

Collegamento tra l'A4 (Torino–Milano) in località Santhià, Biella, Gattinara e l'A26 (Genova Voltri–Gravellona) in località Ghemme. Lotto 1

PROGETTO DEFINITIVO

COD.

PROGETTAZIONE: ANAS - DIREZIONE PROGETTAZIONE E REALIZZAZIONE LAVORI

I PROGETTISTI:

ing. Vincenzo Marzi
Ordine Ing. di Bari n.3594
ing. Achille Devitofranceschi
Ordine Ing. di Roma n.19116

IL GEOLOGO:

geol. Serena Majetta
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RESPONSABILE DEL SIA

arch. Giovanni Magarò
Ordine Arch. di Roma n.16183

IL COORDINATORE PER LA SICUREZZA IN FASE DI PROGETTAZIONE

geom. Fabio Quondam

VISTO: IL RESPONSABILE DEL PROCEDIMENTO :

ing. Nicolò Canepa

PROTOCOLLO

DATA

GEOTECNICA

PONTE TORBOLA E RELATIVE OPERE PROVVISORIALI - VI04

RELAZIONE GEOTECNICA E DI CALCOLO - TABELLE DI CALCOLO

CODICE PROGETTO

NOME FILE

REVISIONE

SCALA:

PROGETTO LIV. PROG. N. PROG.

DPT007_D_1701_T00_VI04_GET_RE02_A.PDF

DPT007 D 1701

CODICE ELAB. T00VI04GETRE02

A

-

C

B

A

Emissione

18/5/2018

Ing. A. Mangiola

Ing. E. Mittiga

Ing. A. Micheli

REV.

DESCRIZIONE

DATA

REDATTO

VERIFICATO

APPROVATO

Indice

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1. VERIFICHE DI STABILITÀ GLOBALE SBANCAMENTO CON PALANCOLE VI04

Project Settings

Length(L) Units: meters

Time(t) Units: Seconds

Force(F) Units: kN

Pressure(p) Units: kPa

Strength Units: kPa

Unit Weight of Water: 9.807 kN/m³

View: 2D

Analysis Settings

Slope Stability

Kind: SLOPE/W

Method: Morgenstern-Price

Settings

Apply Phreatic Correction: No

Side Function

Interslice force function option: Half-Sine

PWP Conditions Source: Piezometric Line

Use Staged Rapid Drawdown: No

Slip Surface

Direction of movement: Right to Left

Use Passive Mode: No

Slip Surface Option: Entry and Exit

Critical slip surfaces saved: 1

Optimize Critical Slip Surface Location: No

Tension Crack

Tension Crack Option: (none)

FOS Distribution

FOS Calculation Option: Constant

Advanced

Number of Slices: 30

Optimization Tolerance: 0.01

Minimum Slip Surface Depth: 0.1 m

Optimization Maximum Iterations: 2000

Optimization Convergence Tolerance: 1e-007

Starting Optimization Points: 8

Ending Optimization Points: 16

Complete Passes per Insertion: 1

Driving Side Maximum Convex Angle: 5 °

Resisting Side Maximum Convex Angle: 1 °

Materials

Ug1

Model: Mohr-Coulomb

Unit Weight: 19.5 kN/m³

Cohesion: 4 kPa

Phi: 21 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

palancola

Model: Undrained (Phi=0)

Unit Weight: 75 kN/m³

Cohesion: 2.5e+005 kPa

Pore Water Pressure

Piezometric Line: 1

Ug2

Model: Mohr-Coulomb

Unit Weight: 19.5 kN/m³

Cohesion: 0 kPa

Phi: 30 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

Ug3

Model: Mohr-Coulomb

Unit Weight: 19 kN/m³

Cohesion: 0 kPa

Phi: 24 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

Slip Surface Entry and Exit

Left Projection: Range

Left-Zone Left Coordinate: (-20.91, -8.8) m

Left-Zone Right Coordinate: (-16.69, -8.8) m

Left-Zone Increment: 4

Right Projection: Range

Right-Zone Left Coordinate: (-4.865794, 0) m

Right-Zone Right Coordinate: (9.68, 0) m

Right-Zone Increment: 4

Radius Increments: 4

Slip Surface Limits

Left Coordinate: (-21, -8.8) m

Right Coordinate: (19, 0) m

Piezometric Lines

Piezometric Line 1

Coordinates

	X (m)	Y (m)
	-5	0
	19	0

Piezometric Line 2

Coordinates

	X (m)	Y (m)
	-21	-8.8
	-11.92	-8.83

Regions

	Material	Points	Area (m ²)
Region 1	palancola	3,1,12,5,4,17,15	6
Region 2	Ug3	8,9,2,18,7	236
Region 3	Ug3	11,10,8,9	240
Region 4	Ug1	1,12,13,14	64.8
Region 5	Ug1	17,15,16,19	1.155
Region 6	Ug2	12,5,4,18,2,13	225.65
Region 7	Ug2	7,6,20,19,17,4,18	76.831

Points

	X (m)	Y (m)
Point 1	-5	0
Point 2	19	-12.1
Point 3	-5.5	0
Point 4	-5.5	-12
Point 5	-5	-12
Point 6	-21	-8.8
Point 7	-21	-12.1
Point 8	-21	-18
Point 9	19	-18
Point 10	-21	-24
Point 11	19	-24
Point 12	-5	-2.7
Point 13	19	-2.7
Point 14	19	0
Point 15	-5.5	-2
Point 16	-6.8	-2
Point 17	-5.5	-2.7
Point 18	-5.5	-12.1
Point 19	-7.5	-2.7
Point 20	-11.92	-8.8

Critical Slip Surfaces

	Slip Surface	FOS	Center (m)	Radius (m)	Entry (m)	Exit (m)
1	49	1.394	(-7.969, 5.271)	18.419	(9.68, 0)	(-19.855, -8.8)

Slices of Slip Surface: 49

	Slip Surface	X (m)	Y (m)	PWP (kPa)	Base Normal Stress (kPa)	Frictional Strength (kPa)	Cohesive Strength (kPa)
1	49	-19.85275	-8.801899	0	0.056971519	0.032892522	0
2	49	-19.370835	-9.1822085	0	11.760999	6.790216	0
3	49	-18.41151	-9.8909895	0	33.80332	19.516356	0
4	49	-17.452185	-10.50962	0	53.551852	30.918176	0
5	49	-16.492855	-11.048425	0	70.864039	40.913372	0
6	49	-15.533525	-11.515135	0	85.540915	49.38707	0
7	49	-14.574195	-11.91565	0	97.397985	56.232753	0
8	49	-13.5509	-12.272975	0	99.590088	44.340364	0
9	49	-12.463635	-12.58281	0	105.60171	47.016909	0
10	49	-11.3675	-12.82345	0	126.88525	56.492951	0
11	49	-10.2625	-12.9966	0	162.06688	72.156826	0
12	49	-9.1575	-13.101715	0	192.24066	85.591054	0
13	49	-8.0525	-13.13997	0	217.50915	96.841312	0
14	49	-7.15	-13.1269	0	232.05595	103.31796	0
15	49	-6.15	-13.046775	0	226.80771	100.9813	0
16	49	-5.25	-12.944915	0	924.89384	411.78927	0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

17	49	-4.4738715	-12.805875	125.58958	237.14596	49.668104	0
18	49	-3.421614	-12.57005	123.27113	223.36331	44.56391	0
19	49	-2.3693565	-12.267975	120.30752	209.66226	39.783295	0
20	49	-1.3668866	-11.91703	116.8687	196.13011	45.7616	0
21	49	-0.41420355	-11.519735	112.97283	183.50187	40.719963	0
22	49	0.5384795	-11.05722	108.43915	171.09723	36.175657	0
23	49	1.4911625	-10.523725	103.20613	158.83893	32.119611	0
24	49	2.4438455	-9.911725	97.202517	146.56121	28.497254	0
25	49	3.3965285	-9.2111945	90.335654	134.01715	25.219526	0
26	49	4.349212	-8.40841	82.463098	120.9178	22.20183	0
27	49	5.3018955	-7.483837	73.390518	106.81266	19.296284	0
28	49	6.2545785	-6.4080785	62.843874	91.122485	16.326664	0
29	49	7.2072615	-5.133094	50.340259	72.912599	13.032146	0
30	49	8.1599445	-3.569122	35.002611	50.66101	9.0403808	0
31	49	9.158143	-1.35	13.239327	15.775334	0.97348158	4

2. VERIFICHE PALANCOLE VI04



Report di Calcolo

Nome Progetto: New Project

Autore: Ingegnere

Jobname: Z:\01 COM\2017-010-ANAS-Pedemontana Piemontese\02-Bozze e varie\04_Sottofondazioni\Paratie
provvisionali\Palanca VI04\palanca AZ52m- VI04.pplus

Data: 24/05/2018 18:18:07

Design Section: Base Design Section

Descrizione del Software

ParatiePlus è un codice agli elementi finiti che simula il problema di uno scavo sostenuto da diaframmi flessibili e permette di valutare il comportamento della parete di sostegno durante tutte le fasi intermedie e nella configurazione finale.

Descrizione della Stratigrafia e degli Strati di Terreno

Tipo : HORIZONTAL

Quota : 0 m

OCR : 1

Tipo : HORIZONTAL

Quota : -2.7 m

OCR : 1

Tipo : HORIZONTAL

Quota : -10.3 m

OCR : 1

Descrizione Pareti

X : 0 m

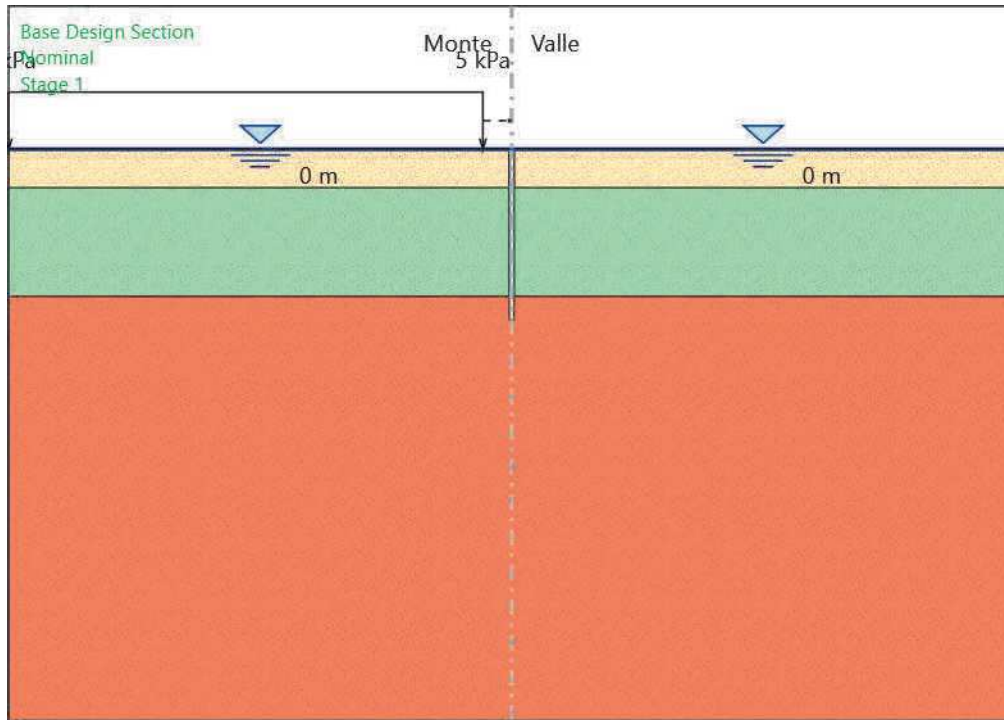
Quota in alto : 0 m

Quota di fondo : -12 m

Muro di sinistra

Fasi di Calcolo

Stage 1



Stage 1

Elementi strutturali

Paratia : WallElement

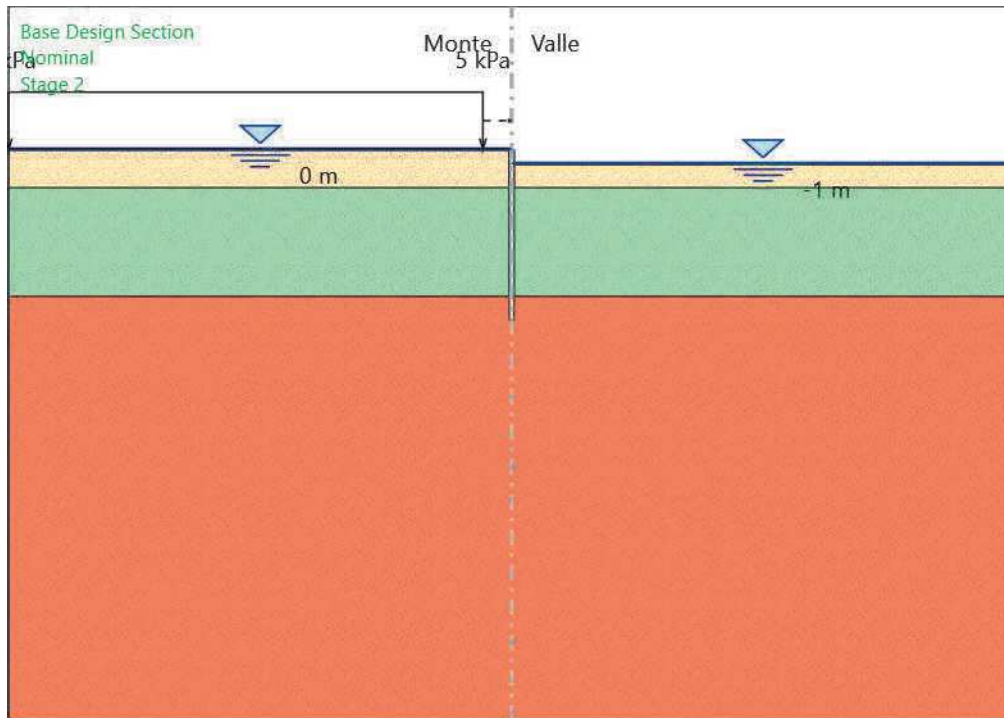
X : 0 m

Quota in alto : 0 m

Quota di fondo : -12 m

Sezione : Default Section

Stage 2



Stage 2

Elementi strutturali

Paratia : WallElement

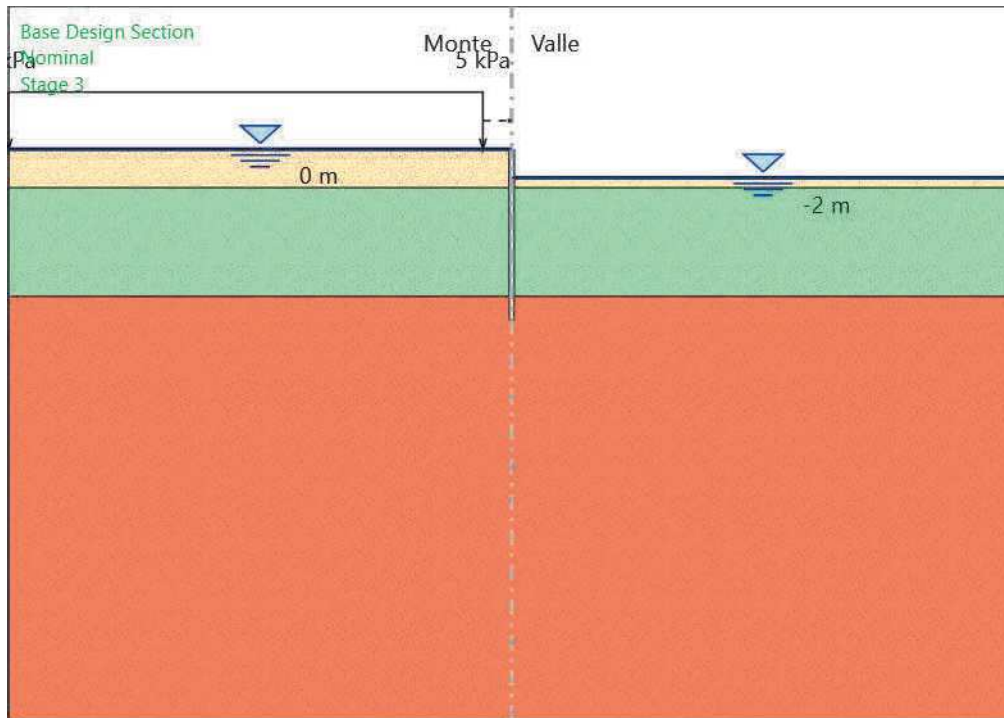
X : 0 m

Quota in alto : 0 m

Quota di fondo : -12 m

Sezione : Default Section

Stage 3



Stage 3

Elementi strutturali

Paratia : WallElement

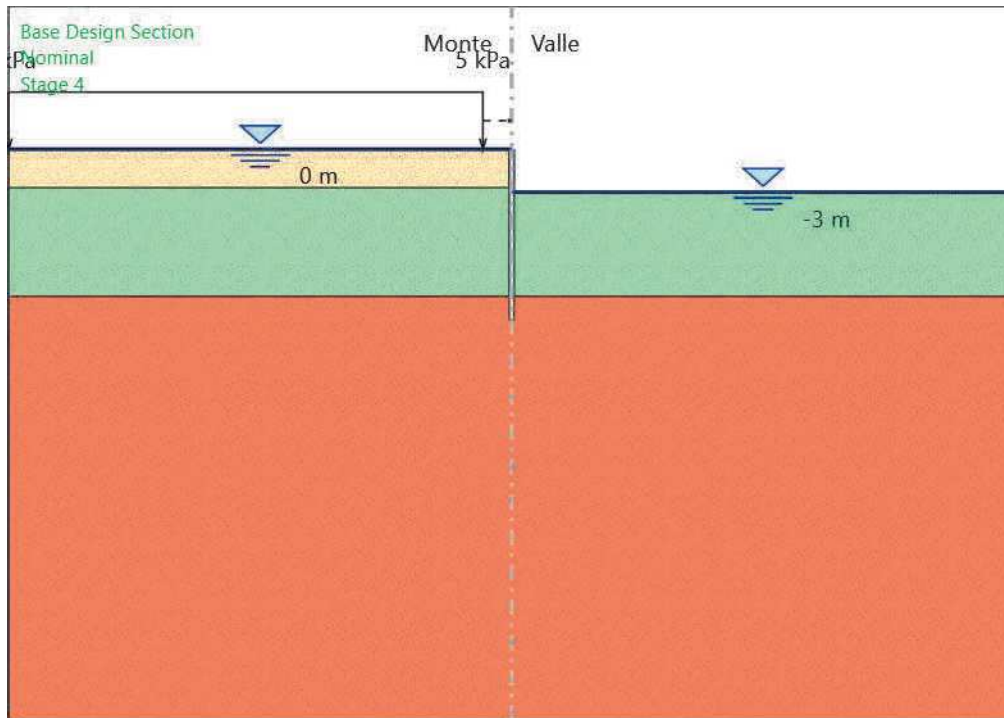
X : 0 m

Quota in alto : 0 m

Quota di fondo : -12 m

Sezione : Default Section

Stage 4



Stage 4

Elementi strutturali

Paratia : WallElement

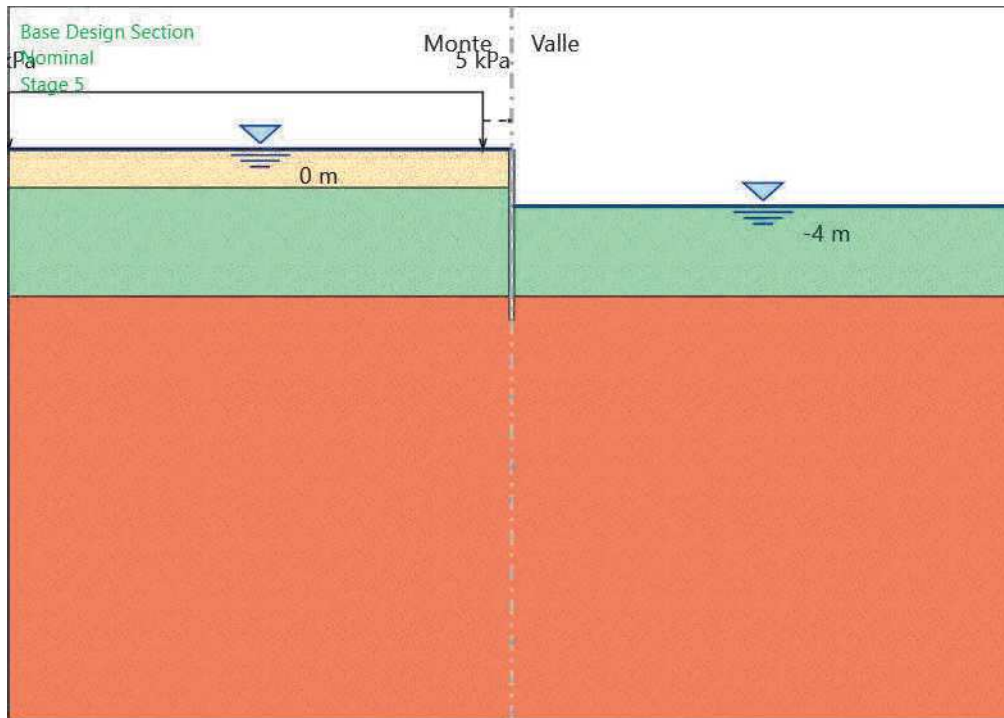
X : 0 m

Quota in alto : 0 m

Quota di fondo : -12 m

Sezione : Default Section

Stage 5



Stage 5

Elementi strutturali

Paratia : WallElement

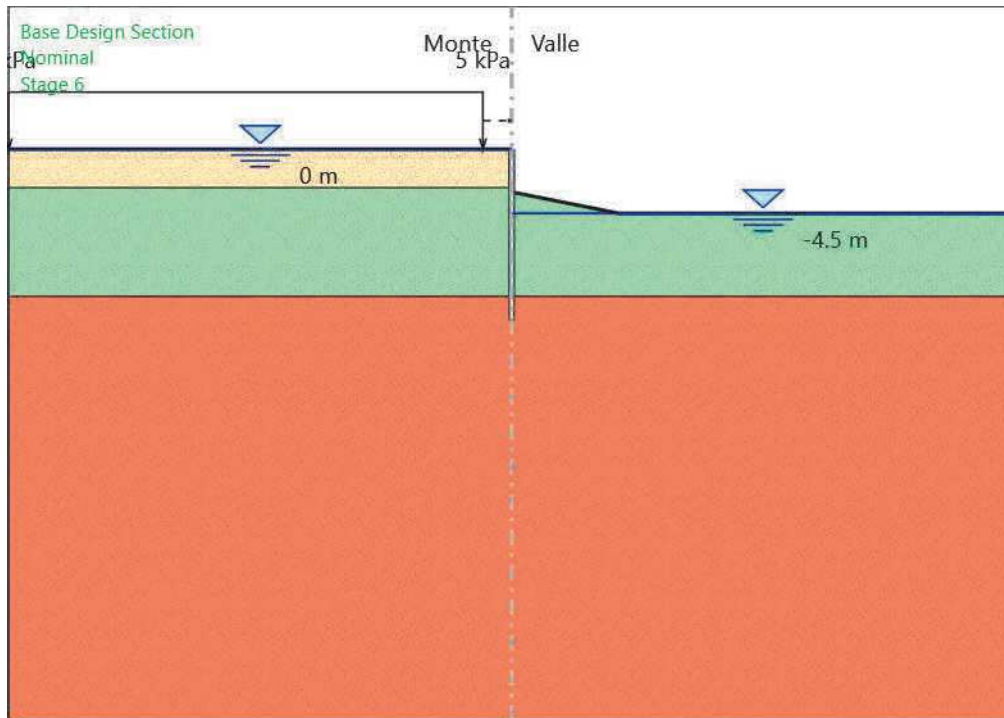
X : 0 m

Quota in alto : 0 m

Quota di fondo : -12 m

Sezione : Default Section

Stage 6



Stage 6

Elementi strutturali

Paratia : WallElement

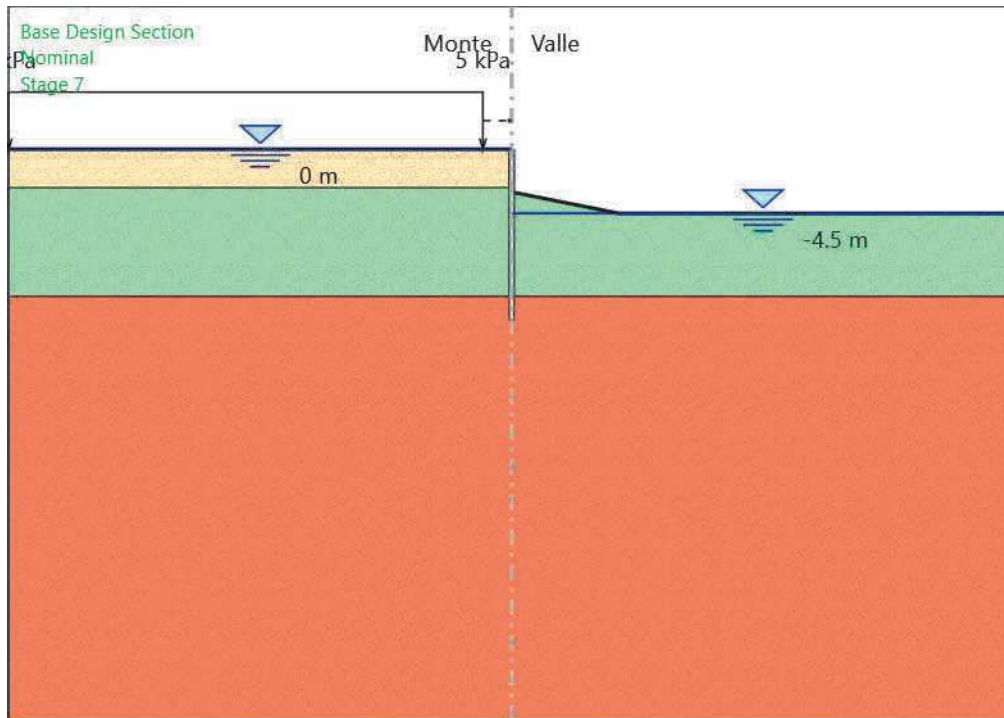
X : 0 m

Quota in alto : 0 m

Quota di fondo : -12 m

Sezione : Default Section

Stage 7



Stage 7

Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -12 m

Sezione : Default Section

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|                                                                    |
|                               NewProject.BaseDesignSection_28.Nominal_63   |
|                               Exe Time :24 May 2018      18:17:33           |
+-----+
```

INPUT FILE HAS BEEN GENERATED BY WALGEN PROGRAM

New Project

```
NO. OF NODAL POINTS (NUMNP) ..... 61
NO. OF COORDINATES (NCOORD)..... 2
NO. OF NODE DOFS (NDOF)..... 2
NO. OF EQUATIONS (NEQ)..... 122
NO. OF CONSTRAINTS CARDS (NVINC)..... 0
NO. OF ELEMENT GROUPS (NEG)..... 3
NO. OF SOLUTION STEPS (NSTE)..... 7
NO. OF ELEMENT SETS ATTACHED TO SLAVE NODES ... 0
NO. OF RECORD FROM WALGEN ..... 132
NO. OF LONG NAMES (LASTNAME) ..... 22
LENGTH UNIT CHOICE ..... 3 (M )
FORCE UNIT CHOICE ..... 3 (KN )
MAX PORE PRESSURE TABLE LENGTH..... 1
NO. OF ELEMENT GROUPS REQUIRING ADD. SLIP DOF . 0
```

```
IDOFA (01) = 2 Y-DISPL.F
IDOFA (02) = 4 X-ROT. F
```

RELEVANT ITEMS UNITS

```
STRESSES                kPa
Y-DISPLACEMENTS        m
ROTATIONS                RADIANS
BEAM AND SLAB MOMENTS   kN*m/m
BEAM SHEAR FORCES      kN/m
ANCHOR FORCES           kN/m
AXIAL FORCES IN TRUSSES kN/m
AXIAL FORCES SPRINGS   kN/m
Y-REACTIONS             kN/m
X-MOMENT REACTIONS     kN*m/m
ETC.
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|                                                                    |
|          NewProject.BaseDesignSection_28.Nominal_63   |
|          Exe Time :24 May 2018           18:17:33      |
+-----+
```

P R E P R O C E S S O R D A T A

N O . O F C O M M A N D S 132

```
1 : UNIT m kN
2 : TITLE New Project
3 : DELTA 0.2
4 : option param itemax 40
5 : option control hinges 0 0.0001 0.001
6 : WALL LeftWall_32 0 -12 0 1
7 : SOIL 0_L LeftWall_32 -12 0 1 0
8 : SOIL 0_R LeftWall_32 -12 0 2 180
9 : LDATA Ug1_2_8_L_0 0 LeftWall_32
10 : ATREST 0.5 0.5 1
11 : WEIGHT 19 10 10
12 : PERMEABILITY 0.0001
13 : RESISTANCE 8 26
14 : YOUNG 2E+04 6E+04
15 : ENDL
16 : LDATA Ug2_741_743_L_0 -2.7 LeftWall_32
17 : ATREST 0.5 0.5 1
18 : WEIGHT 19.5 10 10
19 : PERMEABILITY 0.0001
20 : RESISTANCE 0 36
21 : YOUNG 3E+04 9E+04
22 : ENDL
23 : LDATA Ug3_740_742_L_0 -10.3 LeftWall_32
24 : ATREST 0.5 0.5 1
25 : WEIGHT 19 10 10
26 : PERMEABILITY 0.0001
27 : RESISTANCE 0 29
28 : YOUNG 3E+04 9E+04
29 : ENDL
30 : MATERIAL S275_113 2.1E+08
31 : BEAM WallElement_33 LeftWall_32 -12 0 S275_113 0.25 00 00 0
32 : STRIP LeftWall_32 1 7 2 33 0 5 45
33 : STEP Stage1_31
34 : CHANGE Ug1_2_8_L_0 U-FRICT=26 LeftWall_32
35 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
36 : CHANGE Ug1_2_8_L_0 U-KA=0.39 LeftWall_32
37 : CHANGE Ug1_2_8_L_0 U-KP=3.404 LeftWall_32
38 : CHANGE Ug1_2_8_L_0 D-KA=0.39 LeftWall_32
39 : CHANGE Ug1_2_8_L_0 D-KP=3.404 LeftWall_32
40 : CHANGE Ug2_741_743_L_0 U-FRICT=36 LeftWall_32
41 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
42 : CHANGE Ug2_741_743_L_0 U-KA=0.26 LeftWall_32
43 : CHANGE Ug2_741_743_L_0 U-KP=6.289 LeftWall_32
44 : CHANGE Ug2_741_743_L_0 D-KA=0.26 LeftWall_32
45 : CHANGE Ug2_741_743_L_0 D-KP=6.289 LeftWall_32
46 : CHANGE Ug3_740_742_L_0 U-FRICT=29 LeftWall_32
47 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
48 : CHANGE Ug3_740_742_L_0 U-KA=0.347 LeftWall_32
49 : CHANGE Ug3_740_742_L_0 U-KP=4.041 LeftWall_32
50 : CHANGE Ug3_740_742_L_0 D-KA=0.347 LeftWall_32
51 : CHANGE Ug3_740_742_L_0 D-KP=4.041 LeftWall_32
52 : CHANGE Ug1_2_8_L_0 U-COHE=8 LeftWall_32
53 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
54 : CHANGE Ug2_741_743_L_0 U-COHE=0 LeftWall_32
55 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
56 : CHANGE Ug3_740_742_L_0 U-COHE=0 LeftWall_32
57 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
58 : SETWALL LeftWall_32
59 : GEOM 0 0
60 : WATER 0 0 -12 0 0
61 : ADD WallElement_33
62 : ENDSTEP
63 : STEP Stage2_158
64 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
65 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
66 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
67 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
68 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
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Lotto 1

Progetto Definitivo

```
69 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
70 : SETWALL LeftWall_32
71 : GEOM 0 -1
72 : WATER 0 1 -12 0 0
73 : ENDSTEP
74 : STEP Stage3_255
75 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
76 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
77 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
78 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
79 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
80 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
81 : SETWALL LeftWall_32
82 : GEOM 0 -2
83 : WATER 0 2 -12 0 0
84 : ENDSTEP
85 : STEP Stage4_352
86 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
87 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
88 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
89 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
90 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
91 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
92 : SETWALL LeftWall_32
93 : GEOM 0 -3
94 : WATER 0 3 -12 0 0
95 : ENDSTEP
96 : STEP Stage5_449
97 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
98 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
99 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
100 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
101 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
102 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
103 : SETWALL LeftWall_32
104 : GEOM 0 -4
105 : WATER 0 4 -12 0 0
106 : ENDSTEP
107 : STEP Stage6_546
108 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
109 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
110 : CHANGE Ug2_741_743_L_0 D-KA=0.236 LeftWall_32
111 : CHANGE Ug2_741_743_L_0 D-KP=4.234 LeftWall_32
112 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
113 : CHANGE Ug3_740_742_L_0 D-KA=0.312 LeftWall_32
114 : CHANGE Ug3_740_742_L_0 D-KP=2.897 LeftWall_32
115 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
116 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
117 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
118 : SETWALL LeftWall_32
119 : GEOM 0 -3
120 : WATER 0 4.5 -12 0 0
121 : ENDSTEP
122 : STEP Stage7_643
123 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
124 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
125 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
126 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
127 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
128 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
129 : SETWALL LeftWall_32
130 : GEOM 0 -3
131 : WATER 0 4.5 -12 0 0
132 : ENDSTEP
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
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Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63 |
|          Exe Time :24 May 2018   18:17:33 |
+-----+

```

N O D A L P O I N T D A T A

```

+-----+
| NODE      Y-COORD      Z-COORD / NODE      Y-COORD      Z-COORD / NODE      Y-COORD      Z-COORD / NODE      Y-COORD      Z-COORD / |
| 1 0.0000      0.0000 / 2 0.0000     -0.20000 / 3 0.0000     -0.40000 / 4 0.0000     -0.60000 / |
| 5 0.0000     -0.80000 / 6 0.0000     -1.0000 / 7 0.0000     -1.2000 / 8 0.0000     -1.4000 / |
| 9 0.0000     -1.6000 / 10 0.0000    -1.8000 / 11 0.0000    -2.0000 / 12 0.0000    -2.2000 / |
| 13 0.0000    -2.4000 / 14 0.0000    -2.6000 / 15 0.0000    -2.8000 / 16 0.0000    -3.0000 / |
| 17 0.0000    -3.2000 / 18 0.0000    -3.4000 / 19 0.0000    -3.6000 / 20 0.0000    -3.8000 / |
| 21 0.0000    -4.0000 / 22 0.0000    -4.2000 / 23 0.0000    -4.4000 / 24 0.0000    -4.6000 / |
| 25 0.0000    -4.8000 / 26 0.0000    -5.0000 / 27 0.0000    -5.2000 / 28 0.0000    -5.4000 / |
| 29 0.0000    -5.6000 / 30 0.0000    -5.8000 / 31 0.0000    -6.0000 / 32 0.0000    -6.2000 / |
| 33 0.0000    -6.4000 / 34 0.0000    -6.6000 / 35 0.0000    -6.8000 / 36 0.0000    -7.0000 / |
| 37 0.0000    -7.2000 / 38 0.0000    -7.4000 / 39 0.0000    -7.6000 / 40 0.0000    -7.8000 / |
| 41 0.0000    -8.0000 / 42 0.0000    -8.2000 / 43 0.0000    -8.4000 / 44 0.0000    -8.6000 / |
| 45 0.0000    -8.8000 / 46 0.0000    -9.0000 / 47 0.0000    -9.2000 / 48 0.0000    -9.4000 / |
| 49 0.0000    -9.6000 / 50 0.0000    -9.8000 / 51 0.0000    -10.000 / 52 0.0000    -10.200 / |
| 53 0.0000    -10.400 / 54 0.0000    -10.600 / 55 0.0000    -10.800 / 56 0.0000    -11.000 / |
| 57 0.0000    -11.200 / 58 0.0000    -11.400 / 59 0.0000    -11.600 / 60 0.0000    -11.800 / |
| 61 0.0000    -12.000 / |
+-----+

```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63   |
|          Exe Time :24 May 2018           18:17:33     |
+-----+

```

ELEMENT GROUP NO. 1

```

0_L
 5 61 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0

```

.....2D PLASTIC SOIL

element group behaviour throughout stage analysis

```

stage  status
-----
 1  active
 2  active
 3  active
 4  active
 5  active
 6  active
 7  active

```

material set no. 1

```

prop( 1) angle           0.00000
prop( 2) layer as foreseen 1.00000

```

material set no. 2

```

prop( 1) angle           0.00000
prop( 2) layer as foreseen 2.00000

```

material set no. 3

```

prop( 1) angle           0.00000
prop( 2) layer as foreseen 3.00000

```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	1.000
2	2	1	0.2000	0.000	0.000	0.000	1.000
3	3	1	0.2000	0.000	0.000	0.000	1.000
4	4	1	0.2000	0.000	0.000	0.000	1.000
5	5	1	0.2000	0.000	0.000	0.000	1.000
6	6	1	0.2000	0.000	0.000	0.000	1.000
7	7	1	0.2000	0.000	0.000	0.000	1.000
8	8	1	0.2000	0.000	0.000	0.000	1.000
9	9	1	0.2000	0.000	0.000	0.000	1.000
10	10	1	0.2000	0.000	0.000	0.000	1.000
11	11	1	0.2000	0.000	0.000	0.000	1.000
12	12	1	0.2000	0.000	0.000	0.000	1.000
13	13	1	0.2000	0.000	0.000	0.000	1.000
14	14	1	0.2000	0.000	0.000	0.000	1.000
15	15	2	0.2000	0.000	0.000	0.000	1.000
16	16	2	0.2000	0.000	0.000	0.000	1.000
17	17	2	0.2000	0.000	0.000	0.000	1.000
18	18	2	0.2000	0.000	0.000	0.000	1.000
19	19	2	0.2000	0.000	0.000	0.000	1.000
20	20	2	0.2000	0.000	0.000	0.000	1.000
21	21	2	0.2000	0.000	0.000	0.000	1.000
22	22	2	0.2000	0.000	0.000	0.000	1.000
23	23	2	0.2000	0.000	0.000	0.000	1.000
24	24	2	0.2000	0.000	0.000	0.000	1.000
25	25	2	0.2000	0.000	0.000	0.000	1.000
26	26	2	0.2000	0.000	0.000	0.000	1.000
27	27	2	0.2000	0.000	0.000	0.000	1.000
28	28	2	0.2000	0.000	0.000	0.000	1.000
29	29	2	0.2000	0.000	0.000	0.000	1.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

30	30	2	0.2000	0.000	0.000	0.000	1.000
31	31	2	0.2000	0.000	0.000	0.000	1.000
32	32	2	0.2000	0.000	0.000	0.000	1.000
33	33	2	0.2000	0.000	0.000	0.000	1.000
34	34	2	0.2000	0.000	0.000	0.000	1.000
35	35	2	0.2000	0.000	0.000	0.000	1.000
36	36	2	0.2000	0.000	0.000	0.000	1.000
37	37	2	0.2000	0.000	0.000	0.000	1.000
38	38	2	0.2000	0.000	0.000	0.000	1.000
39	39	2	0.2000	0.000	0.000	0.000	1.000
40	40	2	0.2000	0.000	0.000	0.000	1.000
41	41	2	0.2000	0.000	0.000	0.000	1.000
42	42	2	0.2000	0.000	0.000	0.000	1.000
43	43	2	0.2000	0.000	0.000	0.000	1.000
44	44	2	0.2000	0.000	0.000	0.000	1.000
45	45	2	0.2000	0.000	0.000	0.000	1.000
46	46	2	0.2000	0.000	0.000	0.000	1.000
47	47	2	0.2000	0.000	0.000	0.000	1.000
48	48	2	0.2000	0.000	0.000	0.000	1.000
49	49	2	0.2000	0.000	0.000	0.000	1.000
50	50	2	0.2000	0.000	0.000	0.000	1.000
51	51	2	0.2000	0.000	0.000	0.000	1.000
52	52	2	0.2000	0.000	0.000	0.000	1.000
53	53	3	0.2000	0.000	0.000	0.000	1.000
54	54	3	0.2000	0.000	0.000	0.000	1.000
55	55	3	0.2000	0.000	0.000	0.000	1.000
56	56	3	0.2000	0.000	0.000	0.000	1.000
57	57	3	0.2000	0.000	0.000	0.000	1.000
58	58	3	0.2000	0.000	0.000	0.000	1.000
59	59	3	0.2000	0.000	0.000	0.000	1.000
60	60	3	0.2000	0.000	0.000	0.000	1.000
61	61	3	0.1000	0.000	0.000	0.000	1.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63   |
|          Exe Time :24 May 2018           18:17:33     |
+-----+

```

ELEMENT GROUP NO. 2

```

0_R
 5 61 0 1 0 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0

```

.....2D PLASTIC SOIL

element group behaviour throughout stage analysis

stage status

```

-----
1 active
2 active
3 active
4 active
5 active
6 active
7 active

```

material set no. 1

```

prop( 1) angle           180.000
prop( 2) layer as foreseen 1.00000

```

material set no. 2

```

prop( 1) angle           180.000
prop( 2) layer as foreseen 2.00000

```

material set no. 3

```

prop( 1) angle           180.000
prop( 2) layer as foreseen 3.00000

```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	2.000
2	2	1	0.2000	0.000	0.000	0.000	2.000
3	3	1	0.2000	0.000	0.000	0.000	2.000
4	4	1	0.2000	0.000	0.000	0.000	2.000
5	5	1	0.2000	0.000	0.000	0.000	2.000
6	6	1	0.2000	0.000	0.000	0.000	2.000
7	7	1	0.2000	0.000	0.000	0.000	2.000
8	8	1	0.2000	0.000	0.000	0.000	2.000
9	9	1	0.2000	0.000	0.000	0.000	2.000
10	10	1	0.2000	0.000	0.000	0.000	2.000
11	11	1	0.2000	0.000	0.000	0.000	2.000
12	12	1	0.2000	0.000	0.000	0.000	2.000
13	13	1	0.2000	0.000	0.000	0.000	2.000
14	14	1	0.2000	0.000	0.000	0.000	2.000
15	15	2	0.2000	0.000	0.000	0.000	2.000
16	16	2	0.2000	0.000	0.000	0.000	2.000
17	17	2	0.2000	0.000	0.000	0.000	2.000
18	18	2	0.2000	0.000	0.000	0.000	2.000
19	19	2	0.2000	0.000	0.000	0.000	2.000
20	20	2	0.2000	0.000	0.000	0.000	2.000
21	21	2	0.2000	0.000	0.000	0.000	2.000
22	22	2	0.2000	0.000	0.000	0.000	2.000
23	23	2	0.2000	0.000	0.000	0.000	2.000
24	24	2	0.2000	0.000	0.000	0.000	2.000
25	25	2	0.2000	0.000	0.000	0.000	2.000
26	26	2	0.2000	0.000	0.000	0.000	2.000
27	27	2	0.2000	0.000	0.000	0.000	2.000
28	28	2	0.2000	0.000	0.000	0.000	2.000
29	29	2	0.2000	0.000	0.000	0.000	2.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

30	30	2	0.2000	0.000	0.000	0.000	2.000
31	31	2	0.2000	0.000	0.000	0.000	2.000
32	32	2	0.2000	0.000	0.000	0.000	2.000
33	33	2	0.2000	0.000	0.000	0.000	2.000
34	34	2	0.2000	0.000	0.000	0.000	2.000
35	35	2	0.2000	0.000	0.000	0.000	2.000
36	36	2	0.2000	0.000	0.000	0.000	2.000
37	37	2	0.2000	0.000	0.000	0.000	2.000
38	38	2	0.2000	0.000	0.000	0.000	2.000
39	39	2	0.2000	0.000	0.000	0.000	2.000
40	40	2	0.2000	0.000	0.000	0.000	2.000
41	41	2	0.2000	0.000	0.000	0.000	2.000
42	42	2	0.2000	0.000	0.000	0.000	2.000
43	43	2	0.2000	0.000	0.000	0.000	2.000
44	44	2	0.2000	0.000	0.000	0.000	2.000
45	45	2	0.2000	0.000	0.000	0.000	2.000
46	46	2	0.2000	0.000	0.000	0.000	2.000
47	47	2	0.2000	0.000	0.000	0.000	2.000
48	48	2	0.2000	0.000	0.000	0.000	2.000
49	49	2	0.2000	0.000	0.000	0.000	2.000
50	50	2	0.2000	0.000	0.000	0.000	2.000
51	51	2	0.2000	0.000	0.000	0.000	2.000
52	52	2	0.2000	0.000	0.000	0.000	2.000
53	53	3	0.2000	0.000	0.000	0.000	2.000
54	54	3	0.2000	0.000	0.000	0.000	2.000
55	55	3	0.2000	0.000	0.000	0.000	2.000
56	56	3	0.2000	0.000	0.000	0.000	2.000
57	57	3	0.2000	0.000	0.000	0.000	2.000
58	58	3	0.2000	0.000	0.000	0.000	2.000
59	59	3	0.2000	0.000	0.000	0.000	2.000
60	60	3	0.2000	0.000	0.000	0.000	2.000
61	61	3	0.1000	0.000	0.000	0.000	2.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63   |
|          Exe Time :24 May 2018   18:17:33             |
+-----+

```

ELEMENT GROUP NO. 3

```

WallElement_33      :
 2 60 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0
.....
.....2D WALL ELEMENT.....
.....

```

element group behaviour throughout stage analysis

```

stage  status
-----
 1  active
 2  active
 3  active
 4  active
 5  active
 6  active
 7  active

```

material set no. 1

```

prop( 1) young modulus      0.210000E+09
prop( 2) modification time  0.00000
prop( 3) new young modulus  0.00000
prop( 4) poisson ratio      0.00000
prop( 5) future .....      0.00000

```

no. of step variable items: 1
step inertia multiplier

```

-----
 1  1.000
 2  1.000
 3  1.000
 4  1.000
 5  1.000
 6  1.000
 7  1.000

```

element data

e1	na	nb	mat	erc1	erc2	thick	by-i	by-j
1	1	2	1	0.000	0.000	0.2500	0.000	0.000
2	2	3	1	0.000	0.000	0.2500	0.000	0.000
3	3	4	1	0.000	0.000	0.2500	0.000	0.000
4	4	5	1	0.000	0.000	0.2500	0.000	0.000
5	5	6	1	0.000	0.000	0.2500	0.000	0.000
6	6	7	1	0.000	0.000	0.2500	0.000	0.000
7	7	8	1	0.000	0.000	0.2500	0.000	0.000
8	8	9	1	0.000	0.000	0.2500	0.000	0.000
9	9	10	1	0.000	0.000	0.2500	0.000	0.000
10	10	11	1	0.000	0.000	0.2500	0.000	0.000
11	11	12	1	0.000	0.000	0.2500	0.000	0.000
12	12	13	1	0.000	0.000	0.2500	0.000	0.000
13	13	14	1	0.000	0.000	0.2500	0.000	0.000
14	14	15	1	0.000	0.000	0.2500	0.000	0.000
15	15	16	1	0.000	0.000	0.2500	0.000	0.000
16	16	17	1	0.000	0.000	0.2500	0.000	0.000
17	17	18	1	0.000	0.000	0.2500	0.000	0.000
18	18	19	1	0.000	0.000	0.2500	0.000	0.000
19	19	20	1	0.000	0.000	0.2500	0.000	0.000
20	20	21	1	0.000	0.000	0.2500	0.000	0.000
21	21	22	1	0.000	0.000	0.2500	0.000	0.000
22	22	23	1	0.000	0.000	0.2500	0.000	0.000
23	23	24	1	0.000	0.000	0.2500	0.000	0.000
24	24	25	1	0.000	0.000	0.2500	0.000	0.000
25	25	26	1	0.000	0.000	0.2500	0.000	0.000
26	26	27	1	0.000	0.000	0.2500	0.000	0.000
27	27	28	1	0.000	0.000	0.2500	0.000	0.000
28	28	29	1	0.000	0.000	0.2500	0.000	0.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

29	29	30	1	0.000	0.000	0.2500	0.000	0.000
30	30	31	1	0.000	0.000	0.2500	0.000	0.000
31	31	32	1	0.000	0.000	0.2500	0.000	0.000
32	32	33	1	0.000	0.000	0.2500	0.000	0.000
33	33	34	1	0.000	0.000	0.2500	0.000	0.000
34	34	35	1	0.000	0.000	0.2500	0.000	0.000
35	35	36	1	0.000	0.000	0.2500	0.000	0.000
36	36	37	1	0.000	0.000	0.2500	0.000	0.000
37	37	38	1	0.000	0.000	0.2500	0.000	0.000
38	38	39	1	0.000	0.000	0.2500	0.000	0.000
39	39	40	1	0.000	0.000	0.2500	0.000	0.000
40	40	41	1	0.000	0.000	0.2500	0.000	0.000
41	41	42	1	0.000	0.000	0.2500	0.000	0.000
42	42	43	1	0.000	0.000	0.2500	0.000	0.000
43	43	44	1	0.000	0.000	0.2500	0.000	0.000
44	44	45	1	0.000	0.000	0.2500	0.000	0.000
45	45	46	1	0.000	0.000	0.2500	0.000	0.000
46	46	47	1	0.000	0.000	0.2500	0.000	0.000
47	47	48	1	0.000	0.000	0.2500	0.000	0.000
48	48	49	1	0.000	0.000	0.2500	0.000	0.000
49	49	50	1	0.000	0.000	0.2500	0.000	0.000
50	50	51	1	0.000	0.000	0.2500	0.000	0.000
51	51	52	1	0.000	0.000	0.2500	0.000	0.000
52	52	53	1	0.000	0.000	0.2500	0.000	0.000
53	53	54	1	0.000	0.000	0.2500	0.000	0.000
54	54	55	1	0.000	0.000	0.2500	0.000	0.000
55	55	56	1	0.000	0.000	0.2500	0.000	0.000
56	56	57	1	0.000	0.000	0.2500	0.000	0.000
57	57	58	1	0.000	0.000	0.2500	0.000	0.000
58	58	59	1	0.000	0.000	0.2500	0.000	0.000
59	59	60	1	0.000	0.000	0.2500	0.000	0.000
60	60	61	1	0.000	0.000	0.2500	0.000	0.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|                               NewProject.BaseDesignSection_28.Nominal_63                               |
|                               Exe Time :24 May 2018      18:17:33                               |
+-----+
```

```
NO. OF NODAL LOADS (NLOAD) ..... 0
NO. OF LOAD CURVES (NLCUR) ..... 14
MAXIMUM POINTS/LCURVE (NPTM)..... 5
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|                                                                                               |
|                               NewProject.BaseDesignSection_28.Nominal_63                       |
|                               Exe Time :24 May 2018  18:17:33                               |
+-----+
L O A D      D A T A
```

LOAD FUNCTION NUMBER = 1
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
1.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 2
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
2.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 3
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
3.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 4
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
4.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 5
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
4.80000	0.0000E+00
5.00000	0.1000E+01
5.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 6
NUMBER OF TIME POINTS = 5

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

TIME VALUE	FUNCTION
0.00000	0.0000E+00
5.80000	0.0000E+00
6.00000	0.1000E+01
6.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 7
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
6.80000	0.0000E+00
7.00000	0.1000E+01
7.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 8
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 9
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 10
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 11
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 12
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
4.80000	0.0000E+00
5.00000	0.1000E+01
8.00000	0.1000E+01

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

LOAD FUNCTION NUMBER = 13
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
5.80000	0.0000E+00
6.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 14
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
6.80000	0.0000E+00
7.00000	0.1000E+01
8.00000	0.1000E+01

NO. OF DISTRIBUTED LOAD CARDS 0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|                                                                                               |
|                               NewProject.BaseDesignSection_28.Nominal_63                       |
|                               Exe Time :24 May 2018      18:17:33                             |
+-----+
```

L O A D B A L A N C E

STEP	1	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	1	TOTAL APPLIED LOAD IN DIR.	4	X-ROT.F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	4	X-ROT.F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	4	X-ROT.F	0.0000000
STEP	4	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	4	TOTAL APPLIED LOAD IN DIR.	4	X-ROT.F	0.0000000
STEP	5	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	5	TOTAL APPLIED LOAD IN DIR.	4	X-ROT.F	0.0000000
STEP	6	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	6	TOTAL APPLIED LOAD IN DIR.	4	X-ROT.F	0.0000000
STEP	7	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	7	TOTAL APPLIED LOAD IN DIR.	4	X-ROT.F	0.0000000

LOAD INPUT SECTION COMPLETED

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+  
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*  |  
|                                                                    |  
|                               NewProject.BaseDesignSection_28.Nominal_63  |  
|                               Exe Time :24 May 2018      18:17:33  |  
+-----+
```

NO. OF LAYERS 3
NO. OF DATA PER LAYER..... 100

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|                PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|                |
|                NewProject.BaseDesignSection_28.Nominal_63  |
|                Exe Time :24 May 2018  18:17:33  |
+-----+

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LAYER DESCRIPTORS FOR STEP NO. 1

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 1

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ITEM NO. 1<NAME >= 18.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.0000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.0000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.0000 (BOTH WALLS)
ITEM NO. 8<U-COHE >= 8.0000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 26.0000 (BOTH WALLS)
ITEM NO. 10<U-KA >= 0.39000 WALL NO. 1
ITEM NO. 11<U-KP >= 3.4040 WALL NO. 1
ITEM NO. 12<K0-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 20000. (BOTH WALLS)
ITEM NO. 18<EUR >= 60000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 58<D-COHE >= 8.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 26.0000 (BOTH WALLS)
ITEM NO. 60<D-KA >= 0.39000 WALL NO. 1
ITEM NO. 61<D-KP >= 3.4040 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

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NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 1

```

ITEM NO. 1<NAME >= 19.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -2.7000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.500 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 36.000 (BOTH WALLS)
ITEM NO. 10<U-KA >= 0.26000 WALL NO. 1
ITEM NO. 11<U-KP >= 6.2890 WALL NO. 1
ITEM NO. 12<K0-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 30000. (BOTH WALLS)
ITEM NO. 18<EUR >= 90000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 36.000 (BOTH WALLS)
ITEM NO. 60<D-KA >= 0.26000 WALL NO. 1
ITEM NO. 61<D-KP >= 6.2890 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

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NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 1

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ITEM NO. 1<NAME >= 20.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -10.300 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 29.000 (BOTH WALLS)
ITEM NO. 10<U-KA >= 0.34700 WALL NO. 1
ITEM NO. 11<U-KP >= 4.0410 WALL NO. 1
ITEM NO. 12<K0-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)

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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

ITEM NO.	14<OCR	>=	1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>=	30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>=	90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>=	0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>=	29.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>=	0.34700	WALL NO.	1
ITEM NO.	61<D-KP	>=	4.0410	WALL NO.	1
ITEM NO.	77<D-PERM	>=	0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 2

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 2

ITEM NO.	1<NAME	>=	18.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>=	19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>=	10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>=	10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>=	8.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>=	26.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>=	0.39000	WALL NO.	1
ITEM NO.	11<U-KP	>=	3.4040	WALL NO.	1
ITEM NO.	12<K0-NC	>=	0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>=	0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>=	1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>=	20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>=	60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>=	0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>=	8.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>=	26.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>=	0.39000	WALL NO.	1
ITEM NO.	61<D-KP	>=	3.4040	WALL NO.	1
ITEM NO.	77<D-PERM	>=	0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 2

ITEM NO.	1<NAME	>=	19.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>=	-2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>=	19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>=	10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>=	10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>=	36.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>=	0.26000	WALL NO.	1
ITEM NO.	11<U-KP	>=	6.2890	WALL NO.	1
ITEM NO.	12<K0-NC	>=	0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>=	0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>=	1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>=	30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>=	90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>=	0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>=	36.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>=	0.26000	WALL NO.	1
ITEM NO.	61<D-KP	>=	6.2890	WALL NO.	1
ITEM NO.	77<D-PERM	>=	0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 2

ITEM NO.	1<NAME	>=	20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>=	-10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>=	19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>=	10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>=	10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>=	29.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>=	0.34700	WALL NO.	1
ITEM NO.	11<U-KP	>=	4.0410	WALL NO.	1

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.34700	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.0410	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 3

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 3

ITEM NO.	1<NAME	>= 18.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.39000	WALL NO.	1
ITEM NO.	11<U-KP	>= 3.4040	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.39000	WALL NO.	1
ITEM NO.	61<D-KP	>= 3.4040	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 3

ITEM NO.	1<NAME	>= 19.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.26000	WALL NO.	1
ITEM NO.	11<U-KP	>= 6.2890	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.26000	WALL NO.	1
ITEM NO.	61<D-KP	>= 6.2890	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 3

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 29.000	(BOTH WALLS)	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

ITEM NO.	10<U-KA	>= 0.34700	WALL NO.	1
ITEM NO.	11<U-KP	>= 4.0410	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.34700	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.0410	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 4

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 4

ITEM NO.	1<NAME	>= 18.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.39000	WALL NO.	1
ITEM NO.	11<U-KP	>= 3.4040	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.39000	WALL NO.	1
ITEM NO.	61<D-KP	>= 3.4040	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 4

ITEM NO.	1<NAME	>= 19.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.26000	WALL NO.	1
ITEM NO.	11<U-KP	>= 6.2890	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.26000	WALL NO.	1
ITEM NO.	61<D-KP	>= 6.2890	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 4

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.34700	WALL NO.	1
ITEM NO.	11<U-KP	>= 4.0410	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.34700	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.0410	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 5

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 5

ITEM NO.	1<NAME	>= 18.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.39000	WALL NO.	1
ITEM NO.	11<U-KP	>= 3.4040	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.39000	WALL NO.	1
ITEM NO.	61<D-KP	>= 3.4040	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 5

ITEM NO.	1<NAME	>= 19.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.26000	WALL NO.	1
ITEM NO.	11<U-KP	>= 6.2890	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.26000	WALL NO.	1
ITEM NO.	61<D-KP	>= 6.2890	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 5

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.34700	WALL NO.	1
ITEM NO.	11<U-KP	>= 4.0410	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.34700	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.0410	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 6

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 6

ITEM NO.	1<NAME	>= 18.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.39000	WALL NO.	1
ITEM NO.	11<U-KP	>= 3.4040	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.39000	WALL NO.	1
ITEM NO.	61<D-KP	>= 3.4040	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 6

ITEM NO.	1<NAME	>= 19.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.26000	WALL NO.	1
ITEM NO.	11<U-KP	>= 6.2890	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.23600	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.2340	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 6

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

ITEM NO.	3<LEVEL	>=	-10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>=	19.0000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>=	10.0000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>=	10.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>=	29.0000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>=	0.34700	WALL NO.	1
ITEM NO.	11<U-KP	>=	4.0410	WALL NO.	1
ITEM NO.	12<KO-NC	>=	0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>=	0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>=	1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>=	30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>=	90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>=	0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>=	29.0000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>=	0.31200	WALL NO.	1
ITEM NO.	61<D-KP	>=	2.8970	WALL NO.	1
ITEM NO.	77<D-PERM	>=	0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 7

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 7

ITEM NO.	1<NAME	>=	18.0000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>=	19.0000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>=	10.0000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>=	10.0000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>=	8.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>=	26.0000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>=	0.39000	WALL NO.	1
ITEM NO.	11<U-KP	>=	3.4040	WALL NO.	1
ITEM NO.	12<KO-NC	>=	0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>=	0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>=	1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>=	20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>=	60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>=	0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>=	8.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>=	26.0000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>=	0.39000	WALL NO.	1
ITEM NO.	61<D-KP	>=	3.4040	WALL NO.	1
ITEM NO.	77<D-PERM	>=	0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 7

ITEM NO.	1<NAME	>=	19.0000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>=	-2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>=	19.5000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>=	10.0000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>=	10.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>=	36.0000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>=	0.26000	WALL NO.	1
ITEM NO.	11<U-KP	>=	6.2890	WALL NO.	1
ITEM NO.	12<KO-NC	>=	0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>=	0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>=	1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>=	30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>=	90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>=	0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>=	36.0000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>=	0.23600	WALL NO.	1
ITEM NO.	61<D-KP	>=	4.2340	WALL NO.	1
ITEM NO.	77<D-PERM	>=	0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 7

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.34700	WALL NO.	1
ITEM NO.	11<U-KP	>= 4.0410	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.31200	WALL NO.	1
ITEM NO.	61<D-KP	>= 2.8970	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

DEFAULT WATER UNIT WEIGHT = 10.000
AVERAGED ON 21 VALUES

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63  |
|          Exe Time :24 May 2018  18:17:33  |
+-----+

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PHASE DESCRIPTORS

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STEP NO.      1
              LEFT WALL  RIGHT WALL
Y              0.000      -0.9990E+30
Z-PC           0.000         0.000
Z-EXCAVATION   0.000         0.000
Z-WATER_TABLE  0.000      -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL  0.000         0.000
ZQ             0.000         0.000
DZW_OF_THE_WATER_TABLE  0.000         0.000
QS_ON_THE_EXCAVATION_SIDE  0.000         0.000
ZQS           -0.9990E+30  -0.9990E+30
ZCUT           0.000         0.000
BALANCE LEVEL FOR PORE PRESSURES  -12.00      -12.00
WATER_BEHAVIOUR_FLAG (LINING OPT)  0.000         0.000
PORE_UPDATE_FLAG  0.000         0.000
PORE_TAB._FLAG (gt.0= use tabs)  0.000         0.000
lateral thrusts reduction elevatio  0.000         0.000
Downhill reduction factor for effe  0.000         0.000
Downhill reduction factor for pore  0.000         0.000
Uphill reduction factor for effect  0.000         0.000
Uphill reduction factor for pore p  0.000         0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]  0.000         0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]  0.000         0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]  0.000         0.000
UPHILL BETA ANGLE (SLOPE) [deg]  0.000         0.000
UPHILL DELTA/PHI RATIO  0.000         0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]  0.000         0.000
DOWNHILL DELTA/PHI RATIO  0.000         0.000
DYN.WATER BEHAVIOUR  0.000         0.000
Excess pore pressure RATIO Ru  0.000         0.000
SEISMIC PRESSURE LOWER VALUE  0.000         0.000
SEISMIC PRESSURE UPPER VALUE  0.000         0.000
SEISMIC PRESSURE LOWER LEVEL  0.000         0.000
SEISMIC PRESSURE UPPER LEVEL  0.000         0.000

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=====end of step 1

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STEP NO.      2
              LEFT WALL  RIGHT WALL
Y              0.000      -0.9990E+30
Z-PC           0.000         0.000
Z-EXCAVATION   -1.000         0.000
Z-WATER_TABLE  0.000      -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL  0.000         0.000
ZQ             0.000         0.000
DZW_OF_THE_WATER_TABLE  1.000         0.000
QS_ON_THE_EXCAVATION_SIDE  0.000         0.000
ZQS           -0.9990E+30  -0.9990E+30
ZCUT           0.000         0.000
BALANCE LEVEL FOR PORE PRESSURES  -12.00      -12.00
WATER_BEHAVIOUR_FLAG (LINING OPT)  0.000         0.000
PORE_UPDATE_FLAG  0.000         0.000
PORE_TAB._FLAG (gt.0= use tabs)  0.000         0.000
lateral thrusts reduction elevatio  0.000         0.000
Downhill reduction factor for effe  0.000         0.000
Downhill reduction factor for pore  0.000         0.000
Uphill reduction factor for effect  0.000         0.000
Uphill reduction factor for pore p  0.000         0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]  0.000         0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]  0.000         0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]  0.000         0.000
UPHILL BETA ANGLE (SLOPE) [deg]  0.000         0.000
UPHILL DELTA/PHI RATIO  0.000         0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]  0.000         0.000
DOWNHILL DELTA/PHI RATIO  0.000         0.000
DYN.WATER BEHAVIOUR  0.000         0.000
Excess pore pressure RATIO Ru  0.000         0.000

```


Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|                PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|                |
|                NewProject.BaseDesignSection_28.Nominal_63  |
|                Exe Time :24 May 2018  18:17:33  |
+-----+

```

I N I T I A L S T R E S S T A B L E S

S E C T I O N

NUMBER OF DEFINED TABLES 1

INPUT DATA FOR INITIAL STRESS SET NO. 1
PERTAINING SOIL ELEMENTS AT Y-COORD 0.0000

ACTIVATION TIME 1.0000
END TIME (TIME BEYOND WHICH IT IS REMOVED) 7.0000

TYPE BOUSSINESQ

HORIZONTAL DISTANCE (DY) 2.0000000000000000
FOUNDATION WIDTH (B) 33.0000000000000000
ZETA-F..... 0.0000000000000000E+000
Q-F 5.0000000000000000
BETA 45.0000000000000000
BEHAVIOUR (0=FREE, 1=REFLECTING) 0.0000000000000000E+000

ELEMENT GROUPS BACKUP AREA CAN STAY IN CORE AT
POSITION 5903

NO. OF D.P.W FOR THIS AREA 7208
MAX NO. OF D.P.W. AVAILABLE 81920
** MAX NO OF ITERATIONS SET TO 40

```

ITER    0  RNORM = 0.000    RMNORM= 0.000
          RINORM=0.5271E+05 RIMNOR= 0.000
          RENORM=0.1199E-27 REMNOR= 0.000       RATIO =0.4770E-16 TOLER =0.1000E-03       CONVERGED !
          RFMAX = 35.70       RMMAX = 0.000
          RTSMAL=0.1000E-03 RMSMAL= 0.000
          RDT    =0.5271E+05 RDR    = 0.000
          RATIOI=0.4770E-16 RATIOOR= 0.000
          MAX UN=0.3553E-14 IEQ=    97 NODE       49 DOF    1  Y-DISPL.F
          MIN UN=-.3553E-14 IEQ=    85 NODE       43 DOF    1  Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS       0

```

```

ITER    1  RNORM = 0.000    RMNORM= 0.000
          RINORM=0.5271E+05 RIMNOR= 0.000
          RENORM=0.1511E-28 REMNOR=0.4932E-53 RATIO =0.1693E-16 TOLER =0.1000E-03       CONVERGED !
          RFMAX = 35.70       RMMAX = 0.000
          RTSMAL=0.1000E-03 RMSMAL= 0.000
          RDT    =0.5271E+05 RDR    = 0.000
          RATIOI=0.1693E-16 RATIOOR= 0.000
          MAX UN=0.8982E-15 IEQ=    65 NODE       33 DOF    1  Y-DISPL.F
          MIN UN=-.2717E-15 IEQ=    119 NODE       60 DOF    1  Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS       0

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ITER    2  RNORM = 0.000    RMNORM= 0.000
          RINORM=0.5271E+05 RIMNOR= 0.000
          RENORM=0.1329E-28 REMNOR=0.2437E-52 RATIO =0.1588E-16 TOLER =0.1000E-03       CONVERGED !
          RFMAX = 35.70       RMMAX = 0.000
          RTSMAL=0.1000E-03 RMSMAL= 0.000
          RDT    =0.5271E+05 RDR    = 0.000
          RATIOI=0.1588E-16 RATIOOR= 0.000
          MAX UN=0.7562E-15 IEQ=    65 NODE       33 DOF    1  Y-DISPL.F
          MIN UN=-.2452E-15 IEQ=    119 NODE       60 DOF    1  Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS       0

```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.Nominal_63                                          |
|          Exe Time :24 May 2018      18:17:33                                                  |
+-----+
New Project
SOLUTION REACHED USING      2 ITERATIONS ON      40

P R I N T   O U T   F O R   T I M E   S T E P   1   ( AT TIME 1.000   )

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

      Y-DISPL.F      X-ROT. F
      (02)          (04)      (

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS
```


Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63 |
|          Exe Time :24 May 2018           18:17:33 |
+-----+
New Project
  
```

STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 1.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	2.2246E-20	0.000	0.000	0.000	0.000	V-C	2.0004E+04	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.6596	1.6856E-20	2.001	1.298	2.001	1.298	V-C	2.0004E+04	-0.2000	2.000	
1.000	1.000	3.298	0.000	0.000	Ug1_2_8_L_0						
3 D	1.317	1.1465E-20	4.008	2.584	4.008	2.584	V-C	2.0004E+04	-0.4000	4.000	
1.000	1.000	6.584	0.000	0.000	Ug1_2_8_L_0						
4 D	1.969	6.0683E-21	6.026	3.847	6.026	3.847	V-C	2.0004E+04	-0.6000	6.000	
1.000	1.000	9.847	0.000	0.000	Ug1_2_8_L_0						
5 D	2.616	6.6281E-22	8.057	5.082	8.057	5.082	V-C	2.0004E+04	-0.8000	8.000	
1.000	1.000	13.08	0.000	0.000	Ug1_2_8_L_0						
6 D	3.257	-4.7571E-21	10.10	6.284	10.10	6.284	V-C	2.0004E+04	-1.0000	10.000	
1.000	1.000	16.28	0.000	0.000	Ug1_2_8_L_0						
7 D	3.891	-1.0196E-20	12.16	7.453	12.16	7.453	V-C	2.0004E+04	-1.2000	12.000	
1.000	1.000	19.45	0.000	0.000	Ug1_2_8_L_0						
8 D	4.519	-1.5660E-20	14.22	8.593	14.22	8.593	V-C	2.0004E+04	-1.4000	14.000	
1.000	1.000	22.59	0.000	0.000	Ug1_2_8_L_0						
9 D	5.141	-2.1151E-20	16.30	9.705	16.30	9.705	V-C	2.0004E+04	-1.6000	16.000	
1.000	1.000	25.70	0.000	0.000	Ug1_2_8_L_0						
10 D	5.759	-2.6671E-20	18.37	10.79	18.37	10.79	V-C	2.0004E+04	-1.8000	18.000	
1.000	1.000	28.79	0.000	0.000	Ug1_2_8_L_0						
11 D	6.373	-3.2218E-20	20.45	11.86	20.45	11.86	V-C	2.0004E+04	-2.0000	20.000	
1.000	1.000	31.86	0.000	0.000	Ug1_2_8_L_0						
12 D	6.984	-3.7788E-20	22.53	12.92	22.53	12.92	V-C	2.0004E+04	-2.2000	22.000	
1.000	1.000	34.92	0.000	0.000	Ug1_2_8_L_0						
13 D	7.592	-4.3382E-20	24.67	13.96	24.67	13.96	V-C	2.0004E+04	-2.4000	24.000	
1.000	1.000	37.96	0.000	0.000	Ug1_2_8_L_0						
14 D	8.198	-4.9031E-20	26.69	14.99	26.69	14.99	V-C	2.0004E+04	-2.6000	26.000	
1.000	1.000	40.99	0.000	0.000	Ug1_2_8_L_0						
15 D	8.802	-5.4768E-20	28.91	16.01	28.91	16.01	V-C	3.6799E+04	-2.8000	28.000	
1.000	1.000	44.01	0.000	0.000	Ug2_741_743_L_0						
16 D	9.405	-6.0621E-20	31.14	17.03	31.14	17.03	V-C	3.6799E+04	-3.0000	30.000	
1.000	1.000	47.03	0.000	0.000	Ug2_741_743_L_0						
17 D	10.01	-6.6609E-20	33.10	18.04	33.10	18.04	V-C	3.6799E+04	-3.2000	32.000	
1.000	1.000	50.04	0.000	0.000	Ug2_741_743_L_0						
18 D	10.61	-7.2737E-20	35.30	19.04	35.30	19.04	V-C	3.6799E+04	-3.4000	34.000	
1.000	1.000	53.04	0.000	0.000	Ug2_741_743_L_0						
19 D	11.21	-7.9003E-20	37.26	20.04	37.26	20.04	V-C	3.6799E+04	-3.6000	36.000	
1.000	1.000	56.04	0.000	0.000	Ug2_741_743_L_0						
20 D	11.81	-8.5386E-20	39.43	21.04	39.43	21.04	V-C	3.6799E+04	-3.8000	38.000	
1.000	1.000	59.04	0.000	0.000	Ug2_741_743_L_0						
21 D	12.41	-9.1856E-20	41.59	22.04	41.59	22.04	V-C	3.6799E+04	-4.0000	40.000	
1.000	1.000	62.04	0.000	0.000	Ug2_741_743_L_0						
22 D	13.01	-9.8365E-20	43.55	23.03	43.55	23.03	V-C	3.6799E+04	-4.2000	42.000	
1.000	1.000	65.03	0.000	0.000	Ug2_741_743_L_0						
23 D	13.60	-1.0485E-19	45.69	24.02	45.69	24.02	V-C	3.6799E+04	-4.4000	44.000	
1.000	1.000	68.02	0.000	0.000	Ug2_741_743_L_0						
24 D	14.20	-1.1123E-19	47.65	25.02	47.65	25.02	V-C	3.6799E+04	-4.6000	46.000	
1.000	1.000	71.02	0.000	0.000	Ug2_741_743_L_0						
25 D	14.80	-1.1742E-19	49.78	26.01	49.78	26.01	V-C	3.6799E+04	-4.8000	48.000	
1.000	1.000	74.01	0.000	0.000	Ug2_741_743_L_0						
26 D	15.40	-1.2334E-19	51.89	26.99	51.89	26.99	V-C	3.6799E+04	-5.0000	50.000	
1.000	1.000	76.99	0.000	0.000	Ug2_741_743_L_0						
27 D	16.00	-1.2891E-19	53.85	27.98	53.85	27.98	V-C	3.6799E+04	-5.2000	52.000	
1.000	1.000	79.98	0.000	0.000	Ug2_741_743_L_0						
28 D	16.59	-1.3404E-19	55.96	28.97	55.96	28.97	V-C	3.6799E+04	-5.4000	54.000	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	82.97	0.000	0.000	Ug2_741_743_L_0					
29 D	17.19	-1.3858E-19	57.92	29.96	57.92	29.96	V-C	3.6799E+04	-5.600	56.00
1.000	1.000	85.96	0.000	0.000	Ug2_741_743_L_0					
30 D	17.79	-1.4241E-19	60.02	30.94	60.02	30.94	V-C	3.6799E+04	-5.800	58.00
1.000	1.000	88.94	0.000	0.000	Ug2_741_743_L_0					
31 D	18.39	-1.4535E-19	62.11	31.93	62.11	31.93	V-C	3.6799E+04	-6.000	60.00
1.000	1.000	91.93	0.000	0.000	Ug2_741_743_L_0					
32 D	18.98	-1.4724E-19	64.07	32.92	64.07	32.92	V-C	3.6799E+04	-6.200	62.00
1.000	1.000	94.92	0.000	0.000	Ug2_741_743_L_0					
33 D	19.58	-1.4796E-19	66.16	33.90	66.16	33.90	V-C	3.6799E+04	-6.400	64.00
1.000	1.000	97.90	0.000	0.000	Ug2_741_743_L_0					
34 D	20.18	-1.4750E-19	68.12	34.89	68.12	34.89	V-C	3.6799E+04	-6.600	66.00
1.000	1.000	100.9	0.000	0.000	Ug2_741_743_L_0					
35 D	20.77	-1.4590E-19	70.20	35.87	70.20	35.87	V-C	3.6799E+04	-6.800	68.00
1.000	1.000	103.9	0.000	0.000	Ug2_741_743_L_0					
36 D	21.37	-1.4320E-19	72.27	36.86	72.27	36.86	V-C	3.6799E+04	-7.000	70.00
1.000	1.000	106.9	0.000	0.000	Ug2_741_743_L_0					
37 D	21.97	-1.3952E-19	74.24	37.84	74.24	37.84	V-C	3.6799E+04	-7.200	72.00
1.000	1.000	109.8	0.000	0.000	Ug2_741_743_L_0					
38 D	22.57	-1.3494E-19	76.31	38.83	76.31	38.83	V-C	3.6799E+04	-7.400	74.00
1.000	1.000	112.8	0.000	0.000	Ug2_741_743_L_0					
39 D	23.16	-1.2954E-19	78.27	39.81	78.27	39.81	V-C	3.6799E+04	-7.600	76.00
1.000	1.000	115.8	0.000	0.000	Ug2_741_743_L_0					
40 D	23.76	-1.2338E-19	80.34	40.80	80.34	40.80	V-C	3.6799E+04	-7.800	78.00
1.000	1.000	118.8	0.000	0.000	Ug2_741_743_L_0					
41 D	24.36	-1.1651E-19	82.40	41.78	82.40	41.78	V-C	3.6799E+04	-8.000	80.00
1.000	1.000	121.8	0.000	0.000	Ug2_741_743_L_0					
42 D	24.95	-1.0904E-19	84.37	42.77	84.37	42.77	V-C	3.6799E+04	-8.200	82.00
1.000	1.000	124.8	0.000	0.000	Ug2_741_743_L_0					
43 D	25.55	-1.0108E-19	86.43	43.75	86.43	43.75	V-C	3.6799E+04	-8.400	84.00
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
44 D	26.15	-9.2783E-20	88.39	44.74	88.39	44.74	V-C	3.6799E+04	-8.600	86.00
1.000	1.000	130.7	0.000	0.000	Ug2_741_743_L_0					
45 D	26.74	-8.4242E-20	90.45	45.72	90.45	45.72	V-C	3.6799E+04	-8.800	88.00
1.000	1.000	133.7	0.000	0.000	Ug2_741_743_L_0					
46 D	27.34	-7.5507E-20	92.50	46.70	92.50	46.70	V-C	3.6799E+04	-9.000	90.00
1.000	1.000	136.7	0.000	0.000	Ug2_741_743_L_0					
47 D	27.94	-6.6619E-20	94.47	47.69	94.47	47.69	V-C	3.6799E+04	-9.200	92.00
1.000	1.000	139.7	0.000	0.000	Ug2_741_743_L_0					
48 D	28.53	-5.7605E-20	96.52	48.67	96.52	48.67	V-C	3.6799E+04	-9.400	94.00
1.000	1.000	142.7	0.000	0.000	Ug2_741_743_L_0					
49 D	29.13	-4.8478E-20	98.57	49.66	98.57	49.66	V-C	3.6799E+04	-9.600	96.00
1.000	1.000	145.7	0.000	0.000	Ug2_741_743_L_0					
50 D	29.73	-3.9264E-20	100.5	50.64	100.5	50.64	V-C	3.6799E+04	-9.800	98.00
1.000	1.000	148.6	0.000	0.000	Ug2_741_743_L_0					
51 D	30.33	-3.0044E-20	102.6	51.63	102.6	51.63	V-C	3.6799E+04	-10.00	100.00
1.000	1.000	151.6	0.000	0.000	Ug2_741_743_L_0					
52 D	30.92	-2.0911E-20	104.6	52.61	104.6	52.61	V-C	3.6799E+04	-10.20	102.0
1.000	1.000	154.6	0.000	0.000	Ug2_741_743_L_0					
53 D	31.52	-1.1937E-20	106.6	53.60	106.6	53.60	V-C	3.1831E+04	-10.40	104.0
1.000	1.000	157.6	0.000	0.000	Ug3_740_742_L_0					
54 D	32.12	-3.1162E-21	108.6	54.58	108.6	54.58	V-C	3.1831E+04	-10.60	106.0
1.000	1.000	160.6	0.000	0.000	Ug3_740_742_L_0					
55 D	32.71	5.5743E-21	110.6	55.57	110.6	55.57	V-C	3.1831E+04	-10.80	108.0
1.000	1.000	163.6	0.000	0.000	Ug3_740_742_L_0					
56 D	33.31	1.4160E-20	112.7	56.55	112.7	56.55	V-C	3.1831E+04	-11.00	110.0
1.000	1.000	166.6	0.000	0.000	Ug3_740_742_L_0					
57 D	33.91	2.2667E-20	114.6	57.54	114.6	57.54	V-C	3.1831E+04	-11.20	112.0
1.000	1.000	169.5	0.000	0.000	Ug3_740_742_L_0					
58 D	34.50	3.1119E-20	116.7	58.52	116.7	58.52	V-C	3.1831E+04	-11.40	114.0
1.000	1.000	172.5	0.000	0.000	Ug3_740_742_L_0					
59 D	35.10	3.9537E-20	118.7	59.51	118.7	59.51	V-C	3.1831E+04	-11.60	116.0
1.000	1.000	175.5	0.000	0.000	Ug3_740_742_L_0					
60 D	35.70	4.7938E-20	120.7	60.50	120.7	60.50	V-C	3.1831E+04	-11.80	118.0
1.000	1.000	178.5	0.000	0.000	Ug3_740_742_L_0					
61 D	18.15	5.6335E-20	122.7	61.48	122.7	61.48	V-C	3.1831E+04	-12.00	120.0
1.000	1.000	181.5	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63    |
|          Exe Time :24 May 2018      18:17:33          |
+-----+
New Project
  
```

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 1.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-2.2246E-20	0.000	0.000	0.000	0.000	V-C	1.5622E+04	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.6596	-1.6856E-20	2.000	1.298	2.000	1.298	V-C	1.5622E+04	-0.2000	2.000	
1.000	1.000	3.298	0.000	0.000	Ug1_2_8_L_0						
3 D	1.317	-1.1465E-20	4.000	2.584	4.000	2.584	V-C	1.5622E+04	-0.4000	4.000	
1.000	1.000	6.584	0.000	0.000	Ug1_2_8_L_0						
4 D	1.969	-6.0683E-21	6.000	3.847	6.000	3.847	V-C	1.5622E+04	-0.6000	6.000	
1.000	1.000	9.847	0.000	0.000	Ug1_2_8_L_0						
5 D	2.616	-6.6281E-22	8.000	5.082	8.000	5.082	V-C	1.5622E+04	-0.8000	8.000	
1.000	1.000	13.08	0.000	0.000	Ug1_2_8_L_0						
6 D	3.257	4.7571E-21	10.00	6.284	10.00	6.284	V-C	1.5622E+04	-1.0000	10.00	
1.000	1.000	16.28	0.000	0.000	Ug1_2_8_L_0						
7 D	3.891	1.0196E-20	12.00	7.453	12.00	7.453	V-C	1.5622E+04	-1.2000	12.00	
1.000	1.000	19.45	0.000	0.000	Ug1_2_8_L_0						
8 D	4.519	1.5660E-20	14.00	8.593	14.00	8.593	V-C	1.5622E+04	-1.4000	14.00	
1.000	1.000	22.59	0.000	0.000	Ug1_2_8_L_0						
9 D	5.141	2.1151E-20	16.00	9.705	16.00	9.705	V-C	1.5622E+04	-1.6000	16.00	
1.000	1.000	25.70	0.000	0.000	Ug1_2_8_L_0						
10 D	5.759	2.6671E-20	18.00	10.79	18.00	10.79	V-C	1.5622E+04	-1.8000	18.00	
1.000	1.000	28.79	0.000	0.000	Ug1_2_8_L_0						
11 D	6.373	3.2218E-20	20.00	11.86	20.00	11.86	V-C	1.5622E+04	-2.0000	20.00	
1.000	1.000	31.86	0.000	0.000	Ug1_2_8_L_0						
12 D	6.984	3.7788E-20	22.00	12.92	22.00	12.92	V-C	1.5622E+04	-2.2000	22.00	
1.000	1.000	34.92	0.000	0.000	Ug1_2_8_L_0						
13 D	7.592	4.3382E-20	24.00	13.96	24.00	13.96	V-C	1.5622E+04	-2.4000	24.00	
1.000	1.000	37.96	0.000	0.000	Ug1_2_8_L_0						
14 D	8.198	4.9031E-20	26.00	14.99	26.00	14.99	V-C	1.5622E+04	-2.6000	26.00	
1.000	1.000	40.99	0.000	0.000	Ug1_2_8_L_0						
15 D	8.802	5.4768E-20	28.00	16.01	28.00	16.01	V-C	1.9107E+04	-2.8000	28.00	
1.000	1.000	44.01	0.000	0.000	Ug2_741_743_L_0						
16 D	9.405	6.0621E-20	30.00	17.03	30.00	17.03	V-C	1.9107E+04	-3.0000	30.00	
1.000	1.000	47.03	0.000	0.000	Ug2_741_743_L_0						
17 D	10.01	6.6609E-20	32.00	18.04	32.00	18.04	V-C	1.9107E+04	-3.2000	32.00	
1.000	1.000	50.04	0.000	0.000	Ug2_741_743_L_0						
18 D	10.61	7.2737E-20	34.00	19.04	34.00	19.04	V-C	1.9107E+04	-3.4000	34.00	
1.000	1.000	53.04	0.000	0.000	Ug2_741_743_L_0						
19 D	11.21	7.9003E-20	36.00	20.04	36.00	20.04	V-C	1.9107E+04	-3.6000	36.00	
1.000	1.000	56.04	0.000	0.000	Ug2_741_743_L_0						
20 D	11.81	8.5386E-20	38.00	21.04	38.00	21.04	V-C	1.9107E+04	-3.8000	38.00	
1.000	1.000	59.04	0.000	0.000	Ug2_741_743_L_0						
21 D	12.41	9.1856E-20	40.00	22.04	40.00	22.04	V-C	1.9107E+04	-4.0000	40.00	
1.000	1.000	62.04	0.000	0.000	Ug2_741_743_L_0						
22 D	13.01	9.8365E-20	42.00	23.03	42.00	23.03	V-C	1.9107E+04	-4.2000	42.00	
1.000	1.000	65.03	0.000	0.000	Ug2_741_743_L_0						
23 D	13.60	1.0485E-19	44.00	24.02	44.00	24.02	V-C	1.9107E+04	-4.4000	44.00	
1.000	1.000	68.02	0.000	0.000	Ug2_741_743_L_0						
24 D	14.20	1.1123E-19	46.00	25.02	46.00	25.02	V-C	1.9107E+04	-4.6000	46.00	
1.000	1.000	71.02	0.000	0.000	Ug2_741_743_L_0						
25 D	14.80	1.1742E-19	48.00	26.01	48.00	26.01	V-C	1.9107E+04	-4.8000	48.00	
1.000	1.000	74.01	0.000	0.000	Ug2_741_743_L_0						
26 D	15.40	1.2334E-19	50.00	26.99	50.00	26.99	V-C	1.9107E+04	-5.0000	50.00	
1.000	1.000	76.99	0.000	0.000	Ug2_741_743_L_0						
27 D	16.00	1.2891E-19	52.00	27.98	52.00	27.98	V-C	1.9107E+04	-5.2000	52.00	
1.000	1.000	79.98	0.000	0.000	Ug2_741_743_L_0						
28 D	16.59	1.3404E-19	54.00	28.97	54.00	28.97	V-C	1.9107E+04	-5.4000	54.00	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	82.97	0.000	0.000	Ug2_741_743_L_0					
29 D	17.19	1.3858E-19	56.00	29.96	56.00	29.96	V-C	1.9107E+04	-5.600	56.00
1.000	1.000	85.96	0.000	0.000	Ug2_741_743_L_0					
30 D	17.79	1.4241E-19	58.00	30.94	58.00	30.94	V-C	1.9107E+04	-5.800	58.00
1.000	1.000	88.94	0.000	0.000	Ug2_741_743_L_0					
31 D	18.39	1.4535E-19	60.00	31.93	60.00	31.93	V-C	1.9107E+04	-6.000	60.00
1.000	1.000	91.93	0.000	0.000	Ug2_741_743_L_0					
32 D	18.98	1.4724E-19	62.00	32.92	62.00	32.92	V-C	1.9107E+04	-6.200	62.00
1.000	1.000	94.92	0.000	0.000	Ug2_741_743_L_0					
33 D	19.58	1.4796E-19	64.00	33.90	64.00	33.90	V-C	1.9107E+04	-6.400	64.00
1.000	1.000	97.90	0.000	0.000	Ug2_741_743_L_0					
34 D	20.18	1.4750E-19	66.00	34.89	66.00	34.89	V-C	1.9107E+04	-6.600	66.00
1.000	1.000	100.9	0.000	0.000	Ug2_741_743_L_0					
35 D	20.77	1.4590E-19	68.00	35.87	68.00	35.87	V-C	1.9107E+04	-6.800	68.00
1.000	1.000	103.9	0.000	0.000	Ug2_741_743_L_0					
36 D	21.37	1.4320E-19	70.00	36.86	70.00	36.86	V-C	1.9107E+04	-7.000	70.00
1.000	1.000	106.9	0.000	0.000	Ug2_741_743_L_0					
37 D	21.97	1.3952E-19	72.00	37.84	72.00	37.84	V-C	1.9107E+04	-7.200	72.00
1.000	1.000	109.8	0.000	0.000	Ug2_741_743_L_0					
38 D	22.57	1.3494E-19	74.00	38.83	74.00	38.83	V-C	1.9107E+04	-7.400	74.00
1.000	1.000	112.8	0.000	0.000	Ug2_741_743_L_0					
39 D	23.16	1.2954E-19	76.00	39.81	76.00	39.81	V-C	1.9107E+04	-7.600	76.00
1.000	1.000	115.8	0.000	0.000	Ug2_741_743_L_0					
40 D	23.76	1.2338E-19	78.00	40.80	78.00	40.80	V-C	1.9107E+04	-7.800	78.00
1.000	1.000	118.8	0.000	0.000	Ug2_741_743_L_0					
41 D	24.36	1.1651E-19	80.00	41.78	80.00	41.78	V-C	1.9107E+04	-8.000	80.00
1.000	1.000	121.8	0.000	0.000	Ug2_741_743_L_0					
42 D	24.95	1.0904E-19	82.00	42.77	82.00	42.77	V-C	1.9107E+04	-8.200	82.00
1.000	1.000	124.8	0.000	0.000	Ug2_741_743_L_0					
43 D	25.55	1.0108E-19	84.00	43.75	84.00	43.75	V-C	1.9107E+04	-8.400	84.00
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
44 D	26.15	9.2783E-20	86.00	44.74	86.00	44.74	V-C	1.9107E+04	-8.600	86.00
1.000	1.000	130.7	0.000	0.000	Ug2_741_743_L_0					
45 D	26.74	8.4242E-20	88.00	45.72	88.00	45.72	V-C	1.9107E+04	-8.800	88.00
1.000	1.000	133.7	0.000	0.000	Ug2_741_743_L_0					
46 D	27.34	7.5507E-20	90.00	46.70	90.00	46.70	V-C	1.9107E+04	-9.000	90.00
1.000	1.000	136.7	0.000	0.000	Ug2_741_743_L_0					
47 D	27.94	6.6619E-20	92.00	47.69	92.00	47.69	V-C	1.9107E+04	-9.200	92.00
1.000	1.000	139.7	0.000	0.000	Ug2_741_743_L_0					
48 D	28.53	5.7605E-20	94.00	48.67	94.00	48.67	V-C	1.9107E+04	-9.400	94.00
1.000	1.000	142.7	0.000	0.000	Ug2_741_743_L_0					
49 D	29.13	4.8478E-20	96.00	49.66	96.00	49.66	V-C	1.9107E+04	-9.600	96.00
1.000	1.000	145.7	0.000	0.000	Ug2_741_743_L_0					
50 D	29.73	3.9264E-20	98.00	50.64	98.00	50.64	V-C	1.9107E+04	-9.800	98.00
1.000	1.000	148.6	0.000	0.000	Ug2_741_743_L_0					
51 D	30.33	3.0044E-20	100.00	51.63	100.00	51.63	V-C	1.9107E+04	-10.000	100.00
1.000	1.000	151.6	0.000	0.000	Ug2_741_743_L_0					
52 D	30.92	2.0911E-20	102.0	52.61	102.0	52.61	V-C	1.9107E+04	-10.200	102.0
1.000	1.000	154.6	0.000	0.000	Ug2_741_743_L_0					
53 D	31.52	1.1937E-20	104.0	53.60	104.0	53.60	V-C	2.2089E+04	-10.400	104.0
1.000	1.000	157.6	0.000	0.000	Ug3_740_742_L_0					
54 D	32.12	3.1162E-21	106.0	54.58	106.0	54.58	V-C	2.2089E+04	-10.600	106.0
1.000	1.000	160.6	0.000	0.000	Ug3_740_742_L_0					
55 D	32.71	-5.5743E-21	108.0	55.57	108.0	55.57	V-C	2.2089E+04	-10.800	108.0
1.000	1.000	163.6	0.000	0.000	Ug3_740_742_L_0					
56 D	33.31	-1.4160E-20	110.0	56.55	110.0	56.55	V-C	2.2089E+04	-11.000	110.0
1.000	1.000	166.6	0.000	0.000	Ug3_740_742_L_0					
57 D	33.91	-2.2667E-20	112.0	57.54	112.0	57.54	V-C	2.2089E+04	-11.200	112.0
1.000	1.000	169.5	0.000	0.000	Ug3_740_742_L_0					
58 D	34.50	-3.1119E-20	114.0	58.52	114.0	58.52	V-C	2.2089E+04	-11.400	114.0
1.000	1.000	172.5	0.000	0.000	Ug3_740_742_L_0					
59 D	35.10	-3.9537E-20	116.0	59.51	116.0	59.51	V-C	2.2089E+04	-11.600	116.0
1.000	1.000	175.5	0.000	0.000	Ug3_740_742_L_0					
60 D	35.70	-4.7938E-20	118.0	60.50	118.0	60.50	V-C	2.2089E+04	-11.800	118.0
1.000	1.000	178.5	0.000	0.000	Ug3_740_742_L_0					
61 D	18.15	-5.6335E-20	120.0	61.48	120.0	61.48	V-C	2.2089E+04	-12.000	120.0
1.000	1.000	181.5	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

60-1.47318E-16 1.47318E-16-2.94651E-17-1.00974E-28

```
ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1229E-26
RENORM= 225.0 REMNOR=0.2437E-52 RATIO =0.6867E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8194E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.6867E-01 RATIO= 0.000
MAX UN= 2.957 IEQ= 11 NODE 6 DOF 1 Y-DISPL.F
MIN UN=-.4442E-16 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1229E-26
RENORM= 4.949 REMNOR=0.1214E-22 RATIO =0.1019E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8194E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.1019E-01 RATIO= 0.000
MAX UN= 1.392 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
MIN UN=-.1043E-10 IEQ= 63 NODE 32 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1229E-26
RENORM= 1.161 REMNOR=0.1102E-22 RATIO =0.4934E-02 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8194E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.4934E-02 RATIO= 0.000
MAX UN=0.9097 IEQ= 13 NODE 7 DOF 1 Y-DISPL.F
MIN UN=-.7114E-11 IEQ= 21 NODE 11 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 4 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1229E-26
RENORM=0.1164E-01 REMNOR=0.4880E-23 RATIO =0.4940E-03 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8194E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.4940E-03 RATIO= 0.000
MAX UN=0.1077 IEQ= 35 NODE 18 DOF 1 Y-DISPL.F
MIN UN=-.1918E-10 IEQ= 9 NODE 5 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 5 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1229E-26
RENORM=0.1017E-20 REMNOR=0.6446E-23 RATIO =0.1460E-12 TOLER =0.1000E-03 CONVERGED !
RFMAX = 35.19 RMMAX =0.8194E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.1460E-12 RATIO= 0.000
MAX UN=0.2020E-10 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
MIN UN=-.1473E-10 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0
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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|          NewProject.BaseDesignSection_28.Nominal_63      |
|          Exe Time :24 May 2018      18:17:33             |
+-----+

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New Project

SOLUTION REACHED USING 5 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 2 (AT TIME 2.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	3.3063277E-04	-8.1976656E-05	
2	3.1423744E-04	-8.1976656E-05	
3	2.9784398E-04	-8.1948671E-05	
4	2.8146544E-04	-8.1808746E-05	
5	2.6513727E-04	-8.1416954E-05	
6	2.4892850E-04	-8.0577402E-05	
7	2.3294465E-04	-7.9162647E-05	
8	2.1730234E-04	-7.7164498E-05	
9	2.0211565E-04	-7.4614489E-05	
10	1.8748904E-04	-7.1577066E-05	
11	1.7351092E-04	-6.8148177E-05	
12	1.6024926E-04	-6.4426923E-05	
13	1.4775470E-04	-6.0487428E-05	
14	1.3606552E-04	-5.6379365E-05	
15	1.2521240E-04	-5.2129610E-05	
16	1.1522107E-04	-4.7768996E-05	
17	1.0610871E-04	-4.3349066E-05	
18	9.7881062E-05	-3.8934180E-05	
19	9.0529535E-05	-3.4601817E-05	
20	8.4029484E-05	-3.0432225E-05	
21	7.8341399E-05	-2.6491738E-05	
22	7.3414417E-05	-2.2827253E-05	
23	6.9190061E-05	-1.9469323E-05	
24	6.5605126E-05	-1.6434828E-05	
25	6.2594183E-05	-1.3729541E-05	
26	6.0091566E-05	-1.1350407E-05	
27	5.8032973E-05	-9.2871148E-06	
28	5.6356762E-05	-7.5233530E-06	
29	5.5005033E-05	-6.0385747E-06	
30	5.3924282E-05	-4.8095420E-06	
31	5.3065806E-05	-3.8116744E-06	
32	5.2385859E-05	-3.0201594E-06	
33	5.1845630E-05	-2.4103714E-06	
34	5.1411211E-05	-1.9580792E-06	
35	5.1053455E-05	-1.6399320E-06	
36	5.0747763E-05	-1.4339054E-06	
37	5.0473779E-05	-1.3196111E-06	
38	5.0215042E-05	-1.2784955E-06	
39	4.9958609E-05	-1.2939527E-06	
40	4.9694664E-05	-1.3513609E-06	
41	4.9416112E-05	-1.4380657E-06	
42	4.9118201E-05	-1.5433224E-06	
43	4.8798141E-05	-1.6582085E-06	
44	4.8454756E-05	-1.7755193E-06	
45	4.8088147E-05	-1.8896520E-06	
46	4.7699383E-05	-1.9964917E-06	
47	4.7290220E-05	-2.0932933E-06	
48	4.6862833E-05	-2.1785774E-06	
49	4.6419577E-05	-2.2520327E-06	
50	4.5962760E-05	-2.3144298E-06	
51	4.5494426E-05	-2.3675481E-06	
52	4.5016165E-05	-2.4141120E-06	
53	4.4528990E-05	-2.4577309E-06	
54	4.4033255E-05	-2.4989863E-06	
55	4.3529718E-05	-2.5354124E-06	
56	4.3019520E-05	-2.5653891E-06	
57	4.2504046E-05	-2.5881046E-06	
58	4.1984764E-05	-2.6035252E-06	
59	4.1463074E-05	-2.6123733E-06	
60	4.0940156E-05	-2.6161112E-06	
61	4.0416798E-05	-2.6169312E-06	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63    |
|          Exe Time :24 May 2018      18:17:33          |
+-----+
New Project
  
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STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 2.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-3.3063E-04	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3826	-3.1424E-04	2.088	0.000	2.088	1.341	ACTIVE	0.000	-0.2000	1.913	
1.000	1.000	1.913	0.000	0.000	Ug1_2_8_L_0						
3 D	0.7652	-2.9784E-04	4.182	0.000	4.182	2.671	ACTIVE	0.000	-0.4000	3.826	
1.000	1.000	3.826	0.000	0.000	Ug1_2_8_L_0						
4 D	1.148	-2.8147E-04	6.287	0.000	6.287	3.978	ACTIVE	0.000	-0.6000	5.739	
1.000	1.000	5.739	0.000	0.000	Ug1_2_8_L_0						
5 D	1.530	-2.6514E-04	8.405	0.000	8.405	5.256	ACTIVE	0.000	-0.8000	7.652	
1.000	1.000	7.652	0.000	0.000	Ug1_2_8_L_0						
6 D	1.913	-2.4893E-04	10.54	0.000	10.54	6.501	ACTIVE	0.000	-1.000	9.565	
1.000	1.000	9.565	0.000	0.000	Ug1_2_8_L_0						
7 D	2.296	-2.3294E-04	12.68	0.000	12.68	7.714	ACTIVE	0.000	-1.200	11.48	
1.000	1.000	11.48	0.000	0.000	Ug1_2_8_L_0						
8 D	2.678	-2.1730E-04	14.83	0.000	14.83	8.897	ACTIVE	0.000	-1.400	13.39	
1.000	1.000	13.39	0.000	0.000	Ug1_2_8_L_0						
9 D	3.061	-2.0212E-04	16.99	0.000	16.99	10.05	ACTIVE	0.000	-1.600	15.30	
1.000	1.000	15.30	0.000	0.000	Ug1_2_8_L_0						
10 D	3.443	-1.8749E-04	19.16	0.000	19.16	11.19	ACTIVE	0.000	-1.800	17.22	
1.000	1.000	17.22	0.000	0.000	Ug1_2_8_L_0						
11 D	4.203	-1.7351E-04	21.32	1.886	21.32	12.30	UL-RL	6.0013E+04	-2.000	19.13	
1.000	1.000	21.02	0.000	0.000	Ug1_2_8_L_0						
12 D	4.965	-1.6025E-04	23.49	3.780	23.49	13.40	UL-RL	6.0013E+04	-2.200	21.04	
1.000	1.000	24.82	0.000	0.000	Ug1_2_8_L_0						
13 D	5.714	-1.4775E-04	25.72	5.614	25.72	14.48	UL-RL	6.0013E+04	-2.400	22.96	
1.000	1.000	28.57	0.000	0.000	Ug1_2_8_L_0						
14 D	6.452	-1.3607E-04	27.82	7.390	27.82	15.56	UL-RL	6.0013E+04	-2.600	24.87	
1.000	1.000	32.26	0.000	0.000	Ug1_2_8_L_0						
15 D	6.923	-1.2521E-04	30.13	7.833	30.13	16.62	ACTIVE	0.000	-2.800	26.78	
1.000	1.000	34.62	0.000	0.000	Ug2_741_743_L_0						
16 D	7.426	-1.1522E-04	32.44	8.435	32.44	17.68	ACTIVE	0.000	-3.000	28.70	
1.000	1.000	37.13	0.000	0.000	Ug2_741_743_L_0						
17 D	7.915	-1.0611E-04	34.49	8.968	34.49	18.73	ACTIVE	0.000	-3.200	30.61	
1.000	1.000	39.58	0.000	0.000	Ug2_741_743_L_0						
18 D	8.417	-9.7881E-05	36.78	9.562	36.78	19.78	ACTIVE	0.000	-3.400	32.52	
1.000	1.000	42.08	0.000	0.000	Ug2_741_743_L_0						
19 D	9.053	-9.0530E-05	38.82	10.83	38.82	20.83	UL-RL	1.1040E+05	-3.600	34.43	
1.000	1.000	45.27	0.000	0.000	Ug2_741_743_L_0						
20 D	9.788	-8.4029E-05	41.09	12.59	41.09	21.87	UL-RL	1.1040E+05	-3.800	36.35	
1.000	1.000	48.94	0.000	0.000	Ug2_741_743_L_0						
21 D	10.50	-7.8341E-05	43.33	14.26	43.33	22.91	UL-RL	1.1040E+05	-4.000	38.26	
1.000	1.000	52.52	0.000	0.000	Ug2_741_743_L_0						
22 D	11.20	-7.3414E-05	45.37	15.84	45.37	23.95	UL-RL	1.1040E+05	-4.200	40.17	
1.000	1.000	56.01	0.000	0.000	Ug2_741_743_L_0						
23 D	11.89	-6.9190E-05	47.60	17.34	47.60	24.98	UL-RL	1.1040E+05	-4.400	42.09	
1.000	1.000	59.43	0.000	0.000	Ug2_741_743_L_0						
24 D	12.55	-6.5605E-05	49.65	18.77	49.65	26.02	UL-RL	1.1040E+05	-4.600	44.00	
1.000	1.000	62.77	0.000	0.000	Ug2_741_743_L_0						
25 D	13.21	-6.2594E-05	51.86	20.14	51.86	27.05	UL-RL	1.1040E+05	-4.800	45.91	
1.000	1.000	66.05	0.000	0.000	Ug2_741_743_L_0						
26 D	13.85	-6.0092E-05	54.07	21.45	54.07	28.08	UL-RL	1.1040E+05	-5.000	47.83	
1.000	1.000	69.27	0.000	0.000	Ug2_741_743_L_0						
27 D	14.49	-5.8033E-05	56.11	22.71	56.11	29.11	UL-RL	1.1040E+05	-5.200	49.74	
1.000	1.000	72.45	0.000	0.000	Ug2_741_743_L_0						
28 D	15.11	-5.6357E-05	58.31	23.92	58.31	30.14	UL-RL	1.1040E+05	-5.400	51.65	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	75.57	0.000	0.000	Ug2_741_743_L_0					
29 D	15.73	-5.5005E-05	60.35	25.10	60.35	31.17	UL-RL	1.1040E+05	-5.600	53.57
1.000	1.000	78.67	0.000	0.000	Ug2_741_743_L_0					
30 D	16.35	-5.3924E-05	62.54	26.25	62.54	32.20	UL-RL	1.1040E+05	-5.800	55.48
1.000	1.000	81.73	0.000	0.000	Ug2_741_743_L_0					
31 D	16.95	-5.3066E-05	64.72	27.38	64.72	33.23	UL-RL	1.1040E+05	-6.000	57.39
1.000	1.000	84.77	0.000	0.000	Ug2_741_743_L_0					
32 D	17.56	-5.2386E-05	66.77	28.48	66.77	34.26	UL-RL	1.1040E+05	-6.200	59.30
1.000	1.000	87.78	0.000	0.000	Ug2_741_743_L_0					
33 D	18.16	-5.1846E-05	68.94	29.57	68.94	35.29	UL-RL	1.1040E+05	-6.400	61.22
1.000	1.000	90.79	0.000	0.000	Ug2_741_743_L_0					
34 D	18.76	-5.1411E-05	70.99	30.65	70.99	36.32	UL-RL	1.1040E+05	-6.600	63.13
1.000	1.000	93.78	0.000	0.000	Ug2_741_743_L_0					
35 D	19.35	-5.1053E-05	73.15	31.71	73.15	37.35	UL-RL	1.1040E+05	-6.800	65.04
1.000	1.000	96.76	0.000	0.000	Ug2_741_743_L_0					
36 D	19.95	-5.0748E-05	75.32	32.78	75.32	38.38	UL-RL	1.1040E+05	-7.000	66.96
1.000	1.000	99.73	0.000	0.000	Ug2_741_743_L_0					
37 D	20.54	-5.0474E-05	77.37	33.84	77.37	39.41	UL-RL	1.1040E+05	-7.200	68.87
1.000	1.000	102.7	0.000	0.000	Ug2_741_743_L_0					
38 D	21.13	-5.0215E-05	79.52	34.89	79.52	40.44	UL-RL	1.1040E+05	-7.400	70.78
1.000	1.000	105.7	0.000	0.000	Ug2_741_743_L_0					
39 D	21.73	-4.9959E-05	81.57	35.95	81.57	41.46	UL-RL	1.1040E+05	-7.600	72.70
1.000	1.000	108.6	0.000	0.000	Ug2_741_743_L_0					
40 D	22.32	-4.9695E-05	83.73	37.01	83.73	42.49	UL-RL	1.1040E+05	-7.800	74.61
1.000	1.000	111.6	0.000	0.000	Ug2_741_743_L_0					
41 D	22.92	-4.9416E-05	85.88	38.06	85.88	43.52	UL-RL	1.1040E+05	-8.000	76.52
1.000	1.000	114.6	0.000	0.000	Ug2_741_743_L_0					
42 D	23.51	-4.9118E-05	87.93	39.13	87.93	44.55	UL-RL	1.1040E+05	-8.200	78.43
1.000	1.000	117.6	0.000	0.000	Ug2_741_743_L_0					
43 D	24.11	-4.8798E-05	90.08	40.19	90.08	45.58	UL-RL	1.1040E+05	-8.400	80.35
1.000	1.000	120.5	0.000	0.000	Ug2_741_743_L_0					
44 D	24.70	-4.8455E-05	92.13	41.26	92.13	46.60	UL-RL	1.1040E+05	-8.600	82.26
1.000	1.000	123.5	0.000	0.000	Ug2_741_743_L_0					
45 D	25.30	-4.8088E-05	94.27	42.32	94.27	47.63	UL-RL	1.1040E+05	-8.800	84.17
1.000	1.000	126.5	0.000	0.000	Ug2_741_743_L_0					
46 D	25.90	-4.7699E-05	96.42	43.40	96.42	48.66	UL-RL	1.1040E+05	-9.000	86.09
1.000	1.000	129.5	0.000	0.000	Ug2_741_743_L_0					
47 D	26.49	-4.7290E-05	98.47	44.47	98.47	49.69	UL-RL	1.1040E+05	-9.200	88.00
1.000	1.000	132.5	0.000	0.000	Ug2_741_743_L_0					
48 D	27.09	-4.6863E-05	100.6	45.54	100.6	50.72	UL-RL	1.1040E+05	-9.400	89.91
1.000	1.000	135.5	0.000	0.000	Ug2_741_743_L_0					
49 D	27.69	-4.6420E-05	102.7	46.62	102.7	51.75	UL-RL	1.1040E+05	-9.600	91.83
1.000	1.000	138.4	0.000	0.000	Ug2_741_743_L_0					
50 D	28.29	-4.5963E-05	104.8	47.70	104.8	52.77	UL-RL	1.1040E+05	-9.800	93.74
1.000	1.000	141.4	0.000	0.000	Ug2_741_743_L_0					
51 D	28.89	-4.5494E-05	106.9	48.78	106.9	53.80	UL-RL	1.1040E+05	-10.000	95.65
1.000	1.000	144.4	0.000	0.000	Ug2_741_743_L_0					
52 D	29.49	-4.5016E-05	109.0	49.86	109.0	54.83	UL-RL	1.1040E+05	-10.200	97.57
1.000	1.000	147.4	0.000	0.000	Ug2_741_743_L_0					
53 D	30.22	-4.4529E-05	111.1	51.61	111.1	55.86	UL-RL	9.5494E+04	-10.400	99.48
1.000	1.000	151.1	0.000	0.000	Ug3_740_742_L_0					
54 D	30.81	-4.4033E-05	113.3	52.68	113.3	56.89	UL-RL	9.5494E+04	-10.600	101.4
1.000	1.000	154.1	0.000	0.000	Ug3_740_742_L_0					
55 D	31.41	-4.3530E-05	115.3	53.76	115.3	57.92	UL-RL	9.5494E+04	-10.800	103.3
1.000	1.000	157.1	0.000	0.000	Ug3_740_742_L_0					
56 D	32.01	-4.3020E-05	117.4	54.84	117.4	58.95	UL-RL	9.5494E+04	-11.000	105.2
1.000	1.000	160.1	0.000	0.000	Ug3_740_742_L_0					
57 D	32.61	-4.2504E-05	119.5	55.92	119.5	59.97	UL-RL	9.5494E+04	-11.200	107.1
1.000	1.000	163.0	0.000	0.000	Ug3_740_742_L_0					
58 D	33.21	-4.1985E-05	121.6	56.99	121.6	61.00	UL-RL	9.5494E+04	-11.400	109.0
1.000	1.000	166.0	0.000	0.000	Ug3_740_742_L_0					
59 D	33.81	-4.1463E-05	123.8	58.07	123.8	62.03	UL-RL	9.5494E+04	-11.600	111.0
1.000	1.000	169.0	0.000	0.000	Ug3_740_742_L_0					
60 D	34.40	-4.0940E-05	125.8	59.15	125.8	63.06	UL-RL	9.5494E+04	-11.800	112.9
1.000	1.000	172.0	0.000	0.000	Ug3_740_742_L_0					
61 D	17.50	-4.0417E-05	127.9	60.23	127.9	64.09	UL-RL	9.5494E+04	-12.000	114.8
1.000	1.000	175.0	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*          |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63          |
|          Exe Time :24 May 2018          18:17:33          |
+-----+
New Project

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STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 2.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6 D	1.701	2.4893E-04	0.000	8.506	10.00	8.506	V-C	1.5622E+04	-1.000	0.000	
1.000	1.000	8.506	0.000	0.000	Ug1_2_8_L_0						
7 D	2.396	2.3294E-04	1.913	9.891	12.00	9.891	V-C	1.5622E+04	-1.200	2.087	
1.000	1.000	11.98	0.000	0.000	Ug1_2_8_L_0						
8 D	3.010	2.1730E-04	3.826	10.87	14.00	10.87	V-C	1.5622E+04	-1.400	4.174	
1.000	1.000	15.05	0.000	0.000	Ug1_2_8_L_0						
9 D	3.611	2.0212E-04	5.739	11.79	16.00	11.79	V-C	1.5622E+04	-1.600	6.261	
1.000	1.000	18.05	0.000	0.000	Ug1_2_8_L_0						
10 D	4.205	1.8749E-04	7.652	12.68	18.00	12.68	V-C	1.5622E+04	-1.800	8.348	
1.000	1.000	21.03	0.000	0.000	Ug1_2_8_L_0						
11 D	4.796	1.7351E-04	9.565	13.55	20.00	13.55	V-C	1.5622E+04	-2.000	10.43	
1.000	1.000	23.98	0.000	0.000	Ug1_2_8_L_0						
12 D	5.385	1.6025E-04	11.48	14.40	22.00	14.40	V-C	1.5622E+04	-2.200	12.52	
1.000	1.000	26.93	0.000	0.000	Ug1_2_8_L_0						
13 D	5.973	1.4775E-04	13.39	15.26	24.00	15.26	V-C	1.5622E+04	-2.400	14.61	
1.000	1.000	29.86	0.000	0.000	Ug1_2_8_L_0						
14 D	6.561	1.3607E-04	15.30	16.11	26.00	16.11	V-C	1.5622E+04	-2.600	16.70	
1.000	1.000	32.80	0.000	0.000	Ug1_2_8_L_0						
15 D	7.236	1.2521E-04	17.22	17.40	28.00	17.40	V-C	1.9107E+04	-2.800	18.78	
1.000	1.000	36.18	0.000	0.000	Ug2_741_743_L_0						
16 D	7.818	1.1522E-04	19.13	18.22	30.00	18.22	V-C	1.9107E+04	-3.000	20.87	
1.000	1.000	39.09	0.000	0.000	Ug2_741_743_L_0						
17 D	8.402	1.0611E-04	21.04	19.06	32.00	19.06	V-C	1.9107E+04	-3.200	22.96	
1.000	1.000	42.01	0.000	0.000	Ug2_741_743_L_0						
18 D	8.989	9.7881E-05	22.96	19.90	34.00	19.90	V-C	1.9107E+04	-3.400	25.04	
1.000	1.000	44.95	0.000	0.000	Ug2_741_743_L_0						
19 D	9.578	9.0530E-05	24.87	20.76	36.00	20.76	V-C	1.9107E+04	-3.600	27.13	
1.000	1.000	47.89	0.000	0.000	Ug2_741_743_L_0						
20 D	10.17	8.4029E-05	26.78	21.63	38.00	21.63	V-C	1.9107E+04	-3.800	29.22	
1.000	1.000	50.85	0.000	0.000	Ug2_741_743_L_0						
21 D	10.76	7.8341E-05	28.70	22.51	40.00	22.51	V-C	1.9107E+04	-4.000	31.30	
1.000	1.000	53.82	0.000	0.000	Ug2_741_743_L_0						
22 D	11.36	7.3414E-05	30.61	23.41	42.00	23.41	V-C	1.9107E+04	-4.200	33.39	
1.000	1.000	56.80	0.000	0.000	Ug2_741_743_L_0						
23 D	11.96	6.9190E-05	32.52	24.32	44.00	24.32	V-C	1.9107E+04	-4.400	35.48	
1.000	1.000	59.80	0.000	0.000	Ug2_741_743_L_0						
24 D	12.56	6.5605E-05	34.43	25.24	46.00	25.24	V-C	1.9107E+04	-4.600	37.57	
1.000	1.000	62.80	0.000	0.000	Ug2_741_743_L_0						
25 D	13.16	6.2594E-05	36.35	26.16	48.00	26.16	V-C	1.9107E+04	-4.800	39.65	
1.000	1.000	65.82	0.000	0.000	Ug2_741_743_L_0						
26 D	13.76	6.0092E-05	38.26	27.07	50.00	27.12	UL-RL	5.7322E+04	-5.000	41.74	
1.000	1.000	68.80	0.000	0.000	Ug2_741_743_L_0						
27 D	14.36	5.8033E-05	40.17	27.98	52.00	28.08	UL-RL	5.7322E+04	-5.200	43.83	
1.000	1.000	71.80	0.000	0.000	Ug2_741_743_L_0						
28 D	14.96	5.6357E-05	42.09	28.90	54.00	29.04	UL-RL	5.7322E+04	-5.400	45.91	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	74.81	0.000	0.000	Ug2_741_743_L_0					
29 D	15.57	5.5005E-05	44.00	29.84	56.00	30.00	UL-RL	5.7322E+04	-5.600	48.00
1.000	1.000	77.84	0.000	0.000	Ug2_741_743_L_0					
30 D	16.18	5.3924E-05	45.91	30.79	58.00	30.97	UL-RL	5.7322E+04	-5.800	50.09
1.000	1.000	80.88	0.000	0.000	Ug2_741_743_L_0					
31 D	16.78	5.3066E-05	47.83	31.75	60.00	31.93	UL-RL	5.7322E+04	-6.000	52.17
1.000	1.000	83.92	0.000	0.000	Ug2_741_743_L_0					
32 D	17.39	5.2386E-05	49.74	32.68	62.00	32.92	UL-RL	5.7322E+04	-6.200	54.26
1.000	1.000	86.95	0.000	0.000	Ug2_741_743_L_0					
33 D	17.99	5.1846E-05	51.65	33.62	64.00	33.90	UL-RL	5.7322E+04	-6.400	56.35
1.000	1.000	89.97	0.000	0.000	Ug2_741_743_L_0					
34 D	18.60	5.1411E-05	53.57	34.56	66.00	34.89	UL-RL	5.7322E+04	-6.600	58.43
1.000	1.000	93.00	0.000	0.000	Ug2_741_743_L_0					
35 D	19.21	5.1053E-05	55.48	35.51	68.00	35.87	UL-RL	5.7322E+04	-6.800	60.52
1.000	1.000	96.03	0.000	0.000	Ug2_741_743_L_0					
36 D	19.81	5.0748E-05	57.39	36.46	70.00	36.86	UL-RL	5.7322E+04	-7.000	62.61
1.000	1.000	99.07	0.000	0.000	Ug2_741_743_L_0					
37 D	20.42	5.0474E-05	59.30	37.41	72.00	37.84	UL-RL	5.7322E+04	-7.200	64.70
1.000	1.000	102.1	0.000	0.000	Ug2_741_743_L_0					
38 D	21.03	5.0215E-05	61.22	38.36	74.00	38.83	UL-RL	5.7322E+04	-7.400	66.78
1.000	1.000	105.1	0.000	0.000	Ug2_741_743_L_0					
39 D	21.64	4.9959E-05	63.13	39.31	76.00	39.81	UL-RL	5.7322E+04	-7.600	68.87
1.000	1.000	108.2	0.000	0.000	Ug2_741_743_L_0					
40 D	22.24	4.9695E-05	65.04	40.26	78.00	40.80	UL-RL	5.7322E+04	-7.800	70.96
1.000	1.000	111.2	0.000	0.000	Ug2_741_743_L_0					
41 D	22.85	4.9416E-05	66.96	41.21	80.00	41.78	UL-RL	5.7322E+04	-8.000	73.04
1.000	1.000	114.3	0.000	0.000	Ug2_741_743_L_0					
42 D	23.46	4.9118E-05	68.87	42.16	82.00	42.77	UL-RL	5.7322E+04	-8.200	75.13
1.000	1.000	117.3	0.000	0.000	Ug2_741_743_L_0					
43 D	24.06	4.8798E-05	70.78	43.10	84.00	43.75	UL-RL	5.7322E+04	-8.400	77.22
1.000	1.000	120.3	0.000	0.000	Ug2_741_743_L_0					
44 D	24.67	4.8455E-05	72.70	44.05	86.00	44.74	UL-RL	5.7322E+04	-8.600	79.30
1.000	1.000	123.4	0.000	0.000	Ug2_741_743_L_0					
45 D	25.28	4.8088E-05	74.61	44.99	88.00	45.72	UL-RL	5.7322E+04	-8.800	81.39
1.000	1.000	126.4	0.000	0.000	Ug2_741_743_L_0					
46 D	25.88	4.7699E-05	76.52	45.93	90.00	46.70	UL-RL	5.7322E+04	-9.000	83.48
1.000	1.000	129.4	0.000	0.000	Ug2_741_743_L_0					
47 D	26.49	4.7290E-05	78.43	46.87	92.00	47.69	UL-RL	5.7322E+04	-9.200	85.57
1.000	1.000	132.4	0.000	0.000	Ug2_741_743_L_0					
48 D	27.09	4.6863E-05	80.35	47.81	94.00	48.67	UL-RL	5.7322E+04	-9.400	87.65
1.000	1.000	135.5	0.000	0.000	Ug2_741_743_L_0					
49 D	27.70	4.6420E-05	82.26	48.75	96.00	49.66	UL-RL	5.7322E+04	-9.600	89.74
1.000	1.000	138.5	0.000	0.000	Ug2_741_743_L_0					
50 D	28.30	4.5963E-05	84.17	49.69	98.00	50.64	UL-RL	5.7322E+04	-9.800	91.83
1.000	1.000	141.5	0.000	0.000	Ug2_741_743_L_0					
51 D	28.91	4.5494E-05	86.09	50.63	100.00	51.63	UL-RL	5.7322E+04	-10.000	93.91
1.000	1.000	144.5	0.000	0.000	Ug2_741_743_L_0					
52 D	29.51	4.5016E-05	88.00	51.56	102.0	52.61	UL-RL	5.7322E+04	-10.200	96.00
1.000	1.000	147.6	0.000	0.000	Ug2_741_743_L_0					
53 D	30.20	4.4529E-05	89.91	52.90	104.0	53.60	UL-RL	6.6268E+04	-10.400	98.09
1.000	1.000	151.0	0.000	0.000	Ug3_740_742_L_0					
54 D	30.80	4.4033E-05	91.83	53.83	106.0	54.58	UL-RL	6.6268E+04	-10.600	100.2
1.000	1.000	154.0	0.000	0.000	Ug3_740_742_L_0					
55 D	31.40	4.3530E-05	93.74	54.76	108.0	55.57	UL-RL	6.6268E+04	-10.800	102.3
1.000	1.000	157.0	0.000	0.000	Ug3_740_742_L_0					
56 D	32.01	4.3020E-05	95.65	55.69	110.0	56.55	UL-RL	6.6268E+04	-11.000	104.3
1.000	1.000	160.0	0.000	0.000	Ug3_740_742_L_0					
57 D	32.61	4.2504E-05	97.57	56.62	112.0	57.54	UL-RL	6.6268E+04	-11.200	106.4
1.000	1.000	163.1	0.000	0.000	Ug3_740_742_L_0					
58 D	33.21	4.1985E-05	99.48	57.55	114.0	58.52	UL-RL	6.6268E+04	-11.400	108.5
1.000	1.000	166.1	0.000	0.000	Ug3_740_742_L_0					
59 D	33.82	4.1463E-05	101.4	58.48	116.0	59.51	UL-RL	6.6268E+04	-11.600	110.6
1.000	1.000	169.1	0.000	0.000	Ug3_740_742_L_0					
60 D	34.42	4.0940E-05	103.3	59.41	118.0	60.50	UL-RL	6.6268E+04	-11.800	112.7
1.000	1.000	172.1	0.000	0.000	Ug3_740_742_L_0					
61 D	17.51	4.0417E-05	105.2	60.34	120.0	61.48	UL-RL	6.6268E+04	-12.000	114.8
1.000	1.000	175.1	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

60 1.12102E-02-1.12102E-02 2.24215E-03-1.78087E-14

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ITER      0  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4190E+05 RIMNOR= 1008.
            RENORM= 264.1    REMNOR=0.6446E-23  RATIO =0.7940E-01  TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 33.84    RMMAX = 6.064
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
            RDT  =0.4190E+05  RDR   = 1008.
            RATIO=0.7940E-01 RATIO= 0.000
            MAX UN= 4.120    IEQ=   19 NODE    10 DOF   1  Y-DISPL.F
            MIN UN=-.3794E-01 IEQ=    9 NODE    5 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      2  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4190E+05 RIMNOR= 1008.
            RENORM= 48.08    REMNOR=0.7731E-22  RATIO =0.3387E-01  TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 33.84    RMMAX = 6.064
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
            RDT  =0.4190E+05  RDR   = 1008.
            RATIO=0.3387E-01 RATIO= 0.000
            MAX UN= 2.428    IEQ=   29 NODE    15 DOF   1  Y-DISPL.F
            MIN UN=-.2971E-10 IEQ=   71 NODE    36 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      3  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4190E+05 RIMNOR= 1008.
            RENORM= 49.83    REMNOR=0.1222E-20  RATIO =0.3449E-01  TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 33.84    RMMAX = 6.064
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
            RDT  =0.4190E+05  RDR   = 1008.
            RATIO=0.3449E-01 RATIO= 0.000
            MAX UN= 5.346    IEQ=   27 NODE    14 DOF   1  Y-DISPL.F
            MIN UN=-.1423E-09 IEQ=   29 NODE    15 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      4  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4190E+05 RIMNOR= 1008.
            RENORM=0.8636    REMNOR=0.2065E-20  RATIO =0.4540E-02  TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 33.84    RMMAX = 6.064
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
            RDT  =0.4190E+05  RDR   = 1008.
            RATIO=0.4540E-02 RATIO= 0.000
            MAX UN=0.8483    IEQ=   61 NODE    31 DOF   1  Y-DISPL.F
            MIN UN=-.2479E-09 IEQ=   17 NODE    9 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      5  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4190E+05 RIMNOR= 1008.
            RENORM=0.1244E-18 REMNOR=0.1873E-21  RATIO =0.1723E-11  TOLER =0.1000E-03  CONVERGED !
            RFMAX = 33.84    RMMAX = 6.064
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
            RDT  =0.4190E+05  RDR   = 1008.
            RATIO=0.1723E-11 RATIO= 0.000
            MAX UN=0.1488E-09 IEQ=   13 NODE    7 DOF   1  Y-DISPL.F
            MIN UN=-.1648E-09 IEQ=   15 NODE    8 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0
    
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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63   |
|          Exe Time :24 May 2018   18:17:33             |
+-----+

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New Project

SOLUTION REACHED USING 5 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 3 (AT TIME 3.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	2.9199254E-03	-5.6701322E-04	
2	2.8065228E-03	-5.6701322E-04	
3	2.6931219E-03	-5.6698662E-04	
4	2.5797352E-03	-5.6685363E-04	
5	2.4663964E-03	-5.6648127E-04	
6	2.3531711E-03	-5.6568335E-04	
7	2.2401674E-03	-5.6422049E-04	
8	2.1275467E-03	-5.6180013E-04	
9	2.0155343E-03	-5.5807649E-04	
10	1.9044296E-03	-5.5265062E-04	
11	1.7946176E-03	-5.4507036E-04	
12	1.6865530E-03	-5.3521708E-04	
13	1.5806652E-03	-5.2334754E-04	
14	1.4773303E-03	-5.0973406E-04	
15	1.3768701E-03	-4.9464330E-04	
16	1.2795573E-03	-4.7828693E-04	
17	1.1856288E-03	-4.6082171E-04	
18	1.0952923E-03	-4.4239439E-04	
19	1.0087260E-03	-4.2314221E-04	
20	9.2608180E-04	-4.0319439E-04	
21	8.4748685E-04	-3.8267342E-04	
22	7.7304331E-04	-3.6169525E-04	
23	7.0283175E-04	-3.4037211E-04	
24	6.3691015E-04	-3.1881363E-04	
25	5.7531475E-04	-2.9712835E-04	
26	5.1805999E-04	-2.7542536E-04	
27	4.6513867E-04	-2.5381523E-04	
28	4.1652040E-04	-2.3241173E-04	
29	3.7215226E-04	-2.1133406E-04	
30	3.3195668E-04	-1.9070782E-04	
31	2.9583013E-04	-1.7066665E-04	
32	2.6364166E-04	-1.5135316E-04	
33	2.3523031E-04	-1.3292050E-04	
34	2.1040393E-04	-1.1553090E-04	
35	1.8893906E-04	-9.9324650E-05	
36	1.7058886E-04	-8.4396462E-05	
37	1.5509156E-04	-7.0803039E-05	
38	1.4217728E-04	-5.8566326E-05	
39	1.3157531E-04	-4.7675402E-05	
40	1.2302001E-04	-3.8091115E-05	
41	1.1625582E-04	-2.9752546E-05	
42	1.1104108E-04	-2.2582616E-05	
43	1.0715075E-04	-1.6492953E-05	
44	1.0437825E-04	-1.1388067E-05	
45	1.0253649E-04	-7.1689022E-06	
46	1.0145830E-04	-3.7357164E-06	
47	1.0099633E-04	-9.9064163E-07	
48	1.0102244E-04	1.1604246E-06	
49	1.0142681E-04	2.8062202E-06	
50	1.0211672E-04	4.0288807E-06	
51	1.0301513E-04	4.9030235E-06	
52	1.0405914E-04	5.4950283E-06	
53	1.0519814E-04	5.8625052E-06	
54	1.0639283E-04	6.0611649E-06	
55	1.0761491E-04	6.1444905E-06	
56	1.0884589E-04	6.1567326E-06	
57	1.1007520E-04	6.1328545E-06	
58	1.1129834E-04	6.0985389E-06	
59	1.1251501E-04	6.0702131E-06	
60	1.1372730E-04	6.0550781E-06	
61	1.1493785E-04	6.0511325E-06	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63    |
|          Exe Time :24 May 2018      18:17:33           |
+-----+
New Project

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STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 3.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-2.9199E-03	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3636	-2.8065E-03	2.183	0.000	2.183	1.341	ACTIVE	0.000	-0.2000	1.818	
1.000	1.000	1.818	0.000	0.000	Ug1_2_8_L_0						
3 D	0.7273	-2.6931E-03	4.372	0.000	4.372	2.671	ACTIVE	0.000	-0.4000	3.636	
1.000	1.000	3.636	0.000	0.000	Ug1_2_8_L_0						
4 D	1.091	-2.5797E-03	6.571	0.000	6.571	3.978	ACTIVE	0.000	-0.6000	5.455	
1.000	1.000	5.455	0.000	0.000	Ug1_2_8_L_0						
5 D	1.455	-2.4664E-03	8.784	0.000	8.784	5.256	ACTIVE	0.000	-0.8000	7.273	
1.000	1.000	7.273	0.000	0.000	Ug1_2_8_L_0						
6 D	1.818	-2.3532E-03	11.01	0.000	11.01	6.501	ACTIVE	0.000	-1.000	9.091	
1.000	1.000	9.091	0.000	0.000	Ug1_2_8_L_0						
7 D	2.182	-2.2402E-03	13.25	0.000	13.25	7.714	ACTIVE	0.000	-1.200	10.91	
1.000	1.000	10.91	0.000	0.000	Ug1_2_8_L_0						
8 D	2.545	-2.1275E-03	15.50	0.000	15.50	8.897	ACTIVE	0.000	-1.400	12.73	
1.000	1.000	12.73	0.000	0.000	Ug1_2_8_L_0						
9 D	2.909	-2.0155E-03	17.75	0.000	17.75	10.05	ACTIVE	0.000	-1.600	14.55	
1.000	1.000	14.55	0.000	0.000	Ug1_2_8_L_0						
10 D	3.273	-1.9044E-03	20.01	0.000	20.01	11.19	ACTIVE	0.000	-1.800	16.36	
1.000	1.000	16.36	0.000	0.000	Ug1_2_8_L_0						
11 D	3.636	-1.7946E-03	22.27	0.000	22.27	12.30	ACTIVE	0.000	-2.000	18.18	
1.000	1.000	18.18	0.000	0.000	Ug1_2_8_L_0						
12 D	4.000	-1.6866E-03	24.53	0.000	24.53	13.40	ACTIVE	0.000	-2.200	20.00	
1.000	1.000	20.00	0.000	0.000	Ug1_2_8_L_0						
13 D	4.460	-1.5807E-03	26.86	0.4821	26.86	14.48	ACTIVE	0.000	-2.400	21.82	
1.000	1.000	22.30	0.000	0.000	Ug1_2_8_L_0						
14 D	4.995	-1.4773E-03	29.05	1.338	29.05	15.56	ACTIVE	0.000	-2.600	23.64	
1.000	1.000	24.97	0.000	0.000	Ug1_2_8_L_0						
15 D	6.727	-1.3769E-03	31.45	8.178	31.45	16.62	ACTIVE	0.000	-2.800	25.45	
1.000	1.000	33.63	0.000	0.000	Ug2_741_743_L_0						
16 D	7.216	-1.2796E-03	33.86	8.805	33.86	17.68	ACTIVE	0.000	-3.000	27.27	
1.000	1.000	36.08	0.000	0.000	Ug2_741_743_L_0						
17 D	7.691	-1.1856E-03	36.01	9.362	36.01	18.73	ACTIVE	0.000	-3.200	29.09	
1.000	1.000	38.45	0.000	0.000	Ug2_741_743_L_0						
18 D	8.178	-1.0953E-03	38.39	9.981	38.39	19.78	ACTIVE	0.000	-3.400	30.91	
1.000	1.000	40.89	0.000	0.000	Ug2_741_743_L_0						
19 D	8.653	-1.0087E-03	40.53	10.54	40.53	20.83	ACTIVE	0.000	-3.600	32.73	
1.000	1.000	43.27	0.000	0.000	Ug2_741_743_L_0						
20 D	9.139	-9.2608E-04	42.89	11.15	42.89	21.87	ACTIVE	0.000	-3.800	34.55	
1.000	1.000	45.70	0.000	0.000	Ug2_741_743_L_0						
21 D	9.625	-8.4749E-04	45.23	11.76	45.23	22.91	ACTIVE	0.000	-4.000	36.36	
1.000	1.000	48.12	0.000	0.000	Ug2_741_743_L_0						
22 D	10.10	-7.7304E-04	47.37	12.32	47.37	23.95	ACTIVE	0.000	-4.200	38.18	
1.000	1.000	50.50	0.000	0.000	Ug2_741_743_L_0						
23 D	10.58	-7.0283E-04	49.69	12.92	49.69	24.98	ACTIVE	0.000	-4.400	40.00	
1.000	1.000	52.92	0.000	0.000	Ug2_741_743_L_0						
24 D	11.06	-6.3691E-04	51.83	13.48	51.83	26.02	ACTIVE	0.000	-4.600	41.82	
1.000	1.000	55.29	0.000	0.000	Ug2_741_743_L_0						
25 D	11.54	-5.7531E-04	54.14	14.08	54.14	27.05	ACTIVE	0.000	-4.800	43.64	
1.000	1.000	57.71	0.000	0.000	Ug2_741_743_L_0						
26 D	12.03	-5.1806E-04	56.44	14.67	56.44	28.08	ACTIVE	0.000	-5.000	45.45	
1.000	1.000	60.13	0.000	0.000	Ug2_741_743_L_0						
27 D	12.50	-4.6514E-04	58.58	15.23	58.58	29.11	ACTIVE	0.000	-5.200	47.27	
1.000	1.000	62.50	0.000	0.000	Ug2_741_743_L_0						
28 D	12.98	-4.1652E-04	60.87	15.83	60.87	30.14	ACTIVE	0.000	-5.400	49.09	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	64.92	0.000	0.000	Ug2_741_743_L_0					
29 D	13.46	-3.7215E-04	63.01	16.38	63.01	31.17	ACTIVE	0.000	-5.600	50.91
1.000	1.000	67.29	0.000	0.000	Ug2_741_743_L_0					
30 D	13.94	-3.3196E-04	65.29	16.98	65.29	32.20	ACTIVE	0.000	-5.800	52.73
1.000	1.000	69.70	0.000	0.000	Ug2_741_743_L_0					
31 D	14.42	-2.9583E-04	67.57	17.57	67.57	33.23	ACTIVE	0.000	-6.000	54.55
1.000	1.000	72.11	0.000	0.000	Ug2_741_743_L_0					
32 D	14.90	-2.6364E-04	69.71	18.12	69.71	34.26	ACTIVE	0.000	-6.200	56.36
1.000	1.000	74.49	0.000	0.000	Ug2_741_743_L_0					
33 D	15.42	-2.3523E-04	71.97	18.94	71.97	35.29	UL-RL	6.6238E+04	-6.400	58.18
1.000	1.000	77.12	0.000	0.000	Ug2_741_743_L_0					
34 D	16.34	-2.1040E-04	74.12	21.68	74.12	36.32	UL-RL	6.6238E+04	-6.600	60.00
1.000	1.000	81.68	0.000	0.000	Ug2_741_743_L_0					
35 D	17.20	-1.8894E-04	76.38	24.19	76.38	37.35	UL-RL	6.6238E+04	-6.800	61.82
1.000	1.000	86.01	0.000	0.000	Ug2_741_743_L_0					
36 D	18.03	-1.7059E-04	78.64	26.50	78.64	38.38	UL-RL	6.6238E+04	-7.000	63.64
1.000	1.000	90.13	0.000	0.000	Ug2_741_743_L_0					
37 D	18.81	-1.5509E-04	80.78	28.61	80.78	39.41	UL-RL	6.6238E+04	-7.200	65.45
1.000	1.000	94.07	0.000	0.000	Ug2_741_743_L_0					
38 D	19.57	-1.4218E-04	83.03	30.56	83.03	40.44	UL-RL	6.6238E+04	-7.400	67.27
1.000	1.000	97.83	0.000	0.000	Ug2_741_743_L_0					
39 D	20.29	-1.3158E-04	85.18	32.34	85.18	41.46	UL-RL	6.6238E+04	-7.600	69.09
1.000	1.000	101.4	0.000	0.000	Ug2_741_743_L_0					
40 D	20.98	-1.2302E-04	87.43	34.00	87.43	42.49	UL-RL	6.6238E+04	-7.800	70.91
1.000	1.000	104.9	0.000	0.000	Ug2_741_743_L_0					
41 D	21.65	-1.1626E-04	89.67	35.53	89.67	43.52	UL-RL	6.6238E+04	-8.000	72.73
1.000	1.000	108.3	0.000	0.000	Ug2_741_743_L_0					
42 D	22.30	-1.1104E-04	91.82	36.97	91.82	44.55	UL-RL	6.6238E+04	-8.200	74.55
1.000	1.000	111.5	0.000	0.000	Ug2_741_743_L_0					
43 D	22.94	-1.0715E-04	94.06	38.32	94.06	45.58	UL-RL	6.6238E+04	-8.400	76.36
1.000	1.000	114.7	0.000	0.000	Ug2_741_743_L_0					
44 D	23.55	-1.0438E-04	96.21	39.59	96.21	46.60	UL-RL	6.6238E+04	-8.600	78.18
1.000	1.000	117.8	0.000	0.000	Ug2_741_743_L_0					
45 D	24.16	-1.0254E-04	98.45	40.80	98.45	47.63	UL-RL	6.6238E+04	-8.800	80.00
1.000	1.000	120.8	0.000	0.000	Ug2_741_743_L_0					
46 D	24.76	-1.0146E-04	100.7	41.97	100.7	48.66	UL-RL	6.6238E+04	-9.000	81.82
1.000	1.000	123.8	0.000	0.000	Ug2_741_743_L_0					
47 D	25.35	-1.0100E-04	102.8	43.09	102.8	49.69	UL-RL	6.6238E+04	-9.200	83.64
1.000	1.000	126.7	0.000	0.000	Ug2_741_743_L_0					
48 D	25.93	-1.0102E-04	105.1	44.19	105.1	50.72	UL-RL	6.6238E+04	-9.400	85.45
1.000	1.000	129.6	0.000	0.000	Ug2_741_743_L_0					
49 D	26.51	-1.0143E-04	107.3	45.25	107.3	51.75	UL-RL	6.6238E+04	-9.600	87.27
1.000	1.000	132.5	0.000	0.000	Ug2_741_743_L_0					
50 D	27.08	-1.0212E-04	109.4	46.30	109.4	52.77	UL-RL	6.6238E+04	-9.800	89.09
1.000	1.000	135.4	0.000	0.000	Ug2_741_743_L_0					
51 D	27.65	-1.0302E-04	111.7	47.34	111.7	53.80	UL-RL	6.6238E+04	-10.000	90.91
1.000	1.000	138.3	0.000	0.000	Ug2_741_743_L_0					
52 D	28.22	-1.0406E-04	113.8	48.37	113.8	54.83	UL-RL	6.6238E+04	-10.200	92.73
1.000	1.000	141.1	0.000	0.000	Ug2_741_743_L_0					
53 D	29.03	-1.0520E-04	116.1	50.60	116.1	55.86	UL-RL	5.7296E+04	-10.400	94.55
1.000	1.000	145.1	0.000	0.000	Ug3_740_742_L_0					
54 D	29.60	-1.0639E-04	118.3	51.62	118.3	56.89	UL-RL	5.7296E+04	-10.600	96.36
1.000	1.000	148.0	0.000	0.000	Ug3_740_742_L_0					
55 D	30.17	-1.0761E-04	120.4	52.65	120.4	57.92	UL-RL	5.7296E+04	-10.800	98.18
1.000	1.000	150.8	0.000	0.000	Ug3_740_742_L_0					
56 D	30.73	-1.0885E-04	122.7	53.67	122.7	58.95	UL-RL	5.7296E+04	-11.000	100.00
1.000	1.000	153.7	0.000	0.000	Ug3_740_742_L_0					
57 D	31.30	-1.1008E-04	124.8	54.70	124.8	59.97	UL-RL	5.7296E+04	-11.200	101.8
1.000	1.000	156.5	0.000	0.000	Ug3_740_742_L_0					
58 D	31.87	-1.1130E-04	127.0	55.73	127.0	61.00	UL-RL	5.7296E+04	-11.400	103.6
1.000	1.000	159.4	0.000	0.000	Ug3_740_742_L_0					
59 D	32.44	-1.1252E-04	129.3	56.75	129.3	62.03	UL-RL	5.7296E+04	-11.600	105.5
1.000	1.000	162.2	0.000	0.000	Ug3_740_742_L_0					
60 D	33.01	-1.1373E-04	131.4	57.78	131.4	63.06	UL-RL	5.7296E+04	-11.800	107.3
1.000	1.000	165.1	0.000	0.000	Ug3_740_742_L_0					
61 D	16.79	-1.1494E-04	133.6	58.81	133.6	64.09	UL-RL	5.7296E+04	-12.000	109.1
1.000	1.000	167.9	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63   |
|          Exe Time :24 May 2018   18:17:33   |
+-----+
New Project
  
```

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 3.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11 D	5.287	1.7946E-03	0.000	26.44	20.00	26.44	V-C	9373.	-2.000	0.000	
1.000	1.000	26.44	0.000	0.000	Ug1_2_8_L_0						
12 D	5.859	1.6866E-03	1.818	27.12	22.00	27.12	V-C	9373.	-2.200	2.182	
1.000	1.000	29.30	0.000	0.000	Ug1_2_8_L_0						
13 D	6.324	1.5807E-03	3.636	27.26	24.00	27.26	V-C	9373.	-2.400	4.364	
1.000	1.000	31.62	0.000	0.000	Ug1_2_8_L_0						
14 D	6.777	1.4773E-03	5.455	27.34	26.00	27.34	V-C	9373.	-2.600	6.545	
1.000	1.000	33.88	0.000	0.000	Ug1_2_8_L_0						
15 D	7.839	1.3769E-03	7.273	30.47	28.00	30.47	V-C	1.1464E+04	-2.800	8.727	
1.000	1.000	39.19	0.000	0.000	Ug2_741_743_L_0						
16 D	8.248	1.2796E-03	9.091	30.33	30.00	30.33	V-C	1.1464E+04	-3.000	10.91	
1.000	1.000	41.24	0.000	0.000	Ug2_741_743_L_0						
17 D	8.662	1.1856E-03	10.91	30.22	32.00	30.22	V-C	1.1464E+04	-3.200	13.09	
1.000	1.000	43.31	0.000	0.000	Ug2_741_743_L_0						
18 D	9.084	1.0953E-03	12.73	30.15	34.00	30.15	V-C	1.1464E+04	-3.400	15.27	
1.000	1.000	45.42	0.000	0.000	Ug2_741_743_L_0						
19 D	9.514	1.0087E-03	14.55	30.11	36.00	30.11	V-C	1.1464E+04	-3.600	17.45	
1.000	1.000	47.57	0.000	0.000	Ug2_741_743_L_0						
20 D	9.952	9.2608E-04	16.36	30.12	38.00	30.12	V-C	1.1464E+04	-3.800	19.64	
1.000	1.000	49.76	0.000	0.000	Ug2_741_743_L_0						
21 D	10.40	8.4749E-04	18.18	30.18	40.00	30.18	V-C	1.1464E+04	-4.000	21.82	
1.000	1.000	52.00	0.000	0.000	Ug2_741_743_L_0						
22 D	10.86	7.7304E-04	20.00	30.29	42.00	30.29	V-C	1.1464E+04	-4.200	24.00	
1.000	1.000	54.29	0.000	0.000	Ug2_741_743_L_0						
23 D	11.32	7.0283E-04	21.82	30.44	44.00	30.44	V-C	1.1464E+04	-4.400	26.18	
1.000	1.000	56.62	0.000	0.000	Ug2_741_743_L_0						
24 D	11.80	6.3691E-04	23.64	30.65	46.00	30.65	V-C	1.1464E+04	-4.600	28.36	
1.000	1.000	59.01	0.000	0.000	Ug2_741_743_L_0						
25 D	12.29	5.7531E-04	25.45	30.91	48.00	30.91	V-C	1.1464E+04	-4.800	30.55	
1.000	1.000	61.45	0.000	0.000	Ug2_741_743_L_0						
26 D	12.79	5.1806E-04	27.27	31.21	50.00	31.21	V-C	1.1464E+04	-5.000	32.73	
1.000	1.000	63.94	0.000	0.000	Ug2_741_743_L_0						
27 D	13.30	4.6514E-04	29.09	31.57	52.00	31.57	V-C	1.1464E+04	-5.200	34.91	
1.000	1.000	66.48	0.000	0.000	Ug2_741_743_L_0						
28 D	13.82	4.1652E-04	30.91	31.99	54.00	31.99	V-C	1.1464E+04	-5.400	37.09	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	69.08	0.000	0.000	Ug2_741_743_L_0					
29 D	14.34	3.7215E-04	32.73	32.45	56.00	32.45	V-C	1.1464E+04	-5.600	39.27
1.000	1.000	71.72	0.000	0.000	Ug2_741_743_L_0					
30 D	14.88	3.3196E-04	34.55	32.96	58.00	32.96	V-C	1.1464E+04	-5.800	41.45
1.000	1.000	74.41	0.000	0.000	Ug2_741_743_L_0					
31 D	15.43	2.9583E-04	36.36	33.51	60.00	33.51	V-C	1.1464E+04	-6.000	43.64
1.000	1.000	77.15	0.000	0.000	Ug2_741_743_L_0					
32 D	15.99	2.6364E-04	38.18	34.11	62.00	34.11	V-C	1.1464E+04	-6.200	45.82
1.000	1.000	79.93	0.000	0.000	Ug2_741_743_L_0					
33 D	16.55	2.3523E-04	40.00	34.76	64.00	34.76	V-C	1.1464E+04	-6.400	48.00
1.000	1.000	82.76	0.000	0.000	Ug2_741_743_L_0					
34 D	17.13	2.1040E-04	41.82	35.45	66.00	35.45	V-C	1.1464E+04	-6.600	50.18
1.000	1.000	85.63	0.000	0.000	Ug2_741_743_L_0					
35 D	17.71	1.8894E-04	43.64	36.17	68.00	36.17	V-C	1.1464E+04	-6.800	52.36
1.000	1.000	88.54	0.000	0.000	Ug2_741_743_L_0					
36 D	18.30	1.7059E-04	45.45	36.94	70.00	36.94	V-C	1.1464E+04	-7.000	54.55
1.000	1.000	91.48	0.000	0.000	Ug2_741_743_L_0					
37 D	18.85	1.5509E-04	47.27	37.50	72.00	37.84	UL-RL	3.4393E+04	-7.200	56.73
1.000	1.000	94.23	0.000	0.000	Ug2_741_743_L_0					
38 D	19.38	1.4218E-04	49.09	38.00	74.00	38.83	UL-RL	3.4393E+04	-7.400	58.91
1.000	1.000	96.91	0.000	0.000	Ug2_741_743_L_0					
39 D	19.93	1.3158E-04	50.91	38.58	76.00	39.81	UL-RL	3.4393E+04	-7.600	61.09
1.000	1.000	99.67	0.000	0.000	Ug2_741_743_L_0					
40 D	20.50	1.2302E-04	52.73	39.23	78.00	40.80	UL-RL	3.4393E+04	-7.800	63.27
1.000	1.000	102.5	0.000	0.000	Ug2_741_743_L_0					
41 D	21.08	1.1626E-04	54.55	39.94	80.00	41.78	UL-RL	3.4393E+04	-8.000	65.45
1.000	1.000	105.4	0.000	0.000	Ug2_741_743_L_0					
42 D	21.67	1.1104E-04	56.36	40.70	82.00	42.77	UL-RL	3.4393E+04	-8.200	67.64
1.000	1.000	108.3	0.000	0.000	Ug2_741_743_L_0					
43 D	22.27	1.0715E-04	58.18	41.51	84.00	43.75	UL-RL	3.4393E+04	-8.400	69.82
1.000	1.000	111.3	0.000	0.000	Ug2_741_743_L_0					
44 D	22.87	1.0438E-04	60.00	42.35	86.00	44.74	UL-RL	3.4393E+04	-8.600	72.00
1.000	1.000	114.4	0.000	0.000	Ug2_741_743_L_0					
45 D	23.48	1.0254E-04	61.82	43.23	88.00	45.72	UL-RL	3.4393E+04	-8.800	74.18
1.000	1.000	117.4	0.000	0.000	Ug2_741_743_L_0					
46 D	24.10	1.0146E-04	63.64	44.13	90.00	46.70	UL-RL	3.4393E+04	-9.000	76.36
1.000	1.000	120.5	0.000	0.000	Ug2_741_743_L_0					
47 D	24.72	1.0100E-04	65.45	45.05	92.00	47.69	UL-RL	3.4393E+04	-9.200	78.55
1.000	1.000	123.6	0.000	0.000	Ug2_741_743_L_0					
48 D	25.34	1.0102E-04	67.27	45.98	94.00	48.67	UL-RL	3.4393E+04	-9.400	80.73
1.000	1.000	126.7	0.000	0.000	Ug2_741_743_L_0					
49 D	25.97	1.0143E-04	69.09	46.93	96.00	49.66	UL-RL	3.4393E+04	-9.600	82.91
1.000	1.000	129.8	0.000	0.000	Ug2_741_743_L_0					
50 D	26.60	1.0212E-04	70.91	47.89	98.00	50.64	UL-RL	3.4393E+04	-9.800	85.09
1.000	1.000	133.0	0.000	0.000	Ug2_741_743_L_0					
51 D	27.23	1.0302E-04	72.73	48.85	100.00	51.63	UL-RL	3.4393E+04	-10.000	87.27
1.000	1.000	136.1	0.000	0.000	Ug2_741_743_L_0					
52 D	27.86	1.0406E-04	74.55	49.82	102.0	52.61	UL-RL	3.4393E+04	-10.200	89.45
1.000	1.000	139.3	0.000	0.000	Ug2_741_743_L_0					
53 D	28.63	1.0520E-04	76.36	51.52	104.0	53.60	UL-RL	3.9761E+04	-10.400	91.64
1.000	1.000	143.2	0.000	0.000	Ug3_740_742_L_0					
54 D	29.26	1.0639E-04	78.18	52.50	106.0	54.58	UL-RL	3.9761E+04	-10.600	93.82
1.000	1.000	146.3	0.000	0.000	Ug3_740_742_L_0					
55 D	29.90	1.0761E-04	80.00	53.48	108.0	55.57	UL-RL	3.9761E+04	-10.800	96.00
1.000	1.000	149.5	0.000	0.000	Ug3_740_742_L_0					
56 D	30.53	1.0885E-04	81.82	54.46	110.0	56.55	UL-RL	3.9761E+04	-11.000	98.18
1.000	1.000	152.6	0.000	0.000	Ug3_740_742_L_0					
57 D	31.16	1.1008E-04	83.64	55.43	112.0	57.54	UL-RL	3.9761E+04	-11.200	100.4
1.000	1.000	155.8	0.000	0.000	Ug3_740_742_L_0					
58 D	31.79	1.1130E-04	85.45	56.41	114.0	58.52	UL-RL	3.9761E+04	-11.400	102.5
1.000	1.000	159.0	0.000	0.000	Ug3_740_742_L_0					
59 D	32.42	1.1252E-04	87.27	57.39	116.0	59.51	UL-RL	3.9761E+04	-11.600	104.7
1.000	1.000	162.1	0.000	0.000	Ug3_740_742_L_0					
60 D	33.06	1.1373E-04	89.09	58.37	118.0	60.50	UL-RL	3.9761E+04	-11.800	106.9
1.000	1.000	165.3	0.000	0.000	Ug3_740_742_L_0					
61 D	16.84	1.1494E-04	90.91	59.35	120.0	61.48	UL-RL	3.9761E+04	-12.000	109.1
1.000	1.000	168.4	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63   |
|          Exe Time :24 May 2018   18:17:33             |
+-----+
New Project
    
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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 3.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	3.81368E-11	-3.81368E-11	3.82336E-12	-3.96186E-11
2	0.36364	-0.36364	4.53137E-11	7.27273E-02
3	1.0909	-1.0909	-7.27273E-02	0.29091
4	2.1818	-2.1818	-0.29091	0.72727
5	3.6364	-3.6364	-0.72727	1.4545
6	5.4545	-5.4545	-1.4545	2.5455
7	7.6364	-7.6364	-2.5455	4.0727
8	10.182	-10.182	-4.0727	6.1091
9	13.091	-13.091	-6.1091	8.7273
10	16.364	-16.364	-8.7273	12.000
11	14.713	-14.713	-12.000	14.943
12	12.853	-12.853	-14.943	17.513
13	10.990	-10.990	-17.513	19.711
14	9.2076	-9.2076	-19.711	21.553
15	8.0955	-8.0955	-21.553	23.172
16	7.0633	-7.0633	-23.172	24.584
17	6.0916	-6.0916	-24.584	25.803
18	5.1857	-5.1857	-25.803	26.840
19	4.3251	-4.3251	-26.840	27.705
20	3.5123	-3.5123	-27.705	28.407
21	2.7371	-2.7371	-28.407	28.955
22	1.9793	-1.9793	-28.955	29.351
23	1.2385	-1.2385	-29.351	29.598
24	0.49493	-0.49493	-29.598	29.697
25	-0.25271	0.25271	-29.697	29.647
26	-1.0153	1.0153	-29.647	29.444
27	-1.8114	1.8114	-29.444	29.081
28	-2.6433	2.6433	-29.081	28.553
29	-3.5287	3.5287	-28.553	27.847
30	-4.4702	4.4702	-27.847	26.953
31	-5.4774	5.4774	-26.953	25.858
32	-6.5665	6.5665	-25.858	24.544
33	-7.6942	7.6942	-24.544	23.005
34	-8.4842	8.4842	-23.005	21.309
35	-8.9893	8.9893	-21.309	19.511
36	-9.2585	9.2585	-19.511	17.659
37	-9.2912	9.2912	-17.659	15.801
38	-9.1082	9.1082	-15.801	13.979
39	-8.7560	8.7560	-13.979	12.228
40	-8.2753	8.2753	-12.228	10.573
41	-7.7021	7.7021	-10.573	9.0324
42	-7.0671	7.0671	-9.0324	7.6190
43	-6.3966	6.3966	-7.6190	6.3397
44	-5.7126	5.7126	-6.3397	5.1972
45	-5.0335	5.0335	-5.1972	4.1905
46	-4.3743	4.3743	-4.1905	3.3156
47	-3.7469	3.7469	-3.3156	2.5662
48	-3.1611	3.1611	-2.5662	1.9340
49	-2.6239	2.6239	-1.9340	1.4092
50	-2.1411	2.1411	-1.4092	0.98101
51	-1.7165	1.7165	-0.98101	0.63771
52	-1.3528	1.3528	-0.63771	0.36716
53	-0.95553	0.95553	-0.36716	0.17605
54	-0.62130	0.62130	-0.17605	5.17914E-02
55	-0.35054	0.35054	-5.17914E-02	-1.83168E-02
56	-0.14329	0.14329	1.83168E-02	-4.69748E-02
57	5.89260E-04	-5.89260E-04	4.69748E-02	-4.68570E-02
58	8.13027E-02	-8.13027E-02	4.68570E-02	-3.05964E-02
59	9.90412E-02	-9.90412E-02	3.05964E-02	-1.07882E-02

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

60 5.39383E-02-5.39383E-02 1.07882E-02-7.90930E-14

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ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4104E+05 RIMNOR=0.3607E+05
RENORM= 502.1 REMNOR=0.1873E-21 RATIO =0.1106 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 32.40 RMMAX = 29.70
RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
RDT =0.4104E+05 RDR =0.3607E+05
RATIOT=0.1106 RATIO= 0.000
MAX UN= 8.092 IEQ= 31 NODE 16 DOF 1 Y-DISPL.F
MIN UN=-.9351E-01 IEQ= 19 NODE 10 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4104E+05 RIMNOR=0.3607E+05
RENORM= 171.1 REMNOR=0.1185E-20 RATIO =0.6458E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 32.40 RMMAX = 29.70
RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
RDT =0.4104E+05 RDR =0.3607E+05
RATIOT=0.6458E-01 RATIO= 0.000
MAX UN= 3.425 IEQ= 37 NODE 19 DOF 1 Y-DISPL.F
MIN UN=-.1491E-09 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4104E+05 RIMNOR=0.3607E+05
RENORM= 175.8 REMNOR=0.7184E-19 RATIO =0.6545E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 32.40 RMMAX = 29.70
RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
RDT =0.4104E+05 RDR =0.3607E+05
RATIOT=0.6545E-01 RATIO= 0.000
MAX UN= 7.260 IEQ= 37 NODE 19 DOF 1 Y-DISPL.F
MIN UN=-.1462E-08 IEQ= 27 NODE 14 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 4 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4104E+05 RIMNOR=0.3607E+05
RENORM= 9.799 REMNOR=0.2778E-19 RATIO =0.1545E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 32.40 RMMAX = 29.70
RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
RDT =0.4104E+05 RDR =0.3607E+05
RATIOT=0.1545E-01 RATIO= 0.000
MAX UN= 2.054 IEQ= 83 NODE 42 DOF 1 Y-DISPL.F
MIN UN=-.5331 IEQ= 119 NODE 60 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 5 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4104E+05 RIMNOR=0.3607E+05
RENORM=0.3677E-03 REMNOR=0.3659E-19 RATIO =0.9465E-04 TOLER =0.1000E-03 CONVERGED !
RFMAX = 32.40 RMMAX = 29.70
RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
RDT =0.4104E+05 RDR =0.3607E+05
RATIOT=0.9465E-04 RATIO= 0.000
MAX UN=0.1435E-08 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
MIN UN=-.1917E-01 IEQ= 105 NODE 53 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63    |
|          Exe Time :24 May 2018      18:17:33           |
+-----+
New Project
  
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STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 4.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1 D	0.000	-1.7846E-02	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3429	-1.7293E-02	2.287	0.000	2.287	1.341	ACTIVE	0.000	-0.2000	1.714	
1.000	1.000	1.714	0.000	0.000	Ug1_2_8_L_0						
3 D	0.6857	-1.6740E-02	4.580	0.000	4.580	2.671	ACTIVE	0.000	-0.4000	3.429	
1.000	1.000	3.429	0.000	0.000	Ug1_2_8_L_0						
4 D	1.029	-1.6186E-02	6.883	0.000	6.883	3.978	ACTIVE	0.000	-0.6000	5.143	
1.000	1.000	5.143	0.000	0.000	Ug1_2_8_L_0						
5 D	1.371	-1.5633E-02	9.200	0.000	9.200	5.256	ACTIVE	0.000	-0.8000	6.857	
1.000	1.000	6.857	0.000	0.000	Ug1_2_8_L_0						
6 D	1.714	-1.5080E-02	11.53	0.000	11.53	6.501	ACTIVE	0.000	-1.000	8.571	
1.000	1.000	8.571	0.000	0.000	Ug1_2_8_L_0						
7 D	2.057	-1.4527E-02	13.87	0.000	13.87	7.714	ACTIVE	0.000	-1.200	10.29	
1.000	1.000	10.29	0.000	0.000	Ug1_2_8_L_0						
8 D	2.400	-1.3975E-02	16.22	0.000	16.22	8.897	ACTIVE	0.000	-1.400	12.00	
1.000	1.000	12.00	0.000	0.000	Ug1_2_8_L_0						
9 D	2.743	-1.3423E-02	18.58	0.000	18.58	10.05	ACTIVE	0.000	-1.600	13.71	
1.000	1.000	13.71	0.000	0.000	Ug1_2_8_L_0						
10 D	3.086	-1.2872E-02	20.95	0.000	20.95	11.19	ACTIVE	0.000	-1.800	15.43	
1.000	1.000	15.43	0.000	0.000	Ug1_2_8_L_0						
11 D	3.429	-1.2322E-02	23.31	0.000	23.31	12.30	ACTIVE	0.000	-2.000	17.14	
1.000	1.000	17.14	0.000	0.000	Ug1_2_8_L_0						
12 D	3.776	-1.1774E-02	25.68	2.1702E-02	25.68	13.40	ACTIVE	0.000	-2.200	18.86	
1.000	1.000	18.88	0.000	0.000	Ug1_2_8_L_0						
13 D	4.308	-1.1228E-02	28.10	0.9684	28.10	14.48	ACTIVE	0.000	-2.400	20.57	
1.000	1.000	21.54	0.000	0.000	Ug1_2_8_L_0						
14 D	4.830	-1.0685E-02	30.40	1.864	30.40	15.56	ACTIVE	0.000	-2.600	22.29	
1.000	1.000	24.15	0.000	0.000	Ug1_2_8_L_0						
15 D	6.511	-1.0145E-02	32.91	8.556	32.91	16.62	ACTIVE	0.000	-2.800	24.00	
1.000	1.000	32.56	0.000	0.000	Ug2_741_743_L_0						
16 D	6.985	-9.6105E-03	35.42	9.210	35.42	17.68	ACTIVE	0.000	-3.000	25.71	
1.000	1.000	34.92	0.000	0.000	Ug2_741_743_L_0						
17 D	7.445	-9.0815E-03	37.67	9.794	37.67	18.73	ACTIVE	0.000	-3.200	27.43	
1.000	1.000	37.22	0.000	0.000	Ug2_741_743_L_0						
18 D	7.917	-8.5595E-03	40.16	10.44	40.16	19.78	ACTIVE	0.000	-3.400	29.14	
1.000	1.000	39.58	0.000	0.000	Ug2_741_743_L_0						
19 D	8.376	-8.0461E-03	42.40	11.02	42.40	20.83	ACTIVE	0.000	-3.600	30.86	
1.000	1.000	41.88	0.000	0.000	Ug2_741_743_L_0						
20 D	8.847	-7.5426E-03	44.86	11.66	44.86	21.87	ACTIVE	0.000	-3.800	32.57	
1.000	1.000	44.24	0.000	0.000	Ug2_741_743_L_0						
21 D	9.317	-7.0508E-03	47.31	12.30	47.31	22.91	ACTIVE	0.000	-4.000	34.29	
1.000	1.000	46.59	0.000	0.000	Ug2_741_743_L_0						
22 D	9.776	-6.5721E-03	49.55	12.88	49.55	23.95	ACTIVE	0.000	-4.200	36.00	
1.000	1.000	48.88	0.000	0.000	Ug2_741_743_L_0						
23 D	10.25	-6.1078E-03	51.98	13.51	51.98	24.98	ACTIVE	0.000	-4.400	37.71	
1.000	1.000	51.23	0.000	0.000	Ug2_741_743_L_0						
24 D	10.71	-5.6593E-03	54.22	14.10	54.22	26.02	ACTIVE	0.000	-4.600	39.43	
1.000	1.000	53.53	0.000	0.000	Ug2_741_743_L_0						
25 D	11.17	-5.2275E-03	56.63	14.72	56.63	27.05	ACTIVE	0.000	-4.800	41.14	
1.000	1.000	55.87	0.000	0.000	Ug2_741_743_L_0						
26 D	11.64	-4.8133E-03	59.04	15.35	59.04	28.08	ACTIVE	0.000	-5.000	42.86	
1.000	1.000	58.21	0.000	0.000	Ug2_741_743_L_0						
27 D	12.10	-4.4173E-03	61.28	15.93	61.28	29.11	ACTIVE	0.000	-5.200	44.57	
1.000	1.000	60.50	0.000	0.000	Ug2_741_743_L_0						
28 D	12.57	-4.0401E-03	63.67	16.56	63.67	30.14	ACTIVE	0.000	-5.400	46.29	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	62.84	0.000	0.000	Ug2_741_743_L_0					
29 D	13.03	-3.6820E-03	65.92	17.14	65.92	31.17	ACTIVE	0.000	-5.600	48.00
1.000	1.000	65.14	0.000	0.000	Ug2_741_743_L_0					
30 D	13.49	-3.3432E-03	68.30	17.76	68.30	32.20	ACTIVE	0.000	-5.800	49.71
1.000	1.000	67.47	0.000	0.000	Ug2_741_743_L_0					
31 D	13.96	-3.0238E-03	70.68	18.38	70.68	33.23	ACTIVE	0.000	-6.000	51.43
1.000	1.000	69.81	0.000	0.000	Ug2_741_743_L_0					
32 D	14.42	-2.7238E-03	72.93	18.96	72.93	34.26	ACTIVE	0.000	-6.200	53.14
1.000	1.000	72.10	0.000	0.000	Ug2_741_743_L_0					
33 D	14.89	-2.4431E-03	75.30	19.58	75.30	35.29	ACTIVE	0.000	-6.400	54.86
1.000	1.000	74.44	0.000	0.000	Ug2_741_743_L_0					
34 D	15.35	-2.1814E-03	77.55	20.16	77.55	36.32	ACTIVE	0.000	-6.600	56.57
1.000	1.000	76.73	0.000	0.000	Ug2_741_743_L_0					
35 D	15.81	-1.9385E-03	79.91	20.78	79.91	37.35	ACTIVE	0.000	-6.800	58.29
1.000	1.000	79.06	0.000	0.000	Ug2_741_743_L_0					
36 D	16.28	-1.7140E-03	82.27	21.39	82.27	38.38	ACTIVE	0.000	-7.000	60.00
1.000	1.000	81.39	0.000	0.000	Ug2_741_743_L_0					
37 D	16.74	-1.5074E-03	84.52	21.98	84.52	39.41	ACTIVE	0.000	-7.200	61.71
1.000	1.000	83.69	0.000	0.000	Ug2_741_743_L_0					
38 D	17.20	-1.3181E-03	86.88	22.59	86.88	40.44	ACTIVE	0.000	-7.400	63.43
1.000	1.000	86.02	0.000	0.000	Ug2_741_743_L_0					
39 D	17.66	-1.1457E-03	89.13	23.17	89.13	41.46	ACTIVE	0.000	-7.600	65.14
1.000	1.000	88.32	0.000	0.000	Ug2_741_743_L_0					
40 D	18.13	-9.8949E-04	91.48	23.78	91.48	42.49	ACTIVE	0.000	-7.800	66.86
1.000	1.000	90.64	0.000	0.000	Ug2_741_743_L_0					
41 D	18.59	-8.4869E-04	93.83	24.40	93.83	43.52	ACTIVE	0.000	-8.000	68.57
1.000	1.000	92.97	0.000	0.000	Ug2_741_743_L_0					
42 D	19.05	-7.2255E-04	96.08	24.98	96.08	44.55	ACTIVE	0.000	-8.200	70.29
1.000	1.000	95.27	0.000	0.000	Ug2_741_743_L_0					
43 D	19.52	-6.1026E-04	98.43	25.59	98.43	45.58	ACTIVE	0.000	-8.400	72.00
1.000	1.000	97.59	0.000	0.000	Ug2_741_743_L_0					
44 D	19.98	-5.1093E-04	100.7	26.18	100.7	46.60	ACTIVE	0.000	-8.600	73.71
1.000	1.000	99.89	0.000	0.000	Ug2_741_743_L_0					
45 D	20.87	-4.2363E-04	103.0	28.91	103.0	47.63	UL-RL	4.4159E+04	-8.800	75.43
1.000	1.000	104.3	0.000	0.000	Ug2_741_743_L_0					
46 D	22.12	-3.4734E-04	105.4	33.45	105.4	48.66	UL-RL	4.4159E+04	-9.000	77.14
1.000	1.000	110.6	0.000	0.000	Ug2_741_743_L_0					
47 D	23.28	-2.8104E-04	107.6	37.53	107.6	49.69	UL-RL	4.4159E+04	-9.200	78.86
1.000	1.000	116.4	0.000	0.000	Ug2_741_743_L_0					
48 D	24.36	-2.2366E-04	110.0	41.21	110.0	50.72	UL-RL	4.4159E+04	-9.400	80.57
1.000	1.000	121.8	0.000	0.000	Ug2_741_743_L_0					
49 D	25.36	-1.7413E-04	112.3	44.54	112.3	51.75	UL-RL	4.4159E+04	-9.600	82.29
1.000	1.000	126.8	0.000	0.000	Ug2_741_743_L_0					
50 D	26.31	-1.3142E-04	114.5	47.56	114.5	52.77	UL-RL	4.4159E+04	-9.800	84.00
1.000	1.000	131.6	0.000	0.000	Ug2_741_743_L_0					
51 D	27.21	-9.4513E-05	116.9	50.31	116.9	53.80	UL-RL	4.4159E+04	-10.000	85.71
1.000	1.000	136.0	0.000	0.000	Ug2_741_743_L_0					
52 D	28.06	-6.2466E-05	119.1	52.86	119.1	54.83	UL-RL	4.4159E+04	-10.200	87.43
1.000	1.000	140.3	0.000	0.000	Ug2_741_743_L_0					
53 D	29.01	-3.4396E-05	121.5	55.91	121.5	55.91	V-C	1.2732E+04	-10.400	89.14
1.000	1.000	145.1	0.000	0.000	Ug3_740_742_L_0					
54 D	29.63	-9.4902E-06	123.8	57.28	123.8	57.28	V-C	1.2732E+04	-10.600	90.86
1.000	1.000	148.1	0.000	0.000	Ug3_740_742_L_0					
55 D	30.24	1.2973E-05	126.0	58.63	126.0	58.63	V-C	1.2732E+04	-10.800	92.57
1.000	1.000	151.2	0.000	0.000	Ug3_740_742_L_0					
56 D	30.85	3.3626E-05	128.4	59.95	128.4	59.95	V-C	1.2732E+04	-11.000	94.29
1.000	1.000	154.2	0.000	0.000	Ug3_740_742_L_0					
57 D	31.45	5.3010E-05	130.6	61.26	130.6	61.26	V-C	1.2732E+04	-11.200	96.00
1.000	1.000	157.3	0.000	0.000	Ug3_740_742_L_0					
58 D	32.05	7.1571E-05	133.0	62.56	133.0	62.56	V-C	1.2732E+04	-11.400	97.71
1.000	1.000	160.3	0.000	0.000	Ug3_740_742_L_0					
59 D	32.66	8.9659E-05	135.3	63.85	135.3	63.85	V-C	1.2732E+04	-11.600	99.43
1.000	1.000	163.3	0.000	0.000	Ug3_740_742_L_0					
60 D	33.26	1.0753E-04	137.5	65.14	137.5	65.14	V-C	1.2732E+04	-11.800	101.1
1.000	1.000	166.3	0.000	0.000	Ug3_740_742_L_0					
61 D	16.93	1.2533E-04	139.9	66.43	139.9	66.43	V-C	1.2732E+04	-12.000	102.9
1.000	1.000	169.3	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.Nominal_63                                          |
|          Exe Time :24 May 2018          18:17:33                                          |
+-----+
New Project
  
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STRESS RESULTS FOR GROUP NO. 2

0_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 4.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16 D	0.000	9.6105E-03	0.000	0.000	30.00	30.33	PASSIVE	0.000	-3.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
17 D	2.613	9.0815E-03	1.714	10.78	32.00	30.22	PASSIVE	0.000	-3.200	2.286	
1.000	1.000	13.07	0.000	0.000	Ug2_741_743_L_0						
18 D	5.227	8.5595E-03	3.429	21.56	34.00	30.15	PASSIVE	0.000	-3.400	4.571	
1.000	1.000	26.13	0.000	0.000	Ug2_741_743_L_0						
19 D	7.840	8.0461E-03	5.143	32.34	36.00	32.34	PASSIVE	0.000	-3.600	6.857	
1.000	1.000	39.20	0.000	0.000	Ug2_741_743_L_0						
20 D	10.45	7.5426E-03	6.857	43.12	38.00	43.12	PASSIVE	0.000	-3.800	9.143	
1.000	1.000	52.27	0.000	0.000	Ug2_741_743_L_0						
21 D	13.07	7.0508E-03	8.571	53.91	40.00	53.91	PASSIVE	0.000	-4.000	11.43	
1.000	1.000	65.33	0.000	0.000	Ug2_741_743_L_0						
22 D	15.68	6.5721E-03	10.29	64.69	42.00	64.69	PASSIVE	0.000	-4.200	13.71	
1.000	1.000	78.40	0.000	0.000	Ug2_741_743_L_0						
23 D	17.28	6.1078E-03	12.00	70.42	44.00	70.42	V-C	7643.	-4.400	16.00	
1.000	1.000	86.42	0.000	0.000	Ug2_741_743_L_0						
24 D	17.20	5.6593E-03	13.71	67.72	46.00	67.72	V-C	7643.	-4.600	18.29	
1.000	1.000	86.01	0.000	0.000	Ug2_741_743_L_0						
25 D	17.15	5.2275E-03	15.43	65.17	48.00	65.17	V-C	7643.	-4.800	20.57	
1.000	1.000	85.74	0.000	0.000	Ug2_741_743_L_0						
26 D	17.12	4.8133E-03	17.14	62.77	50.00	62.77	V-C	7643.	-5.000	22.86	
1.000	1.000	85.62	0.000	0.000	Ug2_741_743_L_0						
27 D	17.13	4.4173E-03	18.86	60.52	52.00	60.52	V-C	7643.	-5.200	25.14	
1.000	1.000	85.66	0.000	0.000	Ug2_741_743_L_0						
28 D	17.17	4.0401E-03	20.57	58.43	54.00	58.43	V-C	7643.	-5.400	27.43	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	85.85	0.000	0.000	Ug2_741_743_L_0					
29 D	17.24	3.6820E-03	22.29	56.50	56.00	56.50	V-C	7643.	-5.600	29.71
1.000	1.000	86.21	0.000	0.000	Ug2_741_743_L_0					
30 D	17.35	3.3432E-03	24.00	54.73	58.00	54.73	V-C	7643.	-5.800	32.00
1.000	1.000	86.73	0.000	0.000	Ug2_741_743_L_0					
31 D	17.48	3.0238E-03	25.71	53.12	60.00	53.12	V-C	7643.	-6.000	34.29
1.000	1.000	87.41	0.000	0.000	Ug2_741_743_L_0					
32 D	17.65	2.7238E-03	27.43	51.68	62.00	51.68	V-C	7643.	-6.200	36.57
1.000	1.000	88.25	0.000	0.000	Ug2_741_743_L_0					
33 D	17.85	2.4431E-03	29.14	50.40	64.00	50.40	V-C	7643.	-6.400	38.86
1.000	1.000	89.26	0.000	0.000	Ug2_741_743_L_0					
34 D	18.08	2.1814E-03	30.86	49.28	66.00	49.28	V-C	7643.	-6.600	41.14
1.000	1.000	90.42	0.000	0.000	Ug2_741_743_L_0					
35 D	18.35	1.9385E-03	32.57	48.31	68.00	48.31	V-C	7643.	-6.800	43.43
1.000	1.000	91.74	0.000	0.000	Ug2_741_743_L_0					
36 D	18.64	1.7140E-03	34.29	47.49	70.00	47.49	V-C	7643.	-7.000	45.71
1.000	1.000	93.21	0.000	0.000	Ug2_741_743_L_0					
37 D	18.97	1.5074E-03	36.00	46.83	72.00	46.83	V-C	7643.	-7.200	48.00
1.000	1.000	94.83	0.000	0.000	Ug2_741_743_L_0					
38 D	19.32	1.3181E-03	37.71	46.30	74.00	46.30	V-C	7643.	-7.400	50.29
1.000	1.000	96.59	0.000	0.000	Ug2_741_743_L_0					
39 D	19.70	1.1457E-03	39.43	45.91	76.00	45.91	V-C	7643.	-7.600	52.57
1.000	1.000	98.48	0.000	0.000	Ug2_741_743_L_0					
40 D	20.10	9.8949E-04	41.14	45.65	78.00	45.65	V-C	7643.	-7.800	54.86
1.000	1.000	100.5	0.000	0.000	Ug2_741_743_L_0					
41 D	20.53	8.4869E-04	42.86	45.52	80.00	45.52	V-C	7643.	-8.000	57.14
1.000	1.000	102.7	0.000	0.000	Ug2_741_743_L_0					
42 D	20.99	7.2255E-04	44.57	45.50	82.00	45.50	V-C	7643.	-8.200	59.43
1.000	1.000	104.9	0.000	0.000	Ug2_741_743_L_0					
43 D	21.46	6.1026E-04	46.29	45.59	84.00	45.59	V-C	7643.	-8.400	61.71
1.000	1.000	107.3	0.000	0.000	Ug2_741_743_L_0					
44 D	21.96	5.1093E-04	48.00	45.78	86.00	45.78	V-C	7643.	-8.600	64.00
1.000	1.000	109.8	0.000	0.000	Ug2_741_743_L_0					
45 D	22.47	4.2363E-04	49.71	46.07	88.00	46.07	V-C	7643.	-8.800	66.29
1.000	1.000	112.4	0.000	0.000	Ug2_741_743_L_0					
46 D	22.90	3.4734E-04	51.43	45.94	90.00	46.70	UL-RL	2.2929E+04	-9.000	68.57
1.000	1.000	114.5	0.000	0.000	Ug2_741_743_L_0					
47 D	23.24	2.8104E-04	53.14	45.34	92.00	47.69	UL-RL	2.2929E+04	-9.200	70.86
1.000	1.000	116.2	0.000	0.000	Ug2_741_743_L_0					
48 D	23.62	2.2366E-04	54.86	44.94	94.00	48.67	UL-RL	2.2929E+04	-9.400	73.14
1.000	1.000	118.1	0.000	0.000	Ug2_741_743_L_0					
49 D	24.03	1.7413E-04	56.57	44.73	96.00	49.66	UL-RL	2.2929E+04	-9.600	75.43
1.000	1.000	120.2	0.000	0.000	Ug2_741_743_L_0					
50 D	24.48	1.3142E-04	58.29	44.67	98.00	50.64	UL-RL	2.2929E+04	-9.800	77.71
1.000	1.000	122.4	0.000	0.000	Ug2_741_743_L_0					
51 D	24.95	9.4513E-05	60.00	44.75	100.00	51.63	UL-RL	2.2929E+04	-10.000	80.00
1.000	1.000	124.7	0.000	0.000	Ug2_741_743_L_0					
52 D	25.45	6.2466E-05	61.71	44.94	102.0	52.61	UL-RL	2.2929E+04	-10.200	82.29
1.000	1.000	127.2	0.000	0.000	Ug2_741_743_L_0					
53 D	26.05	3.4396E-05	63.43	45.69	104.0	53.60	UL-RL	2.6507E+04	-10.400	84.57
1.000	1.000	130.3	0.000	0.000	Ug3_740_742_L_0					
54 D	26.56	9.4902E-06	65.14	45.96	106.0	54.58	UL-RL	2.6507E+04	-10.600	86.86
1.000	1.000	132.8	0.000	0.000	Ug3_740_742_L_0					
55 D	27.09	-1.2973E-05	66.86	46.29	108.0	55.57	UL-RL	2.6507E+04	-10.800	89.14
1.000	1.000	135.4	0.000	0.000	Ug3_740_742_L_0					
56 D	27.62	-3.3626E-05	68.57	46.67	110.0	56.55	UL-RL	2.6507E+04	-11.000	91.43
1.000	1.000	138.1	0.000	0.000	Ug3_740_742_L_0					
57 D	28.16	-5.3010E-05	70.29	47.08	112.0	57.54	UL-RL	2.6507E+04	-11.200	93.71
1.000	1.000	140.8	0.000	0.000	Ug3_740_742_L_0					
58 D	28.70	-7.1571E-05	72.00	47.51	114.0	58.52	UL-RL	2.6507E+04	-11.400	96.00
1.000	1.000	143.5	0.000	0.000	Ug3_740_742_L_0					
59 D	29.25	-8.9659E-05	73.71	47.96	116.0	59.51	UL-RL	2.6507E+04	-11.600	98.29
1.000	1.000	146.2	0.000	0.000	Ug3_740_742_L_0					
60 D	29.80	-1.0753E-04	75.43	48.41	118.0	60.50	UL-RL	2.6507E+04	-11.800	100.6
1.000	1.000	149.0	0.000	0.000	Ug3_740_742_L_0					
61 D	15.17	-1.2533E-04	77.14	48.86	120.0	61.48	UL-RL	2.6507E+04	-12.000	102.9
1.000	1.000	151.7	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63   |
|          Exe Time :24 May 2018   18:17:33   |
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New Project
  
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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 4.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-3.85915E-10	3.85915E-10	-3.81697E-11	3.64663E-11
2	0.34286	-0.34286	2.73227E-11	6.85714E-02
3	1.0286	-1.0286	-6.85714E-02	0.27429
4	2.0571	-2.0571	-0.27429	0.68571
5	3.4286	-3.4286	-0.68571	1.3714
6	5.1429	-5.1429	-1.3714	2.4000
7	7.2000	-7.2000	-2.4000	3.8400
8	9.6000	-9.6000	-3.8400	5.7600
9	12.343	-12.343	-5.7600	8.2286
10	15.429	-15.429	-8.2286	11.314
11	18.857	-18.857	-11.314	15.086
12	22.633	-22.633	-15.086	19.612
13	26.941	-26.941	-19.612	25.000
14	31.771	-31.771	-25.000	31.355
15	38.282	-38.282	-31.355	39.011
16	45.267	-45.267	-39.011	48.065
17	50.098	-50.098	-48.065	58.084
18	52.788	-52.788	-58.084	68.642
19	53.324	-53.324	-68.642	79.307
20	51.718	-51.718	-79.307	89.650
21	47.968	-47.968	-89.650	99.244
22	42.064	-42.064	-99.244	107.66
23	35.026	-35.026	-107.66	114.66
24	28.530	-28.530	-114.66	120.37
25	22.555	-22.555	-120.37	124.88
26	17.071	-17.071	-124.88	128.29
27	12.040	-12.040	-128.29	130.70
28	7.4371	-7.4371	-130.70	132.19
29	3.2229	-3.2229	-132.19	132.83
30	-0.62804	0.62804	-132.83	132.71
31	-4.1486	4.1486	-132.71	131.88
32	-7.3783	7.3783	-131.88	130.40
33	-10.343	10.343	-130.40	128.33
34	-13.080	13.080	-128.33	125.72
35	-15.615	15.615	-125.72	122.59
36	-17.979	17.979	-122.59	119.00
37	-20.206	20.206	-119.00	114.96
38	-22.320	22.320	-114.96	110.49
39	-24.353	24.353	-110.49	105.62
40	-26.326	26.326	-105.62	100.36
41	-28.264	28.264	-100.36	94.705
42	-30.196	30.196	-94.705	88.665
43	-32.139	32.139	-88.665	82.238
44	-34.118	34.118	-82.238	75.414
45	-35.722	35.722	-75.414	68.270
46	-36.506	36.506	-68.270	60.969
47	-36.467	36.467	-60.969	53.675
48	-35.727	35.727	-53.675	46.530
49	-34.393	34.393	-46.530	39.651
50	-32.559	32.559	-39.651	33.140
51	-30.303	30.303	-33.140	27.079
52	-27.691	27.691	-27.079	21.541
53	-24.715	24.715	-21.541	16.598
54	-21.651	21.651	-16.598	12.268
55	-18.497	18.497	-12.268	8.5683
56	-15.269	15.269	-8.5683	5.5145
57	-11.976	11.976	-5.5145	3.1194
58	-8.6237	8.6237	-3.1194	1.3947
59	-5.2169	5.2169	-1.3947	0.35134

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

60 -1.7566      1.7566      -0.35134      -1.25149E-12

ITER      0  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM= 983.7    REMNOR=0.3659E-19  RATIO =0.9146E-01  TOLER =0.1000E-03  NOT CONVERGED
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.9146E-01 RATIOOR= 0.000
           MAX UN= 12.95    IEQ= 43 NODE      22 DOF   1  Y-DISPL.F
           MIN UN=-.1714    IEQ= 31 NODE      16 DOF   1  Y-DISPL.F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      2  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM= 328.4    REMNOR=0.1827E-19  RATIO =0.5284E-01  TOLER =0.1000E-03  NOT CONVERGED
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.5284E-01 RATIOOR= 0.000
           MAX UN= 4.639    IEQ= 53 NODE      27 DOF   1  Y-DISPL.F
           MIN UN=-.4401E-10 IEQ= 4 NODE       2 DOF   2  X-ROT. F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      3  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM= 584.0    REMNOR=0.6870E-18  RATIO =0.7047E-01  TOLER =0.1000E-03  NOT CONVERGED
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.7047E-01 RATIOOR= 0.000
           MAX UN= 13.32    IEQ= 91 NODE      46 DOF   1  Y-DISPL.F
           MIN UN=-5.111    IEQ= 119 NODE     60 DOF   1  Y-DISPL.F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      4  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM= 31.82    REMNOR=0.7207E-18  RATIO =0.1645E-01  TOLER =0.1000E-03  NOT CONVERGED
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.1645E-01 RATIOOR= 0.000
           MAX UN= 2.350    IEQ= 63 NODE      32 DOF   1  Y-DISPL.F
           MIN UN=-3.867    IEQ= 117 NODE     59 DOF   1  Y-DISPL.F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      5  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM=0.3977    REMNOR=0.2419E-18  RATIO =0.1839E-02  TOLER =0.1000E-03  NOT CONVERGED
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.1839E-02 RATIOOR= 0.000
           MAX UN=0.4767    IEQ= 101 NODE     51 DOF   1  Y-DISPL.F
           MIN UN=-.3486    IEQ= 111 NODE     56 DOF   1  Y-DISPL.F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      6  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM=0.3883E-04 REMNOR=0.3423E-18  RATIO =0.1817E-04  TOLER =0.1000E-03  CONVERGED !
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.1817E-04 RATIOOR= 0.000
           MAX UN=0.3951E-08 IEQ= 11 NODE       6 DOF   1  Y-DISPL.F
           MIN UN=-.5713E-02 IEQ= 105 NODE     53 DOF   1  Y-DISPL.F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|          NewProject.BaseDesignSection_28.Nominal_63      |
|          Exe Time :24 May 2018      18:17:33             |
+-----+

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New Project

SOLUTION REACHED USING 6 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 5 (AT TIME 5.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	6.1700488E-02	-7.7866556E-03	
2	6.0143157E-02	-7.7866556E-03	
3	5.8585827E-02	-7.7866322E-03	
4	5.7028510E-02	-7.7865152E-03	
5	5.5471235E-02	-7.7861875E-03	
6	5.3914060E-02	-7.7854853E-03	
7	5.2357080E-02	-7.7841980E-03	
8	5.0800437E-02	-7.7820681E-03	
9	4.9244330E-02	-7.7787913E-03	
10	4.7689021E-02	-7.7740165E-03	
11	4.6134849E-02	-7.7673459E-03	
12	4.4582238E-02	-7.7583347E-03	
13	4.3031705E-02	-7.7464839E-03	
14	4.1483872E-02	-7.7312258E-03	
15	3.9939484E-02	-7.7119173E-03	
16	3.8399428E-02	-7.6877596E-03	
17	3.6864760E-02	-7.6578013E-03	
18	3.5336755E-02	-7.6210255E-03	
19	3.3816876E-02	-7.5763494E-03	
20	3.2306818E-02	-7.5226247E-03	
21	3.0808518E-02	-7.4586375E-03	
22	2.9324140E-02	-7.3831071E-03	
23	2.7856122E-02	-7.2948700E-03	
24	2.6407097E-02	-7.1930621E-03	
25	2.4979840E-02	-7.0771181E-03	
26	2.3577210E-02	-6.9467721E-03	
27	2.2202096E-02	-6.8020574E-03	
28	2.0857330E-02	-6.6433045E-03	
29	1.9545668E-02	-6.4711453E-03	
30	1.8269703E-02	-6.2865103E-03	
31	1.7031813E-02	-6.0906293E-03	
32	1.5834105E-02	-5.8850320E-03	
33	1.4678332E-02	-5.6715443E-03	
34	1.3565873E-02	-5.4522716E-03	
35	1.2497666E-02	-5.2293598E-03	
36	1.1474240E-02	-5.0047891E-03	
37	1.0495745E-02	-4.7803831E-03	
38	9.5619690E-03	-4.5578138E-03	
39	8.6723943E-03	-4.3386171E-03	
40	7.8262037E-03	-4.1241969E-03	
41	7.0223117E-03	-3.9158345E-03	
42	6.2593883E-03	-3.7146967E-03	
43	5.5358807E-03	-3.5218442E-03	
44	4.8500341E-03	-3.3382389E-03	
45	4.1999138E-03	-3.1647526E-03	
46	3.5834095E-03	-3.0021699E-03	
47	2.9982716E-03	-2.8512001E-03	
48	2.4421128E-03	-2.7124798E-03	
49	1.9124250E-03	-2.5865797E-03	
50	1.4065948E-03	-2.4740097E-03	
51	9.2190572E-04	-2.3752094E-03	
52	4.5555782E-04	-2.2905333E-03	
53	4.7529268E-06	-2.2201095E-03	
54	-4.3338659E-04	-2.1635345E-03	
55	-8.6152423E-04	-2.1199096E-03	
56	-1.2821294E-03	-2.0879694E-03	
57	-1.6973847E-03	-2.0661202E-03	
58	-2.1091303E-03	-2.0525633E-03	
59	-2.5188356E-03	-2.0453895E-03	
60	-2.9275771E-03	-2.0425800E-03	
61	-3.3360371E-03	-2.0420072E-03	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63    |
|          Exe Time :24 May 2018      18:17:33           |
+-----+
New Project
    
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STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 5.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1 D	0.000	-6.1700E-02	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3200	-6.0143E-02	2.401	0.000	2.401	1.341	ACTIVE	0.000	-0.2000	1.600	
1.000	1.000	1.600	0.000	0.000	Ug1_2_8_L_0						
3 D	0.6400	-5.8586E-02	4.808	0.000	4.808	2.671	ACTIVE	0.000	-0.4000	3.200	
1.000	1.000	3.200	0.000	0.000	Ug1_2_8_L_0						
4 D	0.9600	-5.7029E-02	7.226	0.000	7.226	3.978	ACTIVE	0.000	-0.6000	4.800	
1.000	1.000	4.800	0.000	0.000	Ug1_2_8_L_0						
5 D	1.280	-5.5471E-02	9.657	0.000	9.657	5.256	ACTIVE	0.000	-0.8000	6.400	
1.000	1.000	6.400	0.000	0.000	Ug1_2_8_L_0						
6 D	1.600	-5.3914E-02	12.10	0.000	12.10	6.501	ACTIVE	0.000	-1.000	8.000	
1.000	1.000	8.000	0.000	0.000	Ug1_2_8_L_0						
7 D	1.920	-5.2357E-02	14.56	0.000	14.56	7.714	ACTIVE	0.000	-1.200	9.600	
1.000	1.000	9.600	0.000	0.000	Ug1_2_8_L_0						
8 D	2.240	-5.0800E-02	17.02	0.000	17.02	8.897	ACTIVE	0.000	-1.400	11.20	
1.000	1.000	11.20	0.000	0.000	Ug1_2_8_L_0						
9 D	2.560	-4.9244E-02	19.50	0.000	19.50	10.05	ACTIVE	0.000	-1.600	12.80	
1.000	1.000	12.80	0.000	0.000	Ug1_2_8_L_0						
10 D	2.880	-4.7689E-02	21.97	0.000	21.97	11.19	ACTIVE	0.000	-1.800	14.40	
1.000	1.000	14.40	0.000	0.000	Ug1_2_8_L_0						
11 D	3.200	-4.6135E-02	24.45	0.000	24.45	12.30	ACTIVE	0.000	-2.000	16.00	
1.000	1.000	16.00	0.000	0.000	Ug1_2_8_L_0						
12 D	3.622	-4.4582E-02	26.93	0.5120	26.93	13.40	ACTIVE	0.000	-2.200	17.60	
1.000	1.000	18.11	0.000	0.000	Ug1_2_8_L_0						
13 D	4.141	-4.3032E-02	29.47	1.503	29.47	14.48	ACTIVE	0.000	-2.400	19.20	
1.000	1.000	20.70	0.000	0.000	Ug1_2_8_L_0						
14 D	4.649	-4.1484E-02	31.89	2.444	31.89	15.56	ACTIVE	0.000	-2.600	20.80	
1.000	1.000	23.24	0.000	0.000	Ug1_2_8_L_0						
15 D	6.274	-3.9939E-02	34.51	8.972	34.51	16.62	ACTIVE	0.000	-2.800	22.40	
1.000	1.000	31.37	0.000	0.000	Ug2_741_743_L_0						
16 D	6.731	-3.8399E-02	37.14	9.656	37.14	17.68	ACTIVE	0.000	-3.000	24.00	
1.000	1.000	33.66	0.000	0.000	Ug2_741_743_L_0						
17 D	7.174	-3.6865E-02	39.50	10.27	39.50	18.73	ACTIVE	0.000	-3.200	25.60	
1.000	1.000	35.87	0.000	0.000	Ug2_741_743_L_0						
18 D	7.629	-3.5337E-02	42.10	10.95	42.10	19.78	ACTIVE	0.000	-3.400	27.20	
1.000	1.000	38.15	0.000	0.000	Ug2_741_743_L_0						
19 D	8.072	-3.3817E-02	44.46	11.56	44.46	20.83	ACTIVE	0.000	-3.600	28.80	
1.000	1.000	40.36	0.000	0.000	Ug2_741_743_L_0						
20 D	8.526	-3.2307E-02	47.03	12.23	47.03	21.87	ACTIVE	0.000	-3.800	30.40	
1.000	1.000	42.63	0.000	0.000	Ug2_741_743_L_0						
21 D	8.979	-3.0809E-02	49.59	12.89	49.59	22.91	ACTIVE	0.000	-4.000	32.00	
1.000	1.000	44.89	0.000	0.000	Ug2_741_743_L_0						
22 D	9.421	-2.9324E-02	51.95	13.51	51.95	23.95	ACTIVE	0.000	-4.200	33.60	
1.000	1.000	47.11	0.000	0.000	Ug2_741_743_L_0						
23 D	9.873	-2.7856E-02	54.49	14.17	54.49	24.98	ACTIVE	0.000	-4.400	35.20	
1.000	1.000	49.37	0.000	0.000	Ug2_741_743_L_0						
24 D	10.32	-2.6407E-02	56.85	14.78	56.85	26.02	ACTIVE	0.000	-4.600	36.80	
1.000	1.000	51.58	0.000	0.000	Ug2_741_743_L_0						
25 D	10.77	-2.4980E-02	59.38	15.44	59.38	27.05	ACTIVE	0.000	-4.800	38.40	
1.000	1.000	53.84	0.000	0.000	Ug2_741_743_L_0						
26 D	11.22	-2.3577E-02	61.89	16.09	61.89	28.08	ACTIVE	0.000	-5.000	40.00	
1.000	1.000	56.09	0.000	0.000	Ug2_741_743_L_0						
27 D	11.66	-2.2202E-02	64.25	16.71	64.25	29.11	ACTIVE	0.000	-5.200	41.60	
1.000	1.000	58.31	0.000	0.000	Ug2_741_743_L_0						
28 D	12.11	-2.0857E-02	66.76	17.36	66.76	30.14	ACTIVE	0.000	-5.400	43.20	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	60.56	0.000	0.000	Ug2_741_743_L_0					
29 D	12.55	-1.9546E-02	69.12	17.97	69.12	31.17	ACTIVE	0.000	-5.600	44.80
1.000	1.000	62.77	0.000	0.000	Ug2_741_743_L_0					
30 D	13.00	-1.8270E-02	71.62	18.62	71.62	32.20	ACTIVE	0.000	-5.800	46.40
1.000	1.000	65.02	0.000	0.000	Ug2_741_743_L_0					
31 D	13.45	-1.7032E-02	74.11	19.27	74.11	33.23	ACTIVE	0.000	-6.000	48.00
1.000	1.000	67.27	0.000	0.000	Ug2_741_743_L_0					
32 D	13.90	-1.5834E-02	76.47	19.88	76.47	34.26	ACTIVE	0.000	-6.200	49.60
1.000	1.000	69.48	0.000	0.000	Ug2_741_743_L_0					
33 D	14.35	-1.4678E-02	78.96	20.53	78.96	35.29	ACTIVE	0.000	-6.400	51.20
1.000	1.000	71.73	0.000	0.000	Ug2_741_743_L_0					
34 D	14.79	-1.3566E-02	81.32	21.14	81.32	36.32	ACTIVE	0.000	-6.600	52.80
1.000	1.000	73.94	0.000	0.000	Ug2_741_743_L_0					
35 D	15.24	-1.2498E-02	83.80	21.79	83.80	37.35	ACTIVE	0.000	-6.800	54.40
1.000	1.000	76.19	0.000	0.000	Ug2_741_743_L_0					
36 D	15.69	-1.1474E-02	86.27	22.43	86.27	38.38	ACTIVE	0.000	-7.000	56.00
1.000	1.000	78.43	0.000	0.000	Ug2_741_743_L_0					
37 D	16.13	-1.0496E-02	88.64	23.05	88.64	39.41	ACTIVE	0.000	-7.200	57.60
1.000	1.000	80.65	0.000	0.000	Ug2_741_743_L_0					
38 D	16.58	-9.5620E-03	91.11	23.69	91.11	40.44	ACTIVE	0.000	-7.400	59.20
1.000	1.000	82.89	0.000	0.000	Ug2_741_743_L_0					
39 D	17.02	-8.6724E-03	93.47	24.30	93.47	41.46	ACTIVE	0.000	-7.600	60.80
1.000	1.000	85.10	0.000	0.000	Ug2_741_743_L_0					
40 D	17.47	-7.8262E-03	95.94	24.94	95.94	42.49	ACTIVE	0.000	-7.800	62.40
1.000	1.000	87.34	0.000	0.000	Ug2_741_743_L_0					
41 D	17.92	-7.0223E-03	98.40	25.58	98.40	43.52	ACTIVE	0.000	-8.000	64.00
1.000	1.000	89.58	0.000	0.000	Ug2_741_743_L_0					
42 D	18.36	-6.2594E-03	100.8	26.20	100.8	44.55	ACTIVE	0.000	-8.200	65.60
1.000	1.000	91.80	0.000	0.000	Ug2_741_743_L_0					
43 D	18.81	-5.5359E-03	103.2	26.84	103.2	45.58	ACTIVE	0.000	-8.400	67.20
1.000	1.000	94.04	0.000	0.000	Ug2_741_743_L_0					
44 D	19.25	-4.8500E-03	105.6	27.45	105.6	46.60	ACTIVE	0.000	-8.600	68.80
1.000	1.000	96.25	0.000	0.000	Ug2_741_743_L_0					
45 D	19.70	-4.1999E-03	108.0	28.09	108.0	47.63	ACTIVE	0.000	-8.800	70.40
1.000	1.000	98.49	0.000	0.000	Ug2_741_743_L_0					
46 D	20.15	-3.5834E-03	110.5	28.73	110.5	48.66	ACTIVE	0.000	-9.000	72.00
1.000	1.000	100.7	0.000	0.000	Ug2_741_743_L_0					
47 D	20.59	-2.9983E-03	112.9	29.35	112.9	49.69	ACTIVE	0.000	-9.200	73.60
1.000	1.000	102.9	0.000	0.000	Ug2_741_743_L_0					
48 D	21.04	-2.4421E-03	115.3	29.98	115.3	50.72	ACTIVE	0.000	-9.400	75.20
1.000	1.000	105.2	0.000	0.000	Ug2_741_743_L_0					
49 D	21.48	-1.9124E-03	117.8	30.62	117.8	51.75	ACTIVE	0.000	-9.600	76.80
1.000	1.000	107.4	0.000	0.000	Ug2_741_743_L_0					
50 D	22.05	-1.4066E-03	120.1	31.86	120.1	52.77	UL-RL	3.3119E+04	-9.800	78.40
1.000	1.000	110.3	0.000	0.000	Ug2_741_743_L_0					
51 D	22.71	-9.2191E-04	122.6	33.54	122.6	53.80	UL-RL	3.3119E+04	-10.000	80.00
1.000	1.000	113.5	0.000	0.000	Ug2_741_743_L_0					
52 D	24.87	-4.5556E-04	125.0	42.75	125.0	55.77	UL-RL	3.3119E+04	-10.200	81.60
1.000	1.000	124.4	0.000	0.000	Ug2_741_743_L_0					
53 D	28.47	-4.7529E-06	127.4	59.13	127.4	59.18	UL-RL	2.8648E+04	-10.400	83.20
1.000	1.000	142.3	0.000	0.000	Ug3_740_742_L_0					
54 D	29.87	4.3339E-04	129.8	64.53	129.8	64.55	UL-RL	2.8648E+04	-10.600	84.80
1.000	1.000	149.3	0.000	0.000	Ug3_740_742_L_0					
55 D	31.24	8.6152E-04	132.2	69.82	132.2	69.82	V-C	9549.	-10.800	86.40
1.000	1.000	156.2	0.000	0.000	Ug3_740_742_L_0					
56 D	32.60	1.2821E-03	134.7	75.02	134.7	75.02	V-C	9549.	-11.000	88.00
1.000	1.000	163.0	0.000	0.000	Ug3_740_742_L_0					
57 D	33.95	1.6974E-03	137.0	80.16	137.0	80.16	V-C	9549.	-11.200	89.60
1.000	1.000	169.8	0.000	0.000	Ug3_740_742_L_0					
58 D	35.29	2.1091E-03	139.5	85.27	139.5	85.27	V-C	9549.	-11.400	91.20
1.000	1.000	176.5	0.000	0.000	Ug3_740_742_L_0					
59 D	36.63	2.5188E-03	141.9	90.36	141.9	90.36	V-C	9549.	-11.600	92.80
1.000	1.000	183.2	0.000	0.000	Ug3_740_742_L_0					
60 D	37.97	2.9276E-03	144.3	95.44	144.3	95.44	V-C	9549.	-11.800	94.40
1.000	1.000	189.8	0.000	0.000	Ug3_740_742_L_0					
61 D	19.65	3.3360E-03	146.7	100.5	146.7	100.5	V-C	9549.	-12.000	96.00
1.000	1.000	196.5	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.Nominal_63                                          |
|          Exe Time :24 May 2018          18:17:33                                          |
+-----+
New Project

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STRESS RESULTS FOR GROUP NO. 2

0_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 5.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * FACTOR	FORCE UFACTOR	DISPL-Y Peg	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P LAYER	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16	0.000	--	--	--	--	--	REMOVED	--	-3.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
17	0.000	--	--	--	--	--	REMOVED	--	-3.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
18	0.000	--	--	--	--	--	REMOVED	--	-3.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
19	0.000	--	--	--	--	--	REMOVED	--	-3.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
20	0.000	--	--	--	--	--	REMOVED	--	-3.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
21 D	0.000	3.0809E-02	0.000	0.000	40.00	53.91	PASSIVE	0.000	-4.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
22 D	2.492	2.9324E-02	1.600	10.06	42.00	64.69	PASSIVE	0.000	-4.200	2.400	
1.000	1.000	12.46	0.000	0.000	Ug2_741_743_L_0						
23 D	4.985	2.7856E-02	3.200	20.12	44.00	70.42	PASSIVE	0.000	-4.400	4.800	
1.000	1.000	24.92	0.000	0.000	Ug2_741_743_L_0						
24 D	7.477	2.6407E-02	4.800	30.19	46.00	67.72	PASSIVE	0.000	-4.600	7.200	
1.000	1.000	37.39	0.000	0.000	Ug2_741_743_L_0						
25 D	9.970	2.4980E-02	6.400	40.25	48.00	65.17	PASSIVE	0.000	-4.800	9.600	
1.000	1.000	49.85	0.000	0.000	Ug2_741_743_L_0						
26 D	12.46	2.3577E-02	8.000	50.31	50.00	62.77	PASSIVE	0.000	-5.000	12.00	
1.000	1.000	62.31	0.000	0.000	Ug2_741_743_L_0						
27 D	14.95	2.2202E-02	9.600	60.37	52.00	60.52	PASSIVE	0.000	-5.200	14.40	
1.000	1.000	74.77	0.000	0.000	Ug2_741_743_L_0						
28 D	17.45	2.0857E-02	11.20	70.44	54.00	70.44	PASSIVE	0.000	-5.400	16.80	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	87.24	0.000	0.000	Ug2_741_743_L_0					
29 D	19.94	1.9546E-02	12.80	80.50	56.00	80.50	PASSIVE	0.000	-5.600	19.20
1.000	1.000	99.70	0.000	0.000	Ug2_741_743_L_0					
30 D	22.43	1.8270E-02	14.40	90.56	58.00	90.56	PASSIVE	0.000	-5.800	21.60
1.000	1.000	112.2	0.000	0.000	Ug2_741_743_L_0					
31 D	24.92	1.7032E-02	16.00	100.6	60.00	100.6	PASSIVE	0.000	-6.000	24.00
1.000	1.000	124.6	0.000	0.000	Ug2_741_743_L_0					
32 D	27.42	1.5834E-02	17.60	110.7	62.00	110.7	PASSIVE	0.000	-6.200	26.40
1.000	1.000	137.1	0.000	0.000	Ug2_741_743_L_0					
33 D	29.60	1.4678E-02	19.20	119.2	64.00	119.2	V-C	5732.	-6.400	28.80
1.000	1.000	148.0	0.000	0.000	Ug2_741_743_L_0					
34 D	28.88	1.3566E-02	20.80	113.2	66.00	113.2	V-C	5732.	-6.600	31.20
1.000	1.000	144.4	0.000	0.000	Ug2_741_743_L_0					
35 D	28.22	1.2498E-02	22.40	107.5	68.00	107.5	V-C	5732.	-6.800	33.60
1.000	1.000	141.1	0.000	0.000	Ug2_741_743_L_0					
36 D	27.62	1.1474E-02	24.00	102.1	70.00	102.1	V-C	5732.	-7.000	36.00
1.000	1.000	138.1	0.000	0.000	Ug2_741_743_L_0					
37 D	27.08	1.0496E-02	25.60	97.02	72.00	97.02	V-C	5732.	-7.200	38.40
1.000	1.000	135.4	0.000	0.000	Ug2_741_743_L_0					
38 D	26.61	9.5620E-03	27.20	92.23	74.00	92.23	V-C	5732.	-7.400	40.80
1.000	1.000	133.0	0.000	0.000	Ug2_741_743_L_0					
39 D	26.19	8.6724E-03	28.80	87.73	76.00	87.73	V-C	5732.	-7.600	43.20
1.000	1.000	130.9	0.000	0.000	Ug2_741_743_L_0					
40 D	25.82	7.8262E-03	30.40	83.51	78.00	83.51	V-C	5732.	-7.800	45.60
1.000	1.000	129.1	0.000	0.000	Ug2_741_743_L_0					
41 D	25.52	7.0223E-03	32.00	79.58	80.00	79.58	V-C	5732.	-8.000	48.00
1.000	1.000	127.6	0.000	0.000	Ug2_741_743_L_0					
42 D	25.26	6.2594E-03	33.60	75.91	82.00	75.91	V-C	5732.	-8.200	50.40
1.000	1.000	126.3	0.000	0.000	Ug2_741_743_L_0					
43 D	25.06	5.5359E-03	35.20	72.49	84.00	72.49	V-C	5732.	-8.400	52.80
1.000	1.000	125.3	0.000	0.000	Ug2_741_743_L_0					
44 D	24.90	4.8500E-03	36.80	69.32	86.00	69.32	V-C	5732.	-8.600	55.20
1.000	1.000	124.5	0.000	0.000	Ug2_741_743_L_0					
45 D	24.80	4.1999E-03	38.40	66.39	88.00	66.39	V-C	5732.	-8.800	57.60
1.000	1.000	124.0	0.000	0.000	Ug2_741_743_L_0					
46 D	24.73	3.5834E-03	40.00	63.66	90.00	63.66	V-C	5732.	-9.000	60.00
1.000	1.000	123.7	0.000	0.000	Ug2_741_743_L_0					
47 D	24.71	2.9983E-03	41.60	61.14	92.00	61.14	V-C	5732.	-9.200	62.40
1.000	1.000	123.5	0.000	0.000	Ug2_741_743_L_0					
48 D	24.72	2.4421E-03	43.20	58.80	94.00	58.80	V-C	5732.	-9.400	64.80
1.000	1.000	123.6	0.000	0.000	Ug2_741_743_L_0					
49 D	24.77	1.9124E-03	44.80	56.63	96.00	56.63	V-C	5732.	-9.600	67.20
1.000	1.000	123.8	0.000	0.000	Ug2_741_743_L_0					
50 D	24.80	1.4066E-03	46.40	54.39	98.00	54.71	UL-RL	1.7196E+04	-9.800	69.60
1.000	1.000	124.0	0.000	0.000	Ug2_741_743_L_0					
51 D	24.83	9.2191E-04	48.00	52.14	100.00	53.00	UL-RL	1.7196E+04	-10.000	72.00
1.000	1.000	124.1	0.000	0.000	Ug2_741_743_L_0					
52 D	24.40	4.5556E-04	49.60	47.59	102.0	52.61	UL-RL	1.7196E+04	-10.200	74.40
1.000	1.000	122.0	0.000	0.000	Ug2_741_743_L_0					
53 D	23.56	4.7529E-06	51.20	40.98	104.0	53.60	UL-RL	1.9880E+04	-10.400	76.80
1.000	1.000	117.8	0.000	0.000	Ug3_740_742_L_0					
54 D	22.44	-4.3339E-04	52.80	33.01	106.0	54.58	UL-RL	1.9880E+04	-10.600	79.20
1.000	1.000	112.2	0.000	0.000	Ug3_740_742_L_0					
55 D	21.37	-8.6152E-04	54.40	25.26	108.0	55.57	UL-RL	1.9880E+04	-10.800	81.60
1.000	1.000	106.9	0.000	0.000	Ug3_740_742_L_0					
56 D	20.69	-1.2821E-03	56.00	19.43	110.0	56.55	ACTIVE	0.000	-11.000	84.00
1.000	1.000	103.4	0.000	0.000	Ug3_740_742_L_0					
57 D	21.28	-1.6974E-03	57.60	19.99	112.0	57.54	ACTIVE	0.000	-11.200	86.40
1.000	1.000	106.4	0.000	0.000	Ug3_740_742_L_0					
58 D	21.87	-2.1091E-03	59.20	20.54	114.0	58.52	ACTIVE	0.000	-11.400	88.80
1.000	1.000	109.3	0.000	0.000	Ug3_740_742_L_0					
59 D	22.46	-2.5188E-03	60.80	21.10	116.0	59.51	ACTIVE	0.000	-11.600	91.20
1.000	1.000	112.3	0.000	0.000	Ug3_740_742_L_0					
60 D	23.05	-2.9276E-03	62.40	21.65	118.0	60.50	ACTIVE	0.000	-11.800	93.60
1.000	1.000	115.3	0.000	0.000	Ug3_740_742_L_0					
61 D	11.82	-3.3360E-03	64.00	22.21	120.0	61.48	ACTIVE	0.000	-12.000	96.00
1.000	1.000	118.2	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63   |
|          Exe Time :24 May 2018   18:17:33             |
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New Project

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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 5.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	1.73453E-09	-1.73453E-09	1.73231E-10	3.78323E-10
2	0.32000	-0.32000	-1.65724E-10	6.40000E-02
3	0.96000	-0.96000	-6.40000E-02	0.25600
4	1.9200	-1.9200	-0.25600	0.64000
5	3.2000	-3.2000	-0.64000	1.2800
6	4.8000	-4.8000	-1.2800	2.2400
7	6.7200	-6.7200	-2.2400	3.5840
8	8.9600	-8.9600	-3.5840	5.3760
9	11.520	-11.520	-5.3760	7.6800
10	14.400	-14.400	-7.6800	10.560
11	17.600	-17.600	-10.560	14.080
12	21.222	-21.222	-14.080	18.324
13	25.363	-25.363	-18.324	23.397
14	30.012	-30.012	-23.397	29.399
15	36.286	-36.286	-29.399	36.657
16	43.017	-43.017	-36.657	45.260
17	50.191	-50.191	-45.260	55.299
18	57.821	-57.821	-55.299	66.863
19	65.892	-65.892	-66.863	80.041
20	74.418	-74.418	-80.041	94.925
21	83.397	-83.397	-94.925	111.60
22	90.326	-90.326	-111.60	129.67
23	95.214	-95.214	-129.67	148.71
24	98.053	-98.053	-148.71	168.32
25	98.850	-98.850	-168.32	188.09
26	97.606	-97.606	-188.09	207.61
27	94.313	-94.313	-207.61	226.48
28	88.977	-88.977	-226.48	244.27
29	81.591	-81.591	-244.27	260.59
30	72.163	-72.163	-260.59	275.02
31	60.692	-60.692	-275.02	287.16
32	47.171	-47.171	-287.16	296.59
33	31.921	-31.921	-296.59	302.98
34	17.832	-17.832	-302.98	306.55
35	4.8494	-4.8494	-306.55	307.52
36	-7.0860	7.0860	-307.52	306.10
37	-18.041	18.041	-306.10	302.49
38	-28.069	28.069	-302.49	296.88
39	-37.234	37.234	-296.88	289.43
40	-45.588	45.588	-289.43	280.31
41	-53.187	53.187	-280.31	269.67
42	-60.088	60.088	-269.67	257.66
43	-66.339	66.339	-257.66	244.39
44	-71.994	71.994	-244.39	229.99
45	-77.092	77.092	-229.99	214.57
46	-81.678	81.678	-214.57	198.24
47	-85.796	85.796	-198.24	181.08
48	-89.479	89.479	-181.08	163.18
49	-92.760	92.760	-163.18	144.63
50	-95.506	95.506	-144.63	125.53
51	-97.626	97.626	-125.53	106.00
52	-97.154	97.154	-106.00	86.572
53	-92.238	92.238	-86.572	68.125
54	-84.812	84.812	-68.125	51.162
55	-74.941	74.941	-51.162	36.174
56	-63.023	63.023	-36.174	23.570
57	-50.347	50.347	-23.570	13.500
58	-36.921	36.921	-13.500	6.1159
59	-22.748	22.748	-6.1159	1.5662

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

60 -7.8308 7.8308 -1.5662 2.35452E-12

ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4927E+06 RIMNOR=0.3578E+07
RENORM= 102.6 REMNOR=0.3423E-18 RATIO =0.1443E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 98.85 RMMAX = 307.5
RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
RDT =0.4927E+06 RDR =0.3578E+07
RATIOT=0.1443E-01 RATIO= 0.000
MAX UN=0.1878E-09 IEQ= 8 NODE 4 DOF 2 X-ROT.F
MIN UN=-2.916 IEQ= 41 NODE 21 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4927E+06 RIMNOR=0.3578E+07
RENORM=0.3493 REMNOR=0.3098E-18 RATIO =0.8421E-03 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 98.85 RMMAX = 307.5
RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
RDT =0.4927E+06 RDR =0.3578E+07
RATIOT=0.8421E-03 RATIO= 0.000
MAX UN=0.4813E-01 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
MIN UN=-.2645 IEQ= 111 NODE 56 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4927E+06 RIMNOR=0.3578E+07
RENORM=0.9606E-16 REMNOR=0.2474E-18 RATIO =0.1396E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 98.85 RMMAX = 307.5
RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
RDT =0.4927E+06 RDR =0.3578E+07
RATIOT=0.1396E-10 RATIO= 0.000
MAX UN=0.3920E-08 IEQ= 17 NODE 9 DOF 1 Y-DISPL.F
MIN UN=-.4253E-08 IEQ= 19 NODE 10 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63  |
|          Exe Time :24 May 2018  18:17:33  |
+-----+

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New Project

STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 6.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-6.1719E-02	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3077	-6.0156E-02	2.463	0.000	2.463	1.341	ACTIVE	0.000	-0.2000	1.538	
1.000	1.000	1.538	0.000	0.000	Ug1_2_8_L_0						
3 D	0.6154	-5.8593E-02	4.931	0.000	4.931	2.671	ACTIVE	0.000	-0.4000	3.077	
1.000	1.000	3.077	0.000	0.000	Ug1_2_8_L_0						
4 D	0.9339	-5.7030E-02	7.410	5.4357E-02	7.410	3.978	UL-RL	2.4005E+04	-0.6000	4.615	
1.000	1.000	4.670	0.000	0.000	Ug1_2_8_L_0						
5 D	1.274	-5.5467E-02	9.903	0.2168	9.903	5.256	UL-RL	2.4005E+04	-0.8000	6.154	
1.000	1.000	6.371	0.000	0.000	Ug1_2_8_L_0						
6 D	1.614	-5.3905E-02	12.41	0.3793	12.41	6.501	UL-RL	2.4005E+04	-1.000	7.692	
1.000	1.000	8.072	0.000	0.000	Ug1_2_8_L_0						
7 D	1.955	-5.2342E-02	14.93	0.5419	14.93	7.714	UL-RL	2.4005E+04	-1.200	9.231	
1.000	1.000	9.773	0.000	0.000	Ug1_2_8_L_0						
8 D	2.295	-5.0780E-02	17.45	0.7047	17.45	8.897	UL-RL	2.4005E+04	-1.400	10.77	
1.000	1.000	11.47	0.000	0.000	Ug1_2_8_L_0						
9 D	2.635	-4.9218E-02	19.99	0.8677	19.99	10.05	UL-RL	2.4005E+04	-1.600	12.31	
1.000	1.000	13.18	0.000	0.000	Ug1_2_8_L_0						
10 D	2.975	-4.7658E-02	22.53	1.031	22.53	11.19	UL-RL	2.4005E+04	-1.800	13.85	
1.000	1.000	14.88	0.000	0.000	Ug1_2_8_L_0						
11 D	3.316	-4.6098E-02	25.07	1.194	25.07	12.30	UL-RL	2.4005E+04	-2.000	15.38	
1.000	1.000	16.58	0.000	0.000	Ug1_2_8_L_0						
12 D	3.758	-4.4540E-02	27.61	1.869	27.61	13.40	UL-RL	2.4005E+04	-2.200	16.92	
1.000	1.000	18.79	0.000	0.000	Ug1_2_8_L_0						
13 D	4.297	-4.2984E-02	30.21	3.023	30.21	14.48	UL-RL	2.4005E+04	-2.400	18.46	
1.000	1.000	21.48	0.000	0.000	Ug1_2_8_L_0						
14 D	4.825	-4.1430E-02	32.69	4.126	32.69	15.56	UL-RL	2.4005E+04	-2.600	20.00	
1.000	1.000	24.13	0.000	0.000	Ug1_2_8_L_0						
15 D	6.708	-3.9881E-02	35.37	12.00	35.37	16.62	UL-RL	4.4159E+04	-2.800	21.54	
1.000	1.000	33.54	0.000	0.000	Ug2_741_743_L_0						
16 D	7.206	-3.8335E-02	38.06	12.95	38.06	17.68	UL-RL	4.4159E+04	-3.000	23.08	
1.000	1.000	36.03	0.000	0.000	Ug2_741_743_L_0						
17 D	7.689	-3.6795E-02	40.48	13.83	40.48	18.73	UL-RL	4.4159E+04	-3.200	24.62	
1.000	1.000	38.44	0.000	0.000	Ug2_741_743_L_0						
18 D	8.183	-3.5262E-02	43.14	14.76	43.14	19.78	UL-RL	4.4159E+04	-3.400	26.15	
1.000	1.000	40.91	0.000	0.000	Ug2_741_743_L_0						
19 D	8.663	-3.3737E-02	45.57	15.62	45.57	20.83	UL-RL	4.4159E+04	-3.600	27.69	
1.000	1.000	43.31	0.000	0.000	Ug2_741_743_L_0						
20 D	9.151	-3.2223E-02	48.20	16.53	48.20	21.87	UL-RL	4.4159E+04	-3.800	29.23	
1.000	1.000	45.76	0.000	0.000	Ug2_741_743_L_0						
21 D	9.636	-3.0720E-02	50.82	17.41	50.82	22.91	UL-RL	4.4159E+04	-4.000	30.77	
1.000	1.000	48.18	0.000	0.000	Ug2_741_743_L_0						
22 D	10.11	-2.9232E-02	53.24	18.23	53.24	23.95	UL-RL	4.4159E+04	-4.200	32.31	
1.000	1.000	50.54	0.000	0.000	Ug2_741_743_L_0						
23 D	10.58	-2.7760E-02	55.84	19.08	55.84	24.98	UL-RL	4.4159E+04	-4.400	33.85	
1.000	1.000	52.92	0.000	0.000	Ug2_741_743_L_0						
24 D	11.05	-2.6308E-02	58.26	19.86	58.26	26.02	UL-RL	4.4159E+04	-4.600	35.38	
1.000	1.000	55.25	0.000	0.000	Ug2_741_743_L_0						
25 D	11.52	-2.4878E-02	60.85	20.68	60.85	27.05	UL-RL	4.4159E+04	-4.800	36.92	
1.000	1.000	57.61	0.000	0.000	Ug2_741_743_L_0						
26 D	11.99	-2.3472E-02	63.43	21.49	63.43	28.08	UL-RL	4.4159E+04	-5.000	38.46	
1.000	1.000	59.95	0.000	0.000	Ug2_741_743_L_0						
27 D	12.45	-2.2095E-02	65.85	22.24	65.85	29.11	UL-RL	4.4159E+04	-5.200	40.00	
1.000	1.000	62.24	0.000	0.000	Ug2_741_743_L_0						
28 D	12.91	-2.0748E-02	68.42	23.02	68.42	30.14	UL-RL	4.4159E+04	-5.400	41.54	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	64.56	0.000	0.000	Ug2_741_743_L_0					
29 D	13.37	-1.9434E-02	70.84	23.75	70.84	31.17	UL-RL	4.4159E+04	-5.600	43.08
1.000	1.000	66.83	0.000	0.000	Ug2_741_743_L_0					
30 D	13.83	-1.8156E-02	73.40	24.51	73.40	32.20	UL-RL	4.4159E+04	-5.800	44.62
1.000	1.000	69.13	0.000	0.000	Ug2_741_743_L_0					
31 D	14.28	-1.6917E-02	75.96	25.27	75.96	33.23	UL-RL	4.4159E+04	-6.000	46.15
1.000	1.000	71.42	0.000	0.000	Ug2_741_743_L_0					
32 D	14.73	-1.5718E-02	78.38	25.98	78.38	34.26	UL-RL	4.4159E+04	-6.200	47.69
1.000	1.000	73.67	0.000	0.000	Ug2_741_743_L_0					
33 D	15.19	-1.4561E-02	80.93	26.71	80.93	35.29	UL-RL	4.4159E+04	-6.400	49.23
1.000	1.000	75.95	0.000	0.000	Ug2_741_743_L_0					
34 D	15.64	-1.3447E-02	83.35	27.41	83.35	36.32	UL-RL	4.4159E+04	-6.600	50.77
1.000	1.000	78.18	0.000	0.000	Ug2_741_743_L_0					
35 D	16.09	-1.2377E-02	85.89	28.14	85.89	37.35	UL-RL	4.4159E+04	-6.800	52.31
1.000	1.000	80.45	0.000	0.000	Ug2_741_743_L_0					
36 D	16.54	-1.1353E-02	88.43	28.87	88.43	38.38	UL-RL	4.4159E+04	-7.000	53.85
1.000	1.000	82.71	0.000	0.000	Ug2_741_743_L_0					
37 D	16.99	-1.0373E-02	90.85	29.56	90.85	39.41	UL-RL	4.4159E+04	-7.200	55.38
1.000	1.000	84.94	0.000	0.000	Ug2_741_743_L_0					
38 D	17.44	-9.4386E-03	93.38	30.28	93.38	40.44	UL-RL	4.4159E+04	-7.400	56.92
1.000	1.000	87.20	0.000	0.000	Ug2_741_743_L_0					
39 D	17.89	-8.5480E-03	95.81	30.96	95.81	41.46	UL-RL	4.4159E+04	-7.600	58.46
1.000	1.000	89.43	0.000	0.000	Ug2_741_743_L_0					
40 D	18.34	-7.7008E-03	98.34	31.68	98.34	42.49	UL-RL	4.4159E+04	-7.800	60.00
1.000	1.000	91.68	0.000	0.000	Ug2_741_743_L_0					
41 D	18.79	-6.8959E-03	100.9	32.40	100.9	43.52	UL-RL	4.4159E+04	-8.000	61.54
1.000	1.000	93.94	0.000	0.000	Ug2_741_743_L_0					
42 D	19.23	-6.1319E-03	103.3	33.09	103.3	44.55	UL-RL	4.4159E+04	-8.200	63.08
1.000	1.000	96.17	0.000	0.000	Ug2_741_743_L_0					
43 D	19.69	-5.4073E-03	105.8	33.81	105.8	45.58	UL-RL	4.4159E+04	-8.400	64.62
1.000	1.000	98.43	0.000	0.000	Ug2_741_743_L_0					
44 D	20.13	-4.7202E-03	108.2	34.51	108.2	46.60	UL-RL	4.4159E+04	-8.600	66.15
1.000	1.000	100.7	0.000	0.000	Ug2_741_743_L_0					
45 D	20.59	-4.0688E-03	110.8	35.24	110.8	47.63	UL-RL	4.4159E+04	-8.800	67.69
1.000	1.000	102.9	0.000	0.000	Ug2_741_743_L_0					
46 D	21.04	-3.4509E-03	113.3	35.97	113.3	48.66	UL-RL	4.4159E+04	-9.000	69.23
1.000	1.000	105.2	0.000	0.000	Ug2_741_743_L_0					
47 D	21.49	-2.8643E-03	115.7	36.68	115.7	49.69	UL-RL	4.4159E+04	-9.200	70.77
1.000	1.000	107.4	0.000	0.000	Ug2_741_743_L_0					
48 D	21.95	-2.3065E-03	118.2	37.42	118.2	50.72	UL-RL	4.4159E+04	-9.400	72.31
1.000	1.000	109.7	0.000	0.000	Ug2_741_743_L_0					
49 D	22.40	-1.7750E-03	120.7	38.17	120.7	51.75	UL-RL	4.4159E+04	-9.600	73.85
1.000	1.000	112.0	0.000	0.000	Ug2_741_743_L_0					
50 D	22.98	-1.2672E-03	123.2	39.52	123.2	52.77	UL-RL	4.4159E+04	-9.800	75.38
1.000	1.000	114.9	0.000	0.000	Ug2_741_743_L_0					
51 D	23.65	-7.8045E-04	125.7	41.33	125.7	53.80	UL-RL	4.4159E+04	-10.000	76.92
1.000	1.000	118.2	0.000	0.000	Ug2_741_743_L_0					
52 D	25.83	-3.1184E-04	128.1	50.67	128.1	55.77	UL-RL	4.4159E+04	-10.200	78.46
1.000	1.000	129.1	0.000	0.000	Ug2_741_743_L_0					
53 D	28.52	1.4139E-04	130.6	62.59	130.6	62.59	V-C	1.2732E+04	-10.400	80.00
1.000	1.000	142.6	0.000	0.000	Ug3_740_742_L_0					
54 D	29.92	5.8210E-04	133.1	68.05	133.1	68.05	V-C	1.2732E+04	-10.600	81.54
1.000	1.000	149.6	0.000	0.000	Ug3_740_742_L_0					
55 D	31.30	1.0129E-03	135.5	73.41	135.5	73.41	V-C	1.2732E+04	-10.800	83.08
1.000	1.000	156.5	0.000	0.000	Ug3_740_742_L_0					
56 D	32.66	1.4364E-03	138.0	78.68	138.0	78.68	V-C	1.2732E+04	-11.000	84.62
1.000	1.000	163.3	0.000	0.000	Ug3_740_742_L_0					
57 D	34.01	1.8545E-03	140.5	83.89	140.5	83.89	V-C	1.2732E+04	-11.200	86.15
1.000	1.000	170.0	0.000	0.000	Ug3_740_742_L_0					
58 D	35.35	2.2691E-03	143.0	89.06	143.0	89.06	V-C	1.2732E+04	-11.400	87.69
1.000	1.000	176.8	0.000	0.000	Ug3_740_742_L_0					
59 D	36.69	2.6818E-03	145.5	94.22	145.5	94.22	V-C	1.2732E+04	-11.600	89.23
1.000	1.000	183.5	0.000	0.000	Ug3_740_742_L_0					
60 D	38.03	3.0935E-03	147.9	99.37	147.9	99.37	V-C	1.2732E+04	-11.800	90.77
1.000	1.000	190.1	0.000	0.000	Ug3_740_742_L_0					
61 D	19.68	3.5049E-03	150.4	104.5	150.4	104.5	V-C	1.2732E+04	-12.000	92.31
1.000	1.000	196.8	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63   |
|          Exe Time :24 May 2018   18:17:33   |
+-----+
New Project
  
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STRESS RESULTS FOR GROUP NO. 2

0_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 6.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16 D	0.000	3.8335E-02	0.000	0.000	0.000	0.000	ACTIVE	0.000	-3.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
17 D	0.1841	3.6795E-02	3.900	0.9204	3.900	1.950	ACTIVE	0.000	-3.200	0.000	
1.000	1.000	0.9204	0.000	0.000	Ug2_741_743_L_0						
18 D	0.4381	3.5262E-02	7.800	2.191	7.800	3.900	UL-RL	2.2929E+04	-3.400	0.000	
1.000	1.000	2.191	0.000	0.000	Ug2_741_743_L_0						
19 D	0.8057	3.3737E-02	11.70	4.028	11.70	5.850	UL-RL	2.2929E+04	-3.600	0.000	
1.000	1.000	4.028	0.000	0.000	Ug2_741_743_L_0						
20 D	1.175	3.2223E-02	15.60	5.873	15.60	7.800	UL-RL	2.2929E+04	-3.800	0.000	
1.000	1.000	5.873	0.000	0.000	Ug2_741_743_L_0						
21 D	2.388	3.0720E-02	19.50	11.94	40.00	53.91	UL-RL	2.2929E+04	-4.000	0.000	
1.000	1.000	11.94	0.000	0.000	Ug2_741_743_L_0						
22 D	3.905	2.9232E-02	23.40	19.52	42.00	64.69	UL-RL	2.2929E+04	-4.200	0.000	
1.000	1.000	19.52	0.000	0.000	Ug2_741_743_L_0						
23 D	5.865	2.7760E-02	27.30	29.32	44.00	70.42	UL-RL	2.2929E+04	-4.400	0.000	
1.000	1.000	29.32	0.000	0.000	Ug2_741_743_L_0						
24 D	8.059	2.6308E-02	30.02	39.07	46.00	67.72	UL-RL	2.2929E+04	-4.600	1.231	
1.000	1.000	40.30	0.000	0.000	Ug2_741_743_L_0						
25 D	10.46	2.4878E-02	31.56	48.61	48.00	65.17	UL-RL	2.2929E+04	-4.800	3.692	
1.000	1.000	52.30	0.000	0.000	Ug2_741_743_L_0						
26 D	12.88	2.3472E-02	33.10	58.25	50.00	62.77	UL-RL	2.2929E+04	-5.000	6.154	
1.000	1.000	64.40	0.000	0.000	Ug2_741_743_L_0						
27 D	15.81	2.2095E-02	34.63	70.45	52.00	72.91	UL-RL	2.2929E+04	-5.200	8.615	
1.000	1.000	79.07	0.000	0.000	Ug2_741_743_L_0						
28 D	18.30	2.0748E-02	36.17	80.41	54.00	82.92	UL-RL	2.2929E+04	-5.400	11.08	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	91.49	0.000	0.000	Ug2_741_743_L_0					
29 D	20.79	1.9434E-02	37.71	90.40	56.00	92.95	UL-RL	2.2929E+04	-5.600	13.54
1.000	1.000	103.9	0.000	0.000	Ug2_741_743_L_0					
30 D	23.28	1.8156E-02	39.25	100.4	58.00	103.0	UL-RL	2.2929E+04	-5.800	16.00
1.000	1.000	116.4	0.000	0.000	Ug2_741_743_L_0					
31 D	25.77	1.6917E-02	40.79	110.4	60.00	113.0	UL-RL	2.2929E+04	-6.000	18.46
1.000	1.000	128.8	0.000	0.000	Ug2_741_743_L_0					
32 D	28.26	1.5718E-02	42.33	120.4	62.00	123.0	UL-RL	2.2929E+04	-6.200	20.92
1.000	1.000	141.3	0.000	0.000	Ug2_741_743_L_0					
33 D	30.44	1.4561E-02	43.87	128.8	64.00	131.5	UL-RL	2.2929E+04	-6.400	23.38
1.000	1.000	152.2	0.000	0.000	Ug2_741_743_L_0					
34 D	29.72	1.3447E-02	45.40	122.8	66.00	125.5	UL-RL	2.2929E+04	-6.600	25.85
1.000	1.000	148.6	0.000	0.000	Ug2_741_743_L_0					
35 D	29.06	1.2377E-02	46.94	117.0	68.00	119.8	UL-RL	2.2929E+04	-6.800	28.31
1.000	1.000	145.3	0.000	0.000	Ug2_741_743_L_0					
36 D	28.47	1.1353E-02	48.48	111.6	70.00	114.3	UL-RL	2.2929E+04	-7.000	30.77
1.000	1.000	142.3	0.000	0.000	Ug2_741_743_L_0					
37 D	27.93	1.0373E-02	50.02	106.4	72.00	109.2	UL-RL	2.2929E+04	-7.200	33.23
1.000	1.000	139.7	0.000	0.000	Ug2_741_743_L_0					
38 D	27.45	9.4386E-03	51.56	101.6	74.00	104.4	UL-RL	2.2929E+04	-7.400	35.69
1.000	1.000	137.3	0.000	0.000	Ug2_741_743_L_0					
39 D	27.04	8.5480E-03	53.10	97.02	76.00	99.88	UL-RL	2.2929E+04	-7.600	38.15
1.000	1.000	135.2	0.000	0.000	Ug2_741_743_L_0					
40 D	26.67	7.7008E-03	54.63	92.76	78.00	95.63	UL-RL	2.2929E+04	-7.800	40.62
1.000	1.000	133.4	0.000	0.000	Ug2_741_743_L_0					
41 D	26.37	6.8959E-03	56.17	88.77	80.00	91.66	UL-RL	2.2929E+04	-8.000	43.08
1.000	1.000	131.8	0.000	0.000	Ug2_741_743_L_0					
42 D	26.12	6.1319E-03	57.71	85.04	82.00	87.96	UL-RL	2.2929E+04	-8.200	45.54
1.000	1.000	130.6	0.000	0.000	Ug2_741_743_L_0					
43 D	25.91	5.4073E-03	59.25	81.57	84.00	84.52	UL-RL	2.2929E+04	-8.400	48.00
1.000	1.000	129.6	0.000	0.000	Ug2_741_743_L_0					
44 D	25.76	4.7202E-03	60.79	78.34	86.00	81.32	UL-RL	2.2929E+04	-8.600	50.46
1.000	1.000	128.8	0.000	0.000	Ug2_741_743_L_0					
45 D	25.65	4.0688E-03	62.33	75.34	88.00	78.35	UL-RL	2.2929E+04	-8.800	52.92
1.000	1.000	128.3	0.000	0.000	Ug2_741_743_L_0					
46 D	25.59	3.4509E-03	63.87	72.56	90.00	75.59	UL-RL	2.2929E+04	-9.000	55.38
1.000	1.000	127.9	0.000	0.000	Ug2_741_743_L_0					
47 D	25.56	2.8643E-03	65.40	69.97	92.00	73.04	UL-RL	2.2929E+04	-9.200	57.85
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
48 D	25.57	2.3065E-03	66.94	67.56	94.00	70.67	UL-RL	2.2929E+04	-9.400	60.31
1.000	1.000	127.9	0.000	0.000	Ug2_741_743_L_0					
49 D	25.62	1.7750E-03	68.48	65.32	96.00	68.47	UL-RL	2.2929E+04	-9.600	62.77
1.000	1.000	128.1	0.000	0.000	Ug2_741_743_L_0					
50 D	25.62	1.2672E-03	70.02	62.88	98.00	66.07	UL-RL	2.2929E+04	-9.800	65.23
1.000	1.000	128.1	0.000	0.000	Ug2_741_743_L_0					
51 D	25.60	7.8045E-04	71.56	60.32	100.00	63.57	UL-RL	2.2929E+04	-10.000	67.69
1.000	1.000	128.0	0.000	0.000	Ug2_741_743_L_0					
52 D	24.75	3.1184E-04	73.10	53.57	102.0	56.87	UL-RL	2.2929E+04	-10.200	70.15
1.000	1.000	123.7	0.000	0.000	Ug2_741_743_L_0					
53 D	23.46	-1.4139E-04	74.63	44.67	104.0	53.60	UL-RL	2.6507E+04	-10.400	72.62
1.000	1.000	117.3	0.000	0.000	Ug3_740_742_L_0					
54 D	22.33	-5.8210E-04	76.17	36.59	106.0	54.58	UL-RL	2.6507E+04	-10.600	75.08
1.000	1.000	111.7	0.000	0.000	Ug3_740_742_L_0					
55 D	21.25	-1.0129E-03	77.71	28.73	108.0	55.57	UL-RL	2.6507E+04	-10.800	77.54
1.000	1.000	106.3	0.000	0.000	Ug3_740_742_L_0					
56 D	20.95	-1.4364E-03	79.25	24.73	110.0	56.55	ACTIVE	0.000	-11.000	80.00
1.000	1.000	104.7	0.000	0.000	Ug3_740_742_L_0					
57 D	21.53	-1.8545E-03	80.79	25.21	112.0	57.54	ACTIVE	0.000	-11.200	82.46
1.000	1.000	107.7	0.000	0.000	Ug3_740_742_L_0					
58 D	22.12	-2.2691E-03	82.33	25.69	114.0	58.52	ACTIVE	0.000	-11.400	84.92
1.000	1.000	110.6	0.000	0.000	Ug3_740_742_L_0					
59 D	22.71	-2.6818E-03	83.87	26.17	116.0	59.51	ACTIVE	0.000	-11.600	87.38
1.000	1.000	113.6	0.000	0.000	Ug3_740_742_L_0					
60 D	23.30	-3.0935E-03	85.40	26.65	118.0	60.50	ACTIVE	0.000	-11.800	89.85
1.000	1.000	116.5	0.000	0.000	Ug3_740_742_L_0					
61 D	11.94	-3.5049E-03	86.94	27.13	120.0	61.48	ACTIVE	0.000	-12.000	92.31
1.000	1.000	119.4	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63  |
|          Exe Time :24 May 2018  18:17:33  |
+-----+
New Project
  
```

STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 6.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-5.42870E-10	5.42870E-10	-5.45644E-11	1.50546E-10
2	0.30769	-0.30769	-6.85137E-11	6.15385E-02
3	0.92308	-0.92308	-6.15385E-02	0.24615
4	1.8570	-1.8570	-0.24615	0.61756
5	3.1312	-3.1312	-0.61756	1.2438
6	4.7455	-4.7455	-1.2438	2.1929
7	6.7000	-6.7000	-2.1929	3.5329
8	8.9948	-8.9948	-3.5329	5.3318
9	11.630	-11.630	-5.3318	7.6578
10	14.605	-14.605	-7.6578	10.579
11	17.921	-17.921	-10.579	14.163
12	21.679	-21.679	-14.163	18.499
13	25.976	-25.976	-18.499	23.694
14	30.802	-30.802	-23.694	29.855
15	37.510	-37.510	-29.855	37.356
16	44.715	-44.715	-37.356	46.300
17	52.220	-52.220	-46.300	56.744
18	59.965	-59.965	-56.744	68.737
19	67.822	-67.822	-68.737	82.301
20	75.799	-75.799	-82.301	97.461
21	83.047	-83.047	-97.461	114.07
22	89.250	-89.250	-114.07	131.92
23	93.970	-93.970	-131.92	150.71
24	96.960	-96.960	-150.71	170.11
25	98.021	-98.021	-170.11	189.71
26	97.130	-97.130	-189.71	209.14
27	93.764	-93.764	-209.14	227.89
28	88.377	-88.377	-227.89	245.56
29	80.955	-80.955	-245.56	261.76
30	71.503	-71.503	-261.76	276.06
31	60.018	-60.018	-276.06	288.06
32	46.491	-46.491	-288.06	297.36
33	31.241	-31.241	-297.36	303.61
34	17.156	-17.156	-303.61	307.04
35	4.1819	-4.1819	-307.04	307.87
36	-7.7430	7.7430	-307.87	306.32
37	-18.686	18.686	-306.32	302.59
38	-28.700	28.700	-302.59	296.85
39	-37.850	37.850	-296.85	289.28
40	-46.188	46.188	-289.28	280.04
41	-53.769	53.769	-280.04	269.29
42	-60.652	60.652	-269.29	257.16
43	-66.881	66.881	-257.16	243.78
44	-72.509	72.509	-243.78	229.28
45	-77.576	77.576	-229.28	213.76
46	-82.125	82.125	-213.76	197.34
47	-86.198	86.198	-197.34	180.10
48	-89.826	89.826	-180.10	162.13
49	-93.041	93.041	-162.13	143.52
50	-95.682	95.682	-143.52	124.39
51	-97.635	97.635	-124.39	104.86
52	-96.555	96.555	-104.86	85.551
53	-91.494	91.494	-85.551	67.252
54	-83.910	83.910	-67.252	50.470
55	-73.866	73.866	-50.470	35.697
56	-62.153	62.153	-35.697	23.266
57	-49.678	49.678	-23.266	13.331
58	-36.448	36.448	-13.331	6.0413
59	-22.468	22.468	-6.0413	1.5478

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

```
60 -7.7386      7.7386      -1.5478      -1.51515E-11

ITER      0  RNORM = 0.000      RMNORM= 0.000
          RINORM=0.4925E+06 RIMNOR=0.3589E+07
          RENORM=0.9606E-16 REMNOR=0.2474E-18 RATIO =0.1397E-10 TOLER =0.1000E-03      CONVERGED !
          RFMAX = 98.02      RMMAX = 307.9
          RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
          RDT =0.4925E+06 RDR =0.3589E+07
          RATIO=0.1397E-10 RATIO= 0.000
          MAX UN=0.3920E-08 IEQ= 17 NODE      9 DOF      1 Y-DISPL.F
          MIN UN=-.4253E-08 IEQ= 19 NODE      10 DOF     1 Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      1  RNORM = 0.000      RMNORM= 0.000
          RINORM=0.4925E+06 RIMNOR=0.3589E+07
          RENORM=0.6643E-16 REMNOR=0.3095E-18 RATIO =0.1161E-10 TOLER =0.1000E-03      CONVERGED !
          RFMAX = 98.02      RMMAX = 307.9
          RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
          RDT =0.4925E+06 RDR =0.3589E+07
          RATIO=0.1161E-10 RATIO= 0.000
          MAX UN=0.2940E-08 IEQ= 29 NODE      15 DOF      1 Y-DISPL.F
          MIN UN=-.3306E-08 IEQ= 31 NODE      16 DOF     1 Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      2  RNORM = 0.000      RMNORM= 0.000
          RINORM=0.4925E+06 RIMNOR=0.3589E+07
          RENORM=0.8645E-16 REMNOR=0.2807E-18 RATIO =0.1325E-10 TOLER =0.1000E-03      CONVERGED !
          RFMAX = 98.02      RMMAX = 307.9
          RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
          RDT =0.4925E+06 RDR =0.3589E+07
          RATIO=0.1325E-10 RATIO= 0.000
          MAX UN=0.3351E-08 IEQ= 23 NODE      12 DOF      1 Y-DISPL.F
          MIN UN=-.3577E-08 IEQ= 21 NODE      11 DOF     1 Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS      0
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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	64.56	0.000	0.000	Ug2_741_743_L_0					
29 D	13.37	-1.9434E-02	70.84	23.75	70.84	31.17	UL-RL	4.4159E+04	-5.600	43.08
1.000	1.000	66.83	0.000	0.000	Ug2_741_743_L_0					
30 D	13.83	-1.8156E-02	73.40	24.51	73.40	32.20	UL-RL	4.4159E+04	-5.800	44.62
1.000	1.000	69.13	0.000	0.000	Ug2_741_743_L_0					
31 D	14.28	-1.6917E-02	75.96	25.27	75.96	33.23	UL-RL	4.4159E+04	-6.000	46.15
1.000	1.000	71.42	0.000	0.000	Ug2_741_743_L_0					
32 D	14.73	-1.5718E-02	78.38	25.98	78.38	34.26	UL-RL	4.4159E+04	-6.200	47.69
1.000	1.000	73.67	0.000	0.000	Ug2_741_743_L_0					
33 D	15.19	-1.4561E-02	80.93	26.71	80.93	35.29	UL-RL	4.4159E+04	-6.400	49.23
1.000	1.000	75.95	0.000	0.000	Ug2_741_743_L_0					
34 D	15.64	-1.3447E-02	83.35	27.41	83.35	36.32	UL-RL	4.4159E+04	-6.600	50.77
1.000	1.000	78.18	0.000	0.000	Ug2_741_743_L_0					
35 D	16.09	-1.2377E-02	85.89	28.14	85.89	37.35	UL-RL	4.4159E+04	-6.800	52.31
1.000	1.000	80.45	0.000	0.000	Ug2_741_743_L_0					
36 D	16.54	-1.1353E-02	88.43	28.87	88.43	38.38	UL-RL	4.4159E+04	-7.000	53.85
1.000	1.000	82.71	0.000	0.000	Ug2_741_743_L_0					
37 D	16.99	-1.0373E-02	90.85	29.56	90.85	39.41	UL-RL	4.4159E+04	-7.200	55.38
1.000	1.000	84.94	0.000	0.000	Ug2_741_743_L_0					
38 D	17.44	-9.4386E-03	93.38	30.28	93.38	40.44	UL-RL	4.4159E+04	-7.400	56.92
1.000	1.000	87.20	0.000	0.000	Ug2_741_743_L_0					
39 D	17.89	-8.5480E-03	95.81	30.96	95.81	41.46	UL-RL	4.4159E+04	-7.600	58.46
1.000	1.000	89.43	0.000	0.000	Ug2_741_743_L_0					
40 D	18.34	-7.7008E-03	98.34	31.68	98.34	42.49	UL-RL	4.4159E+04	-7.800	60.00
1.000	1.000	91.68	0.000	0.000	Ug2_741_743_L_0					
41 D	18.79	-6.8959E-03	100.9	32.40	100.9	43.52	UL-RL	4.4159E+04	-8.000	61.54
1.000	1.000	93.94	0.000	0.000	Ug2_741_743_L_0					
42 D	19.23	-6.1319E-03	103.3	33.09	103.3	44.55	UL-RL	4.4159E+04	-8.200	63.08
1.000	1.000	96.17	0.000	0.000	Ug2_741_743_L_0					
43 D	19.69	-5.4073E-03	105.8	33.81	105.8	45.58	UL-RL	4.4159E+04	-8.400	64.62
1.000	1.000	98.43	0.000	0.000	Ug2_741_743_L_0					
44 D	20.13	-4.7202E-03	108.2	34.51	108.2	46.60	UL-RL	4.4159E+04	-8.600	66.15
1.000	1.000	100.7	0.000	0.000	Ug2_741_743_L_0					
45 D	20.59	-4.0688E-03	110.8	35.24	110.8	47.63	UL-RL	4.4159E+04	-8.800	67.69
1.000	1.000	102.9	0.000	0.000	Ug2_741_743_L_0					
46 D	21.04	-3.4509E-03	113.3	35.97	113.3	48.66	UL-RL	4.4159E+04	-9.000	69.23
1.000	1.000	105.2	0.000	0.000	Ug2_741_743_L_0					
47 D	21.49	-2.8643E-03	115.7	36.68	115.7	49.69	UL-RL	4.4159E+04	-9.200	70.77
1.000	1.000	107.4	0.000	0.000	Ug2_741_743_L_0					
48 D	21.95	-2.3065E-03	118.2	37.42	118.2	50.72	UL-RL	4.4159E+04	-9.400	72.31
1.000	1.000	109.7	0.000	0.000	Ug2_741_743_L_0					
49 D	22.40	-1.7750E-03	120.7	38.17	120.7	51.75	UL-RL	4.4159E+04	-9.600	73.85
1.000	1.000	112.0	0.000	0.000	Ug2_741_743_L_0					
50 D	22.98	-1.2672E-03	123.2	39.52	123.2	52.77	UL-RL	4.4159E+04	-9.800	75.38
1.000	1.000	114.9	0.000	0.000	Ug2_741_743_L_0					
51 D	23.65	-7.8045E-04	125.7	41.33	125.7	53.80	UL-RL	4.4159E+04	-10.000	76.92
1.000	1.000	118.2	0.000	0.000	Ug2_741_743_L_0					
52 D	25.83	-3.1184E-04	128.1	50.67	128.1	55.77	UL-RL	4.4159E+04	-10.200	78.46
1.000	1.000	129.1	0.000	0.000	Ug2_741_743_L_0					
53 D	28.52	1.4139E-04	130.6	62.59	130.6	62.59	UL-RL	3.8197E+04	-10.400	80.00
1.000	1.000	142.6	0.000	0.000	Ug3_740_742_L_0					
54 D	29.92	5.8210E-04	133.1	68.05	133.1	68.05	UL-RL	3.8197E+04	-10.600	81.54
1.000	1.000	149.6	0.000	0.000	Ug3_740_742_L_0					
55 D	31.30	1.0129E-03	135.5	73.41	135.5	73.41	UL-RL	3.8197E+04	-10.800	83.08
1.000	1.000	156.5	0.000	0.000	Ug3_740_742_L_0					
56 D	32.66	1.4364E-03	138.0	78.68	138.0	78.68	UL-RL	3.8197E+04	-11.000	84.62
1.000	1.000	163.3	0.000	0.000	Ug3_740_742_L_0					
57 D	34.01	1.8545E-03	140.5	83.89	140.5	83.89	UL-RL	3.8197E+04	-11.200	86.15
1.000	1.000	170.0	0.000	0.000	Ug3_740_742_L_0					
58 D	35.35	2.2691E-03	143.0	89.06	143.0	89.06	UL-RL	3.8197E+04	-11.400	87.69
1.000	1.000	176.8	0.000	0.000	Ug3_740_742_L_0					
59 D	36.69	2.6818E-03	145.5	94.22	145.5	94.22	UL-RL	3.8197E+04	-11.600	89.23
1.000	1.000	183.5	0.000	0.000	Ug3_740_742_L_0					
60 D	38.03	3.0935E-03	147.9	99.37	147.9	99.37	UL-RL	3.8197E+04	-11.800	90.77
1.000	1.000	190.1	0.000	0.000	Ug3_740_742_L_0					
61 D	19.68	3.5049E-03	150.4	104.5	150.4	104.5	UL-RL	3.8197E+04	-12.000	92.31
1.000	1.000	196.8	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.Nominal_63                                                                                       |
|          Exe Time :24 May 2018          18:17:33                                                                                           |
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New Project

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STRESS RESULTS FOR GROUP NO. 2

0_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 7.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * FACTOR	FORCE UFACTOR	DISPL-Y Peg	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P LAYER	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16 D	0.000	3.8335E-02	0.000	0.000	0.000	0.000	UL-RL	2.2929E+04	-3.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
17 D	0.1841	3.6795E-02	3.900	0.9204	3.900	1.950	UL-RL	2.2929E+04	-3.200	0.000	
1.000	1.000	0.9204	0.000	0.000	Ug2_741_743_L_0						
18 D	0.4381	3.5262E-02	7.800	2.191	7.800	3.900	UL-RL	2.2929E+04	-3.400	0.000	
1.000	1.000	2.191	0.000	0.000	Ug2_741_743_L_0						
19 D	0.8057	3.3737E-02	11.70	4.028	11.70	5.850	UL-RL	2.2929E+04	-3.600	0.000	
1.000	1.000	4.028	0.000	0.000	Ug2_741_743_L_0						
20 D	1.175	3.2223E-02	15.60	5.873	15.60	7.800	UL-RL	2.2929E+04	-3.800	0.000	
1.000	1.000	5.873	0.000	0.000	Ug2_741_743_L_0						
21 D	2.388	3.0720E-02	19.50	11.94	40.00	53.91	UL-RL	2.2929E+04	-4.000	0.000	
1.000	1.000	11.94	0.000	0.000	Ug2_741_743_L_0						
22 D	3.905	2.9232E-02	23.40	19.52	42.00	64.69	UL-RL	2.2929E+04	-4.200	0.000	
1.000	1.000	19.52	0.000	0.000	Ug2_741_743_L_0						
23 D	5.865	2.7760E-02	27.30	29.32	44.00	70.42	UL-RL	2.2929E+04	-4.400	0.000	
1.000	1.000	29.32	0.000	0.000	Ug2_741_743_L_0						
24 D	8.059	2.6308E-02	30.02	39.07	46.00	67.72	UL-RL	2.2929E+04	-4.600	1.231	
1.000	1.000	40.30	0.000	0.000	Ug2_741_743_L_0						
25 D	10.46	2.4878E-02	31.56	48.61	48.00	65.17	UL-RL	2.2929E+04	-4.800	3.692	
1.000	1.000	52.30	0.000	0.000	Ug2_741_743_L_0						
26 D	12.88	2.3472E-02	33.10	58.25	50.00	62.77	UL-RL	2.2929E+04	-5.000	6.154	
1.000	1.000	64.40	0.000	0.000	Ug2_741_743_L_0						
27 D	15.81	2.2095E-02	34.63	70.45	52.00	72.91	UL-RL	2.2929E+04	-5.200	8.615	
1.000	1.000	79.07	0.000	0.000	Ug2_741_743_L_0						
28 D	18.30	2.0748E-02	36.17	80.41	54.00	82.92	UL-RL	2.2929E+04	-5.400	11.08	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	91.49	0.000	0.000	Ug2_741_743_L_0					
29 D	20.79	1.9434E-02	37.71	90.40	56.00	92.95	UL-RL	2.2929E+04	-5.600	13.54
1.000	1.000	103.9	0.000	0.000	Ug2_741_743_L_0					
30 D	23.28	1.8156E-02	39.25	100.4	58.00	103.0	UL-RL	2.2929E+04	-5.800	16.00
1.000	1.000	116.4	0.000	0.000	Ug2_741_743_L_0					
31 D	25.77	1.6917E-02	40.79	110.4	60.00	113.0	UL-RL	2.2929E+04	-6.000	18.46
1.000	1.000	128.8	0.000	0.000	Ug2_741_743_L_0					
32 D	28.26	1.5718E-02	42.33	120.4	62.00	123.0	UL-RL	2.2929E+04	-6.200	20.92
1.000	1.000	141.3	0.000	0.000	Ug2_741_743_L_0					
33 D	30.44	1.4561E-02	43.87	128.8	64.00	131.5	UL-RL	2.2929E+04	-6.400	23.38
1.000	1.000	152.2	0.000	0.000	Ug2_741_743_L_0					
34 D	29.72	1.3447E-02	45.40	122.8	66.00	125.5	UL-RL	2.2929E+04	-6.600	25.85
1.000	1.000	148.6	0.000	0.000	Ug2_741_743_L_0					
35 D	29.06	1.2377E-02	46.94	117.0	68.00	119.8	UL-RL	2.2929E+04	-6.800	28.31
1.000	1.000	145.3	0.000	0.000	Ug2_741_743_L_0					
36 D	28.47	1.1353E-02	48.48	111.6	70.00	114.3	UL-RL	2.2929E+04	-7.000	30.77
1.000	1.000	142.3	0.000	0.000	Ug2_741_743_L_0					
37 D	27.93	1.0373E-02	50.02	106.4	72.00	109.2	UL-RL	2.2929E+04	-7.200	33.23
1.000	1.000	139.7	0.000	0.000	Ug2_741_743_L_0					
38 D	27.45	9.4386E-03	51.56	101.6	74.00	104.4	UL-RL	2.2929E+04	-7.400	35.69
1.000	1.000	137.3	0.000	0.000	Ug2_741_743_L_0					
39 D	27.04	8.5480E-03	53.10	97.02	76.00	99.88	UL-RL	2.2929E+04	-7.600	38.15
1.000	1.000	135.2	0.000	0.000	Ug2_741_743_L_0					
40 D	26.67	7.7008E-03	54.63	92.76	78.00	95.63	UL-RL	2.2929E+04	-7.800	40.62
1.000	1.000	133.4	0.000	0.000	Ug2_741_743_L_0					
41 D	26.37	6.8959E-03	56.17	88.77	80.00	91.66	UL-RL	2.2929E+04	-8.000	43.08
1.000	1.000	131.8	0.000	0.000	Ug2_741_743_L_0					
42 D	26.12	6.1319E-03	57.71	85.04	82.00	87.96	UL-RL	2.2929E+04	-8.200	45.54
1.000	1.000	130.6	0.000	0.000	Ug2_741_743_L_0					
43 D	25.91	5.4073E-03	59.25	81.57	84.00	84.52	UL-RL	2.2929E+04	-8.400	48.00
1.000	1.000	129.6	0.000	0.000	Ug2_741_743_L_0					
44 D	25.76	4.7202E-03	60.79	78.34	86.00	81.32	UL-RL	2.2929E+04	-8.600	50.46
1.000	1.000	128.8	0.000	0.000	Ug2_741_743_L_0					
45 D	25.65	4.0688E-03	62.33	75.34	88.00	78.35	UL-RL	2.2929E+04	-8.800	52.92
1.000	1.000	128.3	0.000	0.000	Ug2_741_743_L_0					
46 D	25.59	3.4509E-03	63.87	72.56	90.00	75.59	UL-RL	2.2929E+04	-9.000	55.38
1.000	1.000	127.9	0.000	0.000	Ug2_741_743_L_0					
47 D	25.56	2.8643E-03	65.40	69.97	92.00	73.04	UL-RL	2.2929E+04	-9.200	57.85
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
48 D	25.57	2.3065E-03	66.94	67.56	94.00	70.67	UL-RL	2.2929E+04	-9.400	60.31
1.000	1.000	127.9	0.000	0.000	Ug2_741_743_L_0					
49 D	25.62	1.7750E-03	68.48	65.32	96.00	68.47	UL-RL	2.2929E+04	-9.600	62.77
1.000	1.000	128.1	0.000	0.000	Ug2_741_743_L_0					
50 D	25.62	1.2672E-03	70.02	62.88	98.00	66.07	UL-RL	2.2929E+04	-9.800	65.23
1.000	1.000	128.1	0.000	0.000	Ug2_741_743_L_0					
51 D	25.60	7.8045E-04	71.56	60.32	100.00	63.57	UL-RL	2.2929E+04	-10.000	67.69
1.000	1.000	128.0	0.000	0.000	Ug2_741_743_L_0					
52 D	24.75	3.1184E-04	73.10	53.57	102.0	56.87	UL-RL	2.2929E+04	-10.200	70.15
1.000	1.000	123.7	0.000	0.000	Ug2_741_743_L_0					
53 D	23.46	-1.4139E-04	74.63	44.67	104.0	53.60	UL-RL	2.6507E+04	-10.400	72.62
1.000	1.000	117.3	0.000	0.000	Ug3_740_742_L_0					
54 D	22.33	-5.8210E-04	76.17	36.59	106.0	54.58	UL-RL	2.6507E+04	-10.600	75.08
1.000	1.000	111.7	0.000	0.000	Ug3_740_742_L_0					
55 D	21.25	-1.0129E-03	77.71	28.73	108.0	55.57	UL-RL	2.6507E+04	-10.800	77.54
1.000	1.000	106.3	0.000	0.000	Ug3_740_742_L_0					
56 D	20.95	-1.4364E-03	79.25	24.73	110.0	56.55	UL-RL	2.6507E+04	-11.000	80.00
1.000	1.000	104.7	0.000	0.000	Ug3_740_742_L_0					
57 D	21.53	-1.8545E-03	80.79	25.21	112.0	57.54	UL-RL	2.6507E+04	-11.200	82.46
1.000	1.000	107.7	0.000	0.000	Ug3_740_742_L_0					
58 D	22.12	-2.2691E-03	82.33	25.69	114.0	58.52	UL-RL	2.6507E+04	-11.400	84.92
1.000	1.000	110.6	0.000	0.000	Ug3_740_742_L_0					
59 D	22.71	-2.6818E-03	83.87	26.17	116.0	59.51	UL-RL	2.6507E+04	-11.600	87.38
1.000	1.000	113.6	0.000	0.000	Ug3_740_742_L_0					
60 D	23.30	-3.0935E-03	85.40	26.65	118.0	60.50	UL-RL	2.6507E+04	-11.800	89.85
1.000	1.000	116.5	0.000	0.000	Ug3_740_742_L_0					
61 D	11.94	-3.5049E-03	86.94	27.13	120.0	61.48	UL-RL	2.6507E+04	-12.000	92.31
1.000	1.000	119.4	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63  |
|          Exe Time :24 May 2018  18:17:33  |
+-----+
New Project

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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 7.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-6.85172E-10	6.85172E-10	-6.87945E-11	1.36316E-10
2	0.30769	-0.30769	-8.27439E-11	6.15385E-02
3	0.92308	-0.92308	-6.15385E-02	0.24615
4	1.8570	-1.8570	-0.24615	0.61756
5	3.1312	-3.1312	-0.61756	1.2438
6	4.7455	-4.7455	-1.2438	2.1929
7	6.7000	-6.7000	-2.1929	3.5329
8	8.9948	-8.9948	-3.5329	5.3318
9	11.630	-11.630	-5.3318	7.6578
10	14.605	-14.605	-7.6578	10.579
11	17.921	-17.921	-10.579	14.163
12	21.679	-21.679	-14.163	18.499
13	25.976	-25.976	-18.499	23.694
14	30.802	-30.802	-23.694	29.855
15	37.510	-37.510	-29.855	37.356
16	44.715	-44.715	-37.356	46.300
17	52.220	-52.220	-46.300	56.744
18	59.965	-59.965	-56.744	68.737
19	67.822	-67.822	-68.737	82.301
20	75.799	-75.799	-82.301	97.461
21	83.047	-83.047	-97.461	114.07
22	89.250	-89.250	-114.07	131.92
23	93.970	-93.970	-131.92	150.71
24	96.960	-96.960	-150.71	170.11
25	98.021	-98.021	-170.11	189.71
26	97.130	-97.130	-189.71	209.14
27	93.764	-93.764	-209.14	227.89
28	88.377	-88.377	-227.89	245.56
29	80.955	-80.955	-245.56	261.76
30	71.503	-71.503	-261.76	276.06
31	60.018	-60.018	-276.06	288.06
32	46.491	-46.491	-288.06	297.36
33	31.241	-31.241	-297.36	303.61
34	17.156	-17.156	-303.61	307.04
35	4.1819	-4.1819	-307.04	307.87
36	-7.7430	7.7430	-307.87	306.32
37	-18.686	18.686	-306.32	302.59
38	-28.700	28.700	-302.59	296.85
39	-37.850	37.850	-296.85	289.28
40	-46.188	46.188	-289.28	280.04
41	-53.769	53.769	-280.04	269.29
42	-60.652	60.652	-269.29	257.16
43	-66.881	66.881	-257.16	243.78
44	-72.509	72.509	-243.78	229.28
45	-77.576	77.576	-229.28	213.76
46	-82.125	82.125	-213.76	197.34
47	-86.198	86.198	-197.34	180.10
48	-89.826	89.826	-180.10	162.13
49	-93.041	93.041	-162.13	143.52
50	-95.682	95.682	-143.52	124.39
51	-97.635	97.635	-124.39	104.86
52	-96.555	96.555	-104.86	85.551
53	-91.494	91.494	-85.551	67.252
54	-83.910	83.910	-67.252	50.470
55	-73.866	73.866	-50.470	35.697
56	-62.153	62.153	-35.697	23.266
57	-49.678	49.678	-23.266	13.331
58	-36.448	36.448	-13.331	6.0413
59	-22.468	22.468	-6.0413	1.5478

60 -7.7386 7.7386 -1.5478 1.46110E-12

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.Nominal_63  |
|          Exe Time :24 May 2018  18:17:33  |
+-----+
```

F I N A L I N C R E M E N T A L A N A L Y S I S

S U M M A R Y

STEP		NO. OF ITERATIONS
1	CONVERGENCE :YES	2
2	CONVERGENCE :YES	5
3	CONVERGENCE :YES	5
4	CONVERGENCE :YES	5
5	CONVERGENCE :YES	6
6	CONVERGENCE :YES	3
7	CONVERGENCE :YES	2

END OF PROCESS FOR PROBLEM

New Project

NONLINEAR SOLUTION CPU TIME 0.06 [sec]

DATABASE CREATION CPU TIME..... 0.23 [sec]

Design Assumption : A1+M1+R1 - File di Paratie - File di output (.out)

```
-----+-----  
|                PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1    FULL VERSION  *Build date:Jul 11, 2017*  |  
|                |  
|                NewProject.BaseDesignSection_28.A1M1R1_1757  |  
|                Exe Time :24 May 2018      18:17:33          |  
|                |  
+-----+-----
```

```
*****  
*  
* PARATIE PLUS Non-Linear Spring Engine *  
*  
* AN ELASTOPLASTIC FINITE ELEMENT PROGRAM *  
* FOR FLEXIBLE EARTH-RETAINING STRUCTURES *  
*  
* Written by Ce.A.S. s.r.l. (ITALY) *  
* with the scientific supervision of *  
* Roberto Nova - full professor SOIL MECHANICS *  
* at Politecnico di Milano (ITALY) *  
*  
*****  
*  
* RELEASE  2017.1      *Build date:Jul 11, 2017* *  
*  
*  
* Ce.A.S.    S.R.L  CENTRO DI ANALISI STRUTTURALE *  
*          VIALE  GIUSTINIANO 10 *  
*          20129  M I L A N O (ITALIA) *  
* TEL.      +39 02 2020221  (+39 035 23 67 19) *  
* FAX      +39 02 29512533  (+39 035 42285 49) *  
* email    bruno.becci@ceas.it *  
* Web Page www.ceas.it *  
*****
```

```
JOB : NewProject.BaseDesignSection_28.A1M1R1_1757  
STARTING  
ACCEPTED <FILE,GENW >  
ACCEPTED <FILE,PLOTTER,BINARY >  
ACCEPTED <SOLVE TOTAL STRESS >  
ACCEPTED <PARAM ITEM MAX 40 >  
ACCEPTED <CONTROL HINGES 0 0.0001 0.001 >
```

```
*****  
*  
* WARNING : PORE PRESSURES ARE AUTOMATICALLY COMPUTED *  
* BY THE PROGRAM. *  
*****
```

```
PRELIMINARY OPERATIONS CPU TIME 0.01 [sec]
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|                                                                    |
|                               NewProject.BaseDesignSection_28.A1M1R1_1757   |
|                               Exe Time :24 May 2018      18:17:33   |
+-----+
```

INPUT FILE HAS BEEN GENERATED BY WALGEN PROGRAM

New Project

```
NO. OF NODAL POINTS (NUMNP) ..... 61
NO. OF COORDINATES (NCOORD)..... 2
NO. OF NODE DOFS (NDOF)..... 2
NO. OF EQUATIONS (NEQ)..... 122
NO. OF CONSTRAINTS CARDS (NVINC)..... 0
NO. OF ELEMENT GROUPS (NEG)..... 3
NO. OF SOLUTION STEPS (NSTE)..... 7
NO. OF ELEMENT SETS ATTACHED TO SLAVE NODES ... 0
NO. OF RECORD FROM WALGEN ..... 132
NO. OF LONG NAMES (LASTNAME) ..... 22
LENGTH UNIT CHOICE ..... 3 (M )
FORCE UNIT CHOICE ..... 3 (KN )
MAX PORE PRESSURE TABLE LENGTH..... 1
NO. OF ELEMENT GROUPS REQUIRING ADD. SLIP DOF . 0
```

```
IDOFA (01) = 2 Y-DISPL.F
IDOFA (02) = 4 X-ROT. F
```

RELEVANT ITEMS UNITS

```
STRESSES                kPa
Y-DISPLACEMENTS        m
ROTATIONS                RADIANS
BEAM AND SLAB MOMENTS   kN*m/m
BEAM SHEAR FORCES      kN/m
ANCHOR FORCES           kN/m
AXIAL FORCES IN TRUSSES kN/m
AXIAL FORCES SPRINGS   kN/m
Y-REACTIONS             kN/m
X-MOMENT REACTIONS     kN*m/m
ETC.
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|                                                                    |
|          NewProject.BaseDesignSection_28.A1M1R1_1757   |
|          Exe Time :24 May 2018           18:17:33      |
+-----+
```

P R E P R O C E S S O R D A T A

N O . O F C O M M A N D S 132

```
1 : UNIT m kN
2 : TITLE New Project
3 : DELTA 0.2
4 : option param itemax 40
5 : option control hinges 0 0.0001 0.001
6 : WALL LeftWall_32 0 -12 0 1
7 : SOIL 0_L LeftWall_32 -12 0 1 0
8 : SOIL 0_R LeftWall_32 -12 0 2 180
9 : LDATA Ug1_2_8_L_0 0 LeftWall_32
10 : ATREST 0.5 0.5 1
11 : WEIGHT 19 10 10
12 : PERMEABILITY 0.0001
13 : RESISTANCE 8 26
14 : YOUNG 2E+04 6E+04
15 : ENDL
16 : LDATA Ug2_741_743_L_0 -2.7 LeftWall_32
17 : ATREST 0.5 0.5 1
18 : WEIGHT 19.5 10 10
19 : PERMEABILITY 0.0001
20 : RESISTANCE 0 36
21 : YOUNG 3E+04 9E+04
22 : ENDL
23 : LDATA Ug3_740_742_L_0 -10.3 LeftWall_32
24 : ATREST 0.5 0.5 1
25 : WEIGHT 19 10 10
26 : PERMEABILITY 0.0001
27 : RESISTANCE 0 29
28 : YOUNG 3E+04 9E+04
29 : ENDL
30 : MATERIAL S275_113 2.1E+08
31 : BEAM WallElement_33 LeftWall_32 -12 0 S275_113 0.25 00 00 0
32 : STRIP LeftWall_32 1 7 2 33 0 5 45
33 : STEP Stage1_31
34 : CHANGE Ug1_2_8_L_0 U-FRICT=26 LeftWall_32
35 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
36 : CHANGE Ug1_2_8_L_0 U-KA=0.39 LeftWall_32
37 : CHANGE Ug1_2_8_L_0 U-KP=3.404 LeftWall_32
38 : CHANGE Ug1_2_8_L_0 D-KA=0.39 LeftWall_32
39 : CHANGE Ug1_2_8_L_0 D-KP=3.404 LeftWall_32
40 : CHANGE Ug2_741_743_L_0 U-FRICT=36 LeftWall_32
41 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
42 : CHANGE Ug2_741_743_L_0 U-KA=0.26 LeftWall_32
43 : CHANGE Ug2_741_743_L_0 U-KP=6.289 LeftWall_32
44 : CHANGE Ug2_741_743_L_0 D-KA=0.26 LeftWall_32
45 : CHANGE Ug2_741_743_L_0 D-KP=6.289 LeftWall_32
46 : CHANGE Ug3_740_742_L_0 U-FRICT=29 LeftWall_32
47 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
48 : CHANGE Ug3_740_742_L_0 U-KA=0.347 LeftWall_32
49 : CHANGE Ug3_740_742_L_0 U-KP=4.041 LeftWall_32
50 : CHANGE Ug3_740_742_L_0 D-KA=0.347 LeftWall_32
51 : CHANGE Ug3_740_742_L_0 D-KP=4.041 LeftWall_32
52 : CHANGE Ug1_2_8_L_0 U-COHE=8 LeftWall_32
53 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
54 : CHANGE Ug2_741_743_L_0 U-COHE=0 LeftWall_32
55 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
56 : CHANGE Ug3_740_742_L_0 U-COHE=0 LeftWall_32
57 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
58 : SETWALL LeftWall_32
59 : GEOM 0 0
60 : WATER 0 0 -12 0 0
61 : ADD WallElement_33
62 : ENDSTEP
63 : STEP Stage2_158
64 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
65 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
66 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
67 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
68 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

```
69 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
70 : SETWALL LeftWall_32
71 : GEOM 0 -1
72 : WATER 0 1 -12 0 0
73 : ENDSTEP
74 : STEP Stage3_255
75 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
76 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
77 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
78 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
79 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
80 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
81 : SETWALL LeftWall_32
82 : GEOM 0 -2
83 : WATER 0 2 -12 0 0
84 : ENDSTEP
85 : STEP Stage4_352
86 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
87 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
88 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
89 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
90 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
91 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
92 : SETWALL LeftWall_32
93 : GEOM 0 -3
94 : WATER 0 3 -12 0 0
95 : ENDSTEP
96 : STEP Stage5_449
97 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
98 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
99 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
100 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
101 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
102 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
103 : SETWALL LeftWall_32
104 : GEOM 0 -4
105 : WATER 0 4 -12 0 0
106 : ENDSTEP
107 : STEP Stage6_546
108 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
109 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
110 : CHANGE Ug2_741_743_L_0 D-KA=0.236 LeftWall_32
111 : CHANGE Ug2_741_743_L_0 D-KP=4.234 LeftWall_32
112 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
113 : CHANGE Ug3_740_742_L_0 D-KA=0.312 LeftWall_32
114 : CHANGE Ug3_740_742_L_0 D-KP=2.897 LeftWall_32
115 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
116 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
117 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
118 : SETWALL LeftWall_32
119 : GEOM 0 -3
120 : WATER 0 4.5 -12 0 0
121 : ENDSTEP
122 : STEP Stage7_643
123 : CHANGE Ug1_2_8_L_0 D-FRICT=26 LeftWall_32
124 : CHANGE Ug2_741_743_L_0 D-FRICT=36 LeftWall_32
125 : CHANGE Ug3_740_742_L_0 D-FRICT=29 LeftWall_32
126 : CHANGE Ug1_2_8_L_0 D-COHE=8 LeftWall_32
127 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
128 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
129 : SETWALL LeftWall_32
130 : GEOM 0 -3
131 : WATER 0 4.5 -12 0 0
132 : ENDSTEP
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757   |
|          Exe Time :24 May 2018   18:17:33   |
+-----+

```

N O D A L P O I N T D A T A

```

+-----+
| NODE      Y-COORD      Z-COORD / NODE      Y-COORD      Z-COORD / NODE      Y-COORD      Z-COORD / NODE      Y-COORD      Z-COORD / |
| 1 0.0000      0.0000 / 2 0.0000     -0.20000 / 3 0.0000     -0.40000 / 4 0.0000     -0.60000 / |
| 5 0.0000     -0.80000 / 6 0.0000     -1.0000 / 7 0.0000     -1.2000 / 8 0.0000     -1.4000 / |
| 9 0.0000     -1.6000 / 10 0.0000    -1.8000 / 11 0.0000    -2.0000 / 12 0.0000    -2.2000 / |
| 13 0.0000    -2.4000 / 14 0.0000    -2.6000 / 15 0.0000    -2.8000 / 16 0.0000    -3.0000 / |
| 17 0.0000    -3.2000 / 18 0.0000    -3.4000 / 19 0.0000    -3.6000 / 20 0.0000    -3.8000 / |
| 21 0.0000    -4.0000 / 22 0.0000    -4.2000 / 23 0.0000    -4.4000 / 24 0.0000    -4.6000 / |
| 25 0.0000    -4.8000 / 26 0.0000    -5.0000 / 27 0.0000    -5.2000 / 28 0.0000    -5.4000 / |
| 29 0.0000    -5.6000 / 30 0.0000    -5.8000 / 31 0.0000    -6.0000 / 32 0.0000    -6.2000 / |
| 33 0.0000    -6.4000 / 34 0.0000    -6.6000 / 35 0.0000    -6.8000 / 36 0.0000    -7.0000 / |
| 37 0.0000    -7.2000 / 38 0.0000    -7.4000 / 39 0.0000    -7.6000 / 40 0.0000    -7.8000 / |
| 41 0.0000    -8.0000 / 42 0.0000    -8.2000 / 43 0.0000    -8.4000 / 44 0.0000    -8.6000 / |
| 45 0.0000    -8.8000 / 46 0.0000    -9.0000 / 47 0.0000    -9.2000 / 48 0.0000    -9.4000 / |
| 49 0.0000    -9.6000 / 50 0.0000    -9.8000 / 51 0.0000    -10.000 / 52 0.0000    -10.200 / |
| 53 0.0000   -10.400 / 54 0.0000   -10.600 / 55 0.0000   -10.800 / 56 0.0000   -11.000 / |
| 57 0.0000   -11.200 / 58 0.0000   -11.400 / 59 0.0000   -11.600 / 60 0.0000   -11.800 / |
| 61 0.0000   -12.000 / |
+-----+

```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|          NewProject.BaseDesignSection_28.A1M1R1_1757 |
|          Exe Time :24 May 2018           18:17:33 |
+-----+

```

ELEMENT GROUP NO. 1

```

0_L
 5 61 0 1 0 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0

```

```

.....2D PLASTIC SOIL .....
.....

```

element group behaviour throughout stage analysis

```

stage  status
-----

```

```

1  active
2  active
3  active
4  active
5  active
6  active
7  active

```

material set no. 1

```

prop( 1) angle           0.00000
prop( 2) layer as foreseen 1.00000

```

material set no. 2

```

prop( 1) angle           0.00000
prop( 2) layer as foreseen 2.00000

```

material set no. 3

```

prop( 1) angle           0.00000
prop( 2) layer as foreseen 3.00000

```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	1.000
2	2	1	0.2000	0.000	0.000	0.000	1.000
3	3	1	0.2000	0.000	0.000	0.000	1.000
4	4	1	0.2000	0.000	0.000	0.000	1.000
5	5	1	0.2000	0.000	0.000	0.000	1.000
6	6	1	0.2000	0.000	0.000	0.000	1.000
7	7	1	0.2000	0.000	0.000	0.000	1.000
8	8	1	0.2000	0.000	0.000	0.000	1.000
9	9	1	0.2000	0.000	0.000	0.000	1.000
10	10	1	0.2000	0.000	0.000	0.000	1.000
11	11	1	0.2000	0.000	0.000	0.000	1.000
12	12	1	0.2000	0.000	0.000	0.000	1.000
13	13	1	0.2000	0.000	0.000	0.000	1.000
14	14	1	0.2000	0.000	0.000	0.000	1.000
15	15	2	0.2000	0.000	0.000	0.000	1.000
16	16	2	0.2000	0.000	0.000	0.000	1.000
17	17	2	0.2000	0.000	0.000	0.000	1.000
18	18	2	0.2000	0.000	0.000	0.000	1.000
19	19	2	0.2000	0.000	0.000	0.000	1.000
20	20	2	0.2000	0.000	0.000	0.000	1.000
21	21	2	0.2000	0.000	0.000	0.000	1.000
22	22	2	0.2000	0.000	0.000	0.000	1.000
23	23	2	0.2000	0.000	0.000	0.000	1.000
24	24	2	0.2000	0.000	0.000	0.000	1.000
25	25	2	0.2000	0.000	0.000	0.000	1.000
26	26	2	0.2000	0.000	0.000	0.000	1.000
27	27	2	0.2000	0.000	0.000	0.000	1.000
28	28	2	0.2000	0.000	0.000	0.000	1.000
29	29	2	0.2000	0.000	0.000	0.000	1.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

30	30	2	0.2000	0.000	0.000	0.000	1.000
31	31	2	0.2000	0.000	0.000	0.000	1.000
32	32	2	0.2000	0.000	0.000	0.000	1.000
33	33	2	0.2000	0.000	0.000	0.000	1.000
34	34	2	0.2000	0.000	0.000	0.000	1.000
35	35	2	0.2000	0.000	0.000	0.000	1.000
36	36	2	0.2000	0.000	0.000	0.000	1.000
37	37	2	0.2000	0.000	0.000	0.000	1.000
38	38	2	0.2000	0.000	0.000	0.000	1.000
39	39	2	0.2000	0.000	0.000	0.000	1.000
40	40	2	0.2000	0.000	0.000	0.000	1.000
41	41	2	0.2000	0.000	0.000	0.000	1.000
42	42	2	0.2000	0.000	0.000	0.000	1.000
43	43	2	0.2000	0.000	0.000	0.000	1.000
44	44	2	0.2000	0.000	0.000	0.000	1.000
45	45	2	0.2000	0.000	0.000	0.000	1.000
46	46	2	0.2000	0.000	0.000	0.000	1.000
47	47	2	0.2000	0.000	0.000	0.000	1.000
48	48	2	0.2000	0.000	0.000	0.000	1.000
49	49	2	0.2000	0.000	0.000	0.000	1.000
50	50	2	0.2000	0.000	0.000	0.000	1.000
51	51	2	0.2000	0.000	0.000	0.000	1.000
52	52	2	0.2000	0.000	0.000	0.000	1.000
53	53	3	0.2000	0.000	0.000	0.000	1.000
54	54	3	0.2000	0.000	0.000	0.000	1.000
55	55	3	0.2000	0.000	0.000	0.000	1.000
56	56	3	0.2000	0.000	0.000	0.000	1.000
57	57	3	0.2000	0.000	0.000	0.000	1.000
58	58	3	0.2000	0.000	0.000	0.000	1.000
59	59	3	0.2000	0.000	0.000	0.000	1.000
60	60	3	0.2000	0.000	0.000	0.000	1.000
61	61	3	0.1000	0.000	0.000	0.000	1.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757 |
|          Exe Time :24 May 2018           18:17:33 |
+-----+

```

ELEMENT GROUP NO. 2

```

0_R
 5 61 0 1 0 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0

```

.....2D PLASTIC SOIL

element group behaviour throughout stage analysis

stage status

```

-----
1 active
2 active
3 active
4 active
5 active
6 active
7 active

```

material set no. 1

```

prop( 1) angle           180.000
prop( 2) layer as foreseen 1.00000

```

material set no. 2

```

prop( 1) angle           180.000
prop( 2) layer as foreseen 2.00000

```

material set no. 3

```

prop( 1) angle           180.000
prop( 2) layer as foreseen 3.00000

```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	2.000
2	2	1	0.2000	0.000	0.000	0.000	2.000
3	3	1	0.2000	0.000	0.000	0.000	2.000
4	4	1	0.2000	0.000	0.000	0.000	2.000
5	5	1	0.2000	0.000	0.000	0.000	2.000
6	6	1	0.2000	0.000	0.000	0.000	2.000
7	7	1	0.2000	0.000	0.000	0.000	2.000
8	8	1	0.2000	0.000	0.000	0.000	2.000
9	9	1	0.2000	0.000	0.000	0.000	2.000
10	10	1	0.2000	0.000	0.000	0.000	2.000
11	11	1	0.2000	0.000	0.000	0.000	2.000
12	12	1	0.2000	0.000	0.000	0.000	2.000
13	13	1	0.2000	0.000	0.000	0.000	2.000
14	14	1	0.2000	0.000	0.000	0.000	2.000
15	15	2	0.2000	0.000	0.000	0.000	2.000
16	16	2	0.2000	0.000	0.000	0.000	2.000
17	17	2	0.2000	0.000	0.000	0.000	2.000
18	18	2	0.2000	0.000	0.000	0.000	2.000
19	19	2	0.2000	0.000	0.000	0.000	2.000
20	20	2	0.2000	0.000	0.000	0.000	2.000
21	21	2	0.2000	0.000	0.000	0.000	2.000
22	22	2	0.2000	0.000	0.000	0.000	2.000
23	23	2	0.2000	0.000	0.000	0.000	2.000
24	24	2	0.2000	0.000	0.000	0.000	2.000
25	25	2	0.2000	0.000	0.000	0.000	2.000
26	26	2	0.2000	0.000	0.000	0.000	2.000
27	27	2	0.2000	0.000	0.000	0.000	2.000
28	28	2	0.2000	0.000	0.000	0.000	2.000
29	29	2	0.2000	0.000	0.000	0.000	2.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

30	30	2	0.2000	0.000	0.000	0.000	2.000
31	31	2	0.2000	0.000	0.000	0.000	2.000
32	32	2	0.2000	0.000	0.000	0.000	2.000
33	33	2	0.2000	0.000	0.000	0.000	2.000
34	34	2	0.2000	0.000	0.000	0.000	2.000
35	35	2	0.2000	0.000	0.000	0.000	2.000
36	36	2	0.2000	0.000	0.000	0.000	2.000
37	37	2	0.2000	0.000	0.000	0.000	2.000
38	38	2	0.2000	0.000	0.000	0.000	2.000
39	39	2	0.2000	0.000	0.000	0.000	2.000
40	40	2	0.2000	0.000	0.000	0.000	2.000
41	41	2	0.2000	0.000	0.000	0.000	2.000
42	42	2	0.2000	0.000	0.000	0.000	2.000
43	43	2	0.2000	0.000	0.000	0.000	2.000
44	44	2	0.2000	0.000	0.000	0.000	2.000
45	45	2	0.2000	0.000	0.000	0.000	2.000
46	46	2	0.2000	0.000	0.000	0.000	2.000
47	47	2	0.2000	0.000	0.000	0.000	2.000
48	48	2	0.2000	0.000	0.000	0.000	2.000
49	49	2	0.2000	0.000	0.000	0.000	2.000
50	50	2	0.2000	0.000	0.000	0.000	2.000
51	51	2	0.2000	0.000	0.000	0.000	2.000
52	52	2	0.2000	0.000	0.000	0.000	2.000
53	53	3	0.2000	0.000	0.000	0.000	2.000
54	54	3	0.2000	0.000	0.000	0.000	2.000
55	55	3	0.2000	0.000	0.000	0.000	2.000
56	56	3	0.2000	0.000	0.000	0.000	2.000
57	57	3	0.2000	0.000	0.000	0.000	2.000
58	58	3	0.2000	0.000	0.000	0.000	2.000
59	59	3	0.2000	0.000	0.000	0.000	2.000
60	60	3	0.2000	0.000	0.000	0.000	2.000
61	61	3	0.1000	0.000	0.000	0.000	2.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757   |
|          Exe Time :24 May 2018   18:17:33   |
+-----+
ELEMENT GROUP NO. 3

WallElement_33      :
 2 60 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0
.....
.....2D WALL ELEMENT.....
.....

element group behaviour throughout stage analysis

stage  status
-----
 1  active
 2  active
 3  active
 4  active
 5  active
 6  active
 7  active

material set no. 1

prop( 1) young modulus      0.210000E+09
prop( 2) modification time  0.00000
prop( 3) new young modulus  0.00000
prop( 4) poisson ratio      0.00000
prop( 5) future .....      0.00000

no. of step variable items: 1
step  inertia multiplier
-----
 1  1.000
 2  1.000
 3  1.000
 4  1.000
 5  1.000
 6  1.000
 7  1.000

element data

  e1  na  nb  mat  erc1  erc2  thick  by-i  by-j
-----
 1  1  2  1  0.000  0.000  0.2500  0.000  0.000
 2  2  3  1  0.000  0.000  0.2500  0.000  0.000
 3  3  4  1  0.000  0.000  0.2500  0.000  0.000
 4  4  5  1  0.000  0.000  0.2500  0.000  0.000
 5  5  6  1  0.000  0.000  0.2500  0.000  0.000
 6  6  7  1  0.000  0.000  0.2500  0.000  0.000
 7  7  8  1  0.000  0.000  0.2500  0.000  0.000
 8  8  9  1  0.000  0.000  0.2500  0.000  0.000
 9  9 10  1  0.000  0.000  0.2500  0.000  0.000
10 10 11  1  0.000  0.000  0.2500  0.000  0.000
11 11 12  1  0.000  0.000  0.2500  0.000  0.000
12 12 13  1  0.000  0.000  0.2500  0.000  0.000
13 13 14  1  0.000  0.000  0.2500  0.000  0.000
14 14 15  1  0.000  0.000  0.2500  0.000  0.000
15 15 16  1  0.000  0.000  0.2500  0.000  0.000
16 16 17  1  0.000  0.000  0.2500  0.000  0.000
17 17 18  1  0.000  0.000  0.2500  0.000  0.000
18 18 19  1  0.000  0.000  0.2500  0.000  0.000
19 19 20  1  0.000  0.000  0.2500  0.000  0.000
20 20 21  1  0.000  0.000  0.2500  0.000  0.000
21 21 22  1  0.000  0.000  0.2500  0.000  0.000
22 22 23  1  0.000  0.000  0.2500  0.000  0.000
23 23 24  1  0.000  0.000  0.2500  0.000  0.000
24 24 25  1  0.000  0.000  0.2500  0.000  0.000
25 25 26  1  0.000  0.000  0.2500  0.000  0.000
26 26 27  1  0.000  0.000  0.2500  0.000  0.000
27 27 28  1  0.000  0.000  0.2500  0.000  0.000
28 28 29  1  0.000  0.000  0.2500  0.000  0.000

```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

29	29	30	1	0.000	0.000	0.2500	0.000	0.000
30	30	31	1	0.000	0.000	0.2500	0.000	0.000
31	31	32	1	0.000	0.000	0.2500	0.000	0.000
32	32	33	1	0.000	0.000	0.2500	0.000	0.000
33	33	34	1	0.000	0.000	0.2500	0.000	0.000
34	34	35	1	0.000	0.000	0.2500	0.000	0.000
35	35	36	1	0.000	0.000	0.2500	0.000	0.000
36	36	37	1	0.000	0.000	0.2500	0.000	0.000
37	37	38	1	0.000	0.000	0.2500	0.000	0.000
38	38	39	1	0.000	0.000	0.2500	0.000	0.000
39	39	40	1	0.000	0.000	0.2500	0.000	0.000
40	40	41	1	0.000	0.000	0.2500	0.000	0.000
41	41	42	1	0.000	0.000	0.2500	0.000	0.000
42	42	43	1	0.000	0.000	0.2500	0.000	0.000
43	43	44	1	0.000	0.000	0.2500	0.000	0.000
44	44	45	1	0.000	0.000	0.2500	0.000	0.000
45	45	46	1	0.000	0.000	0.2500	0.000	0.000
46	46	47	1	0.000	0.000	0.2500	0.000	0.000
47	47	48	1	0.000	0.000	0.2500	0.000	0.000
48	48	49	1	0.000	0.000	0.2500	0.000	0.000
49	49	50	1	0.000	0.000	0.2500	0.000	0.000
50	50	51	1	0.000	0.000	0.2500	0.000	0.000
51	51	52	1	0.000	0.000	0.2500	0.000	0.000
52	52	53	1	0.000	0.000	0.2500	0.000	0.000
53	53	54	1	0.000	0.000	0.2500	0.000	0.000
54	54	55	1	0.000	0.000	0.2500	0.000	0.000
55	55	56	1	0.000	0.000	0.2500	0.000	0.000
56	56	57	1	0.000	0.000	0.2500	0.000	0.000
57	57	58	1	0.000	0.000	0.2500	0.000	0.000
58	58	59	1	0.000	0.000	0.2500	0.000	0.000
59	59	60	1	0.000	0.000	0.2500	0.000	0.000
60	60	61	1	0.000	0.000	0.2500	0.000	0.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+  
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*  |  
|                                                                    |  
|                               NewProject.BaseDesignSection_28.A1M1R1_1757  |  
|                               Exe Time :24 May 2018      18:17:33  |  
+-----+
```

```
NO. OF NODAL LOADS (NLOAD) ..... 0  
NO. OF LOAD CURVES (NLCUR) ..... 14  
MAXIMUM POINTS/LCURVE (NPTM)..... 5
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757  |
|          Exe Time :24 May 2018  18:17:33  |
+-----+
L O A D      D A T A
```

LOAD FUNCTION NUMBER = 1
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
1.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 2
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
2.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 3
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
3.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 4
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
4.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 5
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
4.80000	0.0000E+00
5.00000	0.1000E+01
5.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 6
NUMBER OF TIME POINTS = 5

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

TIME VALUE	FUNCTION
0.00000	0.0000E+00
5.80000	0.0000E+00
6.00000	0.1000E+01
6.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 7
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
6.80000	0.0000E+00
7.00000	0.1000E+01
7.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 8
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 9
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 10
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 11
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 12
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
4.80000	0.0000E+00
5.00000	0.1000E+01
8.00000	0.1000E+01

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

LOAD FUNCTION NUMBER = 13
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
5.80000	0.0000E+00
6.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 14
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
6.80000	0.0000E+00
7.00000	0.1000E+01
8.00000	0.1000E+01

NO. OF DISTRIBUTED LOAD CARDS 0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.A1M1R1_1757                                          |
|          Exe Time :24 May 2018      18:17:33                                                  |
+-----+
L O A D      B A L A N C E
STEP  1  TOTAL APPLIED LOAD IN DIR.  2  Y-DISPL.F      0.0000000
STEP  1  TOTAL APPLIED LOAD IN DIR.  4  X-ROT. F      0.0000000
STEP  2  TOTAL APPLIED LOAD IN DIR.  2  Y-DISPL.F      0.0000000
STEP  2  TOTAL APPLIED LOAD IN DIR.  4  X-ROT. F      0.0000000
STEP  3  TOTAL APPLIED LOAD IN DIR.  2  Y-DISPL.F      0.0000000
STEP  3  TOTAL APPLIED LOAD IN DIR.  4  X-ROT. F      0.0000000
STEP  4  TOTAL APPLIED LOAD IN DIR.  2  Y-DISPL.F      0.0000000
STEP  4  TOTAL APPLIED LOAD IN DIR.  4  X-ROT. F      0.0000000
STEP  5  TOTAL APPLIED LOAD IN DIR.  2  Y-DISPL.F      0.0000000
STEP  5  TOTAL APPLIED LOAD IN DIR.  4  X-ROT. F      0.0000000
STEP  6  TOTAL APPLIED LOAD IN DIR.  2  Y-DISPL.F      0.0000000
STEP  6  TOTAL APPLIED LOAD IN DIR.  4  X-ROT. F      0.0000000
STEP  7  TOTAL APPLIED LOAD IN DIR.  2  Y-DISPL.F      0.0000000
STEP  7  TOTAL APPLIED LOAD IN DIR.  4  X-ROT. F      0.0000000
```

LOAD INPUT SECTION COMPLETED

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|                               NewProject.BaseDesignSection_28.A1M1R1_1757                               |
|                               Exe Time :24 May 2018      18:17:33                               |
+-----+
```

NO. OF LAYERS 3
NO. OF DATA PER LAYER..... 100

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|                PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|                |
|                NewProject.BaseDesignSection_28.A1M1R1_1757  |
|                Exe Time :24 May 2018  18:17:33  |
+-----+

```

LAYER DESCRIPTORS FOR STEP NO. 1

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 1

```

ITEM NO.  1<NAME    >= 18.000  (BOTH WALLS)
ITEM NO.  2<NATURE >= 1.0000  (BOTH WALLS)
ITEM NO.  3<LEVEL  >= 0.0000  (BOTH WALLS)
ITEM NO.  4<WALL   >= 1.0000  (BOTH WALLS)
ITEM NO.  5<GAMMAD >= 19.000  (BOTH WALLS)
ITEM NO.  6<GAMMAB >= 10.000  (BOTH WALLS)
ITEM NO.  7<GAMMAW >= 10.000  (BOTH WALLS)
ITEM NO.  8<U-COHE >= 8.0000  (BOTH WALLS)
ITEM NO.  9<U-FRICT >= 26.000  (BOTH WALLS)
ITEM NO. 10<U-KA   >= 0.39000  WALL NO.    1
ITEM NO. 11<U-KP   >= 3.4040  WALL NO.    1
ITEM NO. 12<K0-NC >= 0.50000  (BOTH WALLS)
ITEM NO. 13<NEXP  >= 0.50000  (BOTH WALLS)
ITEM NO. 14<OCR   >= 1.0000  (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000  (BOTH WALLS)
ITEM NO. 17<EVC   >= 20000.  (BOTH WALLS)
ITEM NO. 18<EUR   >= 60000.  (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000  (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000  (BOTH WALLS)
ITEM NO. 58<D-COHE >= 8.0000  (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 26.000  (BOTH WALLS)
ITEM NO. 60<D-KA   >= 0.39000  WALL NO.    1
ITEM NO. 61<D-KP   >= 3.4040  WALL NO.    1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

```

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 1

```

ITEM NO.  1<NAME    >= 19.000  (BOTH WALLS)
ITEM NO.  2<NATURE >= 1.0000  (BOTH WALLS)
ITEM NO.  3<LEVEL  >= -2.7000  (BOTH WALLS)
ITEM NO.  4<WALL   >= 1.0000  (BOTH WALLS)
ITEM NO.  5<GAMMAD >= 19.500  (BOTH WALLS)
ITEM NO.  6<GAMMAB >= 10.000  (BOTH WALLS)
ITEM NO.  7<GAMMAW >= 10.000  (BOTH WALLS)
ITEM NO.  9<U-FRICT >= 36.000  (BOTH WALLS)
ITEM NO. 10<U-KA   >= 0.26000  WALL NO.    1
ITEM NO. 11<U-KP   >= 6.2890  WALL NO.    1
ITEM NO. 12<K0-NC >= 0.50000  (BOTH WALLS)
ITEM NO. 13<NEXP  >= 0.50000  (BOTH WALLS)
ITEM NO. 14<OCR   >= 1.0000  (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000  (BOTH WALLS)
ITEM NO. 17<EVC   >= 30000.  (BOTH WALLS)
ITEM NO. 18<EUR   >= 90000.  (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000  (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000  (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 36.000  (BOTH WALLS)
ITEM NO. 60<D-KA   >= 0.26000  WALL NO.    1
ITEM NO. 61<D-KP   >= 6.2890  WALL NO.    1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

```

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 1

```

ITEM NO.  1<NAME    >= 20.000  (BOTH WALLS)
ITEM NO.  2<NATURE >= 1.0000  (BOTH WALLS)
ITEM NO.  3<LEVEL  >= -10.300  (BOTH WALLS)
ITEM NO.  4<WALL   >= 1.0000  (BOTH WALLS)
ITEM NO.  5<GAMMAD >= 19.000  (BOTH WALLS)
ITEM NO.  6<GAMMAB >= 10.000  (BOTH WALLS)
ITEM NO.  7<GAMMAW >= 10.000  (BOTH WALLS)
ITEM NO.  9<U-FRICT >= 29.000  (BOTH WALLS)
ITEM NO. 10<U-KA   >= 0.34700  WALL NO.    1
ITEM NO. 11<U-KP   >= 4.0410  WALL NO.    1
ITEM NO. 12<K0-NC >= 0.50000  (BOTH WALLS)
ITEM NO. 13<NEXP  >= 0.50000  (BOTH WALLS)

```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 30000. (BOTH WALLS)
ITEM NO. 18<EUR >= 90000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 29.000 (BOTH WALLS)
ITEM NO. 60<D-KA >= 0.34700 WALL NO. 1
ITEM NO. 61<D-KP >= 4.0410 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

LAYER DESCRIPTORS FOR STEP NO. 2

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 2

ITEM NO. 1<NAME >= 18.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 8<U-COHE >= 8.0000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 26.000 (BOTH WALLS)
ITEM NO. 10<U-KA >= 0.39000 WALL NO. 1
ITEM NO. 11<U-KP >= 3.4040 WALL NO. 1
ITEM NO. 12<K0-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 20000. (BOTH WALLS)
ITEM NO. 18<EUR >= 60000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 58<D-COHE >= 8.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 26.000 (BOTH WALLS)
ITEM NO. 60<D-KA >= 0.39000 WALL NO. 1
ITEM NO. 61<D-KP >= 3.4040 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 2

ITEM NO. 1<NAME >= 19.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -2.7000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.500 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 36.000 (BOTH WALLS)
ITEM NO. 10<U-KA >= 0.26000 WALL NO. 1
ITEM NO. 11<U-KP >= 6.2890 WALL NO. 1
ITEM NO. 12<K0-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 30000. (BOTH WALLS)
ITEM NO. 18<EUR >= 90000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 36.000 (BOTH WALLS)
ITEM NO. 60<D-KA >= 0.26000 WALL NO. 1
ITEM NO. 61<D-KP >= 6.2890 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 2

ITEM NO. 1<NAME >= 20.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -10.300 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 29.000 (BOTH WALLS)
ITEM NO. 10<U-KA >= 0.34700 WALL NO. 1
ITEM NO. 11<U-KP >= 4.0410 WALL NO. 1

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.00000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.00000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.00000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.00000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.34700	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.0410	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 3

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 3

ITEM NO.	1<NAME	>= 18.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.00000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= 0.00000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.00000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>= 8.00000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.39000	WALL NO.	1
ITEM NO.	11<U-KP	>= 3.4040	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.00000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.00000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.00000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.00000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>= 8.00000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.39000	WALL NO.	1
ITEM NO.	61<D-KP	>= 3.4040	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 3

ITEM NO.	1<NAME	>= 19.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.00000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -2.70000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.00000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.26000	WALL NO.	1
ITEM NO.	11<U-KP	>= 6.2890	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.00000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.00000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.00000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.00000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.26000	WALL NO.	1
ITEM NO.	61<D-KP	>= 6.2890	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 3

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.00000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.00000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 29.000	(BOTH WALLS)	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

ITEM NO.	10<U-KA	>= 0.34700	WALL NO.	1
ITEM NO.	11<U-KP	>= 4.0410	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.34700	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.0410	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 4

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 4

ITEM NO.	1<NAME	>= 18.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.39000	WALL NO.	1
ITEM NO.	11<U-KP	>= 3.4040	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.39000	WALL NO.	1
ITEM NO.	61<D-KP	>= 3.4040	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 4

ITEM NO.	1<NAME	>= 19.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.26000	WALL NO.	1
ITEM NO.	11<U-KP	>= 6.2890	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.26000	WALL NO.	1
ITEM NO.	61<D-KP	>= 6.2890	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 4

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.34700	WALL NO.	1
ITEM NO.	11<U-KP	>= 4.0410	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.34700	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.0410	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 5

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 5

ITEM NO.	1<NAME	>= 18.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.39000	WALL NO.	1
ITEM NO.	11<U-KP	>= 3.4040	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.39000	WALL NO.	1
ITEM NO.	61<D-KP	>= 3.4040	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 5

ITEM NO.	1<NAME	>= 19.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.26000	WALL NO.	1
ITEM NO.	11<U-KP	>= 6.2890	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.26000	WALL NO.	1
ITEM NO.	61<D-KP	>= 6.2890	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 5

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.34700	WALL NO.	1
ITEM NO.	11<U-KP	>= 4.0410	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.34700	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.0410	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 6

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 6

ITEM NO.	1<NAME	>= 18.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.39000	WALL NO.	1
ITEM NO.	11<U-KP	>= 3.4040	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>= 8.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.39000	WALL NO.	1
ITEM NO.	61<D-KP	>= 3.4040	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 6

ITEM NO.	1<NAME	>= 19.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.26000	WALL NO.	1
ITEM NO.	11<U-KP	>= 6.2890	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 36.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.23600	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.2340	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 6

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

ITEM NO.	3<LEVEL	>=	-10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>=	19.0000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>=	10.0000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>=	10.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>=	29.0000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>=	0.34700	WALL NO.	1
ITEM NO.	11<U-KP	>=	4.0410	WALL NO.	1
ITEM NO.	12<KO-NC	>=	0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>=	0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>=	1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>=	30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>=	90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>=	0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>=	29.0000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>=	0.31200	WALL NO.	1
ITEM NO.	61<D-KP	>=	2.8970	WALL NO.	1
ITEM NO.	77<D-PERM	>=	0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 7

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 7

ITEM NO.	1<NAME	>=	18.0000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>=	19.0000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>=	10.0000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>=	10.0000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>=	8.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>=	26.0000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>=	0.39000	WALL NO.	1
ITEM NO.	11<U-KP	>=	3.4040	WALL NO.	1
ITEM NO.	12<KO-NC	>=	0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>=	0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>=	1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>=	20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>=	60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>=	0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>=	8.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>=	26.0000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>=	0.39000	WALL NO.	1
ITEM NO.	61<D-KP	>=	3.4040	WALL NO.	1
ITEM NO.	77<D-PERM	>=	0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 7

ITEM NO.	1<NAME	>=	19.0000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>=	-2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>=	19.5000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>=	10.0000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>=	10.0000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>=	36.0000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>=	0.26000	WALL NO.	1
ITEM NO.	11<U-KP	>=	6.2890	WALL NO.	1
ITEM NO.	12<KO-NC	>=	0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>=	0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>=	1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>=	30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>=	90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>=	0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>=	36.0000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>=	0.23600	WALL NO.	1
ITEM NO.	61<D-KP	>=	4.2340	WALL NO.	1
ITEM NO.	77<D-PERM	>=	0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 7

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	10<U-KA	>= 0.34700	WALL NO.	1
ITEM NO.	11<U-KP	>= 4.0410	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 29.000	(BOTH WALLS)	
ITEM NO.	60<D-KA	>= 0.31200	WALL NO.	1
ITEM NO.	61<D-KP	>= 2.8970	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

DEFAULT WATER UNIT WEIGHT = 10.000
AVERAGED ON 21 VALUES

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757  |
|          Exe Time :24 May 2018      18:17:33  |
+-----+
  
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PHASE DESCRIPTORS

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STEP NO.      1

                LEFT WALL  RIGHT WALL
Y                0.000     -0.9990E+30
Z-PC             0.000         0.000
Z-EXCAVATION     0.000         0.000
Z-WATER_TABLE   0.000     -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL  0.000         0.000
ZQ              0.000         0.000
DZW_OF_THE_WATER_TABLE  0.000         0.000
QS_ON_THE_EXCAVATION_SIDE  0.000         0.000
ZQS            -0.9990E+30  -0.9990E+30
ZCUT            0.000         0.000
BALANCE LEVEL FOR PORE PRESSURES  -12.00     -12.00
WATER_BEHAVIOUR_FLAG (LINING OPT)  0.000         0.000
PORE_UPDATE_FLAG  0.000         0.000
PORE_TAB._FLAG (gt.0= use tabs)    0.000         0.000
lateRal thrusts reduction elevatio  0.000         0.000
Downhill reduction factor for effe  0.000         0.000
Downhill reduction factor for pore  0.000         0.000
Uphill reduction factor for effect  0.000         0.000
Uphill reduction factor for pore p  0.000         0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]   0.000         0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]   0.000         0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]  0.000         0.000
UPHILL BETA ANGLE (SLOPE) [deg]    0.000         0.000
UPHILL DELTA/PHI RATIO             0.000         0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]  0.000         0.000
DOWNHILL DELTA/PHI RATIO           0.000         0.000
DYN.WATER BEHAVIOUR                0.000         0.000
Excess pore pressure RATIO Ru      0.000         0.000
SEISMIC PRESSURE LOWER VALUE       0.000         0.000
SEISMIC PRESSURE UPPER VALUE       0.000         0.000
SEISMIC PRESSURE LOWER LEVEL       0.000         0.000
SEISMIC PRESSURE UPPER LEVEL       0.000         0.000
  
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=====end of step 1

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STEP NO.      2

                LEFT WALL  RIGHT WALL
Y                0.000     -0.9990E+30
Z-PC             0.000         0.000
Z-EXCAVATION     -1.000         0.000
Z-WATER_TABLE   0.000     -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL  0.000         0.000
ZQ              0.000         0.000
DZW_OF_THE_WATER_TABLE  1.000         0.000
QS_ON_THE_EXCAVATION_SIDE  0.000         0.000
ZQS            -0.9990E+30  -0.9990E+30
ZCUT            0.000         0.000
BALANCE LEVEL FOR PORE PRESSURES  -12.00     -12.00
WATER_BEHAVIOUR_FLAG (LINING OPT)  0.000         0.000
PORE_UPDATE_FLAG  0.000         0.000
PORE_TAB._FLAG (gt.0= use tabs)    0.000         0.000
lateRal thrusts reduction elevatio  0.000         0.000
Downhill reduction factor for effe  0.000         0.000
Downhill reduction factor for pore  0.000         0.000
Uphill reduction factor for effect  0.000         0.000
Uphill reduction factor for pore p  0.000         0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]   0.000         0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]   0.000         0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]  0.000         0.000
UPHILL BETA ANGLE (SLOPE) [deg]    0.000         0.000
UPHILL DELTA/PHI RATIO             0.000         0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]  0.000         0.000
DOWNHILL DELTA/PHI RATIO           0.000         0.000
DYN.WATER BEHAVIOUR                0.000         0.000
Excess pore pressure RATIO Ru      0.000         0.000
  
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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

SEISMIC PRESSURE LOWER VALUE	0.000	0.000
SEISMIC PRESSURE UPPER VALUE	0.000	0.000
SEISMIC PRESSURE LOWER LEVEL	0.000	0.000
SEISMIC PRESSURE UPPER LEVEL	0.000	0.000

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=====end of step 2

STEP NO.	3		
		LEFT WALL	RIGHT WALL
Y		0.000	-0.9990E+30
Z-PC		0.000	0.000
Z-EXCAVATION		-2.000	0.000
Z-WATER_TABLE		0.000	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL		0.000	0.000
ZQ		0.000	0.000
DZW_OF_THE_WATER_TABLE		2.000	0.000
QS_ON_THE_EXCAVATION_SIDE		0.000	0.000
ZQS		-0.9990E+30	-0.9990E+30
ZCUT		0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES		-12.00	-12.00
WATER_BEHAVIOUR_FLAG (LINING OPT)		0.000	0.000
PORE_UPDATE_FLAG		0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)		0.000	0.000
lateral thrusts reduction elevatio		0.000	0.000
Downhill reduction factor for effe		0.000	0.000
Downhill reduction factor for pore		0.000	0.000
Uphill reduction factor for effect		0.000	0.000
Uphill reduction factor for pore p		0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]		0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]		0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]		0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
UPHILL DELTA/PHI RATIO		0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
DOWNHILL DELTA/PHI RATIO		0.000	0.000
DYN.WATER BEHAVIOUR		0.000	0.000
Excess pore pressure RATIO Ru		0.000	0.000
SEISMIC PRESSURE LOWER VALUE		0.000	0.000
SEISMIC PRESSURE UPPER VALUE		0.000	0.000
SEISMIC PRESSURE LOWER LEVEL		0.000	0.000
SEISMIC PRESSURE UPPER LEVEL		0.000	0.000

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=====end of step 3

STEP NO.	4		
		LEFT WALL	RIGHT WALL
Y		0.000	-0.9990E+30
Z-PC		0.000	0.000
Z-EXCAVATION		-3.000	0.000
Z-WATER_TABLE		0.000	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL		0.000	0.000
ZQ		0.000	0.000
DZW_OF_THE_WATER_TABLE		3.000	0.000
QS_ON_THE_EXCAVATION_SIDE		0.000	0.000
ZQS		-0.9990E+30	-0.9990E+30
ZCUT		0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES		-12.00	-12.00
WATER_BEHAVIOUR_FLAG (LINING OPT)		0.000	0.000
PORE_UPDATE_FLAG		0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)		0.000	0.000
lateral thrusts reduction elevatio		0.000	0.000
Downhill reduction factor for effe		0.000	0.000
Downhill reduction factor for pore		0.000	0.000
Uphill reduction factor for effect		0.000	0.000
Uphill reduction factor for pore p		0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]		0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]		0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]		0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
UPHILL DELTA/PHI RATIO		0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
DOWNHILL DELTA/PHI RATIO		0.000	0.000
DYN.WATER BEHAVIOUR		0.000	0.000
Excess pore pressure RATIO Ru		0.000	0.000
SEISMIC PRESSURE LOWER VALUE		0.000	0.000
SEISMIC PRESSURE UPPER VALUE		0.000	0.000
SEISMIC PRESSURE LOWER LEVEL		0.000	0.000
SEISMIC PRESSURE UPPER LEVEL		0.000	0.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

=====end of step 4

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STEP NO.      5
              LEFT WALL  RIGHT WALL
Y              0.000     -0.9990E+30
Z-PC           0.000         0.000
Z-EXCAVATION   -4.000         0.000
Z-WATER_TABLE  0.000     -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL  0.000         0.000
ZQ             0.000         0.000
DZW_OF_THE_WATER_TABLE  4.000         0.000
QS_ON_THE_EXCAVATION_SIDE  0.000         0.000
ZQS           -0.9990E+30  -0.9990E+30
ZCUT           0.000         0.000
BALANCE LEVEL FOR PORE PRESSURES  -12.00    -12.00
WATER_BEHAVIOUR_FLAG (LINING OPT)  0.000         0.000
PORE_UPDATE_FLAG  0.000         0.000
PORE_TAB._FLAG (gt.0= use tabs)  0.000         0.000
lateral thrusts reduction elevatio  0.000         0.000
Downhill reduction factor for effe  0.000         0.000
Downhill reduction factor for pore  0.000         0.000
Uphill reduction factor for effect  0.000         0.000
Uphill reduction factor for pore p  0.000         0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]    0.000         0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]    0.000         0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]   0.000         0.000
UPHILL BETA ANGLE (SLOPE) [deg]     0.000         0.000
UPHILL DELTA/PHI RATIO               0.000         0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]   0.000         0.000
DOWNHILL DELTA/PHI RATIO             0.000         0.000
DYN.WATER BEHAVIOUR                 0.000         0.000
Excess pore pressure RATIO Ru       0.000         0.000
SEISMIC PRESSURE LOWER VALUE        0.000         0.000
SEISMIC PRESSURE UPPER VALUE        0.000         0.000
SEISMIC PRESSURE LOWER LEVEL        0.000         0.000
SEISMIC PRESSURE UPPER LEVEL        0.000         0.000

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=====end of step 5

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STEP NO.      6
              LEFT WALL  RIGHT WALL
Y              0.000     -0.9990E+30
Z-PC           0.000         0.000
Z-EXCAVATION   -3.000         0.000
Z-WATER_TABLE  0.000     -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL  0.000         0.000
ZQ             0.000         0.000
DZW_OF_THE_WATER_TABLE  4.500         0.000
QS_ON_THE_EXCAVATION_SIDE  0.000         0.000
ZQS           -0.9990E+30  -0.9990E+30
ZCUT           0.000         0.000
BALANCE LEVEL FOR PORE PRESSURES  -12.00    -12.00
WATER_BEHAVIOUR_FLAG (LINING OPT)  0.000         0.000
PORE_UPDATE_FLAG  0.000         0.000
PORE_TAB._FLAG (gt.0= use tabs)  0.000         0.000
lateral thrusts reduction elevatio  0.000         0.000
Downhill reduction factor for effe  0.000         0.000
Downhill reduction factor for pore  0.000         0.000
Uphill reduction factor for effect  0.000         0.000
Uphill reduction factor for pore p  0.000         0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]    0.000         0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]    0.000         0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]   0.000         0.000
UPHILL BETA ANGLE (SLOPE) [deg]     0.000         0.000
UPHILL DELTA/PHI RATIO               0.000         0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]   0.000         0.000
DOWNHILL DELTA/PHI RATIO             0.000         0.000
DYN.WATER BEHAVIOUR                 0.000         0.000
Excess pore pressure RATIO Ru       0.000         0.000
SEISMIC PRESSURE LOWER VALUE        0.000         0.000
SEISMIC PRESSURE UPPER VALUE        0.000         0.000
SEISMIC PRESSURE LOWER LEVEL        0.000         0.000
SEISMIC PRESSURE UPPER LEVEL        0.000         0.000

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=====end of step 6

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STEP NO.      7
              LEFT WALL  RIGHT WALL

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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

Y	0.000	-0.9990E+30
Z-PC	0.000	0.000
Z-EXCAVATION	-3.000	0.000
Z-WATER_TABLE	0.000	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL	0.000	0.000
ZQ	0.000	0.000
DZW_OF_THE_WATER_TABLE	4.500	0.000
QS_ON_THE_EXCAVATION_SIDE	0.000	0.000
ZQS	-0.9990E+30	-0.9990E+30
ZCUT	0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES	-12.00	-12.00
WATER_BEHAVIOUR_FLAG (LINING OPT)	0.000	0.000
PORE_UPDATE_FLAG	0.000	0.000
PORE_TAB. _FLAG (gt.0= use tabs)	0.000	0.000
lateral thrusts reduction elevatio	0.000	0.000
Downhill reduction factor for effe	0.000	0.000
Downhill reduction factor for pore	0.000	0.000
Uphill reduction factor for effect	0.000	0.000
Uphill reduction factor for pore p	0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]	0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]	0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]	0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]	0.000	0.000
UPHILL DELTA/PHI RATIO	0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]	0.000	0.000
DOWNHILL DELTA/PHI RATIO	0.000	0.000
DYN.WATER BEHAVIOUR	0.000	0.000
Excess pore pressure RATIO Ru	0.000	0.000
SEISMIC PRESSURE LOWER VALUE	0.000	0.000
SEISMIC PRESSURE UPPER VALUE	0.000	0.000
SEISMIC PRESSURE LOWER LEVEL	0.000	0.000
SEISMIC PRESSURE UPPER LEVEL	0.000	0.000

=====
=====end of step 7

LEFT-HAND WALL

LOWER LEVEL	-12.00000
UPPER LEVEL	0.00000

RIGHT-HAND WALL

LOWER LEVEL	-12.00000
UPPER LEVEL	0.00000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|                PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|                |
|                NewProject.BaseDesignSection_28.A1M1R1_1757  |
|                Exe Time :24 May 2018  18:17:33  |
+-----+

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I N I T I A L S T R E S S T A B L E S

S E C T I O N

NUMBER OF DEFINED TABLES 1

INPUT DATA FOR INITIAL STRESS SET NO. 1
PERTAINING SOIL ELEMENTS AT Y-COORD 0.0000

ACTIVATION TIME 1.0000
END TIME (TIME BEYOND WHICH IT IS REMOVED) 7.0000

TYPE BOUSSINESQ

HORIZONTAL DISTANCE (DY) 2.0000000000000000
FOUNDATION WIDTH (B) 33.0000000000000000
ZETA-F..... 0.0000000000000000E+000
Q-F 5.0000000000000000
BETA 45.0000000000000000
BEHAVIOUR (0=FREE, 1=REFLECTING) 0.0000000000000000E+000

ELEMENT GROUPS BACKUP AREA CAN STAY IN CORE AT
POSITION 5903

NO. OF D.P.W FOR THIS AREA 7208
MAX NO. OF D.P.W. AVAILABLE 81920
** MAX NO OF ITERATIONS SET TO 40

```

ITER    0  RNORM = 0.000    RMNORM= 0.000
          RINORM=0.5271E+05 RIMNOR= 0.000
          RENORM=0.1199E-27 REMNOR= 0.000        RATIO =0.4770E-16 TOLER =0.1000E-03        CONVERGED !
          RFMAX = 35.70        RMMAX = 0.000
          RTSMAL=0.1000E-03 RMSMAL= 0.000
          RDT    =0.5271E+05 RDR    = 0.000
          RATIOI=0.4770E-16 RATIOR= 0.000
          MAX UN=0.3553E-14 IEQ=    97 NODE        49 DOF    1  Y-DISPL.F
          MIN UN=-.3553E-14 IEQ=    85 NODE        43 DOF    1  Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS        0

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ITER    1  RNORM = 0.000    RMNORM= 0.000
          RINORM=0.5271E+05 RIMNOR= 0.000
          RENORM=0.1511E-28 REMNOR=0.4932E-53 RATIO =0.1693E-16 TOLER =0.1000E-03        CONVERGED !
          RFMAX = 35.70        RMMAX = 0.000
          RTSMAL=0.1000E-03 RMSMAL= 0.000
          RDT    =0.5271E+05 RDR    = 0.000
          RATIOI=0.1693E-16 RATIOR= 0.000
          MAX UN=0.8982E-15 IEQ=    65 NODE        33 DOF    1  Y-DISPL.F
          MIN UN=-.2717E-15 IEQ=    119 NODE       60 DOF    1  Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS        0

```

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ITER    2  RNORM = 0.000    RMNORM= 0.000
          RINORM=0.5271E+05 RIMNOR= 0.000
          RENORM=0.1329E-28 REMNOR=0.2437E-52 RATIO =0.1588E-16 TOLER =0.1000E-03        CONVERGED !
          RFMAX = 35.70        RMMAX = 0.000
          RTSMAL=0.1000E-03 RMSMAL= 0.000
          RDT    =0.5271E+05 RDR    = 0.000
          RATIOI=0.1588E-16 RATIOR= 0.000
          MAX UN=0.7562E-15 IEQ=    65 NODE        33 DOF    1  Y-DISPL.F
          MIN UN=-.2452E-15 IEQ=    119 NODE       60 DOF    1  Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS        0

```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*  |
|                                                                                               |
|                               NewProject.BaseDesignSection_28.A1M1R1_1757                       |
|                               Exe Time :24 May 2018      18:17:33                             |
+-----+
New Project
SOLUTION REACHED USING      2 ITERATIONS ON      40

P R I N T   O U T   F O R   T I M E   S T E P   1   ( AT TIME 1.000   )

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

      Y-DISPL.F      X-ROT. F
      (02)          (04)      (

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS
```


Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757 |
|          Exe Time :24 May 2018   18:17:33 |
+-----+
New Project
  
```

STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 1.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	2.2246E-20	0.000	0.000	0.000	0.000	V-C	2.0004E+04	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.6596	1.6856E-20	2.001	1.298	2.001	1.298	V-C	2.0004E+04	-0.2000	2.000	
1.000	1.000	3.298	0.000	0.000	Ug1_2_8_L_0						
3 D	1.317	1.1465E-20	4.008	2.584	4.008	2.584	V-C	2.0004E+04	-0.4000	4.000	
1.000	1.000	6.584	0.000	0.000	Ug1_2_8_L_0						
4 D	1.969	6.0683E-21	6.026	3.847	6.026	3.847	V-C	2.0004E+04	-0.6000	6.000	
1.000	1.000	9.847	0.000	0.000	Ug1_2_8_L_0						
5 D	2.616	6.6281E-22	8.057	5.082	8.057	5.082	V-C	2.0004E+04	-0.8000	8.000	
1.000	1.000	13.08	0.000	0.000	Ug1_2_8_L_0						
6 D	3.257	-4.7571E-21	10.10	6.284	10.10	6.284	V-C	2.0004E+04	-1.0000	10.000	
1.000	1.000	16.28	0.000	0.000	Ug1_2_8_L_0						
7 D	3.891	-1.0196E-20	12.16	7.453	12.16	7.453	V-C	2.0004E+04	-1.2000	12.000	
1.000	1.000	19.45	0.000	0.000	Ug1_2_8_L_0						
8 D	4.519	-1.5660E-20	14.22	8.593	14.22	8.593	V-C	2.0004E+04	-1.4000	14.000	
1.000	1.000	22.59	0.000	0.000	Ug1_2_8_L_0						
9 D	5.141	-2.1151E-20	16.30	9.705	16.30	9.705	V-C	2.0004E+04	-1.6000	16.000	
1.000	1.000	25.70	0.000	0.000	Ug1_2_8_L_0						
10 D	5.759	-2.6671E-20	18.37	10.79	18.37	10.79	V-C	2.0004E+04	-1.8000	18.000	
1.000	1.000	28.79	0.000	0.000	Ug1_2_8_L_0						
11 D	6.373	-3.2218E-20	20.45	11.86	20.45	11.86	V-C	2.0004E+04	-2.0000	20.000	
1.000	1.000	31.86	0.000	0.000	Ug1_2_8_L_0						
12 D	6.984	-3.7788E-20	22.53	12.92	22.53	12.92	V-C	2.0004E+04	-2.2000	22.000	
1.000	1.000	34.92	0.000	0.000	Ug1_2_8_L_0						
13 D	7.592	-4.3382E-20	24.67	13.96	24.67	13.96	V-C	2.0004E+04	-2.4000	24.000	
1.000	1.000	37.96	0.000	0.000	Ug1_2_8_L_0						
14 D	8.198	-4.9031E-20	26.69	14.99	26.69	14.99	V-C	2.0004E+04	-2.6000	26.000	
1.000	1.000	40.99	0.000	0.000	Ug1_2_8_L_0						
15 D	8.802	-5.4768E-20	28.91	16.01	28.91	16.01	V-C	3.6799E+04	-2.8000	28.000	
1.000	1.000	44.01	0.000	0.000	Ug2_741_743_L_0						
16 D	9.405	-6.0621E-20	31.14	17.03	31.14	17.03	V-C	3.6799E+04	-3.0000	30.000	
1.000	1.000	47.03	0.000	0.000	Ug2_741_743_L_0						
17 D	10.01	-6.6609E-20	33.10	18.04	33.10	18.04	V-C	3.6799E+04	-3.2000	32.000	
1.000	1.000	50.04	0.000	0.000	Ug2_741_743_L_0						
18 D	10.61	-7.2737E-20	35.30	19.04	35.30	19.04	V-C	3.6799E+04	-3.4000	34.000	
1.000	1.000	53.04	0.000	0.000	Ug2_741_743_L_0						
19 D	11.21	-7.9003E-20	37.26	20.04	37.26	20.04	V-C	3.6799E+04	-3.6000	36.000	
1.000	1.000	56.04	0.000	0.000	Ug2_741_743_L_0						
20 D	11.81	-8.5386E-20	39.43	21.04	39.43	21.04	V-C	3.6799E+04	-3.8000	38.000	
1.000	1.000	59.04	0.000	0.000	Ug2_741_743_L_0						
21 D	12.41	-9.1856E-20	41.59	22.04	41.59	22.04	V-C	3.6799E+04	-4.0000	40.000	
1.000	1.000	62.04	0.000	0.000	Ug2_741_743_L_0						
22 D	13.01	-9.8365E-20	43.55	23.03	43.55	23.03	V-C	3.6799E+04	-4.2000	42.000	
1.000	1.000	65.03	0.000	0.000	Ug2_741_743_L_0						
23 D	13.60	-1.0485E-19	45.69	24.02	45.69	24.02	V-C	3.6799E+04	-4.4000	44.000	
1.000	1.000	68.02	0.000	0.000	Ug2_741_743_L_0						
24 D	14.20	-1.1123E-19	47.65	25.02	47.65	25.02	V-C	3.6799E+04	-4.6000	46.000	
1.000	1.000	71.02	0.000	0.000	Ug2_741_743_L_0						
25 D	14.80	-1.1742E-19	49.78	26.01	49.78	26.01	V-C	3.6799E+04	-4.8000	48.000	
1.000	1.000	74.01	0.000	0.000	Ug2_741_743_L_0						
26 D	15.40	-1.2334E-19	51.89	26.99	51.89	26.99	V-C	3.6799E+04	-5.0000	50.000	
1.000	1.000	76.99	0.000	0.000	Ug2_741_743_L_0						
27 D	16.00	-1.2891E-19	53.85	27.98	53.85	27.98	V-C	3.6799E+04	-5.2000	52.000	
1.000	1.000	79.98	0.000	0.000	Ug2_741_743_L_0						
28 D	16.59	-1.3404E-19	55.96	28.97	55.96	28.97	V-C	3.6799E+04	-5.4000	54.000	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	82.97	0.000	0.000	Ug2_741_743_L_0					
29 D	17.19	-1.3858E-19	57.92	29.96	57.92	29.96	V-C	3.6799E+04	-5.600	56.00
1.000	1.000	85.96	0.000	0.000	Ug2_741_743_L_0					
30 D	17.79	-1.4241E-19	60.02	30.94	60.02	30.94	V-C	3.6799E+04	-5.800	58.00
1.000	1.000	88.94	0.000	0.000	Ug2_741_743_L_0					
31 D	18.39	-1.4535E-19	62.11	31.93	62.11	31.93	V-C	3.6799E+04	-6.000	60.00
1.000	1.000	91.93	0.000	0.000	Ug2_741_743_L_0					
32 D	18.98	-1.4724E-19	64.07	32.92	64.07	32.92	V-C	3.6799E+04	-6.200	62.00
1.000	1.000	94.92	0.000	0.000	Ug2_741_743_L_0					
33 D	19.58	-1.4796E-19	66.16	33.90	66.16	33.90	V-C	3.6799E+04	-6.400	64.00
1.000	1.000	97.90	0.000	0.000	Ug2_741_743_L_0					
34 D	20.18	-1.4750E-19	68.12	34.89	68.12	34.89	V-C	3.6799E+04	-6.600	66.00
1.000	1.000	100.9	0.000	0.000	Ug2_741_743_L_0					
35 D	20.77	-1.4590E-19	70.20	35.87	70.20	35.87	V-C	3.6799E+04	-6.800	68.00
1.000	1.000	103.9	0.000	0.000	Ug2_741_743_L_0					
36 D	21.37	-1.4320E-19	72.27	36.86	72.27	36.86	V-C	3.6799E+04	-7.000	70.00
1.000	1.000	106.9	0.000	0.000	Ug2_741_743_L_0					
37 D	21.97	-1.3952E-19	74.24	37.84	74.24	37.84	V-C	3.6799E+04	-7.200	72.00
1.000	1.000	109.8	0.000	0.000	Ug2_741_743_L_0					
38 D	22.57	-1.3494E-19	76.31	38.83	76.31	38.83	V-C	3.6799E+04	-7.400	74.00
1.000	1.000	112.8	0.000	0.000	Ug2_741_743_L_0					
39 D	23.16	-1.2954E-19	78.27	39.81	78.27	39.81	V-C	3.6799E+04	-7.600	76.00
1.000	1.000	115.8	0.000	0.000	Ug2_741_743_L_0					
40 D	23.76	-1.2338E-19	80.34	40.80	80.34	40.80	V-C	3.6799E+04	-7.800	78.00
1.000	1.000	118.8	0.000	0.000	Ug2_741_743_L_0					
41 D	24.36	-1.1651E-19	82.40	41.78	82.40	41.78	V-C	3.6799E+04	-8.000	80.00
1.000	1.000	121.8	0.000	0.000	Ug2_741_743_L_0					
42 D	24.95	-1.0904E-19	84.37	42.77	84.37	42.77	V-C	3.6799E+04	-8.200	82.00
1.000	1.000	124.8	0.000	0.000	Ug2_741_743_L_0					
43 D	25.55	-1.0108E-19	86.43	43.75	86.43	43.75	V-C	3.6799E+04	-8.400	84.00
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
44 D	26.15	-9.2783E-20	88.39	44.74	88.39	44.74	V-C	3.6799E+04	-8.600	86.00
1.000	1.000	130.7	0.000	0.000	Ug2_741_743_L_0					
45 D	26.74	-8.4242E-20	90.45	45.72	90.45	45.72	V-C	3.6799E+04	-8.800	88.00
1.000	1.000	133.7	0.000	0.000	Ug2_741_743_L_0					
46 D	27.34	-7.5507E-20	92.50	46.70	92.50	46.70	V-C	3.6799E+04	-9.000	90.00
1.000	1.000	136.7	0.000	0.000	Ug2_741_743_L_0					
47 D	27.94	-6.6619E-20	94.47	47.69	94.47	47.69	V-C	3.6799E+04	-9.200	92.00
1.000	1.000	139.7	0.000	0.000	Ug2_741_743_L_0					
48 D	28.53	-5.7605E-20	96.52	48.67	96.52	48.67	V-C	3.6799E+04	-9.400	94.00
1.000	1.000	142.7	0.000	0.000	Ug2_741_743_L_0					
49 D	29.13	-4.8478E-20	98.57	49.66	98.57	49.66	V-C	3.6799E+04	-9.600	96.00
1.000	1.000	145.7	0.000	0.000	Ug2_741_743_L_0					
50 D	29.73	-3.9264E-20	100.5	50.64	100.5	50.64	V-C	3.6799E+04	-9.800	98.00
1.000	1.000	148.6	0.000	0.000	Ug2_741_743_L_0					
51 D	30.33	-3.0044E-20	102.6	51.63	102.6	51.63	V-C	3.6799E+04	-10.00	100.00
1.000	1.000	151.6	0.000	0.000	Ug2_741_743_L_0					
52 D	30.92	-2.0911E-20	104.6	52.61	104.6	52.61	V-C	3.6799E+04	-10.20	102.0
1.000	1.000	154.6	0.000	0.000	Ug2_741_743_L_0					
53 D	31.52	-1.1937E-20	106.6	53.60	106.6	53.60	V-C	3.1831E+04	-10.40	104.0
1.000	1.000	157.6	0.000	0.000	Ug3_740_742_L_0					
54 D	32.12	-3.1162E-21	108.6	54.58	108.6	54.58	V-C	3.1831E+04	-10.60	106.0
1.000	1.000	160.6	0.000	0.000	Ug3_740_742_L_0					
55 D	32.71	5.5743E-21	110.6	55.57	110.6	55.57	V-C	3.1831E+04	-10.80	108.0
1.000	1.000	163.6	0.000	0.000	Ug3_740_742_L_0					
56 D	33.31	1.4160E-20	112.7	56.55	112.7	56.55	V-C	3.1831E+04	-11.00	110.0
1.000	1.000	166.6	0.000	0.000	Ug3_740_742_L_0					
57 D	33.91	2.2667E-20	114.6	57.54	114.6	57.54	V-C	3.1831E+04	-11.20	112.0
1.000	1.000	169.5	0.000	0.000	Ug3_740_742_L_0					
58 D	34.50	3.1119E-20	116.7	58.52	116.7	58.52	V-C	3.1831E+04	-11.40	114.0
1.000	1.000	172.5	0.000	0.000	Ug3_740_742_L_0					
59 D	35.10	3.9537E-20	118.7	59.51	118.7	59.51	V-C	3.1831E+04	-11.60	116.0
1.000	1.000	175.5	0.000	0.000	Ug3_740_742_L_0					
60 D	35.70	4.7938E-20	120.7	60.50	120.7	60.50	V-C	3.1831E+04	-11.80	118.0
1.000	1.000	178.5	0.000	0.000	Ug3_740_742_L_0					
61 D	18.15	5.6335E-20	122.7	61.48	122.7	61.48	V-C	3.1831E+04	-12.00	120.0
1.000	1.000	181.5	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757 |
|          Exe Time :24 May 2018   18:17:33 |
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 1.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-2.2246E-20	0.000	0.000	0.000	0.000	V-C	1.5622E+04	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.6596	-1.6856E-20	2.000	1.298	2.000	1.298	V-C	1.5622E+04	-0.2000	2.000	
1.000	1.000	3.298	0.000	0.000	Ug1_2_8_L_0						
3 D	1.317	-1.1465E-20	4.000	2.584	4.000	2.584	V-C	1.5622E+04	-0.4000	4.000	
1.000	1.000	6.584	0.000	0.000	Ug1_2_8_L_0						
4 D	1.969	-6.0683E-21	6.000	3.847	6.000	3.847	V-C	1.5622E+04	-0.6000	6.000	
1.000	1.000	9.847	0.000	0.000	Ug1_2_8_L_0						
5 D	2.616	-6.6281E-22	8.000	5.082	8.000	5.082	V-C	1.5622E+04	-0.8000	8.000	
1.000	1.000	13.08	0.000	0.000	Ug1_2_8_L_0						
6 D	3.257	4.7571E-21	10.00	6.284	10.00	6.284	V-C	1.5622E+04	-1.0000	10.00	
1.000	1.000	16.28	0.000	0.000	Ug1_2_8_L_0						
7 D	3.891	1.0196E-20	12.00	7.453	12.00	7.453	V-C	1.5622E+04	-1.2000	12.00	
1.000	1.000	19.45	0.000	0.000	Ug1_2_8_L_0						
8 D	4.519	1.5660E-20	14.00	8.593	14.00	8.593	V-C	1.5622E+04	-1.4000	14.00	
1.000	1.000	22.59	0.000	0.000	Ug1_2_8_L_0						
9 D	5.141	2.1151E-20	16.00	9.705	16.00	9.705	V-C	1.5622E+04	-1.6000	16.00	
1.000	1.000	25.70	0.000	0.000	Ug1_2_8_L_0						
10 D	5.759	2.6671E-20	18.00	10.79	18.00	10.79	V-C	1.5622E+04	-1.8000	18.00	
1.000	1.000	28.79	0.000	0.000	Ug1_2_8_L_0						
11 D	6.373	3.2218E-20	20.00	11.86	20.00	11.86	V-C	1.5622E+04	-2.0000	20.00	
1.000	1.000	31.86	0.000	0.000	Ug1_2_8_L_0						
12 D	6.984	3.7788E-20	22.00	12.92	22.00	12.92	V-C	1.5622E+04	-2.2000	22.00	
1.000	1.000	34.92	0.000	0.000	Ug1_2_8_L_0						
13 D	7.592	4.3382E-20	24.00	13.96	24.00	13.96	V-C	1.5622E+04	-2.4000	24.00	
1.000	1.000	37.96	0.000	0.000	Ug1_2_8_L_0						
14 D	8.198	4.9031E-20	26.00	14.99	26.00	14.99	V-C	1.5622E+04	-2.6000	26.00	
1.000	1.000	40.99	0.000	0.000	Ug1_2_8_L_0						
15 D	8.802	5.4768E-20	28.00	16.01	28.00	16.01	V-C	1.9107E+04	-2.8000	28.00	
1.000	1.000	44.01	0.000	0.000	Ug2_741_743_L_0						
16 D	9.405	6.0621E-20	30.00	17.03	30.00	17.03	V-C	1.9107E+04	-3.0000	30.00	
1.000	1.000	47.03	0.000	0.000	Ug2_741_743_L_0						
17 D	10.01	6.6609E-20	32.00	18.04	32.00	18.04	V-C	1.9107E+04	-3.2000	32.00	
1.000	1.000	50.04	0.000	0.000	Ug2_741_743_L_0						
18 D	10.61	7.2737E-20	34.00	19.04	34.00	19.04	V-C	1.9107E+04	-3.4000	34.00	
1.000	1.000	53.04	0.000	0.000	Ug2_741_743_L_0						
19 D	11.21	7.9003E-20	36.00	20.04	36.00	20.04	V-C	1.9107E+04	-3.6000	36.00	
1.000	1.000	56.04	0.000	0.000	Ug2_741_743_L_0						
20 D	11.81	8.5386E-20	38.00	21.04	38.00	21.04	V-C	1.9107E+04	-3.8000	38.00	
1.000	1.000	59.04	0.000	0.000	Ug2_741_743_L_0						
21 D	12.41	9.1856E-20	40.00	22.04	40.00	22.04	V-C	1.9107E+04	-4.0000	40.00	
1.000	1.000	62.04	0.000	0.000	Ug2_741_743_L_0						
22 D	13.01	9.8365E-20	42.00	23.03	42.00	23.03	V-C	1.9107E+04	-4.2000	42.00	
1.000	1.000	65.03	0.000	0.000	Ug2_741_743_L_0						
23 D	13.60	1.0485E-19	44.00	24.02	44.00	24.02	V-C	1.9107E+04	-4.4000	44.00	
1.000	1.000	68.02	0.000	0.000	Ug2_741_743_L_0						
24 D	14.20	1.1123E-19	46.00	25.02	46.00	25.02	V-C	1.9107E+04	-4.6000	46.00	
1.000	1.000	71.02	0.000	0.000	Ug2_741_743_L_0						
25 D	14.80	1.1742E-19	48.00	26.01	48.00	26.01	V-C	1.9107E+04	-4.8000	48.00	
1.000	1.000	74.01	0.000	0.000	Ug2_741_743_L_0						
26 D	15.40	1.2334E-19	50.00	26.99	50.00	26.99	V-C	1.9107E+04	-5.0000	50.00	
1.000	1.000	76.99	0.000	0.000	Ug2_741_743_L_0						
27 D	16.00	1.2891E-19	52.00	27.98	52.00	27.98	V-C	1.9107E+04	-5.2000	52.00	
1.000	1.000	79.98	0.000	0.000	Ug2_741_743_L_0						
28 D	16.59	1.3404E-19	54.00	28.97	54.00	28.97	V-C	1.9107E+04	-5.4000	54.00	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	82.97	0.000	0.000	Ug2_741_743_L_0					
29 D	17.19	1.3858E-19	56.00	29.96	56.00	29.96	V-C	1.9107E+04	-5.600	56.00
1.000	1.000	85.96	0.000	0.000	Ug2_741_743_L_0					
30 D	17.79	1.4241E-19	58.00	30.94	58.00	30.94	V-C	1.9107E+04	-5.800	58.00
1.000	1.000	88.94	0.000	0.000	Ug2_741_743_L_0					
31 D	18.39	1.4535E-19	60.00	31.93	60.00	31.93	V-C	1.9107E+04	-6.000	60.00
1.000	1.000	91.93	0.000	0.000	Ug2_741_743_L_0					
32 D	18.98	1.4724E-19	62.00	32.92	62.00	32.92	V-C	1.9107E+04	-6.200	62.00
1.000	1.000	94.92	0.000	0.000	Ug2_741_743_L_0					
33 D	19.58	1.4796E-19	64.00	33.90	64.00	33.90	V-C	1.9107E+04	-6.400	64.00
1.000	1.000	97.90	0.000	0.000	Ug2_741_743_L_0					
34 D	20.18	1.4750E-19	66.00	34.89	66.00	34.89	V-C	1.9107E+04	-6.600	66.00
1.000	1.000	100.9	0.000	0.000	Ug2_741_743_L_0					
35 D	20.77	1.4590E-19	68.00	35.87	68.00	35.87	V-C	1.9107E+04	-6.800	68.00
1.000	1.000	103.9	0.000	0.000	Ug2_741_743_L_0					
36 D	21.37	1.4320E-19	70.00	36.86	70.00	36.86	V-C	1.9107E+04	-7.000	70.00
1.000	1.000	106.9	0.000	0.000	Ug2_741_743_L_0					
37 D	21.97	1.3952E-19	72.00	37.84	72.00	37.84	V-C	1.9107E+04	-7.200	72.00
1.000	1.000	109.8	0.000	0.000	Ug2_741_743_L_0					
38 D	22.57	1.3494E-19	74.00	38.83	74.00	38.83	V-C	1.9107E+04	-7.400	74.00
1.000	1.000	112.8	0.000	0.000	Ug2_741_743_L_0					
39 D	23.16	1.2954E-19	76.00	39.81	76.00	39.81	V-C	1.9107E+04	-7.600	76.00
1.000	1.000	115.8	0.000	0.000	Ug2_741_743_L_0					
40 D	23.76	1.2338E-19	78.00	40.80	78.00	40.80	V-C	1.9107E+04	-7.800	78.00
1.000	1.000	118.8	0.000	0.000	Ug2_741_743_L_0					
41 D	24.36	1.1651E-19	80.00	41.78	80.00	41.78	V-C	1.9107E+04	-8.000	80.00
1.000	1.000	121.8	0.000	0.000	Ug2_741_743_L_0					
42 D	24.95	1.0904E-19	82.00	42.77	82.00	42.77	V-C	1.9107E+04	-8.200	82.00
1.000	1.000	124.8	0.000	0.000	Ug2_741_743_L_0					
43 D	25.55	1.0108E-19	84.00	43.75	84.00	43.75	V-C	1.9107E+04	-8.400	84.00
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
44 D	26.15	9.2783E-20	86.00	44.74	86.00	44.74	V-C	1.9107E+04	-8.600	86.00
1.000	1.000	130.7	0.000	0.000	Ug2_741_743_L_0					
45 D	26.74	8.4242E-20	88.00	45.72	88.00	45.72	V-C	1.9107E+04	-8.800	88.00
1.000	1.000	133.7	0.000	0.000	Ug2_741_743_L_0					
46 D	27.34	7.5507E-20	90.00	46.70	90.00	46.70	V-C	1.9107E+04	-9.000	90.00
1.000	1.000	136.7	0.000	0.000	Ug2_741_743_L_0					
47 D	27.94	6.6619E-20	92.00	47.69	92.00	47.69	V-C	1.9107E+04	-9.200	92.00
1.000	1.000	139.7	0.000	0.000	Ug2_741_743_L_0					
48 D	28.53	5.7605E-20	94.00	48.67	94.00	48.67	V-C	1.9107E+04	-9.400	94.00
1.000	1.000	142.7	0.000	0.000	Ug2_741_743_L_0					
49 D	29.13	4.8478E-20	96.00	49.66	96.00	49.66	V-C	1.9107E+04	-9.600	96.00
1.000	1.000	145.7	0.000	0.000	Ug2_741_743_L_0					
50 D	29.73	3.9264E-20	98.00	50.64	98.00	50.64	V-C	1.9107E+04	-9.800	98.00
1.000	1.000	148.6	0.000	0.000	Ug2_741_743_L_0					
51 D	30.33	3.0044E-20	100.00	51.63	100.00	51.63	V-C	1.9107E+04	-10.000	100.00
1.000	1.000	151.6	0.000	0.000	Ug2_741_743_L_0					
52 D	30.92	2.0911E-20	102.0	52.61	102.0	52.61	V-C	1.9107E+04	-10.200	102.0
1.000	1.000	154.6	0.000	0.000	Ug2_741_743_L_0					
53 D	31.52	1.1937E-20	104.0	53.60	104.0	53.60	V-C	2.2089E+04	-10.400	104.0
1.000	1.000	157.6	0.000	0.000	Ug3_740_742_L_0					
54 D	32.12	3.1162E-21	106.0	54.58	106.0	54.58	V-C	2.2089E+04	-10.600	106.0
1.000	1.000	160.6	0.000	0.000	Ug3_740_742_L_0					
55 D	32.71	-5.5743E-21	108.0	55.57	108.0	55.57	V-C	2.2089E+04	-10.800	108.0
1.000	1.000	163.6	0.000	0.000	Ug3_740_742_L_0					
56 D	33.31	-1.4160E-20	110.0	56.55	110.0	56.55	V-C	2.2089E+04	-11.000	110.0
1.000	1.000	166.6	0.000	0.000	Ug3_740_742_L_0					
57 D	33.91	-2.2667E-20	112.0	57.54	112.0	57.54	V-C	2.2089E+04	-11.200	112.0
1.000	1.000	169.5	0.000	0.000	Ug3_740_742_L_0					
58 D	34.50	-3.1119E-20	114.0	58.52	114.0	58.52	V-C	2.2089E+04	-11.400	114.0
1.000	1.000	172.5	0.000	0.000	Ug3_740_742_L_0					
59 D	35.10	-3.9537E-20	116.0	59.51	116.0	59.51	V-C	2.2089E+04	-11.600	116.0
1.000	1.000	175.5	0.000	0.000	Ug3_740_742_L_0					
60 D	35.70	-4.7938E-20	118.0	60.50	118.0	60.50	V-C	2.2089E+04	-11.800	118.0
1.000	1.000	178.5	0.000	0.000	Ug3_740_742_L_0					
61 D	18.15	-5.6335E-20	120.0	61.48	120.0	61.48	V-C	2.2089E+04	-12.000	120.0
1.000	1.000	181.5	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|                PARATIEPLUS(TM)    NLS ENGINE RELEASE 2017.1    FULL VERSION *Build date:Jul 11, 2017*    |
|                                                                              |
|                                                                              |
|                NewProject.BaseDesignSection_28.A1M1R1_1757    |
|                Exe Time :24 May 2018    18:17:33                |
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New Project
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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 1.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	4.44228E-17	-4.44228E-17	1.51461E-28	8.88456E-18
2	1.11314E-16	-1.11314E-16	-8.88456E-18	3.11473E-17
3	1.56247E-16	-1.56247E-16	-3.11473E-17	6.23967E-17
4	1.79216E-16	-1.79216E-16	-6.23967E-17	9.82399E-17
5	1.80207E-16	-1.80207E-16	-9.82399E-17	1.34281E-16
6	1.59200E-16	-1.59200E-16	-1.34281E-16	1.66121E-16
7	1.16168E-16	-1.16168E-16	-1.66121E-16	1.89355E-16
8	5.10787E-17	-5.10787E-17	-1.89355E-16	1.99571E-16
9	-3.61003E-17	3.61003E-17	-1.99571E-16	1.92351E-16
10	-1.45400E-16	1.45400E-16	-1.92351E-16	1.63270E-16
11	-2.76846E-16	2.76846E-16	-1.63270E-16	1.07901E-16
12	1.34591E-15	-1.34591E-15	-1.07901E-16	3.77083E-16
13	1.17015E-15	-1.17015E-15	-3.77083E-16	6.11114E-16
14	9.72289E-16	-9.72289E-16	-6.11114E-16	8.05571E-16
15	6.27201E-16	-6.27201E-16	-8.05571E-16	9.31012E-16
16	2.47713E-16	-2.47713E-16	-9.31012E-16	9.80554E-16
17	-1.65889E-16	1.65889E-16	-9.80554E-16	9.47377E-16
18	-6.13194E-16	6.13194E-16	-9.47377E-16	8.24738E-16
19	-1.09364E-15	1.09364E-15	-8.24738E-16	6.06009E-16
20	-1.60649E-15	1.60649E-15	-6.06009E-16	2.84712E-16
21	-2.15081E-15	2.15081E-15	-2.84712E-16	1.45449E-16
22	-2.72541E-15	2.72541E-15	-1.45449E-16	6.90531E-16
23	-3.32890E-15	3.32890E-15	-6.90531E-16	1.35631E-15
24	-2.18323E-15	2.18323E-15	-1.35631E-15	1.79296E-15
25	-2.83918E-15	2.83918E-15	-1.79296E-15	2.36079E-15
26	-3.51815E-15	3.51815E-15	-2.36079E-15	3.06442E-15
27	-4.21765E-15	4.21765E-15	-3.06442E-15	3.90795E-15
28	-4.93488E-15	4.93488E-15	-3.90795E-15	4.89492E-15
29	-5.66683E-15	5.66683E-15	-4.89492E-15	6.02829E-15
30	-6.41022E-15	6.41022E-15	-6.02829E-15	7.31033E-15
31	-3.60885E-15	3.60885E-15	-7.31033E-15	8.03210E-15
32	-8.11778E-16	8.11778E-16	-8.03210E-15	8.19446E-15
33	1.98478E-15	-1.98478E-15	-8.19446E-15	7.79750E-15
34	1.23199E-15	-1.23199E-15	-7.79750E-15	7.55110E-15
35	4.03920E-15	-4.03920E-15	-7.55110E-15	6.74326E-15
36	3.30491E-15	-3.30491E-15	-6.74326E-15	6.08228E-15
37	2.58571E-15	-2.58571E-15	-6.08228E-15	5.56514E-15
38	1.88537E-15	-1.88537E-15	-5.56514E-15	5.18807E-15
39	1.20755E-15	-1.20755E-15	-5.18807E-15	4.94656E-15
40	4.10846E-15	-4.10846E-15	-4.94656E-15	4.12487E-15
41	3.48594E-15	-3.48594E-15	-4.12487E-15	3.42768E-15
42	6.44850E-15	-6.44850E-15	-3.42768E-15	2.13798E-15
43	2.34082E-15	-2.34082E-15	-2.13798E-15	1.66981E-15
44	1.82363E-15	-1.82363E-15	-1.66981E-15	1.30509E-15
45	1.34651E-15	-1.34651E-15	-1.30509E-15	1.03579E-15
46	9.11530E-16	-9.11530E-16	-1.03579E-15	8.53482E-16
47	5.20487E-16	-5.20487E-16	-8.53482E-16	7.49384E-16
48	1.74929E-16	-1.74929E-16	-7.49384E-16	7.14398E-16
49	3.42889E-15	-3.42889E-15	-7.14398E-16	2.86246E-17
50	3.17802E-15	-3.17802E-15	-2.86246E-17	6.06980E-16
51	2.97595E-15	-2.97595E-15	-6.06980E-16	1.20218E-15
52	-7.29352E-16	7.29352E-16	-1.20218E-15	1.05632E-15
53	-8.28255E-16	8.28255E-16	-1.05632E-15	8.90670E-16
54	-8.78498E-16	8.78498E-16	-8.90670E-16	7.14971E-16
55	-8.79796E-16	8.79796E-16	-7.14971E-16	5.39011E-16
56	-8.31953E-16	8.31953E-16	-5.39011E-16	3.72621E-16
57	-7.34841E-16	7.34841E-16	-3.72621E-16	2.25653E-16
58	-5.88387E-16	5.88387E-16	-2.25653E-16	1.07975E-16
59	-3.92551E-16	3.92551E-16	-1.07975E-16	2.94651E-17

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

60-1.47318E-16 1.47318E-16-2.94651E-17-1.00974E-28

```
ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1229E-26
RENORM= 225.0 REMNOR=0.2437E-52 RATIO =0.6867E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8194E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.6867E-01 RATIO= 0.000
MAX UN= 2.957 IEQ= 11 NODE 6 DOF 1 Y-DISPL.F
MIN UN=-.4442E-16 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1229E-26
RENORM= 4.949 REMNOR=0.1214E-22 RATIO =0.1019E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8194E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.1019E-01 RATIO= 0.000
MAX UN= 1.392 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
MIN UN=-.1043E-10 IEQ= 63 NODE 32 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1229E-26
RENORM= 1.161 REMNOR=0.1102E-22 RATIO =0.4934E-02 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8194E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.4934E-02 RATIO= 0.000
MAX UN=0.9097 IEQ= 13 NODE 7 DOF 1 Y-DISPL.F
MIN UN=-.7114E-11 IEQ= 21 NODE 11 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 4 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1229E-26
RENORM=0.1164E-01 REMNOR=0.4880E-23 RATIO =0.4940E-03 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8194E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.4940E-03 RATIO= 0.000
MAX UN=0.1077 IEQ= 35 NODE 18 DOF 1 Y-DISPL.F
MIN UN=-.1918E-10 IEQ= 9 NODE 5 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 5 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1229E-26
RENORM=0.1017E-20 REMNOR=0.6446E-23 RATIO =0.1460E-12 TOLER =0.1000E-03 CONVERGED !
RFMAX = 35.19 RMMAX =0.8194E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.1460E-12 RATIO= 0.000
MAX UN=0.2020E-10 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
MIN UN=-.1473E-10 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757   |
|          Exe Time :24 May 2018   18:17:33   |
+-----+

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New Project
SOLUTION REACHED USING 5 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 2 (AT TIME 2.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	3.3063277E-04	-8.1976656E-05	
2	3.1423744E-04	-8.1976656E-05	
3	2.9784398E-04	-8.1948671E-05	
4	2.8146544E-04	-8.1808746E-05	
5	2.6513727E-04	-8.1416954E-05	
6	2.4892850E-04	-8.0577402E-05	
7	2.3294465E-04	-7.9162647E-05	
8	2.1730234E-04	-7.7164498E-05	
9	2.0211565E-04	-7.4614489E-05	
10	1.8748904E-04	-7.1577066E-05	
11	1.7351092E-04	-6.8148177E-05	
12	1.6024926E-04	-6.4426923E-05	
13	1.4775470E-04	-6.0487428E-05	
14	1.3606552E-04	-5.6379365E-05	
15	1.2521240E-04	-5.2129610E-05	
16	1.1522107E-04	-4.7768996E-05	
17	1.0610871E-04	-4.3349066E-05	
18	9.7881062E-05	-3.8934180E-05	
19	9.0529535E-05	-3.4601817E-05	
20	8.4029484E-05	-3.0432225E-05	
21	7.8341399E-05	-2.6491738E-05	
22	7.3414417E-05	-2.2827253E-05	
23	6.9190061E-05	-1.9469323E-05	
24	6.5605126E-05	-1.6434828E-05	
25	6.2594183E-05	-1.3729541E-05	
26	6.0091566E-05	-1.1350407E-05	
27	5.8032973E-05	-9.2871148E-06	
28	5.6356762E-05	-7.5233530E-06	
29	5.5005033E-05	-6.0385747E-06	
30	5.3924282E-05	-4.8095420E-06	
31	5.3065806E-05	-3.8116744E-06	
32	5.2385859E-05	-3.0201594E-06	
33	5.1845630E-05	-2.4103714E-06	
34	5.1411211E-05	-1.9580792E-06	
35	5.1053455E-05	-1.6399320E-06	
36	5.0747763E-05	-1.4339054E-06	
37	5.0473779E-05	-1.3196111E-06	
38	5.0215042E-05	-1.2784955E-06	
39	4.9958609E-05	-1.2939527E-06	
40	4.9694664E-05	-1.3513609E-06	
41	4.9416112E-05	-1.4380657E-06	
42	4.9118201E-05	-1.5433224E-06	
43	4.8798141E-05	-1.6582085E-06	
44	4.8454756E-05	-1.7755193E-06	
45	4.8088147E-05	-1.8896520E-06	
46	4.7699383E-05	-1.9964917E-06	
47	4.7290220E-05	-2.0932933E-06	
48	4.6862833E-05	-2.1785774E-06	
49	4.6419577E-05	-2.2520327E-06	
50	4.5962760E-05	-2.3144298E-06	
51	4.5494426E-05	-2.3675481E-06	
52	4.5016165E-05	-2.4141120E-06	
53	4.4528990E-05	-2.4577309E-06	
54	4.4033255E-05	-2.4989863E-06	
55	4.3529718E-05	-2.5354124E-06	
56	4.3019520E-05	-2.5653891E-06	
57	4.2504046E-05	-2.5881046E-06	
58	4.1984764E-05	-2.6035252E-06	
59	4.1463074E-05	-2.6123733E-06	
60	4.0940156E-05	-2.6161112E-06	
61	4.0416798E-05	-2.6169312E-06	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757  |
|          Exe Time :24 May 2018  18:17:33  |
+-----+
New Project
    
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STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 2.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-3.3063E-04	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3826	-3.1424E-04	2.088	0.000	2.088	1.341	ACTIVE	0.000	-0.2000	1.913	
1.000	1.000	1.913	0.000	0.000	Ug1_2_8_L_0						
3 D	0.7652	-2.9784E-04	4.182	0.000	4.182	2.671	ACTIVE	0.000	-0.4000	3.826	
1.000	1.000	3.826	0.000	0.000	Ug1_2_8_L_0						
4 D	1.148	-2.8147E-04	6.287	0.000	6.287	3.978	ACTIVE	0.000	-0.6000	5.739	
1.000	1.000	5.739	0.000	0.000	Ug1_2_8_L_0						
5 D	1.530	-2.6514E-04	8.405	0.000	8.405	5.256	ACTIVE	0.000	-0.8000	7.652	
1.000	1.000	7.652	0.000	0.000	Ug1_2_8_L_0						
6 D	1.913	-2.4893E-04	10.54	0.000	10.54	6.501	ACTIVE	0.000	-1.000	9.565	
1.000	1.000	9.565	0.000	0.000	Ug1_2_8_L_0						
7 D	2.296	-2.3294E-04	12.68	0.000	12.68	7.714	ACTIVE	0.000	-1.200	11.48	
1.000	1.000	11.48	0.000	0.000	Ug1_2_8_L_0						
8 D	2.678	-2.1730E-04	14.83	0.000	14.83	8.897	ACTIVE	0.000	-1.400	13.39	
1.000	1.000	13.39	0.000	0.000	Ug1_2_8_L_0						
9 D	3.061	-2.0212E-04	16.99	0.000	16.99	10.05	ACTIVE	0.000	-1.600	15.30	
1.000	1.000	15.30	0.000	0.000	Ug1_2_8_L_0						
10 D	3.443	-1.8749E-04	19.16	0.000	19.16	11.19	ACTIVE	0.000	-1.800	17.22	
1.000	1.000	17.22	0.000	0.000	Ug1_2_8_L_0						
11 D	4.203	-1.7351E-04	21.32	1.886	21.32	12.30	UL-RL	6.0013E+04	-2.000	19.13	
1.000	1.000	21.02	0.000	0.000	Ug1_2_8_L_0						
12 D	4.965	-1.6025E-04	23.49	3.780	23.49	13.40	UL-RL	6.0013E+04	-2.200	21.04	
1.000	1.000	24.82	0.000	0.000	Ug1_2_8_L_0						
13 D	5.714	-1.4775E-04	25.72	5.614	25.72	14.48	UL-RL	6.0013E+04	-2.400	22.96	
1.000	1.000	28.57	0.000	0.000	Ug1_2_8_L_0						
14 D	6.452	-1.3607E-04	27.82	7.390	27.82	15.56	UL-RL	6.0013E+04	-2.600	24.87	
1.000	1.000	32.26	0.000	0.000	Ug1_2_8_L_0						
15 D	6.923	-1.2521E-04	30.13	7.833	30.13	16.62	ACTIVE	0.000	-2.800	26.78	
1.000	1.000	34.62	0.000	0.000	Ug2_741_743_L_0						
16 D	7.426	-1.1522E-04	32.44	8.435	32.44	17.68	ACTIVE	0.000	-3.000	28.70	
1.000	1.000	37.13	0.000	0.000	Ug2_741_743_L_0						
17 D	7.915	-1.0611E-04	34.49	8.968	34.49	18.73	ACTIVE	0.000	-3.200	30.61	
1.000	1.000	39.58	0.000	0.000	Ug2_741_743_L_0						
18 D	8.417	-9.7881E-05	36.78	9.562	36.78	19.78	ACTIVE	0.000	-3.400	32.52	
1.000	1.000	42.08	0.000	0.000	Ug2_741_743_L_0						
19 D	9.053	-9.0530E-05	38.82	10.83	38.82	20.83	UL-RL	1.1040E+05	-3.600	34.43	
1.000	1.000	45.27	0.000	0.000	Ug2_741_743_L_0						
20 D	9.788	-8.4029E-05	41.09	12.59	41.09	21.87	UL-RL	1.1040E+05	-3.800	36.35	
1.000	1.000	48.94	0.000	0.000	Ug2_741_743_L_0						
21 D	10.50	-7.8341E-05	43.33	14.26	43.33	22.91	UL-RL	1.1040E+05	-4.000	38.26	
1.000	1.000	52.52	0.000	0.000	Ug2_741_743_L_0						
22 D	11.20	-7.3414E-05	45.37	15.84	45.37	23.95	UL-RL	1.1040E+05	-4.200	40.17	
1.000	1.000	56.01	0.000	0.000	Ug2_741_743_L_0						
23 D	11.89	-6.9190E-05	47.60	17.34	47.60	24.98	UL-RL	1.1040E+05	-4.400	42.09	
1.000	1.000	59.43	0.000	0.000	Ug2_741_743_L_0						
24 D	12.55	-6.5605E-05	49.65	18.77	49.65	26.02	UL-RL	1.1040E+05	-4.600	44.00	
1.000	1.000	62.77	0.000	0.000	Ug2_741_743_L_0						
25 D	13.21	-6.2594E-05	51.86	20.14	51.86	27.05	UL-RL	1.1040E+05	-4.800	45.91	
1.000	1.000	66.05	0.000	0.000	Ug2_741_743_L_0						
26 D	13.85	-6.0092E-05	54.07	21.45	54.07	28.08	UL-RL	1.1040E+05	-5.000	47.83	
1.000	1.000	69.27	0.000	0.000	Ug2_741_743_L_0						
27 D	14.49	-5.8033E-05	56.11	22.71	56.11	29.11	UL-RL	1.1040E+05	-5.200	49.74	
1.000	1.000	72.45	0.000	0.000	Ug2_741_743_L_0						
28 D	15.11	-5.6357E-05	58.31	23.92	58.31	30.14	UL-RL	1.1040E+05	-5.400	51.65	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	75.57	0.000	0.000	Ug2_741_743_L_0					
29 D	15.73	-5.5005E-05	60.35	25.10	60.35	31.17	UL-RL	1.1040E+05	-5.600	53.57
1.000	1.000	78.67	0.000	0.000	Ug2_741_743_L_0					
30 D	16.35	-5.3924E-05	62.54	26.25	62.54	32.20	UL-RL	1.1040E+05	-5.800	55.48
1.000	1.000	81.73	0.000	0.000	Ug2_741_743_L_0					
31 D	16.95	-5.3066E-05	64.72	27.38	64.72	33.23	UL-RL	1.1040E+05	-6.000	57.39
1.000	1.000	84.77	0.000	0.000	Ug2_741_743_L_0					
32 D	17.56	-5.2386E-05	66.77	28.48	66.77	34.26	UL-RL	1.1040E+05	-6.200	59.30
1.000	1.000	87.78	0.000	0.000	Ug2_741_743_L_0					
33 D	18.16	-5.1846E-05	68.94	29.57	68.94	35.29	UL-RL	1.1040E+05	-6.400	61.22
1.000	1.000	90.79	0.000	0.000	Ug2_741_743_L_0					
34 D	18.76	-5.1411E-05	70.99	30.65	70.99	36.32	UL-RL	1.1040E+05	-6.600	63.13
1.000	1.000	93.78	0.000	0.000	Ug2_741_743_L_0					
35 D	19.35	-5.1053E-05	73.15	31.71	73.15	37.35	UL-RL	1.1040E+05	-6.800	65.04
1.000	1.000	96.76	0.000	0.000	Ug2_741_743_L_0					
36 D	19.95	-5.0748E-05	75.32	32.78	75.32	38.38	UL-RL	1.1040E+05	-7.000	66.96
1.000	1.000	99.73	0.000	0.000	Ug2_741_743_L_0					
37 D	20.54	-5.0474E-05	77.37	33.84	77.37	39.41	UL-RL	1.1040E+05	-7.200	68.87
1.000	1.000	102.7	0.000	0.000	Ug2_741_743_L_0					
38 D	21.13	-5.0215E-05	79.52	34.89	79.52	40.44	UL-RL	1.1040E+05	-7.400	70.78
1.000	1.000	105.7	0.000	0.000	Ug2_741_743_L_0					
39 D	21.73	-4.9959E-05	81.57	35.95	81.57	41.46	UL-RL	1.1040E+05	-7.600	72.70
1.000	1.000	108.6	0.000	0.000	Ug2_741_743_L_0					
40 D	22.32	-4.9695E-05	83.73	37.01	83.73	42.49	UL-RL	1.1040E+05	-7.800	74.61
1.000	1.000	111.6	0.000	0.000	Ug2_741_743_L_0					
41 D	22.92	-4.9416E-05	85.88	38.06	85.88	43.52	UL-RL	1.1040E+05	-8.000	76.52
1.000	1.000	114.6	0.000	0.000	Ug2_741_743_L_0					
42 D	23.51	-4.9118E-05	87.93	39.13	87.93	44.55	UL-RL	1.1040E+05	-8.200	78.43
1.000	1.000	117.6	0.000	0.000	Ug2_741_743_L_0					
43 D	24.11	-4.8798E-05	90.08	40.19	90.08	45.58	UL-RL	1.1040E+05	-8.400	80.35
1.000	1.000	120.5	0.000	0.000	Ug2_741_743_L_0					
44 D	24.70	-4.8455E-05	92.13	41.26	92.13	46.60	UL-RL	1.1040E+05	-8.600	82.26
1.000	1.000	123.5	0.000	0.000	Ug2_741_743_L_0					
45 D	25.30	-4.8088E-05	94.27	42.32	94.27	47.63	UL-RL	1.1040E+05	-8.800	84.17
1.000	1.000	126.5	0.000	0.000	Ug2_741_743_L_0					
46 D	25.90	-4.7699E-05	96.42	43.40	96.42	48.66	UL-RL	1.1040E+05	-9.000	86.09
1.000	1.000	129.5	0.000	0.000	Ug2_741_743_L_0					
47 D	26.49	-4.7290E-05	98.47	44.47	98.47	49.69	UL-RL	1.1040E+05	-9.200	88.00
1.000	1.000	132.5	0.000	0.000	Ug2_741_743_L_0					
48 D	27.09	-4.6863E-05	100.6	45.54	100.6	50.72	UL-RL	1.1040E+05	-9.400	89.91
1.000	1.000	135.5	0.000	0.000	Ug2_741_743_L_0					
49 D	27.69	-4.6420E-05	102.7	46.62	102.7	51.75	UL-RL	1.1040E+05	-9.600	91.83
1.000	1.000	138.4	0.000	0.000	Ug2_741_743_L_0					
50 D	28.29	-4.5963E-05	104.8	47.70	104.8	52.77	UL-RL	1.1040E+05	-9.800	93.74
1.000	1.000	141.4	0.000	0.000	Ug2_741_743_L_0					
51 D	28.89	-4.5494E-05	106.9	48.78	106.9	53.80	UL-RL	1.1040E+05	-10.000	95.65
1.000	1.000	144.4	0.000	0.000	Ug2_741_743_L_0					
52 D	29.49	-4.5016E-05	109.0	49.86	109.0	54.83	UL-RL	1.1040E+05	-10.200	97.57
1.000	1.000	147.4	0.000	0.000	Ug2_741_743_L_0					
53 D	30.22	-4.4529E-05	111.1	51.61	111.1	55.86	UL-RL	9.5494E+04	-10.400	99.48
1.000	1.000	151.1	0.000	0.000	Ug3_740_742_L_0					
54 D	30.81	-4.4033E-05	113.3	52.68	113.3	56.89	UL-RL	9.5494E+04	-10.600	101.4
1.000	1.000	154.1	0.000	0.000	Ug3_740_742_L_0					
55 D	31.41	-4.3530E-05	115.3	53.76	115.3	57.92	UL-RL	9.5494E+04	-10.800	103.3
1.000	1.000	157.1	0.000	0.000	Ug3_740_742_L_0					
56 D	32.01	-4.3020E-05	117.4	54.84	117.4	58.95	UL-RL	9.5494E+04	-11.000	105.2
1.000	1.000	160.1	0.000	0.000	Ug3_740_742_L_0					
57 D	32.61	-4.2504E-05	119.5	55.92	119.5	59.97	UL-RL	9.5494E+04	-11.200	107.1
1.000	1.000	163.0	0.000	0.000	Ug3_740_742_L_0					
58 D	33.21	-4.1985E-05	121.6	56.99	121.6	61.00	UL-RL	9.5494E+04	-11.400	109.0
1.000	1.000	166.0	0.000	0.000	Ug3_740_742_L_0					
59 D	33.81	-4.1463E-05	123.8	58.07	123.8	62.03	UL-RL	9.5494E+04	-11.600	111.0
1.000	1.000	169.0	0.000	0.000	Ug3_740_742_L_0					
60 D	34.40	-4.0940E-05	125.8	59.15	125.8	63.06	UL-RL	9.5494E+04	-11.800	112.9
1.000	1.000	172.0	0.000	0.000	Ug3_740_742_L_0					
61 D	17.50	-4.0417E-05	127.9	60.23	127.9	64.09	UL-RL	9.5494E+04	-12.000	114.8
1.000	1.000	175.0	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*          |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757          |
|          Exe Time :24 May 2018          18:17:33          |
+-----+
New Project
  
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STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 2.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6 D	1.701	2.4893E-04	0.000	8.506	10.00	8.506	V-C	1.5622E+04	-1.000	0.000	
1.000	1.000	8.506	0.000	0.000	Ug1_2_8_L_0						
7 D	2.396	2.3294E-04	1.913	9.891	12.00	9.891	V-C	1.5622E+04	-1.200	2.087	
1.000	1.000	11.98	0.000	0.000	Ug1_2_8_L_0						
8 D	3.010	2.1730E-04	3.826	10.87	14.00	10.87	V-C	1.5622E+04	-1.400	4.174	
1.000	1.000	15.05	0.000	0.000	Ug1_2_8_L_0						
9 D	3.611	2.0212E-04	5.739	11.79	16.00	11.79	V-C	1.5622E+04	-1.600	6.261	
1.000	1.000	18.05	0.000	0.000	Ug1_2_8_L_0						
10 D	4.205	1.8749E-04	7.652	12.68	18.00	12.68	V-C	1.5622E+04	-1.800	8.348	
1.000	1.000	21.03	0.000	0.000	Ug1_2_8_L_0						
11 D	4.796	1.7351E-04	9.565	13.55	20.00	13.55	V-C	1.5622E+04	-2.000	10.43	
1.000	1.000	23.98	0.000	0.000	Ug1_2_8_L_0						
12 D	5.385	1.6025E-04	11.48	14.40	22.00	14.40	V-C	1.5622E+04	-2.200	12.52	
1.000	1.000	26.93	0.000	0.000	Ug1_2_8_L_0						
13 D	5.973	1.4775E-04	13.39	15.26	24.00	15.26	V-C	1.5622E+04	-2.400	14.61	
1.000	1.000	29.86	0.000	0.000	Ug1_2_8_L_0						
14 D	6.561	1.3607E-04	15.30	16.11	26.00	16.11	V-C	1.5622E+04	-2.600	16.70	
1.000	1.000	32.80	0.000	0.000	Ug1_2_8_L_0						
15 D	7.236	1.2521E-04	17.22	17.40	28.00	17.40	V-C	1.9107E+04	-2.800	18.78	
1.000	1.000	36.18	0.000	0.000	Ug2_741_743_L_0						
16 D	7.818	1.1522E-04	19.13	18.22	30.00	18.22	V-C	1.9107E+04	-3.000	20.87	
1.000	1.000	39.09	0.000	0.000	Ug2_741_743_L_0						
17 D	8.402	1.0611E-04	21.04	19.06	32.00	19.06	V-C	1.9107E+04	-3.200	22.96	
1.000	1.000	42.01	0.000	0.000	Ug2_741_743_L_0						
18 D	8.989	9.7881E-05	22.96	19.90	34.00	19.90	V-C	1.9107E+04	-3.400	25.04	
1.000	1.000	44.95	0.000	0.000	Ug2_741_743_L_0						
19 D	9.578	9.0530E-05	24.87	20.76	36.00	20.76	V-C	1.9107E+04	-3.600	27.13	
1.000	1.000	47.89	0.000	0.000	Ug2_741_743_L_0						
20 D	10.17	8.4029E-05	26.78	21.63	38.00	21.63	V-C	1.9107E+04	-3.800	29.22	
1.000	1.000	50.85	0.000	0.000	Ug2_741_743_L_0						
21 D	10.76	7.8341E-05	28.70	22.51	40.00	22.51	V-C	1.9107E+04	-4.000	31.30	
1.000	1.000	53.82	0.000	0.000	Ug2_741_743_L_0						
22 D	11.36	7.3414E-05	30.61	23.41	42.00	23.41	V-C	1.9107E+04	-4.200	33.39	
1.000	1.000	56.80	0.000	0.000	Ug2_741_743_L_0						
23 D	11.96	6.9190E-05	32.52	24.32	44.00	24.32	V-C	1.9107E+04	-4.400	35.48	
1.000	1.000	59.80	0.000	0.000	Ug2_741_743_L_0						
24 D	12.56	6.5605E-05	34.43	25.24	46.00	25.24	V-C	1.9107E+04	-4.600	37.57	
1.000	1.000	62.80	0.000	0.000	Ug2_741_743_L_0						
25 D	13.16	6.2594E-05	36.35	26.16	48.00	26.16	V-C	1.9107E+04	-4.800	39.65	
1.000	1.000	65.82	0.000	0.000	Ug2_741_743_L_0						
26 D	13.76	6.0092E-05	38.26	27.07	50.00	27.12	UL-RL	5.7322E+04	-5.000	41.74	
1.000	1.000	68.80	0.000	0.000	Ug2_741_743_L_0						
27 D	14.36	5.8033E-05	40.17	27.98	52.00	28.08	UL-RL	5.7322E+04	-5.200	43.83	
1.000	1.000	71.80	0.000	0.000	Ug2_741_743_L_0						
28 D	14.96	5.6357E-05	42.09	28.90	54.00	29.04	UL-RL	5.7322E+04	-5.400	45.91	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	74.81	0.000	0.000	Ug2_741_743_L_0					
29 D	15.57	5.5005E-05	44.00	29.84	56.00	30.00	UL-RL	5.7322E+04	-5.600	48.00
1.000	1.000	77.84	0.000	0.000	Ug2_741_743_L_0					
30 D	16.18	5.3924E-05	45.91	30.79	58.00	30.97	UL-RL	5.7322E+04	-5.800	50.09
1.000	1.000	80.88	0.000	0.000	Ug2_741_743_L_0					
31 D	16.78	5.3066E-05	47.83	31.75	60.00	31.93	UL-RL	5.7322E+04	-6.000	52.17
1.000	1.000	83.92	0.000	0.000	Ug2_741_743_L_0					
32 D	17.39	5.2386E-05	49.74	32.68	62.00	32.92	UL-RL	5.7322E+04	-6.200	54.26
1.000	1.000	86.95	0.000	0.000	Ug2_741_743_L_0					
33 D	17.99	5.1846E-05	51.65	33.62	64.00	33.90	UL-RL	5.7322E+04	-6.400	56.35
1.000	1.000	89.97	0.000	0.000	Ug2_741_743_L_0					
34 D	18.60	5.1411E-05	53.57	34.56	66.00	34.89	UL-RL	5.7322E+04	-6.600	58.43
1.000	1.000	93.00	0.000	0.000	Ug2_741_743_L_0					
35 D	19.21	5.1053E-05	55.48	35.51	68.00	35.87	UL-RL	5.7322E+04	-6.800	60.52
1.000	1.000	96.03	0.000	0.000	Ug2_741_743_L_0					
36 D	19.81	5.0748E-05	57.39	36.46	70.00	36.86	UL-RL	5.7322E+04	-7.000	62.61
1.000	1.000	99.07	0.000	0.000	Ug2_741_743_L_0					
37 D	20.42	5.0474E-05	59.30	37.41	72.00	37.84	UL-RL	5.7322E+04	-7.200	64.70
1.000	1.000	102.1	0.000	0.000	Ug2_741_743_L_0					
38 D	21.03	5.0215E-05	61.22	38.36	74.00	38.83	UL-RL	5.7322E+04	-7.400	66.78
1.000	1.000	105.1	0.000	0.000	Ug2_741_743_L_0					
39 D	21.64	4.9959E-05	63.13	39.31	76.00	39.81	UL-RL	5.7322E+04	-7.600	68.87
1.000	1.000	108.2	0.000	0.000	Ug2_741_743_L_0					
40 D	22.24	4.9695E-05	65.04	40.26	78.00	40.80	UL-RL	5.7322E+04	-7.800	70.96
1.000	1.000	111.2	0.000	0.000	Ug2_741_743_L_0					
41 D	22.85	4.9416E-05	66.96	41.21	80.00	41.78	UL-RL	5.7322E+04	-8.000	73.04
1.000	1.000	114.3	0.000	0.000	Ug2_741_743_L_0					
42 D	23.46	4.9118E-05	68.87	42.16	82.00	42.77	UL-RL	5.7322E+04	-8.200	75.13
1.000	1.000	117.3	0.000	0.000	Ug2_741_743_L_0					
43 D	24.06	4.8798E-05	70.78	43.10	84.00	43.75	UL-RL	5.7322E+04	-8.400	77.22
1.000	1.000	120.3	0.000	0.000	Ug2_741_743_L_0					
44 D	24.67	4.8455E-05	72.70	44.05	86.00	44.74	UL-RL	5.7322E+04	-8.600	79.30
1.000	1.000	123.4	0.000	0.000	Ug2_741_743_L_0					
45 D	25.28	4.8088E-05	74.61	44.99	88.00	45.72	UL-RL	5.7322E+04	-8.800	81.39
1.000	1.000	126.4	0.000	0.000	Ug2_741_743_L_0					
46 D	25.88	4.7699E-05	76.52	45.93	90.00	46.70	UL-RL	5.7322E+04	-9.000	83.48
1.000	1.000	129.4	0.000	0.000	Ug2_741_743_L_0					
47 D	26.49	4.7290E-05	78.43	46.87	92.00	47.69	UL-RL	5.7322E+04	-9.200	85.57
1.000	1.000	132.4	0.000	0.000	Ug2_741_743_L_0					
48 D	27.09	4.6863E-05	80.35	47.81	94.00	48.67	UL-RL	5.7322E+04	-9.400	87.65
1.000	1.000	135.5	0.000	0.000	Ug2_741_743_L_0					
49 D	27.70	4.6420E-05	82.26	48.75	96.00	49.66	UL-RL	5.7322E+04	-9.600	89.74
1.000	1.000	138.5	0.000	0.000	Ug2_741_743_L_0					
50 D	28.30	4.5963E-05	84.17	49.69	98.00	50.64	UL-RL	5.7322E+04	-9.800	91.83
1.000	1.000	141.5	0.000	0.000	Ug2_741_743_L_0					
51 D	28.91	4.5494E-05	86.09	50.63	100.00	51.63	UL-RL	5.7322E+04	-10.000	93.91
1.000	1.000	144.5	0.000	0.000	Ug2_741_743_L_0					
52 D	29.51	4.5016E-05	88.00	51.56	102.0	52.61	UL-RL	5.7322E+04	-10.200	96.00
1.000	1.000	147.6	0.000	0.000	Ug2_741_743_L_0					
53 D	30.20	4.4529E-05	89.91	52.90	104.0	53.60	UL-RL	6.6268E+04	-10.400	98.09
1.000	1.000	151.0	0.000	0.000	Ug3_740_742_L_0					
54 D	30.80	4.4033E-05	91.83	53.83	106.0	54.58	UL-RL	6.6268E+04	-10.600	100.2
1.000	1.000	154.0	0.000	0.000	Ug3_740_742_L_0					
55 D	31.40	4.3530E-05	93.74	54.76	108.0	55.57	UL-RL	6.6268E+04	-10.800	102.3
1.000	1.000	157.0	0.000	0.000	Ug3_740_742_L_0					
56 D	32.01	4.3020E-05	95.65	55.69	110.0	56.55	UL-RL	6.6268E+04	-11.000	104.3
1.000	1.000	160.0	0.000	0.000	Ug3_740_742_L_0					
57 D	32.61	4.2504E-05	97.57	56.62	112.0	57.54	UL-RL	6.6268E+04	-11.200	106.4
1.000	1.000	163.1	0.000	0.000	Ug3_740_742_L_0					
58 D	33.21	4.1985E-05	99.48	57.55	114.0	58.52	UL-RL	6.6268E+04	-11.400	108.5
1.000	1.000	166.1	0.000	0.000	Ug3_740_742_L_0					
59 D	33.82	4.1463E-05	101.4	58.48	116.0	59.51	UL-RL	6.6268E+04	-11.600	110.6
1.000	1.000	169.1	0.000	0.000	Ug3_740_742_L_0					
60 D	34.42	4.0940E-05	103.3	59.41	118.0	60.50	UL-RL	6.6268E+04	-11.800	112.7
1.000	1.000	172.1	0.000	0.000	Ug3_740_742_L_0					
61 D	17.51	4.0417E-05	105.2	60.34	120.0	61.48	UL-RL	6.6268E+04	-12.000	114.8
1.000	1.000	175.1	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757   |
|          Exe Time :24 May 2018   18:17:33   |
+-----+
New Project

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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 2.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	1.47315E-11	-1.47315E-11	1.46169E-12	1.61599E-12
2	0.38261	-0.38261	-6.61091E-13	7.65217E-02
3	1.1478	-1.1478	-7.65217E-02	0.30609
4	2.2957	-2.2957	-0.30609	0.76522
5	3.8261	-3.8261	-0.76522	1.5304
6	4.0380	-4.0380	-1.5304	2.3380
7	3.9381	-3.9381	-2.3380	3.1257
8	3.6069	-3.6069	-3.1257	3.8470
9	3.0570	-3.0570	-3.8470	4.4584
10	2.2951	-2.2951	-4.4584	4.9174
11	1.7021	-1.7021	-4.9174	5.2579
12	1.2817	-1.2817	-5.2579	5.5142
13	1.0229	-1.0229	-5.5142	5.7188
14	0.91427	-0.91427	-5.7188	5.9016
15	0.60138	-0.60138	-5.9016	6.0219
16	0.20928	-0.20928	-6.0219	6.0638
17	-0.27795	0.27795	-6.0638	6.0082
18	-0.85030	0.85030	-6.0082	5.8381
19	-1.3751	1.3751	-5.8381	5.5631
20	-1.7569	1.7569	-5.5631	5.2117
21	-2.0168	2.0168	-5.2117	4.8084
22	-2.1743	2.1743	-4.8084	4.3735
23	-2.2476	2.2476	-4.3735	3.9240
24	-2.2532	2.2532	-3.9240	3.4733
25	-2.2059	2.2059	-3.4733	3.0321
26	-2.1121	2.1121	-3.0321	2.6097
27	-1.9832	1.9832	-2.6097	2.2131
28	-1.8310	1.8310	-2.2131	1.8469
29	-1.6655	1.6655	-1.8469	1.5138
30	-1.4950	1.4950	-1.5138	1.2148
31	-1.3262	1.3262	-1.2148	0.94953
32	-1.1584	1.1584	-0.94953	0.71786
33	-0.99487	0.99487	-0.71786	0.51888
34	-0.83915	0.83915	-0.51888	0.35105
35	-0.69375	0.69375	-0.35105	0.21230
36	-0.56040	0.56040	-0.21230	0.10022
37	-0.44010	0.44010	-0.10022	1.22025E-02
38	-0.33335	0.33335	-1.22025E-02	5.44683E-02
39	-0.24019	0.24019	5.44683E-02	-0.10251
40	-0.16035	0.16035	0.10251	-0.13458
41	-9.32921E-02	9.32921E-02	0.13458	-0.15323
42	-3.83610E-02	3.83610E-02	0.15323	-0.16091
43	5.21199E-03	-5.21199E-03	0.16091	-0.15986
44	3.82294E-02	-3.82294E-02	0.15986	-0.15222
45	6.14888E-02	-6.14888E-02	0.15222	-0.13992
46	7.57505E-02	-7.57505E-02	0.13992	-0.12477
47	8.17147E-02	-8.17147E-02	0.12477	-0.10843
48	8.00077E-02	-8.00077E-02	0.10843	-9.24264E-02
49	7.11757E-02	-7.11757E-02	9.24264E-02	-7.81914E-02
50	5.56868E-02	-5.56868E-02	7.81914E-02	-6.70540E-02
51	3.39394E-02	-3.39394E-02	6.70540E-02	-6.02660E-02
52	6.27734E-03	-6.27734E-03	6.02660E-02	-5.90106E-02
53	2.60670E-02	-2.60670E-02	5.90106E-02	-5.37972E-02
54	3.99590E-02	-3.99590E-02	5.37972E-02	-4.58054E-02
55	4.82153E-02	-4.82153E-02	4.58054E-02	-3.61623E-02
56	5.10603E-02	-5.10603E-02	3.61623E-02	-2.59502E-02
57	4.86732E-02	-4.86732E-02	2.59502E-02	-1.62156E-02
58	4.11853E-02	-4.11853E-02	1.62156E-02	-7.97854E-03
59	2.86820E-02	-2.86820E-02	7.97854E-03	-2.24215E-03

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

60 1.12102E-02-1.12102E-02 2.24215E-03-1.78087E-14

```
ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4190E+05 RIMNOR= 1008.
RENORM= 264.1 REMNOR=0.6446E-23 RATIO =0.7940E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 33.84 RMMAX = 6.064
RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
RDT =0.4190E+05 RDR = 1008.
RATIOT=0.7940E-01 RATIO= 0.000
MAX UN= 4.120 IEQ= 19 NODE 10 DOF 1 Y-DISPL.F
MIN UN=-.3794E-01 IEQ= 9 NODE 5 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4190E+05 RIMNOR= 1008.
RENORM= 48.08 REMNOR=0.7731E-22 RATIO =0.3387E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 33.84 RMMAX = 6.064
RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
RDT =0.4190E+05 RDR = 1008.
RATIOT=0.3387E-01 RATIO= 0.000
MAX UN= 2.428 IEQ= 29 NODE 15 DOF 1 Y-DISPL.F
MIN UN=-.2971E-10 IEQ= 71 NODE 36 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4190E+05 RIMNOR= 1008.
RENORM= 49.83 REMNOR=0.1222E-20 RATIO =0.3449E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 33.84 RMMAX = 6.064
RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
RDT =0.4190E+05 RDR = 1008.
RATIOT=0.3449E-01 RATIO= 0.000
MAX UN= 5.346 IEQ= 27 NODE 14 DOF 1 Y-DISPL.F
MIN UN=-.1423E-09 IEQ= 29 NODE 15 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 4 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4190E+05 RIMNOR= 1008.
RENORM=0.8636 REMNOR=0.2065E-20 RATIO =0.4540E-02 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 33.84 RMMAX = 6.064
RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
RDT =0.4190E+05 RDR = 1008.
RATIOT=0.4540E-02 RATIO= 0.000
MAX UN=0.8483 IEQ= 61 NODE 31 DOF 1 Y-DISPL.F
MIN UN=-.2479E-09 IEQ= 17 NODE 9 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 5 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4190E+05 RIMNOR= 1008.
RENORM=0.1244E-18 REMNOR=0.1873E-21 RATIO =0.1723E-11 TOLER =0.1000E-03 CONVERGED !
RFMAX = 33.84 RMMAX = 6.064
RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
RDT =0.4190E+05 RDR = 1008.
RATIOT=0.1723E-11 RATIO= 0.000
MAX UN=0.1488E-09 IEQ= 13 NODE 7 DOF 1 Y-DISPL.F
MIN UN=-.1648E-09 IEQ= 15 NODE 8 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0
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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757   |
|          Exe Time :24 May 2018   18:17:33   |
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New Project
SOLUTION REACHED USING 5 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 3 (AT TIME 3.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	2.9199254E-03	-5.6701322E-04	
2	2.8065228E-03	-5.6701322E-04	
3	2.6931219E-03	-5.6698662E-04	
4	2.5797352E-03	-5.6685363E-04	
5	2.4663964E-03	-5.6648127E-04	
6	2.3531711E-03	-5.6568335E-04	
7	2.2401674E-03	-5.6422049E-04	
8	2.1275467E-03	-5.6180013E-04	
9	2.0155343E-03	-5.5807649E-04	
10	1.9044296E-03	-5.5265062E-04	
11	1.7946176E-03	-5.4507036E-04	
12	1.6865530E-03	-5.3521708E-04	
13	1.5806652E-03	-5.2334754E-04	
14	1.4773303E-03	-5.0973406E-04	
15	1.3768701E-03	-4.9464330E-04	
16	1.2795573E-03	-4.7828693E-04	
17	1.1856288E-03	-4.6082171E-04	
18	1.0952923E-03	-4.4239439E-04	
19	1.0087260E-03	-4.2314221E-04	
20	9.2608180E-04	-4.0319439E-04	
21	8.4748685E-04	-3.8267342E-04	
22	7.7304331E-04	-3.6169525E-04	
23	7.0283175E-04	-3.4037211E-04	
24	6.3691015E-04	-3.1881363E-04	
25	5.7531475E-04	-2.9712835E-04	
26	5.1805999E-04	-2.7542536E-04	
27	4.6513867E-04	-2.5381523E-04	
28	4.1652040E-04	-2.3241173E-04	
29	3.7215226E-04	-2.1133406E-04	
30	3.3195668E-04	-1.9070782E-04	
31	2.9583013E-04	-1.7066665E-04	
32	2.6364166E-04	-1.5135316E-04	
33	2.3523031E-04	-1.3292050E-04	
34	2.1040393E-04	-1.1553090E-04	
35	1.8893906E-04	-9.9324650E-05	
36	1.7058886E-04	-8.4396462E-05	
37	1.5509156E-04	-7.0803039E-05	
38	1.4217728E-04	-5.8566326E-05	
39	1.3157531E-04	-4.7675402E-05	
40	1.2302001E-04	-3.8091115E-05	
41	1.1625582E-04	-2.9752546E-05	
42	1.1104108E-04	-2.2582616E-05	
43	1.0715075E-04	-1.6492953E-05	
44	1.0437825E-04	-1.1388067E-05	
45	1.0253649E-04	-7.1689022E-06	
46	1.0145830E-04	-3.7357164E-06	
47	1.0099633E-04	-9.9064163E-07	
48	1.0102244E-04	1.1604246E-06	
49	1.0142681E-04	2.8062202E-06	
50	1.0211672E-04	4.0288807E-06	
51	1.0301513E-04	4.9030235E-06	
52	1.0405914E-04	5.4950283E-06	
53	1.0519814E-04	5.8625052E-06	
54	1.0639283E-04	6.0611649E-06	
55	1.0761491E-04	6.1444905E-06	
56	1.0884589E-04	6.1567326E-06	
57	1.1007520E-04	6.1328545E-06	
58	1.1129834E-04	6.0985389E-06	
59	1.1251501E-04	6.0702131E-06	
60	1.1372730E-04	6.0550781E-06	
61	1.1493785E-04	6.0511325E-06	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757  |
|          Exe Time :24 May 2018  18:17:33  |
+-----+
New Project
  
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STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 3.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1 D	0.000	-2.9199E-03	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3636	-2.8065E-03	2.183	0.000	2.183	1.341	ACTIVE	0.000	-0.2000	1.818	
1.000	1.000	1.818	0.000	0.000	Ug1_2_8_L_0						
3 D	0.7273	-2.6931E-03	4.372	0.000	4.372	2.671	ACTIVE	0.000	-0.4000	3.636	
1.000	1.000	3.636	0.000	0.000	Ug1_2_8_L_0						
4 D	1.091	-2.5797E-03	6.571	0.000	6.571	3.978	ACTIVE	0.000	-0.6000	5.455	
1.000	1.000	5.455	0.000	0.000	Ug1_2_8_L_0						
5 D	1.455	-2.4664E-03	8.784	0.000	8.784	5.256	ACTIVE	0.000	-0.8000	7.273	
1.000	1.000	7.273	0.000	0.000	Ug1_2_8_L_0						
6 D	1.818	-2.3532E-03	11.01	0.000	11.01	6.501	ACTIVE	0.000	-1.000	9.091	
1.000	1.000	9.091	0.000	0.000	Ug1_2_8_L_0						
7 D	2.182	-2.2402E-03	13.25	0.000	13.25	7.714	ACTIVE	0.000	-1.200	10.91	
1.000	1.000	10.91	0.000	0.000	Ug1_2_8_L_0						
8 D	2.545	-2.1275E-03	15.50	0.000	15.50	8.897	ACTIVE	0.000	-1.400	12.73	
1.000	1.000	12.73	0.000	0.000	Ug1_2_8_L_0						
9 D	2.909	-2.0155E-03	17.75	0.000	17.75	10.05	ACTIVE	0.000	-1.600	14.55	
1.000	1.000	14.55	0.000	0.000	Ug1_2_8_L_0						
10 D	3.273	-1.9044E-03	20.01	0.000	20.01	11.19	ACTIVE	0.000	-1.800	16.36	
1.000	1.000	16.36	0.000	0.000	Ug1_2_8_L_0						
11 D	3.636	-1.7946E-03	22.27	0.000	22.27	12.30	ACTIVE	0.000	-2.000	18.18	
1.000	1.000	18.18	0.000	0.000	Ug1_2_8_L_0						
12 D	4.000	-1.6866E-03	24.53	0.000	24.53	13.40	ACTIVE	0.000	-2.200	20.00	
1.000	1.000	20.00	0.000	0.000	Ug1_2_8_L_0						
13 D	4.460	-1.5807E-03	26.86	0.4821	26.86	14.48	ACTIVE	0.000	-2.400	21.82	
1.000	1.000	22.30	0.000	0.000	Ug1_2_8_L_0						
14 D	4.995	-1.4773E-03	29.05	1.338	29.05	15.56	ACTIVE	0.000	-2.600	23.64	
1.000	1.000	24.97	0.000	0.000	Ug1_2_8_L_0						
15 D	6.727	-1.3769E-03	31.45	8.178	31.45	16.62	ACTIVE	0.000	-2.800	25.45	
1.000	1.000	33.63	0.000	0.000	Ug2_741_743_L_0						
16 D	7.216	-1.2796E-03	33.86	8.805	33.86	17.68	ACTIVE	0.000	-3.000	27.27	
1.000	1.000	36.08	0.000	0.000	Ug2_741_743_L_0						
17 D	7.691	-1.1856E-03	36.01	9.362	36.01	18.73	ACTIVE	0.000	-3.200	29.09	
1.000	1.000	38.45	0.000	0.000	Ug2_741_743_L_0						
18 D	8.178	-1.0953E-03	38.39	9.981	38.39	19.78	ACTIVE	0.000	-3.400	30.91	
1.000	1.000	40.89	0.000	0.000	Ug2_741_743_L_0						
19 D	8.653	-1.0087E-03	40.53	10.54	40.53	20.83	ACTIVE	0.000	-3.600	32.73	
1.000	1.000	43.27	0.000	0.000	Ug2_741_743_L_0						
20 D	9.139	-9.2608E-04	42.89	11.15	42.89	21.87	ACTIVE	0.000	-3.800	34.55	
1.000	1.000	45.70	0.000	0.000	Ug2_741_743_L_0						
21 D	9.625	-8.4749E-04	45.23	11.76	45.23	22.91	ACTIVE	0.000	-4.000	36.36	
1.000	1.000	48.12	0.000	0.000	Ug2_741_743_L_0						
22 D	10.10	-7.7304E-04	47.37	12.32	47.37	23.95	ACTIVE	0.000	-4.200	38.18	
1.000	1.000	50.50	0.000	0.000	Ug2_741_743_L_0						
23 D	10.58	-7.0283E-04	49.69	12.92	49.69	24.98	ACTIVE	0.000	-4.400	40.00	
1.000	1.000	52.92	0.000	0.000	Ug2_741_743_L_0						
24 D	11.06	-6.3691E-04	51.83	13.48	51.83	26.02	ACTIVE	0.000	-4.600	41.82	
1.000	1.000	55.29	0.000	0.000	Ug2_741_743_L_0						
25 D	11.54	-5.7531E-04	54.14	14.08	54.14	27.05	ACTIVE	0.000	-4.800	43.64	
1.000	1.000	57.71	0.000	0.000	Ug2_741_743_L_0						
26 D	12.03	-5.1806E-04	56.44	14.67	56.44	28.08	ACTIVE	0.000	-5.000	45.45	
1.000	1.000	60.13	0.000	0.000	Ug2_741_743_L_0						
27 D	12.50	-4.6514E-04	58.58	15.23	58.58	29.11	ACTIVE	0.000	-5.200	47.27	
1.000	1.000	62.50	0.000	0.000	Ug2_741_743_L_0						
28 D	12.98	-4.1652E-04	60.87	15.83	60.87	30.14	ACTIVE	0.000	-5.400	49.09	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	64.92	0.000	0.000	Ug2_741_743_L_0					
29 D	13.46	-3.7215E-04	63.01	16.38	63.01	31.17	ACTIVE	0.000	-5.600	50.91
1.000	1.000	67.29	0.000	0.000	Ug2_741_743_L_0					
30 D	13.94	-3.3196E-04	65.29	16.98	65.29	32.20	ACTIVE	0.000	-5.800	52.73
1.000	1.000	69.70	0.000	0.000	Ug2_741_743_L_0					
31 D	14.42	-2.9583E-04	67.57	17.57	67.57	33.23	ACTIVE	0.000	-6.000	54.55
1.000	1.000	72.11	0.000	0.000	Ug2_741_743_L_0					
32 D	14.90	-2.6364E-04	69.71	18.12	69.71	34.26	ACTIVE	0.000	-6.200	56.36
1.000	1.000	74.49	0.000	0.000	Ug2_741_743_L_0					
33 D	15.42	-2.3523E-04	71.97	18.94	71.97	35.29	UL-RL	6.6238E+04	-6.400	58.18
1.000	1.000	77.12	0.000	0.000	Ug2_741_743_L_0					
34 D	16.34	-2.1040E-04	74.12	21.68	74.12	36.32	UL-RL	6.6238E+04	-6.600	60.00
1.000	1.000	81.68	0.000	0.000	Ug2_741_743_L_0					
35 D	17.20	-1.8894E-04	76.38	24.19	76.38	37.35	UL-RL	6.6238E+04	-6.800	61.82
1.000	1.000	86.01	0.000	0.000	Ug2_741_743_L_0					
36 D	18.03	-1.7059E-04	78.64	26.50	78.64	38.38	UL-RL	6.6238E+04	-7.000	63.64
1.000	1.000	90.13	0.000	0.000	Ug2_741_743_L_0					
37 D	18.81	-1.5509E-04	80.78	28.61	80.78	39.41	UL-RL	6.6238E+04	-7.200	65.45
1.000	1.000	94.07	0.000	0.000	Ug2_741_743_L_0					
38 D	19.57	-1.4218E-04	83.03	30.56	83.03	40.44	UL-RL	6.6238E+04	-7.400	67.27
1.000	1.000	97.83	0.000	0.000	Ug2_741_743_L_0					
39 D	20.29	-1.3158E-04	85.18	32.34	85.18	41.46	UL-RL	6.6238E+04	-7.600	69.09
1.000	1.000	101.4	0.000	0.000	Ug2_741_743_L_0					
40 D	20.98	-1.2302E-04	87.43	34.00	87.43	42.49	UL-RL	6.6238E+04	-7.800	70.91
1.000	1.000	104.9	0.000	0.000	Ug2_741_743_L_0					
41 D	21.65	-1.1626E-04	89.67	35.53	89.67	43.52	UL-RL	6.6238E+04	-8.000	72.73
1.000	1.000	108.3	0.000	0.000	Ug2_741_743_L_0					
42 D	22.30	-1.1104E-04	91.82	36.97	91.82	44.55	UL-RL	6.6238E+04	-8.200	74.55
1.000	1.000	111.5	0.000	0.000	Ug2_741_743_L_0					
43 D	22.94	-1.0715E-04	94.06	38.32	94.06	45.58	UL-RL	6.6238E+04	-8.400	76.36
1.000	1.000	114.7	0.000	0.000	Ug2_741_743_L_0					
44 D	23.55	-1.0438E-04	96.21	39.59	96.21	46.60	UL-RL	6.6238E+04	-8.600	78.18
1.000	1.000	117.8	0.000	0.000	Ug2_741_743_L_0					
45 D	24.16	-1.0254E-04	98.45	40.80	98.45	47.63	UL-RL	6.6238E+04	-8.800	80.00
1.000	1.000	120.8	0.000	0.000	Ug2_741_743_L_0					
46 D	24.76	-1.0146E-04	100.7	41.97	100.7	48.66	UL-RL	6.6238E+04	-9.000	81.82
1.000	1.000	123.8	0.000	0.000	Ug2_741_743_L_0					
47 D	25.35	-1.0100E-04	102.8	43.09	102.8	49.69	UL-RL	6.6238E+04	-9.200	83.64
1.000	1.000	126.7	0.000	0.000	Ug2_741_743_L_0					
48 D	25.93	-1.0102E-04	105.1	44.19	105.1	50.72	UL-RL	6.6238E+04	-9.400	85.45
1.000	1.000	129.6	0.000	0.000	Ug2_741_743_L_0					
49 D	26.51	-1.0143E-04	107.3	45.25	107.3	51.75	UL-RL	6.6238E+04	-9.600	87.27
1.000	1.000	132.5	0.000	0.000	Ug2_741_743_L_0					
50 D	27.08	-1.0212E-04	109.4	46.30	109.4	52.77	UL-RL	6.6238E+04	-9.800	89.09
1.000	1.000	135.4	0.000	0.000	Ug2_741_743_L_0					
51 D	27.65	-1.0302E-04	111.7	47.34	111.7	53.80	UL-RL	6.6238E+04	-10.000	90.91
1.000	1.000	138.3	0.000	0.000	Ug2_741_743_L_0					
52 D	28.22	-1.0406E-04	113.8	48.37	113.8	54.83	UL-RL	6.6238E+04	-10.200	92.73
1.000	1.000	141.1	0.000	0.000	Ug2_741_743_L_0					
53 D	29.03	-1.0520E-04	116.1	50.60	116.1	55.86	UL-RL	5.7296E+04	-10.400	94.55
1.000	1.000	145.1	0.000	0.000	Ug3_740_742_L_0					
54 D	29.60	-1.0639E-04	118.3	51.62	118.3	56.89	UL-RL	5.7296E+04	-10.600	96.36
1.000	1.000	148.0	0.000	0.000	Ug3_740_742_L_0					
55 D	30.17	-1.0761E-04	120.4	52.65	120.4	57.92	UL-RL	5.7296E+04	-10.800	98.18
1.000	1.000	150.8	0.000	0.000	Ug3_740_742_L_0					
56 D	30.73	-1.0885E-04	122.7	53.67	122.7	58.95	UL-RL	5.7296E+04	-11.000	100.00
1.000	1.000	153.7	0.000	0.000	Ug3_740_742_L_0					
57 D	31.30	-1.1008E-04	124.8	54.70	124.8	59.97	UL-RL	5.7296E+04	-11.200	101.8
1.000	1.000	156.5	0.000	0.000	Ug3_740_742_L_0					
58 D	31.87	-1.1130E-04	127.0	55.73	127.0	61.00	UL-RL	5.7296E+04	-11.400	103.6
1.000	1.000	159.4	0.000	0.000	Ug3_740_742_L_0					
59 D	32.44	-1.1252E-04	129.3	56.75	129.3	62.03	UL-RL	5.7296E+04	-11.600	105.5
1.000	1.000	162.2	0.000	0.000	Ug3_740_742_L_0					
60 D	33.01	-1.1373E-04	131.4	57.78	131.4	63.06	UL-RL	5.7296E+04	-11.800	107.3
1.000	1.000	165.1	0.000	0.000	Ug3_740_742_L_0					
61 D	16.79	-1.1494E-04	133.6	58.81	133.6	64.09	UL-RL	5.7296E+04	-12.000	109.1
1.000	1.000	167.9	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.A1M1R1_1757          |
|          Exe Time :24 May 2018          18:17:33          |
+-----+
New Project

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STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 3.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11 D	5.287	1.7946E-03	0.000	26.44	20.00	26.44	V-C	9373.	-2.000	0.000	
1.000	1.000	26.44	0.000	0.000	Ug1_2_8_L_0						
12 D	5.859	1.6866E-03	1.818	27.12	22.00	27.12	V-C	9373.	-2.200	2.182	
1.000	1.000	29.30	0.000	0.000	Ug1_2_8_L_0						
13 D	6.324	1.5807E-03	3.636	27.26	24.00	27.26	V-C	9373.	-2.400	4.364	
1.000	1.000	31.62	0.000	0.000	Ug1_2_8_L_0						
14 D	6.777	1.4773E-03	5.455	27.34	26.00	27.34	V-C	9373.	-2.600	6.545	
1.000	1.000	33.88	0.000	0.000	Ug1_2_8_L_0						
15 D	7.839	1.3769E-03	7.273	30.47	28.00	30.47	V-C	1.1464E+04	-2.800	8.727	
1.000	1.000	39.19	0.000	0.000	Ug2_741_743_L_0						
16 D	8.248	1.2796E-03	9.091	30.33	30.00	30.33	V-C	1.1464E+04	-3.000	10.91	
1.000	1.000	41.24	0.000	0.000	Ug2_741_743_L_0						
17 D	8.662	1.1856E-03	10.91	30.22	32.00	30.22	V-C	1.1464E+04	-3.200	13.09	
1.000	1.000	43.31	0.000	0.000	Ug2_741_743_L_0						
18 D	9.084	1.0953E-03	12.73	30.15	34.00	30.15	V-C	1.1464E+04	-3.400	15.27	
1.000	1.000	45.42	0.000	0.000	Ug2_741_743_L_0						
19 D	9.514	1.0087E-03	14.55	30.11	36.00	30.11	V-C	1.1464E+04	-3.600	17.45	
1.000	1.000	47.57	0.000	0.000	Ug2_741_743_L_0						
20 D	9.952	9.2608E-04	16.36	30.12	38.00	30.12	V-C	1.1464E+04	-3.800	19.64	
1.000	1.000	49.76	0.000	0.000	Ug2_741_743_L_0						
21 D	10.40	8.4749E-04	18.18	30.18	40.00	30.18	V-C	1.1464E+04	-4.000	21.82	
1.000	1.000	52.00	0.000	0.000	Ug2_741_743_L_0						
22 D	10.86	7.7304E-04	20.00	30.29	42.00	30.29	V-C	1.1464E+04	-4.200	24.00	
1.000	1.000	54.29	0.000	0.000	Ug2_741_743_L_0						
23 D	11.32	7.0283E-04	21.82	30.44	44.00	30.44	V-C	1.1464E+04	-4.400	26.18	
1.000	1.000	56.62	0.000	0.000	Ug2_741_743_L_0						
24 D	11.80	6.3691E-04	23.64	30.65	46.00	30.65	V-C	1.1464E+04	-4.600	28.36	
1.000	1.000	59.01	0.000	0.000	Ug2_741_743_L_0						
25 D	12.29	5.7531E-04	25.45	30.91	48.00	30.91	V-C	1.1464E+04	-4.800	30.55	
1.000	1.000	61.45	0.000	0.000	Ug2_741_743_L_0						
26 D	12.79	5.1806E-04	27.27	31.21	50.00	31.21	V-C	1.1464E+04	-5.000	32.73	
1.000	1.000	63.94	0.000	0.000	Ug2_741_743_L_0						
27 D	13.30	4.6514E-04	29.09	31.57	52.00	31.57	V-C	1.1464E+04	-5.200	34.91	
1.000	1.000	66.48	0.000	0.000	Ug2_741_743_L_0						
28 D	13.82	4.1652E-04	30.91	31.99	54.00	31.99	V-C	1.1464E+04	-5.400	37.09	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	69.08	0.000	0.000	Ug2_741_743_L_0					
29 D	14.34	3.7215E-04	32.73	32.45	56.00	32.45	V-C	1.1464E+04	-5.600	39.27
1.000	1.000	71.72	0.000	0.000	Ug2_741_743_L_0					
30 D	14.88	3.3196E-04	34.55	32.96	58.00	32.96	V-C	1.1464E+04	-5.800	41.45
1.000	1.000	74.41	0.000	0.000	Ug2_741_743_L_0					
31 D	15.43	2.9583E-04	36.36	33.51	60.00	33.51	V-C	1.1464E+04	-6.000	43.64
1.000	1.000	77.15	0.000	0.000	Ug2_741_743_L_0					
32 D	15.99	2.6364E-04	38.18	34.11	62.00	34.11	V-C	1.1464E+04	-6.200	45.82
1.000	1.000	79.93	0.000	0.000	Ug2_741_743_L_0					
33 D	16.55	2.3523E-04	40.00	34.76	64.00	34.76	V-C	1.1464E+04	-6.400	48.00
1.000	1.000	82.76	0.000	0.000	Ug2_741_743_L_0					
34 D	17.13	2.1040E-04	41.82	35.45	66.00	35.45	V-C	1.1464E+04	-6.600	50.18
1.000	1.000	85.63	0.000	0.000	Ug2_741_743_L_0					
35 D	17.71	1.8894E-04	43.64	36.17	68.00	36.17	V-C	1.1464E+04	-6.800	52.36
1.000	1.000	88.54	0.000	0.000	Ug2_741_743_L_0					
36 D	18.30	1.7059E-04	45.45	36.94	70.00	36.94	V-C	1.1464E+04	-7.000	54.55
1.000	1.000	91.48	0.000	0.000	Ug2_741_743_L_0					
37 D	18.85	1.5509E-04	47.27	37.50	72.00	37.84	UL-RL	3.4393E+04	-7.200	56.73
1.000	1.000	94.23	0.000	0.000	Ug2_741_743_L_0					
38 D	19.38	1.4218E-04	49.09	38.00	74.00	38.83	UL-RL	3.4393E+04	-7.400	58.91
1.000	1.000	96.91	0.000	0.000	Ug2_741_743_L_0					
39 D	19.93	1.3158E-04	50.91	38.58	76.00	39.81	UL-RL	3.4393E+04	-7.600	61.09
1.000	1.000	99.67	0.000	0.000	Ug2_741_743_L_0					
40 D	20.50	1.2302E-04	52.73	39.23	78.00	40.80	UL-RL	3.4393E+04	-7.800	63.27
1.000	1.000	102.5	0.000	0.000	Ug2_741_743_L_0					
41 D	21.08	1.1626E-04	54.55	39.94	80.00	41.78	UL-RL	3.4393E+04	-8.000	65.45
1.000	1.000	105.4	0.000	0.000	Ug2_741_743_L_0					
42 D	21.67	1.1104E-04	56.36	40.70	82.00	42.77	UL-RL	3.4393E+04	-8.200	67.64
1.000	1.000	108.3	0.000	0.000	Ug2_741_743_L_0					
43 D	22.27	1.0715E-04	58.18	41.51	84.00	43.75	UL-RL	3.4393E+04	-8.400	69.82
1.000	1.000	111.3	0.000	0.000	Ug2_741_743_L_0					
44 D	22.87	1.0438E-04	60.00	42.35	86.00	44.74	UL-RL	3.4393E+04	-8.600	72.00
1.000	1.000	114.4	0.000	0.000	Ug2_741_743_L_0					
45 D	23.48	1.0254E-04	61.82	43.23	88.00	45.72	UL-RL	3.4393E+04	-8.800	74.18
1.000	1.000	117.4	0.000	0.000	Ug2_741_743_L_0					
46 D	24.10	1.0146E-04	63.64	44.13	90.00	46.70	UL-RL	3.4393E+04	-9.000	76.36
1.000	1.000	120.5	0.000	0.000	Ug2_741_743_L_0					
47 D	24.72	1.0100E-04	65.45	45.05	92.00	47.69	UL-RL	3.4393E+04	-9.200	78.55
1.000	1.000	123.6	0.000	0.000	Ug2_741_743_L_0					
48 D	25.34	1.0102E-04	67.27	45.98	94.00	48.67	UL-RL	3.4393E+04	-9.400	80.73
1.000	1.000	126.7	0.000	0.000	Ug2_741_743_L_0					
49 D	25.97	1.0143E-04	69.09	46.93	96.00	49.66	UL-RL	3.4393E+04	-9.600	82.91
1.000	1.000	129.8	0.000	0.000	Ug2_741_743_L_0					
50 D	26.60	1.0212E-04	70.91	47.89	98.00	50.64	UL-RL	3.4393E+04	-9.800	85.09
1.000	1.000	133.0	0.000	0.000	Ug2_741_743_L_0					
51 D	27.23	1.0302E-04	72.73	48.85	100.00	51.63	UL-RL	3.4393E+04	-10.000	87.27
1.000	1.000	136.1	0.000	0.000	Ug2_741_743_L_0					
52 D	27.86	1.0406E-04	74.55	49.82	102.0	52.61	UL-RL	3.4393E+04	-10.200	89.45
1.000	1.000	139.3	0.000	0.000	Ug2_741_743_L_0					
53 D	28.63	1.0520E-04	76.36	51.52	104.0	53.60	UL-RL	3.9761E+04	-10.400	91.64
1.000	1.000	143.2	0.000	0.000	Ug3_740_742_L_0					
54 D	29.26	1.0639E-04	78.18	52.50	106.0	54.58	UL-RL	3.9761E+04	-10.600	93.82
1.000	1.000	146.3	0.000	0.000	Ug3_740_742_L_0					
55 D	29.90	1.0761E-04	80.00	53.48	108.0	55.57	UL-RL	3.9761E+04	-10.800	96.00
1.000	1.000	149.5	0.000	0.000	Ug3_740_742_L_0					
56 D	30.53	1.0885E-04	81.82	54.46	110.0	56.55	UL-RL	3.9761E+04	-11.000	98.18
1.000	1.000	152.6	0.000	0.000	Ug3_740_742_L_0					
57 D	31.16	1.1008E-04	83.64	55.43	112.0	57.54	UL-RL	3.9761E+04	-11.200	100.4
1.000	1.000	155.8	0.000	0.000	Ug3_740_742_L_0					
58 D	31.79	1.1130E-04	85.45	56.41	114.0	58.52	UL-RL	3.9761E+04	-11.400	102.5
1.000	1.000	159.0	0.000	0.000	Ug3_740_742_L_0					
59 D	32.42	1.1252E-04	87.27	57.39	116.0	59.51	UL-RL	3.9761E+04	-11.600	104.7
1.000	1.000	162.1	0.000	0.000	Ug3_740_742_L_0					
60 D	33.06	1.1373E-04	89.09	58.37	118.0	60.50	UL-RL	3.9761E+04	-11.800	106.9
1.000	1.000	165.3	0.000	0.000	Ug3_740_742_L_0					
61 D	16.84	1.1494E-04	90.91	59.35	120.0	61.48	UL-RL	3.9761E+04	-12.000	109.1
1.000	1.000	168.4	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|                                                                    |
|          NewProject.BaseDesignSection_28.A1M1R1_1757 |
|          Exe Time :24 May 2018           18:17:33 |
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New Project
    
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STRESS RESULTS FOR GROUP NO. 3

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WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 3.0000
    
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WALL2D ELEMENT

EL	TA	TB	MA	MB
1	3.81368E-11	-3.81368E-11	3.82336E-12	-3.96186E-11
2	0.36364	-0.36364	4.53137E-11	7.27273E-02
3	1.0909	-1.0909	-7.27273E-02	0.29091
4	2.1818	-2.1818	-0.29091	0.72727
5	3.6364	-3.6364	-0.72727	1.4545
6	5.4545	-5.4545	-1.4545	2.5455
7	7.6364	-7.6364	-2.5455	4.0727
8	10.182	-10.182	-4.0727	6.1091
9	13.091	-13.091	-6.1091	8.7273
10	16.364	-16.364	-8.7273	12.000
11	14.713	-14.713	-12.000	14.943
12	12.853	-12.853	-14.943	17.513
13	10.990	-10.990	-17.513	19.711
14	9.2076	-9.2076	-19.711	21.553
15	8.0955	-8.0955	-21.553	23.172
16	7.0633	-7.0633	-23.172	24.584
17	6.0916	-6.0916	-24.584	25.803
18	5.1857	-5.1857	-25.803	26.840
19	4.3251	-4.3251	-26.840	27.705
20	3.5123	-3.5123	-27.705	28.407
21	2.7371	-2.7371	-28.407	28.955
22	1.9793	-1.9793	-28.955	29.351
23	1.2385	-1.2385	-29.351	29.598
24	0.49493	-0.49493	-29.598	29.697
25	-0.25271	0.25271	-29.697	29.647
26	-1.0153	1.0153	-29.647	29.444
27	-1.8114	1.8114	-29.444	29.081
28	-2.6433	2.6433	-29.081	28.553
29	-3.5287	3.5287	-28.553	27.847
30	-4.4702	4.4702	-27.847	26.953
31	-5.4774	5.4774	-26.953	25.858
32	-6.5665	6.5665	-25.858	24.544
33	-7.6942	7.6942	-24.544	23.005
34	-8.4842	8.4842	-23.005	21.309
35	-8.9893	8.9893	-21.309	19.511
36	-9.2585	9.2585	-19.511	17.659
37	-9.2912	9.2912	-17.659	15.801
38	-9.1082	9.1082	-15.801	13.979
39	-8.7560	8.7560	-13.979	12.228
40	-8.2753	8.2753	-12.228	10.573
41	-7.7021	7.7021	-10.573	9.0324
42	-7.0671	7.0671	-9.0324	7.6190
43	-6.3966	6.3966	-7.6190	6.3397
44	-5.7126	5.7126	-6.3397	5.1972
45	-5.0335	5.0335	-5.1972	4.1905
46	-4.3743	4.3743	-4.1905	3.3156
47	-3.7469	3.7469	-3.3156	2.5662
48	-3.1611	3.1611	-2.5662	1.9340
49	-2.6239	2.6239	-1.9340	1.4092
50	-2.1411	2.1411	-1.4092	0.98101
51	-1.7165	1.7165	-0.98101	0.63771
52	-1.3528	1.3528	-0.63771	0.36716
53	-0.95553	0.95553	-0.36716	0.17605
54	-0.62130	0.62130	-0.17605	5.17914E-02
55	-0.35054	0.35054	-5.17914E-02	-1.83168E-02
56	-0.14329	0.14329	1.83168E-02	-4.69748E-02
57	5.89260E-04	-5.89260E-04	4.69748E-02	-4.68570E-02
58	8.13027E-02	-8.13027E-02	4.68570E-02	-3.05964E-02
59	9.90412E-02	-9.90412E-02	3.05964E-02	-1.07882E-02

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

60 5.39383E-02-5.39383E-02 1.07882E-02-7.90930E-14

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ITER      0  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4104E+05 RIMNOR=0.3607E+05
            RENORM= 502.1    REMNOR=0.1873E-21  RATIO =0.1106      TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 32.40    RMMAX = 29.70
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
            RDT  =0.4104E+05 RDR  =0.3607E+05
            RATIOT=0.1106    RATIO= 0.000
            MAX UN= 8.092    IEQ= 31 NODE      16 DOF   1  Y-DISPL.F
            MIN UN=-.9351E-01 IEQ= 19 NODE      10 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      2  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4104E+05 RIMNOR=0.3607E+05
            RENORM= 171.1    REMNOR=0.1185E-20  RATIO =0.6458E-01  TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 32.40    RMMAX = 29.70
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
            RDT  =0.4104E+05 RDR  =0.3607E+05
            RATIOT=0.6458E-01 RATIO= 0.000
            MAX UN= 3.425    IEQ= 37 NODE      19 DOF   1  Y-DISPL.F
            MIN UN=-.1491E-09 IEQ= 1 NODE        1 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      3  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4104E+05 RIMNOR=0.3607E+05
            RENORM= 175.8    REMNOR=0.7184E-19  RATIO =0.6545E-01  TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 32.40    RMMAX = 29.70
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
            RDT  =0.4104E+05 RDR  =0.3607E+05
            RATIOT=0.6545E-01 RATIO= 0.000
            MAX UN= 7.260    IEQ= 37 NODE      19 DOF   1  Y-DISPL.F
            MIN UN=-.1462E-08 IEQ= 27 NODE      14 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      4  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4104E+05 RIMNOR=0.3607E+05
            RENORM= 9.799    REMNOR=0.2778E-19  RATIO =0.1545E-01  TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 32.40    RMMAX = 29.70
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
            RDT  =0.4104E+05 RDR  =0.3607E+05
            RATIOT=0.1545E-01 RATIO= 0.000
            MAX UN= 2.054    IEQ= 83 NODE      42 DOF   1  Y-DISPL.F
            MIN UN=-.5331    IEQ= 119 NODE     60 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      5  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4104E+05 RIMNOR=0.3607E+05
            RENORM=0.3677E-03 REMNOR=0.3659E-19  RATIO =0.9465E-04  TOLER =0.1000E-03  CONVERGED !
            RFMAX = 32.40    RMMAX = 29.70
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
            RDT  =0.4104E+05 RDR  =0.3607E+05
            RATIOT=0.9465E-04 RATIO= 0.000
            MAX UN=0.1435E-08 IEQ= 5 NODE        3 DOF   1  Y-DISPL.F
            MIN UN=-.1917E-01 IEQ= 105 NODE     53 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0
    
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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|          NewProject.BaseDesignSection_28.A1M1R1_1757      |
|          Exe Time :24 May 2018          18:17:33          |
+-----+

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New Project

SOLUTION REACHED USING 5 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 4 (AT TIME 4.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	1.7846152E-02	-2.7662227E-03	
2	1.7292907E-02	-2.7662227E-03	
3	1.6739664E-02	-2.7661976E-03	
4	1.6186435E-02	-2.7660722E-03	
5	1.5633251E-02	-2.7657211E-03	
6	1.5080173E-02	-2.7649688E-03	
7	1.4527305E-02	-2.7635895E-03	
8	1.3974798E-02	-2.7613075E-03	
9	1.3422864E-02	-2.7577966E-03	
10	1.2871786E-02	-2.7526808E-03	
11	1.2321927E-02	-2.7455337E-03	
12	1.1773740E-02	-2.7358788E-03	
13	1.1227778E-02	-2.7231893E-03	
14	1.0684706E-02	-2.7068738E-03	
15	1.0145314E-02	-2.6862639E-03	
16	9.6105416E-03	-2.6605301E-03	
17	9.0815071E-03	-2.6286852E-03	
18	8.5595299E-03	-2.5898651E-03	
19	8.0460628E-03	-2.5435196E-03	
20	7.5426395E-03	-2.4894127E-03	
21	7.0508123E-03	-2.4276230E-03	
22	6.5720789E-03	-2.3585418E-03	
23	6.1078346E-03	-2.2828753E-03	
24	5.6593047E-03	-2.2015702E-03	
25	5.2275164E-03	-2.1156165E-03	
26	4.8133072E-03	-2.0259262E-03	
27	4.4173411E-03	-1.9333382E-03	
28	4.0401159E-03	-1.8386204E-03	
29	3.6819879E-03	-1.7424780E-03	
30	3.3431767E-03	-1.6455559E-03	
31	3.0237782E-03	-1.5484440E-03	
32	2.7237772E-03	-1.4516820E-03	
33	2.4430507E-03	-1.3557626E-03	
34	2.1813858E-03	-1.2611394E-03	
35	1.9384808E-03	-1.1682294E-03	
36	1.7139541E-03	-1.0774183E-03	
37	1.5073506E-03	-9.8906473E-04	
38	1.3181431E-03	-9.0350372E-04	
39	1.1457418E-03	-8.2105320E-04	
40	9.8949420E-04	-7.4201647E-04	
41	8.4868808E-04	-6.6668656E-04	
42	7.2255338E-04	-5.9534957E-04	
43	6.1026319E-04	-5.2828854E-04	
44	5.1093400E-04	-4.6578687E-04	
45	4.2362577E-04	-4.0813166E-04	
46	3.4734126E-04	-3.5558439E-04	
47	2.8103982E-04	-3.0832005E-04	
48	2.2365741E-04	-2.6639316E-04	
49	1.7413052E-04	-2.2974673E-04	
50	1.3141700E-04	-1.9822919E-04	
51	9.4512610E-05	-1.7160851E-04	
52	6.2466323E-05	-1.4958520E-04	
53	3.4396198E-05	-1.3180515E-04	
54	9.4902125E-06	-1.1785729E-04	
55	-1.2972807E-05	-1.0730076E-04	
56	-3.3625860E-05	-9.9680746E-05	
57	-5.3009753E-05	-9.4530450E-05	
58	-7.1570888E-05	-9.1372874E-05	
59	-8.9659348E-05	-8.9721982E-05	
60	-1.0752717E-04	-8.9083427E-05	
61	-1.2532761E-04	-8.8954931E-05	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757 |
|          Exe Time :24 May 2018   18:17:33 |
+-----+
New Project
  
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STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 4.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-1.7846E-02	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3429	-1.7293E-02	2.287	0.000	2.287	1.341	ACTIVE	0.000	-0.2000	1.714	
1.000	1.000	1.714	0.000	0.000	Ug1_2_8_L_0						
3 D	0.6857	-1.6740E-02	4.580	0.000	4.580	2.671	ACTIVE	0.000	-0.4000	3.429	
1.000	1.000	3.429	0.000	0.000	Ug1_2_8_L_0						
4 D	1.029	-1.6186E-02	6.883	0.000	6.883	3.978	ACTIVE	0.000	-0.6000	5.143	
1.000	1.000	5.143	0.000	0.000	Ug1_2_8_L_0						
5 D	1.371	-1.5633E-02	9.200	0.000	9.200	5.256	ACTIVE	0.000	-0.8000	6.857	
1.000	1.000	6.857	0.000	0.000	Ug1_2_8_L_0						
6 D	1.714	-1.5080E-02	11.53	0.000	11.53	6.501	ACTIVE	0.000	-1.000	8.571	
1.000	1.000	8.571	0.000	0.000	Ug1_2_8_L_0						
7 D	2.057	-1.4527E-02	13.87	0.000	13.87	7.714	ACTIVE	0.000	-1.200	10.29	
1.000	1.000	10.29	0.000	0.000	Ug1_2_8_L_0						
8 D	2.400	-1.3975E-02	16.22	0.000	16.22	8.897	ACTIVE	0.000	-1.400	12.00	
1.000	1.000	12.00	0.000	0.000	Ug1_2_8_L_0						
9 D	2.743	-1.3423E-02	18.58	0.000	18.58	10.05	ACTIVE	0.000	-1.600	13.71	
1.000	1.000	13.71	0.000	0.000	Ug1_2_8_L_0						
10 D	3.086	-1.2872E-02	20.95	0.000	20.95	11.19	ACTIVE	0.000	-1.800	15.43	
1.000	1.000	15.43	0.000	0.000	Ug1_2_8_L_0						
11 D	3.429	-1.2322E-02	23.31	0.000	23.31	12.30	ACTIVE	0.000	-2.000	17.14	
1.000	1.000	17.14	0.000	0.000	Ug1_2_8_L_0						
12 D	3.776	-1.1774E-02	25.68	2.1702E-02	25.68	13.40	ACTIVE	0.000	-2.200	18.86	
1.000	1.000	18.88	0.000	0.000	Ug1_2_8_L_0						
13 D	4.308	-1.1228E-02	28.10	0.9684	28.10	14.48	ACTIVE	0.000	-2.400	20.57	
1.000	1.000	21.54	0.000	0.000	Ug1_2_8_L_0						
14 D	4.830	-1.0685E-02	30.40	1.864	30.40	15.56	ACTIVE	0.000	-2.600	22.29	
1.000	1.000	24.15	0.000	0.000	Ug1_2_8_L_0						
15 D	6.511	-1.0145E-02	32.91	8.556	32.91	16.62	ACTIVE	0.000	-2.800	24.00	
1.000	1.000	32.56	0.000	0.000	Ug2_741_743_L_0						
16 D	6.985	-9.6105E-03	35.42	9.210	35.42	17.68	ACTIVE	0.000	-3.000	25.71	
1.000	1.000	34.92	0.000	0.000	Ug2_741_743_L_0						
17 D	7.445	-9.0815E-03	37.67	9.794	37.67	18.73	ACTIVE	0.000	-3.200	27.43	
1.000	1.000	37.22	0.000	0.000	Ug2_741_743_L_0						
18 D	7.917	-8.5595E-03	40.16	10.44	40.16	19.78	ACTIVE	0.000	-3.400	29.14	
1.000	1.000	39.58	0.000	0.000	Ug2_741_743_L_0						
19 D	8.376	-8.0461E-03	42.40	11.02	42.40	20.83	ACTIVE	0.000	-3.600	30.86	
1.000	1.000	41.88	0.000	0.000	Ug2_741_743_L_0						
20 D	8.847	-7.5426E-03	44.86	11.66	44.86	21.87	ACTIVE	0.000	-3.800	32.57	
1.000	1.000	44.24	0.000	0.000	Ug2_741_743_L_0						
21 D	9.317	-7.0508E-03	47.31	12.30	47.31	22.91	ACTIVE	0.000	-4.000	34.29	
1.000	1.000	46.59	0.000	0.000	Ug2_741_743_L_0						
22 D	9.776	-6.5721E-03	49.55	12.88	49.55	23.95	ACTIVE	0.000	-4.200	36.00	
1.000	1.000	48.88	0.000	0.000	Ug2_741_743_L_0						
23 D	10.25	-6.1078E-03	51.98	13.51	51.98	24.98	ACTIVE	0.000	-4.400	37.71	
1.000	1.000	51.23	0.000	0.000	Ug2_741_743_L_0						
24 D	10.71	-5.6593E-03	54.22	14.10	54.22	26.02	ACTIVE	0.000	-4.600	39.43	
1.000	1.000	53.53	0.000	0.000	Ug2_741_743_L_0						
25 D	11.17	-5.2275E-03	56.63	14.72	56.63	27.05	ACTIVE	0.000	-4.800	41.14	
1.000	1.000	55.87	0.000	0.000	Ug2_741_743_L_0						
26 D	11.64	-4.8133E-03	59.04	15.35	59.04	28.08	ACTIVE	0.000	-5.000	42.86	
1.000	1.000	58.21	0.000	0.000	Ug2_741_743_L_0						
27 D	12.10	-4.4173E-03	61.28	15.93	61.28	29.11	ACTIVE	0.000	-5.200	44.57	
1.000	1.000	60.50	0.000	0.000	Ug2_741_743_L_0						
28 D	12.57	-4.0401E-03	63.67	16.56	63.67	30.14	ACTIVE	0.000	-5.400	46.29	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	62.84	0.000	0.000	Ug2_741_743_L_0					
29 D	13.03	-3.6820E-03	65.92	17.14	65.92	31.17	ACTIVE	0.000	-5.600	48.00
1.000	1.000	65.14	0.000	0.000	Ug2_741_743_L_0					
30 D	13.49	-3.3432E-03	68.30	17.76	68.30	32.20	ACTIVE	0.000	-5.800	49.71
1.000	1.000	67.47	0.000	0.000	Ug2_741_743_L_0					
31 D	13.96	-3.0238E-03	70.68	18.38	70.68	33.23	ACTIVE	0.000	-6.000	51.43
1.000	1.000	69.81	0.000	0.000	Ug2_741_743_L_0					
32 D	14.42	-2.7238E-03	72.93	18.96	72.93	34.26	ACTIVE	0.000	-6.200	53.14
1.000	1.000	72.10	0.000	0.000	Ug2_741_743_L_0					
33 D	14.89	-2.4431E-03	75.30	19.58	75.30	35.29	ACTIVE	0.000	-6.400	54.86
1.000	1.000	74.44	0.000	0.000	Ug2_741_743_L_0					
34 D	15.35	-2.1814E-03	77.55	20.16	77.55	36.32	ACTIVE	0.000	-6.600	56.57
1.000	1.000	76.73	0.000	0.000	Ug2_741_743_L_0					
35 D	15.81	-1.9385E-03	79.91	20.78	79.91	37.35	ACTIVE	0.000	-6.800	58.29
1.000	1.000	79.06	0.000	0.000	Ug2_741_743_L_0					
36 D	16.28	-1.7140E-03	82.27	21.39	82.27	38.38	ACTIVE	0.000	-7.000	60.00
1.000	1.000	81.39	0.000	0.000	Ug2_741_743_L_0					
37 D	16.74	-1.5074E-03	84.52	21.98	84.52	39.41	ACTIVE	0.000	-7.200	61.71
1.000	1.000	83.69	0.000	0.000	Ug2_741_743_L_0					
38 D	17.20	-1.3181E-03	86.88	22.59	86.88	40.44	ACTIVE	0.000	-7.400	63.43
1.000	1.000	86.02	0.000	0.000	Ug2_741_743_L_0					
39 D	17.66	-1.1457E-03	89.13	23.17	89.13	41.46	ACTIVE	0.000	-7.600	65.14
1.000	1.000	88.32	0.000	0.000	Ug2_741_743_L_0					
40 D	18.13	-9.8949E-04	91.48	23.78	91.48	42.49	ACTIVE	0.000	-7.800	66.86
1.000	1.000	90.64	0.000	0.000	Ug2_741_743_L_0					
41 D	18.59	-8.4869E-04	93.83	24.40	93.83	43.52	ACTIVE	0.000	-8.000	68.57
1.000	1.000	92.97	0.000	0.000	Ug2_741_743_L_0					
42 D	19.05	-7.2255E-04	96.08	24.98	96.08	44.55	ACTIVE	0.000	-8.200	70.29
1.000	1.000	95.27	0.000	0.000	Ug2_741_743_L_0					
43 D	19.52	-6.1026E-04	98.43	25.59	98.43	45.58	ACTIVE	0.000	-8.400	72.00
1.000	1.000	97.59	0.000	0.000	Ug2_741_743_L_0					
44 D	19.98	-5.1093E-04	100.7	26.18	100.7	46.60	ACTIVE	0.000	-8.600	73.71
1.000	1.000	99.89	0.000	0.000	Ug2_741_743_L_0					
45 D	20.87	-4.2363E-04	103.0	28.91	103.0	47.63	UL-RL	4.4159E+04	-8.800	75.43
1.000	1.000	104.3	0.000	0.000	Ug2_741_743_L_0					
46 D	22.12	-3.4734E-04	105.4	33.45	105.4	48.66	UL-RL	4.4159E+04	-9.000	77.14
1.000	1.000	110.6	0.000	0.000	Ug2_741_743_L_0					
47 D	23.28	-2.8104E-04	107.6	37.53	107.6	49.69	UL-RL	4.4159E+04	-9.200	78.86
1.000	1.000	116.4	0.000	0.000	Ug2_741_743_L_0					
48 D	24.36	-2.2366E-04	110.0	41.21	110.0	50.72	UL-RL	4.4159E+04	-9.400	80.57
1.000	1.000	121.8	0.000	0.000	Ug2_741_743_L_0					
49 D	25.36	-1.7413E-04	112.3	44.54	112.3	51.75	UL-RL	4.4159E+04	-9.600	82.29
1.000	1.000	126.8	0.000	0.000	Ug2_741_743_L_0					
50 D	26.31	-1.3142E-04	114.5	47.56	114.5	52.77	UL-RL	4.4159E+04	-9.800	84.00
1.000	1.000	131.6	0.000	0.000	Ug2_741_743_L_0					
51 D	27.21	-9.4513E-05	116.9	50.31	116.9	53.80	UL-RL	4.4159E+04	-10.000	85.71
1.000	1.000	136.0	0.000	0.000	Ug2_741_743_L_0					
52 D	28.06	-6.2466E-05	119.1	52.86	119.1	54.83	UL-RL	4.4159E+04	-10.200	87.43
1.000	1.000	140.3	0.000	0.000	Ug2_741_743_L_0					
53 D	29.01	-3.4396E-05	121.5	55.91	121.5	55.91	V-C	1.2732E+04	-10.400	89.14
1.000	1.000	145.1	0.000	0.000	Ug3_740_742_L_0					
54 D	29.63	-9.4902E-06	123.8	57.28	123.8	57.28	V-C	1.2732E+04	-10.600	90.86
1.000	1.000	148.1	0.000	0.000	Ug3_740_742_L_0					
55 D	30.24	1.2973E-05	126.0	58.63	126.0	58.63	V-C	1.2732E+04	-10.800	92.57
1.000	1.000	151.2	0.000	0.000	Ug3_740_742_L_0					
56 D	30.85	3.3626E-05	128.4	59.95	128.4	59.95	V-C	1.2732E+04	-11.000	94.29
1.000	1.000	154.2	0.000	0.000	Ug3_740_742_L_0					
57 D	31.45	5.3010E-05	130.6	61.26	130.6	61.26	V-C	1.2732E+04	-11.200	96.00
1.000	1.000	157.3	0.000	0.000	Ug3_740_742_L_0					
58 D	32.05	7.1571E-05	133.0	62.56	133.0	62.56	V-C	1.2732E+04	-11.400	97.71
1.000	1.000	160.3	0.000	0.000	Ug3_740_742_L_0					
59 D	32.66	8.9659E-05	135.3	63.85	135.3	63.85	V-C	1.2732E+04	-11.600	99.43
1.000	1.000	163.3	0.000	0.000	Ug3_740_742_L_0					
60 D	33.26	1.0753E-04	137.5	65.14	137.5	65.14	V-C	1.2732E+04	-11.800	101.1
1.000	1.000	166.3	0.000	0.000	Ug3_740_742_L_0					
61 D	16.93	1.2533E-04	139.9	66.43	139.9	66.43	V-C	1.2732E+04	-12.000	102.9
1.000	1.000	169.3	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.A1M1R1_1757          |
|          Exe Time :24 May 2018          18:17:33          |
+-----+
New Project

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STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 4.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16 D	0.000	9.6105E-03	0.000	0.000	30.00	30.33	PASSIVE	0.000	-3.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
17 D	2.613	9.0815E-03	1.714	10.78	32.00	30.22	PASSIVE	0.000	-3.200	2.286	
1.000	1.000	13.07	0.000	0.000	Ug2_741_743_L_0						
18 D	5.227	8.5595E-03	3.429	21.56	34.00	30.15	PASSIVE	0.000	-3.400	4.571	
1.000	1.000	26.13	0.000	0.000	Ug2_741_743_L_0						
19 D	7.840	8.0461E-03	5.143	32.34	36.00	32.34	PASSIVE	0.000	-3.600	6.857	
1.000	1.000	39.20	0.000	0.000	Ug2_741_743_L_0						
20 D	10.45	7.5426E-03	6.857	43.12	38.00	43.12	PASSIVE	0.000	-3.800	9.143	
1.000	1.000	52.27	0.000	0.000	Ug2_741_743_L_0						
21 D	13.07	7.0508E-03	8.571	53.91	40.00	53.91	PASSIVE	0.000	-4.000	11.43	
1.000	1.000	65.33	0.000	0.000	Ug2_741_743_L_0						
22 D	15.68	6.5721E-03	10.29	64.69	42.00	64.69	PASSIVE	0.000	-4.200	13.71	
1.000	1.000	78.40	0.000	0.000	Ug2_741_743_L_0						
23 D	17.28	6.1078E-03	12.00	70.42	44.00	70.42	V-C	7643.	-4.400	16.00	
1.000	1.000	86.42	0.000	0.000	Ug2_741_743_L_0						
24 D	17.20	5.6593E-03	13.71	67.72	46.00	67.72	V-C	7643.	-4.600	18.29	
1.000	1.000	86.01	0.000	0.000	Ug2_741_743_L_0						
25 D	17.15	5.2275E-03	15.43	65.17	48.00	65.17	V-C	7643.	-4.800	20.57	
1.000	1.000	85.74	0.000	0.000	Ug2_741_743_L_0						
26 D	17.12	4.8133E-03	17.14	62.77	50.00	62.77	V-C	7643.	-5.000	22.86	
1.000	1.000	85.62	0.000	0.000	Ug2_741_743_L_0						
27 D	17.13	4.4173E-03	18.86	60.52	52.00	60.52	V-C	7643.	-5.200	25.14	
1.000	1.000	85.66	0.000	0.000	Ug2_741_743_L_0						
28 D	17.17	4.0401E-03	20.57	58.43	54.00	58.43	V-C	7643.	-5.400	27.43	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	85.85	0.000	0.000	Ug2_741_743_L_0					
29 D	17.24	3.6820E-03	22.29	56.50	56.00	56.50	V-C	7643.	-5.600	29.71
1.000	1.000	86.21	0.000	0.000	Ug2_741_743_L_0					
30 D	17.35	3.3432E-03	24.00	54.73	58.00	54.73	V-C	7643.	-5.800	32.00
1.000	1.000	86.73	0.000	0.000	Ug2_741_743_L_0					
31 D	17.48	3.0238E-03	25.71	53.12	60.00	53.12	V-C	7643.	-6.000	34.29
1.000	1.000	87.41	0.000	0.000	Ug2_741_743_L_0					
32 D	17.65	2.7238E-03	27.43	51.68	62.00	51.68	V-C	7643.	-6.200	36.57
1.000	1.000	88.25	0.000	0.000	Ug2_741_743_L_0					
33 D	17.85	2.4431E-03	29.14	50.40	64.00	50.40	V-C	7643.	-6.400	38.86
1.000	1.000	89.26	0.000	0.000	Ug2_741_743_L_0					
34 D	18.08	2.1814E-03	30.86	49.28	66.00	49.28	V-C	7643.	-6.600	41.14
1.000	1.000	90.42	0.000	0.000	Ug2_741_743_L_0					
35 D	18.35	1.9385E-03	32.57	48.31	68.00	48.31	V-C	7643.	-6.800	43.43
1.000	1.000	91.74	0.000	0.000	Ug2_741_743_L_0					
36 D	18.64	1.7140E-03	34.29	47.49	70.00	47.49	V-C	7643.	-7.000	45.71
1.000	1.000	93.21	0.000	0.000	Ug2_741_743_L_0					
37 D	18.97	1.5074E-03	36.00	46.83	72.00	46.83	V-C	7643.	-7.200	48.00
1.000	1.000	94.83	0.000	0.000	Ug2_741_743_L_0					
38 D	19.32	1.3181E-03	37.71	46.30	74.00	46.30	V-C	7643.	-7.400	50.29
1.000	1.000	96.59	0.000	0.000	Ug2_741_743_L_0					
39 D	19.70	1.1457E-03	39.43	45.91	76.00	45.91	V-C	7643.	-7.600	52.57
1.000	1.000	98.48	0.000	0.000	Ug2_741_743_L_0					
40 D	20.10	9.8949E-04	41.14	45.65	78.00	45.65	V-C	7643.	-7.800	54.86
1.000	1.000	100.5	0.000	0.000	Ug2_741_743_L_0					
41 D	20.53	8.4869E-04	42.86	45.52	80.00	45.52	V-C	7643.	-8.000	57.14
1.000	1.000	102.7	0.000	0.000	Ug2_741_743_L_0					
42 D	20.99	7.2255E-04	44.57	45.50	82.00	45.50	V-C	7643.	-8.200	59.43
1.000	1.000	104.9	0.000	0.000	Ug2_741_743_L_0					
43 D	21.46	6.1026E-04	46.29	45.59	84.00	45.59	V-C	7643.	-8.400	61.71
1.000	1.000	107.3	0.000	0.000	Ug2_741_743_L_0					
44 D	21.96	5.1093E-04	48.00	45.78	86.00	45.78	V-C	7643.	-8.600	64.00
1.000	1.000	109.8	0.000	0.000	Ug2_741_743_L_0					
45 D	22.47	4.2363E-04	49.71	46.07	88.00	46.07	V-C	7643.	-8.800	66.29
1.000	1.000	112.4	0.000	0.000	Ug2_741_743_L_0					
46 D	22.90	3.4734E-04	51.43	45.94	90.00	46.70	UL-RL	2.2929E+04	-9.000	68.57
1.000	1.000	114.5	0.000	0.000	Ug2_741_743_L_0					
47 D	23.24	2.8104E-04	53.14	45.34	92.00	47.69	UL-RL	2.2929E+04	-9.200	70.86
1.000	1.000	116.2	0.000	0.000	Ug2_741_743_L_0					
48 D	23.62	2.2366E-04	54.86	44.94	94.00	48.67	UL-RL	2.2929E+04	-9.400	73.14
1.000	1.000	118.1	0.000	0.000	Ug2_741_743_L_0					
49 D	24.03	1.7413E-04	56.57	44.73	96.00	49.66	UL-RL	2.2929E+04	-9.600	75.43
1.000	1.000	120.2	0.000	0.000	Ug2_741_743_L_0					
50 D	24.48	1.3142E-04	58.29	44.67	98.00	50.64	UL-RL	2.2929E+04	-9.800	77.71
1.000	1.000	122.4	0.000	0.000	Ug2_741_743_L_0					
51 D	24.95	9.4513E-05	60.00	44.75	100.00	51.63	UL-RL	2.2929E+04	-10.000	80.00
1.000	1.000	124.7	0.000	0.000	Ug2_741_743_L_0					
52 D	25.45	6.2466E-05	61.71	44.94	102.0	52.61	UL-RL	2.2929E+04	-10.200	82.29
1.000	1.000	127.2	0.000	0.000	Ug2_741_743_L_0					
53 D	26.05	3.4396E-05	63.43	45.69	104.0	53.60	UL-RL	2.6507E+04	-10.400	84.57
1.000	1.000	130.3	0.000	0.000	Ug3_740_742_L_0					
54 D	26.56	9.4902E-06	65.14	45.96	106.0	54.58	UL-RL	2.6507E+04	-10.600	86.86
1.000	1.000	132.8	0.000	0.000	Ug3_740_742_L_0					
55 D	27.09	-1.2973E-05	66.86	46.29	108.0	55.57	UL-RL	2.6507E+04	-10.800	89.14
1.000	1.000	135.4	0.000	0.000	Ug3_740_742_L_0					
56 D	27.62	-3.3626E-05	68.57	46.67	110.0	56.55	UL-RL	2.6507E+04	-11.000	91.43
1.000	1.000	138.1	0.000	0.000	Ug3_740_742_L_0					
57 D	28.16	-5.3010E-05	70.29	47.08	112.0	57.54	UL-RL	2.6507E+04	-11.200	93.71
1.000	1.000	140.8	0.000	0.000	Ug3_740_742_L_0					
58 D	28.70	-7.1571E-05	72.00	47.51	114.0	58.52	UL-RL	2.6507E+04	-11.400	96.00
1.000	1.000	143.5	0.000	0.000	Ug3_740_742_L_0					
59 D	29.25	-8.9659E-05	73.71	47.96	116.0	59.51	UL-RL	2.6507E+04	-11.600	98.29
1.000	1.000	146.2	0.000	0.000	Ug3_740_742_L_0					
60 D	29.80	-1.0753E-04	75.43	48.41	118.0	60.50	UL-RL	2.6507E+04	-11.800	100.6
1.000	1.000	149.0	0.000	0.000	Ug3_740_742_L_0					
61 D	15.17	-1.2533E-04	77.14	48.86	120.0	61.48	UL-RL	2.6507E+04	-12.000	102.9
1.000	1.000	151.7	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|          NewProject.BaseDesignSection_28.A1M1R1_1757          |
|          Exe Time :24 May 2018          18:17:33          |
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New Project

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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 4.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-3.85915E-10	3.85915E-10	-3.81697E-11	3.64663E-11
2	0.34286	-0.34286	2.73227E-11	6.85714E-02
3	1.0286	-1.0286	-6.85714E-02	0.27429
4	2.0571	-2.0571	-0.27429	0.68571
5	3.4286	-3.4286	-0.68571	1.3714
6	5.1429	-5.1429	-1.3714	2.4000
7	7.2000	-7.2000	-2.4000	3.8400
8	9.6000	-9.6000	-3.8400	5.7600
9	12.343	-12.343	-5.7600	8.2286
10	15.429	-15.429	-8.2286	11.314
11	18.857	-18.857	-11.314	15.086
12	22.633	-22.633	-15.086	19.612
13	26.941	-26.941	-19.612	25.000
14	31.771	-31.771	-25.000	31.355
15	38.282	-38.282	-31.355	39.011
16	45.267	-45.267	-39.011	48.065
17	50.098	-50.098	-48.065	58.084
18	52.788	-52.788	-58.084	68.642
19	53.324	-53.324	-68.642	79.307
20	51.718	-51.718	-79.307	89.650
21	47.968	-47.968	-89.650	99.244
22	42.064	-42.064	-99.244	107.66
23	35.026	-35.026	-107.66	114.66
24	28.530	-28.530	-114.66	120.37
25	22.555	-22.555	-120.37	124.88
26	17.071	-17.071	-124.88	128.29
27	12.040	-12.040	-128.29	130.70
28	7.4371	-7.4371	-130.70	132.19
29	3.2229	-3.2229	-132.19	132.83
30	-0.62804	0.62804	-132.83	132.71
31	-4.1486	4.1486	-132.71	131.88
32	-7.3783	7.3783	-131.88	130.40
33	-10.343	10.343	-130.40	128.33
34	-13.080	13.080	-128.33	125.72
35	-15.615	15.615	-125.72	122.59
36	-17.979	17.979	-122.59	119.00
37	-20.206	20.206	-119.00	114.96
38	-22.320	22.320	-114.96	110.49
39	-24.353	24.353	-110.49	105.62
40	-26.326	26.326	-105.62	100.36
41	-28.264	28.264	-100.36	94.705
42	-30.196	30.196	-94.705	88.665
43	-32.139	32.139	-88.665	82.238
44	-34.118	34.118	-82.238	75.414
45	-35.722	35.722	-75.414	68.270
46	-36.506	36.506	-68.270	60.969
47	-36.467	36.467	-60.969	53.675
48	-35.727	35.727	-53.675	46.530
49	-34.393	34.393	-46.530	39.651
50	-32.559	32.559	-39.651	33.140
51	-30.303	30.303	-33.140	27.079
52	-27.691	27.691	-27.079	21.541
53	-24.715	24.715	-21.541	16.598
54	-21.651	21.651	-16.598	12.268
55	-18.497	18.497	-12.268	8.5683
56	-15.269	15.269	-8.5683	5.5145
57	-11.976	11.976	-5.5145	3.1194
58	-8.6237	8.6237	-3.1194	1.3947
59	-5.2169	5.2169	-1.3947	0.35134

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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60 -1.7566      1.7566      -0.35134      -1.25149E-12

ITER      0  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM= 983.7    REMNOR=0.3659E-19  RATIO =0.9146E-01  TOLER =0.1000E-03  NOT CONVERGED
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.9146E-01 RATIOOR= 0.000
           MAX UN= 12.95    IEQ= 43 NODE      22 DOF   1  Y-DISPL.F
           MIN UN=-.1714    IEQ= 31 NODE      16 DOF   1  Y-DISPL.F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      2  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM= 328.4    REMNOR=0.1827E-19  RATIO =0.5284E-01  TOLER =0.1000E-03  NOT CONVERGED
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.5284E-01 RATIOOR= 0.000
           MAX UN= 4.639    IEQ= 53 NODE      27 DOF   1  Y-DISPL.F
           MIN UN=-.4401E-10 IEQ= 4 NODE       2 DOF   2  X-ROT. F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      3  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM= 584.0    REMNOR=0.6870E-18  RATIO =0.7047E-01  TOLER =0.1000E-03  NOT CONVERGED
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.7047E-01 RATIOOR= 0.000
           MAX UN= 13.32    IEQ= 91 NODE      46 DOF   1  Y-DISPL.F
           MIN UN=-5.111    IEQ= 119 NODE     60 DOF   1  Y-DISPL.F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      4  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM= 31.82    REMNOR=0.7207E-18  RATIO =0.1645E-01  TOLER =0.1000E-03  NOT CONVERGED
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.1645E-01 RATIOOR= 0.000
           MAX UN= 2.350    IEQ= 63 NODE      32 DOF   1  Y-DISPL.F
           MIN UN=-3.867    IEQ= 117 NODE     59 DOF   1  Y-DISPL.F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      5  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM=0.3977    REMNOR=0.2419E-18  RATIO =0.1839E-02  TOLER =0.1000E-03  NOT CONVERGED
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.1839E-02 RATIOOR= 0.000
           MAX UN=0.4767    IEQ= 101 NODE     51 DOF   1  Y-DISPL.F
           MIN UN=-.3486    IEQ= 111 NODE     56 DOF   1  Y-DISPL.F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      6  RNORM = 0.000      RMNORM= 0.000
           RINORM=0.1176E+06 RIMNOR=0.7386E+06
           RENORM=0.3883E-04 REMNOR=0.3423E-18  RATIO =0.1817E-04  TOLER =0.1000E-03  CONVERGED !
           RFMAX = 53.32    RMMAX = 132.8
           RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
           RDT =0.1176E+06  RDR =0.7386E+06
           RATIOI=0.1817E-04 RATIOOR= 0.000
           MAX UN=0.3951E-08 IEQ= 11 NODE       6 DOF   1  Y-DISPL.F
           MIN UN=-.5713E-02 IEQ= 105 NODE    53 DOF   1  Y-DISPL.F
           NO. OF CONTACT CONSTRAINT VIOLATIONS      0

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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|                      NewProject.BaseDesignSection_28.A1M1R1_1757 |
|                      Exe Time :24 May 2018      18:17:33      |
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New Project
SOLUTION REACHED USING 6 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 5 (AT TIME 5.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	6.1700488E-02	-7.7866556E-03	
2	6.0143157E-02	-7.7866556E-03	
3	5.8585827E-02	-7.7866322E-03	
4	5.7028510E-02	-7.7865152E-03	
5	5.5471235E-02	-7.7861875E-03	
6	5.3914060E-02	-7.7854853E-03	
7	5.2357080E-02	-7.7841980E-03	
8	5.0800437E-02	-7.7820681E-03	
9	4.9244330E-02	-7.7787913E-03	
10	4.7689021E-02	-7.7740165E-03	
11	4.6134849E-02	-7.7673459E-03	
12	4.4582238E-02	-7.7583347E-03	
13	4.3031705E-02	-7.7464839E-03	
14	4.1483872E-02	-7.7312258E-03	
15	3.9939484E-02	-7.7119173E-03	
16	3.8399428E-02	-7.6877596E-03	
17	3.6864760E-02	-7.6578013E-03	
18	3.5336755E-02	-7.6210255E-03	
19	3.3816876E-02	-7.5763494E-03	
20	3.2306818E-02	-7.5226247E-03	
21	3.0808518E-02	-7.4586375E-03	
22	2.9324140E-02	-7.3831071E-03	
23	2.7856122E-02	-7.2948700E-03	
24	2.6407097E-02	-7.1930621E-03	
25	2.4979840E-02	-7.0771181E-03	
26	2.3577210E-02	-6.9467721E-03	
27	2.2202096E-02	-6.8020574E-03	
28	2.0857330E-02	-6.6433045E-03	
29	1.9545668E-02	-6.4711453E-03	
30	1.8269703E-02	-6.2865103E-03	
31	1.7031813E-02	-6.0906293E-03	
32	1.5834105E-02	-5.8850320E-03	
33	1.4678332E-02	-5.6715443E-03	
34	1.3565873E-02	-5.4522716E-03	
35	1.2497666E-02	-5.2293598E-03	
36	1.1474240E-02	-5.0047891E-03	
37	1.0495745E-02	-4.7803831E-03	
38	9.5619690E-03	-4.5578138E-03	
39	8.6723943E-03	-4.3386171E-03	
40	7.8262037E-03	-4.1241969E-03	
41	7.0223117E-03	-3.9158345E-03	
42	6.2593883E-03	-3.7146967E-03	
43	5.5358807E-03	-3.5218442E-03	
44	4.8500341E-03	-3.3382389E-03	
45	4.1999138E-03	-3.1647526E-03	
46	3.5834095E-03	-3.0021699E-03	
47	2.9982716E-03	-2.8512001E-03	
48	2.4421128E-03	-2.7124798E-03	
49	1.9124250E-03	-2.5865797E-03	
50	1.4065948E-03	-2.4740097E-03	
51	9.2190572E-04	-2.3752094E-03	
52	4.5555782E-04	-2.2905333E-03	
53	4.7529268E-06	-2.2201095E-03	
54	-4.3338659E-04	-2.1635345E-03	
55	-8.6152423E-04	-2.1199096E-03	
56	-1.2821294E-03	-2.0879694E-03	
57	-1.6973847E-03	-2.0661202E-03	
58	-2.1091303E-03	-2.0525633E-03	
59	-2.5188356E-03	-2.0453895E-03	
60	-2.9275771E-03	-2.0425800E-03	
61	-3.3360371E-03	-2.0420072E-03	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

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|                PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|                |
|                NewProject.BaseDesignSection_28.A1M1R1_1757  |
|                Exe Time :24 May 2018  18:17:33  |
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New Project

STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 5.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-6.1700E-02	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3200	-6.0143E-02	2.401	0.000	2.401	1.341	ACTIVE	0.000	-0.2000	1.600	
1.000	1.000	1.600	0.000	0.000	Ug1_2_8_L_0						
3 D	0.6400	-5.8586E-02	4.808	0.000	4.808	2.671	ACTIVE	0.000	-0.4000	3.200	
1.000	1.000	3.200	0.000	0.000	Ug1_2_8_L_0						
4 D	0.9600	-5.7029E-02	7.226	0.000	7.226	3.978	ACTIVE	0.000	-0.6000	4.800	
1.000	1.000	4.800	0.000	0.000	Ug1_2_8_L_0						
5 D	1.280	-5.5471E-02	9.657	0.000	9.657	5.256	ACTIVE	0.000	-0.8000	6.400	
1.000	1.000	6.400	0.000	0.000	Ug1_2_8_L_0						
6 D	1.600	-5.3914E-02	12.10	0.000	12.10	6.501	ACTIVE	0.000	-1.000	8.000	
1.000	1.000	8.000	0.000	0.000	Ug1_2_8_L_0						
7 D	1.920	-5.2357E-02	14.56	0.000	14.56	7.714	ACTIVE	0.000	-1.200	9.600	
1.000	1.000	9.600	0.000	0.000	Ug1_2_8_L_0						
8 D	2.240	-5.0800E-02	17.02	0.000	17.02	8.897	ACTIVE	0.000	-1.400	11.20	
1.000	1.000	11.20	0.000	0.000	Ug1_2_8_L_0						
9 D	2.560	-4.9244E-02	19.50	0.000	19.50	10.05	ACTIVE	0.000	-1.600	12.80	
1.000	1.000	12.80	0.000	0.000	Ug1_2_8_L_0						
10 D	2.880	-4.7689E-02	21.97	0.000	21.97	11.19	ACTIVE	0.000	-1.800	14.40	
1.000	1.000	14.40	0.000	0.000	Ug1_2_8_L_0						
11 D	3.200	-4.6135E-02	24.45	0.000	24.45	12.30	ACTIVE	0.000	-2.000	16.00	
1.000	1.000	16.00	0.000	0.000	Ug1_2_8_L_0						
12 D	3.622	-4.4582E-02	26.93	0.5120	26.93	13.40	ACTIVE	0.000	-2.200	17.60	
1.000	1.000	18.11	0.000	0.000	Ug1_2_8_L_0						
13 D	4.141	-4.3032E-02	29.47	1.503	29.47	14.48	ACTIVE	0.000	-2.400	19.20	
1.000	1.000	20.70	0.000	0.000	Ug1_2_8_L_0						
14 D	4.649	-4.1484E-02	31.89	2.444	31.89	15.56	ACTIVE	0.000	-2.600	20.80	
1.000	1.000	23.24	0.000	0.000	Ug1_2_8_L_0						
15 D	6.274	-3.9939E-02	34.51	8.972	34.51	16.62	ACTIVE	0.000	-2.800	22.40	
1.000	1.000	31.37	0.000	0.000	Ug2_741_743_L_0						
16 D	6.731	-3.8399E-02	37.14	9.656	37.14	17.68	ACTIVE	0.000	-3.000	24.00	
1.000	1.000	33.66	0.000	0.000	Ug2_741_743_L_0						
17 D	7.174	-3.6865E-02	39.50	10.27	39.50	18.73	ACTIVE	0.000	-3.200	25.60	
1.000	1.000	35.87	0.000	0.000	Ug2_741_743_L_0						
18 D	7.629	-3.5337E-02	42.10	10.95	42.10	19.78	ACTIVE	0.000	-3.400	27.20	
1.000	1.000	38.15	0.000	0.000	Ug2_741_743_L_0						
19 D	8.072	-3.3817E-02	44.46	11.56	44.46	20.83	ACTIVE	0.000	-3.600	28.80	
1.000	1.000	40.36	0.000	0.000	Ug2_741_743_L_0						
20 D	8.526	-3.2307E-02	47.03	12.23	47.03	21.87	ACTIVE	0.000	-3.800	30.40	
1.000	1.000	42.63	0.000	0.000	Ug2_741_743_L_0						
21 D	8.979	-3.0809E-02	49.59	12.89	49.59	22.91	ACTIVE	0.000	-4.000	32.00	
1.000	1.000	44.89	0.000	0.000	Ug2_741_743_L_0						
22 D	9.421	-2.9324E-02	51.95	13.51	51.95	23.95	ACTIVE	0.000	-4.200	33.60	
1.000	1.000	47.11	0.000	0.000	Ug2_741_743_L_0						
23 D	9.873	-2.7856E-02	54.49	14.17	54.49	24.98	ACTIVE	0.000	-4.400	35.20	
1.000	1.000	49.37	0.000	0.000	Ug2_741_743_L_0						
24 D	10.32	-2.6407E-02	56.85	14.78	56.85	26.02	ACTIVE	0.000	-4.600	36.80	
1.000	1.000	51.58	0.000	0.000	Ug2_741_743_L_0						
25 D	10.77	-2.4980E-02	59.38	15.44	59.38	27.05	ACTIVE	0.000	-4.800	38.40	
1.000	1.000	53.84	0.000	0.000	Ug2_741_743_L_0						
26 D	11.22	-2.3577E-02	61.89	16.09	61.89	28.08	ACTIVE	0.000	-5.000	40.00	
1.000	1.000	56.09	0.000	0.000	Ug2_741_743_L_0						
27 D	11.66	-2.2202E-02	64.25	16.71	64.25	29.11	ACTIVE	0.000	-5.200	41.60	
1.000	1.000	58.31	0.000	0.000	Ug2_741_743_L_0						
28 D	12.11	-2.0857E-02	66.76	17.36	66.76	30.14	ACTIVE	0.000	-5.400	43.20	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
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|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.A1M1R1_1757          |
|          Exe Time :24 May 2018          18:17:33          |
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New Project
  
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STRESS RESULTS FOR GROUP NO. 2

0_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 5.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * FACTOR	FORCE UFACTOR	DISPL-Y Peg	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P LAYER	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16	0.000	--	--	--	--	--	REMOVED	--	-3.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
17	0.000	--	--	--	--	--	REMOVED	--	-3.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
18	0.000	--	--	--	--	--	REMOVED	--	-3.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
19	0.000	--	--	--	--	--	REMOVED	--	-3.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
20	0.000	--	--	--	--	--	REMOVED	--	-3.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
21 D	0.000	3.0809E-02	0.000	0.000	40.00	53.91	PASSIVE	0.000	-4.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
22 D	2.492	2.9324E-02	1.600	10.06	42.00	64.69	PASSIVE	0.000	-4.200	2.400	
1.000	1.000	12.46	0.000	0.000	Ug2_741_743_L_0						
23 D	4.985	2.7856E-02	3.200	20.12	44.00	70.42	PASSIVE	0.000	-4.400	4.800	
1.000	1.000	24.92	0.000	0.000	Ug2_741_743_L_0						
24 D	7.477	2.6407E-02	4.800	30.19	46.00	67.72	PASSIVE	0.000	-4.600	7.200	
1.000	1.000	37.39	0.000	0.000	Ug2_741_743_L_0						
25 D	9.970	2.4980E-02	6.400	40.25	48.00	65.17	PASSIVE	0.000	-4.800	9.600	
1.000	1.000	49.85	0.000	0.000	Ug2_741_743_L_0						
26 D	12.46	2.3577E-02	8.000	50.31	50.00	62.77	PASSIVE	0.000	-5.000	12.00	
1.000	1.000	62.31	0.000	0.000	Ug2_741_743_L_0						
27 D	14.95	2.2202E-02	9.600	60.37	52.00	60.52	PASSIVE	0.000	-5.200	14.40	
1.000	1.000	74.77	0.000	0.000	Ug2_741_743_L_0						
28 D	17.45	2.0857E-02	11.20	70.44	54.00	70.44	PASSIVE	0.000	-5.400	16.80	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	87.24	0.000	0.000	Ug2_741_743_L_0						
29 D	19.94	1.9546E-02	12.80	80.50	56.00	80.50	PASSIVE	0.000	-5.600	19.20	
1.000	1.000	99.70	0.000	0.000	Ug2_741_743_L_0						
30 D	22.43	1.8270E-02	14.40	90.56	58.00	90.56	PASSIVE	0.000	-5.800	21.60	
1.000	1.000	112.2	0.000	0.000	Ug2_741_743_L_0						
31 D	24.92	1.7032E-02	16.00	100.6	60.00	100.6	PASSIVE	0.000	-6.000	24.00	
1.000	1.000	124.6	0.000	0.000	Ug2_741_743_L_0						
32 D	27.42	1.5834E-02	17.60	110.7	62.00	110.7	PASSIVE	0.000	-6.200	26.40	
1.000	1.000	137.1	0.000	0.000	Ug2_741_743_L_0						
33 D	29.60	1.4678E-02	19.20	119.2	64.00	119.2	V-C	5732.	-6.400	28.80	
1.000	1.000	148.0	0.000	0.000	Ug2_741_743_L_0						
34 D	28.88	1.3566E-02	20.80	113.2	66.00	113.2	V-C	5732.	-6.600	31.20	
1.000	1.000	144.4	0.000	0.000	Ug2_741_743_L_0						
35 D	28.22	1.2498E-02	22.40	107.5	68.00	107.5	V-C	5732.	-6.800	33.60	
1.000	1.000	141.1	0.000	0.000	Ug2_741_743_L_0						
36 D	27.62	1.1474E-02	24.00	102.1	70.00	102.1	V-C	5732.	-7.000	36.00	
1.000	1.000	138.1	0.000	0.000	Ug2_741_743_L_0						
37 D	27.08	1.0496E-02	25.60	97.02	72.00	97.02	V-C	5732.	-7.200	38.40	
1.000	1.000	135.4	0.000	0.000	Ug2_741_743_L_0						
38 D	26.61	9.5620E-03	27.20	92.23	74.00	92.23	V-C	5732.	-7.400	40.80	
1.000	1.000	133.0	0.000	0.000	Ug2_741_743_L_0						
39 D	26.19	8.6724E-03	28.80	87.73	76.00	87.73	V-C	5732.	-7.600	43.20	
1.000	1.000	130.9	0.000	0.000	Ug2_741_743_L_0						
40 D	25.82	7.8262E-03	30.40	83.51	78.00	83.51	V-C	5732.	-7.800	45.60	
1.000	1.000	129.1	0.000	0.000	Ug2_741_743_L_0						
41 D	25.52	7.0223E-03	32.00	79.58	80.00	79.58	V-C	5732.	-8.000	48.00	
1.000	1.000	127.6	0.000	0.000	Ug2_741_743_L_0						
42 D	25.26	6.2594E-03	33.60	75.91	82.00	75.91	V-C	5732.	-8.200	50.40	
1.000	1.000	126.3	0.000	0.000	Ug2_741_743_L_0						
43 D	25.06	5.5359E-03	35.20	72.49	84.00	72.49	V-C	5732.	-8.400	52.80	
1.000	1.000	125.3	0.000	0.000	Ug2_741_743_L_0						
44 D	24.90	4.8500E-03	36.80	69.32	86.00	69.32	V-C	5732.	-8.600	55.20	
1.000	1.000	124.5	0.000	0.000	Ug2_741_743_L_0						
45 D	24.80	4.1999E-03	38.40	66.39	88.00	66.39	V-C	5732.	-8.800	57.60	
1.000	1.000	124.0	0.000	0.000	Ug2_741_743_L_0						
46 D	24.73	3.5834E-03	40.00	63.66	90.00	63.66	V-C	5732.	-9.000	60.00	
1.000	1.000	123.7	0.000	0.000	Ug2_741_743_L_0						
47 D	24.71	2.9983E-03	41.60	61.14	92.00	61.14	V-C	5732.	-9.200	62.40	
1.000	1.000	123.5	0.000	0.000	Ug2_741_743_L_0						
48 D	24.72	2.4421E-03	43.20	58.80	94.00	58.80	V-C	5732.	-9.400	64.80	
1.000	1.000	123.6	0.000	0.000	Ug2_741_743_L_0						
49 D	24.77	1.9124E-03	44.80	56.63	96.00	56.63	V-C	5732.	-9.600	67.20	
1.000	1.000	123.8	0.000	0.000	Ug2_741_743_L_0						
50 D	24.80	1.4066E-03	46.40	54.39	98.00	54.71	UL-RL	1.7196E+04	-9.800	69.60	
1.000	1.000	124.0	0.000	0.000	Ug2_741_743_L_0						
51 D	24.83	9.2191E-04	48.00	52.14	100.00	53.00	UL-RL	1.7196E+04	-10.000	72.00	
1.000	1.000	124.1	0.000	0.000	Ug2_741_743_L_0						
52 D	24.40	4.5556E-04	49.60	47.59	102.0	52.61	UL-RL	1.7196E+04	-10.200	74.40	
1.000	1.000	122.0	0.000	0.000	Ug2_741_743_L_0						
53 D	23.56	4.7529E-06	51.20	40.98	104.0	53.60	UL-RL	1.9880E+04	-10.400	76.80	
1.000	1.000	117.8	0.000	0.000	Ug3_740_742_L_0						
54 D	22.44	-4.3339E-04	52.80	33.01	106.0	54.58	UL-RL	1.9880E+04	-10.600	79.20	
1.000	1.000	112.2	0.000	0.000	Ug3_740_742_L_0						
55 D	21.37	-8.6152E-04	54.40	25.26	108.0	55.57	UL-RL	1.9880E+04	-10.800	81.60	
1.000	1.000	106.9	0.000	0.000	Ug3_740_742_L_0						
56 D	20.69	-1.2821E-03	56.00	19.43	110.0	56.55	ACTIVE	0.000	-11.000	84.00	
1.000	1.000	103.4	0.000	0.000	Ug3_740_742_L_0						
57 D	21.28	-1.6974E-03	57.60	19.99	112.0	57.54	ACTIVE	0.000	-11.200	86.40	
1.000	1.000	106.4	0.000	0.000	Ug3_740_742_L_0						
58 D	21.87	-2.1091E-03	59.20	20.54	114.0	58.52	ACTIVE	0.000	-11.400	88.80	
1.000	1.000	109.3	0.000	0.000	Ug3_740_742_L_0						
59 D	22.46	-2.5188E-03	60.80	21.10	116.0	59.51	ACTIVE	0.000	-11.600	91.20	
1.000	1.000	112.3	0.000	0.000	Ug3_740_742_L_0						
60 D	23.05	-2.9276E-03	62.40	21.65	118.0	60.50	ACTIVE	0.000	-11.800	93.60	
1.000	1.000	115.3	0.000	0.000	Ug3_740_742_L_0						
61 D	11.82	-3.3360E-03	64.00	22.21	120.0	61.48	ACTIVE	0.000	-12.000	96.00	
1.000	1.000	118.2	0.000	0.000	Ug3_740_742_L_0						

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757   |
|          Exe Time :24 May 2018   18:17:33   |
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New Project

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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 5.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	1.73453E-09	-1.73453E-09	1.73231E-10	3.78323E-10
2	0.32000	-0.32000	-1.65724E-10	6.40000E-02
3	0.96000	-0.96000	-6.40000E-02	0.25600
4	1.9200	-1.9200	-0.25600	0.64000
5	3.2000	-3.2000	-0.64000	1.2800
6	4.8000	-4.8000	-1.2800	2.2400
7	6.7200	-6.7200	-2.2400	3.5840
8	8.9600	-8.9600	-3.5840	5.3760
9	11.520	-11.520	-5.3760	7.6800
10	14.400	-14.400	-7.6800	10.560
11	17.600	-17.600	-10.560	14.080
12	21.222	-21.222	-14.080	18.324
13	25.363	-25.363	-18.324	23.397
14	30.012	-30.012	-23.397	29.399
15	36.286	-36.286	-29.399	36.657
16	43.017	-43.017	-36.657	45.260
17	50.191	-50.191	-45.260	55.299
18	57.821	-57.821	-55.299	66.863
19	65.892	-65.892	-66.863	80.041
20	74.418	-74.418	-80.041	94.925
21	83.397	-83.397	-94.925	111.60
22	90.326	-90.326	-111.60	129.67
23	95.214	-95.214	-129.67	148.71
24	98.053	-98.053	-148.71	168.32
25	98.850	-98.850	-168.32	188.09
26	97.606	-97.606	-188.09	207.61
27	94.313	-94.313	-207.61	226.48
28	88.977	-88.977	-226.48	244.27
29	81.591	-81.591	-244.27	260.59
30	72.163	-72.163	-260.59	275.02
31	60.692	-60.692	-275.02	287.16
32	47.171	-47.171	-287.16	296.59
33	31.921	-31.921	-296.59	302.98
34	17.832	-17.832	-302.98	306.55
35	4.8494	-4.8494	-306.55	307.52
36	-7.0860	7.0860	-307.52	306.10
37	-18.041	18.041	-306.10	302.49
38	-28.069	28.069	-302.49	296.88
39	-37.234	37.234	-296.88	289.43
40	-45.588	45.588	-289.43	280.31
41	-53.187	53.187	-280.31	269.67
42	-60.088	60.088	-269.67	257.66
43	-66.339	66.339	-257.66	244.39
44	-71.994	71.994	-244.39	229.99
45	-77.092	77.092	-229.99	214.57
46	-81.678	81.678	-214.57	198.24
47	-85.796	85.796	-198.24	181.08
48	-89.479	89.479	-181.08	163.18
49	-92.760	92.760	-163.18	144.63
50	-95.506	95.506	-144.63	125.53
51	-97.626	97.626	-125.53	106.00
52	-97.154	97.154	-106.00	86.572
53	-92.238	92.238	-86.572	68.125
54	-84.812	84.812	-68.125	51.162
55	-74.941	74.941	-51.162	36.174
56	-63.023	63.023	-36.174	23.570
57	-50.347	50.347	-23.570	13.500
58	-36.921	36.921	-13.500	6.1159
59	-22.748	22.748	-6.1159	1.5662

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

60 -7.8308 7.8308 -1.5662 2.35452E-12

ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4927E+06 RIMNOR=0.3578E+07
RENORM= 102.6 REMNOR=0.3423E-18 RATIO =0.1443E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 98.85 RMMAX = 307.5
RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
RDT =0.4927E+06 RDR =0.3578E+07
RATIOT=0.1443E-01 RATIO= 0.000
MAX UN=0.1878E-09 IEQ= 8 NODE 4 DOF 2 X-ROT.F
MIN UN=-2.916 IEQ= 41 NODE 21 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4927E+06 RIMNOR=0.3578E+07
RENORM=0.3493 REMNOR=0.3098E-18 RATIO =0.8421E-03 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 98.85 RMMAX = 307.5
RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
RDT =0.4927E+06 RDR =0.3578E+07
RATIOT=0.8421E-03 RATIO= 0.000
MAX UN=0.4813E-01 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
MIN UN=-.2645 IEQ= 111 NODE 56 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4927E+06 RIMNOR=0.3578E+07
RENORM=0.9606E-16 REMNOR=0.2474E-18 RATIO =0.1396E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 98.85 RMMAX = 307.5
RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
RDT =0.4927E+06 RDR =0.3578E+07
RATIOT=0.1396E-10 RATIO= 0.000
MAX UN=0.3920E-08 IEQ= 17 NODE 9 DOF 1 Y-DISPL.F
MIN UN=-.4253E-08 IEQ= 19 NODE 10 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757 |
|          Exe Time :24 May 2018   18:17:33 |
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New Project
SOLUTION REACHED USING 3 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 6 (AT TIME 6.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	6.1718518E-02	-7.8140692E-03	
2	6.0155704E-02	-7.8140692E-03	
3	5.8592892E-02	-7.8140466E-03	
4	5.7030091E-02	-7.8139341E-03	
5	5.5467332E-02	-7.8136182E-03	
6	5.3904668E-02	-7.8129375E-03	
7	5.2342195E-02	-7.8116807E-03	
8	5.0780052E-02	-7.8095867E-03	
9	4.9218437E-02	-7.8063447E-03	
10	4.7657615E-02	-7.8015942E-03	
11	4.6097927E-02	-7.7949248E-03	
12	4.4539803E-02	-7.7858763E-03	
13	4.2983770E-02	-7.7739313E-03	
14	4.1430463E-02	-7.7585006E-03	
15	3.9880646E-02	-7.7389171E-03	
16	3.8335229E-02	-7.7143370E-03	
17	3.6795305E-02	-7.6837427E-03	
18	3.5262197E-02	-7.6460583E-03	
19	3.3737428E-02	-7.6001684E-03	
20	3.2222753E-02	-7.5449317E-03	
21	3.0720164E-02	-7.4791906E-03	
22	2.9231859E-02	-7.4018307E-03	
23	2.7760271E-02	-7.3118685E-03	
24	2.6308005E-02	-7.2085052E-03	
25	2.4877800E-02	-7.0911767E-03	
26	2.3472485E-02	-6.9595867E-03	
27	2.2094924E-02	-6.8137236E-03	
28	2.0747933E-02	-6.6538973E-03	
29	1.9434253E-02	-6.4807486E-03	
30	1.8156460E-02	-6.2952146E-03	
31	1.6916911E-02	-6.0985294E-03	
32	1.5717695E-02	-5.8922255E-03	
33	1.4560546E-02	-5.6781302E-03	
34	1.3446822E-02	-5.4583495E-03	
35	1.2377442E-02	-5.2350289E-03	
36	1.1352914E-02	-5.0101476E-03	
37	1.0373371E-02	-4.7855279E-03	
38	9.4385794E-03	-4.5628402E-03	
39	8.5480035E-03	-4.3436183E-03	
40	7.7008076E-03	-4.1292641E-03	
41	6.8958881E-03	-3.9210567E-03	
42	6.1318974E-03	-3.7201605E-03	
43	5.4072659E-03	-3.5276334E-03	
44	4.7202222E-03	-3.3444344E-03	
45	4.0688157E-03	-3.1714315E-03	
46	3.4509211E-03	-3.0094054E-03	
47	2.8642748E-03	-2.8590602E-03	
48	2.3064762E-03	-2.7210267E-03	
49	1.7750058E-03	-2.5958681E-03	
50	1.2672398E-03	-2.4840855E-03	
51	7.8045392E-04	-2.3861059E-03	
52	3.1184326E-04	-2.3022641E-03	
53	-1.4138824E-04	-2.2326314E-03	
54	-5.8210324E-04	-2.1767493E-03	
55	-1.0129433E-03	-2.1336966E-03	
56	-1.4363512E-03	-2.1021841E-03	
57	-1.8544802E-03	-2.0806204E-03	
58	-2.2691447E-03	-2.0672362E-03	
59	-2.6817946E-03	-2.0601515E-03	
60	-3.0934926E-03	-2.0573760E-03	
61	-3.5049129E-03	-2.0568100E-03	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|                                                                                               |
|                                                                                               |
|          NewProject.BaseDesignSection_28.A1M1R1_1757  |
|          Exe Time :24 May 2018  18:17:33  |
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New Project

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STRESS RESULTS FOR GROUP NO. 1

O_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 6.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-6.1719E-02	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3077	-6.0156E-02	2.463	0.000	2.463	1.341	ACTIVE	0.000	-0.2000	1.538	
1.000	1.000	1.538	0.000	0.000	Ug1_2_8_L_0						
3 D	0.6154	-5.8593E-02	4.931	0.000	4.931	2.671	ACTIVE	0.000	-0.4000	3.077	
1.000	1.000	3.077	0.000	0.000	Ug1_2_8_L_0						
4 D	0.9339	-5.7030E-02	7.410	5.4357E-02	7.410	3.978	UL-RL	2.4005E+04	-0.6000	4.615	
1.000	1.000	4.670	0.000	0.000	Ug1_2_8_L_0						
5 D	1.274	-5.5467E-02	9.903	0.2168	9.903	5.256	UL-RL	2.4005E+04	-0.8000	6.154	
1.000	1.000	6.371	0.000	0.000	Ug1_2_8_L_0						
6 D	1.614	-5.3905E-02	12.41	0.3793	12.41	6.501	UL-RL	2.4005E+04	-1.000	7.692	
1.000	1.000	8.072	0.000	0.000	Ug1_2_8_L_0						
7 D	1.955	-5.2342E-02	14.93	0.5419	14.93	7.714	UL-RL	2.4005E+04	-1.200	9.231	
1.000	1.000	9.773	0.000	0.000	Ug1_2_8_L_0						
8 D	2.295	-5.0780E-02	17.45	0.7047	17.45	8.897	UL-RL	2.4005E+04	-1.400	10.77	
1.000	1.000	11.47	0.000	0.000	Ug1_2_8_L_0						
9 D	2.635	-4.9218E-02	19.99	0.8677	19.99	10.05	UL-RL	2.4005E+04	-1.600	12.31	
1.000	1.000	13.18	0.000	0.000	Ug1_2_8_L_0						
10 D	2.975	-4.7658E-02	22.53	1.031	22.53	11.19	UL-RL	2.4005E+04	-1.800	13.85	
1.000	1.000	14.88	0.000	0.000	Ug1_2_8_L_0						
11 D	3.316	-4.6098E-02	25.07	1.194	25.07	12.30	UL-RL	2.4005E+04	-2.000	15.38	
1.000	1.000	16.58	0.000	0.000	Ug1_2_8_L_0						
12 D	3.758	-4.4540E-02	27.61	1.869	27.61	13.40	UL-RL	2.4005E+04	-2.200	16.92	
1.000	1.000	18.79	0.000	0.000	Ug1_2_8_L_0						
13 D	4.297	-4.2984E-02	30.21	3.023	30.21	14.48	UL-RL	2.4005E+04	-2.400	18.46	
1.000	1.000	21.48	0.000	0.000	Ug1_2_8_L_0						
14 D	4.825	-4.1430E-02	32.69	4.126	32.69	15.56	UL-RL	2.4005E+04	-2.600	20.00	
1.000	1.000	24.13	0.000	0.000	Ug1_2_8_L_0						
15 D	6.708	-3.9881E-02	35.37	12.00	35.37	16.62	UL-RL	4.4159E+04	-2.800	21.54	
1.000	1.000	33.54	0.000	0.000	Ug2_741_743_L_0						
16 D	7.206	-3.8335E-02	38.06	12.95	38.06	17.68	UL-RL	4.4159E+04	-3.000	23.08	
1.000	1.000	36.03	0.000	0.000	Ug2_741_743_L_0						
17 D	7.689	-3.6795E-02	40.48	13.83	40.48	18.73	UL-RL	4.4159E+04	-3.200	24.62	
1.000	1.000	38.44	0.000	0.000	Ug2_741_743_L_0						
18 D	8.183	-3.5262E-02	43.14	14.76	43.14	19.78	UL-RL	4.4159E+04	-3.400	26.15	
1.000	1.000	40.91	0.000	0.000	Ug2_741_743_L_0						
19 D	8.663	-3.3737E-02	45.57	15.62	45.57	20.83	UL-RL	4.4159E+04	-3.600	27.69	
1.000	1.000	43.31	0.000	0.000	Ug2_741_743_L_0						
20 D	9.151	-3.2223E-02	48.20	16.53	48.20	21.87	UL-RL	4.4159E+04	-3.800	29.23	
1.000	1.000	45.76	0.000	0.000	Ug2_741_743_L_0						
21 D	9.636	-3.0720E-02	50.82	17.41	50.82	22.91	UL-RL	4.4159E+04	-4.000	30.77	
1.000	1.000	48.18	0.000	0.000	Ug2_741_743_L_0						
22 D	10.11	-2.9232E-02	53.24	18.23	53.24	23.95	UL-RL	4.4159E+04	-4.200	32.31	
1.000	1.000	50.54	0.000	0.000	Ug2_741_743_L_0						
23 D	10.58	-2.7760E-02	55.84	19.08	55.84	24.98	UL-RL	4.4159E+04	-4.400	33.85	
1.000	1.000	52.92	0.000	0.000	Ug2_741_743_L_0						
24 D	11.05	-2.6308E-02	58.26	19.86	58.26	26.02	UL-RL	4.4159E+04	-4.600	35.38	
1.000	1.000	55.25	0.000	0.000	Ug2_741_743_L_0						
25 D	11.52	-2.4878E-02	60.85	20.68	60.85	27.05	UL-RL	4.4159E+04	-4.800	36.92	
1.000	1.000	57.61	0.000	0.000	Ug2_741_743_L_0						
26 D	11.99	-2.3472E-02	63.43	21.49	63.43	28.08	UL-RL	4.4159E+04	-5.000	38.46	
1.000	1.000	59.95	0.000	0.000	Ug2_741_743_L_0						
27 D	12.45	-2.2095E-02	65.85	22.24	65.85	29.11	UL-RL	4.4159E+04	-5.200	40.00	
1.000	1.000	62.24	0.000	0.000	Ug2_741_743_L_0						
28 D	12.91	-2.0748E-02	68.42	23.02	68.42	30.14	UL-RL	4.4159E+04	-5.400	41.54	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	64.56	0.000	0.000	Ug2_741_743_L_0					
29 D	13.37	-1.9434E-02	70.84	23.75	70.84	31.17	UL-RL	4.4159E+04	-5.600	43.08
1.000	1.000	66.83	0.000	0.000	Ug2_741_743_L_0					
30 D	13.83	-1.8156E-02	73.40	24.51	73.40	32.20	UL-RL	4.4159E+04	-5.800	44.62
1.000	1.000	69.13	0.000	0.000	Ug2_741_743_L_0					
31 D	14.28	-1.6917E-02	75.96	25.27	75.96	33.23	UL-RL	4.4159E+04	-6.000	46.15
1.000	1.000	71.42	0.000	0.000	Ug2_741_743_L_0					
32 D	14.73	-1.5718E-02	78.38	25.98	78.38	34.26	UL-RL	4.4159E+04	-6.200	47.69
1.000	1.000	73.67	0.000	0.000	Ug2_741_743_L_0					
33 D	15.19	-1.4561E-02	80.93	26.71	80.93	35.29	UL-RL	4.4159E+04	-6.400	49.23
1.000	1.000	75.95	0.000	0.000	Ug2_741_743_L_0					
34 D	15.64	-1.3447E-02	83.35	27.41	83.35	36.32	UL-RL	4.4159E+04	-6.600	50.77
1.000	1.000	78.18	0.000	0.000	Ug2_741_743_L_0					
35 D	16.09	-1.2377E-02	85.89	28.14	85.89	37.35	UL-RL	4.4159E+04	-6.800	52.31
1.000	1.000	80.45	0.000	0.000	Ug2_741_743_L_0					
36 D	16.54	-1.1353E-02	88.43	28.87	88.43	38.38	UL-RL	4.4159E+04	-7.000	53.85
1.000	1.000	82.71	0.000	0.000	Ug2_741_743_L_0					
37 D	16.99	-1.0373E-02	90.85	29.56	90.85	39.41	UL-RL	4.4159E+04	-7.200	55.38
1.000	1.000	84.94	0.000	0.000	Ug2_741_743_L_0					
38 D	17.44	-9.4386E-03	93.38	30.28	93.38	40.44	UL-RL	4.4159E+04	-7.400	56.92
1.000	1.000	87.20	0.000	0.000	Ug2_741_743_L_0					
39 D	17.89	-8.5480E-03	95.81	30.96	95.81	41.46	UL-RL	4.4159E+04	-7.600	58.46
1.000	1.000	89.43	0.000	0.000	Ug2_741_743_L_0					
40 D	18.34	-7.7008E-03	98.34	31.68	98.34	42.49	UL-RL	4.4159E+04	-7.800	60.00
1.000	1.000	91.68	0.000	0.000	Ug2_741_743_L_0					
41 D	18.79	-6.8959E-03	100.9	32.40	100.9	43.52	UL-RL	4.4159E+04	-8.000	61.54
1.000	1.000	93.94	0.000	0.000	Ug2_741_743_L_0					
42 D	19.23	-6.1319E-03	103.3	33.09	103.3	44.55	UL-RL	4.4159E+04	-8.200	63.08
1.000	1.000	96.17	0.000	0.000	Ug2_741_743_L_0					
43 D	19.69	-5.4073E-03	105.8	33.81	105.8	45.58	UL-RL	4.4159E+04	-8.400	64.62
1.000	1.000	98.43	0.000	0.000	Ug2_741_743_L_0					
44 D	20.13	-4.7202E-03	108.2	34.51	108.2	46.60	UL-RL	4.4159E+04	-8.600	66.15
1.000	1.000	100.7	0.000	0.000	Ug2_741_743_L_0					
45 D	20.59	-4.0688E-03	110.8	35.24	110.8	47.63	UL-RL	4.4159E+04	-8.800	67.69
1.000	1.000	102.9	0.000	0.000	Ug2_741_743_L_0					
46 D	21.04	-3.4509E-03	113.3	35.97	113.3	48.66	UL-RL	4.4159E+04	-9.000	69.23
1.000	1.000	105.2	0.000	0.000	Ug2_741_743_L_0					
47 D	21.49	-2.8643E-03	115.7	36.68	115.7	49.69	UL-RL	4.4159E+04	-9.200	70.77
1.000	1.000	107.4	0.000	0.000	Ug2_741_743_L_0					
48 D	21.95	-2.3065E-03	118.2	37.42	118.2	50.72	UL-RL	4.4159E+04	-9.400	72.31
1.000	1.000	109.7	0.000	0.000	Ug2_741_743_L_0					
49 D	22.40	-1.7750E-03	120.7	38.17	120.7	51.75	UL-RL	4.4159E+04	-9.600	73.85
1.000	1.000	112.0	0.000	0.000	Ug2_741_743_L_0					
50 D	22.98	-1.2672E-03	123.2	39.52	123.2	52.77	UL-RL	4.4159E+04	-9.800	75.38
1.000	1.000	114.9	0.000	0.000	Ug2_741_743_L_0					
51 D	23.65	-7.8045E-04	125.7	41.33	125.7	53.80	UL-RL	4.4159E+04	-10.000	76.92
1.000	1.000	118.2	0.000	0.000	Ug2_741_743_L_0					
52 D	25.83	-3.1184E-04	128.1	50.67	128.1	55.77	UL-RL	4.4159E+04	-10.200	78.46
1.000	1.000	129.1	0.000	0.000	Ug2_741_743_L_0					
53 D	28.52	1.4139E-04	130.6	62.59	130.6	62.59	V-C	1.2732E+04	-10.400	80.00
1.000	1.000	142.6	0.000	0.000	Ug3_740_742_L_0					
54 D	29.92	5.8210E-04	133.1	68.05	133.1	68.05	V-C	1.2732E+04	-10.600	81.54
1.000	1.000	149.6	0.000	0.000	Ug3_740_742_L_0					
55 D	31.30	1.0129E-03	135.5	73.41	135.5	73.41	V-C	1.2732E+04	-10.800	83.08
1.000	1.000	156.5	0.000	0.000	Ug3_740_742_L_0					
56 D	32.66	1.4364E-03	138.0	78.68	138.0	78.68	V-C	1.2732E+04	-11.000	84.62
1.000	1.000	163.3	0.000	0.000	Ug3_740_742_L_0					
57 D	34.01	1.8545E-03	140.5	83.89	140.5	83.89	V-C	1.2732E+04	-11.200	86.15
1.000	1.000	170.0	0.000	0.000	Ug3_740_742_L_0					
58 D	35.35	2.2691E-03	143.0	89.06	143.0	89.06	V-C	1.2732E+04	-11.400	87.69
1.000	1.000	176.8	0.000	0.000	Ug3_740_742_L_0					
59 D	36.69	2.6818E-03	145.5	94.22	145.5	94.22	V-C	1.2732E+04	-11.600	89.23
1.000	1.000	183.5	0.000	0.000	Ug3_740_742_L_0					
60 D	38.03	3.0935E-03	147.9	99.37	147.9	99.37	V-C	1.2732E+04	-11.800	90.77
1.000	1.000	190.1	0.000	0.000	Ug3_740_742_L_0					
61 D	19.68	3.5049E-03	150.4	104.5	150.4	104.5	V-C	1.2732E+04	-12.000	92.31
1.000	1.000	196.8	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|                PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*                |
|                |
|                NewProject.BaseDesignSection_28.A1M1R1_1757    |
|                Exe Time :24 May 2018      18:17:33              |
+-----+
New Project
    
```

STRESS RESULTS FOR GROUP NO. 2

0_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 6.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * FACTOR	FORCE UFACTOR	DISPL-Y Peg	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P LAYER	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16 D	0.000	3.8335E-02	0.000	0.000	0.000	0.000	ACTIVE	0.000	-3.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
17 D	0.1841	3.6795E-02	3.900	0.9204	3.900	1.950	ACTIVE	0.000	-3.200	0.000	
1.000	1.000	0.9204	0.000	0.000	Ug2_741_743_L_0						
18 D	0.4381	3.5262E-02	7.800	2.191	7.800	3.900	UL-RL	2.2929E+04	-3.400	0.000	
1.000	1.000	2.191	0.000	0.000	Ug2_741_743_L_0						
19 D	0.8057	3.3737E-02	11.70	4.028	11.70	5.850	UL-RL	2.2929E+04	-3.600	0.000	
1.000	1.000	4.028	0.000	0.000	Ug2_741_743_L_0						
20 D	1.175	3.2223E-02	15.60	5.873	15.60	7.800	UL-RL	2.2929E+04	-3.800	0.000	
1.000	1.000	5.873	0.000	0.000	Ug2_741_743_L_0						
21 D	2.388	3.0720E-02	19.50	11.94	40.00	53.91	UL-RL	2.2929E+04	-4.000	0.000	
1.000	1.000	11.94	0.000	0.000	Ug2_741_743_L_0						
22 D	3.905	2.9232E-02	23.40	19.52	42.00	64.69	UL-RL	2.2929E+04	-4.200	0.000	
1.000	1.000	19.52	0.000	0.000	Ug2_741_743_L_0						
23 D	5.865	2.7760E-02	27.30	29.32	44.00	70.42	UL-RL	2.2929E+04	-4.400	0.000	
1.000	1.000	29.32	0.000	0.000	Ug2_741_743_L_0						
24 D	8.059	2.6308E-02	30.02	39.07	46.00	67.72	UL-RL	2.2929E+04	-4.600	1.231	
1.000	1.000	40.30	0.000	0.000	Ug2_741_743_L_0						
25 D	10.46	2.4878E-02	31.56	48.61	48.00	65.17	UL-RL	2.2929E+04	-4.800	3.692	
1.000	1.000	52.30	0.000	0.000	Ug2_741_743_L_0						
26 D	12.88	2.3472E-02	33.10	58.25	50.00	62.77	UL-RL	2.2929E+04	-5.000	6.154	
1.000	1.000	64.40	0.000	0.000	Ug2_741_743_L_0						
27 D	15.81	2.2095E-02	34.63	70.45	52.00	72.91	UL-RL	2.2929E+04	-5.200	8.615	
1.000	1.000	79.07	0.000	0.000	Ug2_741_743_L_0						
28 D	18.30	2.0748E-02	36.17	80.41	54.00	82.92	UL-RL	2.2929E+04	-5.400	11.08	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	91.49	0.000	0.000	Ug2_741_743_L_0					
29 D	20.79	1.9434E-02	37.71	90.40	56.00	92.95	UL-RL	2.2929E+04	-5.600	13.54
1.000	1.000	103.9	0.000	0.000	Ug2_741_743_L_0					
30 D	23.28	1.8156E-02	39.25	100.4	58.00	103.0	UL-RL	2.2929E+04	-5.800	16.00
1.000	1.000	116.4	0.000	0.000	Ug2_741_743_L_0					
31 D	25.77	1.6917E-02	40.79	110.4	60.00	113.0	UL-RL	2.2929E+04	-6.000	18.46
1.000	1.000	128.8	0.000	0.000	Ug2_741_743_L_0					
32 D	28.26	1.5718E-02	42.33	120.4	62.00	123.0	UL-RL	2.2929E+04	-6.200	20.92
1.000	1.000	141.3	0.000	0.000	Ug2_741_743_L_0					
33 D	30.44	1.4561E-02	43.87	128.8	64.00	131.5	UL-RL	2.2929E+04	-6.400	23.38
1.000	1.000	152.2	0.000	0.000	Ug2_741_743_L_0					
34 D	29.72	1.3447E-02	45.40	122.8	66.00	125.5	UL-RL	2.2929E+04	-6.600	25.85
1.000	1.000	148.6	0.000	0.000	Ug2_741_743_L_0					
35 D	29.06	1.2377E-02	46.94	117.0	68.00	119.8	UL-RL	2.2929E+04	-6.800	28.31
1.000	1.000	145.3	0.000	0.000	Ug2_741_743_L_0					
36 D	28.47	1.1353E-02	48.48	111.6	70.00	114.3	UL-RL	2.2929E+04	-7.000	30.77
1.000	1.000	142.3	0.000	0.000	Ug2_741_743_L_0					
37 D	27.93	1.0373E-02	50.02	106.4	72.00	109.2	UL-RL	2.2929E+04	-7.200	33.23
1.000	1.000	139.7	0.000	0.000	Ug2_741_743_L_0					
38 D	27.45	9.4386E-03	51.56	101.6	74.00	104.4	UL-RL	2.2929E+04	-7.400	35.69
1.000	1.000	137.3	0.000	0.000	Ug2_741_743_L_0					
39 D	27.04	8.5480E-03	53.10	97.02	76.00	99.88	UL-RL	2.2929E+04	-7.600	38.15
1.000	1.000	135.2	0.000	0.000	Ug2_741_743_L_0					
40 D	26.67	7.7008E-03	54.63	92.76	78.00	95.63	UL-RL	2.2929E+04	-7.800	40.62
1.000	1.000	133.4	0.000	0.000	Ug2_741_743_L_0					
41 D	26.37	6.8959E-03	56.17	88.77	80.00	91.66	UL-RL	2.2929E+04	-8.000	43.08
1.000	1.000	131.8	0.000	0.000	Ug2_741_743_L_0					
42 D	26.12	6.1319E-03	57.71	85.04	82.00	87.96	UL-RL	2.2929E+04	-8.200	45.54
1.000	1.000	130.6	0.000	0.000	Ug2_741_743_L_0					
43 D	25.91	5.4073E-03	59.25	81.57	84.00	84.52	UL-RL	2.2929E+04	-8.400	48.00
1.000	1.000	129.6	0.000	0.000	Ug2_741_743_L_0					
44 D	25.76	4.7202E-03	60.79	78.34	86.00	81.32	UL-RL	2.2929E+04	-8.600	50.46
1.000	1.000	128.8	0.000	0.000	Ug2_741_743_L_0					
45 D	25.65	4.0688E-03	62.33	75.34	88.00	78.35	UL-RL	2.2929E+04	-8.800	52.92
1.000	1.000	128.3	0.000	0.000	Ug2_741_743_L_0					
46 D	25.59	3.4509E-03	63.87	72.56	90.00	75.59	UL-RL	2.2929E+04	-9.000	55.38
1.000	1.000	127.9	0.000	0.000	Ug2_741_743_L_0					
47 D	25.56	2.8643E-03	65.40	69.97	92.00	73.04	UL-RL	2.2929E+04	-9.200	57.85
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
48 D	25.57	2.3065E-03	66.94	67.56	94.00	70.67	UL-RL	2.2929E+04	-9.400	60.31
1.000	1.000	127.9	0.000	0.000	Ug2_741_743_L_0					
49 D	25.62	1.7750E-03	68.48	65.32	96.00	68.47	UL-RL	2.2929E+04	-9.600	62.77
1.000	1.000	128.1	0.000	0.000	Ug2_741_743_L_0					
50 D	25.62	1.2672E-03	70.02	62.88	98.00	66.07	UL-RL	2.2929E+04	-9.800	65.23
1.000	1.000	128.1	0.000	0.000	Ug2_741_743_L_0					
51 D	25.60	7.8045E-04	71.56	60.32	100.00	63.57	UL-RL	2.2929E+04	-10.000	67.69
1.000	1.000	128.0	0.000	0.000	Ug2_741_743_L_0					
52 D	24.75	3.1184E-04	73.10	53.57	102.0	56.87	UL-RL	2.2929E+04	-10.200	70.15
1.000	1.000	123.7	0.000	0.000	Ug2_741_743_L_0					
53 D	23.46	-1.4139E-04	74.63	44.67	104.0	53.60	UL-RL	2.6507E+04	-10.400	72.62
1.000	1.000	117.3	0.000	0.000	Ug3_740_742_L_0					
54 D	22.33	-5.8210E-04	76.17	36.59	106.0	54.58	UL-RL	2.6507E+04	-10.600	75.08
1.000	1.000	111.7	0.000	0.000	Ug3_740_742_L_0					
55 D	21.25	-1.0129E-03	77.71	28.73	108.0	55.57	UL-RL	2.6507E+04	-10.800	77.54
1.000	1.000	106.3	0.000	0.000	Ug3_740_742_L_0					
56 D	20.95	-1.4364E-03	79.25	24.73	110.0	56.55	ACTIVE	0.000	-11.000	80.00
1.000	1.000	104.7	0.000	0.000	Ug3_740_742_L_0					
57 D	21.53	-1.8545E-03	80.79	25.21	112.0	57.54	ACTIVE	0.000	-11.200	82.46
1.000	1.000	107.7	0.000	0.000	Ug3_740_742_L_0					
58 D	22.12	-2.2691E-03	82.33	25.69	114.0	58.52	ACTIVE	0.000	-11.400	84.92
1.000	1.000	110.6	0.000	0.000	Ug3_740_742_L_0					
59 D	22.71	-2.6818E-03	83.87	26.17	116.0	59.51	ACTIVE	0.000	-11.600	87.38
1.000	1.000	113.6	0.000	0.000	Ug3_740_742_L_0					
60 D	23.30	-3.0935E-03	85.40	26.65	118.0	60.50	ACTIVE	0.000	-11.800	89.85
1.000	1.000	116.5	0.000	0.000	Ug3_740_742_L_0					
61 D	11.94	-3.5049E-03	86.94	27.13	120.0	61.48	ACTIVE	0.000	-12.000	92.31
1.000	1.000	119.4	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757  |
|          Exe Time :24 May 2018  18:17:33  |
+-----+
New Project
    
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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 6.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-5.42870E-10	5.42870E-10	-5.45644E-11	1.50546E-10
2	0.30769	-0.30769	-6.85137E-11	6.15385E-02
3	0.92308	-0.92308	-6.15385E-02	0.24615
4	1.8570	-1.8570	-0.24615	0.61756
5	3.1312	-3.1312	-0.61756	1.2438
6	4.7455	-4.7455	-1.2438	2.1929
7	6.7000	-6.7000	-2.1929	3.5329
8	8.9948	-8.9948	-3.5329	5.3318
9	11.630	-11.630	-5.3318	7.6578
10	14.605	-14.605	-7.6578	10.579
11	17.921	-17.921	-10.579	14.163
12	21.679	-21.679	-14.163	18.499
13	25.976	-25.976	-18.499	23.694
14	30.802	-30.802	-23.694	29.855
15	37.510	-37.510	-29.855	37.356
16	44.715	-44.715	-37.356	46.300
17	52.220	-52.220	-46.300	56.744
18	59.965	-59.965	-56.744	68.737
19	67.822	-67.822	-68.737	82.301
20	75.799	-75.799	-82.301	97.461
21	83.047	-83.047	-97.461	114.07
22	89.250	-89.250	-114.07	131.92
23	93.970	-93.970	-131.92	150.71
24	96.960	-96.960	-150.71	170.11
25	98.021	-98.021	-170.11	189.71
26	97.130	-97.130	-189.71	209.14
27	93.764	-93.764	-209.14	227.89
28	88.377	-88.377	-227.89	245.56
29	80.955	-80.955	-245.56	261.76
30	71.503	-71.503	-261.76	276.06
31	60.018	-60.018	-276.06	288.06
32	46.491	-46.491	-288.06	297.36
33	31.241	-31.241	-297.36	303.61
34	17.156	-17.156	-303.61	307.04
35	4.1819	-4.1819	-307.04	307.87
36	-7.7430	7.7430	-307.87	306.32
37	-18.686	18.686	-306.32	302.59
38	-28.700	28.700	-302.59	296.85
39	-37.850	37.850	-296.85	289.28
40	-46.188	46.188	-289.28	280.04
41	-53.769	53.769	-280.04	269.29
42	-60.652	60.652	-269.29	257.16
43	-66.881	66.881	-257.16	243.78
44	-72.509	72.509	-243.78	229.28
45	-77.576	77.576	-229.28	213.76
46	-82.125	82.125	-213.76	197.34
47	-86.198	86.198	-197.34	180.10
48	-89.826	89.826	-180.10	162.13
49	-93.041	93.041	-162.13	143.52
50	-95.682	95.682	-143.52	124.39
51	-97.635	97.635	-124.39	104.86
52	-96.555	96.555	-104.86	85.551
53	-91.494	91.494	-85.551	67.252
54	-83.910	83.910	-67.252	50.470
55	-73.866	73.866	-50.470	35.697
56	-62.153	62.153	-35.697	23.266
57	-49.678	49.678	-23.266	13.331
58	-36.448	36.448	-13.331	6.0413
59	-22.468	22.468	-6.0413	1.5478

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

60 -7.7386 7.7386 -1.5478 -1.51515E-11

ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4925E+06 RIMNOR=0.3589E+07
RENORM=0.9606E-16 REMNOR=0.2474E-18 RATIO =0.1397E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 98.02 RMMAX = 307.9
RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
RDT =0.4925E+06 RDR =0.3589E+07
RATIOT=0.1397E-10 RATIO= 0.000
MAX UN=0.3920E-08 IEQ= 17 NODE 9 DOF 1 Y-DISPL.F
MIN UN=-.4253E-08 IEQ= 19 NODE 10 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4925E+06 RIMNOR=0.3589E+07
RENORM=0.6643E-16 REMNOR=0.3095E-18 RATIO =0.1161E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 98.02 RMMAX = 307.9
RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
RDT =0.4925E+06 RDR =0.3589E+07
RATIOT=0.1161E-10 RATIO= 0.000
MAX UN=0.2940E-08 IEQ= 29 NODE 15 DOF 1 Y-DISPL.F
MIN UN=-.3306E-08 IEQ= 31 NODE 16 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4925E+06 RIMNOR=0.3589E+07
RENORM=0.8645E-16 REMNOR=0.2807E-18 RATIO =0.1325E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 98.02 RMMAX = 307.9
RTSMAL=0.1000E-03 RMSMAL=0.1000E-02
RDT =0.4925E+06 RDR =0.3589E+07
RATIOT=0.1325E-10 RATIO= 0.000
MAX UN=0.3351E-08 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
MIN UN=-.3577E-08 IEQ= 21 NODE 11 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|          NewProject.BaseDesignSection_28.A1M1R1_1757 |
|          Exe Time :24 May 2018          18:17:33 |
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New Project
SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 7 (AT TIME 7.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)
1	6.1718518E-02	-7.8140692E-03
2	6.0155704E-02	-7.8140692E-03
3	5.8592892E-02	-7.8140466E-03
4	5.7030091E-02	-7.8139341E-03
5	5.5467332E-02	-7.8136182E-03
6	5.3904668E-02	-7.8129375E-03
7	5.2342195E-02	-7.8116807E-03
8	5.0780052E-02	-7.8095867E-03
9	4.9218437E-02	-7.8063447E-03
10	4.7657615E-02	-7.8015942E-03
11	4.6097927E-02	-7.7949248E-03
12	4.4539803E-02	-7.7858763E-03
13	4.2983770E-02	-7.7739313E-03
14	4.1430463E-02	-7.7585006E-03
15	3.9880646E-02	-7.7389171E-03
16	3.8335229E-02	-7.7143370E-03
17	3.6795305E-02	-7.6837427E-03
18	3.5262197E-02	-7.6460583E-03
19	3.3737428E-02	-7.6001684E-03
20	3.2222753E-02	-7.5449317E-03
21	3.0720164E-02	-7.4791906E-03
22	2.9231859E-02	-7.4018307E-03
23	2.7760271E-02	-7.3118685E-03
24	2.6308005E-02	-7.2085052E-03
25	2.4877800E-02	-7.0911767E-03
26	2.3472485E-02	-6.9595867E-03
27	2.2094924E-02	-6.8137236E-03
28	2.0747933E-02	-6.6538973E-03
29	1.9434253E-02	-6.4807486E-03
30	1.8156460E-02	-6.2952146E-03
31	1.6916911E-02	-6.0985294E-03
32	1.5717695E-02	-5.8922255E-03
33	1.4560546E-02	-5.6781302E-03
34	1.3446822E-02	-5.4583495E-03
35	1.2377442E-02	-5.2350289E-03
36	1.1352914E-02	-5.0101476E-03
37	1.0373371E-02	-4.7855279E-03
38	9.4385794E-03	-4.5628402E-03
39	8.5480035E-03	-4.3436183E-03
40	7.7008076E-03	-4.1292641E-03
41	6.8958881E-03	-3.9210567E-03
42	6.1318974E-03	-3.7201605E-03
43	5.4072659E-03	-3.5276334E-03
44	4.7202222E-03	-3.3444344E-03
45	4.0688157E-03	-3.1714315E-03
46	3.4509211E-03	-3.0094054E-03
47	2.8642748E-03	-2.8590602E-03
48	2.3064762E-03	-2.7210267E-03
49	1.7750058E-03	-2.5958681E-03
50	1.2672398E-03	-2.4840855E-03
51	7.8045392E-04	-2.3861059E-03
52	3.1184326E-04	-2.3022641E-03
53	-1.4138824E-04	-2.2326314E-03
54	-5.8210324E-04	-2.1767493E-03
55	-1.0129433E-03	-2.1336966E-03
56	-1.4363512E-03	-2.1021841E-03
57	-1.8544802E-03	-2.0806204E-03
58	-2.2691447E-03	-2.0672362E-03
59	-2.6817946E-03	-2.0601515E-03
60	-3.0934926E-03	-2.0573760E-03
61	-3.5049129E-03	-2.0568100E-03

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757    |
|          Exe Time :24 May 2018      18:17:33           |
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New Project

STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 7.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-6.1719E-02	0.000	0.000	0.000	0.000	UL-RL	2.4005E+04	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3077	-6.0156E-02	2.463	0.000	2.463	1.341	UL-RL	2.4005E+04	-0.2000	1.538	
1.000	1.000	1.538	0.000	0.000	Ug1_2_8_L_0						
3 D	0.6154	-5.8593E-02	4.931	0.000	4.931	2.671	UL-RL	2.4005E+04	-0.4000	3.077	
1.000	1.000	3.077	0.000	0.000	Ug1_2_8_L_0						
4 D	0.9339	-5.7030E-02	7.410	5.4357E-02	7.410	3.978	UL-RL	2.4005E+04	-0.6000	4.615	
1.000	1.000	4.670	0.000	0.000	Ug1_2_8_L_0						
5 D	1.274	-5.5467E-02	9.903	0.2168	9.903	5.256	UL-RL	2.4005E+04	-0.8000	6.154	
1.000	1.000	6.371	0.000	0.000	Ug1_2_8_L_0						
6 D	1.614	-5.3905E-02	12.41	0.3793	12.41	6.501	UL-RL	2.4005E+04	-1.000	7.692	
1.000	1.000	8.072	0.000	0.000	Ug1_2_8_L_0						
7 D	1.955	-5.2342E-02	14.93	0.5419	14.93	7.714	UL-RL	2.4005E+04	-1.200	9.231	
1.000	1.000	9.773	0.000	0.000	Ug1_2_8_L_0						
8 D	2.295	-5.0780E-02	17.45	0.7047	17.45	8.897	UL-RL	2.4005E+04	-1.400	10.77	
1.000	1.000	11.47	0.000	0.000	Ug1_2_8_L_0						
9 D	2.635	-4.9218E-02	19.99	0.8677	19.99	10.05	UL-RL	2.4005E+04	-1.600	12.31	
1.000	1.000	13.18	0.000	0.000	Ug1_2_8_L_0						
10 D	2.975	-4.7658E-02	22.53	1.031	22.53	11.19	UL-RL	2.4005E+04	-1.800	13.85	
1.000	1.000	14.88	0.000	0.000	Ug1_2_8_L_0						
11 D	3.316	-4.6098E-02	25.07	1.194	25.07	12.30	UL-RL	2.4005E+04	-2.000	15.38	
1.000	1.000	16.58	0.000	0.000	Ug1_2_8_L_0						
12 D	3.758	-4.4540E-02	27.61	1.869	27.61	13.40	UL-RL	2.4005E+04	-2.200	16.92	
1.000	1.000	18.79	0.000	0.000	Ug1_2_8_L_0						
13 D	4.297	-4.2984E-02	30.21	3.023	30.21	14.48	UL-RL	2.4005E+04	-2.400	18.46	
1.000	1.000	21.48	0.000	0.000	Ug1_2_8_L_0						
14 D	4.825	-4.1430E-02	32.69	4.126	32.69	15.56	UL-RL	2.4005E+04	-2.600	20.00	
1.000	1.000	24.13	0.000	0.000	Ug1_2_8_L_0						
15 D	6.708	-3.9881E-02	35.37	12.00	35.37	16.62	UL-RL	4.4159E+04	-2.800	21.54	
1.000	1.000	33.54	0.000	0.000	Ug2_741_743_L_0						
16 D	7.206	-3.8335E-02	38.06	12.95	38.06	17.68	UL-RL	4.4159E+04	-3.000	23.08	
1.000	1.000	36.03	0.000	0.000	Ug2_741_743_L_0						
17 D	7.689	-3.6795E-02	40.48	13.83	40.48	18.73	UL-RL	4.4159E+04	-3.200	24.62	
1.000	1.000	38.44	0.000	0.000	Ug2_741_743_L_0						
18 D	8.183	-3.5262E-02	43.14	14.76	43.14	19.78	UL-RL	4.4159E+04	-3.400	26.15	
1.000	1.000	40.91	0.000	0.000	Ug2_741_743_L_0						
19 D	8.663	-3.3737E-02	45.57	15.62	45.57	20.83	UL-RL	4.4159E+04	-3.600	27.69	
1.000	1.000	43.31	0.000	0.000	Ug2_741_743_L_0						
20 D	9.151	-3.2223E-02	48.20	16.53	48.20	21.87	UL-RL	4.4159E+04	-3.800	29.23	
1.000	1.000	45.76	0.000	0.000	Ug2_741_743_L_0						
21 D	9.636	-3.0720E-02	50.82	17.41	50.82	22.91	UL-RL	4.4159E+04	-4.000	30.77	
1.000	1.000	48.18	0.000	0.000	Ug2_741_743_L_0						
22 D	10.11	-2.9232E-02	53.24	18.23	53.24	23.95	UL-RL	4.4159E+04	-4.200	32.31	
1.000	1.000	50.54	0.000	0.000	Ug2_741_743_L_0						
23 D	10.58	-2.7760E-02	55.84	19.08	55.84	24.98	UL-RL	4.4159E+04	-4.400	33.85	
1.000	1.000	52.92	0.000	0.000	Ug2_741_743_L_0						
24 D	11.05	-2.6308E-02	58.26	19.86	58.26	26.02	UL-RL	4.4159E+04	-4.600	35.38	
1.000	1.000	55.25	0.000	0.000	Ug2_741_743_L_0						
25 D	11.52	-2.4878E-02	60.85	20.68	60.85	27.05	UL-RL	4.4159E+04	-4.800	36.92	
1.000	1.000	57.61	0.000	0.000	Ug2_741_743_L_0						
26 D	11.99	-2.3472E-02	63.43	21.49	63.43	28.08	UL-RL	4.4159E+04	-5.000	38.46	
1.000	1.000	59.95	0.000	0.000	Ug2_741_743_L_0						
27 D	12.45	-2.2095E-02	65.85	22.24	65.85	29.11	UL-RL	4.4159E+04	-5.200	40.00	
1.000	1.000	62.24	0.000	0.000	Ug2_741_743_L_0						
28 D	12.91	-2.0748E-02	68.42	23.02	68.42	30.14	UL-RL	4.4159E+04	-5.400	41.54	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	64.56	0.000	0.000	Ug2_741_743_L_0					
29 D	13.37	-1.9434E-02	70.84	23.75	70.84	31.17	UL-RL	4.4159E+04	-5.600	43.08
1.000	1.000	66.83	0.000	0.000	Ug2_741_743_L_0					
30 D	13.83	-1.8156E-02	73.40	24.51	73.40	32.20	UL-RL	4.4159E+04	-5.800	44.62
1.000	1.000	69.13	0.000	0.000	Ug2_741_743_L_0					
31 D	14.28	-1.6917E-02	75.96	25.27	75.96	33.23	UL-RL	4.4159E+04	-6.000	46.15
1.000	1.000	71.42	0.000	0.000	Ug2_741_743_L_0					
32 D	14.73	-1.5718E-02	78.38	25.98	78.38	34.26	UL-RL	4.4159E+04	-6.200	47.69
1.000	1.000	73.67	0.000	0.000	Ug2_741_743_L_0					
33 D	15.19	-1.4561E-02	80.93	26.71	80.93	35.29	UL-RL	4.4159E+04	-6.400	49.23
1.000	1.000	75.95	0.000	0.000	Ug2_741_743_L_0					
34 D	15.64	-1.3447E-02	83.35	27.41	83.35	36.32	UL-RL	4.4159E+04	-6.600	50.77
1.000	1.000	78.18	0.000	0.000	Ug2_741_743_L_0					
35 D	16.09	-1.2377E-02	85.89	28.14	85.89	37.35	UL-RL	4.4159E+04	-6.800	52.31
1.000	1.000	80.45	0.000	0.000	Ug2_741_743_L_0					
36 D	16.54	-1.1353E-02	88.43	28.87	88.43	38.38	UL-RL	4.4159E+04	-7.000	53.85
1.000	1.000	82.71	0.000	0.000	Ug2_741_743_L_0					
37 D	16.99	-1.0373E-02	90.85	29.56	90.85	39.41	UL-RL	4.4159E+04	-7.200	55.38
1.000	1.000	84.94	0.000	0.000	Ug2_741_743_L_0					
38 D	17.44	-9.4386E-03	93.38	30.28	93.38	40.44	UL-RL	4.4159E+04	-7.400	56.92
1.000	1.000	87.20	0.000	0.000	Ug2_741_743_L_0					
39 D	17.89	-8.5480E-03	95.81	30.96	95.81	41.46	UL-RL	4.4159E+04	-7.600	58.46
1.000	1.000	89.43	0.000	0.000	Ug2_741_743_L_0					
40 D	18.34	-7.7008E-03	98.34	31.68	98.34	42.49	UL-RL	4.4159E+04	-7.800	60.00
1.000	1.000	91.68	0.000	0.000	Ug2_741_743_L_0					
41 D	18.79	-6.8959E-03	100.9	32.40	100.9	43.52	UL-RL	4.4159E+04	-8.000	61.54
1.000	1.000	93.94	0.000	0.000	Ug2_741_743_L_0					
42 D	19.23	-6.1319E-03	103.3	33.09	103.3	44.55	UL-RL	4.4159E+04	-8.200	63.08
1.000	1.000	96.17	0.000	0.000	Ug2_741_743_L_0					
43 D	19.69	-5.4073E-03	105.8	33.81	105.8	45.58	UL-RL	4.4159E+04	-8.400	64.62
1.000	1.000	98.43	0.000	0.000	Ug2_741_743_L_0					
44 D	20.13	-4.7202E-03	108.2	34.51	108.2	46.60	UL-RL	4.4159E+04	-8.600	66.15
1.000	1.000	100.7	0.000	0.000	Ug2_741_743_L_0					
45 D	20.59	-4.0688E-03	110.8	35.24	110.8	47.63	UL-RL	4.4159E+04	-8.800	67.69
1.000	1.000	102.9	0.000	0.000	Ug2_741_743_L_0					
46 D	21.04	-3.4509E-03	113.3	35.97	113.3	48.66	UL-RL	4.4159E+04	-9.000	69.23
1.000	1.000	105.2	0.000	0.000	Ug2_741_743_L_0					
47 D	21.49	-2.8643E-03	115.7	36.68	115.7	49.69	UL-RL	4.4159E+04	-9.200	70.77
1.000	1.000	107.4	0.000	0.000	Ug2_741_743_L_0					
48 D	21.95	-2.3065E-03	118.2	37.42	118.2	50.72	UL-RL	4.4159E+04	-9.400	72.31
1.000	1.000	109.7	0.000	0.000	Ug2_741_743_L_0					
49 D	22.40	-1.7750E-03	120.7	38.17	120.7	51.75	UL-RL	4.4159E+04	-9.600	73.85
1.000	1.000	112.0	0.000	0.000	Ug2_741_743_L_0					
50 D	22.98	-1.2672E-03	123.2	39.52	123.2	52.77	UL-RL	4.4159E+04	-9.800	75.38
1.000	1.000	114.9	0.000	0.000	Ug2_741_743_L_0					
51 D	23.65	-7.8045E-04	125.7	41.33	125.7	53.80	UL-RL	4.4159E+04	-10.000	76.92
1.000	1.000	118.2	0.000	0.000	Ug2_741_743_L_0					
52 D	25.83	-3.1184E-04	128.1	50.67	128.1	55.77	UL-RL	4.4159E+04	-10.200	78.46
1.000	1.000	129.1	0.000	0.000	Ug2_741_743_L_0					
53 D	28.52	1.4139E-04	130.6	62.59	130.6	62.59	UL-RL	3.8197E+04	-10.400	80.00
1.000	1.000	142.6	0.000	0.000	Ug3_740_742_L_0					
54 D	29.92	5.8210E-04	133.1	68.05	133.1	68.05	UL-RL	3.8197E+04	-10.600	81.54
1.000	1.000	149.6	0.000	0.000	Ug3_740_742_L_0					
55 D	31.30	1.0129E-03	135.5	73.41	135.5	73.41	UL-RL	3.8197E+04	-10.800	83.08
1.000	1.000	156.5	0.000	0.000	Ug3_740_742_L_0					
56 D	32.66	1.4364E-03	138.0	78.68	138.0	78.68	UL-RL	3.8197E+04	-11.000	84.62
1.000	1.000	163.3	0.000	0.000	Ug3_740_742_L_0					
57 D	34.01	1.8545E-03	140.5	83.89	140.5	83.89	UL-RL	3.8197E+04	-11.200	86.15
1.000	1.000	170.0	0.000	0.000	Ug3_740_742_L_0					
58 D	35.35	2.2691E-03	143.0	89.06	143.0	89.06	UL-RL	3.8197E+04	-11.400	87.69
1.000	1.000	176.8	0.000	0.000	Ug3_740_742_L_0					
59 D	36.69	2.6818E-03	145.5	94.22	145.5	94.22	UL-RL	3.8197E+04	-11.600	89.23
1.000	1.000	183.5	0.000	0.000	Ug3_740_742_L_0					
60 D	38.03	3.0935E-03	147.9	99.37	147.9	99.37	UL-RL	3.8197E+04	-11.800	90.77
1.000	1.000	190.1	0.000	0.000	Ug3_740_742_L_0					
61 D	19.68	3.5049E-03	150.4	104.5	150.4	104.5	UL-RL	3.8197E+04	-12.000	92.31
1.000	1.000	196.8	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.A1M1R1_1757          |
|          Exe Time :24 May 2018          18:17:33          |
+-----+
New Project

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STRESS RESULTS FOR GROUP NO. 2

0_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 7.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * FACTOR	FORCE UFACTOR	DISPL-Y Peg	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P LAYER	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16 D	0.000	3.8335E-02	0.000	0.000	0.000	0.000	UL-RL	2.2929E+04	-3.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
17 D	0.1841	3.6795E-02	3.900	0.9204	3.900	1.950	UL-RL	2.2929E+04	-3.200	0.000	
1.000	1.000	0.9204	0.000	0.000	Ug2_741_743_L_0						
18 D	0.4381	3.5262E-02	7.800	2.191	7.800	3.900	UL-RL	2.2929E+04	-3.400	0.000	
1.000	1.000	2.191	0.000	0.000	Ug2_741_743_L_0						
19 D	0.8057	3.3737E-02	11.70	4.028	11.70	5.850	UL-RL	2.2929E+04	-3.600	0.000	
1.000	1.000	4.028	0.000	0.000	Ug2_741_743_L_0						
20 D	1.175	3.2223E-02	15.60	5.873	15.60	7.800	UL-RL	2.2929E+04	-3.800	0.000	
1.000	1.000	5.873	0.000	0.000	Ug2_741_743_L_0						
21 D	2.388	3.0720E-02	19.50	11.94	40.00	53.91	UL-RL	2.2929E+04	-4.000	0.000	
1.000	1.000	11.94	0.000	0.000	Ug2_741_743_L_0						
22 D	3.905	2.9232E-02	23.40	19.52	42.00	64.69	UL-RL	2.2929E+04	-4.200	0.000	
1.000	1.000	19.52	0.000	0.000	Ug2_741_743_L_0						
23 D	5.865	2.7760E-02	27.30	29.32	44.00	70.42	UL-RL	2.2929E+04	-4.400	0.000	
1.000	1.000	29.32	0.000	0.000	Ug2_741_743_L_0						
24 D	8.059	2.6308E-02	30.02	39.07	46.00	67.72	UL-RL	2.2929E+04	-4.600	1.231	
1.000	1.000	40.30	0.000	0.000	Ug2_741_743_L_0						
25 D	10.46	2.4878E-02	31.56	48.61	48.00	65.17	UL-RL	2.2929E+04	-4.800	3.692	
1.000	1.000	52.30	0.000	0.000	Ug2_741_743_L_0						
26 D	12.88	2.3472E-02	33.10	58.25	50.00	62.77	UL-RL	2.2929E+04	-5.000	6.154	
1.000	1.000	64.40	0.000	0.000	Ug2_741_743_L_0						
27 D	15.81	2.2095E-02	34.63	70.45	52.00	72.91	UL-RL	2.2929E+04	-5.200	8.615	
1.000	1.000	79.07	0.000	0.000	Ug2_741_743_L_0						
28 D	18.30	2.0748E-02	36.17	80.41	54.00	82.92	UL-RL	2.2929E+04	-5.400	11.08	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	91.49	0.000	0.000	Ug2_741_743_L_0					
29 D	20.79	1.9434E-02	37.71	90.40	56.00	92.95	UL-RL	2.2929E+04	-5.600	13.54
1.000	1.000	103.9	0.000	0.000	Ug2_741_743_L_0					
30 D	23.28	1.8156E-02	39.25	100.4	58.00	103.0	UL-RL	2.2929E+04	-5.800	16.00
1.000	1.000	116.4	0.000	0.000	Ug2_741_743_L_0					
31 D	25.77	1.6917E-02	40.79	110.4	60.00	113.0	UL-RL	2.2929E+04	-6.000	18.46
1.000	1.000	128.8	0.000	0.000	Ug2_741_743_L_0					
32 D	28.26	1.5718E-02	42.33	120.4	62.00	123.0	UL-RL	2.2929E+04	-6.200	20.92
1.000	1.000	141.3	0.000	0.000	Ug2_741_743_L_0					
33 D	30.44	1.4561E-02	43.87	128.8	64.00	131.5	UL-RL	2.2929E+04	-6.400	23.38
1.000	1.000	152.2	0.000	0.000	Ug2_741_743_L_0					
34 D	29.72	1.3447E-02	45.40	122.8	66.00	125.5	UL-RL	2.2929E+04	-6.600	25.85
1.000	1.000	148.6	0.000	0.000	Ug2_741_743_L_0					
35 D	29.06	1.2377E-02	46.94	117.0	68.00	119.8	UL-RL	2.2929E+04	-6.800	28.31
1.000	1.000	145.3	0.000	0.000	Ug2_741_743_L_0					
36 D	28.47	1.1353E-02	48.48	111.6	70.00	114.3	UL-RL	2.2929E+04	-7.000	30.77
1.000	1.000	142.3	0.000	0.000	Ug2_741_743_L_0					
37 D	27.93	1.0373E-02	50.02	106.4	72.00	109.2	UL-RL	2.2929E+04	-7.200	33.23
1.000	1.000	139.7	0.000	0.000	Ug2_741_743_L_0					
38 D	27.45	9.4386E-03	51.56	101.6	74.00	104.4	UL-RL	2.2929E+04	-7.400	35.69
1.000	1.000	137.3	0.000	0.000	Ug2_741_743_L_0					
39 D	27.04	8.5480E-03	53.10	97.02	76.00	99.88	UL-RL	2.2929E+04	-7.600	38.15
1.000	1.000	135.2	0.000	0.000	Ug2_741_743_L_0					
40 D	26.67	7.7008E-03	54.63	92.76	78.00	95.63	UL-RL	2.2929E+04	-7.800	40.62
1.000	1.000	133.4	0.000	0.000	Ug2_741_743_L_0					
41 D	26.37	6.8959E-03	56.17	88.77	80.00	91.66	UL-RL	2.2929E+04	-8.000	43.08
1.000	1.000	131.8	0.000	0.000	Ug2_741_743_L_0					
42 D	26.12	6.1319E-03	57.71	85.04	82.00	87.96	UL-RL	2.2929E+04	-8.200	45.54
1.000	1.000	130.6	0.000	0.000	Ug2_741_743_L_0					
43 D	25.91	5.4073E-03	59.25	81.57	84.00	84.52	UL-RL	2.2929E+04	-8.400	48.00
1.000	1.000	129.6	0.000	0.000	Ug2_741_743_L_0					
44 D	25.76	4.7202E-03	60.79	78.34	86.00	81.32	UL-RL	2.2929E+04	-8.600	50.46
1.000	1.000	128.8	0.000	0.000	Ug2_741_743_L_0					
45 D	25.65	4.0688E-03	62.33	75.34	88.00	78.35	UL-RL	2.2929E+04	-8.800	52.92
1.000	1.000	128.3	0.000	0.000	Ug2_741_743_L_0					
46 D	25.59	3.4509E-03	63.87	72.56	90.00	75.59	UL-RL	2.2929E+04	-9.000	55.38
1.000	1.000	127.9	0.000	0.000	Ug2_741_743_L_0					
47 D	25.56	2.8643E-03	65.40	69.97	92.00	73.04	UL-RL	2.2929E+04	-9.200	57.85
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
48 D	25.57	2.3065E-03	66.94	67.56	94.00	70.67	UL-RL	2.2929E+04	-9.400	60.31
1.000	1.000	127.9	0.000	0.000	Ug2_741_743_L_0					
49 D	25.62	1.7750E-03	68.48	65.32	96.00	68.47	UL-RL	2.2929E+04	-9.600	62.77
1.000	1.000	128.1	0.000	0.000	Ug2_741_743_L_0					
50 D	25.62	1.2672E-03	70.02	62.88	98.00	66.07	UL-RL	2.2929E+04	-9.800	65.23
1.000	1.000	128.1	0.000	0.000	Ug2_741_743_L_0					
51 D	25.60	7.8045E-04	71.56	60.32	100.00	63.57	UL-RL	2.2929E+04	-10.000	67.69
1.000	1.000	128.0	0.000	0.000	Ug2_741_743_L_0					
52 D	24.75	3.1184E-04	73.10	53.57	102.0	56.87	UL-RL	2.2929E+04	-10.200	70.15
1.000	1.000	123.7	0.000	0.000	Ug2_741_743_L_0					
53 D	23.46	-1.4139E-04	74.63	44.67	104.0	53.60	UL-RL	2.6507E+04	-10.400	72.62
1.000	1.000	117.3	0.000	0.000	Ug3_740_742_L_0					
54 D	22.33	-5.8210E-04	76.17	36.59	106.0	54.58	UL-RL	2.6507E+04	-10.600	75.08
1.000	1.000	111.7	0.000	0.000	Ug3_740_742_L_0					
55 D	21.25	-1.0129E-03	77.71	28.73	108.0	55.57	UL-RL	2.6507E+04	-10.800	77.54
1.000	1.000	106.3	0.000	0.000	Ug3_740_742_L_0					
56 D	20.95	-1.4364E-03	79.25	24.73	110.0	56.55	UL-RL	2.6507E+04	-11.000	80.00
1.000	1.000	104.7	0.000	0.000	Ug3_740_742_L_0					
57 D	21.53	-1.8545E-03	80.79	25.21	112.0	57.54	UL-RL	2.6507E+04	-11.200	82.46
1.000	1.000	107.7	0.000	0.000	Ug3_740_742_L_0					
58 D	22.12	-2.2691E-03	82.33	25.69	114.0	58.52	UL-RL	2.6507E+04	-11.400	84.92
1.000	1.000	110.6	0.000	0.000	Ug3_740_742_L_0					
59 D	22.71	-2.6818E-03	83.87	26.17	116.0	59.51	UL-RL	2.6507E+04	-11.600	87.38
1.000	1.000	113.6	0.000	0.000	Ug3_740_742_L_0					
60 D	23.30	-3.0935E-03	85.40	26.65	118.0	60.50	UL-RL	2.6507E+04	-11.800	89.85
1.000	1.000	116.5	0.000	0.000	Ug3_740_742_L_0					
61 D	11.94	-3.5049E-03	86.94	27.13	120.0	61.48	UL-RL	2.6507E+04	-12.000	92.31
1.000	1.000	119.4	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.A1M1R1_1757  |
|          Exe Time :24 May 2018  18:17:33  |
+-----+
New Project
    
```

STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 7.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-6.85172E-10	6.85172E-10	-6.87945E-11	1.36316E-10
2	0.30769	-0.30769	-8.27439E-11	6.15385E-02
3	0.92308	-0.92308	-6.15385E-02	0.24615
4	1.8570	-1.8570	-0.24615	0.61756
5	3.1312	-3.1312	-0.61756	1.2438
6	4.7455	-4.7455	-1.2438	2.1929
7	6.7000	-6.7000	-2.1929	3.5329
8	8.9948	-8.9948	-3.5329	5.3318
9	11.630	-11.630	-5.3318	7.6578
10	14.605	-14.605	-7.6578	10.579
11	17.921	-17.921	-10.579	14.163
12	21.679	-21.679	-14.163	18.499
13	25.976	-25.976	-18.499	23.694
14	30.802	-30.802	-23.694	29.855
15	37.510	-37.510	-29.855	37.356
16	44.715	-44.715	-37.356	46.300
17	52.220	-52.220	-46.300	56.744
18	59.965	-59.965	-56.744	68.737
19	67.822	-67.822	-68.737	82.301
20	75.799	-75.799	-82.301	97.461
21	83.047	-83.047	-97.461	114.07
22	89.250	-89.250	-114.07	131.92
23	93.970	-93.970	-131.92	150.71
24	96.960	-96.960	-150.71	170.11
25	98.021	-98.021	-170.11	189.71
26	97.130	-97.130	-189.71	209.14
27	93.764	-93.764	-209.14	227.89
28	88.377	-88.377	-227.89	245.56
29	80.955	-80.955	-245.56	261.76
30	71.503	-71.503	-261.76	276.06
31	60.018	-60.018	-276.06	288.06
32	46.491	-46.491	-288.06	297.36
33	31.241	-31.241	-297.36	303.61
34	17.156	-17.156	-303.61	307.04
35	4.1819	-4.1819	-307.04	307.87
36	-7.7430	7.7430	-307.87	306.32
37	-18.686	18.686	-306.32	302.59
38	-28.700	28.700	-302.59	296.85
39	-37.850	37.850	-296.85	289.28
40	-46.188	46.188	-289.28	280.04
41	-53.769	53.769	-280.04	269.29
42	-60.652	60.652	-269.29	257.16
43	-66.881	66.881	-257.16	243.78
44	-72.509	72.509	-243.78	229.28
45	-77.576	77.576	-229.28	213.76
46	-82.125	82.125	-213.76	197.34
47	-86.198	86.198	-197.34	180.10
48	-89.826	89.826	-180.10	162.13
49	-93.041	93.041	-162.13	143.52
50	-95.682	95.682	-143.52	124.39
51	-97.635	97.635	-124.39	104.86
52	-96.555	96.555	-104.86	85.551
53	-91.494	91.494	-85.551	67.252
54	-83.910	83.910	-67.252	50.470
55	-73.866	73.866	-50.470	35.697
56	-62.153	62.153	-35.697	23.266
57	-49.678	49.678	-23.266	13.331
58	-36.448	36.448	-13.331	6.0413
59	-22.468	22.468	-6.0413	1.5478

60 -7.7386 7.7386 -1.5478 1.46110E-12

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*  |
|                                                                                               |
|                               NewProject.BaseDesignSection_28.A1M1R1_1757                      |
|                               Exe Time :24 May 2018      18:17:33                            |
+-----+
```

F I N A L I N C R E M E N T A L A N A L Y S I S

S U M M A R Y

STEP		NO. OF ITERATIONS
1	CONVERGENCE :YES	2
2	CONVERGENCE :YES	5
3	CONVERGENCE :YES	5
4	CONVERGENCE :YES	5
5	CONVERGENCE :YES	6
6	CONVERGENCE :YES	3
7	CONVERGENCE :YES	2

END OF PROCESS FOR PROBLEM

New Project

NONLINEAR SOLUTION CPU TIME 0.06 [sec]

DATABASE CREATION CPU TIME..... 0.23 [sec]

Design Assumption : A2+M2+R1 - File di Paratie - File di output (.out)

```
-----+-----  
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1    FULL VERSION  *Build date:Jul 11, 2017*  |  
|          |  
|          NewProject.BaseDesignSection_28.A2M2R1_1787  |  
|          Exe Time :24 May 2018          18:17:34      |  
|          |  
+-----+-----
```

```
*****  
*  
* PARATIE PLUS Non-Linear Spring Engine *  
*  
* AN ELASTOPLASTIC FINITE ELEMENT PROGRAM *  
* FOR FLEXIBLE EARTH-RETAINING STRUCTURES *  
*  
* Written by Ce.A.S. s.r.l. (ITALY) *  
* with the scientific supervision of *  
* Roberto Nova - full professor SOIL MECHANICS *  
* at Politecnico di Milano (ITALY) *  
*  
*****  
*  
* RELEASE  2017.1    *Build date:Jul 11, 2017* *  
*  
*  
* Ce.A.S.    S.R.L  CENTRO DI ANALISI STRUTTURALE *  
*          VIALE  GIUSTINIANO 10 *  
*          20129  M I L A N O (ITALIA) *  
* TEL.      +39 02 2020221  (+39 035 23 67 19) *  
* FAX       +39 02 29512533 (+39 035 42285 49) *  
* email     bruno.becci@ceas.it *  
* Web Page  www.ceas.it *  
*****
```

```
JOB : NewProject.BaseDesignSection_28.A2M2R1_1787  
STARTING  
ACCEPTED <FILE,GENW >  
ACCEPTED <FILE,PLOTTER,BINARY >  
ACCEPTED <SOLVE TOTAL STRESS >  
ACCEPTED <PARAM ITEMAX 40 >  
ACCEPTED <CONTROL HINGES 0 0.0001 0.001 >
```

```
*****  
*  
* WARNING : PORE PRESSURES ARE AUTOMATICALLY COMPUTED *  
* BY THE PROGRAM. *  
*****
```

```
PRELIMINARY OPERATIONS CPU TIME 0.00 [sec]
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|                                                                    |
|                               NewProject.BaseDesignSection_28.A2M2R1_1787   |
|                               Exe Time :24 May 2018      18:17:34   |
+-----+
```

INPUT FILE HAS BEEN GENERATED BY WALGEN PROGRAM

New Project

```
NO. OF NODAL POINTS (NUMNP) ..... 61
NO. OF COORDINATES (NCOORD)..... 2
NO. OF NODE DOFS (NDOF)..... 2
NO. OF EQUATIONS (NEQ)..... 122
NO. OF CONSTRAINTS CARDS (NVINC)..... 0
NO. OF ELEMENT GROUPS (NEG)..... 3
NO. OF SOLUTION STEPS (NSTE)..... 7
NO. OF ELEMENT SETS ATTACHED TO SLAVE NODES ... 0
NO. OF RECORD FROM WALGEN ..... 132
NO. OF LONG NAMES (LASTNAME) ..... 22
LENGTH UNIT CHOICE ..... 3 (M )
FORCE UNIT CHOICE ..... 3 (KN )
MAX PORE PRESSURE TABLE LENGTH..... 1
NO. OF ELEMENT GROUPS REQUIRING ADD. SLIP DOF . 0
```

```
IDOFA (01) = 2 Y-DISPL.F
IDOFA (02) = 4 X-ROT. F
```

RELEVANT ITEMS UNITS

```
STRESSES                kPa
Y-DISPLACEMENTS        m
ROTATIONS                RADIANS
BEAM AND SLAB MOMENTS   kN*m/m
BEAM SHEAR FORCES       kN/m
ANCHOR FORCES            kN/m
AXIAL FORCES IN TRUSSES kN/m
AXIAL FORCES SPRINGS    kN/m
Y-REACTIONS              kN/m
X-MOMENT REACTIONS      kN*m/m
ETC.
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|                                                                    |
|                                                                    |
|          NewProject.BaseDesignSection_28.A2M2R1_1787   |
|          Exe Time :24 May 2018           18:17:34       |
+-----+

P R E P R O C E S S O R   D A T A

N O .   O F   C O M M A N D S   132

1 : UNIT m kN
2 : TITLE New Project
3 : DELTA 0.2
4 : option param itemax 40
5 : option control hinges 0 0.0001 0.001
6 : WALL LeftWall_32 0 -12 0 1
7 : SOIL 0_L LeftWall_32 -12 0 1 0
8 : SOIL 0_R LeftWall_32 -12 0 2 180
9 : LDATA Ug1_2_8_L_0 0 LeftWall_32
10 : ATREST 0.5 0.5 1
11 : WEIGHT 19 10 10
12 : PERMEABILITY 0.0001
13 : RESISTANCE 8 26
14 : YOUNG 2E+04 6E+04
15 : ENDL
16 : LDATA Ug2_741_743_L_0 -2.7 LeftWall_32
17 : ATREST 0.5 0.5 1
18 : WEIGHT 19.5 10 10
19 : PERMEABILITY 0.0001
20 : RESISTANCE 0 36
21 : YOUNG 3E+04 9E+04
22 : ENDL
23 : LDATA Ug3_740_742_L_0 -10.3 LeftWall_32
24 : ATREST 0.5 0.5 1
25 : WEIGHT 19 10 10
26 : PERMEABILITY 0.0001
27 : RESISTANCE 0 29
28 : YOUNG 3E+04 9E+04
29 : ENDL
30 : MATERIAL S275_113 2.1E+08
31 : BEAM WallElement_33 LeftWall_32 -12 0 S275_113 0.25 00 00 0
32 : STRIP LeftWall_32 1 7 2 33 0 5 45
33 : STEP Stage1_31
34 : CHANGE Ug1_2_8_L_0 U-FRICT=21.32 LeftWall_32
35 : CHANGE Ug1_2_8_L_0 D-FRICT=21.32 LeftWall_32
36 : CHANGE Ug1_2_8_L_0 U-KA=0.467 LeftWall_32
37 : CHANGE Ug1_2_8_L_0 U-KP=2.649 LeftWall_32
38 : CHANGE Ug1_2_8_L_0 D-KA=0.467 LeftWall_32
39 : CHANGE Ug1_2_8_L_0 D-KP=2.649 LeftWall_32
40 : CHANGE Ug2_741_743_L_0 U-FRICT=30.17 LeftWall_32
41 : CHANGE Ug2_741_743_L_0 D-FRICT=30.17 LeftWall_32
42 : CHANGE Ug2_741_743_L_0 U-KA=0.331 LeftWall_32
43 : CHANGE Ug2_741_743_L_0 U-KP=4.331 LeftWall_32
44 : CHANGE Ug2_741_743_L_0 D-KA=0.331 LeftWall_32
45 : CHANGE Ug2_741_743_L_0 D-KP=4.331 LeftWall_32
46 : CHANGE Ug3_740_742_L_0 U-FRICT=23.91 LeftWall_32
47 : CHANGE Ug3_740_742_L_0 D-FRICT=23.91 LeftWall_32
48 : CHANGE Ug3_740_742_L_0 U-KA=0.423 LeftWall_32
49 : CHANGE Ug3_740_742_L_0 U-KP=3.038 LeftWall_32
50 : CHANGE Ug3_740_742_L_0 D-KA=0.423 LeftWall_32
51 : CHANGE Ug3_740_742_L_0 D-KP=3.038 LeftWall_32
52 : CHANGE Ug1_2_8_L_0 U-COHE=6.4 LeftWall_32
53 : CHANGE Ug1_2_8_L_0 D-COHE=6.4 LeftWall_32
54 : CHANGE Ug2_741_743_L_0 U-COHE=0 LeftWall_32
55 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
56 : CHANGE Ug3_740_742_L_0 U-COHE=0 LeftWall_32
57 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
58 : SETWALL LeftWall_32
59 : GEOM 0 0
60 : WATER 0 0 -12 0 0
61 : ADD WallElement_33
62 : ENDSTEP
63 : STEP Stage2_158
64 : CHANGE Ug1_2_8_L_0 D-FRICT=21.32 LeftWall_32
65 : CHANGE Ug2_741_743_L_0 D-FRICT=30.17 LeftWall_32
66 : CHANGE Ug3_740_742_L_0 D-FRICT=23.91 LeftWall_32
67 : CHANGE Ug1_2_8_L_0 D-COHE=6.4 LeftWall_32
68 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
69 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
70 : SETWALL LeftWall_32
71 : GEOM 0 -1
72 : WATER 0 1 -12 0 0
73 : ENDSTEP
74 : STEP Stage3_255
75 : CHANGE Ug1_2_8_L_0 D-FRICT=21.32 LeftWall_32
76 : CHANGE Ug2_741_743_L_0 D-FRICT=30.17 LeftWall_32
77 : CHANGE Ug3_740_742_L_0 D-FRICT=23.91 LeftWall_32
78 : CHANGE Ug1_2_8_L_0 D-COHE=6.4 LeftWall_32
79 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
80 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
81 : SETWALL LeftWall_32
82 : GEOM 0 -2
83 : WATER 0 2 -12 0 0
84 : ENDSTEP
85 : STEP Stage4_352
86 : CHANGE Ug1_2_8_L_0 D-FRICT=21.32 LeftWall_32
87 : CHANGE Ug2_741_743_L_0 D-FRICT=30.17 LeftWall_32
88 : CHANGE Ug3_740_742_L_0 D-FRICT=23.91 LeftWall_32
89 : CHANGE Ug1_2_8_L_0 D-COHE=6.4 LeftWall_32
90 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
91 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
92 : SETWALL LeftWall_32
93 : GEOM 0 -3
94 : WATER 0 3 -12 0 0
95 : ENDSTEP
96 : STEP Stage5_449
97 : CHANGE Ug1_2_8_L_0 D-FRICT=21.32 LeftWall_32
98 : CHANGE Ug2_741_743_L_0 D-FRICT=30.17 LeftWall_32
99 : CHANGE Ug3_740_742_L_0 D-FRICT=23.91 LeftWall_32
100 : CHANGE Ug1_2_8_L_0 D-COHE=6.4 LeftWall_32
101 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
102 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
103 : SETWALL LeftWall_32
104 : GEOM 0 -4
105 : WATER 0 4 -12 0 0
106 : ENDSTEP
107 : STEP Stage6_546
108 : CHANGE Ug1_2_8_L_0 D-FRICT=21.32 LeftWall_32
109 : CHANGE Ug2_741_743_L_0 D-FRICT=30.17 LeftWall_32
110 : CHANGE Ug2_741_743_L_0 D-KA=0.298 LeftWall_32
111 : CHANGE Ug2_741_743_L_0 D-KP=3.016 LeftWall_32
112 : CHANGE Ug3_740_742_L_0 D-FRICT=23.91 LeftWall_32
113 : CHANGE Ug3_740_742_L_0 D-KA=0.377 LeftWall_32
114 : CHANGE Ug3_740_742_L_0 D-KP=2.219 LeftWall_32
115 : CHANGE Ug1_2_8_L_0 D-COHE=6.4 LeftWall_32
116 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
117 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
118 : SETWALL LeftWall_32
119 : GEOM 0 -3
120 : WATER 0 4.5 -12 0 0
121 : ENDSTEP
122 : STEP Stage7_643
123 : CHANGE Ug1_2_8_L_0 D-FRICT=21.32 LeftWall_32
124 : CHANGE Ug2_741_743_L_0 D-FRICT=30.17 LeftWall_32
125 : CHANGE Ug3_740_742_L_0 D-FRICT=23.91 LeftWall_32
126 : CHANGE Ug1_2_8_L_0 D-COHE=6.4 LeftWall_32
127 : CHANGE Ug2_741_743_L_0 D-COHE=0 LeftWall_32
128 : CHANGE Ug3_740_742_L_0 D-COHE=0 LeftWall_32
129 : SETWALL LeftWall_32
130 : GEOM 0 -3
131 : WATER 0 4.5 -12 0 0
132 : ENDSTEP
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|          NewProject.BaseDesignSection_28.A2M2R1_1787 |
|          Exe Time :24 May 2018           18:17:34 |
+-----+

```

N O D A L P O I N T D A T A

```

+-----+
| NODE      Y-COORD      Z-COORD / NODE      Y-COORD      Z-COORD / NODE      Y-COORD      Z-COORD / NODE      Y-COORD      Z-COORD / |
| 1 0.0000      0.0000 / 2 0.0000     -0.20000 / 3 0.0000     -0.40000 / 4 0.0000     -0.60000 / |
| 5 0.0000     -0.80000 / 6 0.0000     -1.0000 / 7 0.0000     -1.2000 / 8 0.0000     -1.4000 / |
| 9 0.0000     -1.6000 / 10 0.0000    -1.8000 / 11 0.0000    -2.0000 / 12 0.0000    -2.2000 / |
| 13 0.0000    -2.4000 / 14 0.0000    -2.6000 / 15 0.0000    -2.8000 / 16 0.0000    -3.0000 / |
| 17 0.0000    -3.2000 / 18 0.0000    -3.4000 / 19 0.0000    -3.6000 / 20 0.0000    -3.8000 / |
| 21 0.0000    -4.0000 / 22 0.0000    -4.2000 / 23 0.0000    -4.4000 / 24 0.0000    -4.6000 / |
| 25 0.0000    -4.8000 / 26 0.0000    -5.0000 / 27 0.0000    -5.2000 / 28 0.0000    -5.4000 / |
| 29 0.0000    -5.6000 / 30 0.0000    -5.8000 / 31 0.0000    -6.0000 / 32 0.0000    -6.2000 / |
| 33 0.0000    -6.4000 / 34 0.0000    -6.6000 / 35 0.0000    -6.8000 / 36 0.0000    -7.0000 / |
| 37 0.0000    -7.2000 / 38 0.0000    -7.4000 / 39 0.0000    -7.6000 / 40 0.0000    -7.8000 / |
| 41 0.0000    -8.0000 / 42 0.0000    -8.2000 / 43 0.0000    -8.4000 / 44 0.0000    -8.6000 / |
| 45 0.0000    -8.8000 / 46 0.0000    -9.0000 / 47 0.0000    -9.2000 / 48 0.0000    -9.4000 / |
| 49 0.0000    -9.6000 / 50 0.0000    -9.8000 / 51 0.0000    -10.000 / 52 0.0000    -10.200 / |
| 53 0.0000    -10.400 / 54 0.0000    -10.600 / 55 0.0000    -10.800 / 56 0.0000    -11.000 / |
| 57 0.0000    -11.200 / 58 0.0000    -11.400 / 59 0.0000    -11.600 / 60 0.0000    -11.800 / |
| 61 0.0000    -12.000 / |
+-----+

```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|          NewProject.BaseDesignSection_28.A2M2R1_1787 |
|          Exe Time :24 May 2018           18:17:34 |
+-----+

```

ELEMENT GROUP NO. 1

```

0_L
 5 61 0 1 0 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0

```

```

.....2D PLASTIC SOIL .....
.....

```

element group behaviour throughout stage analysis

```

stage  status
-----

```

```

1  active
2  active
3  active
4  active
5  active
6  active
7  active

```

material set no. 1

```

prop( 1) angle           0.00000
prop( 2) layer as foreseen 1.00000

```

material set no. 2

```

prop( 1) angle           0.00000
prop( 2) layer as foreseen 2.00000

```

material set no. 3

```

prop( 1) angle           0.00000
prop( 2) layer as foreseen 3.00000

```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	1.000
2	2	1	0.2000	0.000	0.000	0.000	1.000
3	3	1	0.2000	0.000	0.000	0.000	1.000
4	4	1	0.2000	0.000	0.000	0.000	1.000
5	5	1	0.2000	0.000	0.000	0.000	1.000
6	6	1	0.2000	0.000	0.000	0.000	1.000
7	7	1	0.2000	0.000	0.000	0.000	1.000
8	8	1	0.2000	0.000	0.000	0.000	1.000
9	9	1	0.2000	0.000	0.000	0.000	1.000
10	10	1	0.2000	0.000	0.000	0.000	1.000
11	11	1	0.2000	0.000	0.000	0.000	1.000
12	12	1	0.2000	0.000	0.000	0.000	1.000
13	13	1	0.2000	0.000	0.000	0.000	1.000
14	14	1	0.2000	0.000	0.000	0.000	1.000
15	15	2	0.2000	0.000	0.000	0.000	1.000
16	16	2	0.2000	0.000	0.000	0.000	1.000
17	17	2	0.2000	0.000	0.000	0.000	1.000
18	18	2	0.2000	0.000	0.000	0.000	1.000
19	19	2	0.2000	0.000	0.000	0.000	1.000
20	20	2	0.2000	0.000	0.000	0.000	1.000
21	21	2	0.2000	0.000	0.000	0.000	1.000
22	22	2	0.2000	0.000	0.000	0.000	1.000
23	23	2	0.2000	0.000	0.000	0.000	1.000
24	24	2	0.2000	0.000	0.000	0.000	1.000
25	25	2	0.2000	0.000	0.000	0.000	1.000
26	26	2	0.2000	0.000	0.000	0.000	1.000
27	27	2	0.2000	0.000	0.000	0.000	1.000
28	28	2	0.2000	0.000	0.000	0.000	1.000
29	29	2	0.2000	0.000	0.000	0.000	1.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

30	30	2	0.2000	0.000	0.000	0.000	1.000
31	31	2	0.2000	0.000	0.000	0.000	1.000
32	32	2	0.2000	0.000	0.000	0.000	1.000
33	33	2	0.2000	0.000	0.000	0.000	1.000
34	34	2	0.2000	0.000	0.000	0.000	1.000
35	35	2	0.2000	0.000	0.000	0.000	1.000
36	36	2	0.2000	0.000	0.000	0.000	1.000
37	37	2	0.2000	0.000	0.000	0.000	1.000
38	38	2	0.2000	0.000	0.000	0.000	1.000
39	39	2	0.2000	0.000	0.000	0.000	1.000
40	40	2	0.2000	0.000	0.000	0.000	1.000
41	41	2	0.2000	0.000	0.000	0.000	1.000
42	42	2	0.2000	0.000	0.000	0.000	1.000
43	43	2	0.2000	0.000	0.000	0.000	1.000
44	44	2	0.2000	0.000	0.000	0.000	1.000
45	45	2	0.2000	0.000	0.000	0.000	1.000
46	46	2	0.2000	0.000	0.000	0.000	1.000
47	47	2	0.2000	0.000	0.000	0.000	1.000
48	48	2	0.2000	0.000	0.000	0.000	1.000
49	49	2	0.2000	0.000	0.000	0.000	1.000
50	50	2	0.2000	0.000	0.000	0.000	1.000
51	51	2	0.2000	0.000	0.000	0.000	1.000
52	52	2	0.2000	0.000	0.000	0.000	1.000
53	53	3	0.2000	0.000	0.000	0.000	1.000
54	54	3	0.2000	0.000	0.000	0.000	1.000
55	55	3	0.2000	0.000	0.000	0.000	1.000
56	56	3	0.2000	0.000	0.000	0.000	1.000
57	57	3	0.2000	0.000	0.000	0.000	1.000
58	58	3	0.2000	0.000	0.000	0.000	1.000
59	59	3	0.2000	0.000	0.000	0.000	1.000
60	60	3	0.2000	0.000	0.000	0.000	1.000
61	61	3	0.1000	0.000	0.000	0.000	1.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|          NewProject.BaseDesignSection_28.A2M2R1_1787 |
|          Exe Time :24 May 2018           18:17:34 |
+-----+

```

ELEMENT GROUP NO. 2

```

0_R
 5 61 0 1 0 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0

```

```

.....2D PLASTIC SOIL .....
.....

```

element group behaviour throughout stage analysis

```

stage  status
-----

```

```

1  active
2  active
3  active
4  active
5  active
6  active
7  active

```

material set no. 1

```

prop( 1) angle           180.000
prop( 2) layer as foreseen 1.00000

```

material set no. 2

```

prop( 1) angle           180.000
prop( 2) layer as foreseen 2.00000

```

material set no. 3

```

prop( 1) angle           180.000
prop( 2) layer as foreseen 3.00000

```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	2.000
2	2	1	0.2000	0.000	0.000	0.000	2.000
3	3	1	0.2000	0.000	0.000	0.000	2.000
4	4	1	0.2000	0.000	0.000	0.000	2.000
5	5	1	0.2000	0.000	0.000	0.000	2.000
6	6	1	0.2000	0.000	0.000	0.000	2.000
7	7	1	0.2000	0.000	0.000	0.000	2.000
8	8	1	0.2000	0.000	0.000	0.000	2.000
9	9	1	0.2000	0.000	0.000	0.000	2.000
10	10	1	0.2000	0.000	0.000	0.000	2.000
11	11	1	0.2000	0.000	0.000	0.000	2.000
12	12	1	0.2000	0.000	0.000	0.000	2.000
13	13	1	0.2000	0.000	0.000	0.000	2.000
14	14	1	0.2000	0.000	0.000	0.000	2.000
15	15	2	0.2000	0.000	0.000	0.000	2.000
16	16	2	0.2000	0.000	0.000	0.000	2.000
17	17	2	0.2000	0.000	0.000	0.000	2.000
18	18	2	0.2000	0.000	0.000	0.000	2.000
19	19	2	0.2000	0.000	0.000	0.000	2.000
20	20	2	0.2000	0.000	0.000	0.000	2.000
21	21	2	0.2000	0.000	0.000	0.000	2.000
22	22	2	0.2000	0.000	0.000	0.000	2.000
23	23	2	0.2000	0.000	0.000	0.000	2.000
24	24	2	0.2000	0.000	0.000	0.000	2.000
25	25	2	0.2000	0.000	0.000	0.000	2.000
26	26	2	0.2000	0.000	0.000	0.000	2.000
27	27	2	0.2000	0.000	0.000	0.000	2.000
28	28	2	0.2000	0.000	0.000	0.000	2.000
29	29	2	0.2000	0.000	0.000	0.000	2.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

30	30	2	0.2000	0.000	0.000	0.000	2.000
31	31	2	0.2000	0.000	0.000	0.000	2.000
32	32	2	0.2000	0.000	0.000	0.000	2.000
33	33	2	0.2000	0.000	0.000	0.000	2.000
34	34	2	0.2000	0.000	0.000	0.000	2.000
35	35	2	0.2000	0.000	0.000	0.000	2.000
36	36	2	0.2000	0.000	0.000	0.000	2.000
37	37	2	0.2000	0.000	0.000	0.000	2.000
38	38	2	0.2000	0.000	0.000	0.000	2.000
39	39	2	0.2000	0.000	0.000	0.000	2.000
40	40	2	0.2000	0.000	0.000	0.000	2.000
41	41	2	0.2000	0.000	0.000	0.000	2.000
42	42	2	0.2000	0.000	0.000	0.000	2.000
43	43	2	0.2000	0.000	0.000	0.000	2.000
44	44	2	0.2000	0.000	0.000	0.000	2.000
45	45	2	0.2000	0.000	0.000	0.000	2.000
46	46	2	0.2000	0.000	0.000	0.000	2.000
47	47	2	0.2000	0.000	0.000	0.000	2.000
48	48	2	0.2000	0.000	0.000	0.000	2.000
49	49	2	0.2000	0.000	0.000	0.000	2.000
50	50	2	0.2000	0.000	0.000	0.000	2.000
51	51	2	0.2000	0.000	0.000	0.000	2.000
52	52	2	0.2000	0.000	0.000	0.000	2.000
53	53	3	0.2000	0.000	0.000	0.000	2.000
54	54	3	0.2000	0.000	0.000	0.000	2.000
55	55	3	0.2000	0.000	0.000	0.000	2.000
56	56	3	0.2000	0.000	0.000	0.000	2.000
57	57	3	0.2000	0.000	0.000	0.000	2.000
58	58	3	0.2000	0.000	0.000	0.000	2.000
59	59	3	0.2000	0.000	0.000	0.000	2.000
60	60	3	0.2000	0.000	0.000	0.000	2.000
61	61	3	0.1000	0.000	0.000	0.000	2.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```

+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.A2M2R1_1787  |
|          Exe Time :24 May 2018  18:17:34  |
+-----+
ELEMENT GROUP NO.  3

WallElement_33      :
  2 60  0  1  0  0  0  0  0  0  0  0  0  0  0  1  0  0  1  0
.....
.....2D WALL ELEMENT.....
.....

element group behaviour throughout stage analysis

stage  status
-----
  1  active
  2  active
  3  active
  4  active
  5  active
  6  active
  7  active

material set no.  1

prop( 1) young modulus      0.210000E+09
prop( 2) modification time  0.00000
prop( 3) new young modulus  0.00000
prop( 4) poisson ratio      0.00000
prop( 5) future .....      0.00000

no. of step variable items:  1
step  inertia multiplier
-----
  1  1.000
  2  1.000
  3  1.000
  4  1.000
  5  1.000
  6  1.000
  7  1.000

element data

  e1  na  nb  mat  erc1  erc2  thick  by-i  by-j
-----
  1  1  2  1  0.000  0.000  0.2500  0.000  0.000
  2  2  3  1  0.000  0.000  0.2500  0.000  0.000
  3  3  4  1  0.000  0.000  0.2500  0.000  0.000
  4  4  5  1  0.000  0.000  0.2500  0.000  0.000
  5  5  6  1  0.000  0.000  0.2500  0.000  0.000
  6  6  7  1  0.000  0.000  0.2500  0.000  0.000
  7  7  8  1  0.000  0.000  0.2500  0.000  0.000
  8  8  9  1  0.000  0.000  0.2500  0.000  0.000
  9  9 10  1  0.000  0.000  0.2500  0.000  0.000
 10 10 11  1  0.000  0.000  0.2500  0.000  0.000
 11 11 12  1  0.000  0.000  0.2500  0.000  0.000
 12 12 13  1  0.000  0.000  0.2500  0.000  0.000
 13 13 14  1  0.000  0.000  0.2500  0.000  0.000
 14 14 15  1  0.000  0.000  0.2500  0.000  0.000
 15 15 16  1  0.000  0.000  0.2500  0.000  0.000
 16 16 17  1  0.000  0.000  0.2500  0.000  0.000
 17 17 18  1  0.000  0.000  0.2500  0.000  0.000
 18 18 19  1  0.000  0.000  0.2500  0.000  0.000
 19 19 20  1  0.000  0.000  0.2500  0.000  0.000
 20 20 21  1  0.000  0.000  0.2500  0.000  0.000
 21 21 22  1  0.000  0.000  0.2500  0.000  0.000
 22 22 23  1  0.000  0.000  0.2500  0.000  0.000
 23 23 24  1  0.000  0.000  0.2500  0.000  0.000
 24 24 25  1  0.000  0.000  0.2500  0.000  0.000
 25 25 26  1  0.000  0.000  0.2500  0.000  0.000
 26 26 27  1  0.000  0.000  0.2500  0.000  0.000
 27 27 28  1  0.000  0.000  0.2500  0.000  0.000
 28 28 29  1  0.000  0.000  0.2500  0.000  0.000

```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

29	29	30	1	0.000	0.000	0.2500	0.000	0.000
30	30	31	1	0.000	0.000	0.2500	0.000	0.000
31	31	32	1	0.000	0.000	0.2500	0.000	0.000
32	32	33	1	0.000	0.000	0.2500	0.000	0.000
33	33	34	1	0.000	0.000	0.2500	0.000	0.000
34	34	35	1	0.000	0.000	0.2500	0.000	0.000
35	35	36	1	0.000	0.000	0.2500	0.000	0.000
36	36	37	1	0.000	0.000	0.2500	0.000	0.000
37	37	38	1	0.000	0.000	0.2500	0.000	0.000
38	38	39	1	0.000	0.000	0.2500	0.000	0.000
39	39	40	1	0.000	0.000	0.2500	0.000	0.000
40	40	41	1	0.000	0.000	0.2500	0.000	0.000
41	41	42	1	0.000	0.000	0.2500	0.000	0.000
42	42	43	1	0.000	0.000	0.2500	0.000	0.000
43	43	44	1	0.000	0.000	0.2500	0.000	0.000
44	44	45	1	0.000	0.000	0.2500	0.000	0.000
45	45	46	1	0.000	0.000	0.2500	0.000	0.000
46	46	47	1	0.000	0.000	0.2500	0.000	0.000
47	47	48	1	0.000	0.000	0.2500	0.000	0.000
48	48	49	1	0.000	0.000	0.2500	0.000	0.000
49	49	50	1	0.000	0.000	0.2500	0.000	0.000
50	50	51	1	0.000	0.000	0.2500	0.000	0.000
51	51	52	1	0.000	0.000	0.2500	0.000	0.000
52	52	53	1	0.000	0.000	0.2500	0.000	0.000
53	53	54	1	0.000	0.000	0.2500	0.000	0.000
54	54	55	1	0.000	0.000	0.2500	0.000	0.000
55	55	56	1	0.000	0.000	0.2500	0.000	0.000
56	56	57	1	0.000	0.000	0.2500	0.000	0.000
57	57	58	1	0.000	0.000	0.2500	0.000	0.000
58	58	59	1	0.000	0.000	0.2500	0.000	0.000
59	59	60	1	0.000	0.000	0.2500	0.000	0.000
60	60	61	1	0.000	0.000	0.2500	0.000	0.000

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*  |
|                                                                    |
|                               NewProject.BaseDesignSection_28.A2M2R1_1787  |
|                               Exe Time :24 May 2018      18:17:34  |
+-----+
```

```
NO. OF NODAL LOADS (NLOAD) ..... 0
NO. OF LOAD CURVES (NLCUR) ..... 14
MAXIMUM POINTS/LCURVE (NPTM)..... 5
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.A2M2R1_1787  |
|          Exe Time :24 May 2018  18:17:34  |
+-----+
L O A D      D A T A
```

LOAD FUNCTION NUMBER = 1
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
1.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 2
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
2.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 3
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
3.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 4
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
4.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 5
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
4.80000	0.0000E+00
5.00000	0.1000E+01
5.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 6
NUMBER OF TIME POINTS = 5

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

TIME VALUE	FUNCTION
0.00000	0.0000E+00
5.80000	0.0000E+00
6.00000	0.1000E+01
6.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 7
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
6.80000	0.0000E+00
7.00000	0.1000E+01
7.20000	0.0000E+00
8.00000	0.0000E+00

LOAD FUNCTION NUMBER = 8
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 9
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 10
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 11
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 12
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
4.80000	0.0000E+00
5.00000	0.1000E+01
8.00000	0.1000E+01

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

LOAD FUNCTION NUMBER = 13
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
5.80000	0.0000E+00
6.00000	0.1000E+01
8.00000	0.1000E+01

LOAD FUNCTION NUMBER = 14
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
6.80000	0.0000E+00
7.00000	0.1000E+01
8.00000	0.1000E+01

NO. OF DISTRIBUTED LOAD CARDS 0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.A2M2R1_1787                                          |
|          Exe Time :24 May 2018      18:17:34                                                  |
+-----+
L O A D      B A L A N C E
STEP 1 TOTAL APPLIED LOAD IN DIR. 2 Y-DISPL.F      0.0000000
STEP 1 TOTAL APPLIED LOAD IN DIR. 4 X-ROT. F      0.0000000
STEP 2 TOTAL APPLIED LOAD IN DIR. 2 Y-DISPL.F      0.0000000
STEP 2 TOTAL APPLIED LOAD IN DIR. 4 X-ROT. F      0.0000000
STEP 3 TOTAL APPLIED LOAD IN DIR. 2 Y-DISPL.F      0.0000000
STEP 3 TOTAL APPLIED LOAD IN DIR. 4 X-ROT. F      0.0000000
STEP 4 TOTAL APPLIED LOAD IN DIR. 2 Y-DISPL.F      0.0000000
STEP 4 TOTAL APPLIED LOAD IN DIR. 4 X-ROT. F      0.0000000
STEP 5 TOTAL APPLIED LOAD IN DIR. 2 Y-DISPL.F      0.0000000
STEP 5 TOTAL APPLIED LOAD IN DIR. 4 X-ROT. F      0.0000000
STEP 6 TOTAL APPLIED LOAD IN DIR. 2 Y-DISPL.F      0.0000000
STEP 6 TOTAL APPLIED LOAD IN DIR. 4 X-ROT. F      0.0000000
STEP 7 TOTAL APPLIED LOAD IN DIR. 2 Y-DISPL.F      0.0000000
STEP 7 TOTAL APPLIED LOAD IN DIR. 4 X-ROT. F      0.0000000
```

LOAD INPUT SECTION COMPLETED

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

```
+-----+  
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*  |  
|                                                                    |  
|                          NewProject.BaseDesignSection_28.A2M2R1_1787  |  
|                          Exe Time :24 May 2018      18:17:34          |  
+-----+
```

```
NO. OF LAYERS ..... 3  
NO. OF DATA PER LAYER..... 100
```

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|          NewProject.BaseDesignSection_28.A2M2R1_1787      |
|          Exe Time :24 May 2018          18:17:34          |
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LAYER DESCRIPTORS FOR STEP NO. 1

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 1

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ITEM NO. 1<NAME      >= 18.000    (BOTH WALLS)
ITEM NO. 2<NATURE   >= 1.0000   (BOTH WALLS)
ITEM NO. 3<LEVEL    >= 0.0000   (BOTH WALLS)
ITEM NO. 4<WALL     >= 1.0000   (BOTH WALLS)
ITEM NO. 5<GAMMAD   >= 19.000   (BOTH WALLS)
ITEM NO. 6<GAMMAB   >= 10.000   (BOTH WALLS)
ITEM NO. 7<GAMMAW   >= 10.000   (BOTH WALLS)
ITEM NO. 8<U-COHE   >= 6.4000   WALL NO.    1
ITEM NO. 8<U-COHE   >= 8.0000   WALL NO.    2
ITEM NO. 9<U-FRICT >= 21.320   WALL NO.    1
ITEM NO. 9<U-FRICT >= 26.000   WALL NO.    2
ITEM NO. 10<U-KA    >= 0.46700  WALL NO.    1
ITEM NO. 11<U-KP    >= 2.6490   WALL NO.    1
ITEM NO. 12<KO-NC   >= 0.50000  (BOTH WALLS)
ITEM NO. 13<NEXP    >= 0.50000  (BOTH WALLS)
ITEM NO. 14<OCR     >= 1.0000   (BOTH WALLS)
ITEM NO. 16<MODEL   >= 1.0000   (BOTH WALLS)
ITEM NO. 17<EVC     >= 20000.   (BOTH WALLS)
ITEM NO. 18<EUR     >= 60000.   (BOTH WALLS)
ITEM NO. 27<U-PERM  >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000   (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000   (BOTH WALLS)
ITEM NO. 58<D-COHE >= 6.4000   WALL NO.    1
ITEM NO. 58<D-COHE >= 8.0000   WALL NO.    2
ITEM NO. 59<D-FRICT >= 21.320   WALL NO.    1
ITEM NO. 59<D-FRICT >= 26.000   WALL NO.    2
ITEM NO. 60<D-KA    >= 0.46700  WALL NO.    1
ITEM NO. 61<D-KP    >= 2.6490   WALL NO.    1
ITEM NO. 77<D-PERM  >= 0.10000E-03 (BOTH WALLS)

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NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 1

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ITEM NO. 1<NAME      >= 19.000    (BOTH WALLS)
ITEM NO. 2<NATURE   >= 1.0000   (BOTH WALLS)
ITEM NO. 3<LEVEL    >= -2.7000   (BOTH WALLS)
ITEM NO. 4<WALL     >= 1.0000   (BOTH WALLS)
ITEM NO. 5<GAMMAD   >= 19.500   (BOTH WALLS)
ITEM NO. 6<GAMMAB   >= 10.000   (BOTH WALLS)
ITEM NO. 7<GAMMAW   >= 10.000   (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 30.170   WALL NO.    1
ITEM NO. 9<U-FRICT >= 36.000   WALL NO.    2
ITEM NO. 10<U-KA    >= 0.33100  WALL NO.    1
ITEM NO. 11<U-KP    >= 4.3310   WALL NO.    1
ITEM NO. 12<KO-NC   >= 0.50000  (BOTH WALLS)
ITEM NO. 13<NEXP    >= 0.50000  (BOTH WALLS)
ITEM NO. 14<OCR     >= 1.0000   (BOTH WALLS)
ITEM NO. 16<MODEL   >= 1.0000   (BOTH WALLS)
ITEM NO. 17<EVC     >= 30000.   (BOTH WALLS)
ITEM NO. 18<EUR     >= 90000.   (BOTH WALLS)
ITEM NO. 27<U-PERM  >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000   (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000   (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 30.170   WALL NO.    1
ITEM NO. 59<D-FRICT >= 36.000   WALL NO.    2
ITEM NO. 60<D-KA    >= 0.33100  WALL NO.    1
ITEM NO. 61<D-KP    >= 4.3310   WALL NO.    1
ITEM NO. 77<D-PERM  >= 0.10000E-03 (BOTH WALLS)

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NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 1

```

ITEM NO. 1<NAME      >= 20.000    (BOTH WALLS)
ITEM NO. 2<NATURE   >= 1.0000   (BOTH WALLS)
ITEM NO. 3<LEVEL    >= -10.300   (BOTH WALLS)
ITEM NO. 4<WALL     >= 1.0000   (BOTH WALLS)
ITEM NO. 5<GAMMAD   >= 19.000   (BOTH WALLS)
ITEM NO. 6<GAMMAB   >= 10.000   (BOTH WALLS)

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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 23.910	WALL NO.	1
ITEM NO.	9<U-FRICT	>= 29.000	WALL NO.	2
ITEM NO.	10<U-KA	>= 0.42300	WALL NO.	1
ITEM NO.	11<U-KP	>= 3.0380	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	>= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 23.910	WALL NO.	1
ITEM NO.	59<D-FRICT	>= 29.000	WALL NO.	2
ITEM NO.	60<D-KA	>= 0.42300	WALL NO.	1
ITEM NO.	61<D-KP	>= 3.0380	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 2

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 2

ITEM NO.	1<NAME	>= 18.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>= 6.4000	WALL NO.	1
ITEM NO.	8<U-COHE	>= 8.0000	WALL NO.	2
ITEM NO.	9<U-FRICT	>= 21.320	WALL NO.	1
ITEM NO.	9<U-FRICT	>= 26.000	WALL NO.	2
ITEM NO.	10<U-KA	>= 0.46700	WALL NO.	1
ITEM NO.	11<U-KP	>= 2.6490	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	>= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>= 6.4000	WALL NO.	1
ITEM NO.	58<D-COHE	>= 8.0000	WALL NO.	2
ITEM NO.	59<D-FRICT	>= 21.320	WALL NO.	1
ITEM NO.	59<D-FRICT	>= 26.000	WALL NO.	2
ITEM NO.	60<D-KA	>= 0.46700	WALL NO.	1
ITEM NO.	61<D-KP	>= 2.6490	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 2

ITEM NO.	1<NAME	>= 19.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 30.170	WALL NO.	1
ITEM NO.	9<U-FRICT	>= 36.000	WALL NO.	2
ITEM NO.	10<U-KA	>= 0.33100	WALL NO.	1
ITEM NO.	11<U-KP	>= 4.3310	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE>	>= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 30.170	WALL NO.	1
ITEM NO.	59<D-FRICT	>= 36.000	WALL NO.	2
ITEM NO.	60<D-KA	>= 0.33100	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.3310	WALL NO.	1

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 2

ITEM NO. 1<NAME >= 20.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -10.300 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 23.910 WALL NO. 1
ITEM NO. 9<U-FRICT >= 29.000 WALL NO. 2
ITEM NO. 10<U-KA >= 0.42300 WALL NO. 1
ITEM NO. 11<U-KP >= 3.0380 WALL NO. 1
ITEM NO. 12<KO-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 30000. (BOTH WALLS)
ITEM NO. 18<EUR >= 90000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 23.910 WALL NO. 1
ITEM NO. 59<D-FRICT >= 29.000 WALL NO. 2
ITEM NO. 60<D-KA >= 0.42300 WALL NO. 1
ITEM NO. 61<D-KP >= 3.0380 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

LAYER DESCRIPTORS FOR STEP NO. 3

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 3

ITEM NO. 1<NAME >= 18.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 8<U-COHE >= 6.4000 WALL NO. 1
ITEM NO. 8<U-COHE >= 8.0000 WALL NO. 2
ITEM NO. 9<U-FRICT >= 21.320 WALL NO. 1
ITEM NO. 9<U-FRICT >= 26.000 WALL NO. 2
ITEM NO. 10<U-KA >= 0.46700 WALL NO. 1
ITEM NO. 11<U-KP >= 2.6490 WALL NO. 1
ITEM NO. 12<KO-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 20000. (BOTH WALLS)
ITEM NO. 18<EUR >= 60000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 58<D-COHE >= 6.4000 WALL NO. 1
ITEM NO. 58<D-COHE >= 8.0000 WALL NO. 2
ITEM NO. 59<D-FRICT >= 21.320 WALL NO. 1
ITEM NO. 59<D-FRICT >= 26.000 WALL NO. 2
ITEM NO. 60<D-KA >= 0.46700 WALL NO. 1
ITEM NO. 61<D-KP >= 2.6490 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 3

ITEM NO. 1<NAME >= 19.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -2.7000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.500 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 30.170 WALL NO. 1
ITEM NO. 9<U-FRICT >= 36.000 WALL NO. 2
ITEM NO. 10<U-KA >= 0.33100 WALL NO. 1
ITEM NO. 11<U-KP >= 4.3310 WALL NO. 1
ITEM NO. 12<KO-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 30000. (BOTH WALLS)
ITEM NO. 18<EUR >= 90000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 30.170 WALL NO. 1
ITEM NO. 59<D-FRICT >= 36.000 WALL NO. 2
ITEM NO. 60<D-KA >= 0.33100 WALL NO. 1
ITEM NO. 61<D-KP >= 4.3310 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 3

ITEM NO. 1<NAME >= 20.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -10.300 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 23.910 WALL NO. 1
ITEM NO. 9<U-FRICT >= 29.000 WALL NO. 2
ITEM NO. 10<U-KA >= 0.42300 WALL NO. 1
ITEM NO. 11<U-KP >= 3.0380 WALL NO. 1
ITEM NO. 12<KO-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 30000. (BOTH WALLS)
ITEM NO. 18<EUR >= 90000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 23.910 WALL NO. 1
ITEM NO. 59<D-FRICT >= 29.000 WALL NO. 2
ITEM NO. 60<D-KA >= 0.42300 WALL NO. 1
ITEM NO. 61<D-KP >= 3.0380 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

LAYER DESCRIPTORS FOR STEP NO. 4

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 4

ITEM NO. 1<NAME >= 18.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 8<U-COHE >= 6.4000 WALL NO. 1
ITEM NO. 8<U-COHE >= 8.0000 WALL NO. 2
ITEM NO. 9<U-FRICT >= 21.320 WALL NO. 1
ITEM NO. 9<U-FRICT >= 26.000 WALL NO. 2
ITEM NO. 10<U-KA >= 0.46700 WALL NO. 1
ITEM NO. 11<U-KP >= 2.6490 WALL NO. 1
ITEM NO. 12<KO-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 20000. (BOTH WALLS)
ITEM NO. 18<EUR >= 60000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 58<D-COHE >= 6.4000 WALL NO. 1
ITEM NO. 58<D-COHE >= 8.0000 WALL NO. 2
ITEM NO. 59<D-FRICT >= 21.320 WALL NO. 1
ITEM NO. 59<D-FRICT >= 26.000 WALL NO. 2
ITEM NO. 60<D-KA >= 0.46700 WALL NO. 1
ITEM NO. 61<D-KP >= 2.6490 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 4

ITEM NO. 1<NAME >= 19.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -2.7000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

ITEM NO.	5<GAMMAD	>= 19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 30.170	WALL NO.	1
ITEM NO.	9<U-FRICT	>= 36.000	WALL NO.	2
ITEM NO.	10<U-KA	>= 0.33100	WALL NO.	1
ITEM NO.	11<U-KP	>= 4.3310	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 30.170	WALL NO.	1
ITEM NO.	59<D-FRICT	>= 36.000	WALL NO.	2
ITEM NO.	60<D-KA	>= 0.33100	WALL NO.	1
ITEM NO.	61<D-KP	>= 4.3310	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 4

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 23.910	WALL NO.	1
ITEM NO.	9<U-FRICT	>= 29.000	WALL NO.	2
ITEM NO.	10<U-KA	>= 0.42300	WALL NO.	1
ITEM NO.	11<U-KP	>= 3.0380	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 23.910	WALL NO.	1
ITEM NO.	59<D-FRICT	>= 29.000	WALL NO.	2
ITEM NO.	60<D-KA	>= 0.42300	WALL NO.	1
ITEM NO.	61<D-KP	>= 3.0380	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 5

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 5

ITEM NO.	1<NAME	>= 18.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>= 6.4000	WALL NO.	1
ITEM NO.	8<U-COHE	>= 8.0000	WALL NO.	2
ITEM NO.	9<U-FRICT	>= 21.320	WALL NO.	1
ITEM NO.	9<U-FRICT	>= 26.000	WALL NO.	2
ITEM NO.	10<U-KA	>= 0.46700	WALL NO.	1
ITEM NO.	11<U-KP	>= 2.6490	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>= 6.4000	WALL NO.	1
ITEM NO.	58<D-COHE	>= 8.0000	WALL NO.	2
ITEM NO.	59<D-FRICT	>= 21.320	WALL NO.	1
ITEM NO.	59<D-FRICT	>= 26.000	WALL NO.	2

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

ITEM NO. 60<D-KA >= 0.46700 WALL NO. 1
ITEM NO. 61<D-KP >= 2.6490 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 5

ITEM NO. 1<NAME >= 19.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -2.7000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.500 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 30.170 WALL NO. 1
ITEM NO. 9<U-FRICT >= 36.000 WALL NO. 2
ITEM NO. 10<U-KA >= 0.33100 WALL NO. 1
ITEM NO. 11<U-KP >= 4.3310 WALL NO. 1
ITEM NO. 12<K0-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 30000. (BOTH WALLS)
ITEM NO. 18<EUR >= 90000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 30.170 WALL NO. 1
ITEM NO. 59<D-FRICT >= 36.000 WALL NO. 2
ITEM NO. 60<D-KA >= 0.33100 WALL NO. 1
ITEM NO. 61<D-KP >= 4.3310 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 5

ITEM NO. 1<NAME >= 20.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -10.300 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 23.910 WALL NO. 1
ITEM NO. 9<U-FRICT >= 29.000 WALL NO. 2
ITEM NO. 10<U-KA >= 0.42300 WALL NO. 1
ITEM NO. 11<U-KP >= 3.0380 WALL NO. 1
ITEM NO. 12<K0-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 30000. (BOTH WALLS)
ITEM NO. 18<EUR >= 90000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 23.910 WALL NO. 1
ITEM NO. 59<D-FRICT >= 29.000 WALL NO. 2
ITEM NO. 60<D-KA >= 0.42300 WALL NO. 1
ITEM NO. 61<D-KP >= 3.0380 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

LAYER DESCRIPTORS FOR STEP NO. 6

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 6

ITEM NO. 1<NAME >= 18.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 8<U-COHE >= 6.4000 WALL NO. 1
ITEM NO. 8<U-COHE >= 8.0000 WALL NO. 2
ITEM NO. 9<U-FRICT >= 21.320 WALL NO. 1
ITEM NO. 9<U-FRICT >= 26.000 WALL NO. 2
ITEM NO. 10<U-KA >= 0.46700 WALL NO. 1
ITEM NO. 11<U-KP >= 2.6490 WALL NO. 1
ITEM NO. 12<K0-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 20000. (BOTH WALLS)
ITEM NO. 18<EUR >= 60000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 58<D-COHE >= 6.4000 WALL NO. 1
ITEM NO. 58<D-COHE >= 8.0000 WALL NO. 2
ITEM NO. 59<D-FRICT >= 21.320 WALL NO. 1
ITEM NO. 59<D-FRICT >= 26.000 WALL NO. 2
ITEM NO. 60<D-KA >= 0.46700 WALL NO. 1
ITEM NO. 61<D-KP >= 2.6490 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 6

ITEM NO. 1<NAME >= 19.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -2.7000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.500 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 30.170 WALL NO. 1
ITEM NO. 9<U-FRICT >= 36.000 WALL NO. 2
ITEM NO. 10<U-KA >= 0.33100 WALL NO. 1
ITEM NO. 11<U-KP >= 4.3310 WALL NO. 1
ITEM NO. 12<K0-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 30000. (BOTH WALLS)
ITEM NO. 18<EUR >= 90000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 30.170 WALL NO. 1
ITEM NO. 59<D-FRICT >= 36.000 WALL NO. 2
ITEM NO. 60<D-KA >= 0.29800 WALL NO. 1
ITEM NO. 61<D-KP >= 3.0160 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 6

ITEM NO. 1<NAME >= 20.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= -10.300 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
ITEM NO. 9<U-FRICT >= 23.910 WALL NO. 1
ITEM NO. 9<U-FRICT >= 29.000 WALL NO. 2
ITEM NO. 10<U-KA >= 0.42300 WALL NO. 1
ITEM NO. 11<U-KP >= 3.0380 WALL NO. 1
ITEM NO. 12<K0-NC >= 0.50000 (BOTH WALLS)
ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
ITEM NO. 17<EVC >= 30000. (BOTH WALLS)
ITEM NO. 18<EUR >= 90000. (BOTH WALLS)
ITEM NO. 27<U-PERM >= 0.10000E-03 (BOTH WALLS)
ITEM NO. 52<D-NATURE>= 1.0000 (BOTH WALLS)
ITEM NO. 53<D-LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 59<D-FRICT >= 23.910 WALL NO. 1
ITEM NO. 59<D-FRICT >= 29.000 WALL NO. 2
ITEM NO. 60<D-KA >= 0.37700 WALL NO. 1
ITEM NO. 61<D-KP >= 2.2190 WALL NO. 1
ITEM NO. 77<D-PERM >= 0.10000E-03 (BOTH WALLS)

LAYER DESCRIPTORS FOR STEP NO. 7

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 7

ITEM NO. 1<NAME >= 18.000 (BOTH WALLS)
ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
ITEM NO. 3<LEVEL >= 0.0000 (BOTH WALLS)
ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8<U-COHE	>= 6.4000	WALL NO.	1
ITEM NO.	8<U-COHE	>= 8.0000	WALL NO.	2
ITEM NO.	9<U-FRICT	>= 21.320	WALL NO.	1
ITEM NO.	9<U-FRICT	>= 26.000	WALL NO.	2
ITEM NO.	10<U-KA	>= 0.46700	WALL NO.	1
ITEM NO.	11<U-KP	>= 2.6490	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 60000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	58<D-COHE	>= 6.4000	WALL NO.	1
ITEM NO.	58<D-COHE	>= 8.0000	WALL NO.	2
ITEM NO.	59<D-FRICT	>= 21.320	WALL NO.	1
ITEM NO.	59<D-FRICT	>= 26.000	WALL NO.	2
ITEM NO.	60<D-KA	>= 0.46700	WALL NO.	1
ITEM NO.	61<D-KP	>= 2.6490	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 7

ITEM NO.	1<NAME	>= 19.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -2.7000	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.500	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 30.170	WALL NO.	1
ITEM NO.	9<U-FRICT	>= 36.000	WALL NO.	2
ITEM NO.	10<U-KA	>= 0.33100	WALL NO.	1
ITEM NO.	11<U-KP	>= 4.3310	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 30.170	WALL NO.	1
ITEM NO.	59<D-FRICT	>= 36.000	WALL NO.	2
ITEM NO.	60<D-KA	>= 0.29800	WALL NO.	1
ITEM NO.	61<D-KP	>= 3.0160	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 7

ITEM NO.	1<NAME	>= 20.000	(BOTH WALLS)	
ITEM NO.	2<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3<LEVEL	>= -10.300	(BOTH WALLS)	
ITEM NO.	4<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9<U-FRICT	>= 23.910	WALL NO.	1
ITEM NO.	9<U-FRICT	>= 29.000	WALL NO.	2
ITEM NO.	10<U-KA	>= 0.42300	WALL NO.	1
ITEM NO.	11<U-KP	>= 3.0380	WALL NO.	1
ITEM NO.	12<K0-NC	>= 0.50000	(BOTH WALLS)	
ITEM NO.	13<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17<EVC	>= 30000.	(BOTH WALLS)	
ITEM NO.	18<EUR	>= 90000.	(BOTH WALLS)	
ITEM NO.	27<U-PERM	>= 0.10000E-03	(BOTH WALLS)	
ITEM NO.	52<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	53<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	59<D-FRICT	>= 23.910	WALL NO.	1
ITEM NO.	59<D-FRICT	>= 29.000	WALL NO.	2
ITEM NO.	60<D-KA	>= 0.37700	WALL NO.	1
ITEM NO.	61<D-KP	>= 2.2190	WALL NO.	1
ITEM NO.	77<D-PERM	>= 0.10000E-03	(BOTH WALLS)	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

DEFAULT WATER UNIT WEIGHT = 10.000
AVERAGED ON 21 VALUES

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE  2017.1   FULL VERSION   *Build date:Jul 11, 2017*   |
|                                                                    |
|          NewProject.BaseDesignSection_28.A2M2R1_1787   |
|          Exe Time :24 May 2018           18:17:34       |
+-----+

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PHASE DESCRIPTORS

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STEP NO.      1

                LEFT WALL   RIGHT WALL
Y              0.000        -0.9990E+30
Z-PC           0.000         0.000
Z-EXCAVATION   0.000         0.000
Z-WATER_TABLE  0.000        -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL  0.000         0.000
ZQ             0.000         0.000
DZW_OF_THE_WATER_TABLE  0.000         0.000
QS_ON_THE_EXCAVATION_SIDE  0.000         0.000
ZQS           -0.9990E+30   -0.9990E+30
ZCUT           0.000         0.000
BALANCE LEVEL FOR PORE PRESSURES  -12.00        -12.00
WATER_BEHAVIOUR_FLAG (LINING OPT)  0.000         0.000
PORE_UPDATE_FLAG  0.000         0.000
PORE_TAB. _FLAG (gt.0= use tabs)  0.000         0.000
lateral thrusts reduction elevatio  0.000         0.000
Downhill reduction factor for effe  0.000         0.000
Downhill reduction factor for pore  0.000         0.000
Uphill reduction factor for effect  0.000         0.000
Uphill reduction factor for pore p  0.000         0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]    0.000         0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]    0.000         0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]   0.000         0.000
UPHILL BETA ANGLE (SLOPE) [deg]     0.000         0.000
UPHILL DELTA/PHI RATIO              0.000         0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]   0.000         0.000
DOWNHILL DELTA/PHI RATIO            0.000         0.000
DYN.WATER BEHAVIOUR                 0.000         0.000
Excess pore pressure RATIO Ru       0.000         0.000
SEISMIC PRESSURE LOWER VALUE        0.000         0.000
SEISMIC PRESSURE UPPER VALUE        0.000         0.000
SEISMIC PRESSURE LOWER LEVEL        0.000         0.000
SEISMIC PRESSURE UPPER LEVEL        0.000         0.000

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=====end of step 1

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STEP NO.      2

                LEFT WALL   RIGHT WALL
Y              0.000        -0.9990E+30
Z-PC           0.000         0.000
Z-EXCAVATION   -1.000         0.000
Z-WATER_TABLE  0.000        -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL  0.000         0.000
ZQ             0.000         0.000
DZW_OF_THE_WATER_TABLE  1.000         0.000
QS_ON_THE_EXCAVATION_SIDE  0.000         0.000
ZQS           -0.9990E+30   -0.9990E+30
ZCUT           0.000         0.000
BALANCE LEVEL FOR PORE PRESSURES  -12.00        -12.00
WATER_BEHAVIOUR_FLAG (LINING OPT)  0.000         0.000
PORE_UPDATE_FLAG  0.000         0.000
PORE_TAB. _FLAG (gt.0= use tabs)  0.000         0.000
lateral thrusts reduction elevatio  0.000         0.000
Downhill reduction factor for effe  0.000         0.000
Downhill reduction factor for pore  0.000         0.000
Uphill reduction factor for effect  0.000         0.000
Uphill reduction factor for pore p  0.000         0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]    0.000         0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]    0.000         0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]   0.000         0.000
UPHILL BETA ANGLE (SLOPE) [deg]     0.000         0.000
UPHILL DELTA/PHI RATIO              0.000         0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]   0.000         0.000
DOWNHILL DELTA/PHI RATIO            0.000         0.000
DYN.WATER BEHAVIOUR                 0.000         0.000
Excess pore pressure RATIO Ru       0.000         0.000

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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|                PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|                |
|                NewProject.BaseDesignSection_28.A2M2R1_1787  |
|                Exe Time :24 May 2018  18:17:34  |
+-----+

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I N I T I A L S T R E S S T A B L E S

S E C T I O N

NUMBER OF DEFINED TABLES 1

INPUT DATA FOR INITIAL STRESS SET NO. 1
PERTAINING SOIL ELEMENTS AT Y-COORD 0.0000

ACTIVATION TIME 1.0000
END TIME (TIME BEYOND WHICH IT IS REMOVED) 7.0000

TYPE BOUSSINESQ

HORIZONTAL DISTANCE (DY) 2.0000000000000000
FOUNDATION WIDTH (B) 33.0000000000000000
ZETA-F..... 0.0000000000000000E+000
Q-F 5.0000000000000000
BETA 45.0000000000000000
BEHAVIOUR (0=FREE, 1=REFLECTING) 0.0000000000000000E+000

ELEMENT GROUPS BACKUP AREA CAN STAY IN CORE AT
POSITION 5903

NO. OF D.P.W FOR THIS AREA 7208
MAX NO. OF D.P.W. AVAILABLE 81920
** MAX NO OF ITERATIONS SET TO 40

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ITER    0  RNORM = 0.000    RMNORM= 0.000
          RINORM=0.5271E+05 RIMNOR= 0.000
          RENORM=0.1199E-27 REMNOR= 0.000       RATIO =0.4770E-16 TOLER =0.1000E-03       CONVERGED !
          RFMAX = 35.70       RMMAX = 0.000
          RTSMAL=0.1000E-03 RMSMAL= 0.000
          RDT    =0.5271E+05 RDR    = 0.000
          RATIOI=0.4770E-16 RATIOR= 0.000
          MAX UN=0.3553E-14 IEQ=    97 NODE       49 DOF    1  Y-DISPL.F
          MIN UN=-.3553E-14 IEQ=    85 NODE       43 DOF    1  Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS       0

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ITER    1  RNORM = 0.000    RMNORM= 0.000
          RINORM=0.5271E+05 RIMNOR= 0.000
          RENORM=0.1504E-28 REMNOR=0.8216E-53 RATIO =0.1689E-16 TOLER =0.1000E-03       CONVERGED !
          RFMAX = 35.70       RMMAX = 0.000
          RTSMAL=0.1000E-03 RMSMAL= 0.000
          RDT    =0.5271E+05 RDR    = 0.000
          RATIOI=0.1689E-16 RATIOR= 0.000
          MAX UN=0.8935E-15 IEQ=    65 NODE       33 DOF    1  Y-DISPL.F
          MIN UN=-.2730E-15 IEQ=    119 NODE       60 DOF    1  Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS       0

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ITER    2  RNORM = 0.000    RMNORM= 0.000
          RINORM=0.5271E+05 RIMNOR= 0.000
          RENORM=0.1321E-28 REMNOR=0.3005E-52 RATIO =0.1583E-16 TOLER =0.1000E-03       CONVERGED !
          RFMAX = 35.70       RMMAX = 0.000
          RTSMAL=0.1000E-03 RMSMAL= 0.000
          RDT    =0.5271E+05 RDR    = 0.000
          RATIOI=0.1583E-16 RATIOR= 0.000
          MAX UN=0.7521E-15 IEQ=    65 NODE       33 DOF    1  Y-DISPL.F
          MIN UN=-.2438E-15 IEQ=    119 NODE       60 DOF    1  Y-DISPL.F
          NO. OF CONTACT CONSTRAINT VIOLATIONS       0

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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*  |
|                                                                                               |
|                               NewProject.BaseDesignSection_28.A2M2R1_1787                       |
|                               Exe Time :24 May 2018      18:17:34                             |
+-----+
New Project
SOLUTION REACHED USING      2 ITERATIONS ON      40

P R I N T   O U T   F O R   T I M E   S T E P   1   ( AT TIME  1.000   )

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

      Y-DISPL.F      X-ROT. F
      (02)          (04)      (

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS
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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	82.97	0.000	0.000	Ug2_741_743_L_0					
29 D	17.19	-1.4245E-19	57.92	29.96	57.92	29.96	V-C	3.2588E+04	-5.600	56.00
1.000	1.000	85.96	0.000	0.000	Ug2_741_743_L_0					
30 D	17.79	-1.4632E-19	60.02	30.94	60.02	30.94	V-C	3.2588E+04	-5.800	58.00
1.000	1.000	88.94	0.000	0.000	Ug2_741_743_L_0					
31 D	18.39	-1.4929E-19	62.11	31.93	62.11	31.93	V-C	3.2588E+04	-6.000	60.00
1.000	1.000	91.93	0.000	0.000	Ug2_741_743_L_0					
32 D	18.98	-1.5119E-19	64.07	32.92	64.07	32.92	V-C	3.2588E+04	-6.200	62.00
1.000	1.000	94.92	0.000	0.000	Ug2_741_743_L_0					
33 D	19.58	-1.5191E-19	66.16	33.90	66.16	33.90	V-C	3.2588E+04	-6.400	64.00
1.000	1.000	97.90	0.000	0.000	Ug2_741_743_L_0					
34 D	20.18	-1.5143E-19	68.12	34.89	68.12	34.89	V-C	3.2588E+04	-6.600	66.00
1.000	1.000	100.9	0.000	0.000	Ug2_741_743_L_0					
35 D	20.77	-1.4979E-19	70.20	35.87	70.20	35.87	V-C	3.2588E+04	-6.800	68.00
1.000	1.000	103.9	0.000	0.000	Ug2_741_743_L_0					
36 D	21.37	-1.4704E-19	72.27	36.86	72.27	36.86	V-C	3.2588E+04	-7.000	70.00
1.000	1.000	106.9	0.000	0.000	Ug2_741_743_L_0					
37 D	21.97	-1.4328E-19	74.24	37.84	74.24	37.84	V-C	3.2588E+04	-7.200	72.00
1.000	1.000	109.8	0.000	0.000	Ug2_741_743_L_0					
38 D	22.57	-1.3862E-19	76.31	38.83	76.31	38.83	V-C	3.2588E+04	-7.400	74.00
1.000	1.000	112.8	0.000	0.000	Ug2_741_743_L_0					
39 D	23.16	-1.3312E-19	78.27	39.81	78.27	39.81	V-C	3.2588E+04	-7.600	76.00
1.000	1.000	115.8	0.000	0.000	Ug2_741_743_L_0					
40 D	23.76	-1.2685E-19	80.34	40.80	80.34	40.80	V-C	3.2588E+04	-7.800	78.00
1.000	1.000	118.8	0.000	0.000	Ug2_741_743_L_0					
41 D	24.36	-1.1985E-19	82.40	41.78	82.40	41.78	V-C	3.2588E+04	-8.000	80.00
1.000	1.000	121.8	0.000	0.000	Ug2_741_743_L_0					
42 D	24.95	-1.1223E-19	84.37	42.77	84.37	42.77	V-C	3.2588E+04	-8.200	82.00
1.000	1.000	124.8	0.000	0.000	Ug2_741_743_L_0					
43 D	25.55	-1.0412E-19	86.43	43.75	86.43	43.75	V-C	3.2588E+04	-8.400	84.00
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
44 D	26.15	-9.5654E-20	88.39	44.74	88.39	44.74	V-C	3.2588E+04	-8.600	86.00
1.000	1.000	130.7	0.000	0.000	Ug2_741_743_L_0					
45 D	26.74	-8.6936E-20	90.45	45.72	90.45	45.72	V-C	3.2588E+04	-8.800	88.00
1.000	1.000	133.7	0.000	0.000	Ug2_741_743_L_0					
46 D	27.34	-7.8014E-20	92.50	46.70	92.50	46.70	V-C	3.2588E+04	-9.000	90.00
1.000	1.000	136.7	0.000	0.000	Ug2_741_743_L_0					
47 D	27.94	-6.8930E-20	94.47	47.69	94.47	47.69	V-C	3.2588E+04	-9.200	92.00
1.000	1.000	139.7	0.000	0.000	Ug2_741_743_L_0					
48 D	28.53	-5.9712E-20	96.52	48.67	96.52	48.67	V-C	3.2588E+04	-9.400	94.00
1.000	1.000	142.7	0.000	0.000	Ug2_741_743_L_0					
49 D	29.13	-5.0376E-20	98.57	49.66	98.57	49.66	V-C	3.2588E+04	-9.600	96.00
1.000	1.000	145.7	0.000	0.000	Ug2_741_743_L_0					
50 D	29.73	-4.0945E-20	100.5	50.64	100.5	50.64	V-C	3.2588E+04	-9.800	98.00
1.000	1.000	148.6	0.000	0.000	Ug2_741_743_L_0					
51 D	30.33	-3.1505E-20	102.6	51.63	102.6	51.63	V-C	3.2588E+04	-10.00	100.00
1.000	1.000	151.6	0.000	0.000	Ug2_741_743_L_0					
52 D	30.92	-2.2148E-20	104.6	52.61	104.6	52.61	V-C	3.2588E+04	-10.20	102.0
1.000	1.000	154.6	0.000	0.000	Ug2_741_743_L_0					
53 D	31.52	-1.2947E-20	106.6	53.60	106.6	53.60	V-C	2.8823E+04	-10.40	104.0
1.000	1.000	157.6	0.000	0.000	Ug3_740_742_L_0					
54 D	32.12	-3.8973E-21	108.6	54.58	108.6	54.58	V-C	2.8823E+04	-10.60	106.0
1.000	1.000	160.6	0.000	0.000	Ug3_740_742_L_0					
55 D	32.71	5.0240E-21	110.6	55.57	110.6	55.57	V-C	2.8823E+04	-10.80	108.0
1.000	1.000	163.6	0.000	0.000	Ug3_740_742_L_0					
56 D	33.31	1.3842E-20	112.7	56.55	112.7	56.55	V-C	2.8823E+04	-11.00	110.0
1.000	1.000	166.6	0.000	0.000	Ug3_740_742_L_0					
57 D	33.91	2.2581E-20	114.6	57.54	114.6	57.54	V-C	2.8823E+04	-11.20	112.0
1.000	1.000	169.5	0.000	0.000	Ug3_740_742_L_0					
58 D	34.50	3.1266E-20	116.7	58.52	116.7	58.52	V-C	2.8823E+04	-11.40	114.0
1.000	1.000	172.5	0.000	0.000	Ug3_740_742_L_0					
59 D	35.10	3.9917E-20	118.7	59.51	118.7	59.51	V-C	2.8823E+04	-11.60	116.0
1.000	1.000	175.5	0.000	0.000	Ug3_740_742_L_0					
60 D	35.70	4.8551E-20	120.7	60.50	120.7	60.50	V-C	2.8823E+04	-11.80	118.0
1.000	1.000	178.5	0.000	0.000	Ug3_740_742_L_0					
61 D	18.15	5.7181E-20	122.7	61.48	122.7	61.48	V-C	2.8823E+04	-12.00	120.0
1.000	1.000	181.5	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|          |
|          NewProject.BaseDesignSection_28.A2M2R1_1787   |
|          Exe Time :24 May 2018   18:17:34   |
+-----+
New Project
  
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STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 1.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1 D	0.000	-2.2978E-20	0.000	0.000	0.000	0.000	V-C	1.7079E+04	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.6596	-1.7393E-20	2.000	1.298	2.000	1.298	V-C	1.7079E+04	-0.2000	2.000	
1.000	1.000	3.298	0.000	0.000	Ug1_2_8_L_0						
3 D	1.317	-1.1807E-20	4.000	2.584	4.000	2.584	V-C	1.7079E+04	-0.4000	4.000	
1.000	1.000	6.584	0.000	0.000	Ug1_2_8_L_0						
4 D	1.969	-6.2164E-21	6.000	3.847	6.000	3.847	V-C	1.7079E+04	-0.6000	6.000	
1.000	1.000	9.847	0.000	0.000	Ug1_2_8_L_0						
5 D	2.616	-6.1622E-22	8.000	5.082	8.000	5.082	V-C	1.7079E+04	-0.8000	8.000	
1.000	1.000	13.08	0.000	0.000	Ug1_2_8_L_0						
6 D	3.257	4.9985E-21	10.00	6.284	10.00	6.284	V-C	1.7079E+04	-1.000	10.00	
1.000	1.000	16.28	0.000	0.000	Ug1_2_8_L_0						
7 D	3.891	1.0633E-20	12.00	7.453	12.00	7.453	V-C	1.7079E+04	-1.200	12.00	
1.000	1.000	19.45	0.000	0.000	Ug1_2_8_L_0						
8 D	4.519	1.6292E-20	14.00	8.593	14.00	8.593	V-C	1.7079E+04	-1.400	14.00	
1.000	1.000	22.59	0.000	0.000	Ug1_2_8_L_0						
9 D	5.141	2.1978E-20	16.00	9.705	16.00	9.705	V-C	1.7079E+04	-1.600	16.00	
1.000	1.000	25.70	0.000	0.000	Ug1_2_8_L_0						
10 D	5.759	2.7693E-20	18.00	10.79	18.00	10.79	V-C	1.7079E+04	-1.800	18.00	
1.000	1.000	28.79	0.000	0.000	Ug1_2_8_L_0						
11 D	6.373	3.3436E-20	20.00	11.86	20.00	11.86	V-C	1.7079E+04	-2.000	20.00	
1.000	1.000	31.86	0.000	0.000	Ug1_2_8_L_0						
12 D	6.984	3.9201E-20	22.00	12.92	22.00	12.92	V-C	1.7079E+04	-2.200	22.00	
1.000	1.000	34.92	0.000	0.000	Ug1_2_8_L_0						
13 D	7.592	4.4988E-20	24.00	13.96	24.00	13.96	V-C	1.7079E+04	-2.400	24.00	
1.000	1.000	37.96	0.000	0.000	Ug1_2_8_L_0						
14 D	8.198	5.0829E-20	26.00	14.99	26.00	14.99	V-C	1.7079E+04	-2.600	26.00	
1.000	1.000	40.99	0.000	0.000	Ug1_2_8_L_0						
15 D	8.802	5.6755E-20	28.00	16.01	28.00	16.01	V-C	2.1577E+04	-2.800	28.00	
1.000	1.000	44.01	0.000	0.000	Ug2_741_743_L_0						
16 D	9.405	6.2794E-20	30.00	17.03	30.00	17.03	V-C	2.1577E+04	-3.000	30.00	
1.000	1.000	47.03	0.000	0.000	Ug2_741_743_L_0						
17 D	10.01	6.8964E-20	32.00	18.04	32.00	18.04	V-C	2.1577E+04	-3.200	32.00	
1.000	1.000	50.04	0.000	0.000	Ug2_741_743_L_0						
18 D	10.61	7.5270E-20	34.00	19.04	34.00	19.04	V-C	2.1577E+04	-3.400	34.00	
1.000	1.000	53.04	0.000	0.000	Ug2_741_743_L_0						
19 D	11.21	8.1706E-20	36.00	20.04	36.00	20.04	V-C	2.1577E+04	-3.600	36.00	
1.000	1.000	56.04	0.000	0.000	Ug2_741_743_L_0						
20 D	11.81	8.8253E-20	38.00	21.04	38.00	21.04	V-C	2.1577E+04	-3.800	38.00	
1.000	1.000	59.04	0.000	0.000	Ug2_741_743_L_0						
21 D	12.41	9.4878E-20	40.00	22.04	40.00	22.04	V-C	2.1577E+04	-4.000	40.00	
1.000	1.000	62.04	0.000	0.000	Ug2_741_743_L_0						
22 D	13.01	1.0153E-19	42.00	23.03	42.00	23.03	V-C	2.1577E+04	-4.200	42.00	
1.000	1.000	65.03	0.000	0.000	Ug2_741_743_L_0						
23 D	13.60	1.0816E-19	44.00	24.02	44.00	24.02	V-C	2.1577E+04	-4.400	44.00	
1.000	1.000	68.02	0.000	0.000	Ug2_741_743_L_0						
24 D	14.20	1.1466E-19	46.00	25.02	46.00	25.02	V-C	2.1577E+04	-4.600	46.00	
1.000	1.000	71.02	0.000	0.000	Ug2_741_743_L_0						
25 D	14.80	1.2096E-19	48.00	26.01	48.00	26.01	V-C	2.1577E+04	-4.800	48.00	
1.000	1.000	74.01	0.000	0.000	Ug2_741_743_L_0						
26 D	15.40	1.2699E-19	50.00	26.99	50.00	26.99	V-C	2.1577E+04	-5.000	50.00	
1.000	1.000	76.99	0.000	0.000	Ug2_741_743_L_0						
27 D	16.00	1.3265E-19	52.00	27.98	52.00	27.98	V-C	2.1577E+04	-5.200	52.00	
1.000	1.000	79.98	0.000	0.000	Ug2_741_743_L_0						
28 D	16.59	1.3785E-19	54.00	28.97	54.00	28.97	V-C	2.1577E+04	-5.400	54.00	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	82.97	0.000	0.000	Ug2_741_743_L_0					
29 D	17.19	1.4245E-19	56.00	29.96	56.00	29.96	V-C	2.1577E+04	-5.600	56.00
1.000	1.000	85.96	0.000	0.000	Ug2_741_743_L_0					
30 D	17.79	1.4632E-19	58.00	30.94	58.00	30.94	V-C	2.1577E+04	-5.800	58.00
1.000	1.000	88.94	0.000	0.000	Ug2_741_743_L_0					
31 D	18.39	1.4929E-19	60.00	31.93	60.00	31.93	V-C	2.1577E+04	-6.000	60.00
1.000	1.000	91.93	0.000	0.000	Ug2_741_743_L_0					
32 D	18.98	1.5119E-19	62.00	32.92	62.00	32.92	V-C	2.1577E+04	-6.200	62.00
1.000	1.000	94.92	0.000	0.000	Ug2_741_743_L_0					
33 D	19.58	1.5191E-19	64.00	33.90	64.00	33.90	V-C	2.1577E+04	-6.400	64.00
1.000	1.000	97.90	0.000	0.000	Ug2_741_743_L_0					
34 D	20.18	1.5143E-19	66.00	34.89	66.00	34.89	V-C	2.1577E+04	-6.600	66.00
1.000	1.000	100.9	0.000	0.000	Ug2_741_743_L_0					
35 D	20.77	1.4979E-19	68.00	35.87	68.00	35.87	V-C	2.1577E+04	-6.800	68.00
1.000	1.000	103.9	0.000	0.000	Ug2_741_743_L_0					
36 D	21.37	1.4704E-19	70.00	36.86	70.00	36.86	V-C	2.1577E+04	-7.000	70.00
1.000	1.000	106.9	0.000	0.000	Ug2_741_743_L_0					
37 D	21.97	1.4328E-19	72.00	37.84	72.00	37.84	V-C	2.1577E+04	-7.200	72.00
1.000	1.000	109.8	0.000	0.000	Ug2_741_743_L_0					
38 D	22.57	1.3862E-19	74.00	38.83	74.00	38.83	V-C	2.1577E+04	-7.400	74.00
1.000	1.000	112.8	0.000	0.000	Ug2_741_743_L_0					
39 D	23.16	1.3312E-19	76.00	39.81	76.00	39.81	V-C	2.1577E+04	-7.600	76.00
1.000	1.000	115.8	0.000	0.000	Ug2_741_743_L_0					
40 D	23.76	1.2685E-19	78.00	40.80	78.00	40.80	V-C	2.1577E+04	-7.800	78.00
1.000	1.000	118.8	0.000	0.000	Ug2_741_743_L_0					
41 D	24.36	1.1985E-19	80.00	41.78	80.00	41.78	V-C	2.1577E+04	-8.000	80.00
1.000	1.000	121.8	0.000	0.000	Ug2_741_743_L_0					
42 D	24.95	1.1223E-19	82.00	42.77	82.00	42.77	V-C	2.1577E+04	-8.200	82.00
1.000	1.000	124.8	0.000	0.000	Ug2_741_743_L_0					
43 D	25.55	1.0412E-19	84.00	43.75	84.00	43.75	V-C	2.1577E+04	-8.400	84.00
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
44 D	26.15	9.5654E-20	86.00	44.74	86.00	44.74	V-C	2.1577E+04	-8.600	86.00
1.000	1.000	130.7	0.000	0.000	Ug2_741_743_L_0					
45 D	26.74	8.6936E-20	88.00	45.72	88.00	45.72	V-C	2.1577E+04	-8.800	88.00
1.000	1.000	133.7	0.000	0.000	Ug2_741_743_L_0					
46 D	27.34	7.8014E-20	90.00	46.70	90.00	46.70	V-C	2.1577E+04	-9.000	90.00
1.000	1.000	136.7	0.000	0.000	Ug2_741_743_L_0					
47 D	27.94	6.8930E-20	92.00	47.69	92.00	47.69	V-C	2.1577E+04	-9.200	92.00
1.000	1.000	139.7	0.000	0.000	Ug2_741_743_L_0					
48 D	28.53	5.9712E-20	94.00	48.67	94.00	48.67	V-C	2.1577E+04	-9.400	94.00
1.000	1.000	142.7	0.000	0.000	Ug2_741_743_L_0					
49 D	29.13	5.0376E-20	96.00	49.66	96.00	49.66	V-C	2.1577E+04	-9.600	96.00
1.000	1.000	145.7	0.000	0.000	Ug2_741_743_L_0					
50 D	29.73	4.0945E-20	98.00	50.64	98.00	50.64	V-C	2.1577E+04	-9.800	98.00
1.000	1.000	148.6	0.000	0.000	Ug2_741_743_L_0					
51 D	30.33	3.1505E-20	100.00	51.63	100.00	51.63	V-C	2.1577E+04	-10.000	100.00
1.000	1.000	151.6	0.000	0.000	Ug2_741_743_L_0					
52 D	30.92	2.2148E-20	102.0	52.61	102.0	52.61	V-C	2.1577E+04	-10.200	102.0
1.000	1.000	154.6	0.000	0.000	Ug2_741_743_L_0					
53 D	31.52	1.2947E-20	104.0	53.60	104.0	53.60	V-C	2.4395E+04	-10.400	104.0
1.000	1.000	157.6	0.000	0.000	Ug3_740_742_L_0					
54 D	32.12	3.8973E-21	106.0	54.58	106.0	54.58	V-C	2.4395E+04	-10.600	106.0
1.000	1.000	160.6	0.000	0.000	Ug3_740_742_L_0					
55 D	32.71	-5.0240E-21	108.0	55.57	108.0	55.57	V-C	2.4395E+04	-10.800	108.0
1.000	1.000	163.6	0.000	0.000	Ug3_740_742_L_0					
56 D	33.31	-1.3842E-20	110.0	56.55	110.0	56.55	V-C	2.4395E+04	-11.000	110.0
1.000	1.000	166.6	0.000	0.000	Ug3_740_742_L_0					
57 D	33.91	-2.2581E-20	112.0	57.54	112.0	57.54	V-C	2.4395E+04	-11.200	112.0
1.000	1.000	169.5	0.000	0.000	Ug3_740_742_L_0					
58 D	34.50	-3.1266E-20	114.0	58.52	114.0	58.52	V-C	2.4395E+04	-11.400	114.0
1.000	1.000	172.5	0.000	0.000	Ug3_740_742_L_0					
59 D	35.10	-3.9917E-20	116.0	59.51	116.0	59.51	V-C	2.4395E+04	-11.600	116.0
1.000	1.000	175.5	0.000	0.000	Ug3_740_742_L_0					
60 D	35.70	-4.8551E-20	118.0	60.50	118.0	60.50	V-C	2.4395E+04	-11.800	118.0
1.000	1.000	178.5	0.000	0.000	Ug3_740_742_L_0					
61 D	18.15	-5.7181E-20	120.0	61.48	120.0	61.48	V-C	2.4395E+04	-12.000	120.0
1.000	1.000	181.5	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017*   |
|                                                                    |
|                                                                    |
|          NewProject.BaseDesignSection_28.A2M2R1_1787   |
|          Exe Time :24 May 2018           18:17:34       |
+-----+
New Project
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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 1.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	4.51610E-17	-4.51610E-17	0.0000	9.03220E-18
2	1.12960E-16	-1.12960E-16	-9.03220E-18	3.16243E-17
3	1.58235E-16	-1.58235E-16	-3.16243E-17	6.32713E-17
4	1.80978E-16	-1.80978E-16	-6.32713E-17	9.94669E-17
5	1.81177E-16	-1.81177E-16	-9.94669E-17	1.35702E-16
6	1.58815E-16	-1.58815E-16	-1.35702E-16	1.67465E-16
7	1.13866E-16	-1.13866E-16	-1.67465E-16	1.90239E-16
8	4.63053E-17	-4.63053E-17	-1.90239E-16	1.99500E-16
9	-4.38952E-17	4.38952E-17	-1.99500E-16	1.90721E-16
10	-1.56759E-16	1.56759E-16	-1.90721E-16	1.59369E-16
11	-2.92299E-16	2.92299E-16	-1.59369E-16	1.00909E-16
12	1.32584E-15	-1.32584E-15	-1.00909E-16	3.66077E-16
13	1.14497E-15	-1.14497E-15	-3.66077E-16	5.95071E-16
14	9.41502E-16	-9.41502E-16	-5.95071E-16	7.83372E-16
15	5.95514E-16	-5.95514E-16	-7.83372E-16	9.02474E-16
16	2.15286E-16	-2.15286E-16	-9.02474E-16	9.45532E-16
17	-1.98865E-16	1.98865E-16	-9.45532E-16	9.05759E-16
18	-6.46493E-16	6.46493E-16	-9.05759E-16	7.76460E-16
19	-1.12701E-15	1.12701E-15	-7.76460E-16	5.51059E-16
20	-1.63963E-15	1.63963E-15	-5.51059E-16	2.23134E-16
21	-2.18340E-15	2.18340E-15	-2.23134E-16	-2.13547E-16
22	-2.75713E-15	2.75713E-15	-2.13547E-16	-7.64972E-16
23	-3.35938E-15	3.35938E-15	-7.64972E-16	-1.43685E-15
24	-2.21210E-15	2.21210E-15	-1.43685E-15	-1.87927E-15
25	-2.86607E-15	2.86607E-15	-1.87927E-15	-2.45248E-15
26	-3.54269E-15	3.54269E-15	-2.45248E-15	-3.16102E-15
27	-4.23949E-15	4.23949E-15	-3.16102E-15	-4.00891E-15
28	-4.95370E-15	4.95370E-15	-4.00891E-15	-4.99965E-15
29	-5.68232E-15	5.68232E-15	-4.99965E-15	-6.13612E-15
30	-6.42211E-15	6.42211E-15	-6.13612E-15	-7.42054E-15
31	-3.61694E-15	3.61694E-15	-7.42054E-15	-8.14392E-15
32	-8.15912E-16	8.15912E-16	-8.14392E-15	-8.30711E-15
33	1.98470E-15	-1.98470E-15	-8.30711E-15	-7.91017E-15
34	1.23600E-15	-1.23600E-15	-7.91017E-15	-7.66296E-15
35	4.04728E-15	-4.04728E-15	-7.66296E-15	-6.85351E-15
36	3.31696E-15	-3.31696E-15	-6.85351E-15	-6.19012E-15
37	2.60157E-15	-2.60157E-15	-6.19012E-15	-5.66980E-15
38	1.90484E-15	-1.90484E-15	-5.66980E-15	-5.28884E-15
39	1.23034E-15	-1.23034E-15	-5.28884E-15	-5.04277E-15
40	4.13424E-15	-4.13424E-15	-5.04277E-15	-4.21592E-15
41	3.51435E-15	-3.51435E-15	-4.21592E-15	-3.51305E-15
42	6.47912E-15	-6.47912E-15	-3.51305E-15	-2.21723E-15
43	2.37322E-15	-2.37322E-15	-2.21723E-15	-1.74258E-15
44	1.85732E-15	-1.85732E-15	-1.74258E-15	-1.37112E-15
45	1.38102E-15	-1.38102E-15	-1.37112E-15	-1.09491E-15
46	9.46360E-16	-9.46360E-16	-1.09491E-15	-9.05643E-16
47	5.55129E-16	-5.55129E-16	-9.05643E-16	-7.94617E-16
48	2.08880E-16	-2.08880E-16	-7.94617E-16	-7.52841E-16
49	3.46164E-15	-3.46164E-15	-7.52841E-16	-6.05160E-17
50	3.20909E-15	-3.20909E-15	-6.05160E-17	5.81302E-16
51	3.00483E-15	-3.00483E-15	-5.81302E-16	1.18228E-15
52	-7.03117E-16	7.03117E-16	-1.18228E-15	1.04167E-15
53	-8.06935E-16	8.06935E-16	-1.04167E-15	8.80280E-16
54	-8.61631E-16	8.61631E-16	-8.80280E-16	7.07954E-16
55	-8.66904E-16	8.66904E-16	-7.07954E-16	5.34573E-16
56	-8.22546E-16	8.22546E-16	-5.34573E-16	3.70064E-16
57	-7.28423E-16	7.28423E-16	-3.70064E-16	2.24379E-16
58	-5.84454E-16	5.84454E-16	-2.24379E-16	1.07489E-16
59	-3.90598E-16	3.90598E-16	-1.07489E-16	2.93689E-17

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

60-1.46837E-16 1.46837E-16-2.93689E-17 5.04871E-29

ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1272E-26
RENORM= 225.0 REMNOR=0.3005E-52 RATIO =0.6867E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8307E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.6867E-01 RATIOOR= 0.000
MAX UN= 2.957 IEQ= 11 NODE 6 DOF 1 Y-DISPL.F
MIN UN=-.4516E-16 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1272E-26
RENORM= 6.086 REMNOR=0.2535E-22 RATIO =0.1129E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8307E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.1129E-01 RATIOOR= 0.000
MAX UN= 1.318 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
MIN UN=-.9997E-11 IEQ= 93 NODE 47 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1272E-26
RENORM= 1.069 REMNOR=0.2252E-22 RATIO =0.4733E-02 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8307E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.4733E-02 RATIOOR= 0.000
MAX UN=0.8471 IEQ= 13 NODE 7 DOF 1 Y-DISPL.F
MIN UN=-.2026E-10 IEQ= 9 NODE 5 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 4 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1272E-26
RENORM=0.3796E-02 REMNOR=0.1273E-22 RATIO =0.2821E-03 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 35.19 RMMAX =0.8307E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.2821E-03 RATIOOR= 0.000
MAX UN=0.6129E-01 IEQ= 41 NODE 21 DOF 1 Y-DISPL.F
MIN UN=-.2053E-10 IEQ= 11 NODE 6 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 5 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4771E+05 RIMNOR=0.1272E-26
RENORM=0.4144E-20 REMNOR=0.1152E-22 RATIO =0.2947E-12 TOLER =0.1000E-03 CONVERGED !
RFMAX = 35.19 RMMAX =0.8307E-14
RTSMAL=0.1000E-03 RMSMAL=0.1000E-19
RDT =0.4771E+05 RDR =0.1000E-19
RATIOT=0.2947E-12 RATIOOR= 0.000
MAX UN=0.3804E-10 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
MIN UN=-.3242E-10 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|                               NewProject.BaseDesignSection_28.A2M2R1_1787 |
|                               Exe Time :24 May 2018      18:17:34 |
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New Project
SOLUTION REACHED USING 5 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 2 (AT TIME 2.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	3.3947975E-04	-7.9518222E-05	
2	3.2357610E-04	-7.9518222E-05	
3	3.0767432E-04	-7.9490237E-05	
4	2.9178747E-04	-7.9350312E-05	
5	2.7595099E-04	-7.8958520E-05	
6	2.6023391E-04	-7.8118968E-05	
7	2.4474121E-04	-7.6712346E-05	
8	2.2958626E-04	-7.4746510E-05	
9	2.1487674E-04	-7.2268611E-05	
10	2.0070764E-04	-6.9358298E-05	
11	1.8715506E-04	-6.6123401E-05	
12	1.7427268E-04	-6.2672470E-05	
13	1.6209478E-04	-5.9090867E-05	
14	1.5064084E-04	-5.5441618E-05	
15	1.3991984E-04	-5.1766827E-05	
16	1.2993470E-04	-4.8083254E-05	
17	1.2068678E-04	-4.4395432E-05	
18	1.1217596E-04	-4.0715436E-05	
19	1.0439875E-04	-3.7063211E-05	
20	9.7346941E-05	-3.3466973E-05	
21	9.1005797E-05	-2.9963668E-05	
22	8.5352309E-05	-2.6598308E-05	
23	8.0354206E-05	-2.3416973E-05	
24	7.5970851E-05	-2.0455671E-05	
25	7.2155714E-05	-1.7737715E-05	
26	6.8858697E-05	-1.5275778E-05	
27	6.6028087E-05	-1.3073793E-05	
28	6.3612073E-05	-1.1128627E-05	
29	6.1560088E-05	-9.4316775E-06	
30	5.9823705E-05	-7.9701801E-06	
31	5.8357371E-05	-6.7283514E-06	
32	5.7118919E-05	-5.6883082E-06	
33	5.6069879E-05	-4.8308961E-06	
34	5.5175701E-05	-4.1363632E-06	
35	5.4405801E-05	-3.5848245E-06	
36	5.3733537E-05	-3.1568115E-06	
37	5.3136081E-05	-2.8337700E-06	
38	5.2594184E-05	-2.5984415E-06	
39	5.2091901E-05	-2.4351708E-06	
40	5.1616235E-05	-2.3301177E-06	
41	5.1156763E-05	-2.2714163E-06	
42	5.0705243E-05	-2.2490977E-06	
43	5.0255268E-05	-2.2546164E-06	
44	4.9802037E-05	-2.2805174E-06	
45	4.9342130E-05	-2.3204291E-06	
46	4.8873288E-05	-2.3690379E-06	
47	4.8394221E-05	-2.4220469E-06	
48	4.7904398E-05	-2.4761291E-06	
49	4.7403859E-05	-2.5288747E-06	
50	4.6893043E-05	-2.5787380E-06	
51	4.6372607E-05	-2.6249863E-06	
52	4.5843274E-05	-2.6676504E-06	
53	4.5305750E-05	-2.7074738E-06	
54	4.4760531E-05	-2.7440024E-06	
55	4.4208481E-05	-2.7755517E-06	
56	4.3650711E-05	-2.8010849E-06	
57	4.3088476E-05	-2.8201798E-06	
58	4.2523057E-05	-2.8330042E-06	
59	4.1955643E-05	-2.8402966E-06	
60	4.1387221E-05	-2.8433530E-06	
61	4.0818433E-05	-2.8440187E-06	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A2M2R1_1787 |
|          Exe Time :24 May 2018   18:17:34 |
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New Project
  
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STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 2.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-3.3948E-04	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3826	-3.2358E-04	2.088	0.000	2.088	1.341	ACTIVE	0.000	-0.2000	1.913	
1.000	1.000	1.913	0.000	0.000	Ug1_2_8_L_0						
3 D	0.7652	-3.0767E-04	4.182	0.000	4.182	2.671	ACTIVE	0.000	-0.4000	3.826	
1.000	1.000	3.826	0.000	0.000	Ug1_2_8_L_0						
4 D	1.148	-2.9179E-04	6.287	0.000	6.287	3.978	ACTIVE	0.000	-0.6000	5.739	
1.000	1.000	5.739	0.000	0.000	Ug1_2_8_L_0						
5 D	1.530	-2.7595E-04	8.405	0.000	8.405	5.256	ACTIVE	0.000	-0.8000	7.652	
1.000	1.000	7.652	0.000	0.000	Ug1_2_8_L_0						
6 D	1.913	-2.6023E-04	10.54	0.000	10.54	6.501	ACTIVE	0.000	-1.000	9.565	
1.000	1.000	9.565	0.000	0.000	Ug1_2_8_L_0						
7 D	2.296	-2.4474E-04	12.68	0.000	12.68	7.714	ACTIVE	0.000	-1.200	11.48	
1.000	1.000	11.48	0.000	0.000	Ug1_2_8_L_0						
8 D	2.678	-2.2959E-04	14.83	0.000	14.83	8.897	ACTIVE	0.000	-1.400	13.39	
1.000	1.000	13.39	0.000	0.000	Ug1_2_8_L_0						
9 D	3.061	-2.1488E-04	16.99	0.000	16.99	10.05	ACTIVE	0.000	-1.600	15.30	
1.000	1.000	15.30	0.000	0.000	Ug1_2_8_L_0						
10 D	3.483	-2.0071E-04	19.16	0.1993	19.16	11.19	ACTIVE	0.000	-1.800	17.22	
1.000	1.000	17.42	0.000	0.000	Ug1_2_8_L_0						
11 D	4.231	-1.8716E-04	21.32	2.026	21.32	12.30	UL-RL	5.4891E+04	-2.000	19.13	
1.000	1.000	21.16	0.000	0.000	Ug1_2_8_L_0						
12 D	4.975	-1.7427E-04	23.49	3.831	23.49	13.40	UL-RL	5.4891E+04	-2.200	21.04	
1.000	1.000	24.87	0.000	0.000	Ug1_2_8_L_0						
13 D	5.708	-1.6209E-04	25.72	5.584	25.72	14.48	UL-RL	5.4891E+04	-2.400	22.96	
1.000	1.000	28.54	0.000	0.000	Ug1_2_8_L_0						
14 D	6.431	-1.5064E-04	27.82	7.286	27.82	15.56	UL-RL	5.4891E+04	-2.600	24.87	
1.000	1.000	32.16	0.000	0.000	Ug1_2_8_L_0						
15 D	7.351	-1.3992E-04	30.13	9.972	30.13	16.62	ACTIVE	0.000	-2.800	26.78	
1.000	1.000	36.75	0.000	0.000	Ug2_741_743_L_0						
16 D	7.887	-1.2993E-04	32.44	10.74	32.44	17.68	ACTIVE	0.000	-3.000	28.70	
1.000	1.000	39.43	0.000	0.000	Ug2_741_743_L_0						
17 D	8.405	-1.2069E-04	34.49	11.42	34.49	18.73	ACTIVE	0.000	-3.200	30.61	
1.000	1.000	42.03	0.000	0.000	Ug2_741_743_L_0						
18 D	8.939	-1.1218E-04	36.78	12.17	36.78	19.78	ACTIVE	0.000	-3.400	32.52	
1.000	1.000	44.69	0.000	0.000	Ug2_741_743_L_0						
19 D	9.457	-1.0440E-04	38.82	12.85	38.82	20.83	ACTIVE	0.000	-3.600	34.43	
1.000	1.000	47.29	0.000	0.000	Ug2_741_743_L_0						
20 D	9.989	-9.7347E-05	41.09	13.60	41.09	21.87	ACTIVE	0.000	-3.800	36.35	
1.000	1.000	49.95	0.000	0.000	Ug2_741_743_L_0						
21 D	10.52	-9.1006E-05	43.33	14.34	43.33	22.91	ACTIVE	0.000	-4.000	38.26	
1.000	1.000	52.60	0.000	0.000	Ug2_741_743_L_0						
22 D	11.15	-8.5352E-05	45.37	15.60	45.37	23.95	UL-RL	9.7763E+04	-4.200	40.17	
1.000	1.000	55.77	0.000	0.000	Ug2_741_743_L_0						
23 D	11.84	-8.0354E-05	47.60	17.13	47.60	24.98	UL-RL	9.7763E+04	-4.400	42.09	
1.000	1.000	59.21	0.000	0.000	Ug2_741_743_L_0						
24 D	12.52	-7.5971E-05	49.65	18.59	49.65	26.02	UL-RL	9.7763E+04	-4.600	44.00	
1.000	1.000	62.59	0.000	0.000	Ug2_741_743_L_0						
25 D	13.18	-7.2156E-05	51.86	19.99	51.86	27.05	UL-RL	9.7763E+04	-4.800	45.91	
1.000	1.000	65.91	0.000	0.000	Ug2_741_743_L_0						
26 D	13.84	-6.8859E-05	54.07	21.35	54.07	28.08	UL-RL	9.7763E+04	-5.000	47.83	
1.000	1.000	69.18	0.000	0.000	Ug2_741_743_L_0						
27 D	14.48	-6.6028E-05	56.11	22.66	56.11	29.11	UL-RL	9.7763E+04	-5.200	49.74	
1.000	1.000	72.40	0.000	0.000	Ug2_741_743_L_0						
28 D	15.12	-6.3612E-05	58.31	23.93	58.31	30.14	UL-RL	9.7763E+04	-5.400	51.65	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	75.58	0.000	0.000	Ug2_741_743_L_0					
29 D	15.74	-6.1560E-05	60.35	25.16	60.35	31.17	UL-RL	9.7763E+04	-5.600	53.57
1.000	1.000	78.72	0.000	0.000	Ug2_741_743_L_0					
30 D	16.37	-5.9824E-05	62.54	26.36	62.54	32.20	UL-RL	9.7763E+04	-5.800	55.48
1.000	1.000	81.83	0.000	0.000	Ug2_741_743_L_0					
31 D	16.98	-5.8357E-05	64.72	27.53	64.72	33.23	UL-RL	9.7763E+04	-6.000	57.39
1.000	1.000	84.92	0.000	0.000	Ug2_741_743_L_0					
32 D	17.60	-5.7119E-05	66.77	28.68	66.77	34.26	UL-RL	9.7763E+04	-6.200	59.30
1.000	1.000	87.98	0.000	0.000	Ug2_741_743_L_0					
33 D	18.21	-5.6070E-05	68.94	29.81	68.94	35.29	UL-RL	9.7763E+04	-6.400	61.22
1.000	1.000	91.03	0.000	0.000	Ug2_741_743_L_0					
34 D	18.81	-5.5176E-05	70.99	30.93	70.99	36.32	UL-RL	9.7763E+04	-6.600	63.13
1.000	1.000	94.06	0.000	0.000	Ug2_741_743_L_0					
35 D	19.42	-5.4406E-05	73.15	32.03	73.15	37.35	UL-RL	9.7763E+04	-6.800	65.04
1.000	1.000	97.08	0.000	0.000	Ug2_741_743_L_0					
36 D	20.02	-5.3734E-05	75.32	33.13	75.32	38.38	UL-RL	9.7763E+04	-7.000	66.96
1.000	1.000	100.1	0.000	0.000	Ug2_741_743_L_0					
37 D	20.62	-5.3136E-05	77.37	34.21	77.37	39.41	UL-RL	9.7763E+04	-7.200	68.87
1.000	1.000	103.1	0.000	0.000	Ug2_741_743_L_0					
38 D	21.22	-5.2594E-05	79.52	35.29	79.52	40.44	UL-RL	9.7763E+04	-7.400	70.78
1.000	1.000	106.1	0.000	0.000	Ug2_741_743_L_0					
39 D	21.81	-5.2092E-05	81.57	36.37	81.57	41.46	UL-RL	9.7763E+04	-7.600	72.70
1.000	1.000	109.1	0.000	0.000	Ug2_741_743_L_0					
40 D	22.41	-5.1616E-05	83.73	37.45	83.73	42.49	UL-RL	9.7763E+04	-7.800	74.61
1.000	1.000	112.1	0.000	0.000	Ug2_741_743_L_0					
41 D	23.01	-5.1157E-05	85.88	38.52	85.88	43.52	UL-RL	9.7763E+04	-8.000	76.52
1.000	1.000	115.0	0.000	0.000	Ug2_741_743_L_0					
42 D	23.61	-5.0705E-05	87.93	39.59	87.93	44.55	UL-RL	9.7763E+04	-8.200	78.43
1.000	1.000	118.0	0.000	0.000	Ug2_741_743_L_0					
43 D	24.20	-5.0255E-05	90.08	40.66	90.08	45.58	UL-RL	9.7763E+04	-8.400	80.35
1.000	1.000	121.0	0.000	0.000	Ug2_741_743_L_0					
44 D	24.80	-4.9802E-05	92.13	41.74	92.13	46.60	UL-RL	9.7763E+04	-8.600	82.26
1.000	1.000	124.0	0.000	0.000	Ug2_741_743_L_0					
45 D	25.40	-4.9342E-05	94.27	42.81	94.27	47.63	UL-RL	9.7763E+04	-8.800	84.17
1.000	1.000	127.0	0.000	0.000	Ug2_741_743_L_0					
46 D	25.99	-4.8873E-05	96.42	43.88	96.42	48.66	UL-RL	9.7763E+04	-9.000	86.09
1.000	1.000	130.0	0.000	0.000	Ug2_741_743_L_0					
47 D	26.59	-4.8394E-05	98.47	44.96	98.47	49.69	UL-RL	9.7763E+04	-9.200	88.00
1.000	1.000	133.0	0.000	0.000	Ug2_741_743_L_0					
48 D	27.19	-4.7904E-05	100.6	46.03	100.6	50.72	UL-RL	9.7763E+04	-9.400	89.91
1.000	1.000	135.9	0.000	0.000	Ug2_741_743_L_0					
49 D	27.79	-4.7404E-05	102.7	47.11	102.7	51.75	UL-RL	9.7763E+04	-9.600	91.83
1.000	1.000	138.9	0.000	0.000	Ug2_741_743_L_0					
50 D	28.39	-4.6893E-05	104.8	48.19	104.8	52.77	UL-RL	9.7763E+04	-9.800	93.74
1.000	1.000	141.9	0.000	0.000	Ug2_741_743_L_0					
51 D	28.98	-4.6373E-05	106.9	49.27	106.9	53.80	UL-RL	9.7763E+04	-10.000	95.65
1.000	1.000	144.9	0.000	0.000	Ug2_741_743_L_0					
52 D	29.58	-4.5843E-05	109.0	50.35	109.0	54.83	UL-RL	9.7763E+04	-10.200	97.57
1.000	1.000	147.9	0.000	0.000	Ug2_741_743_L_0					
53 D	30.28	-4.5306E-05	111.1	51.94	111.1	55.86	UL-RL	8.6469E+04	-10.400	99.48
1.000	1.000	151.4	0.000	0.000	Ug3_740_742_L_0					
54 D	30.88	-4.4761E-05	113.3	53.02	113.3	56.89	UL-RL	8.6469E+04	-10.600	101.4
1.000	1.000	154.4	0.000	0.000	Ug3_740_742_L_0					
55 D	31.48	-4.4208E-05	115.3	54.09	115.3	57.92	UL-RL	8.6469E+04	-10.800	103.3
1.000	1.000	157.4	0.000	0.000	Ug3_740_742_L_0					
56 D	32.08	-4.3651E-05	117.4	55.17	117.4	58.95	UL-RL	8.6469E+04	-11.000	105.2
1.000	1.000	160.4	0.000	0.000	Ug3_740_742_L_0					
57 D	32.68	-4.3088E-05	119.5	56.25	119.5	59.97	UL-RL	8.6469E+04	-11.200	107.1
1.000	1.000	163.4	0.000	0.000	Ug3_740_742_L_0					
58 D	33.27	-4.2523E-05	121.6	57.33	121.6	61.00	UL-RL	8.6469E+04	-11.400	109.0
1.000	1.000	166.4	0.000	0.000	Ug3_740_742_L_0					
59 D	33.87	-4.1956E-05	123.8	58.40	123.8	62.03	UL-RL	8.6469E+04	-11.600	111.0
1.000	1.000	169.4	0.000	0.000	Ug3_740_742_L_0					
60 D	34.47	-4.1387E-05	125.8	59.48	125.8	63.06	UL-RL	8.6469E+04	-11.800	112.9
1.000	1.000	172.4	0.000	0.000	Ug3_740_742_L_0					
61 D	17.53	-4.0818E-05	127.9	60.56	127.9	64.09	UL-RL	8.6469E+04	-12.000	114.8
1.000	1.000	175.3	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.A2M2R1_1787          |
|          Exe Time :24 May 2018          18:17:34          |
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New Project
  
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STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 2.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6 D	1.812	2.6023E-04	0.000	9.062	10.00	9.062	V-C	1.7079E+04	-1.000	0.000	
1.000	1.000	9.062	0.000	0.000	Ug1_2_8_L_0						
7 D	2.504	2.4474E-04	1.913	10.43	12.00	10.43	V-C	1.7079E+04	-1.200	2.087	
1.000	1.000	12.52	0.000	0.000	Ug1_2_8_L_0						
8 D	3.115	2.2959E-04	3.826	11.40	14.00	11.40	V-C	1.7079E+04	-1.400	4.174	
1.000	1.000	15.57	0.000	0.000	Ug1_2_8_L_0						
9 D	3.713	2.1488E-04	5.739	12.31	16.00	12.31	V-C	1.7079E+04	-1.600	6.261	
1.000	1.000	18.57	0.000	0.000	Ug1_2_8_L_0						
10 D	4.305	2.0071E-04	7.652	13.18	18.00	13.18	V-C	1.7079E+04	-1.800	8.348	
1.000	1.000	21.53	0.000	0.000	Ug1_2_8_L_0						
11 D	4.893	1.8716E-04	9.565	14.03	20.00	14.03	V-C	1.7079E+04	-2.000	10.43	
1.000	1.000	24.47	0.000	0.000	Ug1_2_8_L_0						
12 D	5.480	1.7427E-04	11.48	14.88	22.00	14.88	V-C	1.7079E+04	-2.200	12.52	
1.000	1.000	27.40	0.000	0.000	Ug1_2_8_L_0						
13 D	6.065	1.6209E-04	13.39	15.72	24.00	15.72	V-C	1.7079E+04	-2.400	14.61	
1.000	1.000	30.32	0.000	0.000	Ug1_2_8_L_0						
14 D	6.650	1.5064E-04	15.30	16.55	26.00	16.55	V-C	1.7079E+04	-2.600	16.70	
1.000	1.000	33.25	0.000	0.000	Ug1_2_8_L_0						
15 D	7.361	1.3992E-04	17.22	18.02	28.00	18.02	V-C	2.1577E+04	-2.800	18.78	
1.000	1.000	36.81	0.000	0.000	Ug2_741_743_L_0						
16 D	7.939	1.2993E-04	19.13	18.82	30.00	18.82	V-C	2.1577E+04	-3.000	20.87	
1.000	1.000	39.69	0.000	0.000	Ug2_741_743_L_0						
17 D	8.518	1.2069E-04	21.04	19.63	32.00	19.63	V-C	2.1577E+04	-3.200	22.96	
1.000	1.000	42.59	0.000	0.000	Ug2_741_743_L_0						
18 D	9.099	1.1218E-04	22.96	20.45	34.00	20.45	V-C	2.1577E+04	-3.400	25.04	
1.000	1.000	45.50	0.000	0.000	Ug2_741_743_L_0						
19 D	9.683	1.0440E-04	24.87	21.28	36.00	21.28	V-C	2.1577E+04	-3.600	27.13	
1.000	1.000	48.41	0.000	0.000	Ug2_741_743_L_0						
20 D	10.27	9.7347E-05	26.78	22.13	38.00	22.13	V-C	2.1577E+04	-3.800	29.22	
1.000	1.000	51.34	0.000	0.000	Ug2_741_743_L_0						
21 D	10.86	9.1006E-05	28.70	22.98	40.00	22.98	V-C	2.1577E+04	-4.000	31.30	
1.000	1.000	54.29	0.000	0.000	Ug2_741_743_L_0						
22 D	11.45	8.5352E-05	30.61	23.85	42.00	23.85	V-C	2.1577E+04	-4.200	33.39	
1.000	1.000	57.24	0.000	0.000	Ug2_741_743_L_0						
23 D	12.04	8.0354E-05	32.52	24.73	44.00	24.73	V-C	2.1577E+04	-4.400	35.48	
1.000	1.000	60.21	0.000	0.000	Ug2_741_743_L_0						
24 D	12.64	7.5971E-05	34.43	25.62	46.00	25.62	V-C	2.1577E+04	-4.600	37.57	
1.000	1.000	63.19	0.000	0.000	Ug2_741_743_L_0						
25 D	13.24	7.2156E-05	36.35	26.52	48.00	26.52	V-C	2.1577E+04	-4.800	39.65	
1.000	1.000	66.18	0.000	0.000	Ug2_741_743_L_0						
26 D	13.84	6.8859E-05	38.26	27.44	50.00	27.44	V-C	2.1577E+04	-5.000	41.74	
1.000	1.000	69.18	0.000	0.000	Ug2_741_743_L_0						
27 D	14.44	6.6028E-05	40.17	28.36	52.00	28.36	V-C	2.1577E+04	-5.200	43.83	
1.000	1.000	72.18	0.000	0.000	Ug2_741_743_L_0						
28 D	15.04	6.3612E-05	42.09	29.29	54.00	29.29	V-C	2.1577E+04	-5.400	45.91	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	75.20	0.000	0.000	Ug2_741_743_L_0					
29 D	15.65	6.1560E-05	44.00	30.23	56.00	30.23	V-C	2.1577E+04	-5.600	48.00
1.000	1.000	78.23	0.000	0.000	Ug2_741_743_L_0					
30 D	16.25	5.9824E-05	45.91	31.16	58.00	31.17	UL-RL	6.4730E+04	-5.800	50.09
1.000	1.000	81.25	0.000	0.000	Ug2_741_743_L_0					
31 D	16.86	5.8357E-05	47.83	32.11	60.00	32.12	UL-RL	6.4730E+04	-6.000	52.17
1.000	1.000	84.28	0.000	0.000	Ug2_741_743_L_0					
32 D	17.46	5.7119E-05	49.74	33.05	62.00	33.08	UL-RL	6.4730E+04	-6.200	54.26
1.000	1.000	87.32	0.000	0.000	Ug2_741_743_L_0					
33 D	18.07	5.6070E-05	51.65	34.00	64.00	34.04	UL-RL	6.4730E+04	-6.400	56.35
1.000	1.000	90.35	0.000	0.000	Ug2_741_743_L_0					
34 D	18.68	5.5176E-05	53.57	34.95	66.00	35.01	UL-RL	6.4730E+04	-6.600	58.43
1.000	1.000	93.38	0.000	0.000	Ug2_741_743_L_0					
35 D	19.28	5.4406E-05	55.48	35.90	68.00	35.97	UL-RL	6.4730E+04	-6.800	60.52
1.000	1.000	96.42	0.000	0.000	Ug2_741_743_L_0					
36 D	19.89	5.3734E-05	57.39	36.86	70.00	36.94	UL-RL	6.4730E+04	-7.000	62.61
1.000	1.000	99.47	0.000	0.000	Ug2_741_743_L_0					
37 D	20.50	5.3136E-05	59.30	37.82	72.00	37.91	UL-RL	6.4730E+04	-7.200	64.70
1.000	1.000	102.5	0.000	0.000	Ug2_741_743_L_0					
38 D	21.11	5.2594E-05	61.22	38.79	74.00	38.88	UL-RL	6.4730E+04	-7.400	66.78
1.000	1.000	105.6	0.000	0.000	Ug2_741_743_L_0					
39 D	21.73	5.2092E-05	63.13	39.76	76.00	39.84	UL-RL	6.4730E+04	-7.600	68.87
1.000	1.000	108.6	0.000	0.000	Ug2_741_743_L_0					
40 D	22.34	5.1616E-05	65.04	40.73	78.00	40.81	UL-RL	6.4730E+04	-7.800	70.96
1.000	1.000	111.7	0.000	0.000	Ug2_741_743_L_0					
41 D	22.95	5.1157E-05	66.96	41.69	80.00	41.78	UL-RL	6.4730E+04	-8.000	73.04
1.000	1.000	114.7	0.000	0.000	Ug2_741_743_L_0					
42 D	23.55	5.0705E-05	68.87	42.62	82.00	42.77	UL-RL	6.4730E+04	-8.200	75.13
1.000	1.000	117.8	0.000	0.000	Ug2_741_743_L_0					
43 D	24.16	5.0255E-05	70.78	43.56	84.00	43.75	UL-RL	6.4730E+04	-8.400	77.22
1.000	1.000	120.8	0.000	0.000	Ug2_741_743_L_0					
44 D	24.76	4.9802E-05	72.70	44.49	86.00	44.74	UL-RL	6.4730E+04	-8.600	79.30
1.000	1.000	123.8	0.000	0.000	Ug2_741_743_L_0					
45 D	25.36	4.9342E-05	74.61	45.43	88.00	45.72	UL-RL	6.4730E+04	-8.800	81.39
1.000	1.000	126.8	0.000	0.000	Ug2_741_743_L_0					
46 D	25.97	4.8873E-05	76.52	46.36	90.00	46.70	UL-RL	6.4730E+04	-9.000	83.48
1.000	1.000	129.8	0.000	0.000	Ug2_741_743_L_0					
47 D	26.57	4.8394E-05	78.43	47.30	92.00	47.69	UL-RL	6.4730E+04	-9.200	85.57
1.000	1.000	132.9	0.000	0.000	Ug2_741_743_L_0					
48 D	27.18	4.7904E-05	80.35	48.23	94.00	48.67	UL-RL	6.4730E+04	-9.400	87.65
1.000	1.000	135.9	0.000	0.000	Ug2_741_743_L_0					
49 D	27.78	4.7404E-05	82.26	49.16	96.00	49.66	UL-RL	6.4730E+04	-9.600	89.74
1.000	1.000	138.9	0.000	0.000	Ug2_741_743_L_0					
50 D	28.38	4.6893E-05	84.17	50.09	98.00	50.64	UL-RL	6.4730E+04	-9.800	91.83
1.000	1.000	141.9	0.000	0.000	Ug2_741_743_L_0					
51 D	28.99	4.6373E-05	86.09	51.02	100.00	51.63	UL-RL	6.4730E+04	-10.000	93.91
1.000	1.000	144.9	0.000	0.000	Ug2_741_743_L_0					
52 D	29.59	4.5843E-05	88.00	51.95	102.0	52.61	UL-RL	6.4730E+04	-10.200	96.00
1.000	1.000	148.0	0.000	0.000	Ug2_741_743_L_0					
53 D	30.27	4.5306E-05	89.91	53.26	104.0	53.60	UL-RL	7.3184E+04	-10.400	98.09
1.000	1.000	151.4	0.000	0.000	Ug3_740_742_L_0					
54 D	30.87	4.4761E-05	91.83	54.19	106.0	54.58	UL-RL	7.3184E+04	-10.600	100.2
1.000	1.000	154.4	0.000	0.000	Ug3_740_742_L_0					
55 D	31.47	4.4208E-05	93.74	55.11	108.0	55.57	UL-RL	7.3184E+04	-10.800	102.3
1.000	1.000	157.4	0.000	0.000	Ug3_740_742_L_0					
56 D	32.08	4.3651E-05	95.65	56.04	110.0	56.55	UL-RL	7.3184E+04	-11.000	104.3
1.000	1.000	160.4	0.000	0.000	Ug3_740_742_L_0					
57 D	32.68	4.3088E-05	97.57	56.96	112.0	57.54	UL-RL	7.3184E+04	-11.200	106.4
1.000	1.000	163.4	0.000	0.000	Ug3_740_742_L_0					
58 D	33.28	4.2523E-05	99.48	57.88	114.0	58.52	UL-RL	7.3184E+04	-11.400	108.5
1.000	1.000	166.4	0.000	0.000	Ug3_740_742_L_0					
59 D	33.88	4.1956E-05	101.4	58.81	116.0	59.51	UL-RL	7.3184E+04	-11.600	110.6
1.000	1.000	169.4	0.000	0.000	Ug3_740_742_L_0					
60 D	34.48	4.1387E-05	103.3	59.73	118.0	60.50	UL-RL	7.3184E+04	-11.800	112.7
1.000	1.000	172.4	0.000	0.000	Ug3_740_742_L_0					
61 D	17.54	4.0818E-05	105.2	60.65	120.0	61.48	UL-RL	7.3184E+04	-12.000	114.8
1.000	1.000	175.4	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

60 9.10080E-03-9.10080E-03 1.82025E-03-2.10248E-15

ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4213E+05 RIMNOR= 841.3
RENORM= 267.2 REMNOR=0.1152E-22 RATIO =0.7964E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 33.91 RMMAX = 5.042
RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
RDT =0.4213E+05 RDR = 841.3
RATIOT=0.7964E-01 RATIO= 0.000
MAX UN= 4.220 IEQ= 19 NODE 10 DOF 1 Y-DISPL.F
MIN UN=-.3794E-01 IEQ= 9 NODE 5 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4213E+05 RIMNOR= 841.3
RENORM= 62.11 REMNOR=0.1679E-21 RATIO =0.3840E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 33.91 RMMAX = 5.042
RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
RDT =0.4213E+05 RDR = 841.3
RATIOT=0.3840E-01 RATIO= 0.000
MAX UN= 2.434 IEQ= 29 NODE 15 DOF 1 Y-DISPL.F
MIN UN=-.3914E-10 IEQ= 101 NODE 51 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4213E+05 RIMNOR= 841.3
RENORM= 46.54 REMNOR=0.3182E-20 RATIO =0.3324E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 33.91 RMMAX = 5.042
RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
RDT =0.4213E+05 RDR = 841.3
RATIOT=0.3324E-01 RATIO= 0.000
MAX UN= 6.334 IEQ= 21 NODE 11 DOF 1 Y-DISPL.F
MIN UN=-.2872E-09 IEQ= 27 NODE 14 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 4 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4213E+05 RIMNOR= 841.3
RENORM=0.2826 REMNOR=0.8502E-21 RATIO =0.2590E-02 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 33.91 RMMAX = 5.042
RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
RDT =0.4213E+05 RDR = 841.3
RATIOT=0.2590E-02 RATIO= 0.000
MAX UN=0.3766 IEQ= 71 NODE 36 DOF 1 Y-DISPL.F
MIN UN=-.2279E-09 IEQ= 13 NODE 7 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 5 RNORM = 0.000 RMNORM= 0.000
RINORM=0.4213E+05 RIMNOR= 841.3
RENORM=0.6554E-05 REMNOR=0.6231E-21 RATIO =0.1247E-04 TOLER =0.1000E-03 CONVERGED !
RFMAX = 33.91 RMMAX = 5.042
RTSMAL=0.1000E-03 RMSMAL=0.1000E-04
RDT =0.4213E+05 RDR = 841.3
RATIOT=0.1247E-04 RATIO= 0.000
MAX UN=0.2560E-02 IEQ= 81 NODE 41 DOF 1 Y-DISPL.F
MIN UN=-.1217E-09 IEQ= 25 NODE 13 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|              NewProject.BaseDesignSection_28.A2M2R1_1787 |
|              Exe Time :24 May 2018           18:17:34 |
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New Project
SOLUTION REACHED USING 5 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 3 (AT TIME 3.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	3.4825917E-03	-6.4946039E-04	
2	3.3526996E-03	-6.4946039E-04	
3	3.2228093E-03	-6.4943380E-04	
4	3.0929332E-03	-6.4930081E-04	
5	2.9631049E-03	-6.4892845E-04	
6	2.8333902E-03	-6.4813052E-04	
7	2.7038970E-03	-6.4666767E-04	
8	2.5747869E-03	-6.4424730E-04	
9	2.4462850E-03	-6.4052367E-04	
10	2.3186909E-03	-6.3509780E-04	
11	2.1923901E-03	-6.2750879E-04	
12	2.0678472E-03	-6.1752311E-04	
13	1.9455347E-03	-6.0523025E-04	
14	1.8258949E-03	-5.9083997E-04	
15	1.7093193E-03	-5.7464025E-04	
16	1.5961450E-03	-5.5684806E-04	
17	1.4866727E-03	-5.3765860E-04	
18	1.3811574E-03	-5.1732337E-04	
19	1.2798046E-03	-4.9606951E-04	
20	1.1827772E-03	-4.7410161E-04	
21	1.0901998E-03	-4.5160339E-04	
22	1.0021608E-03	-4.2873789E-04	
23	9.1871936E-04	-4.0565097E-04	
24	8.3990649E-04	-3.8247267E-04	
25	7.6572864E-04	-3.5931915E-04	
26	6.9617024E-04	-3.3629457E-04	
27	6.3119632E-04	-3.1349222E-04	
28	5.7075322E-04	-2.9099673E-04	
29	5.1477194E-04	-2.6888657E-04	
30	4.6316800E-04	-2.4723536E-04	
31	4.1584249E-04	-2.2611374E-04	
32	3.7268282E-04	-2.0559048E-04	
33	3.3356204E-04	-1.8573444E-04	
34	2.9833982E-04	-1.6661674E-04	
35	2.6686115E-04	-1.4831192E-04	
36	2.3895556E-04	-1.3089950E-04	
37	2.1443628E-04	-1.1446492E-04	
38	1.9309833E-04	-9.9101095E-05	
39	1.7471893E-04	-8.4890858E-05	
40	1.5906161E-04	-7.1886355E-05	
41	1.4588244E-04	-6.0111035E-05	
42	1.3493522E-04	-4.9565300E-05	
43	1.2597584E-04	-4.0226834E-05	
44	1.1876698E-04	-3.2050966E-05	
45	1.1308209E-04	-2.4976012E-05	
46	1.0870816E-04	-1.8927792E-05	
47	1.0544802E-04	-1.3823854E-05	
48	1.0312149E-04	-9.5767593E-06	
49	1.0156616E-04	-6.0970060E-06	
50	1.0063748E-04	-3.2954445E-06	
51	1.0020856E-04	-1.0851891E-06	
52	1.0016952E-04	6.1675657E-07	
53	1.0042654E-04	1.8881024E-06	
54	1.0090106E-04	2.8040481E-06	
55	1.0152923E-04	3.4360120E-06	
56	1.0226081E-04	3.8481952E-06	
57	1.0305763E-04	4.0971664E-06	
58	1.0389204E-04	4.2316404E-06	
59	1.0474537E-04	4.2923468E-06	
60	1.0560624E-04	4.3119612E-06	
61	1.0646909E-04	4.3150751E-06	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A2M2R1_1787 |
|          Exe Time :24 May 2018           18:17:34 |
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New Project

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STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 3.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	0.000	-3.4826E-03	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3636	-3.3527E-03	2.183	0.000	2.183	1.341	ACTIVE	0.000	-0.2000	1.818	
1.000	1.000	1.818	0.000	0.000	Ug1_2_8_L_0						
3 D	0.7273	-3.2228E-03	4.372	0.000	4.372	2.671	ACTIVE	0.000	-0.4000	3.636	
1.000	1.000	3.636	0.000	0.000	Ug1_2_8_L_0						
4 D	1.091	-3.0929E-03	6.571	0.000	6.571	3.978	ACTIVE	0.000	-0.6000	5.455	
1.000	1.000	5.455	0.000	0.000	Ug1_2_8_L_0						
5 D	1.455	-2.9631E-03	8.784	0.000	8.784	5.256	ACTIVE	0.000	-0.8000	7.273	
1.000	1.000	7.273	0.000	0.000	Ug1_2_8_L_0						
6 D	1.818	-2.8334E-03	11.01	0.000	11.01	6.501	ACTIVE	0.000	-1.000	9.091	
1.000	1.000	9.091	0.000	0.000	Ug1_2_8_L_0						
7 D	2.182	-2.7039E-03	13.25	0.000	13.25	7.714	ACTIVE	0.000	-1.200	10.91	
1.000	1.000	10.91	0.000	0.000	Ug1_2_8_L_0						
8 D	2.545	-2.5748E-03	15.50	0.000	15.50	8.897	ACTIVE	0.000	-1.400	12.73	
1.000	1.000	12.73	0.000	0.000	Ug1_2_8_L_0						
9 D	2.909	-2.4463E-03	17.75	0.000	17.75	10.05	ACTIVE	0.000	-1.600	14.55	
1.000	1.000	14.55	0.000	0.000	Ug1_2_8_L_0						
10 D	3.392	-2.3187E-03	20.01	0.5980	20.01	11.19	ACTIVE	0.000	-1.800	16.36	
1.000	1.000	16.96	0.000	0.000	Ug1_2_8_L_0						
11 D	3.967	-2.1924E-03	22.27	1.654	22.27	12.30	ACTIVE	0.000	-2.000	18.18	
1.000	1.000	19.84	0.000	0.000	Ug1_2_8_L_0						
12 D	4.542	-2.0678E-03	24.53	2.710	24.53	13.40	ACTIVE	0.000	-2.200	20.00	
1.000	1.000	22.71	0.000	0.000	Ug1_2_8_L_0						
13 D	5.123	-1.9455E-03	26.86	3.795	26.86	14.48	ACTIVE	0.000	-2.400	21.82	
1.000	1.000	25.61	0.000	0.000	Ug1_2_8_L_0						
14 D	5.691	-1.8259E-03	29.05	4.819	29.05	15.56	ACTIVE	0.000	-2.600	23.64	
1.000	1.000	28.46	0.000	0.000	Ug1_2_8_L_0						
15 D	7.173	-1.7093E-03	31.45	10.41	31.45	16.62	ACTIVE	0.000	-2.800	25.45	
1.000	1.000	35.87	0.000	0.000	Ug2_741_743_L_0						
16 D	7.696	-1.5961E-03	33.86	11.21	33.86	17.68	ACTIVE	0.000	-3.000	27.27	
1.000	1.000	38.48	0.000	0.000	Ug2_741_743_L_0						
17 D	8.202	-1.4867E-03	36.01	11.92	36.01	18.73	ACTIVE	0.000	-3.200	29.09	
1.000	1.000	41.01	0.000	0.000	Ug2_741_743_L_0						
18 D	8.723	-1.3812E-03	38.39	12.71	38.39	19.78	ACTIVE	0.000	-3.400	30.91	
1.000	1.000	43.62	0.000	0.000	Ug2_741_743_L_0						
19 D	9.229	-1.2798E-03	40.53	13.42	40.53	20.83	ACTIVE	0.000	-3.600	32.73	
1.000	1.000	46.14	0.000	0.000	Ug2_741_743_L_0						
20 D	9.748	-1.1828E-03	42.89	14.20	42.89	21.87	ACTIVE	0.000	-3.800	34.55	
1.000	1.000	48.74	0.000	0.000	Ug2_741_743_L_0						
21 D	10.27	-1.0902E-03	45.23	14.97	45.23	22.91	ACTIVE	0.000	-4.000	36.36	
1.000	1.000	51.33	0.000	0.000	Ug2_741_743_L_0						
22 D	10.77	-1.0022E-03	47.37	15.68	47.37	23.95	ACTIVE	0.000	-4.200	38.18	
1.000	1.000	53.86	0.000	0.000	Ug2_741_743_L_0						
23 D	11.29	-9.1872E-04	49.69	16.45	49.69	24.98	ACTIVE	0.000	-4.400	40.00	
1.000	1.000	56.45	0.000	0.000	Ug2_741_743_L_0						
24 D	11.79	-8.3991E-04	51.83	17.16	51.83	26.02	ACTIVE	0.000	-4.600	41.82	
1.000	1.000	58.97	0.000	0.000	Ug2_741_743_L_0						
25 D	12.31	-7.6573E-04	54.14	17.92	54.14	27.05	ACTIVE	0.000	-4.800	43.64	
1.000	1.000	61.56	0.000	0.000	Ug2_741_743_L_0						
26 D	12.83	-6.9617E-04	56.44	18.68	56.44	28.08	ACTIVE	0.000	-5.000	45.45	
1.000	1.000	64.14	0.000	0.000	Ug2_741_743_L_0						
27 D	13.33	-6.3120E-04	58.58	19.39	58.58	29.11	ACTIVE	0.000	-5.200	47.27	
1.000	1.000	66.66	0.000	0.000	Ug2_741_743_L_0						
28 D	13.85	-5.7075E-04	60.87	20.15	60.87	30.14	ACTIVE	0.000	-5.400	49.09	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	69.24	0.000	0.000	Ug2_741_743_L_0					
29 D	14.35	-5.1477E-04	63.01	20.86	63.01	31.17	ACTIVE	0.000	-5.600	50.91
1.000	1.000	71.76	0.000	0.000	Ug2_741_743_L_0					
30 D	14.87	-4.6317E-04	65.29	21.61	65.29	32.20	ACTIVE	0.000	-5.800	52.73
1.000	1.000	74.34	0.000	0.000	Ug2_741_743_L_0					
31 D	15.38	-4.1584E-04	67.57	22.36	67.57	33.23	ACTIVE	0.000	-6.000	54.55
1.000	1.000	76.91	0.000	0.000	Ug2_741_743_L_0					
32 D	15.89	-3.7268E-04	69.71	23.07	69.71	34.26	ACTIVE	0.000	-6.200	56.36
1.000	1.000	79.44	0.000	0.000	Ug2_741_743_L_0					
33 D	16.40	-3.3356E-04	71.97	23.82	71.97	35.29	ACTIVE	0.000	-6.400	58.18
1.000	1.000	82.01	0.000	0.000	Ug2_741_743_L_0					
34 D	16.91	-2.9834E-04	74.12	24.53	74.12	36.32	ACTIVE	0.000	-6.600	60.00
1.000	1.000	84.53	0.000	0.000	Ug2_741_743_L_0					
35 D	17.42	-2.6686E-04	76.38	25.28	76.38	37.35	ACTIVE	0.000	-6.800	61.82
1.000	1.000	87.10	0.000	0.000	Ug2_741_743_L_0					
36 D	17.93	-2.3896E-04	78.64	26.03	78.64	38.38	ACTIVE	0.000	-7.000	63.64
1.000	1.000	89.67	0.000	0.000	Ug2_741_743_L_0					
37 D	18.44	-2.1444E-04	80.78	26.74	80.78	39.41	ACTIVE	0.000	-7.200	65.45
1.000	1.000	92.19	0.000	0.000	Ug2_741_743_L_0					
38 D	19.22	-1.9310E-04	83.03	28.81	83.03	40.44	UL-RL	5.8658E+04	-7.400	67.27
1.000	1.000	96.08	0.000	0.000	Ug2_741_743_L_0					
39 D	20.01	-1.7472E-04	85.18	30.98	85.18	41.46	UL-RL	5.8658E+04	-7.600	69.09
1.000	1.000	100.1	0.000	0.000	Ug2_741_743_L_0					
40 D	20.78	-1.5906E-04	87.43	32.99	87.43	42.49	UL-RL	5.8658E+04	-7.800	70.91
1.000	1.000	103.9	0.000	0.000	Ug2_741_743_L_0					
41 D	21.52	-1.4588E-04	89.67	34.86	89.67	43.52	UL-RL	5.8658E+04	-8.000	72.73
1.000	1.000	107.6	0.000	0.000	Ug2_741_743_L_0					
42 D	22.23	-1.3494E-04	91.82	36.60	91.82	44.55	UL-RL	5.8658E+04	-8.200	74.55
1.000	1.000	111.1	0.000	0.000	Ug2_741_743_L_0					
43 D	22.92	-1.2598E-04	94.06	38.21	94.06	45.58	UL-RL	5.8658E+04	-8.400	76.36
1.000	1.000	114.6	0.000	0.000	Ug2_741_743_L_0					
44 D	23.58	-1.1877E-04	96.21	39.73	96.21	46.60	UL-RL	5.8658E+04	-8.600	78.18
1.000	1.000	117.9	0.000	0.000	Ug2_741_743_L_0					
45 D	24.23	-1.1308E-04	98.45	41.16	98.45	47.63	UL-RL	5.8658E+04	-8.800	80.00
1.000	1.000	121.2	0.000	0.000	Ug2_741_743_L_0					
46 D	24.87	-1.0871E-04	100.7	42.51	100.7	48.66	UL-RL	5.8658E+04	-9.000	81.82
1.000	1.000	124.3	0.000	0.000	Ug2_741_743_L_0					
47 D	25.49	-1.0545E-04	102.8	43.79	102.8	49.69	UL-RL	5.8658E+04	-9.200	83.64
1.000	1.000	127.4	0.000	0.000	Ug2_741_743_L_0					
48 D	26.10	-1.0312E-04	105.1	45.02	105.1	50.72	UL-RL	5.8658E+04	-9.400	85.45
1.000	1.000	130.5	0.000	0.000	Ug2_741_743_L_0					
49 D	26.70	-1.0157E-04	107.3	46.21	107.3	51.75	UL-RL	5.8658E+04	-9.600	87.27
1.000	1.000	133.5	0.000	0.000	Ug2_741_743_L_0					
50 D	27.29	-1.0064E-04	109.4	47.36	109.4	52.77	UL-RL	5.8658E+04	-9.800	89.09
1.000	1.000	136.5	0.000	0.000	Ug2_741_743_L_0					
51 D	27.88	-1.0021E-04	111.7	48.48	111.7	53.80	UL-RL	5.8658E+04	-10.000	90.91
1.000	1.000	139.4	0.000	0.000	Ug2_741_743_L_0					
52 D	28.46	-1.0017E-04	113.8	49.58	113.8	54.83	UL-RL	5.8658E+04	-10.200	92.73
1.000	1.000	142.3	0.000	0.000	Ug2_741_743_L_0					
53 D	29.22	-1.0043E-04	116.1	51.55	116.1	55.86	UL-RL	5.1881E+04	-10.400	94.55
1.000	1.000	146.1	0.000	0.000	Ug3_740_742_L_0					
54 D	29.80	-1.0090E-04	118.3	52.62	118.3	56.89	UL-RL	5.1881E+04	-10.600	96.36
1.000	1.000	149.0	0.000	0.000	Ug3_740_742_L_0					
55 D	30.37	-1.0153E-04	120.4	53.68	120.4	57.92	UL-RL	5.1881E+04	-10.800	98.18
1.000	1.000	151.9	0.000	0.000	Ug3_740_742_L_0					
56 D	30.95	-1.0226E-04	122.7	54.74	122.7	58.95	UL-RL	5.1881E+04	-11.000	100.00
1.000	1.000	154.7	0.000	0.000	Ug3_740_742_L_0					
57 D	31.52	-1.0306E-04	124.8	55.79	124.8	59.97	UL-RL	5.1881E+04	-11.200	101.8
1.000	1.000	157.6	0.000	0.000	Ug3_740_742_L_0					
58 D	32.10	-1.0389E-04	127.0	56.85	127.0	61.00	UL-RL	5.1881E+04	-11.400	103.6
1.000	1.000	160.5	0.000	0.000	Ug3_740_742_L_0					
59 D	32.67	-1.0475E-04	129.3	57.90	129.3	62.03	UL-RL	5.1881E+04	-11.600	105.5
1.000	1.000	163.4	0.000	0.000	Ug3_740_742_L_0					
60 D	33.24	-1.0561E-04	131.4	58.95	131.4	63.06	UL-RL	5.1881E+04	-11.800	107.3
1.000	1.000	166.2	0.000	0.000	Ug3_740_742_L_0					
61 D	16.91	-1.0647E-04	133.6	60.00	133.6	64.09	UL-RL	5.1881E+04	-12.000	109.1
1.000	1.000	169.1	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.A2M2R1_1787          |
|          Exe Time :24 May 2018          18:17:34          |
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 3.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11 D	4.167	2.1924E-03	0.000	20.83	20.00	20.83	PASSIVE	0.000	-2.000	0.000	
1.000	1.000	20.83	0.000	0.000	Ug1_2_8_L_0						
12 D	5.566	2.0678E-03	1.818	25.65	22.00	25.65	PASSIVE	0.000	-2.200	2.182	
1.000	1.000	27.83	0.000	0.000	Ug1_2_8_L_0						
13 D	6.966	1.9455E-03	3.636	30.47	24.00	30.47	PASSIVE	0.000	-2.400	4.364	
1.000	1.000	34.83	0.000	0.000	Ug1_2_8_L_0						
14 D	7.785	1.8259E-03	5.455	32.38	26.00	32.38	V-C	1.0248E+04	-2.600	6.545	
1.000	1.000	38.93	0.000	0.000	Ug1_2_8_L_0						
15 D	8.045	1.7093E-03	7.273	31.50	28.00	31.50	PASSIVE	0.000	-2.800	8.727	
1.000	1.000	40.23	0.000	0.000	Ug2_741_743_L_0						
16 D	9.495	1.5961E-03	9.091	36.56	30.00	36.56	V-C	1.2946E+04	-3.000	10.91	
1.000	1.000	47.47	0.000	0.000	Ug2_741_743_L_0						
17 D	9.839	1.4867E-03	10.91	36.11	32.00	36.11	V-C	1.2946E+04	-3.200	13.09	
1.000	1.000	49.20	0.000	0.000	Ug2_741_743_L_0						
18 D	10.19	1.3812E-03	12.73	35.69	34.00	35.69	V-C	1.2946E+04	-3.400	15.27	
1.000	1.000	50.96	0.000	0.000	Ug2_741_743_L_0						
19 D	10.56	1.2798E-03	14.55	35.33	36.00	35.33	V-C	1.2946E+04	-3.600	17.45	
1.000	1.000	52.78	0.000	0.000	Ug2_741_743_L_0						
20 D	10.93	1.1828E-03	16.36	35.02	38.00	35.02	V-C	1.2946E+04	-3.800	19.64	
1.000	1.000	54.65	0.000	0.000	Ug2_741_743_L_0						
21 D	11.32	1.0902E-03	18.18	34.77	40.00	34.77	V-C	1.2946E+04	-4.000	21.82	
1.000	1.000	56.58	0.000	0.000	Ug2_741_743_L_0						
22 D	11.71	1.0022E-03	20.00	34.57	42.00	34.57	V-C	1.2946E+04	-4.200	24.00	
1.000	1.000	58.57	0.000	0.000	Ug2_741_743_L_0						
23 D	12.12	9.1872E-04	21.82	34.44	44.00	34.44	V-C	1.2946E+04	-4.400	26.18	
1.000	1.000	60.62	0.000	0.000	Ug2_741_743_L_0						
24 D	12.55	8.3991E-04	23.64	34.37	46.00	34.37	V-C	1.2946E+04	-4.600	28.36	
1.000	1.000	62.74	0.000	0.000	Ug2_741_743_L_0						
25 D	12.98	7.6573E-04	25.45	34.37	48.00	34.37	V-C	1.2946E+04	-4.800	30.55	
1.000	1.000	64.91	0.000	0.000	Ug2_741_743_L_0						
26 D	13.43	6.9617E-04	27.27	34.42	50.00	34.42	V-C	1.2946E+04	-5.000	32.73	
1.000	1.000	67.15	0.000	0.000	Ug2_741_743_L_0						
27 D	13.89	6.3120E-04	29.09	34.54	52.00	34.54	V-C	1.2946E+04	-5.200	34.91	
1.000	1.000	69.45	0.000	0.000	Ug2_741_743_L_0						
28 D	14.36	5.7075E-04	30.91	34.72	54.00	34.72	V-C	1.2946E+04	-5.400	37.09	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	71.81	0.000	0.000	Ug2_741_743_L_0					
29 D	14.85	5.1477E-04	32.73	34.95	56.00	34.95	V-C	1.2946E+04	-5.600	39.27
1.000	1.000	74.23	0.000	0.000	Ug2_741_743_L_0					
30 D	15.34	4.6317E-04	34.55	35.25	58.00	35.25	V-C	1.2946E+04	-5.800	41.45
1.000	1.000	76.70	0.000	0.000	Ug2_741_743_L_0					
31 D	15.85	4.1584E-04	36.36	35.60	60.00	35.60	V-C	1.2946E+04	-6.000	43.64
1.000	1.000	79.24	0.000	0.000	Ug2_741_743_L_0					
32 D	16.37	3.7268E-04	38.18	36.01	62.00	36.01	V-C	1.2946E+04	-6.200	45.82
1.000	1.000	81.83	0.000	0.000	Ug2_741_743_L_0					
33 D	16.89	3.3356E-04	40.00	36.47	64.00	36.47	V-C	1.2946E+04	-6.400	48.00
1.000	1.000	84.47	0.000	0.000	Ug2_741_743_L_0					
34 D	17.43	2.9834E-04	41.82	36.98	66.00	36.98	V-C	1.2946E+04	-6.600	50.18
1.000	1.000	87.16	0.000	0.000	Ug2_741_743_L_0					
35 D	17.98	2.6686E-04	43.64	37.54	68.00	37.54	V-C	1.2946E+04	-6.800	52.36
1.000	1.000	89.91	0.000	0.000	Ug2_741_743_L_0					
36 D	18.54	2.3896E-04	45.45	38.15	70.00	38.15	V-C	1.2946E+04	-7.000	54.55
1.000	1.000	92.69	0.000	0.000	Ug2_741_743_L_0					
37 D	19.11	2.1444E-04	47.27	38.80	72.00	38.80	V-C	1.2946E+04	-7.200	56.73
1.000	1.000	95.53	0.000	0.000	Ug2_741_743_L_0					
38 D	19.68	1.9310E-04	49.09	39.49	74.00	39.49	V-C	1.2946E+04	-7.400	58.91
1.000	1.000	98.40	0.000	0.000	Ug2_741_743_L_0					
39 D	20.26	1.7472E-04	50.91	40.22	76.00	40.22	V-C	1.2946E+04	-7.600	61.09
1.000	1.000	101.3	0.000	0.000	Ug2_741_743_L_0					
40 D	20.85	1.5906E-04	52.73	40.99	78.00	40.99	V-C	1.2946E+04	-7.800	63.27
1.000	1.000	104.3	0.000	0.000	Ug2_741_743_L_0					
41 D	21.45	1.4588E-04	54.55	41.79	80.00	41.79	V-C	1.2946E+04	-8.000	65.45
1.000	1.000	107.2	0.000	0.000	Ug2_741_743_L_0					
42 D	21.99	1.3494E-04	56.36	42.31	82.00	42.77	UL-RL	3.8838E+04	-8.200	67.64
1.000	1.000	109.9	0.000	0.000	Ug2_741_743_L_0					
43 D	22.54	1.2598E-04	58.18	42.90	84.00	43.75	UL-RL	3.8838E+04	-8.400	69.82
1.000	1.000	112.7	0.000	0.000	Ug2_741_743_L_0					
44 D	23.11	1.1877E-04	60.00	43.55	86.00	44.74	UL-RL	3.8838E+04	-8.600	72.00
1.000	1.000	115.6	0.000	0.000	Ug2_741_743_L_0					
45 D	23.69	1.1308E-04	61.82	44.27	88.00	45.72	UL-RL	3.8838E+04	-8.800	74.18
1.000	1.000	118.4	0.000	0.000	Ug2_741_743_L_0					
46 D	24.28	1.0871E-04	63.64	45.03	90.00	46.70	UL-RL	3.8838E+04	-9.000	76.36
1.000	1.000	121.4	0.000	0.000	Ug2_741_743_L_0					
47 D	24.88	1.0545E-04	65.45	45.84	92.00	47.69	UL-RL	3.8838E+04	-9.200	78.55
1.000	1.000	124.4	0.000	0.000	Ug2_741_743_L_0					
48 D	25.48	1.0312E-04	67.27	46.68	94.00	48.67	UL-RL	3.8838E+04	-9.400	80.73
1.000	1.000	127.4	0.000	0.000	Ug2_741_743_L_0					
49 D	26.09	1.0157E-04	69.09	47.55	96.00	49.66	UL-RL	3.8838E+04	-9.600	82.91
1.000	1.000	130.5	0.000	0.000	Ug2_741_743_L_0					
50 D	26.71	1.0064E-04	70.91	48.45	98.00	50.64	UL-RL	3.8838E+04	-9.800	85.09
1.000	1.000	133.5	0.000	0.000	Ug2_741_743_L_0					
51 D	27.33	1.0021E-04	72.73	49.36	100.00	51.63	UL-RL	3.8838E+04	-10.000	87.27
1.000	1.000	136.6	0.000	0.000	Ug2_741_743_L_0					
52 D	27.95	1.0017E-04	74.55	50.29	102.0	52.61	UL-RL	3.8838E+04	-10.200	89.45
1.000	1.000	139.7	0.000	0.000	Ug2_741_743_L_0					
53 D	28.71	1.0043E-04	76.36	51.89	104.0	53.60	UL-RL	4.3910E+04	-10.400	91.64
1.000	1.000	143.5	0.000	0.000	Ug3_740_742_L_0					
54 D	29.33	1.0090E-04	78.18	52.84	106.0	54.58	UL-RL	4.3910E+04	-10.600	93.82
1.000	1.000	146.7	0.000	0.000	Ug3_740_742_L_0					
55 D	29.96	1.0153E-04	80.00	53.80	108.0	55.57	UL-RL	4.3910E+04	-10.800	96.00
1.000	1.000	149.8	0.000	0.000	Ug3_740_742_L_0					
56 D	30.59	1.0226E-04	81.82	54.76	110.0	56.55	UL-RL	4.3910E+04	-11.000	98.18
1.000	1.000	152.9	0.000	0.000	Ug3_740_742_L_0					
57 D	31.22	1.0306E-04	83.64	55.72	112.0	57.54	UL-RL	4.3910E+04	-11.200	100.4
1.000	1.000	156.1	0.000	0.000	Ug3_740_742_L_0					
58 D	31.85	1.0389E-04	85.45	56.68	114.0	58.52	UL-RL	4.3910E+04	-11.400	102.5
1.000	1.000	159.2	0.000	0.000	Ug3_740_742_L_0					
59 D	32.47	1.0475E-04	87.27	57.65	116.0	59.51	UL-RL	4.3910E+04	-11.600	104.7
1.000	1.000	162.4	0.000	0.000	Ug3_740_742_L_0					
60 D	33.10	1.0561E-04	89.09	58.61	118.0	60.50	UL-RL	4.3910E+04	-11.800	106.9
1.000	1.000	165.5	0.000	0.000	Ug3_740_742_L_0					
61 D	16.87	1.0647E-04	90.91	59.57	120.0	61.48	UL-RL	4.3910E+04	-12.000	109.1
1.000	1.000	168.7	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A2M2R1_1787 |
|          Exe Time :24 May 2018   18:17:34 |
+-----+
New Project

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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 3.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-1.08282E-11	1.08282E-11	-9.99534E-13	-2.15834E-11
2	0.36364	-0.36364	2.13587E-11	7.27273E-02
3	1.0909	-1.0909	-7.27273E-02	0.29091
4	2.1818	-2.1818	-0.29091	0.72727
5	3.6364	-3.6364	-0.72727	1.4545
6	5.4545	-5.4545	-1.4545	2.5455
7	7.6364	-7.6364	-2.5455	4.0727
8	10.182	-10.182	-4.0727	6.1091
9	13.091	-13.091	-6.1091	8.7273
10	16.483	-16.483	-8.7273	12.024
11	16.284	-16.284	-12.024	15.281
12	15.260	-15.260	-15.281	18.333
13	13.416	-13.416	-18.333	21.016
14	11.322	-11.322	-21.016	23.280
15	10.450	-10.450	-23.280	25.370
16	8.6518	-8.6518	-25.370	27.101
17	7.0144	-7.0144	-27.101	28.504
18	5.5449	-5.5449	-28.504	29.613
19	4.2173	-4.2173	-29.613	30.456
20	3.0349	-3.0349	-30.456	31.063
21	1.9850	-1.9850	-31.063	31.460
22	1.0423	-1.0423	-31.460	31.668
23	0.20696	-0.20696	-31.668	31.710
24	-0.54578	0.54578	-31.710	31.601
25	-1.2170	1.2170	-31.601	31.357
26	-1.8198	1.8198	-31.357	30.993
27	-2.3771	2.3771	-30.993	30.518
28	-2.8911	2.8911	-30.518	29.940
29	-3.3836	3.3836	-29.940	29.263
30	-3.8568	3.8568	-29.263	28.492
31	-4.3226	4.3226	-28.492	27.627
32	-4.8009	4.8009	-27.627	26.667
33	-5.2937	5.2937	-26.667	25.608
34	-5.8198	5.8198	-25.608	24.444
35	-6.3810	6.3810	-24.444	23.168
36	-6.9868	6.9868	-23.168	21.771
37	-7.6537	7.6537	-21.771	20.240
38	-8.1180	8.1180	-20.240	18.616
39	-8.3666	8.3666	-18.616	16.943
40	-8.4386	8.4386	-16.943	15.255
41	-8.3721	8.3721	-15.255	13.581
42	-8.1335	8.1335	-13.581	11.954
43	-7.7614	7.7614	-11.954	10.402
44	-7.2897	7.2897	-10.402	8.9439
45	-6.7482	6.7482	-8.9439	7.5942
46	-6.1620	6.1620	-7.5942	6.3618
47	-5.5527	5.5527	-6.3618	5.2513
48	-4.9383	4.9383	-5.2513	4.2636
49	-4.3337	4.3337	-4.2636	3.3969
50	-3.7508	3.7508	-3.3969	2.6468
51	-3.1993	3.1993	-2.6468	2.0069
52	-2.6865	2.6865	-2.0069	1.4696
53	-2.1735	2.1735	-1.4696	1.0349
54	-1.7090	1.7090	-1.0349	0.69311
55	-1.2958	1.2958	-0.69311	0.43395
56	-0.93564	0.93564	-0.43395	0.24683
57	-0.62976	0.62976	-0.24683	0.12088
58	-0.37878	0.37878	-0.12088	4.51187E-02
59	-0.18302	0.18302	-4.51187E-02	8.51430E-03

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

60-4.25693E-02 4.25693E-02-8.51430E-03-4.29760E-13

```

ITER      0  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4239E+05 RIMNOR=0.4387E+05
            RENORM= 599.0    REMNOR=0.6231E-21  RATIO =0.1189      TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 32.63    RMMAX = 31.71
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
            RDT  =0.4239E+05 RDR  =0.4387E+05
            RATIO=0.1189    RATIO= 0.000
            MAX UN= 9.339    IEQ= 31 NODE      16 DOF   1  Y-DISPL.F
            MIN UN=-.9351E-01 IEQ= 19 NODE      10 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      2  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4239E+05 RIMNOR=0.4387E+05
            RENORM= 228.4    REMNOR=0.1725E-20  RATIO =0.7341E-01  TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 32.63    RMMAX = 31.71
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
            RDT  =0.4239E+05 RDR  =0.4387E+05
            RATIO=0.7341E-01 RATIO= 0.000
            MAX UN= 3.868    IEQ= 41 NODE      21 DOF   1  Y-DISPL.F
            MIN UN=-.6284E-10 IEQ= 1 NODE       1 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      3  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4239E+05 RIMNOR=0.4387E+05
            RENORM= 291.8    REMNOR=0.2319E-18  RATIO =0.8297E-01  TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 32.63    RMMAX = 31.71
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
            RDT  =0.4239E+05 RDR  =0.4387E+05
            RATIO=0.8297E-01 RATIO= 0.000
            MAX UN= 10.33    IEQ= 41 NODE      21 DOF   1  Y-DISPL.F
            MIN UN=-.8430    IEQ= 121 NODE     61 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      4  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4239E+05 RIMNOR=0.4387E+05
            RENORM= 26.97    REMNOR=0.7637E-19  RATIO =0.2522E-01  TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 32.63    RMMAX = 31.71
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
            RDT  =0.4239E+05 RDR  =0.4387E+05
            RATIO=0.2522E-01 RATIO= 0.000
            MAX UN= 3.711    IEQ= 51 NODE      26 DOF   1  Y-DISPL.F
            MIN UN=-.4773    IEQ= 101 NODE     51 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      5  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4239E+05 RIMNOR=0.4387E+05
            RENORM=0.1747    REMNOR=0.5308E-19  RATIO =0.2030E-02  TOLER =0.1000E-03  NOT CONVERGED
            RFMAX = 32.63    RMMAX = 31.71
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
            RDT  =0.4239E+05 RDR  =0.4387E+05
            RATIO=0.2030E-02 RATIO= 0.000
            MAX UN=0.4179    IEQ= 95 NODE      48 DOF   1  Y-DISPL.F
            MIN UN=-.2117E-08 IEQ= 7 NODE       4 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER      6  RNORM = 0.000      RMNORM= 0.000
            RINORM=0.4239E+05 RIMNOR=0.4387E+05
            RENORM=0.3755E-03 REMNOR=0.8024E-19  RATIO =0.9412E-04  TOLER =0.1000E-03  CONVERGED !
            RFMAX = 32.63    RMMAX = 31.71
            RTSMAL=0.1000E-03 RMSMAL=0.1000E-03
            RDT  =0.4239E+05 RDR  =0.4387E+05
            RATIO=0.9412E-04 RATIO= 0.000
            MAX UN=0.1754E-08 IEQ= 3 NODE       2 DOF   1  Y-DISPL.F
            MIN UN=-.1063E-01 IEQ= 107 NODE     54 DOF   1  Y-DISPL.F
            NO. OF CONTACT CONSTRAINT VIOLATIONS      0
    
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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|          NewProject.BaseDesignSection_28.A2M2R1_1787 |
|          Exe Time :24 May 2018          18:17:34 |
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New Project
SOLUTION REACHED USING 6 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 4 (AT TIME 4.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	2.6934629E-02	-3.9422567E-03	
2	2.6146178E-02	-3.9422567E-03	
3	2.5357728E-02	-3.9422317E-03	
4	2.4569292E-02	-3.9421063E-03	
5	2.3780901E-02	-3.9417552E-03	
6	2.2992616E-02	-3.9410029E-03	
7	2.2204541E-02	-3.9396236E-03	
8	2.1416827E-02	-3.9373415E-03	
9	2.0629687E-02	-3.9338307E-03	
10	1.9843402E-02	-3.9287149E-03	
11	1.9058337E-02	-3.9215526E-03	
12	1.8274952E-02	-3.9118211E-03	
13	1.7493820E-02	-3.8989148E-03	
14	1.6715644E-02	-3.8821456E-03	
15	1.5941271E-02	-3.8607428E-03	
16	1.5171717E-02	-3.8337901E-03	
17	1.4408192E-02	-3.8002293E-03	
18	1.3652128E-02	-3.7590714E-03	
19	1.2905121E-02	-3.7095381E-03	
20	1.2168908E-02	-3.6510621E-03	
21	1.1445320E-02	-3.5832876E-03	
22	1.0736227E-02	-3.5060683E-03	
23	1.0043518E-02	-3.4194697E-03	
24	9.3690457E-03	-3.3237685E-03	
25	8.7145849E-03	-3.2194528E-03	
26	8.0817922E-03	-3.1072220E-03	
27	7.4721661E-03	-2.9879867E-03	
28	6.8869929E-03	-2.8628673E-03	
29	6.3273237E-03	-2.7331808E-03	
30	5.7939355E-03	-2.6002704E-03	
31	5.2873491E-03	-2.4653569E-03	
32	4.8078549E-03	-2.3295465E-03	
33	4.3555262E-03	-2.1938355E-03	
34	3.9302542E-03	-2.0591224E-03	
35	3.5317571E-03	-1.9262120E-03	
36	3.1596012E-03	-1.7958236E-03	
37	2.8132185E-03	-1.6685983E-03	
38	2.4919149E-03	-1.5451038E-03	
39	2.1948946E-03	-1.4258454E-03	
40	1.9212646E-03	-1.3112698E-03	
41	1.6700481E-03	-1.2017721E-03	
42	1.4401939E-03	-1.0977017E-03	
43	1.2305850E-03	-9.9936822E-04	
44	1.0400458E-03	-9.0704730E-04	
45	8.6734961E-04	-8.2098609E-04	
46	7.1122016E-04	-7.4140644E-04	
47	5.7034139E-04	-6.6851154E-04	
48	4.4335740E-04	-6.0248883E-04	
49	3.2887599E-04	-5.4351417E-04	
50	2.2547384E-04	-4.9171549E-04	
51	1.3171257E-04	-4.4708302E-04	
52	4.6172689E-05	-4.0943812E-04	
53	-3.2506141E-05	-3.7847082E-04	
54	-1.0562758E-04	-3.5374229E-04	
55	-1.7438276E-04	-3.3470927E-04	
56	-2.3984913E-04	-3.2074391E-04	
57	-3.0297192E-04	-3.1115247E-04	
58	-3.6455129E-04	-3.0517862E-04	
59	-4.2523010E-04	-3.0200580E-04	
60	-4.8548198E-04	-3.0075848E-04	
61	-5.4560262E-04	-3.0050308E-04	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A2M2R1_1787 |
|          Exe Time :24 May 2018           18:17:34 |
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New Project
  
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STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 4.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1 D	0.000	-2.6935E-02	0.000	0.000	0.000	0.000	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3429	-2.6146E-02	2.287	0.000	2.287	1.341	ACTIVE	0.000	-0.2000	1.714	
1.000	1.000	1.714	0.000	0.000	Ug1_2_8_L_0						
3 D	0.6857	-2.5358E-02	4.580	0.000	4.580	2.671	ACTIVE	0.000	-0.4000	3.429	
1.000	1.000	3.429	0.000	0.000	Ug1_2_8_L_0						
4 D	1.029	-2.4569E-02	6.883	0.000	6.883	3.978	ACTIVE	0.000	-0.6000	5.143	
1.000	1.000	5.143	0.000	0.000	Ug1_2_8_L_0						
5 D	1.371	-2.3781E-02	9.200	0.000	9.200	5.256	ACTIVE	0.000	-0.8000	6.857	
1.000	1.000	6.857	0.000	0.000	Ug1_2_8_L_0						
6 D	1.714	-2.2993E-02	11.53	0.000	11.53	6.501	ACTIVE	0.000	-1.000	8.571	
1.000	1.000	8.571	0.000	0.000	Ug1_2_8_L_0						
7 D	2.057	-2.2205E-02	13.87	0.000	13.87	7.714	ACTIVE	0.000	-1.200	10.29	
1.000	1.000	10.29	0.000	0.000	Ug1_2_8_L_0						
8 D	2.400	-2.1417E-02	16.22	0.000	16.22	8.897	ACTIVE	0.000	-1.400	12.00	
1.000	1.000	12.00	0.000	0.000	Ug1_2_8_L_0						
9 D	2.743	-2.0630E-02	18.58	0.000	18.58	10.05	ACTIVE	0.000	-1.600	13.71	
1.000	1.000	13.71	0.000	0.000	Ug1_2_8_L_0						
10 D	3.293	-1.9843E-02	20.95	1.035	20.95	11.19	ACTIVE	0.000	-1.800	15.43	
1.000	1.000	16.46	0.000	0.000	Ug1_2_8_L_0						
11 D	3.856	-1.9058E-02	23.31	2.139	23.31	12.30	ACTIVE	0.000	-2.000	17.14	
1.000	1.000	19.28	0.000	0.000	Ug1_2_8_L_0						
12 D	4.420	-1.8275E-02	25.68	3.244	25.68	13.40	ACTIVE	0.000	-2.200	18.86	
1.000	1.000	22.10	0.000	0.000	Ug1_2_8_L_0						
13 D	4.990	-1.7494E-02	28.10	4.377	28.10	14.48	ACTIVE	0.000	-2.400	20.57	
1.000	1.000	24.95	0.000	0.000	Ug1_2_8_L_0						
14 D	5.547	-1.6716E-02	30.40	5.450	30.40	15.56	ACTIVE	0.000	-2.600	22.29	
1.000	1.000	27.74	0.000	0.000	Ug1_2_8_L_0						
15 D	6.979	-1.5941E-02	32.91	10.89	32.91	16.62	ACTIVE	0.000	-2.800	24.00	
1.000	1.000	34.89	0.000	0.000	Ug2_741_743_L_0						
16 D	7.488	-1.5172E-02	35.42	11.73	35.42	17.68	ACTIVE	0.000	-3.000	25.71	
1.000	1.000	37.44	0.000	0.000	Ug2_741_743_L_0						
17 D	7.980	-1.4408E-02	37.67	12.47	37.67	18.73	ACTIVE	0.000	-3.200	27.43	
1.000	1.000	39.90	0.000	0.000	Ug2_741_743_L_0						
18 D	8.487	-1.3652E-02	40.16	13.29	40.16	19.78	ACTIVE	0.000	-3.400	29.14	
1.000	1.000	42.43	0.000	0.000	Ug2_741_743_L_0						
19 D	8.978	-1.2905E-02	42.40	14.03	42.40	20.83	ACTIVE	0.000	-3.600	30.86	
1.000	1.000	44.89	0.000	0.000	Ug2_741_743_L_0						
20 D	9.484	-1.2169E-02	44.86	14.85	44.86	21.87	ACTIVE	0.000	-3.800	32.57	
1.000	1.000	47.42	0.000	0.000	Ug2_741_743_L_0						
21 D	9.989	-1.1445E-02	47.31	15.66	47.31	22.91	ACTIVE	0.000	-4.000	34.29	
1.000	1.000	49.94	0.000	0.000	Ug2_741_743_L_0						
22 D	10.48	-1.0736E-02	49.55	16.40	49.55	23.95	ACTIVE	0.000	-4.200	36.00	
1.000	1.000	52.40	0.000	0.000	Ug2_741_743_L_0						
23 D	10.98	-1.0044E-02	51.98	17.20	51.98	24.98	ACTIVE	0.000	-4.400	37.71	
1.000	1.000	54.92	0.000	0.000	Ug2_741_743_L_0						
24 D	11.47	-9.3690E-03	54.22	17.95	54.22	26.02	ACTIVE	0.000	-4.600	39.43	
1.000	1.000	57.37	0.000	0.000	Ug2_741_743_L_0						
25 D	11.98	-8.7146E-03	56.63	18.75	56.63	27.05	ACTIVE	0.000	-4.800	41.14	
1.000	1.000	59.89	0.000	0.000	Ug2_741_743_L_0						
26 D	12.48	-8.0818E-03	59.04	19.54	59.04	28.08	ACTIVE	0.000	-5.000	42.86	
1.000	1.000	62.40	0.000	0.000	Ug2_741_743_L_0						
27 D	12.97	-7.4722E-03	61.28	20.28	61.28	29.11	ACTIVE	0.000	-5.200	44.57	
1.000	1.000	64.85	0.000	0.000	Ug2_741_743_L_0						
28 D	13.47	-6.8870E-03	63.67	21.08	63.67	30.14	ACTIVE	0.000	-5.400	46.29	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	67.36	0.000	0.000	Ug2_741_743_L_0					
29 D	13.96	-6.3273E-03	65.92	21.82	65.92	31.17	ACTIVE	0.000	-5.600	48.00
1.000	1.000	69.82	0.000	0.000	Ug2_741_743_L_0					
30 D	14.46	-5.7939E-03	68.30	22.61	68.30	32.20	ACTIVE	0.000	-5.800	49.71
1.000	1.000	72.32	0.000	0.000	Ug2_741_743_L_0					
31 D	14.96	-5.2873E-03	70.68	23.40	70.68	33.23	ACTIVE	0.000	-6.000	51.43
1.000	1.000	74.82	0.000	0.000	Ug2_741_743_L_0					
32 D	15.46	-4.8079E-03	72.93	24.14	72.93	34.26	ACTIVE	0.000	-6.200	53.14
1.000	1.000	77.28	0.000	0.000	Ug2_741_743_L_0					
33 D	15.96	-4.3555E-03	75.30	24.92	75.30	35.29	ACTIVE	0.000	-6.400	54.86
1.000	1.000	79.78	0.000	0.000	Ug2_741_743_L_0					
34 D	16.45	-3.9303E-03	77.55	25.67	77.55	36.32	ACTIVE	0.000	-6.600	56.57
1.000	1.000	82.24	0.000	0.000	Ug2_741_743_L_0					
35 D	16.95	-3.5318E-03	79.91	26.45	79.91	37.35	ACTIVE	0.000	-6.800	58.29
1.000	1.000	84.74	0.000	0.000	Ug2_741_743_L_0					
36 D	17.45	-3.1596E-03	82.27	27.23	82.27	38.38	ACTIVE	0.000	-7.000	60.00
1.000	1.000	87.23	0.000	0.000	Ug2_741_743_L_0					
37 D	17.94	-2.8132E-03	84.52	27.98	84.52	39.41	ACTIVE	0.000	-7.200	61.71
1.000	1.000	89.69	0.000	0.000	Ug2_741_743_L_0					
38 D	18.44	-2.4919E-03	86.88	28.76	86.88	40.44	ACTIVE	0.000	-7.400	63.43
1.000	1.000	92.19	0.000	0.000	Ug2_741_743_L_0					
39 D	18.93	-2.1949E-03	89.13	29.50	89.13	41.46	ACTIVE	0.000	-7.600	65.14
1.000	1.000	94.64	0.000	0.000	Ug2_741_743_L_0					
40 D	19.43	-1.9213E-03	91.48	30.28	91.48	42.49	ACTIVE	0.000	-7.800	66.86
1.000	1.000	97.14	0.000	0.000	Ug2_741_743_L_0					
41 D	19.93	-1.6700E-03	93.83	31.06	93.83	43.52	ACTIVE	0.000	-8.000	68.57
1.000	1.000	99.63	0.000	0.000	Ug2_741_743_L_0					
42 D	20.42	-1.4402E-03	96.08	31.80	96.08	44.55	ACTIVE	0.000	-8.200	70.29
1.000	1.000	102.1	0.000	0.000	Ug2_741_743_L_0					
43 D	20.92	-1.2306E-03	98.43	32.58	98.43	45.58	ACTIVE	0.000	-8.400	72.00
1.000	1.000	104.6	0.000	0.000	Ug2_741_743_L_0					
44 D	21.41	-1.0400E-03	100.7	33.32	100.7	46.60	ACTIVE	0.000	-8.600	73.71
1.000	1.000	107.0	0.000	0.000	Ug2_741_743_L_0					
45 D	21.91	-8.6735E-04	103.0	34.10	103.0	47.63	ACTIVE	0.000	-8.800	75.43
1.000	1.000	109.5	0.000	0.000	Ug2_741_743_L_0					
46 D	22.40	-7.1122E-04	105.4	34.87	105.4	48.66	ACTIVE	0.000	-9.000	77.14
1.000	1.000	112.0	0.000	0.000	Ug2_741_743_L_0					
47 D	22.90	-5.7034E-04	107.6	35.62	107.6	49.69	ACTIVE	0.000	-9.200	78.86
1.000	1.000	114.5	0.000	0.000	Ug2_741_743_L_0					
48 D	23.39	-4.4336E-04	110.0	36.39	110.0	50.72	ACTIVE	0.000	-9.400	80.57
1.000	1.000	117.0	0.000	0.000	Ug2_741_743_L_0					
49 D	24.42	-3.2888E-04	112.3	39.82	112.3	51.75	UL-RL	3.9105E+04	-9.600	82.29
1.000	1.000	122.1	0.000	0.000	Ug2_741_743_L_0					
50 D	25.80	-2.2547E-04	114.5	45.03	114.5	52.77	UL-RL	3.9105E+04	-9.800	84.00
1.000	1.000	129.0	0.000	0.000	Ug2_741_743_L_0					
51 D	26.98	-1.3171E-04	116.9	49.20	116.9	54.13	UL-RL	3.9105E+04	-10.000	85.71
1.000	1.000	134.9	0.000	0.000	Ug2_741_743_L_0					
52 D	28.00	-4.6173E-05	119.1	52.58	119.1	55.71	UL-RL	3.9105E+04	-10.200	87.43
1.000	1.000	140.0	0.000	0.000	Ug2_741_743_L_0					
53 D	29.12	3.2506E-05	121.5	56.43	121.5	57.71	UL-RL	3.4587E+04	-10.400	89.14
1.000	1.000	145.6	0.000	0.000	Ug3_740_742_L_0					
54 D	29.99	1.0563E-04	123.8	59.08	123.8	59.16	UL-RL	3.4587E+04	-10.600	90.86
1.000	1.000	149.9	0.000	0.000	Ug3_740_742_L_0					
55 D	30.69	1.7438E-04	126.0	60.87	126.0	60.94	UL-RL	3.4587E+04	-10.800	92.57
1.000	1.000	153.4	0.000	0.000	Ug3_740_742_L_0					
56 D	31.39	2.3985E-04	128.4	62.64	128.4	62.70	UL-RL	3.4587E+04	-11.000	94.29
1.000	1.000	156.9	0.000	0.000	Ug3_740_742_L_0					
57 D	32.08	3.0297E-04	130.6	64.38	130.6	64.43	UL-RL	3.4587E+04	-11.200	96.00
1.000	1.000	160.4	0.000	0.000	Ug3_740_742_L_0					
58 D	32.76	3.6455E-04	133.0	66.10	133.0	66.14	UL-RL	3.4587E+04	-11.400	97.71
1.000	1.000	163.8	0.000	0.000	Ug3_740_742_L_0					
59 D	33.45	4.2523E-04	135.3	67.82	135.3	67.85	UL-RL	3.4587E+04	-11.600	99.43
1.000	1.000	167.2	0.000	0.000	Ug3_740_742_L_0					
60 D	34.13	4.8548E-04	137.5	69.52	137.5	69.54	UL-RL	3.4587E+04	-11.800	101.1
1.000	1.000	170.7	0.000	0.000	Ug3_740_742_L_0					
61 D	17.41	5.4560E-04	139.9	71.27	139.9	71.29	UL-RL	3.4587E+04	-12.000	102.9
1.000	1.000	174.1	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.A2M2R1_1787          |
|          Exe Time :24 May 2018          18:17:34          |
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New Project
  
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STRESS RESULTS FOR GROUP NO. 2

0_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 4.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16 D	0.000	1.5172E-02	0.000	0.000	30.00	36.56	PASSIVE	0.000	-3.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
17 D	1.942	1.4408E-02	1.714	7.425	32.00	36.11	PASSIVE	0.000	-3.200	2.286	
1.000	1.000	9.710	0.000	0.000	Ug2_741_743_L_0						
18 D	3.884	1.3652E-02	3.429	14.85	34.00	35.69	PASSIVE	0.000	-3.400	4.571	
1.000	1.000	19.42	0.000	0.000	Ug2_741_743_L_0						
19 D	5.826	1.2905E-02	5.143	22.27	36.00	35.33	PASSIVE	0.000	-3.600	6.857	
1.000	1.000	29.13	0.000	0.000	Ug2_741_743_L_0						
20 D	7.768	1.2169E-02	6.857	29.70	38.00	35.02	PASSIVE	0.000	-3.800	9.143	
1.000	1.000	38.84	0.000	0.000	Ug2_741_743_L_0						
21 D	9.710	1.1445E-02	8.571	37.12	40.00	37.12	PASSIVE	0.000	-4.000	11.43	
1.000	1.000	48.55	0.000	0.000	Ug2_741_743_L_0						
22 D	11.65	1.0736E-02	10.29	44.55	42.00	44.55	PASSIVE	0.000	-4.200	13.71	
1.000	1.000	58.26	0.000	0.000	Ug2_741_743_L_0						
23 D	13.59	1.0044E-02	12.00	51.97	44.00	51.97	PASSIVE	0.000	-4.400	16.00	
1.000	1.000	67.97	0.000	0.000	Ug2_741_743_L_0						
24 D	15.54	9.3690E-03	13.71	59.40	46.00	59.40	PASSIVE	0.000	-4.600	18.29	
1.000	1.000	77.68	0.000	0.000	Ug2_741_743_L_0						
25 D	17.48	8.7146E-03	15.43	66.82	48.00	66.82	PASSIVE	0.000	-4.800	20.57	
1.000	1.000	87.39	0.000	0.000	Ug2_741_743_L_0						
26 D	19.42	8.0818E-03	17.14	74.25	50.00	74.25	PASSIVE	0.000	-5.000	22.86	
1.000	1.000	97.10	0.000	0.000	Ug2_741_743_L_0						
27 D	21.36	7.4722E-03	18.86	81.67	52.00	81.67	PASSIVE	0.000	-5.200	25.14	
1.000	1.000	106.8	0.000	0.000	Ug2_741_743_L_0						
28 D	23.08	6.8870E-03	20.57	87.98	54.00	87.98	V-C	8631.	-5.400	27.43	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	115.4	0.000	0.000	Ug2_741_743_L_0					
29 D	22.72	6.3273E-03	22.29	83.87	56.00	83.87	V-C	8631.	-5.600	29.71
1.000	1.000	113.6	0.000	0.000	Ug2_741_743_L_0					
30 D	22.40	5.7939E-03	24.00	80.02	58.00	80.02	V-C	8631.	-5.800	32.00
1.000	1.000	112.0	0.000	0.000	Ug2_741_743_L_0					
31 D	22.14	5.2873E-03	25.71	76.41	60.00	76.41	V-C	8631.	-6.000	34.29
1.000	1.000	110.7	0.000	0.000	Ug2_741_743_L_0					
32 D	21.92	4.8079E-03	27.43	73.05	62.00	73.05	V-C	8631.	-6.200	36.57
1.000	1.000	109.6	0.000	0.000	Ug2_741_743_L_0					
33 D	21.76	4.3555E-03	29.14	69.95	64.00	69.95	V-C	8631.	-6.400	38.86
1.000	1.000	108.8	0.000	0.000	Ug2_741_743_L_0					
34 D	21.65	3.9303E-03	30.86	67.09	66.00	67.09	V-C	8631.	-6.600	41.14
1.000	1.000	108.2	0.000	0.000	Ug2_741_743_L_0					
35 D	21.58	3.5318E-03	32.57	64.48	68.00	64.48	V-C	8631.	-6.800	43.43
1.000	1.000	107.9	0.000	0.000	Ug2_741_743_L_0					
36 D	21.57	3.1596E-03	34.29	62.12	70.00	62.12	V-C	8631.	-7.000	45.71
1.000	1.000	107.8	0.000	0.000	Ug2_741_743_L_0					
37 D	21.60	2.8132E-03	36.00	59.99	72.00	59.99	V-C	8631.	-7.200	48.00
1.000	1.000	108.0	0.000	0.000	Ug2_741_743_L_0					
38 D	21.68	2.4919E-03	37.71	58.09	74.00	58.09	V-C	8631.	-7.400	50.29
1.000	1.000	108.4	0.000	0.000	Ug2_741_743_L_0					
39 D	21.80	2.1949E-03	39.43	56.42	76.00	56.42	V-C	8631.	-7.600	52.57
1.000	1.000	109.0	0.000	0.000	Ug2_741_743_L_0					
40 D	21.96	1.9213E-03	41.14	54.95	78.00	54.95	V-C	8631.	-7.800	54.86
1.000	1.000	109.8	0.000	0.000	Ug2_741_743_L_0					
41 D	22.17	1.6700E-03	42.86	53.69	80.00	53.69	V-C	8631.	-8.000	57.14
1.000	1.000	110.8	0.000	0.000	Ug2_741_743_L_0					
42 D	22.41	1.4402E-03	44.57	52.62	82.00	52.62	V-C	8631.	-8.200	59.43
1.000	1.000	112.1	0.000	0.000	Ug2_741_743_L_0					
43 D	22.69	1.2306E-03	46.29	51.74	84.00	51.74	V-C	8631.	-8.400	61.71
1.000	1.000	113.5	0.000	0.000	Ug2_741_743_L_0					
44 D	23.01	1.0400E-03	48.00	51.03	86.00	51.03	V-C	8631.	-8.600	64.00
1.000	1.000	115.0	0.000	0.000	Ug2_741_743_L_0					
45 D	23.35	8.6735E-04	49.71	50.48	88.00	50.48	V-C	8631.	-8.800	66.29
1.000	1.000	116.8	0.000	0.000	Ug2_741_743_L_0					
46 D	23.73	7.1122E-04	51.43	50.07	90.00	50.07	V-C	8631.	-9.000	68.57
1.000	1.000	118.6	0.000	0.000	Ug2_741_743_L_0					
47 D	24.13	5.7034E-04	53.14	49.80	92.00	49.80	V-C	8631.	-9.200	70.86
1.000	1.000	120.7	0.000	0.000	Ug2_741_743_L_0					
48 D	24.56	4.4336E-04	54.86	49.66	94.00	49.66	V-C	8631.	-9.400	73.14
1.000	1.000	122.8	0.000	0.000	Ug2_741_743_L_0					
49 D	25.00	3.2888E-04	56.57	49.56	96.00	49.66	UL-RL	2.5892E+04	-9.600	75.43
1.000	1.000	125.0	0.000	0.000	Ug2_741_743_L_0					
50 D	25.10	2.2547E-04	58.29	47.79	98.00	50.64	UL-RL	2.5892E+04	-9.800	77.71
1.000	1.000	125.5	0.000	0.000	Ug2_741_743_L_0					
51 D	25.25	1.3171E-04	60.00	46.27	100.00	51.63	UL-RL	2.5892E+04	-10.000	80.00
1.000	1.000	126.3	0.000	0.000	Ug2_741_743_L_0					
52 D	25.45	4.6173E-05	61.71	44.96	102.0	52.61	UL-RL	2.5892E+04	-10.200	82.29
1.000	1.000	127.2	0.000	0.000	Ug2_741_743_L_0					
53 D	25.72	-3.2506E-05	63.43	44.05	104.0	53.60	UL-RL	2.9274E+04	-10.400	84.57
1.000	1.000	128.6	0.000	0.000	Ug3_740_742_L_0					
54 D	25.94	-1.0563E-04	65.14	42.83	106.0	54.58	UL-RL	2.9274E+04	-10.600	86.86
1.000	1.000	129.7	0.000	0.000	Ug3_740_742_L_0					
55 D	26.17	-1.7438E-04	66.86	41.73	108.0	55.57	UL-RL	2.9274E+04	-10.800	89.14
1.000	1.000	130.9	0.000	0.000	Ug3_740_742_L_0					
56 D	26.43	-2.3985E-04	68.57	40.73	110.0	56.55	UL-RL	2.9274E+04	-11.000	91.43
1.000	1.000	132.2	0.000	0.000	Ug3_740_742_L_0					
57 D	26.70	-3.0297E-04	70.29	39.80	112.0	57.54	UL-RL	2.9274E+04	-11.200	93.71
1.000	1.000	133.5	0.000	0.000	Ug3_740_742_L_0					
58 D	26.98	-3.6455E-04	72.00	38.92	114.0	58.52	UL-RL	2.9274E+04	-11.400	96.00
1.000	1.000	134.9	0.000	0.000	Ug3_740_742_L_0					
59 D	27.27	-4.2523E-04	73.71	38.06	116.0	59.51	UL-RL	2.9274E+04	-11.600	98.29
1.000	1.000	136.3	0.000	0.000	Ug3_740_742_L_0					
60 D	27.56	-4.8548E-04	75.43	37.21	118.0	60.50	UL-RL	2.9274E+04	-11.800	100.6
1.000	1.000	137.8	0.000	0.000	Ug3_740_742_L_0					
61 D	13.92	-5.4560E-04	77.14	36.37	120.0	61.48	UL-RL	2.9274E+04	-12.000	102.9
1.000	1.000	139.2	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*  |
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New Project
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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 4.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	6.95075E-10	-6.95075E-10	6.91075E-11	9.92186E-11
2	0.34286	-0.34286	-1.34572E-10	6.85714E-02
3	1.0286	-1.0286	-6.85714E-02	0.27429
4	2.0571	-2.0571	-0.27429	0.68571
5	3.4286	-3.4286	-0.68571	1.3714
6	5.1429	-5.1429	-1.3714	2.4000
7	7.2000	-7.2000	-2.4000	3.8400
8	9.6000	-9.6000	-3.8400	5.7600
9	12.343	-12.343	-5.7600	8.2286
10	15.636	-15.636	-8.2286	11.356
11	19.492	-19.492	-11.356	15.254
12	23.912	-23.912	-15.254	20.036
13	28.902	-28.902	-20.036	25.817
14	34.449	-34.449	-25.817	32.707
15	41.428	-41.428	-32.707	40.992
16	48.915	-48.915	-40.992	50.775
17	54.953	-54.953	-50.775	61.766
18	59.556	-59.556	-61.766	73.677
19	62.708	-62.708	-73.677	86.218
20	64.424	-64.424	-86.218	99.103
21	64.702	-64.702	-99.103	112.04
22	63.530	-63.530	-112.04	124.75
23	60.919	-60.919	-124.75	136.93
24	56.858	-56.858	-136.93	148.30
25	51.357	-51.357	-148.30	158.58
26	44.416	-44.416	-158.58	167.46
27	36.024	-36.024	-167.46	174.66
28	26.416	-26.416	-174.66	179.95
29	17.662	-17.662	-179.95	183.48
30	9.7232	-9.7232	-183.48	185.42
31	2.5494	-2.5494	-185.42	185.93
32	-3.9188	3.9188	-185.93	185.15
33	-9.7234	9.7234	-185.15	183.21
34	-14.923	14.923	-183.21	180.22
35	-19.558	19.558	-180.22	176.31
36	-23.678	23.678	-176.31	171.57
37	-27.338	27.338	-171.57	166.11
38	-30.577	30.577	-166.11	159.99
39	-33.446	33.446	-159.99	153.30
40	-35.980	35.980	-153.30	146.11
41	-38.221	38.221	-146.11	138.46
42	-40.214	40.214	-138.46	130.42
43	-41.989	41.989	-130.42	122.02
44	-43.587	43.587	-122.02	113.30
45	-45.034	45.034	-113.30	104.30
46	-46.359	46.359	-104.30	95.025
47	-47.596	47.596	-95.025	85.506
48	-48.764	48.764	-85.506	75.753
49	-49.342	49.342	-75.753	65.885
50	-48.637	48.637	-65.885	56.157
51	-46.908	46.908	-56.157	46.775
52	-44.355	44.355	-46.775	37.905
53	-40.964	40.964	-37.905	29.712
54	-36.904	36.904	-29.712	22.331
55	-32.381	32.381	-22.331	15.855
56	-27.419	27.419	-15.855	10.371
57	-22.040	22.040	-10.371	5.9633
58	-16.255	16.255	-5.9633	2.7123
59	-10.070	10.070	-2.7123	0.69831

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

```

60 -3.4914      3.4914      -0.69831      2.40886E-12

ITER    0  RNORM = 0.000      RMNORM= 0.000
      RINORM=0.1943E+06  RIMNOR=0.1379E+07
      RENORM= 1069.      REMNOR=0.8024E-19  RATIO =0.7418E-01  TOLER =0.1000E-03  NOT CONVERGED
      RFMAX = 64.70      RMMAX = 185.9
      RTSMAL=0.1000E-03  RMSMAL=0.1000E-02
      RDT =0.1943E+06   RDR =0.1379E+07
      RATIO=0.7418E-01  RATIO= 0.000
      MAX UN= 9.870      IEQ= 53 NODE      27 DOF   1  Y-DISPL.F
      MIN UN=-.1714     IEQ= 31 NODE      16 DOF   1  Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER    2  RNORM = 0.000      RMNORM= 0.000
      RINORM=0.1943E+06  RIMNOR=0.1379E+07
      RENORM= 466.7      REMNOR=0.3720E-19  RATIO =0.4901E-01  TOLER =0.1000E-03  NOT CONVERGED
      RFMAX = 64.70      RMMAX = 185.9
      RTSMAL=0.1000E-03  RMSMAL=0.1000E-02
      RDT =0.1943E+06   RDR =0.1379E+07
      RATIO=0.4901E-01  RATIO= 0.000
      MAX UN= 4.833      IEQ= 63 NODE      32 DOF   1  Y-DISPL.F
      MIN UN=-.5864E-10  IEQ= 20 NODE      10 DOF   2  X-ROT. F
      NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER    3  RNORM = 0.000      RMNORM= 0.000
      RINORM=0.1943E+06  RIMNOR=0.1379E+07
      RENORM= 1230.      REMNOR=0.3283E-18  RATIO =0.7957E-01  TOLER =0.1000E-03  NOT CONVERGED
      RFMAX = 64.70      RMMAX = 185.9
      RTSMAL=0.1000E-03  RMSMAL=0.1000E-02
      RDT =0.1943E+06   RDR =0.1379E+07
      RATIO=0.7957E-01  RATIO= 0.000
      MAX UN= 30.11      IEQ= 3 NODE        2 DOF   1  Y-DISPL.F
      MIN UN=-5.185      IEQ= 119 NODE     60 DOF   1  Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER    4  RNORM = 0.000      RMNORM= 0.000
      RINORM=0.1943E+06  RIMNOR=0.1379E+07
      RENORM= 1244.      REMNOR=0.5143E-17  RATIO =0.8002E-01  TOLER =0.1000E-03  NOT CONVERGED
      RFMAX = 64.70      RMMAX = 185.9
      RTSMAL=0.1000E-03  RMSMAL=0.1000E-02
      RDT =0.1943E+06   RDR =0.1379E+07
      RATIO=0.8002E-01  RATIO= 0.000
      MAX UN= 17.67      IEQ= 71 NODE      36 DOF   1  Y-DISPL.F
      MIN UN=-14.87     IEQ= 115 NODE     58 DOF   1  Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER    5  RNORM = 0.000      RMNORM= 0.000
      RINORM=0.1943E+06  RIMNOR=0.1379E+07
      RENORM= 210.5      REMNOR=0.6259E-17  RATIO =0.3291E-01  TOLER =0.1000E-03  NOT CONVERGED
      RFMAX = 64.70      RMMAX = 185.9
      RTSMAL=0.1000E-03  RMSMAL=0.1000E-02
      RDT =0.1943E+06   RDR =0.1379E+07
      RATIO=0.3291E-01  RATIO= 0.000
      MAX UN= 11.53      IEQ= 83 NODE      42 DOF   1  Y-DISPL.F
      MIN UN=-4.676     IEQ= 107 NODE     54 DOF   1  Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER    6  RNORM = 0.000      RMNORM= 0.000
      RINORM=0.1943E+06  RIMNOR=0.1379E+07
      RENORM= 12.90      REMNOR=0.8020E-17  RATIO =0.8148E-02  TOLER =0.1000E-03  NOT CONVERGED
      RFMAX = 64.70      RMMAX = 185.9
      RTSMAL=0.1000E-03  RMSMAL=0.1000E-02
      RDT =0.1943E+06   RDR =0.1379E+07
      RATIO=0.8148E-02  RATIO= 0.000
      MAX UN= 3.166      IEQ= 89 NODE      45 DOF   1  Y-DISPL.F
      MIN UN=-1.646     IEQ= 107 NODE     54 DOF   1  Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS      0

ITER    7  RNORM = 0.000      RMNORM= 0.000
      RINORM=0.1943E+06  RIMNOR=0.1379E+07
      RENORM=0.1376E-14  REMNOR=0.3465E-17  RATIO =0.8417E-10  TOLER =0.1000E-03  CONVERGED !
      RFMAX = 64.70      RMMAX = 185.9
      RTSMAL=0.1000E-03  RMSMAL=0.1000E-02
      RDT =0.1943E+06   RDR =0.1379E+07
      RATIO=0.8417E-10  RATIO= 0.000

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Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

MAX UN=0.1207E-07 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
MIN UN=-.1809E-07 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|              NewProject.BaseDesignSection_28.A2M2R1_1787 |
|              Exe Time :24 May 2018           18:17:34 |
+-----+

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New Project
SOLUTION REACHED USING 7 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 5 (AT TIME 5.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	0.1896750	-2.0564336E-02	
2	0.1855621	-2.0564336E-02	
3	0.1814492	-2.0564313E-02	
4	0.1773364	-2.0564196E-02	
5	0.1732236	-2.0563868E-02	
6	0.1691109	-2.0563166E-02	
7	0.1649983	-2.0561879E-02	
8	0.1608862	-2.0559749E-02	
9	0.1567745	-2.0556472E-02	
10	0.1526637	-2.0551692E-02	
11	0.1485540	-2.0544983E-02	
12	0.1444458	-2.0535840E-02	
13	0.1403398	-2.0523676E-02	
14	0.1362366	-2.0507823E-02	
15	0.1321370	-2.0487533E-02	
16	0.1280420	-2.0461916E-02	
17	0.1239526	-2.0429948E-02	
18	0.1198705	-2.0390531E-02	
19	0.1157970	-2.0342497E-02	
20	0.1117341	-2.0284610E-02	
21	0.1076839	-2.0215559E-02	
22	0.1036487	-2.0133964E-02	
23	9.9631261E-02	-2.0038510E-02	
24	9.5634344E-02	-1.9928085E-02	
25	9.1661086E-02	-1.9801779E-02	
26	8.7714738E-02	-1.9658883E-02	
27	8.3798692E-02	-1.9498895E-02	
28	7.9916360E-02	-1.9321507E-02	
29	7.6071255E-02	-1.9126622E-02	
30	7.2266871E-02	-1.8914340E-02	
31	6.8506659E-02	-1.8684966E-02	
32	6.4794009E-02	-1.8439008E-02	
33	6.1132133E-02	-1.8177172E-02	
34	5.7524137E-02	-1.7900373E-02	
35	5.3972907E-02	-1.7609724E-02	
36	5.0481083E-02	-1.7306542E-02	
37	4.7051042E-02	-1.6992349E-02	
38	4.3684781E-02	-1.6668863E-02	
39	4.0383987E-02	-1.6338011E-02	
40	3.7149926E-02	-1.6001920E-02	
41	3.3983413E-02	-1.5662922E-02	
42	3.0884782E-02	-1.5323547E-02	
43	2.7853837E-02	-1.4986533E-02	
44	2.4889816E-02	-1.4654816E-02	
45	2.1991362E-02	-1.4331540E-02	
46	1.9156429E-02	-1.4020045E-02	
47	1.6382327E-02	-1.3723804E-02	
48	1.3665674E-02	-1.3446062E-02	
49	1.1002486E-02	-1.3189562E-02	
50	8.3882954E-03	-1.2956561E-02	
51	5.8181903E-03	-1.2748831E-02	
52	3.2869284E-03	-1.2567676E-02	
53	7.8935199E-04	-1.2413958E-02	
54	-1.6803731E-03	-1.2287890E-02	
55	-4.1275927E-03	-1.2188653E-02	
56	-6.5574954E-03	-1.2114331E-02	
57	-8.9748098E-03	-1.2062279E-02	
58	-1.1383675E-02	-1.2029250E-02	
59	-1.3787521E-02	-1.2011389E-02	
60	-1.6188945E-02	-1.2004242E-02	
61	-1.8589715E-02	-1.2002752E-02	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A2M2R1_1787 |
|          Exe Time :24 May 2018   18:17:34 |
+-----+
New Project
  
```

STRESS RESULTS FOR GROUP NO. 1

0_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 5.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1 D	0.000	-0.1897	0.000	0.000	0.000	0.2590	ACTIVE	0.000	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3200	-0.1856	2.401	0.000	2.401	1.341	ACTIVE	0.000	-0.2000	1.600	
1.000	1.000	1.600	0.000	0.000	Ug1_2_8_L_0						
3 D	0.6400	-0.1814	4.808	0.000	4.808	2.671	ACTIVE	0.000	-0.4000	3.200	
1.000	1.000	3.200	0.000	0.000	Ug1_2_8_L_0						
4 D	0.9600	-0.1773	7.226	0.000	7.226	3.978	ACTIVE	0.000	-0.6000	4.800	
1.000	1.000	4.800	0.000	0.000	Ug1_2_8_L_0						
5 D	1.280	-0.1732	9.657	0.000	9.657	5.256	ACTIVE	0.000	-0.8000	6.400	
1.000	1.000	6.400	0.000	0.000	Ug1_2_8_L_0						
6 D	1.600	-0.1691	12.10	0.000	12.10	6.501	ACTIVE	0.000	-1.000	8.000	
1.000	1.000	8.000	0.000	0.000	Ug1_2_8_L_0						
7 D	1.920	-0.1650	14.56	0.000	14.56	7.714	ACTIVE	0.000	-1.200	9.600	
1.000	1.000	9.600	0.000	0.000	Ug1_2_8_L_0						
8 D	2.240	-0.1609	17.02	0.000	17.02	8.897	ACTIVE	0.000	-1.400	11.20	
1.000	1.000	11.20	0.000	0.000	Ug1_2_8_L_0						
9 D	2.632	-0.1568	19.50	0.3581	19.50	10.05	ACTIVE	0.000	-1.600	12.80	
1.000	1.000	13.16	0.000	0.000	Ug1_2_8_L_0						
10 D	3.183	-0.1527	21.97	1.515	21.97	11.19	ACTIVE	0.000	-1.800	14.40	
1.000	1.000	15.92	0.000	0.000	Ug1_2_8_L_0						
11 D	3.735	-0.1486	24.45	2.673	24.45	12.30	ACTIVE	0.000	-2.000	16.00	
1.000	1.000	18.67	0.000	0.000	Ug1_2_8_L_0						
12 D	4.286	-0.1444	26.93	3.831	26.93	13.40	ACTIVE	0.000	-2.200	17.60	
1.000	1.000	21.43	0.000	0.000	Ug1_2_8_L_0						
13 D	4.844	-0.1403	29.47	5.018	29.47	14.48	ACTIVE	0.000	-2.400	19.20	
1.000	1.000	24.22	0.000	0.000	Ug1_2_8_L_0						
14 D	5.389	-0.1362	31.89	6.144	31.89	15.56	ACTIVE	0.000	-2.600	20.80	
1.000	1.000	26.94	0.000	0.000	Ug1_2_8_L_0						
15 D	6.764	-0.1321	34.51	11.42	34.51	16.62	ACTIVE	0.000	-2.800	22.40	
1.000	1.000	33.82	0.000	0.000	Ug2_741_743_L_0						
16 D	7.259	-0.1280	37.14	12.29	37.14	17.68	ACTIVE	0.000	-3.000	24.00	
1.000	1.000	36.29	0.000	0.000	Ug2_741_743_L_0						
17 D	7.735	-0.1240	39.50	13.07	39.50	18.73	ACTIVE	0.000	-3.200	25.60	
1.000	1.000	38.67	0.000	0.000	Ug2_741_743_L_0						
18 D	8.227	-0.1199	42.10	13.93	42.10	19.78	ACTIVE	0.000	-3.400	27.20	
1.000	1.000	41.13	0.000	0.000	Ug2_741_743_L_0						
19 D	8.703	-0.1158	44.46	14.72	44.46	20.83	ACTIVE	0.000	-3.600	28.80	
1.000	1.000	43.52	0.000	0.000	Ug2_741_743_L_0						
20 D	9.194	-0.1117	47.03	15.57	47.03	21.87	ACTIVE	0.000	-3.800	30.40	
1.000	1.000	45.97	0.000	0.000	Ug2_741_743_L_0						
21 D	9.683	-0.1077	49.59	16.41	49.59	22.91	ACTIVE	0.000	-4.000	32.00	
1.000	1.000	48.41	0.000	0.000	Ug2_741_743_L_0						
22 D	10.16	-0.1036	51.95	17.19	51.95	23.95	ACTIVE	0.000	-4.200	33.60	
1.000	1.000	50.79	0.000	0.000	Ug2_741_743_L_0						
23 D	10.65	-9.9631E-02	54.49	18.04	54.49	24.98	ACTIVE	0.000	-4.400	35.20	
1.000	1.000	53.24	0.000	0.000	Ug2_741_743_L_0						
24 D	11.12	-9.5634E-02	56.85	18.82	56.85	26.02	ACTIVE	0.000	-4.600	36.80	
1.000	1.000	55.62	0.000	0.000	Ug2_741_743_L_0						
25 D	11.61	-9.1661E-02	59.38	19.65	59.38	27.05	ACTIVE	0.000	-4.800	38.40	
1.000	1.000	58.05	0.000	0.000	Ug2_741_743_L_0						
26 D	12.10	-8.7715E-02	61.89	20.49	61.89	28.08	ACTIVE	0.000	-5.000	40.00	
1.000	1.000	60.49	0.000	0.000	Ug2_741_743_L_0						
27 D	12.57	-8.3799E-02	64.25	21.27	64.25	29.11	ACTIVE	0.000	-5.200	41.60	
1.000	1.000	62.87	0.000	0.000	Ug2_741_743_L_0						
28 D	13.06	-7.9916E-02	66.76	22.10	66.76	30.14	ACTIVE	0.000	-5.400	43.20	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	65.30	0.000	0.000	Ug2_741_743_L_0					
29 D	13.54	-7.6071E-02	69.12	22.88	69.12	31.17	ACTIVE	0.000	-5.600	44.80
1.000	1.000	67.68	0.000	0.000	Ug2_741_743_L_0					
30 D	14.02	-7.2267E-02	71.62	23.71	71.62	32.20	ACTIVE	0.000	-5.800	46.40
1.000	1.000	70.11	0.000	0.000	Ug2_741_743_L_0					
31 D	14.51	-6.8507E-02	74.11	24.53	74.11	33.23	ACTIVE	0.000	-6.000	48.00
1.000	1.000	72.53	0.000	0.000	Ug2_741_743_L_0					
32 D	14.98	-6.4794E-02	76.47	25.31	76.47	34.26	ACTIVE	0.000	-6.200	49.60
1.000	1.000	74.91	0.000	0.000	Ug2_741_743_L_0					
33 D	15.47	-6.1132E-02	78.96	26.13	78.96	35.29	ACTIVE	0.000	-6.400	51.20
1.000	1.000	77.33	0.000	0.000	Ug2_741_743_L_0					
34 D	15.94	-5.7524E-02	81.32	26.92	81.32	36.32	ACTIVE	0.000	-6.600	52.80
1.000	1.000	79.72	0.000	0.000	Ug2_741_743_L_0					
35 D	16.43	-5.3973E-02	83.80	27.74	83.80	37.35	ACTIVE	0.000	-6.800	54.40
1.000	1.000	82.14	0.000	0.000	Ug2_741_743_L_0					
36 D	16.91	-5.0481E-02	86.27	28.56	86.27	38.38	ACTIVE	0.000	-7.000	56.00
1.000	1.000	84.56	0.000	0.000	Ug2_741_743_L_0					
37 D	17.39	-4.7051E-02	88.64	29.34	88.64	39.41	ACTIVE	0.000	-7.200	57.60
1.000	1.000	86.94	0.000	0.000	Ug2_741_743_L_0					
38 D	17.87	-4.3685E-02	91.11	30.16	91.11	40.44	ACTIVE	0.000	-7.400	59.20
1.000	1.000	89.36	0.000	0.000	Ug2_741_743_L_0					
39 D	18.35	-4.0384E-02	93.47	30.94	93.47	41.46	ACTIVE	0.000	-7.600	60.80
1.000	1.000	91.74	0.000	0.000	Ug2_741_743_L_0					
40 D	18.83	-3.7150E-02	95.94	31.76	95.94	42.49	ACTIVE	0.000	-7.800	62.40
1.000	1.000	94.16	0.000	0.000	Ug2_741_743_L_0					
41 D	19.31	-3.3983E-02	98.40	32.57	98.40	43.52	ACTIVE	0.000	-8.000	64.00
1.000	1.000	96.57	0.000	0.000	Ug2_741_743_L_0					
42 D	19.79	-3.0885E-02	100.8	33.35	100.8	44.55	ACTIVE	0.000	-8.200	65.60
1.000	1.000	98.95	0.000	0.000	Ug2_741_743_L_0					
43 D	20.27	-2.7854E-02	103.2	34.17	103.2	45.58	ACTIVE	0.000	-8.400	67.20
1.000	1.000	101.4	0.000	0.000	Ug2_741_743_L_0					
44 D	20.75	-2.4890E-02	105.6	34.95	105.6	46.60	ACTIVE	0.000	-8.600	68.80
1.000	1.000	103.8	0.000	0.000	Ug2_741_743_L_0					
45 D	21.23	-2.1991E-02	108.0	35.76	108.0	47.63	ACTIVE	0.000	-8.800	70.40
1.000	1.000	106.2	0.000	0.000	Ug2_741_743_L_0					
46 D	21.72	-1.9156E-02	110.5	36.58	110.5	48.66	ACTIVE	0.000	-9.000	72.00
1.000	1.000	108.6	0.000	0.000	Ug2_741_743_L_0					
47 D	22.19	-1.6382E-02	112.9	37.36	112.9	49.69	ACTIVE	0.000	-9.200	73.60
1.000	1.000	111.0	0.000	0.000	Ug2_741_743_L_0					
48 D	22.67	-1.3666E-02	115.3	38.17	115.3	50.72	ACTIVE	0.000	-9.400	75.20
1.000	1.000	113.4	0.000	0.000	Ug2_741_743_L_0					
49 D	23.16	-1.1002E-02	117.8	38.98	117.8	51.75	ACTIVE	0.000	-9.600	76.80
1.000	1.000	115.8	0.000	0.000	Ug2_741_743_L_0					
50 D	23.63	-8.3883E-03	120.1	39.77	120.1	52.77	ACTIVE	0.000	-9.800	78.40
1.000	1.000	118.2	0.000	0.000	Ug2_741_743_L_0					
51 D	24.12	-5.8182E-03	122.6	40.58	122.6	54.13	ACTIVE	0.000	-10.000	80.00
1.000	1.000	120.6	0.000	0.000	Ug2_741_743_L_0					
52 D	24.59	-3.2869E-03	125.0	41.36	125.0	55.71	ACTIVE	0.000	-10.200	81.60
1.000	1.000	123.0	0.000	0.000	Ug2_741_743_L_0					
53 D	27.42	-7.8935E-04	127.4	53.89	127.4	62.26	ACTIVE	0.000	-10.400	83.20
1.000	1.000	137.1	0.000	0.000	Ug3_740_742_L_0					
54 D	31.58	1.6804E-03	129.8	73.09	129.8	79.18	UL-RL	2.5941E+04	-10.600	84.80
1.000	1.000	157.9	0.000	0.000	Ug3_740_742_L_0					
55 D	36.91	4.1276E-03	132.2	98.14	132.2	98.14	V-C	8647.	-10.800	86.40
1.000	1.000	184.5	0.000	0.000	Ug3_740_742_L_0					
56 D	41.68	6.5575E-03	134.7	120.4	134.7	120.4	V-C	8647.	-11.000	88.00
1.000	1.000	208.4	0.000	0.000	Ug3_740_742_L_0					
57 D	46.43	8.9748E-03	137.0	142.6	137.0	142.6	V-C	8647.	-11.200	89.60
1.000	1.000	232.2	0.000	0.000	Ug3_740_742_L_0					
58 D	51.17	1.1384E-02	139.5	164.6	139.5	164.6	V-C	8647.	-11.400	91.20
1.000	1.000	255.8	0.000	0.000	Ug3_740_742_L_0					
59 D	55.89	1.3788E-02	141.9	186.7	141.9	186.7	V-C	8647.	-11.600	92.80
1.000	1.000	279.5	0.000	0.000	Ug3_740_742_L_0					
60 D	60.62	1.6189E-02	144.3	208.7	144.3	208.7	V-C	8647.	-11.800	94.40
1.000	1.000	303.1	0.000	0.000	Ug3_740_742_L_0					
61 D	32.67	1.8590E-02	146.7	230.7	146.7	230.7	V-C	8647.	-12.000	96.00
1.000	1.000	326.7	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.A2M2R1_1787  |
|          Exe Time :24 May 2018  18:17:34  |
+-----+
New Project
  
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STRESS RESULTS FOR GROUP NO. 2

0_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 5.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peg	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16	0.000	--	--	--	--	--	REMOVED	--	-3.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
17	0.000	--	--	--	--	--	REMOVED	--	-3.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
18	0.000	--	--	--	--	--	REMOVED	--	-3.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
19	0.000	--	--	--	--	--	REMOVED	--	-3.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
20	0.000	--	--	--	--	--	REMOVED	--	-3.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
21 D	0.000	0.1077	0.000	0.000	40.00	37.12	PASSIVE	0.000	-4.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
22 D	1.866	0.1036	1.600	6.930	42.00	44.55	PASSIVE	0.000	-4.200	2.400	
1.000	1.000	9.330	0.000	0.000	Ug2_741_743_L_0						
23 D	3.732	9.9631E-02	3.200	13.86	44.00	51.97	PASSIVE	0.000	-4.400	4.800	
1.000	1.000	18.66	0.000	0.000	Ug2_741_743_L_0						
24 D	5.598	9.5634E-02	4.800	20.79	46.00	59.40	PASSIVE	0.000	-4.600	7.200	
1.000	1.000	27.99	0.000	0.000	Ug2_741_743_L_0						
25 D	7.464	9.1661E-02	6.400	27.72	48.00	66.82	PASSIVE	0.000	-4.800	9.600	
1.000	1.000	37.32	0.000	0.000	Ug2_741_743_L_0						
26 D	9.330	8.7715E-02	8.000	34.65	50.00	74.25	PASSIVE	0.000	-5.000	12.00	
1.000	1.000	46.65	0.000	0.000	Ug2_741_743_L_0						
27 D	11.20	8.3799E-02	9.600	41.58	52.00	81.67	PASSIVE	0.000	-5.200	14.40	
1.000	1.000	55.98	0.000	0.000	Ug2_741_743_L_0						
28 D	13.06	7.9916E-02	11.20	48.51	54.00	87.98	PASSIVE	0.000	-5.400	16.80	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	65.31	0.000	0.000	Ug2_741_743_L_0					
29 D	14.93	7.6071E-02	12.80	55.44	56.00	83.87	PASSIVE	0.000	-5.600	19.20
1.000	1.000	74.64	0.000	0.000	Ug2_741_743_L_0					
30 D	16.79	7.2267E-02	14.40	62.37	58.00	80.02	PASSIVE	0.000	-5.800	21.60
1.000	1.000	83.97	0.000	0.000	Ug2_741_743_L_0					
31 D	18.66	6.8507E-02	16.00	69.30	60.00	76.41	PASSIVE	0.000	-6.000	24.00
1.000	1.000	93.30	0.000	0.000	Ug2_741_743_L_0					
32 D	20.53	6.4794E-02	17.60	76.23	62.00	76.23	PASSIVE	0.000	-6.200	26.40
1.000	1.000	102.6	0.000	0.000	Ug2_741_743_L_0					
33 D	22.39	6.1132E-02	19.20	83.16	64.00	83.16	PASSIVE	0.000	-6.400	28.80
1.000	1.000	112.0	0.000	0.000	Ug2_741_743_L_0					
34 D	24.26	5.7524E-02	20.80	90.08	66.00	90.08	PASSIVE	0.000	-6.600	31.20
1.000	1.000	121.3	0.000	0.000	Ug2_741_743_L_0					
35 D	26.12	5.3973E-02	22.40	97.01	68.00	97.01	PASSIVE	0.000	-6.800	33.60
1.000	1.000	130.6	0.000	0.000	Ug2_741_743_L_0					
36 D	27.99	5.0481E-02	24.00	103.9	70.00	103.9	PASSIVE	0.000	-7.000	36.00
1.000	1.000	139.9	0.000	0.000	Ug2_741_743_L_0					
37 D	29.85	4.7051E-02	25.60	110.9	72.00	110.9	PASSIVE	0.000	-7.200	38.40
1.000	1.000	149.3	0.000	0.000	Ug2_741_743_L_0					
38 D	31.72	4.3685E-02	27.20	117.8	74.00	117.8	PASSIVE	0.000	-7.400	40.80
1.000	1.000	158.6	0.000	0.000	Ug2_741_743_L_0					
39 D	33.59	4.0384E-02	28.80	124.7	76.00	124.7	PASSIVE	0.000	-7.600	43.20
1.000	1.000	167.9	0.000	0.000	Ug2_741_743_L_0					
40 D	35.45	3.7150E-02	30.40	131.7	78.00	131.7	PASSIVE	0.000	-7.800	45.60
1.000	1.000	177.3	0.000	0.000	Ug2_741_743_L_0					
41 D	37.32	3.3983E-02	32.00	138.6	80.00	138.6	PASSIVE	0.000	-8.000	48.00
1.000	1.000	186.6	0.000	0.000	Ug2_741_743_L_0					
42 D	39.18	3.0885E-02	33.60	145.5	82.00	145.5	PASSIVE	0.000	-8.200	50.40
1.000	1.000	195.9	0.000	0.000	Ug2_741_743_L_0					
43 D	41.05	2.7854E-02	35.20	152.5	84.00	152.5	PASSIVE	0.000	-8.400	52.80
1.000	1.000	205.3	0.000	0.000	Ug2_741_743_L_0					
44 D	42.92	2.4890E-02	36.80	159.4	86.00	159.4	PASSIVE	0.000	-8.600	55.20
1.000	1.000	214.6	0.000	0.000	Ug2_741_743_L_0					
45 D	44.78	2.1991E-02	38.40	166.3	88.00	166.3	PASSIVE	0.000	-8.800	57.60
1.000	1.000	223.9	0.000	0.000	Ug2_741_743_L_0					
46 D	45.63	1.9156E-02	40.00	168.1	90.00	168.1	V-C	6473.	-9.000	60.00
1.000	1.000	228.1	0.000	0.000	Ug2_741_743_L_0					
47 D	42.64	1.6382E-02	41.60	150.8	92.00	150.8	V-C	6473.	-9.200	62.40
1.000	1.000	213.2	0.000	0.000	Ug2_741_743_L_0					
48 D	39.74	1.3666E-02	43.20	133.9	94.00	133.9	V-C	6473.	-9.400	64.80
1.000	1.000	198.7	0.000	0.000	Ug2_741_743_L_0					
49 D	36.91	1.1002E-02	44.80	117.4	96.00	117.4	V-C	6473.	-9.600	67.20
1.000	1.000	184.6	0.000	0.000	Ug2_741_743_L_0					
50 D	34.15	8.3883E-03	46.40	101.2	98.00	101.2	V-C	6473.	-9.800	69.60
1.000	1.000	170.8	0.000	0.000	Ug2_741_743_L_0					
51 D	31.46	5.8182E-03	48.00	85.29	100.00	85.29	V-C	6473.	-10.000	72.00
1.000	1.000	157.3	0.000	0.000	Ug2_741_743_L_0					
52 D	28.81	3.2869E-03	49.60	69.67	102.0	69.67	V-C	6473.	-10.200	74.40
1.000	1.000	144.1	0.000	0.000	Ug2_741_743_L_0					
53 D	26.37	7.8935E-04	51.20	55.06	104.0	55.06	V-C	7318.	-10.400	76.80
1.000	1.000	131.9	0.000	0.000	Ug3_740_742_L_0					
54 D	21.34	-1.6804E-03	52.80	27.49	106.0	54.58	UL-RL	2.1955E+04	-10.600	79.20
1.000	1.000	106.7	0.000	0.000	Ug3_740_742_L_0					
55 D	20.92	-4.1276E-03	54.40	23.01	108.0	55.57	ACTIVE	0.000	-10.800	81.60
1.000	1.000	104.6	0.000	0.000	Ug3_740_742_L_0					
56 D	21.54	-6.5575E-03	56.00	23.69	110.0	56.55	ACTIVE	0.000	-11.000	84.00
1.000	1.000	107.7	0.000	0.000	Ug3_740_742_L_0					
57 D	22.15	-8.9748E-03	57.60	24.36	112.0	57.54	ACTIVE	0.000	-11.200	86.40
1.000	1.000	110.8	0.000	0.000	Ug3_740_742_L_0					
58 D	22.77	-1.1384E-02	59.20	25.04	114.0	58.52	ACTIVE	0.000	-11.400	88.80
1.000	1.000	113.8	0.000	0.000	Ug3_740_742_L_0					
59 D	23.38	-1.3788E-02	60.80	25.72	116.0	59.51	ACTIVE	0.000	-11.600	91.20
1.000	1.000	116.9	0.000	0.000	Ug3_740_742_L_0					
60 D	24.00	-1.6189E-02	62.40	26.40	118.0	60.50	ACTIVE	0.000	-11.800	93.60
1.000	1.000	120.0	0.000	0.000	Ug3_740_742_L_0					
61 D	12.31	-1.8590E-02	64.00	27.07	120.0	61.48	ACTIVE	0.000	-12.000	96.00
1.000	1.000	123.1	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|          |
|          NewProject.BaseDesignSection_28.A2M2R1_1787  |
|          Exe Time :24 May 2018  18:17:34  |
+-----+
New Project
    
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STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 5.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-9.24525E-09	9.24525E-09	-9.41227E-10	-1.51855E-09
2	0.32000	-0.32000	1.47665E-09	6.40000E-02
3	0.96000	-0.96000	-6.40000E-02	0.25600
4	1.9200	-1.9200	-0.25600	0.64000
5	3.2000	-3.2000	-0.64000	1.2800
6	4.8000	-4.8000	-1.2800	2.2400
7	6.7200	-6.7200	-2.2400	3.5840
8	8.9600	-8.9600	-3.5840	5.3760
9	11.592	-11.592	-5.3760	7.6943
10	14.775	-14.775	-7.6943	10.649
11	18.509	-18.509	-10.649	14.351
12	22.795	-22.795	-14.351	18.910
13	27.639	-27.639	-18.910	24.438
14	33.028	-33.028	-24.438	31.043
15	39.792	-39.792	-31.043	39.002
16	47.051	-47.051	-39.002	48.412
17	54.786	-54.786	-48.412	59.369
18	63.012	-63.012	-59.369	71.972
19	71.716	-71.716	-71.972	86.315
20	80.909	-80.909	-86.315	102.50
21	90.592	-90.592	-102.50	120.61
22	98.885	-98.885	-120.61	140.39
23	105.80	-105.80	-140.39	161.55
24	111.33	-111.33	-161.55	183.82
25	115.47	-115.47	-183.82	206.91
26	118.24	-118.24	-206.91	230.56
27	119.62	-119.62	-230.56	254.48
28	119.62	-119.62	-254.48	278.41
29	118.22	-118.22	-278.41	302.05
30	115.45	-115.45	-302.05	325.14
31	111.30	-111.30	-325.14	347.40
32	105.76	-105.76	-347.40	368.55
33	98.833	-98.833	-368.55	388.32
34	90.519	-90.519	-388.32	406.42
35	80.824	-80.824	-406.42	422.59
36	69.746	-69.746	-422.59	436.54
37	57.279	-57.279	-436.54	447.99
38	43.430	-43.430	-447.99	456.68
39	28.191	-28.191	-456.68	462.32
40	11.570	-11.570	-462.32	464.63
41	-6.4346	6.4346	-464.63	463.34
42	-25.828	25.828	-463.34	458.18
43	-46.605	46.605	-458.18	448.86
44	-68.771	68.771	-448.86	435.10
45	-92.320	92.320	-435.10	416.64
46	-116.23	116.23	-416.64	393.39
47	-136.68	136.68	-393.39	366.06
48	-153.75	153.75	-366.06	335.31
49	-167.50	167.50	-335.31	301.81
50	-178.02	178.02	-301.81	266.20
51	-185.37	185.37	-266.20	229.13
52	-189.59	189.59	-229.13	191.21
53	-188.54	188.54	-191.21	153.51
54	-178.30	178.30	-153.51	117.84
55	-162.32	162.32	-117.84	85.381
56	-142.17	142.17	-85.381	56.947
57	-117.89	117.89	-56.947	33.368
58	-89.493	89.493	-33.368	15.470
59	-56.982	56.982	-15.470	4.0733

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

60 -20.366 20.366 -4.0733 1.33796E-11

ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1163E+07 RIMNOR=0.8067E+07
RENORM= 100.2 REMNOR=0.3465E-17 RATIO =0.9282E-02 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 189.6 RMMAX = 464.6
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1163E+07 RDR =0.8067E+07
RATIOT=0.9282E-02 RATIO= 0.000
MAX UN=0.9245E-08 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
MIN UN=-2.916 IEQ= 41 NODE 21 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1163E+07 RIMNOR=0.8067E+07
RENORM= 1.580 REMNOR=0.4208E-17 RATIO =0.1166E-02 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 189.6 RMMAX = 464.6
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1163E+07 RDR =0.8067E+07
RATIOT=0.1166E-02 RATIO= 0.000
MAX UN=0.2472E-01 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
MIN UN=-.5282 IEQ= 109 NODE 55 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1163E+07 RIMNOR=0.8067E+07
RENORM=0.7068E-04 REMNOR=0.2725E-17 RATIO =0.7794E-05 TOLER =0.1000E-03 CONVERGED !
RFMAX = 189.6 RMMAX = 464.6
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1163E+07 RDR =0.8067E+07
RATIOT=0.7794E-05 RATIO= 0.000
MAX UN=0.7493E-02 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
MIN UN=-.8216E-08 IEQ= 19 NODE 10 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017* |
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New Project
SOLUTION REACHED USING      3 ITERATIONS ON      40

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P R I N T   O U T   F O R   T I M E   S T E P      6      ( AT TIME      6.000      )

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PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

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	Y-DISPL.F (02)	X-ROT. F (04)	(
1	0.1896853	-2.0589371E-02	
2	0.1855674	-2.0589371E-02	
3	0.1814496	-2.0589349E-02	
4	0.1773317	-2.0589235E-02	
5	0.1732139	-2.0588915E-02	
6	0.1690961	-2.0588222E-02	
7	0.1649786	-2.0586943E-02	
8	0.1608614	-2.0584813E-02	
9	0.1567448	-2.0581520E-02	
10	0.1526289	-2.0576698E-02	
11	0.1485142	-2.0569906E-02	
12	0.1444011	-2.0560625E-02	
13	0.1402902	-2.0548250E-02	
14	0.1361821	-2.0532093E-02	
15	0.1320776	-2.0511383E-02	
16	0.1279779	-2.0485193E-02	
17	0.1238840	-2.0452438E-02	
18	0.1197974	-2.0411978E-02	
19	0.1157198	-2.0362630E-02	
20	0.1116530	-2.0303175E-02	
21	0.1075993	-2.0232371E-02	
22	0.1035609	-2.0149014E-02	
23	9.9540602E-02	-2.0051984E-02	
24	9.5541126E-02	-1.9940248E-02	
25	9.1565543E-02	-1.9812914E-02	
26	8.7617048E-02	-1.9669262E-02	
27	8.3698981E-02	-1.9508761E-02	
28	7.9814709E-02	-1.9331070E-02	
29	7.5967708E-02	-1.9136044E-02	
30	7.2161444E-02	-1.8923730E-02	
31	6.8399353E-02	-1.8694374E-02	
32	6.4684819E-02	-1.8448436E-02	
33	6.1021056E-02	-1.8186616E-02	
34	5.7411169E-02	-1.7909850E-02	
35	5.3858037E-02	-1.7619270E-02	
36	5.0364293E-02	-1.7316211E-02	
37	4.6932299E-02	-1.7002210E-02	
38	4.3564040E-02	-1.6678998E-02	
39	4.0261184E-02	-1.6348514E-02	
40	3.7024977E-02	-1.6012896E-02	
41	3.3856213E-02	-1.5674480E-02	
42	3.0755202E-02	-1.5335804E-02	
43	2.7721726E-02	-1.4999606E-02	
44	2.4754998E-02	-1.4668824E-02	
45	2.1853640E-02	-1.4346596E-02	
46	1.9015582E-02	-1.4036257E-02	
47	1.6238114E-02	-1.3741266E-02	
48	1.3517837E-02	-1.3464854E-02	
49	1.0850753E-02	-1.3209745E-02	
50	8.2323832E-03	-1.2978167E-02	
51	5.6578139E-03	-1.2771864E-02	
52	3.1218052E-03	-1.2592100E-02	
53	6.1921163E-04	-1.2439692E-02	
54	-1.8557807E-03	-1.2314802E-02	
55	-4.3084827E-03	-1.2216515E-02	
56	-6.7440289E-03	-1.2142862E-02	
57	-9.1670972E-03	-1.2091254E-02	
58	-1.1581787E-02	-1.2058490E-02	
59	-1.3991496E-02	-1.2040765E-02	
60	-1.6398801E-02	-1.2033669E-02	
61	-1.8805458E-02	-1.2032189E-02	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|          |
|          NewProject.BaseDesignSection_28.A2M2R1_1787 |
|          Exe Time :24 May 2018           18:17:34 |
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New Project
  
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STRESS RESULTS FOR GROUP NO. 1

O_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 6.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1 D	3.8119E-03	-0.1897	0.000	3.8119E-02	0.000	0.2590	UL-RL	2.1956E+04	0.000	0.000	
1.000	1.000	3.8119E-02	0.000	0.000	Ug1_2_8_L_0						
2 D	0.3152	-0.1856	2.463	3.7465E-02	2.463	1.341	UL-RL	2.1956E+04	-0.2000	1.538	
1.000	1.000	1.576	0.000	0.000	Ug1_2_8_L_0						
3 D	0.6263	-0.1814	4.931	5.4584E-02	4.931	2.671	UL-RL	2.1956E+04	-0.4000	3.077	
1.000	1.000	3.132	0.000	0.000	Ug1_2_8_L_0						
4 D	0.9621	-0.1773	7.410	0.1953	7.410	3.978	UL-RL	2.1956E+04	-0.6000	4.615	
1.000	1.000	4.811	0.000	0.000	Ug1_2_8_L_0						
5 D	1.298	-0.1732	9.903	0.3360	9.903	5.256	UL-RL	2.1956E+04	-0.8000	6.154	
1.000	1.000	6.490	0.000	0.000	Ug1_2_8_L_0						
6 D	1.634	-0.1691	12.41	0.4768	12.41	6.501	UL-RL	2.1956E+04	-1.0000	7.692	
1.000	1.000	8.169	0.000	0.000	Ug1_2_8_L_0						
7 D	1.970	-0.1650	14.93	0.6176	14.93	7.714	UL-RL	2.1956E+04	-1.2000	9.231	
1.000	1.000	9.848	0.000	0.000	Ug1_2_8_L_0						
8 D	2.306	-0.1609	17.45	0.7585	17.45	8.897	UL-RL	2.1956E+04	-1.4000	10.77	
1.000	1.000	11.53	0.000	0.000	Ug1_2_8_L_0						
9 D	2.713	-0.1567	19.99	1.257	19.99	10.05	UL-RL	2.1956E+04	-1.6000	12.31	
1.000	1.000	13.57	0.000	0.000	Ug1_2_8_L_0						
10 D	3.280	-0.1526	22.53	2.555	22.53	11.19	UL-RL	2.1956E+04	-1.8000	13.85	
1.000	1.000	16.40	0.000	0.000	Ug1_2_8_L_0						
11 D	3.848	-0.1485	25.07	3.853	25.07	12.30	UL-RL	2.1956E+04	-2.0000	15.38	
1.000	1.000	19.24	0.000	0.000	Ug1_2_8_L_0						
12 D	4.415	-0.1444	27.61	5.151	27.61	13.40	UL-RL	2.1956E+04	-2.2000	16.92	
1.000	1.000	22.07	0.000	0.000	Ug1_2_8_L_0						
13 D	4.988	-0.1403	30.21	6.477	30.21	14.48	UL-RL	2.1956E+04	-2.4000	18.46	
1.000	1.000	24.94	0.000	0.000	Ug1_2_8_L_0						
14 D	5.548	-0.1362	32.69	7.741	32.69	15.56	UL-RL	2.1956E+04	-2.6000	20.00	
1.000	1.000	27.74	0.000	0.000	Ug1_2_8_L_0						
15 D	7.143	-0.1321	35.37	14.17	35.37	16.62	UL-RL	3.9105E+04	-2.8000	21.54	
1.000	1.000	35.71	0.000	0.000	Ug2_741_743_L_0						
16 D	7.667	-0.1280	38.06	15.26	38.06	17.68	UL-RL	3.9105E+04	-3.0000	23.08	
1.000	1.000	38.34	0.000	0.000	Ug2_741_743_L_0						
17 D	8.173	-0.1239	40.48	16.25	40.48	18.73	UL-RL	3.9105E+04	-3.2000	24.62	
1.000	1.000	40.87	0.000	0.000	Ug2_741_743_L_0						
18 D	8.694	-0.1198	43.14	17.31	43.14	19.78	UL-RL	3.9105E+04	-3.4000	26.15	
1.000	1.000	43.47	0.000	0.000	Ug2_741_743_L_0						
19 D	9.196	-0.1157	45.57	18.29	45.57	20.83	UL-RL	3.9105E+04	-3.6000	27.69	
1.000	1.000	45.98	0.000	0.000	Ug2_741_743_L_0						
20 D	9.711	-0.1117	48.20	19.32	48.20	21.87	UL-RL	3.9105E+04	-3.8000	29.23	
1.000	1.000	48.55	0.000	0.000	Ug2_741_743_L_0						
21 D	10.22	-0.1076	50.82	20.34	50.82	22.91	UL-RL	3.9105E+04	-4.0000	30.77	
1.000	1.000	51.11	0.000	0.000	Ug2_741_743_L_0						
22 D	10.72	-0.1036	53.24	21.27	53.24	23.95	UL-RL	3.9105E+04	-4.2000	32.31	
1.000	1.000	53.58	0.000	0.000	Ug2_741_743_L_0						
23 D	11.22	-9.9541E-02	55.84	22.26	55.84	24.98	UL-RL	3.9105E+04	-4.4000	33.85	
1.000	1.000	56.10	0.000	0.000	Ug2_741_743_L_0						
24 D	11.71	-9.5541E-02	58.26	23.17	58.26	26.02	UL-RL	3.9105E+04	-4.6000	35.38	
1.000	1.000	58.55	0.000	0.000	Ug2_741_743_L_0						
25 D	12.21	-9.1566E-02	60.85	24.13	60.85	27.05	UL-RL	3.9105E+04	-4.8000	36.92	
1.000	1.000	61.05	0.000	0.000	Ug2_741_743_L_0						
26 D	12.71	-8.7617E-02	63.43	25.08	63.43	28.08	UL-RL	3.9105E+04	-5.0000	38.46	
1.000	1.000	63.54	0.000	0.000	Ug2_741_743_L_0						
27 D	13.19	-8.3699E-02	65.85	25.97	65.85	29.11	UL-RL	3.9105E+04	-5.2000	40.00	
1.000	1.000	65.97	0.000	0.000	Ug2_741_743_L_0						
28 D	13.69	-7.9815E-02	68.42	26.90	68.42	30.14	UL-RL	3.9105E+04	-5.4000	41.54	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	68.44	0.000	0.000	Ug2_741_743_L_0					
29 D	14.17	-7.5968E-02	70.84	27.79	70.84	31.17	UL-RL	3.9105E+04	-5.600	43.08
1.000	1.000	70.87	0.000	0.000	Ug2_741_743_L_0					
30 D	14.67	-7.2161E-02	73.40	28.72	73.40	32.20	UL-RL	3.9105E+04	-5.800	44.62
1.000	1.000	73.34	0.000	0.000	Ug2_741_743_L_0					
31 D	15.16	-6.8399E-02	75.96	29.65	75.96	33.23	UL-RL	3.9105E+04	-6.000	46.15
1.000	1.000	75.80	0.000	0.000	Ug2_741_743_L_0					
32 D	15.65	-6.4685E-02	78.38	30.54	78.38	34.26	UL-RL	3.9105E+04	-6.200	47.69
1.000	1.000	78.23	0.000	0.000	Ug2_741_743_L_0					
33 D	16.14	-6.1021E-02	80.93	31.46	80.93	35.29	UL-RL	3.9105E+04	-6.400	49.23
1.000	1.000	80.69	0.000	0.000	Ug2_741_743_L_0					
34 D	16.62	-5.7411E-02	83.35	32.35	83.35	36.32	UL-RL	3.9105E+04	-6.600	50.77
1.000	1.000	83.12	0.000	0.000	Ug2_741_743_L_0					
35 D	17.12	-5.3858E-02	85.89	33.28	85.89	37.35	UL-RL	3.9105E+04	-6.800	52.31
1.000	1.000	85.58	0.000	0.000	Ug2_741_743_L_0					
36 D	17.61	-5.0364E-02	88.43	34.20	88.43	38.38	UL-RL	3.9105E+04	-7.000	53.85
1.000	1.000	88.05	0.000	0.000	Ug2_741_743_L_0					
37 D	18.09	-4.6932E-02	90.85	35.09	90.85	39.41	UL-RL	3.9105E+04	-7.200	55.38
1.000	1.000	90.47	0.000	0.000	Ug2_741_743_L_0					
38 D	18.59	-4.3564E-02	93.38	36.02	93.38	40.44	UL-RL	3.9105E+04	-7.400	56.92
1.000	1.000	92.94	0.000	0.000	Ug2_741_743_L_0					
39 D	19.07	-4.0261E-02	95.81	36.91	95.81	41.46	UL-RL	3.9105E+04	-7.600	58.46
1.000	1.000	95.37	0.000	0.000	Ug2_741_743_L_0					
40 D	19.57	-3.7025E-02	98.34	37.84	98.34	42.49	UL-RL	3.9105E+04	-7.800	60.00
1.000	1.000	97.84	0.000	0.000	Ug2_741_743_L_0					
41 D	20.06	-3.3856E-02	100.9	38.78	100.9	43.52	UL-RL	3.9105E+04	-8.000	61.54
1.000	1.000	100.3	0.000	0.000	Ug2_741_743_L_0					
42 D	20.55	-3.0755E-02	103.3	39.68	103.3	44.55	UL-RL	3.9105E+04	-8.200	63.08
1.000	1.000	102.8	0.000	0.000	Ug2_741_743_L_0					
43 D	21.05	-2.7722E-02	105.8	40.63	105.8	45.58	UL-RL	3.9105E+04	-8.400	64.62
1.000	1.000	105.2	0.000	0.000	Ug2_741_743_L_0					
44 D	21.54	-2.4755E-02	108.2	41.55	108.2	46.60	UL-RL	3.9105E+04	-8.600	66.15
1.000	1.000	107.7	0.000	0.000	Ug2_741_743_L_0					
45 D	22.04	-2.1854E-02	110.8	42.50	110.8	47.63	UL-RL	3.9105E+04	-8.800	67.69
1.000	1.000	110.2	0.000	0.000	Ug2_741_743_L_0					
46 D	22.54	-1.9016E-02	113.3	43.47	113.3	48.66	UL-RL	3.9105E+04	-9.000	69.23
1.000	1.000	112.7	0.000	0.000	Ug2_741_743_L_0					
47 D	23.04	-1.6238E-02	115.7	44.41	115.7	49.69	UL-RL	3.9105E+04	-9.200	70.77
1.000	1.000	115.2	0.000	0.000	Ug2_741_743_L_0					
48 D	23.54	-1.3518E-02	118.2	45.40	118.2	50.72	UL-RL	3.9105E+04	-9.400	72.31
1.000	1.000	117.7	0.000	0.000	Ug2_741_743_L_0					
49 D	24.05	-1.0851E-02	120.7	46.39	120.7	51.75	UL-RL	3.9105E+04	-9.600	73.85
1.000	1.000	120.2	0.000	0.000	Ug2_741_743_L_0					
50 D	24.55	-8.2324E-03	123.2	47.37	123.2	52.77	UL-RL	3.9105E+04	-9.800	75.38
1.000	1.000	122.8	0.000	0.000	Ug2_741_743_L_0					
51 D	25.06	-5.6578E-03	125.7	48.39	125.7	54.13	UL-RL	3.9105E+04	-10.000	76.92
1.000	1.000	125.3	0.000	0.000	Ug2_741_743_L_0					
52 D	25.57	-3.1218E-03	128.1	49.39	128.1	55.71	UL-RL	3.9105E+04	-10.200	78.46
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
53 D	28.28	-6.1921E-04	130.6	61.38	130.6	62.26	UL-RL	3.4587E+04	-10.400	80.00
1.000	1.000	141.4	0.000	0.000	Ug3_740_742_L_0					
54 D	32.25	1.8558E-03	133.1	79.71	133.1	79.71	V-C	1.1529E+04	-10.600	81.54
1.000	1.000	161.3	0.000	0.000	Ug3_740_742_L_0					
55 D	36.99	4.3085E-03	135.5	101.9	135.5	101.9	V-C	1.1529E+04	-10.800	83.08
1.000	1.000	185.0	0.000	0.000	Ug3_740_742_L_0					
56 D	41.77	6.7440E-03	138.0	124.3	138.0	124.3	V-C	1.1529E+04	-11.000	84.62
1.000	1.000	208.9	0.000	0.000	Ug3_740_742_L_0					
57 D	46.53	9.1671E-03	140.5	146.5	140.5	146.5	V-C	1.1529E+04	-11.200	86.15
1.000	1.000	232.7	0.000	0.000	Ug3_740_742_L_0					
58 D	51.27	1.1582E-02	143.0	168.7	143.0	168.7	V-C	1.1529E+04	-11.400	87.69
1.000	1.000	256.4	0.000	0.000	Ug3_740_742_L_0					
59 D	56.01	1.3991E-02	145.5	190.8	145.5	190.8	V-C	1.1529E+04	-11.600	89.23
1.000	1.000	280.0	0.000	0.000	Ug3_740_742_L_0					
60 D	60.74	1.6399E-02	147.9	212.9	147.9	212.9	V-C	1.1529E+04	-11.800	90.77
1.000	1.000	303.7	0.000	0.000	Ug3_740_742_L_0					
61 D	32.74	1.8805E-02	150.4	235.1	150.4	235.1	V-C	1.1529E+04	-12.000	92.31
1.000	1.000	327.4	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
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|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.A2M2R1_1787          |
|          Exe Time :24 May 2018          18:17:34          |
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New Project
  
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STRESS RESULTS FOR GROUP NO. 2

0_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 6.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16 D	0.000	0.1280	0.000	0.000	0.000	0.000	0.000	ACTIVE	0.000	-3.000	0.000
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
17 D	0.2324	0.1239	3.900	1.162	3.900	1.950		ACTIVE	0.000	-3.200	0.000
1.000	1.000	1.162	0.000	0.000	Ug2_741_743_L_0						
18 D	0.4649	0.1198	7.800	2.324	7.800	3.900		ACTIVE	0.000	-3.400	0.000
1.000	1.000	2.324	0.000	0.000	Ug2_741_743_L_0						
19 D	0.7702	0.1157	11.70	3.851	11.70	5.850		UL-RL	2.5892E+04	-3.600	0.000
1.000	1.000	3.851	0.000	0.000	Ug2_741_743_L_0						
20 D	1.140	0.1117	15.60	5.701	15.60	7.800		UL-RL	2.5892E+04	-3.800	0.000
1.000	1.000	5.701	0.000	0.000	Ug2_741_743_L_0						
21 D	2.355	0.1076	19.50	11.77	40.00	37.12		UL-RL	2.5892E+04	-4.000	0.000
1.000	1.000	11.77	0.000	0.000	Ug2_741_743_L_0						
22 D	3.246	0.1036	23.40	16.23	42.00	44.55		UL-RL	2.5892E+04	-4.200	0.000
1.000	1.000	16.23	0.000	0.000	Ug2_741_743_L_0						
23 D	4.582	9.9541E-02	27.30	22.91	44.00	51.97		UL-RL	2.5892E+04	-4.400	0.000
1.000	1.000	22.91	0.000	0.000	Ug2_741_743_L_0						
24 D	6.151	9.5541E-02	30.02	29.53	46.00	59.40		UL-RL	2.5892E+04	-4.600	1.231
1.000	1.000	30.76	0.000	0.000	Ug2_741_743_L_0						
25 D	7.927	9.1566E-02	31.56	35.94	48.00	66.82		UL-RL	2.5892E+04	-4.800	3.692
1.000	1.000	39.63	0.000	0.000	Ug2_741_743_L_0						
26 D	9.722	8.7617E-02	33.10	42.46	50.00	74.25		UL-RL	2.5892E+04	-5.000	6.154
1.000	1.000	48.61	0.000	0.000	Ug2_741_743_L_0						
27 D	11.53	8.3699E-02	34.63	49.04	52.00	81.67		UL-RL	2.5892E+04	-5.200	8.615
1.000	1.000	57.66	0.000	0.000	Ug2_741_743_L_0						
28 D	13.35	7.9815E-02	36.17	55.68	54.00	87.98		UL-RL	2.5892E+04	-5.400	11.08

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	66.75	0.000	0.000	Ug2_741_743_L_0					
29 D	15.18	7.5968E-02	37.71	62.35	56.00	83.87	UL-RL	2.5892E+04	-5.600	13.54
1.000	1.000	75.89	0.000	0.000	Ug2_741_743_L_0					
30 D	17.01	7.2161E-02	39.25	69.04	58.00	80.02	UL-RL	2.5892E+04	-5.800	16.00
1.000	1.000	85.04	0.000	0.000	Ug2_741_743_L_0					
31 D	19.09	6.8399E-02	40.79	76.99	60.00	79.77	UL-RL	2.5892E+04	-6.000	18.46
1.000	1.000	95.45	0.000	0.000	Ug2_741_743_L_0					
32 D	21.34	6.4685E-02	42.33	85.76	62.00	88.59	UL-RL	2.5892E+04	-6.200	20.92
1.000	1.000	106.7	0.000	0.000	Ug2_741_743_L_0					
33 D	23.20	6.1021E-02	43.87	92.61	64.00	95.49	UL-RL	2.5892E+04	-6.400	23.38
1.000	1.000	116.0	0.000	0.000	Ug2_741_743_L_0					
34 D	25.06	5.7411E-02	45.40	99.46	66.00	102.4	UL-RL	2.5892E+04	-6.600	25.85
1.000	1.000	125.3	0.000	0.000	Ug2_741_743_L_0					
35 D	26.92	5.3858E-02	46.94	106.3	68.00	109.3	UL-RL	2.5892E+04	-6.800	28.31
1.000	1.000	134.6	0.000	0.000	Ug2_741_743_L_0					
36 D	28.79	5.0364E-02	48.48	113.2	70.00	116.2	UL-RL	2.5892E+04	-7.000	30.77
1.000	1.000	143.9	0.000	0.000	Ug2_741_743_L_0					
37 D	30.65	4.6932E-02	50.02	120.0	72.00	123.1	UL-RL	2.5892E+04	-7.200	33.23
1.000	1.000	153.2	0.000	0.000	Ug2_741_743_L_0					
38 D	32.51	4.3564E-02	51.56	126.9	74.00	130.0	UL-RL	2.5892E+04	-7.400	35.69
1.000	1.000	162.5	0.000	0.000	Ug2_741_743_L_0					
39 D	34.37	4.0261E-02	53.10	133.7	76.00	136.9	UL-RL	2.5892E+04	-7.600	38.15
1.000	1.000	171.9	0.000	0.000	Ug2_741_743_L_0					
40 D	36.23	3.7025E-02	54.63	140.5	78.00	143.8	UL-RL	2.5892E+04	-7.800	40.62
1.000	1.000	181.2	0.000	0.000	Ug2_741_743_L_0					
41 D	38.09	3.3856E-02	56.17	147.4	80.00	150.7	UL-RL	2.5892E+04	-8.000	43.08
1.000	1.000	190.5	0.000	0.000	Ug2_741_743_L_0					
42 D	39.95	3.0755E-02	57.71	154.2	82.00	157.6	UL-RL	2.5892E+04	-8.200	45.54
1.000	1.000	199.8	0.000	0.000	Ug2_741_743_L_0					
43 D	41.81	2.7722E-02	59.25	161.1	84.00	164.5	UL-RL	2.5892E+04	-8.400	48.00
1.000	1.000	209.1	0.000	0.000	Ug2_741_743_L_0					
44 D	43.67	2.4755E-02	60.79	167.9	86.00	171.4	UL-RL	2.5892E+04	-8.600	50.46
1.000	1.000	218.3	0.000	0.000	Ug2_741_743_L_0					
45 D	45.53	2.1854E-02	62.33	174.7	88.00	178.3	UL-RL	2.5892E+04	-8.800	52.92
1.000	1.000	227.6	0.000	0.000	Ug2_741_743_L_0					
46 D	46.36	1.9016E-02	63.87	176.4	90.00	180.1	UL-RL	2.5892E+04	-9.000	55.38
1.000	1.000	231.8	0.000	0.000	Ug2_741_743_L_0					
47 D	43.37	1.6238E-02	65.40	159.0	92.00	162.7	UL-RL	2.5892E+04	-9.200	57.85
1.000	1.000	216.8	0.000	0.000	Ug2_741_743_L_0					
48 D	40.45	1.3518E-02	66.94	141.9	94.00	145.8	UL-RL	2.5892E+04	-9.400	60.31
1.000	1.000	202.3	0.000	0.000	Ug2_741_743_L_0					
49 D	37.61	1.0851E-02	68.48	125.3	96.00	129.2	UL-RL	2.5892E+04	-9.600	62.77
1.000	1.000	188.0	0.000	0.000	Ug2_741_743_L_0					
50 D	34.84	8.2324E-03	70.02	108.9	98.00	113.0	UL-RL	2.5892E+04	-9.800	65.23
1.000	1.000	174.2	0.000	0.000	Ug2_741_743_L_0					
51 D	32.12	5.6578E-03	71.56	92.91	100.00	97.07	UL-RL	2.5892E+04	-10.000	67.69
1.000	1.000	160.6	0.000	0.000	Ug2_741_743_L_0					
52 D	29.46	3.1218E-03	73.10	77.14	102.0	81.42	UL-RL	2.5892E+04	-10.200	70.15
1.000	1.000	147.3	0.000	0.000	Ug2_741_743_L_0					
53 D	26.88	6.1921E-04	74.63	61.79	104.0	66.77	UL-RL	2.9274E+04	-10.400	72.62
1.000	1.000	134.4	0.000	0.000	Ug3_740_742_L_0					
54 D	20.99	-1.8558E-03	76.17	29.88	106.0	54.58	UL-RL	2.9274E+04	-10.600	75.08
1.000	1.000	105.0	0.000	0.000	Ug3_740_742_L_0					
55 D	21.37	-4.3085E-03	77.71	29.30	108.0	55.57	ACTIVE	0.000	-10.800	77.54
1.000	1.000	106.8	0.000	0.000	Ug3_740_742_L_0					
56 D	21.98	-6.7440E-03	79.25	29.88	110.0	56.55	ACTIVE	0.000	-11.000	80.00
1.000	1.000	109.9	0.000	0.000	Ug3_740_742_L_0					
57 D	22.58	-9.1671E-03	80.79	30.46	112.0	57.54	ACTIVE	0.000	-11.200	82.46
1.000	1.000	112.9	0.000	0.000	Ug3_740_742_L_0					
58 D	23.19	-1.1582E-02	82.33	31.04	114.0	58.52	ACTIVE	0.000	-11.400	84.92
1.000	1.000	116.0	0.000	0.000	Ug3_740_742_L_0					
59 D	23.80	-1.3991E-02	83.87	31.62	116.0	59.51	ACTIVE	0.000	-11.600	87.38
1.000	1.000	119.0	0.000	0.000	Ug3_740_742_L_0					
60 D	24.41	-1.6399E-02	85.40	32.20	118.0	60.50	ACTIVE	0.000	-11.800	89.85
1.000	1.000	122.0	0.000	0.000	Ug3_740_742_L_0					
61 D	12.51	-1.8805E-02	86.94	32.78	120.0	61.48	ACTIVE	0.000	-12.000	92.31
1.000	1.000	125.1	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2017.1  FULL VERSION  *Build date:Jul 11, 2017*  |
|                                                                                               |
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|                                                                                               |
|          NewProject.BaseDesignSection_28.A2M2R1_1787  |
|          Exe Time :24 May 2018  18:17:34  |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_33 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 60
CURRENT TIME IS 6.0000

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-3.26869E-09	3.26869E-09	-3.24629E-10	-9.39900E-10
2	0.30769	-0.30769	1.16353E-09	6.15385E-02
3	0.93399	-0.93399	-6.15385E-02	0.24834
4	1.8961	-1.8961	-0.24834	0.62756
5	3.1941	-3.1941	-0.62756	1.2664
6	4.8279	-4.8279	-1.2664	2.2320
7	6.7976	-6.7976	-2.2320	3.5915
8	9.1032	-9.1032	-3.5915	5.4121
9	11.816	-11.816	-5.4121	7.7754
10	15.096	-15.096	-7.7754	10.795
11	18.944	-18.944	-10.795	14.583
12	23.359	-23.359	-14.583	19.255
13	28.346	-28.346	-19.255	24.924
14	33.895	-33.895	-24.924	31.703
15	41.037	-41.037	-31.703	39.911
16	48.705	-48.705	-39.911	49.652
17	56.646	-56.646	-49.652	60.981
18	64.874	-64.874	-60.981	73.956
19	73.300	-73.300	-73.956	88.616
20	81.871	-81.871	-88.616	104.99
21	89.738	-89.738	-104.99	122.94
22	97.208	-97.208	-122.94	142.38
23	103.85	-103.85	-142.38	163.15
24	109.41	-109.41	-163.15	185.03
25	113.69	-113.69	-185.03	207.77
26	116.68	-116.68	-207.77	231.10
27	118.34	-118.34	-231.10	254.77
28	118.67	-118.67	-254.77	278.51
29	117.67	-117.67	-278.51	302.04
30	115.33	-115.33	-302.04	325.11
31	111.40	-111.40	-325.11	347.39
32	105.71	-105.71	-347.39	368.53
33	98.647	-98.647	-368.53	388.26
34	90.209	-90.209	-388.26	406.30
35	80.402	-80.402	-406.30	422.38
36	69.226	-69.226	-422.38	436.22
37	56.672	-56.672	-436.22	447.56
38	42.751	-42.751	-447.56	456.11
39	27.454	-27.454	-456.11	461.60
40	10.790	-10.790	-461.60	463.76
41	-7.2391	7.2391	-463.76	462.31
42	-26.639	26.639	-462.31	456.98
43	-47.402	47.402	-456.98	447.50
44	-69.531	69.531	-447.50	433.59
45	-93.018	93.018	-433.59	414.99
46	-116.84	116.84	-414.99	391.62
47	-137.17	137.17	-391.62	364.19
48	-154.08	154.08	-364.19	333.37
49	-167.64	167.64	-333.37	299.85
50	-177.92	177.92	-299.85	264.26
51	-184.98	184.98	-264.26	227.27
52	-188.87	188.87	-227.27	189.49
53	-187.48	187.48	-189.49	152.00
54	-176.22	176.22	-152.00	116.76
55	-160.59	160.59	-116.76	84.638
56	-140.79	140.79	-84.638	56.479
57	-116.85	116.85	-56.479	33.110
58	-88.764	88.764	-33.110	15.357
59	-56.556	56.556	-15.357	4.0459

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

60 -20.228 20.228 -4.0459 -8.63792E-11

ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1155E+07 RIMNOR=0.8040E+07
RENORM=0.7068E-04 REMNOR=0.2725E-17 RATIO =0.7821E-05 TOLER =0.1000E-03 CONVERGED !
RFMAX = 188.9 RMMAX = 463.8
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1155E+07 RDR =0.8040E+07
RATIOT=0.7821E-05 RATIO= 0.000
MAX UN=0.7493E-02 IEQ= 3 NODE 2 DOF 1 Y-DISPL.F
MIN UN=-.8216E-08 IEQ= 19 NODE 10 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1155E+07 RIMNOR=0.8040E+07
RENORM=0.6430E-07 REMNOR=0.3752E-17 RATIO =0.2359E-06 TOLER =0.1000E-03 CONVERGED !
RFMAX = 188.9 RMMAX = 463.8
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1155E+07 RDR =0.8040E+07
RATIOT=0.2359E-06 RATIO= 0.000
MAX UN=0.2536E-03 IEQ= 31 NODE 16 DOF 1 Y-DISPL.F
MIN UN=-.1251E-07 IEQ= 27 NODE 14 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1155E+07 RIMNOR=0.8040E+07
RENORM=0.7437E-15 REMNOR=0.3417E-17 RATIO =0.2537E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 188.9 RMMAX = 463.8
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1155E+07 RDR =0.8040E+07
RATIOT=0.2537E-10 RATIO= 0.000
MAX UN=0.1054E-07 IEQ= 13 NODE 7 DOF 1 Y-DISPL.F
MIN UN=-.1020E-07 IEQ= 29 NODE 15 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2017.1   FULL VERSION *Build date:Jul 11, 2017* |
|                                                                    |
|                                                                    |
|                               NewProject.BaseDesignSection_28.A2M2R1_1787 |
|                               Exe Time :24 May 2018      18:17:34 |
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New Project
SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 7 (AT TIME 7.000)

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F (02)	X-ROT. F (04)	(
1	0.1896857	-2.0589503E-02	
2	0.1855678	-2.0589502E-02	
3	0.1814499	-2.0589479E-02	
4	0.1773320	-2.0589363E-02	
5	0.1732141	-2.0589303E-02	
6	0.1690964	-2.0588343E-02	
7	0.1649788	-2.0587058E-02	
8	0.1608616	-2.0584923E-02	
9	0.1567449	-2.0581624E-02	
10	0.1526291	-2.0576795E-02	
11	0.1485144	-2.0569997E-02	
12	0.1444012	-2.0560710E-02	
13	0.1402903	-2.0548328E-02	
14	0.1361822	-2.0532164E-02	
15	0.1320777	-2.0511447E-02	
16	0.1279779	-2.0485250E-02	
17	0.1238840	-2.0452489E-02	
18	0.1197974	-2.0412023E-02	
19	0.1157198	-2.0362669E-02	
20	0.1116530	-2.0303209E-02	
21	0.1075993	-2.0232400E-02	
22	0.1035609	-2.0149039E-02	
23	9.9540601E-02	-2.0052004E-02	
24	9.5541121E-02	-1.9940264E-02	
25	9.1565535E-02	-1.9812927E-02	
26	8.7617038E-02	-1.9669272E-02	
27	8.3698969E-02	-1.9508768E-02	
28	7.9814696E-02	-1.9331075E-02	
29	7.5967695E-02	-1.9136046E-02	
30	7.2161430E-02	-1.8923731E-02	
31	6.8399338E-02	-1.8694373E-02	
32	6.4684805E-02	-1.8448434E-02	
33	6.1021042E-02	-1.8186614E-02	
34	5.7411156E-02	-1.7909847E-02	
35	5.3858024E-02	-1.7619266E-02	
36	5.0364281E-02	-1.7316207E-02	
37	4.6932288E-02	-1.7002205E-02	
38	4.3564030E-02	-1.6678994E-02	
39	4.0261176E-02	-1.6348510E-02	
40	3.7024969E-02	-1.6012891E-02	
41	3.3856206E-02	-1.5674475E-02	
42	3.0755196E-02	-1.5335800E-02	
43	2.7721720E-02	-1.4999602E-02	
44	2.4754994E-02	-1.4668821E-02	
45	2.1853636E-02	-1.4346593E-02	
46	1.9015579E-02	-1.4036253E-02	
47	1.6238112E-02	-1.3741263E-02	
48	1.3517835E-02	-1.3464852E-02	
49	1.0850751E-02	-1.3209742E-02	
50	8.2323821E-03	-1.2978165E-02	
51	5.6578132E-03	-1.2771862E-02	
52	3.1218049E-03	-1.2592098E-02	
53	6.1921179E-04	-1.2439690E-02	
54	-1.8557801E-03	-1.2314801E-02	
55	-4.3084819E-03	-1.2216513E-02	
56	-6.7440277E-03	-1.2142861E-02	
57	-9.1670957E-03	-1.2091252E-02	
58	-1.1581785E-02	-1.2058488E-02	
59	-1.3991494E-02	-1.2040763E-02	
60	-1.6398799E-02	-1.2033667E-02	
61	-1.8805455E-02	-1.2032188E-02	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	68.44	0.000	0.000	Ug2_741_743_L_0					
29 D	14.17	-7.5968E-02	70.84	27.79	70.84	31.17	UL-RL	3.9105E+04	-5.600	43.08
1.000	1.000	70.87	0.000	0.000	Ug2_741_743_L_0					
30 D	14.67	-7.2161E-02	73.40	28.72	73.40	32.20	UL-RL	3.9105E+04	-5.800	44.62
1.000	1.000	73.34	0.000	0.000	Ug2_741_743_L_0					
31 D	15.16	-6.8399E-02	75.96	29.65	75.96	33.23	UL-RL	3.9105E+04	-6.000	46.15
1.000	1.000	75.80	0.000	0.000	Ug2_741_743_L_0					
32 D	15.65	-6.4685E-02	78.38	30.54	78.38	34.26	UL-RL	3.9105E+04	-6.200	47.69
1.000	1.000	78.23	0.000	0.000	Ug2_741_743_L_0					
33 D	16.14	-6.1021E-02	80.93	31.46	80.93	35.29	UL-RL	3.9105E+04	-6.400	49.23
1.000	1.000	80.69	0.000	0.000	Ug2_741_743_L_0					
34 D	16.62	-5.7411E-02	83.35	32.35	83.35	36.32	UL-RL	3.9105E+04	-6.600	50.77
1.000	1.000	83.12	0.000	0.000	Ug2_741_743_L_0					
35 D	17.12	-5.3858E-02	85.89	33.28	85.89	37.35	UL-RL	3.9105E+04	-6.800	52.31
1.000	1.000	85.58	0.000	0.000	Ug2_741_743_L_0					
36 D	17.61	-5.0364E-02	88.43	34.20	88.43	38.38	UL-RL	3.9105E+04	-7.000	53.85
1.000	1.000	88.05	0.000	0.000	Ug2_741_743_L_0					
37 D	18.09	-4.6932E-02	90.85	35.09	90.85	39.41	UL-RL	3.9105E+04	-7.200	55.38
1.000	1.000	90.47	0.000	0.000	Ug2_741_743_L_0					
38 D	18.59	-4.3564E-02	93.38	36.02	93.38	40.44	UL-RL	3.9105E+04	-7.400	56.92
1.000	1.000	92.94	0.000	0.000	Ug2_741_743_L_0					
39 D	19.07	-4.0261E-02	95.81	36.91	95.81	41.46	UL-RL	3.9105E+04	-7.600	58.46
1.000	1.000	95.37	0.000	0.000	Ug2_741_743_L_0					
40 D	19.57	-3.7025E-02	98.34	37.84	98.34	42.49	UL-RL	3.9105E+04	-7.800	60.00
1.000	1.000	97.84	0.000	0.000	Ug2_741_743_L_0					
41 D	20.06	-3.3856E-02	100.9	38.78	100.9	43.52	UL-RL	3.9105E+04	-8.000	61.54
1.000	1.000	100.3	0.000	0.000	Ug2_741_743_L_0					
42 D	20.55	-3.0755E-02	103.3	39.68	103.3	44.55	UL-RL	3.9105E+04	-8.200	63.08
1.000	1.000	102.8	0.000	0.000	Ug2_741_743_L_0					
43 D	21.05	-2.7722E-02	105.8	40.63	105.8	45.58	UL-RL	3.9105E+04	-8.400	64.62
1.000	1.000	105.2	0.000	0.000	Ug2_741_743_L_0					
44 D	21.54	-2.4755E-02	108.2	41.55	108.2	46.60	UL-RL	3.9105E+04	-8.600	66.15
1.000	1.000	107.7	0.000	0.000	Ug2_741_743_L_0					
45 D	22.04	-2.1854E-02	110.8	42.50	110.8	47.63	UL-RL	3.9105E+04	-8.800	67.69
1.000	1.000	110.2	0.000	0.000	Ug2_741_743_L_0					
46 D	22.54	-1.9016E-02	113.3	43.47	113.3	48.66	UL-RL	3.9105E+04	-9.000	69.23
1.000	1.000	112.7	0.000	0.000	Ug2_741_743_L_0					
47 D	23.04	-1.6238E-02	115.7	44.41	115.7	49.69	UL-RL	3.9105E+04	-9.200	70.77
1.000	1.000	115.2	0.000	0.000	Ug2_741_743_L_0					
48 D	23.54	-1.3518E-02	118.2	45.40	118.2	50.72	UL-RL	3.9105E+04	-9.400	72.31
1.000	1.000	117.7	0.000	0.000	Ug2_741_743_L_0					
49 D	24.05	-1.0851E-02	120.7	46.39	120.7	51.75	UL-RL	3.9105E+04	-9.600	73.85
1.000	1.000	120.2	0.000	0.000	Ug2_741_743_L_0					
50 D	24.55	-8.2324E-03	123.2	47.37	123.2	52.77	UL-RL	3.9105E+04	-9.800	75.38
1.000	1.000	122.8	0.000	0.000	Ug2_741_743_L_0					
51 D	25.06	-5.6578E-03	125.7	48.39	125.7	54.13	UL-RL	3.9105E+04	-10.000	76.92
1.000	1.000	125.3	0.000	0.000	Ug2_741_743_L_0					
52 D	25.57	-3.1218E-03	128.1	49.39	128.1	55.71	UL-RL	3.9105E+04	-10.200	78.46
1.000	1.000	127.8	0.000	0.000	Ug2_741_743_L_0					
53 D	28.28	-6.1921E-04	130.6	61.38	130.6	62.26	UL-RL	3.4587E+04	-10.400	80.00
1.000	1.000	141.4	0.000	0.000	Ug3_740_742_L_0					
54 D	32.25	1.8558E-03	133.1	79.71	133.1	79.71	UL-RL	3.4587E+04	-10.600	81.54
1.000	1.000	161.3	0.000	0.000	Ug3_740_742_L_0					
55 D	36.99	4.3085E-03	135.5	101.9	135.5	101.9	UL-RL	3.4587E+04	-10.800	83.08
1.000	1.000	185.0	0.000	0.000	Ug3_740_742_L_0					
56 D	41.77	6.7440E-03	138.0	124.3	138.0	124.3	UL-RL	3.4587E+04	-11.000	84.62
1.000	1.000	208.9	0.000	0.000	Ug3_740_742_L_0					
57 D	46.53	9.1671E-03	140.5	146.5	140.5	146.5	UL-RL	3.4587E+04	-11.200	86.15
1.000	1.000	232.7	0.000	0.000	Ug3_740_742_L_0					
58 D	51.27	1.1582E-02	143.0	168.7	143.0	168.7	UL-RL	3.4587E+04	-11.400	87.69
1.000	1.000	256.4	0.000	0.000	Ug3_740_742_L_0					
59 D	56.01	1.3991E-02	145.5	190.8	145.5	190.8	UL-RL	3.4587E+04	-11.600	89.23
1.000	1.000	280.0	0.000	0.000	Ug3_740_742_L_0					
60 D	60.74	1.6399E-02	147.9	212.9	147.9	212.9	UL-RL	3.4587E+04	-11.800	90.77
1.000	1.000	303.7	0.000	0.000	Ug3_740_742_L_0					
61 D	32.74	1.8805E-02	150.4	235.1	150.4	235.1	UL-RL	3.4587E+04	-12.000	92.31
1.000	1.000	327.4	0.000	0.000	Ug3_740_742_L_0					

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*          |
|                                                                                                                                            |
|                                                                                                                                            |
|                                                                                                                                            |
|          NewProject.BaseDesignSection_28.A2M2R1_1787          |
|          Exe Time :24 May 2018          18:17:34          |
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New Project

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STRESS RESULTS FOR GROUP NO. 2

0_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 61
CURRENT TIME IS 7.0000

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL *	FORCE	DISPL-Y	VERTICAL-P	HORIZON.-P	MAX-V-P	MAX-H-P	STATE	STIFFNESS	Z-LEVEL	PORE	E
FACTOR	UFACTOR	Peq	Su_a	Su_p	LAYER						
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
2	0.000	--	--	--	--	--	REMOVED	--	-0.2000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
3	0.000	--	--	--	--	--	REMOVED	--	-0.4000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
4	0.000	--	--	--	--	--	REMOVED	--	-0.6000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
5	0.000	--	--	--	--	--	REMOVED	--	-0.8000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
6	0.000	--	--	--	--	--	REMOVED	--	-1.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
7	0.000	--	--	--	--	--	REMOVED	--	-1.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
8	0.000	--	--	--	--	--	REMOVED	--	-1.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
9	0.000	--	--	--	--	--	REMOVED	--	-1.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
10	0.000	--	--	--	--	--	REMOVED	--	-1.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
11	0.000	--	--	--	--	--	REMOVED	--	-2.000	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
12	0.000	--	--	--	--	--	REMOVED	--	-2.200	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
13	0.000	--	--	--	--	--	REMOVED	--	-2.400	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
14	0.000	--	--	--	--	--	REMOVED	--	-2.600	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
15	0.000	--	--	--	--	--	REMOVED	--	-2.800	0.000	
1.000	1.000	0.000	0.000	0.000	not available						
16 D	0.000	0.1280	0.000	0.000	0.000	0.000	PASSIVE	0.000	-3.000	0.000	
1.000	1.000	0.000	0.000	0.000	Ug2_741_743_L_0						
17 D	0.2326	0.1239	3.900	1.163	3.900	1.950	UL-RL	2.5892E+04	-3.200	0.000	
1.000	1.000	1.163	0.000	0.000	Ug2_741_743_L_0						
18 D	0.4650	0.1198	7.800	2.325	7.800	3.900	UL-RL	2.5892E+04	-3.400	0.000	
1.000	1.000	2.325	0.000	0.000	Ug2_741_743_L_0						
19 D	0.7703	0.1157	11.70	3.851	11.70	5.850	UL-RL	2.5892E+04	-3.600	0.000	
1.000	1.000	3.851	0.000	0.000	Ug2_741_743_L_0						
20 D	1.140	0.1117	15.60	5.701	15.60	7.800	UL-RL	2.5892E+04	-3.800	0.000	
1.000	1.000	5.701	0.000	0.000	Ug2_741_743_L_0						
21 D	2.355	0.1076	19.50	11.77	40.00	37.12	UL-RL	2.5892E+04	-4.000	0.000	
1.000	1.000	11.77	0.000	0.000	Ug2_741_743_L_0						
22 D	3.246	0.1036	23.40	16.23	42.00	44.55	UL-RL	2.5892E+04	-4.200	0.000	
1.000	1.000	16.23	0.000	0.000	Ug2_741_743_L_0						
23 D	4.582	9.9541E-02	27.30	22.91	44.00	51.97	UL-RL	2.5892E+04	-4.400	0.000	
1.000	1.000	22.91	0.000	0.000	Ug2_741_743_L_0						
24 D	6.151	9.5541E-02	30.02	29.53	46.00	59.40	UL-RL	2.5892E+04	-4.600	1.231	
1.000	1.000	30.76	0.000	0.000	Ug2_741_743_L_0						
25 D	7.927	9.1566E-02	31.56	35.94	48.00	66.82	UL-RL	2.5892E+04	-4.800	3.692	
1.000	1.000	39.63	0.000	0.000	Ug2_741_743_L_0						
26 D	9.722	8.7617E-02	33.10	42.46	50.00	74.25	UL-RL	2.5892E+04	-5.000	6.154	
1.000	1.000	48.61	0.000	0.000	Ug2_741_743_L_0						
27 D	11.53	8.3699E-02	34.63	49.04	52.00	81.67	UL-RL	2.5892E+04	-5.200	8.615	
1.000	1.000	57.66	0.000	0.000	Ug2_741_743_L_0						
28 D	13.35	7.9815E-02	36.17	55.68	54.00	87.98	UL-RL	2.5892E+04	-5.400	11.08	

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme

Lotto 1

Progetto Definitivo

1.000	1.000	66.75	0.000	0.000	Ug2_741_743_L_0					
29 D	15.18	7.5968E-02	37.71	62.35	56.00	83.87	UL-RL	2.5892E+04	-5.600	13.54
1.000	1.000	75.88	0.000	0.000	Ug2_741_743_L_0					
30 D	17.01	7.2161E-02	39.25	69.04	58.00	80.02	UL-RL	2.5892E+04	-5.800	16.00
1.000	1.000	85.04	0.000	0.000	Ug2_741_743_L_0					
31 D	19.09	6.8399E-02	40.79	76.99	60.00	79.77	UL-RL	2.5892E+04	-6.000	18.46
1.000	1.000	95.45	0.000	0.000	Ug2_741_743_L_0					
32 D	21.34	6.4685E-02	42.33	85.76	62.00	88.59	UL-RL	2.5892E+04	-6.200	20.92
1.000	1.000	106.7	0.000	0.000	Ug2_741_743_L_0					
33 D	23.20	6.1021E-02	43.87	92.61	64.00	95.49	UL-RL	2.5892E+04	-6.400	23.38
1.000	1.000	116.0	0.000	0.000	Ug2_741_743_L_0					
34 D	25.06	5.7411E-02	45.40	99.46	66.00	102.4	UL-RL	2.5892E+04	-6.600	25.85
1.000	1.000	125.3	0.000	0.000	Ug2_741_743_L_0					
35 D	26.92	5.3858E-02	46.94	106.3	68.00	109.3	UL-RL	2.5892E+04	-6.800	28.31
1.000	1.000	134.6	0.000	0.000	Ug2_741_743_L_0					
36 D	28.79	5.0364E-02	48.48	113.2	70.00	116.2	UL-RL	2.5892E+04	-7.000	30.77
1.000	1.000	143.9	0.000	0.000	Ug2_741_743_L_0					
37 D	30.65	4.6932E-02	50.02	120.0	72.00	123.1	UL-RL	2.5892E+04	-7.200	33.23
1.000	1.000	153.2	0.000	0.000	Ug2_741_743_L_0					
38 D	32.51	4.3564E-02	51.56	126.9	74.00	130.0	UL-RL	2.5892E+04	-7.400	35.69
1.000	1.000	162.5	0.000	0.000	Ug2_741_743_L_0					
39 D	34.37	4.0261E-02	53.10	133.7	76.00	136.9	UL-RL	2.5892E+04	-7.600	38.15
1.000	1.000	171.9	0.000	0.000	Ug2_741_743_L_0					
40 D	36.23	3.7025E-02	54.63	140.5	78.00	143.8	UL-RL	2.5892E+04	-7.800	40.62
1.000	1.000	181.2	0.000	0.000	Ug2_741_743_L_0					
41 D	38.09	3.3856E-02	56.17	147.4	80.00	150.7	UL-RL	2.5892E+04	-8.000	43.08
1.000	1.000	190.5	0.000	0.000	Ug2_741_743_L_0					
42 D	39.95	3.0755E-02	57.71	154.2	82.00	157.6	UL-RL	2.5892E+04	-8.200	45.54
1.000	1.000	199.8	0.000	0.000	Ug2_741_743_L_0					
43 D	41.81	2.7722E-02	59.25	161.1	84.00	164.5	UL-RL	2.5892E+04	-8.400	48.00
1.000	1.000	209.1	0.000	0.000	Ug2_741_743_L_0					
44 D	43.67	2.4755E-02	60.79	167.9	86.00	171.4	UL-RL	2.5892E+04	-8.600	50.46
1.000	1.000	218.3	0.000	0.000	Ug2_741_743_L_0					
45 D	45.53	2.1854E-02	62.33	174.7	88.00	178.3	UL-RL	2.5892E+04	-8.800	52.92
1.000	1.000	227.6	0.000	0.000	Ug2_741_743_L_0					
46 D	46.36	1.9016E-02	63.87	176.4	90.00	180.1	UL-RL	2.5892E+04	-9.000	55.38
1.000	1.000	231.8	0.000	0.000	Ug2_741_743_L_0					
47 D	43.37	1.6238E-02	65.40	159.0	92.00	162.7	UL-RL	2.5892E+04	-9.200	57.85
1.000	1.000	216.8	0.000	0.000	Ug2_741_743_L_0					
48 D	40.45	1.3518E-02	66.94	141.9	94.00	145.8	UL-RL	2.5892E+04	-9.400	60.31
1.000	1.000	202.3	0.000	0.000	Ug2_741_743_L_0					
49 D	37.61	1.0851E-02	68.48	125.3	96.00	129.2	UL-RL	2.5892E+04	-9.600	62.77
1.000	1.000	188.0	0.000	0.000	Ug2_741_743_L_0					
50 D	34.84	8.2324E-03	70.02	108.9	98.00	113.0	UL-RL	2.5892E+04	-9.800	65.23
1.000	1.000	174.2	0.000	0.000	Ug2_741_743_L_0					
51 D	32.12	5.6578E-03	71.56	92.91	100.00	97.07	UL-RL	2.5892E+04	-10.000	67.69
1.000	1.000	160.6	0.000	0.000	Ug2_741_743_L_0					
52 D	29.46	3.1218E-03	73.10	77.14	102.0	81.42	UL-RL	2.5892E+04	-10.200	70.15
1.000	1.000	147.3	0.000	0.000	Ug2_741_743_L_0					
53 D	26.88	6.1921E-04	74.63	61.79	104.0	66.77	UL-RL	2.9274E+04	-10.400	72.62
1.000	1.000	134.4	0.000	0.000	Ug3_740_742_L_0					
54 D	20.99	-1.8558E-03	76.17	29.88	106.0	54.58	UL-RL	2.9274E+04	-10.600	75.08
1.000	1.000	105.0	0.000	0.000	Ug3_740_742_L_0					
55 D	21.37	-4.3085E-03	77.71	29.30	108.0	55.57	UL-RL	2.9274E+04	-10.800	77.54
1.000	1.000	106.8	0.000	0.000	Ug3_740_742_L_0					
56 D	21.98	-6.7440E-03	79.25	29.88	110.0	56.55	UL-RL	2.9274E+04	-11.000	80.00
1.000	1.000	109.9	0.000	0.000	Ug3_740_742_L_0					
57 D	22.58	-9.1671E-03	80.79	30.46	112.0	57.54	UL-RL	2.9274E+04	-11.200	82.46
1.000	1.000	112.9	0.000	0.000	Ug3_740_742_L_0					
58 D	23.19	-1.1582E-02	82.33	31.04	114.0	58.52	UL-RL	2.9274E+04	-11.400	84.92
1.000	1.000	116.0	0.000	0.000	Ug3_740_742_L_0					
59 D	23.80	-1.3991E-02	83.87	31.62	116.0	59.51	UL-RL	2.9274E+04	-11.600	87.38
1.000	1.000	119.0	0.000	0.000	Ug3_740_742_L_0					
60 D	24.41	-1.6399E-02	85.40	32.20	118.0	60.50	UL-RL	2.9274E+04	-11.800	89.85
1.000	1.000	122.0	0.000	0.000	Ug3_740_742_L_0					
61 D	12.51	-1.8805E-02	86.94	32.78	120.0	61.48	UL-RL	2.9274E+04	-12.000	92.31
1.000	1.000	125.1	0.000	0.000	Ug3_740_742_L_0					

60 -20.228 20.228 -4.0459 -9.76031E-12

Collegamento tra l'A4 (Torino-Milano) in località Santhià, Biella, Gattinara e
l'A26 (Genova Voltri-Gravellona) in località Ghemme
Lotto 1

Progetto Definitivo

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2017.1  FULL VERSION *Build date:Jul 11, 2017*  |
|                                                                                               |
|                               NewProject.BaseDesignSection_28.A2M2R1_1787                       |
|                               Exe Time :24 May 2018      18:17:34                             |
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F I N A L I N C R E M E N T A L A N A L Y S I S

S U M M A R Y

STEP		NO. OF ITERATIONS
1	CONVERGENCE :YES	2
2	CONVERGENCE :YES	5
3	CONVERGENCE :YES	5
4	CONVERGENCE :YES	6
5	CONVERGENCE :YES	7
6	CONVERGENCE :YES	3
7	CONVERGENCE :YES	2

END OF PROCESS FOR PROBLEM

New Project

NONLINEAR SOLUTION CPU TIME 0.07 [sec]

DATABASE CREATION CPU TIME..... 0.23 [sec]