### Vegetated Ephemeral Drainage

<table>
<thead>
<tr>
<th>Swale Width (ft)</th>
<th>Grade (%)</th>
<th>0.2</th>
<th>0.45</th>
<th>0.9</th>
<th>1.3</th>
<th>1.8</th>
<th>2.2</th>
<th>2.7</th>
<th>3.1</th>
<th>3.6</th>
<th>4.0</th>
<th>4.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>0.3</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>175</td>
<td>200</td>
<td>225</td>
<td>250</td>
<td>250</td>
<td>275</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>175</td>
<td>200</td>
<td>225</td>
<td>250</td>
<td>275</td>
<td>300</td>
<td>325</td>
<td>350</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>175</td>
<td>225</td>
<td>250</td>
<td>300</td>
<td>325</td>
<td>350</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>275</td>
<td>325</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>150</td>
<td>150</td>
<td>175</td>
<td>225</td>
<td>275</td>
<td>300</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>150</td>
<td>150</td>
<td>175</td>
<td>225</td>
<td>275</td>
<td>325</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>150</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>325</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>150</td>
<td>150</td>
<td>200</td>
<td>275</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>0.3</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>200</td>
<td>225</td>
<td>250</td>
<td>275</td>
<td>300</td>
<td>325</td>
<td>350</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>150</td>
<td>150</td>
<td>175</td>
<td>200</td>
<td>250</td>
<td>275</td>
<td>325</td>
<td>350</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>150</td>
<td>150</td>
<td>175</td>
<td>225</td>
<td>275</td>
<td>325</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>150</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>325</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>150</td>
<td>150</td>
<td>225</td>
<td>275</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>150</td>
<td>150</td>
<td>225</td>
<td>300</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>150</td>
<td>150</td>
<td>250</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>150</td>
<td>175</td>
<td>275</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>0.5</td>
<td>150</td>
<td>150</td>
<td>175</td>
<td>225</td>
<td>275</td>
<td>325</td>
<td>375</td>
<td>450</td>
<td>500</td>
<td>550</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>150</td>
<td>150</td>
<td>225</td>
<td>275</td>
<td>350</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>150</td>
<td>175</td>
<td>275</td>
<td>325</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>150</td>
<td>200</td>
<td>300</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>150</td>
<td>200</td>
<td>325</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>150</td>
<td>225</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>150</td>
<td>250</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>150</td>
<td>275</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>0.5</td>
<td>150</td>
<td>175</td>
<td>250</td>
<td>350</td>
<td>450</td>
<td>530</td>
<td>650</td>
<td>725</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>150</td>
<td>225</td>
<td>300</td>
<td>375</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>150</td>
<td>250</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>175</td>
<td>275</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>200</td>
<td>300</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>200</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>225</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>250</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0</td>
<td>0.5</td>
<td>150</td>
<td>250</td>
<td>450</td>
<td>550</td>
<td>725</td>
<td>800</td>
<td>950</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>175</td>
<td>300</td>
<td>500</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>225</td>
<td>325</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>225</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>275</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>275</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Non-vegetated Ephemeral Drainage

<table>
<thead>
<tr>
<th>Swale Width (ft)</th>
<th>Grade (%)</th>
<th>0.2</th>
<th>0.45</th>
<th>0.9</th>
<th>1.3</th>
<th>1.8</th>
<th>2.2</th>
<th>2.7</th>
<th>3.1</th>
<th>3.6</th>
<th>4.0</th>
<th>4.4</th>
</tr>
</thead>
</table>

1 Distances given in feet. A dash indicates no distance is acceptable for excluding the Stormwater Outfall as a priority.