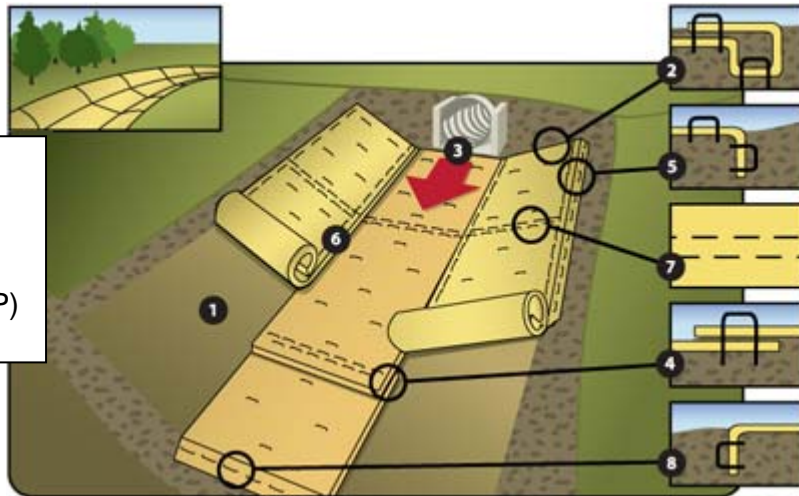
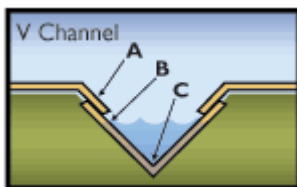


Installation of Erosion Mat in Channels

(rolled erosion control product – RECP)



1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the channel by anchoring the RECPs in a 6" (15 cm) deep x 6" (15 cm) wide trench with approximately 12" (30 cm) of RECPs extended beyond the up-slope portion of the trench. Anchor the RECPs with a row of staples/stakes approximately 12" (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to compacted soil and fold remaining 12" (30 cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12" (30 cm) across the width of the RECPs.
3. Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide. When using the DOT System[®], staples/stakes should be placed through each of the colored dots corresponding to the appropriate staple pattern.
4. Place consecutive RECPs end over end (shingle style) with a 4" to 6" (10 cm to 15 cm) overlap. Use a double row of staples staggered 4" (10 cm) apart and 4" (10 cm) on center to secure RECPs.
5. Full-length edge of RECPs at top of side slopes must be anchored with a row of staples/stakes approximately 12" (30 cm) apart in a 6" (15 cm) deep x 6" (15 cm) wide trench. Backfill and compact the trench after stapling.
6. Adjacent RECPs must be overlapped approximately 2" to 5" (5 cm to 12.5 cm) (depending on RECP type) and stapled.
7. In high-flow channel applications, a staple check slot is recommended at 30- to 40-foot (9 M to 12 M) intervals. Use a double row of staples staggered 4" (10 cm) apart and 4" (10 cm) on center over entire width of the channel.
8. The terminal end of the RECPs must be anchored with a row of staples/stakes approximately 12" (30 cm) apart in a 6" (15 cm) deep x 6" (15 cm) wide trench. Backfill and compact the trench after stapling.
NOTE: In loose soil conditions, the use of staple or stake lengths greater than 6" (15 cm) may be necessary to properly anchor the RECPs.



Critical Points

- A. Overlaps and Seams
- B. Projected Water Line
- C. Channel Bottom/Side Slope Vertices

NOTE:

*Horizontal staple spacing should be altered if necessary to allow staples to secure the critical points along the channel surface.

CHANNEL EROSION CONTROL MATRIX

(Concentrated Flow Application)

TYPE OF EROSION CONTROL DEVICE	PERMISSIBLE SHEAR LB/S.F.	DITCH GRADE															REMARKS
		< 2%			2% - 4%			4% - 6%			6% - 9% *			9% - 12% *			
		Max. Length (ft.)			Max. Length (ft.)			Max. Length (ft.)			Max. Length (ft.)			Max. Length (ft.)			
		300	600	1200	300	600	1200	300	600	1200	300	600	1200	300	600	1200	
Seed with properly anchored mulch	0.6	█															Anchor mulch per specifications.
Sod ditch checks with seed and mulch	N/A	█	█	█	█	C											Install one ditch check for every 1 foot of drop. Sod stakes required.
Temporary ditch checks (hay bales or approved manufactured alternatives listed in the WisDOT PAL)	N/A	█	█	█	█	█											Install one ditch check for every 2 feet of drop. Maximum 200' spacing. Not recommended for slopes less than 1%.
Sod ditch liner	1.0	█	█	█													Upstream end must be buried. Additional sod stakes required.
Double netted light duty (WisDOT Class I Type B) erosion mat	1.5	█	█	█	█	█											Only mat type products allowed.
Sod reinforced with a double netted jute (WisDOT Class II Type A) erosion mat	1.5	█	█	█	█	█											Upstream end must be buried. Additional sod stakes required. Two bid items needed.
Stone or rock ditch checks, or Rock-Filled Filter Bags	N/A	█	█	█	█	█	█	█	█	█							Use No. 2 coarse aggregate, railroad ballast, or breaker run. Install one ditch check for every 2 feet of drop. Use in conjunction with a channel lining.
Medium duty coconut erosion mat (WisDOT Class II Type B or C)	2.0	█	█	█	█	█	█	█	█	█	⊗	█					
Heavy duty synthetic (WisDOT Class III Type A) erosion mat or turf reinforcement mat (WisDOT Class III Type B)	2.0	█	█	█	█	█	█	█	█	█	█	█					Germination may be a problem with Class III Type A mats. An ECRM is required for initial erosion protection for Class III Type B mats.
Heavy duty synthetic turf reinforcement (WisDOT Class III Type C) mat	3.5	█	█	█	█	█	█	█	█	█	█	█	█				An ECRM is required for initial erosion protection. Contact manufacturer if higher shears are needed.
Riprap ditch checks	N/A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	Place top of downstream ditch check level with bottom of upstream ditch check. Use in conjunction with a channel lining.
Heavy duty synthetic turf reinforcement (Class III Type D) mat	5	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	An ECRM is required for initial erosion protection. Contact manufacturer if higher shears are needed.
Light riprap	4	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	Outfalling, overtopping and scour need to be addressed. Use 2' minimum ditch depth.
Medium riprap	5	█	█	█	█	█	█	█	█	█	█	█	█	█	█		
Heavy riprap	8	█	█	█	█	█	█	█	█	█	█	█	█	█	█		
Riprap measures apply to all ditch types. Use of these measure requires engineering judgement and design.																	

