Earthquake

Earthquake not included.

Settings of the stage of construction

Design situation : permanent

Results (Stage of construction 1)

Analysis 1

Circular slip surface

Slip surface parameters							
Center :	x =	-1.17	[ft]	Angles :	α_1 =	-42.76	[°]
	z =	1.91	[ft]		α_2 =	82.36	[°]
Radius :	R =	8.73	[ft]				
The slip surface after optimization.							

Slope stability verification (Bishop)

Sum of active forces : F_a = 2076.1 lbf/ft
Sum of passive forces : F_p = 4239.1 lbf/ft

Sliding moment : M_a = 18124.5 lbfft/ft
Resisting moment : M_p = 37007.4 lbfft/ft
Factor of safety = 2.04 > 1.30
Slope stability ACCEPTABLE

Input data (Stage of construction 2)

Geological profile and assigned soils

No.	Thickness of layer t [ft]	Depth z [ft]	Assigned soil	Pattern
1	-	0.00 .. ∞	Lean Clay	

Terrain profile

Terrain behind construction has the slope 1: 4.01 (slope angle is 14.00 °).
Embankment height is 0.75 ft, embankment length is 3.00 ft.

Water influence

Ground water table is located below the structure.

Resistance on front face of the structure

Resistance on front face of the structure: at rest
Soil on front face of the structure - Lean Clay
Soil thickness in front of structure h = 2.50 ft

Terrain in front of structure is flat.

Earthquake

Factor of horizontal acceleration K_h = 0.1100
Factor of vertical acceleration K_v = 0.0000

Water below the GWT is restricted.

Settings of the stage of construction

Design situation : seismic
Reduction of soil/soil friction angle : do not reduce