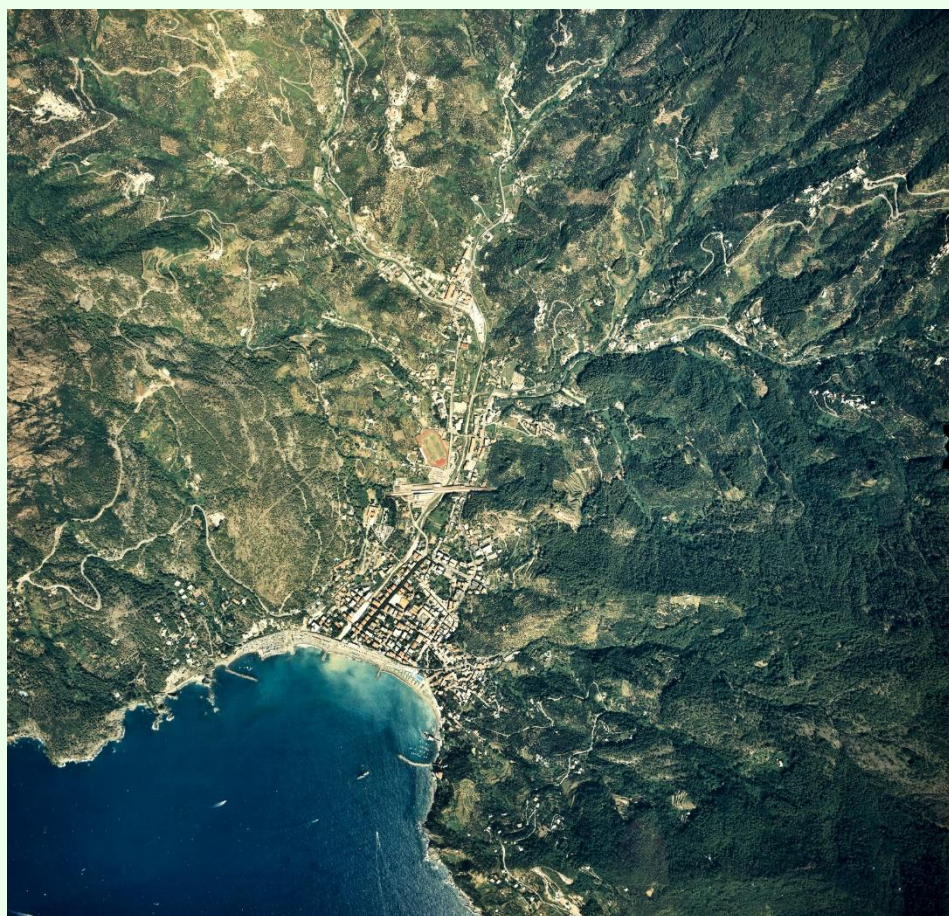


**PIANO DI BACINO STRALCIO
PER LA TUTELA DAL RISCHIO IDROGEOLOGICO**
(ai sensi dell'art. 1, comma 1, del D.L. 180/1998 convertito con L. 267/1998)

AMBITO 18 – Ghiararo



**VERIFICHE IDRAULICHE
TORRENTI MEZZEMA E CASTAGNOLA
*DEIVA MARINA***

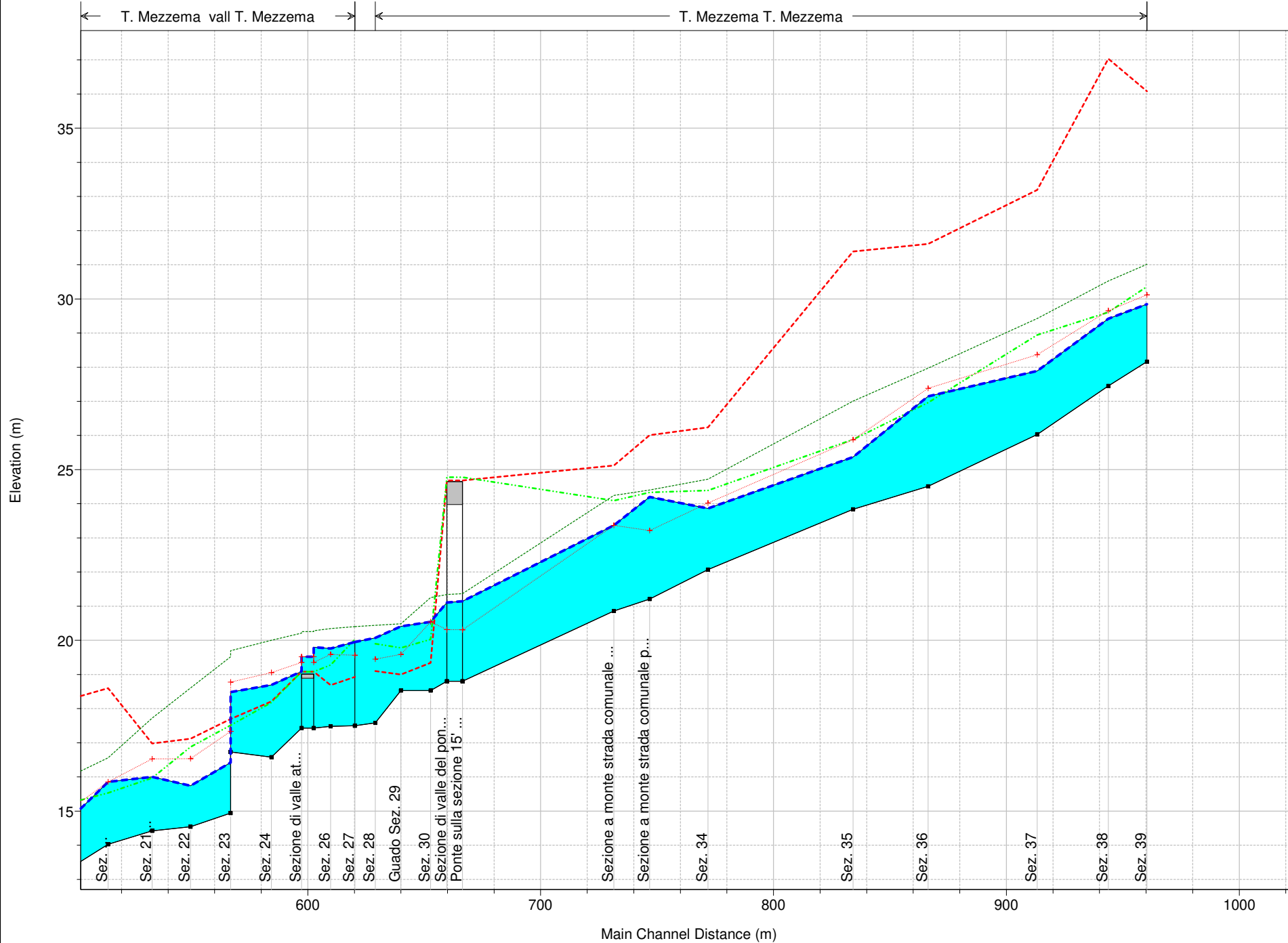
APPROVAZIONE	Delibera del Consiglio Provinciale della Spezia n. 51 del 05/05/2003
ULTIMA MODIFICA DELL'ELABORATO	Decreto del Direttore Generale n. 4387 del 03/08/2020
ENTRATA IN VIGORE	Pubblicazione sul BURL n. 34 del 19/08/2020 – parte II

Torrente Mezzema

Da SEZ 39 a SEZ 7

- Profili idraulici**
- Sezioni**
- Tabelle dei risultati**

Castagnola Plan: castagnola_

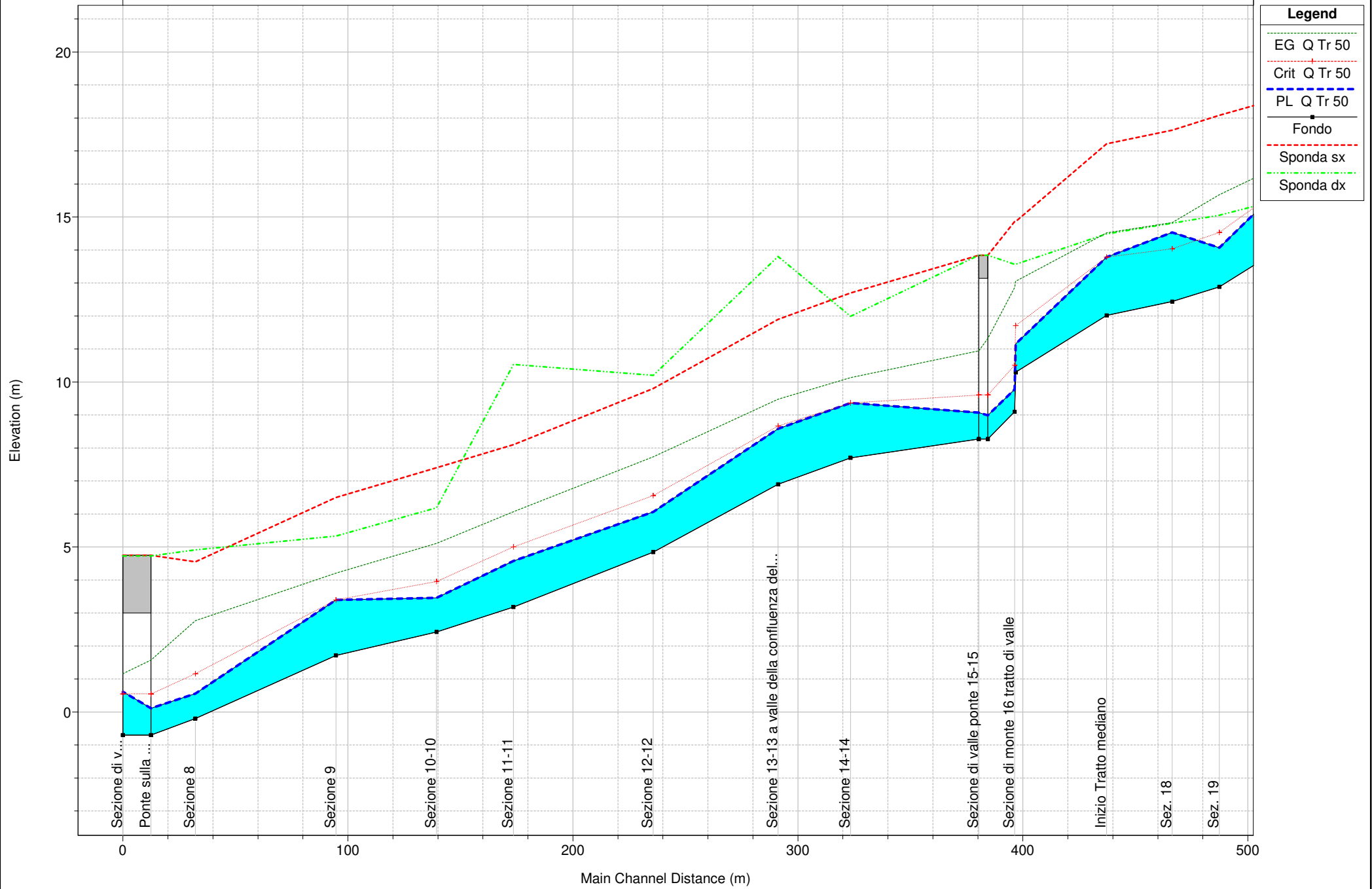


Legend	
EG Q Tr 50	(Green dotted line)
Crit Q Tr 50	(Red dotted line with crosses)
PL Q Tr 50	(Blue dashed line)
Fondo	(Black solid line)
Sponda sx	(Red dashed line)
Sponda dx	(Green dashed line)

1 cm Horiz. = 22 m 1 cm Vert. = 1.5 m

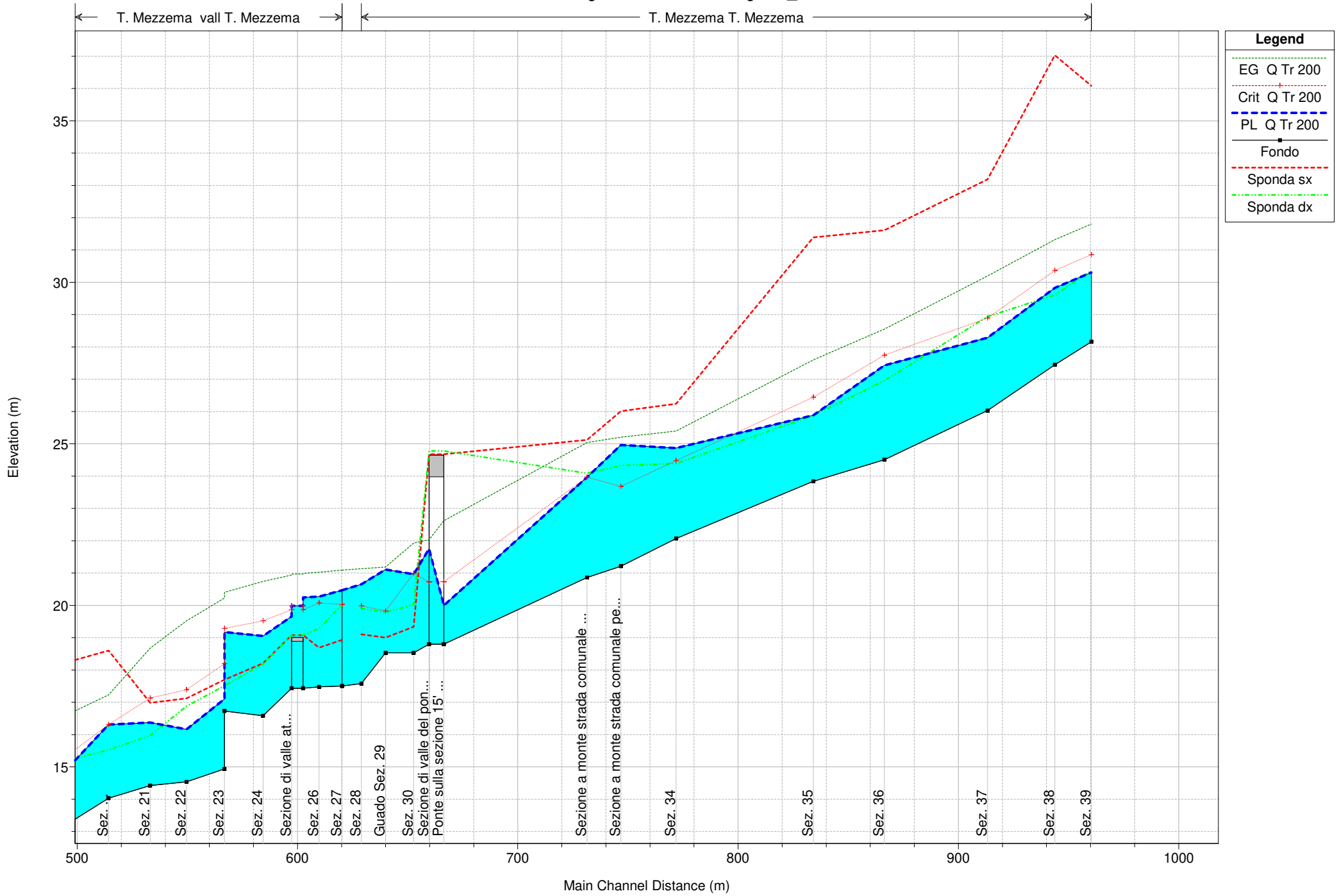
Castagnola Plan: castagnola_

T. Mezzema vall T. Mezzema



1 cm Horiz. = 22 m 1 cm Vert. = 1.5 m

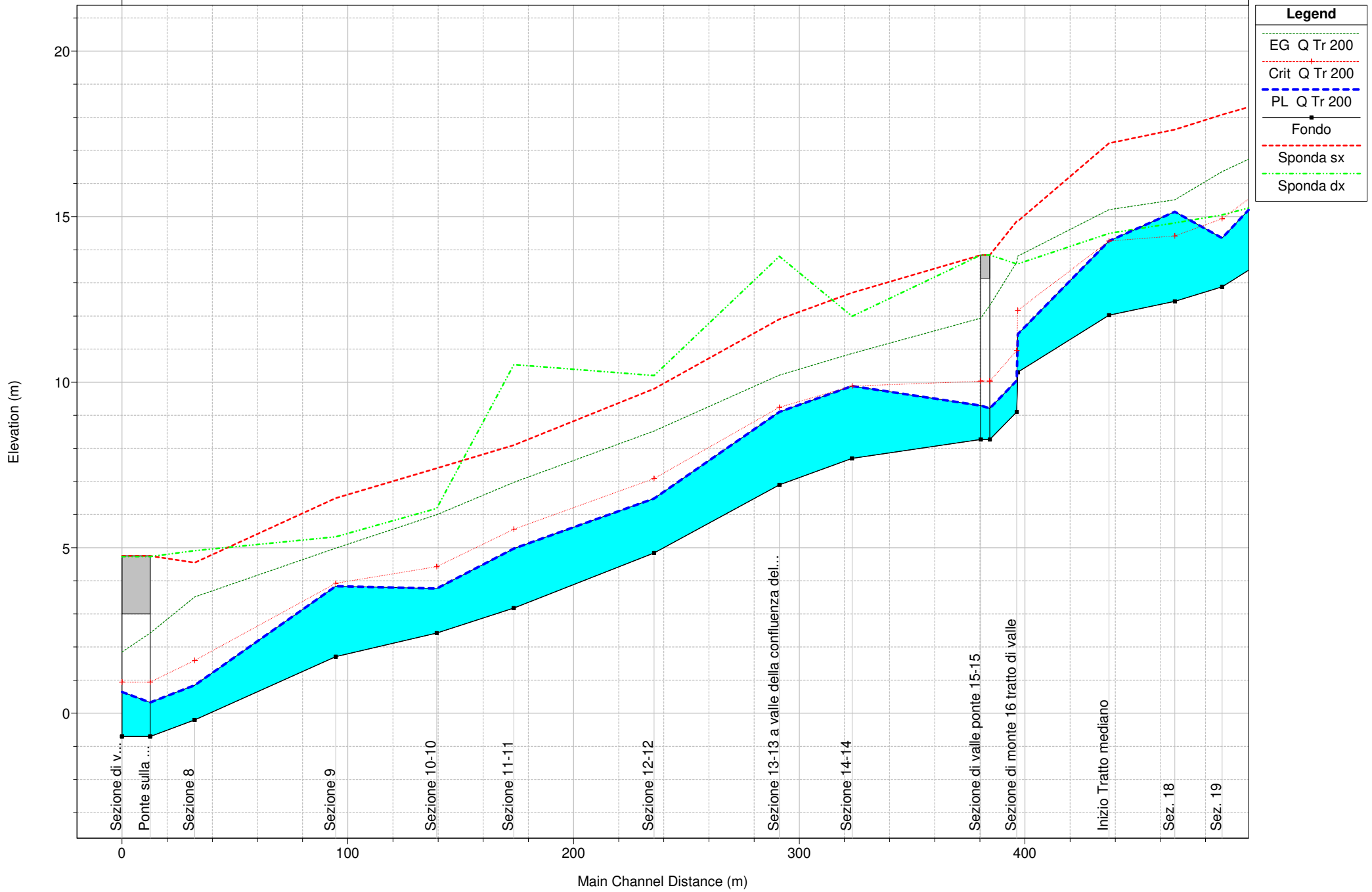
Castagnola Plan: castagnola_



1 cm Horiz. = 22 m 1 cm Vert. = 1.5 m

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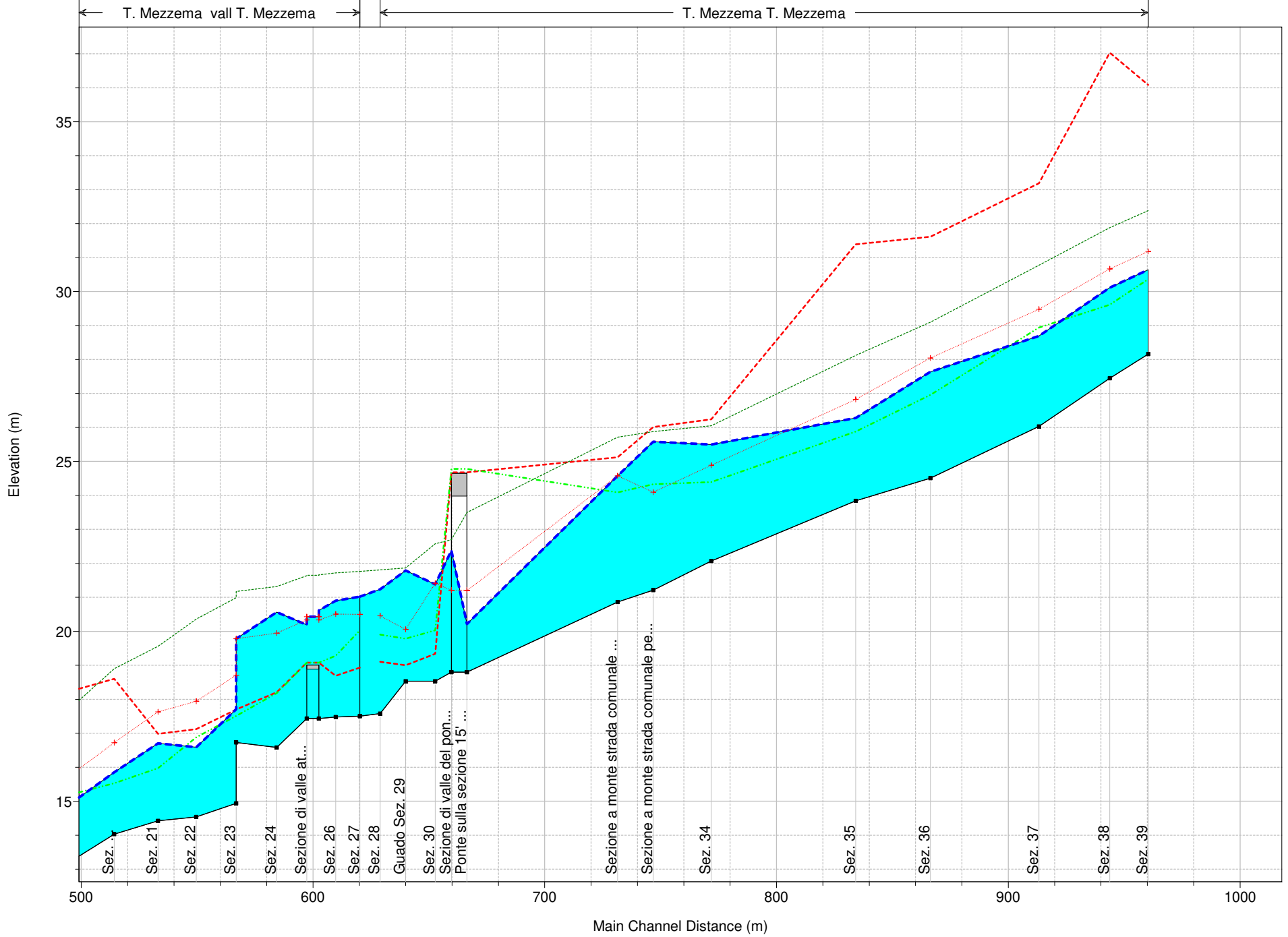
T. Mezzema vall T. Mezzema



Legend	
EG Q Tr 200	(Green dotted line)
Crit Q Tr 200	(Red dotted line with crosses)
PL Q Tr 200	(Blue dashed line)
Fondo	(Black solid line with dots)
Sponda sx	(Red dashed line)
Sponda dx	(Green dashed line)

1 cm Horiz. = 22 m 1 cm Vert. = 1.5 m

Castagnola Plan: castagnola_



Legend	
EG Q Tr 500	(Green dashed line)
Crit Q Tr 500	(Red dashed line with crosses)
PL Q Tr 500	(Blue dashed line)
Fondo	(Black solid line with dots)
Sponda sx	(Red dashed line)
Sponda dx	(Green dashed line)

T. Mezzema vall T. Mezzema

T. Mezzema T. Mezzema

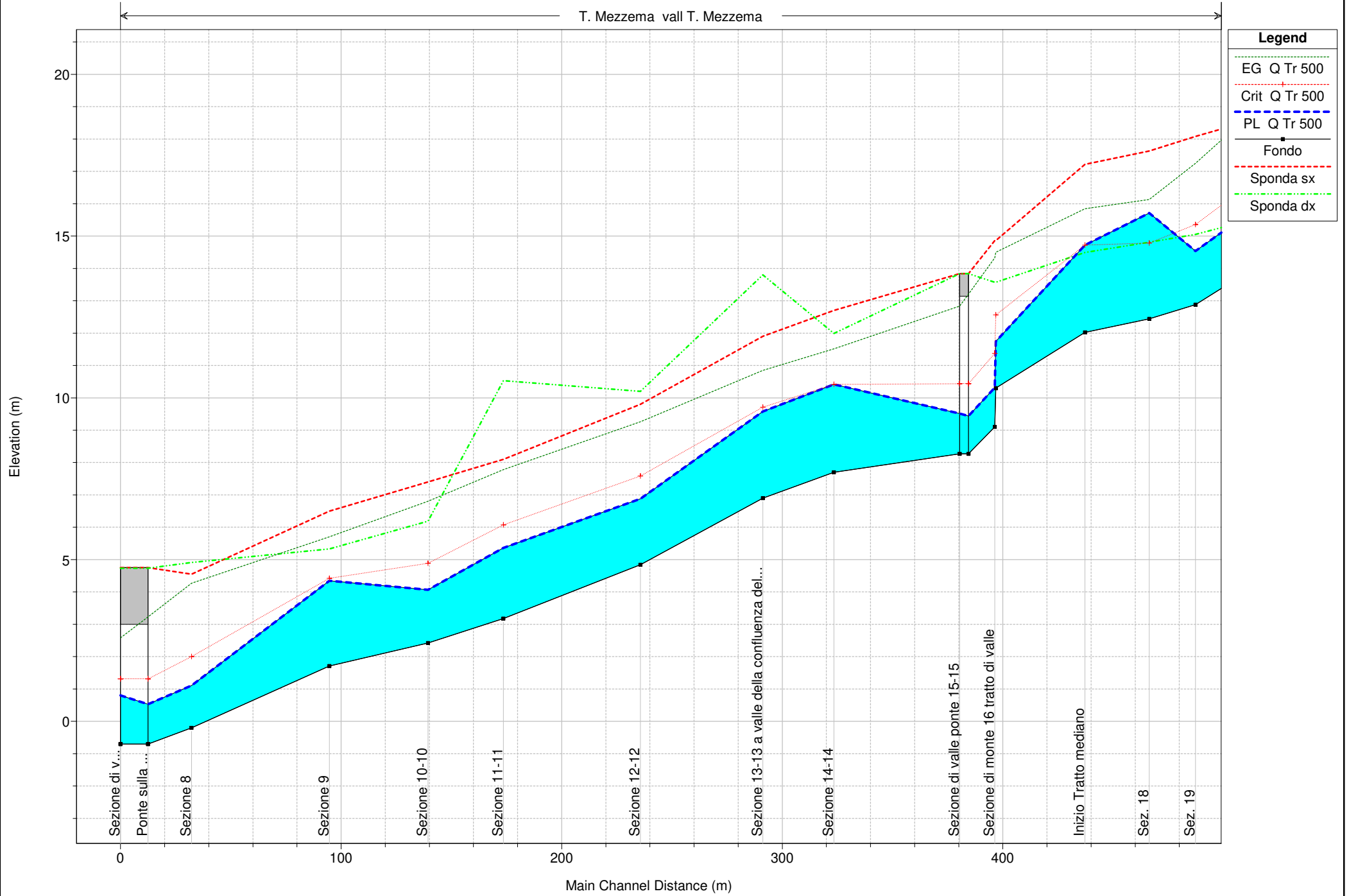
Elevation (m)

Main Channel Distance (m)

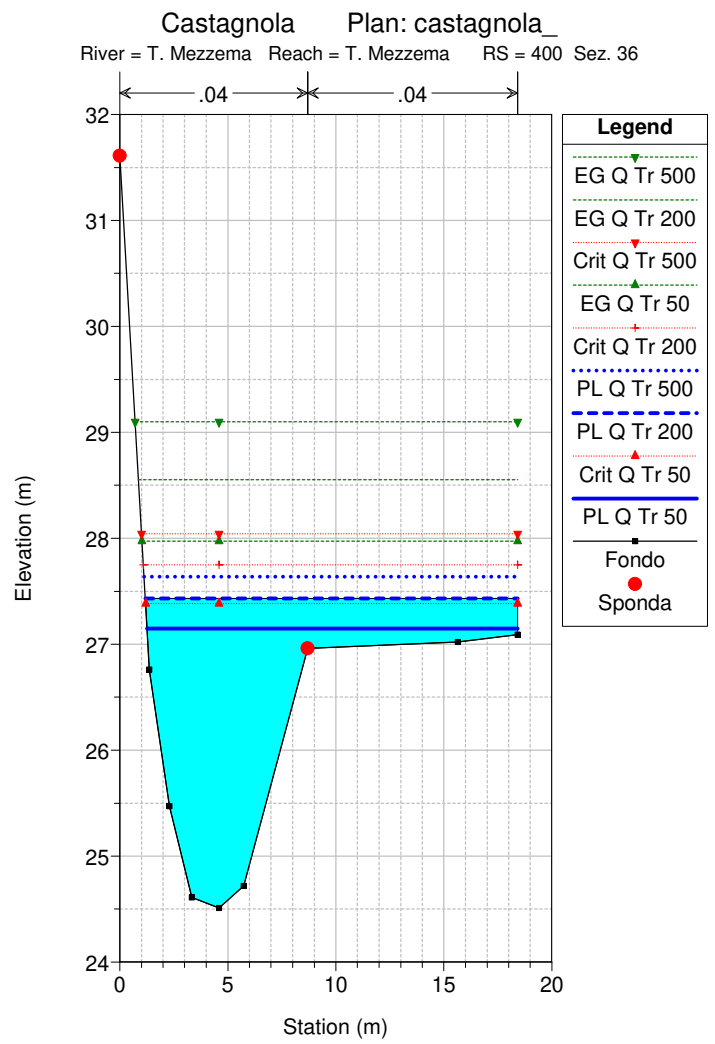
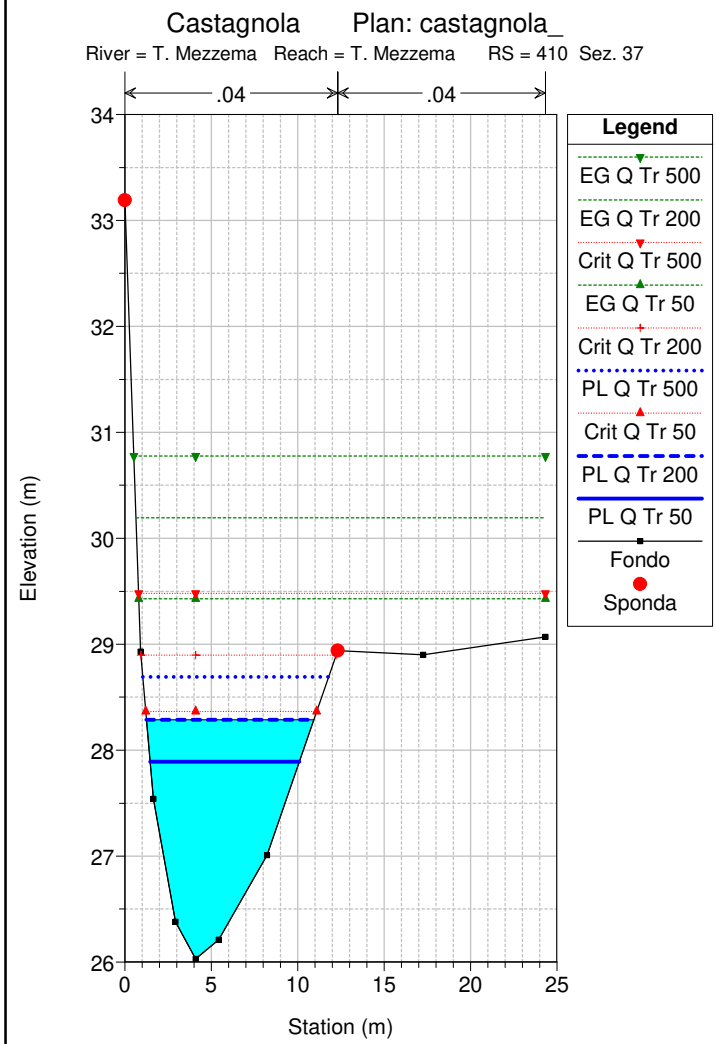
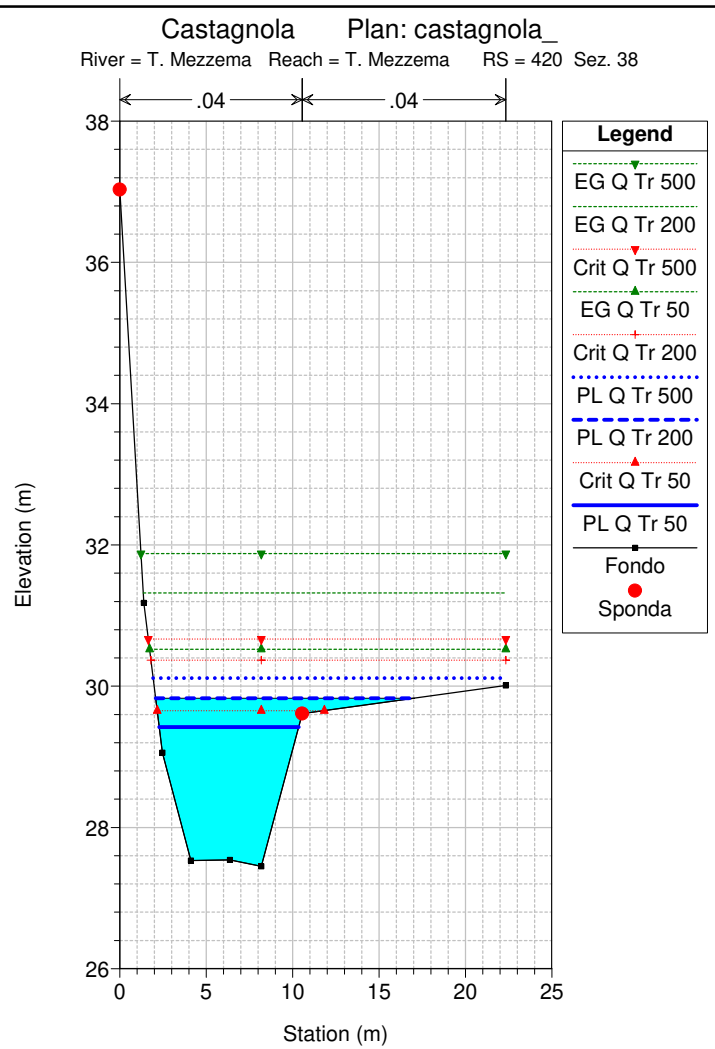
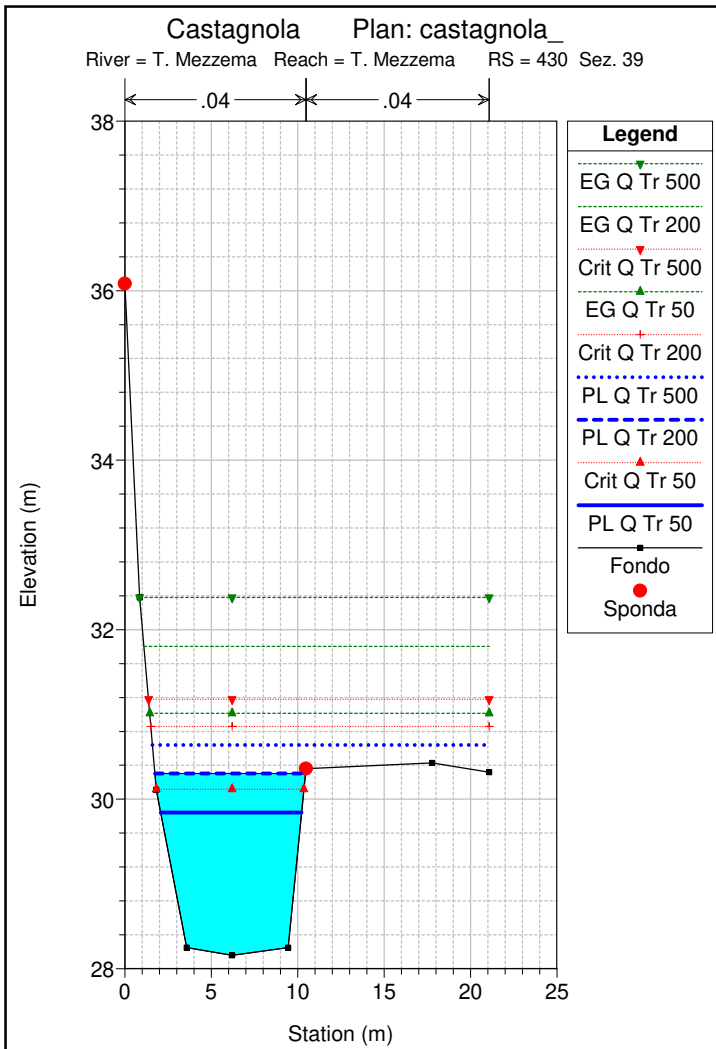
1 cm Horiz. = 22 m 1 cm Vert. = 1.5 m

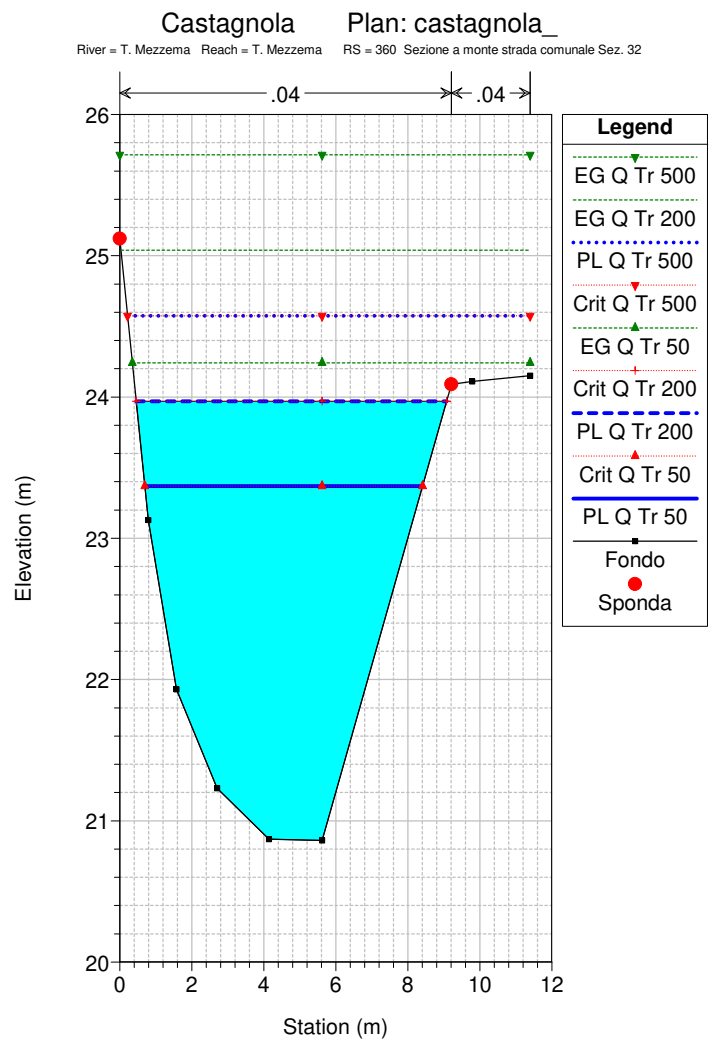
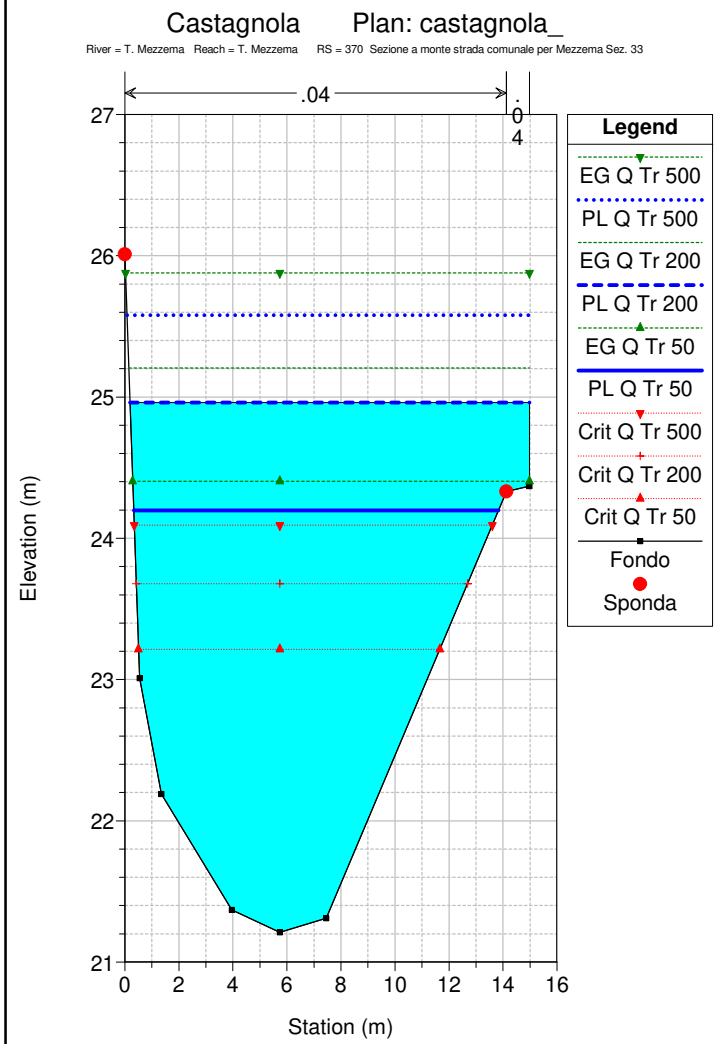
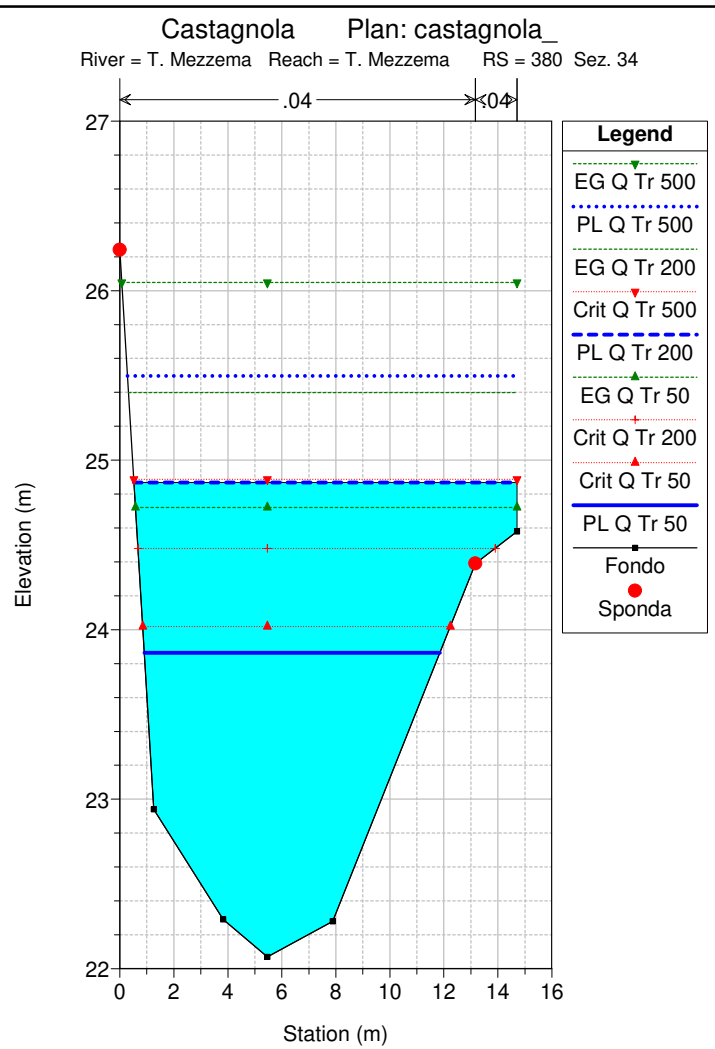
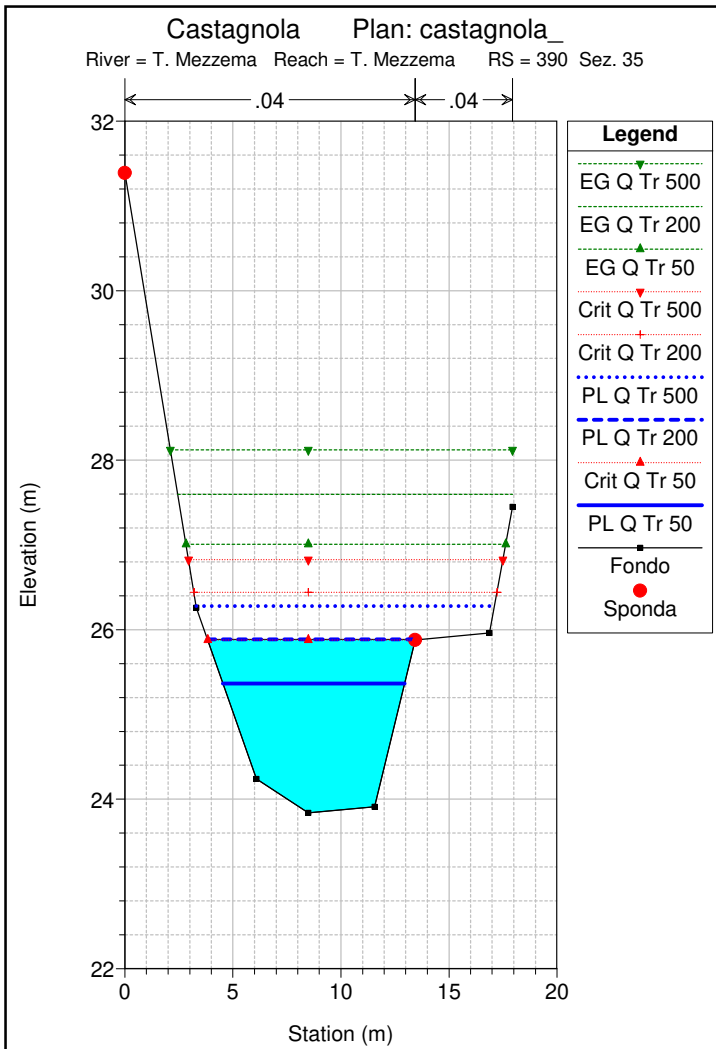
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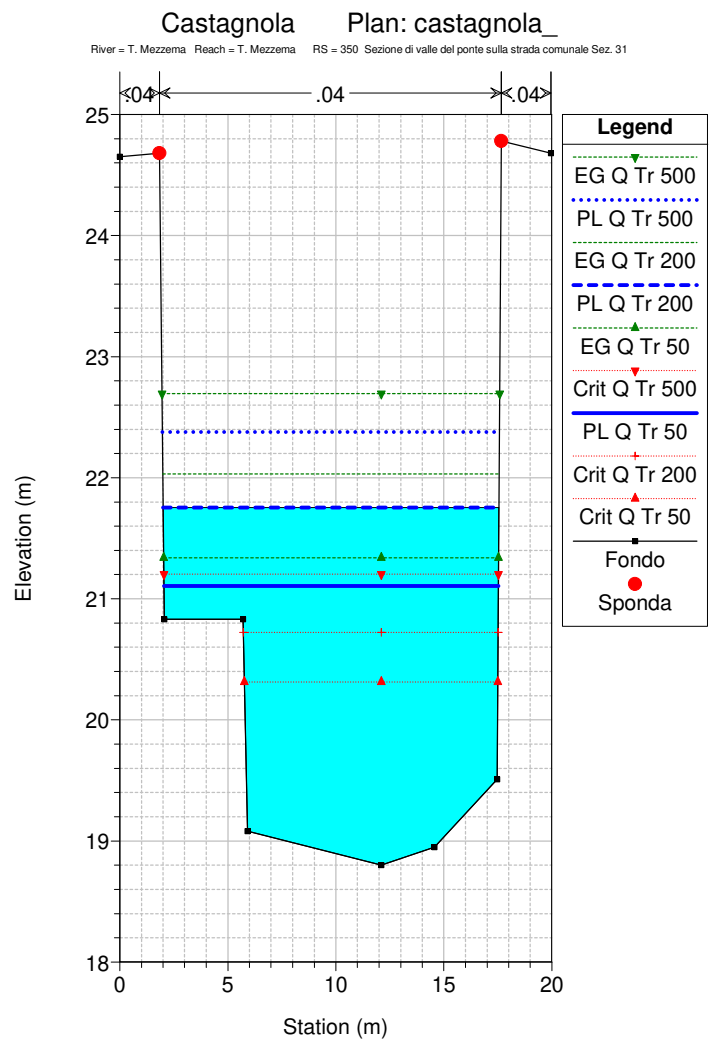
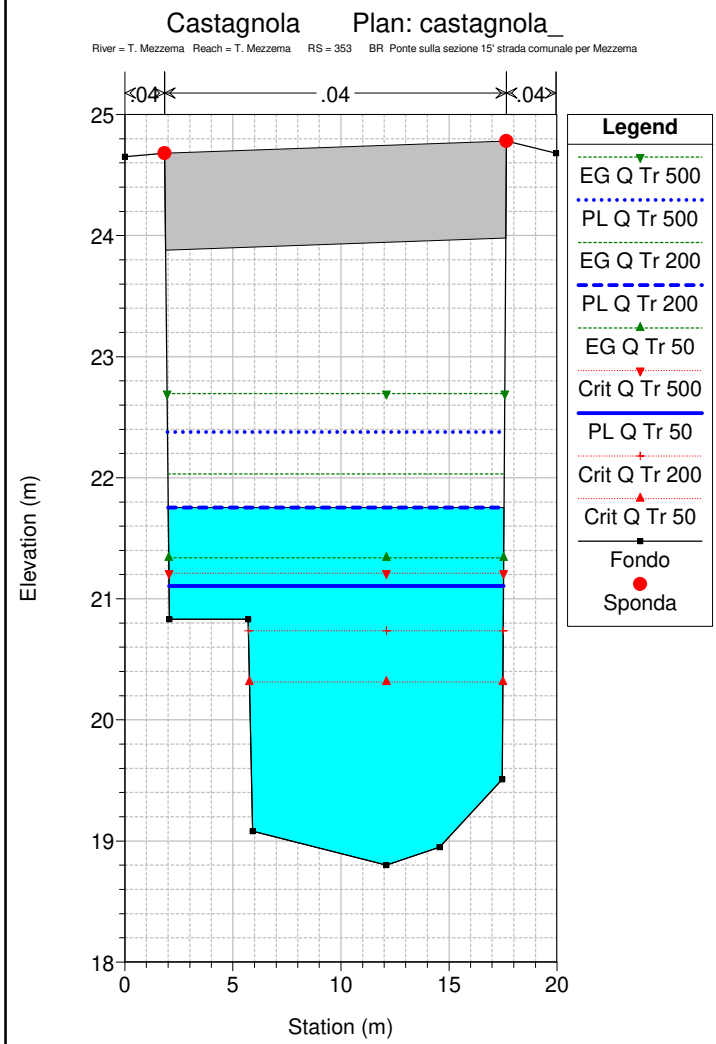
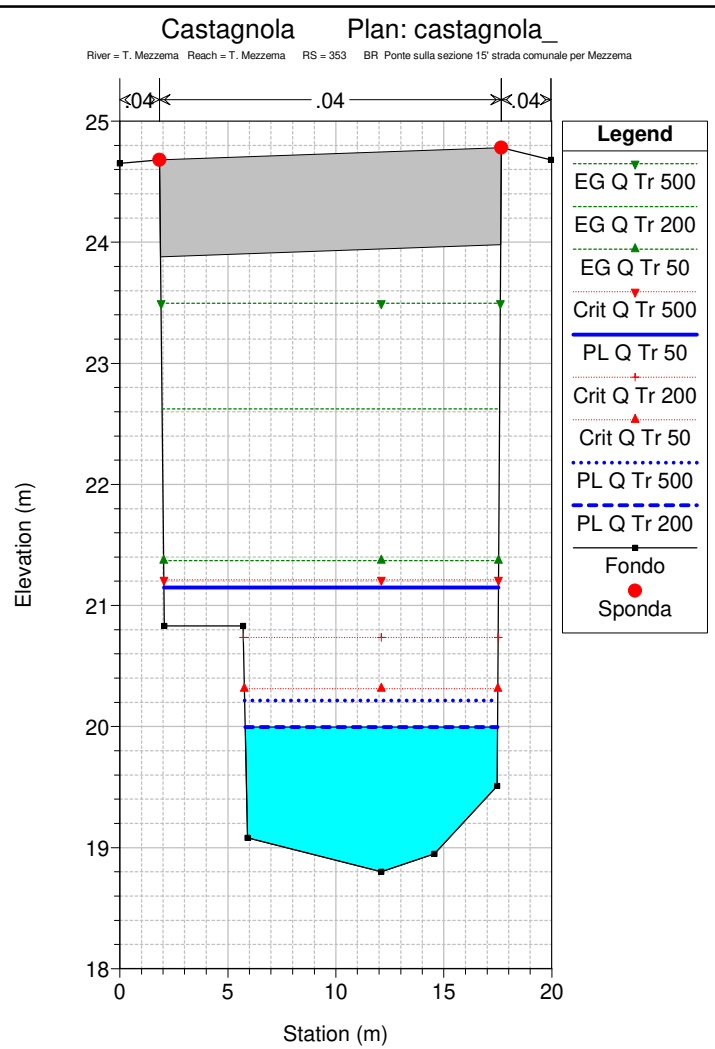
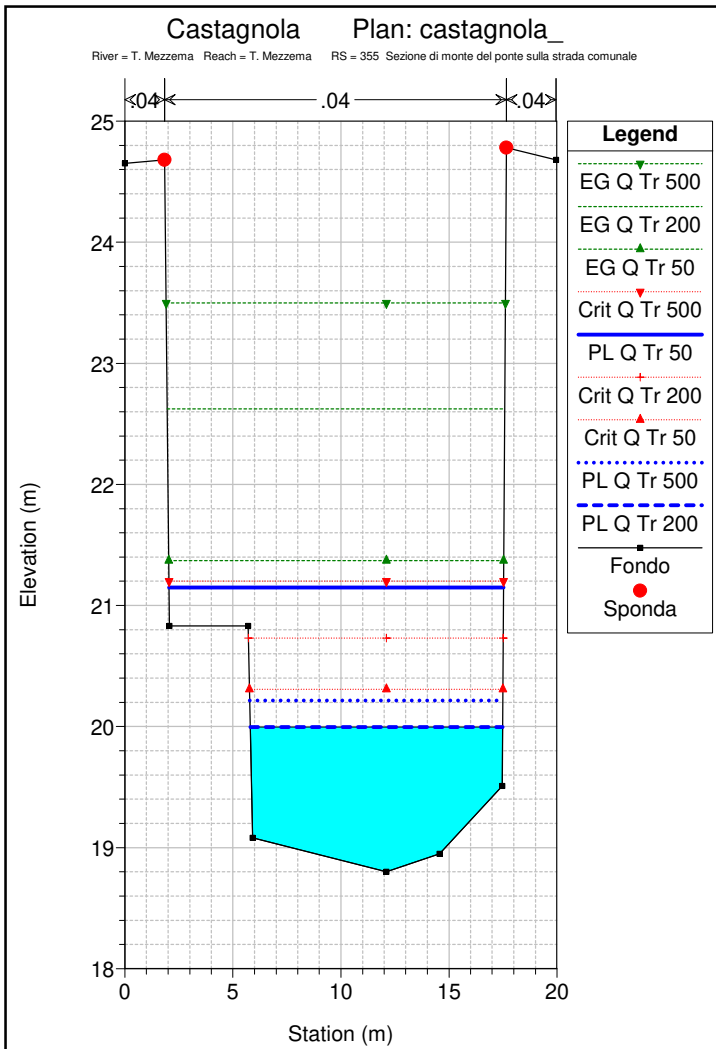
T. Mezzema vall T. Mezzema

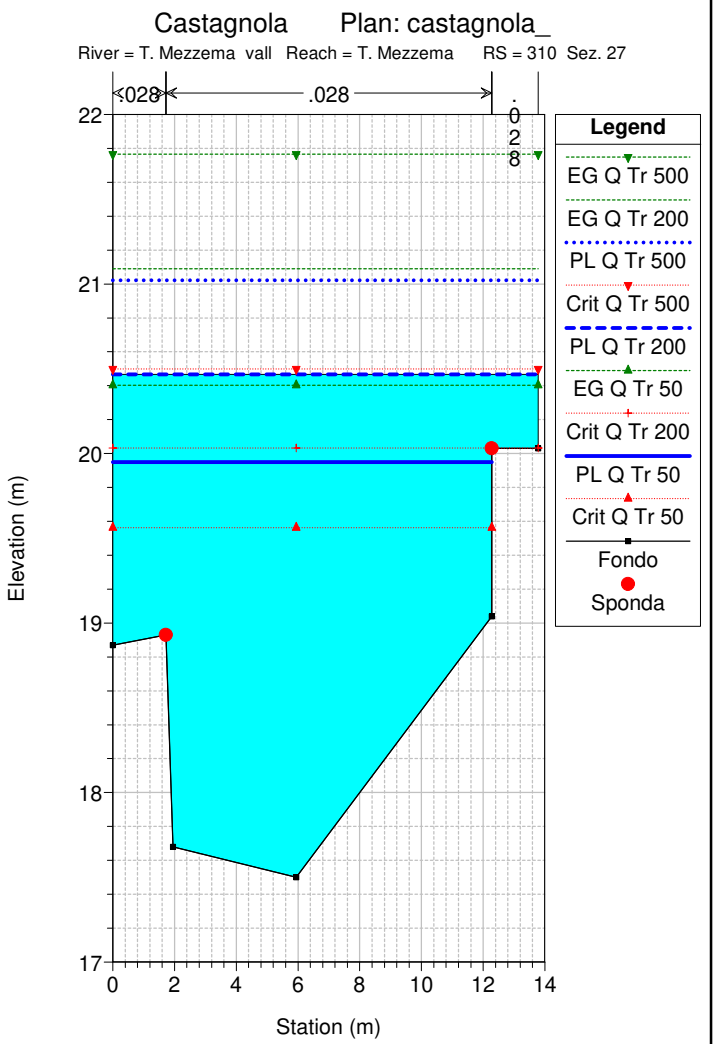
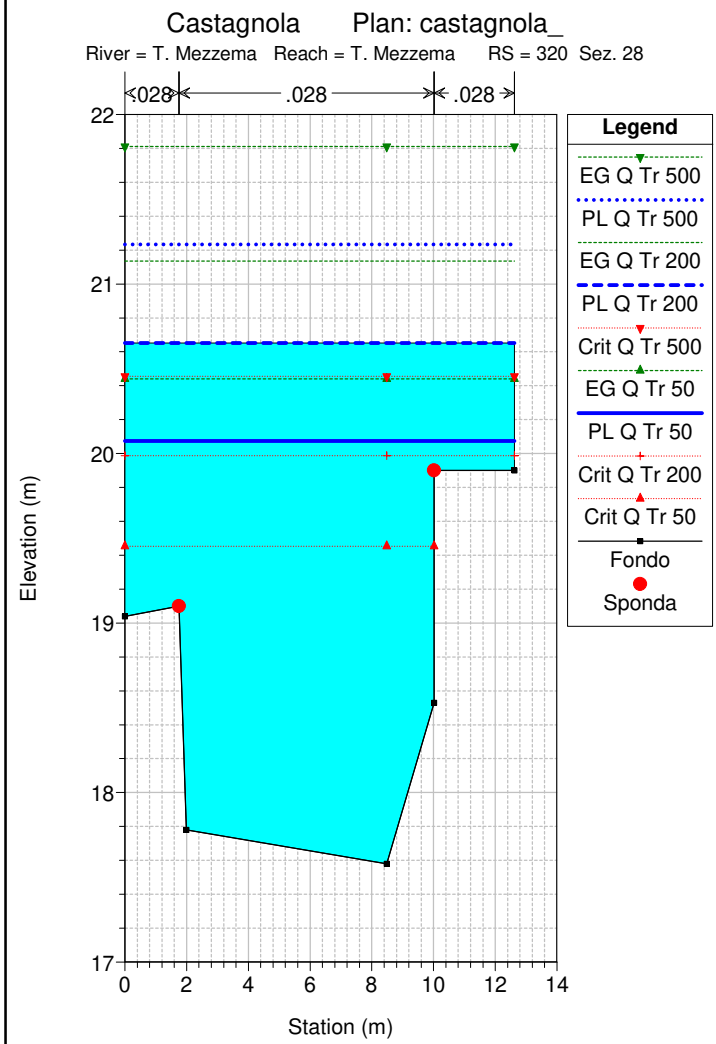
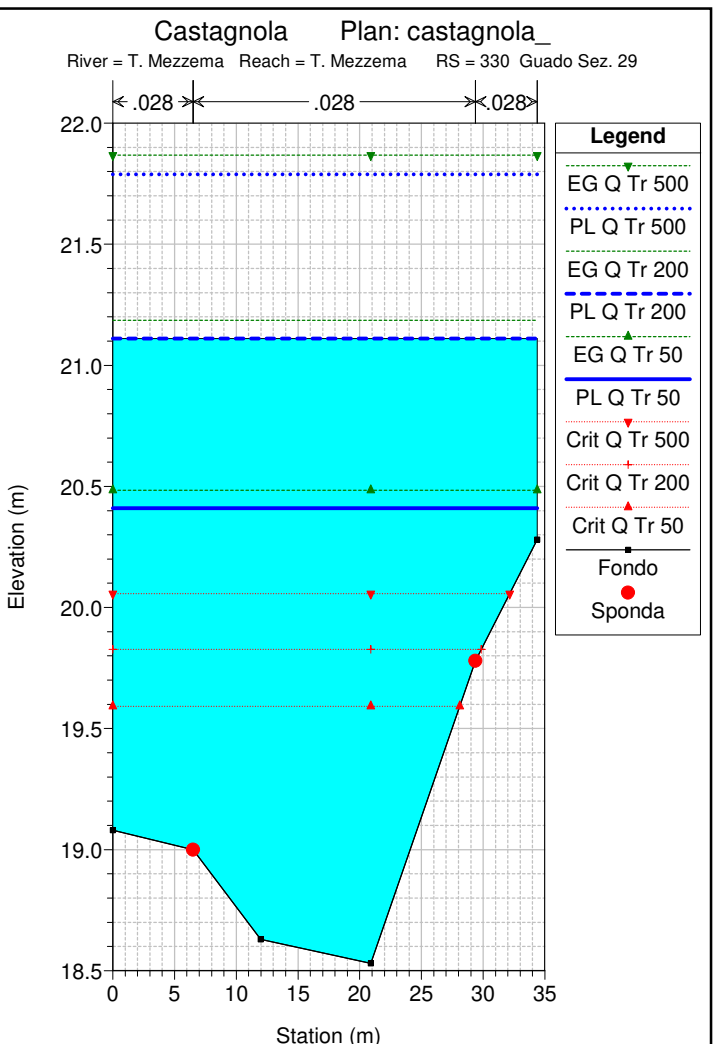
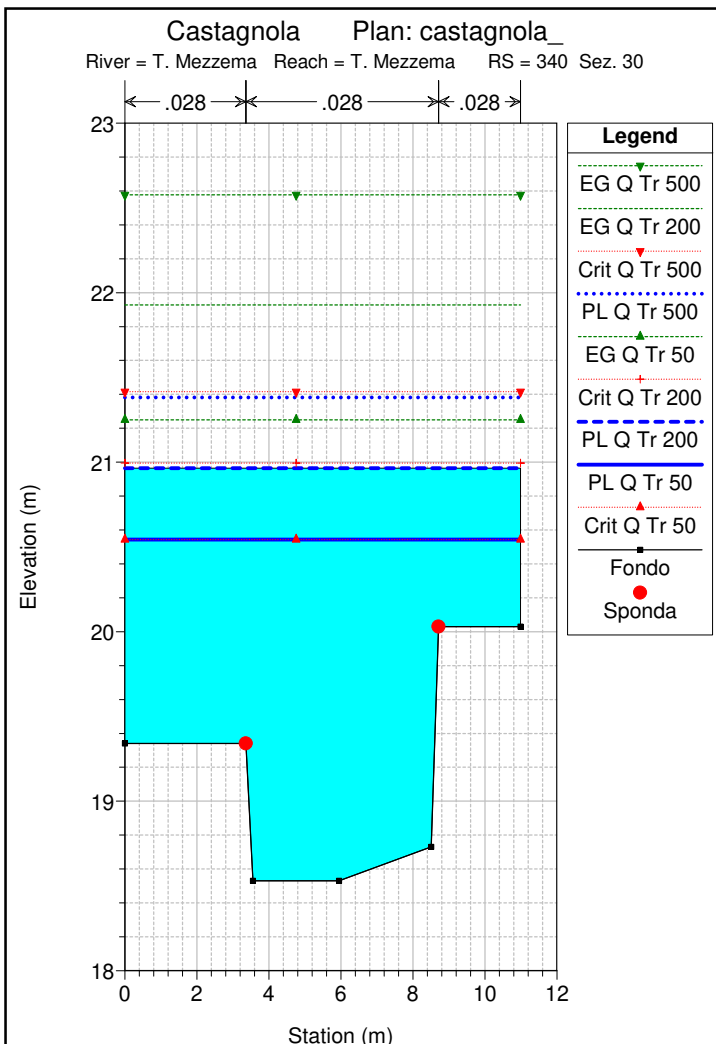


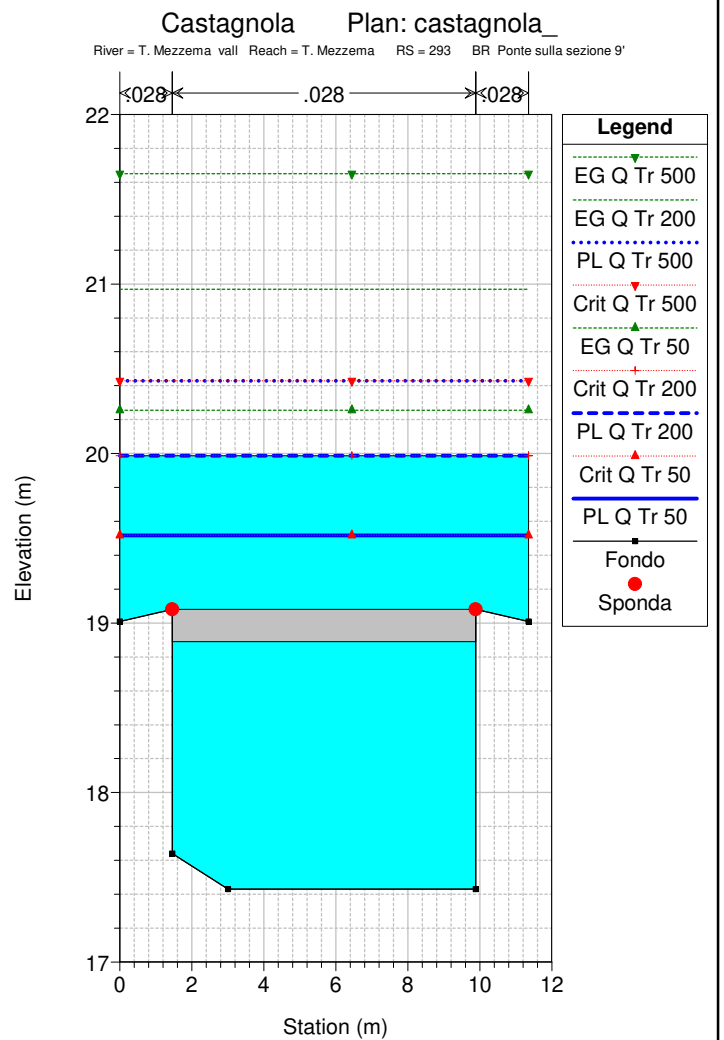
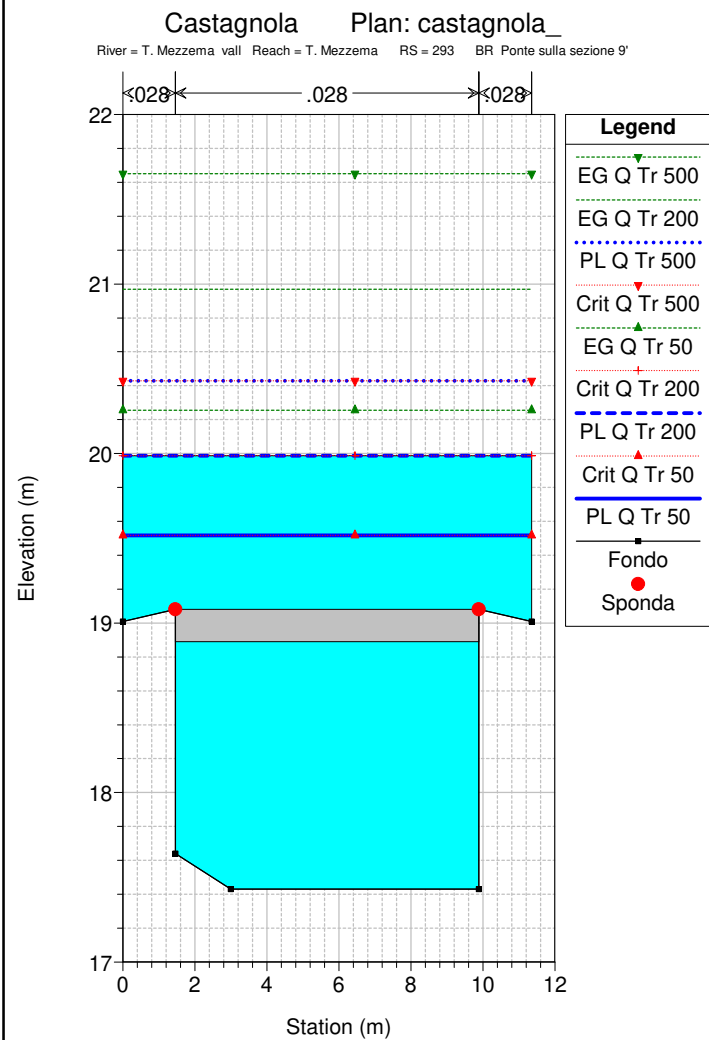
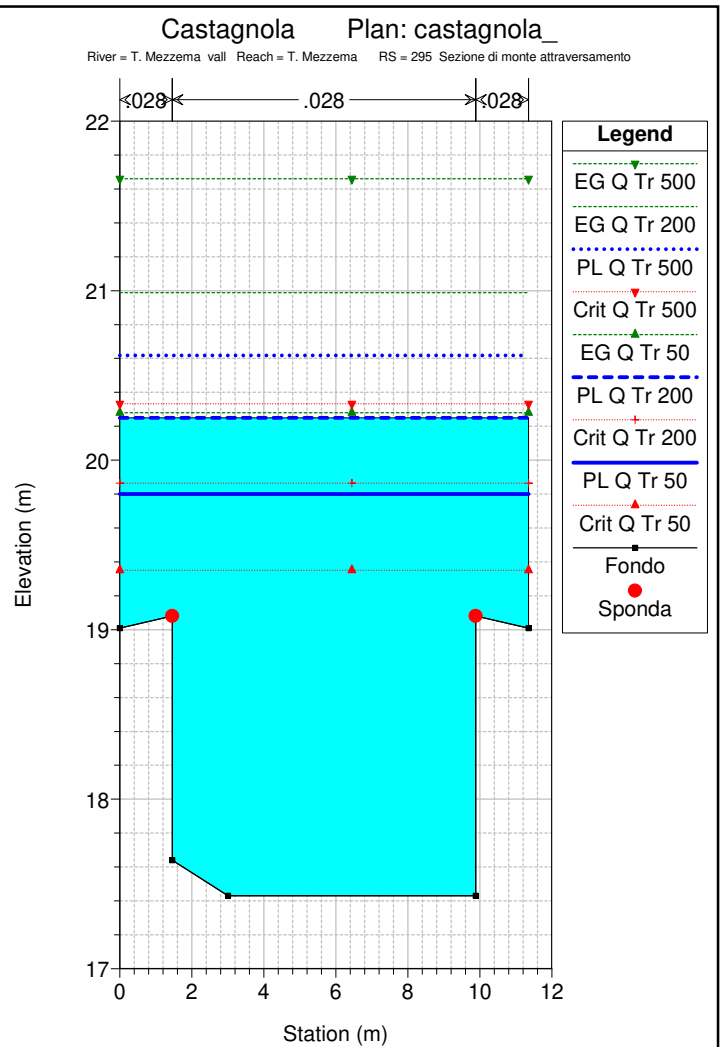
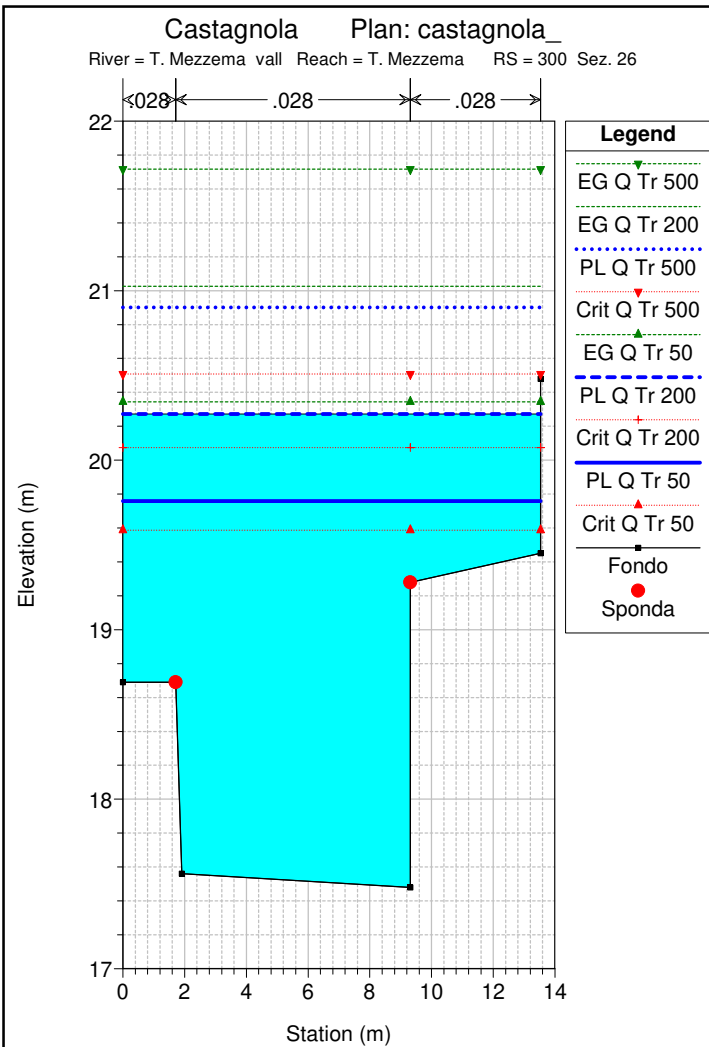
1 cm Horiz. = 22 m 1 cm Vert. = 1.5 m





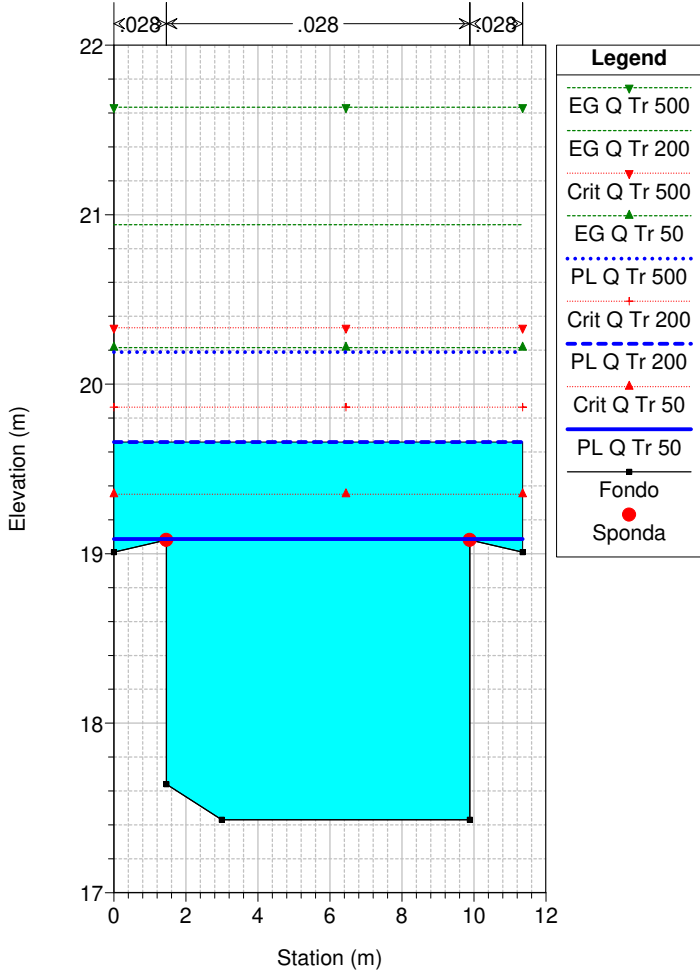






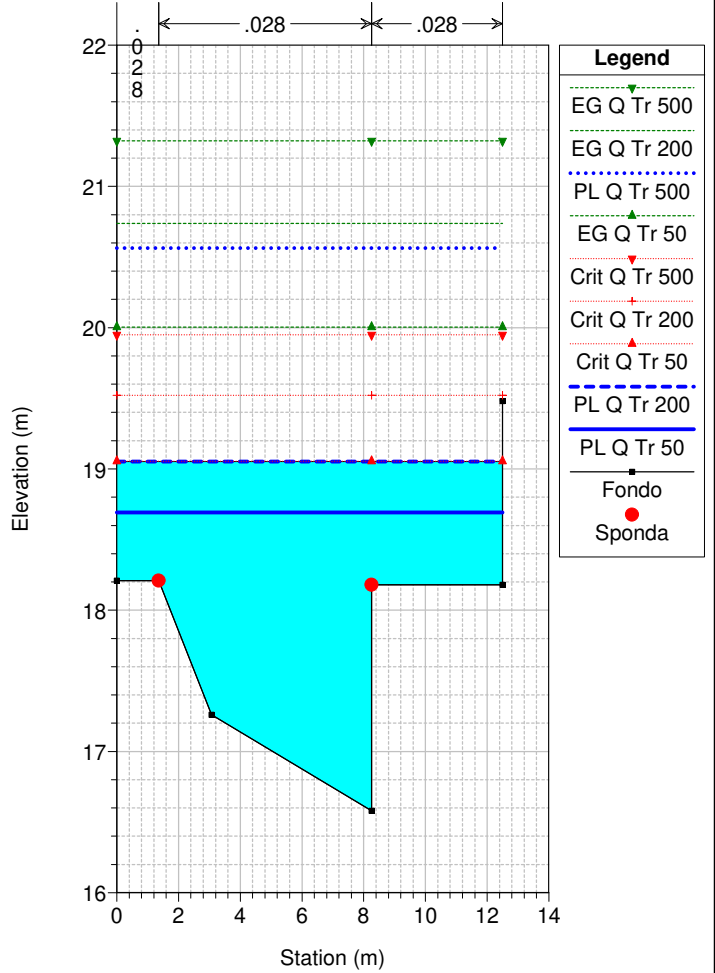
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River = T. Mezzema vall Reach = T. Mezzema RS = 290 Sezione di valle attraversamento Sez. 25



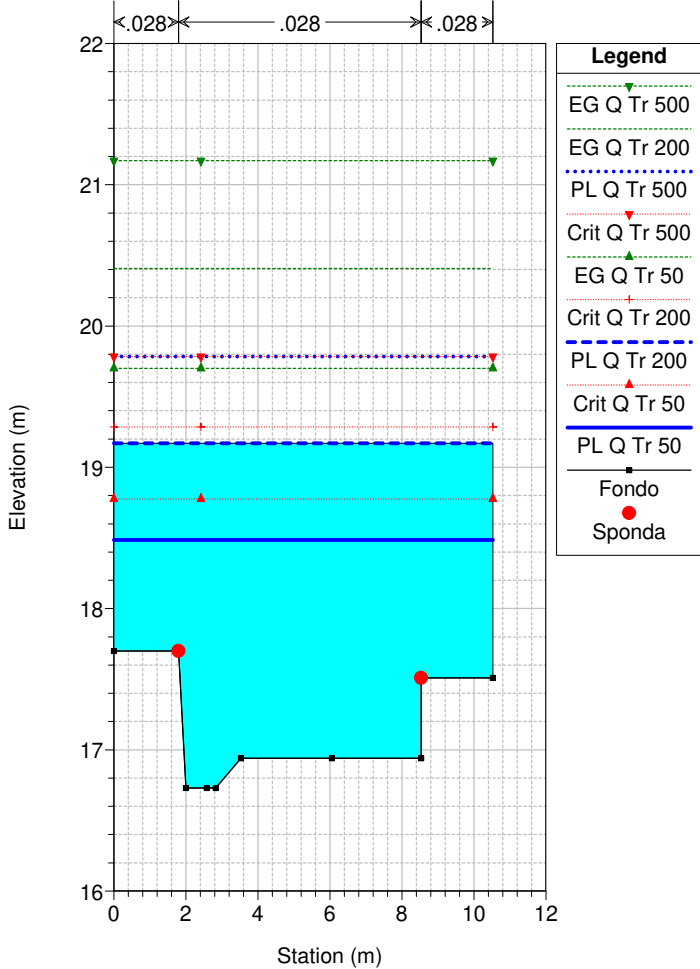
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River = T. Mezzema vall Reach = T. Mezzema RS = 280 Sez. 24



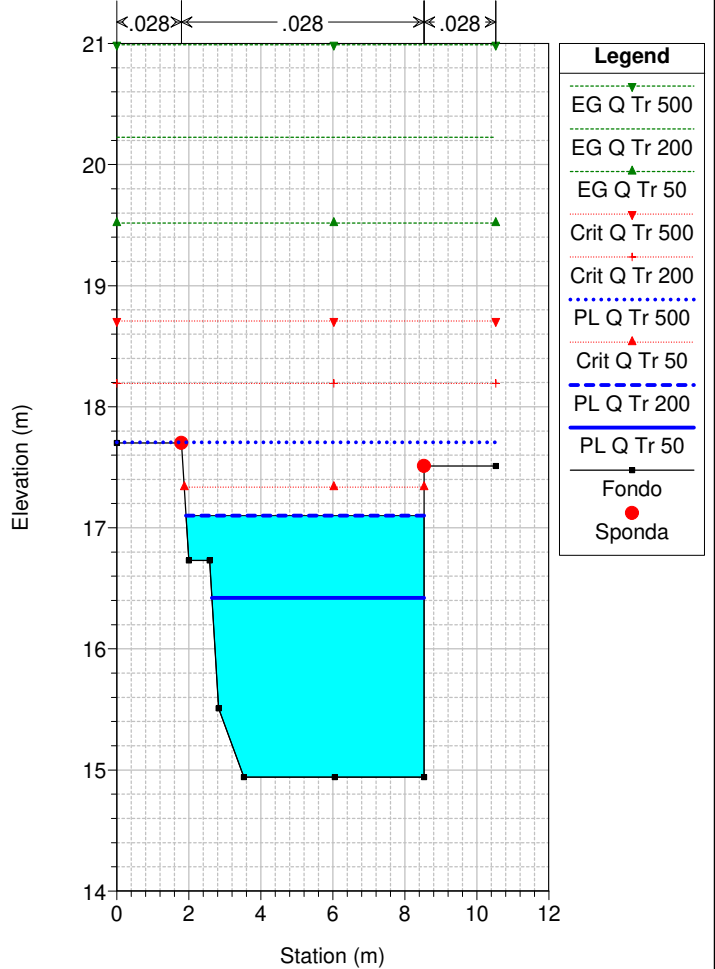
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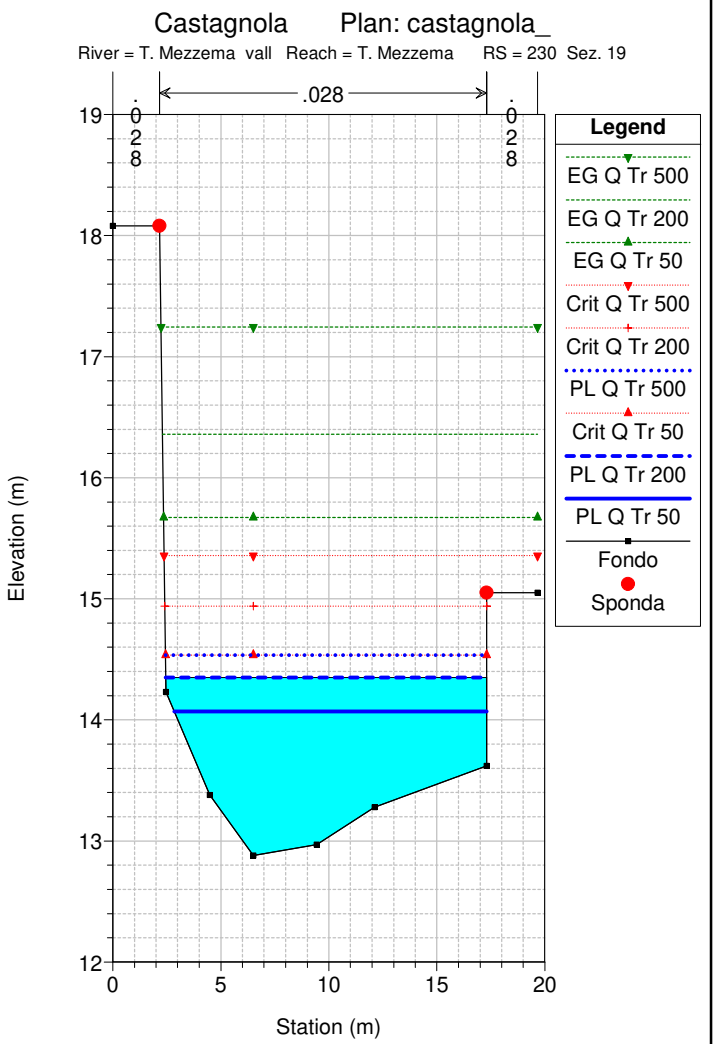
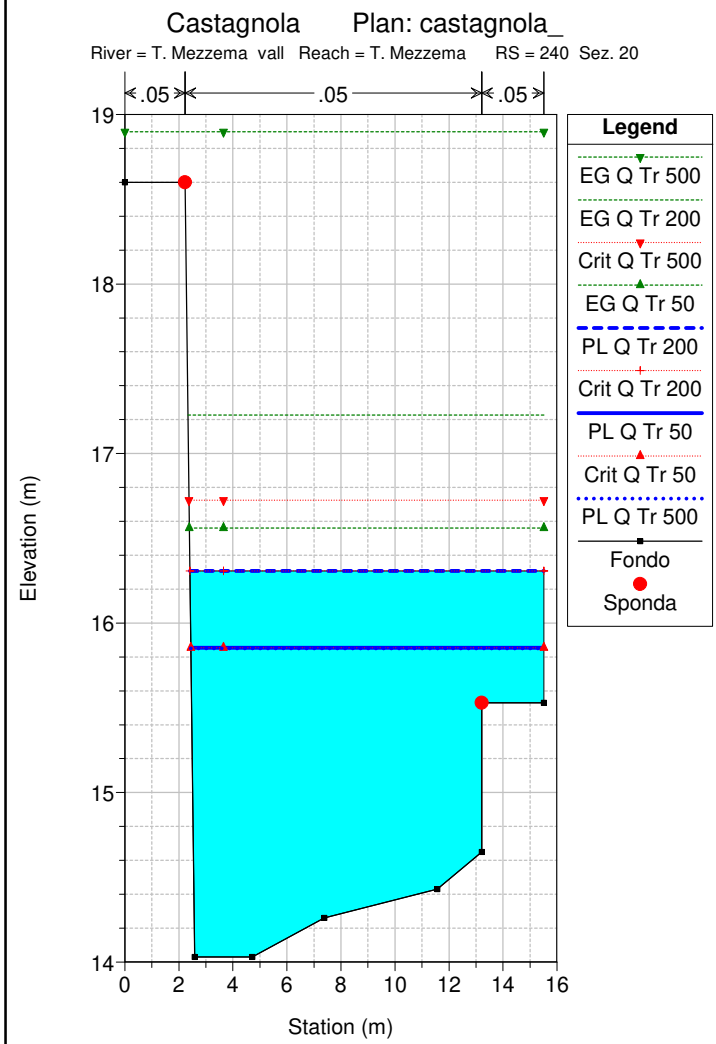
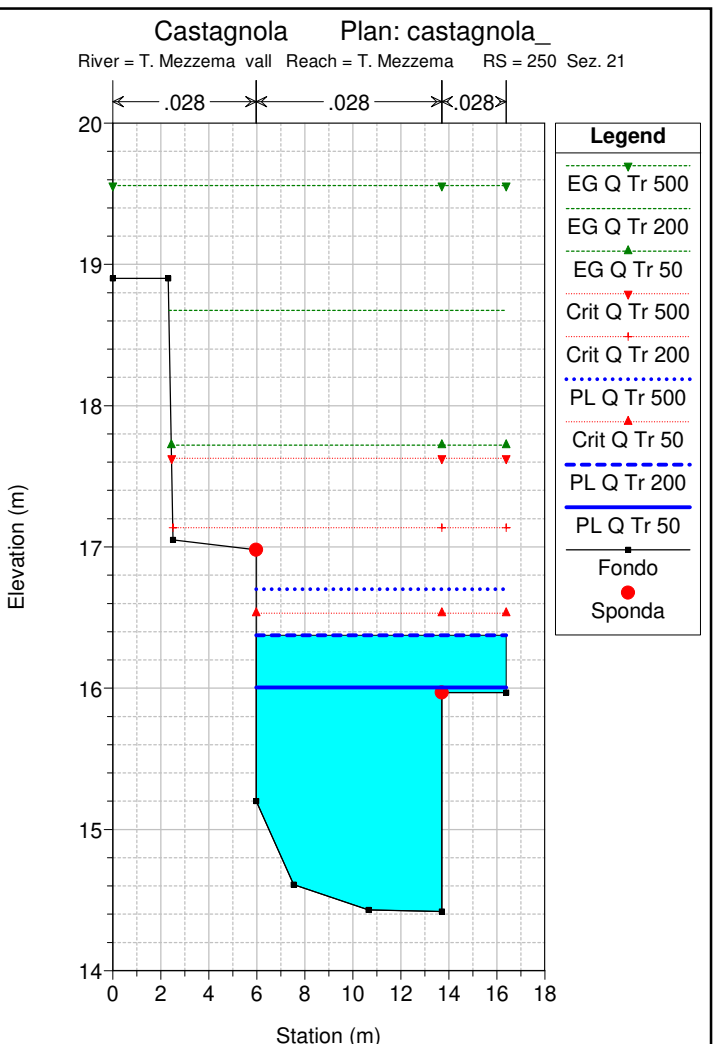
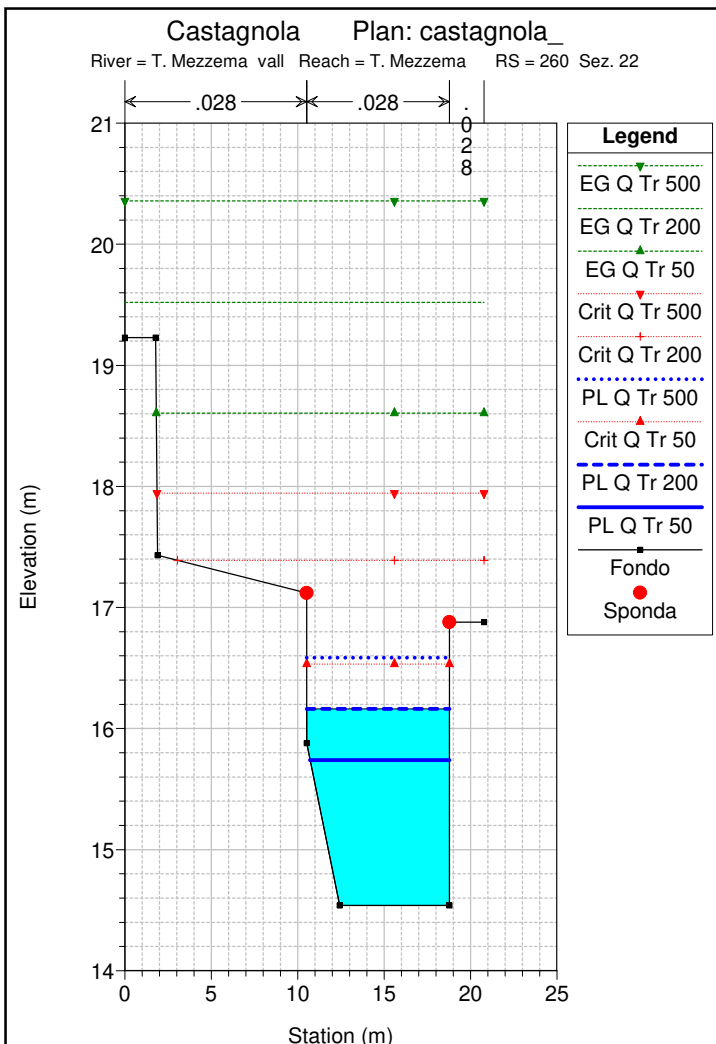
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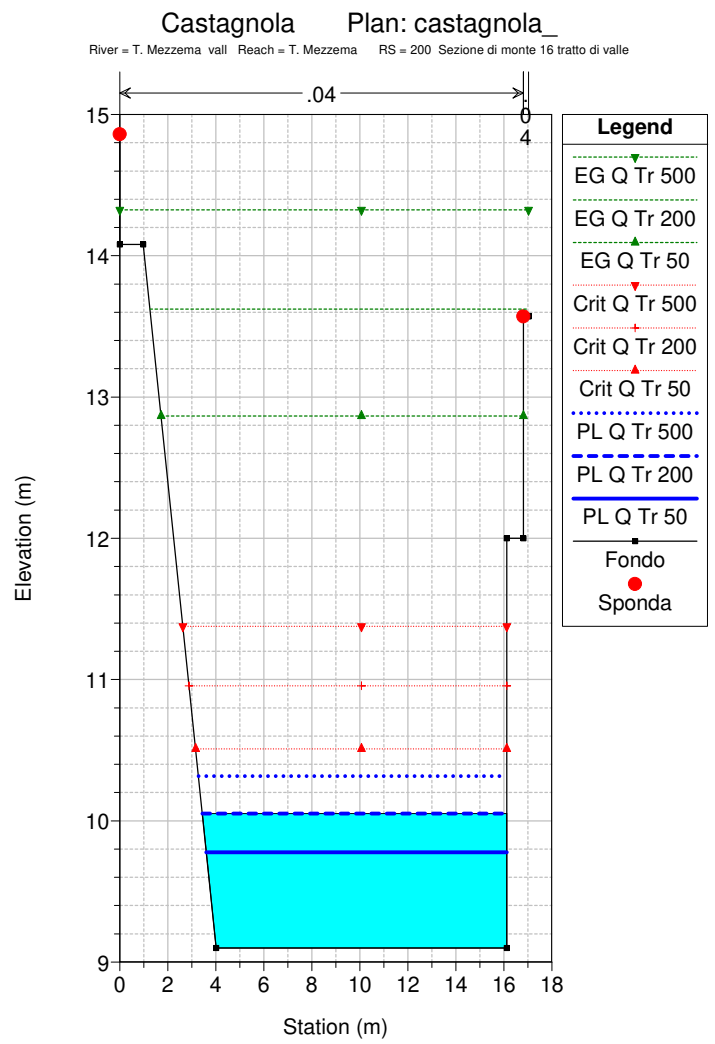
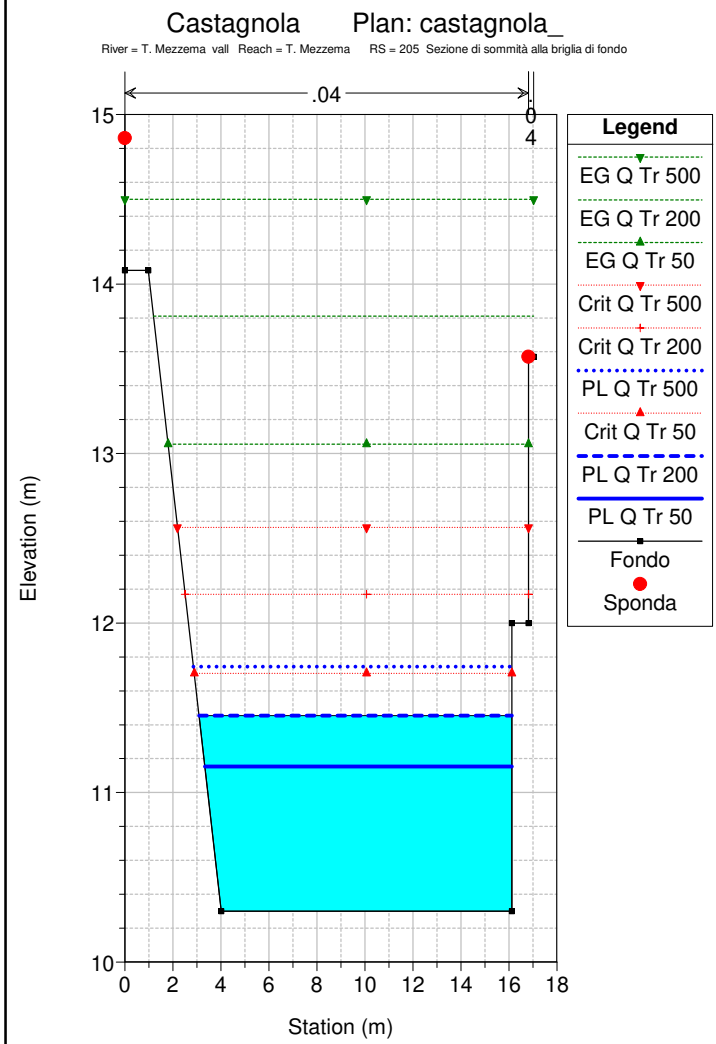
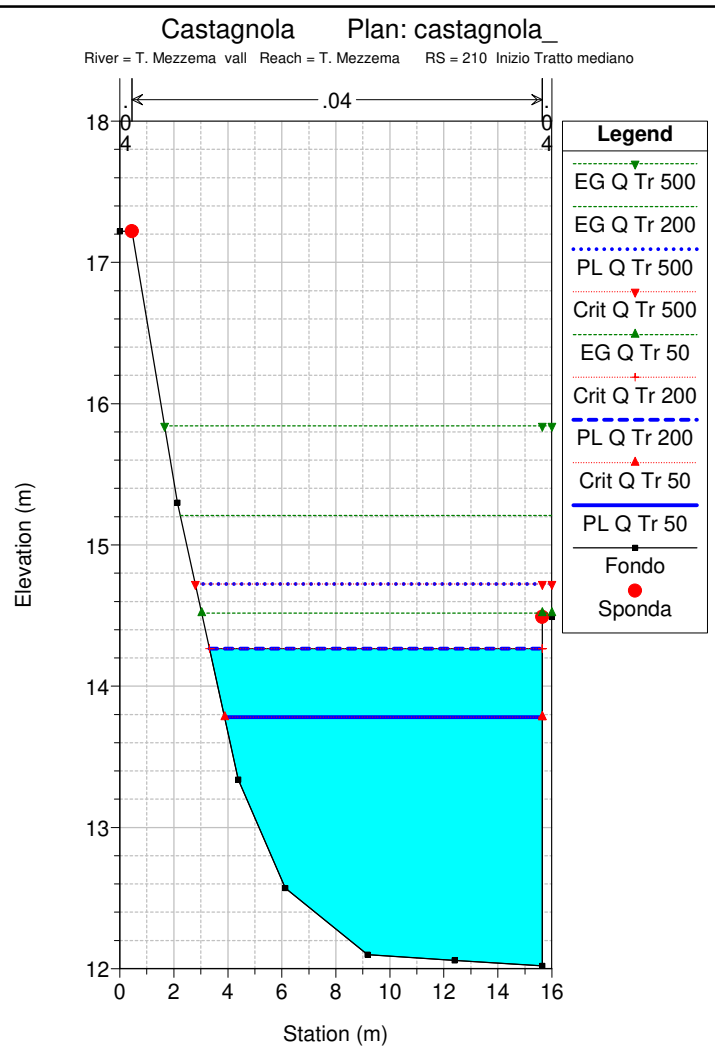
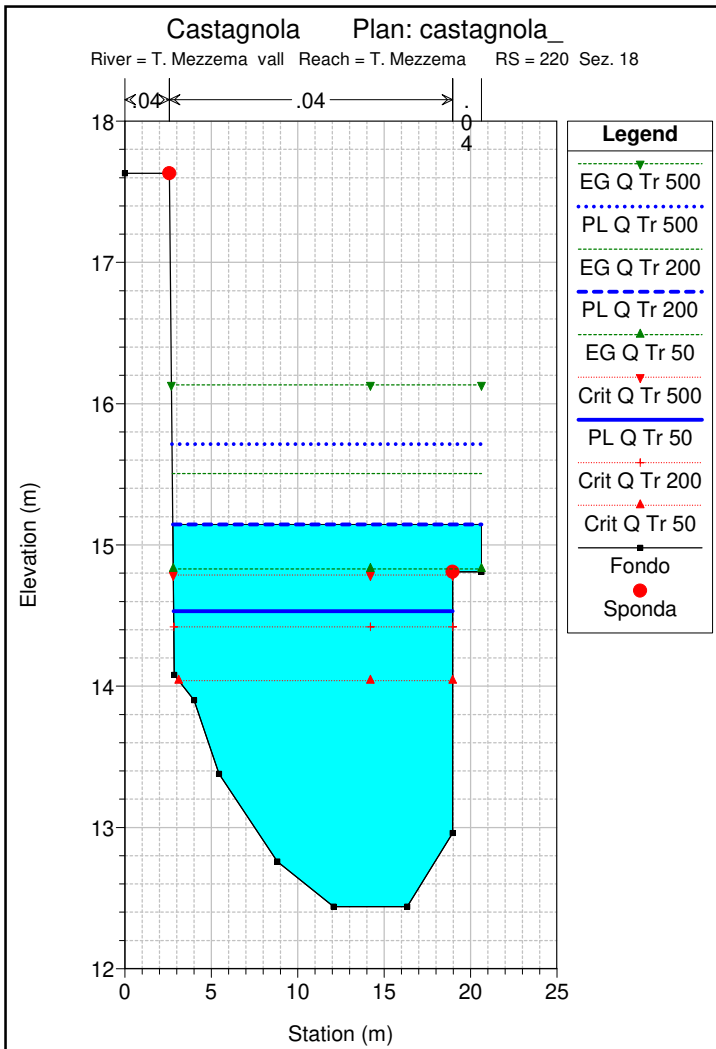


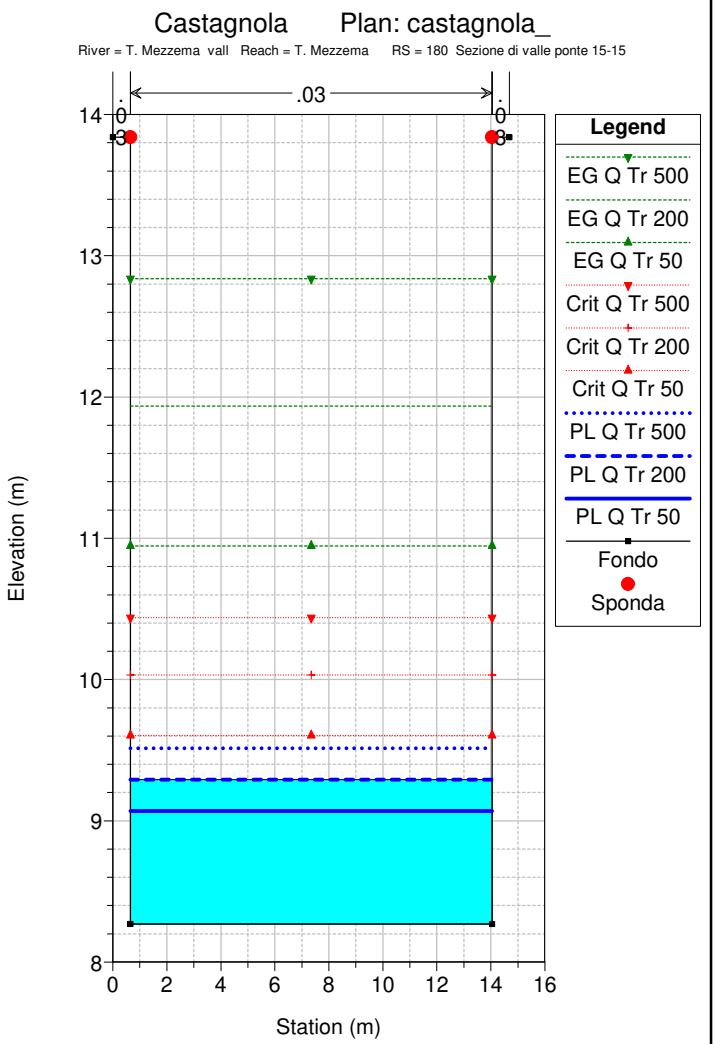
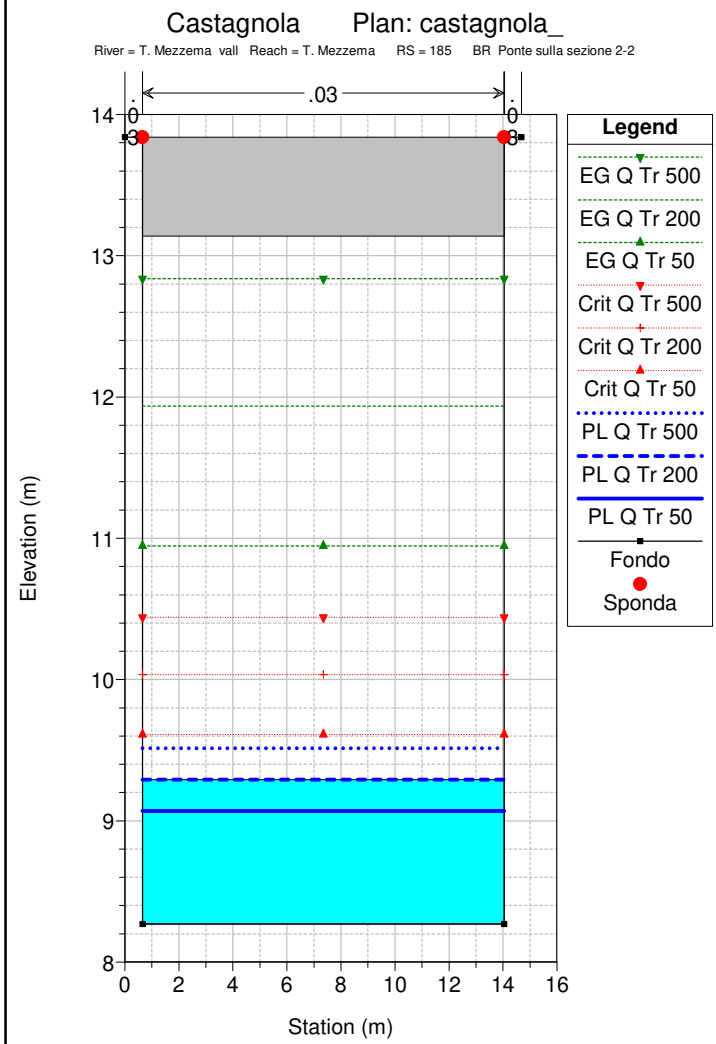
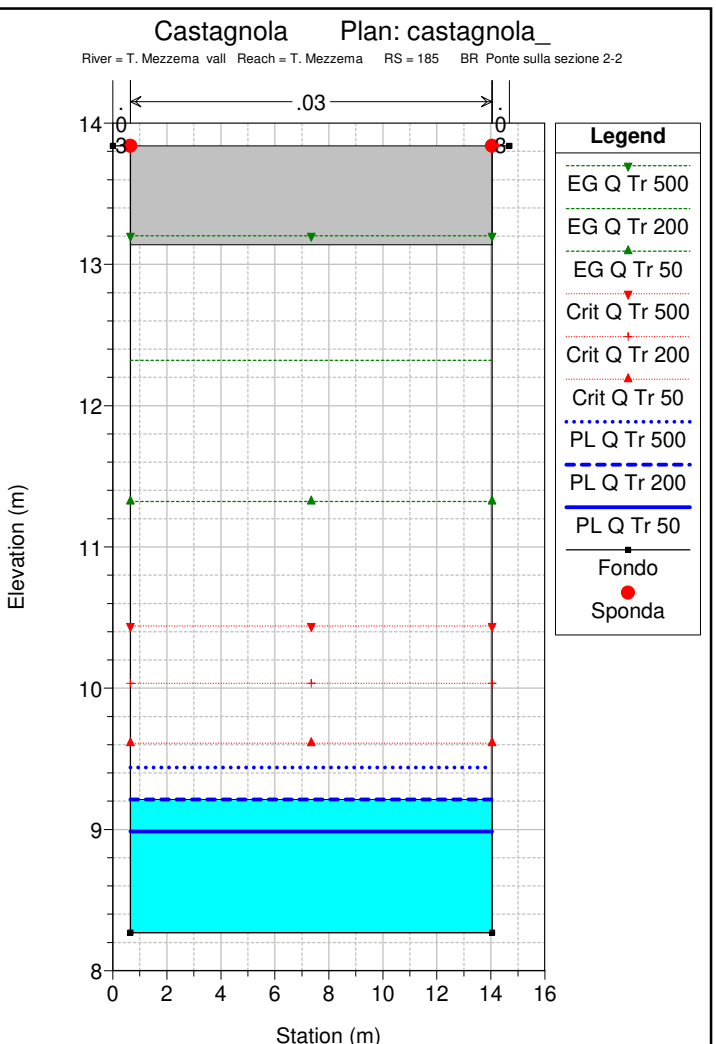
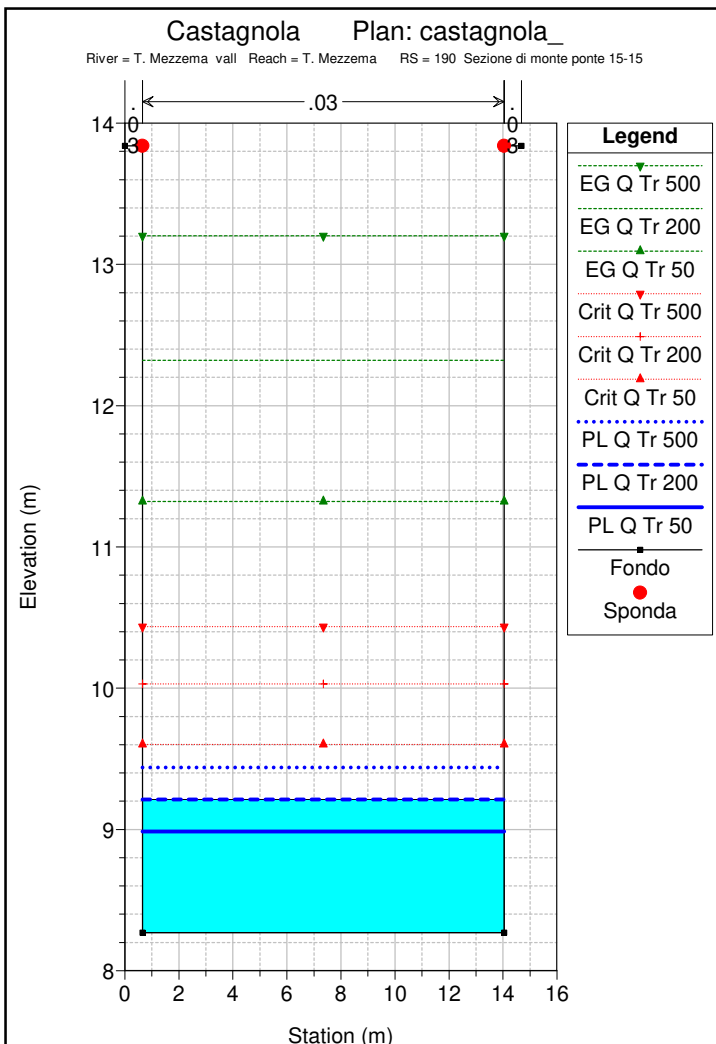
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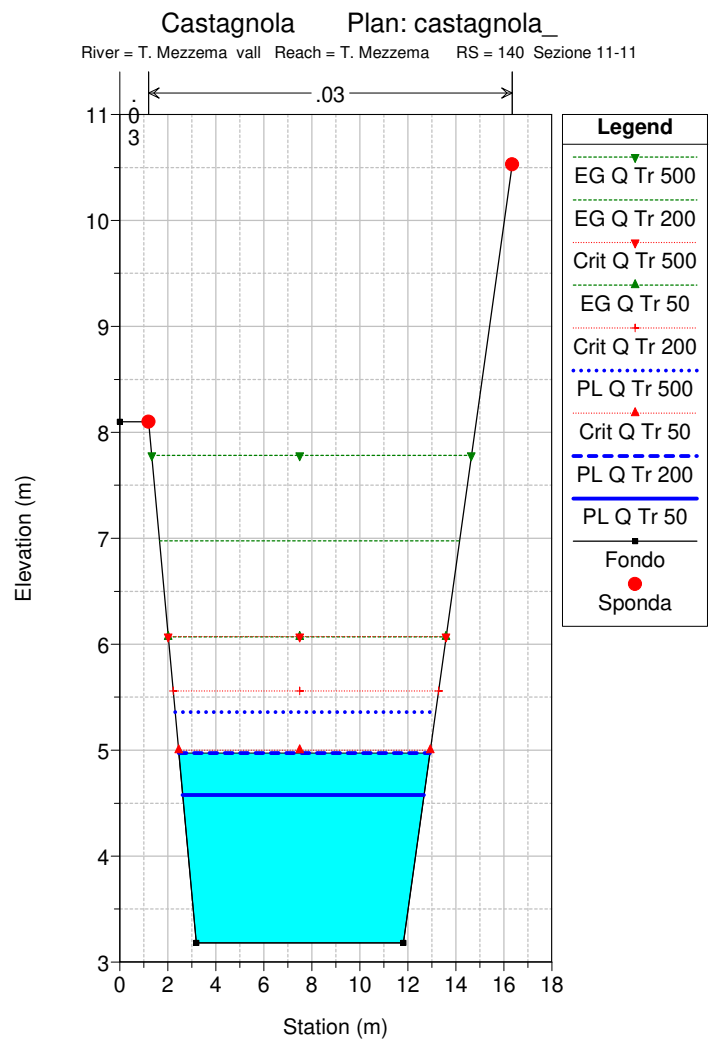
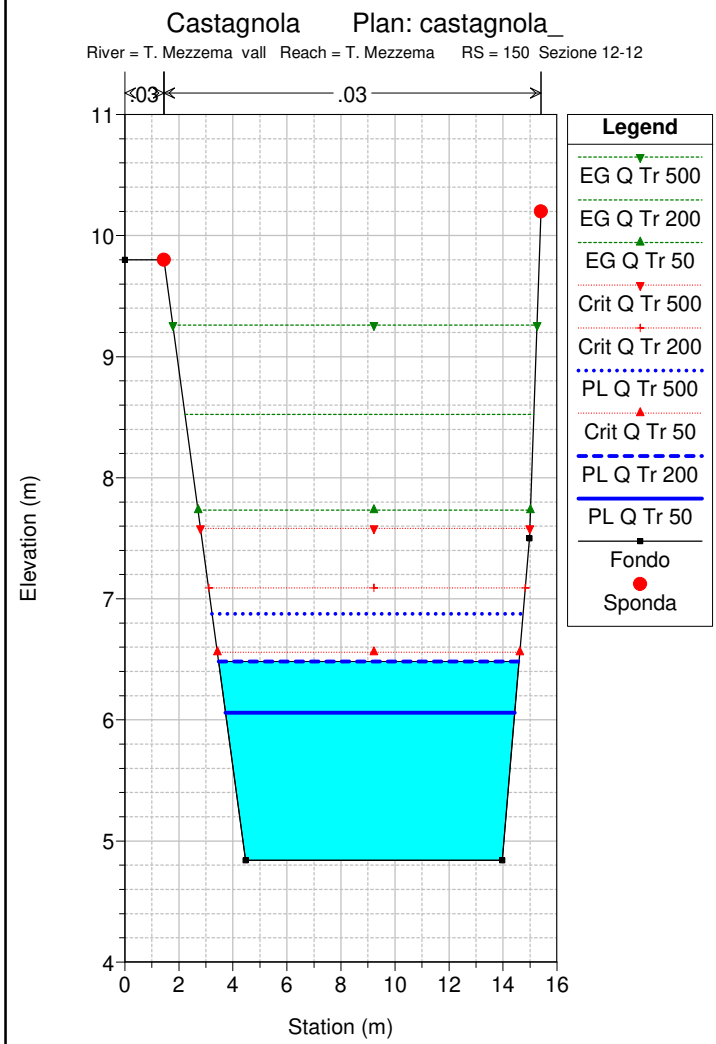
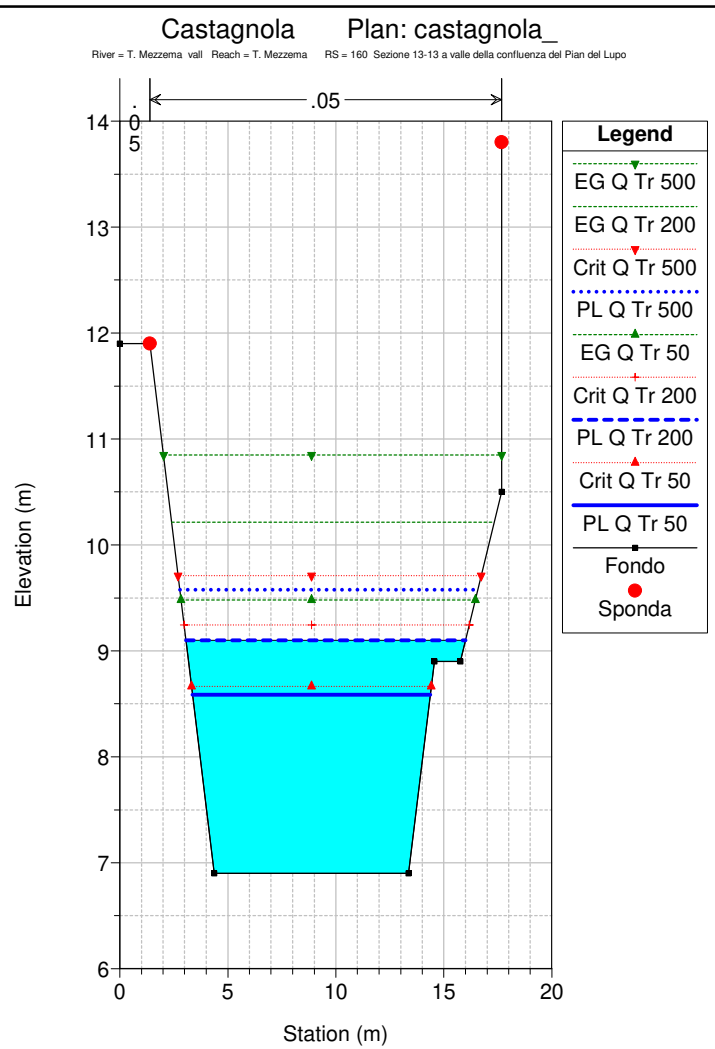
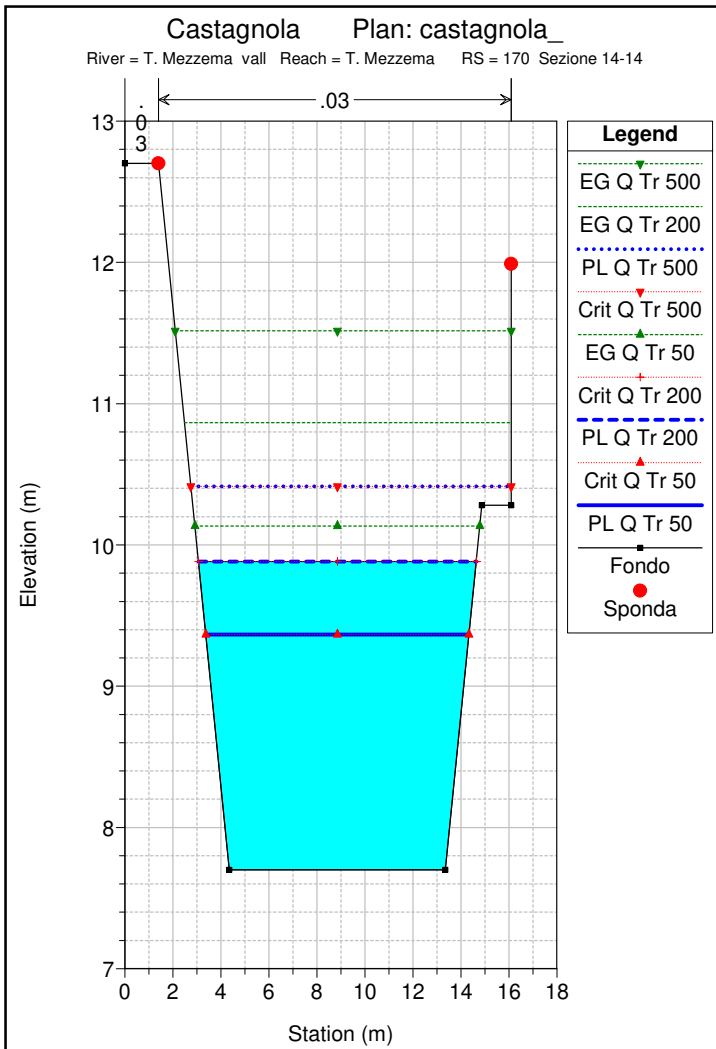
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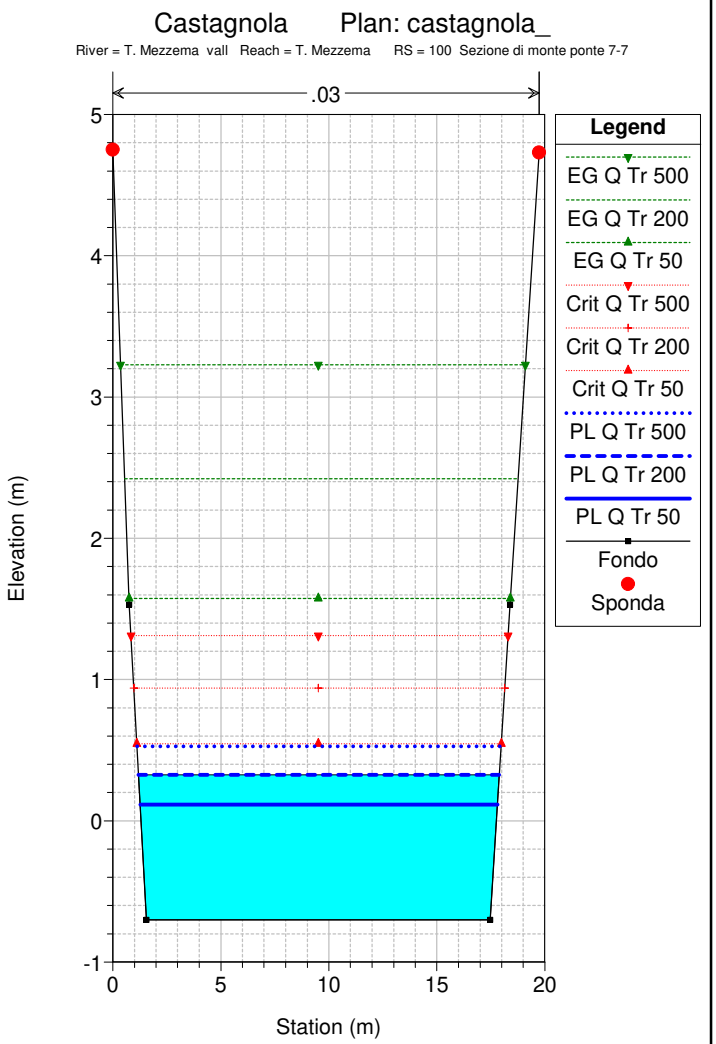
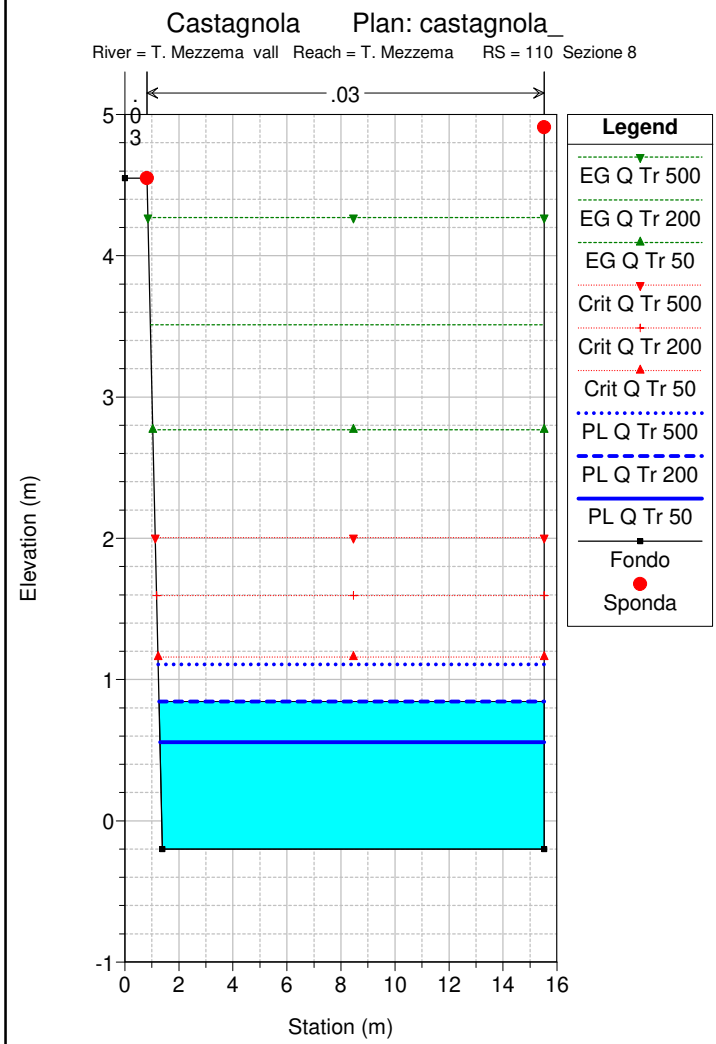
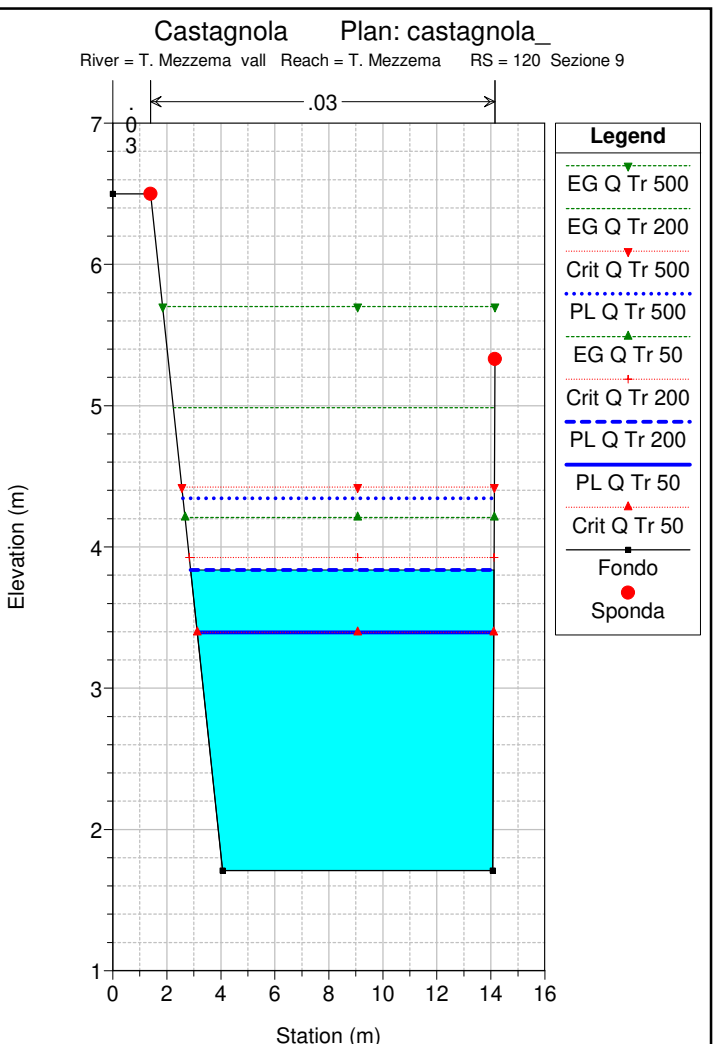
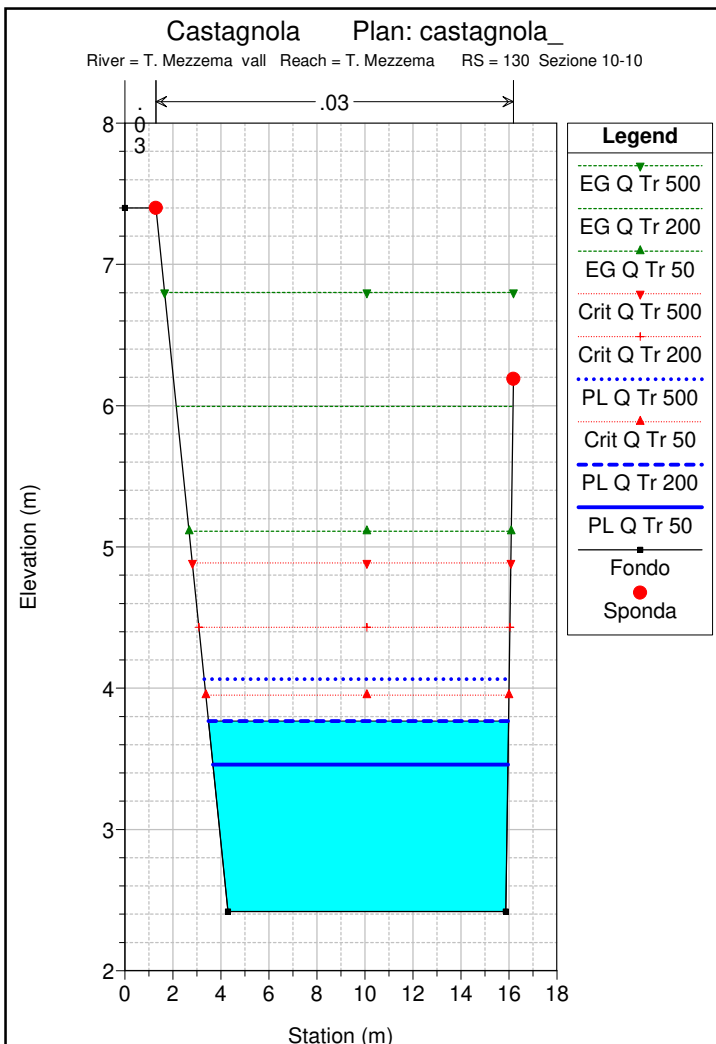






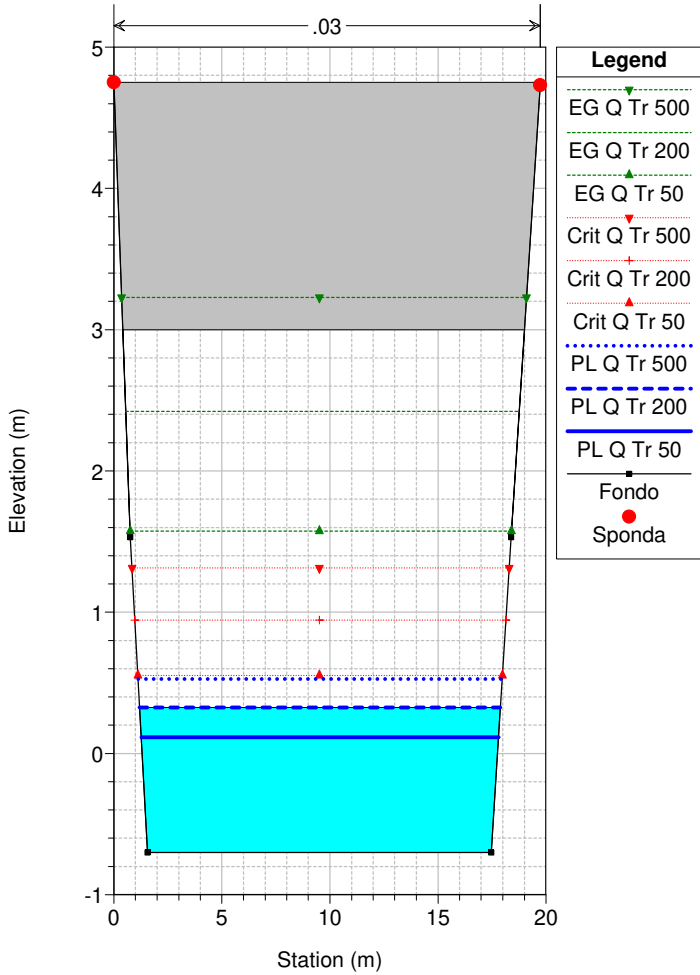






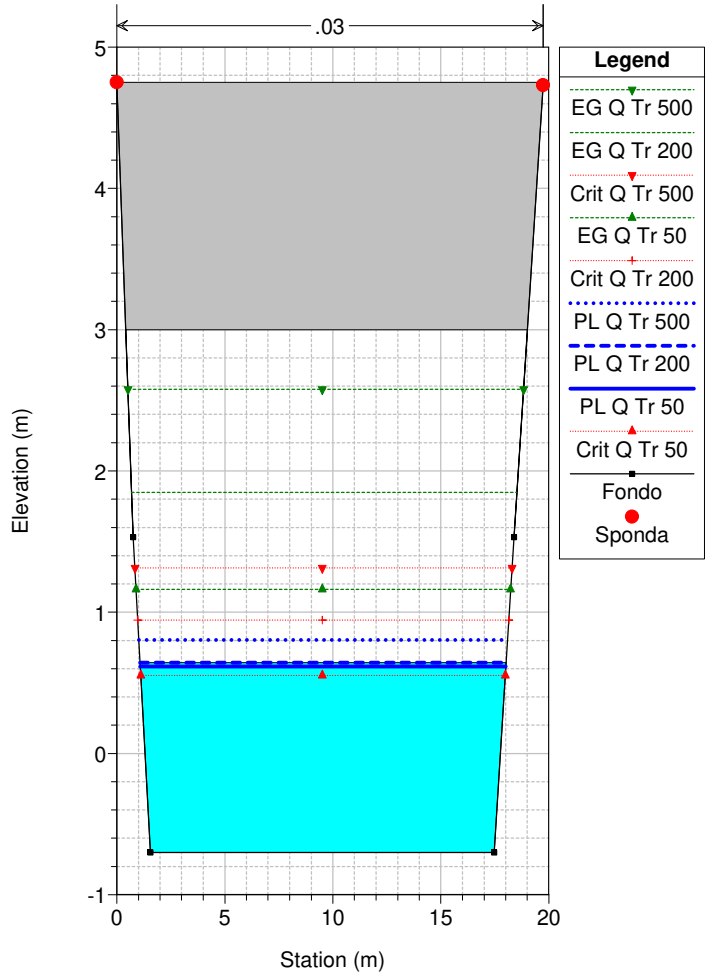
Castagnola Plan: castagnola_

River = T. Mezzema vall Reach = T. Mezzema RS = 95 BR Ponte sulla Strada provinciale sez. 10-10



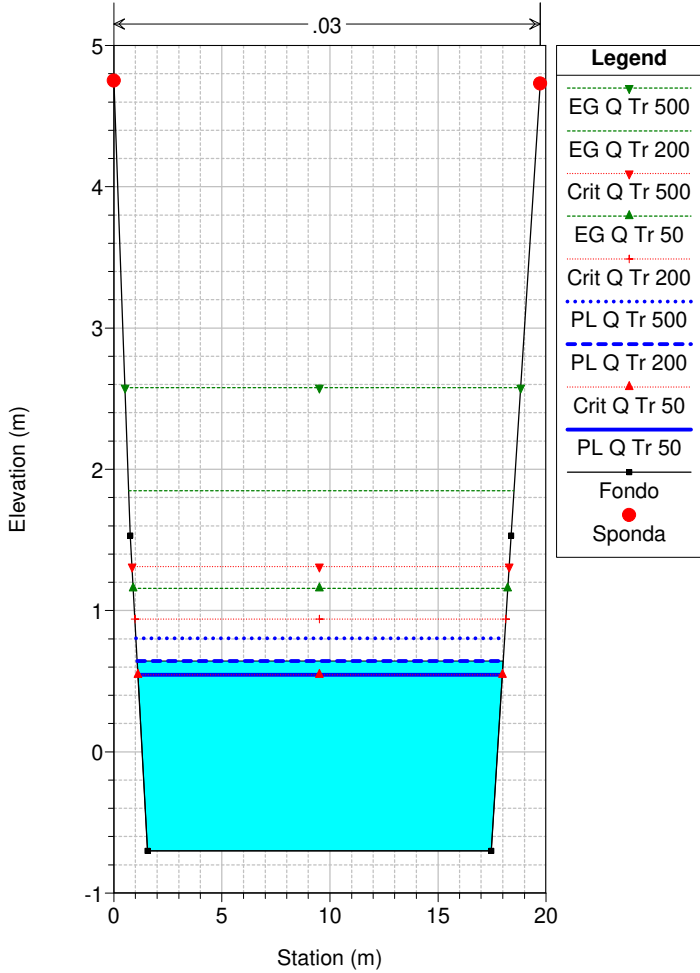
Castagnola Plan: castagnola_

River = T. Mezzema vall Reach = T. Mezzema RS = 95 BR Ponte sulla Strada provinciale sez. 10-10



Castagnola Plan: castagnola_

River = T. Mezzema vall Reach = T. Mezzema RS = 90 Sezione di valle ponte 7-7



River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (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
T. Mezzema vall	T. Mezzema	310	Q Tr 200	98.60	17.50	20.47	18.93	-1.54	20.03	-0.44	20.03	21.09	0.003907	3.58	29.26	13.78	0.73
T. Mezzema vall	T. Mezzema	310	Q Tr 50	64.96	17.50	19.95	18.93	-1.02	20.03	0.08	19.56	20.40	0.003819	3.03	22.25	12.28	0.70
T. Mezzema vall	T. Mezzema	310	Q Tr 500	134.56	17.50	21.02	18.93	-2.09	20.03	-0.99	20.50	21.76	0.003595	3.93	36.90	13.78	0.72
T. Mezzema vall	T. Mezzema	300	Q Tr 200	98.60	17.48	20.27	18.69	-1.58	19.28	-0.99	20.07	21.03	0.005092	4.06	27.34	13.53	0.78
T. Mezzema vall	T. Mezzema	300	Q Tr 50	64.96	17.48	19.76	18.69	-1.07	19.28	-0.48	19.59	20.34	0.005027	3.51	20.38	13.53	0.75
T. Mezzema vall	T. Mezzema	300	Q Tr 500	134.56	17.48	20.90	18.69	-2.21	19.28	-1.62	20.51	21.72	0.004289	4.28	35.84	13.53	0.74
T. Mezzema vall	T. Mezzema	295	Q Tr 200	98.60	17.43	20.25	19.08	-1.17	19.08	-1.17	19.87	20.99	0.004614	3.91	27.10	11.35	0.75
T. Mezzema vall	T. Mezzema	295	Q Tr 50	64.96	17.43	19.80	19.08	-0.72	19.08	-0.72	19.35	20.28	0.003732	3.13	22.01	11.35	0.65
T. Mezzema vall	T. Mezzema	295	Q Tr 500	134.56	17.43	20.62	19.08	-1.54	19.08	-1.54	20.33	21.66	0.005571	4.66	31.28	11.35	0.84
T. Mezzema vall	T. Mezzema	293	Bridge														
T. Mezzema vall	T. Mezzema	290	Q Tr 200	98.60	17.43	19.66	19.08	-0.58	19.08	-0.58	19.87	20.94	0.010774	5.10	20.39	11.35	1.10
T. Mezzema vall	T. Mezzema	290	Q Tr 50	64.96	17.43	19.09	19.08	-0.01	19.08	-0.01	19.35	20.21	0.013704	4.71	13.90	11.35	1.18
T. Mezzema vall	T. Mezzema	290	Q Tr 500	134.56	17.43	20.19	19.08	-1.11	19.08	-1.11	20.33	21.63	0.009273	5.46	26.43	11.35	1.05
T. Mezzema vall	T. Mezzema	280	Q Tr 200	98.60	16.58	19.05	18.21	-0.84	18.18	-0.87	19.52	20.74	0.016836	6.11	18.16	12.50	1.40
T. Mezzema vall	T. Mezzema	280	Q Tr 50	64.96	16.58	18.69	18.21	-0.48	18.18	-0.51	19.05	20.00	0.016726	5.31	13.66	12.50	1.35
T. Mezzema vall	T. Mezzema	280	Q Tr 500	134.56	16.58	20.56	18.21	-2.35	18.18	-2.38	19.95	21.32	0.003658	4.19	37.04	12.50	0.72
T. Mezzema vall	T. Mezzema	275	Q Tr 200	98.60	16.73	19.17	17.70	-1.47	17.51	-1.66	19.29	20.41	0.009400	5.26	21.15	10.52	1.12
T. Mezzema vall	T. Mezzema	275	Q Tr 50	64.96	16.73	18.48	17.70	-0.78	17.51	-0.97	18.78	19.70	0.014610	5.15	13.94	10.52	1.31
T. Mezzema vall	T. Mezzema	275	Q Tr 500	134.56	16.73	19.78	17.70	-2.08	17.51	-2.27	19.78	21.17	0.007742	5.60	27.60	10.52	1.06
T. Mezzema vall	T. Mezzema	270	Q Tr 200	98.60	14.94	17.10	17.70	0.60	17.51	0.41	18.19	20.23	0.036658	7.83	12.59	6.61	1.81
T. Mezzema vall	T. Mezzema	270	Q Tr 50	64.96	14.94	16.42	17.70	1.28	17.51	1.09	17.34	19.52	0.047493	7.79	8.33	5.89	2.09
T. Mezzema vall	T. Mezzema	270	Q Tr 500	134.56	14.94	17.71	17.70	-0.01	17.51	-0.20	18.71	20.99	0.030319	8.05	17.02	10.52	1.63
T. Mezzema vall	T. Mezzema	260	Q Tr 200	98.60	14.54	16.16	17.12	0.96	16.88	0.72	17.39	19.52	0.043085	8.12	12.15	8.27	2.14
T. Mezzema vall	T. Mezzema	260	Q Tr 50	64.96	14.54	15.74	17.12	1.38	16.88	1.14	16.53	18.60	0.050881	7.50	8.66	8.07	2.31
T. Mezzema vall	T. Mezzema	260	Q Tr 500	134.56	14.54	16.59	17.12	0.53	16.88	0.29	17.94	20.36	0.038275	8.60	15.64	8.27	2.00
T. Mezzema vall	T. Mezzema	250	Q Tr 200	98.60	14.42	16.37	16.98	0.61	15.97	-0.40	17.14	18.67	0.024914	6.81	15.12	10.42	1.61
T. Mezzema vall	T. Mezzema	250	Q Tr 50	64.96	14.42	16.00	16.98	0.98	15.97	-0.03	16.53	17.72	0.023421	5.81	11.27	10.42	1.54
T. Mezzema vall	T. Mezzema	250	Q Tr 500	134.56	14.42	16.70	16.98	0.28	15.97	-0.73	17.63	19.56	0.026298	7.65	18.52	10.42	1.67
T. Mezzema vall	T. Mezzema	240	Q Tr 200	98.60	14.03	16.31	18.60	2.29	15.53	-0.78	16.31	17.23	0.025122	4.31	23.73	13.10	0.97
T. Mezzema vall	T. Mezzema	240	Q Tr 50	64.96	14.03	15.85	18.60	2.75	15.53	-0.33	15.85	16.56	0.025341	3.75	17.81	13.07	0.95
T. Mezzema vall	T. Mezzema	240	Q Tr 500	134.56	14.03	15.85	18.60	2.75	15.53	-0.32	16.72	18.90	0.109862	7.79	17.75	13.07	1.98
T. Mezzema vall	T. Mezzema	230	Q Tr 200	98.60	12.88	14.35	18.08	3.73	15.05	0.70	14.94	16.36	0.031611	6.28	15.70	14.86	1.95
T. Mezzema vall	T. Mezzema	230	Q Tr 50	64.96	12.88	14.07	18.08	4.01	15.05	0.98	14.53	15.67	0.035260	5.61	11.58	14.47	2.00
T. Mezzema vall	T. Mezzema	230	Q Tr 500	134.56	12.88	14.53	18.08	3.55	15.05	0.52	15.36	17.25	0.035468	7.29	18.45	14.87	2.09
T. Mezzema vall	T. Mezzema	220	Q Tr 200	98.60	12.44	15.14	17.63	2.49	14.81	-0.33	14.42	15.51	0.004819	2.67	37.32	17.86	0.57
T. Mezzema vall	T. Mezzema	220	Q Tr 50	64.96	12.44	14.53	17.63	3.10	14.81	0.28	14.04	14.83	0.005634	2.42	26.86	16.14	0.60
T. Mezzema vall	T. Mezzema	220	Q Tr 500	134.56	12.44	15.71	17.63	1.92	14.81	-0.90	14.79	16.13	0.004347	2.89	47.49	17.90	0.55
T. Mezzema vall	T. Mezzema	210	Q Tr 200	98.60	12.02	14.27	17.22	2.95	14.49	0.22	14.27	15.21	0.016999	4.30	22.91	12.32	1.01
T. Mezzema vall	T. Mezzema	210	Q Tr 50	64.96	12.02	13.78	17.22	3.44	14.49	0.71	13.78	14.52	0.017560	3.80	17.08	11.76	1.01
T. Mezzema vall	T. Mezzema	210	Q Tr 500	134.56	12.02	14.72	17.22	2.50	14.49	-0.23	14.72	15.84	0.016225	4.69	28.75	13.20	1.00
T. Mezzema vall	T. Mezzema	205	Q Tr 200	98.60	10.30	11.45	14.86	3.41	13.57	2.12	12.17	13.81	0.075597	6.80	14.50	13.03	2.06

HEC-RAS Plan: 2 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (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
T. Mezzema vall	T. Mezzema	205	Q Tr 50	64.96	10.30	11.15	14.86	3.71	13.57	2.42	11.70	13.06	0.086579	6.11	10.63	12.79	2.14
T. Mezzema vall	T. Mezzema	205	Q Tr 500	134.56	10.30	11.74	14.86	3.12	13.57	1.83	12.56	14.50	0.068813	7.36	18.29	13.26	2.00
T. Mezzema vall	T. Mezzema	200	Q Tr 200	98.60	9.10	10.05	14.86	4.81	13.57	3.52	10.95	13.62	0.143556	8.37	11.77	12.68	2.77
T. Mezzema vall	T. Mezzema	200	Q Tr 50	64.96	9.10	9.78	14.86	5.08	13.57	3.79	10.51	12.86	0.185389	7.78	8.35	12.52	3.04
T. Mezzema vall	T. Mezzema	200	Q Tr 500	134.56	9.10	10.32	14.86	4.54	13.57	3.25	11.38	14.32	0.121196	8.87	15.17	12.84	2.61
T. Mezzema vall	T. Mezzema	190	Q Tr 200	98.60	8.27	9.21	13.84	4.63	13.84	4.63	10.03	12.32	0.070867	7.81	12.62	13.40	2.57
T. Mezzema vall	T. Mezzema	190	Q Tr 50	64.96	8.27	8.99	13.84	4.85	13.84	4.85	9.60	11.32	0.073802	6.77	9.59	13.40	2.55
T. Mezzema vall	T. Mezzema	190	Q Tr 500	134.56	8.27	9.44	13.84	4.40	13.84	4.40	10.44	13.20	0.066954	8.60	15.65	13.40	2.54
T. Mezzema vall	T. Mezzema	185	Bridge														
T. Mezzema vall	T. Mezzema	180	Q Tr 200	98.60	8.27	9.29	13.84	4.55	13.84	4.55	10.03	11.93	0.054840	7.20	13.69	13.40	2.27
T. Mezzema vall	T. Mezzema	180	Q Tr 50	64.96	8.27	9.07	13.84	4.77	13.84	4.77	9.60	10.94	0.051934	6.07	10.71	13.40	2.17
T. Mezzema vall	T. Mezzema	180	Q Tr 500	134.56	8.27	9.51	13.84	4.33	13.84	4.33	10.44	12.84	0.055119	8.08	16.66	13.40	2.31
T. Mezzema vall	T. Mezzema	170	Q Tr 200	98.60	7.70	9.88	12.70	2.82	11.99	2.11	9.88	10.87	0.009298	4.39	22.46	11.57	1.01
T. Mezzema vall	T. Mezzema	170	Q Tr 50	64.56	7.70	9.37	12.70	3.33	11.99	2.62	9.37	10.13	0.009630	3.88	16.63	10.96	1.01
T. Mezzema vall	T. Mezzema	170	Q Tr 500	134.56	7.70	10.41	12.70	2.29	11.99	1.57	10.41	11.52	0.009199	4.65	28.94	13.34	1.01
T. Mezzema vall	T. Mezzema	160	Q Tr 200	107.27	6.90	9.10	11.90	2.80	13.80	4.70	9.24	10.21	0.032219	4.68	22.92	12.94	1.12
T. Mezzema vall	T. Mezzema	160	Q Tr 50	70.67	6.90	8.58	11.90	3.32	13.80	5.22	8.67	9.48	0.030854	4.19	16.85	11.00	1.08
T. Mezzema vall	T. Mezzema	160	Q Tr 500	146.39	6.90	9.58	11.90	2.32	13.80	4.22	9.71	10.85	0.029446	4.99	29.32	13.80	1.09
T. Mezzema vall	T. Mezzema	150	Q Tr 200	107.27	4.84	6.48	9.80	3.32	10.20	3.72	7.09	8.52	0.025786	6.33	16.95	11.12	1.64
T. Mezzema vall	T. Mezzema	150	Q Tr 50	70.67	4.84	6.06	9.80	3.74	10.20	4.14	6.56	7.73	0.029240	5.73	12.33	10.71	1.70
T. Mezzema vall	T. Mezzema	150	Q Tr 500	146.39	4.84	6.88	9.80	2.92	10.20	3.32	7.58	9.26	0.024041	6.84	21.41	11.51	1.60
T. Mezzema vall	T. Mezzema	140	Q Tr 200	107.27	3.18	4.97	8.10	3.13	10.53	5.56	5.56	6.98	0.023724	6.27	17.10	10.46	1.57
T. Mezzema vall	T. Mezzema	140	Q Tr 50	70.67	3.18	4.58	8.10	3.52	10.53	5.95	5.00	6.07	0.022961	5.41	13.06	10.05	1.52
T. Mezzema vall	T. Mezzema	140	Q Tr 500	146.39	3.18	5.36	8.10	2.74	10.53	5.17	6.07	7.78	0.023502	6.90	21.23	10.85	1.57
T. Mezzema vall	T. Mezzema	130	Q Tr 200	107.27	2.42	3.77	7.40	3.63	6.19	2.42	4.43	5.99	0.033871	6.61	16.23	12.50	1.85
T. Mezzema vall	T. Mezzema	130	Q Tr 50	70.67	2.42	3.46	7.40	3.94	6.19	2.73	3.95	5.11	0.033730	5.69	12.41	12.29	1.81
T. Mezzema vall	T. Mezzema	130	Q Tr 500	146.39	2.42	4.06	7.40	3.34	6.19	2.13	4.89	6.80	0.033442	7.33	19.97	12.71	1.87
T. Mezzema vall	T. Mezzema	120	Q Tr 200	107.27	1.71	3.84	6.50	2.66	5.33	1.49	3.92	4.99	0.011316	4.75	22.58	11.23	1.07
T. Mezzema vall	T. Mezzema	120	Q Tr 50	70.67	1.71	3.40	6.50	3.10	5.33	1.93	3.40	4.21	0.010158	4.00	17.68	10.98	1.01
T. Mezzema vall	T. Mezzema	120	Q Tr 500	146.39	1.71	4.34	6.50	2.16	5.33	0.99	4.42	5.70	0.010858	5.16	28.36	11.53	1.05
T. Mezzema vall	T. Mezzema	110	Q Tr 200	107.27	-0.20	0.84	4.55	3.71	4.91	4.07	1.59	3.51	0.053175	7.24	14.83	14.27	2.27
T. Mezzema vall	T. Mezzema	110	Q Tr 50	70.67	-0.20	0.56	4.55	3.99	4.91	4.35	1.16	2.77	0.064719	6.59	10.72	14.23	2.42
T. Mezzema vall	T. Mezzema	110	Q Tr 500	146.39	-0.20	1.11	4.55	3.44	4.91	3.80	2.01	4.27	0.048732	7.88	18.58	14.30	2.21
T. Mezzema vall	T. Mezzema	100	Q Tr 200	107.27	-0.70	0.33	4.75	4.42	4.73	4.40	0.94	2.42	0.041204	6.42	16.72	16.70	2.05
T. Mezzema vall	T. Mezzema	100	Q Tr 50	70.67	-0.70	0.11	4.75	4.64	4.73	4.62	0.54	1.57	0.037997	5.35	13.20	16.53	1.91
T. Mezzema vall	T. Mezzema	100	Q Tr 500	146.39	-0.70	0.53	4.75	4.22	4.73	4.20	1.31	3.23	0.042805	7.28	20.11	16.85	2.13
T. Mezzema vall	T. Mezzema	95	Bridge														
T. Mezzema vall	T. Mezzema	90	Q Tr 200	107.27	-0.70	0.64	4.75	4.11	4.73	4.09	0.94	1.85	0.017204	4.86	22.05	16.94	1.36
T. Mezzema vall	T. Mezzema	90	Q Tr 50	70.67	-0.70	0.55	4.75	4.20	4.73	4.18	0.55	1.16	0.009522	3.46	20.41	16.86	1.00
T. Mezzema vall	T. Mezzema	90	Q Tr 500	146.39	-0.70	0.80	4.75	3.95	4.73	3.93	1.31	2.58	0.022162	5.90	24.81	17.06	1.56

HEC-RAS Plan: 2 (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (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
T. Mezzema	T. Mezzema	430	Q Tr 200	83.13	28.16	30.30	36.08	5.78	30.36	0.06	30.86	31.80	0.030021	5.43	15.32	8.71	1.31
T. Mezzema	T. Mezzema	430	Q Tr 50	54.77	28.16	29.84	36.08	6.24	30.36	0.52	30.12	31.01	0.030044	4.79	11.43	8.15	1.29
T. Mezzema	T. Mezzema	430	Q Tr 500	113.45	28.16	30.64	36.08	5.44	30.36	-0.28	31.18	32.38	0.030013	5.95	20.96	19.47	1.32
T. Mezzema	T. Mezzema	420	Q Tr 200	83.13	27.45	29.83	37.03	7.20	29.61	-0.22	30.37	31.32	0.028454	5.43	15.90	14.98	1.30
T. Mezzema	T. Mezzema	420	Q Tr 50	54.77	27.45	29.42	37.03	7.61	29.61	0.19	29.65	30.52	0.026614	4.66	11.77	8.06	1.23
T. Mezzema	T. Mezzema	420	Q Tr 500	113.45	27.45	30.11	37.03	6.92	29.61	-0.50	30.67	31.88	0.030269	6.06	21.15	20.40	1.35
T. Mezzema	T. Mezzema	410	Q Tr 200	83.13	26.03	28.29	33.19	4.90	28.94	0.65	28.90	30.19	0.045433	6.12	13.58	9.68	1.65
T. Mezzema	T. Mezzema	410	Q Tr 50	54.77	26.03	27.89	33.19	5.30	28.94	1.05	28.37	29.43	0.046307	5.49	9.97	8.63	1.63
T. Mezzema	T. Mezzema	410	Q Tr 500	113.45	26.03	28.69	33.19	4.50	28.94	0.25	29.48	30.78	0.040819	6.40	17.74	10.75	1.59
T. Mezzema	T. Mezzema	400	Q Tr 200	83.13	24.51	27.43	31.61	4.18	26.96	-0.47	27.75	28.55	0.021111	4.90	19.40	17.24	1.10
T. Mezzema	T. Mezzema	400	Q Tr 50	54.77	24.51	27.15	31.61	4.46	26.96	-0.19	27.38	27.97	0.017039	4.07	14.53	17.16	0.98
T. Mezzema	T. Mezzema	400	Q Tr 500	113.45	24.51	27.64	31.61	3.97	26.96	-0.68	28.04	29.10	0.025789	5.69	22.99	17.30	1.22
T. Mezzema	T. Mezzema	390	Q Tr 200	83.13	23.84	25.89	31.39	5.50	25.88	-0.01	26.44	27.60	0.037841	5.79	14.35	9.94	1.51
T. Mezzema	T. Mezzema	390	Q Tr 50	54.77	23.84	25.37	31.39	6.02	25.88	0.51	25.88	27.01	0.050079	5.68	9.65	8.41	1.69
T. Mezzema	T. Mezzema	390	Q Tr 500	113.45	23.84	26.28	31.39	5.11	25.88	-0.40	26.83	28.12	0.032699	6.08	19.49	13.81	1.45
T. Mezzema	T. Mezzema	380	Q Tr 200	83.13	22.07	24.87	26.24	1.37	24.39	-0.48	24.48	25.40	0.007864	3.23	26.11	14.19	0.73
T. Mezzema	T. Mezzema	380	Q Tr 50	54.77	22.07	23.86	26.24	2.38	24.39	0.53	24.02	24.72	0.023342	4.10	13.35	10.94	1.19
T. Mezzema	T. Mezzema	380	Q Tr 500	113.45	22.07	25.50	26.24	0.74	24.39	-1.11	24.89	26.05	0.006105	3.32	35.09	14.43	0.66
T. Mezzema	T. Mezzema	370	Q Tr 200	83.13	21.21	24.96	26.01	1.05	24.33	-0.63	23.68	25.21	0.002599	2.19	38.25	14.79	0.43
T. Mezzema	T. Mezzema	370	Q Tr 50	54.77	21.21	24.20	26.01	1.81	24.33	0.13	23.21	24.40	0.003115	2.02	27.14	13.51	0.45
T. Mezzema	T. Mezzema	370	Q Tr 500	113.45	21.21	25.58	26.01	0.43	24.33	-1.25	24.09	25.88	0.002540	2.43	47.42	14.90	0.43
T. Mezzema	T. Mezzema	360	Q Tr 200	83.13	20.86	23.97	25.12	1.15	24.09	0.12	23.97	25.04	0.017830	4.58	18.14	8.62	1.01
T. Mezzema	T. Mezzema	360	Q Tr 50	54.77	20.86	23.37	25.12	1.75	24.09	0.72	23.37	24.24	0.018175	4.14	13.24	7.72	1.01
T. Mezzema	T. Mezzema	360	Q Tr 500	113.45	20.86	24.57	25.12	0.55	24.09	-0.48	24.57	25.71	0.014995	4.76	24.48	11.18	0.94
T. Mezzema	T. Mezzema	355	Q Tr 200	83.13	18.80	20.00	24.68	4.68	24.78	4.78	20.73	22.62	0.096546	7.18	11.58	11.67	2.30
T. Mezzema	T. Mezzema	355	Q Tr 50	54.77	18.80	21.15	24.68	3.53	24.78	3.63	20.31	21.37	0.004507	2.08	26.28	15.48	0.51
T. Mezzema	T. Mezzema	355	Q Tr 500	113.45	18.80	20.22	24.68	4.46	24.78	4.56	21.20	23.50	0.096604	8.03	14.13	11.71	2.33
T. Mezzema	T. Mezzema	353		Bridge													
T. Mezzema	T. Mezzema	350	Q Tr 200	83.13	18.80	21.75	24.68	2.93	24.78	3.03	20.72	22.03	0.004072	2.33	35.67	15.54	0.49
T. Mezzema	T. Mezzema	350	Q Tr 50	54.77	18.80	21.11	24.68	3.57	24.78	3.67	20.31	21.34	0.004865	2.14	25.64	15.48	0.53
T. Mezzema	T. Mezzema	350	Q Tr 500	113.45	18.80	22.38	24.68	2.30	24.78	2.40	21.20	22.70	0.003685	2.50	45.36	15.60	0.47
T. Mezzema	T. Mezzema	340	Q Tr 200	83.13	18.53	20.97	19.34	-1.63	20.03	-0.94	21.00	21.93	0.008210	4.72	20.11	10.99	0.98
T. Mezzema	T. Mezzema	340	Q Tr 50	54.77	18.53	20.54	19.34	-1.20	20.03	-0.51	20.54	21.25	0.007691	4.00	15.47	10.99	0.92
T. Mezzema	T. Mezzema	340	Q Tr 500	113.45	18.53	21.38	19.34	-2.04	20.03	-1.35	21.42	22.58	0.008326	5.30	24.70	10.99	1.02
T. Mezzema	T. Mezzema	330	Q Tr 200	83.13	18.53	21.11	19.00	-2.11	19.78	-1.33	19.83	21.19	0.000430	1.27	70.59	34.38	0.27
T. Mezzema	T. Mezzema	330	Q Tr 50	54.77	18.53	20.41	19.00	-1.41	19.78	-0.63	19.59	20.48	0.000686	1.25	46.50	34.38	0.32
T. Mezzema	T. Mezzema	330	Q Tr 500	113.45	18.53	21.79	19.00	-2.79	19.78	-2.01	20.06	21.87	0.000325	1.32	93.92	34.38	0.25
T. Mezzema	T. Mezzema	320	Q Tr 200	83.13	17.58	20.65	19.10	-1.55	19.90	-0.75	19.99	21.13	0.002849	3.19	28.53	12.62	0.60
T. Mezzema	T. Mezzema	320	Q Tr 50	54.77	17.58	20.07	19.10	-0.97	19.90	-0.17	19.45	20.44	0.002822	2.73	21.26	12.62	0.57
T. Mezzema	T. Mezzema	320	Q Tr 500	113.45	17.58	21.23	19.10	-2.13	19.90	-1.33	20.46	21.81	0.002712	3.52	35.88	12.62	0.60

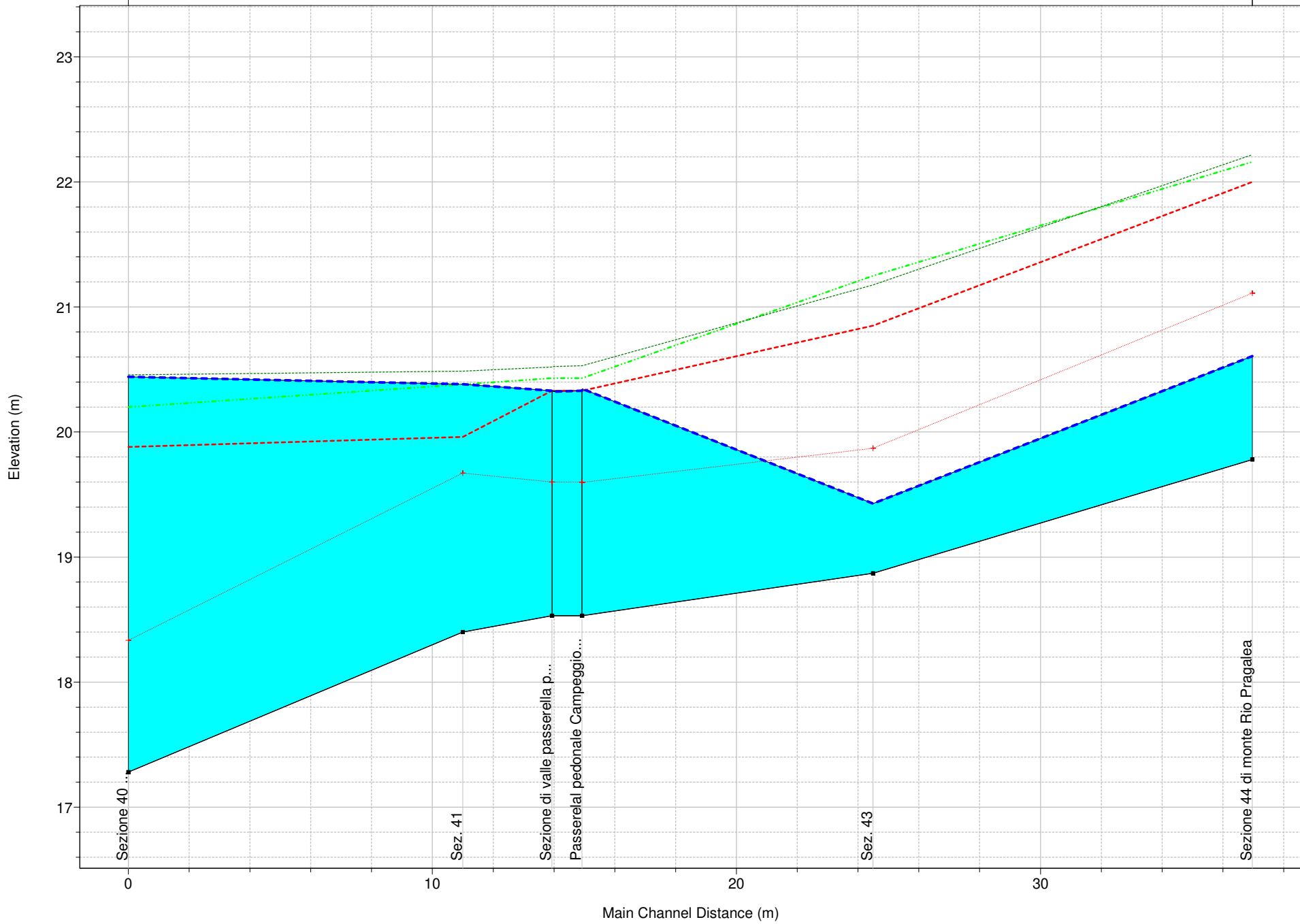
Rio Pragalea

Da SEZ 44 a SEZ 40

- Profili idraulici**
- Sezioni**
- Tabelle dei risultati**

Castagnola Plan: castagnola_

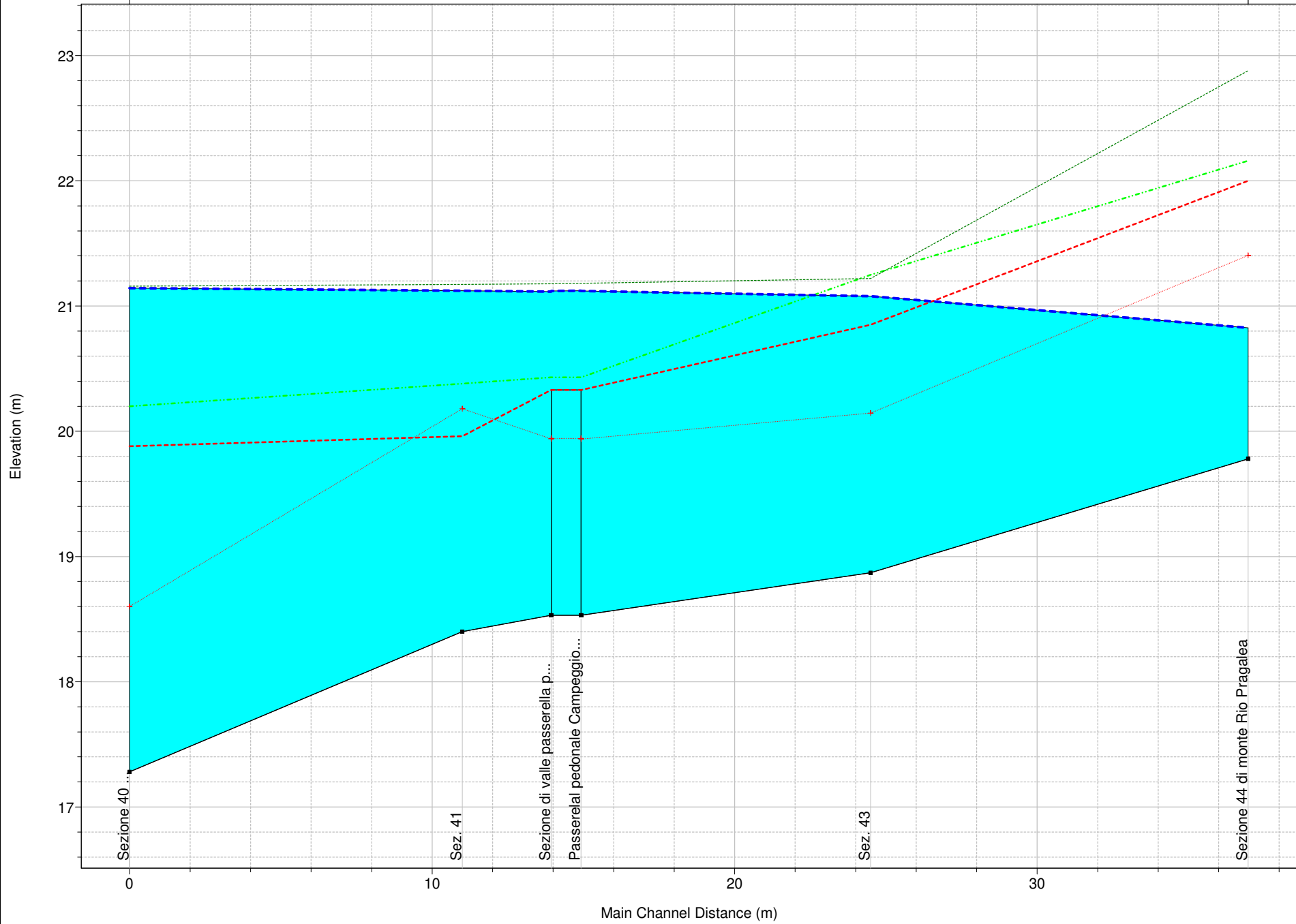
Rio Pragalea Castagnola



Legend	
EG Q Tr 50	(Green dashed line)
PL Q Tr 50	(Blue dashed line)
Crit Q Tr 50	(Red dashed line)
Fondo	(Black solid line)
Sponda sx	(Red dashed line)
Sponda dx	(Green dashed line)

Castagnola Plan: castagnola_

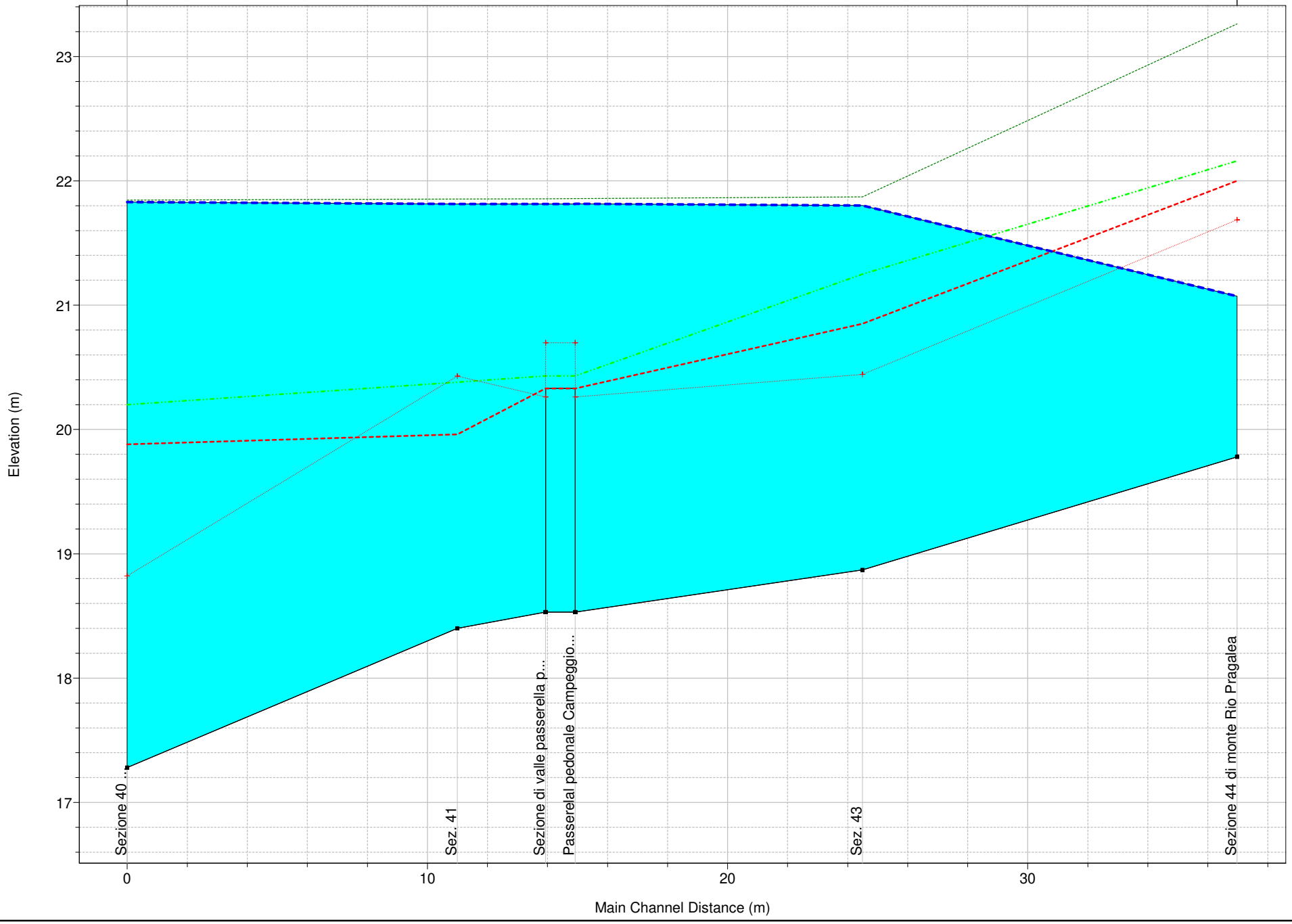
Rio Pragalea Castagnola



Legend	
EG Q Tr 200	Green dotted line with cross markers
PL Q Tr 200	Blue dashed line with cross markers
Crit Q Tr 200	Red dashed line with cross markers
Fondo	Black line with square markers
Sponda sx	Red dashed line with cross markers
Sponda dx	Green dashed line with cross markers

Castagnola Plan: castagnola_

Rio Pragalea Castagnola



Legend	
EG Q Tr 500	(Dotted green line)
PL Q Tr 500	(Blue dashed line)
Crit Q Tr 500	(Red dashed line)
Fondo	(Dotted black line)
Sponda sx	(Red dashed line)
Sponda dx	(Green dashed line)

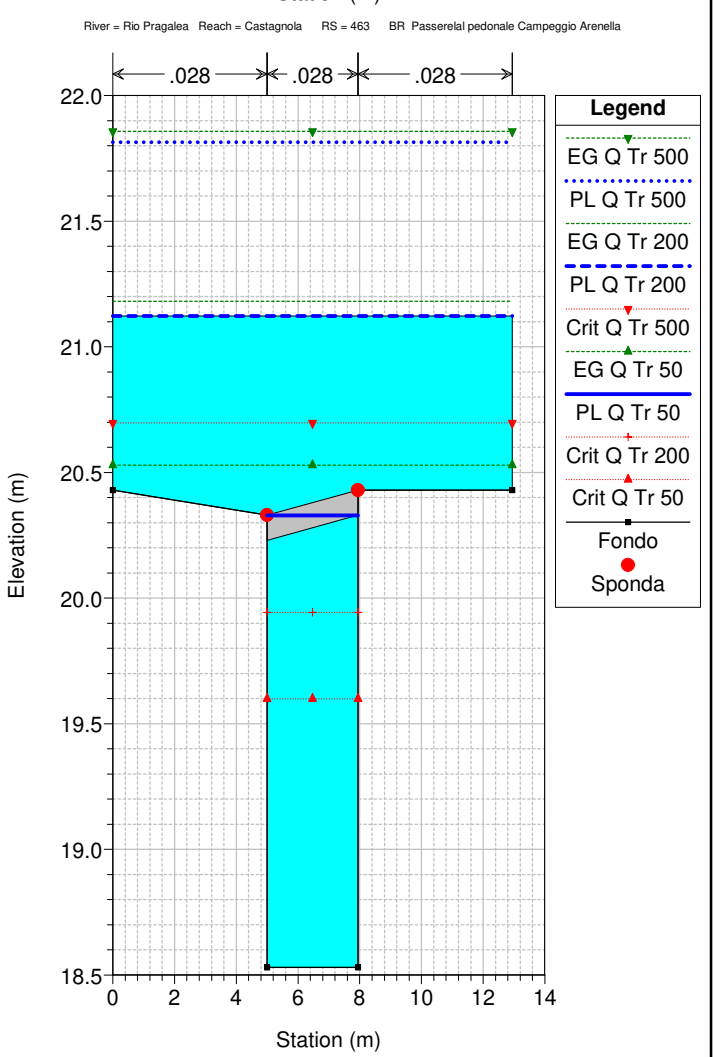
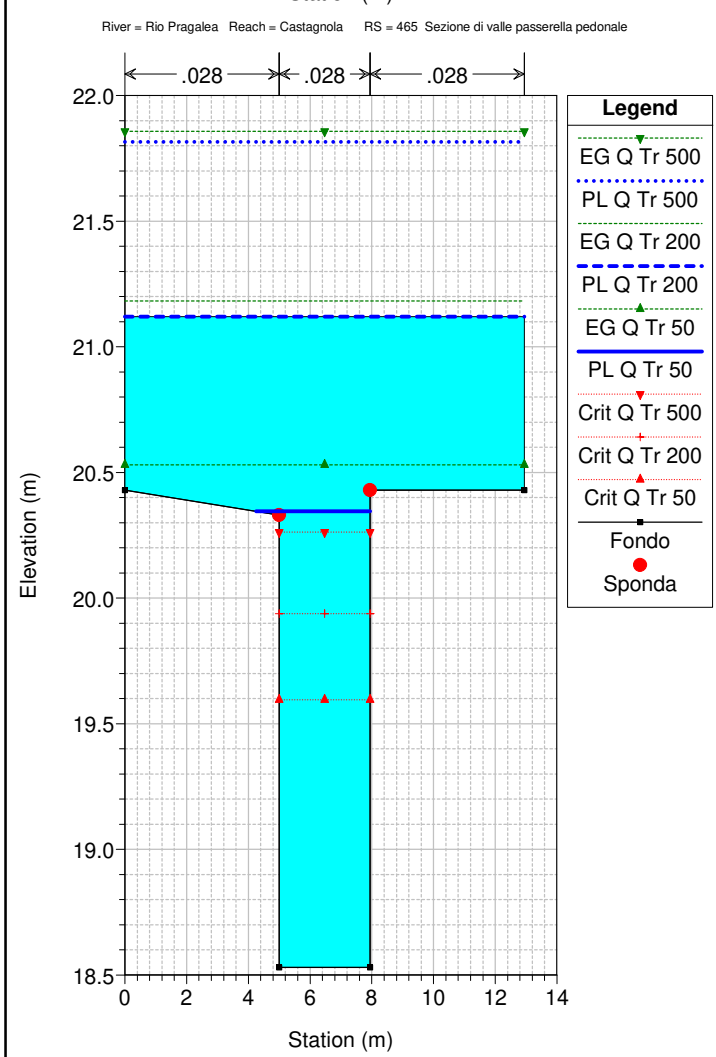
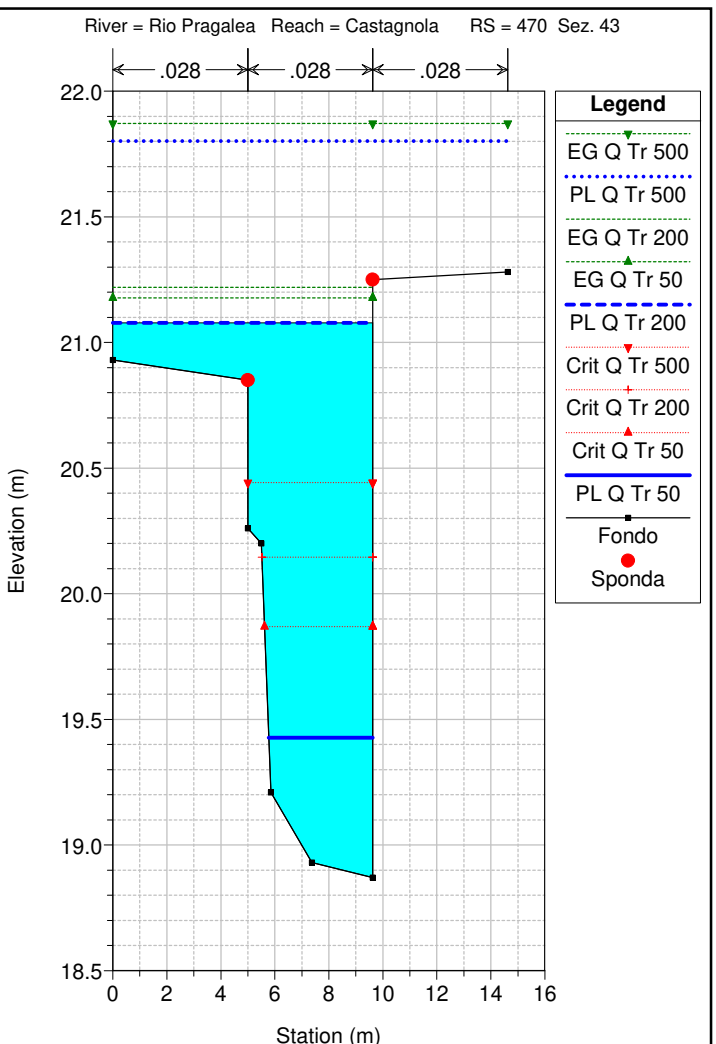
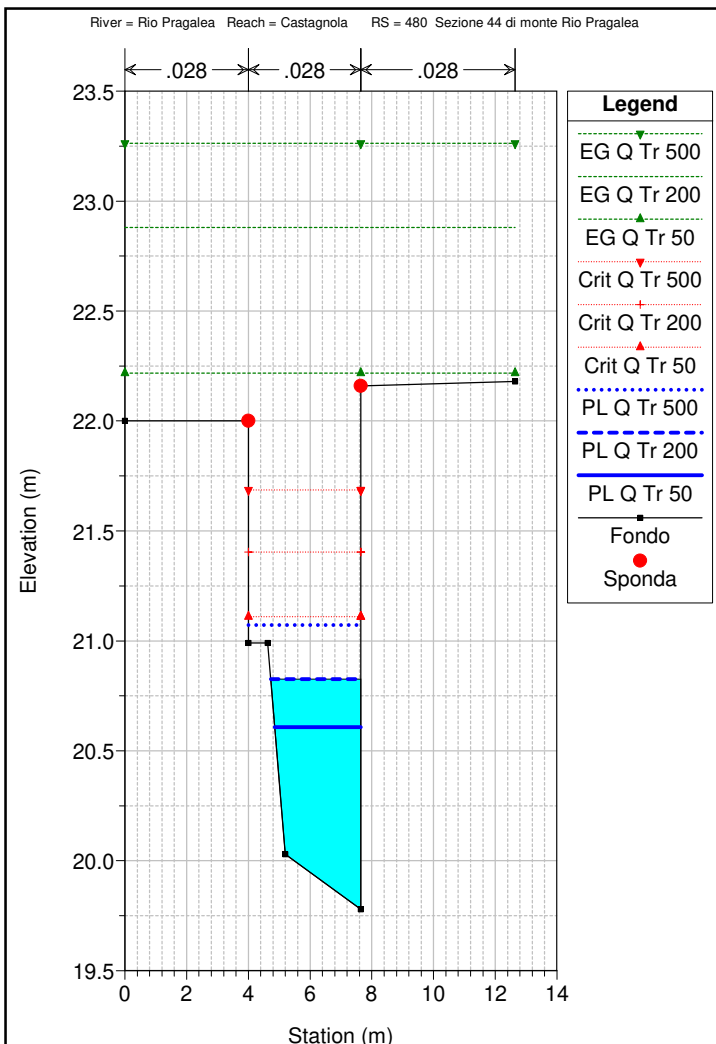
Sezione 40

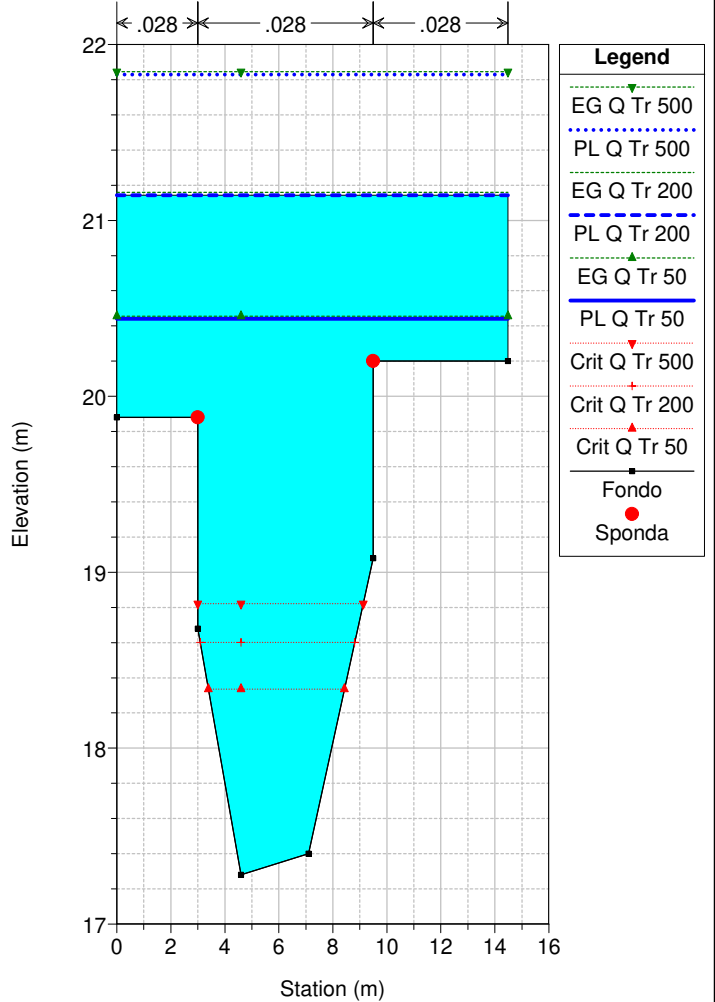
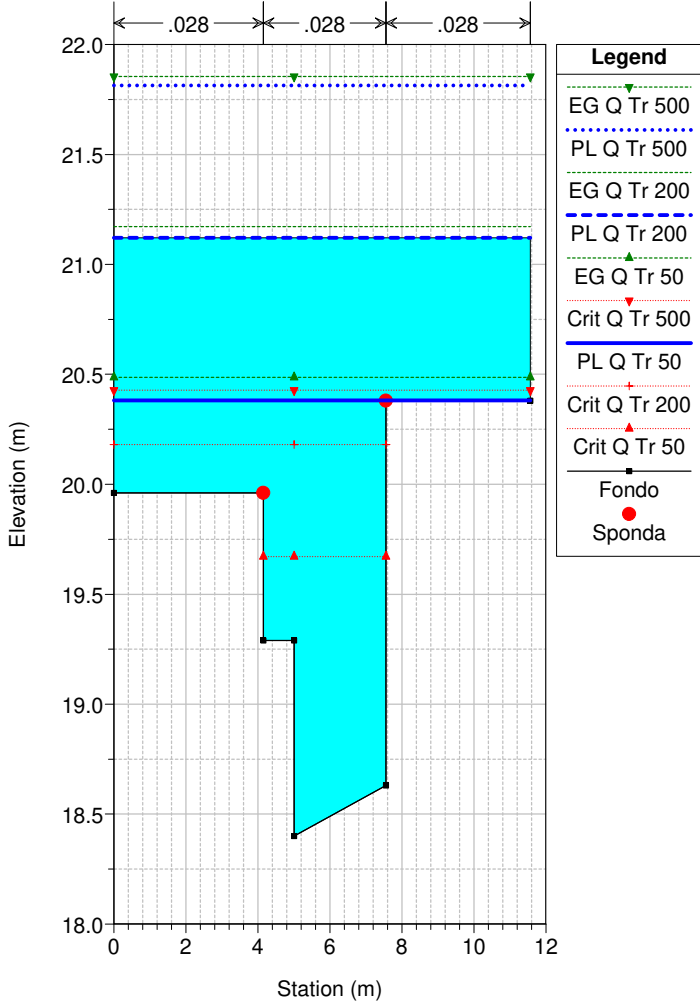
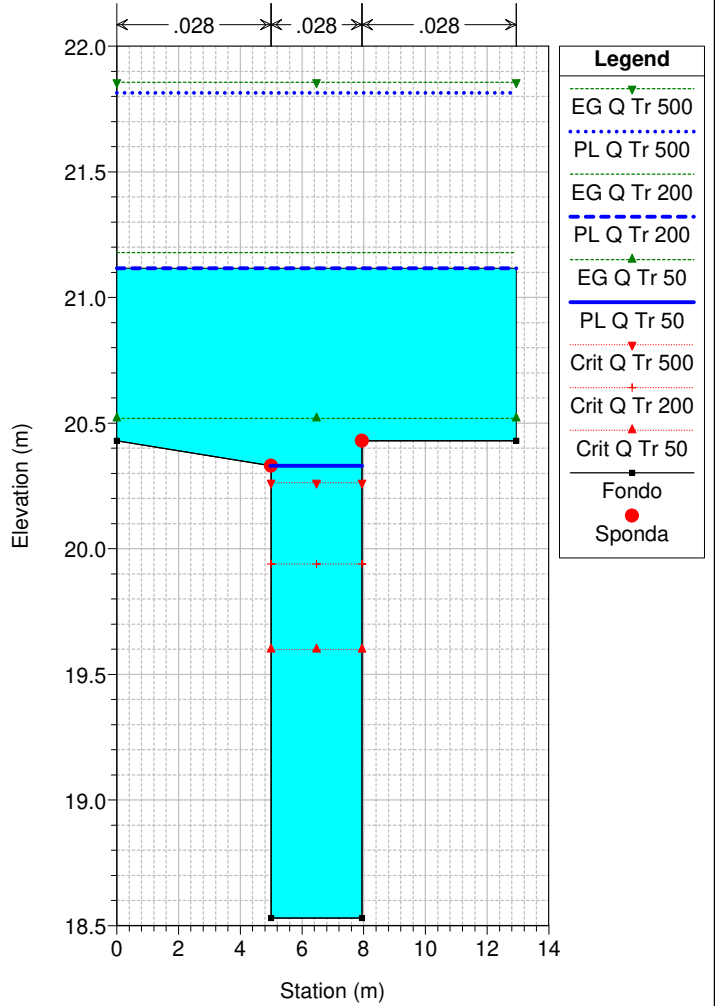
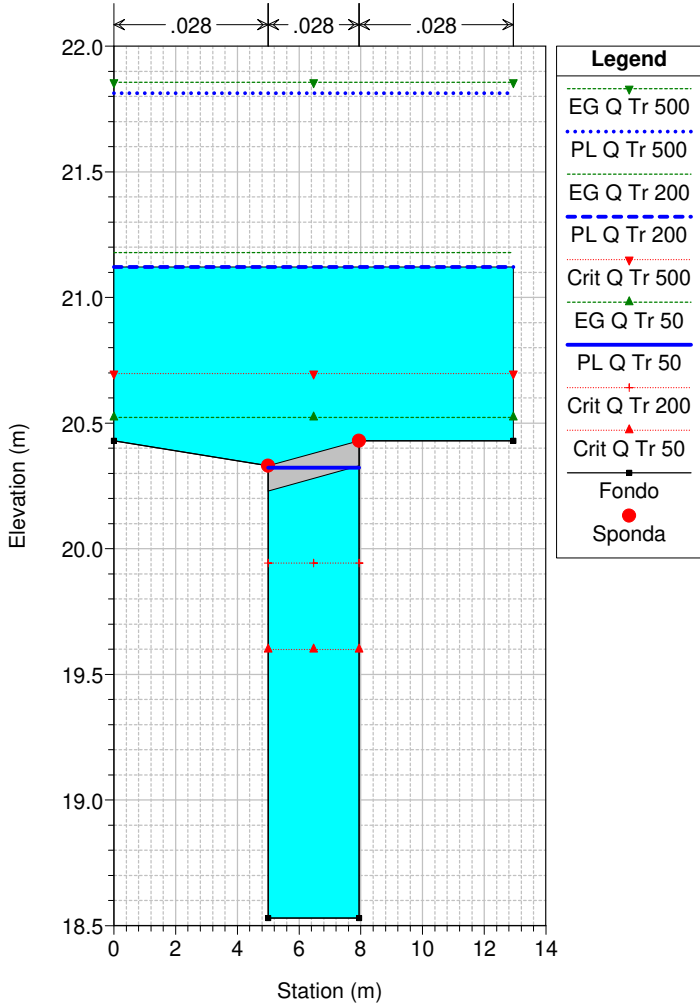
Sez. 41

Sezione di valle passerella p...
Passerrela pedonale Campeggio...

Sez. 43

Sezione 44 di monte Rio Pragalea





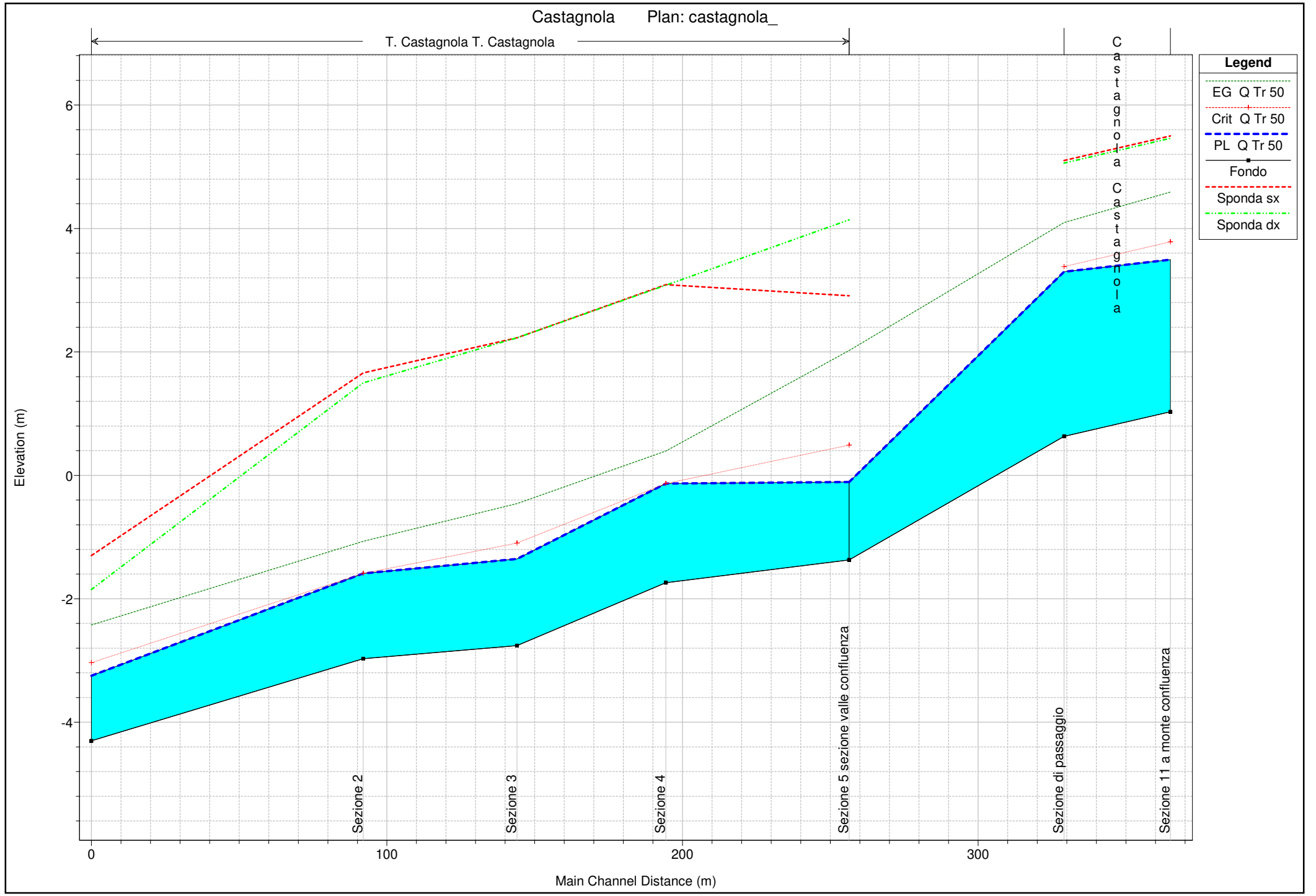
HEC-RAS Plan: 2 River: Rio Pragalea Reach: Castagnola

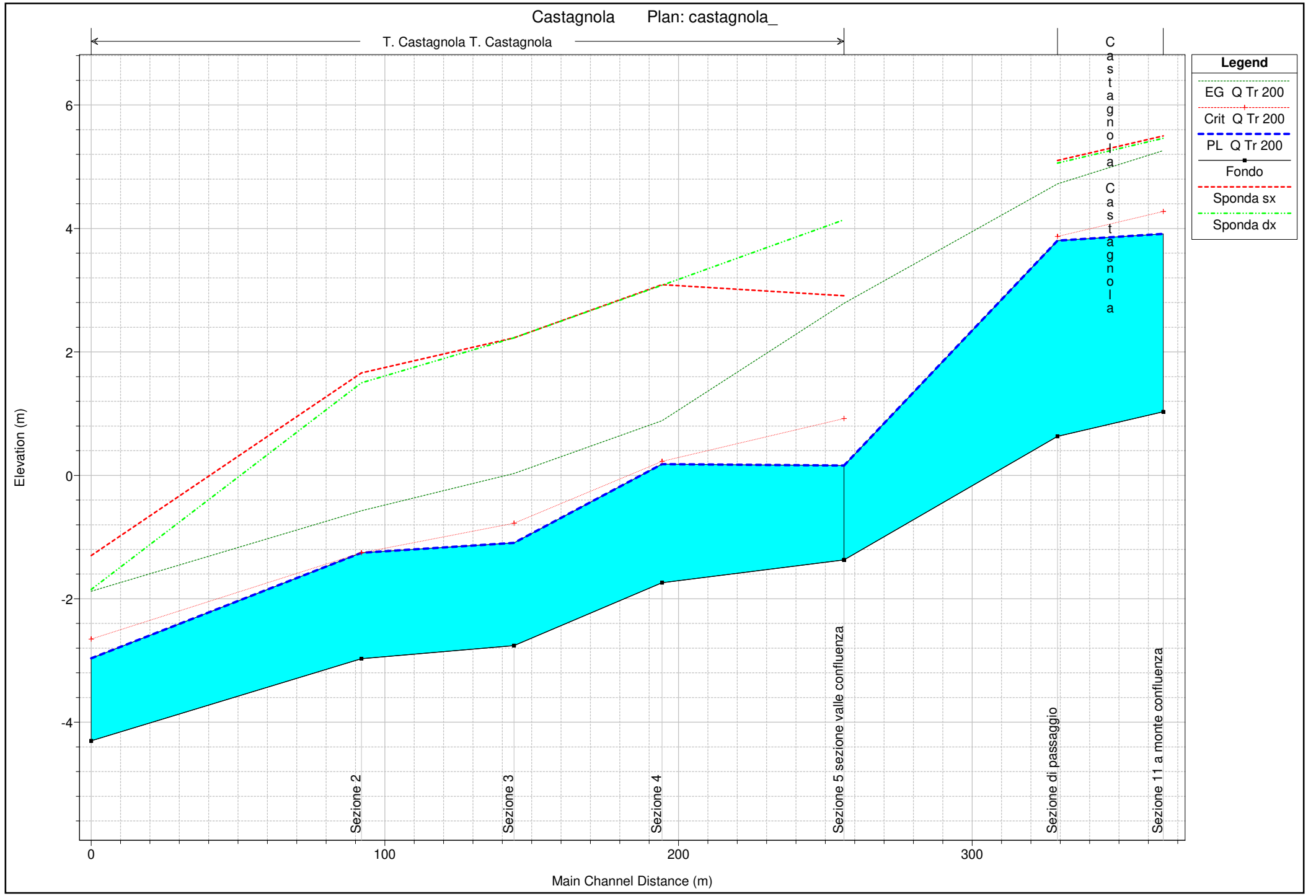
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Castagnola	480	Q Tr 200	15.47	19.78	20.83	22.00	1.17	22.16	1.33	21.40	22.88	0.070041	6.35	2.44	2.91	2.22
Castagnola	480	Q Tr 50	10.19	19.78	20.61	22.00	1.39	22.16	1.55	21.11	22.22	0.070038	5.62	1.81	2.78	2.22
Castagnola	480	Q Tr 500	21.11	19.78	21.07	22.00	0.93	22.16	1.09	21.69	23.26	0.070094	6.56	3.22	3.64	2.23
Castagnola	470	Q Tr 200	15.47	18.87	21.08	20.85	-0.23	21.25	0.17	20.15	21.22	0.002007	1.69	9.80	9.62	0.39
Castagnola	470	Q Tr 50	10.19	18.87	19.43	20.85	1.42	21.25	1.82	19.87	21.18	0.098053	5.86	1.74	3.85	2.78
Castagnola	470	Q Tr 500	21.11	18.87	21.80	20.85	-0.95	21.25	-0.55	20.44	21.87	0.000774	1.28	19.44	14.62	0.25
Castagnola	465	Q Tr 200	15.47	18.53	21.12	20.33	-0.79	20.43	-0.69	19.94	21.18	0.001017	1.25	14.76	12.94	0.25
Castagnola	465	Q Tr 50	10.19	18.53	20.35	20.33	-0.02	20.43	0.09	19.60	20.53	0.003760	1.91	5.34	3.70	0.45
Castagnola	465	Q Tr 500	21.11	18.53	21.82	20.33	-1.49	20.43	-1.39	20.26	21.86	0.000463	0.99	23.77	12.94	0.17
Castagnola	463	Bridge														
Castagnola	460	Q Tr 200	15.47	18.53	21.12	20.33	-0.79	20.43	-0.69	19.94	21.18	0.001027	1.25	14.71	12.94	0.25
Castagnola	460	Q Tr 50	10.19	18.53	20.33	20.33	0.00	20.43	0.10	19.60	20.52	0.003851	1.92	5.29	2.97	0.46
Castagnola	460	Q Tr 500	21.11	18.53	21.81	20.33	-1.48	20.43	-1.38	20.26	21.86	0.000464	0.99	23.75	12.94	0.17
Castagnola	450	Q Tr 200	15.47	18.40	21.12	19.96	-1.16	20.38	-0.74	20.18	21.17	0.000724	1.10	16.01	11.56	0.23
Castagnola	450	Q Tr 50	10.19	18.40	20.38	19.96	-0.42	20.38	0.00	19.67	20.49	0.002235	1.51	7.46	11.56	0.37
Castagnola	450	Q Tr 500	21.11	18.40	21.81	19.96	-1.85	20.38	-1.43	20.43	21.85	0.000406	0.97	24.01	11.56	0.18
Castagnola	440	Q Tr 200	15.47	17.28	21.14	19.88	-1.26	20.20	-0.94	18.60	21.16	0.000098	0.60	30.01	14.48	0.10
Castagnola	440	Q Tr 50	10.19	17.28	20.44	19.88	-0.56	20.20	-0.24	18.33	20.46	0.000123	0.57	19.83	14.48	0.11
Castagnola	440	Q Tr 500	21.11	17.28	21.83	19.88	-1.95	20.20	-1.63	18.82	21.84	0.000082	0.62	39.93	14.48	0.10

Torrente Castagnola

Da SEZ 6 a SEZ 1

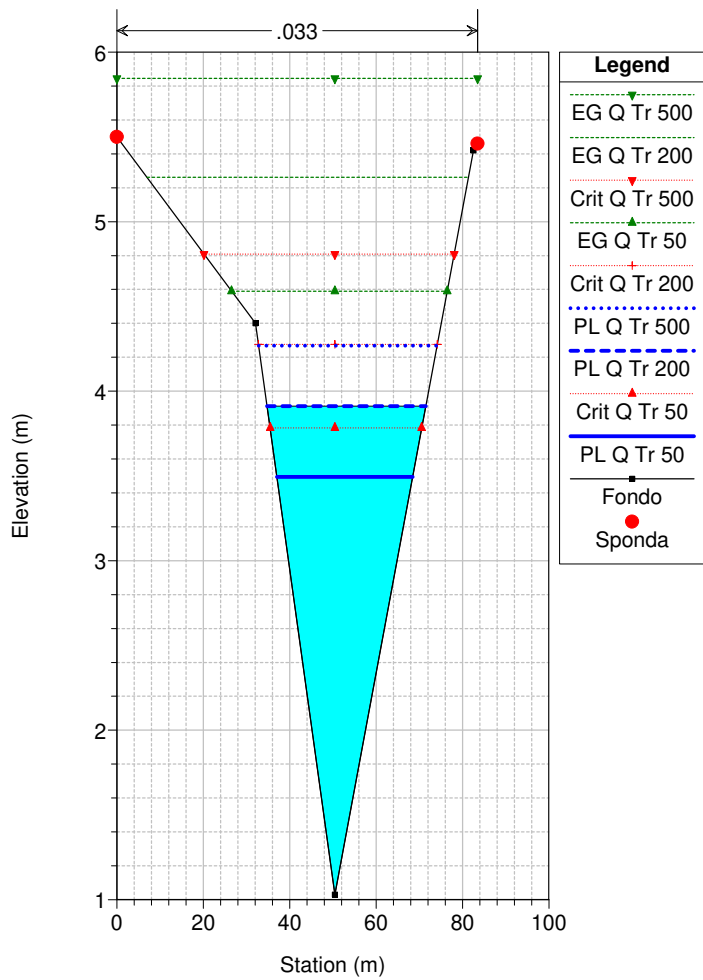
- Profili idraulici**
- Sezioni**
- Tabelle dei risultati**





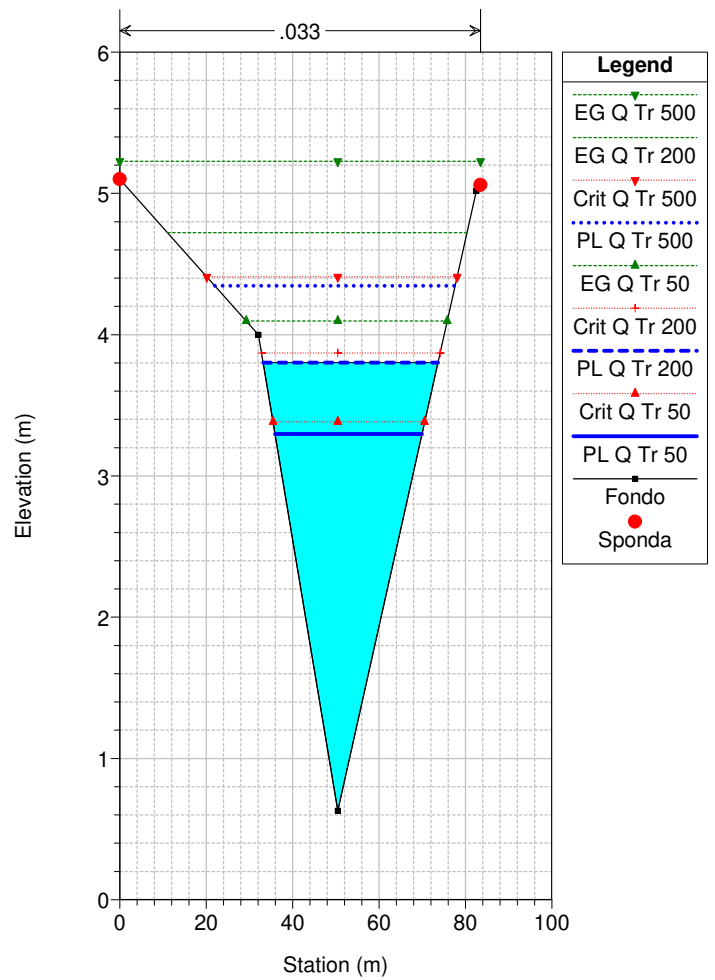
Castagnola Plan: castagnola_

River = Castagnola Reach = Castagnola RS = 50 Sezione 11 a monte confluenza



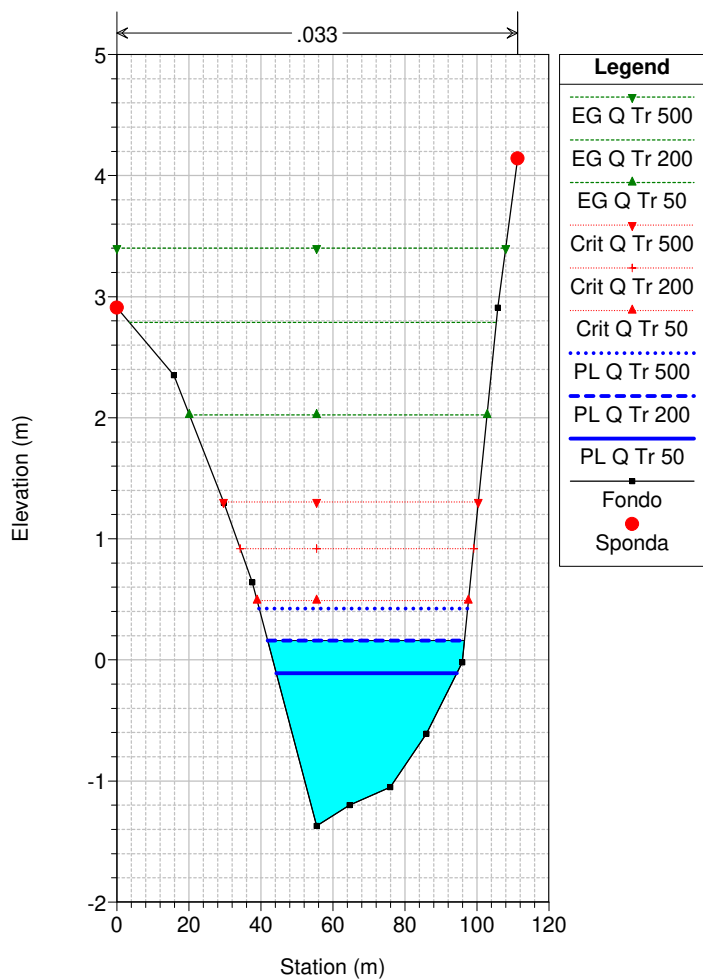
Castagnola Plan: castagnola_

River = Castagnola Reach = Castagnola RS = 45 Sezione di passaggio



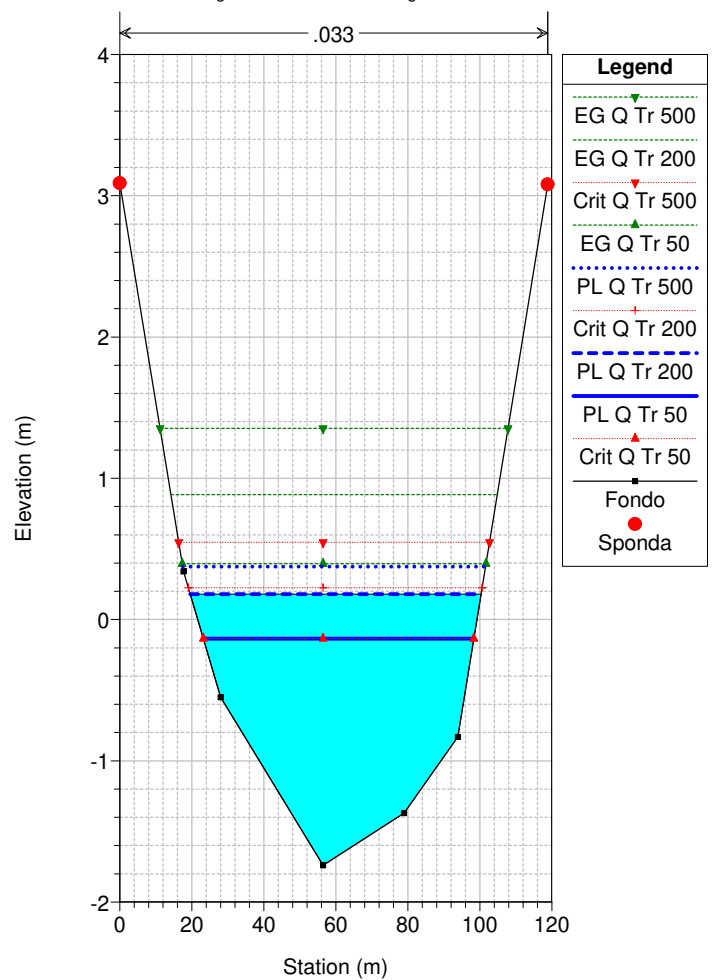
Castagnola Plan: castagnola_

River = T. Castagnola Reach = T. Castagnola RS = 40 Sezione 5 sezione valle confluenza



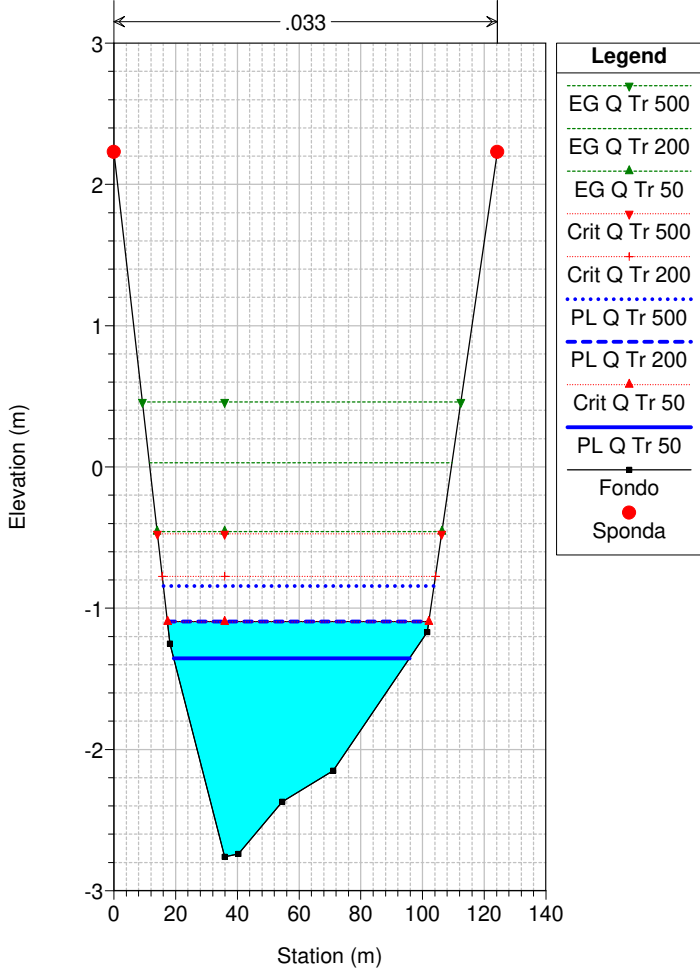
Castagnola Plan: castagnola_

River = T. Castagnola Reach = T. Castagnola RS = 30 Sezione 4



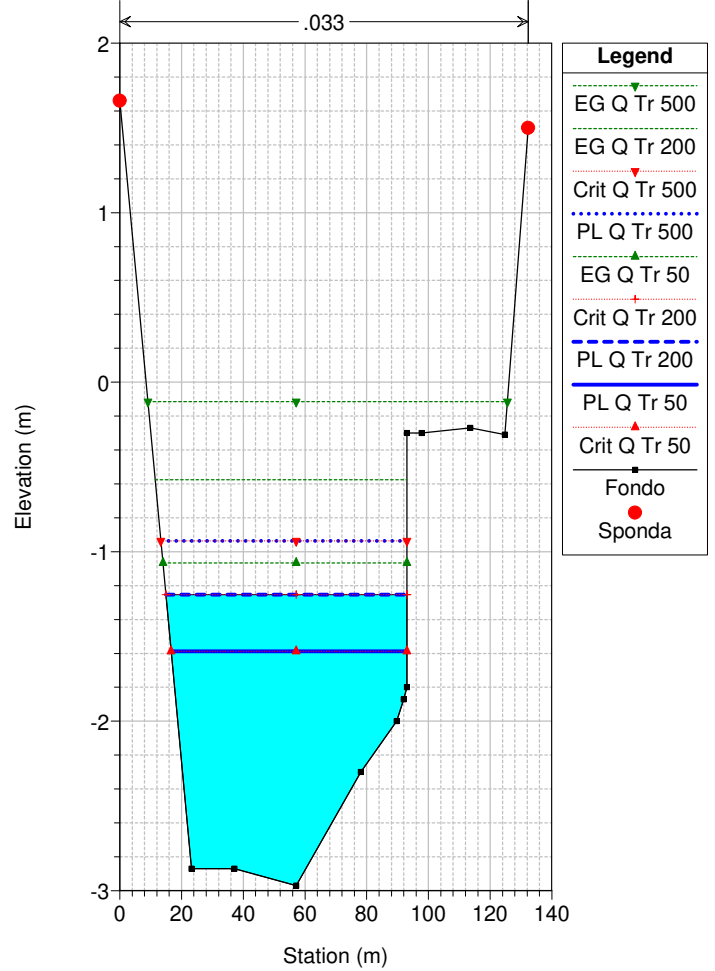
Castagnola Plan: castagnola_

River = T. Castagnola Reach = T. Castagnola RS = 20 Sezione 3



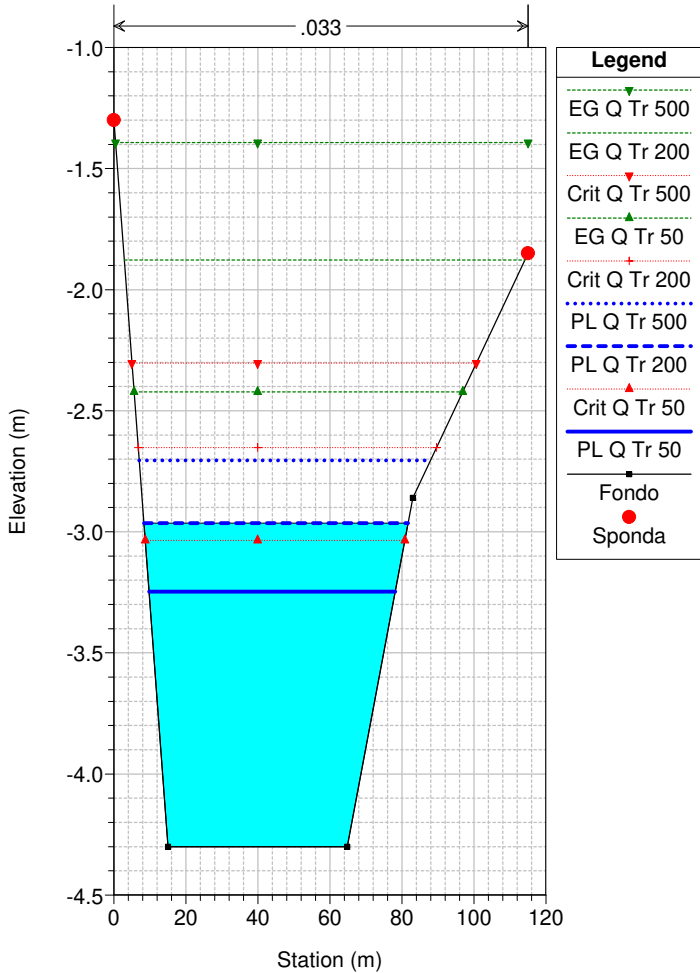
Castagnola Plan: castagnola_

River = T. Castagnola Reach = T. Castagnola RS = 10 Sezione 2



Castagnola Plan: castagnola_

River = T. Castagnola Reach = T. Castagnola RS = 5 Sezione 1 Soglia di fondo (lato monte)



HEC-RAS Plan: 2

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (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
T. Castagnola	T. Castagnola	40	Q Tr 200	379.78	-1.37	0.16	2.91	2.75	4.14	3.98	0.92	2.79	0.058852	7.18	52.89	54.66	2.33
T. Castagnola	T. Castagnola	40	Q Tr 50	250.21	-1.37	-0.11	2.91	3.02	4.14	4.25	0.49	2.02	0.064617	6.47	38.68	50.16	2.35
T. Castagnola	T. Castagnola	40	Q Tr 500	518.29	-1.37	0.43	2.91	2.48	4.14	3.71	1.31	3.40	0.051787	7.64	67.81	57.91	2.25
T. Castagnola	T. Castagnola	30	Q Tr 200	379.78	-1.74	0.18	3.09	2.91	3.08	2.90	0.23	0.88	0.011025	3.72	102.17	80.76	1.05
T. Castagnola	T. Castagnola	30	Q Tr 50	250.21	-1.74	-0.13	3.09	3.22	3.08	3.21	-0.13	0.39	0.010831	3.22	77.66	75.10	1.01
T. Castagnola	T. Castagnola	30	Q Tr 500	518.29	-1.74	0.37	3.09	2.72	3.08	2.71	0.55	1.35	0.013328	4.38	118.21	84.08	1.18
T. Castagnola	T. Castagnola	20	Q Tr 200	379.78	-2.76	-1.09	2.23	3.32	2.23	3.32	-0.78	0.03	0.025635	4.70	80.83	84.70	1.54
T. Castagnola	T. Castagnola	20	Q Tr 50	250.21	-2.76	-1.35	2.23	3.58	2.23	3.58	-1.10	-0.46	0.026724	4.20	59.63	76.41	1.52
T. Castagnola	T. Castagnola	20	Q Tr 500	518.29	-2.76	-0.84	2.23	3.07	2.23	3.07	-0.47	0.46	0.022636	5.05	102.54	87.70	1.49
T. Castagnola	T. Castagnola	10	Q Tr 200	379.78	-2.97	-1.25	1.66	2.91	1.50	2.75	-1.25	-0.58	0.010005	3.65	104.07	78.05	1.01
T. Castagnola	T. Castagnola	10	Q Tr 50	250.21	-2.97	-1.59	1.66	3.25	1.50	3.09	-1.59	-1.07	0.010822	3.20	78.29	76.34	1.01
T. Castagnola	T. Castagnola	10	Q Tr 500	518.29	-2.97	-0.94	1.66	2.60	1.50	2.44	-0.94	-0.11	0.009402	4.02	129.04	79.68	1.01
T. Castagnola	T. Castagnola	5	Q Tr 200	379.78	-4.30	-2.96	-1.30	1.66	-1.85	1.11	-2.65	-1.88	0.020012	4.62	82.23	73.35	1.39
T. Castagnola	T. Castagnola	5	Q Tr 50	250.21	-4.30	-3.25	-1.30	1.95	-1.85	1.40	-3.04	-2.42	0.020059	4.02	62.19	68.36	1.35
T. Castagnola	T. Castagnola	5	Q Tr 500	518.29	-4.30	-2.71	-1.30	1.41	-1.85	0.86	-2.30	-1.39	0.020653	5.08	102.08	80.88	1.44
Castagnola	Castagnola	50	Q Tr 200	272.51	1.03	3.91	5.50	1.59	5.46	1.55	4.28	5.26	0.018015	5.15	52.95	36.74	1.37
Castagnola	Castagnola	50	Q Tr 50	179.54	1.03	3.49	5.50	2.01	5.46	1.96	3.78	4.59	0.018013	4.64	38.72	31.42	1.33
Castagnola	Castagnola	50	Q Tr 500	371.90	1.03	4.27	5.50	1.23	5.46	1.19	4.81	5.85	0.018027	5.56	66.84	41.28	1.40
Castagnola	Castagnola	45	Q Tr 200	272.51	0.63	3.80	5.10	1.30	5.06	1.26	3.87	4.72	0.010791	4.25	64.17	40.44	1.08
Castagnola	Castagnola	45	Q Tr 50	179.54	0.63	3.30	5.10	1.80	5.06	1.76	3.38	4.10	0.011830	3.96	45.33	34.00	1.09
Castagnola	Castagnola	45	Q Tr 500	371.90	0.63	4.35	5.10	0.75	5.06	0.71	4.41	5.23	0.010126	4.16	89.43	55.59	1.05