

4.5 Capping Fill Trench

Revision: ~~April 21, 2009~~ February 6, 2014

4.5.1 Description

A capping fill trench is a ~~standard~~-drainfield trench constructed so that its bottom is at least 3 inches into the natural soil but less than 2 feet deep in the natural soil. A selected fill material caps the trench to provide cover. ~~There are two subcategories of a capping fill trench. The standard capping fill trench and the extreme capping fill trench. Capping fill trenches may be installed by any installer with a basic installer's permit unless a complex component is used in conjunction with the capping fill trench design.~~

4.5.2 Standard Capping Fill Trench

~~A standard capping fill trench is constructed so that its bottom is less than 24 inches deep in the natural soil but deep enough in the natural soil to keep the invert of the drainfield pipe below the natural soil. The installation depth is deeper than 6 inches for a standard drainrock and perforated pipe drainfield. The bottom depth of the drainfield necessary to keep the invert of the drainfield pipe below the natural soil may be deeper for gravelless trench products or extra drainrock capping fill systems.~~

4.5.2.1 Standard Capping Fill Trench Approval Conditions

- ~~1. Capping fill trench may be considered for a site if the effective depth below the trench bottom, as specified in section 2.2, Table 2-6 and Table 2-7, can be met. Effective soil depths below the drainfield bottom must be met as required by IDAPA 58.01.03 or as allowed in section 2.2 of this manual following the separation distance hierarchy.~~
- ~~2. Site may not exceed 12% slope if the ~~drainrock~~-drainfield extends above natural soil.~~
- ~~2.3. If the ~~drainrock~~-drainfield is at or below natural soil, the site may not exceed 20% slope.~~
- ~~3. Bottom of a capping fill trench must be below the organic soil layer.~~

4.5.3 Extreme Capping Fill Trench

~~An extreme capping fill trench is constructed so that the invert of the drainfield pipe is above the natural soil. This is typically 6 inches deep or less for a standard drainrock and perforated pipe drainfield. The bottom depth of the drainfield that results in the invert of the drainfield pipe being above the natural soil may be deeper for gravelless trench products or extra drainrock capping fill systems.~~

4.5.3.1 Extreme Capping Fill Trench Approval Conditions

- ~~1. Effective soil depth below the drainfield bottom must be met as required by IDAPA 58.01.03 or as allowed in section 2.2 of this manual following the separation distance hierarchy.~~
- ~~2. Site may not exceed 12% slope.~~
- ~~3. The soil cap shall be constructed prior to trench excavation but after natural soil scarification.~~

4. The soil cap shall be compacted to 90% of the existing soils which shall be verified by a soil compaction test after cap construction.
5. The drainrock below the perforated pipe in an extra drainrock extreme capping fill trench shall not extend more than 3 inches above the natural soil.
6. The bottom of the drainfield shall be installed no shallower than 3 inches below the natural soil.

4.5.34.5.4 Fill Material

The capping fill drainfield must meet the minimum (12 inches) and maximum (36 inches) cover requirements of IDAPA 58.01.03.008.04. Fill material must be imported or removed from a location greater than 6 feet away from the edge of the drainfield cap to meet the texture requirements of the cap. The material requirements for the cap are:

1. The upper layer of the natural site soil must be one of the approved effective soil design subgroups as described in Table 2-4.
2. The texture of the fill material used for the soil cap shall be the same as or one soil design subgroup finer than that of the site material upper layer of the natural site soil, except that no fill material finer than clay loam may be used.
3. Fill material shall be free of debris, stones, frozen clods, or ice.

4.5.44.5.5 Construction

1. ~~Fill~~The entire cap area is plowed or scarified to disrupt the vegetative mat. Smearing of the soil during scarification shall be avoided.
2. Site soil should not be removed during the scarification process unless heavy vegetation (e.g., bushes) or a heavy vegetative mat is present. Any site soil that is removed should be replaced with medium sand prior to cap placement.
3. Construction related requirements in section 4.5.3.1 shall be followed.
4. Trenches shall be installed according to the specifications outlined on the permit, as if the top of the fill was the natural soil surface.
6. ~~If the trenches are constructed entirely within the natural soil, the trenches will be constructed first. The site will then be scarified, and the cap installed after the trenches are in place.~~
2. ~~When the invert of the pipe is at or above the original soil, the fill material should be compacted to 90% of the existing soils.~~
5. Edges of the finished cap fill should be at least 10 feet beyond the nearest trench sidewall.
6. Finished side slopes of the fill are to be evenly graded from the outer edges of the trenches to the natural soil surface with a slope of 3:1 or less (three horizontal to one vertical).
7. Compaction of the scarified area must be prevented. Use of equipment with pneumatic tires is prohibited on the fill or cover.
8. At least 12 inches of fill must be applied to cover the trenches.

9. Typical lawn grasses and other appropriate low-profile vegetation should be established on the fill soil cap after placement and final grading. Trees, shrubs, or other aggressive water seeking plants should not be planted on the soil cap.

4.5.6 Inspections

1. Site soil texture, fill soil texture, **and the** scarification or vegetative mat disruption process will be inspected by the Director.
2. Installed trenches will be inspected by the Director **prior to cover**.
3. Final inspection after covering may be conducted by the Director to **investigate the degree of incorporation of fill soil with the original soil** ensure proper cap placement and slope.

Figure **Error! No text of specified style in document.**-1 ~~Figure 4-1~~ shows a cross section of a capping fill trench.

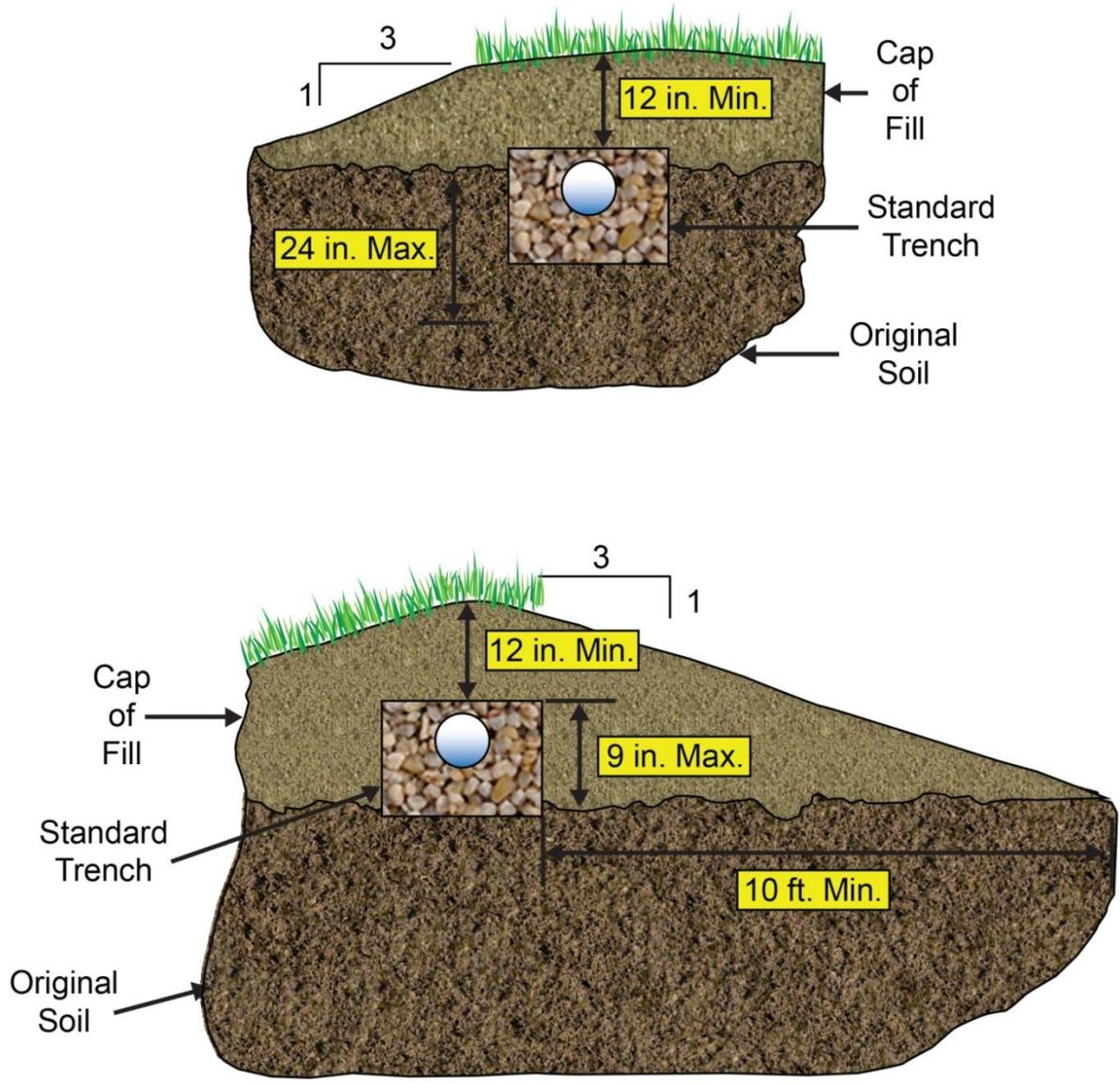


Figure Error! No text of specified style in document.-1. Cross-sectional view of a capping fill trench.