

COMUNE DI GREVE IN CHIANTI
**NUOVO PROGETTO PER LA COLTIVAZIONE ED IL RECUPERO AMBIENTALE
DELLA CAVA DI PONETA IN LOCALITÀ FERRONE**



Elaborato
REL.05.B

**ALLEGATI DI MODELLAZIONE IDRAULICA
HEC RAS 5.0.4 – BORRO DI PONETA**

Il proponente:



Progettazione:



STG A - STUDIO TECNICO DI GEOLOGIA E INGEGNERIA AMBIENTALE

50121 FIRENZE – Viale Giovanni Amendola n.6/4 – www.stgassociati.it
studio@stgassociati.it – stga@pec.it - 055.9336400 – P.IVA 03740890482

Gruppo di lavoro

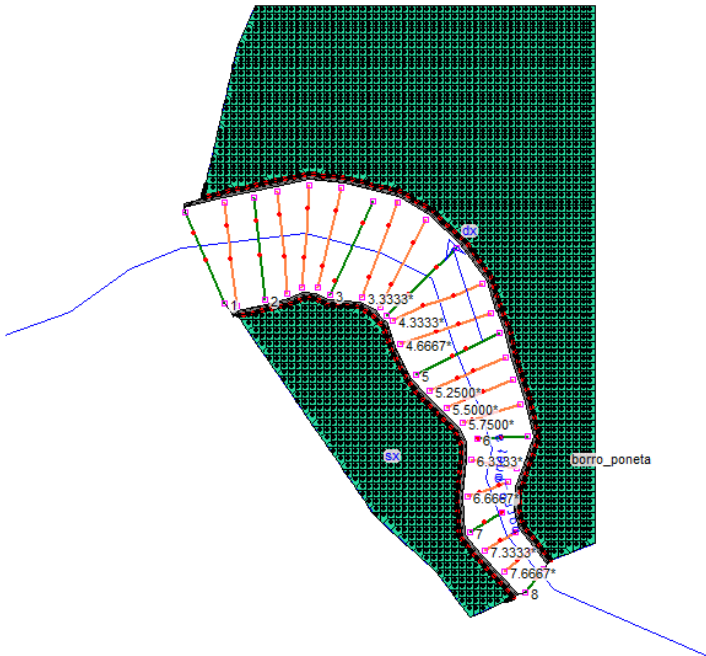
geol. Giancarlo Ceccanti (STGA)
geol. Giampaolo Mariannelli (STGA)
ing. Lapo Consumi (STGA)
for. Gianluca Capecci

Collaboratori

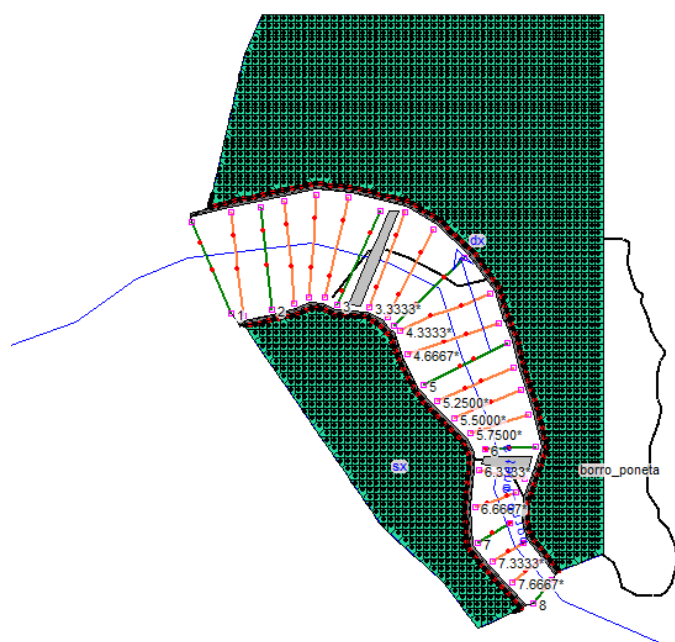
geol. Marco Folini (STGA)
chimico Giuseppe Sarti
biologo Alberto Conti
geol. Francesco Facchini

Revisione 0 - data: aprile 2025

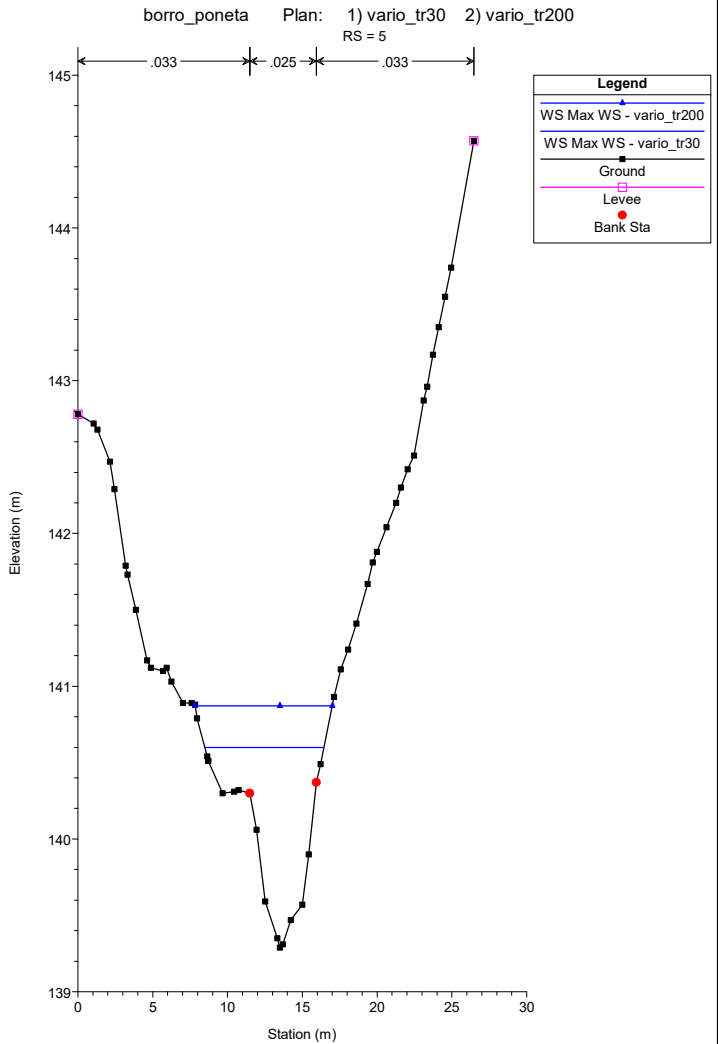
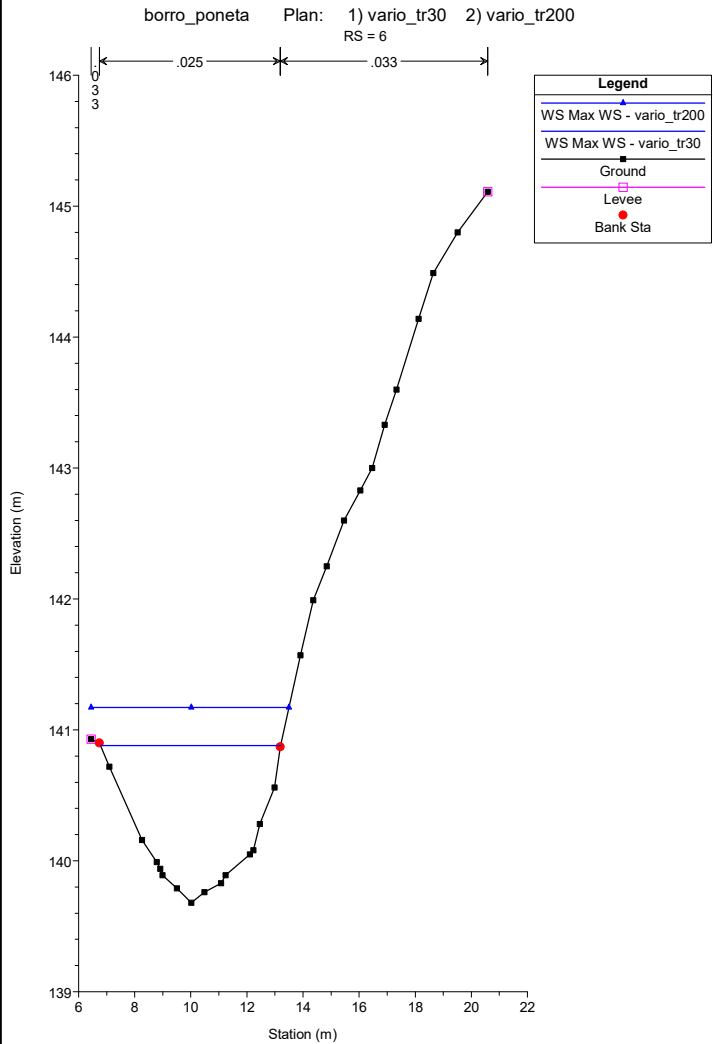
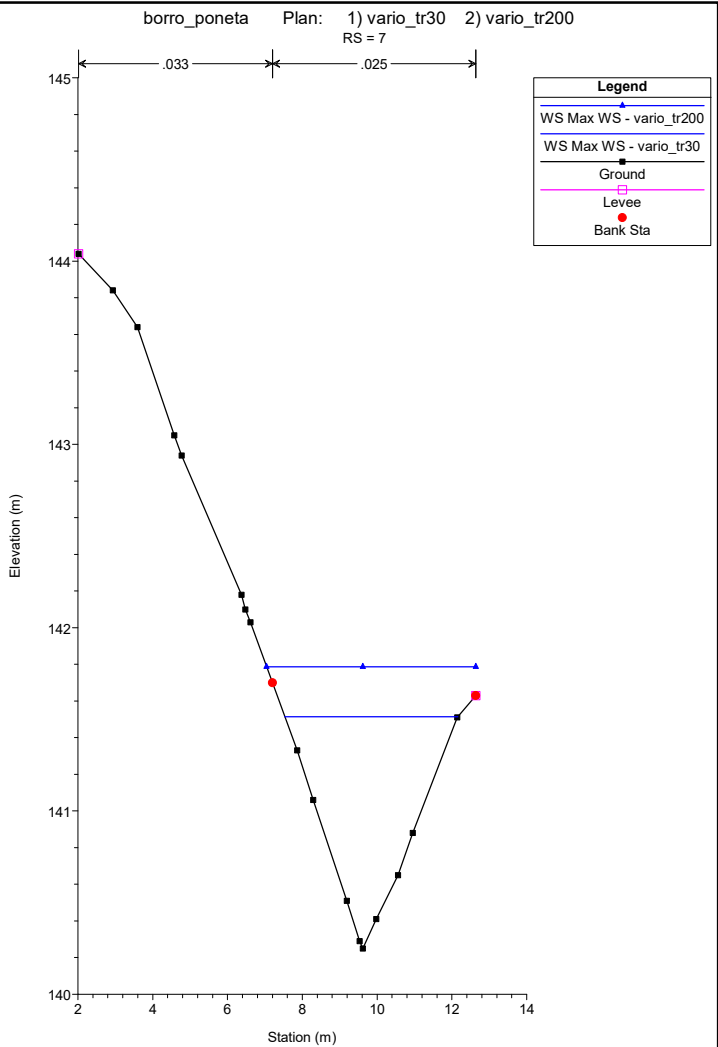
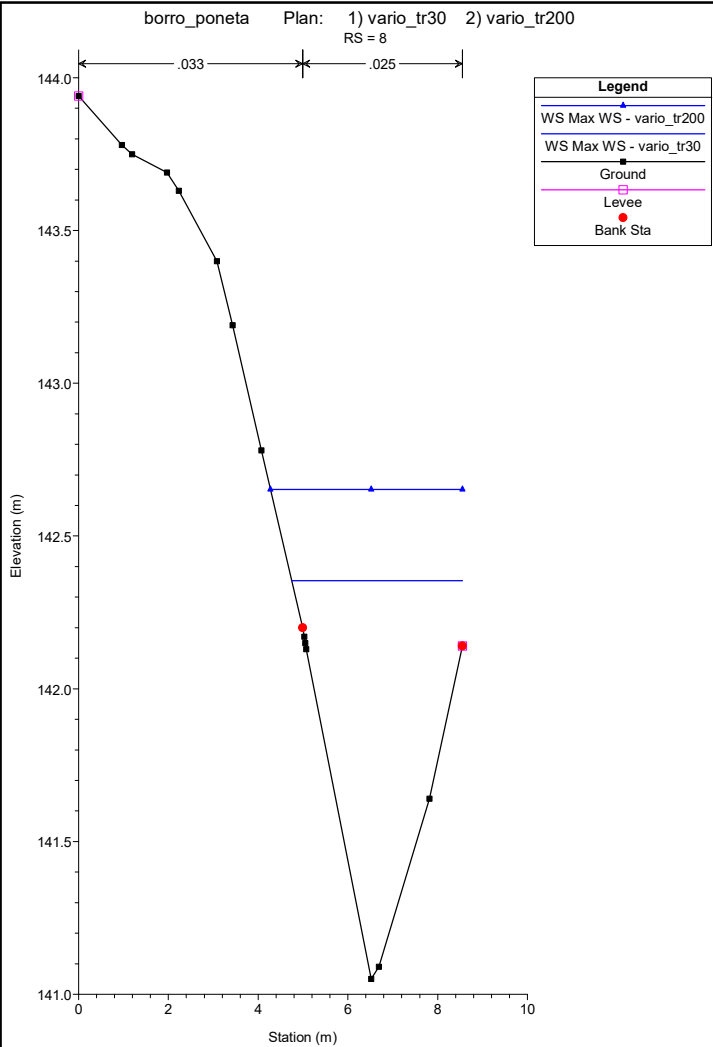
PLANIMETRIA MODELLO IDRAULICO STATO ATTUALE

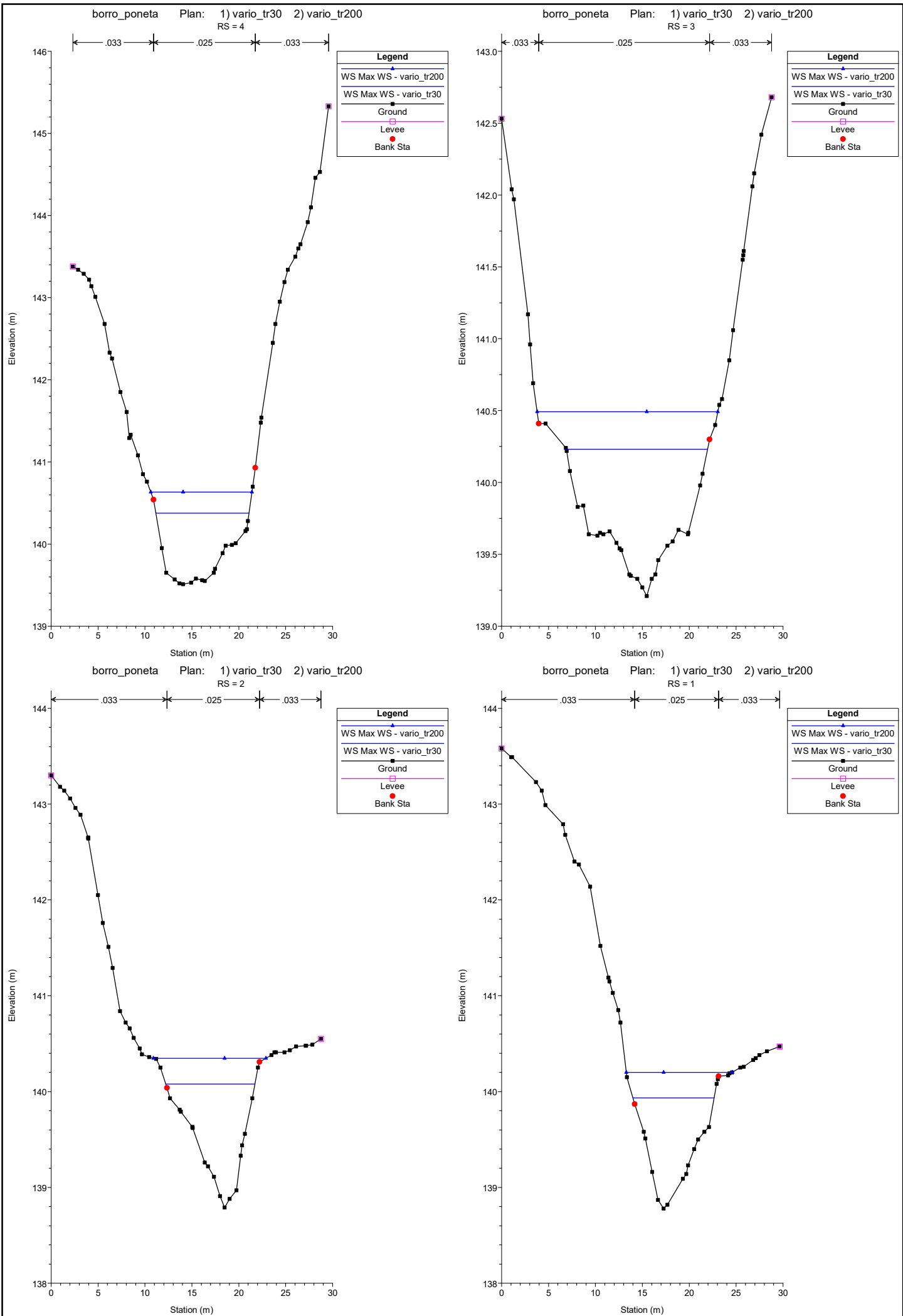


PLANIMETRIA MODELLO IDRAULICO STATO DI PROGETTO

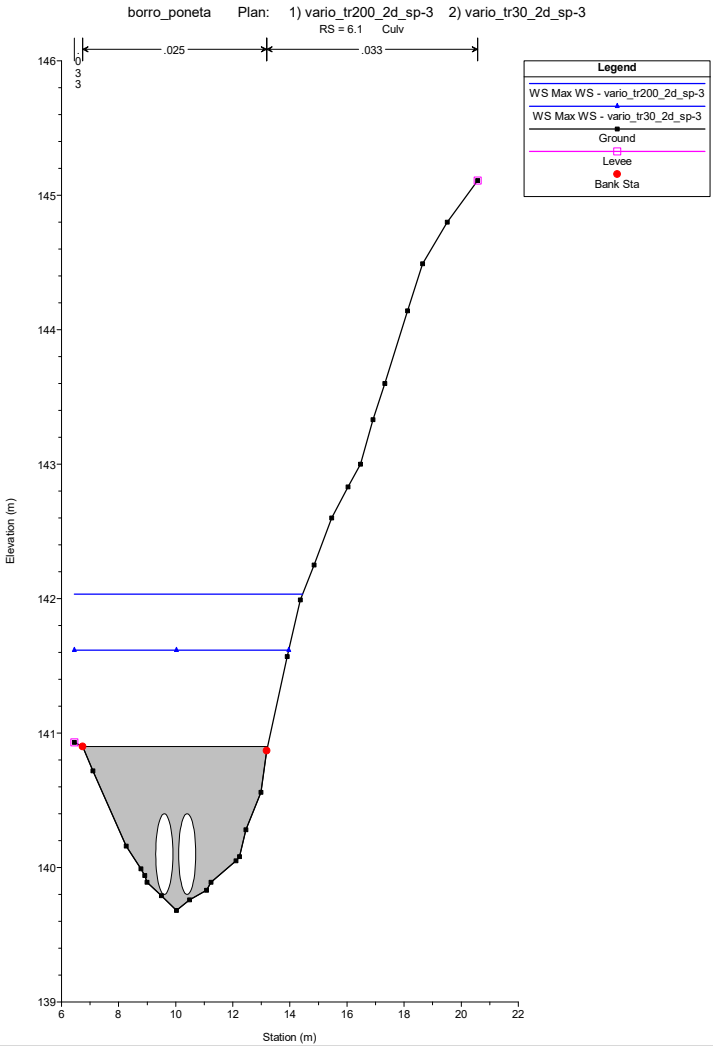
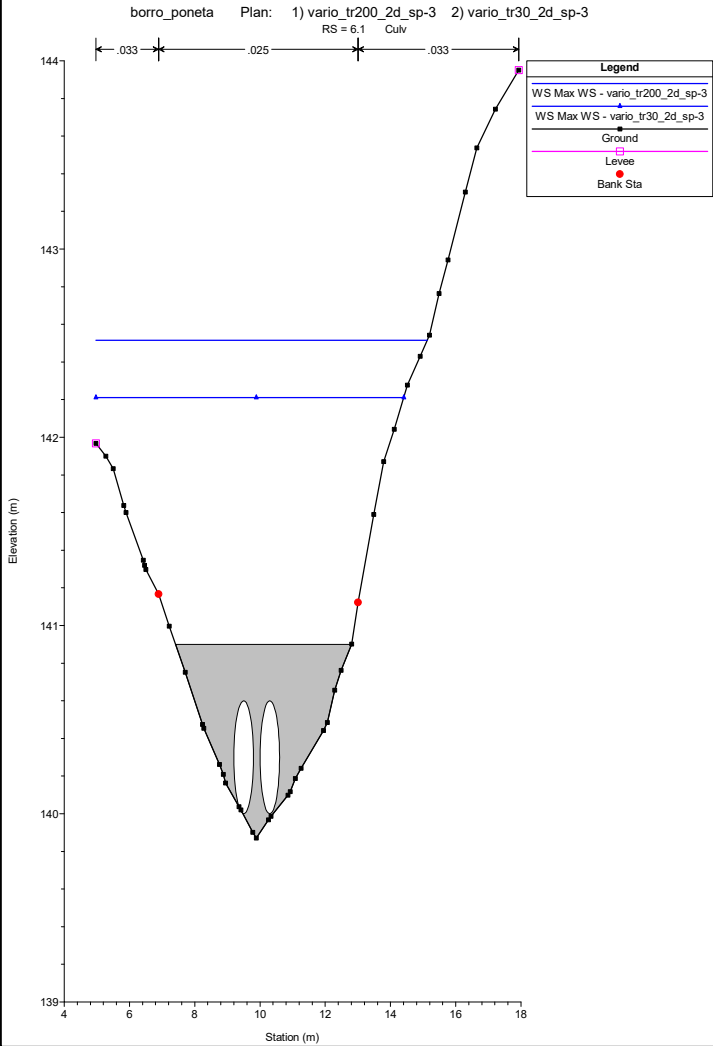
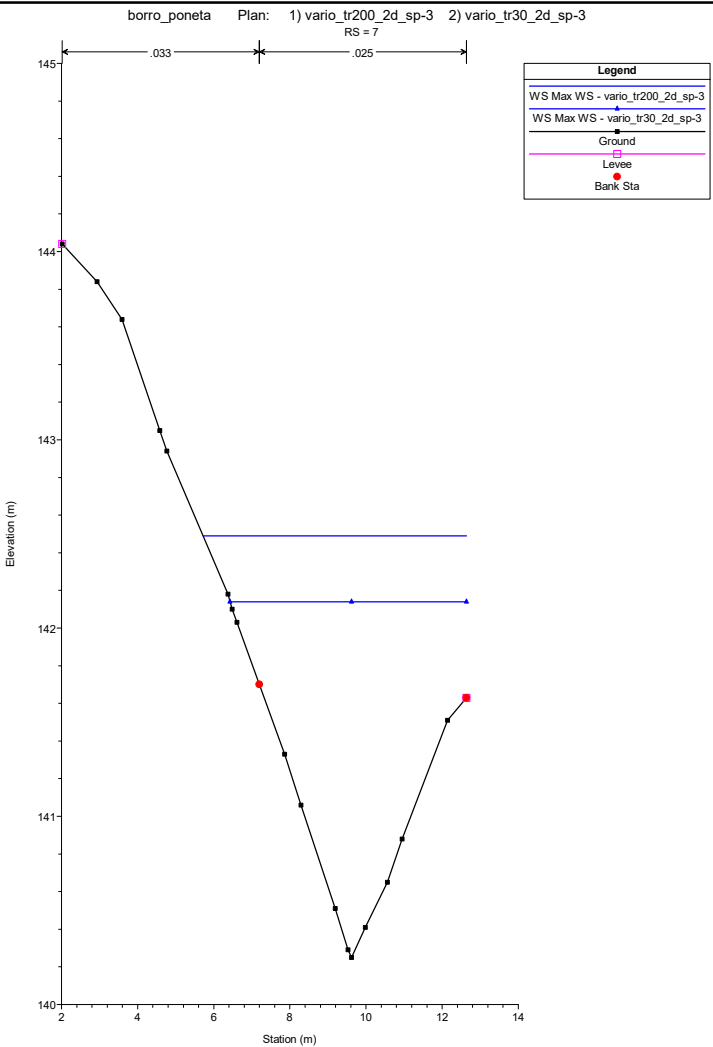
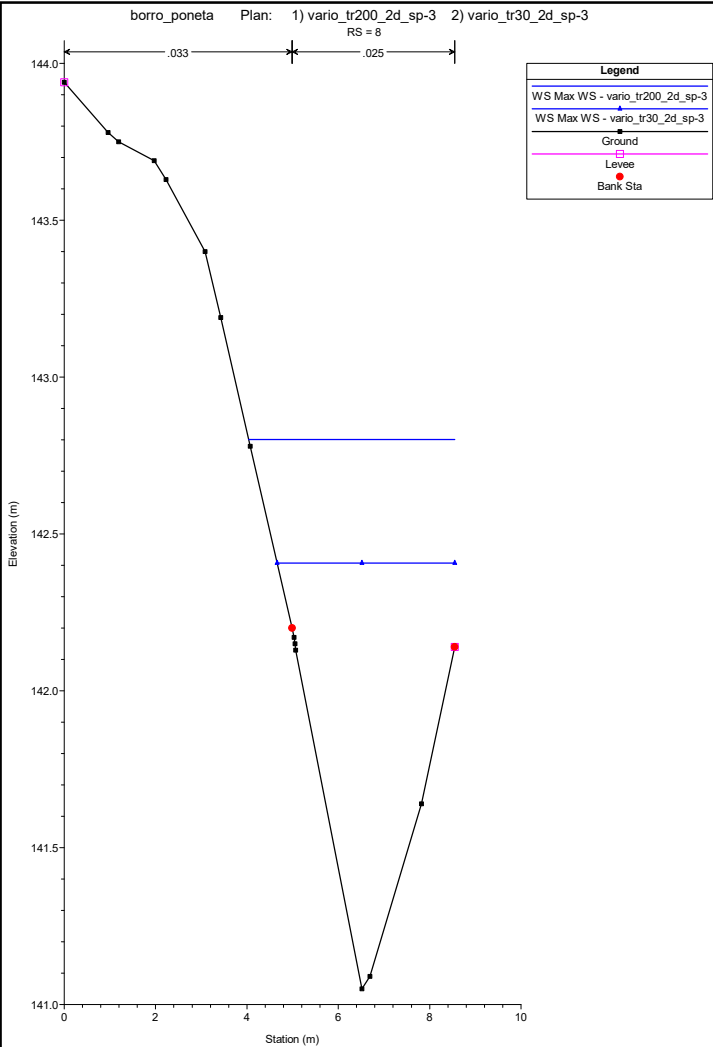


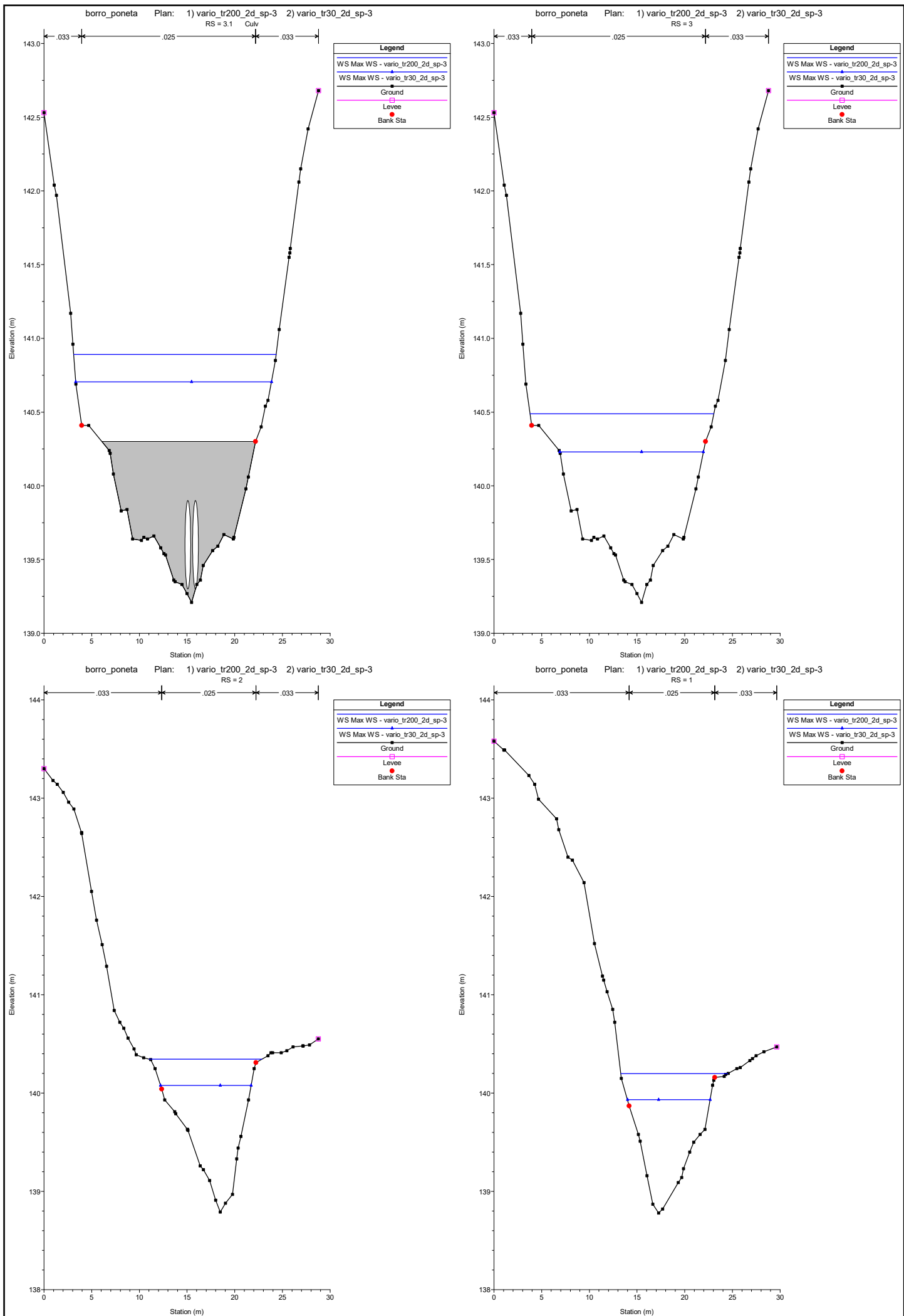
SEZIONI IDRAULICHE STATO ATTUALE



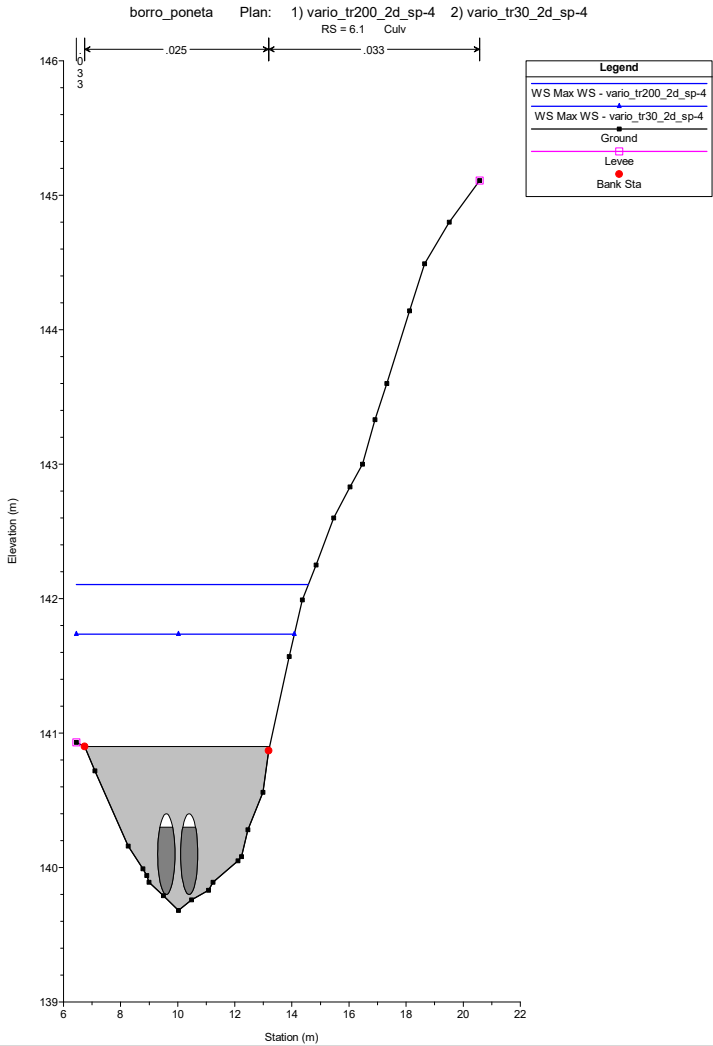
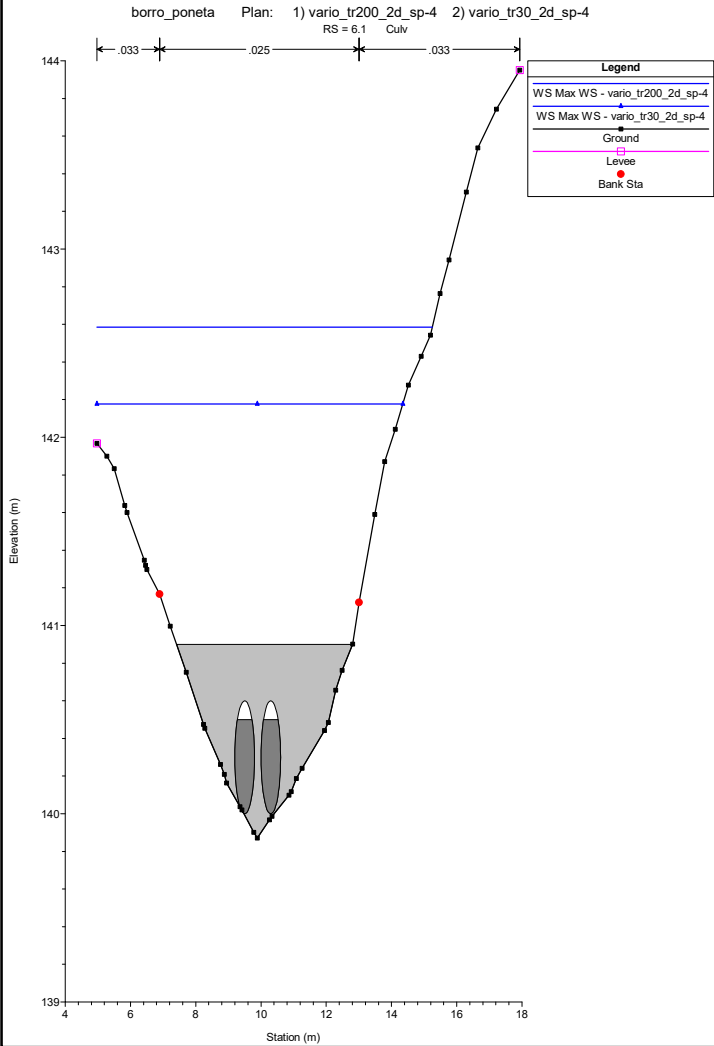
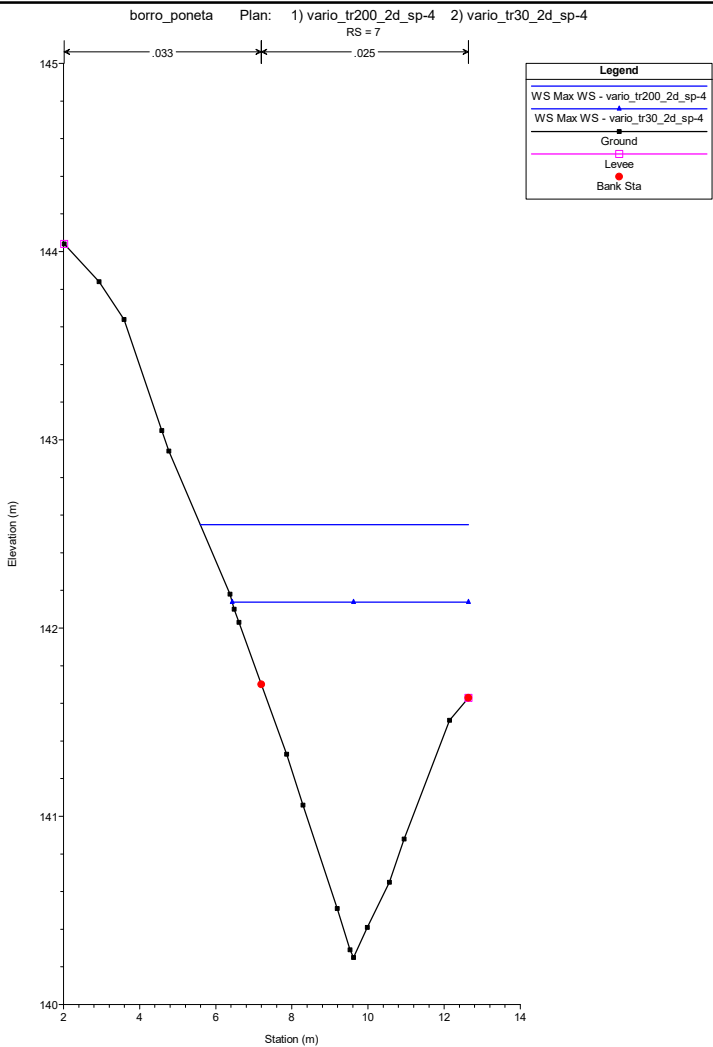
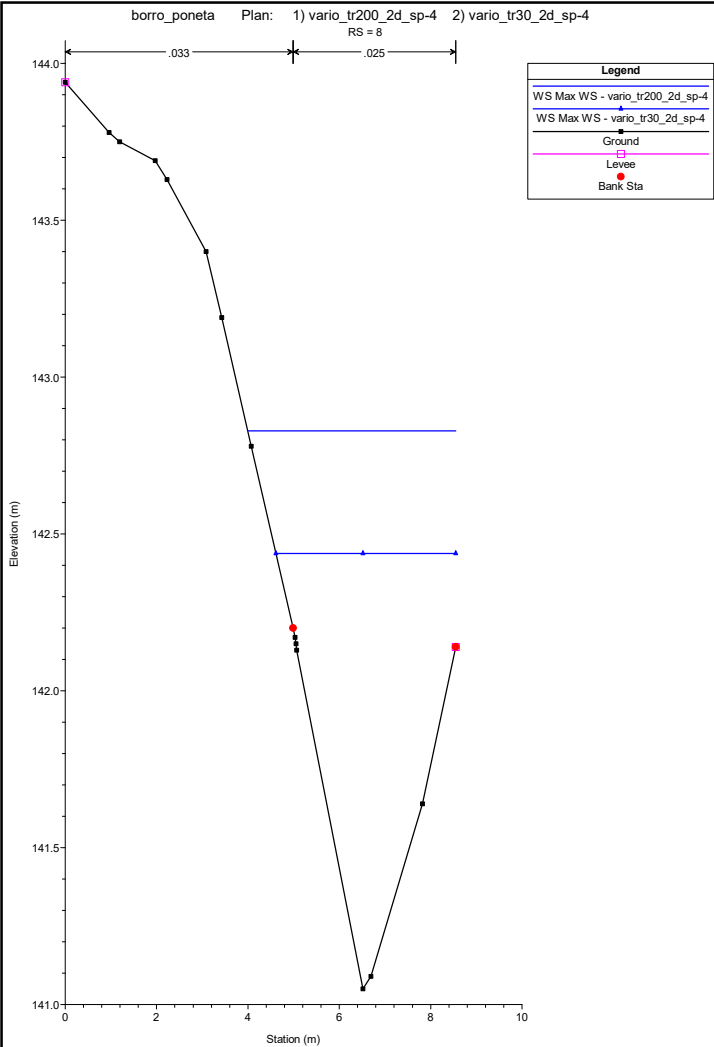


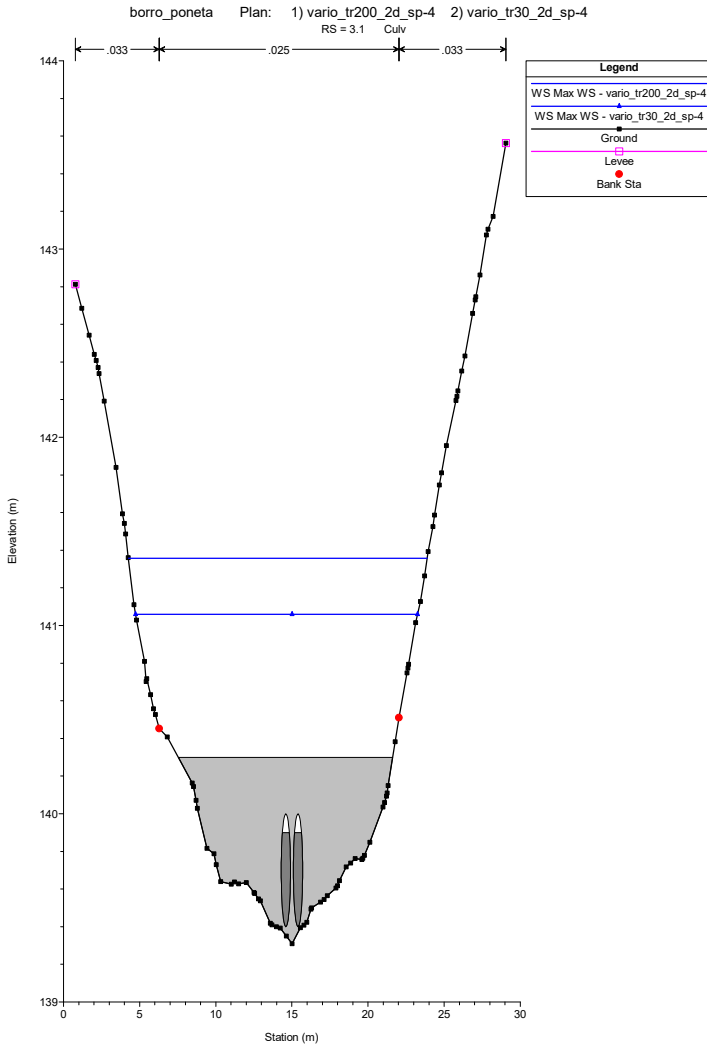
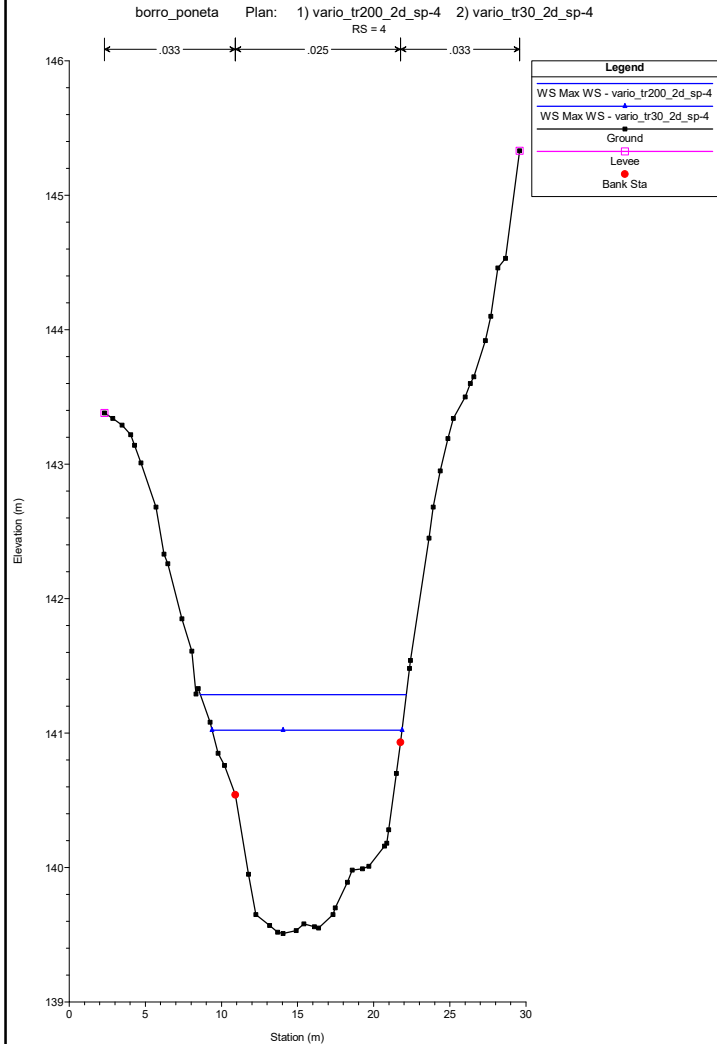
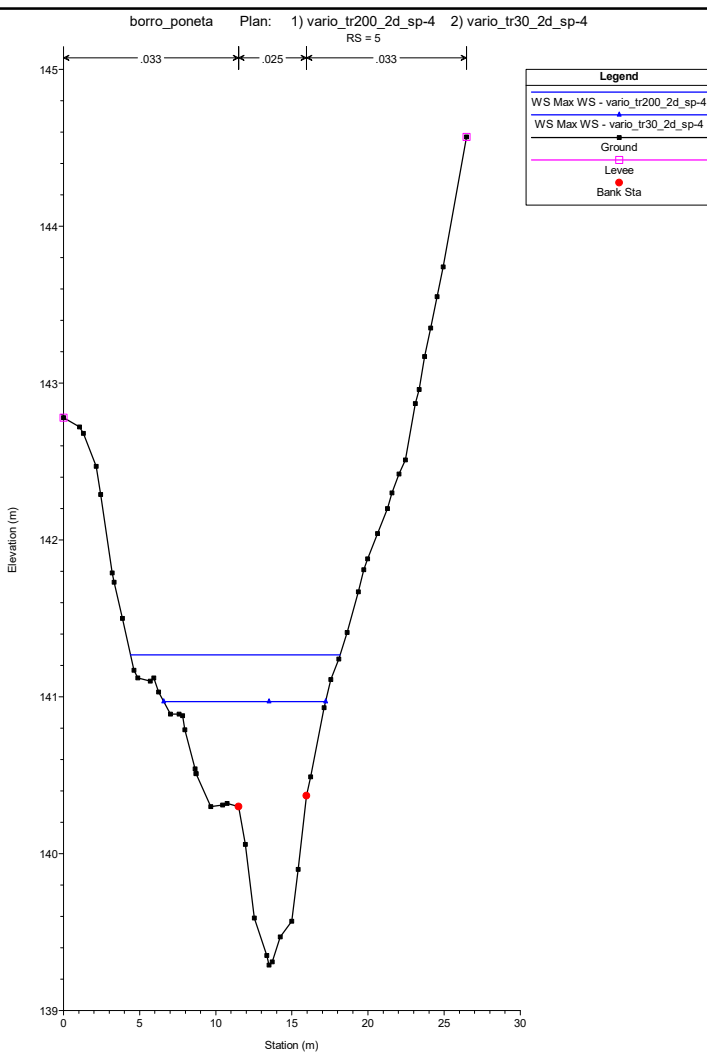
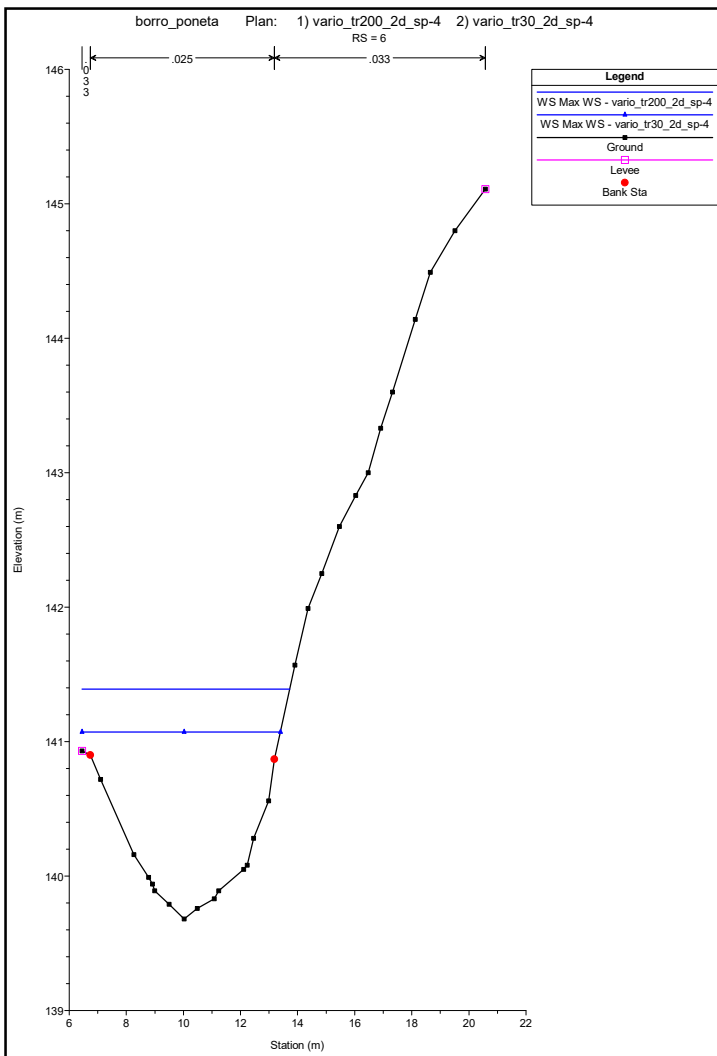
SEZIONI IDRAULICHE STATO DI PROGETTO

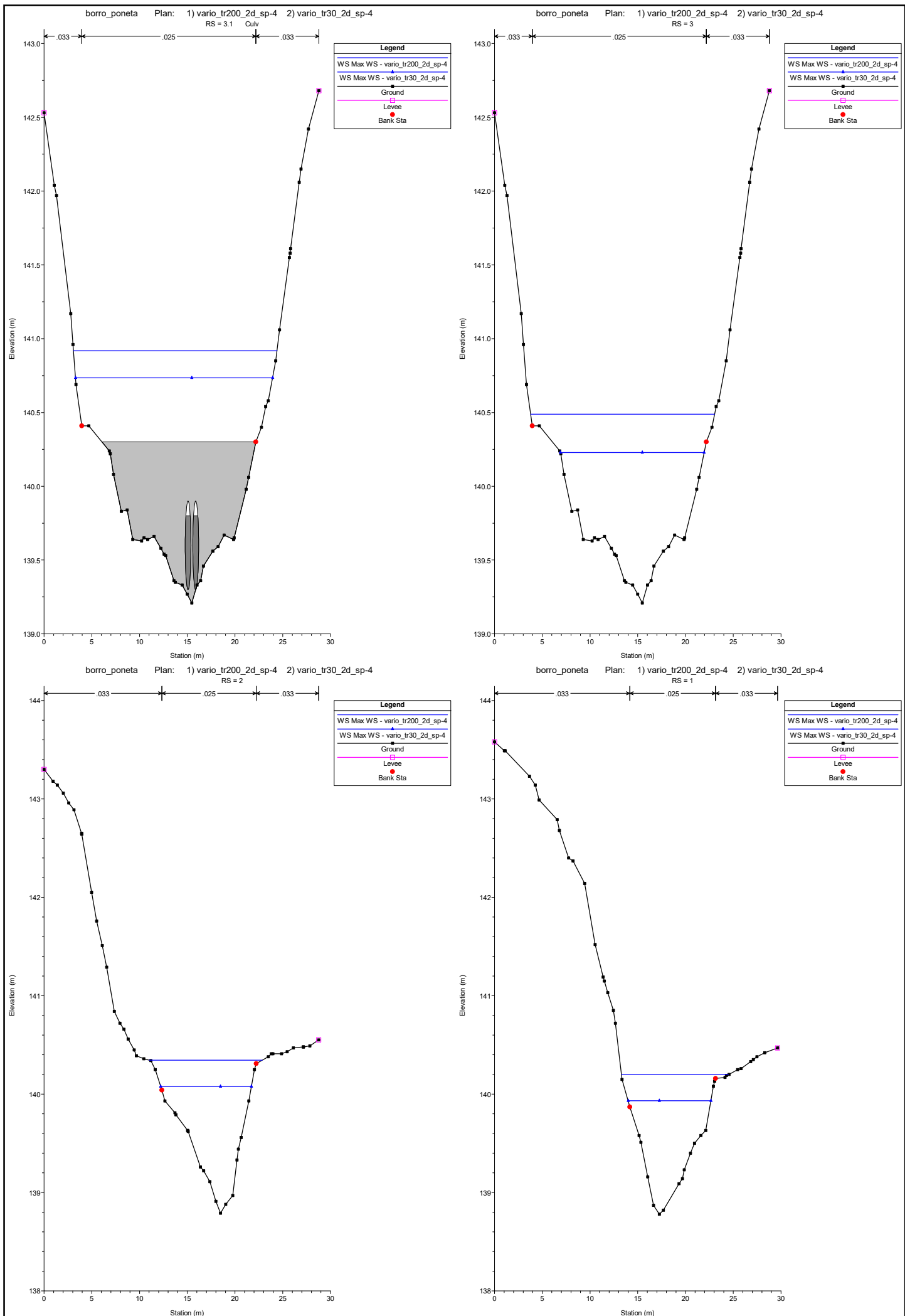




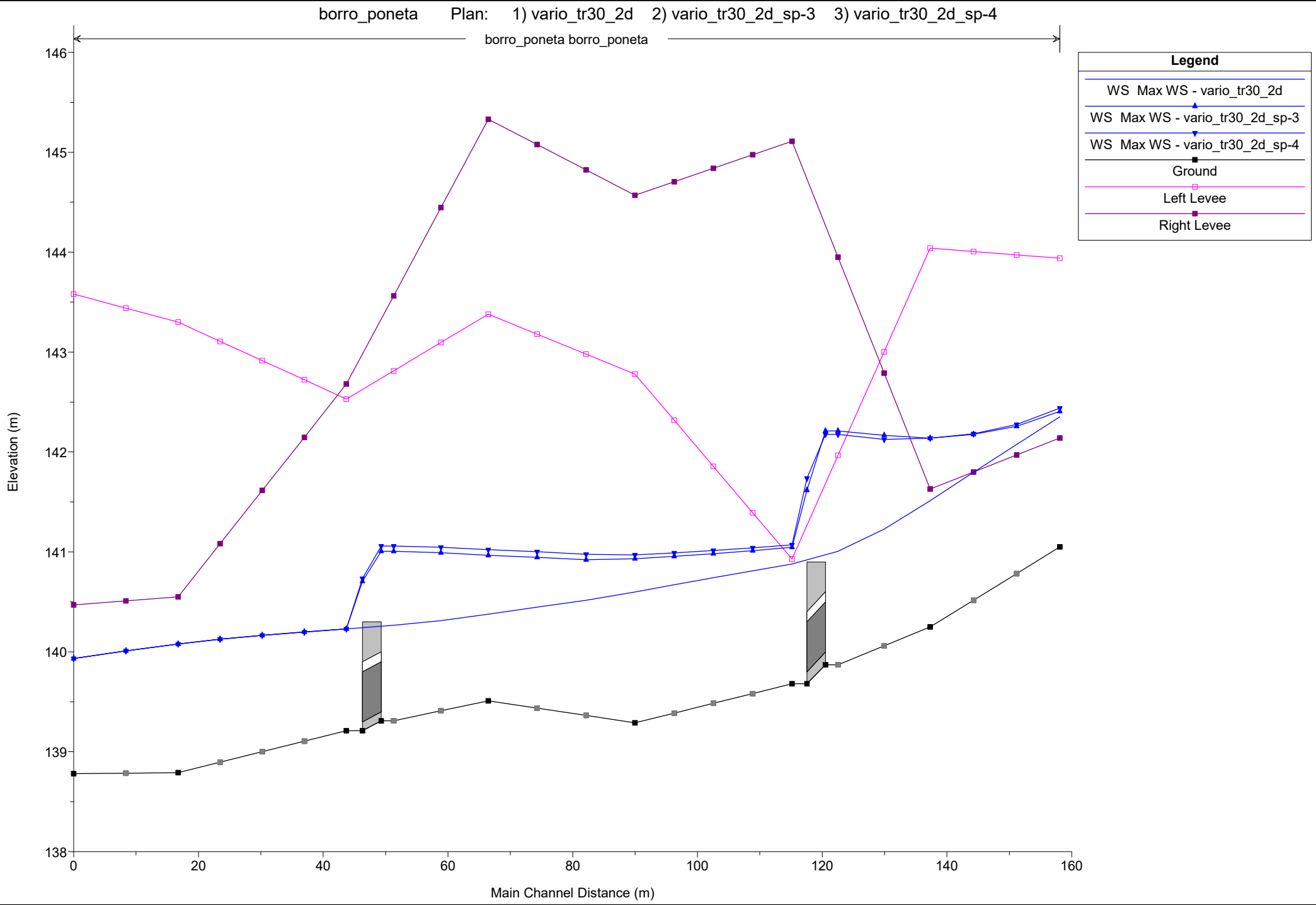
SEZIONI IDRAULICHE STATO DI PROGETTO (CONDOTTE OSTRUITE)







PROFILI IDRAULICI EVENTI TEMPO DI RITORNO 30 ANNI



PROFILI IDRAULICI EVENTI TEMPO DI RITORNO 200 ANNI

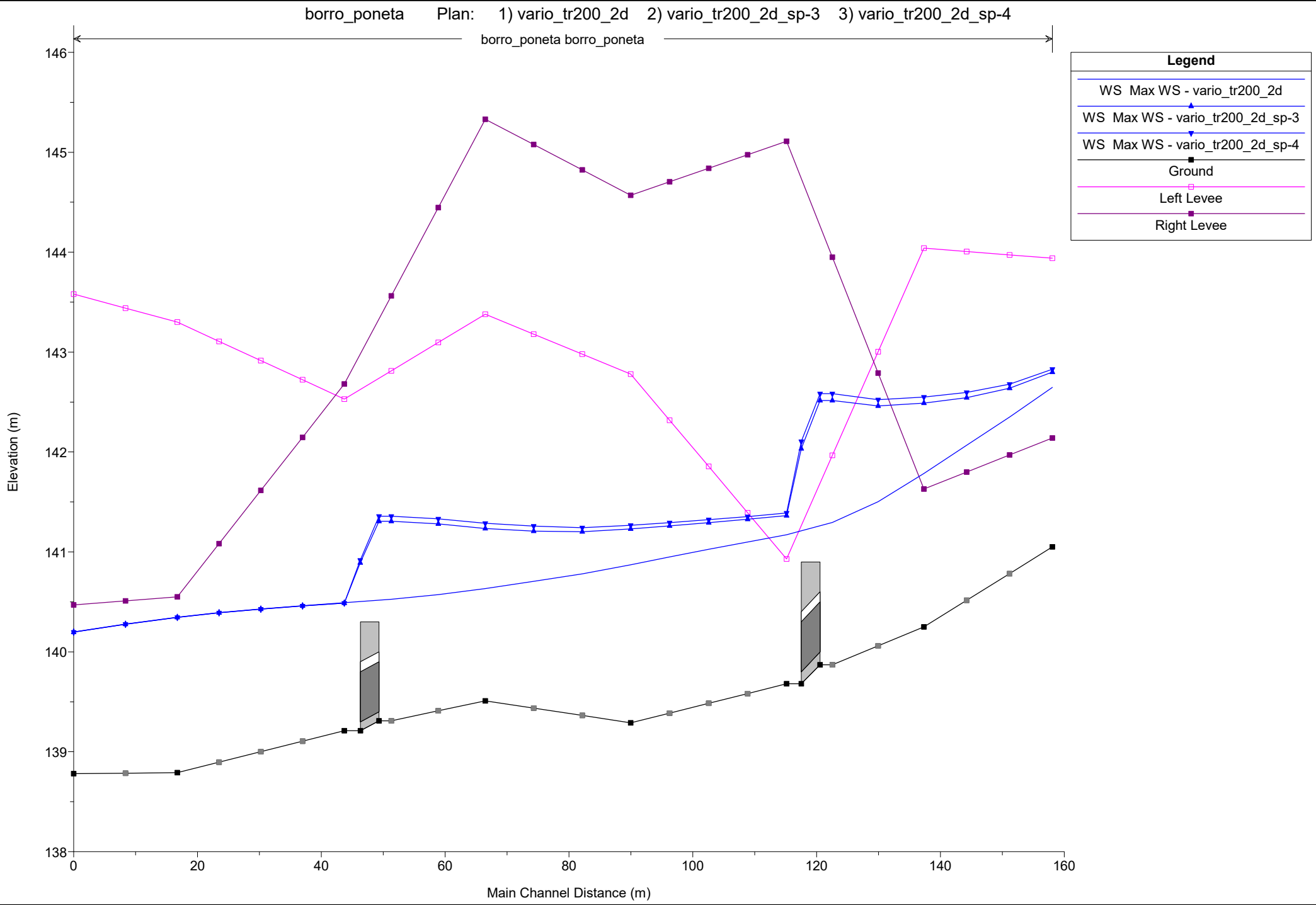


TABELLA DEI RISULTATI STATO ATTUALE

HEC-RAS River: borro_poneta Reach: borro_poneta Profile: Max WS

| Reach | River Sta | Profile | Plan | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|--------------|-----------|---------|----------------|------------|-----------|-----------|-----------|-----------|------------|----------|-----------|-----------|--------------|
| | | | | (m3/s) | (m) | (m) | (m) | (m) | (m/m) | (m/s) | (m2) | (m) | |
| borro_poneta | 8 | Max WS | vario_tr30_2d | 16.52 | 141.05 | 142.35 | 142.89 | 144.13 | 0.040505 | 5.91 | 2.81 | 3.80 | 2.13 |
| borro_poneta | 8 | Max WS | vario_tr200_2d | 28.58 | 141.05 | 142.65 | 143.41 | 145.37 | 0.044696 | 7.35 | 4.00 | 4.27 | 2.26 |
| borro_poneta | 7.99 | | | Lat Struct | | | | | | | | | |
| borro_poneta | 7.98 | | | Lat Struct | | | | | | | | | |
| borro_poneta | 7.6667* | Max WS | vario_tr30_2d | 16.45 | 140.78 | 142.08 | 142.55 | 143.68 | 0.039552 | 5.60 | 2.94 | 4.26 | 2.13 |
| borro_poneta | 7.6667* | Max WS | vario_tr200_2d | 28.25 | 140.78 | 142.35 | 143.07 | 144.76 | 0.041433 | 6.89 | 4.16 | 4.71 | 2.23 |
| borro_poneta | 7.3333* | Max WS | vario_tr30_2d | 16.42 | 140.52 | 141.80 | 142.25 | 143.34 | 0.041210 | 5.50 | 2.99 | 4.69 | 2.20 |
| borro_poneta | 7.3333* | Max WS | vario_tr200_2d | 28.12 | 140.52 | 142.07 | 142.72 | 144.25 | 0.039777 | 6.54 | 4.33 | 5.16 | 2.21 |
| borro_poneta | 7 | Max WS | vario_tr30_2d | 16.46 | 140.25 | 141.51 | 141.96 | 143.07 | 0.040924 | 5.53 | 2.98 | 4.62 | 2.20 |
| borro_poneta | 7 | Max WS | vario_tr200_2d | 28.41 | 140.25 | 141.79 | 142.40 | 143.91 | 0.042212 | 6.46 | 4.40 | 5.59 | 2.29 |
| borro_poneta | 6.6667* | Max WS | vario_tr30_2d | 16.46 | 140.06 | 141.23 | 141.64 | 142.59 | 0.036258 | 5.18 | 3.18 | 5.15 | 2.10 |
| borro_poneta | 6.6667* | Max WS | vario_tr200_2d | 28.51 | 140.06 | 141.50 | 142.07 | 143.37 | 0.034343 | 6.05 | 4.73 | 6.05 | 2.14 |
| borro_poneta | 6.3333* | Max WS | vario_tr30_2d | 16.44 | 139.87 | 141.01 | 141.31 | 141.99 | 0.023441 | 4.38 | 3.75 | 5.70 | 1.73 |
| borro_poneta | 6.3333* | Max WS | vario_tr200_2d | 28.50 | 139.87 | 141.29 | 141.72 | 142.67 | 0.022126 | 5.20 | 5.51 | 6.67 | 1.76 |
| borro_poneta | 6 | Max WS | vario_tr30_2d | 16.44 | 139.68 | 140.88 | 140.99 | 141.44 | 0.010935 | 3.32 | 4.95 | 6.42 | 1.21 |
| borro_poneta | 6 | Max WS | vario_tr200_2d | 28.45 | 139.68 | 141.17 | 141.37 | 142.05 | 0.011245 | 4.15 | 6.95 | 7.05 | 1.29 |
| borro_poneta | 5.7500* | Max WS | vario_tr30_2d | 16.44 | 139.58 | 140.81 | 140.94 | 141.41 | 0.010975 | 3.42 | 4.84 | 6.75 | 1.21 |
| borro_poneta | 5.7500* | Max WS | vario_tr200_2d | 28.44 | 139.58 | 141.10 | 141.34 | 142.01 | 0.011405 | 4.27 | 7.05 | 8.42 | 1.30 |
| borro_poneta | 5.5000* | Max WS | vario_tr30_2d | 16.44 | 139.49 | 140.74 | 140.89 | 141.37 | 0.011100 | 3.53 | 4.80 | 7.12 | 1.23 |
| borro_poneta | 5.5000* | Max WS | vario_tr200_2d | 28.43 | 139.49 | 141.03 | 141.32 | 141.99 | 0.011896 | 4.43 | 7.07 | 9.45 | 1.33 |
| borro_poneta | 5.2500* | Max WS | vario_tr30_2d | 16.43 | 139.39 | 140.67 | 140.85 | 141.34 | 0.011355 | 3.65 | 4.81 | 7.53 | 1.24 |
| borro_poneta | 5.2500* | Max WS | vario_tr200_2d | 28.43 | 139.39 | 140.95 | 141.29 | 141.95 | 0.012414 | 4.58 | 7.12 | 9.43 | 1.36 |
| borro_poneta | 5 | Max WS | vario_tr30_2d | 16.43 | 139.29 | 140.60 | 140.81 | 141.29 | 0.011762 | 3.78 | 4.88 | 7.97 | 1.26 |
| borro_poneta | 5 | Max WS | vario_tr200_2d | 28.43 | 139.29 | 140.87 | 141.26 | 141.87 | 0.012777 | 4.68 | 7.22 | 9.16 | 1.37 |
| borro_poneta | 4.6667* | Max WS | vario_tr30_2d | 16.41 | 139.36 | 140.52 | 140.61 | 141.02 | 0.009255 | 3.15 | 5.31 | 8.21 | 1.13 |
| borro_poneta | 4.6667* | Max WS | vario_tr200_2d | 28.42 | 139.36 | 140.78 | 140.99 | 141.56 | 0.010143 | 3.97 | 7.67 | 9.61 | 1.23 |
| borro_poneta | 4.3333* | Max WS | vario_tr30_2d | 16.41 | 139.44 | 140.45 | 140.48 | 140.85 | 0.008473 | 2.81 | 5.84 | 8.34 | 1.07 |
| borro_poneta | 4.3333* | Max WS | vario_tr200_2d | 28.38 | 139.44 | 140.71 | 140.83 | 141.33 | 0.009238 | 3.52 | 8.21 | 10.08 | 1.17 |
| borro_poneta | 4 | Max WS | vario_tr30_2d | 16.40 | 139.51 | 140.38 | 140.43 | 140.76 | 0.009628 | 2.74 | 6.00 | 9.94 | 1.13 |
| borro_poneta | 4 | Max WS | vario_tr200_2d | 28.38 | 139.51 | 140.63 | 140.72 | 141.18 | 0.009331 | 3.29 | 8.64 | 10.79 | 1.16 |
| borro_poneta | 3.6667* | Max WS | vario_tr30_2d | 16.40 | 139.41 | 140.31 | 140.30 | 140.59 | 0.007019 | 2.32 | 7.06 | 12.01 | 0.97 |
| borro_poneta | 3.6667* | Max WS | vario_tr200_2d | 28.37 | 139.41 | 140.57 | 140.57 | 140.96 | 0.006691 | 2.75 | 10.34 | 13.32 | 0.99 |
| borro_poneta | 3.3333* | Max WS | vario_tr30_2d | 16.37 | 139.31 | 140.27 | | 140.48 | 0.005412 | 2.03 | 8.05 | 13.78 | 0.85 |
| borro_poneta | 3.3333* | Max WS | vario_tr200_2d | 28.37 | 139.31 | 140.53 | | 140.81 | 0.005237 | 2.38 | 11.95 | 16.03 | 0.87 |
| borro_poneta | 3 | Max WS | vario_tr30_2d | 16.37 | 139.21 | 140.23 | | 140.40 | 0.004126 | 1.81 | 9.05 | 15.07 | 0.75 |
| borro_poneta | 3 | Max WS | vario_tr200_2d | 28.36 | 139.21 | 140.49 | | 140.72 | 0.004223 | 2.10 | 13.56 | 19.27 | 0.78 |
| borro_poneta | 2.7500* | Max WS | vario_tr30_2d | 16.37 | 139.10 | 140.20 | | 140.39 | 0.004590 | 1.92 | 8.54 | 14.12 | 0.79 |
| borro_poneta | 2.7500* | Max WS | vario_tr200_2d | 28.35 | 139.10 | 140.46 | | 140.72 | 0.004425 | 2.24 | 12.79 | 17.96 | 0.81 |
| borro_poneta | 2.5000* | Max WS | vario_tr30_2d | 16.37 | 139.00 | 140.17 | | 140.38 | 0.005304 | 2.06 | 7.94 | 13.09 | 0.84 |
| borro_poneta | 2.5000* | Max WS | vario_tr200_2d | 28.32 | 139.00 | 140.43 | | 140.73 | 0.004902 | 2.43 | 11.78 | 16.41 | 0.85 |
| borro_poneta | 2.2500* | Max WS | vario_tr30_2d | 16.36 | 138.89 | 140.13 | | 140.39 | 0.006264 | 2.27 | 7.19 | 11.47 | 0.92 |
| borro_poneta | 2.2500* | Max WS | vario_tr200_2d | 28.32 | 138.89 | 140.39 | 140.36 | 140.77 | 0.005903 | 2.73 | 10.52 | 14.81 | 0.94 |
| borro_poneta | 2 | Max WS | vario_tr30_2d | 16.36 | 138.79 | 140.08 | 140.09 | 140.43 | 0.007945 | 2.63 | 6.23 | 9.50 | 1.03 |
| borro_poneta | 2 | Max WS | vario_tr200_2d | 28.32 | 138.79 | 140.35 | 140.45 | 140.87 | 0.007997 | 3.20 | 8.98 | 11.95 | 1.08 |
| borro_poneta | 1.5000* | Max WS | vario_tr30_2d | 16.36 | 138.78 | 140.01 | 140.04 | 140.39 | 0.008446 | 2.74 | 5.98 | 9.11 | 1.07 |
| borro_poneta | 1.5000* | Max WS | vario_tr200_2d | 28.32 | 138.78 | 140.28 | 140.40 | 140.84 | 0.008553 | 3.34 | 8.68 | 12.29 | 1.13 |
| borro_poneta | 1 | Max WS | vario_tr30_2d | 16.35 | 138.78 | 139.93 | 140.01 | 140.37 | 0.010005 | 2.94 | 5.57 | 8.66 | 1.16 |
| borro_poneta | 1 | Max WS | vario_tr200_2d | 28.32 | 138.78 | 140.20 | 140.37 | 140.85 | 0.010011 | 3.57 | 8.09 | 11.26 | 1.21 |

TABELLA DEI RISULTATI STATO DI PROGETTO

HEC-RAS River: borro_poneta Reach: borro_poneta Profile: Max WS

| Reach | River Sta | Profile | Plan | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|--------------|-----------|---------|---------------------|------------|-----------|-----------|-----------|-----------|------------|----------|-----------|-----------|--------------|
| | | | | (m3/s) | (m) | (m) | (m) | (m) | (m/m) | (m/s) | (m2) | (m) | |
| borro_poneta | 8 | Max WS | vario_tr30_2d_sp-3 | 16.52 | 141.05 | 142.41 | 142.89 | 143.96 | 0.032829 | 5.52 | 3.02 | 3.89 | 1.92 |
| borro_poneta | 8 | Max WS | vario_tr200_2d_sp-3 | 28.58 | 141.05 | 142.80 | 143.41 | 144.84 | 0.029397 | 6.38 | 4.67 | 4.51 | 1.83 |
| borro_poneta | 7.99 | | | Lat Struct | | | | | | | | | |
| borro_poneta | 7.98 | | | Lat Struct | | | | | | | | | |
| borro_poneta | 7.6667* | Max WS | vario_tr30_2d_sp-3 | 14.87 | 140.78 | 142.26 | 142.48 | 143.08 | 0.015700 | 4.01 | 3.74 | 4.55 | 1.36 |
| borro_poneta | 7.6667* | Max WS | vario_tr200_2d_sp-3 | 27.85 | 140.78 | 142.64 | 143.05 | 143.98 | 0.017770 | 5.17 | 5.59 | 5.18 | 1.47 |
| borro_poneta | 7.3333* | Max WS | vario_tr30_2d_sp-3 | 14.62 | 140.52 | 142.18 | 142.17 | 142.64 | 0.007479 | 3.02 | 4.90 | 5.34 | 0.97 |
| borro_poneta | 7.3333* | Max WS | vario_tr200_2d_sp-3 | 27.36 | 140.52 | 142.54 | 142.69 | 143.38 | 0.009747 | 4.08 | 6.97 | 5.99 | 1.12 |
| borro_poneta | 7 | Max WS | vario_tr30_2d_sp-3 | 14.80 | 140.25 | 142.14 | | 142.41 | 0.003620 | 2.32 | 6.50 | 6.21 | 0.69 |
| borro_poneta | 7 | Max WS | vario_tr200_2d_sp-3 | 27.93 | 140.25 | 142.49 | | 143.04 | 0.005561 | 3.32 | 8.80 | 6.92 | 0.86 |
| borro_poneta | 6.6667* | Max WS | vario_tr30_2d_sp-3 | 14.88 | 140.06 | 142.17 | | 142.31 | 0.001206 | 1.69 | 9.50 | 8.48 | 0.44 |
| borro_poneta | 6.6667* | Max WS | vario_tr200_2d_sp-3 | 28.32 | 140.06 | 142.46 | | 142.79 | 0.002265 | 2.61 | 12.14 | 9.45 | 0.63 |
| borro_poneta | 6.3333* | Max WS | vario_tr30_2d_sp-3 | 14.84 | 139.87 | 142.21 | | 142.29 | 0.000515 | 1.27 | 12.94 | 9.43 | 0.30 |
| borro_poneta | 6.3333* | Max WS | vario_tr200_2d_sp-3 | 28.17 | 139.87 | 142.52 | | 142.71 | 0.001057 | 2.02 | 15.92 | 10.15 | 0.44 |
| borro_poneta | 6.1 | | | Culvert | | | | | | | | | |
| borro_poneta | 6 | Max WS | vario_tr30_2d_sp-3 | 16.39 | 139.68 | 141.05 | | 141.42 | 0.005674 | 2.72 | 6.08 | 6.92 | 0.90 |
| borro_poneta | 6 | Max WS | vario_tr200_2d_sp-3 | 28.15 | 139.68 | 141.36 | 141.37 | 141.97 | 0.006257 | 3.46 | 8.33 | 7.25 | 0.99 |
| borro_poneta | 5.7500* | Max WS | vario_tr30_2d_sp-3 | 16.38 | 139.58 | 141.01 | 140.94 | 141.38 | 0.005070 | 2.69 | 6.34 | 8.11 | 0.86 |
| borro_poneta | 5.7500* | Max WS | vario_tr200_2d_sp-3 | 28.27 | 139.58 | 141.33 | 141.34 | 141.90 | 0.005720 | 3.43 | 9.04 | 9.17 | 0.95 |
| borro_poneta | 5.5000* | Max WS | vario_tr30_2d_sp-3 | 16.38 | 139.49 | 140.98 | 140.89 | 141.33 | 0.004541 | 2.67 | 6.67 | 8.68 | 0.82 |
| borro_poneta | 5.5000* | Max WS | vario_tr200_2d_sp-3 | 28.27 | 139.49 | 141.29 | 141.32 | 141.83 | 0.005228 | 3.38 | 9.72 | 10.47 | 0.91 |
| borro_poneta | 5.2500* | Max WS | vario_tr30_2d_sp-3 | 16.38 | 139.39 | 140.96 | | 141.28 | 0.004044 | 2.62 | 7.17 | 9.47 | 0.77 |
| borro_poneta | 5.2500* | Max WS | vario_tr200_2d_sp-3 | 28.27 | 139.39 | 141.26 | 141.28 | 141.76 | 0.004805 | 3.34 | 10.48 | 11.84 | 0.88 |
| borro_poneta | 5 | Max WS | vario_tr30_2d_sp-3 | 16.38 | 139.29 | 140.93 | | 141.23 | 0.003573 | 2.56 | 7.82 | 10.33 | 0.73 |
| borro_poneta | 5 | Max WS | vario_tr200_2d_sp-3 | 28.24 | 139.29 | 141.23 | 141.25 | 141.69 | 0.004428 | 3.28 | 11.38 | 13.55 | 0.84 |
| borro_poneta | 4.6667* | Max WS | vario_tr30_2d_sp-3 | 16.38 | 139.36 | 140.92 | | 141.11 | 0.002139 | 1.98 | 9.06 | 10.28 | 0.58 |
| borro_poneta | 4.6667* | Max WS | vario_tr200_2d_sp-3 | 28.24 | 139.36 | 141.20 | | 141.54 | 0.002929 | 2.67 | 12.12 | 11.85 | 0.70 |
| borro_poneta | 4.3333* | Max WS | vario_tr30_2d_sp-3 | 16.37 | 139.44 | 140.95 | | 141.07 | 0.001394 | 1.59 | 10.77 | 11.19 | 0.47 |
| borro_poneta | 4.3333* | Max WS | vario_tr200_2d_sp-3 | 28.24 | 139.44 | 141.21 | | 141.44 | 0.002026 | 2.19 | 13.85 | 12.31 | 0.59 |
| borro_poneta | 4 | Max WS | vario_tr30_2d_sp-3 | 16.36 | 139.51 | 140.97 | | 141.06 | 0.001025 | 1.33 | 12.49 | 12.29 | 0.40 |
| borro_poneta | 4 | Max WS | vario_tr200_2d_sp-3 | 28.23 | 139.51 | 141.23 | | 141.40 | 0.001465 | 1.84 | 15.92 | 13.31 | 0.50 |
| borro_poneta | 3.6667* | Max WS | vario_tr30_2d_sp-3 | 16.36 | 139.41 | 140.99 | | 141.05 | 0.000532 | 1.02 | 16.37 | 15.22 | 0.30 |
| borro_poneta | 3.6667* | Max WS | vario_tr200_2d_sp-3 | 28.23 | 139.41 | 141.28 | | 141.38 | 0.000757 | 1.40 | 20.90 | 16.21 | 0.37 |
| borro_poneta | 3.3333* | Max WS | vario_tr30_2d_sp-3 | 16.36 | 139.31 | 141.01 | | 141.04 | 0.000333 | 0.83 | 20.21 | 18.26 | 0.24 |
| borro_poneta | 3.3333* | Max WS | vario_tr200_2d_sp-3 | 28.23 | 139.31 | 141.31 | | 141.37 | 0.000469 | 1.14 | 25.88 | 19.46 | 0.29 |
| borro_poneta | 3.1 | | | Culvert | | | | | | | | | |
| borro_poneta | 3 | Max WS | vario_tr30_2d_sp-3 | 16.35 | 139.21 | 140.23 | | 140.40 | 0.004126 | 1.81 | 9.04 | 15.06 | 0.75 |
| borro_poneta | 3 | Max WS | vario_tr200_2d_sp-3 | 28.21 | 139.21 | 140.49 | | 140.71 | 0.004220 | 2.10 | 13.52 | 19.25 | 0.78 |
| borro_poneta | 2.7500* | Max WS | vario_tr30_2d_sp-3 | 16.34 | 139.10 | 140.20 | | 140.39 | 0.004589 | 1.92 | 8.53 | 14.11 | 0.79 |
| borro_poneta | 2.7500* | Max WS | vario_tr200_2d_sp-3 | 28.21 | 139.10 | 140.46 | | 140.71 | 0.004422 | 2.23 | 12.75 | 17.94 | 0.81 |
| borro_poneta | 2.5000* | Max WS | vario_tr30_2d_sp-3 | 16.34 | 139.00 | 140.17 | | 140.38 | 0.005303 | 2.06 | 7.94 | 13.08 | 0.84 |
| borro_poneta | 2.5000* | Max WS | vario_tr200_2d_sp-3 | 28.21 | 139.00 | 140.43 | | 140.73 | 0.004906 | 2.43 | 11.75 | 16.39 | 0.85 |
| borro_poneta | 2.2500* | Max WS | vario_tr30_2d_sp-3 | 16.34 | 138.89 | 140.13 | | 140.39 | 0.006265 | 2.27 | 7.19 | 11.47 | 0.92 |
| borro_poneta | 2.2500* | Max WS | vario_tr200_2d_sp-3 | 28.21 | 138.89 | 140.39 | 140.36 | 140.77 | 0.005905 | 2.73 | 10.49 | 14.74 | 0.94 |
| borro_poneta | 2 | Max WS | vario_tr30_2d_sp-3 | 16.34 | 138.79 | 140.08 | 140.09 | 140.43 | 0.007950 | 2.63 | 6.22 | 9.50 | 1.03 |
| borro_poneta | 2 | Max WS | vario_tr200_2d_sp-3 | 28.20 | 138.79 | 140.34 | 140.44 | 140.86 | 0.007995 | 3.20 | 8.96 | 11.84 | 1.08 |
| borro_poneta | 1.5000* | Max WS | vario_tr30_2d_sp-3 | 16.34 | 138.78 | 140.01 | 140.04 | 140.39 | 0.008451 | 2.74 | 5.97 | 9.11 | 1.07 |
| borro_poneta | 1.5000* | Max WS | vario_tr200_2d_sp-3 | 28.20 | 138.78 | 140.28 | 140.40 | 140.84 | 0.008553 | 3.33 | 8.65 | 12.27 | 1.13 |
| borro_poneta | 1 | Max WS | vario_tr30_2d_sp-3 | 16.34 | 138.78 | 139.93 | 140.00 | 140.37 | 0.010014 | 2.94 | 5.57 | 8.66 | 1.16 |
| borro_poneta | 1 | Max WS | vario_tr200_2d_sp-3 | 28.20 | 138.78 | 140.20 | 140.36 | 140.84 | 0.010010 | 3.56 | 8.07 | 11.20 | 1.21 |

TABELLA DEI RISULTATI STATO DI PROGETTO (CONDOTTE OSTRUITE)

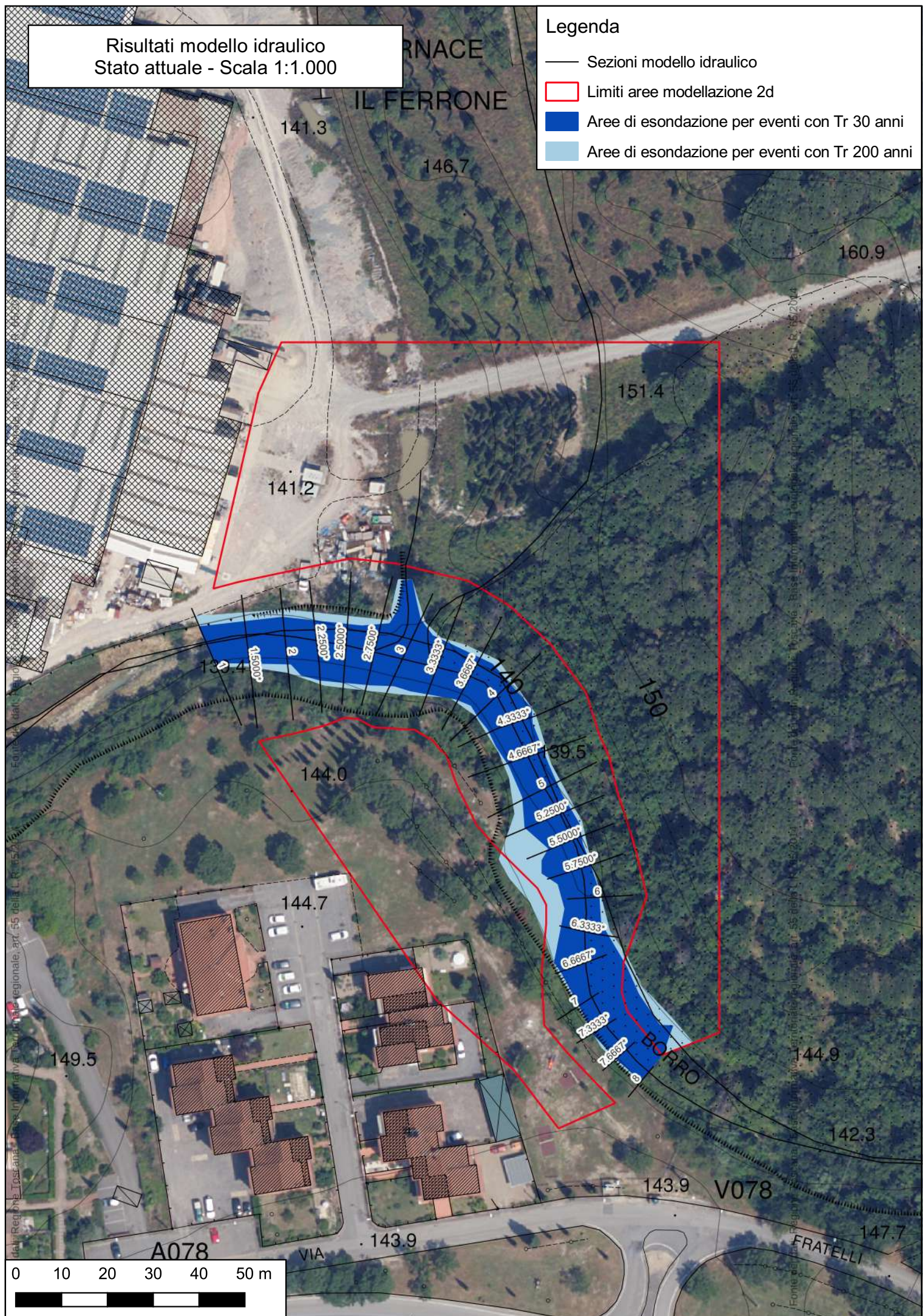
HEC-RAS River: borro_poneta Reach: borro_poneta Profile: Max WS

| Reach | River Sta | Profile | Plan | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|--------------|-----------|---------|---------------------|------------|-----------|-----------|-----------|-----------|------------|----------|-----------|-----------|--------------|
| | | | | (m3/s) | (m) | (m) | (m) | (m) | (m/m) | (m/s) | (m2) | (m) | |
| borro_poneta | 8 | Max WS | vario_tr30_2d_sp-4 | 16.52 | 141.05 | 142.44 | 142.89 | 143.88 | 0.029363 | 5.32 | 3.14 | 3.94 | 1.82 |
| borro_poneta | 8 | Max WS | vario_tr200_2d_sp-4 | 28.58 | 141.05 | 142.83 | 143.41 | 144.76 | 0.027355 | 6.22 | 4.80 | 4.56 | 1.77 |
| borro_poneta | 7.99 | | | Lat Struct | | | | | | | | | |
| borro_poneta | 7.98 | | | Lat Struct | | | | | | | | | |
| borro_poneta | 7.6667* | Max WS | vario_tr30_2d_sp-4 | 16.27 | 140.78 | 142.27 | 142.55 | 143.22 | 0.017662 | 4.31 | 3.82 | 4.58 | 1.45 |
| borro_poneta | 7.6667* | Max WS | vario_tr200_2d_sp-4 | 27.69 | 140.78 | 142.68 | 143.04 | 143.91 | 0.015833 | 4.97 | 5.81 | 5.25 | 1.39 |
| borro_poneta | 7.3333* | Max WS | vario_tr30_2d_sp-4 | 16.04 | 140.52 | 142.18 | 142.23 | 142.74 | 0.008825 | 3.30 | 4.93 | 5.36 | 1.05 |
| borro_poneta | 7.3333* | Max WS | vario_tr200_2d_sp-4 | 27.29 | 140.52 | 142.60 | 142.68 | 143.36 | 0.008597 | 3.91 | 7.28 | 6.10 | 1.05 |
| borro_poneta | 7 | Max WS | vario_tr30_2d_sp-4 | 16.29 | 140.25 | 142.14 | | 142.47 | 0.004401 | 2.56 | 6.49 | 6.21 | 0.76 |
| borro_poneta | 7 | Max WS | vario_tr200_2d_sp-4 | 27.87 | 140.25 | 142.55 | | 143.05 | 0.004896 | 3.18 | 9.21 | 7.05 | 0.81 |
| borro_poneta | 6.6667* | Max WS | vario_tr30_2d_sp-4 | 16.39 | 140.06 | 142.13 | | 142.31 | 0.001620 | 1.92 | 9.16 | 8.33 | 0.51 |
| borro_poneta | 6.6667* | Max WS | vario_tr200_2d_sp-4 | 28.29 | 140.06 | 142.52 | | 142.82 | 0.001990 | 2.50 | 12.74 | 9.65 | 0.59 |
| borro_poneta | 6.3333* | Max WS | vario_tr30_2d_sp-4 | 16.38 | 139.87 | 142.18 | | 142.28 | 0.000672 | 1.43 | 12.62 | 9.37 | 0.34 |
| borro_poneta | 6.3333* | Max WS | vario_tr200_2d_sp-4 | 28.09 | 139.87 | 142.58 | | 142.76 | 0.000934 | 1.94 | 16.63 | 10.28 | 0.42 |
| borro_poneta | 6.1 | | | Culvert | | | | | | | | | |
| borro_poneta | 6 | Max WS | vario_tr30_2d_sp-4 | 16.36 | 139.68 | 141.07 | | 141.43 | 0.005177 | 2.64 | 6.25 | 6.95 | 0.86 |
| borro_poneta | 6 | Max WS | vario_tr200_2d_sp-4 | 28.08 | 139.68 | 141.39 | 141.36 | 141.97 | 0.005811 | 3.38 | 8.51 | 7.27 | 0.96 |
| borro_poneta | 5.7500* | Max WS | vario_tr30_2d_sp-4 | 16.36 | 139.58 | 141.04 | | 141.38 | 0.004587 | 2.61 | 6.56 | 8.21 | 0.82 |
| borro_poneta | 5.7500* | Max WS | vario_tr200_2d_sp-4 | 28.24 | 139.58 | 141.35 | 141.34 | 141.90 | 0.005294 | 3.34 | 9.29 | 9.33 | 0.92 |
| borro_poneta | 5.5000* | Max WS | vario_tr30_2d_sp-4 | 16.36 | 139.49 | 141.01 | 140.89 | 141.34 | 0.004103 | 2.59 | 6.95 | 9.37 | 0.78 |
| borro_poneta | 5.5000* | Max WS | vario_tr200_2d_sp-4 | 28.24 | 139.49 | 141.32 | 141.32 | 141.83 | 0.004793 | 3.29 | 10.04 | 10.59 | 0.88 |
| borro_poneta | 5.2500* | Max WS | vario_tr30_2d_sp-4 | 16.35 | 139.39 | 140.99 | | 141.29 | 0.003612 | 2.53 | 7.49 | 9.72 | 0.74 |
| borro_poneta | 5.2500* | Max WS | vario_tr200_2d_sp-4 | 28.24 | 139.39 | 141.29 | 141.29 | 141.76 | 0.004366 | 3.23 | 10.88 | 11.98 | 0.84 |
| borro_poneta | 5 | Max WS | vario_tr30_2d_sp-4 | 16.35 | 139.29 | 140.97 | | 141.24 | 0.003162 | 2.45 | 8.22 | 10.64 | 0.69 |
| borro_poneta | 5 | Max WS | vario_tr200_2d_sp-4 | 28.24 | 139.29 | 141.27 | 141.25 | 141.69 | 0.003989 | 3.17 | 11.88 | 13.76 | 0.80 |
| borro_poneta | 4.6667* | Max WS | vario_tr30_2d_sp-4 | 16.35 | 139.36 | 140.98 | | 141.15 | 0.001812 | 1.88 | 9.63 | 10.51 | 0.54 |
| borro_poneta | 4.6667* | Max WS | vario_tr200_2d_sp-4 | 28.22 | 139.36 | 141.24 | | 141.56 | 0.002652 | 2.58 | 12.59 | 12.09 | 0.67 |
| borro_poneta | 4.3333* | Max WS | vario_tr30_2d_sp-4 | 16.35 | 139.44 | 141.00 | | 141.12 | 0.001176 | 1.50 | 11.41 | 11.45 | 0.44 |
| borro_poneta | 4.3333* | Max WS | vario_tr200_2d_sp-4 | 28.22 | 139.44 | 141.26 | | 141.48 | 0.001785 | 2.10 | 14.47 | 12.43 | 0.55 |
| borro_poneta | 4 | Max WS | vario_tr30_2d_sp-4 | 16.34 | 139.51 | 141.02 | | 141.10 | 0.000865 | 1.27 | 13.19 | 12.48 | 0.37 |
| borro_poneta | 4 | Max WS | vario_tr200_2d_sp-4 | 28.22 | 139.51 | 141.29 | | 141.44 | 0.001286 | 1.77 | 16.63 | 13.53 | 0.47 |
| borro_poneta | 3.6667* | Max WS | vario_tr30_2d_sp-4 | 16.33 | 139.41 | 141.05 | | 141.09 | 0.000457 | 0.97 | 17.19 | 15.52 | 0.28 |
| borro_poneta | 3.6667* | Max WS | vario_tr200_2d_sp-4 | 28.22 | 139.41 | 141.33 | | 141.42 | 0.000673 | 1.35 | 21.73 | 16.43 | 0.35 |
| borro_poneta | 3.3333* | Max WS | vario_tr30_2d_sp-4 | 16.33 | 139.31 | 141.06 | | 141.09 | 0.000288 | 0.79 | 21.17 | 18.51 | 0.22 |
| borro_poneta | 3.3333* | Max WS | vario_tr200_2d_sp-4 | 28.22 | 139.31 | 141.36 | | 141.42 | 0.000420 | 1.10 | 26.85 | 19.63 | 0.28 |
| borro_poneta | 3.1 | | | Culvert | | | | | | | | | |
| borro_poneta | 3 | Max WS | vario_tr30_2d_sp-4 | 16.32 | 139.21 | 140.23 | | 140.40 | 0.004123 | 1.81 | 9.03 | 15.06 | 0.74 |
| borro_poneta | 3 | Max WS | vario_tr200_2d_sp-4 | 28.20 | 139.21 | 140.49 | | 140.71 | 0.004223 | 2.10 | 13.52 | 19.25 | 0.78 |
| borro_poneta | 2.7500* | Max WS | vario_tr30_2d_sp-4 | 16.32 | 139.10 | 140.20 | | 140.38 | 0.004584 | 1.91 | 8.52 | 14.10 | 0.79 |
| borro_poneta | 2.7500* | Max WS | vario_tr200_2d_sp-4 | 28.20 | 139.10 | 140.46 | | 140.71 | 0.004425 | 2.23 | 12.74 | 17.94 | 0.81 |
| borro_poneta | 2.5000* | Max WS | vario_tr30_2d_sp-4 | 16.32 | 139.00 | 140.16 | | 140.38 | 0.005299 | 2.06 | 7.93 | 13.08 | 0.84 |
| borro_poneta | 2.5000* | Max WS | vario_tr200_2d_sp-4 | 28.20 | 139.00 | 140.43 | | 140.73 | 0.004909 | 2.43 | 11.74 | 16.38 | 0.85 |
| borro_poneta | 2.2500* | Max WS | vario_tr30_2d_sp-4 | 16.31 | 138.89 | 140.13 | | 140.39 | 0.006261 | 2.27 | 7.18 | 11.46 | 0.92 |
| borro_poneta | 2.2500* | Max WS | vario_tr200_2d_sp-4 | 28.19 | 138.89 | 140.39 | 140.36 | 140.77 | 0.005901 | 2.73 | 10.49 | 14.74 | 0.94 |
| borro_poneta | 2 | Max WS | vario_tr30_2d_sp-4 | 16.31 | 138.79 | 140.08 | 140.09 | 140.43 | 0.007946 | 2.63 | 6.22 | 9.49 | 1.03 |
| borro_poneta | 2 | Max WS | vario_tr200_2d_sp-4 | 28.19 | 138.79 | 140.34 | 140.44 | 140.86 | 0.007998 | 3.20 | 8.95 | 11.82 | 1.08 |
| borro_poneta | 1.5000* | Max WS | vario_tr30_2d_sp-4 | 16.31 | 138.78 | 140.01 | 140.04 | 140.39 | 0.008449 | 2.74 | 5.97 | 9.11 | 1.07 |
| borro_poneta | 1.5000* | Max WS | vario_tr200_2d_sp-4 | 28.19 | 138.78 | 140.28 | 140.40 | 140.84 | 0.008557 | 3.33 | 8.65 | 12.26 | 1.13 |
| borro_poneta | 1 | Max WS | vario_tr30_2d_sp-4 | 16.31 | 138.78 | 139.93 | 140.00 | 140.37 | 0.010012 | 2.94 | 5.56 | 8.66 | 1.16 |
| borro_poneta | 1 | Max WS | vario_tr200_2d_sp-4 | 28.19 | 138.78 | 140.20 | 140.36 | 140.84 | 0.010015 | 3.56 | 8.07 | 11.19 | 1.21 |

Risultati modello idraulico
Stato attuale - Scala 1:1.000

Legenda

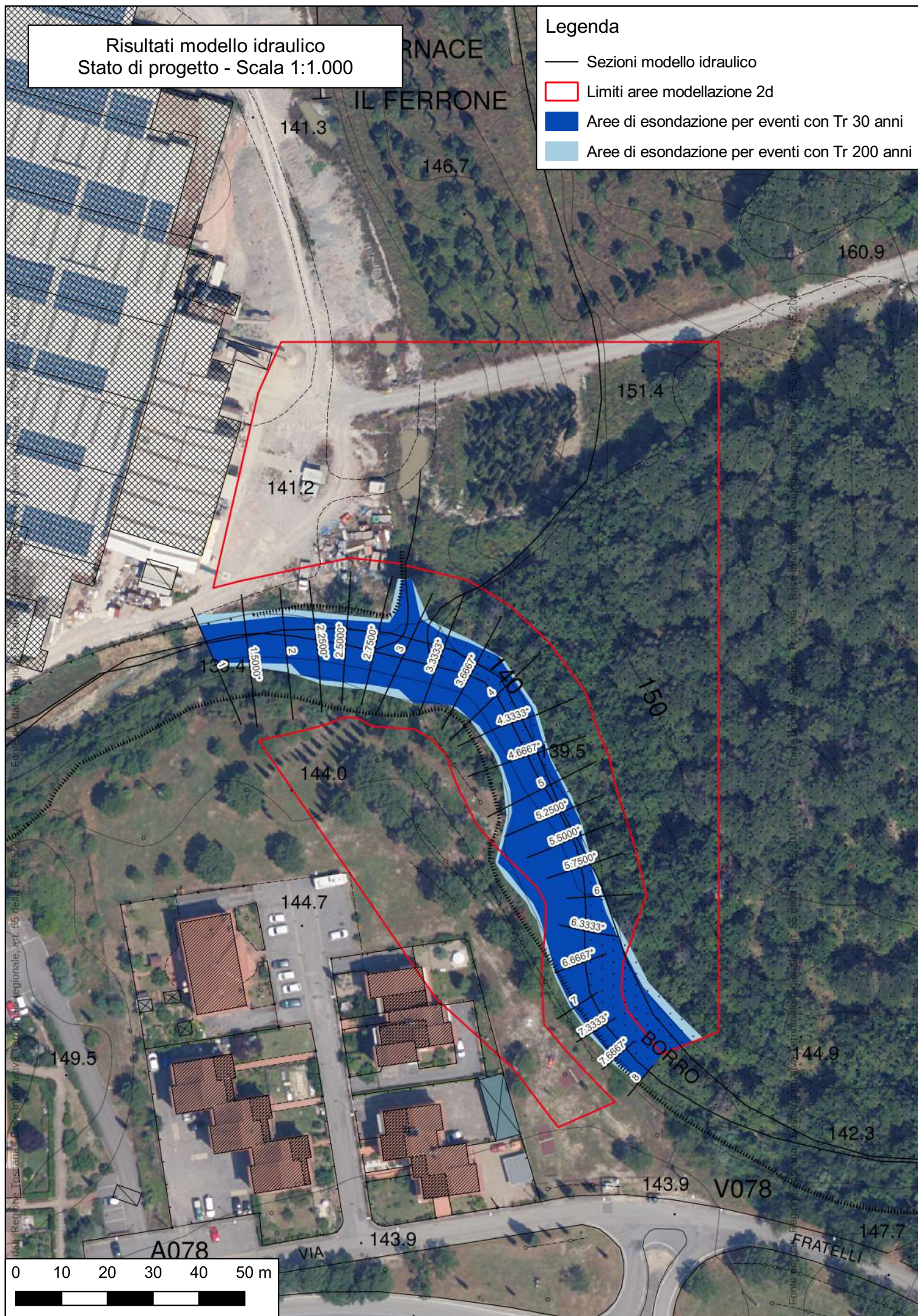
- Sezioni modello idraulico
- Limiti aree modellazione 2d
- Aree di esondazione per eventi con Tr 30 anni
- Aree di esondazione per eventi con Tr 200 anni



Risultati modello idraulico
Stato di progetto - Scala 1:1.000

Legenda

- Sezioni modello idraulico
- Limiti aree modellazione 2d
- Aree di esondazione per eventi con Tr 30 anni
- Aree di esondazione per eventi con Tr 200 anni



Risultati modello idraulico
Stato di progetto (condotte ostruite)
- Scala 1:1.000

Legenda

- Sezioni modello idraulico
- Limiti aree modellazione 2d
- Aree di esondazione per eventi con Tr 30 anni
- Aree di esondazione per eventi con Tr 200 anni

