



PROVINCIA DI SAVONA
DIFESA DEL SUOLO E TUTELA AMBIENTALE

VERIFICHE IDRAULICHE

Bacino: NIMBALTO

RIO CASTELLARO

PROFILI DI RIGURGITO

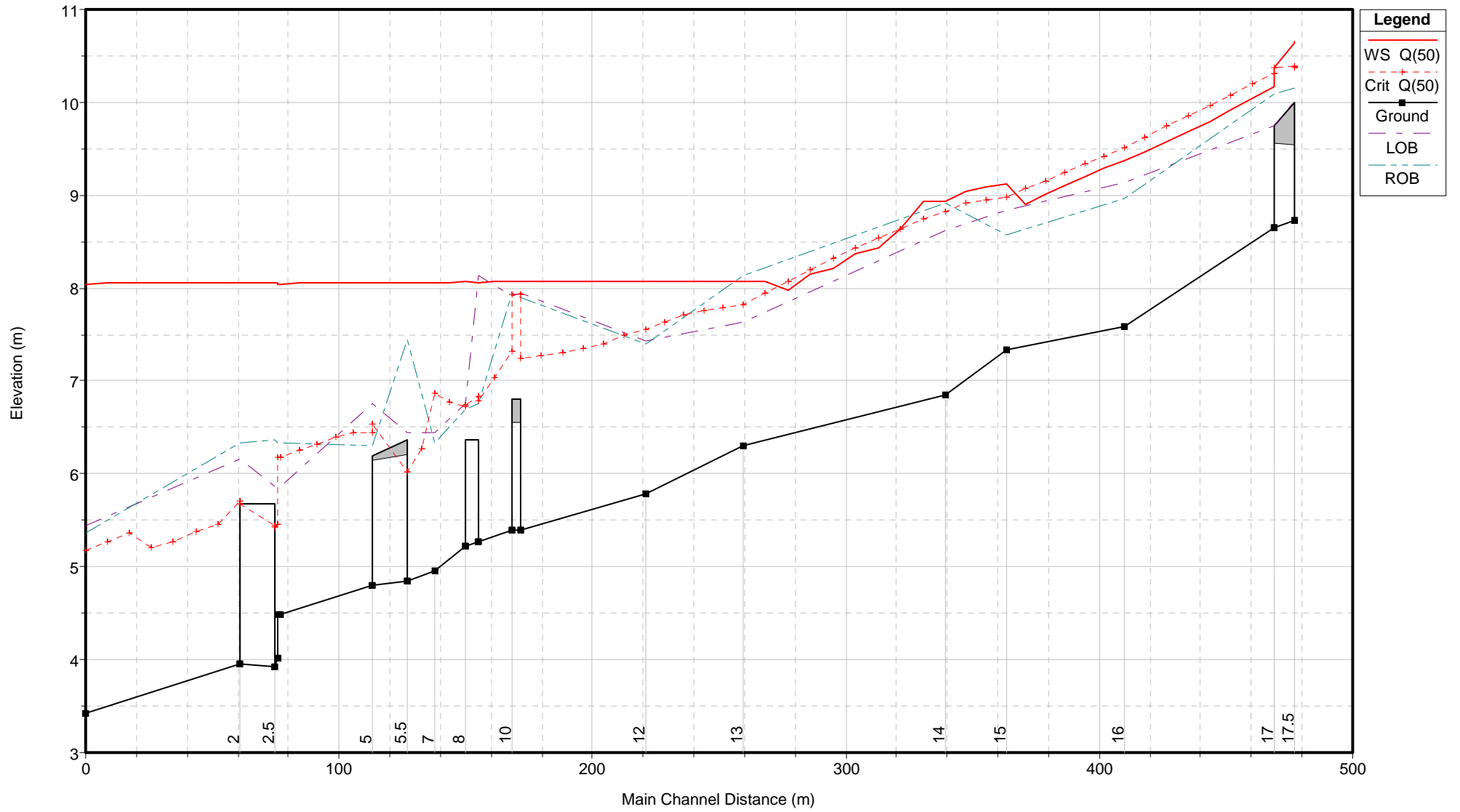
PER LE PORTATE

T=50, 200, 500 ANNI

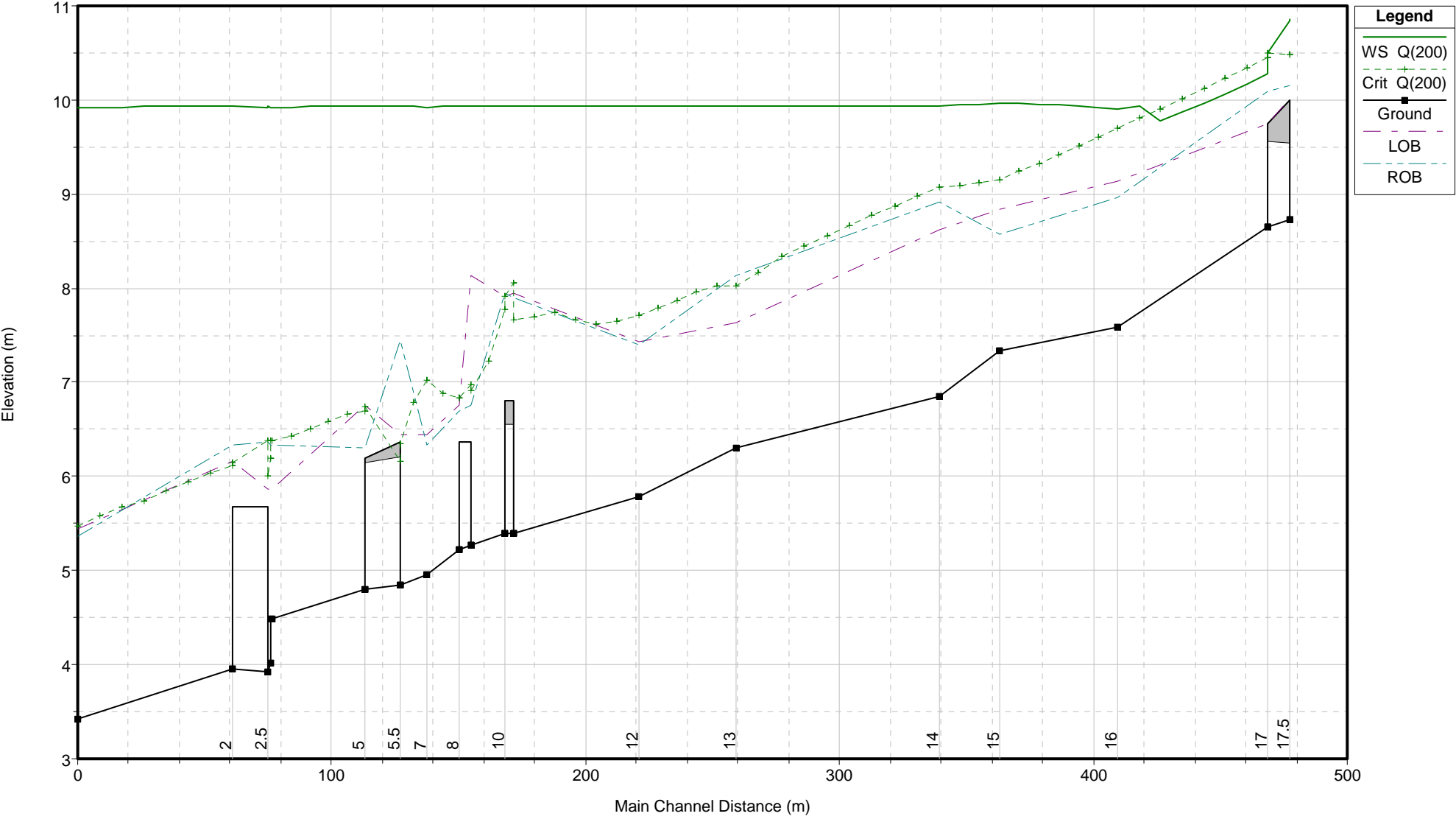
RIO CASTELLARO

Dalla sez. 1 alla sez. 18

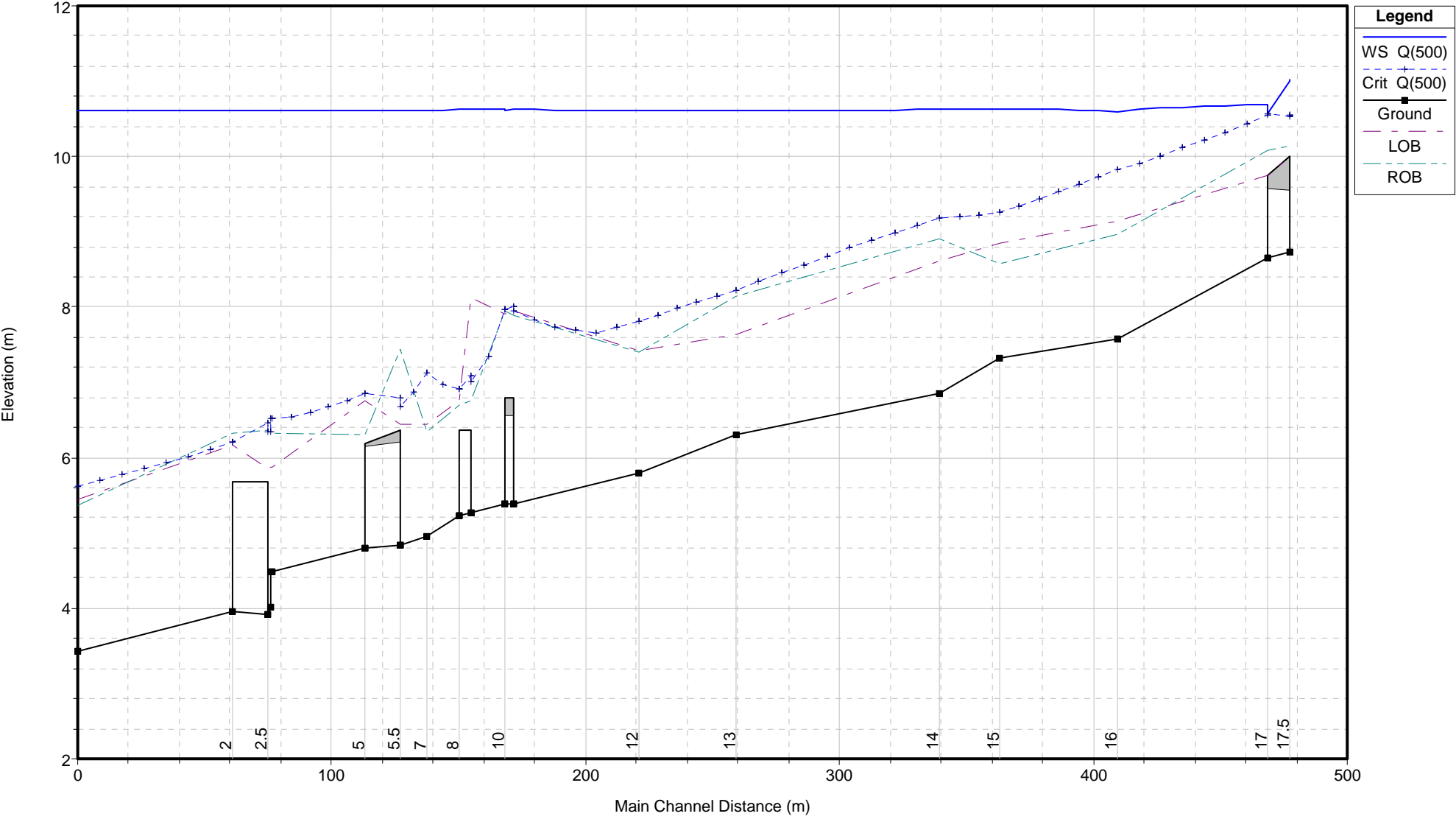
Rio Castellaro – Profilo longitudinale di moto permanente per T=50 anni



Rio Castellaro – Profilo longitudinale di moto permanente per T=200 anni



Rio Castellaro – Profilo longitudinale di moto permanente per T=500 anni



GEOMETRIA DELLE SEZIONI

E LIVELLI IDRICI

PER LE PORTATE

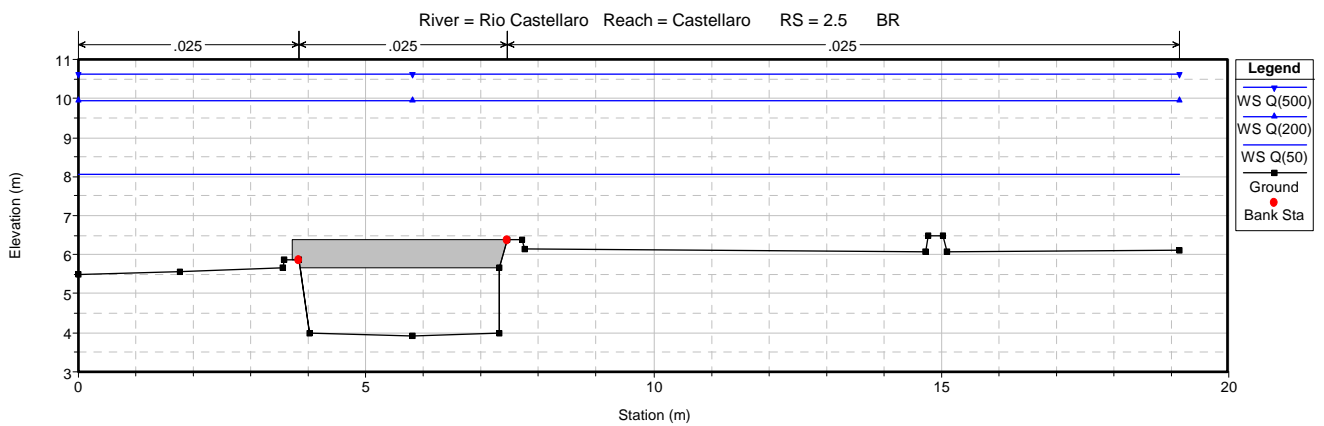
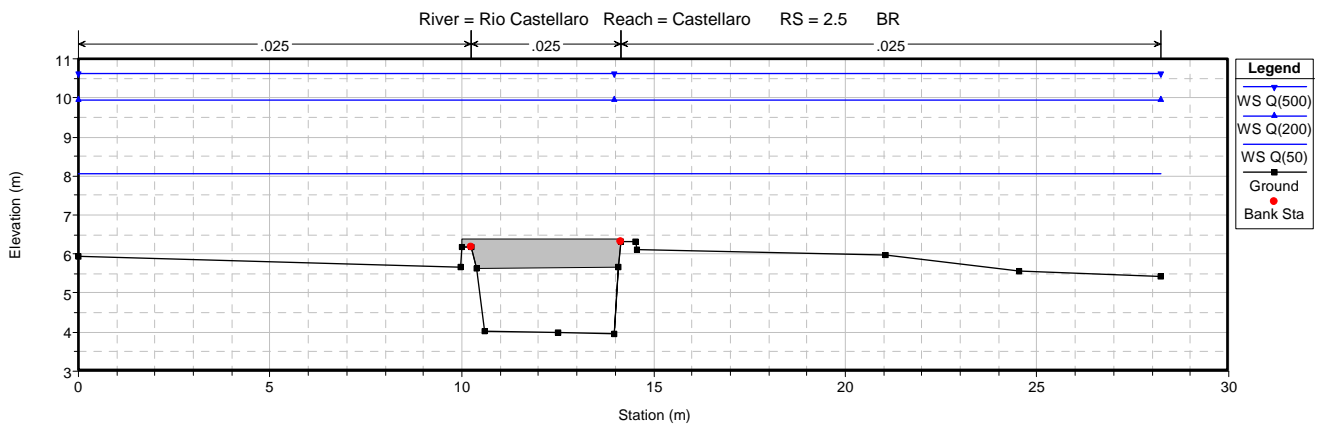
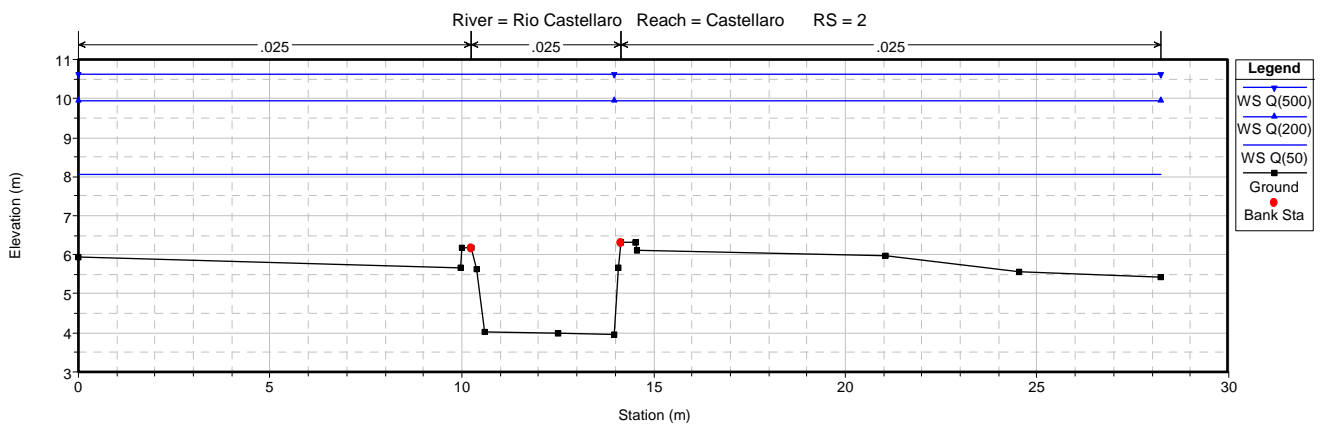
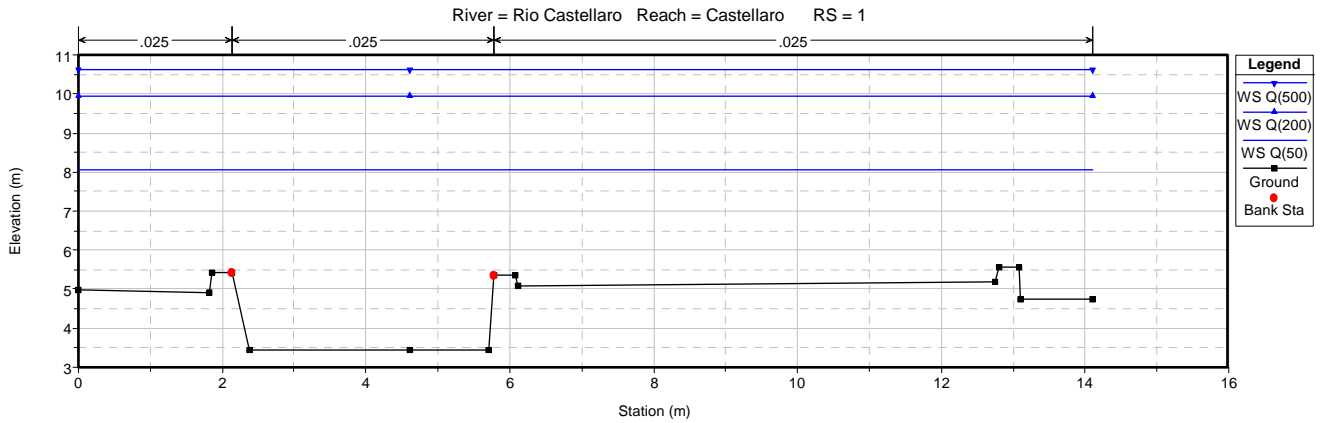
T=50, 200, 500 ANNI

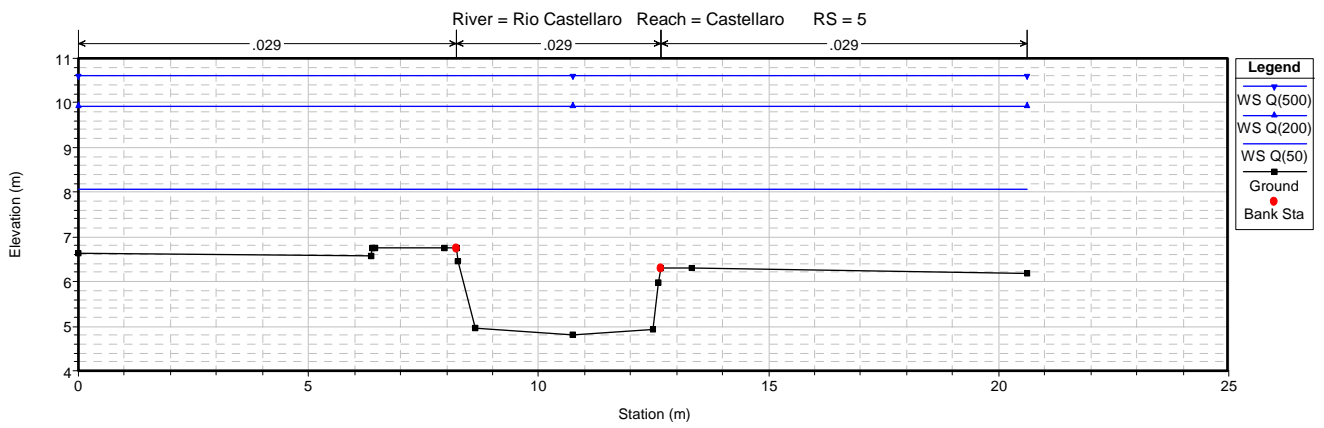
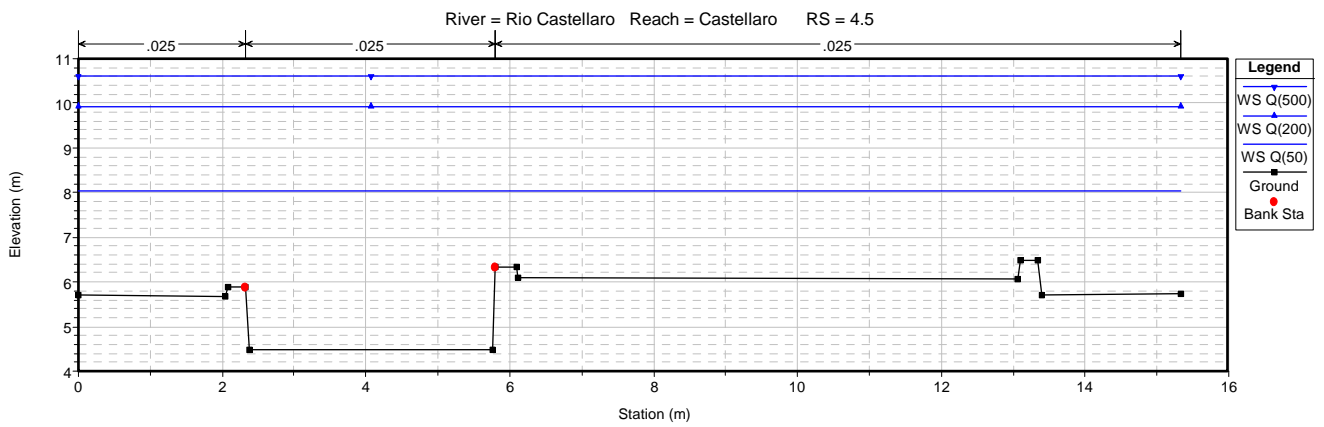
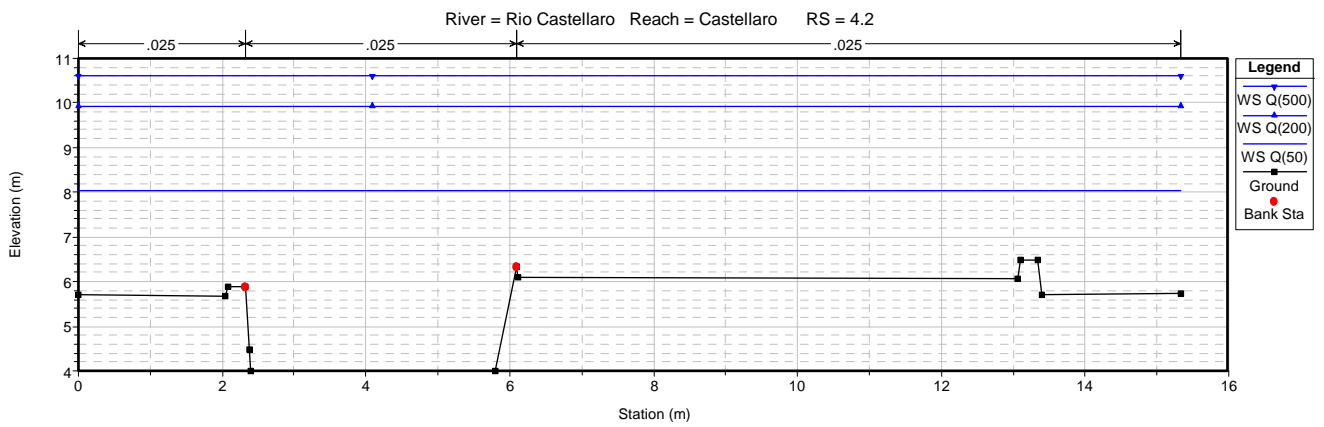
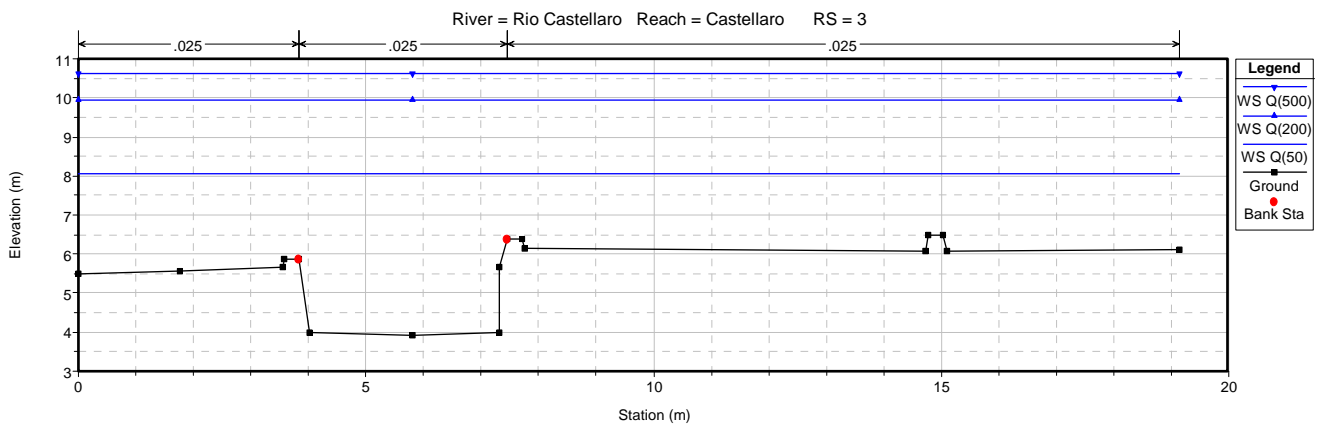
RIO CASTELLARO

Dalla sez. 1 alla sez. 18

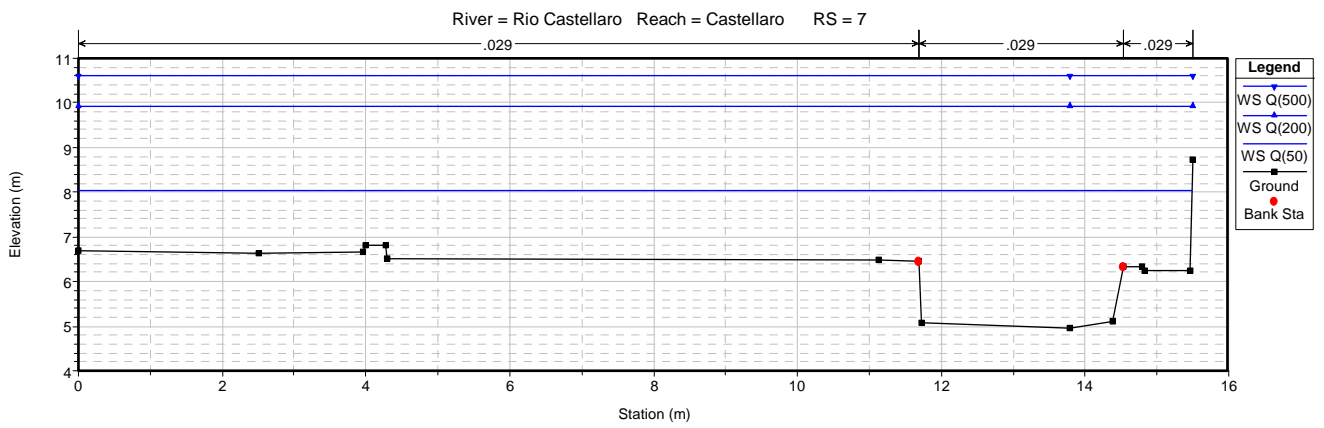
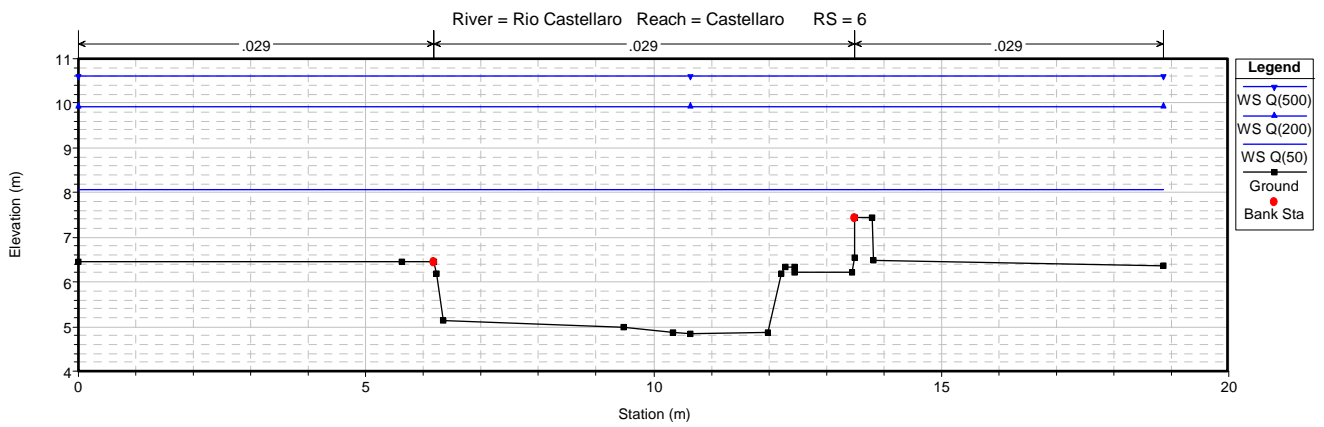
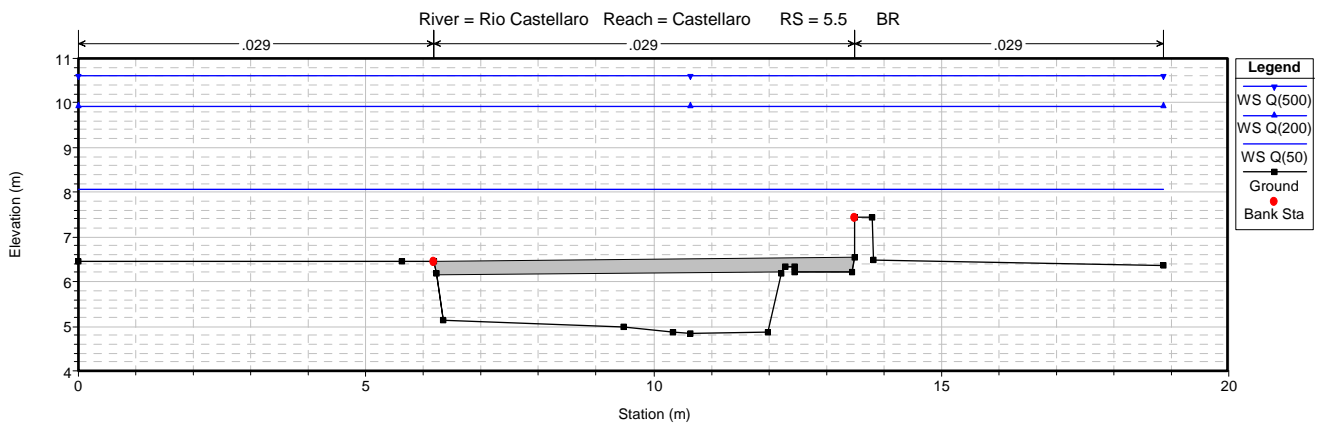
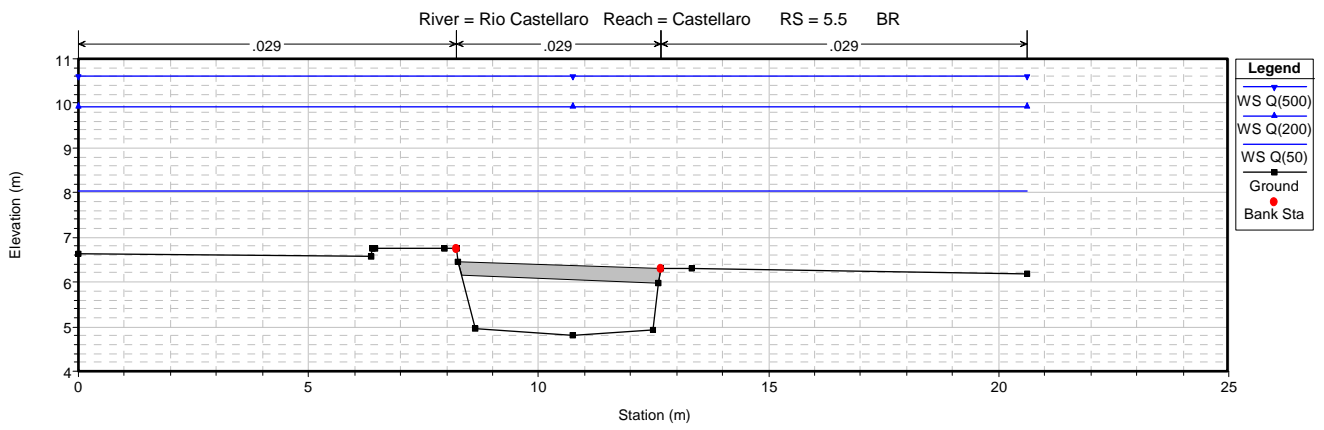
RIO CASTELLARO

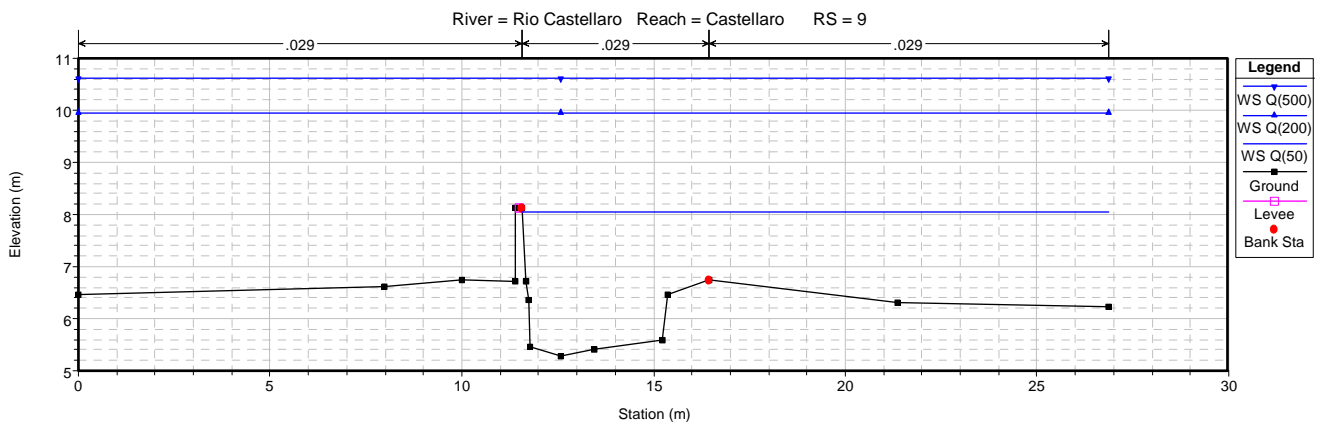
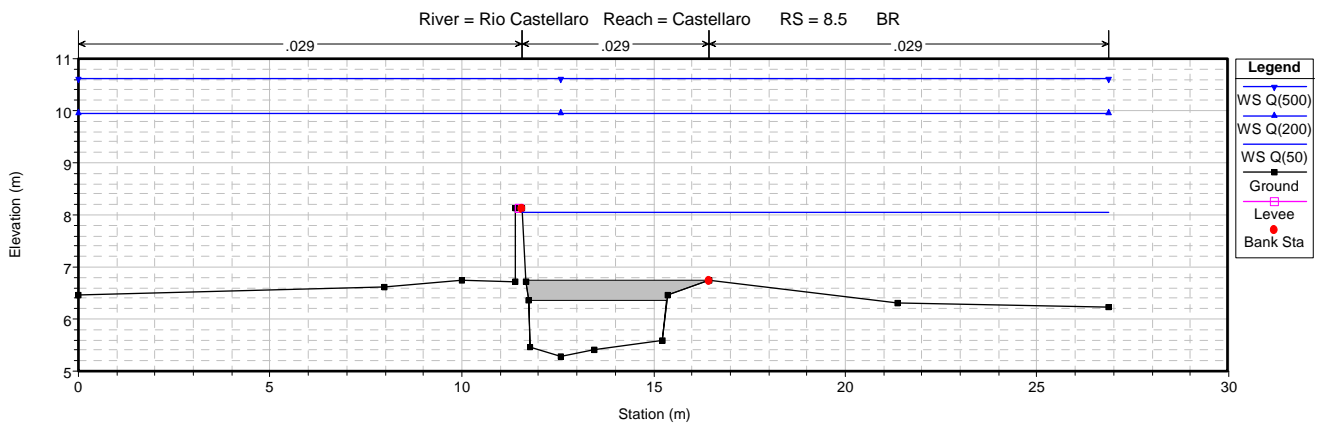
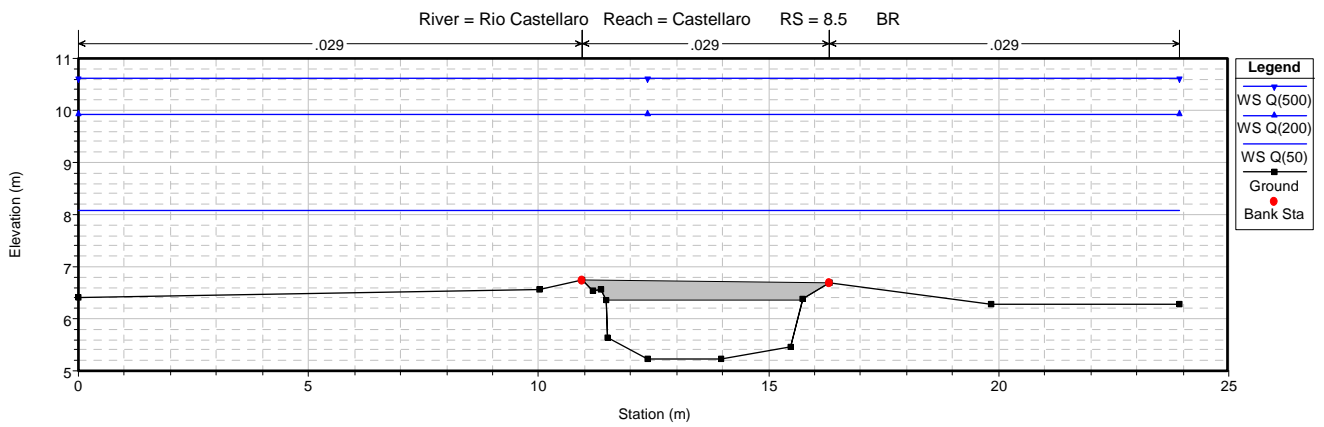
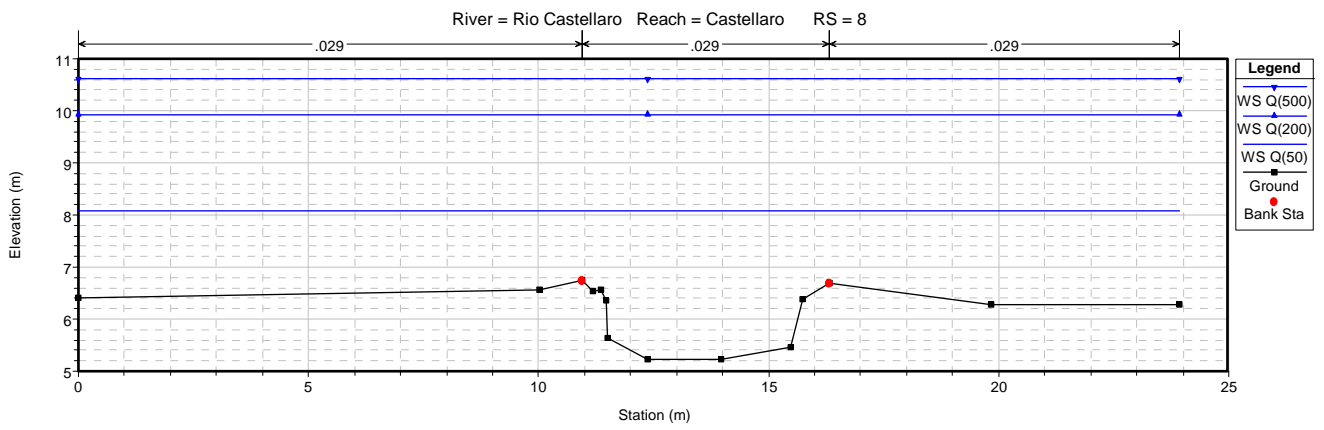
Sezioni trasversali

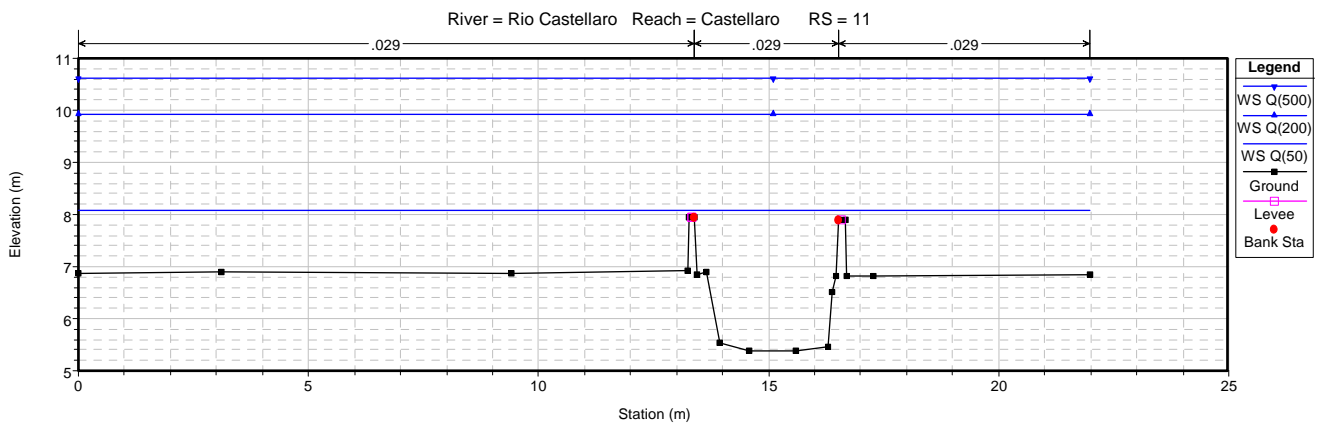
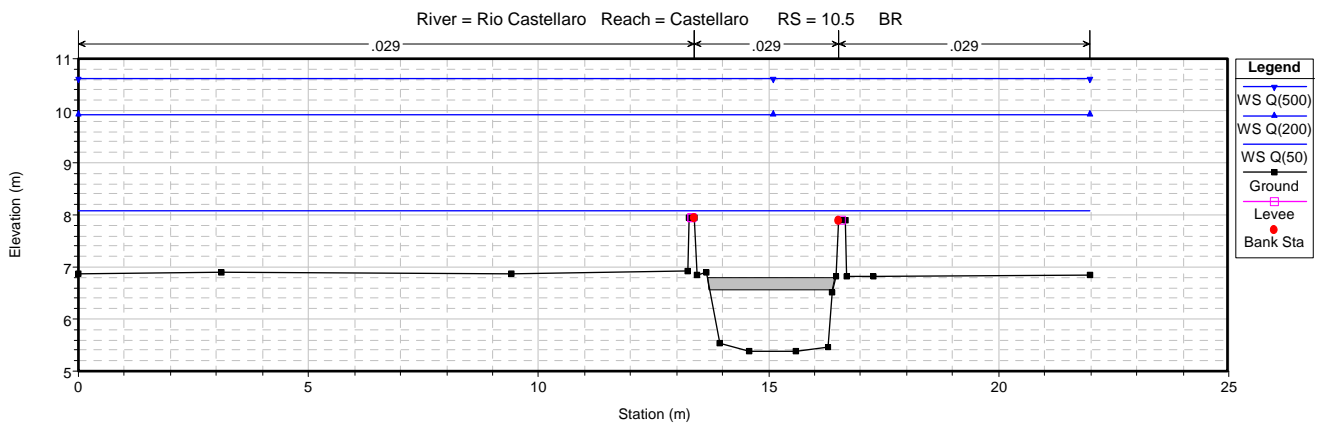
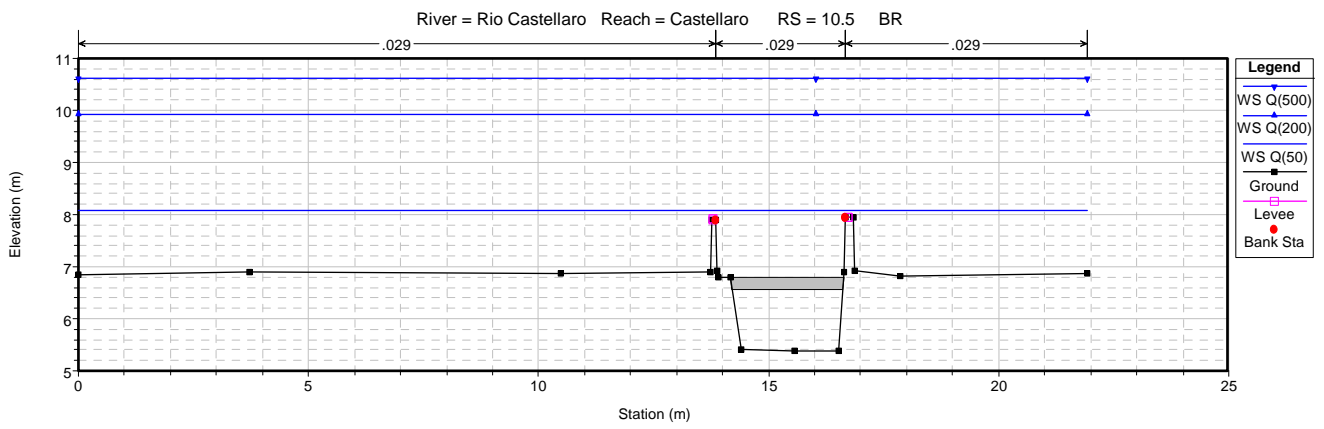
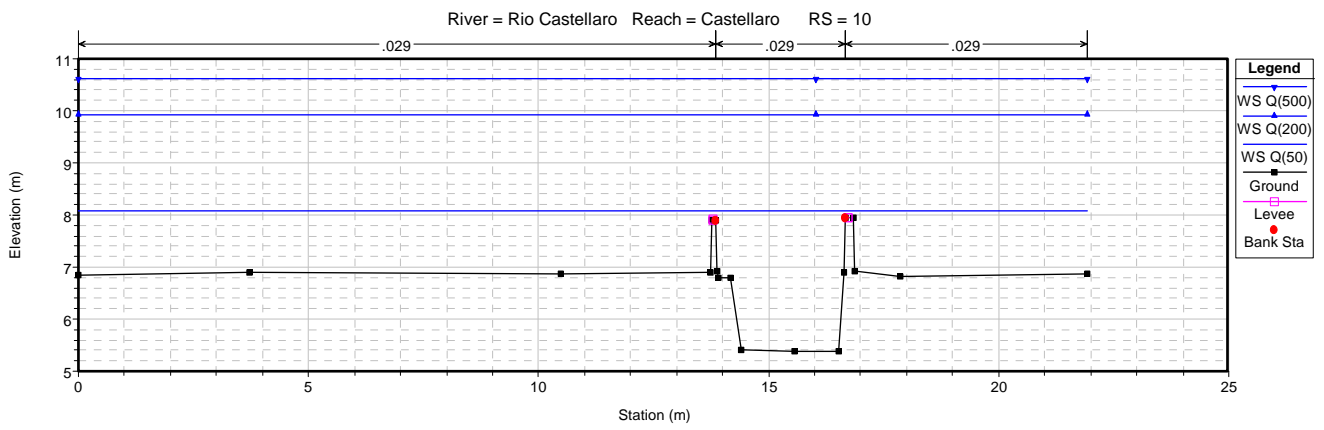




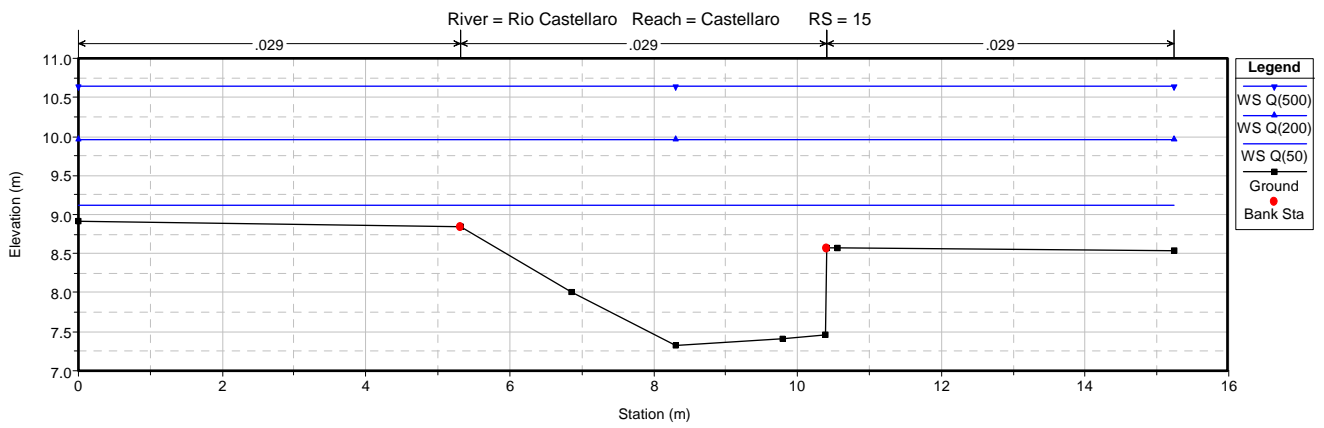
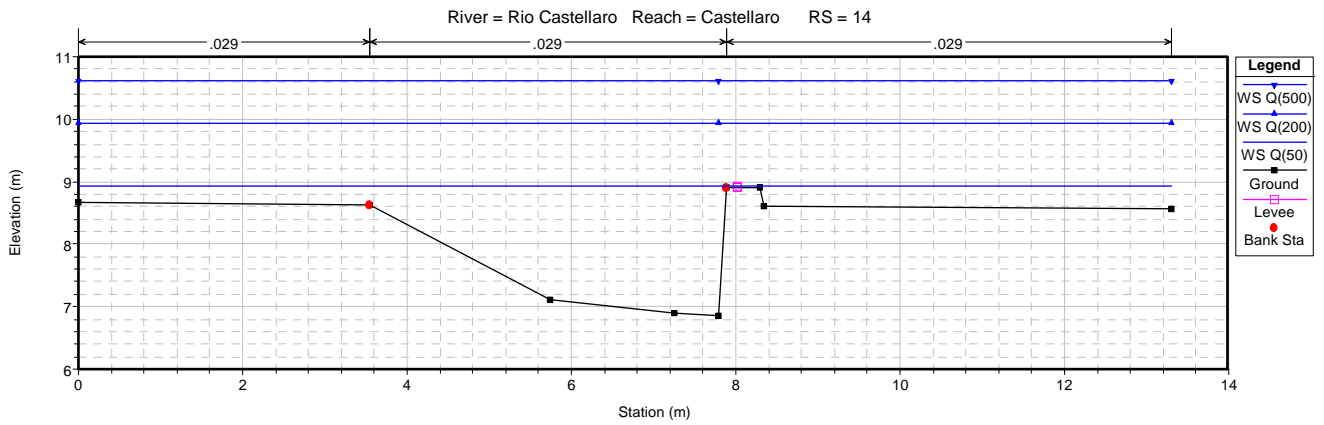
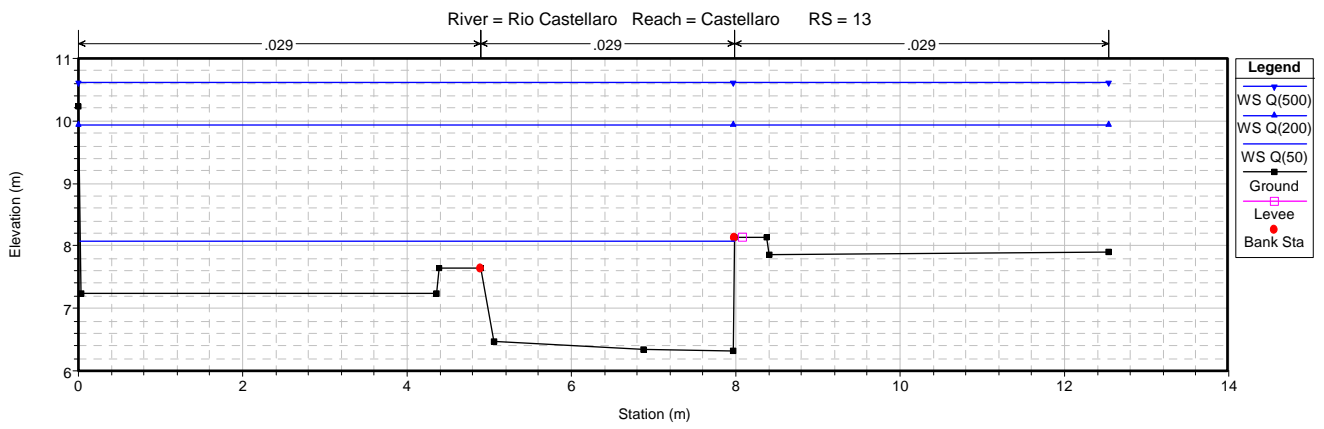
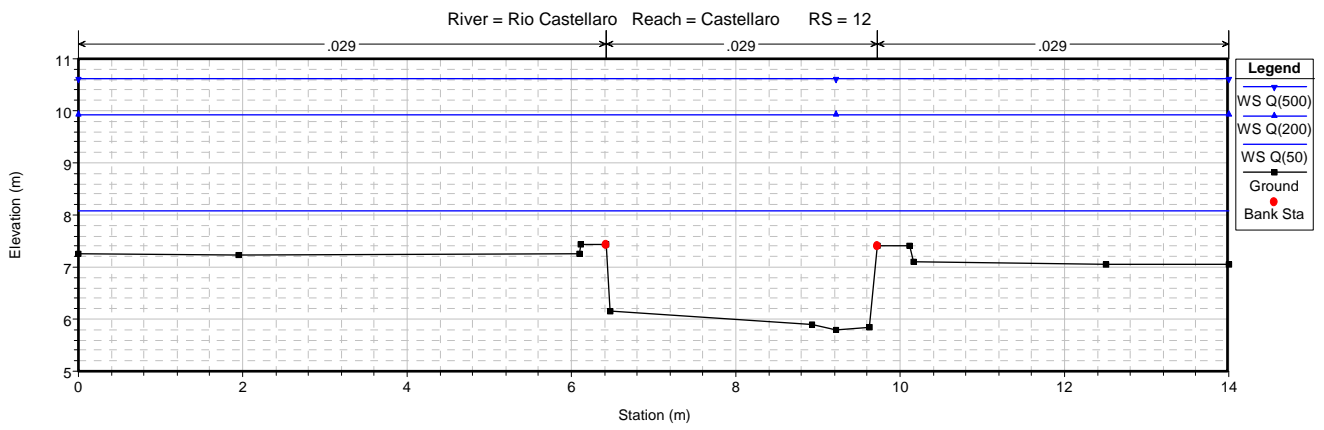
Rio Castellaro



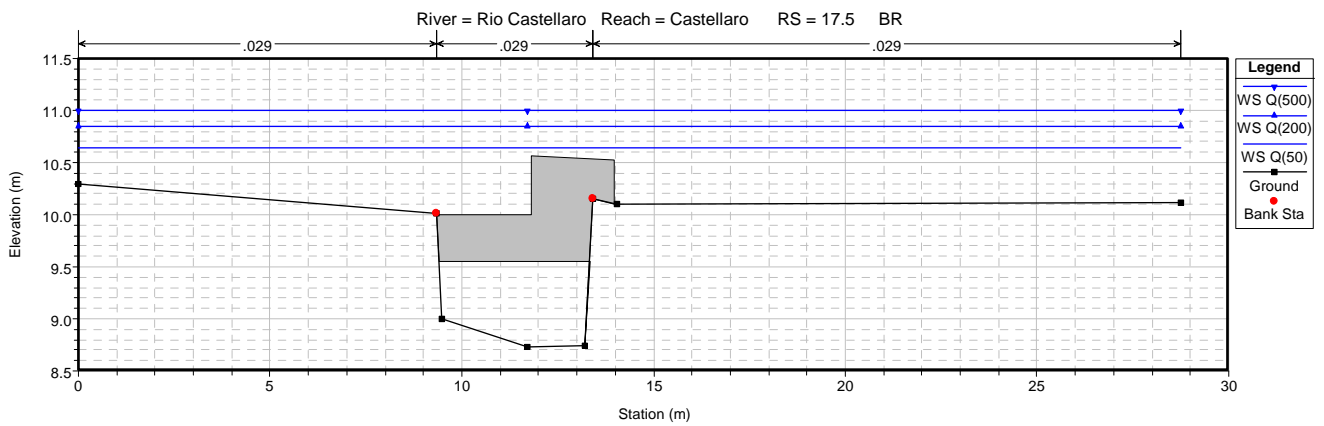
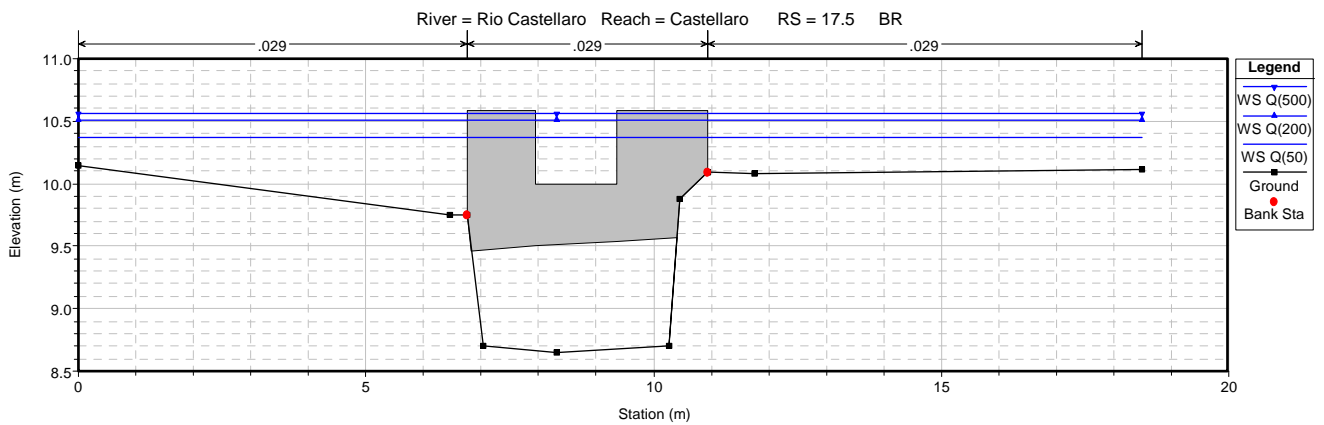
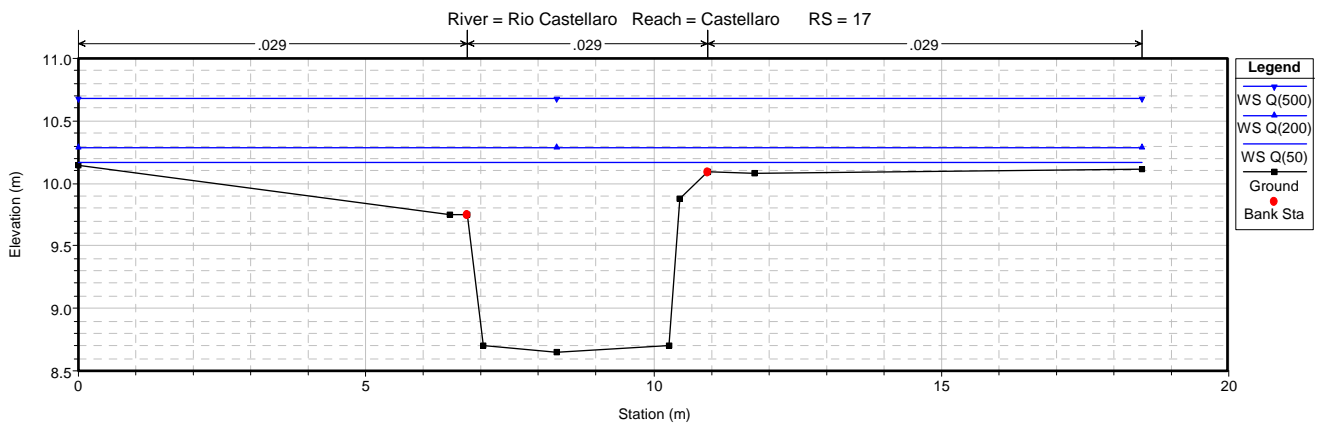
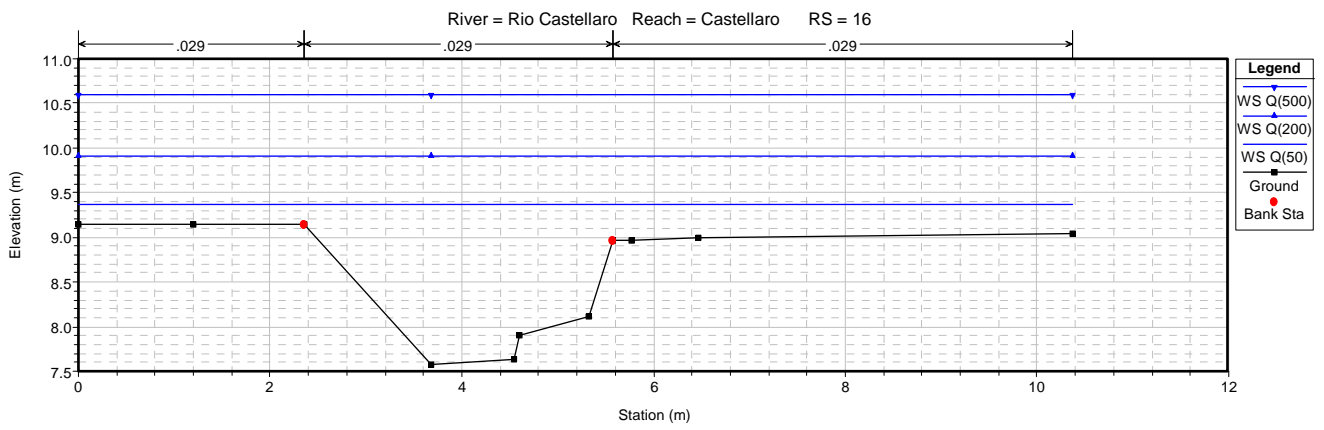




Rio Castellaro



Rio Castellaro



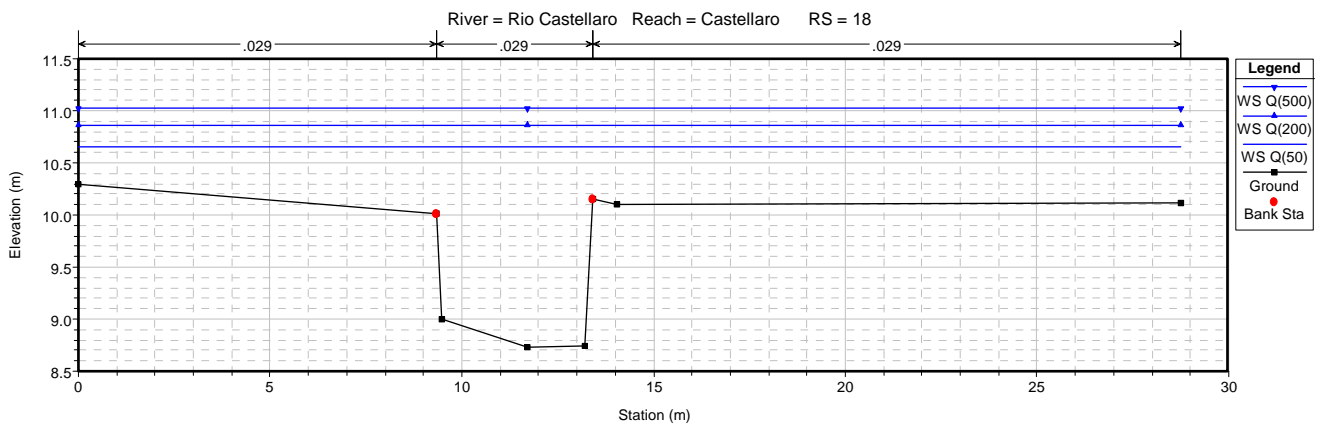


TABELLE DELLE GRANDEZZE

IDRAULICHE SIGNIFICATIVE

PER LE PORTATE

T=50, 200, 500 ANNI

RIO CASTELLARO

Dalla sez. 1 alla sez. 18

Rio Castellaro T=50 anni

Sezioni	Portata totale (m ³ /s)	Fondo alveo (m)	Argine sinistro (m)	Argine destro (m)	Pelo libero (m)	Profondità critica (m)	Energia (m)	Velocità (m/s)	Area bagnata (m ²)	N° Froude
18	19	8.73	10.01	10.15	10.66	10.38	10.71	1.28	20.42	0.31
17.5	Bridge									
17	19	8.65	9.75	10.09	10.17	10.31	10.62	3.15	7.39	0.89
16	19	7.58	9.14	8.97	9.37	9.52	9.92	3.6	6.4	1.01
15	19	7.33	8.84	8.58	9.12	8.98	9.31	2.12	10.82	0.59
14	19	6.85	8.62	8.91	8.93	8.83	9.2	2.48	9.19	0.65
13	19	6.31	7.64	8.14	8.07	7.83	8.3	2.32	8.93	0.58
12	19	5.79	7.43	7.4	8.07	7.56	8.15	1.37	16.21	0.31
11	19	5.39	7.94	7.9	8.07	7.24	8.09	0.65	29.65	0.14
10.5	Bridge									
10	19	5.39	7.91	7.95	8.07	7.33	8.09	0.63	29.22	0.13
9	19	5.27	8.13	6.75	8.06	6.78	8.09	0.66	28.54	0.14
8.5	Bridge									
8	19	5.22	6.75	6.69	8.07	6.72	8.08	0.51	43.18	0.1
7	19	4.95	6.44	6.34	8.05	6.87	8.07	0.78	27.62	0.14
6	19	4.84	6.45	7.45	8.06	6.02	8.07	0.56	39.06	0.11
5.5	Bridge									
5	19	4.8	6.76	6.3	8.05	6.44	8.07	0.56	39.71	0.1
4.5	19	4.49	5.87	6.33	8.05	6.18	8.06	0.58	36.98	0.1
4.3	19	4.49	5.87	6.33	8.05	6.18	8.06	0.58	36.98	0.1
4.2	19	4.01	5.87	6.33	8.05	5.46	8.06	0.56	38.99	0.09
3	19	3.92	5.86	6.37	8.05	5.43	8.06	0.45	46.54	0.07
2.5	Bridge									
2	19	3.95	6.17	6.33	8.05	5.7	8.06	0.28	69.41	0.05
1	19	3.43	5.44	5.36	8.05	5.18	8.06	0.45	47.34	0.07

Rio Castellaro T=200 anni

Sezioni	Portata totale (m ³ /s)	Fondo alveo (m)	Argine sinistro (m)	Argine destro (m)	Pelo libero (m)	Profondità critica (m)	Energia (m)	Velocità (m/s)	Area bagnata (m ²)	N° Froude
18	27	8.73	10.01	10.15	10.86	10.49	10.93	1.34	26.4	0.3
17.5	Bridge									
17	27	8.65	9.75	10.09	10.28	10.45	10.84	3.62	9.58	0.98
16	27	7.58	9.14	8.97	9.9	9.7	10.19	2.67	11.96	0.63
15	27	7.33	8.84	8.58	9.96	9.15	10.04	1.35	23.65	0.29
14	27	6.85	8.62	8.91	9.94	9.07	10.02	1.39	22.59	0.28
13	27	6.31	7.64	8.14	9.93	8.03	9.96	0.89	32.98	0.15
12	27	5.79	7.43	7.4	9.93	7.71	9.95	0.7	42.21	0.11
11	27	5.39	7.94	7.9	9.93	7.67	9.94	0.34	70.56	0.05
10.5	Bridge									
10	27	5.39	7.91	7.95	9.93	7.77	9.94	0.33	70.07	0.05
9	27	5.27	8.13	6.75	9.94	6.92	9.94	0.28	95.67	0.04
8.5	Bridge									
8	27	5.22	6.75	6.69	9.94	6.84	9.94	0.35	87.84	0.05
7	27	4.95	6.44	6.34	9.93	7.02	9.94	0.5	56.69	0.07
6	27	4.84	6.45	7.45	9.93	6.35	9.94	0.42	74.39	0.06
5.5	Bridge									
5	27	4.8	6.76	6.3	9.93	6.7	9.94	0.39	78.41	0.06
4.5	27	4.49	5.87	6.33	9.93	6.38	9.93	0.46	65.78	0.06
4.3	27	4.49	5.87	6.33	9.93	6.38	9.93	0.46	65.78	0.06
4.2	27	4.01	5.87	6.33	9.93	6.2	9.93	0.45	67.78	0.06
3	27	3.92	5.86	6.37	9.93	6.01	9.93	0.35	82.47	0.05
2.5	Bridge									
2	27	3.95	6.17	6.33	9.93	6.11	9.93	0.21	122.36	0.03
1	27	3.43	5.44	5.36	9.92	5.48	9.93	0.42	73.82	0.05

Rio Castellaro T=500 anni

Sezioni	Portata totale (m ³ /s)	Fondo alveo (m)	Argine sinistro (m)	Argine destro (m)	Pelo libero (m)	Profondità critica (m)	Energia (m)	Velocità (m/s)	Area bagnata (m ²)	N° Froude
18	33	8.73	10.01	10.15	11.02	10.55	11.08	1.35	30.87	0.29
17.5	Bridge									
17	33	8.65	9.75	10.09	10.68	10.54	10.91	2.45	16.97	0.58
16	33	7.58	9.14	8.97	10.6	9.83	10.76	2	19.17	0.4
15	33	7.33	8.84	8.58	10.64	9.26	10.69	1.15	33.94	0.22
14	33	6.85	8.62	8.91	10.62	9.18	10.68	1.2	31.67	0.22
13	33	6.31	7.64	8.14	10.61	8.23	10.65	0.87	41.57	0.14
12	33	5.79	7.43	7.4	10.62	7.81	10.64	0.7	51.81	0.1
11	33	5.39	7.94	7.9	10.62	7.95	10.63	0.34	85.64	0.05
10.5	Bridge									
10	33	5.39	7.91	7.95	10.62	7.96	10.63	0.33	85.12	0.05
9	33	5.27	8.13	6.75	10.62	7.01	10.63	0.29	114.11	0.04
8.5	Bridge									
8	33	5.22	6.75	6.69	10.62	6.91	10.63	0.36	104.26	0.05
7	33	4.95	6.44	6.34	10.61	7.13	10.63	0.51	67.32	0.07
6	33	4.84	6.45	7.45	10.62	6.68	10.62	0.44	87.33	0.06
5.5	Bridge									
5	33	4.8	6.76	6.3	10.62	6.86	10.62	0.4	92.57	0.05
4.5	33	4.49	5.87	6.33	10.61	6.51	10.62	0.49	76.29	0.06
4.3	33	4.49	5.87	6.33	10.61	6.51	10.62	0.49	76.29	0.06
4.2	33	4.01	5.87	6.33	10.61	6.35	10.62	0.47	78.3	0.06
3	33	3.92	5.86	6.37	10.61	6.35	10.62	0.36	95.6	0.05
2.5	Bridge									
2	33	3.95	6.17	6.33	10.62	6.2	10.62	0.23	141.73	0.03
1	33	3.43	5.44	5.36	10.61	5.62	10.62	0.45	83.48	0.05