B	GENNAIO 2013	AGG. A SEGUITO MODIFICHE PROG. LOTTO 9	F.CAMPAILLA	P.LO CASCIO	F.BUSOLA
A	DICEMBRE 2011	EMISSIONE	F.CAMPAILLA	P.LO CASCIO	F.BUSOLA
REV.	DATA	DESCRIZIONE	ELABORATO	VERIFICATO	APPROVATO

SOSTITUISCE L'ELABORATO N°	SOSTITUITO DALL'ELABORATO N°

CONSORZIO PER LE AUTOSTRADE SICILIANE

AUTOSTRADA SIRACUSA – GELA

2° TRONCO: ROSOLINI – RAGUSA
LOTTO 10/11

PROGETTO ESECUTIVO

IDENTIFICAZIONE ELABORATO

E	A	1	8	10	11	T	0	0	T	R	U	N	G	E	T	R	E	0	0	2	B
PROG.	STRADA			LOTTO		MACRO OPERA			OPERA				PARTE DI OPERA		TIPOLOGIA ELABORATO	N. ELABORATO				REV.	

RIQUALIFICAZIONE CAVA TRUNCAFILA MEDIANTE DEPOSITO MATERIALI IN ESUBERO PROVENIENTI DAGLI SCAVI

SCHEDE DI VERIFICA GEOTECNICA

DATA	DICEMBRE 2011	PROGETTAZIONE	TECHNITAL
CODICE CAD–FILE	EA181011T00TRUNGETRE002B.doc	IL RESPONSABILE : DOTT. ING. F. BUSOLA	

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

AUTOSTRADA SIRACUSA-GELA

2° TRONCO ROSOLINI - RAGUSA

PROGETTO ESECUTIVO

LOTTO 10-11

RIQUALIFICAZIONE CAVA TRUNCAFILA MEDIANTE DEPOSITO MATERIALI IN ESUBERO PROVENIENTI DAGLI SCAVI

SCHEDE DI VERIFICA GEOTECNICA

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- **SCHEDA GRAFICA N. 2**
- VERIFICA GLOBALE VERSANTE NE. Stato di progetto – SEZIONE B
- **SCHEDA GRAFICA N. 3**
- VERIFICA A BREVE TERMINE (PISTA) VERSANTE NE. Stato di progetto –-SEZIONE B
- **SCHEDA GRAFICA N. 4**
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- VERIFICA (PISTA DI ACCESSO FOSSA) VERSANTE NE. Stato di progetto –SEZIONE D
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- VERIFICA GRADONE INTERMEDIO A BREVE TERMINE VERSANTE NE. Stato di progetto –SEZIONE D
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- VERIFICA GRADONATURA ALTA A BREVE TERMINE VERSANTE SE. Stato di progetto -SEZIONE 14
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- **SCHEDA GRAFICA N. 23**
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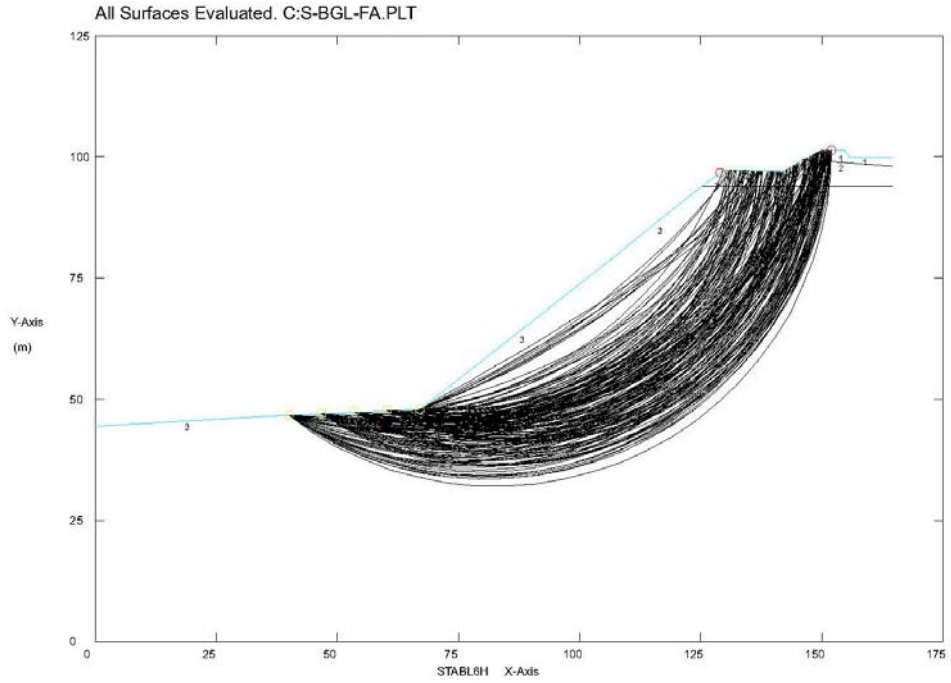
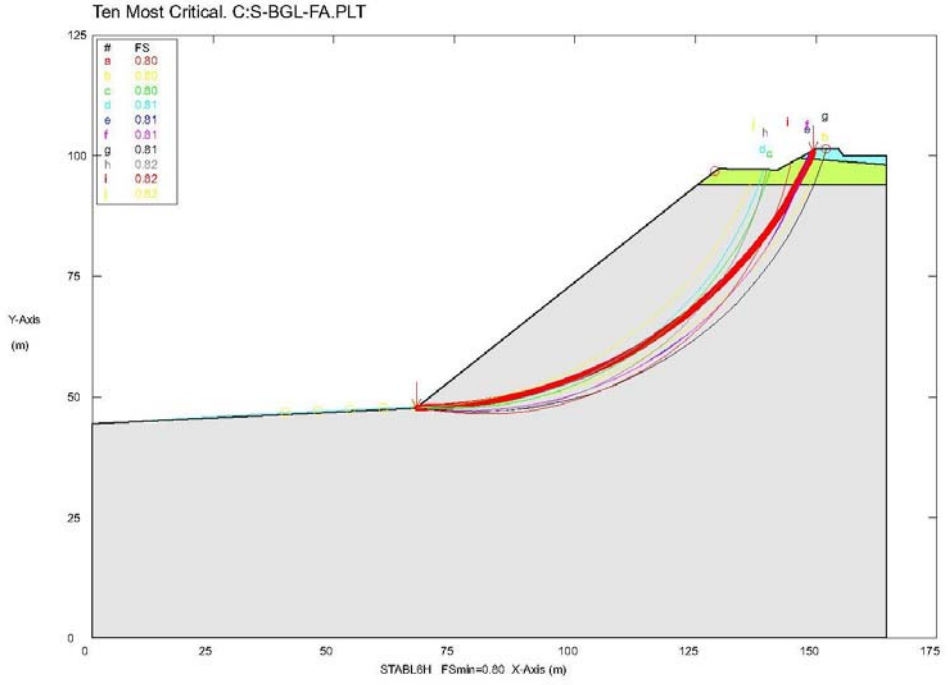
- **SCHEDA GRAFICA N. 24**
- VERIFICA GLOBALE VERSANTE NW. Stato di progetto -SEZIONE 11

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/m3)	Saturated Unit Wt. (KN/m3)	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.	Pressure Constant (Kpa)	Piez. Sur-face 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

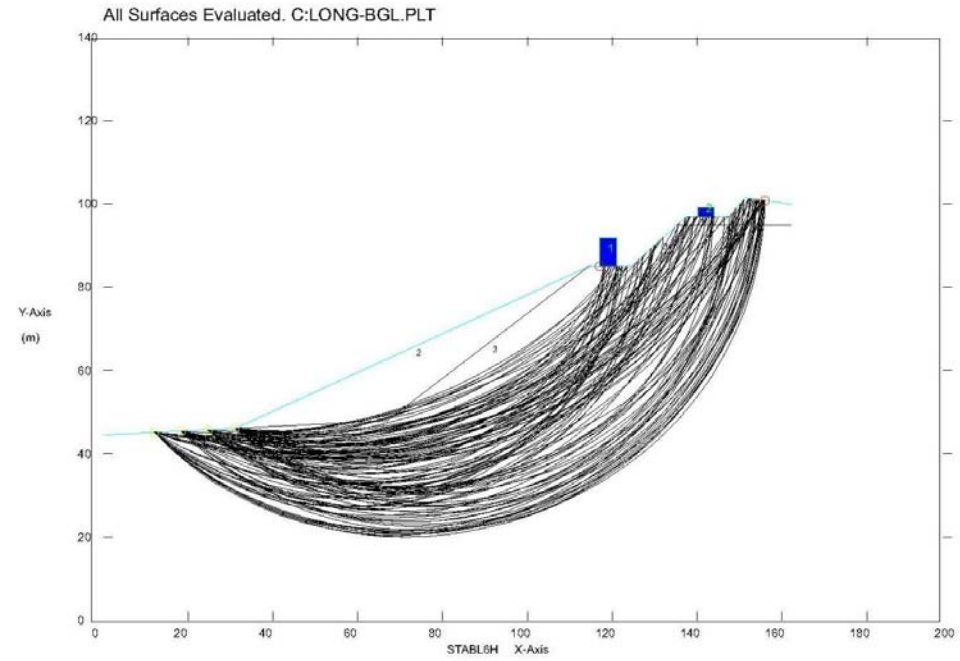
Circle Center At X = 65.7 ; Y = 124.8 and Radius, 76.8

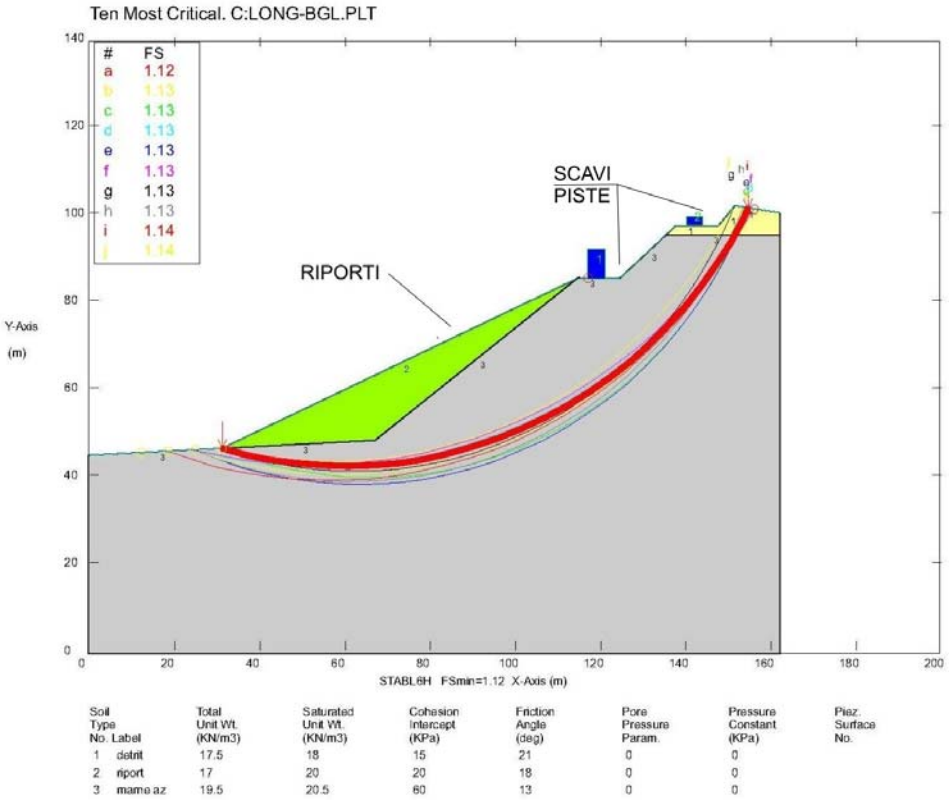
*** .821 ***

SCHEDA GRAFICA N. 2

VERIFICA GLOBALE A LUNGO TERMINE 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	detrit	17.5	18	15	21	0	0	
2	riport	17	20	20	18	0	0	
3	marna az	19.5	20.5	60	13	0	0	

VERIFICA GLOBALE A LUNGO TERMINE 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-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

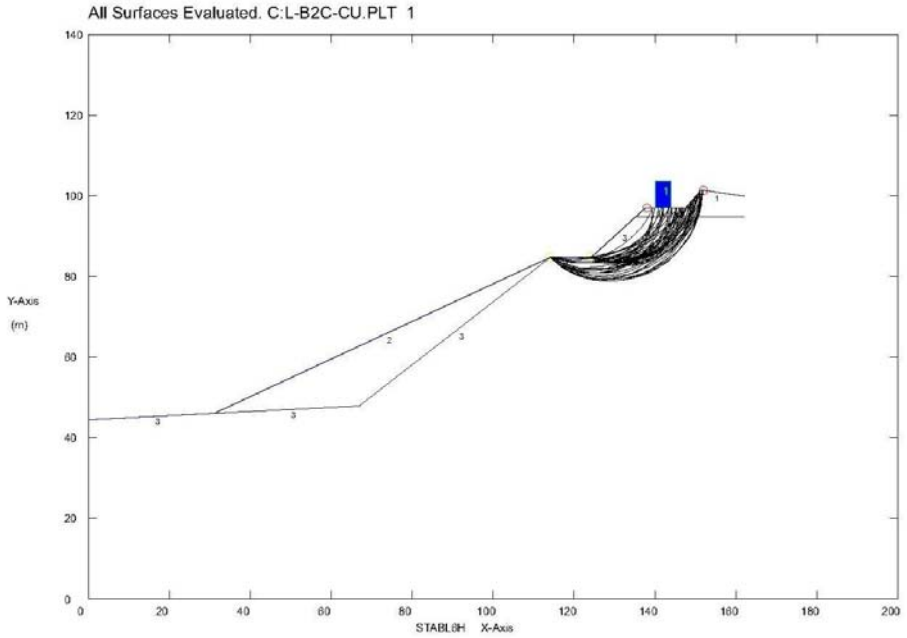
Circle Center At X = 56.0 ; Y = 149.9 and Radius, 106.9

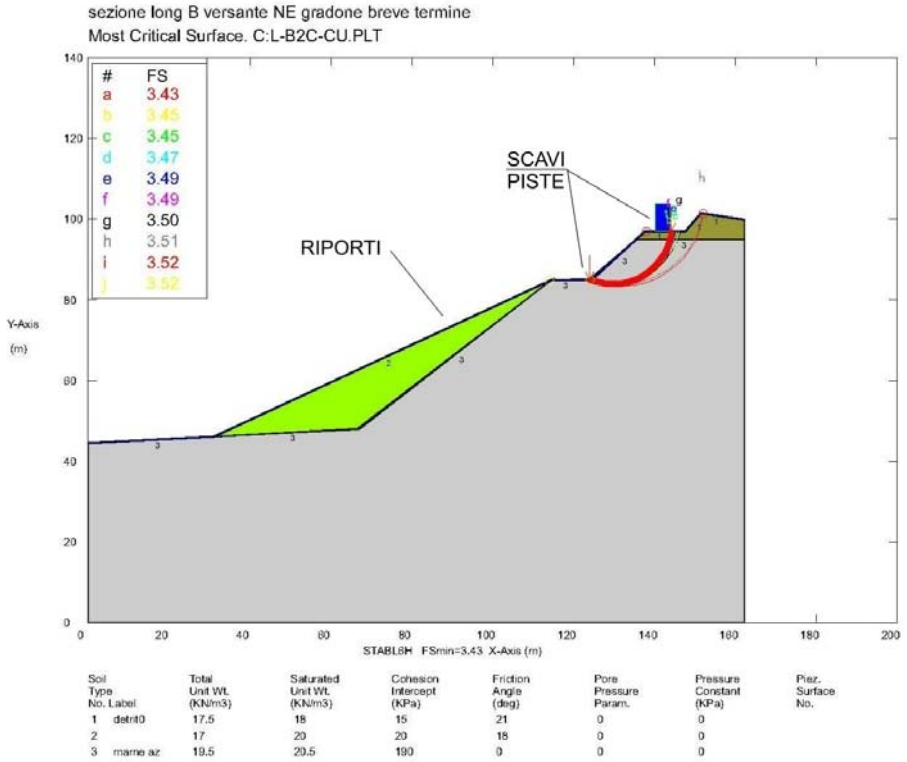
*** 1.139 ***

SCHEDA GRAFICA N. 3

VERIFICA A BREVE 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		17	20	20	18	0	0	
3	marne az	19.5	20.5	190	0	0	0	

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

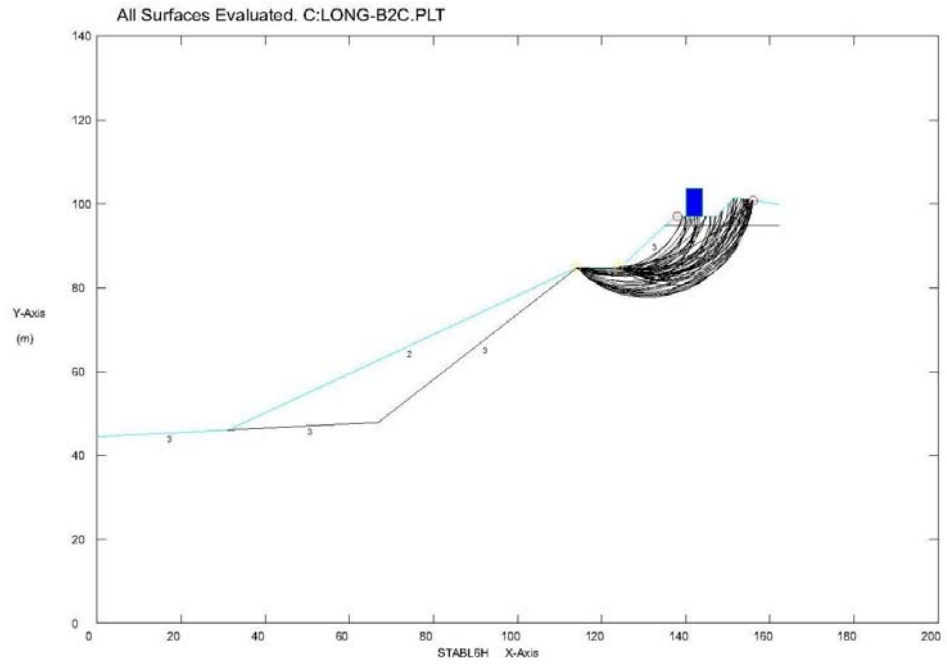
Circle Center At X = 129.6 ; Y = 98.7 and Radius, 14.8

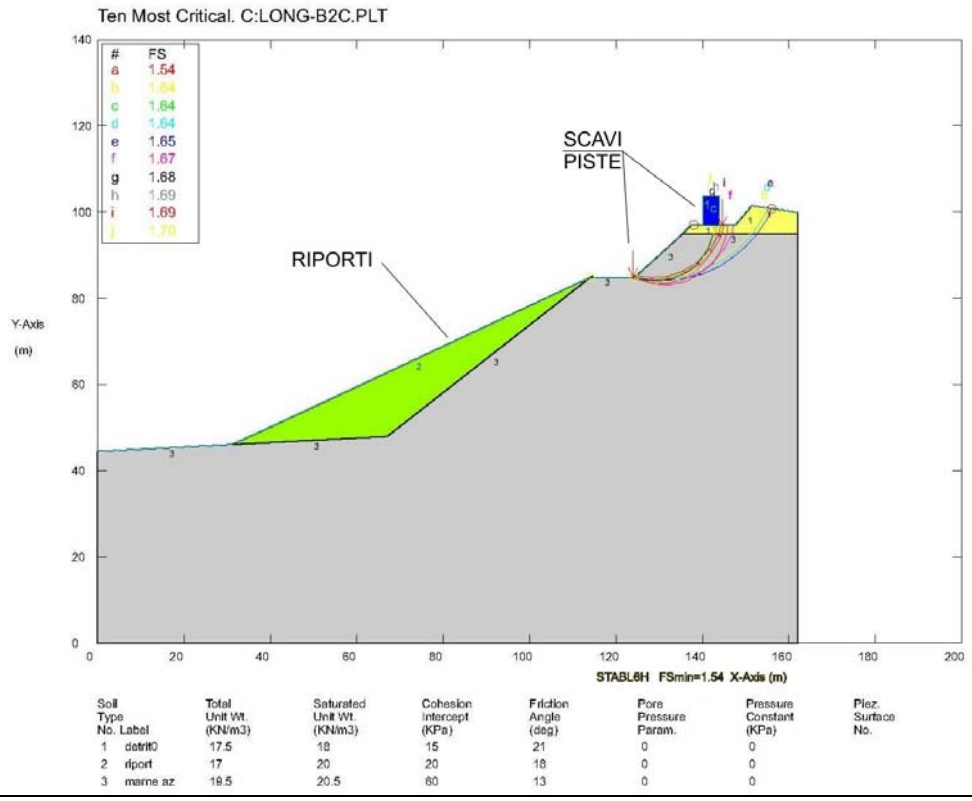
*** 3.428 ***

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

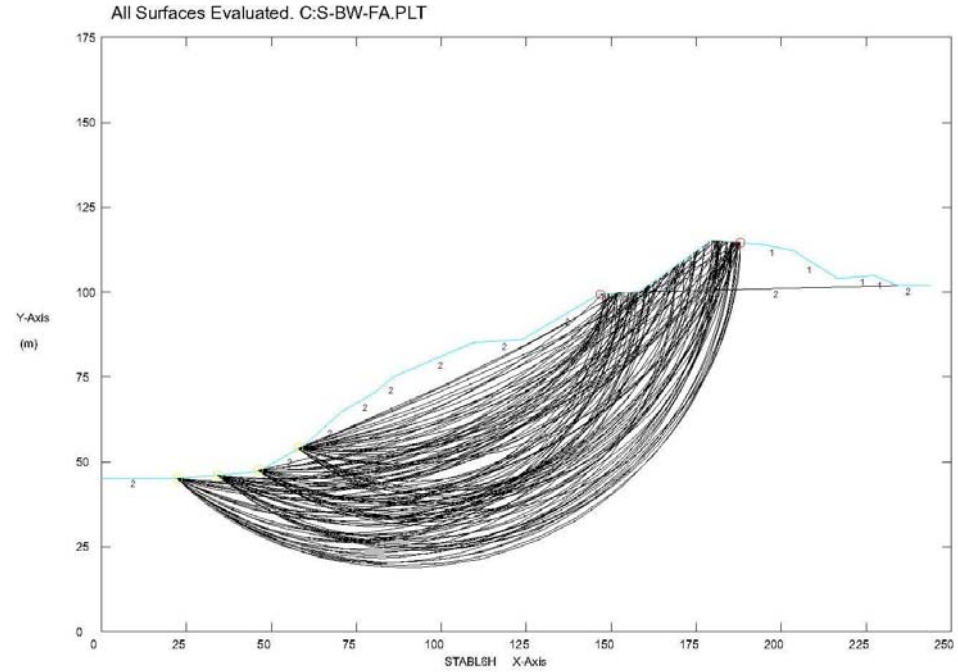
Point No.	X-Surf (mt)	Y-Surf (mt)
1	124.00	85.00
2	127.95	84.37
3	131.94	84.70
4	135.73	85.97
5	139.11	88.11
6	141.87	91.00
7	143.87	94.47
8	144.59	97.00

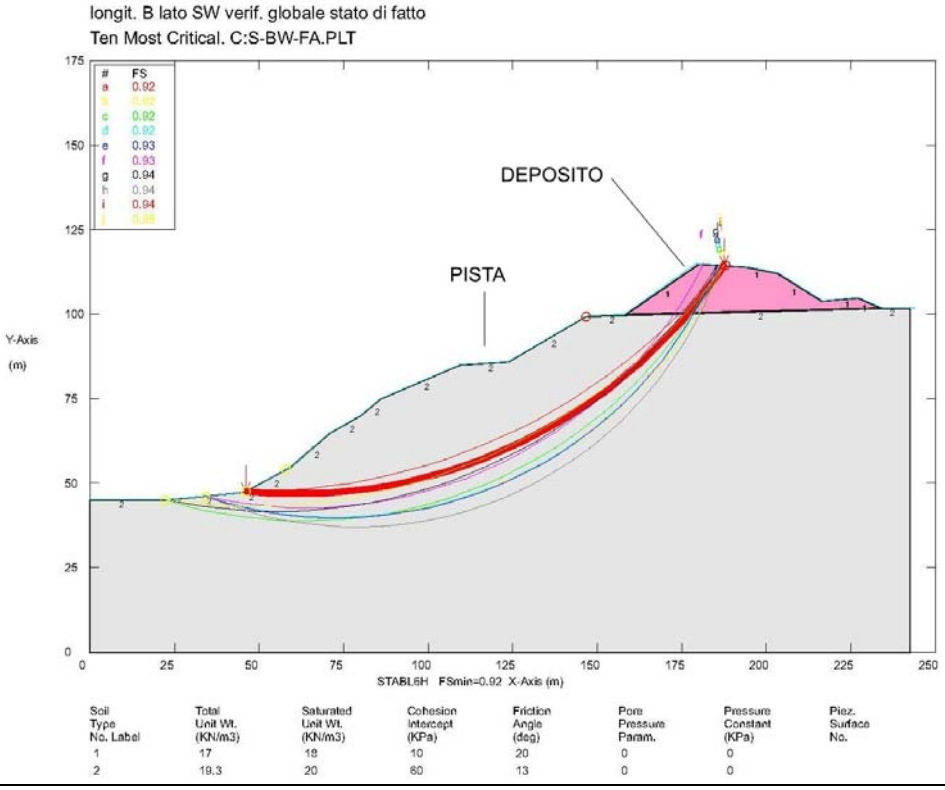
Circle Center At X = 128.6 ; Y = 101.0 and Radius, 16.6

*** 1.539 ***

SCHEDA GRAFICA N. 5

VERIFICA GLOBALE VERSANTE SW *(Sezione vista da Ovest)*. **Stato di fatto - 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	17	18	10	20	0	0	
2	18.3	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)	X-Right (mt)	Y-Right (mt)	Soil Type Below Bnd
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 Piez. Surface No. (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

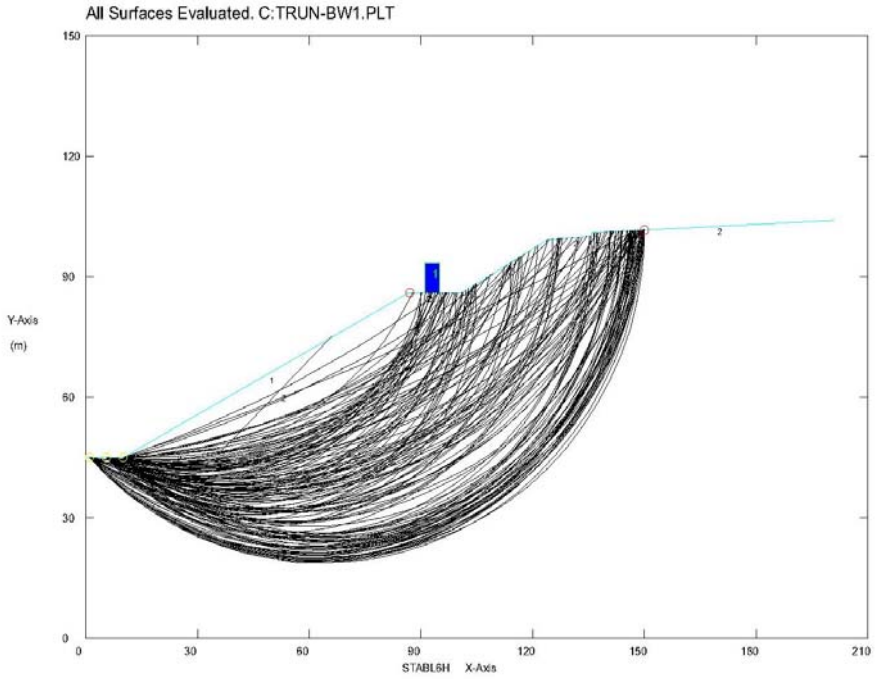
Point No.	X-Surf (mt)	Y-Surf (mt)
1	22.40	45.00
2	28.35	44.22
3	34.32	43.66
4	40.31	43.29
5	46.31	43.14
6	52.31	43.20
7	58.30	43.46
8	64.29	43.93
9	70.25	44.61
10	76.18	45.49
11	82.08	46.58
12	87.94	47.88
13	93.75	49.38
14	99.51	51.07
15	105.20	52.97
16	110.82	55.06
17	116.37	57.35
18	121.83	59.82
19	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

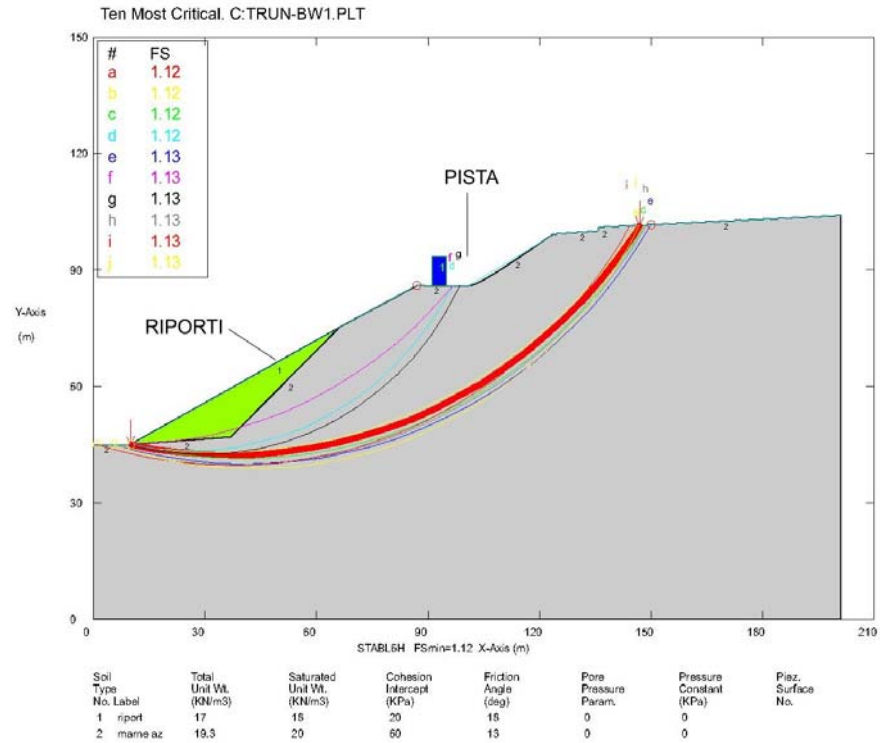
Circle Center At X = 47.7 ; Y = 216.0 and Radius, 172.9

*** .948 ***

SCHEDA GRAFICA N. 6

VERIFICA GLOBALE A LUNGO TERMINE VERSANTE SW *(Sezione vista da Ovest)*. **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	riport	17	18	20	18	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.	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

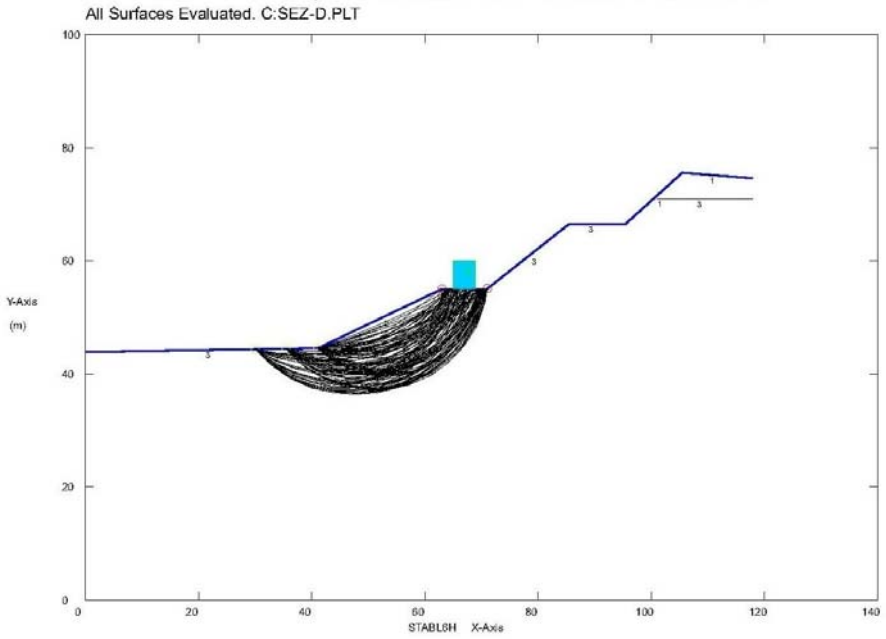
Point No.	X-Surf (mt)	Y-Surf (mt)
1	5.50	45.00
2	12.19	42.95
3	19.00	41.30
4	25.89	40.06
5	32.84	39.23
6	39.82	38.82
7	46.82	38.83
8	53.81	39.26
9	60.76	40.10
10	67.65	41.36
11	74.44	43.03
12	81.13	45.10
13	87.68	47.57
14	94.07	50.42
15	100.29	53.65
16	106.29	57.24
17	112.07	61.19
18	117.61	65.48
19	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

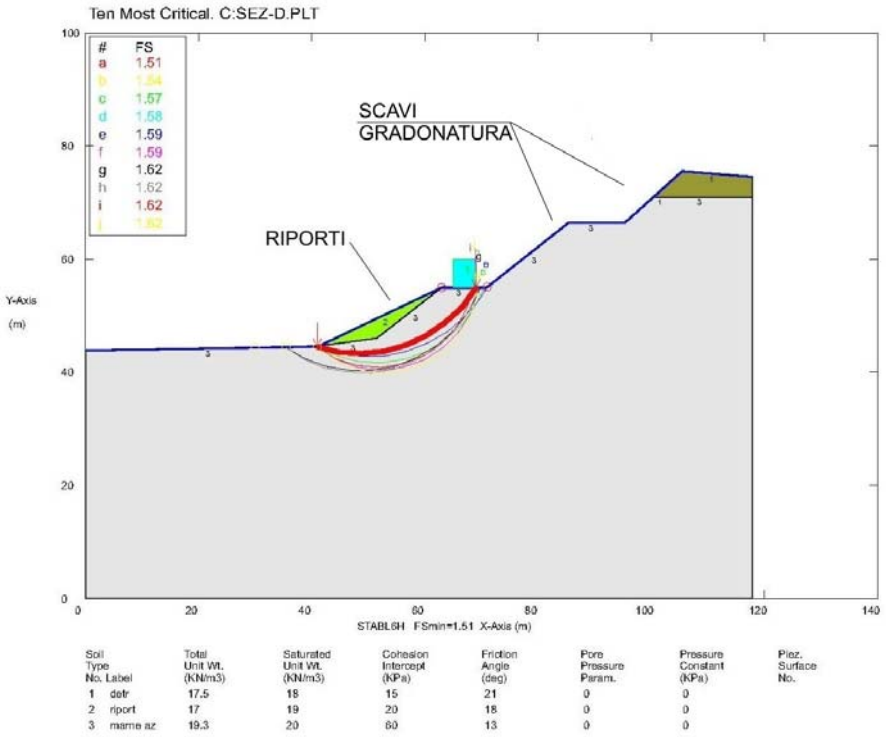
Circle Center At X = 43.2 ; Y = 155.9 and Radius, 117.1

*** 1.131 ***

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/m3)	Saturated Unit Wt. (KN/m3)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1	detr	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 (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

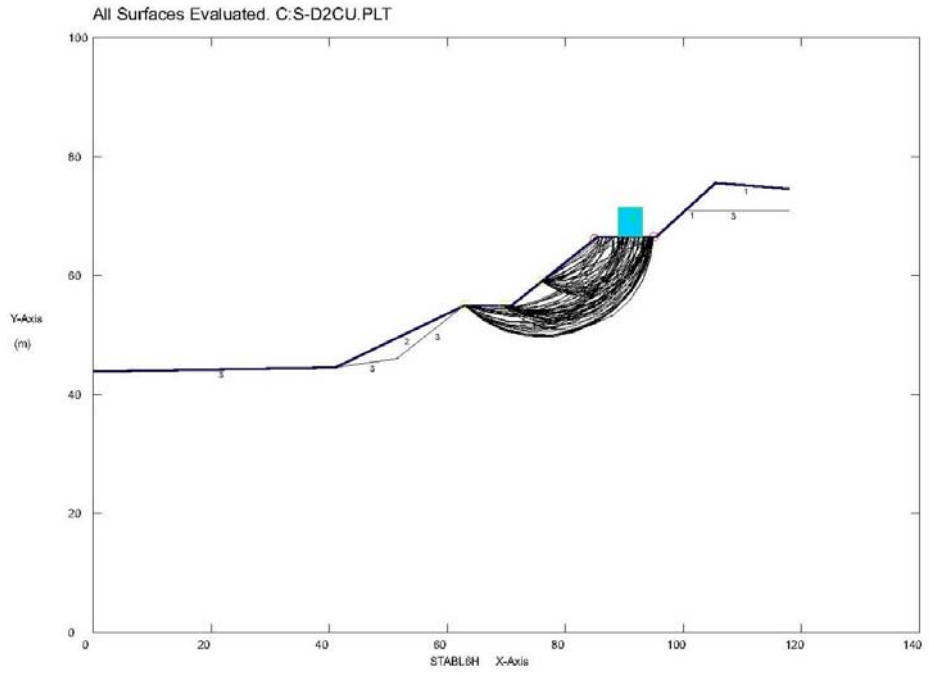
Point No.	X-Surf (mt)	Y-Surf (mt)
1	41.00	44.50
2	44.90	43.60
3	48.89	43.35
4	52.87	43.76
5	56.72	44.83
6	60.35	46.51
7	63.65	48.77
8	66.53	51.55
9	68.92	54.76
10	69.04	55.00

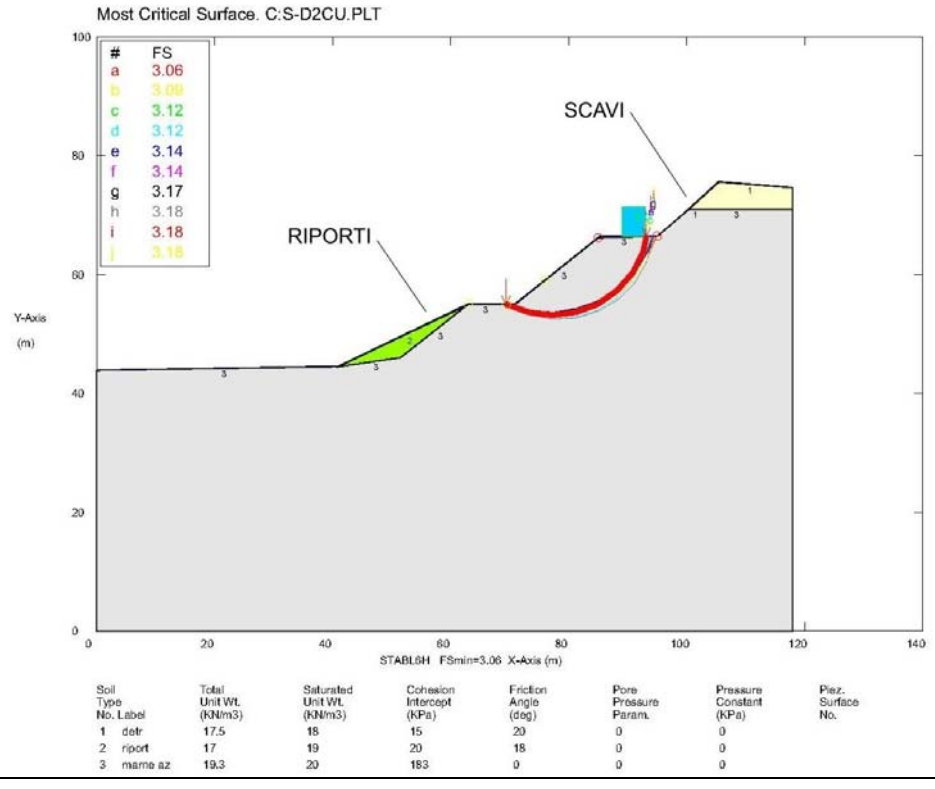
Circle Center At X = 48.4 ; Y = 67.5 and Radius, 24.2

*** 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 Wt. (KN/m3)	Saturated Unit Wt. (KN/m3)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1	detr	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     X-Left      Y-Left     X-Right     Y-Right     Soil Type
   No.        (mt)        (mt)       (mt)        (mt)     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  Total  Saturated  Cohesion Friction   Pore   Pressure   Piez.
 Type Unit Wt. Unit Wt. Intercept   Angle  Pressure Constant Surface
   No.  (kN)    (kN)     (Kpa)     (deg)   Param.    (Kpa)    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        X-Left      X-Right     Intensity     Deflection
      No.         (mt)        (mt)        (Kpa)        (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

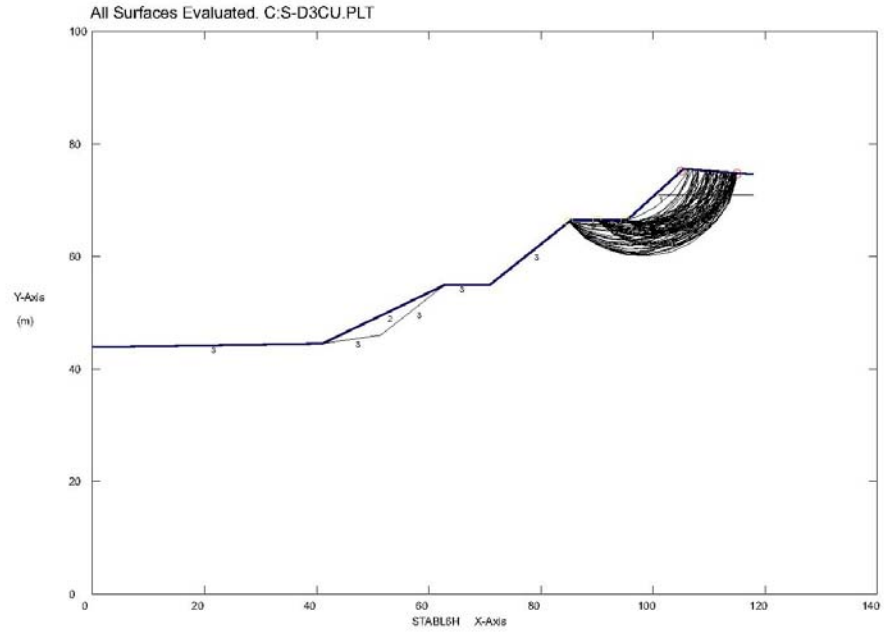
Point No.	X-Surf (mt)	Y-Surf (mt)
1	69.50	55.00
2	73.24	53.59
3	77.21	53.11
4	81.18	53.61
5	84.92	55.05
6	88.19	57.34
7	90.82	60.36
8	92.65	63.92
9	93.25	66.50

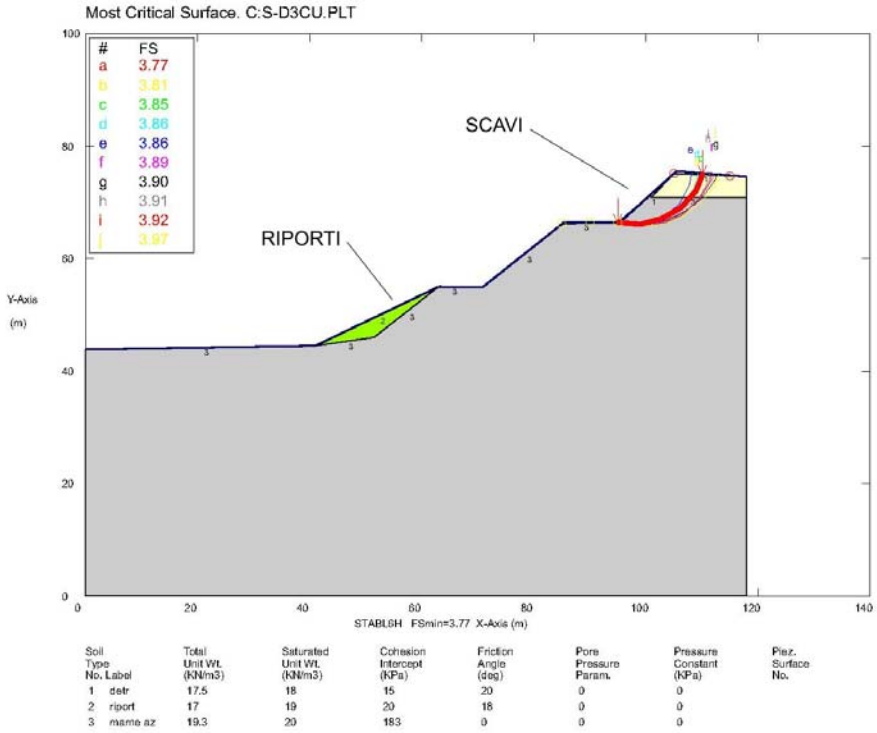
Circle Center At X = 77.2 ; Y = 69.6 and Radius, 16.5

*** 3.062 ***

SCHEDA GRAFICA N. 9

VERIFICA GRADONE INTERMEDIO A LUNGO TERMINE VERSANTE NE *(Sezione vista da Est)*. **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)	Piez. Surface No.
1	detr	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 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

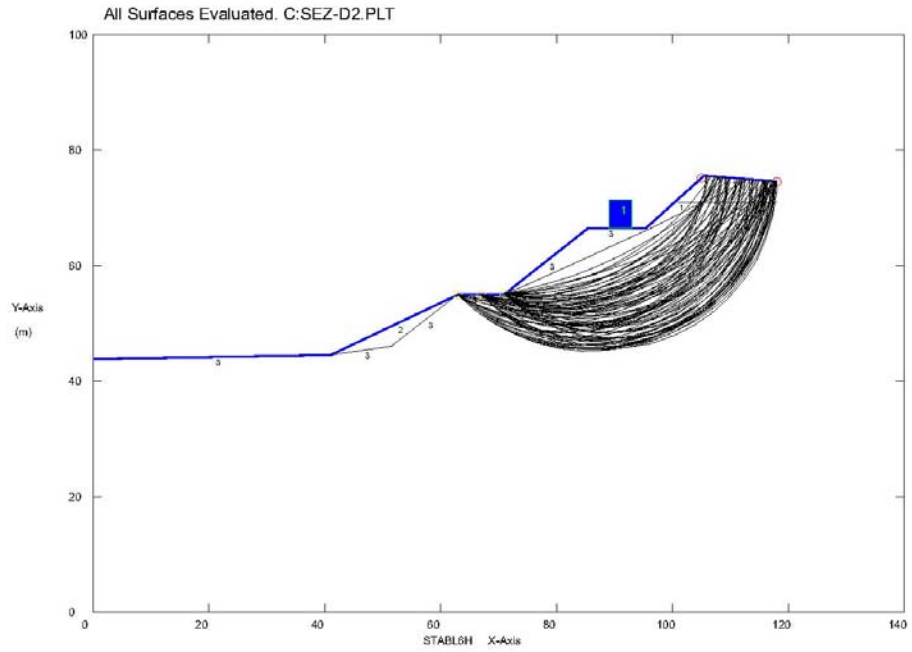
Point No.	X-Surf (mt)	Y-Surf (mt)
1	95.00	66.50
2	98.98	66.14
3	102.88	67.04
4	106.30	69.12
5	108.89	72.17
6	110.09	75.13

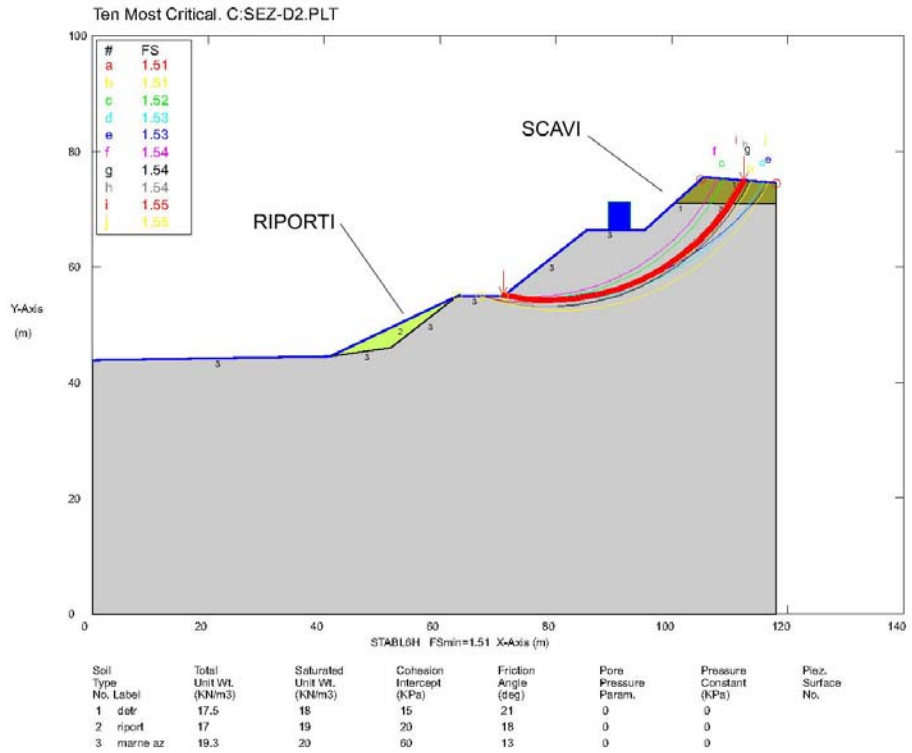
Circle Center At X = 98.1 ; Y = 78.7 and Radius, 12.6

*** 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. (KN/m3)	Saturated Unit Wt. (KN/m3)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1	detr	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     X-Left      Y-Left     X-Right     Y-Right     Soil Type
   No.        (mt)        (mt)       (mt)        (mt)     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  Total  Saturated  Cohesion Friction   Pore   Pressure   Piez.
 Type Unit Wt. Unit Wt. Intercept   Angle  Pressure Constant Surface
   No.  (kN)    (kN)     (Kpa)     (deg)   Param.    (Kpa)    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        X-Left      X-Right     Intensity     Deflection
      No.         (mt)        (mt)        (Kpa)        (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

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

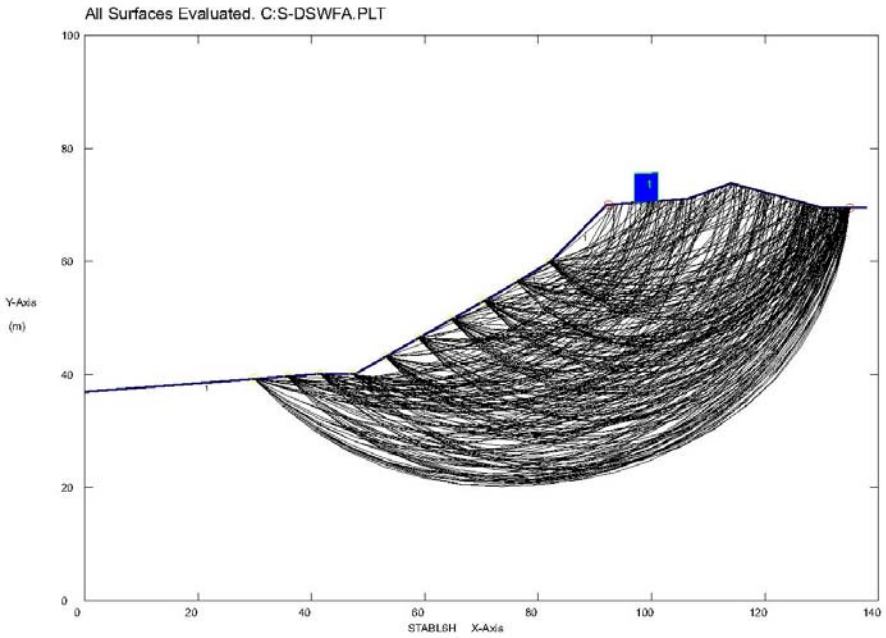
Point No.	X-Surf (mt)	Y-Surf (mt)
1	67.00	55.00
2	70.81	53.79
3	74.73	52.96
4	78.70	52.54
5	82.70	52.51
6	86.69	52.89
7	90.61	53.67
8	94.44	54.83
9	98.12	56.38
10	101.64	58.29
11	104.95	60.54
12	108.01	63.11
13	110.80	65.98
14	113.28	69.12
15	115.44	72.48
16	116.52	74.62

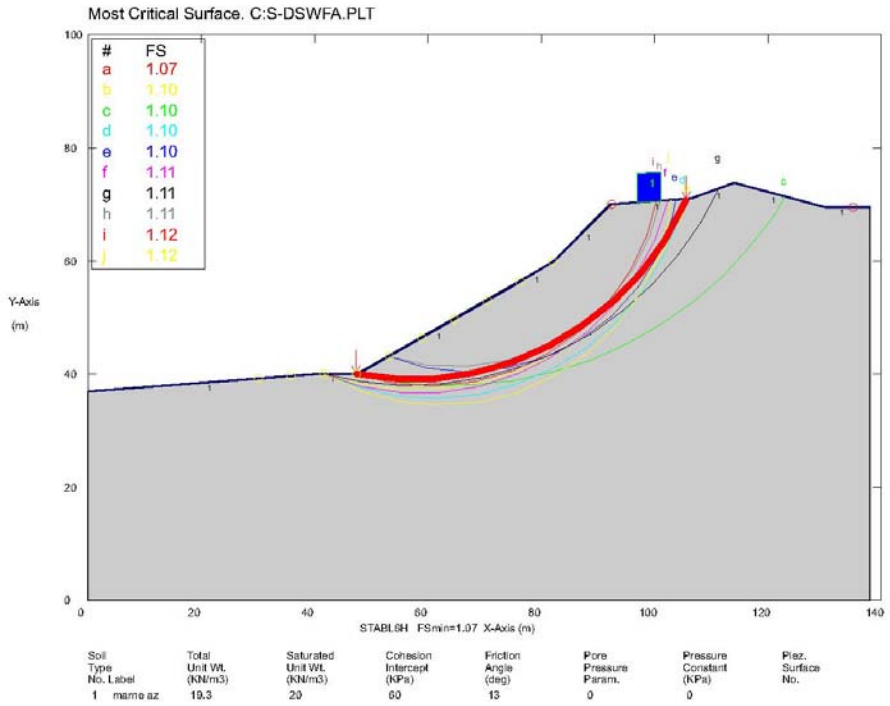
Circle Center At X = 80.9 ; Y = 92.2 and Radius, 39.7

*** 1.551 ***

SCHEDA GRAFICA N. 11

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





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

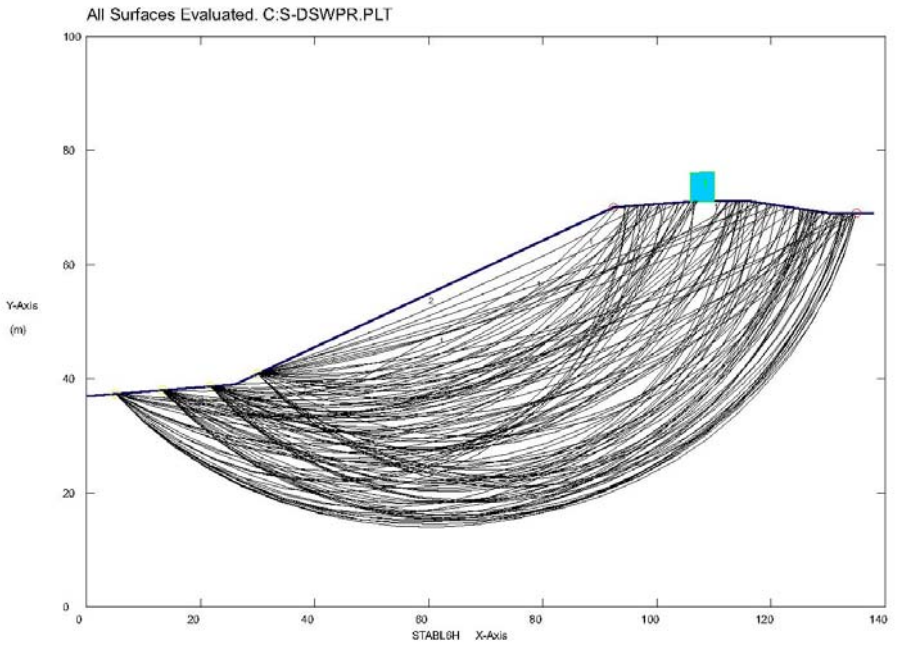
Point No.	X-Surf (mt)	Y-Surf (mt)
1	41.56	40.00
2	47.89	37.01
3	54.63	35.15
4	61.60	34.45
5	68.58	34.95
6	75.38	36.63
7	81.79	39.43
8	87.64	43.29
9	92.74	48.08
10	96.96	53.66
11	100.17	59.89
12	102.27	66.56
13	102.84	70.75

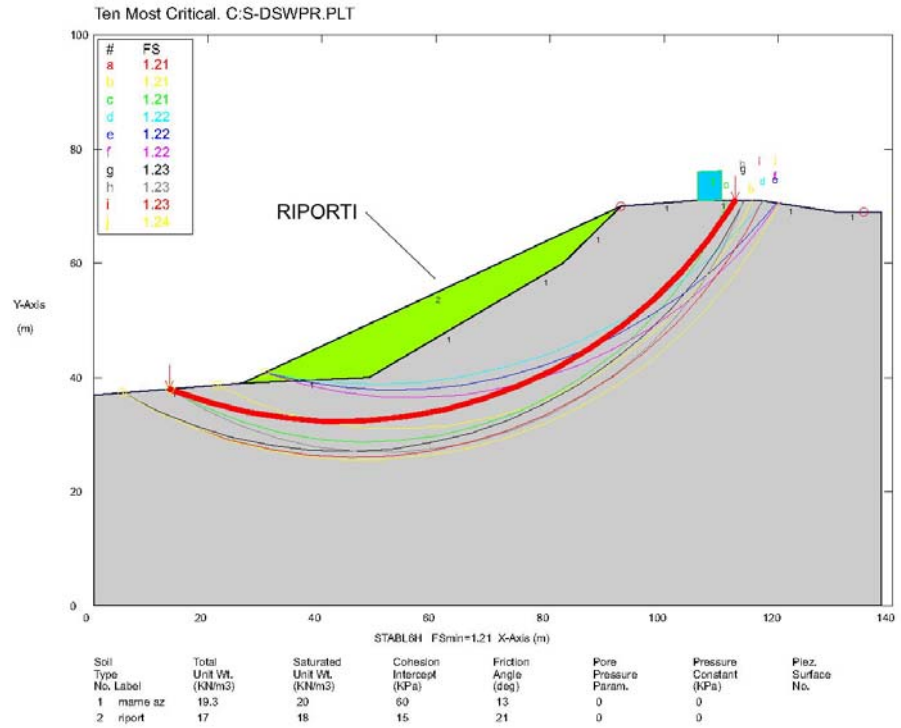
Circle Center At X = 62.2 ; Y = 75.5 and Radius, 41.1

*** 1.118 ***

SCHEDA GRAFICA N. 12

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





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

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                    ** 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     X-Left      Y-Left     X-Right     Y-Right     Soil Type
   No.        (mt)        (mt)       (mt)        (mt)     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  Total  Saturated  Cohesion Friction   Pore   Pressure   Piez.
 Type Unit Wt. Unit Wt. Intercept  Angle  Pressure Constant Surface
   No.  (kN)    (kN)     (Kpa)     (deg)   Param.    (Kpa)    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        X-Left      X-Right     Intensity     Deflection
      No.         (mt)        (mt)        (Kpa)        (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)

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

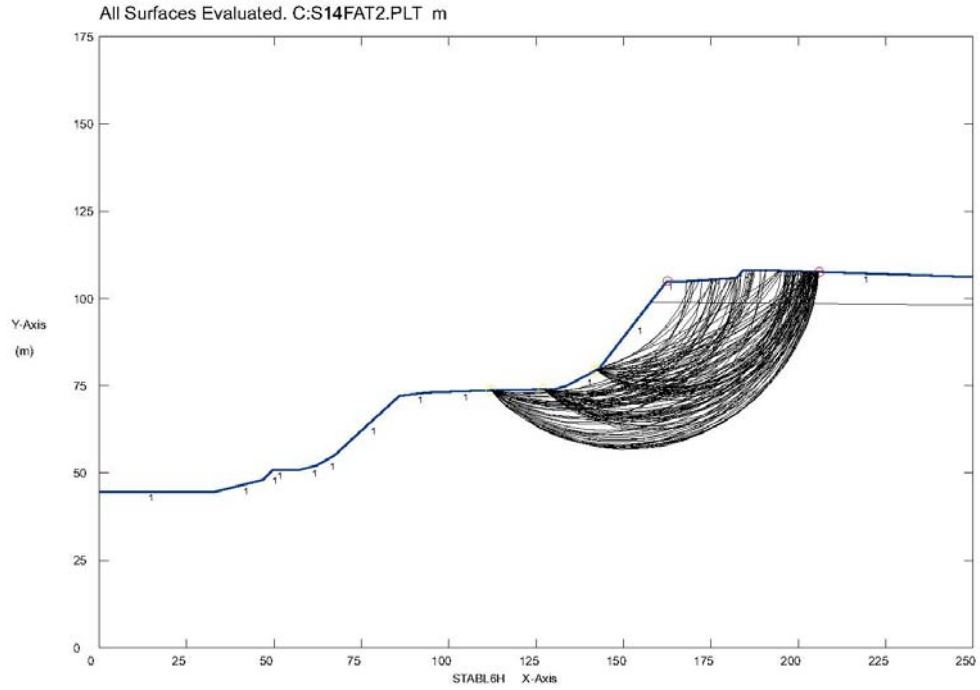
Circle Center At X = 47.3 ; Y = 106.8 and Radius, 81.3

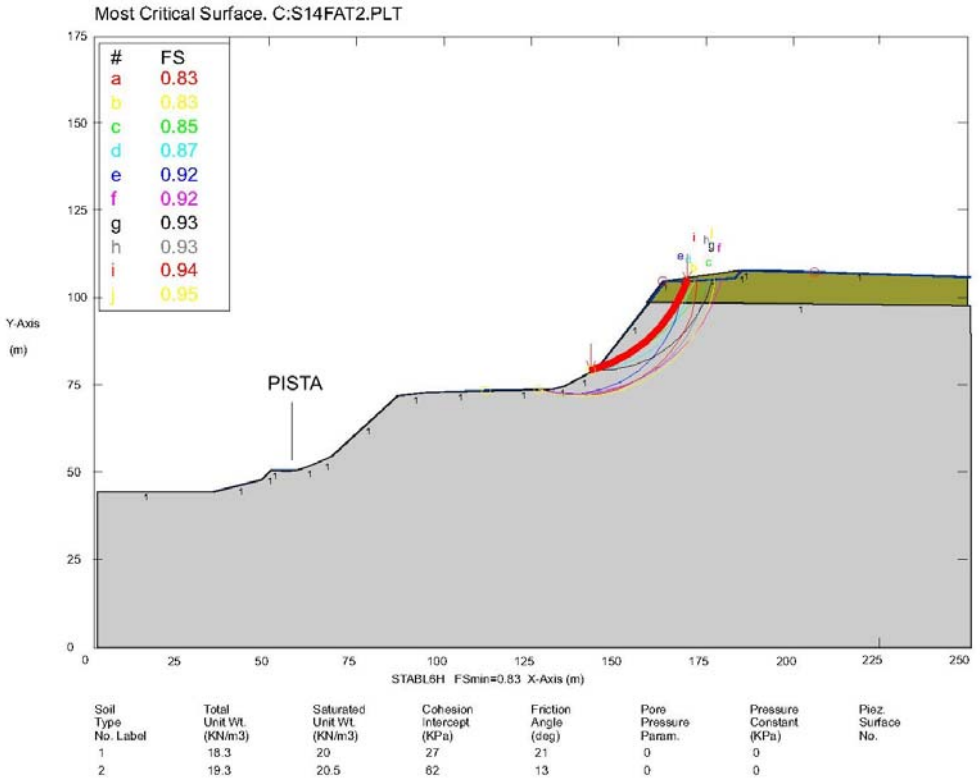
*** 1.239 ***

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/m3)	Saturated Unit Wt. (KN/m3)	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 (CONFINE) 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.	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.

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

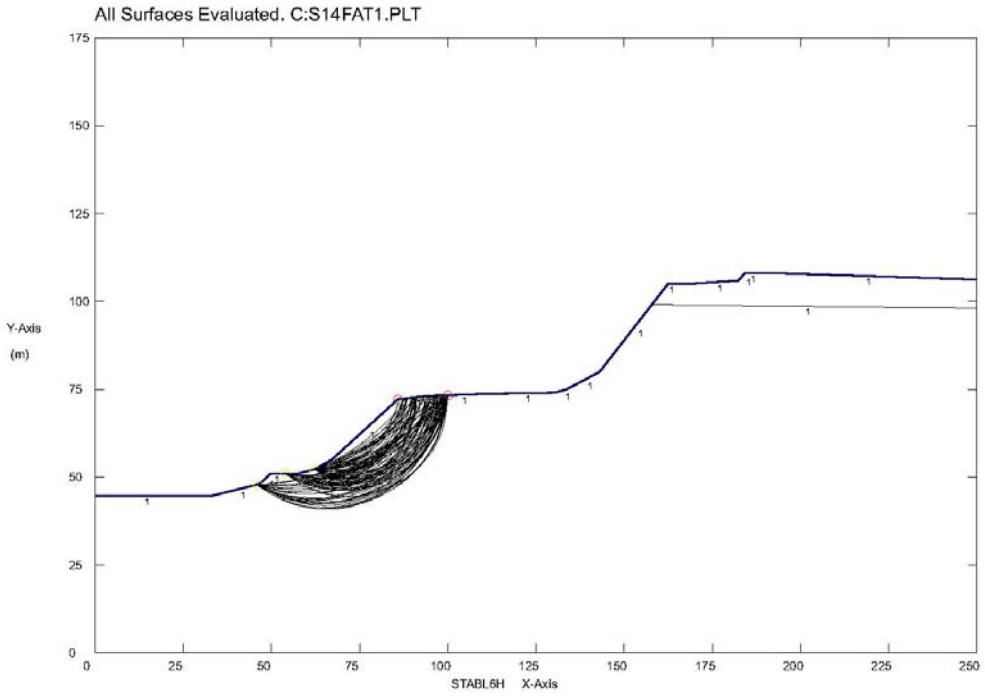
Point No.	X-Surf (mt)	Y-Surf (mt)
1	127.00	73.93
2	132.83	72.51
3	138.81	71.99
4	144.79	72.41
5	150.64	73.75
6	156.21	75.97
7	161.38	79.03
8	166.01	82.84
9	169.99	87.33
10	173.24	92.38
11	175.67	97.86
12	177.22	103.66
13	177.43	105.65

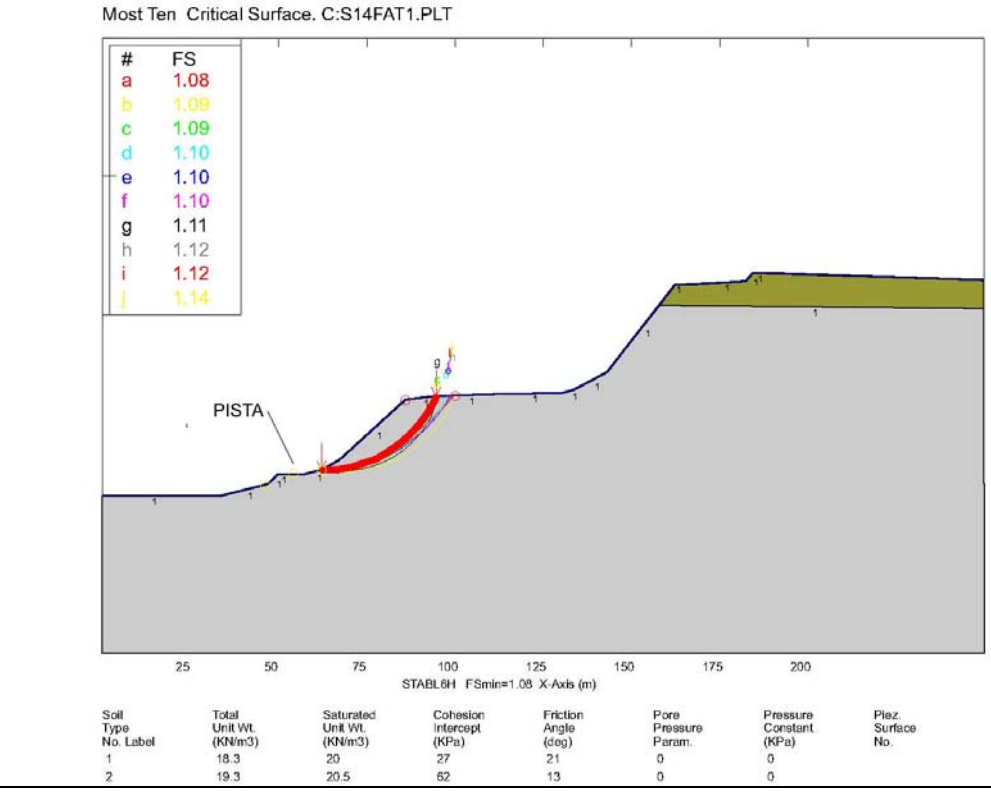
Circle Center At X = 139.1 ; Y = 110.8 and Radius, 38.8

*** .950 ***

SCHEDA GRAFICA N. 14

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





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	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)

** STABL6H **

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      X-Surf      Y-Surf
                 No.        (mt)        (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      X-Surf      Y-Surf
                 No.        (mt)        (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      X-Surf      Y-Surf
                 No.        (mt)        (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
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                    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      X-Surf      Y-Surf
                   No.        (mt)        (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      X-Surf      Y-Surf
                   No.        (mt)        (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   ***
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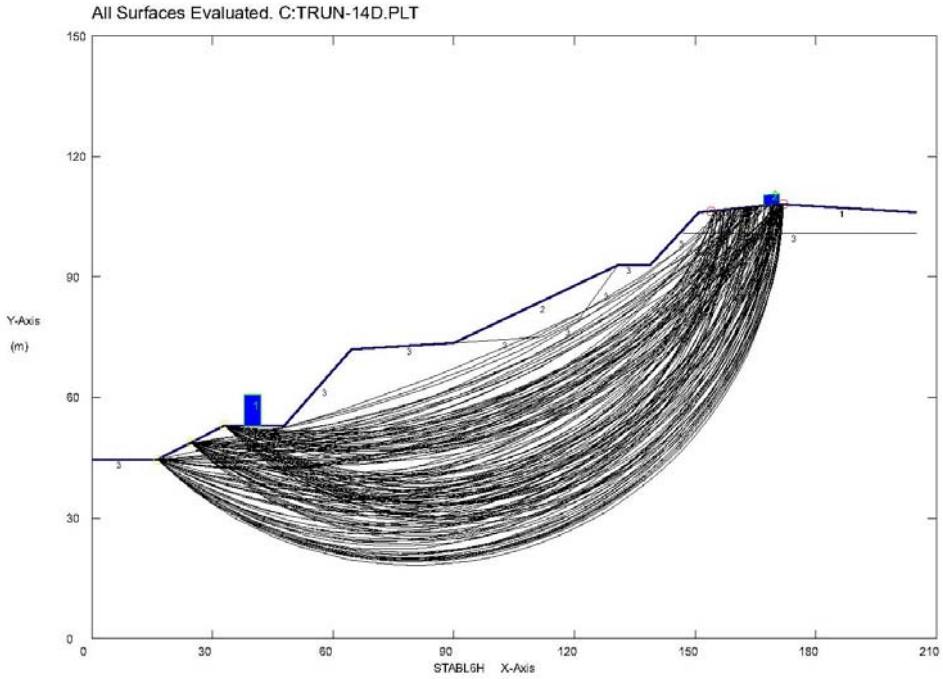
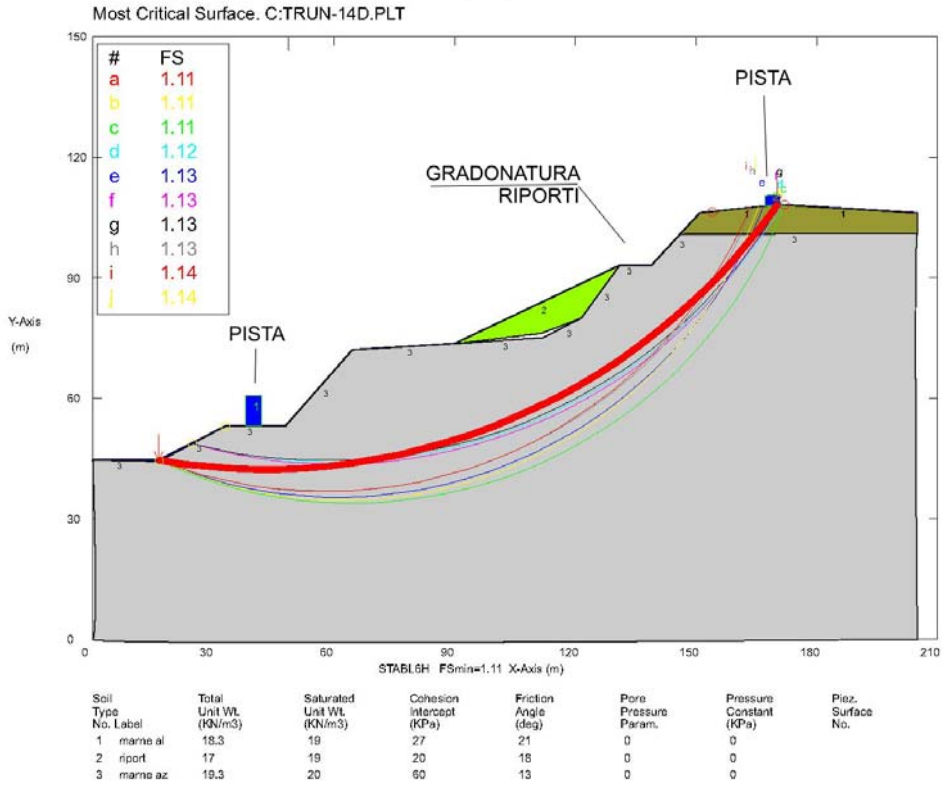
SCHEDA GRAFICA N. 15

VERIFICA GLOBALE A LUNGO 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)	Piez. Surface No.
1	marne al	18.3	19	27	21	0	0	
2	riport	17	19	20	18	0	0	
3	marne az	19.3	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

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)
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)

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 ***

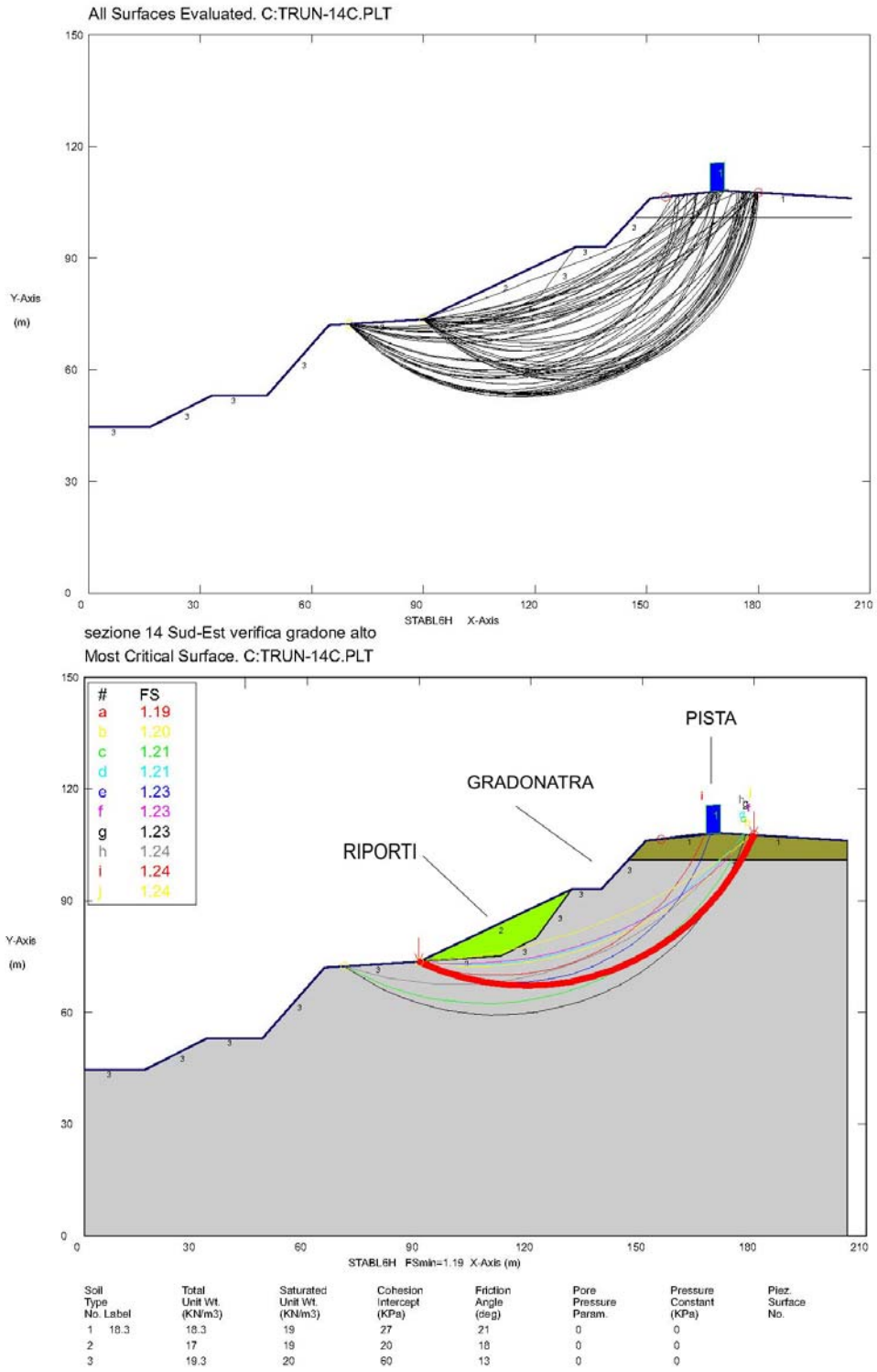
Failure Surface Specified By 32 Coordinate Points

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   ***
```

SCHEDA GRAFICA N. 16

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



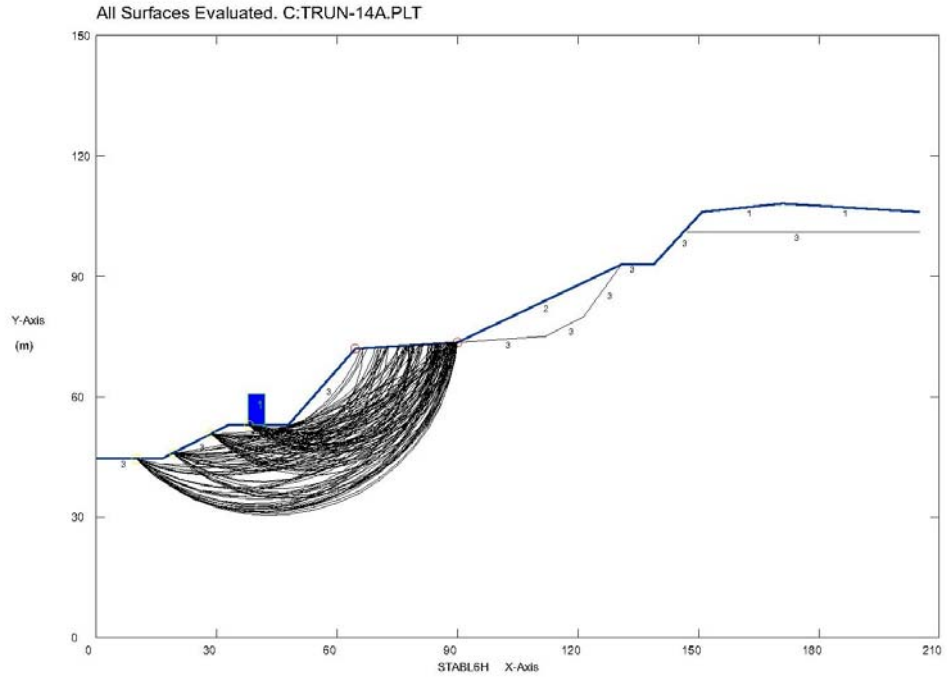
VERIFICA GRADONATURA ALTA A LUNGO TERMINE VERSANTE SE. Stato di progetto -SEZIONE 14 (report)

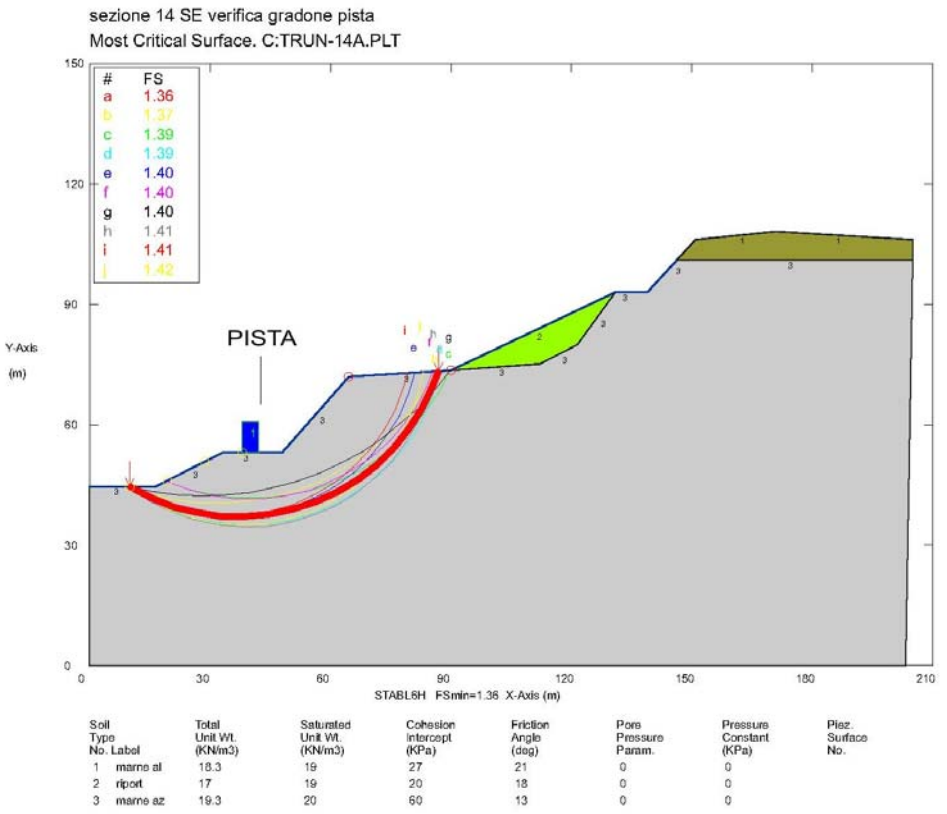
```
                          ** STABL6H  **
                                by
                          Purdue University

                     --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     X-Left     Y-Left    X-Right    Y-Right    Soil Type
    No.         (mt)       (mt)       (mt)       (mt)    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  Total  Saturated  Cohesion Friction   Pore   Pressure   Piez.
Type Unit Wt. Unit Wt. Intercept   Angle  Pressure Constant Surface
  No.  (kN)    (kN)     (Kpa)     (deg)   Param.    (Kpa)    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        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.

           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      X-Surf      Y-Surf
             No.        (mt)        (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   ***
```

SCHEDA GRAFICA N. 17

VERIFICA GRADONATURA BASSA (PISTA) A LUNGO 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)	Piez. Surface No.
1	marne al	18.3	19	27	21	0	0	
2	riport	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     X-Left     Y-Left    X-Right    Y-Right    Soil Type
      No.        (mt)       (mt)       (mt)       (mt)    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  Total  Saturated  Cohesion Friction   Pore   Pressure   Piez.
 Type Unit Wt. Unit Wt. Intercept   Angle  Pressure Constant Surface
  No.  (kN)    (kN)     (Kpa)     (deg)   Param.    (Kpa)    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        X-Left      X-Right     Intensity     Deflection
       No.         (mt)        (mt)       (Kpa)       (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

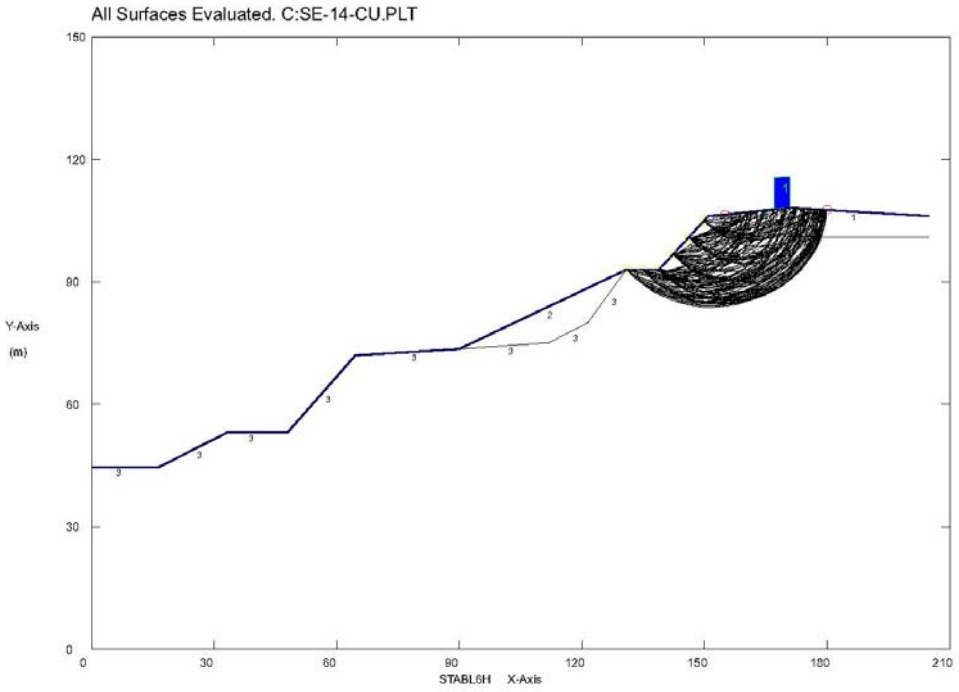
Point No.	X-Surf (mt)	Y-Surf (mt)
1	10.00	44.50
2	15.32	41.72
3	20.92	39.56
4	26.72	38.06
5	32.67	37.23
6	38.66	37.08
7	44.64	37.62
8	50.52	38.84
9	56.21	40.72
10	61.66	43.24
11	66.78	46.37
12	71.51	50.06
13	75.79	54.27
14	79.56	58.93
15	82.77	64.00
16	85.38	69.40
17	86.78	73.40

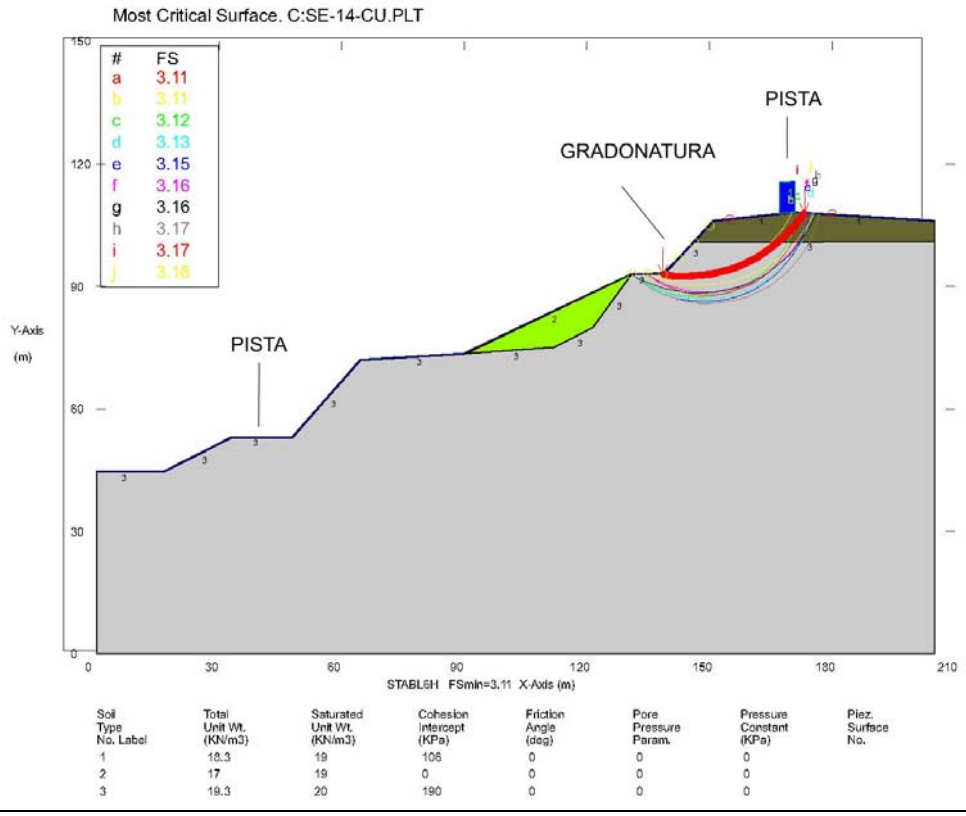
Circle Center At X = 36.9 ; Y = 89.5 and Radius, 52.4

*** 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)	Piez. 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.	Pressure 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

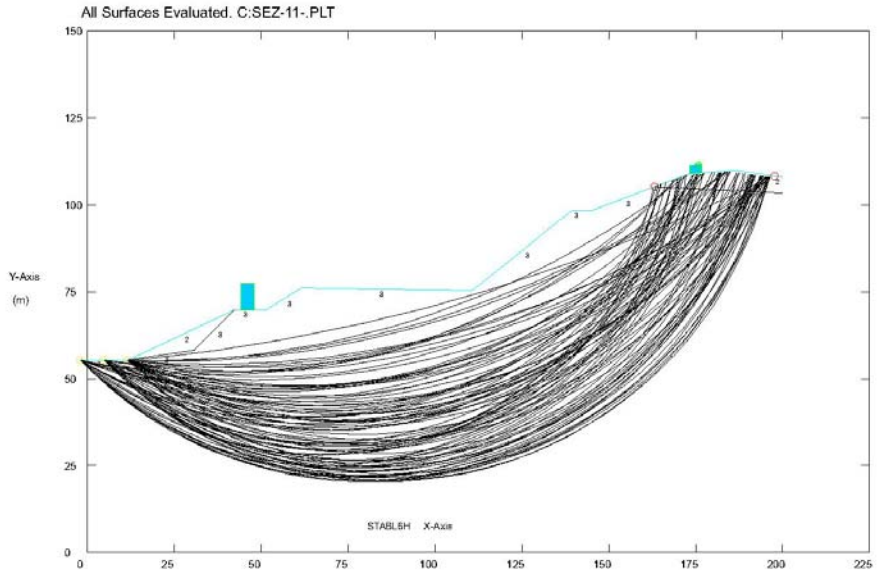
Circle Center At X = 144.3 ; Y = 127.0 and Radius, 34.5

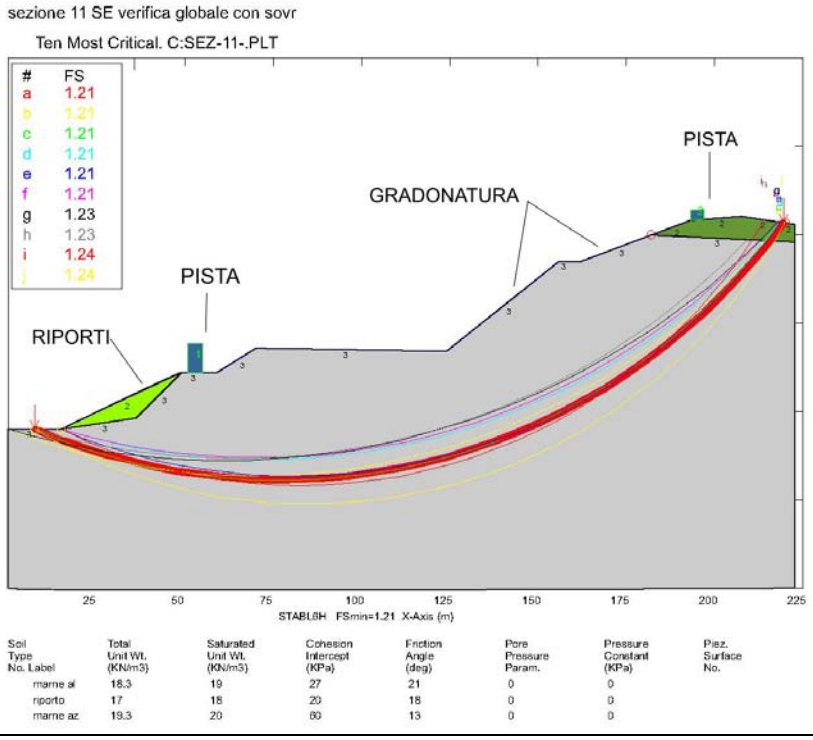
*** 3.108 ***

SCHEDA GRAFICA N. 19

VERIFICA GLOBALE A LUNGO TERMINE VERSANTE SE*(Sezione vista da Sud).*

Stato di progetto -SEZIONE 11 (calcolo)





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.
marne al	18.3	19	27	21	0	0	
riporto	17	18	20	18	0	0	
marne az	19.3	20	60	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     X-Left     Y-Left    X-Right    Y-Right    Soil Type
   No.        (mt)       (mt)       (mt)       (mt)     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  Total  Saturated  Cohesion Friction   Pore   Pressure   Piez.
 Type Unit Wt. Unit Wt. Intercept   Angle  Pressure Constant Surface
   No.  (kN)    (kN)     (Kpa)     (deg)   Param.    (Kpa)    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        X-Left      X-Right     Intensity     Deflection
      No.         (mt)        (mt)        (Kpa)        (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

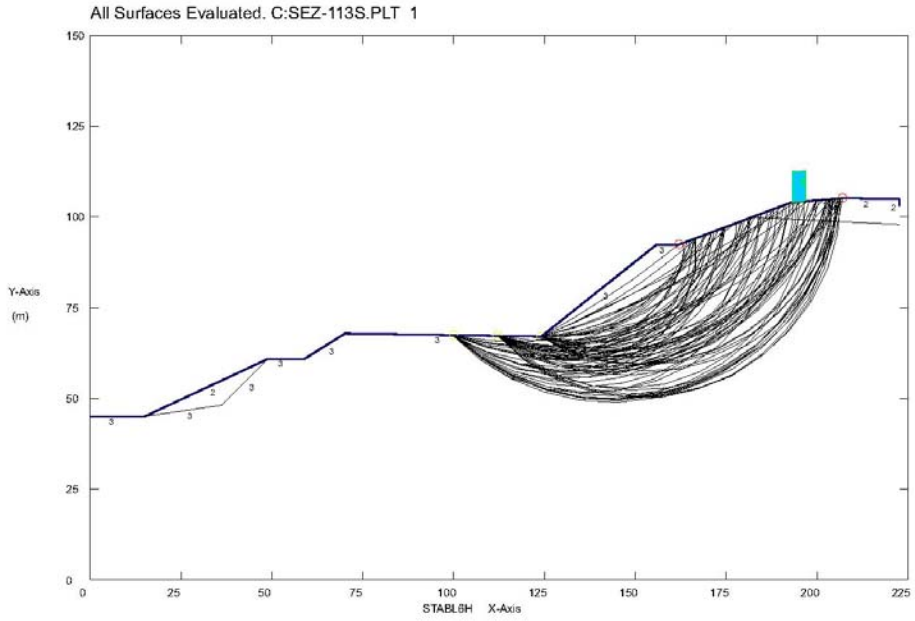
Point No.	X-Surf (mt)	Y-Surf (mt)
1	7.50	45.00
2	13.99	42.37
3	20.57	40.00
4	27.25	37.89
5	34.00	36.05
6	40.82	34.48
7	47.70	33.18
8	54.63	32.16
9	61.59	31.41
10	68.57	30.94
11	75.57	30.74
12	82.57	30.83
13	89.56	31.19
14	96.53	31.83
15	103.47	32.75
16	110.37	33.94
17	117.21	35.41
18	123.99	37.15
19	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

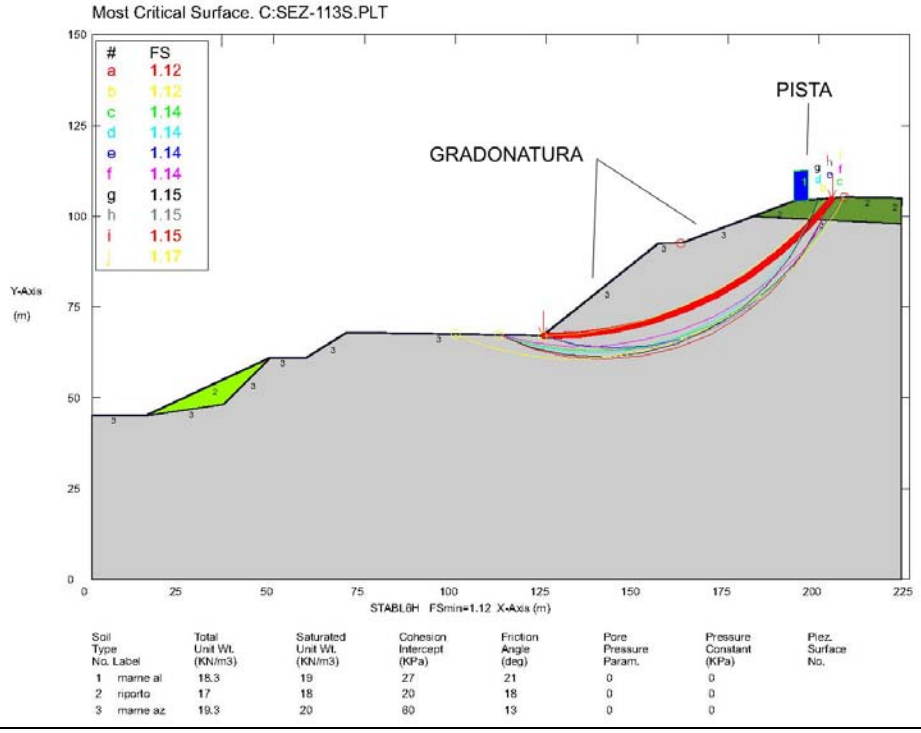
Circle Center At X = 76.9 ; Y = 206.9 and Radius, 176.1

*** 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/m3)	Saturated Unit Wt. (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	riporto	17	18	20	18	0	0	
3	marne az	19.3	20	80	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

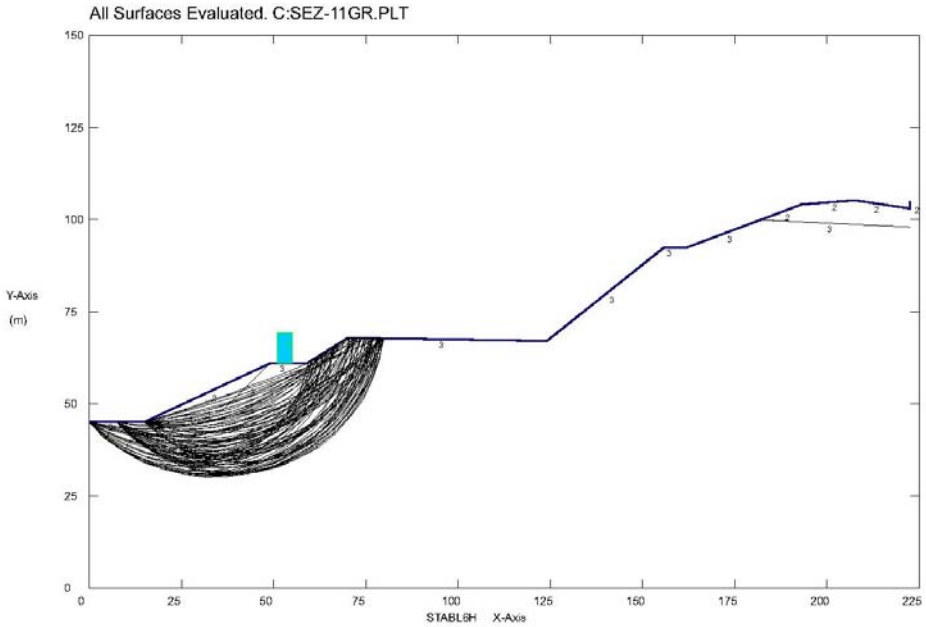
Point No.	X-Surf (mt)	Y-Surf (mt)
1	124.00	67.00
2	134.00	67.30
3	143.91	68.61
4	153.64	70.93
5	163.08	74.22
6	172.14	78.46
7	180.72	83.59
8	188.73	89.57
9	196.10	96.34
10	202.74	103.82
11	203.55	104.95

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

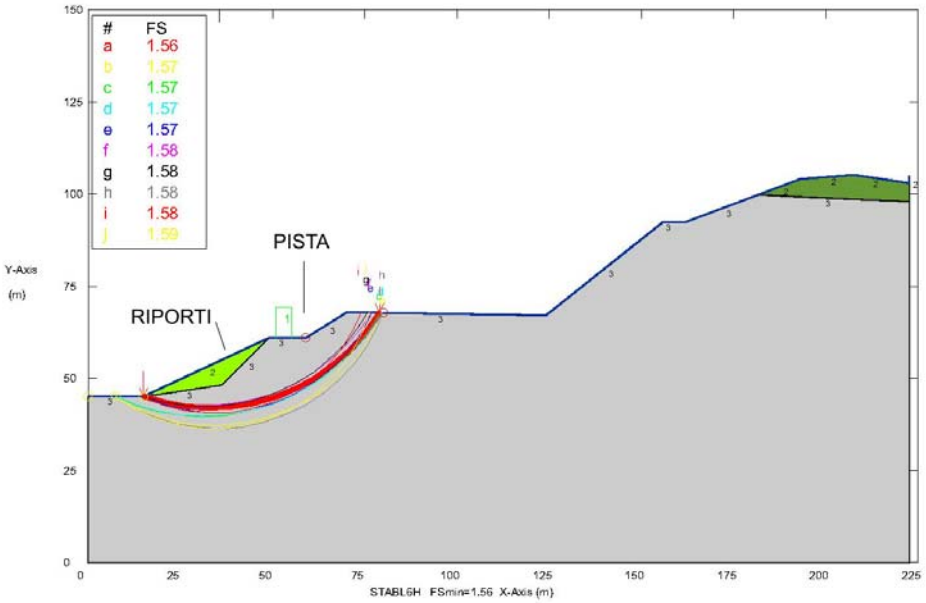
*** 1.115 ***

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/m3)	Saturated Unit Wt. (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	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)

** STABL6H **

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

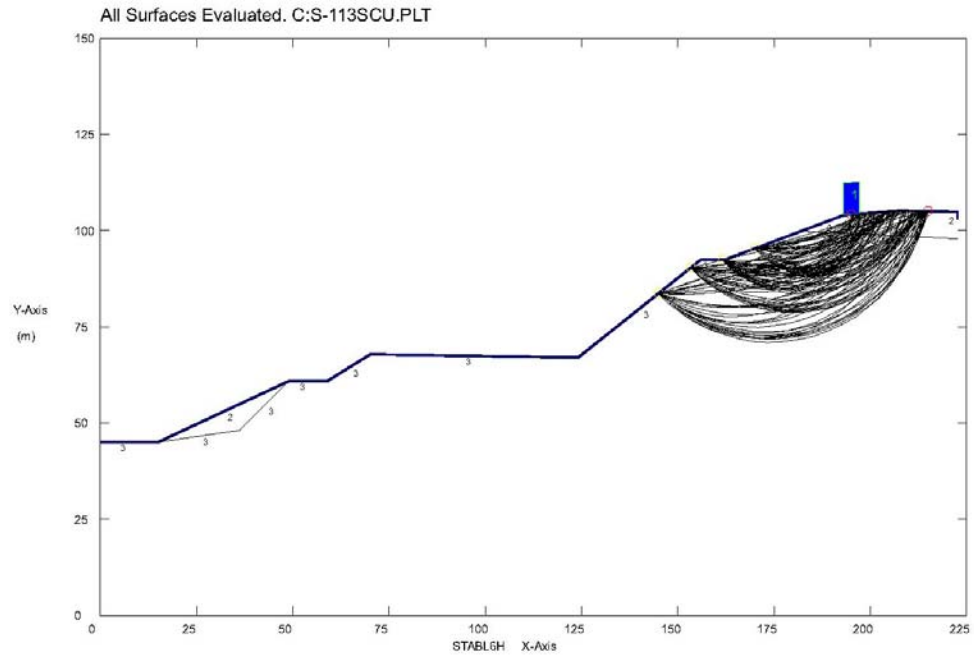
Circle Center At X = 33.0 ; Y = 96.0 and Radius, 54.1

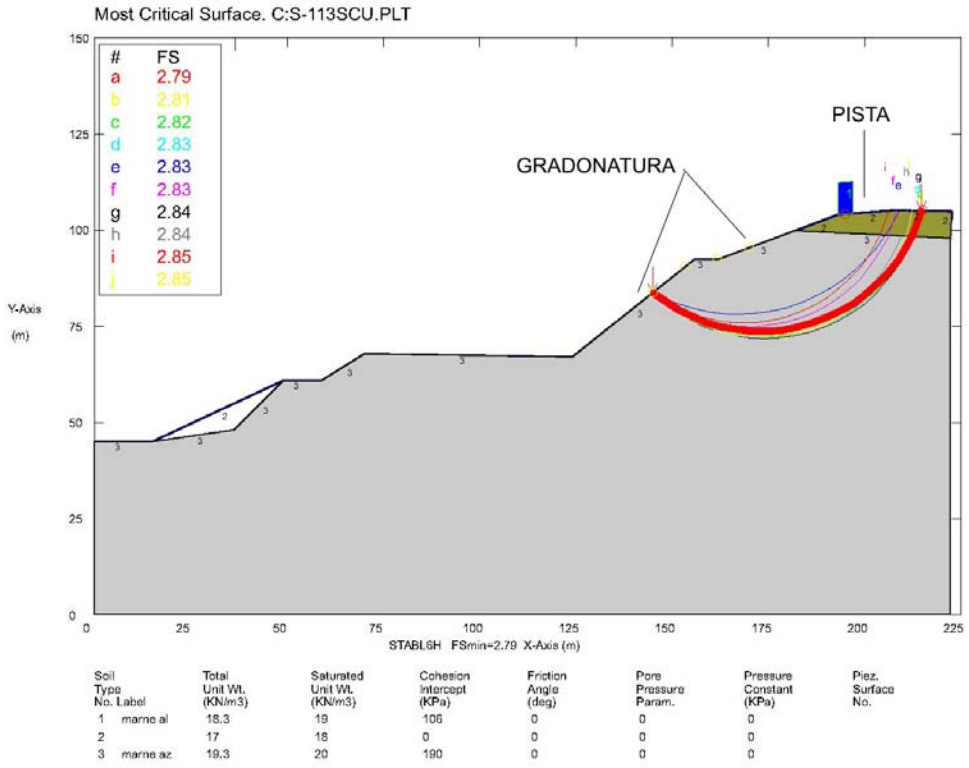
*** 1.563 ***

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 Wt. (KN/m3)	Saturated Unit Wt. (KN/m3)	Cohesion Intercept (KPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (KPa)	Piez. Surface No.
1	marne al	18.3	19	105	0	0	0	
2		17	18	0	0	0	0	
3	marne az	19.3	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.	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

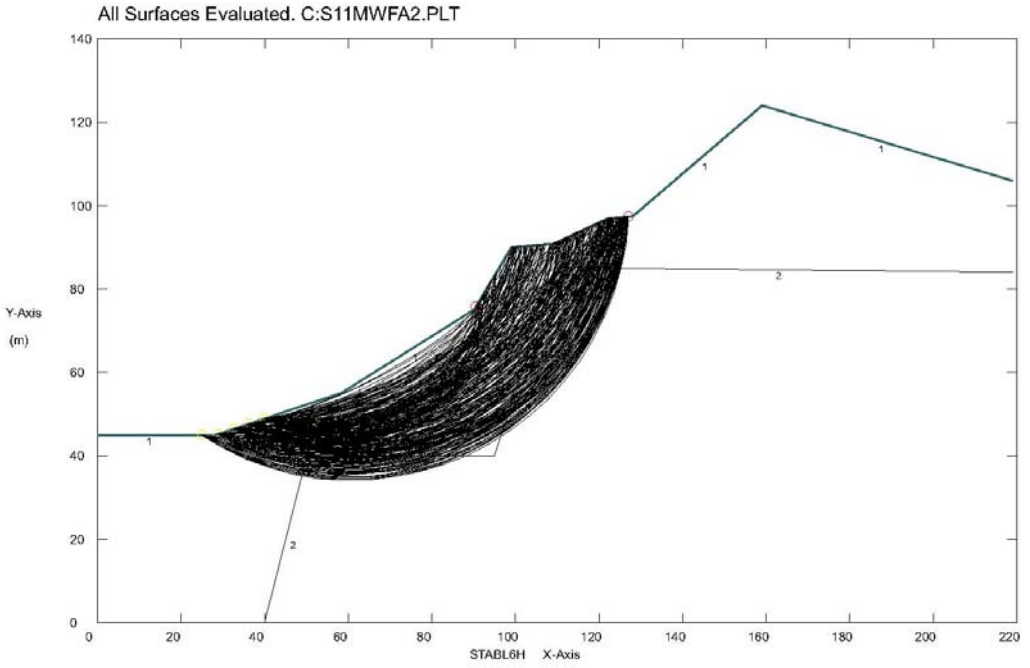
Point No.	X-Surf (mt)	Y-Surf (mt)
1	145.00	83.84
2	148.19	81.42
3	151.58	79.31
4	155.16	77.51
5	158.88	76.05
6	162.72	74.94
7	166.65	74.18
8	170.63	73.79
9	174.63	73.76
10	178.62	74.10
11	182.55	74.80
12	186.41	75.86
13	190.15	77.27
14	193.75	79.02
15	197.18	81.09
16	200.40	83.46
17	203.38	86.12
18	206.12	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

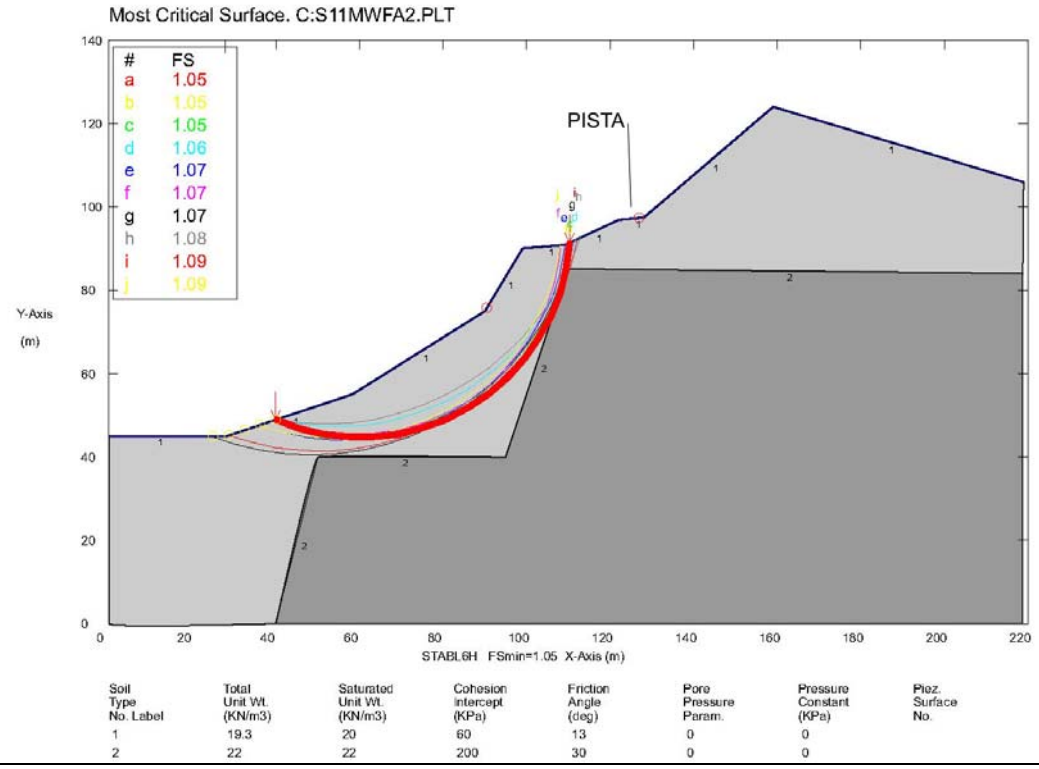
Circle Center At X = 172.9 ; Y = 117.3 and Radius, 43.6

*** 2.786 ***

SCHEDA GRAFICA N. 23

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

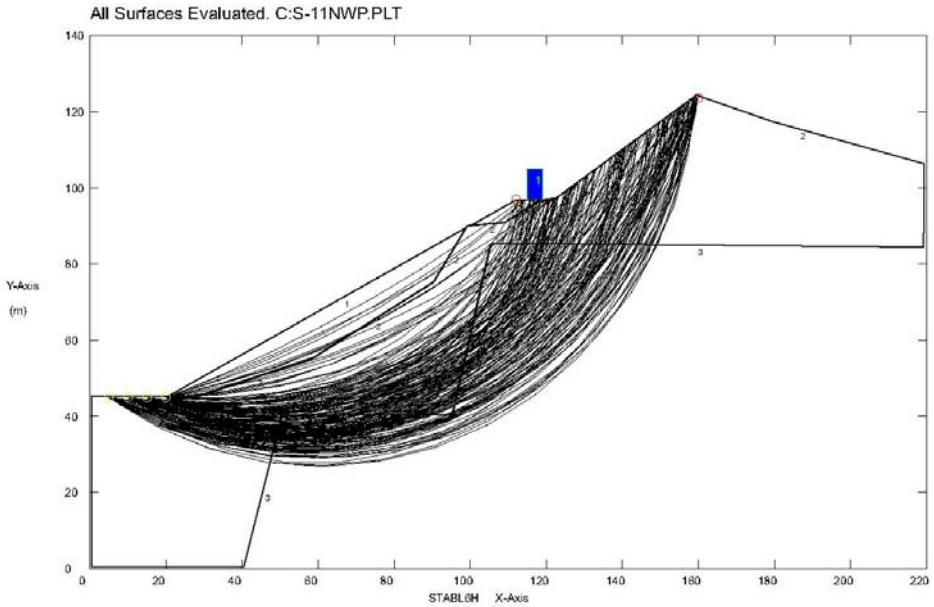
Point No.	X-Surf (ft)	Y-Surf (ft)
1	36.25	47.72
2	42.00	46.00
3	47.90	44.92
4	53.88	44.50
5	59.88	44.75
6	65.81	45.66
7	71.60	47.23
8	77.18	49.43
9	82.49	52.23
10	87.45	55.60
11	92.01	59.51
12	96.10	63.89
13	99.69	68.71
14	102.71	73.89
15	105.15	79.37
16	106.96	85.09
17	108.11	90.89

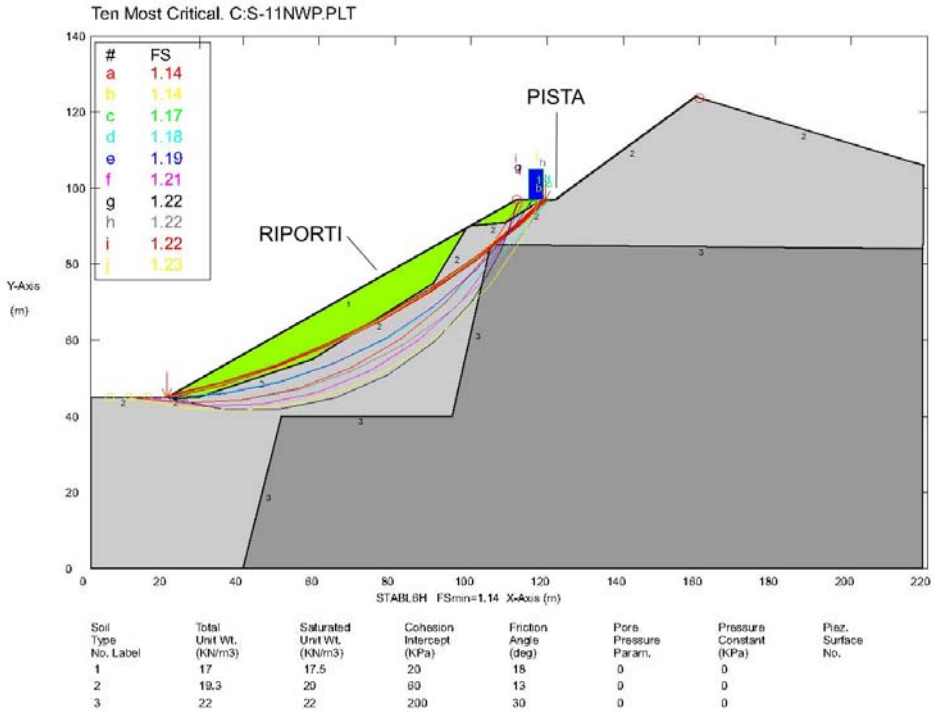
Circle Center At X = 54.6 ; Y = 98.5 and Radius, 54.0

*** 1.091 ***

SCHEDA GRAFICA N. 24

VERIFICA GLOBALE VERSANTE NW *(Sezione vista da Nord)*. **Stato di progetto- Sezione 11 (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	17	17.5	20	18	0	0	
2	19.3	20	80	13	0	0	
3	22	22	200	30	0	0	

VERIFICA GLOBALE VERSANTE NW. 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-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

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

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