

02	SET 2012	Conferimento materiali di risulta alla cava Truncafila	FRESIA	LO CASCIO	BUSOLA
01	MAR 2011	Adeguamento Normativa	FRESIA	LO CASCIO	BUSOLA
00	LUG 2004	Emissione	FRESIA	LO CASCIO	BUSOLA
REV. N.	DATA	DESCRIZIONE	ELABORATO	VERIFICATO	APPROVATO
SOSTITUISCE L'ELABORATO N°			SOSTITUITO DALL'ELABORATO N°		
CONSORZIO PER LE AUTOSTRAD E SICILIANE					
AUTOSTRADA SIRACUSA – GELA					
2° TRONCO: ROSOLINI – RAGUSA					
LOTTO 9 : "SCICLI"					
PROGETTO ESECUTIVO					
 SISTEMAZIONE CAVA TRUNCAFILA SCHEDE DI VERIFICA GEOTECNICA 					
ELABORATO N.	A18-9-trunc103		PROGETTAZIONE  FRESIA IL RESPONSABILE : DOTT. ING. F. BUSOLA		
DATA	LUGLIO 2004				
CODICE CAD-FILE	A18-9-trunc103				
<small>OPERA PROTETTA AI SENSI DELLA LEGGE 22 APRILE 1941 N. 633 TUTTI I DIRITTI RISERVATI QUALSIASI RIPRODUZIONE ED UTILIZZAZIONE NON AUTORIZZATE SARANNO PERSEGUITE A RIGORE DI LEGGE</small>					

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AUTOSTRADA SIRACUSA-GELA

2° TRONCO ROSOLINI - RAGUSA

PROGETTO ESECUTIVO

LOTTO 9

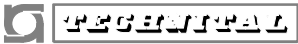
**PROGETTO AREA DI DEPOSITO DEFINITIVO TRUNCAFILA
MATERIALI DI SCAVO DELL'AUTOSTRADA**

SCHEDE DI VERIFICA GEOTECNICA

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ALLEGATI GRAFICI

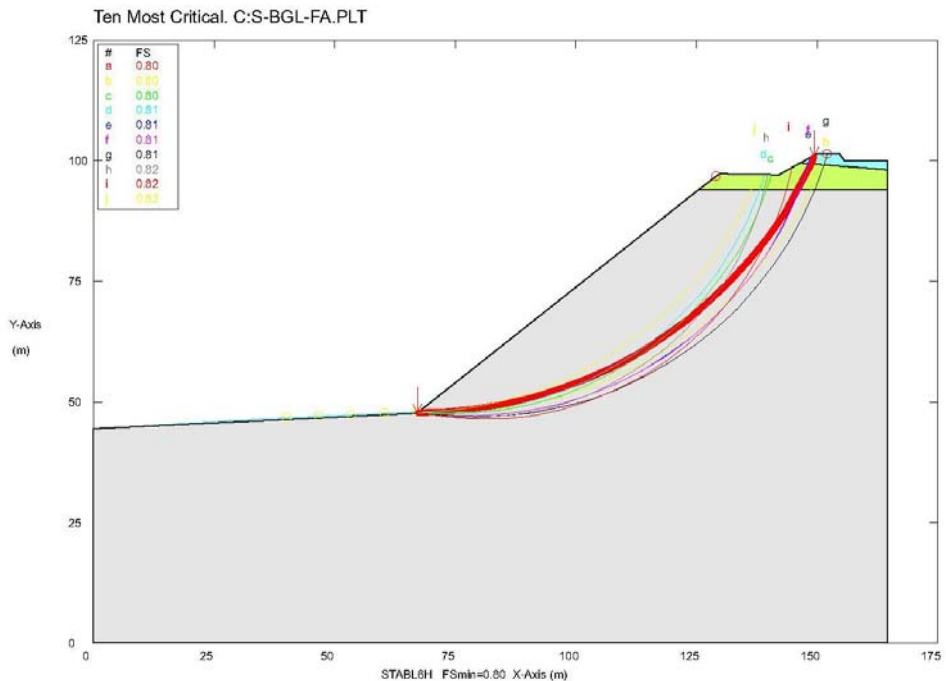
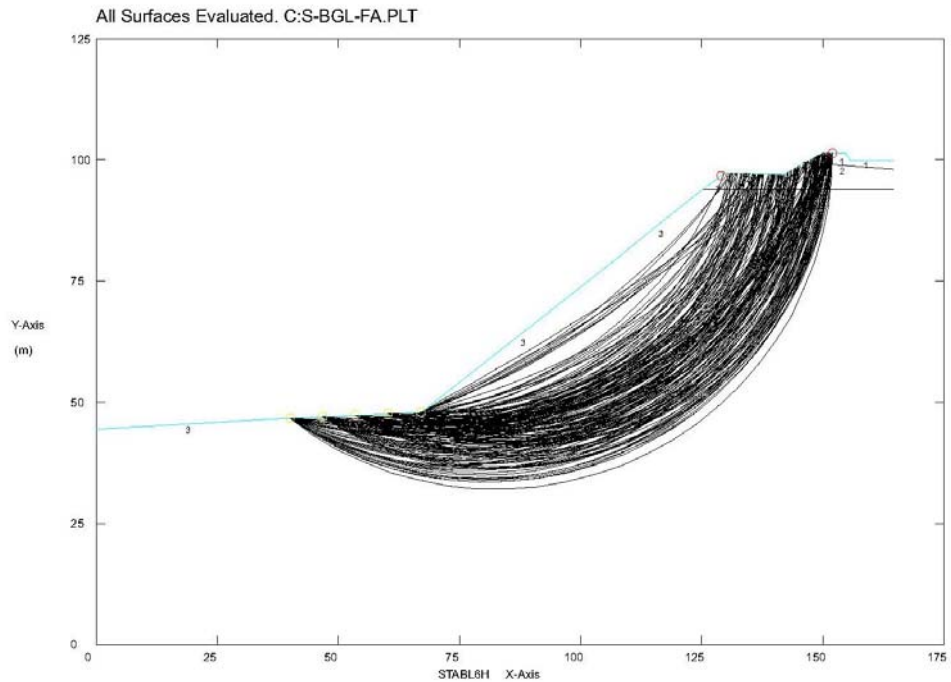
- **SCHEDA GRAFICA N. 1**
- VERIFICA GLOBALE VERSANTE NE. Stato di fatto – SEZIONE B
- **SCHEDA GRAFICA N. 2**
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- **SCHEDA GRAFICA N. 13**
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- VERIFICA GRADONATURA ALTA A LUNGO TERMINE VERSANTE SE. Stato di progetto -SEZIONE 14
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- VERIFICA GRADONATURA BASSA(PISTA) A LUNGO TERMINE VERSANTE SE. Stato di progetto-SEZIONE 14
- **SCHEDA GRAFICA N. 18**
- VERIFICA GRADONATURA ALTA A BREVE TERMINE VERSANTE SE. Stato di progetto -SEZIONE 14
- **SCHEDA GRAFICA N. 19**
- VERIFICA GLOBALE A LUNGO TERMOINE VERSANTE SE. Stato di progetto -SEZIONE 11
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- VERIFICA GRADONATURA ALTA A LUNGO TERMINE(PISTA) VERSANTE SE.. Stato di progetto -SEZIONE 11
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- **SCHEDA GRAFICA N. 22**
- VERIFICA GRADONATURA ALTA A LUNGO TERMINE (PISTA) VERSANTE SE. Stato di progetto -SEZIONE 11
- **SCHEDA GRAFICA N. 23**
- VERIFICA GLOBALE VERSANTE NW. Stato di fatto -SEZIONE 11
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SCHEDA GRAFICA N. 1

VERIFICA GLOBALE VERSANTE NE *(Sezione vista da Est)*. Stato di fatto - SEZIONE B (calcolo)



Soil Type No. Label	Total Unit Wt. (kN/m ³)	Saturated Unit Wt. (kN/m ³)	Cohesion Intercept (kPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (kPa)	Piez. No.
1	17	18	20	18	0	0	
2	17.5	18	15	21	0	0	
3	19.3	20.5	60	13	0	0	

VERIFICA GLOBALE VERSANTE NE. Stato di fatto -SEZIONE B (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:S-BGL-FA.SI
Output Filename: C:S-BGL-FA.OUT
Plotted Output Filename: C:S-BGL-FA.PLT

PROBLEM DESCRIPTION **SEZIONE LONG B VERSANTE NE**
VERIFICA GLOBALE STATO FATTO

BOUNDARY COORDINATES

10 Top Boundaries
12 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	44.50	35.25	46.50	3
2	35.25	46.50	67.00	48.00	3
3	67.00	48.00	106.50	79.00	3
4	106.50	79.00	124.00	93.00	3
5	124.00	93.00	129.70	97.30	3
6	129.70	97.30	142.00	97.00	2
7	142.00	97.00	150.00	101.40	2
8	150.00	101.40	154.60	101.40	1
9	154.60	101.40	155.60	100.00	1
10	155.60	100.00	164.50	99.90	1
11	146.00	99.50	164.50	98.00	2
12	125.50	94.00	164.50	94.00	2

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param. (Kpa)	Pressure Constant (Kpa)	Surface No.
1	17.0	18.0	20.0	18.0	.00	.0	0
2	17.5	18.0	15.0	21.0	.00	.0	0
3	19.3	20.5	60.0	13.0	.00	.0	0

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned
A Vertical Earthquake Loading Coefficient

Of .030 Has Been Assigned
 Cavitation Pressure = .0 Kpa
 A Critical Failure Surface Searching Method, Using A Random
 Technique For Generating Circular Surfaces, Has Been Specified.

200 Trial Surfaces Have Been Generated.

40 Surfaces Initiate From Each Of 5 Points Equally Spaced
 Along The Ground Surface Between X = 40.00 mt.
 and X = 67.00 mt.

Each Surface Terminates Between X = 129.00 mt.
 and X = 152.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
 At Which A Surface Extends Is Y = .00 ft.

6.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
 Failure Surfaces Examined. They Are Ordered - Most Critical
 First.

* * Safety Factors Are Calculated By The Modified Bishop Method *

Failure Surface Specified By 19 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	48.00
2	73.00	48.16
3	78.97	48.73
4	84.89	49.69
5	90.74	51.05
6	96.48	52.79
7	102.09	54.92
8	107.54	57.42
9	112.82	60.29
10	117.89	63.49
11	122.73	67.04
12	127.32	70.90
13	131.65	75.05
14	135.68	79.49
15	139.41	84.19
16	142.82	89.13
17	145.88	94.29
18	148.60	99.64
19	149.14	100.93

Circle Center At X = 67.6 ; Y = 137.3 and Radius, 89.3

*** .795 ***

Failure Surface Specified By 19 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	48.00
2	73.00	47.80

3	78.99	48.03
4	84.96	48.68
5	90.86	49.75
6	96.68	51.23
7	102.37	53.12
8	107.92	55.41
9	113.29	58.08
10	118.46	61.12
11	123.40	64.53
12	128.09	68.27
13	132.50	72.34
14	136.62	76.70
15	140.41	81.35
16	143.87	86.25
17	146.98	91.39
18	149.71	96.73
19	151.70	101.40

Circle Center At X = 72.8 ; Y = 132.7 and Radius, 84.9

*** .797 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	48.00
2	72.99	47.66
3	78.99	47.84
4	84.95	48.53
5	90.82	49.74
6	96.57	51.46
7	102.15	53.67
8	107.52	56.35
9	112.63	59.49
10	117.46	63.06
11	121.95	67.03
12	126.08	71.38
13	129.83	76.07
14	133.15	81.07
15	136.02	86.33
16	138.43	91.83
17	140.19	97.04

Circle Center At X = 73.9 ; Y = 116.8 and Radius, 69.2

*** .803 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	48.00
2	73.00	47.81
3	78.99	48.14
4	84.93	48.98
5	90.78	50.32
6	96.49	52.16
7	102.02	54.49
8	107.33	57.28
9	112.38	60.52
10	117.13	64.18

11	121.56	68.24
12	125.61	72.66
13	129.28	77.41
14	132.52	82.46
15	135.32	87.76
16	137.65	93.29
17	138.87	97.08

Circle Center At X = 72.2 ; Y = 117.6 and Radius, 69.8

*** .805 ***

Failure Surface Specified By 19 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	48.00
2	72.97	47.39
3	78.97	47.28
4	84.96	47.65
5	90.90	48.51
6	96.74	49.84
7	102.46	51.65
8	108.02	53.92
9	113.37	56.64
10	118.48	59.78
11	123.32	63.33
12	127.85	67.26
13	132.05	71.54
14	135.89	76.16
15	139.34	81.07
16	142.37	86.24
17	144.98	91.65
18	147.13	97.25
19	148.04	100.32

Circle Center At X = 77.4 ; Y = 120.9 and Radius, 73.6

*** .806 ***

Failure Surface Specified By 19 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	48.00
2	72.97	47.39
3	78.97	47.27
4	84.96	47.64
5	90.90	48.49
6	96.75	49.82
7	102.47	51.63
8	108.02	53.89
9	113.38	56.60
10	118.49	59.73
11	123.34	63.27
12	127.88	67.20
13	132.08	71.48
14	135.93	76.08
15	139.38	80.99
16	142.43	86.16
17	145.04	91.56
18	147.21	97.15

19 148.17 100.39
 Circle Center At X = 77.5 ; Y = 121.0 and Radius, 73.7

*** .807 ***

Failure Surface Specified By 20 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	48.00
2	72.95	47.26
3	78.95	46.99
4	84.94	47.20
5	90.91	47.89
6	96.79	49.05
7	102.57	50.67
8	108.20	52.74
9	113.65	55.25
10	118.88	58.19
11	123.86	61.54
12	128.56	65.27
13	132.95	69.36
14	137.00	73.79
15	140.68	78.52
16	143.98	83.54
17	146.87	88.80
18	149.33	94.27
19	151.35	99.92
20	151.75	101.40

Circle Center At X = 79.3 ; Y = 122.5 and Radius, 75.5

*** .814 ***

Failure Surface Specified By 18 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	48.00
2	72.94	47.17
3	78.94	46.92
4	84.93	47.25
5	90.86	48.15
6	96.68	49.62
7	102.32	51.65
8	107.75	54.22
9	112.90	57.29
10	117.73	60.85
11	122.19	64.86
12	126.25	69.29
13	129.86	74.08
14	132.99	79.20
15	135.61	84.60
16	137.69	90.22
17	139.23	96.02
18	139.40	97.06

Circle Center At X = 78.5 ; Y = 109.0 and Radius, 62.0

*** .815 ***

Failure Surface Specified By 19 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	48.00
2	72.92	47.02
3	78.90	46.59
4	84.90	46.72
5	90.87	47.39
6	96.74	48.61
7	102.48	50.36
8	108.03	52.63
9	113.35	55.40
10	118.40	58.65
11	123.12	62.35
12	127.48	66.47
13	131.45	70.97
14	134.99	75.82
15	138.06	80.97
16	140.65	86.38
17	142.73	92.01
18	144.29	97.81
19	144.38	98.31

Circle Center At X = 80.6 ; Y = 111.8 and Radius, 65.2

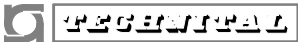
*** .820 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	48.00
2	72.99	48.33
3	78.94	49.13
4	84.80	50.39
5	90.55	52.11
6	96.15	54.26
7	101.56	56.85
8	106.76	59.86
9	111.70	63.26
10	116.37	67.03
11	120.72	71.16
12	124.74	75.62
13	128.40	80.37
14	131.67	85.40
15	134.55	90.67
16	137.00	96.14
17	137.35	97.11

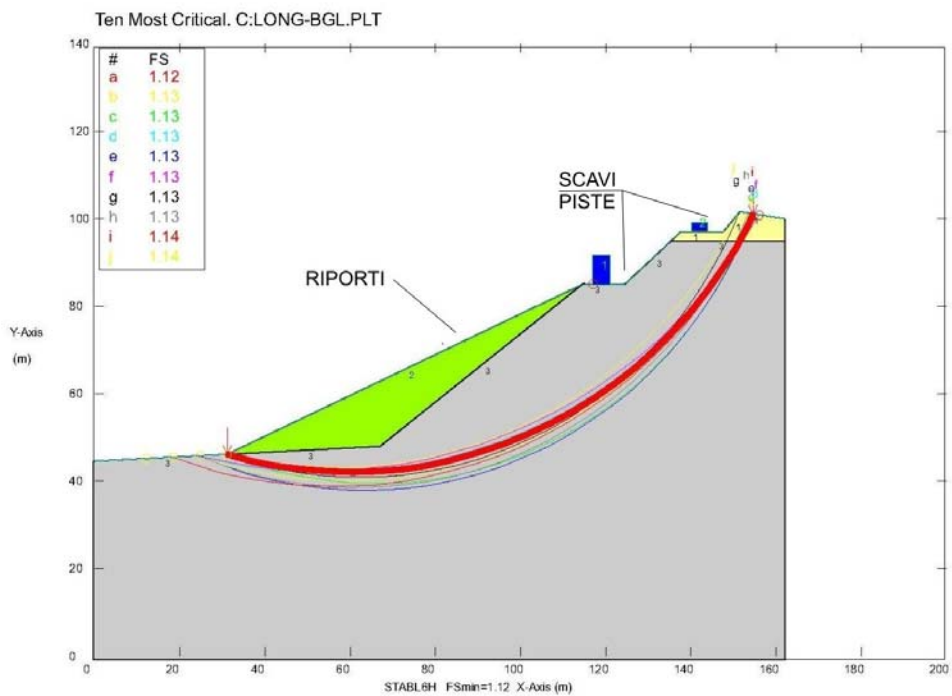
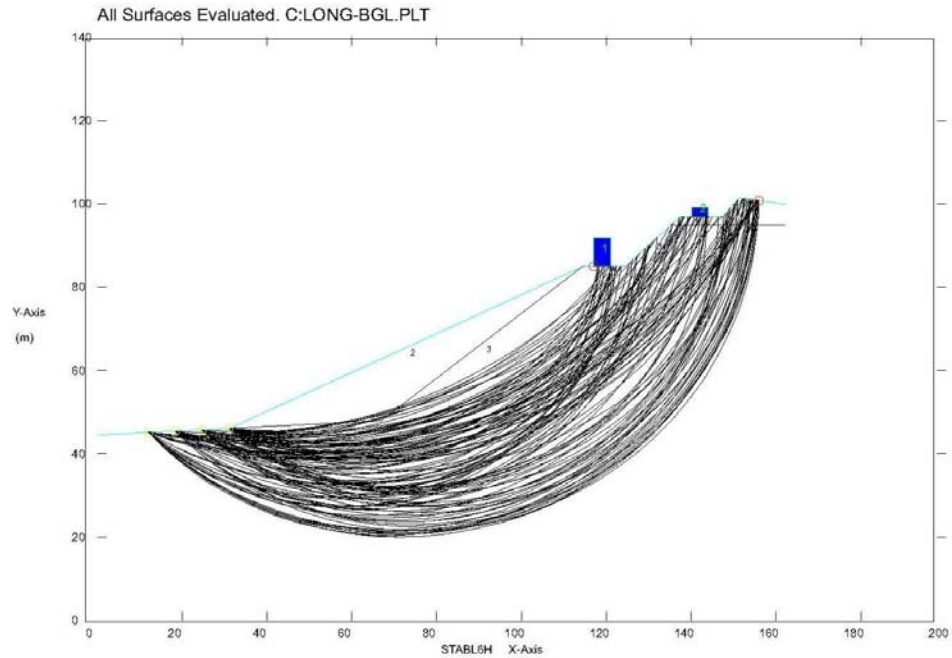
Circle Center At X = 65.7 ; Y = 124.8 and Radius, 76.8

*** .821 ***

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SCHEDA GRAFICA N. 2

VERIFICA GLOBALE A LUNGO TERMINE VERSANTE NE (*Sezione vista da Est*).
Stato di progetto -SEZIONE B (calcolo)



**VERIFICA GLOBALE A LUNGO TERMINE VERSANTE NE. Stato di progetto-
SEZIONE B (report)**

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:LONG-BGL.SI
Output Filename: C:LONG-BGL.OUT
Plotted Output Filename: C:LONG-BGL.PLT

PROBLEM DESCRIPTION sezione long B
versante NE globale

BOUNDARY COORDINATES

7 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	44.50	31.20	46.00	3
2	31.20	46.00	114.40	85.00	2
3	114.40	85.00	124.50	85.00	3
4	124.50	85.00	137.50	97.00	3
5	137.50	97.00	147.50	97.00	1
6	147.50	97.00	151.50	101.40	1
7	151.50	101.40	162.00	99.90	1
8	135.00	95.00	162.00	95.00	3
9	31.20	46.00	67.00	48.00	3
10	67.00	48.00	114.40	85.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	17.5	18.0	15.0	21.0	.00	.0	0
2	17.0	20.0	20.0	18.0	.00	.0	0
3	19.5	20.5	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S)

2 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	117.00	121.00	300.0	.0
2	140.00	144.00	100.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.

120 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 4 Points Equally Spaced
Along The Ground Surface Between X = 12.00 mt.
and X = 31.00 mt.

Each Surface Terminates Between X = 117.00 mt.
and X = 156.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 mt.

6.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 26 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	31.00	45.99
2	36.82	44.52
3	42.71	43.38
4	48.66	42.58
5	54.64	42.12
6	60.64	42.00
7	66.63	42.21
8	72.61	42.77
9	78.54	43.66
10	84.41	44.89
11	90.21	46.45
12	95.90	48.34
13	101.48	50.54
14	106.93	53.06
15	112.22	55.88
16	117.35	59.00
17	122.29	62.40
18	127.03	66.08
19	131.56	70.02
20	135.85	74.21
21	139.90	78.64
22	143.69	83.29
23	147.22	88.14
24	150.46	93.19
25	153.41	98.41

26 154.66 100.95

Circle Center At X = 59.8 ; Y = 147.8 and Radius, 105.8

*** 1.117 ***

Failure Surface Specified By 27 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	24.67	45.69
2	30.40	43.92
3	36.22	42.47
4	42.12	41.36
5	48.07	40.59
6	54.05	40.15
7	60.05	40.06
8	66.05	40.30
9	72.02	40.88
10	77.95	41.80
11	83.82	43.05
12	89.61	44.63
13	95.29	46.54
14	100.87	48.77
15	106.30	51.31
16	111.59	54.15
17	116.70	57.28
18	121.63	60.71
19	126.36	64.40
20	130.87	68.36
21	135.15	72.56
22	139.18	77.00
23	142.96	81.66
24	146.47	86.53
25	149.69	91.59
26	152.63	96.82
27	154.64	100.95

Circle Center At X = 58.8 ; Y = 146.0 and Radius, 106.0

*** 1.125 ***

Failure Surface Specified By 27 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	31.00	45.99
2	36.65	43.97
3	42.41	42.30
4	48.27	41.01
5	54.20	40.09
6	60.18	39.55
7	66.18	39.39
8	72.17	39.61
9	78.14	40.21
10	84.06	41.19
11	89.91	42.54

12	95.66	44.26
13	101.28	46.34
14	106.77	48.77
15	112.09	51.55
16	117.22	54.66
17	122.14	58.09
18	126.84	61.82
19	131.29	65.84
20	135.48	70.14
21	139.38	74.70
22	142.99	79.49
23	146.29	84.50
24	149.26	89.71
25	151.90	95.10
26	154.19	100.65
27	154.30	101.00

Circle Center At X = 65.7 ; Y = 133.9 and Radius, 94.5

*** 1.126 ***

Failure Surface Specified By 27 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	24.67	45.69
2	30.50	44.29
3	36.40	43.21
4	42.35	42.43
5	48.34	41.96
6	54.33	41.80
7	60.33	41.96
8	66.31	42.42
9	72.26	43.19
10	78.16	44.28
11	84.00	45.66
12	89.76	47.35
13	95.42	49.33
14	100.97	51.61
15	106.40	54.17
16	111.69	57.01
17	116.82	60.12
18	121.78	63.49
19	126.57	67.11
20	131.15	70.98
21	135.53	75.08
22	139.70	79.40
23	143.63	83.93
24	147.32	88.66
25	150.76	93.57
26	153.95	98.66
27	155.18	100.87

Circle Center At X = 54.4 ; Y = 157.4 and Radius, 115.6

*** 1.130 ***

Failure Surface Specified By 28 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	24.67	45.69
2	30.25	43.49
3	35.96	41.65
4	41.77	40.16
5	47.67	39.03
6	53.62	38.26
7	59.60	37.86
8	65.60	37.83
9	71.59	38.17
10	77.55	38.87
11	83.46	39.94
12	89.28	41.37
13	95.01	43.16
14	100.62	45.30
15	106.08	47.77
16	111.38	50.58
17	116.50	53.71
18	121.42	57.15
19	126.12	60.88
20	130.58	64.89
21	134.78	69.17
22	138.72	73.71
23	142.36	78.47
24	145.71	83.45
25	148.75	88.63
26	151.46	93.98
27	153.83	99.49
28	154.37	100.99

Circle Center At X = 63.1 ; Y = 135.4 and Radius, 97.6

*** 1.131 ***

Failure Surface Specified By 27 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	24.67	45.69
2	30.53	44.42
3	36.45	43.45
4	42.42	42.78
5	48.40	42.41
6	54.40	42.33
7	60.40	42.56
8	66.38	43.08
9	72.32	43.91
10	78.21	45.03
11	84.05	46.44
12	89.80	48.14
13	95.46	50.13
14	101.02	52.40
15	106.45	54.94
16	111.75	57.75
17	116.90	60.82
18	121.90	64.15
19	126.72	67.72

20	131.36	71.53
21	135.80	75.56
22	140.03	79.82
23	144.05	84.27
24	147.83	88.93
25	151.38	93.76
26	154.69	98.77
27	155.87	100.78

Circle Center At X = 52.9 ; Y = 162.4 and Radius, 120.0

*** 1.132 ***

Failure Surface Specified By 26 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	31.00	45.99
2	36.74	44.23
3	42.57	42.82
4	48.48	41.79
5	54.44	41.13
6	60.44	40.84
7	66.44	40.92
8	72.42	41.38
9	78.36	42.22
10	84.24	43.42
11	90.03	44.99
12	95.71	46.91
13	101.26	49.19
14	106.66	51.81
15	111.88	54.76
16	116.91	58.04
17	121.73	61.62
18	126.31	65.49
19	130.64	69.65
20	134.70	74.06
21	138.48	78.72
22	141.96	83.61
23	145.13	88.71
24	147.97	93.99
25	150.48	99.44
26	151.03	100.89

Circle Center At X = 62.1 ; Y = 136.8 and Radius, 96.0

*** 1.132 ***

Failure Surface Specified By 27 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	24.67	45.69
2	30.29	43.60

3	36.03	41.86
4	41.87	40.47
5	47.78	39.44
6	53.74	38.77
7	59.74	38.47
8	65.74	38.53
9	71.72	38.96
10	77.67	39.75
11	83.56	40.91
12	89.36	42.42
13	95.07	44.28
14	100.65	46.49
15	106.08	49.03
16	111.35	51.90
17	116.43	55.09
18	121.31	58.58
19	125.97	62.36
20	130.39	66.42
21	134.56	70.74
22	138.45	75.30
23	142.06	80.10
24	145.36	85.10
25	148.36	90.30
26	151.03	95.67
27	153.35	101.14

Circle Center At X = 61.7 ; Y = 136.8 and Radius, 98.3

*** 1.133 ***

Failure Surface Specified By 28 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	18.33	45.38
2	24.02	43.48
3	29.81	41.88
4	35.67	40.61
5	41.60	39.66
6	47.56	39.03
7	53.55	38.73
8	59.55	38.76
9	65.54	39.11
10	71.51	39.79
11	77.42	40.80
12	83.27	42.12
13	89.04	43.77
14	94.71	45.72
15	100.27	47.99
16	105.70	50.55
17	110.97	53.40
18	116.09	56.54
19	121.02	59.96
20	125.76	63.63
21	130.30	67.57
22	134.61	71.74
23	138.68	76.14

24	142.52	80.76
25	146.09	85.58
26	149.39	90.58
27	152.42	95.77
28	155.05	100.89

Circle Center At X = 56.1 ; Y = 148.6 and Radius, 109.9

*** 1.135 ***

Failure Surface Specified By 25 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	31.00	45.99
2	36.87	44.75
3	42.80	43.84
4	48.77	43.27
5	54.77	43.04
6	60.77	43.14
7	66.75	43.57
8	72.70	44.34
9	78.60	45.45
10	84.43	46.88
11	90.16	48.64
12	95.79	50.72
13	101.30	53.11
14	106.66	55.80
15	111.86	58.80
16	116.88	62.07
17	121.72	65.63
18	126.34	69.45
19	130.74	73.53
20	134.91	77.84
21	138.83	82.38
22	142.49	87.14
23	145.88	92.09
24	148.98	97.23
25	150.76	100.58

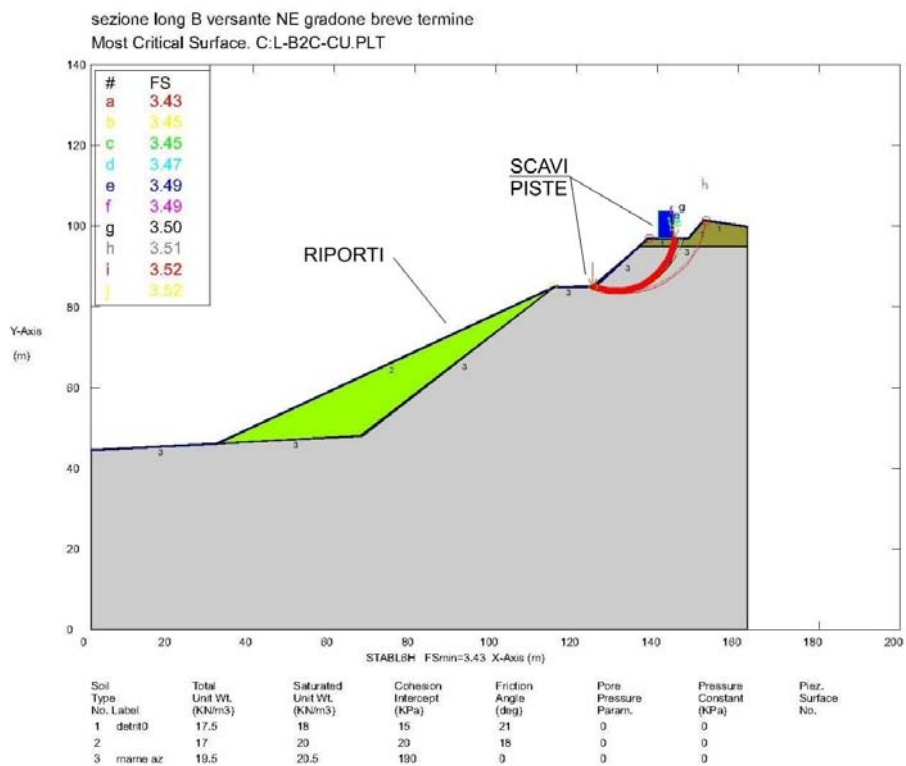
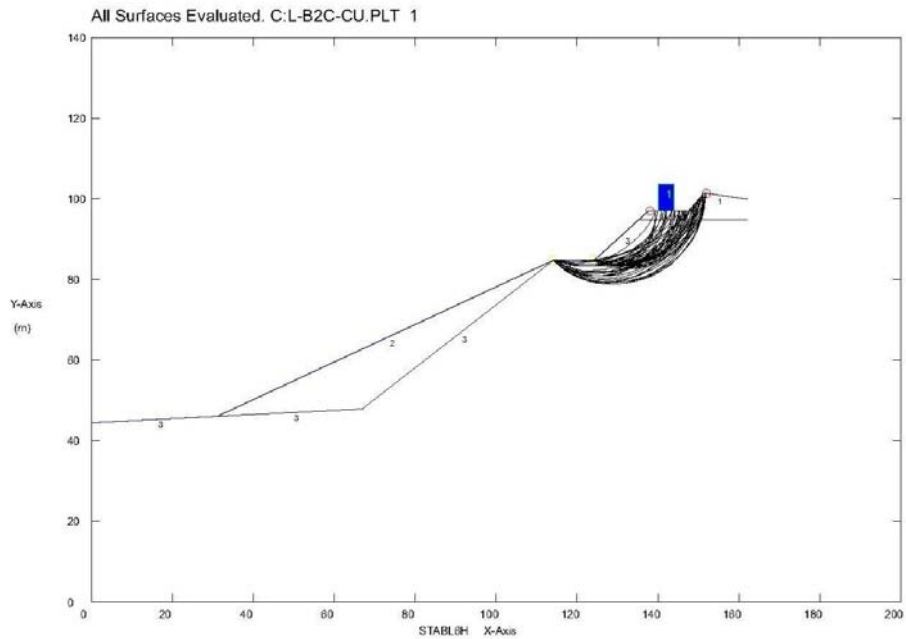
Circle Center At X = 56.0 ; Y = 149.9 and Radius, 106.9

*** 1.139 ***

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SCHEDA GRAFICA N. 3

VERIFICA A BREVE TERMINE (PISTA) VERSANTE NE *(Sezione vista da Est)*.
Stato di progetto -SEZIONE B (calcolo)



VERIFICA A BREVE TERMINE (PISTA) VERSANTE NE. Stato di progetto - SEZIONE B (report)

** STABL6H **
by

Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:L-B2C-CU.SI
Output Filename: C:L-B2C-CU.OUT
Plotted Output Filename: C:L-B2C-CU.PLT

PROBLEM DESCRIPTION sezione long B
versante NE gradone breve termine

BOUNDARY COORDINATES
7 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	44.50	31.20	46.00	3
2	31.20	46.00	114.40	85.00	2
3	114.40	85.00	124.50	85.00	3
4	124.50	85.00	137.50	97.00	3
5	137.50	97.00	147.50	97.00	1
6	147.50	97.00	151.50	101.40	1
7	151.50	101.40	162.00	99.90	1
8	135.00	95.00	162.00	95.00	3
9	31.20	46.00	67.00	48.00	3
10	67.00	48.00	114.40	85.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	17.5	18.0	15.0	21.0	.00	.0	0
2	17.0	20.0	20.0	18.0	.00	.0	0
3	19.5	20.5	190.0	.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	140.00	144.00	100.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa
A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.

60 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 2 Points Equally Spaced
Along The Ground Surface Between X = 114.00 mt.
and X = 124.00 mt.

Each Surface Terminates Between X = 138.00 mt.
and X = 152.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 mt.

2.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 15 Coordinate Points

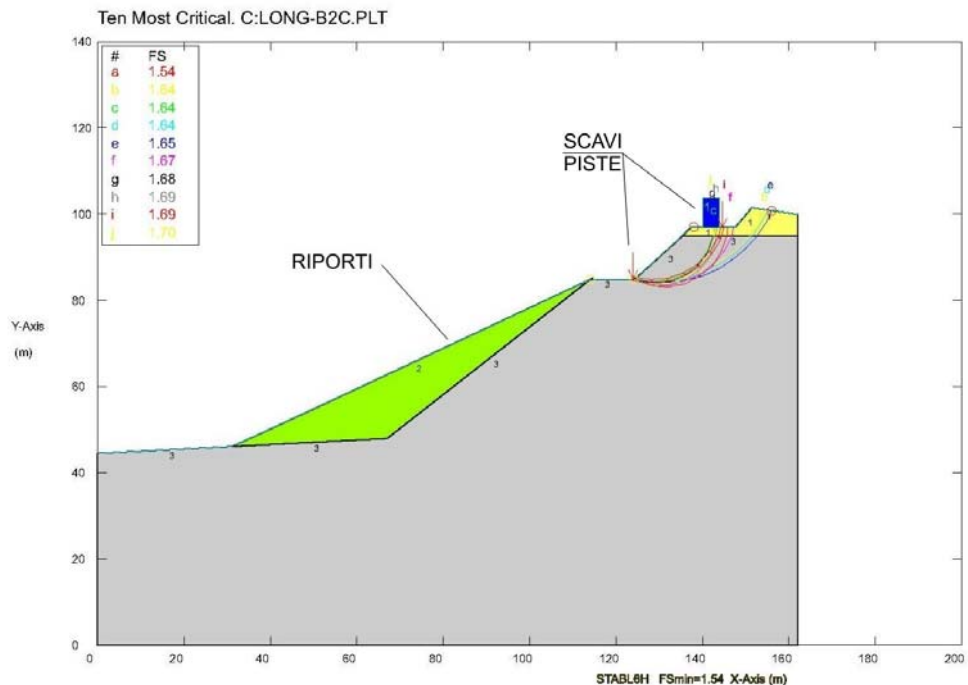
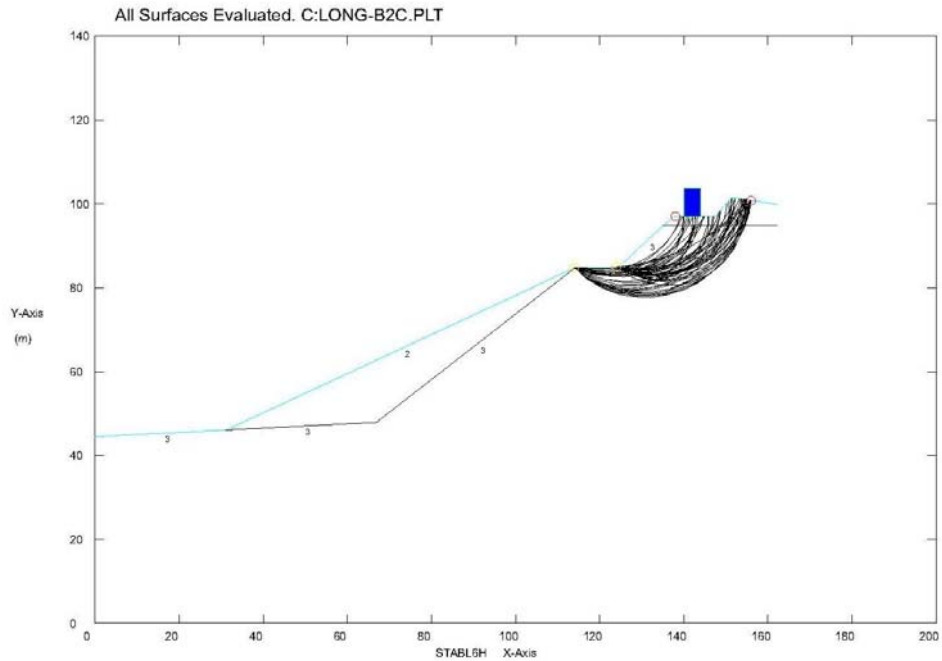
Point No.	X-Surf (mt)	Y-Surf (mt)
1	124.00	85.00
2	125.90	84.37
3	127.86	84.00
4	129.86	83.90
5	131.85	84.07
6	133.81	84.51
7	135.68	85.20
8	137.44	86.15
9	139.07	87.32
10	140.51	88.70
11	141.76	90.26
12	142.79	91.98
13	143.57	93.82
14	144.10	95.75
15	144.27	97.00

Circle Center At X = 129.6 ; Y = 98.7 and Radius, 14.8

*** 3.428 ***

SCHEDA GRAFICA N. 4

VERIFICA A LUNGO TERMINE (PISTA) VERSANTE NE (Sezione vista da Est).

Stato di progetto-SEZIONE B (calcolo)


Soil Type No. Label	Total Unit Wt. (KN/m3)	Saturated Unit Wt. (KN/m3)	Cohesion intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1 detrit0	17.5	18	15	21	0	0	
2 riport	17	20	20	18	0	0	
3 marne az	19.5	20.5	60	13	0	0	

VERIFICA A LUNGO TERMINE (PISTA) VERSANTE NE. Stato di progetto-SEZIONE B (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:LONG-B2C.SI
Output Filename: C:LONG-B2C.OUT
Plotted Output Filename: C:LONG-B2C.PLT

PROBLEM DESCRIPTION sezione long B versante NE gradone

BOUNDARY COORDINATES

7 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	44.50	31.20	46.00	3
2	31.20	46.00	114.40	85.00	2
3	114.40	85.00	124.50	85.00	3
4	124.50	85.00	137.50	97.00	3
5	137.50	97.00	147.50	97.00	1
6	147.50	97.00	151.50	101.40	1
7	151.50	101.40	162.00	99.90	1
8	135.00	95.00	162.00	95.00	3
9	31.20	46.00	67.00	48.00	3
10	67.00	48.00	114.40	85.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	17.5	18.0	15.0	21.0	.00	.0	0
2	17.0	20.0	20.0	18.0	.00	.0	0
3	19.5	20.5	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	140.00	144.00	100.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.

60 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 2 Points Equally Spaced
Along The Ground Surface Between X = 114.00 mt.
and X = 124.00 mt.

Each Surface Terminates Between X = 138.00 mt.
and X = 156.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 mt.

4.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

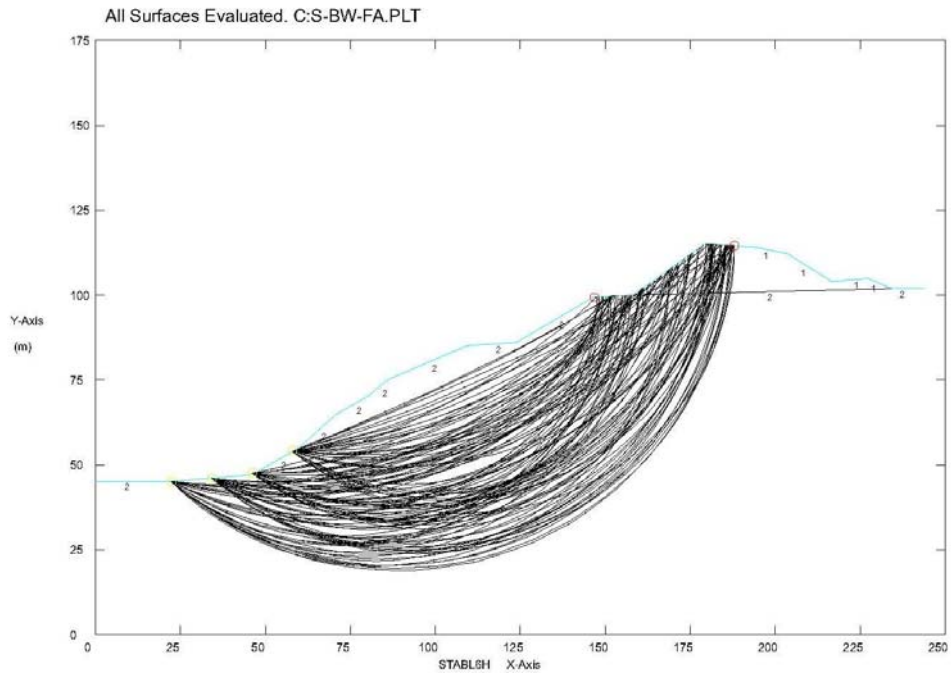
Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	124.00	85.00
2	127.95	84.37
3	131.94	84.70
4	135.73	85.97
5	139.11	88.11
6	141.87	91.00
7	143.87	94.47
8	144.59	97.00

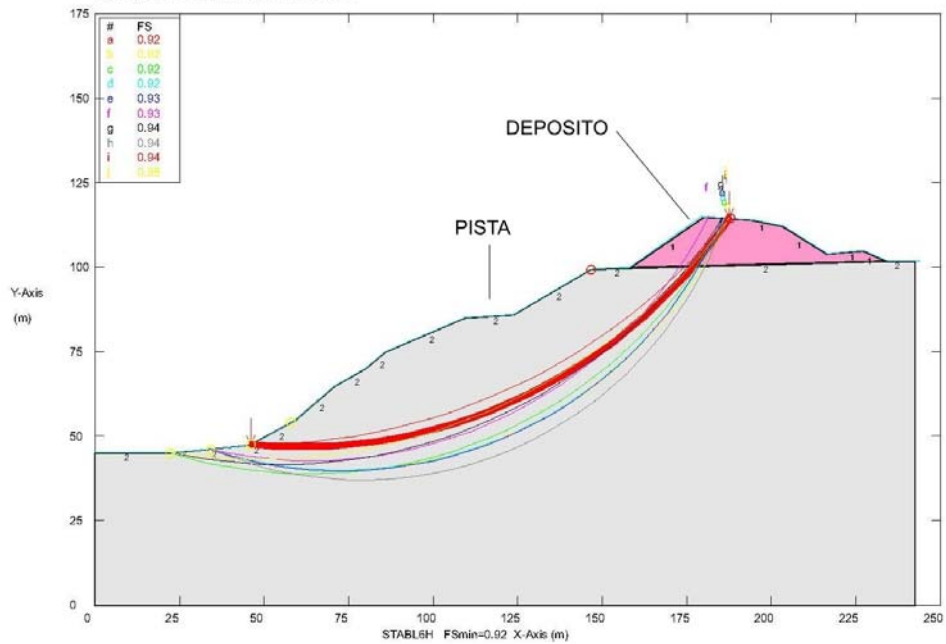
Circle Center At X = 128.6 ; Y = 101.0 and Radius, 16.6

*** 1.539 ***

VERIFICA GLOBALE VERSANTE SW (*Sezione vista da Ovest*). Stato di fatto - SEZIONE B (calcolo)



longit. B lato SW verif. globale stato di fatto
Ten Most Critical. C:S-BW-FA.PLT



Soil Type No. Label	Total Unit Wt. (KN/m3)	Saturated Unit Wt. (KN/m3)	Cohesion intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1	17	19	10	20	0	0	
2	19.3	20	60	13	0	0	

VERIFICA GLOBALE VERSANTE SW. Stato di fatto - SEZIONE B (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:S-BW-FA.SI
Output Filename: C:S-BW-FA.OUT
Plotted Output Filename: C:S-BW-FA.PLT

PROBLEM DESCRIPTION LONGIT. B LATO SW
VERIF. GLOBALE STATO DI FATTO

BOUNDARY COORDINATES
18 Top Boundaries
19 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt) Soil Type low Bnd	X-Right (mt)	Y-Right (mt)	Be-
1	.00	45.00	22.40	45.00	2
2	22.40	45.00	44.60	47.00	2
3	44.60	47.00	47.40	48.00	2
4	47.40	48.00	59.50	55.00	2
5	59.50	55.00	71.00	65.00	2
6	71.00	65.00	80.20	70.00	2
7	80.20	70.00	85.90	75.00	2
8	85.90	75.00	109.50	85.00	2
9	109.50	85.00	123.90	86.00	2
10	123.90	86.00	146.80	99.30	2
11	146.80	99.30	158.40	100.00	2
12	158.40	100.00	179.40	115.00	1
13	179.40	115.00	194.20	114.20	1
14	194.20	114.20	203.50	112.30	1
15	203.50	112.30	216.50	104.00	1
16	216.50	104.00	227.20	105.00	1
17	227.20	105.00	234.30	101.90	1
18	234.30	101.90	244.00	101.90	2
19	158.50	100.00	234.30	101.90	2

ISOTROPIC SOIL PARAMETERS

2 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)
1	17.0	18.0	10.00	20.0	.00	.0
2	19.3	20.0	60.00	13.0	.00	.0

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been
Specified.

120 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 4 Points Equally
Spaced
Along The Ground Surface Between X = 22.40 mt.
and X = 58.00 mt.

Each Surface Terminates Between X = 146.80 mt.
and X = 188.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 mt.

6.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

* * Safety Factors Are Calculated By The Modified Bishop
Method * *

Failure Surface Specified By 29 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	46.13	47.55
2	52.12	47.08
3	58.11	46.85
4	64.11	46.85

5	70.11	47.09
6	76.09	47.56
7	82.05	48.27
8	87.97	49.22
9	93.85	50.39
10	99.69	51.80
11	105.46	53.44
12	111.16	55.30
13	116.79	57.38
14	122.33	59.69
15	127.77	62.21
16	133.12	64.94
17	138.34	67.88
18	143.45	71.03
19	148.44	74.37
20	153.28	77.91
21	157.99	81.63
22	162.54	85.54
23	166.94	89.62
24	171.17	93.88
25	175.23	98.29
26	179.11	102.87
27	182.82	107.59
28	186.33	112.45
29	187.72	114.55

Circle Center At X = 61.0 ; Y = 199.2 and Radius, 152.4

*** .920 ***

Failure Surface Specified By 32 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	34.27	46.07
2	40.02	44.36
3	45.85	42.94
4	51.74	41.79
5	57.67	40.93
6	63.65	40.35
7	69.64	40.05
8	75.64	40.05
9	81.63	40.33
10	87.61	40.90
11	93.54	41.75
12	99.44	42.88
13	105.27	44.30
14	111.02	45.99
15	116.69	47.96
16	122.26	50.19
17	127.71	52.69
18	133.04	55.45
19	138.24	58.46
20	143.28	61.71
21	148.16	65.20
22	152.86	68.92
23	157.39	72.86
24	161.72	77.02

25	165.85	81.37
26	169.76	85.92
27	173.45	90.65
28	176.91	95.55
29	180.14	100.61
30	183.11	105.82
31	185.84	111.17
32	187.37	114.57

Circle Center At X = 72.8 ; Y = 165.4 and Radius, 125.4

*** .920 ***

Failure Surface Specified By 34 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
--------------	----------------	----------------

1	22.40	45.00
2	28.17	43.34
3	34.00	41.93
4	39.89	40.78
5	45.82	39.88
6	51.79	39.25
7	57.77	38.87
8	63.77	38.76
9	69.77	38.91
10	75.76	39.32
11	81.72	39.99
12	87.65	40.92
13	93.53	42.11
14	99.35	43.55
15	105.11	45.24
16	110.78	47.19
17	116.37	49.38
18	121.85	51.81
19	127.23	54.48
20	132.48	57.38
21	137.60	60.51
22	142.58	63.85
23	147.41	67.41
24	152.08	71.18
25	156.58	75.15
26	160.90	79.31
27	165.04	83.66
28	168.98	88.18
29	172.73	92.87
30	176.26	97.72
31	179.58	102.71
32	182.68	107.85
33	185.56	113.12
34	186.29	114.63

Circle Center At X = 63.4 ; Y = 176.3 and Radius, 137.6

*** .924 ***

Failure Surface Specified By 32 Coordinate Points

Point	X-Surf	Y-Surf
-------	--------	--------

No.	(mt)	(mt)
1	34.27	46.07
2	40.01	44.33
3	45.83	42.87
4	51.71	41.69
5	57.65	40.81
6	63.62	40.21
7	69.61	39.90
8	75.61	39.89
9	81.60	40.17
10	87.57	40.74
11	93.51	41.60
12	99.40	42.75
13	105.23	44.19
14	110.98	45.90
15	116.63	47.90
16	122.19	50.17
17	127.63	52.70
18	132.93	55.50
19	138.10	58.56
20	143.11	61.86
21	147.95	65.40
22	152.62	69.17
23	157.09	73.17
24	161.37	77.38
25	165.43	81.79
26	169.28	86.40
27	172.89	91.19
28	176.27	96.14
29	179.41	101.26
30	182.29	106.53
31	184.91	111.92
32	186.07	114.64

Circle Center At X = 72.9 ; Y = 163.0 and Radius, 123.1

*** .924 ***

Failure Surface Specified By 32 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	34.27	46.07
2	40.00	44.29
3	45.81	42.79
4	51.68	41.58
5	57.61	40.67
6	63.58	40.04
7	69.57	39.71
8	75.57	39.68
9	81.57	39.94
10	87.54	40.49
11	93.48	41.34
12	99.37	42.48
13	105.20	43.91
14	110.95	45.62
15	116.61	47.61

16	122.16	49.88
17	127.60	52.42
18	132.90	55.23
19	138.06	58.29
20	143.06	61.60
21	147.90	65.16
22	152.55	68.95
23	157.01	72.96
24	161.27	77.19
25	165.31	81.62
26	169.13	86.24
27	172.72	91.05
28	176.07	96.03
29	179.17	101.17
30	182.01	106.45
31	184.59	111.87
32	185.75	114.66

Circle Center At X = 73.3 ; Y = 161.5 and Radius, 121.9

*** .926 ***

Failure Surface Specified By 31 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	34.27	46.07
2	40.14	44.84
3	46.06	43.89
4	52.02	43.20
5	58.01	42.78
6	64.01	42.64
7	70.01	42.78
8	75.99	43.18
9	81.95	43.86
10	87.88	44.81
11	93.75	46.03
12	99.57	47.52
13	105.31	49.26
14	110.96	51.27
15	116.52	53.54
16	121.96	56.05
17	127.29	58.81
18	132.49	61.81
19	137.54	65.05
20	142.44	68.51
21	147.18	72.19
22	151.74	76.08
23	156.13	80.18
24	160.32	84.47
25	164.31	88.95
26	168.09	93.61
27	171.66	98.44
28	175.01	103.42
29	178.12	108.55
30	180.99	113.81
31	181.52	114.89

Circle Center At X = 64.1 ; Y = 174.2 and Radius, 131.6

*** .934 ***

Failure Surface Specified By 33 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	22.40	45.00
2	28.29	43.85
3	34.22	42.94
4	40.18	42.25
5	46.16	41.80
6	52.16	41.59
7	58.16	41.60
8	64.15	41.85
9	70.13	42.34
10	76.09	43.06
11	82.02	44.01
12	87.90	45.19
13	93.73	46.60
14	99.50	48.23
15	105.21	50.09
16	110.84	52.17
17	116.38	54.47
18	121.83	56.98
19	127.17	59.71
20	132.41	62.64
21	137.52	65.77
22	142.52	69.10
23	147.37	72.62
24	152.09	76.33
25	156.66	80.22
26	161.07	84.29
27	165.32	88.52
28	169.40	92.92
29	173.31	97.47
30	177.04	102.18
31	180.58	107.02
32	183.93	112.00
33	185.57	114.67

Circle Center At X = 54.7 ; Y = 195.3 and Radius, 153.7

*** .936 ***

Failure Surface Specified By 33 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	34.27	46.07
2	39.85	43.86
3	45.53	41.95
4	51.32	40.35
5	57.17	39.05
6	63.09	38.07
7	69.06	37.40
8	75.05	37.04

9	81.05	37.01
10	87.04	37.29
11	93.01	37.89
12	98.94	38.80
13	104.81	40.03
14	110.61	41.56
15	116.32	43.40
16	121.93	45.54
17	127.41	47.98
18	132.76	50.70
19	137.96	53.70
20	142.99	56.97
21	147.84	60.50
22	152.49	64.28
23	156.94	68.31
24	161.17	72.56
25	165.17	77.04
26	168.93	81.71
27	172.44	86.58
28	175.68	91.63
29	178.65	96.85
30	181.34	102.21
31	183.74	107.71
32	185.85	113.33
33	186.26	114.63

Circle Center At X = 78.7 ; Y = 150.3 and Radius, 113.3

*** .942 ***

Failure Surface Specified By 28 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	46.13	47.55
2	52.13	47.60
3	58.13	47.86
4	64.11	48.31
5	70.07	48.97
6	76.01	49.83
7	81.92	50.88
8	87.79	52.13
9	93.61	53.58
10	99.38	55.22
11	105.09	57.05
12	110.74	59.08
13	116.32	61.29
14	121.82	63.69
15	127.24	66.27
16	132.56	69.03
17	137.80	71.97
18	142.93	75.08
19	147.95	78.36
20	152.86	81.81
21	157.65	85.42
22	162.32	89.19
23	166.86	93.11
24	171.26	97.19

25	175.53	101.40
26	179.65	105.76
27	183.63	110.26
28	187.20	114.58

Circle Center At X = 47.5 ; Y = 226.6 and Radius, 179.1

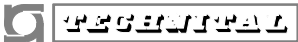
*** .942 **

Failure Surface Specified By 33 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	22.40	45.00
2	28.35	44.22
3	34.32	43.66
4	40.31	43.29
5	46.31	43.14
6	52.31	43.20
7	58.30	43.46
8	64.29	43.93
9	70.25	44.61
10	76.18	45.49
11	82.08	46.58
12	87.94	47.88
13	93.75	49.38
14	99.51	51.07
15	105.20	52.97
16	110.82	55.06
17	116.37	57.35
18	121.83	59.82
19	127.21	62.49
20	132.49	65.34
21	137.67	68.37
22	142.74	71.58
23	147.69	74.97
24	152.53	78.52
25	157.23	82.24
26	161.81	86.12
27	166.25	90.16
28	170.55	94.34
29	174.69	98.68
30	178.69	103.15
31	182.53	107.77
32	186.20	112.51
33	187.68	114.55

Circle Center At X = 47.7 ; Y = 216.0 and Radius, 172.9

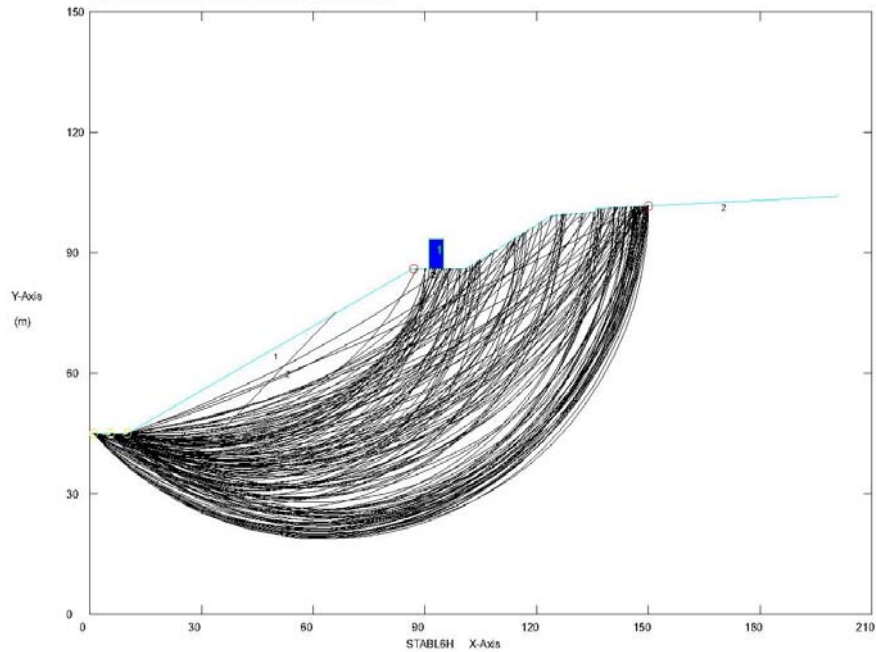
*** .948 ***

	Rev. 1	Data Settembre 2012	El. A18-9-trunc103	Pag. n. 38

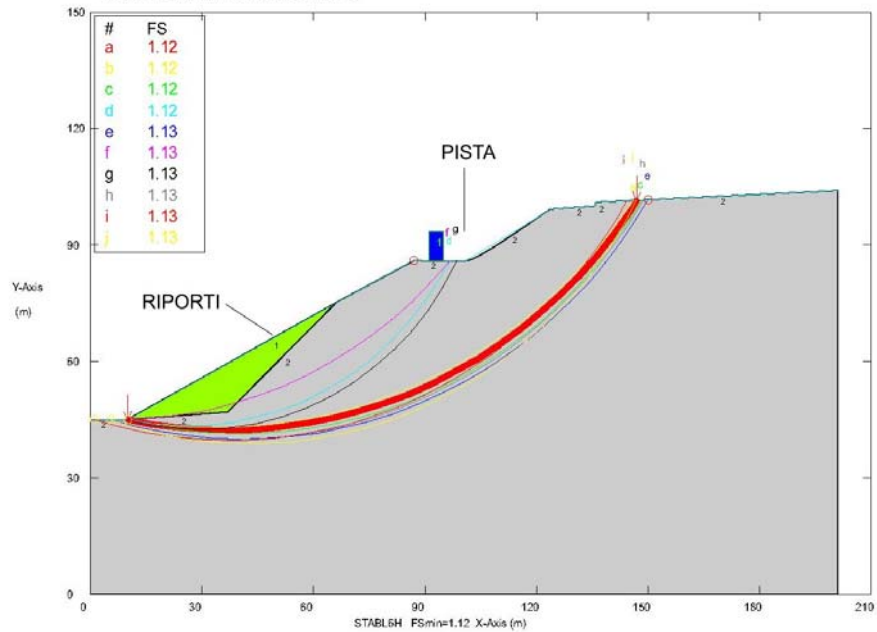
SCHEDA GRAFICA N. 6

VERIFICA GLOBALE A LUNGO TERMINE VERSANTE SW (Sezione vista da Ovest). **Stato di progetto -SEZIONE B (calcolo)**

All Surfaces Evaluated. C:TRUN-BW1.PLT



Ten Most Critical. C:TRUN-BW1.PLT



Soil Type No. Label	Total Unit Wt. (KN/m3)	Saturated Unit Wt. (KN/m3)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1 riport	17	15	20	15	0	0	
2 marne az	19.3	20	60	13	0	0	

VERIFICA GLOBALE A LUNGO TERMINE VERSANTE SW. Stato di progetto - SEZIONE B (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:TRUN-BW1.SI
Output Filename: C:TRUN-BW1.OUT
Plotted Output Filename: C:TRUN-BW1.PLT

PROBLEM DESCRIPTION longitud b sw

BOUNDARY COORDINATES

7 Top Boundaries

9 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	45.00	10.00	45.00	2
2	10.00	45.00	86.70	86.00	1
3	86.70	86.00	101.00	86.00	2
4	101.00	86.00	124.00	99.30	2
5	124.00	99.30	135.60	100.00	2
6	135.60	100.00	136.00	101.00	2
7	136.00	101.00	201.00	104.00	2
8	10.00	45.00	37.00	47.00	2
9	37.00	47.00	66.00	75.00	2

ISOTROPIC SOIL PARAMETERS

2 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param. (Kpa)	Pressure Constant (Kpa)	Piez. Surface No.
1	17.0	18.0	20.0	18.0	.00	.0	0
2	19.3	20.0	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	91.00	95.00	300.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient

Of .030 Has Been Assigned

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

150 Trial Surfaces Have Been Generated.

50 Surfaces Initiate From Each Of 3 Points Equally Spaced Along The Ground Surface Between X = 1.00 mt. and X = 10.00 mt.

Each Surface Terminates Between X = 87.00 mt. and X = 150.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 mt. 7.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 24 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	10.00	45.00
2	16.89	43.77
3	23.84	42.90
4	30.82	42.40
5	37.82	42.28
6	44.81	42.52
7	51.79	43.13
8	58.72	44.11
9	65.59	45.45
10	72.38	47.16
11	79.07	49.22
12	85.64	51.63
13	92.07	54.38
14	98.36	57.47
15	104.46	60.89
16	110.38	64.63
17	116.10	68.67
18	121.59	73.01
19	126.84	77.64
20	131.85	82.53
21	136.58	87.69
22	141.04	93.08
23	145.21	98.71
24	147.07	101.51

Circle Center At X = 36.7 ; Y = 174.7 and Radius, 132.5

*** 1.118 ***

Failure Surface Specified By 24 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	10.00	45.00
2	16.93	43.98
3	23.89	43.31
4	30.89	43.00
5	37.89	43.04
6	44.88	43.44
7	51.83	44.19
8	58.75	45.29
9	65.59	46.75
10	72.36	48.55
11	79.02	50.69
12	85.57	53.17
13	91.98	55.98
14	98.24	59.11
15	104.34	62.55
16	110.25	66.30
17	115.96	70.35
18	121.46	74.68
19	126.73	79.28
20	131.77	84.15
21	136.55	89.26
22	141.06	94.61
23	145.29	100.19
24	146.17	101.47

Circle Center At X = 33.6 ; Y = 180.7 and Radius, 137.7

*** 1.118 ***

Failure Surface Specified By 24 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	10.00	45.00
2	16.84	43.52
3	23.75	42.42
4	30.72	41.70
5	37.71	41.36
6	44.71	41.41
7	51.70	41.85
8	58.65	42.67
9	65.54	43.87
10	72.36	45.45
11	79.08	47.41
12	85.69	49.73
13	92.15	52.41
14	98.46	55.45
15	104.59	58.83
16	110.53	62.54
17	116.25	66.57
18	121.74	70.91
19	126.98	75.55
20	131.96	80.47
21	136.66	85.66
22	141.07	91.10

23	145.17	96.77
24	148.25	101.57

Circle Center At X = 40.3 ; Y = 168.3 and Radius, 126.9

*** 1.120 ***

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	10.00	45.00
2	16.91	43.91
3	23.90	43.42
4	30.90	43.55
5	37.86	44.28
6	44.73	45.63
7	51.45	47.56
8	57.99	50.08
9	64.27	53.16
10	70.27	56.78
11	75.92	60.90
12	81.19	65.51
13	86.04	70.56
14	90.43	76.01
15	94.33	81.82
16	96.63	86.00

Circle Center At X = 26.0 ; Y = 123.4 and Radius, 80.0

*** 1.122 ***

Failure Surface Specified By 25 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	5.50	45.00
2	12.28	43.24
3	19.14	41.85
4	26.06	40.85
5	33.04	40.22
6	40.03	39.98
7	47.03	40.13
8	54.01	40.66
9	60.95	41.57
10	67.83	42.86
11	74.63	44.53
12	81.33	46.57
13	87.90	48.97
14	94.33	51.73
15	100.60	54.84
16	106.69	58.29
17	112.58	62.07
18	118.26	66.17
19	123.70	70.58
20	128.89	75.27

21	133.82	80.25
22	138.46	85.48
23	142.81	90.97
24	146.85	96.68
25	149.96	101.64

Circle Center At X = 40.9 ; Y = 167.3 and Radius, 127.3

*** 1.127 ***

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	10.00	45.00
2	16.99	45.35
3	23.95	46.12
4	30.85	47.31
5	37.66	48.90
6	44.37	50.90
7	50.95	53.30
8	57.37	56.08
9	63.61	59.25
10	69.66	62.78
11	75.48	66.67
12	81.06	70.90
13	86.37	75.46
14	91.40	80.32
15	96.13	85.48
16	96.56	86.00

Circle Center At X = 7.6 ; Y = 161.9 and Radius, 117.0

*** 1.129 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	10.00	45.00
2	16.84	43.52
3	23.79	42.68
4	30.79	42.48
5	37.78	42.91
6	44.69	43.99
7	51.48	45.69
8	58.09	48.01
9	64.45	50.92
10	70.52	54.40
11	76.25	58.43
12	81.59	62.96
13	86.49	67.96
14	90.91	73.39
15	94.81	79.20
16	98.17	85.34
17	98.45	86.00

Circle Center At X = 29.5 ; Y = 118.9 and Radius, 76.4

*** 1.129 ***

Failure Surface Specified By 26 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	1.00	45.00
2	7.77	43.22
3	14.63	41.81
4	21.55	40.76
5	28.52	40.09
6	35.51	39.79
7	42.51	39.86
8	49.49	40.31
9	56.45	41.13
10	63.34	42.32
11	70.17	43.88
12	76.90	45.80
13	83.52	48.08
14	90.01	50.71
15	96.35	53.68
16	102.52	56.99
17	108.50	60.62
18	114.28	64.56
19	119.85	68.81
20	125.17	73.35
21	130.25	78.17
22	135.07	83.25
23	139.60	88.58
24	143.84	94.15
25	147.78	99.94
26	148.78	101.59

Circle Center At X = 37.6 ; Y = 170.7 and Radius, 130.9

*** 1.129 ***

Failure Surface Specified By 25 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	1.00	45.00
2	7.75	43.15
3	14.59	41.68
4	21.51	40.60
5	28.48	39.91
6	35.47	39.62
7	42.47	39.72
8	49.45	40.22
9	56.40	41.11
10	63.28	42.39
11	70.07	44.06
12	76.77	46.12
13	83.33	48.54
14	89.75	51.34
15	96.00	54.49

16	102.07	57.99
17	107.92	61.82
18	113.55	65.98
19	118.93	70.46
20	124.06	75.23
21	128.90	80.28
22	133.46	85.60
23	137.70	91.16
24	141.62	96.96
25	144.27	101.38

Circle Center At X = 37.1 ; Y = 163.4 and Radius, 123.8

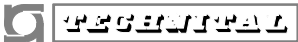
*** 1.130 ***

Failure Surface Specified By 25 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	5.50	45.00
2	12.19	42.95
3	19.00	41.30
4	25.89	40.06
5	32.84	39.23
6	39.82	38.82
7	46.82	38.83
8	53.81	39.26
9	60.76	40.10
10	67.65	41.36
11	74.44	43.03
12	81.13	45.10
13	87.68	47.57
14	94.07	50.42
15	100.29	53.65
16	106.29	57.24
17	112.07	61.19
18	117.61	65.48
19	122.87	70.09
20	127.86	75.00
21	132.54	80.21
22	136.90	85.68
23	140.93	91.41
24	144.61	97.36
25	146.83	101.50

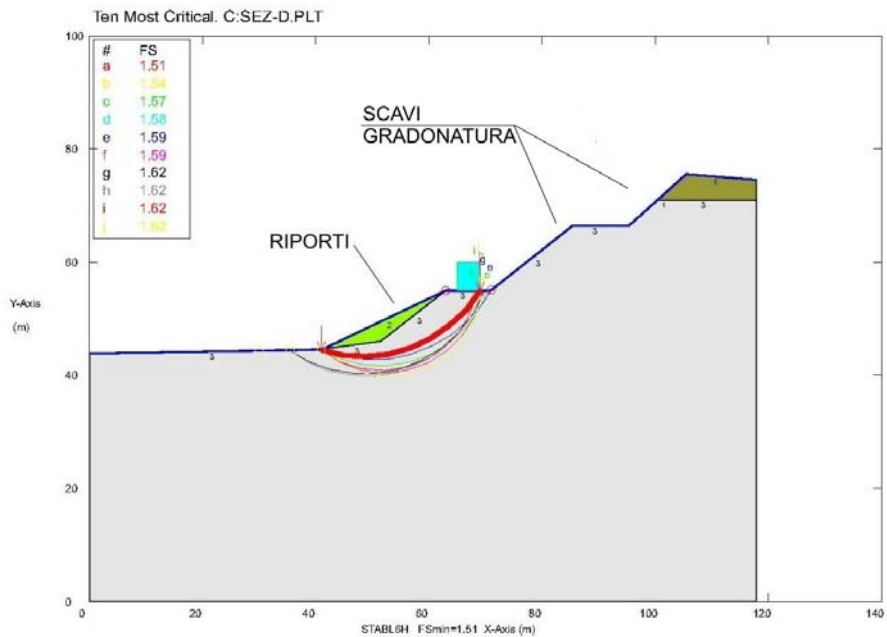
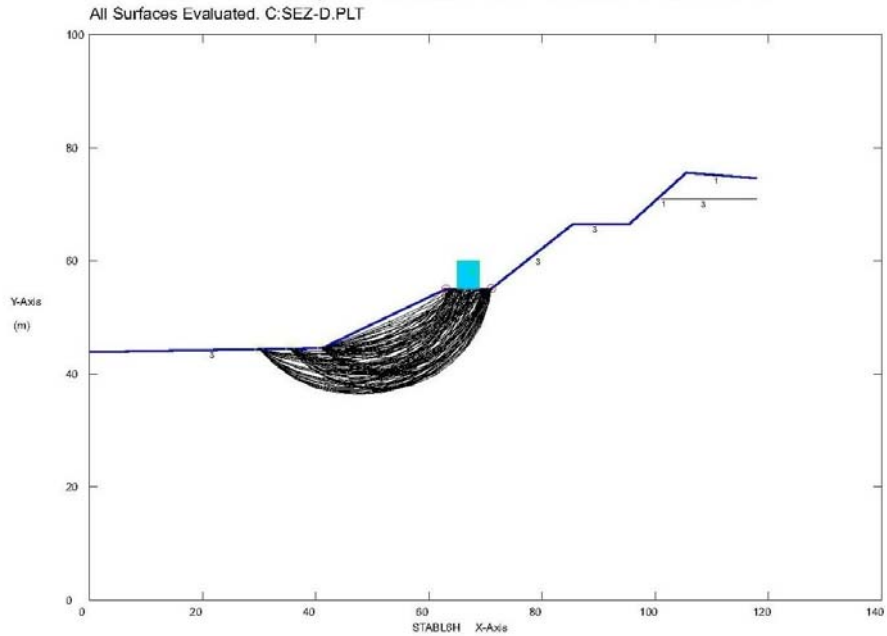
Circle Center At X = 43.2 ; Y = 155.9 and Radius, 117.1

*** 1.131 ***

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SCHEDA GRAFICA N. 7

VERIFICA (PISTA DI SERVIZIO) VERSANTE NE (*Sezione vista da Est*). **Stato di progetto** -SEZIONE D (calcolo)



Soil Type No. Label	Total Unit Wt. (kN/m ³)	Saturated Unit Wt. (kN/m ³)	Cohesion Intercept (kPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (kPa)	Piez. Surface No.
1 dot	17.5	15	15	21	0	0	
2 report	17	19	20	18	0	0	
3 name az	19.3	20	60	13	0	0	

VERIFICA (PISTA DI SERVIZIO) VERSANTE NE. Stato di progetto -SEZIONE D (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:SEZ-D.SI
Output Filename: C:SEZ-D.OUT
Plotted Output Filename: C:SEZ-D.PLT

PROBLEM DESCRIPTION sezione long D NE
1 gradone

BOUNDARY COORDINATES
7 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	43.80	41.00	44.50	3
2	41.00	44.50	62.90	55.00	2
3	62.90	55.00	70.90	55.00	3
4	70.90	55.00	85.40	66.50	3
5	85.40	66.50	95.40	66.50	3
6	95.40	66.50	105.40	75.50	1
7	105.40	75.50	118.00	74.50	1
8	101.00	71.00	118.00	71.00	3
9	41.00	44.50	51.50	46.00	3
10	51.50	46.00	62.90	55.00	3

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	17.5	18.0	15.0	21.0	.00	.0	0
2	17.0	19.0	20.0	18.0	.00	.0	0
3	19.3	20.0	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S)
1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	65.00	69.00	300.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient

Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.

120 Trial Surfaces Have Been Generated.

40 Surfaces Initiate From Each Of 3 Points Equally Spaced
Along The Ground Surface Between X = 30.00 mt.
and X = 41.00 mt.

Each Surface Terminates Between X = 63.00 mt.
and X = 71.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 mt.

4.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 10 Coordinate Points

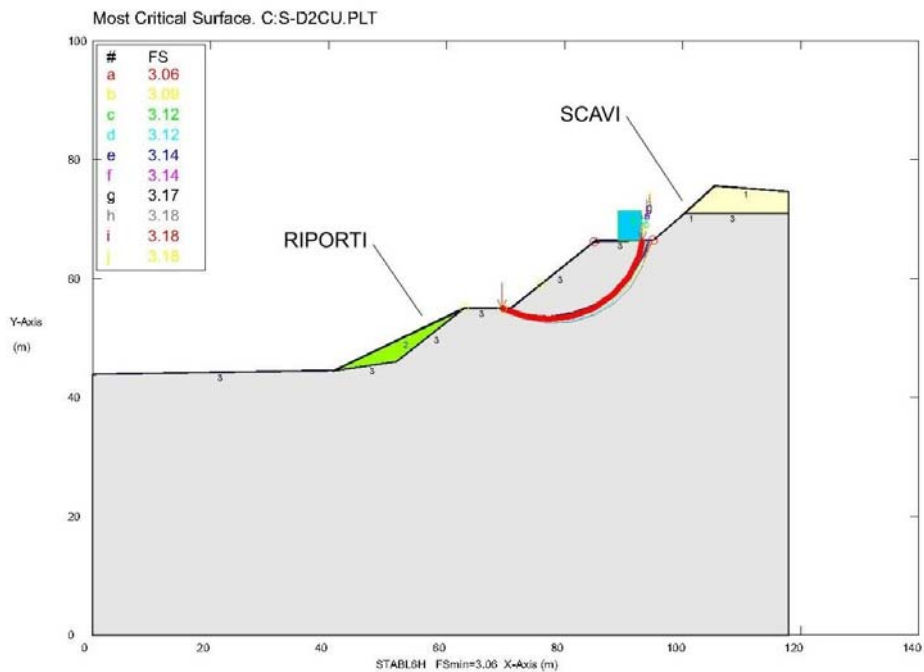
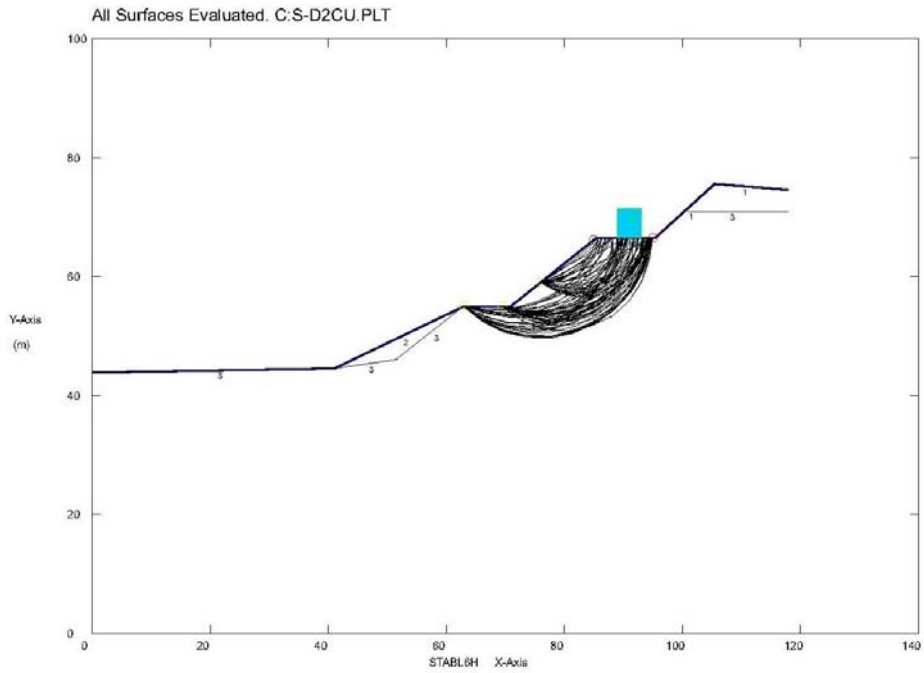
Point No.	X-Surf (mt)	Y-Surf (mt)
1	41.00	44.50
2	44.90	43.60
3	48.89	43.35
4	52.87	43.76
5	56.72	44.83
6	60.35	46.51
7	63.65	48.77
8	66.53	51.55
9	68.92	54.76
10	69.04	55.00

Circle Center At X = 48.4 ; Y = 67.5 and Radius, 24.2

*** 1.508 ***

SCHEDA GRAFICA N. 8

VERIFICA GRADONE INTERMEDIO A BREVE TERMINE VERSANTE NE (Sezione vista da Est). Stato di progetto -SEZIONE D (calcolo)



Soil Type No. Label	Total Unit WL (kN/m ³)	Saturated Unit WL (kN/m ³)	Cohesion Intercept (kPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (kPa)	Piez. Surface No.
1 detrl	17.5	18	15	20	0	0	
2 riport	17	19	20	18	0	0	
3 marne az	19.3	20	183	0	0	0	

VERIFICA GRADONE INTERMEDIO A BREVE TERMINE VERSANTE NE. Stato di progetto -SEZIONE D (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:S-D2CU.SI
Output Filename: C:S-D2CU.OUT
Plotted Output Filename: C:S-D2CU.PLT

PROBLEM DESCRIPTION sezione long D NE nuovo scavo
2 gradone

BOUNDARY COORDINATES

7 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	43.80	41.00	44.50	3
2	41.00	44.50	62.90	55.00	2
3	62.90	55.00	70.90	55.00	3
4	70.90	55.00	85.40	66.50	3
5	85.40	66.50	95.40	66.50	3
6	95.40	66.50	105.40	75.50	1
7	105.40	75.50	118.00	74.50	1
8	101.00	71.00	118.00	71.00	3
9	41.00	44.50	51.50	46.00	3
10	51.50	46.00	62.90	55.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	17.5	18.0	15.0	20.0	.00	.0	0
2	17.0	19.0	20.0	18.0	.00	.0	0
3	19.3	20.0	183.0	.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)

1 89.00 93.00 200.0 .0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

90 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 3 Points Equally Spaced Along The Ground Surface Between X = 63.00 mt. and X = 76.00 mt.

Each Surface Terminates Between X = 85.00 mt. and X = 95.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 mt.

4.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.


* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	69.50	55.00
2	73.24	53.59
3	77.21	53.11
4	81.18	53.61
5	84.92	55.05
6	88.19	57.34
7	90.82	60.36
8	92.65	63.92
9	93.25	66.50

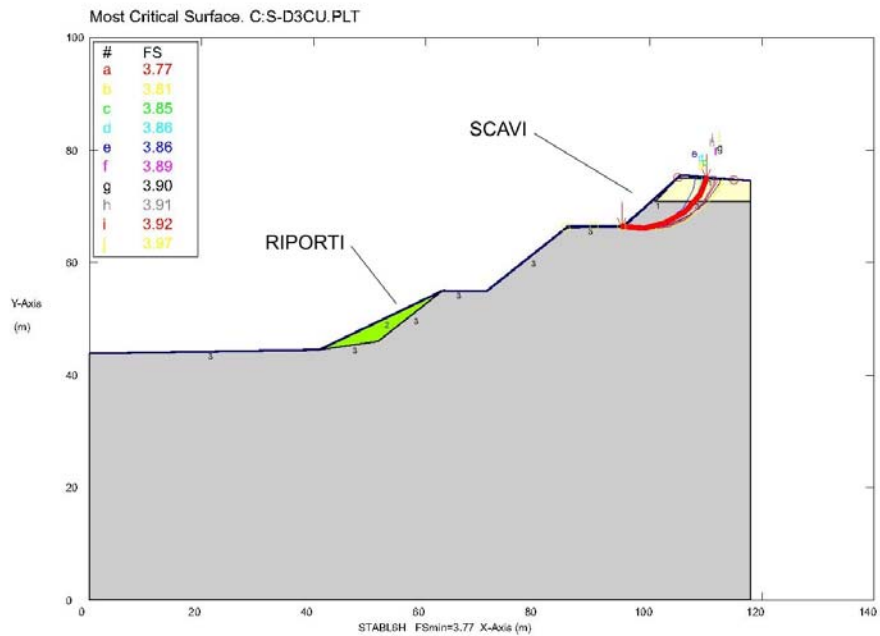
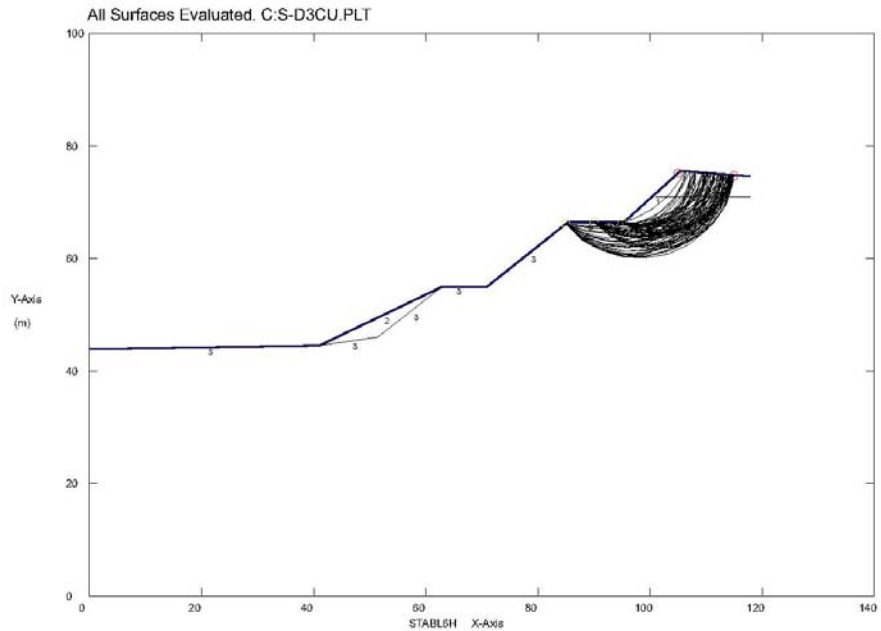
Circle Center At X = 77.2 ; Y = 69.6 and Radius, 16.5

*** 3.062 ***

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SCHEDA GRAFICA N. 9

**VERIFICA GRADONE INTERMEDIO A LUNGO TERMINE VERSANTE NE (*Se-*
zione vista da Est). **Stato di progetto** -SEZIONE D (calcolo)**



Soil Type No. Label	Total Unit WL (kN/m ³)	Saturated Unit WL (kN/m ³)	Cohesion Intercept (kPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (kPa)	Piez. Surface No.
1 detf	17.5	18	15	23	0	0	
2 riport	17	19	20	18	0	0	
3 name az	19.3	20	183	0	0	0	

VERIFICA GRADONE INTERMEDIO A LUNGO TERMINE VERSANTE NE. Stato di progetto -SEZIONE D (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run Date: 12-18-12
Time of Run: 1:45pm
Run By:
Input Data Filename: C:S-D3CU.SI
Output Filename: C:S-D3CU.OUT
Plotted Output Filename: C:S-D3CU.PLT

PROBLEM DESCRIPTION sezione long D NE nuovo scavo
1 gradone

BOUNDARY COORDINATES

7 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	43.80	41.00	44.50	3
2	41.00	44.50	62.90	55.00	2
3	62.90	55.00	70.90	55.00	3
4	70.90	55.00	85.40	66.50	3
5	85.40	66.50	95.40	66.50	3
6	95.40	66.50	105.40	75.50	1
7	105.40	75.50	118.00	74.50	1
8	101.00	71.00	118.00	71.00	3
9	41.00	44.50	51.50	46.00	3
10	51.50	46.00	62.90	55.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	17.5	18.0	15.0	20.0	.00	.0	0
2	17.0	19.0	20.0	18.0	.00	.0	0
3	19.3	20.0	183.0	.0	.00	.0	0

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

90 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 3 Points Equally Spaced Along The Ground Surface Between X = 85.00 mt. and X = 95.00 mt.

Each Surface Terminates Between X = 105.00 mt. and X = 115.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 mt.

4.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

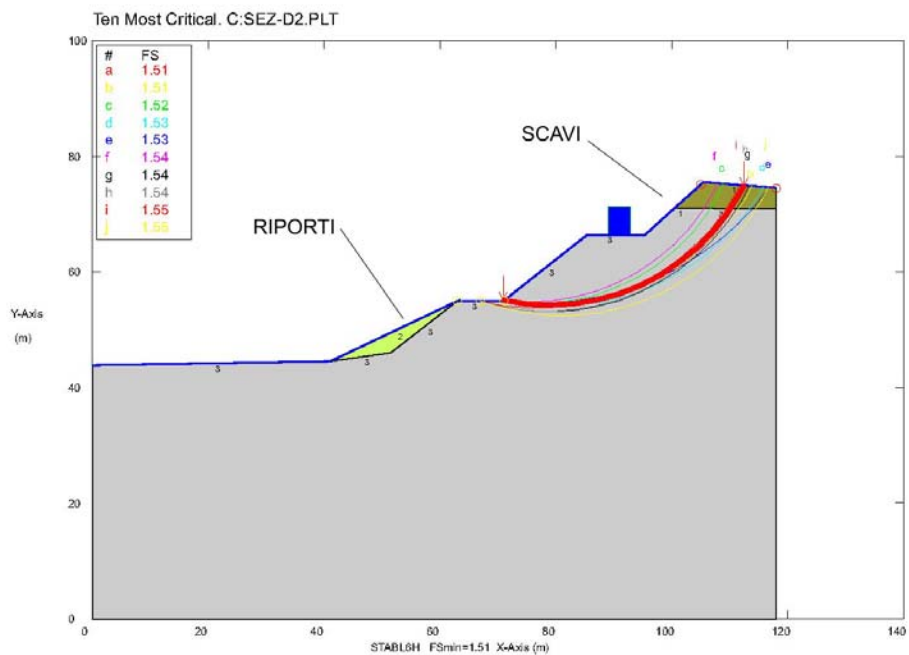
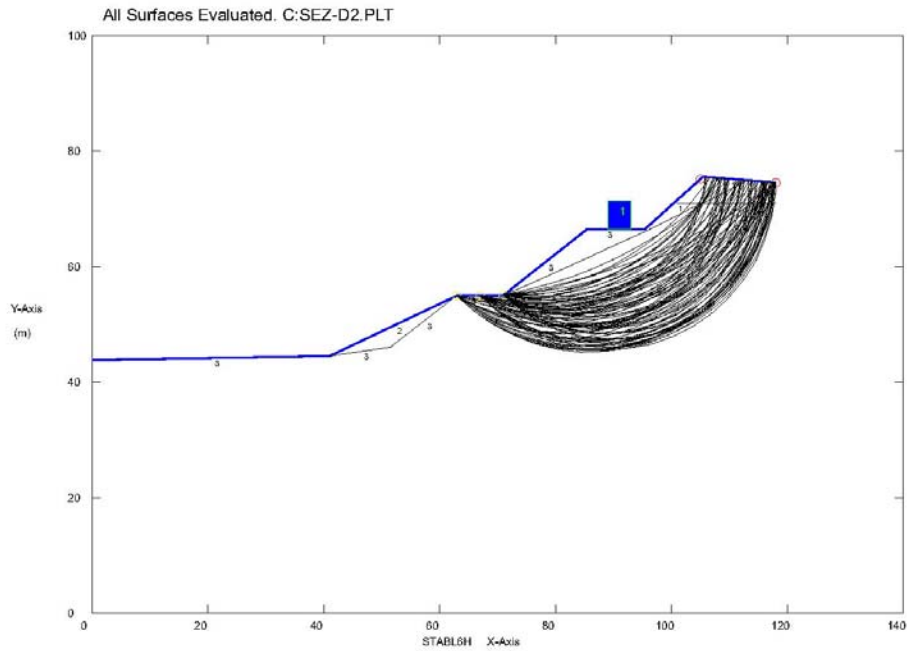
* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	95.00	66.50
2	98.98	66.14
3	102.88	67.04
4	106.30	69.12
5	108.89	72.17
6	110.09	75.13

Circle Center At X = 98.1 ; Y = 78.7 and Radius, 12.6

*** 3.769 ***

SCHEDA GRAFICA N. 10
VERIFICA GLOBALE SCAVI A LUNGO TERMINE VERSANTE NE (Sezione vista da Est). Stato di progetto -SEZIONE D (calcolo)


Soil Type No. Label	Total Unit Wt. (kNm ³)	Saturated Unit Wt. (kNm ³)	Cohesion Intercept (kPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (kPa)	Piez. Surface No.
1 delf	17,5	18	15	21	0	0	
2 riport	17	19	20	18	0	0	
3 marne az	19,3	20	60	13	0	0	

VERIFICA GLOBALE SCAVI A LUNGO TERMINE VERSANTE NE. [Stato di progetto](#) -SEZIONE D (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:SEZ-D2.SI
Output Filename: C:SEZ-D2.OUT
Plotted Output Filename: C:SEZ-D2.PLT

PROBLEM DESCRIPTION sezione long D NE
2 gradone

BOUNDARY COORDINATES

7 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	43.80	41.00	44.50	3
2	41.00	44.50	62.90	55.00	2
3	62.90	55.00	70.90	55.00	3
4	70.90	55.00	85.40	66.50	3
5	85.40	66.50	95.40	66.50	3
6	95.40	66.50	105.40	75.50	1
7	105.40	75.50	118.00	74.50	1
8	101.00	71.00	118.00	71.00	3
9	41.00	44.50	51.50	46.00	3
10	51.50	46.00	62.90	55.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	17.5	18.0	15.0	21.0	.00	.0	0
2	17.0	19.0	20.0	18.0	.00	.0	0
3	19.3	20.0	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)

1 89.00 93.00 200.0 .0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

90 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 3 Points Equally Spaced Along The Ground Surface Between X = 63.00 mt. and X = 71.00 mt.

Each Surface Terminates Between X = 105.00 mt. and X = 118.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 mt.

4.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	71.00	55.08
2	74.95	54.46
3	78.95	54.27
4	82.94	54.50
5	86.89	55.15
6	90.74	56.22
7	94.46	57.68
8	98.01	59.54
9	101.34	61.75
10	104.41	64.31
11	107.20	67.18
12	109.67	70.33
13	111.79	73.72
14	112.39	74.95

Circle Center At X = 78.8 ; Y = 92.0 and Radius, 37.7

*** 1.512 ***

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	71.00	55.08
2	74.95	54.47
3	78.95	54.26
4	82.94	54.45
5	86.90	55.04
6	90.78	56.02
7	94.53	57.39
8	98.14	59.13
9	101.54	61.23
10	104.73	63.65
11	107.65	66.38
12	110.28	69.40
13	112.59	72.66
14	113.83	74.83

Circle Center At X = 79.1 ; Y = 94.0 and Radius, 39.8

*** 1.513 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	71.00	55.08
2	74.98	54.64
3	78.98	54.66
4	82.95	55.13
5	86.84	56.05
6	90.61	57.40
7	94.19	59.17
8	97.56	61.33
9	100.65	63.87
10	103.44	66.73
11	105.89	69.90
12	107.96	73.32
13	108.84	75.23

Circle Center At X = 76.8 ; Y = 89.8 and Radius, 35.2

*** 1.523 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	71.00	55.08
2	74.94	54.39
3	78.93	54.08
4	82.93	54.16
5	86.90	54.63

6	90.81	55.48
7	94.62	56.71
8	98.29	58.30
9	101.78	60.24
10	105.08	62.51
11	108.14	65.08
12	110.93	67.95
13	113.43	71.07
14	115.62	74.42
15	115.75	74.68

Circle Center At X = 80.1 ; Y = 95.2 and Radius, 41.2

*** 1.526 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	71.00	55.08
2	74.98	54.71
3	78.98	54.67
4	82.97	54.96
5	86.93	55.57
6	90.81	56.51
7	94.61	57.76
8	98.30	59.32
9	101.84	61.18
10	105.21	63.32
11	108.40	65.74
12	111.39	68.40
13	114.14	71.31
14	116.64	74.43
15	116.76	74.60

Circle Center At X = 77.5 ; Y = 103.3 and Radius, 48.6

*** 1.528 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	71.00	55.08
2	74.99	54.79
3	78.99	54.95
4	82.94	55.56
5	86.80	56.61
6	90.52	58.08
7	94.05	59.95
8	97.36	62.21
9	100.38	64.82
10	103.10	67.76
11	105.47	70.98
12	107.47	74.45
13	107.84	75.31

Circle Center At X = 75.6 ; Y = 90.5 and Radius, 35.7

*** 1.537 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	55.00
2	70.87	53.97
3	74.82	53.36
4	78.81	53.16
5	82.81	53.38
6	86.76	54.01
7	90.62	55.05
8	94.35	56.49
9	97.91	58.31
10	101.27	60.49
11	104.37	63.01
12	107.20	65.84
13	109.72	68.95
14	111.89	72.31
15	113.20	74.88

Circle Center At X = 78.7 ; Y = 91.4 and Radius, 38.3

*** 1.537 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	55.00
2	70.87	53.99
3	74.82	53.39
4	78.82	53.21
5	82.81	53.45
6	86.76	54.11
7	90.61	55.19
8	94.33	56.66
9	97.87	58.52
10	101.20	60.74
11	104.27	63.30
12	107.06	66.16
13	109.53	69.31
14	111.66	72.70
15	112.74	74.92

Circle Center At X = 78.5 ; Y = 91.1 and Radius, 37.9

*** 1.538 ***

Failure Surface Specified By 15 Coordinate Points

Point	X-Surf	Y-Surf
-------	--------	--------

No.	(mt)	(mt)
1	67.00	55.00
2	70.92	54.20
3	74.90	53.81
4	78.90	53.82
5	82.88	54.24
6	86.79	55.06
7	90.61	56.27
8	94.27	57.87
9	97.76	59.83
10	101.03	62.13
11	104.05	64.75
12	106.79	67.67
13	109.22	70.85
14	111.31	74.26
15	111.67	75.00

Circle Center At X = 76.8 ; Y = 93.1 and Radius, 39.3

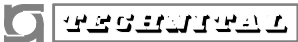
*** 1.546 ***

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	55.00
2	70.81	53.79
3	74.73	52.96
4	78.70	52.54
5	82.70	52.51
6	86.69	52.89
7	90.61	53.67
8	94.44	54.83
9	98.12	56.38
10	101.64	58.29
11	104.95	60.54
12	108.01	63.11
13	110.80	65.98
14	113.28	69.12
15	115.44	72.48
16	116.52	74.62

Circle Center At X = 80.9 ; Y = 92.2 and Radius, 39.7

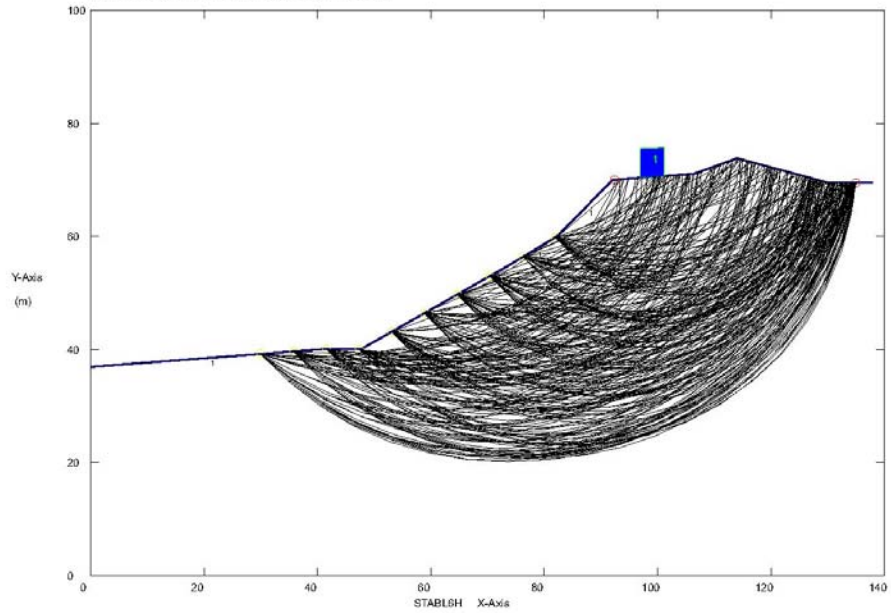
*** 1.551 ***

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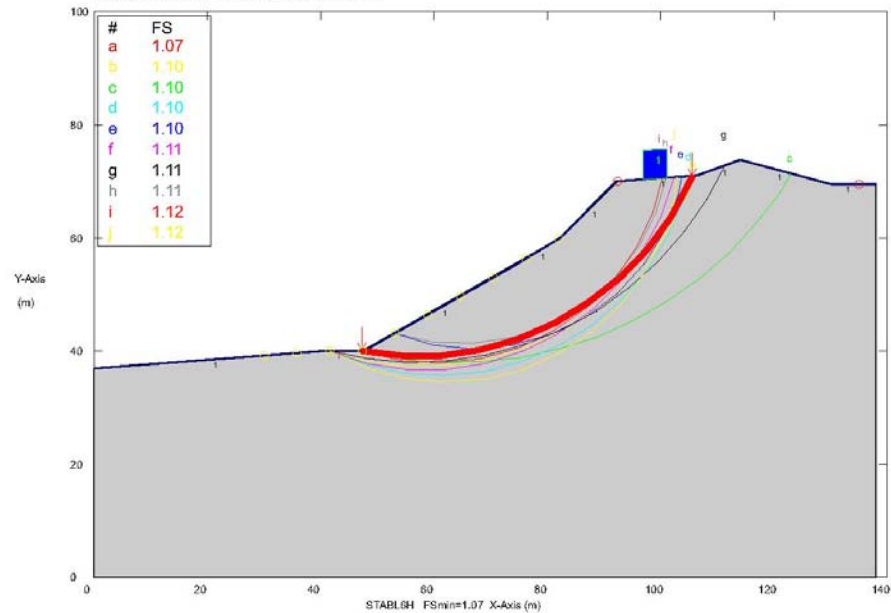
SCHEDA GRAFICA N. 11

VERIFICA GLOBALE VERSANTE SW (*Sezione vista da Ovest*). **Stato di fatto -
SEZIONE D (calcolo)**

All Surfaces Evaluated. C:S-DSWFA.PLT



Most Critical Surface. C:S-DSWFA.PLT



Soil Type No. Label	Total Unit Wt (KN/m3)	Saturated Unit Wt (KN/m3)	Cohesion Intercept (kPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (kPa)	Piez. Surface No.
1 name az	19.3	20	60	13	0	0	

VERIFICA GLOBALE VERSANTE SW. Stato di fatto -SEZIONE D (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:S-DSWFA.SI
Output Filename: C:S-DSWFA.OUT
Plotted Output Filename: C:S-DSWFA.PLT

PROBLEM DESCRIPTION sezione D lato SW
stato di fatto

BOUNDARY COORDINATES

9 Top Boundaries
9 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	37.00	40.70	40.00	1
2	40.70	40.00	47.60	40.00	1
3	47.60	40.00	74.00	55.00	1
4	74.00	55.00	82.20	60.00	1
5	82.20	60.00	92.20	70.00	1
6	92.20	70.00	106.40	71.00	1
7	106.40	71.00	114.00	73.90	1
8	114.00	73.90	130.00	69.50	1
9	130.00	69.50	138.00	69.50	1

ISOTROPIC SOIL PARAMETERS

1 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	19.3	20.0	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	97.00	101.00	300.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.

300 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 10 Points Equally Spaced
Along The Ground Surface Between X = 30.00 mt.
and X = 82.00 mt.

Each Surface Terminates Between X = 92.40 mt.
and X = 135.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 mt.

7.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	47.33	40.00
2	54.28	39.15
3	61.28	39.23
4	68.21	40.24
5	74.94	42.15
6	81.36	44.94
7	87.35	48.56
8	92.81	52.94
9	97.64	58.01
10	101.76	63.67
11	105.09	69.83
12	105.51	70.94

Circle Center At X = 57.2 ; Y = 91.8 and Radius, 52.7

*** 1.070 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	41.56	40.00
2	48.32	38.18
3	55.26	37.31
4	62.26	37.41
5	69.18	38.46

6	75.89	40.46
7	82.26	43.36
8	88.17	47.11
9	93.51	51.64
10	98.18	56.86
11	102.08	62.67
12	105.15	68.96
13	105.80	70.96

Circle Center At X = 58.1 ; Y = 88.0 and Radius, 50.8

*** 1.095 ***

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	47.33	40.00
2	54.20	38.66
3	61.17	38.01
4	68.17	38.08
5	75.13	38.86
6	81.97	40.33
7	88.63	42.50
8	95.04	45.32
9	101.12	48.78
10	106.82	52.84
11	112.09	57.45
12	116.86	62.58
13	121.08	68.16
14	123.06	71.41

Circle Center At X = 64.0 ; Y = 107.0 and Radius, 69.0

*** 1.096 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	41.56	40.00
2	48.11	37.55
3	54.97	36.12
4	61.96	35.77
5	68.92	36.48
6	75.69	38.25
7	82.12	41.03
8	88.04	44.76
9	93.32	49.35
10	97.84	54.70
11	101.49	60.67
12	104.19	67.13
13	105.12	70.91

Circle Center At X = 60.8 ; Y = 81.4 and Radius, 45.7

*** 1.096 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	53.11	43.13

2	59.82	41.14
3	66.79	40.43
4	73.76	41.04
5	80.50	42.93
6	86.77	46.05
7	92.34	50.28
8	97.04	55.48
9	100.68	61.45
10	103.14	68.01
11	103.63	70.80

Circle Center At X = 67.1 ; Y = 77.8 and Radius, 37.4

*** 1.103 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	41.56	40.00
2	48.22	37.84
3	55.13	36.75
4	62.13	36.74
5	69.05	37.81
6	75.71	39.95
7	81.97	43.09
8	87.66	47.17
9	92.64	52.08
10	96.81	57.70
11	100.05	63.91
12	102.29	70.54
13	102.32	70.71

Circle Center At X = 58.7 ; Y = 81.6 and Radius, 45.0

*** 1.107 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	41.56	40.00
2	48.42	38.60
3	55.39	38.02
4	62.39	38.25
5	69.31	39.30
6	76.06	41.16
7	82.55	43.78
8	88.68	47.15
9	94.38	51.22
10	99.56	55.92
11	104.16	61.20
12	108.12	66.98
13	111.18	72.82

Circle Center At X = 56.9 ; Y = 97.8 and Radius, 59.8

*** 1.110 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
-----------	-------------	-------------

1	53.11	43.13
2	59.94	41.57
3	66.93	41.33
4	73.85	42.40
5	80.44	44.76
6	86.47	48.31
7	91.73	52.93
8	96.02	58.46
9	99.20	64.70
10	100.91	70.61

Circle Center At X = 64.7 ; Y = 78.3 and Radius, 37.1

*** 1.114 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	47.33	40.00
2	54.14	38.35
3	61.12	37.89
4	68.08	38.63
5	74.81	40.55
6	81.12	43.59
7	86.81	47.67
8	91.72	52.65
9	95.71	58.41
10	98.66	64.76
11	100.22	70.56

Circle Center At X = 60.3 ; Y = 78.7 and Radius, 40.8

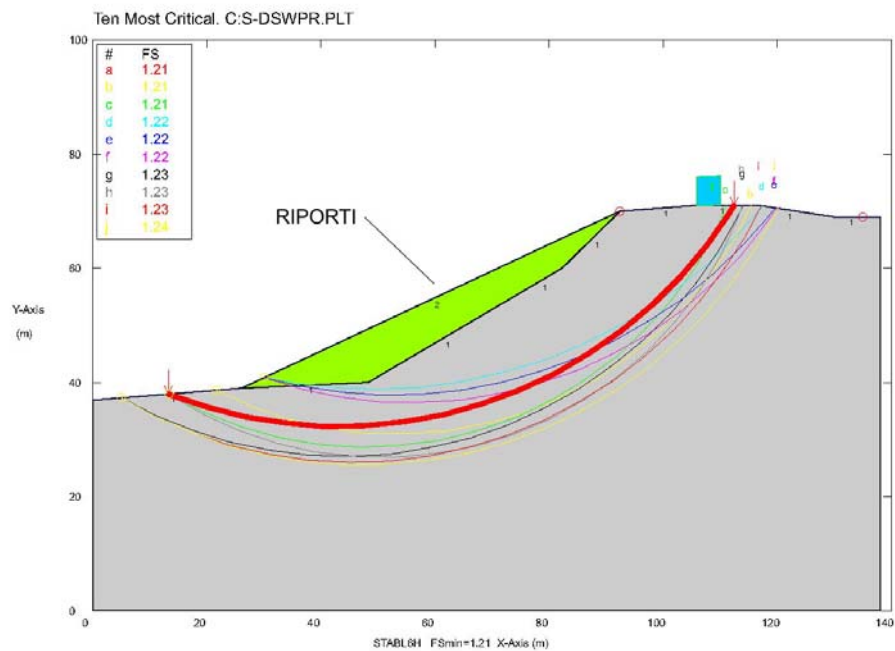
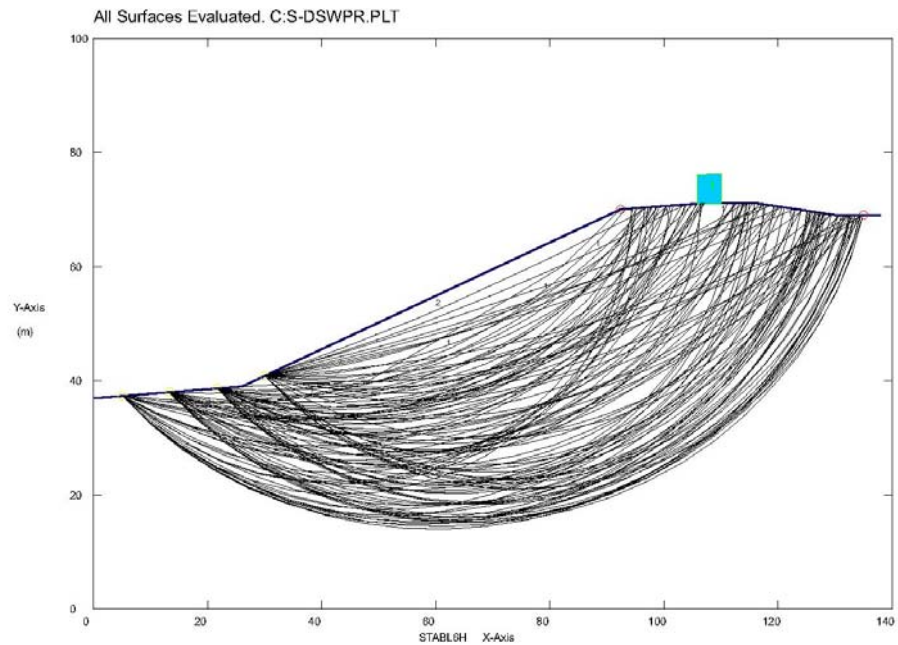
*** 1.117 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	41.56	40.00
2	47.89	37.01
3	54.63	35.15
4	61.60	34.45
5	68.58	34.95
6	75.38	36.63
7	81.79	39.43
8	87.64	43.29
9	92.74	48.08
10	96.96	53.66
11	100.17	59.89
12	102.27	66.56
13	102.84	70.75

Circle Center At X = 62.2 ; Y = 75.5 and Radius, 41.1

*** 1.118 ***

SCHEDA GRAFICA N. 12
VERIFICA GLOBALE VERSANTE SW (Sezione vista da Ovest). Stato di progetto - SEZIONE D (calcolo)


Soil Type No. Label	Total Unit Wt. (KN/m3)	Saturated Unit Wt. (KN/m3)	Cohesion Intercept (kPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (kPa)	Plaz. Surface No.
1 mame az	19.3	20	60	13	0	0	
2 riport	17	18	15	21	0	0	

VERIFICA GLOBALE VERSANTE SW. Stato di progetto -SEZIONE D (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:S-DSWPR.SI
Output Filename: C:S-DSWPR.OUT
Plotted Output Filename: C:S-DSWPR.PLT

PROBLEM DESCRIPTION sezione D lato SW
stato di progetto

BOUNDARY COORDINATES

6 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	37.00	26.00	39.00	1
2	26.00	39.00	92.40	70.00	2
3	92.40	70.00	106.50	71.00	1
4	106.50	71.00	116.50	71.00	1
5	116.50	71.00	130.00	69.00	1
6	130.00	69.00	138.00	69.00	1
7	26.00	39.00	48.30	40.00	1
8	48.30	40.00	74.00	55.00	1
9	74.00	55.00	82.20	60.00	1
10	82.20	60.00	92.40	70.00	1

ISOTROPIC SOIL PARAMETERS

2 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	19.3	20.0	60.0	13.0	.00	.0	0
2	17.0	18.0	15.0	21.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	106.00	110.00	300.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

120 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 4 Points Equally Spaced Along The Ground Surface Between X = 5.00 mt. and X = 30.00 mt.

Each Surface Terminates Between X = 92.40 mt. and X = 135.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 mt.

7.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 18 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	13.33	38.03
2	19.94	35.72
3	26.73	34.00
4	33.64	32.86
5	40.62	32.33
6	47.62	32.40
7	54.58	33.07
8	61.47	34.34
9	68.21	36.20
10	74.78	38.64
11	81.11	41.63
12	87.15	45.16
13	92.87	49.19
14	98.23	53.70
15	103.17	58.66
16	107.67	64.02
17	111.68	69.75
18	112.41	71.00

Circle Center At X = 43.3 ; Y = 113.4 and Radius, 81.1

*** 1.208 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	21.67	38.67
2	28.04	35.76
3	34.67	33.52
4	41.49	31.97
5	48.44	31.12
6	55.44	31.00
7	62.42	31.58
8	69.29	32.88
9	76.00	34.88
10	82.47	37.55
11	88.64	40.87
12	94.43	44.80
13	99.79	49.30
14	104.66	54.33
15	108.99	59.83
16	112.74	65.74
17	115.36	71.00

Circle Center At X = 53.2 ; Y = 99.3 and Radius, 68.4

*** 1.209 ***

Failure Surface Specified By 18 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	13.33	38.03
2	19.55	34.80
3	26.06	32.23
4	32.80	30.34
5	39.70	29.15
6	46.68	28.66
7	53.67	28.90
8	60.61	29.84
9	67.41	31.49
10	74.01	33.83
11	80.34	36.83
12	86.32	40.46
13	91.90	44.68
14	97.03	49.46
15	101.63	54.72
16	105.68	60.44
17	109.12	66.53
18	111.07	71.00

Circle Center At X = 47.9 ; Y = 97.1 and Radius, 68.4

*** 1.213 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	30.00	40.87
2	36.89	39.63
3	43.86	38.94
4	50.85	38.80
5	57.84	39.21

6	64.78	40.17
7	71.61	41.67
8	78.31	43.70
9	84.83	46.25
10	91.13	49.31
11	97.17	52.85
12	102.91	56.86
13	108.31	61.30
14	113.36	66.16
15	117.52	70.85

Circle Center At X = 49.1 ; Y = 127.8 and Radius, 89.0

*** 1.218 ***

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	30.00	40.87
2	36.82	39.30
3	43.75	38.29
4	50.74	37.86
5	57.73	38.00
6	64.70	38.72
7	71.58	40.01
8	78.33	41.86
9	84.90	44.26
10	91.26	47.20
11	97.35	50.64
12	103.14	54.58
13	108.59	58.97
14	113.66	63.80
15	118.31	69.03
16	119.46	70.56

Circle Center At X = 52.5 ; Y = 122.9 and Radius, 85.1

*** 1.223 ***

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	30.00	40.87
2	36.70	38.85
3	43.56	37.44
4	50.51	36.65
5	57.51	36.49
6	64.50	36.97
7	71.41	38.07
8	78.19	39.79
9	84.80	42.12
10	91.16	45.03
11	97.24	48.50
12	102.98	52.51
13	108.34	57.01
14	113.26	61.98
15	117.72	67.38
16	119.86	70.50

Circle Center At X = 55.7 ; Y = 114.1 and Radius, 77.6

*** 1.224 ***

Failure Surface Specified By 20 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	5.00	37.38
2	11.22	34.18
3	17.71	31.55
4	24.41	29.50
5	31.26	28.07
6	38.21	27.25
7	45.21	27.06
8	52.19	27.50
9	59.11	28.56
10	65.91	30.23
11	72.53	32.51
12	78.92	35.37
13	85.02	38.79
14	90.80	42.74
15	96.20	47.20
16	101.18	52.12
17	105.70	57.46
18	109.72	63.19
19	113.22	69.26
20	114.02	71.00

Circle Center At X = 43.8 ; Y = 105.2 and Radius, 78.1

*** 1.226 ***

Failure Surface Specified By 19 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	13.33	38.03
2	19.37	34.48
3	25.74	31.58
4	32.37	29.35
5	39.20	27.82
6	46.16	27.00
7	53.16	26.91
8	60.13	27.54
9	67.00	28.88
10	73.69	30.94
11	80.13	33.67
12	86.26	37.05
13	92.01	41.05
14	97.31	45.62
15	102.11	50.72
16	106.35	56.28
17	110.00	62.26
18	113.02	68.58
19	113.88	71.00

Circle Center At X = 50.6 ; Y = 94.5 and Radius, 67.6

*** 1.230 ***

Failure Surface Specified By 20 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
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1	5.00	37.38
2	11.15	34.04
3	17.57	31.25
4	24.21	29.05
5	31.03	27.44
6	37.95	26.43
7	44.94	26.04
8	51.94	26.28
9	58.89	27.13
10	65.73	28.59
11	72.42	30.65
12	78.90	33.29
13	85.13	36.50
14	91.04	40.24
15	96.60	44.50
16	101.76	49.22
17	106.49	54.39
18	110.74	59.95
19	114.48	65.87
20	117.07	70.91

Circle Center At X = 45.8 ; Y = 105.1 and Radius, 79.1

*** 1.232 ***

Failure Surface Specified By 21 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	5.00	37.38
2	11.13	34.00
3	17.53	31.16
4	24.14	28.88
5	30.93	27.17
6	37.84	26.06
7	44.82	25.54
8	51.82	25.63
9	58.79	26.32
10	65.67	27.61
11	72.42	29.48
12	78.97	31.93
13	85.30	34.93
14	91.34	38.46
15	97.05	42.51
16	102.40	47.02
17	107.34	51.99
18	111.83	57.35
19	115.85	63.09
20	119.35	69.15
21	119.98	70.48

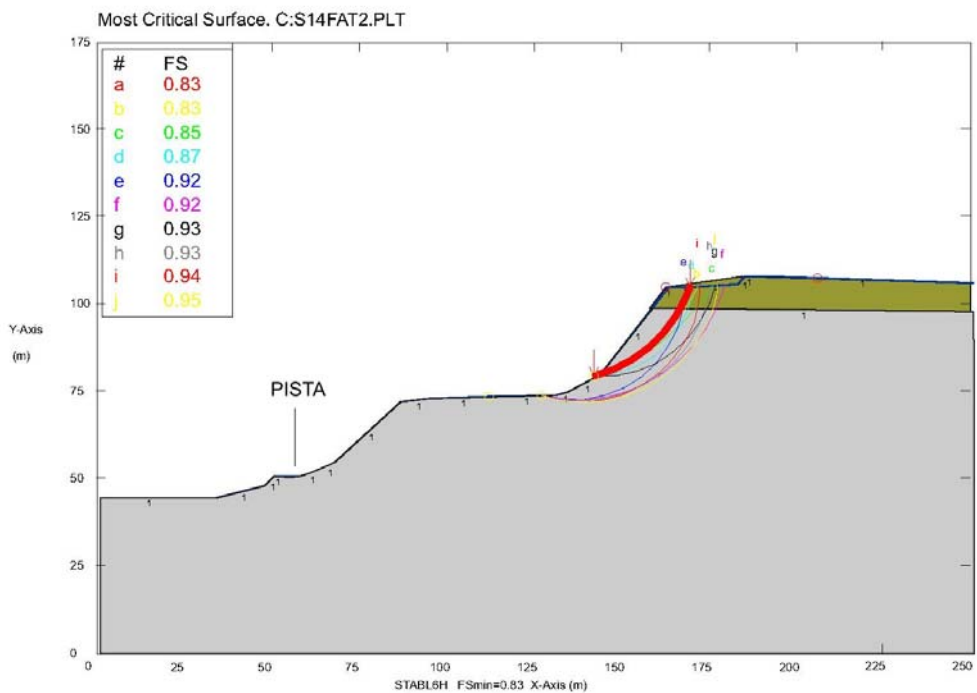
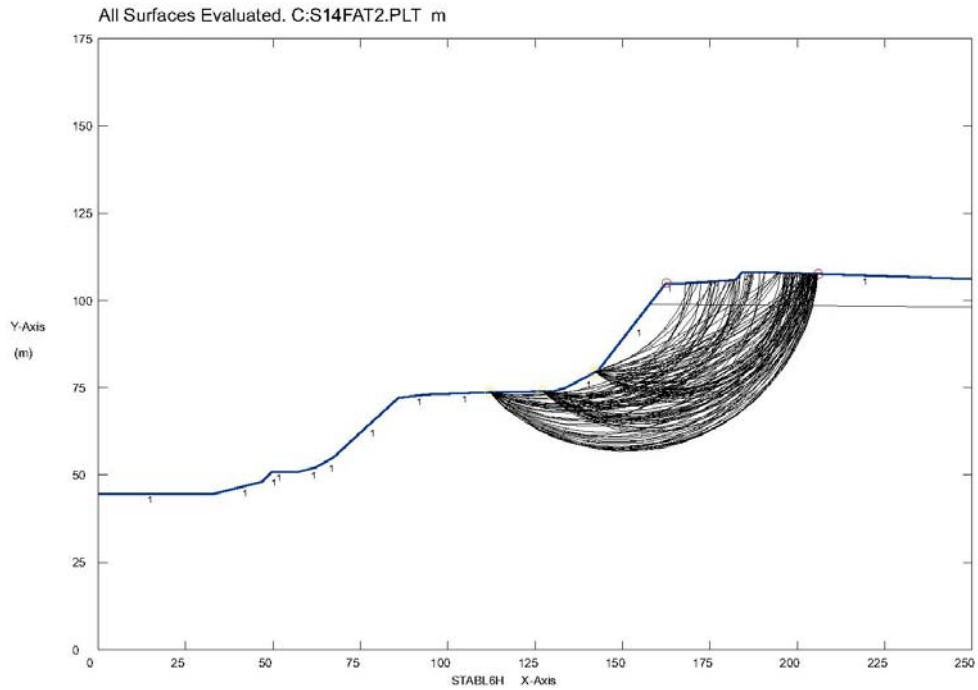
Circle Center At X = 47.3 ; Y = 106.8 and Radius, 81.3

*** 1.239 ***

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SCHEDA GRAFICA N. 13

VERIFICA GRADONE ALTO (CONFINE) VERSANTE SE *(Sezione vista da Sud)*.
Stato di fatto -SEZIONE 14 (calcolo)



Soil Type No. Label	Total Unit Wt. (KN/m ³)	Saturated Unit Wt. (KN/m ³)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1	18.3	20	27	21	0	0	
2	19.3	20.5	62	13	0	0	

VERIFICA GRADONE ALTO (CONFINÉ) VERSANTE SE. Stato di fatto - SEZIONE 14 (calcolo)

**** STABL6H ****

by

Purdue University

--Slope Stability Analysis--

Simplified Janbu, Simplified Bishop

or Spencer`s Method of Slices

Run By:

Input Data Filename: C:S14FAT2.SI

Output Filename: C:S14FAT2.OUT

Plotted Output Filename: C:S14FAT2.PLT

PROBLEM DESCRIPTION sezione 14

2 gradone alto confine

BOUNDARY COORDINATE

18 Top Boundaries

19 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	44.50	33.20	44.50	1
2	33.20	44.50	46.88	48.00	1
3	46.88	48.00	49.70	51.00	1
4	49.70	51.00	57.30	51.00	1
5	57.30	51.00	62.20	52.00	1
6	62.20	52.00	67.25	55.00	1
7	67.25	55.00	85.90	72.00	1
8	85.90	72.00	94.00	73.00	1
9	94.00	73.00	111.40	73.60	1
10	111.40	73.60	130.20	74.00	1
11	130.20	74.00	133.50	75.00	1
12	133.50	75.00	142.90	80.00	1
13	142.90	80.00	162.40	105.00	1
14	162.40	105.00	168.10	105.00	1
15	168.10	105.00	182.50	106.00	1
16	182.50	106.00	184.20	108.00	1
17	184.20	108.00	192.40	108.00	1
18	192.40	108.00	249.82	106.20	1
19	158.00	99.00	249.82	98.00	1

ISOTROPIC SOIL PARAMETERS

2 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (kpa)	Friction Angle (deg)	Pore Pressure Param. (Kpa)	Pressure Constant	Piez. Surface No.
1	18.3	20.0	27.0	21.0	.00	.0	0
2	19.3	20.5	62.0	13.0	.00	.0	0

A Horizontal Earthquake Loading Coefficient

Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient

Of-.030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

120 Trial Surfaces Have Been Generated.

40 Surfaces Initiate From Each Of 3 Points Equally Spaced
Along The Ground Surface Between X = 112.00 mt.
and X = 142.00 mt.

Each Surface Terminates Between X = 162.60 mt.
and X = 206.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 ft.

6.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	142.00	79.52
2	147.67	81.48
3	152.98	84.27
4	157.82	87.83
5	162.06	92.07
6	165.62	96.90
7	168.42	102.20
8	169.43	105.09

Circle Center At X = 131.8 ; Y = 118.1 and Radius, 39.9

*** .826 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	142.00	79.52
2	147.63	81.59
3	152.96	84.35
4	157.90	87.75
5	162.38	91.74
6	166.32	96.27
7	169.66	101.25
8	171.67	105.25

Circle Center At X = 128.4 ; Y = 125.3 and Radius, 47.8

*** .828 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	142.00	79.52

2	147.65	81.55
3	153.07	84.12
4	158.21	87.21
5	163.03	90.79
6	167.48	94.82
7	171.51	99.26
8	175.09	104.08
9	175.97	105.55

Circle Center At X = 124.1 ; Y = 138.2 and Radius, 61.4

*** .848 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	142.00	79.52
2	147.97	80.16
3	153.67	82.03
4	158.85	85.05
5	163.29	89.09
6	166.78	93.97
7	169.18	99.47
8	170.33	105.15

Circle Center At X = 142.0 ; Y = 108.0 and Radius, 28.5

*** .866 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	127.00	73.93
2	132.90	72.86
3	138.90	72.89
4	144.80	74.02
5	150.38	76.22
6	155.46	79.41
7	159.87	83.49
8	163.45	88.30
9	166.08	93.69
10	167.68	99.47
11	168.15	105.00

Circle Center At X = 135.7 ; Y = 105.2 and Radius, 32.4

*** .924 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	127.00	73.93
2	132.92	72.98
3	138.92	72.84
4	144.88	73.52

5	150.70	75.00
6	156.25	77.27
7	161.45	80.26
8	166.19	83.94
9	170.38	88.23
10	173.96	93.06
11	176.84	98.32
12	178.97	103.93
13	179.40	105.79

Circle Center At X = 136.9 ; Y = 116.7 and Radius, 43.9

*** .924 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	142.00	79.52
2	148.00	79.68
3	153.87	80.91
4	159.43	83.16
5	164.50	86.37
6	168.91	90.44
7	172.53	95.23
8	175.23	100.58
9	176.72	105.60

Circle Center At X = 144.1 ; Y = 112.9 and Radius, 33.5

*** .926 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	127.00	73.93
2	132.87	72.68
3	138.86	72.37
4	144.83	73.01
5	150.62	74.58
6	156.08	77.05
7	161.09	80.35
8	165.52	84.41
9	169.24	89.11
10	172.18	94.34
11	174.26	99.97
12	175.35	105.50

Circle Center At X = 137.8 ; Y = 110.2 and Radius, 37.8

*** .929 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	127.00	73.93
2	132.83	72.51
3	138.82	72.12

4	144.78	72.76
5	150.54	74.43
6	155.93	77.07
7	160.78	80.61
8	164.95	84.92
9	168.31	89.90
10	170.75	95.37
11	172.21	101.19
12	172.51	105.31

Circle Center At X = 138.1 ; Y = 106.7 and Radius, 34.6

*** .936 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	127.00	73.93
2	132.83	72.51
3	138.81	71.99
4	144.79	72.41
5	150.64	73.75
6	156.21	75.97
7	161.38	79.03
8	166.01	82.84
9	169.99	87.33
10	173.24	92.38
11	175.67	97.86
12	177.22	103.66
13	177.43	105.65

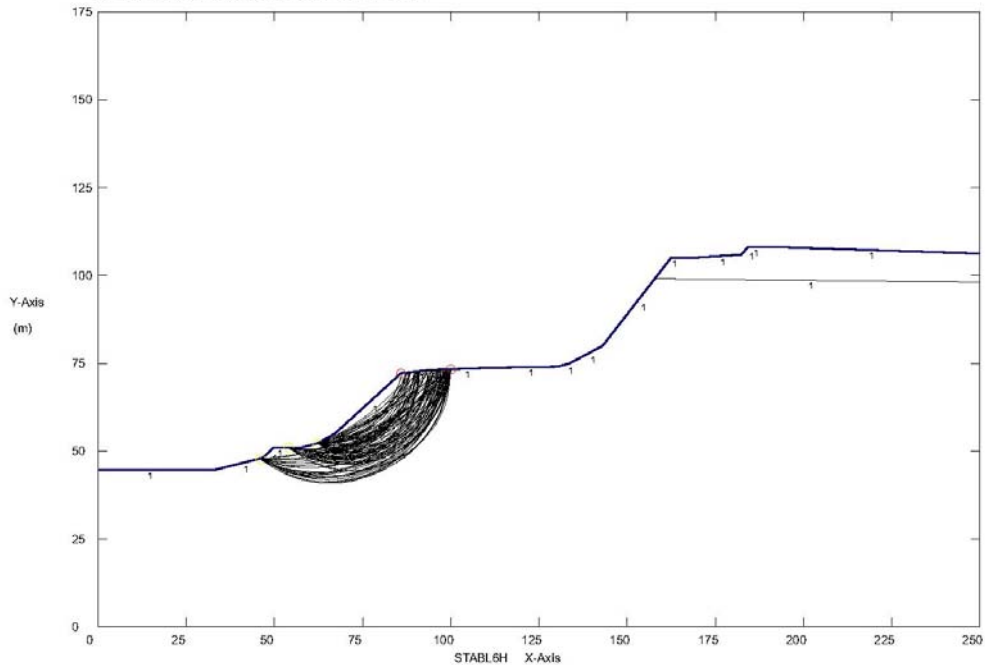
Circle Center At X = 139.1 ; Y = 110.8 and Radius, 38.8

*** .950 ***

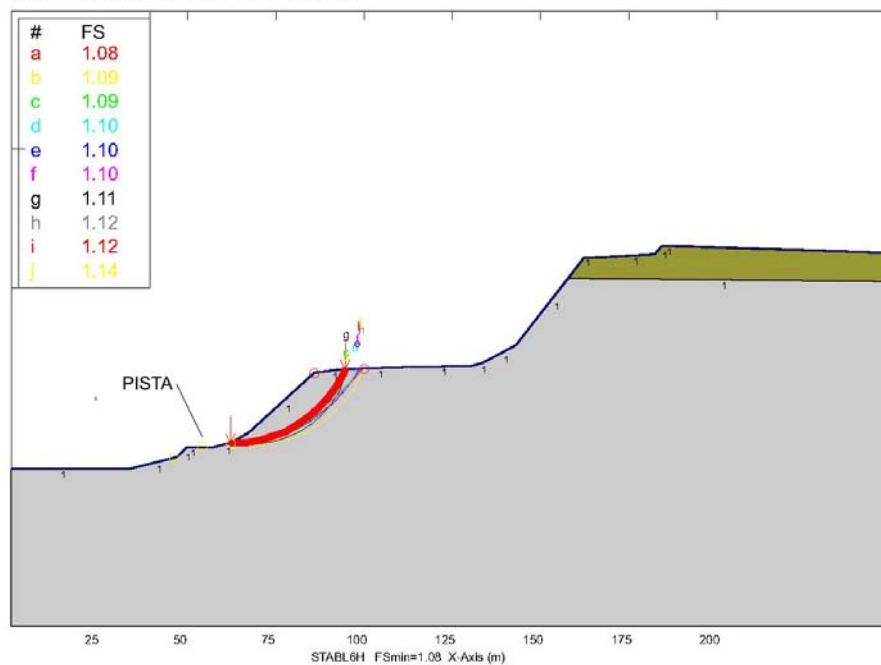
SCHEDA GRAFICA N. 14

VERIFICA GRADONE BASSO (PISTA ACCESSO FOSSA) VERSANTE SE (*Sezione vista da Sud*). **Stato di fatto -SEZIONE 14 (calcolo)**

All Surfaces Evaluated. C:S14FAT1.PLT



Most Ten Critical Surface. C:S14FAT1.PLT



Soil Type No. Label	Total Unit Wt (KN/m ³)	Saturated Unit Wt (KN/m ³)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1	18.3	20	27	21	0	0	
2	19.3	20.5	62	13	0	0	

VERIFICA GRADONE BASSO (PISTA ACCESSO FOSSA) VERSANTE SE. [Stato di fatto](#) -SEZIONE 14 (report)

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:S14FAT1.SI
Output Filename: C:S14FAT1.OUT
Plotted Output Filename: C:S14FAT1.PLT

PROBLEM DESCRIPTION sezione 14 stato fatto
1 gradone pista

BOUNDARY COORDINATES

18 Top Boundaries
19 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	44.50	33.20	44.50	1
2	33.20	44.50	46.88	48.00	1
3	46.88	48.00	49.70	51.00	1
4	49.70	51.00	57.30	51.00	1
5	57.30	51.00	62.20	52.00	1
6	62.20	52.00	67.25	55.00	1
7	67.25	55.00	85.90	72.00	1
8	85.90	72.00	94.00	73.00	1
9	94.00	73.00	111.40	73.60	1
10	111.40	73.60	130.20	74.00	1
11	130.20	74.00	133.50	75.00	1
12	133.50	75.00	142.90	80.00	1
13	142.90	80.00	162.40	105.00	1
14	162.40	105.00	168.10	105.00	1
15	168.10	105.00	182.50	106.00	1
16	182.50	106.00	184.20	108.00	1
17	184.20	108.00	192.40	108.00	1
18	192.40	108.00	249.82	106.20	1
19	158.00	99.00	249.82	98.00	1

ISOTROPIC SOIL PARAMETERS

2 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	18.3	20.0	27.0	21.0	.00	.0	0
2	19.3	20.5	62.0	13.0	.00	.0	0

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient

Of-.030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

90 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 3 Points Equally Spaced Along The Ground Surface Between X = 46.00 mt. and X = 62.20 mt.

Each Surface Terminates Between X = 85.90 mt. and X = 100.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 mt.

4.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	62.20	52.00
2	66.20	52.18
3	70.15	52.81
4	74.00	53.90
5	77.69	55.42
6	81.19	57.36
7	84.44	59.69
8	87.41	62.38
9	90.04	65.39
10	92.31	68.69
11	94.18	72.22
12	94.49	73.02

Circle Center At X = 62.7 ; Y = 86.7 and Radius, 34.7

*** 1.084 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	62.20	52.00
2	66.20	51.87
3	70.18	52.25
4	74.09	53.12
5	77.85	54.47
6	81.42	56.28
7	84.73	58.53
8	87.73	61.17
9	90.38	64.17

10	92.63	67.48
11	94.45	71.04
12	95.17	73.04

Circle Center At X = 65.2 ; Y = 83.7 and Radius, 31.9

*** 1.091 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	62.20	52.00
2	66.20	51.84
3	70.18	52.19
4	74.09	53.03
5	77.86	54.36
6	81.44	56.16
7	84.76	58.39
8	87.77	61.02
9	90.43	64.01
10	92.68	67.32
11	94.51	70.88
12	95.29	73.04

Circle Center At X = 65.5 ; Y = 83.5 and Radius, 31.7

*** 1.093 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	62.20	52.00
2	66.18	52.41
3	70.11	53.18
4	73.95	54.29
5	77.68	55.73
6	81.26	57.51
7	84.68	59.59
8	87.89	61.97
9	90.89	64.62
10	93.63	67.53
11	96.10	70.68
12	97.71	73.13

Circle Center At X = 59.6 ; Y = 96.9 and Radius, 45.0

*** 1.097 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	62.20	52.00
2	66.20	52.14
3	70.16	52.67
4	74.06	53.58
5	77.84	54.88
6	81.48	56.53
7	84.94	58.54
8	88.19	60.88
9	91.19	63.52
10	93.92	66.44

11	96.35	69.62
12	98.46	73.02
13	98.52	73.16

Circle Center At X = 62.8 ; Y = 92.8 and Radius, 40.8

*** 1.098 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	62.20	52.00
2	66.19	52.29
3	70.14	52.94
4	74.01	53.94
5	77.78	55.28
6	81.41	56.96
7	84.88	58.96
8	88.15	61.25
9	91.20	63.84
10	94.01	66.68
11	96.56	69.77
12	98.81	73.08
13	98.86	73.17

Circle Center At X = 61.0 ; Y = 96.5 and Radius, 44.5

*** 1.101 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	62.20	52.00
2	66.18	51.57
3	70.18	51.69
4	74.12	52.35
5	77.93	53.56
6	81.55	55.27
7	84.89	57.47
8	87.89	60.11
9	90.51	63.14
10	92.68	66.50
11	94.37	70.12
12	95.27	73.04

Circle Center At X = 67.3 ; Y = 80.5 and Radius, 29.0

*** 1.112 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	62.20	52.00
2	66.15	52.63
3	70.05	53.54
4	73.87	54.72
5	77.59	56.18
6	81.20	57.90
7	84.69	59.87
8	88.02	62.08
9	91.18	64.53

10	94.16	67.19
11	96.95	70.07
12	99.52	73.13
13	99.56	73.19

Circle Center At X = 55.4 ; Y = 107.6 and Radius, 56.0

*** 1.121 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	62.20	52.00
2	66.14	52.68
3	70.03	53.64
4	73.83	54.86
5	77.55	56.35
6	81.15	58.09
7	84.62	60.08
8	87.94	62.30
9	91.10	64.75
10	94.09	67.42
11	96.87	70.29
12	99.32	73.18

Circle Center At X = 54.4 ; Y = 108.8 and Radius, 57.3

*** 1.124 ***

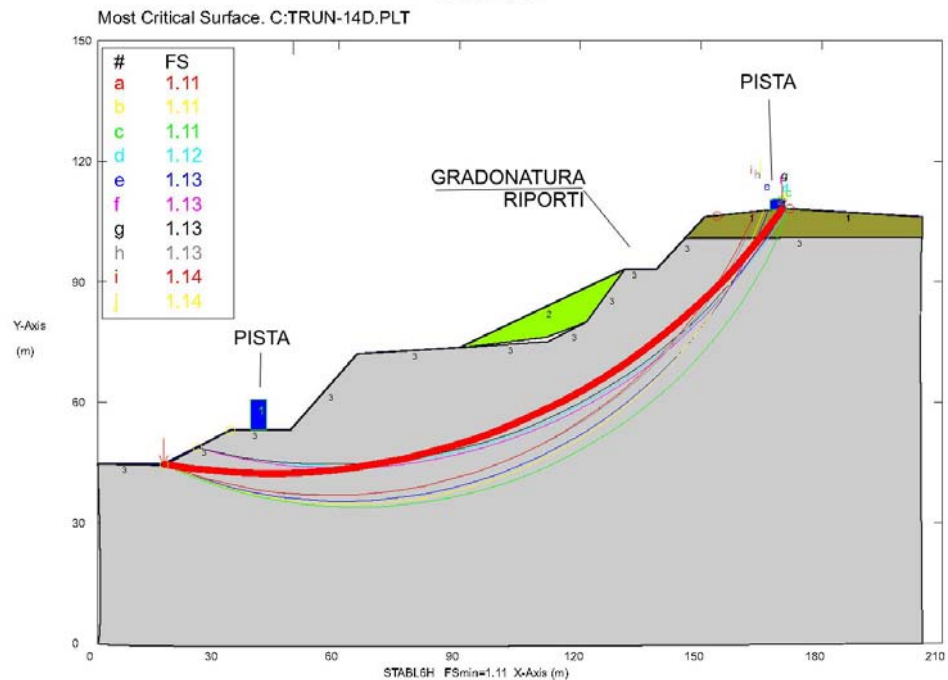
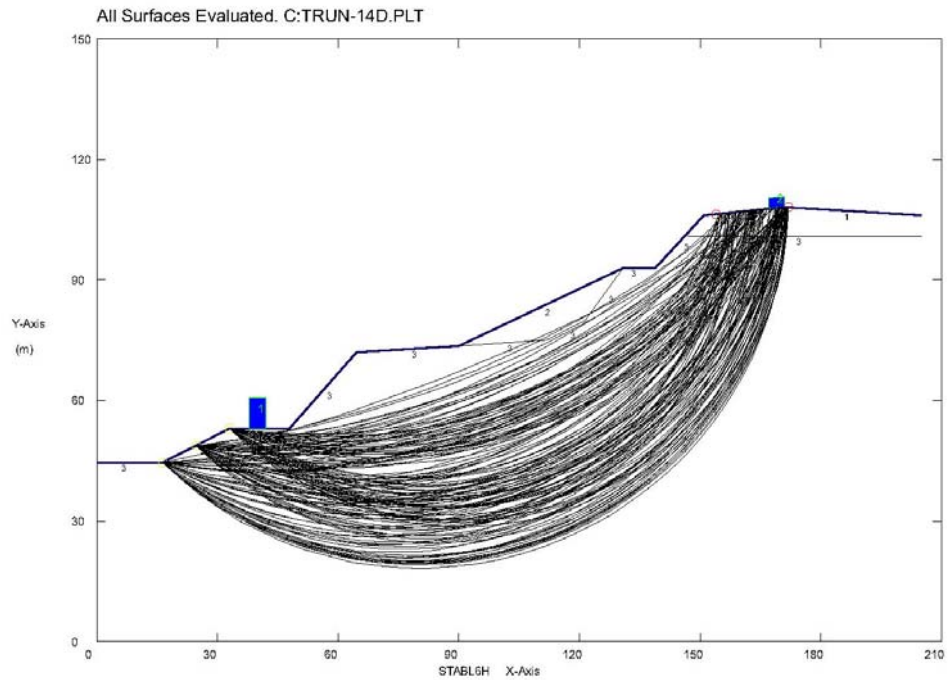
Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	62.20	52.00
2	66.18	51.57
3	70.18	51.60
4	74.15	52.10
5	78.03	53.05
6	81.78	54.45
7	85.34	56.28
8	88.66	58.50
9	91.71	61.10
10	94.43	64.03
11	96.79	67.25
12	98.76	70.73
13	99.80	73.20

Circle Center At X = 67.9 ; Y = 85.9 and Radius, 34.4

*** 1.137 ***

VERIFICA GLOBALE A LUNGO TERMINE VERSANTE SE (*Sezione vista da Sud*).
Stato di progetto -SEZIONE 14 (calcolo)



Soil Type No. Label	Total Unit WL (KN/m3)	Saturated Unit WL (KN/m3)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1 marne al	18.3	19	27	21	0	0	
2 riport	17	19	20	18	0	0	
3 marne az	18.3	20	60	13	0	0	

VERIFICA GLOBALE A LUNGO TERMINE VERSANTE SE. Stato di progetto -

SEZIONE 14 (report)

** STABL6H **
by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:TRUN-14D.SI
Output Filename: C:TRUN-14D.OUT
Plotted Output Filename: C:TRUN-14D.PLT

PROBLEM DESCRIPTION sezione 14 SE
verifica globale
BOUNDARY COORDINATES

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	44.50	16.50	44.50	3
2	16.50	44.50	33.00	53.00	3
3	33.00	53.00	48.00	53.00	3
4	48.00	53.00	64.50	72.00	3
5	64.50	72.00	90.00	73.60	3
6	90.00	73.60	131.00	93.00	2
7	131.00	93.00	139.00	93.00	3
8	139.00	93.00	151.00	106.00	3
9	151.00	106.00	171.00	108.20	1
10	171.00	108.20	205.00	106.20	1
11	90.00	73.60	112.00	75.00	3
12	112.00	75.00	121.40	80.00	3
13	121.40	80.00	131.00	93.00	3
14	147.00	101.00	205.00	101.00	3

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	18.3	19.0	27.0	21.0	.00	.0	0
2	17.0	19.0	20.0	18.0	.00	.0	0
3	19.3	20.0	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S)
2 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	38.00	42.00	300.0	.0
2	167.00	171.00	100.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

150 Trial Surfaces Have Been Generated.

50 Surfaces Initiate From Each Of 3 Points Equally Spaced Along The Ground Surface Between X = 16.50 mt. and X = 33.00 mt.

Each Surface Terminates Between X = 154.00 mt. and X = 172.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 mt.

6.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 31 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	16.50	44.50
2	22.43	43.61
3	28.40	42.95
4	34.38	42.51
5	40.38	42.31
6	46.38	42.34
7	52.37	42.59
8	58.35	43.08
9	64.31	43.79
10	70.24	44.74
11	76.12	45.90
12	81.96	47.30
13	87.74	48.91
14	93.45	50.75
15	99.08	52.80
16	104.64	55.07
17	110.10	57.55
18	115.47	60.24
19	120.72	63.13
20	125.87	66.22
21	130.89	69.51

22	135.78	72.98
23	140.53	76.64
24	145.14	80.48
25	149.60	84.49
26	153.91	88.68
27	158.05	93.02
28	162.02	97.52
29	165.81	102.17
30	169.43	106.96
31	170.23	108.12

Circle Center At X = 42.7 ; Y = 198.8 and Radius, 156.5

*** 1.106 ***

Failure Surface Specified By 31 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	16.50	44.50
2	22.45	43.73
3	28.42	43.17
4	34.42	42.84
5	40.41	42.72
6	46.41	42.83
7	52.40	43.16
8	58.38	43.70
9	64.33	44.47
10	70.25	45.45
11	76.13	46.65
12	81.96	48.07
13	87.73	49.69
14	93.45	51.53
15	99.08	53.58
16	104.65	55.83
17	110.12	58.29
18	115.50	60.95
19	120.78	63.80
20	125.95	66.84
21	131.01	70.07
22	135.94	73.49
23	140.74	77.08
24	145.41	80.85
25	149.94	84.78
26	154.32	88.88
27	158.55	93.14
28	162.62	97.55
29	166.52	102.11
30	170.25	106.81
31	171.27	108.18

Circle Center At X = 40.5 ; Y = 206.1 and Radius, 163.4

*** 1.106 ***

Failure Surface Specified By 33 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
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1	16.50	44.50
2	22.01	42.12
3	27.63	40.02
4	33.36	38.23
5	39.17	36.74
6	45.05	35.55
7	50.98	34.68
8	56.96	34.11
9	62.95	33.87
10	68.95	33.93
11	74.94	34.31
12	80.90	35.00
13	86.82	36.01
14	92.67	37.32
15	98.45	38.94
16	104.13	40.85
17	109.71	43.07
18	115.16	45.57
19	120.48	48.35
20	125.64	51.41
21	130.63	54.74
22	135.45	58.32
23	140.07	62.15
24	144.48	66.22
25	148.67	70.51
26	152.63	75.02
27	156.35	79.72
28	159.82	84.62
29	163.03	89.69
30	165.96	94.92
31	168.62	100.30
32	171.00	105.81
33	171.86	108.15

Circle Center At X = 64.7 ; Y = 148.3 and Radius, 114.5

*** 1.110 ***

Failure Surface Specified By 30 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	24.75	48.75
2	30.57	47.31
3	36.46	46.13
4	42.39	45.23
5	48.36	44.60
6	54.35	44.25
7	60.35	44.17
8	66.34	44.37
9	72.32	44.85
10	78.28	45.59
11	84.19	46.62
12	90.05	47.91
13	95.84	49.47
14	101.56	51.29
15	107.19	53.38
16	112.71	55.72

17	118.12	58.31
18	123.41	61.15
19	128.56	64.23
20	133.56	67.54
21	138.40	71.08
22	143.08	74.84
23	147.58	78.81
24	151.89	82.98
25	156.01	87.34
26	159.92	91.89
27	163.62	96.62
28	167.10	101.51
29	170.35	106.55
30	171.29	108.18

Circle Center At X = 59.0 ; Y = 174.7 and Radius, 130.5

*** 1.123 ***

Failure Surface Specified By 32 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	16.50	44.50
2	22.08	42.30
3	27.77	40.39
4	33.55	38.79
5	39.41	37.49
6	45.33	36.51
7	51.29	35.84
8	57.28	35.49
9	63.28	35.45
10	69.28	35.74
11	75.25	36.33
12	81.18	37.25
13	87.05	38.47
14	92.85	40.01
15	98.56	41.85
16	104.17	43.98
17	109.65	46.42
18	115.00	49.13
19	120.20	52.13
20	125.23	55.40
21	130.08	58.93
22	134.74	62.71
23	139.19	66.73
24	143.43	70.98
25	147.43	75.45
26	151.19	80.13
27	154.70	85.00
28	157.95	90.04
29	160.92	95.25
30	163.62	100.61
31	166.02	106.11
32	166.63	107.72

Circle Center At X = 60.9 ; Y = 148.9 and Radius, 113.4

*** 1.126 ***

Failure Surface Specified By 30 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	24.75	48.75
2	30.54	47.18
3	36.40	45.89
4	42.32	44.88
5	48.27	44.15
6	54.25	43.71
7	60.25	43.55
8	66.25	43.67
9	72.24	44.09
10	78.20	44.78
11	84.12	45.76
12	89.98	47.02
13	95.78	48.56
14	101.50	50.37
15	107.13	52.45
16	112.65	54.80
17	118.05	57.41
18	123.33	60.27
19	128.46	63.38
20	133.44	66.73
21	138.25	70.32
22	142.88	74.12
23	147.33	78.15
24	151.59	82.38
25	155.63	86.81
26	159.47	91.43
27	163.07	96.22
28	166.45	101.18
29	169.58	106.30
30	170.60	108.16

Circle Center At X = 60.6 ; Y = 169.6 and Radius, 126.0

*** 1.126 ***

Failure Surface Specified By 30 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	24.75	48.75
2	30.59	47.36
3	36.48	46.24
4	42.42	45.39
5	48.39	44.81
6	54.39	44.50
7	60.39	44.47
8	66.38	44.71
9	72.36	45.22
10	78.31	46.01
11	84.21	47.06

12	90.07	48.39
13	95.85	49.98
14	101.56	51.83
15	107.17	53.94
16	112.69	56.30
17	118.09	58.92
18	123.37	61.77
19	128.51	64.87
20	133.50	68.19
21	138.34	71.74
22	143.01	75.51
23	147.51	79.48
24	151.81	83.66
25	155.93	88.02
26	159.84	92.58
27	163.54	97.30
28	167.02	102.19
29	170.27	107.23
30	170.82	108.18

Circle Center At X = 58.1 ; Y = 176.0 and Radius, 131.6

*** 1.127 ***

Failure Surface Specified By 31 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	16.50	44.50
2	22.16	42.50
3	27.91	40.80
4	33.75	39.40
5	39.64	38.30
6	45.59	37.52
7	51.57	37.04
8	57.57	36.87
9	63.57	37.01
10	69.55	37.47
11	75.50	38.24
12	81.41	39.31
13	87.25	40.69
14	93.01	42.37
15	98.67	44.34
16	104.23	46.61
17	109.66	49.17
18	114.95	52.00
19	120.08	55.10
20	125.05	58.46
21	129.84	62.08
22	134.43	65.94
23	138.81	70.04
24	142.98	74.36
25	146.92	78.88
26	150.61	83.61
27	154.06	88.52
28	157.25	93.60
29	160.17	98.85
30	162.81	104.23

31 164.18 107.45
 Circle Center At X = 57.8 ; Y = 152.4 and Radius, 115.5

*** 1.129 ***

Failure Surface Specified By 31 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	16.50	44.50
2	22.15	42.48
3	27.90	40.76
4	33.73	39.34
5	39.63	38.24
6	45.57	37.44
7	51.55	36.96
8	57.55	36.79
9	63.55	36.94
10	69.53	37.41
11	75.48	38.18
12	81.38	39.27
13	87.22	40.67
14	92.97	42.38
15	98.62	44.38
16	104.17	46.68
17	109.58	49.27
18	114.85	52.13
19	119.96	55.27
20	124.90	58.68
21	129.66	62.34
22	134.21	66.25
23	138.56	70.39
24	142.67	74.75
25	146.56	79.32
26	150.20	84.09
27	153.58	89.05
28	156.70	94.17
29	159.54	99.46
30	162.10	104.88
31	163.11	107.33

Circle Center At X = 57.7 ; Y = 150.9 and Radius, 114.1

*** 1.135 ***

Failure Surface Specified By 32 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	16.50	44.50
2	22.02	42.15
3	27.67	40.11
4	33.41	38.39
5	39.24	36.97
6	45.14	35.88
7	51.09	35.12

8	57.08	34.68
9	63.08	34.56
10	69.07	34.78
11	75.05	35.33
12	80.98	36.20
13	86.86	37.39
14	92.67	38.90
15	98.38	40.73
16	103.99	42.87
17	109.47	45.31
18	114.81	48.05
19	119.99	51.08
20	125.00	54.38
21	129.82	57.96
22	134.43	61.79
23	138.83	65.87
24	143.00	70.18
25	146.93	74.72
26	150.61	79.46
27	154.01	84.40
28	157.15	89.52
29	160.00	94.80
30	162.55	100.23
31	164.81	105.79
32	165.43	107.59

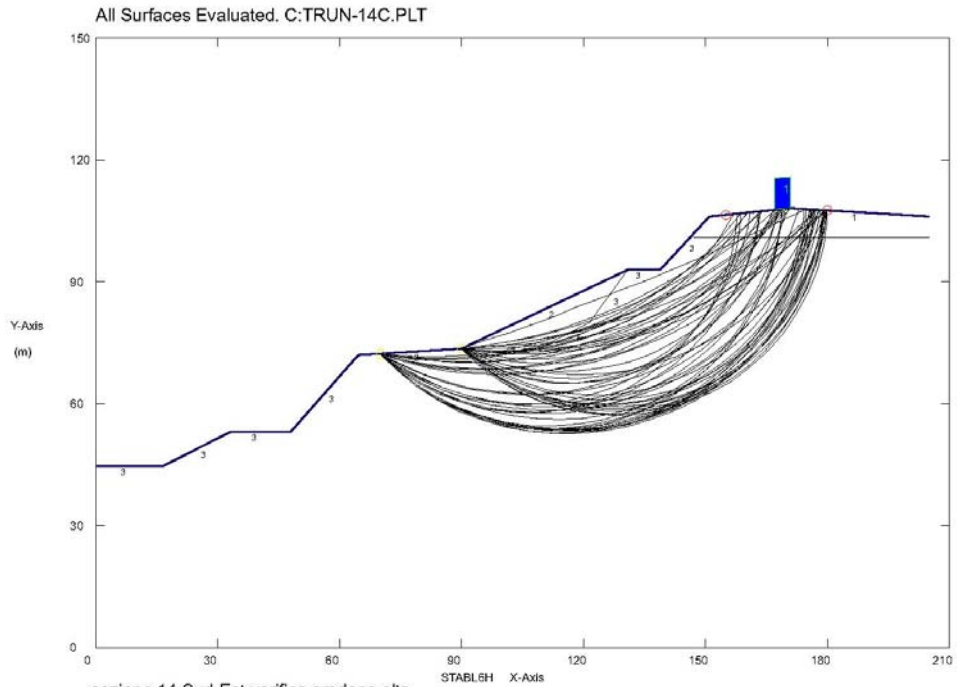
Circle Center At X = 62.1 ; Y = 144.2 and Radius, 109.6

*** 1.138 ***

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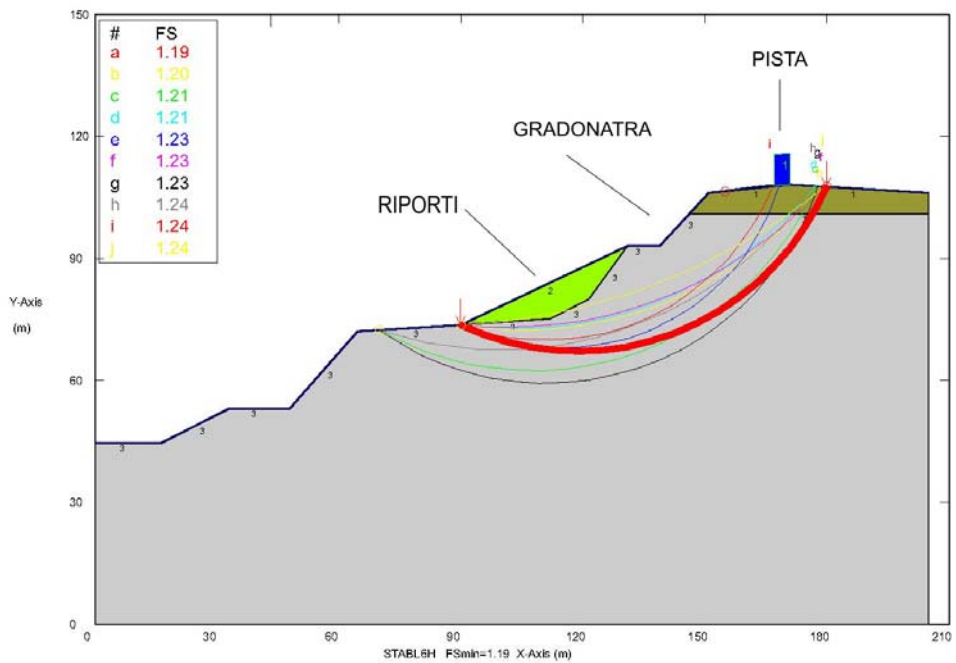
SCHEDA GRAFICA N. 16

VERIFICA GRADONATURA ALTA A LUNGO TERMINE VERSANTE SE (*Sezione vista da Sud*). Stato di progetto -SEZIONE 14 (calcolo)



sezione 14 Sud-Est verifica gradone alto

Most Critical Surface. C:TRUN-14C.PLT



Soil Type No. Label	Total Unit Wt (KN/m ³)	Saturated Unit Wt (KN/m ³)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1 18.3	18.3	19	27	21	0	0	
2	17	19	20	18	0	0	
3	19.3	20	60	13	0	0	

VERIFICA GRADONATURA ALTA A LUNGO TERMINE VERSANTE SE. Stato di progetto -SEZIONE 14 (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:TRUN-14C.SI
Output Filename: C:TRUN-14C.OUT
Plotted Output Filename: C:TRUN-14C.PLT

PROBLEM DESCRIPTION sezione 14 Sud-Est
verifica gradone alto

BOUNDARY COORDINATES
10 Top Boundaries
14 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	44.50	16.50	44.50	3
2	16.50	44.50	33.00	53.00	3
3	33.00	53.00	48.00	53.00	3
4	48.00	53.00	64.50	72.00	3
5	64.50	72.00	90.00	73.60	3
6	90.00	73.60	131.00	93.00	2
7	131.00	93.00	139.00	93.00	3
8	139.00	93.00	151.00	106.00	3
9	151.00	106.00	171.00	108.20	1
10	171.00	108.20	205.00	106.20	1
11	90.00	73.60	112.00	75.00	3
12	112.00	75.00	121.40	80.00	3
13	121.40	80.00	131.00	93.00	3
14	147.00	101.00	205.00	101.00	3

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param. (Kpa)	Pressure Constant (Kpa)	Piez. Surface No.
1	18.3	19.0	27.0	21.0	.00	.0	0
2	17.0	19.0	20.0	18.0	.00	.0	0
3	19.3	20.0	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S)
1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	167.00	171.00	100.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient

Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.

60 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 2 Points Equally Spaced
Along The Ground Surface Between X = 70.00 mt.
and X = 90.00 mt.

Each Surface Terminates Between X = 155.00 mt.
and X = 180.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 mt.

6.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

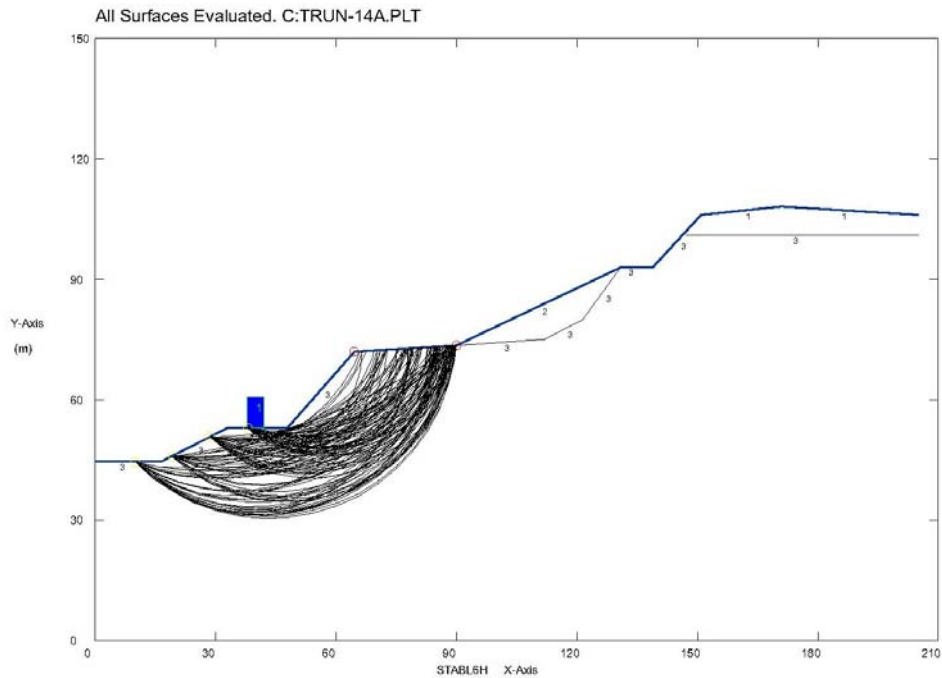
Failure Surface Specified By 19 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	90.00	73.60
2	95.53	71.26
3	101.24	69.44
4	107.10	68.13
5	113.05	67.36
6	119.04	67.13
7	125.04	67.44
8	130.98	68.29
9	136.81	69.67
10	142.51	71.57
11	148.00	73.97
12	153.26	76.87
13	158.23	80.22
14	162.88	84.01
15	167.18	88.20
16	171.07	92.77
17	174.54	97.66
18	177.55	102.85
19	179.80	107.68

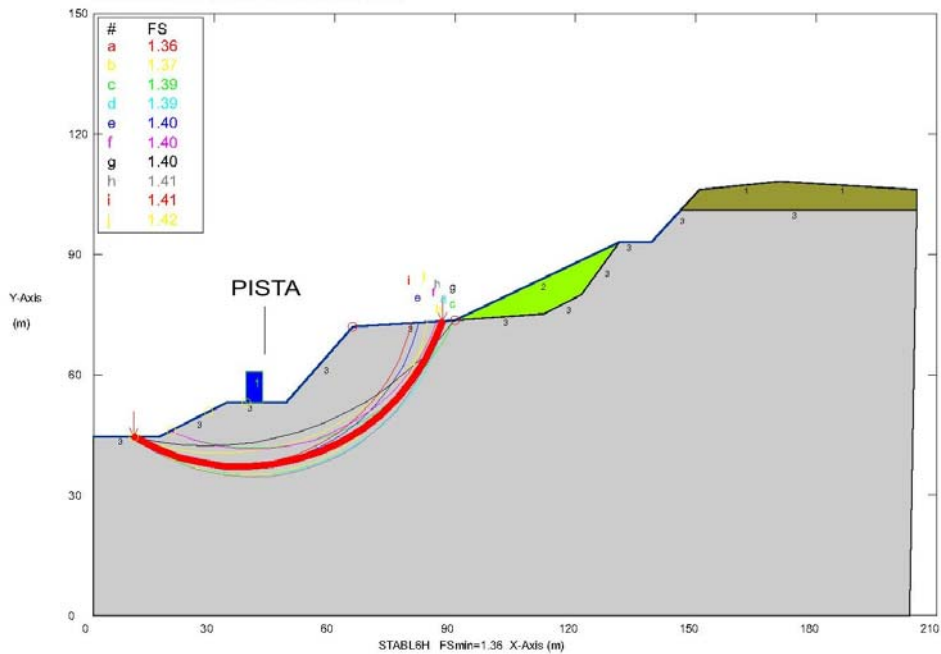
Circle Center At X = 118.6 ; Y = 133.6 and Radius, 66.5

*** 1.185 ***

VERIFICA GRADONATURA BASSA (PISTA) A LUNGO TERMINE VERSANTE SE *(Sezione vista da Sud)*. **Stato di progetto -SEZIONE 14 (calcolo)**



sezione 14 SE verifica gradone pista
Most Critical Surface. C:TRUN-14A.PLT



Soil Type No. Label	Total Unit Wt (KN/m ³)	Saturated Unit Wt (KN/m ³)	Cohesion intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Plaz. Surface No.
1 marne al	18.3	19	27	21	0	0	
2 ripod	17	19	20	18	0	0	
3 marne az	19.3	20	60	13	0	0	

VERIFICA GRADONATURA BASSA (PISTA) A LUNGO TERMINE VERSANTE

SE. Stato di progetto -SEZIONE 14 (report)

** STABL6H **
by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:TRUN-14A.SI
Output Filename: C:TRUN-14A.OUT
Plotted Output Filename: C:TRUN-14A.PLT

PROBLEM DESCRIPTION sezione 14 SE
verifica gradone pista

BOUNDARY COORDINATES
10 Top Boundaries
14 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	44.50	16.50	44.50	3
2	16.50	44.50	33.00	53.00	3
3	33.00	53.00	48.00	53.00	3
4	48.00	53.00	64.50	72.00	3
5	64.50	72.00	90.00	73.60	3
6	90.00	73.60	131.00	93.00	2
7	131.00	93.00	139.00	93.00	3
8	139.00	93.00	151.00	106.00	3
9	151.00	106.00	171.00	108.20	1
10	171.00	108.20	205.00	106.20	1
11	90.00	73.60	112.00	75.00	3
12	112.00	75.00	121.40	80.00	3
13	121.40	80.00	131.00	93.00	3
14	147.00	101.00	205.00	101.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	18.3	19.0	27.0	21.0	.00	.0	0
2	17.0	19.0	20.0	18.0	.00	.0	0
3	19.3	20.0	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	38.00	42.00	300.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed

Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.

120 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 4 Points Equally Spaced
Along The Ground Surface Between X = 10.00 mt.
and X = 38.00 mt.

Each Surface Terminates Between X = 64.50 mt.
and X = 90.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 mt.

6.00 mt. Line Segments Define Each Trial Failure Surface.

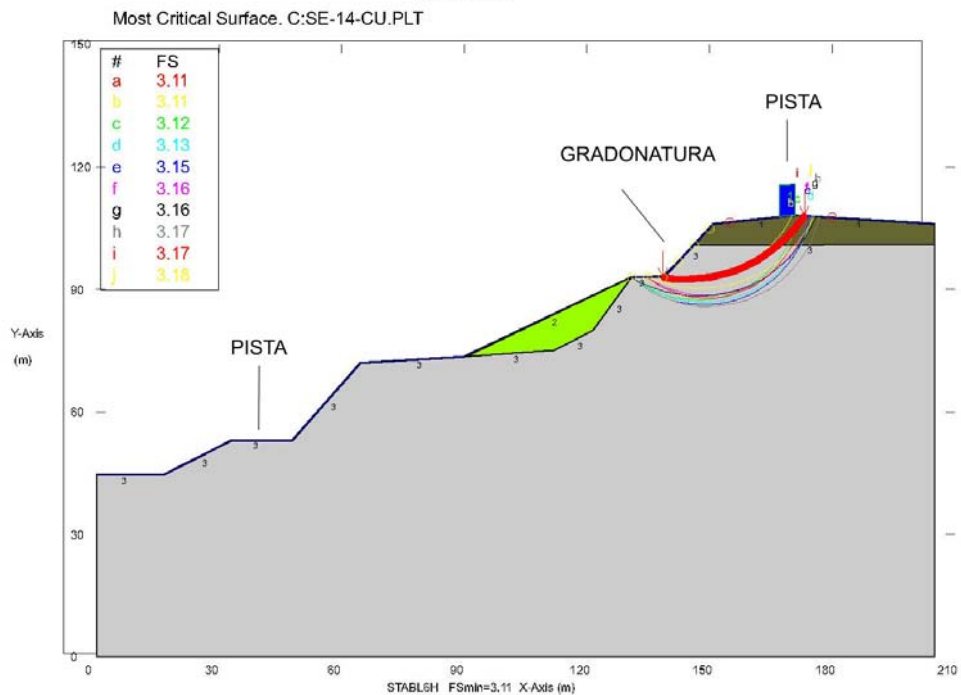
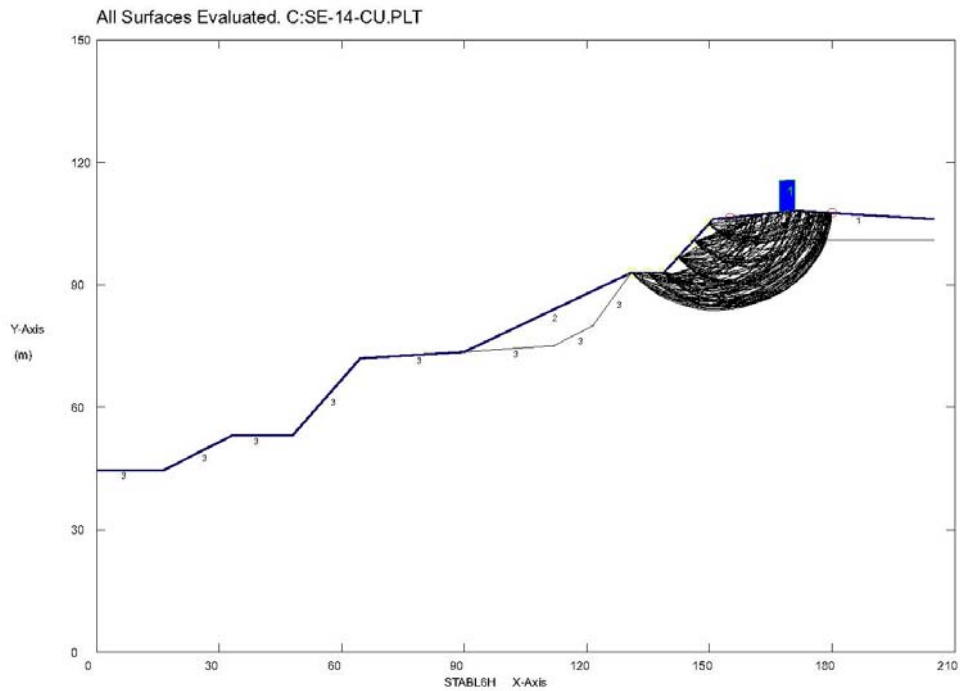
Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *
Failure Surface Specified By 17 Coordinate Point

Point No.	X-Surf (mt)	Y-Surf (mt)
1	10.00	44.50
2	15.32	41.72
3	20.92	39.56
4	26.72	38.06
5	32.67	37.23
6	38.66	37.08
7	44.64	37.62
8	50.52	38.84
9	56.21	40.72
10	61.66	43.24
11	66.78	46.37
12	71.51	50.06
13	75.79	54.27
14	79.56	58.93
15	82.77	64.00
16	85.38	69.40
17	86.78	73.40

Circle Center At X = 36.9 ; Y = 89.5 and Radius, 52.4

*** 1.362 ***

SCHEDA GRAFICA N. 18
VERIFICA GRADONATURA ALTA A BREVE TERMINE VERSANTE SE (*Sezione vista da Sud*). Stato di progetto -SEZIONE 14 (calcolo)


Soil Type No. Label	Total Unit Wt. (KN/m3)	Saturated Unit Wt. (KN/m3)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Plaz. Surface No.
1	18.3	19	106	0	0	0	
2	17	19	0	0	0	0	
3	19.3	20	190	0	0	0	

VERIFICA GRADONATURA ALTA A BREVE TERMINE VERSANTE SE. [Stato di progetto](#) -SEZIONE 14 (report)

**** STABL6H ****

by

Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:SE-14-CU.SI

Output Filename: C:SE-14-CU.OUT

Plotted Output Filename: C:SE-14-CU.PLT

PROBLEM DESCRIPTION sezione 14 Sud-Est
verifica gradone alto a breve termine

BOUNDARY COORDINATES

10 Top Boundaries

14 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	44.50	16.50	44.50	3
2	16.50	44.50	33.00	53.00	3
3	33.00	53.00	48.00	53.00	3
4	48.00	53.00	64.50	72.00	3
5	64.50	72.00	90.00	73.60	3
6	90.00	73.60	131.00	93.00	2
7	131.00	93.00	139.00	93.00	3
8	139.00	93.00	151.00	106.00	3
9	151.00	106.00	171.00	108.20	1
10	171.00	108.20	205.00	106.20	1
11	90.00	73.60	112.00	75.00	3
12	112.00	75.00	121.40	80.00	3
13	121.40	80.00	131.00	93.00	3
14	147.00	101.00	205.00	101.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param. (Kpa)	Piez. Constant (Kpa)	Piez. Surface No.
1	18.3	19.0	106.0	.0	.00	.0	0
2	17.0	19.0	.0	.0	.00	.0	0
3	19.3	20.0	190.0	.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load	X-Left	X-Right	Intensity	Deflection
------	--------	---------	-----------	------------

No.	(mt)	(mt)	(Kpa)	(deg)
1	167.00	171.00	100.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface. A Horizontal Earthquake Loading Coefficient Of .060 Has Been Assigned
A Vertical Earthquake Loading Coefficient Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

180 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 6 Points Equally Spaced Along The Ground Surface Between X = 131.00 mt. and X = 150.00 mt.

Each Surface Terminates Between X = 155.00 mt. and X = 180.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 mt.

3.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical. First.

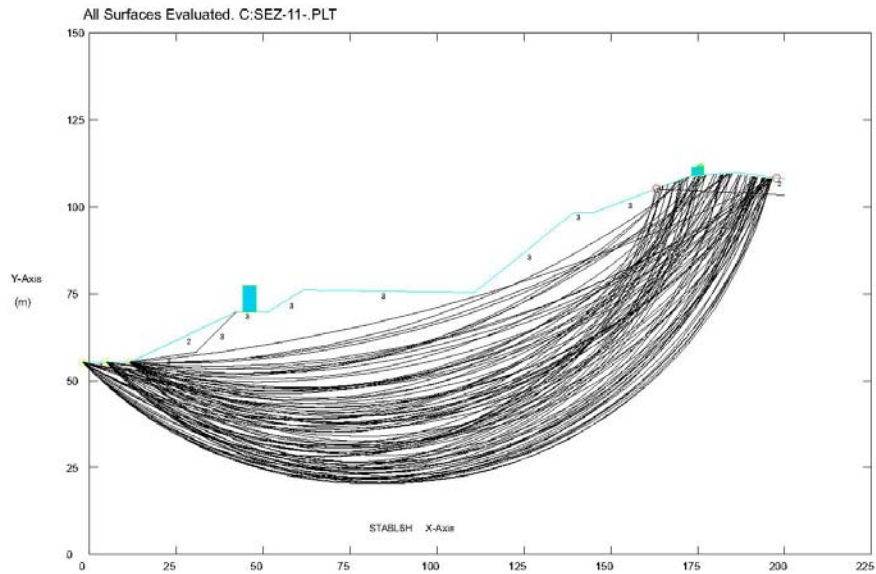
** Safety Factors Are Calculated By The Modified Bishop Method **

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	138.60	93.00
2	141.58	92.63
3	144.58	92.52
4	147.57	92.67
5	150.54	93.08
6	153.47	93.75
7	156.32	94.67
8	159.09	95.84
9	161.74	97.24
10	164.26	98.86
11	166.64	100.70
12	168.84	102.73
13	170.86	104.95
14	172.67	107.34
15	173.14	108.07

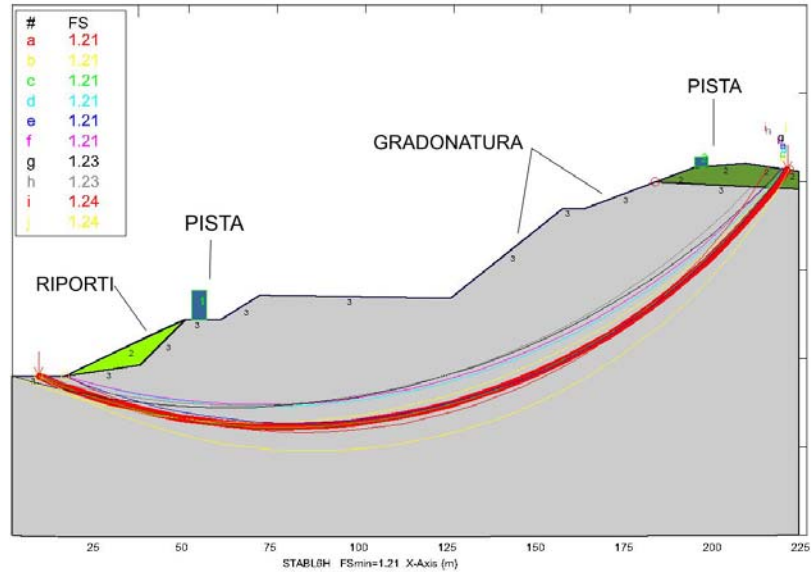
Circle Center At X = 144.3 ; Y = 127.0 and Radius, 34.5

*** 3.108 ***

SCHEDA GRAFICA N. 19
VERIFICA GLOBALE A LUNGO TERMINE VERSANTE SE (Sezione vista da Sud).
Stato di progetto -SEZIONE 11 (calcolo)


sezione 11 SE verifica globale con sovr

Ten Most Critical. C:SEZ-11-.PLT



Soil Type No. Label	Total Unit Wt. (KN/m ³)	Saturated Unit Wt. (KN/m ³)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Plaz. Surface No.
marne al	18.3	19	27	21	0	0	
riporto	17	18	20	18	0	0	
marne az	19.3	20	80	13	0	0	

**VERIFICA GLOBALE A LUNGO TERMINE VERSANTE SE. Stato di progetto -
SEZIONE 11 (report)**

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:SEZ-11-.SI
Output Filename: C:SEZ-11-.OUT
Plotted Output Filename: C:SEZ-11-.PLT

PROBLEM DESCRIPTION sezione 11 SE
verifica globale con sovraccarico

BOUNDARY COORDINATES

12 Top Boundaries

15 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	45.00	15.00	45.00	3
2	15.00	45.00	49.00	61.00	2
3	49.00	61.00	59.00	61.00	3
4	59.00	61.00	70.00	68.00	3
5	70.00	68.00	124.00	67.00	3
6	124.00	67.00	155.80	92.50	3
7	155.80	92.50	162.00	92.50	3
8	162.00	92.50	182.00	100.00	3
9	182.00	100.00	193.00	104.00	2
10	193.00	104.00	207.50	105.30	2
11	207.50	105.30	222.50	103.00	2
12	222.50	103.00	222.60	103.00	2
13	182.00	100.00	222.60	98.00	3
14	15.00	45.00	36.30	48.00	3
15	36.30	48.00	49.00	61.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param. (Kpa)	Pressure Constant (Kpa)	Piez. Surface No.
1	18.3	19.0	27.0	21.0	.00	.0	0
2	17.0	18.0	20.0	18.0	.00	.0	0
3	19.3	20.0	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S) 2 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	51.00	55.00	300.0	.0
2	193.00	197.00	100.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface. A Horizontal Earthquake Loading Coefficient. Of .060 Has Been Assigned. A Vertical Earthquake Loading Coefficient. Of .030 Has Been Assigned
Cavitation Pressure = .0 Kpa
A Critical Failure Surface Searching Method, Using A Random

Technique For Generating Circular Surfaces, Has Been Specified.

90 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 3 Points Equally Spaced
 Along The Ground Surface Between X = .00 mt.
 and X = 15.00 mt.

Each Surface Terminates Between X = 182.00 mt.
 and X = 220.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
 At Which A Surface Extends Is Y = .00 ft.

7.00 mt. Line Segments Define Each Trial Failure Surface.

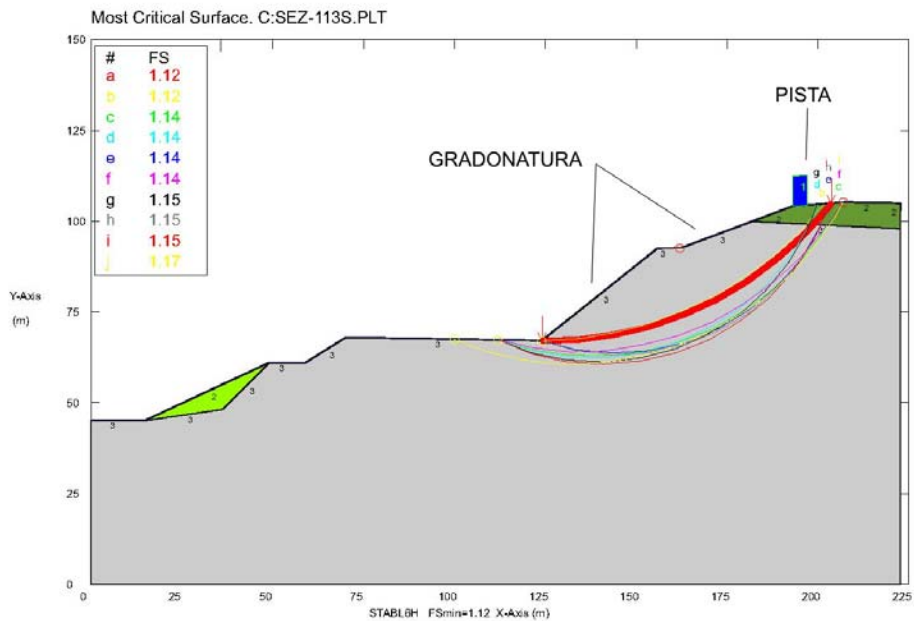
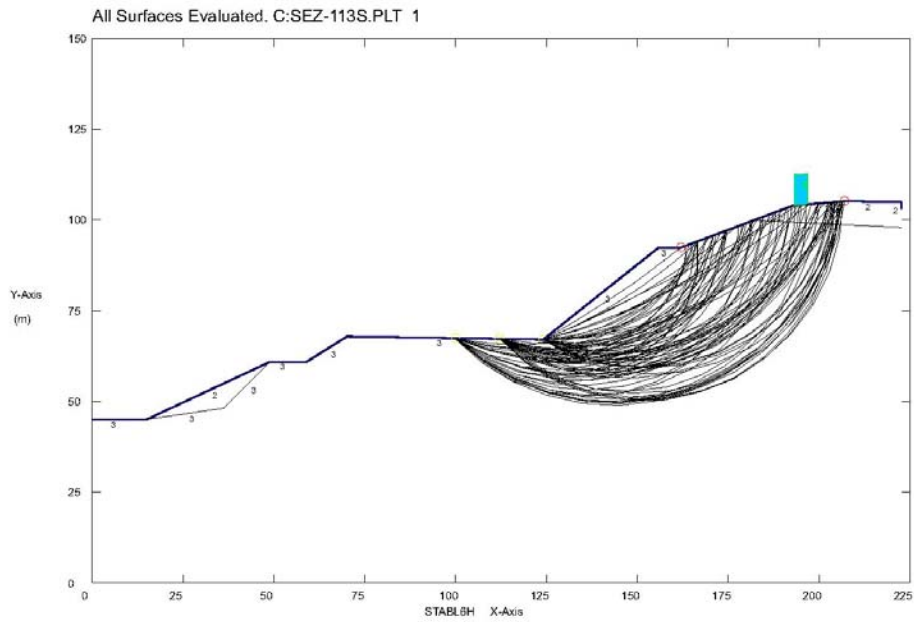
Following Are Displayed The Ten Most Critical Of The Trial
 Failure Surfaces Examined. They Are Ordered - Most Critical
 First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *
 Failure Surface Specified By 35 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	7.50	45.00
2	13.99	42.37
3	20.57	40.00
4	27.25	37.89
5	34.00	36.05
6	40.82	34.48
7	47.70	33.18
8	54.63	32.16
9	61.59	31.41
10	68.57	30.94
11	75.57	30.74
12	82.57	30.83
13	89.56	31.19
14	96.53	31.83
15	103.47	32.75
16	110.37	33.94
17	117.21	35.41
18	123.99	37.15
19	130.70	39.15
20	137.32	41.42
21	143.85	43.95
22	150.27	46.74
23	156.57	49.78
24	162.75	53.07
25	168.80	56.60
26	174.69	60.37
27	180.44	64.37
28	186.02	68.60
29	191.43	73.04
30	196.65	77.70
31	201.69	82.56
32	206.53	87.61
33	211.17	92.86
34	215.59	98.28
35	219.48	103.46

Circle Center At X = 76.9 ; Y = 206.9 and Radius, 176.1

*** 1.207 **

SCHEDA GRAFICA N. 20
VERIFICA GRADONATURA ALTA A LUNGO TERMINE (PISTA) VERSANTE SE
(Sezione vista da Sud). Stato di progetto -SEZIONE 11 (calcolo)


Soil Type No. Label	Total Unit Wt (KN/m ³)	Saturated Unit Wt (KN/m ³)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1 mame al	18.3	19	27	21	0	0	
2 riparla	17	18	20	18	0	0	
3 mame az	19.3	20	60	13	0	0	

VERIFICA GRADONATURA ALTA A LUNGO TERMINE (PISTA) VERSANTE SE.
Stato di progetto -SEZIONE 11 (report)

** STABL6H **

by

Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:SEZ-113S.SI
Output Filename: C:SEZ-113S.OUT
Plotted Output Filename: C:SEZ-113S.PLT

PROBLEM DESCRIPTION sezione 11 SE
verifica gradone

BOUNDARY COORDINATES

12 Top Boundaries
15 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	45.00	15.00	45.00	3
2	15.00	45.00	49.00	61.00	2
3	49.00	61.00	59.00	61.00	3
4	59.00	61.00	70.00	68.00	3
5	70.00	68.00	124.00	67.00	3
6	124.00	67.00	155.80	92.50	3
7	155.80	92.50	162.00	92.50	3
8	162.00	92.50	182.00	100.00	3
9	182.00	100.00	193.00	104.00	2
10	193.00	104.00	207.50	105.30	2
11	207.50	105.30	222.50	105.00	2
12	222.50	105.00	222.60	103.00	2
13	182.00	100.00	222.60	98.00	3
14	15.00	45.00	36.30	48.00	3
15	36.30	48.00	49.00	61.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	18.3	19.0	27.0	21.0	.00	.0	0
2	17.0	18.0	20.0	18.0	.00	.0	0
3	19.3	20.0	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	193.00	197.00	100.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

90 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 3 Points Equally Spaced Along The Ground Surface Between X = 100.00 mt. and X = 124.00 mt.

Each Surface Terminates Between X = 162.00 mt. and X = 207.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 mt.

10.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

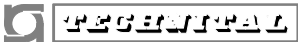
* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	124.00	67.00
2	134.00	67.30
3	143.91	68.61
4	153.64	70.93
5	163.08	74.22
6	172.14	78.46
7	180.72	83.59
8	188.73	89.57
9	196.10	96.34
10	202.74	103.82
11	203.55	104.95

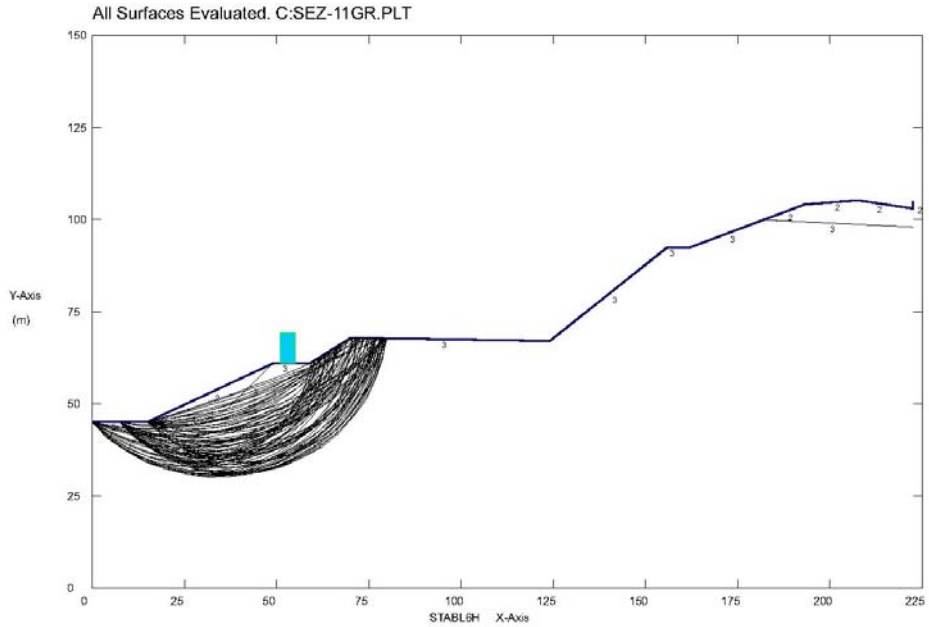
Circle Center At X = 126.1 ; Y = 165.2 and Radius, 98.2

*** 1.115 ***

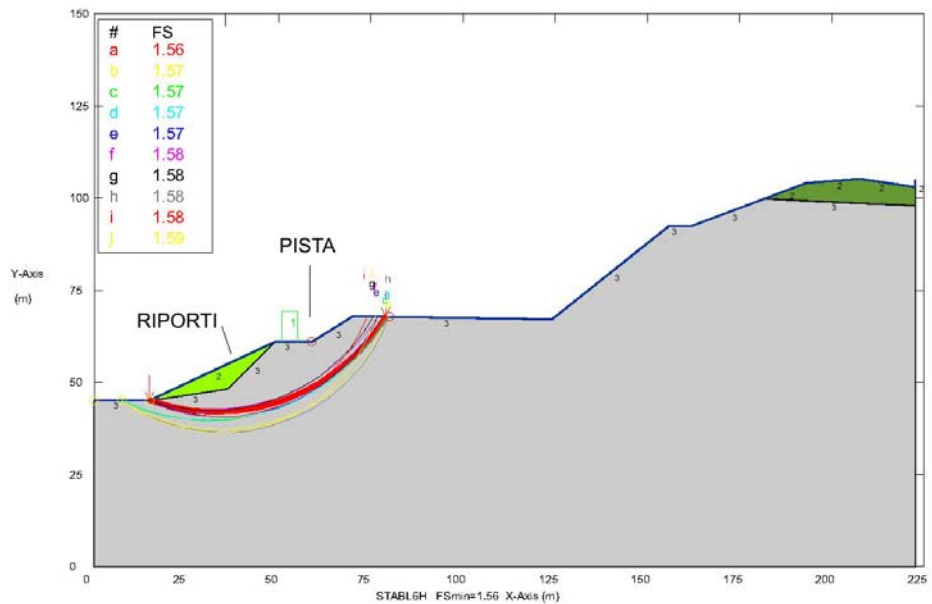
	Rev. 1	Data Settembre 2012	El. A18-9-trunc103	Pag. n. 118

SCHEDA GRAFICA N. 21

VERIFICA GRADONATURA BASSA A LUNGO TERMINE (PISTA ACCESSO FOSSA) VERSANTE SE(*Sezione vista da Sud*). Stato di progetto - SEZIONE 11(calcolo)



sezione 11 SE verifica gradone pista



Soil Type No. Label	Total Unit Wt. (KN/m ³)	Saturated Unit Wt. (KN/m ³)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Phz. Surface No.
1 marne ai	18.3	19	27	21	0	0	
2 riporto	17	18	20	18	0	0	
3 marne az	19.3	20	60	13	0	0	

VERIFICA GRADONATURA BASSA A LUNGO TERMINE (PISTA ACCESSO FOSSA) VERSANTE SE. Stato di progetto -SEZIONE 11 (report)

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:SEZ-11GR.SI
Output Filename: C:SEZ-11GR.OUT
Plotted Output Filename: C:SEZ-11GR.PLT

PROBLEM DESCRIPTION sezione 11 SE
verifica gradone pista

BOUNDARY COORDINATES

12 Top Boundaries
15 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	45.00	15.00	45.00	3
2	15.00	45.00	49.00	61.00	2
3	49.00	61.00	59.00	61.00	3
4	59.00	61.00	70.00	68.00	3
5	70.00	68.00	124.00	67.00	3
6	124.00	67.00	155.80	92.50	3
7	155.80	92.50	162.00	92.50	3
8	162.00	92.50	182.00	100.00	3
9	182.00	100.00	193.00	104.00	2
10	193.00	104.00	207.50	105.30	2
11	207.50	105.30	222.50	103.00	2
12	222.50	103.00	222.60	105.00	2
13	182.00	100.00	222.60	98.00	3
14	15.00	45.00	36.30	48.00	3
15	36.30	48.00	49.00	61.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	18.3	19.0	27.0	21.0	.00	.0	0
2	17.0	18.0	20.0	18.0	.00	.0	0
3	19.3	20.0	60.0	13.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	51.00	55.00	300.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed

Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.

90 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 3 Points Equally Spaced
Along The Ground Surface Between X = .00 mt.
and X = 15.00 mt.

Each Surface Terminates Between X = 59.00 mt.
and X = 80.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 mt.

6.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	15.00	45.00
2	20.76	43.32
3	26.67	42.29
4	32.66	41.93
5	38.65	42.23
6	44.58	43.19
7	50.36	44.80
8	55.92	47.04
9	61.20	49.89
10	66.14	53.30
11	70.66	57.24
12	74.72	61.66
13	78.27	66.50
14	79.04	67.83

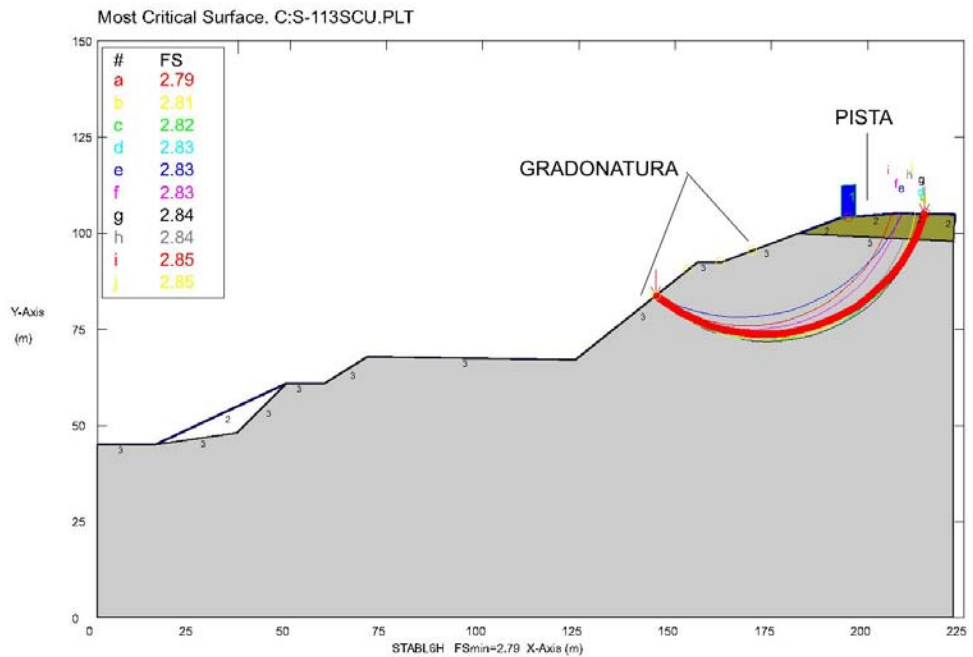
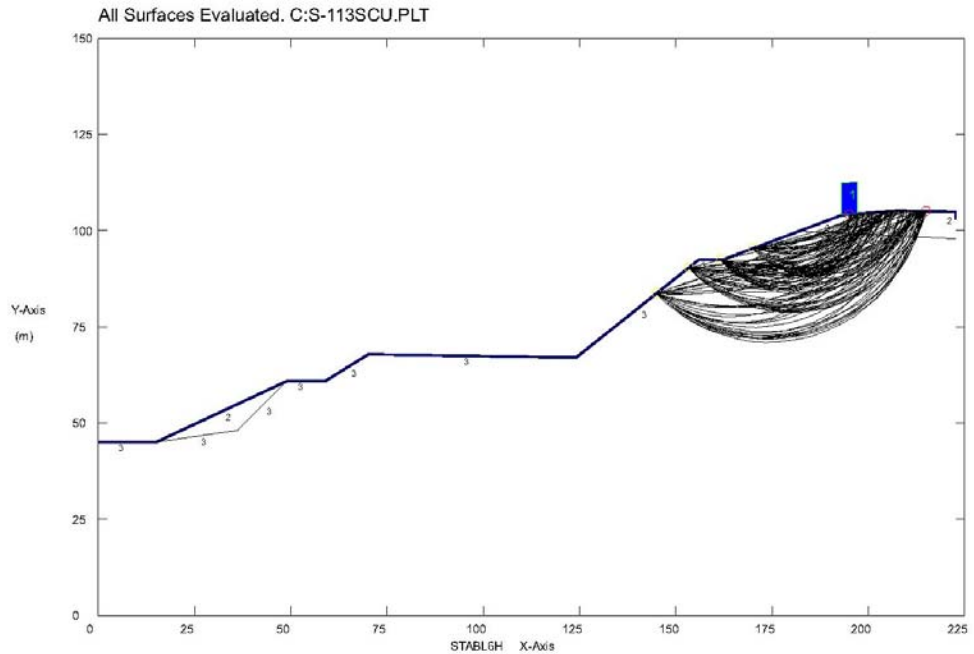
Circle Center At X = 33.0 ; Y = 96.0 and Radius, 54.1

*** 1.563 ***

SCHEDA GRAFICA N. 22

VERIFICA GRADONATURA ALTA A BREVE TERMINE (PISTA) VERSANTE SE

(Sezione vista da Sud). **Stato di progetto -SEZIONE 11 (calcolo)**



Soil Type No. Label	Total Unit WL (KN/m ³)	Saturated Unit WL (KN/m ³)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1 marne al	18.3	19	106	0	0	0	
2	17	18	0	0	0	0	
3 marne az	18.3	20	190	0	0	0	

VERIFICA GRADONATURA ALTA A BREVE TERMINE (PISTA) VERSANTE SE.

Stato di progetto -SEZIONE 11 (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:S-113SCU.SI
Output Filename: C:S-113SCU.OUT
Plotted Output Filename: C:S-113SCU.PLT
PROBLEM DESCRIPTION sezione 11 SE
verifica gradone

BOUNDARY COORDINATES

12 Top Boundaries
15 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	45.00	15.00	45.00	3
2	15.00	45.00	49.00	61.00	2
3	49.00	61.00	59.00	61.00	3
4	59.00	61.00	70.00	68.00	3
5	70.00	68.00	124.00	67.00	3
6	124.00	67.00	155.80	92.50	3
7	155.80	92.50	162.00	92.50	3
8	162.00	92.50	182.00	100.00	3
9	182.00	100.00	193.00	104.00	2
10	193.00	104.00	207.50	105.30	2
11	207.50	105.30	222.50	105.00	2
12	222.50	105.00	222.60	103.00	2
13	182.00	100.00	222.60	98.00	3
14	15.00	45.00	36.30	48.00	3
15	36.30	48.00	49.00	61.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param. (Kpa)	Pressure Constant (Kpa)	Piez. Surface No.
1	18.3	19.0	106.0	.0	.00	.0	0
2	17.0	18.0	.0	.0	.00	.0	0
3	19.3	20.0	190.0	.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	193.00	197.00	100.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.
120 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 4 Points Equally Spaced
Along The Ground Surface Between X = 145.00 mt.
and X = 170.00 mt.

Each Surface Terminates Between X = 195.00 mt.
and X = 215.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 mt.

4.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

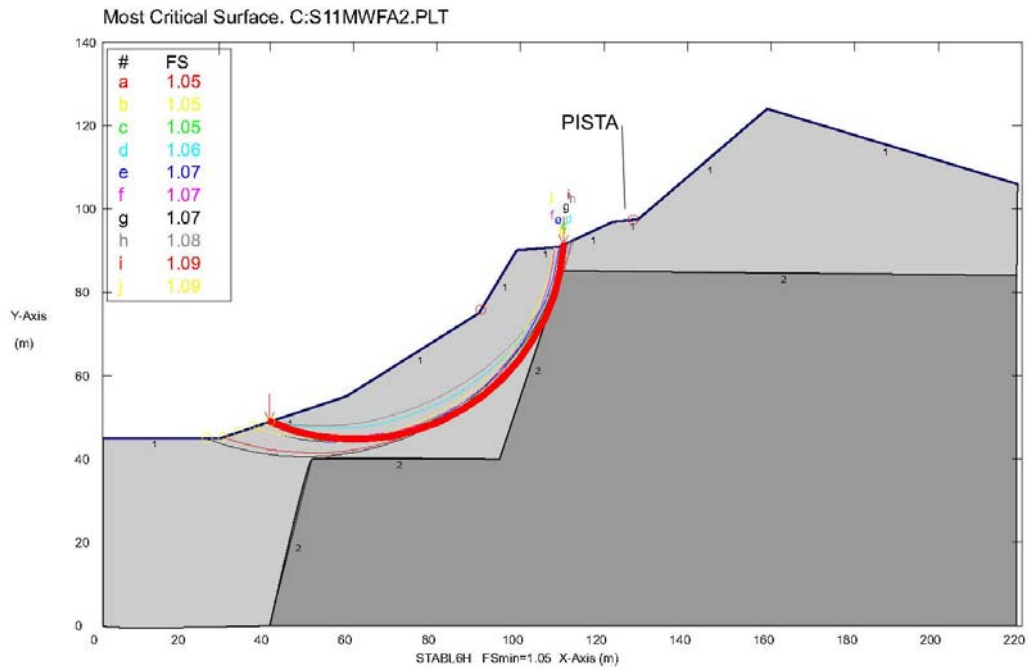
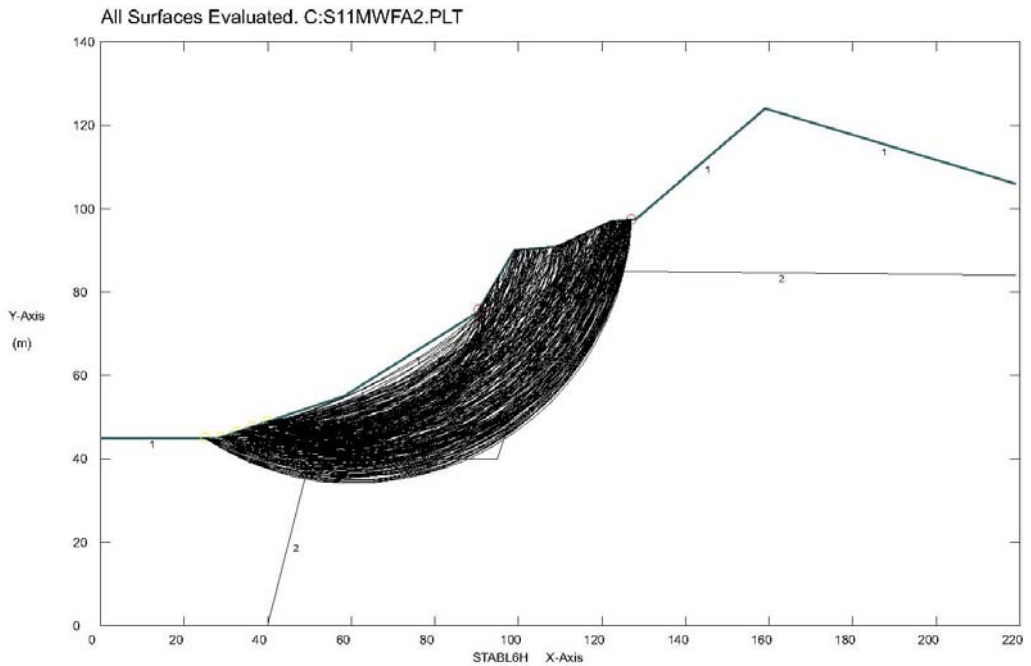
* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 23 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	145.00	83.84
2	148.19	81.42
3	151.58	79.31
4	155.16	77.51
5	158.88	76.05
6	162.72	74.94
7	166.65	74.18
8	170.63	73.79
9	174.63	73.76
10	178.62	74.10
11	182.55	74.80
12	186.41	75.86
13	190.15	77.27
14	193.75	79.02
15	197.18	81.09
16	200.40	83.46
17	203.38	86.12
18	206.12	89.04
19	208.57	92.20
20	210.72	95.57
21	212.56	99.13
22	214.06	102.83
23	214.76	105.15

Circle Center At X = 172.9 ; Y = 117.3 and Radius, 43.6

*** 2.786 ***

VERIFICA GLOBALE VERSANTE NW (Sezione vista da Nord). Stato di fatto- Sezione 11 (calcolo)


Soil Type No. Label	Total Unit Wt. (KN/m ³)	Saturated Unit Wt. (KN/m ³)	Cohesion intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Poz. Surface No.
1	19.3	20	60	13	0	0	
2	22	22	200	30	0	0	

VERIFICA GLOBALE VERSANTE NW. Stato di fatto -Sezione 11 (report)

** STABL6H **

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:S11MWFA2.SI
Output Filename: C:S11MWFA2.OUT
Plotted Output Filename: C:S11MWFA2.PLT

PROBLEM DESCRIPTION sez 11 lato NW
stato di fatto

BOUNDARY COORDINATES

9 Top Boundaries
13 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (fm)	Y-Right (mt)	Soil Type Below Bnd
1	.00	45.00	28.00	45.00	1
2	28.00	45.00	58.30	55.00	1
3	58.30	55.00	90.00	75.00	1
4	90.00	75.00	99.00	90.00	1
5	99.00	90.00	109.20	91.00	1
6	109.20	91.00	122.00	97.00	1
7	122.00	97.00	128.00	97.50	1
8	128.00	97.50	159.00	124.00	1
9	159.00	124.00	219.00	106.00	1
10	40.00	.00	50.00	40.00	2
11	50.00	40.00	95.00	40.00	2
12	95.00	40.00	110.00	85.00	2
13	110.00	85.00	219.00	84.00	2

ISOTROPIC SOIL PARAMETERS

2 Type(s) of Soil

Soil Type No.	Total Unit Wt. (KN/mc)	Saturated Unit Wt. (KN/mc)	Cohesion Intercept (kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	19.3	20.0	60.0	13.0	.00	.0	0
2	22.0	22.0	200.0	30.0	.00	.0	0

A Horizontal Earthquake Loading Coefficient
Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of .030 Has Been Assigned

Cavitation Pressure = .0 psf

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

300 Trial Surfaces Have Been Generated.

60 Surfaces Initiate From Each Of 5 Points Equally Spaced Along The Ground Surface Between X = 25.00 ft. and X = 40.00 ft.

Each Surface Terminates Between X = 90.50 ft. and X = 127.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 ft.

6.00 ft. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Modified Bishop Method

Failure Surface Specified By 18 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	40.00	48.96
2	45.63	46.88
3	51.46	45.48
4	57.42	44.79
5	63.42	44.81
6	69.38	45.55
7	75.20	46.99
8	80.81	49.11
9	86.13	51.89
10	91.08	55.28
11	95.59	59.24
12	99.60	63.71
13	103.05	68.62
14	105.88	73.90
15	108.07	79.49
16	109.58	85.30
17	110.38	91.24
18	110.39	91.56

Circle Center At X = 60.2 ; Y = 95.0 and Radius, 50.3

*** 1.047 ***

Failure Surface Specified By 18 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	40.00	48.96
2	45.61	46.83
3	51.43	45.39
4	57.39	44.66

5	63.39	44.65
6	69.35	45.36
7	75.18	46.79
8	80.79	48.90
9	86.11	51.67
10	91.06	55.06
11	95.57	59.02
12	99.57	63.50
13	103.00	68.42
14	105.81	73.72
15	107.97	79.32
16	109.44	85.13
17	110.20	91.09
18	110.20	91.47

Circle Center At X = 60.5 ; Y = 94.4 and Radius, 49.8

*** 1.048 ***

Failure Surface Specified By 18 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
-----------	-------------	-------------

1	36.25	47.72
2	41.98	45.95
3	47.87	44.80
4	53.85	44.30
5	59.85	44.44
6	65.80	45.22
7	71.63	46.64
8	77.27	48.67
9	82.67	51.30
10	87.75	54.49
11	92.45	58.21
12	96.73	62.42
13	100.54	67.06
14	103.82	72.08
15	106.54	77.43
16	108.68	83.03
17	110.20	88.84
18	110.62	91.67

Circle Center At X = 55.6 ; Y = 100.0 and Radius, 55.8

*** 1.053 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
-----------	-------------	-------------

1	40.00	48.96
2	45.89	47.81
3	51.86	47.25
4	57.86	47.31
5	63.83	47.97
6	69.69	49.23
7	75.40	51.08
8	80.89	53.49
9	86.11	56.45
10	91.01	59.92

11	95.52	63.87
12	99.62	68.26
13	103.25	73.04
14	106.38	78.16
15	108.97	83.57
16	111.00	89.21
17	111.75	92.19

Circle Center At X = 54.3 ; Y = 106.4 and Radius, 59.2

*** 1.062 ***

Failure Surface Specified By 18 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	36.25	47.72
2	41.96	45.87
3	47.83	44.66
4	53.81	44.10
5	59.81	44.22
6	65.76	45.00
7	71.58	46.44
8	77.21	48.51
9	82.58	51.20
10	87.61	54.46
11	92.25	58.26
12	96.44	62.56
13	100.13	67.29
14	103.26	72.41
15	105.82	77.84
16	107.75	83.52
17	109.04	89.38
18	109.21	91.01

Circle Center At X = 55.8 ; Y = 98.0 and Radius, 54.0

*** 1.068 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	40.00	48.96
2	45.69	47.06
3	51.57	45.85
4	57.55	45.36
5	63.54	45.59
6	69.47	46.54
7	75.24	48.20
8	80.76	50.53
9	85.97	53.52
10	90.78	57.10
11	95.12	61.24
12	98.94	65.87
13	102.17	70.93
14	104.77	76.34
15	106.70	82.02
16	107.94	87.89
17	108.20	90.90

Circle Center At X = 58.6 ; Y = 95.2 and Radius, 49.9

*** 1.074 ***

Failure Surface Specified By 20 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	25.00	45.00
2	30.68	43.06
3	36.51	41.67
4	42.45	40.82
5	48.45	40.54
6	54.44	40.82
7	60.38	41.66
8	66.22	43.06
9	71.90	44.99
10	77.37	47.45
11	82.59	50.42
12	87.50	53.85
13	92.08	57.74
14	96.27	62.03
15	100.03	66.70
16	103.35	71.71
17	106.18	77.00
18	108.50	82.53
19	110.29	88.26
20	111.06	91.87

Circle Center At X = 48.5 ; Y = 104.5 and Radius, 63.9

*** 1.074 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	40.00	48.96
2	45.95	48.16
3	51.94	47.91
4	57.93	48.22
5	63.87	49.10
6	69.70	50.52
7	75.37	52.48
8	80.83	54.96
9	86.04	57.94
10	90.94	61.40
11	95.51	65.29
12	99.68	69.60
13	103.44	74.28
14	106.75	79.29
15	109.57	84.58
16	111.88	90.12
17	112.67	92.63

Circle Center At X = 51.6 ; Y = 112.1 and Radius, 64.2

*** 1.081 ***

Failure Surface Specified By 20 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	28.75	45.25
2	34.48	43.46
3	40.35	42.22
4	46.31	41.55
5	52.31	41.45
6	58.29	41.92
7	64.20	42.95
8	69.99	44.55
9	75.59	46.68
10	80.97	49.34
11	86.08	52.50
12	90.85	56.13
13	95.27	60.19
14	99.27	64.66
15	102.83	69.49
16	105.92	74.63
17	108.51	80.05
18	110.56	85.68
19	112.08	91.49
20	112.23	92.42

Circle Center At X = 50.4 ; Y = 104.5 and Radius, 63.0


*** 1.088 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	36.25	47.72
2	42.00	46.00
3	47.90	44.92
4	53.88	44.50
5	59.88	44.75
6	65.81	45.66
7	71.60	47.23
8	77.18	49.43
9	82.49	52.23
10	87.45	55.60
11	92.01	59.51
12	96.10	63.89
13	99.69	68.71
14	102.71	73.89
15	105.15	79.37
16	106.96	85.09
17	108.11	90.89

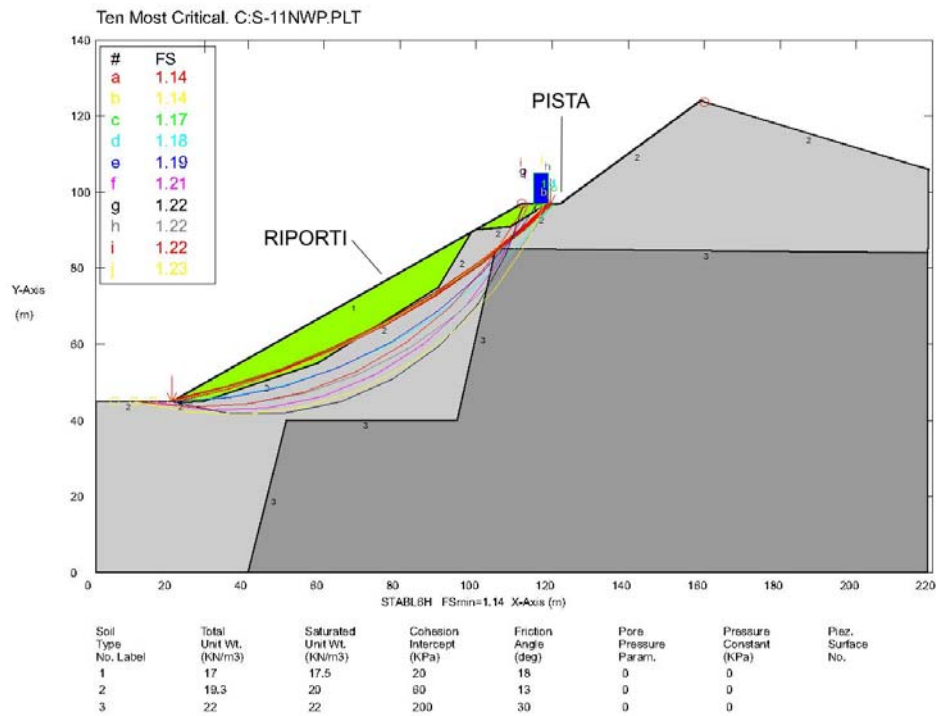
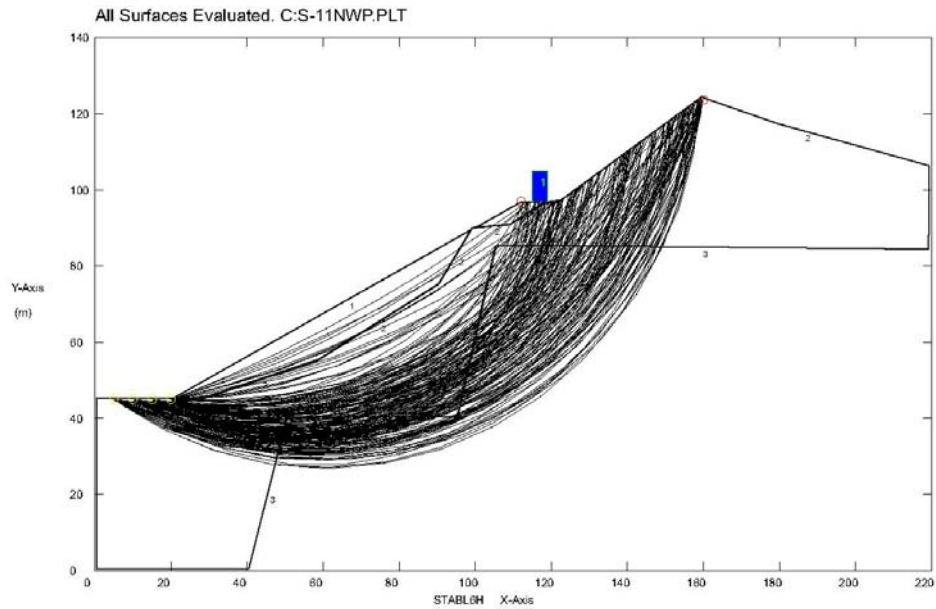
Circle Center At X = 54.6 ; Y = 98.5 and Radius, 54.0

*** 1.091 ***

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SCHEDA GRAFICA N. 24

VERIFICA GLOBALE VERSANTE NW (*Sezione vista da Nord*). **Stato di progetto-**
Sezione 11 (calcolo)



VERIFICA GLOBALE VERSANTE NW. **Stato di progetto** -Sezione 11 (report)

by
Purdue University

--Slope Stability Analysis--
Simplified Janbu, Simplified Bishop
or Spencer`s Method of Slices

Run By:

Input Data Filename: C:S-11NWP.SI
Output Filename: C:S-11NWP.OUT
Plotted Output Filename: C:S-11NWP.PLT

PROBLEM DESCRIPTION sez 11 lato NW
verifica globale

BOUNDARY COORDINATES

5 Top Boundaries
15 Total Boundaries

Boundary No.	X-Left (mt)	Y-Left (mt)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
1	.00	45.00	20.00	45.00	2
2	20.00	45.00	112.00	97.00	1
3	112.00	97.00	122.00	97.00	1
4	122.00	97.00	159.00	124.00	2
5	159.00	124.00	219.00	106.00	2
6	20.00	45.00	28.00	45.00	2
7	28.00	45.00	58.30	55.00	2
8	58.30	55.00	90.00	75.00	2
9	90.00	75.00	99.00	90.00	2
10	99.00	90.00	109.00	91.00	2
11	109.00	91.00	122.00	97.00	2
12	40.00	.00	50.00	40.00	3
13	50.00	40.00	95.00	40.00	3
14	95.00	40.00	105.00	85.00	3
15	105.00	85.00	219.00	84.00	3

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN)	Saturated Unit Wt. (kN)	Cohesion Intercept (Kpa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (Kpa)	Piez. Surface No.
1	17.0	17.5	20.0	18.0	.00	.0	0
2	19.3	20.0	60.0	13.0	.00	.0	0
3	22.0	22.0	200.0	30.0	.00	.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (mt)	X-Right (mt)	Intensity (Kpa)	Deflection (deg)
1	115.00	119.00	300.0	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Horizontal Earthquake Loading Coefficient Of .060 Has Been Assigned

A Vertical Earthquake Loading Coefficient Of .030 Has Been Assigned

Cavitation Pressure = .0 Kpa

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

200 Trial Surfaces Have Been Generated.

50 Surfaces Initiate From Each Of 4 Points Equally Spaced Along The Ground Surface Between X = 5.00 mt. and X = 20.00 mt.

Each Surface Terminates Between X = 112.00 mt. and X = 160.00 mt.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 mt.

15.00 mt. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	20.00	45.00
2	34.57	48.57
3	48.84	53.18
4	62.74	58.83
5	76.19	65.46
6	89.12	73.06
7	101.47	81.58
8	113.16	90.98
9	119.63	97.00

Circle Center At X = -21.7 ; Y = 246.8 and Radius, 206.1

*** 1.143 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	20.00	45.00
2	34.61	48.39
3	48.91	52.93
4	62.80	58.60

5	76.19	65.35
6	89.01	73.15
7	101.16	81.94
8	112.57	91.67
9	117.90	97.00

Circle Center At X = -15.2 ; Y = 230.0 and Radius, 188.3

*** 1.144 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
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1	20.00	45.00
2	34.51	48.79
3	48.74	53.53
4	62.63	59.21
5	76.11	65.79
6	89.13	73.24
7	101.62	81.54
8	113.54	90.64
9	120.81	97.00

Circle Center At X = -30.1 ; Y = 266.3 and Radius, 226.9

*** 1.165 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
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1	20.00	45.00
2	34.94	46.30
3	49.64	49.32
4	63.89	54.00
5	77.50	60.30
6	90.30	68.12
7	102.12	77.36
8	112.79	87.90
9	120.08	97.00

Circle Center At X = 16.2 ; Y = 175.0 and Radius, 130.1

*** 1.183 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
-----------	-------------	-------------

1	20.00	45.00
2	34.96	46.03
3	49.67	48.99
4	63.88	53.81
5	77.34	60.41
6	89.85	68.70
7	101.18	78.52
8	111.16	89.73
9	116.12	97.00

Circle Center At X = 19.5 ; Y = 161.3 and Radius, 116.3

*** 1.185 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	15.00	45.00
2	29.83	42.77
3	44.83	43.20
4	59.51	46.28
5	73.41	51.92
6	86.09	59.93
7	97.15	70.06
8	106.24	81.99
9	113.07	95.35
10	113.58	97.00

Circle Center At X = 34.9 ; Y = 126.9 and Radius, 84.3

*** 1.208 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	20.00	45.00
2	34.67	41.85
3	49.67	41.80
4	64.35	44.86
5	78.08	50.90
6	90.26	59.65
7	100.36	70.74
8	107.95	83.68
9	112.39	97.00

Circle Center At X = 42.4 ; Y = 113.4 and Radius, 72.0

*** 1.219 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	10.00	45.00
2	24.94	43.63
3	39.92	44.38
4	54.65	47.22
5	68.83	52.10
6	82.19	58.92
7	94.46	67.55
8	105.39	77.82
9	114.78	89.52
10	119.21	97.00

Circle Center At X = 27.2 ; Y = 150.2 and Radius, 106.6

*** 1.223 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (mt)	Y-Surf (mt)
1	10.00	45.00
2	24.92	43.42
3	39.90	44.21
4	54.56	47.37
5	68.54	52.80
6	81.49	60.37

	7	93.08	69.89
	8	103.02	81.12
	9	111.06	93.78
	10	112.45	97.00

Circle Center At X = 27.4 ; Y = 138.0 and Radius, 94.6

*** 1.224 ***

Failure Surface Specified By 10 Coordinate Point

Point No.	X-Surf (mt)	Y-Surf (mt)
1	10.00	45.00
2	24.70	42.03
3	39.70	41.54
4	54.56	43.56
5	68.88	48.02
6	82.26	54.80
7	94.33	63.71
8	104.74	74.50
9	113.22	86.88
10	117.90	97.00

Circle Center At X = 35.1 ; Y = 131.3 and Radius, 89.9

*** 1.227 ***
