

TORINO - IVREA - QUINCINETTO

IVREA - SANTHIA'

SISTEMA AUTOSTRADALE
TANGENZIALE DI TORINO

VISTO per ATIVA S.p.A.



Amministratore Delegato
Dott. Ing. LUIGI CRESTA

AUTOSTRADA A4/A5 - A5 TORINO QUINCINETTO IVREA SANTHIA'

NODO IDRAULICO DI IVREA 2° FASE DI COMPLETAMENTO

PROGETTO DEFINITIVO

LOTTO 2 - SVINCOLO DI IVREA SEZIONI TRASVERSALI RAMPA B

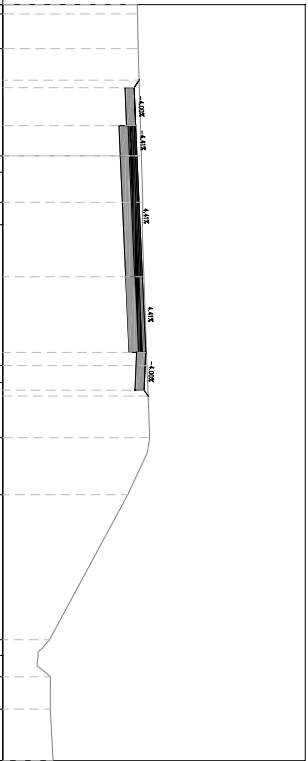
| IL PROGETTISTA | REDATTO | CONTROLLATO | APPROVATO |
|---|-------------------------------|-------------------------------|-----------------------------------|
|  <i>Il Direttore Tecnico</i> Dott. Ing. ROBERTO PETRALI ordine degli Ingegneri di Milano n° 14638 | ATIVA ENGINEERING F. Racca | ATIVA ENGINEERING F. Racca | ATIVA ENGINEERING V. Palmisano |
| | DATA GIUGNO 2012 | REVISIONE | DATA |
| | SCALA 1 : 250 | | |
| | UFFICIO SSP0101A05 | COMMESSA 0000 | N° PROGETTO 0000 |
| | | ARGOMENTO STD | N° ELABORATO 204 |
| | | | REV - - |

Rampa B (I) lvr_Ao
 Sez B 1
 Progr : 0+435.15
 Scala : 1:250
 Q.Rif. : 240.00

| PROGRESSIVE TERRENO | QUOTE TERRENO | DISTANZE PARZIALI TERRENO | PROGRESSIVE PROGETTO | QUOTE PROGETTO | DISTANZE PARZIALI PROGETTO |
|---------------------|---------------|---------------------------|----------------------|----------------|----------------------------|
| 5.00 | 244.73 | 1.18 | -2.45 | 244.88 | |
| -3.78 | 244.75 | 3.51 | -1.00 | 244.73 | 1.25 |
| | 244.86 | 1.07 | 0.00 | 244.79 | 1.00 |
| 1.07 | 244.90 | 0.87 | | | 4.00 |
| 1.94 | 244.88 | | 4.00 | 245.02 | 2.50 |
| | 245.05 | 5.03 | 6.50 | 245.16 | 1.25 |
| 7.01 | 245.08 | 0.74 | 7.85 | 245.08 | |
| 7.78 | 245.12 | 1.09 | | | |
| 8.87 | 245.12 | | | | |
| 9.69 | 244.91 | 6.38 | | | |
| | 241.52 | | | | |
| 16.07 | 241.13 | | | | |
| 16.77 | 241.48 | | | | |
| 17.36 | 241.65 | 1.79 | | | |
| 18.01 | 241.63 | | | | |
| 20.81 | 241.63 | | | | |

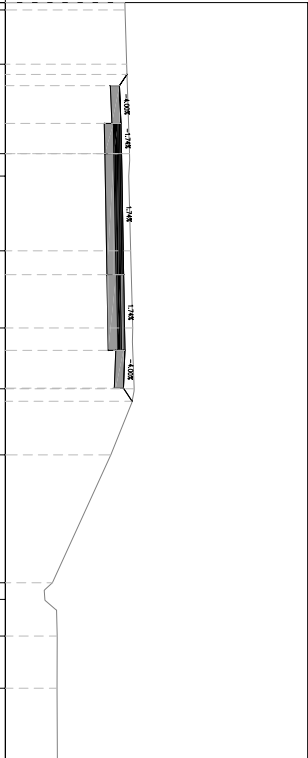
Rampa B (I) lvr_Ao
 Sez B 2
 Progr : 0+450.00
 Scala : 1:250
 Q.Rif. : 240.00

| DISTANZE PARZIALI PROGETTO | QUOTE PROGETTO | PROGRESSIVE PROGETTO | DISTANZE PARZIALI TERRENO | QUOTE TERRENO | PROGRESSIVE TERRENO |
|----------------------------|----------------|----------------------|---------------------------|---------------|---------------------|
| | | | | 244.44 | -4.89 |
| | | | 1.15 | 244.48 | -3.54 |
| 0.25 | 244.54 | -2.59 | | | |
| 1.25 | 244.39 | -1.00 | 3.54 | | |
| 1.00 | 244.44 | 0.00 | | 244.58 | 0.54 |
| | | | 0.54 | 244.60 | 1.54 |
| 4.00 | | | 1.00 | 244.63 | 2.28 |
| | | | 0.74 | 244.62 | |
| | 244.61 | 4.00 | 4.57 | | |
| 2.50 | 244.72 | 6.50 | | 244.77 | 6.93 |
| 1.25 | 244.67 | 7.75 | | 244.79 | 7.50 |
| | | | 1.83 | | |
| | | | | 244.86 | 9.32 |
| | | | 1.39 | | |
| | | | 4.80 | | |
| | | | | 241.55 | 16.00 |
| | | | | 241.16 | 16.52 |
| | | | | 241.57 | 17.23 |
| | | | 0.57 | 241.57 | 18.30 |
| | | | 1.70 | | |
| | | | | 241.66 | 20.00 |



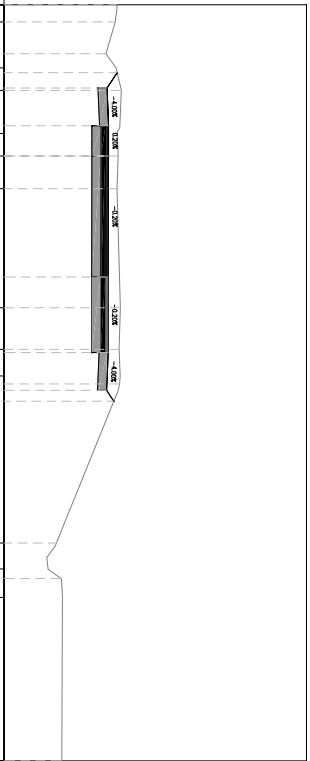
Rampa B (I) lvr_Ao
 Sez B 3
 Progr : 0+475.00
 Scala : 1:250
 Q.Rif. : 240.00

| PROGRESSIVE TERRENO | QUOTE TERRENO | DISTANZE PARZIALI TERRENO | PROGRESSIVE PROGETTO | QUOTE PROGETTO | DISTANZE PARZIALI PROGETTO |
|---------------------|---------------|---------------------------|----------------------|----------------|----------------------------|
| 243.98 | -4.98 | 1.80 | 243.98 | -2.62 | 0.37 |
| 244.01 | -2.96 | 2.96 | 243.97 | -1.00 | 1.25 |
| 244.11 | 0.00 | | 243.82 | 0.00 | 1.00 |
| 244.08 | 0.74 | 2.47 | 243.84 | | 4.00 |
| 244.14 | 3.21 | 2.55 | 243.91 | 4.00 | 2.50 |
| 244.22 | 5.76 | 1.56 | 243.95 | 6.50 | 1.25 |
| 244.26 | 7.77 | 1.73 | 243.98 | 7.75 | 0.44 |
| 243.49 | 9.96 | 4.23 | 244.20 | | |
| 241.56 | 14.19 | | | | |
| 241.31 | 14.73 | 0.86 | | | |
| 241.71 | 15.95 | 1.68 | | | |
| 241.71 | 17.67 | 2.33 | | | |
| 241.72 | 20.00 | | | | |



Rampa B (I) lvr_Ao
 Sez B 4
 Progr : 0+493.07
 Scala : 1:250
 Q.Rif. : 240.00

| PROGRESSIVE TERRENO | QUOTE TERRENO | DISTANZE PARZIALI TERRENO | PROGRESSIVE PROGETTO | QUOTE PROGETTO | DISTANZE PARZIALI PROGETTO |
|---------------------|---------------|---------------------------|----------------------|----------------|----------------------------|
| 243.73 | 5.00 | | | | |
| 243.68 | -4.44 | 1.06 | | | |
| | | 0.46 | | | 0.50 |
| 243.71 | -2.91 | 0.72 | -2.75 | 243.74 | 1.25 |
| 243.88 | -2.17 | 1.24 | -2.25 | 243.41 | 1.00 |
| | | 0.72 | -1.00 | 243.46 | 4.00 |
| 243.75 | -0.74 | 1.08 | 0.00 | 243.46 | |
| 243.77 | | | | | |
| 243.74 | 1.08 | 3.94 | 4.00 | 243.45 | 2.50 |
| | | | | | 1.25 |
| 243.85 | 5.02 | 1.37 | 6.50 | 243.44 | 0.36 |
| 243.81 | 6.39 | 0.88 | 7.75 | 243.39 | |
| 243.84 | 7.27 | | | 243.83 | |
| | | 5.05 | | | |
| 241.73 | 12.80 | 0.31 | | | |
| 241.46 | 13.65 | | | | |
| 241.93 | 14.59 | 5.41 | | | |
| | | | | | |
| 241.91 | 20.00 | | | | |

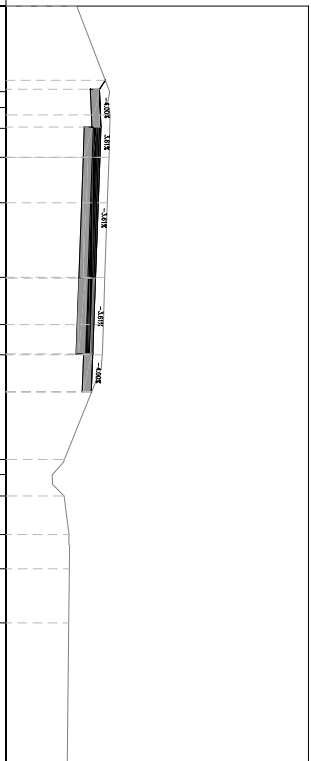


Rampa B (I) lvr_Ao
 Sez B 5
 Progr : 0+500.00
 Scala : 1:250
 Q.Rif. : 240.00

| PROGRESSIVE TERRENO | QUOTE TERRENO | DISTANZE PARZIALI TERRENO | PROGRESSIVE PROGETTO | QUOTE PROGETTO | DISTANZE PARZIALI PROGETTO |
|---------------------|---------------|---------------------------|----------------------|----------------|----------------------------|
| 5.00 | 242.52 | 0.51 | | | |
| -4.18 | 242.43 | 1.68 | | | |
| -2.50 | 243.64 | 0.51 | -2.62 | 243.55 | 0.37 |
| -1.84 | 243.78 | 0.89 | -1.00 | 243.50 | 1.25 |
| -0.51 | 243.68 | 0.51 | 0.00 | 243.35 | 1.00 |
| 0.00 | 243.70 | 2.02 | | 243.34 | |
| 2.02 | 243.63 | 2.81 | 4.00 | 243.31 | 4.00 |
| 4.83 | 243.71 | 1.72 | 6.50 | 243.28 | 2.50 |
| 6.55 | 243.66 | 0.63 | 7.75 | 243.23 | 1.25 |
| 7.18 | 243.68 | 3.64 | 8.09 | 243.48 | 0.34 |
| 11.29 | 242.15 | 1.06 | | | |
| 12.36 | 241.78 | | | | |
| 12.96 | 241.49 | | | | |
| 13.88 | 241.95 | 2.31 | | | |
| 16.50 | 241.95 | 3.50 | | | |
| 20.00 | 241.96 | | | | |

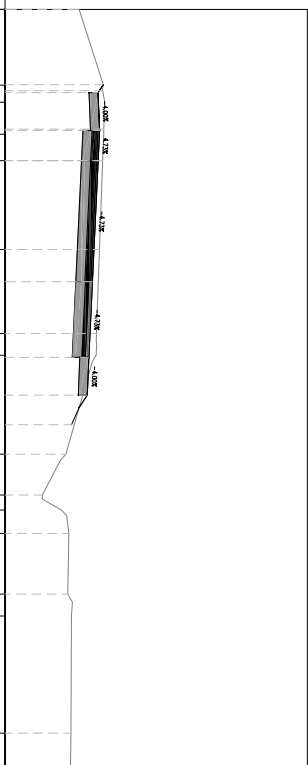
Rampa B (I) lvr_Ao
 Sez B 6
 Progr : 0+525.00
 Scala : 1:250
 Q.Rif. : 240.00

| PROGRESSIVE TERRENO | QUOTE TERRENO | DISTANZE PARZIALI TERRENO | PROGRESSIVE PROGETTO | QUOTE PROGETTO | DISTANZE PARZIALI PROGETTO |
|---------------------|---------------|---------------------------|----------------------|----------------|----------------------------|
| 5.00 | 242.34 | 2.83 | -2.54 | 243.88 | 0.29 |
| -2.17 | 243.43 | | -1.00 | 243.88 | 1.25 |
| -1.64 | 243.40 | 0.63 | 0.00 | 243.14 | 1.00 |
| -0.96 | 243.43 | | | 243.10 | |
| 0.00 | 243.40 | 1.50 | | | 4.00 |
| 1.50 | 243.35 | | 4.00 | 242.96 | |
| 3.97 | 243.26 | 2.47 | | | 2.50 |
| 5.53 | 243.22 | 1.56 | 6.50 | 242.87 | |
| 6.53 | 243.18 | 1.00 | 7.76 | 242.83 | 1.25 |
| 9.99 | 241.93 | 3.03 | | | |
| 10.49 | 241.54 | 0.42 | | | |
| 11.20 | 241.92 | 0.38 | | | |
| 12.47 | 242.08 | 1.28 | | | |
| 13.61 | 242.09 | 0.69 | | | |
| 15.40 | 242.09 | 1.79 | | | |
| 20.00 | 242.02 | 4.60 | | | |



Rampa B (I) lvr_Ao
 Sez B 7
 Progr : 0+537.96
 Scala : 1:250
 Q.Rif. : 240.00

| DISTANZE PARZIALI PROGETTO | QUOTE PROGETTO | PROGRESSIVE PROGETTO | DISTANZE PARZIALI TERRENO | QUOTE TERRENO | PROGRESSIVE TERRENO |
|----------------------------|----------------|----------------------|---------------------------|---------------|---------------------|
| | | | 2.50 | 242.45 | -5.00 |
| 0.26 | 243.06 | -2.54 | | 243.26 | -2.50 |
| 1.25 | 243.13 | -1.00 | 0.89 | 243.30 | -1.93 |
| 1.00 | 243.08 | | 0.87 | 243.26 | -0.87 |
| | | | 2.93 | 243.23 | |
| 4.00 | | | | 243.12 | 2.93 |
| | 242.89 | 4.00 | 2.30 | 243.02 | 5.71 |
| 2.50 | 242.77 | 6.50 | | 243.01 | 6.43 |
| 1.25 | 242.72 | 7.75 | 3.05 | 242.01 | 9.70 |
| 0.40 | 242.45 | 8.15 | 1.15 | 241.23 | 11.05 |
| 0.46 | 242.20 | 8.61 | 0.36 | 241.86 | 11.55 |
| | | | 0.60 | 242.11 | 12.33 |
| | | | 2.00 | 242.07 | 14.33 |
| | | | | 242.20 | 15.06 |
| | | | 3.87 | | |
| | | | 1.07 | 242.18 | 18.93 |
| | | | | 242.16 | 20.00 |



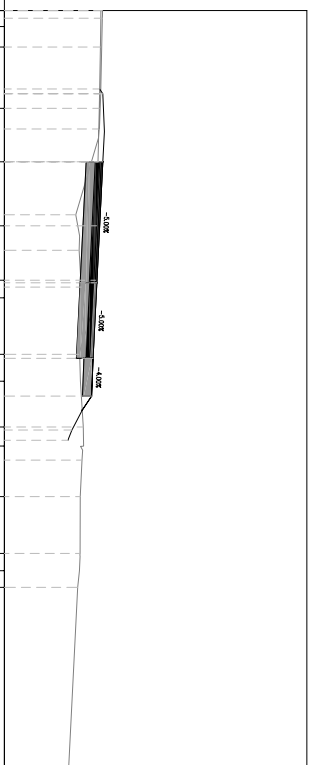
Rampa B (I) lvr_Ao
 Sez B 8
 Progr : 0+550.00
 Scala : 1:250
 Q.Rif. : 240.00

| DISTANZE PARZIALI PROGETTO | QUOTE PROGETTO | PROGRESSIVE PROGETTO | DISTANZE PARZIALI TERRENO | QUOTE TERRENO | PROGRESSIVE TERRENO |
|----------------------------|----------------|----------------------|---------------------------|---------------|---------------------|
| | | | 1.23 | 242.32 | -4.98 |
| | | | 0.56 | 243.11 | -3.00 |
| 1.25 | 243.12 | -2.26 | 1.16 | 243.16 | -2.43 |
| 1.00 | 243.17 | -1.00 | 1.25 | 243.14 | -1.25 |
| | 243.12 | 0.00 | | 243.10 | |
| 4.00 | | | 2.86 | | |
| | 242.92 | 4.00 | 2.41 | 243.02 | 2.86 |
| 2.50 | | | | 242.96 | 5.34 |
| | 242.80 | 6.50 | 1.04 | 242.81 | 6.20 |
| 1.25 | | | 0.63 | 242.52 | 7.25 |
| | 242.75 | 7.75 | 0.85 | 241.17 | 7.88 |
| 2.35 | | | 1.27 | | |
| | 241.18 | 10.20 | 0.80 | 241.41 | 9.21 |
| | | | 0.42 | 240.99 | 10.01 |
| | | | | 242.15 | 10.64 |
| | | | 3.42 | | |
| | | | 0.47 | 242.07 | 14.17 |
| | | | 0.79 | 242.29 | 15.42 |
| | | | 4.58 | | |
| | | | | 242.26 | 20.00 |

The diagram shows a cross-section of a ramp. The ground profile is represented by a solid line, and the project profile is shown as a dashed line. The ramp is a straight line with a constant slope. The ground profile starts at an elevation of -4.98 and ends at 20.00. The project profile starts at -2.26 and ends at 10.20. The diagram includes vertical markers for the ground and project elevations at various points along the ramp.

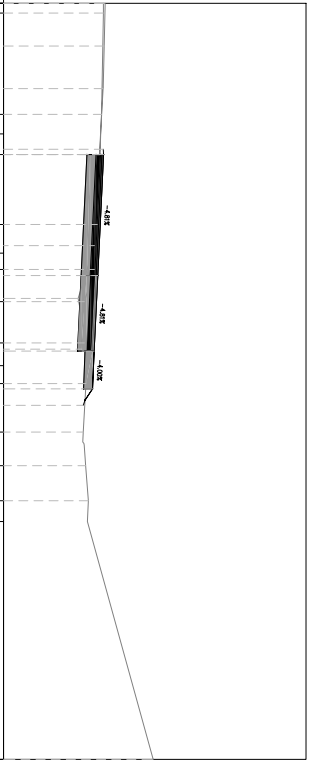
Rampa B (I) lvr_Ao
 Sez B 9
 Progr : 0+575.00
 Scala : 1:250
 Q.Rif. : 240.00

| PROGRESSIVE TERRENO | QUOTE TERRENO | DISTANZE PARZIALI TERRENO | PROGRESSIVE PROGETTO | QUOTE PROGETTO | DISTANZE PARZIALI PROGETTO |
|---------------------|---------------|---------------------------|----------------------|----------------|----------------------------|
| 5.00 | 243.10 | 0.53 | -2.44 | 243.10 | |
| 4.47 | 243.18 | 0.68 | -1.00 | 243.10 | 1.25 |
| -3.79 | 243.17 | | | 243.26 | 1.00 |
| | | 2.03 | | | 4.00 |
| -1.76 | 243.14 | | | | |
| | | 1.76 | | | |
| 0.00 | 243.10 | | | | |
| | | 2.12 | | | |
| 2.12 | 243.05 | | | | |
| | | 1.49 | | | |
| 3.92 | 243.02 | 0.58 | 4.00 | 243.06 | 2.50 |
| 4.50 | 243.04 | | | | |
| | | 1.75 | | | |
| 6.37 | 242.46 | 0.77 | 6.50 | 242.93 | 1.25 |
| 7.25 | 242.51 | | | | 0.46 |
| | | 1.52 | | | 0.66 |
| 8.77 | 242.61 | 0.63 | 9.24 | 242.10 | 0.28 |
| 9.40 | 242.62 | | | | |
| | | 1.20 | | | |
| 11.07 | 242.51 | | | | |
| | | 1.88 | | | |
| 12.95 | 242.50 | | | | |
| 13.52 | 242.48 | 0.55 | | | |
| 14.07 | 242.42 | | | | |
| | | 5.93 | | | |
| 20.00 | 242.12 | | | | |



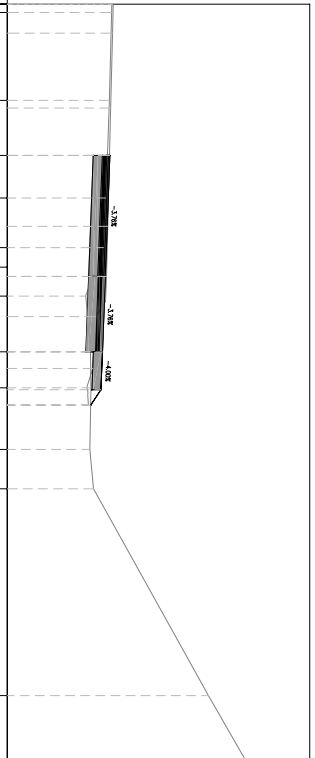
Rampa B (I) lvr_Ao
 Sez B 10
 Progr : 0+584.03
 Scala : 1:250
 Q.Rif. : 240.00

| DISTANZE PARZIALI PROGETTO | QUOTE PROGETTO | PROGRESSIVE PROGETTO | DISTANZE PARZIALI TERRENO | QUOTE TERRENO | PROGRESSIVE TERRENO |
|----------------------------|----------------|----------------------|---------------------------|---------------|---------------------|
| | | | 3.15 | 243.30 | 5.88 |
| | | | 0.65 | 243.24 | -1.33 |
| | | | 0.68 | 243.21 | -0.68 |
| | | | | 243.19 | 0.00 |
| 4.00 | 243.39 | 0.00 | 2.31 | | |
| | | | 0.64 | 243.10 | 2.31 |
| | | | 0.52 | 243.06 | 3.26 |
| | | | 0.87 | 243.00 | 3.80 |
| 2.50 | 243.11 | 4.00 | 1.20 | 242.67 | 4.86 |
| | | | 0.75 | 242.67 | 6.23 |
| 1.25 | 242.99 | 6.50 | 0.60 | 242.72 | 6.98 |
| 0.38 | 242.94 | 7.75 | 1.60 | 242.72 | 7.58 |
| | 242.84 | 8.29 | | | |
| | | | 0.68 | 242.63 | 9.18 |
| | | | 1.16 | 242.71 | 10.29 |
| | | | 0.69 | 242.80 | 11.45 |
| | | | | 242.77 | 12.13 |
| | | | 7.87 | | |
| | | | | 244.95 | 20.00 |



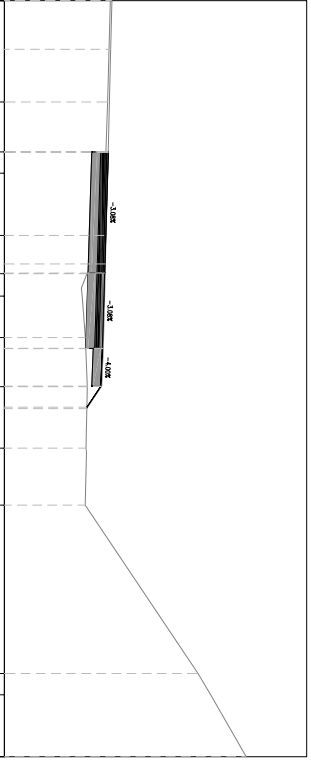
Rampa B (I) lvr_Ao
 Sez B 11
 Progr : 0+600.00
 Scala : 1:250
 Q.Rif. : 240.00

| PROGRESSIVE TERRENO | QUOTE TERRENO | DISTANZE PARZIALI TERRENO | PROGRESSIVE PROGETTO | QUOTE PROGETTO | DISTANZE PARZIALI PROGETTO |
|---------------------|---------------|---------------------------|----------------------|----------------|----------------------------|
| 243.46 | -4.99 | 2.90 | | | |
| 243.38 | -1.82 | 1.82 | | | |
| 243.31 | 0.00 | 1.41 | | 243.39 | 4.00 |
| 243.26 | 1.41 | 1.64 | | | |
| 243.18 | 3.05 | | 4.00 | 243.24 | 2.50 |
| 242.96 | 3.69 | 0.96 | | | |
| 242.59 | 4.65 | 1.82 | 6.50 | 243.15 | 1.25 |
| 242.75 | 6.50 | 1.19 | | 243.10 | 0.51 |
| 242.77 | 7.69 | 2.04 | 7.75 | 242.75 | |
| 242.73 | 9.72 | 1.30 | 8.26 | | |
| 242.85 | 11.02 | 6.84 | | | |
| 246.65 | 17.86 | 2.14 | | | |
| 247.88 | 20.00 | | | | |



Rampa B (I) lvr_Ao
 Sez B 12
 Progr : 0+608.94
 Scala : 1:250
 Q.Rif. : 240.00

| PROGRESSIVE TERRENO | QUOTE TERRENO | DISTANZE PARZIALI TERRENO | PROGRESSIVE PROGETTO | QUOTE PROGETTO | DISTANZE PARZIALI PROGETTO |
|---------------------|---------------|---------------------------|----------------------|----------------|----------------------------|
| 5.00 | 243.50 | 3.35 | | | |
| -1.65 | 243.42 | 1.53 | | | |
| 0.71 | 243.36 | 0.71 | 0.01 | 243.44 | 0.86 |
| 2.76 | 243.32 | 2.06 | 0.86 | 243.41 | 3.14 |
| 4.03 | 243.29 | 0.92 | 4.01 | 243.32 | 0.53 |
| 4.77 | 242.73 | 0.48 | 4.54 | 243.30 | 1.97 |
| 6.14 | 242.57 | 1.37 | 6.57 | 243.24 | 0.27 |
| 7.76 | 242.68 | 1.62 | 8.44 | 243.23 | 0.98 |
| 9.80 | 242.75 | 2.00 | | 243.19 | 0.55 |
| 11.68 | 242.70 | 1.74 | | 242.73 | |
| 17.25 | 242.67 | 5.57 | | | |
| 17.95 | 246.41 | 0.70 | | | |
| 20.00 | 246.82 | 2.05 | | | |
| | 248.00 | | | | |



Rampa B (I) lvr_Ao
 Sez B 13
 Progr : 0+616.28
 Scala : 1:250
 Q.Rif. : 240.00

