Settlement analysis

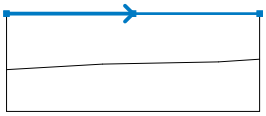
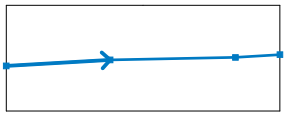
Input data

Project

Date : 4/18/2009

Type of analysis : Analysis using constrained modulus
Restriction of influence zone : based on structural strength

Interface

Number	Interface location	Coordinates of interface points [m]					
		x	z	x	z	x	z
1		-15.00	0.00	0.00	0.00	15.00	0.00
2		-15.00	-6.72	-3.61	-6.05	10.12	-5.78
		15.00	-5.47				

Soil parameters

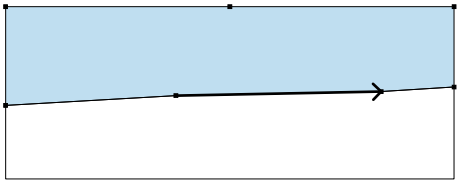
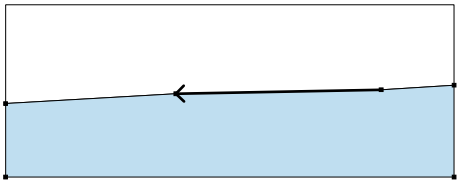
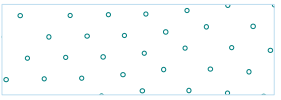
Soil 1

Unit weight : γ = 21.00 kN/m^3
Coeff. of structural strength : m = 0.20
Constrained modulus : M_{dmt} = 3.00 MPa
Saturated unit weight : γ_{sat} = 21.00 kN/m^3

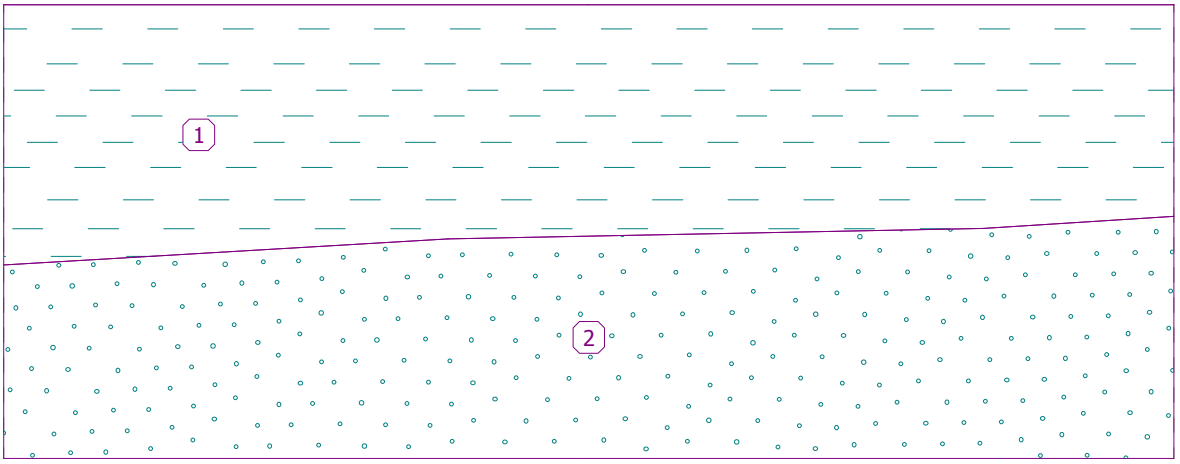
Soil 2

Unit weight : γ = 18.50 kN/m^3
Coeff. of structural strength : m = 0.10
Constrained modulus : M_{dmt} = 16.00 MPa
Saturated unit weight : γ_{sat} = 18.50 kN/m^3

Assigning and surfaces

Number	Surface position	Coordinates of surface points [m]				Assigned soil
		x	z	x	z	
1		-3.61	-6.05	10.12	-5.78	Soil 1
		15.00	-5.47	15.00	0.00	
		0.00	0.00	-15.00	0.00	
		-15.00	-6.72			
2		10.12	-5.78	-3.61	-6.05	Soil 2
		-15.00	-6.72	-15.00	-11.72	
		15.00	-11.72	15.00	-5.47	

Name : Soils and assignment | **Stage : 1**



Water
Water type : No water

Analysis settings
Layout and refinement of holes : standard

Horizontal layout
Layout pattern : exact
Add holes : by number of sections
Number of sections : 20

Vertical refinement

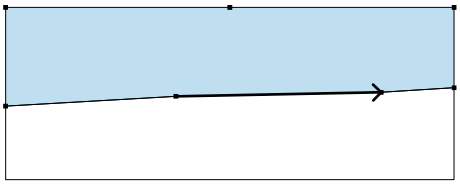
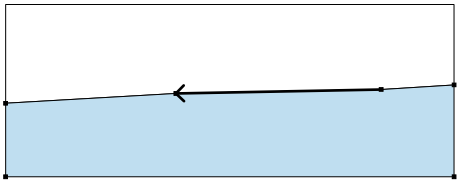
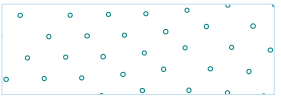
Number	From depth [m]	Refinement [m]
1	0.00	0.10
2	2.00	0.30
3	5.00	0.50
4	10.00	2.00
5	30.00	10.00

Results (Stage of construction 1)

Results
The analysis has not been carried out.

Input data (Stage of construction 2)

Assigning and surfaces

Number	Surface position	Coordinates of surface points [m]				Assigned soil
		x	z	x	z	
1		-3.61	-6.05	10.12	-5.78	Soil 1
		15.00	-5.47	15.00	0.00	
		0.00	0.00	-15.00	0.00	
		-15.00	-6.72			
2		10.12	-5.78	-3.61	-6.05	Soil 2
		-15.00	-6.72	-15.00	-11.72	
		15.00	-11.72	15.00	-5.47	

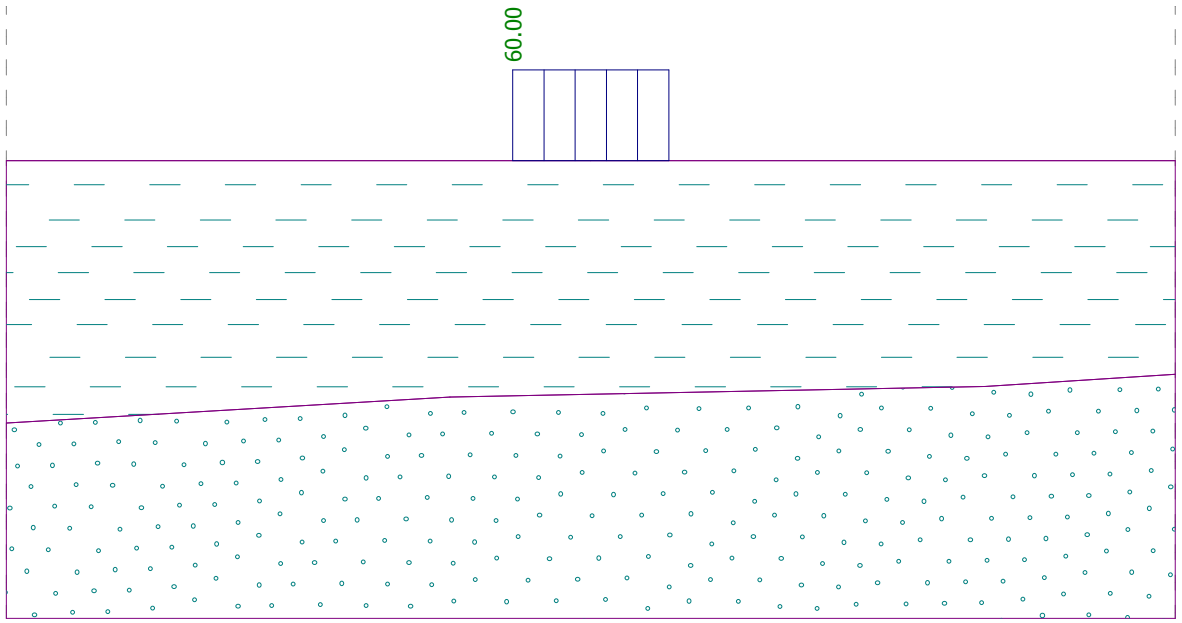
Surcharge

Number	Surcharge		Type	Location	Origin	Length	Width	Magnitude		
	new	change		z [m]	x [m]	l [m]	b [m]	q, q_1, f, F	q_2	unit
1	Yes		strip	on terrain	x = -2.00	l = 4.00		60.00		kN/m^2

Surcharges

Number	Name
1	Surcharge No. 1

Name : Surcharge **Stage : 2**



Water

Water type : No water

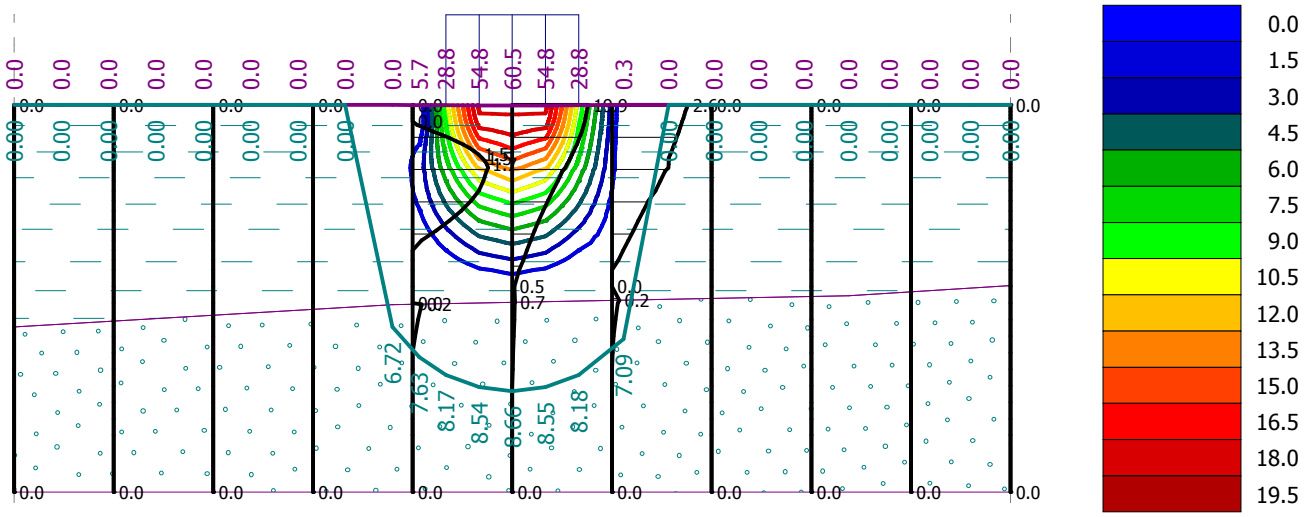
Results (Stage of construction 2)

Results

Analysis performed, method Analysis using constrained modulus
Maximum settlement = 60.5 mm
Maximum depth of influence zone = 8.66 m

Name : Analysis — Stage : 2

Results : overall; variable : Deformation; range : <0.0; 19.9> mm/m



Name : Analysis — Stage : 2

Results : overall; variable : Sigma Z, tot.; range : <0.000; 245.594> kPa