



PROVINCIA DI SAVONA

**STUDIO IDRAULICO PER LA DEFINIZIONE
DELLE AREE A PERICOLOSITA' IDRAULICA
NEL VERSANTE PADANO DELLA PROVINCIA DI SAVONA
BACINI DEL TORRENTE ERRO, ORBA OLBICELLA E MIOGLIA**

Allegato 2d VERIFICHE IDRAULICHE

TRATTO ERRO_4

A_9: Rio dei Giovi
A_10: Rio Sbruggia
A_11: Rio Foresto
A_12: Rio Ciua
A_13: Rio Viorina

Comune:

Sassello

Località interessate:

Badani, Bastia Soprana, Morona, Prà Vallarino, Sassello, Case Ciua

| REVISIONE | DATA | REDAZIONE | VERIFICA |
|-----------|----------|---|-----------------------------|
| 00 | MARZO 05 | Ing. Furia Massimo Ing. Molinari Michele | Dott. Ing. Antonio Da Corte |

4.4.1 CARATTERISTICHE DELL'ALVEO

La zona oggetto d'indagine è ubicata nel Comune di Sassello ed interessa principalmente l'abitato del paese di Sassello e alcune località limitrofe.

Tratto A_9 Rio dei Givi: è stato studiato il tratto a monte della confluenza con il Rio Sbruggia in località Badani frazione di Sassello, dalla sezione 16 alla sezione 1 per una lunghezza di circa 1000 m;

Tratto A_10 Rio Sbruggia: è stato studiato il tratto a monte della confluenza con il Rio Del Giovo in Località Il Piano e Colletto fraz. di Sassello, dalla sezione 35 alla sezione 9 per una lunghezza di circa 2300 m e il tratto a valle della confluenza con il Rio del Giovo sino alla confluenza con il Rio Foresto, dalla sezione 9 alla sezione 1 per una lunghezza di circa 700 m

Tratto A_11 Rio Foresto: è stato studiato il tratto a monte della confluenza con il Rio Viorina in Località Morona frazione di Sassello, dalla sezione 60 alla sezione 52 per una lunghezza di circa 800 m e il tratto a valle del Rio Viorina sino alla confluenza con il Rio Sbruggia e con il Rio Ciua, dalla sezione 52 alla sezione 1 per una lunghezza di circa 5000 m

Tratto A_12 Rio Ciua: è stato studiato il tratto a valle della confluenza con il Rio Foresto e il Rio Sbruggia, sino alla confluenza con il Torrente Erro dalla sezione 12 alla sezione 1 per una lunghezza di circa 1200 m.

Tratto A_13 Rio Viorina è stato studiato il tratto a valle della confluenza con il Rio Foresto dalla sezione 10 alla sezione 1 per una lunghezza di circa 800 m

4.4.2 PARAMETRI DI SCABREZZA UTILIZZATI

Sulla base di quanto riscontrato durante i sopralluoghi effettuati relativamente alle condizioni di fondo alveo è stato utilizzato un unico valore, per tutti i tratti indagati, del parametro di scabrezza di Manning pari a $0,035 \text{ m}^{-1/3} \text{ s}$ (Coefficiente di scabrezza secondo Strickler $K_s = 29 \text{ m}^{1/3} \text{ s}^{-1}$) corrispondente a corsi d'acqua naturali con salti, rocce o vegetazione anche arbustiva -arborea in alveo.

4.4.3 VALORI DI PORTATA AL COLMO DI PIENA

Si riportano di seguito i valori di portata al colmo di piena proposti dallo studio in oggetto per i periodi di ritorno di 50,200 e 500 anni, relativamente ai corsi d'acqua presenti all'interno del tratto indagato:

| Tratto indagato | Codice Tratto | Corso d'acqua | Sezione | Area [Km ²] | Portate proposte [m ³ /s] | | |
|-----------------|---------------|--------------------------------|----------------------------------|-------------------------|--------------------------------------|-----------------|-----------------|
| | | | | | Q T=50anni | Q T=200 anni | Q T=500 anni |
| Erro_4 | A_9 | Rio dei Giovi | A monte confluenza Rio Sbruggia | 18.60 | 156 | 212 | 250 |
| | A_10 | Rio Sbruggia | A monte confluenza Rio dei Giovi | 12.70 | 116 | 156 | 184 |
| | | | A monte confluenza Rio Foresto | 31.60 | 245 | 333 | 392 |
| | A_11 | Rio Foresto | A monte confluenza Rio Viorina | 3.28 | 54 | 73 | 87 |
| | | | A valle confluenza Rio Viorina | 5.55 | 87 | 109 | 129 |
| | | | A monte confluenza Rio Sbruggia | 7.10 | 92 | 126 | 150 |
| | A_12 | Rio Ciua | A monte confluenza Torrente Erro | 42.00 | 300 | 409 | 483 |
| A_13 | Rio Viorina | A monte confluenza Rio Foresto | 1.22 | 20 | 28 | 34 | |

Nelle seguenti tabelle riassuntive si riportano invece i valori di portata al colmo di piena per i periodi di ritorno di 50,200 e 500 anni, calcolati sia con il metodo razionale previsto dalla normativa PAI, sia con il metodo di regionalizzazione del CIMA:

Tratto A_9 - RIO DEI GIOVI
Sezione a monte confluenza Rio Sbruggia

Località "Badani" - Comune di Sassello

Dalla sezione 16 alla sezione 1

Superficie della porzione di Bacino sottesa alla sezione di calcolo: **18.60** Km²

METODO RAZIONALE (Giandotti)

| Parametri di calcolo Probabilità pluviometrica | 50 anni | 200 anni | 500 anni |
|--|---------|----------|----------|
| | a | 73.10 | 93.20 |
| n | 0.43 | 0.43 | 0.43 |

| | | | |
|--------------------------------|--------------------|---------|----------|
| Lunghezza asta principale | L = | 11.00 | Km |
| Altitudine sezione di chiusura | H ₀ = | 350.00 | m s.l.m. |
| Altitudine massima del bacino | H _{max} = | 1262.00 | m s.l.m. |
| Altitudine media del bacino | H _m = | 806.00 | m s.l.m. |

| | | |
|------------------------------------|------|------|
| Tempo di corrivazione (Giandotti): | tc = | 1.98 |
| Coefficiente di deflusso | c = | 0.60 |

| H pioggia f (tc;T) | h(tc) = | 50 anni | 200 anni | 500 anni | mm |
|----------------------|---------|---------|----------|----------|------|
| | | a | 97.97 | 124.90 | |
| Intensità di pioggia | i = | 50 anni | 200 anni | 500 anni | mm/h |
| | | n | 49.59 | 63.22 | |

| Calcolo Portata | 50 anni | 200 anni | 500 anni | m ³ /s |
|-----------------|---------|----------|----------|-------------------|
| | 154.95 | 197.55 | 227.65 | |

METODO CIMA

CIMA - GRANDI BACINI

Corso d'acqua GIOVO

Tratto da Rio dell'Ara a Rio Reborgo

Area drenata 17 Km²

| c = | 50 anni | 200 anni | 500 anni |
|-----|---------|----------|----------|
| | 17.41 | 25.18 | 30.3 |

| Calcolo portata | 50 anni | 200 anni | 500 anni | m ³ /s |
|-----------------|---------|----------|----------|-------------------|
| | 156 | 226 | 271 | |

VALORE MEDIATO PROPOSTO

| Calcolo portata | 50 anni | 200 anni | 500 anni | m ³ /s |
|-----------------|---------|----------|----------|-------------------|
| | 156 | 212 | 250 | |

Tratto A_10 - RIO SBRUGGIA
Sezione a monte confluenza Rio dei Giovi

Località "Bastia Soprana" - Comune di Sassello

Dalla sezione 35 alla sezione 9

Superficie della porzione di Bacino sottesa alla sezione di calcolo: **12.70** Km²

METODO RAZIONALE (Giandotti)

| Parametri di calcolo Probabilità pluviometrica | 50 anni | 200 anni | 500 anni |
|--|---------|----------|----------|
| | a | 73.10 | 93.20 |
| n | 0.43 | 0.43 | 0.43 |

| | | | |
|--------------------------------|--------------------|---------|----------|
| Lunghezza asta principale | L = | 7.20 | Km |
| Altitudine sezione di chiusura | H ₀ = | 350.00 | m s.l.m. |
| Altitudine massima del bacino | H _{max} = | 1262.00 | m s.l.m. |
| Altitudine media del bacino | H _m = | 806.00 | m s.l.m. |

| | | |
|------------------------------------|------|------|
| Tempo di corrivazione (Giandotti): | tc = | 1.47 |
| Coefficiente di deflusso | c = | 0.60 |

| H pioggia f (tc;T) | h(tc) = | 50 anni | 200 anni | 500 anni | mm |
|----------------------|---------|---------|----------|----------|------|
| | | a | 86.19 | 109.88 | |
| Intensità di pioggia | i = | 50 anni | 200 anni | 500 anni | mm/h |
| | | n | 58.76 | 74.92 | |

| Calcolo Portata | 50 anni | 200 anni | 500 anni | m ³ /s |
|-----------------|---------|----------|----------|-------------------|
| | 125.38 | 159.86 | 184.21 | |

METODO CIMA

CIMA - GRANDI BACINI

Corso d'acqua GIOVO

Tratto da Rio dell'Ara a Rio Reborgo

Area drenata 12 Km²

| c = | 50 anni | 200 anni | 500 anni |
|-----|---------|----------|----------|
| | 17.41 | 25.18 | 30.3 |

| Calcolo portata | 50 anni | 200 anni | 500 anni | m ³ /s |
|-----------------|---------|----------|----------|-------------------|
| | 105 | 152 | 183 | |

VALORE MEDIATO PROPOSTO

| Calcolo portata | 50 anni | 200 anni | 500 anni | m ³ /s |
|-----------------|---------|----------|----------|-------------------|
| | 116 | 156 | 184 | |

Tratto A_10 - RIO SBRUGGIA
Sezione a monte confluenza Rio Foresto

Località "Ressia" - Comune di Sassello

Dalla sezione 9 alla sezione 1

Superficie della porzione di Bacino sottesa alla sezione di calcolo: **31.60** Km²

METODO RAZIONALE (Giandotti)

| Parametri di calcolo Probabilità pluviometrica | 50 anni | 200 anni | 500 anni |
|--|---------|----------|----------|
| | a | 73.10 | 93.20 |
| n | 0.43 | 0.43 | 0.43 |

| | | | |
|--------------------------------|--------------------|---------|----------|
| Lunghezza asta principale | L = | 11.80 | Km |
| Altitudine sezione di chiusura | H ₀ = | 348.00 | m s.l.m. |
| Altitudine massima del bacino | H _{max} = | 1262.00 | m s.l.m. |
| Altitudine media del bacino | H _m = | 805.00 | m s.l.m. |

| | | |
|------------------------------------|------|------|
| Tempo di corrivazione (Giandotti): | tc = | 2.35 |
| Coefficiente di deflusso | c = | 0.60 |

| H pioggia f (tc;T) | h(tc) = | 50 anni | 200 anni | 500 anni | mm |
|----------------------|---------|---------|----------|----------|------|
| | | a | 104.19 | 132.84 | |
| Intensità di pioggia | i = | 50 anni | 200 anni | 500 anni | mm/h |
| | | n | 45.7 | 58.26 | |

| Calcolo Portata | 50 anni | 200 anni | 500 anni | m ³ /s |
|-----------------|---------|----------|----------|-------------------|
| | 242.6 | 309.31 | 356.43 | |

METODO CIMA

CIMA - GRANDI BACINI

Corso d'acqua GIOVO

Tratto da Rio dell'Ara a Rio Reborgo

Area drenata 36 Km²

| c = | 50 anni | 200 anni | 500 anni |
|-----|---------|----------|----------|
| | 17.41 | 25.18 | 30.3 |

| Calcolo portata | 50 anni | 200 anni | 500 anni | m ³ /s |
|-----------------|---------|----------|----------|-------------------|
| | 246 | 355 | 427 | |

VALORE MEDIATO PROPOSTO

| Calcolo portata | 50 anni | 200 anni | 500 anni | m ³ /s |
|-----------------|---------|----------|----------|-------------------|
| | 245 | 333 | 392 | |

Tratto A_11 - RIO FORESTO Sezione a monte confluenza Rio Viorina

Località "Morona" - Comune di Sassello

Dalla sezione 60 alla sezione 52Superficie della porzione di Bacino sottesa alla sezione di calcolo: **3.28** Km²**METODO RAZIONALE (Giandotti)**

| Parametri di calcolo Probabilità pluviometrica | 50 anni | 200 anni | 500 anni |
|--|---------|----------|----------|
| | a | 73.10 | 93.20 |
| n | 0.43 | 0.43 | 0.43 |

| | | | |
|--------------------------------|--------------------|---------|----------|
| Lunghezza asta principale | L = | 3.21 | Km |
| Altitudine sezione di chiusura | H ₀ = | 416.30 | m s.l.m. |
| Altitudine massima del bacino | H _{max} = | 1262.00 | m s.l.m. |
| Altitudine media del bacino | H _m = | 839.15 | m s.l.m. |

Tempo di corrvazione (Giandotti): tc = 0.73

Coefficiente di deflusso c = 0.65

| H pioggia f(tc,T) | h(tc) = i = | 50 anni | 200 anni | 500 anni |
|----------------------|----------------|---------|----------|----------|
| | | 63.96 | 81.55 | 93.98 |
| Intensità di pioggia | | 87.28 | 111.25 | 128.2 |
| | | | | mm/h |

Calcolo Portata

| 50 anni | 200 anni | 500 anni |
|---------|----------|----------|
| 52.09 | 66.41 | 76.53 |

m³/s**METODO CIMA**

CIMA - PICCOLI BACINI

Longitudine gradi = 8
primi = 32

Tipo di bacino: D: bacini con copertura arborea - Aree Impermeabili < 5%

| Bacini tra 2 e 10 Km ² | KT = CQ = | 50 anni | 200 anni | 500 anni |
|-----------------------------------|--------------|---------|----------|----------|
| | | 3.47 | 5.02 | 6.04 |
| | | 4.19 | 4.19 | 4.19 |

Calcolo portata

| 50 anni | 200 anni | 500 anni |
|---------|----------|----------|
| 55.19 | 79.85 | 96.07 |

m³/s**VALORE MEDIATO PROPOSTO****Calcolo portata**

| 50 anni | 200 anni | 500 anni |
|---------|----------|----------|
| 54 | 73 | 87 |

m³/s

Tratto A_11 - RIO FORESTO Sezione a monte centro abitato di Sassello

Località "Prà Vallarino" - Comune di Sassello

Dalla sezione 52 alla sezione 36Superficie della porzione di Bacino sottesa alla sezione di calcolo: **5.55** Km²**METODO RAZIONALE (Giandotti)**

| Parametri di calcolo Probabilità pluviometrica | 50 anni | 200 anni | 500 anni |
|--|---------|----------|----------|
| | a | 73.10 | 93.20 |
| n | 0.43 | 0.43 | 0.43 |

| | | | |
|--------------------------------|--------------------|---------|----------|
| Lunghezza asta principale | L = | 5.04 | Km |
| Altitudine sezione di chiusura | H ₀ = | 382.00 | m s.l.m. |
| Altitudine massima del bacino | H _{max} = | 1262.00 | m s.l.m. |
| Altitudine media del bacino | H _m = | 822.00 | m s.l.m. |

Tempo di corrvazione (Giandotti): tc = 1.01

Coefficiente di deflusso c = 0.65

| H pioggia f(tc,T) | h(tc) = i = | 50 anni | 200 anni | 500 anni |
|----------------------|----------------|---------|----------|----------|
| | | 73.48 | 93.69 | 107.96 |
| Intensità di pioggia | | 72.59 | 92.56 | 106.66 |
| | | | | mm/h |

Calcolo Portata

| 50 anni | 200 anni | 500 anni |
|---------|----------|----------|
| 73.33 | 93.49 | 107.73 |

m³/s**METODO CIMA**

CIMA - PICCOLI BACINI

Longitudine gradi = 8
primi = 32

Tipo di bacino: D: bacini con copertura arborea - Aree Impermeabili < 5%

| Bacini tra 2 e 10 Km ² | KT = CQ = | 50 anni | 200 anni | 500 anni |
|-----------------------------------|--------------|---------|----------|----------|
| | | 3.47 | 5.02 | 6.04 |
| | | 4.19 | 4.19 | 4.19 |

Calcolo portata

| 50 anni | 200 anni | 500 anni |
|---------|----------|----------|
| 100.61 | 123.83 | 149 |

m³/s**VALORE MEDIATO PROPOSTO****Calcolo portata**

| 50 anni | 200 anni | 500 anni |
|---------|----------|----------|
| 87 | 109 | 129 |

m³/s

Tratto A_11 - RIO FORESTO Sezione a monte confluenza Rio Sbruggia

Centro abitato di Sassello - Comune di Sassello

Dalla sezione 36 alla sezione 1Superficie della porzione di Bacino sottesa alla sezione di calcolo: **7.10** Km²**METODO RAZIONALE (Giandotti)**

| Parametri di calcolo Probabilità pluviometrica | 50 anni | 200 anni | 500 anni |
|--|---------|----------|----------|
| | a | 73.10 | 93.20 |
| n | 0.43 | 0.43 | 0.43 |

| | | | |
|--------------------------------|--------------------|---------|----------|
| Lunghezza asta principale | L = | 8.40 | Km |
| Altitudine sezione di chiusura | H ₀ = | 348.00 | m s.l.m. |
| Altitudine massima del bacino | H _{max} = | 1262.00 | m s.l.m. |
| Altitudine media del bacino | H _m = | 805.00 | m s.l.m. |

Tempo di corrvazione (Giandotti): tc = 1.36

Coefficiente di deflusso c = 0.65

| H pioggia f(tc,T) | h(tc) = i = | 50 anni | 200 anni | 500 anni |
|----------------------|----------------|---------|----------|----------|
| | | 83.43 | 106.37 | 122.58 |
| Intensità di pioggia | | 61.35 | 78.22 | 90.13 |
| | | | | mm/h |

Calcolo Portata

| 50 anni | 200 anni | 500 anni |
|---------|----------|----------|
| 79.27 | 101.07 | 116.47 |

m³/s**METODO CIMA**

CIMA - PICCOLI BACINI

Longitudine gradi = 8
primi = 31

Tipo di bacino: D: bacini con copertura arborea - Aree Impermeabili < 5%

| Bacini tra 2 e 10 Km ² | KT = CQ = | 50 anni | 200 anni | 500 anni |
|-----------------------------------|--------------|---------|----------|----------|
| | | 3.47 | 5.02 | 6.04 |
| | | 4.18 | 4.18 | 4.18 |

Calcolo portata

| 50 anni | 200 anni | 500 anni |
|---------|----------|----------|
| 104.58 | 151.29 | 182.03 |

m³/s**VALORE MEDIATO PROPOSTO****Calcolo portata**

| 50 anni | 200 anni | 500 anni |
|---------|----------|----------|
| 92 | 126 | 150 |

m³/s

Tratto A_13 - RIO VIORINA
Sezione a monte confluenza Rio Foresto
 Località "Morona" - Comune di Sassello
Dalla sezione 10 alla sezione 1

Superficie della porzione di Bacino sottesa alla sezione di calcolo: **1.22** Km²

| METODO RAZIONALE (Giandotti) | | | | | |
|--|--------------------|----------------|-----------------|-----------------|-------------------|
| Parametri di calcolo Probabilità pluviometrica | | 50 anni | 200 anni | 500 anni | |
| a | | 73.10 | 93.20 | 107.40 | |
| n | | 0.43 | 0.43 | 0.43 | |
| Lunghezza asta principale | L = | 2.54 | Km | | |
| Altitudine sezione di chiusura | H ₀ = | 416.30 | m s.l.m. | | |
| Altitudine massima del bacino | H _{max} = | 697.00 | m s.l.m. | | |
| Altitudine media del bacino | H _m = | 556.65 | m s.l.m. | | |
| Tempo di corrivazione (Giandotti): | t _c = | 0.87 | | | |
| Coefficiente di deflusso | c = | 0.65 | | | |
| H pioggia f (tc;T) | h(tc) = | 50 anni | 200 anni | 500 anni | |
| | | 68.79 | 87.70 | 101.07 | mm |
| Intensità di pioggia | i = | 79.23 | 101.02 | 116.41 | mm/h |
| Calcolo Portata | | 50 anni | 200 anni | 500 anni | |
| | | 17.59 | 22.43 | 25.85 | m ³ /s |

| METODO CIMA | | | | | |
|--|---------|----------------|-----------------|-----------------|-------------------|
| CIMA - PICCOLI BACINI | | | | | |
| Longitudine | gradi = | 8 | | | |
| | primi = | 32 | | | |
| Tipo di bacino: D: bacini con copertura arborea - Aree Impermeabili < 5% | | | | | |
| Bacini < 2 Km ² | | 50 anni | 200 anni | 500 anni | |
| | KT = | 3.47 | 5.02 | 6.04 | |
| | UA = | 5.22 | 5.22 | 5.22 | |
| Calcolo portata | | 50 anni | 200 anni | 500 anni | |
| | | 22.12 | 32 | 41.24 | m ³ /s |

| VALORE MEDIATO PROPOSTO | | | | | |
|-------------------------|--|----------------|-----------------|-----------------|-------------------|
| Calcolo portata | | 50 anni | 200 anni | 500 anni | |
| | | 20 | 28 | 34 | m ³ /s |

Tratto A_12 - RIO CIUA
Sezione a monte confluenza Torrente Erro
 Località "Case Ciua" - Comune di Sassello
Dalla sezione 12 alla sezione 1

Superficie della porzione di Bacino sottesa alla sezione di calcolo: **42.00** Km²

| METODO RAZIONALE (Giandotti) | | | | | |
|--|--------------------|----------------|-----------------|-----------------|-------------------|
| Parametri di calcolo Probabilità pluviometrica | | 50 anni | 200 anni | 500 anni | |
| a | | 73.10 | 93.20 | 107.40 | |
| n | | 0.43 | 0.43 | 0.43 | |
| Lunghezza asta principale | L = | 13.30 | Km | | |
| Altitudine sezione di chiusura | H ₀ = | 323.00 | m s.l.m. | | |
| Altitudine massima del bacino | H _{max} = | 1262.00 | m s.l.m. | | |
| Altitudine media del bacino | H _m = | 792.50 | m s.l.m. | | |
| Tempo di corrivazione (Giandotti): | t _c = | 2.65 | | | |
| Coefficiente di deflusso | c = | 0.60 | | | |
| H pioggia f (tc;T) | h(tc) = | 50 anni | 200 anni | 500 anni | |
| | | 111.09 | 141.63 | 163.21 | mm |
| Intensità di pioggia | i = | 41.98 | 53.52 | 61.67 | mm/h |
| Calcolo Portata | | 50 anni | 200 anni | 500 anni | |
| | | 296.19 | 377.43 | 435.16 | m ³ /s |

| METODO CIMA | | | | | |
|------------------------|---------------|-----------------|-----------------|-----------------|-------------------|
| CIMA - GRANDI BACINI | | | | | |
| Corso d'acqua CIUA | | | | | |
| Tratto da | Torrente Erro | a | Rio del Giovo | | |
| Area drenata | 36 | Km ² | | | |
| | | 50 anni | 200 anni | 500 anni | |
| | c = | 18.42 | 26.64 | 32.6 | |
| Calcolo portata | | 50 anni | 200 anni | 500 anni | |
| | | 304 | 440 | 529 | m ³ /s |

| VALORE MEDIATO PROPOSTO | | | | | |
|-------------------------|--|----------------|-----------------|-----------------|-------------------|
| Calcolo portata | | 50 anni | 200 anni | 500 anni | |
| | | 300 | 409 | 483 | m ³ /s |

4.4.4 CONDIZIONI AL CONTORNO

Sono state utilizzate le seguenti condizioni al contorno:

Condizione al contorno di monte:

Per i tratti A_9 Rio del Giovo, A_10 Rio Sbruggia, A_11 Rio Foresto e A_13 Rio Viorina è stata scelta la profondità critica.

Dal sopralluogo effettuato si è riscontrato che non vi sono criticità rilevanti a monte delle sezioni d'interesse

Condizione al contorno di valle:

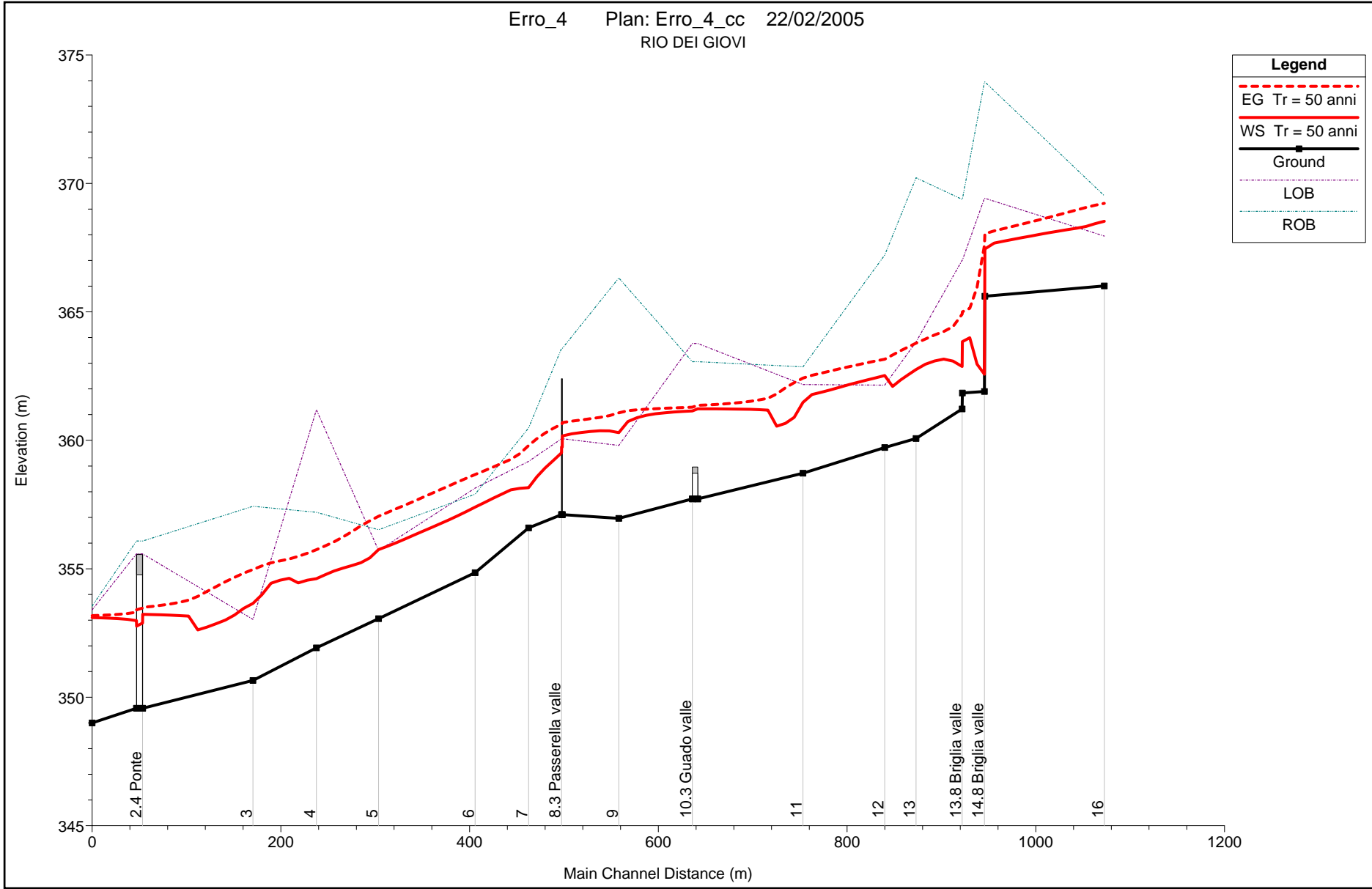
Per il tratto A_12 Rio Ciua è stata scelta la profondità critica.

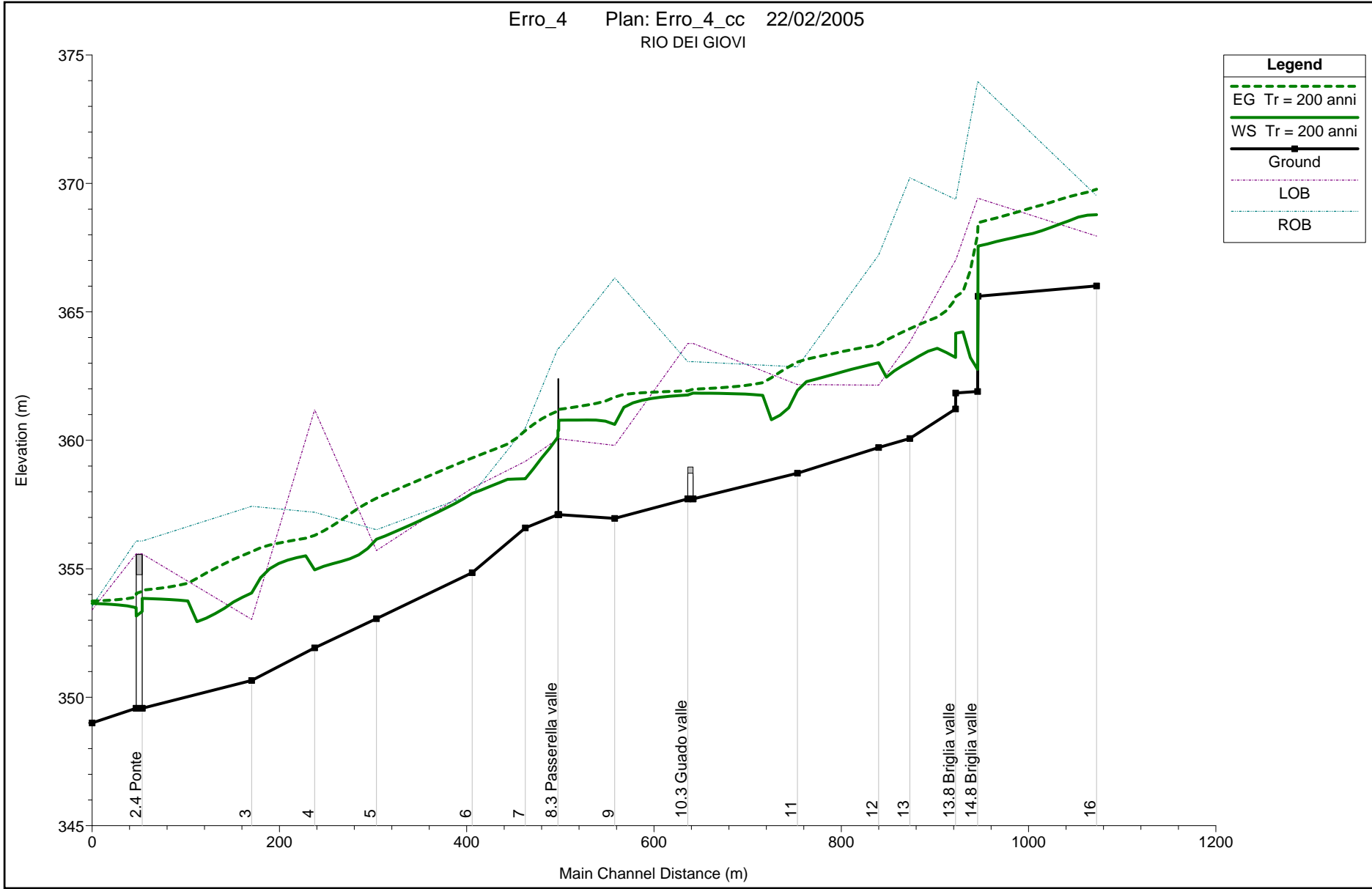
Dal sopralluogo effettuato si è riscontrato che non vi sono criticità rilevanti a valle della sezione 1.

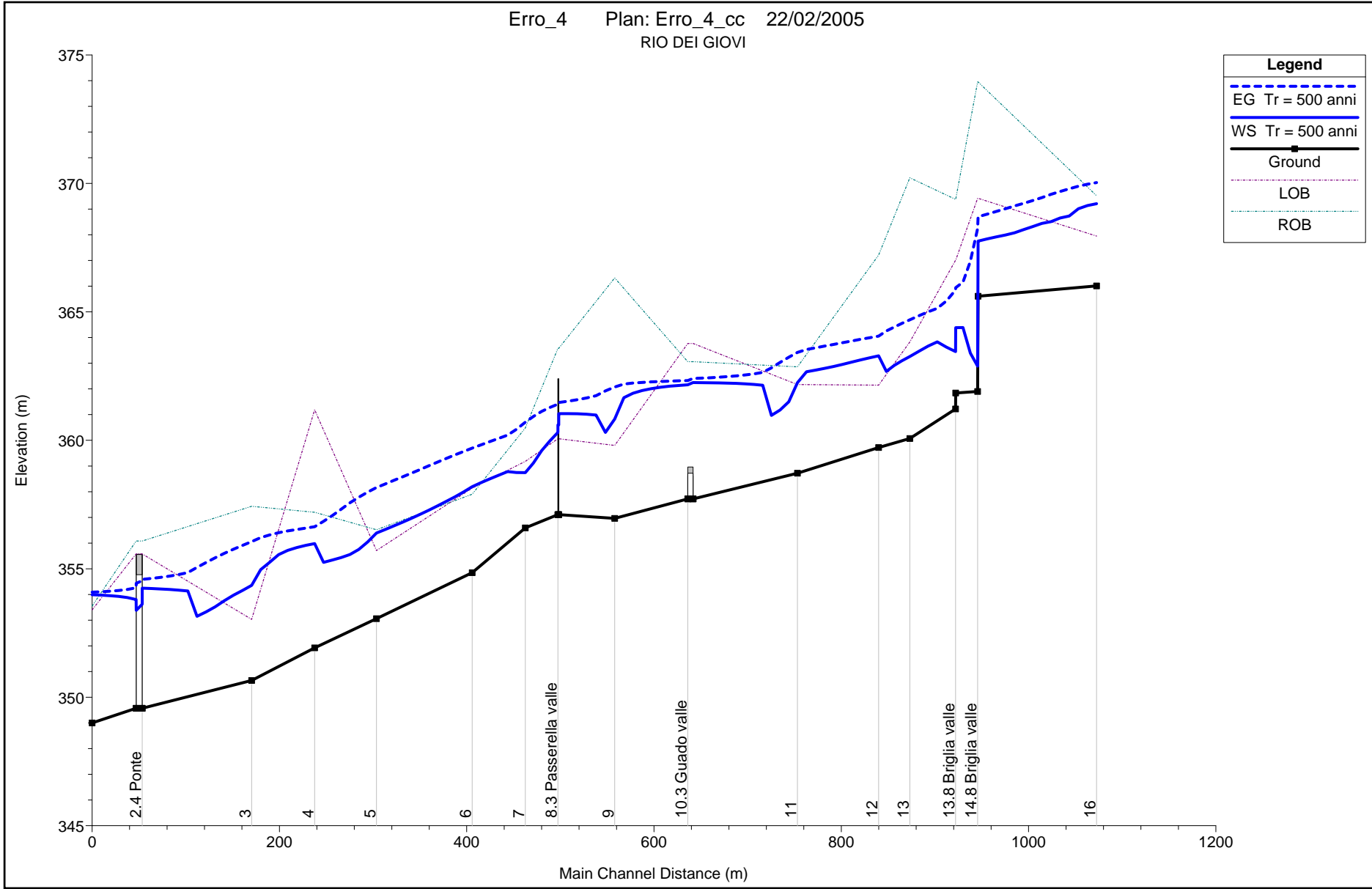
PROFILI IDRAULICI

TRATTO ERRO_4

A_9 Rio dei Giovi



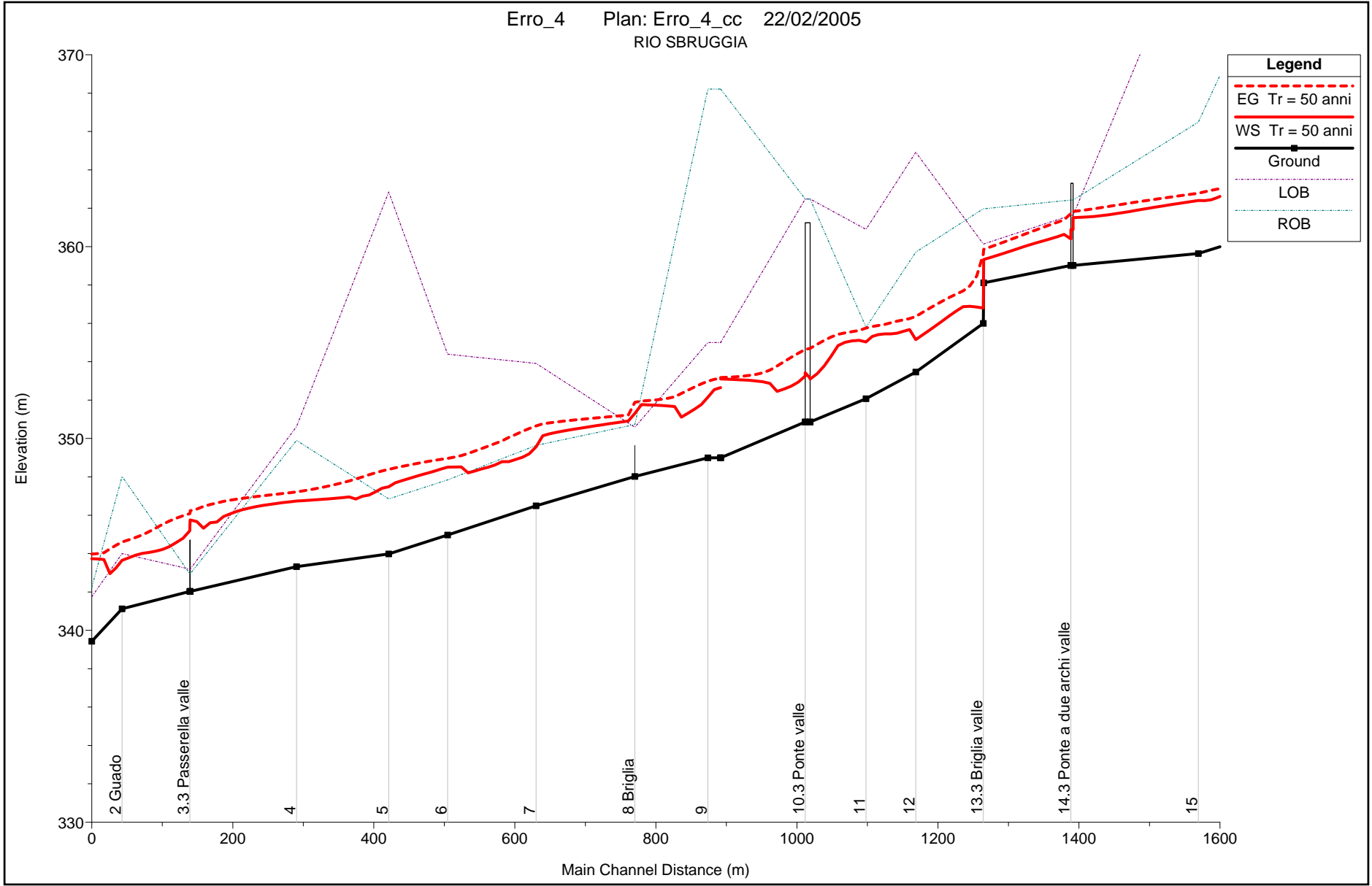


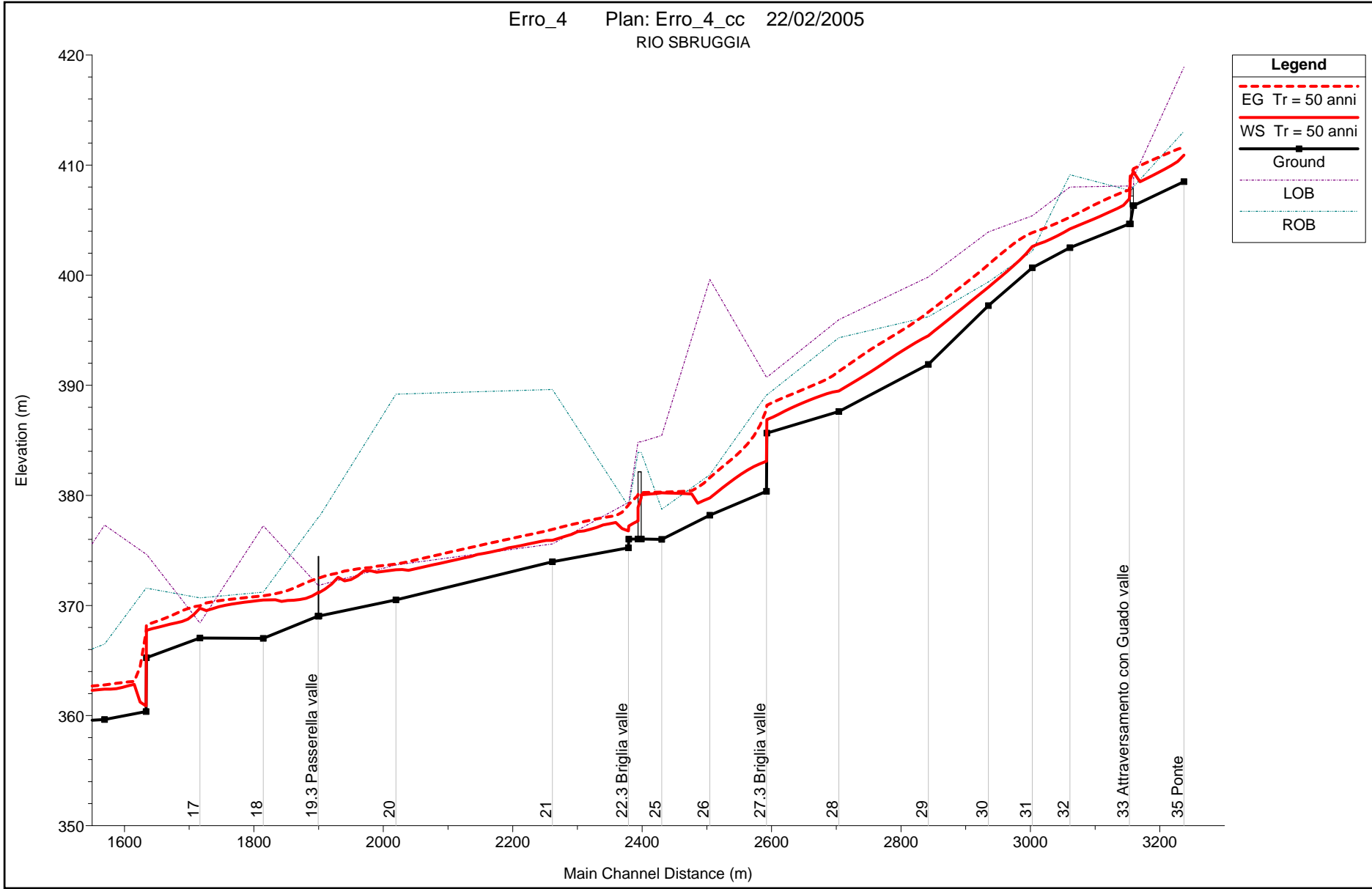


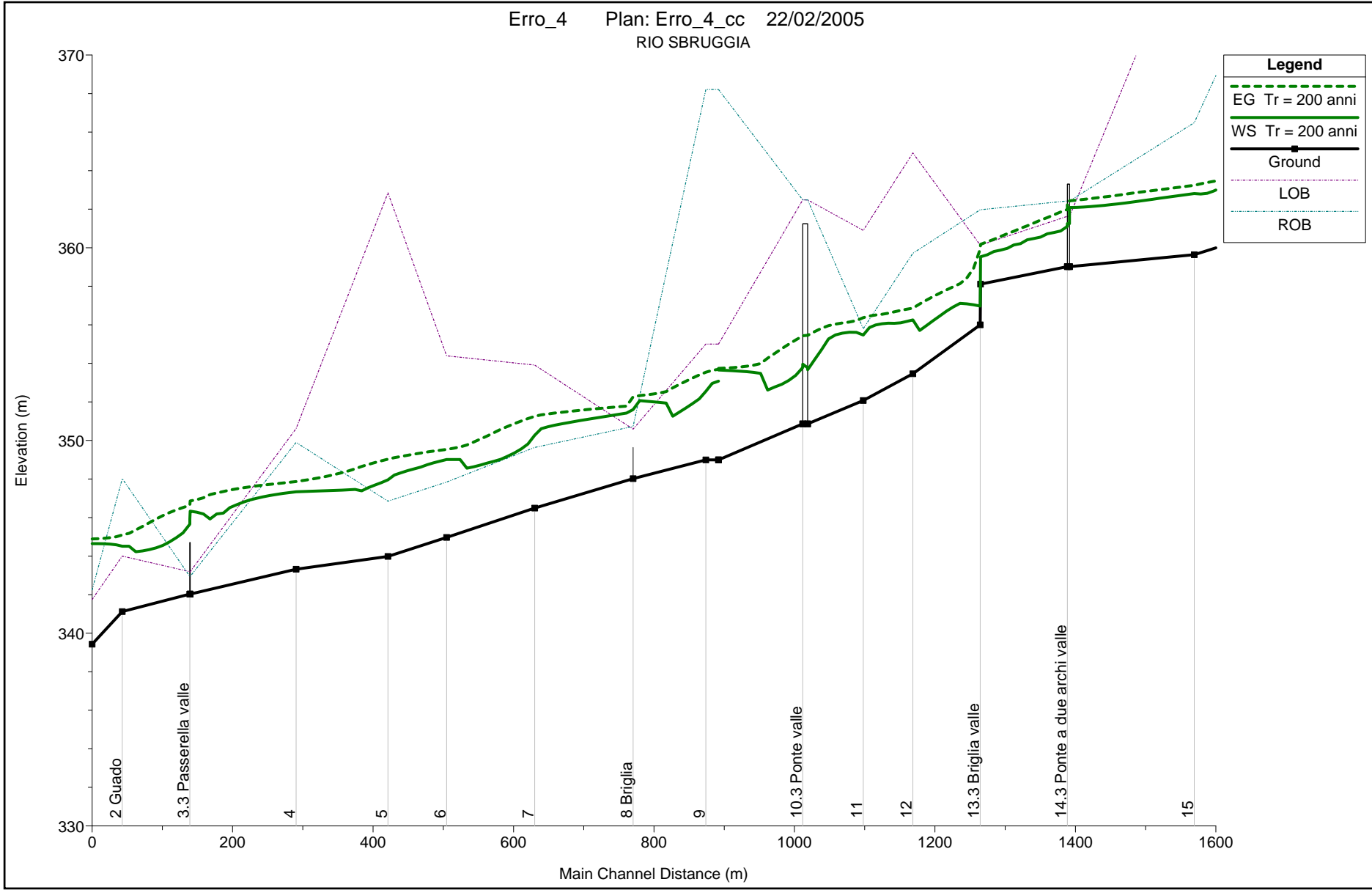
PROFILI IDRAULICI

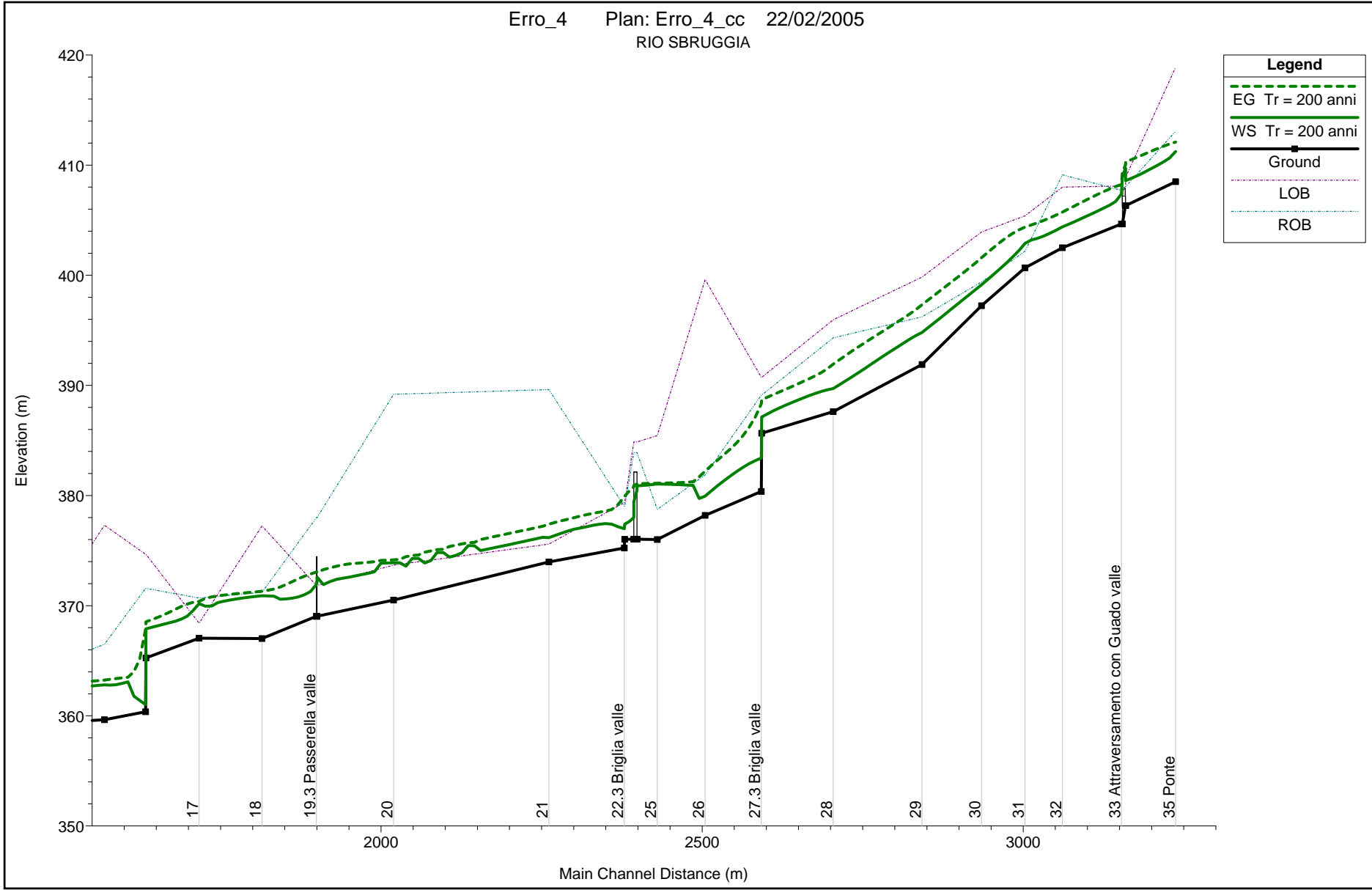
TRATTO ERRO_4

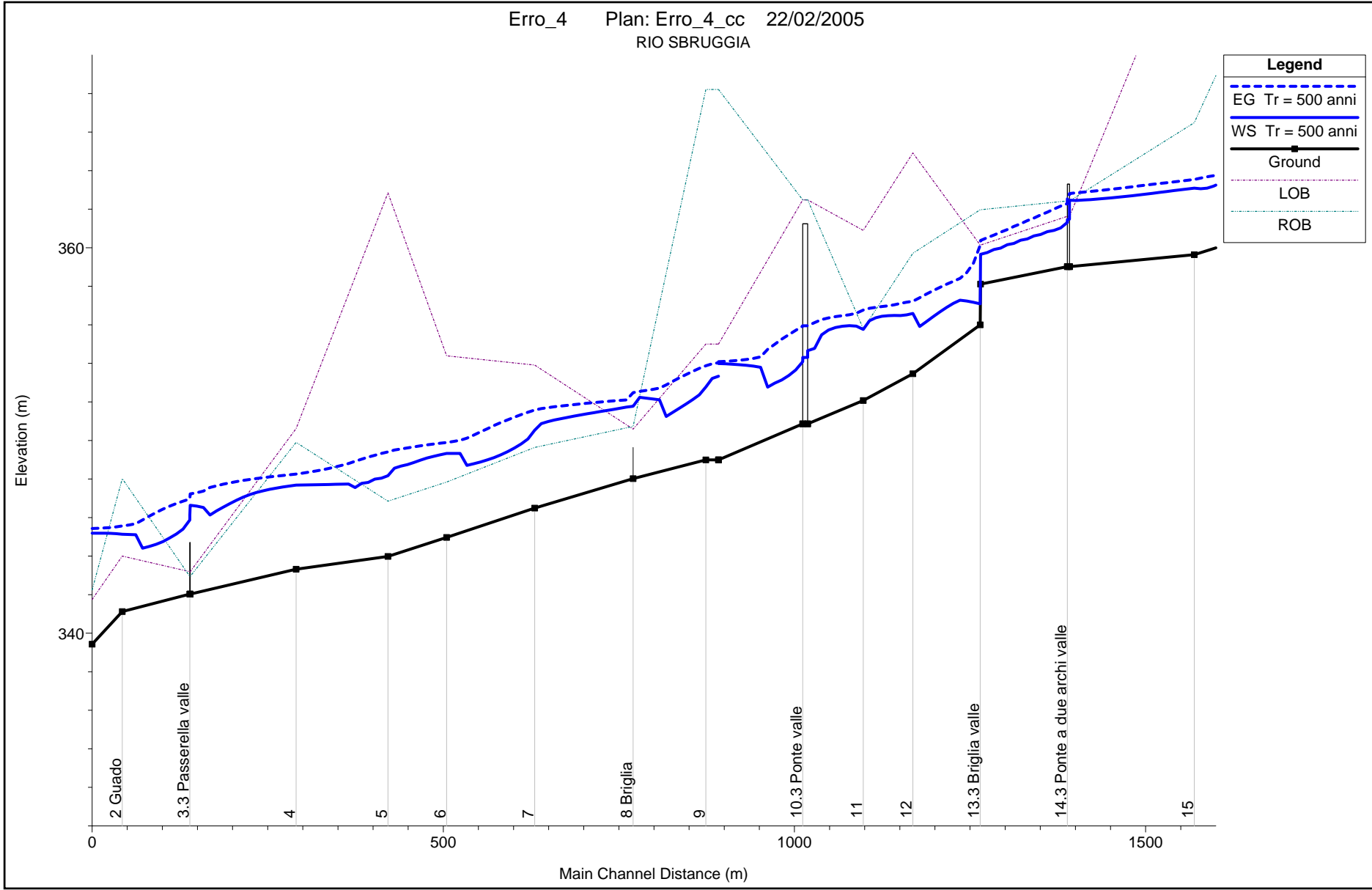
A_10 Rio Sbruggia

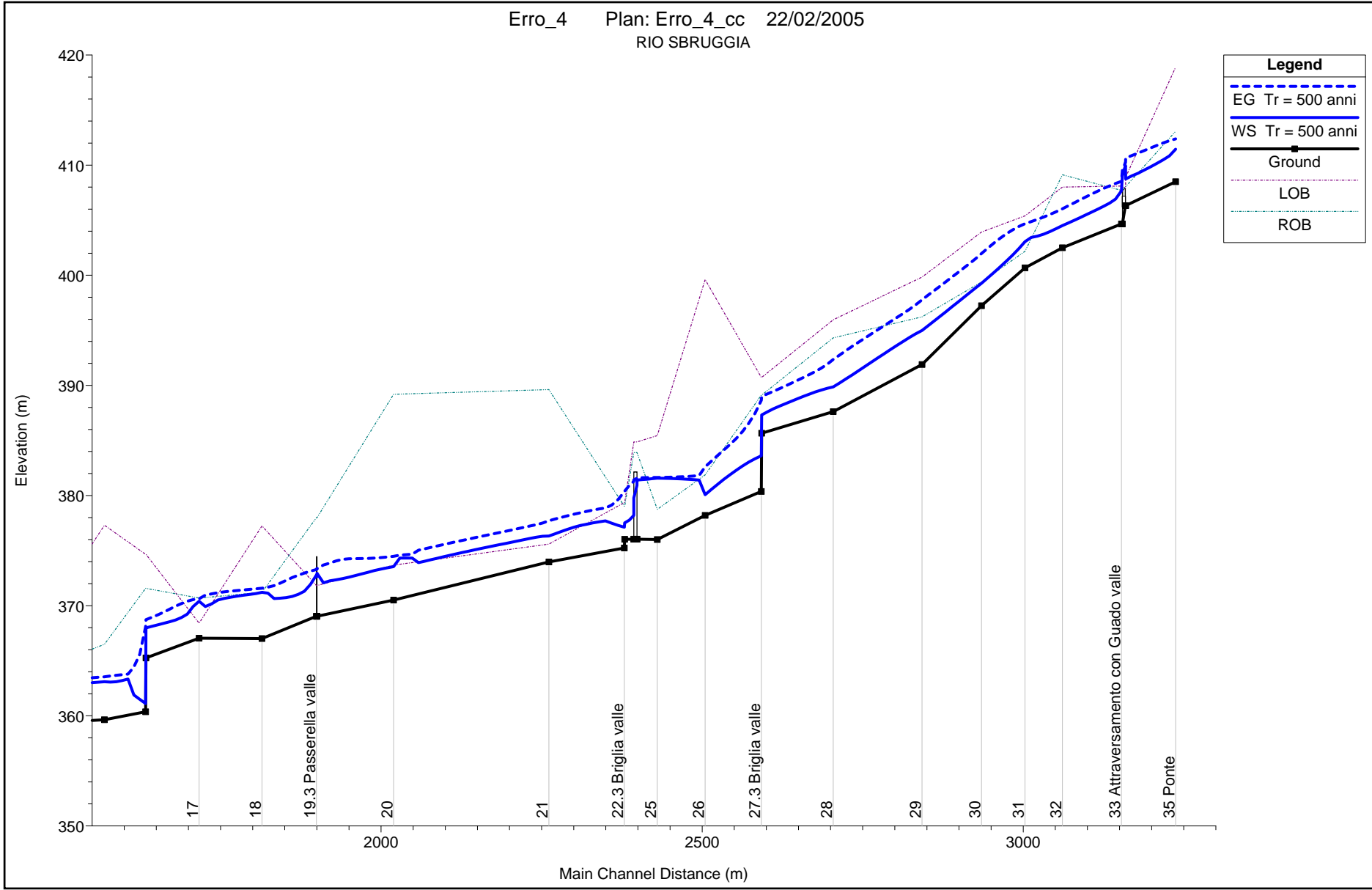








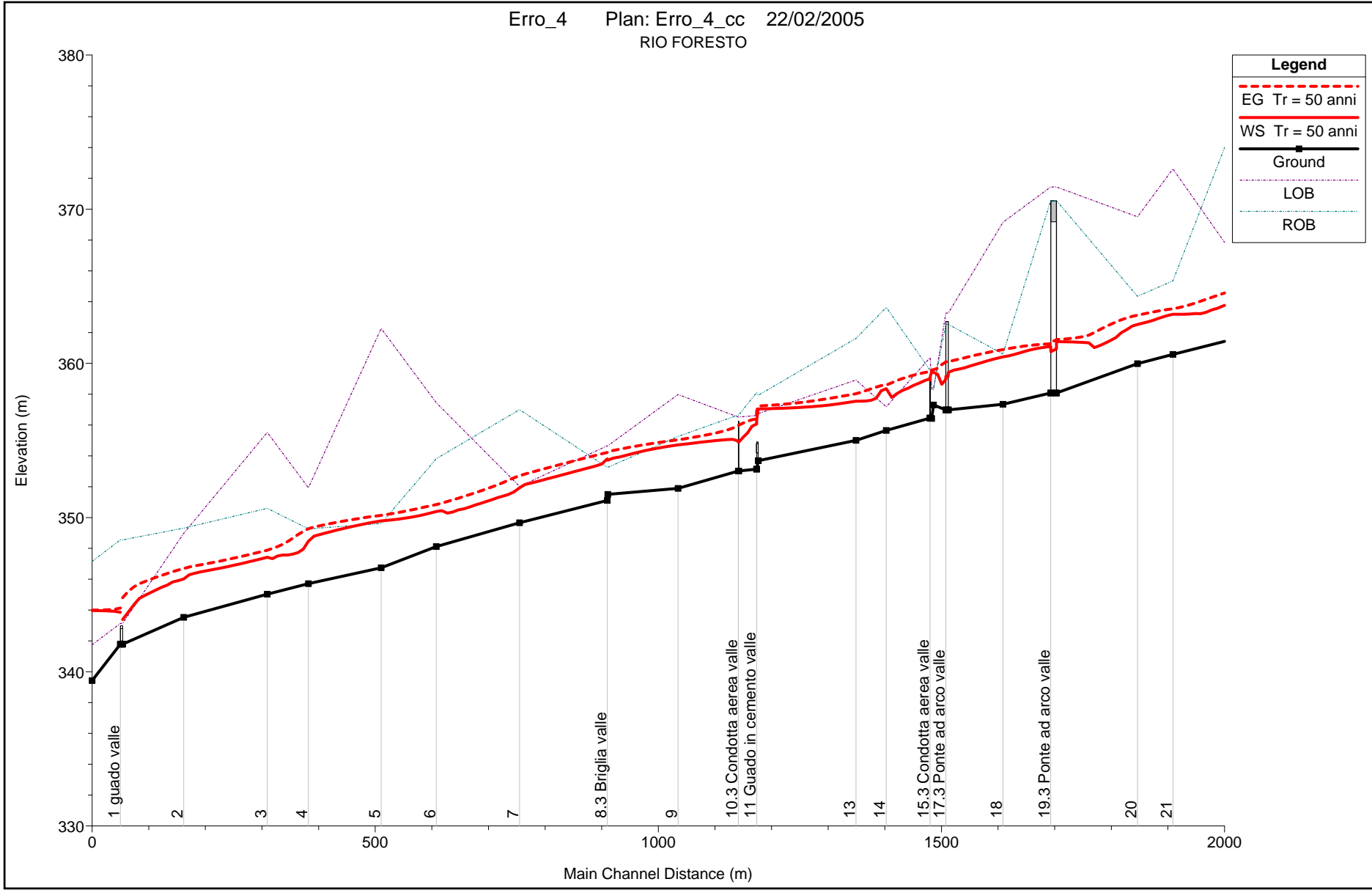


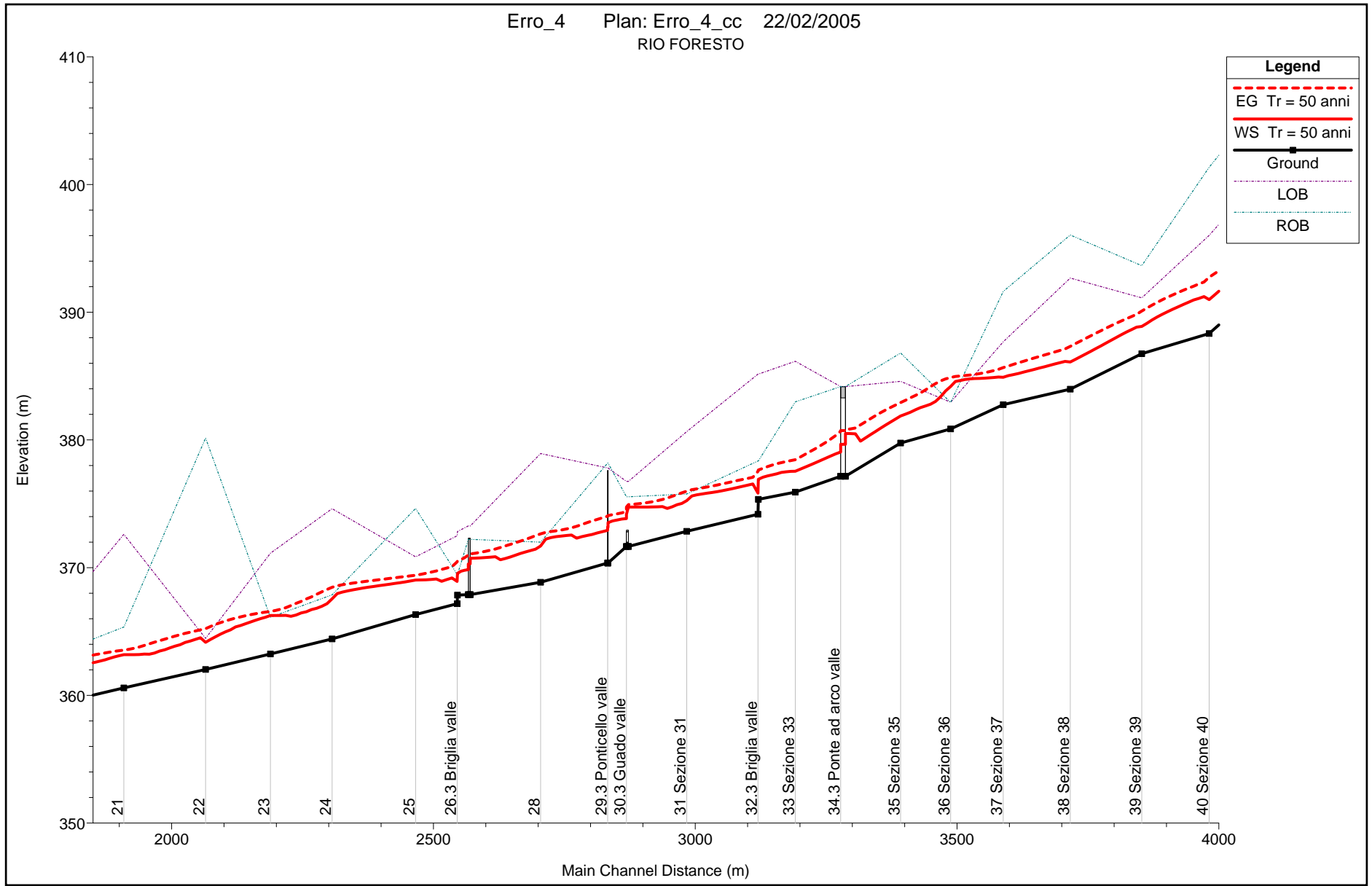


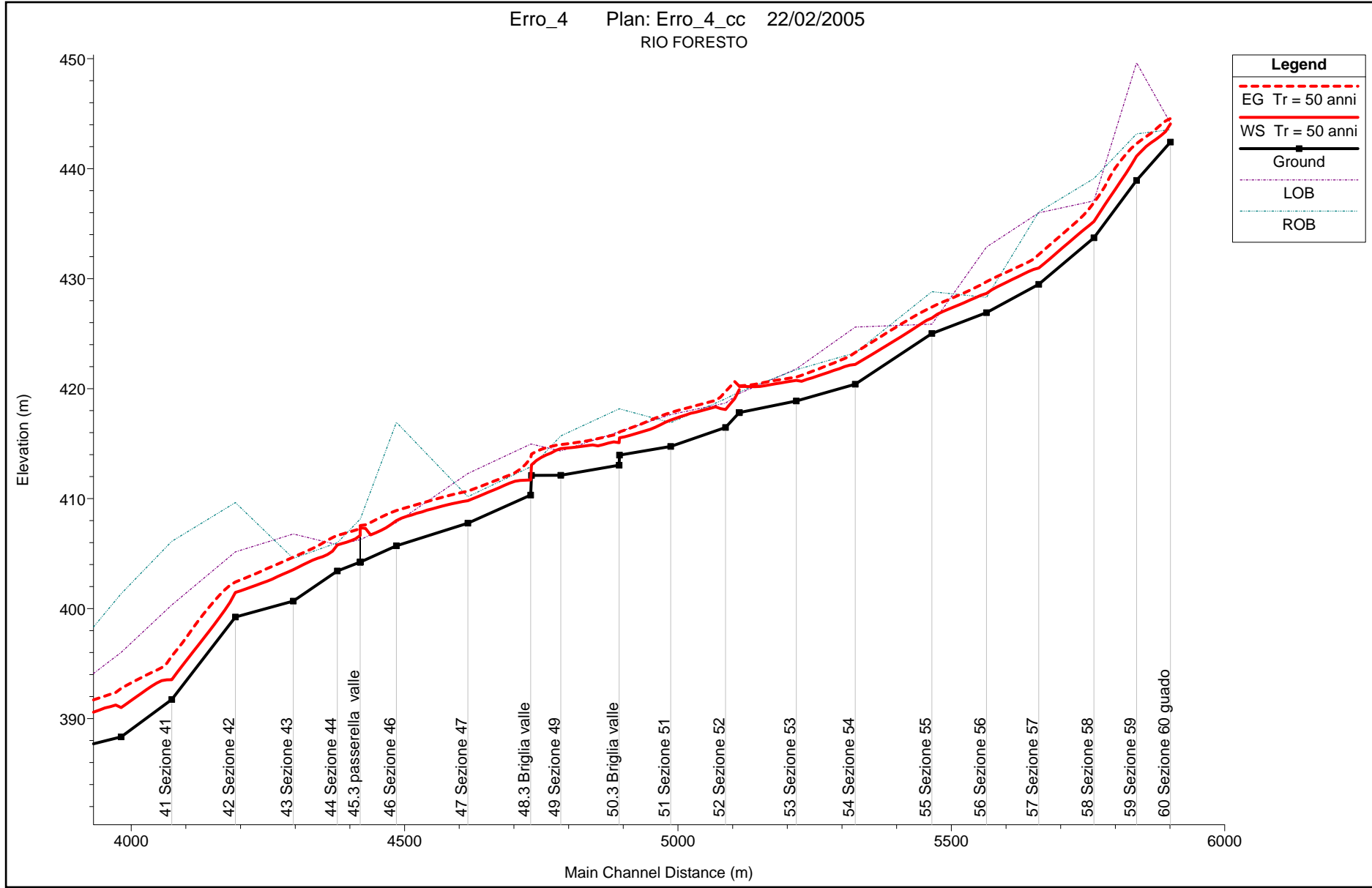
PROFILI IDRAULICI

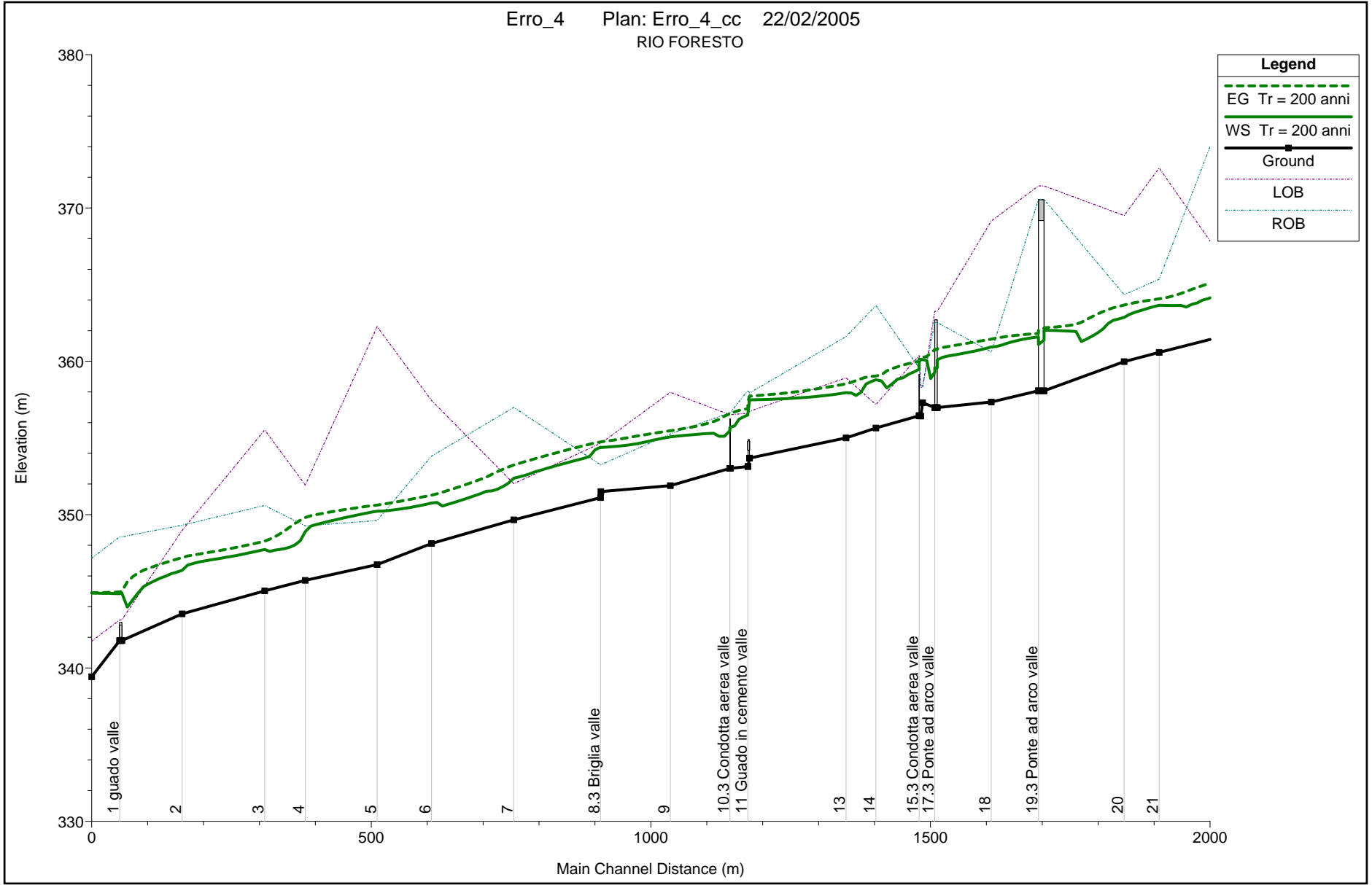
TRATTO ERRO_4

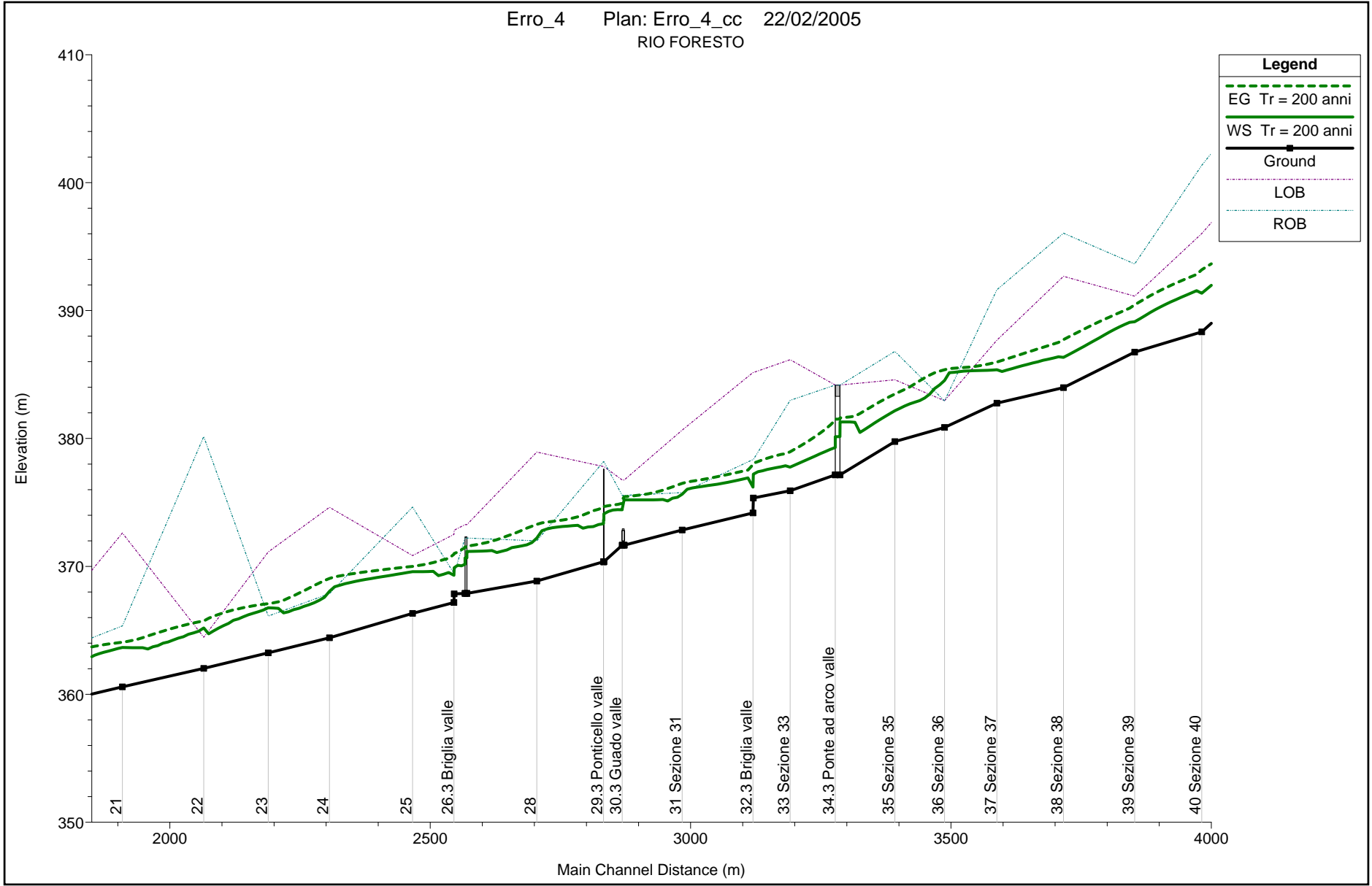
A_11 Rio Foresto

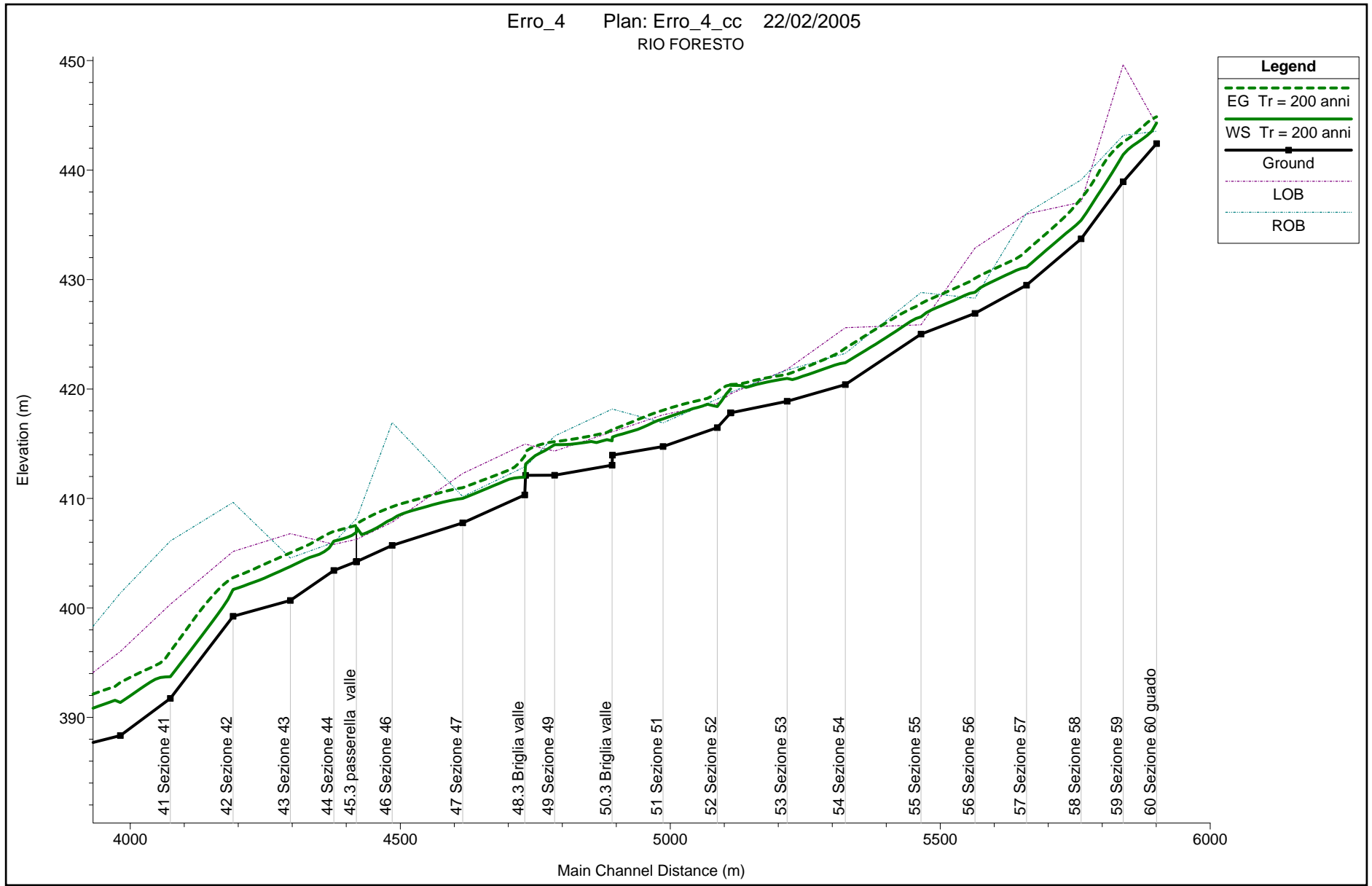


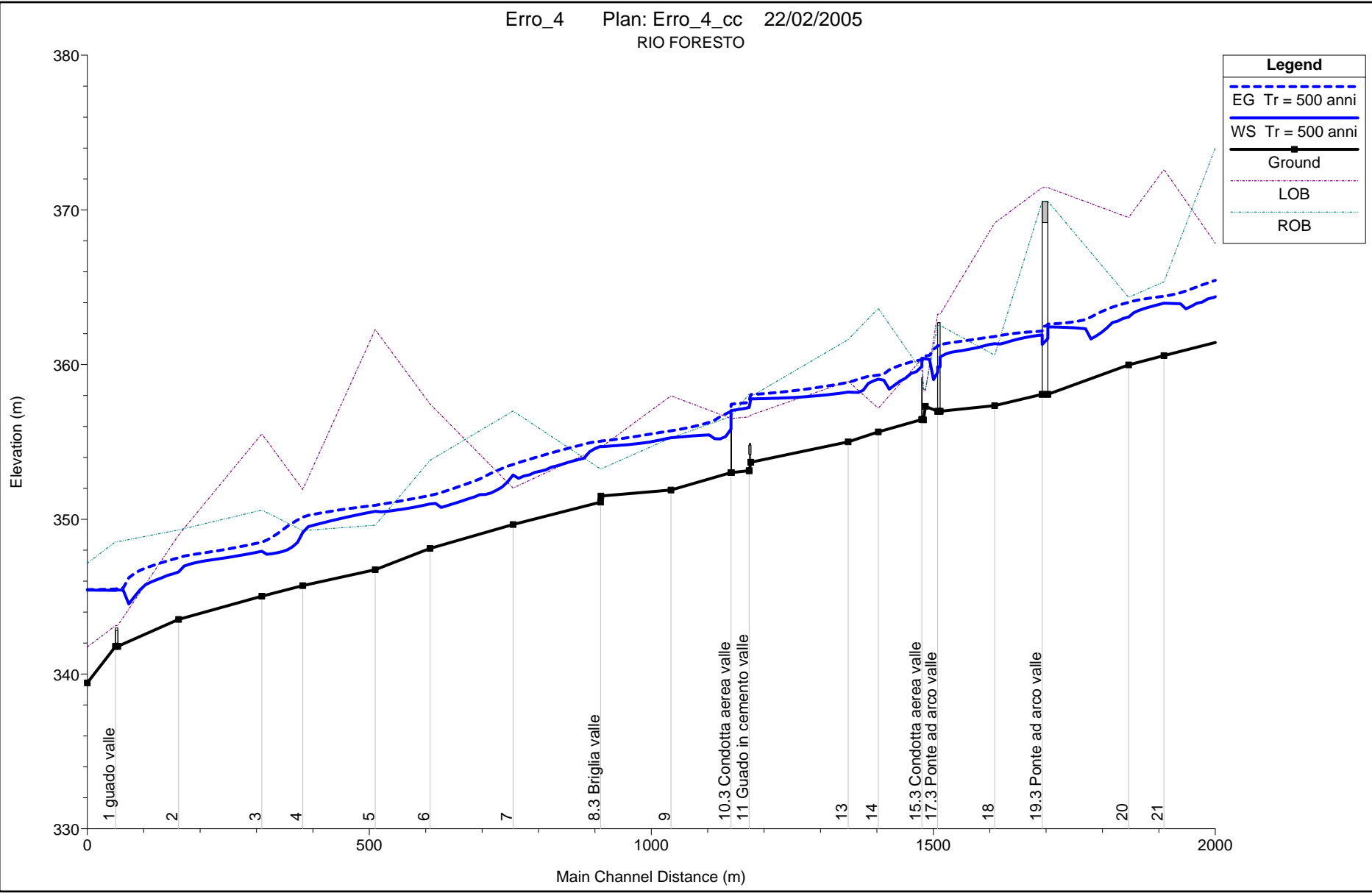


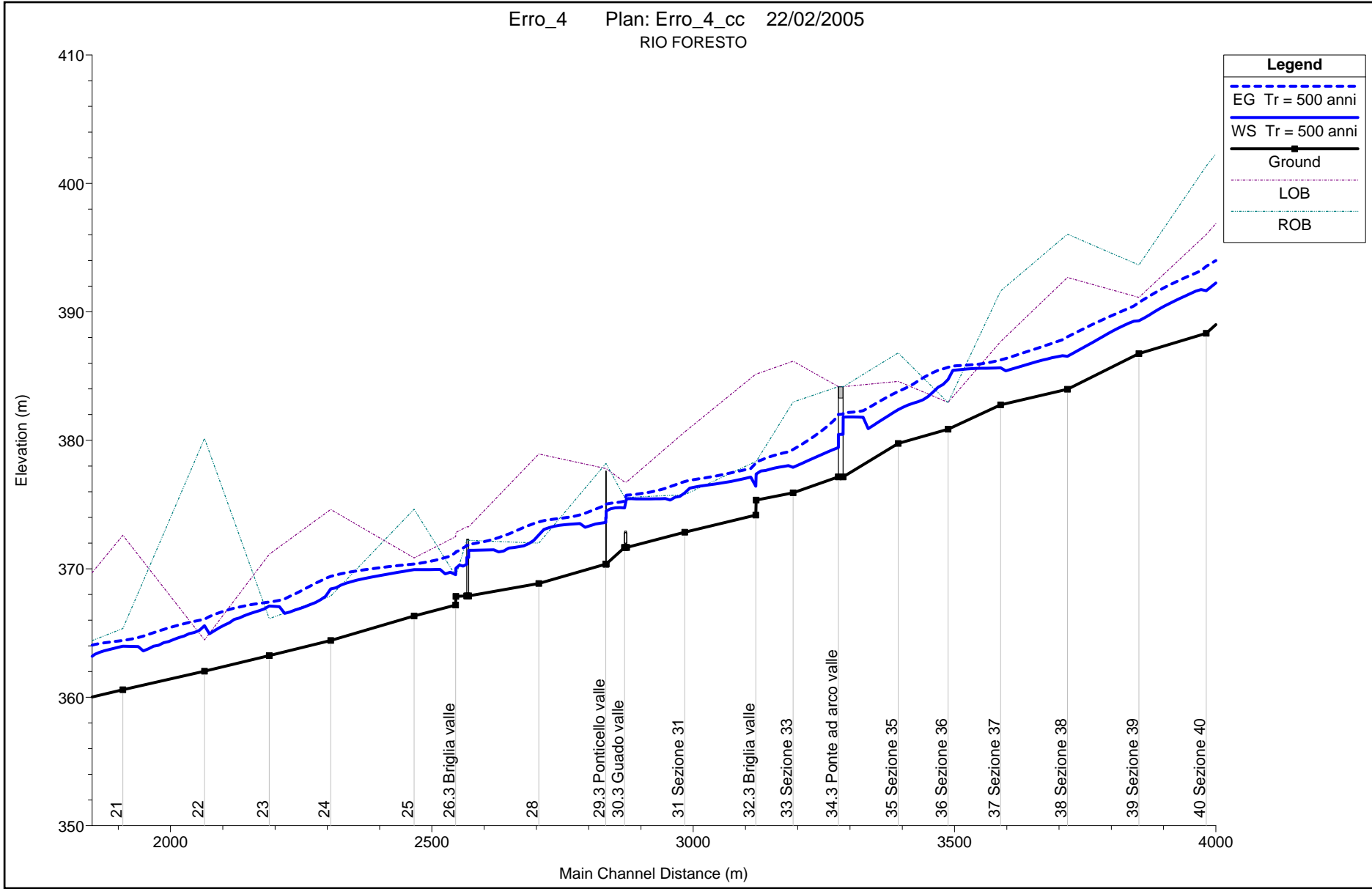


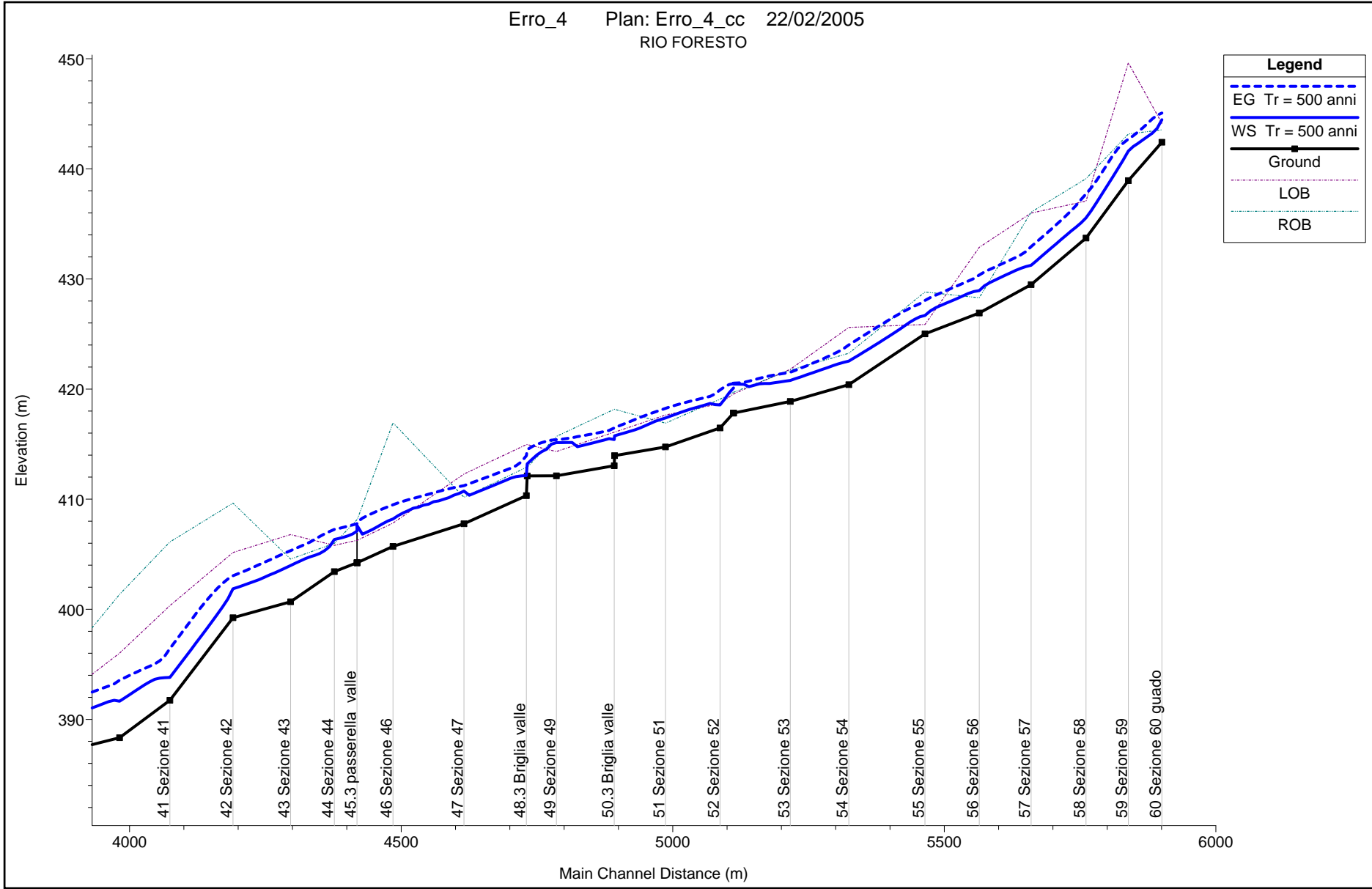








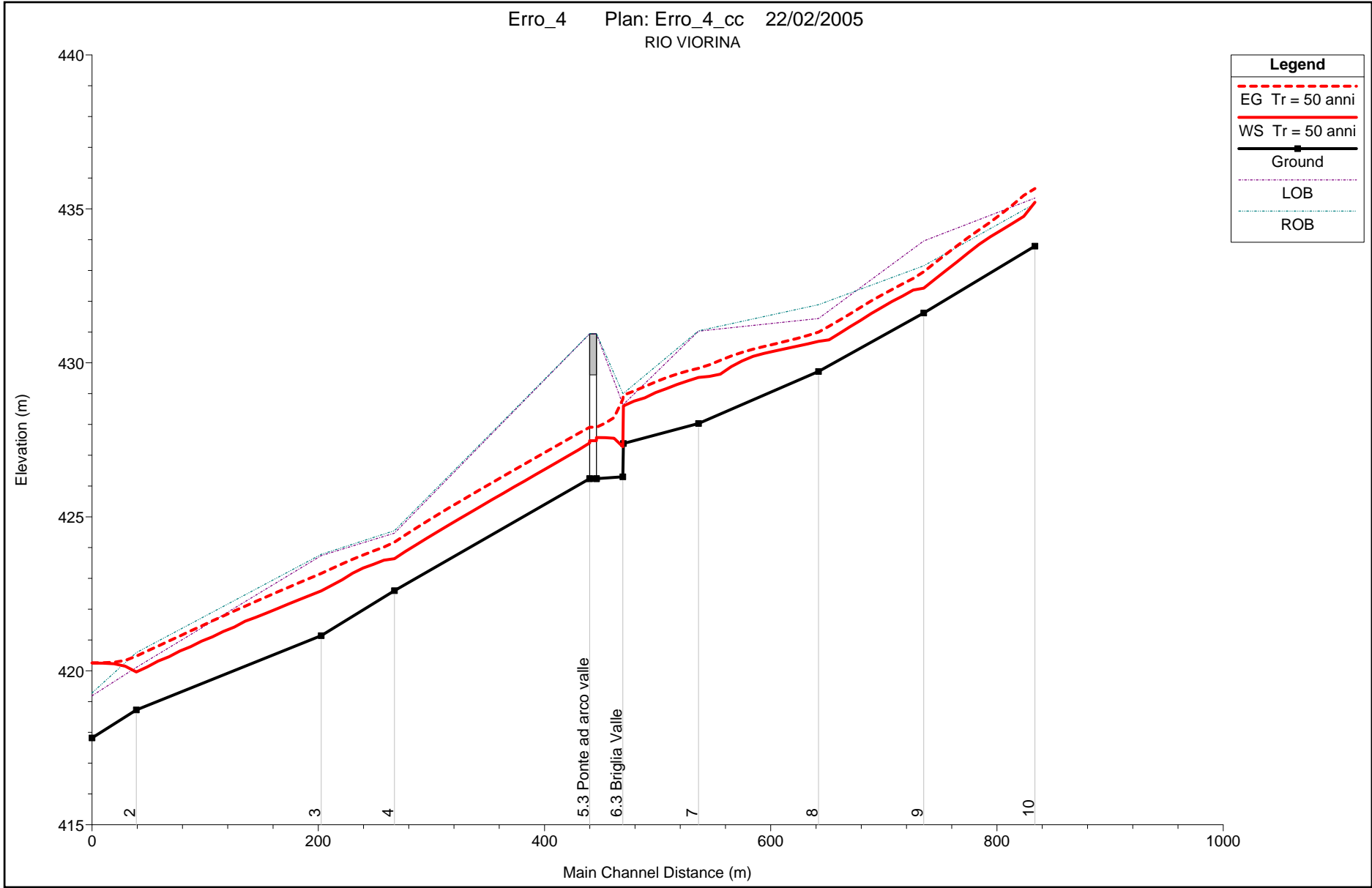


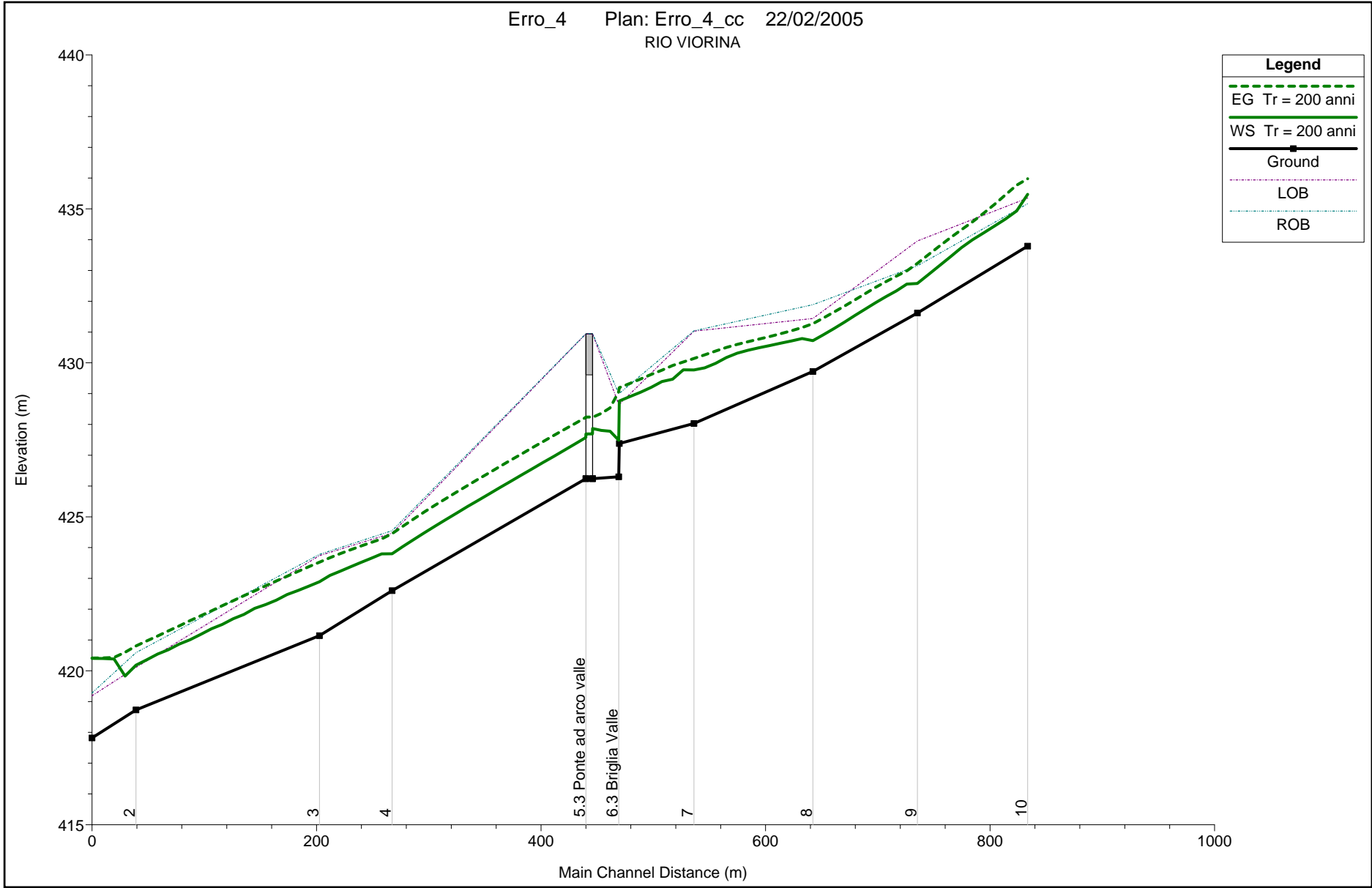


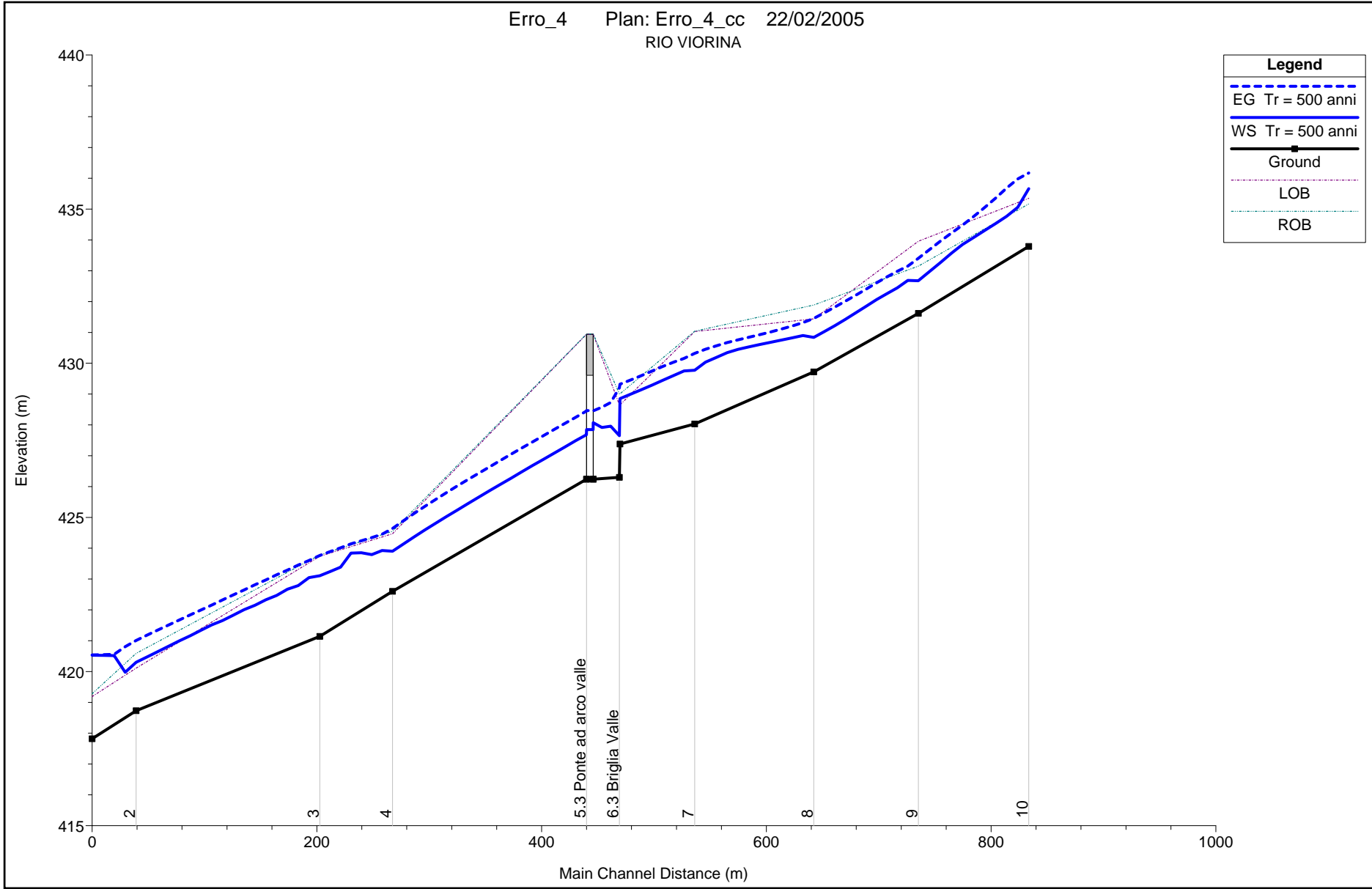
PROFILI IDRAULICI

TRATTO ERRO_4

A_13 Rio Viorina



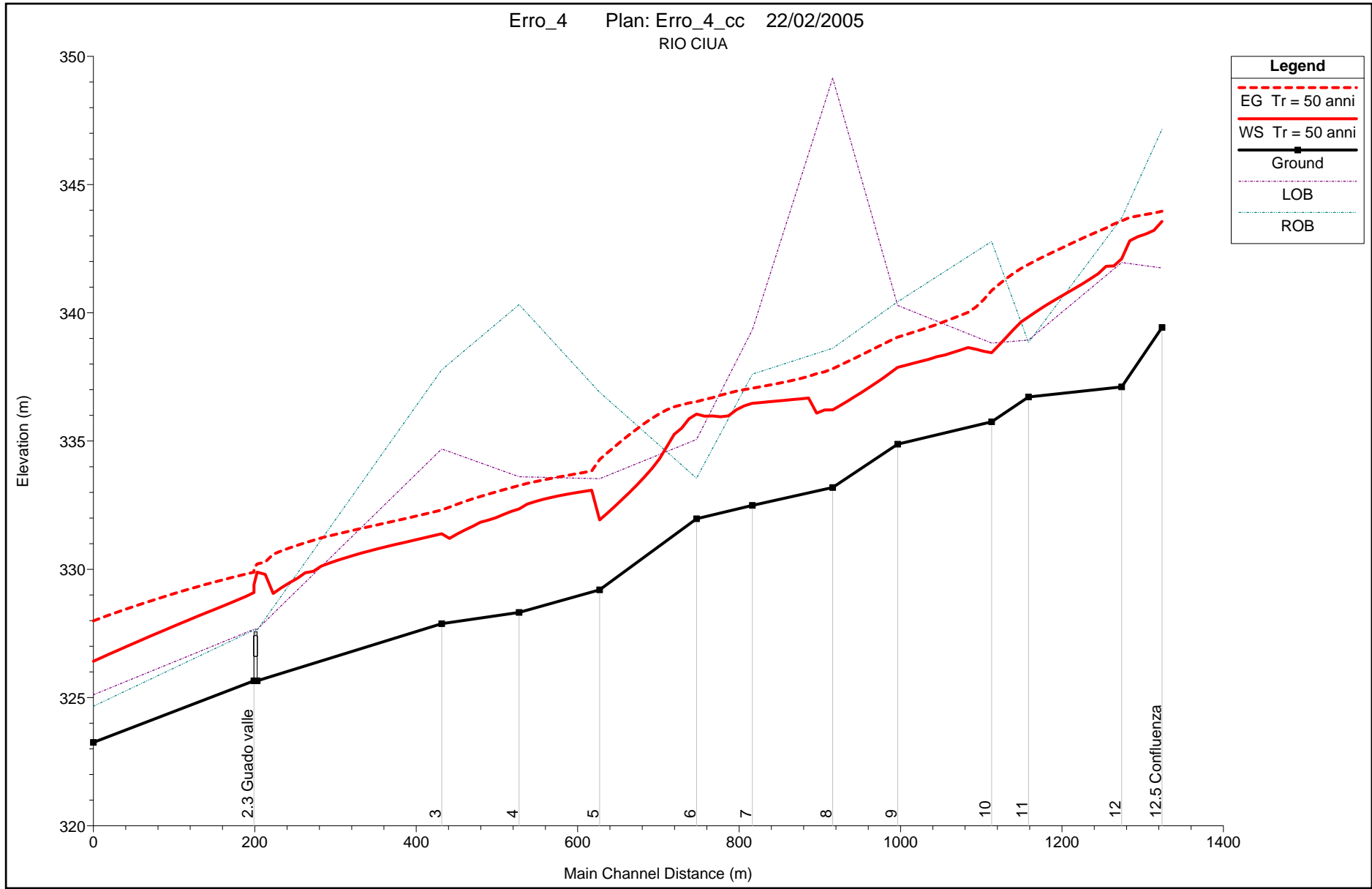


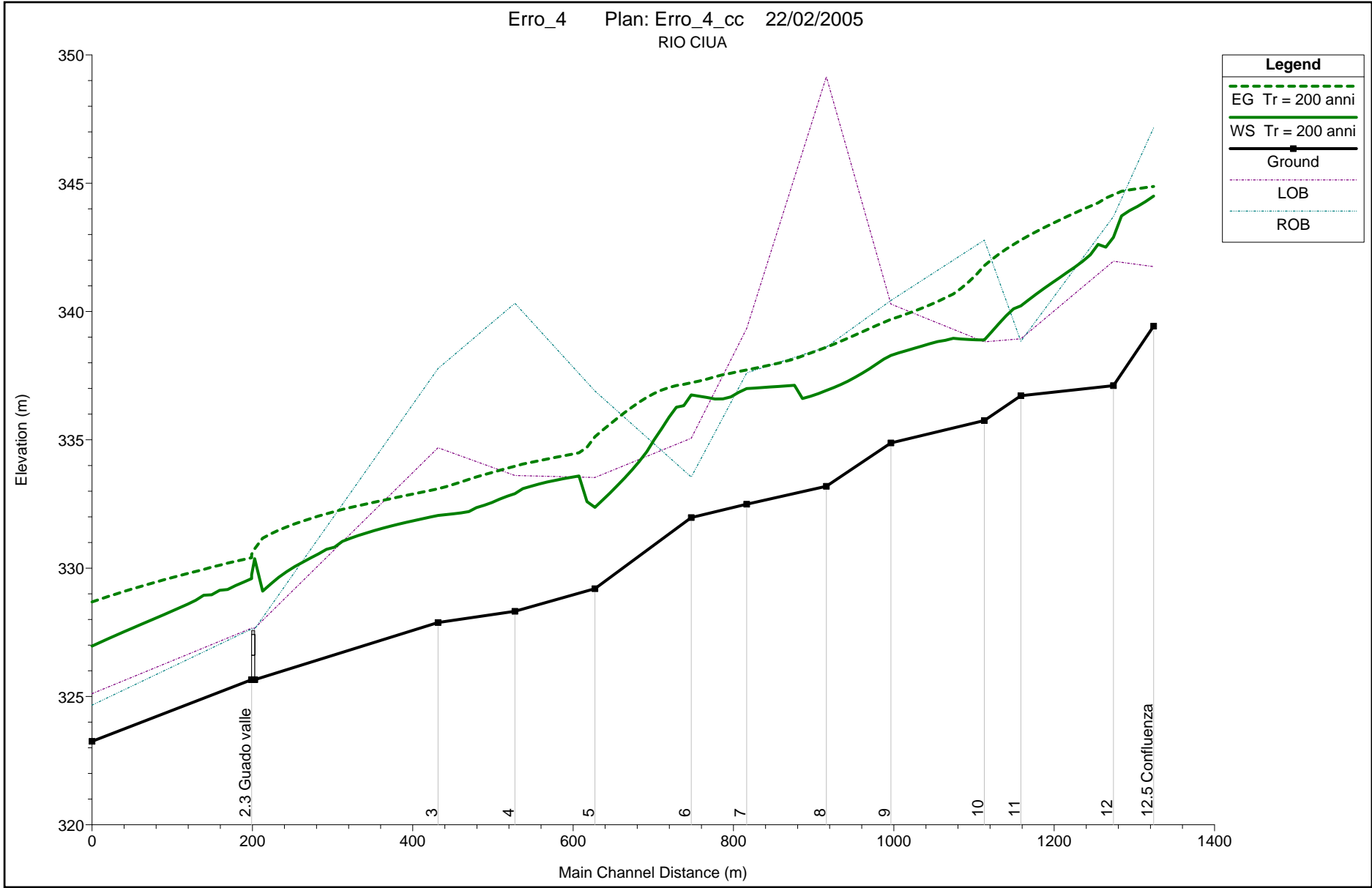


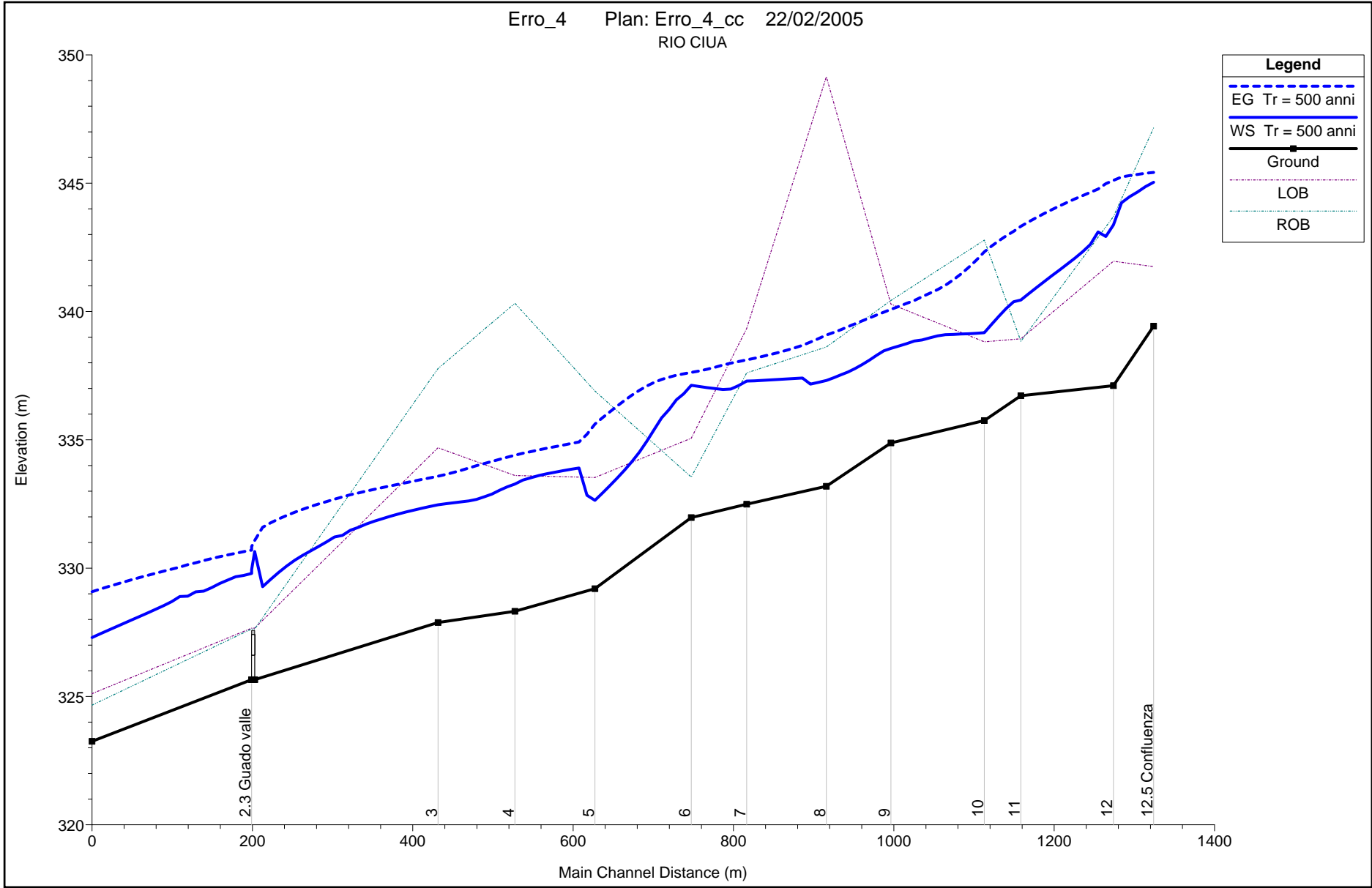
PROFILI IDRAULICI

TRATTO ERRO_4

A_12 Rio Ciua



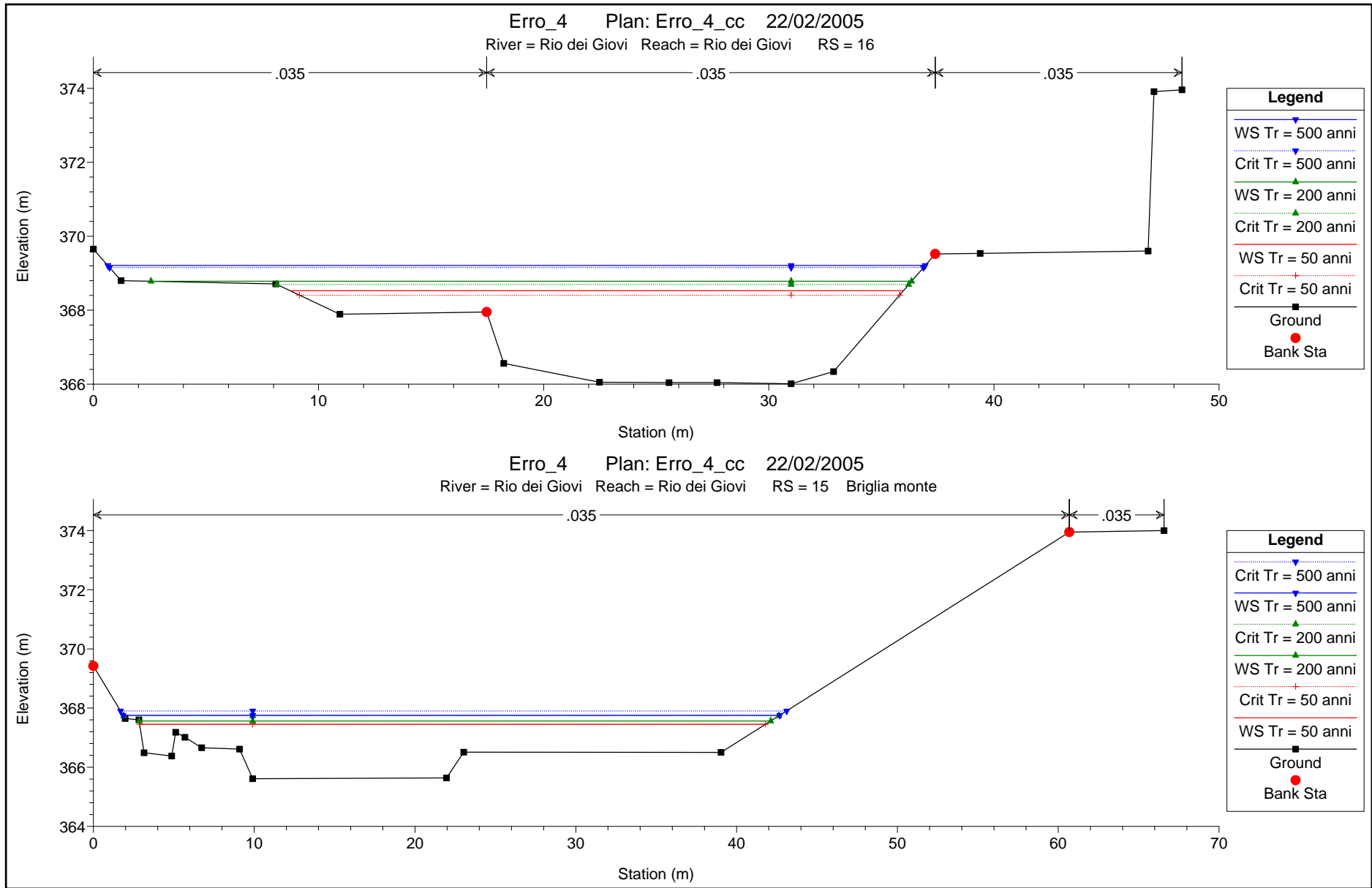


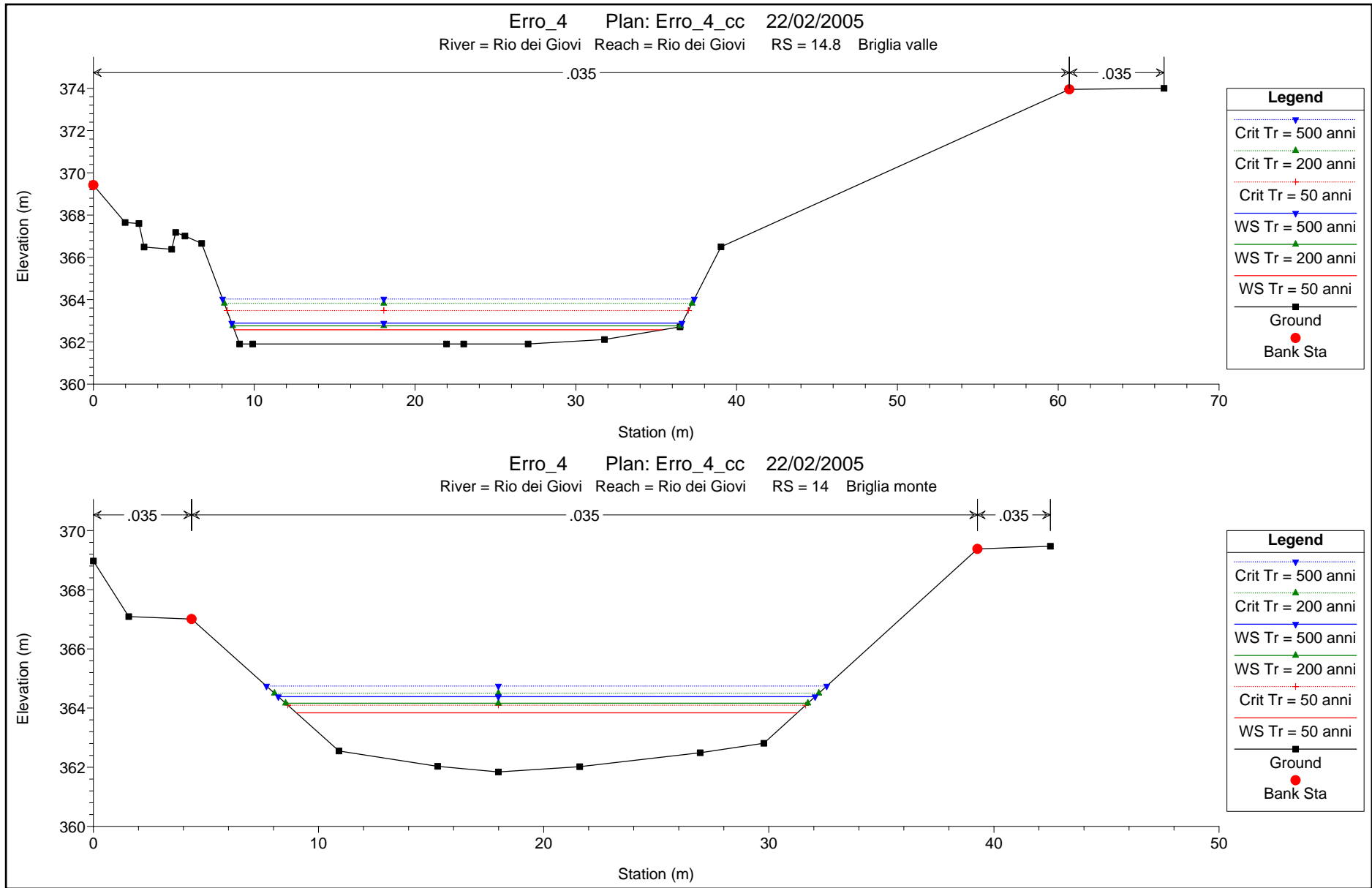


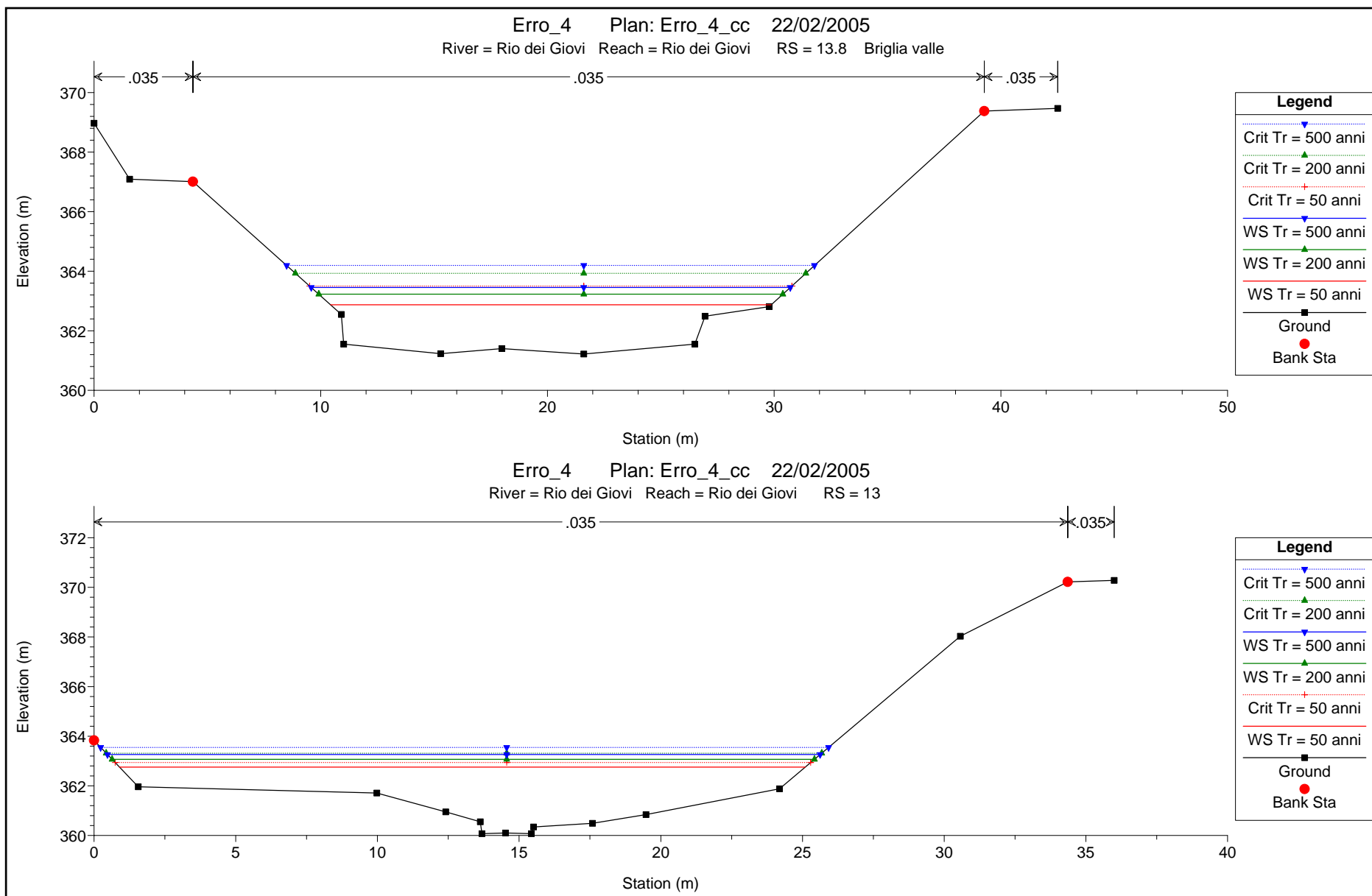
SEZIONI IDRAULICHE

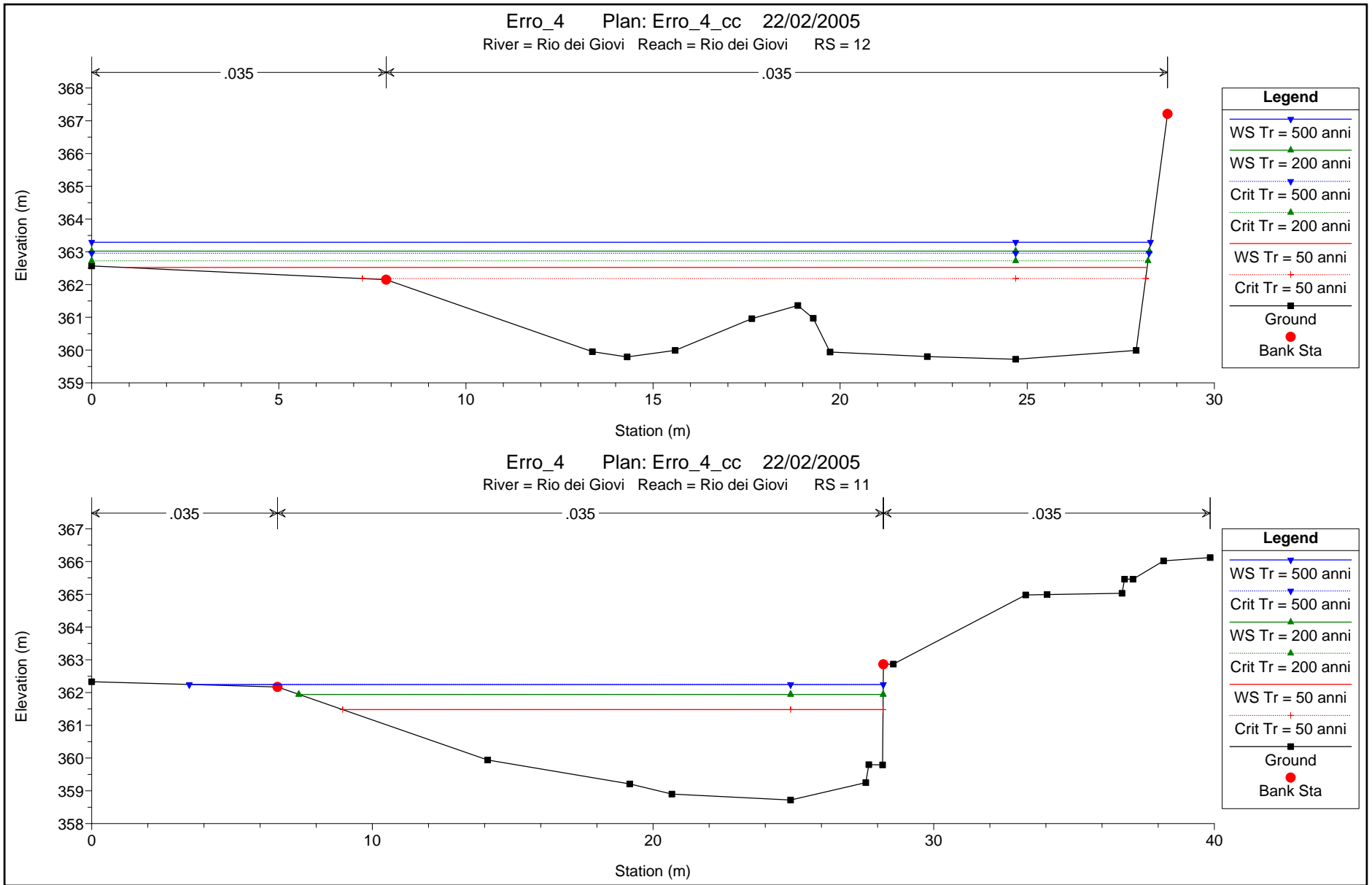
TRATTO ERRO_4

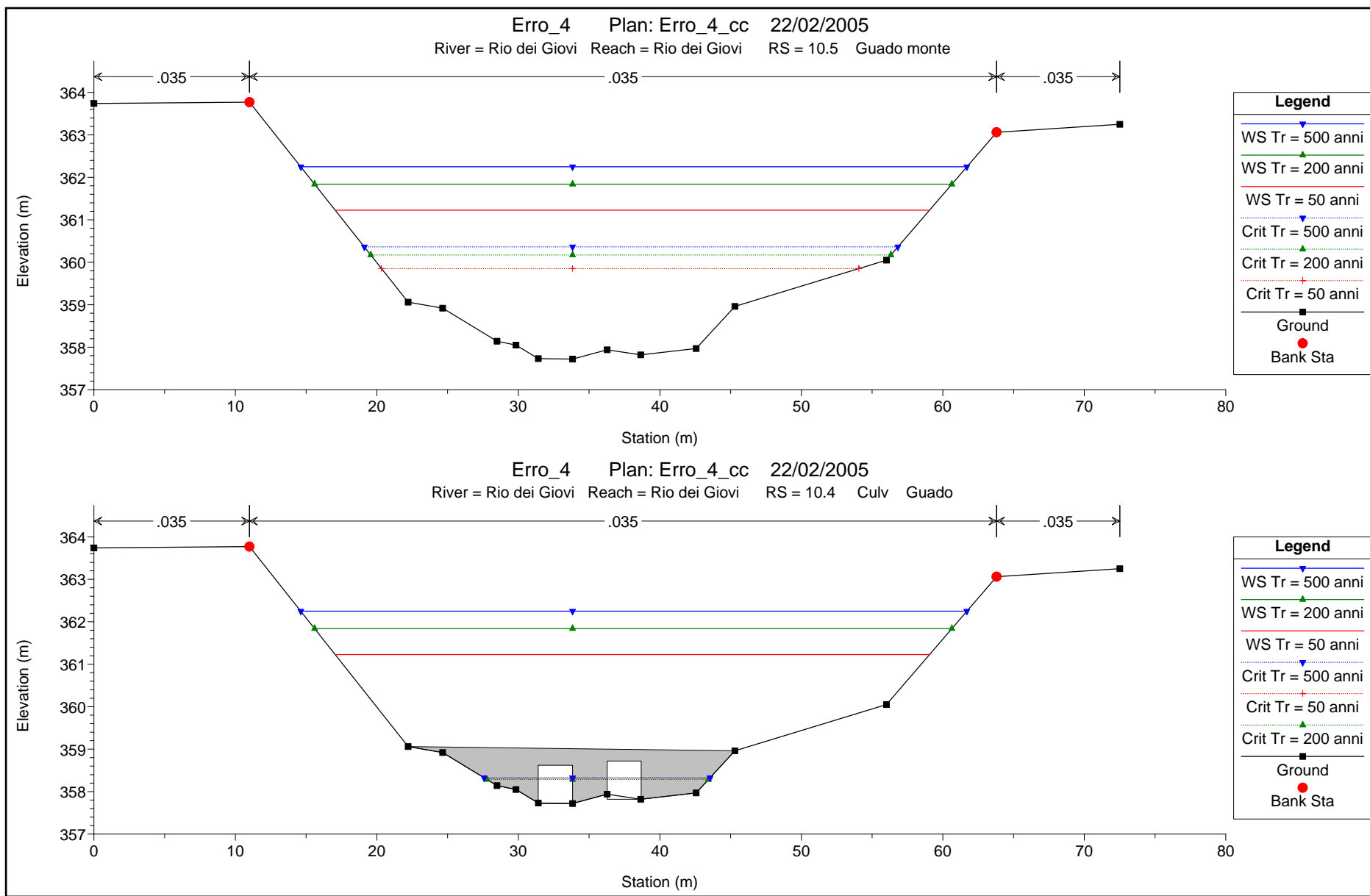
Rio dei Giovi



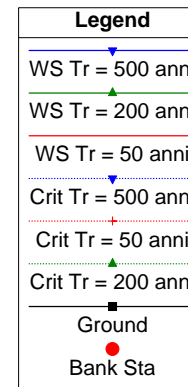
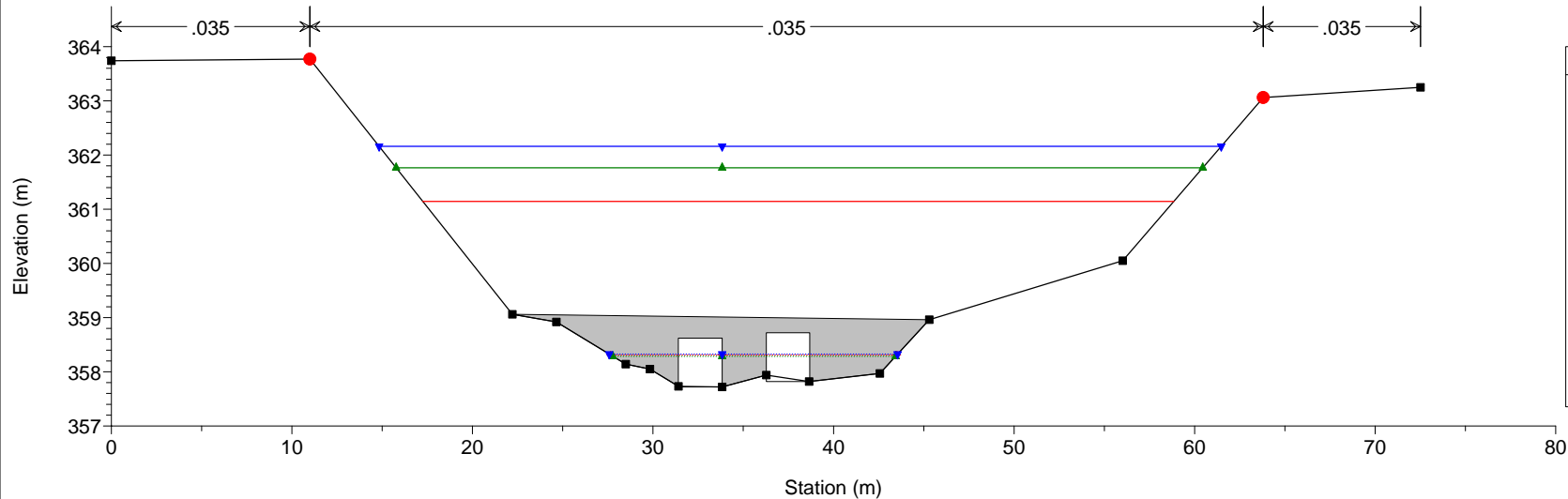




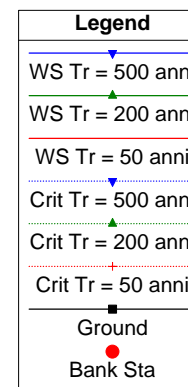
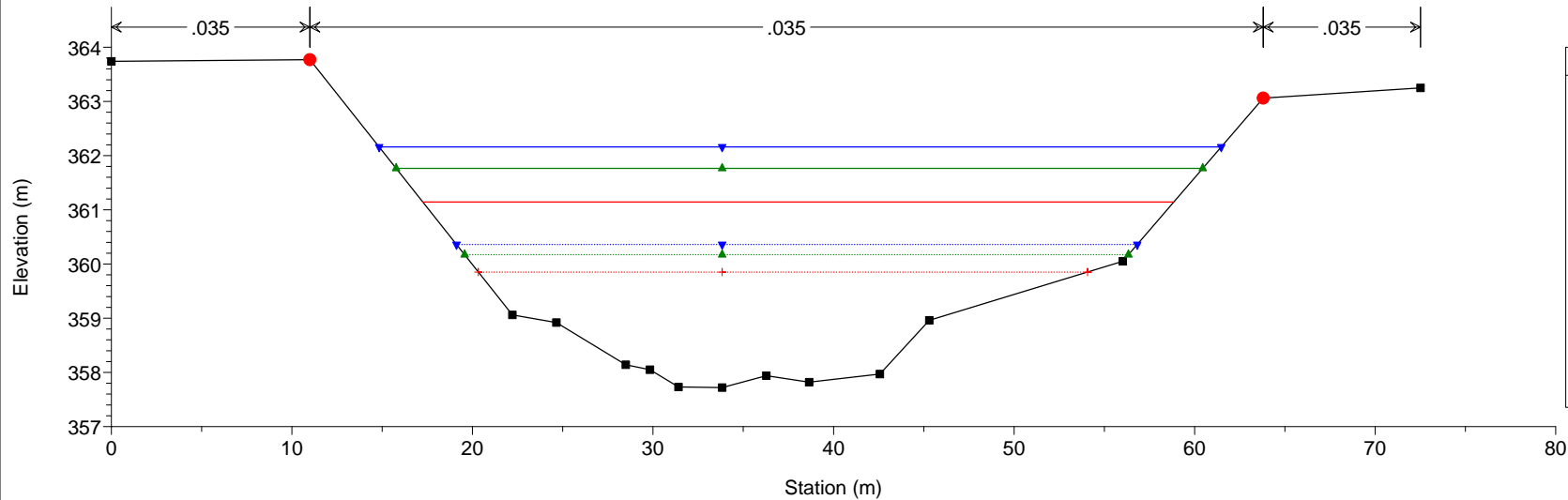


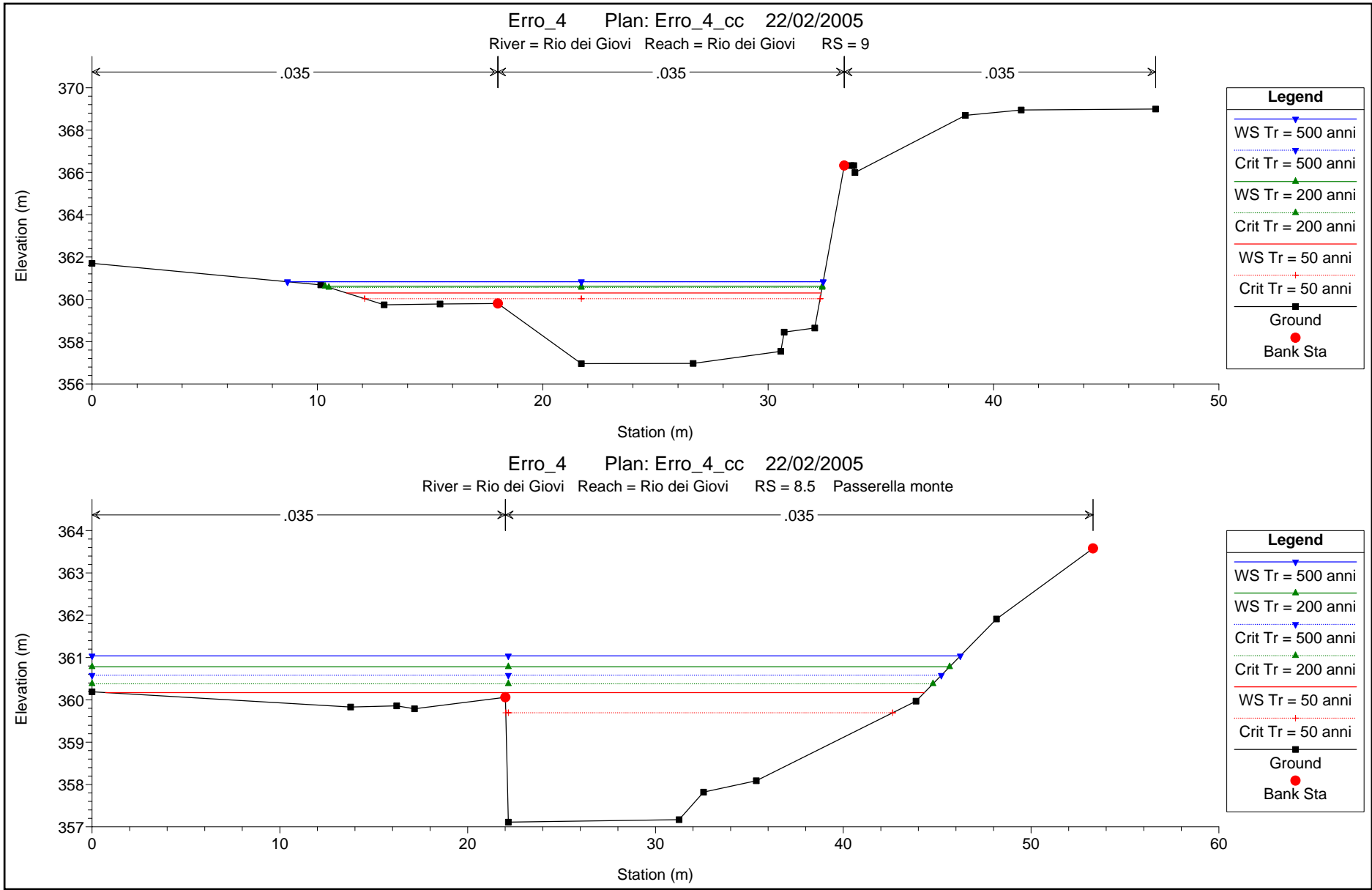


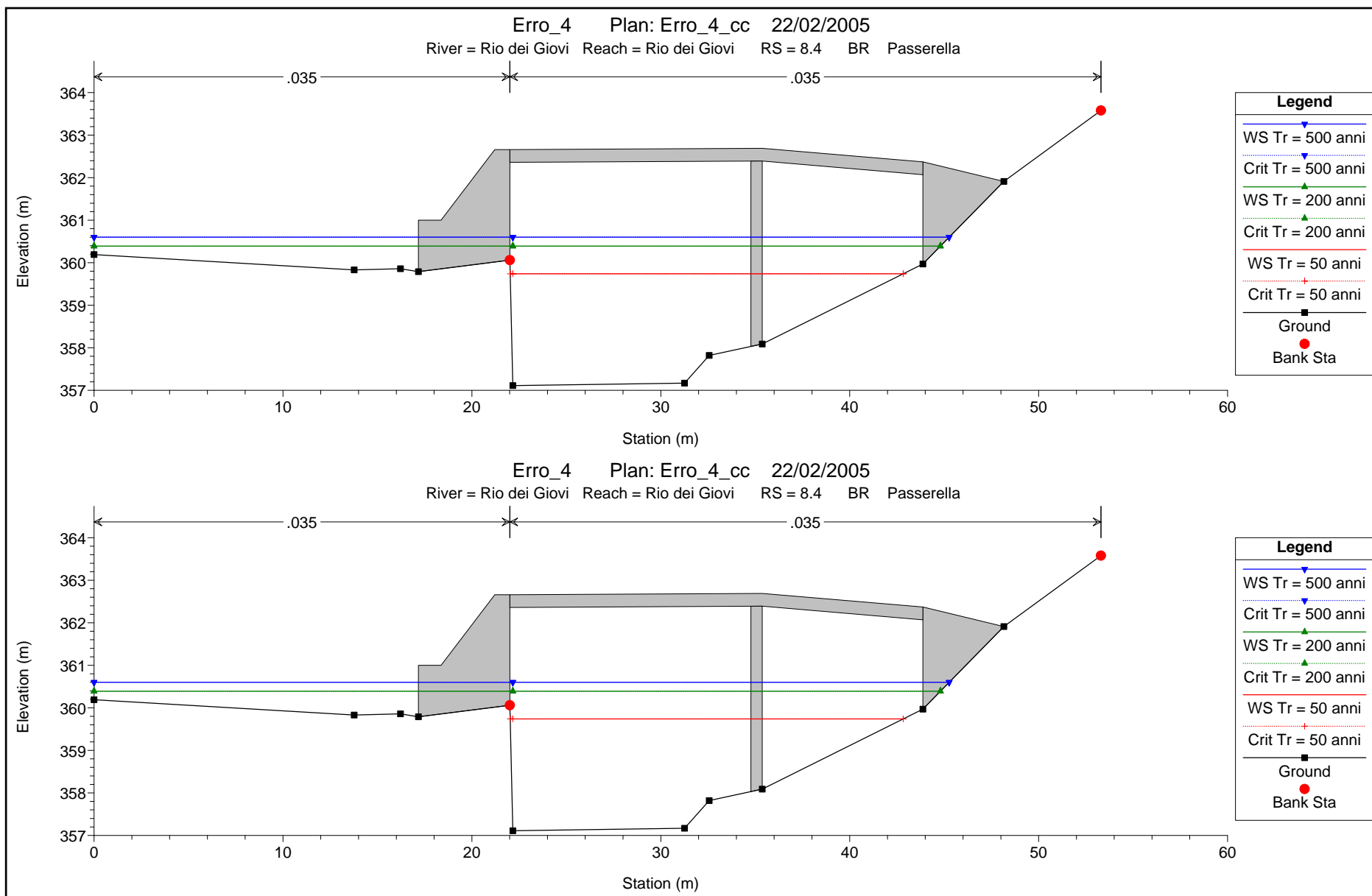
Erro_4 Plan: Erro_4_cc 22/02/2005
 River = Rio dei Giovi Reach = Rio dei Giovi RS = 10.4 Culv Guado

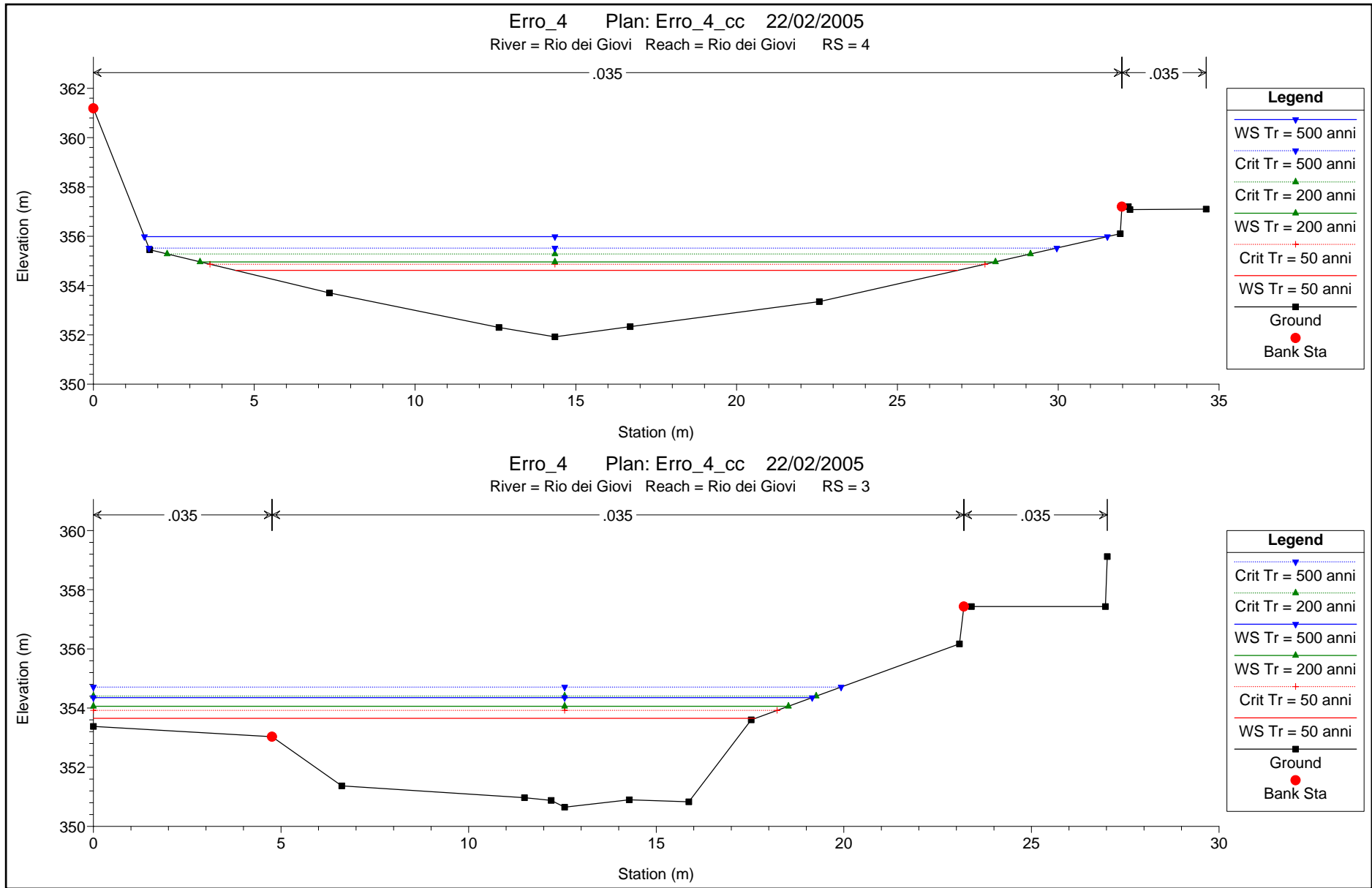


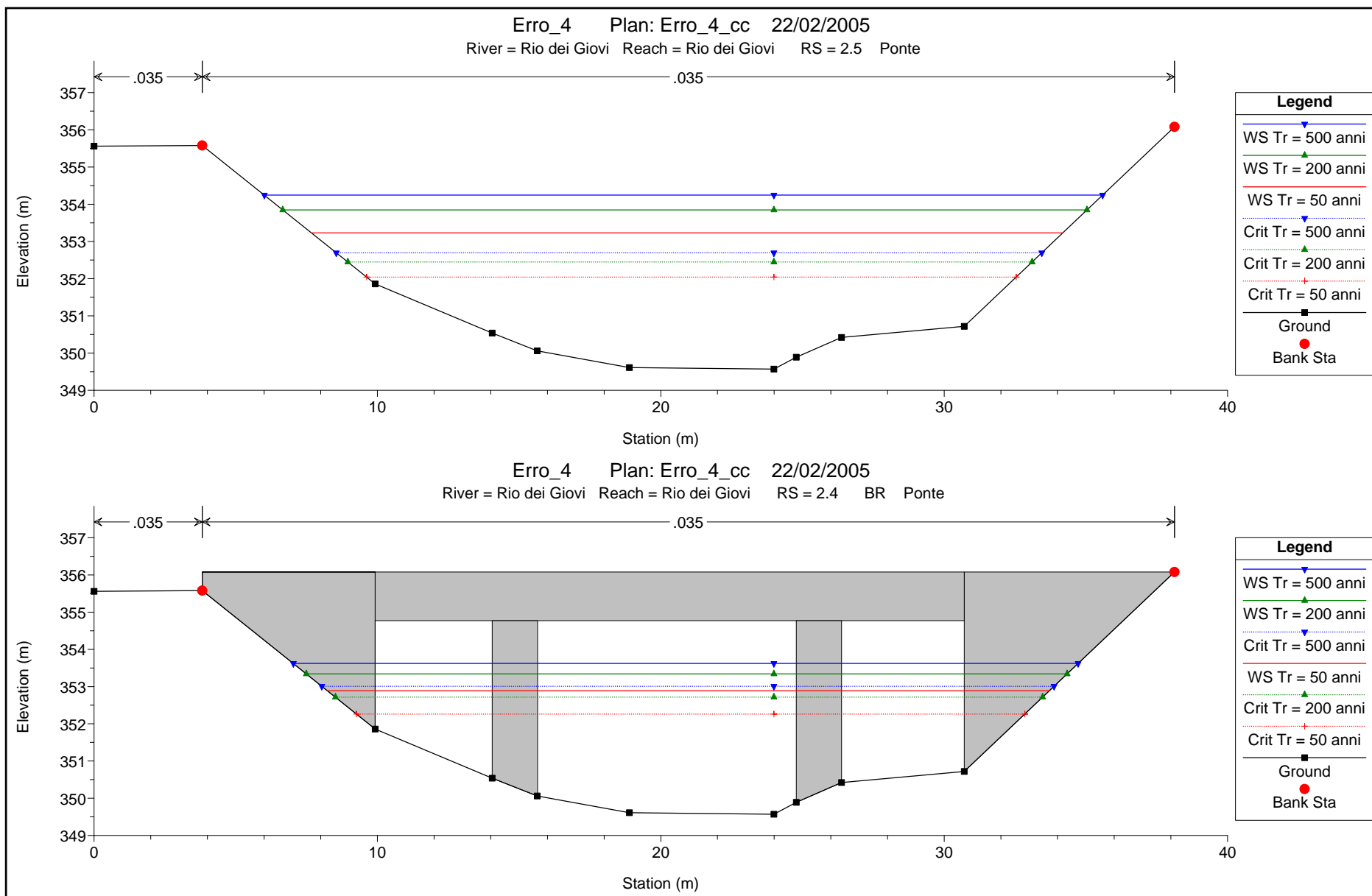
Erro_4 Plan: Erro_4_cc 22/02/2005
 River = Rio dei Giovi Reach = Rio dei Giovi RS = 10.3 Guado valle



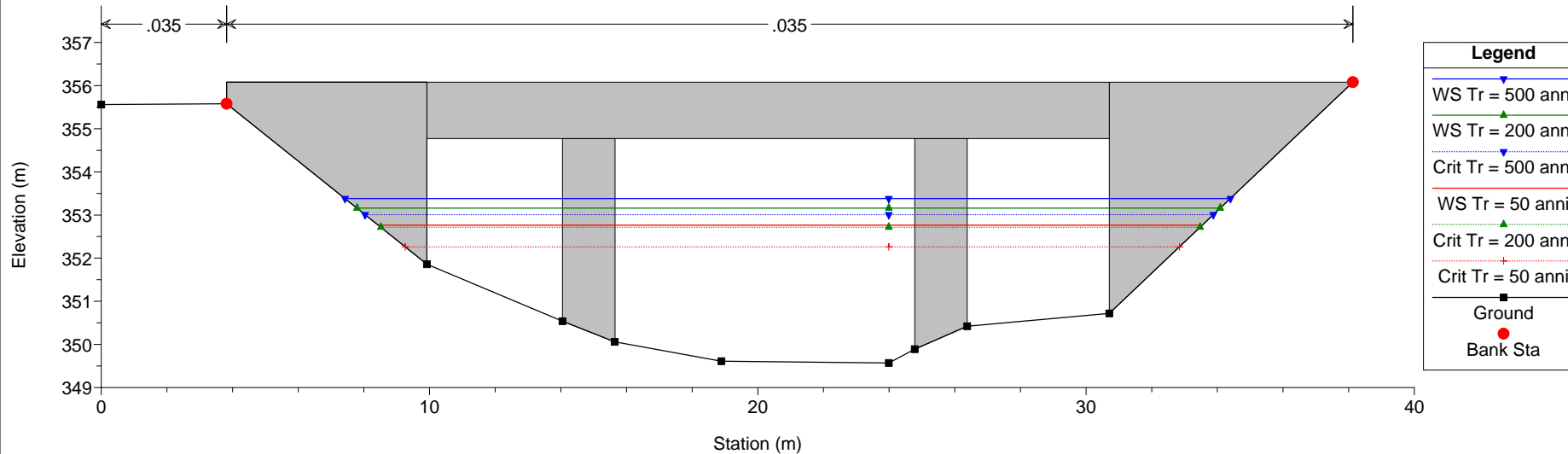




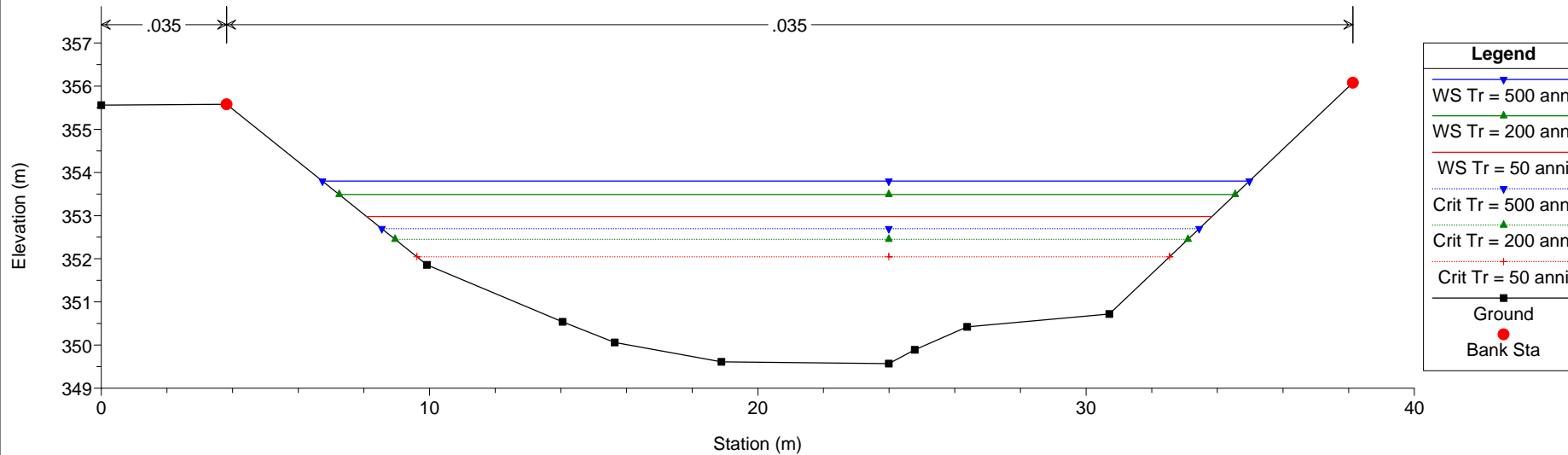




Erro_4 Plan: Erro_4_cc 22/02/2005
 River = Rio dei Giovi Reach = Rio dei Giovi RS = 2.4 BR Ponte



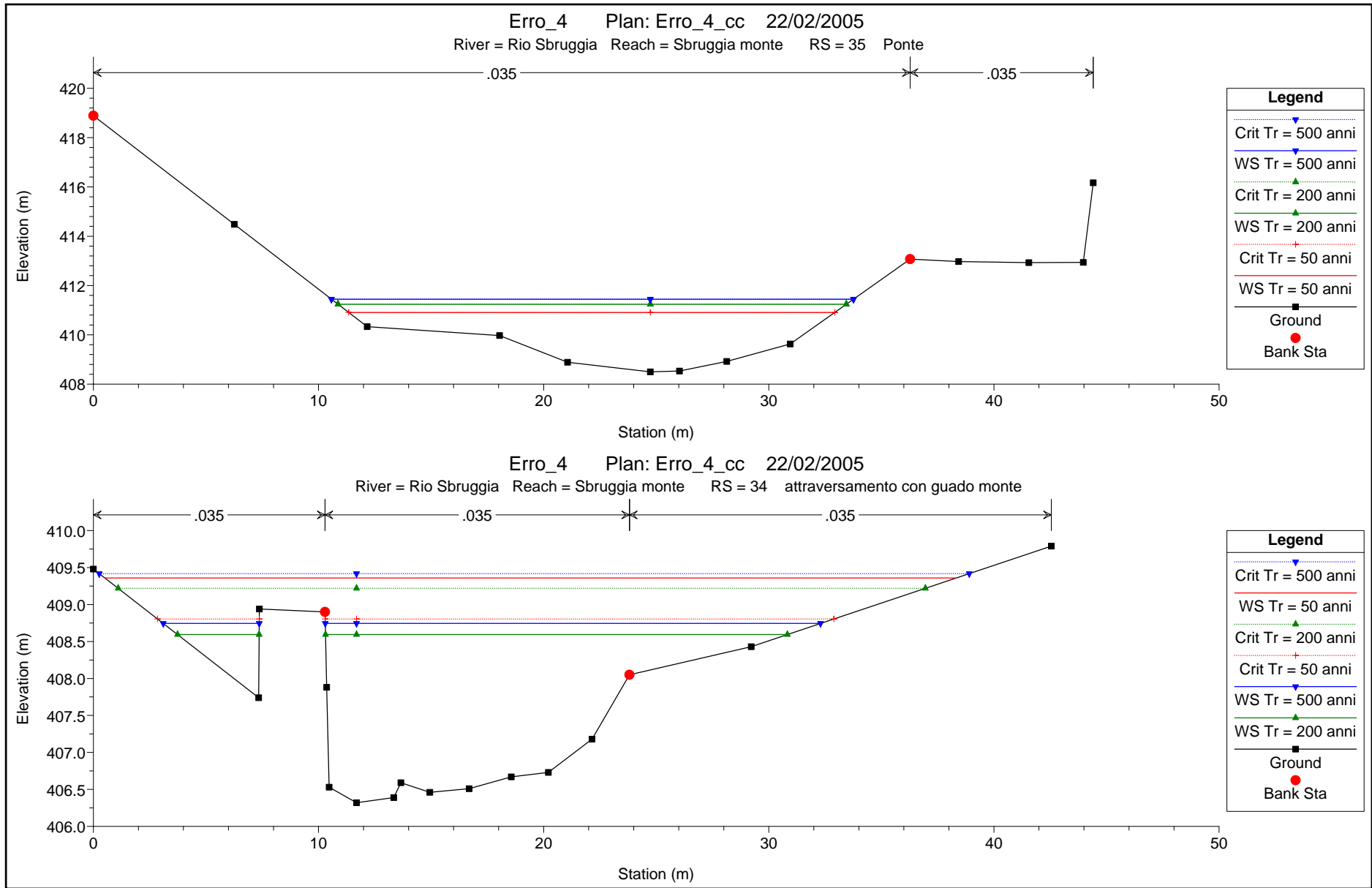
Erro_4 Plan: Erro_4_cc 22/02/2005
 River = Rio dei Giovi Reach = Rio dei Giovi RS = 2.3 Ponte valle

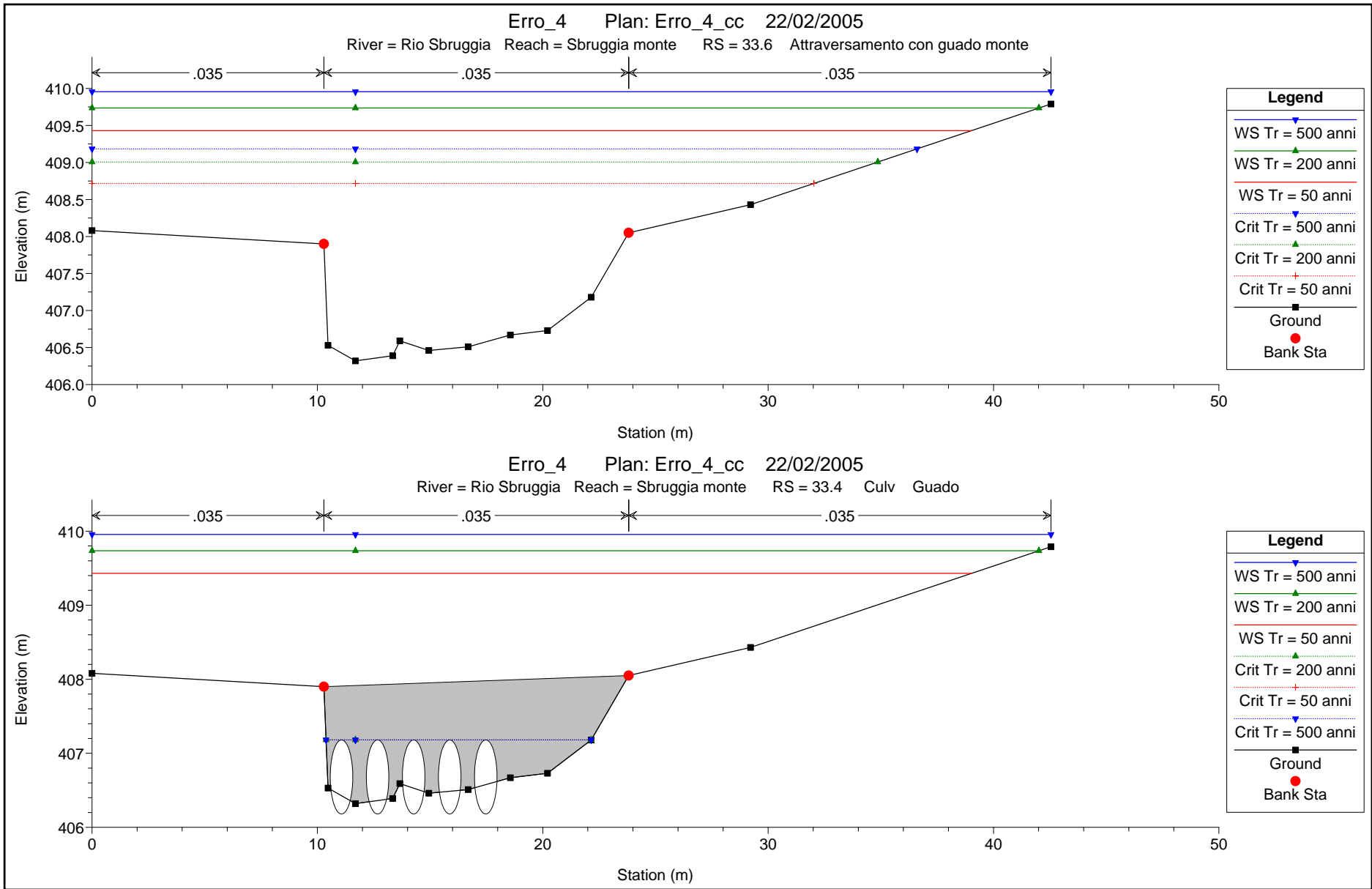


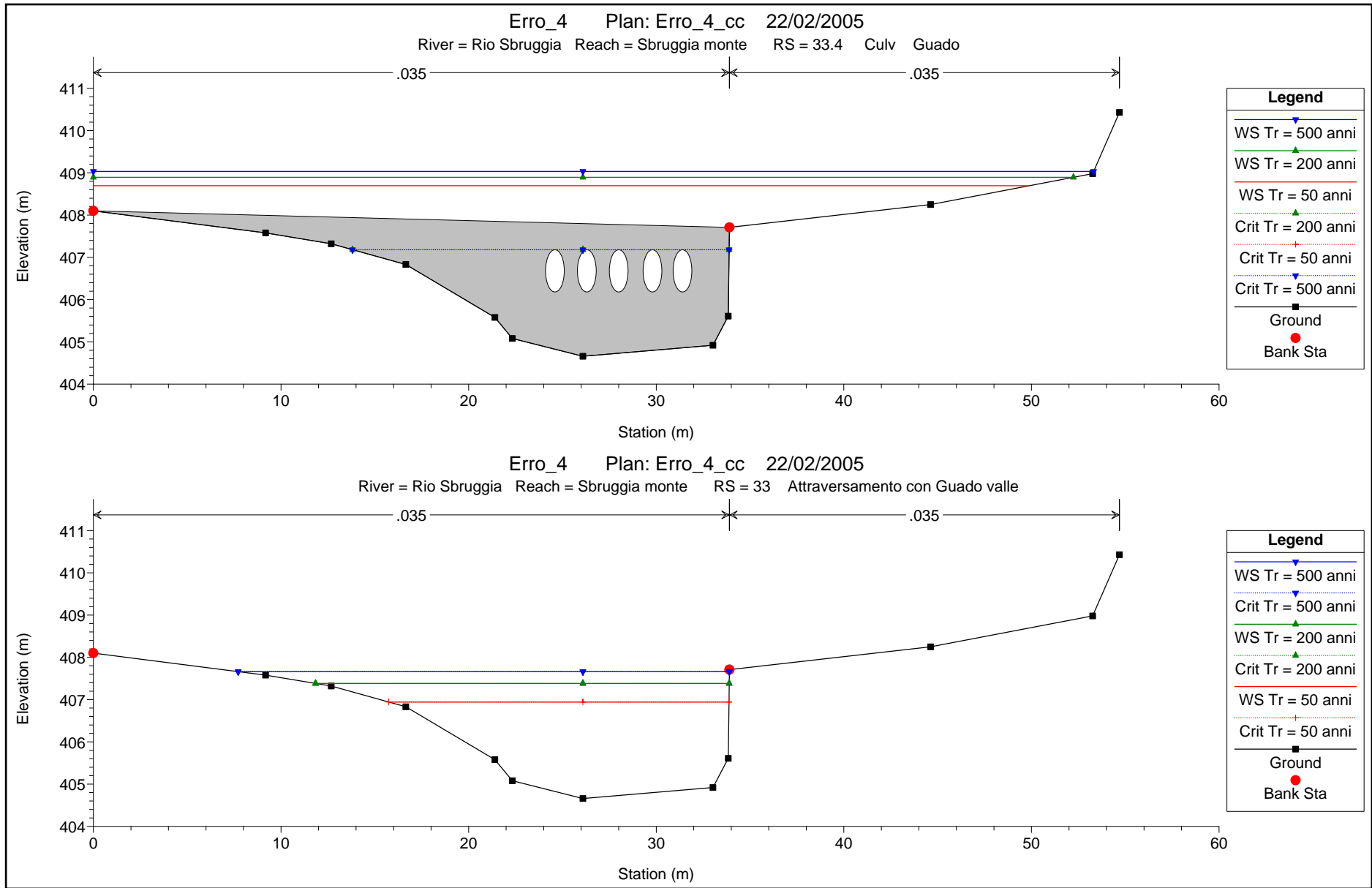
SEZIONI IDRAULICHE

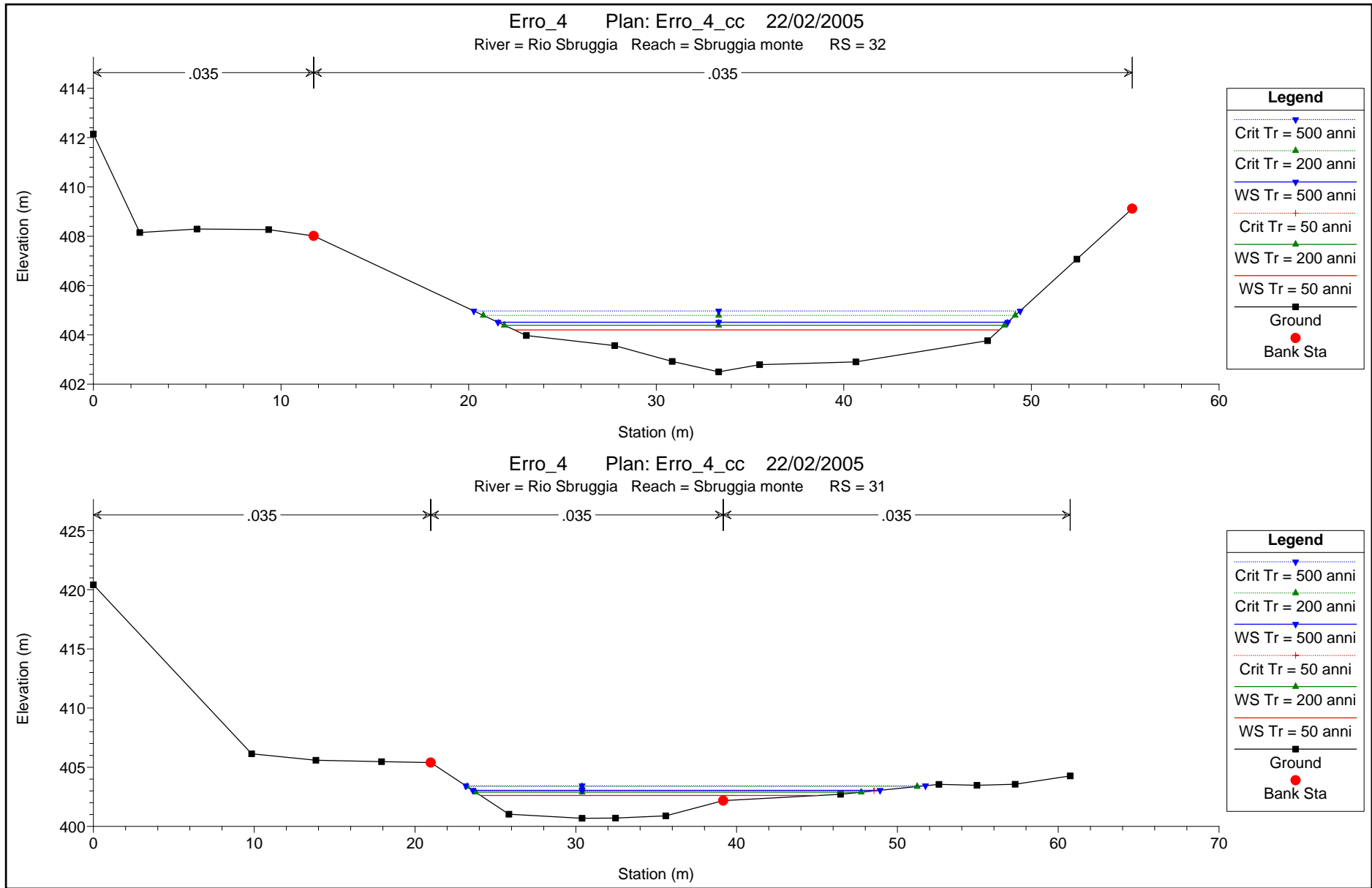
TRATTO ERRO_4

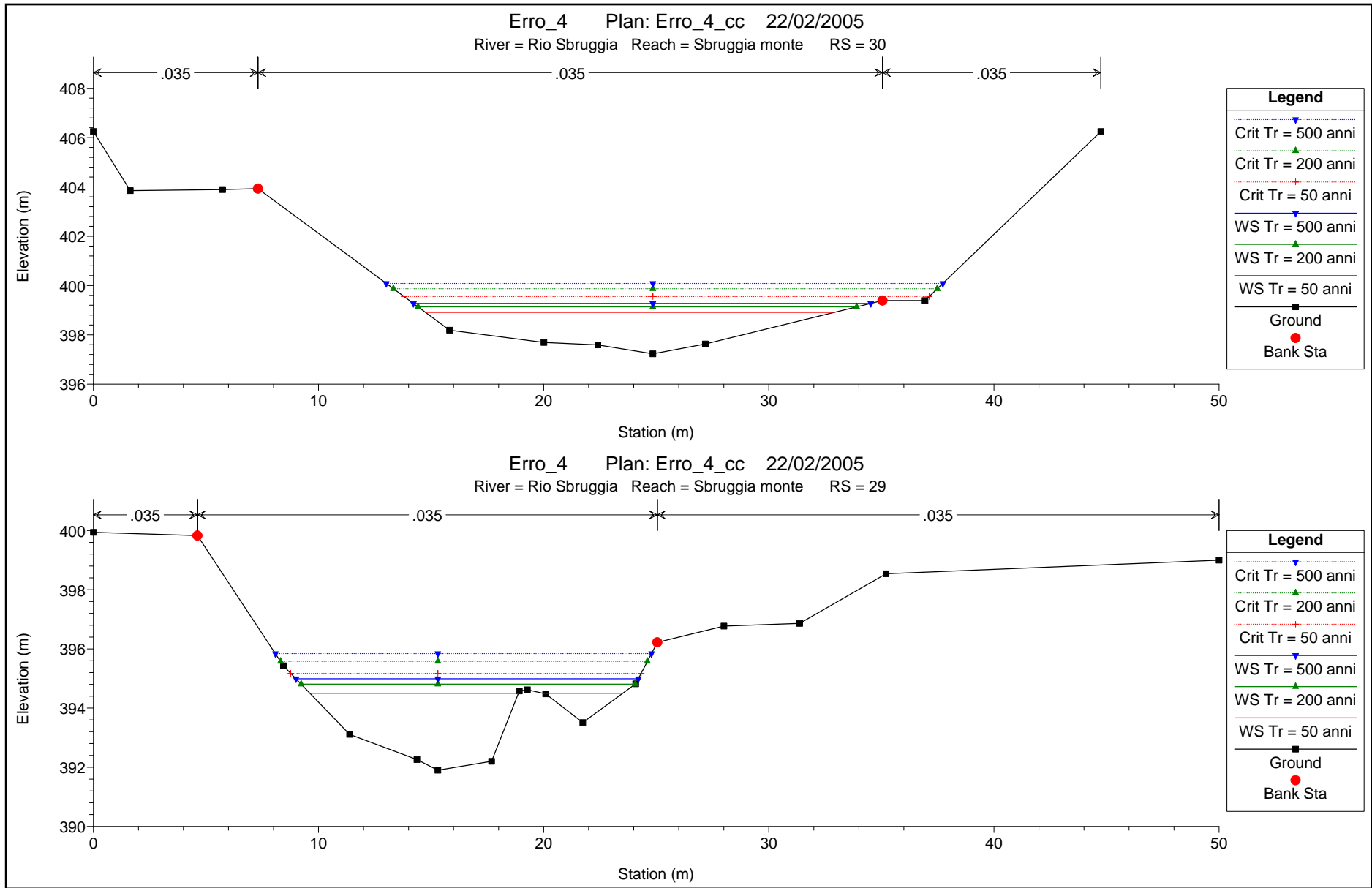
Rio Sbruggia

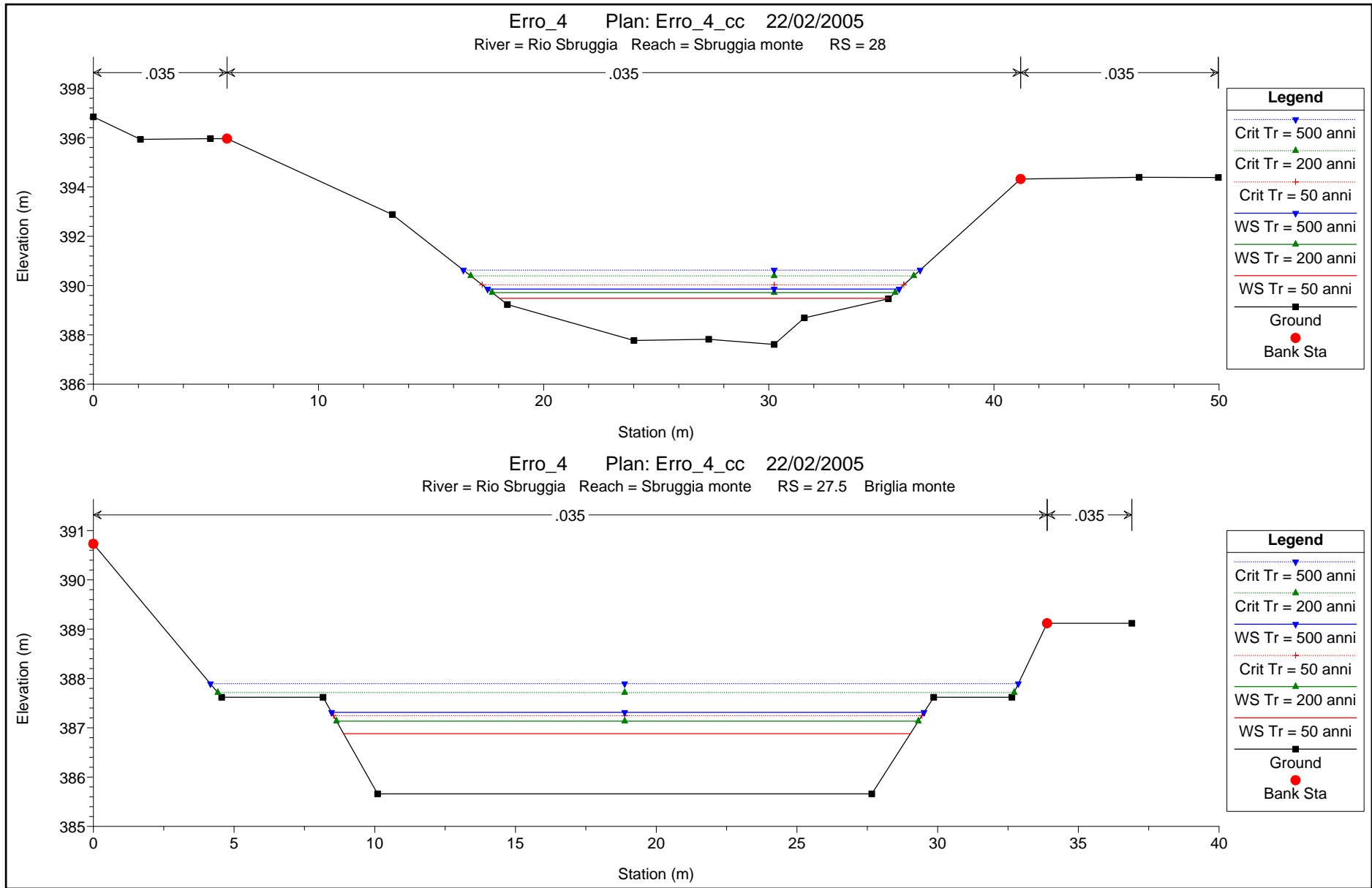


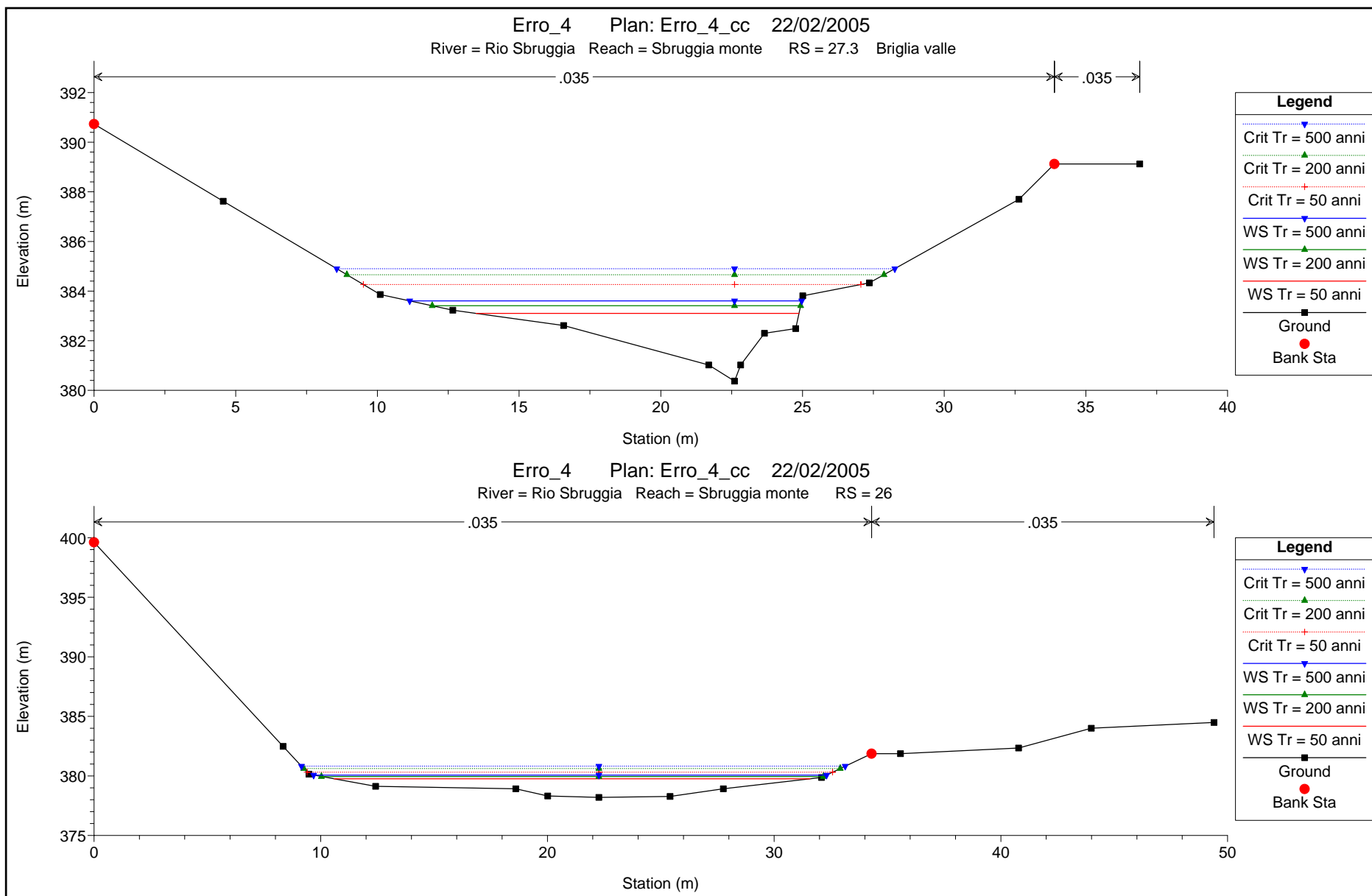


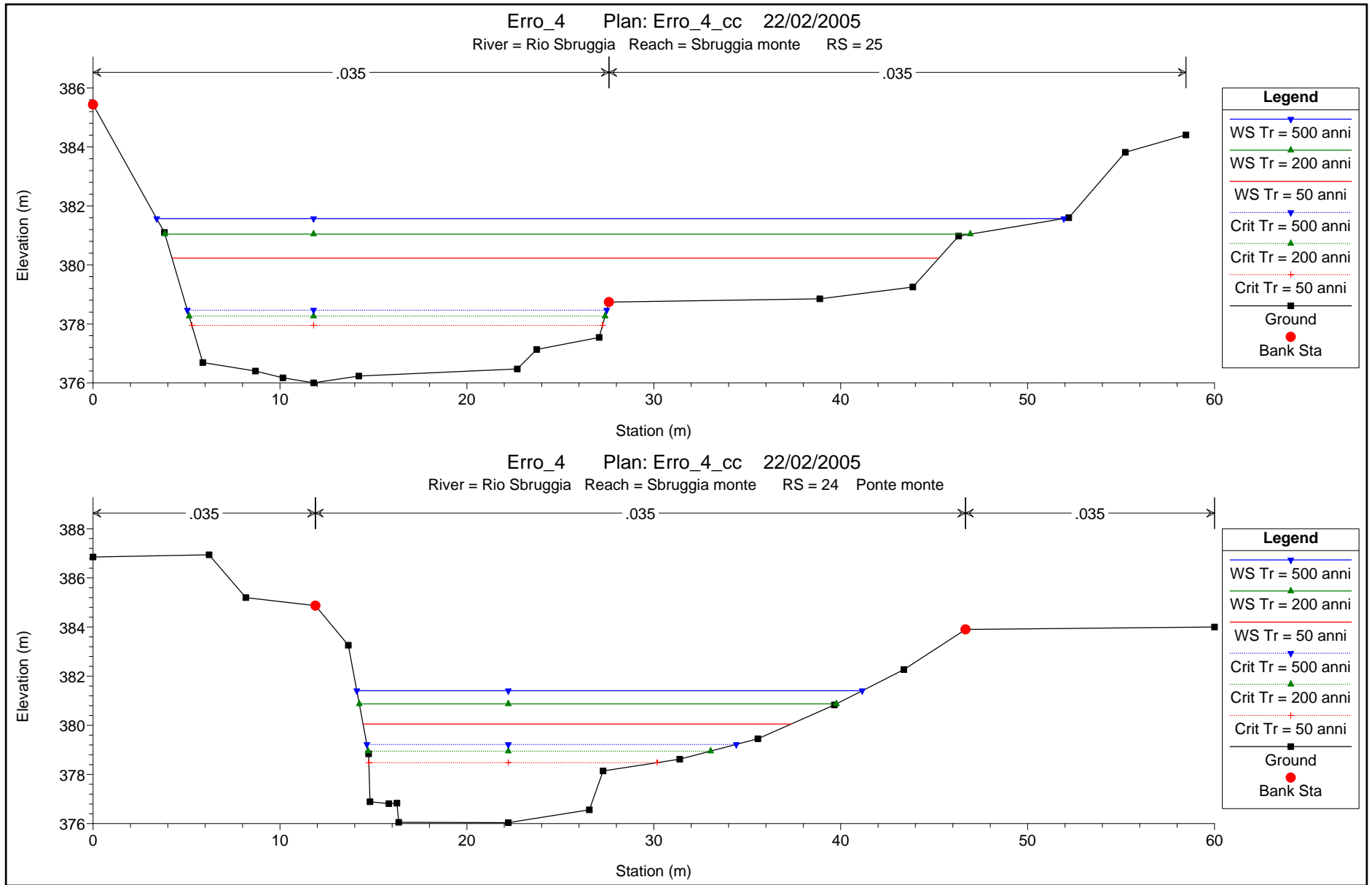


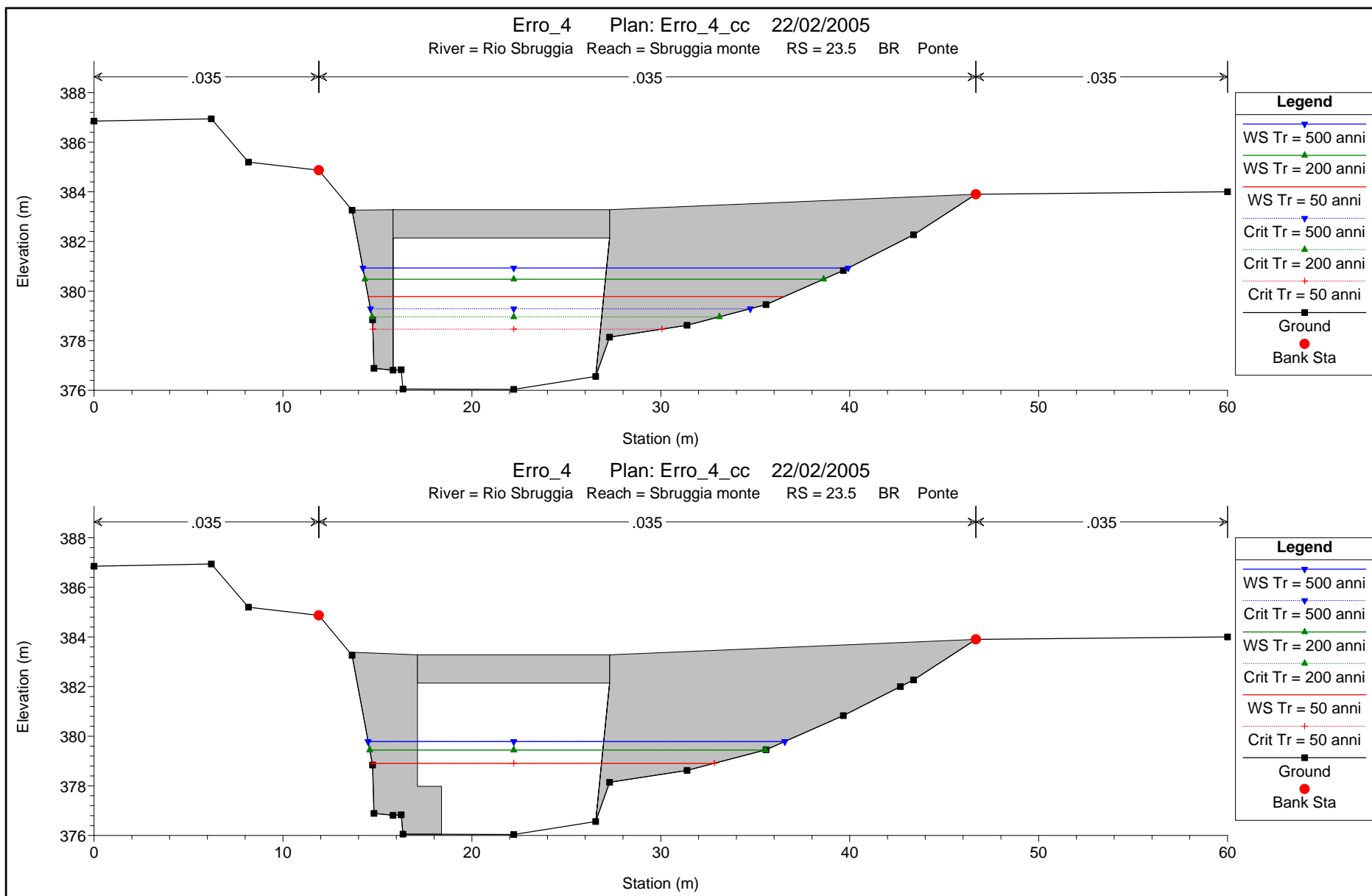


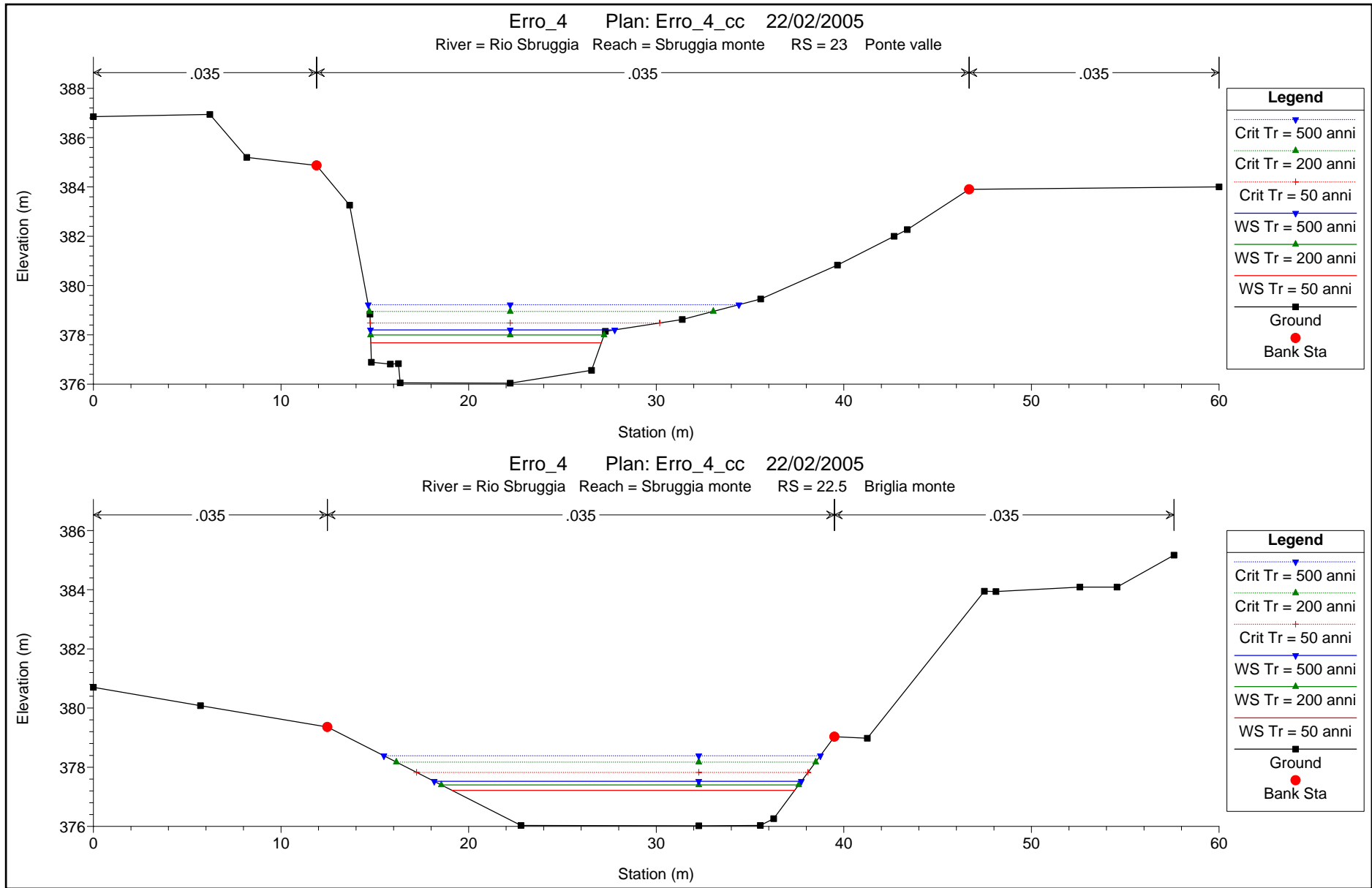


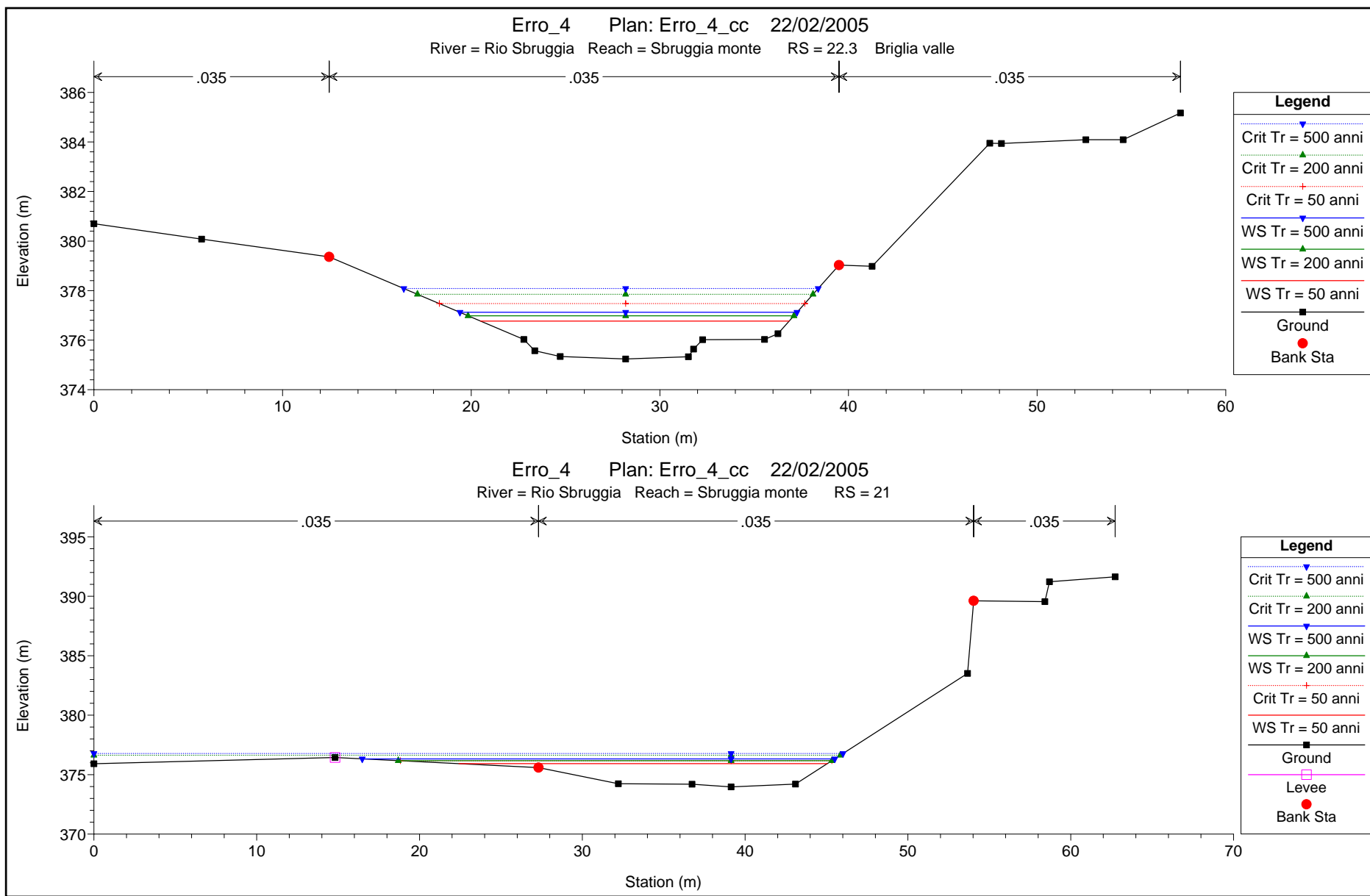


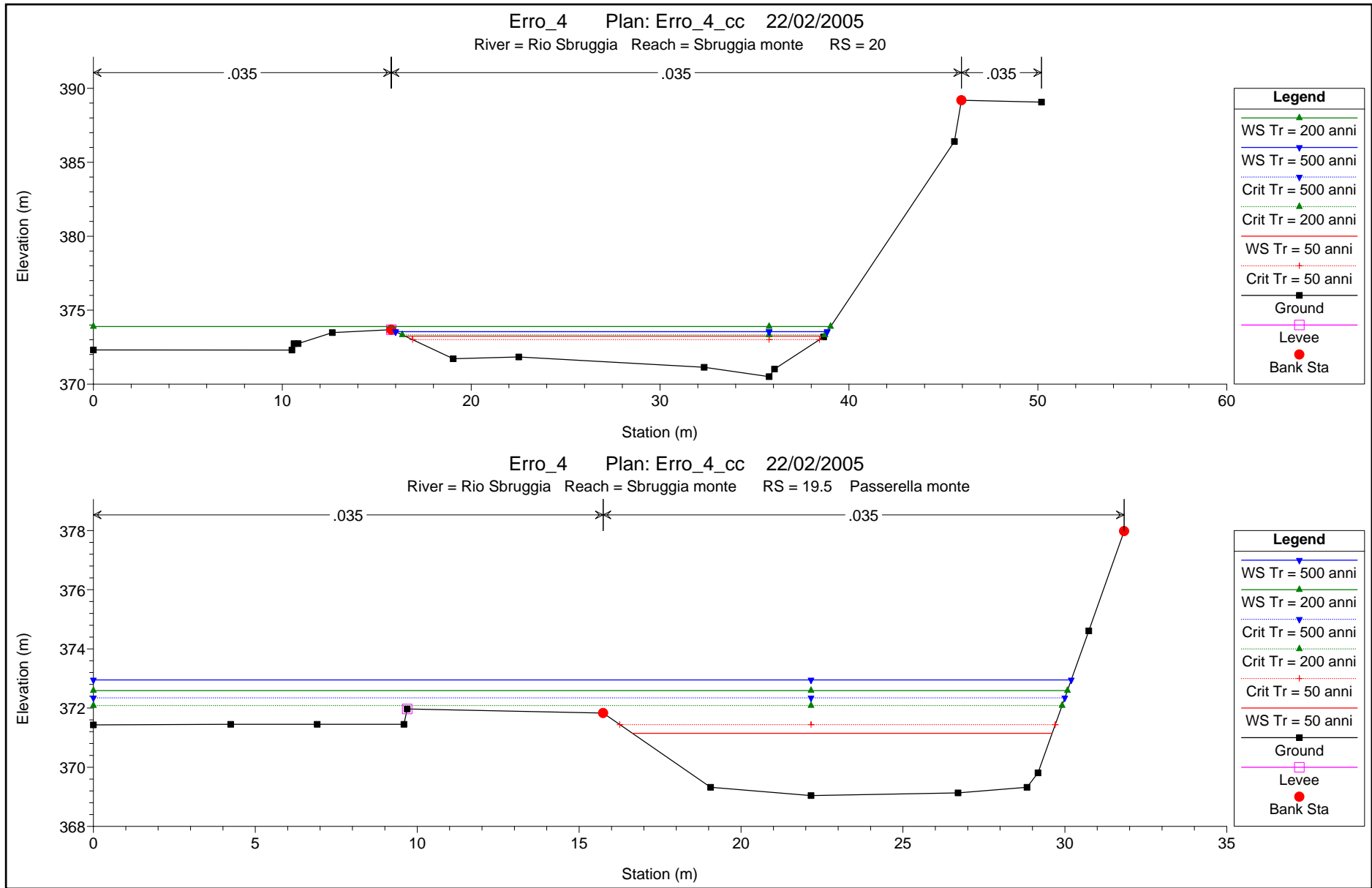


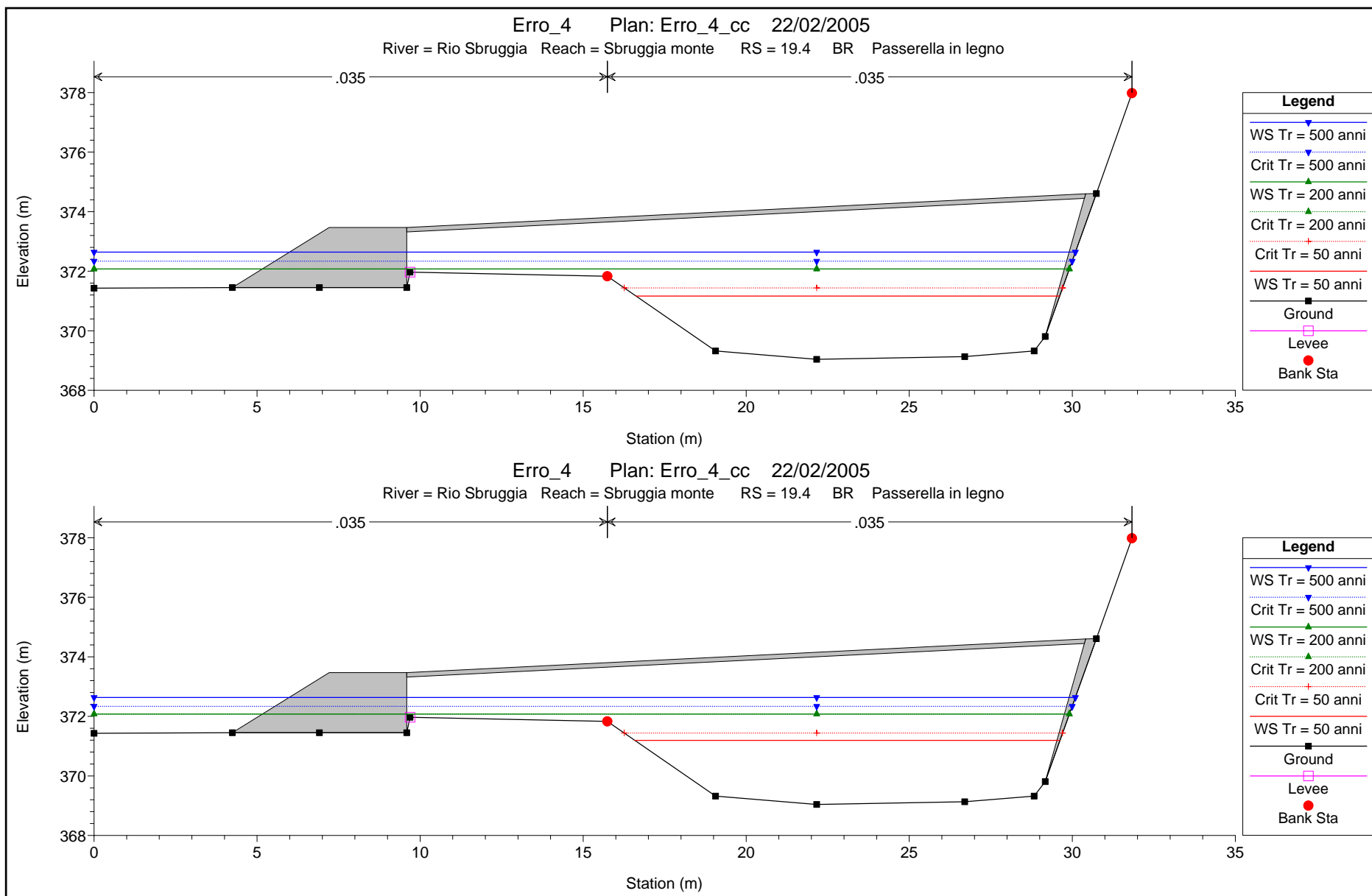


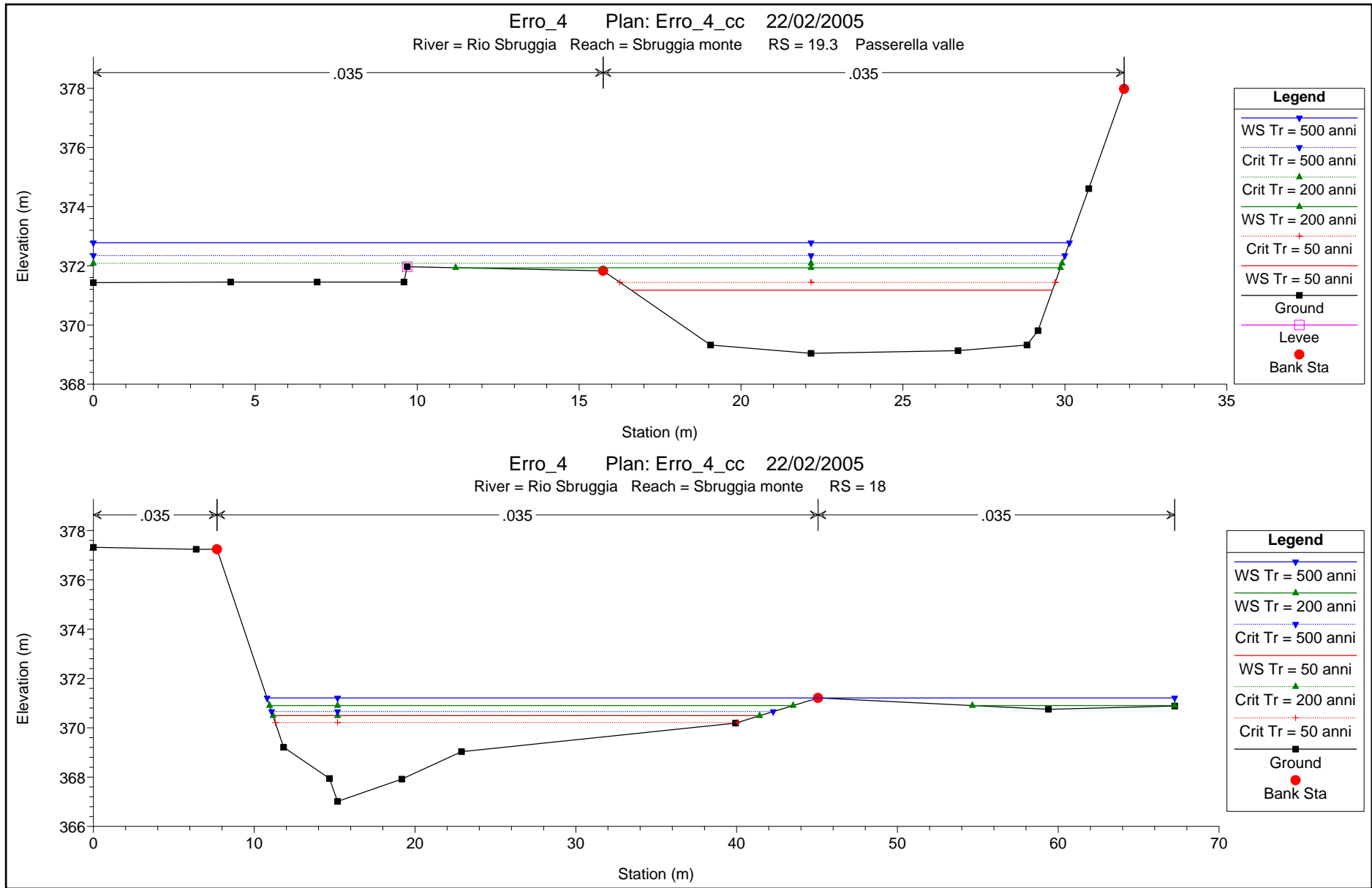


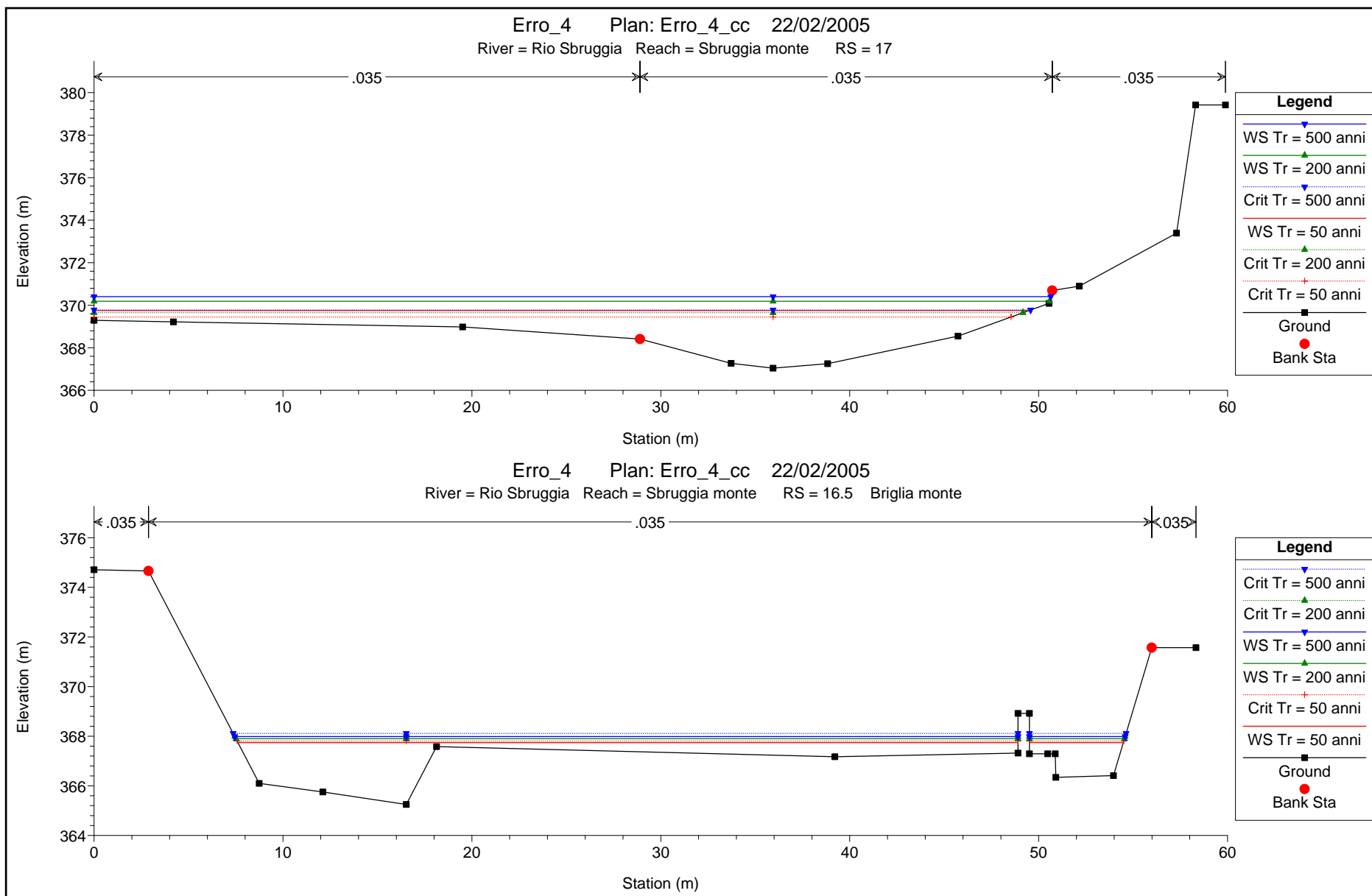


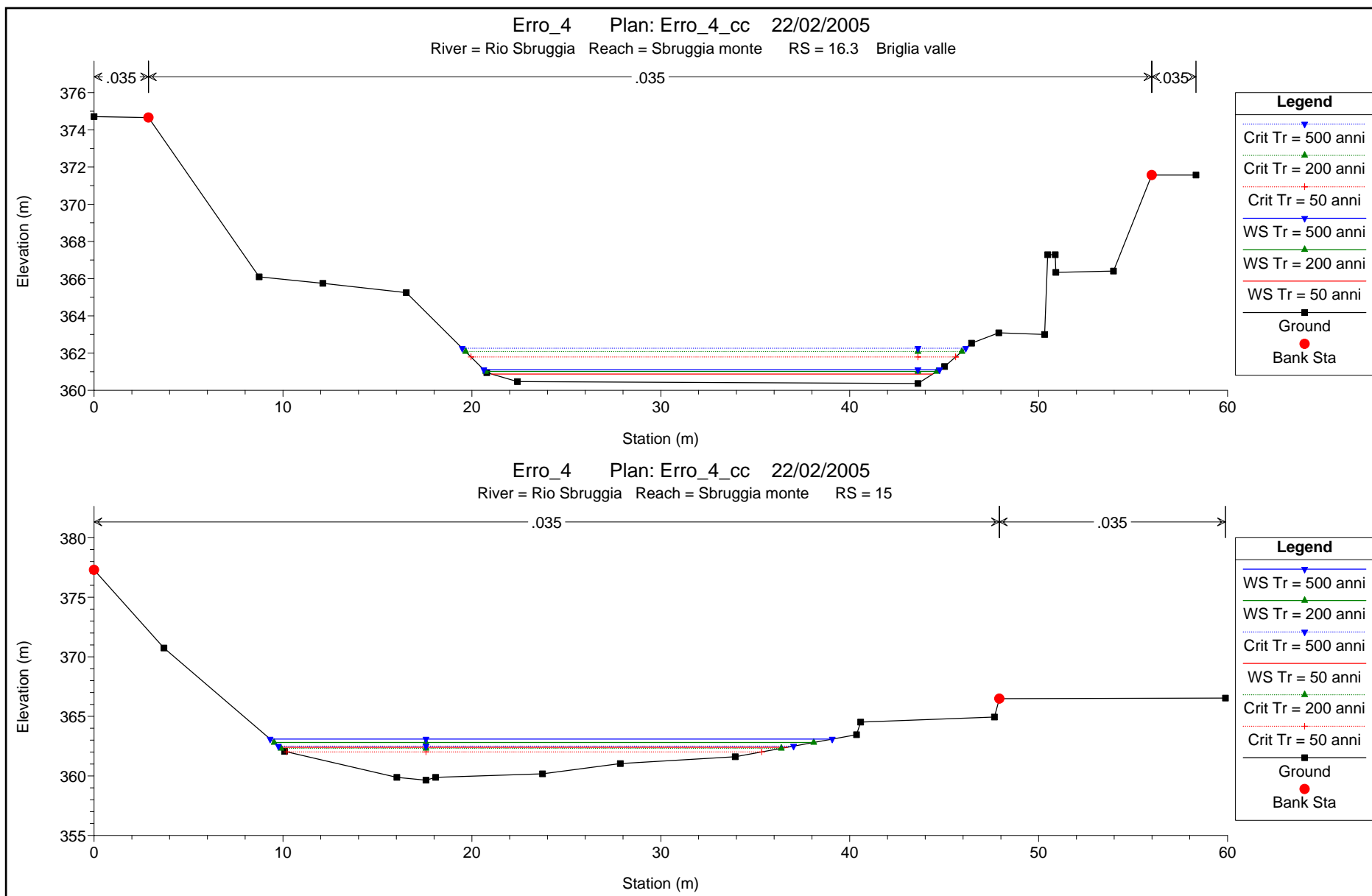


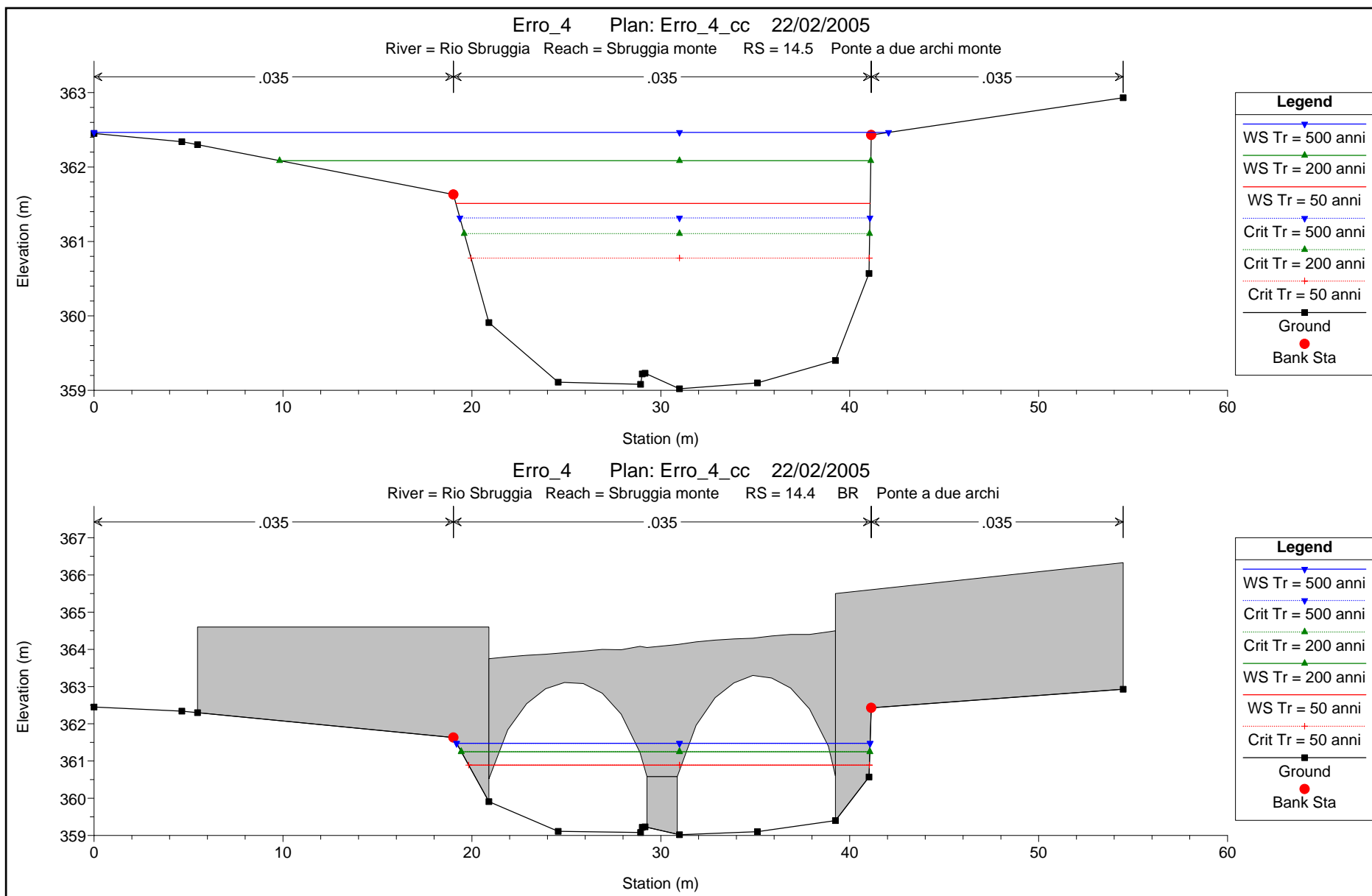


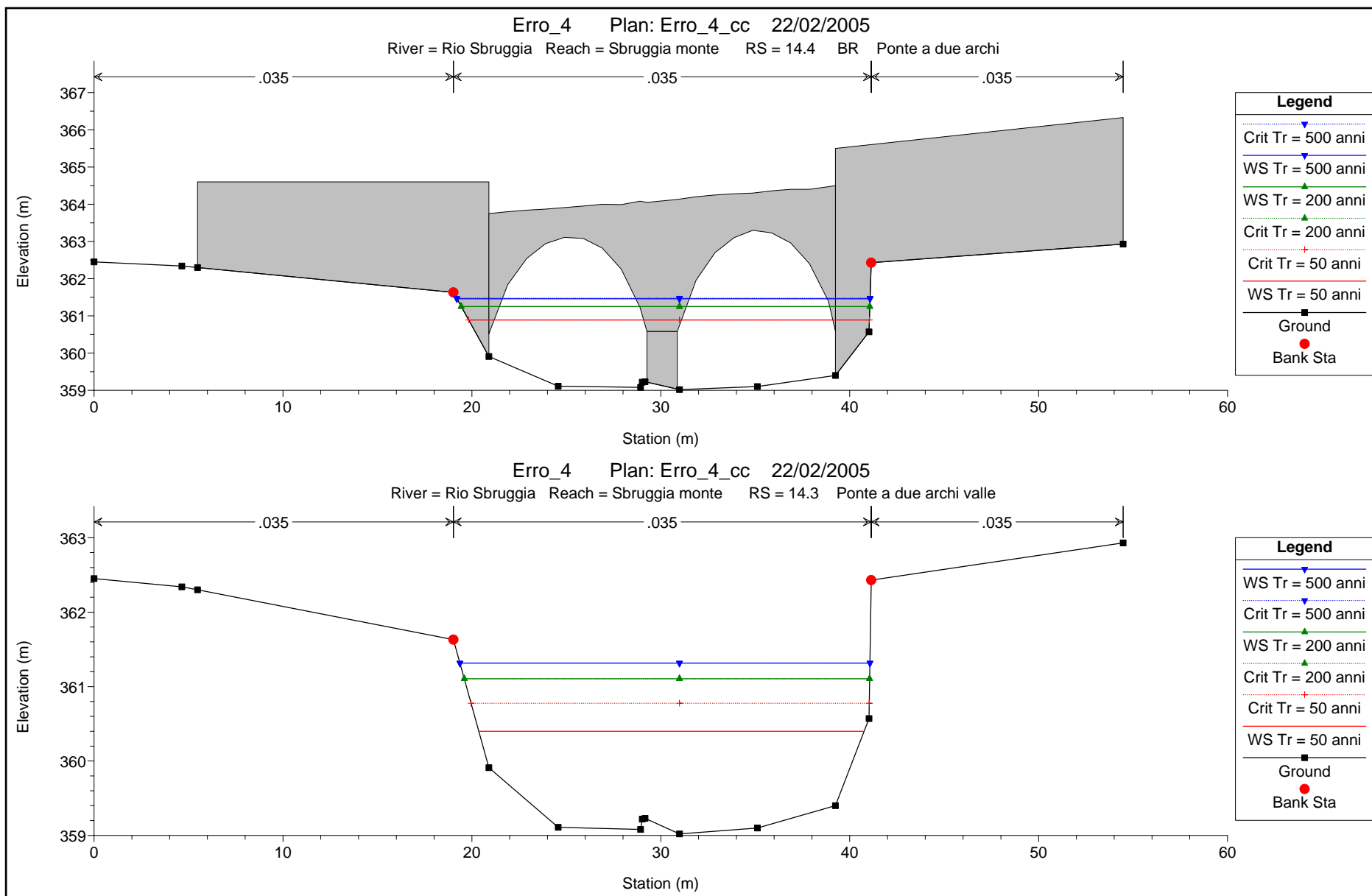


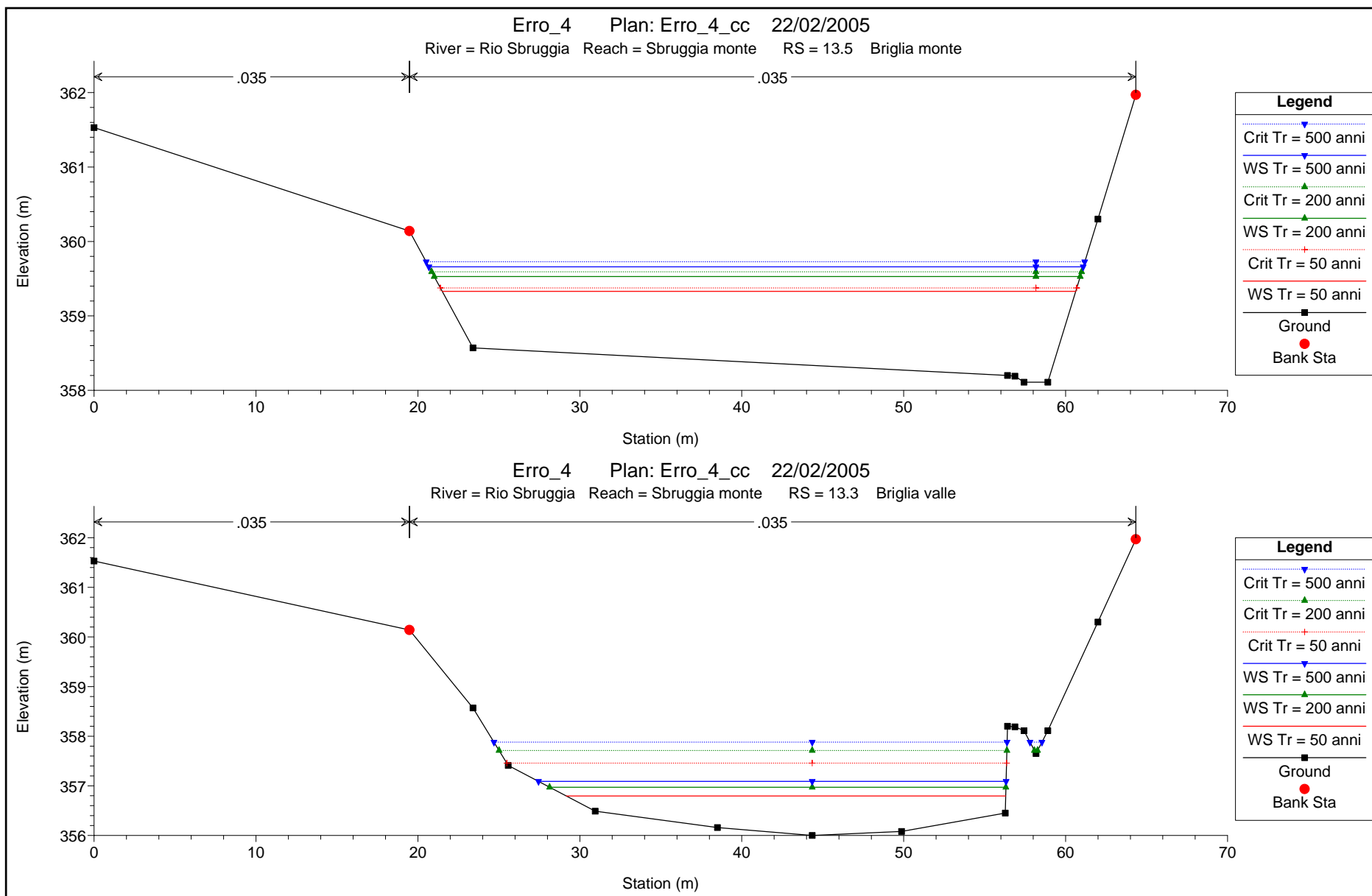


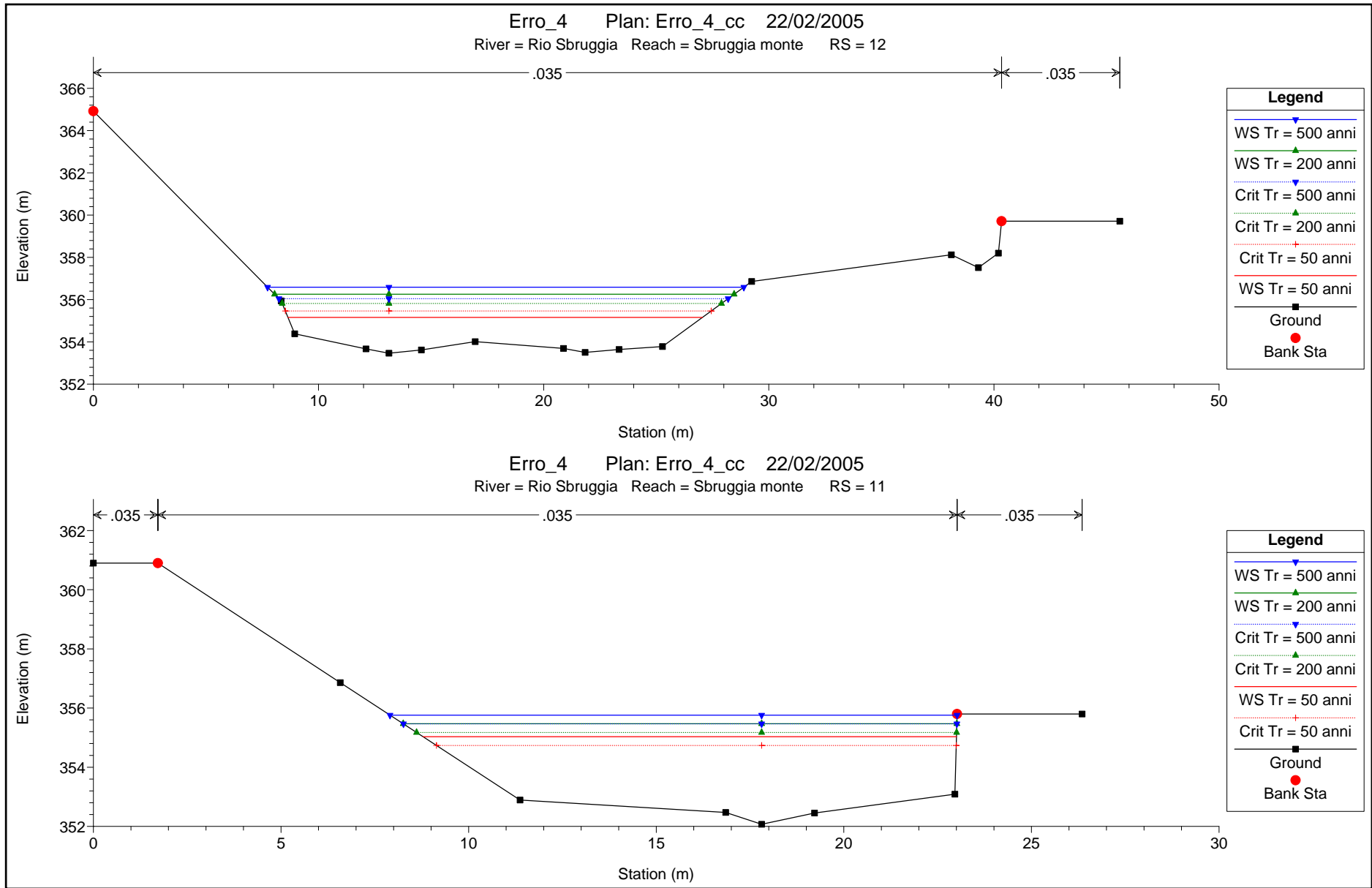


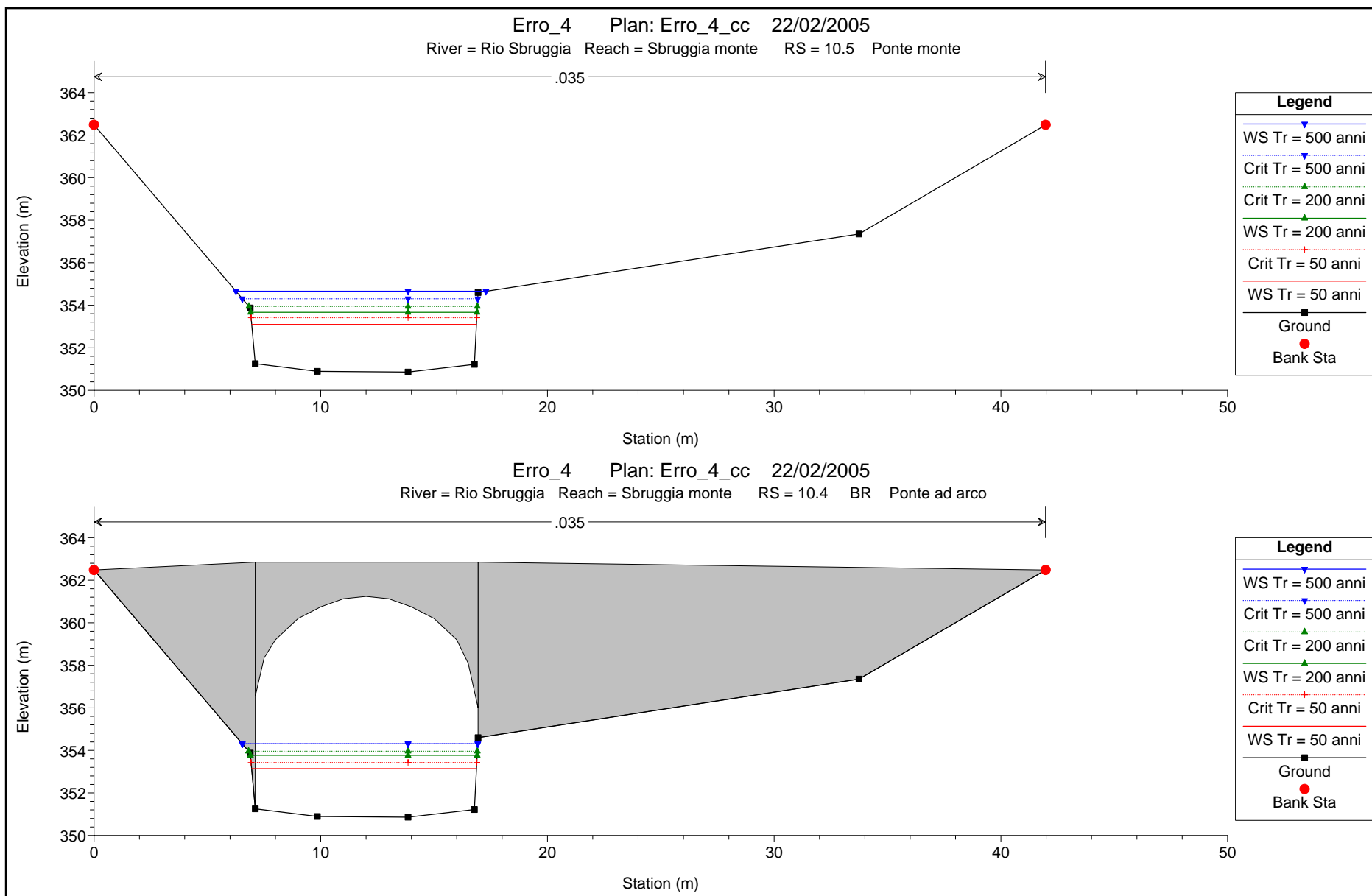


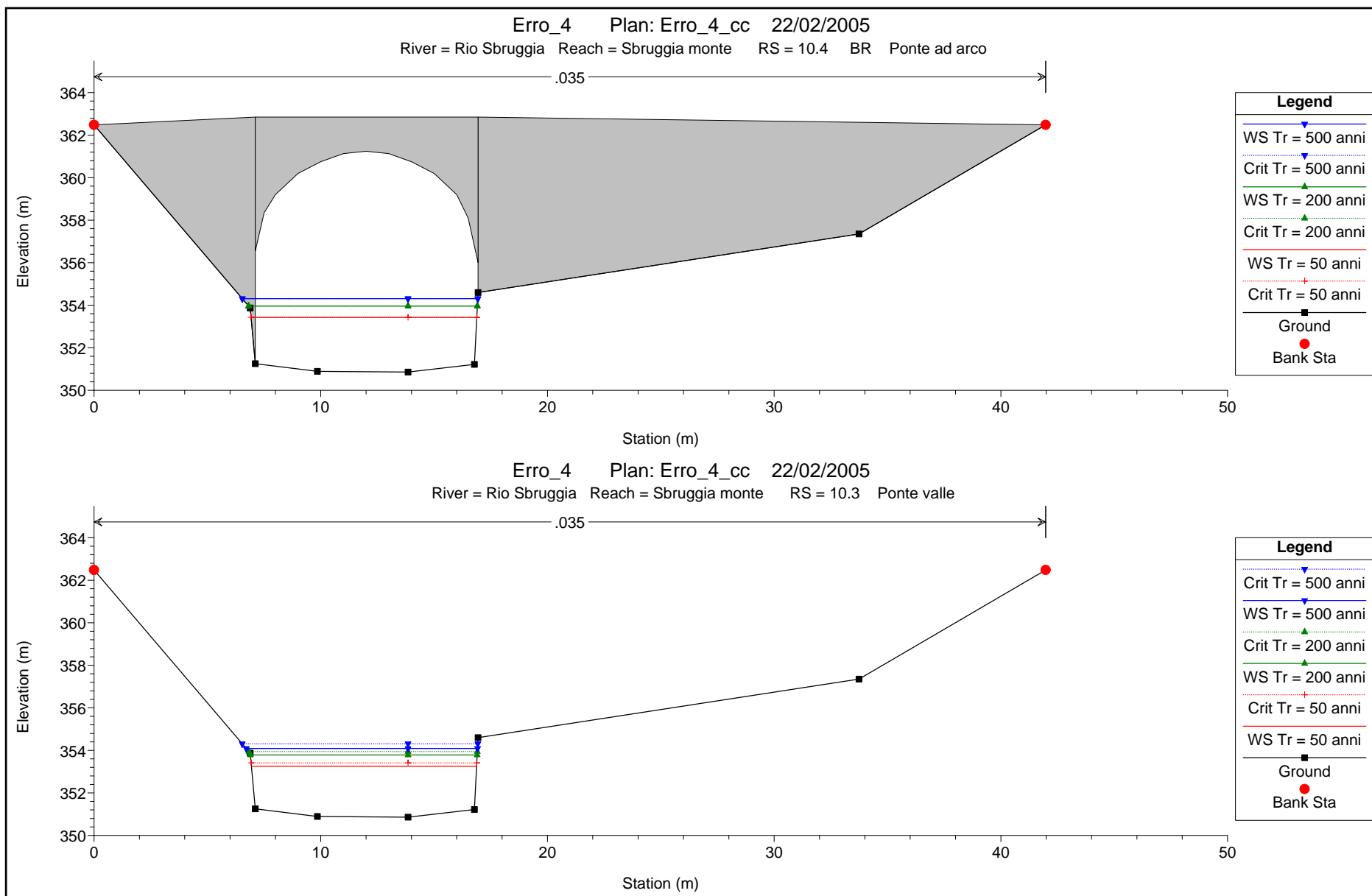




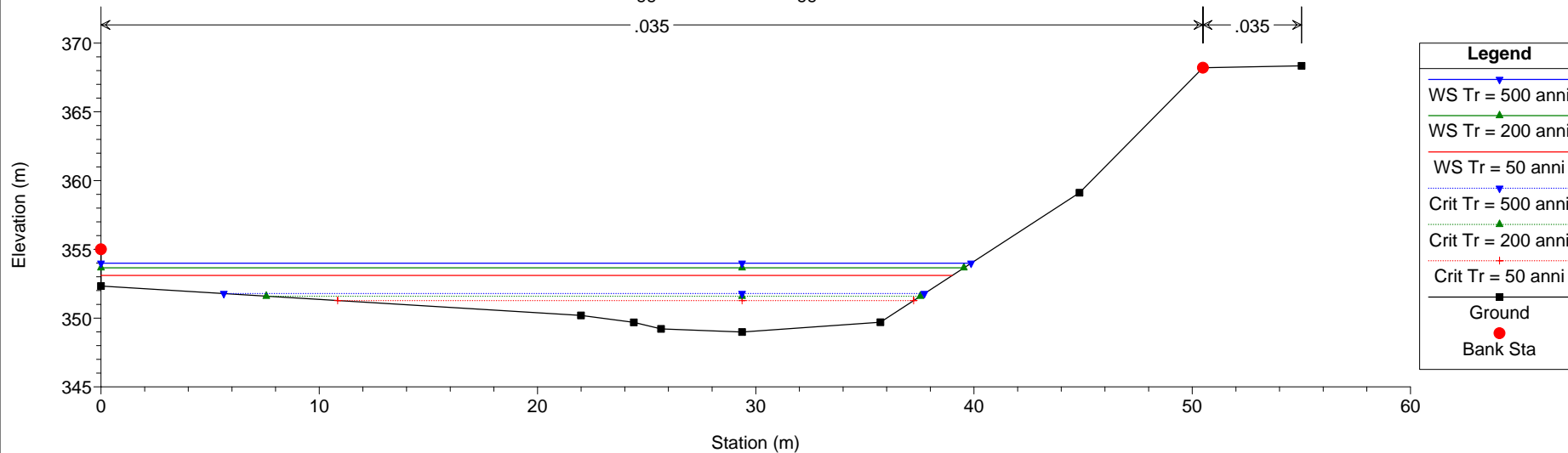




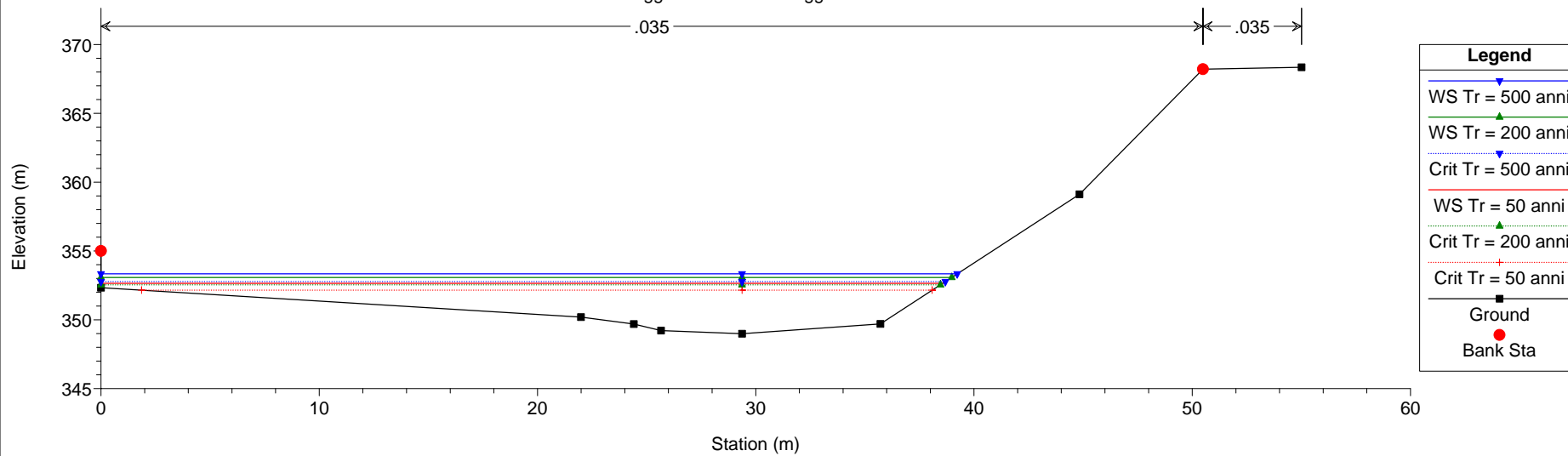


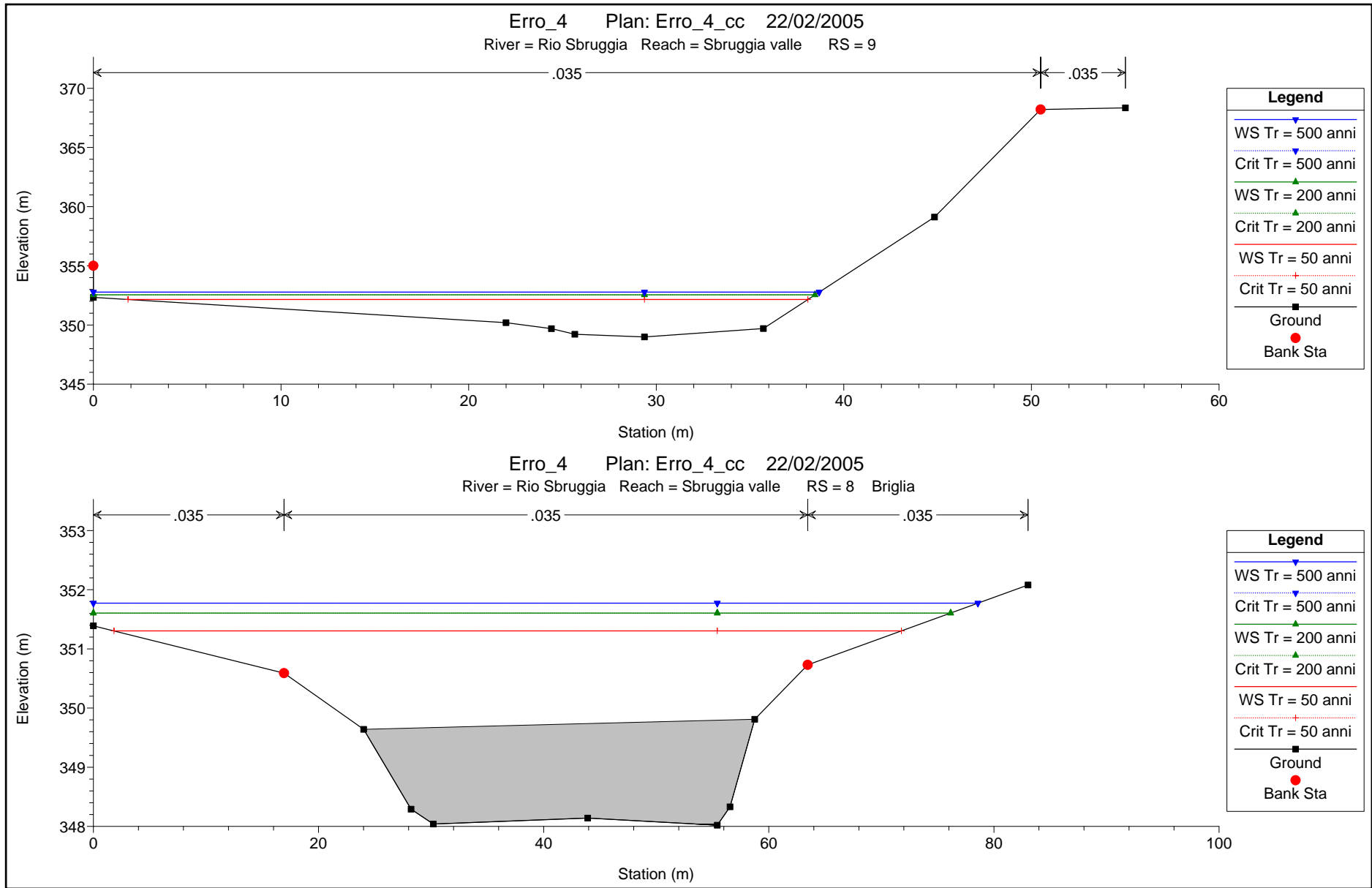


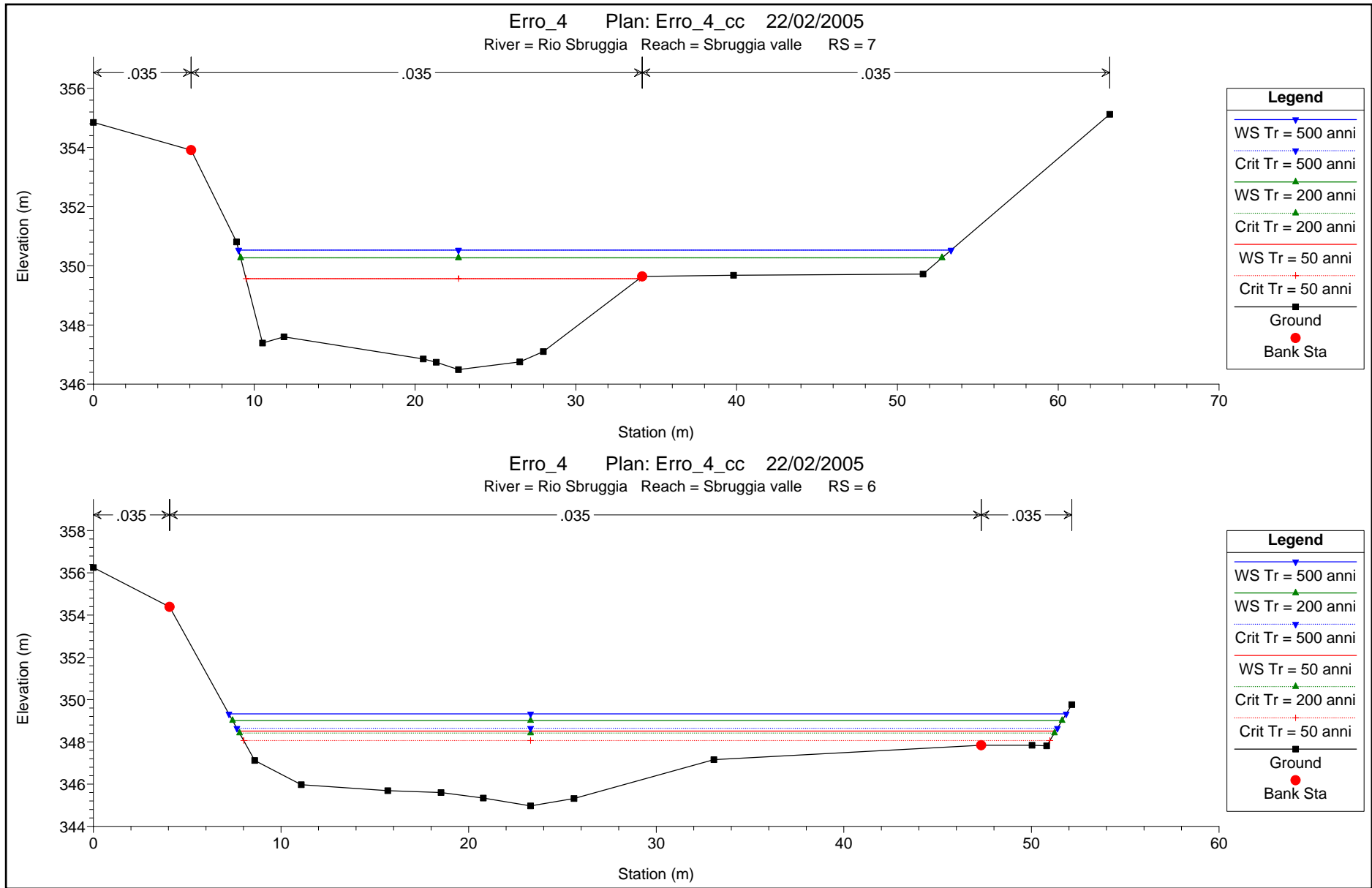
Erro_4 Plan: Erro_4_cc 22/02/2005
 River = Rio Sbruggia Reach = Sbruggia monte RS = 9.8 Sez 9 tris

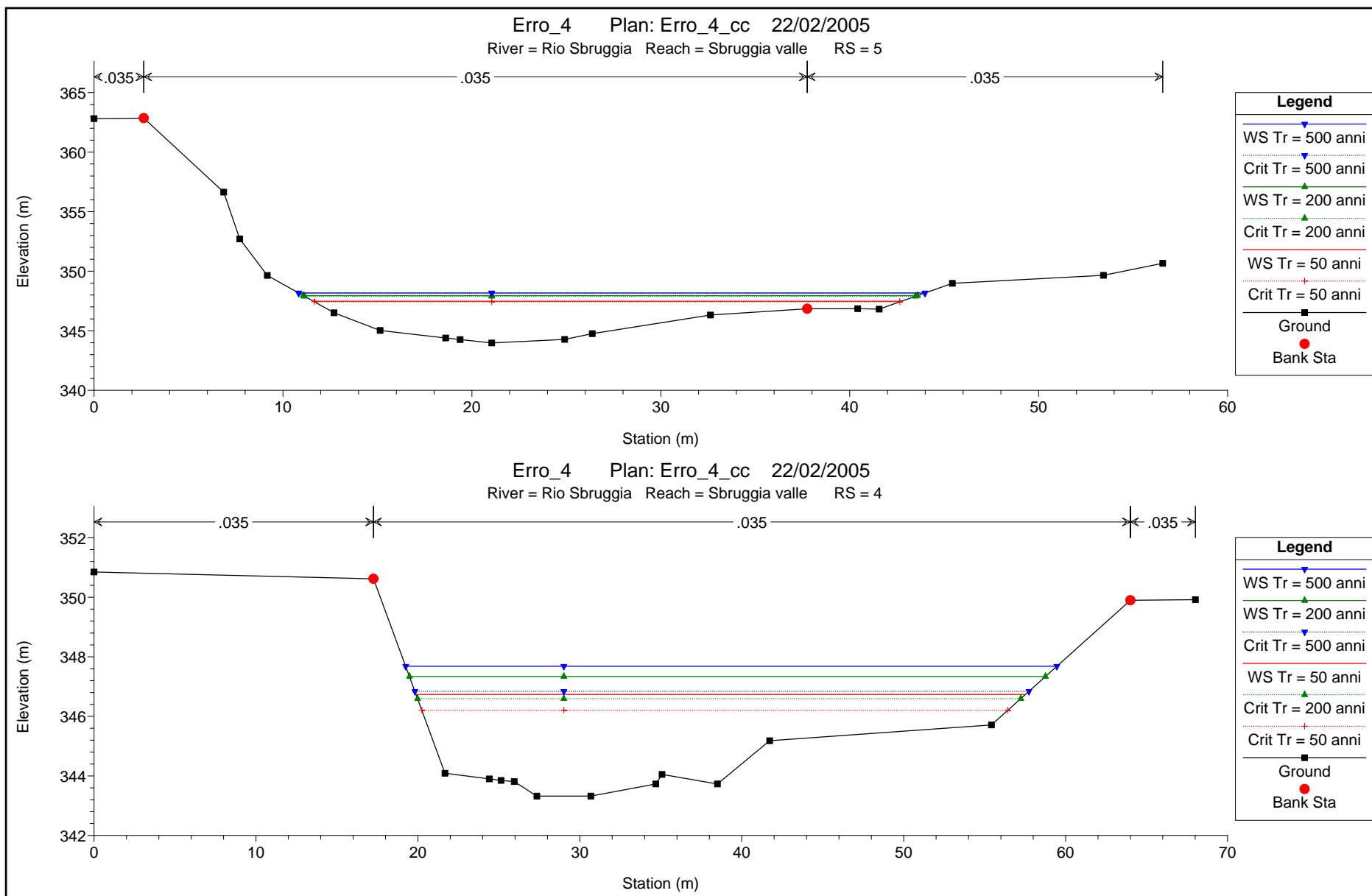


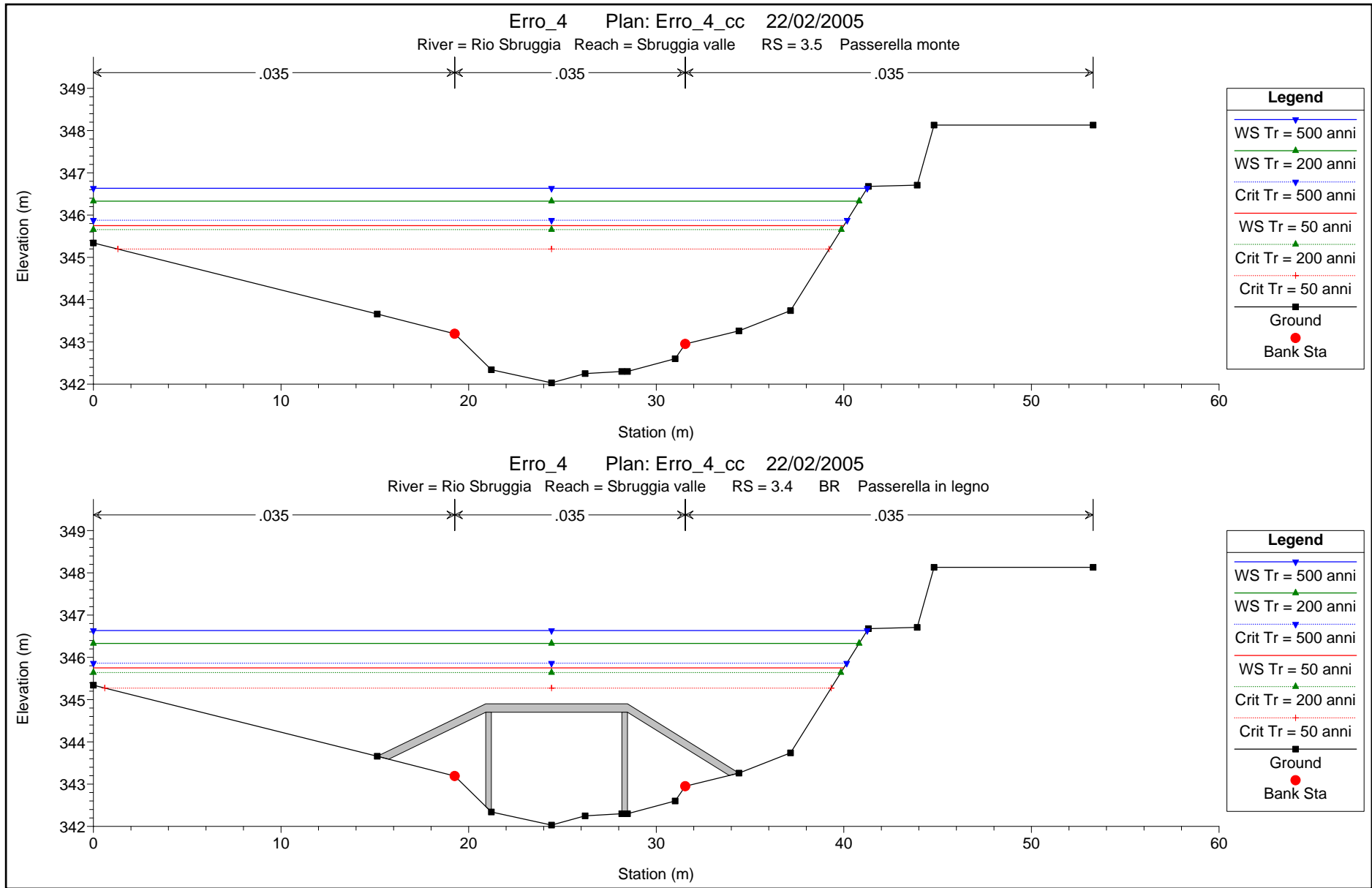
Erro_4 Plan: Erro_4_cc 22/02/2005
 River = Rio Sbruggia Reach = Sbruggia valle RS = 9.6 Sez 9 bis

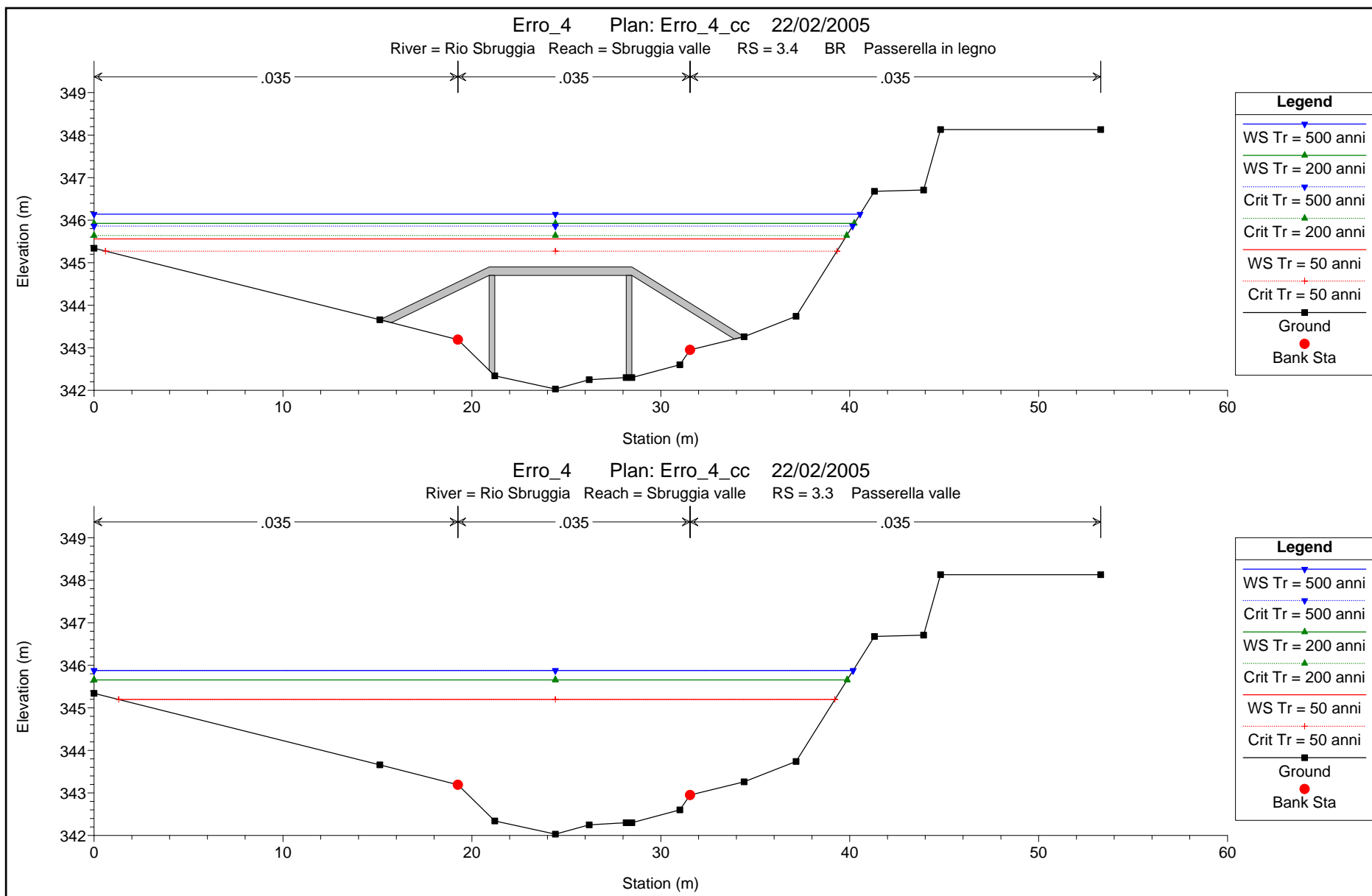


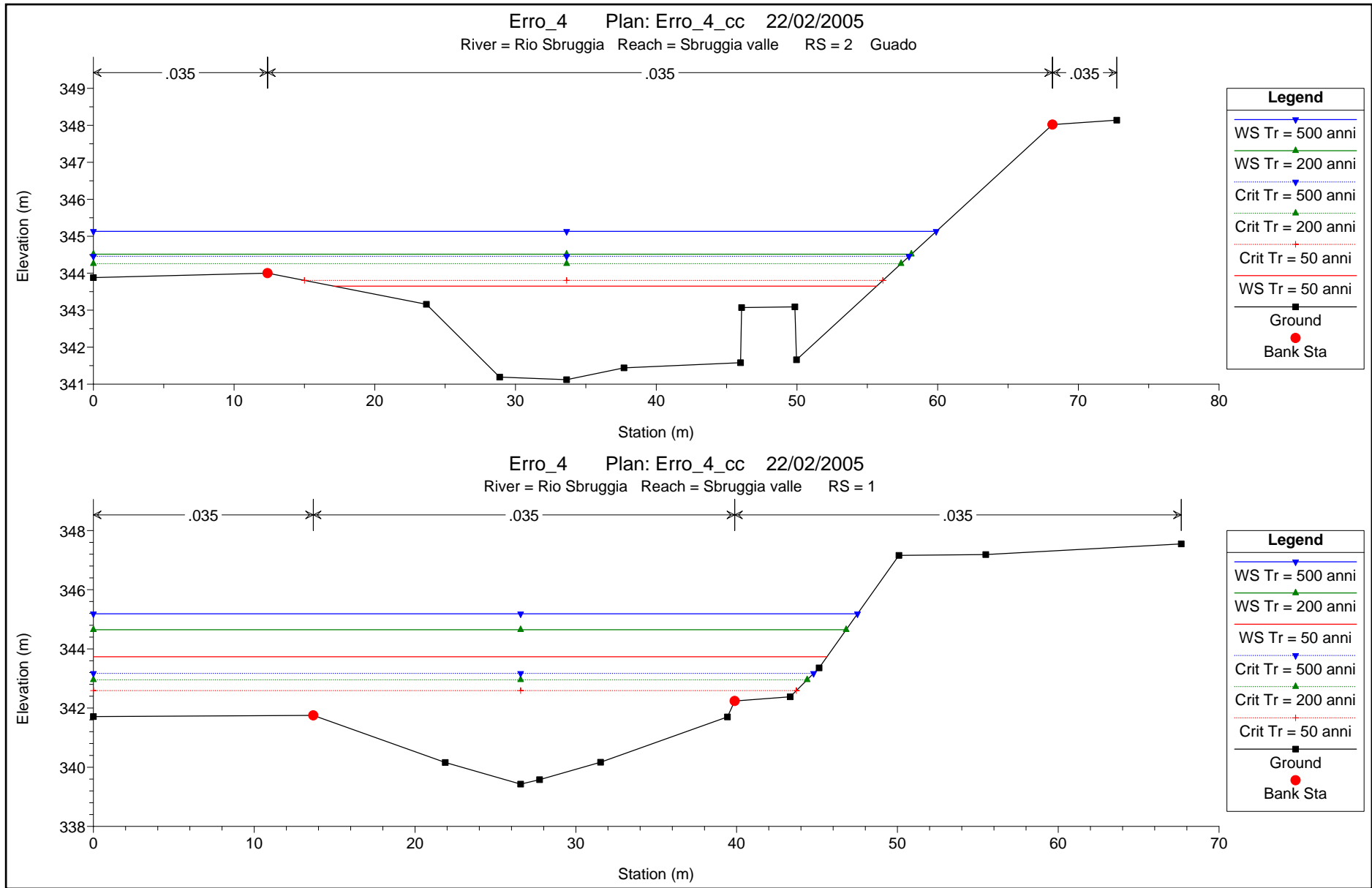








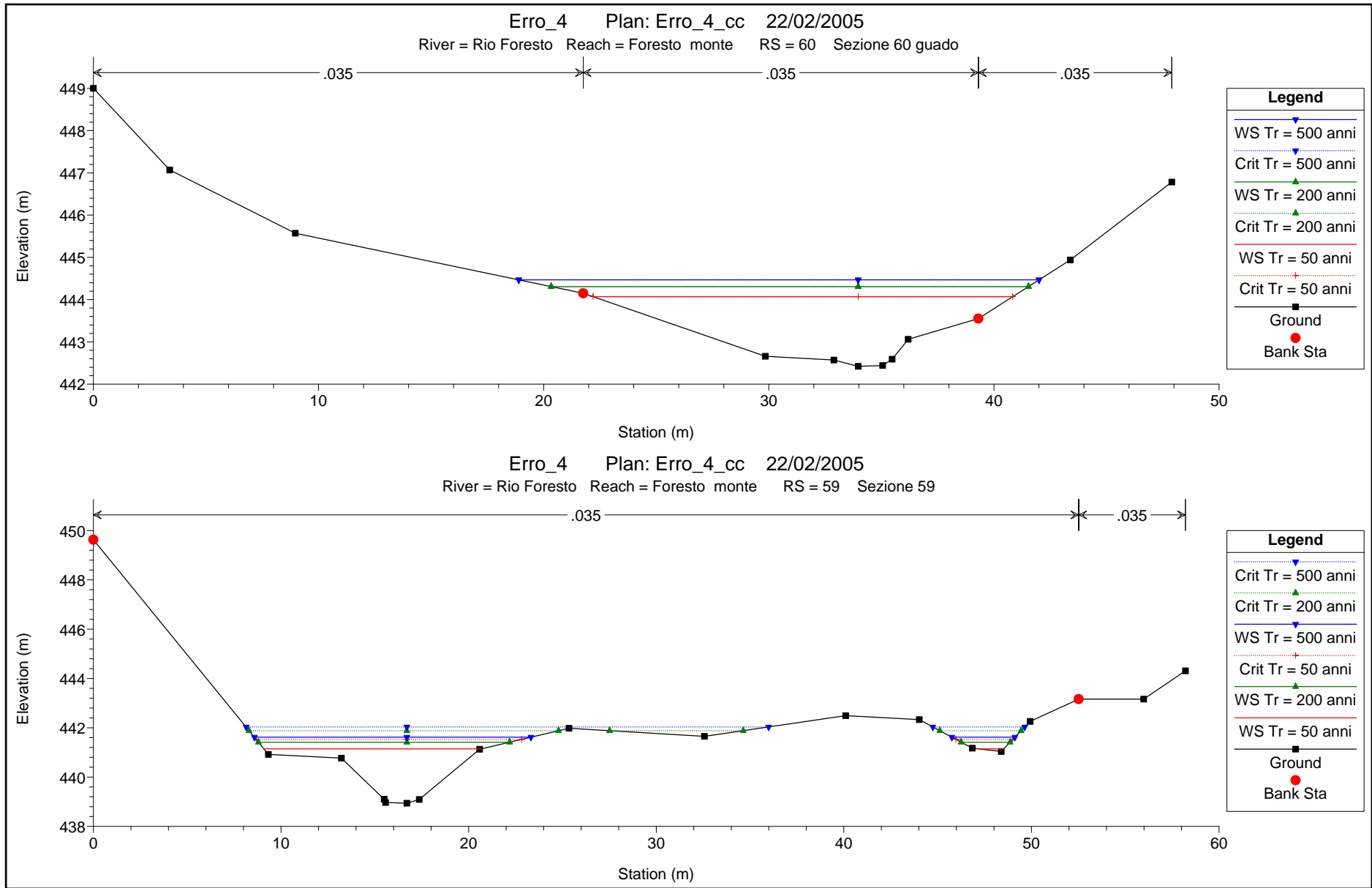


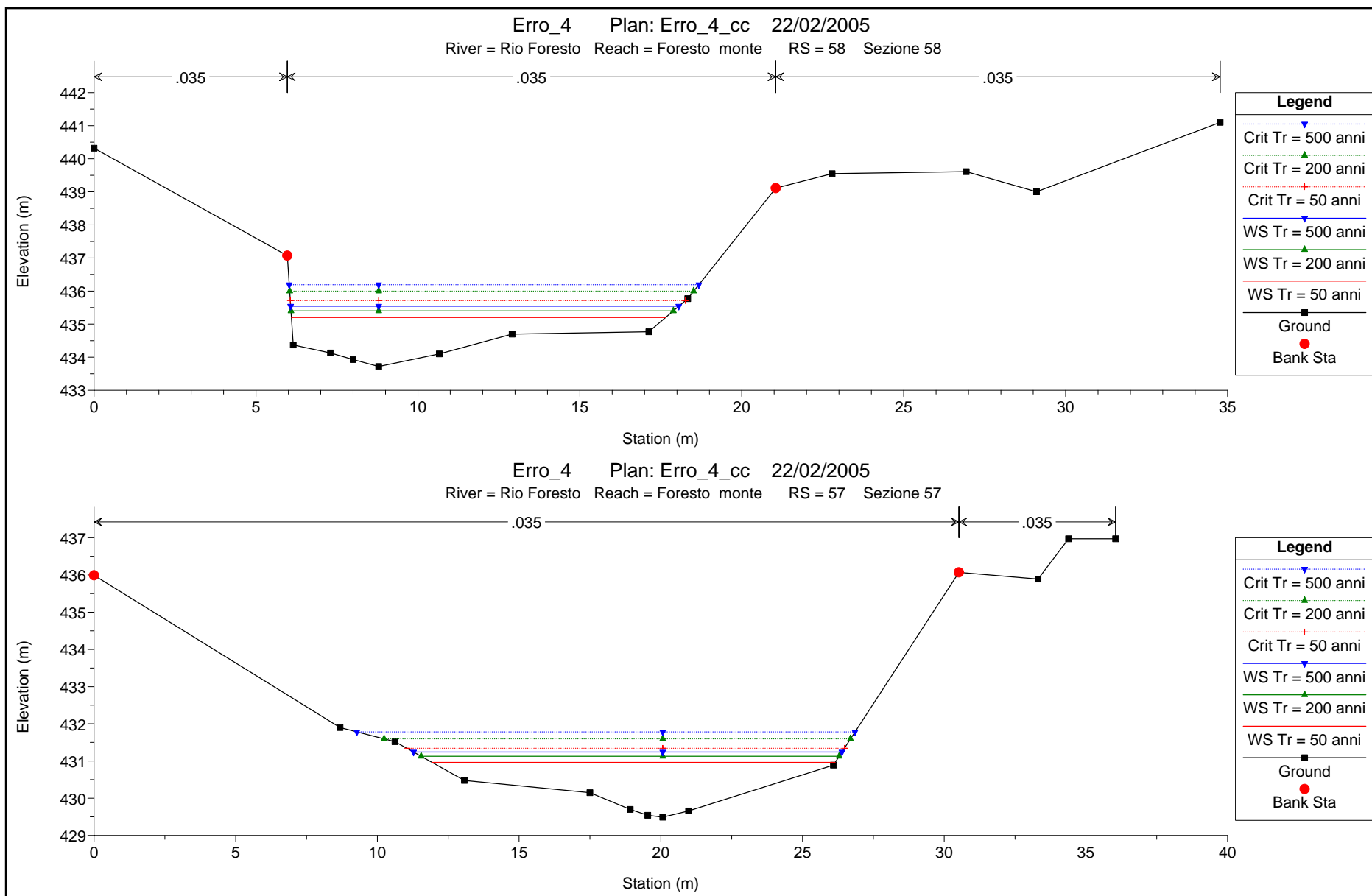


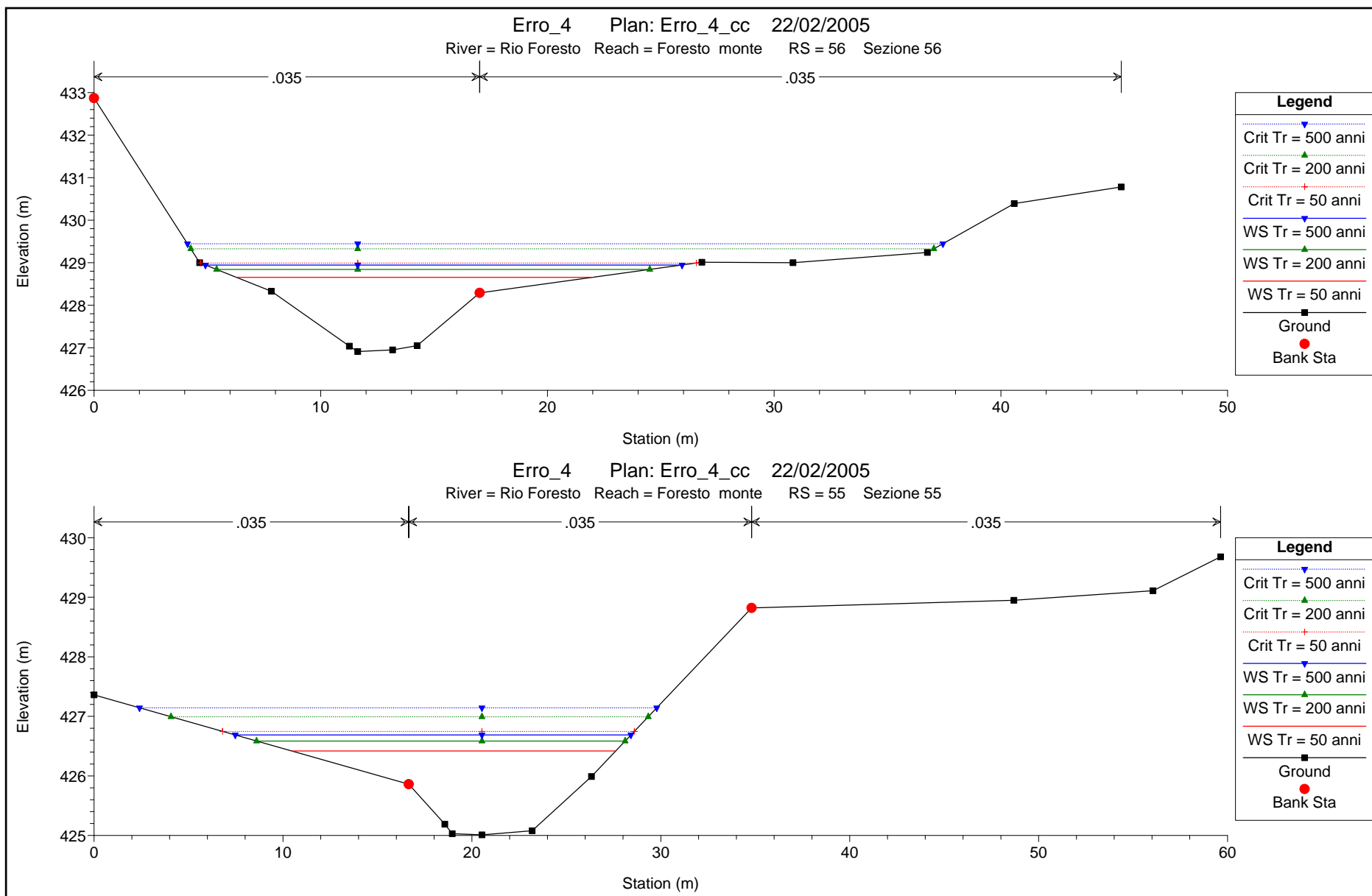
SEZIONI IDRAULICHE

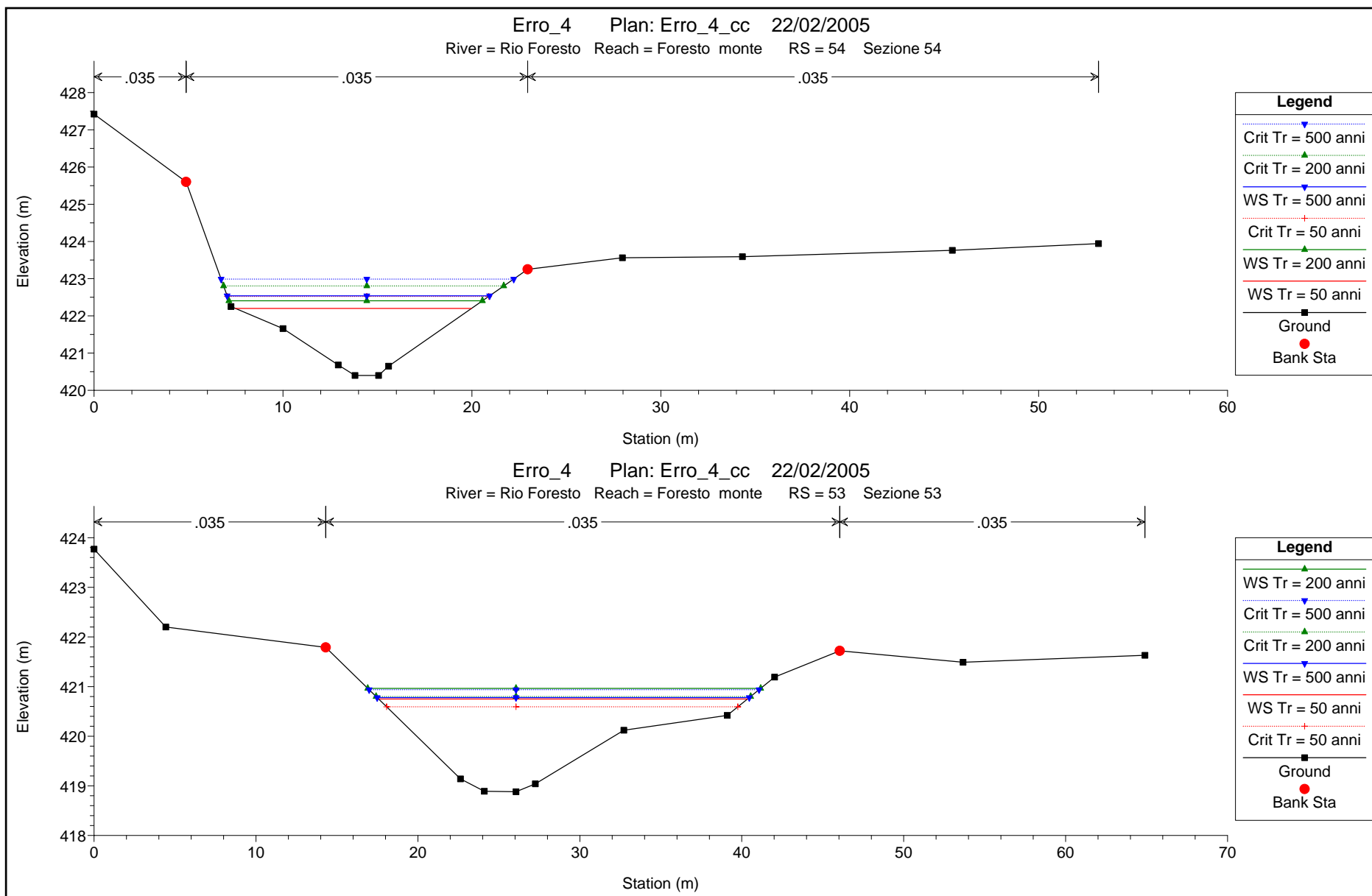
TRATTO ERRO_4

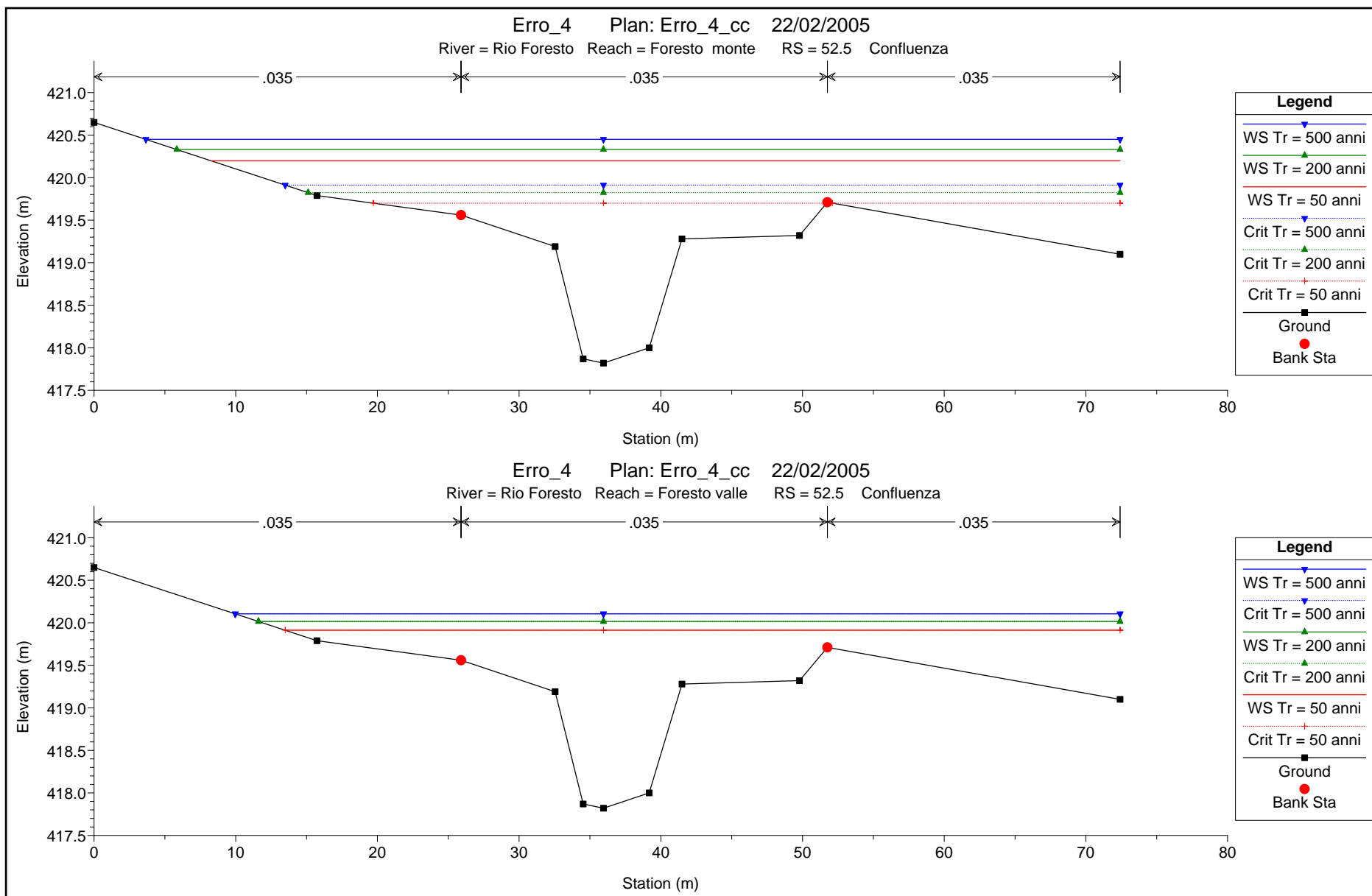
Rio Foresto

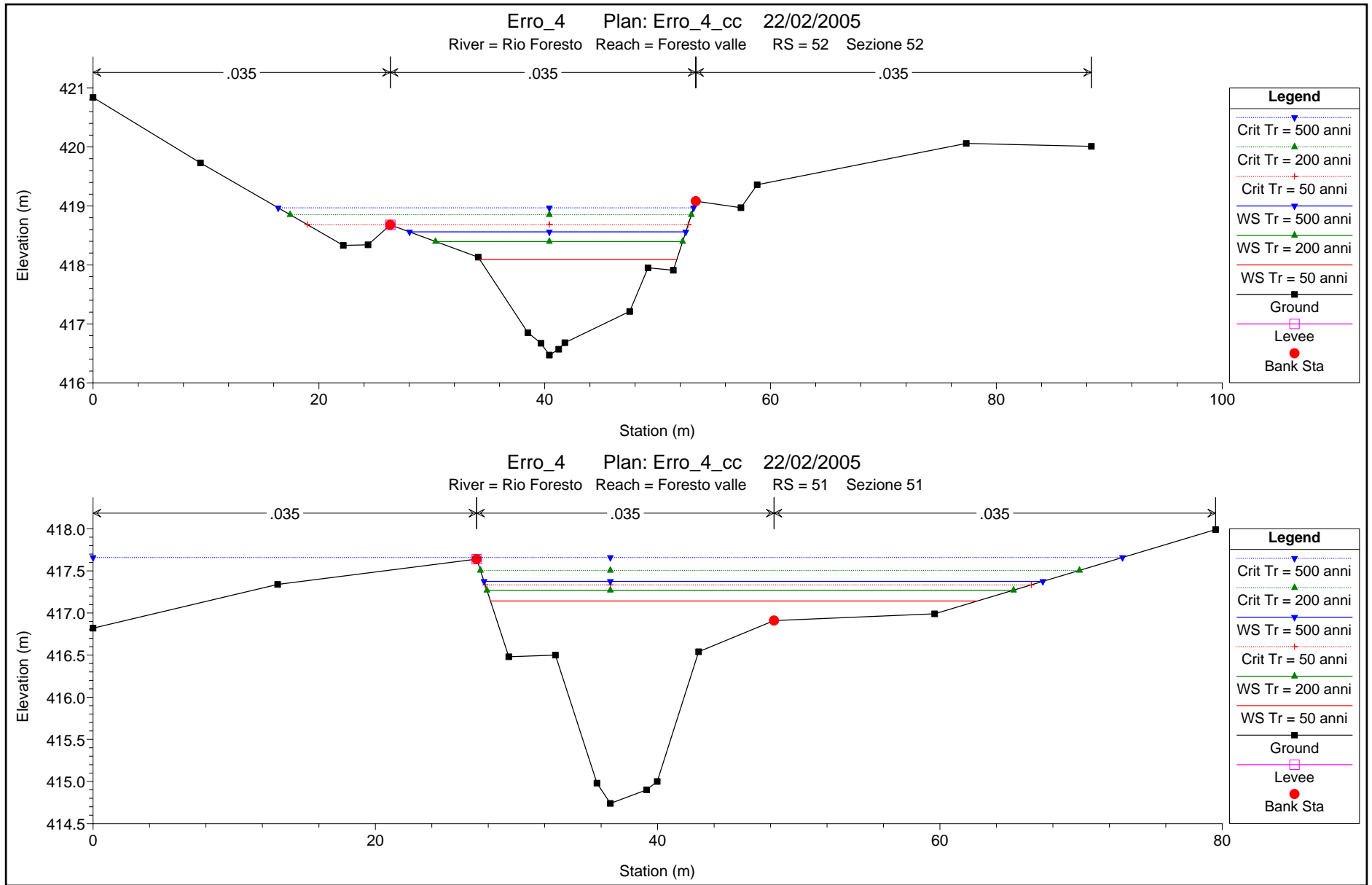


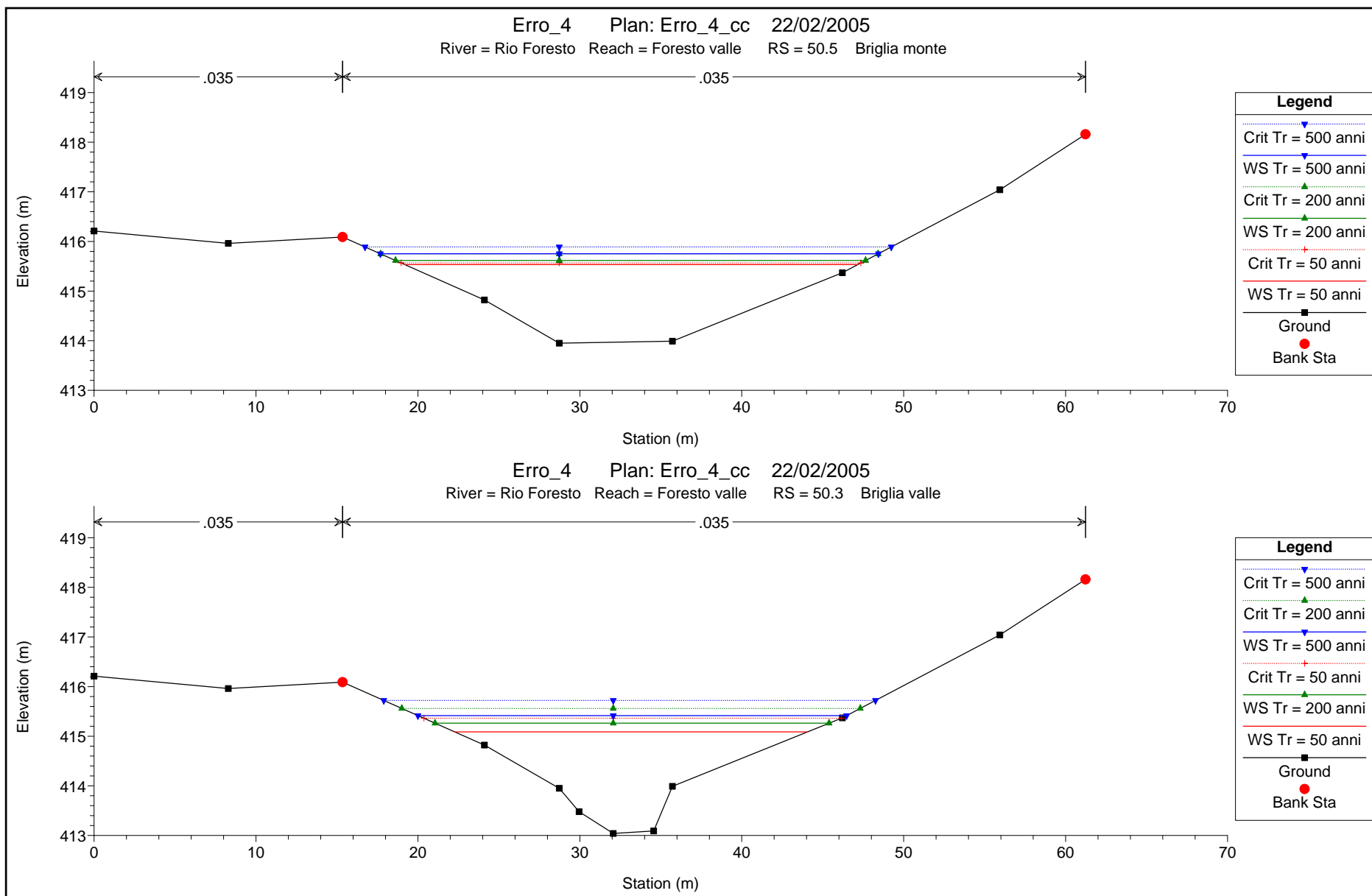


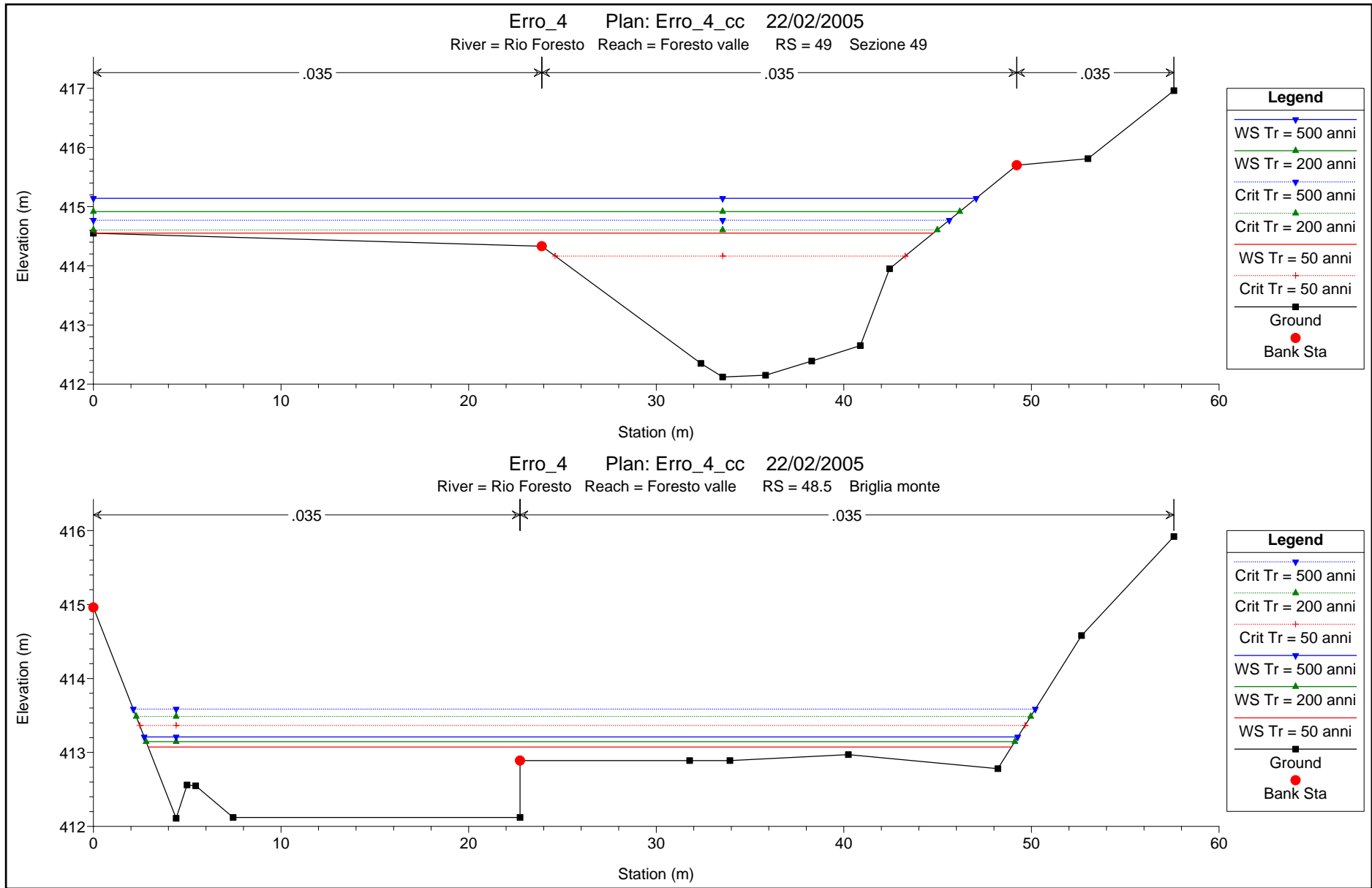


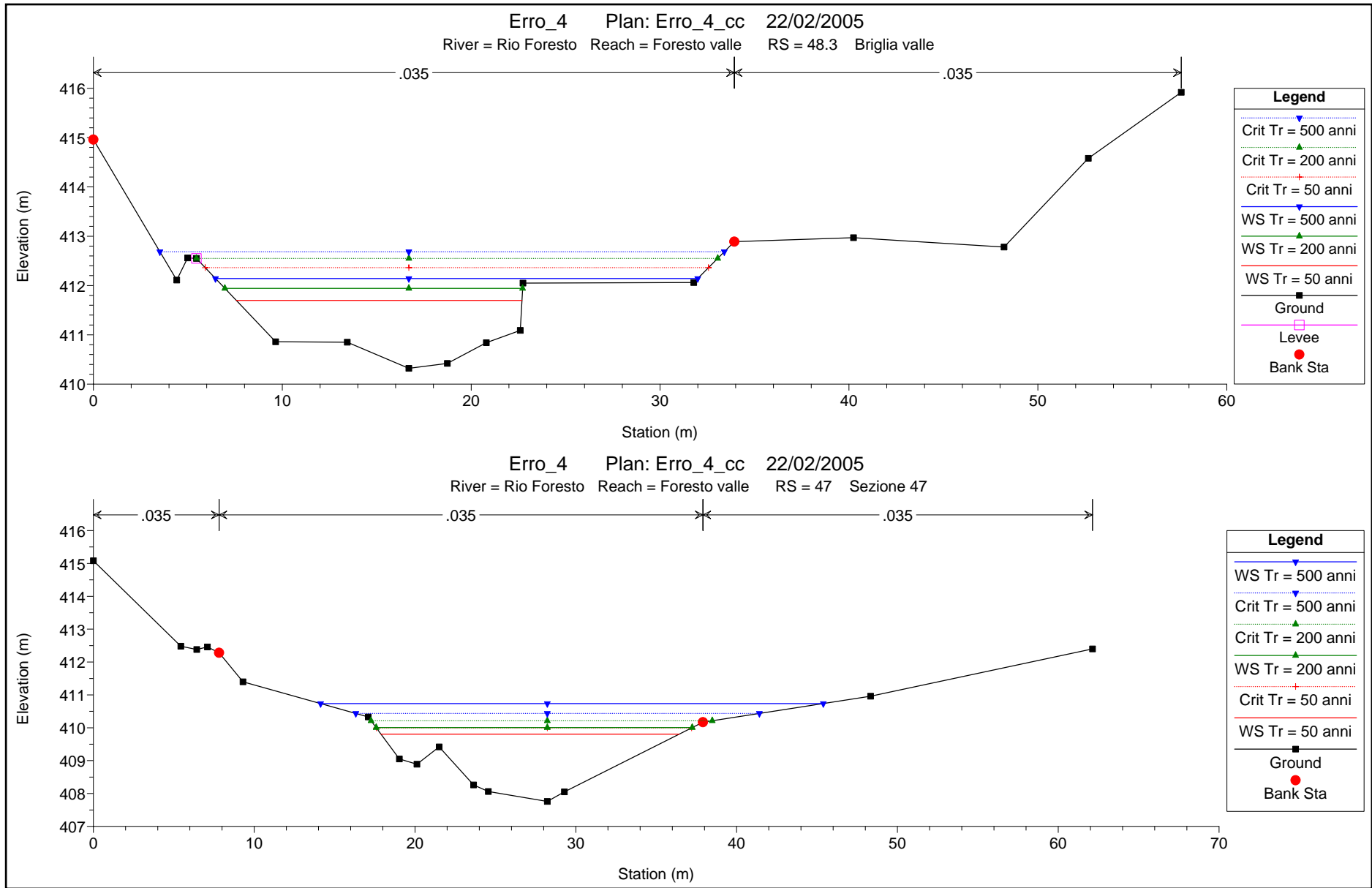


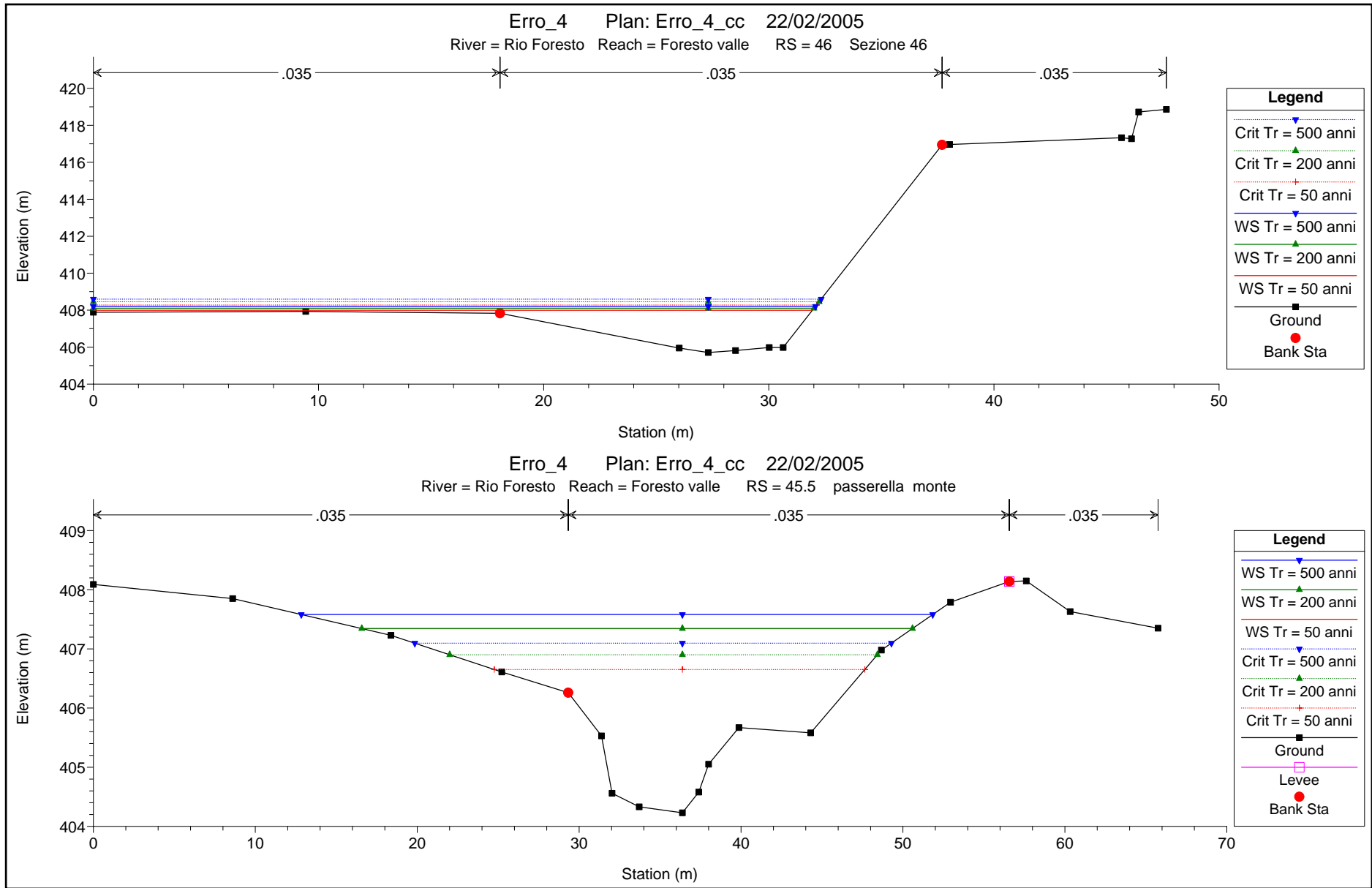


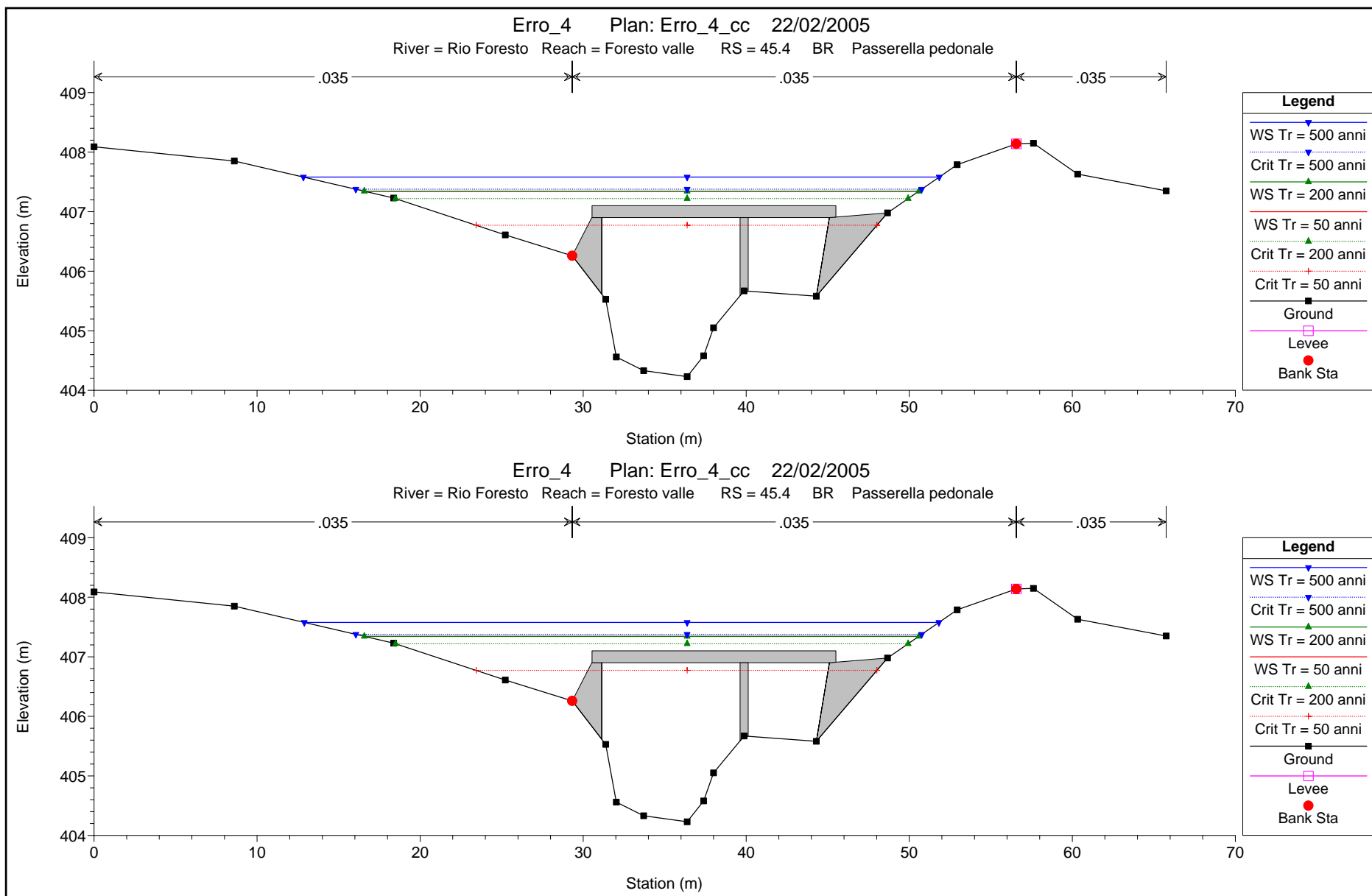


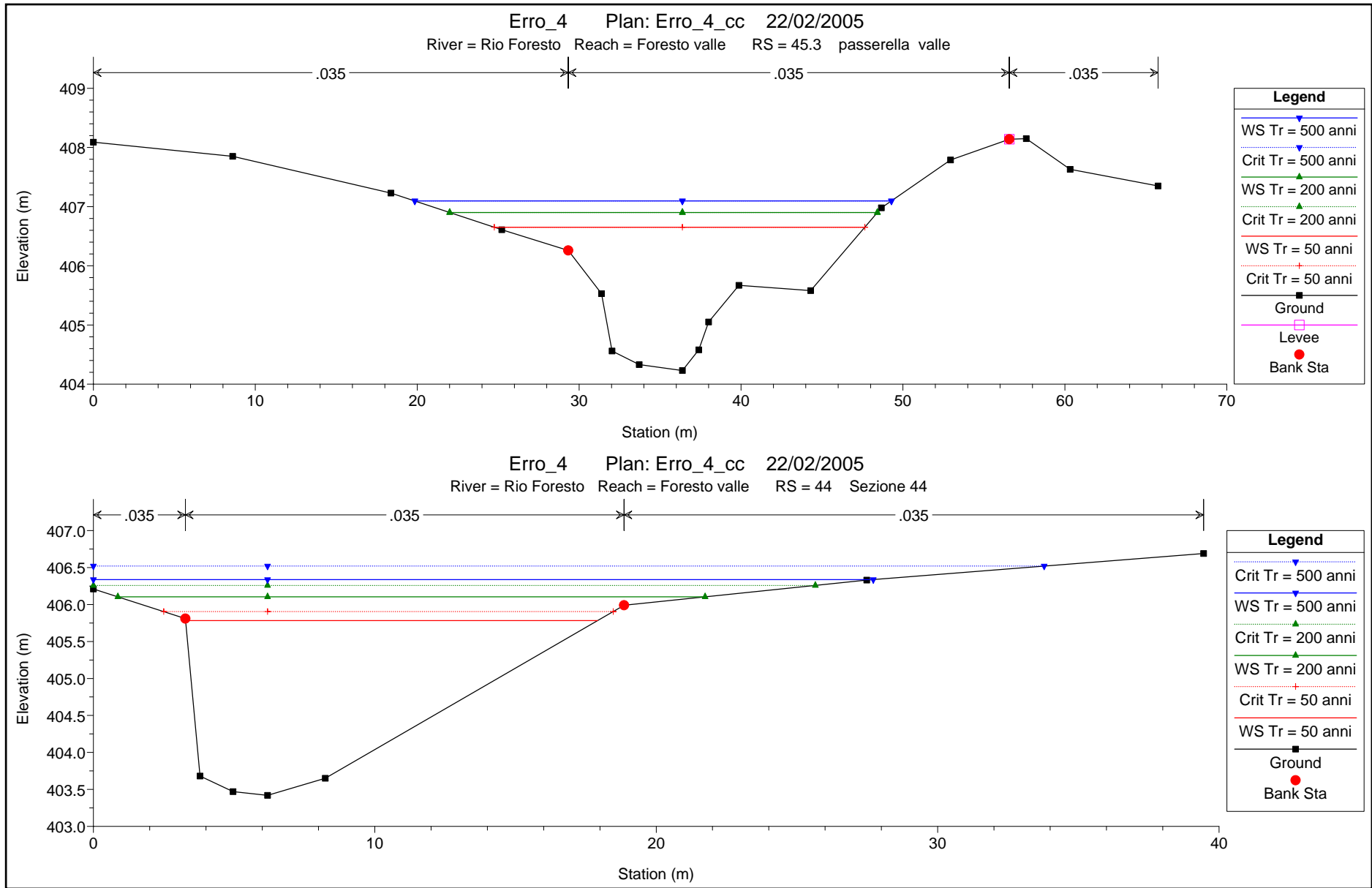


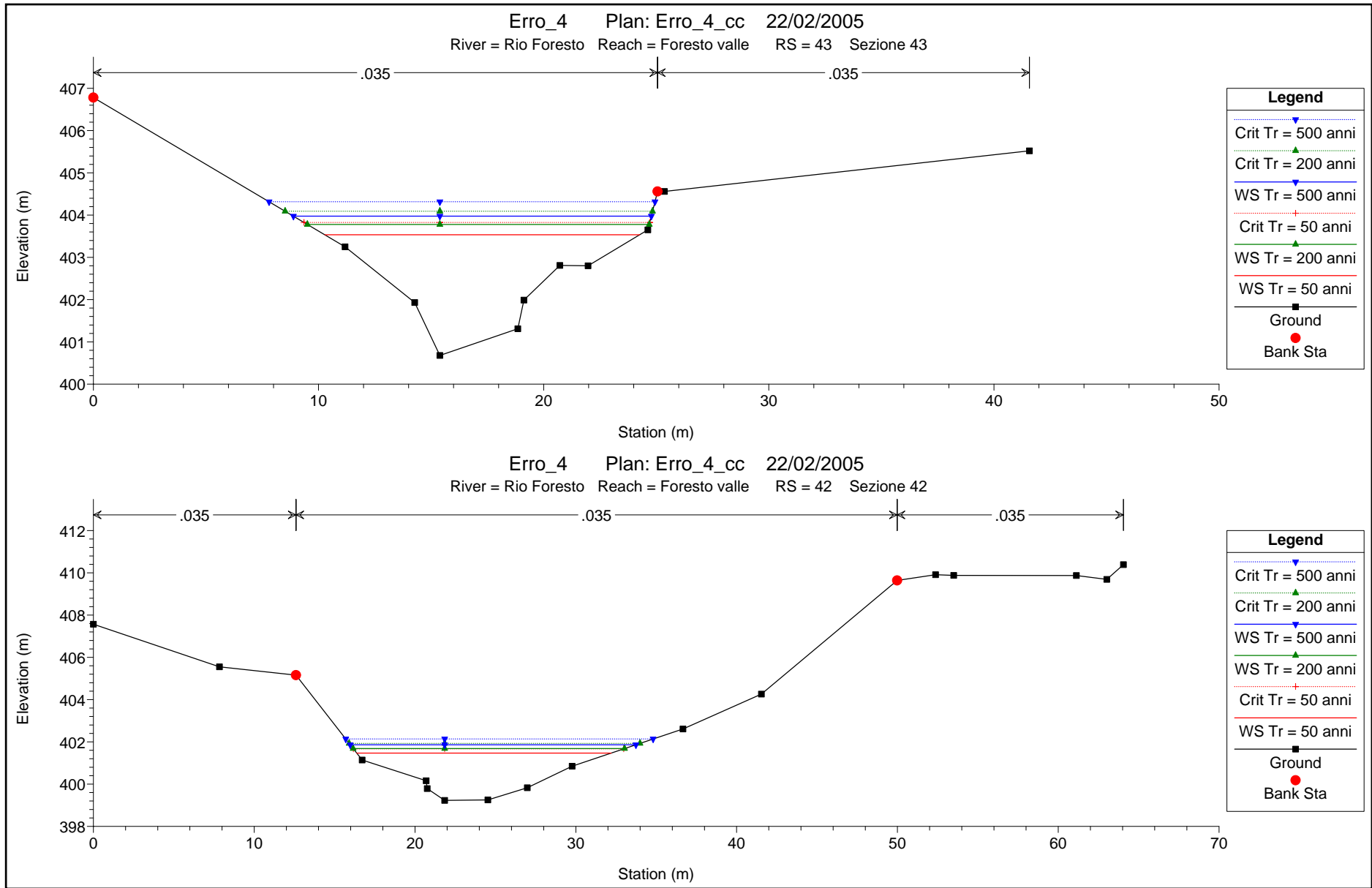


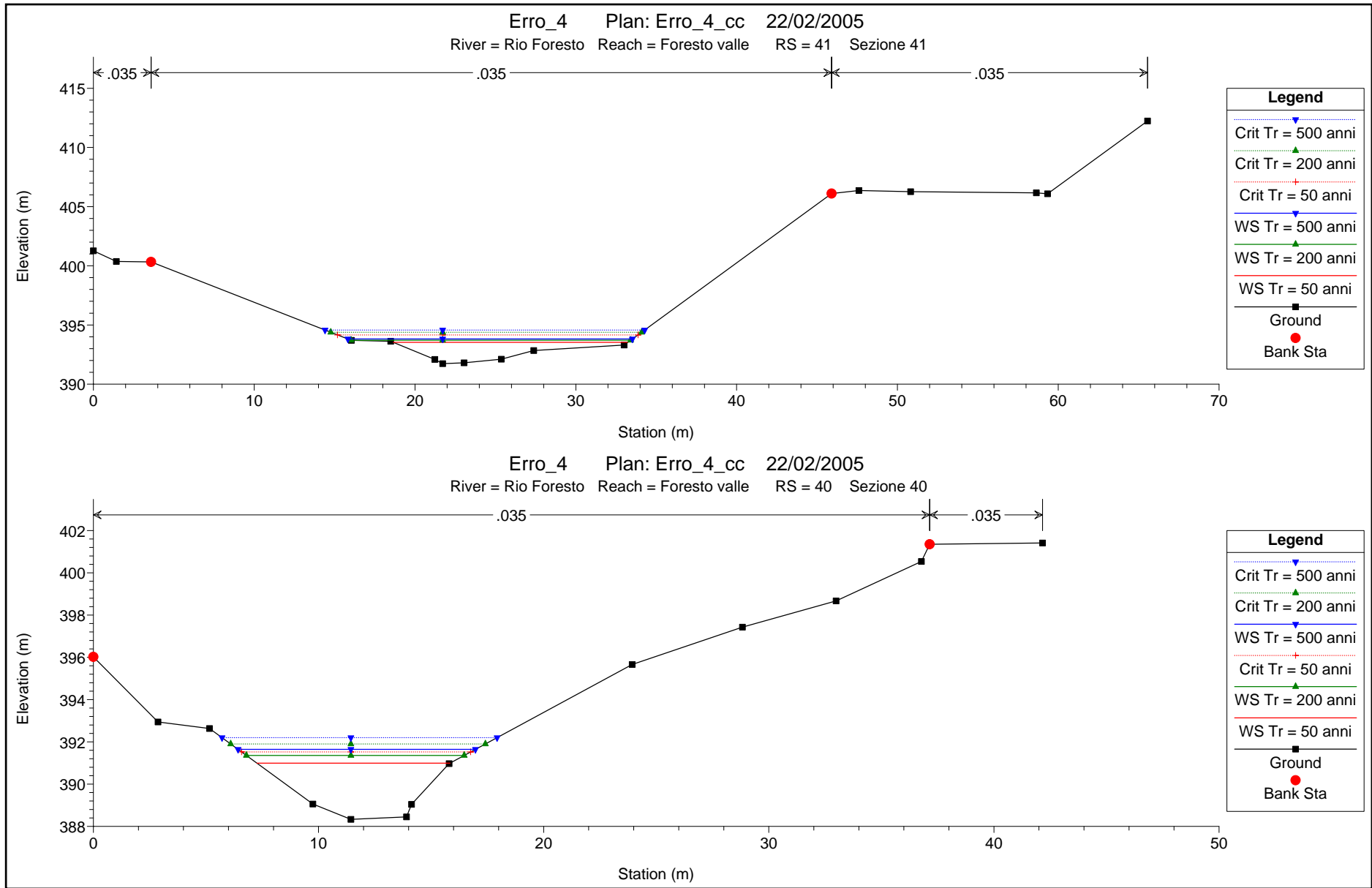


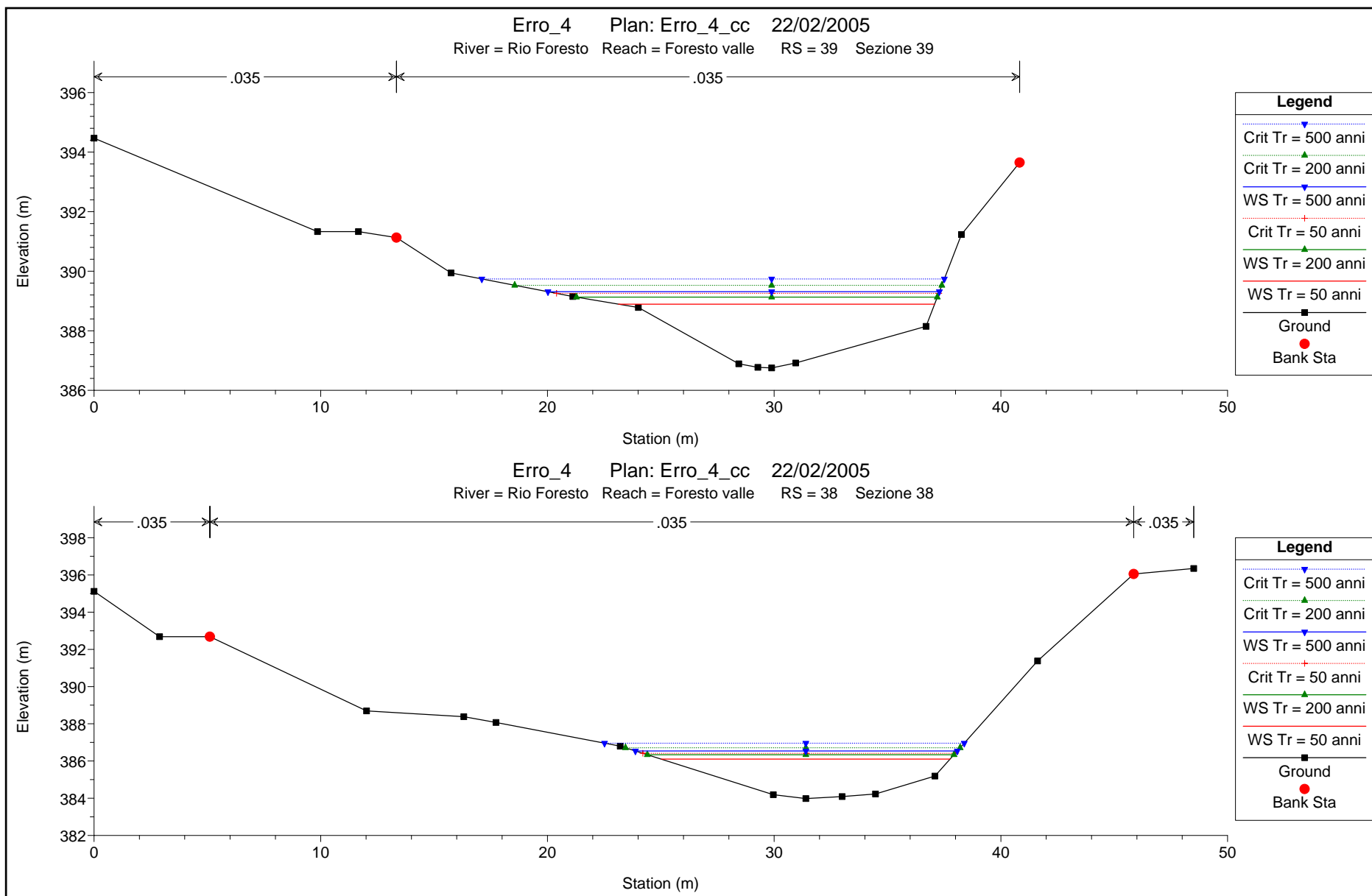


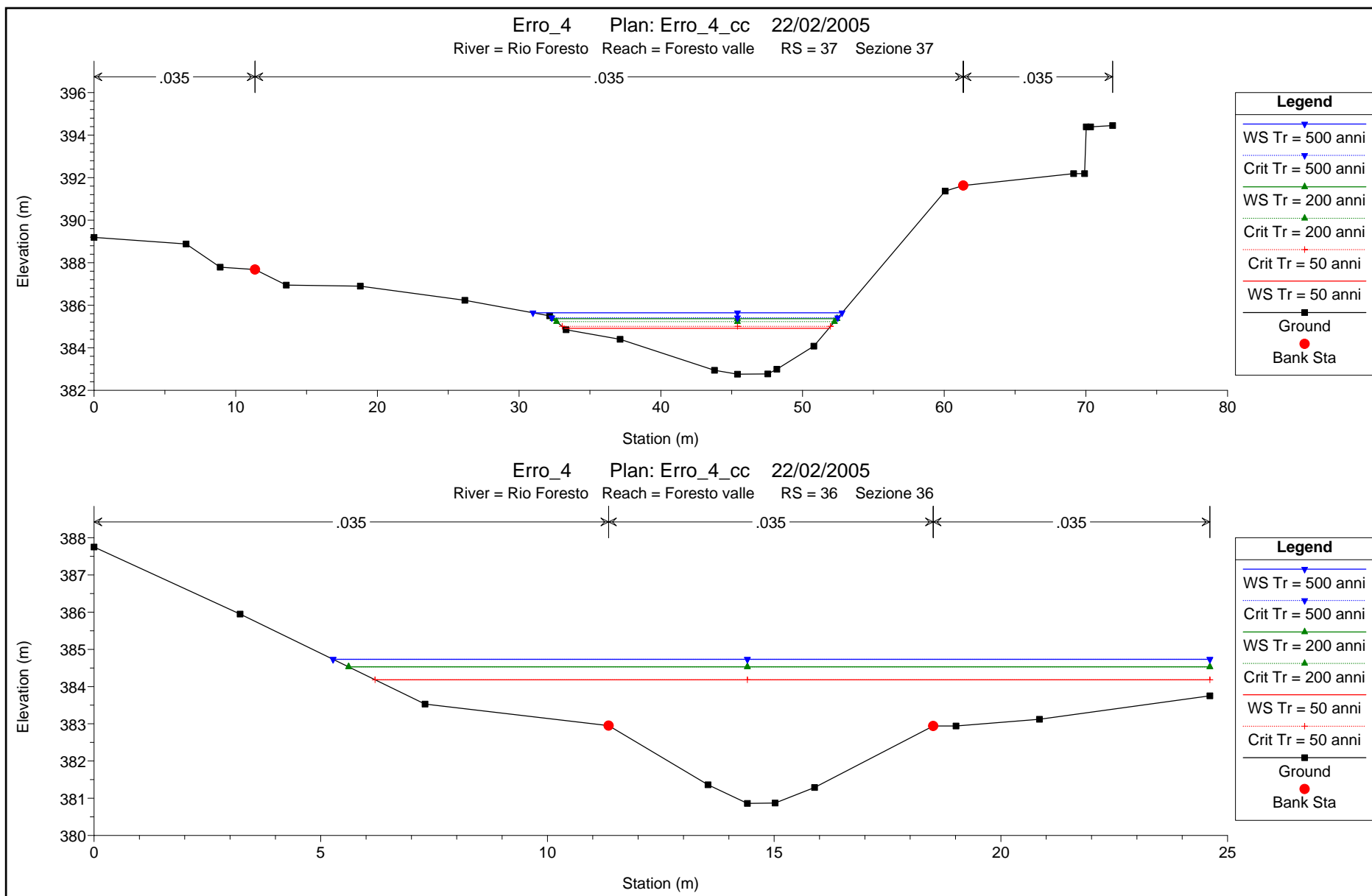


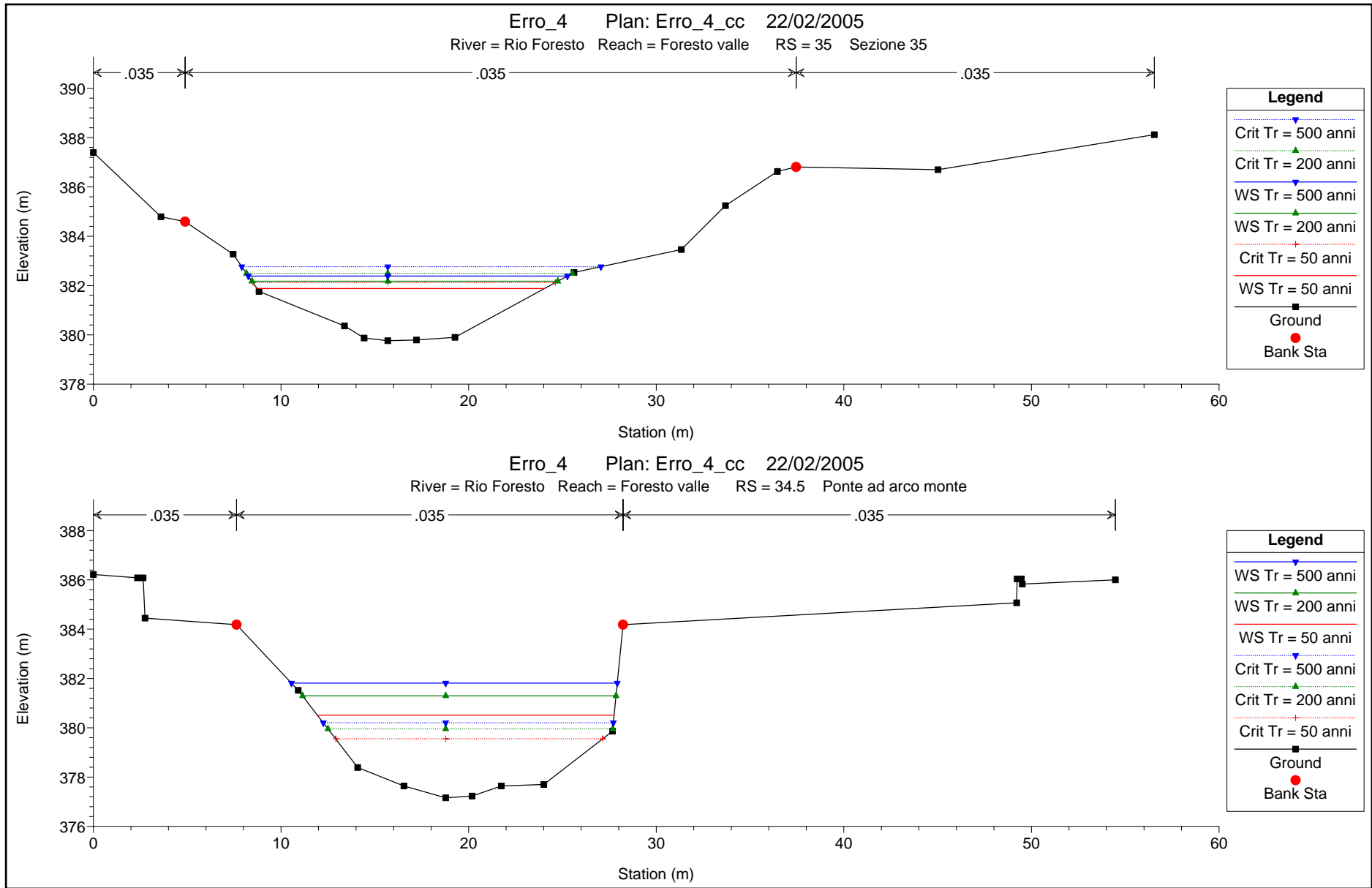


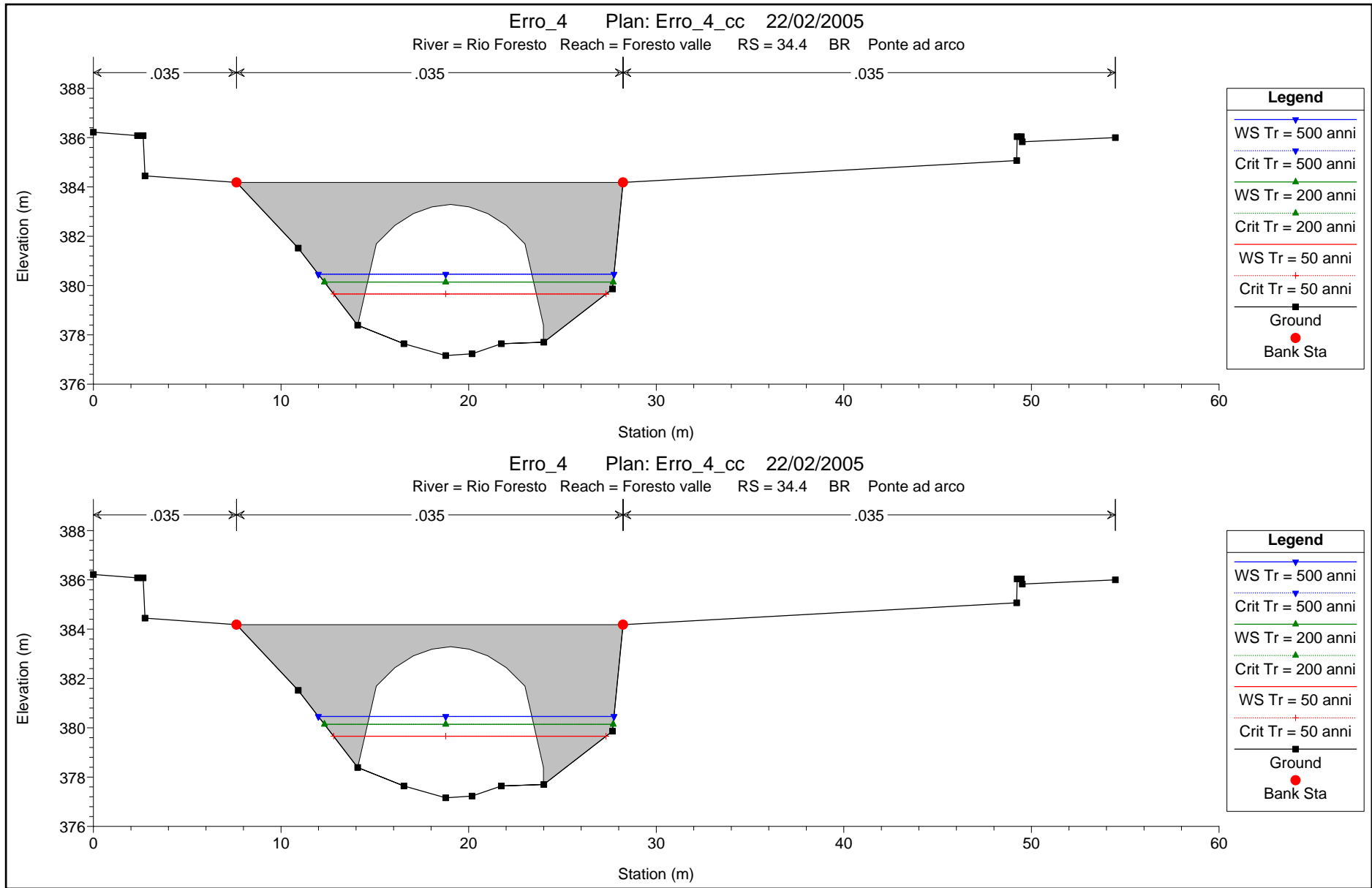


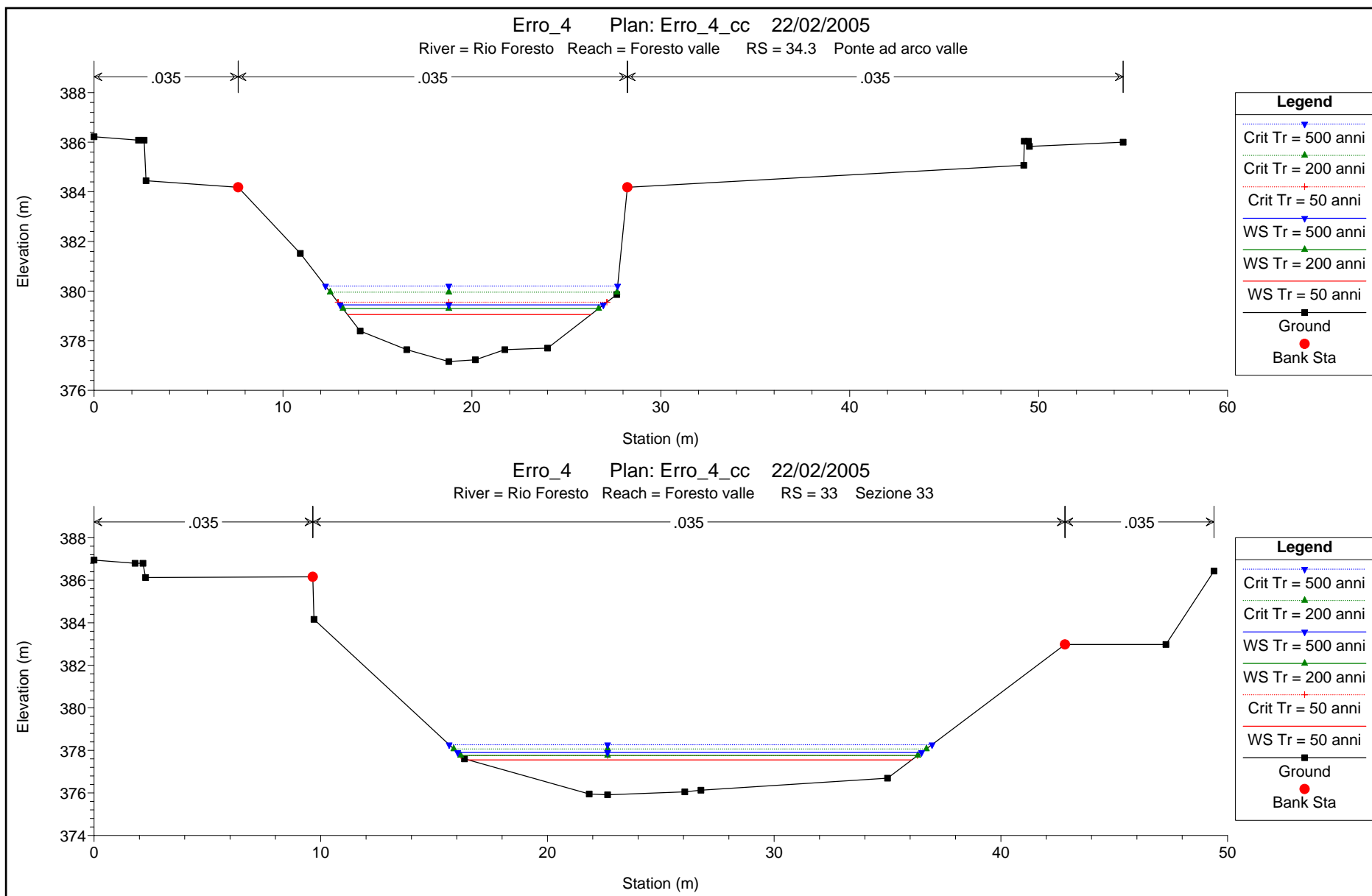


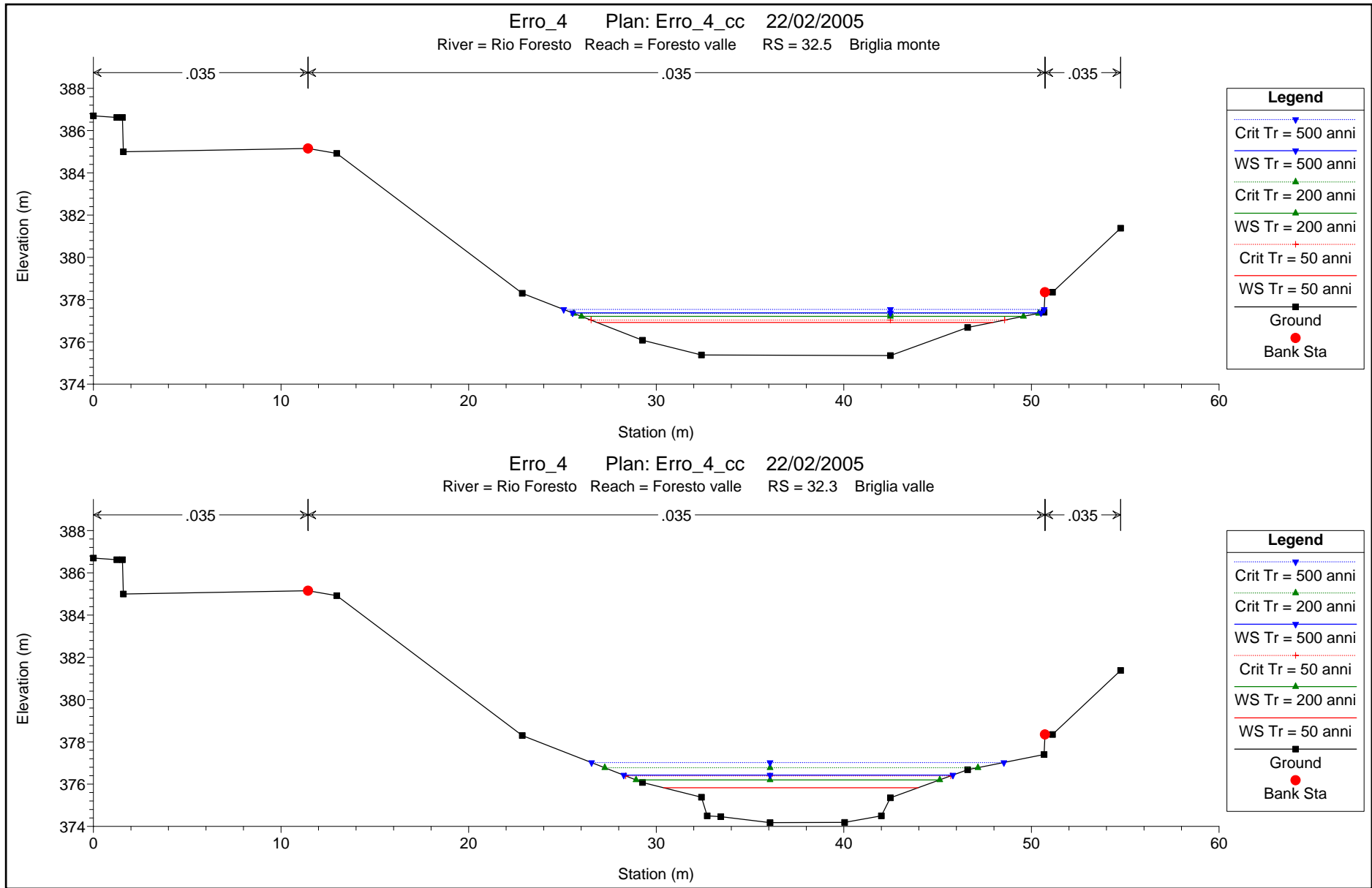


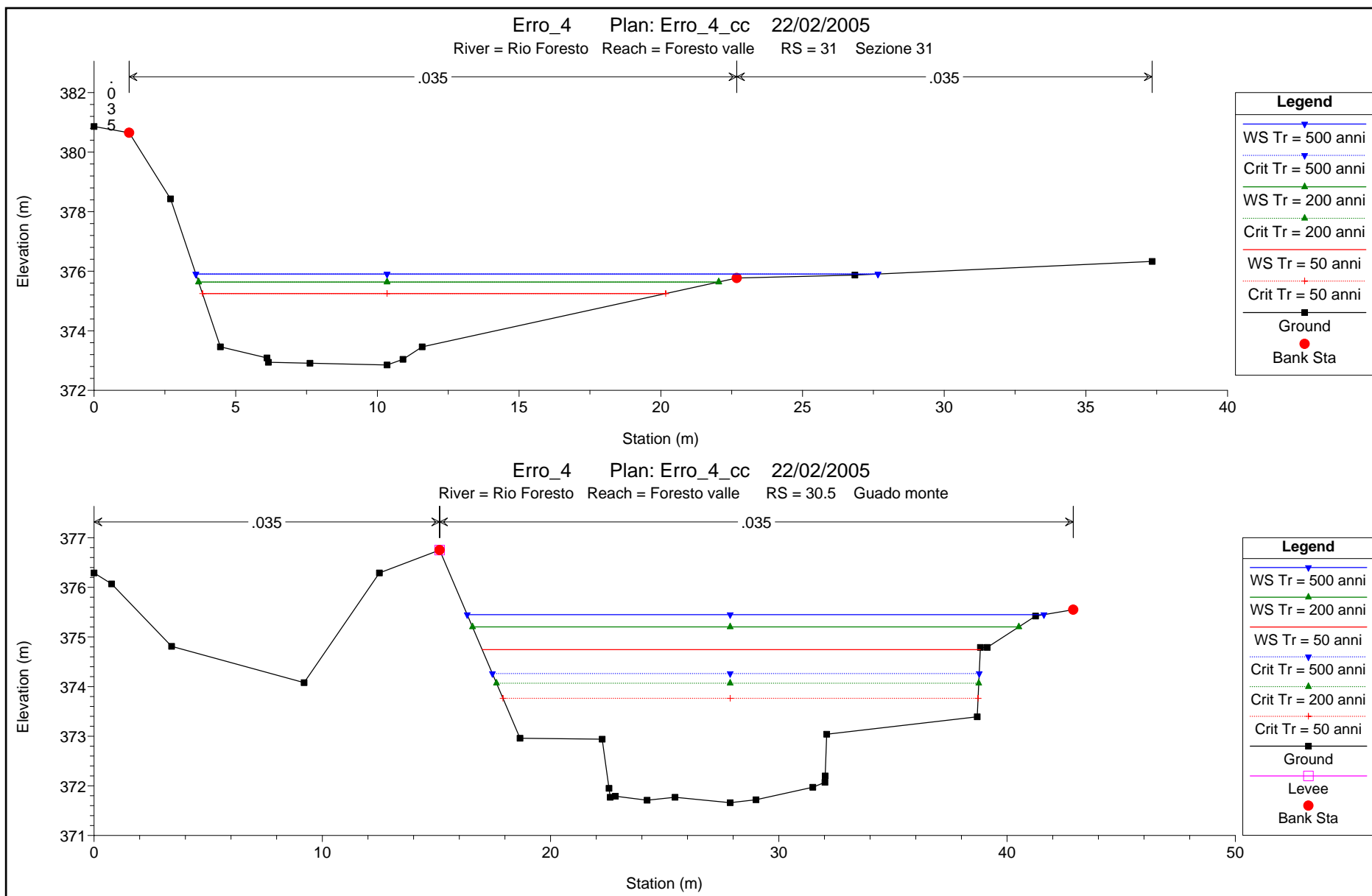


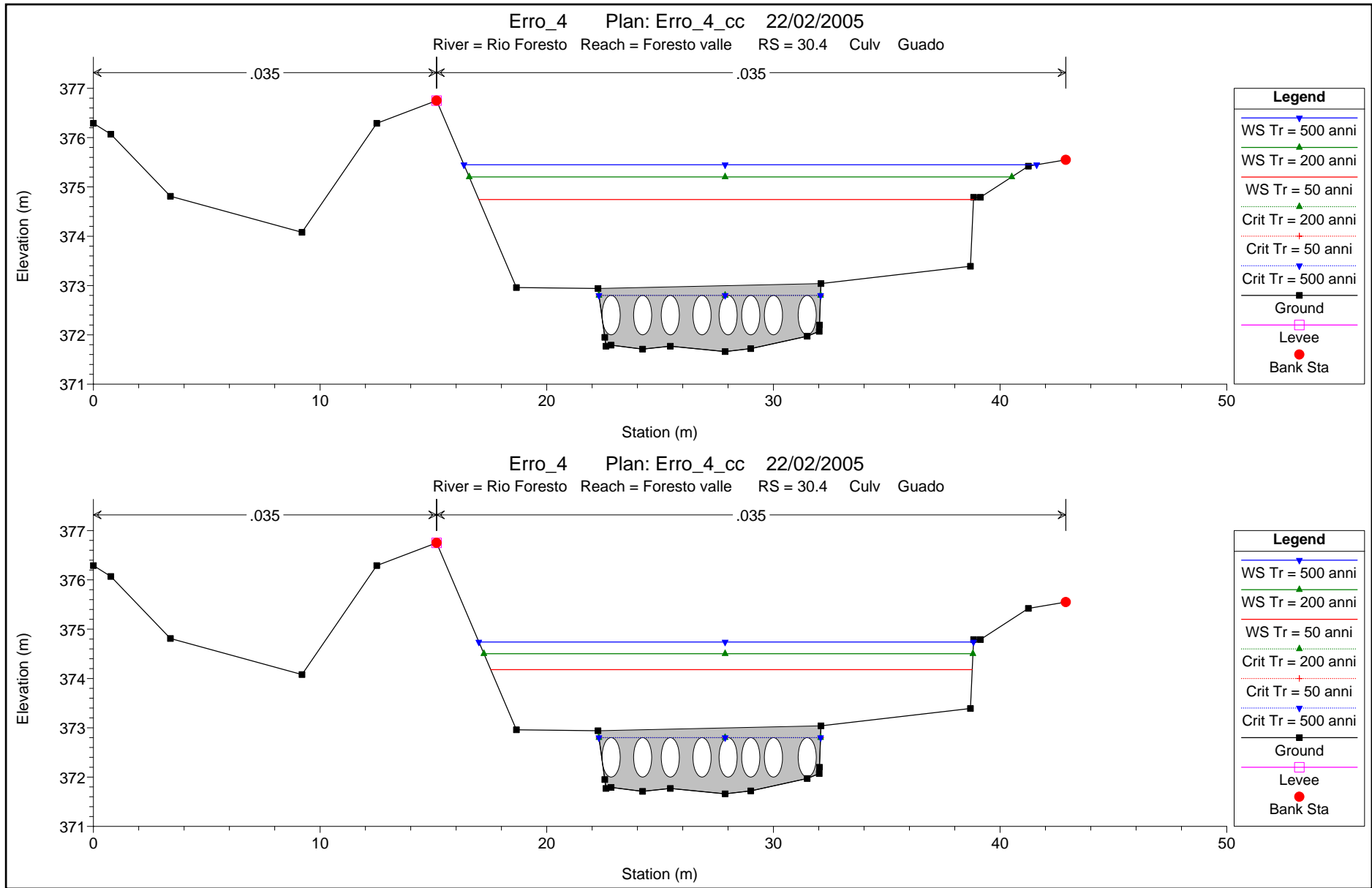


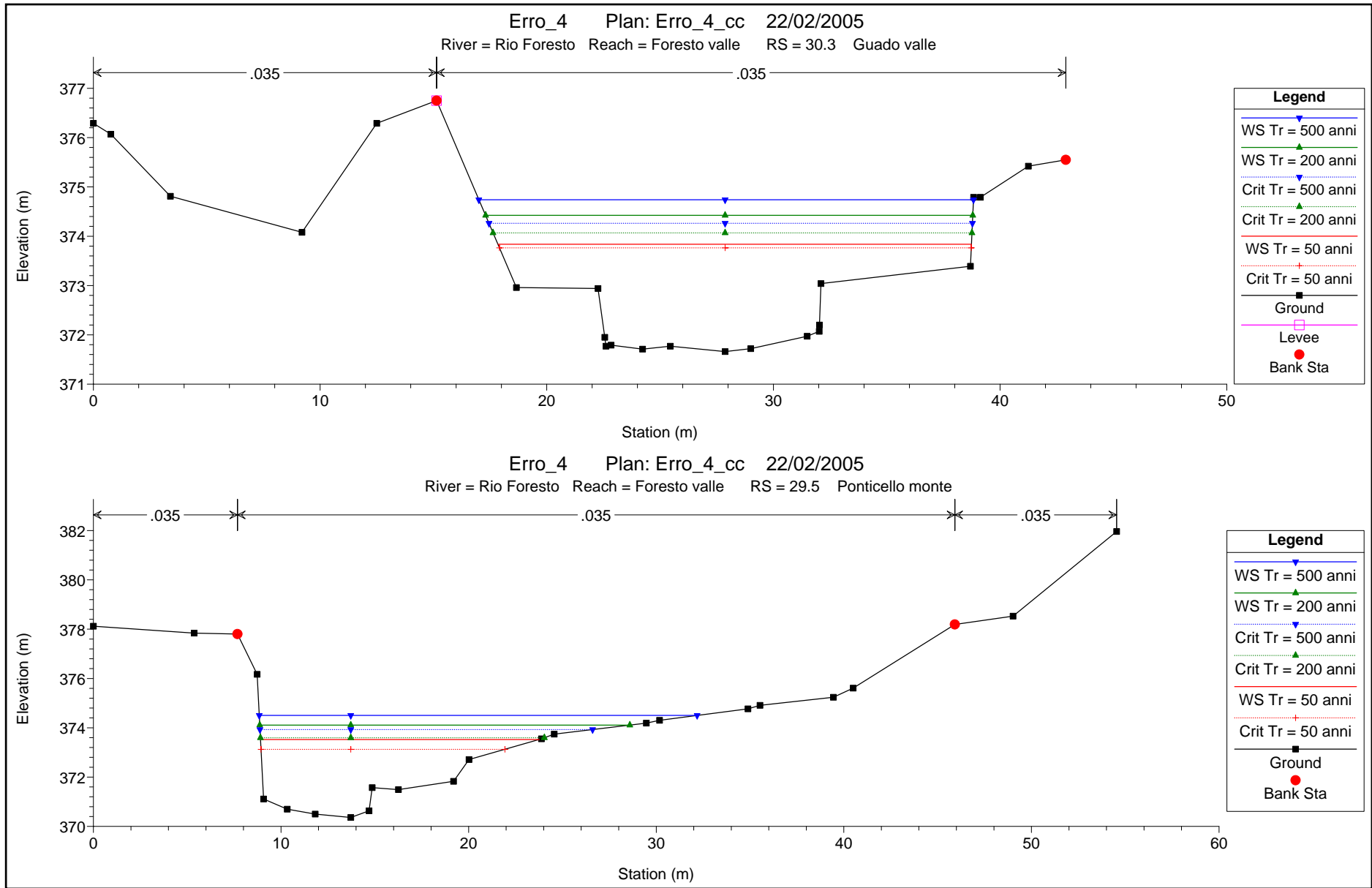


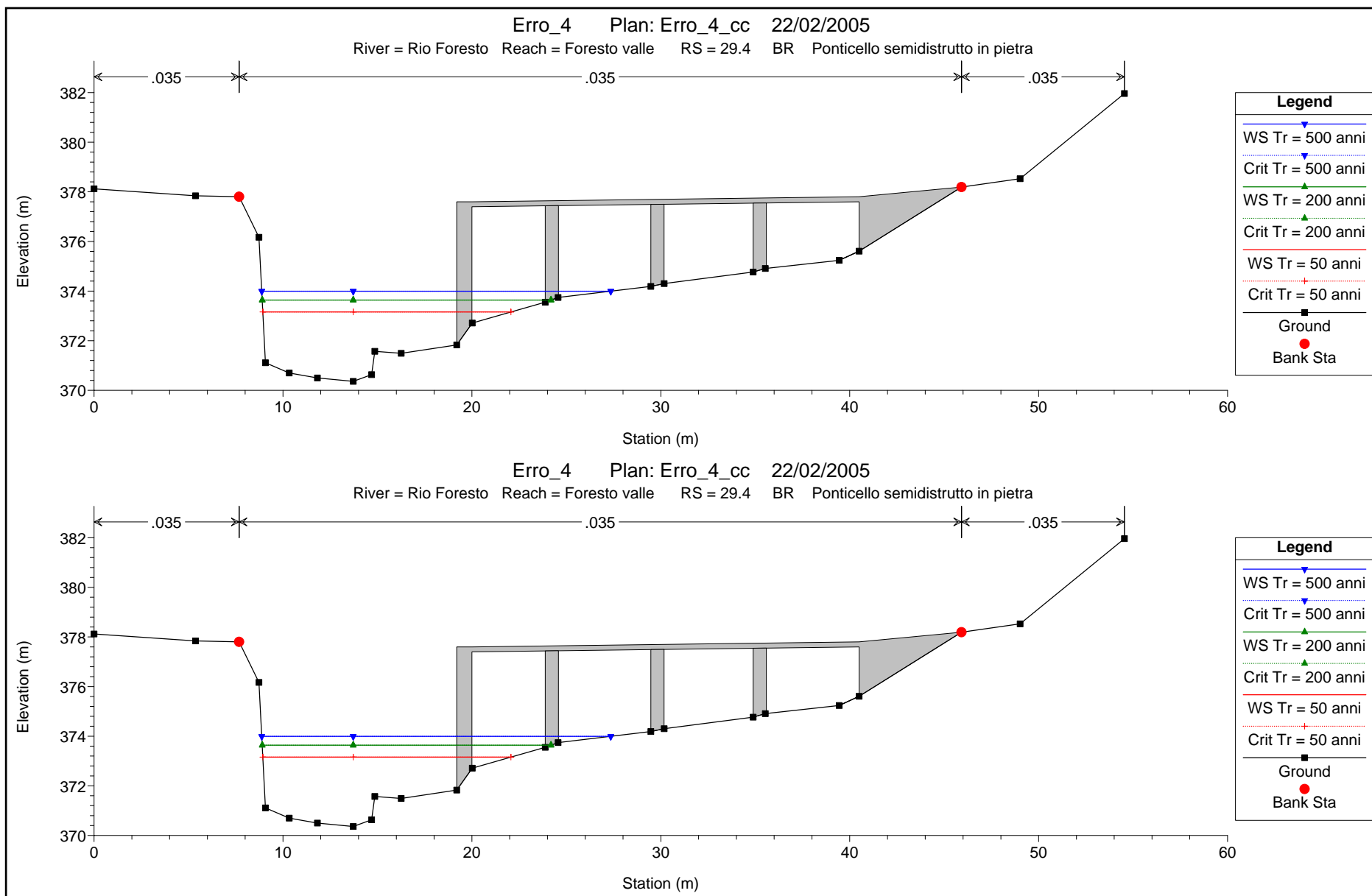


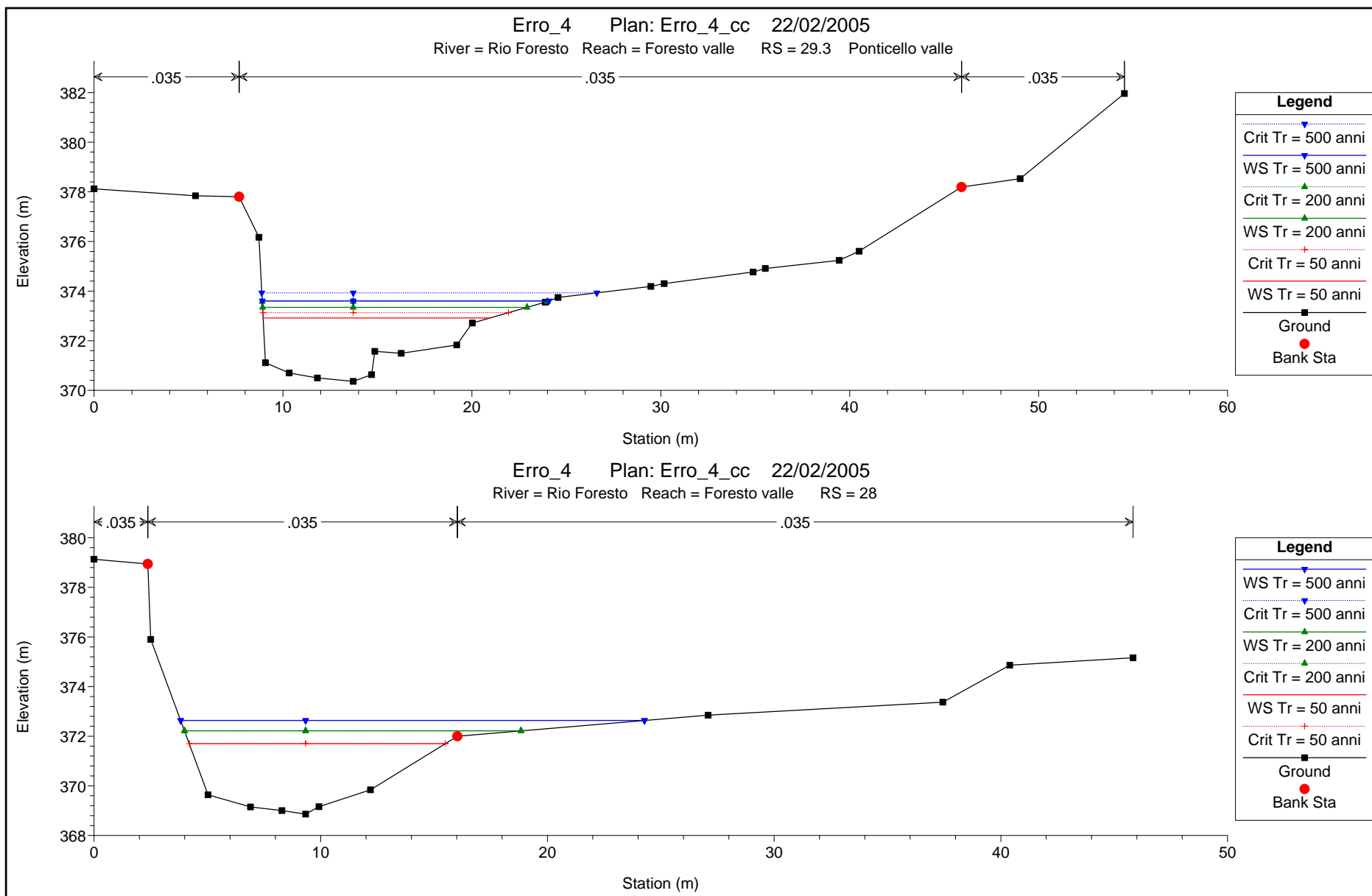


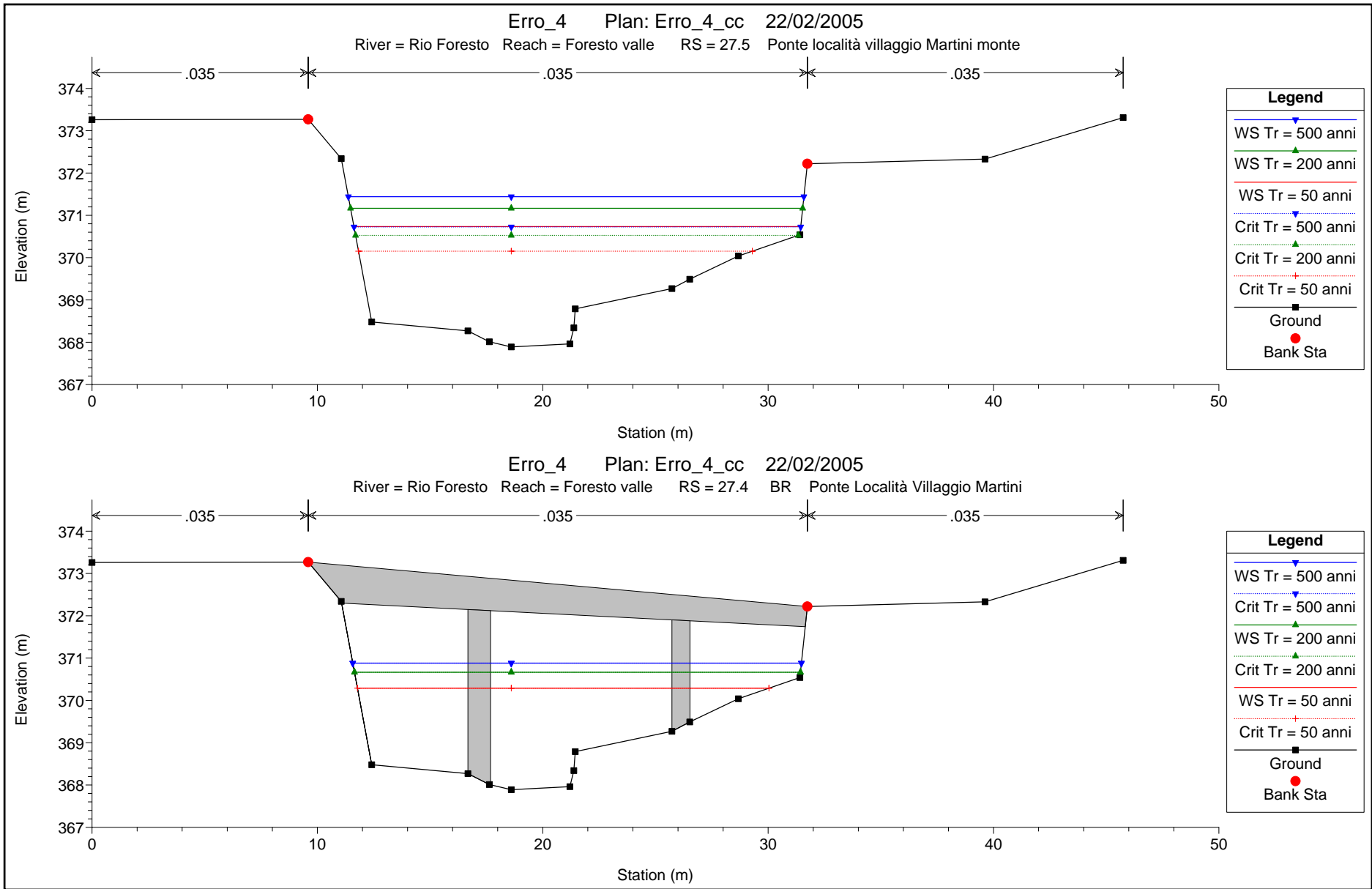


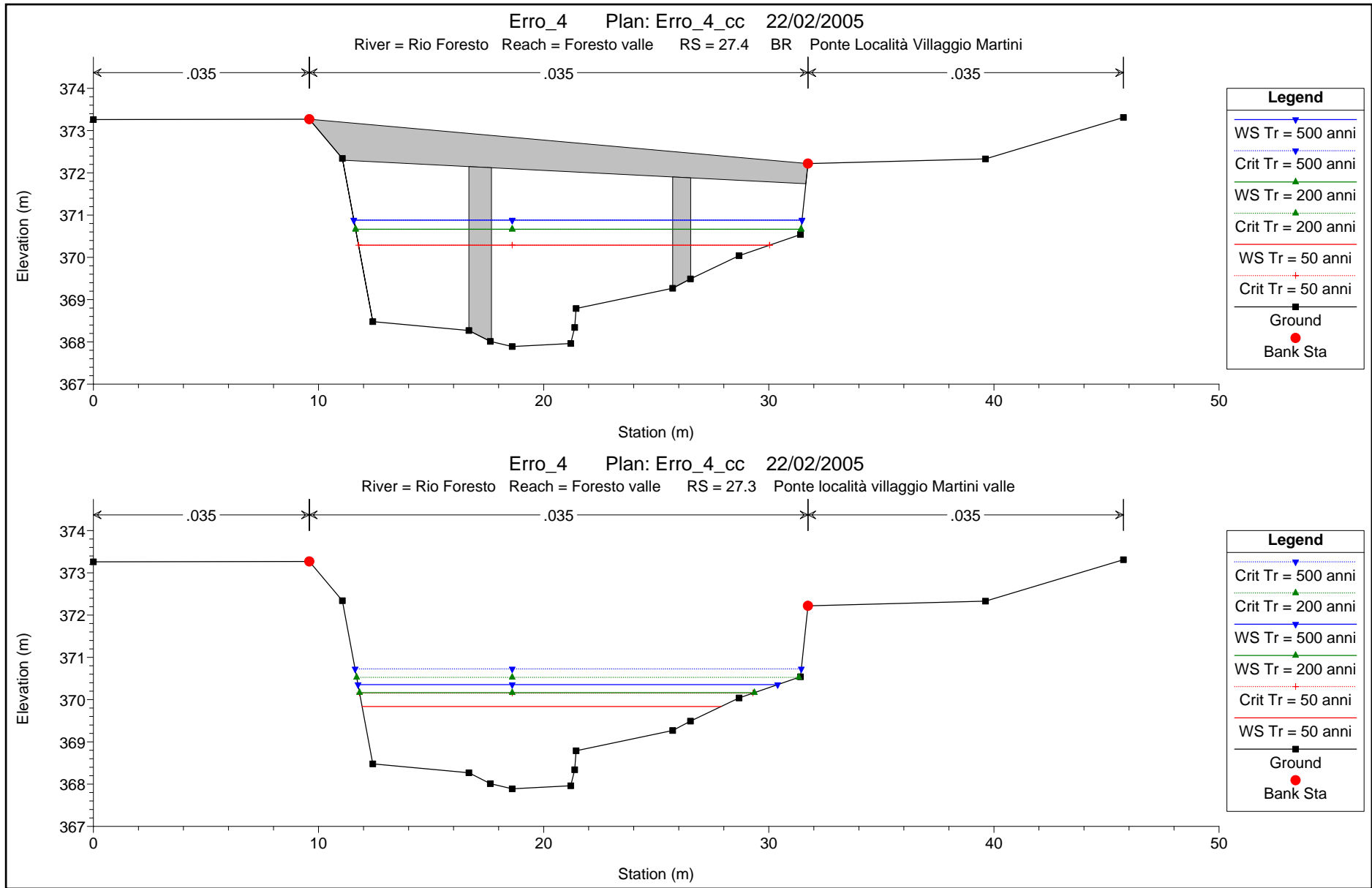


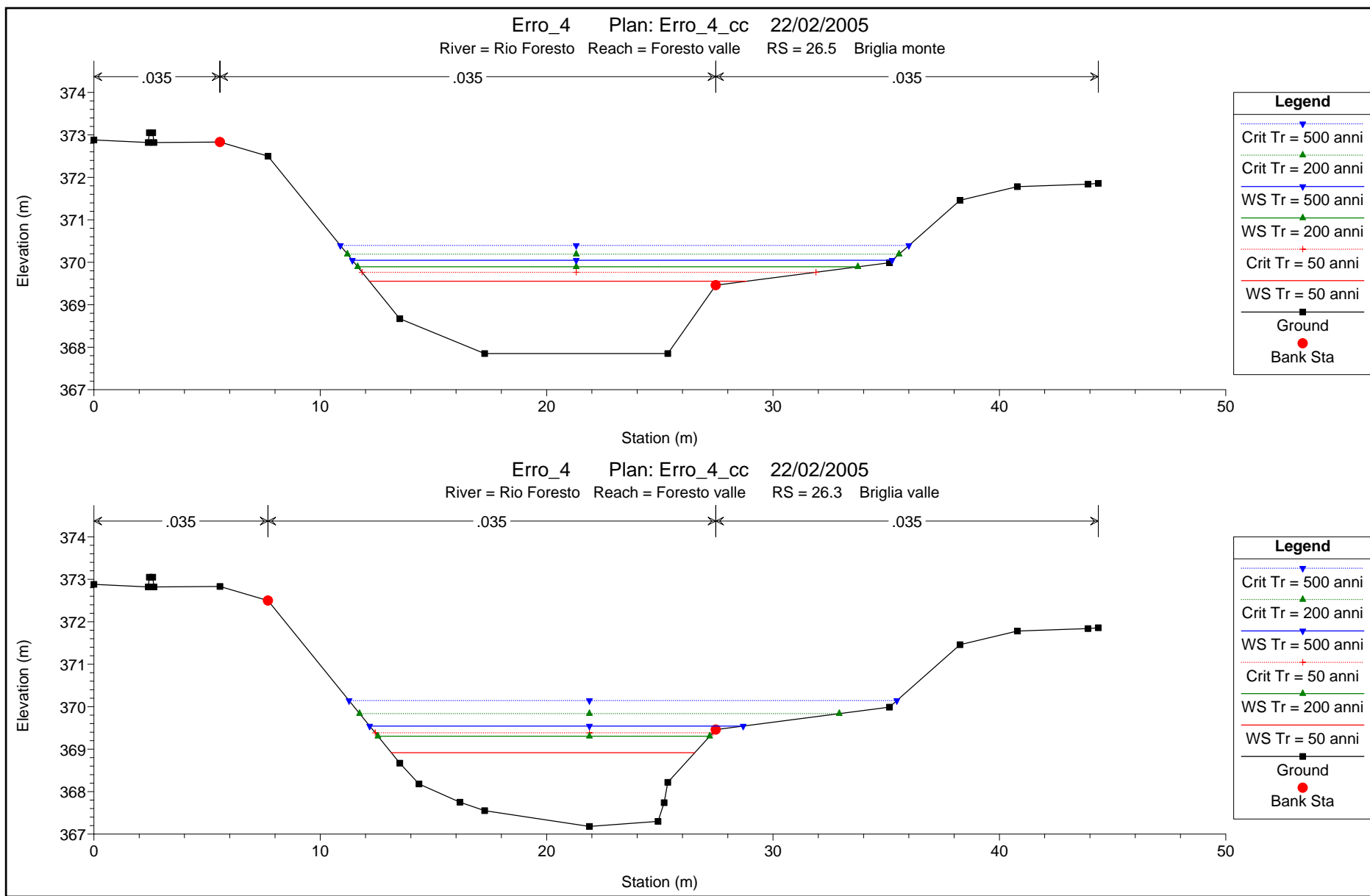


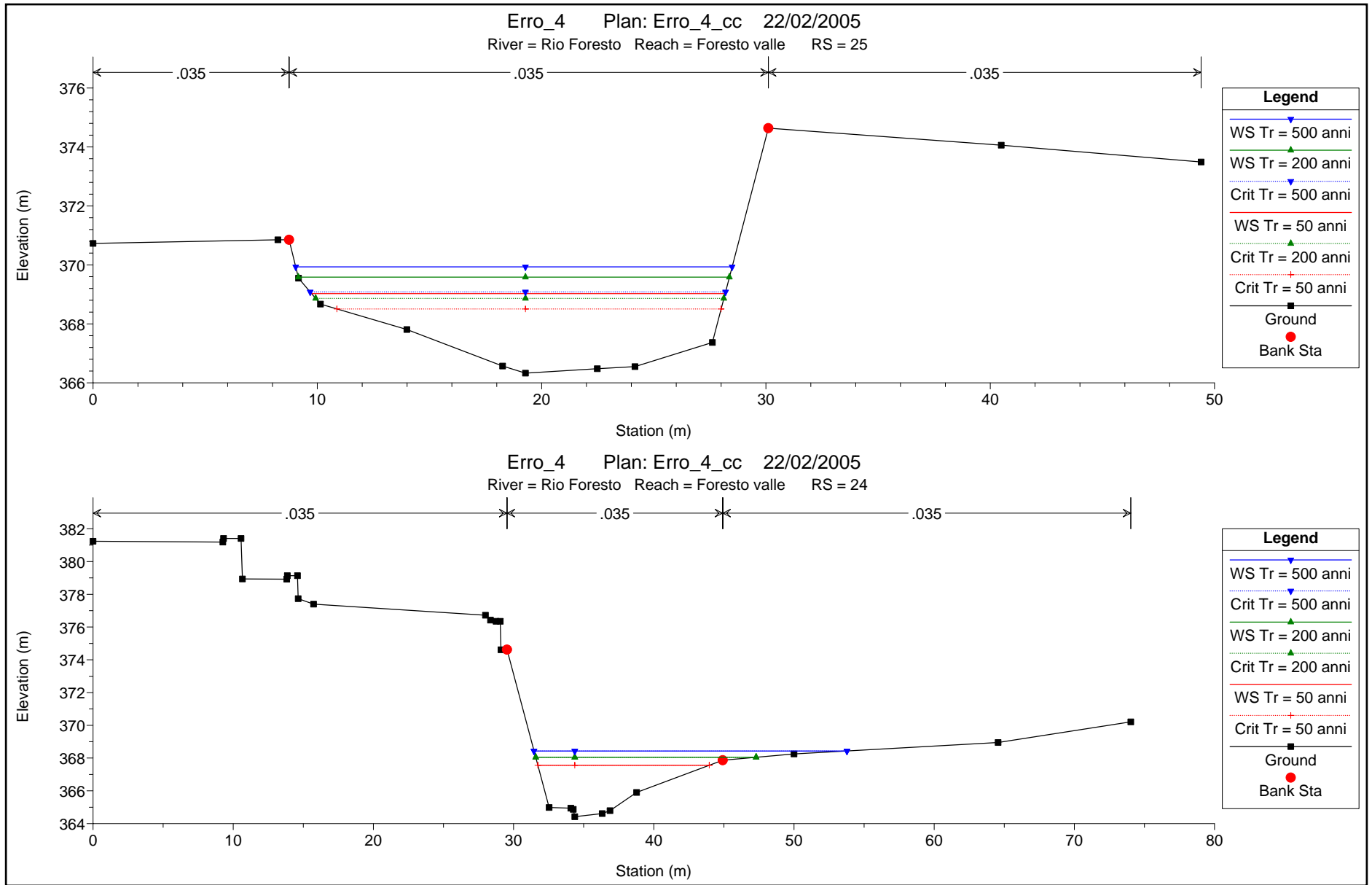


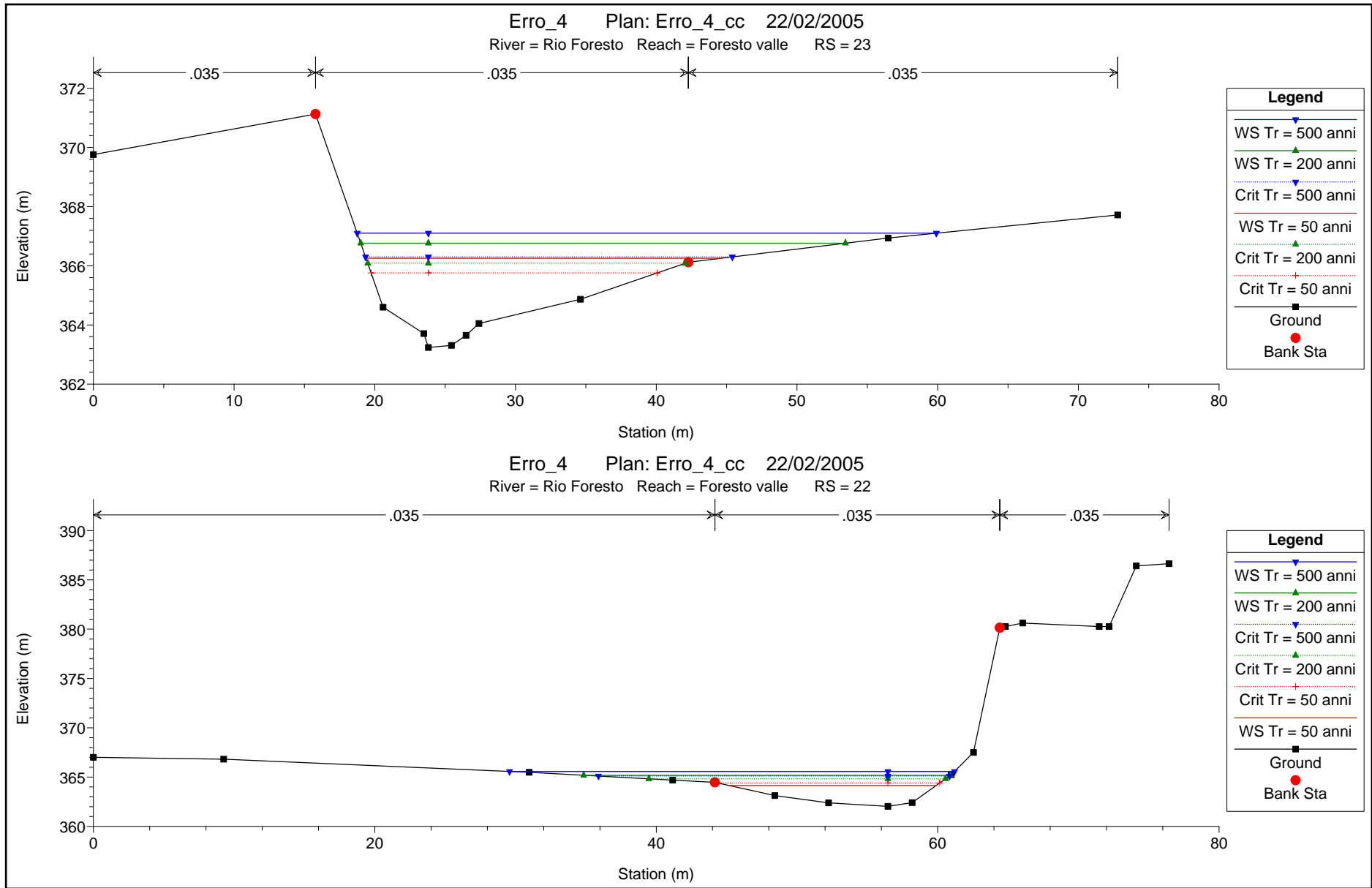


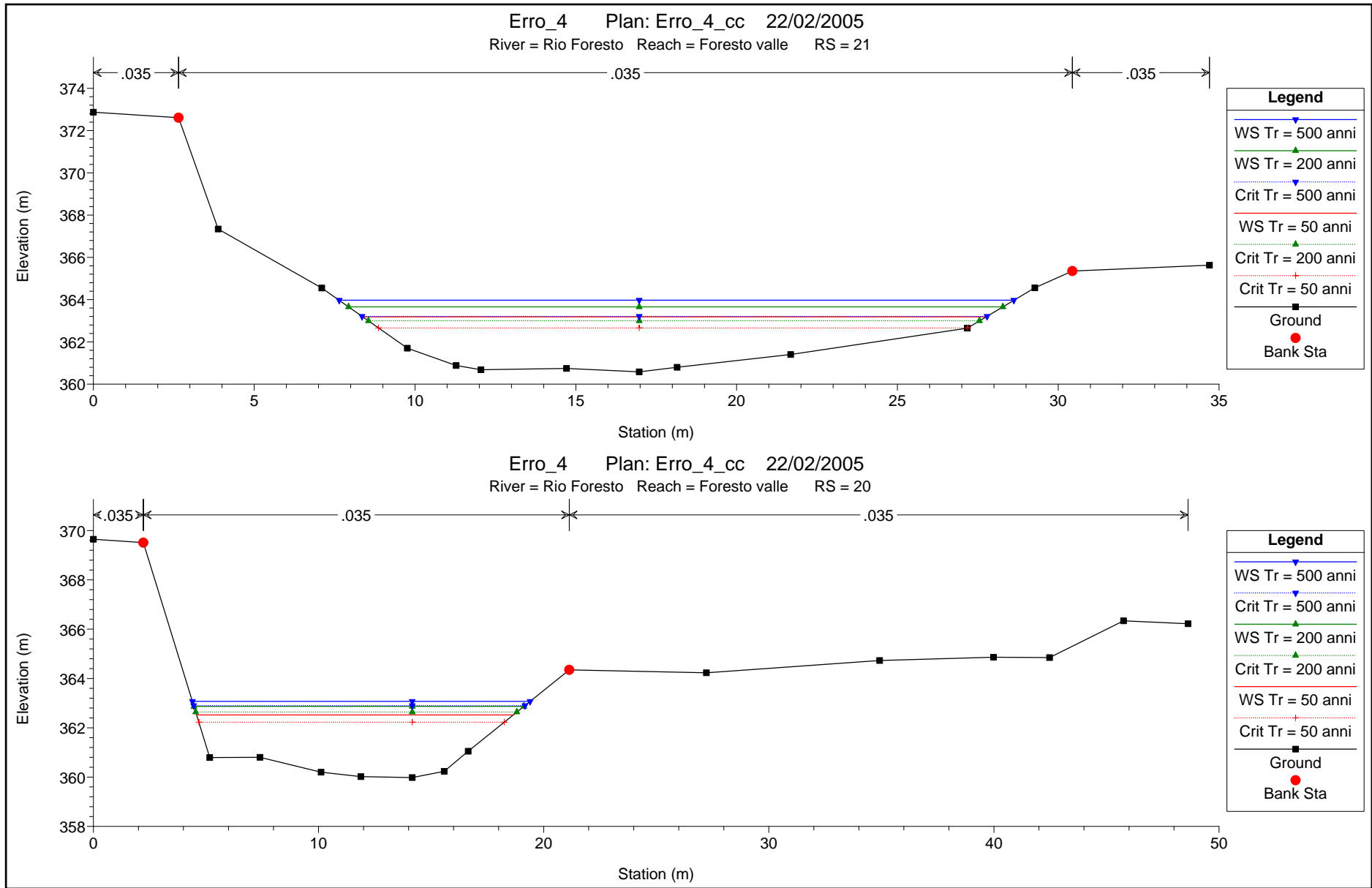


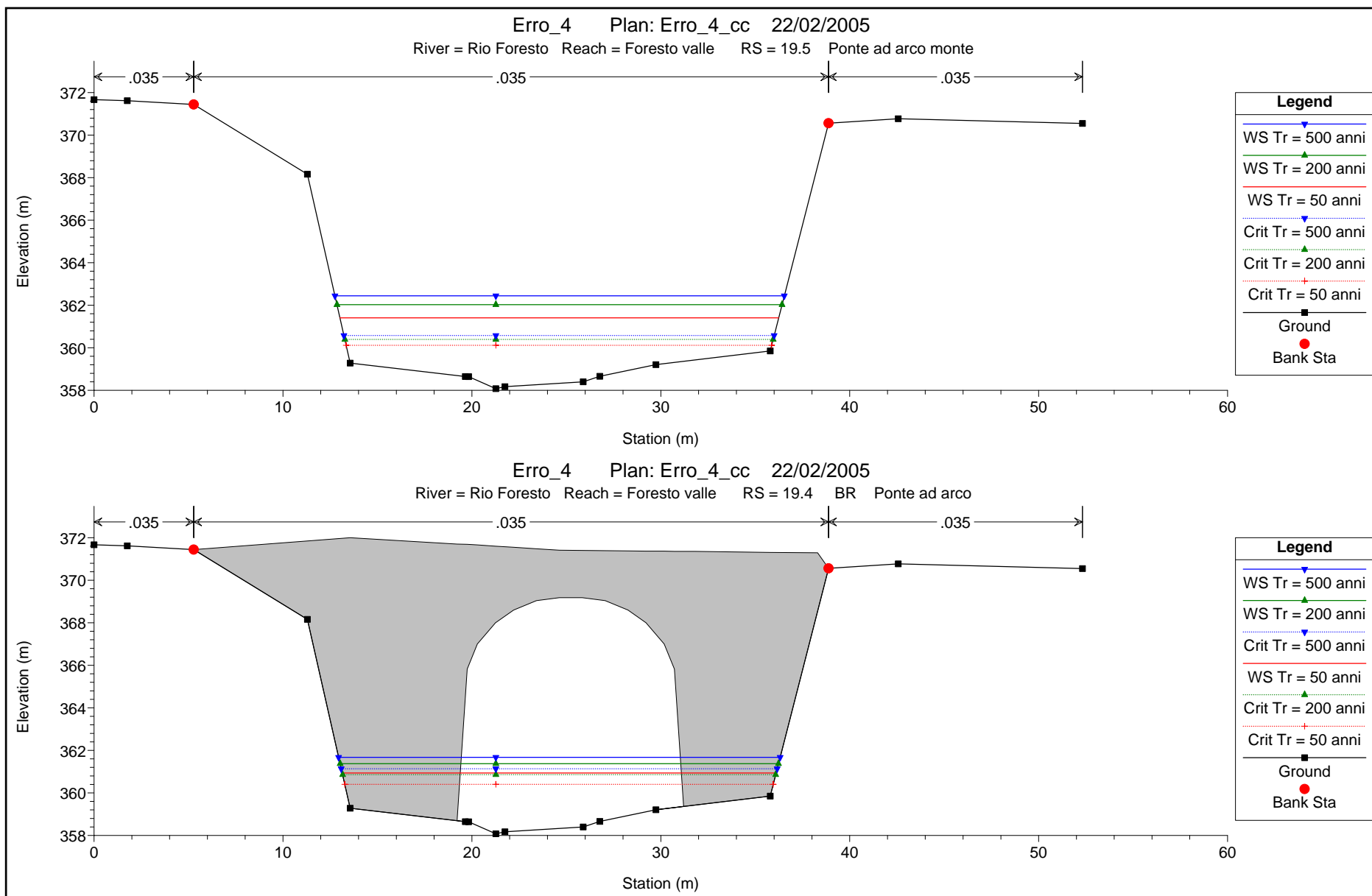


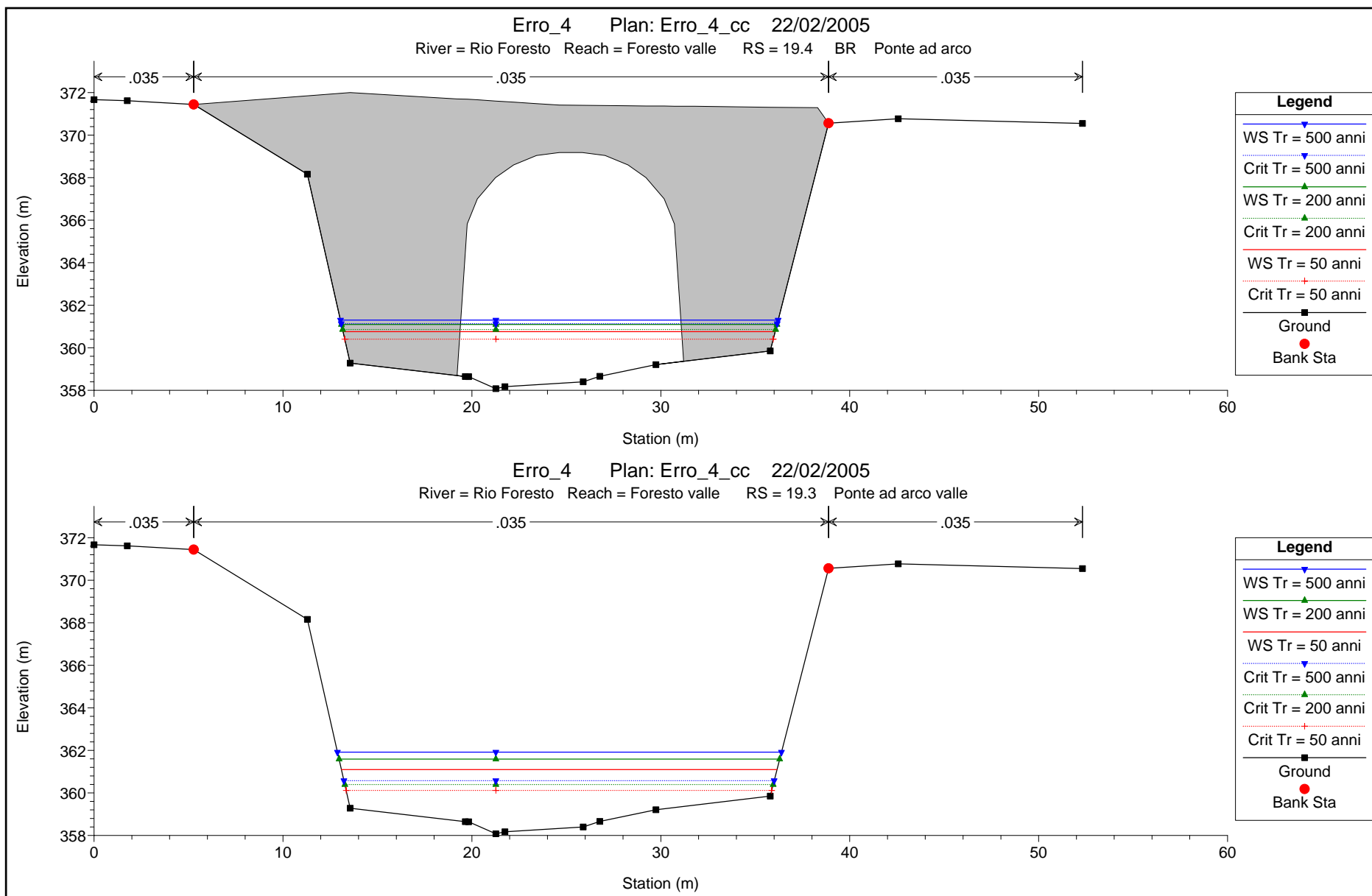


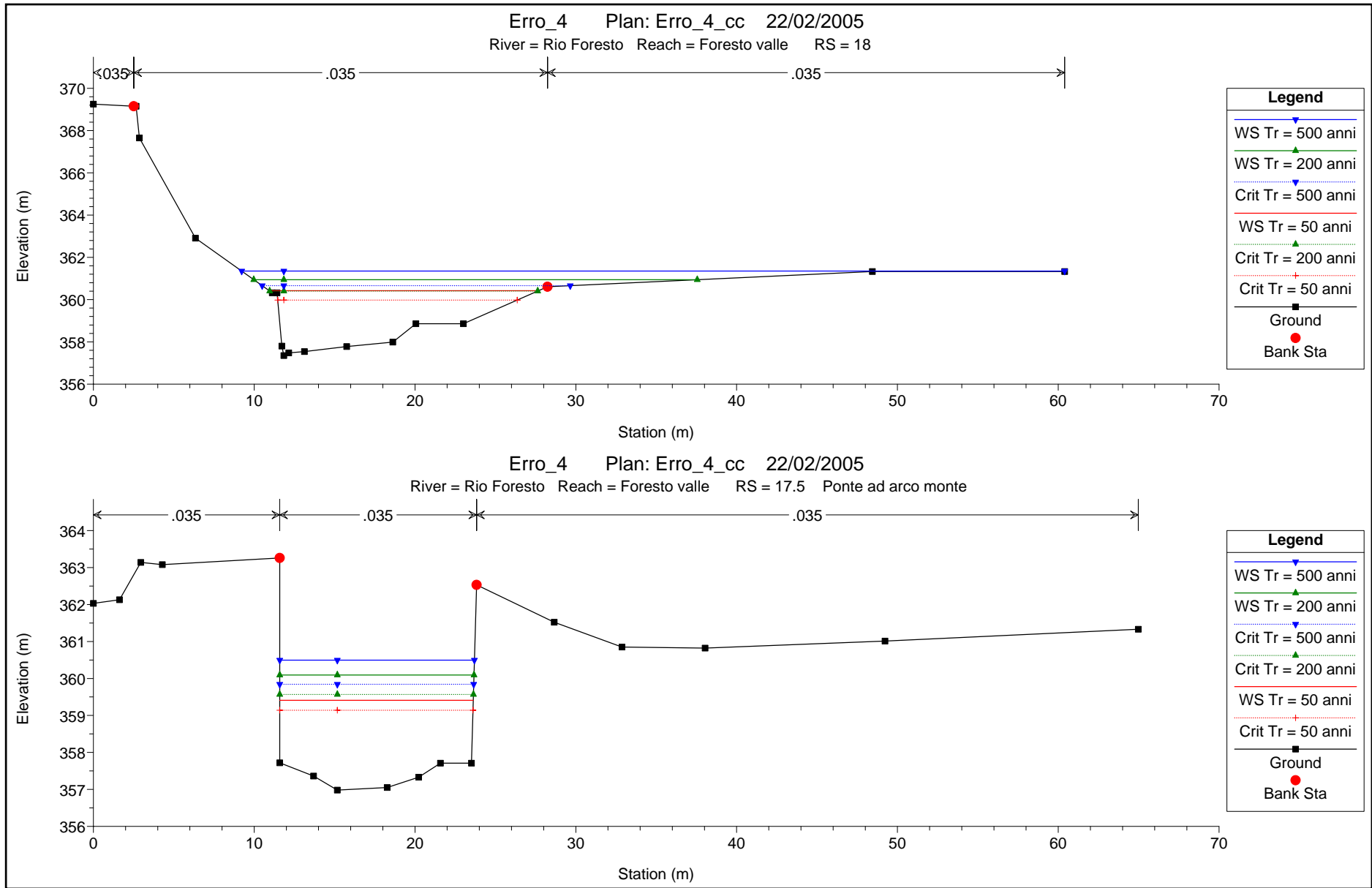


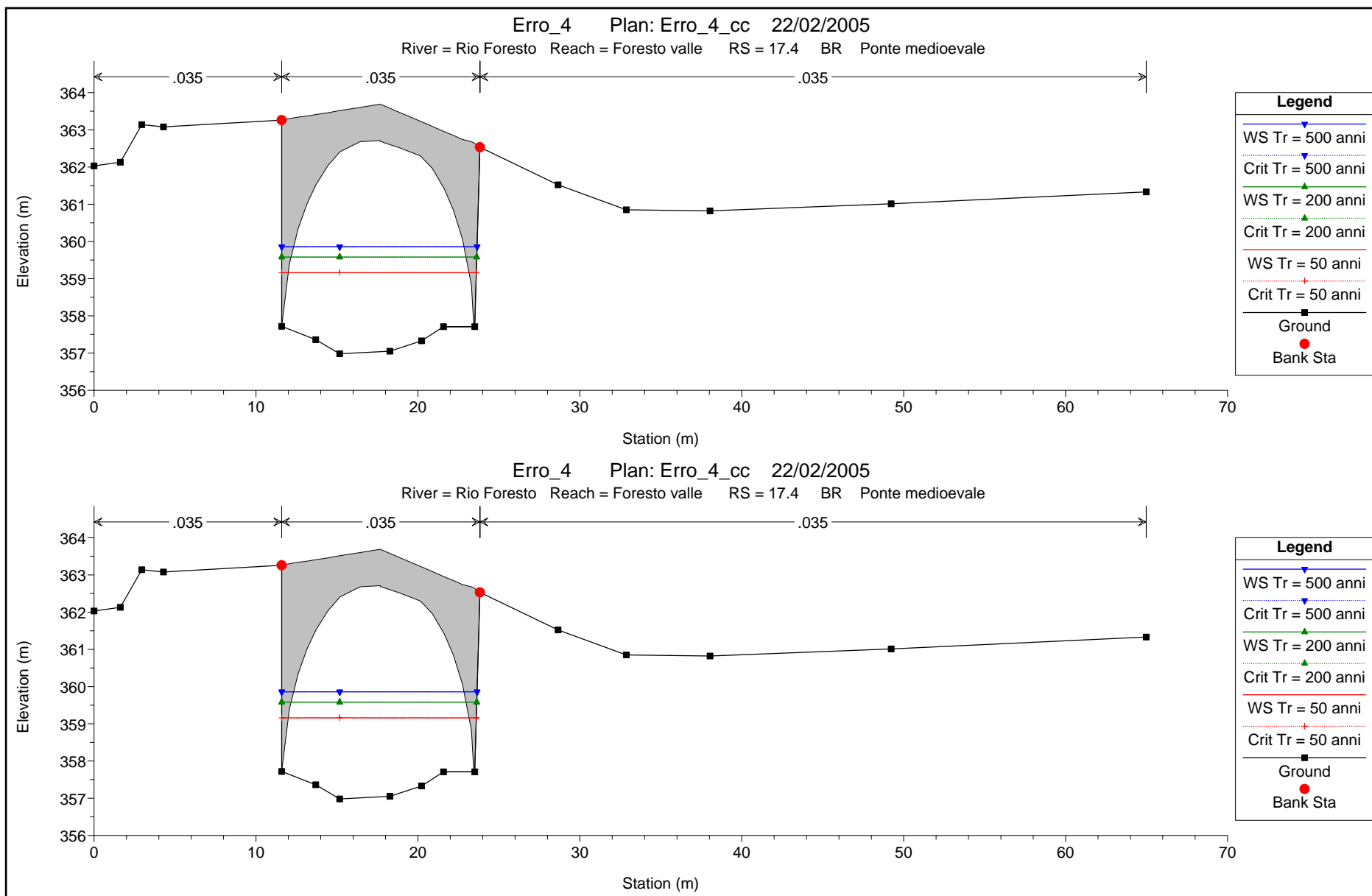


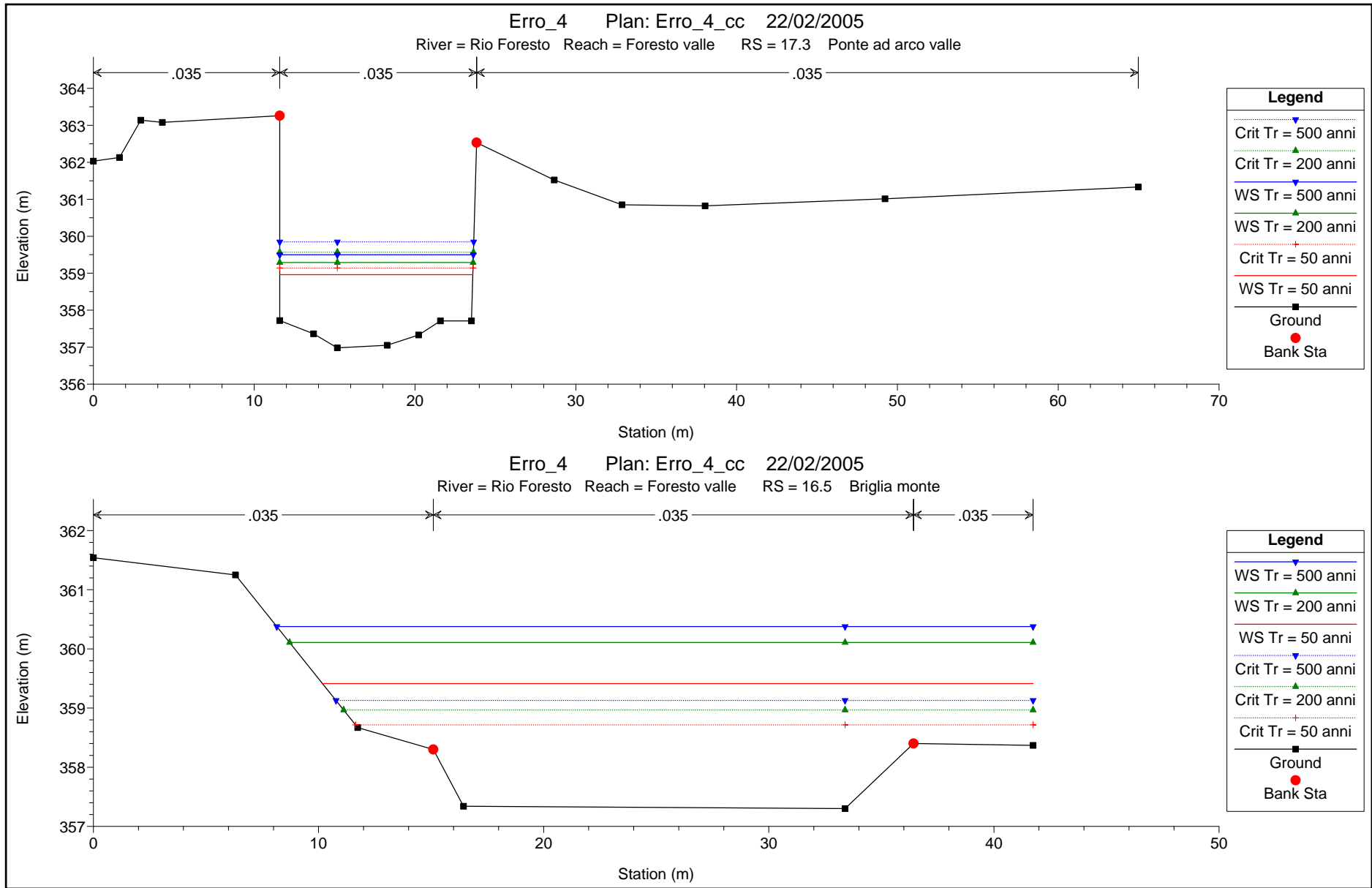


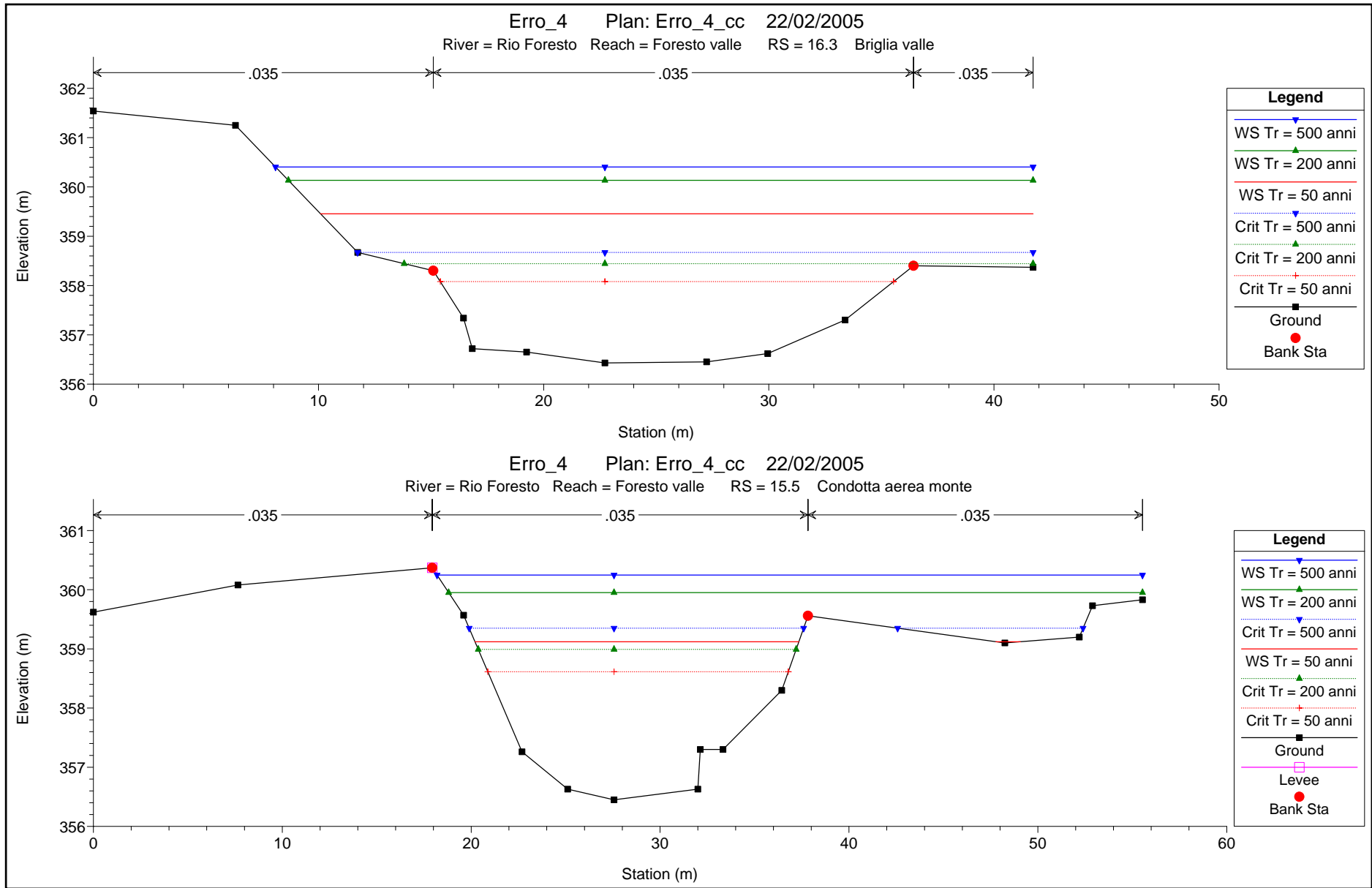


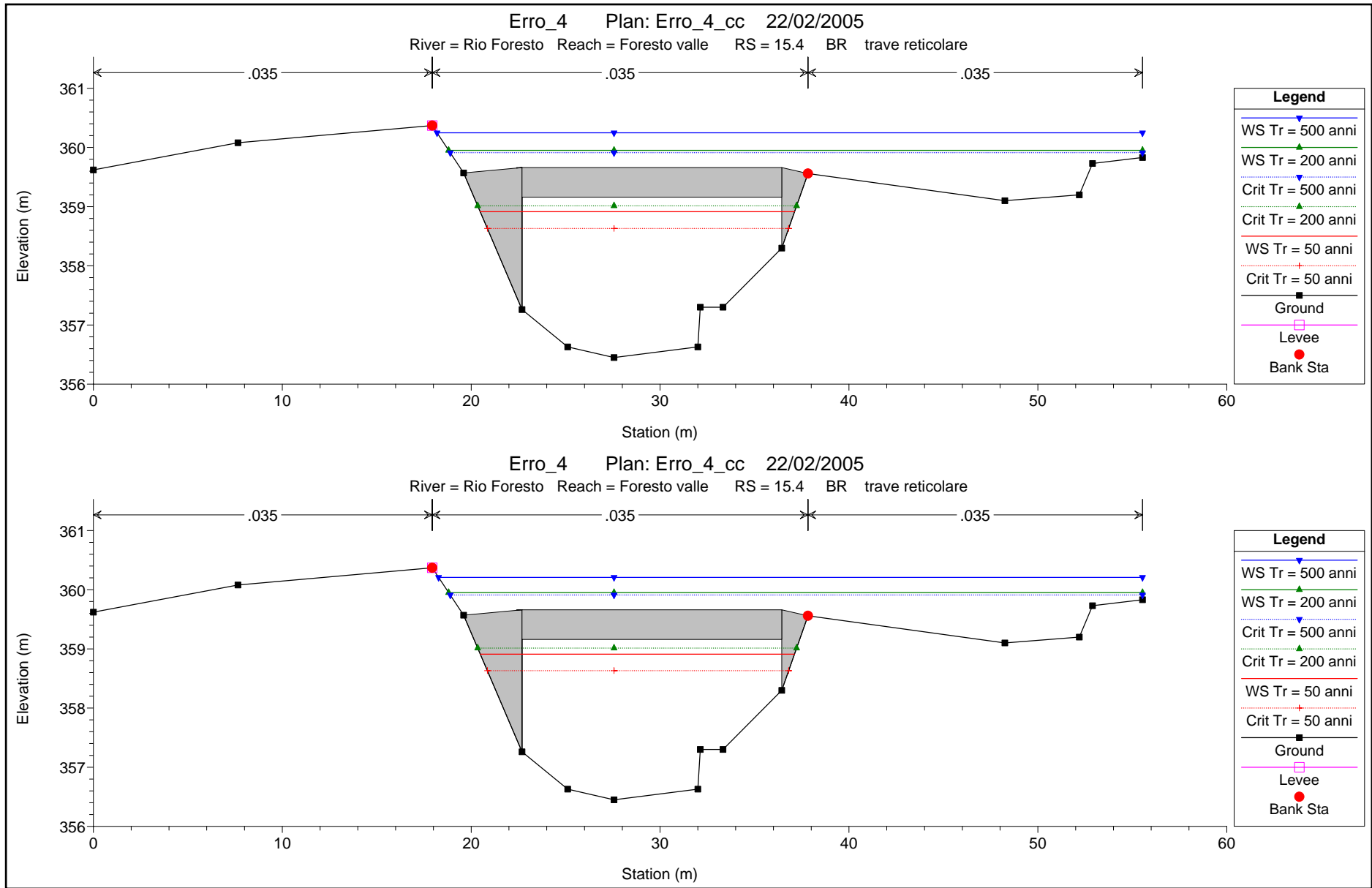


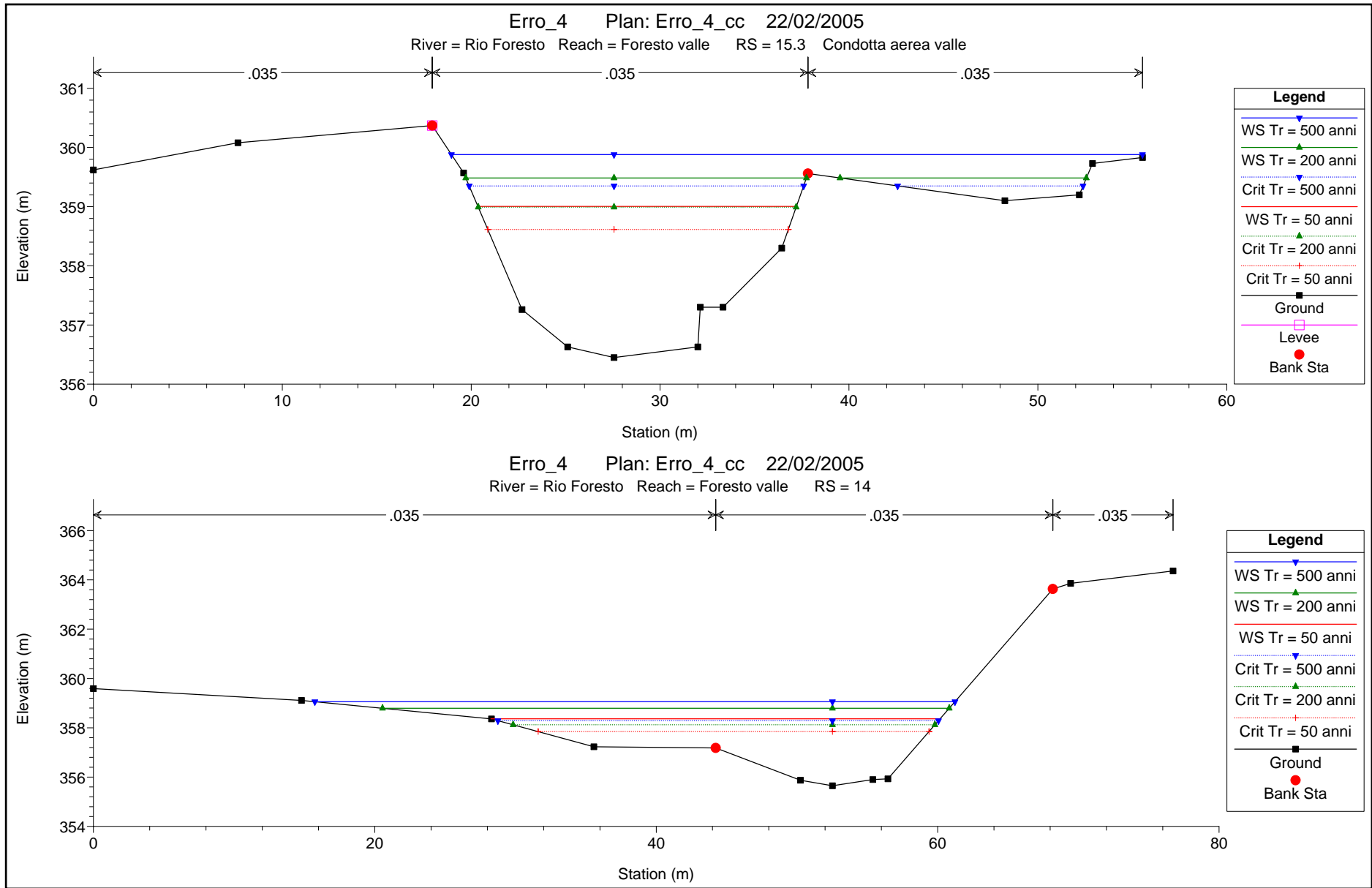


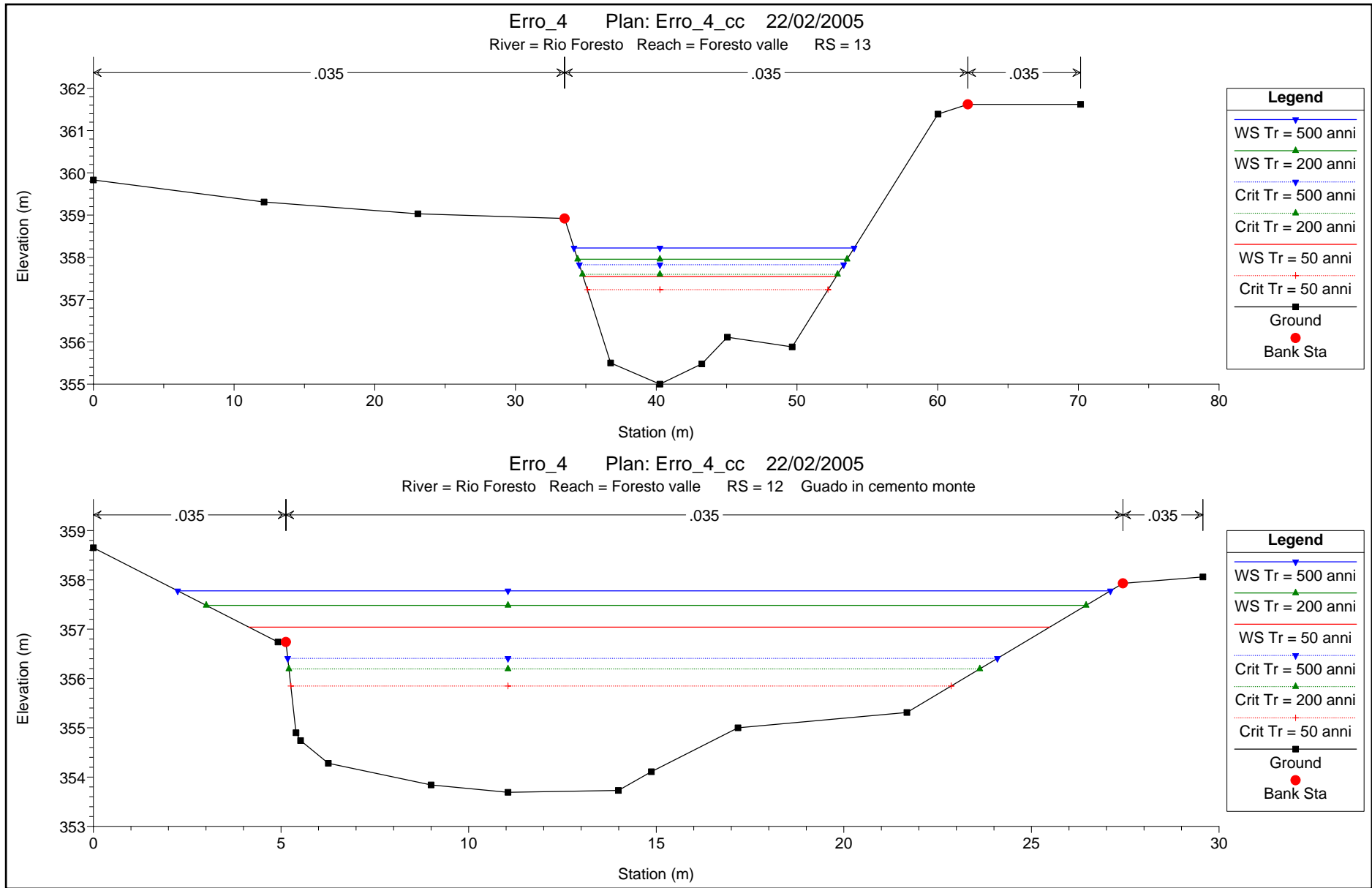


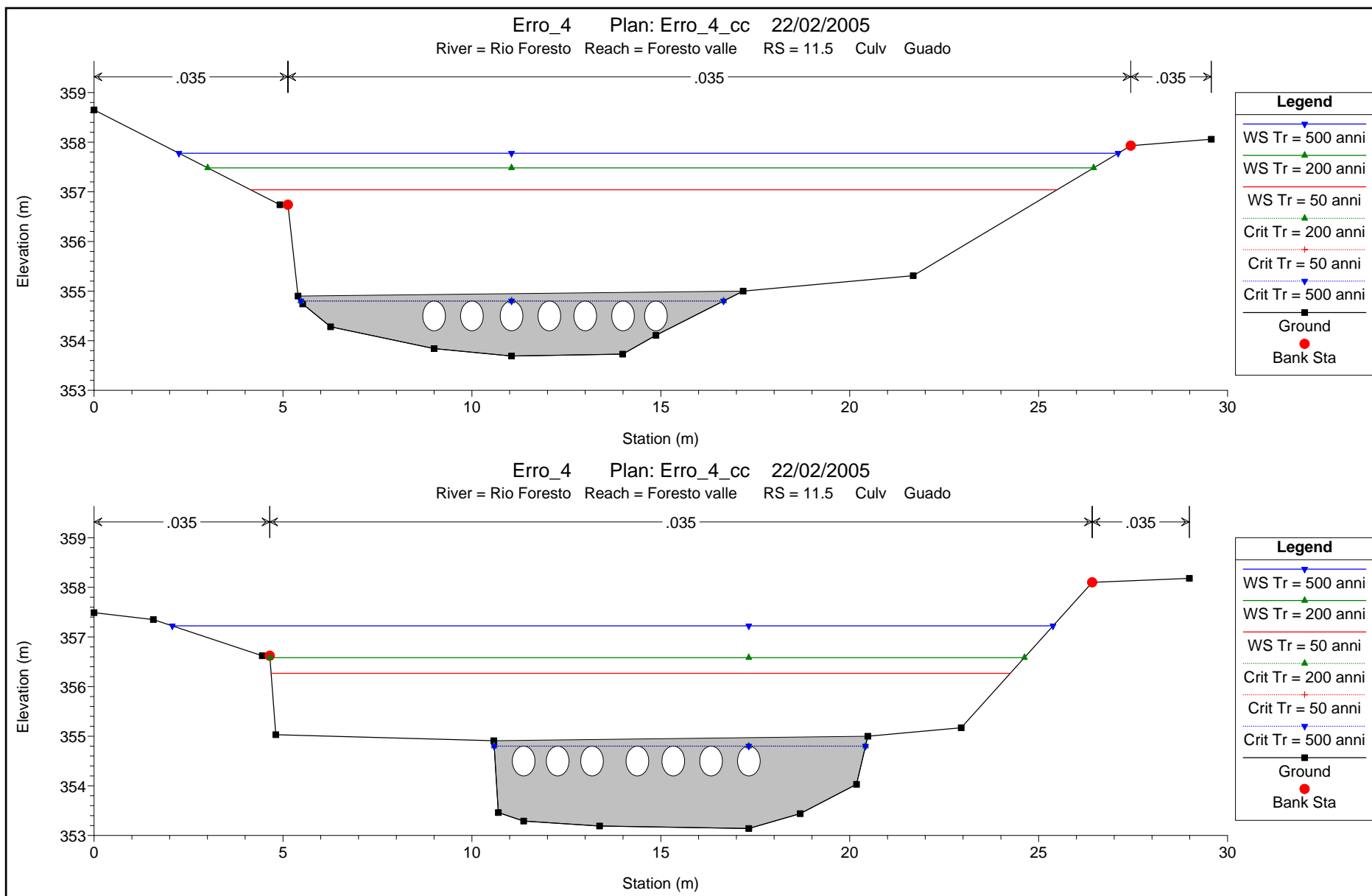


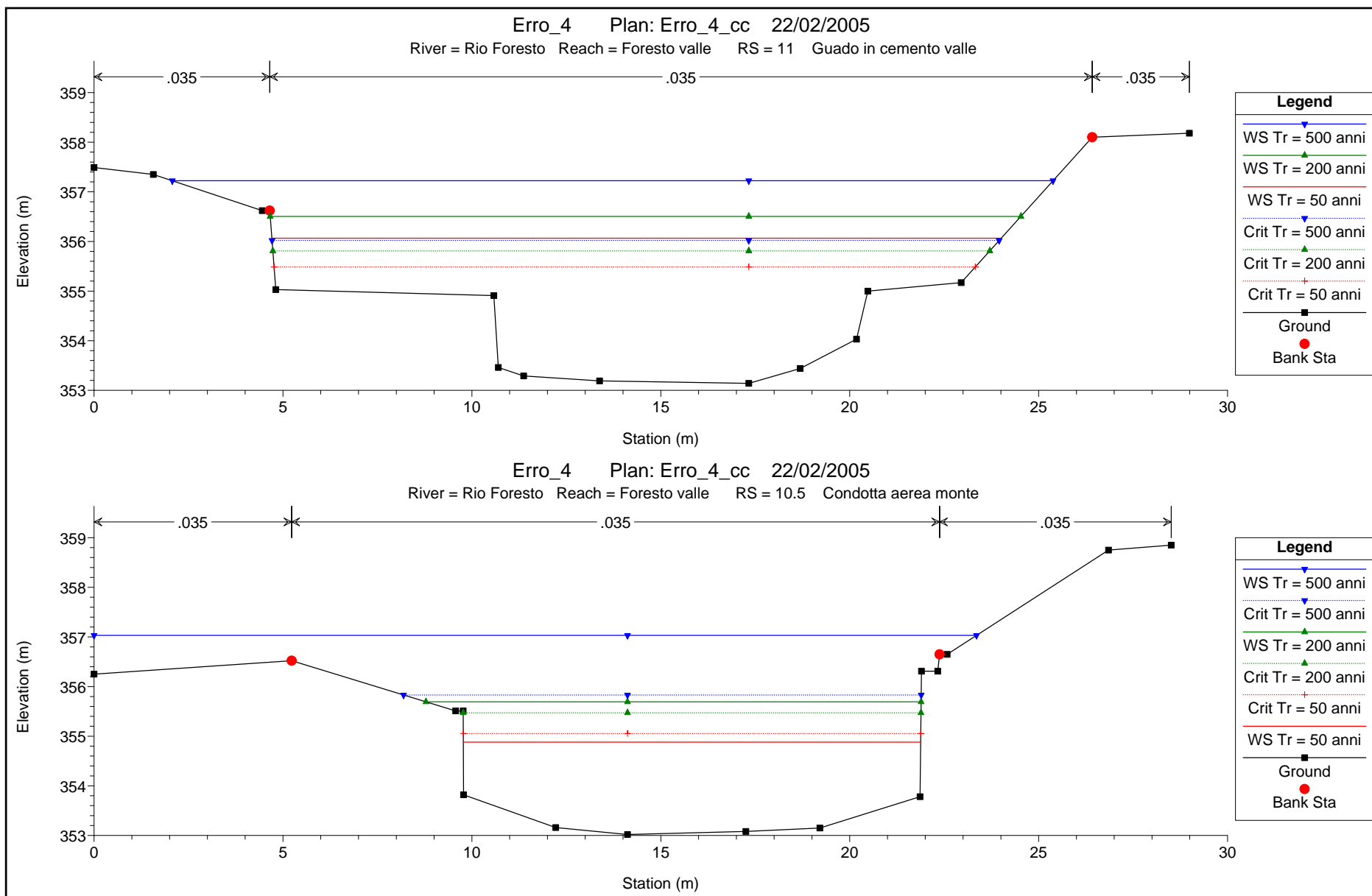


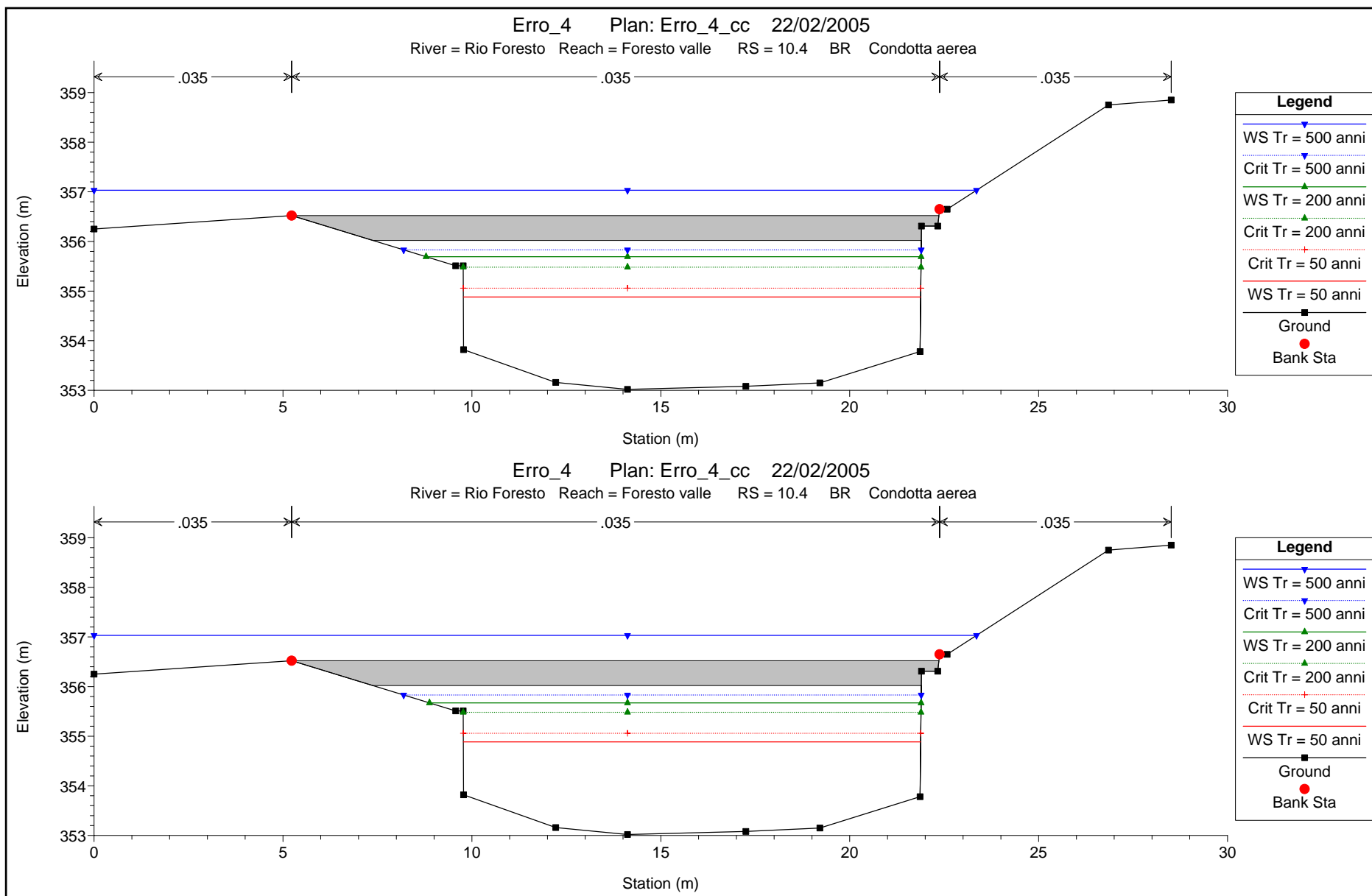


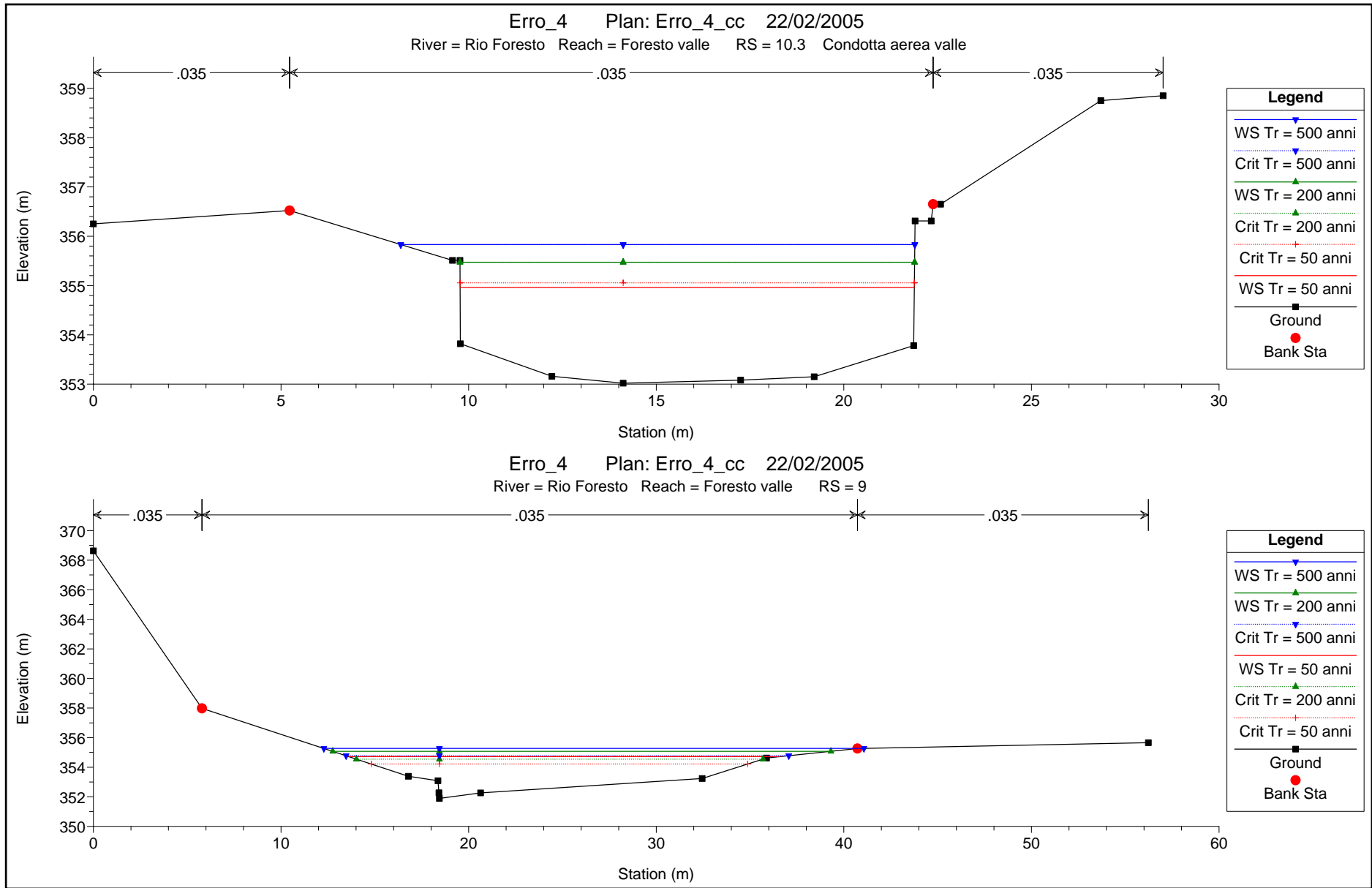


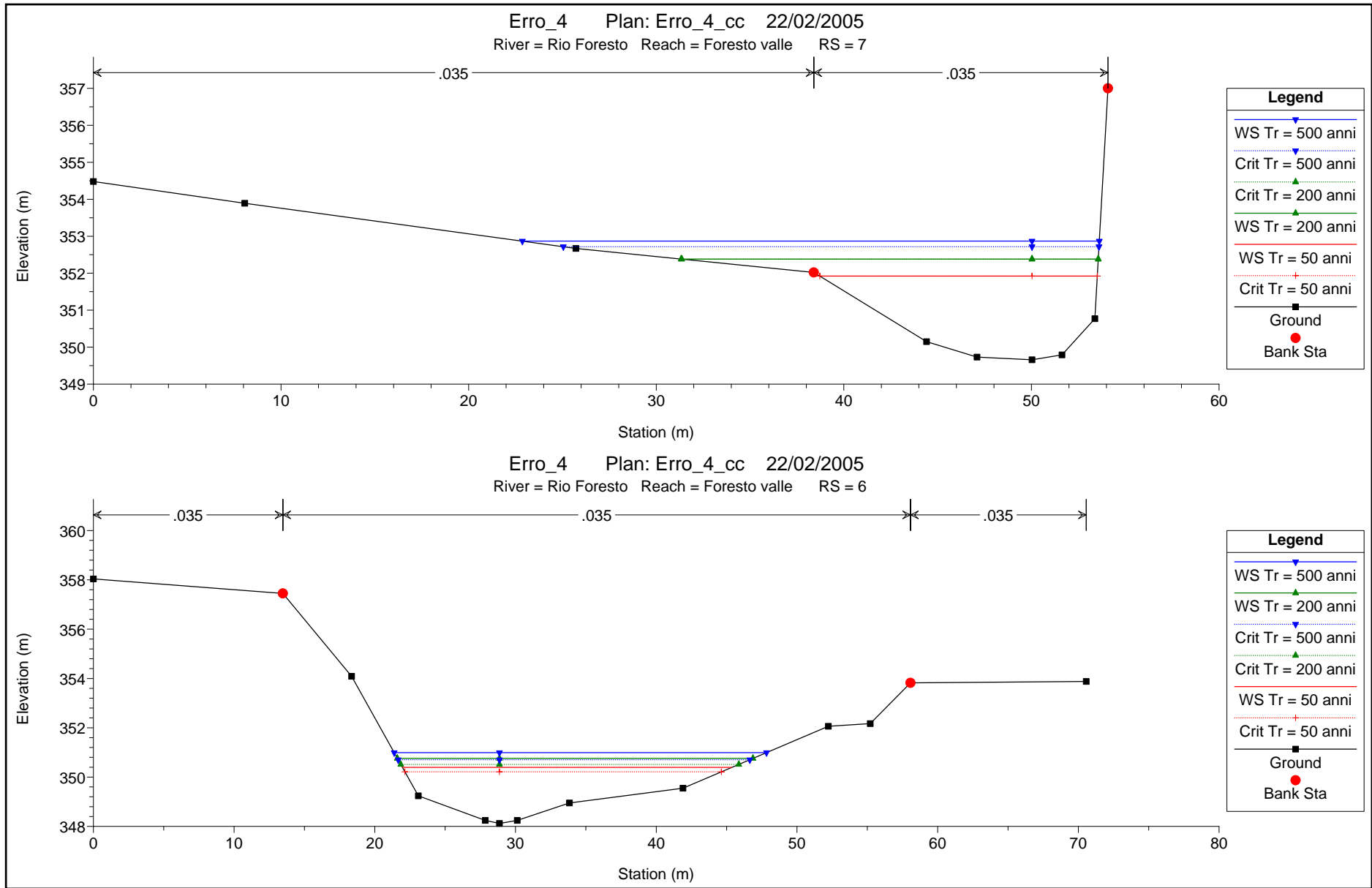


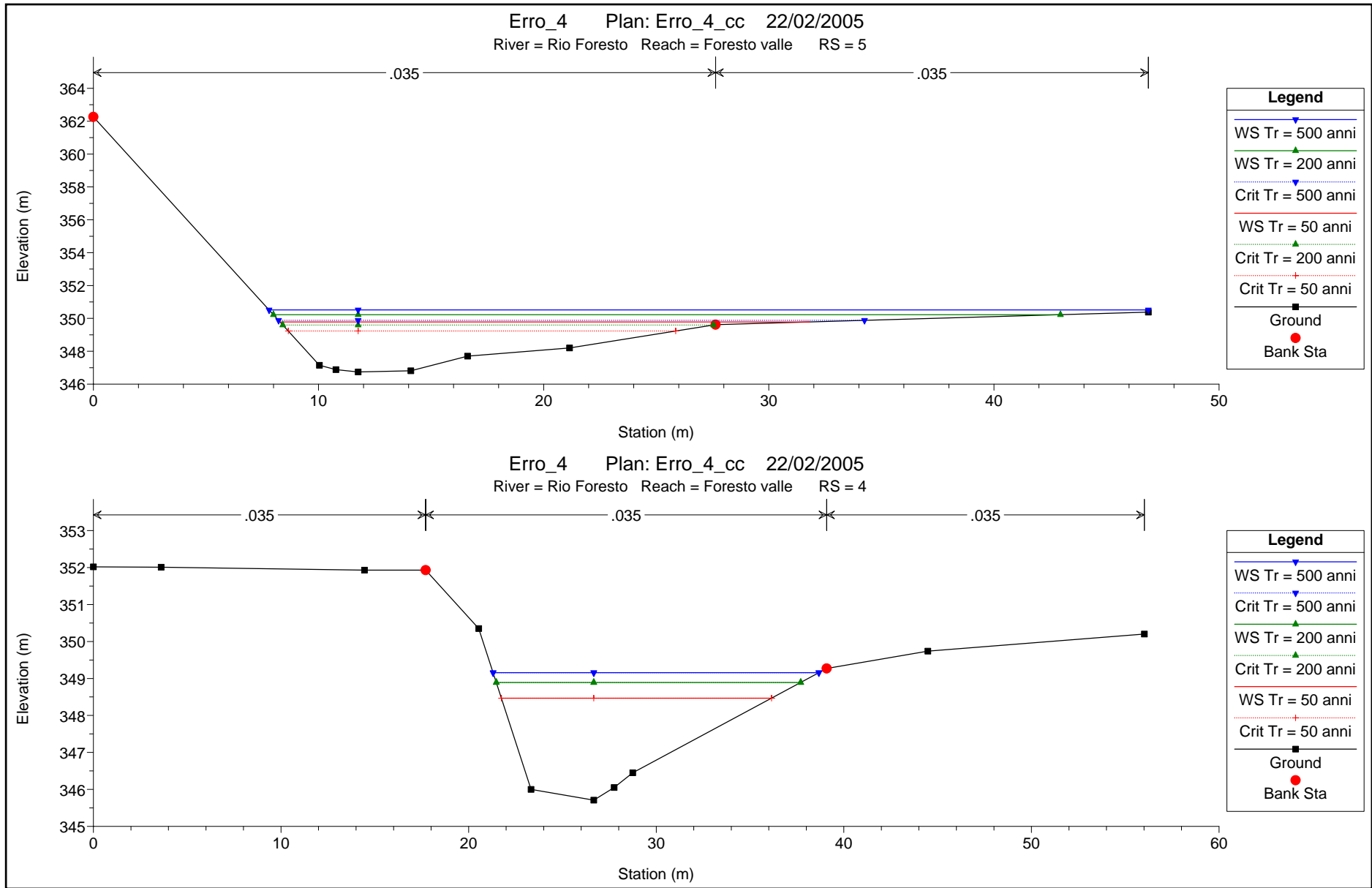


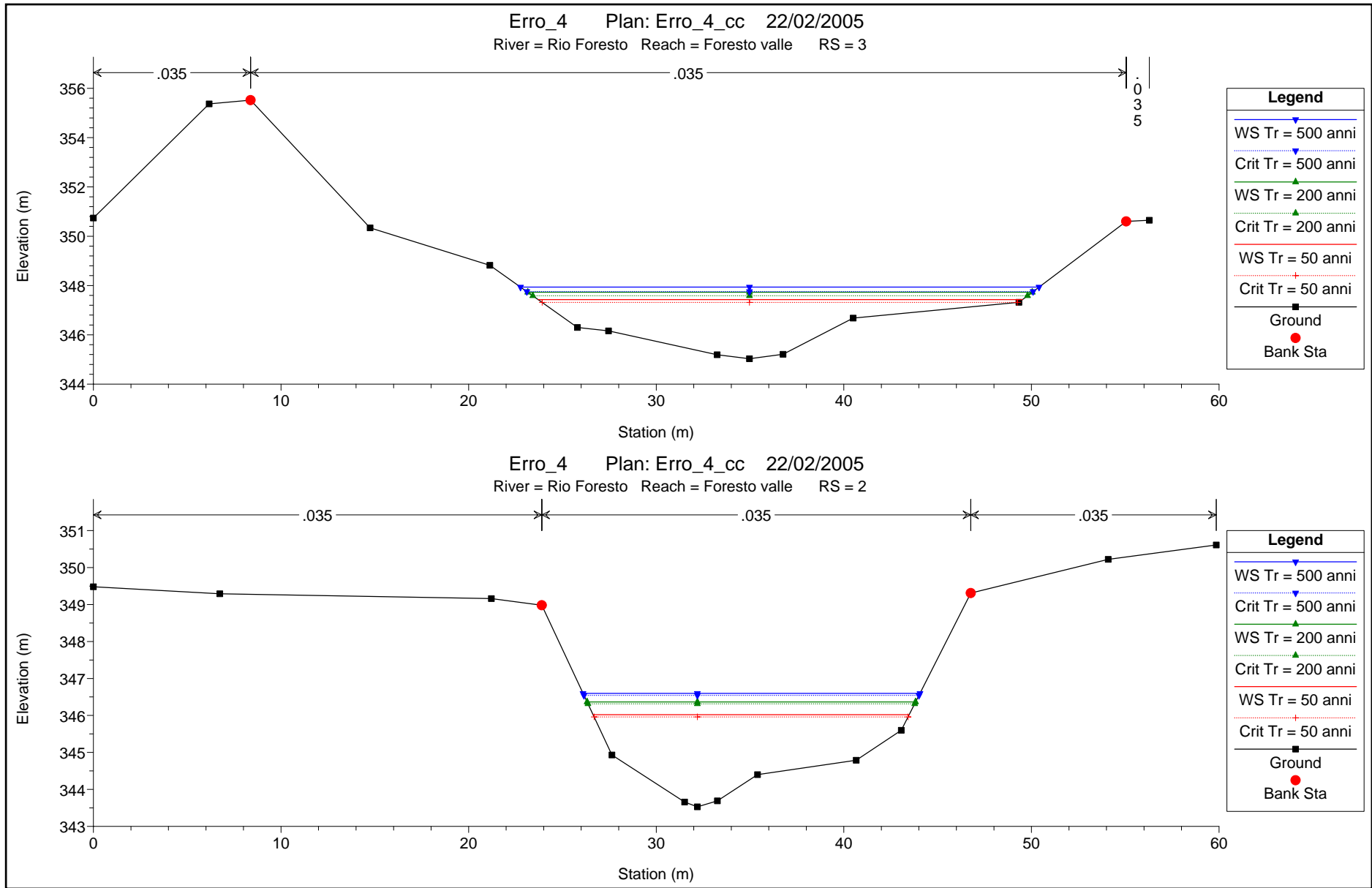


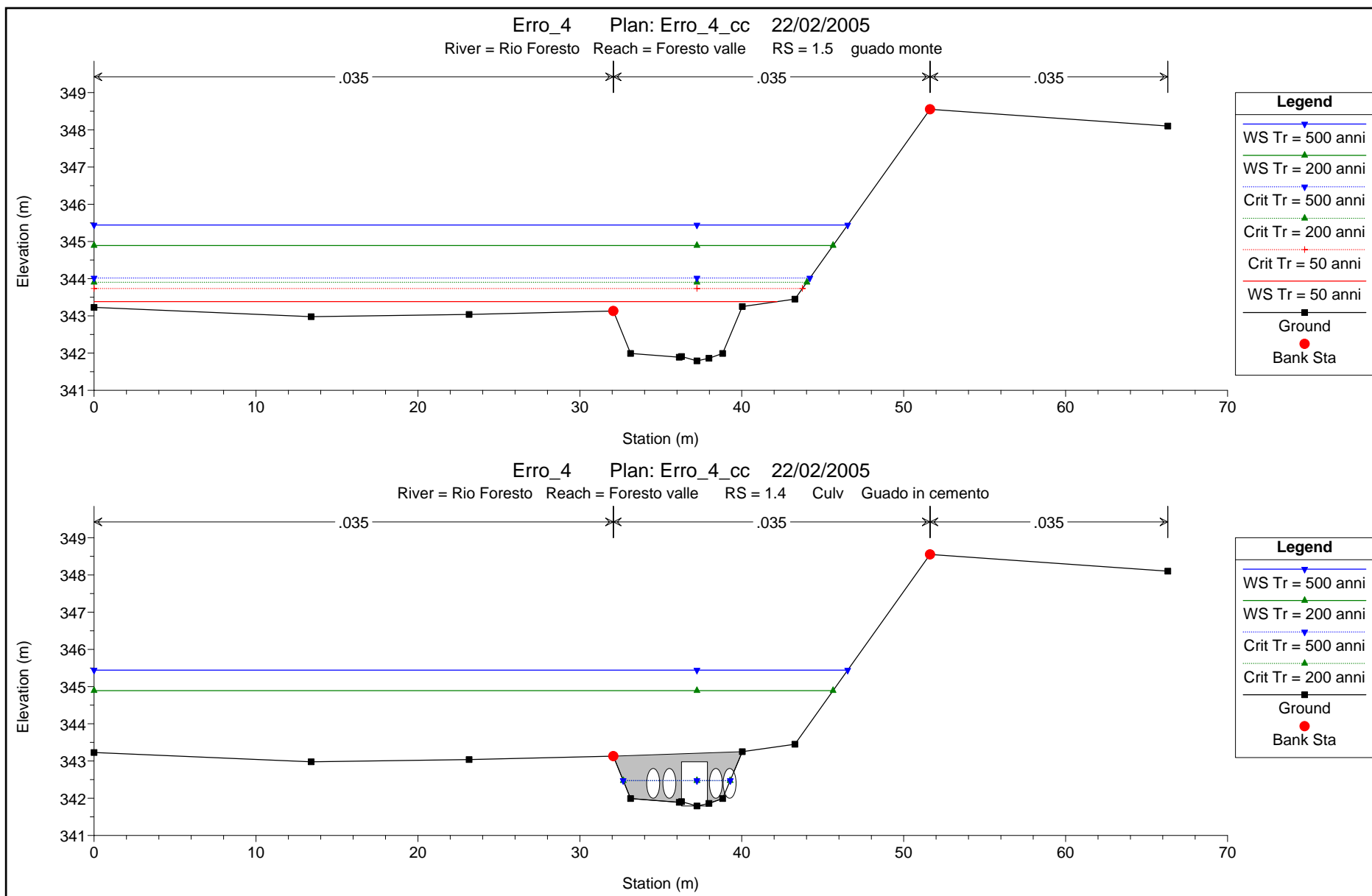


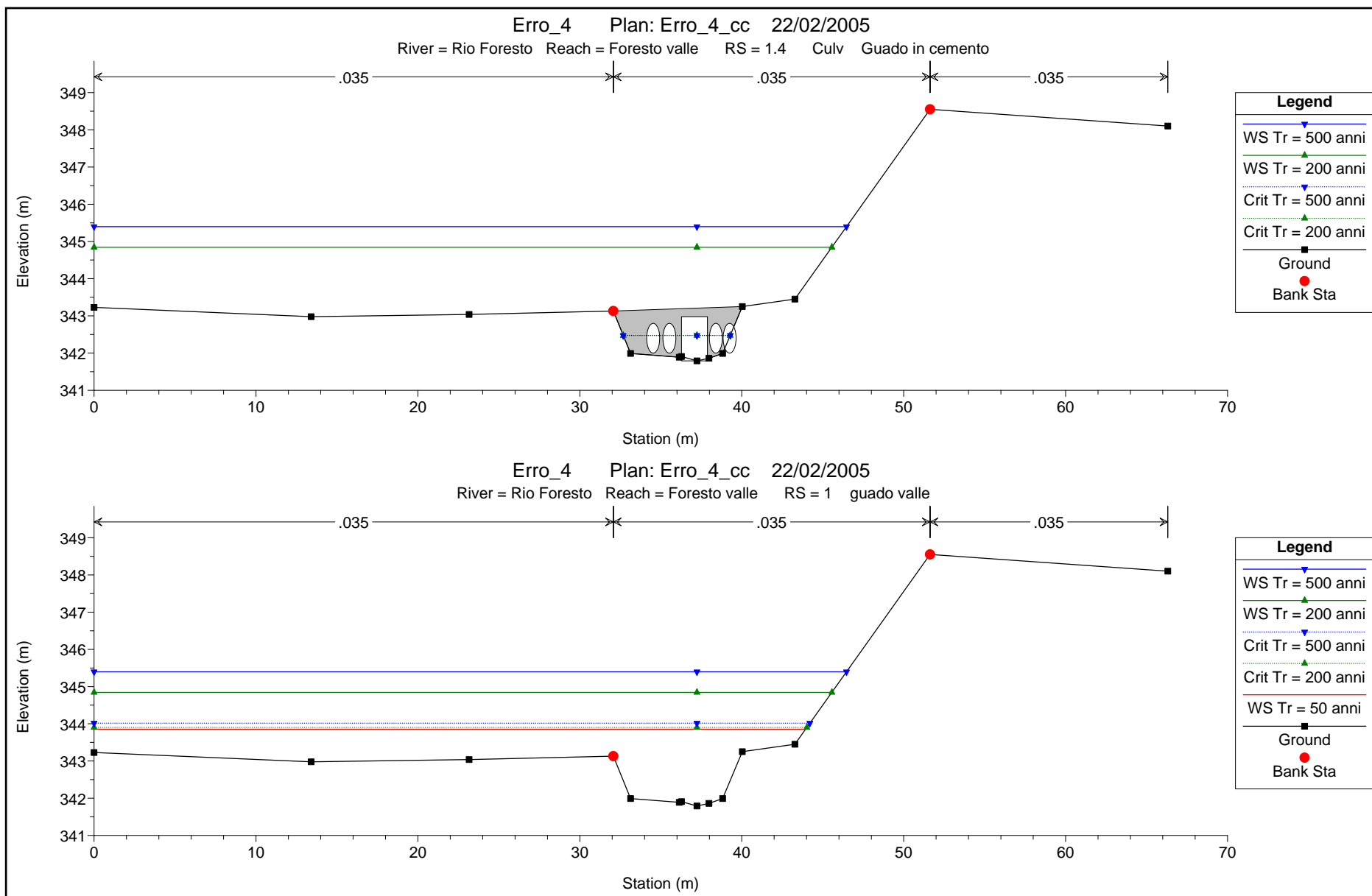








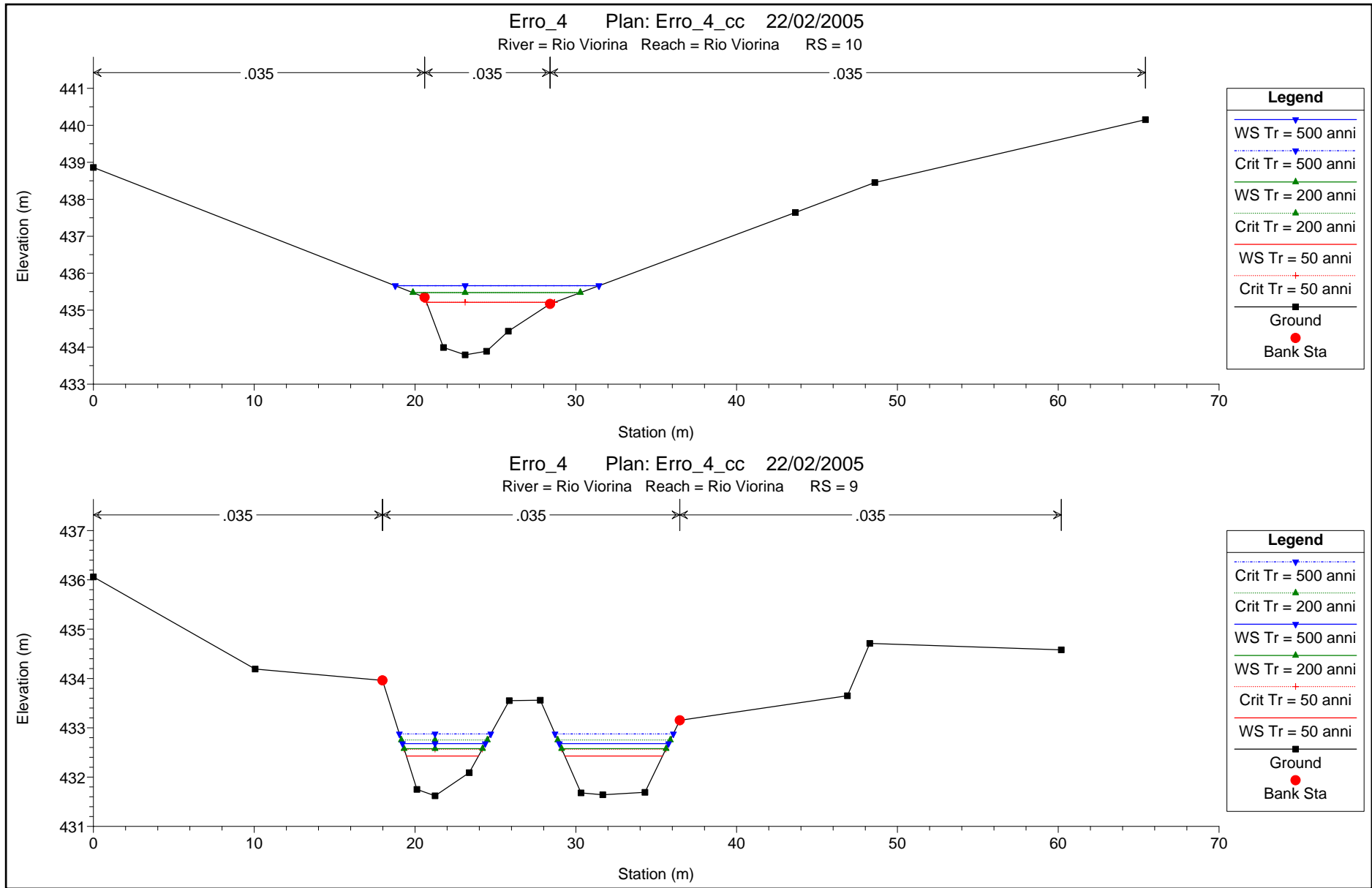


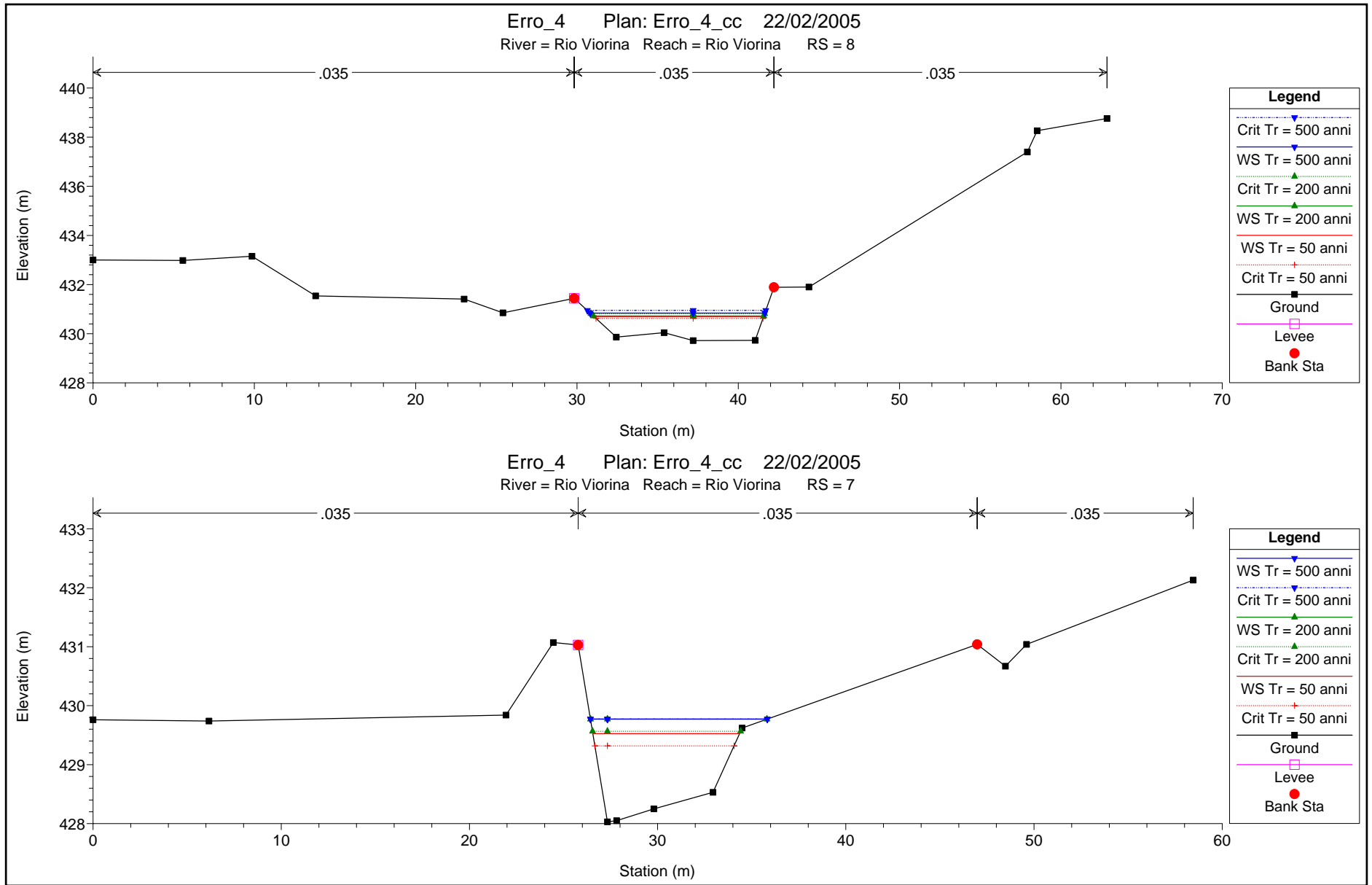


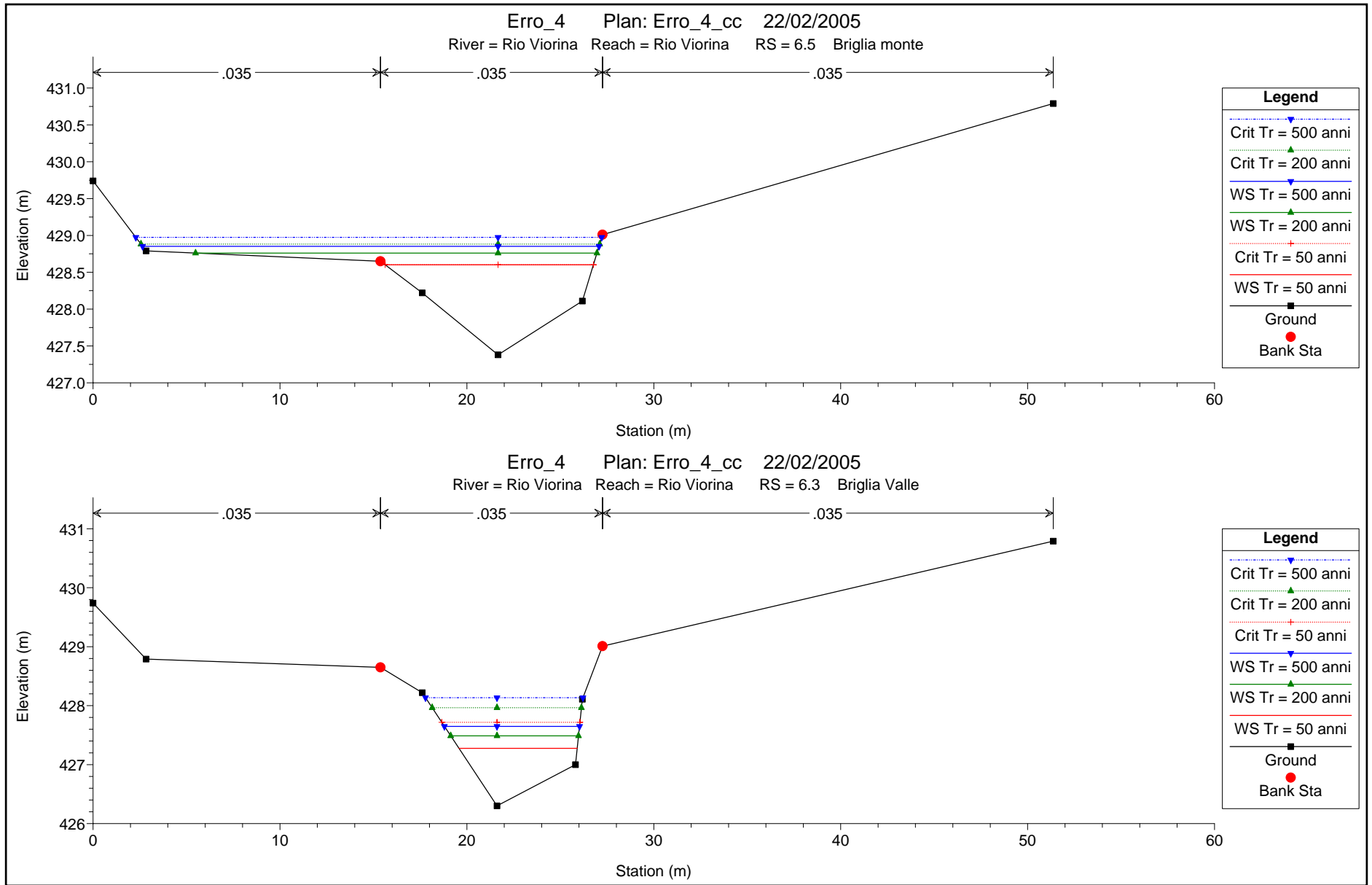
SEZIONI IDRAULICHE

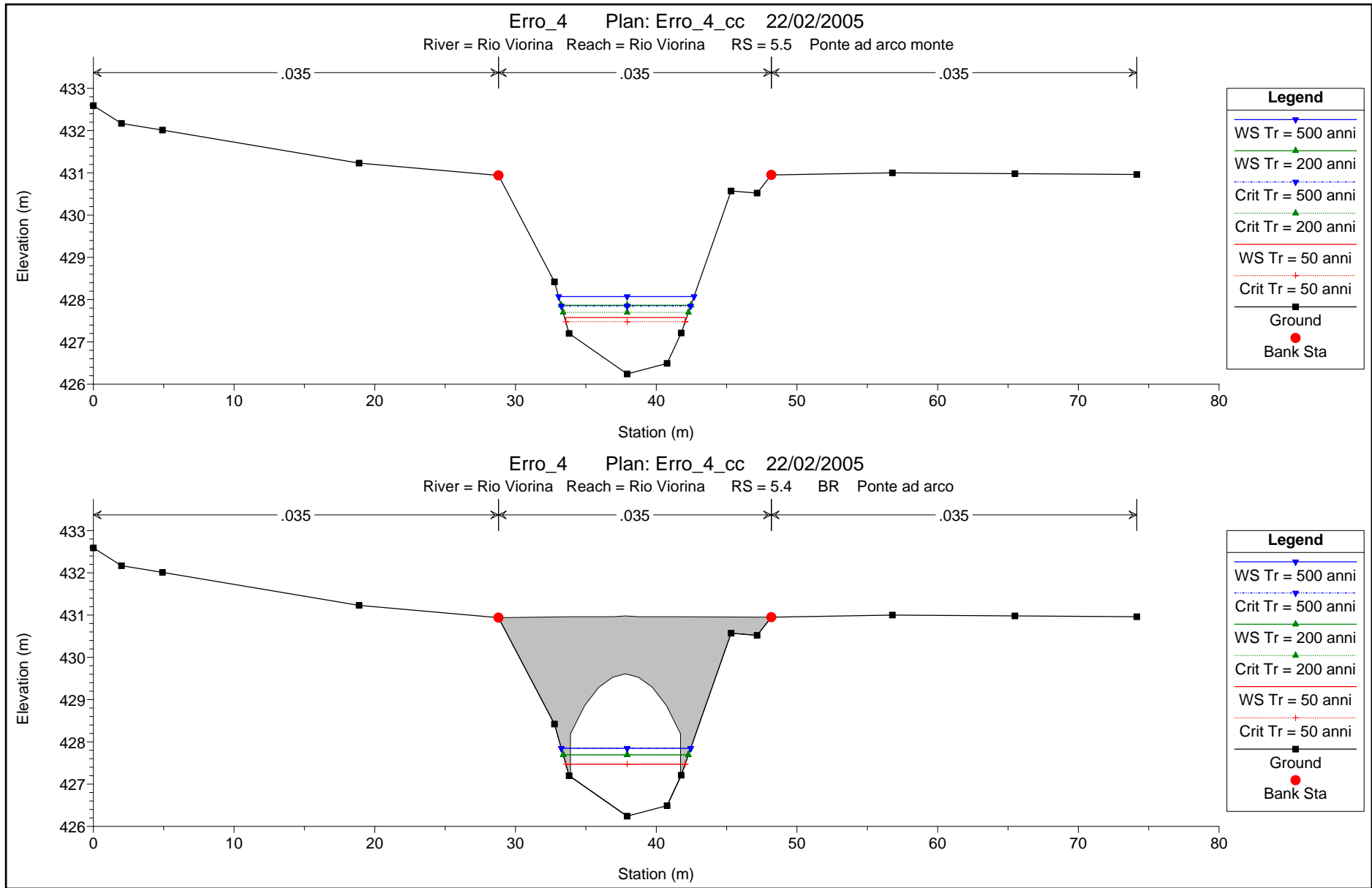
TRATTO ERRO_4

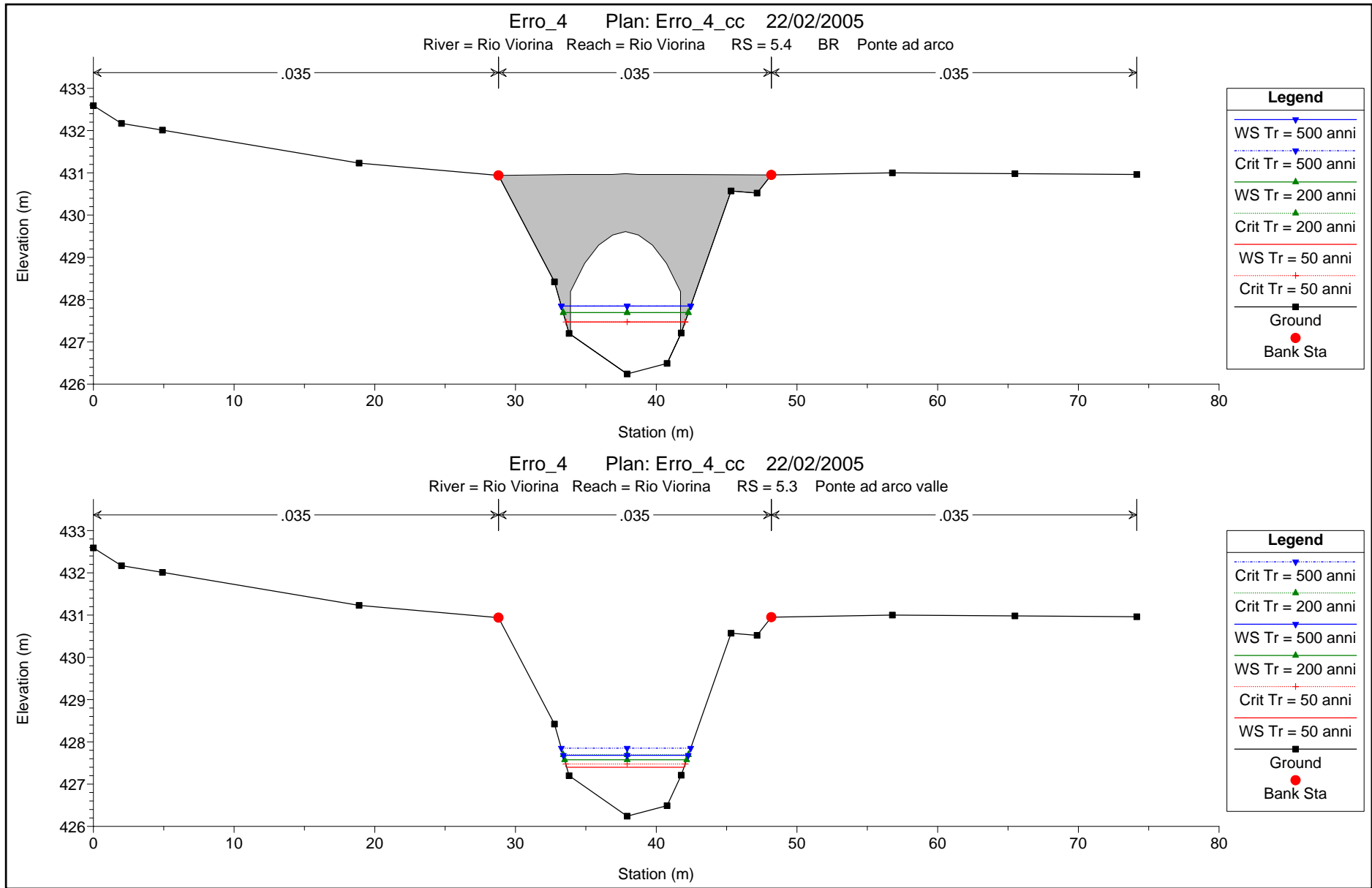
Rio Viorina

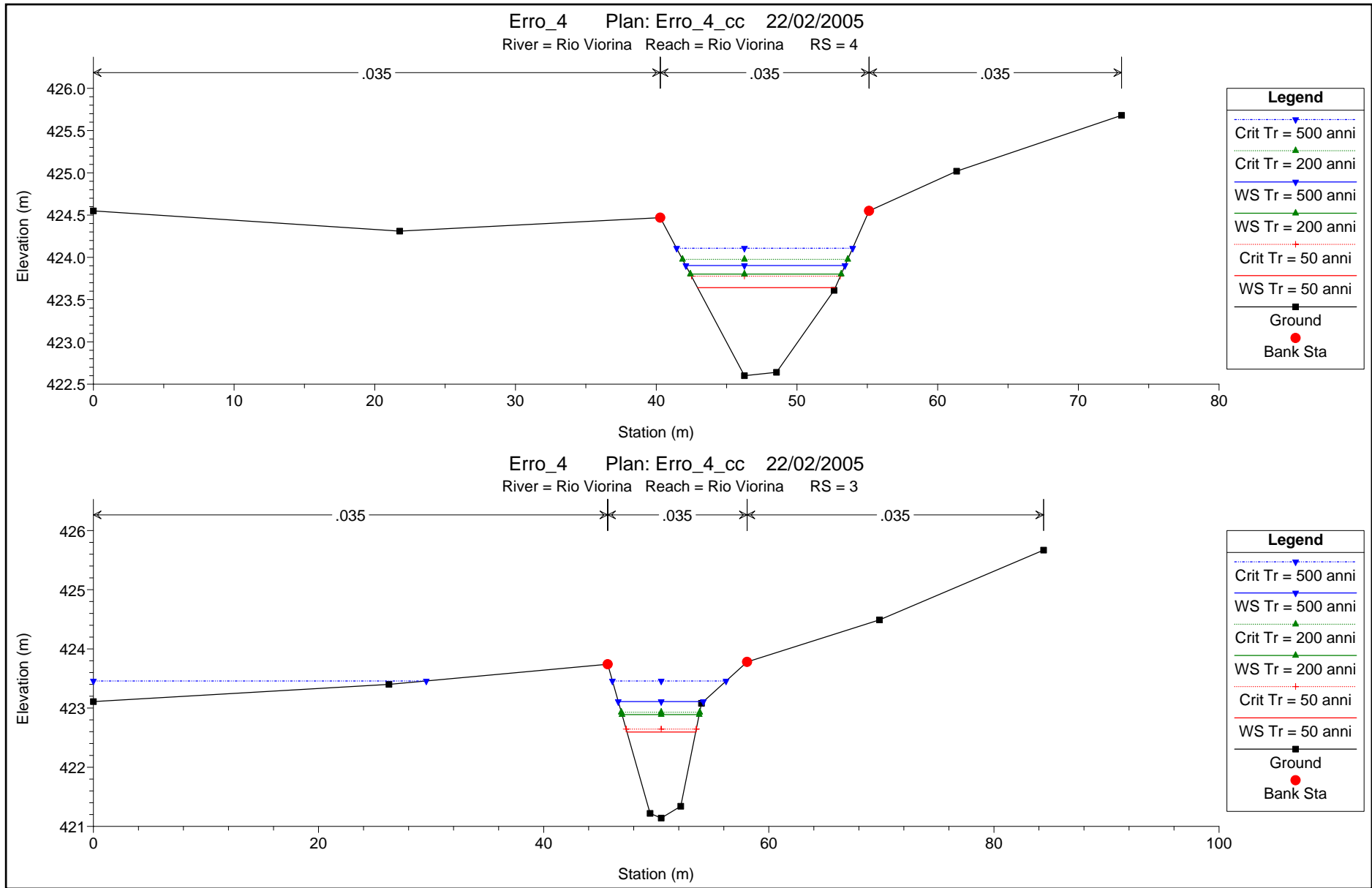


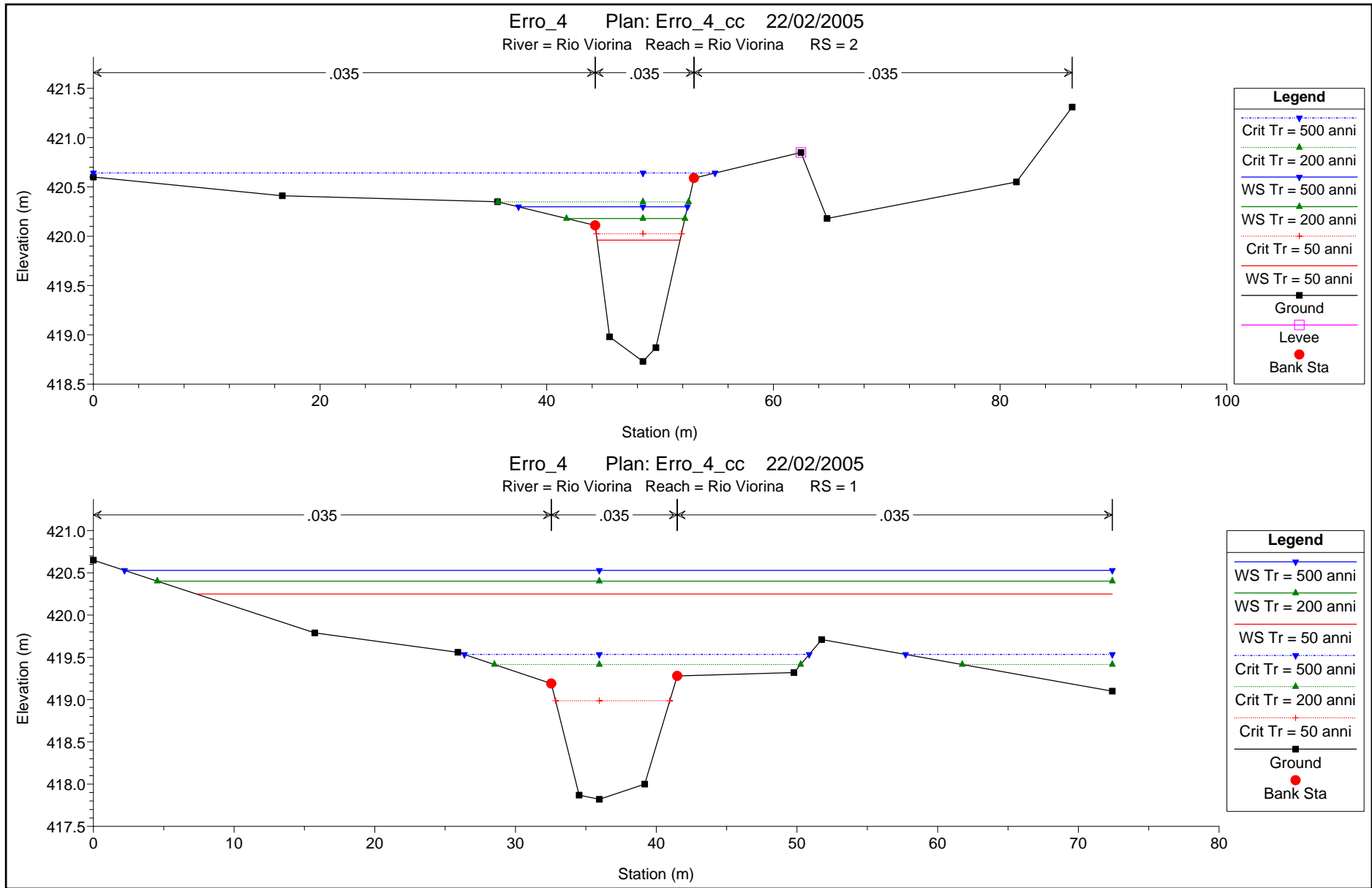








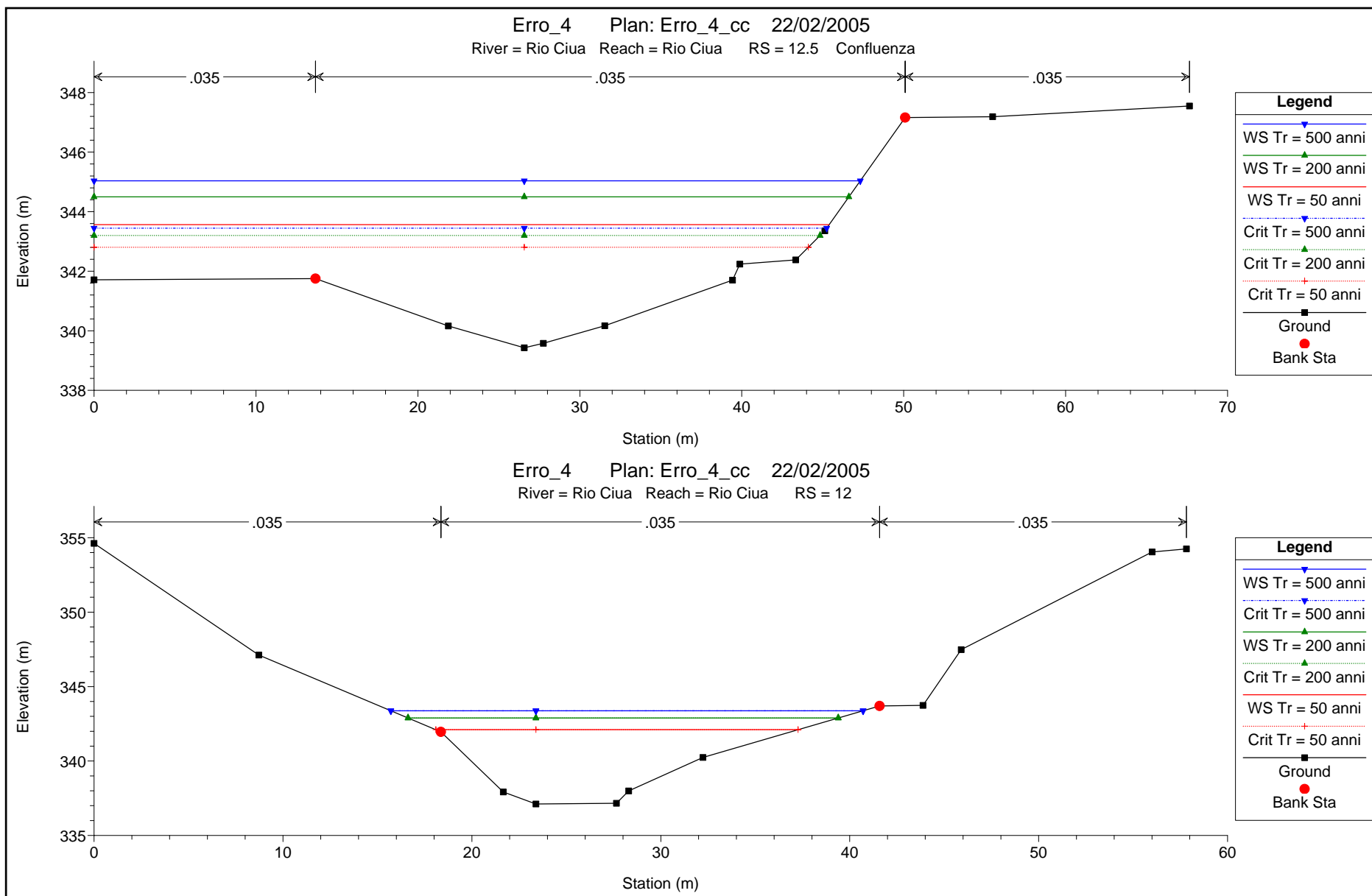


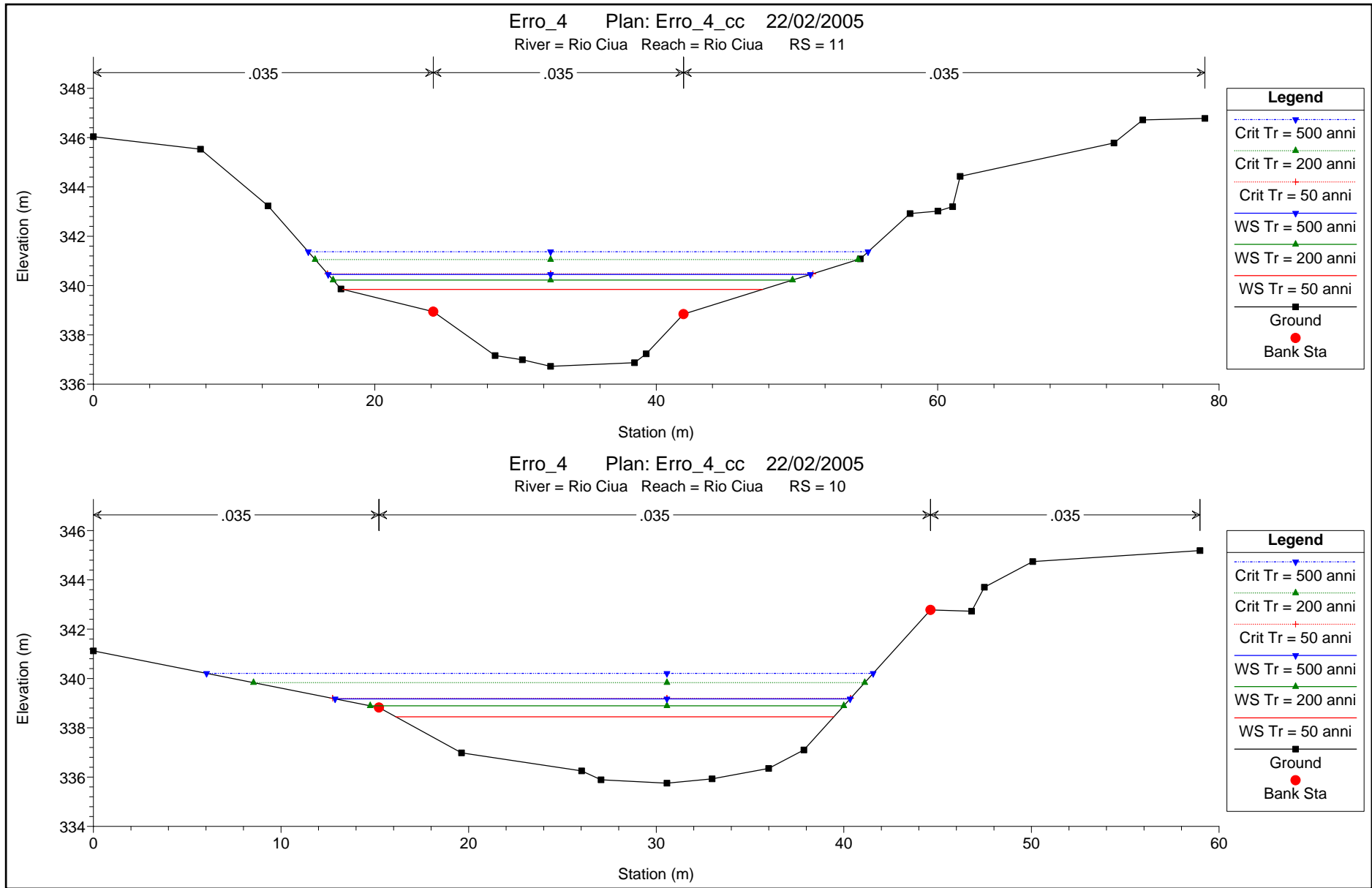


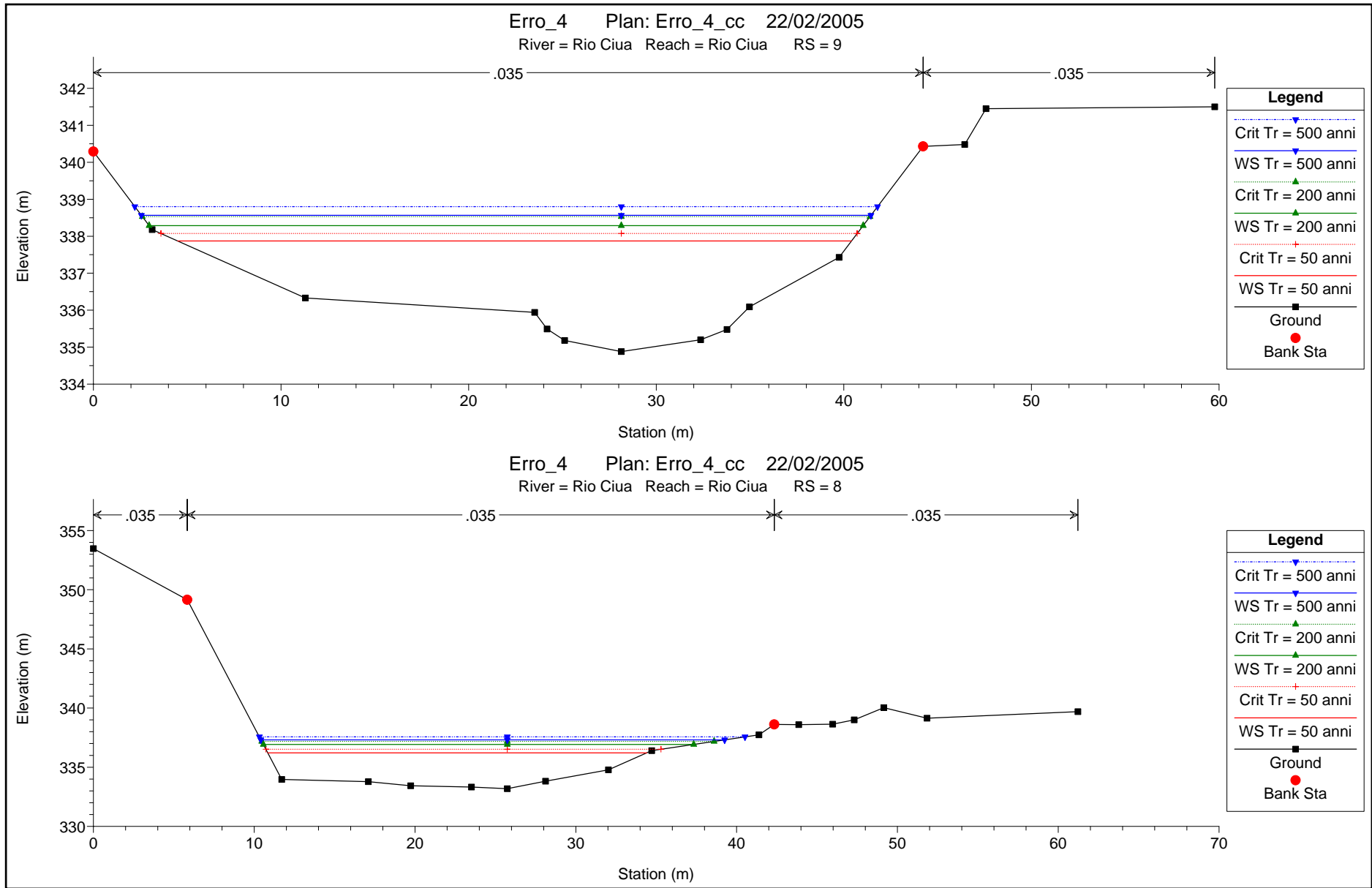
SEZIONI IDRAULICHE

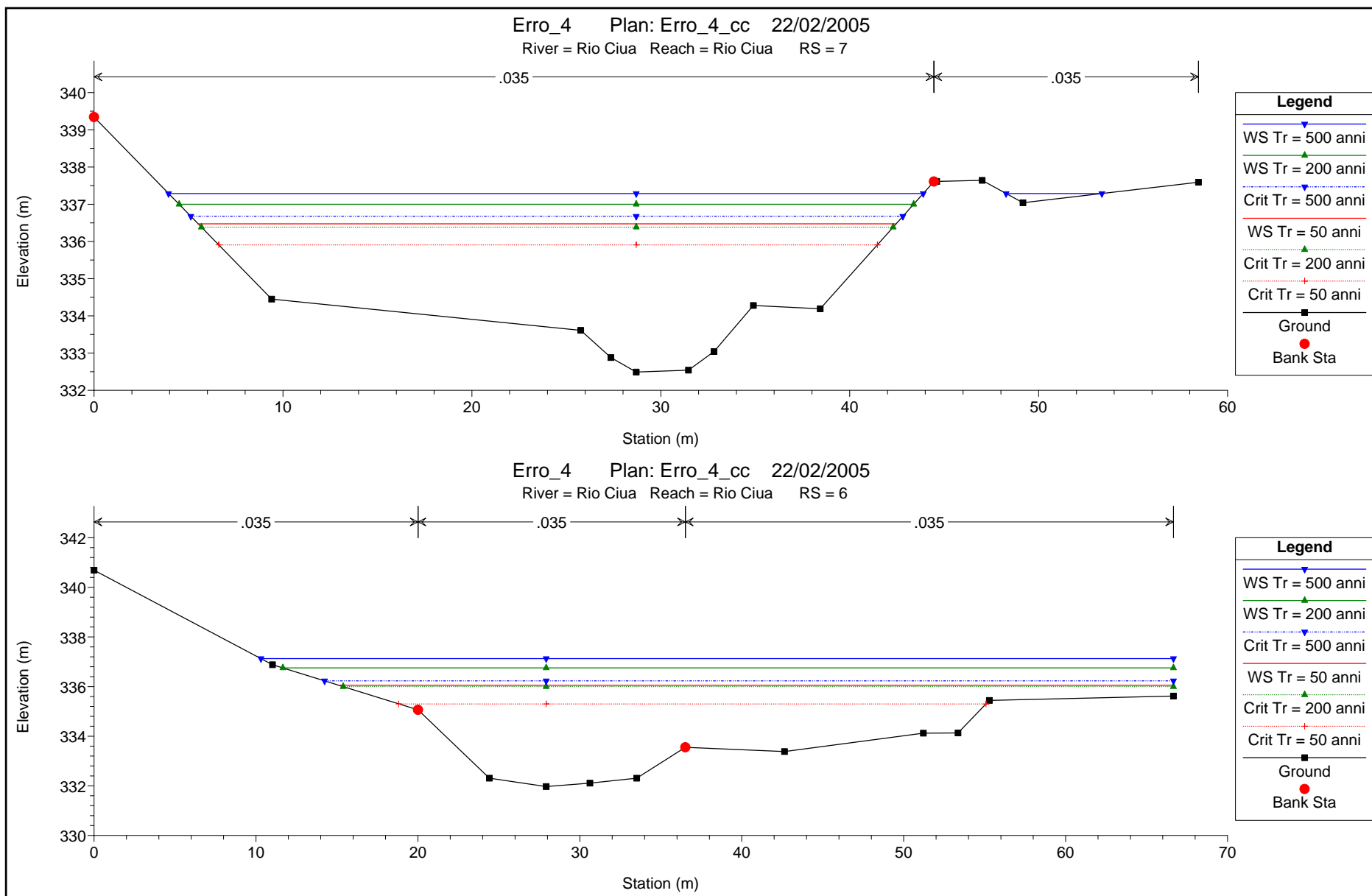
TRATTO ERRO_4

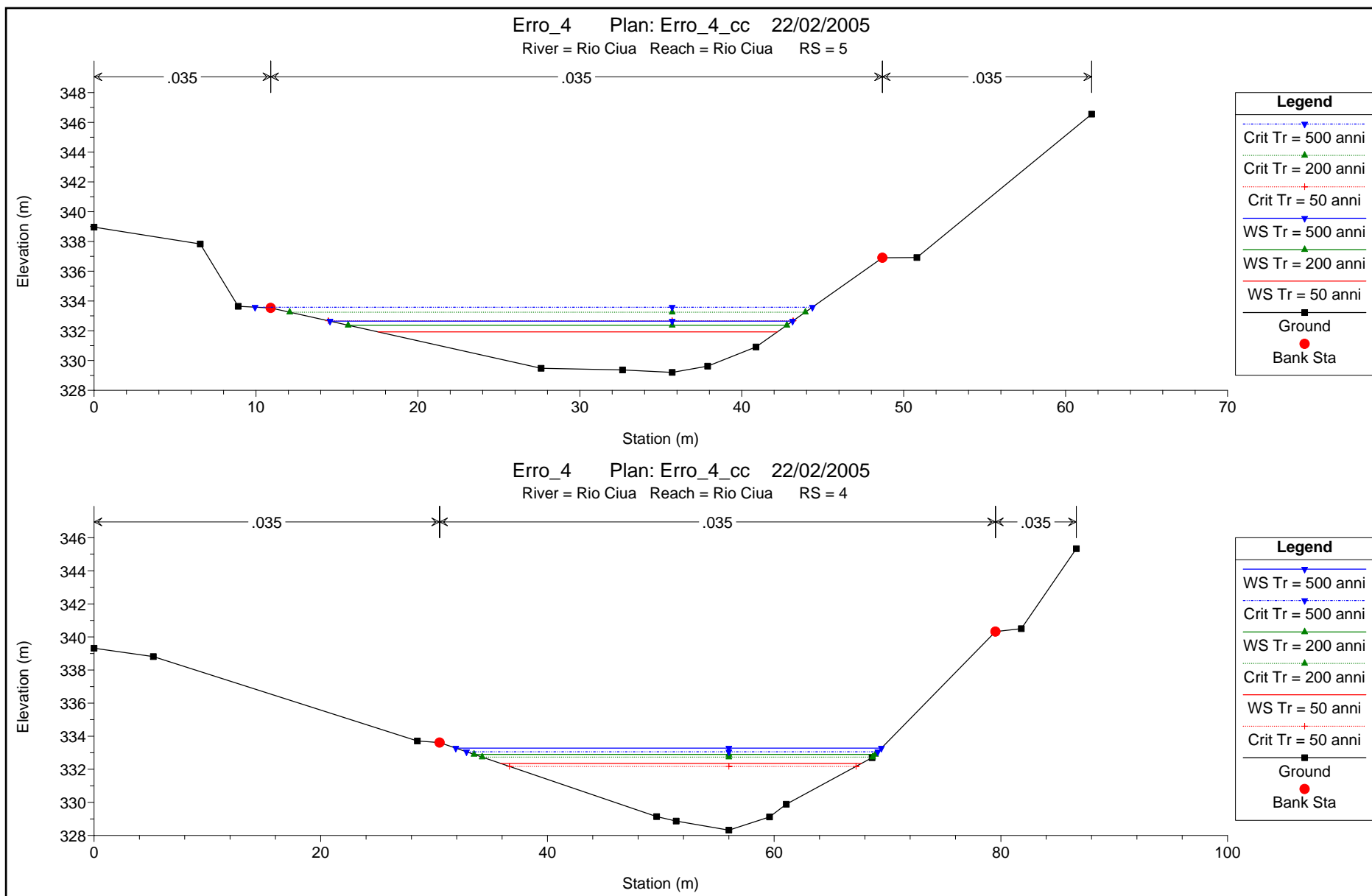
Rio Ciua

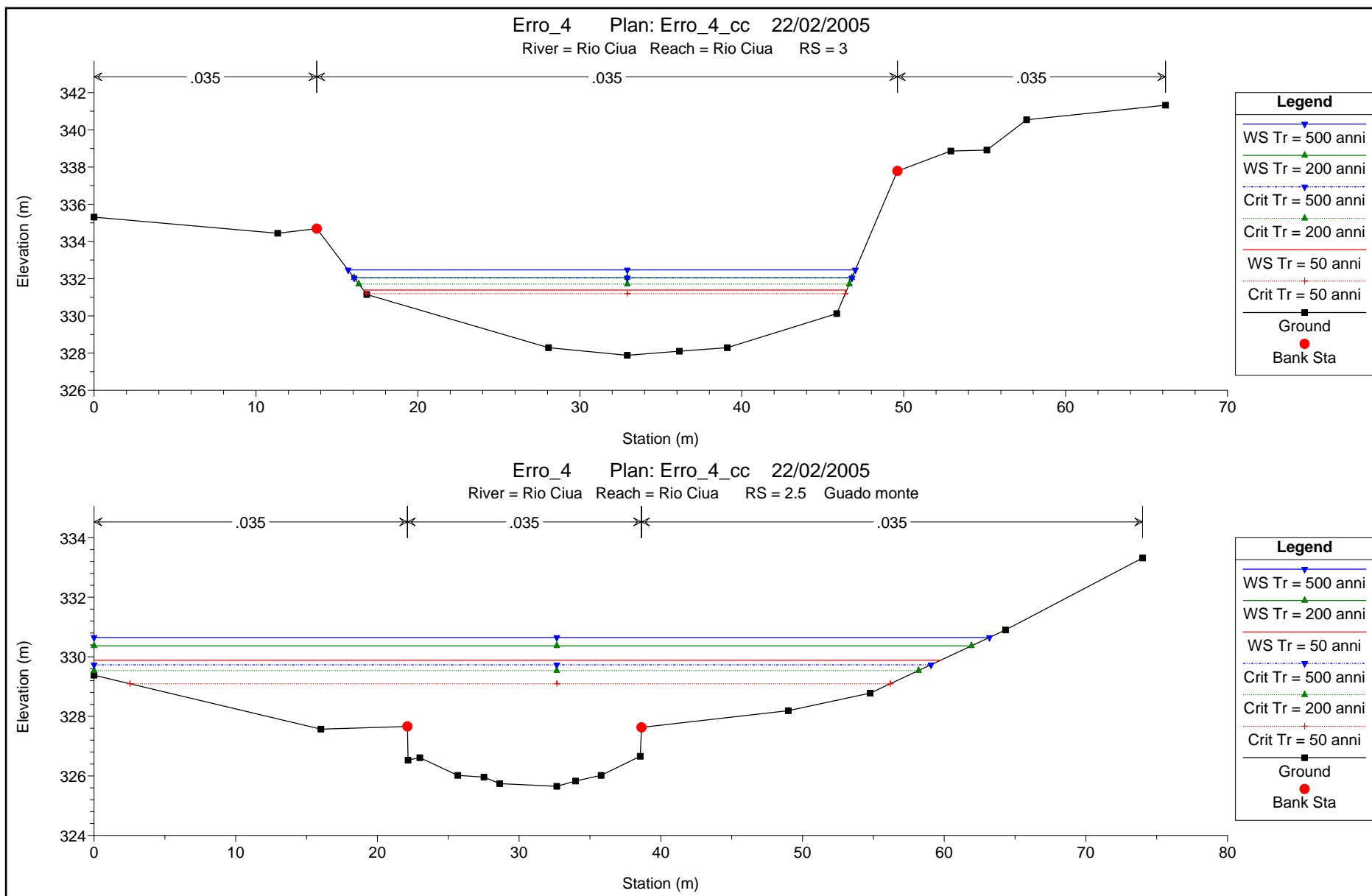


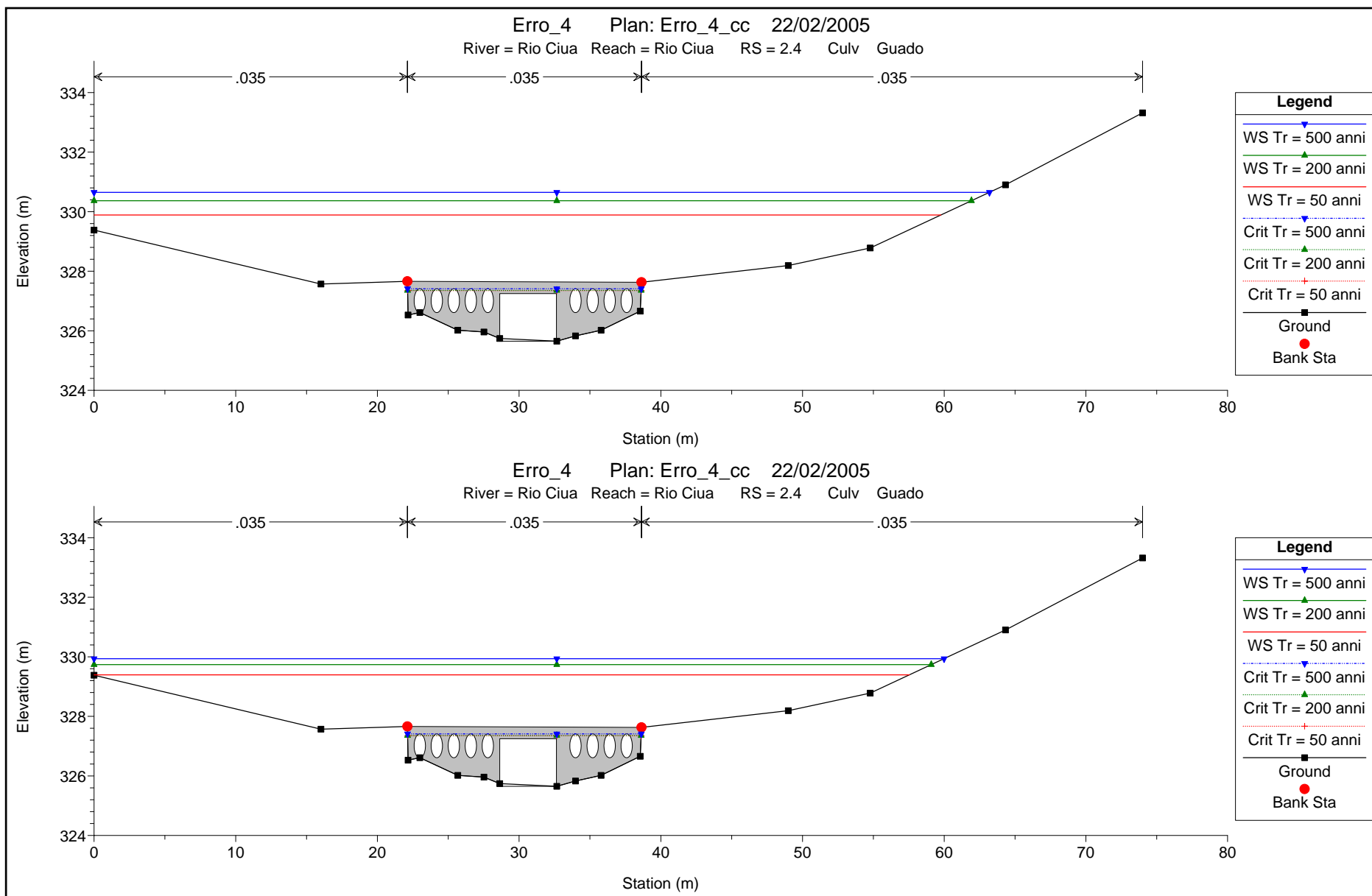












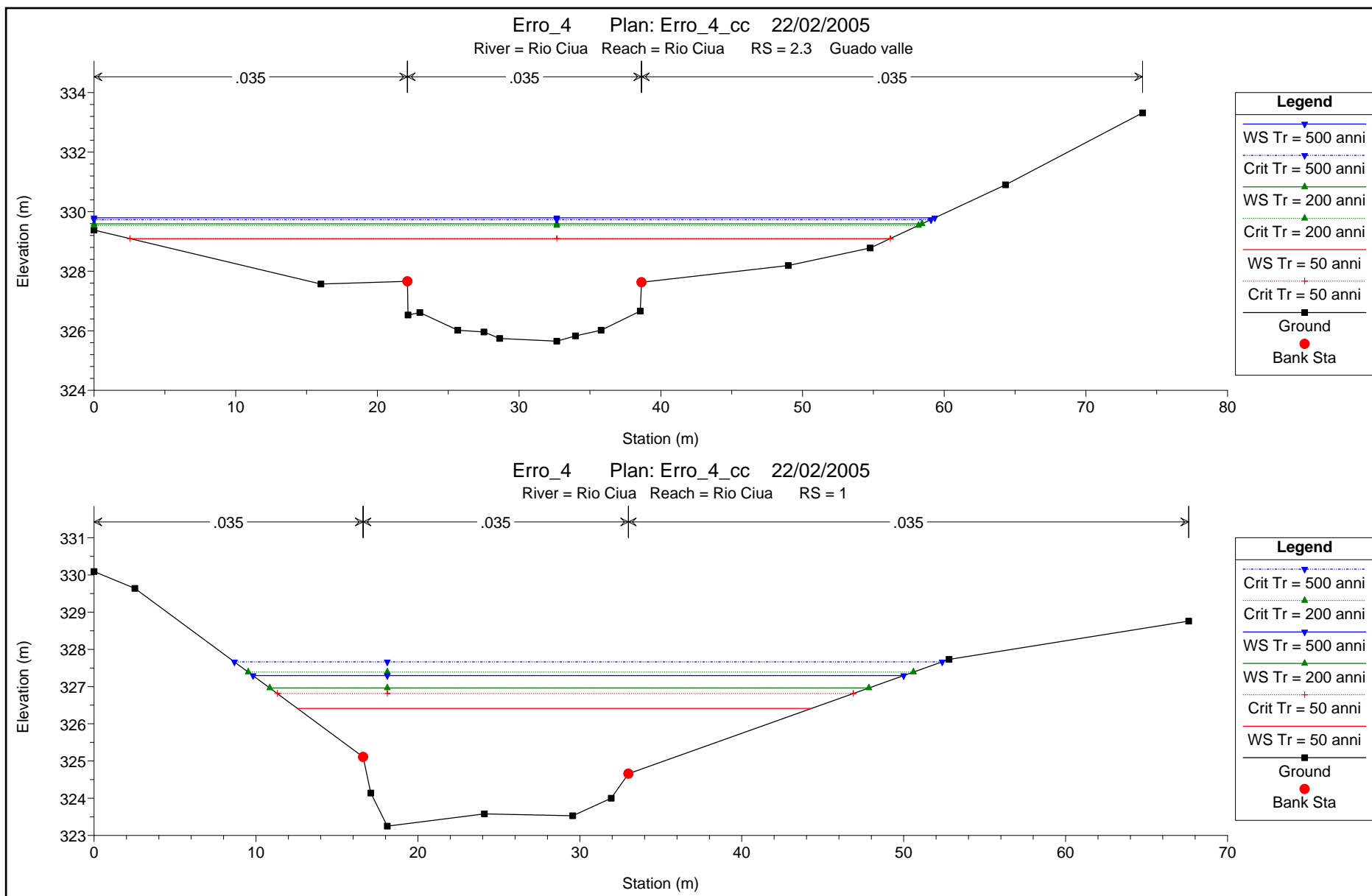


TABELLE
TRATTO ERRO_4

Rio dei Giovi

| Tratto Erro_4 - RIO DEI GIOVI | | | | | | | | | | | | |
|-------------------------------|-----------|---------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
| Rio dei Giovi | 16 | Tr = 50 anni | 156 | 366.01 | 368.53 | 368.41 | 369.22 | 0.007072 | 3.77 | 44.12 | 27.25 | 0.82 |
| | | Tr = 200 anni | 212 | 366.01 | 368.78 | 368.69 | 369.77 | 0.009012 | 4.52 | 51.42 | 33.78 | 0.94 |
| | | Tr = 500 anni | 250 | 366.01 | 369.21 | 369.15 | 370.03 | 0.006539 | 4.21 | 66.65 | 36.31 | 0.82 |
| Rio dei Giovi | 15 | Tr = 50 anni | 156 | 365.61 | 367.45 | 367.45 | 368.04 | 0.01239 | 3.41 | 45.77 | 38.92 | 1 |
| | | Tr = 200 anni | 212 | 365.61 | 367.56 | 367.74 | 368.47 | 0.017052 | 4.22 | 50.22 | 39.28 | 1.19 |
| | | Tr = 500 anni | 250 | 365.61 | 367.76 | 367.9 | 368.7 | 0.015445 | 4.31 | 58.01 | 40.83 | 1.15 |
| Rio dei Giovi | 14.8 | Tr = 50 anni | 156 | 361.9 | 362.57 | 363.48 | 367.58 | 0.248867 | 9.92 | 15.73 | 26.65 | 4.12 |
| | | Tr = 200 anni | 212 | 361.9 | 362.76 | 363.82 | 368.02 | 0.191043 | 10.16 | 20.87 | 27.85 | 3.75 |
| | | Tr = 500 anni | 250 | 361.9 | 362.89 | 364.03 | 368.24 | 0.160483 | 10.25 | 24.38 | 28 | 3.51 |
| Rio dei Giovi | 14 | Tr = 50 anni | 156 | 361.84 | 363.84 | 364.1 | 365 | 0.017551 | 4.78 | 32.67 | 22.25 | 1.26 |
| | | Tr = 200 anni | 212 | 361.84 | 364.16 | 364.5 | 365.59 | 0.017544 | 5.29 | 40.04 | 23.2 | 1.29 |
| | | Tr = 500 anni | 250 | 361.84 | 364.39 | 364.74 | 365.94 | 0.016956 | 5.53 | 45.23 | 23.84 | 1.28 |
| Rio dei Giovi | 13.8 | Tr = 50 anni | 156 | 361.22 | 362.87 | 363.5 | 364.91 | 0.039799 | 6.32 | 24.67 | 19.44 | 1.79 |
| | | Tr = 200 anni | 212 | 361.22 | 363.23 | 363.93 | 365.5 | 0.034275 | 6.68 | 31.73 | 20.47 | 1.71 |
| | | Tr = 500 anni | 250 | 361.22 | 363.45 | 364.19 | 365.85 | 0.031535 | 6.86 | 36.43 | 21.12 | 1.67 |
| Rio dei Giovi | 13 | Tr = 50 anni | 156 | 360.07 | 362.76 | 362.94 | 363.78 | 0.016698 | 4.49 | 34.74 | 24.2 | 1.2 |
| | | Tr = 200 anni | 212 | 360.07 | 363.07 | 363.32 | 364.34 | 0.016641 | 5.01 | 42.34 | 24.79 | 1.22 |
| | | Tr = 500 anni | 250 | 360.07 | 363.26 | 363.55 | 364.69 | 0.016576 | 5.3 | 47.17 | 25.15 | 1.24 |
| Rio dei Giovi | 12 | Tr = 50 anni | 156 | 359.72 | 362.52 | 362.18 | 363.16 | 0.007015 | 3.55 | 44.96 | 27.29 | 0.77 |
| | | Tr = 200 anni | 212 | 359.72 | 363.02 | 362.72 | 363.72 | 0.006195 | 3.78 | 58.99 | 28.26 | 0.74 |
| | | Tr = 500 anni | 250 | 359.72 | 363.29 | 362.96 | 364.06 | 0.006068 | 3.97 | 66.66 | 28.29 | 0.74 |
| Rio dei Giovi | 11 | Tr = 50 anni | 156 | 358.72 | 361.48 | 361.48 | 362.42 | 0.011463 | 4.3 | 36.26 | 19.25 | 1 |
| | | Tr = 200 anni | 212 | 358.72 | 361.94 | 361.94 | 363.05 | 0.011162 | 4.65 | 45.58 | 20.82 | 1 |
| | | Tr = 500 anni | 250 | 358.72 | 362.25 | 362.25 | 363.42 | 0.010606 | 4.8 | 52.14 | 24.72 | 0.99 |
| Rio dei Giovi | 10.5 | Tr = 50 anni | 156 | 357.72 | 361.23 | 359.85 | 361.36 | 0.001091 | 1.62 | 96.49 | 42.01 | 0.34 |
| | | Tr = 200 anni | 212 | 357.72 | 361.84 | 360.17 | 361.99 | 0.000987 | 1.72 | 123.07 | 45.05 | 0.33 |
| | | Tr = 500 anni | 250 | 357.72 | 362.25 | 360.36 | 362.41 | 0.000907 | 1.76 | 141.96 | 47.08 | 0.32 |
| Rio dei Giovi | 10.4 | Culvert | | | | | | | | | | |
| Rio dei Giovi | 10.3 | Tr = 50 anni | 156 | 357.72 | 361.15 | 359.85 | 361.29 | 0.001215 | 1.68 | 93.04 | 41.6 | 0.36 |
| | | Tr = 200 anni | 212 | 357.72 | 361.77 | 360.17 | 361.93 | 0.001068 | 1.77 | 119.8 | 44.68 | 0.34 |
| | | Tr = 500 anni | 250 | 357.72 | 362.16 | 360.36 | 362.33 | 0.000989 | 1.81 | 137.81 | 46.64 | 0.34 |
| Rio dei Giovi | 9 | Tr = 50 anni | 156 | 356.96 | 360.3 | 360.03 | 361.07 | 0.006701 | 3.95 | 41.54 | 21.06 | 0.77 |
| | | Tr = 200 anni | 212 | 356.96 | 360.62 | 360.56 | 361.68 | 0.008289 | 4.67 | 48.41 | 22.07 | 0.86 |
| | | Tr = 500 anni | 250 | 356.96 | 360.83 | 360.83 | 362.07 | 0.009067 | 5.08 | 53.23 | 23.77 | 0.91 |
| Rio dei Giovi | 8.5 | Tr = 50 anni | 156 | 357.11 | 360.17 | 359.7 | 360.69 | 0.005609 | 3.23 | 51.81 | 43.6 | 0.71 |
| | | Tr = 200 anni | 212 | 357.11 | 360.78 | 360.38 | 361.2 | 0.003743 | 3.02 | 79.26 | 45.66 | 0.6 |
| | | Tr = 500 anni | 250 | 357.11 | 361.04 | 360.58 | 361.47 | 0.003573 | 3.1 | 91.04 | 46.23 | 0.59 |
| Rio dei Giovi | 8.4 | Bridge | | | | | | | | | | |
| Rio dei Giovi | 8.3 | Tr = 50 anni | 156 | 357.11 | 359.51 | 359.7 | 360.63 | 0.015824 | 4.69 | 33.29 | 19.76 | 1.15 |
| | | Tr = 200 anni | 212 | 357.11 | 360.12 | 360.38 | 361.14 | 0.011219 | 4.51 | 49.81 | 41.71 | 1 |
| | | Tr = 500 anni | 250 | 357.11 | 360.31 | 360.58 | 361.41 | 0.011304 | 4.74 | 57.96 | 44.62 | 1.01 |
| Rio dei Giovi | 7 | Tr = 50 anni | 156 | 356.59 | 358.16 | 358.65 | 359.8 | 0.029622 | 5.67 | 27.5 | 21.05 | 1.58 |
| | | Tr = 200 anni | 212 | 356.59 | 358.51 | 359.06 | 360.38 | 0.026473 | 6.06 | 34.97 | 21.97 | 1.53 |
| | | Tr = 500 anni | 250 | 356.59 | 358.74 | 359.48 | 360.71 | 0.024168 | 6.21 | 40.27 | 22.6 | 1.48 |
| Rio dei Giovi | 6 | Tr = 50 anni | 156 | 354.85 | 357.4 | 357.62 | 358.67 | 0.015087 | 4.99 | 31.26 | 16.81 | 1.17 |
| | | Tr = 200 anni | 212 | 354.85 | 357.93 | 358.31 | 359.32 | 0.013282 | 5.21 | 40.74 | 19.3 | 1.12 |
| | | Tr = 500 anni | 250 | 354.85 | 358.19 | 358.62 | 359.7 | 0.012988 | 5.45 | 47.38 | 31.84 | 1.12 |
| Rio dei Giovi | 5 | Tr = 50 anni | 156 | 353.06 | 355.75 | 355.99 | 357.04 | 0.015277 | 5.04 | 30.93 | 16.68 | 1.17 |
| | | Tr = 200 anni | 212 | 353.06 | 356.15 | 356.64 | 357.75 | 0.015075 | 5.62 | 38.47 | 20.67 | 1.18 |
| | | Tr = 500 anni | 250 | 353.06 | 356.39 | 356.9 | 358.16 | 0.014999 | 5.94 | 43.74 | 24.71 | 1.19 |
| Rio dei Giovi | 4 | Tr = 50 anni | 156 | 351.92 | 354.61 | 354.86 | 355.74 | 0.016724 | 4.7 | 33.19 | 22.46 | 1.23 |
| | | Tr = 200 anni | 212 | 351.92 | 354.96 | 355.28 | 356.3 | 0.016938 | 5.13 | 41.33 | 24.73 | 1.27 |
| | | Tr = 500 anni | 250 | 351.92 | 355.98 | 355.52 | 356.64 | 0.005443 | 3.59 | 69.63 | 29.94 | 0.75 |
| Rio dei Giovi | 3 | Tr = 50 anni | 156 | 350.65 | 353.65 | 353.92 | 354.97 | 0.013369 | 5.14 | 31.69 | 17.65 | 1.08 |
| | | Tr = 200 anni | 212 | 350.65 | 354.06 | 354.4 | 355.67 | 0.014417 | 5.74 | 39.03 | 18.52 | 1.15 |
| | | Tr = 500 anni | 250 | 350.65 | 354.35 | 354.71 | 356.06 | 0.01408 | 5.94 | 44.56 | 19.16 | 1.15 |
| Rio dei Giovi | 2.5 | Tr = 50 anni | 156 | 349.57 | 353.23 | 352.04 | 353.5 | 0.002018 | 2.3 | 67.72 | 26.51 | 0.46 |
| | | Tr = 200 anni | 212 | 349.57 | 353.85 | 352.45 | 354.17 | 0.001959 | 2.5 | 84.7 | 28.38 | 0.46 |
| | | Tr = 500 anni | 250 | 349.57 | 354.24 | 352.7 | 354.59 | 0.001895 | 2.6 | 96.21 | 29.58 | 0.46 |
| Rio dei Giovi | 2.4 | Bridge | | | | | | | | | | |
| Rio dei Giovi | 2.3 | Tr = 50 anni | 156 | 349.57 | 352.98 | 352.04 | 353.31 | 0.002705 | 2.55 | 61.22 | 25.76 | 0.53 |
| | | Tr = 200 anni | 212 | 349.57 | 353.49 | 352.45 | 353.9 | 0.002811 | 2.84 | 74.68 | 27.29 | 0.55 |
| | | Tr = 500 anni | 250 | 349.57 | 353.8 | 352.7 | 354.26 | 0.002852 | 3 | 83.35 | 28.24 | 0.56 |
| Rio dei Giovi | 1 | Tr = 50 anni | 156 | 349 | 353.1 | 351.19 | 353.18 | 0.000587 | 1.22 | 127.61 | 53.27 | 0.25 |
| | | Tr = 200 anni | 212 | 349 | 353.65 | 351.53 | 353.74 | 0.000579 | 1.34 | 158.16 | 56.5 | 0.26 |
| | | Tr = 500 anni | 250 | 349 | 353.99 | 351.73 | 354.09 | 0.000558 | 1.41 | 177.3 | 56.5 | 0.25 |

TABELLE
TRATTO ERRO_4

Rio Sbruggia

| Tratto Erro_4 - RIO SBRUGGIA | | | | | | | | | | | | |
|------------------------------|-----------|---------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
| Sbruggia monte | 35 | Tr = 50 anni | 116 | 408.5 | 410.91 | 410.91 | 411.63 | 0.011399 | 3.76 | 30.82 | 21.59 | 1.01 |
| | | Tr = 200 anni | 156 | 408.5 | 411.24 | 411.24 | 412.09 | 0.010893 | 4.1 | 38.09 | 22.57 | 1.01 |
| | | Tr = 500 anni | 184 | 408.5 | 411.44 | 411.45 | 412.38 | 0.010686 | 4.3 | 42.83 | 23.18 | 1.01 |
| Sbruggia monte | 34 | Tr = 50 anni | 116 | 406.32 | 409.36 | 408.8 | 409.67 | 0.003062 | 2.68 | 52.65 | 37.81 | 0.53 |
| | | Tr = 200 anni | 156 | 406.32 | 408.59 | 409.22 | 410.3 | 0.022882 | 5.91 | 28.79 | 24.14 | 1.38 |
| | | Tr = 500 anni | 184 | 406.32 | 408.74 | 409.42 | 410.65 | 0.023759 | 6.3 | 32.58 | 26.26 | 1.42 |
| Sbruggia monte | 33.6 | Tr = 50 anni | 116 | 406.32 | 409.43 | 408.72 | 409.64 | 0.001915 | 2.26 | 62.75 | 39.03 | 0.44 |
| | | Tr = 200 anni | 156 | 406.32 | 409.74 | 409.01 | 410 | 0.002148 | 2.57 | 75.1 | 42.01 | 0.47 |
| | | Tr = 500 anni | 184 | 406.32 | 409.96 | 409.18 | 410.24 | 0.002151 | 2.69 | 84.48 | 42.55 | 0.48 |
| Sbruggia monte | 33.4 | | Culvert | | | | | | | | | |
| Sbruggia monte | 33 | Tr = 50 anni | 116 | 404.66 | 406.94 | 406.94 | 407.75 | 0.011735 | 3.98 | 29.16 | 18.14 | 1 |
| | | Tr = 200 anni | 156 | 404.66 | 407.38 | 407.38 | 408.24 | 0.01148 | 4.11 | 37.94 | 22.05 | 1 |
| | | Tr = 500 anni | 184 | 404.66 | 407.66 | 407.66 | 408.53 | 0.011569 | 4.12 | 44.67 | 26.18 | 1.01 |
| Sbruggia monte | 32 | Tr = 50 anni | 116 | 402.5 | 404.2 | 404.5 | 405.27 | 0.027162 | 4.59 | 25.25 | 25.84 | 1.48 |
| | | Tr = 200 anni | 156 | 402.5 | 404.39 | 404.79 | 405.74 | 0.027972 | 5.15 | 30.31 | 28.66 | 1.54 |
| | | Tr = 500 anni | 184 | 402.5 | 404.51 | 404.97 | 406.04 | 0.028376 | 5.47 | 33.61 | 27.18 | 1.57 |
| Sbruggia monte | 31 | Tr = 50 anni | 116 | 400.68 | 402.61 | 403 | 403.86 | 0.018979 | 5 | 24.09 | 20.96 | 1.3 |
| | | Tr = 200 anni | 156 | 400.68 | 402.89 | 403.36 | 404.37 | 0.018881 | 5.5 | 30.44 | 23.98 | 1.32 |
| | | Tr = 500 anni | 184 | 400.68 | 403.05 | 403.44 | 404.68 | 0.019185 | 5.82 | 34.39 | 25.33 | 1.35 |
| Sbruggia monte | 30 | Tr = 50 anni | 116 | 397.23 | 398.91 | 399.55 | 400.96 | 0.050547 | 6.35 | 18.28 | 18.15 | 2.02 |
| | | Tr = 200 anni | 156 | 397.23 | 399.13 | 399.87 | 401.59 | 0.050619 | 6.94 | 22.47 | 19.48 | 2.06 |
| | | Tr = 500 anni | 184 | 397.23 | 399.27 | 400.09 | 401.98 | 0.050515 | 7.28 | 25.27 | 20.32 | 2.08 |
| Sbruggia monte | 29 | Tr = 50 anni | 116 | 391.9 | 394.5 | 395.17 | 396.65 | 0.042554 | 6.5 | 17.85 | 12.81 | 1.76 |
| | | Tr = 200 anni | 156 | 391.9 | 394.81 | 395.58 | 397.33 | 0.044751 | 7.03 | 22.2 | 14.84 | 1.83 |
| | | Tr = 500 anni | 184 | 391.9 | 394.99 | 395.84 | 397.77 | 0.044044 | 7.39 | 24.91 | 15.21 | 1.84 |
| Sbruggia monte | 28 | Tr = 50 anni | 116 | 387.61 | 389.48 | 390.03 | 391.27 | 0.038463 | 5.92 | 19.59 | 17.3 | 1.78 |
| | | Tr = 200 anni | 156 | 387.61 | 389.71 | 390.39 | 391.93 | 0.039183 | 6.59 | 23.66 | 17.9 | 1.83 |
| | | Tr = 500 anni | 184 | 387.61 | 389.86 | 390.63 | 392.35 | 0.039621 | 7 | 26.3 | 18.28 | 1.86 |
| Sbruggia monte | 27.5 | Tr = 50 anni | 116 | 385.66 | 386.88 | 387.25 | 388.18 | 0.027756 | 5.04 | 23.01 | 20.14 | 1.51 |
| | | Tr = 200 anni | 156 | 385.66 | 387.13 | 387.72 | 388.69 | 0.026716 | 5.53 | 28.19 | 20.67 | 1.51 |
| | | Tr = 500 anni | 184 | 385.66 | 387.31 | 387.89 | 389.01 | 0.025335 | 5.76 | 31.92 | 21.05 | 1.49 |
| Sbruggia monte | 27.3 | Tr = 50 anni | 116 | 380.37 | 383.1 | 384.26 | 387.81 | 0.132283 | 9.61 | 12.07 | 11.39 | 2.98 |
| | | Tr = 200 anni | 156 | 380.37 | 383.41 | 384.66 | 388.33 | 0.11435 | 9.83 | 15.87 | 13 | 2.84 |
| | | Tr = 500 anni | 184 | 380.37 | 383.6 | 384.9 | 388.65 | 0.103944 | 9.95 | 18.49 | 13.83 | 2.75 |
| Sbruggia monte | 26 | Tr = 50 anni | 116 | 378.2 | 379.76 | 380.31 | 381.61 | 0.05131 | 6.03 | 19.24 | 20.99 | 2.01 |
| | | Tr = 200 anni | 156 | 378.2 | 379.95 | 380.62 | 382.22 | 0.052142 | 6.67 | 23.39 | 22.15 | 2.07 |
| | | Tr = 500 anni | 184 | 378.2 | 380.07 | 380.82 | 382.61 | 0.052275 | 7.06 | 26.06 | 22.63 | 2.1 |
| Sbruggia monte | 25 | Tr = 50 anni | 116 | 376 | 380.23 | 377.95 | 380.3 | 0.000398 | 1.21 | 105.79 | 41.02 | 0.21 |
| | | Tr = 200 anni | 156 | 376 | 381.05 | 378.26 | 381.11 | 0.000326 | 1.23 | 139.93 | 43.09 | 0.19 |
| | | Tr = 500 anni | 184 | 376 | 381.57 | 378.47 | 381.64 | 0.000303 | 1.27 | 164.07 | 48.53 | 0.19 |
| Sbruggia monte | 24 | Tr = 50 anni | 116 | 376.04 | 380.05 | 378.48 | 380.25 | 0.001754 | 1.98 | 58.71 | 22.91 | 0.39 |
| | | Tr = 200 anni | 156 | 376.04 | 380.87 | 378.95 | 381.07 | 0.001398 | 1.98 | 78.64 | 25.53 | 0.36 |
| | | Tr = 500 anni | 184 | 376.04 | 381.41 | 379.22 | 381.61 | 0.001226 | 1.99 | 92.63 | 27.04 | 0.34 |
| Sbruggia monte | 23.5 | | Bridge | | | | | | | | | |
| Sbruggia monte | 23 | Tr = 50 anni | 116 | 376.04 | 377.68 | 378.48 | 380.01 | 0.04465 | 6.76 | 17.16 | 12.29 | 1.83 |
| | | Tr = 200 anni | 156 | 376.04 | 377.99 | 378.95 | 380.78 | 0.04314 | 7.4 | 21.09 | 12.45 | 1.81 |
| | | Tr = 500 anni | 184 | 376.04 | 378.2 | 379.22 | 381.28 | 0.044105 | 7.78 | 23.65 | 13.02 | 1.84 |
| Sbruggia monte | 22.5 | Tr = 50 anni | 116 | 376.02 | 377.22 | 377.82 | 379.18 | 0.047711 | 6.21 | 18.69 | 18.27 | 1.96 |
| | | Tr = 200 anni | 156 | 376.02 | 377.4 | 378.17 | 379.94 | 0.052425 | 7.06 | 22.1 | 19.05 | 2.09 |
| | | Tr = 500 anni | 184 | 376.02 | 377.52 | 378.39 | 380.41 | 0.054119 | 7.52 | 24.46 | 19.57 | 2.15 |
| Sbruggia monte | 22.3 | Tr = 50 anni | 116 | 375.24 | 376.77 | 377.47 | 379.11 | 0.056623 | 6.78 | 17.1 | 16.36 | 2.12 |
| | | Tr = 200 anni | 156 | 375.24 | 376.98 | 377.85 | 379.88 | 0.058434 | 7.53 | 20.71 | 17.28 | 2.2 |
| | | Tr = 500 anni | 184 | 375.24 | 377.12 | 378.08 | 380.34 | 0.058826 | 7.95 | 23.15 | 17.87 | 2.23 |
| Sbruggia monte | 21 | Tr = 50 anni | 116 | 373.97 | 375.92 | 376.17 | 376.91 | 0.015193 | 4.41 | 26.9 | 22.63 | 1.16 |
| | | Tr = 200 anni | 156 | 373.97 | 376.18 | 376.63 | 377.4 | 0.015958 | 4.97 | 33.13 | 26.64 | 1.22 |
| | | Tr = 500 anni | 184 | 373.97 | 376.33 | 376.78 | 377.7 | 0.016456 | 5.29 | 37.32 | 29.02 | 1.25 |
| Sbruggia monte | 20 | Tr = 50 anni | 116 | 370.51 | 373.24 | 373 | 373.77 | 0.007196 | 3.2 | 36.2 | 22.19 | 0.8 |
| | | Tr = 200 anni | 156 | 370.51 | 373.89 | 373.33 | 374.16 | 0.002869 | 2.44 | 70.51 | 39.03 | 0.53 |
| | | Tr = 500 anni | 184 | 370.51 | 373.54 | 373.54 | 374.48 | 0.01077 | 4.28 | 42.95 | 22.84 | 1 |
| Sbruggia monte | 19.5 | Tr = 50 anni | 116 | 369.04 | 371.15 | 371.44 | 372.49 | 0.018409 | 5.13 | 22.59 | 12.96 | 1.24 |
| | | Tr = 200 anni | 156 | 369.04 | 372.59 | 372.08 | 373.02 | 0.003573 | 3.1 | 57.92 | 30.08 | 0.57 |
| | | Tr = 500 anni | 184 | 369.04 | 372.95 | 372.34 | 373.37 | 0.003107 | 3.07 | 68.7 | 30.2 | 0.54 |
| Sbruggia monte | 19.4 | | Bridge | | | | | | | | | |
| Sbruggia monte | 19.3 | Tr = 50 anni | 116 | 369.04 | 371.18 | 371.44 | 372.47 | 0.017504 | 5.05 | 22.99 | 13.01 | 1.21 |
| | | Tr = 200 anni | 156 | 369.04 | 371.94 | 372.08 | 373.05 | 0.010754 | 4.68 | 33.56 | 18.68 | 0.97 |
| | | Tr = 500 anni | 184 | 369.04 | 372.78 | 372.34 | 373.27 | 0.003855 | 3.33 | 63.58 | 30.14 | 0.6 |
| Sbruggia monte | 18 | Tr = 50 anni | 116 | 367.01 | 370.5 | 370.21 | 370.88 | 0.006366 | 2.74 | 42.4 | 30.31 | 0.74 |
| | | Tr = 200 anni | 156 | 367.01 | 370.9 | 370.49 | 371.31 | 0.005283 | 2.82 | 56.17 | 45.14 | 0.69 |
| | | Tr = 500 anni | 184 | 367.01 | 371.21 | 370.66 | 371.58 | 0.004236 | 2.73 | 71.83 | 56.44 | 0.63 |
| Sbruggia monte | 17 | Tr = 50 anni | 116 | 367.04 | 369.75 | 369.45 | 369.98 | 0.003082 | 2.33 | 59.41 | 49.48 | 0.55 |
| | | Tr = 200 anni | 156 | 367.04 | 370.19 | 369.65 | 370.39 | 0.002256 | 2.23 | 81.37 | 50.58 | 0.48 |
| | | Tr = 500 anni | 184 | 367.04 | 370.4 | 369.78 | 370.62 | 0.002133 | 2.29 | 92.26 | 50.64 | 0.48 |
| Sbruggia monte | 16.5 | Tr = 50 anni | 116 | 365.25 | 367.74 | 367.8 | 368.25 | 0.018895 | 3.15 | 36.78 | 46.27 | 1.13 |
| | | Tr = 200 anni | 156 | 365.25 | 367.9 | 367.99 | 368.54 | 0.019072 | 3.54 | 44.04 | 46.44 | 1.16 |
| | | Tr = 500 anni | 184 | 365.25 | 367.99 | 368.11 | 368.73 | 0.019984 | 3.83 | 48.09 | 46.53 | 1.2 |
| Sbruggia monte | 16.3 | Tr = 50 anni | 116 | 360.37 | 360.87 | 361.79 | 367.6 | 0.500514 | 11.49 | 10.09 | 23.34 | 5.58 |
| | | Tr = 200 anni | 156 | 360.37 | 361.01 | 362.08 | 367.89 | 0.36187 | 11.62 | 13.43 | 23.88 | 4.94 |
| | | Tr = 500 anni | 184 | 360.37 | 361.11 | 362.26 | 368.08 | 0.302467 | 11.7 | 15.73 | 24.13 | 4.63 |
| Sbruggia monte | 15 | Tr = 50 anni | 116 | 359.64 | 362.4 | 362.01 | 362.78 | 0.005137 | 2.72 | 42.57 | 26.87 | 0.69 |
| | | Tr = 200 anni | 156 | 359.64 | 362.81 | 362.31 | 363.24 | 0.004671 | 2.9 | 53.78 | 28.57 | 0.67 |
| | | Tr = 500 anni | 184 | 359.64 | 363.09 | 362.5 | 363.54 | 0.004294 | 2.97 | 62 | 29.75 | 0.66 |
| | | Tr = 50 anni | 116 | 359.02 | 361.51 | 360.78 | 361.83 | 0.003187 | 2.5 | 46.34 | 21.93 | 0.55 |

| Sbruggia monte | 14.5 | Tr = 200 anni | 156 | 359.02 | 362.09 | 361.11 | 362.43 | 0.002642 | 2.62 | 61.12 | 31.3 | 0.51 |
|----------------|-----------|---------------|----------------|---------------|---------------|---------------|---------------|------------------|----------------|----------------|---------------|--------------|
| | | Tr = 200 anni | 156 | 359.02 | 361.1 | 361.1 | 361.98 | 0.010981 | 4.16 | 37.54 | 21.46 | 1 |
| | | Tr = 500 anni | 184 | 359.02 | 362.46 | 361.32 | 362.81 | 0.002306 | 2.65 | 74.63 | 42.05 | 0.49 |
| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
| Sbruggia monte | 14.4 | Bridge | | | | | | | | | | |
| Sbruggia monte | 14.3 | Tr = 50 anni | 116 | 359.02 | 360.4 | 360.78 | 361.73 | 0.028865 | 5.1 | 22.72 | 20.4 | 1.54 |
| | | Tr = 200 anni | 156 | 359.02 | 361.1 | 361.1 | 361.98 | 0.010981 | 4.16 | 37.54 | 21.46 | 1 |
| | | Tr = 500 anni | 184 | 359.02 | 361.32 | 361.32 | 362.29 | 0.01076 | 4.37 | 42.08 | 21.7 | 1 |
| Sbruggia monte | 13.5 | Tr = 50 anni | 116 | 358.11 | 359.33 | 359.38 | 359.86 | 0.014601 | 3.23 | 35.9 | 39.11 | 1.08 |
| | | Tr = 200 anni | 156 | 358.11 | 359.53 | 359.59 | 360.18 | 0.013995 | 3.56 | 43.82 | 39.9 | 1.08 |
| | | Tr = 500 anni | 184 | 358.11 | 359.66 | 359.73 | 360.38 | 0.01364 | 3.75 | 49.03 | 40.41 | 1.09 |
| Sbruggia monte | 13.3 | Tr = 50 anni | 116 | 356 | 356.8 | 357.46 | 359.62 | 0.144539 | 7.44 | 15.59 | 27.13 | 3.13 |
| | | Tr = 200 anni | 156 | 356 | 356.97 | 357.71 | 359.93 | 0.111766 | 7.62 | 20.47 | 28.18 | 2.85 |
| | | Tr = 500 anni | 184 | 356 | 357.09 | 357.88 | 360.13 | 0.097382 | 7.73 | 23.82 | 28.87 | 2.71 |
| Sbruggia monte | 12 | Tr = 50 anni | 116 | 353.46 | 355.16 | 355.46 | 356.36 | 0.022242 | 4.86 | 23.87 | 18.41 | 1.36 |
| | | Tr = 200 anni | 156 | 353.46 | 356.25 | 355.82 | 356.86 | 0.005845 | 3.46 | 45.12 | 20.41 | 0.74 |
| | | Tr = 500 anni | 184 | 353.46 | 356.59 | 356.05 | 357.22 | 0.00534 | 3.53 | 52.07 | 21.15 | 0.72 |
| Sbruggia monte | 11 | Tr = 50 anni | 116 | 352.07 | 355.03 | 354.74 | 355.76 | 0.00802 | 3.78 | 30.68 | 14.21 | 0.82 |
| | | Tr = 200 anni | 156 | 352.07 | 355.47 | 355.18 | 356.37 | 0.008429 | 4.21 | 37.04 | 14.75 | 0.85 |
| | | Tr = 500 anni | 184 | 352.07 | 355.76 | 355.46 | 356.77 | 0.008539 | 4.44 | 41.41 | 15.11 | 0.86 |
| Sbruggia monte | 10.5 | Tr = 50 anni | 116 | 350.86 | 353.1 | 353.41 | 354.7 | 0.021682 | 5.61 | 20.69 | 9.91 | 1.24 |
| | | Tr = 200 anni | 156 | 350.86 | 353.67 | 353.95 | 355.45 | 0.01949 | 5.92 | 26.36 | 9.99 | 1.16 |
| | | Tr = 500 anni | 184 | 350.86 | 354.66 | 354.31 | 355.95 | 0.011264 | 5.03 | 36.55 | 11.03 | 0.88 |
| Sbruggia monte | 10.4 | Bridge | | | | | | | | | | |
| Sbruggia monte | 10.3 | Tr = 50 anni | 116 | 350.86 | 353.25 | 353.41 | 354.64 | 0.017614 | 5.22 | 22.22 | 9.93 | 1.11 |
| | | Tr = 200 anni | 156 | 350.86 | 353.78 | 353.95 | 355.42 | 0.017215 | 5.66 | 27.54 | 10 | 1.09 |
| | | Tr = 500 anni | 184 | 350.86 | 354.09 | 354.31 | 355.93 | 0.017832 | 6.01 | 30.63 | 10.2 | 1.11 |
| Sbruggia monte | 9.8 | Tr = 50 anni | 116 | 348.99 | 353.1 | 351.28 | 353.18 | 0.000564 | 1.2 | 97.04 | 39 | 0.24 |
| | | Tr = 200 anni | 156 | 348.99 | 353.65 | 351.59 | 353.74 | 0.000544 | 1.31 | 118.66 | 39.54 | 0.24 |
| | | Tr = 500 anni | 184 | 348.99 | 353.99 | 351.78 | 354.09 | 0.000543 | 1.39 | 132.06 | 39.86 | 0.24 |
| Sbruggia valle | 9.6 | Tr = 50 anni | 245 | 348.99 | 352.65 | 352.15 | 353.13 | 0.004722 | 3.08 | 79.5 | 38.57 | 0.69 |
| | | Tr = 200 anni | 333 | 348.99 | 353.08 | 352.54 | 353.69 | 0.004811 | 3.47 | 95.99 | 38.98 | 0.71 |
| | | Tr = 500 anni | 392 | 348.99 | 353.34 | 352.77 | 354.03 | 0.004866 | 3.69 | 106.13 | 39.23 | 0.72 |
| Sbruggia valle | 9 | Tr = 50 anni | 245 | 348.99 | 352.15 | 352.15 | 352.99 | 0.010649 | 4.05 | 60.48 | 36.24 | 1 |
| | | Tr = 200 anni | 333 | 348.99 | 352.54 | 352.54 | 353.54 | 0.010316 | 4.42 | 75.41 | 38.46 | 1.01 |
| | | Tr = 500 anni | 392 | 348.99 | 352.77 | 352.77 | 353.88 | 0.010057 | 4.65 | 84.26 | 38.69 | 1.01 |
| Sbruggia valle | 8 | Tr = 50 anni | 245 | 348.02 | 351.3 | 351.3 | 351.88 | 0.009775 | 3.44 | 75.91 | 69.95 | 0.57 |
| | | Tr = 200 anni | 333 | 348.02 | 351.61 | 351.61 | 352.26 | 0.008818 | 3.7 | 98.17 | 76.16 | 0.57 |
| | | Tr = 500 anni | 392 | 348.02 | 351.77 | 351.77 | 352.48 | 0.00858 | 3.88 | 111.13 | 78.58 | 0.58 |
| Sbruggia valle | 7 | Tr = 50 anni | 245 | 346.49 | 349.57 | 349.57 | 350.66 | 0.010406 | 4.63 | 52.94 | 24.46 | 1 |
| | | Tr = 200 anni | 333 | 346.49 | 350.27 | 350.27 | 351.25 | 0.007027 | 4.49 | 80.88 | 43.62 | 0.85 |
| | | Tr = 500 anni | 392 | 346.49 | 350.53 | 350.53 | 351.58 | 0.006901 | 4.69 | 92.36 | 44.3 | 0.85 |
| Sbruggia valle | 6 | Tr = 50 anni | 245 | 344.97 | 348.51 | 348.06 | 348.96 | 0.004522 | 3.01 | 82.78 | 43.56 | 0.67 |
| | | Tr = 200 anni | 333 | 344.97 | 349.01 | 348.41 | 349.54 | 0.003989 | 3.25 | 104.74 | 44.21 | 0.65 |
| | | Tr = 500 anni | 392 | 344.97 | 349.33 | 348.64 | 349.89 | 0.003719 | 3.37 | 118.84 | 44.63 | 0.64 |
| Sbruggia valle | 5 | Tr = 50 anni | 245 | 343.98 | 347.48 | 347.43 | 348.39 | 0.008419 | 4.25 | 59.27 | 31.14 | 0.92 |
| | | Tr = 200 anni | 333 | 343.98 | 347.96 | 347.89 | 349.03 | 0.00799 | 4.65 | 74.27 | 32.52 | 0.92 |
| | | Tr = 500 anni | 392 | 343.98 | 348.17 | 348.17 | 349.41 | 0.00845 | 5.01 | 81.39 | 33.15 | 0.96 |
| Sbruggia valle | 4 | Tr = 50 anni | 245 | 343.32 | 346.74 | 346.2 | 347.22 | 0.004526 | 3.06 | 80.06 | 37.65 | 0.67 |
| | | Tr = 200 anni | 333 | 343.32 | 347.34 | 346.6 | 347.87 | 0.003851 | 3.23 | 103.11 | 39.28 | 0.64 |
| | | Tr = 500 anni | 392 | 343.32 | 347.68 | 346.84 | 348.26 | 0.003653 | 3.36 | 116.84 | 40.22 | 0.63 |
| Sbruggia valle | 3.5 | Tr = 50 anni | 245 | 342.03 | 345.75 | 345.2 | 346.23 | 0.003129 | 3.54 | 86.76 | 40 | 0.61 |
| | | Tr = 200 anni | 333 | 342.03 | 346.33 | 345.66 | 346.86 | 0.002862 | 3.76 | 110.13 | 40.82 | 0.6 |
| | | Tr = 500 anni | 392 | 342.03 | 346.64 | 345.88 | 347.23 | 0.002878 | 3.96 | 122.64 | 41.25 | 0.61 |
| Sbruggia valle | 3.4 | Bridge | | | | | | | | | | |
| Sbruggia valle | 3.3 | Tr = 50 anni | 245 | 342.03 | 345.2 | 345.2 | 346.09 | 0.007083 | 4.72 | 64.82 | 37.91 | 0.9 |
| | | Tr = 200 anni | 333 | 342.03 | 345.66 | 345.66 | 346.63 | 0.006576 | 5.04 | 82.99 | 39.87 | 0.89 |
| | | Tr = 500 anni | 392 | 342.03 | 345.88 | 345.88 | 346.97 | 0.006796 | 5.34 | 91.78 | 40.18 | 0.91 |
| Sbruggia valle | 2 | Tr = 50 anni | 245 | 341.12 | 343.65 | 343.81 | 344.6 | 0.015444 | 4.33 | 56.58 | 38.56 | 1.14 |
| | | Tr = 200 anni | 333 | 341.12 | 344.51 | 344.26 | 345.09 | 0.006061 | 3.42 | 101.32 | 58.13 | 0.76 |
| | | Tr = 500 anni | 392 | 341.12 | 345.13 | 344.46 | 345.56 | 0.003376 | 2.98 | 137.77 | 59.9 | 0.59 |
| Sbruggia valle | 1 | Tr = 50 anni | 245 | 339.43 | 343.73 | 342.59 | 343.97 | 0.00145 | 2.32 | 117.66 | 45.62 | 0.41 |
| | | Tr = 200 anni | 333 | 339.43 | 344.65 | 342.96 | 344.89 | 0.001047 | 2.33 | 159.9 | 46.81 | 0.37 |
| | | Tr = 500 anni | 392 | 339.43 | 345.19 | 343.17 | 345.43 | 0.000923 | 2.38 | 185.32 | 47.51 | 0.35 |

TABELLE
TRATTO ERRO_4

Rio Foresto

| Tratto Ero_4 - RIO FORESTO | | | | | | | | | | | | |
|----------------------------|-----------|---------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
| Foresto monte | 60 | Tr = 50 anni | 54 | 442.42 | 444.07 | 444.07 | 444.56 | 0.01203 | 3.11 | 17.63 | 18.64 | 0.99 |
| | | Tr = 200 anni | 73 | 442.42 | 444.31 | 444.31 | 444.87 | 0.01084 | 3.35 | 22.35 | 21.2 | 0.97 |
| | | Tr = 500 anni | 87 | 442.42 | 444.47 | 444.47 | 445.08 | 0.010009 | 3.49 | 25.9 | 23.11 | 0.95 |
| Foresto monte | 59 | Tr = 50 anni | 54 | 438.94 | 441.15 | 441.53 | 442.29 | 0.037145 | 4.73 | 11.42 | 12.98 | 1.61 |
| | | Tr = 200 anni | 73 | 438.94 | 441.42 | 441.88 | 442.57 | 0.033342 | 4.76 | 15.35 | 16 | 1.55 |
| | | Tr = 500 anni | 87 | 438.94 | 441.62 | 442.03 | 442.71 | 0.028403 | 4.63 | 18.8 | 18.1 | 1.45 |
| Foresto monte | 58 | Tr = 50 anni | 54 | 433.72 | 435.2 | 435.71 | 436.91 | 0.062135 | 5.8 | 9.31 | 11.55 | 2.06 |
| | | Tr = 200 anni | 73 | 433.72 | 435.4 | 436 | 437.4 | 0.056853 | 6.27 | 11.65 | 11.81 | 2.01 |
| | | Tr = 500 anni | 87 | 433.72 | 435.54 | 436.19 | 437.71 | 0.053491 | 6.53 | 13.32 | 11.98 | 1.98 |
| Foresto monte | 57 | Tr = 50 anni | 54 | 429.49 | 430.96 | 431.34 | 432.19 | 0.043051 | 4.91 | 11.01 | 14.22 | 1.78 |
| | | Tr = 200 anni | 73 | 429.49 | 431.13 | 431.6 | 432.64 | 0.043359 | 5.45 | 13.39 | 14.75 | 1.83 |
| | | Tr = 500 anni | 87 | 429.49 | 431.24 | 431.78 | 432.94 | 0.043003 | 5.77 | 15.08 | 15.11 | 1.84 |
| Foresto monte | 56 | Tr = 50 anni | 54 | 426.91 | 428.66 | 428.99 | 429.72 | 0.025872 | 4.62 | 12.31 | 15.73 | 1.43 |
| | | Tr = 200 anni | 73 | 426.91 | 428.84 | 429.33 | 430.11 | 0.028102 | 5.12 | 15.52 | 19.11 | 1.52 |
| | | Tr = 500 anni | 87 | 426.91 | 428.95 | 429.45 | 430.36 | 0.029977 | 5.45 | 17.62 | 21.02 | 1.58 |
| Foresto monte | 55 | Tr = 50 anni | 54 | 425.01 | 426.42 | 426.75 | 427.42 | 0.025882 | 4.55 | 12.86 | 17.17 | 1.44 |
| | | Tr = 200 anni | 73 | 425.01 | 426.59 | 426.99 | 427.8 | 0.027898 | 5.08 | 15.9 | 19.51 | 1.52 |
| | | Tr = 500 anni | 87 | 425.01 | 426.69 | 427.14 | 428.05 | 0.02926 | 5.42 | 17.96 | 20.94 | 1.58 |
| Foresto monte | 54 | Tr = 50 anni | 54 | 420.4 | 422.2 | 422.52 | 423.29 | 0.030318 | 4.62 | 11.69 | 12.49 | 1.52 |
| | | Tr = 200 anni | 73 | 420.4 | 422.41 | 422.8 | 423.72 | 0.030839 | 5.08 | 14.38 | 13.42 | 1.57 |
| | | Tr = 500 anni | 87 | 420.4 | 422.54 | 422.99 | 424.01 | 0.030971 | 5.37 | 16.21 | 13.89 | 1.59 |
| Foresto monte | 53 | Tr = 50 anni | 54 | 418.88 | 420.75 | 420.59 | 421.05 | 0.00786 | 2.45 | 22.06 | 22.77 | 0.79 |
| | | Tr = 200 anni | 73 | 418.88 | 420.96 | 420.8 | 421.33 | 0.007869 | 2.69 | 27.11 | 24.27 | 0.81 |
| | | Tr = 500 anni | 87 | 418.88 | 420.78 | 420.94 | 421.52 | 0.018674 | 3.83 | 22.73 | 22.98 | 1.23 |
| Foresto monte | 52.5 | Tr = 50 anni | 54 | 417.82 | 420.2 | 419.7 | 420.25 | 0.001264 | 1.15 | 55.11 | 64.13 | 0.33 |
| | | Tr = 200 anni | 73 | 417.82 | 420.33 | 419.82 | 420.41 | 0.00151 | 1.34 | 66.57 | 66.57 | 0.37 |
| | | Tr = 500 anni | 87 | 417.82 | 420.45 | 419.91 | 420.53 | 0.001519 | 1.42 | 71.86 | 68.75 | 0.37 |
| Foresto valle | 52.5 | Tr = 50 anni | 87 | 417.82 | 419.91 | 419.91 | 420.23 | 0.009898 | 2.69 | 37.57 | 58.92 | 0.88 |
| | | Tr = 200 anni | 109 | 417.82 | 420.02 | 420.02 | 420.38 | 0.010053 | 2.9 | 43.74 | 60.8 | 0.9 |
| | | Tr = 500 anni | 129 | 417.82 | 420.11 | 420.11 | 420.5 | 0.009996 | 3.06 | 49.25 | 62.44 | 0.91 |
| Foresto valle | 52 | Tr = 50 anni | 87 | 416.47 | 418.1 | 418.68 | 419.74 | 0.049088 | 5.69 | 15.29 | 17.47 | 1.94 |
| | | Tr = 200 anni | 109 | 416.47 | 418.4 | 418.85 | 419.75 | 0.035094 | 5.15 | 21.18 | 21.88 | 1.67 |
| | | Tr = 500 anni | 129 | 416.47 | 418.56 | 418.97 | 419.92 | 0.032984 | 5.17 | 24.95 | 24.47 | 1.63 |
| Foresto valle | 51 | Tr = 50 anni | 87 | 414.74 | 417.14 | 417.33 | 417.82 | 0.015202 | 3.71 | 25.18 | 34.52 | 1.11 |
| | | Tr = 200 anni | 109 | 414.74 | 417.27 | 417.51 | 418.06 | 0.015925 | 4.04 | 29.78 | 37.32 | 1.16 |
| | | Tr = 500 anni | 129 | 414.74 | 417.38 | 417.66 | 418.25 | 0.016349 | 4.29 | 33.79 | 39.6 | 1.19 |
| Foresto valle | 50.5 | Tr = 50 anni | 87 | 413.95 | 415.53 | 415.57 | 416.06 | 0.01349 | 3.22 | 26.99 | 27.96 | 1.05 |
| | | Tr = 200 anni | 109 | 413.95 | 415.62 | 415.75 | 416.32 | 0.01678 | 3.71 | 29.38 | 29.03 | 1.18 |
| | | Tr = 500 anni | 129 | 413.95 | 415.75 | 415.89 | 416.51 | 0.016491 | 3.86 | 33.44 | 30.76 | 1.18 |
| Foresto valle | 50.3 | Tr = 50 anni | 87 | 413.04 | 415.09 | 415.36 | 416.01 | 0.025052 | 4.25 | 20.45 | 21.8 | 1.4 |
| | | Tr = 200 anni | 109 | 413.04 | 415.26 | 415.56 | 416.27 | 0.024916 | 4.45 | 24.49 | 24.33 | 1.42 |
| | | Tr = 500 anni | 129 | 413.04 | 415.42 | 415.72 | 416.47 | 0.02382 | 4.54 | 28.39 | 26.48 | 1.4 |
| Foresto valle | 49 | Tr = 50 anni | 87 | 412.12 | 414.55 | 414.16 | 414.91 | 0.005209 | 2.67 | 34.74 | 44.77 | 0.69 |
| | | Tr = 200 anni | 109 | 412.12 | 414.92 | 414.61 | 415.19 | 0.003533 | 2.44 | 51.26 | 46.18 | 0.58 |
| | | Tr = 500 anni | 129 | 412.12 | 415.14 | 414.77 | 415.4 | 0.003086 | 2.41 | 61.72 | 47.05 | 0.55 |
| Foresto valle | 48.5 | Tr = 50 anni | 87 | 412.11 | 413.07 | 413.37 | 414.05 | 0.032825 | 4.56 | 22.05 | 46.01 | 1.55 |
| | | Tr = 200 anni | 109 | 412.11 | 413.15 | 413.49 | 414.3 | 0.036074 | 5.02 | 25.46 | 46.31 | 1.65 |
| | | Tr = 500 anni | 129 | 412.11 | 413.21 | 413.59 | 414.49 | 0.038133 | 5.37 | 28.34 | 46.56 | 1.71 |
| Foresto valle | 48.3 | Tr = 50 anni | 87 | 410.32 | 411.7 | 412.36 | 413.68 | 0.056821 | 6.24 | 13.95 | 15.12 | 2.07 |
| | | Tr = 200 anni | 109 | 410.32 | 411.94 | 412.55 | 413.87 | 0.043078 | 6.14 | 17.74 | 15.77 | 1.85 |
| | | Tr = 500 anni | 129 | 410.32 | 412.14 | 412.69 | 413.94 | 0.057137 | 5.94 | 21.7 | 25.52 | 2.06 |
| Foresto valle | 47 | Tr = 50 anni | 87 | 407.76 | 409.81 | 410 | 410.68 | 0.018815 | 4.13 | 21.06 | 18.54 | 1.24 |
| | | Tr = 200 anni | 109 | 407.76 | 410 | 410.21 | 410.98 | 0.018393 | 4.38 | 24.86 | 19.65 | 1.24 |
| | | Tr = 500 anni | 129 | 407.76 | 410.74 | 410.44 | 411.23 | 0.006259 | 3.13 | 42.7 | 31.27 | 0.76 |
| Foresto valle | 46 | Tr = 50 anni | 87 | 405.71 | 408 | 408.28 | 408.91 | 0.015599 | 4.28 | 21.82 | 31.94 | 1.14 |
| | | Tr = 200 anni | 109 | 405.71 | 408.11 | 408.46 | 409.24 | 0.018183 | 4.82 | 25.33 | 32.01 | 1.24 |
| | | Tr = 500 anni | 129 | 405.71 | 408.2 | 408.6 | 409.49 | 0.019657 | 5.2 | 28.44 | 32.07 | 1.3 |
| Foresto valle | 45.5 | Tr = 50 anni | 87 | 404.23 | 407.34 | 406.65 | 407.55 | 0.002665 | 2.1 | 44.99 | 33.94 | 0.5 |
| | | Tr = 200 anni | 109 | 404.23 | 407.34 | 406.9 | 407.68 | 0.004161 | 2.63 | 45.1 | 34.01 | 0.63 |
| | | Tr = 500 anni | 129 | 404.23 | 407.58 | 407.1 | 407.92 | 0.003869 | 2.66 | 53.74 | 38.99 | 0.61 |
| Foresto valle | 45.4 | | Bridge | | | | | | | | | |
| Foresto valle | 45.3 | Tr = 50 anni | 87 | 404.23 | 406.65 | 406.65 | 407.26 | 0.010717 | 3.47 | 25.68 | 22.89 | 0.95 |
| | | Tr = 200 anni | 109 | 404.23 | 406.9 | 406.9 | 407.54 | 0.009623 | 3.59 | 31.84 | 26.42 | 0.92 |
| | | Tr = 500 anni | 129 | 404.23 | 407.1 | 407.1 | 407.76 | 0.009143 | 3.69 | 37.28 | 29.43 | 0.91 |
| Foresto valle | 44 | Tr = 50 anni | 87 | 403.42 | 405.78 | 405.9 | 406.66 | 0.015494 | 4.16 | 20.93 | 14.64 | 1.11 |
| | | Tr = 200 anni | 109 | 403.42 | 406.1 | 406.26 | 407 | 0.012933 | 4.2 | 26.35 | 20.87 | 1.04 |
| | | Tr = 500 anni | 129 | 403.42 | 406.34 | 406.52 | 407.25 | 0.011231 | 4.28 | 32.07 | 27.71 | 0.99 |
| Foresto valle | 43 | Tr = 50 anni | 87 | 400.68 | 403.53 | 403.83 | 404.67 | 0.022155 | 4.73 | 18.4 | 13.98 | 1.32 |
| | | Tr = 200 anni | 109 | 400.68 | 403.78 | 404.09 | 405.03 | 0.021371 | 4.95 | 22 | 15.19 | 1.31 |
| | | Tr = 500 anni | 129 | 400.68 | 403.97 | 404.32 | 405.33 | 0.020785 | 5.15 | 25.03 | 15.9 | 1.31 |
| Foresto valle | 42 | Tr = 50 anni | 87 | 399.23 | 401.47 | 401.67 | 402.42 | 0.01797 | 4.32 | 20.15 | 15.82 | 1.22 |
| | | Tr = 200 anni | 109 | 399.23 | 401.68 | 401.93 | 402.76 | 0.018098 | 4.61 | 23.65 | 16.87 | 1.24 |
| | | Tr = 500 anni | 129 | 399.23 | 401.86 | 402.14 | 403.05 | 0.018 | 4.82 | 26.77 | 17.76 | 1.25 |
| Foresto valle | 41 | Tr = 50 anni | 87 | 391.73 | 393.53 | 394.16 | 395.68 | 0.061688 | 6.49 | 13.41 | 14.59 | 2.16 |
| | | Tr = 200 anni | 109 | 391.73 | 393.71 | 394.38 | 396.03 | 0.06559 | 6.75 | 16.16 | 17.39 | 2.23 |
| | | Tr = 500 anni | 129 | 391.73 | 393.82 | 394.57 | 396.43 | 0.065632 | 7.16 | 18.02 | 17.7 | 2.26 |
| Foresto valle | 40 | Tr = 50 anni | 87 | 388.33 | 390.99 | 391.52 | 392.74 | 0.027083 | 5.86 | 14.86 | 8.57 | 1.42 |
| | | Tr = 200 anni | 109 | 388.33 | 391.36 | 391.9 | 393.19 | 0.025338 | 6 | 18.18 | 9.67 | 1.4 |
| | | Tr = 500 anni | 129 | 388.33 | 391.65 | 392.2 | 393.55 | 0.024136 | 6.11 | 21.11 | 10.55 | 1.38 |
| Foresto valle | 39 | Tr = 50 anni | 87 | 386.75 | 388.89 | 389.26 | 390.1 | 0.022793 | 4.86 | 17.89 | 13.94 | 1.37 |
| | | Tr = 200 anni | 109 | 386.75 | 389.13 | 389.53 | 390.45 | 0.023423 | 5.09 | 21.43 | 15.91 | 1.4 |
| | | Tr = 500 anni | 129 | 386.75 | 389.31 | 389.74 | 390.73 | 0.023606 | 5.28 | 24.45 | 17.26 | 1.42 |

| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|---------------|-----------|---------------|----------------|---------------|---------------|---------------|---------------|------------------|----------------|----------------|---------------|--------------|
| Foresto valle | 38 | Tr = 50 anni | 87 | 383.98 | 386.1 | 386.41 | 387.33 | 0.02104 | 4.91 | 17.72 | 12.74 | 1.33 |
| | | Tr = 200 anni | 109 | 383.98 | 386.34 | 386.71 | 387.73 | 0.020999 | 5.23 | 20.86 | 13.53 | 1.34 |
| | | Tr = 500 anni | 129 | 383.98 | 386.54 | 386.96 | 388.06 | 0.020746 | 5.45 | 23.66 | 14.2 | 1.35 |
| Foresto valle | 37 | Tr = 50 anni | 87 | 382.76 | 384.91 | 385.01 | 385.66 | 0.014745 | 3.84 | 22.63 | 18.65 | 1.11 |
| | | Tr = 200 anni | 109 | 382.76 | 385.37 | 385.23 | 385.98 | 0.008591 | 3.46 | 31.5 | 20.06 | 0.88 |
| | | Tr = 500 anni | 129 | 382.76 | 385.64 | 385.41 | 386.26 | 0.007776 | 3.47 | 37.16 | 21.81 | 0.85 |
| Foresto valle | 36 | Tr = 50 anni | 92 | 380.86 | 384.18 | 384.18 | 384.89 | 0.007815 | 4.09 | 26.99 | 18.41 | 0.84 |
| | | Tr = 200 anni | 126 | 380.86 | 384.53 | 384.53 | 385.38 | 0.008033 | 4.53 | 33.47 | 18.99 | 0.87 |
| | | Tr = 500 anni | 150 | 380.86 | 384.73 | 384.73 | 385.69 | 0.008325 | 4.84 | 37.38 | 19.34 | 0.9 |
| Foresto valle | 35 | Tr = 50 anni | 92 | 379.76 | 381.88 | 382.12 | 382.92 | 0.018426 | 4.53 | 20.32 | 15.33 | 1.26 |
| | | Tr = 200 anni | 126 | 379.76 | 382.17 | 382.49 | 383.47 | 0.019121 | 5.05 | 24.95 | 16.3 | 1.3 |
| | | Tr = 500 anni | 150 | 379.76 | 382.38 | 382.76 | 383.8 | 0.018626 | 5.27 | 28.45 | 17 | 1.3 |
| Foresto valle | 34.5 | Tr = 50 anni | 92 | 377.16 | 380.51 | 379.55 | 380.82 | 0.002757 | 2.45 | 37.61 | 15.81 | 0.51 |
| | | Tr = 200 anni | 126 | 377.16 | 381.29 | 379.96 | 381.61 | 0.002239 | 2.5 | 50.32 | 16.71 | 0.46 |
| | | Tr = 500 anni | 150 | 377.16 | 381.81 | 380.2 | 382.14 | 0.00201 | 2.53 | 59.2 | 17.37 | 0.44 |
| Foresto valle | 34.4 | | Bridge | | | | | | | | | |
| Foresto valle | 34.3 | Tr = 50 anni | 92 | 377.16 | 379.05 | 379.55 | 380.68 | 0.031246 | 5.65 | 16.27 | 12.88 | 1.61 |
| | | Tr = 200 anni | 126 | 377.16 | 379.29 | 379.96 | 381.43 | 0.034831 | 6.47 | 19.47 | 13.54 | 1.72 |
| | | Tr = 500 anni | 150 | 377.16 | 379.44 | 380.2 | 381.92 | 0.037183 | 6.98 | 21.48 | 13.94 | 1.79 |
| Foresto valle | 33 | Tr = 50 anni | 92 | 375.91 | 377.55 | 377.75 | 378.46 | 0.019569 | 4.22 | 21.82 | 19.57 | 1.27 |
| | | Tr = 200 anni | 126 | 375.91 | 377.76 | 378.07 | 378.96 | 0.021352 | 4.84 | 26.04 | 20.16 | 1.36 |
| | | Tr = 500 anni | 150 | 375.91 | 377.9 | 378.27 | 379.28 | 0.022216 | 5.21 | 28.79 | 20.47 | 1.4 |
| Foresto valle | 32.5 | Tr = 50 anni | 92 | 375.35 | 376.92 | 377.03 | 377.65 | 0.014995 | 3.79 | 24.28 | 21.1 | 1.13 |
| | | Tr = 200 anni | 126 | 375.35 | 377.21 | 377.35 | 378.06 | 0.014916 | 4.1 | 30.71 | 23.56 | 1.15 |
| | | Tr = 500 anni | 150 | 375.35 | 377.37 | 377.54 | 378.32 | 0.015199 | 4.32 | 34.7 | 24.97 | 1.17 |
| Foresto valle | 32.3 | Tr = 50 anni | 92 | 374.18 | 375.83 | 376.39 | 377.54 | 0.037464 | 5.79 | 15.9 | 13.57 | 1.71 |
| | | Tr = 200 anni | 126 | 374.18 | 376.2 | 376.78 | 377.96 | 0.032494 | 5.88 | 21.44 | 16.19 | 1.63 |
| | | Tr = 500 anni | 150 | 374.18 | 376.43 | 377.02 | 378.22 | 0.029568 | 5.94 | 25.26 | 17.55 | 1.58 |
| Foresto valle | 31 | Tr = 50 anni | 92 | 372.85 | 375.25 | 375.25 | 375.99 | 0.012175 | 3.82 | 24.11 | 16.35 | 1 |
| | | Tr = 200 anni | 126 | 372.85 | 375.64 | 375.64 | 376.49 | 0.011774 | 4.08 | 30.86 | 18.36 | 1.01 |
| | | Tr = 500 anni | 150 | 372.85 | 375.91 | 375.91 | 376.79 | 0.010648 | 4.17 | 36.29 | 24.07 | 0.97 |
| Foresto valle | 30.5 | Tr = 50 anni | 92 | 371.66 | 374.74 | 373.76 | 374.94 | 0.002084 | 1.96 | 47.05 | 21.82 | 0.43 |
| | | Tr = 200 anni | 126 | 371.66 | 375.2 | 374.07 | 375.45 | 0.002251 | 2.19 | 57.55 | 23.94 | 0.45 |
| | | Tr = 500 anni | 150 | 371.66 | 375.45 | 374.26 | 375.73 | 0.002447 | 2.36 | 63.6 | 25.26 | 0.47 |
| Foresto valle | 30.4 | | Culvert | | | | | | | | | |
| Foresto valle | 30.3 | Tr = 50 anni | 92 | 371.66 | 373.84 | 373.76 | 374.4 | 0.010809 | 3.32 | 27.73 | 20.89 | 0.92 |
| | | Tr = 200 anni | 126 | 371.66 | 374.42 | 374.07 | 374.93 | 0.006393 | 3.14 | 40.11 | 21.49 | 0.73 |
| | | Tr = 500 anni | 150 | 371.66 | 374.74 | 374.26 | 375.26 | 0.005562 | 3.19 | 46.99 | 21.82 | 0.69 |
| Foresto valle | 29.5 | Tr = 50 anni | 92 | 370.36 | 373.53 | 373.13 | 374.08 | 0.007691 | 3.3 | 27.92 | 14.86 | 0.77 |
| | | Tr = 200 anni | 126 | 370.36 | 374.11 | 373.59 | 374.68 | 0.007456 | 3.34 | 37.74 | 19.72 | 0.77 |
| | | Tr = 500 anni | 150 | 370.36 | 374.5 | 373.93 | 375.04 | 0.006649 | 3.25 | 46.13 | 23.34 | 0.74 |
| Foresto valle | 29.4 | | Bridge | | | | | | | | | |
| Foresto valle | 29.3 | Tr = 50 anni | 92 | 370.36 | 372.92 | 373.13 | 374.02 | 0.018503 | 4.66 | 19.75 | 12.02 | 1.16 |
| | | Tr = 200 anni | 126 | 370.36 | 373.34 | 373.58 | 374.61 | 0.018598 | 4.98 | 25.28 | 14 | 1.18 |
| | | Tr = 500 anni | 150 | 370.36 | 373.6 | 373.93 | 374.96 | 0.018292 | 5.15 | 29.12 | 15.17 | 1.19 |
| Foresto valle | 28 | Tr = 50 anni | 92 | 368.86 | 371.7 | 371.7 | 372.65 | 0.012302 | 4.31 | 21.32 | 11.29 | 1 |
| | | Tr = 200 anni | 126 | 368.86 | 372.22 | 372.22 | 373.29 | 0.011114 | 4.59 | 27.73 | 14.85 | 0.97 |
| | | Tr = 500 anni | 150 | 368.86 | 372.63 | 372.63 | 373.65 | 0.008939 | 4.51 | 35.12 | 20.46 | 0.88 |
| Foresto valle | 27.5 | Tr = 50 anni | 92 | 367.89 | 370.73 | 370.15 | 371.07 | 0.004375 | 2.58 | 35.71 | 19.83 | 0.61 |
| | | Tr = 200 anni | 126 | 367.89 | 371.17 | 370.53 | 371.58 | 0.004199 | 2.84 | 44.36 | 20.06 | 0.61 |
| | | Tr = 500 anni | 150 | 367.89 | 371.44 | 370.73 | 371.9 | 0.004168 | 3.01 | 49.83 | 20.21 | 0.61 |
| Foresto valle | 27.4 | | Bridge | | | | | | | | | |
| Foresto valle | 27.3 | Tr = 50 anni | 92 | 367.89 | 369.84 | 370.15 | 370.98 | 0.024283 | 4.74 | 19.42 | 15.95 | 1.37 |
| | | Tr = 200 anni | 126 | 367.89 | 370.16 | 370.53 | 371.47 | 0.02279 | 5.06 | 24.88 | 17.54 | 1.36 |
| | | Tr = 500 anni | 150 | 367.89 | 370.35 | 370.73 | 371.78 | 0.022823 | 5.3 | 28.3 | 18.64 | 1.37 |
| Foresto valle | 26.5 | Tr = 50 anni | 92 | 367.85 | 369.55 | 369.77 | 370.52 | 0.016261 | 4.35 | 21.2 | 16.67 | 1.18 |
| | | Tr = 200 anni | 126 | 367.85 | 369.89 | 370.19 | 371.01 | 0.014837 | 4.7 | 27.79 | 22.1 | 1.16 |
| | | Tr = 500 anni | 150 | 367.85 | 370.05 | 370.4 | 371.32 | 0.015596 | 5.06 | 31.32 | 23.84 | 1.2 |
| Foresto valle | 26.3 | Tr = 50 anni | 92 | 367.18 | 368.92 | 369.38 | 370.45 | 0.03029 | 5.49 | 16.77 | 13.41 | 1.57 |
| | | Tr = 200 anni | 126 | 367.18 | 369.3 | 369.84 | 370.94 | 0.025369 | 5.67 | 22.21 | 14.66 | 1.47 |
| | | Tr = 500 anni | 150 | 367.18 | 369.54 | 370.14 | 371.26 | 0.023143 | 5.81 | 25.86 | 16.5 | 1.43 |
| Foresto valle | 25 | Tr = 50 anni | 92 | 366.33 | 369.03 | 368.51 | 369.41 | 0.004548 | 2.72 | 33.82 | 18.44 | 0.64 |
| | | Tr = 200 anni | 126 | 366.33 | 369.59 | 368.86 | 370 | 0.00379 | 2.84 | 44.32 | 19.22 | 0.6 |
| | | Tr = 500 anni | 150 | 366.33 | 369.93 | 369.08 | 370.37 | 0.003511 | 2.94 | 51.02 | 19.45 | 0.58 |
| Foresto valle | 24 | Tr = 50 anni | 92 | 364.42 | 367.56 | 367.56 | 368.46 | 0.013169 | 4.2 | 21.9 | 12.23 | 1 |
| | | Tr = 200 anni | 126 | 364.42 | 368.05 | 368.05 | 369.06 | 0.012039 | 4.46 | 28.43 | 15.72 | 0.98 |
| | | Tr = 500 anni | 150 | 364.42 | 368.43 | 368.43 | 369.41 | 0.009769 | 4.42 | 35.59 | 22.32 | 0.9 |
| Foresto valle | 23 | Tr = 50 anni | 92 | 363.24 | 366.26 | 365.76 | 366.57 | 0.004453 | 2.5 | 36.89 | 25.25 | 0.63 |
| | | Tr = 200 anni | 126 | 363.24 | 366.76 | 366.09 | 367.09 | 0.003276 | 2.54 | 52.1 | 34.45 | 0.56 |
| | | Tr = 500 anni | 150 | 363.24 | 367.1 | 366.3 | 367.41 | 0.002696 | 2.52 | 64.88 | 41.17 | 0.52 |
| Foresto valle | 22 | Tr = 50 anni | 92 | 362.03 | 364.16 | 364.4 | 365.22 | 0.018603 | 4.58 | 20.1 | 14.77 | 1.25 |
| | | Tr = 200 anni | 126 | 362.03 | 365.18 | 364.82 | 365.74 | 0.005421 | 3.35 | 39.95 | 26.07 | 0.72 |
| | | Tr = 500 anni | 150 | 362.03 | 365.57 | 365.1 | 366.07 | 0.004266 | 3.25 | 51.01 | 31.62 | 0.65 |
| Foresto valle | 21 | Tr = 50 anni | 92 | 360.58 | 363.19 | 362.66 | 363.54 | 0.004245 | 2.64 | 34.89 | 19.38 | 0.63 |
| | | Tr = 200 anni | 126 | 360.58 | 363.66 | 363 | 364.07 | 0.003915 | 2.85 | 44.27 | 20.34 | 0.62 |
| | | Tr = 500 anni | 150 | 360.58 | 363.97 | 363.21 | 364.42 | 0.003717 | 2.96 | 50.72 | 20.98 | 0.61 |
| Foresto valle | 20 | Tr = 50 anni | 92 | 359.98 | 362.52 | 362.22 | 363.12 | 0.007407 | 3.44 | 26.74 | 14.06 | 0.8 |
| | | Tr = 200 anni | 126 | 359.98 | 362.87 | 362.64 | 363.67 | 0.0085 | 3.97 | 31.71 | 14.65 | 0.86 |
| | | Tr = 500 anni | 150 | 359.98 | 363.07 | 362.9 | 364.02 | 0.009266 | 4.32 | 34.75 | 15 | 0.91 |
| Foresto valle | 19.5 | Tr = 50 anni | 92 | 358.08 | 361.41 | 360.11 | 361.55 | 0.001174 | 1.63 | 56.48 | 23.22 | 0.33 |
| | | Tr = 200 anni | 126 | 358.08 | 362.03 | 360.4 | 362.19 | 0.001098 | 1.78 | 70.95 | 23.56 | 0.33 |
| | | Tr = 500 anni | 150 | 358.08 | 362.44 | 360.58 | 362.62 | 0.001053 | 1.86 | 80.74 | 23.79 | 0.32 |

| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|---------------|-----------|---------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Foresto valle | 19.4 | | Bridge | | | | | | | | | |
| Foresto valle | 19.3 | Tr = 50 anni | 92 | 358.08 | 361.1 | 360.11 | 361.27 | 0.001797 | 1.87 | 49.22 | 23.05 | 0.41 |
| | | Tr = 200 anni | 126 | 358.08 | 361.59 | 360.4 | 361.81 | 0.001766 | 2.08 | 60.69 | 23.32 | 0.41 |
| | | Tr = 500 anni | 150 | 358.08 | 361.92 | 360.58 | 362.16 | 0.00174 | 2.19 | 68.38 | 23.5 | 0.41 |
| Foresto valle | 18 | Tr = 50 anni | 92 | 357.35 | 360.42 | 359.98 | 360.89 | 0.006518 | 3.05 | 30.2 | 16.74 | 0.72 |
| | | Tr = 200 anni | 126 | 357.35 | 360.94 | 360.41 | 361.45 | 0.005523 | 3.17 | 40.95 | 27.57 | 0.69 |
| | | Tr = 500 anni | 150 | 357.35 | 361.35 | 360.66 | 361.81 | 0.004297 | 3.07 | 54.93 | 51.18 | 0.62 |
| Foresto valle | 17.5 | Tr = 50 anni | 92 | 356.98 | 359.41 | 359.14 | 360.1 | 0.008821 | 3.69 | 24.93 | 12.03 | 0.82 |
| | | Tr = 200 anni | 126 | 356.98 | 360.09 | 359.57 | 360.83 | 0.007134 | 3.79 | 33.2 | 12.08 | 0.73 |
| | | Tr = 500 anni | 150 | 356.98 | 360.5 | 359.84 | 361.29 | 0.006835 | 3.94 | 38.04 | 12.1 | 0.71 |
| Foresto valle | 17.4 | | Bridge | | | | | | | | | |
| Foresto valle | 17.3 | Tr = 50 anni | 92 | 356.98 | 358.96 | 359.14 | 360.09 | 0.018407 | 4.71 | 19.52 | 12 | 1.18 |
| | | Tr = 200 anni | 126 | 356.98 | 359.29 | 359.57 | 360.75 | 0.019714 | 5.36 | 23.51 | 12.02 | 1.22 |
| | | Tr = 500 anni | 150 | 356.98 | 359.5 | 359.85 | 361.19 | 0.020718 | 5.77 | 25.99 | 12.04 | 1.25 |
| Foresto valle | 16.5 | Tr = 50 anni | 92 | 357.3 | 359.41 | 358.72 | 359.59 | 0.0019 | 1.94 | 51.55 | 31.57 | 0.44 |
| | | Tr = 200 anni | 126 | 357.3 | 360.11 | 358.97 | 360.27 | 0.00119 | 1.87 | 73.95 | 33.03 | 0.37 |
| | | Tr = 500 anni | 150 | 357.3 | 360.38 | 359.13 | 360.56 | 0.001191 | 2 | 82.93 | 33.59 | 0.37 |
| Foresto valle | 16.3 | Tr = 50 anni | 92 | 356.43 | 359.45 | 358.08 | 359.57 | 0.000876 | 1.54 | 64.5 | 31.65 | 0.31 |
| | | Tr = 200 anni | 126 | 356.43 | 360.13 | 358.44 | 360.25 | 0.00069 | 1.6 | 86.51 | 33.08 | 0.28 |
| | | Tr = 500 anni | 150 | 356.43 | 360.4 | 358.67 | 360.54 | 0.000728 | 1.74 | 95.54 | 33.65 | 0.3 |
| Foresto valle | 15.5 | Tr = 50 anni | 92 | 356.45 | 359.12 | 358.61 | 359.53 | 0.004852 | 2.85 | 32.32 | 18.44 | 0.66 |
| | | Tr = 200 anni | 126 | 356.45 | 359.95 | 358.99 | 360.24 | 0.002497 | 2.44 | 57.78 | 36.73 | 0.49 |
| | | Tr = 500 anni | 150 | 356.45 | 360.25 | 359.35 | 360.53 | 0.002275 | 2.46 | 68.76 | 37.35 | 0.48 |
| Foresto valle | 15.4 | | Bridge | | | | | | | | | |
| Foresto valle | 15.3 | Tr = 50 anni | 92 | 356.45 | 359 | 358.61 | 359.47 | 0.005848 | 3.04 | 30.31 | 16.86 | 0.72 |
| | | Tr = 200 anni | 126 | 356.45 | 359.49 | 358.99 | 360 | 0.005189 | 3.19 | 41.77 | 31.07 | 0.7 |
| | | Tr = 500 anni | 150 | 356.45 | 359.88 | 359.35 | 360.32 | 0.003952 | 3.03 | 55.2 | 36.58 | 0.62 |
| Foresto valle | 14 | Tr = 50 anni | 92 | 355.65 | 358.36 | 357.84 | 358.59 | 0.002793 | 2.29 | 45.69 | 31.92 | 0.52 |
| | | Tr = 200 anni | 126 | 355.65 | 358.79 | 358.12 | 359.04 | 0.002584 | 2.45 | 61.14 | 40.28 | 0.51 |
| | | Tr = 500 anni | 150 | 355.65 | 359.06 | 358.29 | 359.32 | 0.002416 | 2.5 | 72.59 | 45.49 | 0.5 |
| Foresto valle | 13 | Tr = 50 anni | 92 | 355 | 357.54 | 357.24 | 358.03 | 0.006603 | 3.09 | 29.82 | 17.99 | 0.76 |
| | | Tr = 200 anni | 126 | 355 | 357.96 | 357.6 | 358.53 | 0.006381 | 3.37 | 37.44 | 19.15 | 0.77 |
| | | Tr = 500 anni | 150 | 355 | 358.22 | 357.83 | 358.85 | 0.00622 | 3.52 | 42.62 | 19.91 | 0.77 |
| Foresto valle | 12 | Tr = 50 anni | 92 | 353.69 | 357.04 | 355.85 | 357.23 | 0.001735 | 1.94 | 47.62 | 21.35 | 0.41 |
| | | Tr = 200 anni | 126 | 353.69 | 357.48 | 356.19 | 357.73 | 0.001903 | 2.22 | 57.49 | 23.45 | 0.43 |
| | | Tr = 500 anni | 150 | 353.69 | 357.78 | 356.41 | 358.06 | 0.001947 | 2.36 | 64.62 | 24.86 | 0.44 |
| Foresto valle | 11.5 | | Culvert | | | | | | | | | |
| Foresto valle | 11 | Tr = 50 anni | 92 | 353.14 | 356.06 | 355.49 | 356.4 | 0.004295 | 2.55 | 36.14 | 19.3 | 0.59 |
| | | Tr = 200 anni | 126 | 353.14 | 356.51 | 355.81 | 356.91 | 0.004207 | 2.81 | 44.77 | 19.87 | 0.6 |
| | | Tr = 500 anni | 150 | 353.14 | 357.22 | 356.02 | 357.55 | 0.002473 | 2.52 | 60.18 | 23.31 | 0.48 |
| Foresto valle | 10.5 | Tr = 50 anni | 92 | 353.02 | 354.88 | 355.05 | 355.99 | 0.017491 | 4.66 | 19.74 | 12.1 | 1.17 |
| | | Tr = 200 anni | 126 | 353.02 | 355.69 | 355.47 | 356.61 | 0.010369 | 4.24 | 29.69 | 13.11 | 0.9 |
| | | Tr = 500 anni | 150 | 353.02 | 357.03 | 355.83 | 357.44 | 0.003283 | 2.87 | 54.48 | 23.36 | 0.53 |
| Foresto valle | 10.4 | | Bridge | | | | | | | | | |
| Foresto valle | 10.3 | Tr = 50 anni | 92 | 353.02 | 354.96 | 355.05 | 355.97 | 0.015158 | 4.45 | 20.69 | 12.11 | 1.09 |
| | | Tr = 200 anni | 126 | 353.02 | 355.47 | 355.47 | 356.59 | 0.012969 | 4.68 | 26.91 | 12.12 | 1 |
| | | Tr = 500 anni | 150 | 353.02 | 355.83 | 355.83 | 356.98 | 0.012727 | 4.76 | 31.54 | 13.7 | 1 |
| Foresto valle | 9 | Tr = 50 anni | 92 | 351.89 | 354.72 | 354.22 | 355.04 | 0.0047 | 2.53 | 36.37 | 23 | 0.64 |
| | | Tr = 200 anni | 126 | 351.89 | 355.07 | 354.55 | 355.47 | 0.00513 | 2.79 | 45.19 | 26.56 | 0.68 |
| | | Tr = 500 anni | 150 | 351.89 | 355.27 | 354.78 | 355.72 | 0.005452 | 2.97 | 50.59 | 28.78 | 0.71 |
| Foresto valle | 8.5 | Tr = 50 anni | 92 | 351.5 | 353.72 | 353.72 | 354.27 | 0.007757 | 3.38 | 29.8 | 28.33 | 0.84 |
| | | Tr = 200 anni | 126 | 351.5 | 354.38 | 354.01 | 354.75 | 0.003955 | 2.87 | 48.99 | 29.7 | 0.62 |
| | | Tr = 500 anni | 150 | 351.5 | 354.69 | 354.18 | 355.06 | 0.003381 | 2.84 | 58.45 | 31.14 | 0.59 |
| Foresto valle | 8.3 | Tr = 50 anni | 92 | 351.11 | 353.81 | 353.53 | 354.22 | 0.005091 | 2.93 | 34.61 | 28.52 | 0.68 |
| | | Tr = 200 anni | 126 | 351.11 | 354.4 | 353.92 | 354.74 | 0.003293 | 2.71 | 51.92 | 29.76 | 0.57 |
| | | Tr = 500 anni | 150 | 351.11 | 354.71 | 354.1 | 355.05 | 0.002921 | 2.72 | 61.21 | 31.55 | 0.54 |
| Foresto valle | 7 | Tr = 50 anni | 92 | 349.66 | 351.92 | 351.92 | 352.71 | 0.011854 | 3.94 | 23.35 | 14.79 | 1 |
| | | Tr = 200 anni | 126 | 349.66 | 352.38 | 352.38 | 353.24 | 0.00977 | 4.12 | 31.56 | 22.2 | 0.93 |
| | | Tr = 500 anni | 150 | 349.66 | 352.87 | 352.72 | 353.54 | 0.006239 | 3.74 | 44.6 | 30.75 | 0.76 |
| Foresto valle | 6 | Tr = 50 anni | 92 | 348.12 | 350.39 | 350.21 | 350.84 | 0.007842 | 2.98 | 30.9 | 23.41 | 0.83 |
| | | Tr = 200 anni | 126 | 348.12 | 350.76 | 350.51 | 351.27 | 0.007052 | 3.17 | 39.8 | 25.27 | 0.81 |
| | | Tr = 500 anni | 150 | 348.12 | 350.99 | 350.7 | 351.54 | 0.006644 | 3.27 | 45.88 | 26.47 | 0.79 |
| Foresto valle | 5 | Tr = 50 anni | 92 | 346.74 | 349.79 | 349.23 | 350.14 | 0.004444 | 2.65 | 35.04 | 23.53 | 0.63 |
| | | Tr = 200 anni | 126 | 346.74 | 350.23 | 349.6 | 350.62 | 0.003893 | 2.83 | 47.91 | 34.95 | 0.61 |
| | | Tr = 500 anni | 150 | 346.74 | 350.51 | 349.88 | 350.9 | 0.003433 | 2.85 | 58.79 | 39.05 | 0.58 |
| Foresto valle | 4 | Tr = 50 anni | 92 | 345.71 | 348.47 | 348.47 | 349.27 | 0.011978 | 3.97 | 23.15 | 14.4 | 1 |
| | | Tr = 200 anni | 126 | 345.71 | 348.89 | 348.89 | 349.81 | 0.0116 | 4.25 | 29.66 | 16.23 | 1 |
| | | Tr = 500 anni | 150 | 345.71 | 349.16 | 349.16 | 350.14 | 0.011336 | 4.4 | 34.09 | 17.37 | 1 |
| Foresto valle | 3 | Tr = 50 anni | 92 | 345.03 | 347.43 | 347.31 | 347.88 | 0.00899 | 2.99 | 30.76 | 25.81 | 0.87 |
| | | Tr = 200 anni | 126 | 345.03 | 347.73 | 347.58 | 348.27 | 0.008329 | 3.25 | 38.72 | 26.89 | 0.87 |
| | | Tr = 500 anni | 150 | 345.03 | 347.94 | 347.76 | 348.52 | 0.007818 | 3.38 | 44.34 | 27.64 | 0.85 |
| Foresto valle | 2 | Tr = 50 anni | 92 | 343.53 | 346.02 | 345.96 | 346.7 | 0.010345 | 3.64 | 25.25 | 16.85 | 0.95 |
| | | Tr = 200 anni | 126 | 343.53 | 346.37 | 346.32 | 347.2 | 0.010296 | 4.04 | 31.18 | 17.51 | 0.97 |
| | | Tr = 500 anni | 150 | 343.53 | 346.6 | 346.54 | 347.52 | 0.010093 | 4.25 | 35.29 | 17.96 | 0.97 |
| Foresto valle | 1.5 | Tr = 50 anni | 92 | 341.79 | 343.38 | 343.73 | 344.8 | 0.050012 | 6.06 | 20.34 | 42.19 | 1.92 |
| | | Tr = 200 anni | 126 | 341.79 | 344.89 | 343.9 | 345 | 0.001172 | 1.51 | 87.28 | 45.64 | 0.33 |
| | | Tr = 500 anni | 150 | 341.79 | 345.44 | 344.02 | 345.53 | 0.000742 | 1.35 | 112.67 | 46.54 | 0.27 |
| Foresto valle | 1.4 | | Culvert | | | | | | | | | |
| Foresto valle | 1 | Tr = 50 anni | 92 | 341.79 | 343.86 | 343.86 | 344.13 | 0.006791 | 2.67 | 40.98 | 43.95 | 1.92 |
| | | Tr = 200 anni | 126 | 341.79 | 344.84 | 343.9 | 344.96 | 0.001266 | 1.56 | 85.17 | 45.56 | 0.34 |
| | | Tr = 500 anni | 150 | 341.79 | 345.4 | 344.02 | 345.49 | 0.000786 | 1.37 | 110.63 | 46.47 | 0.28 |
| Foresto valle | 0.5 | Tr = 50 anni | 92 | 339.43 | 343.97 | 341.58 | 344 | 0.000169 | 0.76 | 128.47 | 45.92 | 0.14 |
| | | Tr = 200 anni | 126 | 339.43 | 344.88 | 341.95 | 344.91 | 0.000132 | 0.78 | 170.86 | 47.11 | 0.13 |
| | | Tr = 500 anni | 150 | 339.43 | 345.43 | 342.1 | 345.46 | 0.000121 | 0.8 | 196.75 | 47.83 | 0.12 |

TABELLE
TRATTO ERRO_4

Rio Ciua

| Tratto Erro_4 - RIO CIUA | | | | | | | | | | | | |
|--------------------------|-----------|---------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
| Rio Ciuia | 12.5 | Tr = 50 anni | 300 | 339.43 | 343.56 | 342.81 | 343.96 | 0.002901 | 2.91 | 110 | 45.4 | 0.57 |
| | | Tr = 200 anni | 409 | 339.43 | 344.5 | 343.2 | 344.87 | 0.001948 | 2.83 | 152.99 | 46.62 | 0.48 |
| | | Tr = 500 anni | 483 | 339.43 | 345.04 | 343.45 | 345.42 | 0.0017 | 2.86 | 178.23 | 47.32 | 0.46 |
| Rio Ciuia | 12 | Tr = 50 anni | 300 | 337.11 | 342.1 | 342.1 | 343.59 | 0.010549 | 5.39 | 55.66 | 19.18 | 1 |
| | | Tr = 200 anni | 409 | 337.11 | 342.89 | 342.89 | 344.55 | 0.009687 | 5.72 | 72.13 | 22.77 | 0.99 |
| | | Tr = 500 anni | 483 | 337.11 | 343.38 | 343.38 | 345.11 | 0.00909 | 5.85 | 83.77 | 25 | 0.98 |
| Rio Ciuia | 11 | Tr = 50 anni | 300 | 336.72 | 339.84 | 340.48 | 341.89 | 0.016051 | 6.46 | 50.24 | 29.85 | 1.3 |
| | | Tr = 200 anni | 409 | 336.72 | 340.22 | 341.05 | 342.79 | 0.017203 | 7.34 | 62.1 | 32.65 | 1.38 |
| | | Tr = 500 anni | 483 | 336.72 | 340.45 | 341.37 | 343.32 | 0.017708 | 7.84 | 69.72 | 34.28 | 1.42 |
| Rio Ciuia | 10 | Tr = 50 anni | 300 | 335.75 | 338.45 | 339.19 | 340.87 | 0.026949 | 6.89 | 43.52 | 23.36 | 1.61 |
| | | Tr = 200 anni | 409 | 335.75 | 338.89 | 339.83 | 341.79 | 0.026241 | 7.54 | 54.26 | 25.25 | 1.63 |
| | | Tr = 500 anni | 483 | 335.75 | 339.17 | 340.21 | 342.33 | 0.024844 | 7.87 | 61.7 | 27.45 | 1.61 |
| Rio Ciuia | 9 | Tr = 50 anni | 300 | 334.88 | 337.87 | 338.07 | 339.05 | 0.014035 | 4.81 | 62.36 | 35.92 | 1.17 |
| | | Tr = 200 anni | 409 | 334.88 | 338.29 | 338.53 | 339.7 | 0.01356 | 5.26 | 77.78 | 38.06 | 1.17 |
| | | Tr = 500 anni | 483 | 334.88 | 338.56 | 338.8 | 340.08 | 0.012745 | 5.46 | 88.43 | 38.88 | 1.16 |
| Rio Ciuia | 8 | Tr = 50 anni | 300 | 333.19 | 336.22 | 336.52 | 337.82 | 0.014562 | 5.61 | 53.46 | 23.57 | 1.19 |
| | | Tr = 200 anni | 409 | 333.19 | 336.93 | 337.18 | 338.61 | 0.012529 | 5.75 | 71.15 | 26.77 | 1.13 |
| | | Tr = 500 anni | 483 | 333.19 | 337.31 | 337.57 | 339.08 | 0.012126 | 5.9 | 81.89 | 28.84 | 1.12 |
| Rio Ciuia | 7 | Tr = 50 anni | 300 | 332.49 | 336.47 | 335.91 | 337.06 | 0.00468 | 3.39 | 88.47 | 36.95 | 0.7 |
| | | Tr = 200 anni | 409 | 332.49 | 337 | 336.38 | 337.72 | 0.004765 | 3.78 | 108.34 | 38.88 | 0.72 |
| | | Tr = 500 anni | 483 | 332.49 | 337.29 | 336.67 | 338.11 | 0.004943 | 4.03 | 120.38 | 45.02 | 0.74 |
| Rio Ciuia | 6 | Tr = 50 anni | 300 | 331.97 | 336.05 | 335.3 | 336.53 | 0.003208 | 3.48 | 106.02 | 51.55 | 0.61 |
| | | Tr = 200 anni | 409 | 331.97 | 336.75 | 336 | 337.23 | 0.002504 | 3.49 | 143.21 | 55 | 0.55 |
| | | Tr = 500 anni | 483 | 331.97 | 337.13 | 336.23 | 337.63 | 0.002347 | 3.58 | 164.15 | 56.35 | 0.54 |
| Rio Ciuia | 5 | Tr = 50 anni | 300 | 329.2 | 331.92 | 332.67 | 334.28 | 0.027517 | 6.81 | 44.08 | 24.67 | 1.63 |
| | | Tr = 200 anni | 409 | 329.2 | 332.37 | 333.24 | 335.12 | 0.026808 | 7.35 | 55.64 | 27.09 | 1.64 |
| | | Tr = 500 anni | 483 | 329.2 | 332.64 | 333.58 | 335.62 | 0.026284 | 7.64 | 63.22 | 28.57 | 1.64 |
| Rio Ciuia | 4 | Tr = 50 anni | 300 | 328.32 | 332.35 | 332.17 | 333.27 | 0.00795 | 4.24 | 70.78 | 31.84 | 0.91 |
| | | Tr = 200 anni | 409 | 328.32 | 332.9 | 332.73 | 333.97 | 0.007888 | 4.58 | 89.2 | 35.4 | 0.92 |
| | | Tr = 500 anni | 483 | 328.32 | 333.28 | 333.06 | 334.4 | 0.007403 | 4.69 | 102.94 | 37.55 | 0.9 |
| Rio Ciuia | 3 | Tr = 50 anni | 300 | 327.88 | 331.39 | 331.19 | 332.31 | 0.007626 | 4.27 | 70.25 | 29.84 | 0.89 |
| | | Tr = 200 anni | 409 | 327.88 | 332.05 | 331.71 | 333.09 | 0.006535 | 4.52 | 90.43 | 30.75 | 0.84 |
| | | Tr = 500 anni | 483 | 327.88 | 332.47 | 332.04 | 333.58 | 0.006066 | 4.67 | 103.42 | 31.32 | 0.82 |
| Rio Ciuia | 2.5 | Tr = 50 anni | 300 | 325.65 | 329.89 | 329.09 | 330.21 | 0.001995 | 2.89 | 131.61 | 59.77 | 0.47 |
| | | Tr = 200 anni | 409 | 325.65 | 330.37 | 329.54 | 330.75 | 0.002095 | 3.2 | 160.71 | 61.93 | 0.49 |
| | | Tr = 500 anni | 483 | 325.65 | 330.65 | 329.73 | 331.08 | 0.002165 | 3.4 | 178.31 | 63.19 | 0.5 |
| Rio Ciuia | 2.4 | | Culvert | | | | | | | | | |
| Rio Ciuia | 2.3 | Tr = 50 anni | 300 | 325.65 | 329.09 | 329.09 | 329.89 | 0.006284 | 4.4 | 85.95 | 53.67 | 0.8 |
| | | Tr = 200 anni | 409 | 325.65 | 329.59 | 329.54 | 330.4 | 0.00554 | 4.57 | 114.07 | 58.43 | 0.77 |
| | | Tr = 500 anni | 483 | 325.65 | 329.79 | 329.73 | 330.7 | 0.005864 | 4.87 | 125.88 | 59.34 | 0.8 |
| Rio Ciuia | 1 | Tr = 50 anni | 300 | 323.25 | 326.41 | 326.81 | 327.99 | 0.011638 | 5.83 | 58.24 | 31.74 | 1.11 |
| | | Tr = 200 anni | 409 | 323.25 | 326.96 | 327.39 | 328.69 | 0.010437 | 6.22 | 77.11 | 36.99 | 1.09 |
| | | Tr = 500 anni | 483 | 323.25 | 327.3 | 327.66 | 329.08 | 0.009778 | 6.42 | 89.97 | 40.18 | 1.07 |

TABELLE
TRATTO ERRO_4

Rio Viorina

| Tratto Erro_4 - RIO VIORINA | | | | | | | | | | | | |
|-----------------------------|-----------|---------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
| Rio Viorina | 10 | Tr = 50 anni | 20 | 433.79 | 435.21 | 435.21 | 435.66 | 0.014512 | 2.96 | 6.76 | 7.95 | 1.01 |
| | | Tr = 200 anni | 28 | 433.79 | 435.47 | 435.47 | 435.98 | 0.011967 | 3.16 | 9.11 | 10.41 | 0.95 |
| | | Tr = 500 anni | 34 | 433.79 | 435.66 | 435.66 | 436.17 | 0.010097 | 3.21 | 11.28 | 12.67 | 0.9 |
| Rio Viorina | 9 | Tr = 50 anni | 20 | 431.62 | 432.43 | 432.56 | 432.96 | 0.029153 | 3.23 | 6.19 | 10.56 | 1.35 |
| | | Tr = 200 anni | 28 | 431.62 | 432.58 | 432.75 | 433.23 | 0.02917 | 3.57 | 7.83 | 11.39 | 1.38 |
| | | Tr = 500 anni | 34 | 431.62 | 432.68 | 432.88 | 433.4 | 0.028998 | 3.77 | 9.01 | 11.94 | 1.39 |
| Rio Viorina | 8 | Tr = 50 anni | 20 | 429.72 | 430.7 | 430.62 | 431 | 0.010958 | 2.42 | 8.27 | 10.51 | 0.87 |
| | | Tr = 200 anni | 28 | 429.72 | 430.72 | 430.82 | 431.27 | 0.019598 | 3.29 | 8.52 | 10.57 | 1.17 |
| | | Tr = 500 anni | 34 | 429.72 | 430.84 | 430.95 | 431.46 | 0.01902 | 3.48 | 9.78 | 10.82 | 1.17 |
| Rio Viorina | 7 | Tr = 50 anni | 20 | 428.03 | 429.53 | 429.32 | 429.82 | 0.007963 | 2.41 | 8.31 | 7.8 | 0.74 |
| | | Tr = 200 anni | 28 | 428.03 | 429.77 | 429.56 | 430.14 | 0.008514 | 2.71 | 10.35 | 9.38 | 0.82 |
| | | Tr = 500 anni | 34 | 428.03 | 429.77 | 429.77 | 430.32 | 0.013973 | 3.28 | 10.37 | 9.4 | 1 |
| Rio Viorina | 6.5 | Tr = 50 anni | 20 | 427.38 | 428.6 | 428.6 | 428.95 | 0.014439 | 2.62 | 7.65 | 11.14 | 1.01 |
| | | Tr = 200 anni | 28 | 427.38 | 428.76 | 428.88 | 429.19 | 0.014456 | 2.93 | 10.01 | 21.48 | 1.04 |
| | | Tr = 500 anni | 34 | 427.38 | 428.85 | 428.97 | 429.32 | 0.014141 | 3.09 | 12.2 | 24.42 | 1.04 |
| Rio Viorina | 6.3 | Tr = 50 anni | 20 | 426.3 | 427.28 | 427.72 | 428.82 | 0.08539 | 5.5 | 3.64 | 6.33 | 2.31 |
| | | Tr = 200 anni | 28 | 426.3 | 427.49 | 427.96 | 429.07 | 0.064765 | 5.56 | 5.03 | 6.84 | 2.07 |
| | | Tr = 500 anni | 34 | 426.3 | 427.65 | 428.13 | 429.2 | 0.053437 | 5.52 | 6.16 | 7.23 | 1.91 |
| Rio Viorina | 5.5 | Tr = 50 anni | 20 | 426.24 | 427.58 | 427.48 | 427.91 | 0.010121 | 2.55 | 7.83 | 8.68 | 0.86 |
| | | Tr = 200 anni | 28 | 426.24 | 427.87 | 427.7 | 428.23 | 0.008478 | 2.68 | 10.45 | 9.23 | 0.8 |
| | | Tr = 500 anni | 34 | 426.24 | 428.07 | 427.85 | 428.46 | 0.007645 | 2.75 | 12.37 | 9.62 | 0.77 |
| Rio Viorina | 5.4 | Bridge | | | | | | | | | | |
| Rio Viorina | 5.3 | Tr = 50 anni | 20 | 426.24 | 427.4 | 427.48 | 427.91 | 0.019171 | 3.16 | 6.33 | 8.34 | 1.16 |
| | | Tr = 200 anni | 28 | 426.24 | 427.58 | 427.7 | 428.23 | 0.019832 | 3.58 | 7.83 | 8.68 | 1.2 |
| | | Tr = 500 anni | 34 | 426.24 | 427.68 | 427.85 | 428.45 | 0.020957 | 3.88 | 8.76 | 8.88 | 1.25 |
| Rio Viorina | 4 | Tr = 50 anni | 20 | 422.6 | 423.64 | 423.78 | 424.18 | 0.02457 | 3.24 | 6.18 | 9.79 | 1.3 |
| | | Tr = 200 anni | 28 | 422.6 | 423.8 | 423.98 | 424.46 | 0.024937 | 3.58 | 7.82 | 10.72 | 1.34 |
| | | Tr = 500 anni | 34 | 422.6 | 423.9 | 424.11 | 424.64 | 0.025401 | 3.81 | 8.93 | 11.31 | 1.37 |
| Rio Viorina | 3 | Tr = 50 anni | 20 | 421.14 | 422.6 | 422.64 | 423.16 | 0.016804 | 3.33 | 6.01 | 6.11 | 1.07 |
| | | Tr = 200 anni | 28 | 421.14 | 422.89 | 422.93 | 423.53 | 0.015572 | 3.54 | 7.91 | 6.86 | 1.05 |
| | | Tr = 500 anni | 34 | 421.14 | 423.11 | 423.46 | 423.76 | 0.014345 | 3.59 | 9.48 | 7.56 | 1.02 |
| Rio Viorina | 2 | Tr = 50 anni | 20 | 418.73 | 419.96 | 420.02 | 420.48 | 0.01708 | 3.18 | 6.28 | 7.32 | 1.1 |
| | | Tr = 200 anni | 28 | 418.73 | 420.18 | 420.35 | 420.81 | 0.01692 | 3.51 | 8.06 | 10.45 | 1.12 |
| | | Tr = 500 anni | 34 | 418.73 | 420.3 | 420.64 | 421.01 | 0.01738 | 3.76 | 9.55 | 14.91 | 1.15 |
| Rio Viorina | 1 | Tr = 50 anni | 20 | 417.82 | 420.25 | 418.99 | 420.26 | 0.000135 | 0.5 | 58.49 | 65.09 | 0.11 |
| | | Tr = 200 anni | 28 | 417.82 | 420.4 | 419.41 | 420.41 | 0.000171 | 0.6 | 68.58 | 67.87 | 0.13 |
| | | Tr = 500 anni | 34 | 417.82 | 420.53 | 419.53 | 420.54 | 0.000181 | 0.64 | 77.37 | 70.2 | 0.13 |