### Volume Type

<table>
<thead>
<tr>
<th>Volume Type</th>
<th>Surface Area</th>
<th>Depth</th>
<th>Porosity</th>
<th>Storage Volume</th>
<th>Volume Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>( V_A ): PEA GRAVEL</td>
<td></td>
<td>0.25</td>
<td>0.50</td>
<td>( 0.50 \times 0.25 \times V_A )</td>
<td></td>
</tr>
<tr>
<td>( V_B ): COARSE AGGREGATE (ABOVE INVERT)</td>
<td></td>
<td>0.36</td>
<td>0.50</td>
<td>( 0.50 \times 0.36 \times V_B )</td>
<td></td>
</tr>
<tr>
<td>( V_C ): COARSE AGGREGATE (BELOW INVERT)</td>
<td></td>
<td>0.36</td>
<td>0.36</td>
<td>( 0.36 \times V_C )</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**

1. The perimeter of the Volume Control Facility shall maintain the minimum horizontal separation distance of: 10-feet from foundations, unless waterproofed; 20-feet from roadway gravel shoulder; and 100-feet from potable water wells, septic tanks/fields, or other underground tanks.
2. Sanitary or combined sewers shall not be located within the Volume Control Facility. Sanitary or combined sewers shall not be located below the footprint of the Volume Control Facility, when local conditions prevent the sewer from being located outside the footprint of the Facility the sewer shall be constructed to water main quality standards, or it shall be encased with a water main quality carrier pipe with the ends sealed.
3. Avoid installation on slopes greater than 3.00%.
5. Geotextile fabric shall meet requirements of IUM Material Specification 592. For woven: Apparent opening size of 0.50 mm (Table 1, Class I), For non-woven: Apparent opening size of 0.30 mm (Table 2, Class II).
6. Stone storage options are IDOT CA-1, IDOT CA-3, District Vulcan Mix, or approved alternate. No recycled materials.
7. Minimum distance of 2 feet (3.5 feet in combined sewer areas) between bottom of BMP and seasonally high groundwater level.
8. Underdrains are required in typical clayey soils where infiltration rates are less than 0.5 inch/hour, maximum of 1 underdrain per 30 feet. Provide a soil report documenting native infiltration rate to forego underdrains.
9. Minimum underdrain bedding of two inches, maximum of 12 inches.
10. One observation well required per 6,000 square feet of surface area.
11. Follow the required pretreatment measures listed on the Volume Control Pretreatment Measures Detail.

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**Technical Guidance Manual**

Infiltration Trench Detail

10/4/18