why use the

**SCOURSTOP SYSTEM?**

ScourStop transition mats protect against erosion and scour at culvert outlets with a vegetated solution in areas traditionally protected with rock or other hard armor.

ScourStop is part of a system that includes semi-rigid transition mats installed over sod or turf reinforcement mats. Each 4’ x 4’ x 1/2” mat is made of high-density polyethylene and secured tightly to the ground with anchors.

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**Circular Culvert Outlet Protection**

<table>
<thead>
<tr>
<th>PIPE DIAMETER</th>
<th>VELOCITY ≤ 10 FT/SEC</th>
<th>10 &lt; VELOCITY &lt; 16 FT/SEC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TRANSITION MAT W x L</td>
<td>QUANTITY OF MATS</td>
</tr>
<tr>
<td>12”</td>
<td>4’ x 4’</td>
<td>1</td>
</tr>
<tr>
<td>24”</td>
<td>8’ x 8’</td>
<td>4</td>
</tr>
<tr>
<td>36”</td>
<td>8’ x 12’</td>
<td>6</td>
</tr>
<tr>
<td>48”</td>
<td>12’ x 16’</td>
<td>12</td>
</tr>
<tr>
<td>60”</td>
<td>12’ x 20’</td>
<td>15</td>
</tr>
<tr>
<td>72”</td>
<td>16’ x 24’</td>
<td>24</td>
</tr>
</tbody>
</table>

These are minimum recommendations. More ScourStop protection may be needed depending upon site and soil conditions, per project engineer.

- If velocity is greater than 16 fps, contact manufacturer for design assistance.
- ScourStop mats have been shown to at least double the effectiveness of turf reinforcement mats.
- ScourStop fully vegetated channel (2:1 slope): velocity = 31 fps, shear stress = 16 psf.
ScourStop®
Installation Recommendations

1. ScourStop mats must be installed over a soil cover: sod, seeded turf reinforcement mat (TRM), geotextile, or a combination thereof.
2. For steep slopes (>10%) or higher velocities (>10 ft/sec), sod is the recommended soil cover.
3. Follow manufacturer’s ScourStop Installation Guidelines to ensure proper installation.
4. Install ScourStop mats at maximum 1-2” below flowline of culvert or culvert apron. (No waterfall impacts onto ScourStop mats.)
5. Performance of protected area assumes stable downstream conditions.

Transition mat apron protects culvert outlet.

*Width of protection:
Bottom width of channel and up both side slopes to a depth at least half the culvert diameter.

Protect bare/disturbed downstream soils from erosion with appropriate soil cover.

Use normal-depth calculator to compute for downstream protection.

ANCHOR PATTERN
Abut transition mats to end of culvert or culvert apron. Adjacent mats abut together, laterally and longitudinally. Minimum 8 anchors per mat. Extra anchors as needed for loose or wet soils. Extra anchors as needed for uneven soil surface.

ANCHOR ILLUSTRATION
Install anchors per ScourStop Installation Guidelines. Minimum depth 24” in compacted, cohesive soil. Minimum depth 30” in loose, sandy, or wet soil. Extra anchors as needed to secure mat tightly over soil cover.