

R-TANK® INFILTRATION SYSTEMS

When R-Tanks® are used to infiltrate concentrated runoff, several parts of the installation process require additional scrutiny and/or modification.

Subgrade

The subgrade of the excavation must be able to support the system base while remaining porous to allow for infiltration. To achieve this, the subgrade should NOT be compacted, but must support a minimum of 2,000 psf. If the bearing capacity of the subgrade is below 2,000 psf, a qualified engineer must be consulted for guidance on bringing the bearing capacity up to minimum requirements while not reducing the infiltration capacity of the soils.

GeoTextile

In areas where runoff is exposed to clay soils it is important to change the geotextile used in the system to a woven monofilament (such as Propex 117F) instead of the typical 8 oz/sy nonwoven to prevent clogging of the textile. In addition to wrapping the R-Tanks®, an extra layer of Geotextile should be used between the subgrade and the base to prevent contamination of the base by the subgrade.

System Base

R-Tank® Systems used for infiltration require a 4" base (instead of the typical 3" base) which acts as a leveling course for the tanks and a stabilizing layer for the subgrade. The base materials must be porous to encourage infiltration. A clean, coarse sand or a washed angular stone (such as #57 stone) both work well. The base material will generally be placed and rolled but not compacted. Local requirements may provide further guidance on this issue.

Side Backfill

The backfilling procedure for the sides of the R-Tanks® should follow the typical installation process. These guidelines require that the material be compacted in 12" lifts with a vibratory compactor. The 12" lift is enough to isolate the porous subgrade from the backfill material, ensuring that porosity of the base is not lost while backfilling the sides of the system.

