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filename: example-EC7.dat

problem description: Seismic Undrained analysis

Code: EAK2000 & Eurocode 8 ΕΛΟΤ EN 1998-5:2005/NA DA-2*
 partial factors: $\gamma_\phi=1,00$ $\gamma_c=1,00$ $\gamma_{cu}=1,00$ $\gamma_v=1,00$ $\gamma_G=1,00$ $\gamma_Q=1,00$

ΕΔΑΦΙΚΑ ΧΑΡΑΚΤΗΡΙΣΤΙΚΑ - SOIL PARAMETERS

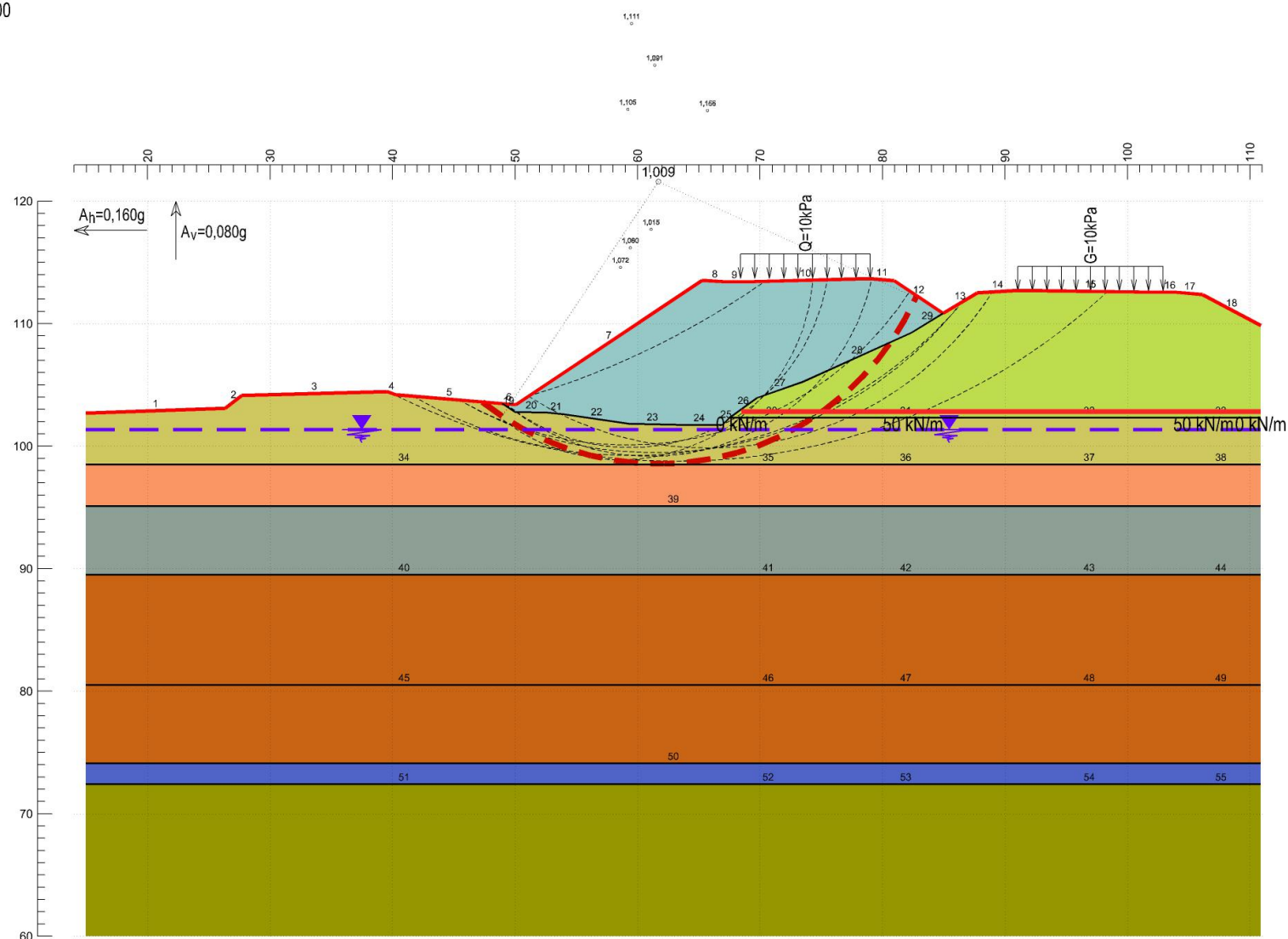
soil pattern	total unit wt. γ (kN/m ³)	saturated unit wt. γ_s (kN/m ³)	friction angle ϕ (°)	cohesion intercept c (kPa)	undrained	pore pressure param.
1	21,5	21,5	30,00	5,00		0,0000
2	21,5	21,5	30,00	0,00	x	0,0000
3	18,7	18,7	0,00	50,00	x	0,0000
4	19,3	19,3	30,00	50,00		0,0000
5	19,5	19,5	30,00	50,00		0,0000
6	18,4	18,4	30,00	50,00		0,0000
7	17,6	17,6	30,00	50,00		0,0000
8	18,3	18,3	30,00	50,00		0,0000
9	20,4	20,4	30,00	50,00		0,0000

SLOPE STABILITY ANALYSIS

slope stability analysis: PCSTABL6 (Purdue University, 1986)
 pre- and post-processor to PCSTABL: Pre-Stabl 8.2 (G.Mavridis-Geognosi S.A.©1998-2013)

figure: 10.1

PROJECT: Embankment slope stability Example



CIRCULAR shape trial failure surfaces

Factor of safety by the modified BISHOP method

CRITICAL FAILURE SURFACE

$X_o = 61,7$ m
 $Y_o = 121,6$ m
 radius $R_o = 23,0$ m

min F.S. = 1,009 > 1,00