

Equation 4-16 shows the calculation for the absorption bed area.

$$\frac{\text{Design Flow (GPD)}}{\text{Soil Application Rate (GPD/ft}^2\text{)}} \quad \text{Equation 4-16. Effluent application area.}$$

6. Slope of all sides must be 3 horizontal to 1 vertical (3:1) or flatter.
7. Sand fill area must be as long and narrow as practical, with plan view dimension G exceeding dimension F (Figure 4-30).
8. Slope correction factors as provided in Table 4-21 should be used to determine the downslope width of the medium sand fill for sloped sites.
9. Slope correction factors as provided in Table 4-22 should be used to determine the upslope width of the medium sand fill for sloped sites.

Table 4-21. Downslope correction factors for sloped sites.

| Slope (%) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| Correction Factor | 1.03 | 1.06 | 1.10 | 1.14 | 1.18 | 1.22 | 1.27 | 1.32 | 1.38 | 1.44 | 1.51 | 1.57 | 1.64 | 1.72 | 1.82 | 1.92 | 2.04 | 2.17 | 2.33 | 2.5 |

Table 4-22. Upslope correction factors for sloped sites.

| Slope (%) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|
| Correction Factor | 0.97 | 0.94 | 0.91 | 0.89 | 0.87 | 0.85 | 0.83 | 0.81 | 0.79 | 0.77 | 0.75 | 0.73 | 0.72 | 0.7 | 0.69 | 0.67 | 0.66 | 0.65 | 0.64 | 0.62 |

Figure 4-30 and Figure 4-31 can be used with Table 4-23 and Table 4-24 (sand mound design checklist) for flat and sloped sites.

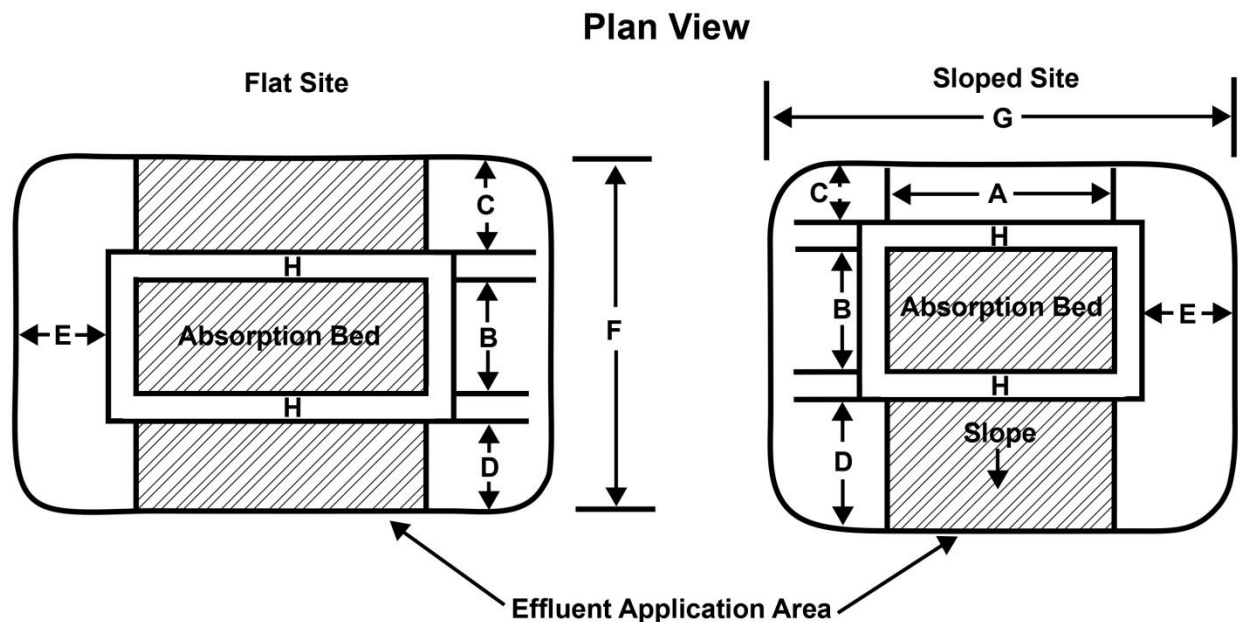


Figure 4-30. Design illustrations for sand mound installation on flat and sloped sites (use with sand mound design checklist).