

TORRENTE BISAGNO



PIANO DI BACINO STRALCIO PER LA TUTELA DAL RISCHIO IDROGEOLOGICO

(ai sensi dell'art. 1, comma 1, del D.L.
180/1998 convertito in L. 267/1998)



VERIFICHE IDRAULICHE Affluenti

APPROVAZIONE	Delibera del Consiglio Provinciale di Genova n. 62 del 04/12/2001
ULTIMA MODIFICA DELL'ELABORATO	Decreto del Segretario Generale n. 119 del 23/11/2022
ENTRATA IN VIGORE	Pubblicazione sul BURL n. 51 del 21/12/2022 – parte II

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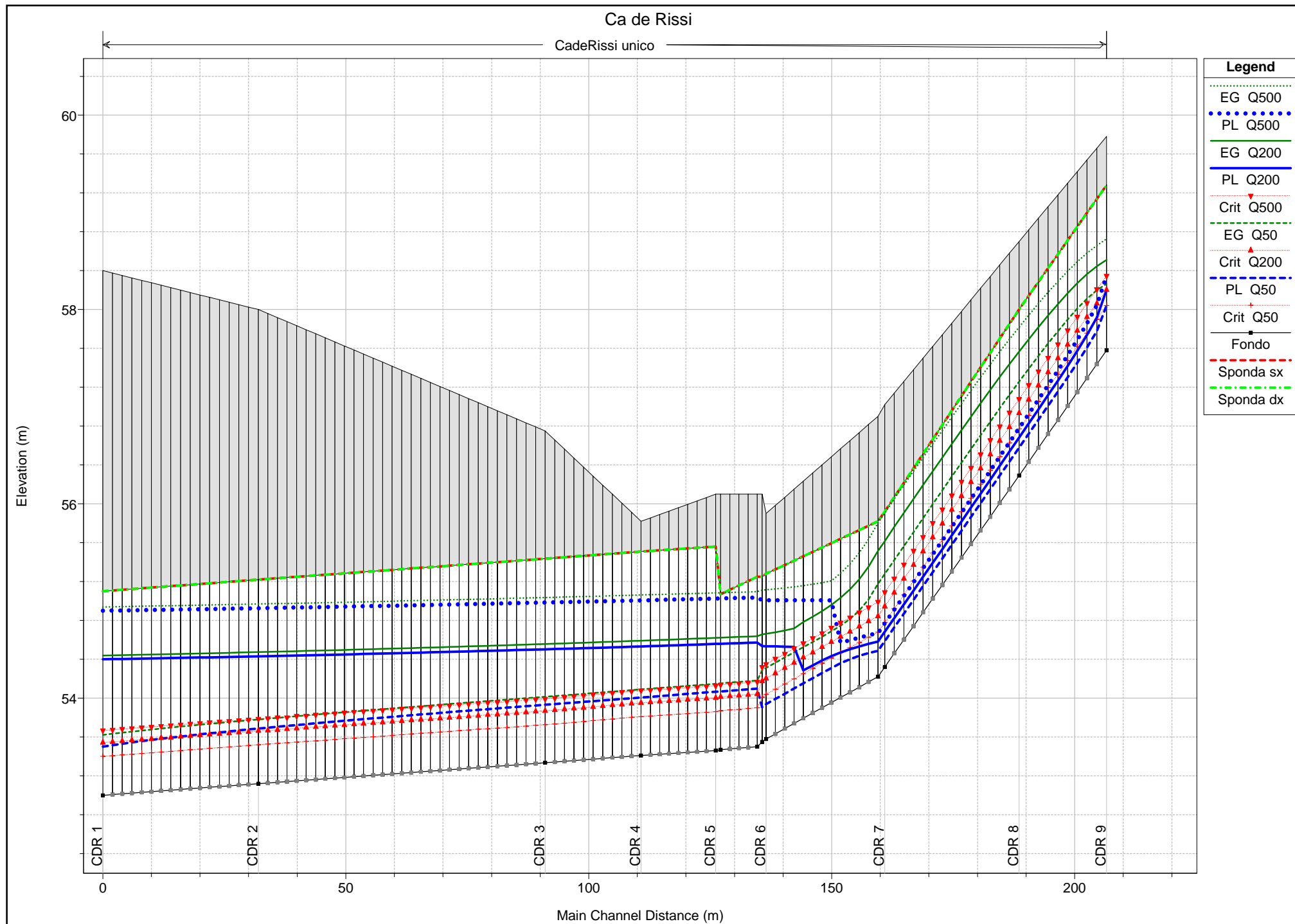
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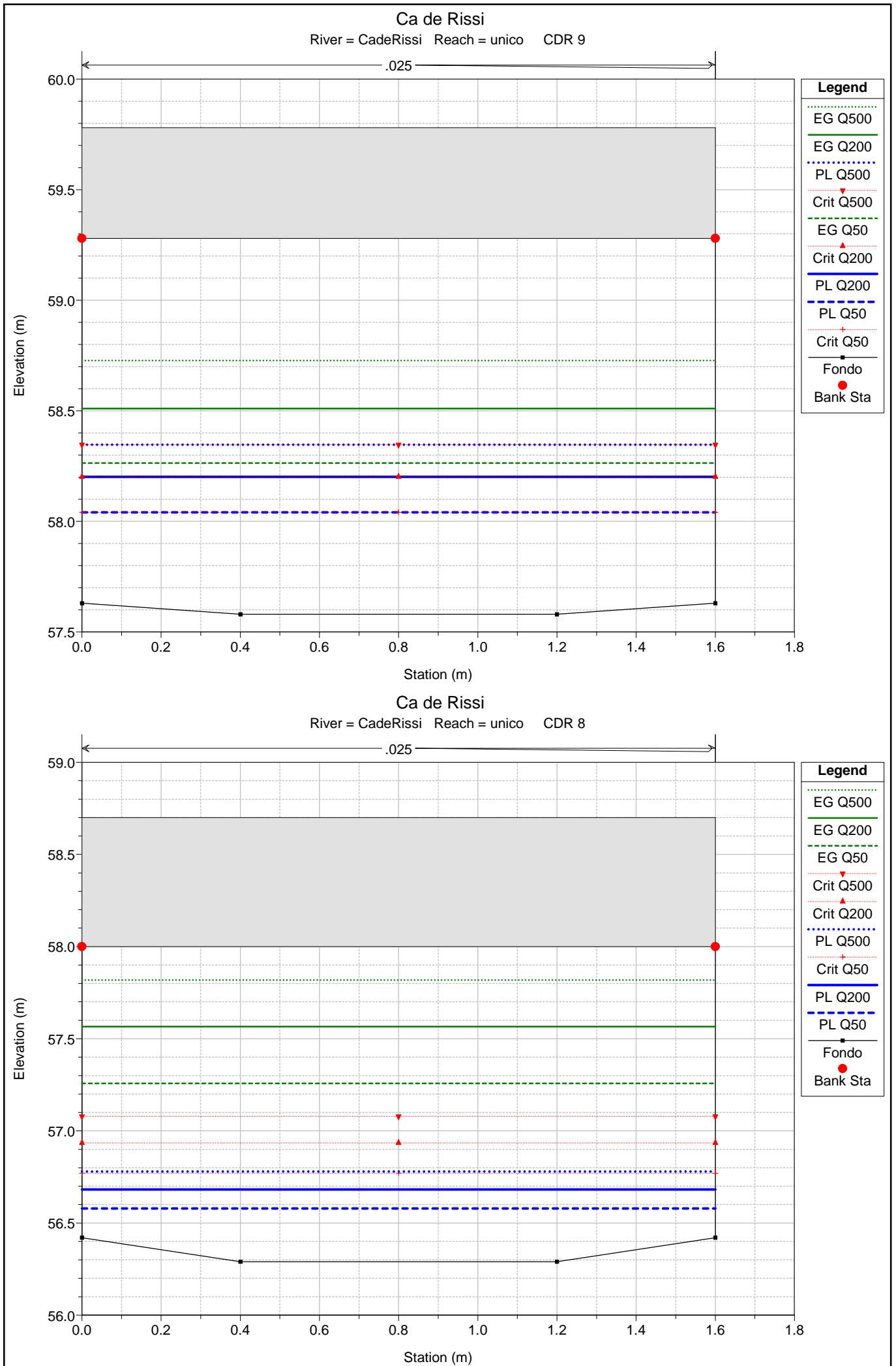
Allegato

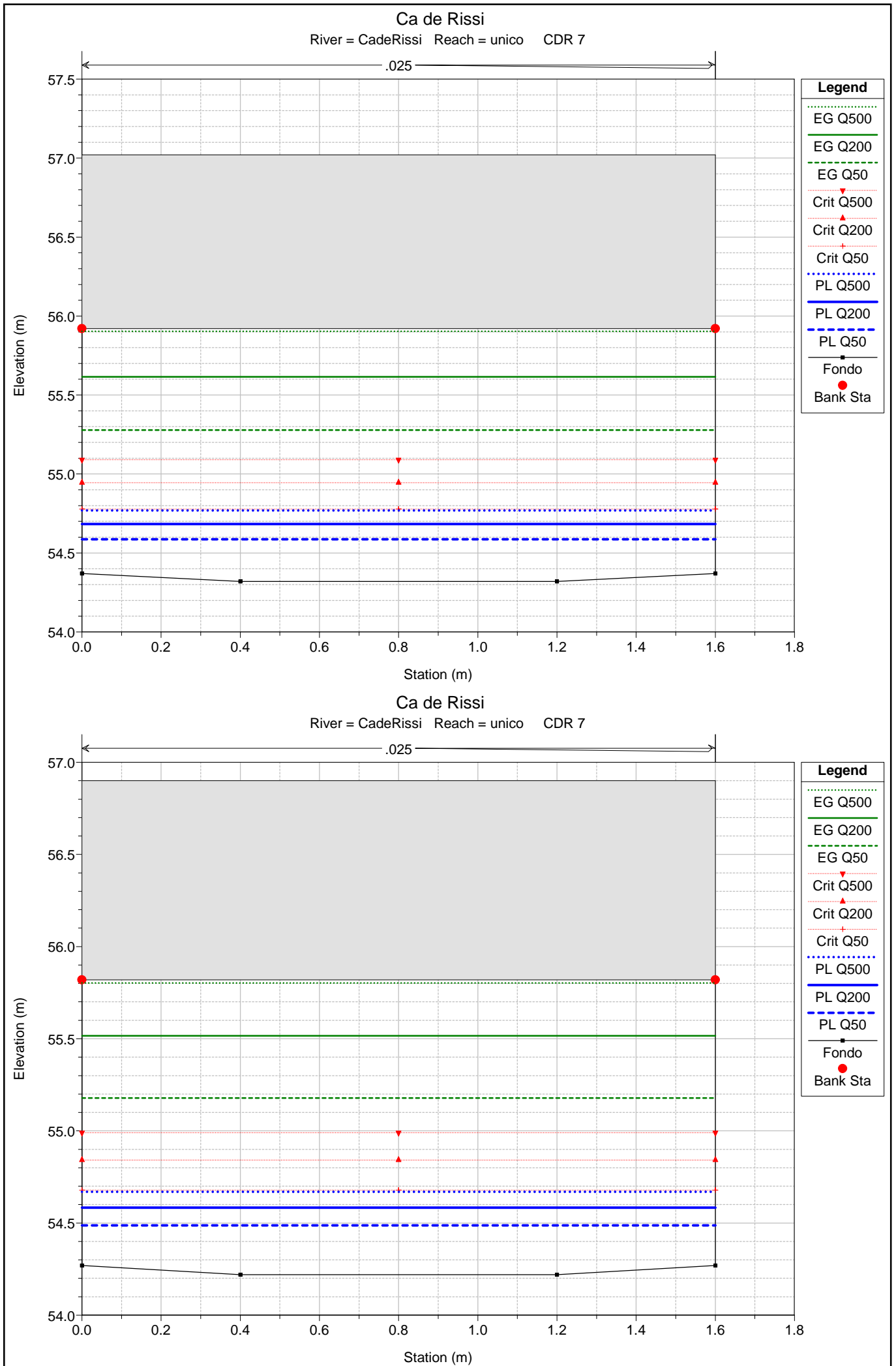
Verifiche idrauliche

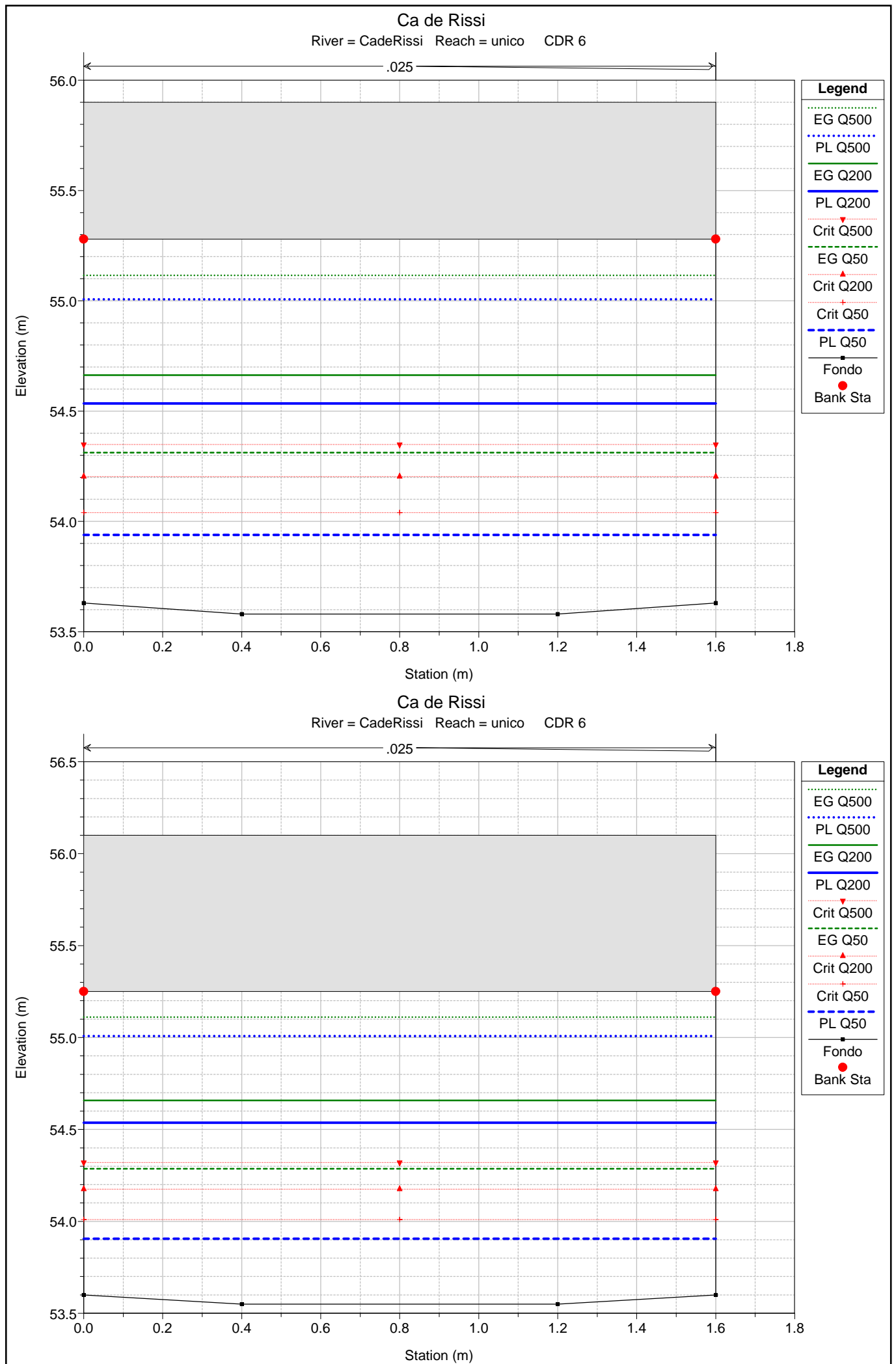
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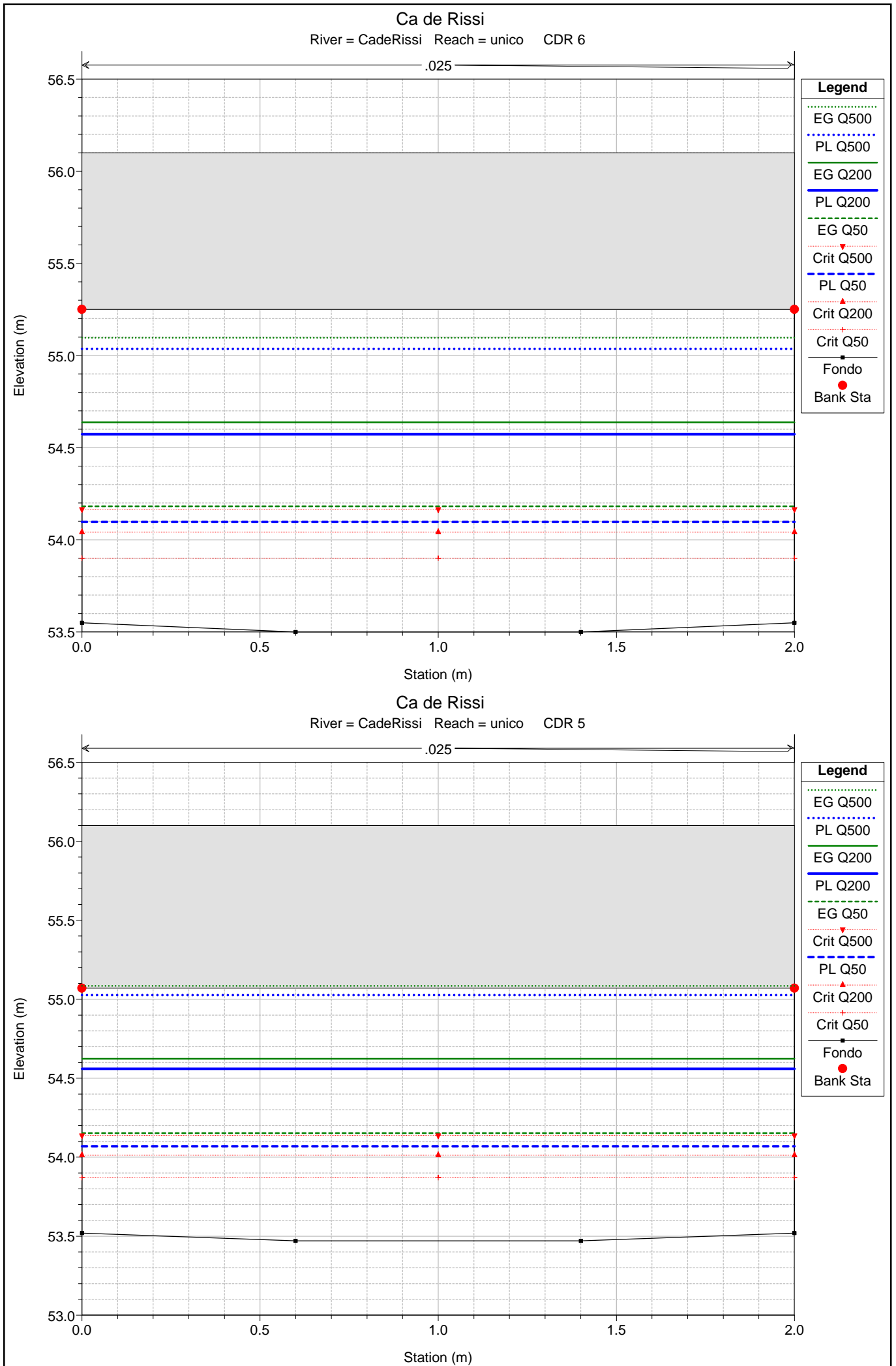
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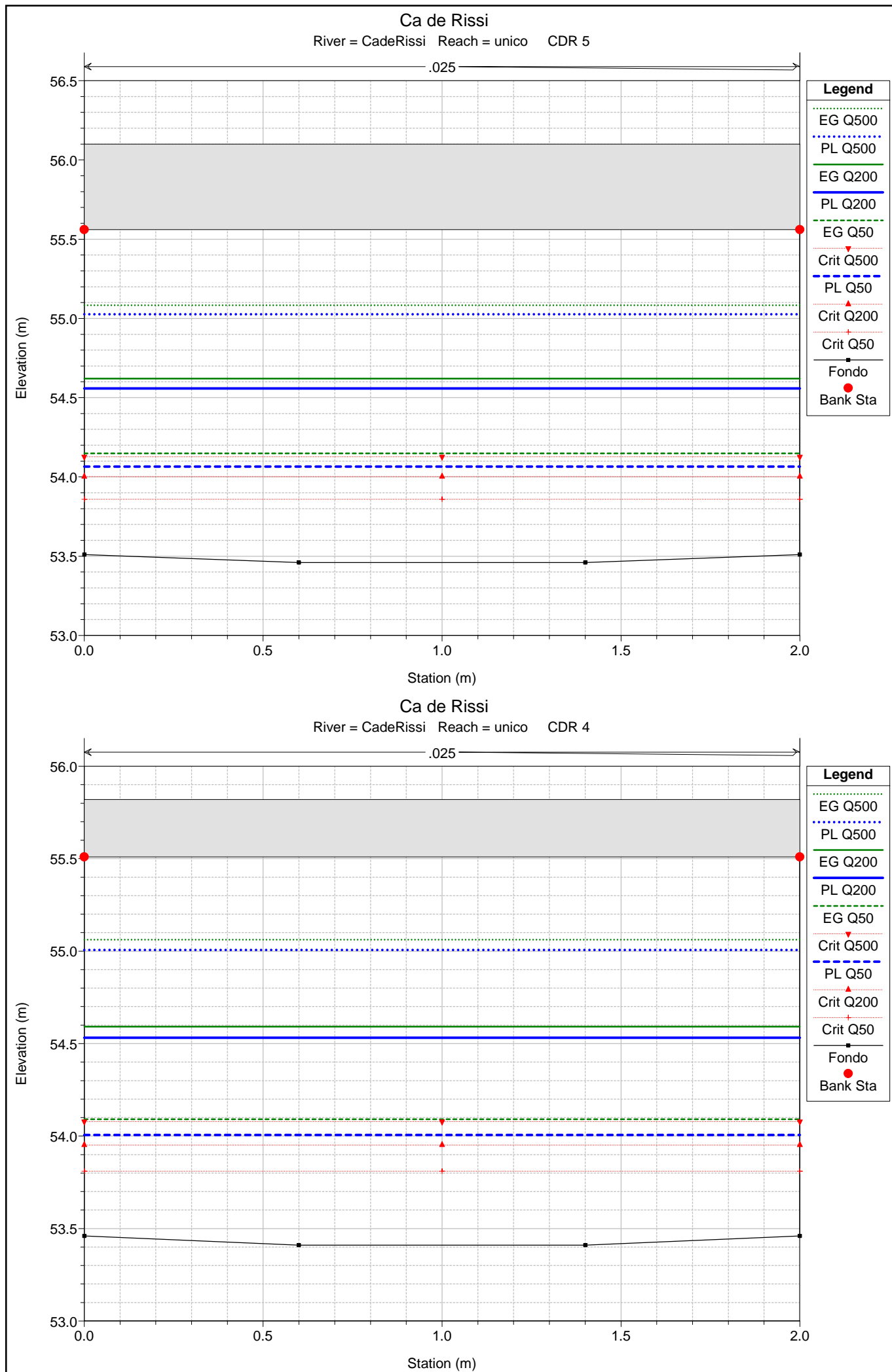


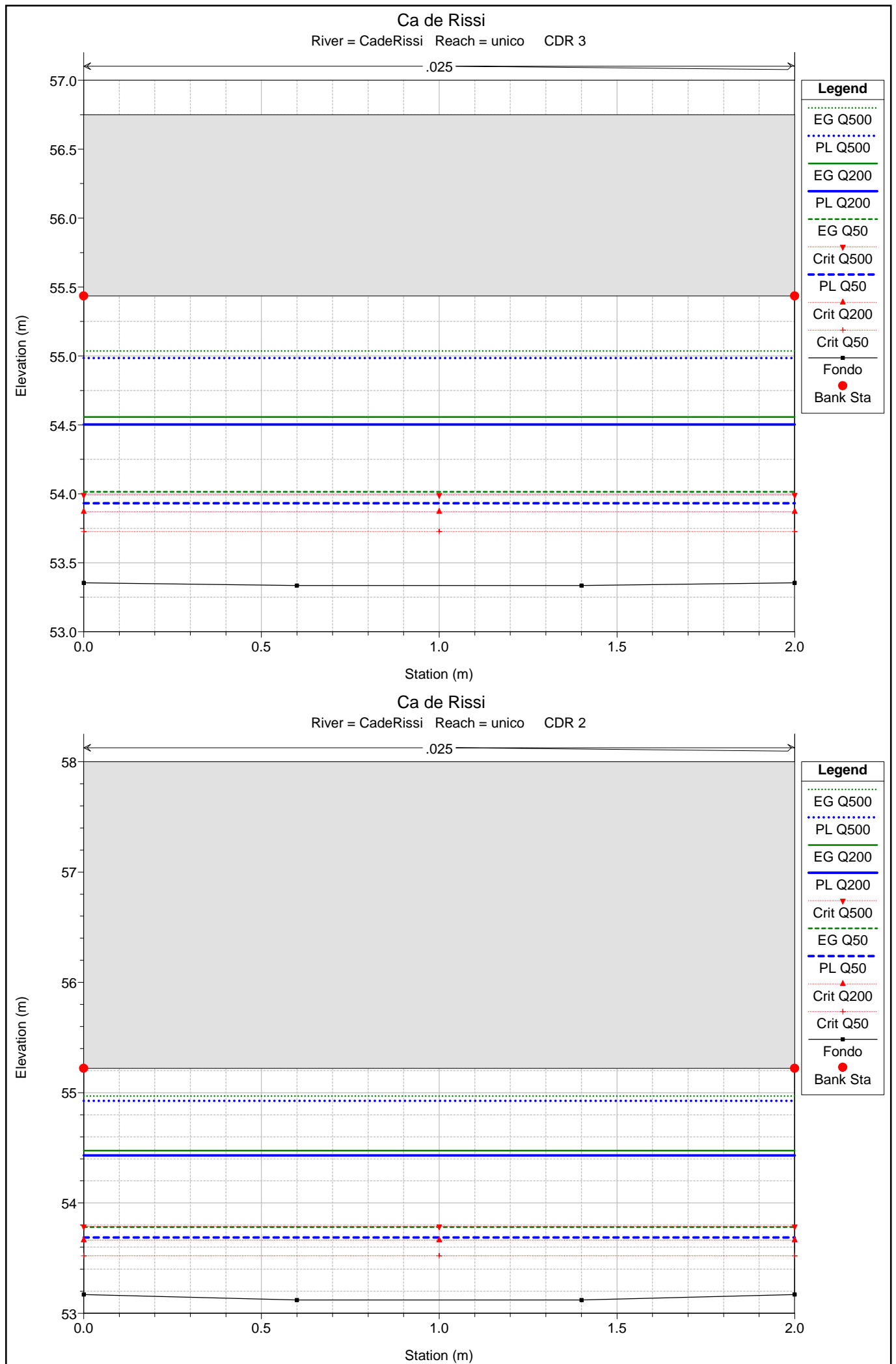


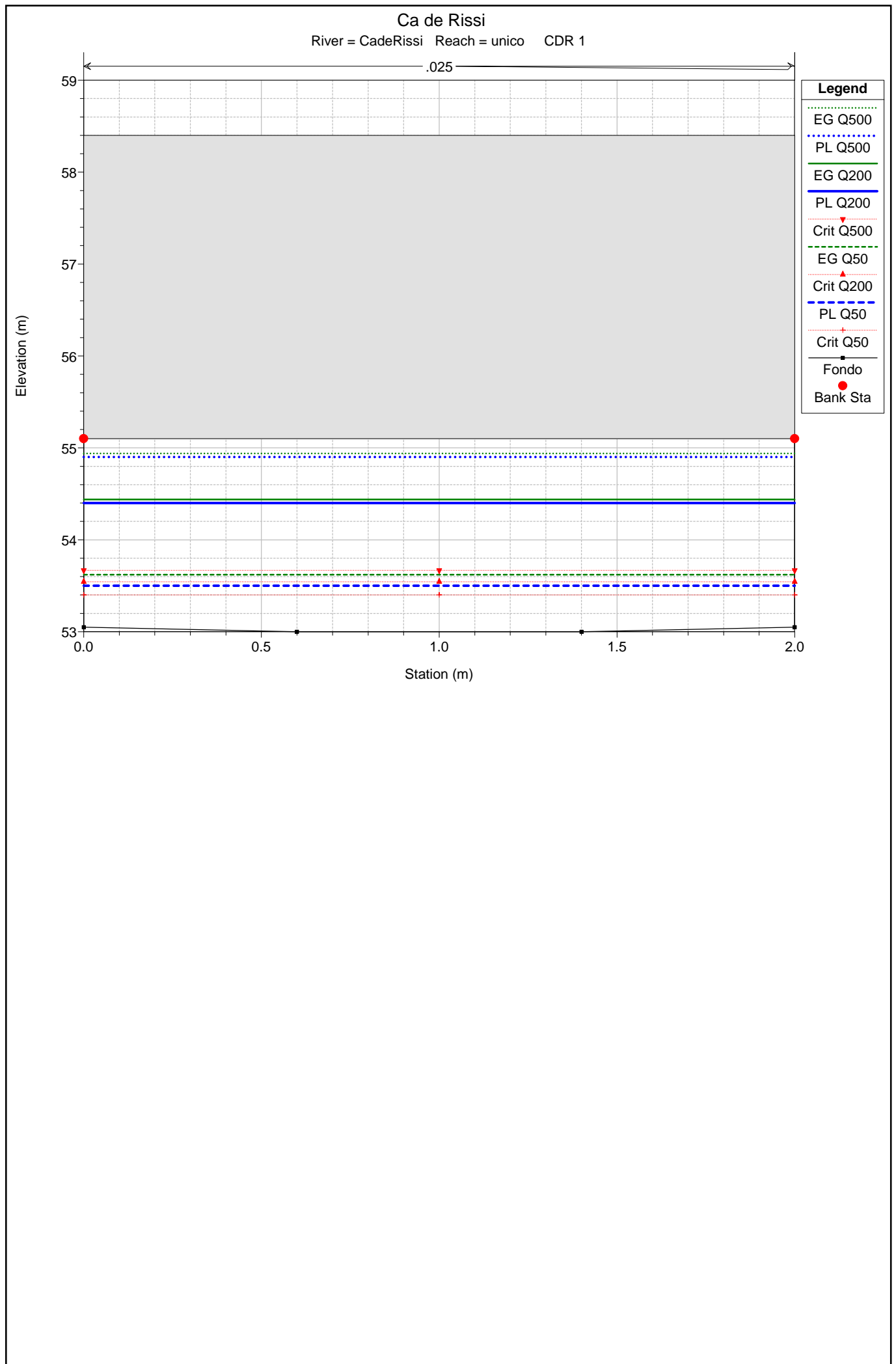












HEC-RAS Plan: PdB_2017 River: CadeRissi Reach: unico

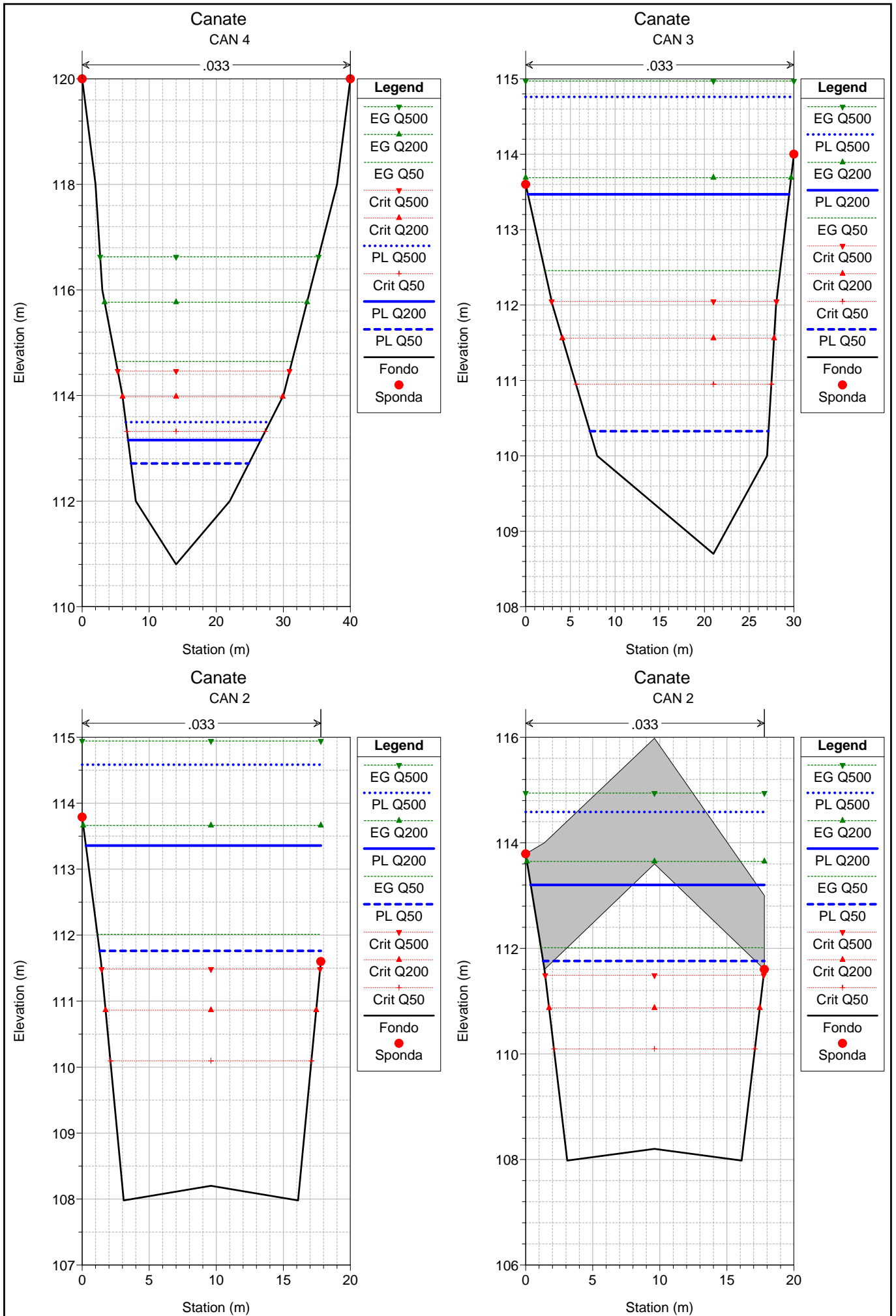
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	6 CDR 9	Q50	1.50	57.58	58.04	59.28	1.24	59.28	1.24	58.04	58.26	0.013915	2.09	0.72	1.60	1.00
unico	6 CDR 9	Q200	2.40	57.58	58.20	59.28	1.08	59.28	1.08	58.20	58.51	0.015106	2.46	0.97	1.60	1.01
unico	6 CDR 9	Q500	3.30	57.58	58.35	59.28	0.93	59.28	0.93	58.35	58.73	0.016026	2.74	1.21	1.60	1.01
unico	5 CDR 8	Q50	1.50	56.29	56.58	58.00	1.42	58.00	1.42	56.77	57.26	0.066714	3.65	0.41	1.60	2.30
unico	5 CDR 8	Q200	2.40	56.29	56.68	58.00	1.32	58.00	1.32	56.93	57.57	0.063364	4.16	0.58	1.60	2.22
unico	5 CDR 8	Q500	3.30	56.29	56.78	58.00	1.22	58.00	1.22	57.08	57.82	0.060873	4.52	0.73	1.60	2.13
unico	4 CDR 7	Q50	1.50	54.32	54.59	55.92	1.33	55.92	1.33	54.78	55.28	0.072613	3.68	0.41	1.60	2.33
unico	4 CDR 7	Q200	2.40	54.32	54.68	55.92	1.24	55.92	1.24	54.95	55.62	0.072150	4.28	0.56	1.60	2.31
unico	4 CDR 7	Q500	3.30	54.32	54.77	55.92	1.15	55.92	1.15	55.09	55.90	0.072133	4.72	0.70	1.60	2.28
unico	3.9	Q50	1.50	54.22	54.49	55.82	1.33	55.82	1.33	54.68	55.18	0.072613	3.68	0.41	1.60	2.33
unico	3.9	Q200	2.40	54.22	54.58	55.82	1.24	55.82	1.24	54.84	55.52	0.072150	4.28	0.56	1.60	2.31
unico	3.9	Q500	3.30	54.22	54.67	55.82	1.15	55.82	1.15	54.99	55.80	0.072133	4.72	0.70	1.60	2.28
unico	3 CDR 6	Q50	1.50	53.58	53.94	55.28	1.34	55.28	1.34	54.04	54.31	0.029210	2.71	0.55	1.60	1.47
unico	3 CDR 6	Q200	2.40	53.58	54.53	55.28	0.75	55.28	0.75	54.20	54.66	0.004717	1.59	1.51	1.60	0.52
unico	3 CDR 6	Q500	3.30	53.58	55.01	55.28	0.27	55.28	0.27	54.35	55.12	0.003185	1.46	2.26	1.60	0.39
unico	2.94	Q50	1.50	53.55	53.91	55.25	1.34	55.25	1.34	54.01	54.29	0.030028	2.73	0.55	1.60	1.49
unico	2.94	Q200	2.40	53.55	54.54	55.25	0.71	55.25	0.71	54.18	54.66	0.004326	1.54	1.56	1.60	0.50
unico	2.94	Q500	3.30	53.55	55.01	55.25	0.24	55.25	0.24	54.32	55.11	0.003022	1.43	2.31	1.60	0.38
unico	2.93	Q50	1.50	53.50	54.10	55.25	1.15	55.25	1.15	53.90	54.18	0.003817	1.29	1.17	2.00	0.54
unico	2.93	Q200	2.40	53.50	54.57	55.25	0.68	55.25	0.68	54.04	54.64	0.001914	1.13	2.11	2.00	0.35
unico	2.93	Q500	3.30	53.50	55.04	55.25	0.21	55.25	0.21	54.17	55.10	0.001417	1.08	3.04	2.00	0.28
unico	2.92 CDR 5	Q50	1.50	53.47	54.07	55.07	1.00	55.07	1.00	53.87	54.15	0.003798	1.29	1.17	2.00	0.54
unico	2.92 CDR 5	Q200	2.40	53.47	54.56	55.07	0.51	55.07	0.51	54.01	54.62	0.001836	1.12	2.15	2.00	0.34
unico	2.92 CDR 5	Q500	3.30	53.47	55.03	55.07	0.04	55.07	0.04	54.14	55.08	0.001371	1.07	3.08	2.00	0.28
unico	2.91 CDR 5	Q50	1.50	53.46	54.07	55.56	1.49	55.56	1.49	53.86	54.15	0.003668	1.27	1.18	2.00	0.53
unico	2.91 CDR 5	Q200	2.40	53.46	54.56	55.56	1.00	55.56	1.00	54.00	54.62	0.001797	1.11	2.17	2.00	0.34
unico	2.91 CDR 5	Q500	3.30	53.46	55.03	55.56	0.53	55.56	0.53	54.13	55.08	0.001350	1.06	3.10	2.00	0.27
unico	2.9 CDR 4	Q50	1.50	53.41	54.01	55.51	1.50	55.51	1.50	53.81	54.09	0.003852	1.29	1.16	2.00	0.54
unico	2.9 CDR 4	Q200	2.40	53.41	54.53	55.51	0.98	55.51	0.98	53.95	54.59	0.001698	1.08	2.21	2.00	0.33
unico	2.9 CDR 4	Q500	3.30	53.41	55.01	55.51	0.50	55.51	0.50	54.08	55.06	0.001285	1.04	3.16	2.00	0.26
unico	2 CDR 3	Q50	1.50	53.34	53.93	55.43	1.50	55.43	1.50	53.73	54.01	0.003719	1.27	1.18	2.00	0.53
unico	2 CDR 3	Q200	2.40	53.34	54.50	55.43	0.93	55.43	0.93	53.87	54.56	0.001513	1.03	2.32	2.00	0.31
unico	2 CDR 3	Q500	3.30	53.34	54.98	55.43	0.45	55.43	0.45	53.99	55.04	0.001179	1.00	3.29	2.00	0.25
unico	1.13 CDR 2	Q50	1.50	53.12	53.69	55.22	1.53	55.22	1.53	53.52	53.78	0.004451	1.36	1.10	2.00	0.58
unico	1.13 CDR 2	Q200	2.40	53.12	54.43	55.22	0.79	55.22	0.79	53.66	54.47	0.001128	0.93	2.59	2.00	0.26
unico	1.13 CDR 2	Q500	3.30	53.12	54.93	55.22	0.29	55.22	0.29	53.79	54.97	0.000943	0.92	3.58	2.00	0.22
unico	1 CDR 1	Q50	1.50	53.00	53.50	55.10	1.60	55.10	1.60	53.40	53.62	0.006454	1.55	0.97	2.00	0.71
unico	1 CDR 1	Q200	2.40	53.00	54.40	55.10	0.70	55.10	0.70	53.54	54.44	0.000951	0.87	2.77	2.00	0.24
unico	1 CDR 1	Q500	3.30	53.00	54.90	55.10	0.20	55.10	0.20	53.67	54.94	0.000832	0.88	3.77	2.00	0.20

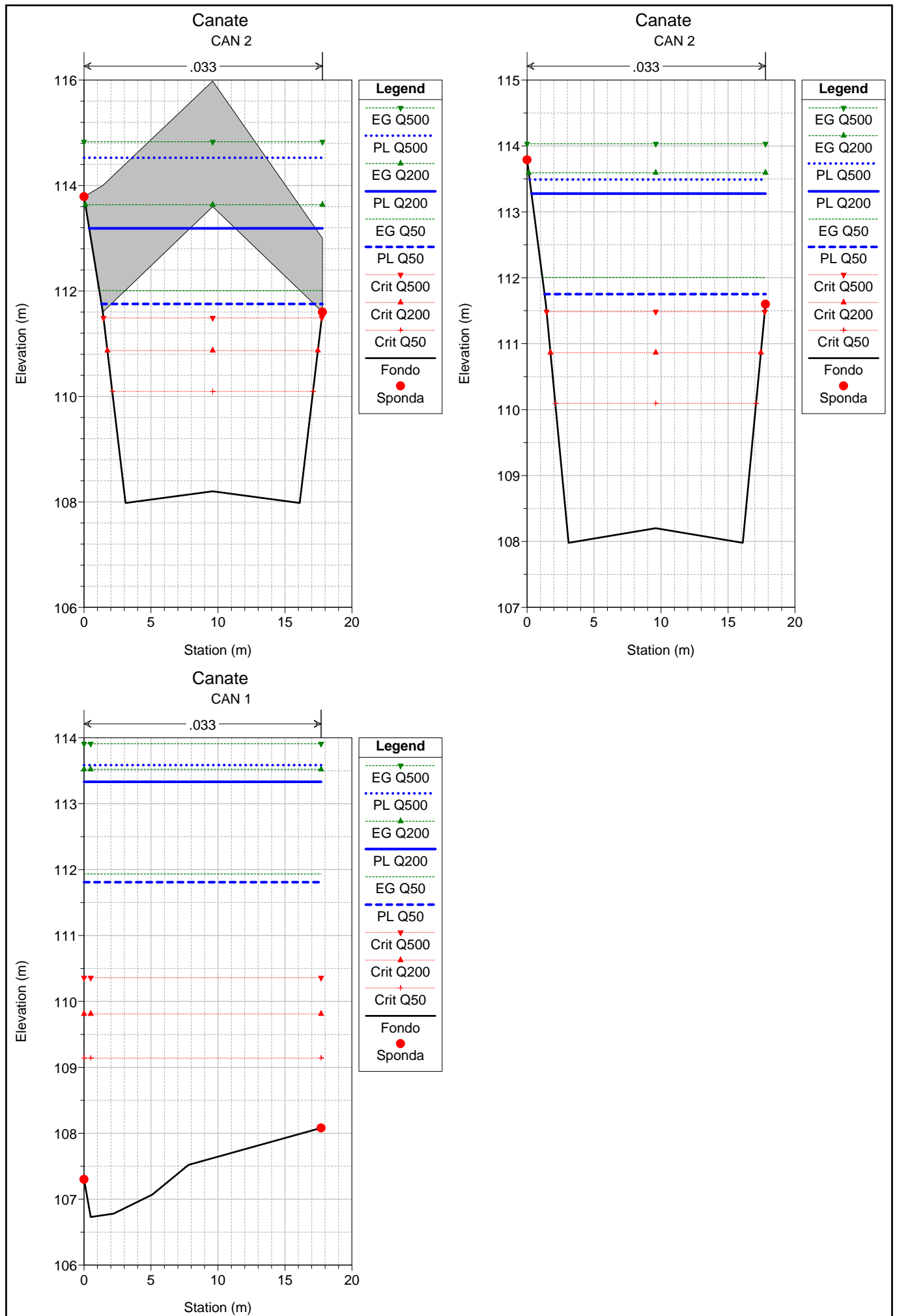
Allegato

Verifiche idrauliche

Torrente Canate

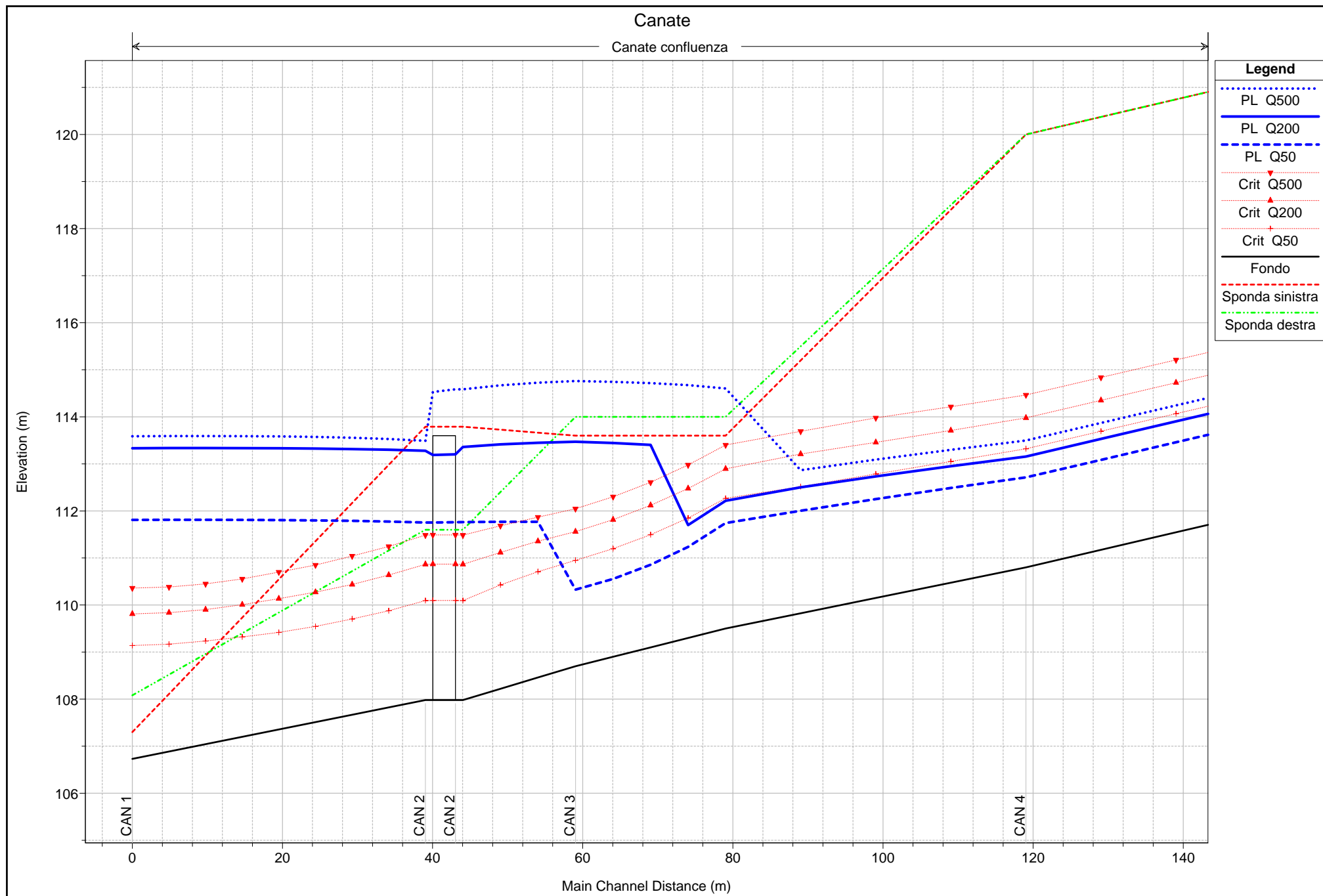
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo





HEC-RAS Plan: Plan02_mag11 River: Canate Reach: confluenza

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	
confluenza	100	Q50	121.00	114.53	116.44	123.73	7.29	123.73	7.29	117.05	118.37	0.037050	6.15	19.67	17.57	1.86	
confluenza	100	Q200	200.00	114.53	116.89	123.73	6.84	123.73	6.84	117.71	119.49	0.037003	7.14	27.99	19.80	1.92	
confluenza	100	Q500	274.00	114.53	117.23	123.73	6.50	123.73	6.50	118.20	120.35	0.037009	7.83	35.01	21.50	1.96	
confluenza	20	CAN 4	Q50	121.00	110.80	112.71	120.00	7.29	120.00	7.29	113.32	114.65	0.037190	6.16	19.64	17.56	1.86
confluenza	20	CAN 4	Q200	200.00	110.80	113.16	120.00	6.84	120.00	6.84	113.98	115.77	0.037225	7.16	27.93	19.78	1.92
confluenza	20	CAN 4	Q500	274.00	110.80	113.50	120.00	6.50	120.00	6.50	114.46	116.63	0.037200	7.84	34.95	21.48	1.96
confluenza	19.5	Q50	121.00	109.50	111.74	113.60	1.86	114.00	2.26	112.27	113.37	0.026722	5.66	21.39	16.82	1.60	
confluenza	19.5	Q200	200.00	109.50	112.22	113.60	1.38	114.00	1.78	112.89	114.42	0.030092	6.58	30.41	20.84	1.74	
confluenza	19.5	Q500	274.00	109.50	114.60	113.60	-1.00	114.00	-0.60	113.40	115.08	0.002304	3.05	90.34	28.51	0.53	
confluenza	19	CAN 3	Q50	121.00	108.70	110.33	113.60	3.27	114.00	3.67	110.95	112.46	0.051247	6.47	18.71	19.98	2.13
confluenza	19	CAN 3	Q200	200.00	108.70	113.47	113.60	0.13	114.00	0.53	111.56	113.69	0.001086	2.08	96.19	29.22	0.37
confluenza	19	CAN 3	Q500	274.00	108.70	114.76	113.60	-1.16	114.00	-0.76	112.05	114.97	0.000745	2.03	134.77	30.00	0.31
confluenza	18.1	CAN 2	Q50	121.00	107.98	111.76	113.79	2.03	111.60	-0.16	110.09	112.01	0.001544	2.22	54.46	16.50	0.39
confluenza	18.1	CAN 2	Q200	200.00	107.98	113.36	113.79	0.43	111.60	-1.76	110.86	113.66	0.001341	2.45	81.60	17.52	0.36
confluenza	18.1	CAN 2	Q500	274.00	107.98	114.58	113.79	-0.79	111.60	-2.98	111.49	114.94	0.001302	2.65	103.38	17.80	0.35
confluenza	18	CAN 2	Bridge														
confluenza	17.9	CAN 2	Q50	121.00	107.98	111.75	113.79	2.04	111.60	-0.15	110.09	112.01	0.001557	2.23	54.29	16.50	0.39
confluenza	17.9	CAN 2	Q200	200.00	107.98	113.28	113.79	0.51	111.60	-1.68	110.86	113.59	0.001407	2.49	80.20	17.47	0.37
confluenza	17.9	CAN 2	Q500	274.00	107.98	113.49	113.79	0.30	111.60	-1.89	111.49	114.03	0.002326	3.26	83.94	17.61	0.48
confluenza	17	CAN 1	Q50	121.00	106.73	111.81	107.30	-4.51	108.08	-3.73	109.14	111.93	0.000640	1.57	77.02	17.70	0.24
confluenza	17	CAN 1	Q200	200.00	106.73	113.33	107.30	-6.03	108.08	-5.25	109.81	113.52	0.000744	1.92	104.00	17.70	0.25
confluenza	17	CAN 1	Q500	274.00	106.73	113.59	107.30	-6.29	108.08	-5.51	110.36	113.91	0.001242	2.53	108.47	17.70	0.33

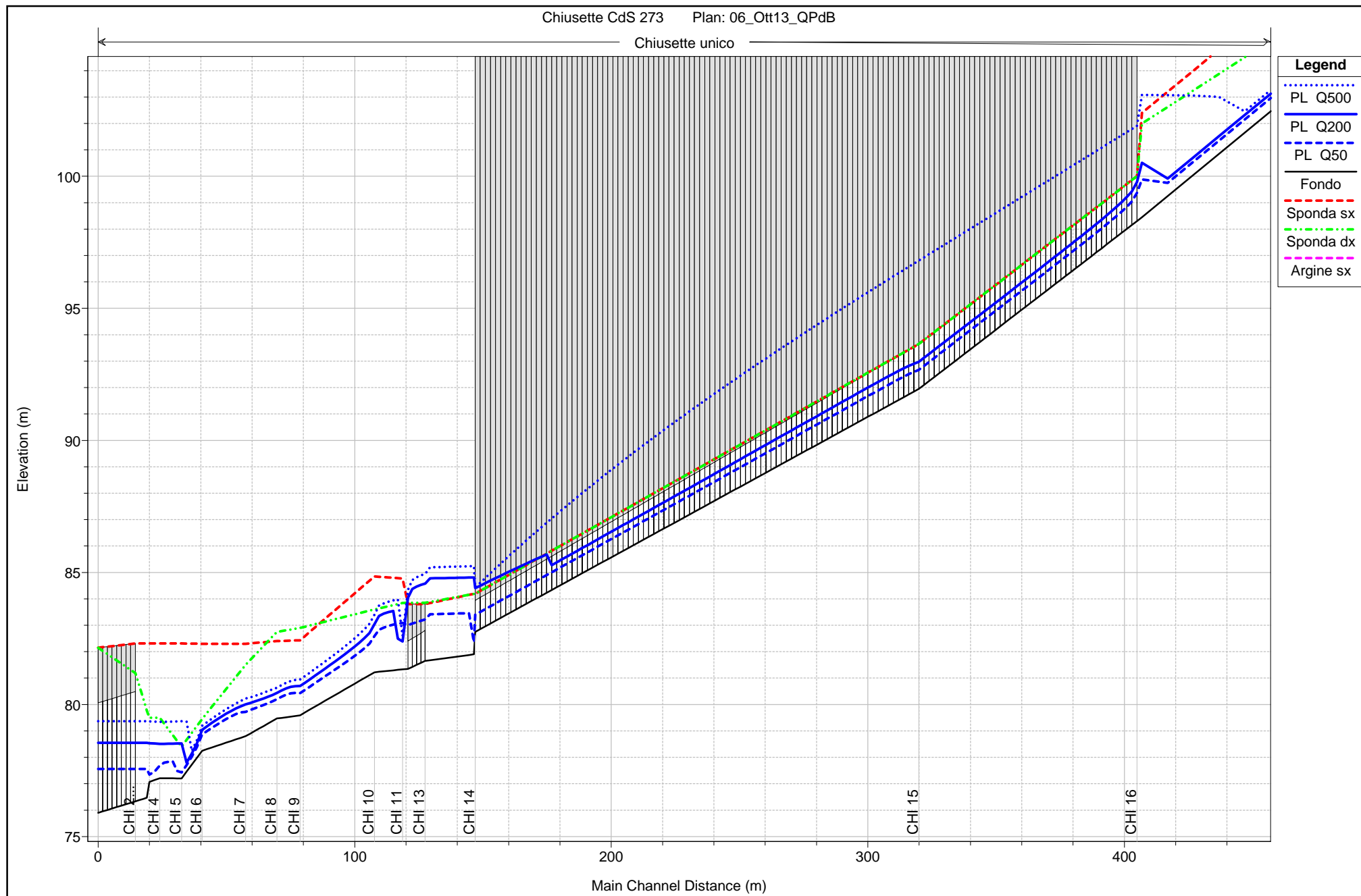


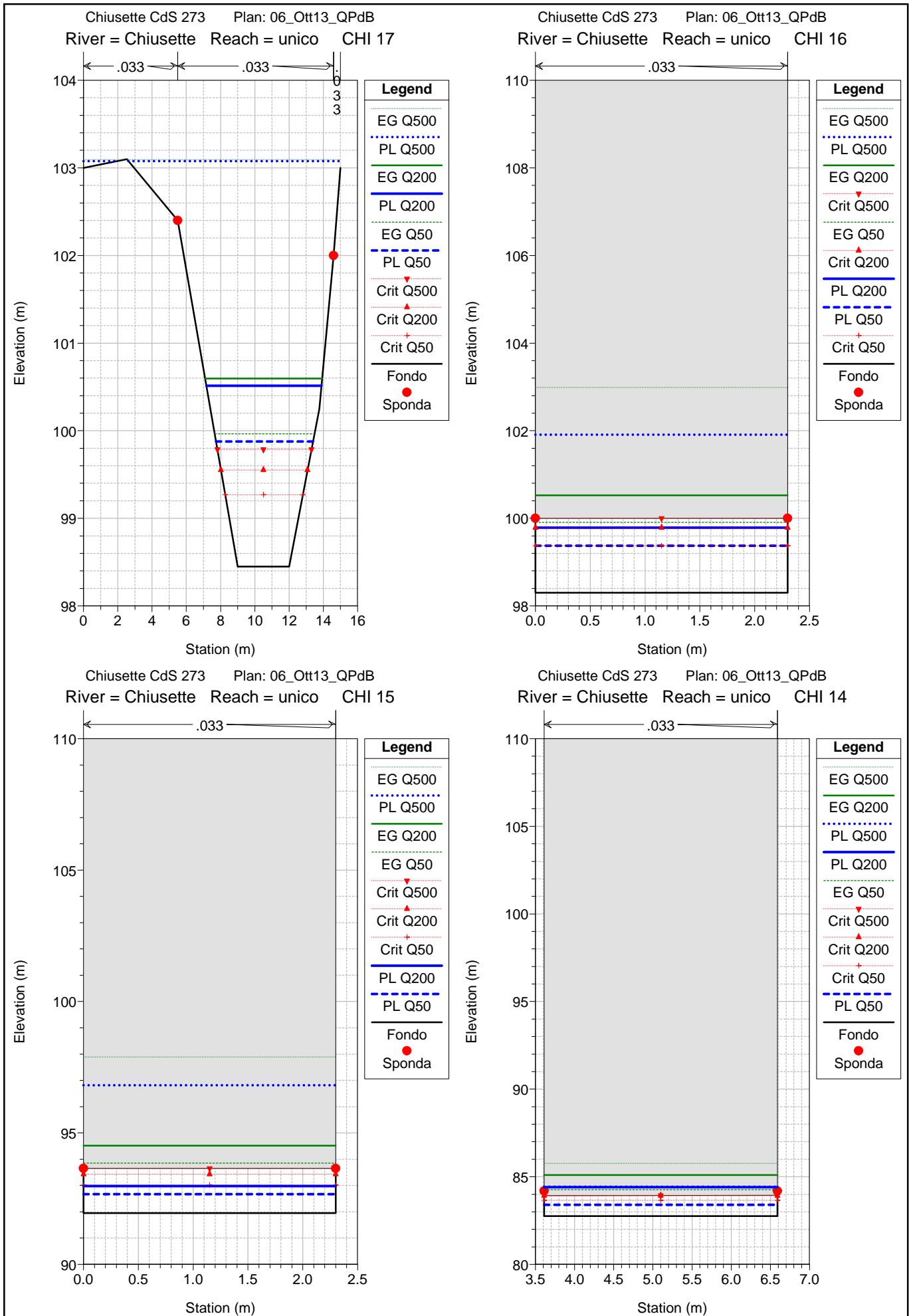
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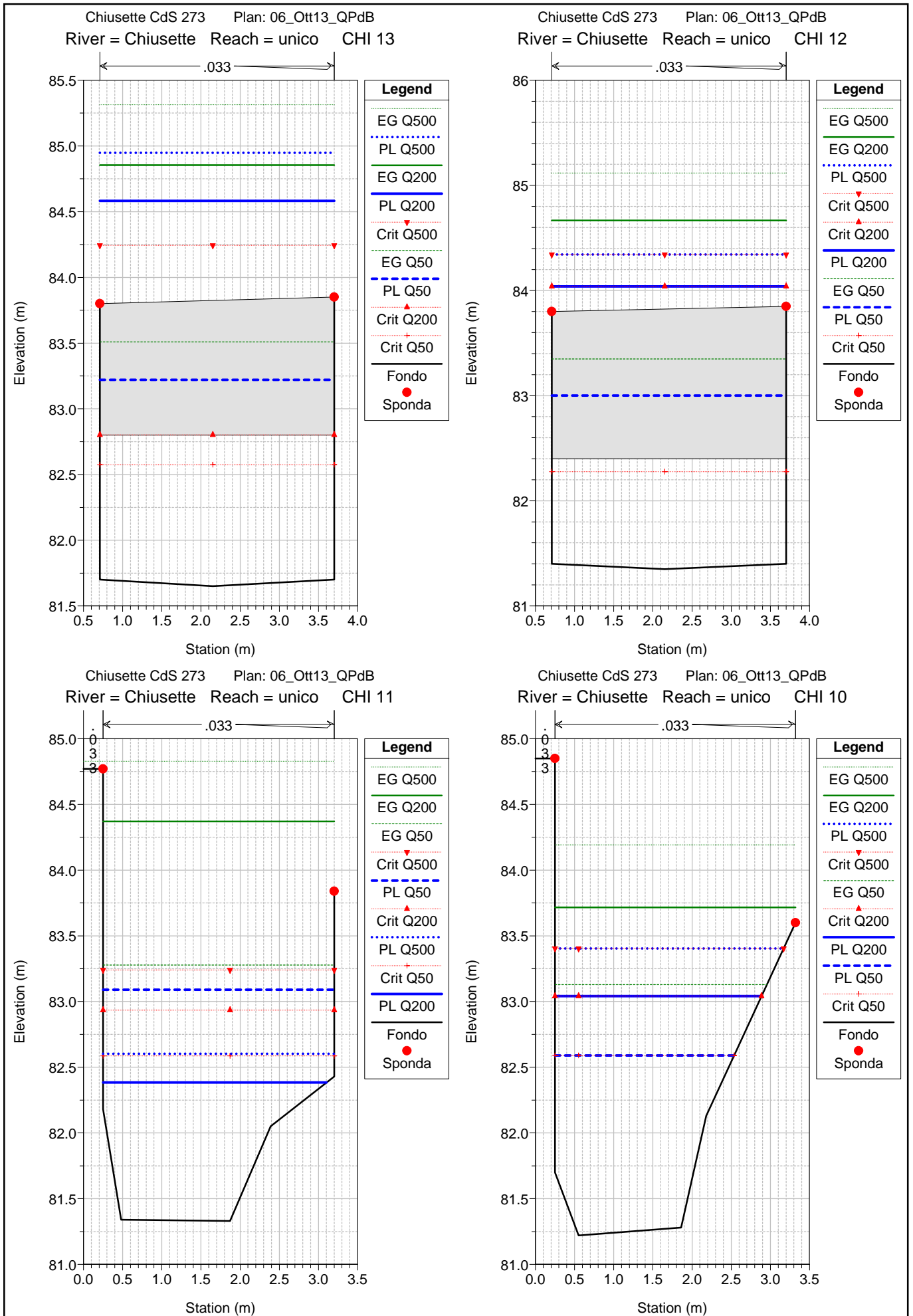
Verifiche idrauliche

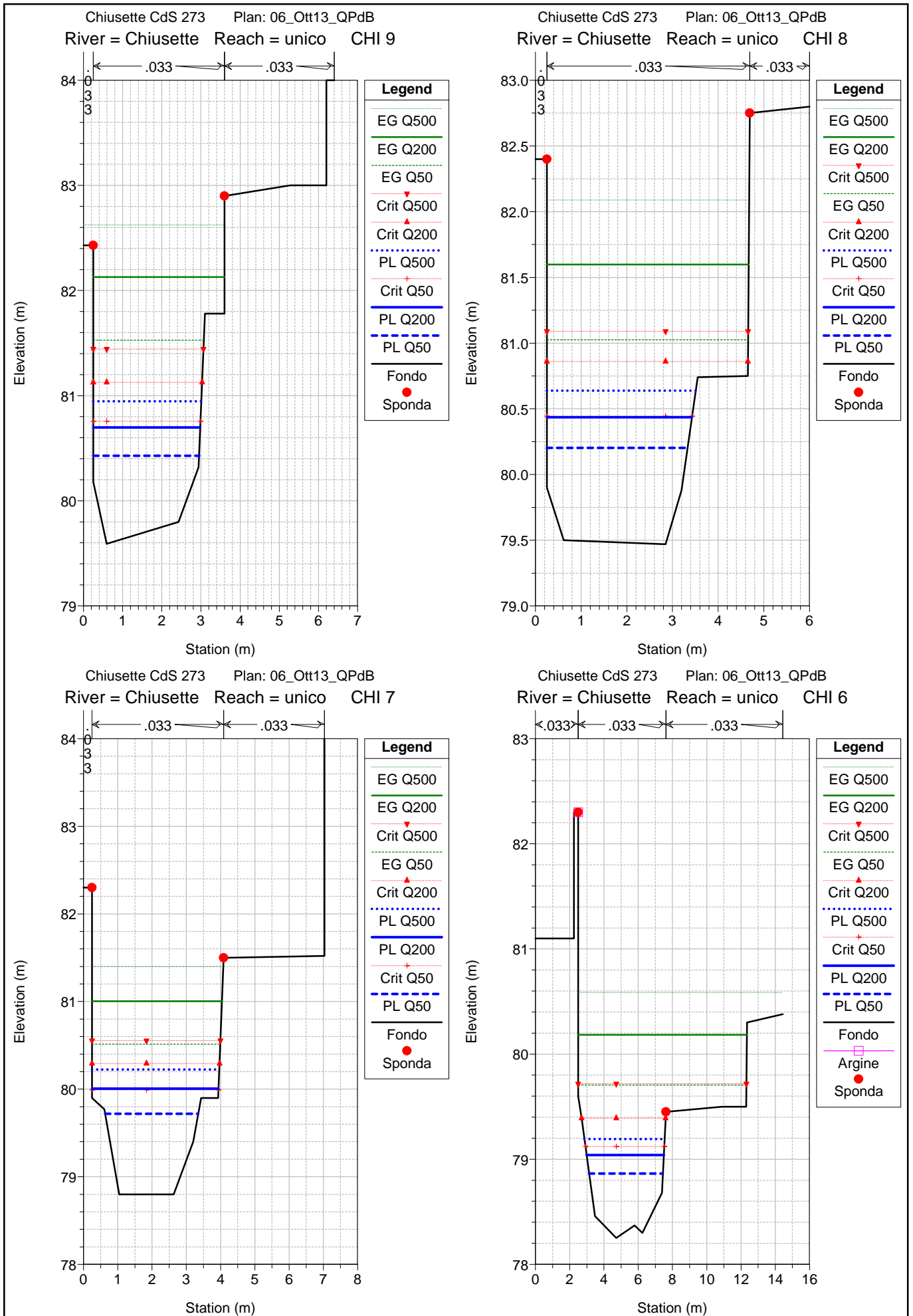
Rio Chiusette

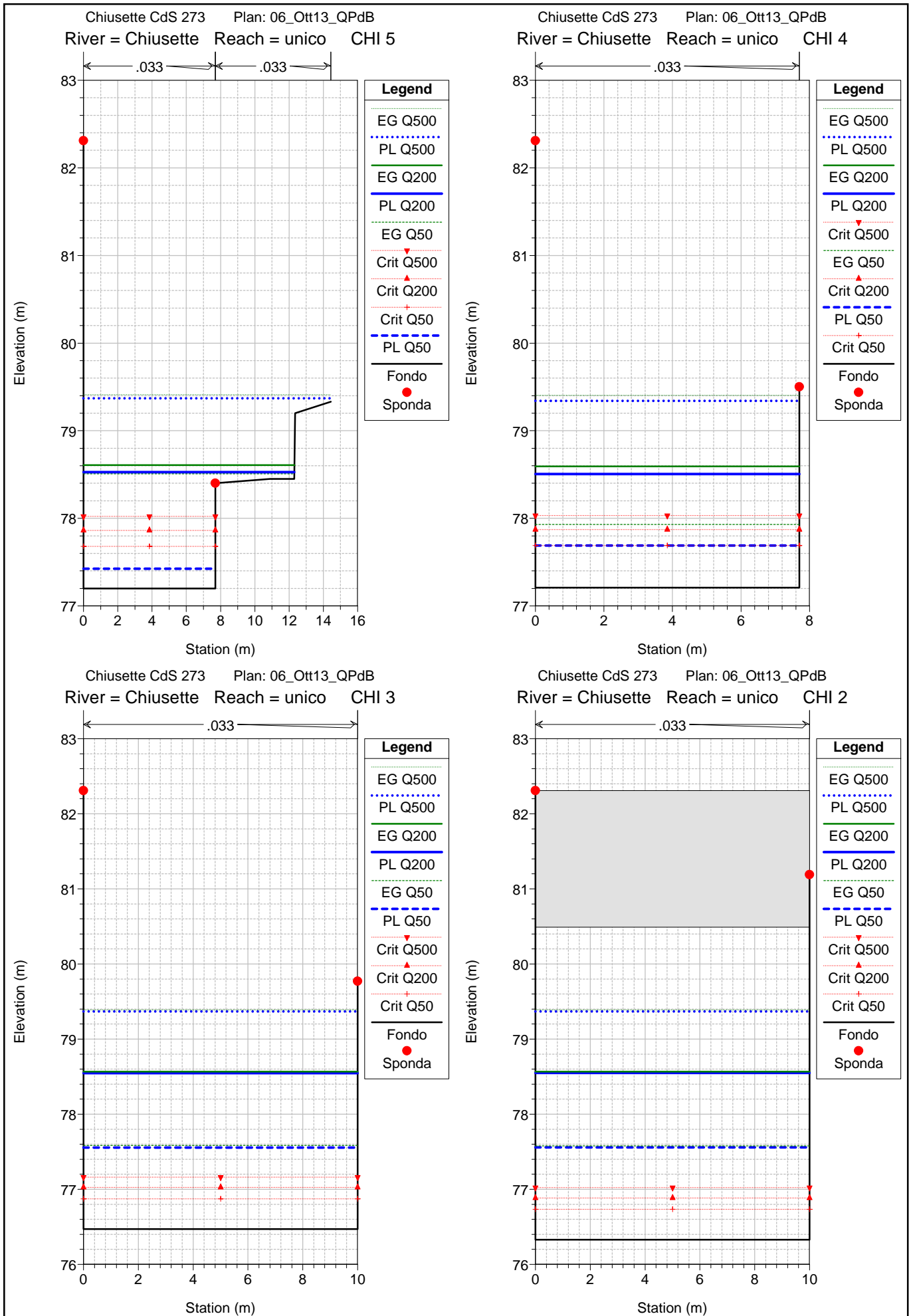
- Profilo longitudinale
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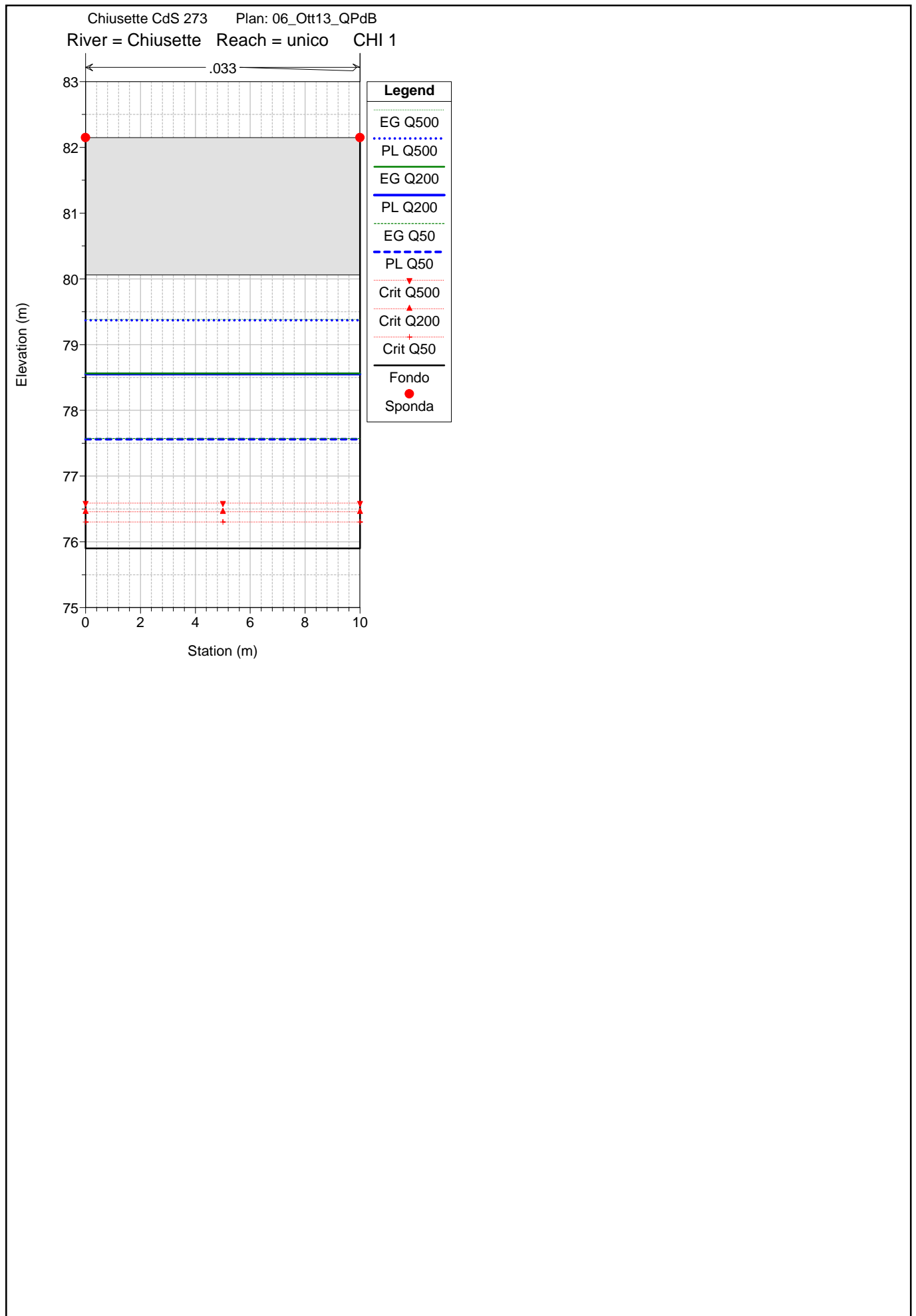












HEC-RAS Plan: 6_QPdB River: Chiusette Reach: unico

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
unico	506.90	Q50	8.00	106.45	106.95	110.40	3.45	108.25	1.30	107.27	108.04	0.080055	4.63	1.73	3.93	2.23
unico	506.90	Q200	13.00	106.45	107.12	110.40	3.29	108.25	1.13	107.55	108.60	0.080071	5.40	2.41	4.24	2.29
unico	506.90	Q500	18.00	106.45	107.25	110.40	3.15	108.25	1.00	107.79	109.07	0.080086	5.97	3.02	4.50	2.33
unico	406.90 CHI 17	Q50	8.00	98.45	99.88	102.40	2.52	102.00	2.12	99.27	99.96	0.002111	1.29	6.18	5.66	0.40
unico	406.90 CHI 17	Q200	13.00	98.45	100.51	102.40	1.89	102.00	1.49	99.55	100.60	0.001432	1.28	10.13	6.71	0.33
unico	406.90 CHI 17	Q500	18.00	98.45	103.08	102.40	-0.68	102.00	-1.08	99.79	103.09	0.000106	0.57	32.65	14.35	0.10
unico	404.90 CHI 16	Q50	8.00	98.30	99.37	100.00	0.63	100.00	0.63	99.37	99.91	0.025049	3.24	2.47	2.30	1.00
unico	404.90 CHI 16	Q200	13.00	98.30	99.79	100.00	0.22	100.00	0.22	99.79	100.52	0.028134	3.81	3.42	2.30	1.00
unico	404.90 CHI 16	Q500	18.00	98.30	101.91	100.00	-1.91	100.00	-1.91	100.00	102.99	0.059958	4.60	3.91		0.77
unico	319.94 CHI 15	Q50	8.00	91.95	92.67	93.65	0.98	93.65	0.98	93.02	93.85	0.074199	4.81	1.66	2.30	1.80
unico	319.94 CHI 15	Q200	13.00	91.95	92.98	93.65	0.67	93.65	0.67	93.43	94.52	0.074496	5.50	2.36	2.30	1.73
unico	319.94 CHI 15	Q500	18.00	91.95	96.81	93.65	-3.16	93.65	-3.16	93.65	97.89	0.059929	4.60	3.91		0.67
unico	146.96 CHI 14	Q50	8.00	82.75	83.40	83.92	0.52	83.94	0.54	83.65	84.27	0.053203	4.12	1.94	2.98	1.63
unico	146.96 CHI 14	Q200	13.00	82.75	84.40	83.92	-0.48	83.94	-0.46	83.92	85.10	0.046939	3.70	3.52		0.92
unico	146.96 CHI 14	Q500	18.00	82.75	84.43	83.92	-0.51	83.94	-0.49	83.93	85.76	0.089990	5.12	3.52		1.26
unico	146.46	Q50	8.00	81.90	82.35	84.19	1.84	84.19	1.84	82.80	84.13	0.155310	5.91	1.35	2.98	2.80
unico	146.46	Q200	13.00	81.90	84.81	84.19	-0.62	84.19	-0.62	83.15	84.92	0.002500	1.50	8.67	2.98	0.28
unico	146.46	Q500	18.00	81.90	85.24	84.19	-1.05	84.19	-1.05	83.45	85.41	0.003425	1.81	9.95	2.98	0.32
unico	127.46 CHI 13	Q50	8.00	81.65	83.22	82.80	-0.42	82.80	-0.42	82.57	83.51	0.020147	2.38	3.36		0.61
unico	127.46 CHI 13	Q200	13.00	81.65	84.58	82.80	-1.78	82.80	-1.78	82.80	84.85	0.014501	2.31	5.63	2.99	0.43
unico	127.46 CHI 13	Q500	18.00	81.65	84.95	82.80	-2.15	82.80	-2.15	84.24	85.31	0.015363	2.68	6.72	2.99	0.47
unico	120.76 CHI 12	Q50	8.00	81.35	83.00	82.40	-0.60	82.40	-0.60	82.28	83.35	0.026583	2.61	3.06		0.65
unico	120.76 CHI 12	Q200	13.00	81.35	84.04	82.40	-1.64	82.40	-1.64	84.04	84.67	0.056817	3.51	3.71	2.99	0.68
unico	120.76 CHI 12	Q500	18.00	81.35	84.34	82.40	-1.94	82.40	-1.94	84.34	85.12	0.052528	3.90	4.62	2.99	0.72
unico	118.66 CHI 11	Q50	8.00	81.33	83.09	84.77	1.68	83.84	0.75	82.59	83.28	0.006007	1.92	4.16	2.95	0.52
unico	118.66 CHI 11	Q200	13.00	81.33	82.38	84.77	2.39	83.84	1.46	82.93	84.37	0.106207	6.24	2.08	2.85	2.33
unico	118.66 CHI 11	Q500	18.00	81.33	82.60	84.77	2.17	83.84	1.24	83.24	84.83	0.096749	6.61	2.72	2.95	2.20
unico	107.66 CHI 10	Q50	8.00	81.22	82.59	84.85	2.26	83.60	1.01	82.59	83.13	0.023981	3.25	2.46	2.29	1.00
unico	107.66 CHI 10	Q200	13.00	81.22	83.04	84.85	1.81	83.60	0.56	83.04	83.72	0.024294	3.64	3.57	2.64	1.00
unico	107.66 CHI 10	Q500	18.00	81.22	83.40	84.85	1.45	83.60	0.20	83.40	84.19	0.024691	3.93	4.58	2.92	1.00
unico	78.68 CHI 9	Q50	8.00	79.59	80.43	82.43	2.00	82.90	2.47	80.76	81.53	0.063110	4.64	1.72	2.70	1.86
unico	78.68 CHI 9	Q200	13.00	79.59	80.70	82.43	1.73	82.90	2.20	81.13	82.13	0.061828	5.30	2.45	2.73	1.79
unico	78.68 CHI 9	Q500	18.00	79.59	80.95	82.43	1.48	82.90	1.95	81.44	82.62	0.060827	5.74	3.14	2.76	1.72
unico	69.68 CHI 8	Q50	8.00	79.47	80.20	82.40	2.20	82.75	2.55	80.44	81.02	0.044025	4.02	1.99	3.08	1.60
unico	69.68 CHI 8	Q200	13.00	79.47	80.44	82.40	1.96	82.75	2.31	80.86	81.60	0.047794	4.77	2.72	3.18	1.65
unico	69.68 CHI 8	Q500	18.00	79.47	80.64	82.40	1.76	82.75	2.11	81.09	82.09	0.050585	5.34	3.37	3.26	1.67
unico	57.48 CHI 7	Q50	8.00	78.80	79.72	82.30	2.58	81.50	1.78	79.99	80.51	0.038852	3.95	2.03	2.72	1.46

HEC-RAS Plan: 6_QPdB River: Chiusette Reach: unico (Continued)

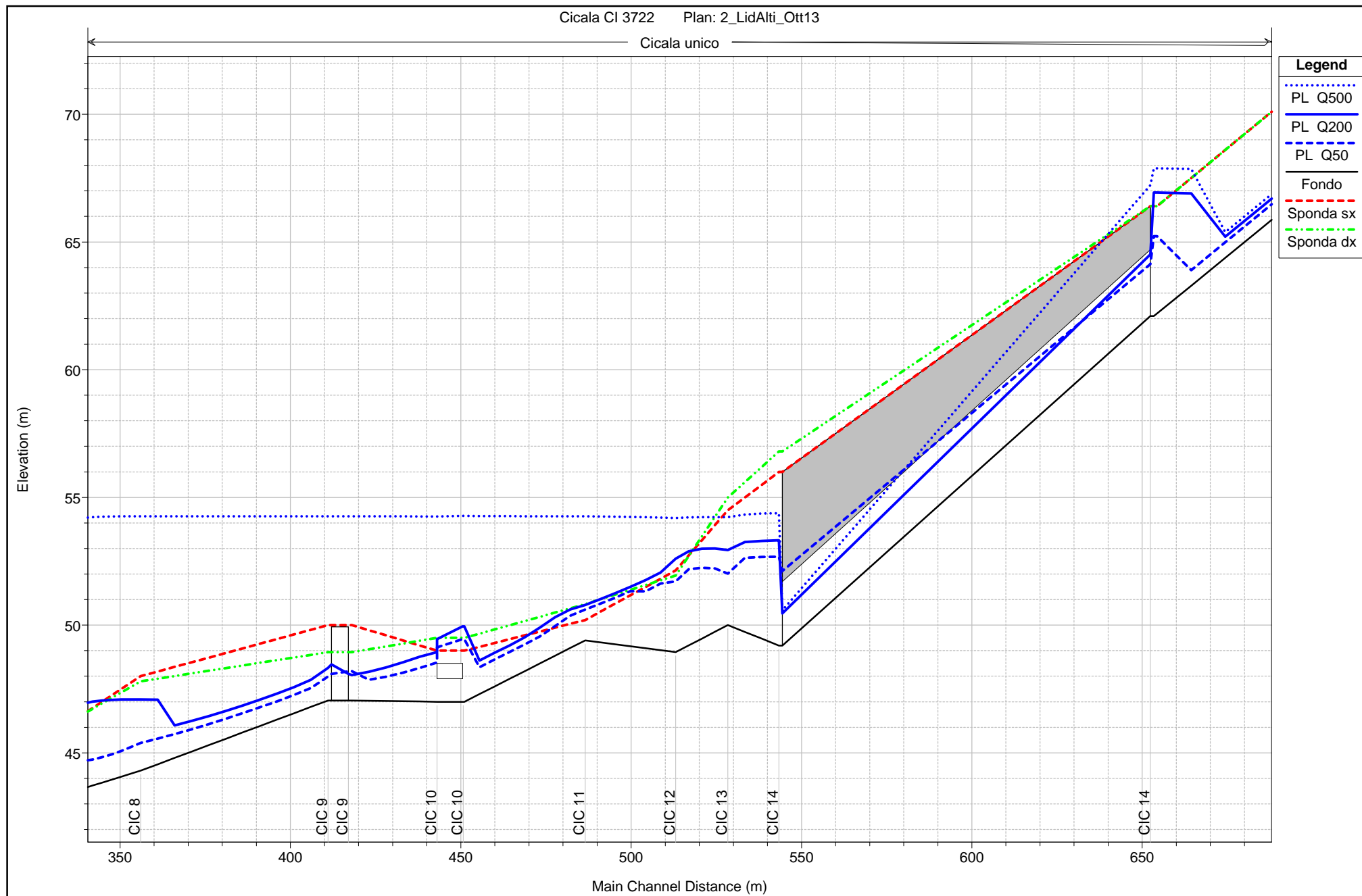
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	57.48 CHI 7	Q200	13.00	78.80	80.00	82.30	2.30	81.50	1.50	80.29	81.00	0.044800	4.43	2.94	3.69	1.58
unico	57.48 CHI 7	Q500	18.00	78.80	80.22	82.30	2.08	81.50	1.28	80.55	81.40	0.042589	4.81	3.75	3.71	1.53
unico	40.50 CHI 6	Q50	8.00	78.25	78.86	82.30	3.44	79.45	0.59	79.12	79.71	0.057855	4.07	1.97	4.31	1.92
unico	40.50 CHI 6	Q200	13.00	78.25	79.04	82.30	3.26	79.45	0.41	79.39	80.18	0.056412	4.74	2.74	4.51	1.94
unico	40.50 CHI 6	Q500	18.00	78.25	79.19	82.30	3.11	79.45	0.26	79.72	80.59	0.055563	5.23	3.44	4.68	1.95
unico	32.50 CHI 5	Q50	8.00	77.20	77.43	82.31	4.88	78.40	0.97	77.68	78.51	0.181704	4.61	1.74	7.70	3.10
unico	32.50 CHI 5	Q200	13.00	77.20	78.53	82.31	3.78	78.40	-0.13	77.86	78.61	0.001729	1.26	10.67	12.31	0.35
unico	32.50 CHI 5	Q500	18.00	77.20	79.37	82.31	2.94	78.40	-0.97	78.02	79.41	0.000552	0.94	21.28	14.44	0.20
unico	24.00 CHI 4	Q50	8.00	77.21	77.69	82.31	4.62	79.50	1.81	77.69	77.93	0.016004	2.17	3.69	7.70	1.00
unico	24.00 CHI 4	Q200	13.00	77.21	78.51	82.31	3.80	79.50	0.99	77.87	78.59	0.001923	1.30	9.98	7.70	0.37
unico	24.00 CHI 4	Q500	18.00	77.21	79.34	82.31	2.97	79.50	0.16	78.03	79.40	0.000859	1.10	16.41	7.70	0.24
unico	20.00	Q50	8.00	77.07	77.35	82.31	4.96	79.50	2.15	77.47	77.77	0.052205	2.86	2.80	10.00	1.72
unico	20.00	Q200	13.00	77.07	78.53	82.31	3.78	79.50	0.97	77.63	78.57	0.000727	0.89	14.64	10.00	0.23
unico	20.00	Q500	18.00	77.07	79.36	82.31	2.95	79.50	0.14	77.76	79.39	0.000368	0.79	22.91	10.00	0.17
unico	19.00 CHI 3	Q50	8.00	76.47	77.56	82.31	4.75	79.77	2.21	76.87	77.58	0.000688	0.74	10.86	10.00	0.23
unico	19.00 CHI 3	Q200	13.00	76.47	78.55	82.31	3.76	79.77	1.22	77.03	78.57	0.000255	0.63	20.78	10.00	0.14
unico	19.00 CHI 3	Q500	18.00	76.47	79.37	82.31	2.94	79.77	0.40	77.16	79.39	0.000187	0.62	28.98	10.00	0.12
unico	14.50 CHI 2	Q50	8.00	76.33	77.56	80.49	2.93	80.49	2.93	76.73	77.58	0.000472	0.65	12.27	10.00	0.19
unico	14.50 CHI 2	Q200	13.00	76.33	78.55	80.49	1.94	80.49	1.94	76.89	78.57	0.000211	0.59	22.19	10.00	0.13
unico	14.50 CHI 2	Q500	18.00	76.33	79.37	80.49	1.12	80.49	1.12	77.02	79.39	0.000164	0.59	30.39	10.00	0.11
unico	0.00 CHI 1	Q50	8.00	75.90	77.56	80.06	2.50	80.06	2.50	76.30	77.57	0.000189	0.48	16.60	10.00	0.12
unico	0.00 CHI 1	Q200	13.00	75.90	78.55	80.06	1.51	80.06	1.51	76.46	78.56	0.000126	0.49	26.50	10.00	0.10
unico	0.00 CHI 1	Q500	18.00	75.90	79.37	80.06	0.69	80.06	0.69	76.59	79.38	0.000113	0.52	34.70	10.00	0.09

Allegato

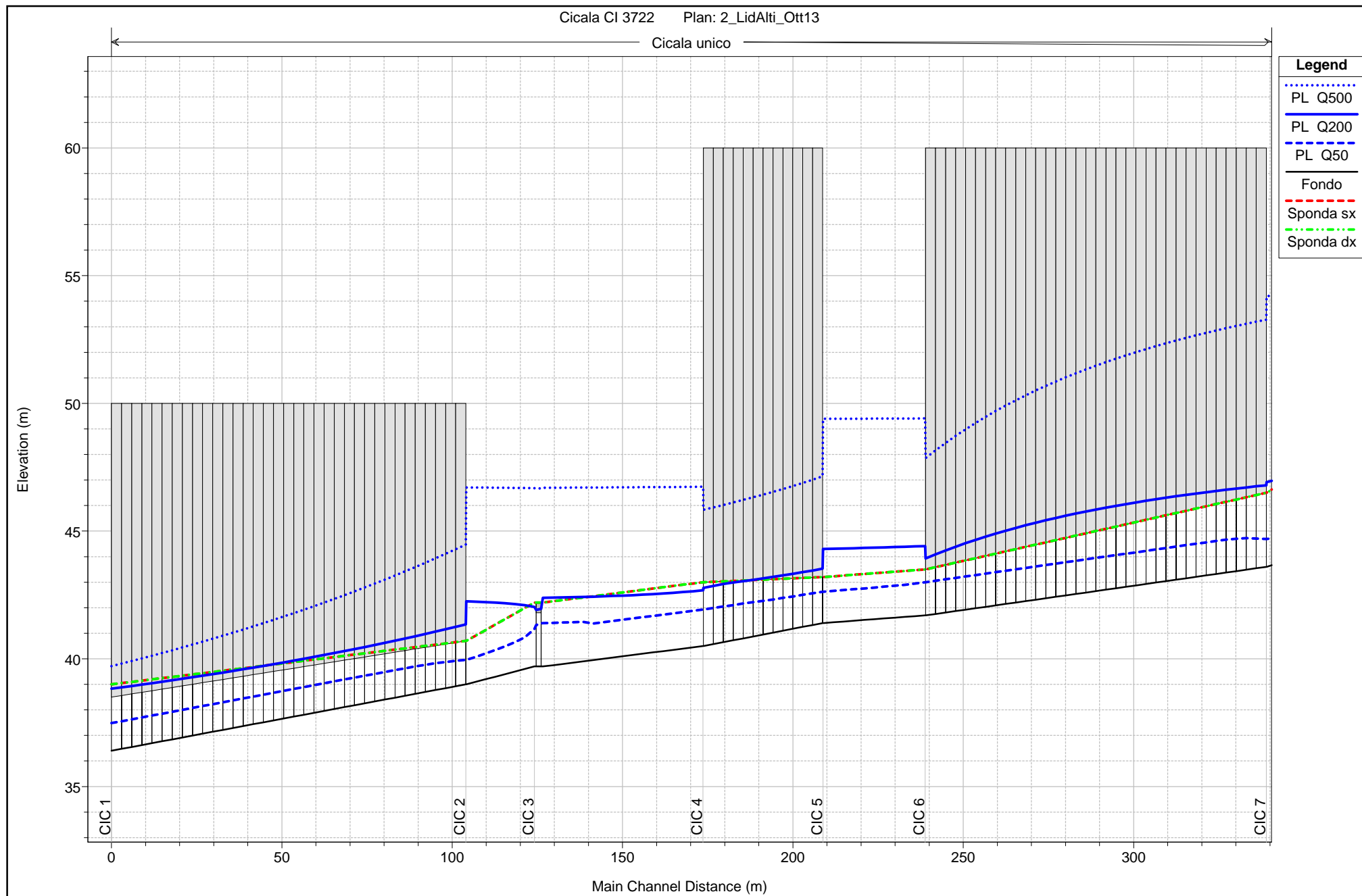
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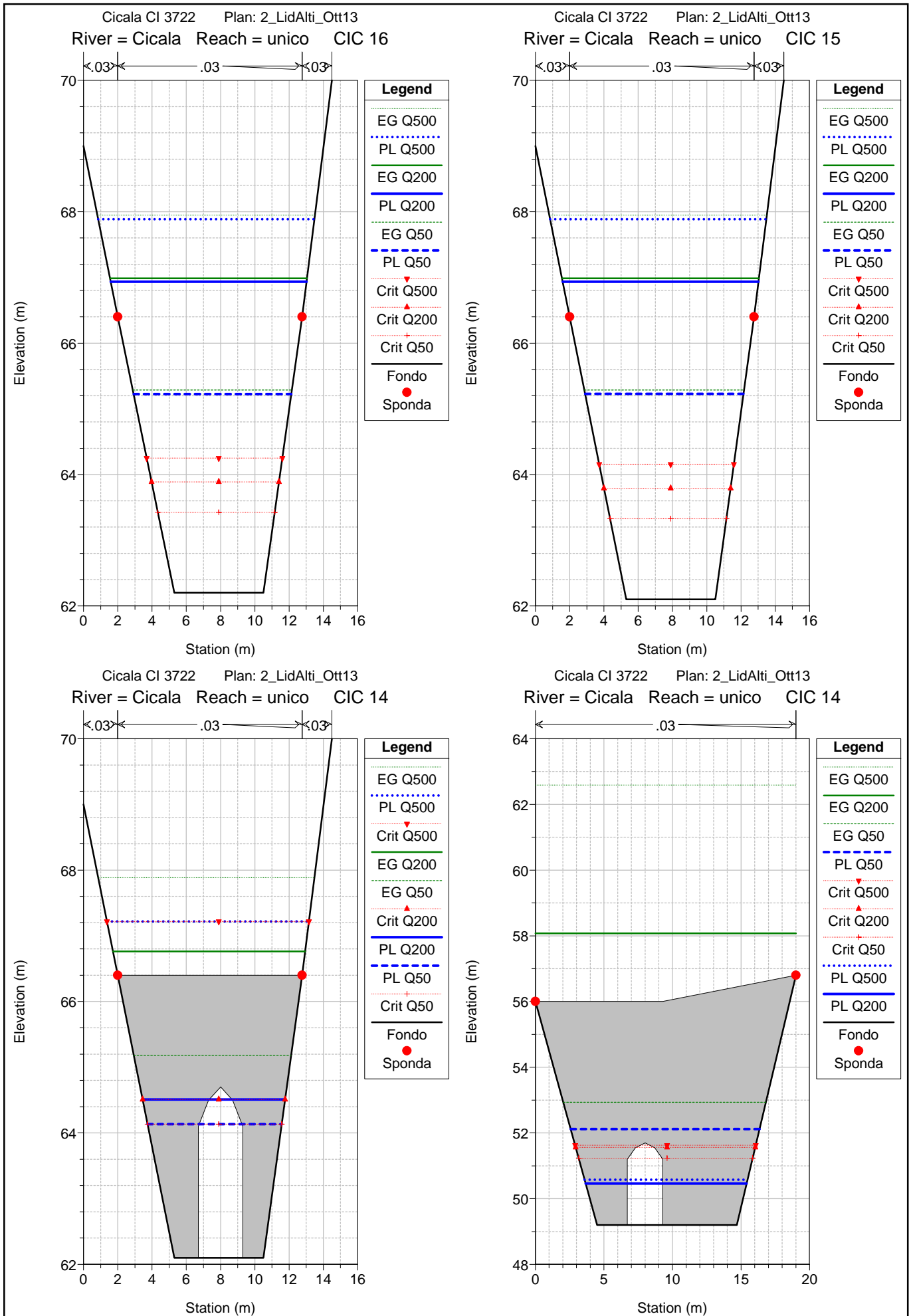
Rio Cicala

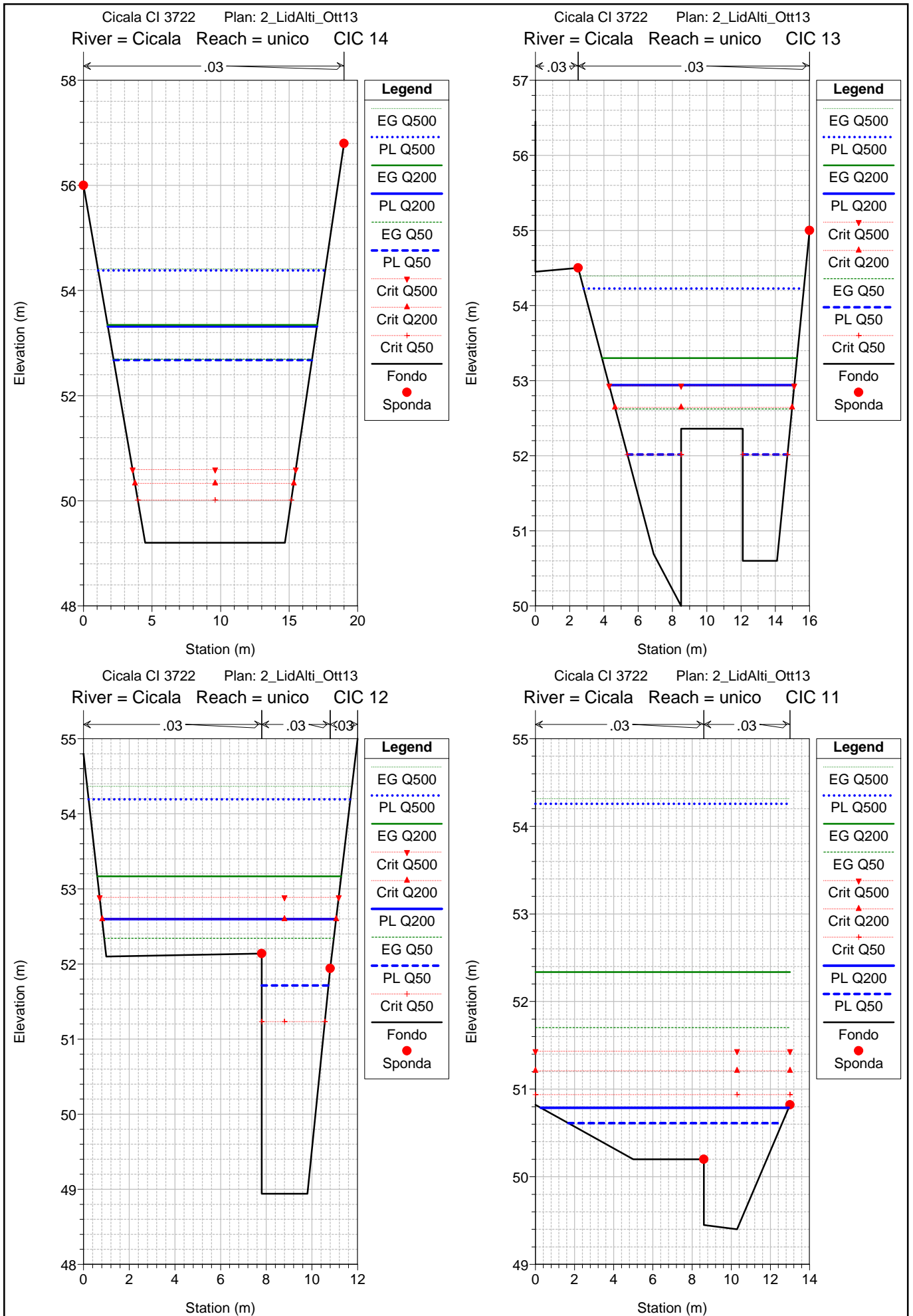
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

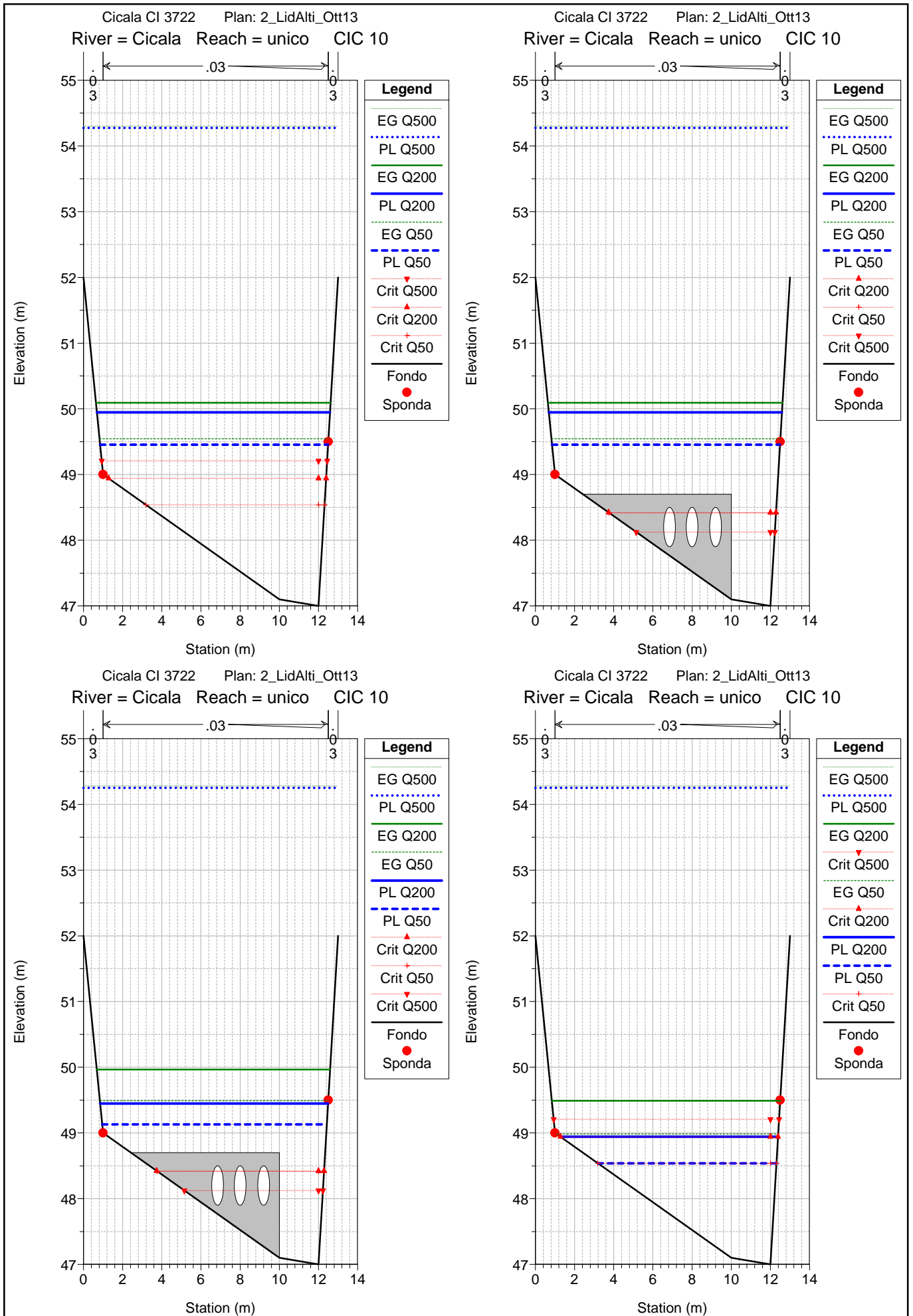


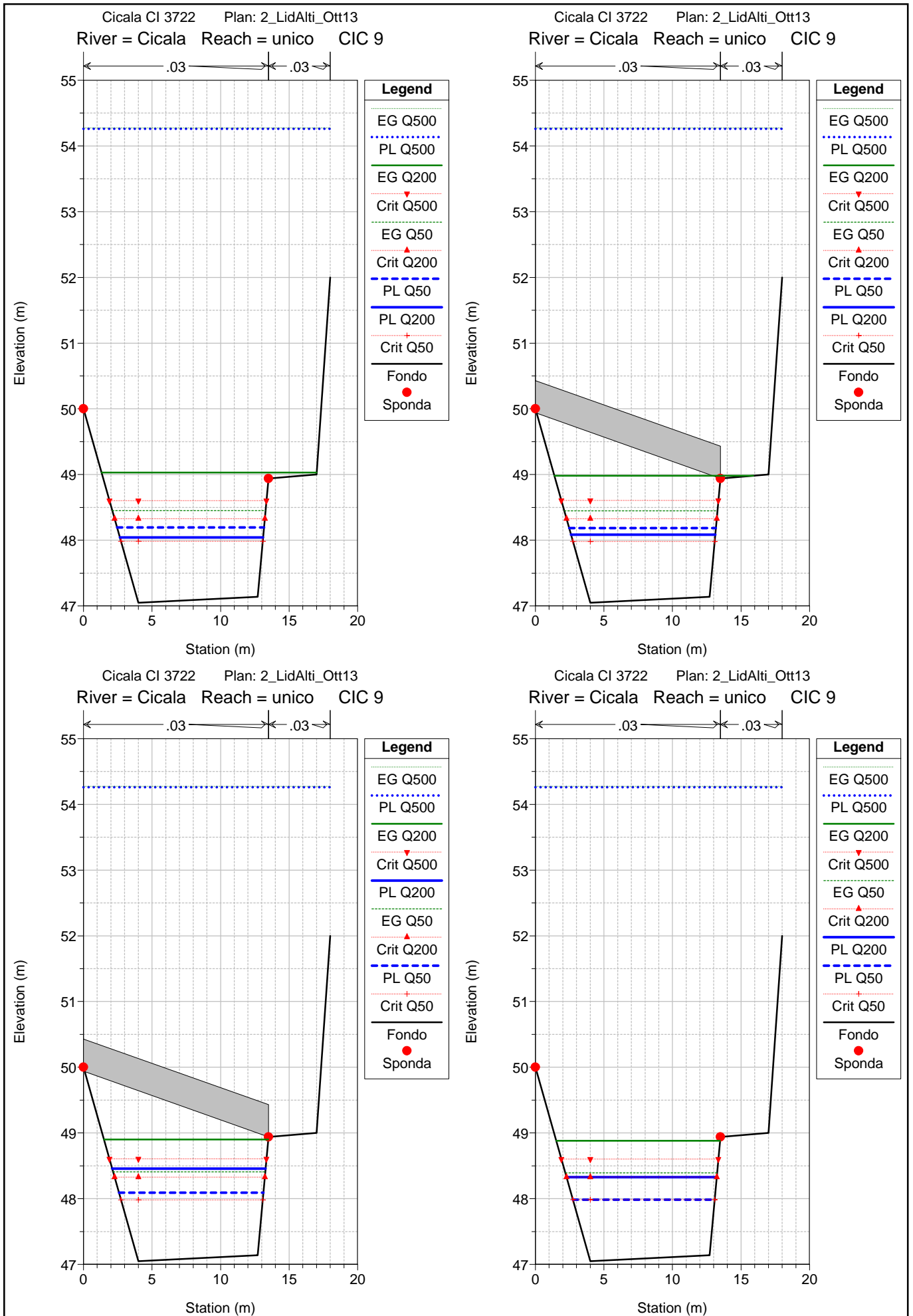
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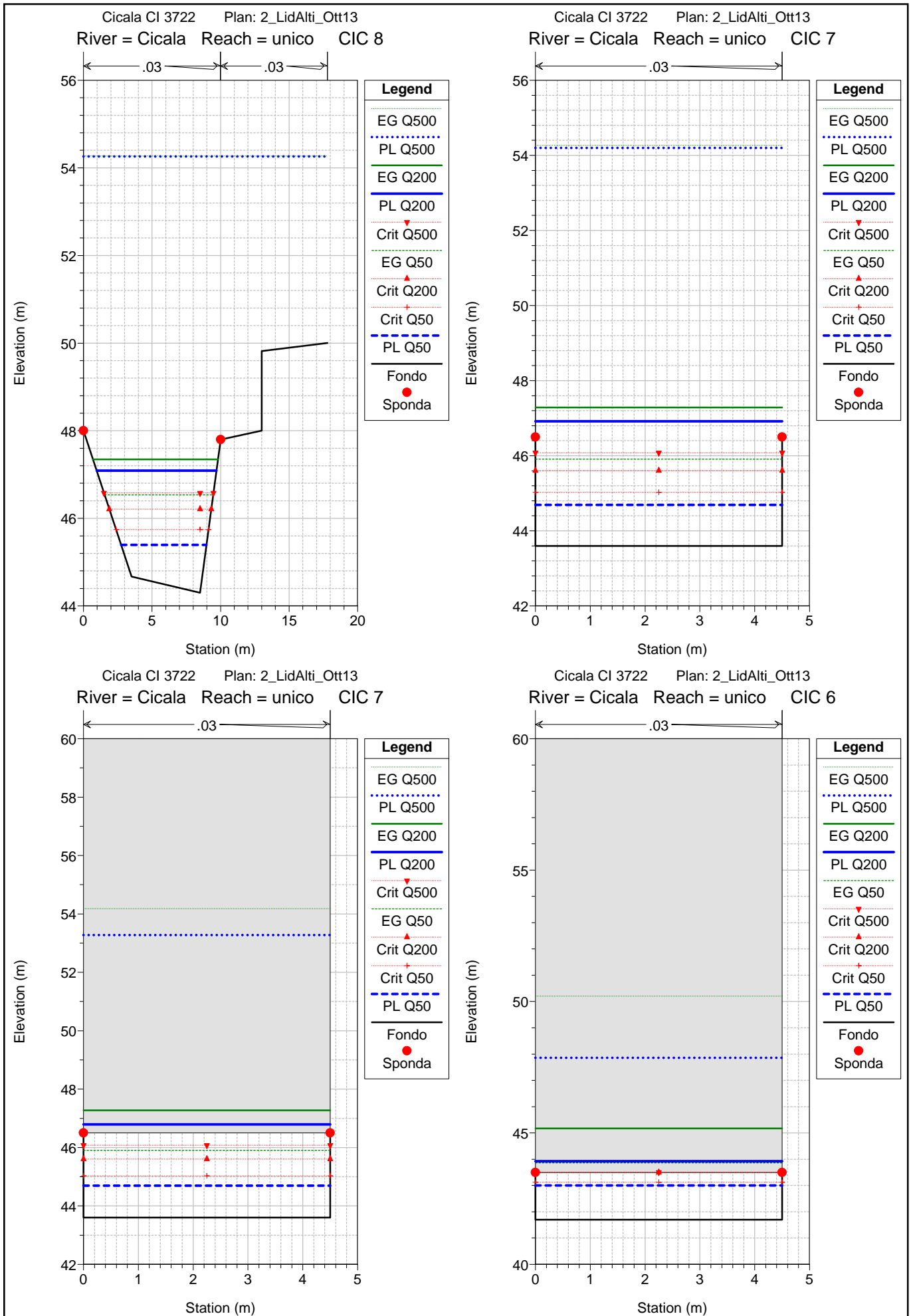


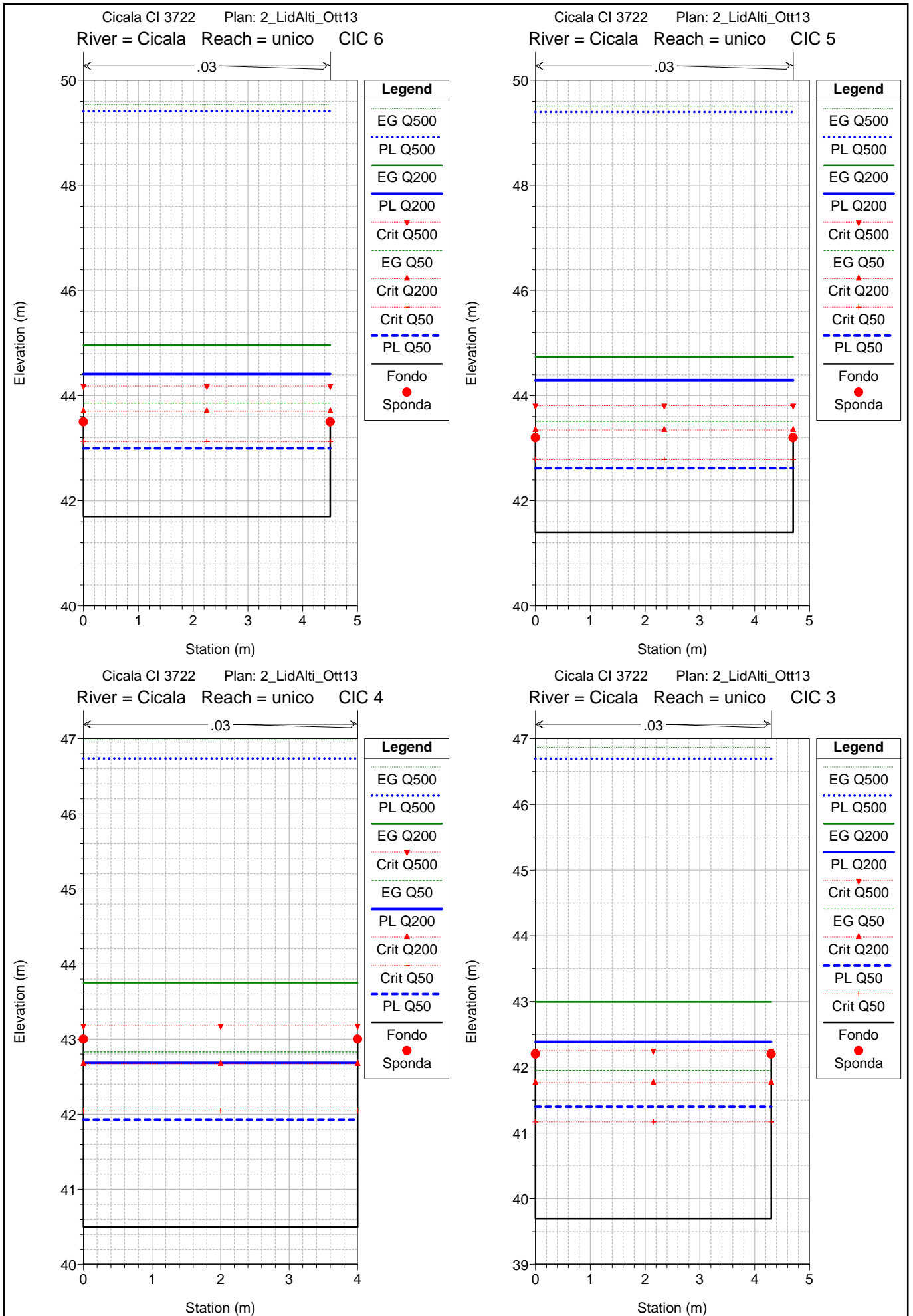


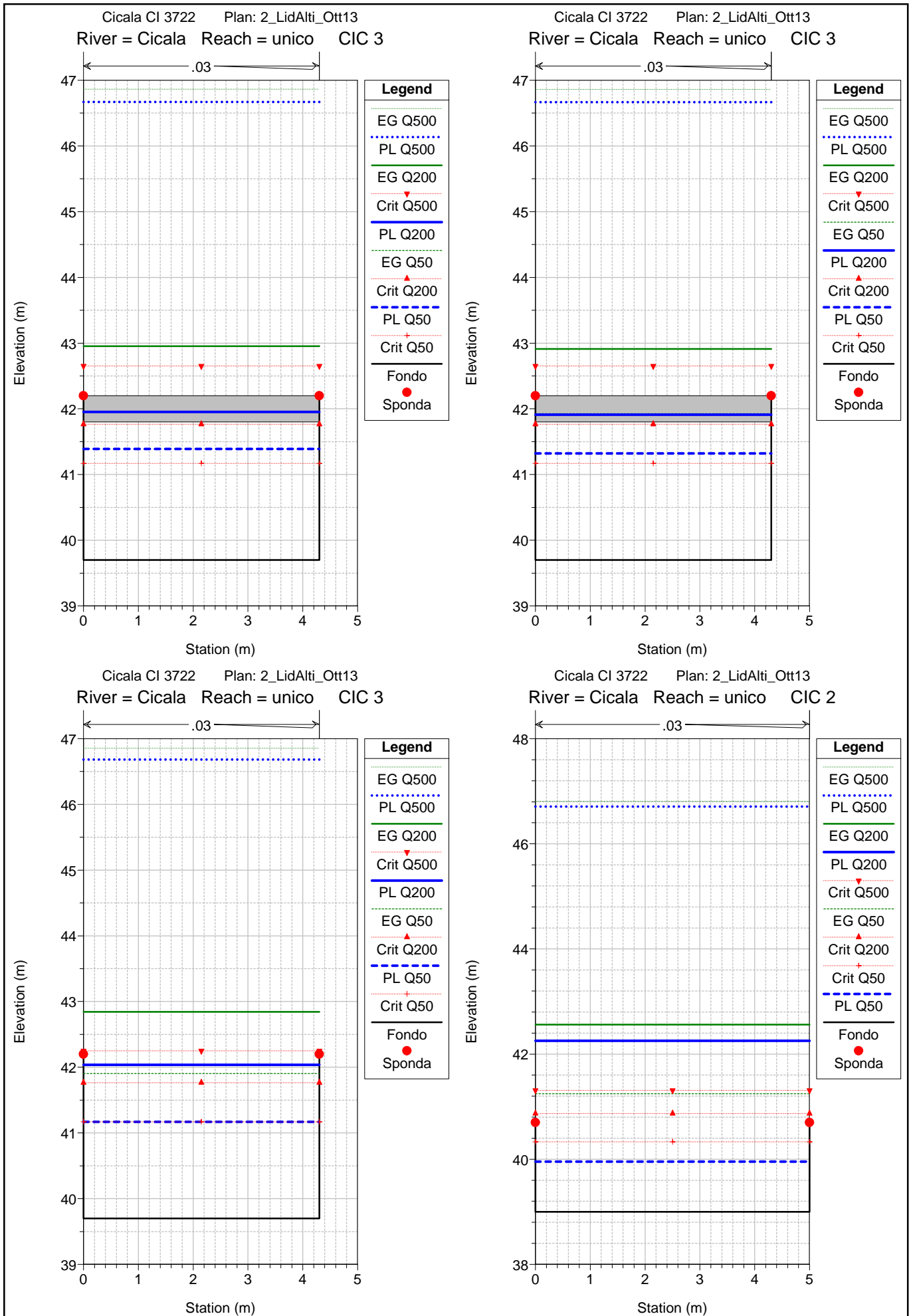


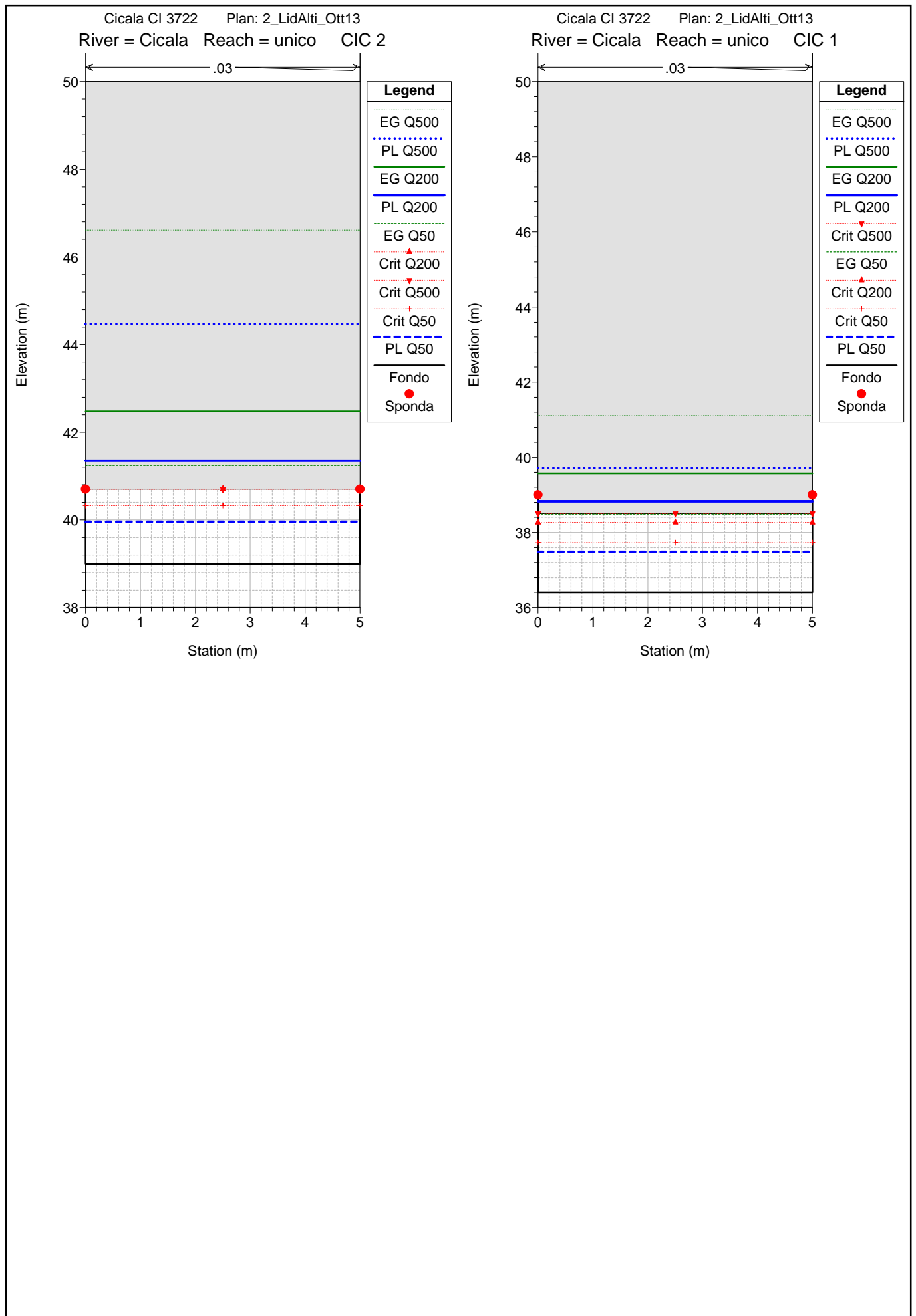












HEC-RAS Plan: 2_Ott13 River: Cicala Reach: unico

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	
unico	100	Q50	24.00	73.10	73.71	77.40	3.69	77.40	3.69	74.33	76.25	0.110018	7.06	3.40	5.99	2.99	
unico	100	Q200	40.00	73.10	73.93	77.40	3.47	77.40	3.47	74.79	77.53	0.110037	8.40	4.76	6.27	3.08	
unico	100	Q500	55.00	73.10	74.11	77.40	3.29	77.40	3.29	75.16	78.54	0.110039	9.33	5.90	6.50	3.13	
unico	16	CIC 16	Q50	24.00	62.20	65.22	66.40	1.18	66.40	1.18	63.43	65.29	0.000520	1.10	21.79	9.20	0.23
unico	16	CIC 16	Q200	40.00	62.20	66.93	66.40	-0.53	66.40	-0.53	63.89	66.99	0.000266	1.02	39.43	11.43	0.17
unico	16	CIC 16	Q500	55.00	62.20	67.89	66.40	-1.49	66.40	-1.49	64.25	67.95	0.000229	1.10	50.88	12.62	0.16
unico	15	CIC 15	Q50	24.00	62.10	65.23	66.40	1.17	66.40	1.17	63.33	65.28	0.000470	1.06	22.59	9.24	0.22
unico	15	CIC 15	Q200	40.00	62.10	66.93	66.40	-0.53	66.40	-0.53	63.79	66.99	0.000252	1.00	40.25	11.43	0.17
unico	15	CIC 15	Q500	55.00	62.10	67.89	66.40	-1.49	66.40	-1.49	64.16	67.95	0.000220	1.09	51.69	12.62	0.16
unico	14.5	CIC 14	Bridge														
unico	14	CIC 14	Q50	24.00	49.20	52.68	56.00	3.32	56.80	4.12	50.01	52.69	0.000091	0.56	42.89	14.47	0.10
unico	14	CIC 14	Q200	40.00	49.20	53.32	56.00	2.68	56.80	3.48	50.33	53.35	0.000144	0.76	52.40	15.25	0.13
unico	14	CIC 14	Q500	55.00	49.20	54.38	56.00	1.62	56.80	2.42	50.60	54.42	0.000125	0.79	69.36	16.56	0.12
unico	13	CIC 13	Q50	24.00	50.00	52.02	54.50	2.48	55.00	2.98	52.02	52.62	0.019099	3.45	6.96	5.74	1.00
unico	13	CIC 13	Q200	40.00	50.00	52.94	54.50	1.56	55.00	2.06	52.64	53.30	0.007770	2.66	15.04	10.81	0.72
unico	13	CIC 13	Q500	55.00	50.00	54.23	54.50	0.27	55.00	0.77	52.93	54.39	0.001810	1.82	30.24	12.85	0.38
unico	12	CIC 12	Q50	24.00	48.94	51.71	52.14	0.43	51.94	0.23	51.23	52.34	0.013044	3.51	6.83	2.92	0.73
unico	12	CIC 12	Q200	40.00	48.94	52.60	52.14	-0.46	51.94	-0.66	52.60	53.17	0.009592	3.55	12.86	10.24	0.64
unico	12	CIC 12	Q500	55.00	48.94	54.19	52.14	-2.05	51.94	-2.25	52.89	54.37	0.001566	1.88	30.15	11.46	0.28
unico	11	CIC 11	Q50	24.00	49.40	50.61	50.20	-0.41	50.82	0.21	50.94	51.70	0.039470	5.10	5.58	10.93	1.76
unico	11	CIC 11	Q200	40.00	49.40	50.79	50.20	-0.59	50.82	0.03	51.21	52.34	0.049074	6.17	7.64	12.67	2.01
unico	11	CIC 11	Q500	55.00	49.40	54.26	50.20	-4.06	50.82	-3.44	51.43	54.31	0.000282	0.94	52.76	13.00	0.14
unico	10.1	CIC 10	Q50	24.00	47.00	49.45	49.00	-0.45	49.50	0.05	48.54	49.54	0.001101	1.33	18.09	11.64	0.34
unico	10.1	CIC 10	Q200	40.00	47.00	49.95	49.00	-0.95	49.50	-0.45	48.94	50.09	0.001234	1.68	23.89	11.90	0.37
unico	10.1	CIC 10	Q500	55.00	47.00	54.27	49.00	-5.27	49.50	-4.77	49.21	54.30	0.000052	0.74	79.01	13.00	0.09
unico	10	CIC 10	Culvert														
unico	9.9	CIC 10	Q50	24.00	47.00	48.54	49.00	0.46	49.50	0.96	48.54	48.98	0.011133	2.96	8.12	9.12	1.00
unico	9.9	CIC 10	Q200	40.00	47.00	48.94	49.00	0.06	49.50	0.56	48.94	49.49	0.010452	3.28	12.19	11.11	1.00
unico	9.9	CIC 10	Q500	55.00	47.00	54.25	49.00	-5.25	49.50	-4.75	49.21	54.28	0.000053	0.74	78.74	13.00	0.09
unico	9.1	CIC 9	Q50	24.00	47.05	48.19	50.00	1.81	48.94	0.75	47.98	48.45	0.005151	2.24	10.70	10.72	0.72
unico	9.1	CIC 9	Q200	40.00	47.05	48.04	50.00	1.96	48.94	0.90	48.33	49.03	0.023463	4.40	9.09	10.45	1.51
unico	9.1	CIC 9	Q500	55.00	47.05	54.26	50.00	-4.26	48.94	-5.32	48.60	54.27	0.000033	0.52	112.56	18.00	0.06
unico	9	CIC 9	Bridge														
unico	8.9	CIC 9	Q50	24.00	47.05	47.98	50.00	2.02	48.94	0.96	47.98	48.39	0.010462	2.83	8.47	10.34	1.00
unico	8.9	CIC 9	Q200	40.00	47.05	48.33	50.00	1.67	48.94	0.61	48.33	48.88	0.009766	3.29	12.15	10.96	1.00
unico	8.9	CIC 9	Q500	55.00	47.05	54.26	50.00	-4.26	48.94	-5.32	48.60	54.27	0.000033	0.52	112.54	18.00	0.06

HEC-RAS Plan: 2_Ott13 River: Cicala Reach: unico (Continued)

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	
unico	8	CIC 8	Q50	24.00	44.30	45.39	48.00	2.61	47.80	2.41	45.74	46.54	0.032669	4.74	5.06	6.23	1.68
unico	8	CIC 8	Q200	40.00	44.30	47.09	48.00	0.91	47.80	0.71	46.21	47.35	0.002571	2.25	17.77	8.74	0.50
unico	8	CIC 8	Q500	55.00	44.30	54.26	48.00	-6.26	47.80	-6.46	46.58	54.27	0.000026	0.46	128.92	17.80	0.05
unico	7	CIC 7	Q50	24.00	43.60	44.69	46.50	1.81	46.50	1.81	45.03	45.91	0.032392	4.89	4.91	4.50	1.49
unico	7	CIC 7	Q200	40.00	43.60	46.92	46.50	-0.42	46.50	-0.42	45.60	47.29	0.004362	2.68	14.94	4.50	0.47
unico	7	CIC 7	Q500	55.00	43.60	54.20	46.50	-7.70	46.50	-7.70	46.08	54.26	0.000525	1.15	47.68	4.50	0.11
unico	6.9	CIC 7	Q50	24.00	43.60	44.69	46.50	1.81	46.50	1.81	45.03	45.91	0.032203	4.88	4.92	4.50	1.49
unico	6.9	CIC 7	Q200	40.00	43.60	46.79	46.50	-0.29	46.50	-0.29	45.61	47.27	0.010001	3.07	13.05		0.55
unico	6.9	CIC 7	Q500	55.00	43.60	53.28	46.50	-6.78	46.50	-6.78	46.08	54.18	0.018908	4.21	13.05		0.43
unico	6.1	CIC 6	Q50	24.00	41.70	43.00	43.50	0.50	43.50	0.50	43.13	43.86	0.019604	4.10	5.85	4.50	1.15
unico	6.1	CIC 6	Q200	40.00	41.70	43.93	43.50	-0.43	43.50	-0.43	43.50	45.17	0.039548	4.94	8.10		1.06
unico	6.1	CIC 6	Q500	55.00	41.70	47.86	43.50	-4.36	43.50	-4.36	43.50	50.21	0.074770	6.79	8.10		0.87
unico	6	CIC 6	Q50	24.00	41.70	43.00	43.50	0.50	43.50	0.50	43.13	43.86	0.019604	4.10	5.85	4.50	1.15
unico	6	CIC 6	Q200	40.00	41.70	44.41	43.50	-0.91	43.50	-0.91	43.70	44.96	0.007318	3.27	12.22	4.50	0.63
unico	6	CIC 6	Q500	55.00	41.70	49.41	43.50	-5.91	43.50	-5.91	44.18	49.54	0.001079	1.58	34.70	4.50	0.18
unico	5	CIC 5	Q50	24.00	41.40	42.62	43.20	0.58	43.20	0.58	42.78	43.51	0.021018	4.18	5.74	4.70	1.21
unico	5	CIC 5	Q200	40.00	41.40	44.30	43.20	-1.10	43.20	-1.10	43.35	44.74	0.005481	2.94	13.62	4.70	0.55
unico	5	CIC 5	Q500	55.00	41.40	49.40	43.20	-6.20	43.20	-6.20	43.81	49.50	0.000870	1.46	37.58	4.70	0.17
unico	4.9		Q50	24.00	41.40	42.62	43.20	0.58	43.20	0.58	42.78	43.51	0.020890	4.17	5.76	4.70	1.20
unico	4.9		Q200	40.00	41.40	43.53	43.20	-0.33	43.20	-0.33	43.20	44.67	0.035686	4.73	8.46		1.03
unico	4.9		Q500	55.00	41.40	47.15	43.20	-3.95	43.20	-3.95	43.20	49.30	0.067468	6.50	8.46		0.87
unico	4.1		Q50	24.00	40.50	41.93	43.00	1.07	43.00	1.07	42.04	42.83	0.020191	4.20	5.72	4.00	1.12
unico	4.1		Q200	40.00	40.50	42.78	43.00	0.22	43.00	0.22	42.67	43.76	0.015924	4.39	9.12	4.00	0.93
unico	4.1		Q500	55.00	40.50	45.83	43.00	-2.83	43.00	-2.83	43.00	47.37	0.038631	5.50	10.00		0.76
unico	4	CIC 4	Q50	24.00	40.50	41.93	43.00	1.07	43.00	1.07	42.04	42.83	0.020191	4.20	5.72	4.00	1.12
unico	4	CIC 4	Q200	40.00	40.50	42.68	43.00	0.32	43.00	0.32	42.67	43.75	0.017869	4.58	8.73	4.00	0.99
unico	4	CIC 4	Q500	55.00	40.50	46.74	43.00	-3.74	43.00	-3.74	43.18	46.98	0.002517	2.21	24.94	4.00	0.28
unico	3.1	CIC 3	Q50	24.00	39.70	41.40	42.20	0.80	42.20	0.80	41.17	41.95	0.010414	3.29	7.31	4.30	0.80
unico	3.1	CIC 3	Q200	40.00	39.70	42.39	42.20	-0.19	42.20	-0.19	41.77	43.00	0.008524	3.46	11.55	4.30	0.67
unico	3.1	CIC 3	Q500	55.00	39.70	46.70	42.20	-4.50	42.20	-4.50	42.25	46.87	0.001549	1.83	30.09	4.30	0.22
unico	3	CIC 3		Bridge													
unico	2.9	CIC 3	Q50	24.00	39.70	41.17	42.20	1.03	42.20	1.03	41.17	41.90	0.015537	3.80	6.32	4.30	1.00
unico	2.9	CIC 3	Q200	40.00	39.70	42.04	42.20	0.16	42.20	0.16	41.77	42.84	0.012283	3.98	10.04	4.30	0.83
unico	2.9	CIC 3	Q500	55.00	39.70	46.68	42.20	-4.48	42.20	-4.48	42.25	46.85	0.001556	1.83	30.03	4.30	0.22
unico	2.1	CIC 2	Q50	24.00	39.00	39.95	40.70	0.75	40.70	0.75	40.33	41.24	0.037347	5.03	4.77	5.00	1.64
unico	2.1	CIC 2	Q200	40.00	39.00	42.25	40.70	-1.55	40.70	-1.55	40.87	42.56	0.003431	2.46	16.27	5.00	0.44

HEC-RAS Plan: 2_Ott13 River: Cicala Reach: unico (Continued)

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
unico	2.1	CIC 2	Q500	55.00	39.00	46.71	40.70	-6.01	40.70	-6.01	41.31	46.81	0.000786	1.43	38.54	5.00	0.16
unico	2	CIC 2	Q50	24.00	39.00	39.96	40.70	0.74	40.70	0.74	40.33	41.24	0.037131	5.02	4.78	5.00	1.64
unico	2	CIC 2	Q200	40.00	39.00	41.35	40.70	-0.65	40.70	-0.65	40.70	42.48	0.036578	4.71	8.50		0.98
unico	2	CIC 2	Q500	55.00	39.00	44.47	40.70	-3.77	40.70	-3.77	40.70	46.61	0.069155	6.47	8.50		0.88
unico	1	CIC 1	Q50	24.00	36.40	37.48	38.50	1.02	38.50	1.02	37.73	38.48	0.025732	4.43	5.41	5.00	1.36
unico	1	CIC 1	Q200	40.00	36.40	38.83	38.50	-0.33	38.50	-0.33	38.27	39.57	0.019541	3.81	10.50		0.78
unico	1	CIC 1	Q500	55.00	36.40	39.71	38.50	-1.21	38.50	-1.21	38.50	41.11	0.036944	5.24	10.50		0.92

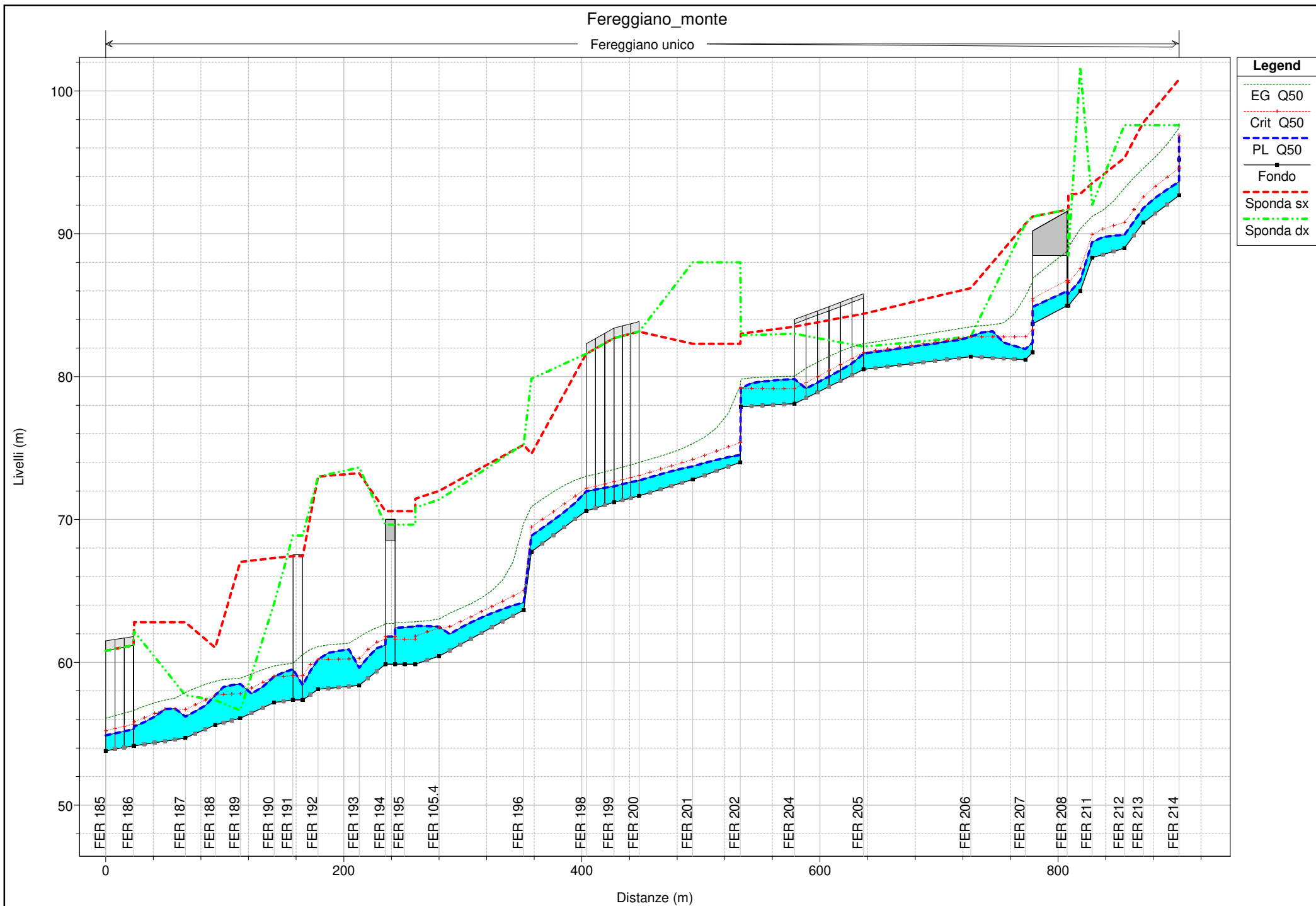
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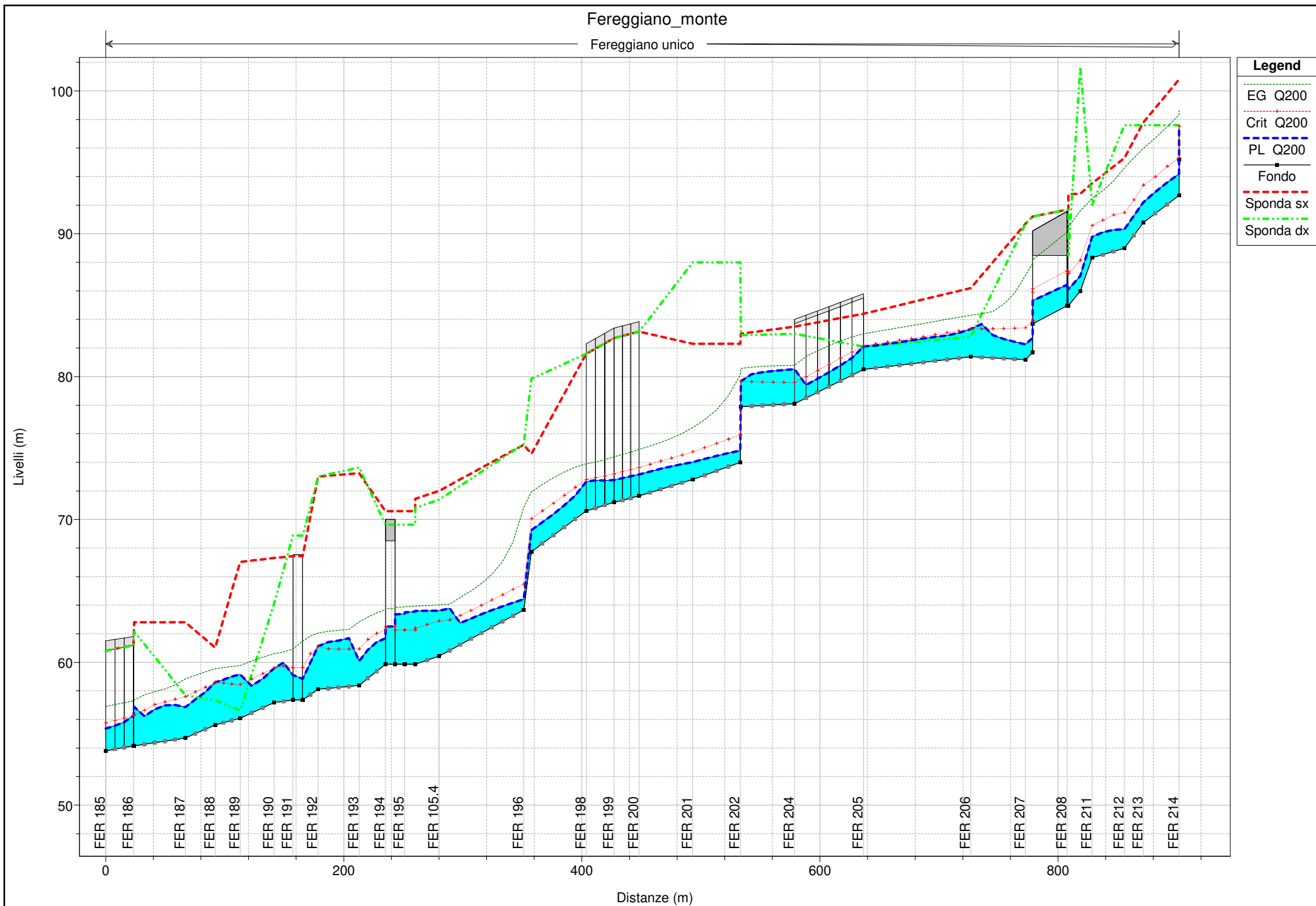
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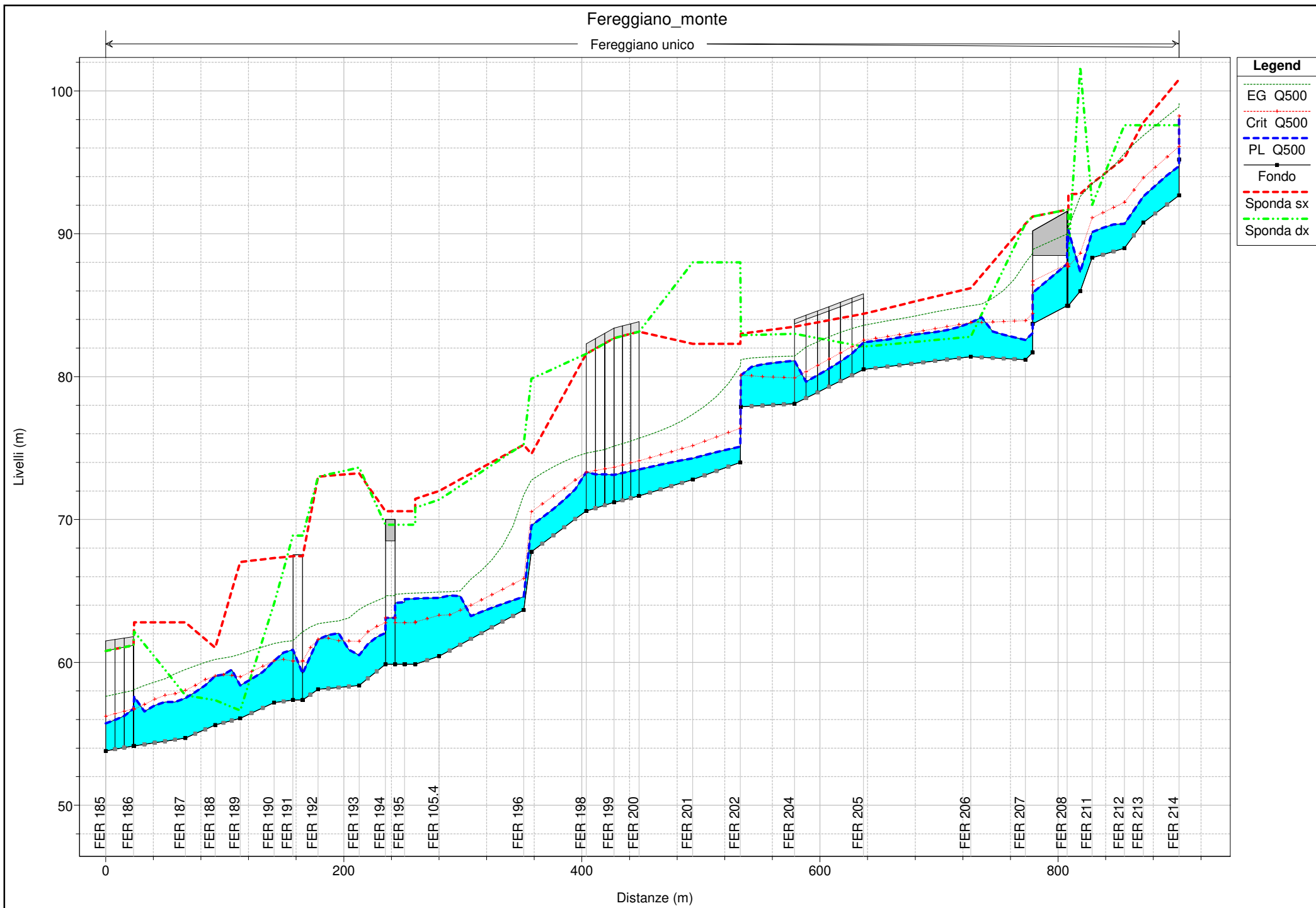
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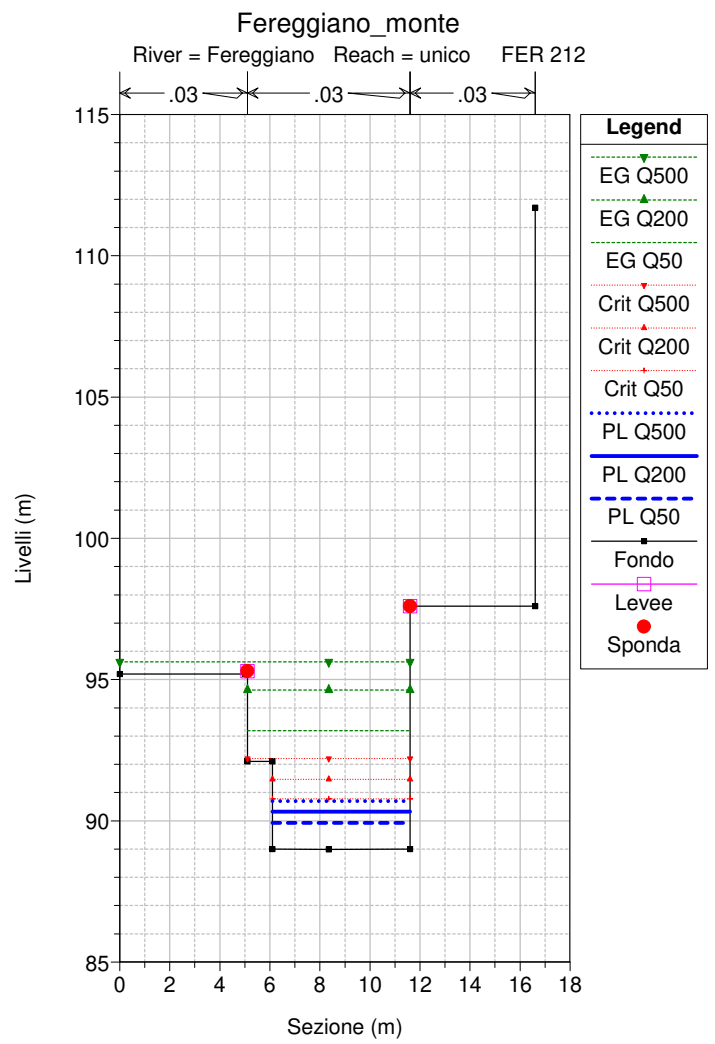
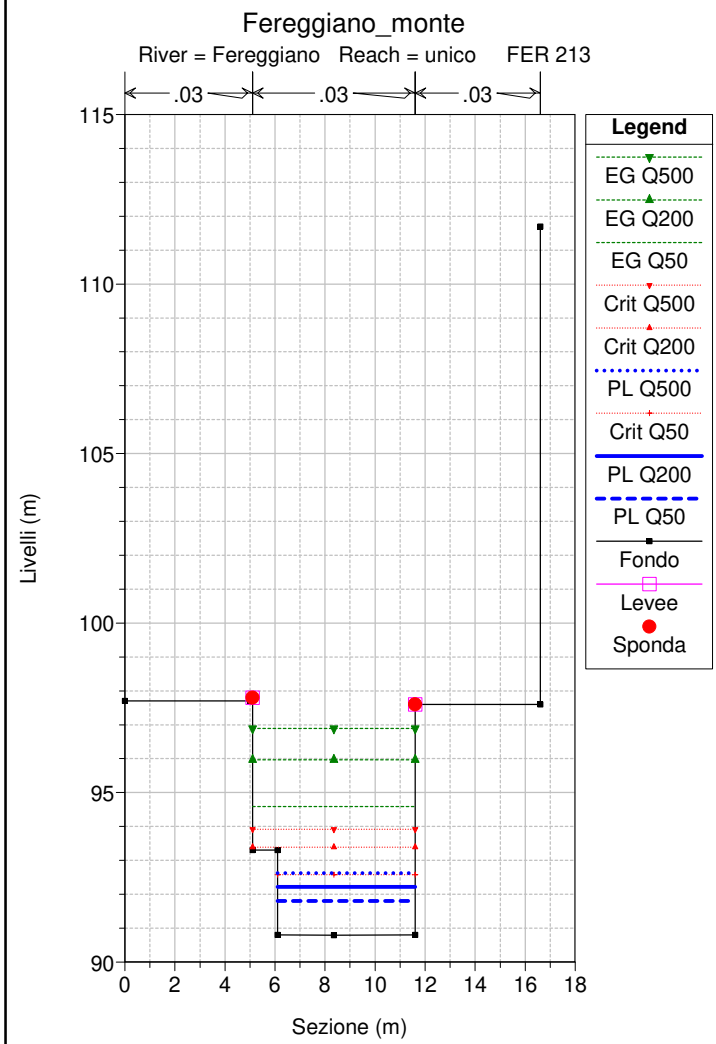
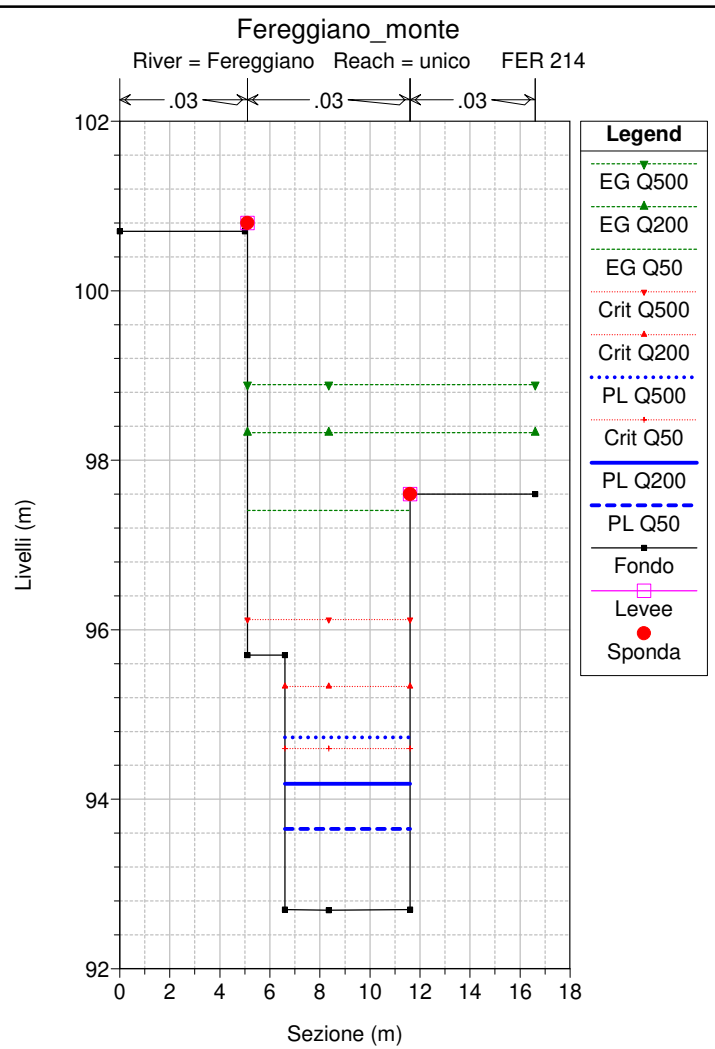
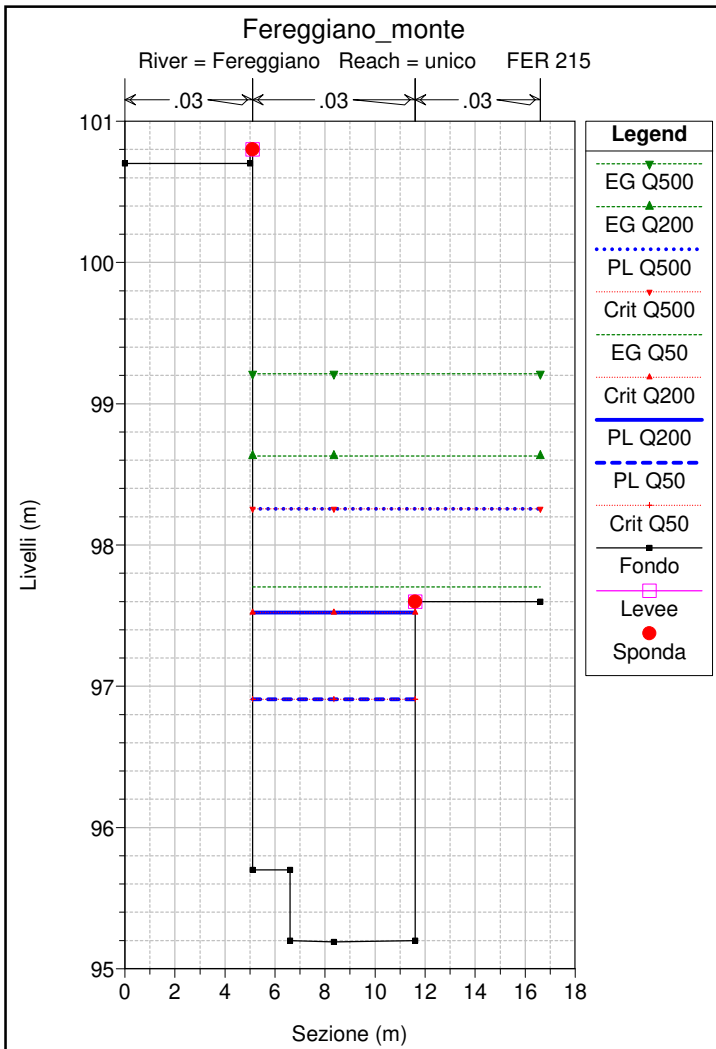
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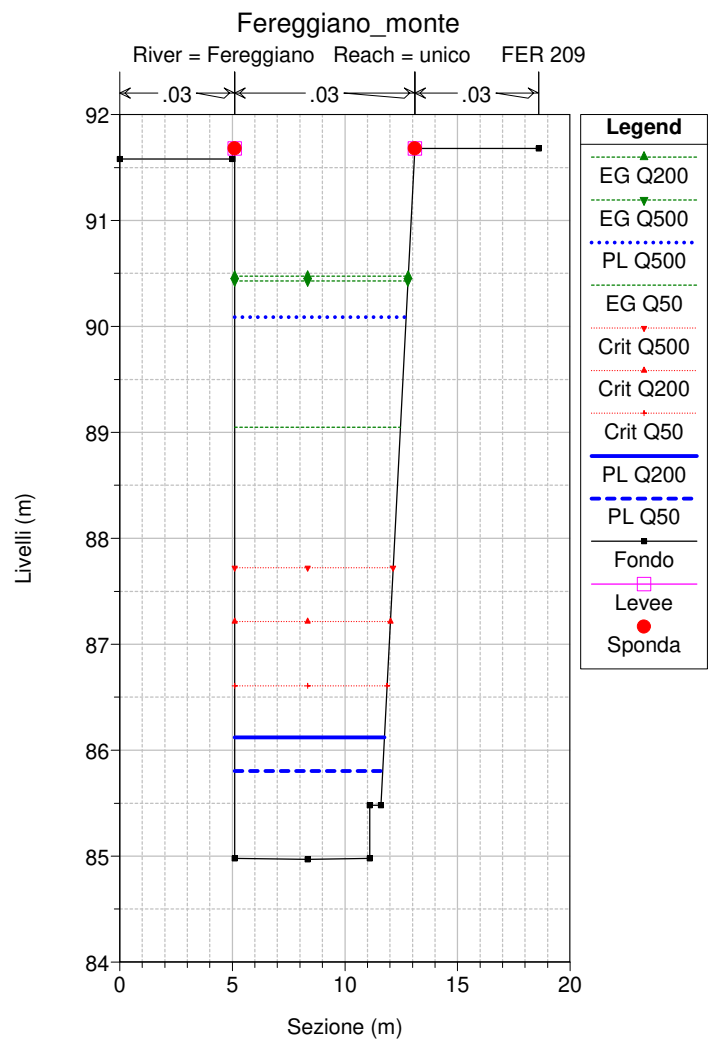
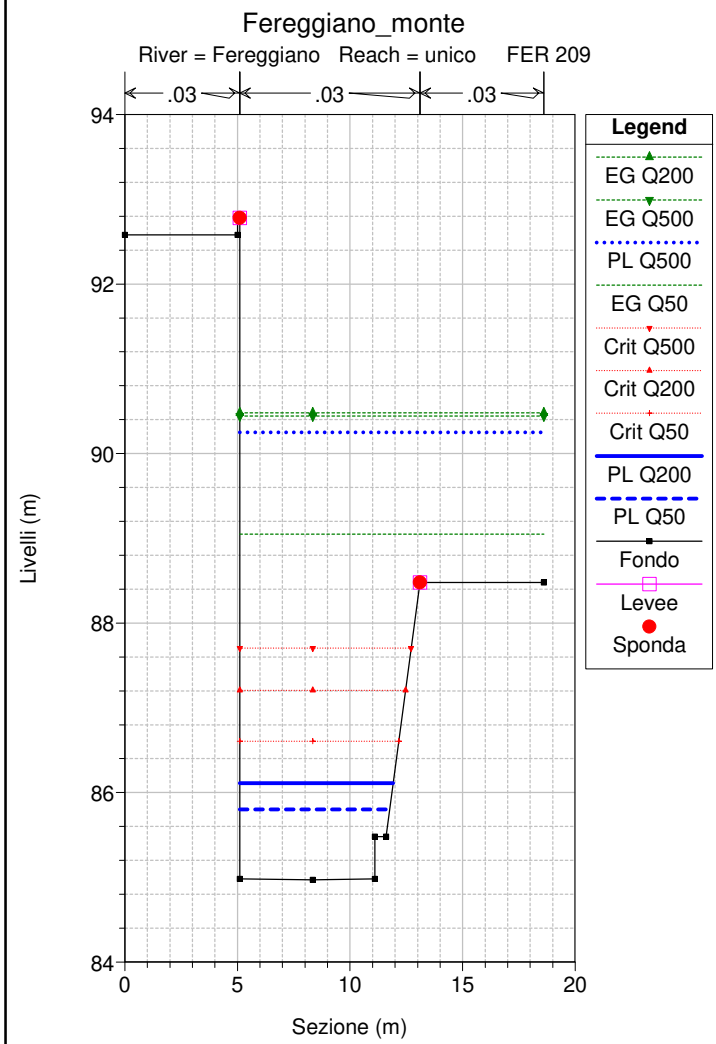
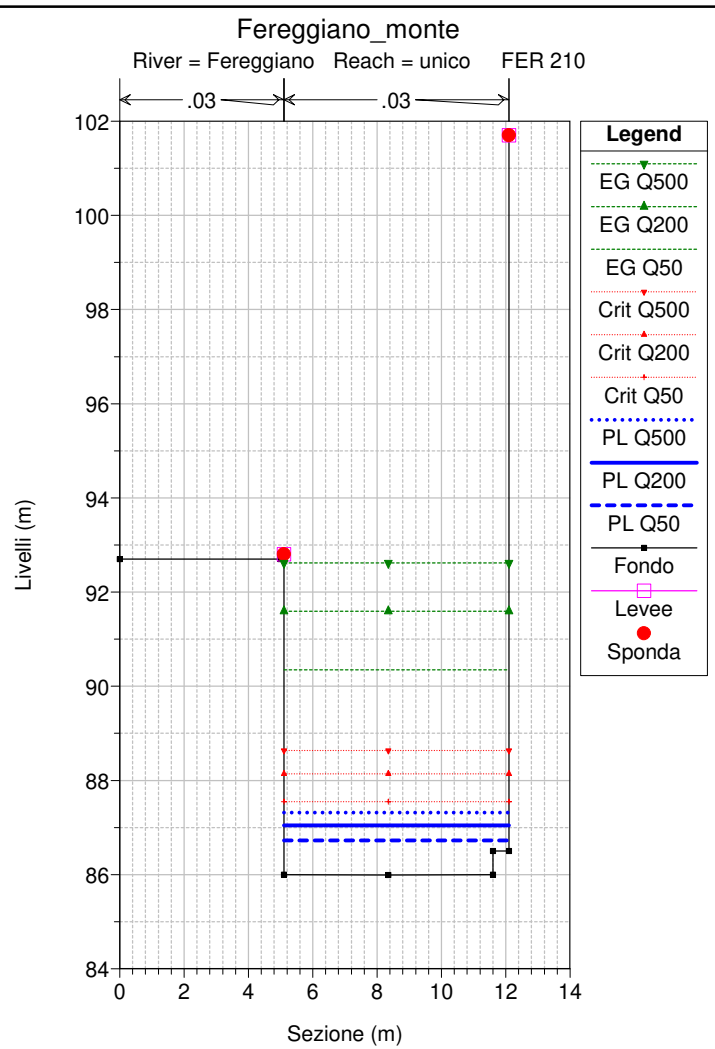
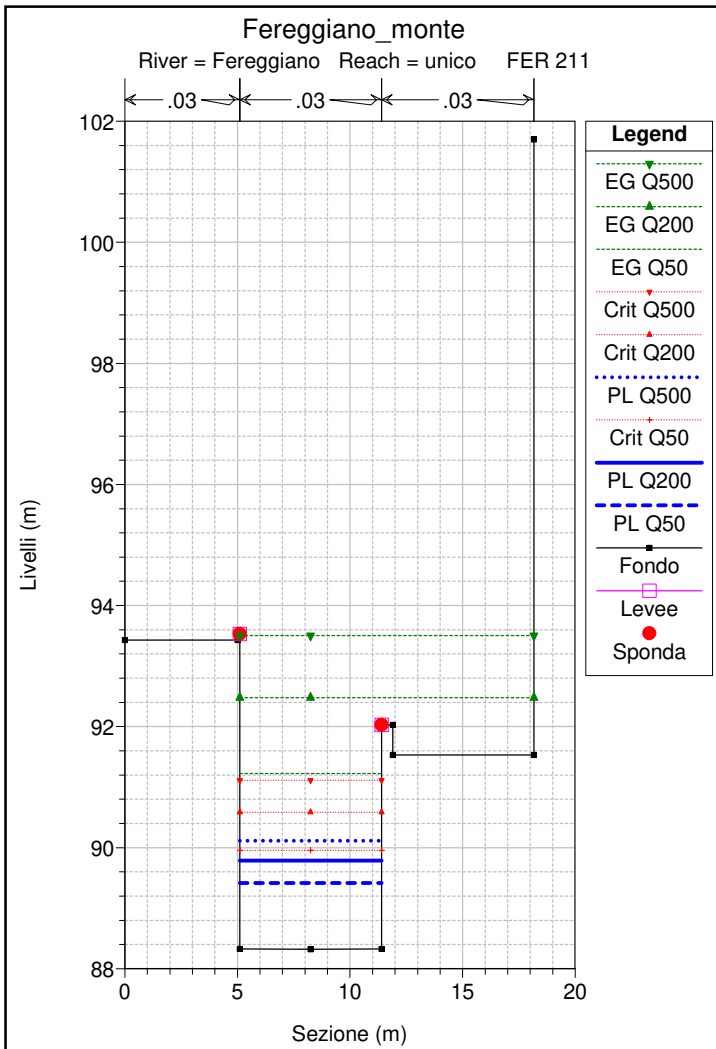
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

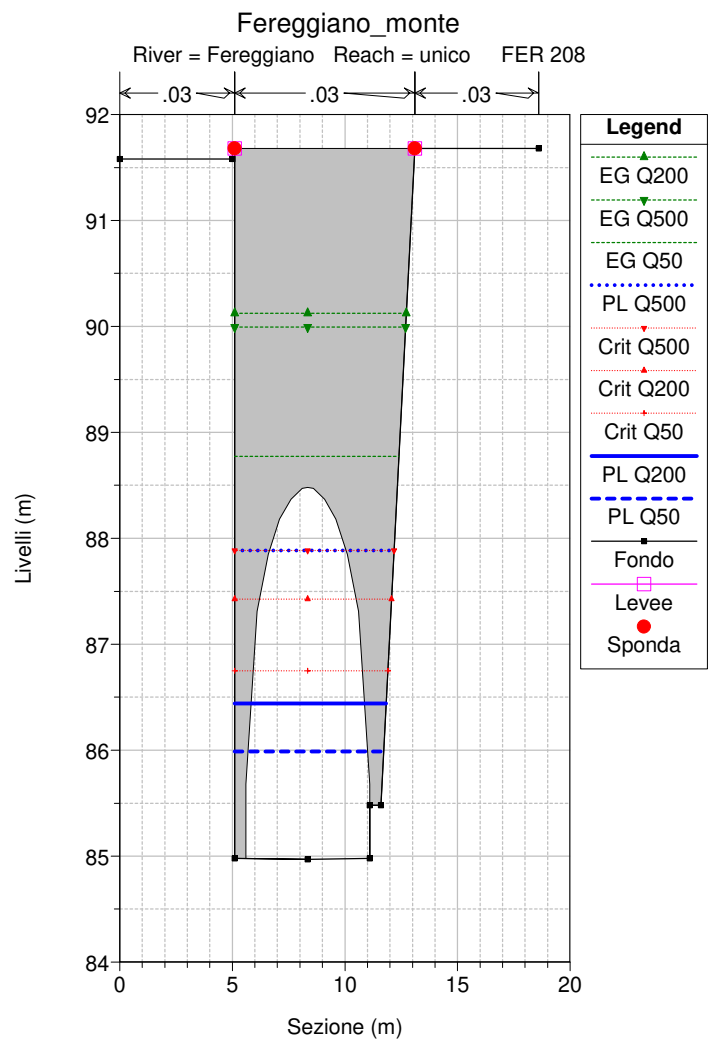
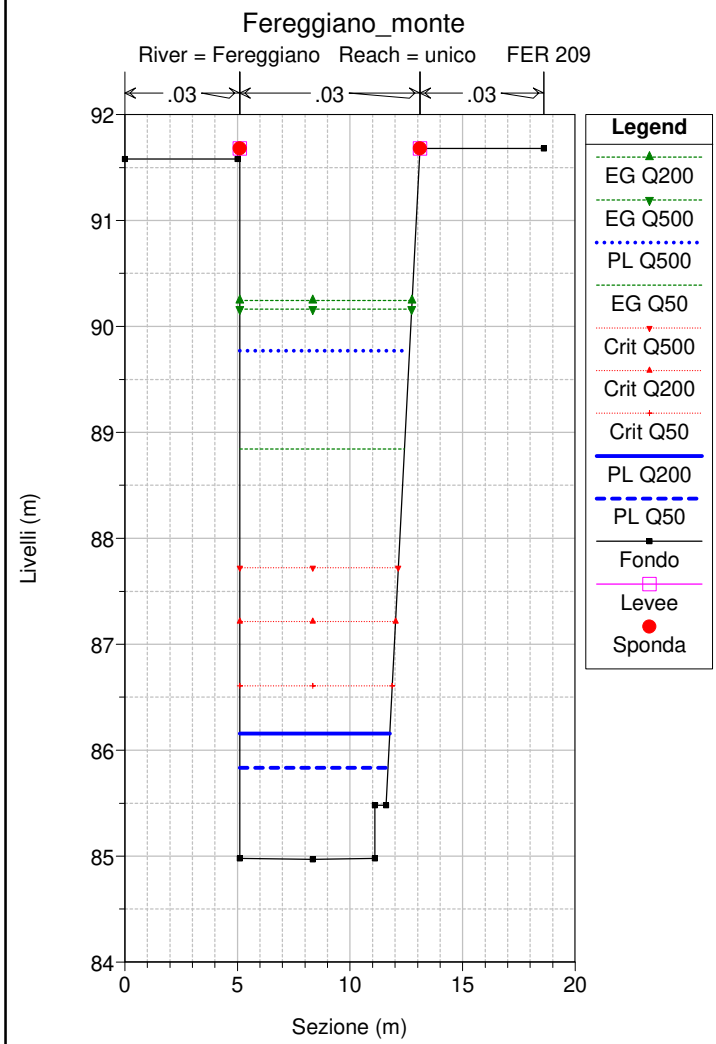
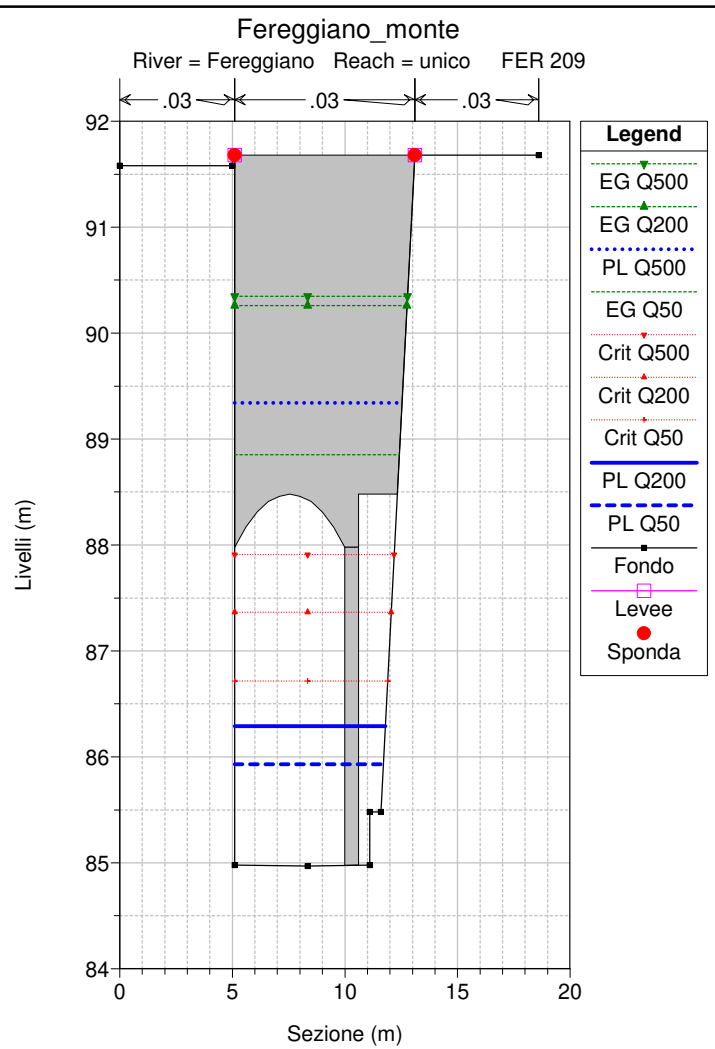
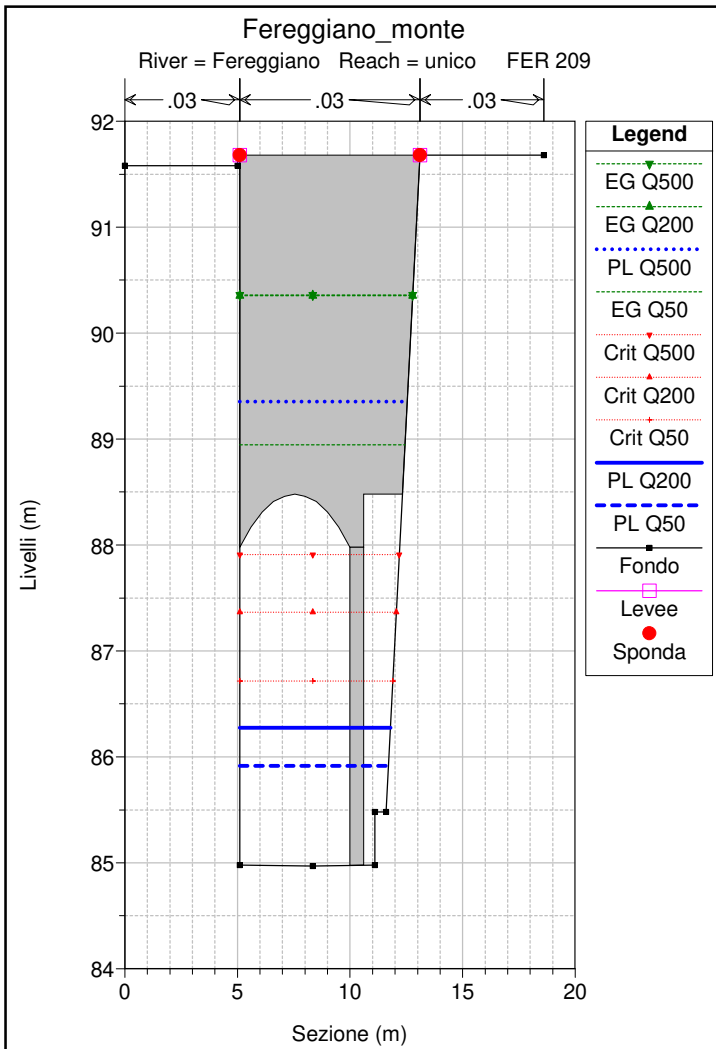


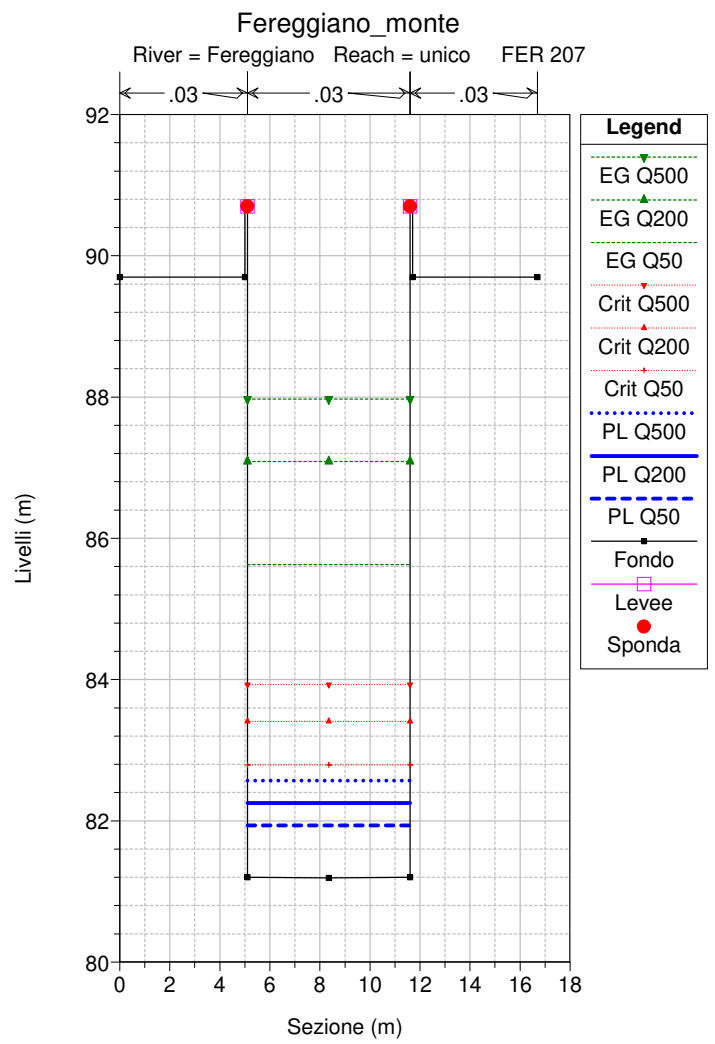
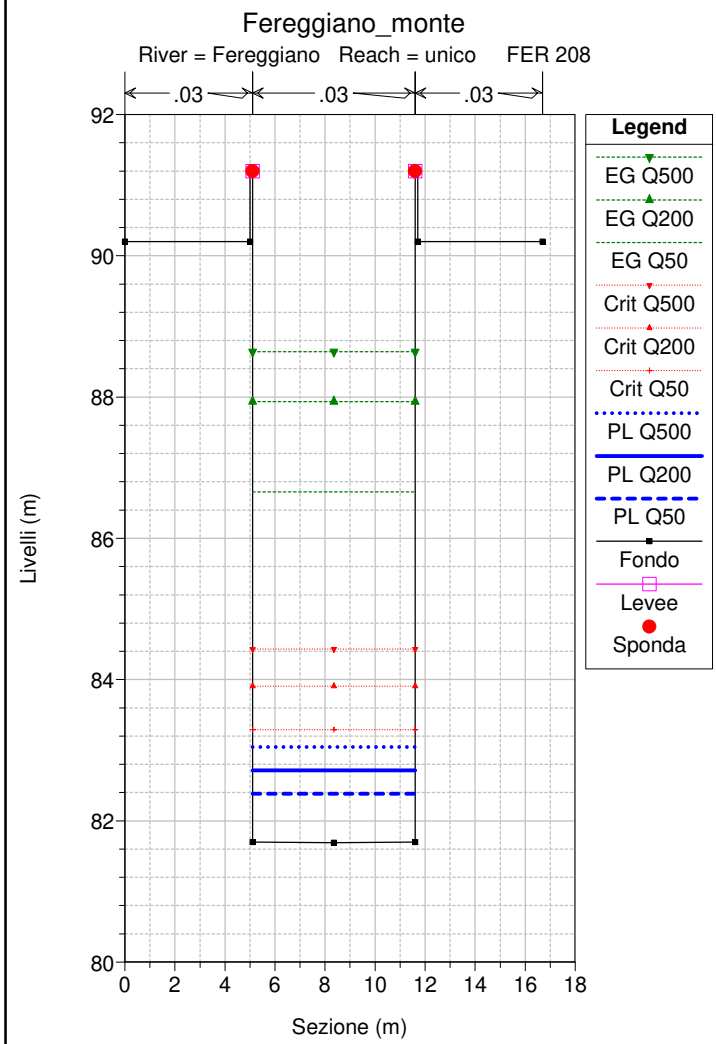
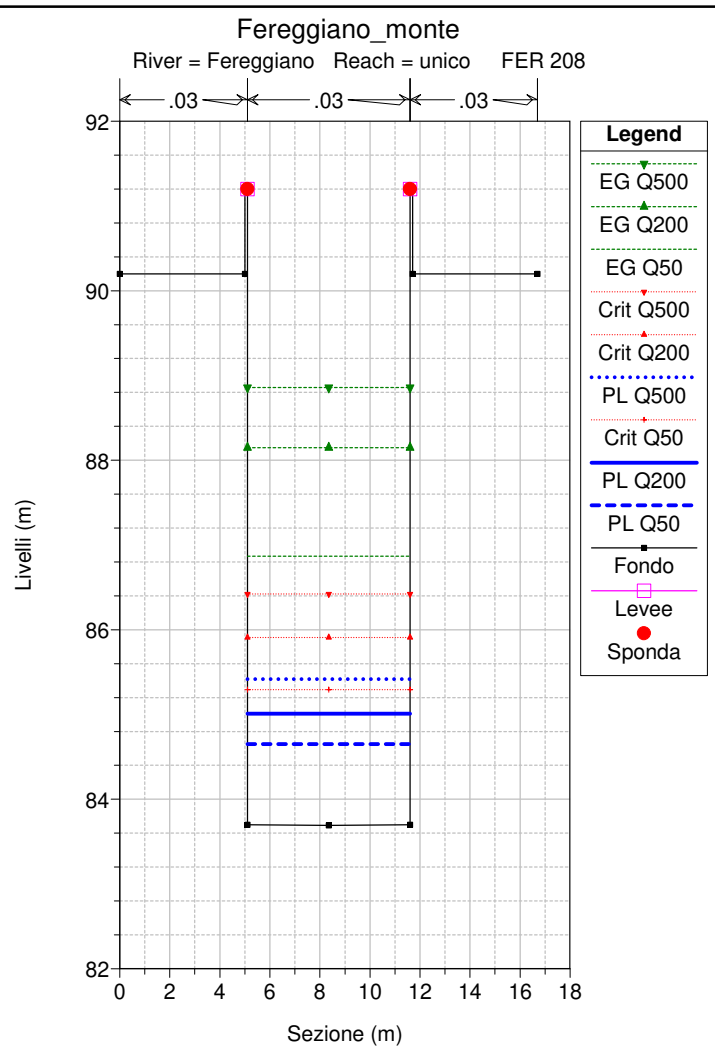
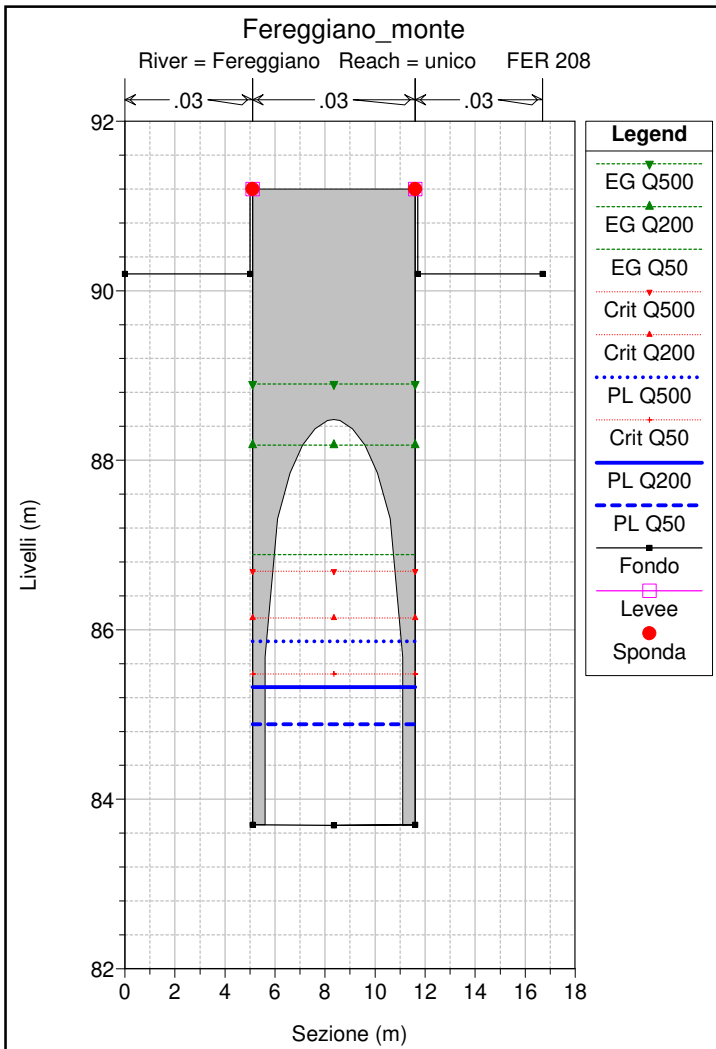


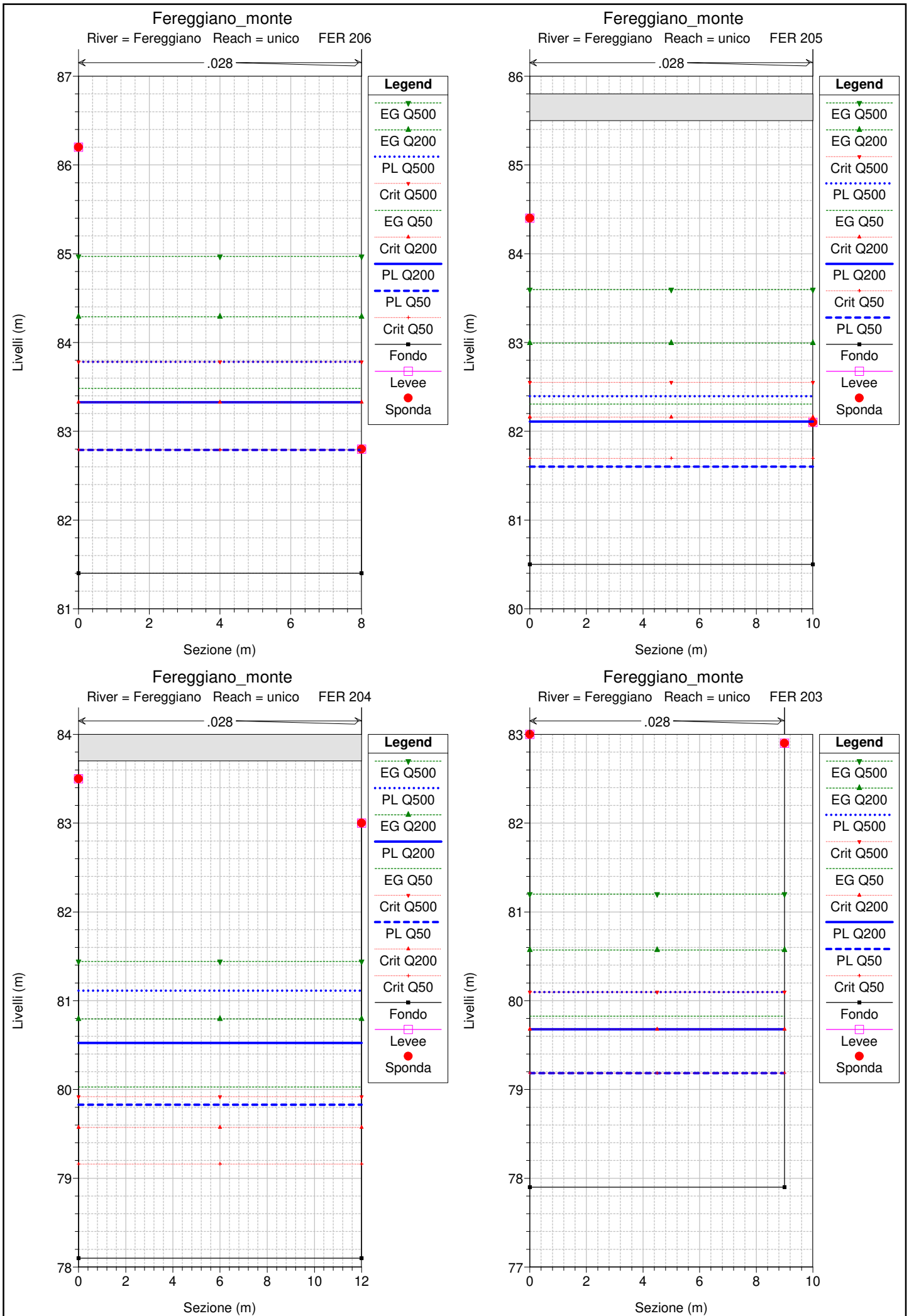


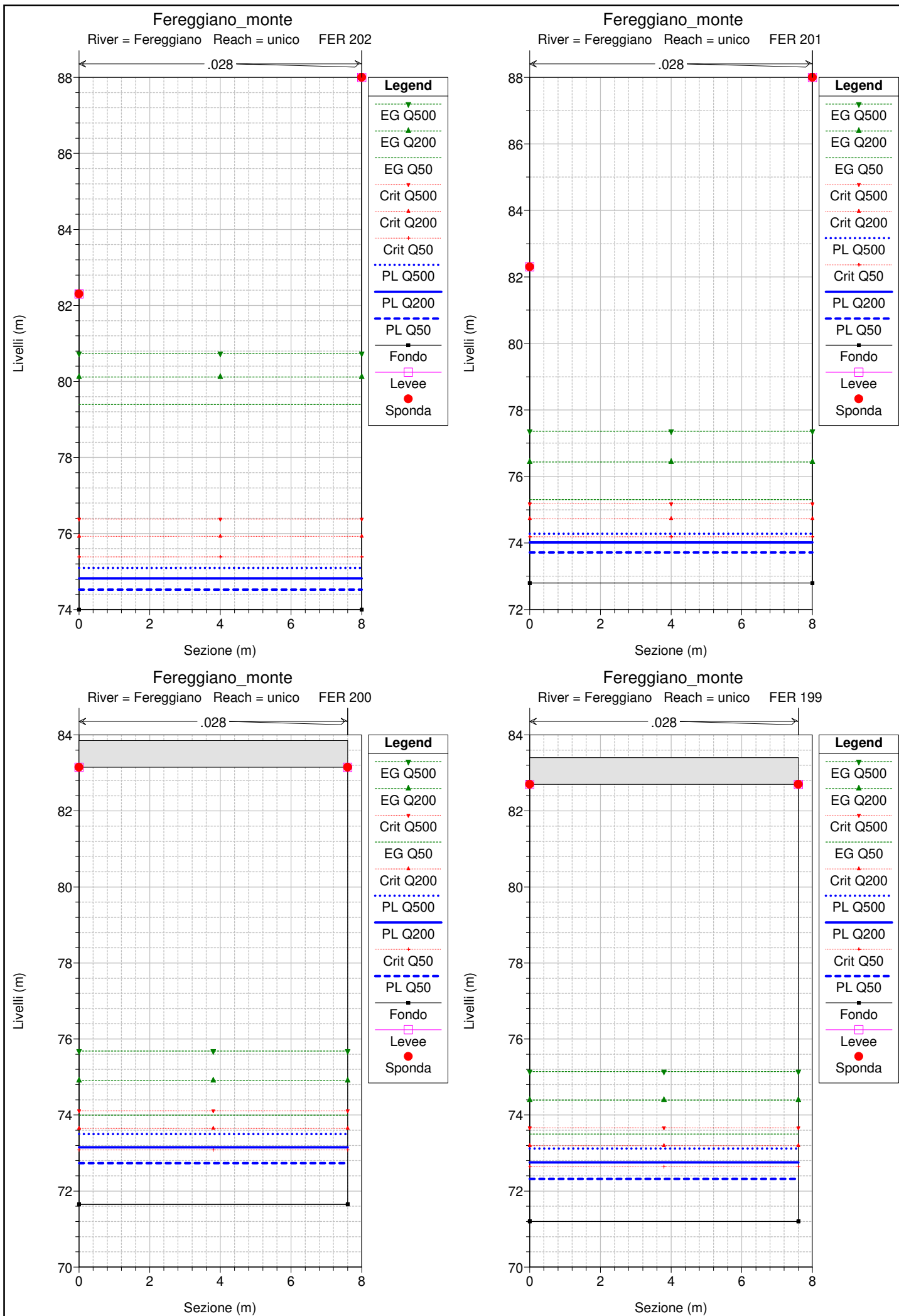


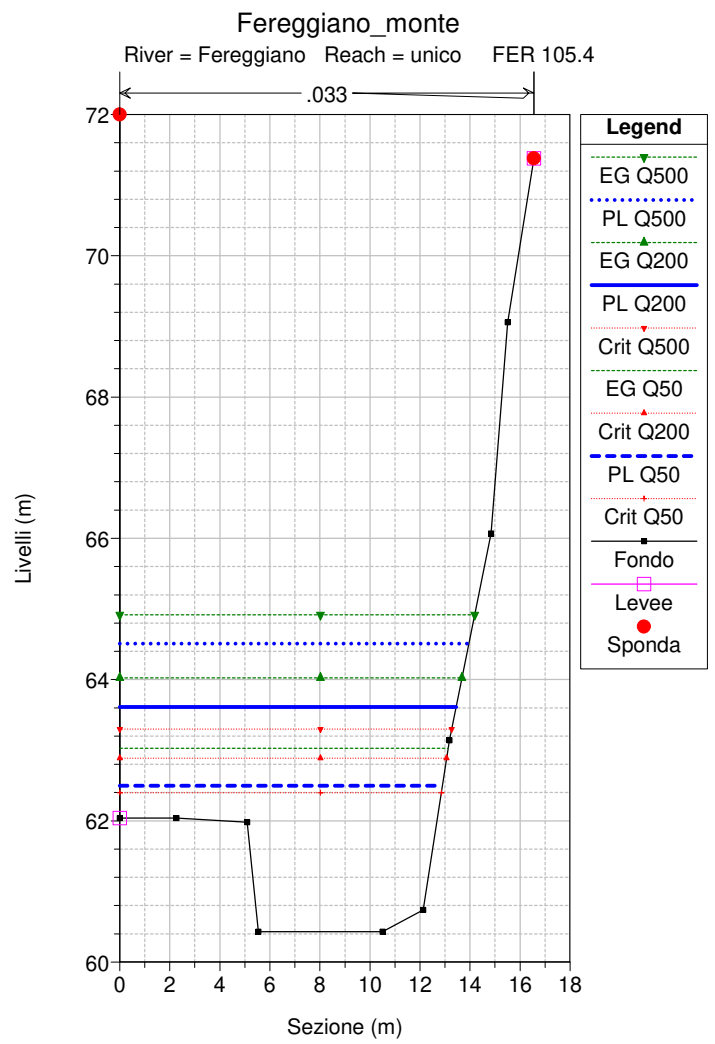
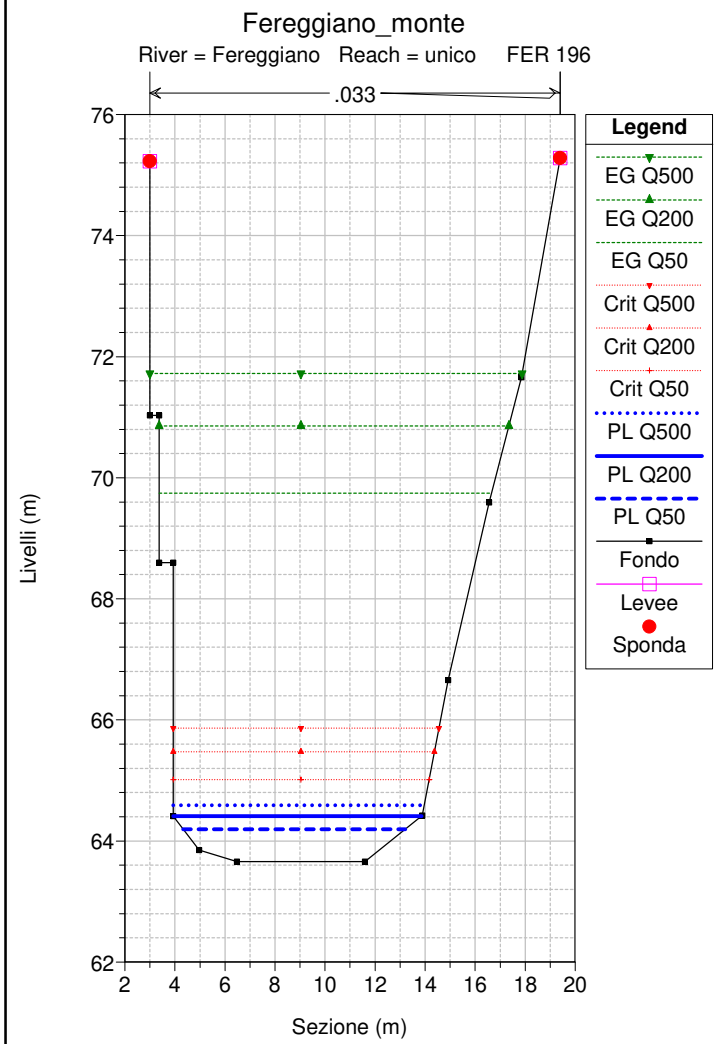
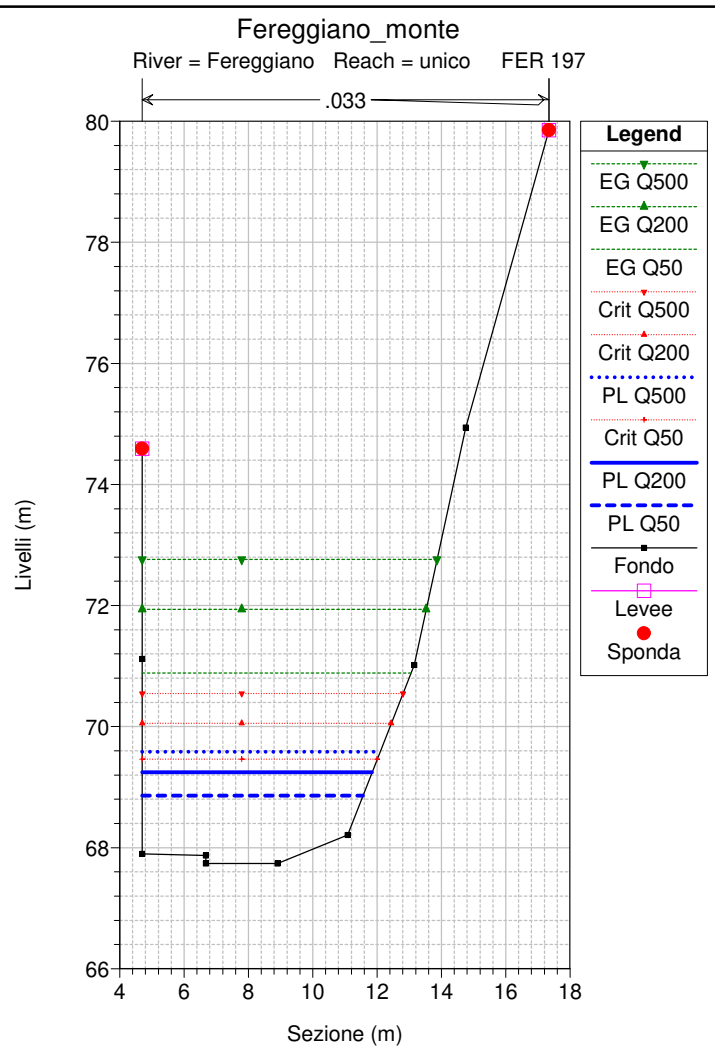
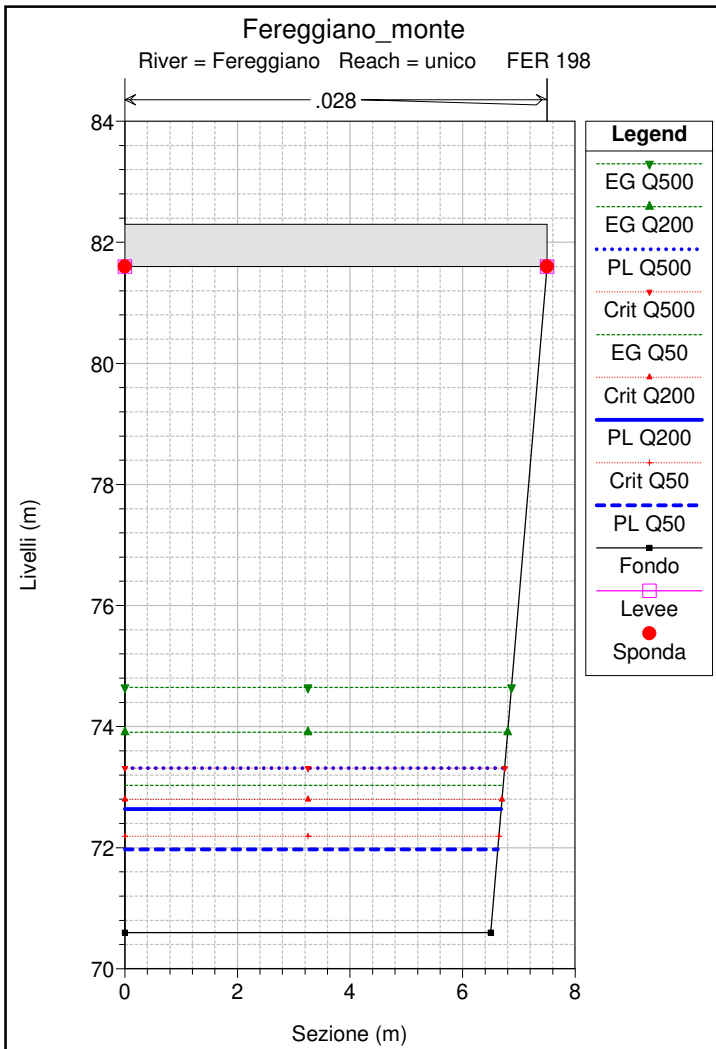


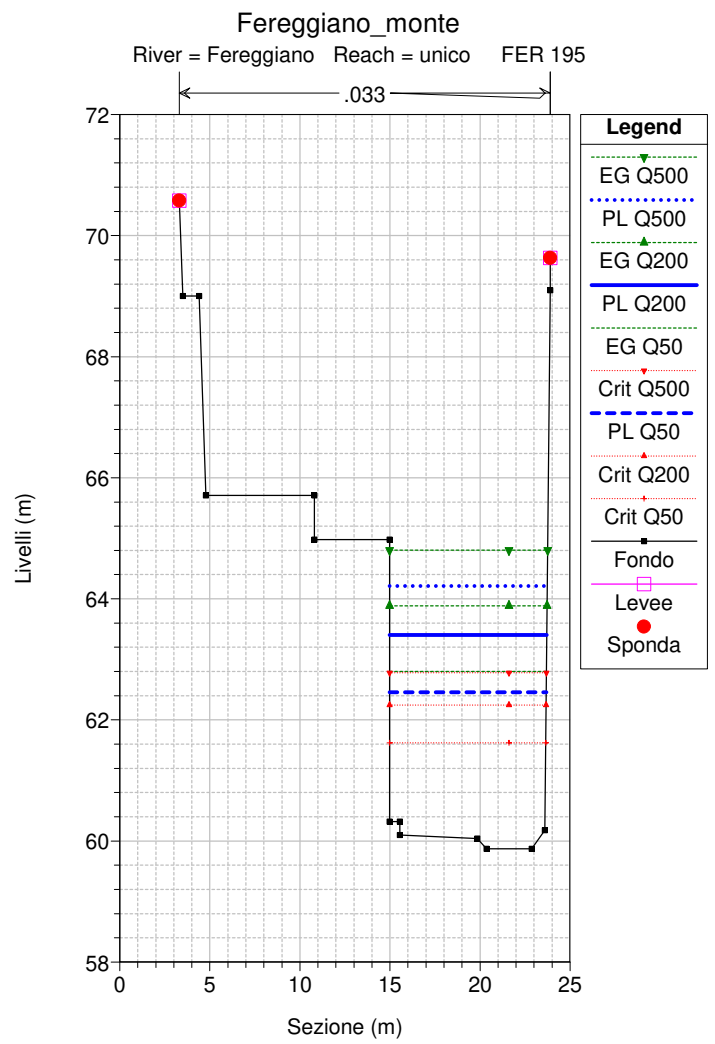
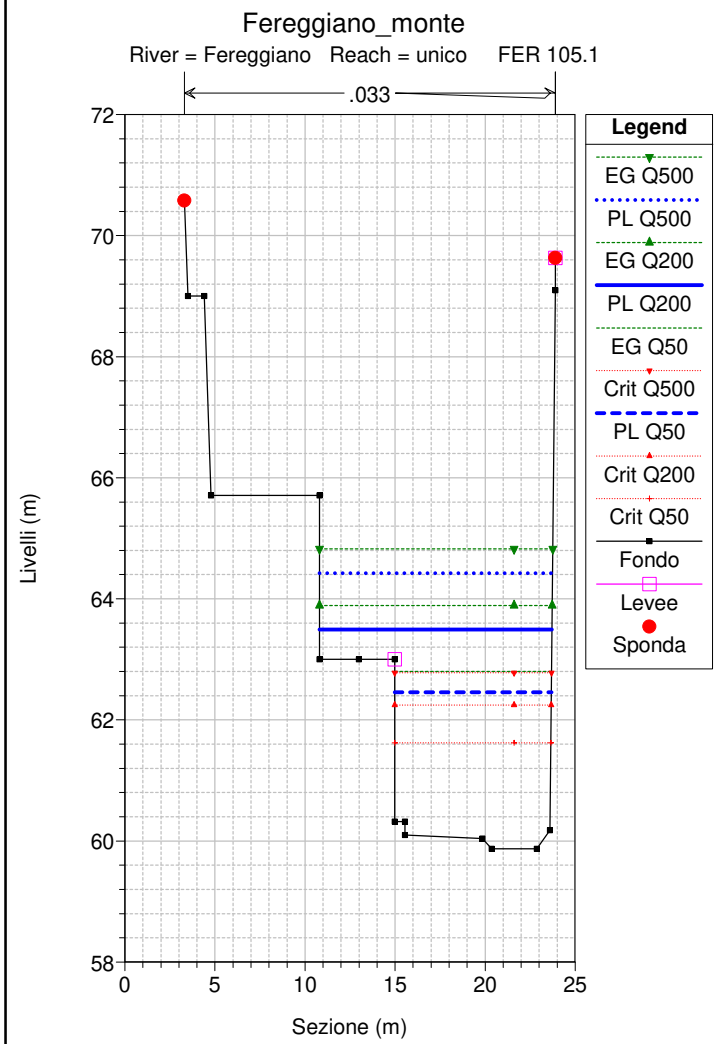
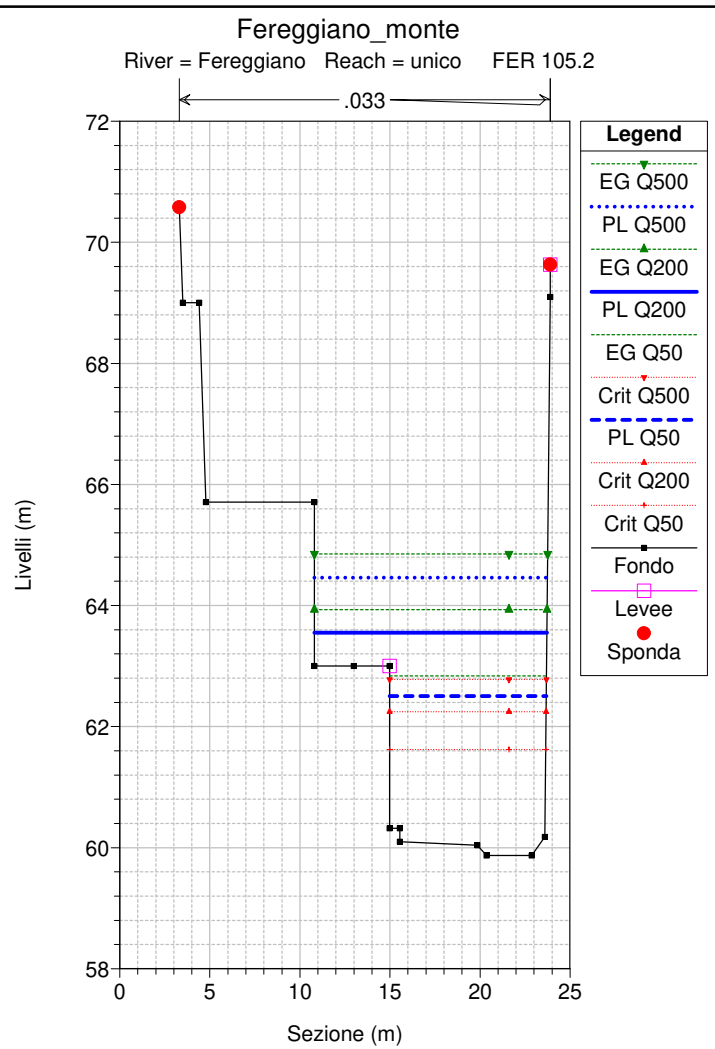
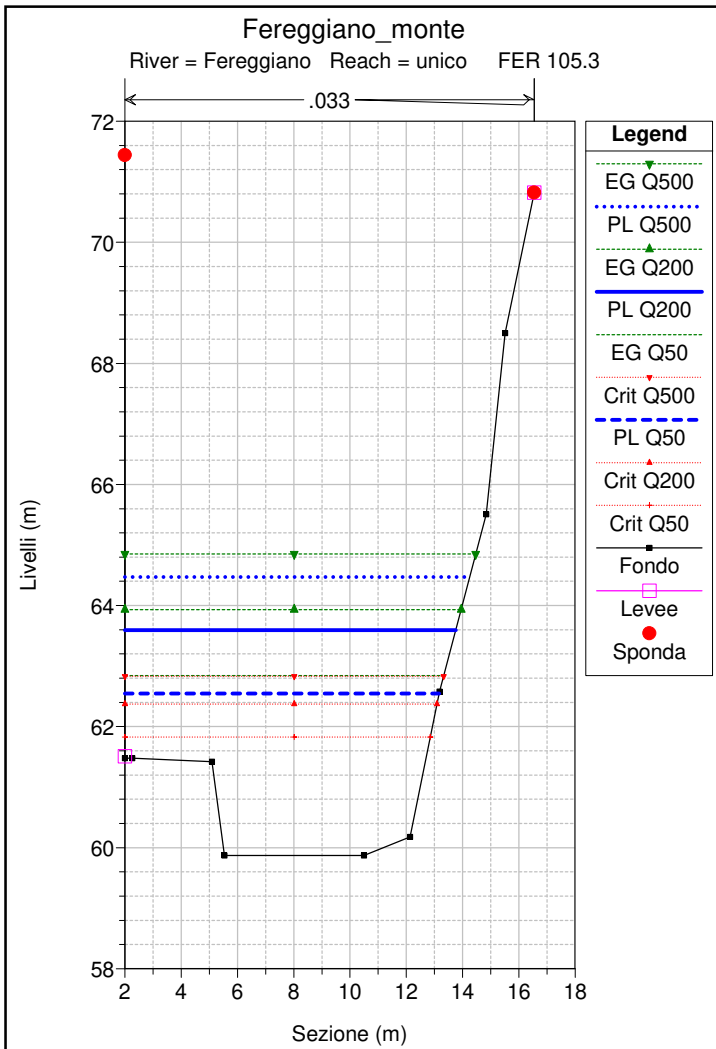


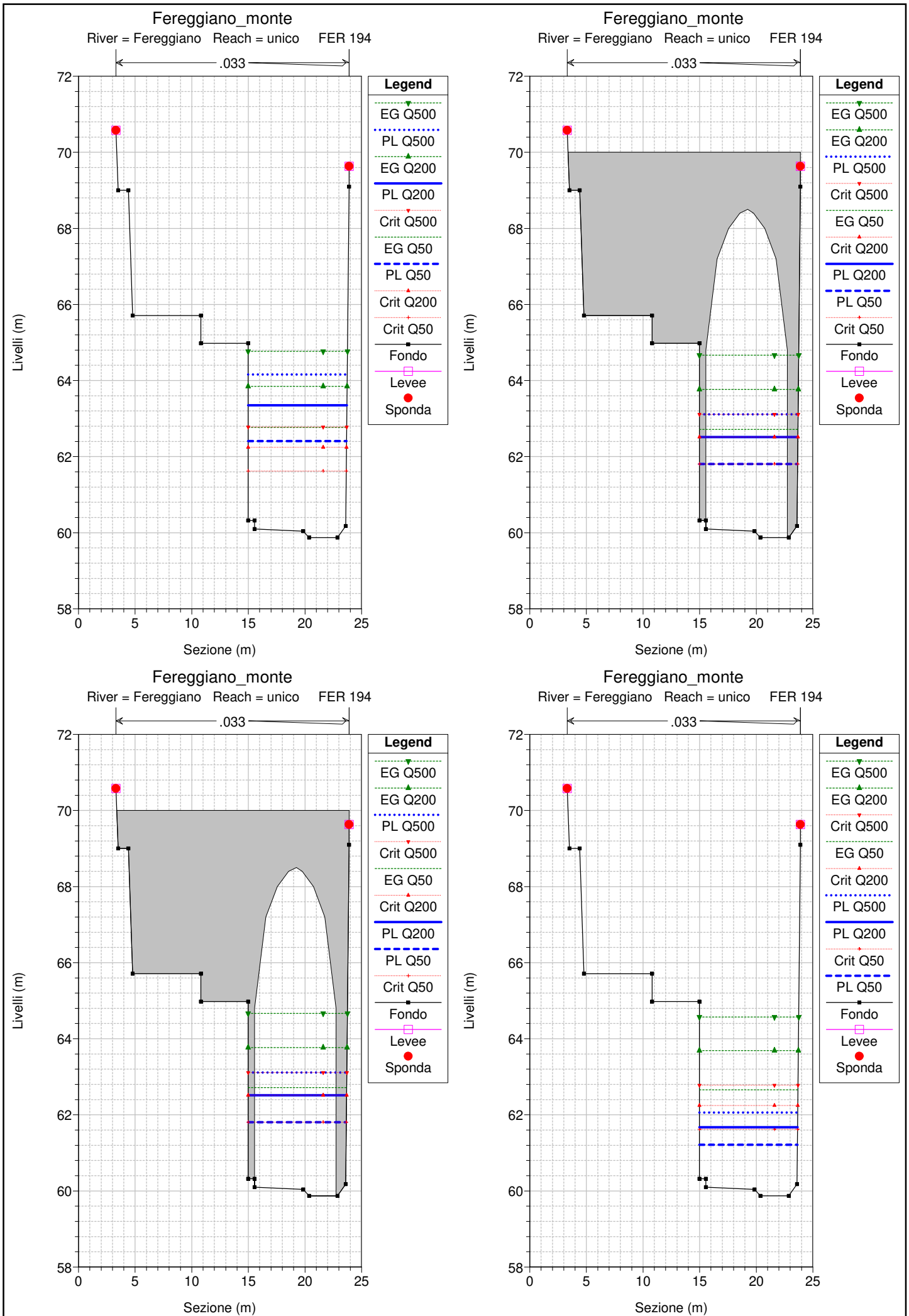


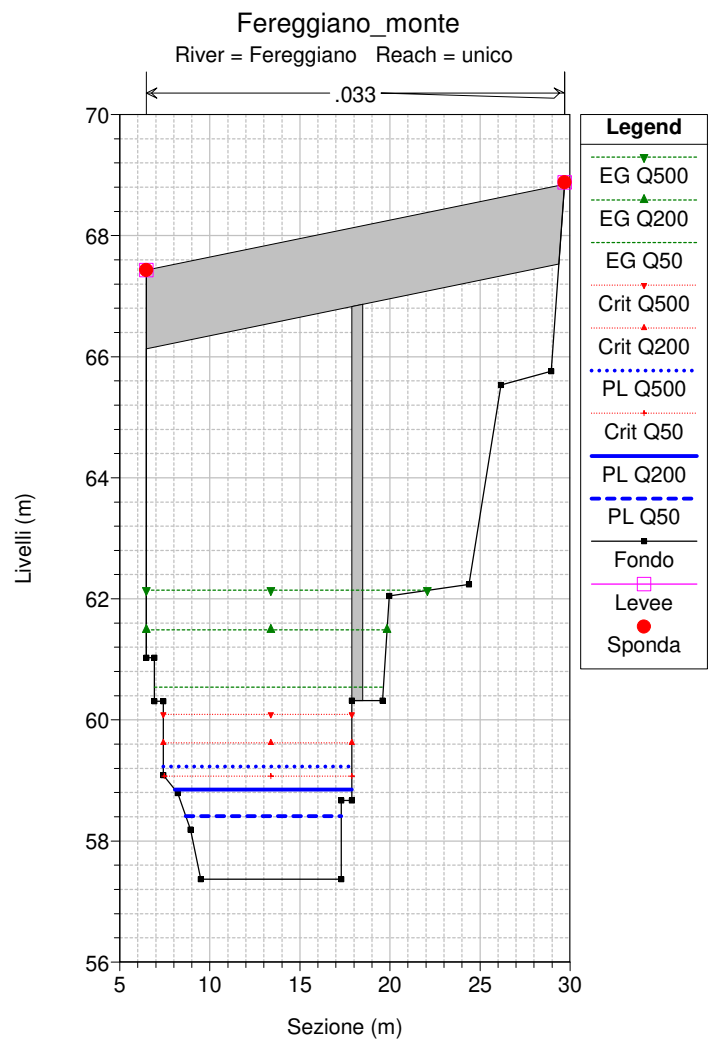
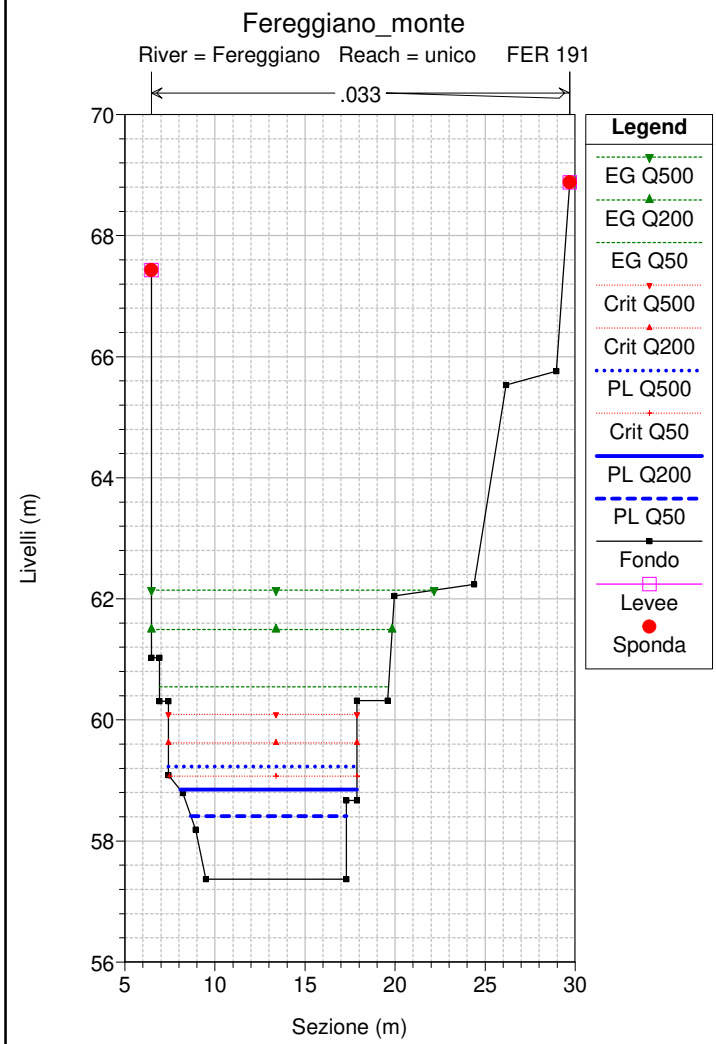
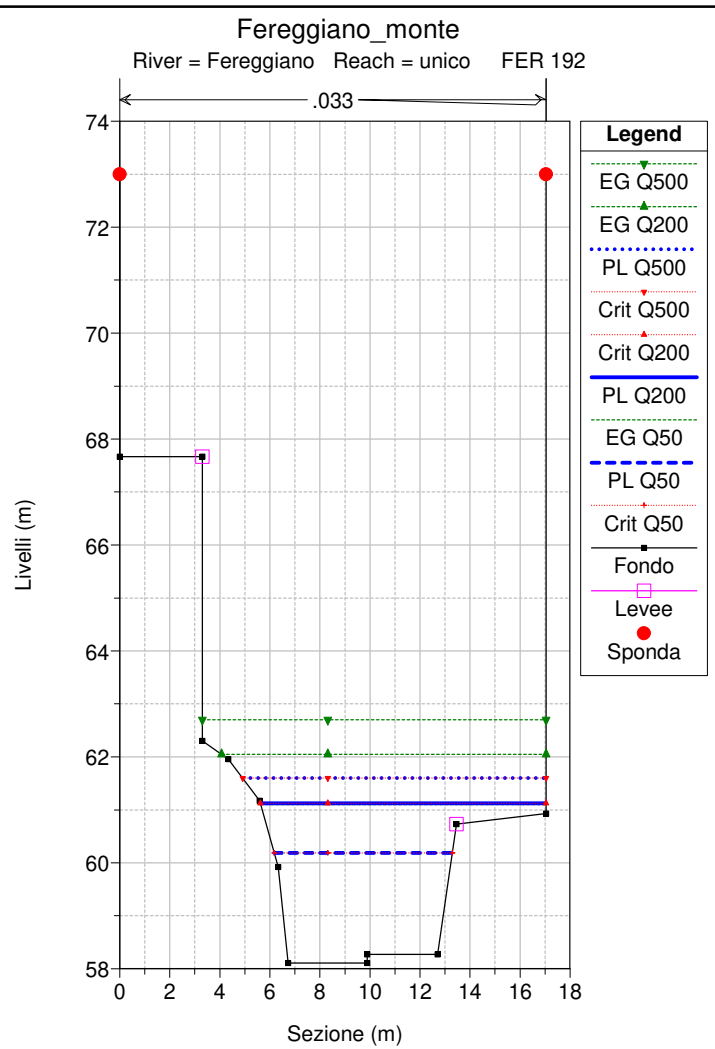
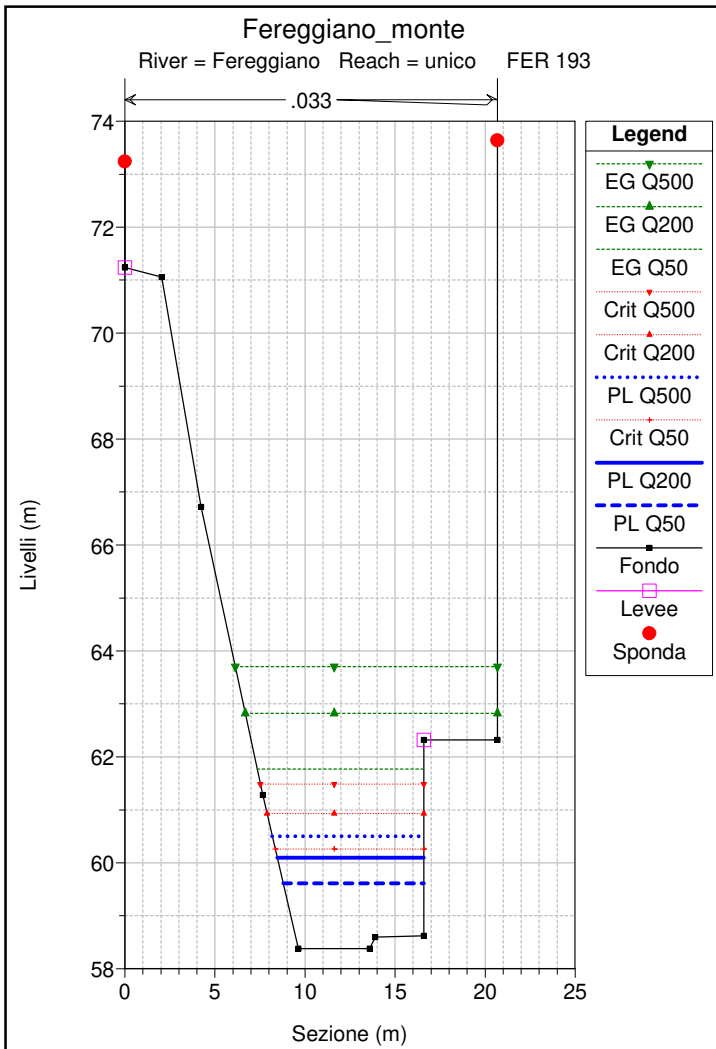


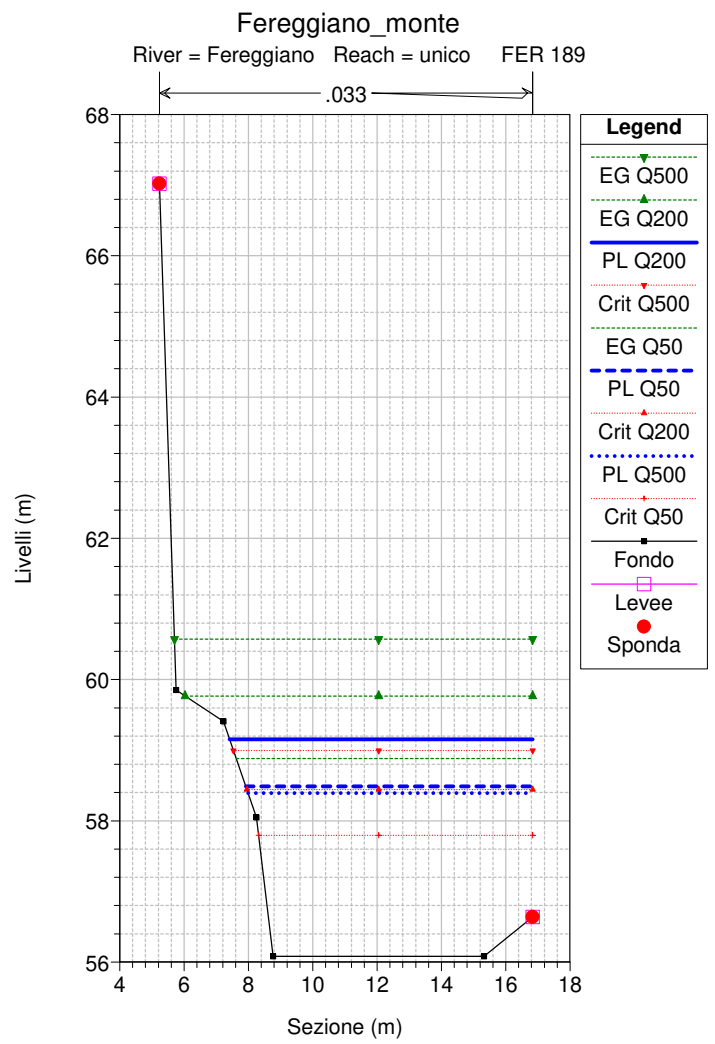
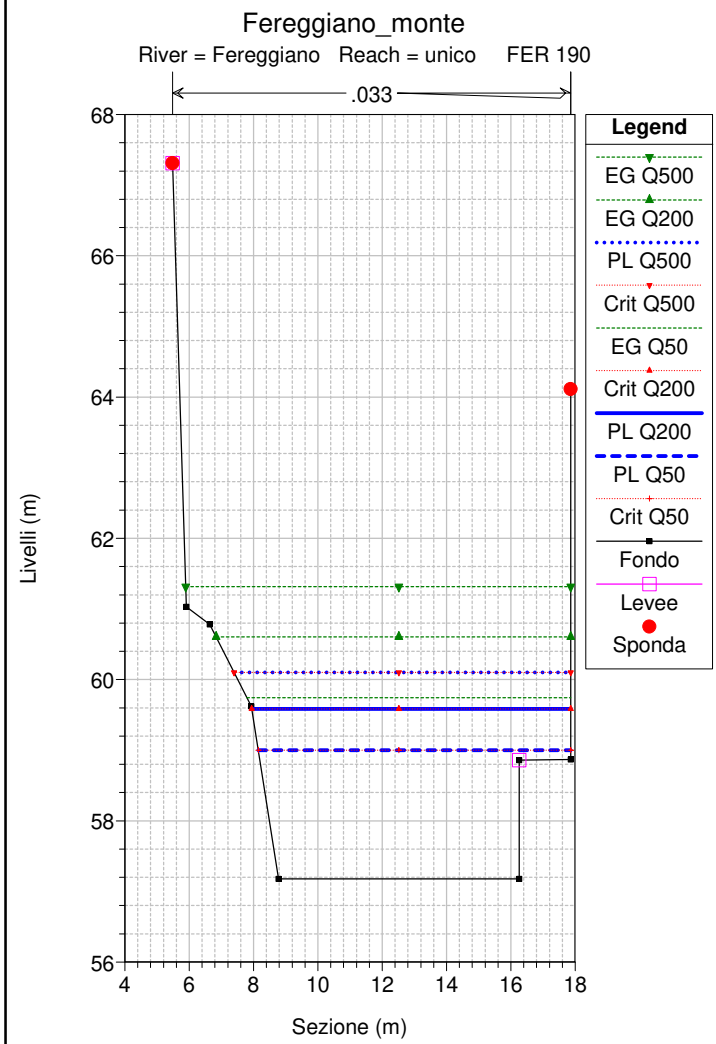
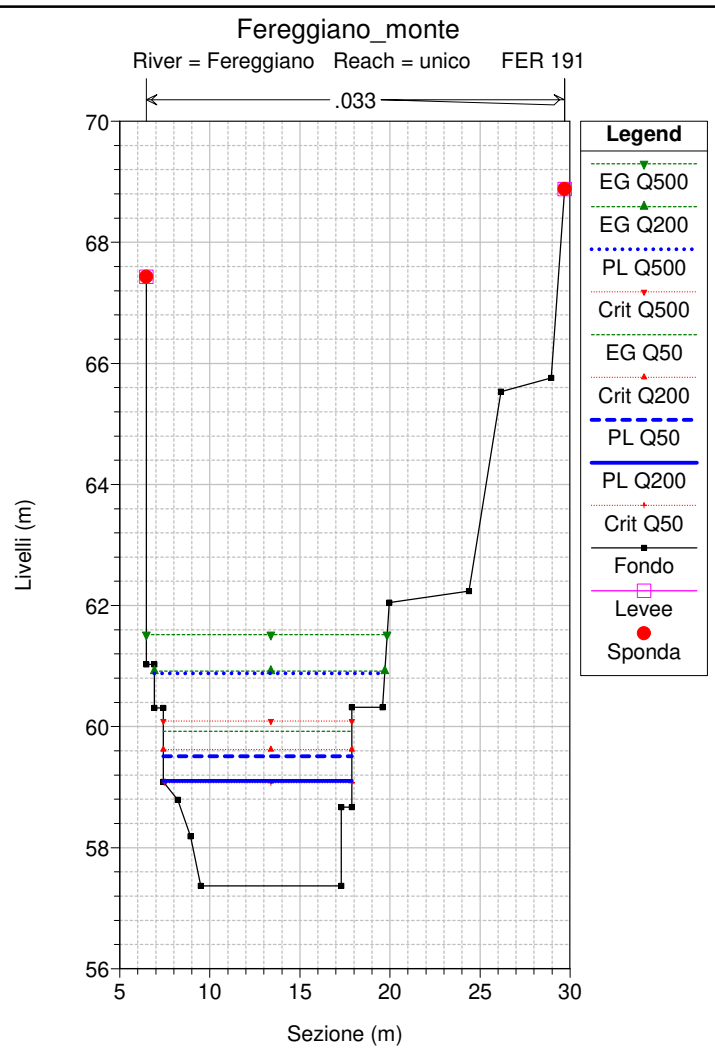
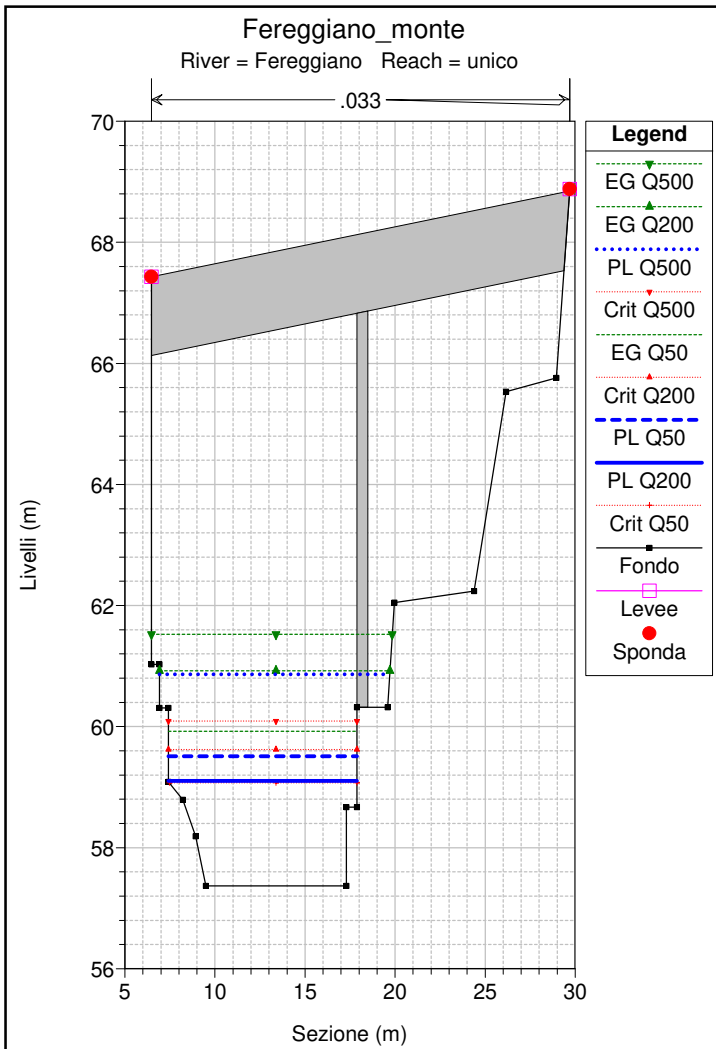


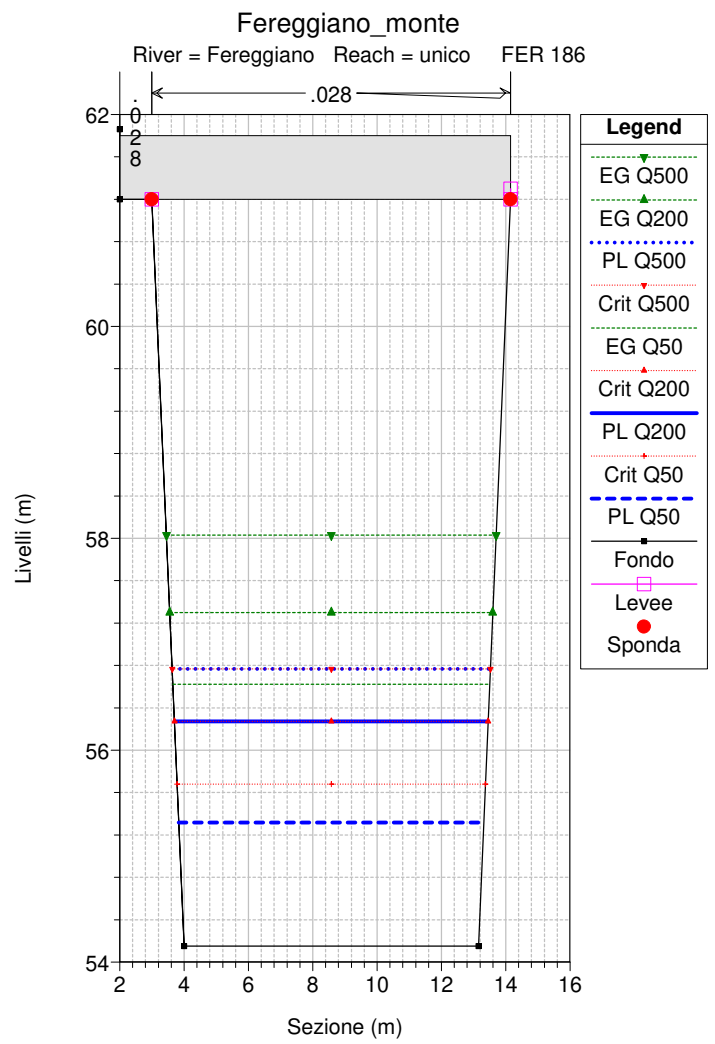
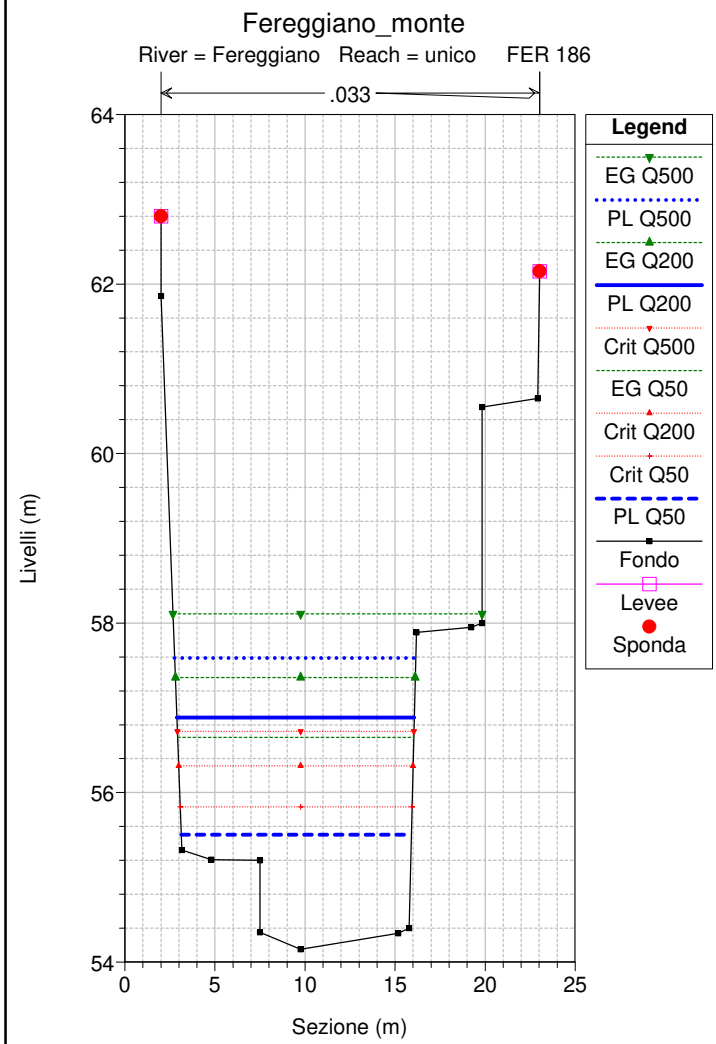
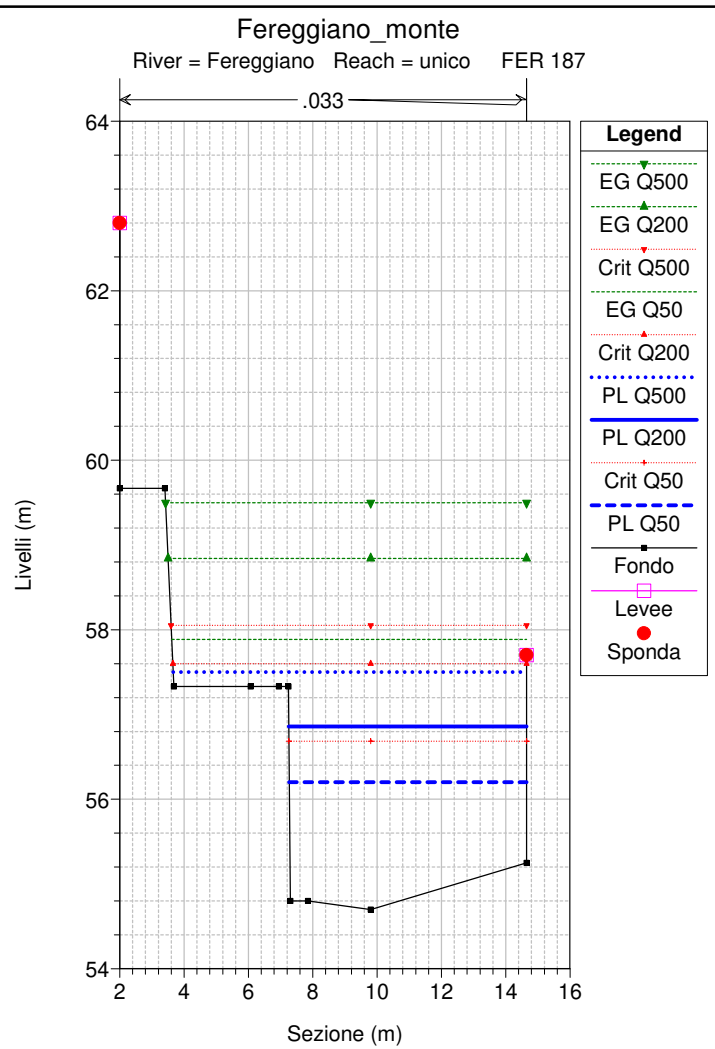
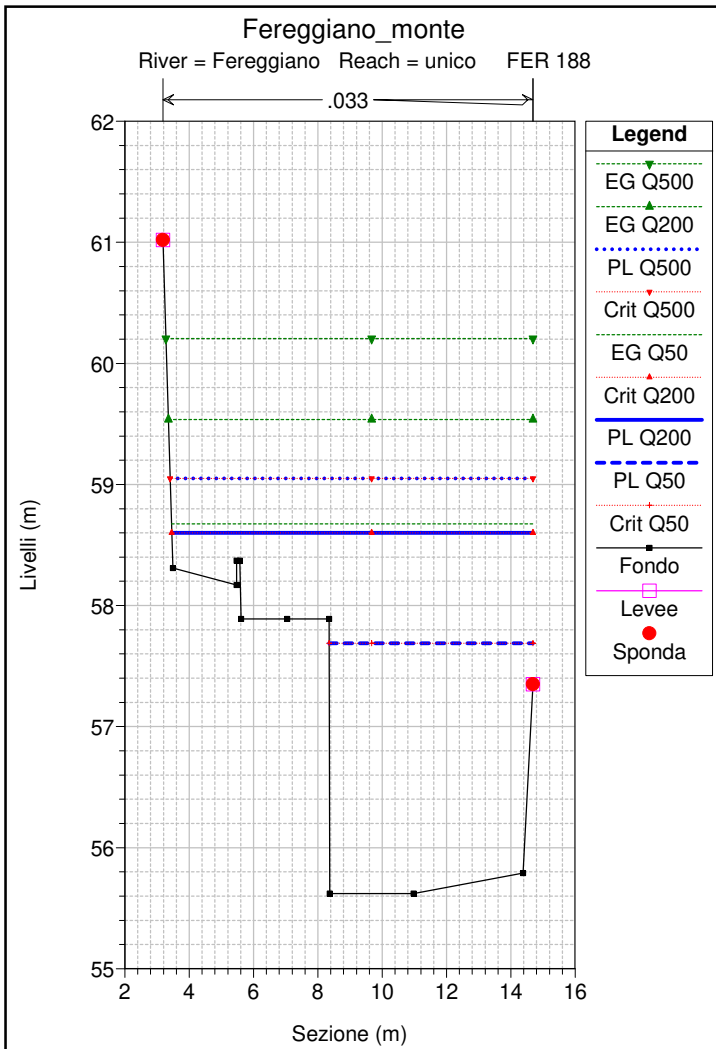


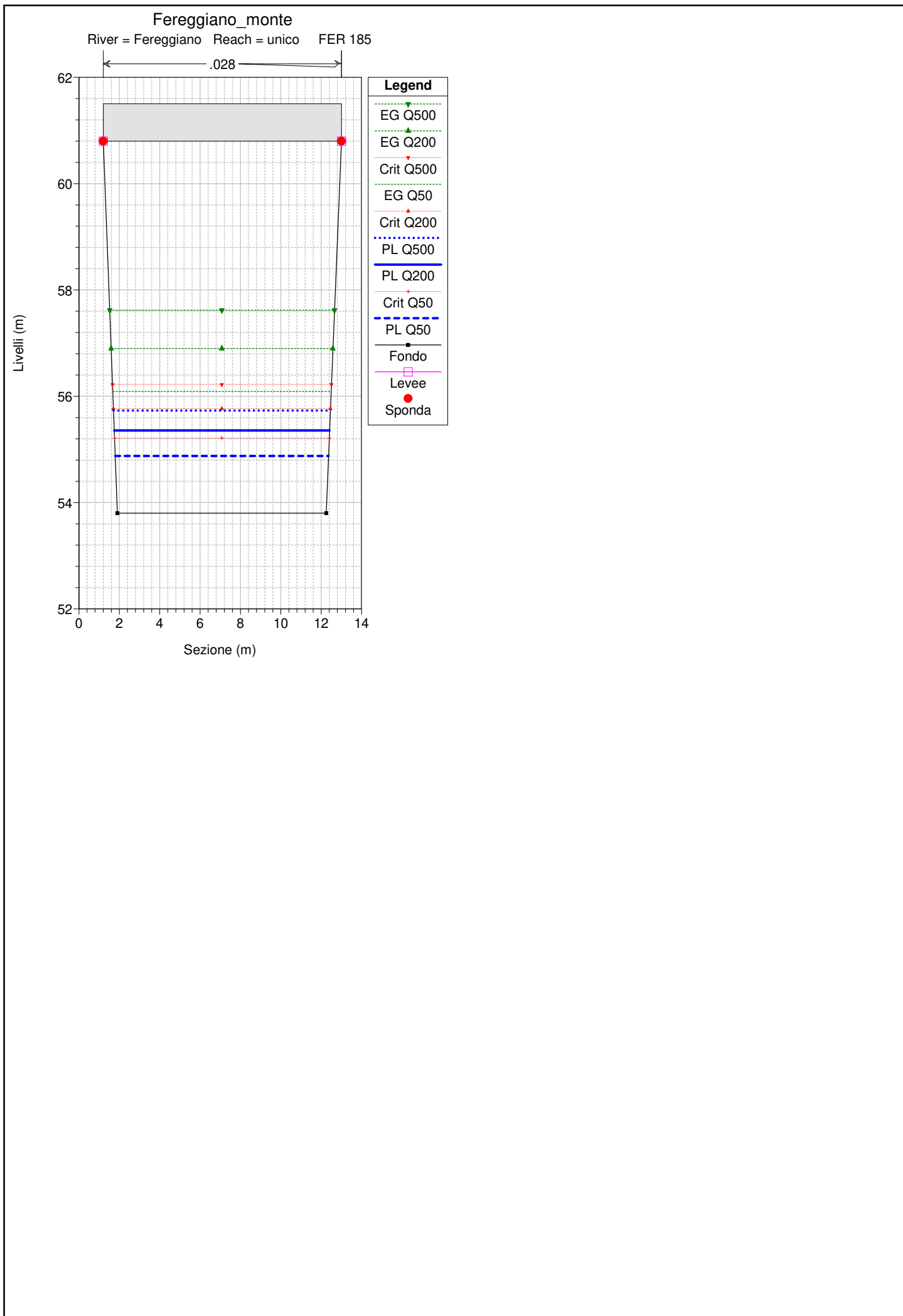












HEC-RAS Plan: 04_Fere_2021 River: Fereggiانو Reach: unico

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
unico	2789.31 FER 215	Q50	41.00	95.19	96.91	100.80	3.89	97.60	0.69	96.91	97.70	0.013237	3.95	10.37	6.50	1.00
unico	2789.31 FER 215	Q200	67.00	95.19	97.52	100.80	3.28	97.60	0.08	97.52	98.63	0.013928	4.66	14.37	6.50	1.00
unico	2789.31 FER 215	Q500	92.00	95.19	98.26	100.80	2.54	97.60	-0.66	98.26	99.21	0.012195	4.46	22.42	11.50	0.83
unico	2789.30 FER 214	Q50	41.00	92.69	93.65	100.80	7.15	97.60	3.95	94.60	97.41	0.108320	8.58	4.78	5.00	2.80
unico	2789.30 FER 214	Q200	67.00	92.69	94.18	100.80	6.62	97.60	3.42	95.33	98.33	0.080262	9.02	7.43	5.00	2.36
unico	2789.30 FER 214	Q500	92.00	92.69	94.73	100.80	6.07	97.60	2.87	96.12	98.89	0.062846	9.03	10.19	5.00	2.02
unico	2759.30 FER 213	Q50	41.00	90.79	91.80	97.80	6.00	97.60	5.80	92.58	94.59	0.073500	7.39	5.55	5.50	2.35
unico	2759.30 FER 213	Q200	67.00	90.79	92.21	97.80	5.59	97.60	5.39	93.39	95.97	0.072199	8.58	7.81	5.50	2.30
unico	2759.30 FER 213	Q500	92.00	90.79	92.62	97.80	5.18	97.60	4.98	93.91	96.89	0.066312	9.15	10.06	5.50	2.16
unico	2743.30 FER 212	Q50	41.00	88.99	89.93	95.30	5.37	97.60	7.67	90.78	93.19	0.093406	8.01	5.12	5.50	2.65
unico	2743.30 FER 212	Q200	67.00	88.99	90.32	95.30	4.98	97.60	7.28	91.47	94.62	0.087982	9.19	7.29	5.50	2.55
unico	2743.30 FER 212	Q500	92.00	88.99	90.69	95.30	4.61	97.60	6.91	92.21	95.63	0.081486	9.84	9.35	5.50	2.41
unico	2716.30 FER 211	Q50	41.00	88.32	89.42	93.53	4.11	92.03	2.61	89.95	91.22	0.041958	5.95	6.89	6.30	1.82
unico	2716.30 FER 211	Q200	67.00	88.32	89.79	93.53	3.74	92.03	2.24	90.59	92.48	0.047457	7.26	9.22	6.30	1.92
unico	2716.30 FER 211	Q500	92.00	88.32	90.12	93.53	3.41	92.03	1.91	91.11	93.50	0.049971	8.15	11.29	6.30	1.94
unico	2706.30 FER 210	Q50	41.00	85.99	86.73	92.80	6.07	101.70	14.97	87.55	90.35	0.133749	8.43	4.86	7.00	3.23
unico	2706.30 FER 210	Q200	67.00	85.99	87.04	92.80	5.76	101.70	14.66	88.14	91.60	0.111830	9.45	7.09	7.00	3.00
unico	2706.30 FER 210	Q500	92.00	85.99	87.32	92.80	5.48	101.70	14.38	88.63	92.62	0.102182	10.20	9.02	7.00	2.87
unico	2696.30 FER 209	Q50	41.00	84.97	85.80	92.78	6.98	88.48	2.68	86.61	89.05	0.106637	7.98	5.14	6.66	2.90
unico	2696.30 FER 209	Q200	67.00	84.97	86.11	92.78	6.67	88.48	2.37	87.21	90.48	0.100664	9.26	7.24	6.82	2.87
unico	2696.30 FER 209	Q500	92.00	84.97	90.25	92.78	2.53	88.48	-1.77	87.71	90.44	0.001094	2.03	48.69	13.50	0.29
unico	2696.29 FER 209	Q50	41.00	84.97	85.80	91.68	5.88	91.68	5.88	86.61	89.05	0.106088	7.98	5.14	6.58	2.88
unico	2696.29 FER 209	Q200	67.00	84.97	86.12	91.68	5.56	91.68	5.56	87.21	90.48	0.099525	9.24	7.25	6.66	2.83
unico	2696.29 FER 209	Q500	92.00	84.97	90.09	91.68	1.59	91.68	1.59	87.72	90.43	0.002228	2.59	35.54	7.61	0.38
unico	2695.60 FER 209		Bridge													
unico	2695.29 FER 209	Q50	41.00	84.97	85.83	91.68	5.85	91.68	5.85	86.61	88.84	0.094417	7.68	5.34	6.59	2.73
unico	2695.29 FER 209	Q200	67.00	84.97	86.16	91.68	5.52	91.68	5.52	87.21	90.25	0.090596	8.96	7.48	6.66	2.70
unico	2695.29 FER 209	Q500	92.00	84.97	89.77	91.68	1.91	91.68	1.91	87.72	90.16	0.002669	2.78	33.15	7.54	0.42
unico	2680.80 FER 208		Bridge													
unico	2666.31 FER 208	Q50	41.00	83.69	84.65	91.20	6.55	91.20	6.55	85.29	86.87	0.058379	6.59	6.22	6.50	2.15
unico	2666.31 FER 208	Q200	67.00	83.69	85.01	91.20	6.19	91.20	6.19	85.91	88.15	0.060460	7.85	8.54	6.50	2.19
unico	2666.31 FER 208	Q500	92.00	83.69	85.42	91.20	5.78	91.20	5.78	86.42	88.86	0.051772	8.21	11.20	6.50	2.00
unico	2666.30 FER 208	Q50	41.00	81.69	82.38	91.20	8.82	91.20	8.82	83.29	86.66	0.160026	9.16	4.48	6.50	3.52
unico	2666.30 FER 208	Q200	67.00	81.69	82.71	91.20	8.49	91.20	8.49	83.91	87.94	0.129212	10.12	6.62	6.50	3.20
unico	2666.30 FER 208	Q500	92.00	81.69	83.05	91.20	8.15	91.20	8.15	84.43	88.64	0.104979	10.48	8.78	6.50	2.88
unico	2660.30 FER 207	Q50	41.00	81.19	81.94	90.70	8.76	90.70	8.76	82.79	85.63	0.127584	8.51	4.82	6.50	3.16
unico	2660.30 FER 207	Q200	67.00	81.19	82.25	90.70	8.45	90.70	8.45	83.41	87.09	0.115094	9.74	6.88	6.50	3.02
unico	2660.30 FER 207	Q500	92.00	81.19	82.57	90.70	8.13	90.70	8.13	83.93	87.97	0.099591	10.29	8.94	6.50	2.80
unico	2614.30 FER 206	Q50	41.00	81.40	82.79	86.20	3.41	82.80	0.01	82.79	83.48	0.010220	3.69	11.12	8.00	1.00
unico	2614.30 FER 206	Q200	67.00	81.40	83.33	86.20	2.87	82.80	-0.53	83.33	84.29	0.012117	4.35	15.41	8.00	1.00
unico	2614.30 FER 206	Q500	92.00	81.40	83.78	86.20	2.42	82.80	-0.98	83.78	84.97	0.012308	4.83	19.05	8.00	1.00

HEC-RAS Plan: 04_Fere_2021 River: Fereggiano Reach: unico (Continued)

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
unico	2524.30 FER 205	Q50	41.00	80.50	81.60	85.50	3.90	85.50	3.90	81.69	82.31	0.012410	3.72	11.03	10.00	1.13
unico	2524.30 FER 205	Q200	67.00	80.50	82.11	85.50	3.39	85.50	3.39	82.16	82.99	0.012179	4.16	16.09	10.00	1.05
unico	2524.30 FER 205	Q500	92.00	80.50	82.40	85.50	3.10	85.50	3.10	82.55	83.60	0.013989	4.85	18.96	10.00	1.13
unico	2466.28 FER 204	Q50	41.00	78.10	79.83	83.70	3.87	83.70	3.87	79.16	80.03	0.002066	1.98	20.75	12.00	0.48
unico	2466.28 FER 204	Q200	67.00	78.10	80.52	83.70	3.18	83.70	3.18	79.57	80.79	0.002010	2.30	29.08	12.00	0.47
unico	2466.28 FER 204	Q500	92.00	78.10	81.11	83.70	2.59	83.70	2.59	79.92	81.44	0.002008	2.55	36.15	12.00	0.47
unico	2421.28 FER 203	Q50	41.00	77.90	79.18	83.00	3.82	82.90	3.72	79.18	79.83	0.009867	3.55	11.56	9.00	1.00
unico	2421.28 FER 203	Q200	67.00	77.90	79.68	83.00	3.32	82.90	3.22	79.68	80.57	0.009927	4.18	16.01	9.00	1.00
unico	2421.28 FER 203	Q500	92.00	77.90	80.10	83.00	2.90	82.90	2.80	80.10	81.20	0.010088	4.65	19.78	9.00	1.00
unico	2420.78 FER 202	Q50	41.00	74.00	74.52	82.30	7.78	88.00	13.48	75.39	79.39	0.208505	9.77	4.20	8.00	4.31
unico	2420.78 FER 202	Q200	67.00	74.00	74.82	82.30	7.48	88.00	13.18	75.93	80.12	0.135797	10.19	6.57	8.00	3.59
unico	2420.78 FER 202	Q500	92.00	74.00	75.09	82.30	7.21	88.00	12.91	76.38	80.73	0.106308	10.52	8.75	8.00	3.21
unico	2380.78 FER 201	Q50	41.00	72.80	73.72	82.30	8.58	88.00	14.28	74.19	75.31	0.036039	5.58	7.35	8.00	1.86
unico	2380.78 FER 201	Q200	67.00	72.80	74.02	82.30	8.28	88.00	13.98	74.73	76.43	0.040793	6.89	9.73	8.00	1.99
unico	2380.78 FER 201	Q500	92.00	72.80	74.28	82.30	8.02	88.00	13.72	75.18	77.36	0.042714	7.77	11.84	8.00	2.04
unico	2335.78 FER 200	Q50	41.00	71.65	72.73	83.15	10.42	83.15	10.42	73.08	74.00	0.024319	4.97	8.24	7.60	1.52
unico	2335.78 FER 200	Q200	67.00	71.65	73.15	83.15	10.00	83.15	10.00	73.65	74.91	0.024475	5.87	11.42	7.60	1.53
unico	2335.78 FER 200	Q500	92.00	71.65	73.50	83.15	9.65	83.15	9.65	74.11	75.69	0.025174	6.55	14.04	7.60	1.54
unico	2314.78 FER 199	Q50	41.00	71.20	72.32	82.70	10.38	82.70	10.38	72.64	73.50	0.021930	4.81	8.53	7.60	1.45
unico	2314.78 FER 199	Q200	67.00	71.20	72.76	82.70	9.94	82.70	9.94	73.19	74.39	0.022049	5.67	11.83	7.60	1.45
unico	2314.78 FER 199	Q500	92.00	71.20	73.12	82.70	9.58	82.70	9.58	73.66	75.15	0.022501	6.30	14.60	7.60	1.45
unico	2291.29 FER 198	Q50	41.00	70.60	71.97	81.60	9.63	81.60	9.63	72.19	73.03	0.016840	4.55	9.01	6.62	1.25
unico	2291.29 FER 198	Q200	67.00	70.60	72.64	81.60	8.96	81.60	8.96	72.80	73.91	0.014147	4.98	13.45	6.69	1.12
unico	2291.29 FER 198	Q500	92.00	70.60	73.32	81.60	8.28	81.60	8.28	73.32	74.65	0.011865	5.11	18.00	6.75	1.00
unico	2245.29 FER 197	Q50	41.00	67.74	68.86	74.59	5.73	79.85	10.99	69.46	70.89	0.060140	6.30	6.51	6.86	2.07
unico	2245.29 FER 197	Q200	67.00	67.74	69.25	74.59	5.34	79.85	10.60	70.06	71.94	0.057256	7.26	9.22	7.14	2.04
unico	2245.29 FER 197	Q500	92.00	67.74	69.58	74.59	5.01	79.85	10.27	70.55	72.76	0.055030	7.90	11.65	7.39	2.01
unico	2238.79 FER 196	Q50	41.00	63.66	64.19	75.23	11.04	75.28	11.09	65.02	69.75	0.361087	10.44	3.93	8.87	5.01
unico	2238.79 FER 196	Q200	67.00	63.66	64.41	75.23	10.82	75.28	10.87	65.48	70.86	0.281929	11.24	5.96	9.93	4.63
unico	2238.79 FER 196	Q500	92.00	63.66	64.59	75.23	10.64	75.28	10.69	65.86	71.72	0.230170	11.83	7.78	10.04	4.29
unico	2167.75 FER 105.4	Q50	55.00	60.43	62.50	72.00	9.50	71.38	8.88	62.40	63.03	0.010167	3.23	17.04	12.90	0.90
unico	2167.75 FER 105.4	Q200	90.00	60.43	63.61	72.00	8.39	71.38	7.77	62.88	64.02	0.004140	2.84	31.71	13.45	0.59
unico	2167.75 FER 105.4	Q500	124.00	60.43	64.51	72.00	7.49	71.38	6.87	63.30	64.92	0.003016	2.82	44.02	13.96	0.51
unico	2147.75 FER 105.3	Q50	55.00	59.87	62.55	71.44	8.89	70.82	8.27	61.83	62.84	0.003589	2.41	22.86	11.17	0.54
unico	2147.75 FER 105.3	Q200	90.00	59.87	63.59	71.44	7.85	70.82	7.23	62.37	63.93	0.002836	2.58	34.86	11.75	0.48
unico	2147.75 FER 105.3	Q500	124.00	59.87	64.47	71.44	6.97	70.82	6.35	62.83	64.85	0.002563	2.73	45.40	12.25	0.45
unico	2147.65 FER 105.2	Q50	55.00	59.87	62.51	70.58	8.07	69.63	7.12	61.62	62.84	0.003786	2.55	21.54	8.70	0.52
unico	2147.65 FER 105.2	Q200	90.00	59.87	63.55	70.58	7.03	69.63	6.08	62.25	63.93	0.004103	2.73	32.93	12.91	0.55
unico	2147.65 FER 105.2	Q500	124.00	59.87	64.46	70.58	6.12	69.63	5.17	62.78	64.85	0.003165	2.77	44.70	12.94	0.48
unico	2138.85 FER 105.1	Q50	55.00	59.87	62.46	70.58	8.12	69.63	7.17	61.62	62.80	0.004009	2.61	21.11	8.70	0.53
unico	2138.85 FER 105.1	Q200	90.00	59.87	63.49	70.58	7.09	69.63	6.14	62.25	63.89	0.004388	2.79	32.20	12.91	0.57

HEC-RAS Plan: 04_Fere_2021 River: Fereggiario Reach: unico (Continued)

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
unico	2138.85 FER 105.1	Q500	124.00	59.87	64.42	70.58	6.16	69.63	5.21	62.78	64.82	0.003267	2.80	44.21	12.94	0.48
unico	2138.75 FER 195	Q50	55.00	59.87	62.46	70.58	8.12	69.63	7.17	61.62	62.80	0.004011	2.61	21.11	8.70	0.53
unico	2138.75 FER 195	Q200	90.00	59.87	63.40	70.58	7.18	69.63	6.23	62.25	63.88	0.004270	3.07	29.36	8.73	0.53
unico	2138.75 FER 195	Q500	124.00	59.87	64.21	70.58	6.37	69.63	5.42	62.78	64.80	0.004515	3.40	36.43	8.76	0.53
unico	2130.85 FER 194	Q50	55.00	59.87	62.41	70.58	8.17	69.63	7.22	61.62	62.77	0.004250	2.66	20.69	8.69	0.55
unico	2130.85 FER 194	Q200	90.00	59.87	63.35	70.58	7.23	69.63	6.28	62.25	63.85	0.004453	3.11	28.91	8.73	0.55
unico	2130.85 FER 194	Q500	124.00	59.87	64.16	70.58	6.42	69.63	5.47	62.78	64.76	0.004675	3.45	35.96	8.75	0.54
unico	2126.75 FER 194	Bridge														
unico	2122.65 FER 194	Q50	55.00	59.87	61.21	70.58	9.37	69.63	8.42	61.62	62.66	0.032941	5.32	10.34	8.65	1.55
unico	2122.65 FER 194	Q200	90.00	59.87	61.67	70.58	8.91	69.63	7.96	62.25	63.69	0.033276	6.29	14.30	8.67	1.56
unico	2122.65 FER 194	Q500	124.00	59.87	62.06	70.58	8.52	69.63	7.57	62.78	64.57	0.033984	7.02	17.67	8.68	1.57
unico	2100.66 FER 193	Q50	55.00	58.38	59.61	73.24	13.63	73.64	14.03	60.26	61.77	0.053925	6.50	8.46	7.80	1.99
unico	2100.66 FER 193	Q200	90.00	58.38	60.10	73.24	13.14	73.64	13.54	60.93	62.82	0.047675	7.31	12.31	8.13	1.90
unico	2100.66 FER 193	Q500	124.00	58.38	60.50	73.24	12.74	73.64	13.14	61.48	63.70	0.045214	7.92	15.65	8.41	1.85
unico	2066.14 FER 192	Q50	55.00	58.11	60.19	73.00	12.81	73.00	12.81	60.19	61.10	0.014259	4.23	13.01	7.12	1.00
unico	2066.14 FER 192	Q200	90.00	58.11	61.13	73.00	11.87	73.00	11.87	61.13	62.05	0.013324	4.26	21.14	11.42	1.00
unico	2066.14 FER 192	Q500	124.00	58.11	61.60	73.00	11.40	73.00	11.40	61.60	62.70	0.012951	4.65	26.69	12.13	1.00
unico	2053.14 FER 191	Q50	55.00	57.37	58.41	67.43	9.02	68.88	10.47	59.07	60.55	0.058145	6.48	8.49	8.63	2.09
unico	2053.14 FER 191	Q200	90.00	57.37	58.85	67.43	8.58	68.88	10.03	59.62	61.50	0.053297	7.21	12.49	9.81	2.04
unico	2053.14 FER 191	Q500	124.00	57.37	59.23	67.43	8.20	68.88	9.65	60.09	62.15	0.046456	7.56	16.40	10.46	1.93
unico	2049.04	Bridge														
unico	2044.94 FER 191	Q50	55.00	57.37	59.51	67.43	7.92	68.88	9.37	59.07	59.92	0.005588	2.85	19.32	10.46	0.67
unico	2044.94 FER 191	Q200	90.00	57.37	59.10	67.43	8.33	68.88	9.78	59.62	60.92	0.031531	5.97	15.08	10.46	1.59
unico	2044.94 FER 191	Q500	124.00	57.37	60.88	67.43	6.55	68.88	8.00	60.09	61.52	0.005964	3.55	34.91	12.78	0.69
unico	2029.16 FER 190	Q50	55.00	57.18	59.00	67.31	8.31	64.11	5.11	59.00	59.74	0.018496	3.82	14.41	9.71	1.00
unico	2029.16 FER 190	Q200	90.00	57.18	59.59	67.31	7.72	64.11	4.52	59.59	60.60	0.017822	4.46	20.16	9.92	1.00
unico	2029.16 FER 190	Q500	124.00	57.18	60.10	67.31	7.21	64.11	4.01	60.10	61.32	0.017204	4.88	25.40	10.46	1.00
unico	2000.66 FER 189	Q50	55.00	56.08	58.49	67.02	8.53	56.64	-1.85	57.79	58.88	0.004576	2.77	19.84	8.92	0.59
unico	2000.66 FER 189	Q200	90.00	56.08	59.15	67.02	7.87	56.64	-2.51	58.44	59.77	0.005839	3.47	25.91	9.42	0.67
unico	2000.66 FER 189	Q500	124.00	56.08	58.39	67.02	8.63	56.64	-1.75	58.99	60.57	0.026425	6.54	18.95	8.85	1.43
unico	1979.66 FER 188	Q50	55.00	55.62	57.69	61.02	3.33	57.35	-0.34	57.69	58.67	0.015633	4.40	12.51	6.34	1.00
unico	1979.66 FER 188	Q200	90.00	55.62	58.60	61.02	2.42	57.35	-1.25	58.60	59.54	0.014994	4.28	21.00	11.23	1.00
unico	1979.66 FER 188	Q500	124.00	55.62	59.05	61.02	1.97	57.35	-1.70	59.05	60.20	0.014849	4.76	26.07	11.28	1.00
unico	1954.67 FER 187	Q50	55.00	54.70	56.20	62.80	6.60	57.70	1.50	56.69	57.89	0.036884	5.75	9.56	7.38	1.61
unico	1954.67 FER 187	Q200	90.00	54.70	56.86	62.80	5.94	57.70	0.84	57.60	58.84	0.029663	6.24	14.43	7.40	1.43
unico	1954.67 FER 187	Q500	124.00	54.70	57.50	62.80	5.30	57.70	0.20	58.05	59.50	0.031828	6.26	19.81	10.99	1.49
unico	1911.67 FER 186	Q50	55.00	54.15	55.50	62.80	7.30	62.15	6.65	55.83	56.65	0.033929	4.75	11.59	12.78	1.59
unico	1911.67 FER 186	Q200	90.00	54.15	56.88	62.80	5.92	62.15	5.27	56.31	57.36	0.005070	3.05	29.52	13.18	0.65
unico	1911.67 FER 186	Q500	124.00	54.15	57.59	62.80	5.21	62.15	4.56	56.72	58.11	0.004262	3.19	38.89	13.39	0.60
unico	1911.17 FER 186	Q50	55.00	54.15	55.32	61.20	5.88	61.20	5.88	55.68	56.62	0.021613	5.06	10.88	9.48	1.51

HEC-RAS Plan: 04_Fere_2021 River: Fereggiano Reach: unico (Continued)

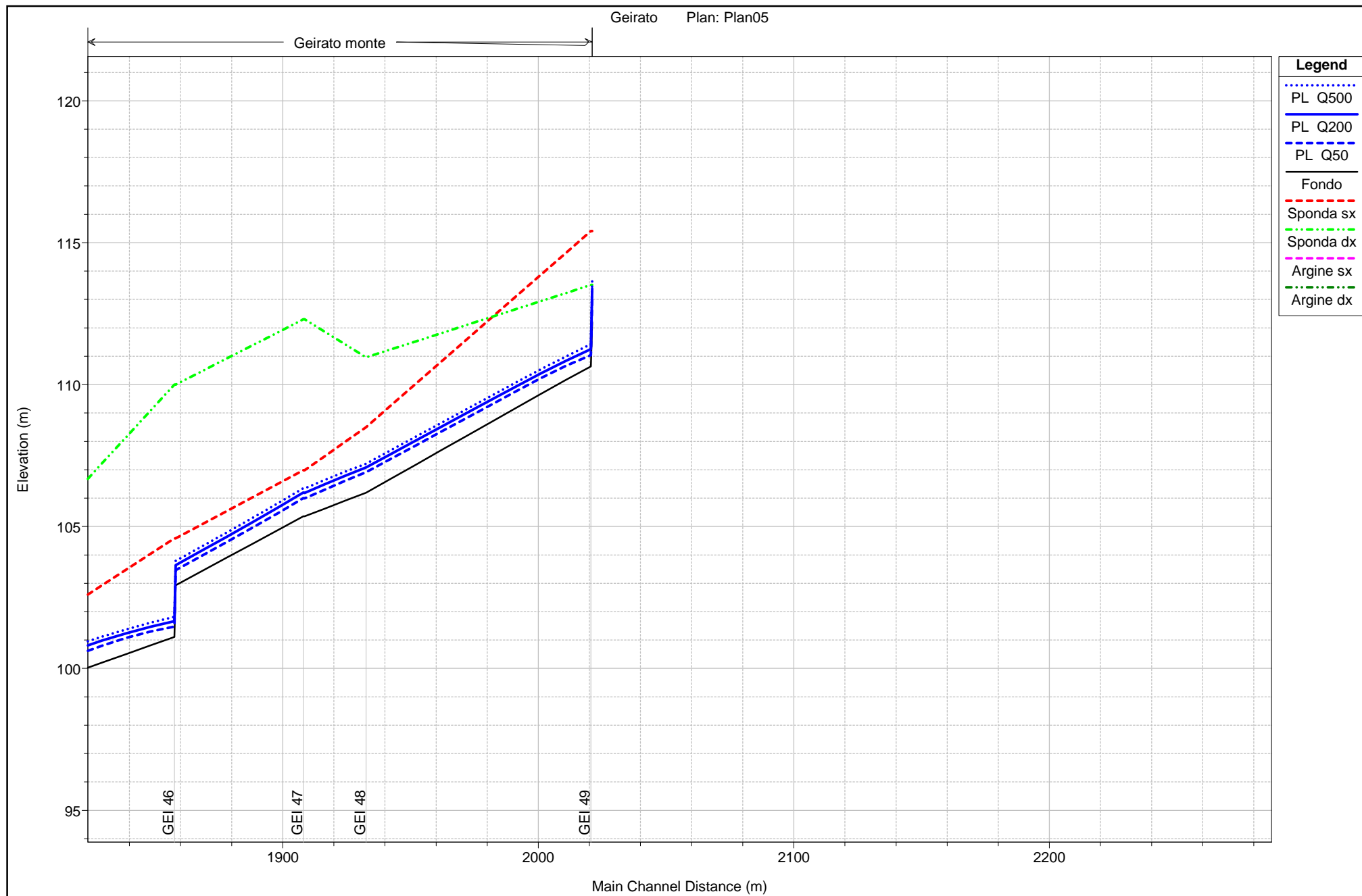
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	1911.17 FER 186	Q200	90.00	54.15	56.27	61.20	4.93	61.20	4.93	56.27	57.30	0.009261	4.49	20.05	9.75	1.00
unico	1911.17 FER 186	Q500	124.00	54.15	56.77	61.20	4.43	61.20	4.43	56.77	58.03	0.009375	4.98	24.92	9.89	1.00
unico	1887.68 FER 185	Q50	55.00	53.80	54.88	60.80	5.92	60.80	5.92	55.22	56.09	0.021371	4.87	11.29	10.57	1.51
unico	1887.68 FER 185	Q200	90.00	53.80	55.36	60.80	5.44	60.80	5.44	55.76	56.90	0.018305	5.50	16.37	10.67	1.42
unico	1887.68 FER 185	Q500	124.00	53.80	55.73	60.80	5.07	60.80	5.07	56.22	57.62	0.017949	6.08	20.39	10.75	1.41

Allegato

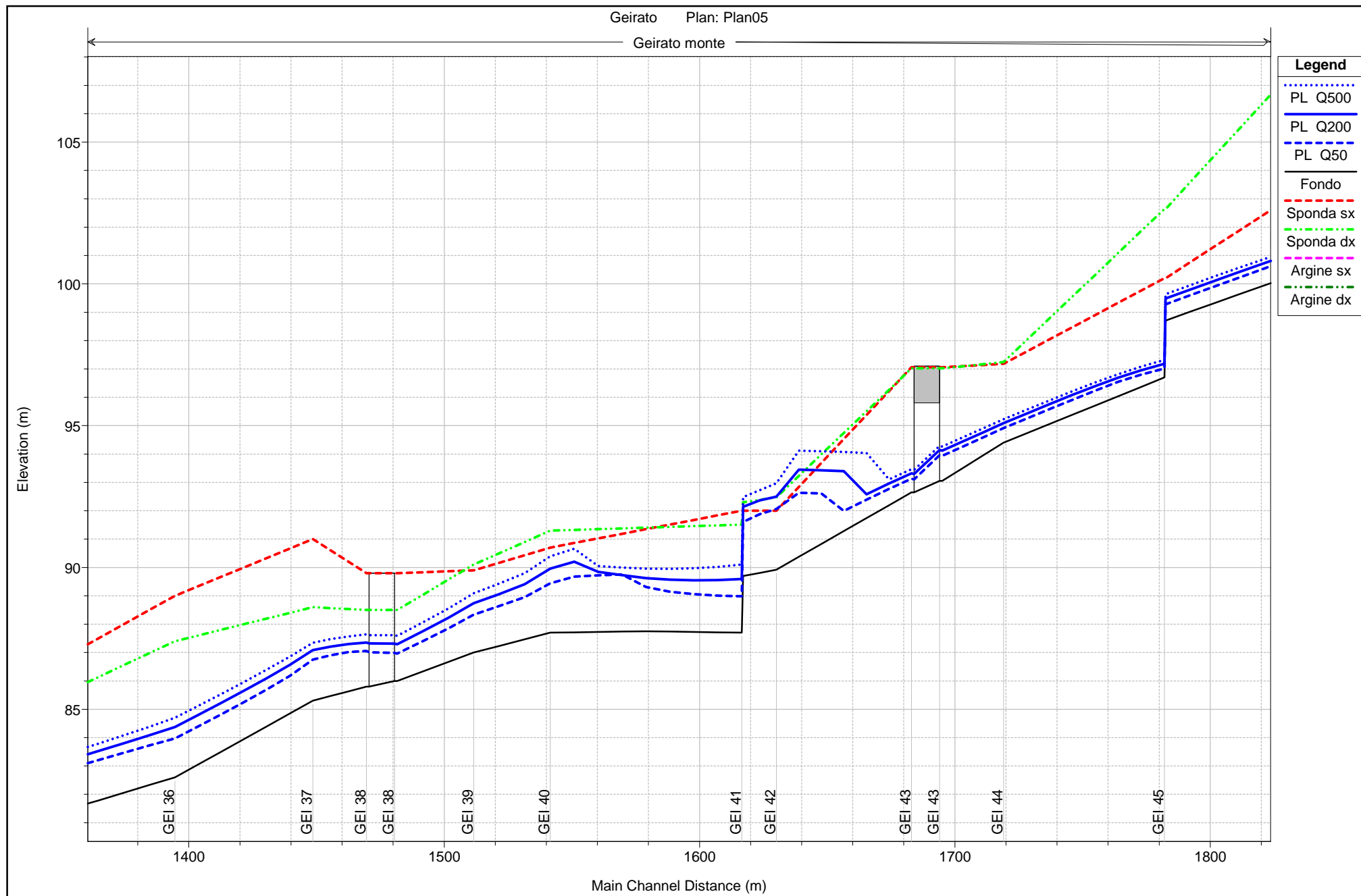
Verifiche idrauliche

Torrente Geirato

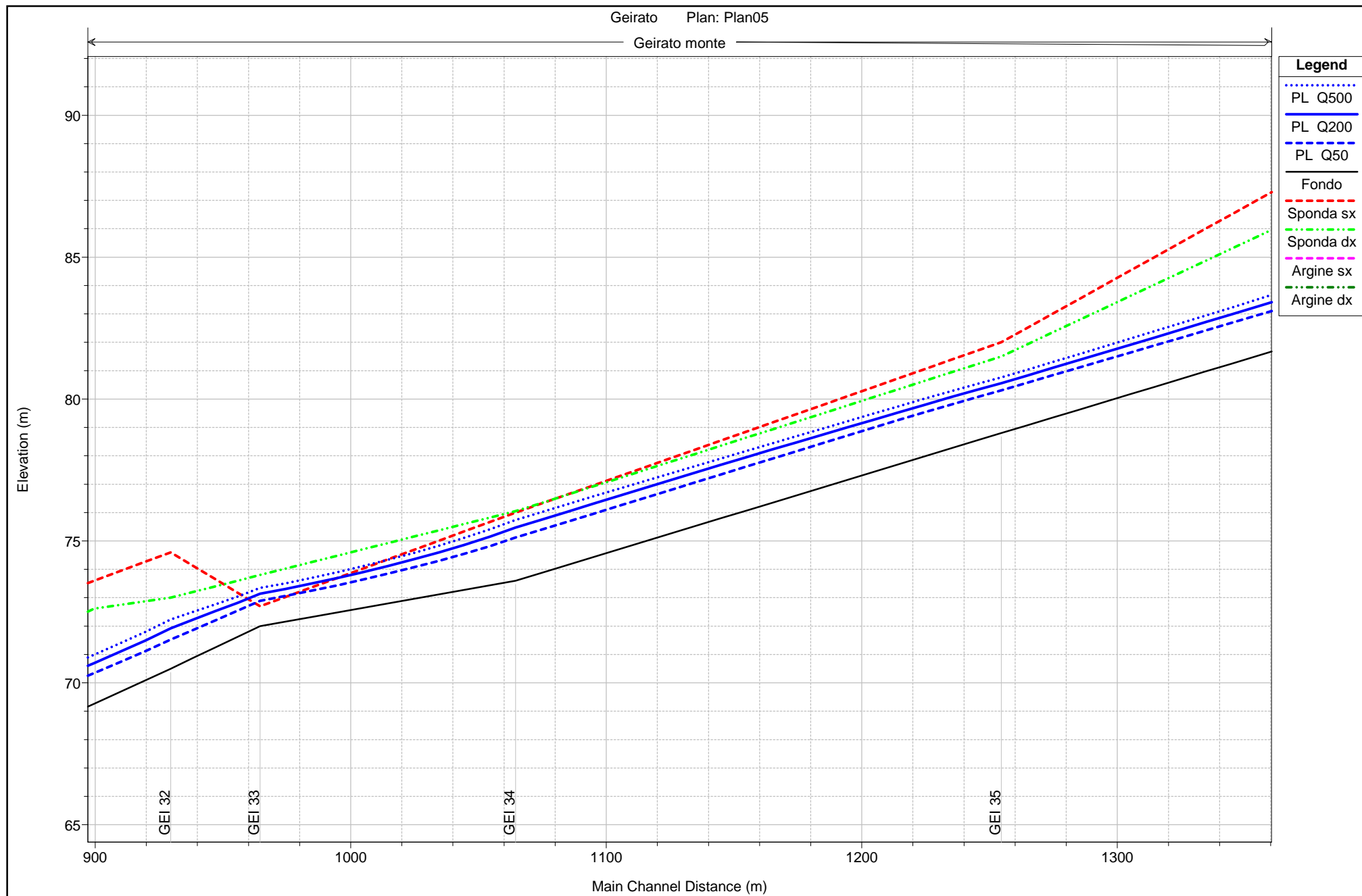
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo



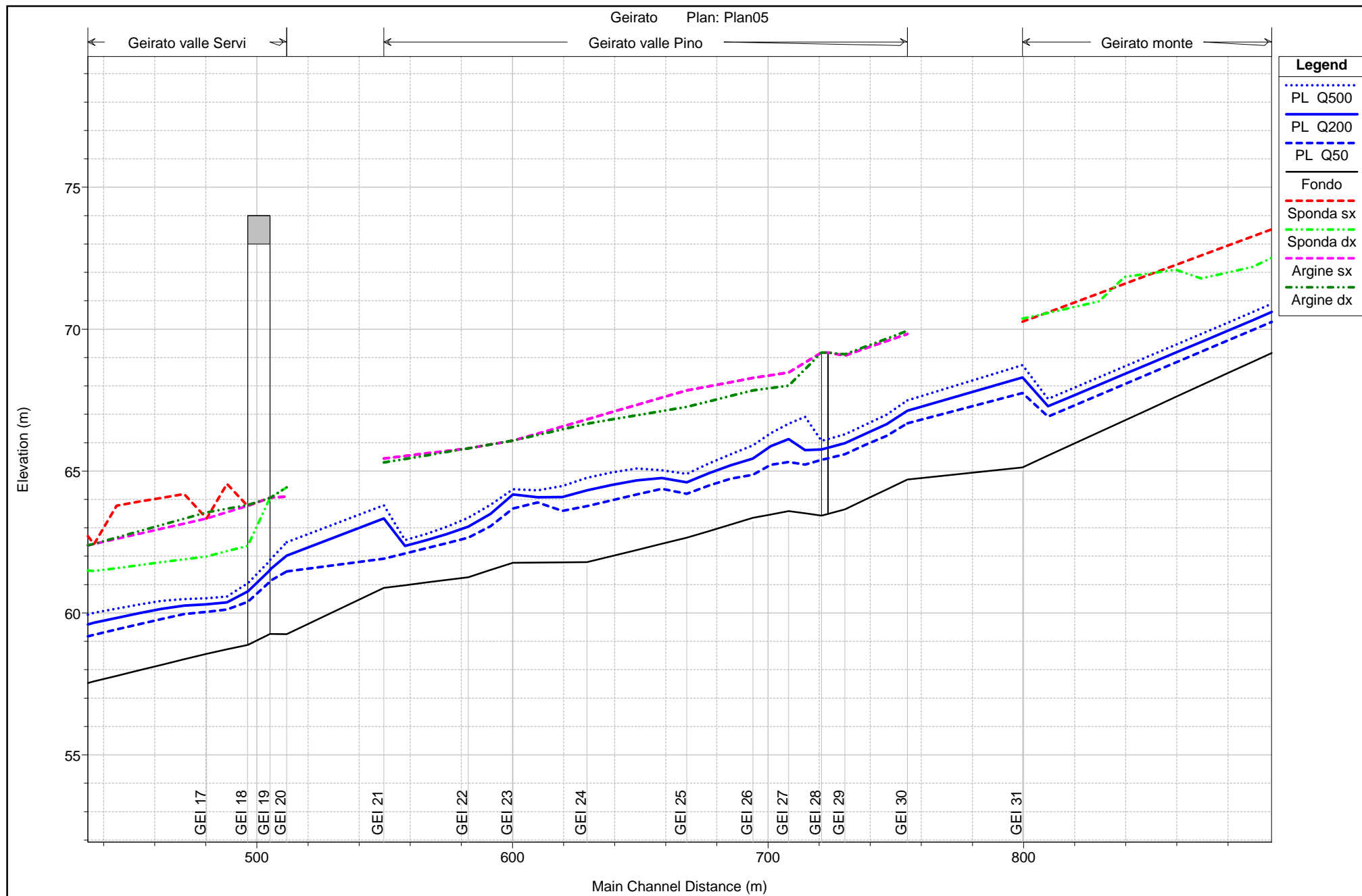
1 cm Horiz. = 20 m 1 cm Vert. = 1.8 m



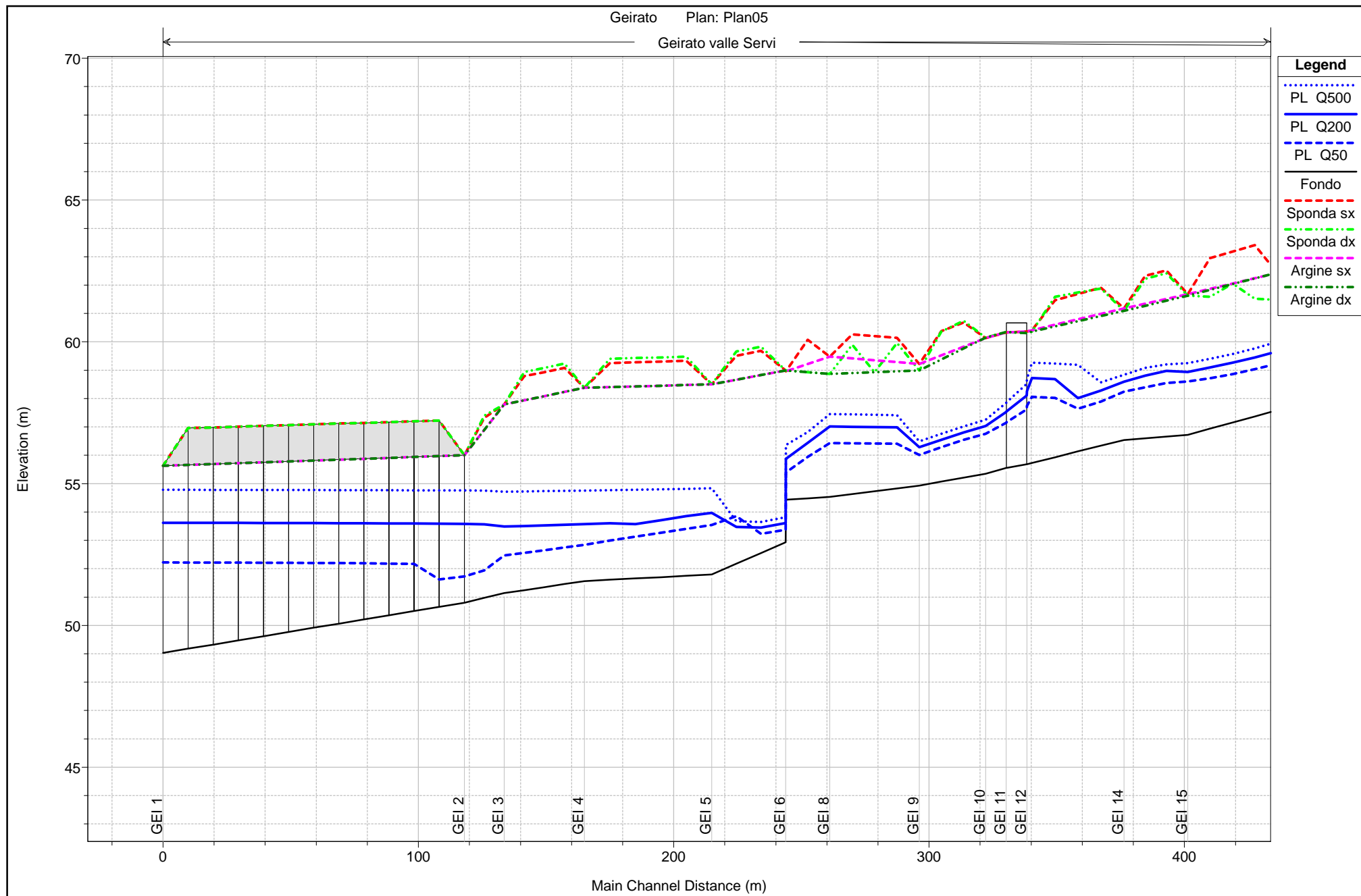
1 cm Horiz. = 20 m 1 cm Vert. = 1.8 m



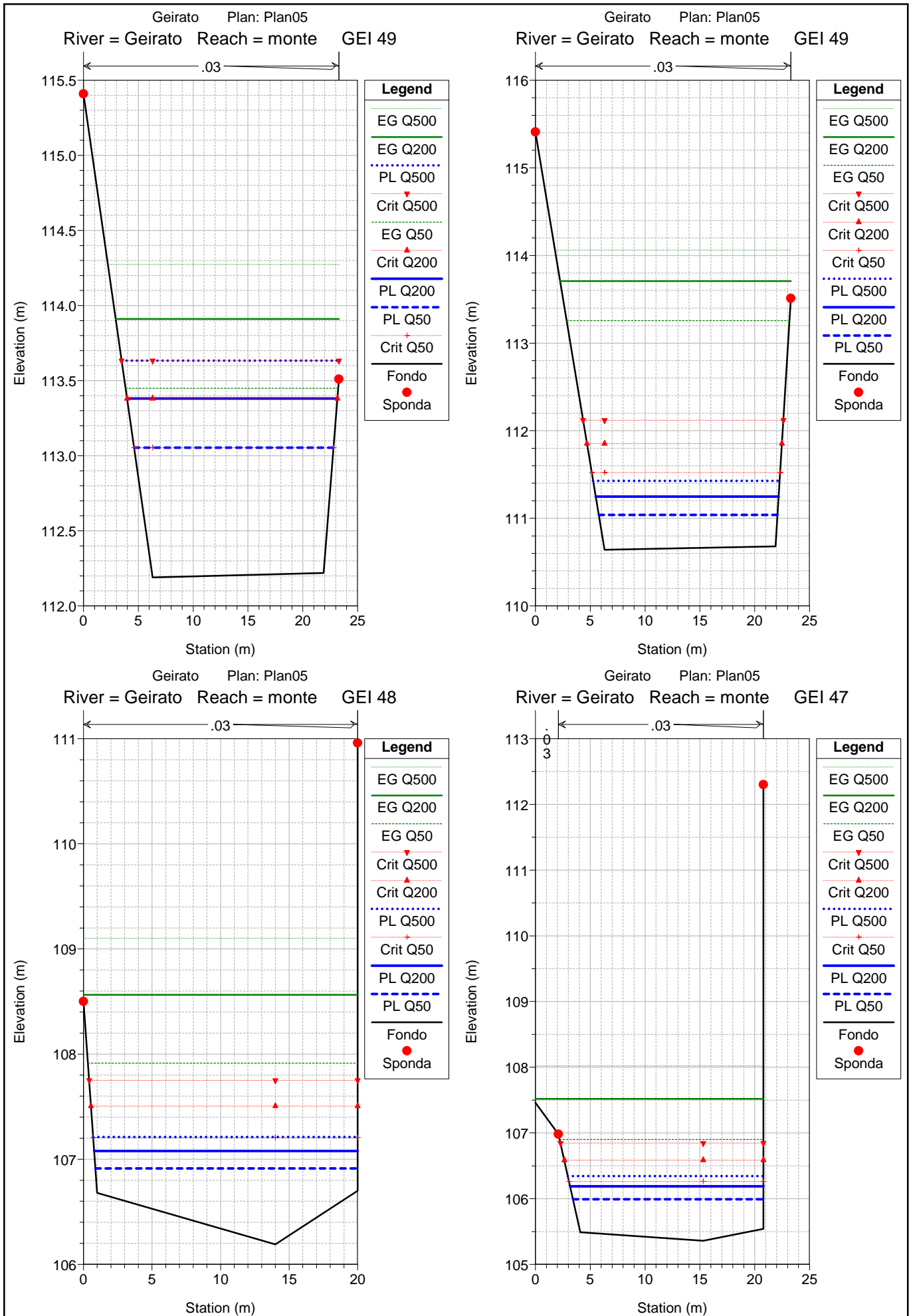
1 cm Horiz. = 20 m 1 cm Vert. = 1.8 m

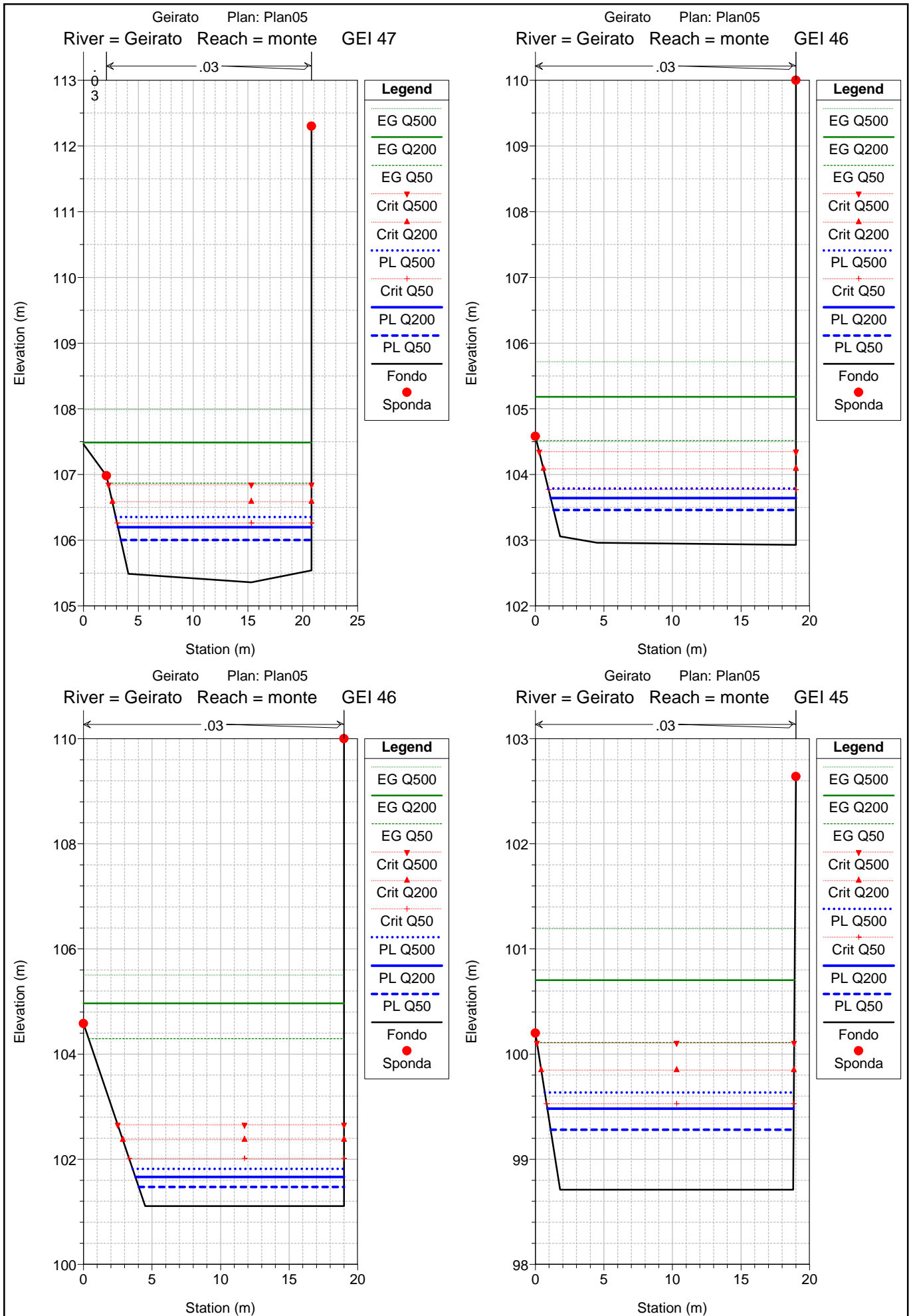


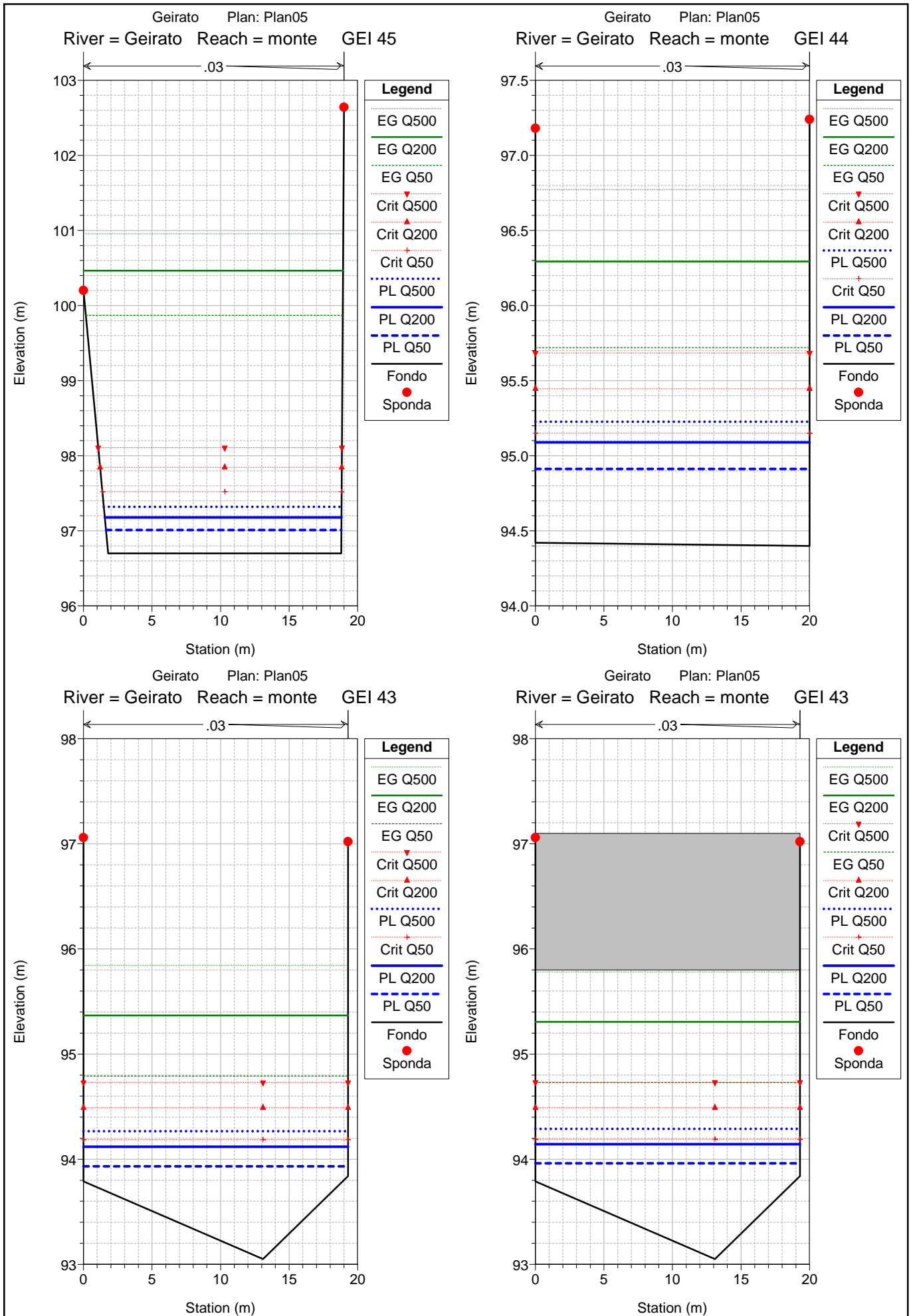
1 cm Horiz. = 20 m 1 cm Vert. = 1.8 m

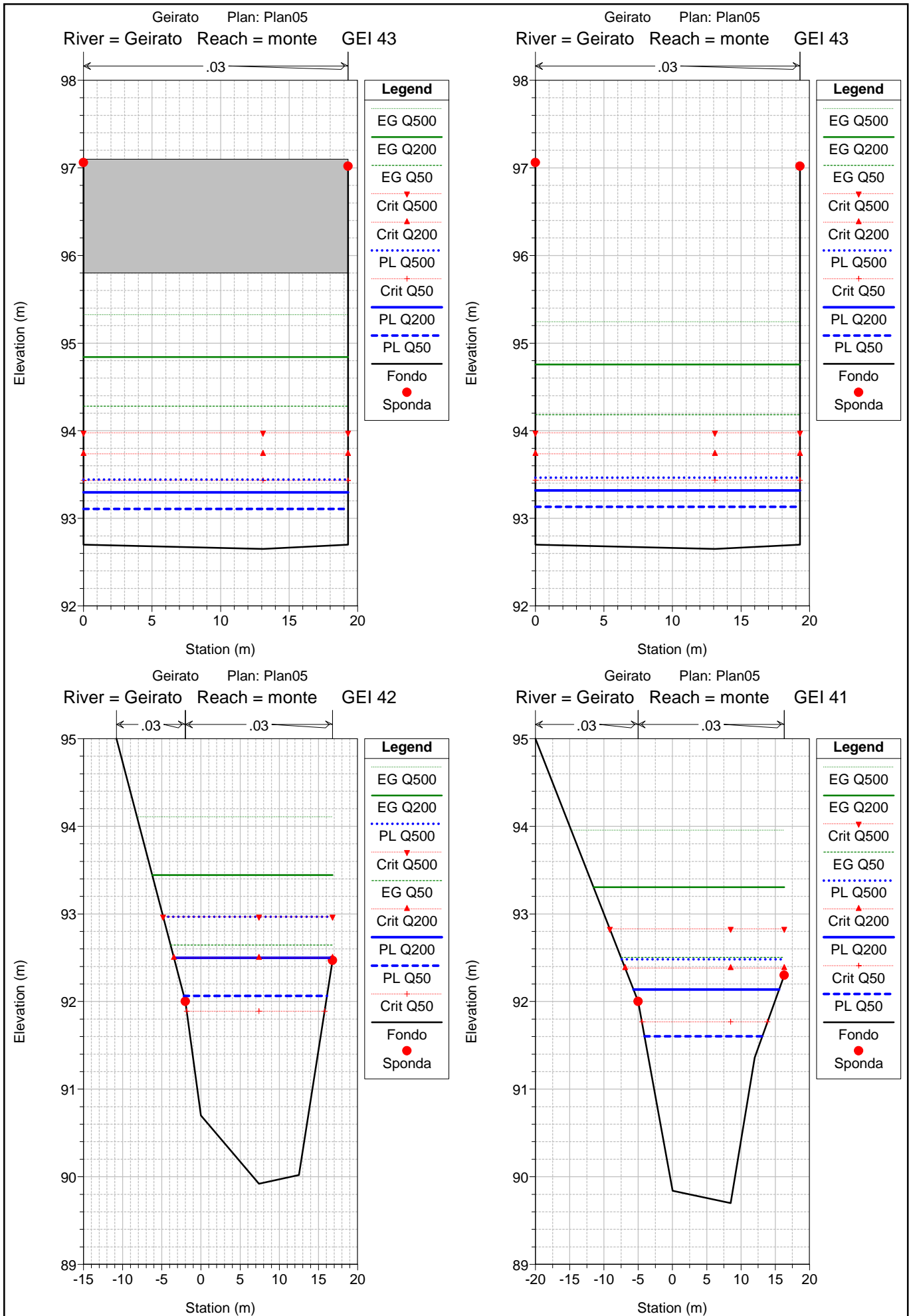


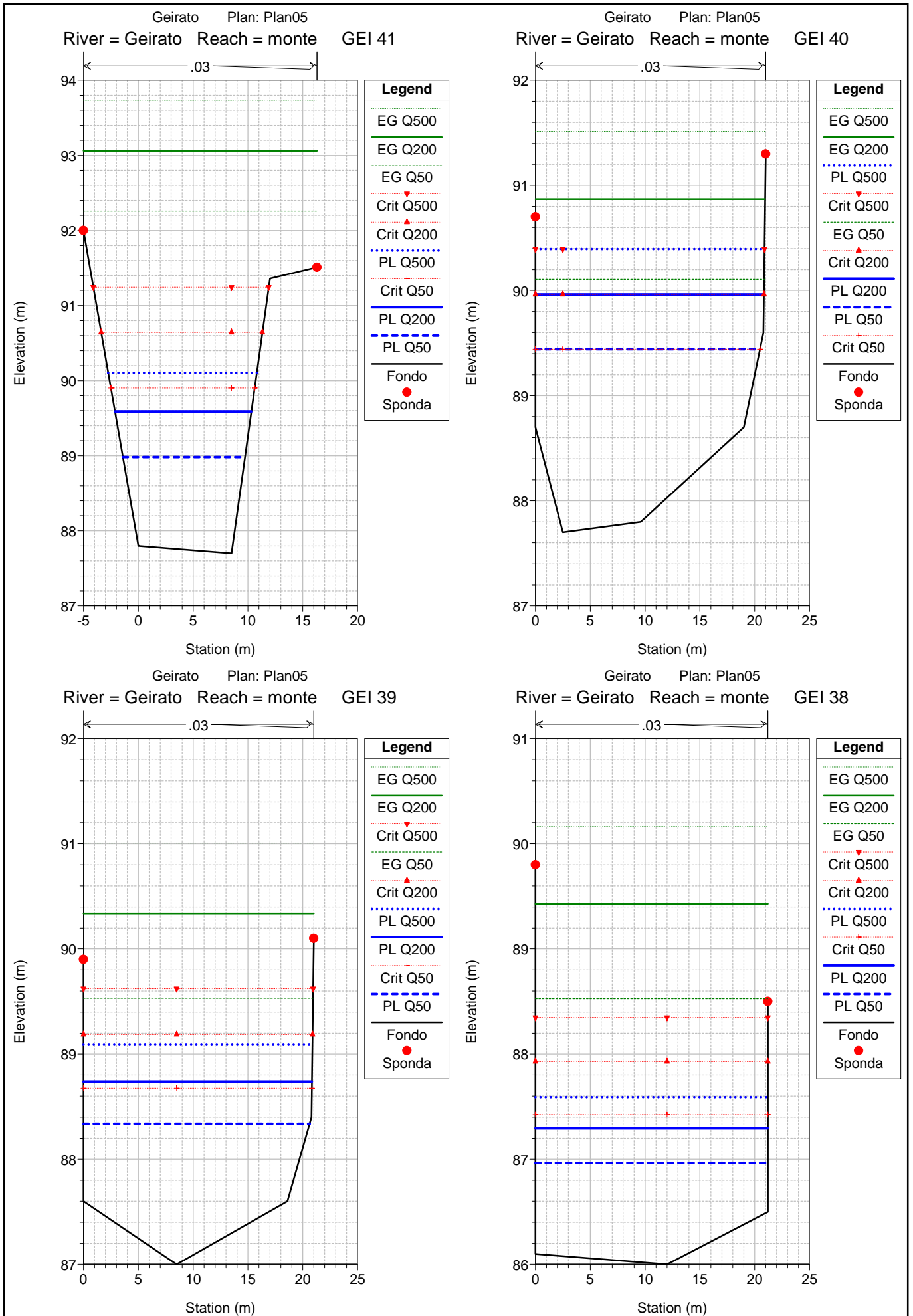
1 cm Horiz. = 20 m 1 cm Vert. = 1.8 m

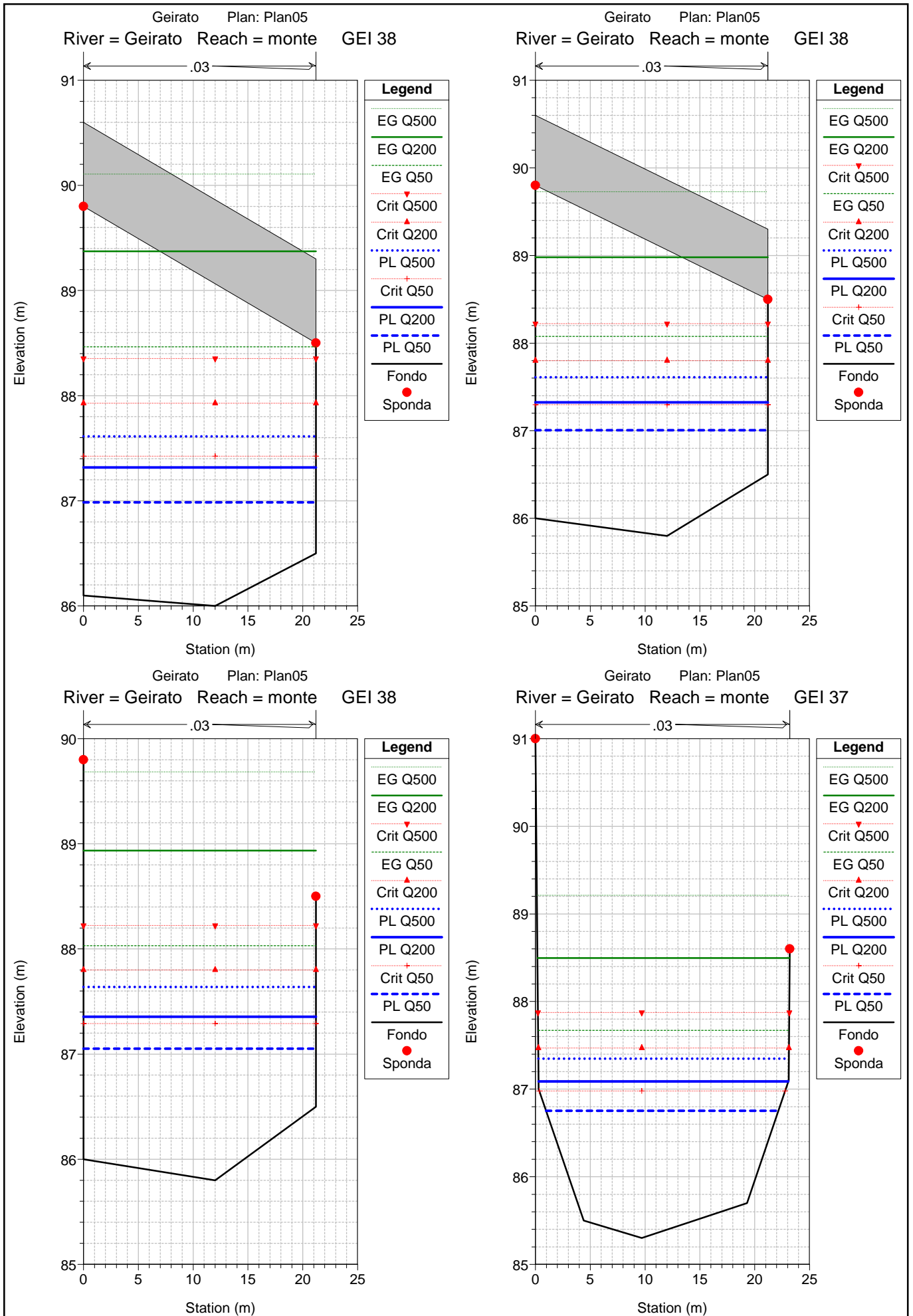


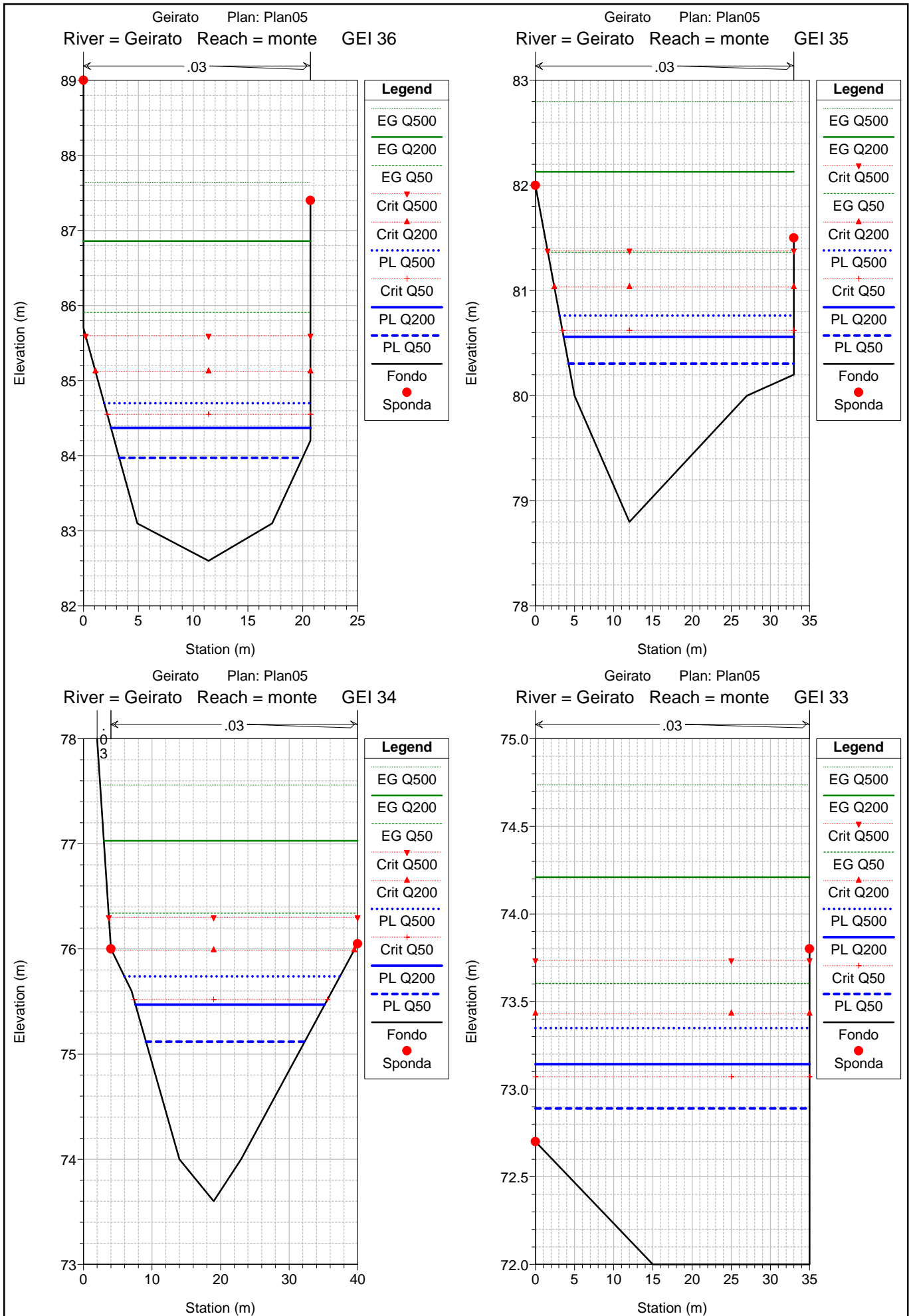


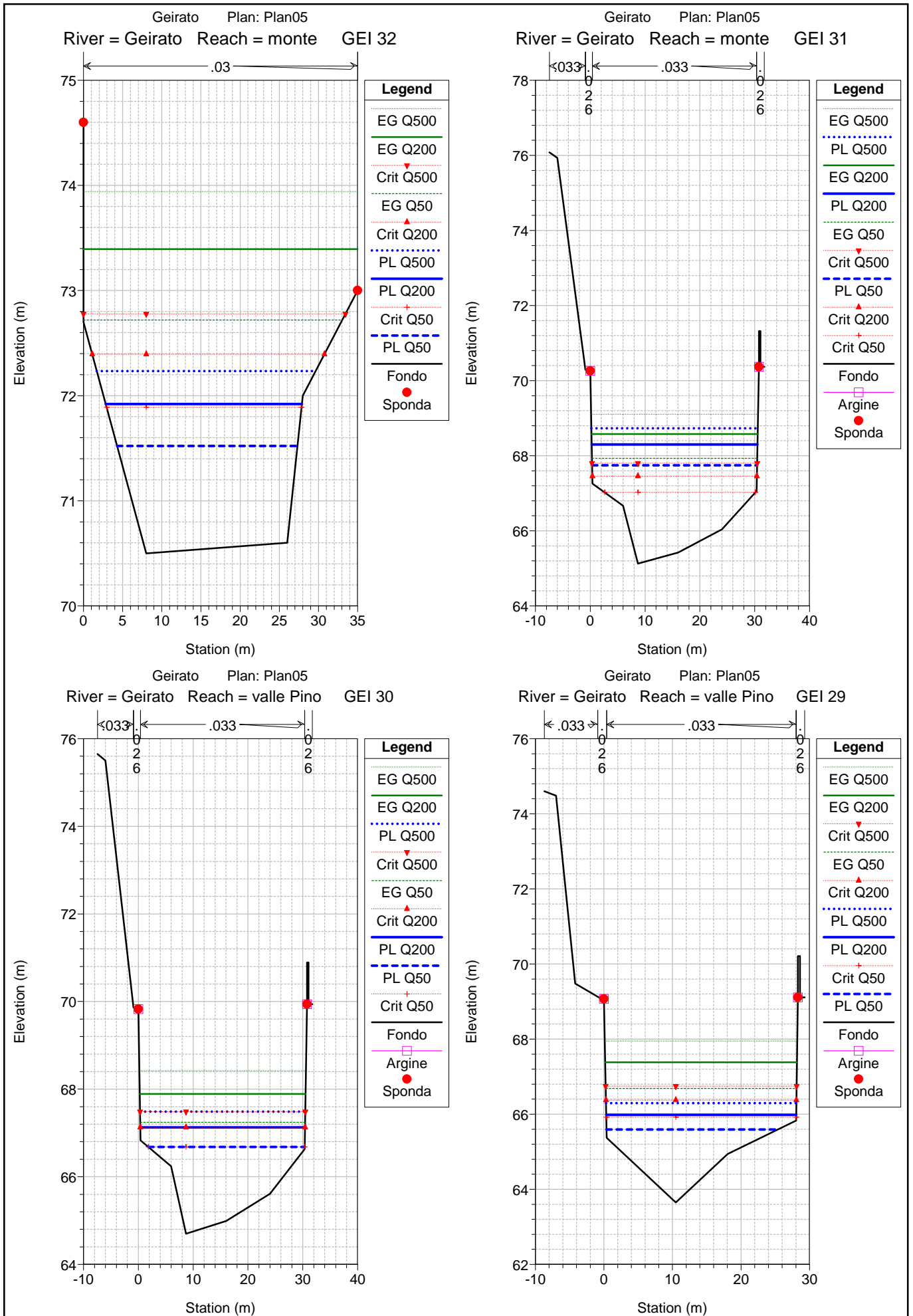


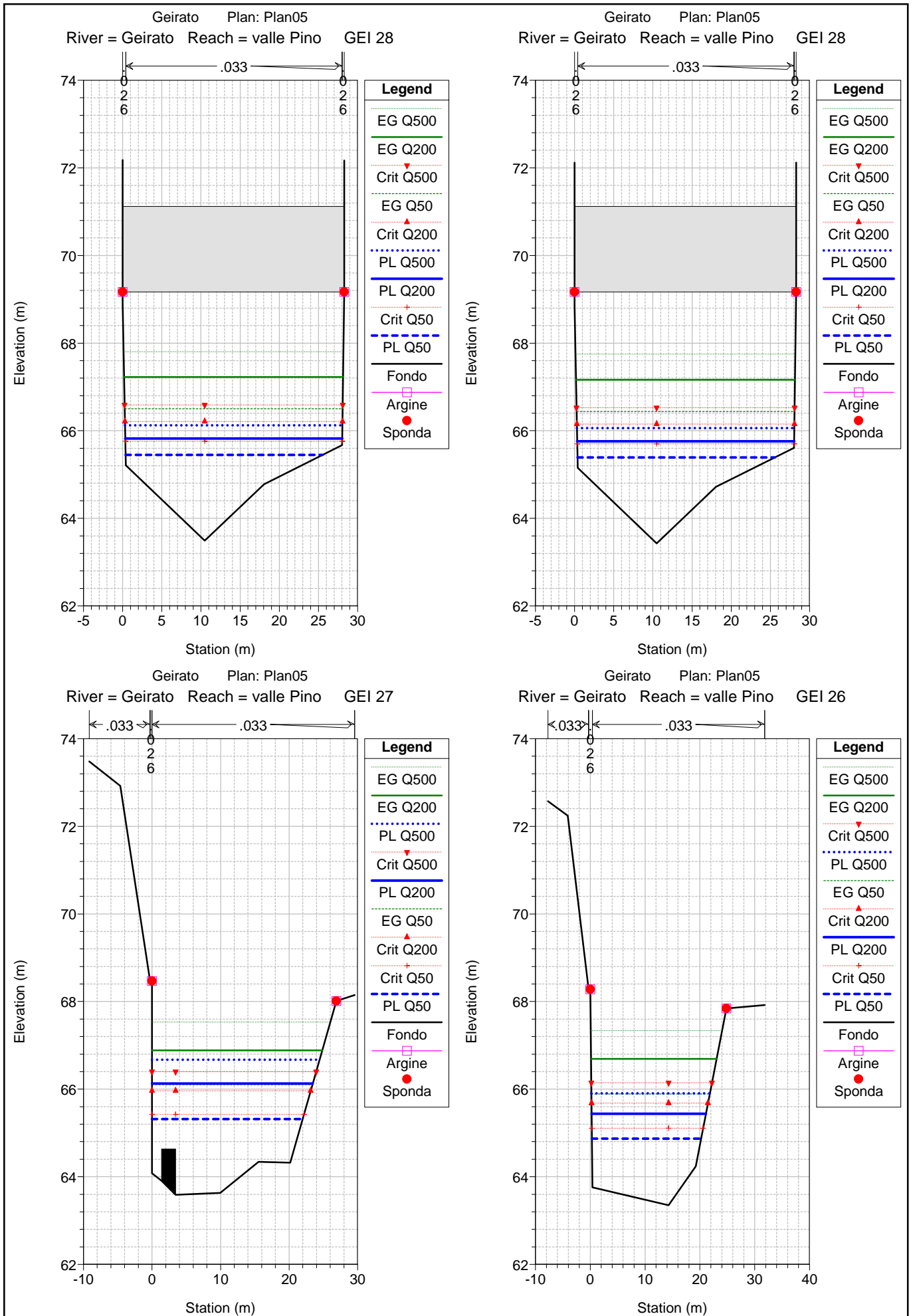


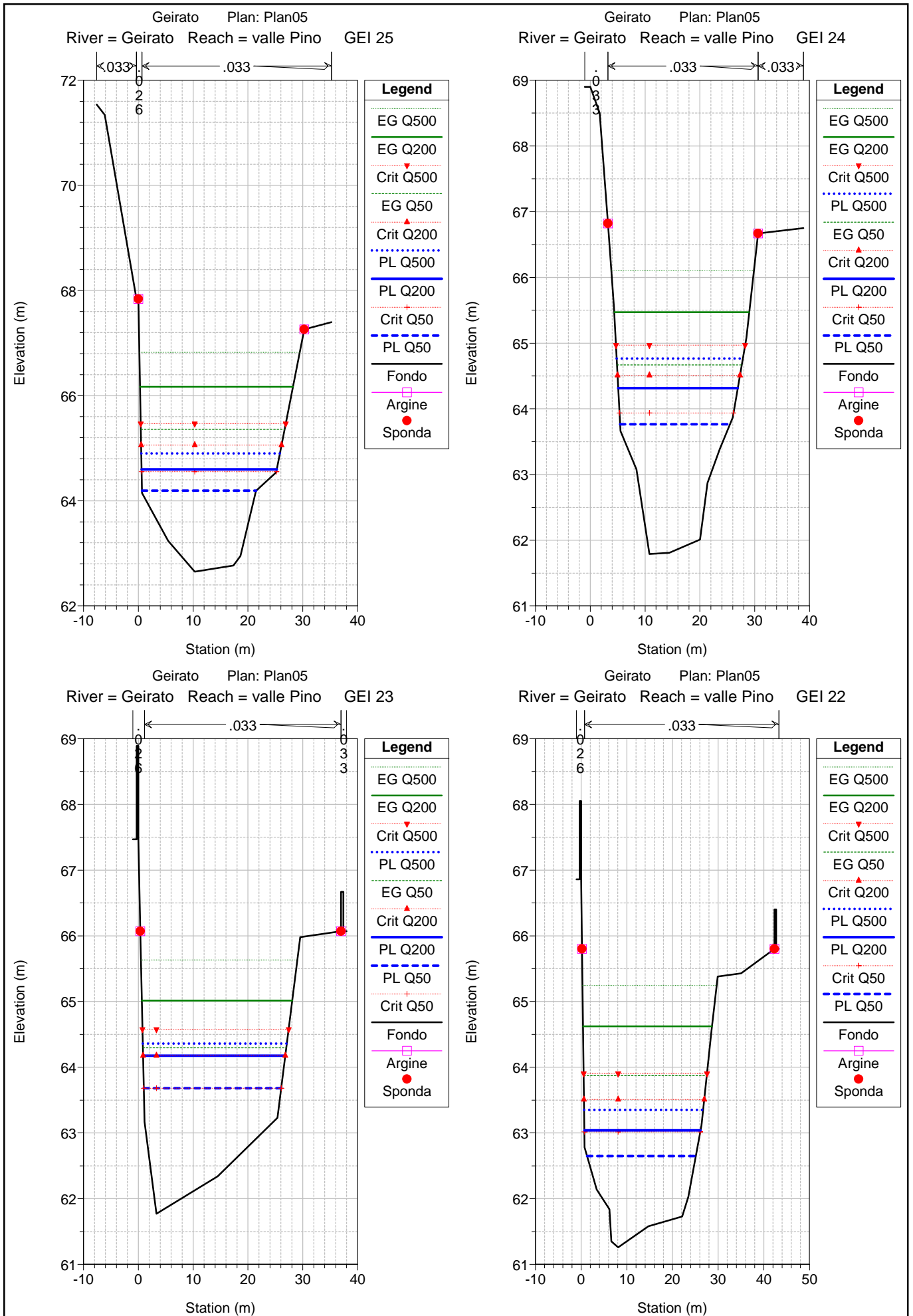


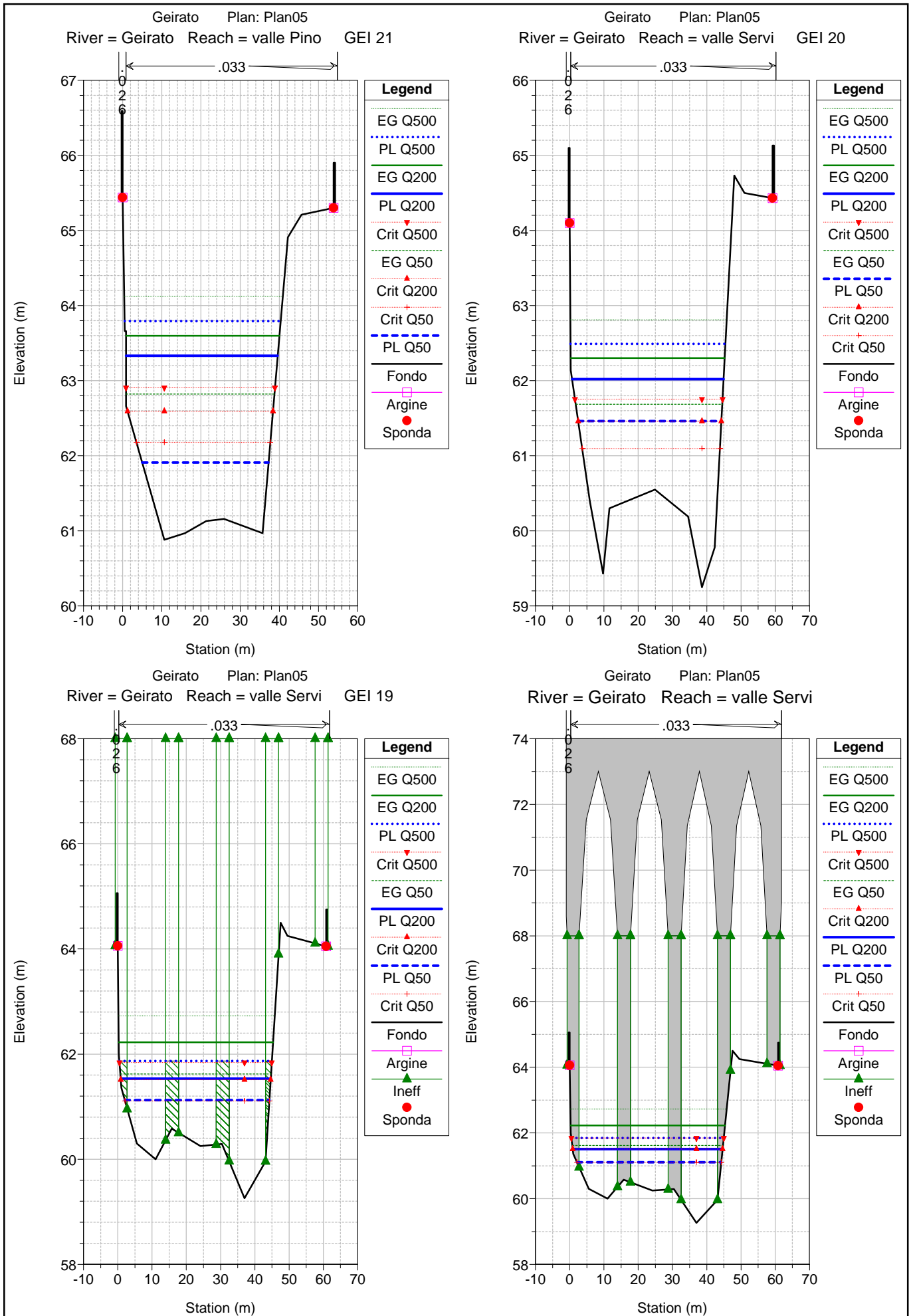


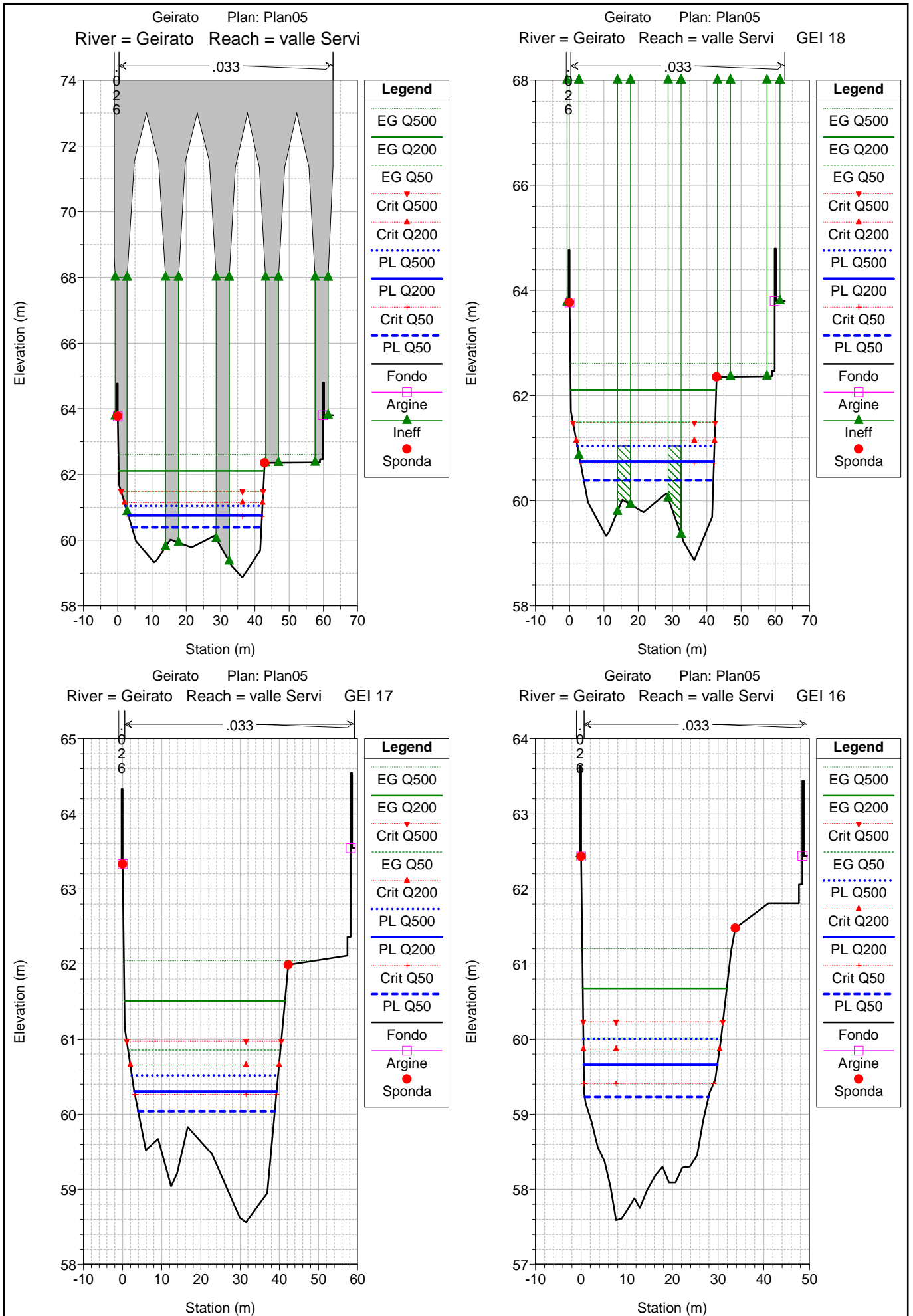


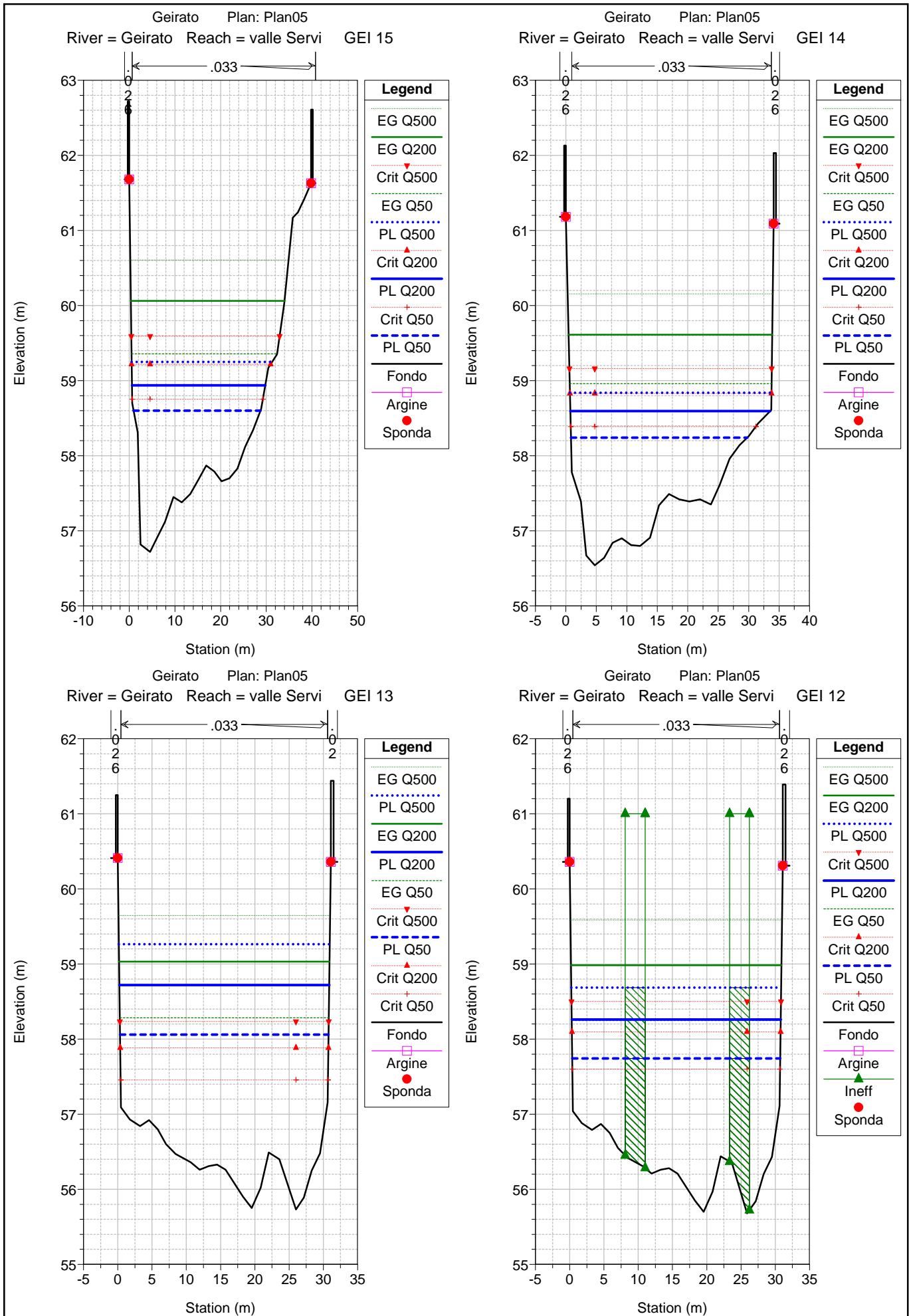


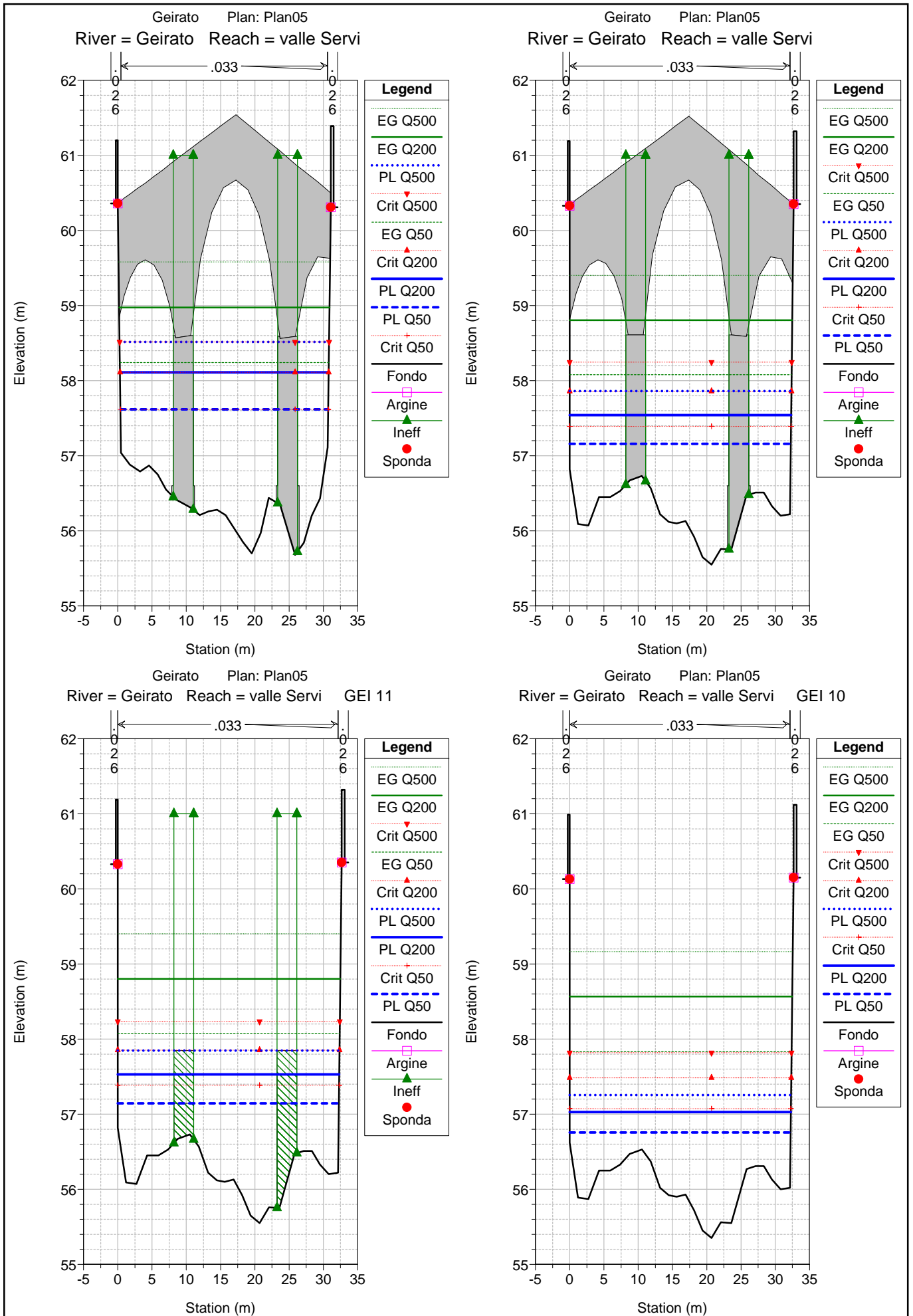


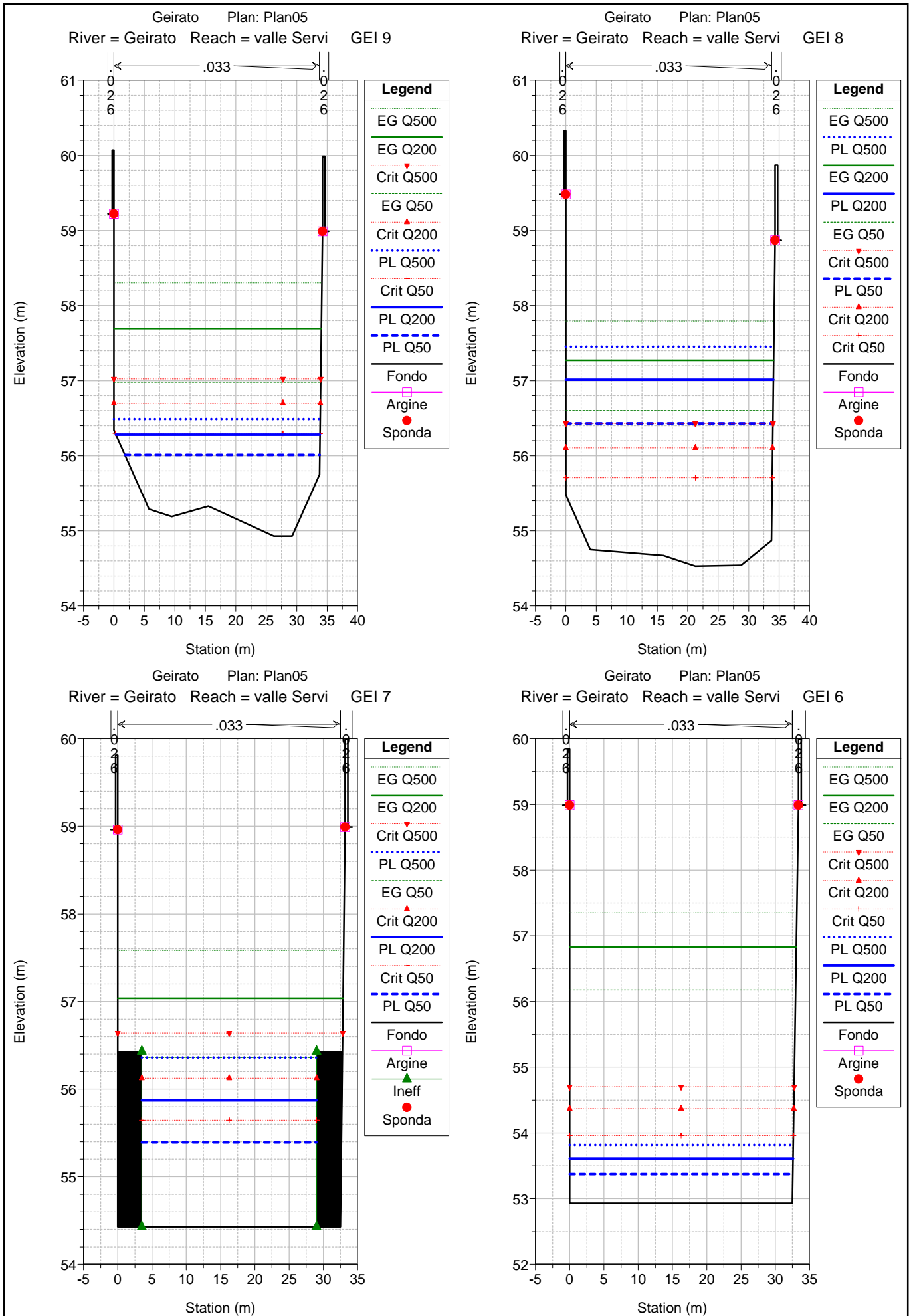


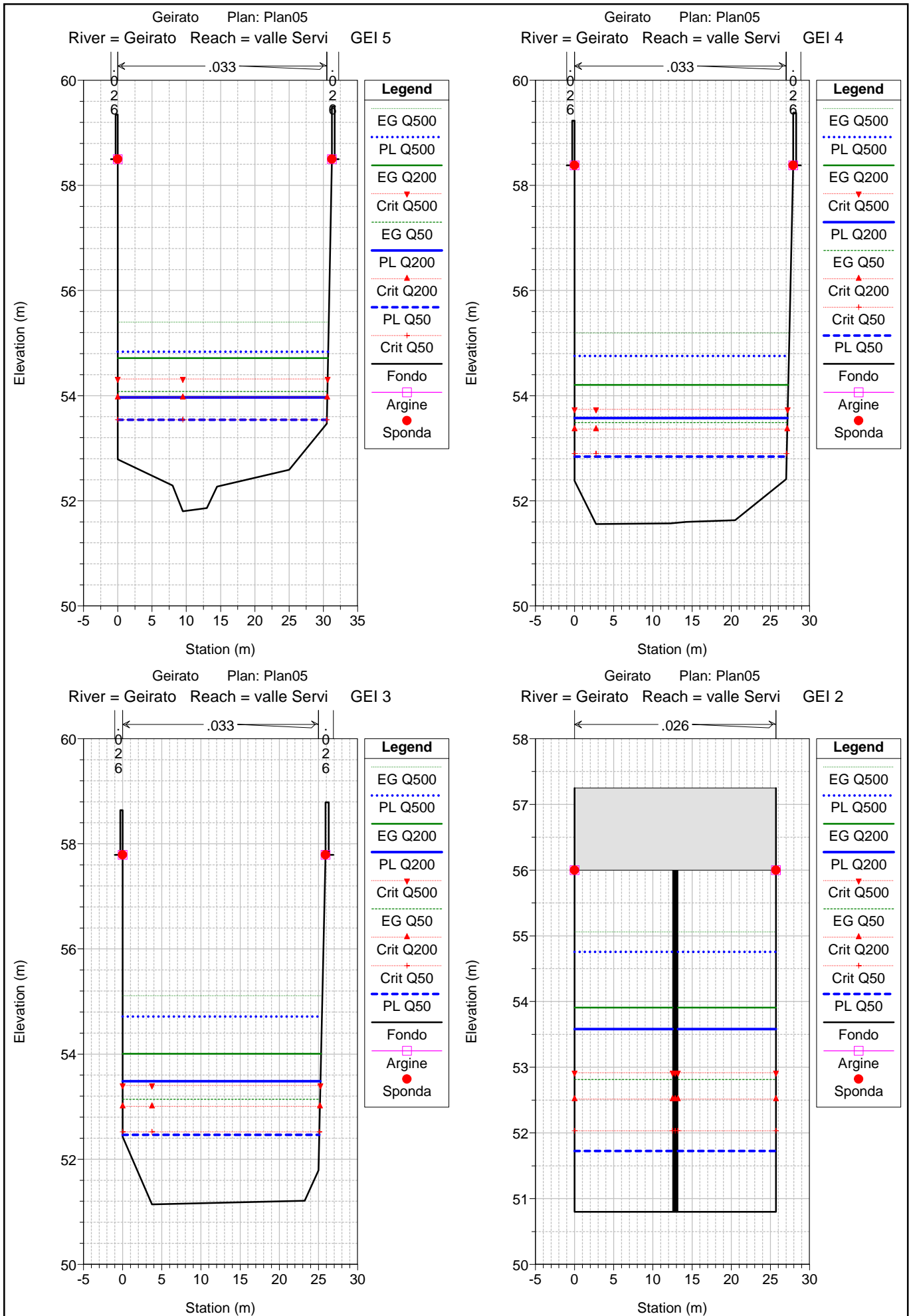


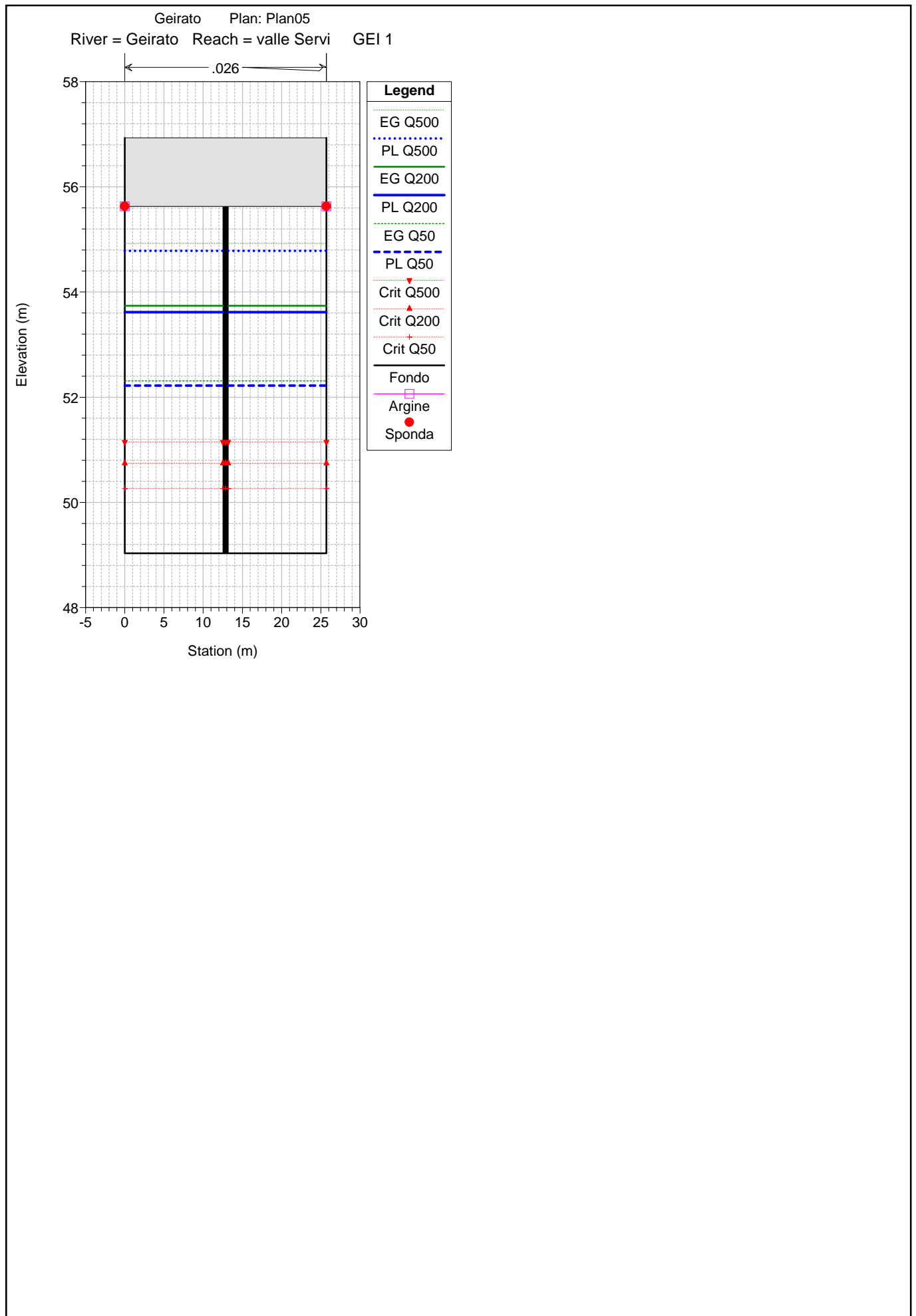












HEC-RAS Plan: SA

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
monte	190	GEI 49	Q50	40.00	112.19	113.05	115.41	2.36	113.51	0.46	113.05	113.45	0.009978	2.79	14.35	18.20	1.00
monte	190	GEI 49	Q200	66.00	112.19	113.38	115.41	2.03	113.51	0.13	113.38	113.91	0.009052	3.23	20.45	19.19	1.00
monte	190	GEI 49	Q500	90.00	112.19	113.63	115.41	1.78	113.51	-0.12	113.63	114.27	0.008650	3.54	25.41	19.83	1.00
monte	189	GEI 49	Q50	40.00	110.64	111.04	115.41	4.37	113.51	2.47	111.52	113.26	0.150650	6.60	6.07	16.31	3.45
monte	189	GEI 49	Q200	66.00	110.64	111.25	115.41	4.16	113.51	2.26	111.85	113.71	0.096186	6.95	9.50	16.68	2.94
monte	189	GEI 49	Q500	90.00	110.64	111.43	115.41	3.98	113.51	2.08	112.12	114.06	0.074178	7.19	12.51	17.01	2.68
monte	180	GEI 48	Q50	40.00	106.19	106.91	108.50	1.59	110.96	4.05	107.21	107.91	0.049452	4.43	9.02	19.13	2.06
monte	180	GEI 48	Q200	66.00	106.19	107.08	108.50	1.42	110.96	3.88	107.51	108.56	0.050082	5.40	12.23	19.22	2.16
monte	180	GEI 48	Q500	90.00	106.19	107.21	108.50	1.29	110.96	3.75	107.75	109.10	0.050502	6.09	14.77	19.29	2.22
monte	170	GEI 47	Q50	40.00	105.36	105.99	106.98	0.99	112.30	6.31	106.26	106.90	0.038003	4.23	9.45	17.37	1.83
monte	170	GEI 47	Q200	66.00	105.36	106.19	106.98	0.79	112.30	6.11	106.59	107.52	0.038035	5.11	12.91	17.64	1.91
monte	170	GEI 47	Q500	90.00	105.36	106.34	106.98	0.64	112.30	5.96	106.85	108.02	0.038111	5.74	15.68	17.84	1.95
monte	169	GEI 47	Q50	40.00	105.36	106.00	106.98	0.98	112.30	6.30	106.26	106.87	0.034946	4.12	9.70	17.39	1.76
monte	169	GEI 47	Q200	66.00	105.36	106.20	106.98	0.78	112.30	6.10	106.59	107.49	0.036047	5.03	13.13	17.65	1.86
monte	169	GEI 47	Q500	90.00	105.36	106.35	106.98	0.63	112.30	5.95	106.85	107.99	0.036579	5.67	15.89	17.86	1.92
monte	160	GEI 46	Q50	40.00	102.93	103.46	104.58	1.12	110.00	6.54	103.77	104.52	0.049740	4.55	8.79	17.67	2.06
monte	160	GEI 46	Q200	66.00	102.93	103.64	104.58	0.94	110.00	6.36	104.09	105.18	0.049534	5.50	12.00	17.89	2.14
monte	160	GEI 46	Q500	90.00	102.93	103.79	104.58	0.79	110.00	6.21	104.35	105.72	0.048910	6.15	14.63	18.06	2.18
monte	159	GEI 46	Q50	40.00	101.11	101.48	104.58	3.10	110.00	8.52	102.01	104.29	0.203525	7.44	5.38	14.97	3.96
monte	159	GEI 46	Q200	66.00	101.11	101.66	104.58	2.92	110.00	8.34	102.37	104.96	0.141805	8.05	8.20	15.22	3.50
monte	159	GEI 46	Q500	90.00	101.11	101.82	104.58	2.76	110.00	8.18	102.65	105.50	0.116495	8.51	10.58	15.42	3.28
monte	150	GEI 45	Q50	40.00	98.71	99.28	100.20	0.92	102.64	3.36	99.53	100.11	0.033526	4.03	9.92	17.72	1.72
monte	150	GEI 45	Q200	66.00	98.71	99.48	100.20	0.72	102.64	3.16	99.85	100.70	0.034146	4.90	13.47	17.97	1.81
monte	150	GEI 45	Q500	90.00	98.71	99.64	100.20	0.56	102.64	3.00	100.11	101.19	0.034729	5.53	16.28	18.17	1.86
monte	149	GEI 45	Q50	40.00	96.70	97.01	100.20	3.19	102.64	5.63	97.52	99.87	0.248811	7.49	5.34	17.17	4.29
monte	149	GEI 45	Q200	66.00	96.70	97.18	100.20	3.02	102.64	5.46	97.84	100.47	0.165311	8.03	8.22	17.26	3.71
monte	149	GEI 45	Q500	90.00	96.70	97.32	100.20	2.88	102.64	5.32	98.11	100.95	0.132217	8.45	10.66	17.34	3.44
monte	140	GEI 44	Q50	40.00	94.40	94.91	97.18	2.27	97.24	2.33	95.15	95.72	0.038146	3.98	10.05	20.00	1.79
monte	140	GEI 44	Q200	66.00	94.40	95.09	97.18	2.09	97.24	2.15	95.45	96.29	0.038900	4.86	13.58	20.00	1.88
monte	140	GEI 44	Q500	90.00	94.40	95.23	97.18	1.95	97.24	2.01	95.68	96.77	0.039695	5.51	16.34	20.00	1.95
monte	135	GEI 43	Q50	40.00	93.05	93.93	97.06	3.13	97.02	3.09	94.19	94.79	0.038422	4.10	9.75	19.30	1.84
monte	135	GEI 43	Q200	66.00	93.05	94.12	97.06	2.94	97.02	2.90	94.49	95.37	0.037821	4.95	13.33	19.30	1.90
monte	135	GEI 43	Q500	90.00	93.05	94.27	97.06	2.79	97.02	2.75	94.73	95.84	0.037620	5.56	16.18	19.30	1.94
monte	130	GEI 43		Bridge													
monte	125	GEI 43	Q50	40.00	92.65	93.13	97.06	3.93	97.02	3.89	93.44	94.18	0.056176	4.55	8.80	19.30	2.15
monte	125	GEI 43	Q200	66.00	92.65	93.32	97.06	3.74	97.02	3.70	93.74	94.76	0.049659	5.31	12.42	19.30	2.11
monte	125	GEI 43	Q500	90.00	92.65	93.46	97.06	3.60	97.02	3.56	93.98	95.24	0.047722	5.91	15.23	19.30	2.12

HEC-RAS Plan: SA (Continued)

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	
monte	120	GEI 42	Q50	97.00	89.92	92.06	92.00	-0.06	92.47	0.41	91.89	92.64	0.005914	3.37	28.77	18.28	0.85
monte	120	GEI 42	Q200	159.00	89.92	92.50	92.00	-0.50	92.47	-0.03	92.50	93.44	0.007374	4.31	37.16	20.26	0.98
monte	120	GEI 42	Q500	219.00	89.92	92.97	92.00	-0.97	92.47	-0.50	92.97	94.11	0.006937	4.75	46.99	21.64	0.97
monte	111	GEI 41	Q50	97.00	89.70	91.60	92.00	0.40	92.30	0.70	91.77	92.50	0.011406	4.21	23.06	17.19	1.16
monte	111	GEI 41	Q200	159.00	89.70	92.14	92.00	-0.14	92.30	0.16	92.38	93.30	0.011514	4.79	33.26	21.24	1.20
monte	111	GEI 41	Q500	219.00	89.70	92.48	92.00	-0.48	92.30	-0.18	92.83	93.96	0.011866	5.39	41.08	23.71	1.25
monte	110	GEI 41	Q50	97.00	87.70	88.98	92.00	3.02	91.51	2.53	89.90	92.26	0.057971	8.02	12.10	11.13	2.46
monte	110	GEI 41	Q200	159.00	87.70	89.59	92.00	2.41	91.51	1.92	90.64	93.06	0.039731	8.26	19.26	12.44	2.12
monte	110	GEI 41	Q500	219.00	87.70	90.11	92.00	1.89	91.51	1.40	91.24	93.73	0.031995	8.44	25.95	13.54	1.95
monte	100	GEI 40	Q50	97.00	87.70	89.44	90.70	1.26	91.30	1.86	89.44	90.11	0.008772	3.61	26.89	20.49	1.01
monte	100	GEI 40	Q200	159.00	87.70	89.96	90.70	0.74	91.30	1.34	89.96	90.87	0.008233	4.22	37.69	20.84	1.00
monte	100	GEI 40	Q500	219.00	87.70	90.40	90.70	0.30	91.30	0.90	90.40	91.51	0.008018	4.69	46.73	20.89	1.00
monte	90	GEI 39	Q50	97.00	87.00	88.34	89.90	1.56	90.10	1.76	88.68	89.53	0.023229	4.84	20.03	20.63	1.57
monte	90	GEI 39	Q200	159.00	87.00	88.74	89.90	1.16	90.10	1.36	89.19	90.34	0.020702	5.60	28.37	20.84	1.53
monte	90	GEI 39	Q500	219.00	87.00	89.09	89.90	0.81	90.10	1.01	89.62	91.01	0.019044	6.14	35.69	20.88	1.50
monte	81	GEI 38	Q50	97.00	86.00	86.96	89.80	2.84	88.50	1.54	87.43	88.53	0.038698	5.54	17.51	21.20	1.95
monte	81	GEI 38	Q200	159.00	86.00	87.30	89.80	2.50	88.50	1.20	87.93	89.43	0.034970	6.47	24.56	21.20	1.92
monte	81	GEI 38	Q500	219.00	86.00	87.59	89.80	2.21	88.50	0.91	88.35	90.16	0.032166	7.10	30.83	21.20	1.88
monte	80	GEI 38	Bridge														
monte	79	GEI 38	Q50	97.00	85.80	87.05	89.80	2.75	88.50	1.45	87.29	88.03	0.018047	4.38	22.12	21.20	1.37
monte	79	GEI 38	Q200	159.00	85.80	87.35	89.80	2.45	88.50	1.15	87.80	88.94	0.021491	5.57	28.54	21.20	1.53
monte	79	GEI 38	Q500	219.00	85.80	87.64	89.80	2.16	88.50	0.86	88.22	89.68	0.022204	6.33	34.57	21.20	1.58
monte	70	GEI 37	Q50	97.00	85.30	86.75	91.00	4.25	88.60	1.85	86.98	87.67	0.015068	4.25	22.84	21.18	1.31
monte	70	GEI 37	Q200	159.00	85.30	87.09	91.00	3.91	88.60	1.51	87.47	88.50	0.017629	5.26	30.26	22.78	1.46
monte	70	GEI 37	Q500	219.00	85.30	87.35	91.00	3.65	88.60	1.25	87.87	89.21	0.018978	6.05	36.19	22.84	1.53
monte	60	GEI 36	Q50	97.00	82.60	83.97	89.00	5.03	87.40	3.43	84.55	85.91	0.038285	6.17	15.73	16.72	2.03
monte	60	GEI 36	Q200	159.00	82.60	84.37	89.00	4.63	87.40	3.03	85.12	86.86	0.034289	6.99	22.75	18.20	1.99
monte	60	GEI 36	Q500	219.00	82.60	84.70	89.00	4.30	87.40	2.70	85.60	87.64	0.031781	7.60	28.81	18.81	1.96
monte	50	GEI 35	Q50	97.00	78.80	80.31	82.00	1.69	81.50	1.19	80.62	81.36	0.028373	4.56	21.28	28.76	1.69
monte	50	GEI 35	Q200	159.00	78.80	80.56	82.00	1.44	81.50	0.94	81.03	82.13	0.029538	5.55	28.64	29.40	1.80
monte	50	GEI 35	Q500	219.00	78.80	80.76	82.00	1.24	81.50	0.74	81.38	82.80	0.030718	6.32	34.64	29.90	1.88
monte	40	GEI 34	Q50	97.00	73.60	75.12	76.00	0.88	76.05	0.93	75.52	76.34	0.026951	4.90	19.81	23.18	1.69
monte	40	GEI 34	Q200	159.00	73.60	75.47	76.00	0.53	76.05	0.58	75.99	77.03	0.026473	5.53	28.75	27.64	1.73
monte	40	GEI 34	Q500	219.00	73.60	75.74	76.00	0.26	76.05	0.31	76.30	77.56	0.026622	5.98	36.64	31.46	1.77
monte	35	GEI 33	Q50	97.00	72.00	72.89	72.70	-0.19	73.80	0.91	73.07	73.60	0.019635	3.74	25.91	35.00	1.39
monte	35	GEI 33	Q200	159.00	72.00	73.14	72.70	-0.44	73.80	0.66	73.43	74.21	0.020211	4.58	34.74	35.00	1.47

HEC-RAS Plan: SA (Continued)

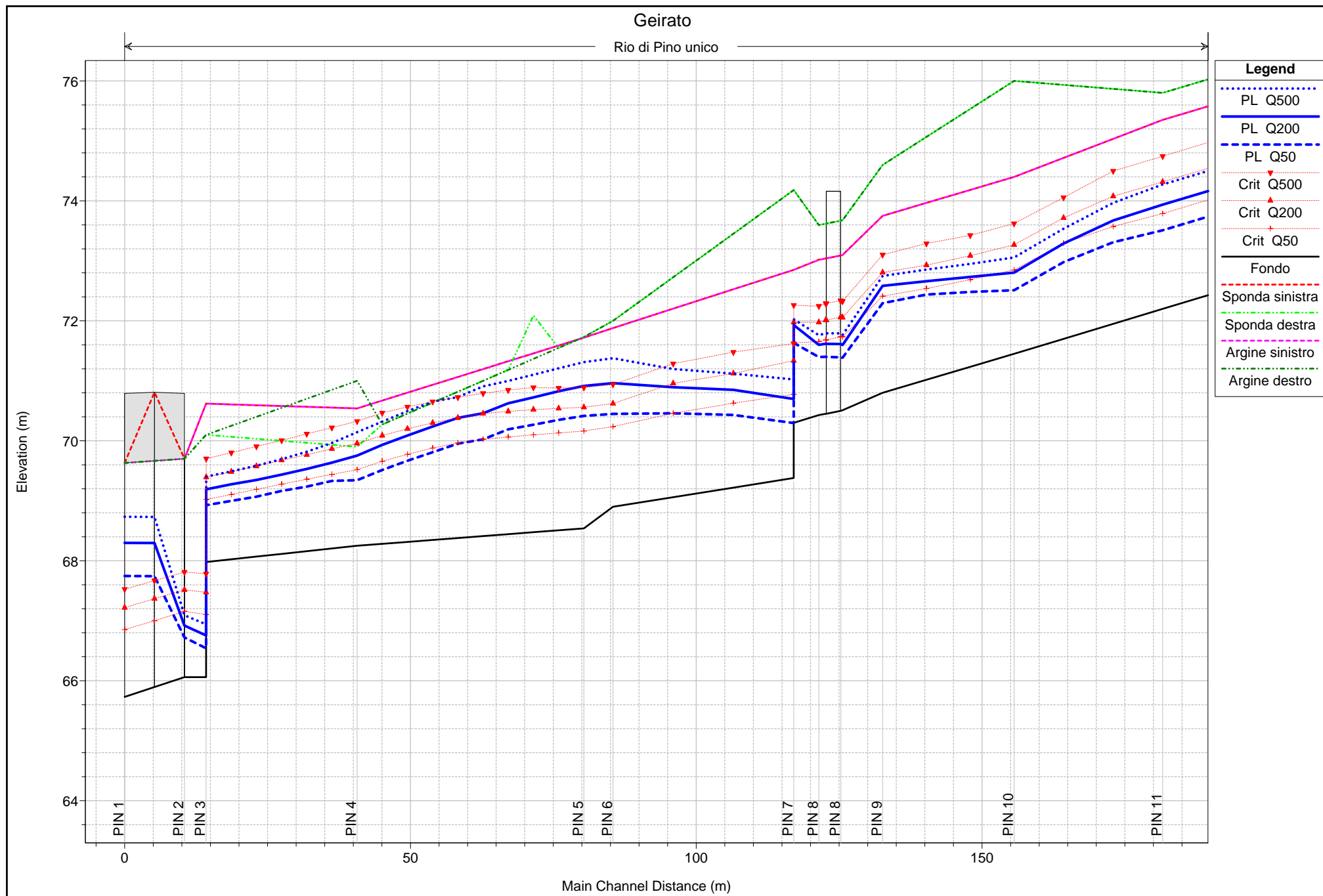
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl	
monte	35	GEI 33	Q500	219.00	72.00	73.35	72.70	-0.65	73.80	0.45	73.74	74.74	0.020764	5.22	41.95	35.00	1.52
monte	30	GEI 32	Q50	97.00	70.50	71.52	74.60	3.08	73.00	1.48	71.89	72.72	0.026189	4.85	20.00	23.03	1.66
monte	30	GEI 32	Q200	159.00	70.50	71.92	74.60	2.68	73.00	1.08	72.39	73.39	0.021520	5.38	29.58	25.05	1.58
monte	30	GEI 32	Q500	219.00	70.50	72.23	74.60	2.37	73.00	0.77	72.78	73.94	0.020815	5.79	37.82	27.94	1.59
monte	19	GEI 31	Q50	97.00	65.13	67.75	70.26	2.51	70.37	2.62	67.02	67.93	0.002035	1.90	51.16	30.09	0.46
monte	19	GEI 31	Q200	159.00	65.13	68.30	70.26	1.96	70.37	2.07	67.46	68.58	0.002207	2.34	67.82	30.23	0.50
monte	19	GEI 31	Q500	219.00	65.13	68.73	70.26	1.53	70.37	1.64	67.80	69.11	0.002377	2.70	80.99	30.34	0.53
valle Pino	18	GEI 30	Q50	107.00	64.70	66.68	69.83	3.15	69.94	3.26	66.68	67.24	0.010548	3.33	32.16	28.52	1.00
valle Pino	18	GEI 30	Q200	176.00	64.70	67.13	69.83	2.70	69.94	2.81	67.13	67.89	0.009818	3.87	45.46	30.04	1.00
valle Pino	18	GEI 30	Q500	241.00	64.70	67.49	69.83	2.34	69.94	2.45	67.49	68.42	0.009228	4.28	56.29	30.13	1.00
valle Pino	17	GEI 29	Q50	107.00	63.65	65.59	69.07	3.48	69.11	3.52	65.92	66.69	0.026694	4.64	23.04	24.96	1.54
valle Pino	17	GEI 29	Q200	176.00	63.65	65.98	69.07	3.09	69.11	3.13	66.37	67.38	0.024056	5.25	33.55	27.71	1.52
valle Pino	17	GEI 29	Q500	241.00	63.65	66.30	69.07	2.77	69.11	2.81	66.75	67.95	0.021276	5.70	42.30	27.77	1.47
valle Pino	16.6	GEI 28	Q50	107.00	63.49	65.45	69.17	3.72	69.17	3.72	65.76	66.50	0.025350	4.55	23.51	25.17	1.50
valle Pino	16.6	GEI 28	Q200	176.00	63.49	65.82	69.17	3.35	69.17	3.35	66.21	67.22	0.024377	5.25	33.53	27.71	1.52
valle Pino	16.6	GEI 28	Q500	241.00	63.49	66.12	69.17	3.05	69.17	3.05	66.59	67.80	0.022255	5.74	41.96	27.76	1.49
valle Pino	16.4	GEI 28	Q50	107.00	63.43	65.39	69.17	3.78	69.17	3.78	65.70	66.44	0.025195	4.54	23.57	25.19	1.50
valle Pino	16.4	GEI 28	Q200	176.00	63.43	65.76	69.17	3.41	69.17	3.41	66.15	67.16	0.024377	5.25	33.53	27.71	1.52
valle Pino	16.4	GEI 28	Q500	241.00	63.43	66.06	69.17	3.11	69.17	3.11	66.53	67.75	0.022391	5.75	41.88	27.76	1.50
valle Pino	16	GEI 27	Q50	107.00	63.59	65.32	68.47	3.15	68.01	2.69	65.42	66.10	0.015201	3.93	27.25	21.98	1.13
valle Pino	16	GEI 27	Q200	176.00	63.59	66.13	68.47	2.34	68.01	1.88	65.96	66.88	0.008338	3.85	45.67	23.46	0.88
valle Pino	16	GEI 27	Q500	241.00	63.59	66.67	68.47	1.80	68.01	1.34	66.40	67.53	0.007329	4.11	58.68	24.46	0.85
valle Pino	15	GEI 26	Q50	107.00	63.35	64.87	68.28	3.41	67.84	2.97	65.11	65.89	0.018217	4.48	23.89	19.90	1.30
valle Pino	15	GEI 26	Q200	176.00	63.35	65.44	68.28	2.84	67.84	2.40	65.68	66.69	0.014413	4.96	35.49	20.84	1.21
valle Pino	15	GEI 26	Q500	241.00	63.35	65.91	68.28	2.37	67.84	1.93	66.15	67.34	0.012713	5.30	45.44	21.61	1.17
valle Pino	14	GEI 25	Q50	107.00	62.65	64.19	67.84	3.65	67.26	3.07	64.56	65.36	0.023156	4.78	22.40	20.82	1.47
valle Pino	14	GEI 25	Q200	176.00	62.65	64.60	67.84	3.24	67.26	2.66	65.06	66.17	0.024884	5.55	31.70	24.67	1.56
valle Pino	14	GEI 25	Q500	241.00	62.65	64.90	67.84	2.94	67.26	2.36	65.47	66.82	0.023932	6.14	39.25	25.29	1.57
valle Pino	13	GEI 24	Q50	107.00	61.79	63.77	66.82	3.05	66.67	2.90	63.94	64.67	0.014823	4.21	25.40	20.02	1.19
valle Pino	13	GEI 24	Q200	176.00	61.79	64.32	66.82	2.50	66.67	2.35	64.51	65.47	0.013084	4.76	37.00	21.80	1.17
valle Pino	13	GEI 24	Q500	241.00	61.79	64.77	66.82	2.05	66.67	1.90	64.97	66.10	0.012021	5.12	47.05	23.01	1.14
valle Pino	12	GEI 23	Q50	107.00	61.77	63.68	66.07	2.39	66.07	2.39	63.68	64.30	0.010451	3.48	30.79	25.07	1.00
valle Pino	12	GEI 23	Q200	176.00	61.77	64.18	66.07	1.89	66.07	1.89	64.18	65.01	0.009564	4.05	43.43	25.95	1.00
valle Pino	12	GEI 23	Q500	241.00	61.77	64.36	66.07	1.71	66.07	1.71	64.58	65.63	0.012930	5.00	48.24	26.28	1.18
valle Pino	11	GEI 22	Q50	107.00	61.26	62.65	65.80	3.15	65.80	3.15	63.02	63.87	0.030056	4.90	21.85	23.80	1.63
valle Pino	11	GEI 22	Q200	176.00	61.26	63.04	65.80	2.76	65.80	2.76	63.51	64.62	0.026283	5.57	31.57	25.43	1.60
valle Pino	11	GEI 22	Q500	241.00	61.26	63.35	65.80	2.45	65.80	2.45	63.90	65.24	0.024377	6.10	39.51	26.05	1.58

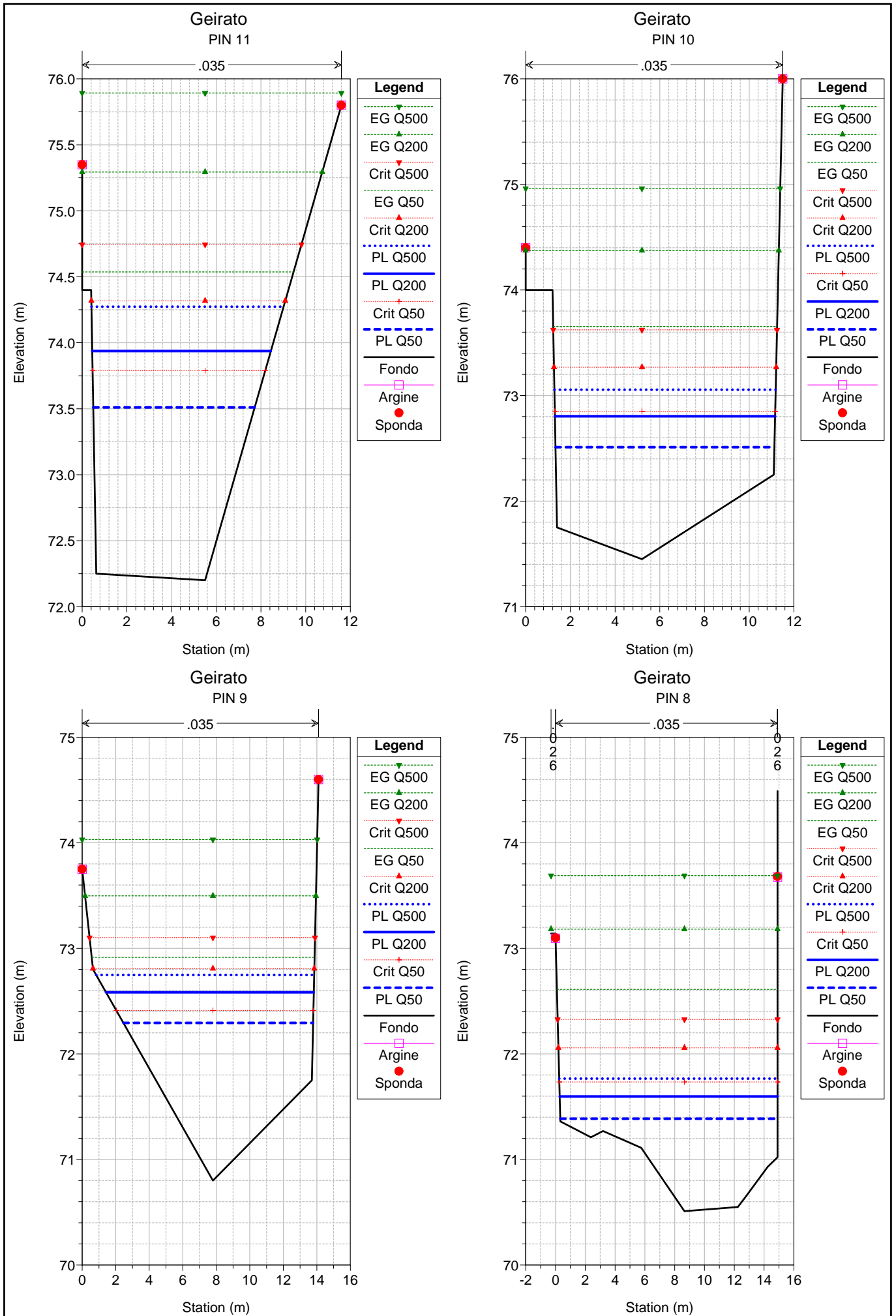
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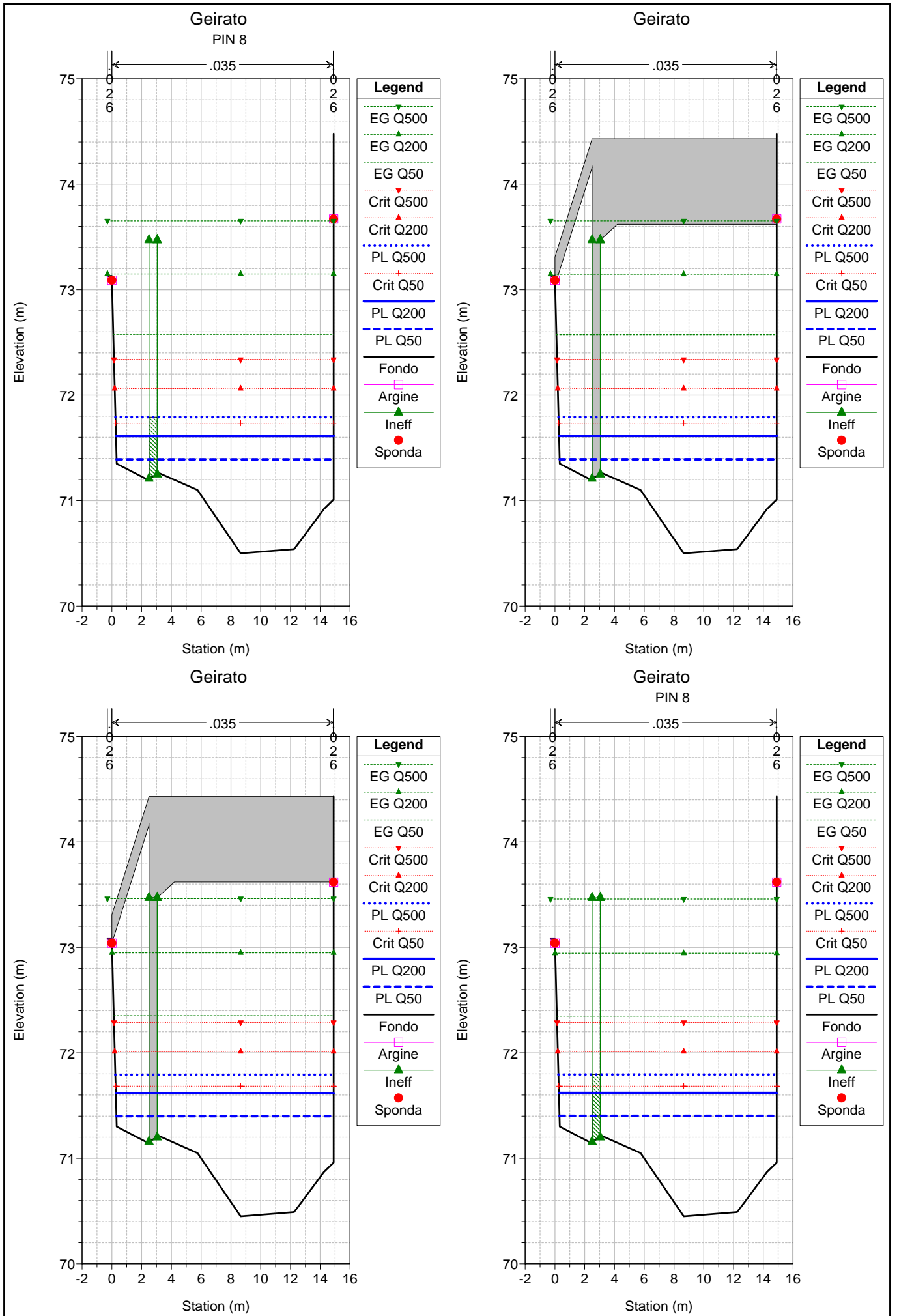
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
valle Pino	10 GEI 21	Q50	107.00	60.88	61.91	65.44	3.53	65.30	3.39	62.18	62.82	0.027391	4.23	25.29	32.27	1.53
valle Pino	10 GEI 21	Q200	176.00	60.88	63.33	65.44	2.11	65.30	1.97	62.59	63.60	0.002377	2.28	77.17	38.73	0.52
valle Pino	10 GEI 21	Q500	241.00	60.88	63.79	65.44	1.65	65.30	1.51	62.91	64.12	0.002320	2.53	95.28	39.84	0.52
valle Servi	9 GEI 20	Q50	107.00	59.25	61.46	64.10	2.64	64.43	2.97	61.10	61.69	0.003820	2.10	51.01	41.79	0.61
valle Servi	9 GEI 20	Q200	176.00	59.25	62.02	64.10	2.08	64.43	2.41	61.46	62.30	0.003097	2.35	75.05	44.22	0.57
valle Servi	9 GEI 20	Q500	241.00	59.25	62.49	64.10	1.61	64.43	1.94	61.75	62.81	0.002651	2.51	96.08	45.20	0.55
valle Servi	8 GEI 19	Q50	107.00	59.26	61.13	64.06	2.93	64.05	2.92	61.11	61.62	0.010032	3.12	34.33	42.24	0.97
valle Servi	8 GEI 19	Q200	176.00	59.26	61.53	64.06	2.53	64.05	2.52	61.51	62.23	0.009090	3.69	47.67	43.83	0.98
valle Servi	8 GEI 19	Q500	241.00	59.26	61.87	64.06	2.19	64.05	2.18	61.84	62.73	0.008519	4.11	58.69	44.52	0.98
valle Servi	7.5	Bridge														
valle Servi	7 GEI 18	Q50	107.00	58.87	60.39	63.77	3.38	62.36	1.97	60.72	61.50	0.035174	4.66	22.95	37.80	1.71
valle Servi	7 GEI 18	Q200	176.00	58.87	60.75	63.77	3.02	62.36	1.61	61.14	62.11	0.027084	5.16	34.10	39.02	1.58
valle Servi	7 GEI 18	Q500	241.00	58.87	61.04	63.77	2.73	62.36	1.32	61.49	62.62	0.023399	5.56	43.38	40.01	1.52
valle Servi	6 GEI 17	Q50	107.00	58.56	60.04	63.33	3.29	61.99	1.95	60.26	60.85	0.025280	4.00	26.78	34.90	1.46
valle Servi	6 GEI 17	Q200	176.00	58.56	60.30	63.33	3.03	61.99	1.69	60.66	61.51	0.026673	4.87	36.14	36.35	1.56
valle Servi	6 GEI 17	Q500	241.00	58.56	60.52	63.33	2.81	61.99	1.47	60.97	62.04	0.026952	5.47	44.02	37.36	1.61
valle Servi	5 GEI 16	Q50	107.00	57.59	59.23	62.43	3.20	61.48	2.25	59.41	60.02	0.017128	3.94	27.19	27.09	1.25
valle Servi	5 GEI 16	Q200	176.00	57.59	59.66	62.43	2.77	61.48	1.82	59.86	60.68	0.015110	4.47	39.37	29.25	1.23
valle Servi	5 GEI 16	Q500	241.00	57.59	60.01	62.43	2.42	61.48	1.47	60.23	61.20	0.013676	4.85	49.70	30.11	1.20
valle Servi	4 GEI 15	Q50	107.00	56.72	58.60	61.68	3.08	61.63	3.03	58.75	59.36	0.017103	3.85	27.78	27.79	1.23
valle Servi	4 GEI 15	Q200	176.00	56.72	58.94	61.68	2.74	61.63	2.69	59.22	60.06	0.018329	4.70	37.47	29.20	1.32
valle Servi	4 GEI 15	Q500	241.00	56.72	59.25	61.68	2.43	61.63	2.38	59.59	60.61	0.017759	5.16	46.71	30.76	1.34
valle Servi	3 GEI 14	Q50	107.00	56.54	58.24	61.18	2.94	61.09	2.85	58.39	58.96	0.016212	3.76	28.48	28.94	1.21
valle Servi	3 GEI 14	Q200	176.00	56.54	58.60	61.18	2.58	61.09	2.49	58.83	59.61	0.017636	4.47	39.40	32.82	1.30
valle Servi	3 GEI 14	Q500	241.00	56.54	58.84	61.18	2.34	61.09	2.25	59.16	60.16	0.018198	5.08	47.41	33.09	1.36
valle Servi	2.5 GEI 13	Q50	107.00	55.73	58.06	60.41	2.35	60.36	2.30	57.46	58.28	0.002537	2.09	51.13	30.43	0.52
valle Servi	2.5 GEI 13	Q200	176.00	55.73	58.72	60.41	1.69	60.36	1.64	57.88	59.03	0.002343	2.47	71.27	30.62	0.52
valle Servi	2.5 GEI 13	Q500	241.00	55.73	59.26	60.41	1.15	60.36	1.10	58.24	59.65	0.002234	2.74	87.99	30.78	0.52
valle Servi	2 GEI 12	Q50	107.00	55.68	57.74	60.36	2.62	60.31	2.57	57.60	58.25	0.007449	3.15	34.01	30.35	0.85
valle Servi	2 GEI 12	Q200	176.00	55.68	58.26	60.36	2.10	60.31	2.05	58.10	58.98	0.007232	3.76	46.77	30.50	0.87
valle Servi	2 GEI 12	Q500	241.00	55.68	58.68	60.36	1.68	60.31	1.63	58.50	59.59	0.007116	4.21	57.26	30.62	0.88
valle Servi	1.5	Bridge														
valle Servi	1 GEI 11	Q50	107.00	55.55	57.14	60.33	3.19	60.35	3.21	57.39	58.08	0.022842	4.28	25.02	32.26	1.40
valle Servi	1 GEI 11	Q200	176.00	55.55	57.53	60.33	2.80	60.35	2.82	57.85	58.80	0.020430	5.00	35.20	32.31	1.39
valle Servi	1 GEI 11	Q500	241.00	55.55	57.85	60.33	2.48	60.35	2.50	58.24	59.40	0.019230	5.53	43.61	32.35	1.38

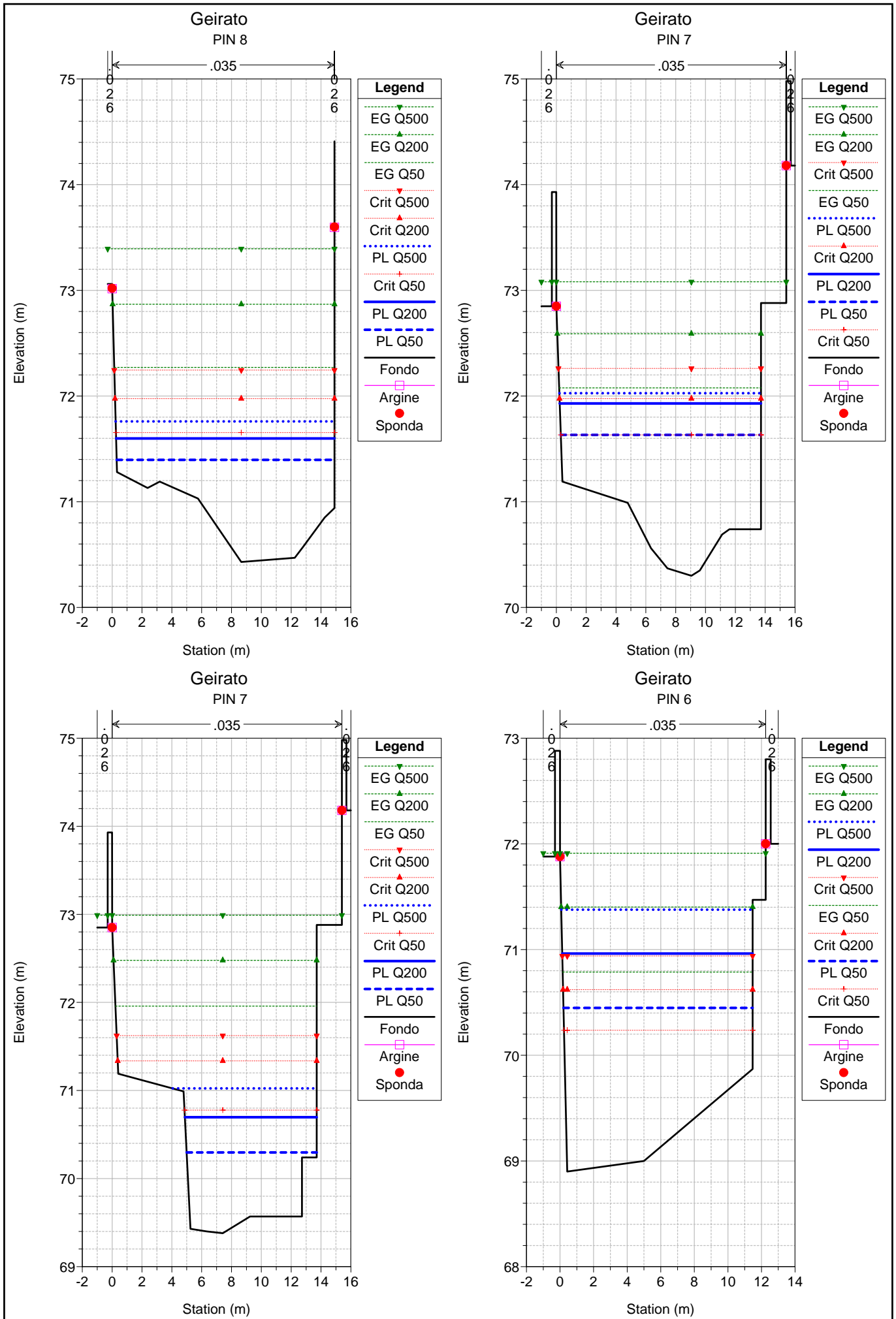
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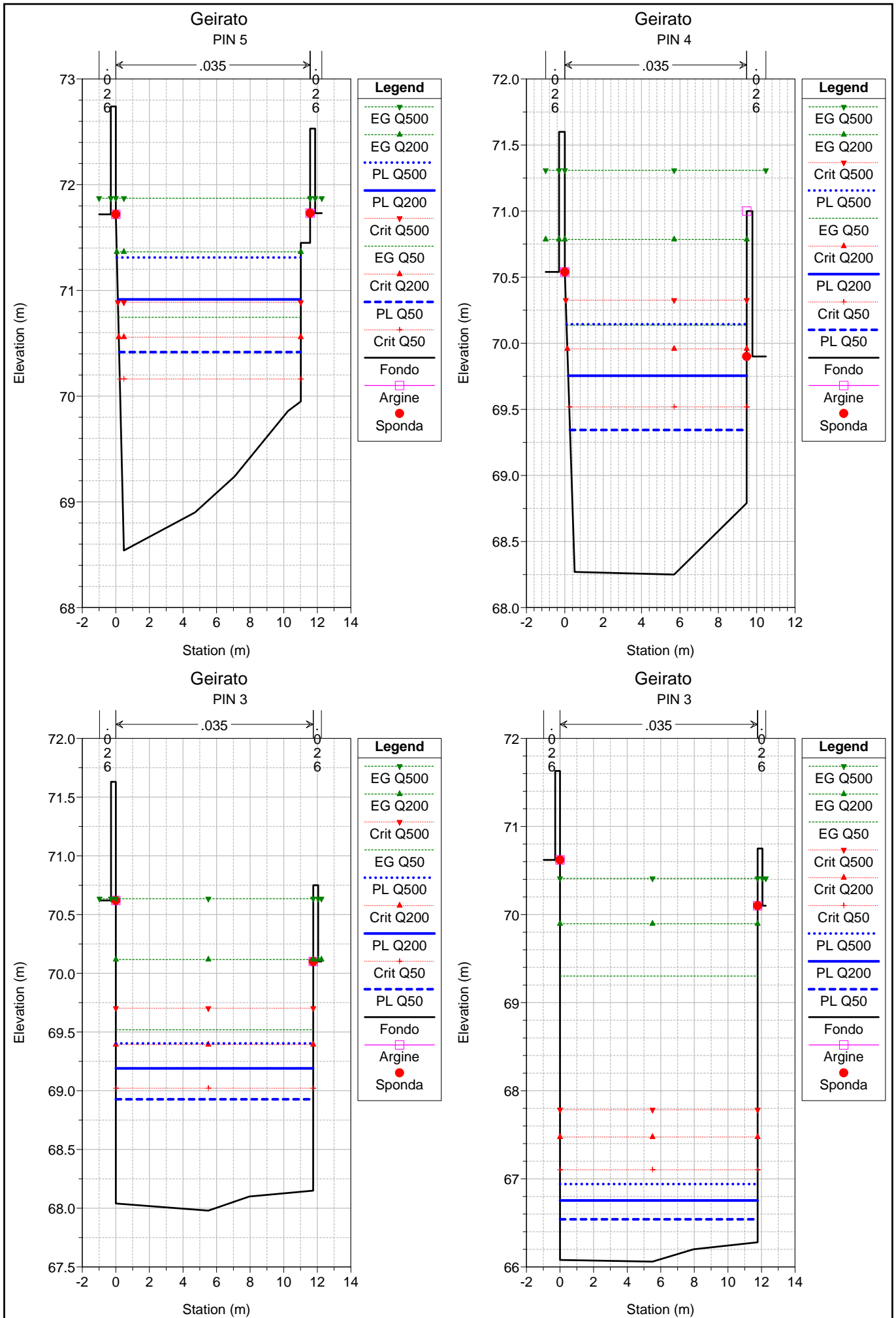
Reach	River Sta		Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
valle Servi	0.5	GEI 10	Q50	107.00	55.35	56.76	60.13	3.37	60.15	3.39	57.07	57.83	0.037146	4.60	23.27	32.24	1.73
valle Servi	0.5	GEI 10	Q200	176.00	55.35	57.03	60.13	3.10	60.15	3.12	57.48	58.57	0.035279	5.49	32.04	32.27	1.76
valle Servi	0.5	GEI 10	Q500	241.00	55.35	57.25	60.13	2.88	60.15	2.90	57.82	59.17	0.033851	6.13	39.35	32.30	1.77
valle Servi	0.49	GEI 9	Q50	107.00	54.93	56.01	59.22	3.21	58.99	2.98	56.30	56.98	0.029837	4.36	24.54	31.98	1.59
valle Servi	0.49	GEI 9	Q200	176.00	54.93	56.28	59.22	2.94	58.99	2.71	56.70	57.69	0.030898	5.27	33.41	33.51	1.68
valle Servi	0.49	GEI 9	Q500	241.00	54.93	56.49	59.22	2.73	58.99	2.50	57.03	58.30	0.031431	5.96	40.41	33.86	1.74
valle Servi	0.48	GEI 8	Q50	107.00	54.53	56.43	59.48	3.05	58.87	2.44	55.71	56.60	0.001874	1.83	58.55	33.98	0.44
valle Servi	0.48	GEI 8	Q200	176.00	54.53	57.01	59.48	2.47	58.87	1.86	56.11	57.27	0.001973	2.24	78.42	34.07	0.47
valle Servi	0.48	GEI 8	Q500	241.00	54.53	57.45	59.48	2.03	58.87	1.42	56.43	57.79	0.002112	2.58	93.40	34.14	0.50
valle Servi	0.47	GEI 7	Q50	107.00	54.43	55.39	58.96	3.57	58.99	3.60	55.65	56.36	0.023876	4.35	24.58	25.50	1.42
valle Servi	0.47	GEI 7	Q200	176.00	54.43	55.87	58.96	3.09	58.99	3.12	56.12	57.04	0.017634	4.78	36.79	25.50	1.27
valle Servi	0.47	GEI 7	Q500	241.00	54.43	56.36	58.96	2.60	58.99	2.63	56.64	57.58	0.013103	4.90	49.23	25.50	1.12
valle Servi	0.46	GEI 6	Q50	107.00	52.93	53.37	58.99	5.62	58.99	5.62	53.96	56.17	0.181330	7.42	14.43	32.56	3.56
valle Servi	0.46	GEI 6	Q200	176.00	52.93	53.61	58.99	5.38	58.99	5.38	54.37	56.83	0.119400	7.95	22.14	32.60	3.08
valle Servi	0.46	GEI 6	Q500	241.00	52.93	53.82	58.99	5.17	58.99	5.17	54.70	57.35	0.092625	8.33	28.95	32.63	2.82
valle Servi	0.45	GEI 5	Q50	107.00	51.80	53.54	58.50	4.96	58.50	4.96	53.54	54.08	0.010775	3.25	32.90	30.51	1.00
valle Servi	0.45	GEI 5	Q200	176.00	51.80	53.97	58.50	4.53	58.50	4.53	53.97	54.71	0.009832	3.83	45.93	30.57	1.00
valle Servi	0.45	GEI 5	Q500	241.00	51.80	54.84	58.50	3.66	58.50	3.66	54.32	55.40	0.004220	3.32	72.57	30.70	0.69
valle Servi	0.44	GEI 4	Q50	107.00	51.56	52.84	58.38	5.54	58.38	5.54	52.90	53.49	0.012431	3.56	30.06	27.06	1.08
valle Servi	0.44	GEI 4	Q200	176.00	51.56	53.57	58.38	4.81	58.38	4.81	53.36	54.21	0.006528	3.53	49.87	27.17	0.83
valle Servi	0.44	GEI 4	Q500	241.00	51.56	54.75	58.38	3.62	58.38	3.62	53.74	55.19	0.002503	2.93	82.12	27.35	0.54
valle Servi	0.43	GEI 3	Q50	107.00	51.14	52.47	57.79	5.32	57.79	5.32	52.52	53.14	0.012070	3.63	29.44	25.10	1.07
valle Servi	0.43	GEI 3	Q200	176.00	51.14	53.48	57.79	4.31	57.79	4.31	53.01	54.00	0.004344	3.19	55.10	25.25	0.69
valle Servi	0.43	GEI 3	Q500	241.00	51.14	54.71	57.79	3.08	57.79	3.08	53.40	55.11	0.001987	2.80	86.23	25.44	0.48
valle Servi	0.42	GEI 2	Q50	107.00	50.80	51.73	56.00	4.27	56.00	4.27	52.03	52.81	0.019244	4.62	23.15	25.00	1.53
valle Servi	0.42	GEI 2	Q200	176.00	50.80	53.58	56.00	2.42	56.00	2.42	52.52	53.91	0.001812	2.53	69.50	25.00	0.48
valle Servi	0.42	GEI 2	Q500	241.00	50.80	54.76	56.00	1.24	56.00	1.24	52.92	55.06	0.001233	2.44	98.93	25.00	0.39
valle Servi	0.41	GEI 1	Q50	107.00	49.03	52.22	55.63	3.41	55.63	3.41	50.26	52.31	0.000449	1.34	79.74	25.00	0.24
valle Servi	0.41	GEI 1	Q200	176.00	49.03	53.62	55.63	2.01	55.63	2.01	50.74	53.74	0.000435	1.53	114.70	25.00	0.23
valle Servi	0.41	GEI 1	Q500	241.00	49.03	54.78	55.63	0.85	55.63	0.85	51.15	54.92	0.000440	1.68	143.77	25.00	0.22

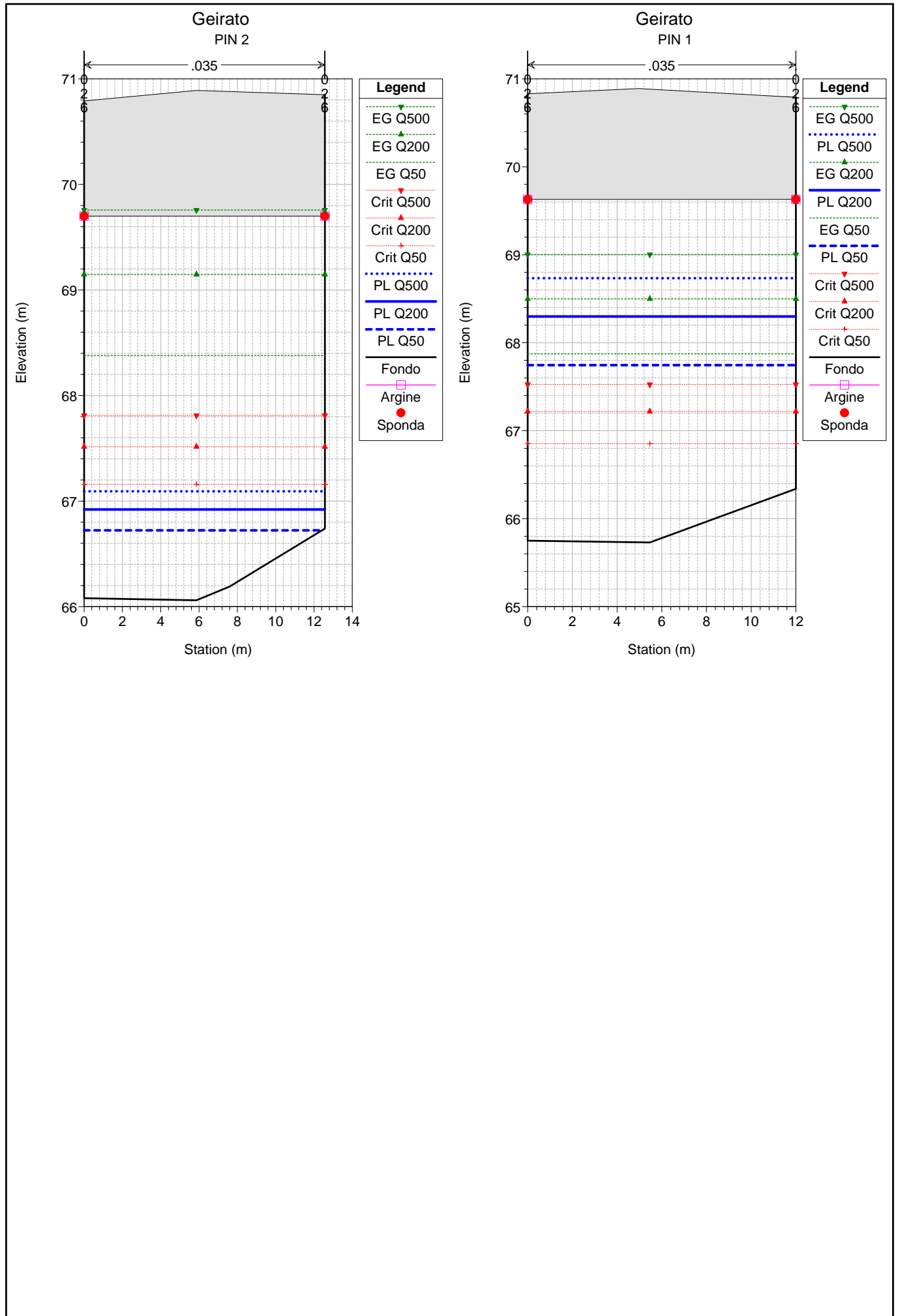










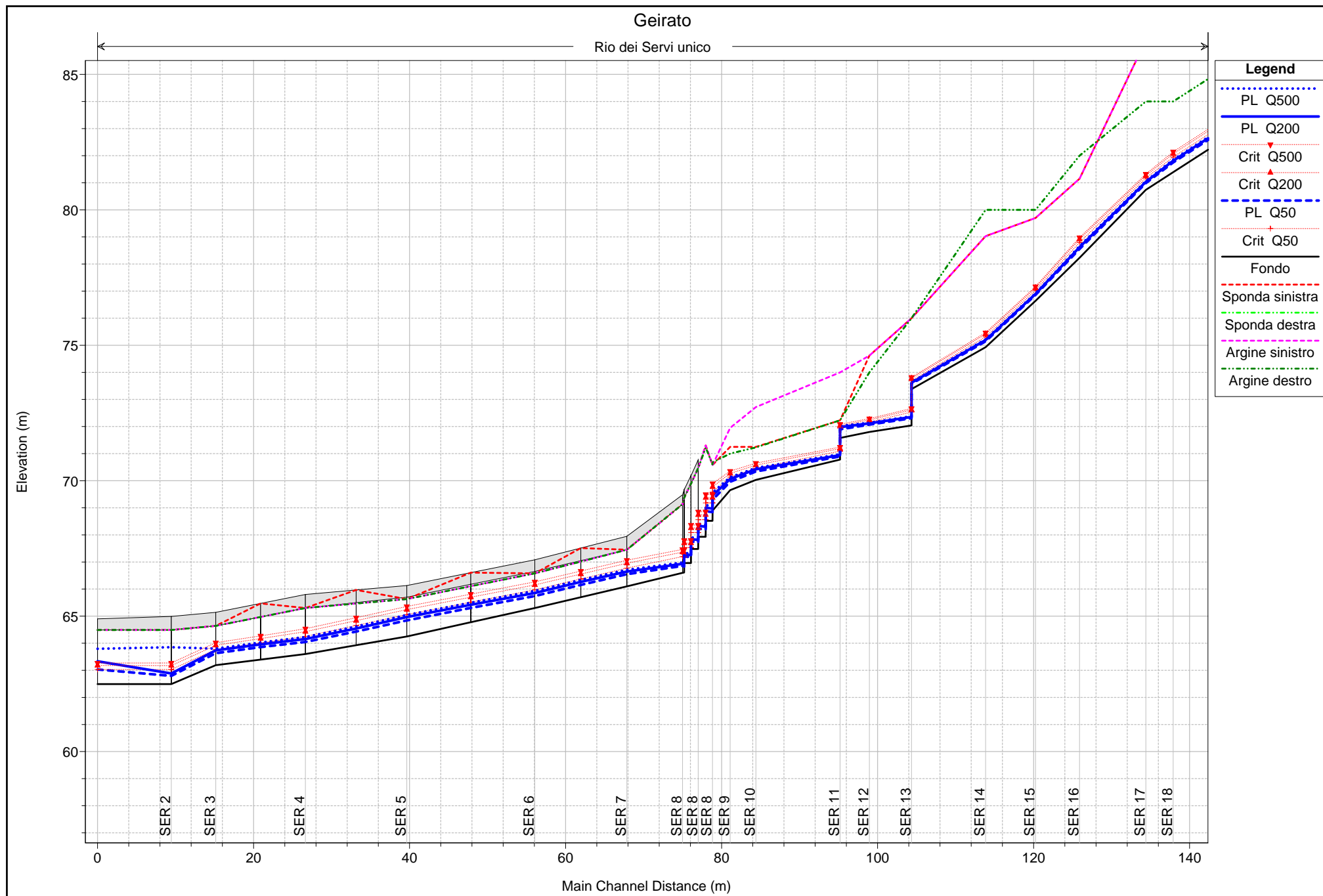


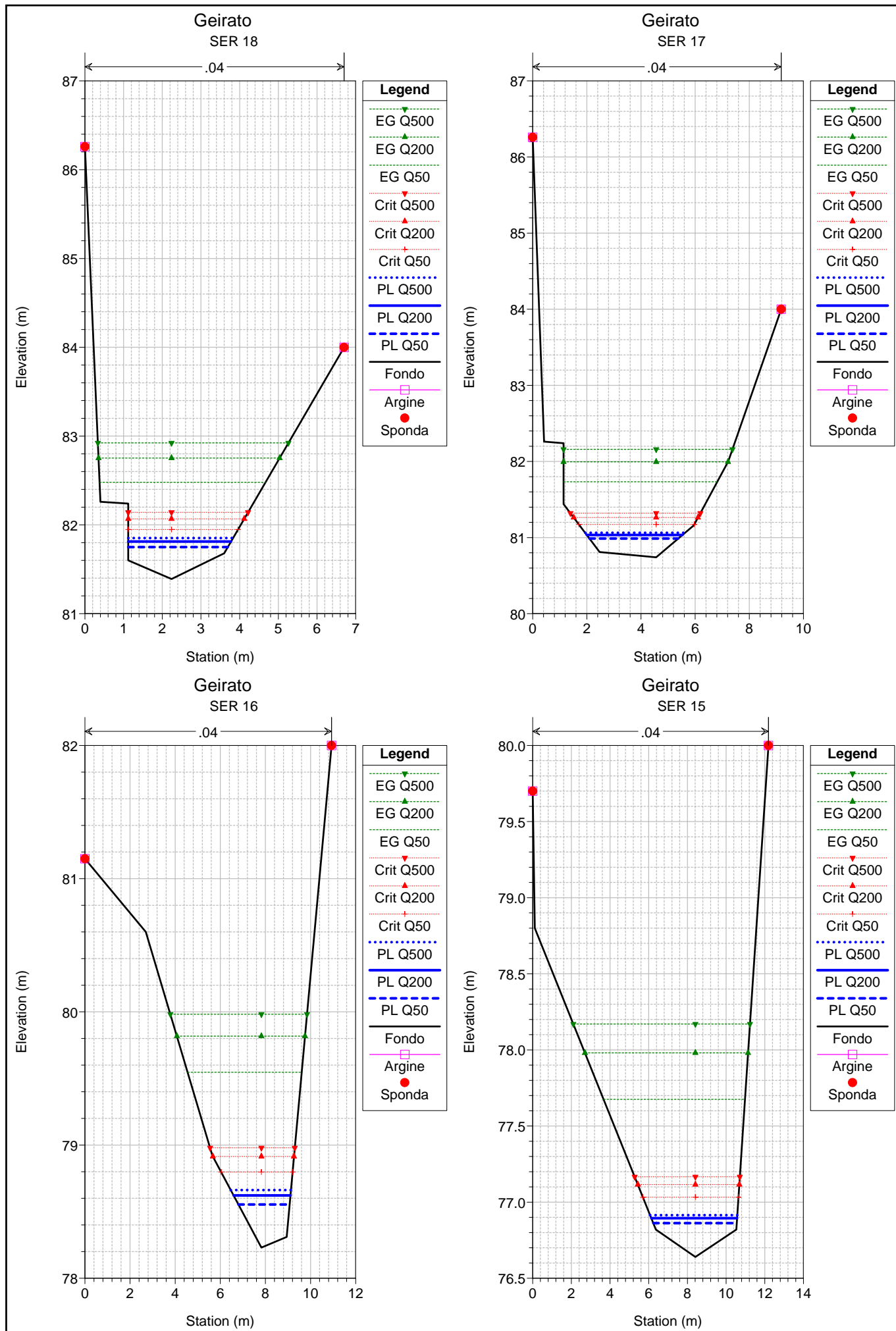
HEC-RAS Plan: SA River: Rio di Pino Reach: unico

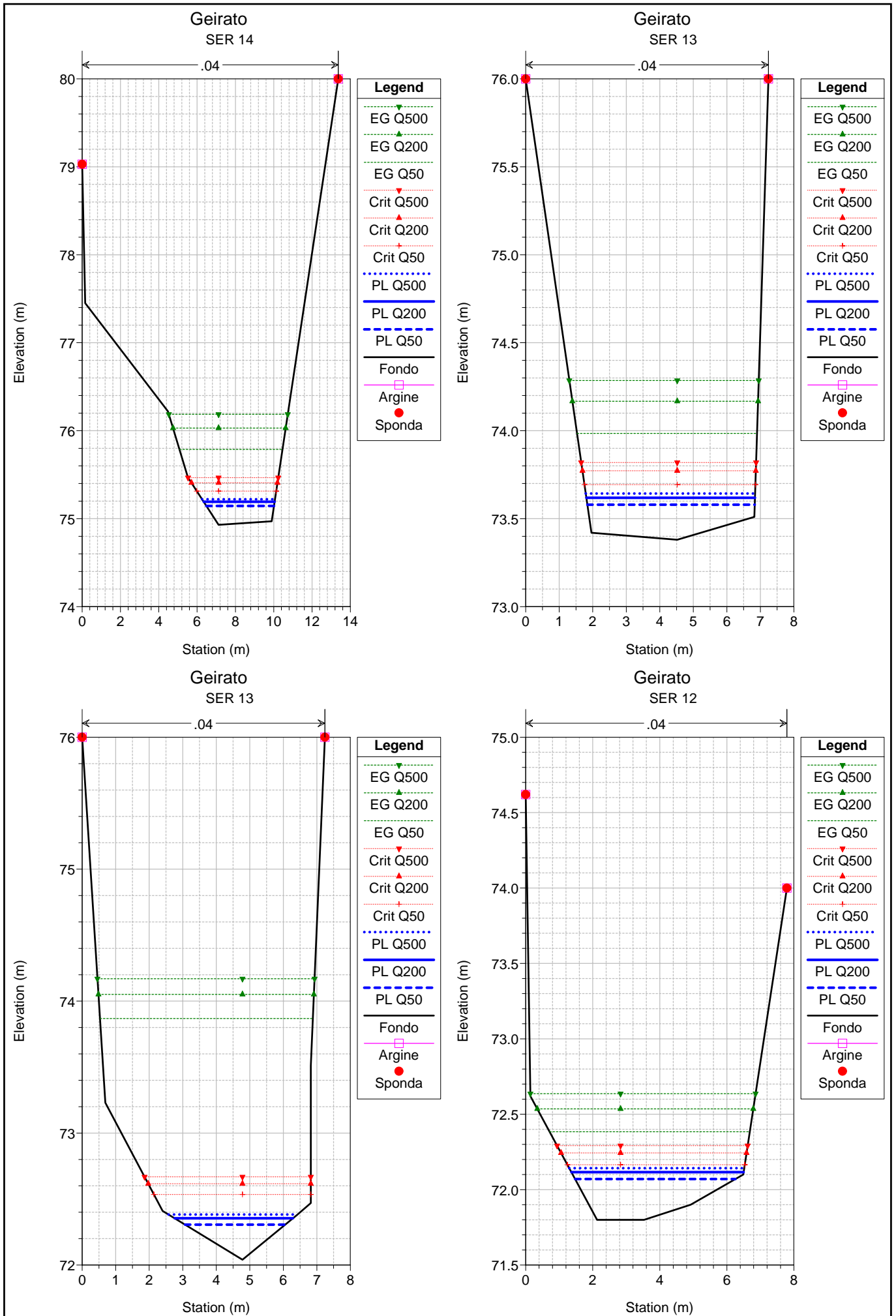
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl	
unico	100	Q50	35.00	75.06	76.37	78.21	1.84	78.66	2.29	76.65	77.40	0.028651	4.49	7.80	7.22	1.38	
unico	100	Q200	57.00	75.06	76.80	78.21	1.41	78.66	1.86	77.18	78.16	0.028605	5.17	11.03	7.99	1.40	
unico	100	Q500	78.00	75.06	77.13	78.21	1.08	78.66	1.53	77.60	78.75	0.028636	5.64	13.83	8.60	1.42	
unico	11	PIN 11	Q50	35.00	72.20	73.51	75.35	1.84	75.80	2.29	73.79	74.54	0.028651	4.49	7.80	7.22	1.38
unico	11	PIN 11	Q200	57.00	72.20	73.94	75.35	1.41	75.80	1.86	74.32	75.29	0.028498	5.16	11.05	7.99	1.40
unico	11	PIN 11	Q500	78.00	72.20	74.27	75.35	1.08	75.80	1.53	74.74	75.89	0.028636	5.64	13.83	8.60	1.42
unico	10	PIN 10	Q50	35.00	71.45	72.51	74.40	1.89	76.00	3.49	72.85	73.65	0.045567	4.74	7.39	9.80	1.74
unico	10	PIN 10	Q200	57.00	71.45	72.80	74.40	1.60	76.00	3.20	73.27	74.37	0.043312	5.55	10.27	9.85	1.74
unico	10	PIN 10	Q500	78.00	71.45	73.06	74.40	1.34	76.00	2.94	73.62	74.96	0.041694	6.11	12.76	9.90	1.72
unico	9	PIN 9	Q50	35.00	70.80	72.29	73.75	1.46	74.60	2.31	72.41	72.92	0.019138	3.49	10.02	11.32	1.18
unico	9	PIN 9	Q200	57.00	70.80	72.58	73.75	1.17	74.60	2.02	72.81	73.50	0.021918	4.23	13.46	12.39	1.30
unico	9	PIN 9	Q500	78.00	70.80	72.75	73.75	1.00	74.60	1.85	73.10	74.03	0.027366	5.02	15.55	13.00	1.46
unico	8.3	PIN 8	Q50	35.00	70.51	71.39	73.10	1.71	73.68	2.29	71.73	72.61	0.079891	4.90	7.14	14.58	2.24
unico	8.3	PIN 8	Q200	57.00	70.51	71.60	73.10	1.50	73.68	2.08	72.06	73.18	0.066484	5.58	10.22	14.62	2.13
unico	8.3	PIN 8	Q500	78.00	70.51	71.77	73.10	1.33	73.68	1.91	72.33	73.69	0.062164	6.14	12.70	14.65	2.11
unico	8.2	PIN 8	Q50	35.00	70.50	71.39	73.09	1.70	73.67	2.28	71.73	72.58	0.072338	4.83	7.25	14.58	2.14
unico	8.2	PIN 8	Q200	57.00	70.50	71.61	73.09	1.48	73.67	2.06	72.06	73.15	0.060410	5.49	10.38	14.62	2.04
unico	8.2	PIN 8	Q500	78.00	70.50	71.79	73.09	1.30	73.67	1.88	72.34	73.65	0.056561	6.05	12.90	14.66	2.02
unico	8.15		Bridge														
unico	8.1	PIN 8	Q50	35.00	70.45	71.40	73.04	1.64	73.62	2.22	71.68	72.35	0.050126	4.31	8.12	14.59	1.81
unico	8.1	PIN 8	Q200	57.00	70.45	71.62	73.04	1.42	73.62	2.00	72.01	72.94	0.047725	5.10	11.17	14.63	1.83
unico	8.1	PIN 8	Q500	78.00	70.45	71.79	73.04	1.25	73.62	1.83	72.29	73.46	0.047311	5.71	13.65	14.67	1.86
unico	8	PIN 8	Q50	35.00	70.43	71.40	73.02	1.62	73.60	2.20	71.65	72.27	0.046351	4.15	8.44	14.60	1.74
unico	8	PIN 8	Q200	57.00	70.43	71.60	73.02	1.42	73.60	2.00	71.98	72.87	0.046579	4.99	11.42	14.63	1.80
unico	8	PIN 8	Q500	78.00	70.43	71.76	73.02	1.26	73.60	1.84	72.25	73.39	0.047970	5.66	13.77	14.66	1.87
unico	7.1	PIN 7	Q50	35.00	70.30	71.63	72.85	1.22	74.18	2.55	71.63	72.08	0.014391	2.96	11.84	13.42	1.00
unico	7.1	PIN 7	Q200	57.00	70.30	71.93	72.85	0.92	74.18	2.25	71.98	72.59	0.015254	3.60	15.84	13.49	1.06
unico	7.1	PIN 7	Q500	78.00	70.30	72.03	72.85	0.82	74.18	2.15	72.26	73.08	0.022299	4.55	17.15	13.52	1.29
unico	7	PIN 7	Q50	35.00	69.38	70.30	72.85	2.55	74.18	3.88	70.78	71.96	0.077717	5.71	6.13	8.72	2.17
unico	7	PIN 7	Q200	57.00	69.38	70.70	72.85	2.15	74.18	3.48	71.34	72.48	0.050530	5.91	9.64	8.83	1.81
unico	7	PIN 7	Q500	78.00	69.38	71.02	72.85	1.83	74.18	3.16	71.62	72.99	0.045925	6.21	12.56	9.65	1.74
unico	6	PIN 6	Q50	35.00	68.90	70.45	71.88	1.43	72.00	1.55	70.24	70.79	0.007877	2.58	13.58	11.26	0.75
unico	6	PIN 6	Q200	57.00	68.90	70.96	71.88	0.92	72.00	1.04	70.62	71.40	0.007046	2.94	19.38	11.34	0.72
unico	6	PIN 6	Q500	78.00	68.90	71.38	71.88	0.50	72.00	0.62	70.94	71.91	0.006880	3.24	24.11	11.40	0.71
unico	5	PIN 5	Q50	35.00	68.54	70.42	71.72	1.30	71.73	1.31	70.16	70.75	0.007337	2.54	13.77	10.82	0.72
unico	5	PIN 5	Q200	57.00	68.54	70.92	71.72	0.80	71.73	0.81	70.56	71.36	0.007108	2.97	19.19	10.90	0.71
unico	5	PIN 5	Q500	78.00	68.54	71.31	71.72	0.41	71.73	0.42	70.89	71.87	0.007270	3.32	23.52	10.96	0.72
unico	4	PIN 4	Q50	35.00	68.25	69.34	70.54	1.20	69.90	0.56	69.52	70.14	0.024391	3.95	8.87	9.21	1.28
unico	4	PIN 4	Q200	57.00	68.25	69.75	70.54	0.79	69.90	0.15	69.96	70.79	0.021782	4.50	12.67	9.30	1.23
unico	4	PIN 4	Q500	78.00	68.25	70.14	70.54	0.40	69.90	-0.24	70.33	71.31	0.018681	4.78	16.31	9.39	1.16

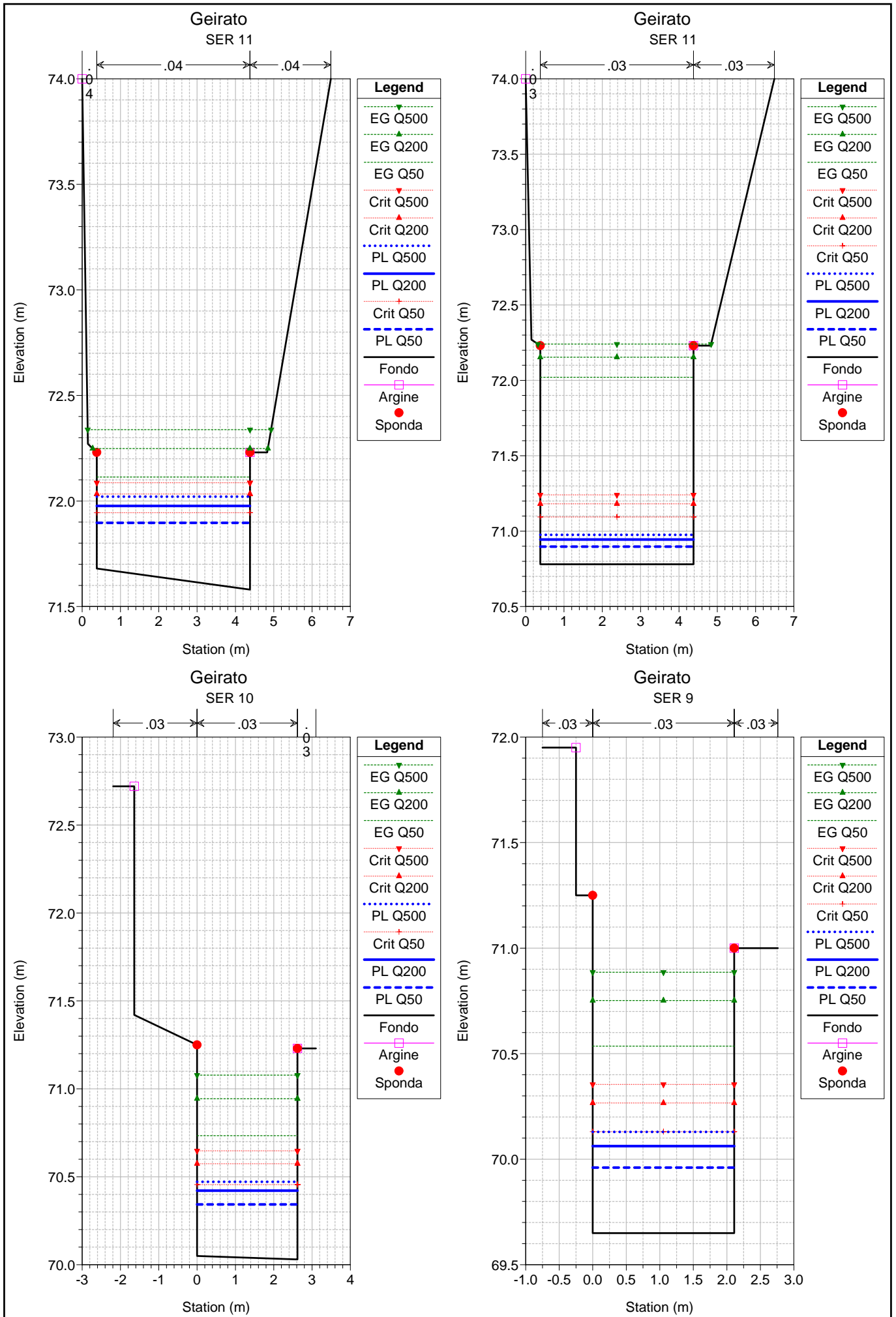
HEC-RAS Plan: SA River: Rio di Pino Reach: unico (Continued)

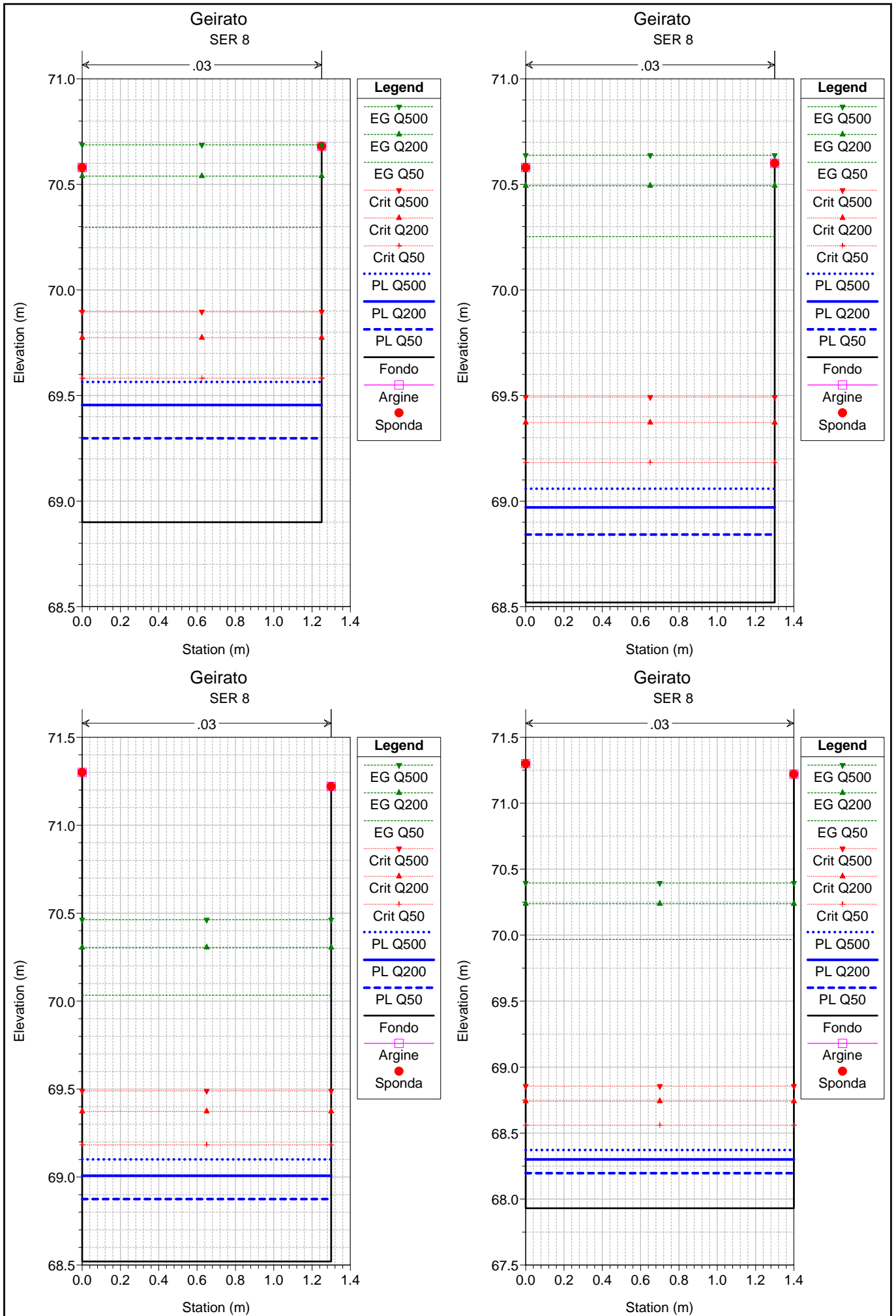
Reach	River Sta		Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	3.1	PIN 3	Q50	35.00	67.98	68.93	70.62	1.69	70.10	1.17	69.02	69.52	0.020308	3.41	10.27	11.75	1.16
unico	3.1	PIN 3	Q200	57.00	67.98	69.19	70.62	1.43	70.10	0.91	69.39	70.12	0.023592	4.27	13.36	11.76	1.28
unico	3.1	PIN 3	Q500	78.00	67.98	69.40	70.62	1.22	70.10	0.70	69.70	70.63	0.025940	4.92	15.87	11.76	1.35
unico	3	PIN 3	Q50	35.00	66.06	66.54	70.62	4.08	70.10	3.56	67.10	69.30	0.240756	7.36	4.75	11.77	3.70
unico	3	PIN 3	Q200	57.00	66.06	66.75	70.62	3.87	70.10	3.35	67.47	69.89	0.162931	7.85	7.26	11.77	3.19
unico	3	PIN 3	Q500	78.00	66.06	66.94	70.62	3.68	70.10	3.16	67.78	70.41	0.131521	8.25	9.45	11.77	2.94
unico	2	PIN 2	Q50	35.00	66.06	66.72	69.70	2.98	69.70	2.98	67.16	68.38	0.109174	5.70	6.14	12.41	2.59
unico	2	PIN 2	Q200	57.00	66.06	66.92	69.70	2.78	69.70	2.78	67.51	69.15	0.098564	6.61	8.62	12.57	2.55
unico	2	PIN 2	Q500	78.00	66.06	67.09	69.70	2.61	69.70	2.61	67.81	69.76	0.090474	7.23	10.78	12.57	2.49
unico	1	PIN 1	Q50	35.00	65.73	67.75	69.63	1.88	69.63	1.88	66.85	67.87	0.001891	1.58	22.14	12.00	0.37
unico	1	PIN 1	Q200	57.00	65.73	68.30	69.63	1.33	69.63	1.33	67.22	68.50	0.002297	1.98	28.77	12.00	0.41
unico	1	PIN 1	Q500	78.00	65.73	68.73	69.63	0.90	69.63	0.90	67.53	69.00	0.002643	2.30	33.99	12.00	0.44

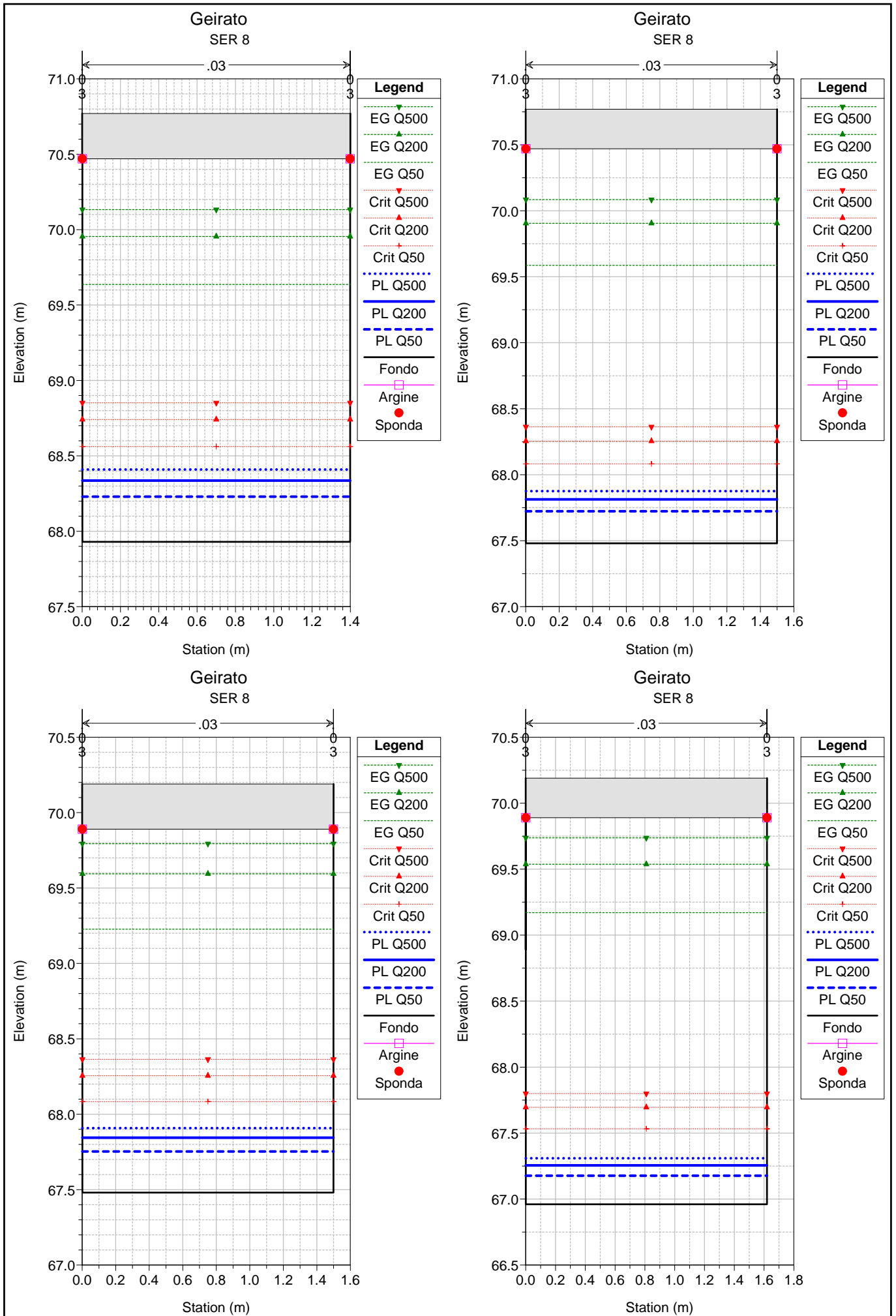


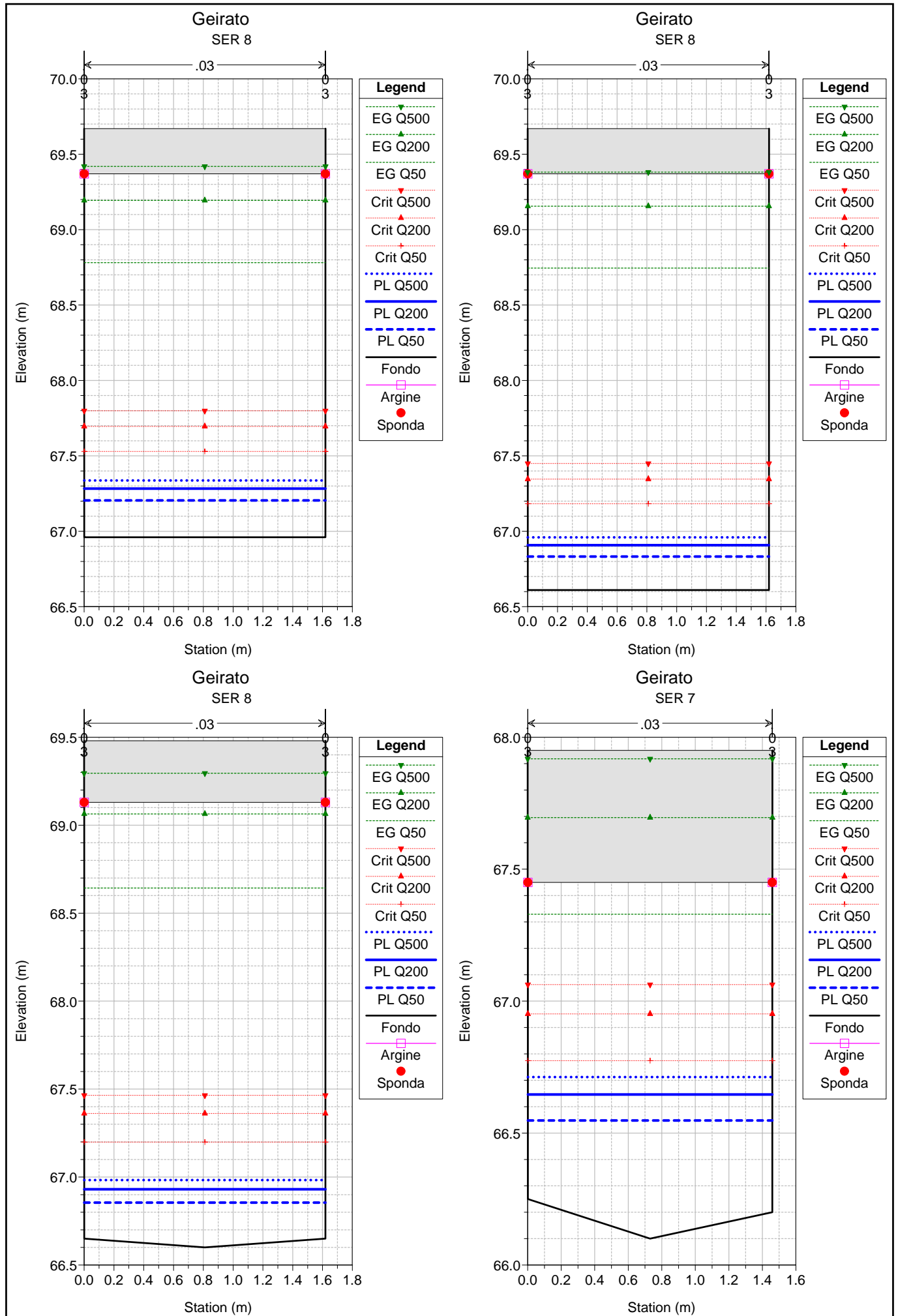


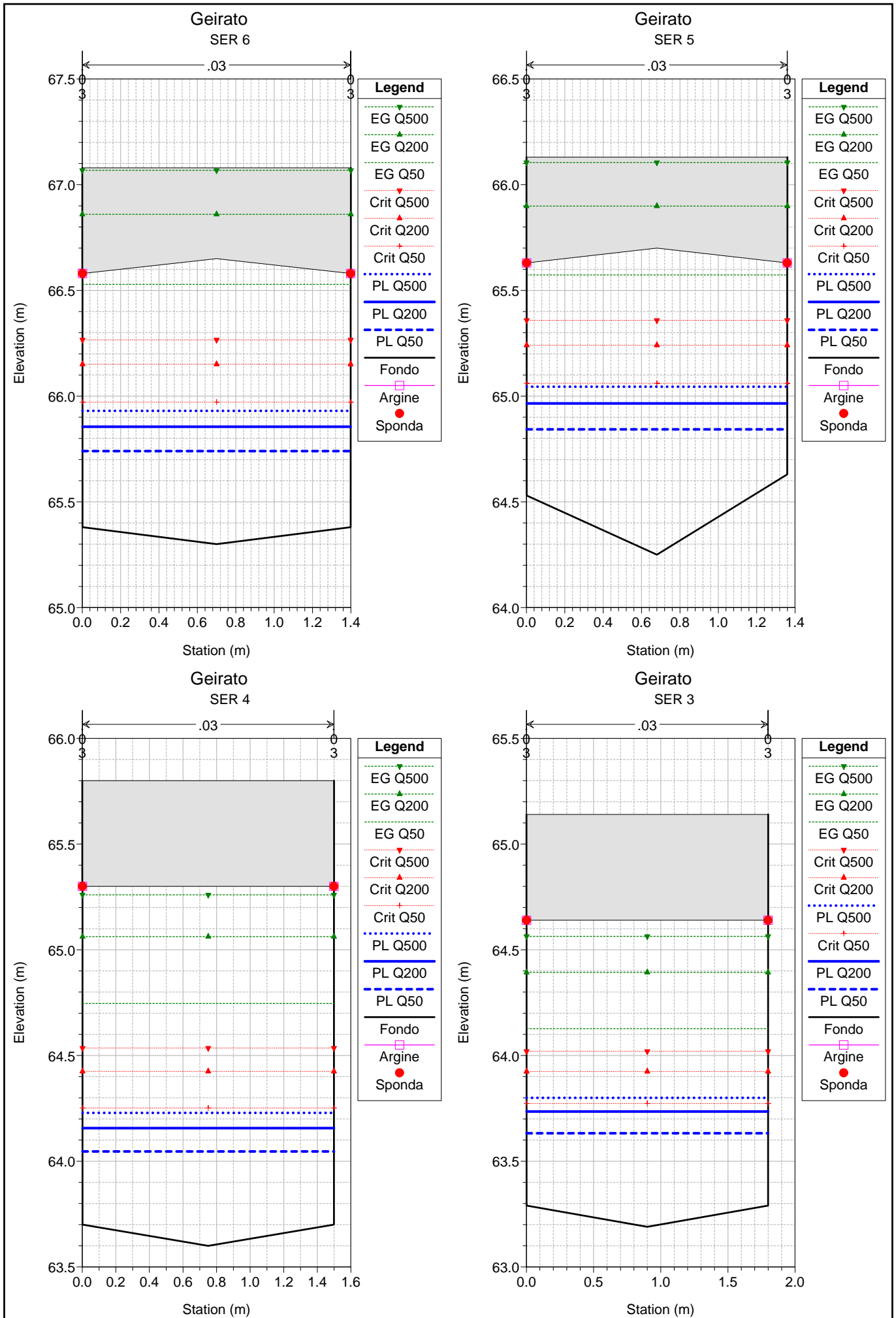


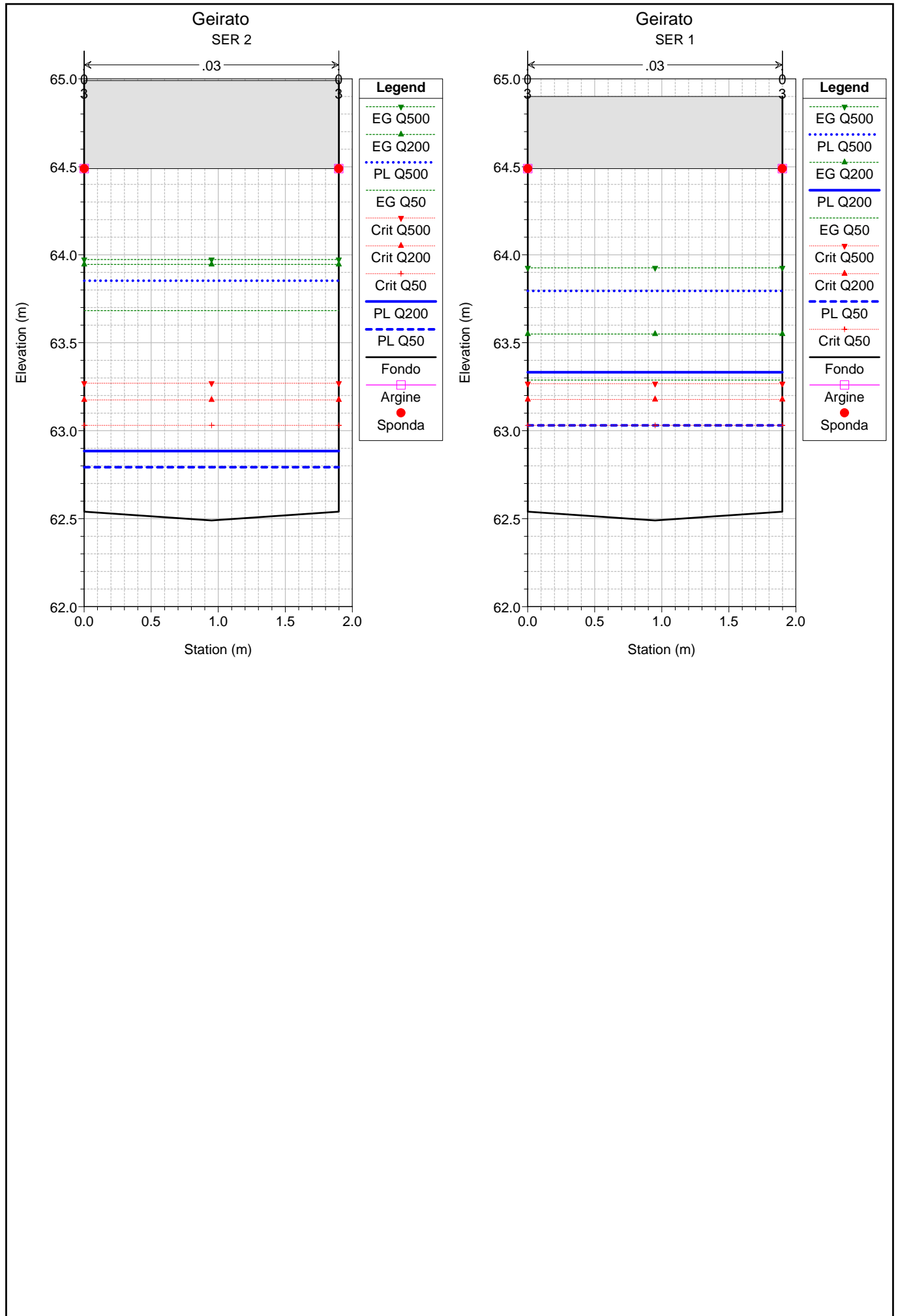












HEC-RAS Plan: SA River: Rio dei Servi Reach: unico

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	
unico	100	Q50	2.20	99.99	100.35	104.86	4.51	102.60	2.25	100.55	101.08	0.185289	3.78	0.58	2.57	2.54	
unico	100	Q200	3.20	99.99	100.41	104.86	4.45	102.60	2.19	100.67	101.35	0.185256	4.29	0.75	2.66	2.58	
unico	100	Q500	3.90	99.99	100.45	104.86	4.41	102.60	2.15	100.74	101.52	0.185246	4.58	0.85	2.71	2.61	
unico	18	SER 18	Q50	2.20	81.39	81.75	86.26	4.51	84.00	2.25	81.95	82.48	0.185843	3.78	0.58	2.57	2.54
unico	18	SER 18	Q200	3.20	81.39	81.81	86.26	4.45	84.00	2.19	82.07	82.75	0.186127	4.30	0.74	2.66	2.59
unico	18	SER 18	Q500	3.90	81.39	81.85	86.26	4.41	84.00	2.15	82.14	82.92	0.186075	4.58	0.85	2.71	2.61
unico	17	SER 17	Q50	2.20	80.74	80.99	86.26	5.27	84.00	3.01	81.17	81.73	0.246146	3.83	0.57	3.28	2.92
unico	17	SER 17	Q200	3.20	80.74	81.03	86.26	5.23	84.00	2.97	81.26	82.00	0.253166	4.34	0.74	3.53	3.04
unico	17	SER 17	Q500	3.90	80.74	81.06	86.26	5.20	84.00	2.94	81.32	82.16	0.256916	4.64	0.84	3.69	3.10
unico	16	SER 16	Q50	2.20	78.23	78.55	81.15	2.60	82.00	3.45	78.80	79.55	0.262984	4.41	0.50	2.27	3.01
unico	16	SER 16	Q200	3.20	78.23	78.62	81.15	2.53	82.00	3.38	78.91	79.82	0.253832	4.85	0.66	2.52	3.02
unico	16	SER 16	Q500	3.90	78.23	78.66	81.15	2.49	82.00	3.34	78.98	79.98	0.250112	5.09	0.77	2.67	3.03
unico	15	SER 15	Q50	2.20	76.64	76.86	79.70	2.84	80.00	3.14	77.03	77.67	0.403227	4.00	0.55	4.31	3.57
unico	15	SER 15	Q200	3.20	76.64	76.89	79.70	2.81	80.00	3.11	77.12	77.98	0.414004	4.62	0.69	4.43	3.73
unico	15	SER 15	Q500	3.90	76.64	76.91	79.70	2.79	80.00	3.09	77.17	78.17	0.415737	4.96	0.79	4.51	3.80
unico	14	SER 14	Q50	2.20	74.93	75.15	79.03	3.88	80.00	4.85	75.31	75.79	0.214651	3.55	0.62	3.53	2.70
unico	14	SER 14	Q200	3.20	74.93	75.19	79.03	3.84	80.00	4.81	75.41	76.03	0.218372	4.05	0.79	3.70	2.80
unico	14	SER 14	Q500	3.90	74.93	75.22	79.03	3.81	80.00	4.78	75.47	76.19	0.222020	4.36	0.90	3.80	2.87
unico	13.5	SER 13	Q50	2.20	73.38	73.58	76.00	2.42	76.00	2.42	73.69	73.98	0.156676	2.82	0.78	4.99	2.28
unico	13.5	SER 13	Q200	3.20	73.38	73.62	76.00	2.38	76.00	2.38	73.77	74.17	0.161527	3.28	0.98	5.03	2.38
unico	13.5	SER 13	Q500	3.90	73.38	73.64	76.00	2.36	76.00	2.36	73.82	74.29	0.163765	3.55	1.10	5.05	2.43
unico	13	SER 13	Q50	2.20	72.04	72.31	76.00	3.69	76.00	3.69	72.53	73.87	0.738186	5.54	0.40	2.99	4.85
unico	13	SER 13	Q200	3.20	72.04	72.35	76.00	3.65	76.00	3.65	72.62	74.05	0.641833	5.77	0.55	3.53	4.65
unico	13	SER 13	Q500	3.90	72.04	72.38	76.00	3.62	76.00	3.62	72.67	74.17	0.602714	5.92	0.66	3.84	4.57
unico	12	SER 12	Q50	2.20	71.80	72.07	74.62	2.55	74.00	1.93	72.17	72.38	0.094814	2.48	0.89	4.78	1.84
unico	12	SER 12	Q200	3.20	71.80	72.12	74.62	2.50	74.00	1.88	72.24	72.54	0.103149	2.87	1.12	5.14	1.96
unico	12	SER 12	Q500	3.90	71.80	72.14	74.62	2.48	74.00	1.86	72.29	72.64	0.106870	3.11	1.25	5.22	2.03
unico	11.5	SER 11	Q50	2.20	71.58	71.90	72.23	0.33	72.23	0.33	71.94	72.11	0.046947	2.06	1.07	4.00	1.28
unico	11.5	SER 11	Q200	3.20	71.58	71.98	72.23	0.25	72.23	0.25	72.03	72.25	0.043464	2.31	1.39	4.00	1.25
unico	11.5	SER 11	Q500	3.90	71.58	72.02	72.23	0.21	72.23	0.21	72.09	72.34	0.044297	2.50	1.56	4.00	1.27
unico	11	SER 11	Q50	2.20	70.78	70.90	72.23	1.33	72.23	1.33	71.09	72.02	0.373460	4.70	0.47	4.00	4.38
unico	11	SER 11	Q200	3.20	70.78	70.94	72.23	1.29	72.23	1.29	71.18	72.15	0.263905	4.87	0.66	4.00	3.84
unico	11	SER 11	Q500	3.90	70.78	70.98	72.23	1.25	72.23	1.25	71.24	72.24	0.222842	4.98	0.78	4.00	3.60
unico	10	SER 10	Q50	2.20	70.03	70.34	71.25	0.91	71.23	0.89	70.46	70.73	0.044742	2.77	0.79	2.62	1.61
unico	10	SER 10	Q200	3.20	70.03	70.42	71.25	0.83	71.23	0.81	70.57	70.94	0.046893	3.20	1.00	2.62	1.65
unico	10	SER 10	Q500	3.90	70.03	70.47	71.25	0.78	71.23	0.76	70.65	71.08	0.048008	3.45	1.13	2.62	1.68
unico	9	SER 9	Q50	2.20	69.65	69.96	71.25	1.29	71.00	1.04	70.13	70.54	0.068260	3.36	0.65	2.11	1.93
unico	9	SER 9	Q200	3.20	69.65	70.06	71.25	1.19	71.00	0.94	70.27	70.75	0.061646	3.68	0.87	2.11	1.83
unico	9	SER 9	Q500	3.90	69.65	70.13	71.25	1.12	71.00	0.87	70.35	70.89	0.058643	3.85	1.01	2.11	1.78
unico	8.51	SER 8	Q50	2.20	68.90	69.30	70.58	1.28	70.68	1.38	69.58	70.30	0.116333	4.43	0.50	1.25	2.24

HEC-RAS Plan: SA River: Rio dei Servi Reach: unico (Continued)

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	
unico	8.51	SER 8	Q200	3.20	68.90	69.45	70.58	1.13	70.68	1.23	69.77	70.54	0.098047	4.61	0.69	1.25	1.98
unico	8.51	SER 8	Q500	3.90	68.90	69.56	70.58	1.02	70.68	1.12	69.90	70.69	0.089852	4.69	0.83	1.25	1.84
unico	8.5	SER 8	Q50	2.20	68.52	68.84	70.58	1.74	70.60	1.76	69.18	70.25	0.193519	5.26	0.42	1.30	2.96
unico	8.5	SER 8	Q200	3.20	68.52	68.97	70.58	1.61	70.60	1.63	69.37	70.49	0.157367	5.47	0.59	1.30	2.60
unico	8.5	SER 8	Q500	3.90	68.52	69.06	70.58	1.52	70.60	1.54	69.49	70.64	0.142322	5.57	0.70	1.30	2.42
unico	8.41	SER 8	Q50	2.20	68.52	68.87	71.30	2.43	71.22	2.35	69.18	70.03	0.145656	4.77	0.46	1.30	2.56
unico	8.41	SER 8	Q200	3.20	68.52	69.01	71.30	2.29	71.22	2.21	69.37	70.31	0.125963	5.05	0.63	1.30	2.31
unico	8.41	SER 8	Q500	3.90	68.52	69.10	71.30	2.20	71.22	2.12	69.49	70.46	0.116462	5.17	0.75	1.30	2.17
unico	8.4	SER 8	Q50	2.20	67.93	68.20	71.30	3.10	71.22	3.02	68.56	69.97	0.280539	5.90	0.37	1.40	3.65
unico	8.4	SER 8	Q200	3.20	67.93	68.30	71.30	3.00	71.22	2.92	68.74	70.24	0.226686	6.17	0.52	1.40	3.23
unico	8.4	SER 8	Q500	3.90	67.93	68.37	71.30	2.93	71.22	2.85	68.86	70.39	0.203808	6.30	0.62	1.40	3.03
unico	8.31	SER 8	Q50	2.20	67.93	68.23	70.47	2.24	70.47	2.24	68.56	69.64	0.199739	5.26	0.42	1.40	3.07
unico	8.31	SER 8	Q200	3.20	67.93	68.34	70.47	2.13	70.47	2.13	68.74	69.95	0.175206	5.64	0.57	1.40	2.82
unico	8.31	SER 8	Q500	3.90	67.93	68.41	70.47	2.06	70.47	2.06	68.85	70.13	0.162697	5.82	0.67	1.40	2.68
unico	8.3	SER 8	Q50	2.20	67.48	67.72	70.47	2.75	70.47	2.75	68.08	69.59	0.316147	6.05	0.36	1.50	3.92
unico	8.3	SER 8	Q200	3.20	67.48	67.81	70.47	2.66	70.47	2.66	68.25	69.91	0.261246	6.41	0.50	1.50	3.54
unico	8.3	SER 8	Q500	3.90	67.48	67.88	70.47	2.59	70.47	2.59	68.36	70.08	0.236744	6.59	0.59	1.50	3.34
unico	8.21	SER 8	Q50	2.20	67.48	67.75	69.89	2.14	69.89	2.14	68.08	69.23	0.222561	5.38	0.41	1.50	3.29
unico	8.21	SER 8	Q200	3.20	67.48	67.84	69.89	2.05	69.89	2.05	68.26	69.59	0.201431	5.86	0.55	1.50	3.10
unico	8.21	SER 8	Q500	3.90	67.48	67.91	69.89	1.98	69.89	1.98	68.36	69.79	0.188849	6.09	0.64	1.50	2.97
unico	8.2	SER 8	Q50	2.20	66.96	67.18	69.89	2.71	69.89	2.71	67.53	69.17	0.369948	6.25	0.35	1.62	4.28
unico	8.2	SER 8	Q200	3.20	66.96	67.26	69.89	2.63	69.89	2.63	67.69	69.54	0.310182	6.69	0.48	1.62	3.93
unico	8.2	SER 8	Q500	3.90	66.96	67.31	69.89	2.58	69.89	2.58	67.80	69.74	0.281609	6.90	0.56	1.62	3.73
unico	8.11	SER 8	Q50	2.20	66.96	67.20	69.37	2.17	69.37	2.17	67.53	68.78	0.259323	5.56	0.40	1.62	3.59
unico	8.11	SER 8	Q200	3.20	66.96	67.28	69.37	2.09	69.37	2.09	67.70	69.19	0.238412	6.12	0.52	1.62	3.44
unico	8.11	SER 8	Q500	3.90	66.96	67.34	69.37	2.03	69.37	2.03	67.80	69.42	0.224932	6.39	0.61	1.62	3.32
unico	8.1	SER 8	Q50	2.20	66.61	66.83	69.37	2.54	69.37	2.54	67.18	68.74	0.347579	6.13	0.36	1.62	4.15
unico	8.1	SER 8	Q200	3.20	66.61	66.91	69.37	2.46	69.37	2.46	67.35	69.16	0.303382	6.64	0.48	1.62	3.89
unico	8.1	SER 8	Q500	3.90	66.61	66.96	69.37	2.41	69.37	2.41	67.45	69.38	0.280380	6.89	0.57	1.62	3.72
unico	8	SER 8	Q50	2.20	66.60	66.85	69.13	2.28	69.13	2.28	67.20	68.64	0.304373	5.93	0.37	1.62	3.95
unico	8	SER 8	Q200	3.20	66.60	66.93	69.13	2.20	69.13	2.20	67.36	69.06	0.272892	6.47	0.49	1.62	3.74
unico	8	SER 8	Q500	3.90	66.60	66.98	69.13	2.15	69.13	2.15	67.46	69.30	0.255090	6.74	0.58	1.62	3.60
unico	7	SER 7	Q50	2.20	66.10	66.55	67.45	0.90	67.45	0.90	66.77	67.33	0.081425	3.92	0.56	1.46	2.01
unico	7	SER 7	Q200	3.20	66.10	66.65	67.45	0.80	67.45	0.80	66.95	67.70	0.090862	4.54	0.71	1.46	2.08
unico	7	SER 7	Q500	3.90	66.10	66.71	67.45	0.74	67.45	0.74	67.06	67.92	0.094719	4.86	0.80	1.46	2.09
unico	6	SER 6	Q50	2.20	65.30	65.74	65.38	-0.36	66.58	0.84	65.97	66.53	0.064582	3.93	0.56	1.40	1.99
unico	6	SER 6	Q200	3.20	65.30	65.86	65.38	-0.48	66.58	0.72	66.15	66.86	0.063867	4.44	0.72	1.40	1.97
unico	6	SER 6	Q500	3.90	65.30	65.93	65.38	-0.55	66.58	0.65	66.27	67.07	0.063589	4.73	0.83	1.40	1.96
unico	5	SER 5	Q50	2.20	64.25	64.84	64.53	-0.31	65.63	0.79	65.06	65.57	0.055064	3.79	0.58	1.36	1.85
unico	5	SER 5	Q200	3.20	64.25	64.97	64.53	-0.44	65.63	0.66	65.24	65.90	0.055103	4.28	0.75	1.36	1.84

HEC-RAS Plan: SA River: Rio dei Servi Reach: unico (Continued)

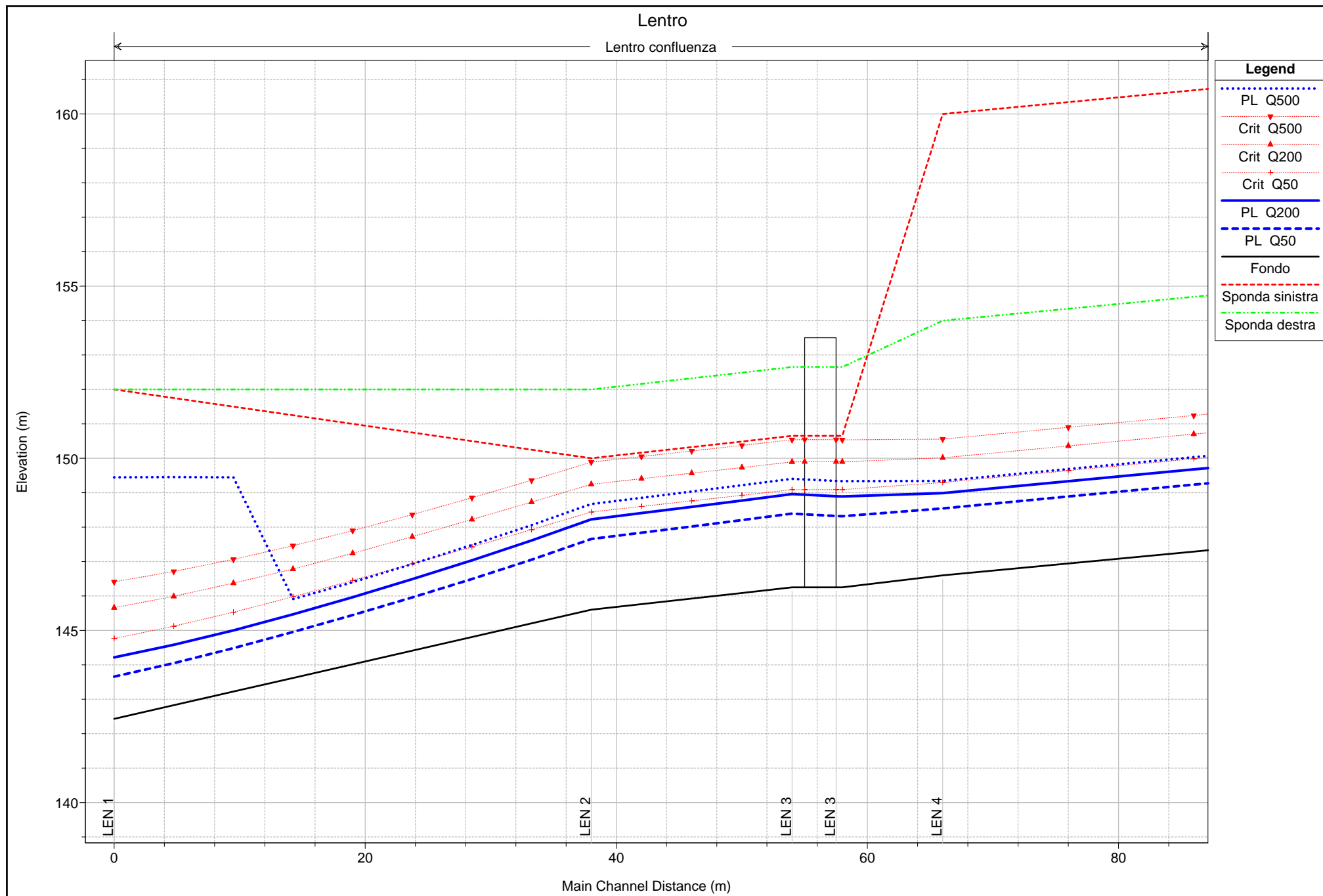
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	5 SER 5	Q500	3.90	64.25	65.04	64.53	-0.51	65.63	0.59	65.36	66.10	0.055389	4.56	0.85	1.36	1.84
unico	4 SER 4	Q50	2.20	63.60	64.05	65.30	1.25	65.30	1.25	64.25	64.75	0.071144	3.71	0.59	1.50	1.88
unico	4 SER 4	Q200	3.20	63.60	64.16	65.30	1.14	65.30	1.14	64.42	65.06	0.075259	4.22	0.76	1.50	1.89
unico	4 SER 4	Q500	3.90	63.60	64.23	65.30	1.07	65.30	1.07	64.53	65.26	0.077561	4.50	0.87	1.50	1.89
unico	3 SER 3	Q50	2.20	63.19	63.63	64.64	1.01	64.64	1.01	63.77	64.13	0.047058	3.12	0.71	1.80	1.59
unico	3 SER 3	Q200	3.20	63.19	63.74	64.64	0.90	64.64	0.90	63.92	64.39	0.050979	3.59	0.89	1.80	1.63
unico	3 SER 3	Q500	3.90	63.19	63.80	64.64	0.84	64.64	0.84	64.02	64.56	0.053476	3.87	1.01	1.80	1.65
unico	2 SER 2	Q50	2.20	62.49	62.79	64.49	1.70	64.49	1.70	63.03	63.68	0.119300	4.18	0.53	1.90	2.53
unico	2 SER 2	Q200	3.20	62.49	62.88	64.49	1.61	64.49	1.61	63.18	63.95	0.106952	4.56	0.70	1.90	2.40
unico	2 SER 2	Q500	3.90	62.49	63.85	64.49	0.64	64.49	0.64	63.27	63.97	0.004590	1.54	2.54	1.90	0.42
unico	1 SER 1	Q50	2.20	62.49	63.03	64.49	1.46	64.49	1.46	63.03	63.29	0.019208	2.25	0.98	1.90	1.00
unico	1 SER 1	Q200	3.20	62.49	63.33	64.49	1.16	64.49	1.16	63.18	63.55	0.011261	2.06	1.55	1.90	0.73
unico	1 SER 1	Q500	3.90	62.49	63.79	64.49	0.70	64.49	0.70	63.27	63.93	0.005143	1.61	2.43	1.90	0.45

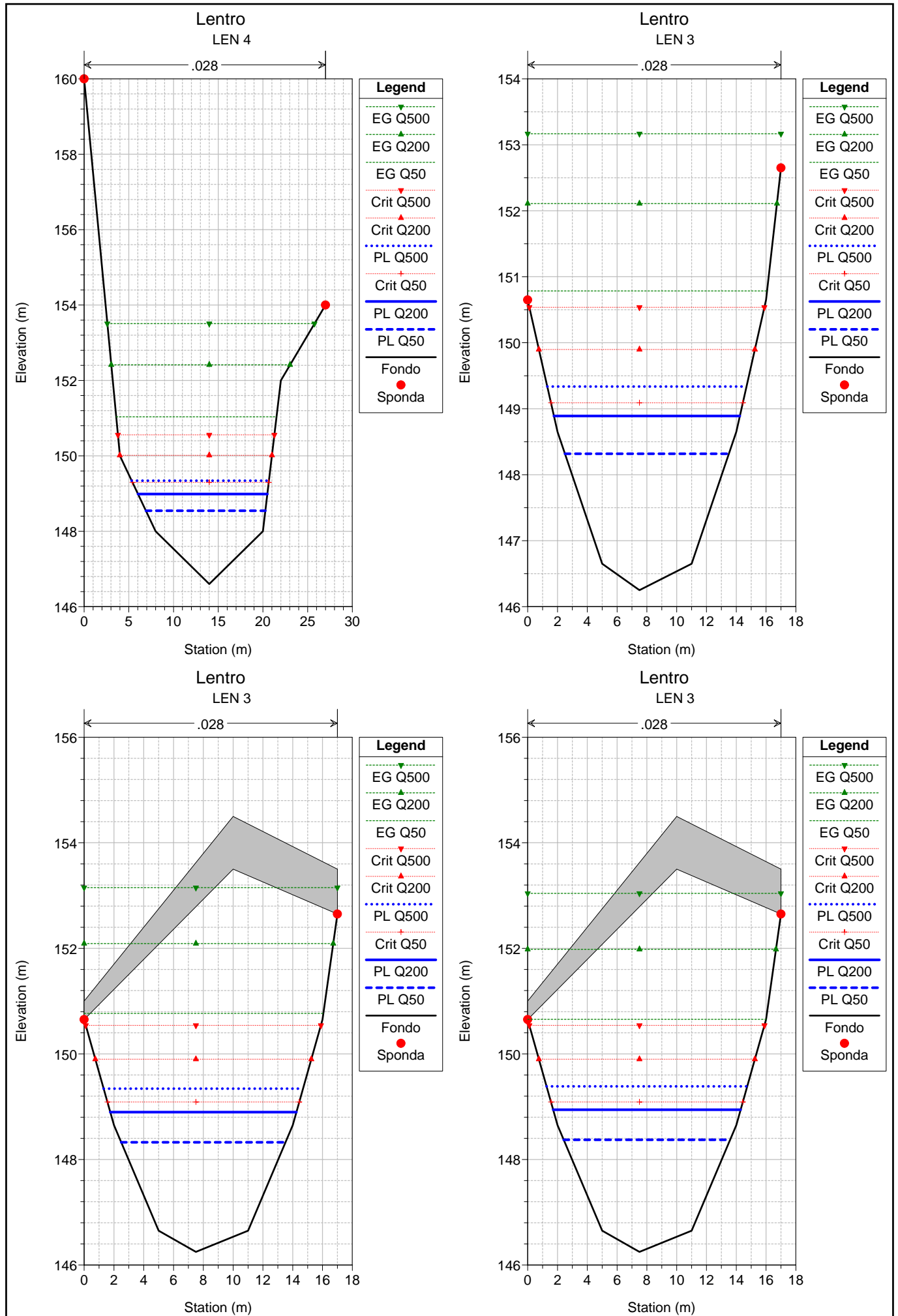
Allegato

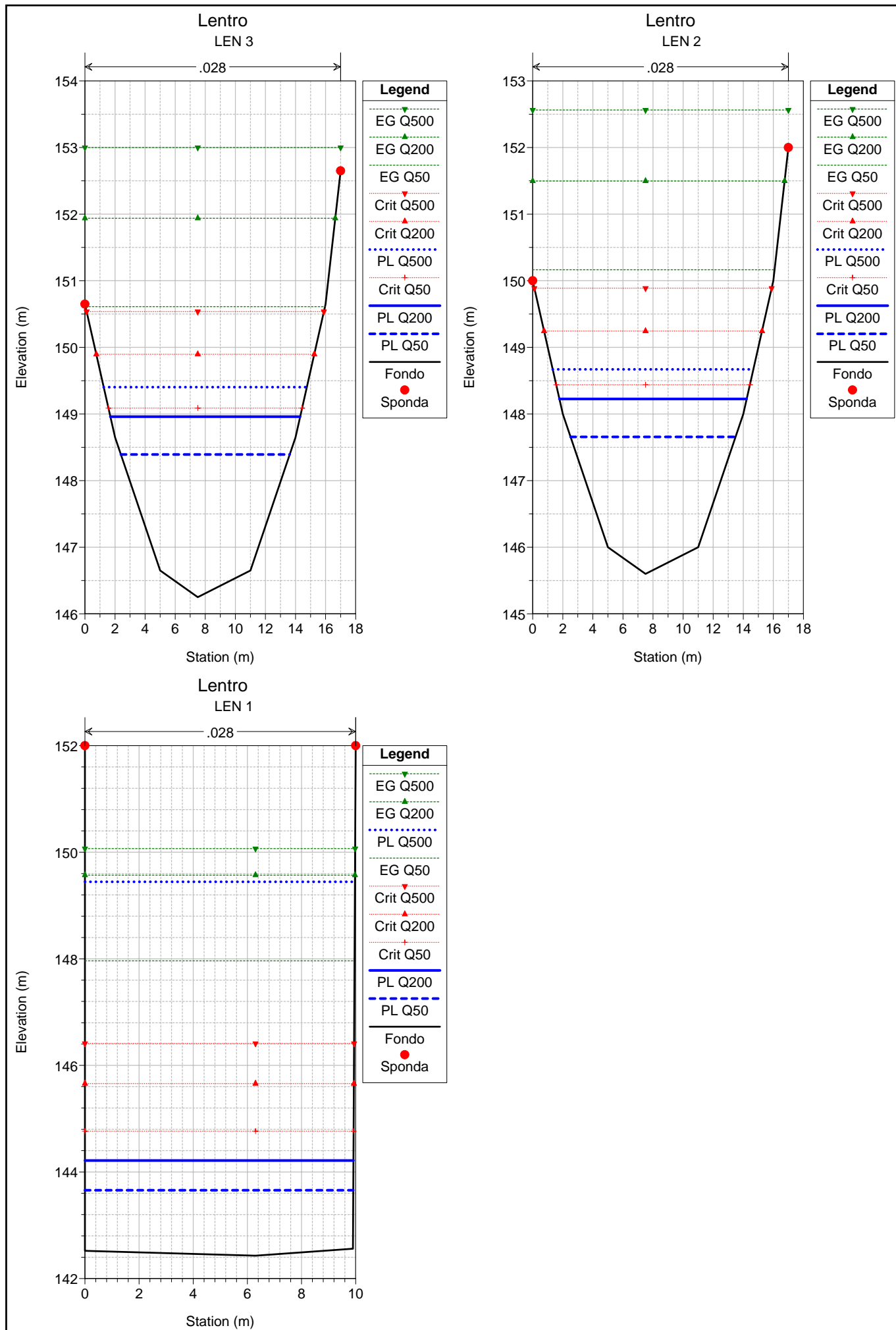
Verifiche idrauliche

Torrente Lentro

- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo







HEC-RAS Plan: Plan 01 River: Lentro Reach: confluenza

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	
confluenza	100	Q50	107.00	150.05	151.99	163.45	11.46	157.45	5.46	152.75	154.49	0.034532	6.99	15.30	13.36	2.09	
confluenza	100	Q200	176.00	150.05	152.44	163.45	11.01	157.45	5.01	153.46	155.86	0.034569	8.20	21.46	14.47	2.15	
confluenza	100	Q500	242.00	150.05	152.79	163.45	10.66	157.45	4.66	154.01	156.96	0.034503	9.04	26.77	15.36	2.19	
confluenza	4	LEN 4	Q50	107.00	146.60	148.54	160.00	11.46	154.00	5.46	149.30	151.04	0.034533	6.99	15.30	13.36	2.09
confluenza	4	LEN 4	Q200	176.00	146.60	148.99	160.00	11.01	154.00	5.01	150.01	152.41	0.034561	8.20	21.46	14.47	2.15
confluenza	4	LEN 4	Q500	242.00	146.60	149.34	160.00	10.66	154.00	4.66	150.56	153.51	0.034508	9.04	26.77	15.36	2.19
confluenza	3.1	LEN 3	Q50	107.00	146.25	148.32	150.65	2.33	152.65	4.33	149.09	150.79	0.027507	6.96	15.37	11.00	1.88
confluenza	3.1	LEN 3	Q200	176.00	146.25	148.89	150.65	1.76	152.65	3.76	149.90	152.11	0.026737	7.95	22.14	12.48	1.90
confluenza	3.1	LEN 3	Q500	242.00	146.25	149.34	150.65	1.31	152.65	3.31	150.54	153.17	0.026250	8.67	27.90	13.37	1.92
confluenza	3	LEN 3	Bridge														
confluenza	2.9	LEN 3	Q50	107.00	146.25	148.39	150.65	2.26	152.65	4.26	149.09	150.61	0.023731	6.60	16.21	11.23	1.75
confluenza	2.9	LEN 3	Q200	176.00	146.25	148.96	150.65	1.69	152.65	3.69	149.90	151.94	0.023942	7.65	23.02	12.62	1.81
confluenza	2.9	LEN 3	Q500	242.00	146.25	149.40	150.65	1.25	152.65	3.25	150.54	153.00	0.024017	8.40	28.80	13.51	1.84
confluenza	2	LEN 2	Q50	107.00	145.60	147.66	150.00	2.34	152.00	4.34	148.44	150.17	0.028146	7.02	15.24	10.97	1.90
confluenza	2	LEN 2	Q200	176.00	145.60	148.23	150.00	1.77	152.00	3.77	149.25	151.50	0.027372	8.01	21.96	12.45	1.93
confluenza	2	LEN 2	Q500	242.00	145.60	148.67	150.00	1.33	152.00	3.33	149.89	152.56	0.026844	8.74	27.68	13.34	1.94
confluenza	1	LEN 1	Q50	107.00	142.43	143.66	152.00	8.34	152.00	8.34	144.76	147.96	0.070027	9.19	11.64	9.91	2.71
confluenza	1	LEN 1	Q200	176.00	142.43	144.22	152.00	7.79	152.00	7.79	145.66	149.57	0.058344	10.25	17.17	9.92	2.49
confluenza	1	LEN 1	Q500	242.00	142.43	149.44	152.00	2.56	152.00	2.56	146.41	150.07	0.002301	3.50	69.18	9.97	0.42

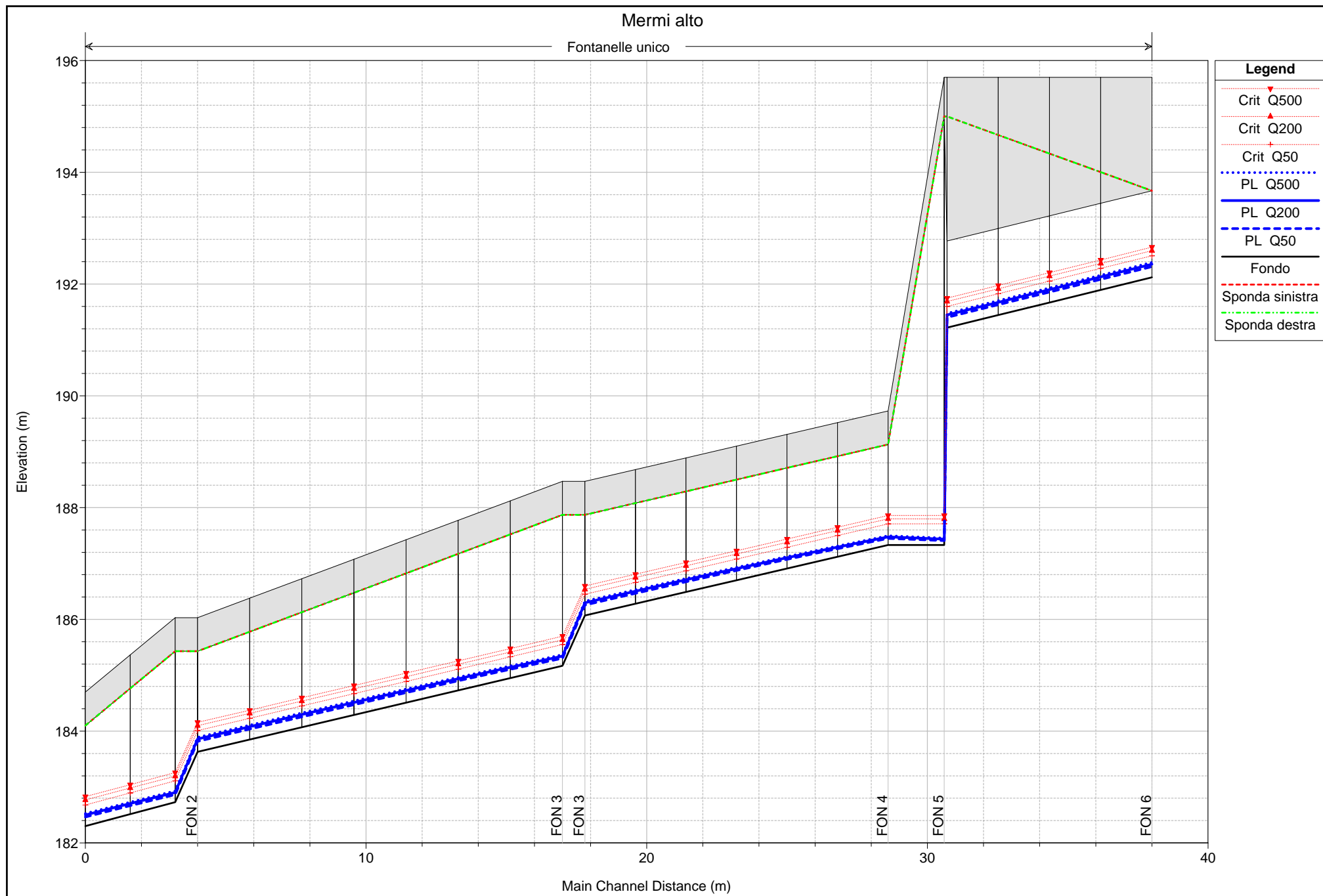
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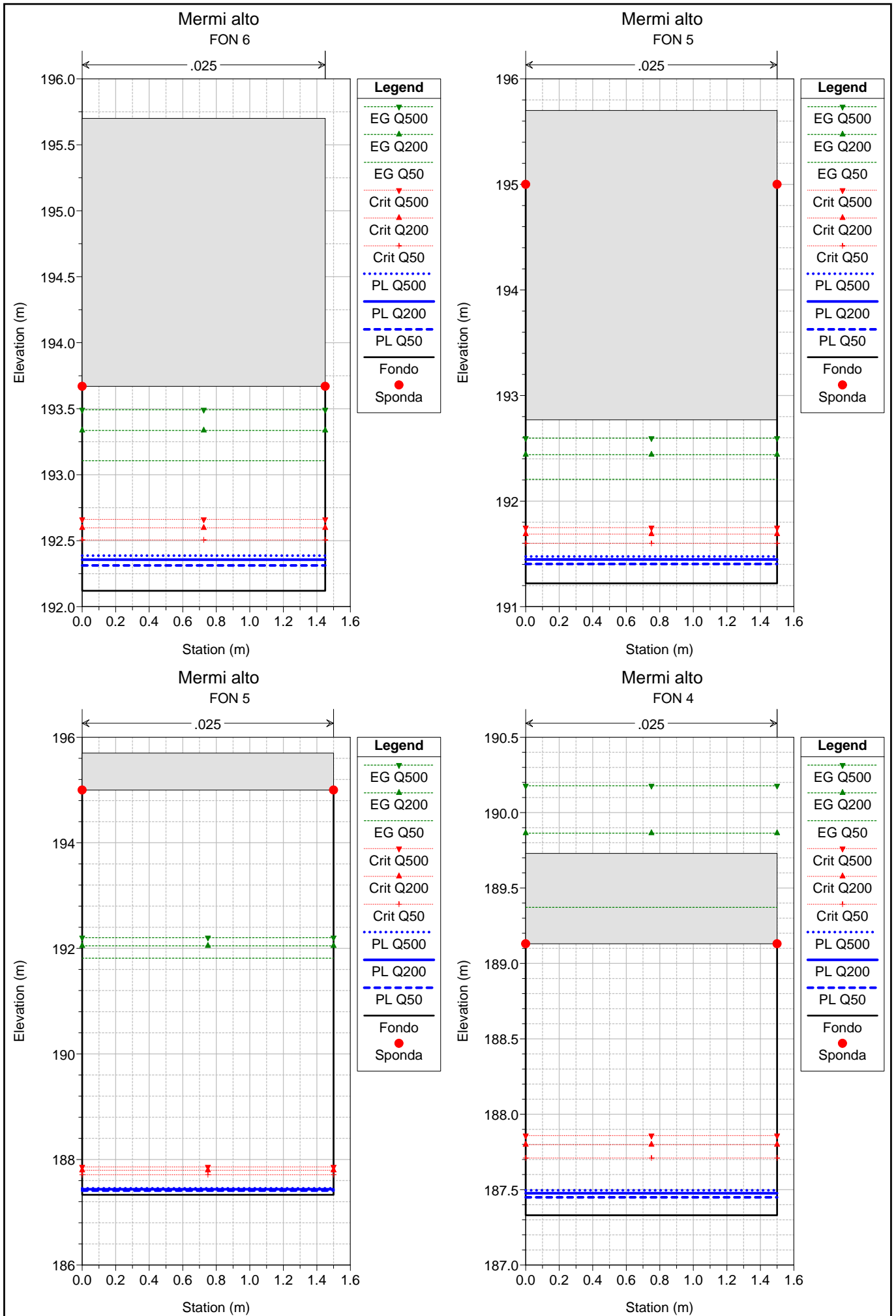
Verifiche idrauliche

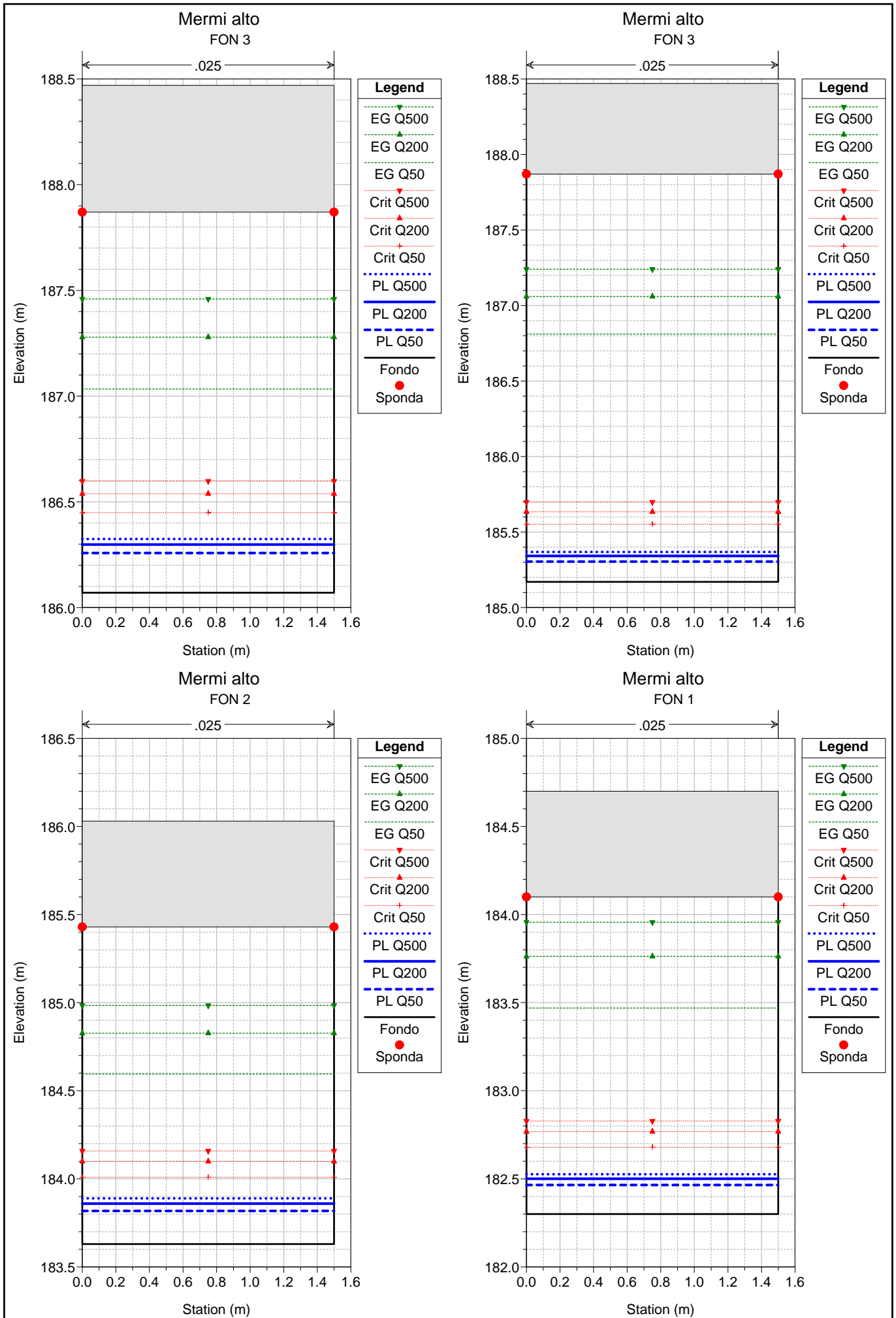
Rio Mermi

- tratto di monte -

- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

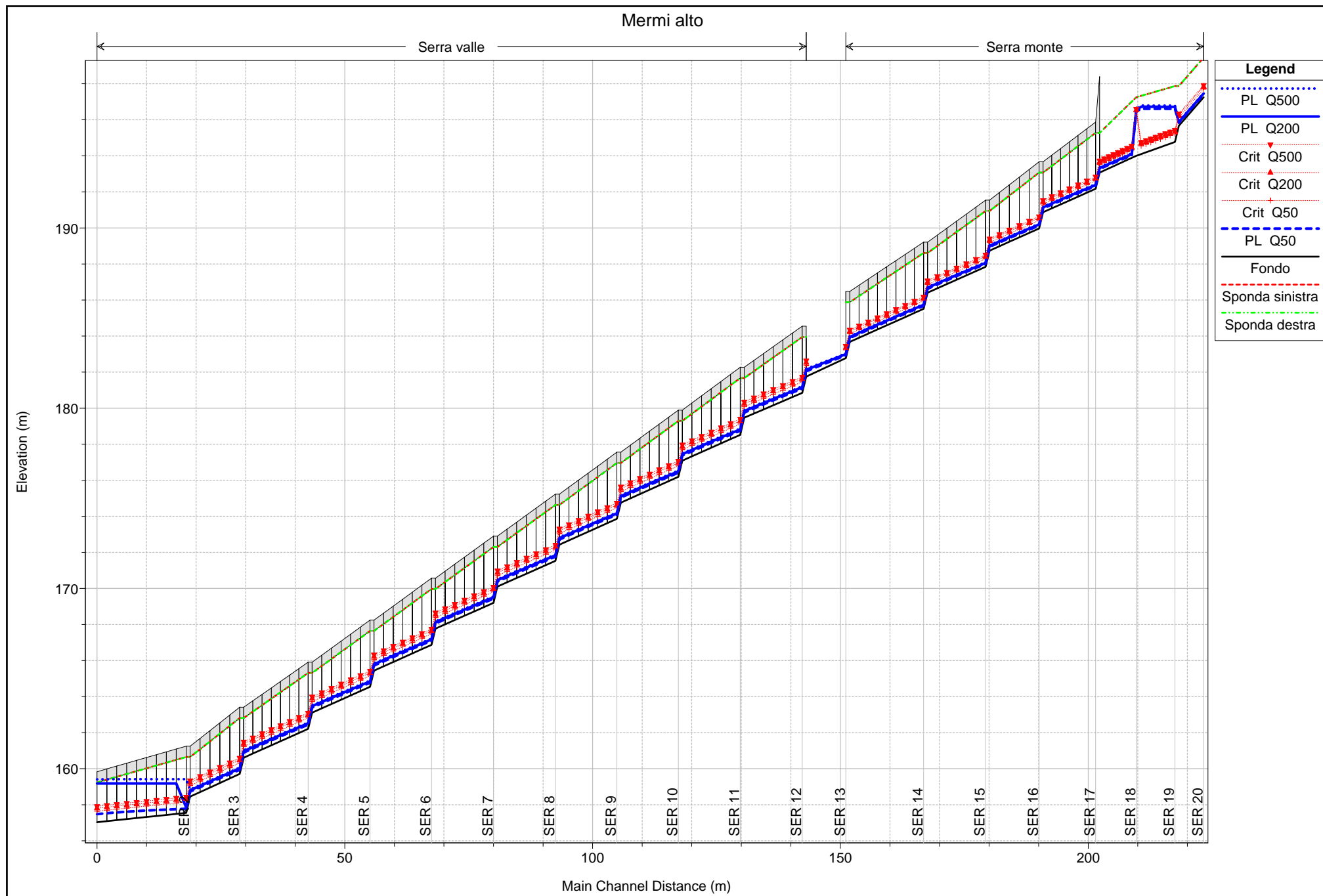


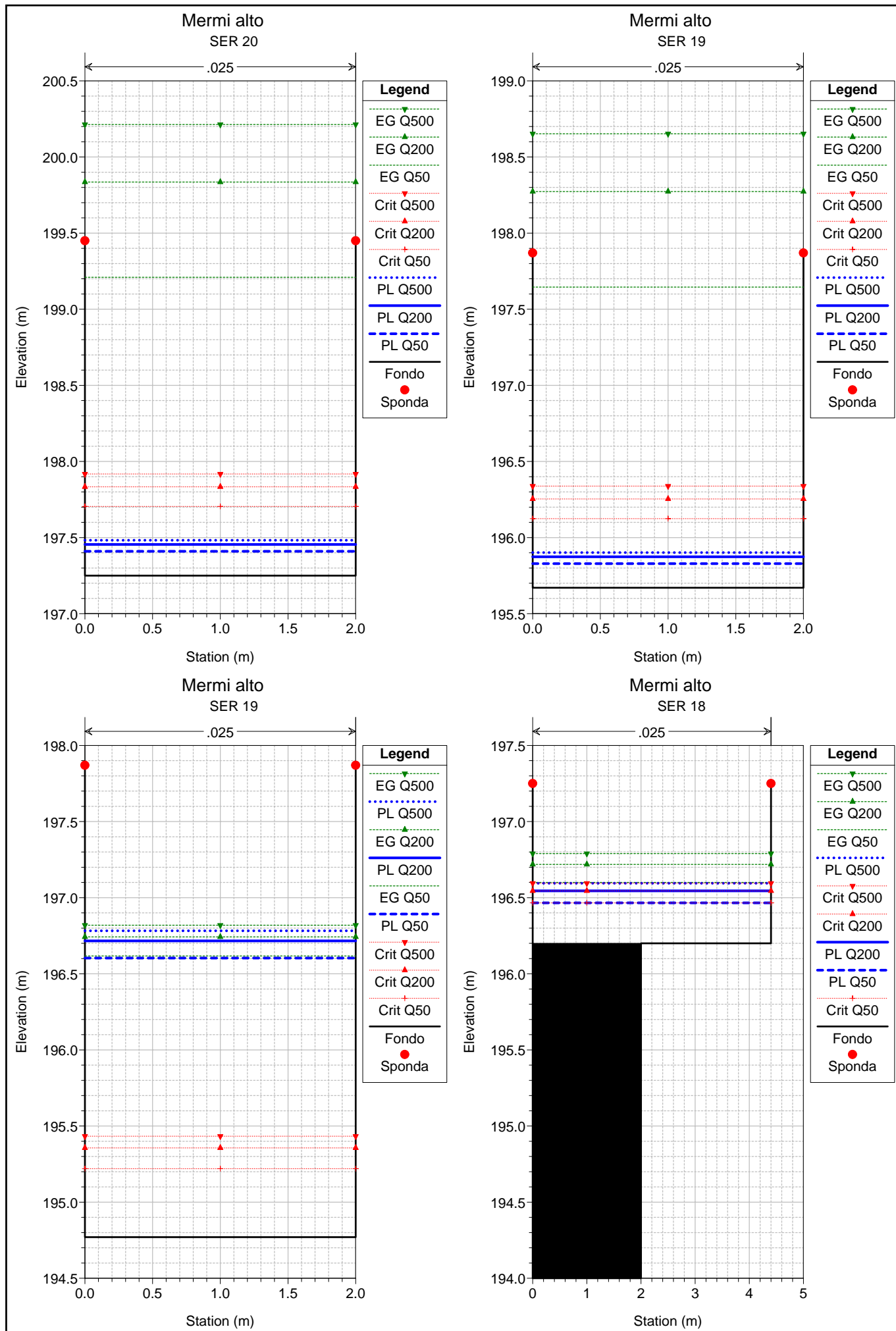


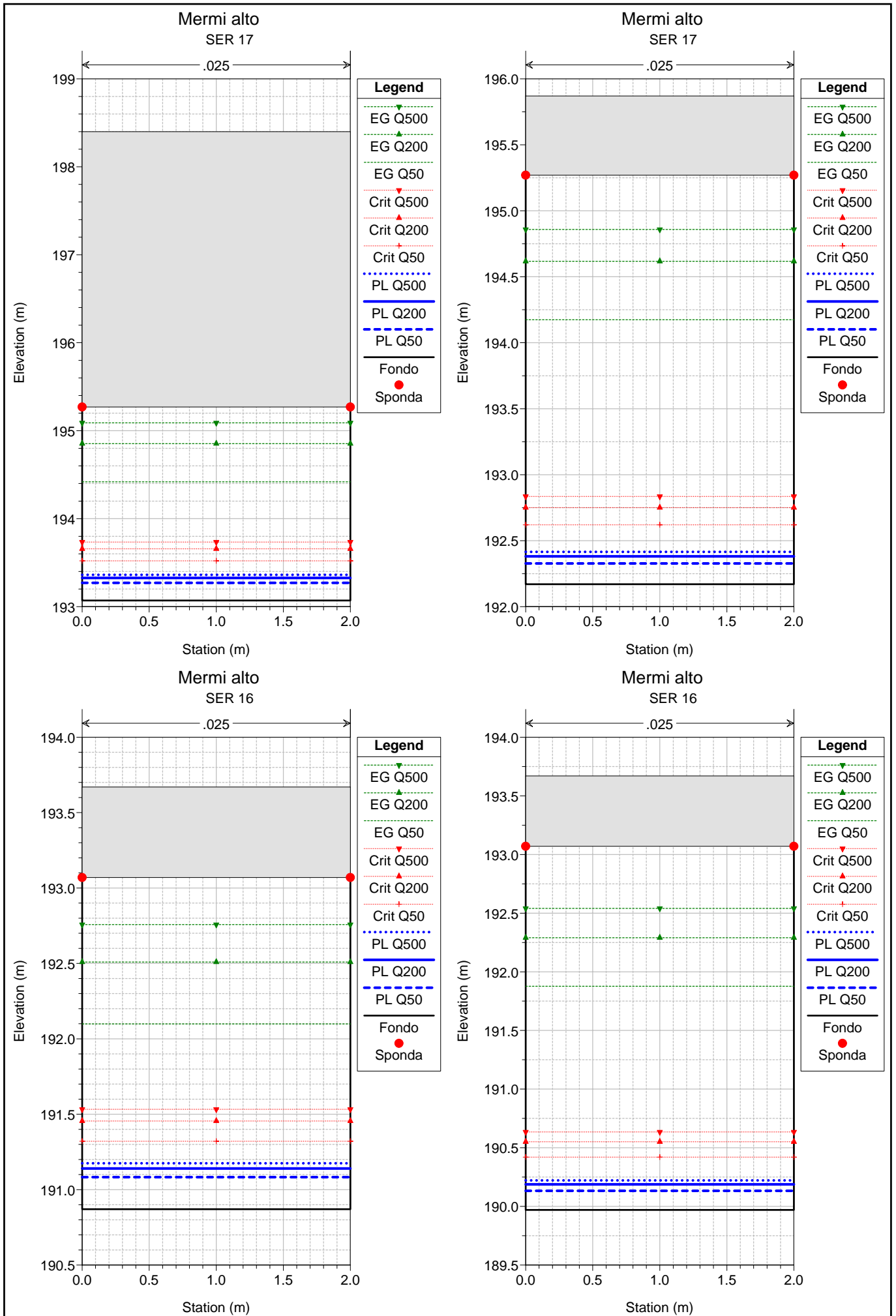


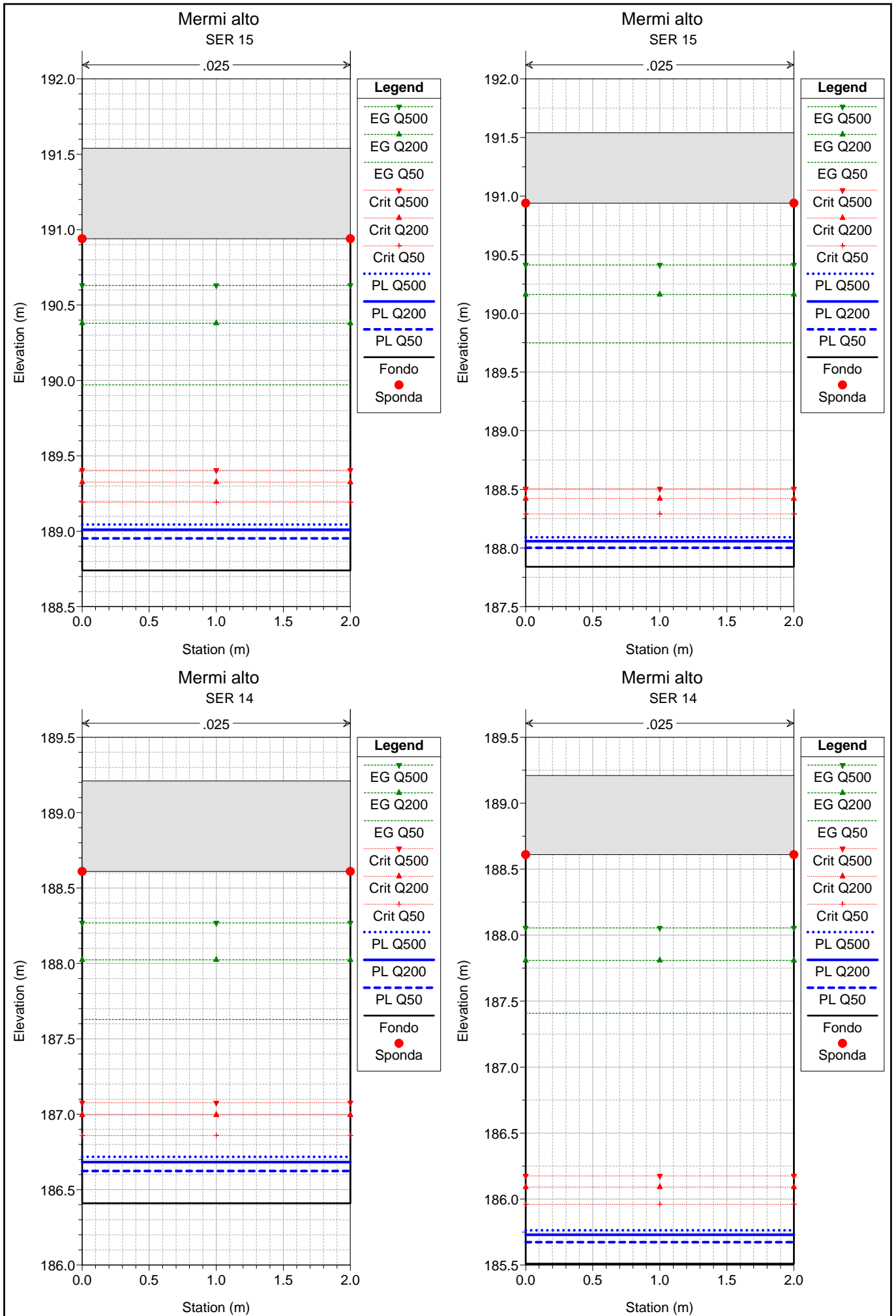
HEC-RAS Plan: Plan 03 River: Fontanelle Reach: unico

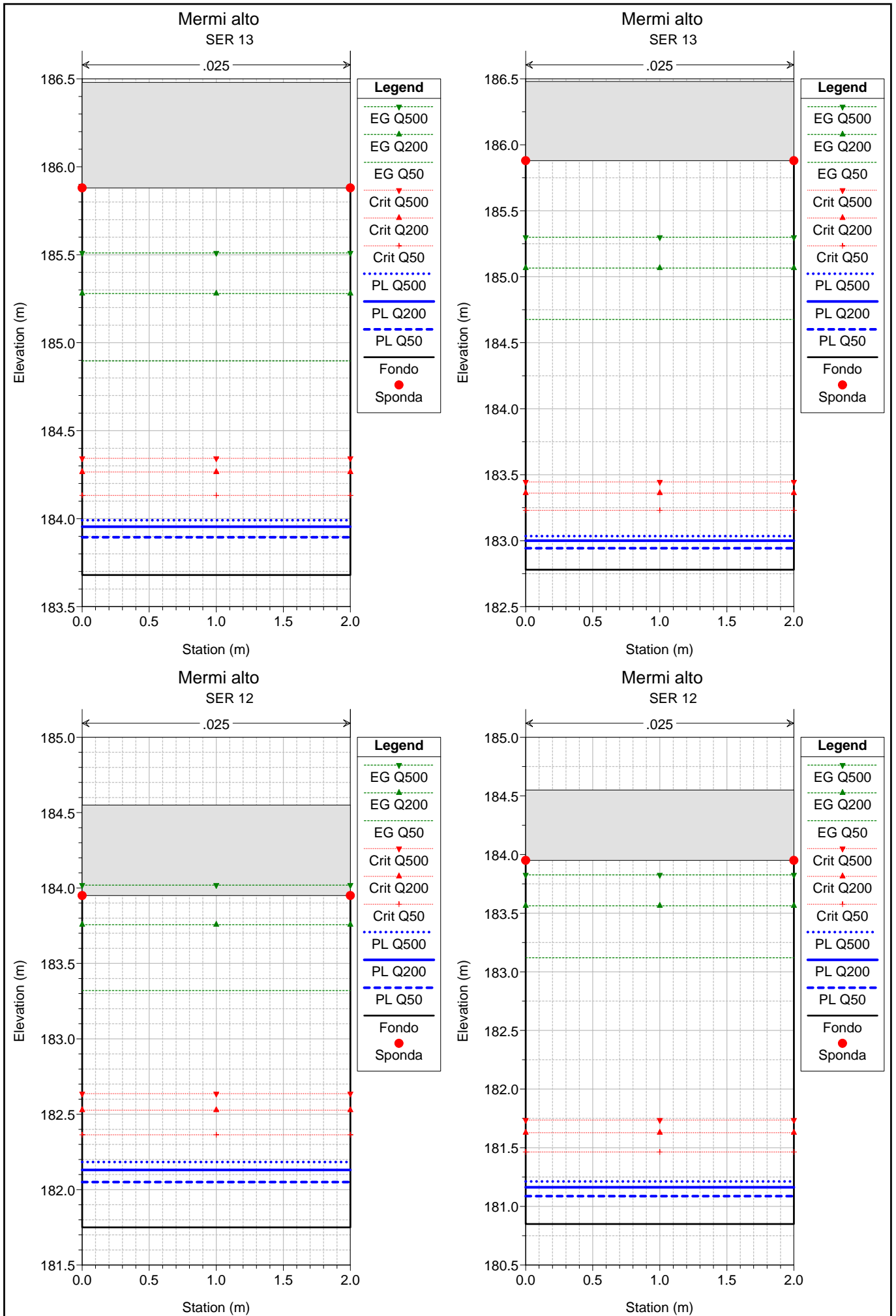
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	6 FON 6	Q50	1.10	192.12	192.31	193.67	1.36	193.67	1.36	192.51	193.11	0.119996	3.95	0.28	1.45	2.87
unico	6 FON 6	Q200	1.50	192.12	192.36	193.67	1.31	193.67	1.31	192.60	193.34	0.120015	4.38	0.34	1.45	2.88
unico	6 FON 6	Q500	1.80	192.12	192.39	193.67	1.28	193.67	1.28	192.66	193.49	0.120028	4.66	0.39	1.45	2.88
unico	5.1 FON 5	Q50	1.10	191.22	191.40	192.77	1.37	192.77	1.37	191.60	192.21	0.125299	3.97	0.28	1.50	2.95
unico	5.1 FON 5	Q200	1.50	191.22	191.45	192.77	1.32	192.77	1.32	191.69	192.44	0.125406	4.41	0.34	1.50	2.96
unico	5.1 FON 5	Q500	1.80	191.22	191.48	192.77	1.29	192.77	1.29	191.75	192.60	0.125014	4.69	0.38	1.50	2.96
unico	5 FON 5	Q50	1.10	187.33	187.41	195.00	7.59	195.00	7.59	187.71	191.81	1.824883	9.30	0.12	1.50	10.57
unico	5 FON 5	Q200	1.50	187.33	187.44	195.00	7.56	195.00	7.56	187.80	192.05	1.358518	9.51	0.16	1.50	9.37
unico	5 FON 5	Q500	1.80	187.33	187.45	195.00	7.55	195.00	7.55	187.86	192.20	1.152471	9.66	0.19	1.50	8.74
unico	4 FON 4	Q50	1.10	187.33	187.45	189.13	1.68	189.13	1.68	187.71	189.37	0.488622	6.14	0.18	1.50	5.68
unico	4 FON 4	Q200	1.50	187.33	187.48	189.13	1.65	189.13	1.65	187.80	189.86	0.482752	6.85	0.22	1.50	5.72
unico	4 FON 4	Q500	1.80	187.33	187.50	189.13	1.63	189.13	1.63	187.86	190.18	0.472983	7.26	0.25	1.50	5.70
unico	3 FON 3	Q50	1.10	186.07	186.26	187.87	1.61	187.87	1.61	186.45	187.03	0.119126	3.90	0.28	1.50	2.87
unico	3 FON 3	Q200	1.50	186.07	186.30	187.87	1.57	187.87	1.57	186.54	187.28	0.123190	4.39	0.34	1.50	2.93
unico	3 FON 3	Q500	1.80	186.07	186.32	187.87	1.55	187.87	1.55	186.60	187.46	0.127579	4.72	0.38	1.50	2.99
unico	2.9 FON 3	Q50	1.10	185.17	185.30	187.87	2.57	187.87	2.57	185.55	186.81	0.333056	5.44	0.20	1.50	4.73
unico	2.9 FON 3	Q200	1.50	185.17	185.34	187.87	2.53	187.87	2.53	185.63	187.06	0.289590	5.81	0.26	1.50	4.47
unico	2.9 FON 3	Q500	1.80	185.17	185.37	187.87	2.50	187.87	2.50	185.70	187.24	0.272066	6.06	0.30	1.50	4.35
unico	2 FON 2	Q50	1.10	183.63	183.82	185.43	1.61	185.43	1.61	184.01	184.60	0.119525	3.91	0.28	1.50	2.88
unico	2 FON 2	Q200	1.50	183.63	183.86	185.43	1.57	185.43	1.57	184.10	184.83	0.120466	4.36	0.34	1.50	2.90
unico	2 FON 2	Q500	1.80	183.63	183.89	185.43	1.54	185.43	1.54	184.16	184.98	0.121023	4.64	0.39	1.50	2.91
unico	1.9	Q50	1.10	182.73	182.86	185.43	2.57	185.43	2.57	183.11	184.37	0.333488	5.44	0.20	1.50	4.73
unico	1.9	Q200	1.50	182.73	182.90	185.43	2.53	185.43	2.53	183.19	184.61	0.286811	5.79	0.26	1.50	4.44
unico	1.9	Q500	1.80	182.73	182.93	185.43	2.50	185.43	2.50	183.26	184.77	0.265082	6.01	0.30	1.50	4.29
unico	1 FON 1	Q50	1.10	182.30	182.47	184.10	1.63	184.10	1.63	182.68	183.47	0.177317	4.44	0.25	1.50	3.49
unico	1 FON 1	Q200	1.50	182.30	182.50	184.10	1.60	184.10	1.60	182.77	183.76	0.180468	4.98	0.30	1.50	3.54
unico	1 FON 1	Q500	1.80	182.30	182.53	184.10	1.57	184.10	1.57	182.83	183.96	0.180674	5.30	0.34	1.50	3.55

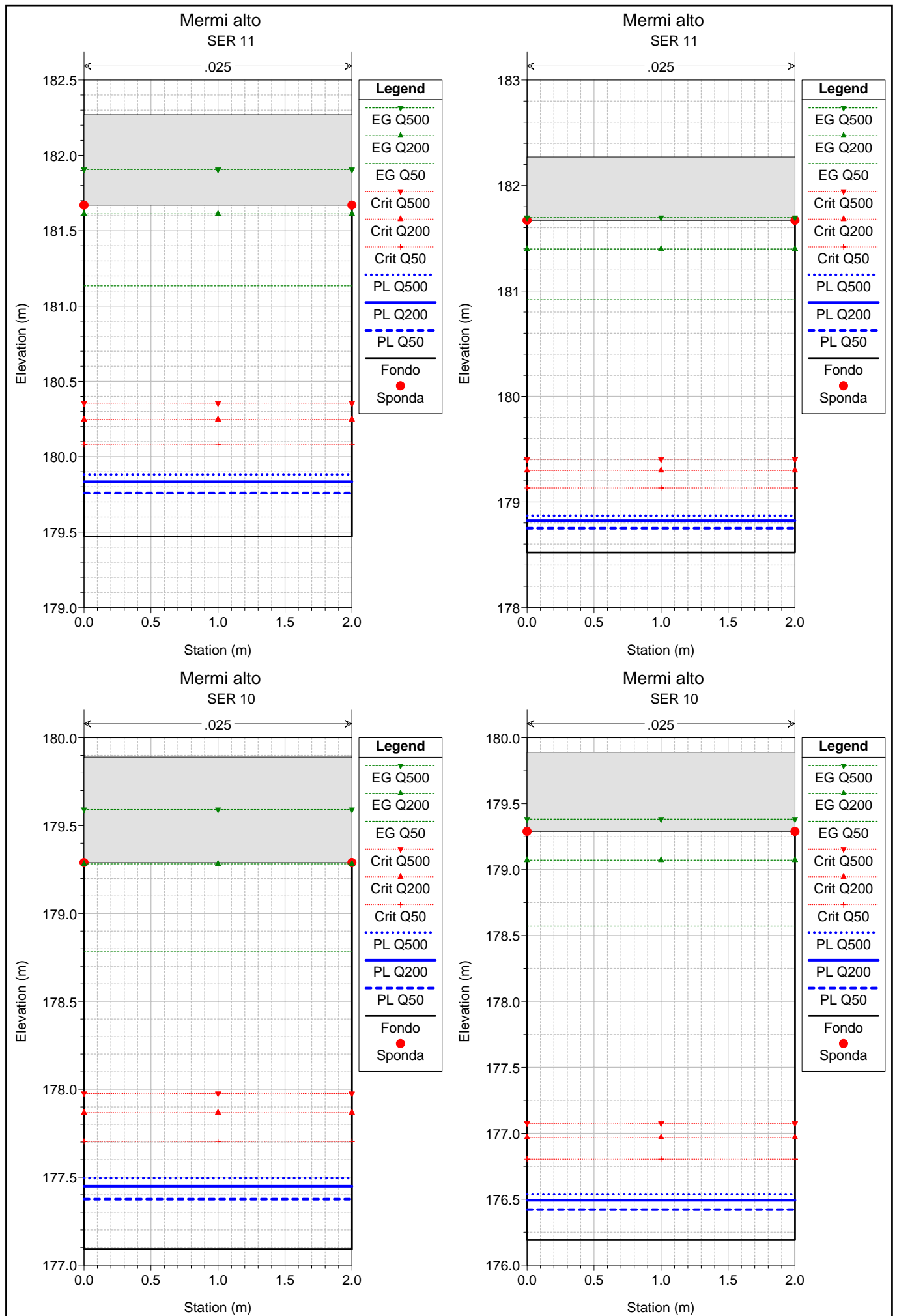


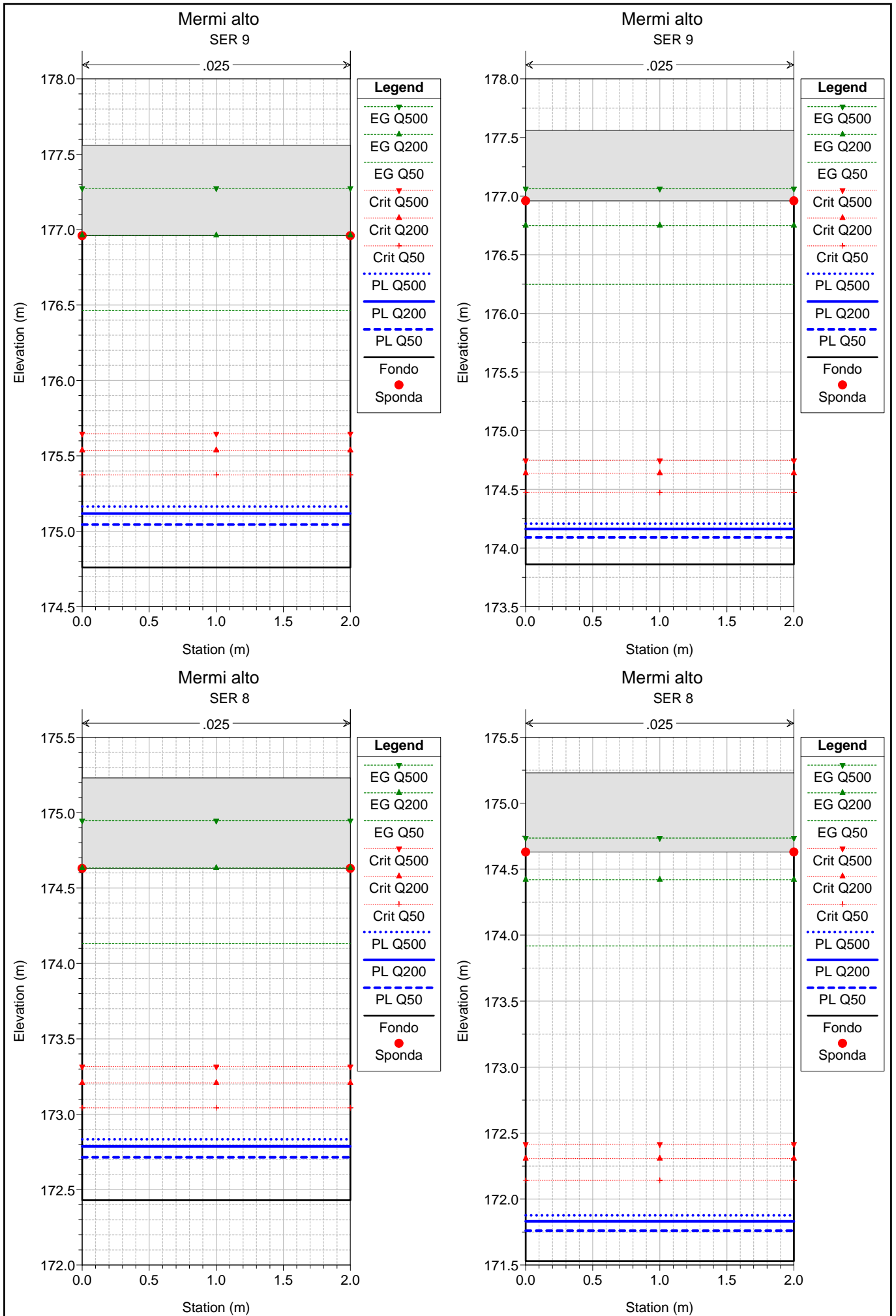


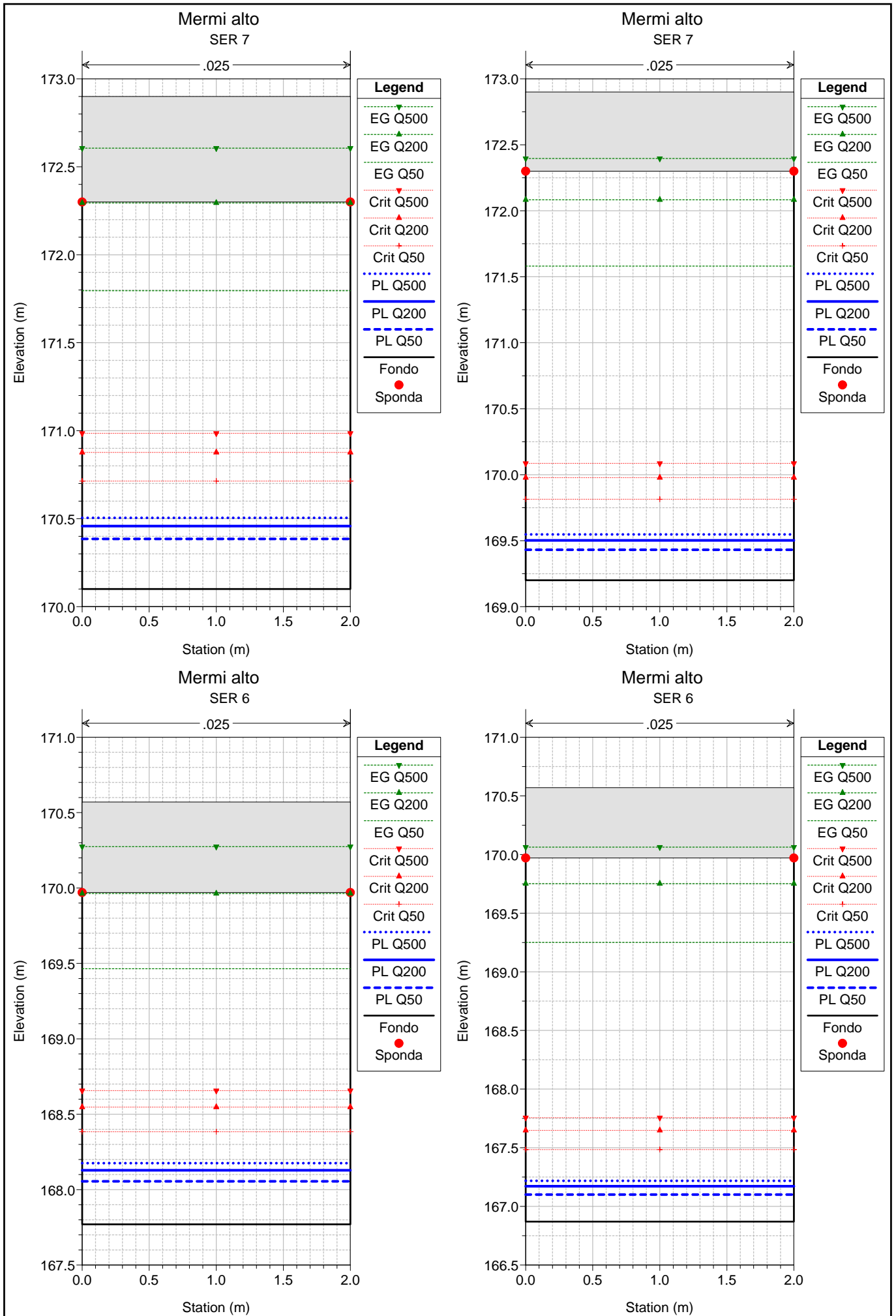


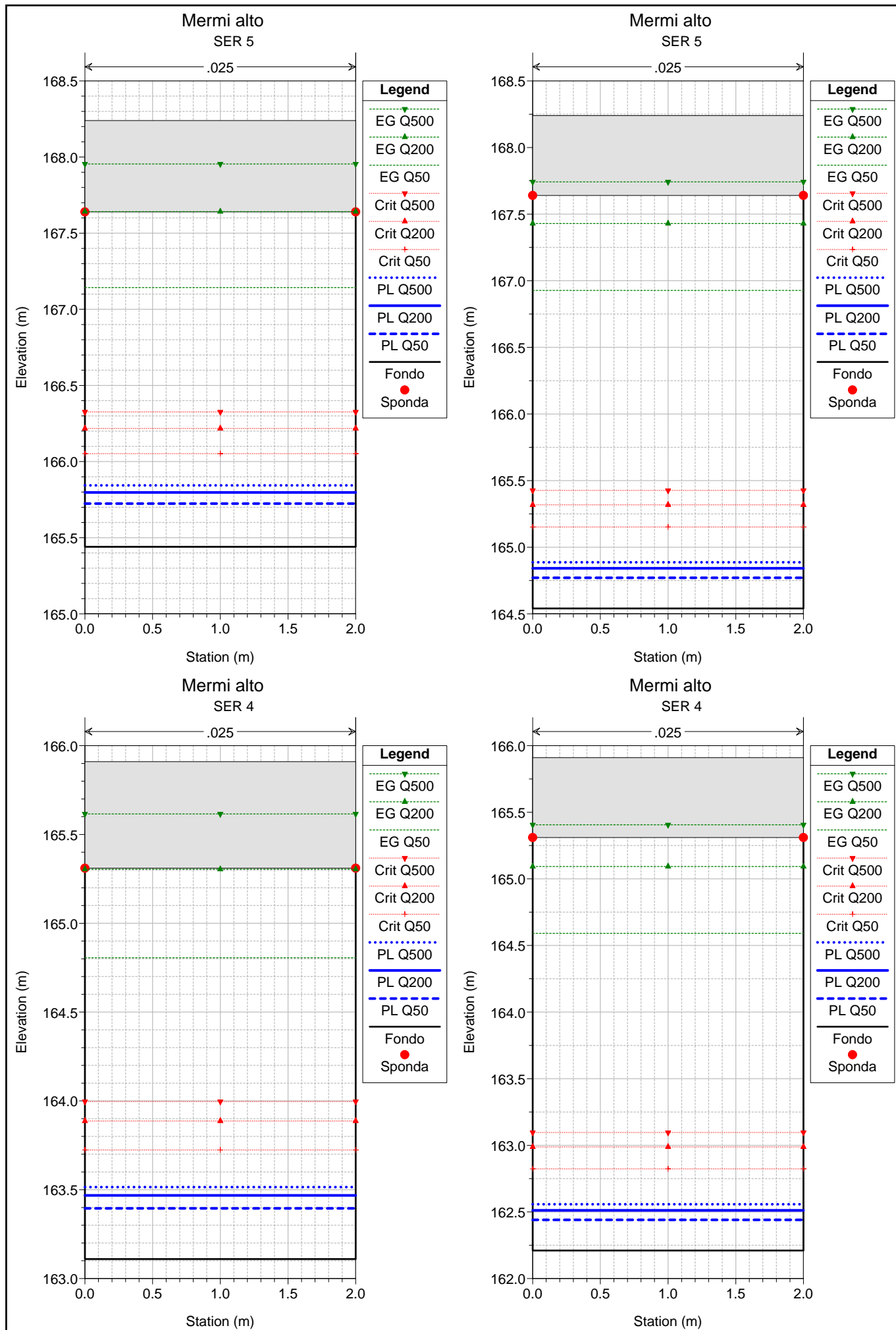


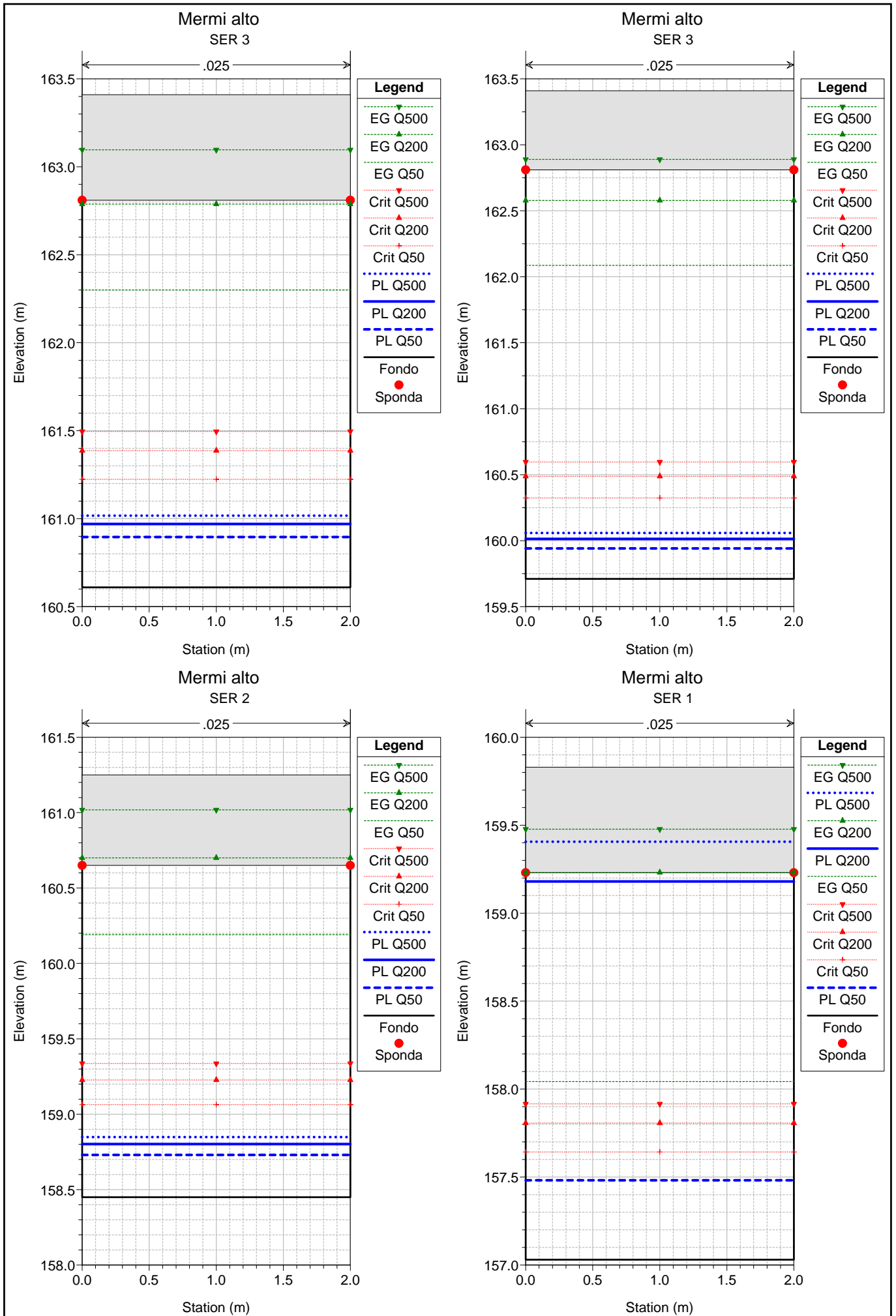












HEC-RAS Plan: Plan 03

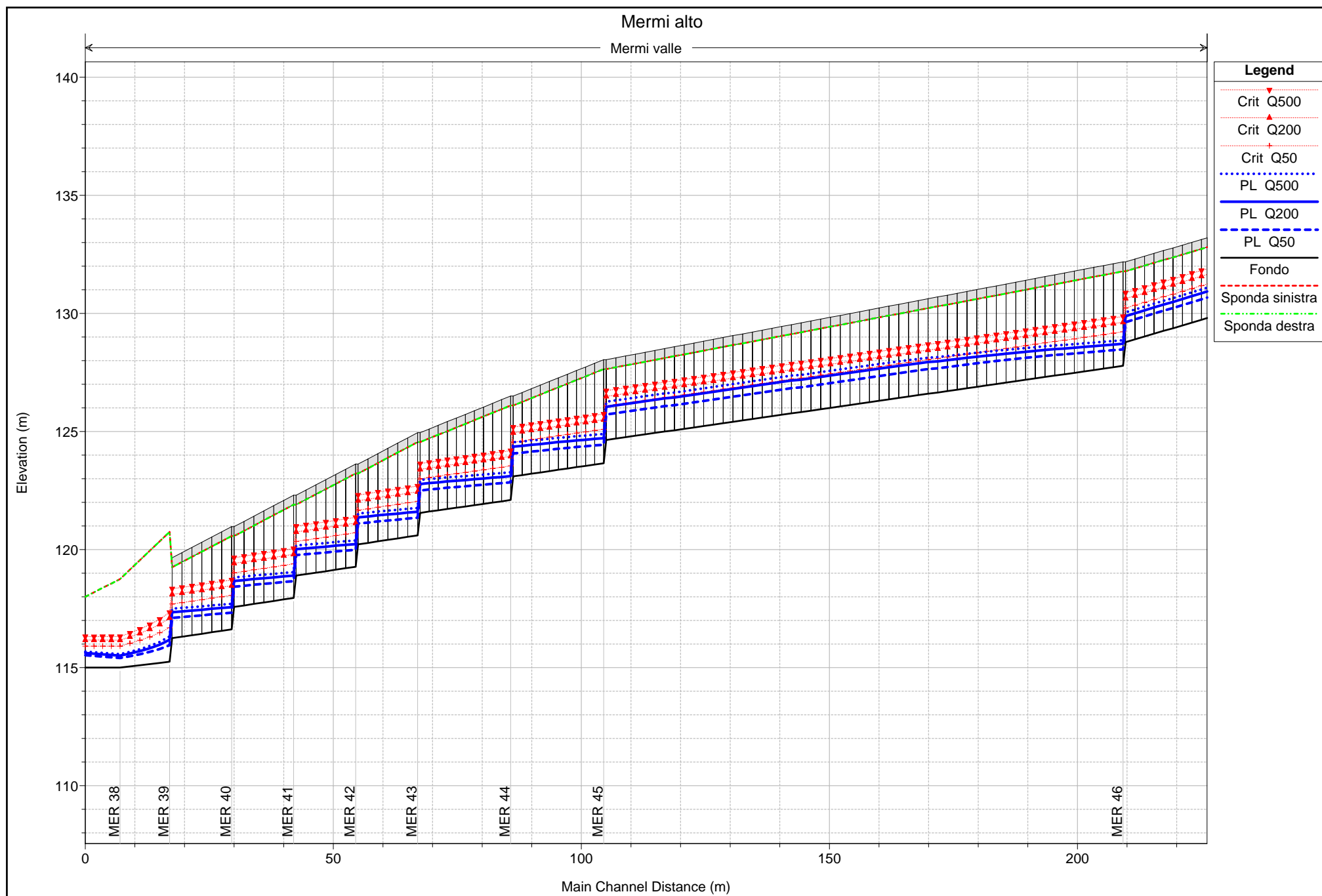
Reach	River Sta		Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
monte	20	SER 20	Q50	1.90	197.25	197.41	199.45	2.04	199.45	2.04	197.70	199.21	0.310223	5.94	0.32	2.00	4.75
monte	20	SER 20	Q200	2.80	197.25	197.45	199.45	2.00	199.45	2.00	197.83	199.84	0.310188	6.84	0.41	2.00	4.82
monte	20	SER 20	Q500	3.40	197.25	197.48	199.45	1.97	199.45	1.97	197.92	200.21	0.310165	7.32	0.46	2.00	4.85
monte	19	SER 19	Q50	1.90	195.67	195.83	197.87	2.04	197.87	2.04	196.12	197.65	0.314817	5.97	0.32	2.00	4.78
monte	19	SER 19	Q200	2.80	195.67	195.87	197.87	2.00	197.87	2.00	196.25	198.27	0.313983	6.86	0.41	2.00	4.85
monte	19	SER 19	Q500	3.40	195.67	195.90	197.87	1.97	197.87	1.97	196.34	198.65	0.313716	7.35	0.46	2.00	4.88
monte	18.9	SER 19	Q50	1.90	194.77	196.60	197.87	1.27	197.87	1.27	195.22	196.62	0.000300	0.52	3.67	2.00	0.12
monte	18.9	SER 19	Q200	2.80	194.77	196.72	197.87	1.15	197.87	1.15	195.36	196.74	0.000562	0.72	3.89	2.00	0.16
monte	18.9	SER 19	Q500	3.40	194.77	196.78	197.87	1.09	197.87	1.09	195.43	196.82	0.000763	0.84	4.03	2.00	0.19
monte	18	SER 18	Q50	1.90	196.20	196.47	197.25	0.78	197.25	0.78	196.47	196.60	0.011181	1.62	1.17	4.40	1.00
monte	18	SER 18	Q200	2.80	196.20	196.54	197.25	0.71	197.25	0.71	196.54	196.72	0.010699	1.85	1.52	4.40	1.00
monte	18	SER 18	Q500	3.40	196.20	196.59	197.25	0.66	197.25	0.66	196.59	196.79	0.010333	1.96	1.74	4.40	1.00
monte	17	SER 17	Q50	1.90	193.07	193.27	195.27	2.00	195.27	2.00	193.52	194.42	0.153536	4.75	0.40	2.00	3.39
monte	17	SER 17	Q200	2.80	193.07	193.33	195.27	1.94	195.27	1.94	193.66	194.85	0.156469	5.48	0.51	2.00	3.46
monte	17	SER 17	Q500	3.40	193.07	193.36	195.27	1.91	195.27	1.91	193.73	195.09	0.153952	5.82	0.58	2.00	3.44
monte	16.9	SER 17	Q50	1.90	192.17	192.33	195.27	2.94	195.27	2.94	192.62	194.17	0.323078	6.02	0.32	2.00	4.84
monte	16.9	SER 17	Q200	2.80	192.17	192.38	195.27	2.89	195.27	2.89	192.75	194.62	0.281471	6.63	0.42	2.00	4.60
monte	16.9	SER 17	Q500	3.40	192.17	192.42	195.27	2.85	195.27	2.85	192.84	194.86	0.261313	6.93	0.49	2.00	4.46
monte	16	SER 16	Q50	1.90	190.87	191.08	193.07	1.99	193.07	1.99	191.32	192.10	0.126954	4.47	0.43	2.00	3.09
monte	16	SER 16	Q200	2.80	190.87	191.14	193.07	1.93	193.07	1.93	191.46	192.51	0.132345	5.18	0.54	2.00	3.18
monte	16	SER 16	Q500	3.40	190.87	191.18	193.07	1.90	193.07	1.90	191.53	192.76	0.134827	5.57	0.61	2.00	3.22
monte	15.9	SER 16	Q50	1.90	189.97	190.13	193.07	2.94	193.07	2.94	190.42	191.88	0.295469	5.85	0.32	2.00	4.64
monte	15.9	SER 16	Q200	2.80	189.97	190.19	193.07	2.88	193.07	2.88	190.55	192.29	0.255943	6.43	0.44	2.00	4.39
monte	15.9	SER 16	Q500	3.40	189.97	190.22	193.07	2.85	193.07	2.85	190.64	192.54	0.241147	6.75	0.50	2.00	4.29
monte	15	SER 15	Q50	1.90	188.74	188.95	190.94	1.99	190.94	1.99	189.19	189.97	0.127299	4.47	0.43	2.00	3.09
monte	15	SER 15	Q200	2.80	188.74	189.01	190.94	1.93	190.94	1.93	189.33	190.38	0.132457	5.19	0.54	2.00	3.19
monte	15	SER 15	Q500	3.40	188.74	189.04	190.94	1.90	190.94	1.90	189.40	190.63	0.135225	5.58	0.61	2.00	3.23
monte	14.9	SER 15	Q50	1.90	187.84	188.00	190.94	2.94	190.94	2.94	188.29	189.75	0.295789	5.85	0.32	2.00	4.64
monte	14.9	SER 15	Q200	2.80	187.84	188.06	190.94	2.88	190.94	2.88	188.42	190.16	0.256011	6.43	0.44	2.00	4.39
monte	14.9	SER 15	Q500	3.40	187.84	188.09	190.94	2.85	190.94	2.85	188.51	190.41	0.241584	6.75	0.50	2.00	4.29
monte	14	SER 14	Q50	1.90	186.41	186.62	188.61	1.99	188.61	1.99	186.86	187.63	0.124609	4.44	0.43	2.00	3.06
monte	14	SER 14	Q200	2.80	186.41	186.68	188.61	1.93	188.61	1.93	187.00	188.02	0.128235	5.13	0.55	2.00	3.14
monte	14	SER 14	Q500	3.40	186.41	186.72	188.61	1.89	188.61	1.89	187.08	188.27	0.130786	5.52	0.62	2.00	3.17
monte	13.9	SER 14	Q50	1.90	185.51	185.67	188.61	2.94	188.61	2.94	185.96	187.41	0.292820	5.84	0.33	2.00	4.62
monte	13.9	SER 14	Q200	2.80	185.51	185.73	188.61	2.88	188.61	2.88	186.09	187.81	0.251465	6.39	0.44	2.00	4.36
monte	13.9	SER 14	Q500	3.40	185.51	185.76	188.61	2.85	188.61	2.85	186.18	188.05	0.236781	6.71	0.51	2.00	4.25
monte	13	SER 13	Q50	1.90	183.68	183.89	185.88	1.99	185.88	1.99	184.13	184.90	0.124341	4.44	0.43	2.00	3.06
monte	13	SER 13	Q200	2.80	183.68	183.95	185.88	1.93	185.88	1.93	184.27	185.28	0.125919	5.10	0.55	2.00	3.11
monte	13	SER 13	Q500	3.40	183.68	183.99	185.88	1.89	185.88	1.89	184.34	185.51	0.126817	5.46	0.62	2.00	3.12
monte	12.9	SER 13	Q50	1.90	182.78	182.94	185.88	2.94	185.88	2.94	183.23	184.68	0.292610	5.83	0.33	2.00	4.62

HEC-RAS Plan: Plan 03 (Continued)

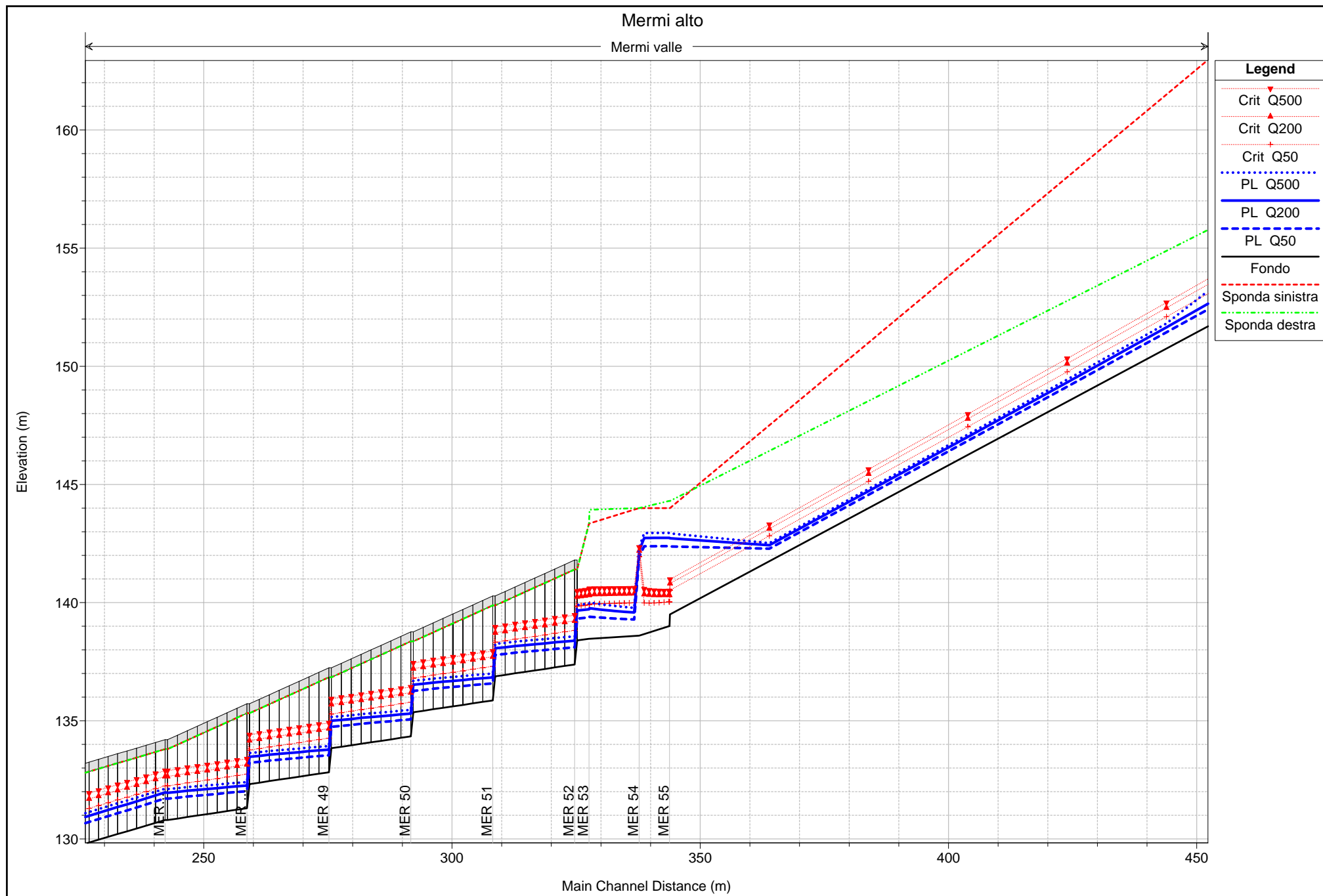
Reach	River Sta		Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte	12.9	SER 13	Q200	2.80	182.78	183.00	185.88	2.88	185.88	2.88	183.36	185.07	0.249037	6.37	0.44	2.00	4.34
monte	12.9	SER 13	Q500	3.40	182.78	183.04	185.88	2.85	185.88	2.85	183.45	185.30	0.232573	6.67	0.51	2.00	4.21
valle	12	SER 12	Q50	3.00	181.75	182.05	183.95	1.90	183.95	1.90	182.36	183.32	0.109919	4.99	0.60	2.00	2.91
valle	12	SER 12	Q200	4.30	181.75	182.13	183.95	1.82	183.95	1.82	182.53	183.76	0.111269	5.65	0.76	2.00	2.92
valle	12	SER 12	Q500	5.20	181.75	182.18	183.95	1.77	183.95	1.77	182.64	184.02	0.111043	6.00	0.87	2.00	2.91
valle	11.9	SER 12	Q50	3.00	180.85	181.09	183.95	2.86	183.95	2.86	181.46	183.12	0.225256	6.32	0.47	2.00	4.14
valle	11.9	SER 12	Q200	4.30	180.85	181.16	183.95	2.79	183.95	2.79	181.63	183.56	0.199014	6.86	0.63	2.00	3.91
valle	11.9	SER 12	Q500	5.20	180.85	181.21	183.95	2.74	183.95	2.74	181.74	183.83	0.187145	7.16	0.73	2.00	3.79
valle	11	SER 11	Q50	3.00	179.47	179.76	181.67	1.91	181.67	1.91	180.08	181.13	0.123957	5.19	0.58	2.00	3.09
valle	11	SER 11	Q200	4.30	179.47	179.83	181.67	1.84	181.67	1.84	180.25	181.61	0.126921	5.91	0.73	2.00	3.13
valle	11	SER 11	Q500	5.20	179.47	179.88	181.67	1.79	181.67	1.79	180.36	181.91	0.128143	6.30	0.83	2.00	3.13
valle	10.9	SER 11	Q50	3.00	178.52	178.75	181.67	2.92	181.67	2.92	179.13	180.92	0.248531	6.52	0.46	2.00	4.34
valle	10.9	SER 11	Q200	4.30	178.52	178.82	181.67	2.85	181.67	2.85	179.30	181.40	0.221522	7.11	0.60	2.00	4.13
valle	10.9	SER 11	Q500	5.20	178.52	178.87	181.67	2.80	181.67	2.80	179.41	181.70	0.210428	7.45	0.70	2.00	4.03
valle	10	SER 10	Q50	3.00	177.09	177.38	179.29	1.92	179.29	1.92	177.70	178.79	0.128936	5.26	0.57	2.00	3.15
valle	10	SER 10	Q200	4.30	177.09	177.45	179.29	1.84	179.29	1.84	177.87	179.28	0.133045	6.00	0.72	2.00	3.20
valle	10	SER 10	Q500	5.20	177.09	177.50	179.29	1.79	179.29	1.79	177.98	179.59	0.134984	6.42	0.81	2.00	3.22
valle	9.9	SER 10	Q50	3.00	176.19	176.42	179.29	2.87	179.29	2.87	176.80	178.57	0.245763	6.50	0.46	2.00	4.32
valle	9.9	SER 10	Q200	4.30	176.19	176.49	179.29	2.80	179.29	2.80	176.97	179.07	0.221976	7.12	0.60	2.00	4.13
valle	9.9	SER 10	Q500	5.20	176.19	176.54	179.29	2.75	179.29	2.75	177.08	179.38	0.212419	7.47	0.70	2.00	4.04
valle	9	SER 9	Q50	3.00	174.76	175.04	176.96	1.92	176.96	1.92	175.37	176.46	0.129938	5.28	0.57	2.00	3.16
valle	9	SER 9	Q200	4.30	174.76	175.12	176.96	1.84	176.96	1.84	175.54	176.96	0.134081	6.02	0.71	2.00	3.21
valle	9	SER 9	Q500	5.20	174.76	175.16	176.96	1.80	176.96	1.80	175.65	177.27	0.136327	6.44	0.81	2.00	3.23
valle	8.9	SER 9	Q50	3.00	173.86	174.09	176.96	2.87	176.96	2.87	174.47	176.25	0.246865	6.51	0.46	2.00	4.33
valle	8.9	SER 9	Q200	4.30	173.86	174.16	176.96	2.80	176.96	2.80	174.64	176.75	0.223054	7.13	0.60	2.00	4.14
valle	8.9	SER 9	Q500	5.20	173.86	174.21	176.96	2.75	176.96	2.75	174.75	177.06	0.213543	7.49	0.69	2.00	4.06
valle	8	SER 8	Q50	3.00	172.43	172.71	174.63	1.92	174.63	1.92	173.04	174.13	0.130016	5.28	0.57	2.00	3.16
valle	8	SER 8	Q200	4.30	172.43	172.79	174.63	1.84	174.63	1.84	173.21	174.63	0.134227	6.02	0.71	2.00	3.21
valle	8	SER 8	Q500	5.20	172.43	172.83	174.63	1.80	174.63	1.80	173.32	174.95	0.136513	6.44	0.81	2.00	3.24
valle	7.9	SER 8	Q50	3.00	171.53	171.76	174.63	2.87	174.63	2.87	172.14	173.92	0.246927	6.51	0.46	2.00	4.33
valle	7.9	SER 8	Q200	4.30	171.53	171.83	174.63	2.80	174.63	2.80	172.31	174.42	0.223221	7.13	0.60	2.00	4.14
valle	7.9	SER 8	Q500	5.20	171.53	171.88	174.63	2.75	174.63	2.75	172.42	174.74	0.213988	7.49	0.69	2.00	4.06
valle	7	SER 7	Q50	3.00	170.10	170.39	172.30	1.91	172.30	1.91	170.71	171.80	0.128860	5.26	0.57	2.00	3.15
valle	7	SER 7	Q200	4.30	170.10	170.46	172.30	1.84	172.30	1.84	170.88	172.29	0.133231	6.00	0.72	2.00	3.20
valle	7	SER 7	Q500	5.20	170.10	170.50	172.30	1.80	172.30	1.80	170.99	172.61	0.135442	6.42	0.81	2.00	3.22
valle	6.9	SER 7	Q50	3.00	169.20	169.43	172.30	2.87	172.30	2.87	169.81	171.58	0.245702	6.50	0.46	2.00	4.32
valle	6.9	SER 7	Q200	4.30	169.20	169.50	172.30	2.80	172.30	2.80	169.98	172.08	0.222183	7.12	0.60	2.00	4.13
valle	6.9	SER 7	Q500	5.20	169.20	169.55	172.30	2.75	172.30	2.75	170.09	172.40	0.212793	7.48	0.70	2.00	4.05
valle	6	SER 6	Q50	3.00	167.77	168.06	169.97	1.91	169.97	1.91	168.38	169.46	0.128732	5.26	0.57	2.00	3.14
valle	6	SER 6	Q200	4.30	167.77	168.13	169.97	1.84	169.97	1.84	168.55	169.96	0.133066	6.00	0.72	2.00	3.20

HEC-RAS Plan: Plan 03 (Continued)

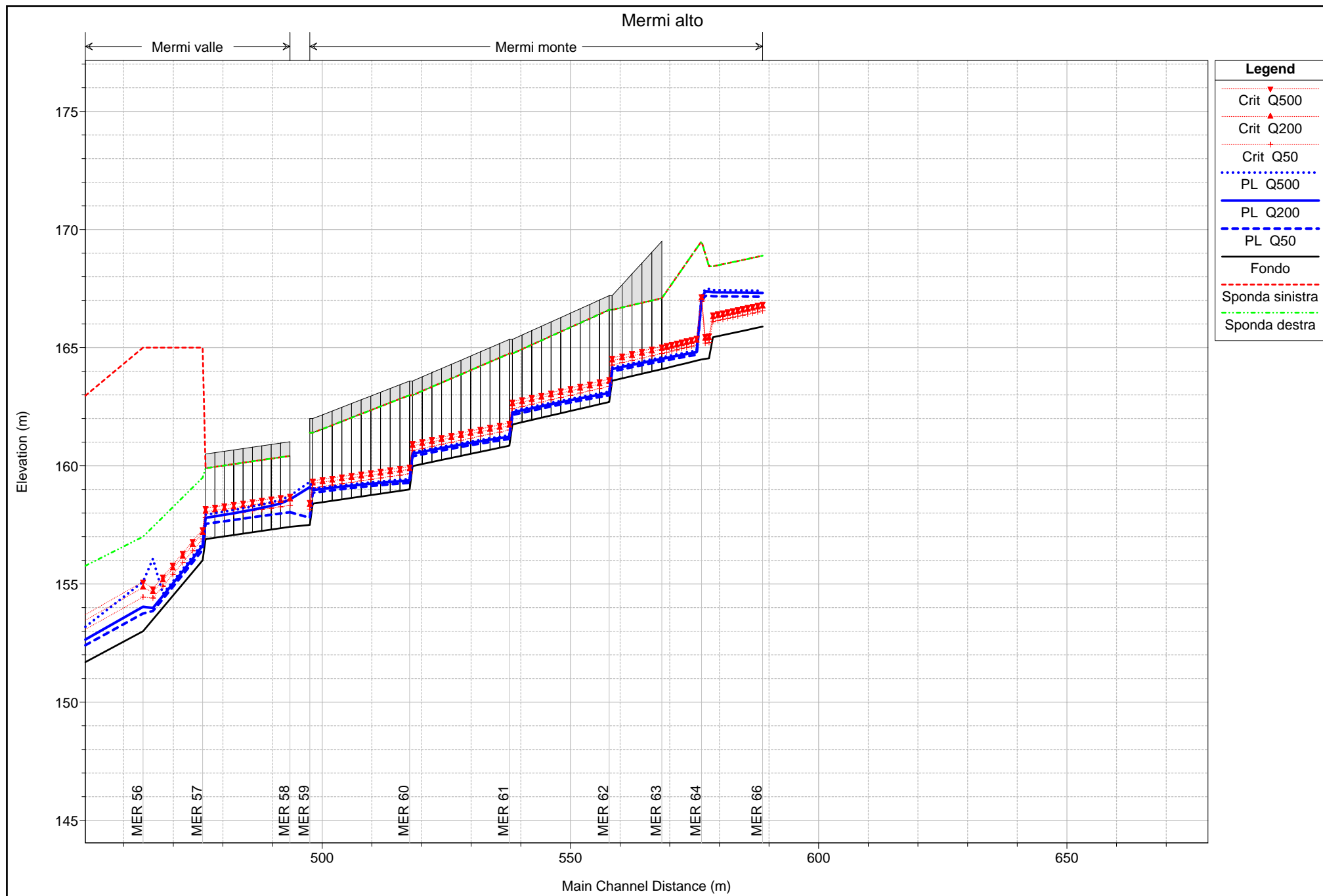
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
valle	6 SER 6	Q500	5.20	167.77	168.18	169.97	1.79	169.97	1.79	168.66	170.27	0.135241	6.42	0.81	2.00	3.22
valle	5.9 SER 6	Q50	3.00	166.87	167.10	169.97	2.87	169.97	2.87	167.48	169.25	0.245580	6.50	0.46	2.00	4.31
valle	5.9 SER 6	Q200	4.30	166.87	167.17	169.97	2.80	169.97	2.80	167.65	169.75	0.221976	7.12	0.60	2.00	4.13
valle	5.9 SER 6	Q500	5.20	166.87	167.22	169.97	2.75	169.97	2.75	167.76	170.06	0.212419	7.47	0.70	2.00	4.04
valle	5 SER 5	Q50	3.00	165.44	165.72	167.64	1.92	167.64	1.92	166.05	167.14	0.129964	5.28	0.57	2.00	3.16
valle	5 SER 5	Q200	4.30	165.44	165.80	167.64	1.84	167.64	1.84	166.22	167.64	0.134102	6.02	0.71	2.00	3.21
valle	5 SER 5	Q500	5.20	165.44	165.84	167.64	1.80	167.64	1.80	166.33	167.95	0.136346	6.44	0.81	2.00	3.23
valle	4.9 SER 5	Q50	3.00	164.54	164.77	167.64	2.87	167.64	2.87	165.15	166.93	0.246865	6.51	0.46	2.00	4.33
valle	4.9 SER 5	Q200	4.30	164.54	164.84	167.64	2.80	167.64	2.80	165.32	167.43	0.223054	7.13	0.60	2.00	4.14
valle	4.9 SER 5	Q500	5.20	164.54	164.89	167.64	2.75	167.64	2.75	165.43	167.74	0.213543	7.49	0.69	2.00	4.06
valle	4 SER 4	Q50	3.00	163.11	163.40	165.31	1.91	165.31	1.91	163.72	164.81	0.128860	5.26	0.57	2.00	3.15
valle	4 SER 4	Q200	4.30	163.11	163.47	165.31	1.84	165.31	1.84	163.89	165.30	0.133210	6.00	0.72	2.00	3.20
valle	4 SER 4	Q500	5.20	163.11	163.52	165.31	1.80	165.31	1.80	164.00	165.62	0.135369	6.42	0.81	2.00	3.22
valle	3.9 SER 4	Q50	3.00	162.21	162.44	165.31	2.87	165.31	2.87	162.82	164.59	0.245702	6.50	0.46	2.00	4.32
valle	3.9 SER 4	Q200	4.30	162.21	162.51	165.31	2.80	165.31	2.80	162.99	165.09	0.222142	7.12	0.60	2.00	4.13
valle	3.9 SER 4	Q500	5.20	162.21	162.56	165.31	2.75	165.31	2.75	163.10	165.41	0.212724	7.48	0.70	2.00	4.05
valle	3 SER 3	Q50	3.00	160.61	160.90	162.81	1.91	162.81	1.91	161.22	162.30	0.128020	5.25	0.57	2.00	3.14
valle	3 SER 3	Q200	4.30	160.61	160.97	162.81	1.84	162.81	1.84	161.39	162.79	0.131310	5.97	0.72	2.00	3.18
valle	3 SER 3	Q500	5.20	160.61	161.02	162.81	1.79	162.81	1.79	161.50	163.10	0.133354	6.39	0.81	2.00	3.20
valle	2.9 SER 3	Q50	3.00	159.71	159.94	162.81	2.87	162.81	2.87	160.32	162.09	0.244788	6.49	0.46	2.00	4.31
valle	2.9 SER 3	Q200	4.30	159.71	160.01	162.81	2.80	162.81	2.80	160.49	162.58	0.220168	7.10	0.61	2.00	4.12
valle	2.9 SER 3	Q500	5.20	159.71	160.06	162.81	2.75	162.81	2.75	160.60	162.89	0.210730	7.45	0.70	2.00	4.03
valle	2 SER 2	Q50	3.00	158.45	158.73	160.65	1.92	160.65	1.92	159.06	160.19	0.135850	5.35	0.56	2.00	3.23
valle	2 SER 2	Q200	4.30	158.45	158.80	160.65	1.85	160.65	1.85	159.23	160.70	0.139911	6.10	0.70	2.00	3.28
valle	2 SER 2	Q500	5.20	158.45	158.85	160.65	1.80	160.65	1.80	159.34	161.02	0.142023	6.53	0.80	2.00	3.30
valle	1.9	Q50	3.00	157.55	157.78	160.65	2.87	160.65	2.87	158.16	159.97	0.253177	6.56	0.46	2.00	4.38
valle	1.9	Q200	4.30	157.55	157.85	160.65	2.80	160.65	2.80	158.33	160.48	0.229070	7.19	0.60	2.00	4.20
valle	1.9	Q500	5.20	157.55	159.42	160.65	1.23	160.65	1.23	158.44	159.52	0.002139	1.39	3.74	2.00	0.32
valle	1 SER 1	Q50	3.00	157.03	157.48	159.23	1.75	159.23	1.75	157.64	158.04	0.032627	3.32	0.90	2.00	1.58
valle	1 SER 1	Q200	4.30	157.03	159.18	159.23	0.05	159.23	0.05	157.81	159.23	0.001039	1.00	4.30	2.00	0.22
valle	1 SER 1	Q500	5.20	157.03	159.41	159.23	-0.18	159.23	-0.18	157.92	159.48	0.002067	1.18	4.40		0.24



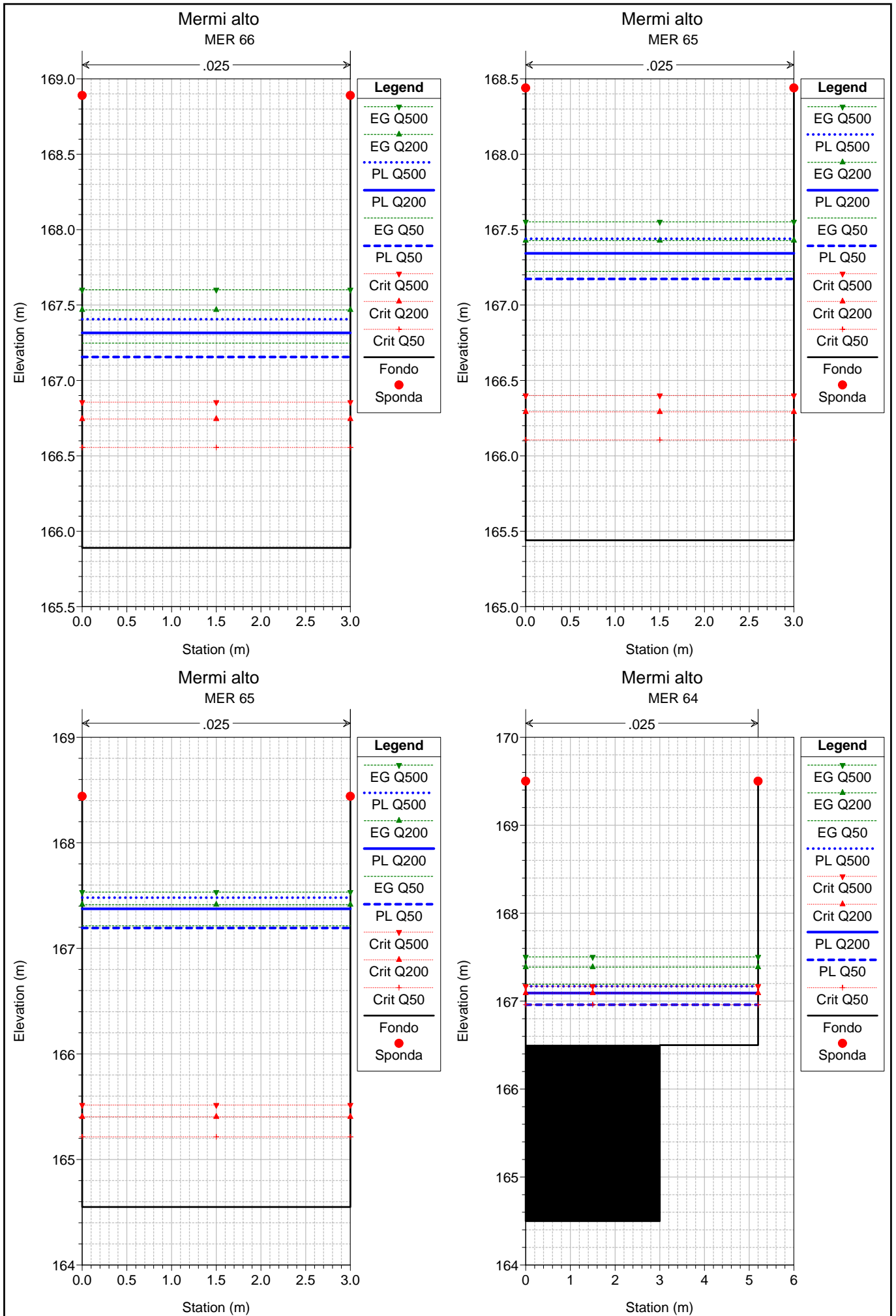
1 cm Horiz. = 10 m 1 cm Vert. = 2.1 m

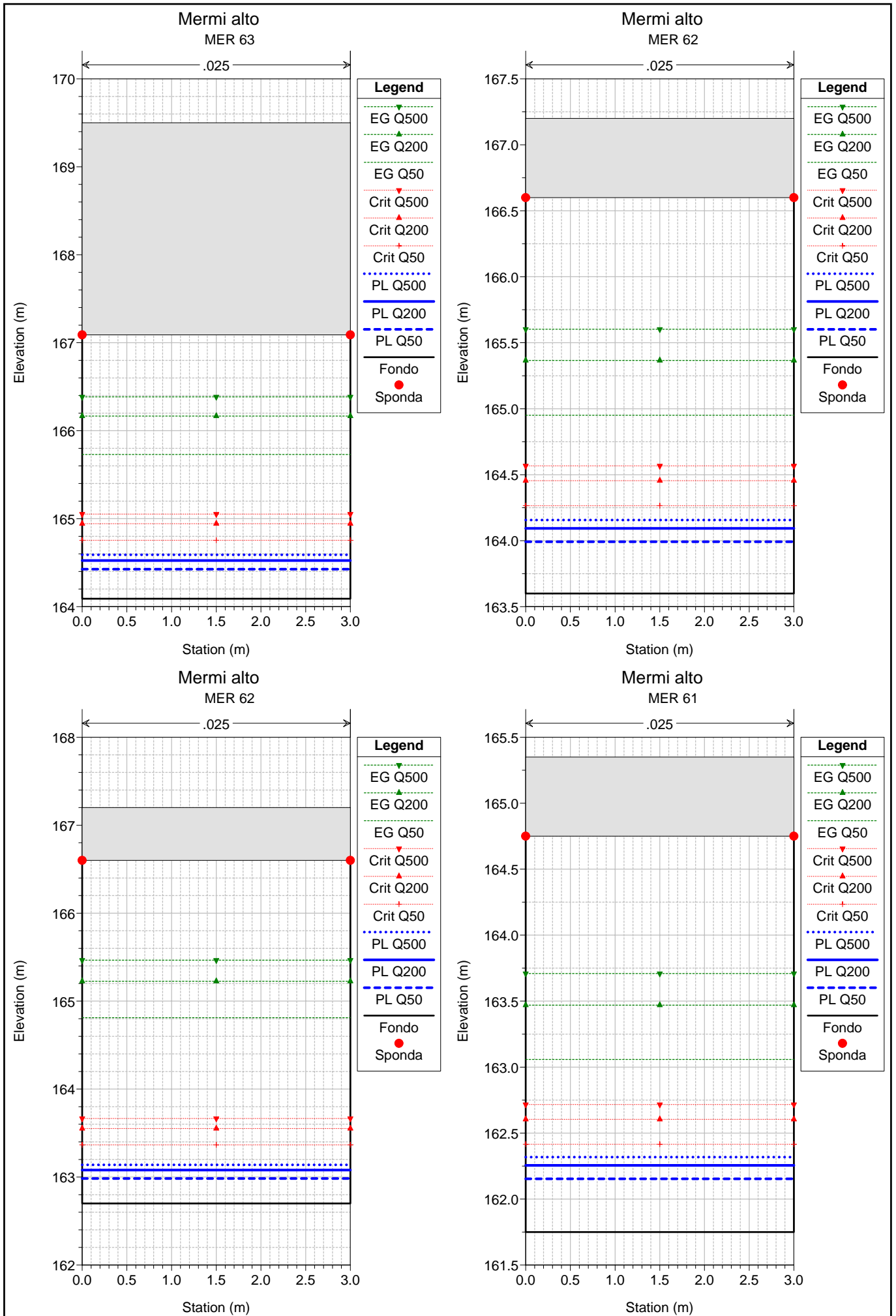


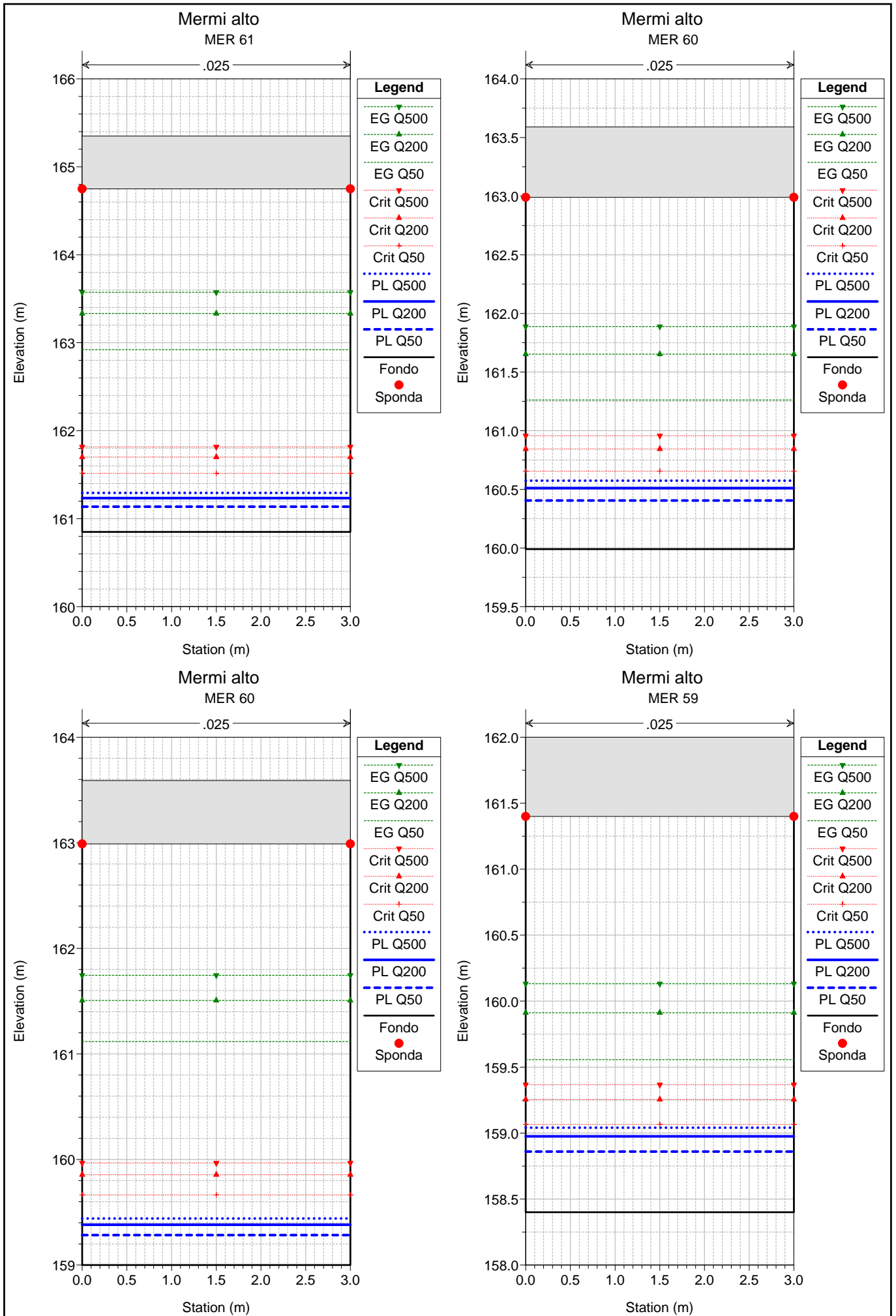
1 cm Horiz. = 10 m 1 cm Vert. = 2.1 m

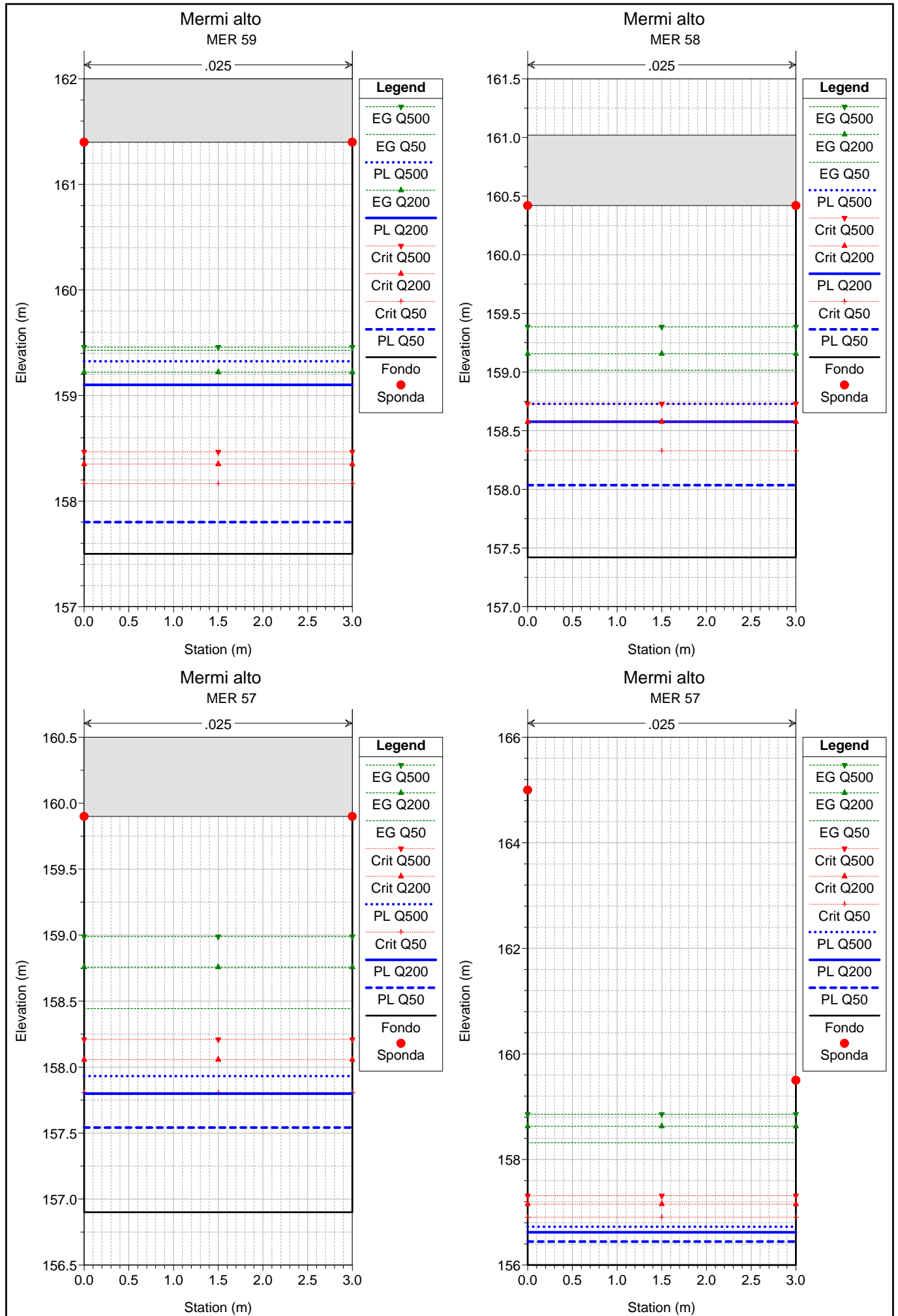


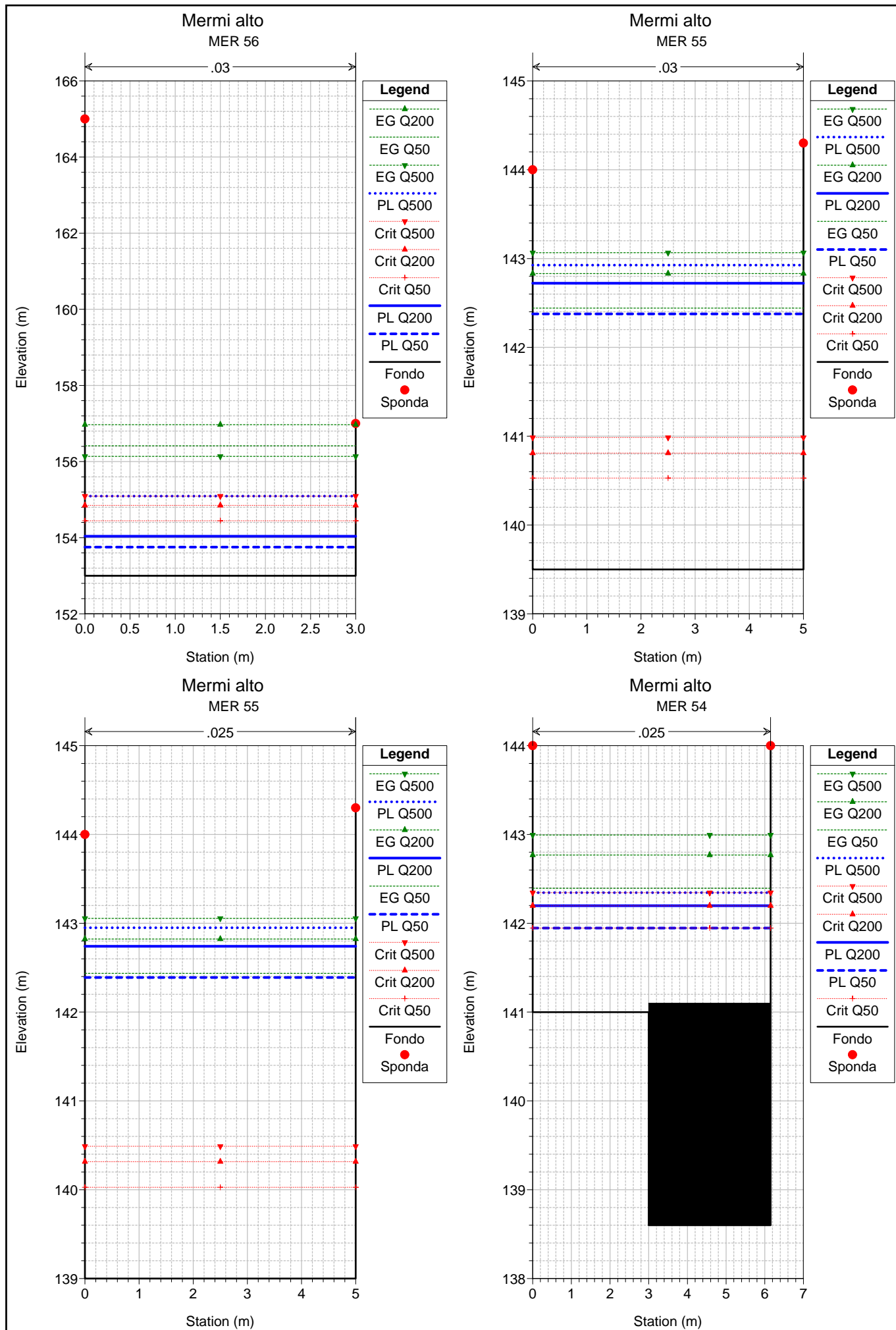
1 cm Horiz. = 10 m 1 cm Vert. = 2.1 m

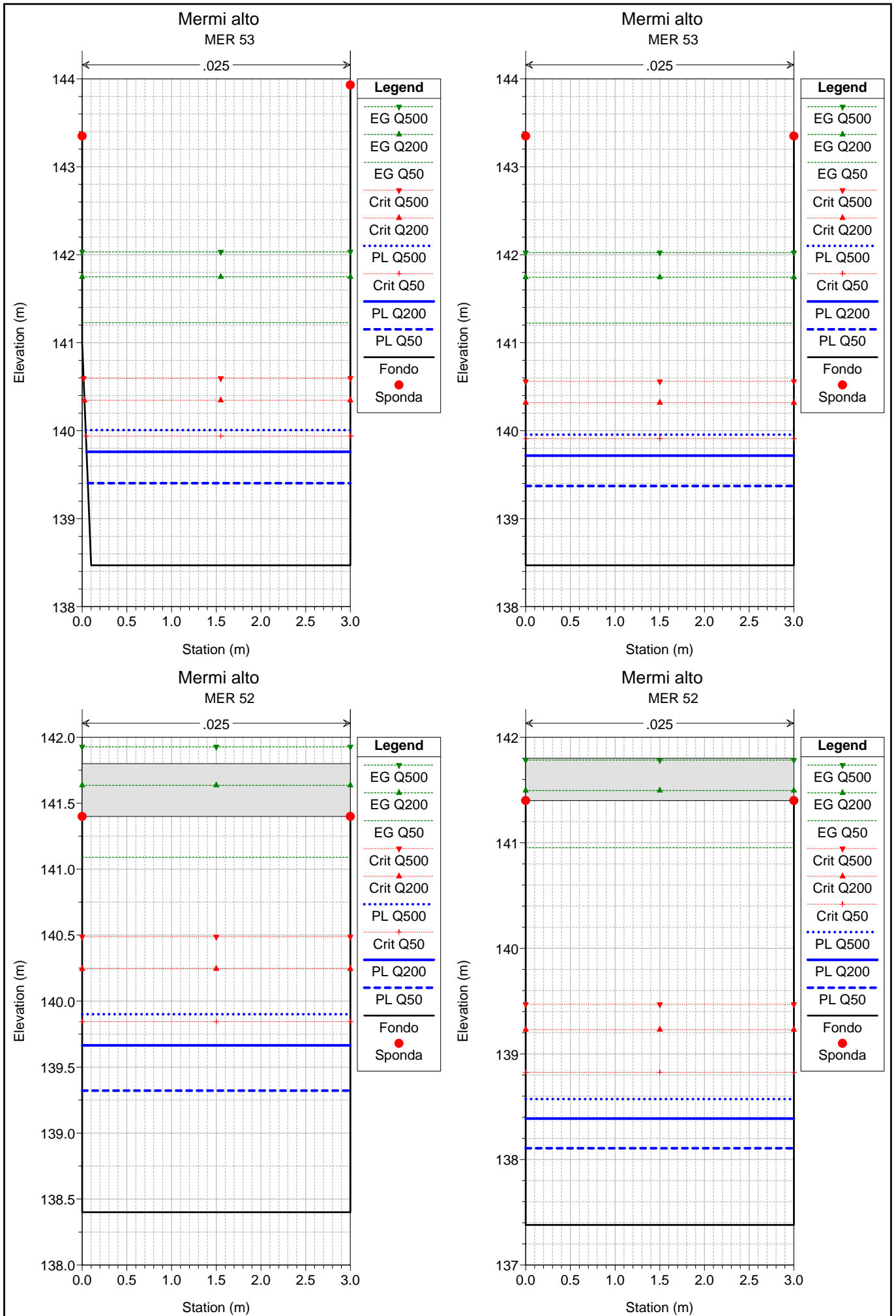


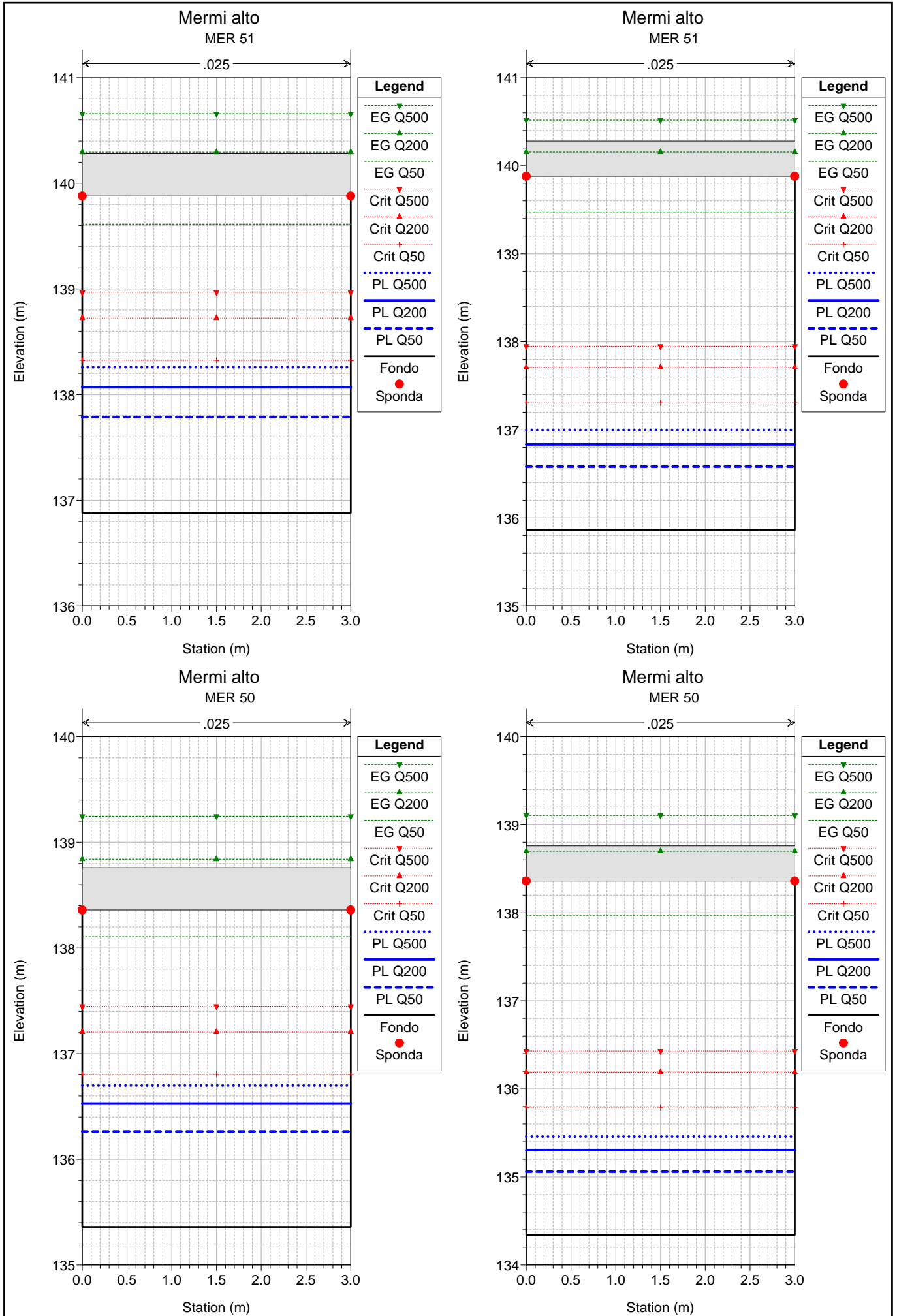


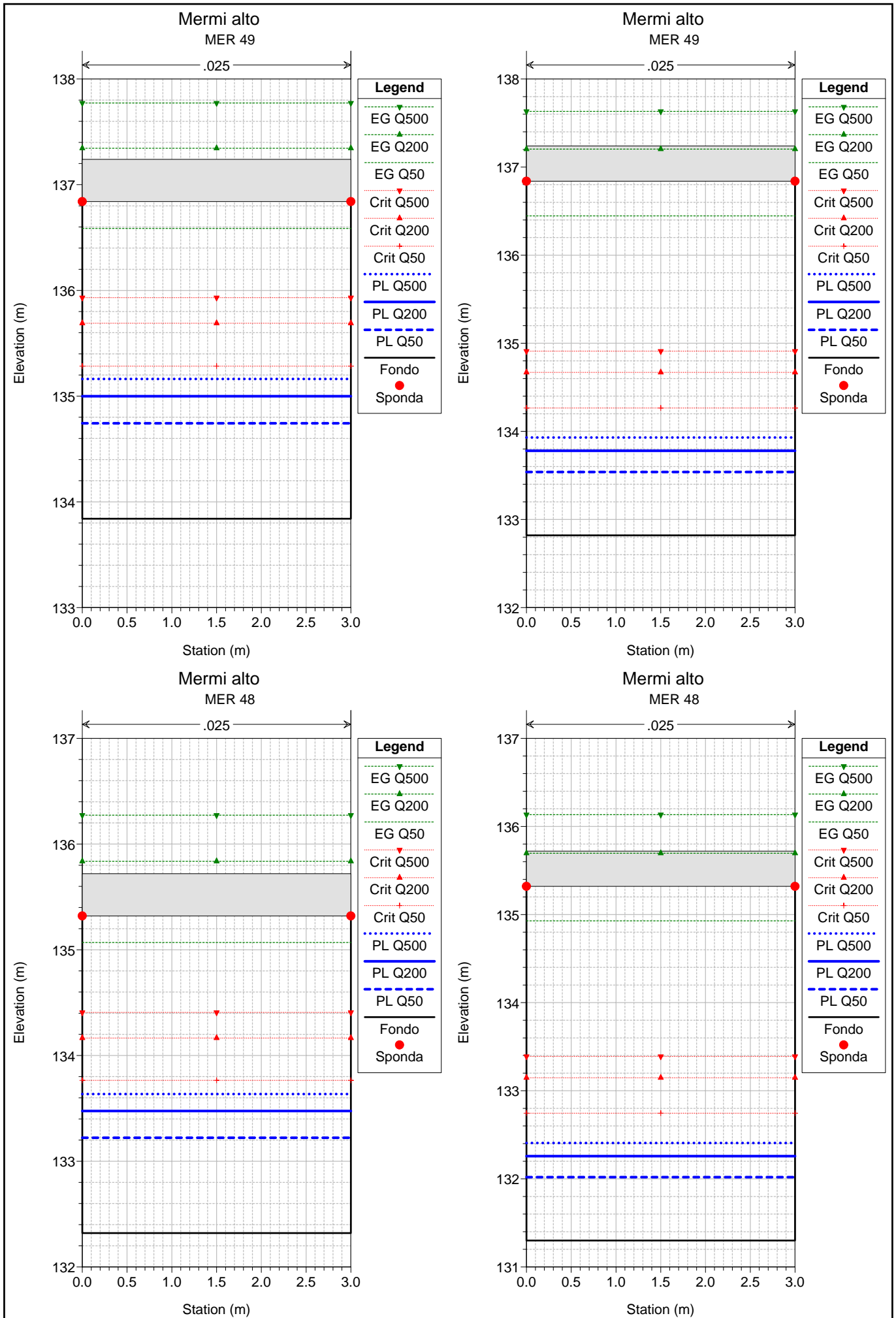


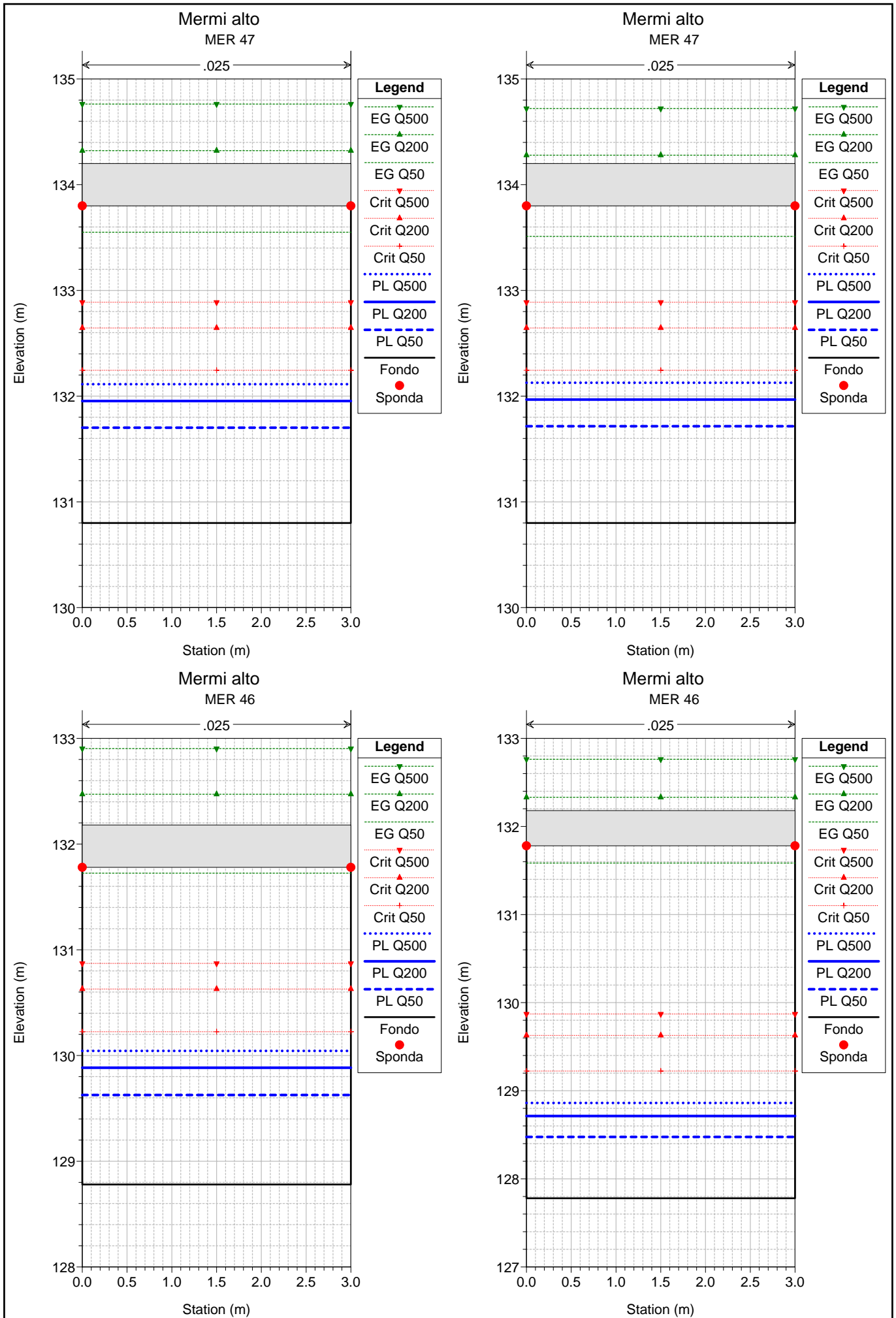


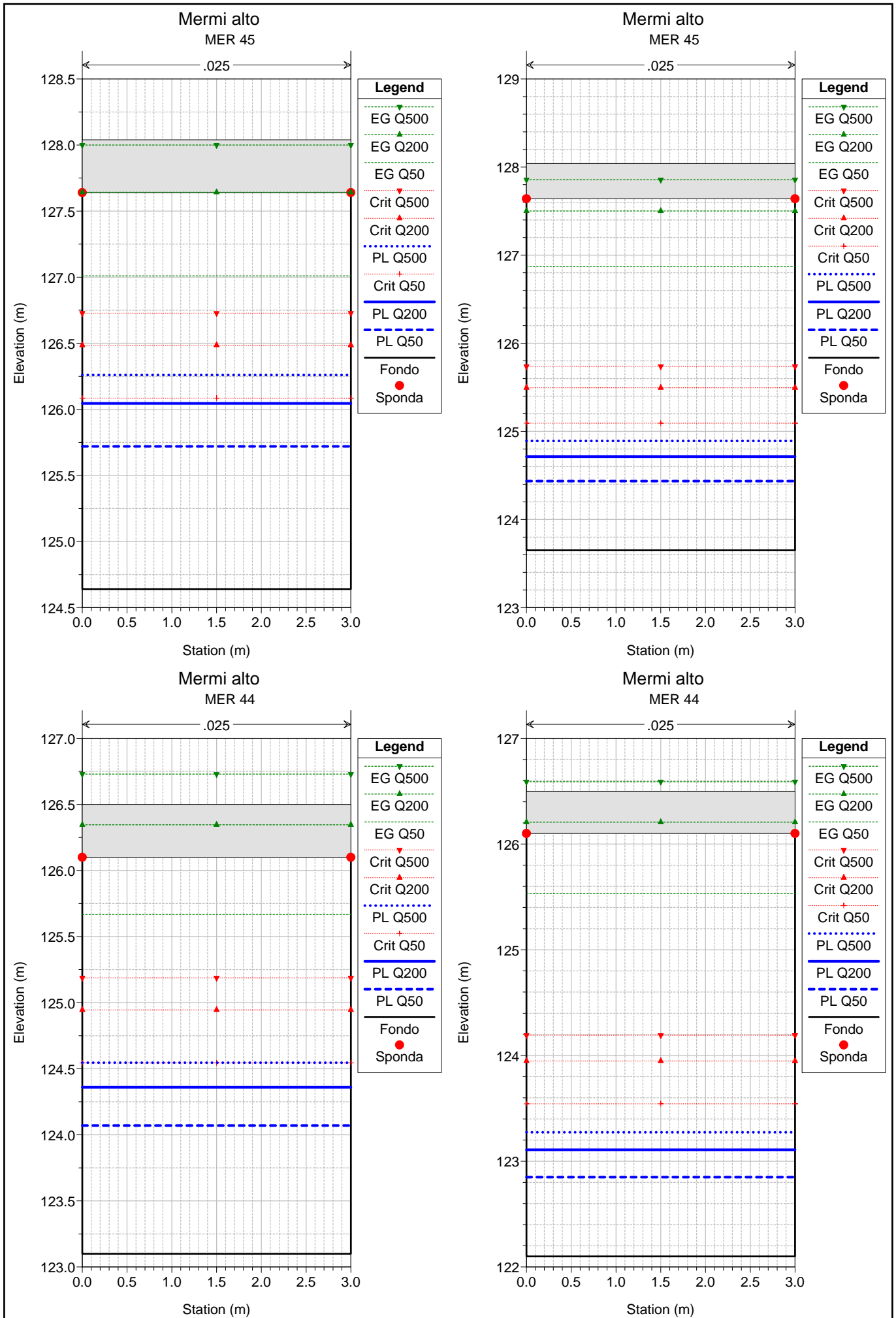


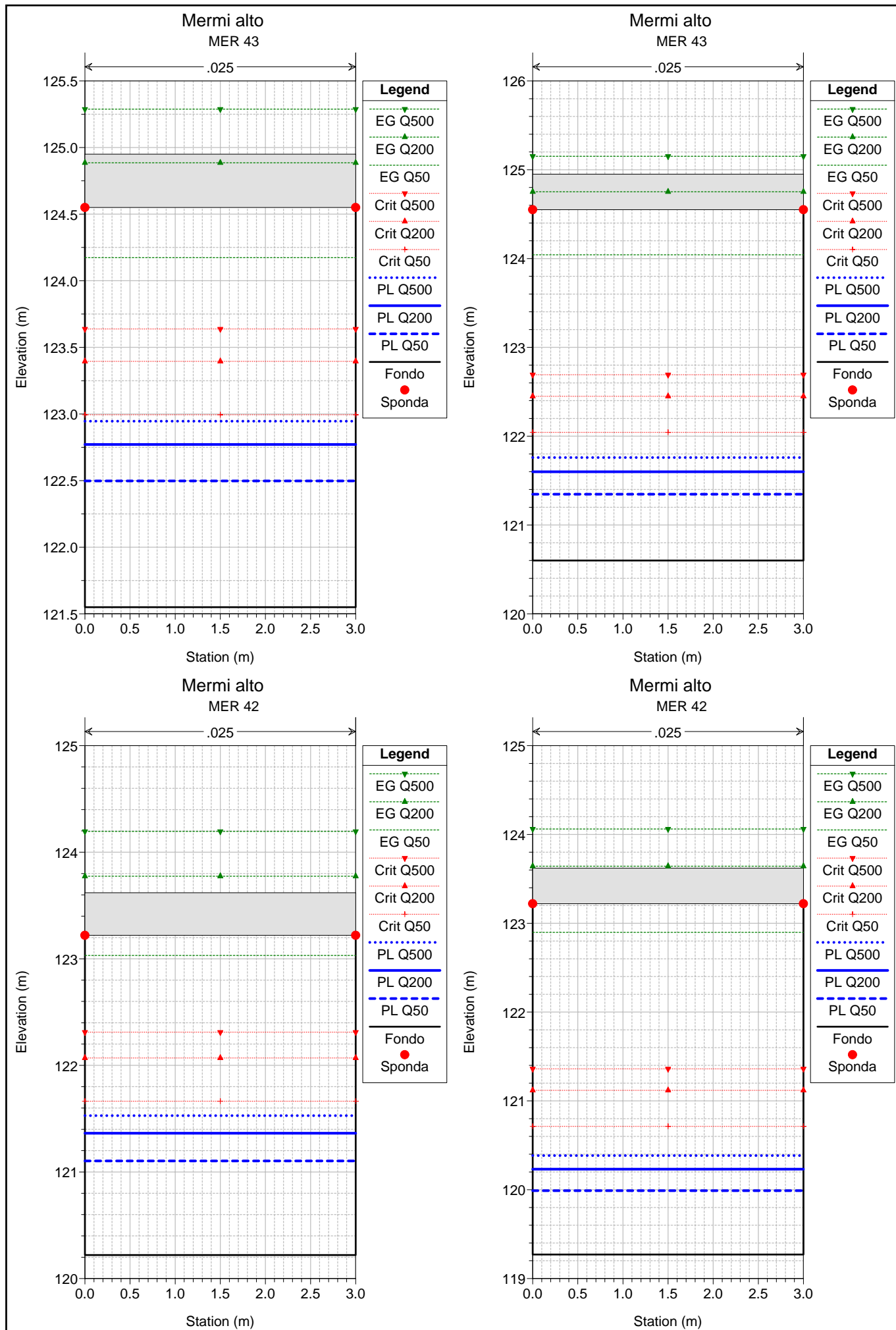


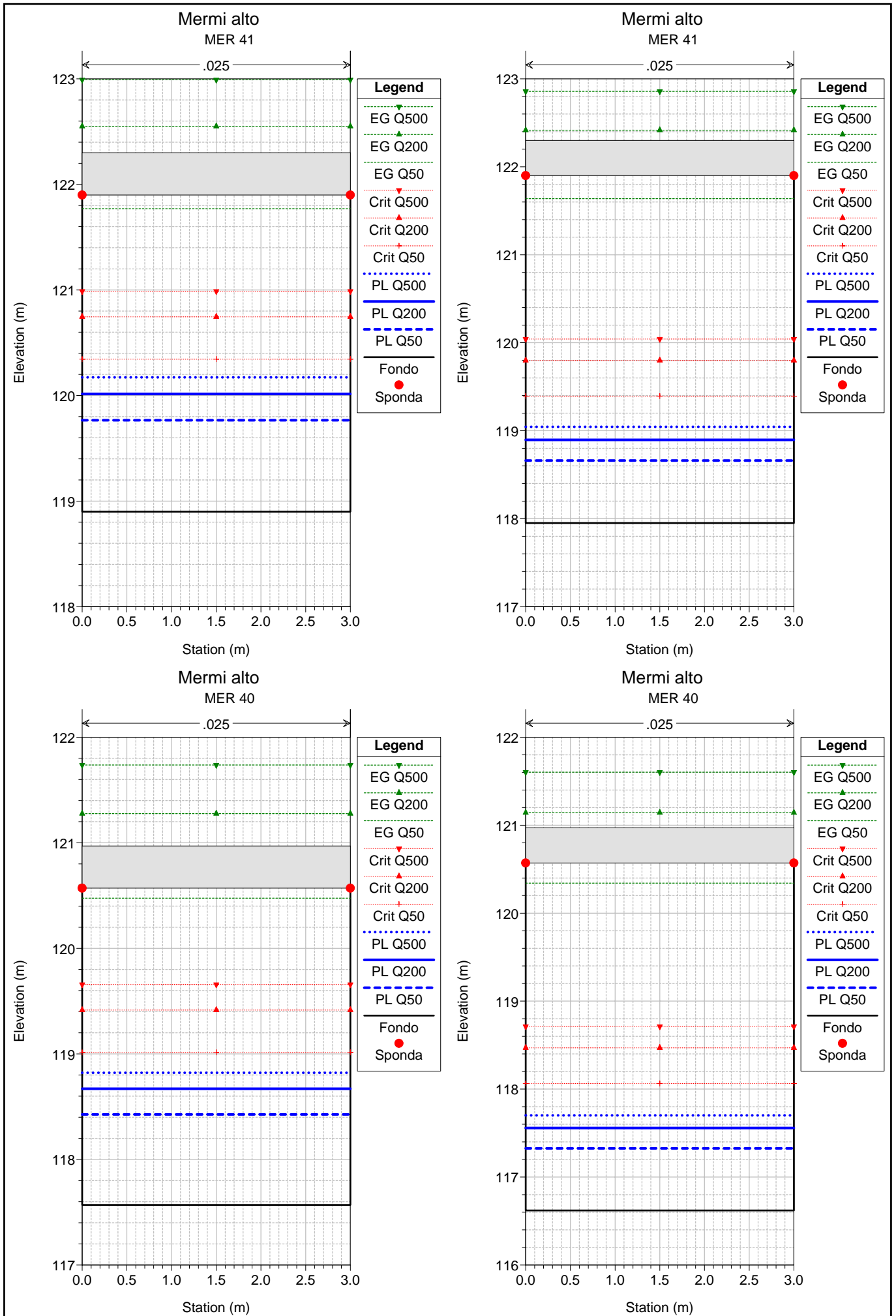


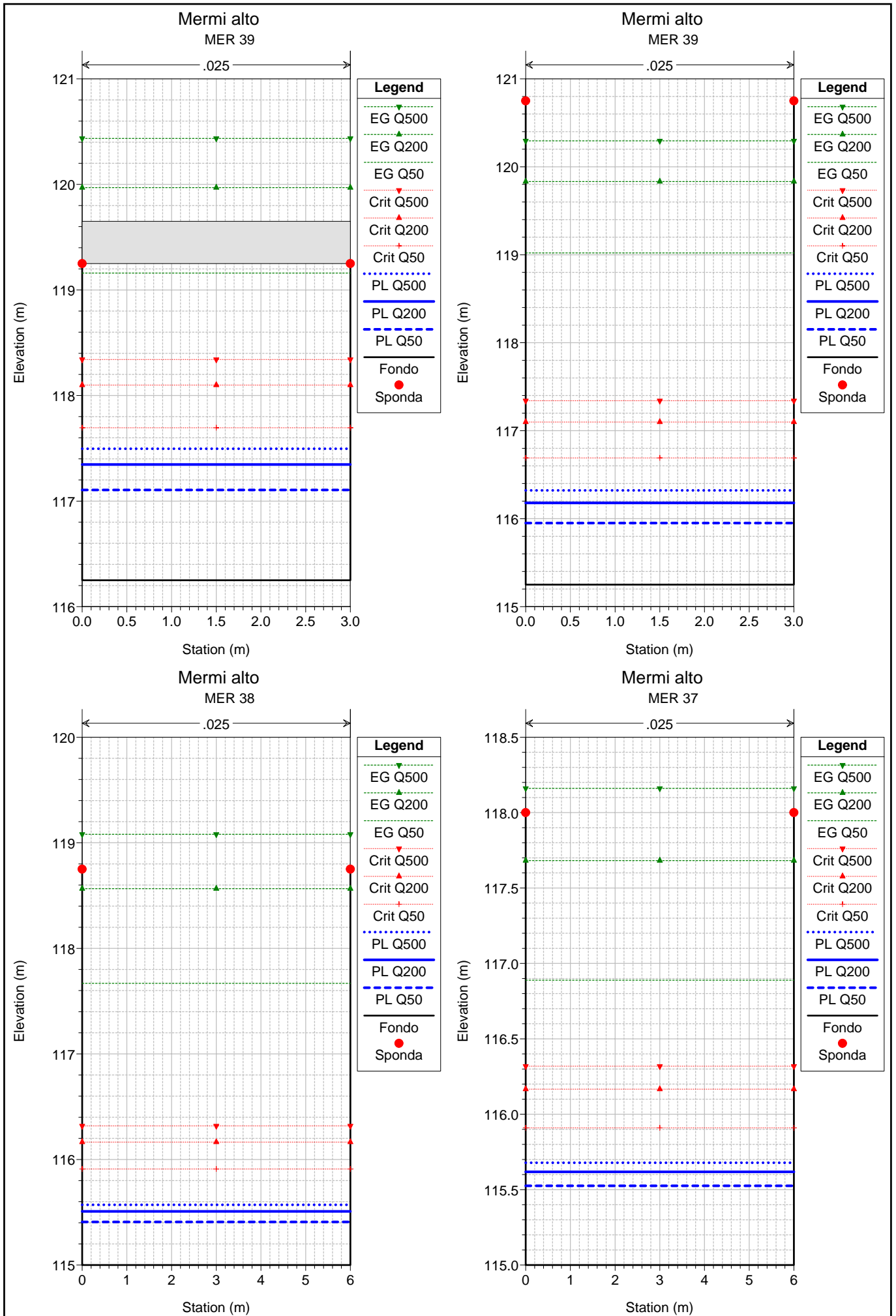












HEC-RAS Plan: Plan 03

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
monte	111. MER 66	Q50	5.10	165.89	167.16	168.89	1.73	168.89	1.73	166.56	167.25	0.001862	1.34	3.80	3.00	0.38
monte	111. MER 66	Q200	7.40	165.89	167.32	168.89	1.57	168.89	1.57	166.74	167.47	0.002844	1.73	4.28	3.00	0.46
monte	111. MER 66	Q500	8.90	165.89	167.41	168.89	1.48	168.89	1.48	166.86	167.60	0.003489	1.96	4.55	3.00	0.51
monte	110. MER 65	Q50	5.10	165.44	167.17	168.44	1.27	168.44	1.27	166.11	167.22	0.000804	0.98	5.20	3.00	0.24
monte	110. MER 65	Q200	7.40	165.44	167.34	168.44	1.10	168.44	1.10	166.29	167.43	0.001328	1.30	5.71	3.00	0.30
monte	110. MER 65	Q500	8.90	165.44	167.44	168.44	1.00	168.44	1.00	166.40	167.55	0.001689	1.48	6.00	3.00	0.33
monte	109.9 MER 65	Q50	5.10	164.55	167.19	168.44	1.25	168.44	1.25	165.21	167.21	0.000274	0.64	7.93	3.00	0.13
monte	109.9 MER 65	Q200	7.40	164.55	167.37	168.44	1.07	168.44	1.07	165.40	167.41	0.000490	0.87	8.47	3.00	0.17
monte	109.9 MER 65	Q500	8.90	164.55	167.48	168.44	0.96	168.44	0.96	165.52	167.53	0.000647	1.01	8.79	3.00	0.19
monte	109. MER 64	Q50	5.10	166.50	166.96	169.50	2.54	169.50	2.54	166.96	167.19	0.010026	2.14	2.39	5.20	1.01
monte	109. MER 64	Q200	7.40	166.50	167.09	169.50	2.41	169.50	2.41	167.09	167.39	0.009547	2.40	3.08	5.20	1.00
monte	109. MER 64	Q500	8.90	166.50	167.17	169.50	2.33	169.50	2.33	167.17	167.50	0.009467	2.56	3.48	5.20	1.00
monte	108. MER 63	Q50	5.10	164.09	164.43	167.09	2.66	167.09	2.66	164.75	165.73	0.089609	5.06	1.01	3.00	2.79
monte	108. MER 63	Q200	7.40	164.09	164.52	167.09	2.57	167.09	2.57	164.94	166.17	0.085921	5.68	1.30	3.00	2.75
monte	108. MER 63	Q500	8.90	164.09	164.59	167.09	2.50	167.09	2.50	165.05	166.39	0.081488	5.94	1.50	3.00	2.68
monte	107. MER 62	Q50	5.10	163.60	163.99	166.60	2.61	166.60	2.61	164.26	164.95	0.055907	4.34	1.18	3.00	2.21
monte	107. MER 62	Q200	7.40	163.60	164.09	166.60	2.51	166.60	2.51	164.45	165.37	0.058478	5.00	1.48	3.00	2.27
monte	107. MER 62	Q500	8.90	163.60	164.16	166.60	2.44	166.60	2.44	164.57	165.60	0.058997	5.33	1.67	3.00	2.28
monte	106.9 MER 62	Q50	5.10	162.70	162.98	166.60	3.62	166.60	3.62	163.37	164.81	0.151457	5.99	0.85	3.00	3.59
monte	106.9 MER 62	Q200	7.40	162.70	163.08	166.60	3.52	166.60	3.52	163.55	165.23	0.129265	6.49	1.14	3.00	3.36
monte	106.9 MER 62	Q500	8.90	162.70	163.14	166.60	3.46	166.60	3.46	163.67	165.47	0.120475	6.76	1.32	3.00	3.26
monte	106. MER 61	Q50	5.10	161.75	162.15	164.75	2.60	164.75	2.60	162.42	163.06	0.051152	4.21	1.21	3.00	2.12
monte	106. MER 61	Q200	7.40	161.75	162.26	164.75	2.49	164.75	2.49	162.60	163.47	0.054544	4.88	1.52	3.00	2.19
monte	106. MER 61	Q500	8.90	161.75	162.32	164.75	2.43	164.75	2.43	162.72	163.71	0.055712	5.23	1.70	3.00	2.21
monte	105.9 MER 61	Q50	5.10	160.85	161.14	164.75	3.61	164.75	3.61	161.52	162.92	0.145896	5.92	0.86	3.00	3.52
monte	105.9 MER 61	Q200	7.40	160.85	161.23	164.75	3.52	164.75	3.52	161.70	163.33	0.124926	6.42	1.15	3.00	3.31
monte	105.9 MER 61	Q500	8.90	160.85	161.29	164.75	3.46	164.75	3.46	161.82	163.57	0.116822	6.69	1.33	3.00	3.21
monte	105. MER 60	Q50	5.10	159.99	160.40	162.99	2.59	162.99	2.59	160.66	161.26	0.047114	4.10	1.24	3.00	2.03
monte	105. MER 60	Q200	7.40	159.99	160.51	162.99	2.48	162.99	2.48	160.84	161.65	0.049673	4.73	1.56	3.00	2.09
monte	105. MER 60	Q500	8.90	159.99	160.57	162.99	2.42	162.99	2.42	160.96	161.89	0.051176	5.08	1.75	3.00	2.12
monte	104.9 MER 60	Q50	5.10	159.00	159.28	162.99	3.71	162.99	3.71	159.66	161.12	0.152235	6.00	0.85	3.00	3.60
monte	104.9 MER 60	Q200	7.40	159.00	159.38	162.99	3.61	162.99	3.61	159.86	161.51	0.127213	6.46	1.15	3.00	3.33
monte	104.9 MER 60	Q500	8.90	159.00	159.44	162.99	3.55	162.99	3.55	159.97	161.74	0.118622	6.72	1.32	3.00	3.23
monte	104. MER 59	Q50	5.10	158.40	158.86	161.40	2.54	161.40	2.54	159.07	159.56	0.034461	3.70	1.38	3.00	1.74
monte	104. MER 59	Q200	7.40	158.40	158.98	161.40	2.42	161.40	2.42	159.25	159.91	0.037038	4.29	1.73	3.00	1.80
monte	104. MER 59	Q500	8.90	158.40	159.04	161.40	2.36	161.40	2.36	159.37	160.13	0.038866	4.63	1.92	3.00	1.84
monte	103.9 MER 59	Q50	5.10	157.50	157.80	161.40	3.60	161.40	3.60	158.17	159.43	0.126416	5.65	0.90	3.00	3.29
monte	103.9 MER 59	Q200	7.40	157.50	159.10	161.40	2.30	161.40	2.30	158.35	159.22	0.002086	1.54	4.80	3.00	0.39

HEC-RAS Plan: Plan 03 (Continued)

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
monte	103.9 MER 59	Q500	8.90	157.50	159.32	161.40	2.08	161.40	2.08	158.47	159.46	0.002141	1.63	5.47	3.00	0.38
valle	33. MER 58	Q50	8.10	157.42	158.04	160.42	2.38	160.42	2.38	158.33	159.02	0.036347	4.39	1.85	3.00	1.79
valle	33. MER 58	Q200	11.70	157.42	158.58	160.42	1.84	160.42	1.84	158.58	159.16	0.012532	3.37	3.47	3.00	1.00
valle	33. MER 58	Q500	14.10	157.42	158.73	160.42	1.69	160.42	1.69	158.73	159.39	0.012984	3.59	3.93	3.00	1.00
valle	32. MER 57	Q50	8.10	156.90	157.54	159.90	2.36	159.90	2.36	157.81	158.44	0.032158	4.21	1.92	3.00	1.68
valle	32. MER 57	Q200	11.70	156.90	157.80	159.90	2.10	159.90	2.10	158.06	158.76	0.025361	4.34	2.70	3.00	1.46
valle	32. MER 57	Q500	14.10	156.90	157.93	159.90	1.97	159.90	1.97	158.21	158.99	0.025012	4.56	3.09	3.00	1.43
valle	31.9 MER 57	Q50	8.10	156.00	156.45	165.00	8.55	159.50	3.05	156.91	158.32	0.095370	6.06	1.34	3.00	2.90
valle	31.9 MER 57	Q200	11.70	156.00	156.62	165.00	8.38	159.50	2.88	157.16	158.63	0.073738	6.28	1.86	3.00	2.54
valle	31.9 MER 57	Q500	14.10	156.00	156.73	165.00	8.27	159.50	2.77	157.31	158.86	0.067804	6.47	2.18	3.00	2.42
valle	31. MER 56	Q50	16.30	153.00	153.75	165.00	11.25	157.00	3.25	154.44	156.42	0.118408	7.23	2.25	3.00	2.66
valle	31. MER 56	Q200	23.60	153.00	154.04	165.00	10.96	157.00	2.96	154.85	156.97	0.099437	7.59	3.11	3.00	2.38
valle	31. MER 56	Q500	28.40	153.00	155.09	165.00	9.91	157.00	1.91	155.09	156.14	0.022062	4.52	6.28	3.00	1.00
valle	20.1 MER 55	Q50	16.30	139.50	142.38	144.00	1.62	144.30	1.92	140.53	142.44	0.000784	1.13	14.38	5.00	0.21
valle	20.1 MER 55	Q200	23.60	139.50	142.72	144.00	1.28	144.30	1.58	140.81	142.83	0.001224	1.46	16.11	5.00	0.26
valle	20.1 MER 55	Q500	28.40	139.50	142.93	144.00	1.07	144.30	1.37	140.98	143.07	0.001514	1.66	17.13	5.00	0.29
valle	20 MER 55	Q50	16.30	139.00	142.39	144.00	1.61	144.30	1.91	140.03	142.44	0.000356	0.96	16.95	5.00	0.17
valle	20 MER 55	Q200	23.60	139.00	142.74	144.00	1.26	144.30	1.56	140.32	142.82	0.000580	1.26	18.71	5.00	0.21
valle	20 MER 55	Q500	28.40	139.00	142.95	144.00	1.05	144.30	1.35	140.49	143.06	0.000733	1.44	19.75	5.00	0.23
valle	19.9	Q50	16.30	139.00	142.39	144.00	1.61	144.30	1.91	140.04	142.44	0.000359	0.97	16.84	5.00	0.17
valle	19.9	Q200	23.60	139.00	142.74	144.00	1.26	144.30	1.56	140.33	142.82	0.000585	1.27	18.60	5.00	0.21
valle	19.9	Q500	28.40	139.00	142.95	144.00	1.05	144.30	1.35	140.50	143.05	0.000738	1.45	19.64	5.00	0.23
valle	19 MER 54	Q50	16.30	141.00	141.95	144.00	2.05	144.00	2.05	141.95	142.39	0.009088	2.96	5.50	6.15	1.00
valle	19 MER 54	Q200	23.60	141.00	142.20	144.00	1.80	144.00	1.80	142.20	142.77	0.009045	3.35	7.05	6.15	1.00
valle	19 MER 54	Q500	28.40	141.00	142.34	144.00	1.66	144.00	1.66	142.34	142.99	0.009176	3.57	7.95	6.15	1.00
valle	18.1 MER 53	Q50	16.30	138.47	139.40	143.35	3.95	143.93	4.53	139.94	141.23	0.047248	5.99	2.72	2.94	1.98
valle	18.1 MER 53	Q200	23.60	138.47	139.76	143.35	3.59	143.93	4.17	140.35	141.75	0.040088	6.25	3.78	2.95	1.76
valle	18.1 MER 53	Q500	28.40	138.47	140.01	143.35	3.34	143.93	3.92	140.60	142.03	0.036220	6.31	4.50	2.96	1.63
valle	18 MER 53	Q50	16.30	138.47	139.37	143.35	3.98	143.35	3.98	139.91	141.22	0.048901	6.03	2.70	3.00	2.03
valle	18 MER 53	Q200	23.60	138.47	139.72	143.35	3.63	143.35	3.63	140.32	141.74	0.041510	6.31	3.74	3.00	1.80
valle	18 MER 53	Q500	28.40	138.47	139.96	143.35	3.39	143.35	3.39	140.56	142.02	0.037489	6.37	4.46	3.00	1.67
valle	17 MER 52	Q50	16.30	138.40	139.32	141.40	2.08	141.40	2.08	139.84	141.09	0.045795	5.89	2.77	3.00	1.96
valle	17 MER 52	Q200	23.60	138.40	139.66	141.40	1.74	141.40	1.74	140.25	141.64	0.039946	6.22	3.79	3.00	1.77
valle	17 MER 52	Q500	28.40	138.40	139.90	141.40	1.50	141.40	1.50	140.49	141.93	0.036460	6.31	4.50	3.00	1.64
valle	16.9 MER 52	Q50	16.30	137.38	138.11	141.40	3.29	141.40	3.29	138.82	140.95	0.090516	7.48	2.18	3.00	2.80
valle	16.9 MER 52	Q200	23.60	137.38	138.39	141.40	3.01	141.40	3.01	139.23	141.49	0.074884	7.81	3.02	3.00	2.48
valle	16.9 MER 52	Q500	28.40	137.38	138.57	141.40	2.83	141.40	2.83	139.47	141.78	0.067952	7.94	3.58	3.00	2.32

HEC-RAS Plan: Plan 03 (Continued)

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
valle	16 MER 51	Q50	16.30	136.88	137.79	139.88	2.09	139.88	2.09	138.32	139.61	0.047934	5.99	2.72	3.00	2.01
valle	16 MER 51	Q200	23.60	136.88	138.07	139.88	1.81	139.88	1.81	138.73	140.29	0.047093	6.61	3.57	3.00	1.93
valle	16 MER 51	Q500	28.40	136.88	138.26	139.88	1.62	139.88	1.62	138.97	140.66	0.045754	6.86	4.14	3.00	1.87
valle	15.9 MER 51	Q50	16.30	135.86	136.58	139.88	3.30	139.88	3.30	137.30	139.47	0.092631	7.54	2.16	3.00	2.83
valle	15.9 MER 51	Q200	23.60	135.86	136.83	139.88	3.05	139.88	3.05	137.71	140.15	0.082143	8.07	2.92	3.00	2.61
valle	15.9 MER 51	Q500	28.40	135.86	137.00	139.88	2.88	139.88	2.88	137.95	140.52	0.077048	8.31	3.42	3.00	2.49
valle	15 MER 50	Q50	16.30	135.36	136.26	138.36	2.10	138.36	2.10	136.80	138.11	0.048540	6.01	2.71	3.00	2.02
valle	15 MER 50	Q200	23.60	135.36	136.53	138.36	1.83	138.36	1.83	137.21	138.84	0.049738	6.74	3.50	3.00	1.99
valle	15 MER 50	Q500	28.40	135.36	136.70	138.36	1.66	138.36	1.66	137.45	139.25	0.049621	7.07	4.02	3.00	1.95
valle	14.9 MER 50	Q50	16.30	134.34	135.06	138.36	3.30	138.36	3.30	135.78	137.97	0.093237	7.55	2.16	3.00	2.84
valle	14.9 MER 50	Q200	23.60	134.34	135.30	138.36	3.06	138.36	3.06	136.19	138.70	0.084857	8.17	2.89	3.00	2.66
valle	14.9 MER 50	Q500	28.40	134.34	135.46	138.36	2.90	138.36	2.90	136.43	139.11	0.080978	8.46	3.36	3.00	2.55
valle	14 MER 49	Q50	16.30	133.84	134.74	136.84	2.10	136.84	2.10	135.28	136.59	0.048544	6.01	2.71	3.00	2.02
valle	14 MER 49	Q200	23.60	133.84	135.00	136.84	1.84	136.84	1.84	135.69	137.34	0.050691	6.79	3.48	3.00	2.01
valle	14 MER 49	Q500	28.40	133.84	135.16	136.84	1.68	136.84	1.68	135.93	137.77	0.051254	7.16	3.97	3.00	1.99
valle	13.9 MER 49	Q50	16.30	132.82	133.54	136.84	3.30	136.84	3.30	134.26	136.45	0.093255	7.55	2.16	3.00	2.84
valle	13.9 MER 49	Q200	23.60	132.82	133.78	136.84	3.06	136.84	3.06	134.67	137.20	0.085849	8.20	2.88	3.00	2.67
valle	13.9 MER 49	Q500	28.40	132.82	133.93	136.84	2.91	136.84	2.91	134.91	137.63	0.082654	8.52	3.33	3.00	2.58
valle	13 MER 48	Q50	16.30	132.32	133.22	135.32	2.10	135.32	2.10	133.76	135.07	0.048692	6.02	2.71	3.00	2.02
valle	13 MER 48	Q200	23.60	132.32	133.48	135.32	1.84	135.32	1.84	134.17	135.84	0.051167	6.81	3.47	3.00	2.02
valle	13 MER 48	Q500	28.40	132.32	133.64	135.32	1.68	135.32	1.68	134.41	136.27	0.051970	7.20	3.95	3.00	2.00
valle	12.9 MER 48	Q50	16.30	131.30	132.02	135.32	3.30	135.32	3.30	132.74	134.93	0.093402	7.56	2.16	3.00	2.84
valle	12.9 MER 48	Q200	23.60	131.30	132.26	135.32	3.06	135.32	3.06	133.15	135.70	0.086340	8.22	2.87	3.00	2.68
valle	12.9 MER 48	Q500	28.40	131.30	132.41	135.32	2.91	135.32	2.91	133.39	136.13	0.083460	8.55	3.32	3.00	2.60
valle	12 MER 47	Q50	16.30	130.80	131.70	133.80	2.10	133.80	2.10	132.24	133.55	0.048740	6.02	2.71	3.00	2.02
valle	12 MER 47	Q200	23.60	130.80	131.95	133.80	1.85	133.80	1.85	132.65	134.32	0.051356	6.82	3.46	3.00	2.03
valle	12 MER 47	Q500	28.40	130.80	132.11	133.80	1.69	133.80	1.69	132.89	134.76	0.052312	7.21	3.94	3.00	2.01
valle	11.9 MER 47	Q50	16.30	130.80	131.72	133.80	2.08	133.80	2.08	132.24	133.51	0.046782	5.94	2.75	3.00	1.98
valle	11.9 MER 47	Q200	23.60	130.80	131.97	133.80	1.83	133.80	1.83	132.65	134.28	0.049700	6.74	3.50	3.00	1.99
valle	11.9 MER 47	Q500	28.40	130.80	132.13	133.80	1.67	133.80	1.67	132.89	134.72	0.050785	7.13	3.98	3.00	1.98
valle	11 MER 46	Q50	16.30	128.78	129.63	131.78	2.15	131.78	2.15	130.22	131.72	0.058341	6.42	2.54	3.00	2.23
valle	11 MER 46	Q200	23.60	128.78	129.88	131.78	1.90	131.78	1.90	130.63	132.47	0.058028	7.13	3.31	3.00	2.16
valle	11 MER 46	Q500	28.40	128.78	130.04	131.78	1.74	131.78	1.74	130.87	132.90	0.058001	7.49	3.79	3.00	2.13
valle	10.9 MER 46	Q50	16.30	127.78	128.48	131.78	3.30	131.78	3.30	129.22	131.58	0.102883	7.81	2.09	3.00	2.99
valle	10.9 MER 46	Q200	23.60	127.78	128.71	131.78	3.07	131.78	3.07	129.63	132.33	0.092737	8.43	2.80	3.00	2.78
valle	10.9 MER 46	Q500	28.40	127.78	128.86	131.78	2.92	131.78	2.92	129.87	132.76	0.088903	8.75	3.25	3.00	2.69
valle	10 MER 45	Q50	16.30	124.64	125.72	127.64	1.92	127.64	1.92	126.08	127.01	0.029461	5.03	3.24	3.00	1.55
valle	10 MER 45	Q200	23.60	124.64	126.04	127.64	1.60	127.64	1.60	126.49	127.64	0.030089	5.60	4.21	3.00	1.51

HEC-RAS Plan: Plan 03 (Continued)

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
valle	10	MER 45	Q500	28.40	124.64	126.26	127.64	1.38	127.64	1.38	126.73	128.00	0.029793	5.84	4.86	3.00	1.47
valle	9.9	MER 45	Q50	16.30	123.65	124.44	127.64	3.20	127.64	3.20	125.09	126.87	0.072254	6.91	2.36	3.00	2.49
valle	9.9	MER 45	Q200	23.60	123.65	124.71	127.64	2.93	127.64	2.93	125.49	127.50	0.064371	7.40	3.19	3.00	2.29
valle	9.9	MER 45	Q500	28.40	123.65	124.89	127.64	2.75	127.64	2.75	125.74	127.86	0.060962	7.63	3.72	3.00	2.19
valle	9	MER 44	Q50	16.30	123.10	124.07	126.10	2.03	126.10	2.03	124.54	125.67	0.039653	5.60	2.91	3.00	1.81
valle	9	MER 44	Q200	23.60	123.10	124.36	126.10	1.74	126.10	1.74	124.95	126.35	0.040384	6.24	3.78	3.00	1.78
valle	9	MER 44	Q500	28.40	123.10	124.55	126.10	1.55	126.10	1.55	125.19	126.73	0.040304	6.55	4.34	3.00	1.74
valle	8.9	MER 44	Q50	16.30	122.10	122.85	126.10	3.25	126.10	3.25	123.54	125.53	0.083012	7.26	2.25	3.00	2.68
valle	8.9	MER 44	Q200	23.60	122.10	123.11	126.10	2.99	126.10	2.99	123.95	126.21	0.074595	7.80	3.03	3.00	2.48
valle	8.9	MER 44	Q500	28.40	122.10	123.27	126.10	2.83	126.10	2.83	124.19	126.59	0.071051	8.07	3.52	3.00	2.38
valle	8	MER 43	Q50	16.30	121.55	122.50	124.55	2.05	124.55	2.05	122.99	124.17	0.042451	5.74	2.84	3.00	1.88
valle	8	MER 43	Q200	23.60	121.55	122.77	124.55	1.78	124.55	1.78	123.40	124.89	0.043960	6.44	3.66	3.00	1.86
valle	8	MER 43	Q500	28.40	121.55	122.95	124.55	1.60	124.55	1.60	123.64	125.29	0.044266	6.78	4.19	3.00	1.83
valle	7.9	MER 43	Q50	16.30	120.60	121.35	124.55	3.20	124.55	3.20	122.04	124.04	0.083623	7.27	2.24	3.00	2.69
valle	7.9	MER 43	Q200	23.60	120.60	121.60	124.55	2.95	124.55	2.95	122.45	124.75	0.076419	7.87	3.00	3.00	2.51
valle	7.9	MER 43	Q500	28.40	120.60	121.76	124.55	2.79	124.55	2.79	122.69	125.15	0.073286	8.16	3.48	3.00	2.42
valle	7	MER 42	Q50	16.30	120.22	121.10	123.22	2.12	123.22	2.12	121.66	123.03	0.051777	6.15	2.65	3.00	2.09
valle	7	MER 42	Q200	23.60	120.22	121.36	123.22	1.86	123.22	1.86	122.07	123.78	0.052685	6.88	3.43	3.00	2.05
valle	7	MER 42	Q500	28.40	120.22	121.53	123.22	1.69	123.22	1.69	122.31	124.19	0.052740	7.23	3.93	3.00	2.02
valle	6.9	MER 42	Q50	16.30	119.27	119.99	123.22	3.23	123.22	3.23	120.71	122.90	0.093388	7.56	2.16	3.00	2.84
valle	6.9	MER 42	Q200	23.60	119.27	120.23	123.22	2.99	123.22	2.99	121.12	123.64	0.085352	8.18	2.88	3.00	2.66
valle	6.9	MER 42	Q500	28.40	119.27	120.38	123.22	2.84	123.22	2.84	121.36	124.06	0.081899	8.50	3.34	3.00	2.57
valle	6	MER 41	Q50	16.30	118.90	119.77	121.90	2.13	121.90	2.13	120.34	121.77	0.054681	6.27	2.60	3.00	2.15
valle	6	MER 41	Q200	23.60	118.90	120.02	121.90	1.88	121.90	1.88	120.75	122.55	0.056412	7.05	3.35	3.00	2.13
valle	6	MER 41	Q500	28.40	118.90	120.17	121.90	1.73	121.90	1.73	120.99	122.99	0.056882	7.44	3.82	3.00	2.10
valle	5.9	MER 41	Q50	16.30	117.95	118.66	121.90	3.24	121.90	3.24	119.39	121.64	0.096562	7.64	2.13	3.00	2.89
valle	5.9	MER 41	Q200	23.60	117.95	118.90	121.90	3.00	121.90	3.00	119.80	122.42	0.089207	8.31	2.84	3.00	2.73
valle	5.9	MER 41	Q500	28.40	117.95	119.04	121.90	2.86	121.90	2.86	120.04	122.86	0.086131	8.65	3.28	3.00	2.64
valle	5	MER 40	Q50	16.30	117.57	118.43	120.57	2.14	120.57	2.14	119.01	120.48	0.056412	6.34	2.57	3.00	2.19
valle	5	MER 40	Q200	23.60	117.57	118.67	120.57	1.90	120.57	1.90	119.42	121.28	0.058634	7.15	3.30	3.00	2.18
valle	5	MER 40	Q500	28.40	117.57	118.82	120.57	1.75	120.57	1.75	119.66	121.74	0.059583	7.57	3.75	3.00	2.16
valle	4.9	MER 40	Q50	16.30	116.62	117.33	120.57	3.24	120.57	3.24	118.06	120.34	0.098396	7.69	2.12	3.00	2.92
valle	4.9	MER 40	Q200	23.60	116.62	117.56	120.57	3.01	120.57	3.01	118.47	121.14	0.091508	8.39	2.81	3.00	2.76
valle	4.9	MER 40	Q500	28.40	116.62	117.70	120.57	2.87	120.57	2.87	118.71	121.60	0.088886	8.75	3.25	3.00	2.69
valle	4	MER 39	Q50	16.30	116.25	117.11	119.25	2.14	119.25	2.14	117.69	119.16	0.056617	6.35	2.57	3.00	2.19
valle	4	MER 39	Q200	23.60	116.25	117.35	119.25	1.90	119.25	1.90	118.10	119.97	0.059177	7.18	3.29	3.00	2.19
valle	4	MER 39	Q500	28.40	116.25	117.50	119.25	1.75	119.25	1.75	118.34	120.44	0.060226	7.60	3.74	3.00	2.17

HEC-RAS Plan: Plan 03 (Continued)

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
valle	3 MER 39	Q50	16.30	115.25	115.95	120.75	4.80	120.75	4.80	116.69	119.02	0.101027	7.76	2.10	3.00	2.96
valle	3 MER 39	Q200	23.60	115.25	116.18	120.75	4.57	120.75	4.57	117.10	119.83	0.094051	8.47	2.79	3.00	2.80
valle	3 MER 39	Q500	28.40	115.25	116.32	120.75	4.43	120.75	4.43	117.34	120.30	0.091199	8.83	3.22	3.00	2.72
valle	2 MER 38	Q50	16.30	115.00	115.41	118.75	3.34	118.75	3.34	115.91	117.67	0.108695	6.66	2.45	6.00	3.33
valle	2 MER 38	Q200	23.60	115.00	115.51	118.75	3.24	118.75	3.24	116.16	118.57	0.114104	7.75	3.05	6.00	3.47
valle	2 MER 38	Q500	28.40	115.00	115.57	118.75	3.18	118.75	3.18	116.32	119.08	0.114852	8.30	3.42	6.00	3.51
valle	1 MER 37	Q50	16.30	115.00	115.53	118.00	2.47	118.00	2.47	115.91	116.89	0.048966	5.17	3.15	6.00	2.28
valle	1 MER 37	Q200	23.60	115.00	115.62	118.00	2.38	118.00	2.38	116.17	117.68	0.061764	6.37	3.71	6.00	2.58
valle	1 MER 37	Q500	28.40	115.00	115.68	118.00	2.32	118.00	2.32	116.32	118.16	0.067086	6.98	4.07	6.00	2.71

Allegato

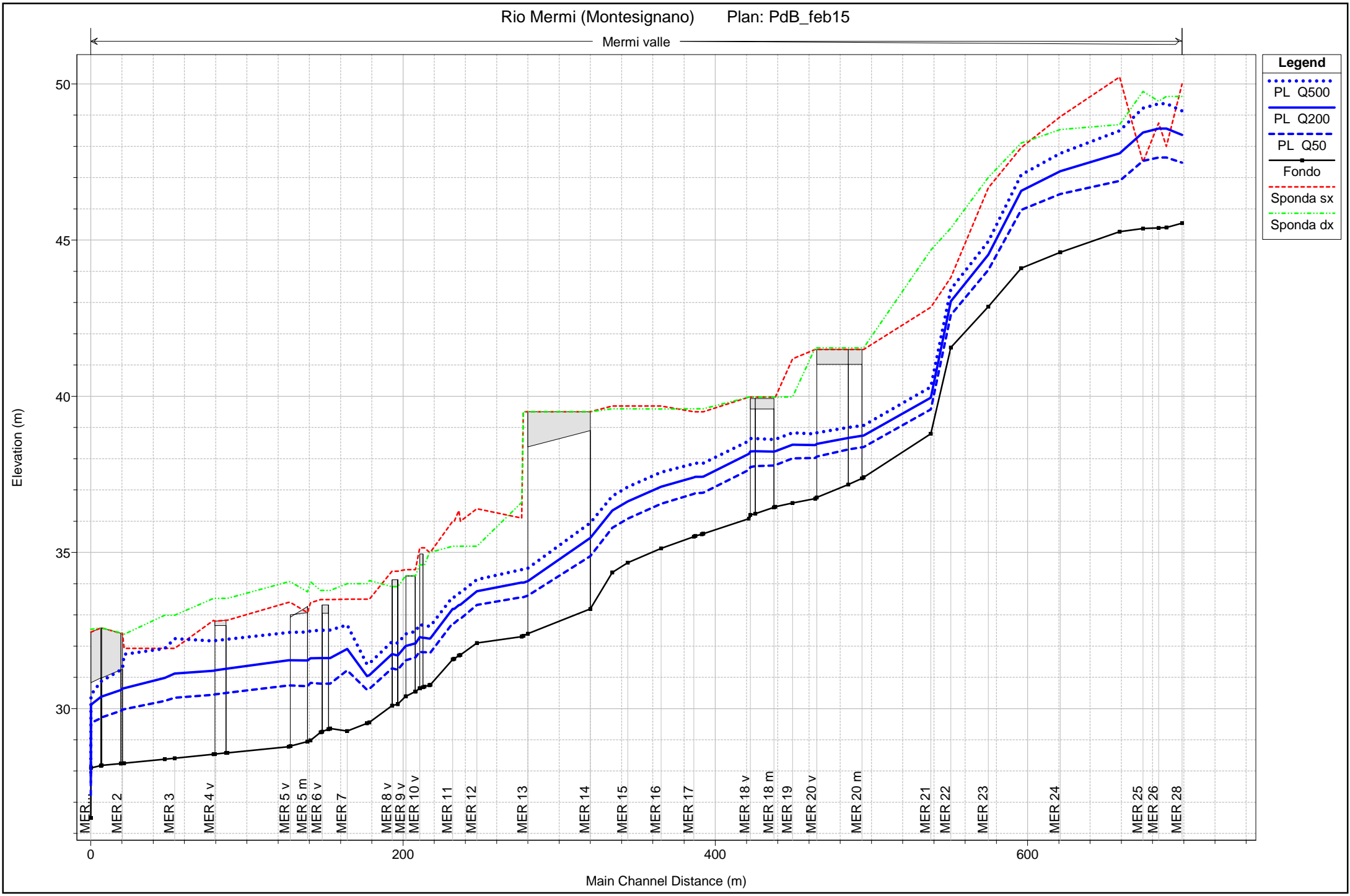
Verifiche idrauliche

Rio Mermi

- tratto di valle -

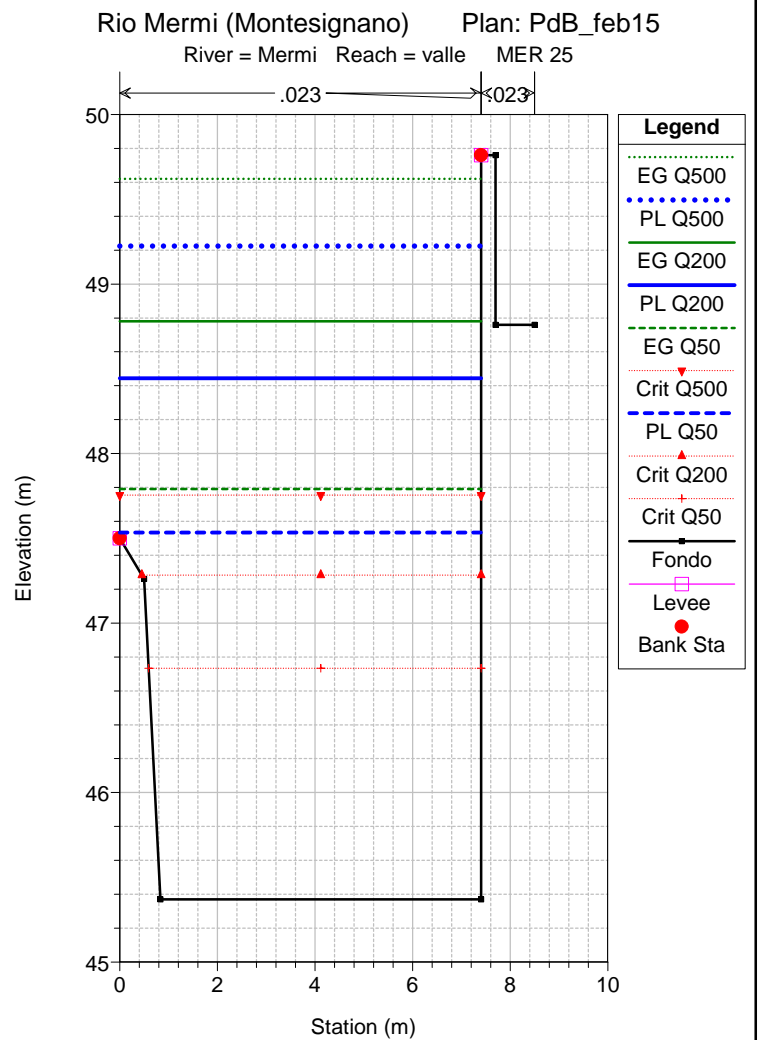
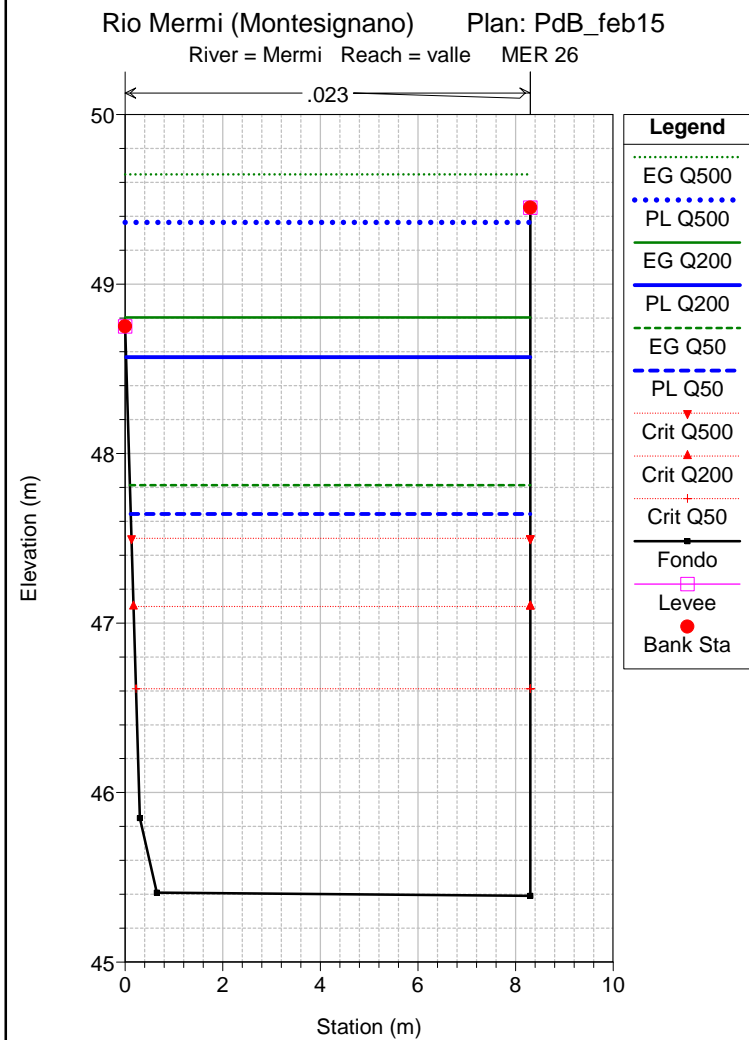
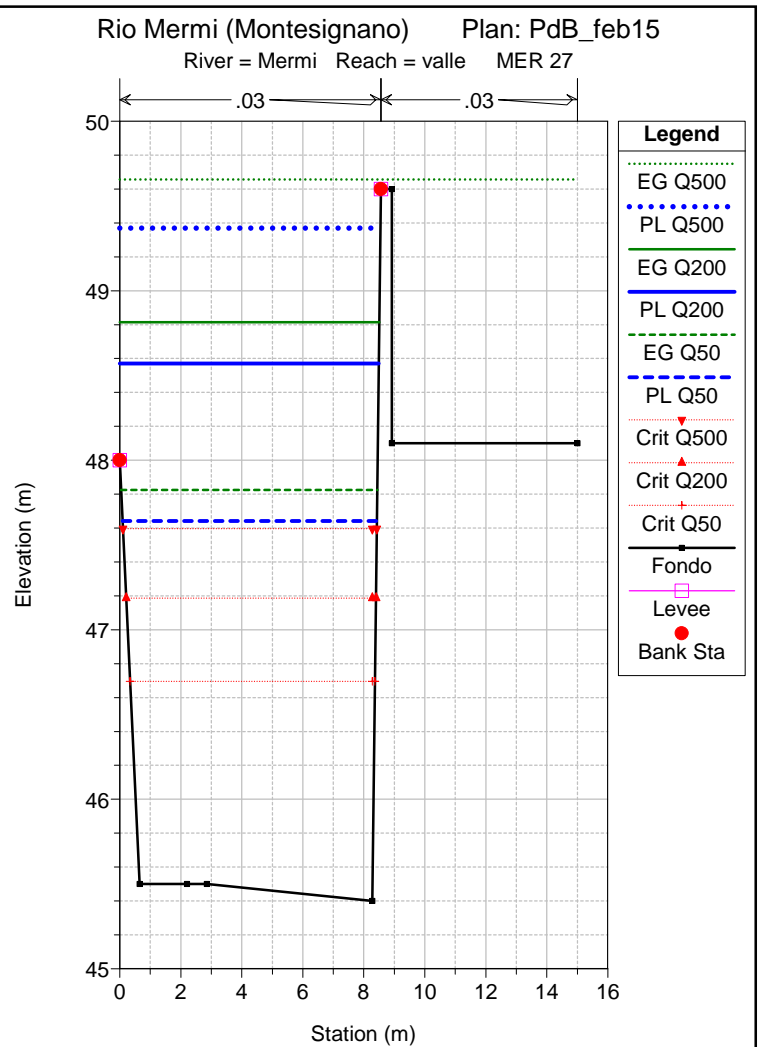
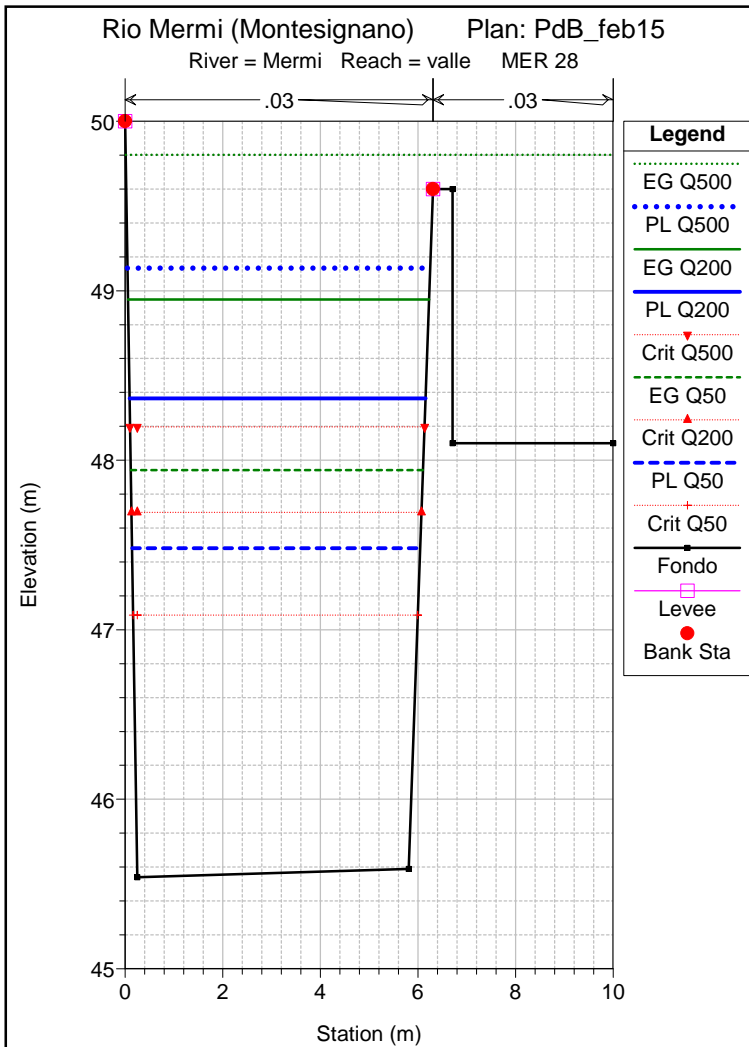
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

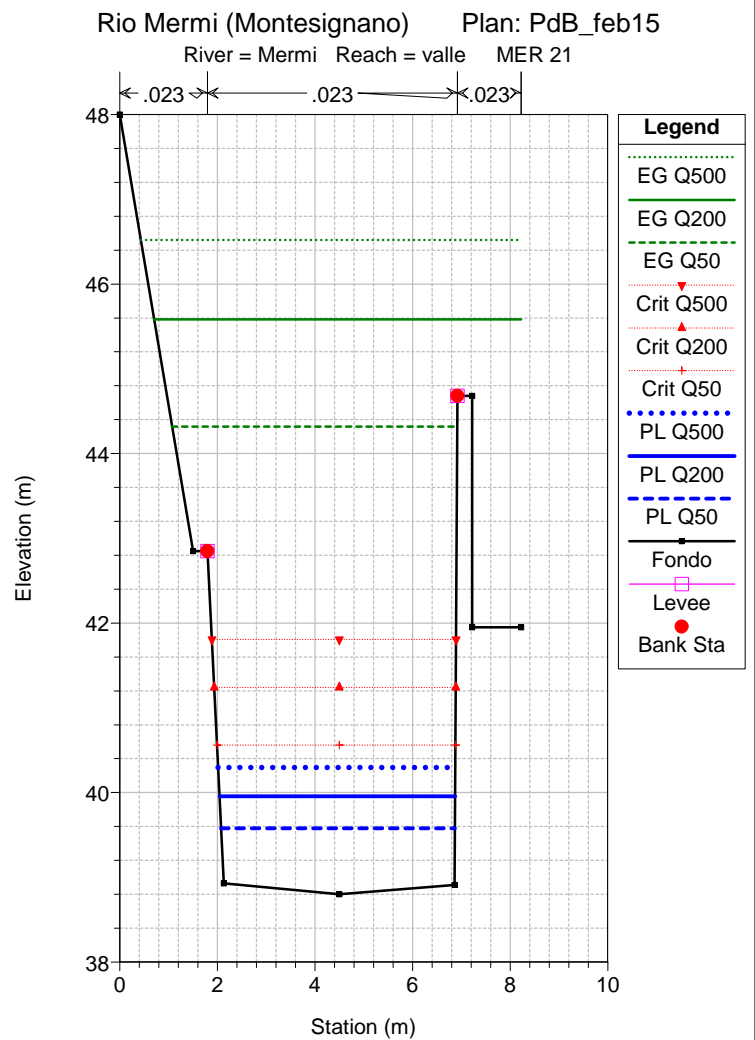
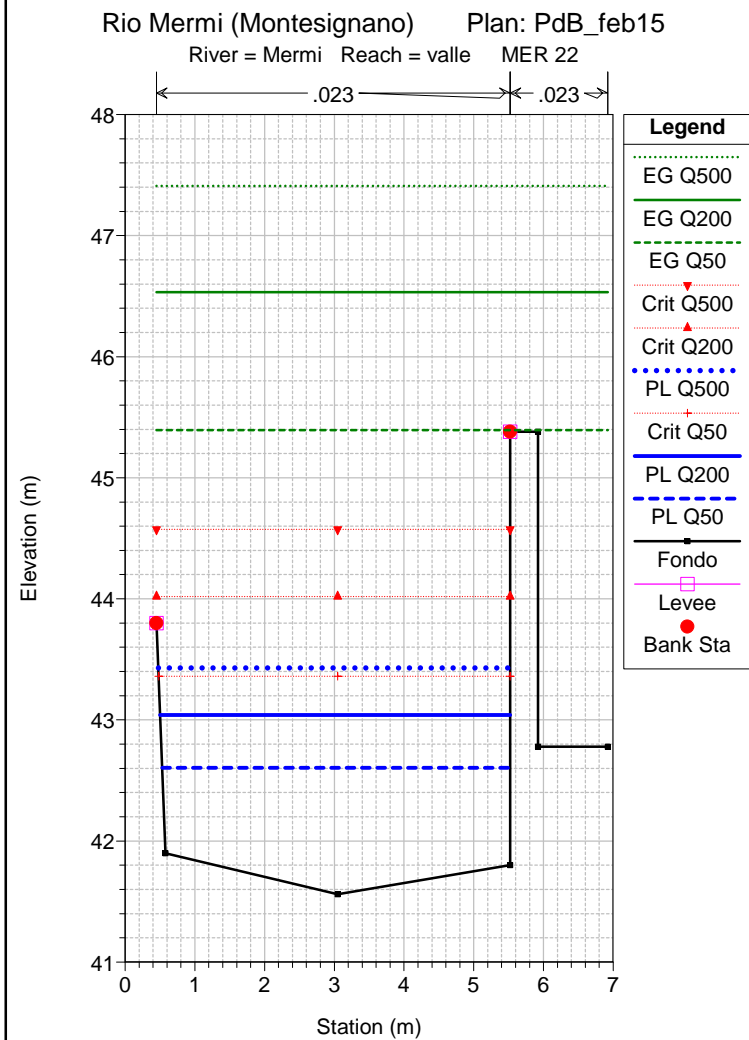
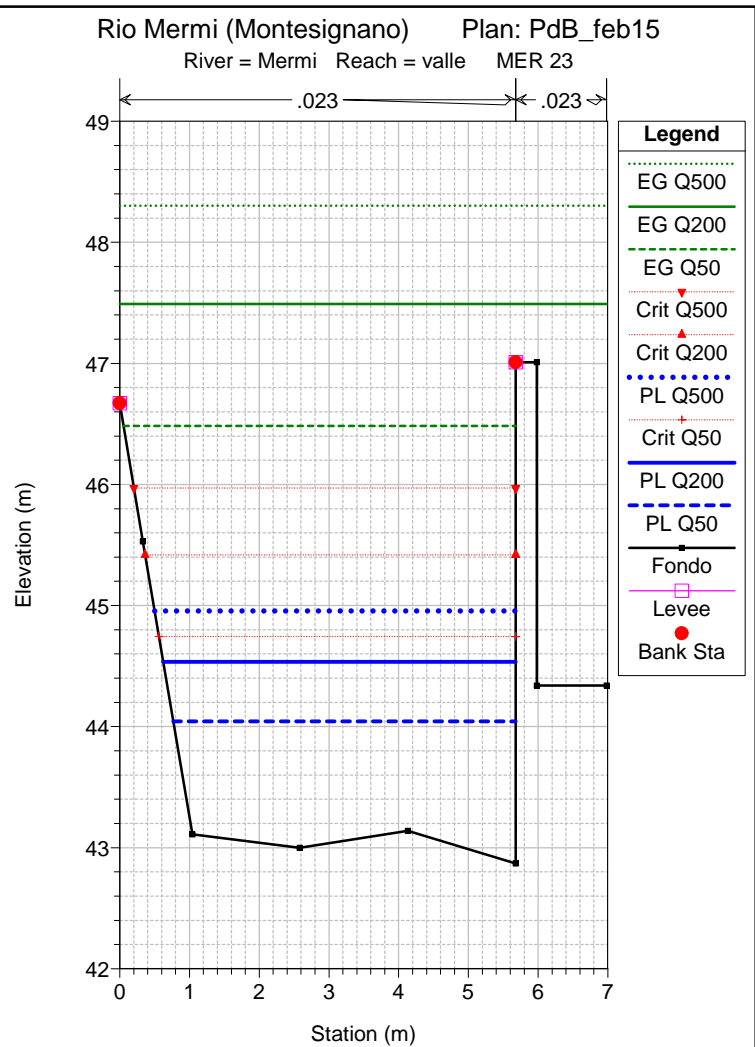
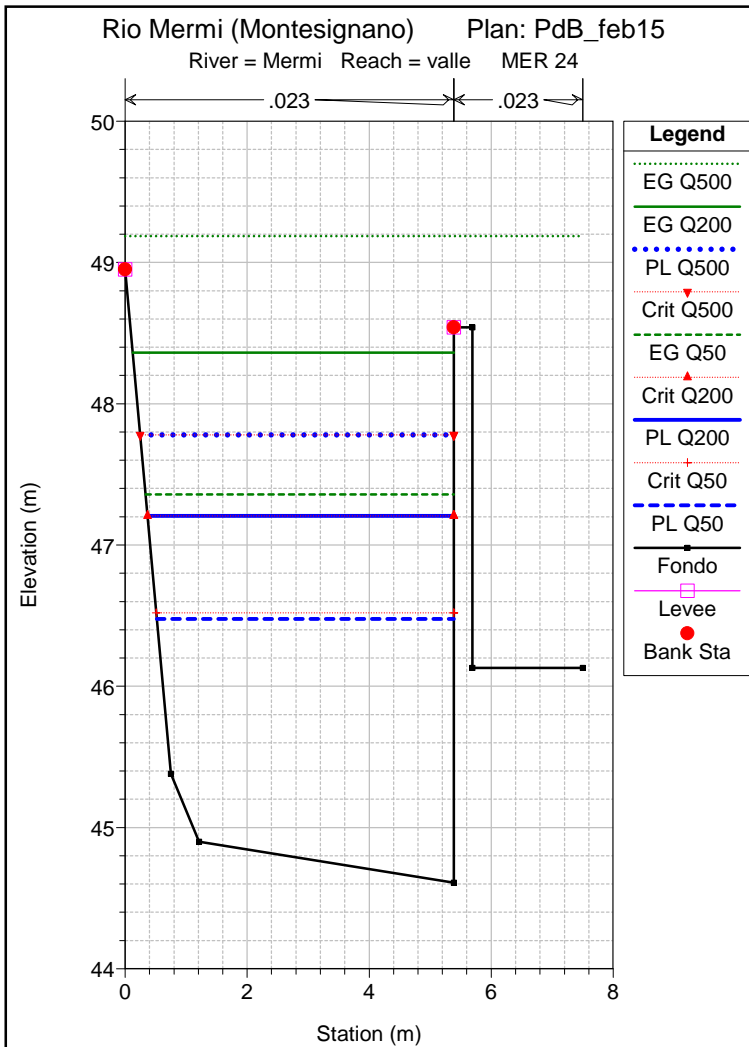
Rio Mermi (Montesignano) Plan: PdB_feb15

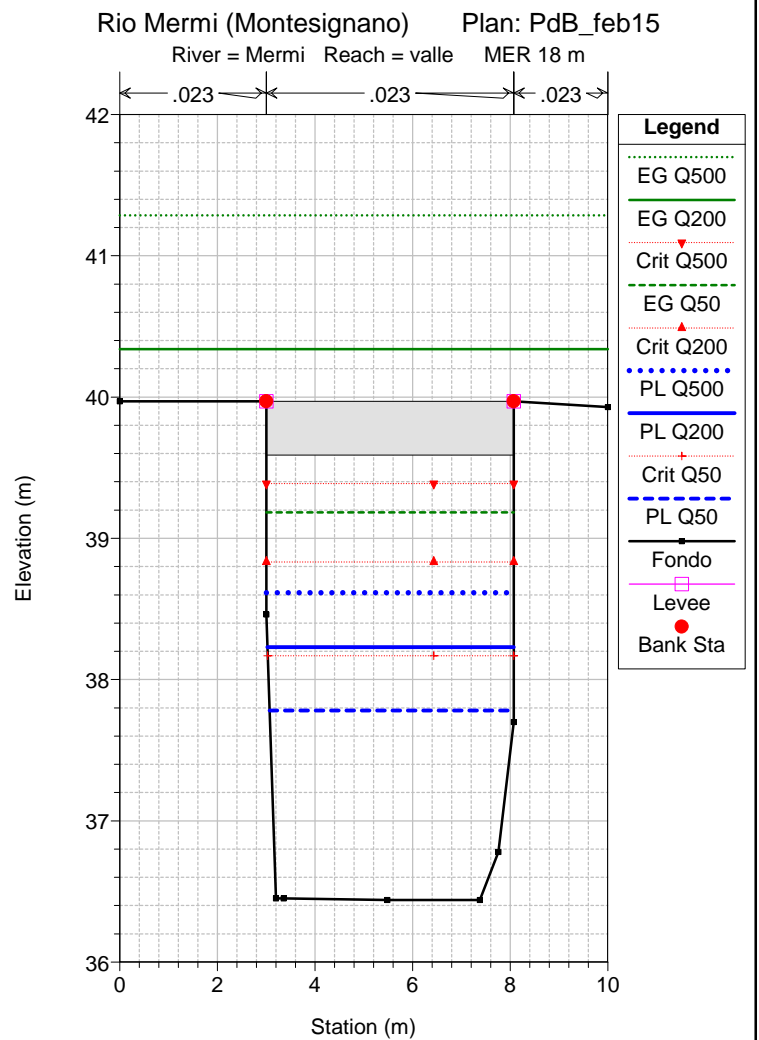
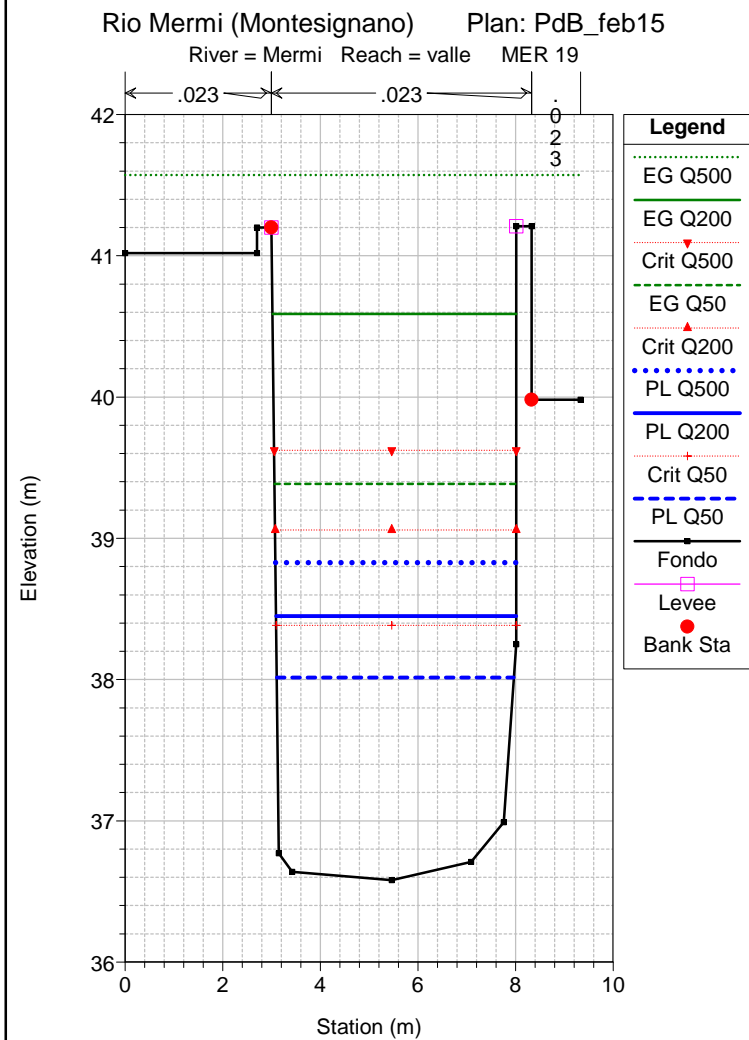
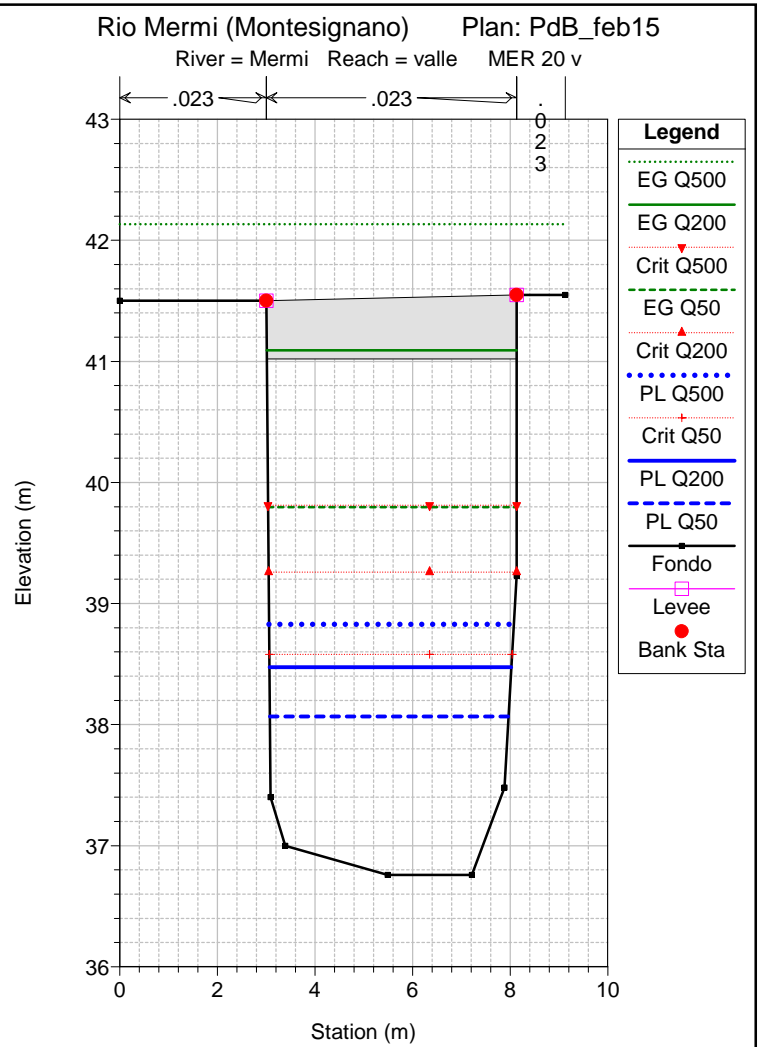
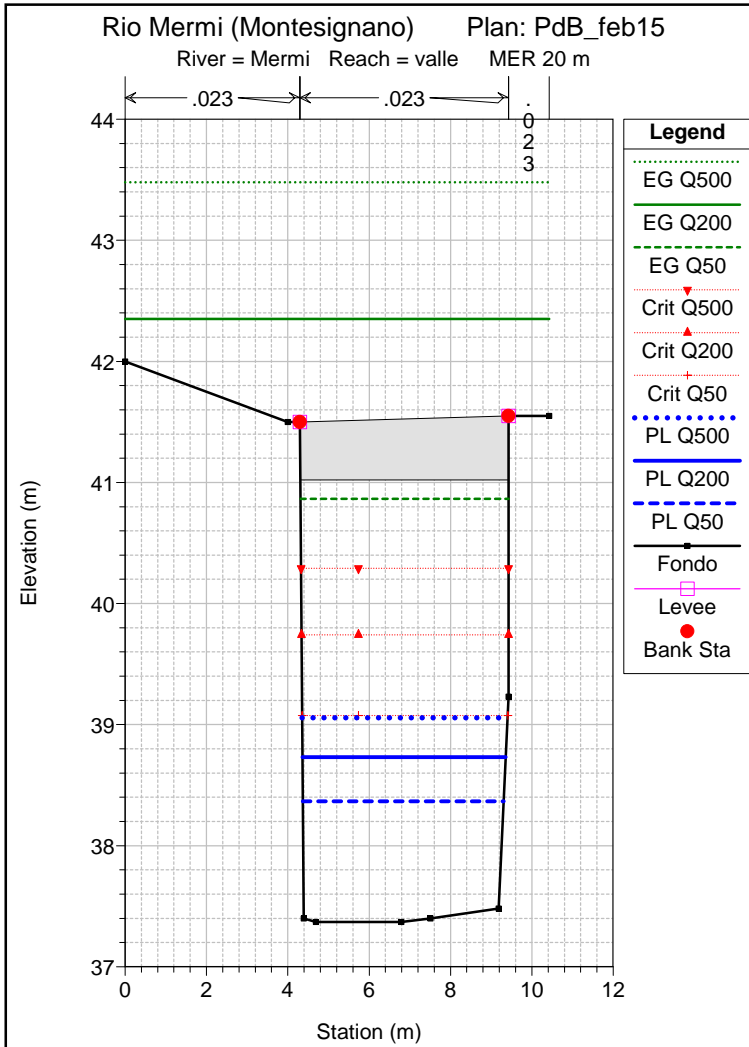


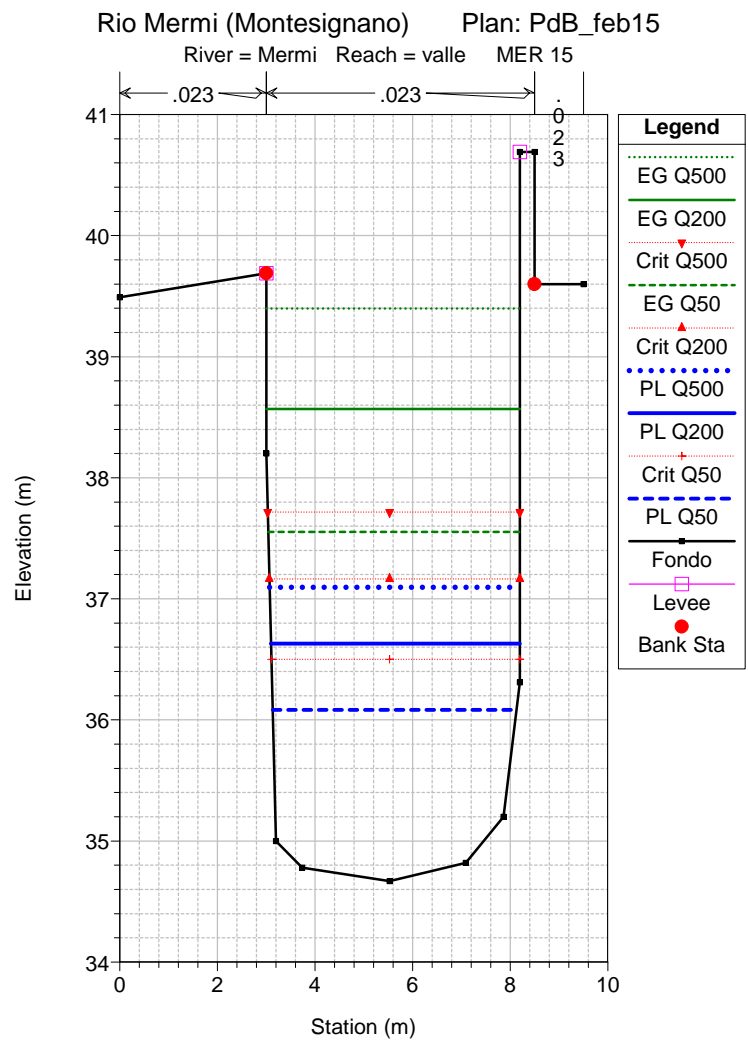
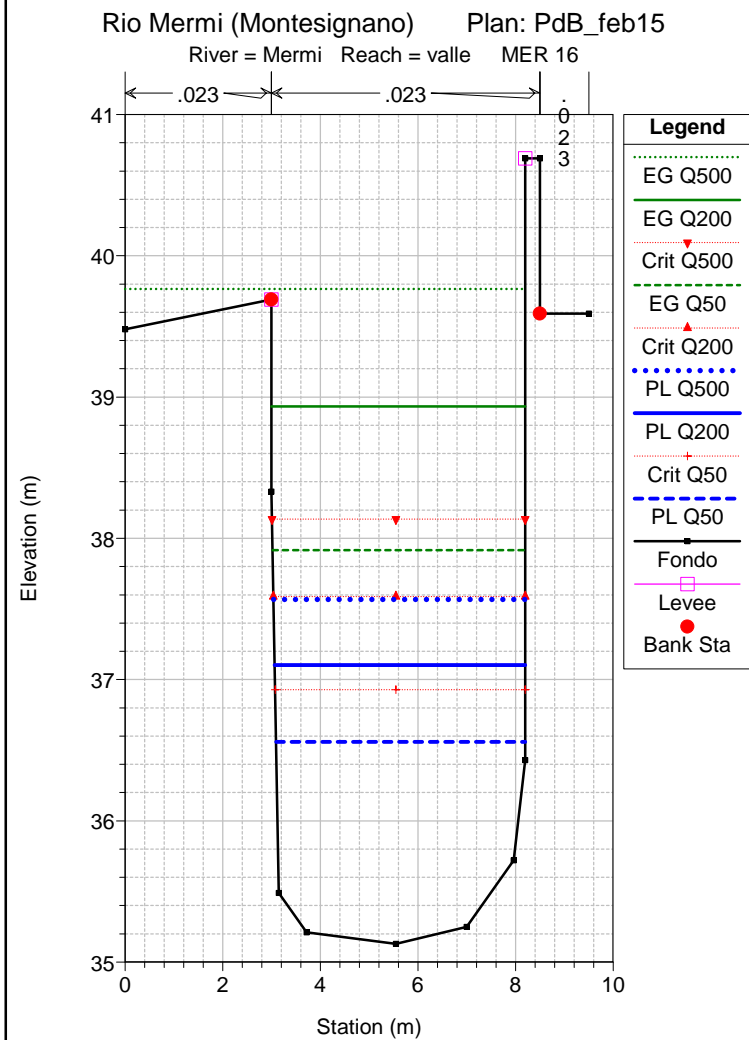
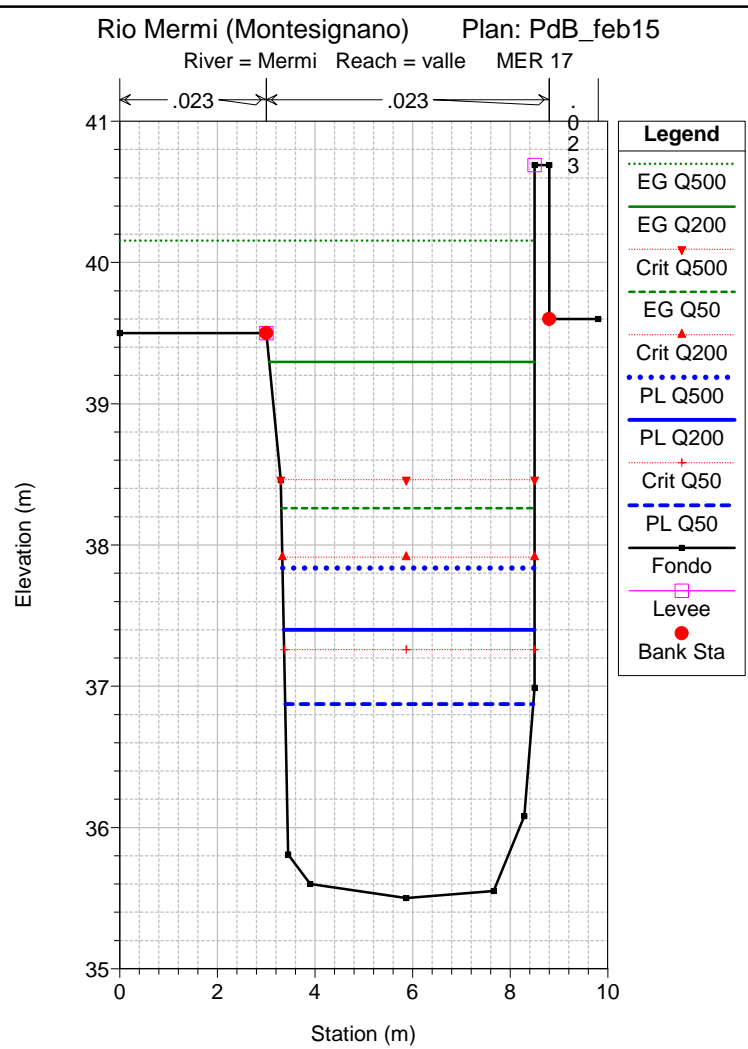
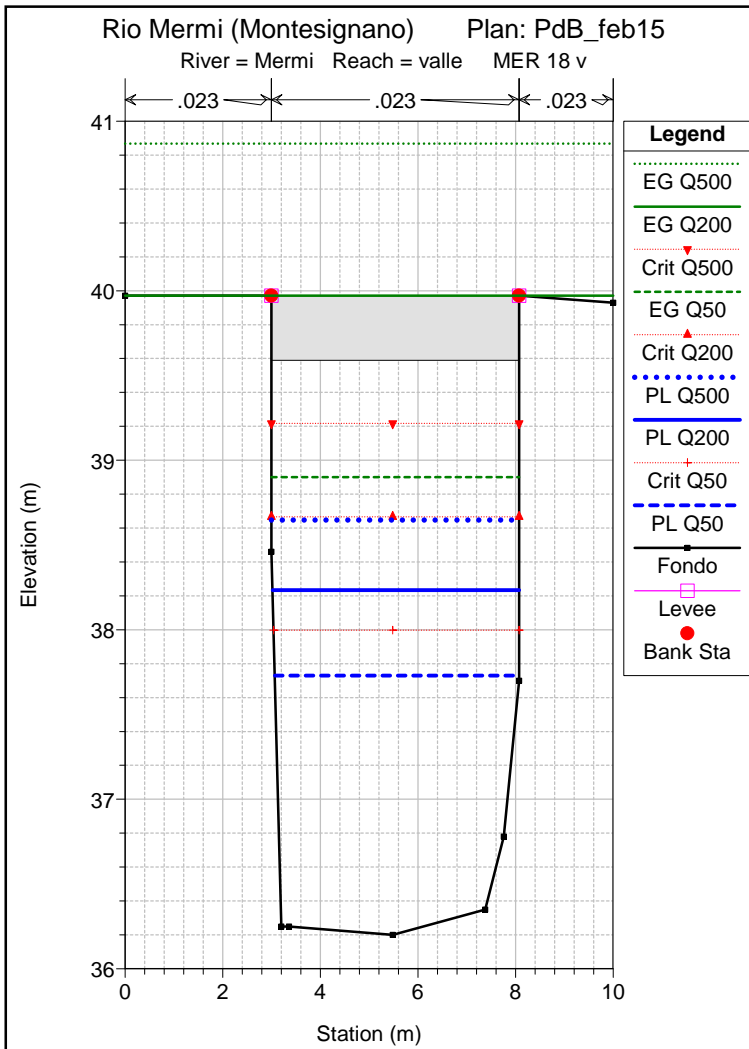
Legend

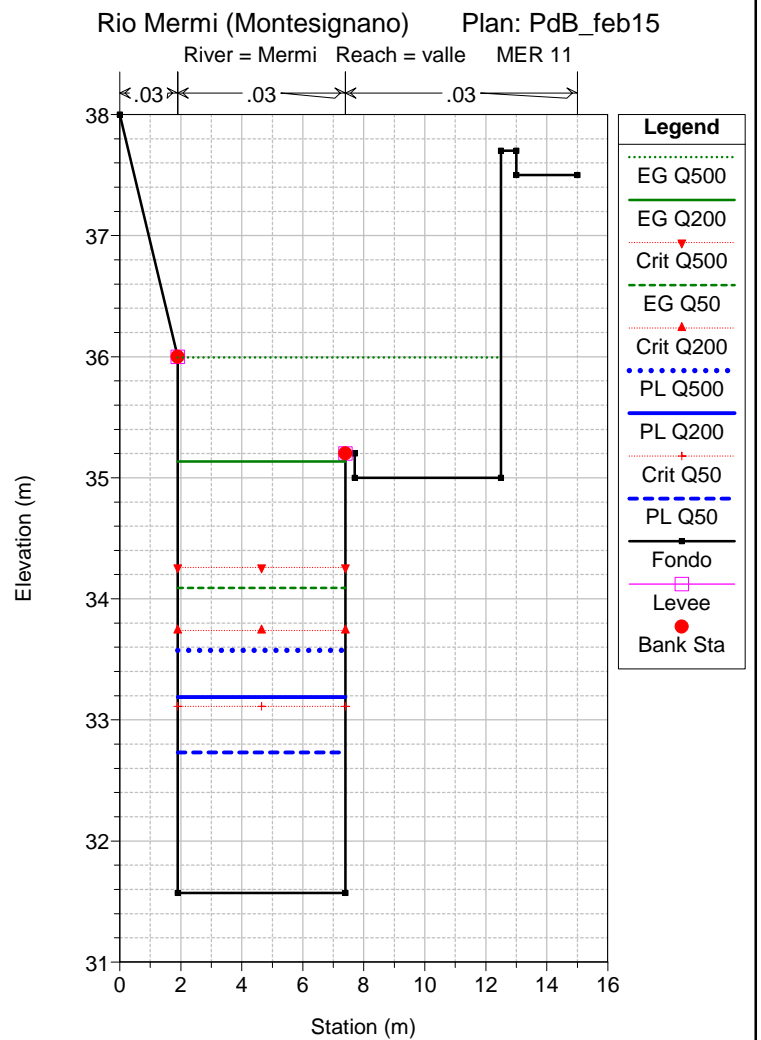
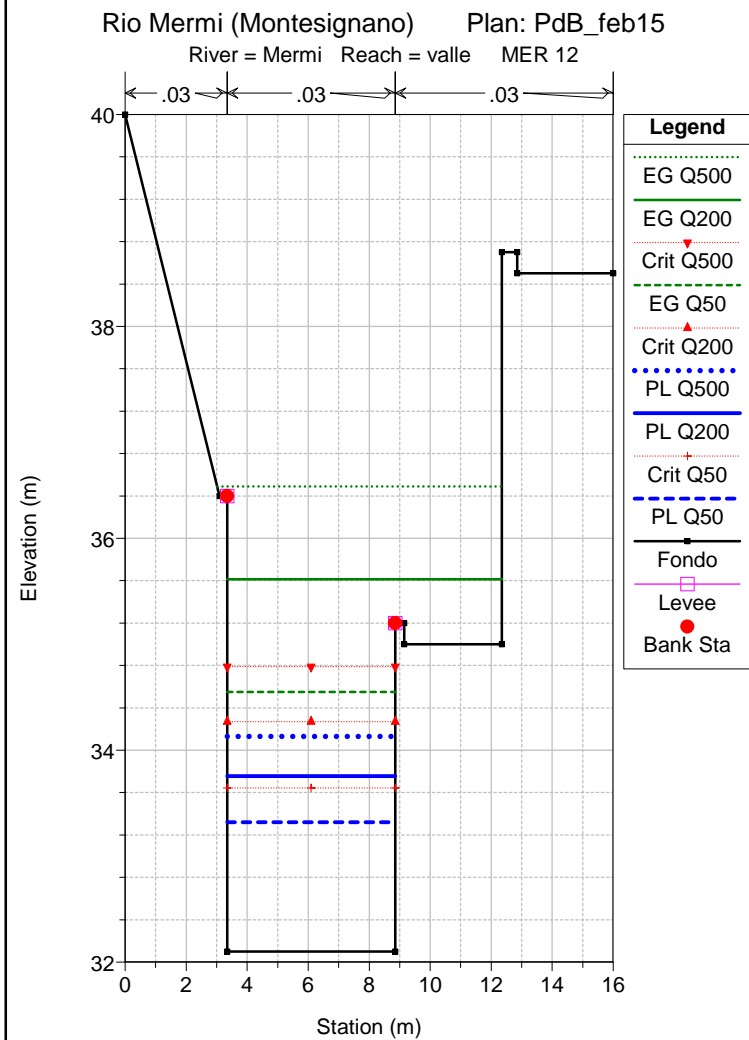
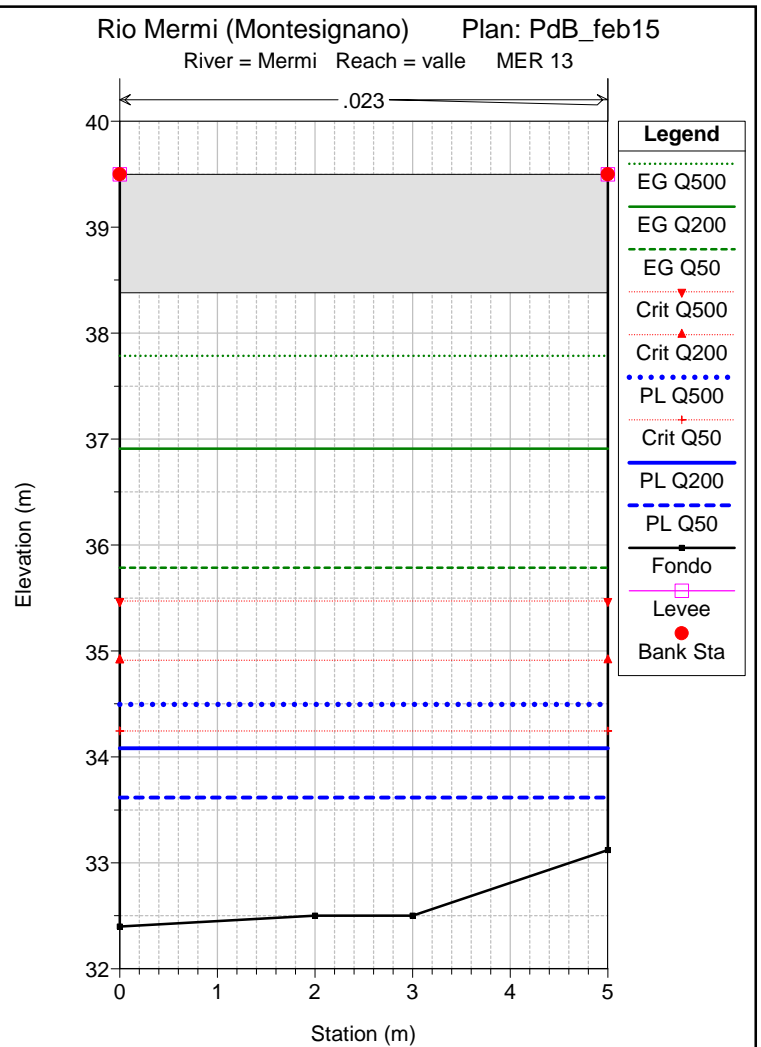
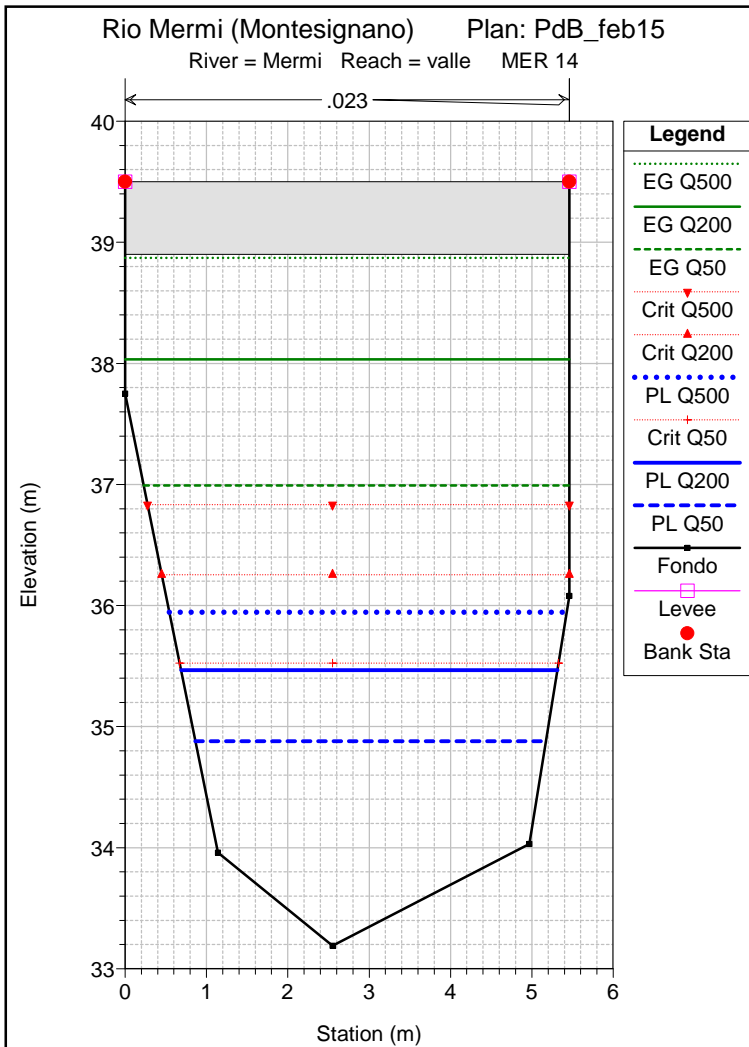
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- - - Sponda sx
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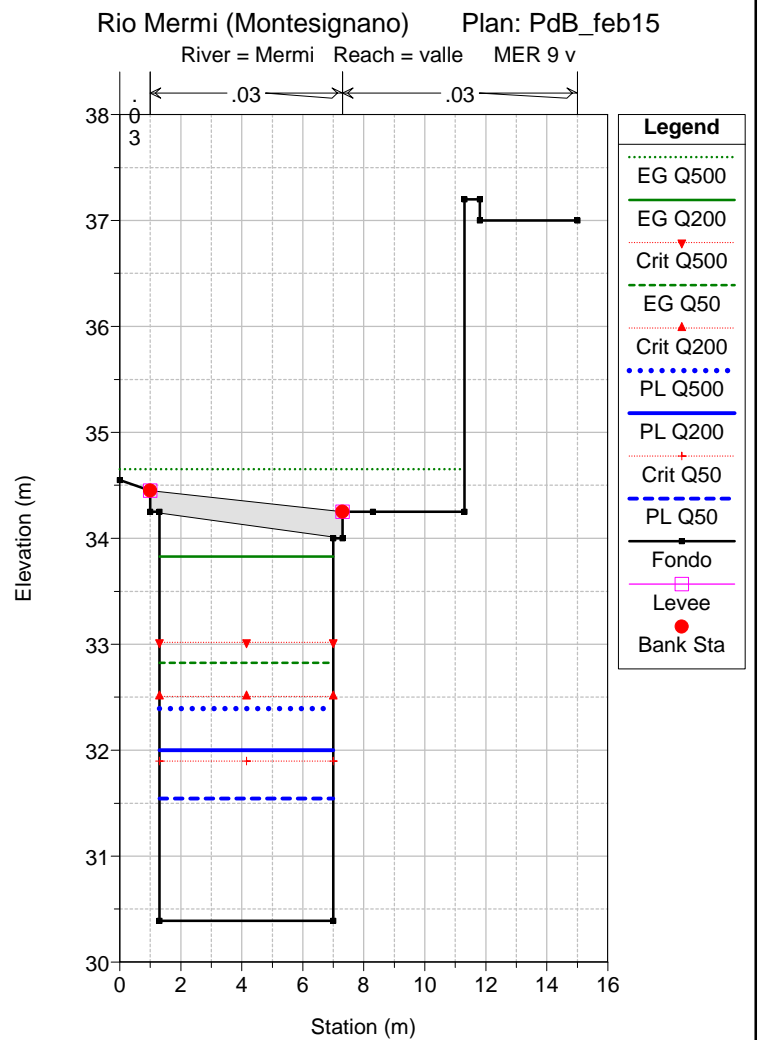
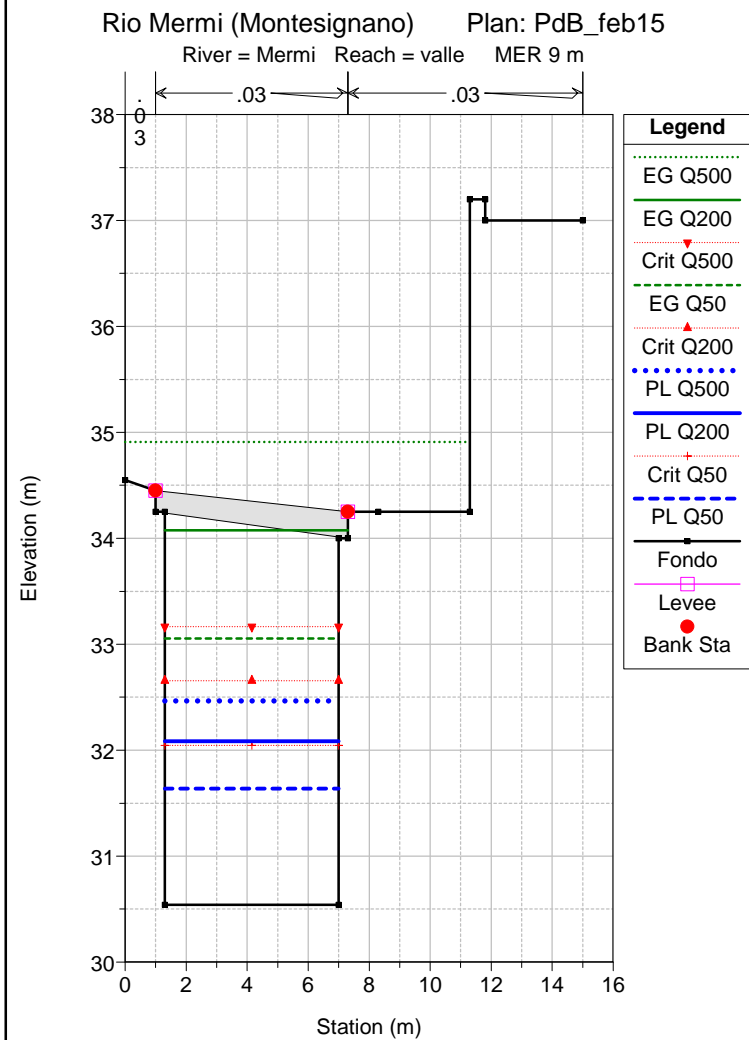
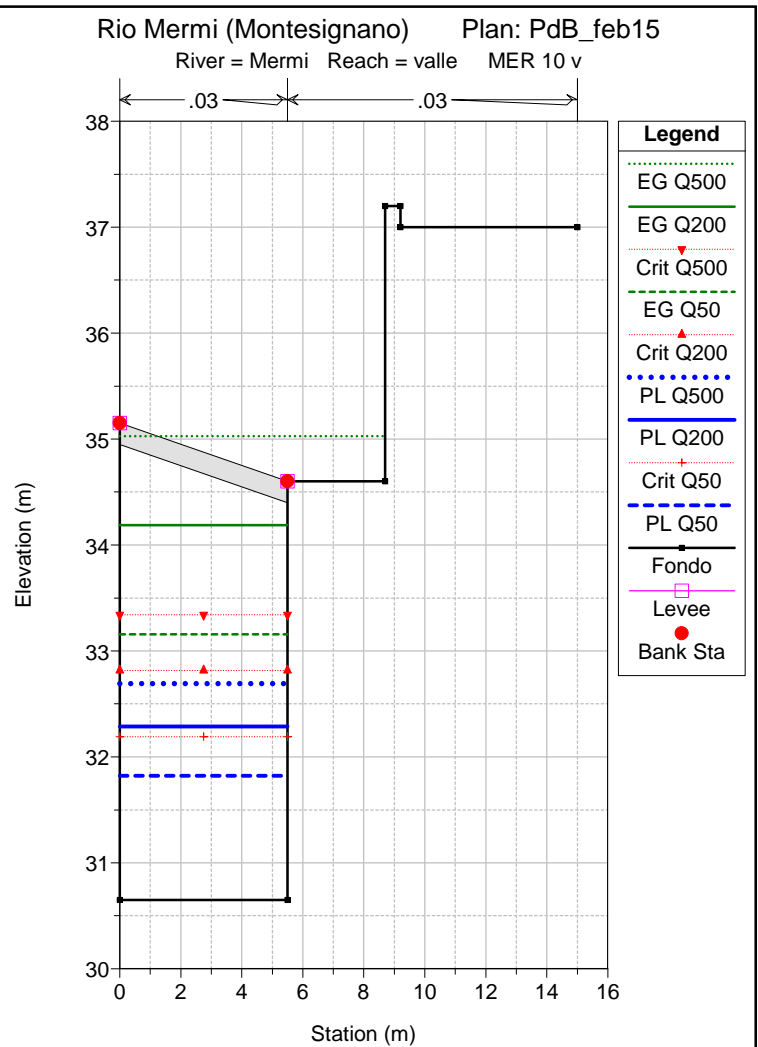
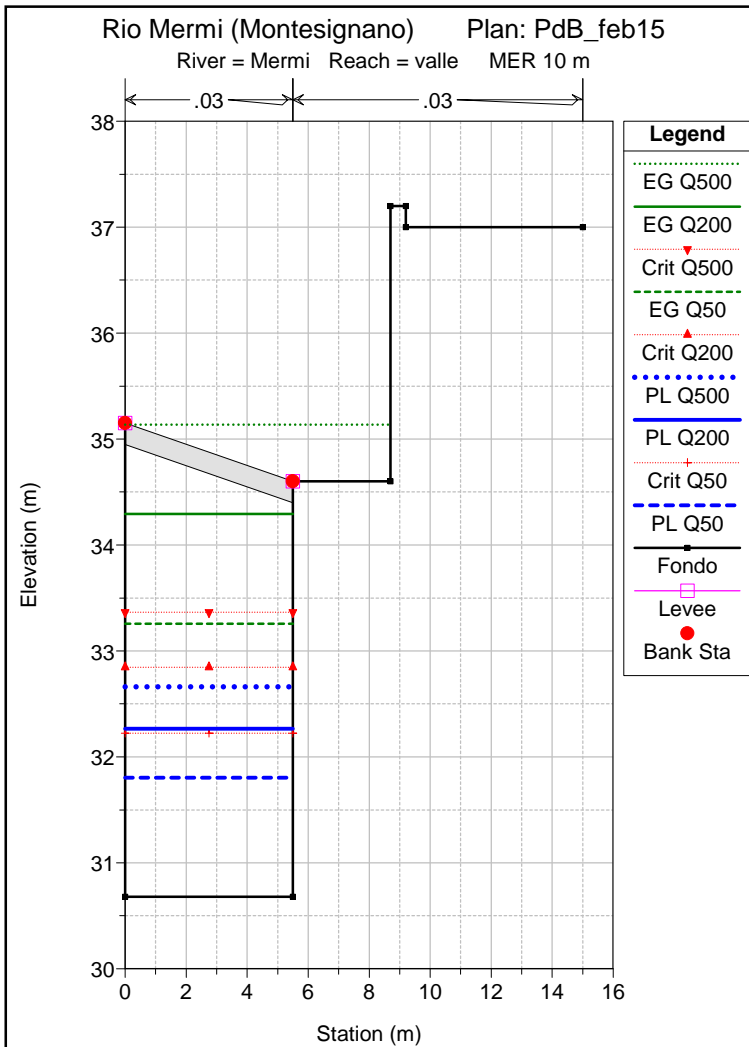


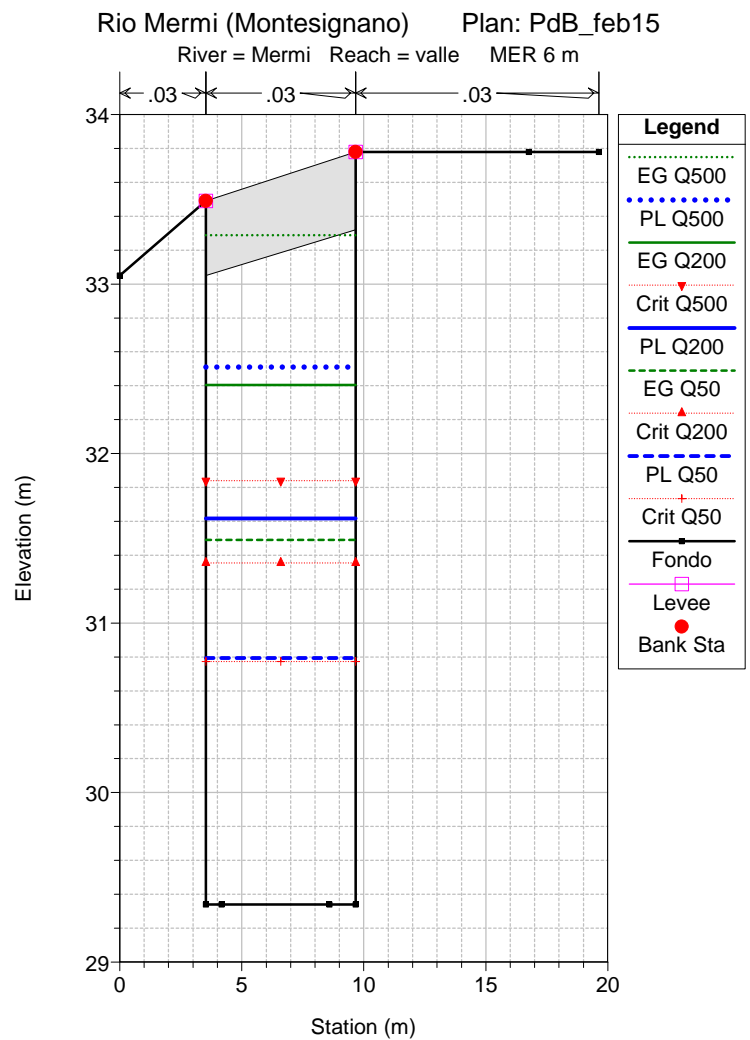
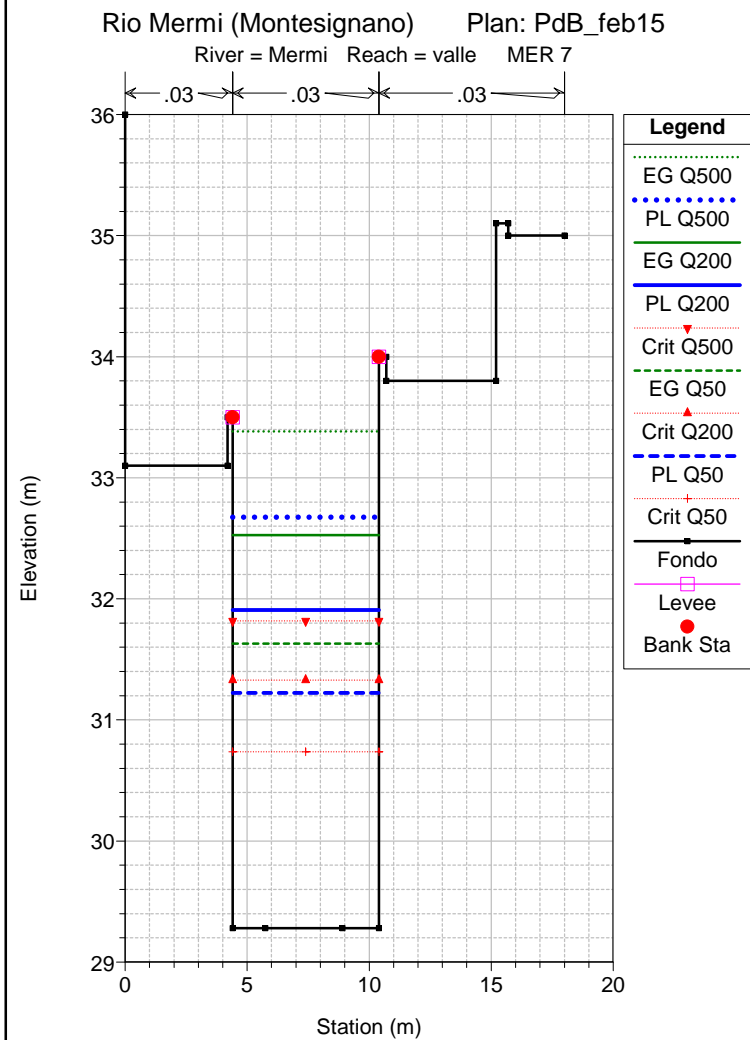
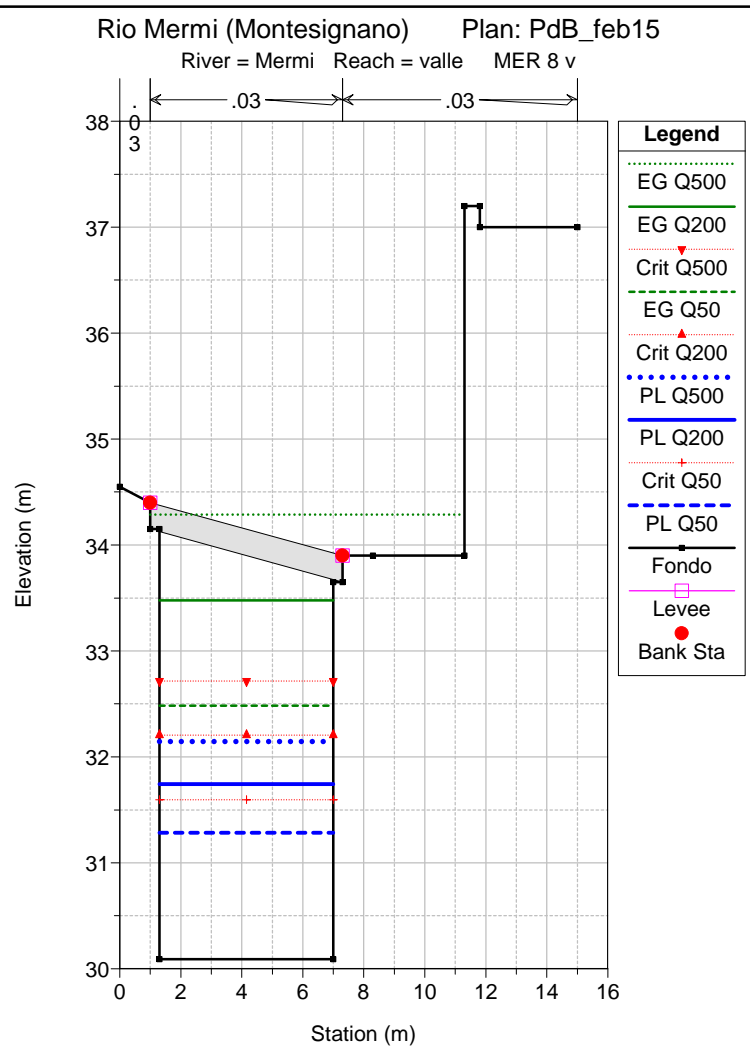
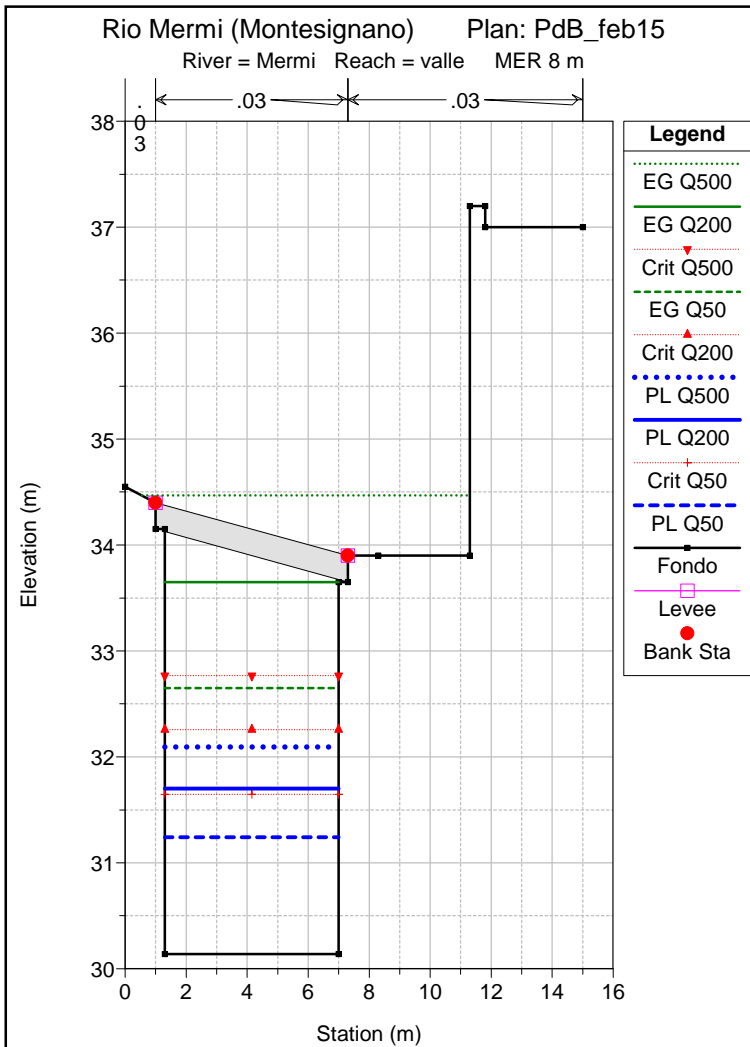


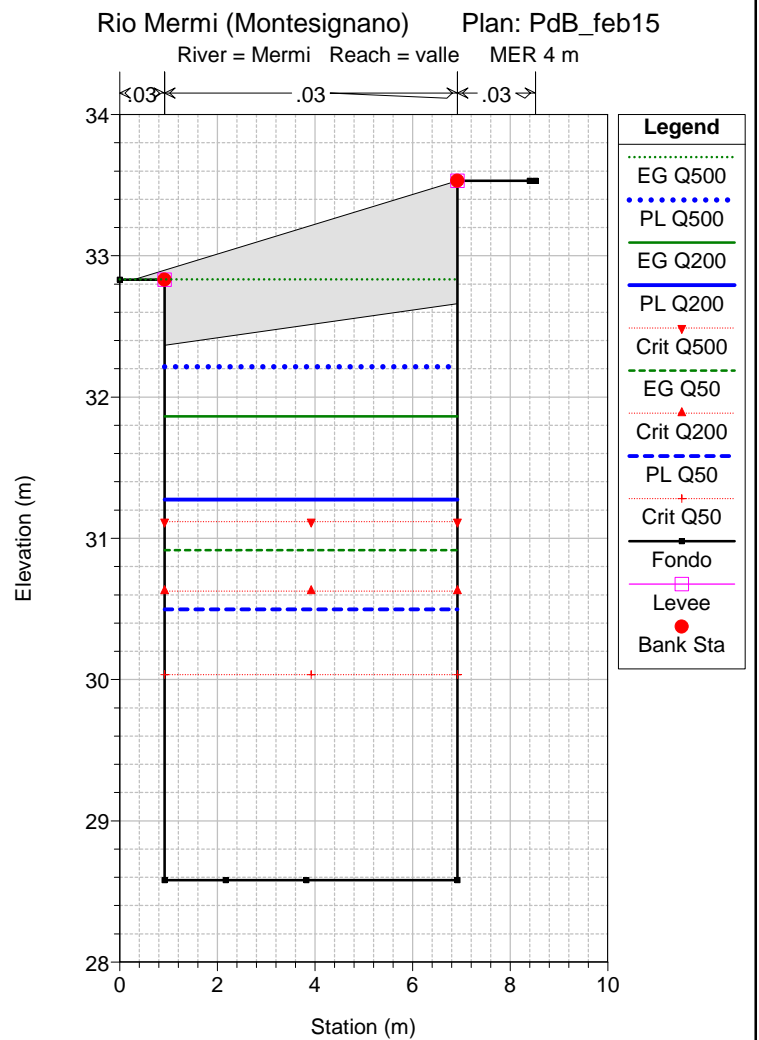
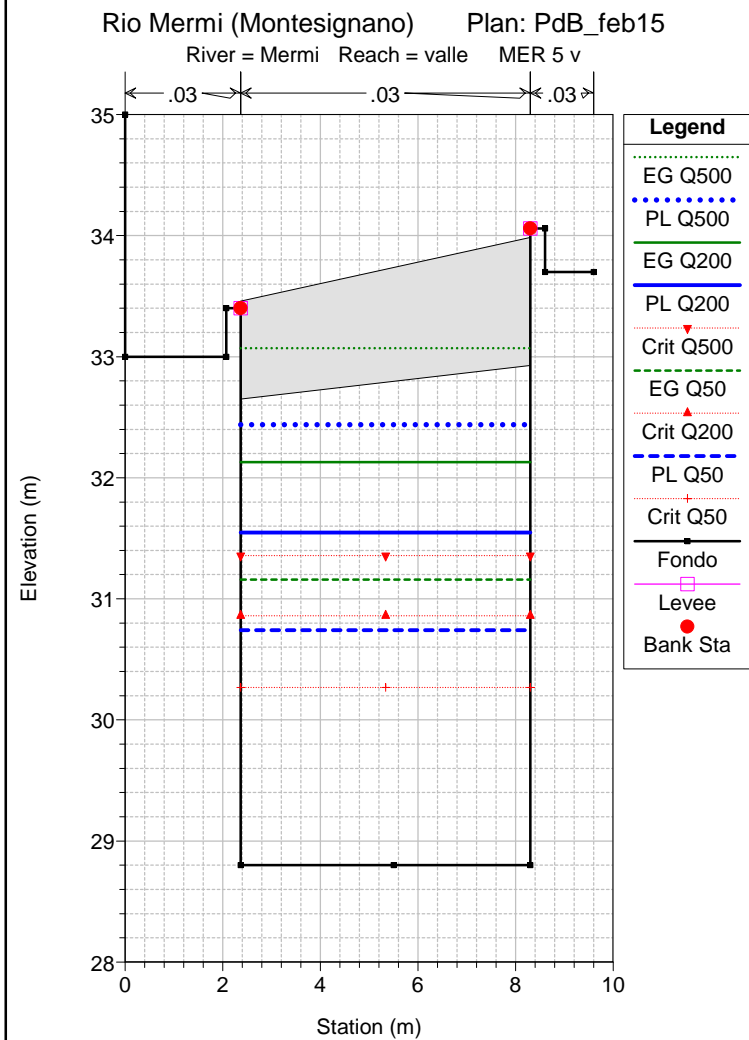
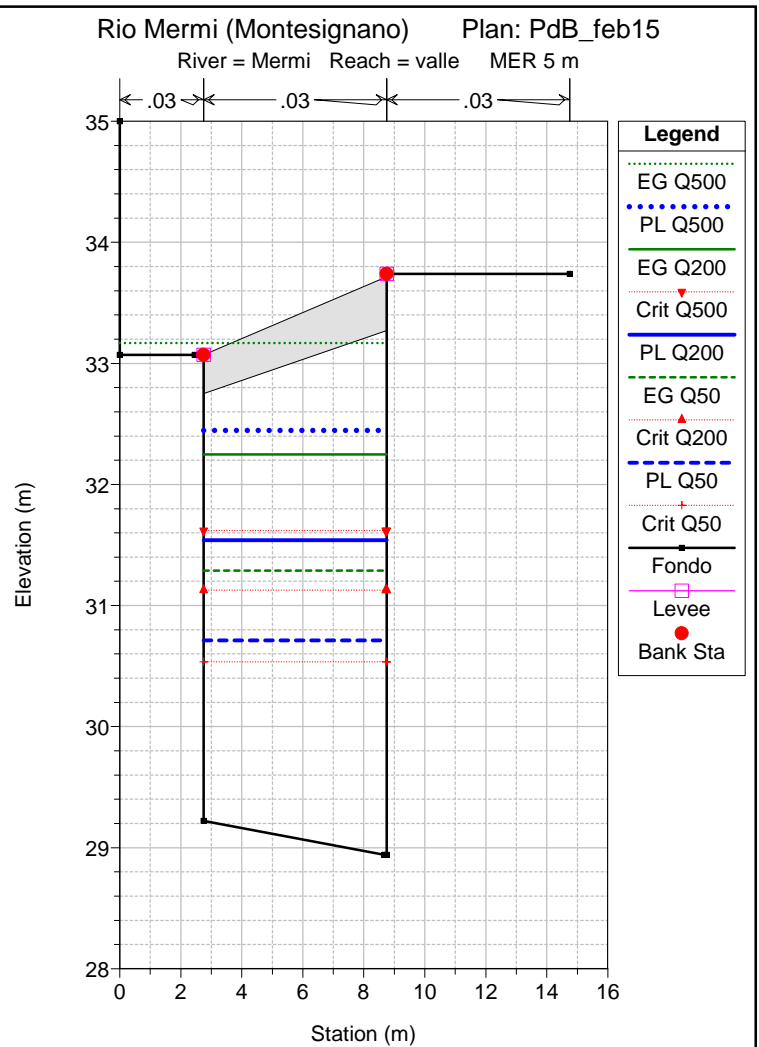
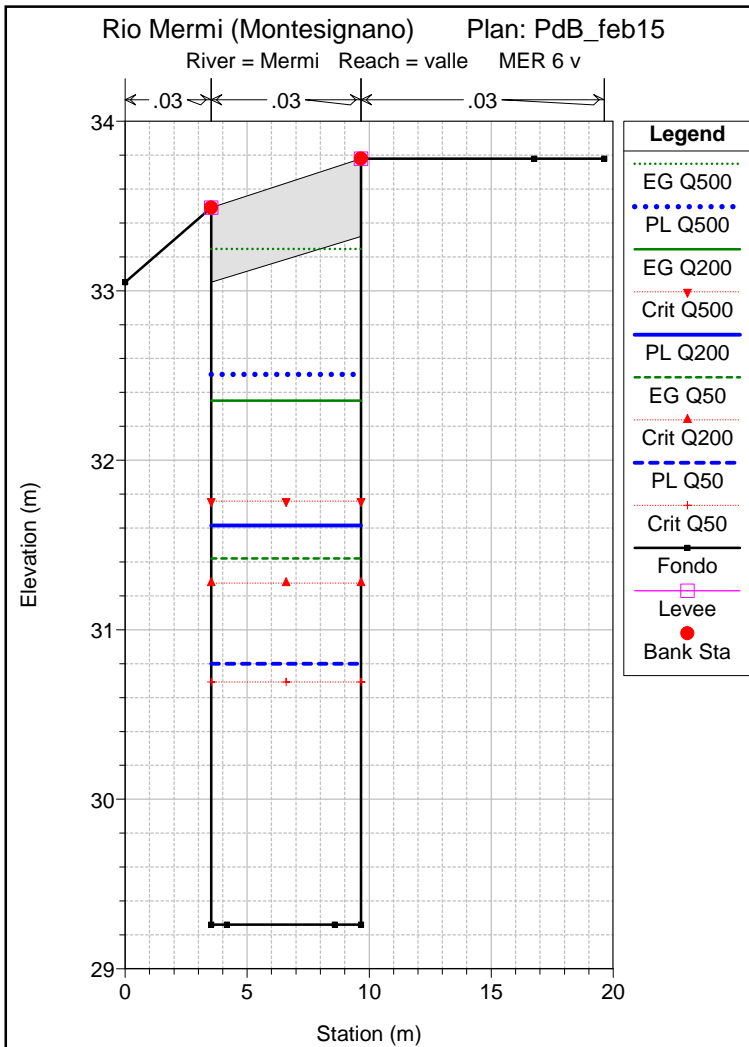


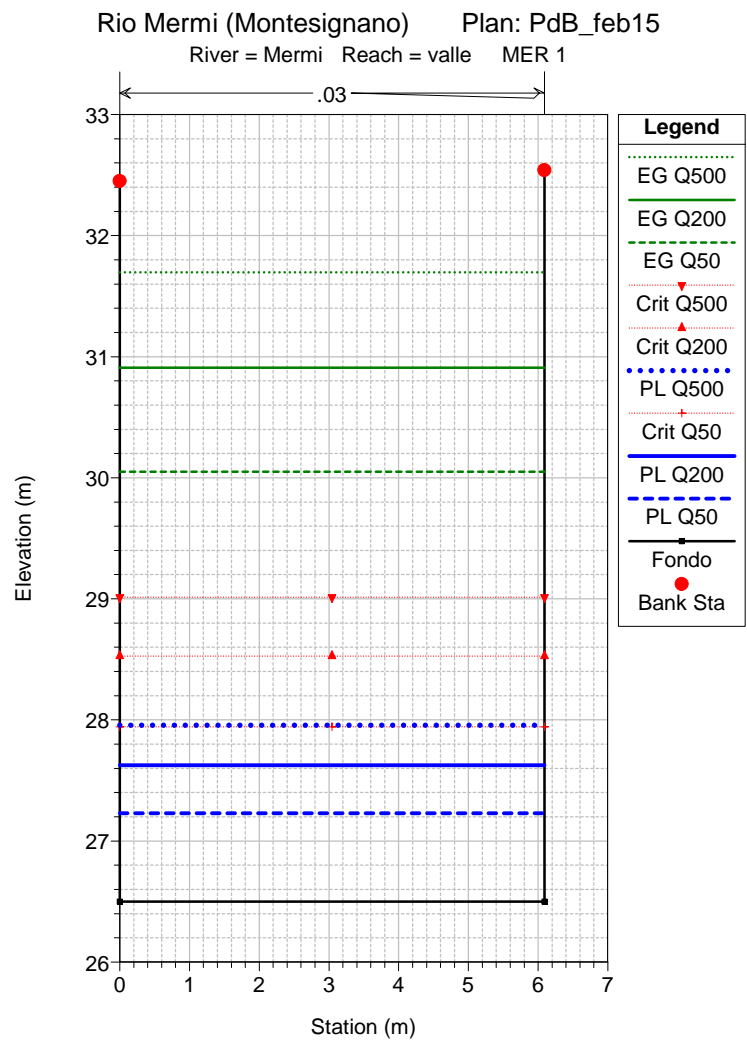
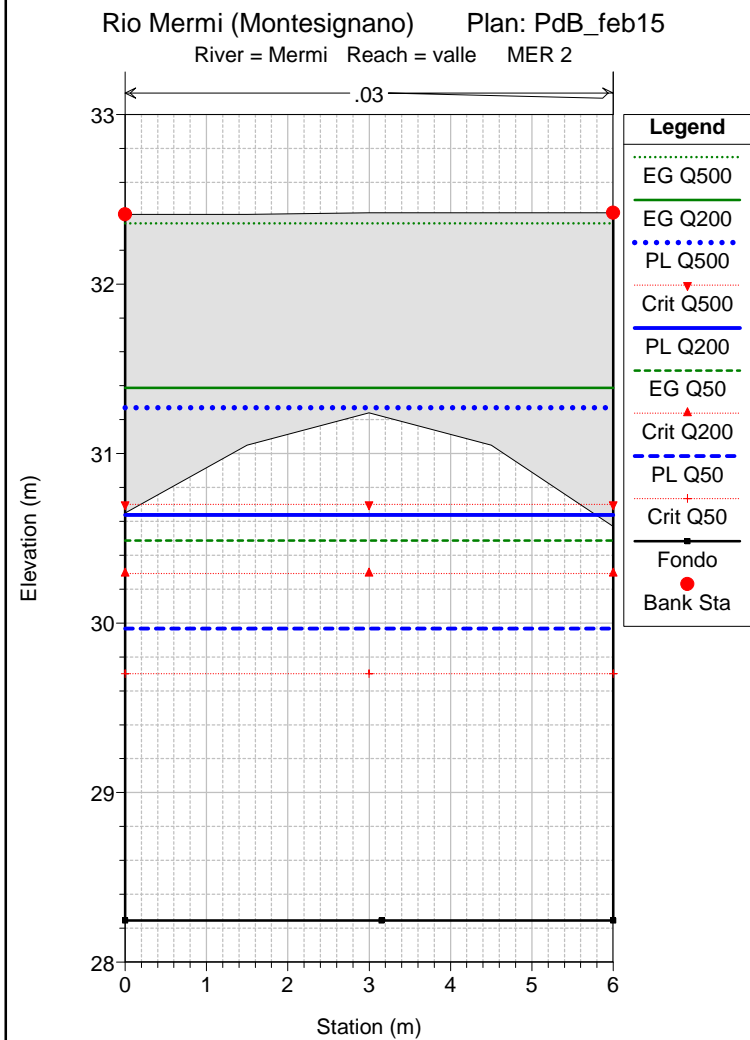
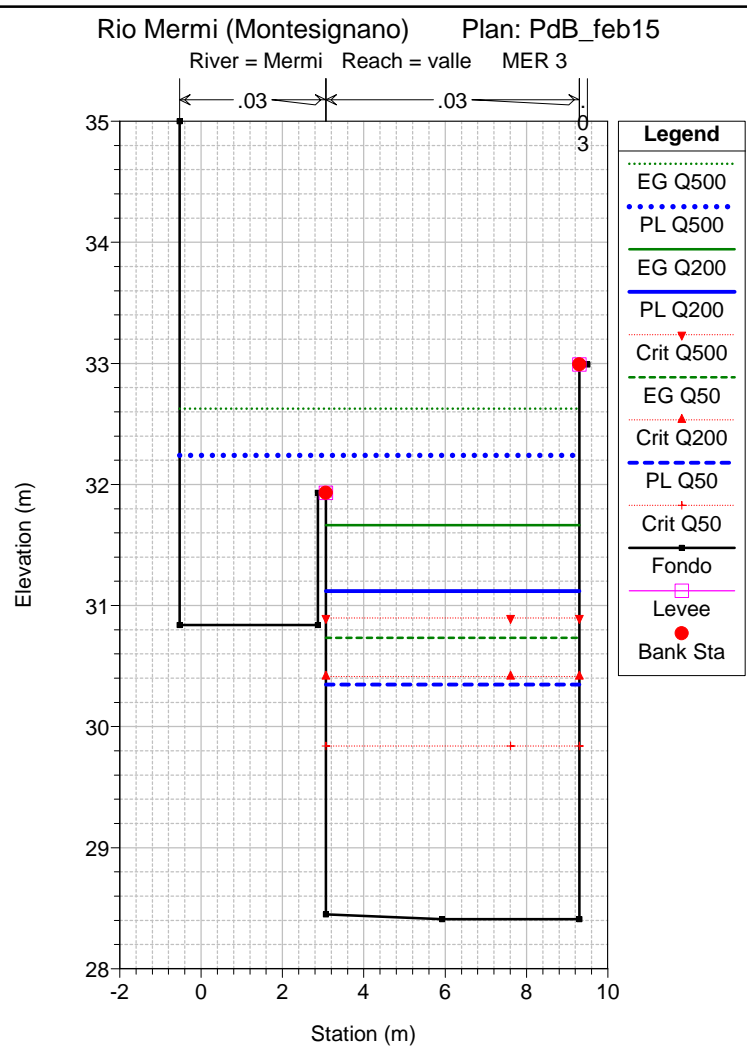
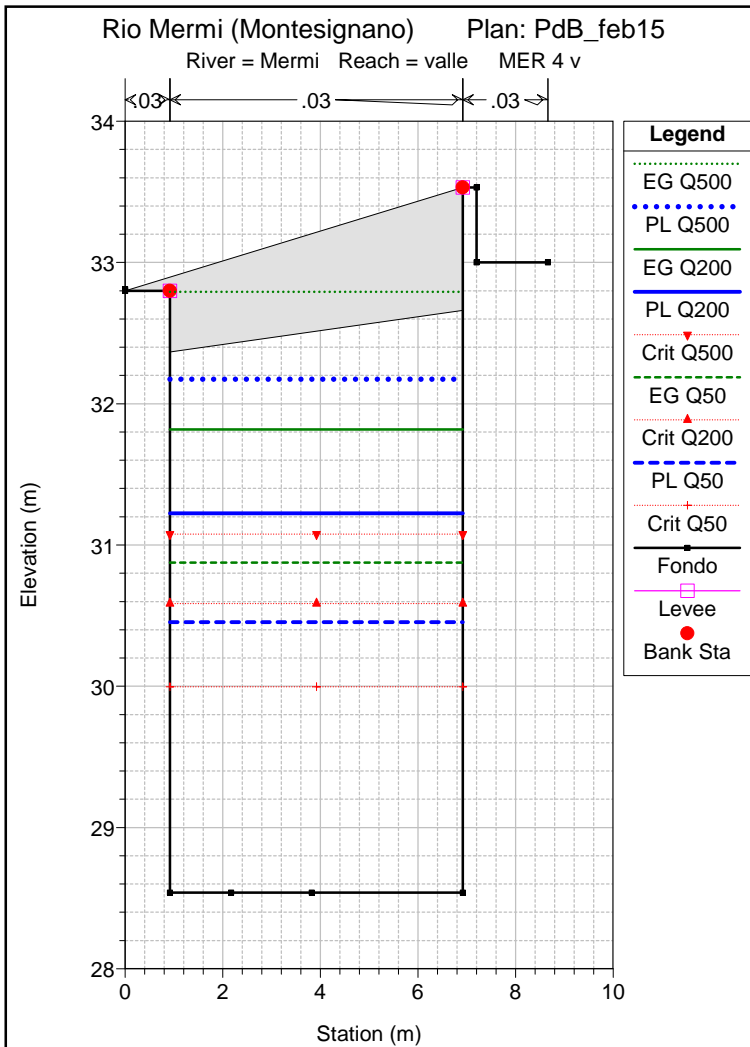












HEC-RAS Plan: PdB_feb2015 River: Mermi Reach: valle

Reach	River Sta		Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	42	MER 28	Q50	33.00	45.54	47.48	50.00	2.52	49.60	2.12	47.09	47.94	0.006614	3.00	10.98	5.90	0.70
valle	42	MER 28	Q200	55.00	45.54	48.37	50.00	1.63	49.60	1.23	47.69	48.95	0.006233	3.38	16.28	6.06	0.66
valle	42	MER 28	Q500	76.00	45.54	49.13	50.00	0.87	49.60	0.47	48.20	49.80	0.006061	3.62	20.99	6.20	0.63
valle	41	MER 27	Q50	33.00	45.40	47.64	48.00	0.36	49.60	1.96	46.70	47.82	0.002004	1.90	17.37	8.34	0.42
valle	41	MER 27	Q200	55.00	45.40	48.57	48.00	-0.57	49.60	1.03	47.19	48.81	0.001945	2.18	25.22	8.49	0.40
valle	41	MER 27	Q500	76.00	45.40	49.37	48.00	-1.37	49.60	0.23	47.60	49.66	0.001938	2.37	32.01	8.54	0.39
valle	38	MER 26	Q50	33.00	45.39	47.64	48.75	1.11	49.45	1.81	46.61	47.81	0.001061	1.83	18.03	8.19	0.39
valle	38	MER 26	Q200	55.00	45.39	48.57	48.75	0.18	49.45	0.88	47.10	48.80	0.001097	2.14	25.66	8.28	0.39
valle	38	MER 26	Q500	76.00	45.39	49.36	48.75	-0.61	49.45	0.09	47.50	49.65	0.001127	2.36	32.25	8.30	0.38
valle	25	MER 25	Q50	33.00	45.37	47.53	47.50	-0.03	49.76	2.23	46.73	47.79	0.001865	2.25	14.70	7.40	0.51
valle	25	MER 25	Q200	55.00	45.37	48.44	47.50	-0.94	49.76	1.32	47.28	48.78	0.001801	2.57	21.43	7.40	0.48
valle	25	MER 25	Q500	76.00	45.37	49.22	47.50	-1.72	49.76	0.54	47.76	49.62	0.001805	2.79	27.20	7.40	0.47
valle	24.1		Q50	33.00	45.27	46.90	50.22	3.32	48.70	1.80	46.90	47.69	0.007989	3.94	8.37	5.29	1.00
valle	24.1		Q200	55.00	45.27	47.78	50.22	2.44	48.70	0.92	47.55	48.68	0.006473	4.20	13.11	5.41	0.86
valle	24.1		Q500	76.00	45.27	48.50	50.22	1.72	48.70	0.20	48.08	49.51	0.006169	4.46	17.04	5.51	0.81
valle	24	MER 24	Q50	33.00	44.61	46.48	48.95	2.47	48.54	2.06	46.52	47.36	0.008996	4.16	7.94	4.87	1.04
valle	24	MER 24	Q200	55.00	44.61	47.21	48.95	1.74	48.54	1.33	47.21	48.36	0.009013	4.76	11.55	5.02	1.00
valle	24	MER 24	Q500	76.00	44.61	47.78	48.95	1.17	48.54	0.76	47.78	49.19	0.009514	5.26	14.46	5.14	1.00
valle	23		Q50	33.00	44.10	45.97	47.96	1.99	48.11	2.14	46.19	47.07	0.013086	4.65	7.10	5.00	1.25
valle	23		Q200	55.00	44.10	46.58	47.96	1.38	48.11	1.53	46.87	48.06	0.013195	5.39	10.20	5.13	1.22
valle	23		Q500	76.00	44.10	47.09	47.96	0.87	48.11	1.02	47.43	48.87	0.013435	5.91	12.86	5.23	1.20
valle	22	MER 23	Q50	33.00	42.87	44.04	46.67	2.63	47.01	2.97	44.74	46.48	0.040862	6.92	4.77	4.91	2.24
valle	22	MER 23	Q200	55.00	42.87	44.54	46.67	2.13	47.01	2.47	45.42	47.49	0.034162	7.62	7.22	5.06	2.04
valle	22	MER 23	Q500	76.00	42.87	44.96	46.67	1.71	47.01	2.05	45.97	48.30	0.031376	8.11	9.38	5.18	1.92
valle	20.1	MER 22	Q50	33.00	41.56	42.60	43.80	1.20	45.38	2.78	43.36	45.39	0.047726	7.40	4.46	4.99	2.50
valle	20.1	MER 22	Q200	55.00	41.56	43.04	43.80	0.76	45.38	2.34	44.02	46.53	0.041579	8.28	6.64	5.02	2.30
valle	20.1	MER 22	Q500	76.00	41.56	43.43	43.80	0.37	45.38	1.95	44.57	47.41	0.038396	8.84	8.60	5.04	2.16
valle	17	MER 21	Q50	33.00	38.80	39.58	42.85	3.27	44.68	5.10	40.56	44.32	0.105423	9.65	3.42	4.79	3.64
valle	17	MER 21	Q200	55.00	38.80	39.96	42.85	2.89	44.68	4.72	41.24	45.58	0.083069	10.51	5.23	4.83	3.22
valle	17	MER 21	Q500	76.00	38.80	40.29	42.85	2.56	44.68	4.39	41.81	46.52	0.072488	11.05	6.87	4.86	2.97
valle	16.4		Q50	33.00	37.40	38.37	41.50	3.13	41.55	3.18	39.09	40.92	0.042615	7.07	4.67	4.94	2.32
valle	16.4		Q200	55.00	37.40	38.74	41.50	2.76	41.55	2.81	39.75	42.41	0.045573	8.49	6.48	5.00	2.38
valle	16.4		Q500	76.00	37.40	39.06	41.50	2.44	41.55	2.49	40.30	43.54	0.046133	9.38	8.10	5.05	2.36
valle	16.3	MER 20 m	Q50	33.00	37.37	38.37	41.02	2.65	41.02	2.65	39.08	40.87	0.041127	7.00	4.71	4.94	2.29
valle	16.3	MER 20 m	Q200	55.00	37.37	38.73	41.02	2.29	41.02	2.29	39.74	42.35	0.044347	8.43	6.53	5.00	2.35
valle	16.3	MER 20 m	Q500	76.00	37.37	39.06	41.02	1.96	41.02	1.96	40.29	43.48	0.045084	9.32	8.16	5.05	2.34
valle	16.25		Q50	33.00	37.17	38.29	41.02	2.73	41.02	2.73	38.93	40.45	0.031621	6.50	5.07	4.93	2.05
valle	16.25		Q200	55.00	37.17	38.67	41.02	2.35	41.02	2.35	39.60	41.88	0.035956	7.94	6.93	4.99	2.15
valle	16.25		Q500	76.00	37.17	39.00	41.02	2.02	41.02	2.02	40.15	42.99	0.037674	8.85	8.59	5.04	2.16

HEC-RAS Plan: PdB_feb2015 River: Mermi Reach: valle (Continued)

Reach	River Sta		Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	16.2	MER 20 v	Q50	33.00	36.76	38.07	41.02	2.95	41.02	2.95	38.58	39.80	0.021926	5.83	5.66	4.89	1.73
valle	16.2	MER 20 v	Q200	55.00	36.76	38.48	41.02	2.54	41.02	2.54	39.26	41.09	0.025869	7.17	7.67	4.96	1.84
valle	16.2	MER 20 v	Q500	76.00	36.76	38.83	41.02	2.19	41.02	2.19	39.81	42.13	0.028033	8.05	9.44	5.01	1.87
valle	16.1		Q50	33.00	36.72	38.02	41.50	3.48	41.55	3.53	38.55	39.77	0.022263	5.86	5.63	4.88	1.74
valle	16.1		Q200	55.00	36.72	38.43	41.50	3.07	41.55	3.12	39.22	41.06	0.026037	7.19	7.65	4.95	1.84
valle	16.1		Q500	76.00	36.72	38.79	41.50	2.71	41.55	2.76	39.77	42.10	0.028136	8.07	9.42	5.01	1.88
valle	15	MER 19	Q50	33.00	36.58	38.01	41.20	3.19	39.98	1.97	38.38	39.39	0.016169	5.19	6.36	4.86	1.45
valle	15	MER 19	Q200	55.00	36.58	38.45	41.20	2.75	39.98	1.53	39.06	40.59	0.020057	6.48	8.49	4.92	1.57
valle	15	MER 19	Q500	76.00	36.58	38.83	41.20	2.37	39.98	1.15	39.62	41.57	0.022304	7.34	10.36	4.93	1.62
valle	14.4		Q50	33.00	36.46	37.79	39.97	2.18	39.97	2.18	38.18	39.20	0.017115	5.25	6.28	5.00	1.50
valle	14.4		Q200	55.00	36.46	38.24	39.97	1.73	39.97	1.73	38.85	40.36	0.020178	6.45	8.52	5.05	1.59
valle	14.4		Q500	76.00	36.46	38.62	39.97	1.35	39.97	1.35	39.40	41.31	0.021973	7.26	10.46	5.07	1.61
valle	14.3	MER 18 m	Q50	33.00	36.44	37.78	39.59	1.81	39.59	1.81	38.17	39.18	0.017038	5.25	6.29	5.00	1.49
valle	14.3	MER 18 m	Q200	55.00	36.44	38.23	39.59	1.36	39.59	1.36	38.83	40.34	0.020001	6.44	8.54	5.05	1.58
valle	14.3	MER 18 m	Q500	76.00	36.44	38.61	39.59	0.98	39.59	0.98	39.39	41.29	0.021778	7.24	10.49	5.07	1.61
valle	14.25		Q50	33.00	36.24	37.77	39.59	1.82	39.59	1.82	38.04	38.94	0.013066	4.80	6.88	5.01	1.31
valle	14.25		Q200	55.00	36.24	38.24	39.59	1.35	39.59	1.35	38.71	40.04	0.015812	5.93	9.27	5.05	1.40
valle	14.25		Q500	76.00	36.24	38.65	39.59	0.94	39.59	0.94	39.25	40.94	0.017574	6.71	11.32	5.07	1.43
valle	14.2	MER 18 v	Q50	33.00	36.20	37.73	39.59	1.86	39.59	1.86	38.00	38.90	0.013000	4.79	6.89	5.00	1.30
valle	14.2	MER 18 v	Q200	55.00	36.20	38.23	39.59	1.36	39.59	1.36	38.67	39.97	0.015138	5.84	9.42	5.05	1.36
valle	14.2	MER 18 v	Q500	76.00	36.20	38.65	39.59	0.94	39.59	0.94	39.22	40.87	0.016803	6.60	11.51	5.07	1.40
valle	14.1		Q50	33.00	36.08	37.64	39.97	2.33	39.97	2.33	37.95	38.88	0.013905	4.93	6.70	4.98	1.36
valle	14.1		Q200	55.00	36.08	38.15	39.97	1.82	39.97	1.82	38.62	39.95	0.015678	5.94	9.26	5.04	1.40
valle	14.1		Q500	76.00	36.08	38.57	39.97	1.40	39.97	1.40	39.17	40.84	0.017193	6.68	11.38	5.07	1.42
valle	13.3		Q50	33.00	35.60	36.91	39.50	2.59	39.60	2.69	37.34	38.39	0.018215	5.39	6.12	5.09	1.57
valle	13.3		Q200	55.00	35.60	37.43	39.50	2.07	39.60	2.17	37.99	39.43	0.018416	6.28	8.76	5.14	1.53
valle	13.3		Q500	76.00	35.60	37.86	39.50	1.64	39.60	1.74	38.54	40.30	0.019031	6.93	10.97	5.17	1.52
valle	13.2		Q50	33.00	35.58	36.91	39.50	2.59	39.60	2.69	37.32	38.37	0.017917	5.37	6.15	5.09	1.56
valle	13.2		Q200	55.00	35.58	37.42	39.50	2.08	39.60	2.18	37.98	39.41	0.018176	6.25	8.79	5.14	1.53
valle	13.2		Q500	76.00	35.58	37.85	39.50	1.65	39.60	1.75	38.53	40.28	0.018807	6.90	11.01	5.17	1.51
valle	13.1		Q50	33.00	35.53	36.90	39.50	2.60	39.60	2.70	37.28	38.28	0.016325	5.21	6.34	5.09	1.49
valle	13.1		Q200	55.00	35.53	37.42	39.50	2.08	39.60	2.18	37.93	39.31	0.016849	6.10	9.02	5.14	1.47
valle	13.1		Q500	76.00	35.53	37.86	39.50	1.64	39.60	1.74	38.49	40.17	0.017540	6.74	11.28	5.17	1.46
valle	13	MER 17	Q50	33.00	35.50	36.87	39.50	2.63	39.60	2.73	37.26	38.26	0.016373	5.22	6.33	5.08	1.49
valle	13	MER 17	Q200	55.00	35.50	37.40	39.50	2.10	39.60	2.20	37.91	39.30	0.016857	6.10	9.01	5.14	1.47
valle	13	MER 17	Q500	76.00	35.50	37.84	39.50	1.66	39.60	1.76	38.46	40.16	0.017563	6.75	11.27	5.16	1.46
valle	12	MER 16	Q50	33.00	35.13	36.56	39.69	3.13	39.59	3.03	36.93	37.92	0.015705	5.16	6.40	5.11	1.47
valle	12	MER 16	Q200	55.00	35.13	37.10	39.69	2.59	39.59	2.49	37.59	38.93	0.015919	6.00	9.17	5.14	1.43
valle	12	MER 16	Q500	76.00	35.13	37.57	39.69	2.12	39.59	2.02	38.14	39.77	0.016234	6.57	11.57	5.16	1.40

HEC-RAS Plan: PdB_feb2015 River: Mermi Reach: valle (Continued)

Reach	River Sta		Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	11.5	MER 15	Q50	33.00	34.67	36.08	39.69	3.61	39.60	3.52	36.50	37.55	0.017537	5.37	6.14	5.00	1.55
valle	11.5	MER 15	Q200	55.00	34.67	36.63	39.69	3.06	39.60	2.97	37.16	38.57	0.017173	6.17	8.92	5.10	1.49
valle	11.5	MER 15	Q500	76.00	34.67	37.10	39.69	2.59	39.60	2.50	37.72	39.40	0.017250	6.72	11.31	5.13	1.45
valle	11		Q50	33.00	34.36	35.79	39.69	3.90	39.60	3.81	36.25	37.36	0.019202	5.56	5.94	4.90	1.61
valle	11		Q200	55.00	34.36	36.34	39.69	3.35	39.60	3.26	36.92	38.38	0.018414	6.33	8.69	5.08	1.54
valle	11		Q500	76.00	34.36	36.81	39.69	2.88	39.60	2.79	37.47	39.21	0.018279	6.87	11.07	5.11	1.49
valle	10	MER 14	Q50	33.00	33.19	34.88	38.90	4.02	38.90	4.02	35.53	36.99	0.027061	6.44	5.13	4.31	1.88
valle	10	MER 14	Q200	55.00	33.19	35.47	38.90	3.43	38.90	3.43	36.25	38.03	0.024223	7.10	7.75	4.63	1.75
valle	10	MER 14	Q500	76.00	33.19	35.95	38.90	2.95	38.90	2.95	36.83	38.87	0.023277	7.58	10.03	4.89	1.69
valle	9.2	MER 13	Q50	33.00	32.40	33.61	38.38	4.77	38.38	4.77	34.25	35.79	0.033513	6.53	5.06	5.00	2.07
valle	9.2	MER 13	Q200	55.00	32.40	34.08	38.38	4.30	38.38	4.30	34.91	36.91	0.031278	7.45	7.38	5.00	1.96
valle	9.2	MER 13	Q500	76.00	32.40	34.50	38.38	3.89	38.38	3.89	35.47	37.79	0.029957	8.04	9.46	5.00	1.87
valle	9.1		Q50	33.00	32.33	33.56	39.50	5.94	39.50	5.94	34.18	35.67	0.032244	6.43	5.13	5.00	2.02
valle	9.1		Q200	55.00	32.33	34.03	39.50	5.47	39.50	5.47	34.85	36.80	0.030576	7.38	7.46	5.00	1.93
valle	9.1		Q500	76.00	32.33	34.44	39.50	5.06	39.50	5.06	35.40	37.68	0.029473	7.97	9.53	5.00	1.84
valle	9		Q50	33.00	32.30	33.57	36.10	2.53	36.60	3.03	34.17	35.62	0.030171	6.35	5.20	4.80	1.95
valle	9		Q200	55.00	32.30	34.03	36.10	2.07	36.60	2.57	34.84	36.75	0.029979	7.31	7.53	5.00	1.90
valle	9		Q500	76.00	32.30	34.45	36.10	1.65	36.60	2.15	35.39	37.64	0.029000	7.91	9.61	5.00	1.82
valle	8	MER 12	Q50	33.00	32.10	33.32	36.40	3.08	35.20	1.88	33.64	34.55	0.027171	4.91	6.72	5.50	1.42
valle	8	MER 12	Q200	55.00	32.10	33.76	36.40	2.64	35.20	1.44	34.27	35.61	0.031432	6.04	9.11	5.50	1.50
valle	8	MER 12	Q500	76.00	32.10	34.13	36.40	2.27	35.20	1.07	34.79	36.49	0.033879	6.81	11.17	5.50	1.52
valle	7.3		Q50	33.00	31.72	32.87	36.00	3.13	35.20	2.33	33.26	34.25	0.026044	5.21	6.34	8.30	1.55
valle	7.3		Q200	55.00	31.72	33.33	36.00	2.67	35.20	1.87	33.89	35.30	0.026126	6.23	8.83	8.30	1.57
valle	7.3		Q500	76.00	31.72	33.71	36.00	2.29	35.20	1.49	34.41	36.17	0.026219	6.95	10.94	8.30	1.57
valle	7.2		Q50	33.00	31.70	32.86	36.34	3.48	35.20	2.34	33.24	34.22	0.025585	5.18	6.37	8.30	1.54
valle	7.2		Q200	55.00	31.70	33.31	36.34	3.03	35.20	1.89	33.87	35.27	0.025811	6.20	8.87	8.30	1.56
valle	7.2		Q500	76.00	31.70	33.70	36.34	2.64	35.20	1.50	34.39	36.14	0.025966	6.93	10.97	8.30	1.57
valle	7.1		Q50	33.00	31.59	32.73	36.00	3.27	35.20	2.47	33.13	34.13	0.032857	5.24	6.29	5.50	1.56
valle	7.1		Q200	55.00	31.59	33.19	36.00	2.81	35.20	2.01	33.76	35.18	0.034687	6.25	8.79	5.50	1.58
valle	7.1		Q500	76.00	31.59	33.57	36.00	2.43	35.20	1.63	34.28	36.05	0.036140	6.97	10.91	5.50	1.58
valle	7	MER 11	Q50	33.00	31.57	32.73	36.00	3.27	35.20	2.47	33.11	34.09	0.031403	5.16	6.39	5.50	1.53
valle	7	MER 11	Q200	55.00	31.57	33.19	36.00	2.81	35.20	2.01	33.74	35.13	0.033507	6.18	8.90	5.50	1.55
valle	7	MER 11	Q500	76.00	31.57	33.58	36.00	2.42	35.20	1.62	34.26	35.99	0.035069	6.89	11.03	5.50	1.55
valle	6.7		Q50	33.00	30.76	31.79	35.00	3.21	35.00	3.21	32.30	33.52	0.044976	5.83	5.66	5.50	1.83
valle	6.7		Q200	55.00	30.76	32.24	35.00	2.76	35.00	2.76	32.93	34.56	0.042924	6.74	8.16	5.50	1.77
valle	6.7		Q500	76.00	30.76	32.63	35.00	2.37	35.00	2.37	33.45	35.41	0.042448	7.38	10.30	5.50	1.72
valle	6.6		Q50	33.00	30.75	31.79	35.00	3.21	35.00	3.21	32.29	33.49	0.044055	5.79	5.70	5.50	1.82
valle	6.6		Q200	55.00	30.75	32.24	35.00	2.76	35.00	2.76	32.92	34.53	0.042305	6.70	8.20	5.50	1.75
valle	6.6		Q500	76.00	30.75	32.63	35.00	2.37	35.00	2.37	33.44	35.38	0.041940	7.35	10.34	5.50	1.71

HEC-RAS Plan: PdB_feb2015 River: Mermi Reach: valle (Continued)

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	
valle	6.5	Q50	33.00	30.70	31.81	35.15	3.34	34.60	2.79	32.24	33.31	0.036422	5.43	6.08	5.50	1.65	
valle	6.5	Q200	55.00	30.70	32.27	35.15	2.88	34.60	2.33	32.87	34.34	0.036811	6.39	8.61	5.50	1.63	
valle	6.5	Q500	76.00	30.70	32.66	35.15	2.49	34.60	1.94	33.39	35.19	0.037288	7.04	10.79	5.50	1.61	
valle	6.4	MER 10 m	Q50	33.00	30.68	31.80	34.95	3.15	34.40	2.60	32.22	33.26	0.034737	5.34	6.18	5.50	1.61
valle	6.4	MER 10 m	Q200	55.00	30.68	32.27	34.95	2.68	34.40	2.13	32.85	34.29	0.035544	6.31	8.72	5.50	1.60
valle	6.4	MER 10 m	Q500	76.00	30.68	32.66	34.95	2.29	34.40	1.74	33.37	35.14	0.036186	6.97	10.91	5.50	1.58
valle	6.3	MER 10 v	Q50	33.00	30.65	31.82	34.95	3.13	34.40	2.58	32.19	33.16	0.030636	5.12	6.45	5.50	1.51
valle	6.3	MER 10 v	Q200	55.00	30.65	32.29	34.95	2.66	34.40	2.11	32.82	34.19	0.032387	6.10	9.01	5.50	1.52
valle	6.3	MER 10 v	Q500	76.00	30.65	32.69	34.95	2.26	34.40	1.71	33.34	35.03	0.033417	6.77	11.22	5.50	1.51
valle	6.29	Q50	33.00	30.65	31.82	35.15	3.33	34.60	2.78	32.19	33.15	0.030482	5.11	6.46	5.50	1.51	
valle	6.29	Q200	55.00	30.65	32.29	35.15	2.86	34.60	2.31	32.82	34.18	0.032270	6.10	9.02	5.50	1.52	
valle	6.29	Q500	76.00	30.65	32.69	35.15	2.46	34.60	1.91	33.34	35.02	0.033318	6.76	11.24	5.50	1.51	
valle	5.79	Q50	33.00	30.54	31.64	34.45	2.81	34.25	2.61	32.05	33.06	0.034283	5.28	6.25	5.70	1.61	
valle	5.79	Q200	55.00	30.54	32.08	34.45	2.37	34.25	2.17	32.65	34.08	0.035251	6.26	8.79	5.70	1.61	
valle	5.79	Q500	76.00	30.54	32.46	34.45	1.99	34.25	1.79	33.17	34.91	0.036034	6.94	10.96	5.70	1.60	
valle	5.78	MER 9 m	Q50	33.00	30.54	31.64	34.24	2.60	34.00	2.36	32.04	33.05	0.034113	5.27	6.26	5.70	1.61
valle	5.78	MER 9 m	Q200	55.00	30.54	32.08	34.24	2.15	34.00	1.92	32.66	34.07	0.035127	6.25	8.80	5.70	1.61
valle	5.78	MER 9 m	Q500	76.00	30.54	32.46	34.24	1.77	34.00	1.54	33.17	34.91	0.035930	6.93	10.97	5.70	1.59
valle	5.71	MER 9 v	Q50	33.00	30.39	31.55	34.24	2.69	34.00	2.46	31.90	32.83	0.029373	5.01	6.58	5.70	1.49
valle	5.71	MER 9 v	Q200	55.00	30.39	32.00	34.24	2.24	34.00	2.00	32.51	33.83	0.031083	5.99	9.18	5.70	1.51
valle	5.71	MER 9 v	Q500	76.00	30.39	32.39	34.24	1.85	34.00	1.61	33.02	34.65	0.032180	6.66	11.41	5.70	1.50
valle	5.7	Q50	33.00	30.39	31.55	34.45	2.90	34.25	2.70	31.90	32.82	0.029226	5.00	6.59	5.70	1.49	
valle	5.7	Q200	55.00	30.39	32.00	34.45	2.45	34.25	2.25	32.51	33.83	0.030970	5.98	9.19	5.70	1.50	
valle	5.7	Q500	76.00	30.39	32.39	34.45	2.06	34.25	1.86	33.02	34.65	0.032084	6.65	11.42	5.70	1.50	
valle	5.69	Q50	33.00	30.14	31.24	34.40	3.16	33.90	2.66	31.65	32.65	0.033964	5.27	6.27	5.70	1.60	
valle	5.69	Q200	55.00	30.14	31.70	34.40	2.70	33.90	2.20	32.26	33.65	0.034144	6.19	8.88	5.70	1.58	
valle	5.69	Q500	76.00	30.14	32.09	34.40	2.31	33.90	1.81	32.77	34.47	0.034537	6.83	11.12	5.70	1.56	
valle	5.68	MER 8 m	Q50	33.00	30.14	31.24	34.13	2.88	33.65	2.41	31.65	32.65	0.033796	5.26	6.28	5.70	1.60
valle	5.68	MER 8 m	Q200	55.00	30.14	31.70	34.13	2.43	33.65	1.95	32.26	33.65	0.034023	6.18	8.90	5.70	1.58
valle	5.68	MER 8 m	Q500	76.00	30.14	32.09	34.13	2.03	33.65	1.56	32.77	34.47	0.034436	6.83	11.14	5.70	1.56
valle	5.61	MER 8 v	Q50	33.00	30.09	31.28	34.13	2.84	33.65	2.37	31.60	32.48	0.026675	4.85	6.80	5.70	1.42
valle	5.61	MER 8 v	Q200	55.00	30.09	31.74	34.13	2.38	33.65	1.91	32.21	33.48	0.028812	5.83	9.43	5.70	1.45
valle	5.61	MER 8 v	Q500	76.00	30.09	32.15	34.13	1.98	33.65	1.50	32.72	34.29	0.029855	6.48	11.72	5.70	1.44
valle	5.6	Q50	33.00	30.09	31.29	34.40	3.11	33.90	2.61	31.60	32.48	0.026535	4.84	6.81	5.70	1.41	
valle	5.6	Q200	55.00	30.09	31.75	34.40	2.65	33.90	2.15	32.21	33.48	0.028706	5.83	9.44	5.70	1.44	
valle	5.6	Q500	76.00	30.09	32.15	34.40	2.25	33.90	1.75	32.71	34.29	0.029855	6.48	11.72	5.70	1.44	
valle	5	Q50	33.00	29.56	30.63	33.50	2.87	34.10	3.47	31.03	32.03	0.034289	5.23	6.31	5.98	1.63	
valle	5	Q200	55.00	29.56	31.07	33.50	2.43	34.10	3.03	31.62	33.00	0.034243	6.16	8.93	5.98	1.61	
valle	5	Q500	76.00	29.56	31.44	33.50	2.06	34.10	2.66	32.12	33.80	0.034592	6.81	11.17	5.98	1.59	

HEC-RAS Plan: PdB_feb2015 River: Mermi Reach: valle (Continued)

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
valle	4.9	Q50	33.00	29.53	30.60	33.50	2.90	34.00	3.40	30.99	31.97	0.033129	5.18	6.38	5.98	1.60
valle	4.9	Q200	55.00	29.53	31.04	33.50	2.46	34.00	2.96	31.58	32.94	0.033430	6.11	9.00	5.98	1.59
valle	4.9	Q500	76.00	29.53	31.41	33.50	2.09	34.00	2.59	32.08	33.74	0.033939	6.77	11.23	5.98	1.58
valle	4.4	MER 7 Q50	33.00	29.28	31.22	33.50	2.28	34.00	2.78	30.74	31.63	0.005798	2.83	11.65	6.00	0.65
valle	4.4	MER 7 Q200	55.00	29.28	31.91	33.50	1.59	34.00	2.09	31.33	32.53	0.006990	3.49	15.76	6.00	0.69
valle	4.4	MER 7 Q500	76.00	29.28	32.67	33.50	0.83	34.00	1.33	31.82	33.38	0.006737	3.73	20.37	6.00	0.65
valle	4.3	Q50	33.00	29.36	30.80	33.49	2.69	33.78	2.98	30.79	31.51	0.012941	3.74	8.83	6.14	1.00
valle	4.3	Q200	55.00	29.36	31.62	33.49	1.87	33.78	2.16	31.37	32.42	0.009991	3.97	13.85	6.14	0.84
valle	4.3	Q500	76.00	29.36	32.51	33.49	0.98	33.78	1.27	31.86	33.30	0.007701	3.93	19.36	6.14	0.71
valle	4.2	MER 6 m Q50	33.00	29.34	30.79	33.05	2.26	33.32	2.53	30.77	31.49	0.012506	3.70	8.93	6.14	0.98
valle	4.2	MER 6 m Q200	55.00	29.34	31.62	33.05	1.43	33.32	1.70	31.35	32.41	0.009753	3.94	13.98	6.14	0.83
valle	4.2	MER 6 m Q500	76.00	29.34	32.51	33.05	0.54	33.32	0.81	31.84	33.29	0.007580	3.90	19.47	6.14	0.70
valle	4.1	MER 6 v Q50	33.00	29.26	30.80	33.05	2.25	33.32	2.52	30.69	31.42	0.010619	3.49	9.45	6.14	0.90
valle	4.1	MER 6 v Q200	55.00	29.26	31.61	33.05	1.44	33.32	1.71	31.28	32.35	0.008878	3.80	14.46	6.14	0.79
valle	4.1	MER 6 v Q500	76.00	29.26	32.51	33.05	0.54	33.32	0.81	31.76	33.25	0.007120	3.81	19.94	6.14	0.68
valle	4	Q50	33.00	29.24	30.80	33.49	2.69	33.78	2.98	30.67	31.40	0.010214	3.45	9.58	6.14	0.88
valle	4	Q200	55.00	29.24	31.61	33.49	1.88	33.78	2.17	31.26	32.34	0.008680	3.77	14.58	6.14	0.78
valle	4	Q500	76.00	29.24	32.51	33.49	0.98	33.78	1.27	31.74	33.24	0.007013	3.79	20.05	6.14	0.67
valle	3.1	Q50	33.00	28.98	30.82	33.39	2.57	34.06	3.24	30.50	31.32	0.007429	3.11	10.61	5.96	0.74
valle	3.1	Q200	55.00	28.98	31.61	33.39	1.78	34.06	2.45	31.10	32.27	0.007501	3.60	15.28	5.96	0.72
valle	3.1	Q500	76.00	28.98	32.48	33.39	0.91	34.06	1.58	31.60	33.18	0.006552	3.71	20.51	5.96	0.64
valle	3	MER 5 m Q50	33.00	28.94	30.71	32.75	2.04	33.27	2.56	30.53	31.29	0.009473	3.37	9.80	6.00	0.84
valle	3	MER 5 m Q200	55.00	28.94	31.54	32.75	1.21	33.27	1.73	31.13	32.25	0.008343	3.72	14.77	6.00	0.76
valle	3	MER 5 m Q500	76.00	28.94	32.45	32.75	0.30	33.27	0.82	31.62	33.17	0.006882	3.76	20.21	6.00	0.65
valle	2.5	MER 5 v Q50	33.00	28.80	30.74	32.65	1.91	32.93	2.19	30.27	31.16	0.005976	2.87	11.51	5.93	0.66
valle	2.5	MER 5 v Q200	55.00	28.80	31.55	32.65	1.10	32.93	1.38	30.86	32.13	0.006386	3.37	16.30	5.93	0.65
valle	2.5	MER 5 v Q500	76.00	28.80	32.44	32.65	0.21	32.93	0.49	31.36	33.07	0.005803	3.52	21.58	5.93	0.59
valle	2.4	Q50	33.00	28.78	30.74	33.40	2.66	34.06	3.32	30.25	31.15	0.005808	2.84	11.63	5.93	0.65
valle	2.4	Q200	55.00	28.78	31.55	33.40	1.85	34.06	2.51	30.84	32.12	0.006268	3.35	16.41	5.93	0.64
valle	2.4	Q500	76.00	28.78	32.44	33.40	0.96	34.06	1.62	31.34	33.06	0.005727	3.50	21.69	5.93	0.58
valle	2.3	Q50	33.00	28.58	30.51	32.83	2.32	33.53	3.02	30.03	30.92	0.005930	2.86	11.56	6.00	0.66
valle	2.3	Q200	55.00	28.58	31.28	32.83	1.55	33.53	2.25	30.63	31.87	0.006475	3.39	16.22	6.00	0.66
valle	2.3	Q500	76.00	28.58	32.22	32.83	0.61	33.53	1.31	31.12	32.84	0.005608	3.48	21.85	6.00	0.58
valle	2.2	MER 4 m Q50	33.00	28.58	30.50	32.37	1.87	32.66	2.16	30.03	30.92	0.005996	2.87	11.51	6.00	0.66
valle	2.2	MER 4 m Q200	55.00	28.58	31.27	32.37	1.09	32.66	1.39	30.63	31.86	0.006529	3.40	16.17	6.00	0.66
valle	2.2	MER 4 m Q500	76.00	28.58	32.21	32.37	0.15	32.66	0.45	31.12	32.83	0.005634	3.48	21.81	6.00	0.58
valle	2.1	MER 4 v Q50	33.00	28.54	30.45	32.37	1.91	32.66	2.21	30.00	30.87	0.006033	2.87	11.49	6.00	0.66
valle	2.1	MER 4 v Q200	55.00	28.54	31.22	32.37	1.14	32.66	1.44	30.58	31.82	0.006602	3.42	16.10	6.00	0.67
valle	2.1	MER 4 v Q500	76.00	28.54	32.17	32.37	0.19	32.66	0.49	31.08	32.79	0.005636	3.48	21.81	6.00	0.58

HEC-RAS Plan: PdB_feb2015 River: Mermi Reach: valle (Continued)

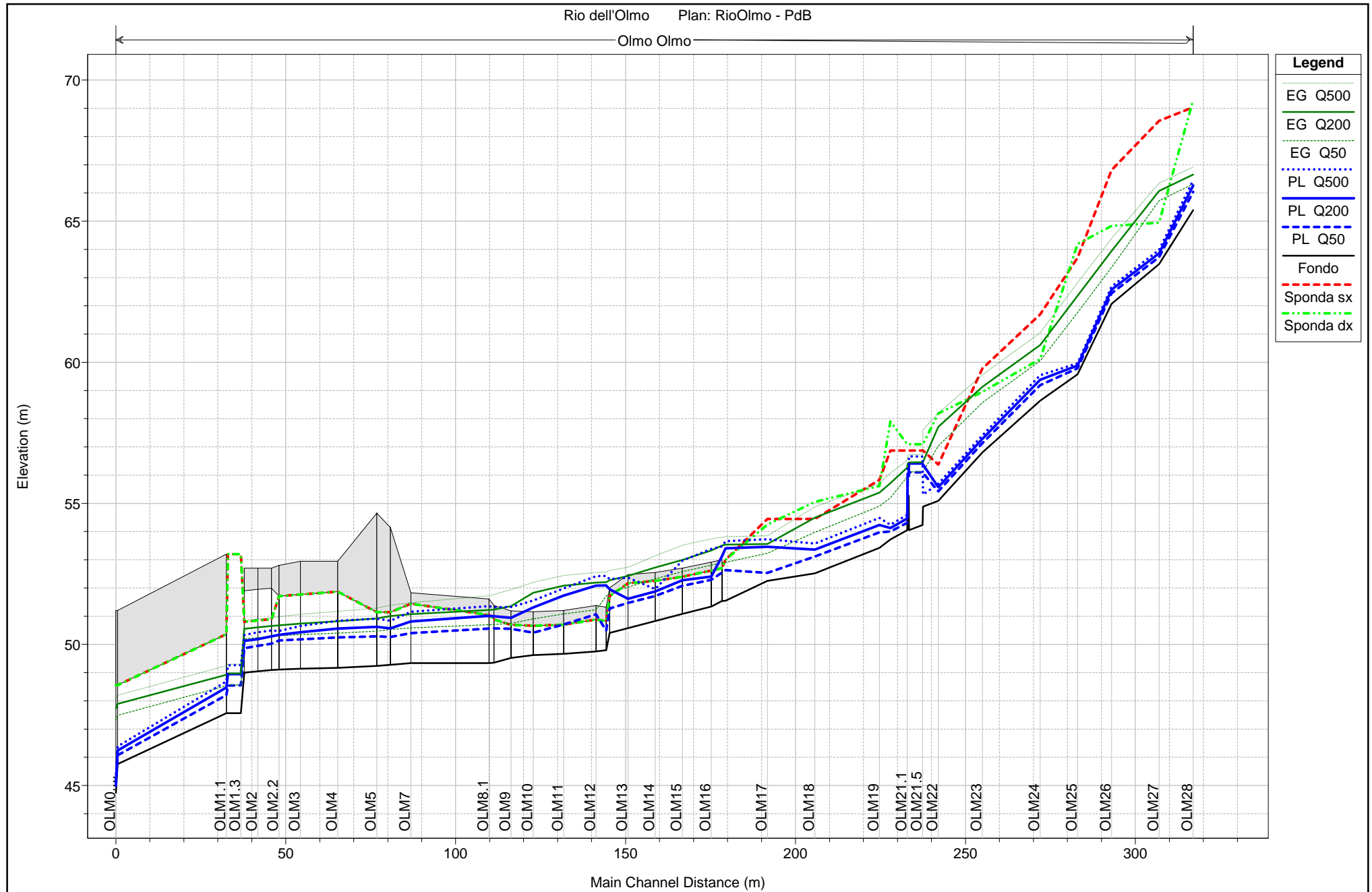
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
valle	2	Q50	33.00	28.54	30.44	32.82	2.38	33.53	3.09	29.99	30.87	0.004646	2.90	11.37	7.97	0.67
valle	2	Q200	55.00	28.54	31.21	32.82	1.61	33.53	2.32	30.59	31.81	0.004725	3.45	15.96	7.97	0.67
valle	2	Q500	76.00	28.54	32.16	32.82	0.66	33.53	1.37	31.08	32.79	0.003744	3.51	21.66	7.97	0.59
valle	1.2 MER 3	Q50	33.00	28.41	30.35	31.93	1.58	32.99	2.64	29.84	30.73	0.005359	2.75	12.02	6.23	0.63
valle	1.2 MER 3	Q200	55.00	28.41	31.12	31.93	0.81	32.99	1.87	30.41	31.66	0.005870	3.27	16.82	6.23	0.64
valle	1.2 MER 3	Q500	76.00	28.41	32.24	31.93	-0.31	32.99	0.75	30.90	32.63	0.003450	2.85	28.64	9.83	0.47
valle	1.11	Q50	33.00	28.38	30.25	31.93	1.68	32.99	2.74	29.84	30.69	0.006472	2.95	11.20	6.00	0.69
valle	1.11	Q200	55.00	28.38	30.98	31.93	0.95	32.99	2.01	30.43	31.61	0.007188	3.52	15.60	6.00	0.70
valle	1.11	Q500	76.00	28.38	31.92	31.93	0.01	32.99	1.07	30.92	32.57	0.006040	3.58	21.24	6.00	0.61
valle	1.1	Q50	33.00	28.25	29.98	31.93	1.95	32.38	2.40	29.70	30.49	0.008056	3.18	10.37	6.00	0.77
valle	1.1	Q200	55.00	28.25	30.65	31.93	1.28	32.38	1.73	30.30	31.39	0.008915	3.81	14.42	6.00	0.79
valle	1.1	Q500	76.00	28.25	31.74	31.93	0.19	32.38	0.64	30.79	32.41	0.006278	3.63	20.92	6.00	0.62
valle	1 MER 2	Q50	33.00	28.24	29.97	30.65	0.68	30.57	0.60	29.70	30.49	0.008124	3.19	10.34	6.00	0.78
valle	1 MER 2	Q200	55.00	28.24	30.64	30.65	0.01	30.57	-0.07	30.29	31.39	0.009201	3.83	14.36	5.79	0.79
valle	1 MER 2	Q500	76.00	28.24	31.27	30.65	-0.62	30.57	-0.70	30.70	32.36	0.019864	4.62	16.46		0.85
valle	0.3	Q50	33.00	28.24	29.93	30.65	0.72	30.57	0.64	29.71	30.48	0.008770	3.28	10.05	6.00	0.81
valle	0.3	Q200	55.00	28.24	30.60	30.65	0.05	30.57	-0.03	30.30	31.38	0.009599	3.91	14.05	5.92	0.81
valle	0.3	Q500	76.00	28.24	31.24	30.65	-0.59	30.57	-0.67	30.70	32.34	0.019987	4.63	16.41		0.85
valle	0.2	Q50	33.00	28.18	29.72	30.38	0.66	30.31	0.59	29.62	30.35	0.010818	3.52	9.38	6.09	0.91
valle	0.2	Q200	55.00	28.18	30.39	30.38	-0.01	30.31	-0.08	30.20	31.24	0.011081	4.09	13.44	5.86	0.88
valle	0.2	Q500	76.00	28.18	30.88	30.38	-0.50	30.31	-0.57	30.54	32.09	0.018615	4.87	15.60	2.62	0.95
valle	0.1	Q50	33.00	28.18	29.69	30.38	0.69	30.31	0.62	29.62	30.34	0.011290	3.57	9.24	6.09	0.93
valle	0.1	Q200	55.00	28.18	30.37	30.38	0.01	30.31	-0.06	30.20	31.24	0.011191	4.11	13.37	5.92	0.89
valle	0.1	Q500	76.00	28.18	30.86	30.38	-0.48	30.31	-0.55	30.54	32.08	0.018162	4.88	15.57	2.94	0.95
valle	0.05	Q50	33.00	28.10	29.54	30.23	0.69	30.16	0.62	29.54	30.26	0.013137	3.76	8.77	6.09	1.00
valle	0.05	Q200	55.00	28.10	30.12	30.23	0.11	30.16	0.04	30.12	31.14	0.013813	4.46	12.32	6.09	1.00
valle	0.05	Q500	76.00	28.10	30.43	30.23	-0.20	30.16	-0.27	30.43	31.93	0.020829	5.41	14.04	4.69	1.13
valle	0 MER 1	Q50	33.00	26.50	27.23	32.45	5.22	32.54	5.31	27.94	30.05	0.101220	7.44	4.44	6.09	2.78
valle	0 MER 1	Q200	55.00	26.50	27.62	32.45	4.83	32.54	4.92	28.53	30.91	0.075430	8.03	6.85	6.09	2.42
valle	0 MER 1	Q500	76.00	26.50	27.96	32.45	4.49	32.54	4.58	29.01	31.70	0.067438	8.57	8.87	6.09	2.27

Allegato

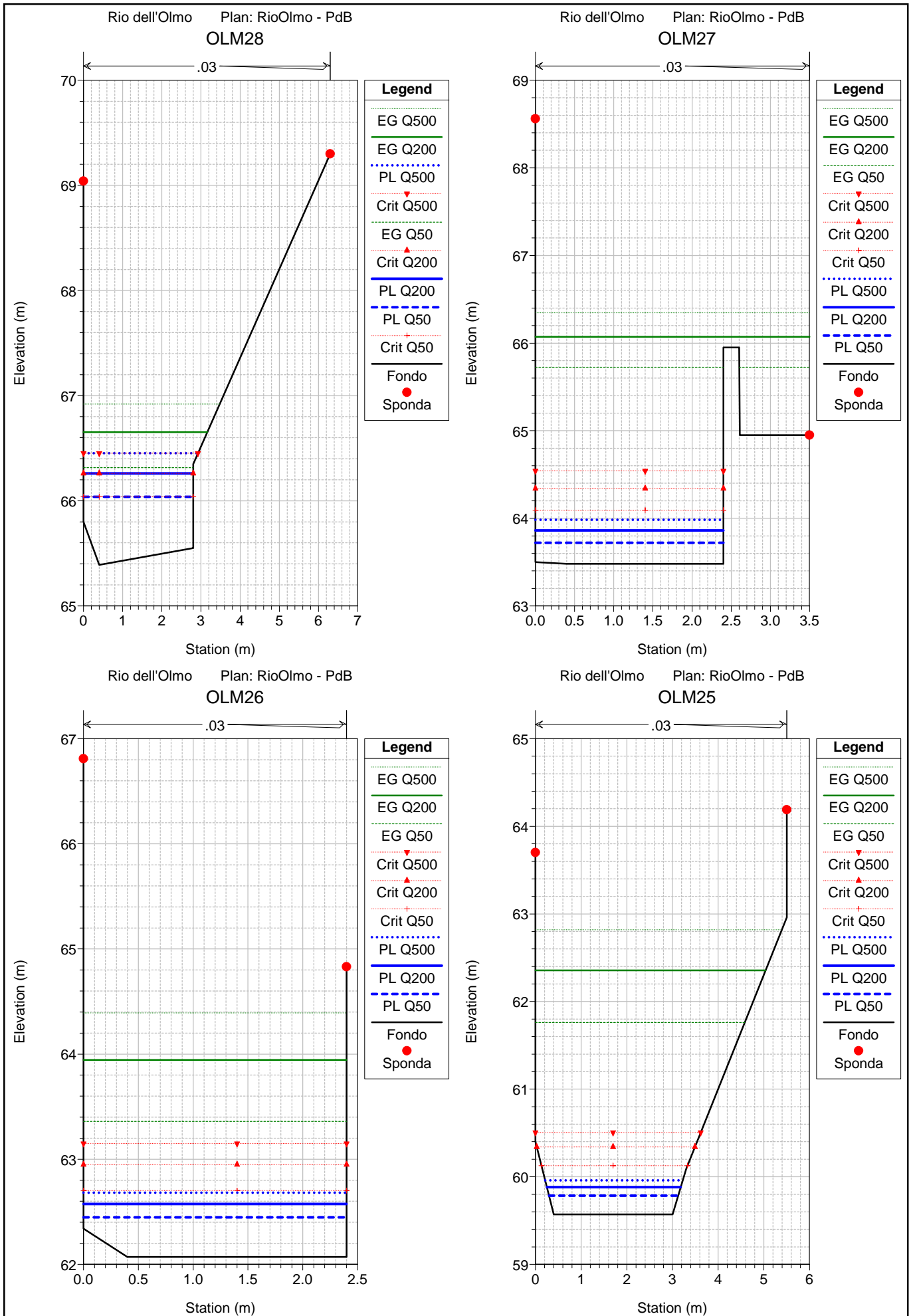
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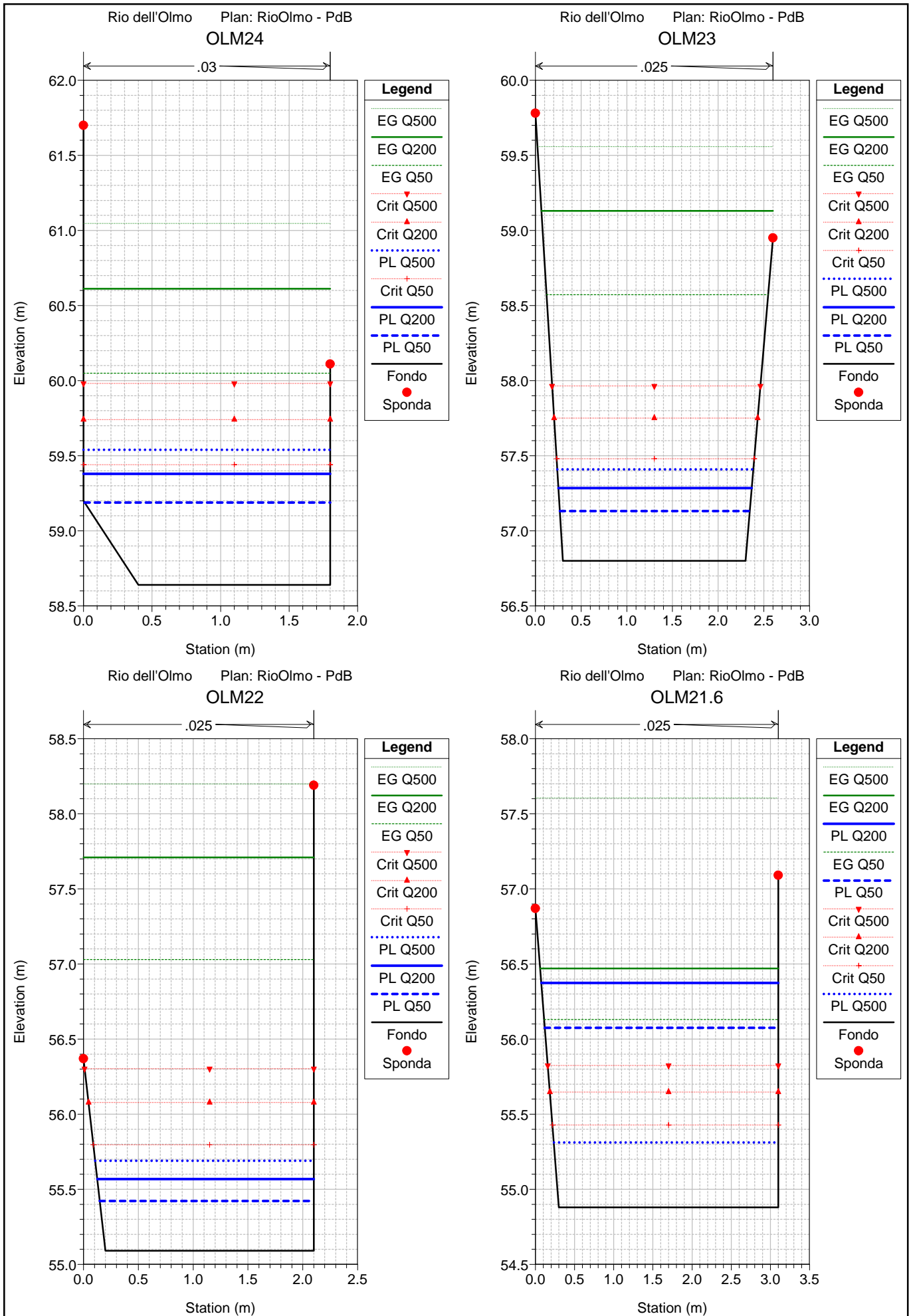
Rio dell'Olmo

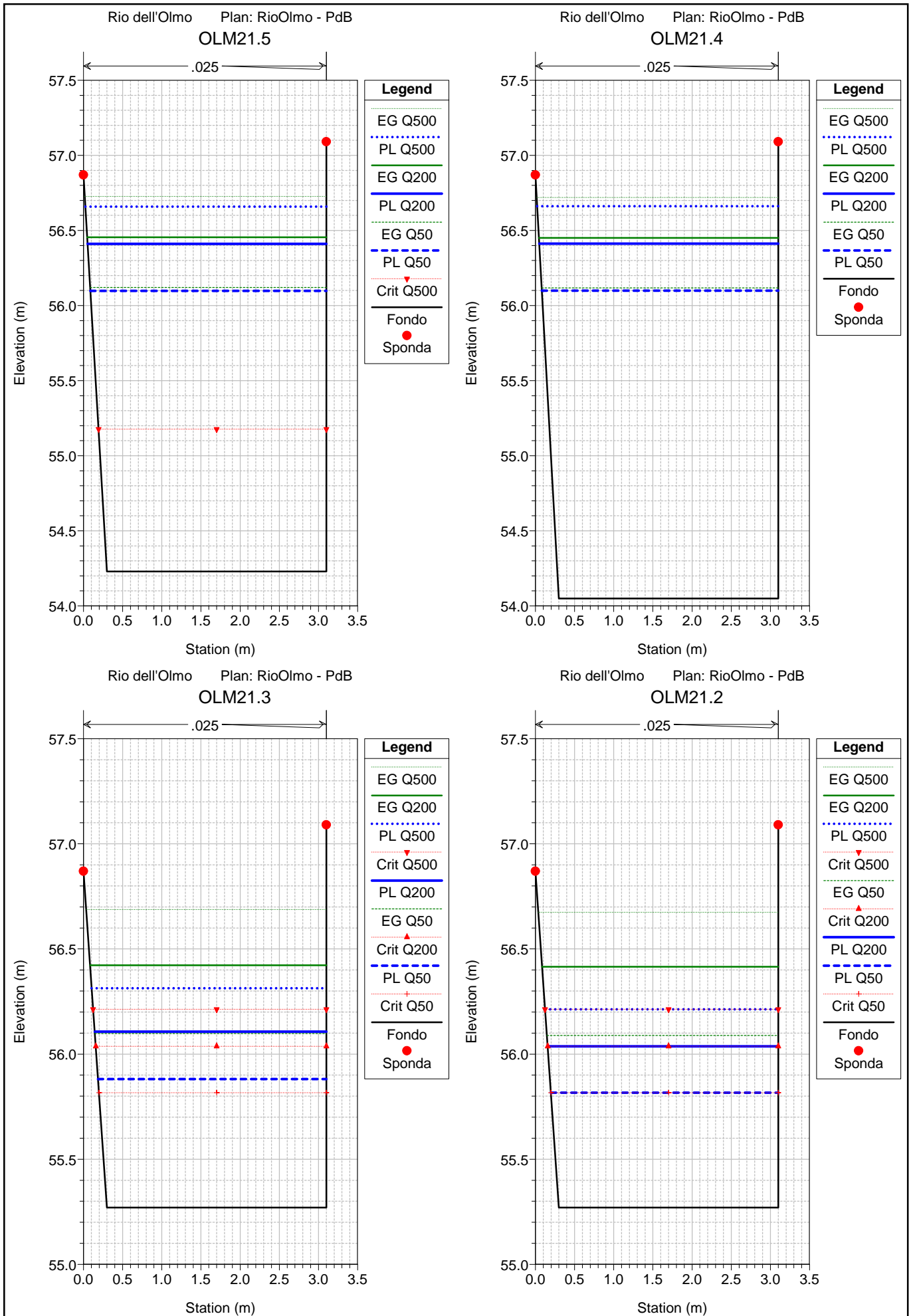
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

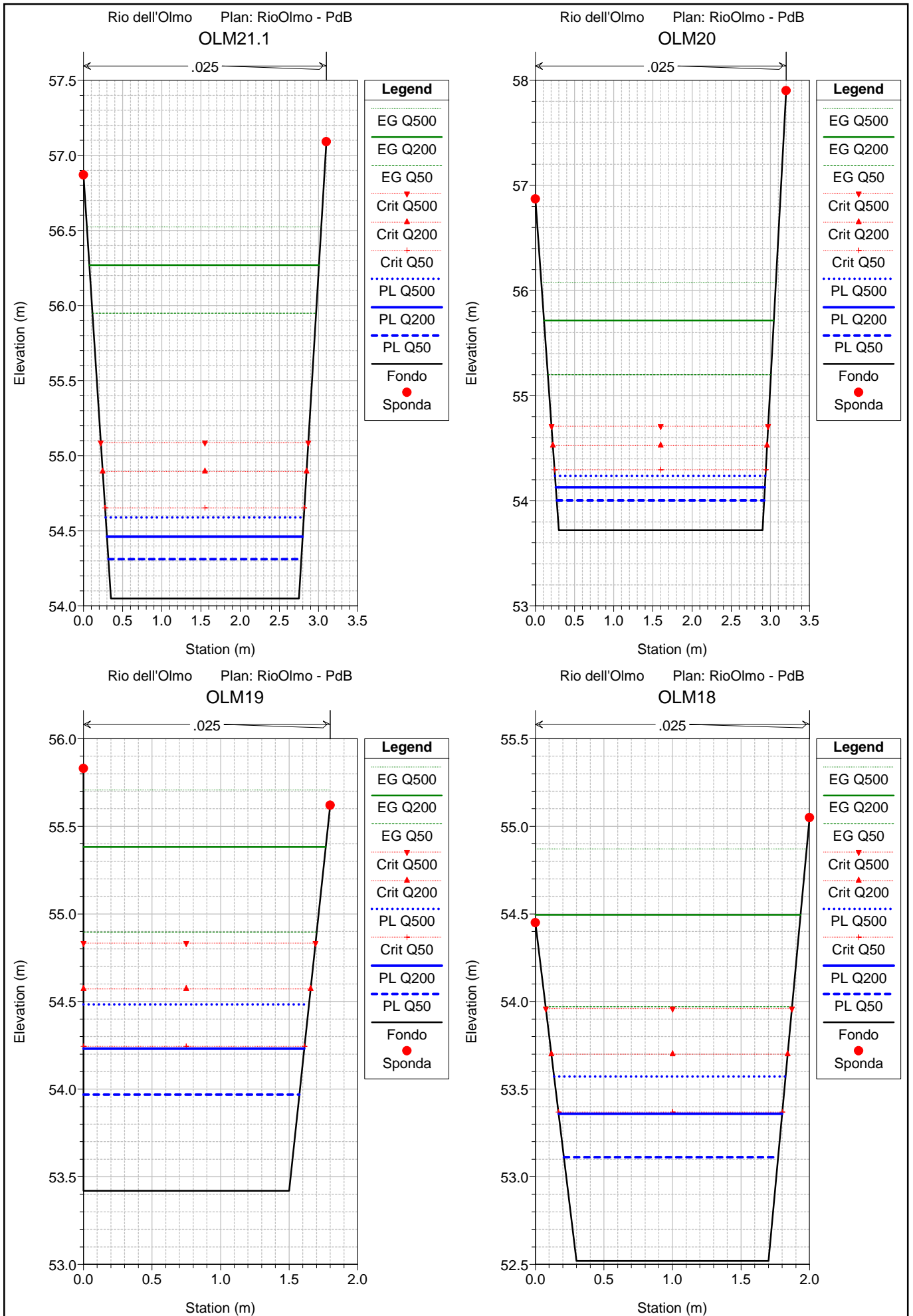


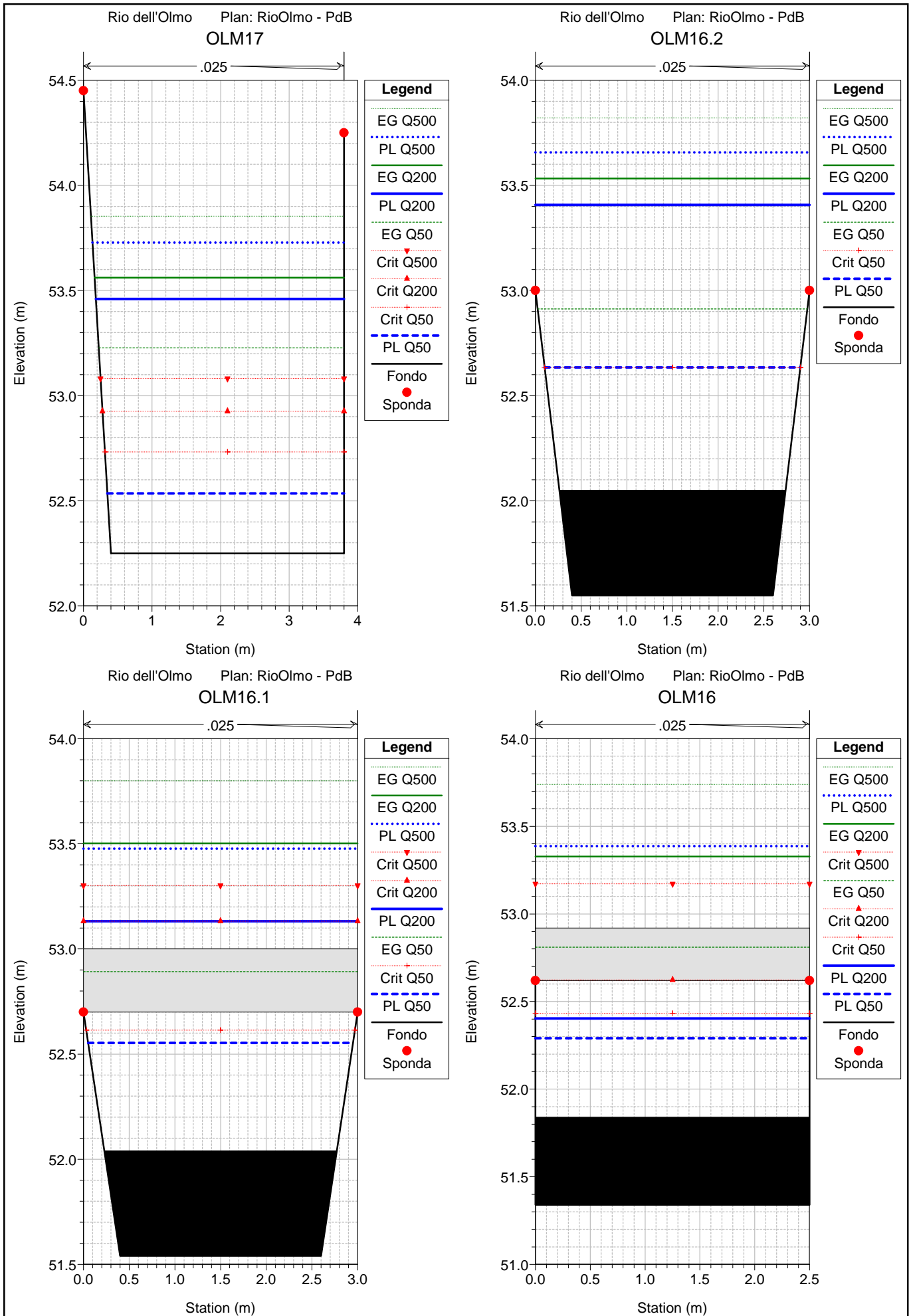
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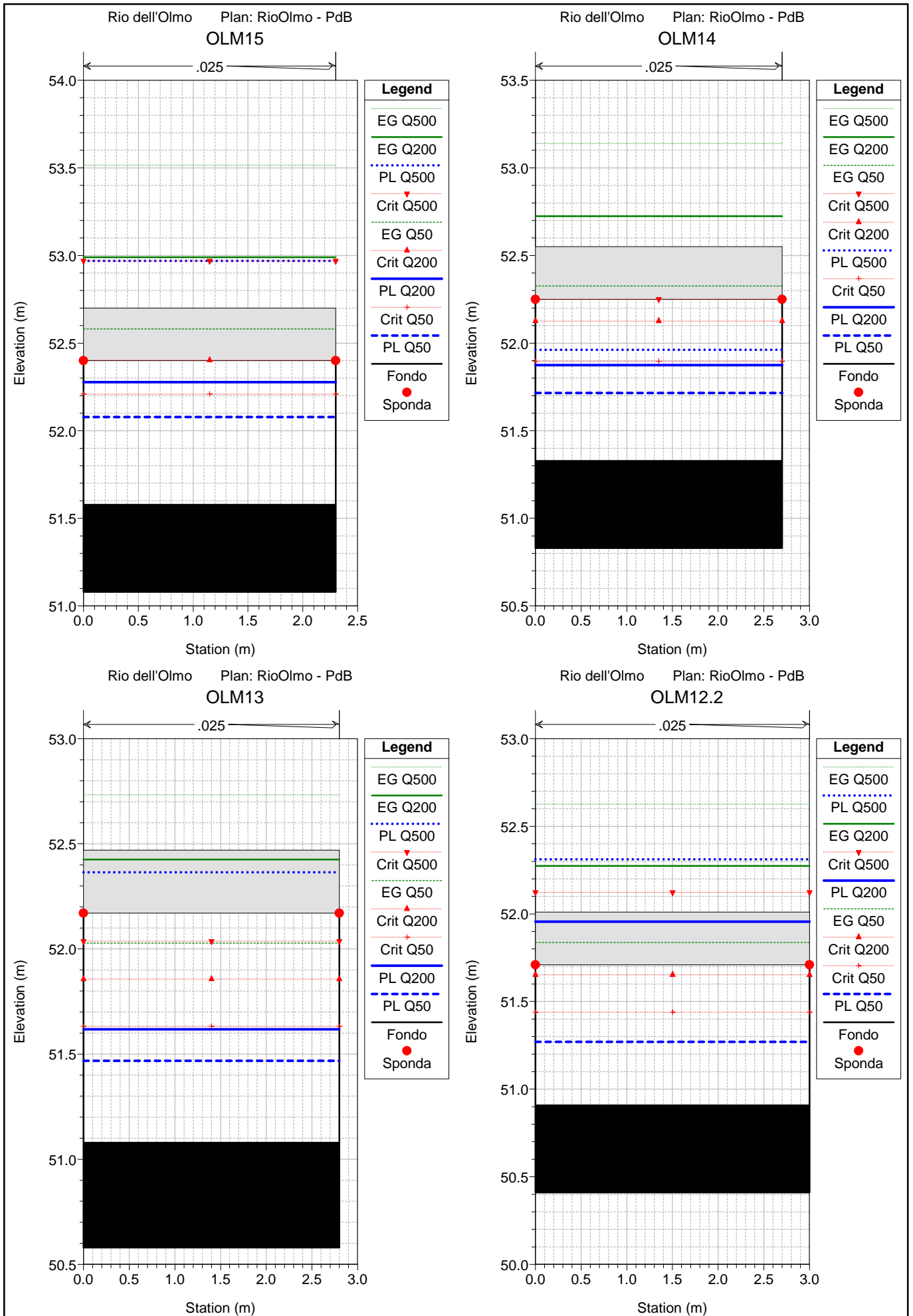


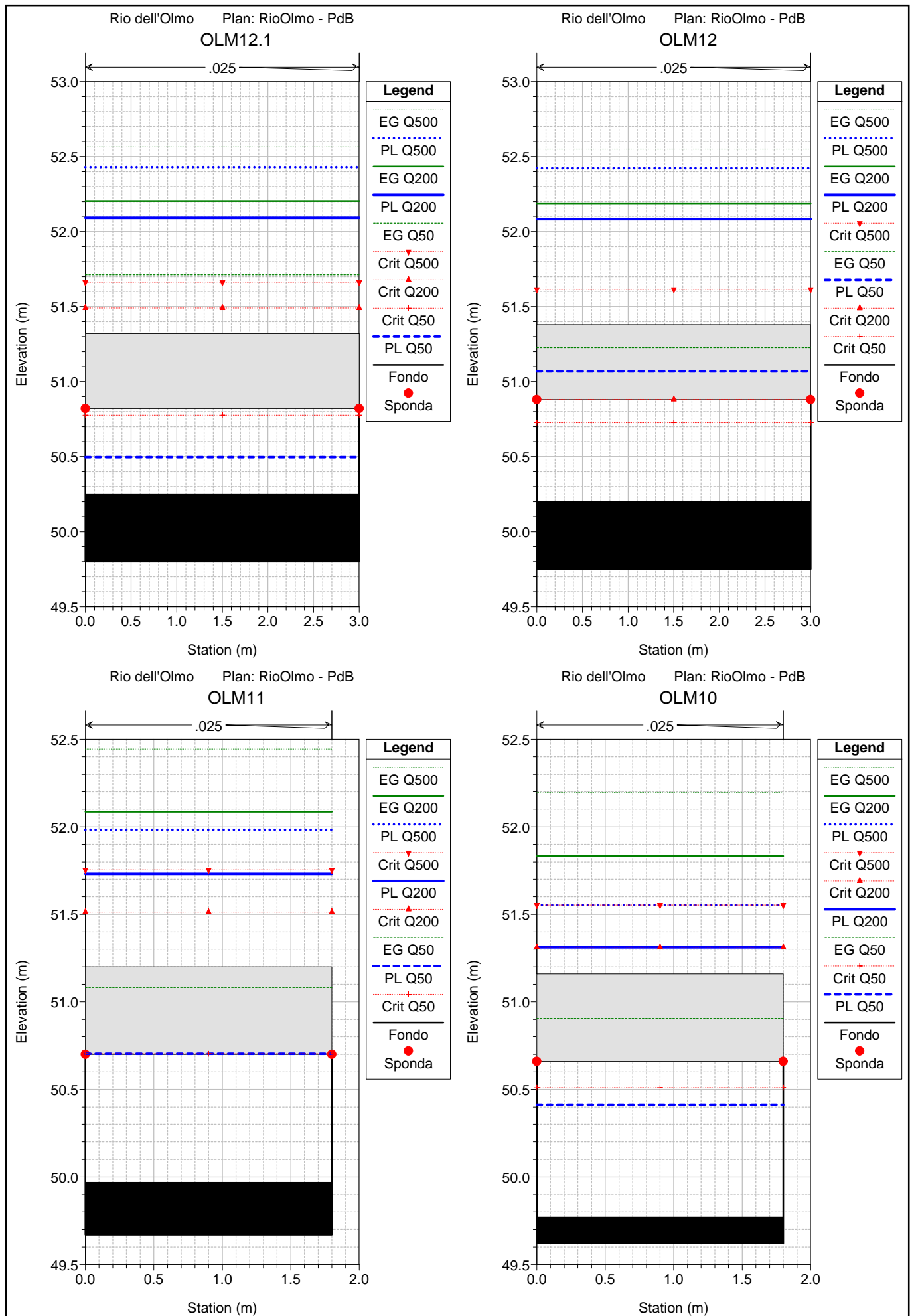


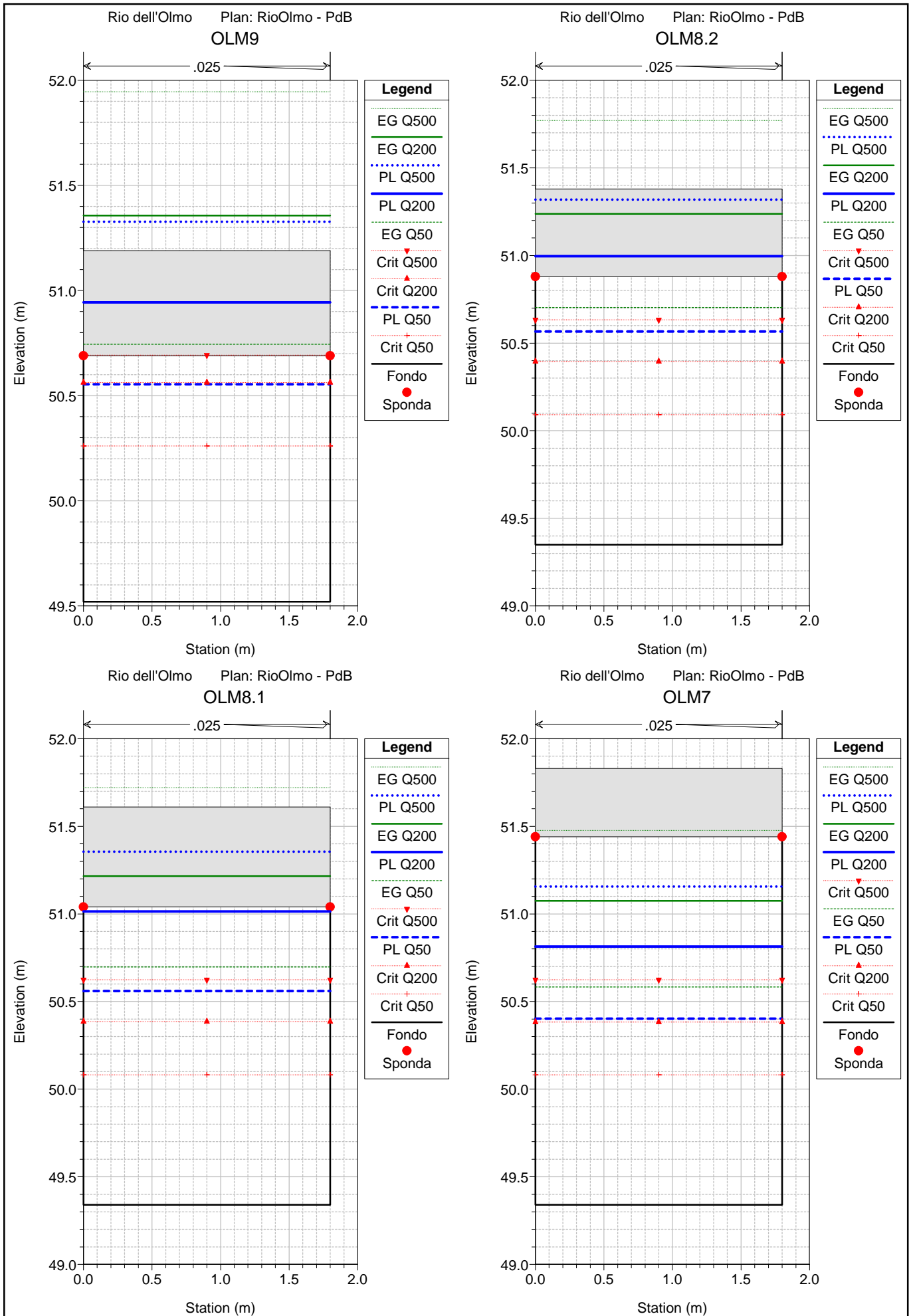


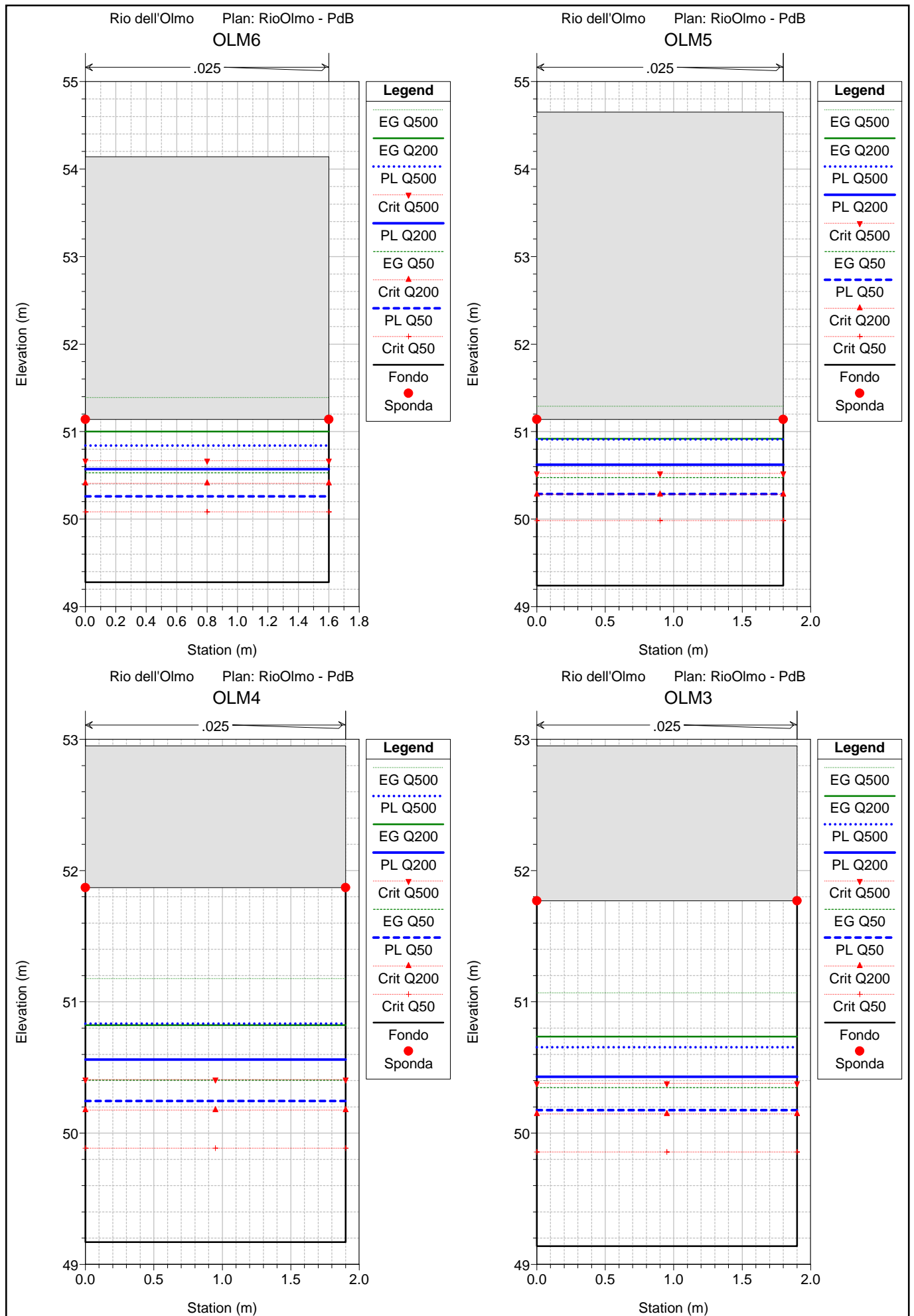


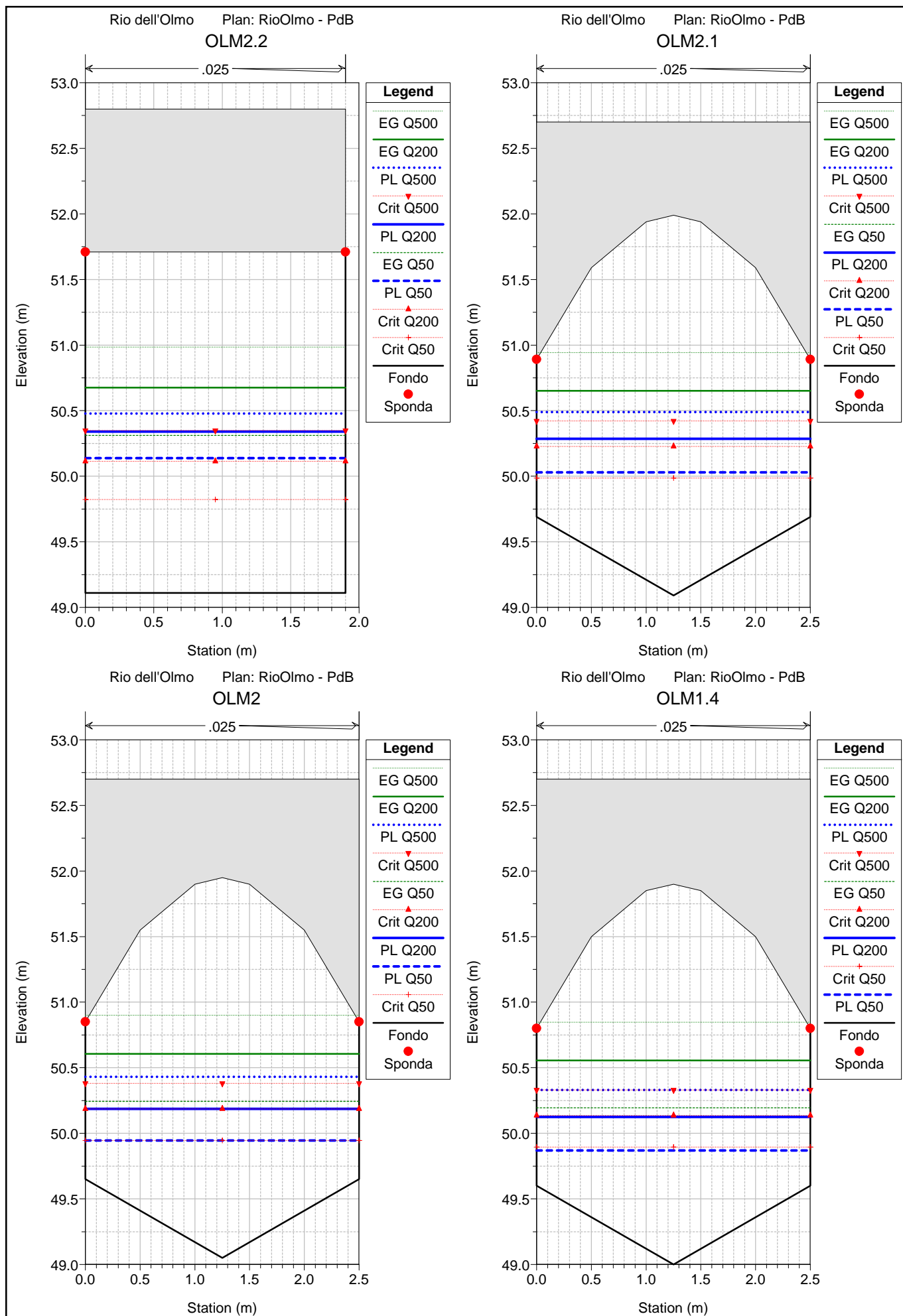


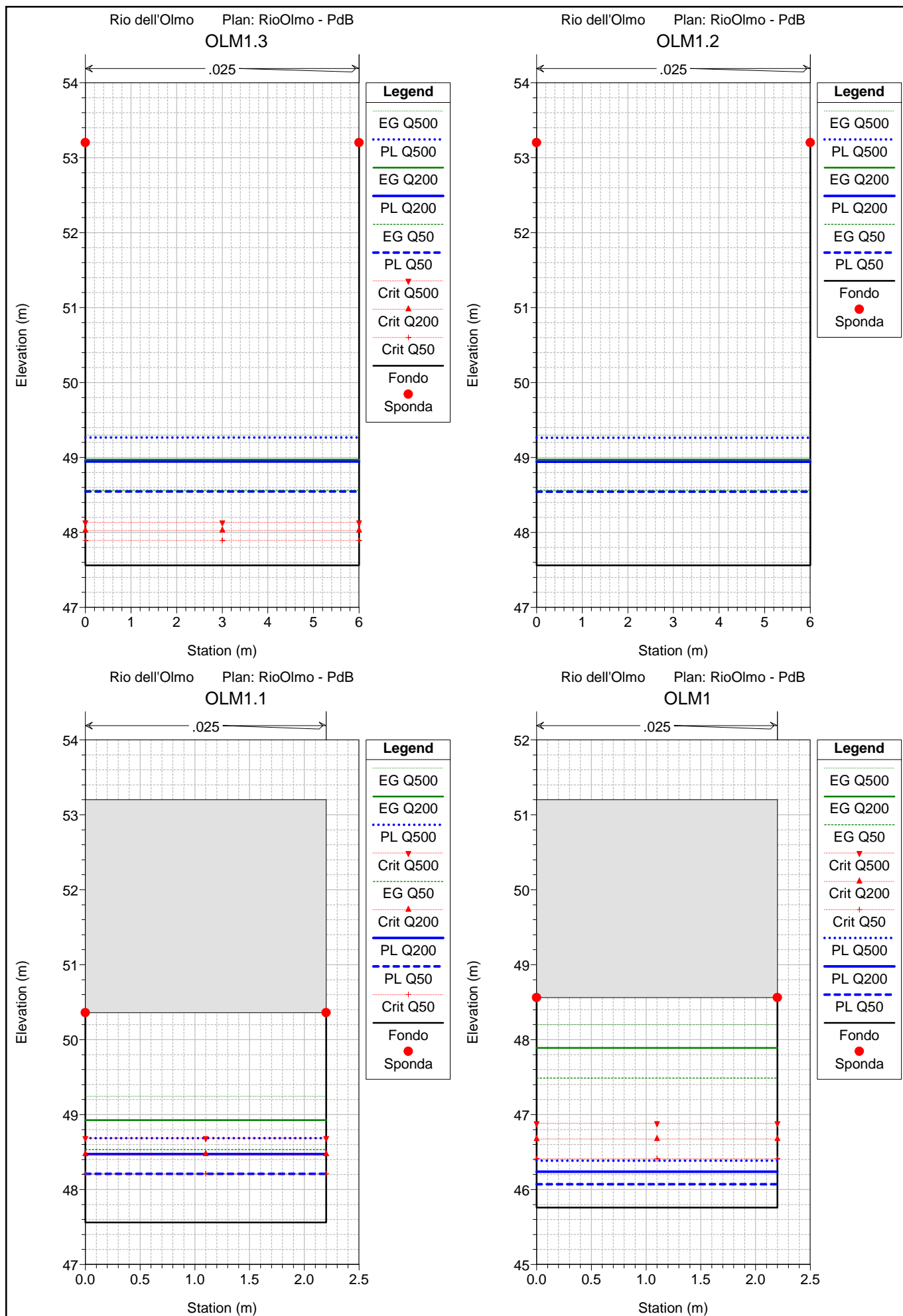


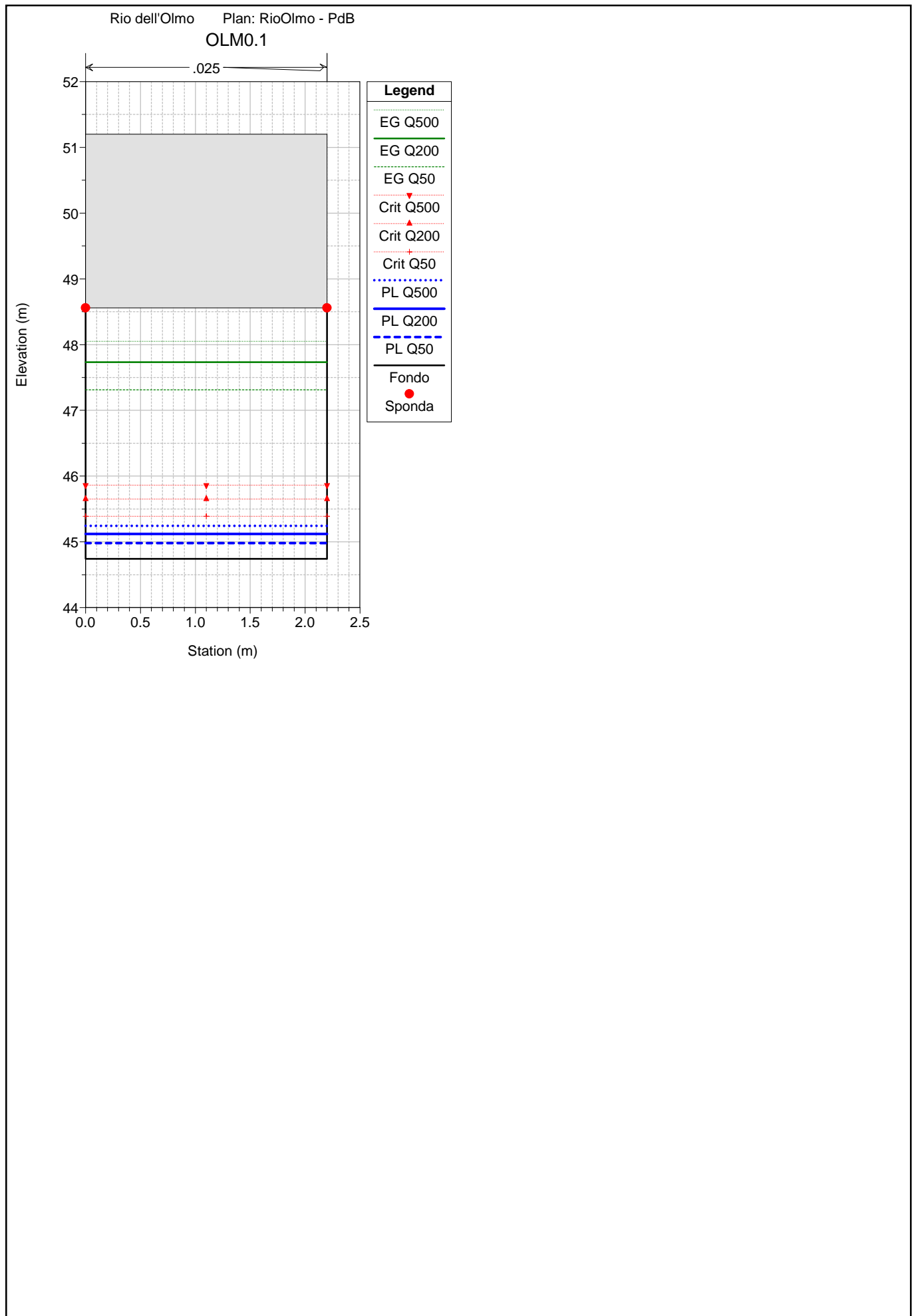












HEC-RAS Plan: 0_PdB River: Olmo Reach: Olmo

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	
Olmo	28	OLM28	Q50	3.60	65.39	66.04	69.04	3.00	69.30	3.26	66.04	66.32	0.015839	2.34	1.54	2.80	1.01
Olmo	28	OLM28	Q200	6.00	65.39	66.26	69.04	2.78	69.30	3.04	66.26	66.65	0.016473	2.77	2.16	2.80	1.01
Olmo	28	OLM28	Q500	8.20	65.39	66.45	69.04	2.59	69.30	2.85	66.45	66.92	0.016710	3.03	2.71	2.92	1.00
Olmo	27	OLM27	Q50	3.60	63.48	63.72	68.56	4.84	64.95	1.23	64.09	65.72	0.301616	6.27	0.57	2.40	4.09
Olmo	27	OLM27	Q200	6.00	63.48	63.86	68.56	4.70	64.95	1.09	64.34	66.07	0.203544	6.59	0.91	2.40	3.41
Olmo	27	OLM27	Q500	8.20	63.48	63.98	68.56	4.58	64.95	0.97	64.54	66.35	0.165680	6.81	1.20	2.40	3.07
Olmo	26	OLM26	Q50	3.60	62.07	62.45	66.81	4.36	64.83	2.38	62.70	63.36	0.085414	4.23	0.85	2.40	2.27
Olmo	26	OLM26	Q200	6.00	62.07	62.57	66.81	4.24	64.83	2.26	62.95	63.94	0.094772	5.18	1.16	2.40	2.38
Olmo	26	OLM26	Q500	8.20	62.07	62.68	66.81	4.13	64.83	2.15	63.15	64.39	0.098526	5.79	1.42	2.40	2.41
Olmo	25	OLM25	Q50	3.60	59.57	59.78	63.70	3.92	64.19	4.41	60.13	61.76	0.325654	6.23	0.58	2.83	4.40
Olmo	25	OLM25	Q200	6.00	59.57	59.88	63.70	3.82	64.19	4.31	60.34	62.35	0.262591	6.97	0.86	2.93	4.10
Olmo	25	OLM25	Q500	8.20	59.57	59.96	63.70	3.74	64.19	4.23	60.51	62.82	0.236438	7.49	1.09	3.01	3.97
Olmo	24	OLM24	Q50	3.60	58.64	59.19	61.70	2.51	60.11	0.92	59.44	60.05	0.065667	4.11	0.88	1.79	1.88
Olmo	24	OLM24	Q200	6.00	58.64	59.38	61.70	2.32	60.11	0.73	59.74	60.61	0.072473	4.92	1.22	1.80	1.91
Olmo	24	OLM24	Q500	8.20	58.64	59.54	61.70	2.16	60.11	0.57	59.98	61.05	0.076462	5.44	1.51	1.80	1.90
Olmo	23	OLM23	Q50	3.60	56.80	57.13	59.78	2.65	58.95	1.82	57.48	58.57	0.109994	5.32	0.68	2.08	2.97
Olmo	23	OLM23	Q200	6.00	56.80	57.28	59.78	2.50	58.95	1.67	57.75	59.13	0.097350	6.02	1.00	2.12	2.80
Olmo	23	OLM23	Q500	8.20	56.80	57.41	59.78	2.37	58.95	1.54	57.97	59.56	0.092168	6.50	1.26	2.15	2.70
Olmo	22	OLM22	Q50	3.60	55.09	55.42	56.37	0.95	58.19	2.77	55.80	57.03	0.125529	5.62	0.64	1.95	3.13
Olmo	22	OLM22	Q200	6.00	55.09	55.57	56.37	0.80	58.19	2.62	56.08	57.71	0.118392	6.48	0.93	1.97	3.02
Olmo	22	OLM22	Q500	8.20	55.09	55.69	56.37	0.68	58.19	2.50	56.30	58.20	0.113326	7.02	1.17	1.99	2.92
Olmo	21.6	OLM21.6	Q50	3.60	54.88	56.07	56.87	0.80	57.09	1.02	55.43	56.13	0.001174	1.04	3.45	2.98	0.31
Olmo	21.6	OLM21.6	Q200	6.00	54.88	56.37	56.87	0.50	57.09	0.72	55.65	56.47	0.001744	1.38	4.35	3.03	0.37
Olmo	21.6	OLM21.6	Q500	8.20	54.88	55.31	56.87	1.56	57.09	1.78	55.82	57.60	0.121782	6.71	1.22	2.87	3.28
Olmo	21.5	OLM21.5	Q50	3.60	54.23	56.10	56.87	0.77	57.09	0.99		56.12	0.000353	0.66	5.43	3.01	0.16
Olmo	21.5	OLM21.5	Q200	6.00	54.23	56.41	56.87	0.46	57.09	0.68		56.46	0.000648	0.94	6.37	3.05	0.21
Olmo	21.5	OLM21.5	Q500	8.20	54.23	56.66	56.87	0.21	57.09	0.43	55.18	56.73	0.000909	1.15	7.14	3.08	0.24
Olmo	21.4	OLM21.4	Q50	3.60	54.05	56.10	56.87	0.77	57.09	0.99		56.12	0.000278	0.60	5.96	3.02	0.14
Olmo	21.4	OLM21.4	Q200	6.00	54.05	56.41	56.87	0.46	57.09	0.68		56.45	0.000529	0.87	6.91	3.05	0.18
Olmo	21.4	OLM21.4	Q500	8.20	54.05	56.66	56.87	0.21	57.09	0.43		56.72	0.000758	1.07	7.68	3.08	0.22
Olmo	21.3	OLM21.3	Q50	3.60	55.27	55.88	56.87	0.99	57.09	1.21	55.82	56.10	0.008112	2.06	1.75	2.91	0.85
Olmo	21.3	OLM21.3	Q200	6.00	55.27	56.11	56.87	0.76	57.09	0.98	56.04	56.42	0.008891	2.49	2.41	2.96	0.88
Olmo	21.3	OLM21.3	Q500	8.20	55.27	56.31	56.87	0.56	57.09	0.78	56.21	56.69	0.008777	2.71	3.02	3.00	0.86
Olmo	21.2	OLM21.2	Q50	3.60	55.27	55.82	56.87	1.05	57.09	1.27	55.82	56.09	0.011320	2.31	1.56	2.90	1.01
Olmo	21.2	OLM21.2	Q200	6.00	55.27	56.04	56.87	0.83	57.09	1.05	56.04	56.41	0.011489	2.72	2.20	2.94	1.01
Olmo	21.2	OLM21.2	Q500	8.20	55.27	56.21	56.87	0.66	57.09	0.88	56.21	56.67	0.011737	3.01	2.72	2.98	1.00
Olmo	21.1	OLM21.1	Q50	3.60	54.05	54.31	56.87	2.56	57.09	2.78	54.65	55.95	0.154078	5.67	0.63	2.46	3.56

HEC-RAS Plan: 0_PdB River: Olmo Reach: Olmo (Continued)

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
Olmo	21.1	OLM21.1	Q200	6.00	54.05	54.46	56.87	2.41	57.09	2.63	54.90	56.27	0.104787	5.96	1.01	2.50	2.99
Olmo	21.1	OLM21.1	Q500	8.20	54.05	54.59	56.87	2.28	57.09	2.50	55.09	56.52	0.085782	6.16	1.33	2.53	2.71
Olmo	20	OLM20	Q50	3.60	53.72	54.00	56.87	2.87	57.90	3.90	54.29	55.20	0.101355	4.84	0.74	2.65	2.92
Olmo	20	OLM20	Q200	6.00	53.72	54.13	56.87	2.74	57.90	3.77	54.53	55.72	0.091088	5.58	1.07	2.67	2.81
Olmo	20	OLM20	Q500	8.20	53.72	54.24	56.87	2.63	57.90	3.66	54.71	56.07	0.083151	6.00	1.37	2.69	2.69
Olmo	19	OLM19	Q50	3.60	53.42	53.97	55.83	1.86	55.62	1.65	54.24	54.90	0.051070	4.27	0.84	1.57	1.86
Olmo	19	OLM19	Q200	6.00	53.42	54.23	55.83	1.60	55.62	1.39	54.57	55.38	0.047403	4.75	1.26	1.61	1.71
Olmo	19	OLM19	Q500	8.20	53.42	54.48	55.83	1.35	55.62	1.14	54.83	55.71	0.042261	4.90	1.67	1.65	1.55
Olmo	18	OLM18	Q50	3.60	52.52	53.11	54.45	1.34	55.05	1.94	53.37	53.97	0.044719	4.10	0.88	1.56	1.75
Olmo	18	OLM18	Q200	6.00	52.52	53.36	54.45	1.09	55.05	1.69	53.70	54.49	0.045615	4.72	1.27	1.63	1.71
Olmo	18	OLM18	Q500	8.20	52.52	53.57	54.45	0.88	55.05	1.48	53.96	54.87	0.044796	5.05	1.62	1.69	1.64
Olmo	17	OLM17	Q50	3.60	52.25	52.54	54.45	1.91	54.25	1.72	52.73	53.23	0.055174	3.69	0.98	3.45	2.21
Olmo	17	OLM17	Q200	6.00	52.25	53.46	54.45	0.99	54.25	0.79	52.93	53.56	0.001910	1.41	4.25	3.62	0.42
Olmo	17	OLM17	Q500	8.20	52.25	53.73	54.45	0.72	54.25	0.52	53.08	53.85	0.002011	1.57	5.22	3.67	0.42
Olmo	16.2	OLM16.2	Q50	3.60	52.05	52.63	53.00	0.37	53.00	0.37	52.63	52.91	0.010938	2.34	1.54	2.80	1.01
Olmo	16.2	OLM16.2	Q200	6.00	52.05	53.41	53.00	-0.41	53.00	-0.41		53.53	0.002358	1.57	3.82	3.00	0.44
Olmo	16.2	OLM16.2	Q500	8.20	52.05	53.66	53.00	-0.66	53.00	-0.66		53.82	0.002736	1.79	4.57	3.00	0.46
Olmo	16.1	OLM16.1	Q50	3.60	52.04	52.55	52.70	0.15	52.70	0.15	52.61	52.89	0.014864	2.58	1.40	2.90	1.19
Olmo	16.1	OLM16.1	Q200	6.00	52.04	53.13	52.70	-0.43	52.70	-0.43	53.13	53.50	0.033468	2.70	2.22	3.00	0.82
Olmo	16.1	OLM16.1	Q500	8.20	52.04	53.48	52.70	-0.78	52.70	-0.78	53.30	53.80	0.017464	2.51	3.26	3.00	0.67
Olmo	16	OLM16	Q50	3.60	51.84	52.29	52.62	0.33	52.62	0.33	52.43	52.81	0.027780	3.19	1.13	2.50	1.52
Olmo	16	OLM16	Q200	6.00	51.84	52.40	52.62	0.22	52.62	0.22	52.62	53.33	0.039972	4.26	1.41	2.50	1.81
Olmo	16	OLM16	Q500	8.20	51.84	53.39	52.62	-0.77	52.62	-0.77	53.17	53.74	0.017927	2.63	3.12	2.50	0.67
Olmo	15	OLM15	Q50	3.60	51.58	52.08	52.40	0.32	52.40	0.32	52.21	52.58	0.025240	3.14	1.15	2.30	1.42
Olmo	15	OLM15	Q200	6.00	51.58	52.28	52.40	0.12	52.40	0.12	52.40	52.99	0.026568	3.74	1.60	2.30	1.43
Olmo	15	OLM15	Q500	8.20	51.58	52.97	52.40	-0.57	52.40	-0.57	52.97	53.52	0.034329	3.27	2.51	2.30	0.89
Olmo	14	OLM14	Q50	3.60	51.33	51.72	52.25	0.53	52.25	0.53	51.90	52.33	0.037415	3.46	1.04	2.70	1.78
Olmo	14	OLM14	Q200	6.00	51.33	51.87	52.25	0.38	52.25	0.38	52.13	52.72	0.036903	4.09	1.47	2.70	1.77
Olmo	14	OLM14	Q500	8.20	51.33	51.96	52.25	0.29	52.25	0.29	52.25	53.14	0.044505	4.81	1.71	2.70	1.93
Olmo	13	OLM13	Q50	3.60	51.08	51.47	52.17	0.70	52.17	0.70	51.63	52.03	0.033646	3.32	1.09	2.80	1.70
Olmo	13	OLM13	Q200	6.00	51.08	51.62	52.17	0.55	52.17	0.55	51.86	52.43	0.034868	3.98	1.51	2.80	1.73
Olmo	13	OLM13	Q500	8.20	51.08	52.37	52.17	-0.20	52.17	-0.20	52.04	52.73	0.015714	2.69	3.05		0.76
Olmo	12.2	OLM12.2	Q50	3.60	50.91	51.27	51.71	0.44	51.71	0.44	51.44	51.84	0.036305	3.34	1.08	3.00	1.78
Olmo	12.2	OLM12.2	Q200	6.00	50.91	51.96	51.71	-0.25	51.71	-0.25	51.65	52.27	0.018177	2.50	2.40		0.78
Olmo	12.2	OLM12.2	Q500	8.20	50.91	52.31	51.71	-0.60	51.71	-0.60	52.12	52.63	0.018175	2.48	3.31	3.00	0.67
Olmo	12.1	OLM12.1	Q50	3.60	50.25	50.50	50.82	0.32	50.82	0.32	50.78	51.71	0.118813	4.89	0.74	3.00	3.15
Olmo	12.1	OLM12.1	Q200	6.00	50.25	52.09	50.82	-1.27	50.82	-1.27	51.49	52.20	0.004773	1.49	4.02	3.00	0.35

HEC-RAS Plan: 0_PdB River: Olmo Reach: Olmo (Continued)

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
Olmo	12.1	OLM12.1	Q500	8.20	50.25	52.43	50.82	-1.61	50.82	-1.61	51.66	52.56	0.004209	1.63	5.04	3.00	0.35
Olmo	12	OLM12	Q50	3.60	50.20	51.07	50.88	-0.19	50.88	-0.19	50.73	51.23	0.010768	1.76	2.04		0.60
Olmo	12	OLM12	Q200	6.00	50.20	52.08	50.88	-1.20	50.88	-1.20	50.88	52.19	0.004444	1.45	4.14	3.00	0.34
Olmo	12	OLM12	Q500	8.20	50.20	52.42	50.88	-1.54	50.88	-1.54	51.61	52.55	0.003987	1.59	5.16	3.00	0.34
Olmo	11	OLM11	Q50	3.60	49.97	50.70	50.70	0.00	50.70	0.00	50.70	51.08	0.015551	2.73	1.32	1.80	1.02
Olmo	11	OLM11	Q200	6.00	49.97	51.73	50.70	-1.03	50.70	-1.03	51.51	52.09	0.019138	2.65	2.27	1.80	0.64
Olmo	11	OLM11	Q500	8.20	49.97	51.98	50.70	-1.28	50.70	-1.28	51.75	52.44	0.019420	3.01	2.72	1.80	0.68
Olmo	10	OLM10	Q50	3.60	49.77	50.41	50.66	0.25	50.66	0.25	50.51	50.91	0.022284	3.11	1.16	1.80	1.24
Olmo	10	OLM10	Q200	6.00	49.77	51.31	50.66	-0.65	50.66	-0.65	51.31	51.83	0.038370	3.20	1.87	1.80	0.82
Olmo	10	OLM10	Q500	8.20	49.77	51.55	50.66	-0.89	50.66	-0.89	51.55	52.20	0.035707	3.55	2.31	1.80	0.85
Olmo	9	OLM9	Q50	3.60	49.52	50.55	50.69	0.14	50.69	0.14	50.26	50.74	0.006200	1.93	1.86	1.80	0.61
Olmo	9	OLM9	Q200	6.00	49.52	50.94	50.69	-0.25	50.69	-0.25	50.56	51.36	0.020206	2.85	2.11		0.76
Olmo	9	OLM9	Q500	8.20	49.52	51.33	50.69	-0.64	50.69	-0.64	50.69	51.95	0.037141	3.49	2.35	1.80	0.83
Olmo	8.2	OLM8.2	Q50	3.60	49.35	50.57	50.88	0.31	50.88	0.31	50.09	50.70	0.004070	1.64	2.19	1.80	0.48
Olmo	8.2	OLM8.2	Q200	6.00	49.35	51.00	50.88	-0.12	50.88	-0.12	50.39	51.24	0.009626	2.18	2.75		0.54
Olmo	8.2	OLM8.2	Q500	8.20	49.35	51.32	50.88	-0.44	50.88	-0.44	50.63	51.77	0.017979	2.98	2.75		0.68
Olmo	8.1	OLM8.1	Q50	3.60	49.34	50.56	51.04	0.48	51.04	0.48	50.08	50.70	0.004035	1.64	2.20	1.80	0.47
Olmo	8.1	OLM8.1	Q200	6.00	49.34	51.01	51.04	0.03	51.04	0.03	50.38	51.22	0.005063	1.99	3.01	1.80	0.49
Olmo	8.1	OLM8.1	Q500	8.20	49.34	51.36	51.04	-0.32	51.04	-0.32	50.62	51.72	0.013528	2.68	3.06		0.60
Olmo	7	OLM7	Q50	3.60	49.34	50.40	51.44	1.04	51.44	1.04	50.08	50.58	0.005785	1.88	1.91	1.80	0.58
Olmo	7	OLM7	Q200	6.00	49.34	50.81	51.44	0.63	51.44	0.63	50.38	51.07	0.006948	2.26	2.65	1.80	0.59
Olmo	7	OLM7	Q500	8.20	49.34	51.16	51.44	0.28	51.44	0.28	50.62	51.48	0.007740	2.51	3.27	1.80	0.59
Olmo	6	OLM6	Q50	3.60	49.28	50.26	51.14	0.88	51.14	0.88	50.08	50.53	0.009831	2.30	1.57	1.60	0.74
Olmo	6	OLM6	Q200	6.00	49.28	50.57	51.14	0.57	51.14	0.57	50.41	51.00	0.013494	2.90	2.07	1.60	0.82
Olmo	6	OLM6	Q500	8.20	49.28	50.84	51.14	0.30	51.14	0.30	50.67	51.39	0.015783	3.29	2.50	1.60	0.84
Olmo	5	OLM5	Q50	3.60	49.24	50.29	51.14	0.85	51.14	0.85	49.98	50.47	0.005995	1.91	1.89	1.80	0.60
Olmo	5	OLM5	Q200	6.00	49.24	50.62	51.14	0.52	51.14	0.52	50.28	50.92	0.008152	2.41	2.49	1.80	0.65
Olmo	5	OLM5	Q500	8.20	49.24	50.91	51.14	0.23	51.14	0.23	50.52	51.29	0.009507	2.73	3.01	1.80	0.67
Olmo	4	OLM4	Q50	3.60	49.17	50.24	51.87	1.63	51.87	1.63	49.89	50.40	0.004837	1.76	2.04	1.90	0.54
Olmo	4	OLM4	Q200	6.00	49.17	50.56	51.87	1.31	51.87	1.31	50.18	50.82	0.006919	2.27	2.64	1.90	0.62
Olmo	4	OLM4	Q500	8.20	49.17	50.83	51.87	1.04	51.87	1.04	50.41	51.18	0.008219	2.59	3.16	1.90	0.64
Olmo	3	OLM3	Q50	3.60	49.14	50.18	51.77	1.59	51.77	1.59	49.86	50.35	0.005331	1.83	1.97	1.90	0.57
Olmo	3	OLM3	Q200	6.00	49.14	50.43	51.77	1.34	51.77	1.34	50.15	50.73	0.008375	2.45	2.45	1.90	0.69
Olmo	3	OLM3	Q500	8.20	49.14	50.65	51.77	1.12	51.77	1.12	50.38	51.07	0.010398	2.85	2.88	1.90	0.74
Olmo	2.2	OLM2.2	Q50	3.60	49.11	50.14	51.71	1.57	51.71	1.57	49.82	50.31	0.005436	1.84	1.95	1.90	0.58
Olmo	2.2	OLM2.2	Q200	6.00	49.11	50.34	51.71	1.37	51.71	1.37	50.11	50.68	0.009462	2.57	2.34	1.90	0.74
Olmo	2.2	OLM2.2	Q500	8.20	49.11	50.48	51.71	1.23	51.71	1.23	50.35	50.98	0.013472	3.16	2.60	1.90	0.86

HEC-RAS Plan: 0_PdB River: Olmo Reach: Olmo (Continued)

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
Olmo	2.1 OLM2.1	Q50	3.60	49.09	50.03	50.89	0.86	50.89	0.86	49.99	50.29	0.008868	2.25	1.60	2.50	0.90
Olmo	2.1 OLM2.1	Q200	6.00	49.09	50.29	50.89	0.60	50.89	0.60	50.23	50.65	0.009615	2.68	2.24	2.50	0.90
Olmo	2.1 OLM2.1	Q500	8.20	49.09	50.49	50.89	0.40	50.89	0.40	50.42	50.94	0.010349	2.99	2.75	2.50	0.91
Olmo	2 OLM2	Q50	3.60	49.05	49.95	50.85	0.90	50.85	0.90	49.95	50.24	0.010828	2.42	1.49	2.50	1.00
Olmo	2 OLM2	Q200	6.00	49.05	50.19	50.85	0.66	50.85	0.66	50.19	50.61	0.011599	2.87	2.09	2.50	1.00
Olmo	2 OLM2	Q500	8.20	49.05	50.43	50.85	0.42	50.85	0.42	50.38	50.90	0.010813	3.04	2.70	2.50	0.93
Olmo	1.4 OLM1.4	Q50	3.60	49.00	49.87	50.80	0.93	50.80	0.93	49.89	50.20	0.012375	2.53	1.42	2.50	1.07
Olmo	1.4 OLM1.4	Q200	6.00	49.00	50.12	50.80	0.68	50.80	0.68	50.14	50.56	0.012068	2.91	2.06	2.50	1.02
Olmo	1.4 OLM1.4	Q500	8.20	49.00	50.33	50.80	0.47	50.80	0.47	50.33	50.85	0.012279	3.18	2.58	2.50	1.00
Olmo	1.3 OLM1.3	Q50	3.60	47.56	48.55	53.20	4.65	53.20	4.65	47.89	48.57	0.000344	0.61	5.92	6.00	0.20
Olmo	1.3 OLM1.3	Q200	6.00	47.56	48.95	53.20	4.25	53.20	4.25	48.03	48.97	0.000350	0.72	8.31	6.00	0.20
Olmo	1.3 OLM1.3	Q500	8.20	47.56	49.27	53.20	3.93	53.20	3.93	48.13	49.30	0.000359	0.80	10.24	6.00	0.20
Olmo	1.2 OLM1.2	Q50	3.60	47.56	48.54	53.20	4.66	53.20	4.66		48.56	0.000346	0.61	5.91	6.00	0.20
Olmo	1.2 OLM1.2	Q200	6.00	47.56	48.94	53.20	4.26	53.20	4.26		48.97	0.000351	0.72	8.31	6.00	0.20
Olmo	1.2 OLM1.2	Q500	8.20	47.56	49.26	53.20	3.94	53.20	3.94		49.30	0.000359	0.80	10.23	6.00	0.20
Olmo	1.1 OLM1.1	Q50	3.60	47.56	48.21	50.36	2.15	50.36	2.15	48.21	48.53	0.013107	2.52	1.43	2.20	1.00
Olmo	1.1 OLM1.1	Q200	6.00	47.56	48.47	50.36	1.89	50.36	1.89	48.47	48.93	0.014112	2.99	2.01	2.20	1.00
Olmo	1.1 OLM1.1	Q500	8.20	47.56	48.69	50.36	1.67	50.36	1.67	48.69	49.24	0.014994	3.31	2.48	2.20	1.00
Olmo	1 OLM1	Q50	3.60	45.76	46.07	48.56	2.49	48.56	2.49	46.41	47.49	0.115082	5.27	0.68	2.20	3.02
Olmo	1 OLM1	Q200	6.00	45.76	46.24	48.56	2.32	48.56	2.32	46.67	47.89	0.087456	5.69	1.05	2.20	2.62
Olmo	1 OLM1	Q500	8.20	45.76	46.38	48.56	2.18	48.56	2.18	46.88	48.20	0.076013	5.97	1.37	2.20	2.41
Olmo	0.1 OLM0.1	Q50	3.60	44.74	44.98	48.56	3.58	48.56	3.58	45.39	47.31	0.247042	6.76	0.53	2.20	4.39
Olmo	0.1 OLM0.1	Q200	6.00	44.74	45.12	48.56	3.44	48.56	3.44	45.65	47.73	0.172560	7.16	0.84	2.20	3.70
Olmo	0.1 OLM0.1	Q500	8.20	44.74	45.24	48.56	3.32	48.56	3.32	45.86	48.05	0.142513	7.42	1.10	2.20	3.34

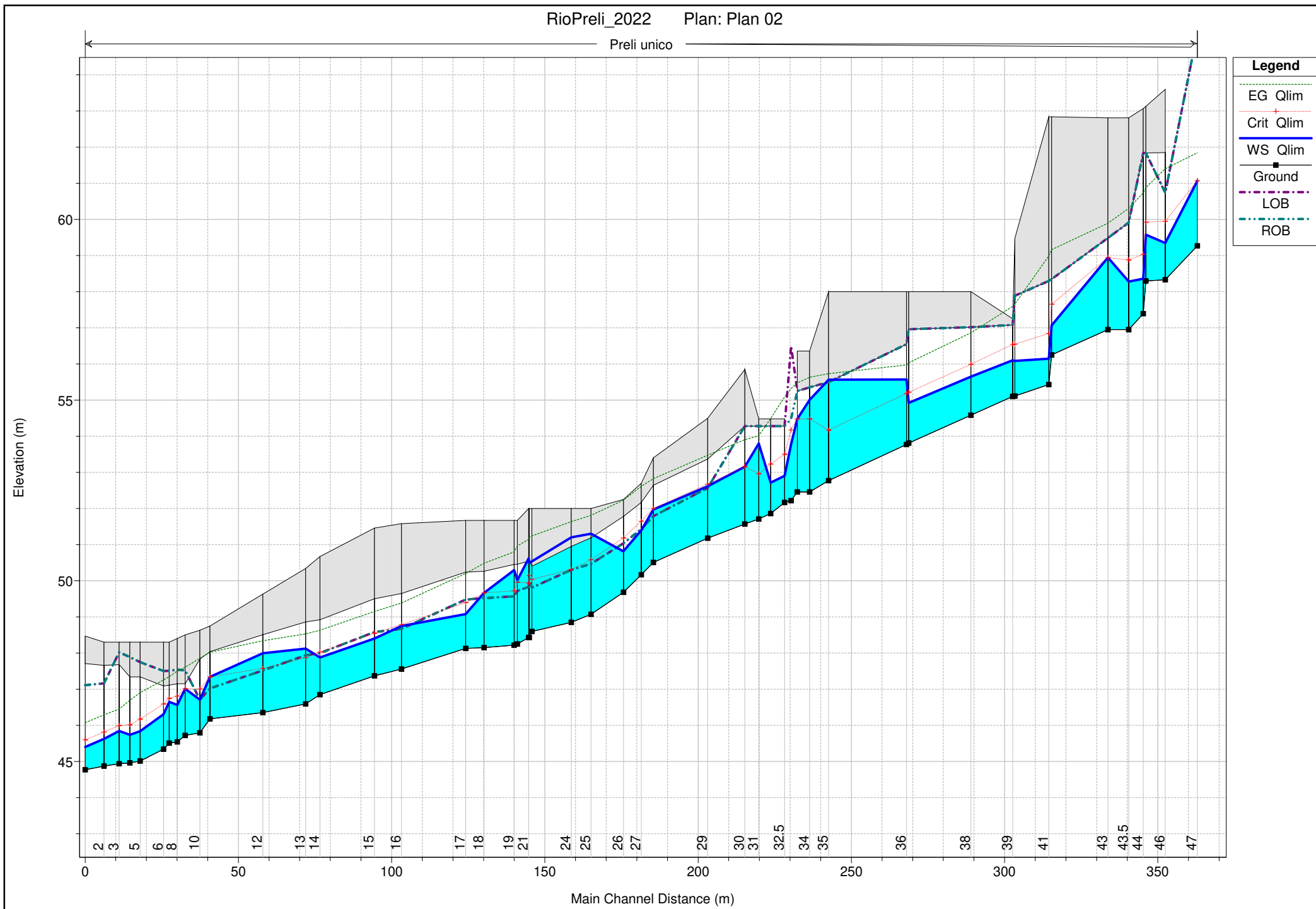
Allegato

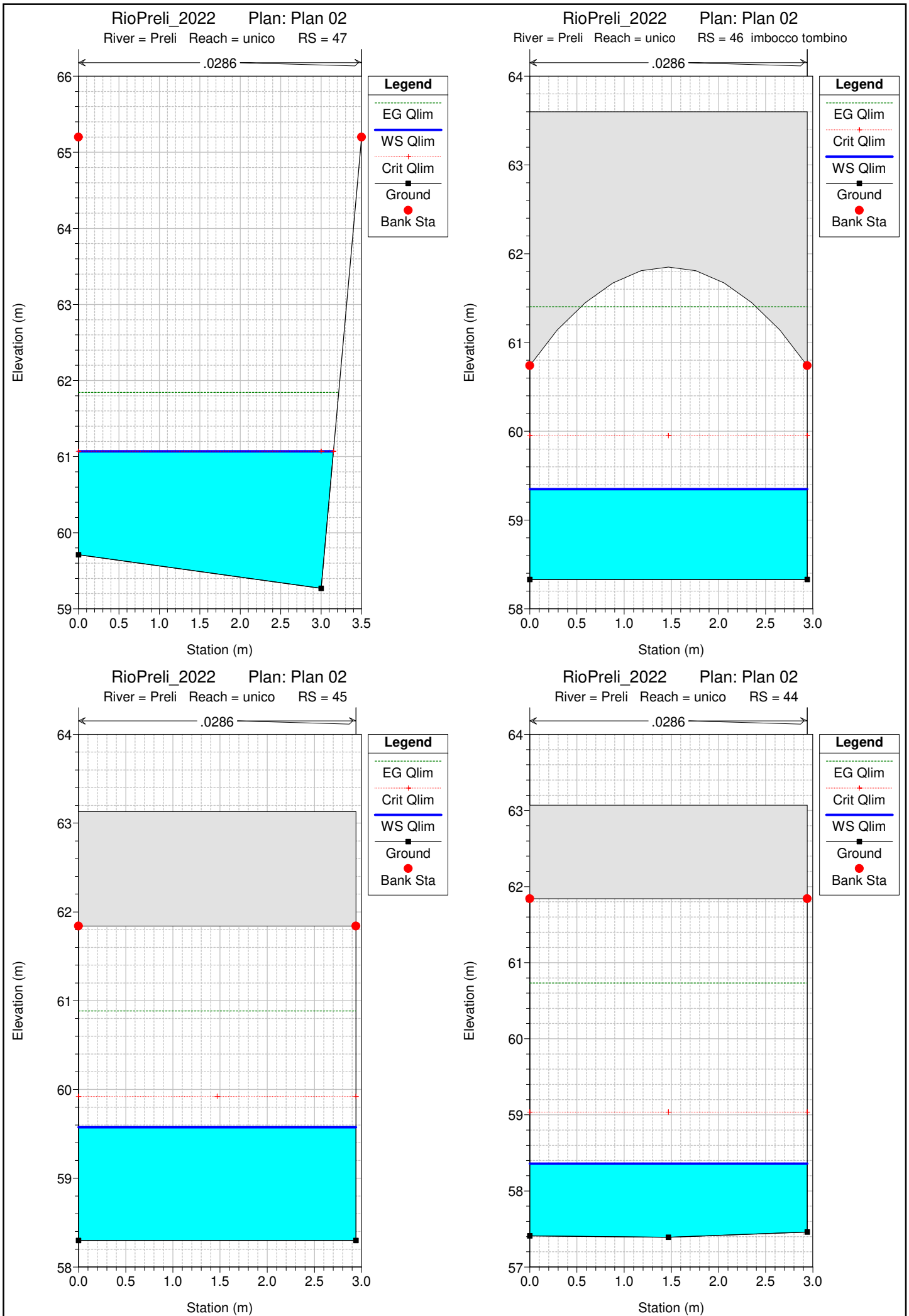
Verifiche idrauliche

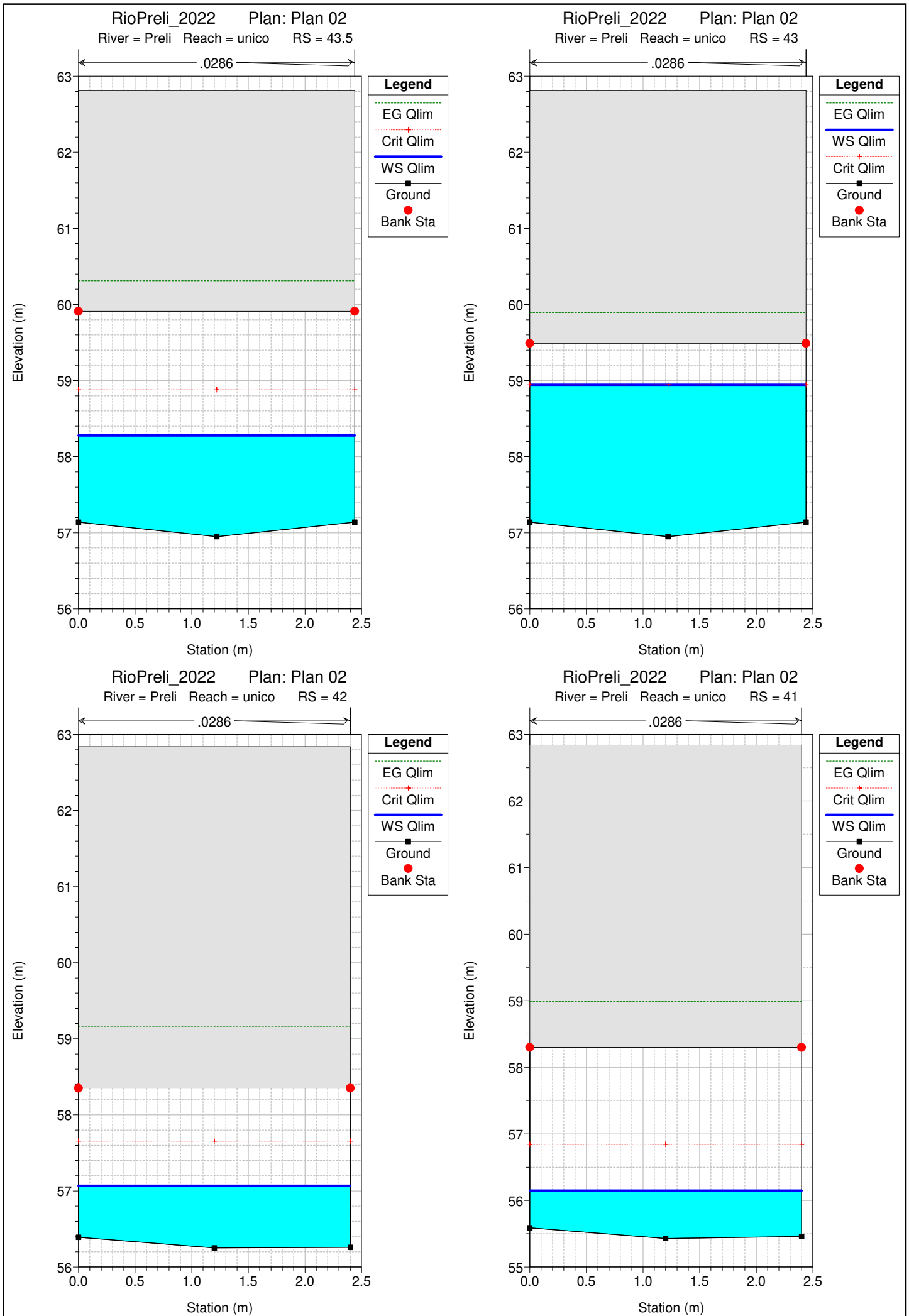
Rio Preli

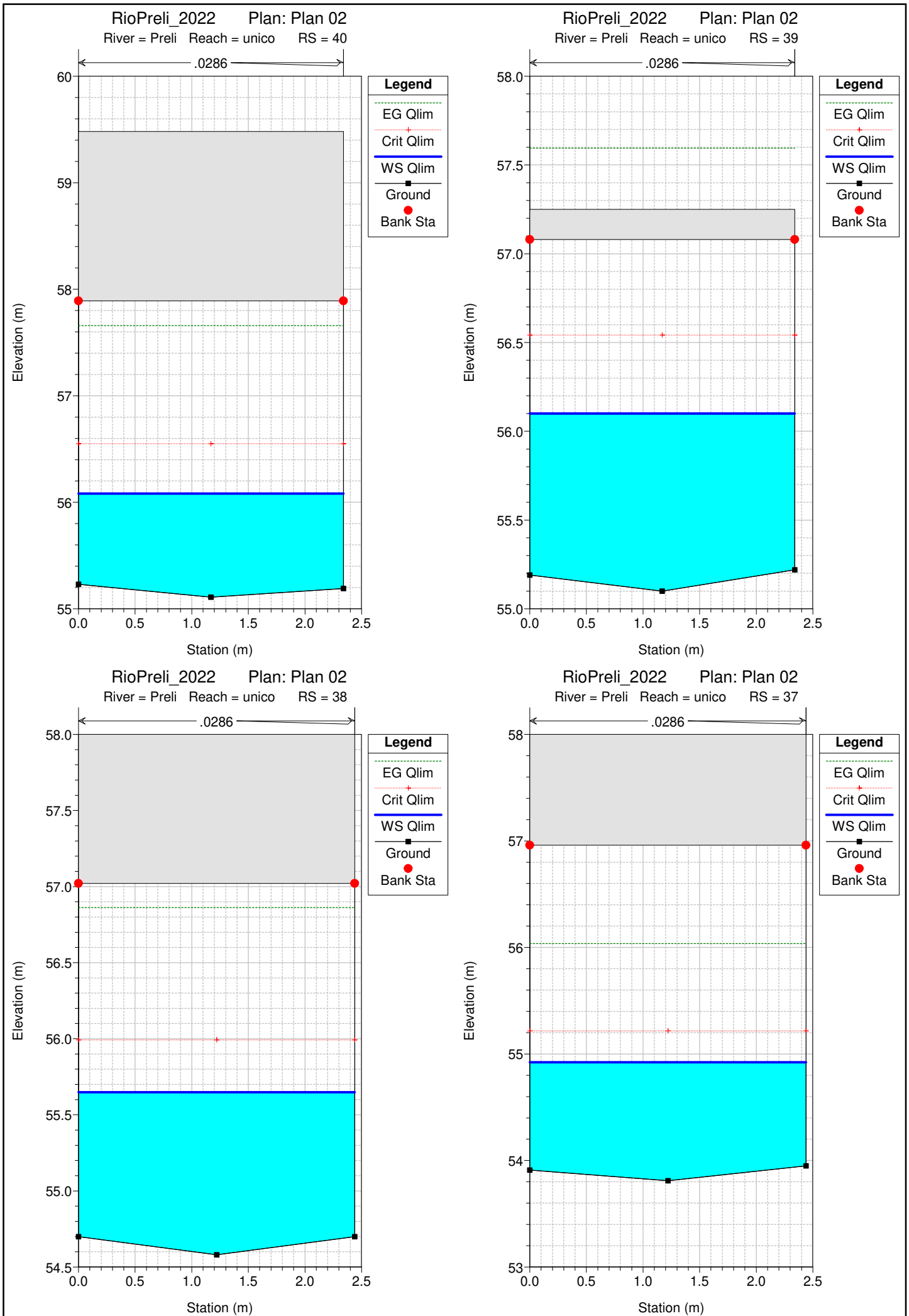
N.B. Sono riportati soltanto i risultati delle verifiche idrauliche per la portata limite, come illustrato nella relazione generale.

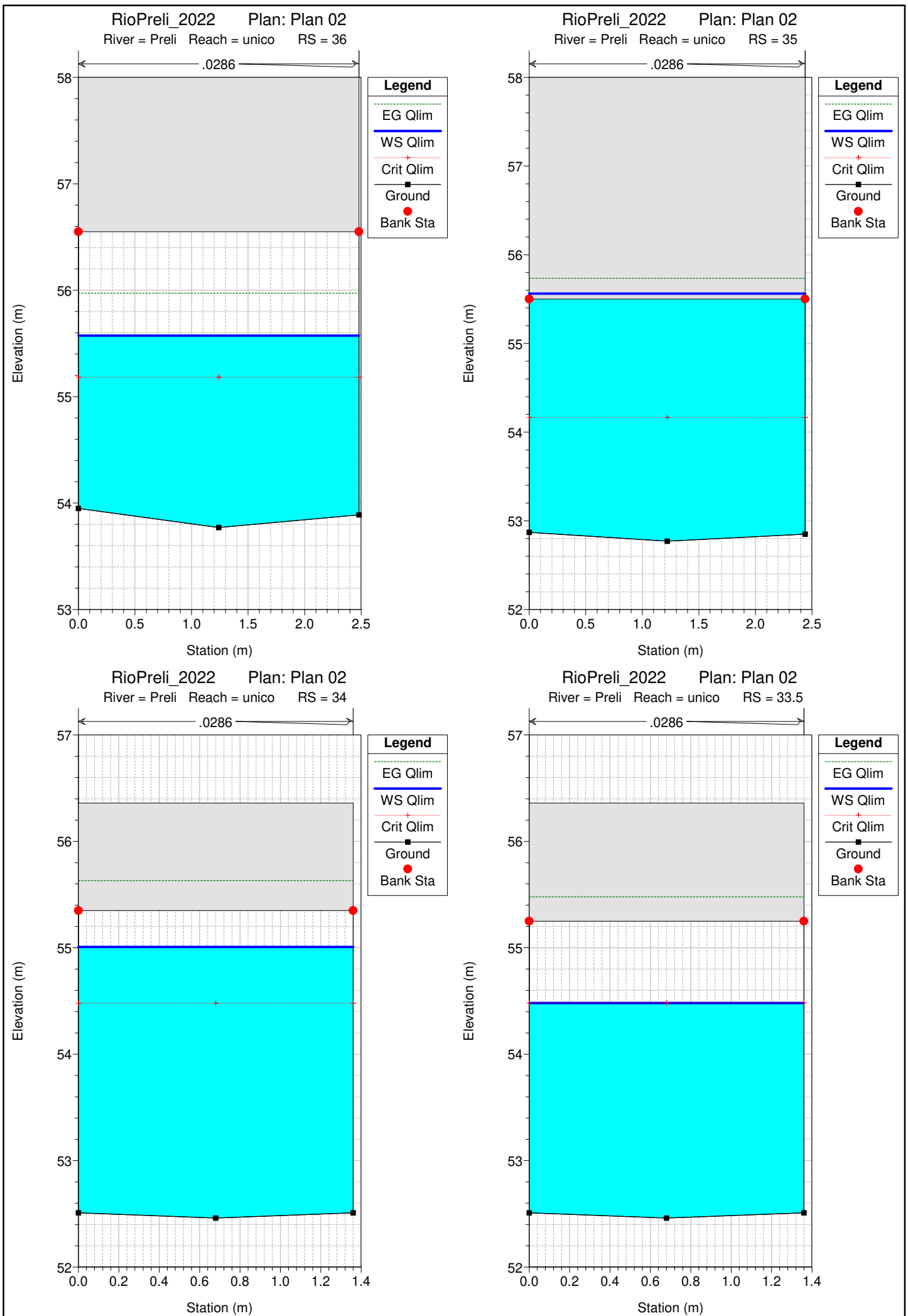
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

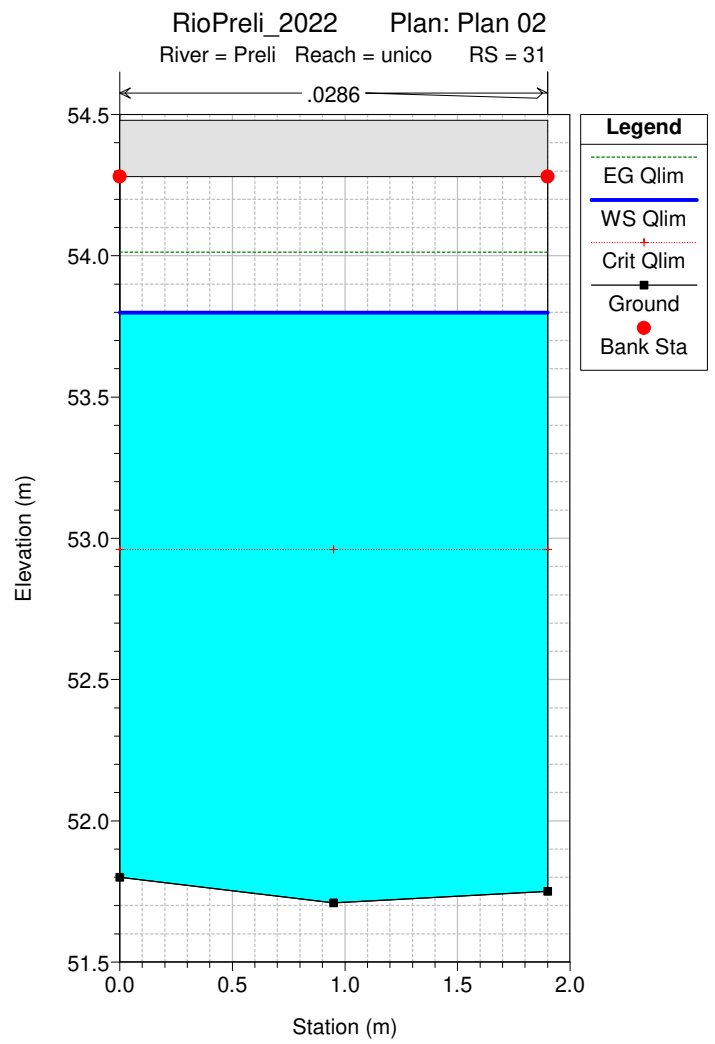
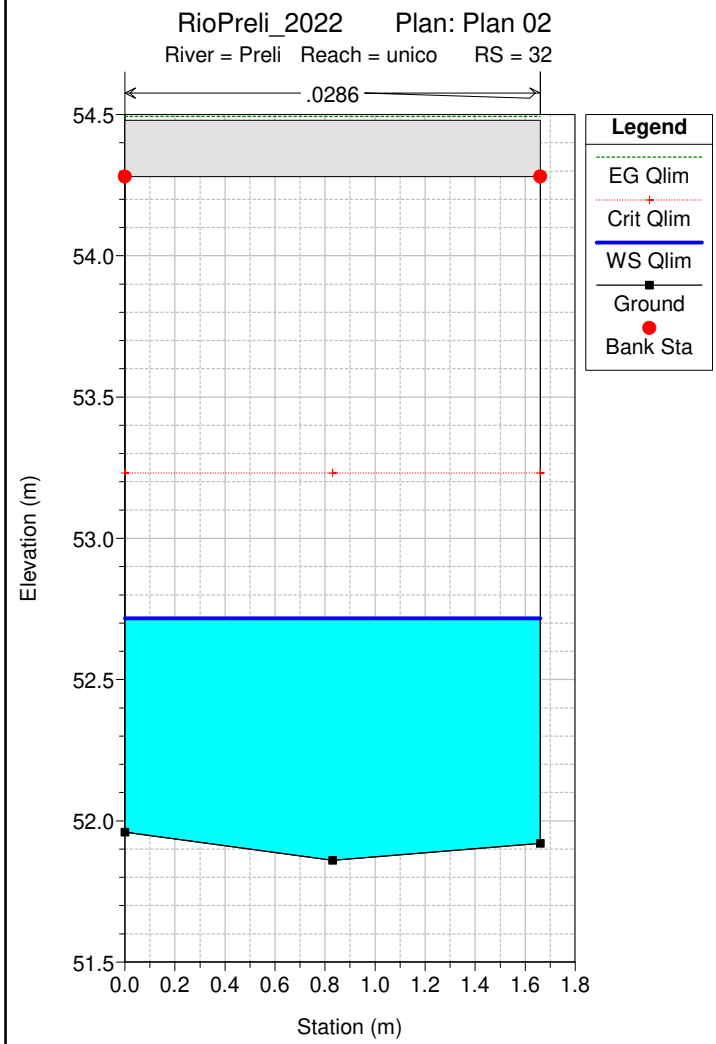
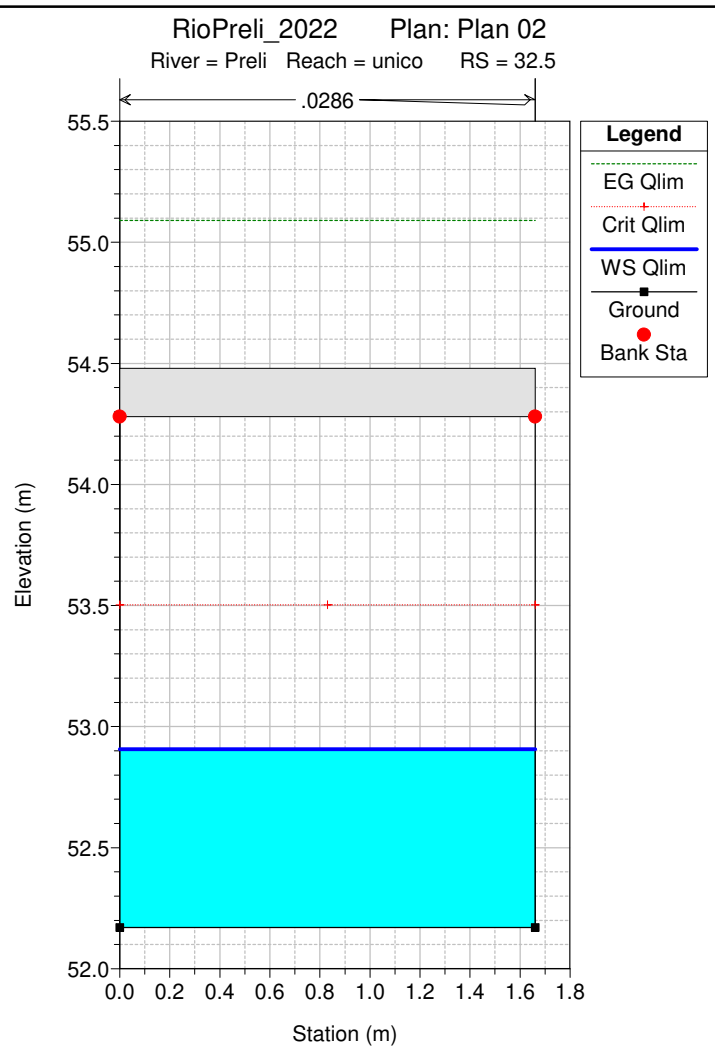
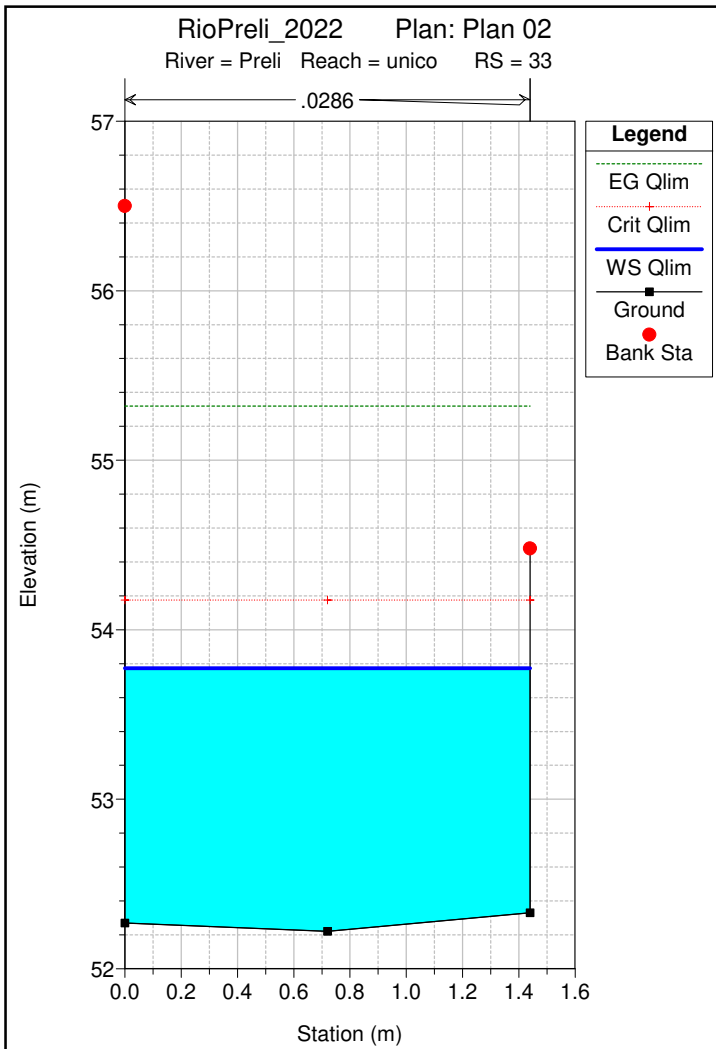


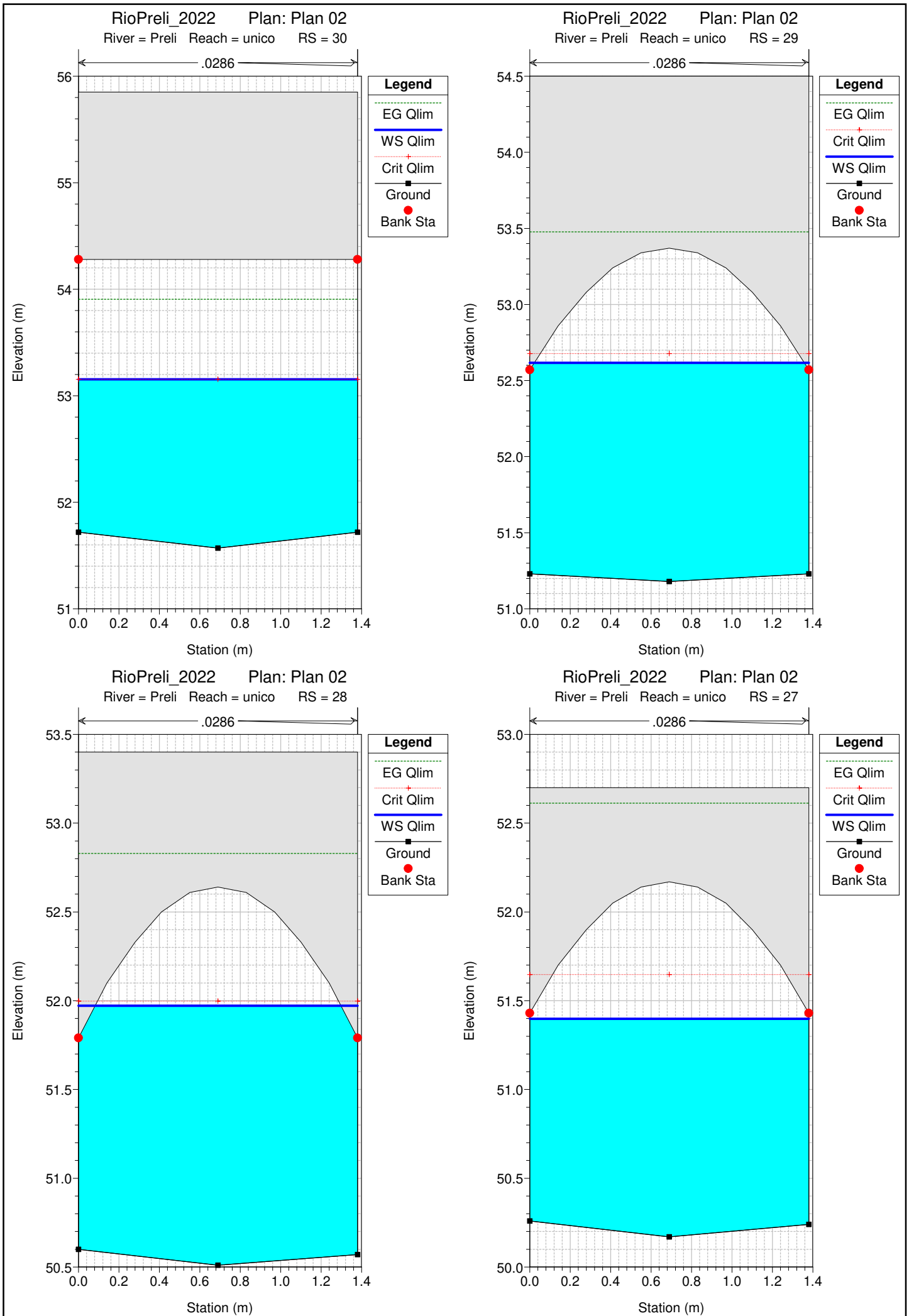


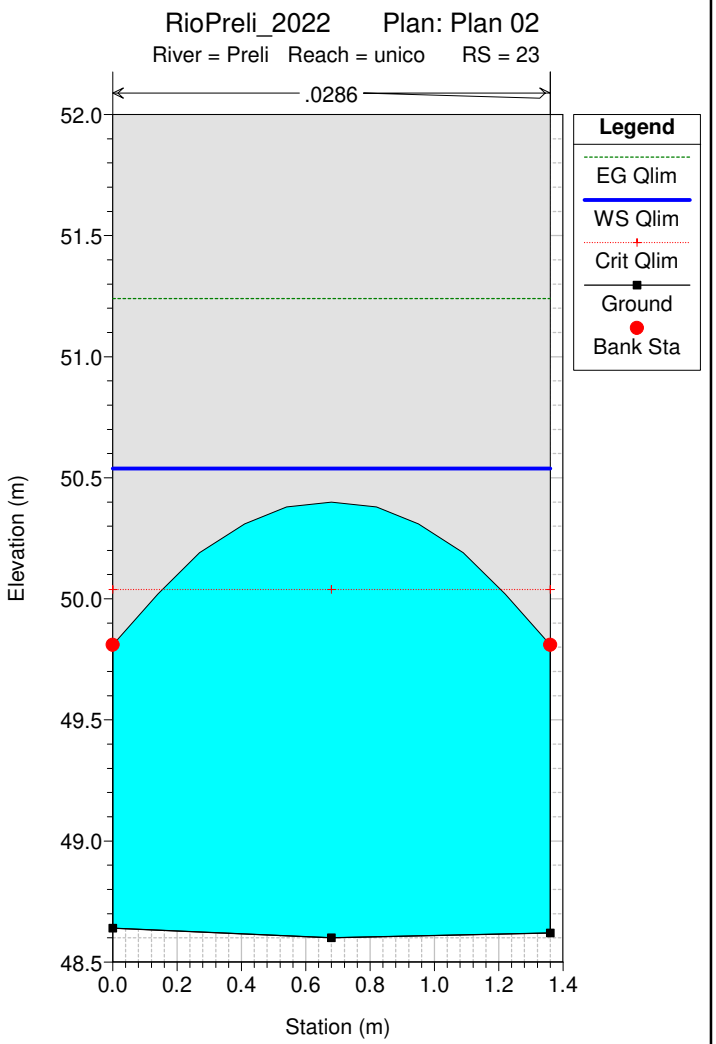
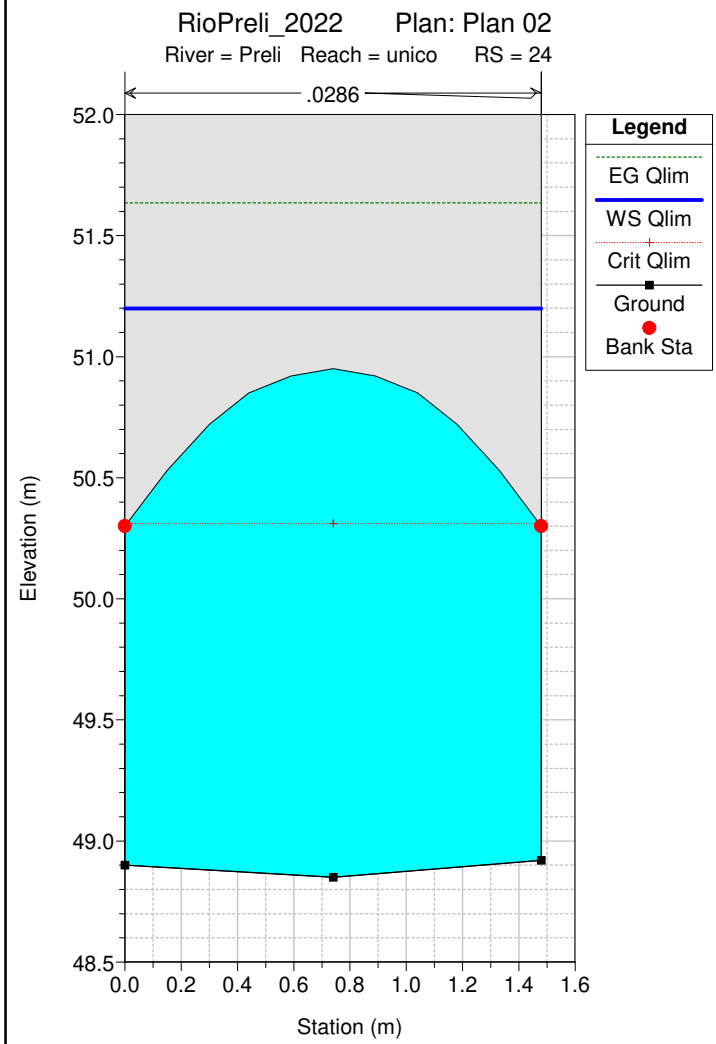
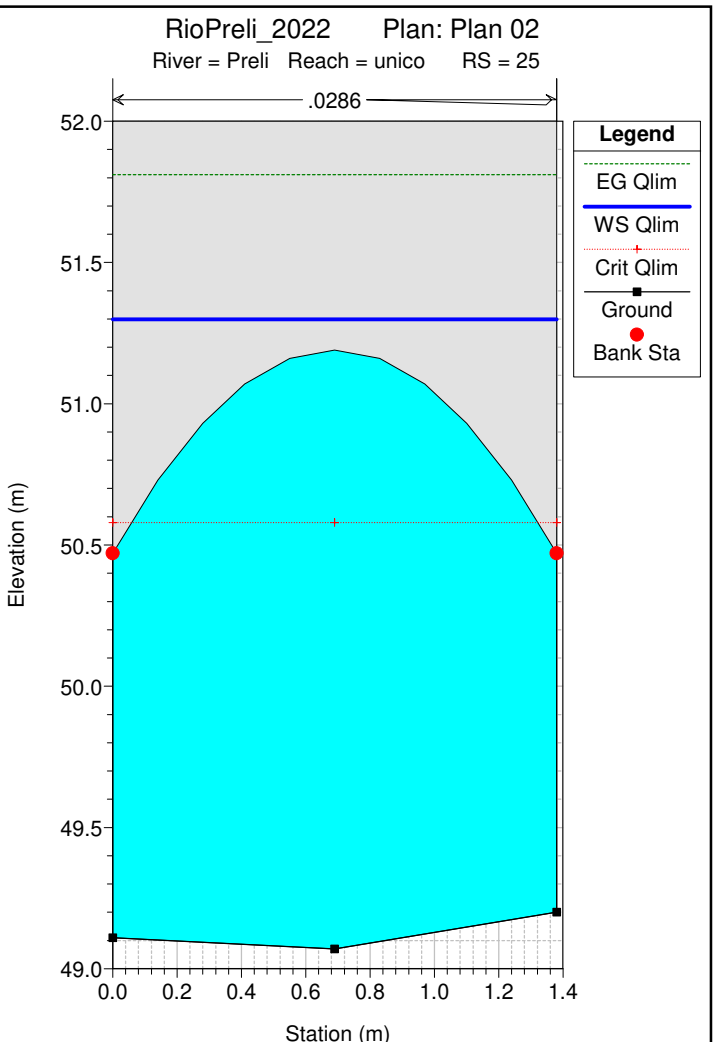
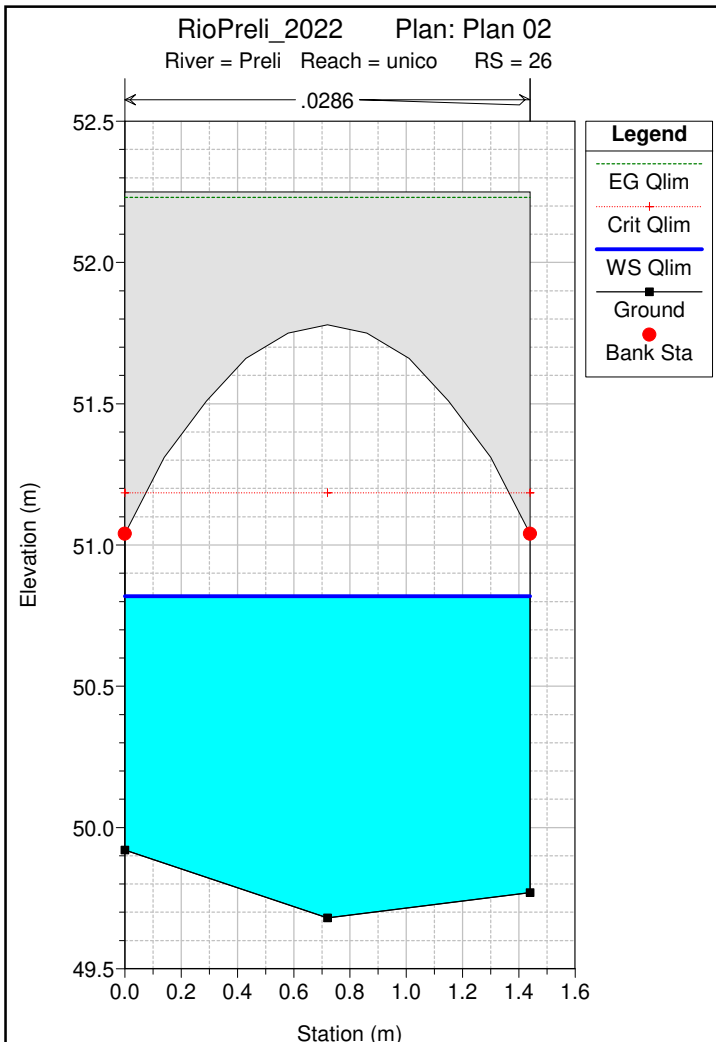


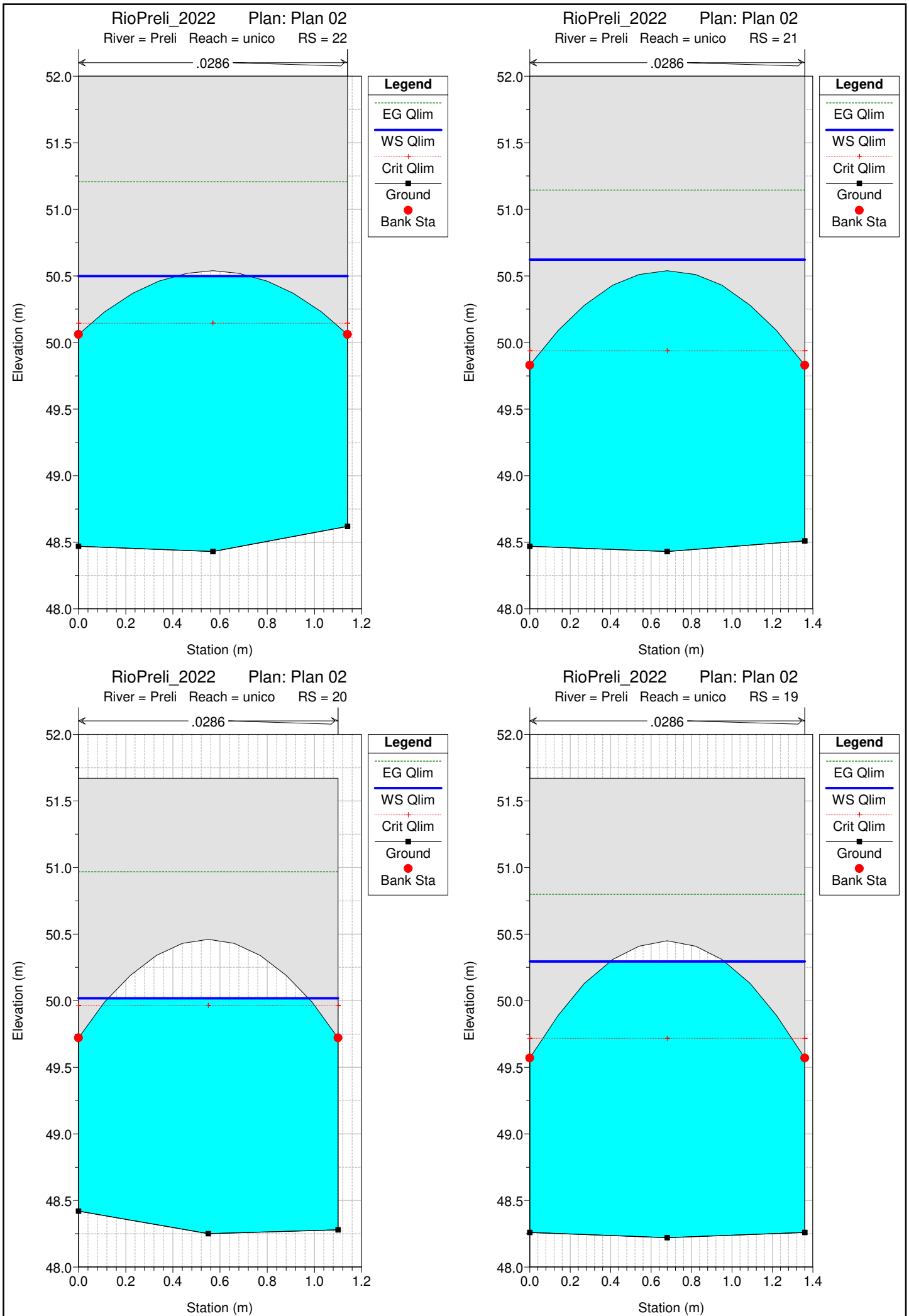


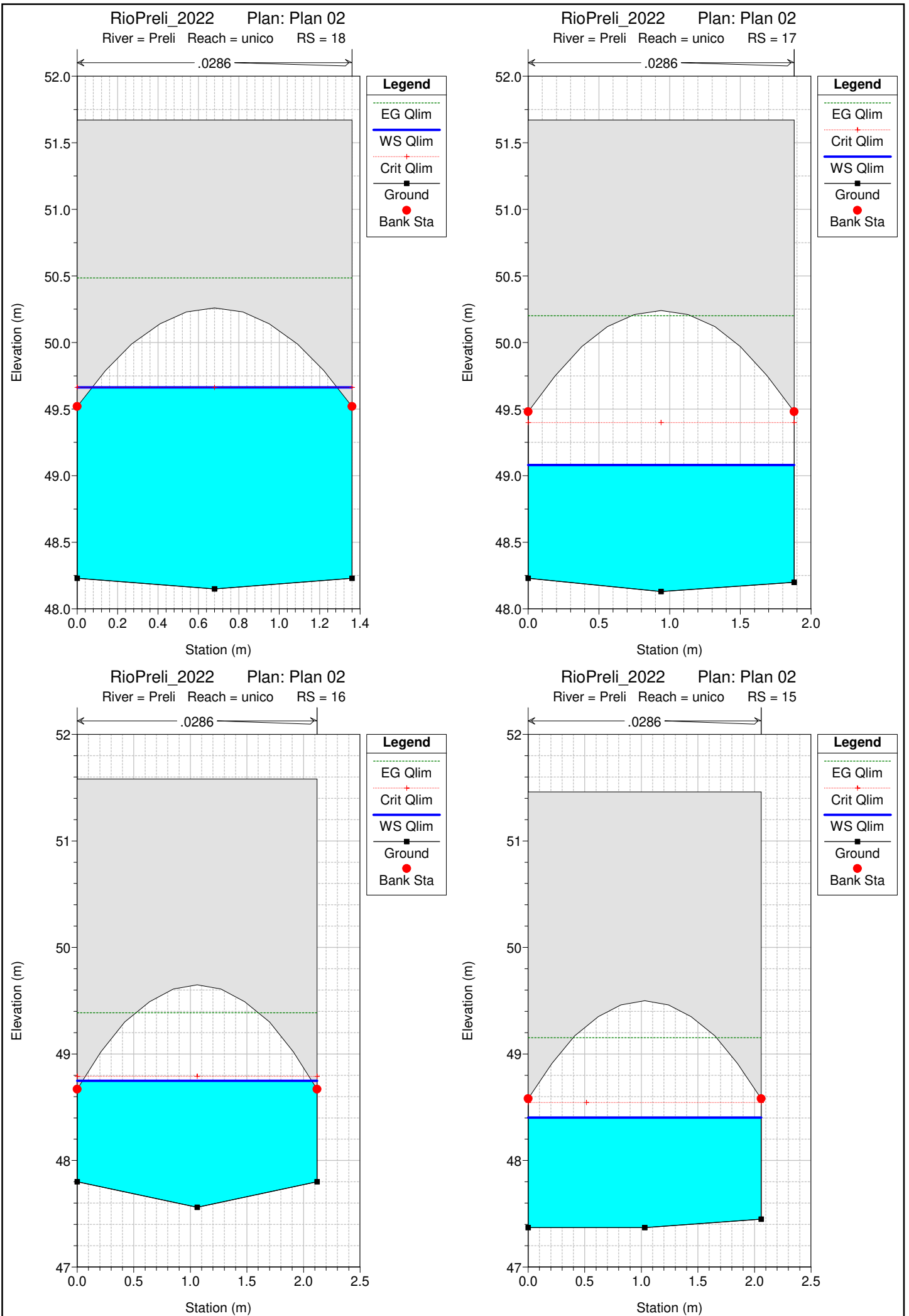


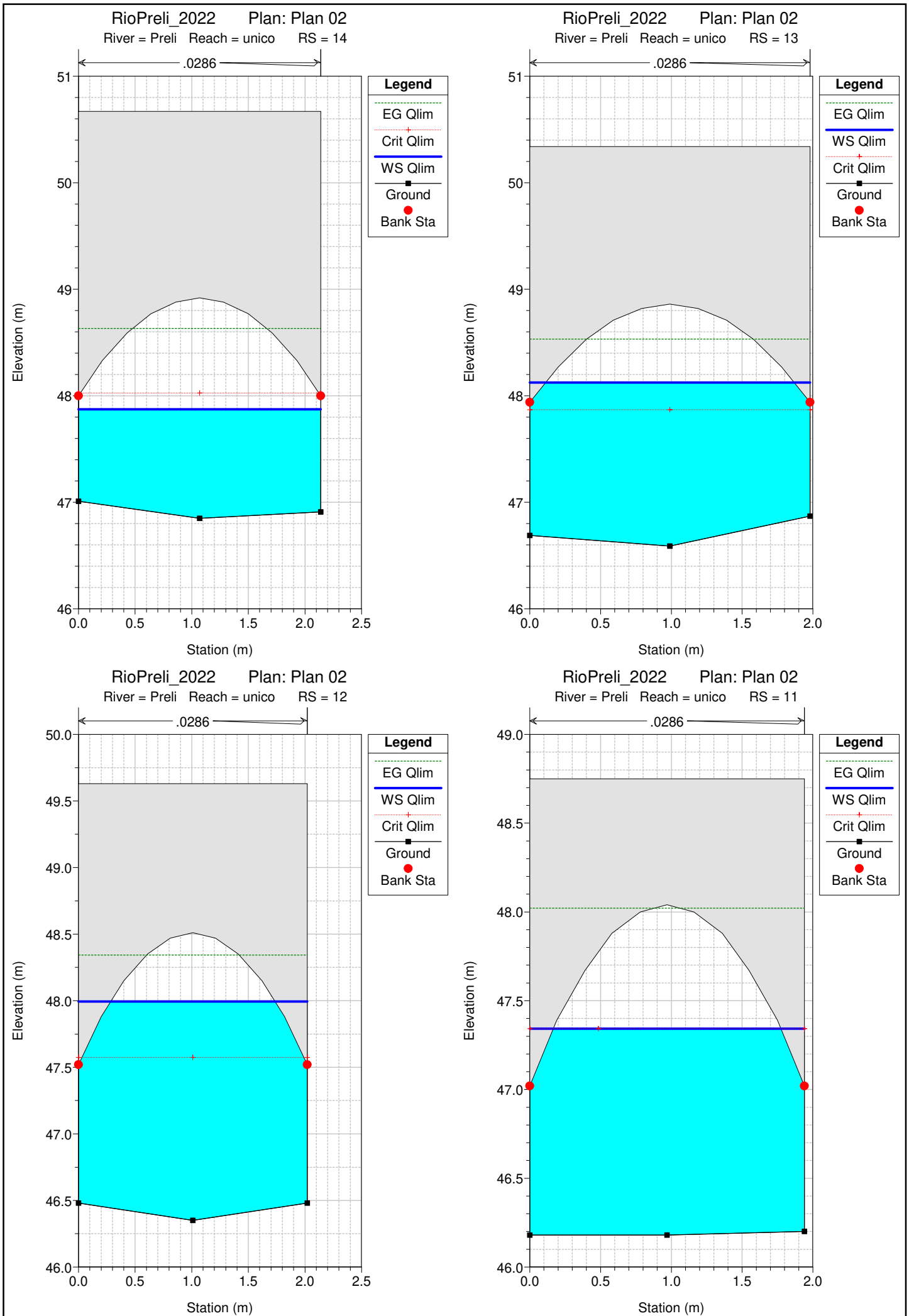


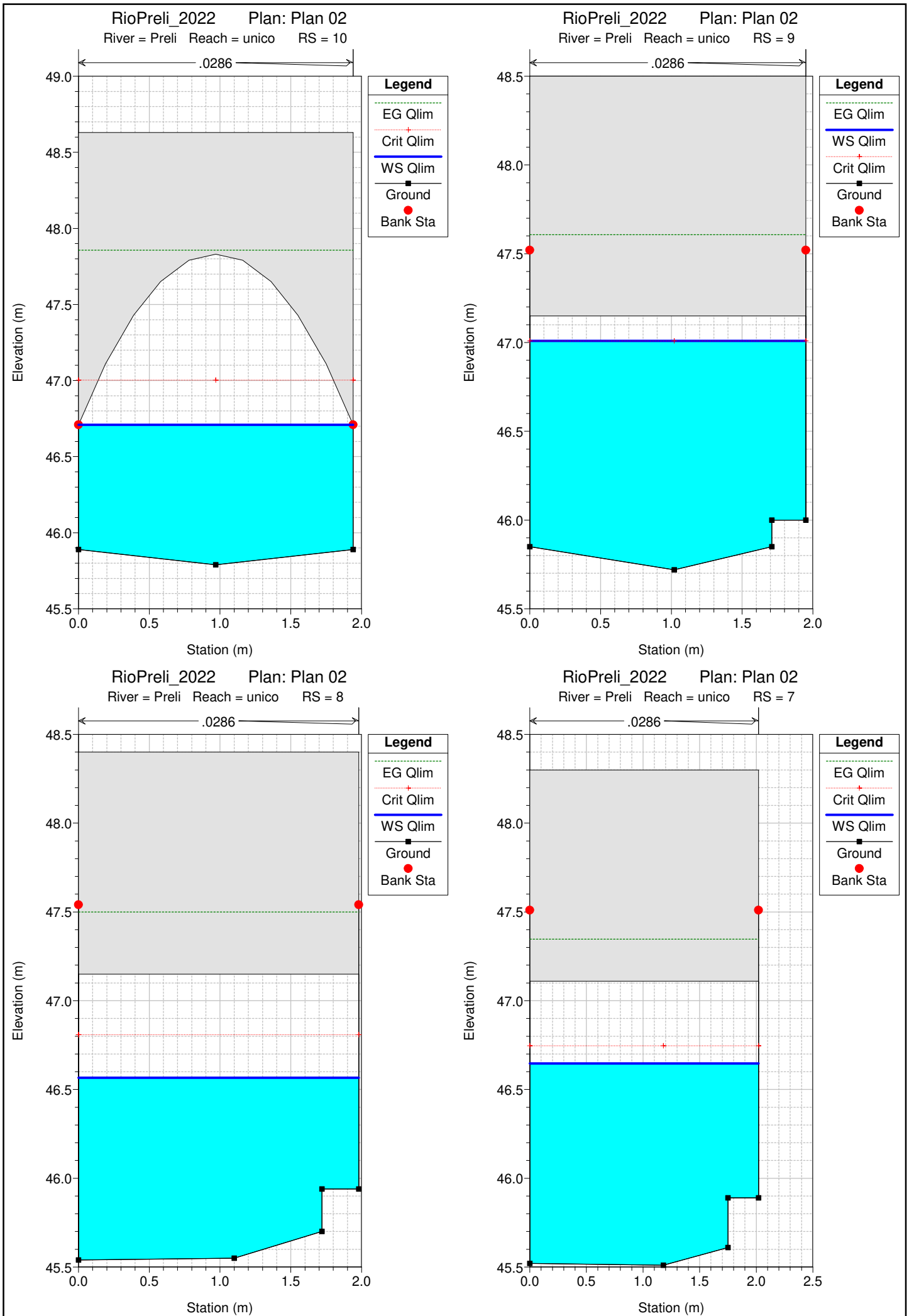


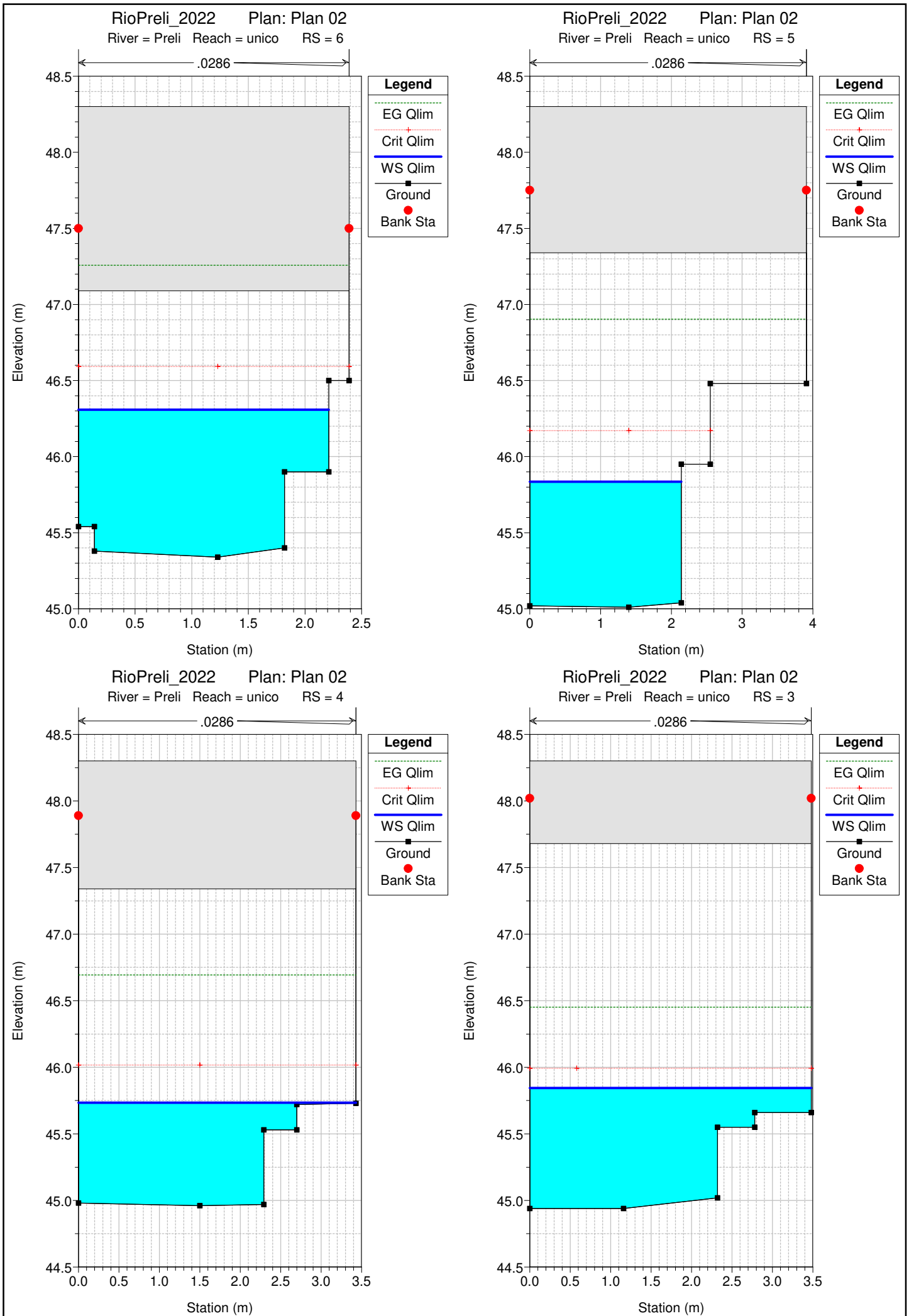


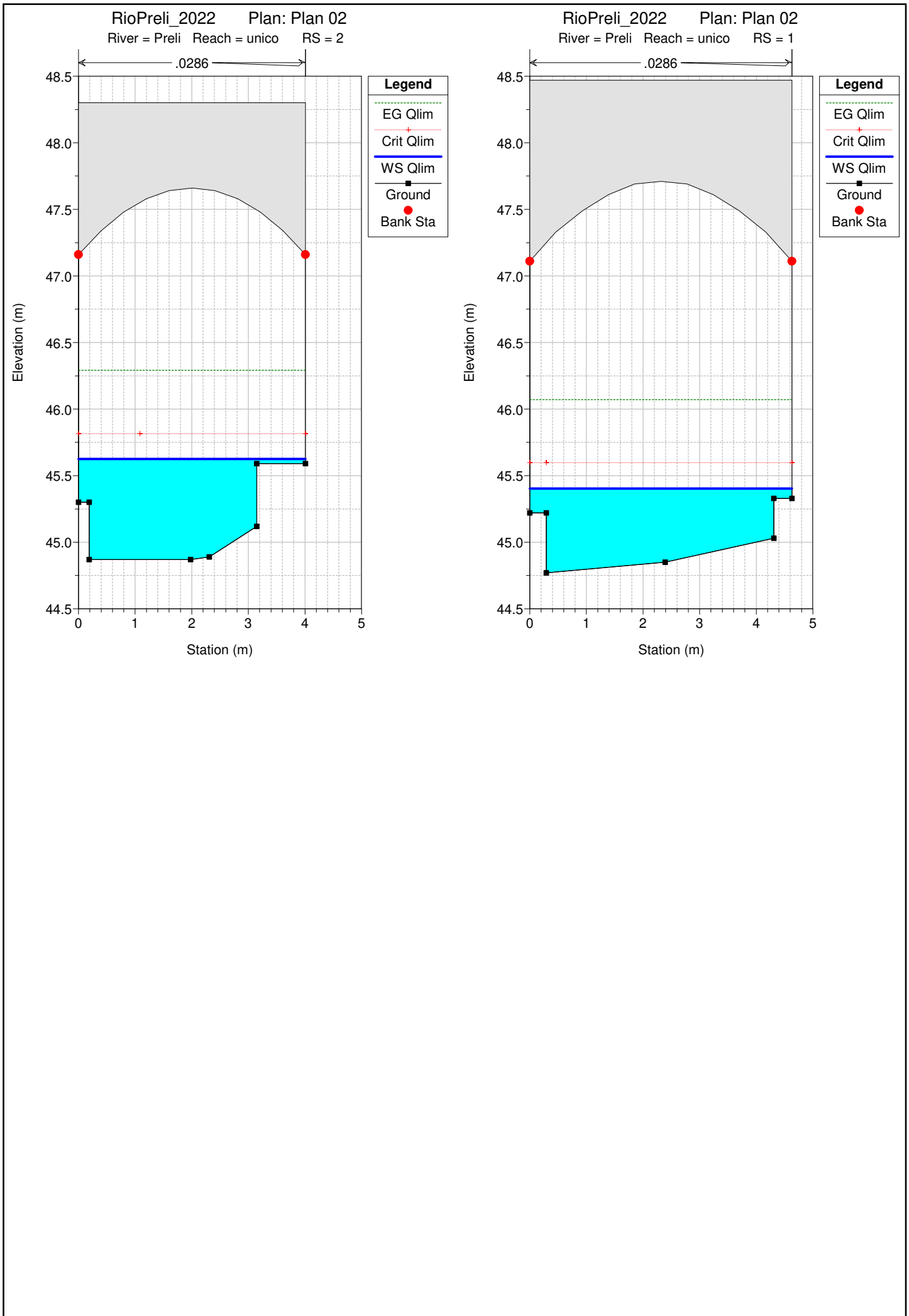












HEC-RAS Plan: 02 River: Preli Reach: unico Profile: Qlim

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
unico	47	Qlim	19.00	59.27	61.07	65.20	4.13	65.20	4.13	61.07	61.84	0.017100	3.90	4.88	3.15	1.00
unico	46	Qlim	19.00	58.33	59.35	60.74	1.39	60.74	1.39	59.95	61.40	0.064906	6.35	2.99	2.94	2.01
unico	45	Qlim	19.00	58.30	59.57	61.84	2.27	61.84	2.27	59.92	60.89	0.034985	5.07	3.75	2.94	1.43
unico	44	Qlim	19.00	57.39	58.36	61.84	3.48	61.84	3.48	59.04	60.73	0.078529	6.82	2.78	2.94	2.24
unico	43.5	Qlim	19.00	56.95	58.28	59.91	1.63	59.91	1.63	58.88	60.31	0.059837	6.31	3.01	2.44	1.82
unico	43	Qlim	20.00	56.95	58.94	59.49	0.55	59.49	0.55	58.94	59.89	0.021892	4.32	4.63	2.44	1.00
unico	42	Qlim	12.00	56.25	57.07	58.35	1.28	58.35	1.28	57.65	59.17	0.089398	6.41	1.87	2.40	2.32
unico	41	Qlim	12.00	55.43	56.15	58.30	2.15	58.30	2.15	56.84	58.99	0.136429	7.47	1.61	2.40	2.91
unico	40	Qlim	12.00	55.11	56.08	57.89	1.81	57.89	1.81	56.55	57.66	0.059343	5.56	2.16	2.34	1.85
unico	39	Qlim	12.00	55.10	56.10	57.08	0.98	57.08	0.98	56.54	57.59	0.055130	5.41	2.22	2.34	1.78
unico	38	Qlim	12.00	54.58	55.65	57.02	1.37	57.02	1.37	55.99	56.86	0.041595	4.88	2.46	2.44	1.55
unico	37	Qlim	12.00	53.81	54.92	56.96	2.04	56.96	2.04	55.22	56.04	0.037013	4.67	2.57	2.44	1.45
unico	36	Qlim	12.00	53.77	55.57	56.55	0.98	56.55	0.98	55.18	55.97	0.009612	2.80	4.29	2.48	0.68
unico	35	Qlim	12.00	52.77	55.56	55.50	-0.06	55.50	-0.06	54.17	55.73	0.004930	1.83	6.55		0.35
unico	34	Qlim	12.00	52.46	55.01	55.35	0.34	55.35	0.34	54.48	55.63	0.022773	3.50	3.43	1.36	0.70
unico	33.5	Qlim	12.00	52.46	54.48	55.25	0.77	55.25	0.77	54.48	55.48	0.039081	4.42	2.71	1.36	1.00
unico	33	Qlim	12.00	52.22	53.77	56.50	2.73	54.48	0.71	54.18	55.32	0.063240	5.51	2.18	1.44	1.43
unico	32.5	Qlim	8.00	52.17	52.91	54.28	1.37	54.28	1.37	53.50	55.09	0.122927	6.55	1.22	1.66	2.44
unico	32	Qlim	8.00	51.86	52.72	54.28	1.56	54.28	1.56	53.23	54.49	0.090432	5.90	1.36	1.66	2.09
unico	31	Qlim	8.00	51.71	53.80	54.28	0.48	54.28	0.48	52.96	54.01	0.006012	2.05	3.91	1.90	0.46
unico	30	Qlim	8.00	51.57	53.15	54.28	1.13	54.28	1.13	53.15	53.91	0.031509	3.84	2.08	1.38	1.00
unico	29	Qlim	8.00	51.18	52.62	52.57	-0.05	52.57	-0.05	52.68	53.48	0.038095	4.11	1.95	1.34	1.09
unico	28	Qlim	8.00	50.51	51.97	51.79	-0.18	51.79	-0.18	52.00	52.83	0.038196	4.10	1.95	1.22	1.08
unico	27	Qlim	8.00	50.17	51.40	51.43	0.03	51.43	0.03	51.65	52.61	0.057370	4.88	1.64	1.38	1.43
unico	26	Qlim	8.00	49.68	50.82	51.04	0.22	51.04	0.22	51.18	52.23	0.067070	5.26	1.52	1.44	1.64
unico	25	Qlim	8.00	49.07	51.30	50.47	-0.83	50.47	-0.83	50.58	51.81	0.026585	3.17	2.53		0.68
unico	24	Qlim	8.00	48.85	51.20	50.30	-0.90	50.30	-0.90	50.31	51.63	0.021354	2.92	2.74		0.61
unico	23	Qlim	8.00	48.60	50.54	49.81	-0.73	49.81	-0.73	50.04	51.24	0.040218	3.71	2.16		0.85
unico	22	Qlim	8.00	48.43	50.50	50.06	-0.44	50.06	-0.44	50.15	51.21	0.039221	3.73	2.15	0.31	0.83
unico	21	Qlim	8.00	48.43	50.62	49.83	-0.79	49.83	-0.79	49.94	51.14	0.027508	3.20	2.50		0.69
unico	20	Qlim	8.00	48.25	50.02	49.72	-0.30	49.72	-0.30	49.96	50.97	0.049937	4.32	1.85	0.85	1.04
unico	19	Qlim	8.00	48.22	50.29	49.57	-0.72	49.57	-0.72	49.72	50.80	0.023490	3.15	2.54	0.56	0.70
unico	18	Qlim	8.00	48.15	49.66	49.52	-0.14	49.52	-0.14	49.66	50.48	0.036451	4.02	1.99	1.21	1.04
unico	17	Qlim	8.00	48.13	49.08	49.48	0.40	49.48	0.40	49.40	50.20	0.049002	4.69	1.71	1.88	1.57
unico	16	Qlim	8.00	47.56	48.75	48.67	-0.08	48.67	-0.08	48.79	49.39	0.022637	3.54	2.26	2.03	1.04
unico	15	Qlim	8.00	47.37	48.40	48.58	0.18	48.58	0.18	48.54	49.15	0.029116	3.83	2.09	2.06	1.22
unico	14	Qlim	8.00	46.85	47.87	48.00	0.13	48.00	0.13	48.03	48.63	0.029047	3.86	2.07	2.14	1.25
unico	13	Qlim	8.00	46.59	48.12	47.94	-0.18	47.94	-0.18	47.87	48.53	0.013151	2.83	2.83	1.76	0.73
unico	12	Qlim	8.00	46.35	47.99	47.52	-0.47	47.52	-0.47	47.57	48.34	0.011370	2.61	3.06	1.45	0.65
unico	11	Qlim	8.00	46.18	47.34	47.02	-0.32	47.02	-0.32	47.34	48.02	0.026937	3.65	2.19	1.61	1.08
unico	10	Qlim	8.00	45.79	46.71	46.71	0.00	46.71	0.00	47.00	47.86	0.050367	4.74	1.69	1.94	1.62
unico	9	Qlim	8.00	45.72	47.01	47.15	0.14	47.15	0.14	47.01	47.61	0.021581	3.43	2.34	1.95	1.00
unico	8	Qlim	8.00	45.54	46.57	47.15	0.58	47.15	0.58	46.81	47.50	0.039838	4.28	1.87	1.98	1.41
unico	7	Qlim	8.00	45.51	46.65	47.11	0.46	47.11	0.46	46.75	47.35	0.027179	3.70	2.16	2.02	1.14
unico	6	Qlim	8.00	45.34	46.31	47.09	0.78	47.09	0.78	46.59	47.26	0.043156	4.31	1.85	2.21	1.50
unico	5	Qlim	8.00	45.01	45.84	47.34	1.50	47.34	1.50	46.17	46.90	0.047388	4.58	1.75	2.14	1.62
unico	4	Qlim	8.00	44.96	45.73	47.34	1.61	47.34	1.61	46.02	46.69	0.057165	4.34	1.84	3.43	1.89
unico	3	Qlim	8.00	44.94	45.84	47.68	1.84	47.68	1.84	45.99	46.45	0.028743	3.45	2.32	3.48	1.35
unico	2	Qlim	8.00	44.87	45.63	47.16	1.53	47.16	1.53	45.82	46.29	0.034301	3.62	2.21	4.01	1.55

HEC-RAS Plan: 02 River: Preli Reach: unico Profile: Qlim (Continued)

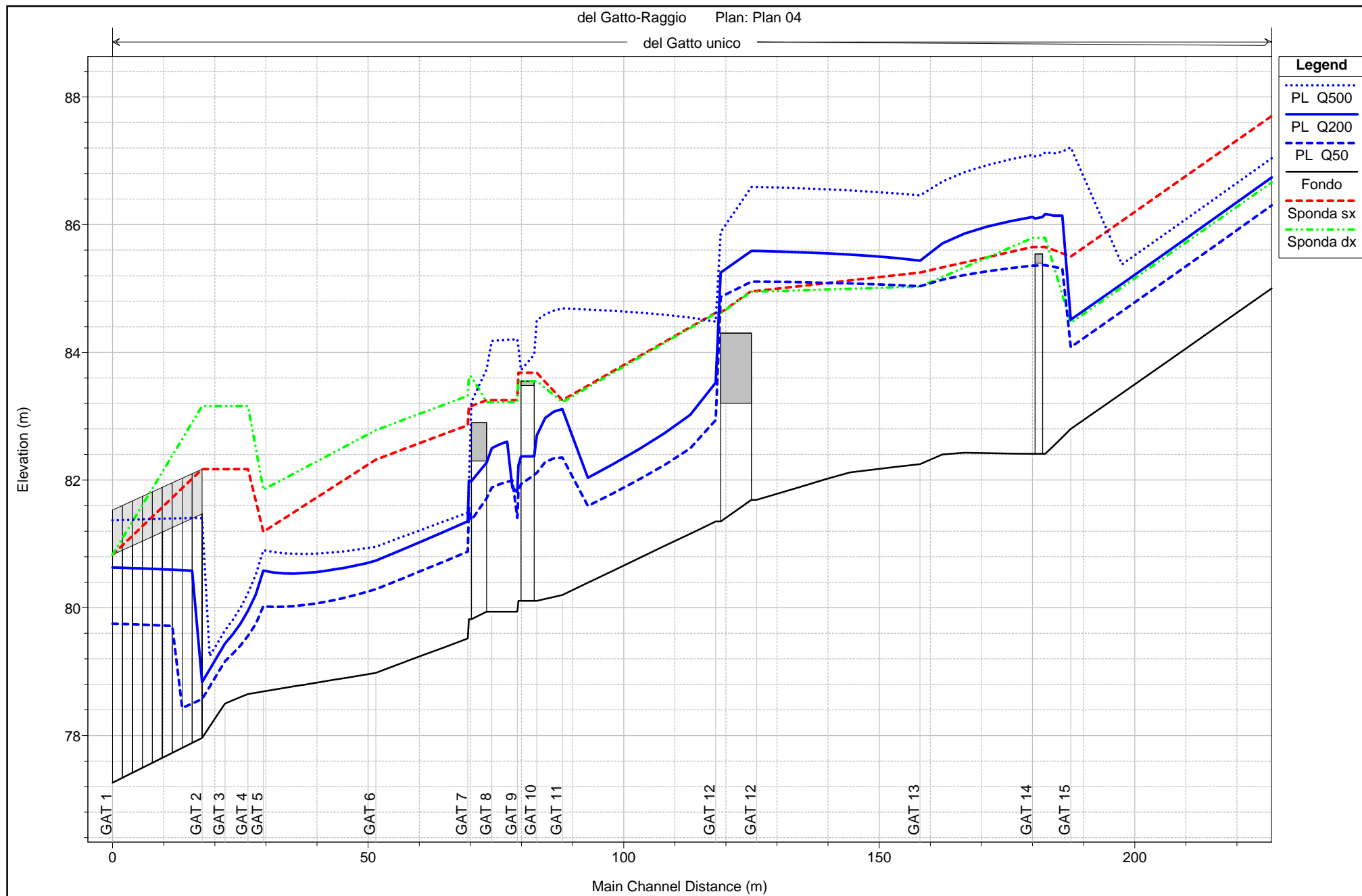
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	1	Qlim	8.00	44.77	45.40	47.11	1.71	47.11	1.71	45.60	46.07	0.037399	3.62	2.21	4.63	1.67

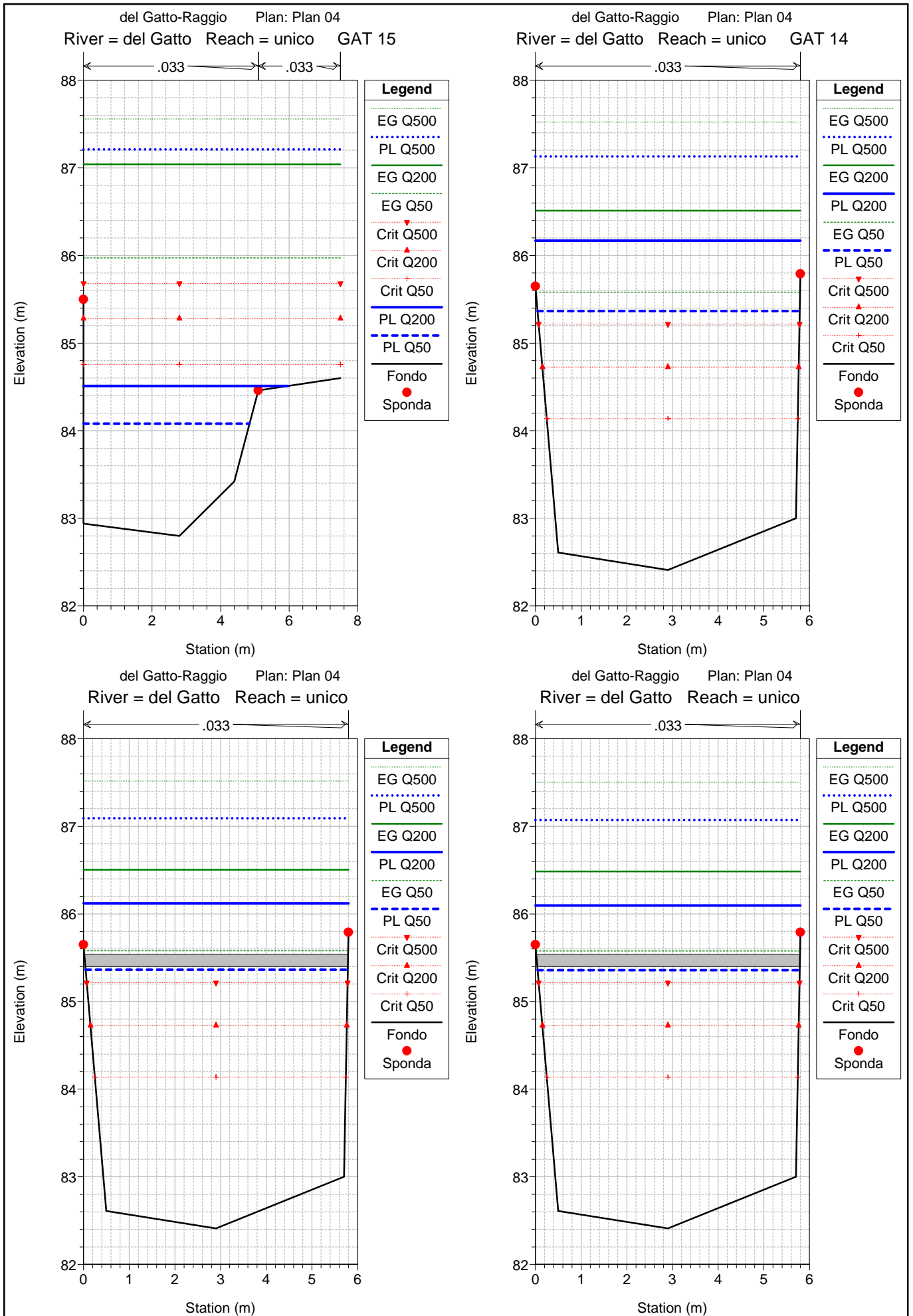
Allegato

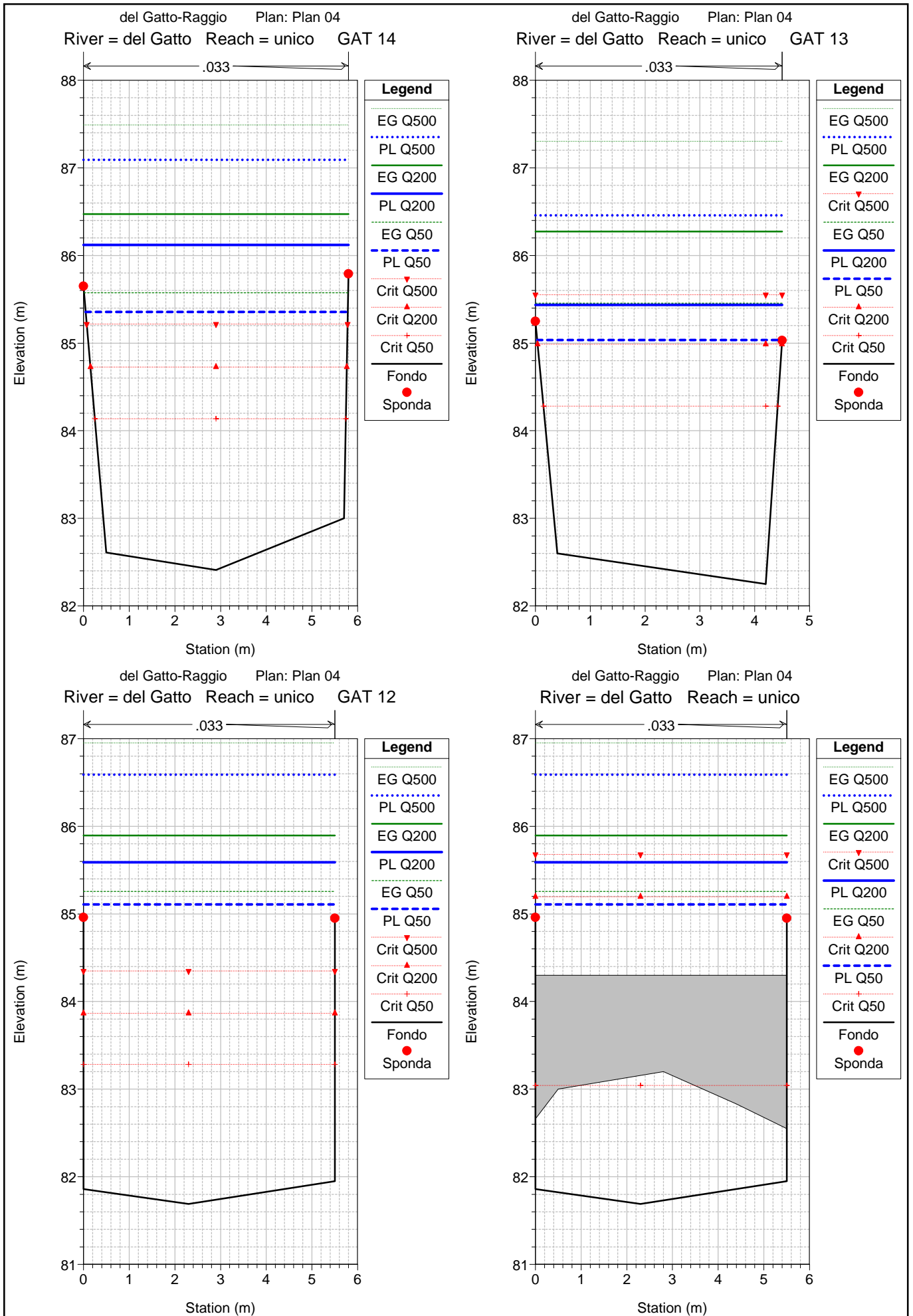
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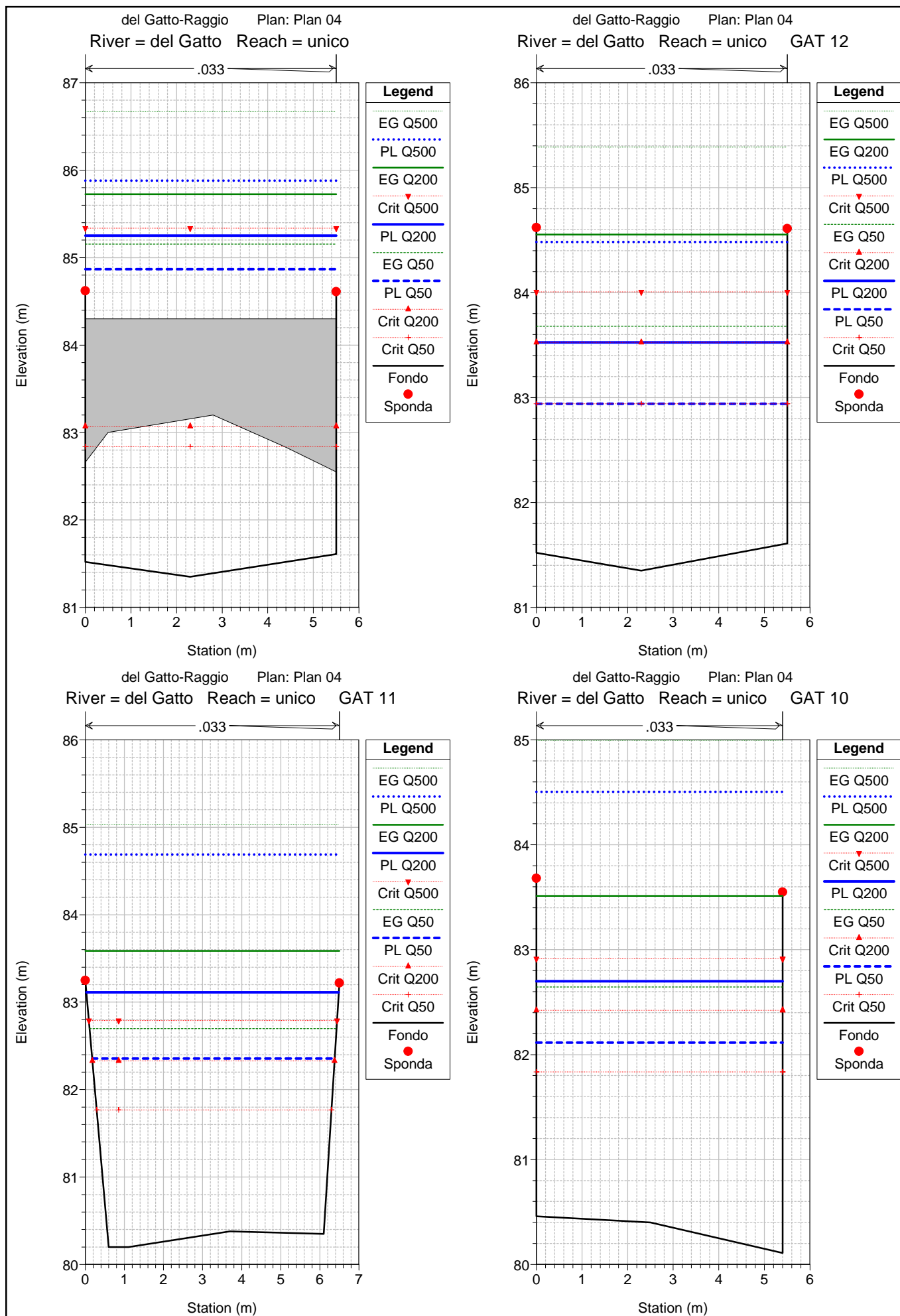
Rio Raggio

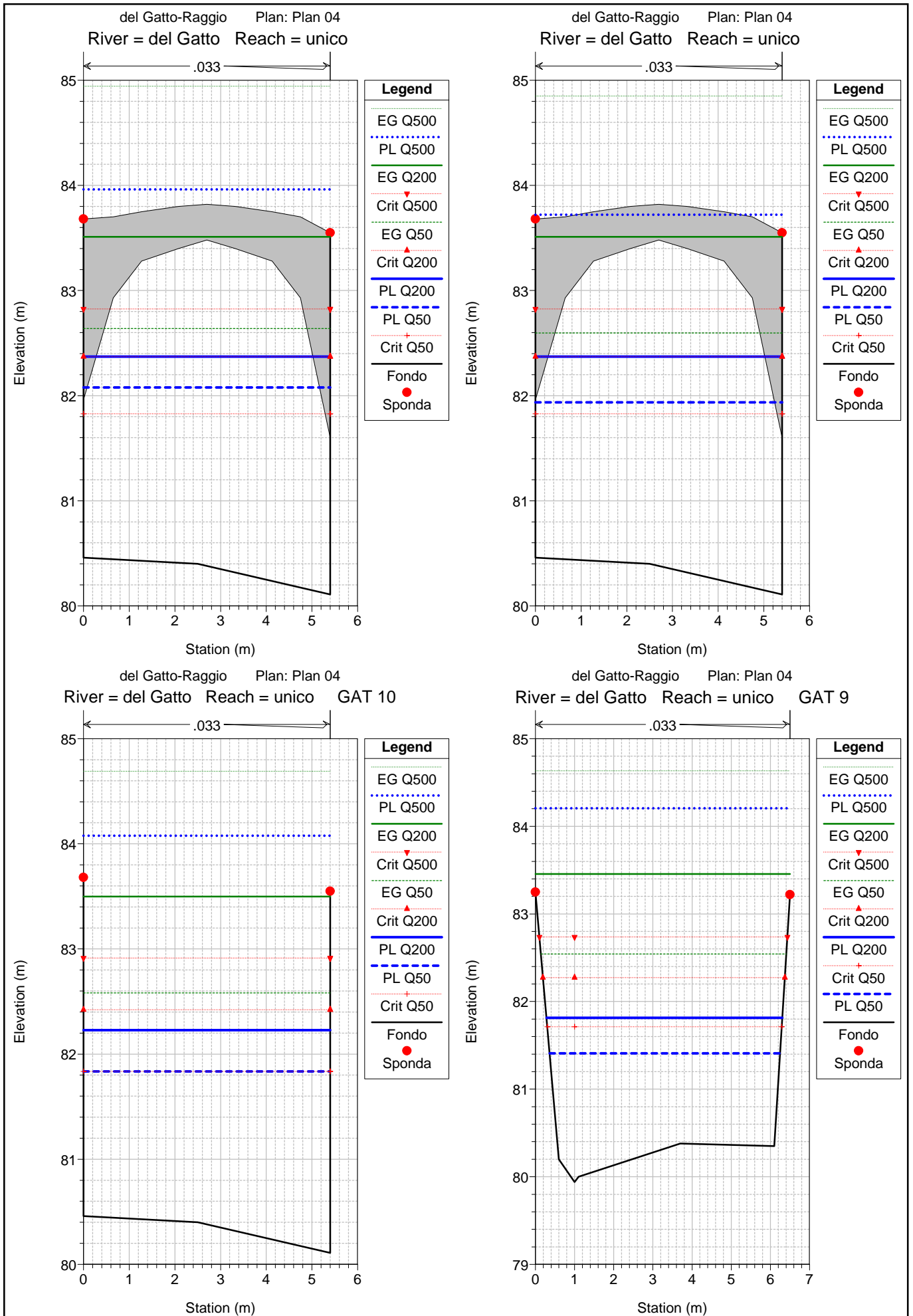
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

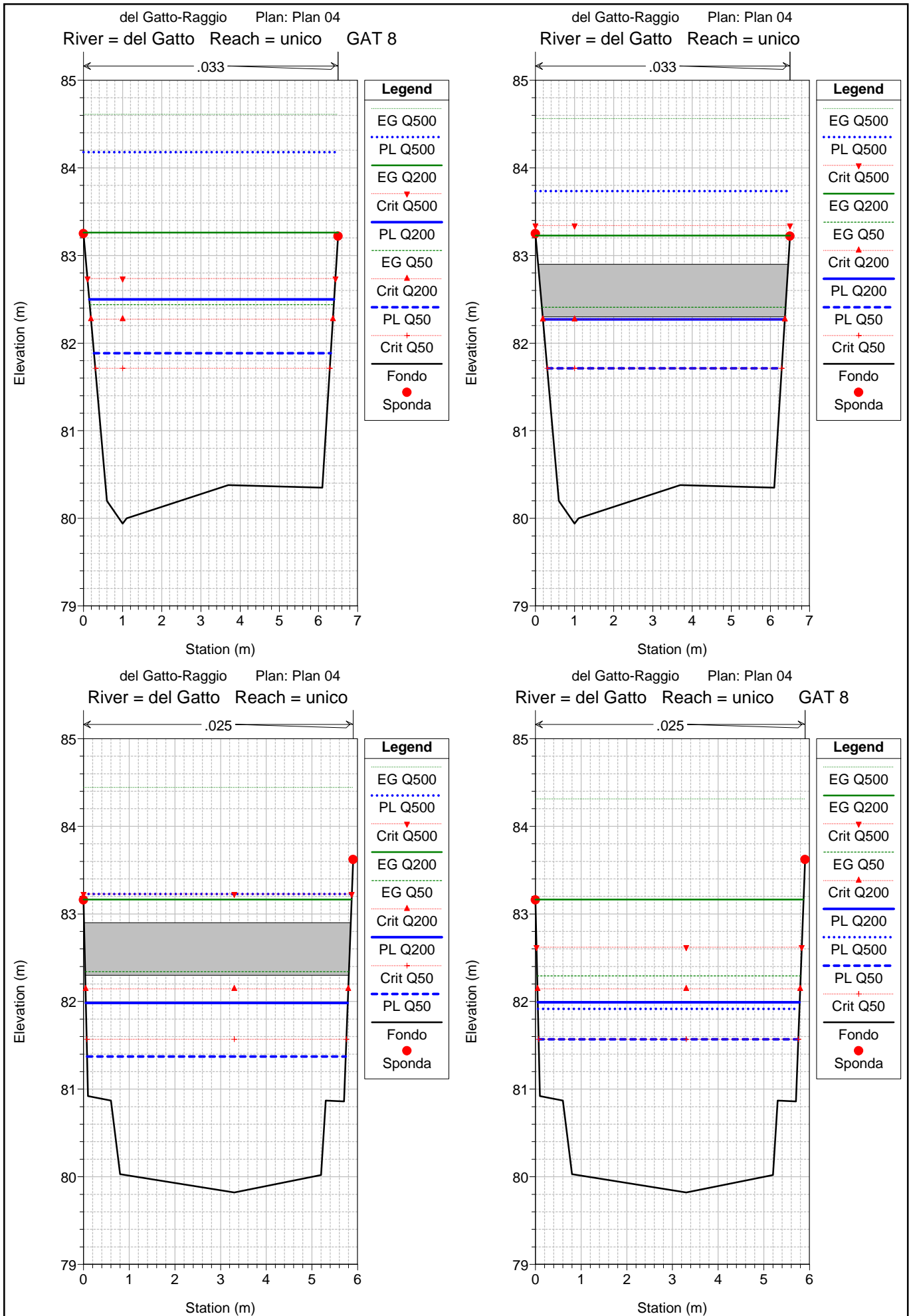


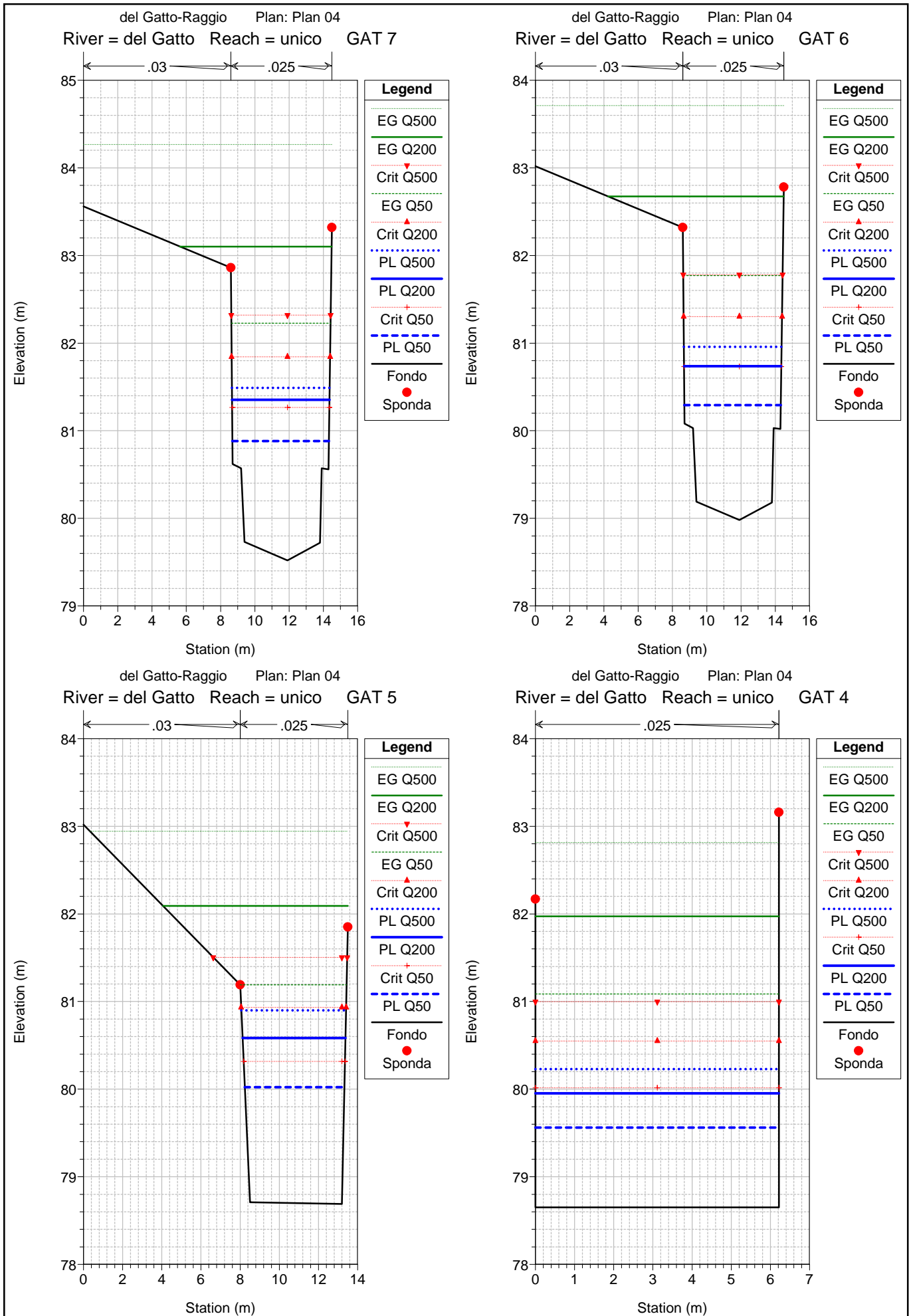


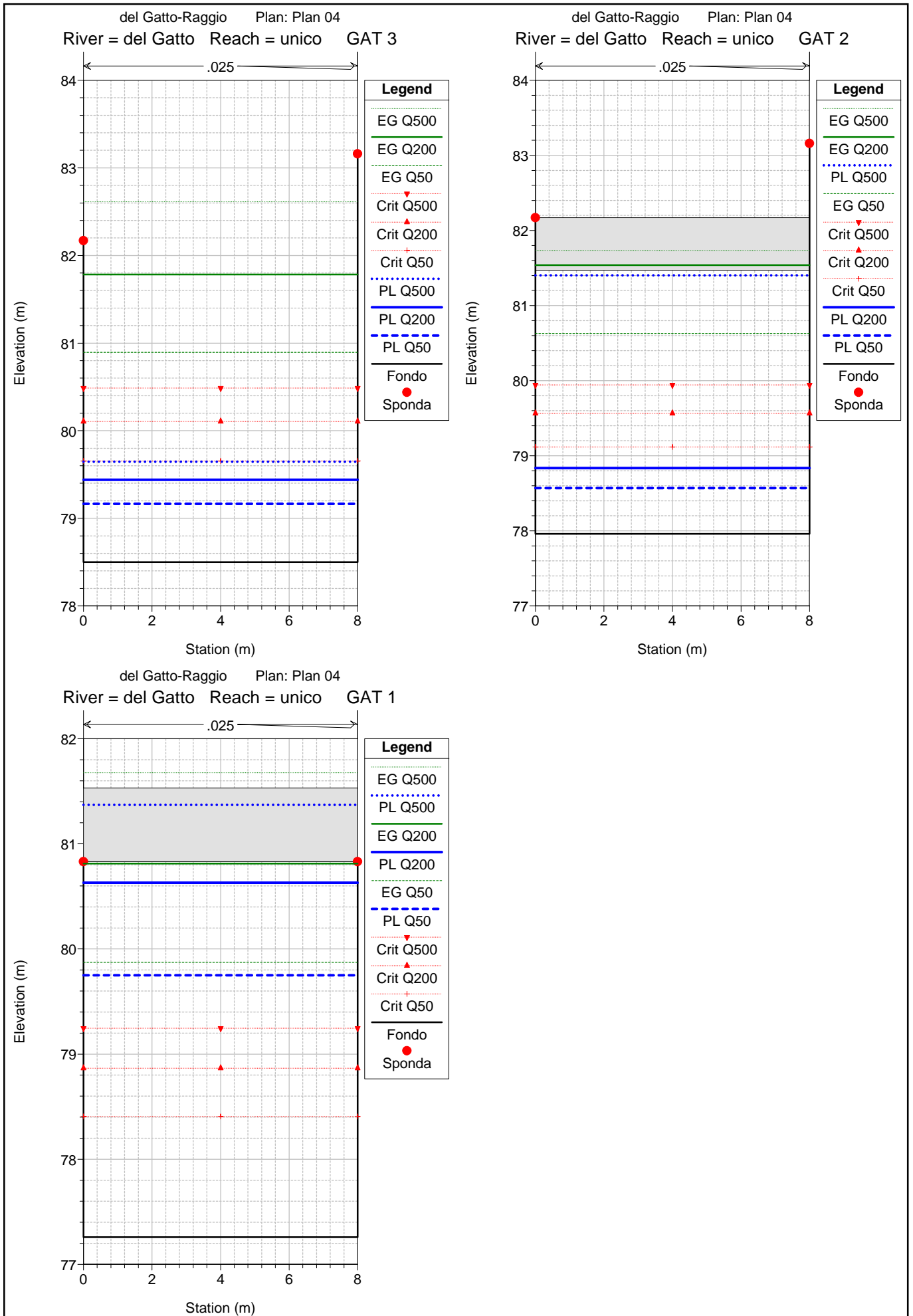












HEC-RAS Plan: Plan 04 River: del Gatto Reach: unico

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	
unico	100	Q50	31.00	85.60	86.92	88.30	1.38	87.26	0.34	87.56	88.68	0.050062	5.88	5.28	4.87	1.80	
unico	100	Q200	51.00	85.60	87.36	88.30	0.94	87.26	-0.10	88.08	89.72	0.050033	6.82	7.54	6.74	1.80	
unico	100	Q500	70.00	85.60	87.66	88.30	0.64	87.26	-0.40	88.48	90.46	0.050029	7.52	9.77	7.50	1.81	
unico	8	GAT 15	Q50	31.00	82.80	84.08	85.50	1.42	84.46	0.38	84.76	85.97	0.055534	6.09	5.09	4.84	1.90
unico	8	GAT 15	Q200	51.00	82.80	84.51	85.50	0.99	84.46	-0.05	85.28	87.04	0.055174	7.05	7.26	5.97	1.89
unico	8	GAT 15	Q500	70.00	82.80	87.21	85.50	-1.71	84.46	-2.75	85.68	87.56	0.003033	2.73	27.44	7.50	0.43
unico	7.1	GAT 14	Q50	31.00	82.41	85.36	85.65	0.29	85.79	0.43	84.14	85.58	0.002850	2.06	15.02	5.74	0.41
unico	7.1	GAT 14	Q200	51.00	82.41	86.17	85.65	-0.52	85.79	-0.38	84.73	86.51	0.003803	2.59	19.67	5.80	0.45
unico	7.1	GAT 14	Q500	70.00	82.41	87.13	85.65	-1.48	85.79	-1.34	85.22	87.52	0.003795	2.77	25.26	5.80	0.42
unico	7		Bridge														
unico	6.9	GAT 14	Q50	31.00	82.41	85.36	85.65	0.29	85.79	0.43	84.14	85.57	0.002875	2.07	14.97	5.74	0.41
unico	6.9	GAT 14	Q200	51.00	82.41	86.12	85.65	-0.47	85.79	-0.33	84.73	86.47	0.003947	2.63	19.39	5.80	0.46
unico	6.9	GAT 14	Q500	70.00	82.41	87.09	85.65	-1.44	85.79	-1.30	85.22	87.49	0.003885	2.80	25.02	5.80	0.43
unico	6	GAT 13	Q50	31.00	82.25	85.04	85.25	0.21	85.03	-0.01	84.28	85.46	0.007150	2.87	10.79	4.47	0.59
unico	6	GAT 13	Q200	51.00	82.25	85.44	85.25	-0.19	85.03	-0.41	84.99	86.27	0.012949	4.05	12.59	4.50	0.77
unico	6	GAT 13	Q500	70.00	82.25	86.46	85.25	-1.21	85.03	-1.43	85.55	87.30	0.011110	4.07	17.18	4.50	0.67
unico	5.1	GAT 12	Q50	31.00	81.69	85.11	84.96	-0.15	84.95	-0.16	83.28	85.26	0.001802	1.70	18.18	5.50	0.30
unico	5.1	GAT 12	Q200	51.00	81.69	85.59	84.96	-0.63	84.95	-0.64	83.87	85.89	0.003437	2.45	20.84	5.50	0.40
unico	5.1	GAT 12	Q500	70.00	81.69	86.59	84.96	-1.63	84.95	-1.64	84.35	86.95	0.003593	2.66	26.34	5.50	0.39
unico	5		Bridge														
unico	4.9	GAT 12	Q50	31.00	81.35	82.94	84.62	1.68	84.61	1.67	82.94	83.68	0.016148	3.81	8.14	5.50	1.00
unico	4.9	GAT 12	Q200	51.00	81.35	83.52	84.62	1.10	84.61	1.09	83.52	84.55	0.017186	4.49	11.35	5.50	1.00
unico	4.9	GAT 12	Q500	70.00	81.35	84.48	84.62	0.14	84.61	0.13	84.01	85.39	0.011629	4.21	16.62	5.50	0.77
unico	4.5	GAT 11	Q50	31.00	80.20	82.36	83.25	0.89	83.22	0.86	81.77	82.70	0.005554	2.59	11.96	6.20	0.60
unico	4.5	GAT 11	Q200	51.00	80.20	83.11	83.25	0.14	83.22	0.11	82.33	83.59	0.005934	3.04	16.76	6.46	0.60
unico	4.5	GAT 11	Q500	70.00	80.20	84.69	83.25	-1.44	83.22	-1.47	82.79	85.03	0.003173	2.59	27.00	6.50	0.41
unico	4.1	GAT 10	Q50	31.00	80.11	82.11	83.68	1.57	83.55	1.44	81.84	82.65	0.010515	3.23	9.61	5.40	0.77
unico	4.1	GAT 10	Q200	51.00	80.11	82.70	83.68	0.98	83.55	0.85	82.42	83.51	0.012982	4.00	12.76	5.40	0.83
unico	4.1	GAT 10	Q500	70.00	80.11	84.50	83.68	-0.82	83.55	-0.95	82.91	85.00	0.005516	3.11	22.51	5.40	0.49
unico	4		Bridge														
unico	3.9	GAT 10	Q50	31.00	80.11	81.84	83.68	1.84	83.55	1.71	81.84	82.58	0.017068	3.83	8.10	5.40	1.00
unico	3.9	GAT 10	Q200	51.00	80.11	82.23	83.68	1.45	83.55	1.32	82.42	83.50	0.023970	4.99	10.21	5.40	1.16
unico	3.9	GAT 10	Q500	70.00	80.11	84.08	83.68	-0.40	83.55	-0.53	82.91	84.69	0.007259	3.46	20.21	5.40	0.57
unico	3.5	GAT 9	Q50	31.00	79.94	81.41	83.25	1.84	83.22	1.81	81.71	82.54	0.031068	4.72	6.57	5.89	1.42
unico	3.5	GAT 9	Q200	51.00	79.94	81.81	83.25	1.44	83.22	1.41	82.27	83.46	0.033855	5.68	8.98	6.02	1.48
unico	3.5	GAT 9	Q500	70.00	79.94	84.21	83.25	-0.96	83.22	-0.99	82.74	84.63	0.004217	2.89	24.19	6.50	0.48

HEC-RAS Plan: Plan 04 River: del Gatto Reach: unico (Continued)

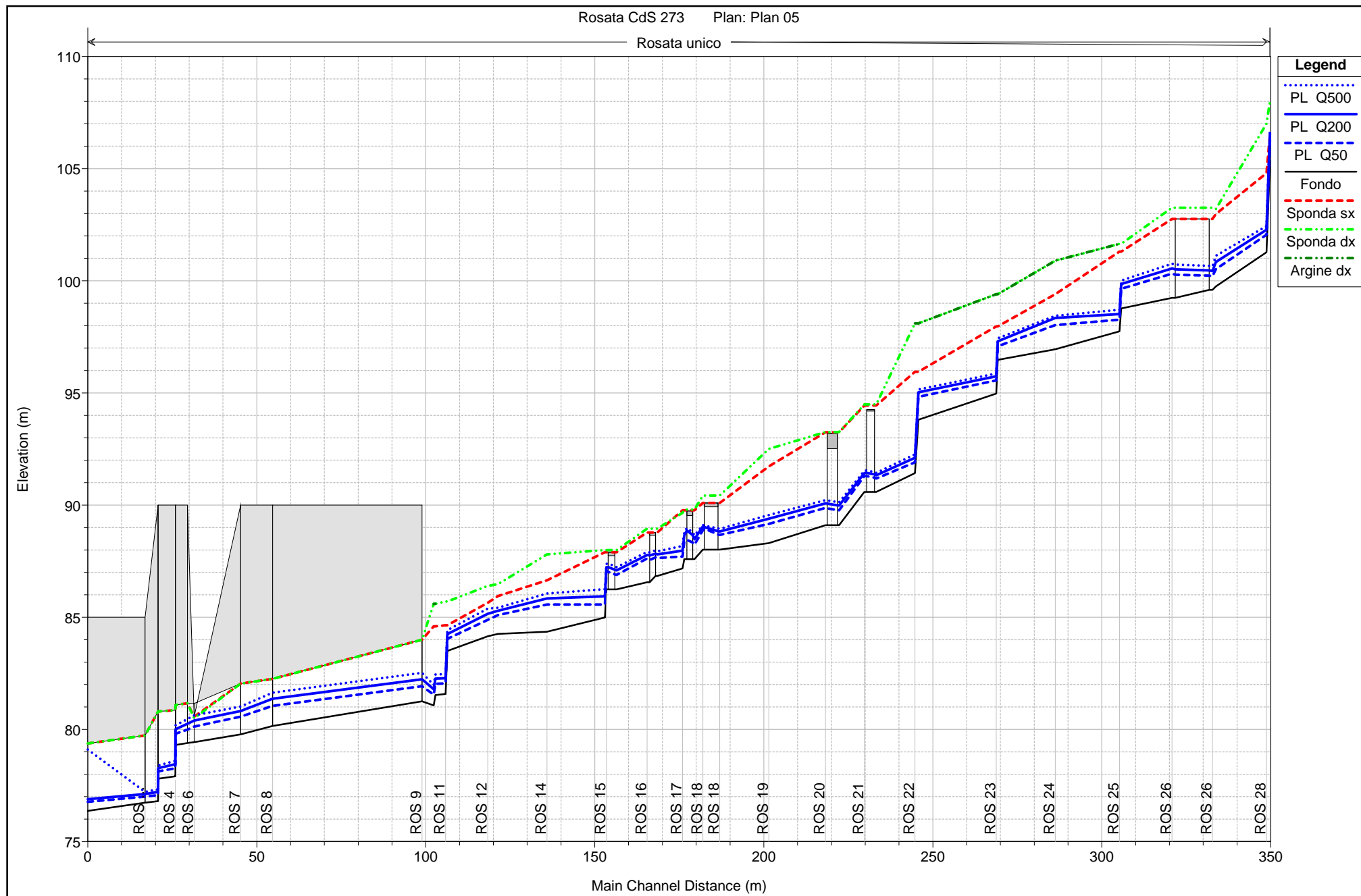
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	3.1 GAT 8	Q50	31.00	79.94	81.88	83.25	1.37	83.22	1.34	81.71	82.44	0.010938	3.29	9.41	6.05	0.84
unico	3.1 GAT 8	Q200	51.00	79.94	82.50	83.25	0.75	83.22	0.72	82.27	83.26	0.011461	3.87	13.19	6.25	0.85
unico	3.1 GAT 8	Q500	70.00	79.94	84.18	83.25	-0.93	83.22	-0.96	82.74	84.61	0.004298	2.91	24.02	6.50	0.48
unico	3		Bridge													
unico	2.9 GAT 8	Q50	31.00	79.82	81.57	83.16	1.59	83.62	2.05	81.57	82.29	0.009133	3.77	8.23	5.68	1.00
unico	2.9 GAT 8	Q200	51.00	79.82	81.99	83.16	1.17	83.62	1.63	82.14	83.16	0.011941	4.80	10.63	5.73	1.12
unico	2.9 GAT 8	Q500	70.00	79.82	81.92	83.16	1.24	83.62	1.70	82.62	84.31	0.025194	6.86	10.21	5.72	1.64
unico	2.8 GAT 7	Q50	31.00	79.52	80.88	82.86	1.98	83.32	2.44	81.27	82.23	0.022583	5.14	6.03	5.63	1.59
unico	2.8 GAT 7	Q200	51.00	79.52	81.35	82.86	1.51	83.32	1.97	81.84	83.10	0.021021	5.86	8.70	5.69	1.51
unico	2.8 GAT 7	Q500	70.00	79.52	81.49	82.86	1.37	83.32	1.83	82.32	84.27	0.031058	7.38	9.48	5.71	1.83
unico	2 GAT 6	Q50	31.00	78.98	80.29	82.32	2.03	82.78	2.49	80.73	81.77	0.025968	5.39	5.75	5.63	1.70
unico	2 GAT 6	Q200	51.00	78.98	80.74	82.32	1.58	82.78	2.04	81.30	82.67	0.024341	6.17	8.27	5.68	1.63
unico	2 GAT 6	Q500	70.00	78.98	80.96	82.32	1.36	82.78	1.82	81.78	83.71	0.030678	7.35	9.52	5.71	1.82
unico	1 GAT 5	Q50	31.00	78.69	80.02	81.19	1.17	81.85	1.83	80.32	81.19	0.017039	4.79	6.48	5.09	1.35
unico	1 GAT 5	Q200	51.00	78.69	80.58	81.19	0.61	81.85	1.27	80.93	82.09	0.016259	5.44	9.38	5.26	1.30
unico	1 GAT 5	Q500	70.00	78.69	80.90	81.19	0.29	81.85	0.95	81.50	82.94	0.019494	6.33	11.05	5.35	1.41
unico	0.8 GAT 4	Q50	31.00	78.65	79.56	82.17	2.61	83.16	3.60	80.01	81.09	0.029862	5.47	5.66	6.22	1.83
unico	0.8 GAT 4	Q200	51.00	78.65	79.95	82.17	2.22	83.16	3.21	80.55	81.97	0.027822	6.30	8.10	6.22	1.76
unico	0.8 GAT 4	Q500	70.00	78.65	80.23	82.17	1.94	83.16	2.93	81.00	82.81	0.029806	7.12	9.83	6.22	1.81
unico	0.6 GAT 3	Q50	31.00	78.50	79.16	82.17	3.01	83.16	4.00	79.65	80.90	0.044905	5.83	5.32	8.00	2.28
unico	0.6 GAT 3	Q200	51.00	78.50	79.44	82.17	2.73	83.16	3.72	80.11	81.78	0.041394	6.78	7.52	8.00	2.23
unico	0.6 GAT 3	Q500	70.00	78.50	79.65	82.17	2.52	83.16	3.51	80.49	82.61	0.042455	7.63	9.17	8.00	2.28
unico	0.4 GAT 2	Q50	31.00	77.96	78.57	81.47	2.90	81.47	2.90	79.12	80.63	0.059034	6.36	4.88	8.00	2.60
unico	0.4 GAT 2	Q200	51.00	77.96	78.83	81.47	2.64	81.47	2.64	79.56	81.54	0.051616	7.29	7.00	8.00	2.49
unico	0.4 GAT 2	Q500	70.00	77.96	81.40	81.47	0.07	81.47	0.07	79.94	81.73	0.001776	2.54	27.55	8.00	0.44
unico	0.2 GAT 1	Q50	31.00	77.26	79.75	80.83	1.08	80.83	1.08	78.41	79.87	0.000855	1.56	19.92	8.00	0.31
unico	0.2 GAT 1	Q200	51.00	77.26	80.63	80.83	0.20	80.83	0.20	78.86	80.81	0.001000	1.89	26.96	8.00	0.33
unico	0.2 GAT 1	Q500	70.00	77.26	81.37	80.83	-0.54	80.83	-0.54	79.25	81.68	0.002836	2.45	28.56		0.39

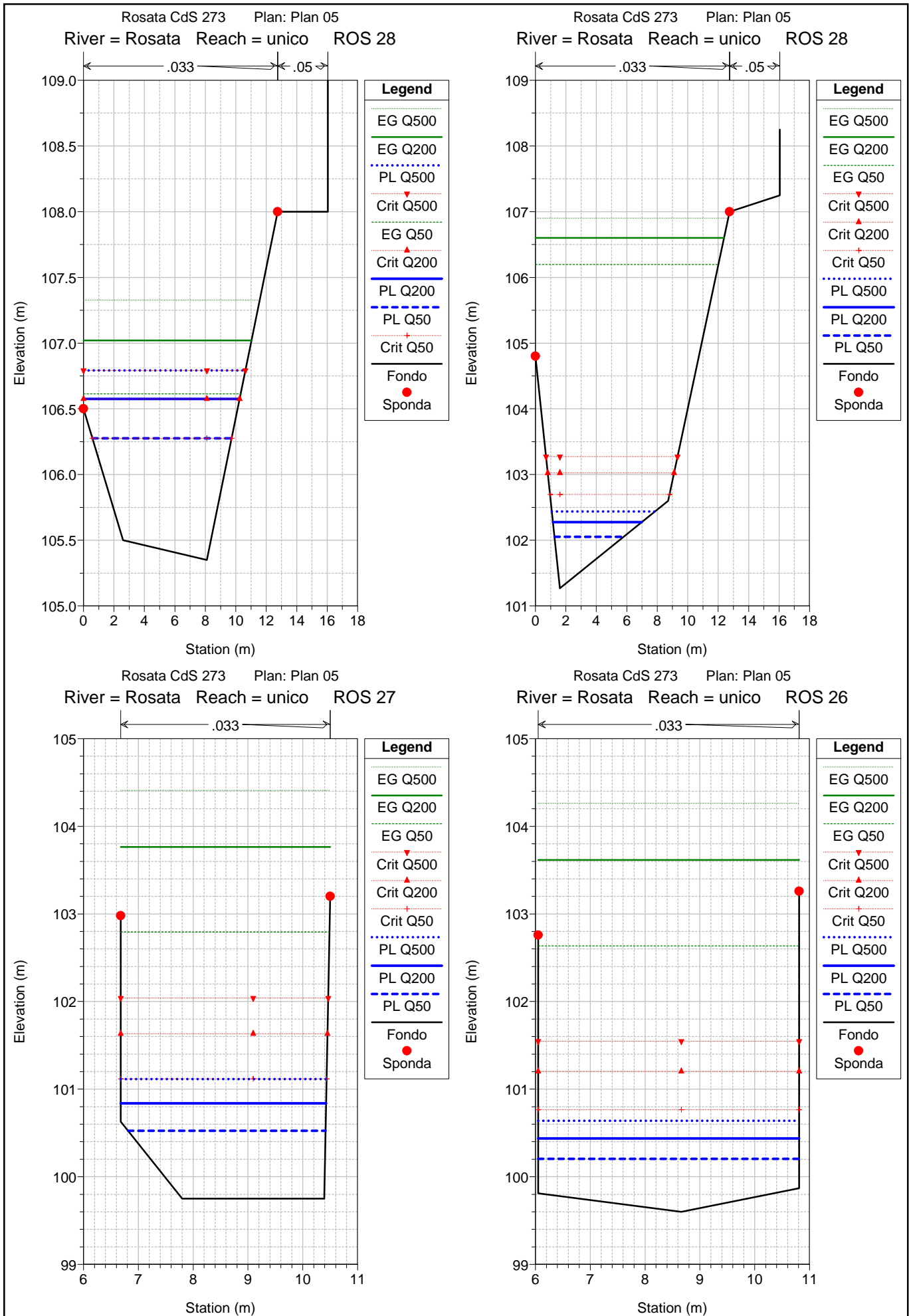
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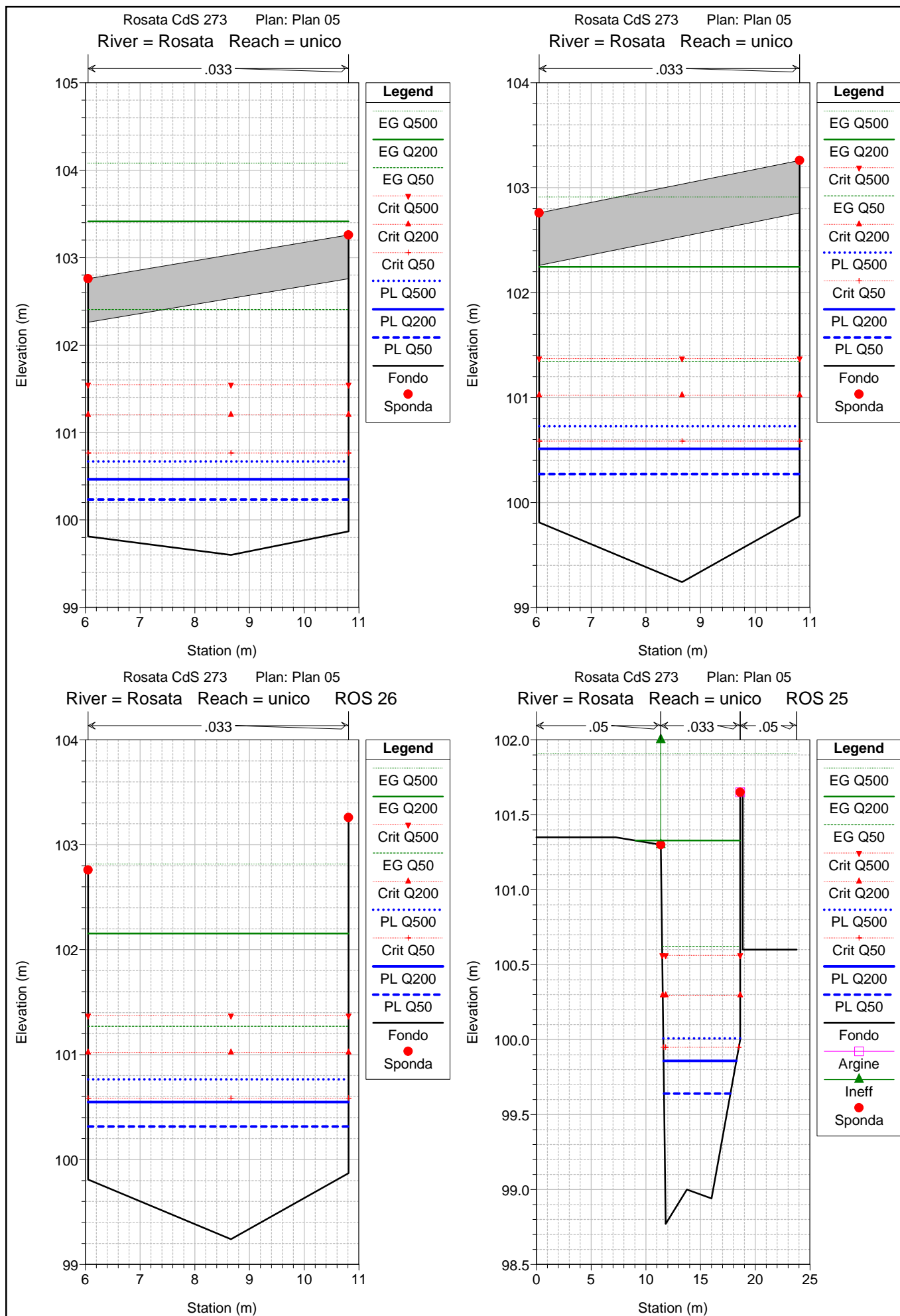
Verifiche idrauliche

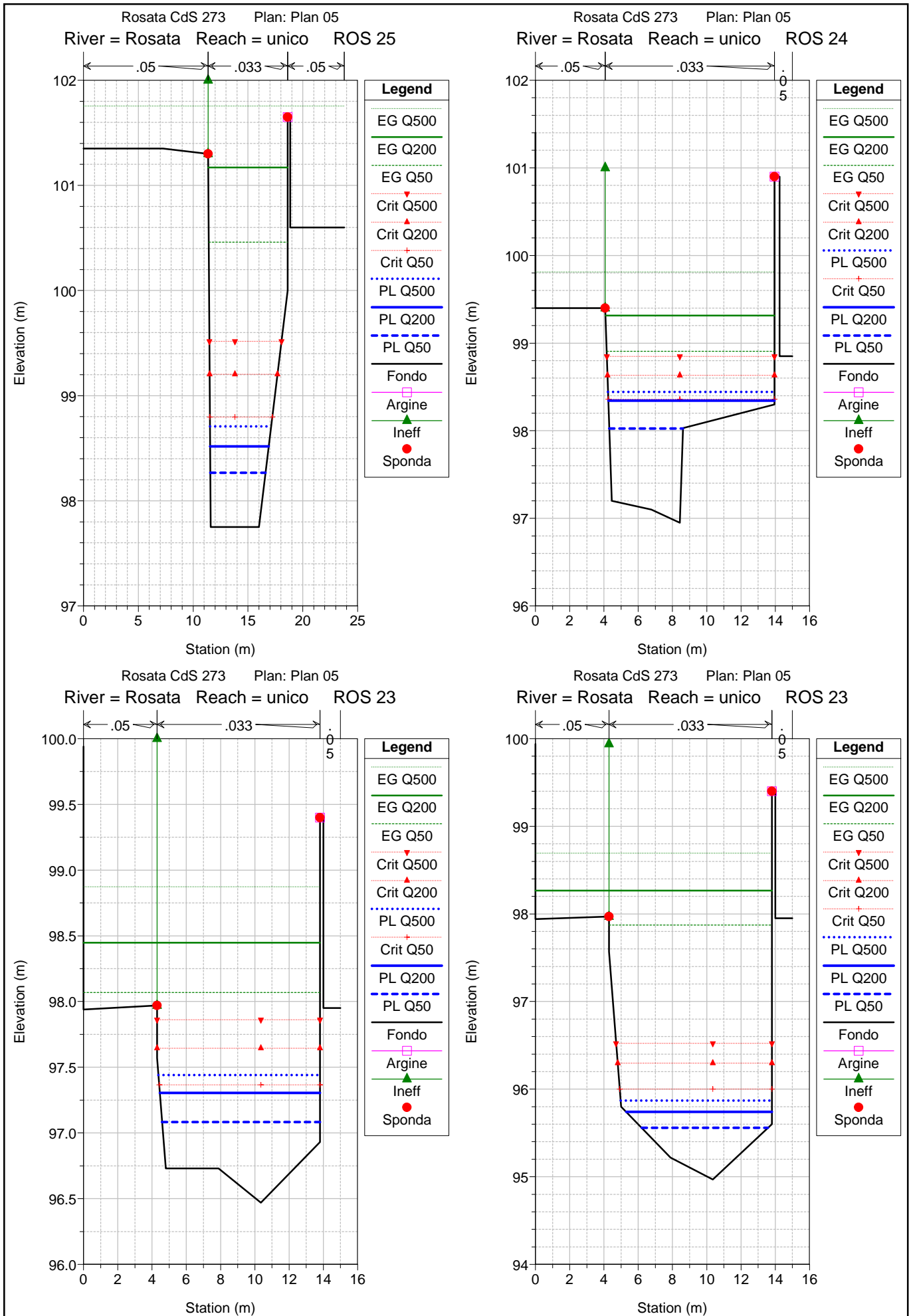
Rio Rosata

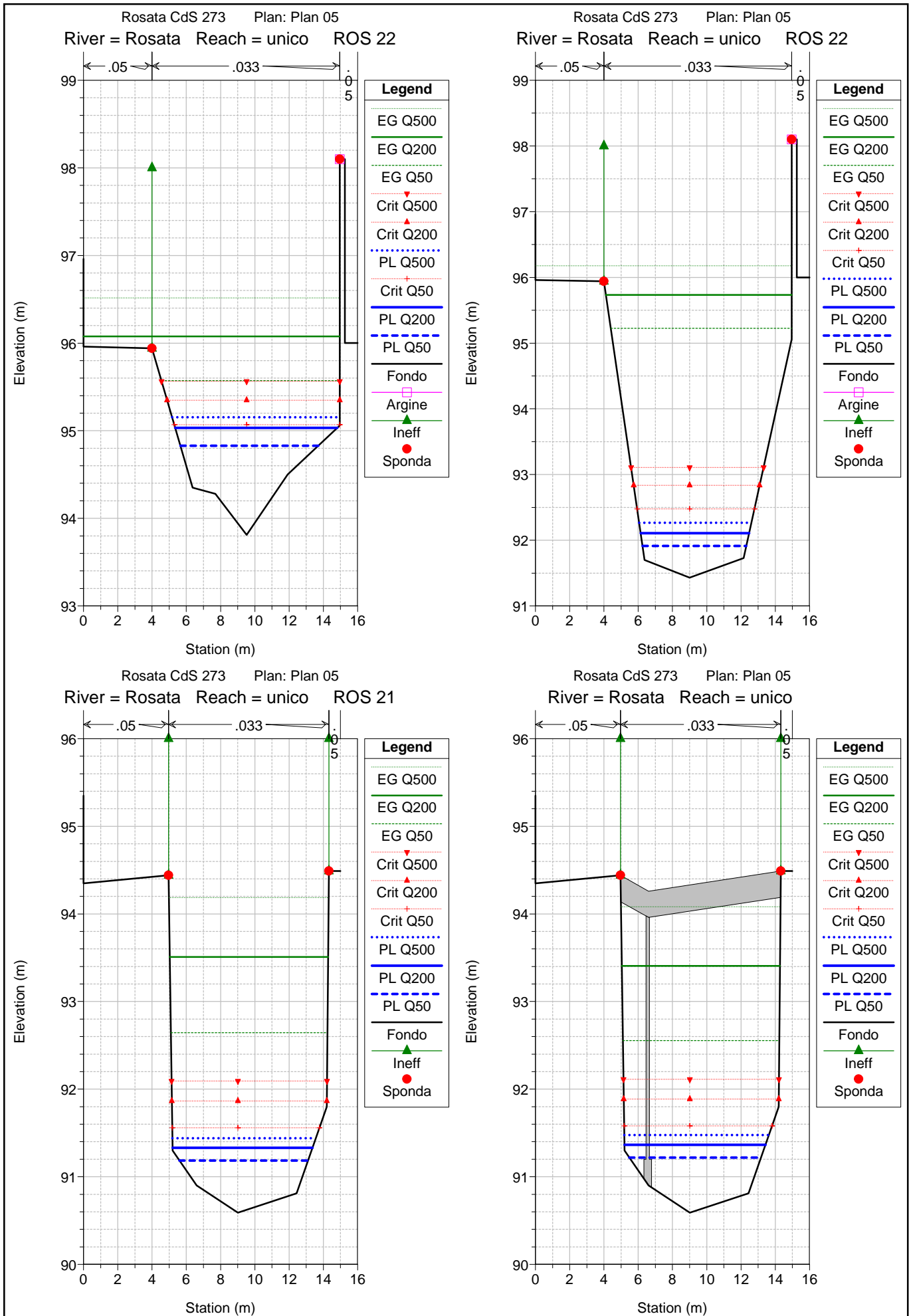
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

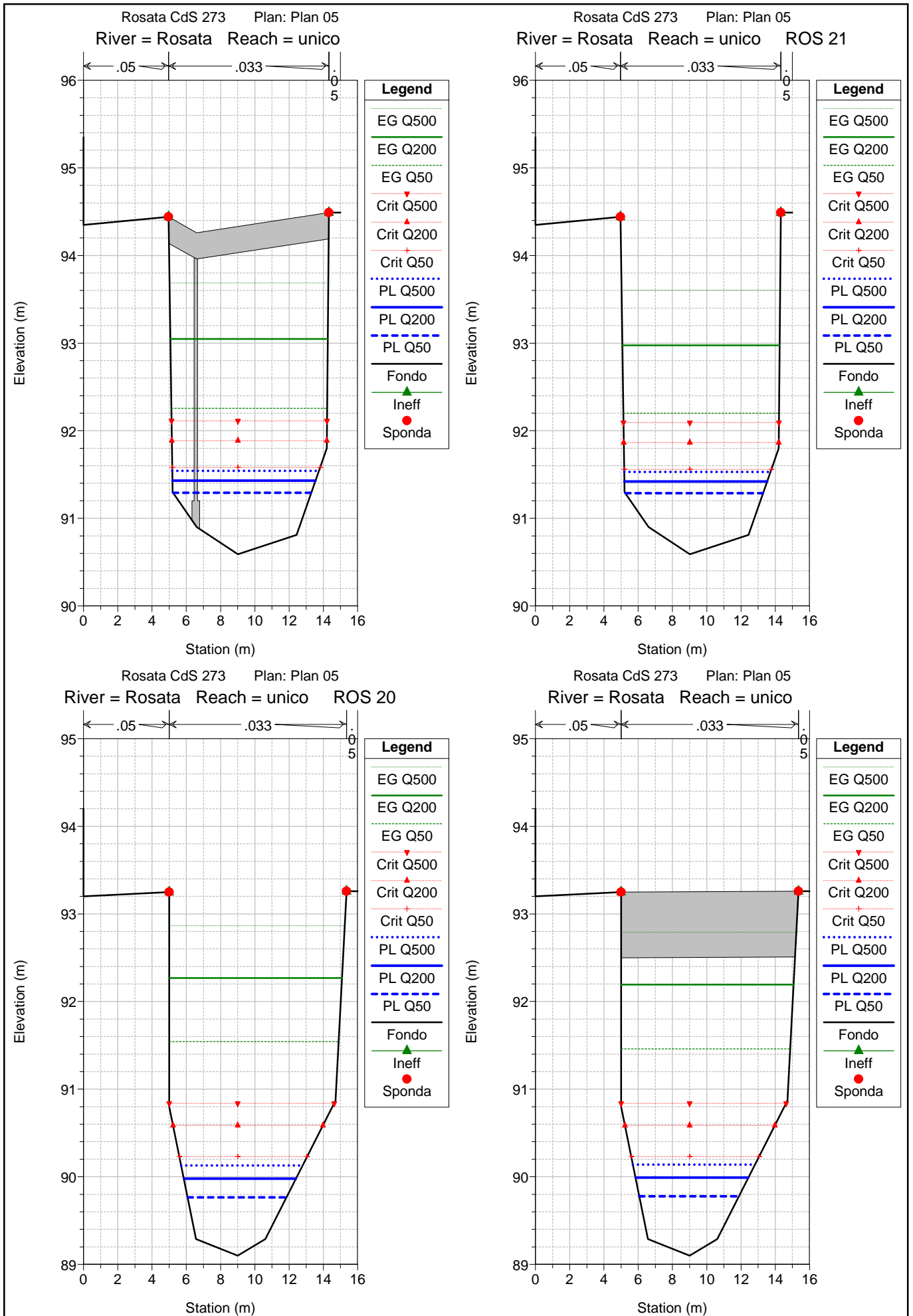


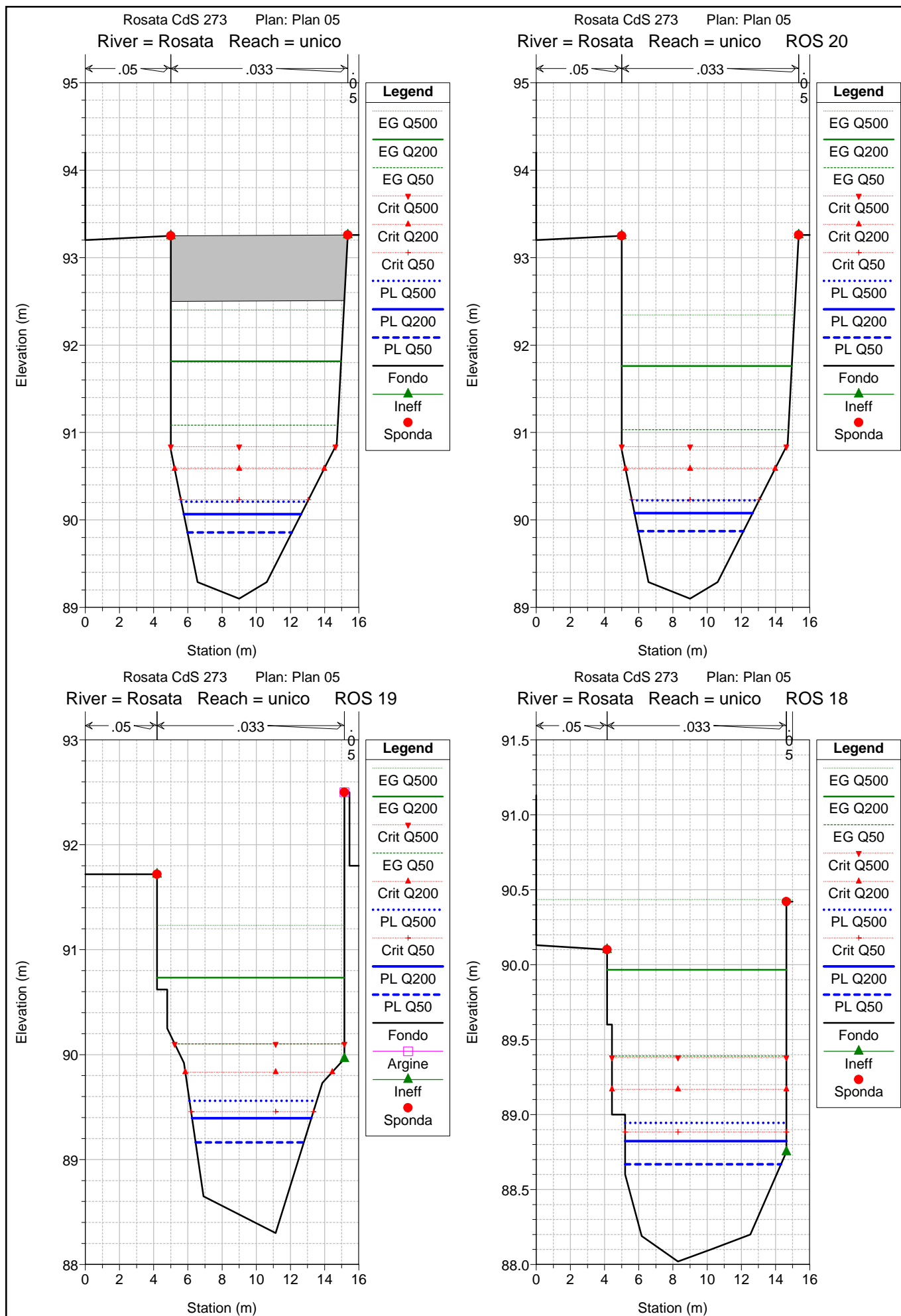


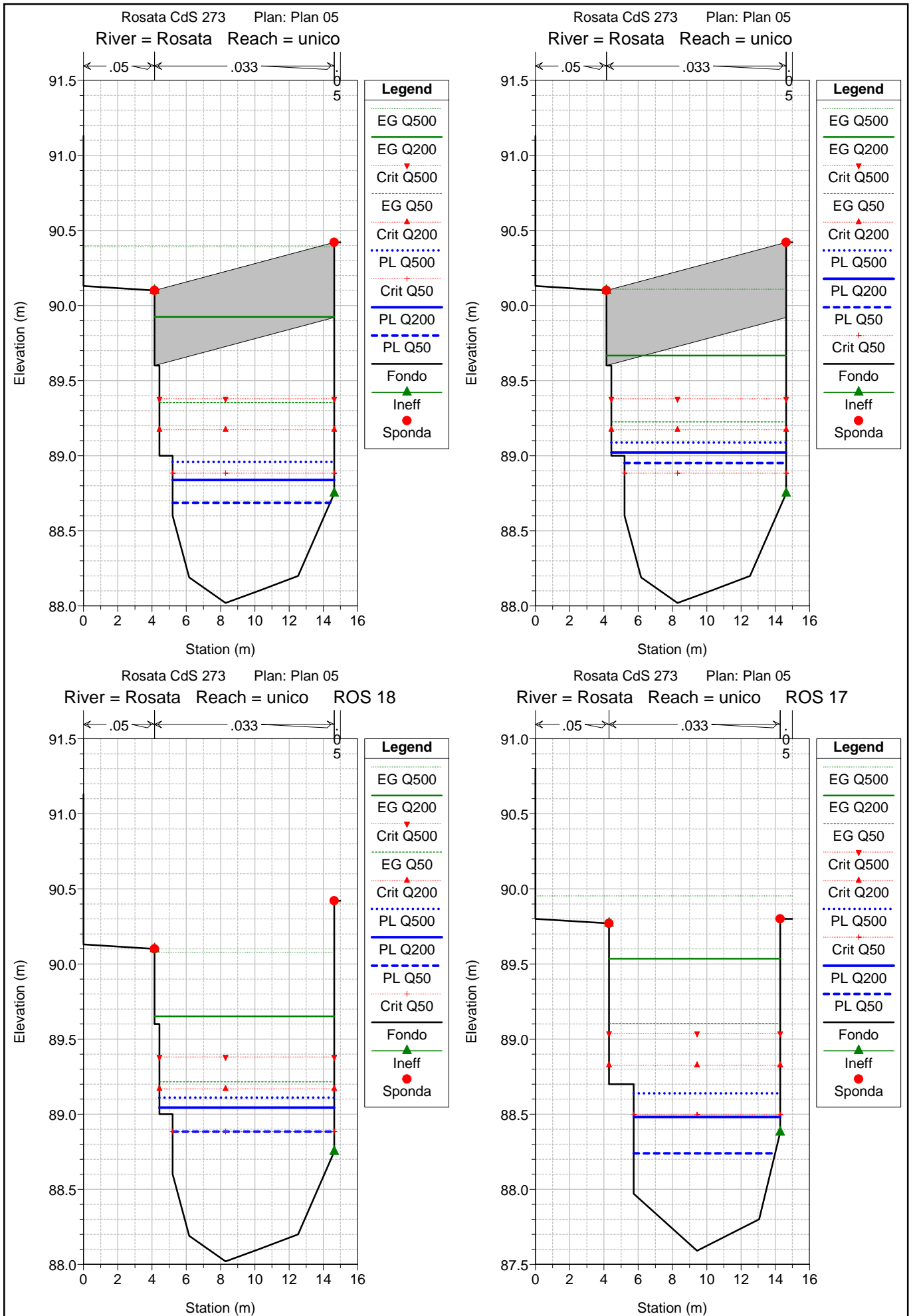


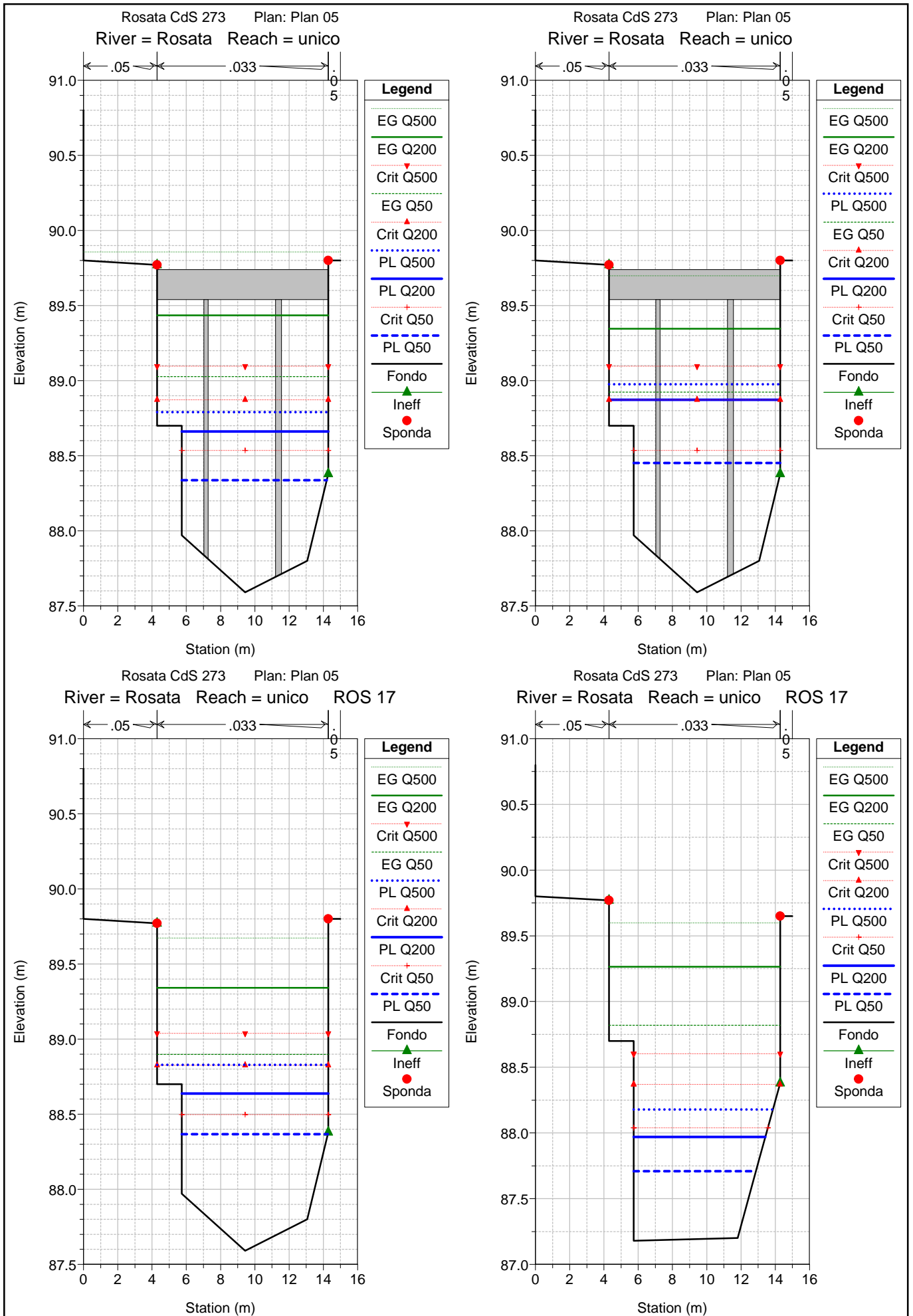


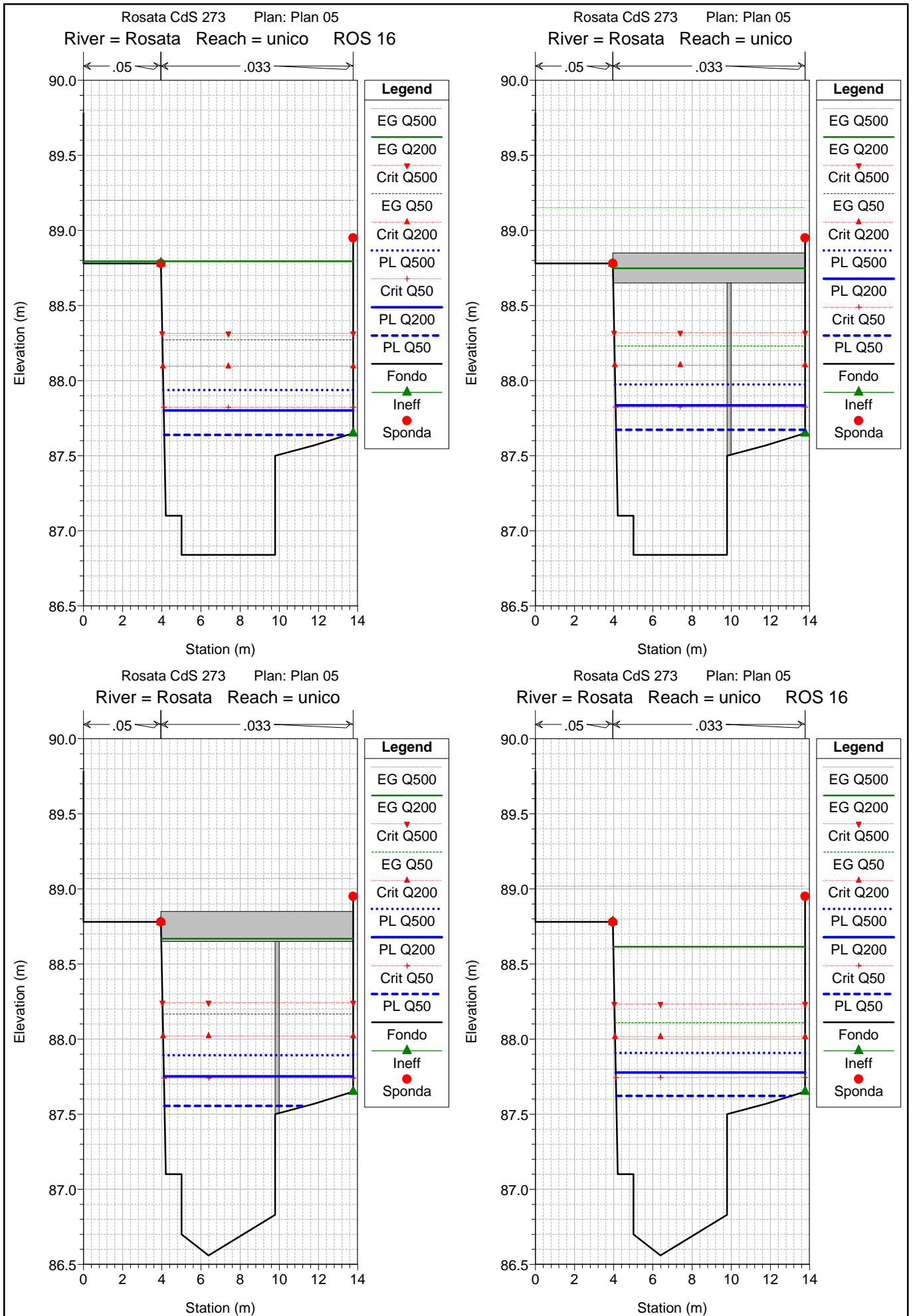


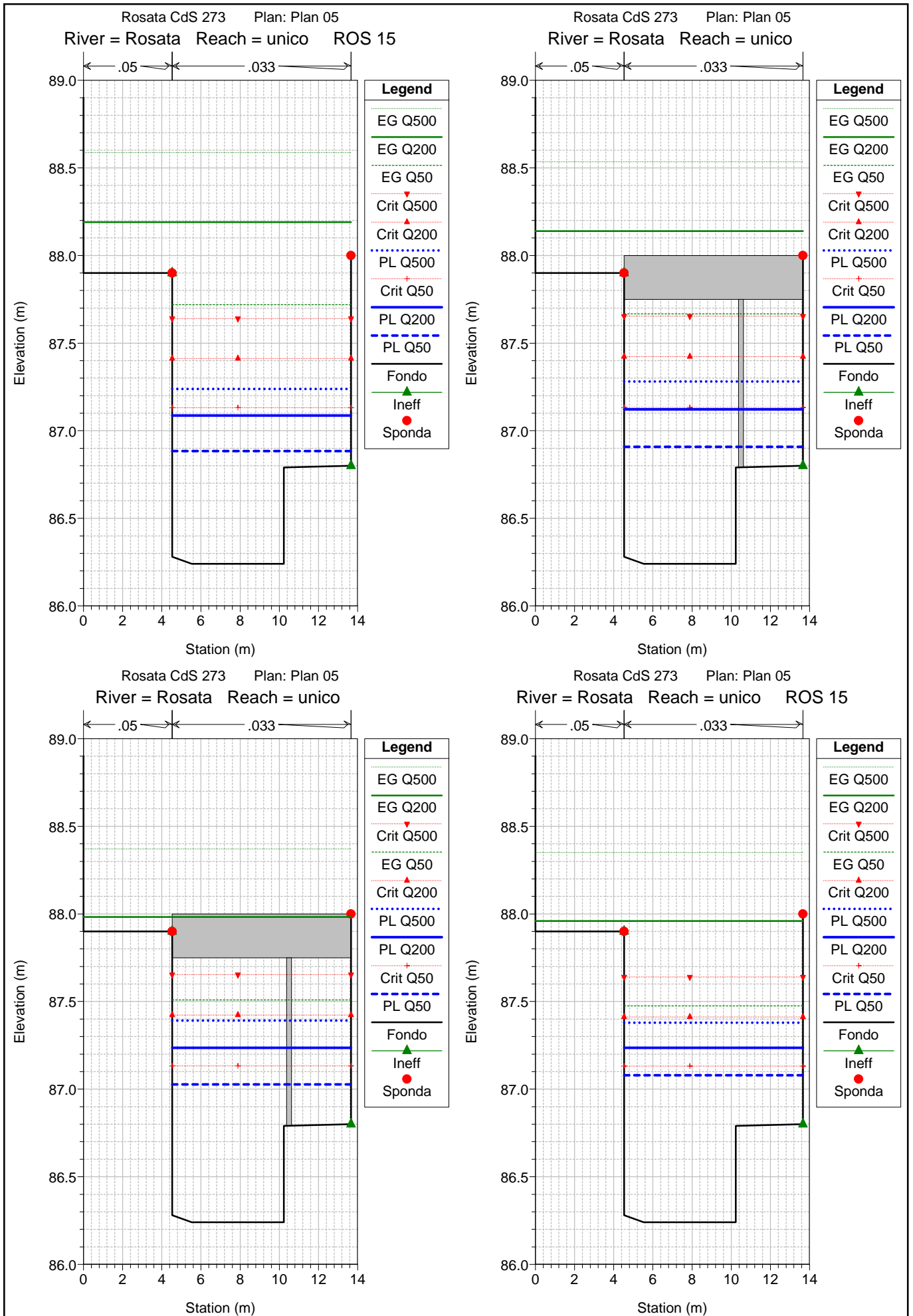


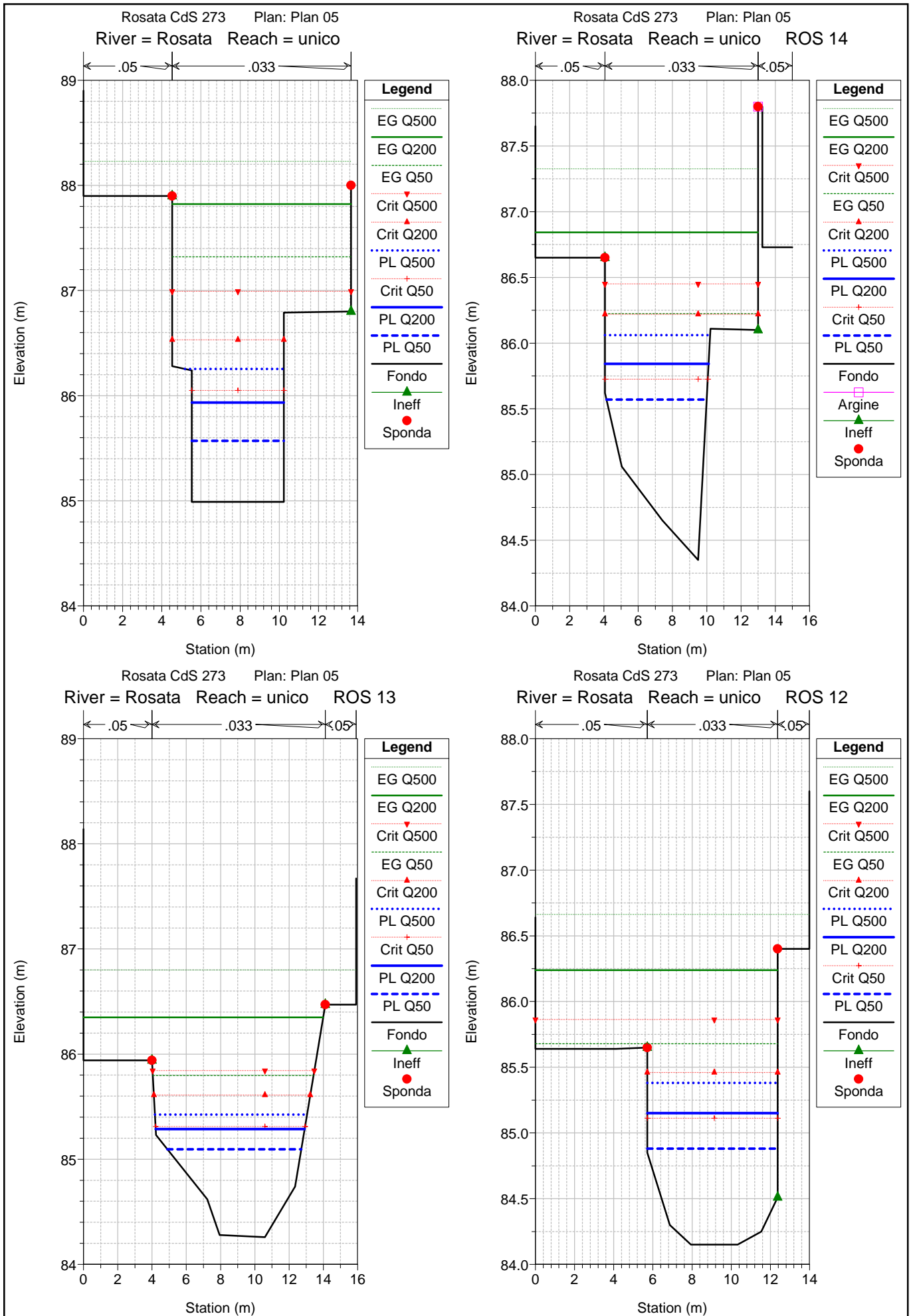


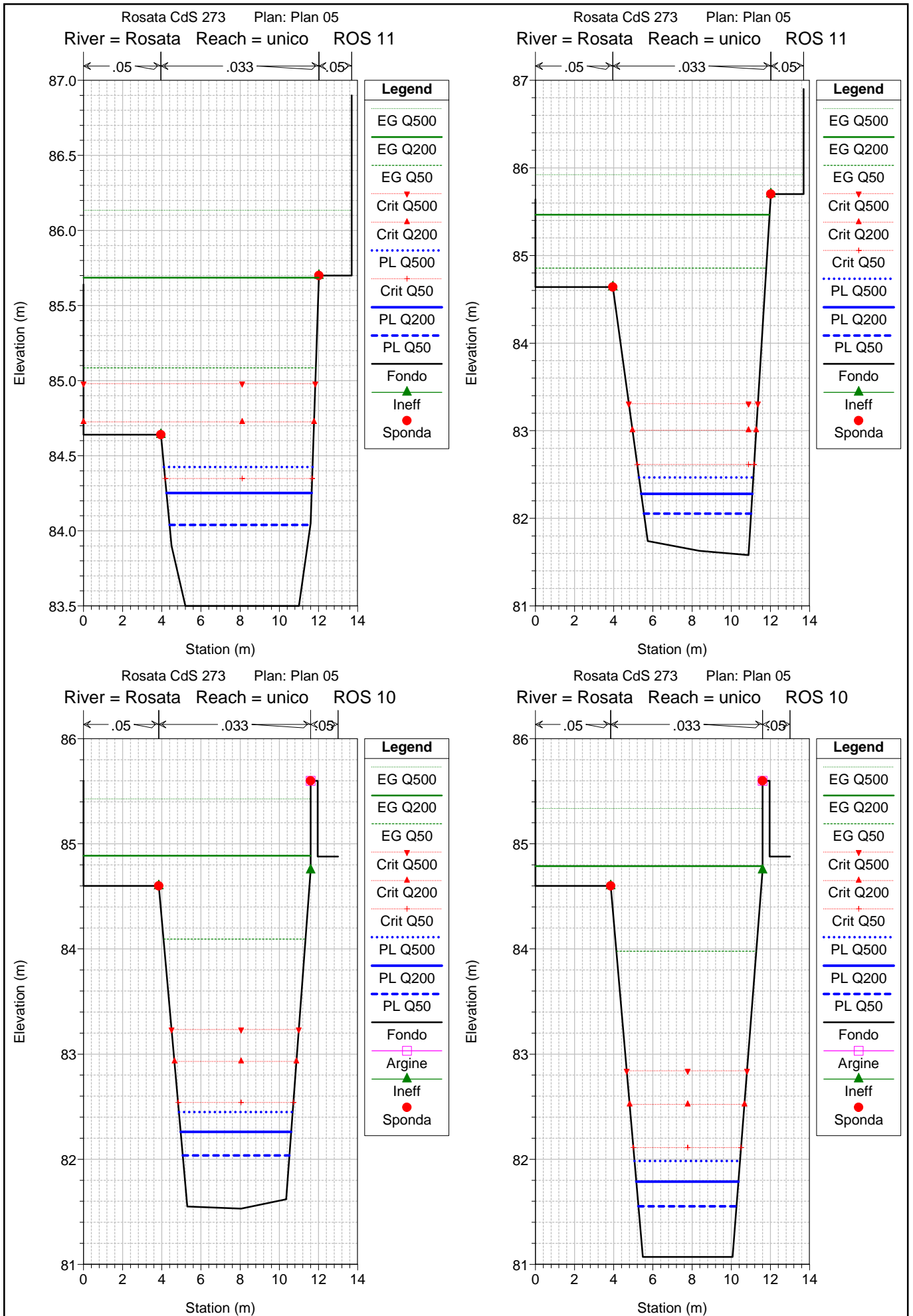


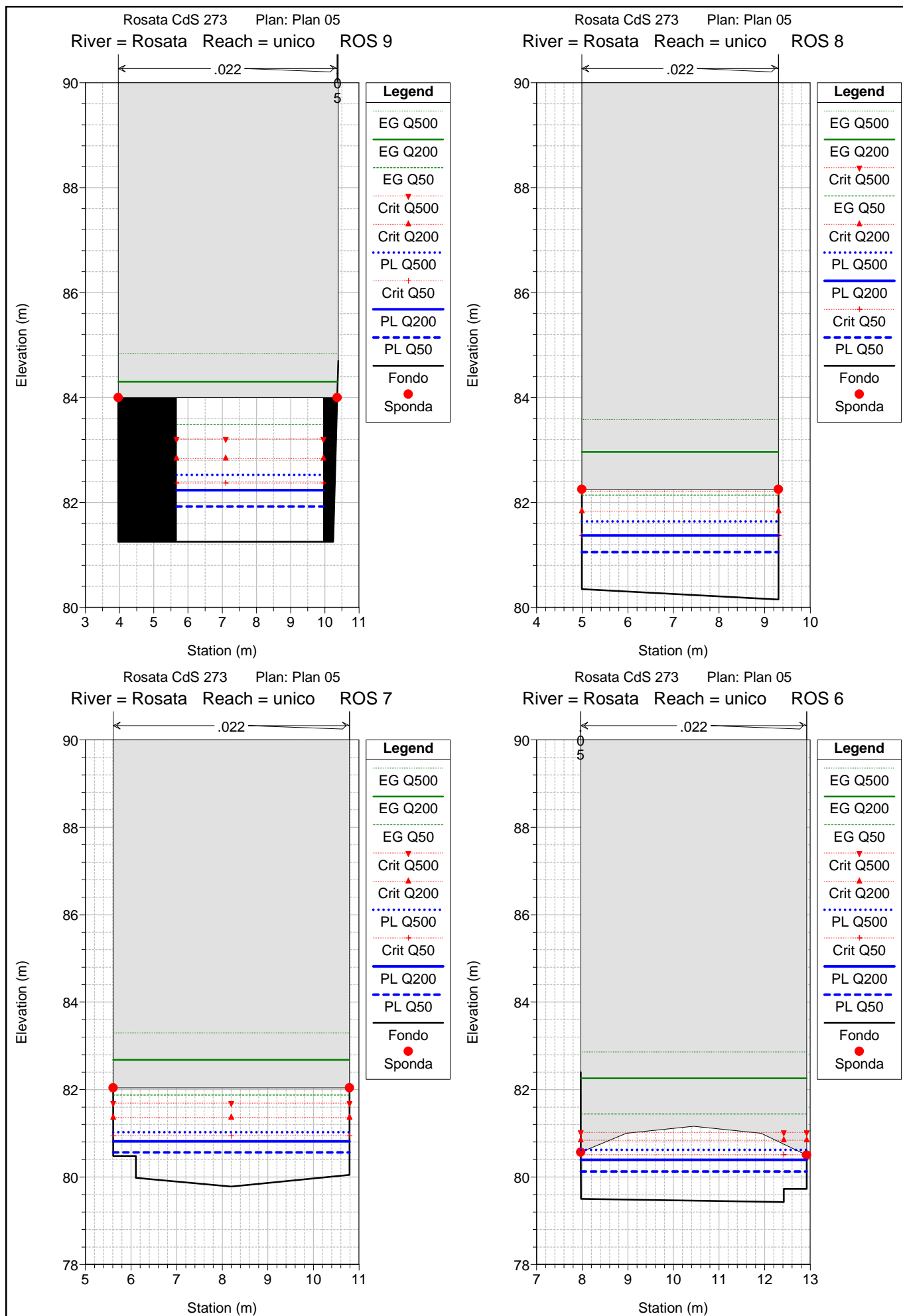


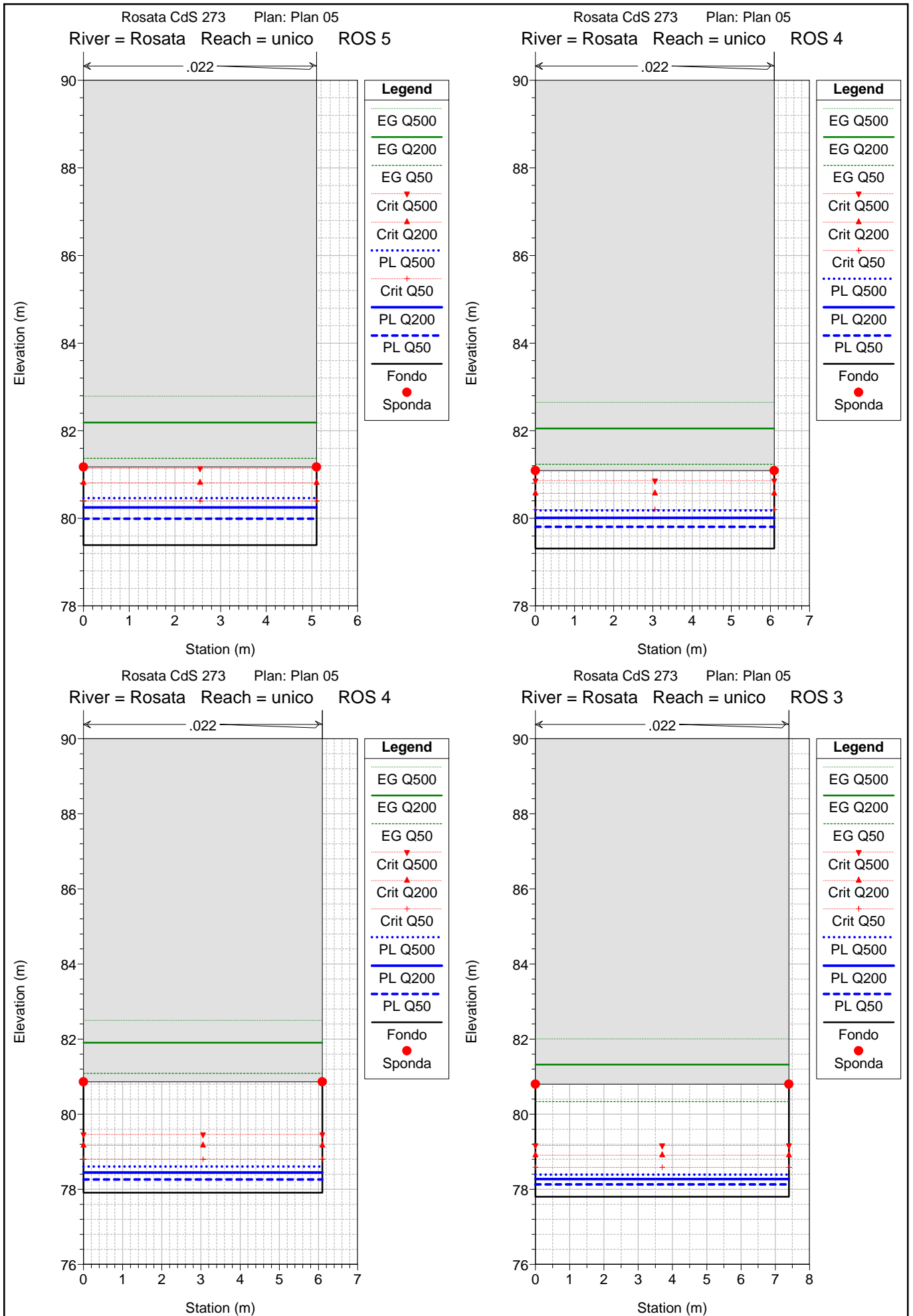


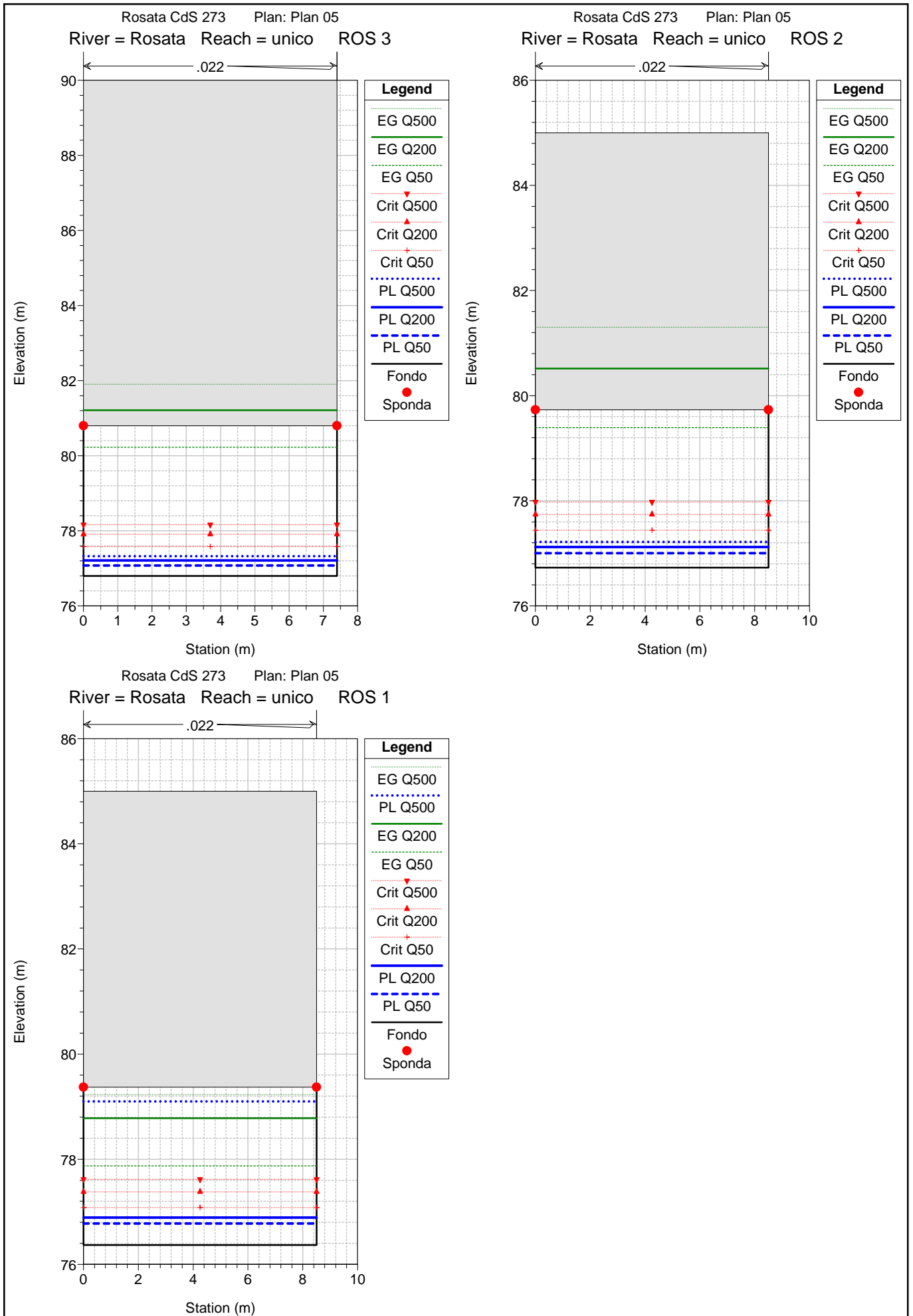












HEC-RAS Plan: Plan 05 River: Rosata Reach: unico

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
unico	25.1 ROS 28	Q50	16.00	105.35	106.27	106.50	0.23	108.00	1.73	106.27	106.61	0.012825	2.58	6.21	9.14	1.00
unico	25.1 ROS 28	Q200	27.00	105.35	106.57	106.50	-0.07	108.00	1.43	106.57	107.02	0.011952	2.96	9.13	10.25	1.00
unico	25.1 ROS 28	Q500	37.00	105.35	106.79	106.50	-0.29	108.00	1.21	106.79	107.33	0.011583	3.24	11.40	10.63	1.00
unico	25 ROS 28	Q50	16.00	101.27	102.05	104.80	2.75	107.00	4.95	102.70	106.20	0.363097	9.02	1.77	4.53	4.60
unico	25 ROS 28	Q200	27.00	101.27	102.28	104.80	2.52	107.00	4.72	103.02	106.60	0.271076	9.21	2.93	5.83	4.15
unico	25 ROS 28	Q500	37.00	101.27	102.44	104.80	2.36	107.00	4.56	103.27	106.90	0.229335	9.36	3.95	6.77	3.91
unico	24 ROS 27	Q50	16.00	99.75	100.52	102.98	2.46	103.20	2.68	101.12	102.79	0.116115	6.67	2.40	3.60	2.61
unico	24 ROS 27	Q200	27.00	99.75	100.84	102.98	2.14	103.20	2.36	101.63	103.77	0.106578	7.58	3.56	3.74	2.48
unico	24 ROS 27	Q500	37.00	99.75	101.11	102.98	1.87	103.20	2.09	102.04	104.41	0.097379	8.04	4.60	3.75	2.32
unico	23.1 ROS 26	Q50	16.00	99.60	100.21	102.76	2.55	103.26	3.05	100.77	102.64	0.165133	6.91	2.32	4.76	3.16
unico	23.1 ROS 26	Q200	27.00	99.60	100.44	102.76	2.32	103.26	2.82	101.20	103.62	0.143185	7.90	3.42	4.76	2.98
unico	23.1 ROS 26	Q500	37.00	99.60	100.64	102.76	2.12	103.26	2.62	101.55	104.27	0.127848	8.44	4.39	4.76	2.80
unico	23	Bridge														
unico	22.9 ROS 26	Q50	16.00	99.24	100.32	102.76	2.44	103.26	2.94	100.58	101.27	0.037716	4.33	3.70	4.76	1.57
unico	22.9 ROS 26	Q200	27.00	99.24	100.55	102.76	2.21	103.26	2.71	101.02	102.16	0.049543	5.62	4.81	4.76	1.78
unico	22.9 ROS 26	Q500	37.00	99.24	100.76	102.76	2.00	103.26	2.50	101.37	102.82	0.053417	6.35	5.83	4.76	1.83
unico	22.1 ROS 25	Q50	16.00	98.77	99.64	101.30	1.66	101.65	2.01	99.95	100.62	0.049500	4.39	3.65	6.07	1.81
unico	22.1 ROS 25	Q200	27.00	98.77	99.86	101.30	1.44	101.65	1.79	100.30	101.33	0.055907	5.37	5.03	6.64	1.97
unico	22.1 ROS 25	Q500	37.00	98.77	100.01	101.30	1.29	101.65	1.64	100.56	101.91	0.061669	6.11	6.06	7.02	2.10
unico	22 ROS 25	Q50	16.00	97.75	98.27	101.30	3.03	101.65	3.38	98.80	100.46	0.146105	6.56	2.44	5.04	3.01
unico	22 ROS 25	Q200	27.00	97.75	98.52	101.30	2.78	101.65	3.13	99.20	101.17	0.114905	7.22	3.74	5.35	2.75
unico	22 ROS 25	Q500	37.00	97.75	98.71	101.30	2.59	101.65	2.94	99.52	101.76	0.104832	7.74	4.78	5.58	2.67
unico	21 ROS 24	Q50	16.00	96.95	98.03	99.40	1.37	100.90	2.87	98.36	98.91	0.033398	4.16	3.85	4.30	1.40
unico	21 ROS 24	Q200	27.00	96.95	98.34	99.40	1.06	100.90	2.56	98.63	99.32	0.048260	4.37	6.18	9.70	1.75
unico	21 ROS 24	Q500	37.00	96.95	98.44	99.40	0.96	100.90	2.46	98.85	99.81	0.057414	5.18	7.14	9.71	1.93
unico	20.1 ROS 23	Q50	16.00	96.47	97.08	97.97	0.89	99.40	2.32	97.37	98.07	0.077096	4.40	3.64	9.21	2.24
unico	20.1 ROS 23	Q200	27.00	96.47	97.31	97.97	0.66	99.40	2.09	97.64	98.45	0.052274	4.74	5.70	9.35	1.94
unico	20.1 ROS 23	Q500	37.00	96.47	97.44	97.97	0.53	99.40	1.96	97.86	98.87	0.052083	5.30	6.98	9.43	1.97
unico	20 ROS 23	Q50	16.00	94.97	95.56	97.97	2.41	99.40	3.84	96.00	97.87	0.228270	6.74	2.37	7.37	3.79
unico	20 ROS 23	Q200	27.00	94.97	95.74	97.97	2.23	99.40	3.66	96.30	98.27	0.162567	7.04	3.83	8.50	3.35
unico	20 ROS 23	Q500	37.00	94.97	95.87	97.97	2.10	99.40	3.53	96.52	98.69	0.138703	7.45	4.97	8.83	3.17
unico	19.1 ROS 22	Q50	16.00	93.81	94.83	95.94	1.11	98.10	3.27	95.07	95.57	0.040000	3.82	4.19	8.05	1.69
unico	19.1 ROS 22	Q200	27.00	93.81	95.03	95.94	0.91	98.10	3.07	95.35	96.08	0.043680	4.53	5.96	9.45	1.82
unico	19.1 ROS 22	Q500	37.00	93.81	95.15	95.94	0.79	98.10	2.94	95.56	96.52	0.047464	5.17	7.16	9.79	1.93
unico	19 ROS 22	Q50	16.00	91.43	91.91	95.94	4.03	98.10	6.19	92.48	95.23	0.329868	8.07	1.98	6.05	4.50
unico	19 ROS 22	Q200	27.00	91.43	92.11	95.94	3.83	98.10	5.99	92.83	95.73	0.210556	8.44	3.20	6.33	3.79
unico	19 ROS 22	Q500	37.00	91.43	92.27	95.94	3.67	98.10	5.83	93.11	96.18	0.169006	8.76	4.22	6.55	3.48

HEC-RAS Plan: Plan 05 River: Rosata Reach: unico (Continued)

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	
unico	18.1	ROS 21	Q50	16.00	90.59	91.18	94.44	3.26	94.49	3.31	91.56	92.64	0.109484	5.35	2.99	7.50	2.71
unico	18.1	ROS 21	Q200	27.00	90.59	91.33	94.44	3.11	94.49	3.16	91.86	93.51	0.120243	6.54	4.13	8.17	2.94
unico	18.1	ROS 21	Q500	37.00	90.59	91.44	94.44	3.00	94.49	3.05	92.09	94.19	0.122466	7.34	5.04	8.37	3.02
unico	18		Bridge														
unico	17.9	ROS 21	Q50	16.00	90.59	91.29	94.44	3.15	94.49	3.20	91.56	92.20	0.055145	4.23	3.78	8.04	1.97
unico	17.9	ROS 21	Q200	27.00	90.59	91.42	94.44	3.02	94.49	3.07	91.86	92.98	0.071540	5.52	4.89	8.34	2.30
unico	17.9	ROS 21	Q500	37.00	90.59	91.53	94.44	2.91	94.49	2.96	92.09	93.60	0.079835	6.38	5.80	8.54	2.47
unico	17.1	ROS 20	Q50	16.00	89.10	89.76	93.25	3.49	93.26	3.50	90.23	91.54	0.111293	5.91	2.71	5.76	2.75
unico	17.1	ROS 20	Q200	27.00	89.10	89.98	93.25	3.27	93.26	3.28	90.59	92.27	0.101585	6.70	4.03	6.54	2.73
unico	17.1	ROS 20	Q500	37.00	89.10	90.13	93.25	3.12	93.26	3.13	90.84	92.87	0.101025	7.33	5.05	7.09	2.77
unico	17		Bridge														
unico	16.9	ROS 20	Q50	16.00	89.10	89.87	93.25	3.38	93.26	3.39	90.23	91.03	0.060093	4.77	3.35	6.16	2.06
unico	16.9	ROS 20	Q200	27.00	89.10	90.08	93.25	3.17	93.26	3.18	90.59	91.76	0.065694	5.74	4.70	6.91	2.22
unico	16.9	ROS 20	Q500	37.00	89.10	90.22	93.25	3.03	93.26	3.04	90.84	92.34	0.070702	6.45	5.73	7.43	2.35
unico	16	ROS 19	Q50	16.00	88.30	89.16	91.72	2.56	92.50	3.34	89.46	90.10	0.044584	4.29	3.73	6.33	1.79
unico	16	ROS 19	Q200	27.00	88.30	89.39	91.72	2.33	92.50	3.11	89.83	90.73	0.046734	5.13	5.26	6.98	1.89
unico	16	ROS 19	Q500	37.00	88.30	89.56	91.72	2.16	92.50	2.94	90.10	91.23	0.048934	5.73	6.46	7.45	1.96
unico	15.1	ROS 18	Q50	16.00	88.02	88.67	90.10	1.43	90.42	1.75	88.88	89.39	0.044209	3.77	4.25	9.12	1.76
unico	15.1	ROS 18	Q200	27.00	88.02	88.82	90.10	1.28	90.42	1.60	89.17	89.97	0.051011	4.74	5.70	9.44	1.95
unico	15.1	ROS 18	Q500	37.00	88.02	88.94	90.10	1.16	90.42	1.48	89.38	90.43	0.053874	5.41	6.84	9.44	2.03
unico	15		Bridge														
unico	14.9	ROS 18	Q50	16.00	88.02	88.88	90.10	1.22	90.42	1.54	88.88	89.22	0.013287	2.55	6.26	9.44	1.00
unico	14.9	ROS 18	Q200	27.00	88.02	89.04	90.10	1.06	90.42	1.38	89.17	89.65	0.020724	3.45	7.82	10.21	1.26
unico	14.9	ROS 18	Q500	37.00	88.02	89.11	90.10	0.99	90.42	1.31	89.38	90.08	0.030050	4.36	8.49	10.21	1.52
unico	14.1	ROS 17	Q50	16.00	87.59	88.24	89.77	1.53	89.80	1.56	88.50	89.10	0.053738	4.12	3.89	8.26	1.92
unico	14.1	ROS 17	Q200	27.00	87.59	88.48	89.77	1.29	89.80	1.32	88.83	89.54	0.041179	4.55	5.94	8.56	1.74
unico	14.1	ROS 17	Q500	37.00	87.59	88.64	89.77	1.13	89.80	1.16	89.04	89.95	0.040849	5.08	7.28	8.56	1.76
unico	14		Bridge														
unico	13.9	ROS 17	Q50	16.00	87.59	88.37	89.77	1.40	89.80	1.43	88.50	88.90	0.025452	3.23	4.96	8.53	1.35
unico	13.9	ROS 17	Q200	27.00	87.59	88.64	89.77	1.13	89.80	1.16	88.83	89.34	0.021937	3.72	7.26	8.56	1.29
unico	13.9	ROS 17	Q500	37.00	87.59	88.83	89.77	0.94	89.80	0.97	89.04	89.67	0.024588	4.07	9.09	10.00	1.36
unico	13.8	ROS 17	Q50	16.00	87.18	87.71	89.77	2.06	89.65	1.94	88.04	88.82	0.070872	4.67	3.43	7.14	2.15
unico	13.8	ROS 17	Q200	27.00	87.18	87.97	89.77	1.80	89.65	1.68	88.37	89.26	0.052486	5.04	5.36	7.69	1.93
unico	13.8	ROS 17	Q500	37.00	87.18	88.18	89.77	1.59	89.65	1.47	88.60	89.60	0.044601	5.28	7.01	8.13	1.82

HEC-RAS Plan: Plan 05 River: Rosata Reach: unico (Continued)

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	
unico	13.1	ROS 16	Q50	16.00	86.84	87.64	88.78	1.14	88.95	1.31	87.82	88.27	0.042753	3.53	4.54	9.35	1.62
unico	13.1	ROS 16	Q200	27.00	86.84	87.80	88.78	0.98	88.95	1.15	88.10	88.80	0.048454	4.42	6.11	9.67	1.77
unico	13.1	ROS 16	Q500	37.00	86.84	87.94	88.78	0.84	88.95	1.01	88.31	89.20	0.049086	4.98	7.43	9.69	1.82
unico	13		Bridge														
unico	12.9	ROS 16	Q50	16.00	86.56	87.62	88.78	1.16	88.95	1.33	87.74	88.11	0.026772	3.09	5.17	8.95	1.30
unico	12.9	ROS 16	Q200	27.00	86.56	87.78	88.78	1.00	88.95	1.17	88.02	88.61	0.036929	4.05	6.66	9.67	1.56
unico	12.9	ROS 16	Q500	37.00	86.56	87.91	88.78	0.87	88.95	1.04	88.23	89.02	0.040009	4.67	7.93	9.69	1.65
unico	12.1	ROS 15	Q50	16.00	86.24	86.88	87.90	1.02	88.00	1.12	87.13	87.72	0.064624	4.05	3.95	9.13	1.96
unico	12.1	ROS 15	Q200	27.00	86.24	87.09	87.90	0.81	88.00	0.91	87.41	88.19	0.053850	4.65	5.80	9.13	1.86
unico	12.1	ROS 15	Q500	37.00	86.24	87.24	87.90	0.66	88.00	0.76	87.64	88.59	0.051337	5.15	7.19	9.13	1.85
unico	12		Bridge														
unico	11.9	ROS 15	Q50	16.00	86.24	87.08	87.90	0.82	88.00	0.92	87.13	87.48	0.019511	2.79	5.74	9.13	1.12
unico	11.9	ROS 15	Q200	27.00	86.24	87.24	87.90	0.66	88.00	0.76	87.41	87.96	0.027648	3.77	7.16	9.13	1.36
unico	11.9	ROS 15	Q500	37.00	86.24	87.38	87.90	0.52	88.00	0.62	87.64	88.35	0.030691	4.37	8.47	9.13	1.45
unico	11.8		Q50	16.00	84.99	85.57	87.90	2.33	88.00	2.43	86.05	87.32	0.103550	5.86	2.73	4.70	2.45
unico	11.8		Q200	27.00	84.99	85.93	87.90	1.97	88.00	2.07	86.53	87.82	0.068434	6.09	4.43	4.70	2.00
unico	11.8		Q500	37.00	84.99	86.25	87.90	1.65	88.00	1.75	86.99	88.23	0.058199	6.23	5.94	5.04	1.83
unico	11	ROS 14	Q50	16.00	84.35	85.57	86.65	1.08	87.80	2.23	85.73	86.22	0.024858	3.59	4.46	5.85	1.31
unico	11	ROS 14	Q200	27.00	84.35	85.84	86.65	0.81	87.80	1.96	86.22	86.84	0.028168	4.43	6.09	6.05	1.41
unico	11	ROS 14	Q500	37.00	84.35	86.06	86.65	0.59	87.80	1.74	86.45	87.33	0.029597	4.99	7.42	6.14	1.45
unico	10	ROS 13	Q50	16.00	84.26	85.10	85.94	0.84	86.47	1.37	85.31	85.80	0.035012	3.71	4.31	7.82	1.59
unico	10	ROS 13	Q200	27.00	84.26	85.29	85.94	0.65	86.47	1.18	85.61	86.35	0.040804	4.57	5.91	8.69	1.77
unico	10	ROS 13	Q500	37.00	84.26	85.42	85.94	0.52	86.47	1.05	85.84	86.80	0.043312	5.20	7.12	8.88	1.85
unico	9	ROS 12	Q50	16.00	84.15	84.88	85.65	0.77	86.40	1.52	85.11	85.68	0.037146	3.96	4.04	6.66	1.62
unico	9	ROS 12	Q200	27.00	84.15	85.15	85.65	0.50	86.40	1.25	85.46	86.24	0.034024	4.62	5.85	6.66	1.57
unico	9	ROS 12	Q500	37.00	84.15	85.38	85.65	0.27	86.40	1.02	85.86	86.66	0.031799	5.02	7.37	6.66	1.52
unico	8.1	ROS 11	Q50	16.00	83.50	84.04	84.64	0.60	85.70	1.66	84.35	85.09	0.061942	4.53	3.53	7.19	2.06
unico	8.1	ROS 11	Q200	27.00	83.50	84.25	84.64	0.39	85.70	1.45	84.72	85.69	0.056572	5.30	5.09	7.41	2.04
unico	8.1	ROS 11	Q500	37.00	83.50	84.43	84.64	0.21	85.70	1.27	84.98	86.14	0.053184	5.79	6.39	7.59	2.02
unico	8	ROS 11	Q50	16.00	81.58	82.05	84.64	2.59	85.70	3.65	82.62	84.86	0.234953	7.42	2.16	5.47	3.77
unico	8	ROS 11	Q200	27.00	81.58	82.28	84.64	2.36	85.70	3.42	83.01	85.46	0.161017	7.91	3.41	5.67	3.25
unico	8	ROS 11	Q500	37.00	81.58	82.47	84.64	2.17	85.70	3.23	83.31	85.92	0.131451	8.23	4.49	5.84	3.00
unico	7.1	ROS 10	Q50	16.00	81.53	82.04	84.60	2.56	85.60	3.56	82.54	84.09	0.141173	6.35	2.52	5.45	2.98
unico	7.1	ROS 10	Q200	27.00	81.53	82.26	84.60	2.34	85.60	3.34	82.93	84.89	0.117181	7.18	3.76	5.64	2.81
unico	7.1	ROS 10	Q500	37.00	81.53	82.45	84.60	2.15	85.60	3.15	83.23	85.43	0.102975	7.65	4.84	5.81	2.67
unico	7	ROS 10	Q50	16.00	81.07	81.55	84.60	3.05	85.60	4.05	82.11	83.98	0.169852	6.90	2.32	5.01	3.24

HEC-RAS Plan: Plan 05 River: Rosata Reach: unico (Continued)

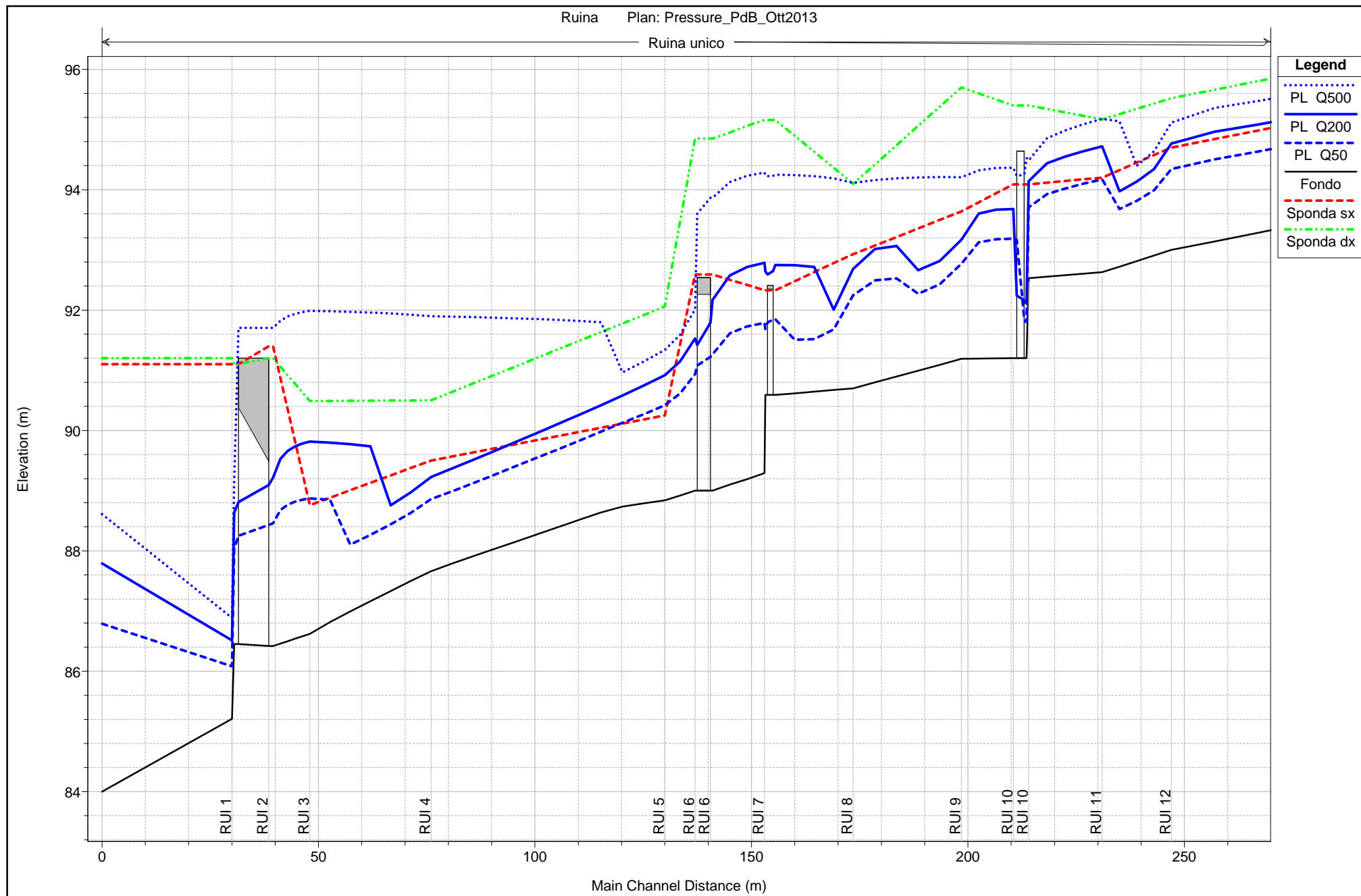
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	7 ROS 10	Q200	27.00	81.07	81.79	84.60	2.81	85.60	3.81	82.52	84.79	0.135290	7.67	3.52	5.22	2.98
unico	7 ROS 10	Q500	37.00	81.07	81.98	84.60	2.62	85.60	3.62	82.84	85.34	0.116903	8.11	4.56	5.39	2.81
unico	6 ROS 9	Q50	16.00	81.25	81.92	84.00	2.08	84.00	2.08	82.37	83.48	0.036218	5.54	2.89	4.30	2.16
unico	6 ROS 9	Q200	27.00	81.25	82.24	84.00	1.76	84.00	1.76	82.84	84.30	0.033111	6.37	4.24	4.30	2.05
unico	6 ROS 9	Q500	37.00	81.25	82.53	84.00	1.47	84.00	1.47	83.21	84.84	0.029566	6.74	5.49	4.30	1.90
unico	5 ROS 8	Q50	16.00	80.15	81.05	82.25	1.20	82.25	1.20	81.37	82.14	0.021160	4.62	3.46	4.31	1.65
unico	5 ROS 8	Q200	27.00	80.15	81.37	82.25	0.88	82.25	0.88	81.83	82.96	0.022668	5.58	4.83	4.31	1.68
unico	5 ROS 8	Q500	37.00	80.15	81.64	82.25	0.61	82.25	0.61	82.21	83.58	0.023108	6.17	5.99	4.31	1.67
unico	4 ROS 7	Q50	16.00	79.78	80.56	82.04	1.48	82.04	1.48	80.94	81.88	0.031414	5.08	3.15	5.18	2.08
unico	4 ROS 7	Q200	27.00	79.78	80.82	82.04	1.22	82.04	1.22	81.36	82.68	0.031136	6.05	4.46	5.18	2.08
unico	4 ROS 7	Q500	37.00	79.78	81.02	82.04	1.02	82.04	1.02	81.69	83.30	0.030752	6.68	5.54	5.18	2.06
unico	3 ROS 6	Q50	16.00	79.43	80.13	80.57	0.44	80.50	0.37	80.51	81.44	0.031333	5.08	3.15	4.95	2.03
unico	3 ROS 6	Q200	27.00	79.43	80.39	80.57	0.18	80.50	0.11	80.84	82.26	0.031101	6.05	4.46	4.95	2.03
unico	3 ROS 6	Q500	37.00	79.43	80.62	80.57	-0.05	80.50	-0.12	81.02	82.86	0.031479	6.62	5.59	4.58	1.93
unico	2.5 ROS 5	Q50	16.00	79.39	79.99	81.17	1.18	81.17	1.18	80.39	81.37	0.034145	5.20	3.07	5.10	2.14
unico	2.5 ROS 5	Q200	27.00	79.39	80.25	81.17	0.92	81.17	0.92	80.81	82.19	0.033243	6.17	4.38	5.10	2.13
unico	2.5 ROS 5	Q500	37.00	79.39	80.46	81.17	0.71	81.17	0.71	81.14	82.79	0.032047	6.75	5.48	5.10	2.08
unico	2.3 ROS 4	Q50	16.00	79.31	79.81	81.09	1.28	81.09	1.28	80.20	81.23	0.042265	5.29	3.02	6.10	2.40
unico	2.3 ROS 4	Q200	27.00	79.31	80.01	81.09	1.08	81.09	1.08	80.57	82.05	0.041137	6.33	4.27	6.10	2.42
unico	2.3 ROS 4	Q500	37.00	79.31	80.18	81.09	0.91	81.09	0.91	80.86	82.65	0.039358	6.96	5.32	6.10	2.38
unico	2.2 ROS 4	Q50	16.00	77.91	78.26	80.86	2.60	80.86	2.60	78.80	81.09	0.124734	7.45	2.15	6.10	4.00
unico	2.2 ROS 4	Q200	27.00	77.91	78.45	80.86	2.41	80.86	2.41	79.17	81.90	0.093256	8.24	3.28	6.10	3.59
unico	2.2 ROS 4	Q500	37.00	77.91	78.60	80.86	2.26	80.86	2.26	79.46	82.50	0.079246	8.75	4.23	6.10	3.35
unico	2 ROS 3	Q50	16.00	77.80	78.13	80.80	2.67	80.80	2.67	78.58	80.33	0.103352	6.58	2.43	7.40	3.66
unico	2 ROS 3	Q200	27.00	77.80	78.27	80.80	2.53	80.80	2.53	78.91	81.32	0.092451	7.73	3.49	7.40	3.59
unico	2 ROS 3	Q500	37.00	77.80	78.39	80.80	2.41	80.80	2.41	79.17	82.01	0.083907	8.42	4.39	7.40	3.49
unico	1.9 ROS 3	Q50	16.00	76.80	77.08	80.80	3.72	80.80	3.72	77.58	80.23	0.184159	7.86	2.03	7.40	4.79
unico	1.9 ROS 3	Q200	27.00	76.80	77.21	80.80	3.59	80.80	3.59	77.91	81.21	0.142746	8.86	3.05	7.40	4.41
unico	1.9 ROS 3	Q500	37.00	76.80	77.33	80.80	3.47	80.80	3.47	78.17	81.90	0.121694	9.47	3.91	7.40	4.16
unico	1.8 ROS 2	Q50	16.00	76.73	77.01	79.73	2.72	79.73	2.72	77.44	79.39	0.137914	6.85	2.34	8.50	4.17
unico	1.8 ROS 2	Q200	27.00	76.73	77.12	79.73	2.61	79.73	2.61	77.74	80.52	0.127783	8.17	3.31	8.50	4.18
unico	1.8 ROS 2	Q500	37.00	76.73	77.22	79.73	2.51	79.73	2.51	77.98	81.30	0.117277	8.95	4.13	8.50	4.10
unico	1 ROS 1	Q50	16.00	76.37	76.78	79.37	2.59	79.37	2.59	77.08	77.87	0.039219	4.64	3.45	8.50	2.33
unico	1 ROS 1	Q200	27.00	76.37	76.89	79.37	2.48	79.37	2.48	77.38	78.78	0.049889	6.09	4.43	8.50	2.69
unico	1 ROS 1	Q500	37.00	76.37	79.10	79.37	0.27	79.37	0.27	77.62	79.23	0.000625	1.59	23.20	8.50	0.31

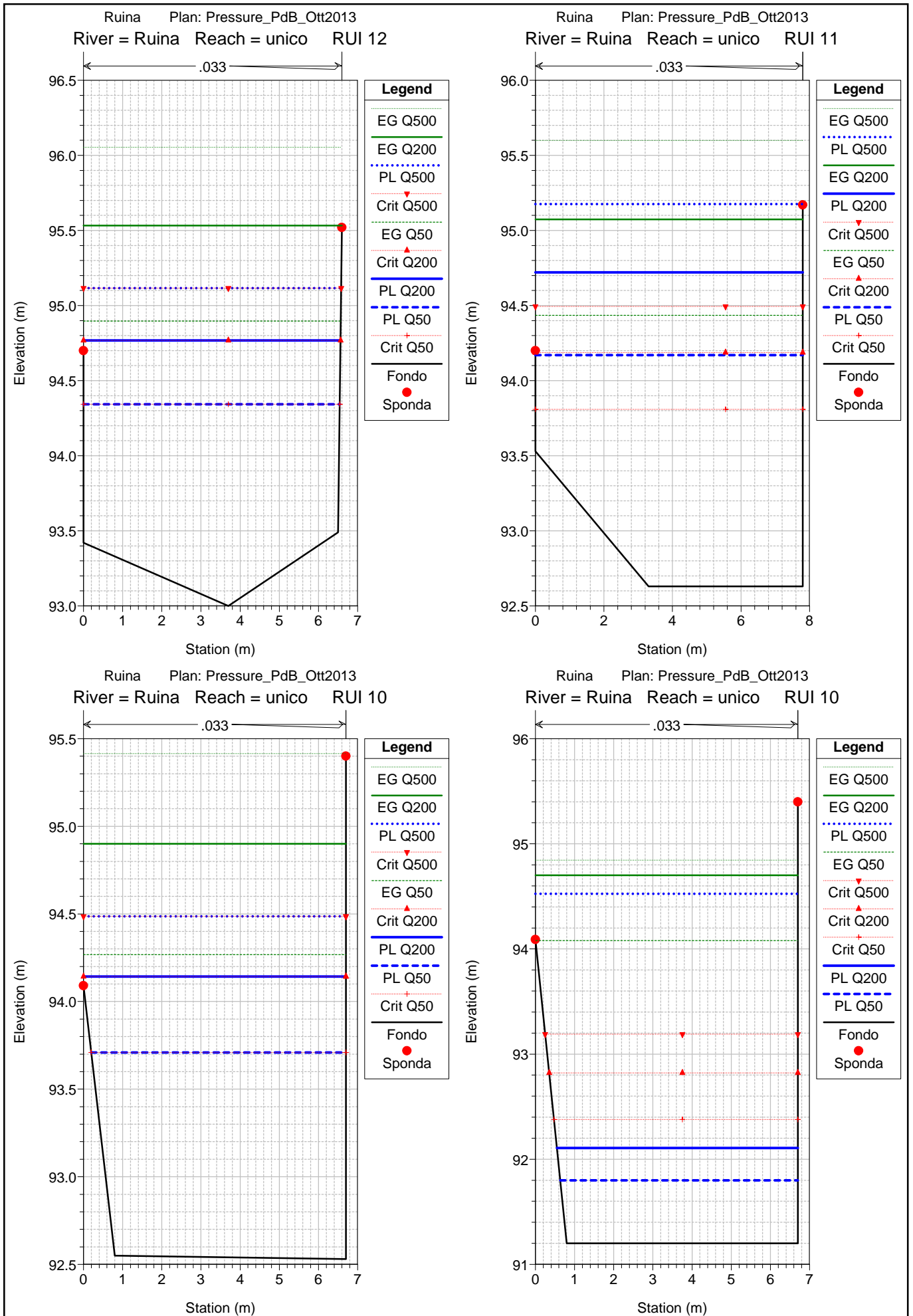
Allegato

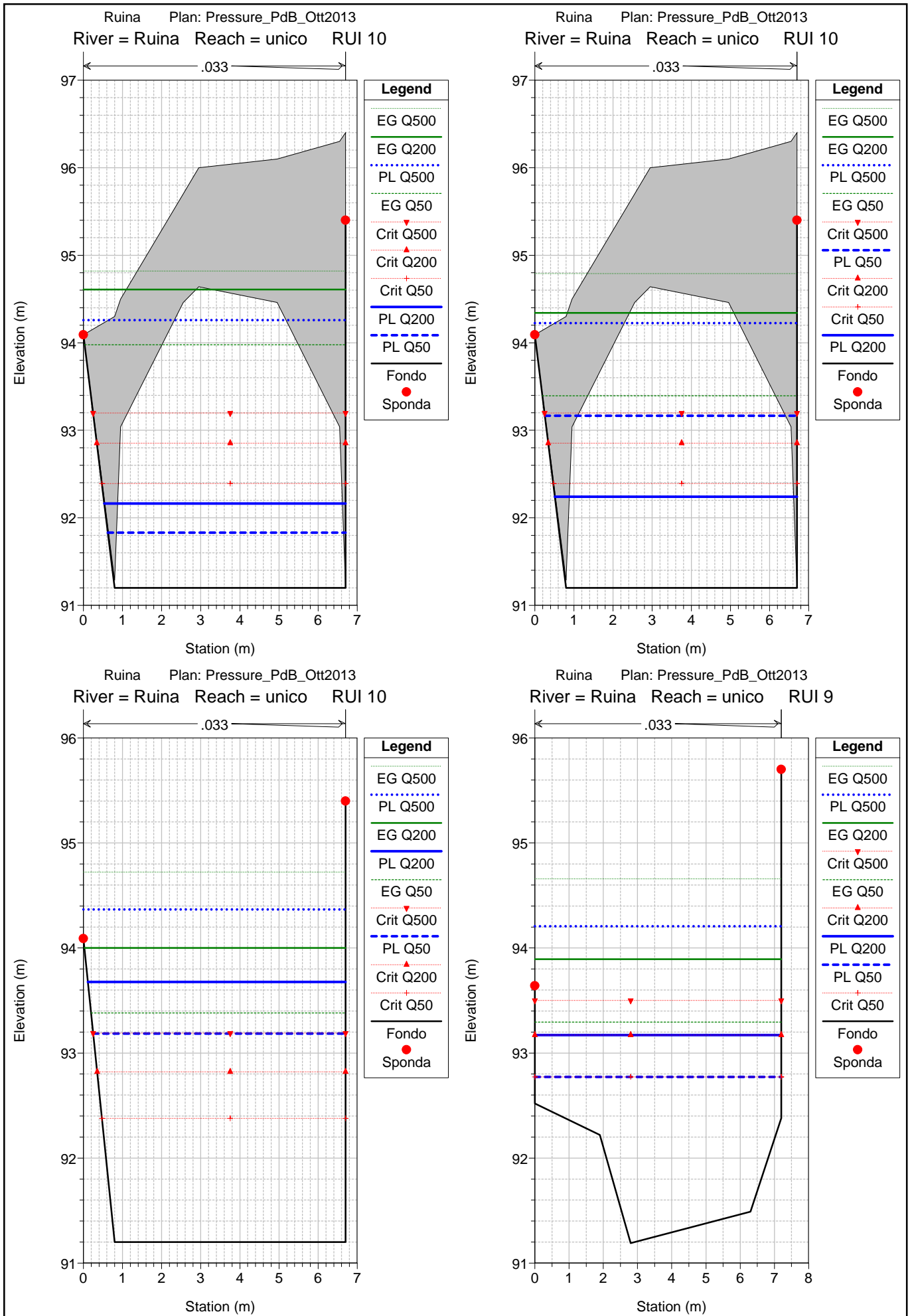
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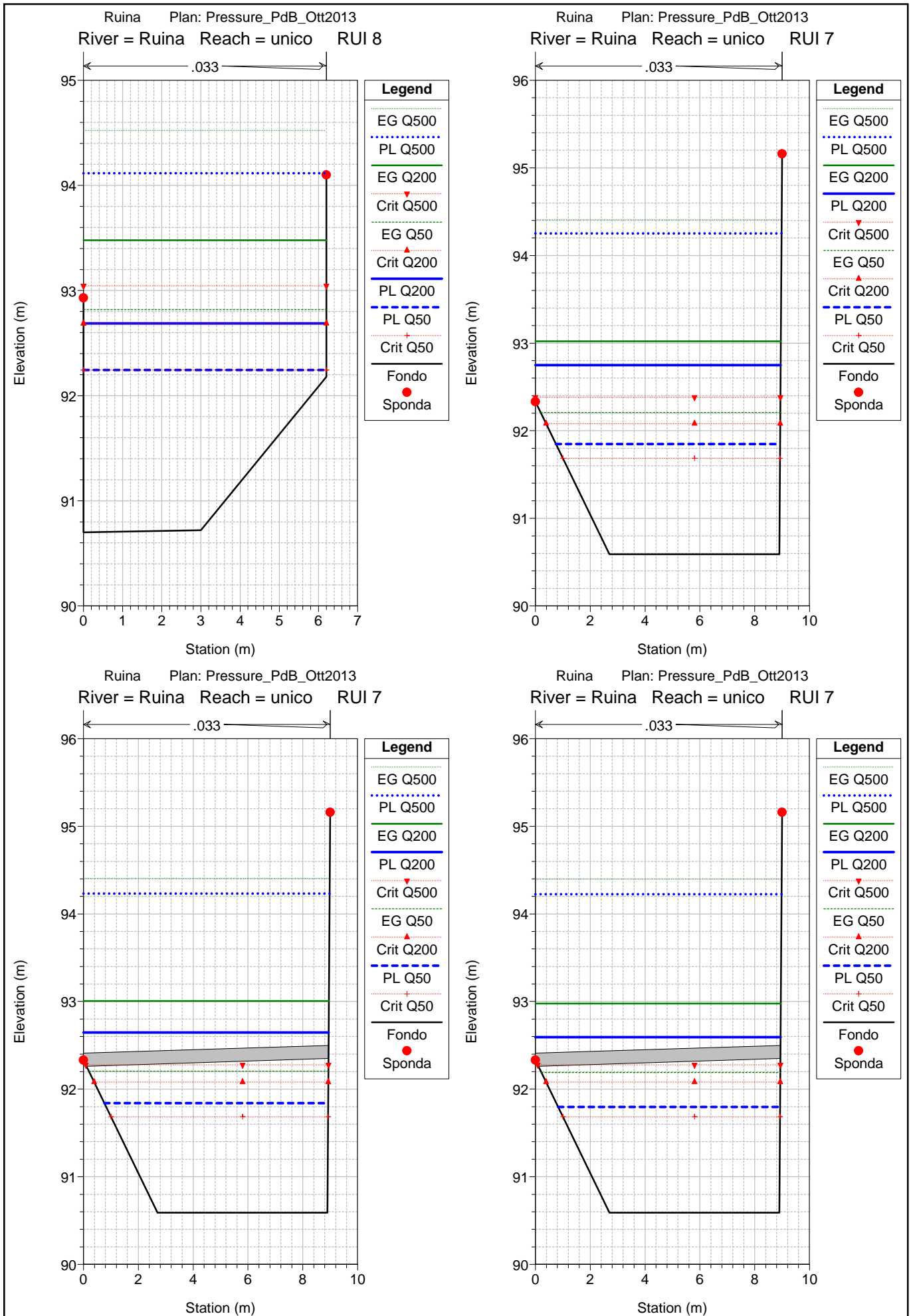
Rio Ruinà

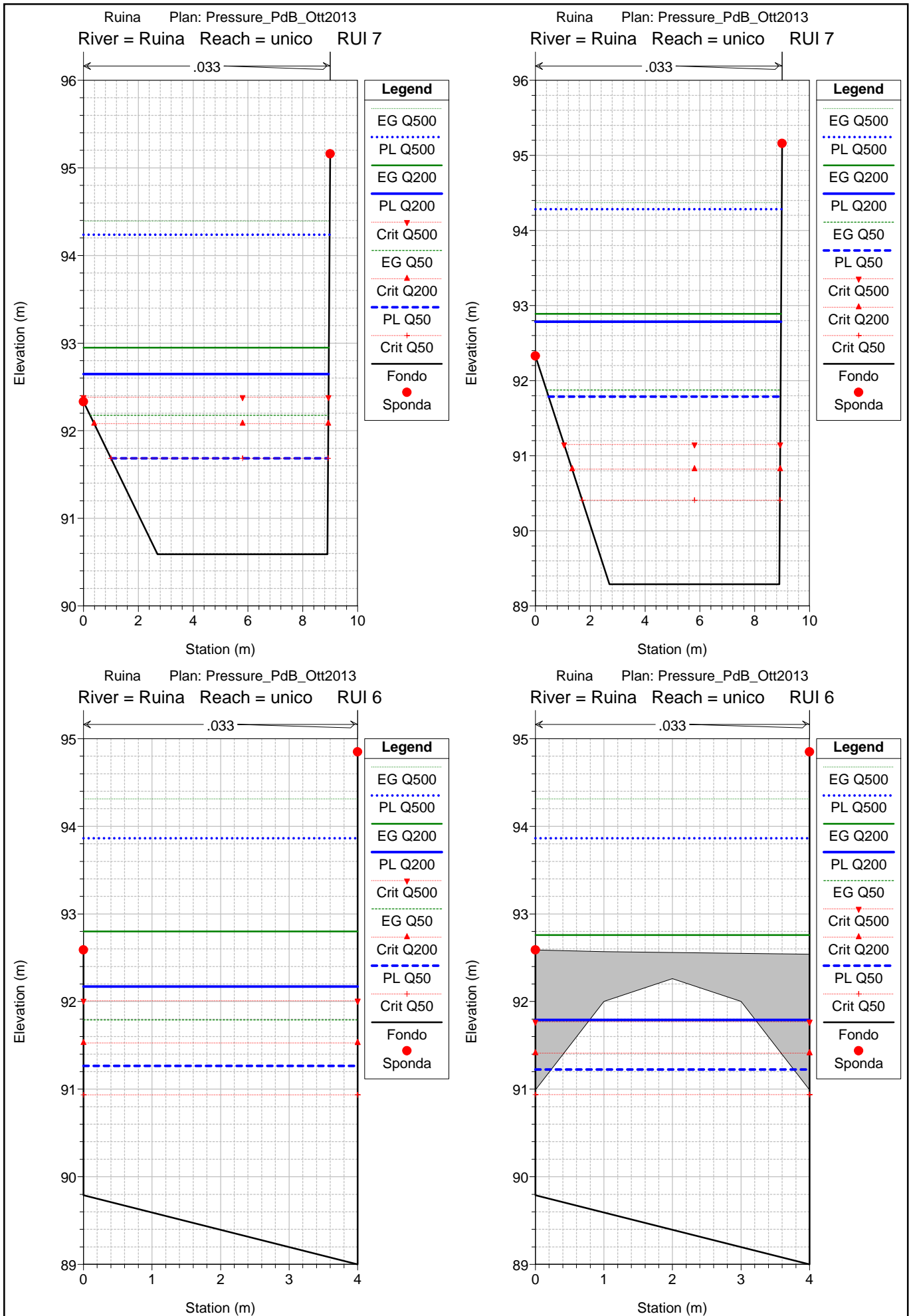
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

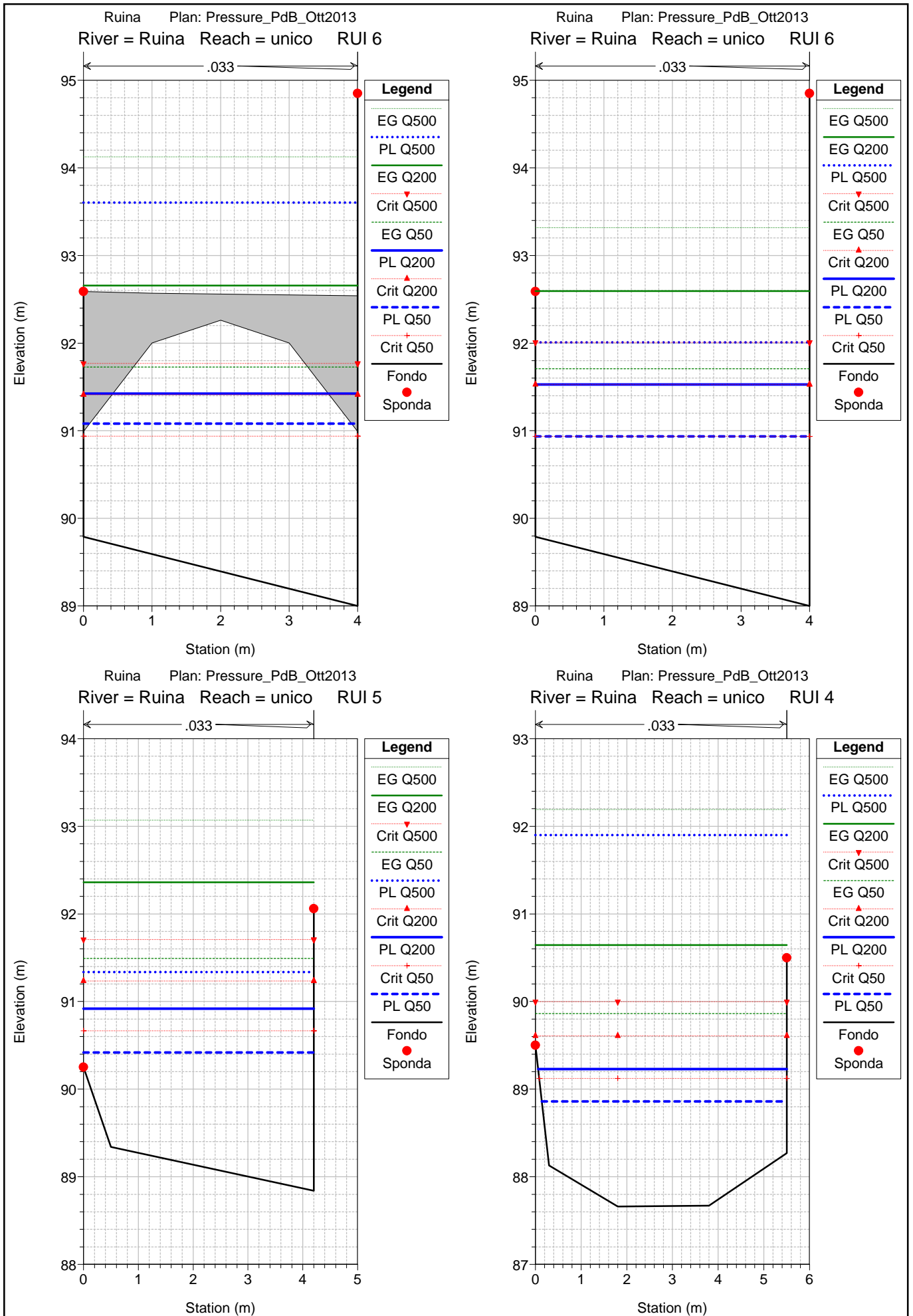


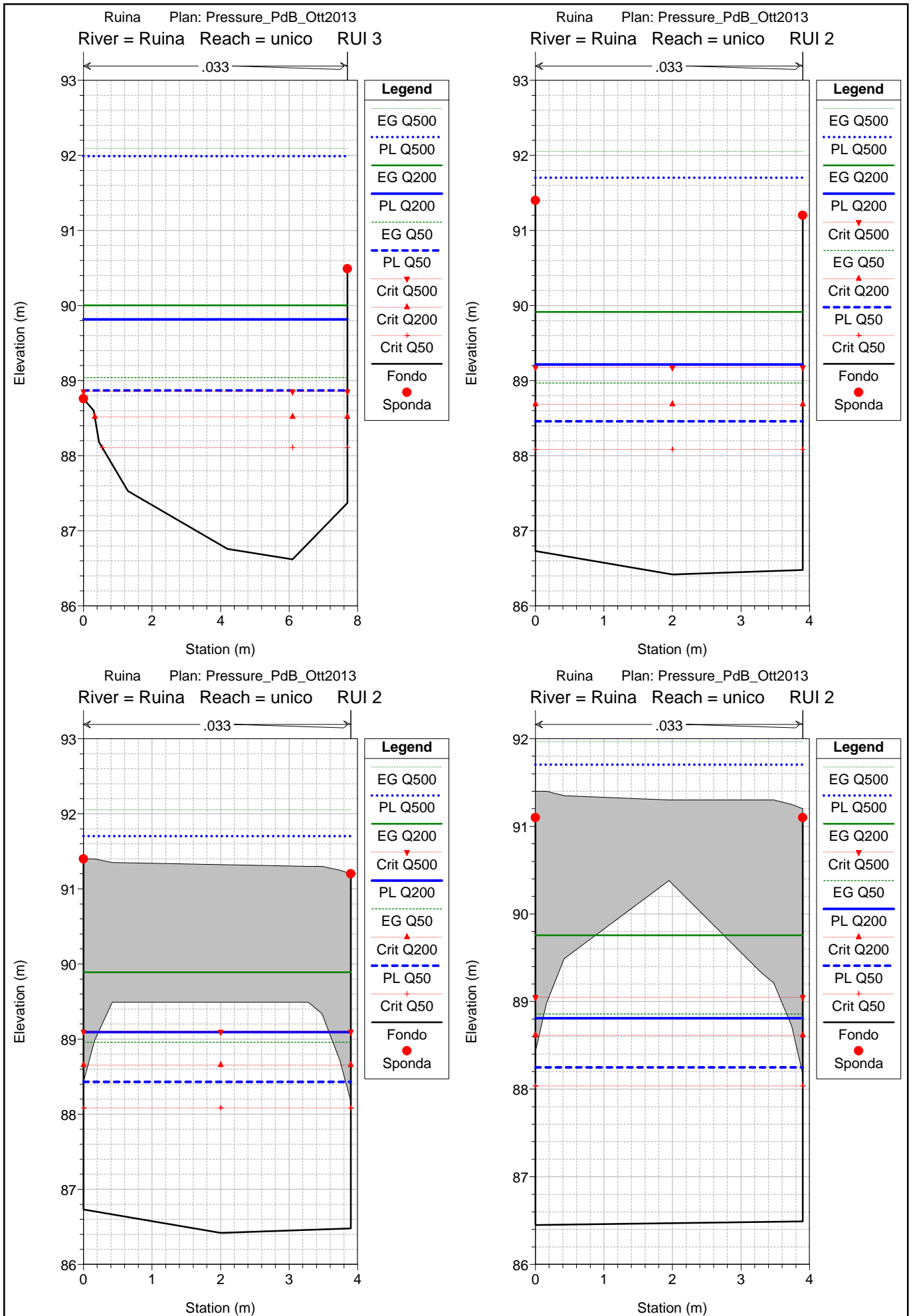


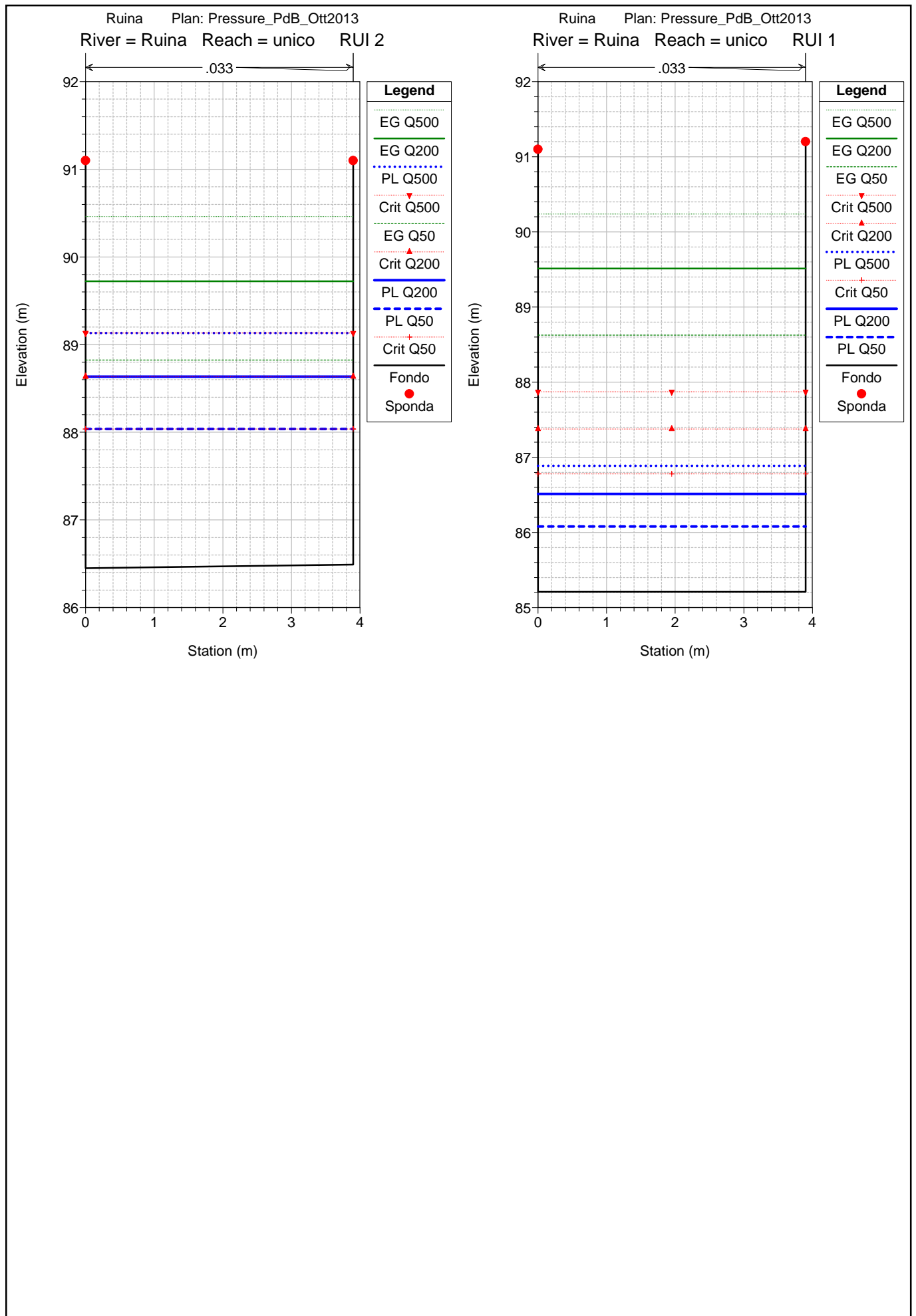












HEC-RAS Plan: PdB_2013 River: Ruina Reach: unico

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	
unico	50	Q50	24.00	93.71	95.06	95.41	0.35	96.23	1.17	95.05	95.61	0.014031	3.28	7.31	6.54	0.99	
unico	50	Q200	39.00	93.71	95.50	95.41	-0.09	96.23	0.73	95.48	96.24	0.014006	3.83	10.18	6.56	0.98	
unico	50	Q500	53.00	93.71	95.87	95.41	-0.46	96.23	0.36	95.83	96.76	0.013959	4.19	12.64	6.58	0.97	
unico	12	RUI 12	Q50	24.00	93.00	94.34	94.70	0.36	95.52	1.18	94.34	94.90	0.014201	3.30	7.28	6.54	1.00
unico	12	RUI 12	Q200	39.00	93.00	94.77	94.70	-0.07	95.52	0.75	94.77	95.53	0.014491	3.88	10.06	6.56	1.00
unico	12	RUI 12	Q500	53.00	93.00	95.12	94.70	-0.42	95.52	0.40	95.12	96.05	0.014887	4.29	12.36	6.58	1.00
unico	11	RUI 11	Q50	24.00	92.63	94.17	94.20	0.03	95.17	1.00	93.81	94.44	0.005349	2.28	10.53	7.80	0.63
unico	11	RUI 11	Q200	39.00	92.63	94.72	94.20	-0.52	95.17	0.45	94.19	95.07	0.005192	2.63	14.82	7.80	0.61
unico	11	RUI 11	Q500	53.00	92.63	95.18	94.20	-0.98	95.17	-0.01	94.49	95.60	0.005199	2.88	18.37	7.80	0.60
unico	10.2	RUI 10	Q50	24.00	92.53	93.71	94.09	0.38	95.40	1.69	93.71	94.27	0.014529	3.31	7.24	6.50	1.00
unico	10.2	RUI 10	Q200	39.00	92.53	94.14	94.09	-0.05	95.40	1.26	94.14	94.90	0.014470	3.86	10.12	6.70	1.00
unico	10.2	RUI 10	Q500	53.00	92.53	94.49	94.09	-0.40	95.40	0.91	94.49	95.41	0.014852	4.27	12.41	6.70	1.00
unico	10.1	RUI 10	Q50	24.00	91.20	91.80	94.09	2.29	95.40	3.60	92.38	94.08	0.121595	6.69	3.59	6.07	2.78
unico	10.1	RUI 10	Q200	39.00	91.20	92.11	94.09	1.98	95.40	3.29	92.82	94.70	0.088289	7.14	5.47	6.15	2.42
unico	10.1	RUI 10	Q500	53.00	91.20	94.52	94.09	-0.43	95.40	0.88	93.19	94.85	0.003466	2.51	21.12	6.70	0.45
unico	10	RUI 10	Bridge														
unico	9.9	RUI 10	Q50	24.00	91.20	93.19	94.09	0.90	95.40	2.21	92.38	93.38	0.003158	1.96	12.26	6.45	0.45
unico	9.9	RUI 10	Q200	39.00	91.20	93.68	94.09	0.41	95.40	1.72	92.82	94.00	0.004367	2.52	15.47	6.59	0.53
unico	9.9	RUI 10	Q500	53.00	91.20	94.37	94.09	-0.28	95.40	1.03	93.19	94.72	0.003978	2.64	20.06	6.70	0.49
unico	9	RUI 9	Q50	24.00	91.19	92.77	93.64	0.87	95.70	2.93	92.77	93.30	0.013679	3.20	7.49	7.20	1.00
unico	9	RUI 9	Q200	39.00	91.19	93.17	93.64	0.47	95.70	2.53	93.17	93.89	0.013776	3.77	10.36	7.20	1.00
unico	9	RUI 9	Q500	53.00	91.19	94.21	93.64	-0.57	95.70	1.49	93.50	94.66	0.005416	2.97	17.83	7.20	0.60
unico	8	RUI 8	Q50	24.00	90.70	92.24	92.93	0.68	94.10	1.86	92.24	92.82	0.014567	3.36	7.15	6.20	1.00
unico	8	RUI 8	Q200	39.00	90.70	92.69	92.93	0.24	94.10	1.41	92.69	93.48	0.014980	3.95	9.89	6.20	1.00
unico	8	RUI 8	Q500	53.00	90.70	94.12	92.93	-1.19	94.10	-0.02	93.05	94.52	0.004733	2.83	18.74	6.20	0.52
unico	7.1	RUI 7	Q50	24.00	90.59	91.85	92.33	0.48	95.16	3.31	91.69	92.21	0.008495	2.65	9.05	8.18	0.80
unico	7.1	RUI 7	Q200	39.00	90.59	92.75	92.33	-0.42	95.16	2.41	92.08	93.02	0.003655	2.30	16.92	8.95	0.53
unico	7.1	RUI 7	Q500	53.00	90.59	94.25	92.33	-1.92	95.16	0.91	92.38	94.41	0.001292	1.74	30.39	8.98	0.30
unico	7	RUI 7	Bridge														
unico	6.9	RUI 7	Q50	24.00	90.59	91.69	92.33	0.64	95.16	3.47	91.69	92.18	0.013407	3.10	7.74	7.92	1.00
unico	6.9	RUI 7	Q200	39.00	90.59	92.65	92.33	-0.32	95.16	2.51	92.08	92.95	0.004306	2.44	16.00	8.94	0.58
unico	6.9	RUI 7	Q500	53.00	90.59	94.24	92.33	-1.91	95.16	0.92	92.38	94.39	0.001308	1.75	30.25	8.98	0.30
unico	6.8	RUI 7	Q50	24.00	89.29	91.79	92.33	0.54	95.16	3.37	90.41	91.87	0.001071	1.31	18.30	8.46	0.28
unico	6.8	RUI 7	Q200	39.00	89.29	92.78	92.33	-0.45	95.16	2.38	90.82	92.89	0.000955	1.44	27.10	8.96	0.26
unico	6.8	RUI 7	Q500	53.00	89.29	94.28	92.33	-1.95	95.16	0.88	91.15	94.37	0.000593	1.31	40.56	8.99	0.20
unico	6.1	RUI 6	Q50	24.00	89.00	91.27	92.59	1.32	94.85	3.58	90.94	91.79	0.011867	3.21	7.49	4.00	0.75

HEC-RAS Plan: PdB_2013 River: Ruina Reach: unico (Continued)

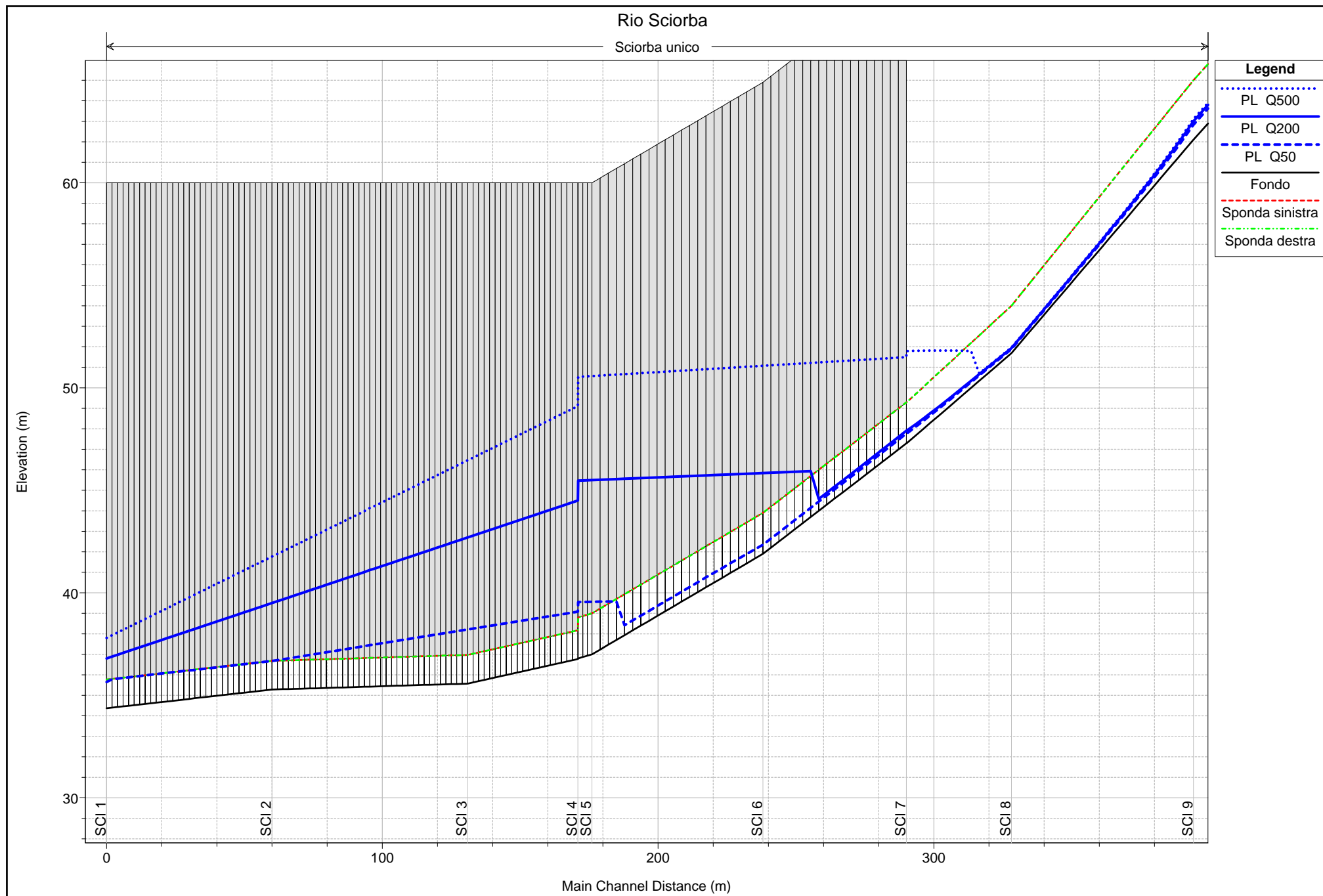
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	6.1 RUI 6	Q200	39.00	89.00	92.17	92.59	0.42	94.85	2.68	91.53	92.80	0.011119	3.51	11.10	4.00	0.67
unico	6.1 RUI 6	Q500	53.00	89.00	93.86	92.59	-1.27	94.85	0.99	92.01	94.31	0.006269	2.96	17.88	4.00	0.45
unico	6 RUI 6	Bridge														
unico	5.9 RUI 6	Q50	24.00	89.00	90.94	92.59	1.65	94.85	3.91	90.94	91.71	0.020163	3.89	6.16	4.00	1.00
unico	5.9 RUI 6	Q200	39.00	89.00	91.53	92.59	1.06	94.85	3.32	91.53	92.59	0.022080	4.57	8.53	4.00	1.00
unico	5.9 RUI 6	Q500	53.00	89.00	92.01	92.59	0.58	94.85	2.84	92.01	93.32	0.023976	5.07	10.45	4.00	1.00
unico	5 RUI 5	Q50	24.00	88.84	90.42	90.25	-0.17	92.06	1.64	90.67	91.49	0.030846	4.59	5.23	4.20	1.31
unico	5 RUI 5	Q200	39.00	88.84	90.92	90.25	-0.67	92.06	1.14	91.23	92.36	0.031871	5.32	7.33	4.20	1.28
unico	5 RUI 5	Q500	53.00	88.84	91.34	90.25	-1.09	92.06	0.72	91.71	93.07	0.033152	5.83	9.08	4.20	1.27
unico	4 RUI 4	Q50	24.00	87.66	88.86	89.50	0.64	90.50	1.64	89.12	89.86	0.028629	4.44	5.41	5.36	1.41
unico	4 RUI 4	Q200	39.00	87.66	89.23	89.50	0.27	90.50	1.27	89.61	90.64	0.030585	5.27	7.40	5.44	1.44
unico	4 RUI 4	Q500	53.00	87.66	91.90	89.50	-2.40	90.50	-1.40	90.00	92.19	0.003035	2.40	22.08	5.50	0.38
unico	3 RUI 3	Q50	24.00	86.62	88.87	88.76	-0.11	90.49	1.62	88.11	89.04	0.002573	1.83	13.14	7.70	0.45
unico	3 RUI 3	Q200	39.00	86.62	89.82	88.76	-1.06	90.49	0.67	88.52	90.00	0.001963	1.91	20.42	7.70	0.37
unico	3 RUI 3	Q500	53.00	86.62	91.99	88.76	-3.23	90.49	-1.50	88.86	92.09	0.000744	1.43	37.15	7.70	0.21
unico	2.1 RUI 2	Q50	24.00	86.42	88.46	91.40	2.94	91.20	2.74	88.08	88.97	0.010998	3.16	7.58	3.90	0.72
unico	2.1 RUI 2	Q200	39.00	86.42	89.22	91.40	2.18	91.20	1.98	88.68	89.91	0.012358	3.70	10.54	3.90	0.72
unico	2.1 RUI 2	Q500	53.00	86.42	91.70	91.40	-0.30	91.20	-0.50	89.18	92.05	0.004623	2.62	20.24	3.90	0.37
unico	2 RUI 2	Bridge														
unico	1.1 RUI 2	Q50	24.00	86.45	88.04	91.10	3.06	91.10	3.06	88.04	88.82	0.020235	3.93	6.11	3.90	1.00
unico	1.1 RUI 2	Q200	39.00	86.45	88.64	91.10	2.46	91.10	2.46	88.64	89.72	0.022446	4.62	8.44	3.90	1.00
unico	1.1 RUI 2	Q500	53.00	86.45	89.13	91.10	1.97	91.10	1.97	89.13	90.46	0.024244	5.11	10.38	3.90	1.00
unico	1 RUI 1	Q50	24.00	85.21	86.08	91.10	5.02	91.20	5.12	86.78	88.63	0.107093	7.07	3.40	3.90	2.42
unico	1 RUI 1	Q200	39.00	85.21	86.51	91.10	4.59	91.20	4.69	87.38	89.51	0.089165	7.67	5.08	3.90	2.15
unico	1 RUI 1	Q500	53.00	85.21	86.89	91.10	4.21	91.20	4.31	87.87	90.24	0.082320	8.11	6.53	3.90	2.00
unico	0.9	Q50	24.00	84.00	86.79	91.10	4.31	91.20	4.41	85.33	86.94	0.002230	1.72	13.95	5.00	0.33
unico	0.9	Q200	39.00	84.00	87.79	91.10	3.31	91.20	3.41	85.84	88.01	0.002671	2.06	18.95	5.00	0.34
unico	0.9	Q500	53.00	84.00	88.61	91.10	2.49	91.20	2.59	86.26	88.88	0.003024	2.30	23.05	5.00	0.34

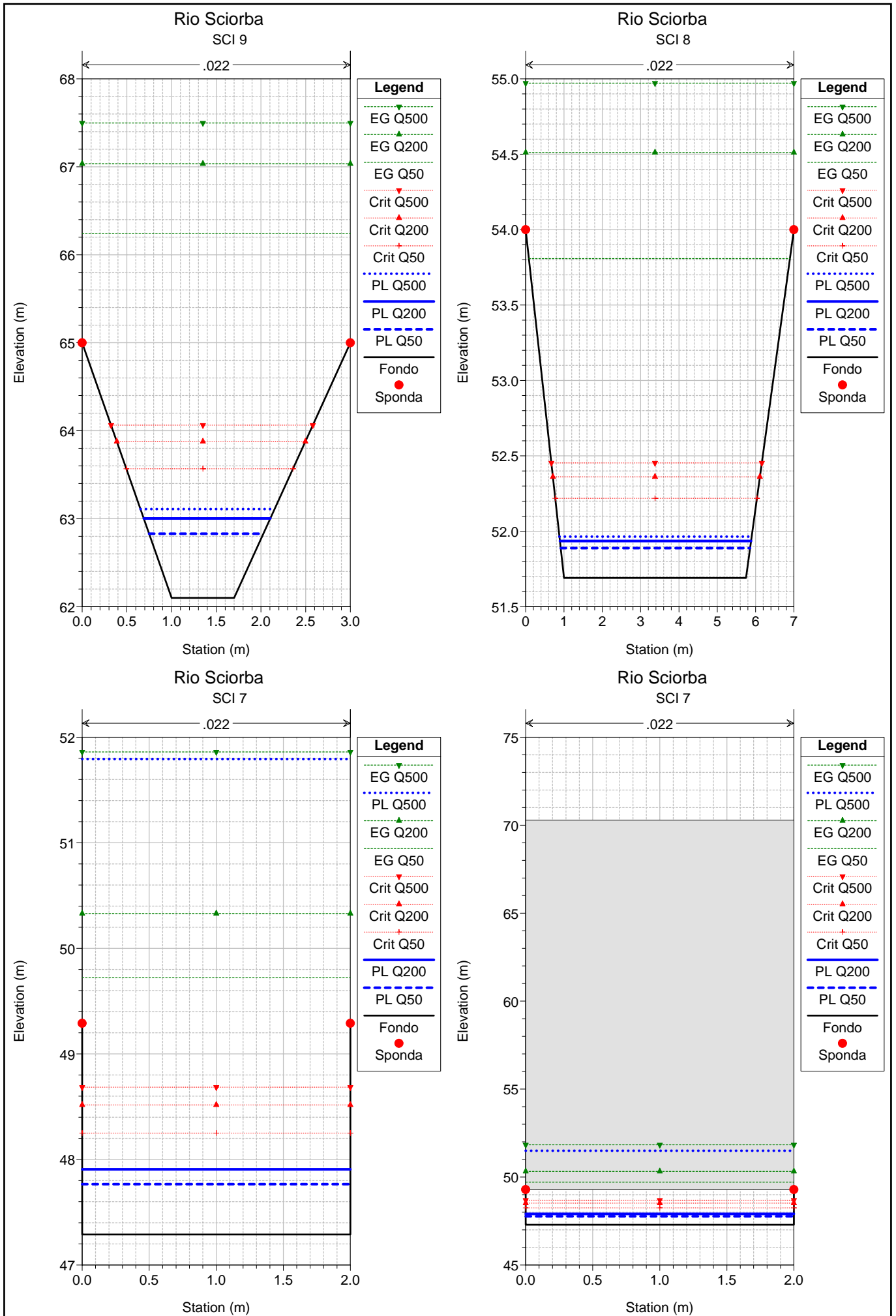
Allegato

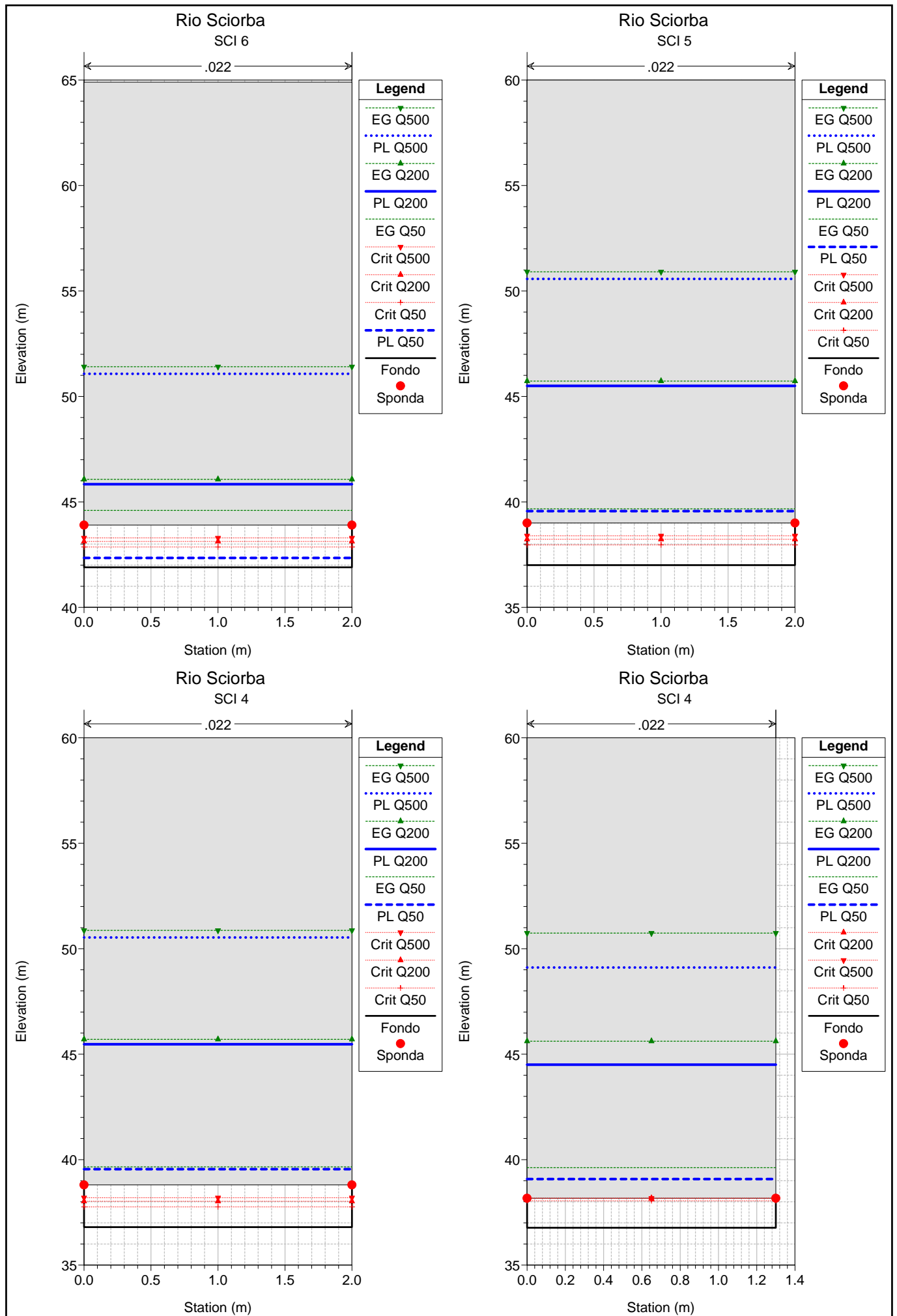
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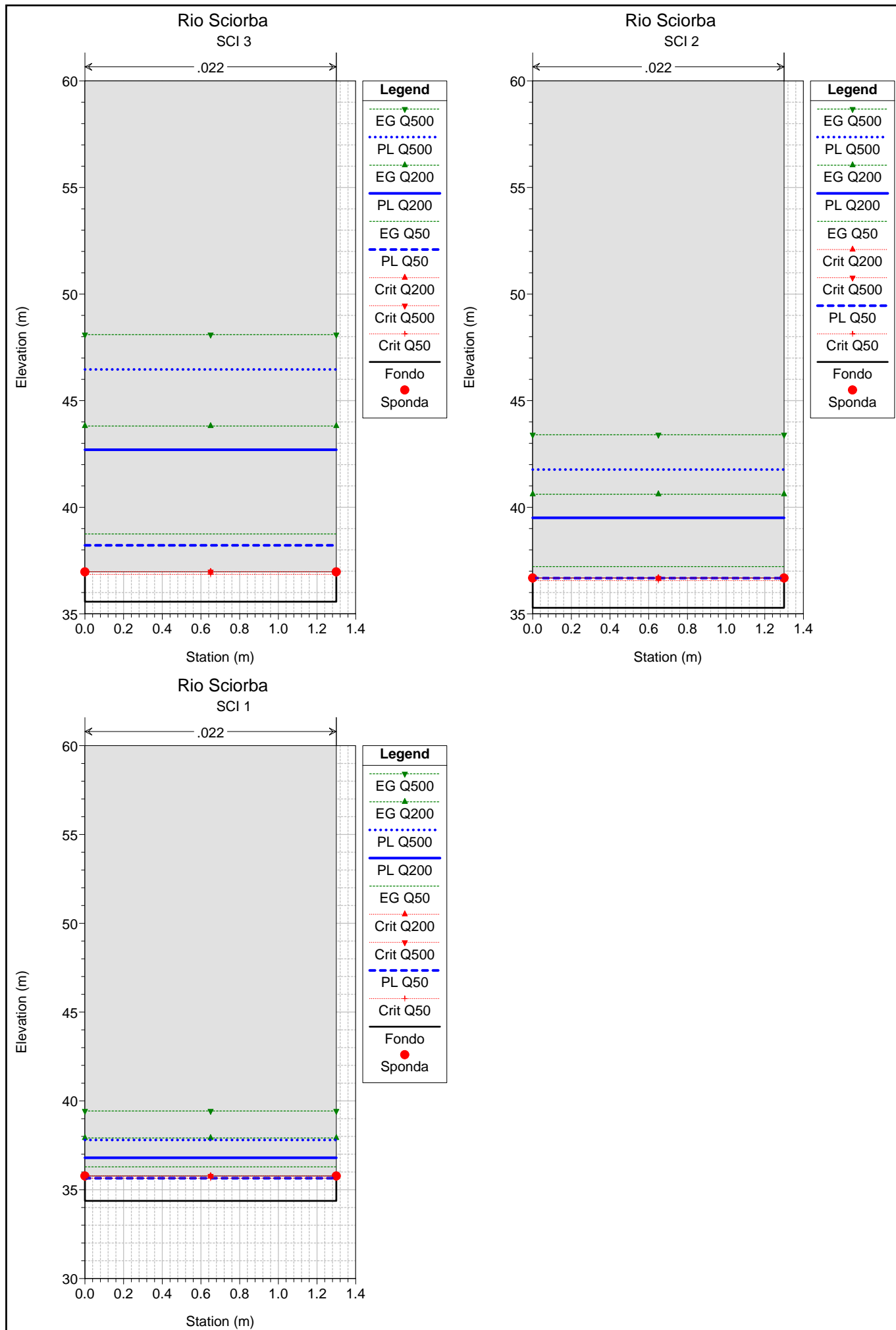
Rio Sciorba

- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo









HEC-RAS Plan: 08_Nov_2008 River: Sciorba Reach: unico

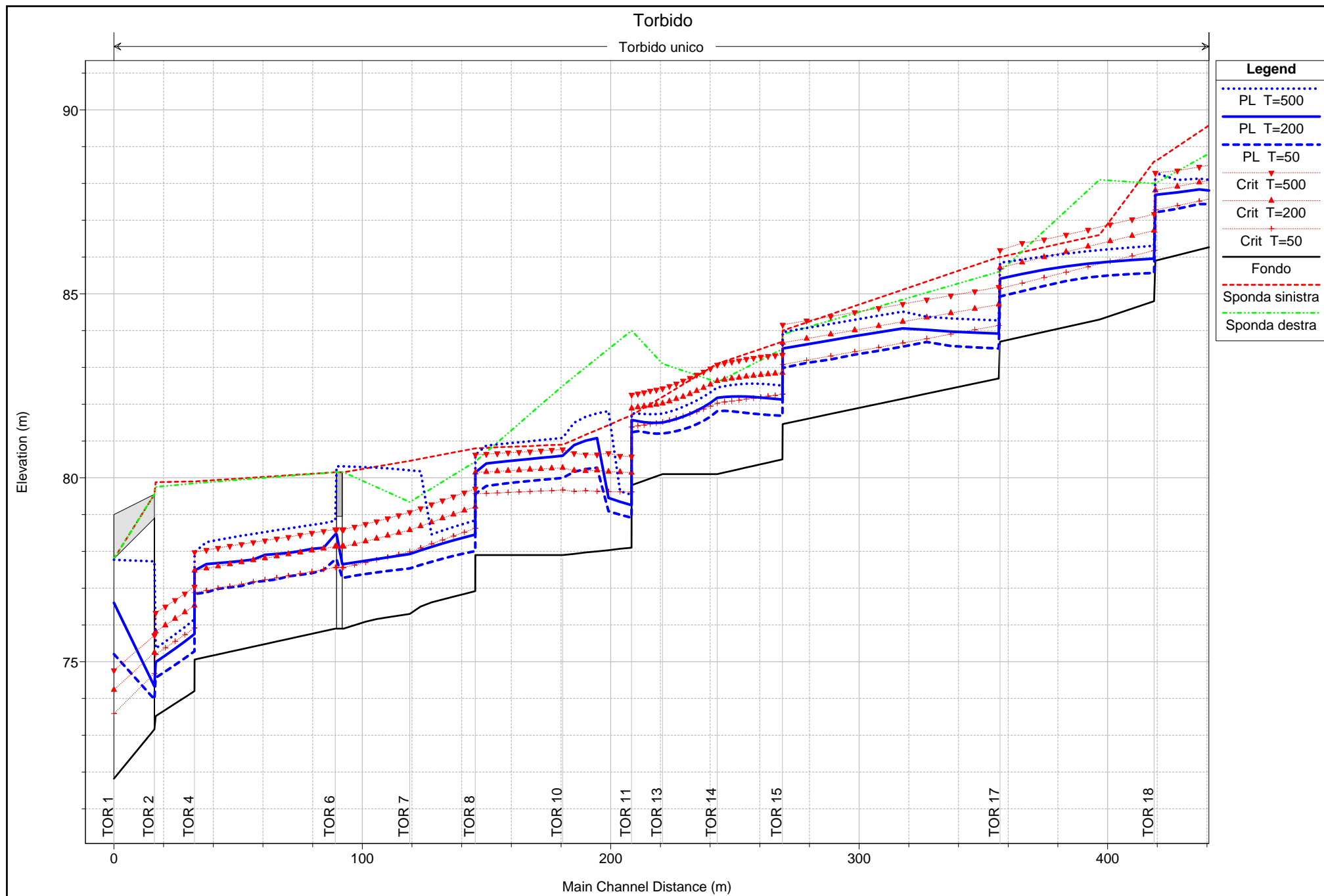
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	100	Q50	5.90	77.10	78.57	80.00	1.43	80.00	1.43	78.57	79.07	0.012435	3.14	1.88	1.86	1.00
unico	100	Q200	8.50	77.10	78.88	80.00	1.12	80.00	1.12	78.88	79.47	0.012386	3.40	2.50	2.11	1.00
unico	100	Q500	10.30	77.10	79.06	80.00	0.94	80.00	0.94	79.06	79.70	0.012362	3.55	2.90	2.26	1.00
unico	9	SCI 9	5.90	62.10	62.83	65.00	2.17	65.00	2.17	63.57	66.24	0.149653	8.19	0.72	1.28	3.48
unico	9	SCI 9	8.50	62.10	63.00	65.00	2.00	65.00	2.00	63.88	67.03	0.148874	8.90	0.96	1.42	3.46
unico	9	SCI 9	10.30	62.10	63.11	65.00	1.89	65.00	1.89	64.06	67.50	0.148249	9.28	1.11	1.50	3.45
unico	8	SCI 8	5.90	51.69	51.89	54.00	2.11	54.00	2.11	52.22	53.81	0.172857	6.14	0.96	4.94	4.44
unico	8	SCI 8	8.50	51.69	51.94	54.00	2.06	54.00	2.06	52.36	54.51	0.178048	7.11	1.20	4.99	4.64
unico	8	SCI 8	10.30	51.69	51.96	54.00	2.04	54.00	2.04	52.45	54.97	0.181342	7.68	1.34	5.02	4.74
unico	7.1	SCI 7	5.90	47.29	47.77	49.29	1.52	49.29	1.52	48.25	49.72	0.084004	6.20	0.95	2.00	2.87
unico	7.1	SCI 7	8.50	47.29	47.91	49.29	1.38	49.29	1.38	48.52	50.33	0.083278	6.90	1.23	2.00	2.80
unico	7.1	SCI 7	10.30	47.29	51.79	49.29	-2.50	49.29	-2.50	48.68	51.86	0.000827	1.14	9.01	2.00	0.17
unico	7	SCI 7	5.90	47.29	47.77	49.29	1.52	49.29	1.52	48.25	49.71	0.083251	6.18	0.96	2.00	2.85
unico	7	SCI 7	8.50	47.29	47.91	49.29	1.38	49.29	1.38	48.52	50.32	0.082689	6.88	1.24	2.00	2.79
unico	7	SCI 7	10.30	47.29	51.50	49.29	-2.20	49.29	-2.20	48.68	51.83	0.008085	2.57	4.00		0.40
unico	6	SCI 6	5.90	41.90	42.34	43.90	1.56	43.90	1.56	42.86	44.60	0.103151	6.65	0.89	2.00	3.19
unico	6	SCI 6	8.50	41.90	45.84	43.90	-1.94	43.90	-1.94	43.13	46.07	0.005506	2.12	4.00		0.34
unico	6	SCI 6	10.30	41.90	51.07	43.90	-7.17	43.90	-7.17	43.29	51.41	0.008085	2.57	4.00		0.27
unico	5	SCI 5	5.90	37.00	39.56	39.00	-0.56	39.00	-0.56	37.96	39.67	0.002653	1.47	4.00		0.29
unico	5	SCI 5	8.50	37.00	45.50	39.00	-6.50	39.00	-6.50	38.23	45.73	0.005506	2.12	4.00		0.23
unico	5	SCI 5	10.30	37.00	50.57	39.00	-11.57	39.00	-11.57	38.39	50.91	0.008085	2.57	4.00		0.22
unico	4	SCI 4	5.90	36.80	39.55	38.80	-0.75	38.80	-0.75	37.76	39.66	0.002653	1.47	4.00		0.28
unico	4	SCI 4	8.50	36.80	45.47	38.80	-6.67	38.80	-6.67	38.03	45.70	0.005506	2.12	4.00		0.23
unico	4	SCI 4	10.30	36.80	50.53	38.80	-11.73	38.80	-11.73	38.19	50.87	0.008085	2.57	4.00		0.22
unico	3.9	SCI 4	5.90	36.77	39.08	38.17	-0.91	38.17	-0.91	38.05	39.62	0.021676	3.24	1.82		0.68
unico	3.9	SCI 4	8.50	36.77	44.50	38.17	-6.33	38.17	-6.33	38.17	45.61	0.044991	4.67	1.82		0.54
unico	3.9	SCI 4	10.30	36.77	49.11	38.17	-10.94	38.17	-10.94	38.17	50.74	0.066063	5.66	1.82		0.51
unico	3	SCI 3	5.90	35.57	38.21	36.97	-1.24	36.97	-1.24	36.85	38.75	0.021676	3.24	1.82		0.64
unico	3	SCI 3	8.50	35.57	42.70	36.97	-5.73	36.97	-5.73	36.97	43.81	0.044991	4.67	1.82		0.56
unico	3	SCI 3	10.30	35.57	46.46	36.97	-9.49	36.97	-9.49	36.97	48.09	0.066063	5.66	1.82		0.55
unico	2	SCI 2	5.90	35.28	36.68	36.68	0.00	36.68	0.00	36.56	37.21	0.015151	3.25	1.81	1.30	0.88
unico	2	SCI 2	8.50	35.28	39.50	36.68	-2.82	36.68	-2.82	36.68	40.61	0.045017	4.67	1.82		0.73
unico	2	SCI 2	10.30	35.28	41.77	36.68	-5.09	36.68	-5.09	36.68	43.40	0.066101	5.66	1.82		0.71
unico	1	SCI 1	5.90	34.37	35.65	35.77	0.12	35.77	0.12	35.65	36.29	0.018686	3.55	1.66	1.30	1.00
unico	1	SCI 1	8.50	34.37	36.80	35.77	-1.03	35.77	-1.03	35.77	37.91	0.044991	4.67	1.82		0.96
unico	1	SCI 1	10.30	34.37	37.80	35.77	-2.03	35.77	-2.03	35.77	39.43	0.066063	5.66	1.82		0.98

Allegato

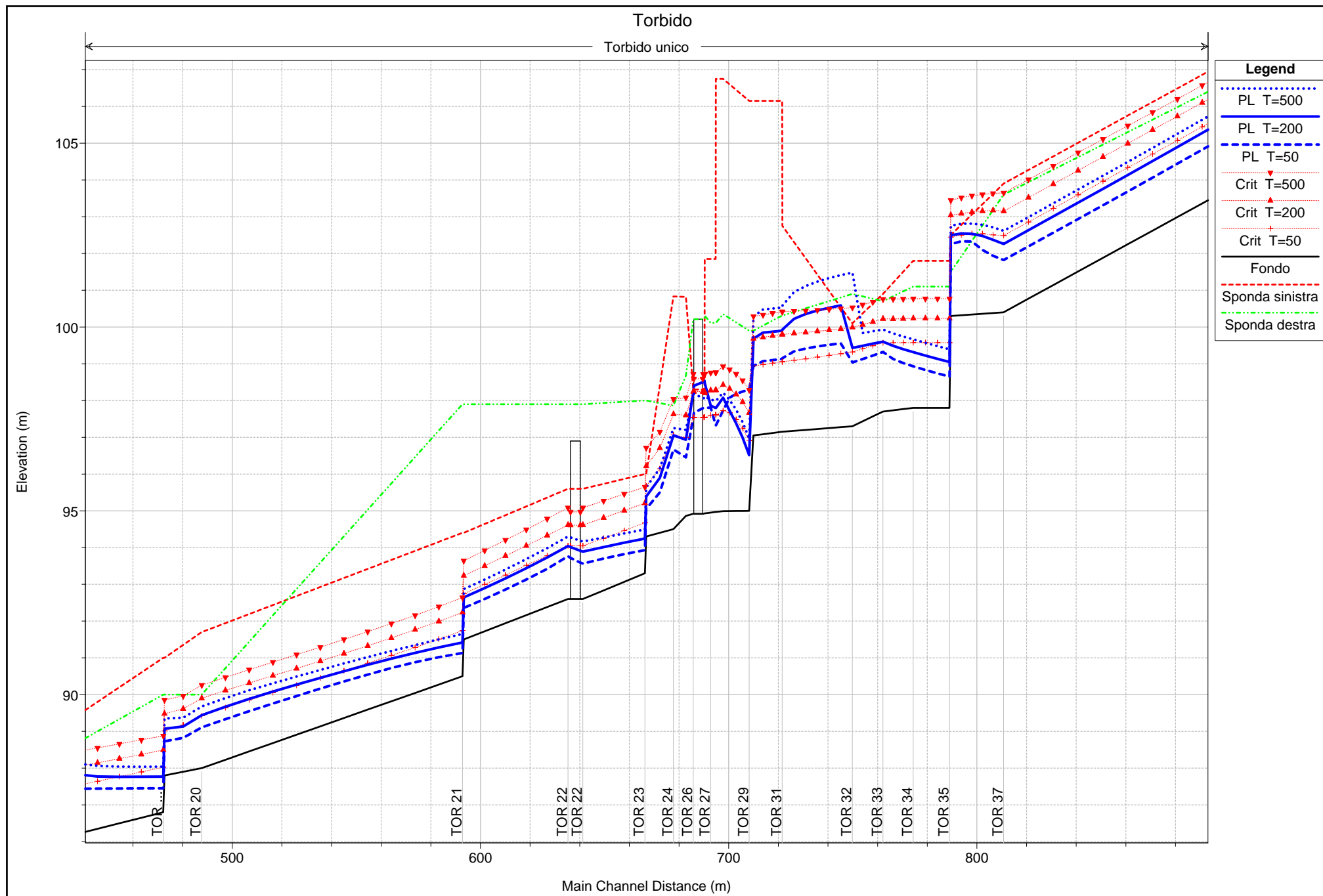
Verifiche idrauliche

Rio Torbido

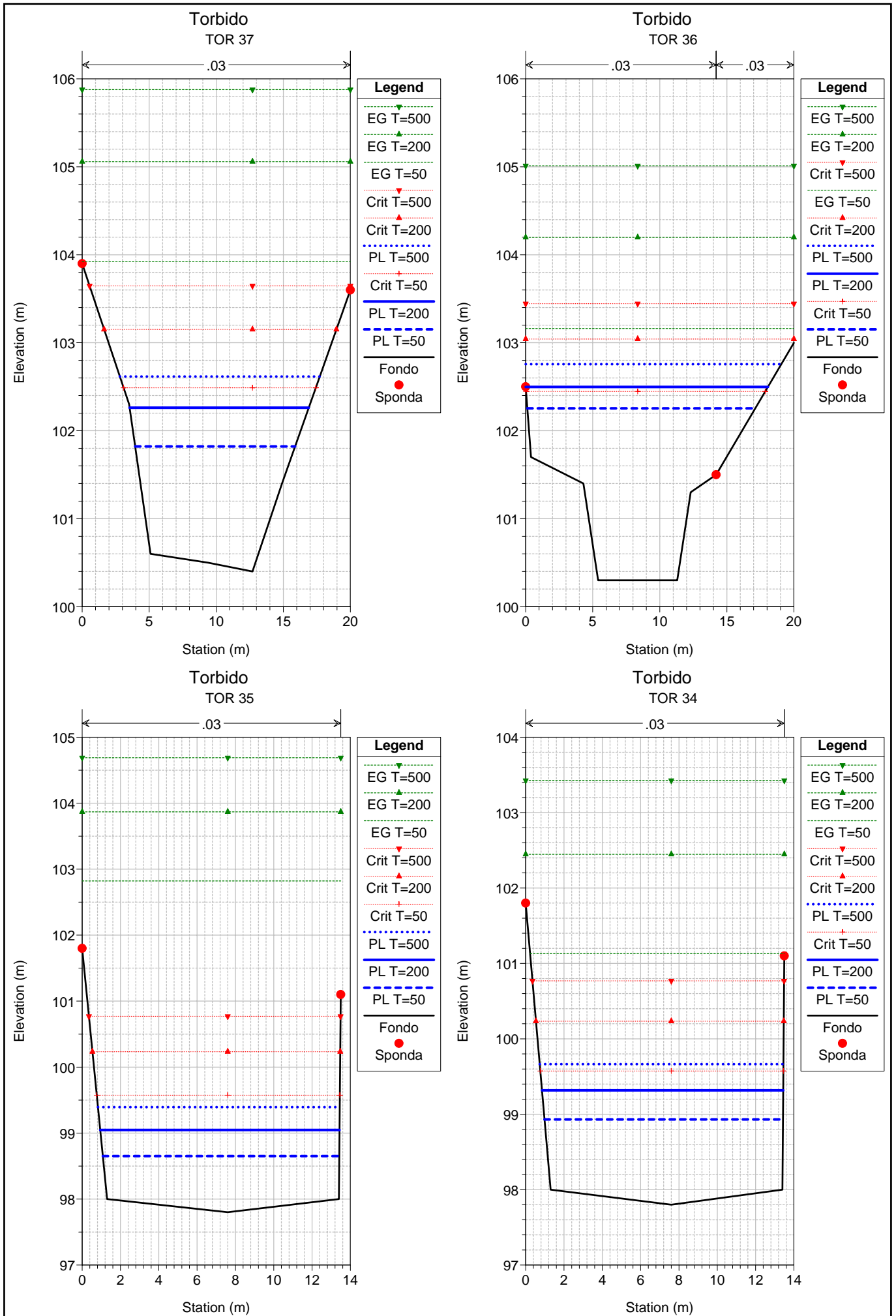
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

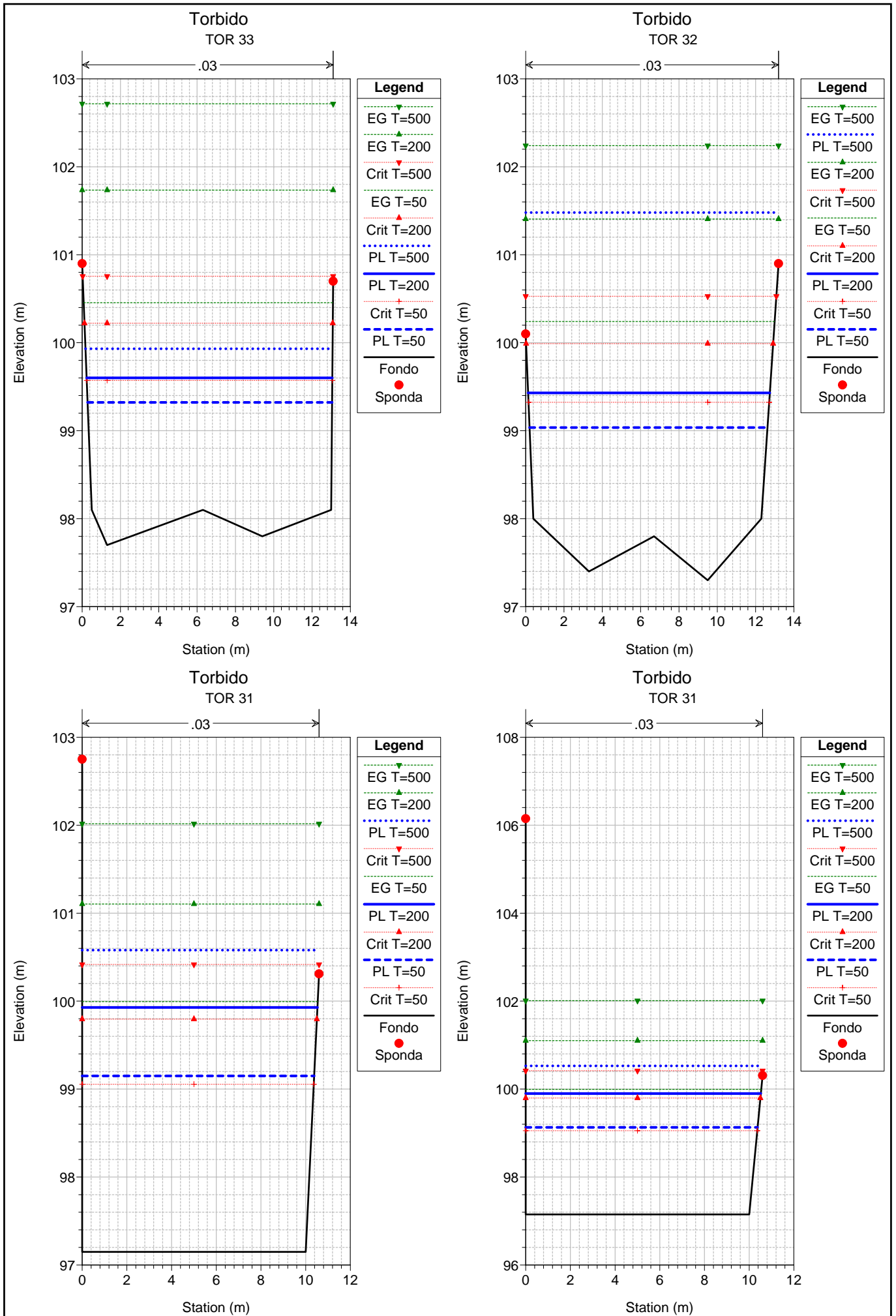


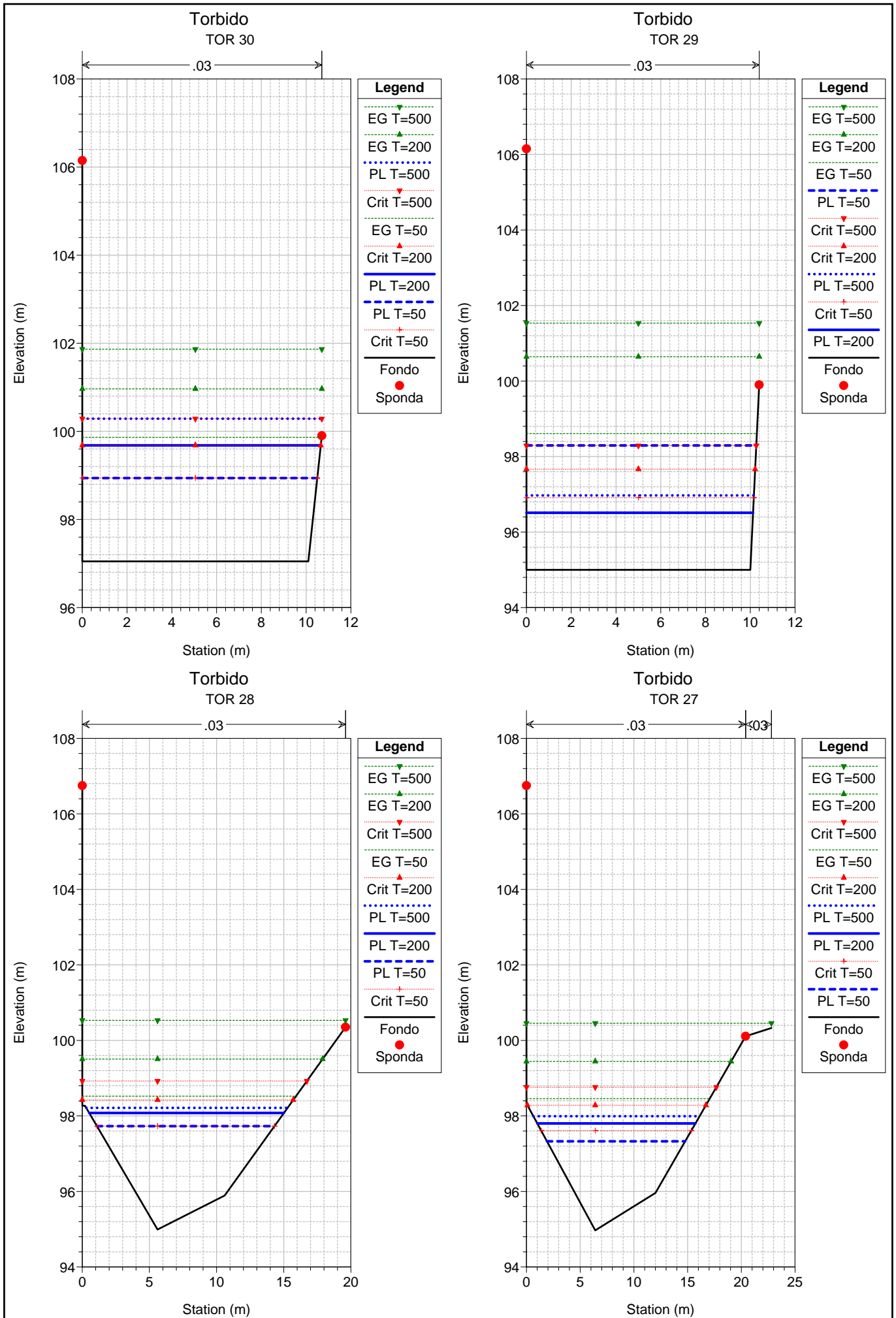
1 cm Horiz. = 20 m 1 cm Vert. = 1.35 m

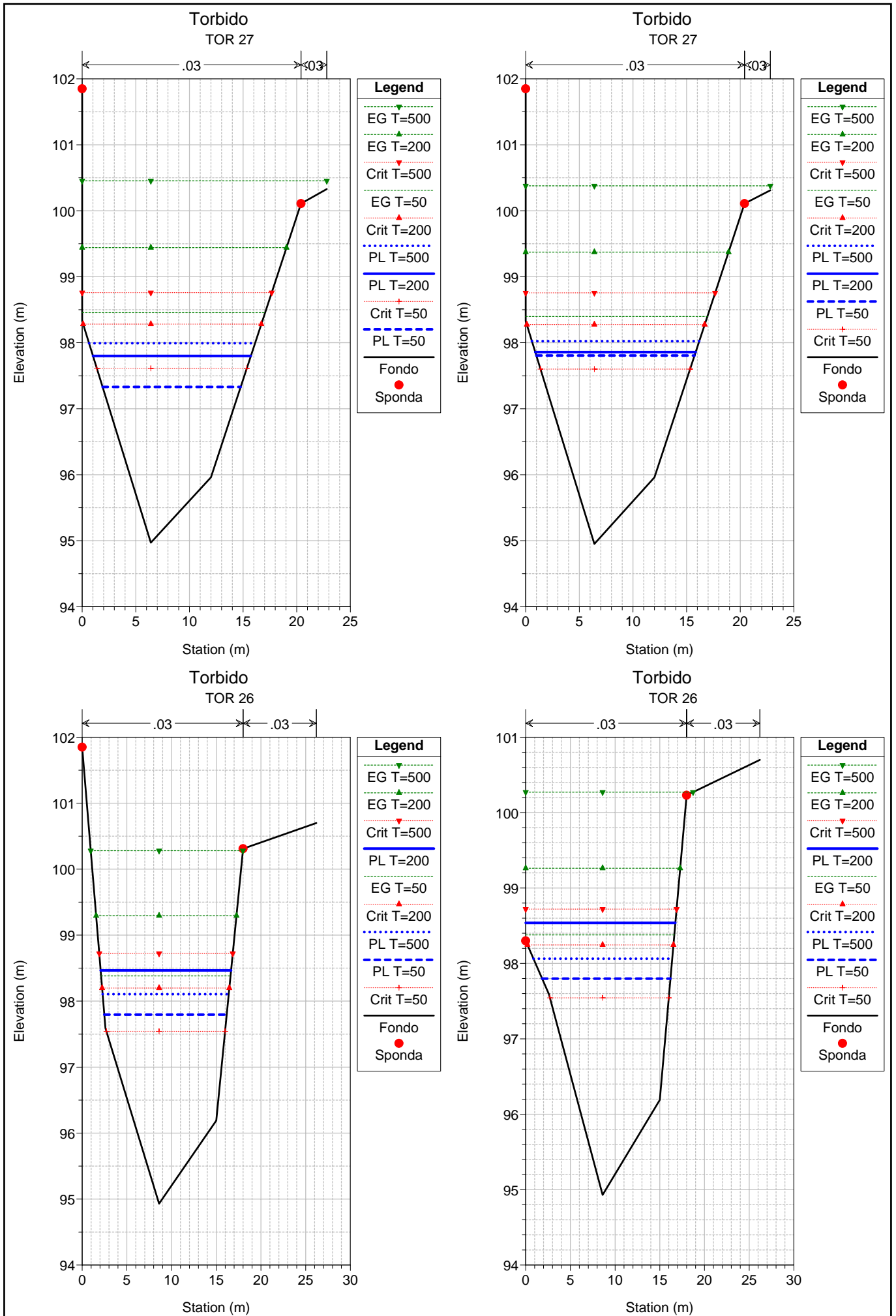


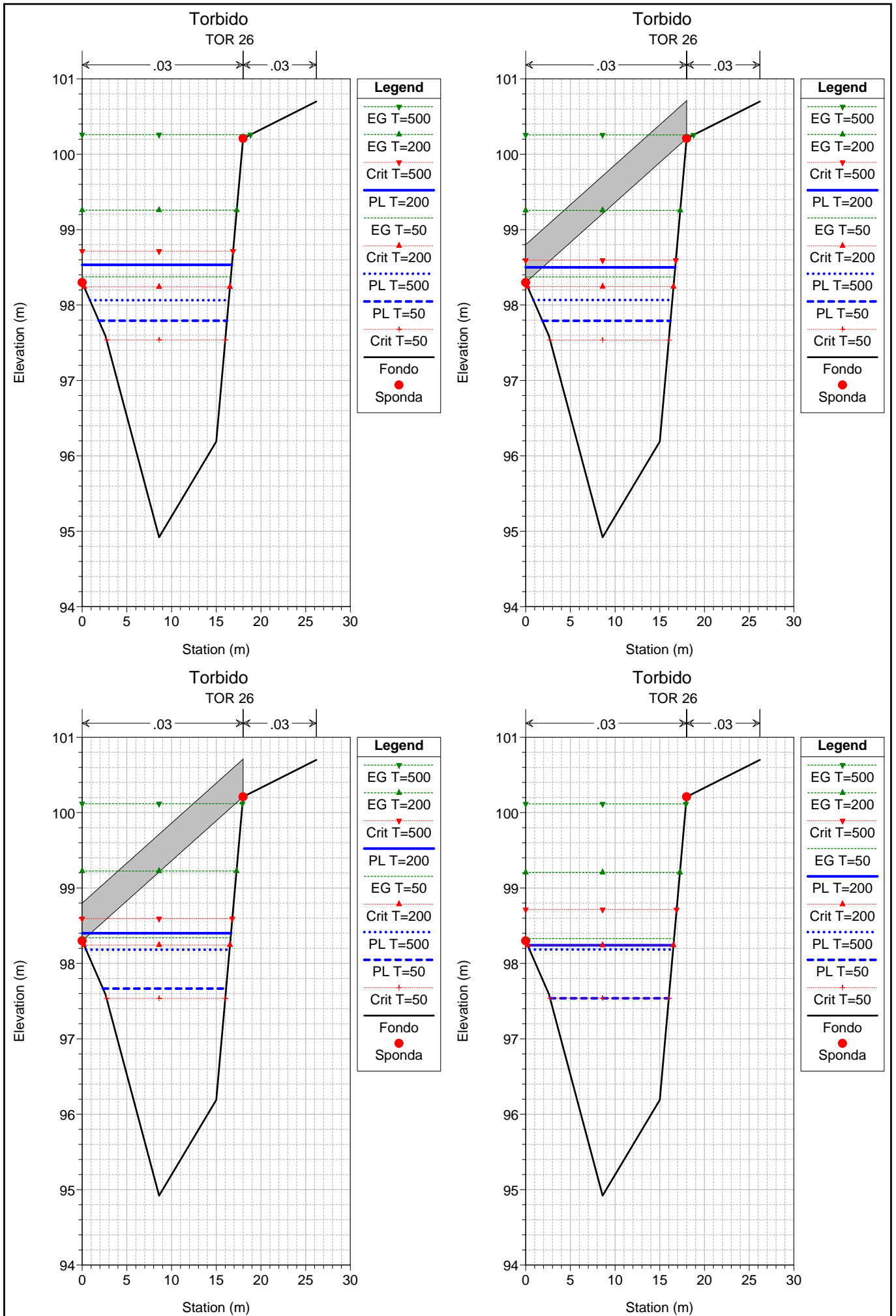
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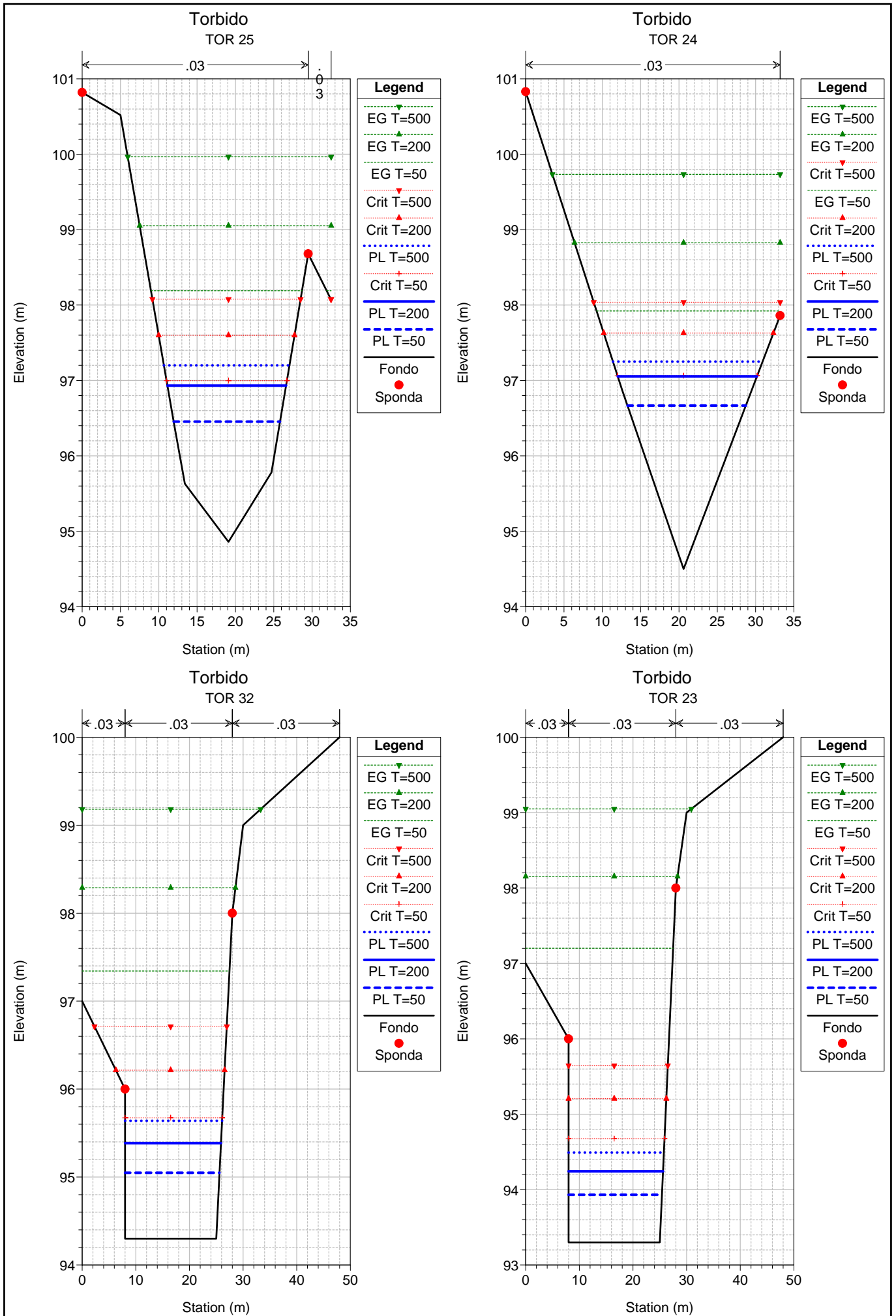


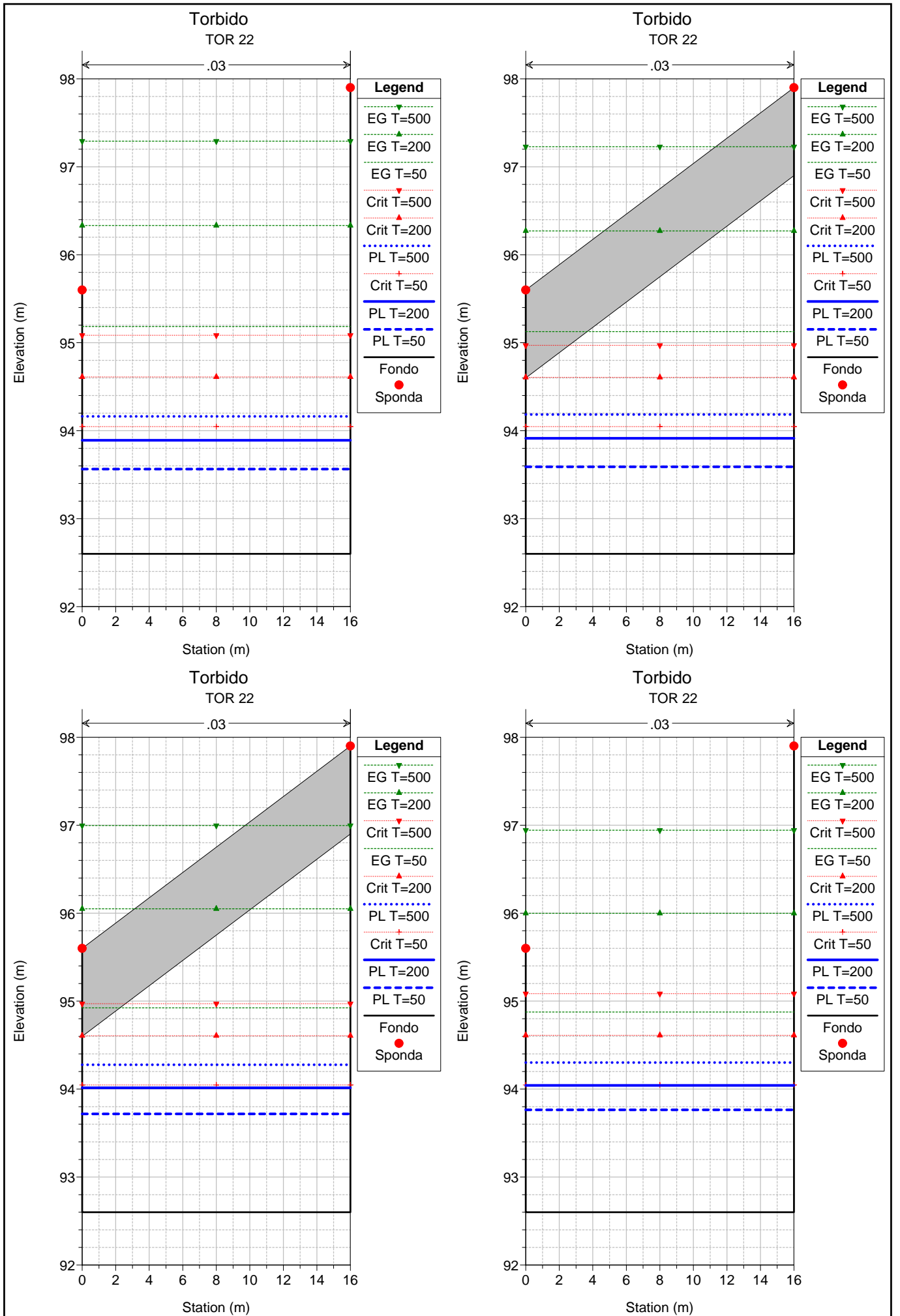


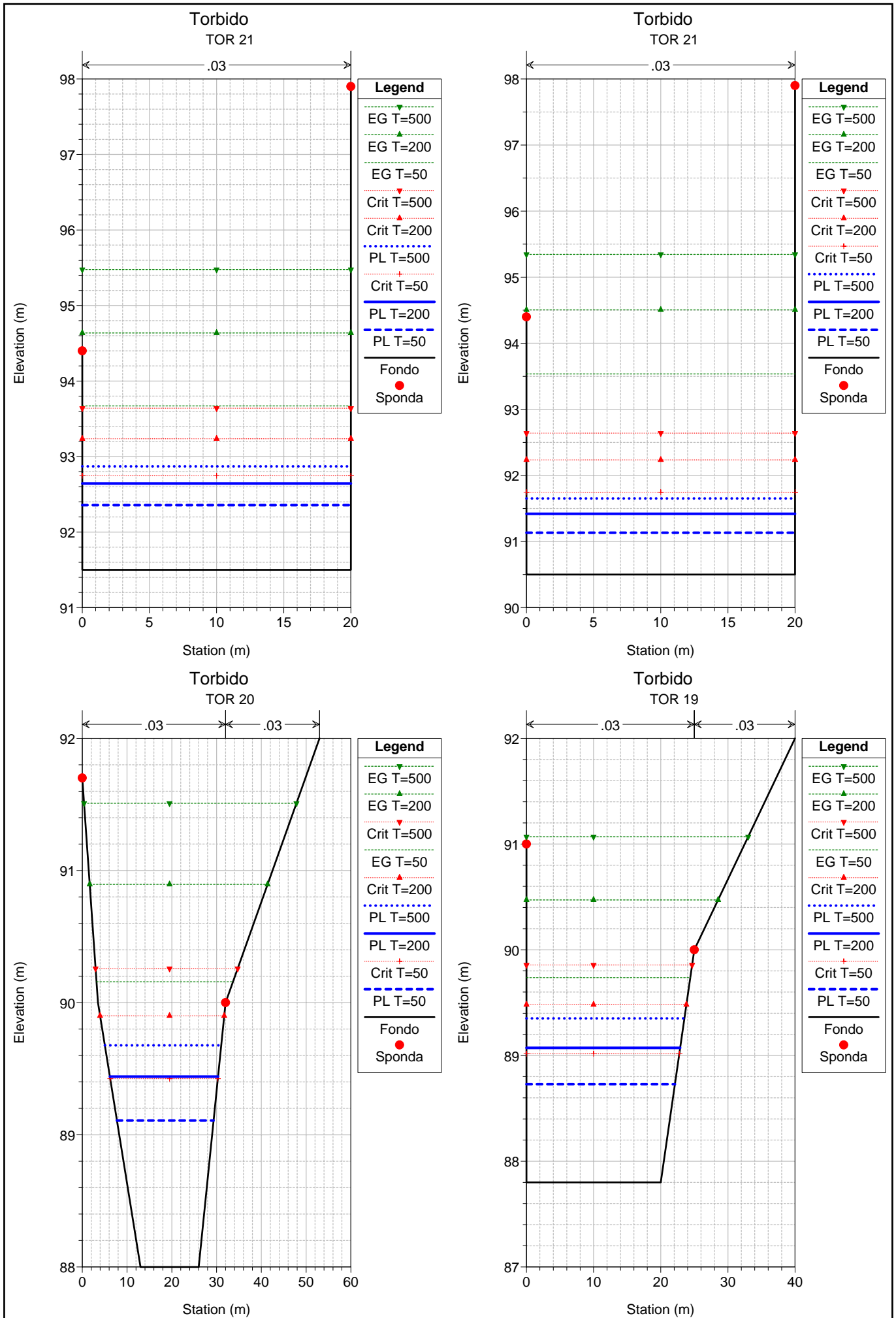


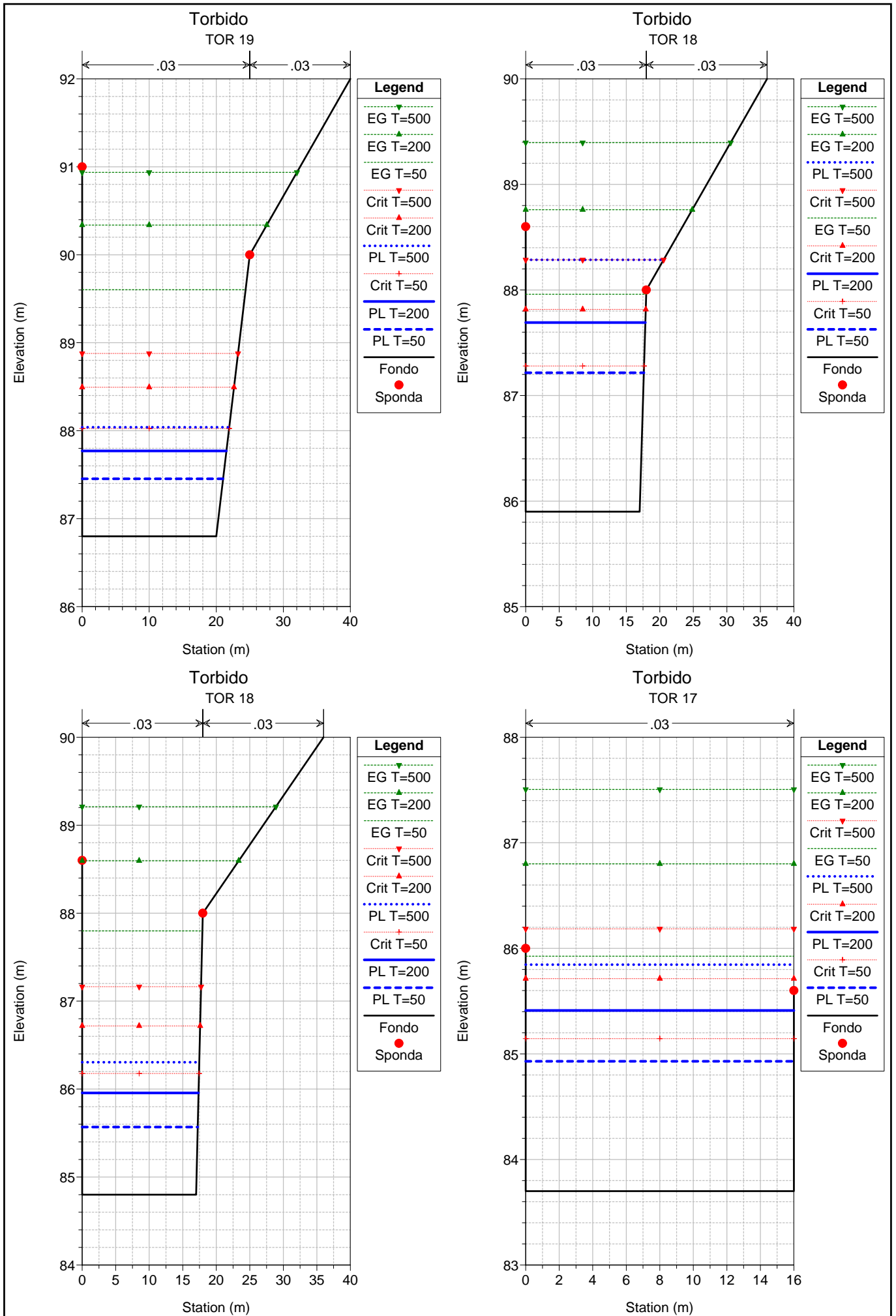


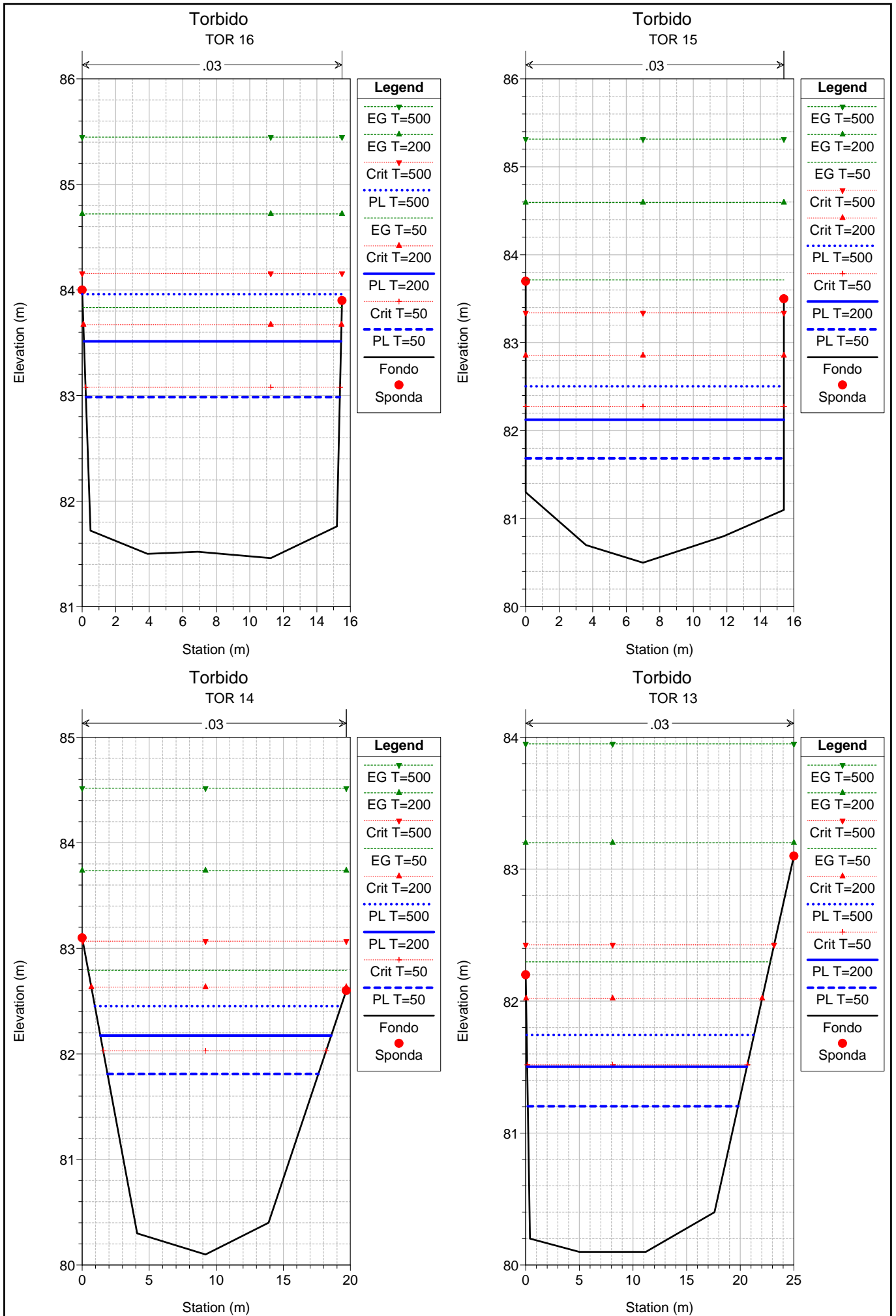


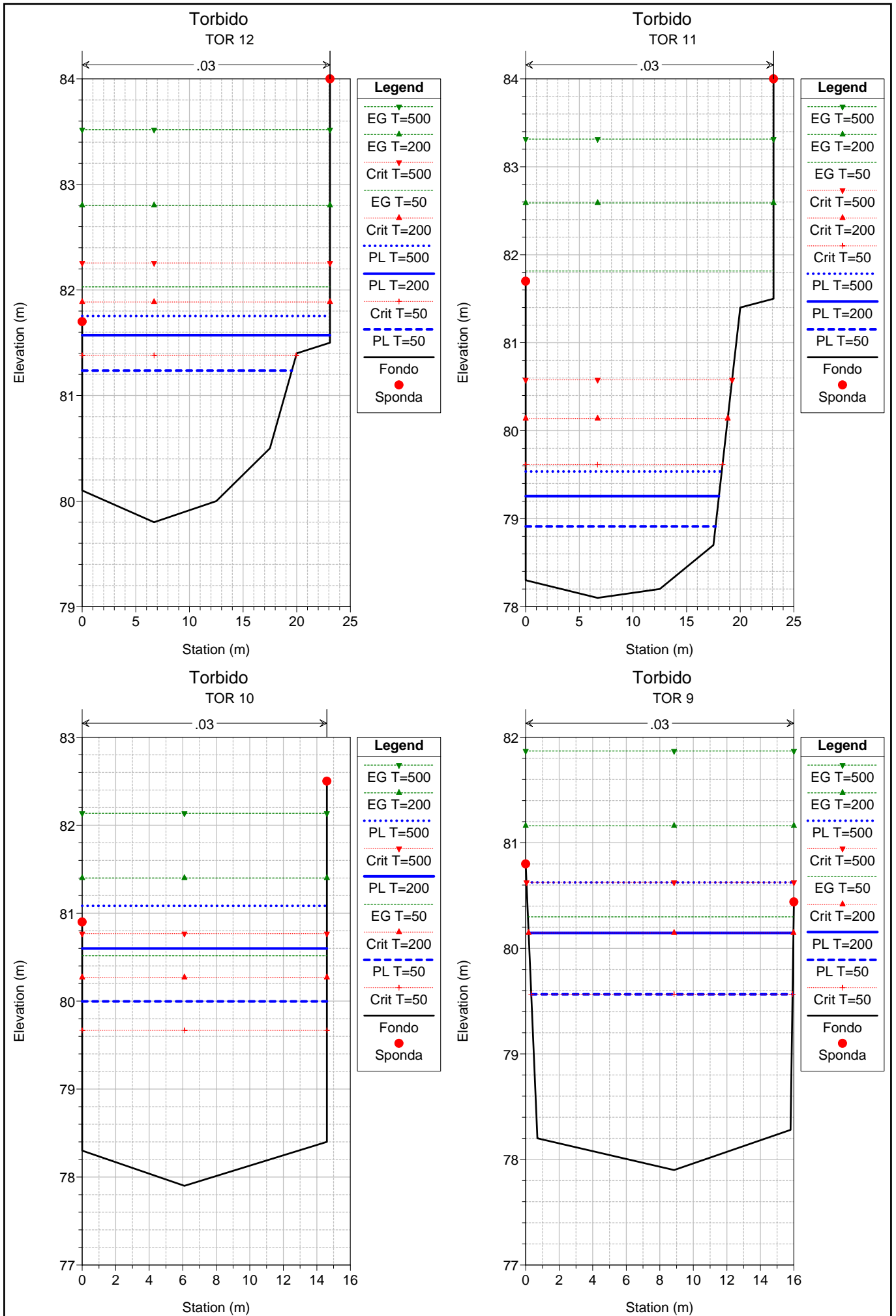


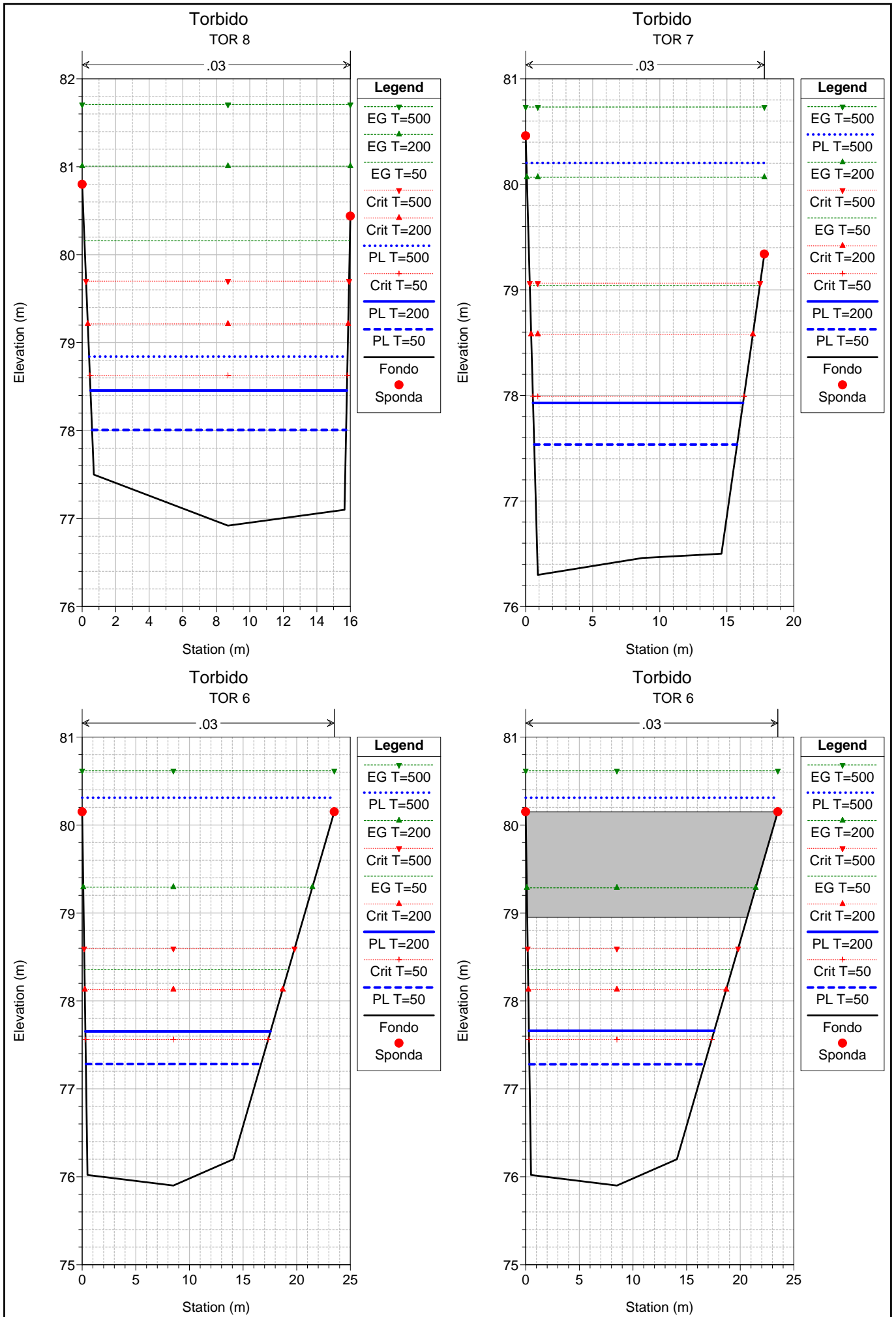


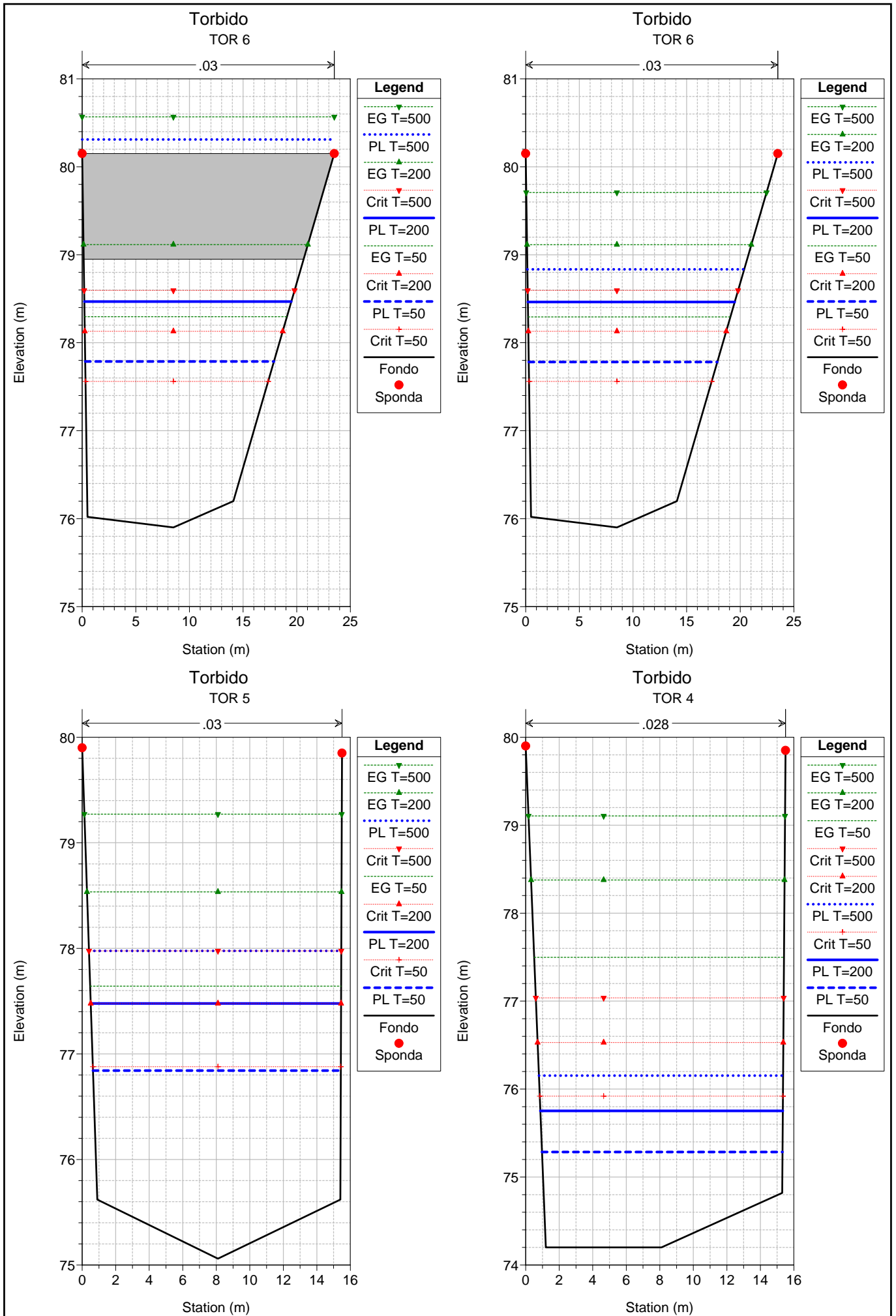


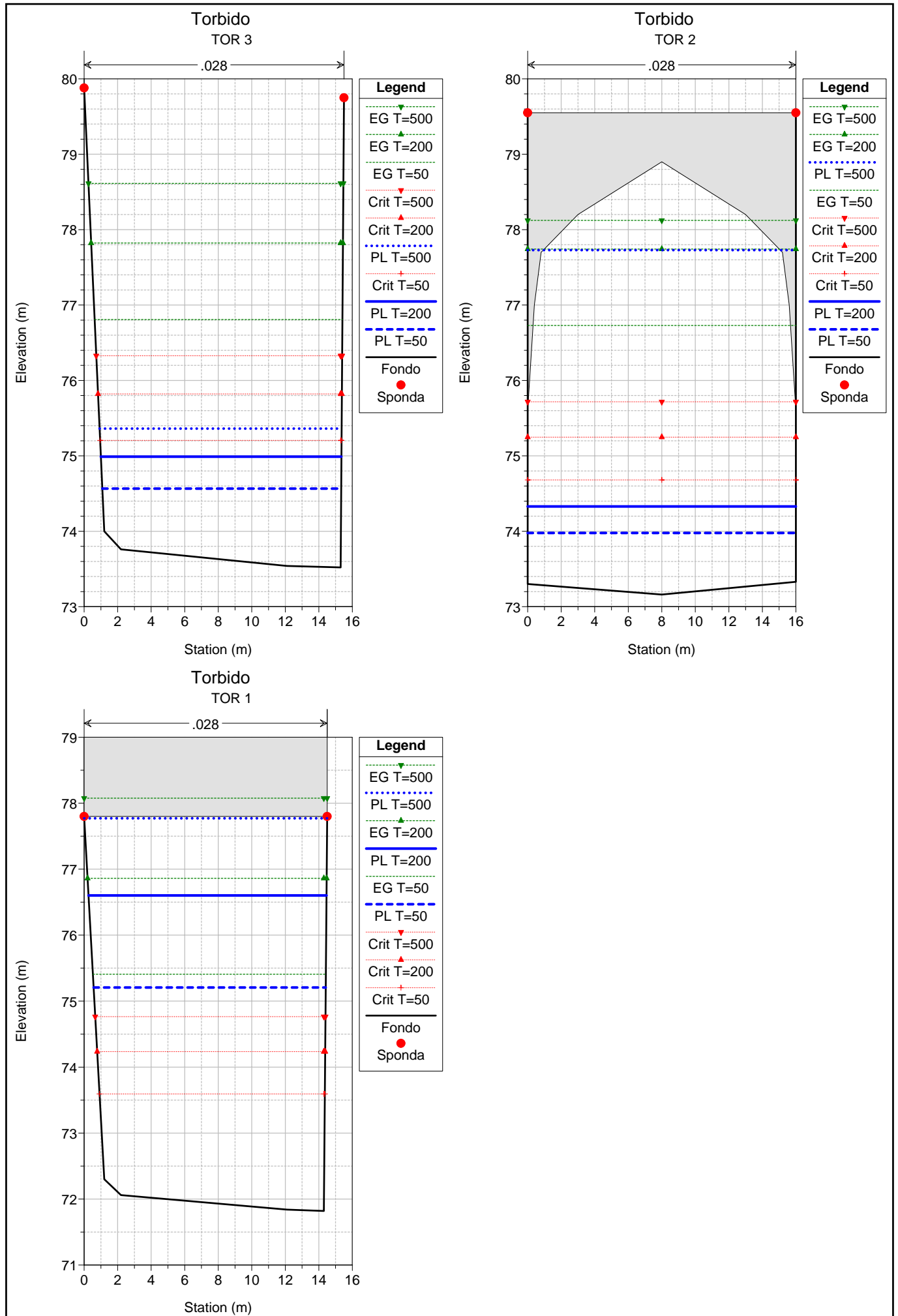












HEC-RAS Plan: 03_Apr11 River: Torbido Reach: unico

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
unico	100	T=50	83.00	104.10	105.61	107.60	1.99	107.00	1.39	106.18	107.40	0.029517	5.93	13.99	12.38	1.78
unico	100	T=200	137.00	104.10	106.06	107.60	1.54	107.00	0.94	106.84	108.46	0.029541	6.86	19.97	14.10	1.84
unico	100	T=500	188.00	104.10	106.41	107.60	1.19	107.00	0.59	107.30	109.23	0.029518	7.43	25.30	15.83	1.88
unico	37 TOR 37	T=50	83.00	100.40	101.82	103.90	2.08	103.60	1.78	102.49	103.92	0.036447	6.42	12.93	11.93	1.97
unico	37 TOR 37	T=200	137.00	100.40	102.26	103.90	1.64	103.60	1.34	103.15	105.06	0.035674	7.41	18.49	13.36	2.01
unico	37 TOR 37	T=500	188.00	100.40	102.62	103.90	1.28	103.60	0.98	103.65	105.88	0.035064	8.00	23.49	14.91	2.03
unico	36 TOR 36	T=50	83.00	100.30	102.25	102.50	0.25	101.50	-0.75	102.45	103.16	0.012303	4.27	20.07	16.99	1.17
unico	36 TOR 36	T=200	137.00	100.30	102.50	102.50	0.00	101.50	-1.00	103.04	104.20	0.019069	5.87	24.35	18.06	1.49
unico	36 TOR 36	T=500	188.00	100.30	102.76	102.50	-0.26	101.50	-1.26	103.44	105.01	0.021388	6.80	29.14	19.06	1.60
unico	35 TOR 35	T=50	83.00	97.80	98.65	101.80	3.15	101.10	2.45	99.57	102.82	0.122677	9.05	9.17	12.34	3.35
unico	35 TOR 35	T=200	137.00	97.80	99.05	101.80	2.75	101.10	2.05	100.23	103.87	0.086624	9.73	14.08	12.49	2.92
unico	35 TOR 35	T=500	188.00	97.80	99.39	101.80	2.41	101.10	1.71	100.77	104.69	0.070895	10.20	18.44	12.62	2.69
unico	34 TOR 34	T=50	83.00	97.80	98.93	101.80	2.87	101.10	2.17	99.57	101.13	0.044675	6.57	12.63	12.45	2.08
unico	34 TOR 34	T=200	137.00	97.80	99.32	101.80	2.48	101.10	1.78	100.23	102.45	0.044366	7.84	17.48	12.59	2.12
unico	34 TOR 34	T=500	188.00	97.80	99.67	101.80	2.13	101.10	1.43	100.77	103.43	0.042087	8.59	21.88	12.72	2.09
unico	33 TOR 33	T=50	83.00	97.70	99.32	100.90	1.58	100.70	1.38	99.57	100.46	0.016333	4.72	17.60	12.77	1.28
unico	33 TOR 33	T=200	137.00	97.70	99.60	100.90	1.30	100.70	1.10	100.22	101.73	0.025235	6.47	21.17	12.83	1.61
unico	33 TOR 33	T=500	188.00	97.70	99.93	100.90	0.97	100.70	0.77	100.76	102.72	0.027265	7.39	25.43	12.90	1.68
unico	32 TOR 32	T=50	83.00	97.30	99.04	100.10	1.06	100.90	1.86	99.32	100.24	0.016763	4.87	17.06	12.42	1.32
unico	32 TOR 32	T=200	137.00	97.30	99.43	100.10	0.67	100.90	1.47	99.99	101.41	0.021085	6.23	22.00	12.62	1.51
unico	32 TOR 32	T=500	188.00	97.30	101.48	100.10	-1.38	100.90	-0.58	100.53	102.24	0.003894	3.86	48.69	13.20	0.64
unico	31.4 TOR 31	T=50	83.00	97.15	99.15	102.75	3.60	100.31	1.16	99.05	100.00	0.009082	4.07	20.38	10.38	0.93
unico	31.4 TOR 31	T=200	137.00	97.15	99.93	102.75	2.82	100.31	0.38	99.80	101.10	0.009303	4.80	28.51	10.53	0.93
unico	31.4 TOR 31	T=500	188.00	97.15	100.58	102.75	2.17	100.31	-0.27	100.42	102.02	0.009474	5.31	35.41	10.60	0.93
unico	31. TOR 31	T=50	83.00	97.15	99.13	106.15	7.02	100.31	1.18	99.05	99.99	0.009350	4.11	20.18	10.38	0.94
unico	31. TOR 31	T=200	137.00	97.15	99.90	106.15	6.25	100.31	0.41	99.80	101.10	0.009587	4.86	28.22	10.52	0.95
unico	31. TOR 31	T=500	188.00	97.15	100.53	106.15	5.62	100.31	-0.22	100.42	102.01	0.009899	5.39	34.86	10.60	0.95
unico	30. TOR 30	T=50	83.00	97.05	98.94	106.15	7.21	99.90	0.96	98.94	99.87	0.010484	4.27	19.45	10.50	1.00
unico	30. TOR 30	T=200	137.00	97.05	99.68	106.15	6.47	99.90	0.22	99.68	100.96	0.010552	5.01	27.33	10.65	1.00
unico	30. TOR 30	T=500	188.00	97.05	100.29	106.15	5.86	99.90	-0.39	100.29	101.87	0.010845	5.57	33.78	10.70	1.00
unico	29. TOR 29	T=50	83.00	95.00	98.29	106.15	7.86	99.90	1.61	96.91	98.61	0.002193	2.49	33.37	10.27	0.44
unico	29. TOR 29	T=200	137.00	95.00	96.51	106.15	9.64	99.90	3.39	97.67	100.64	0.059378	9.01	15.21	10.12	2.35
unico	29. TOR 29	T=500	188.00	95.00	96.97	106.15	9.18	99.90	2.93	98.29	101.53	0.050280	9.46	19.87	10.16	2.16
unico	28. TOR 28	T=50	83.00	94.99	97.73	106.75	9.02	100.35	2.62	97.73	98.52	0.008542	3.95	21.03	13.22	1.00
unico	28. TOR 28	T=200	137.00	94.99	98.08	106.75	8.67	100.35	2.27	98.42	99.51	0.013270	5.30	25.86	14.50	1.27
unico	28. TOR 28	T=500	188.00	94.99	98.21	106.75	8.54	100.35	2.14	98.92	100.53	0.020401	6.75	27.87	15.00	1.58
unico	27.1 TOR 27	T=50	83.00	94.97	97.33	106.75	9.42	100.11	2.78	97.61	98.46	0.014472	4.71	17.62	12.86	1.28
unico	27.1 TOR 27	T=200	137.00	94.97	97.80	106.75	8.95	100.11	2.31	98.28	99.44	0.016679	5.68	24.13	14.71	1.42

HEC-RAS Plan: 03_Apr11 River: Torbido Reach: unico (Continued)

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
unico	27.1 TOR 27	T=500	188.00	94.97	97.99	106.75	8.76	100.11	2.12	98.76	100.46	0.023019	6.95	27.04	15.47	1.68
unico	27 TOR 27	T=50	83.00	94.97	97.33	101.85	4.52	100.11	2.78	97.61	98.46	0.014425	4.70	17.65	12.87	1.28
unico	27 TOR 27	T=200	137.00	94.97	97.80	101.85	4.05	100.11	2.31	98.28	99.44	0.016679	5.68	24.13	14.71	1.42
unico	27 TOR 27	T=500	188.00	94.97	97.99	101.85	3.86	100.11	2.12	98.76	100.46	0.023019	6.95	27.04	15.47	1.68
unico	26.8 TOR 27	T=50	83.00	94.95	97.81	101.85	4.04	100.11	2.30	97.60	98.40	0.005969	3.41	24.34	14.74	0.85
unico	26.8 TOR 27	T=200	137.00	94.95	97.86	101.85	3.99	100.11	2.25	98.28	99.37	0.014924	5.45	25.12	14.95	1.34
unico	26.8 TOR 27	T=500	188.00	94.95	98.03	101.85	3.82	100.11	2.08	98.76	100.38	0.021609	6.80	27.66	15.60	1.63
unico	26.2 TOR 26	T=50	83.00	94.93	97.80	101.85	4.05	100.31	2.51	97.54	98.38	0.005539	3.39	24.47	13.69	0.81
unico	26.2 TOR 26	T=200	137.00	94.93	98.47	101.85	3.38	100.31	1.84	98.20	99.30	0.005792	4.03	33.95	14.59	0.84
unico	26.2 TOR 26	T=500	188.00	94.93	98.10	101.85	3.75	100.31	2.21	98.72	100.28	0.017655	6.53	28.77	14.11	1.46
unico	26.1 TOR 26	T=50	83.00	94.93	97.80	98.30	0.50	100.23	2.43	97.54	98.38	0.005718	3.37	24.60	14.36	0.82
unico	26.1 TOR 26	T=200	137.00	94.93	98.54	98.30	-0.24	100.23	1.69	98.24	99.26	0.005378	3.77	36.32	16.74	0.82
unico	26.1 TOR 26	T=500	188.00	94.93	98.06	98.30	0.24	100.23	2.17	98.72	100.27	0.019872	6.58	28.55	15.52	1.55
unico	26. TOR 26	T=50	83.00	94.92	97.79	98.30	0.51	100.21	2.42	97.54	98.37	0.005715	3.38	24.59	14.34	0.82
unico	26. TOR 26	T=200	137.00	94.92	98.53	98.30	-0.23	100.21	1.68	98.24	99.26	0.005385	3.77	36.30	16.75	0.82
unico	26. TOR 26	T=500	188.00	94.92	98.06	98.30	0.24	100.21	2.15	98.71	100.26	0.019702	6.56	28.64	15.53	1.54
unico	25.55 TOR 26	Bridge														
unico	25.5 TOR 26	T=50	83.00	94.92	97.54	98.30	0.76	100.21	2.67	97.54	98.33	0.008605	3.94	21.07	13.29	1.00
unico	25.5 TOR 26	T=200	137.00	94.92	98.24	98.30	0.06	100.21	1.97	98.24	99.21	0.008191	4.36	31.45	16.31	1.00
unico	25.5 TOR 26	T=500	188.00	94.92	98.18	98.30	0.12	100.21	2.03	98.71	100.12	0.016663	6.16	30.53	16.06	1.43
unico	25. TOR 25	T=50	83.00	94.86	96.45	100.82	4.37	98.68	2.23	97.00	98.19	0.031197	5.84	14.22	13.87	1.84
unico	25. TOR 25	T=200	137.00	94.86	96.93	100.82	3.89	98.68	1.75	97.60	99.05	0.026256	6.45	21.24	15.48	1.76
unico	25. TOR 25	T=500	188.00	94.86	97.20	100.82	3.62	98.68	1.48	98.08	99.97	0.029148	7.37	25.52	16.39	1.88
unico	24. TOR 24	T=50	83.00	94.50	96.67	100.83	4.16	97.86	1.19	97.06	97.92	0.020983	4.96	16.72	15.43	1.52
unico	24. TOR 24	T=200	137.00	94.50	97.05	100.83	3.78	97.86	0.81	97.63	98.83	0.023728	5.90	23.23	18.16	1.66
unico	24. TOR 24	T=500	188.00	94.50	97.25	100.83	3.58	97.86	0.61	98.04	99.73	0.030075	6.98	26.92	19.52	1.90
unico	23 TOR 32	T=50	87.00	94.30	95.05	96.00	0.95	98.00	2.95	95.67	97.34	0.066067	6.71	12.97	17.61	2.50
unico	23 TOR 32	T=200	143.00	94.30	95.39	96.00	0.61	98.00	2.61	96.21	98.29	0.053206	7.55	18.95	17.88	2.34
unico	23 TOR 32	T=500	196.00	94.30	95.64	96.00	0.36	98.00	2.36	96.71	99.18	0.050651	8.34	23.51	18.09	2.33
unico	22.9 TOR 23	T=50	87.00	93.30	93.93	96.00	2.07	98.00	4.07	94.68	97.20	0.116557	8.01	10.86	17.40	3.24
unico	22.9 TOR 23	T=200	143.00	93.30	94.24	96.00	1.76	98.00	3.76	95.21	98.15	0.084966	8.76	16.32	17.60	2.90
unico	22.9 TOR 23	T=500	196.00	93.30	94.49	96.00	1.51	98.00	3.51	95.65	99.05	0.074759	9.46	20.72	17.76	2.79
unico	22.1 TOR 22	T=50	87.00	92.60	93.56	95.60	2.04	97.90	4.34	94.05	95.18	0.034988	5.64	15.42	16.00	1.83
unico	22.1 TOR 22	T=200	143.00	92.60	93.89	95.60	1.71	97.90	4.01	94.61	96.33	0.037484	6.92	20.65	16.00	1.95
unico	22.1 TOR 22	T=500	196.00	92.60	94.16	95.60	1.44	97.90	3.74	95.08	97.29	0.038660	7.84	25.01	16.00	2.00
unico	22 TOR 22	Bridge														

HEC-RAS Plan: 03_Apr11 River: Torbido Reach: unico (Continued)

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	
unico	21.9	TOR 22	T=50	87.00	92.60	93.76	95.60	1.84	97.90	4.14	94.05	94.88	0.019231	4.67	18.62	16.00	1.38
unico	21.9	TOR 22	T=200	143.00	92.60	94.04	95.60	1.56	97.90	3.86	94.61	96.00	0.026451	6.20	23.08	16.00	1.65
unico	21.9	TOR 22	T=500	196.00	92.60	94.30	95.60	1.30	97.90	3.60	95.08	96.94	0.029708	7.20	27.22	16.00	1.76
unico	21	TOR 21	T=50	87.00	91.50	92.36	94.40	2.04	97.90	5.54	92.75	93.67	0.031808	5.08	17.14	20.00	1.75
unico	21	TOR 21	T=200	143.00	91.50	92.64	94.40	1.76	97.90	5.26	93.24	94.64	0.034028	6.25	22.86	20.00	1.87
unico	21	TOR 21	T=500	196.00	91.50	92.87	94.40	1.53	97.90	5.03	93.64	95.48	0.035927	7.15	27.40	20.00	1.95
unico	20.9	TOR 21	T=50	87.00	90.50	91.13	94.40	3.27	97.90	6.77	91.74	93.54	0.084705	6.87	12.67	20.00	2.75
unico	20.9	TOR 21	T=200	143.00	90.50	91.42	94.40	2.98	97.90	6.48	92.23	94.50	0.068637	7.78	18.37	20.00	2.59
unico	20.9	TOR 21	T=500	196.00	90.50	91.65	94.40	2.75	97.90	6.25	92.64	95.34	0.062568	8.52	23.02	20.00	2.53
unico	20	TOR 20	T=50	87.00	88.00	89.11	91.70	2.59	90.00	0.89	89.42	90.16	0.022122	4.54	19.17	21.59	1.54
unico	20	TOR 20	T=200	143.00	88.00	89.44	91.70	2.26	90.00	0.56	89.90	90.90	0.022912	5.34	26.76	24.16	1.62
unico	20	TOR 20	T=500	196.00	88.00	89.68	91.70	2.02	90.00	0.32	90.26	91.51	0.024391	6.00	32.69	25.99	1.71
unico	19	TOR 19	T=50	87.00	87.80	88.73	91.00	2.27	90.00	1.27	89.02	89.74	0.022382	4.45	19.57	22.11	1.51
unico	19	TOR 19	T=200	143.00	87.80	89.07	91.00	1.93	90.00	0.93	89.48	90.47	0.021334	5.24	27.29	22.89	1.53
unico	19	TOR 19	T=500	196.00	87.80	89.35	91.00	1.65	90.00	0.65	89.86	91.07	0.020789	5.81	33.75	23.52	1.55
unico	18.9	TOR 19	T=50	87.00	86.80	87.45	91.00	3.55	90.00	2.55	88.03	89.60	0.073047	6.50	13.39	21.02	2.60
unico	18.9	TOR 19	T=200	143.00	86.80	87.77	91.00	3.23	90.00	2.23	88.49	90.34	0.053403	7.10	20.14	21.52	2.34
unico	18.9	TOR 19	T=500	196.00	86.80	88.04	91.00	2.96	90.00	1.96	88.88	90.94	0.044846	7.54	25.99	21.94	2.21
unico	18	TOR 18	T=50	87.00	85.90	87.22	88.60	1.38	88.00	0.78	87.28	87.96	0.010869	3.82	22.78	17.63	1.07
unico	18	TOR 18	T=200	143.00	85.90	87.69	88.60	0.91	88.00	0.31	87.82	88.76	0.010967	4.58	31.22	17.85	1.11
unico	18	TOR 18	T=500	196.00	85.90	88.29	88.60	0.31	88.00	-0.29	88.29	89.40	0.008183	4.67	42.25	20.57	0.98
unico	17.9	TOR 18	T=50	87.00	84.80	85.57	88.60	3.03	88.00	2.43	86.18	87.80	0.062453	6.62	13.15	17.24	2.42
unico	17.9	TOR 18	T=200	143.00	84.80	85.96	88.60	2.64	88.00	2.04	86.72	88.59	0.045043	7.20	19.87	17.36	2.15
unico	17.9	TOR 18	T=500	196.00	84.80	86.31	88.60	2.29	88.00	1.69	87.16	89.21	0.036470	7.55	25.95	17.47	1.98
unico	17	TOR 17	T=50	87.00	83.70	84.93	86.00	1.07	85.60	0.67	85.14	85.93	0.016162	4.42	19.68	16.00	1.27
unico	17	TOR 17	T=200	143.00	83.70	85.41	86.00	0.59	85.60	0.19	85.71	86.80	0.015533	5.22	27.38	16.00	1.27
unico	17	TOR 17	T=500	196.00	83.70	85.85	86.00	0.15	85.60	-0.25	86.18	87.51	0.014551	5.71	34.33	16.00	1.24
unico	16.9		T=50	87.00	82.70	83.51	86.00	2.49	85.60	2.09	84.14	85.78	0.059973	6.67	13.03	16.00	2.36
unico	16.9		T=200	143.00	82.70	83.92	86.00	2.08	85.60	1.68	84.71	86.65	0.044749	7.32	19.52	16.00	2.12
unico	16.9		T=500	196.00	82.70	84.28	86.00	1.72	85.60	1.32	85.18	87.35	0.037637	7.77	25.23	16.00	1.98
unico	16	TOR 16	T=50	87.00	81.46	82.99	84.00	1.01	83.90	0.91	83.08	83.83	0.011286	4.08	21.33	15.15	1.10
unico	16	TOR 16	T=200	143.00	81.46	83.51	84.00	0.49	83.90	0.39	83.67	84.72	0.011380	4.87	29.37	15.34	1.12
unico	16	TOR 16	T=500	196.00	81.46	83.96	84.00	0.04	83.90	-0.06	84.16	85.45	0.011288	5.40	36.26	15.49	1.13
unico	15	TOR 15	T=50	87.00	80.50	81.69	83.70	2.01	83.50	1.81	82.27	83.71	0.045359	6.31	13.79	15.40	2.13
unico	15	TOR 15	T=200	143.00	80.50	82.12	83.70	1.58	83.50	1.38	82.85	84.59	0.034776	6.96	20.54	15.40	1.92
unico	15	TOR 15	T=500	196.00	80.50	82.50	83.70	1.20	83.50	1.00	83.34	85.32	0.030025	7.43	26.38	15.40	1.81
unico	14	TOR 14	T=50	87.00	80.10	81.81	83.10	1.29	82.60	0.79	82.03	82.79	0.013499	4.38	19.84	15.73	1.25
unico	14	TOR 14	T=200	143.00	80.10	82.17	83.10	0.93	82.60	0.43	82.63	83.74	0.017252	5.54	25.81	17.22	1.44

HEC-RAS Plan: 03_Apr11 River: Torbido Reach: unico (Continued)

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
unico	14	TOR 14	T=500	196.00	80.10	82.45	83.10	0.65	82.60	0.15	83.07	84.52	0.019731	6.37	30.79	18.36	1.57
unico	13.0	TOR 13	T=50	87.00	80.10	81.20	82.20	1.00	83.10	1.90	81.52	82.30	0.021861	4.64	18.77	19.60	1.51
unico	13.0	TOR 13	T=200	143.00	80.10	81.50	82.20	0.70	83.10	1.60	82.02	83.20	0.025198	5.77	24.78	20.48	1.67
unico	13.0	TOR 13	T=500	196.00	80.10	81.74	82.20	0.46	83.10	1.36	82.43	83.95	0.027140	6.58	29.78	21.19	1.77
unico	12	TOR 12	T=50	87.00	79.80	81.24	81.70	0.46	84.00	2.76	81.38	82.03	0.012991	3.94	22.05	19.55	1.19
unico	12	TOR 12	T=200	143.00	79.80	81.57	81.70	0.13	84.00	2.43	81.89	82.80	0.017577	4.91	29.11	23.10	1.40
unico	12	TOR 12	T=500	196.00	79.80	81.75	81.70	-0.05	84.00	2.25	82.26	83.52	0.021497	5.89	33.30	23.10	1.56
unico	11	TOR 11	T=50	87.00	78.10	78.91	81.70	2.79	84.00	5.09	79.62	81.82	0.095955	7.55	11.52	17.70	2.99
unico	11	TOR 11	T=200	143.00	78.10	79.26	81.70	2.44	84.00	4.74	80.14	82.59	0.065918	8.09	17.68	18.02	2.61
unico	11	TOR 11	T=500	196.00	78.10	79.54	81.70	2.16	84.00	4.46	80.58	83.32	0.055829	8.61	22.76	18.28	2.46
unico	10	TOR 10	T=50	87.00	77.90	80.00	80.90	0.90	82.50	2.50	79.67	80.52	0.005233	3.19	27.27	14.60	0.75
unico	10	TOR 10	T=200	143.00	77.90	80.60	80.90	0.30	82.50	1.90	80.27	81.40	0.006081	3.97	36.05	14.60	0.81
unico	10	TOR 10	T=500	196.00	77.90	81.08	80.90	-0.18	82.50	1.42	80.77	82.14	0.006716	4.54	43.12	14.60	0.84
unico	9	TOR 9	T=50	87.00	77.90	79.56	80.80	1.24	80.44	0.88	79.56	80.30	0.009264	3.79	22.92	15.59	1.00
unico	9	TOR 9	T=200	143.00	77.90	80.15	80.80	0.65	80.44	0.29	80.15	81.16	0.008928	4.46	32.05	15.80	1.00
unico	9	TOR 9	T=500	196.00	77.90	80.62	80.80	0.18	80.44	-0.18	80.62	81.87	0.008828	4.94	39.64	15.95	1.00
unico	8	TOR 8	T=50	87.00	76.92	78.01	80.80	2.79	80.44	2.43	78.63	80.16	0.049820	6.50	13.39	15.15	2.21
unico	8	TOR 8	T=200	143.00	76.92	78.46	80.80	2.34	80.44	1.98	79.21	81.01	0.036665	7.08	20.21	15.29	1.96
unico	8	TOR 8	T=500	196.00	76.92	78.84	80.80	1.96	80.44	1.60	79.70	81.71	0.031013	7.50	26.13	15.42	1.84
unico	7	TOR 7	T=50	87.00	76.30	77.53	80.46	2.93	79.34	1.81	77.99	79.04	0.027788	5.44	16.00	15.13	1.69
unico	7	TOR 7	T=200	143.00	76.30	77.93	80.46	2.53	79.34	1.41	78.58	80.07	0.027783	6.48	22.07	15.66	1.74
unico	7	TOR 7	T=500	196.00	76.30	80.20	80.46	0.26	79.34	-0.86	79.06	80.73	0.002544	3.23	60.73	17.74	0.56
unico	6.2	TOR 6	T=50	87.00	75.90	77.28	80.15	2.87	80.15	2.87	77.56	78.35	0.017225	4.59	18.97	16.33	1.36
unico	6.2	TOR 6	T=200	143.00	75.90	77.65	80.15	2.50	80.15	2.50	78.13	79.29	0.019914	5.68	25.19	17.26	1.50
unico	6.2	TOR 6	T=500	196.00	75.90	80.31	80.15	-0.16	80.15	-0.16	78.59	80.62	0.001359	2.45	79.85	23.50	0.43
unico	6.11	TOR 6	Bridge														
unico	6.1	TOR 6	T=50	87.00	75.90	77.78	80.15	2.37	80.15	2.37	77.56	78.29	0.005730	3.17	27.43	17.58	0.81
unico	6.1	TOR 6	T=200	143.00	75.90	78.46	80.15	1.69	80.15	1.69	78.13	79.11	0.005160	3.58	39.99	19.28	0.79
unico	6.1	TOR 6	T=500	196.00	75.90	78.83	80.15	1.32	80.15	1.32	78.59	79.71	0.005981	4.14	47.33	20.21	0.86
unico	5	TOR 5	T=50	87.00	75.06	76.84	79.90	3.06	79.85	3.01	76.88	77.64	0.010068	3.96	21.95	14.79	1.04
unico	5	TOR 5	T=200	143.00	75.06	77.48	79.90	2.42	79.85	2.37	77.48	78.53	0.009084	4.55	31.40	14.93	1.00
unico	5	TOR 5	T=500	196.00	75.06	77.98	79.90	1.92	79.85	1.87	77.98	79.27	0.009001	5.04	38.87	15.05	1.00
unico	4	TOR 4	T=50	87.00	74.20	75.29	79.90	4.61	79.85	4.56	75.92	77.50	0.042886	6.59	13.20	14.35	2.19
unico	4	TOR 4	T=200	143.00	74.20	75.75	79.90	4.15	79.85	4.10	76.53	78.38	0.031791	7.18	19.92	14.46	1.95
unico	4	TOR 4	T=500	196.00	74.20	76.15	79.90	3.75	79.85	3.70	77.04	79.10	0.027052	7.61	25.75	14.56	1.83
unico	3	TOR 3	T=50	87.00	73.52	74.57	79.88	5.31	79.75	5.18	75.21	76.81	0.044063	6.63	13.11	14.25	2.21
unico	3	TOR 3	T=200	143.00	73.52	74.99	79.88	4.89	79.75	4.76	75.82	77.82	0.036010	7.46	19.17	14.35	2.06

HEC-RAS Plan: 03_Apr11 River: Torbido Reach: unico (Continued)

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
unico	3 TOR 3	T=500	196.00	73.52	75.36	79.88	4.52	79.75	4.39	76.33	78.61	0.031552	7.99	24.54	14.44	1.96
unico	2 TOR 2	T=50	87.00	73.16	73.98	75.60	1.62	75.60	1.62	74.68	76.73	0.070370	7.35	11.84	16.00	2.73
unico	2 TOR 2	T=200	143.00	73.16	74.33	75.60	1.27	75.60	1.27	75.25	77.74	0.054784	8.19	17.47	16.00	2.50
unico	2 TOR 2	T=500	196.00	73.16	77.73	75.60	-2.13	75.60	-2.13	75.72	78.12	0.001557	2.78	70.40	14.15	0.42
unico	1 TOR 1	T=50	87.00	71.82	75.21	77.80	2.59	77.80	2.59	73.59	75.41	0.001051	1.99	43.81	13.85	0.36
unico	1 TOR 1	T=200	143.00	71.82	76.60	77.80	1.20	77.80	1.20	74.23	76.86	0.000993	2.26	63.37	14.20	0.34
unico	1 TOR 1	T=500	196.00	71.82	77.77	77.80	0.03	77.80	0.03	74.77	78.08	0.000975	2.45	80.15	14.49	0.33

Allegato

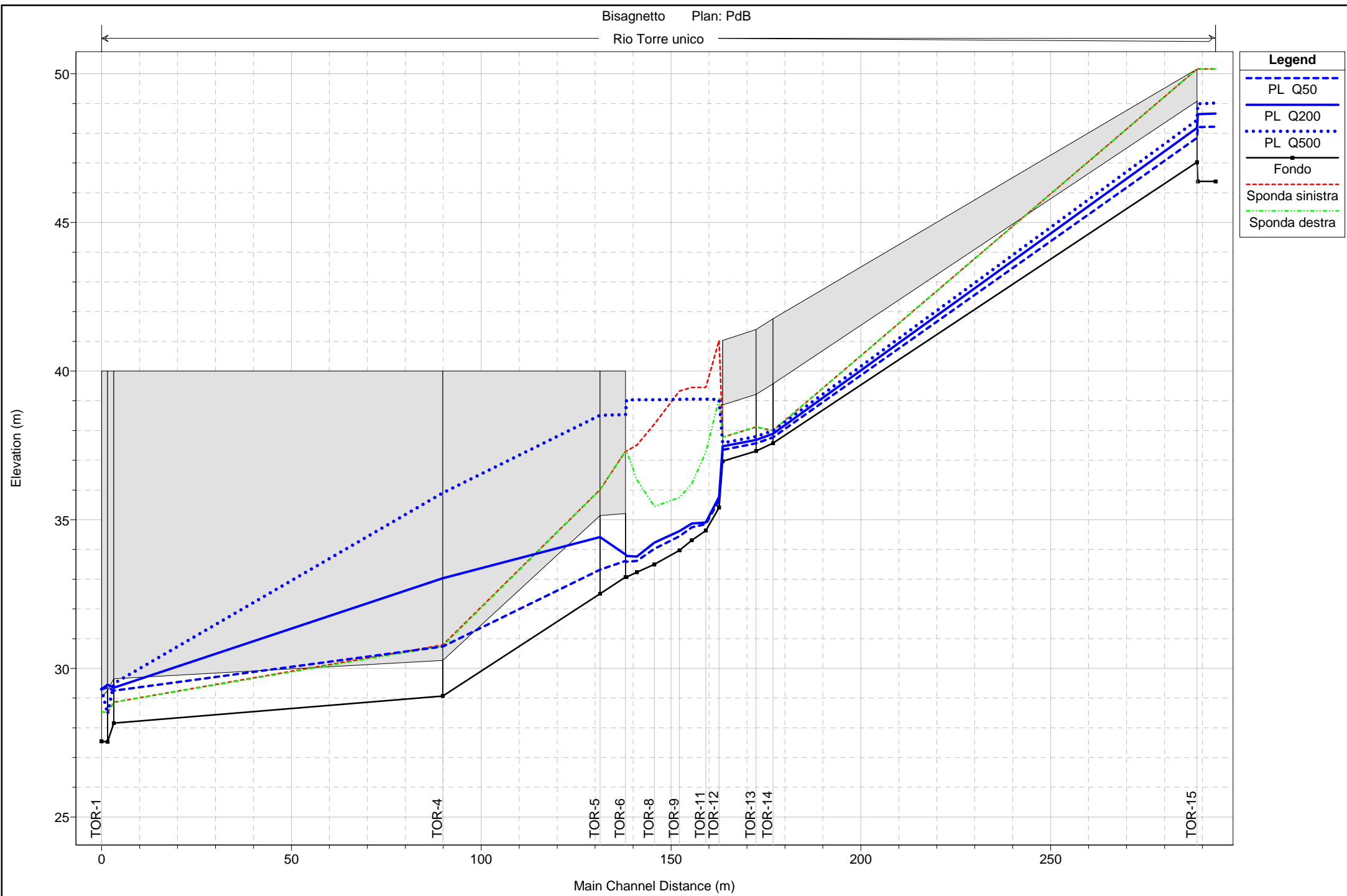
Verifiche idrauliche

Rio Torre

- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

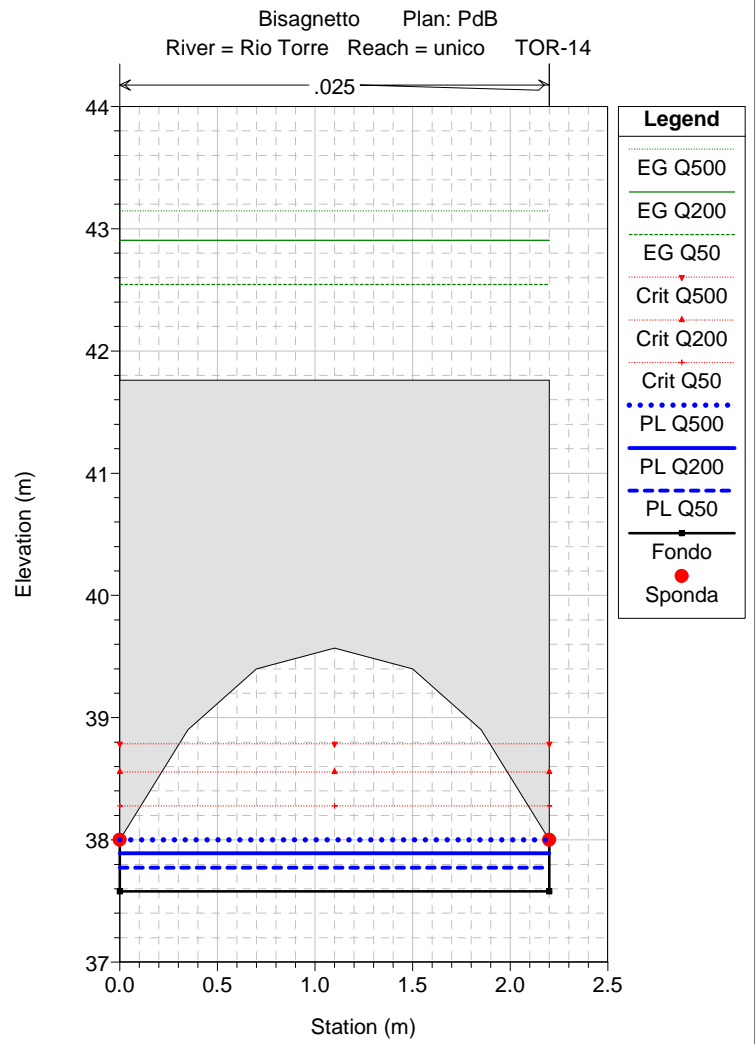
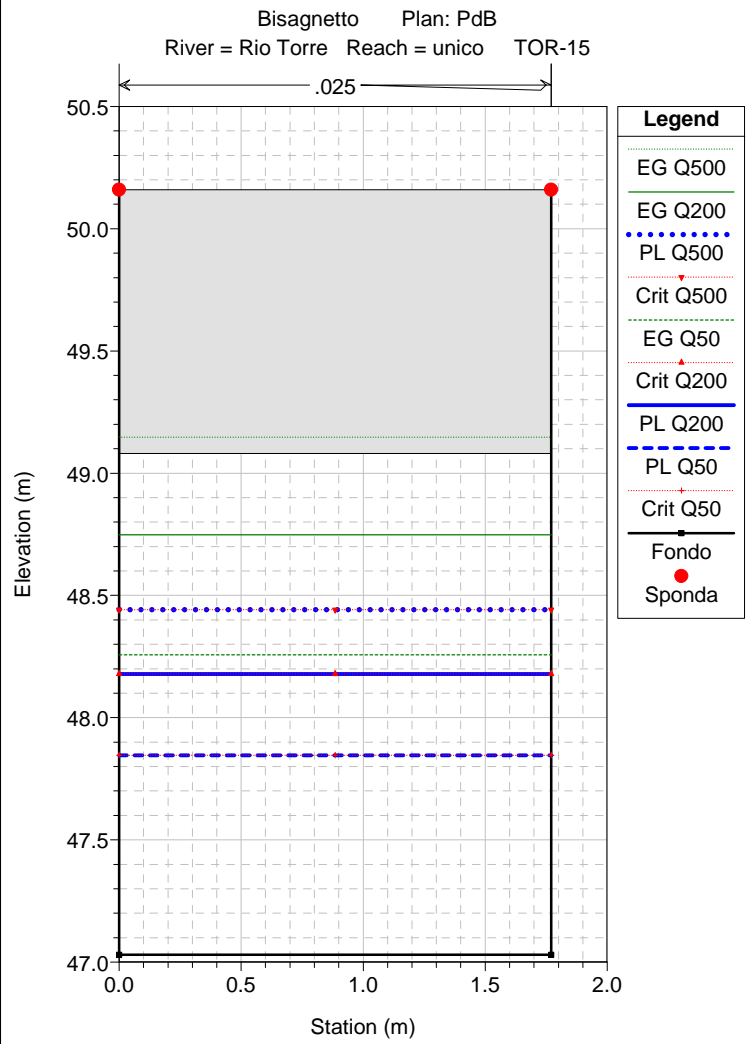
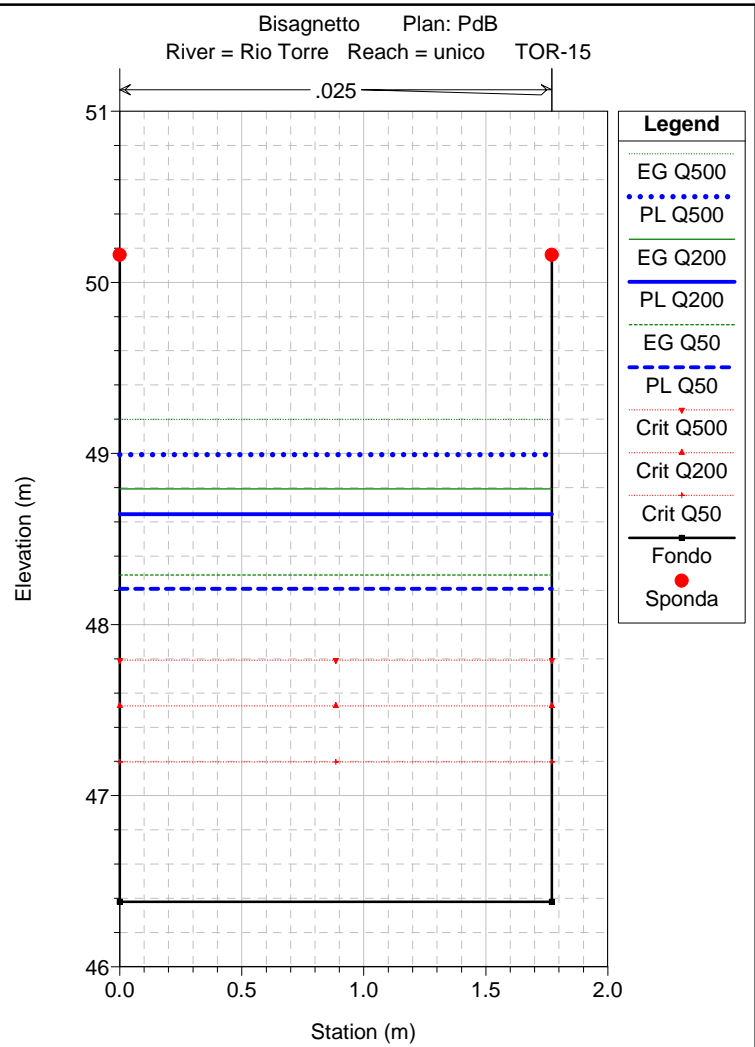
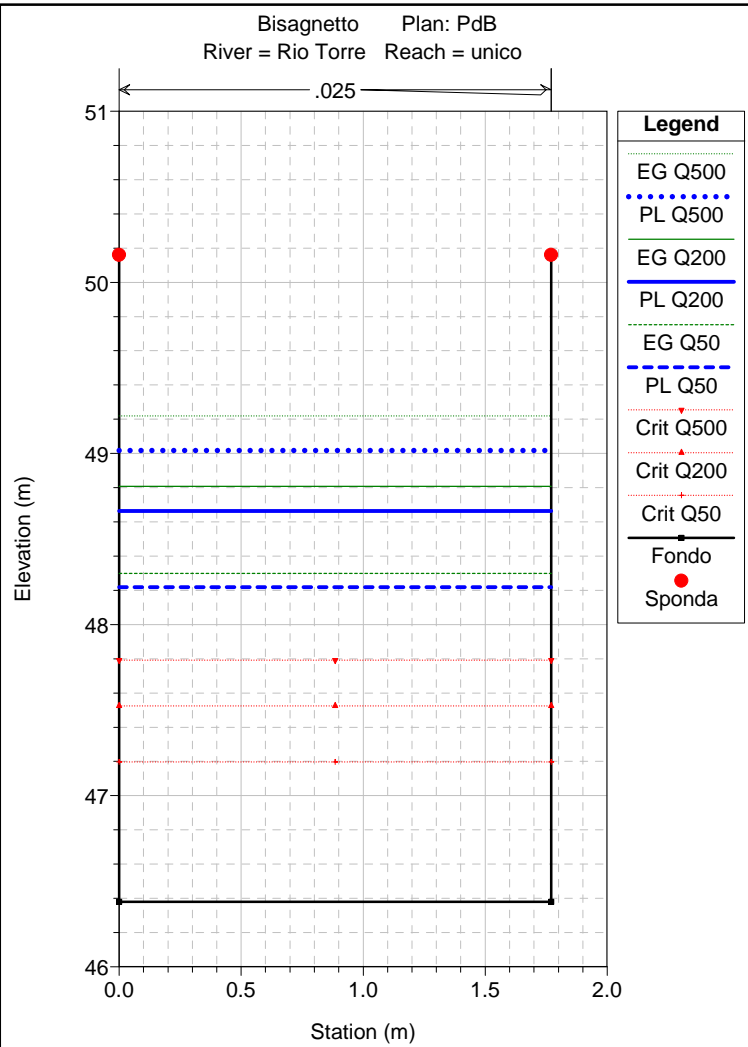
Bisagnetto Plan: PdB

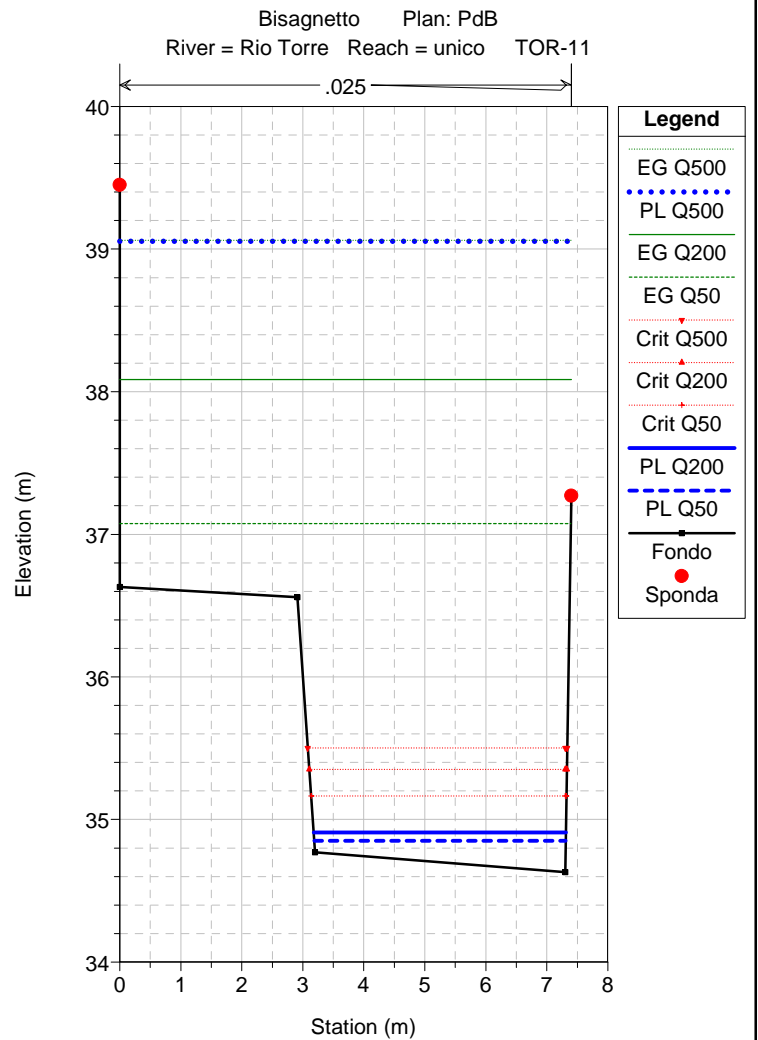
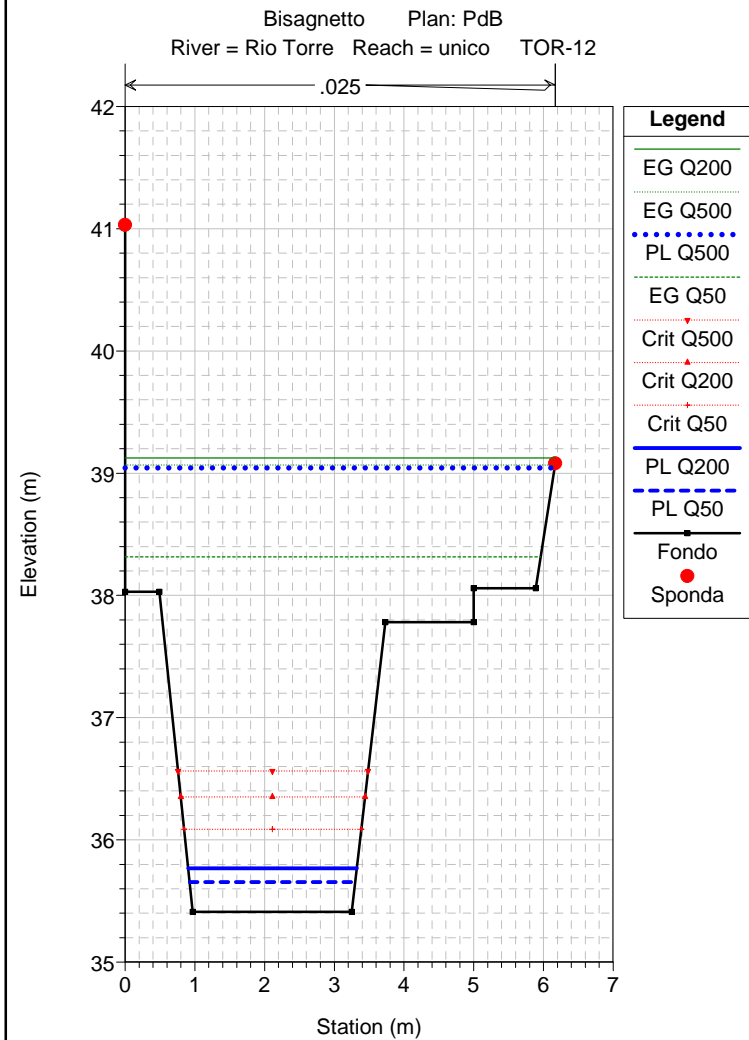
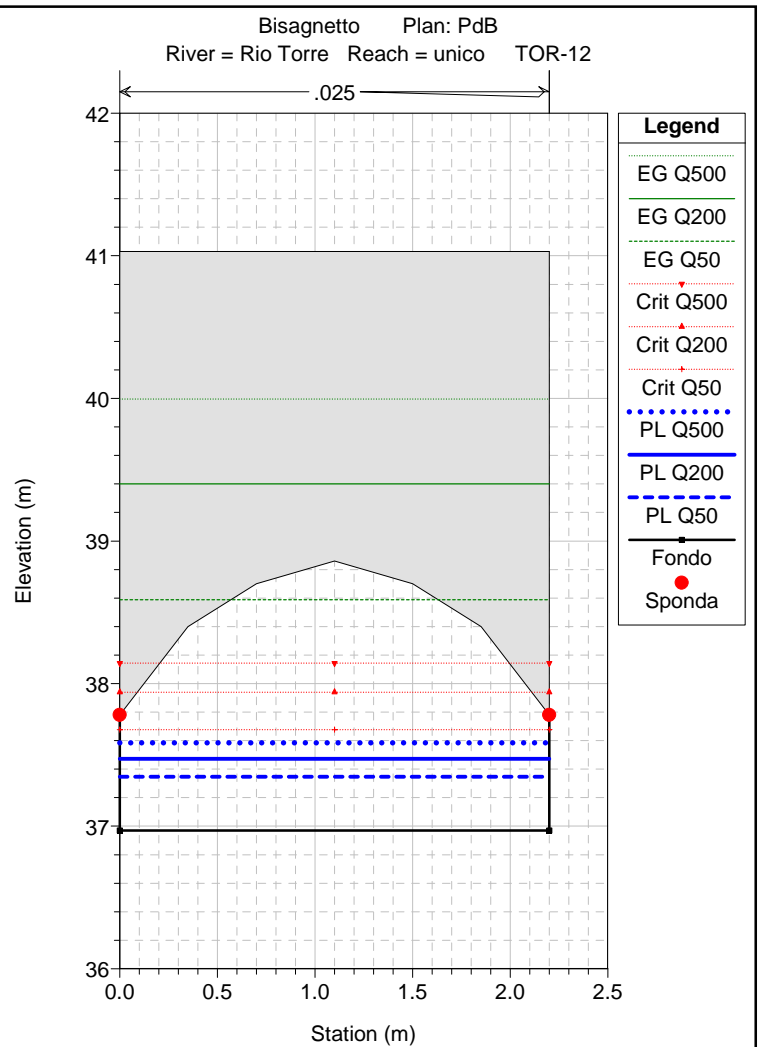
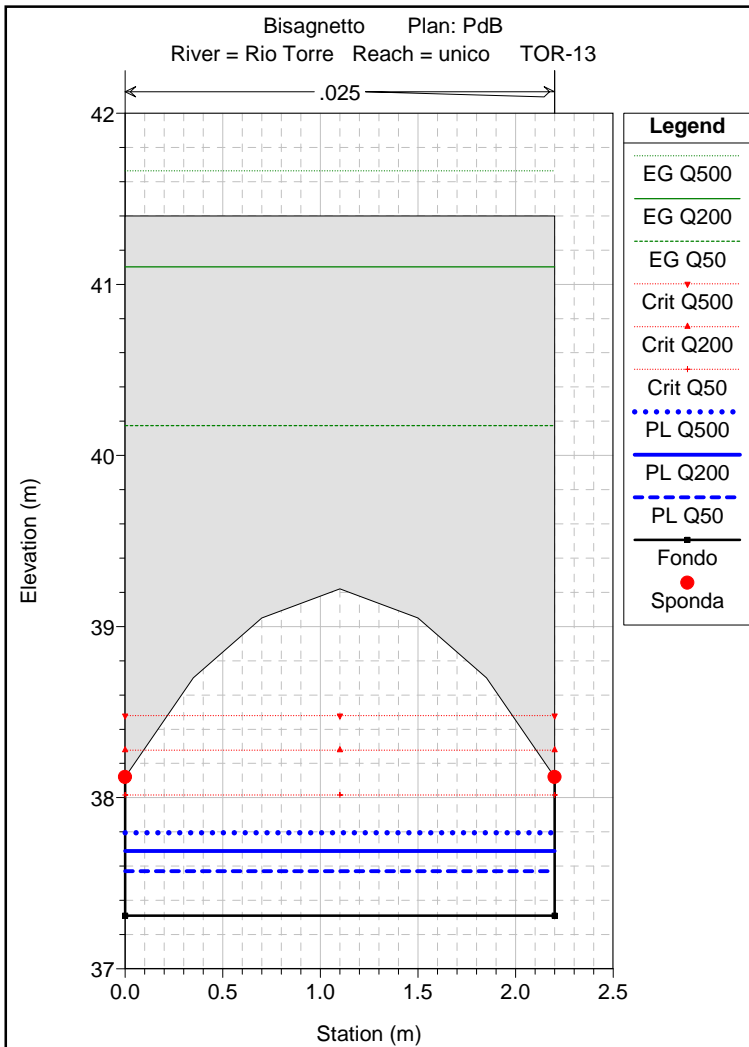
Rio Torre unico

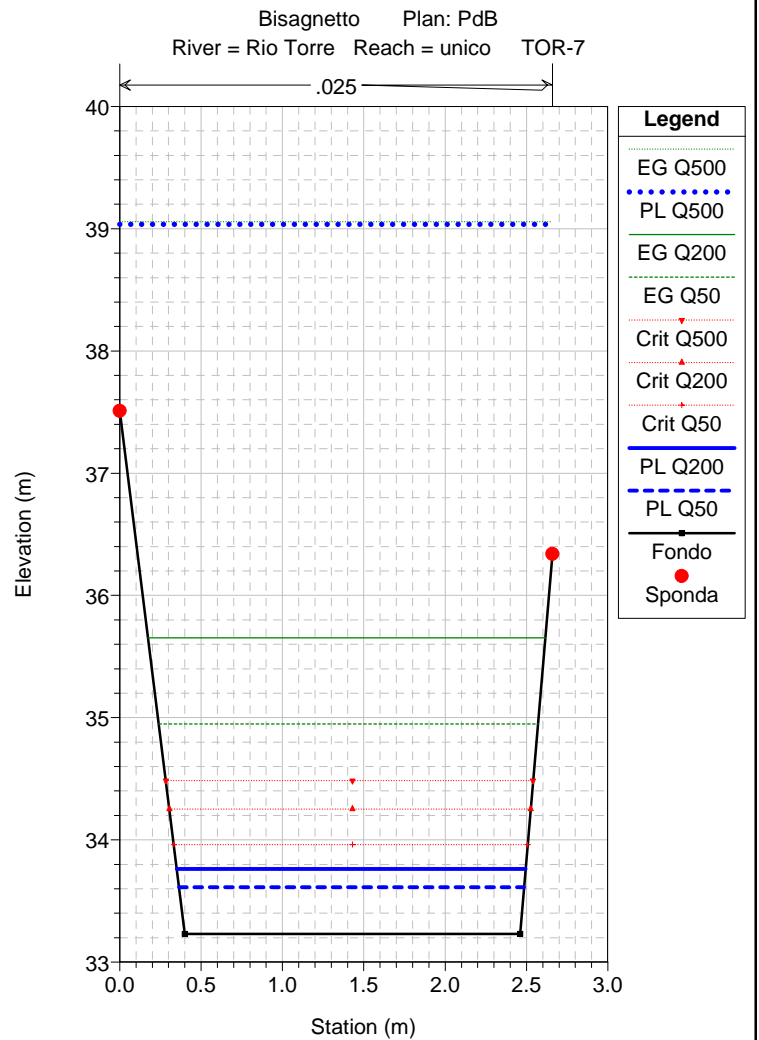
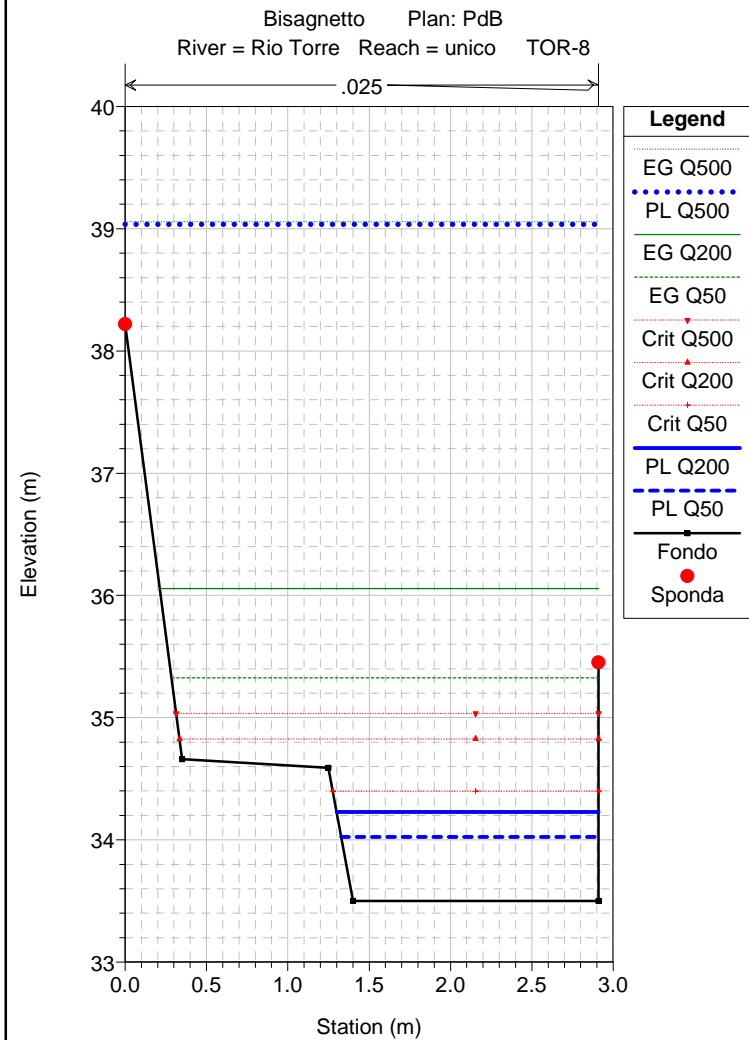
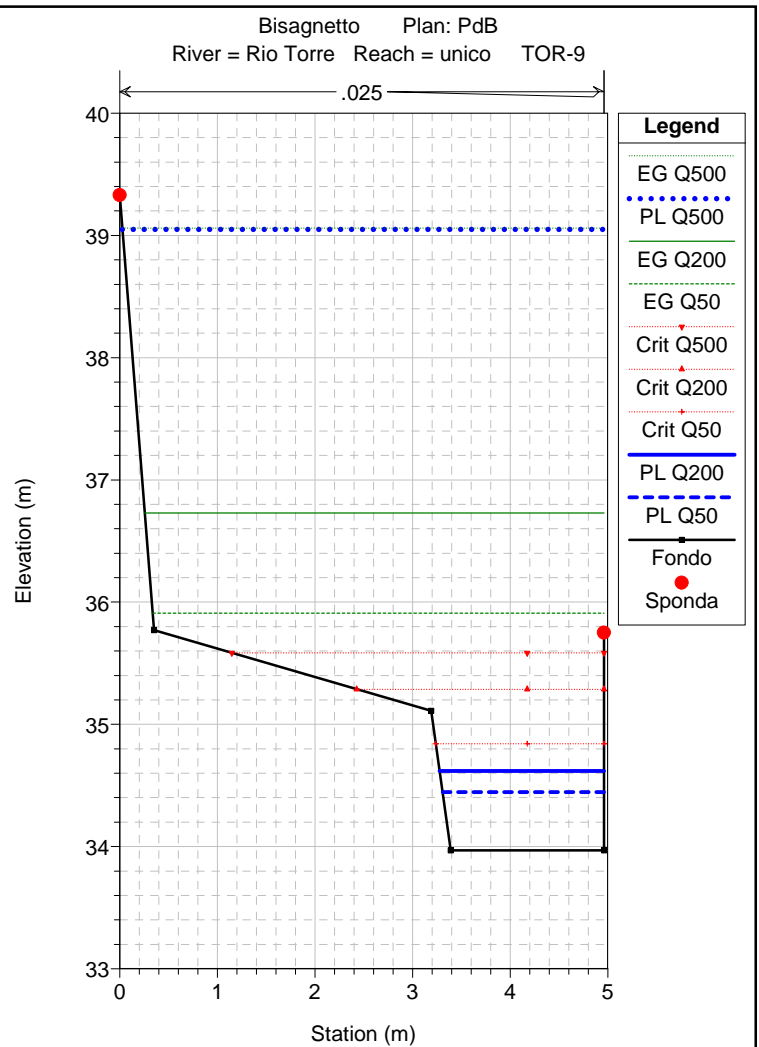
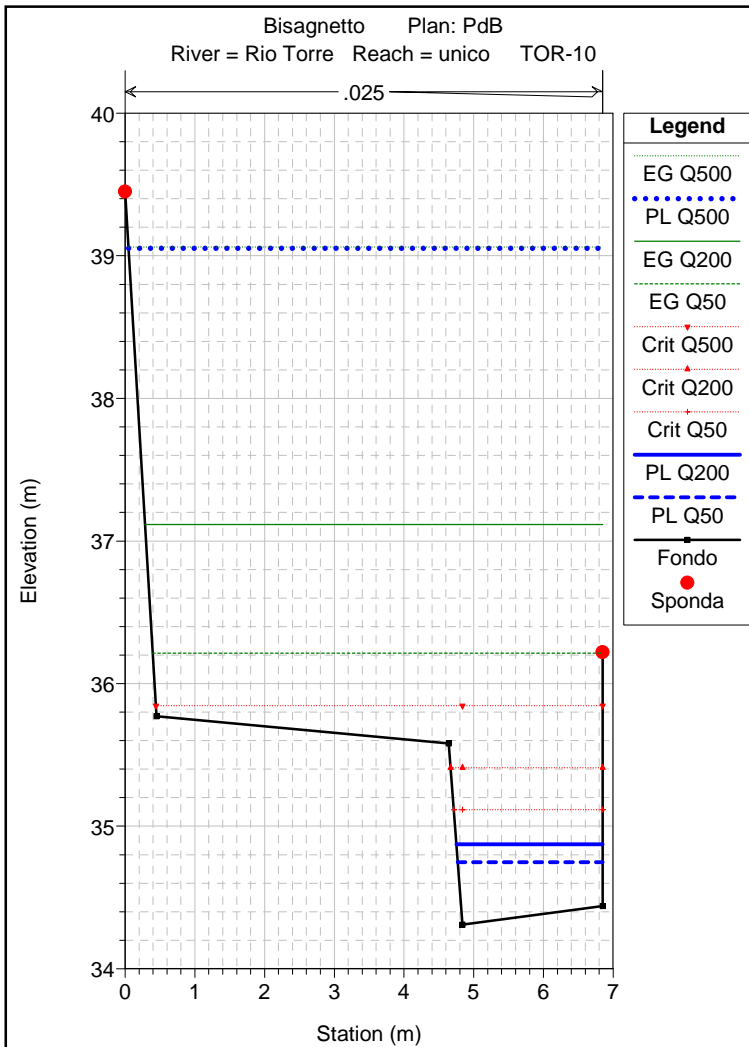


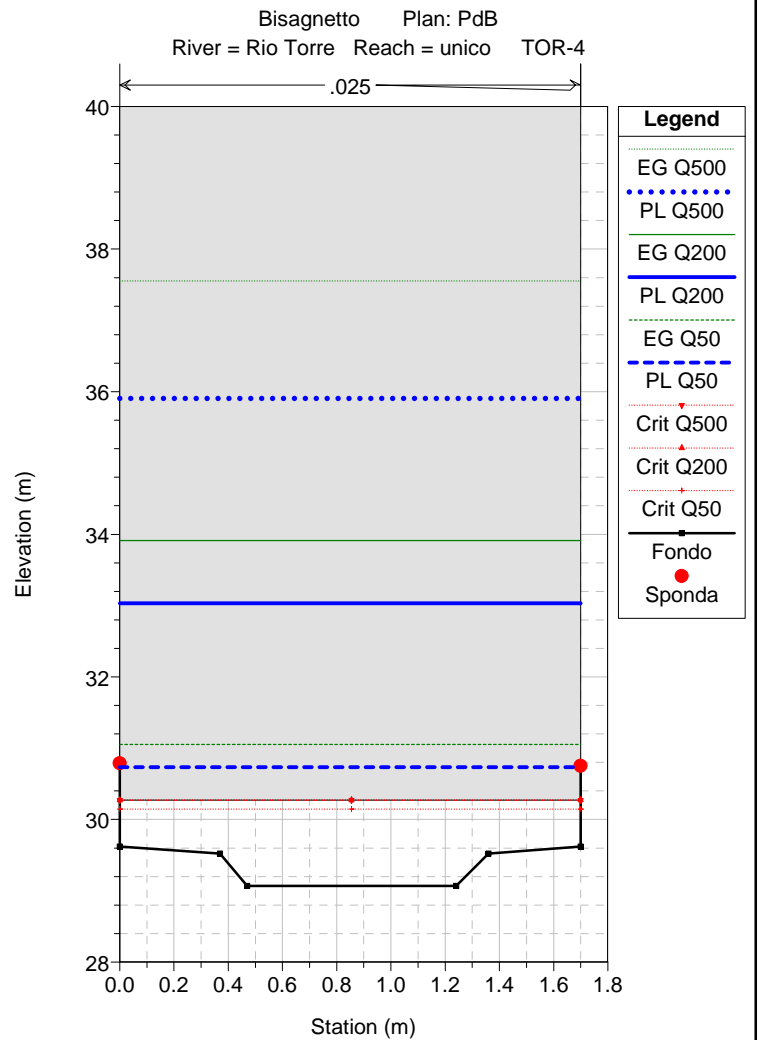
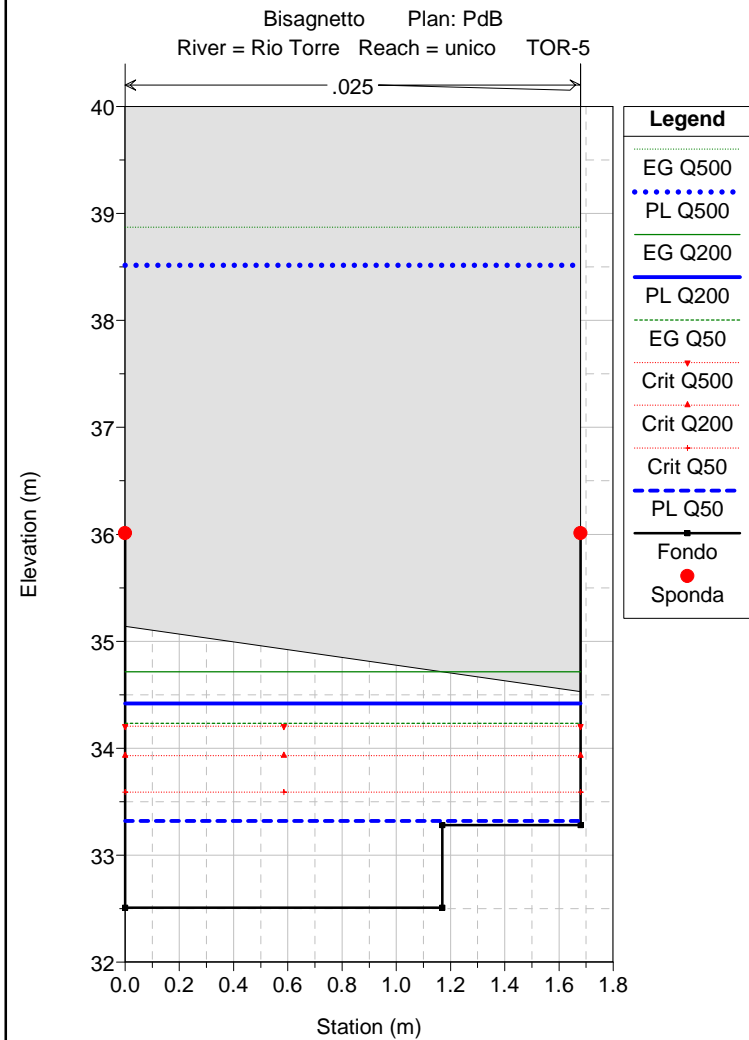
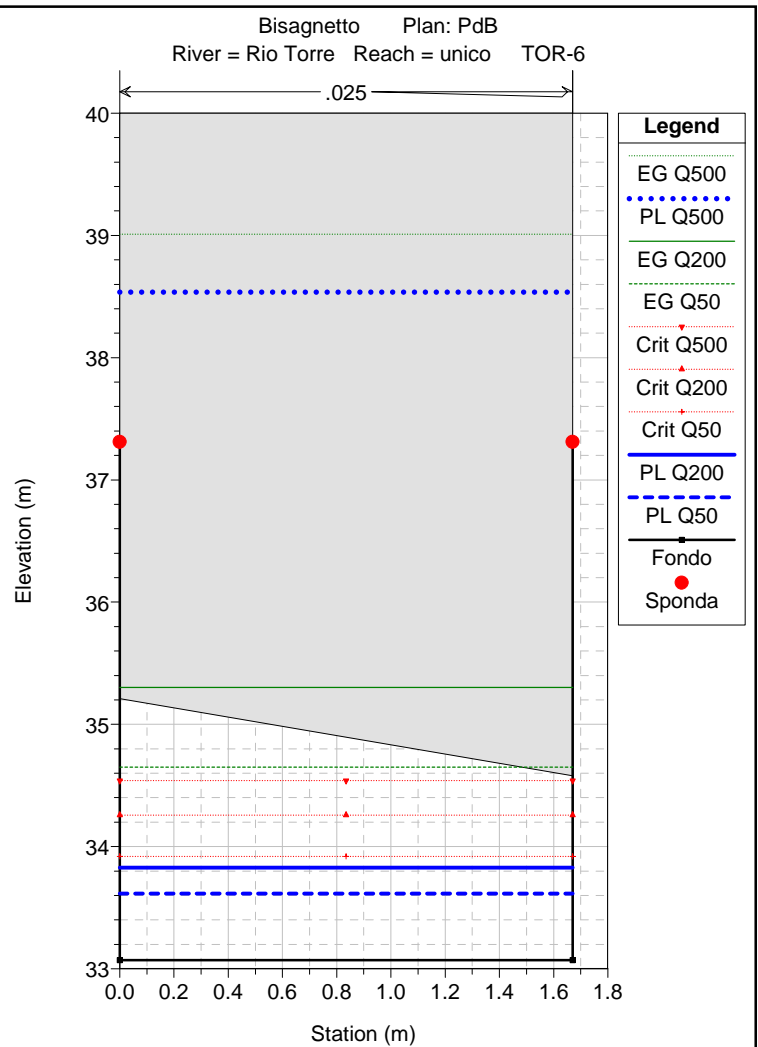
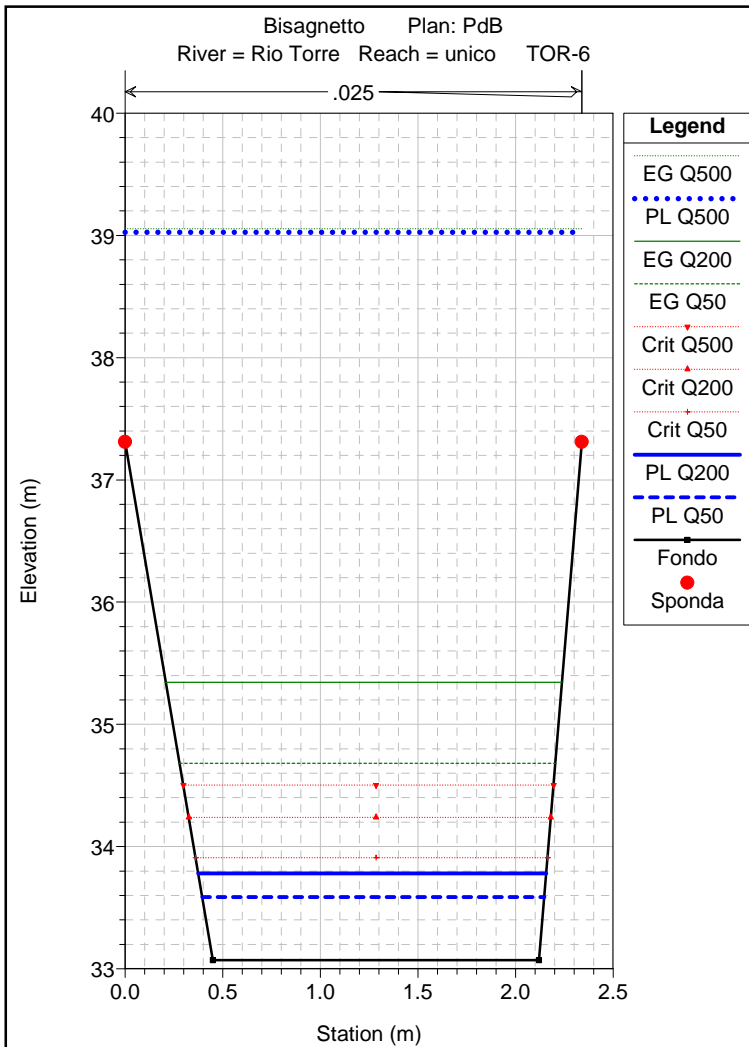
Legend

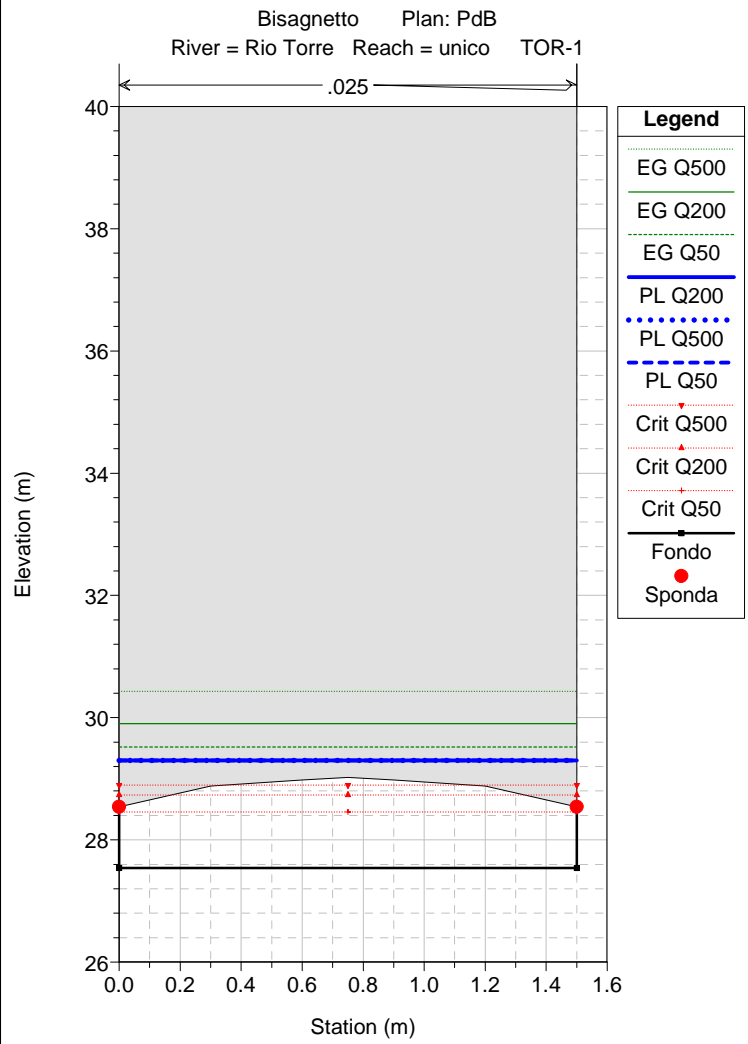
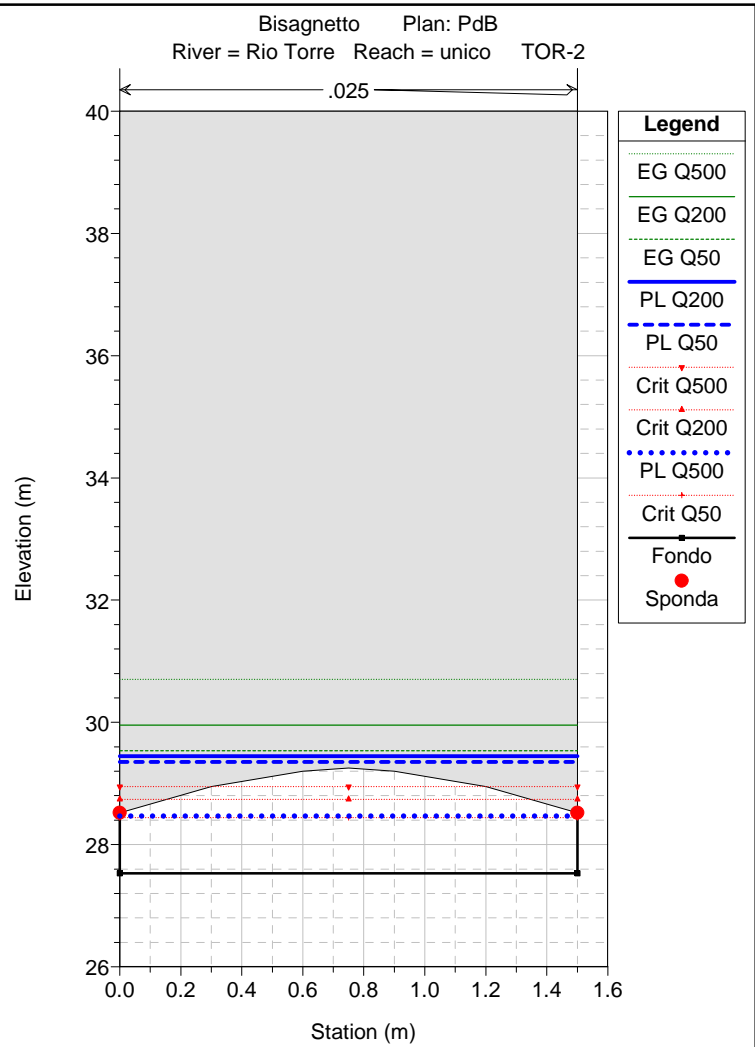
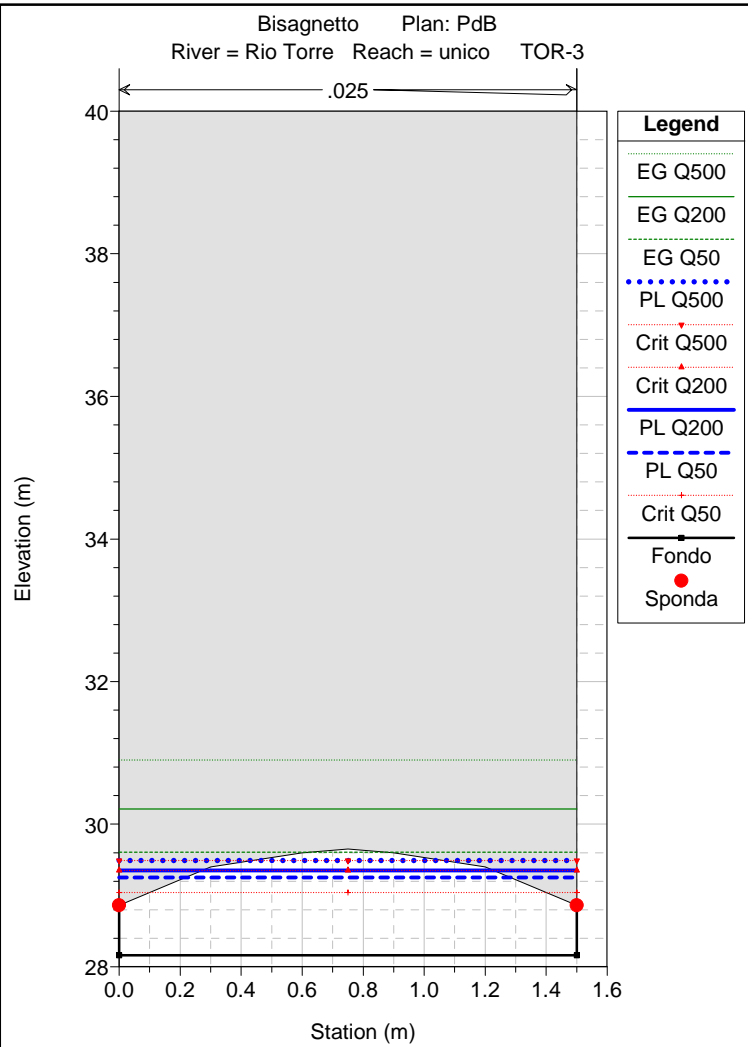
- PL Q50 (dashed blue line)
- PL Q200 (solid blue line)
- PL Q500 (dotted blue line)
- Fondo (solid black line with square markers)
- Sponda sinistra (dashed red line)
- Sponda destra (dotted green line)











HEC-RAS Plan: SA River: Rio Torre Reach: unico

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
unico	15.3	Q50	4.10	46.38	48.22	50.16	1.94	50.16	1.94	47.20	48.30	0.001971	1.26	3.25	1.77	0.30
unico	15.3	Q200	6.80	46.38	48.66	50.16	1.50	50.16	1.50	47.52	48.81	0.003222	1.68	4.04	1.77	0.36
unico	15.3	Q500	9.30	46.38	49.02	50.16	1.14	50.16	1.14	47.79	49.22	0.004294	1.99	4.67	1.77	0.39
unico	15.2 TOR-15	Q50	4.10	46.38	48.21	50.16	1.95	50.16	1.95	47.20	48.29	0.001998	1.27	3.24	1.77	0.30
unico	15.2 TOR-15	Q200	6.80	46.38	48.65	50.16	1.51	50.16	1.51	47.52	48.79	0.003283	1.70	4.01	1.77	0.36
unico	15.2 TOR-15	Q500	9.30	46.38	48.99	50.16	1.17	50.16	1.17	47.79	49.20	0.004389	2.01	4.62	1.77	0.40
unico	15.1 TOR-15	Q50	4.10	47.03	47.85	49.08	1.23	49.08	1.23	47.85	48.26	0.015769	2.84	1.44	1.77	1.00
unico	15.1 TOR-15	Q200	6.80	47.03	48.18	49.08	0.90	49.08	0.90	48.18	48.75	0.017639	3.35	2.03	1.77	1.00
unico	15.1 TOR-15	Q500	9.30	47.03	48.44	49.08	0.64	49.08	0.64	48.44	49.15	0.019487	3.72	2.50	1.77	1.00
unico	14 TOR-14	Q50	4.10	37.58	37.77	38.00	0.23	38.00	0.23	38.28	42.54	0.652562	9.68	0.42	2.20	7.04
unico	14 TOR-14	Q200	6.80	37.58	37.89	38.00	0.11	38.00	0.11	38.56	42.91	0.406258	9.92	0.69	2.20	5.67
unico	14 TOR-14	Q500	9.30	37.58	38.00	38.00	0.00	38.00	0.00	38.79	43.15	0.308186	10.05	0.93	2.20	4.95
unico	13 TOR-13	Q50	4.10	37.31	37.57	38.12	0.55	38.12	0.55	38.02	40.17	0.254806	7.15	0.57	2.20	4.47
unico	13 TOR-13	Q200	6.80	37.31	37.69	38.12	0.43	38.12	0.43	38.28	41.10	0.227439	8.19	0.83	2.20	4.25
unico	13 TOR-13	Q500	9.30	37.31	37.80	38.12	0.33	38.12	0.33	38.48	41.66	0.202584	8.71	1.07	2.20	3.99
unico	12.1 TOR-12	Q50	4.10	36.97	37.35	37.78	0.43	37.78	0.43	37.68	38.59	0.082534	4.93	0.83	2.20	2.56
unico	12.1 TOR-12	Q200	6.80	36.97	37.47	37.78	0.31	37.78	0.31	37.94	39.40	0.097852	6.15	1.11	2.20	2.77
unico	12.1 TOR-12	Q500	9.30	36.97	37.58	37.78	0.20	37.78	0.20	38.14	40.00	0.102371	6.88	1.35	2.20	2.80
unico	12 TOR-12	Q50	4.10	35.41	35.65	41.03	5.38	39.08	3.43	36.09	38.31	0.271231	7.23	0.57	2.37	4.72
unico	12 TOR-12	Q200	6.80	35.41	35.77	41.03	5.26	39.08	3.31	36.35	39.12	0.226381	8.12	0.84	2.42	4.40
unico	12 TOR-12	Q500	9.30	35.41	39.04	41.03	1.99	39.08	0.04	36.56	39.07	0.000251	0.68	13.68	6.16	0.15
unico	11 TOR-11	Q50	4.10	34.63	34.85	39.45	4.60	37.27	2.42	35.16	37.08	0.372355	6.61	0.62	4.12	5.44
unico	11 TOR-11	Q200	6.80	34.63	34.91	39.45	4.54	37.27	2.36	35.35	38.09	0.355862	7.90	0.86	4.13	5.52
unico	11 TOR-11	Q500	9.30	34.63	39.05	39.45	0.40	37.27	-1.78	35.50	39.06	0.000039	0.35	26.30	7.40	0.06
unico	10 TOR-10	Q50	4.10	34.31	34.75	39.45	4.70	36.22	1.47	35.12	36.21	0.099804	5.36	0.76	2.08	2.82
unico	10 TOR-10	Q200	6.80	34.31	34.87	39.45	4.58	36.22	1.35	35.41	37.11	0.116005	6.63	1.02	2.10	3.03
unico	10 TOR-10	Q500	9.30	34.31	39.05	39.45	0.40	36.22	-2.83	35.84	39.06	0.000045	0.37	25.04	6.80	0.06
unico	9 TOR-9	Q50	4.10	33.97	34.44	39.33	4.89	35.75	1.31	34.84	35.91	0.088375	5.36	0.76	1.65	2.52
unico	9 TOR-9	Q200	6.80	33.97	34.62	39.33	4.71	35.75	1.13	35.29	36.73	0.098448	6.43	1.06	1.68	2.59
unico	9 TOR-9	Q500	9.30	33.97	39.05	39.33	0.28	35.75	-3.30	35.58	39.06	0.000089	0.47	19.65	4.93	0.08
unico	8 TOR-8	Q50	4.10	33.50	34.02	38.22	4.20	35.45	1.43	34.40	35.33	0.074018	5.05	0.81	1.58	2.25
unico	8 TOR-8	Q200	6.80	33.50	34.23	38.22	3.99	35.45	1.22	34.82	36.06	0.080904	5.99	1.14	1.61	2.28
unico	8 TOR-8	Q500	9.30	33.50	39.04	38.22	-0.82	35.45	-3.59	35.03	39.06	0.000262	0.66	13.99	2.91	0.10
unico	7 TOR-7	Q50	4.10	33.23	33.61	37.51	3.90	36.34	2.73	33.96	34.95	0.088255	5.12	0.80	2.12	2.66
unico	7 TOR-7	Q200	6.80	33.23	33.76	37.51	3.75	36.34	2.58	34.25	35.65	0.091554	6.09	1.12	2.14	2.70
unico	7 TOR-7	Q500	9.30	33.23	39.03	37.51	-1.53	36.34	-2.69	34.48	39.06	0.000251	0.65	14.27	2.66	0.09
unico	6.1 TOR-6	Q50	4.10	33.07	33.59	37.31	3.72	37.31	3.72	33.91	34.68	0.059686	4.64	0.88	1.75	2.08

HEC-RAS Plan: SA River: Rio Torre Reach: unico (Continued)

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
unico	6.1	TOR-6	Q200	6.80	33.07	33.78	37.31	3.53	37.31	3.53	34.24	35.34	0.065855	5.54	1.23	1.78	2.13
unico	6.1	TOR-6	Q500	9.30	33.07	39.03	37.31	-1.72	37.31	-1.72	34.50	39.06	0.000386	0.74	12.52	2.34	0.10
unico	6	TOR-6	Q50	4.10	33.07	33.61	35.21	1.60	34.58	0.97	33.92	34.65	0.055802	4.51	0.91	1.67	1.95
unico	6	TOR-6	Q200	6.80	33.07	33.83	35.21	1.38	34.58	0.75	34.26	35.30	0.062070	5.38	1.26	1.67	1.98
unico	6	TOR-6	Q500	9.30	33.07	38.54	35.21	-3.33	34.58	-3.96	34.54	39.01	0.017989	3.05	3.05		0.42
unico	5	TOR-5	Q50	4.10	32.51	33.32	35.14	1.82	34.53	1.21	33.59	34.23	0.057484	4.23	0.97	1.68	1.78
unico	5	TOR-5	Q200	6.80	32.51	34.42	35.14	0.72	34.53	0.11	33.93	34.72	0.008921	2.42	2.81	1.68	0.60
unico	5	TOR-5	Q500	9.30	32.51	38.51	35.14	-3.37	34.53	-3.98	34.21	38.87	0.013374	2.65	3.51		0.34
unico	4	TOR-4	Q50	4.10	29.07	30.73	30.27	-0.46	30.27	-0.46	30.15	31.05	0.019474	2.51	1.64		0.62
unico	4	TOR-4	Q200	6.80	29.07	33.03	30.27	-2.76	30.27	-2.76	30.27	33.91	0.053569	4.16	1.64		0.67
unico	4	TOR-4	Q500	9.30	29.07	35.91	30.27	-5.64	30.27	-5.64	30.27	37.55	0.100198	5.69	1.64		0.69
unico	3	TOR-3	Q50	4.10	28.16	29.25	28.86	-0.39	28.86	-0.39	29.04	29.61	0.014387	2.64	1.55	1.07	0.81
unico	3	TOR-3	Q200	6.80	28.16	29.35	28.86	-0.49	28.86	-0.49	29.35	30.21	0.034685	4.12	1.65	0.96	1.20
unico	3	TOR-3	Q500	9.30	28.16	29.49	28.86	-0.63	28.86	-0.63	29.49	30.90	0.059492	5.26	1.77	0.63	1.46
unico	2	TOR-2	Q50	4.10	27.53	29.35	28.52	-0.83	28.52	-0.83	28.44	29.54	0.008091	1.90	2.16		0.45
unico	2	TOR-2	Q200	6.80	27.53	29.45	28.52	-0.93	28.52	-0.93	28.74	29.95	0.022256	3.15	2.16		0.73
unico	2	TOR-2	Q500	9.30	27.53	28.47	28.52	0.05	28.52	0.05	28.95	30.70	0.088363	6.63	1.40	1.50	2.19
unico	1	TOR-1	Q50	4.10	27.54	29.30	28.54	-0.76	28.54	-0.76	28.45	29.52	0.010185	2.08	1.97		0.50
unico	1	TOR-1	Q200	6.80	27.54	29.30	28.54	-0.76	28.54	-0.76	28.74	29.90	0.028017	3.44	1.97		0.83
unico	1	TOR-1	Q500	9.30	27.54	29.30	28.54	-0.76	28.54	-0.76	28.90	30.43	0.052405	4.71	1.97		1.13

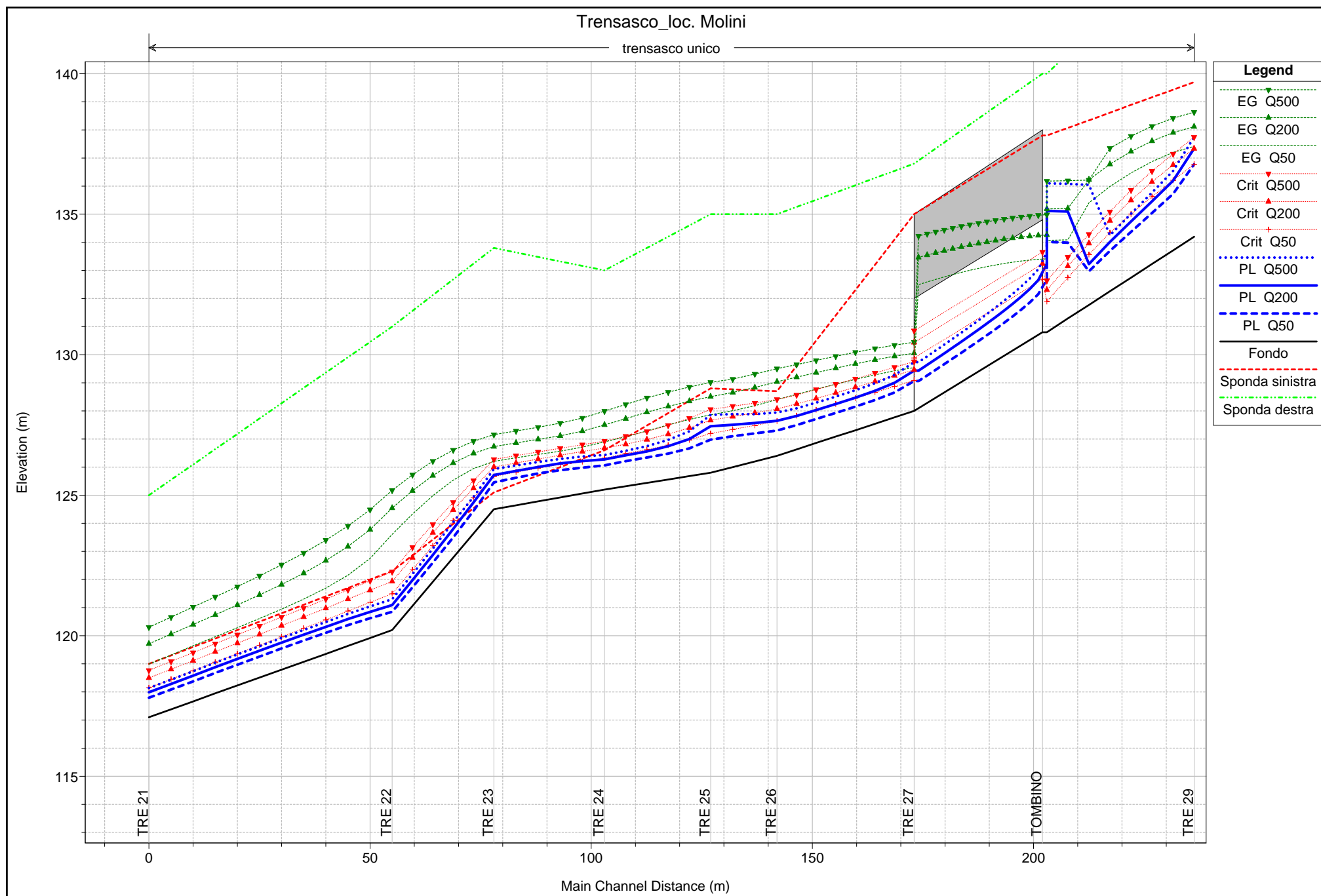
Allegato

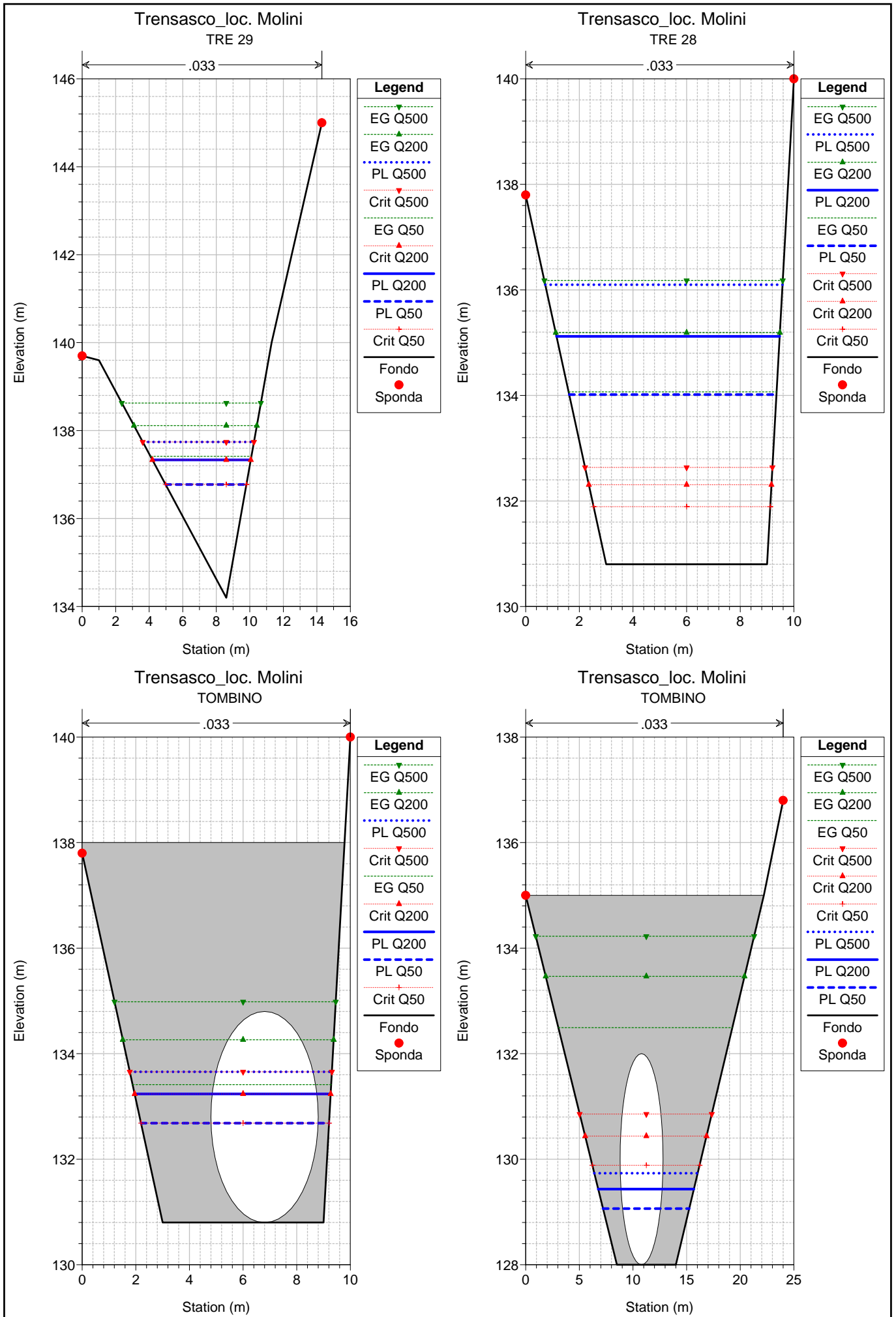
Verifiche idrauliche

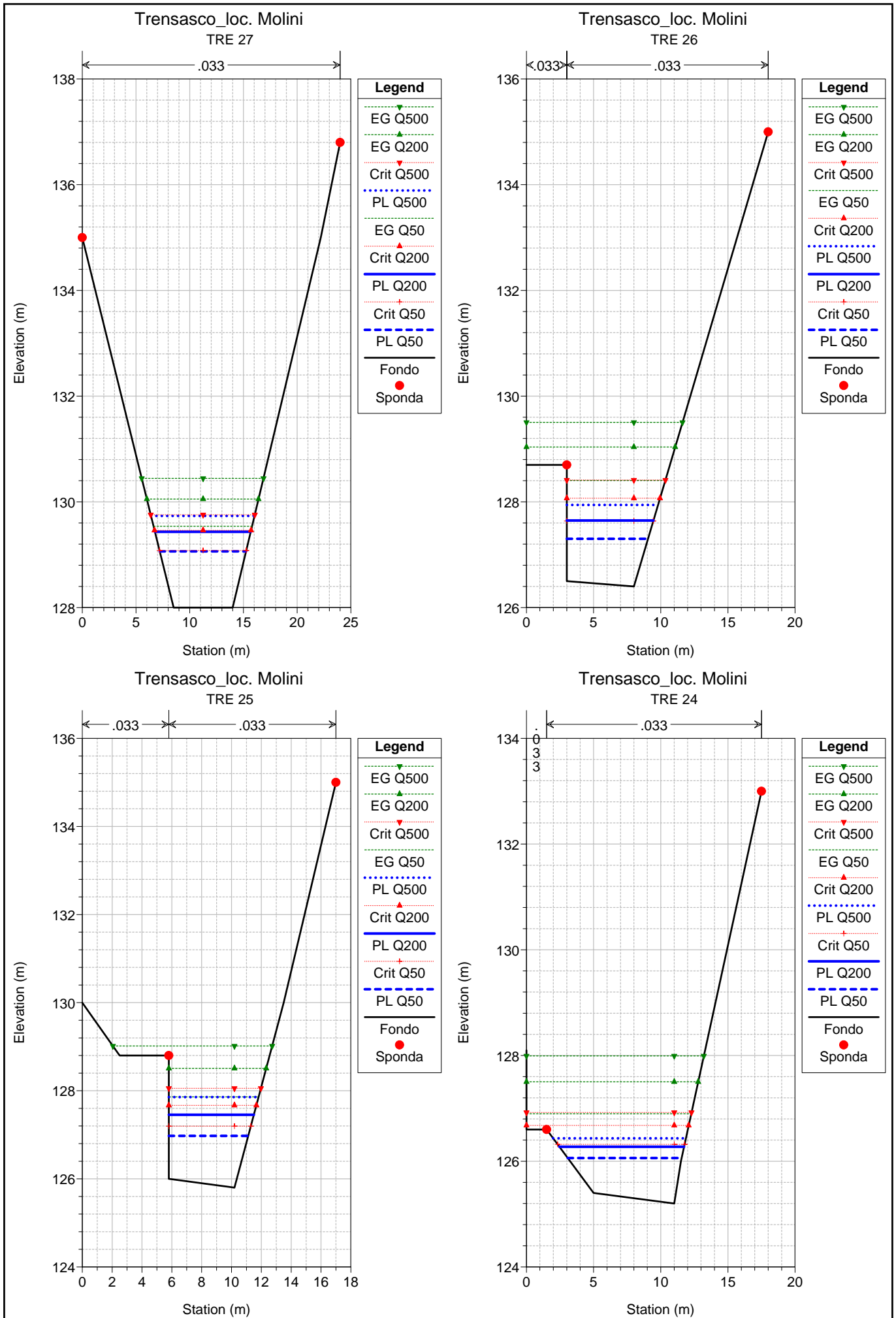
Rio Trensasco

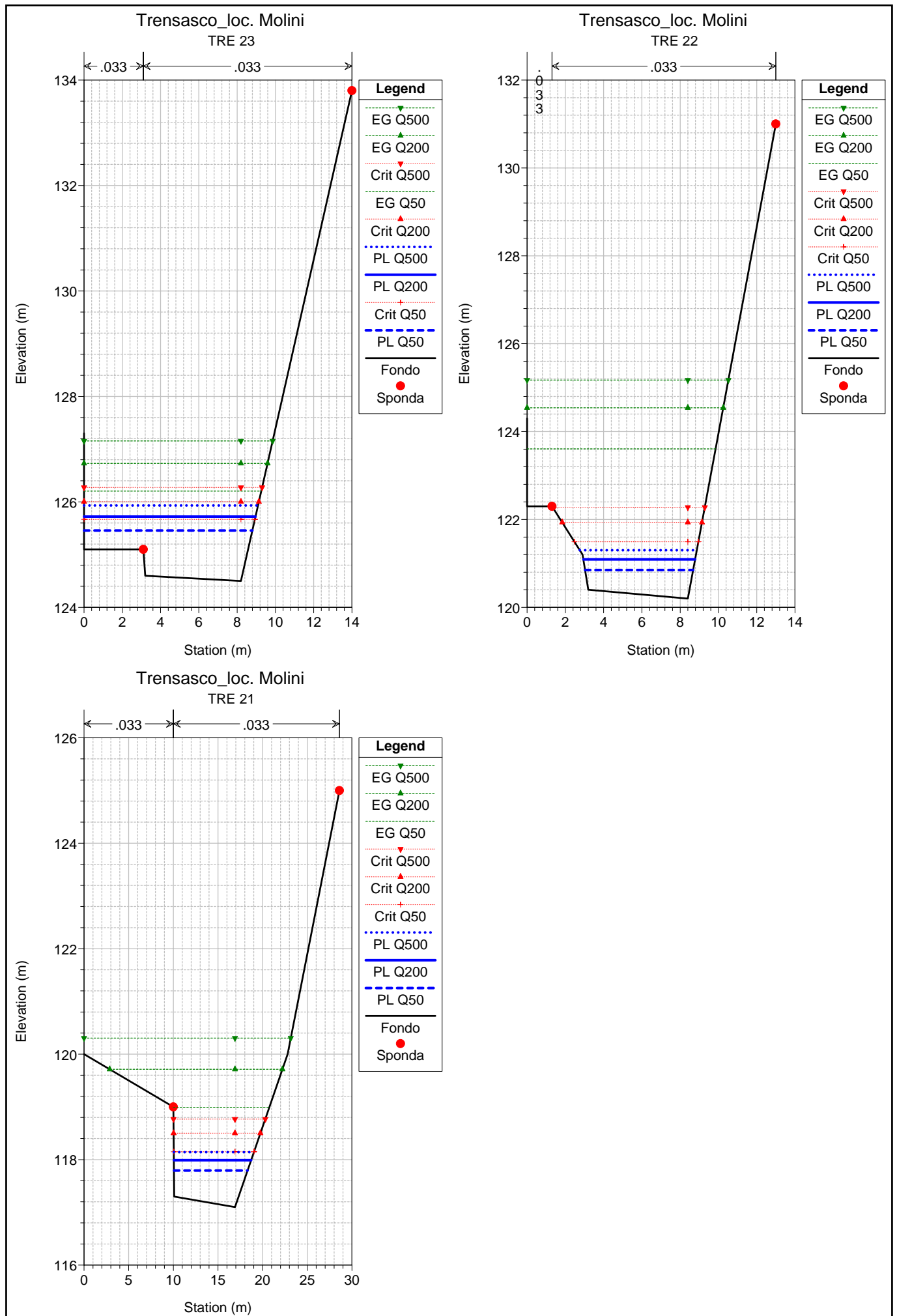
- tratto di monte -

- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo









HEC-RAS Plan: plan01 River: trentasco Reach: unico

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
unico	29. TRE 29	Q50	22.00	134.20	136.77	139.70	2.93	145.00	8.23	136.77	137.41	0.016998	3.55	6.20	4.82	1.00
unico	29. TRE 29	Q200	36.00	134.20	137.33	139.70	2.37	145.00	7.67	137.33	138.11	0.015890	3.91	9.20	5.87	1.00
unico	29. TRE 29	Q500	49.00	134.20	137.74	139.70	1.96	145.00	7.26	137.74	138.63	0.015298	4.17	11.76	6.64	1.00
unico	28. TRE 28	Q50	22.00	130.80	134.02	137.80	3.78	140.00	5.98	131.89	134.07	0.000519	1.00	22.08	7.73	0.19
unico	28. TRE 28	Q200	36.00	130.80	135.12	137.80	2.68	140.00	4.88	132.31	135.19	0.000565	1.16	30.92	8.32	0.19
unico	28. TRE 28	Q500	49.00	130.80	136.10	137.80	1.70	140.00	3.90	132.64	136.18	0.000556	1.25	39.33	8.85	0.19
unico	27.5 TOMBINO	Culvert														
unico	27. TRE 27	Q50	22.00	128.00	129.06	135.00	5.94	136.80	7.74	129.08	129.54	0.013286	3.05	7.20	8.04	0.19
unico	27. TRE 27	Q200	36.00	128.00	129.43	135.00	5.57	136.80	7.37	129.46	130.05	0.012591	3.48	10.33	8.92	0.19
unico	27. TRE 27	Q500	49.00	128.00	129.73	135.00	5.27	136.80	7.07	129.76	130.44	0.011870	3.74	13.12	9.64	0.19
unico	26. TRE 26	Q50	22.00	126.40	127.30	128.70	1.40	135.00	7.70	127.64	128.40	0.041276	4.66	4.73	6.05	1.68
unico	26. TRE 26	Q200	36.00	126.40	127.65	128.70	1.05	135.00	7.35	128.07	129.04	0.036617	5.22	6.89	6.45	1.61
unico	26. TRE 26	Q500	49.00	126.40	127.94	128.70	0.76	135.00	7.06	128.41	129.50	0.033184	5.54	8.85	6.80	1.55
unico	25. TRE 25	Q50	22.00	125.80	126.98	128.80	1.82	135.00	8.02	127.20	127.86	0.026956	4.17	5.28	5.32	1.34
unico	25. TRE 25	Q200	36.00	125.80	127.45	128.80	1.35	135.00	7.55	127.67	128.51	0.022719	4.55	7.91	5.70	1.23
unico	25. TRE 25	Q500	49.00	125.80	127.86	128.80	0.94	135.00	7.14	128.06	129.02	0.020433	4.77	10.27	6.02	1.17
unico	24. TRE 24	Q50	22.00	125.20	126.06	126.60	0.54	133.00	6.94	126.32	126.90	0.035398	4.05	5.43	8.48	1.62
unico	24. TRE 24	Q200	36.00	125.20	126.27	126.60	0.33	133.00	6.73	126.68	127.50	0.039705	4.91	7.33	9.29	1.76
unico	24. TRE 24	Q500	49.00	125.20	126.43	126.60	0.17	133.00	6.57	126.92	127.99	0.042924	5.53	8.86	9.89	1.87
unico	23. TRE 23	Q50	22.00	124.50	125.46	125.10	-0.36	133.80	8.34	125.67	126.20	0.026117	3.99	5.99	8.80	1.38
unico	23. TRE 23	Q200	36.00	124.50	125.72	125.10	-0.62	133.80	8.08	126.00	126.73	0.026526	4.67	8.32	8.96	1.43
unico	23. TRE 23	Q500	49.00	124.50	125.93	125.10	-0.83	133.80	7.87	126.27	127.16	0.026589	5.15	10.23	9.09	1.45
unico	22. TRE 22	Q50	22.00	120.20	120.85	122.30	1.45	131.00	10.15	121.49	123.61	0.162082	7.35	2.99	5.65	3.22
unico	22. TRE 22	Q200	36.00	120.20	121.09	122.30	1.21	131.00	9.91	121.93	124.54	0.135787	8.23	4.37	5.84	3.04
unico	22. TRE 22	Q500	49.00	120.20	121.30	122.30	1.00	131.00	9.70	122.28	125.17	0.120166	8.72	5.62	6.12	2.90
unico	21. TRE 21	Q50	22.00	117.10	117.79	119.00	1.21	125.00	7.21	118.15	118.99	0.062688	4.85	4.54	8.24	2.09
unico	21. TRE 21	Q200	36.00	117.10	117.99	119.00	1.01	125.00	7.01	118.50	119.71	0.065295	5.82	6.19	8.65	2.19
unico	21. TRE 21	Q500	49.00	117.10	118.14	119.00	0.86	125.00	6.86	118.77	120.30	0.067667	6.52	7.52	8.97	2.27

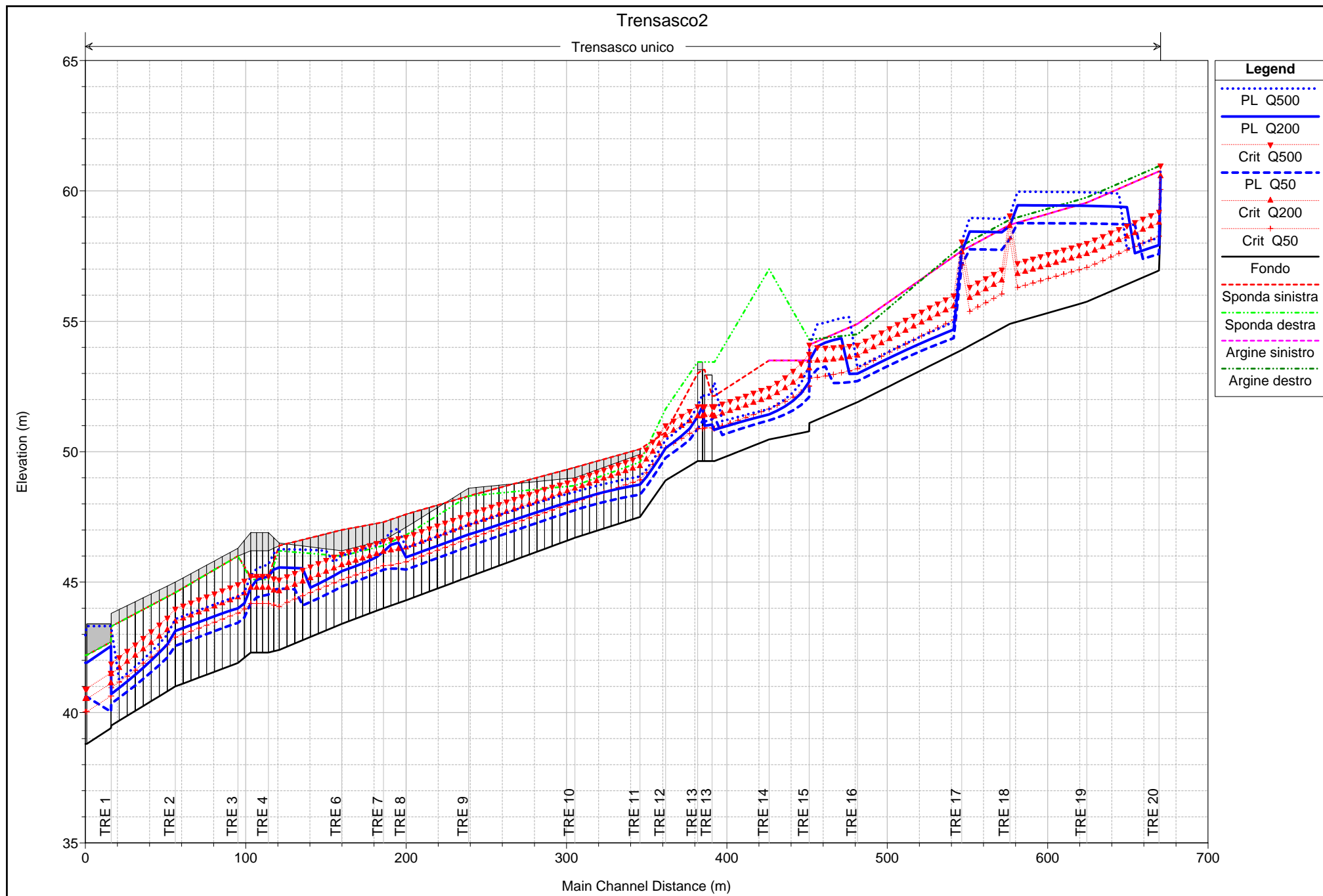
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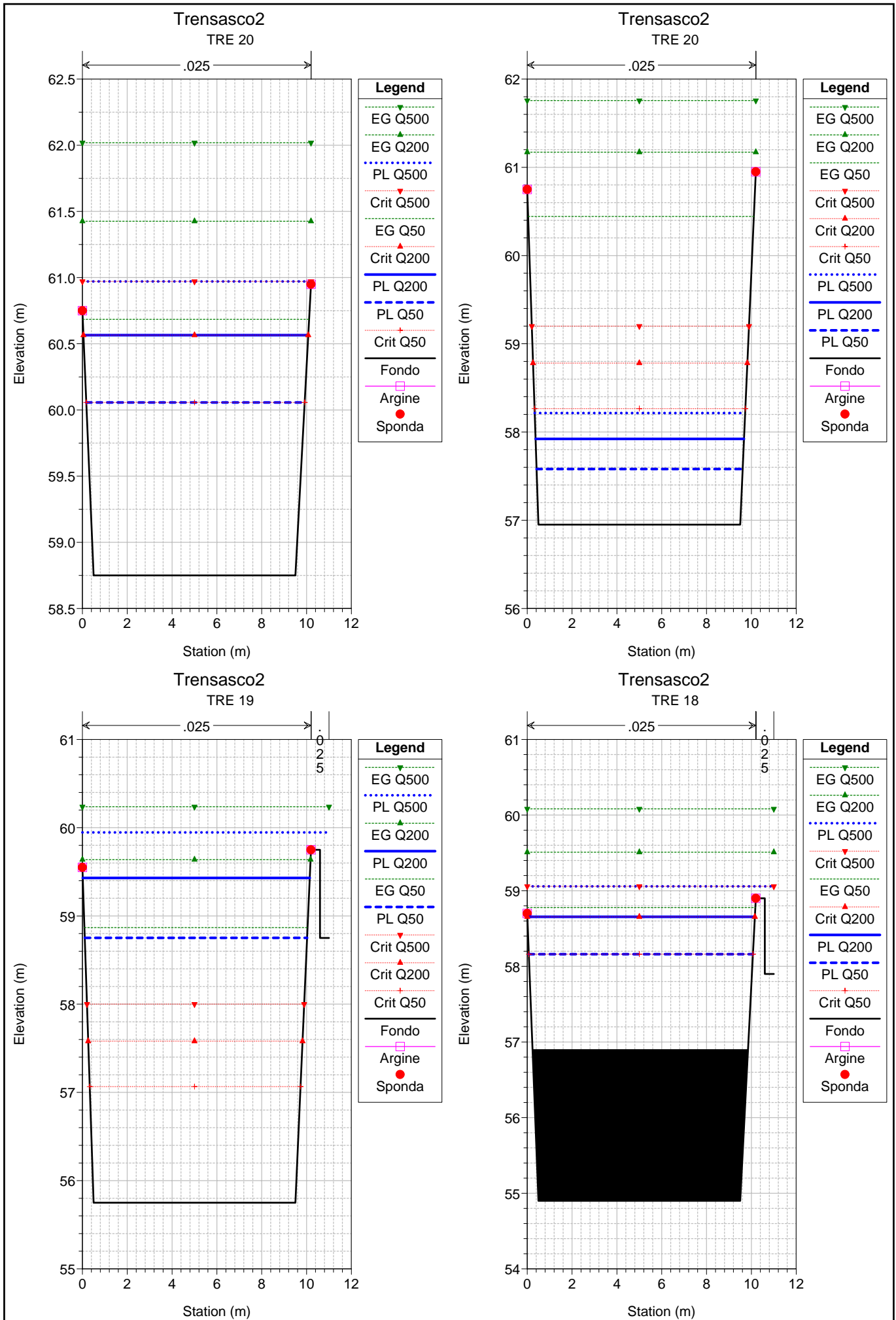
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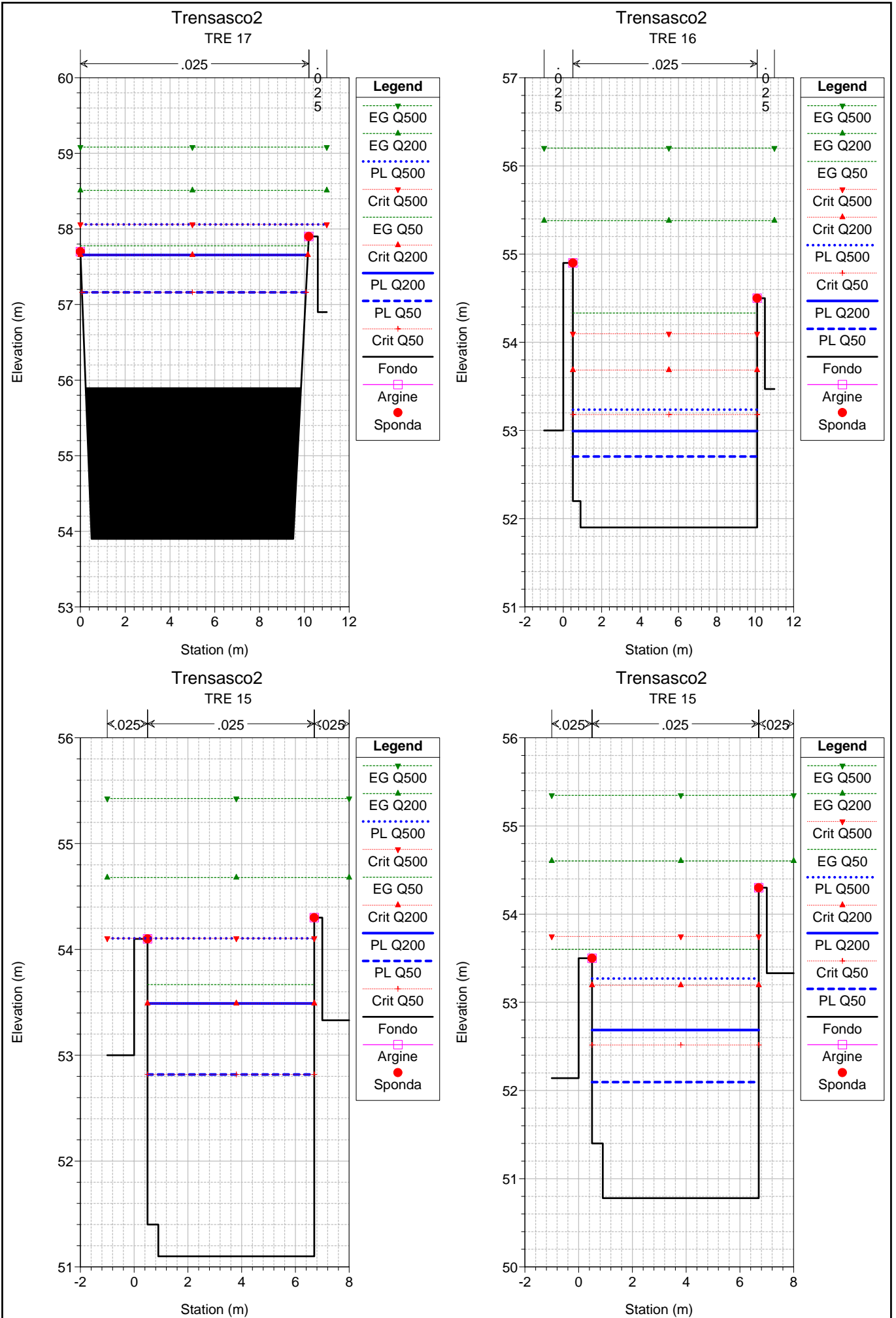
Rio Trensasco

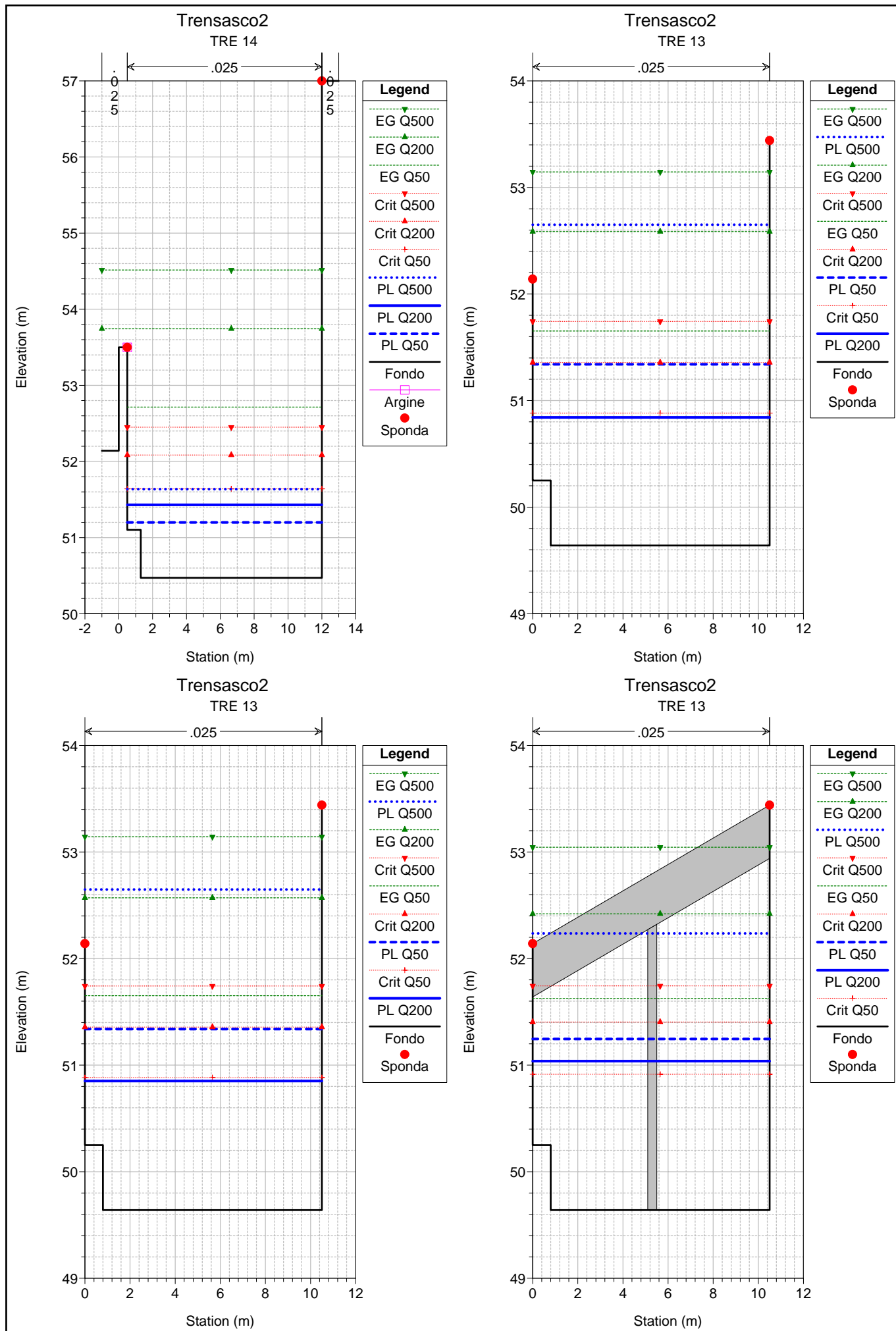
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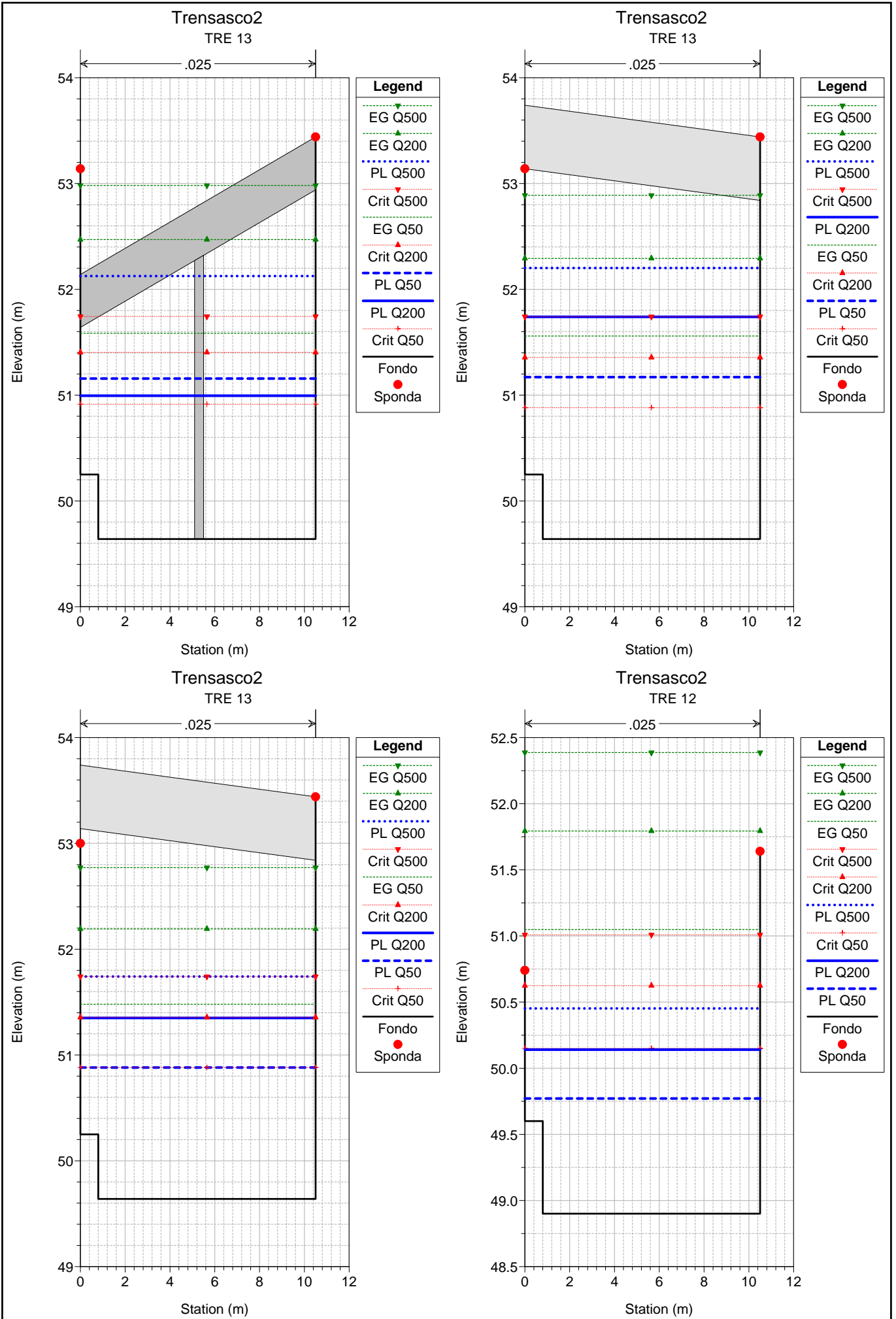
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

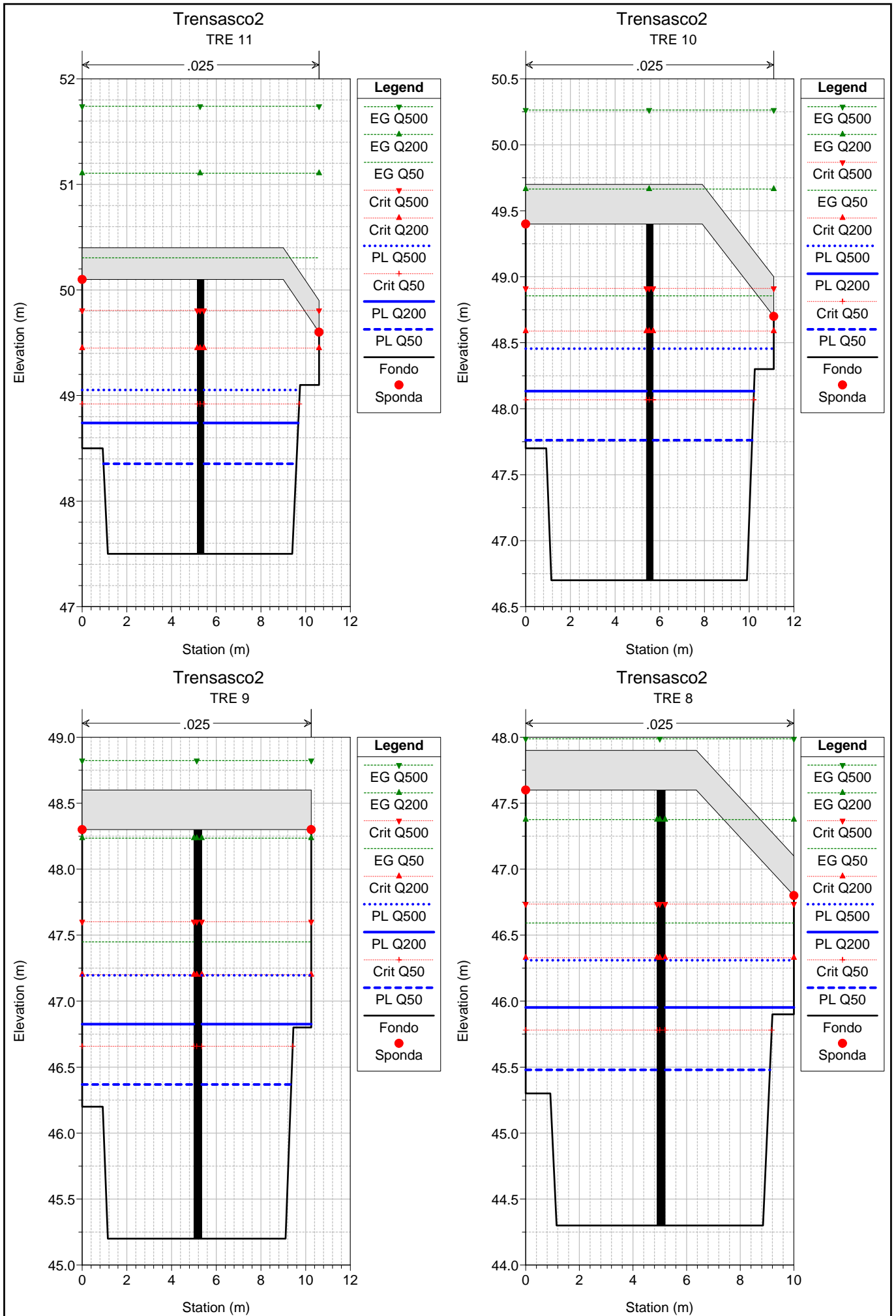


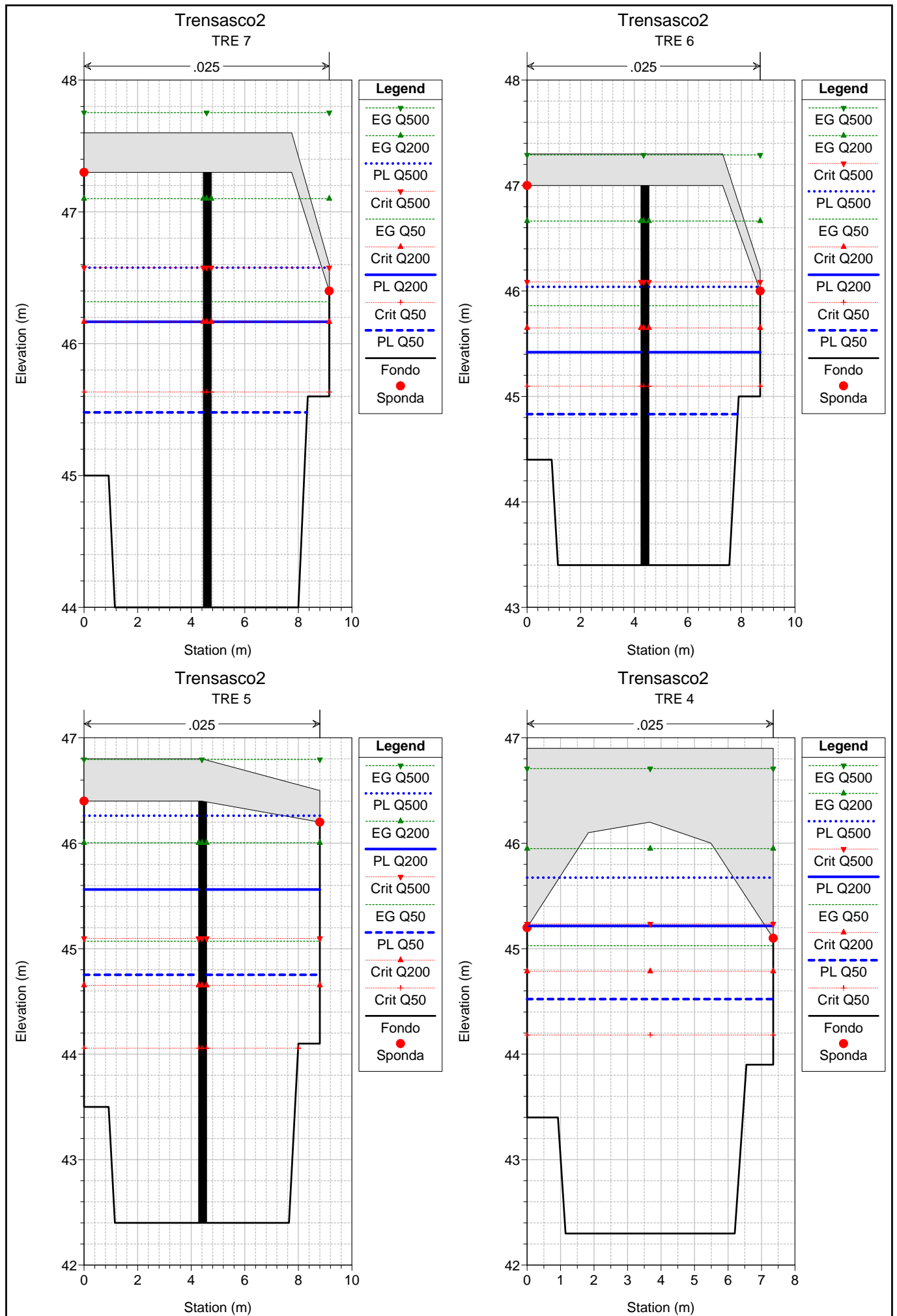


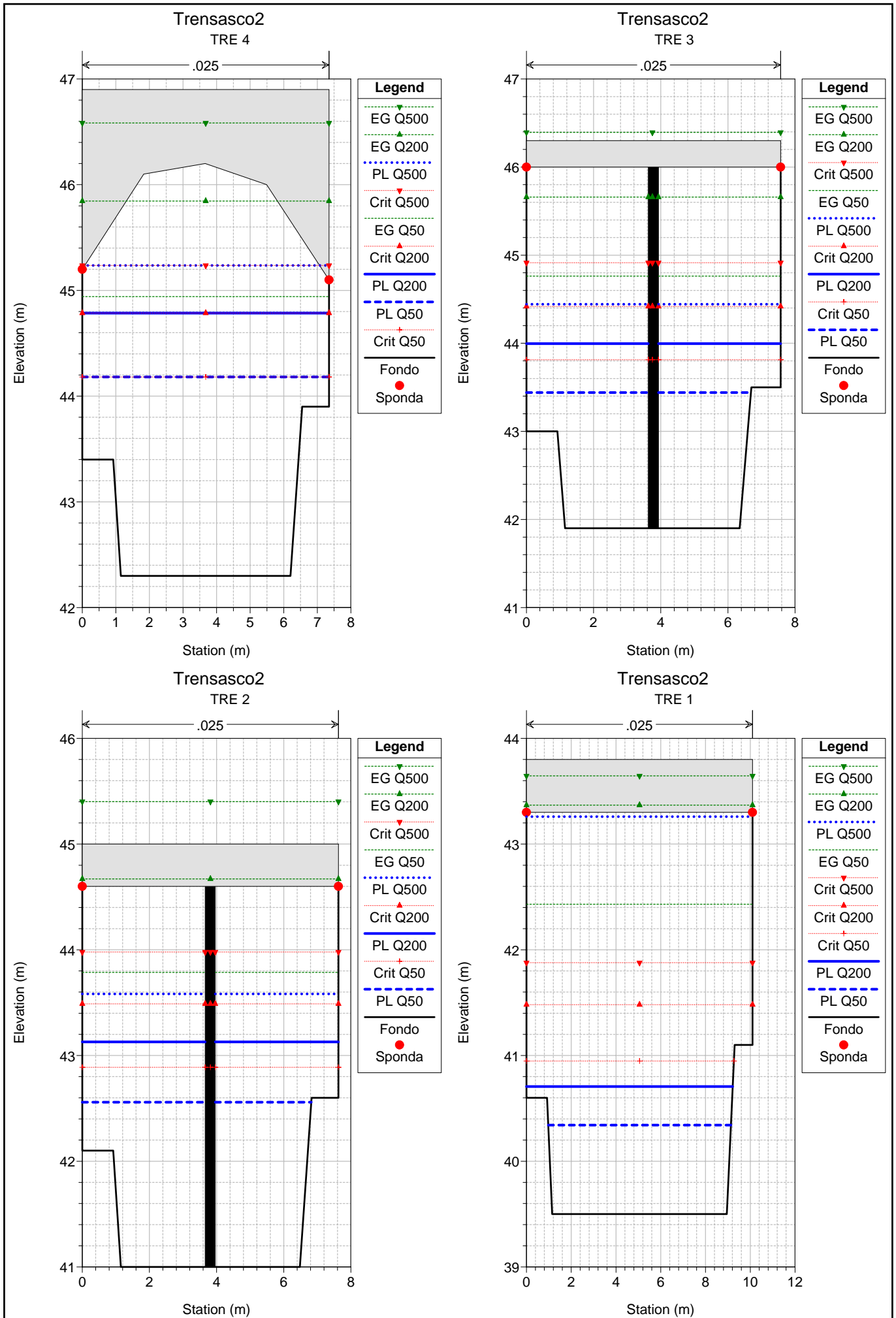


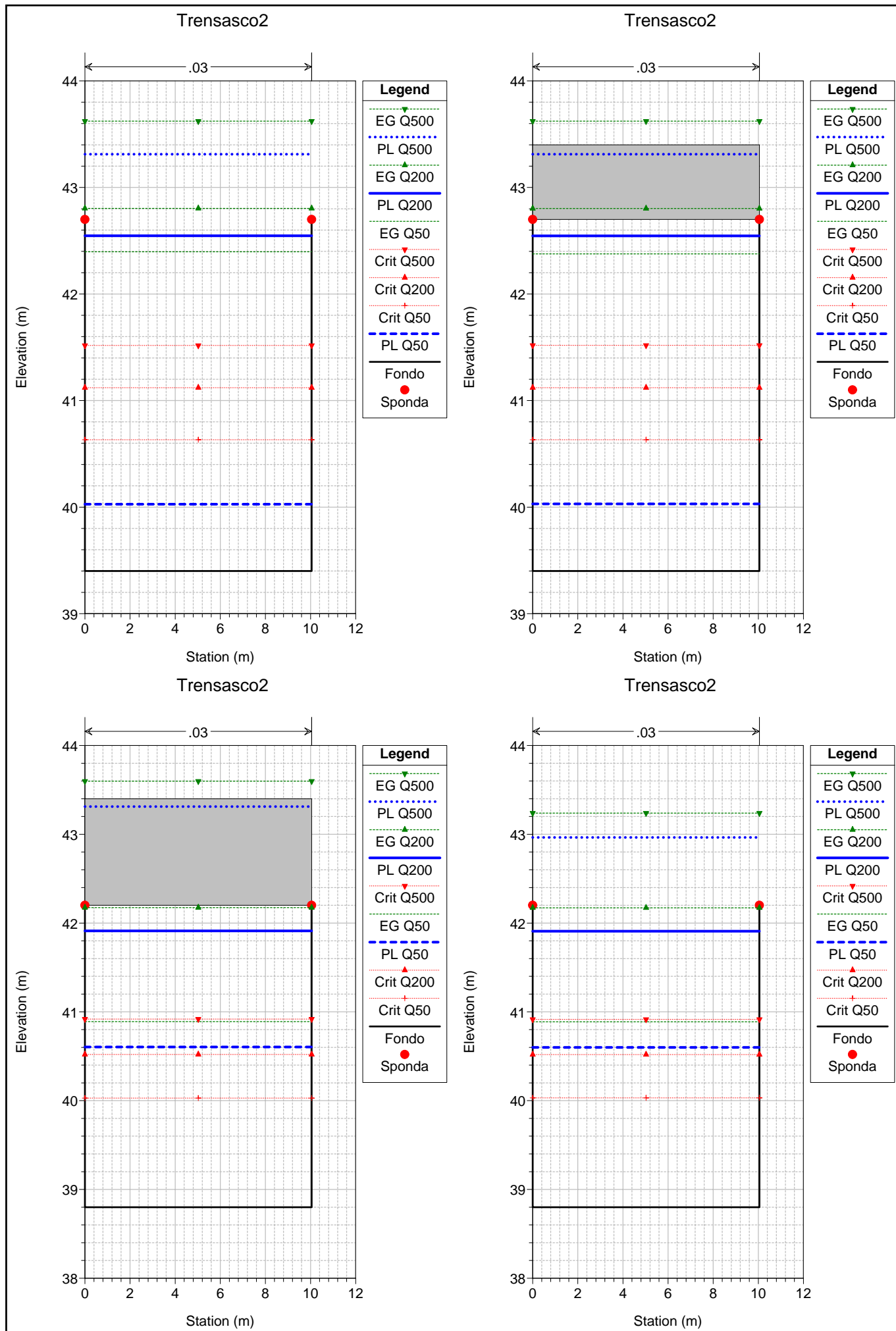












HEC-RAS Plan: Plan 01 River: Trensasco Reach: unico

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	
unico	20.1	TRE 20	Q50	43.00	58.75	60.06	60.75	0.69	60.95	0.89	60.06	60.68	0.007267	3.51	12.25	9.74	1.00
unico	20.1	TRE 20	Q200	71.00	58.75	60.57	60.75	0.18	60.95	0.38	60.57	61.43	0.007058	4.11	17.28	10.03	1.00
unico	20.1	TRE 20	Q500	97.00	58.75	60.97	60.75	-0.22	60.95	-0.02	60.97	62.02	0.007041	4.54	21.38	10.20	1.00
unico	20.	TRE 20	Q50	43.00	56.95	57.58	60.75	3.17	60.95	3.37	58.27	60.44	0.076435	7.50	5.74	9.19	3.03
unico	20.	TRE 20	Q200	71.00	56.95	57.92	60.75	2.83	60.95	3.03	58.78	61.17	0.052745	7.99	8.89	9.30	2.61
unico	20.	TRE 20	Q500	97.00	56.95	58.22	60.75	2.53	60.95	2.73	59.20	61.76	0.043069	8.34	11.64	9.39	2.39
unico	19.	TRE 19	Q50	43.00	55.75	58.75	59.55	0.80	59.75	1.00	57.07	58.87	0.000616	1.51	28.39	9.92	0.29
unico	19.	TRE 19	Q200	71.00	55.75	59.43	59.55	0.12	59.75	0.32	57.58	59.64	0.000922	2.02	35.20	10.13	0.35
unico	19.	TRE 19	Q500	97.00	55.75	59.95	59.55	-0.40	59.75	-0.20	58.00	60.24	0.001151	2.39	41.01	11.00	0.38
unico	18.	TRE 18	Q50	43.00	56.90	58.16	58.70	0.54	58.90	0.74	58.16	58.78	0.007397	3.48	12.36	10.00	1.00
unico	18.	TRE 18	Q200	71.00	56.90	58.66	58.70	0.04	58.90	0.24	58.66	59.51	0.007253	4.09	17.34	10.15	1.00
unico	18.	TRE 18	Q500	97.00	56.90	59.06	58.70	-0.36	58.90	-0.16	59.06	60.08	0.007030	4.50	21.98	11.00	0.99
unico	17.	TRE 17	Q50	43.00	55.90	57.16	57.70	0.54	57.90	0.74	57.16	57.78	0.007397	3.48	12.36	10.00	1.00
unico	17.	TRE 17	Q200	71.00	55.90	57.66	57.70	0.04	57.90	0.25	57.66	58.51	0.007252	4.09	17.34	10.15	1.00
unico	17.	TRE 17	Q500	97.00	55.90	58.06	57.70	-0.36	57.90	-0.16	58.06	59.08	0.007013	4.49	21.99	11.00	0.99
unico	16.	TRE 16	Q50	43.00	51.90	52.71	54.90	2.19	54.50	1.79	53.18	54.33	0.033457	5.65	7.61	9.60	2.03
unico	16.	TRE 16	Q200	71.00	51.90	52.99	54.90	1.91	54.50	1.51	53.68	55.38	0.034693	6.84	10.38	9.60	2.10
unico	16.	TRE 16	Q500	97.00	51.90	53.24	54.90	1.66	54.50	1.26	54.10	56.20	0.034719	7.63	12.71	9.60	2.12
unico	15.	TRE 15	Q50	43.00	51.10	52.82	54.10	1.28	54.30	1.48	52.82	53.67	0.009247	4.08	10.53	6.20	1.00
unico	15.	TRE 15	Q200	71.00	51.10	53.49	54.10	0.61	54.30	0.81	53.49	54.68	0.009887	4.83	14.70	6.20	1.00
unico	15.	TRE 15	Q500	97.00	51.10	54.11	54.10	-0.01	54.30	0.20	54.11	55.43	0.009460	5.14	19.62	7.70	0.95
unico	14.9	TRE 15	Q50	43.00	50.78	52.10	53.50	1.40	54.30	2.20	52.52	53.60	0.021393	5.44	7.91	6.20	1.54
unico	14.9	TRE 15	Q200	71.00	50.78	52.69	53.50	0.81	54.30	1.61	53.19	54.60	0.019398	6.14	11.57	6.20	1.43
unico	14.9	TRE 15	Q500	97.00	50.78	53.27	53.50	0.23	54.30	1.03	53.75	55.35	0.016931	6.38	15.19	6.20	1.30
unico	14.	TRE 14	Q50	43.00	50.47	51.20	53.50	2.30	57.00	5.80	51.64	52.71	0.036064	5.45	7.88	11.50	2.10
unico	14.	TRE 14	Q200	71.00	50.47	51.43	53.50	2.07	57.00	5.57	52.08	53.74	0.039171	6.74	10.54	11.50	2.25
unico	14.	TRE 14	Q500	97.00	50.47	51.64	53.50	1.86	57.00	5.36	52.45	54.52	0.038759	7.52	12.90	11.50	2.27
unico	13.3	TRE 13	Q50	43.00	49.64	51.34	52.14	0.80	53.44	2.10	50.88	51.65	0.002847	2.48	17.37	10.50	0.61
unico	13.3	TRE 13	Q200	71.00	49.64	50.84	52.14	1.30	53.44	2.60	51.36	52.59	0.023216	5.85	12.14	10.50	1.74
unico	13.3	TRE 13	Q500	97.00	49.64	52.65	52.14	-0.51	53.44	0.79	51.74	53.15	0.002609	3.12	31.12	10.50	0.58
unico	13.2	TRE 13	Q50	43.00	49.64	51.34	52.14	0.80	53.44	2.10	50.88	51.65	0.002858	2.48	17.35	10.50	0.62
unico	13.2	TRE 13	Q200	71.00	49.64	50.85	52.14	1.29	53.44	2.59	51.36	52.57	0.022718	5.81	12.22	10.50	1.72
unico	13.2	TRE 13	Q500	97.00	49.64	52.65	52.14	-0.51	53.44	0.79	51.74	53.14	0.002615	3.12	31.10	10.50	0.58
unico	13.11	TRE 13		Bridge													
unico	13.1	TRE 13	Q50	43.00	49.64	51.17	53.14	1.97	52.84	1.67	50.88	51.56	0.003954	2.76	15.58	10.50	0.72
unico	13.1	TRE 13	Q200	71.00	49.64	51.74	53.14	1.40	52.84	1.10	51.36	52.29	0.004067	3.29	21.56	10.50	0.73
unico	13.1	TRE 13	Q500	97.00	49.64	52.20	53.14	0.94	52.84	0.64	51.74	52.89	0.004187	3.67	26.41	10.50	0.74

HEC-RAS Plan: Plan 01 River: Trensasco Reach: unico (Continued)

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
unico	13. TRE 13	Q50	43.00	49.64	50.88	53.14	2.26	52.84	1.96	50.88	51.48	0.007685	3.43	12.55	10.50	1.00
unico	13. TRE 13	Q200	71.00	49.64	51.35	53.14	1.79	52.84	1.49	51.36	52.19	0.007623	4.06	17.47	10.50	1.01
unico	13. TRE 13	Q500	97.00	49.64	51.74	53.14	1.40	52.84	1.10	51.74	52.77	0.007572	4.50	21.58	10.50	1.00
unico	12. TRE 12	Q50	43.00	48.90	49.77	50.74	0.97	51.64	1.87	50.15	51.05	0.025132	5.01	8.59	10.50	1.77
unico	12. TRE 12	Q200	71.00	48.90	50.14	50.74	0.60	51.64	1.50	50.62	51.79	0.021411	5.70	12.46	10.50	1.67
unico	12. TRE 12	Q500	97.00	48.90	50.45	50.74	0.29	51.64	1.19	51.01	52.39	0.019546	6.16	15.74	10.50	1.61
unico	11 TRE 11	Q50	43.00	47.50	48.35	50.10	1.75	49.60	1.25	48.92	50.30	0.046322	6.19	6.95	8.33	2.16
unico	11 TRE 11	Q200	71.00	47.50	48.74	50.10	1.36	49.60	0.86	49.45	51.11	0.042583	6.82	10.42	9.37	2.06
unico	11 TRE 11	Q500	97.00	47.50	49.05	50.10	1.05	49.60	0.55	49.81	51.74	0.038981	7.26	13.36	9.44	1.95
unico	10 TRE 10	Q50	43.00	46.70	47.76	49.40	1.64	48.70	0.94	48.07	48.86	0.022484	4.63	9.28	9.83	1.52
unico	10 TRE 10	Q200	71.00	46.70	48.13	49.40	1.27	48.70	0.57	48.59	49.66	0.023192	5.48	12.95	9.91	1.53
unico	10 TRE 10	Q500	97.00	46.70	48.46	49.40	0.94	48.70	0.24	48.91	50.26	0.024057	5.96	16.28	10.80	1.55
unico	9 TRE 9	Q50	43.00	45.20	46.37	48.30	1.93	48.30	1.93	46.66	47.45	0.021136	4.61	9.34	9.01	1.44
unico	9 TRE 9	Q200	71.00	45.20	46.83	48.30	1.47	48.30	1.47	47.20	48.23	0.021476	5.26	13.50	9.90	1.44
unico	9 TRE 9	Q500	97.00	45.20	47.20	48.30	1.10	48.30	1.10	47.60	48.82	0.020283	5.65	17.16	9.90	1.37
unico	8 TRE 8	Q50	43.00	44.30	45.48	47.60	2.12	46.80	1.32	45.78	46.59	0.021841	4.67	9.20	8.81	1.46
unico	8 TRE 8	Q200	71.00	44.30	45.95	47.60	1.65	46.80	0.85	46.33	47.38	0.021669	5.29	13.43	9.70	1.43
unico	8 TRE 8	Q500	97.00	44.30	46.31	47.60	1.29	46.80	0.49	46.74	47.99	0.021124	5.74	16.90	9.70	1.39
unico	7 TRE 7	Q50	43.00	44.00	45.48	47.30	1.82	46.40	0.92	45.63	46.32	0.014148	4.06	10.60	8.02	1.13
unico	7 TRE 7	Q200	71.00	44.00	46.17	47.30	1.13	46.40	0.23	46.17	47.10	0.011853	4.28	16.58	8.85	1.00
unico	7 TRE 7	Q500	97.00	44.00	46.58	47.30	0.72	46.40	-0.18	46.58	47.75	0.013112	4.80	20.19	8.57	1.01
unico	6 TRE 6	Q50	43.00	43.40	44.83	47.00	2.17	46.00	1.17	45.10	45.86	0.018602	4.49	9.57	7.56	1.27
unico	6 TRE 6	Q200	71.00	43.40	45.42	47.00	1.58	46.00	0.58	45.65	46.66	0.017548	4.94	14.37	8.40	1.21
unico	6 TRE 6	Q500	97.00	43.40	46.04	47.00	0.96	46.00	-0.04	46.09	47.29	0.014197	4.95	19.58	8.34	1.04
unico	5 TRE 5	Q50	43.00	42.40	44.75	46.40	1.65	46.20	1.45	44.06	45.07	0.003962	2.50	17.20	8.50	0.56
unico	5 TRE 5	Q200	71.00	42.40	45.56	46.40	0.84	46.20	0.64	44.65	46.00	0.004423	2.95	24.07	8.50	0.56
unico	5 TRE 5	Q500	97.00	42.40	46.26	46.40	0.14	46.20	-0.06	45.10	46.79	0.005055	3.24	29.98	7.15	0.55
unico	4.1 TRE 4	Q50	43.00	42.30	44.52	45.20	0.68	45.10	0.58	44.18	45.03	0.004827	3.15	13.63	7.35	0.74
unico	4.1 TRE 4	Q200	71.00	42.30	45.22	45.20	-0.02	45.10	-0.12	44.79	45.95	0.005433	3.79	18.72	7.08	0.76
unico	4.1 TRE 4	Q500	97.00	42.30	45.67	45.20	-0.47	45.10	-0.57	45.24	46.71	0.007779	4.50	21.53	5.20	0.83
unico	3.9 TRE 4	Q50	43.00	42.30	44.18	45.20	1.02	45.10	0.92	44.18	44.94	0.008738	3.86	11.13	7.35	1.00
unico	3.9 TRE 4	Q200	71.00	42.30	44.79	45.20	0.41	45.10	0.31	44.79	45.84	0.008986	4.56	15.57	7.35	1.00
unico	3.9 TRE 4	Q500	97.00	42.30	45.24	45.20	-0.04	45.10	-0.14	45.24	46.58	0.009987	5.14	18.86	6.99	1.02
unico	3 TRE 3	Q50	43.00	41.90	43.44	46.00	2.56	46.00	2.56	43.81	44.76	0.026052	5.09	8.44	6.39	1.41
unico	3 TRE 3	Q200	71.00	41.90	44.00	46.00	2.00	46.00	2.00	44.42	45.66	0.026564	5.72	12.42	7.27	1.40
unico	3 TRE 3	Q500	97.00	41.90	44.44	46.00	1.56	46.00	1.56	44.91	46.39	0.026499	6.19	15.68	7.27	1.35
unico	2 TRE 2	Q50	43.00	41.00	42.56	44.60	2.04	44.60	2.04	42.89	43.79	0.023561	4.91	8.76	6.52	1.35
unico	2 TRE 2	Q200	71.00	41.00	43.13	44.60	1.47	44.60	1.47	43.49	44.67	0.023789	5.50	12.91	7.33	1.32

HEC-RAS Plan: Plan 01 River: Trensasco Reach: unico (Continued)

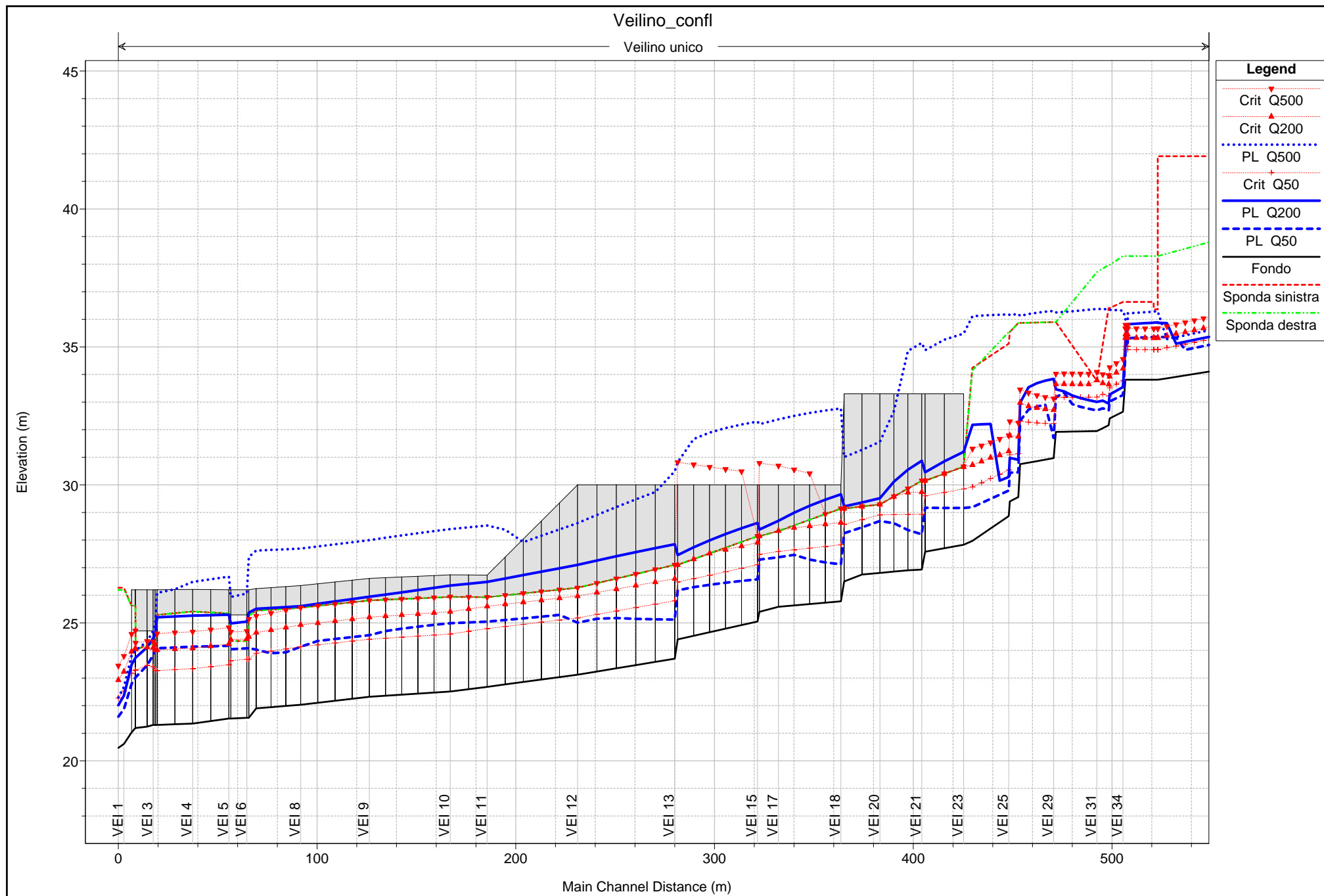
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
unico	2 TRE 2	Q500	97.00	41.00	43.58	44.60	1.02	44.60	1.02	43.98	45.40	0.023988	5.97	16.24	7.33	1.28
unico	1.3 TRE 1	Q50	43.00	39.50	40.34	43.30	2.96	43.30	2.96	40.95	42.43	0.040827	6.40	6.71	8.16	2.25
unico	1.3 TRE 1	Q200	71.00	39.50	40.71	43.30	2.59	43.30	2.59	41.48	43.37	0.038834	7.23	9.82	9.21	2.23
unico	1.3 TRE 1	Q500	97.00	39.50	43.26	43.30	0.04	43.30	0.04	41.88	43.64	0.001800	2.75	35.27	10.10	0.47
unico	1.2	Q50	43.00	39.40	40.03	42.70	2.67	42.70	2.67	40.63	42.40	0.091153	6.82	6.31	10.05	2.75
unico	1.2	Q200	71.00	39.40	42.55	42.70	0.15	42.70	0.15	41.12	42.80	0.001881	2.25	31.62	10.05	0.40
unico	1.2	Q500	97.00	39.40	43.31	42.70	-0.61	42.70	-0.61	41.52	43.62	0.001915	2.47	39.31	10.05	0.40
unico	1.11		Bridge													
unico	1.1	Q50	43.00	38.80	40.60	42.20	1.60	42.20	1.60	40.03	40.89	0.003499	2.38	18.08	10.05	0.57
unico	1.1	Q200	71.00	38.80	41.91	42.20	0.29	42.20	0.29	40.52	42.17	0.001948	2.27	31.24	10.05	0.47
unico	1.1	Q500	97.00	38.80	42.96	42.20	-0.76	42.20	-0.76	40.92	43.24	0.001614	2.32	41.85	10.05	0.42

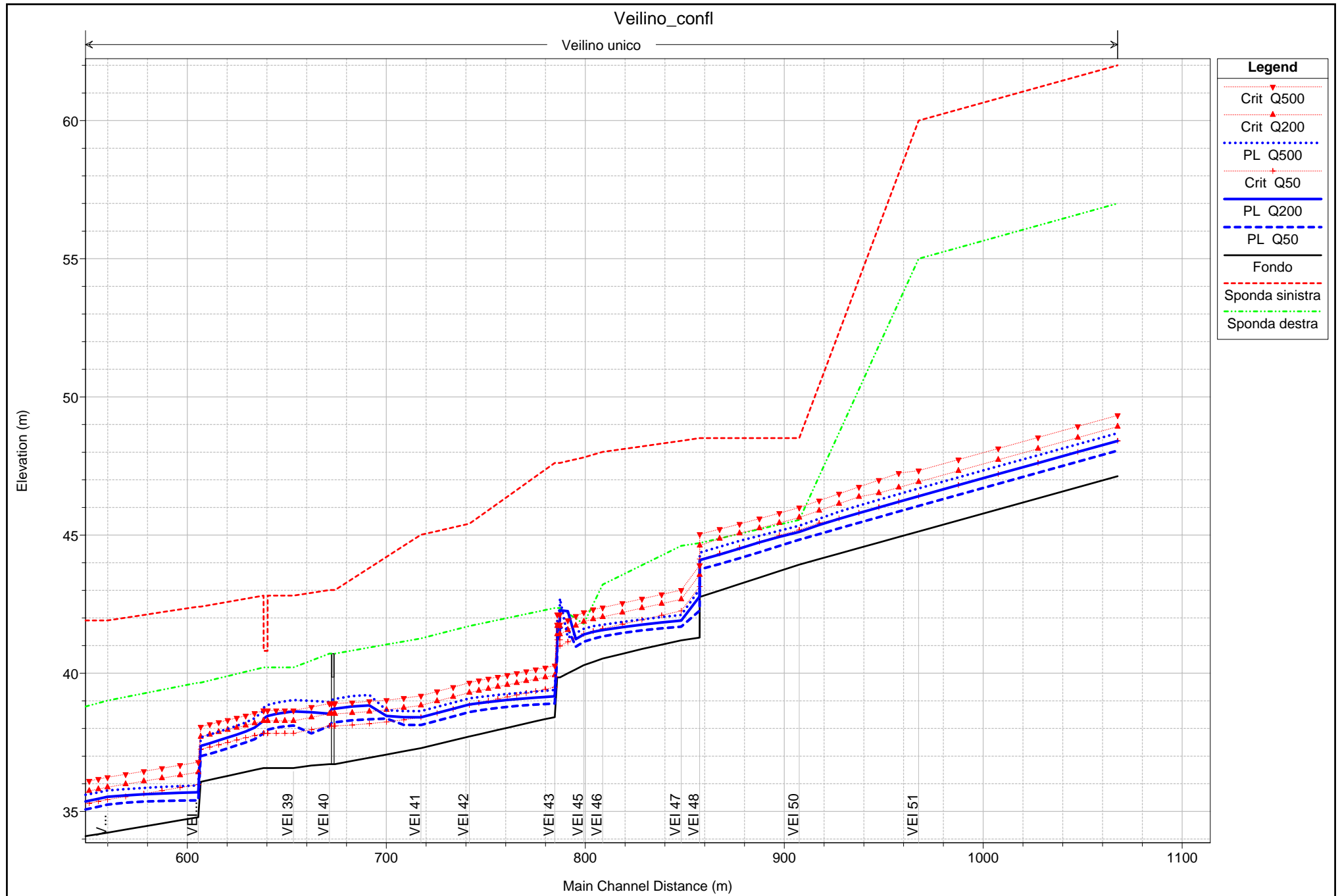
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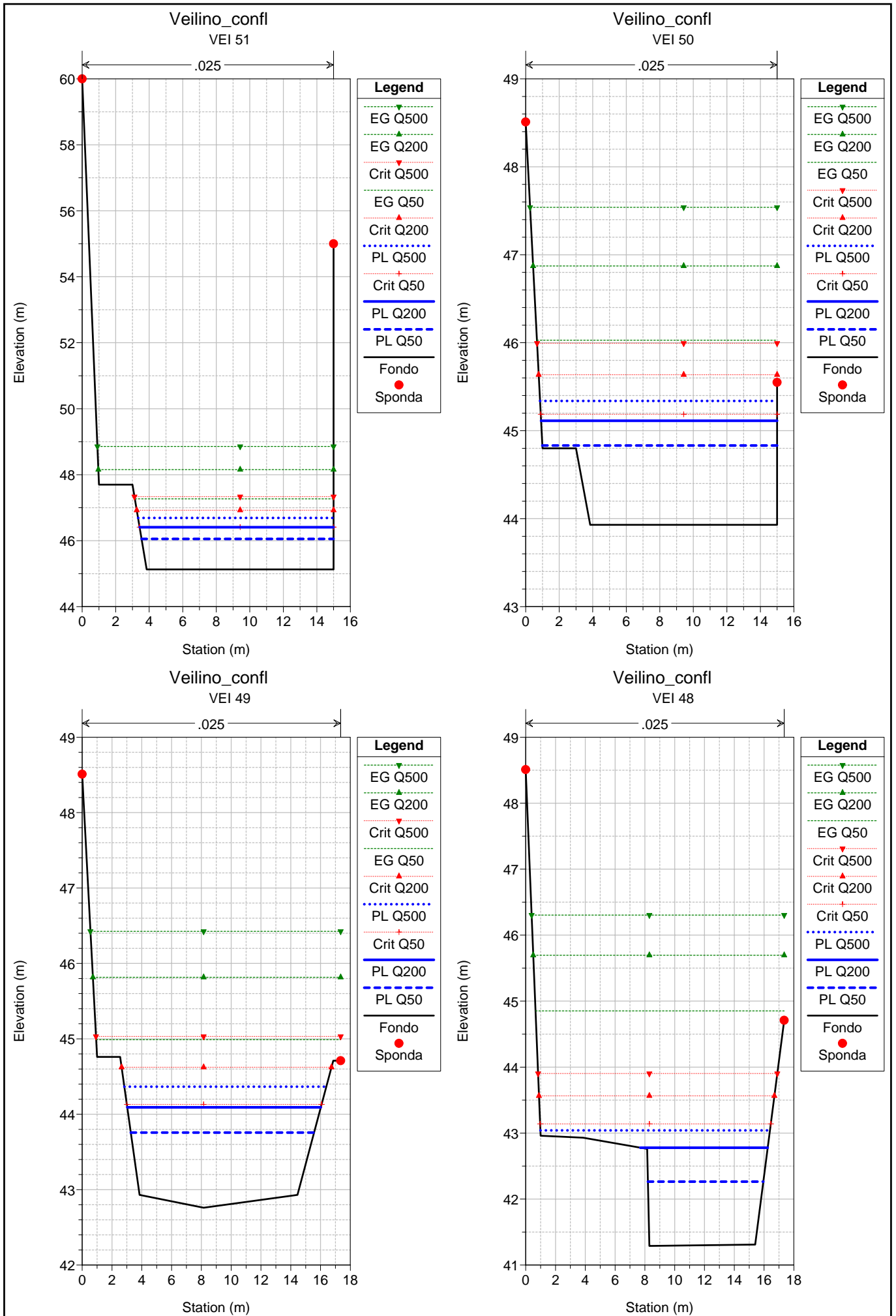
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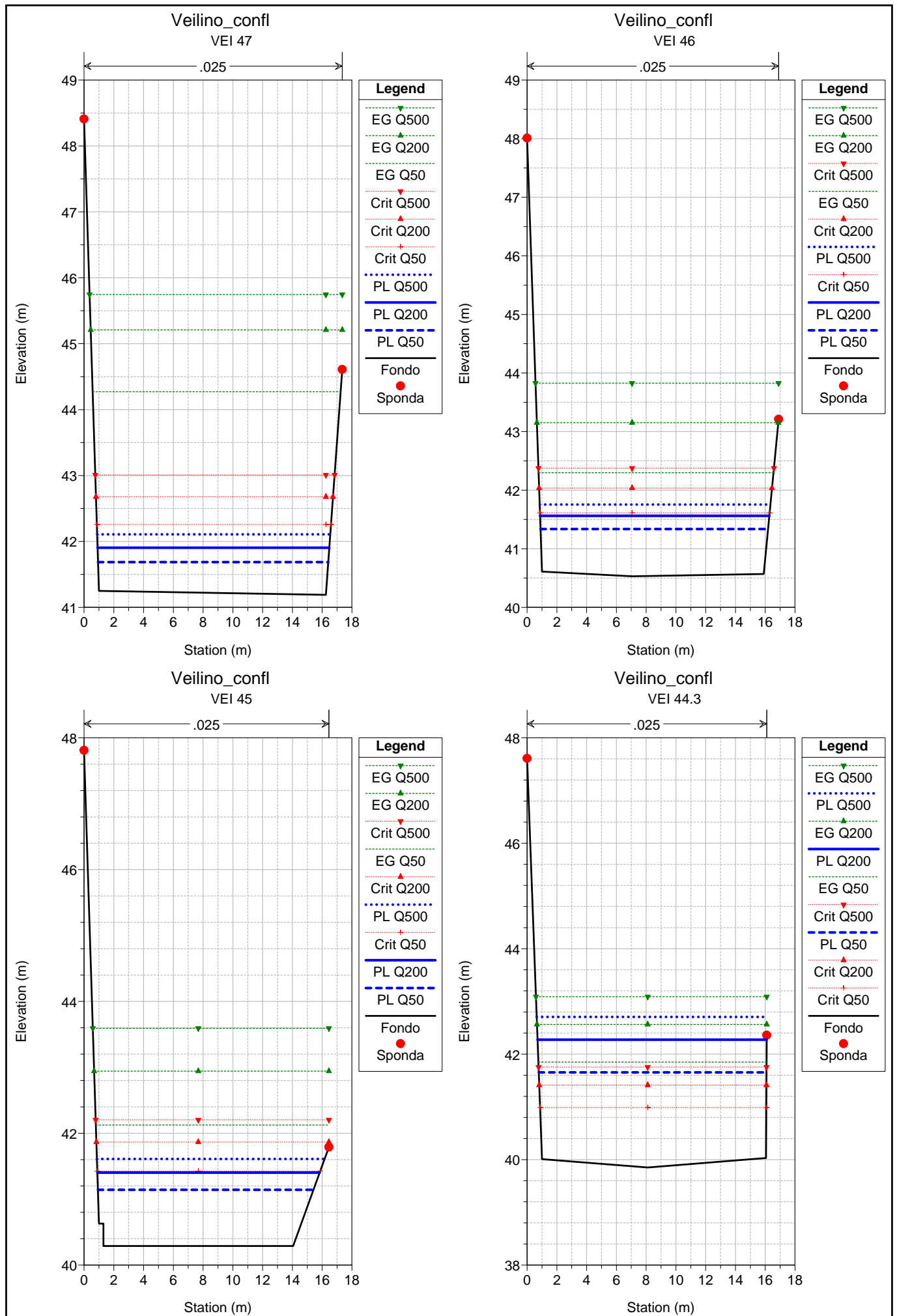
Rio Veilino

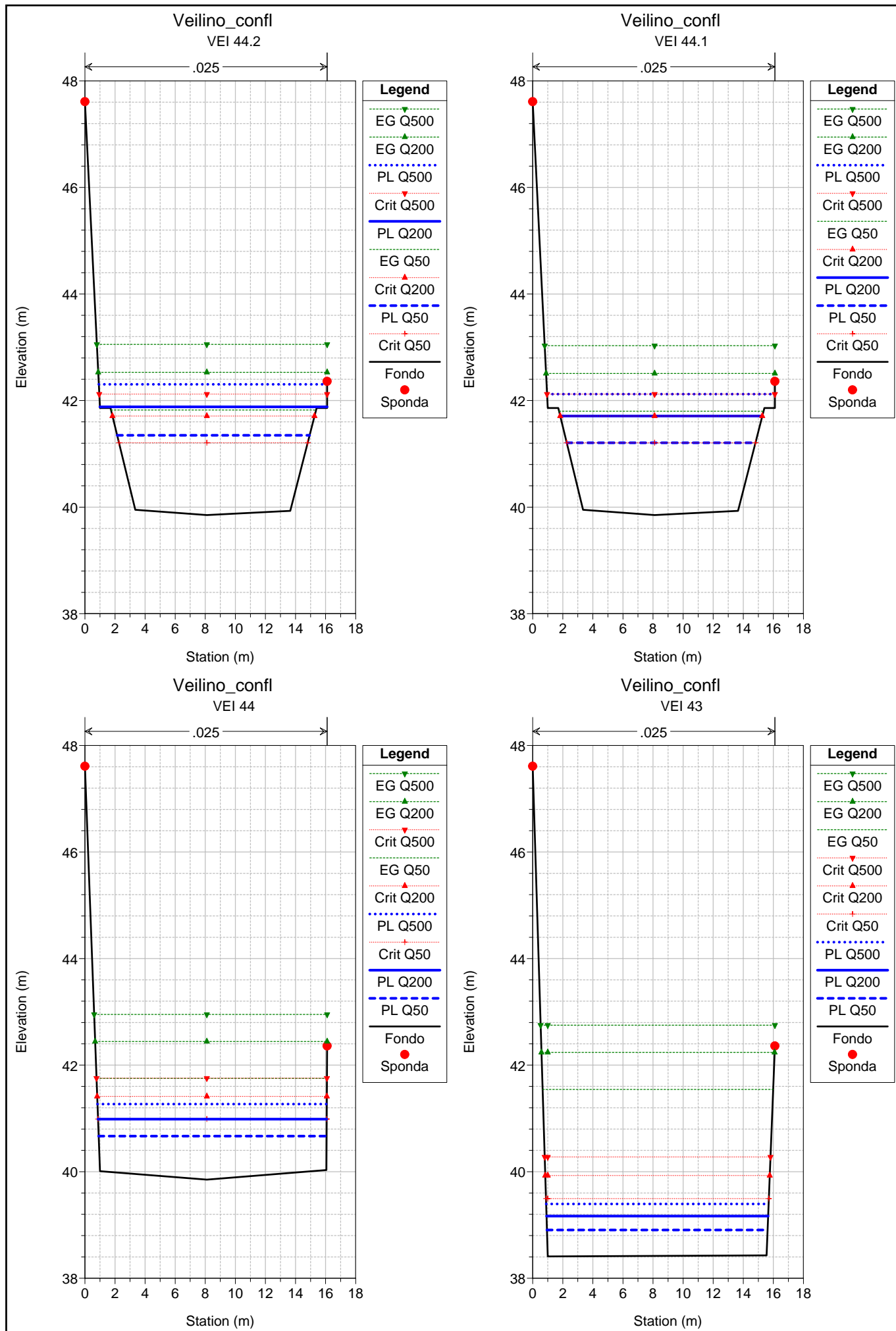
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo

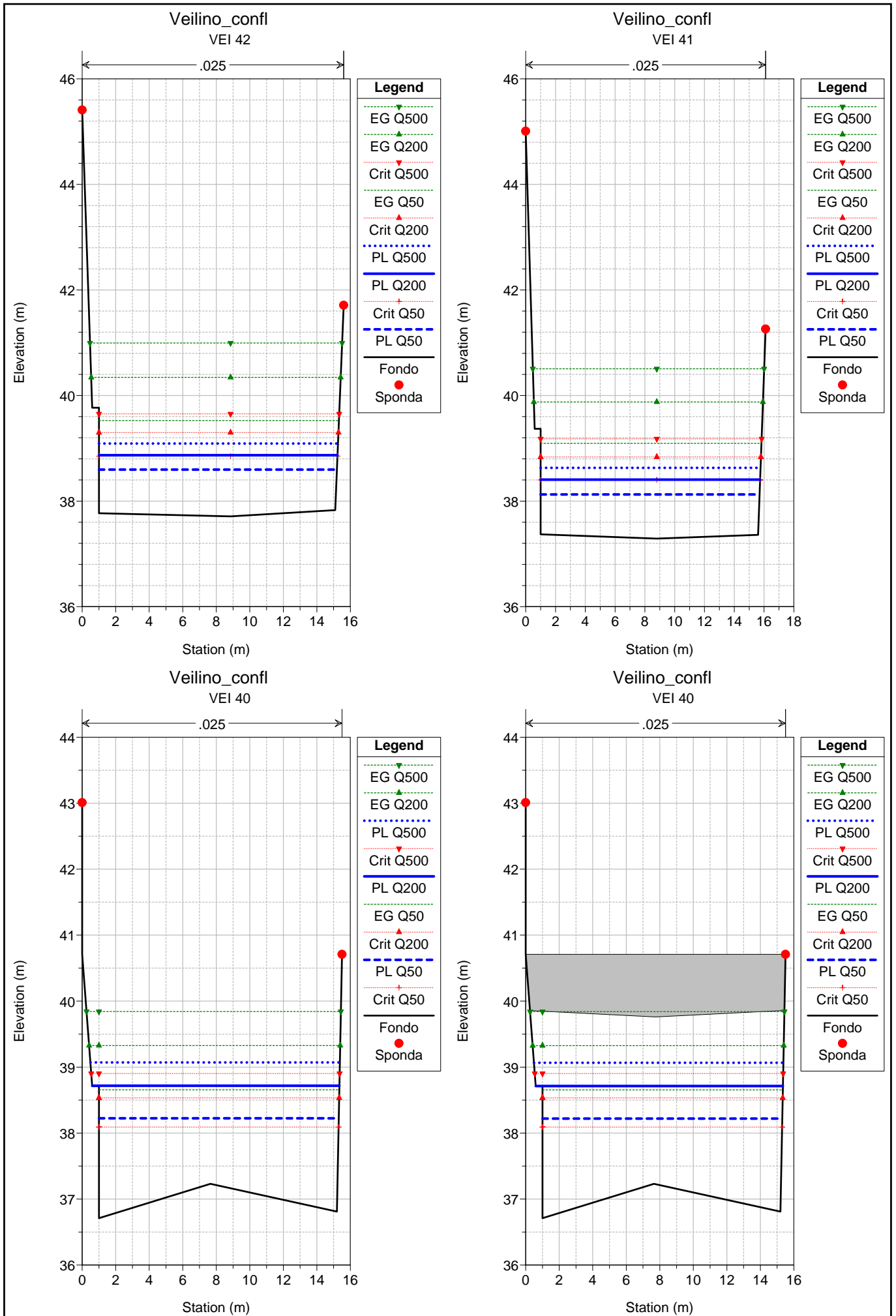


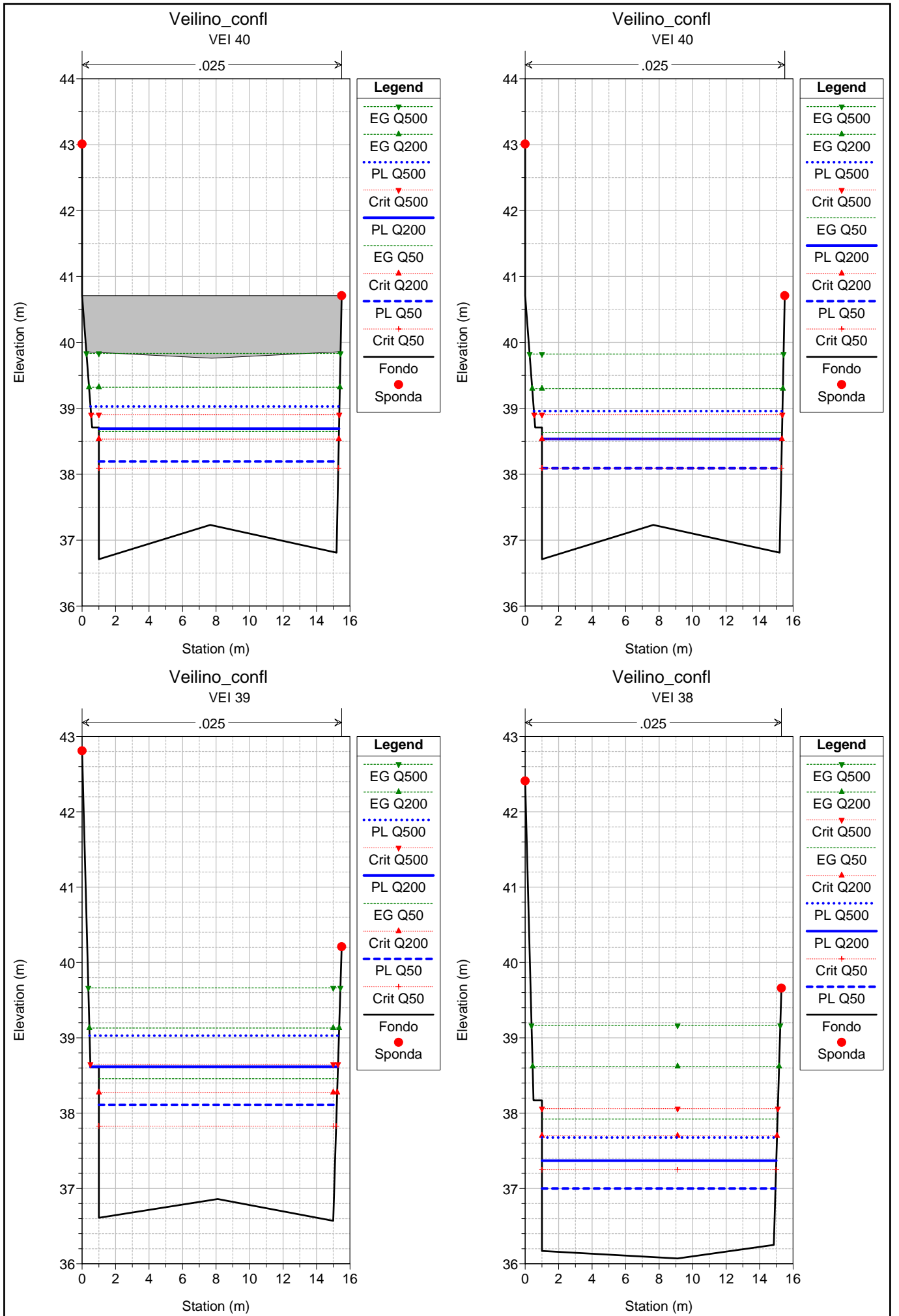


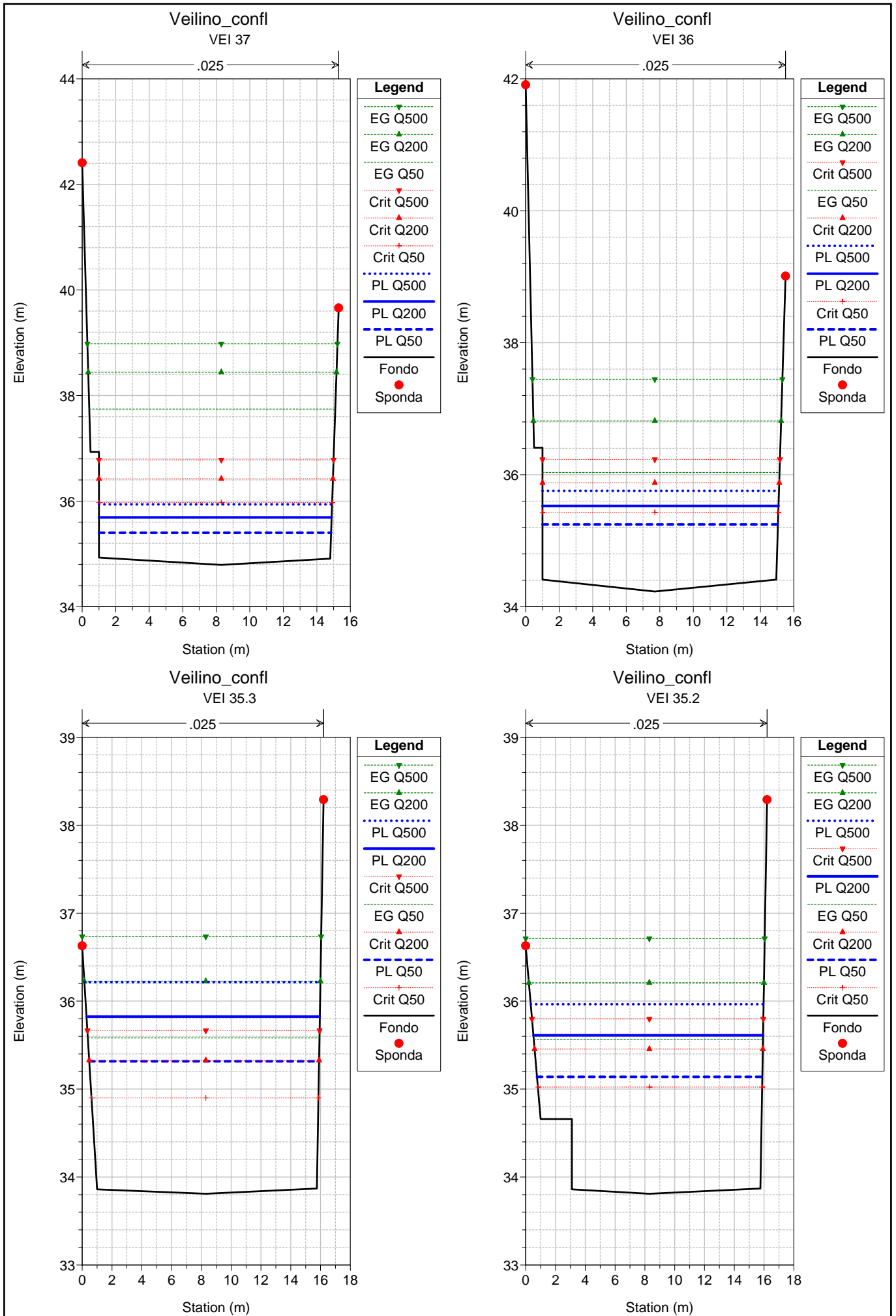


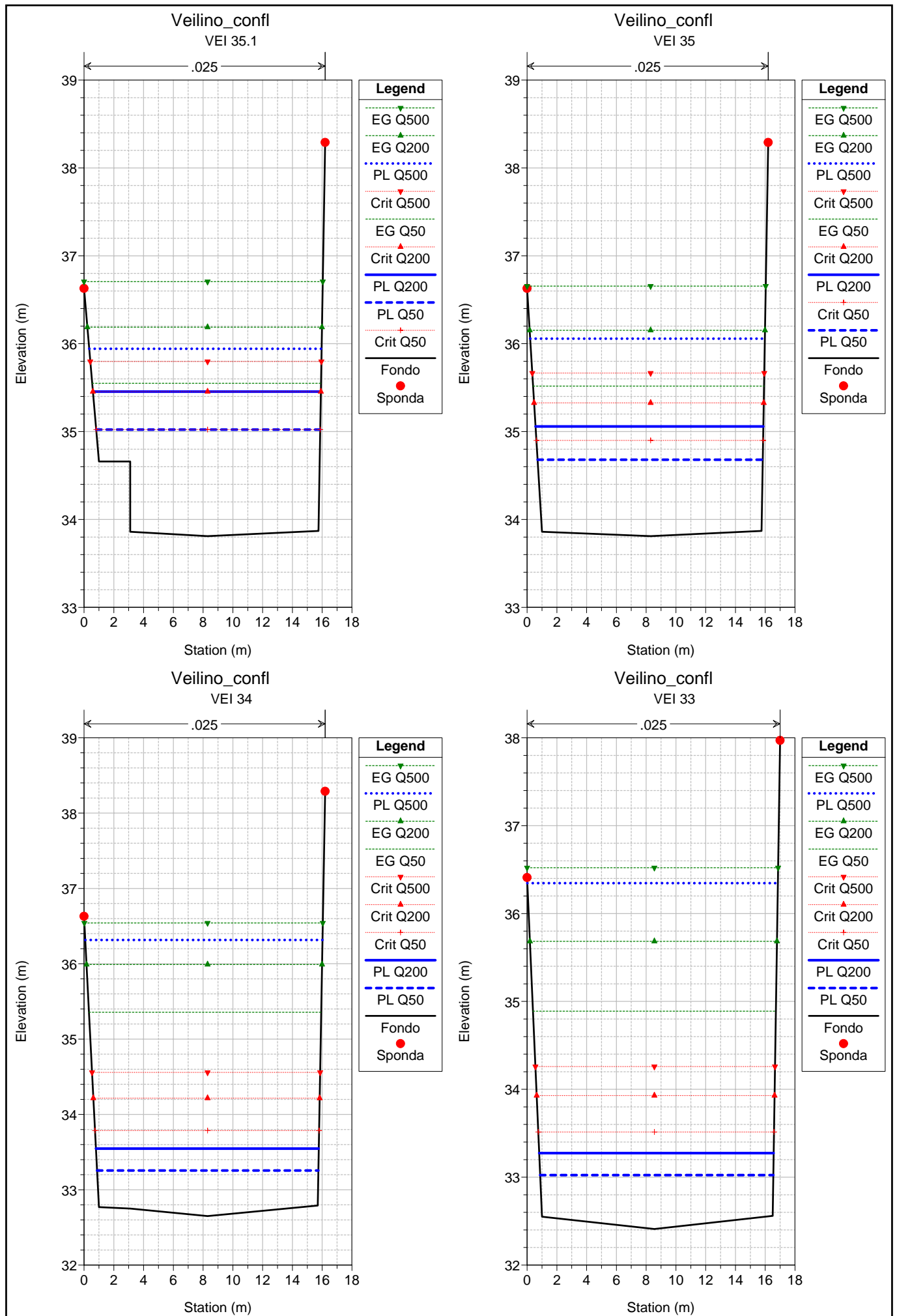


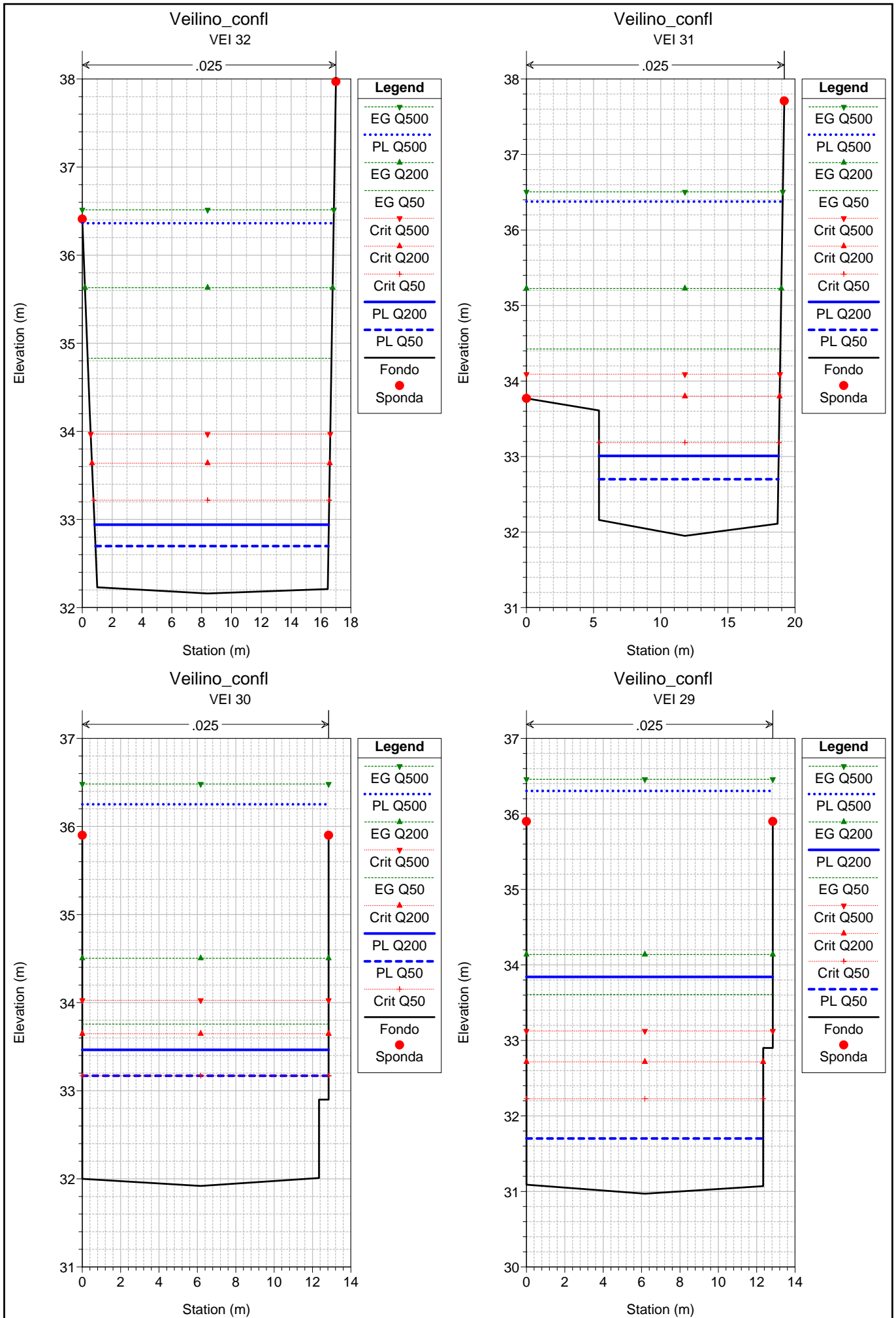


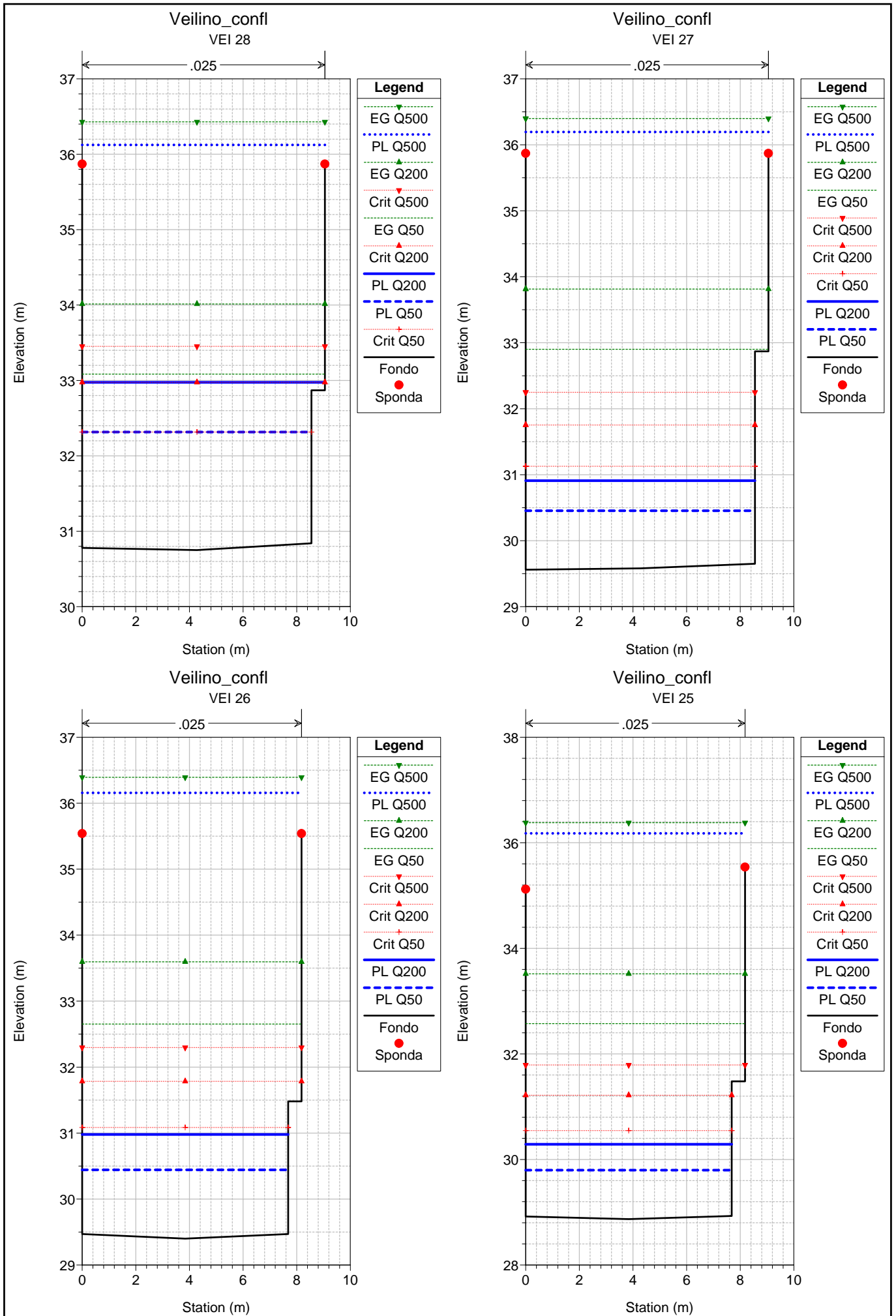


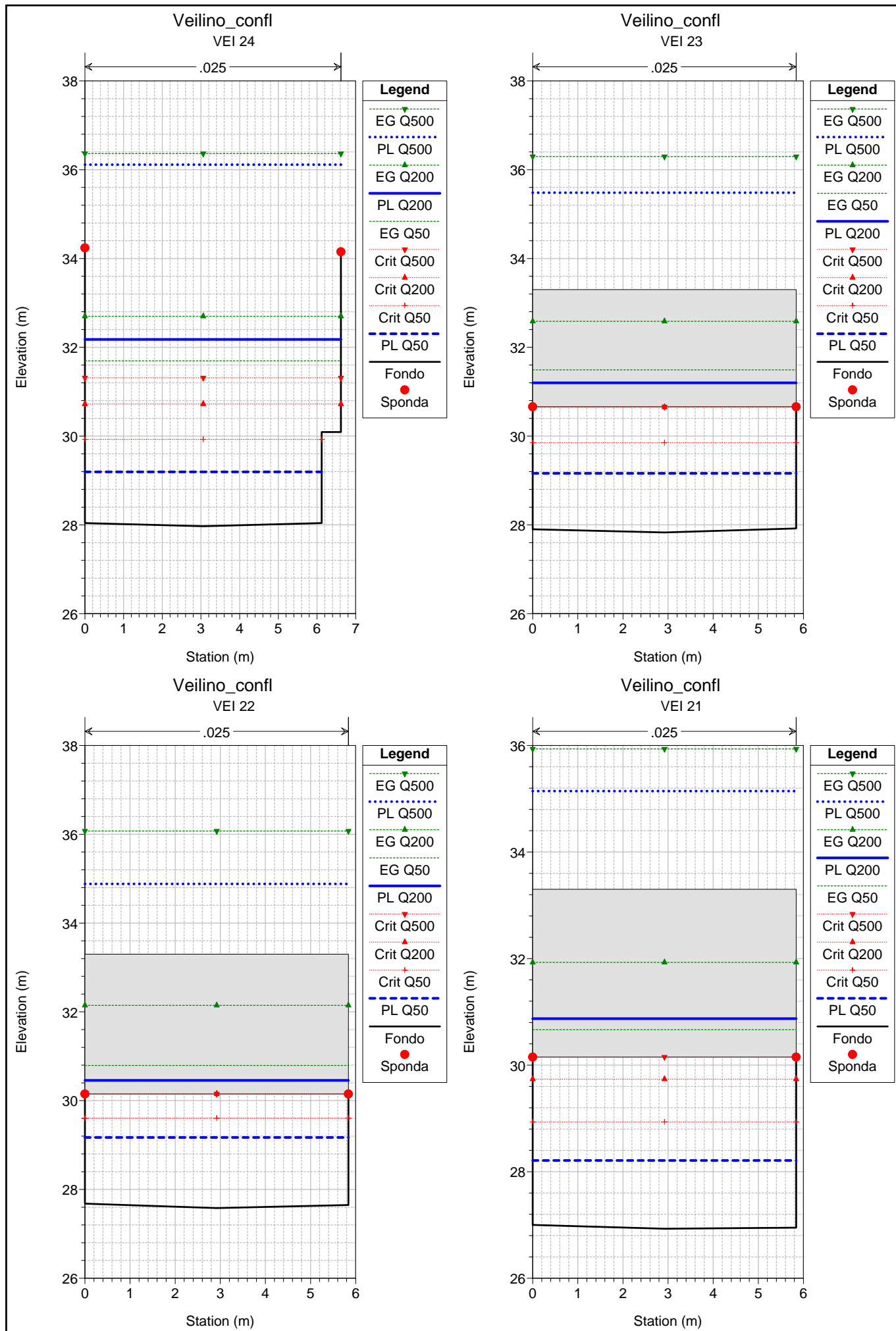


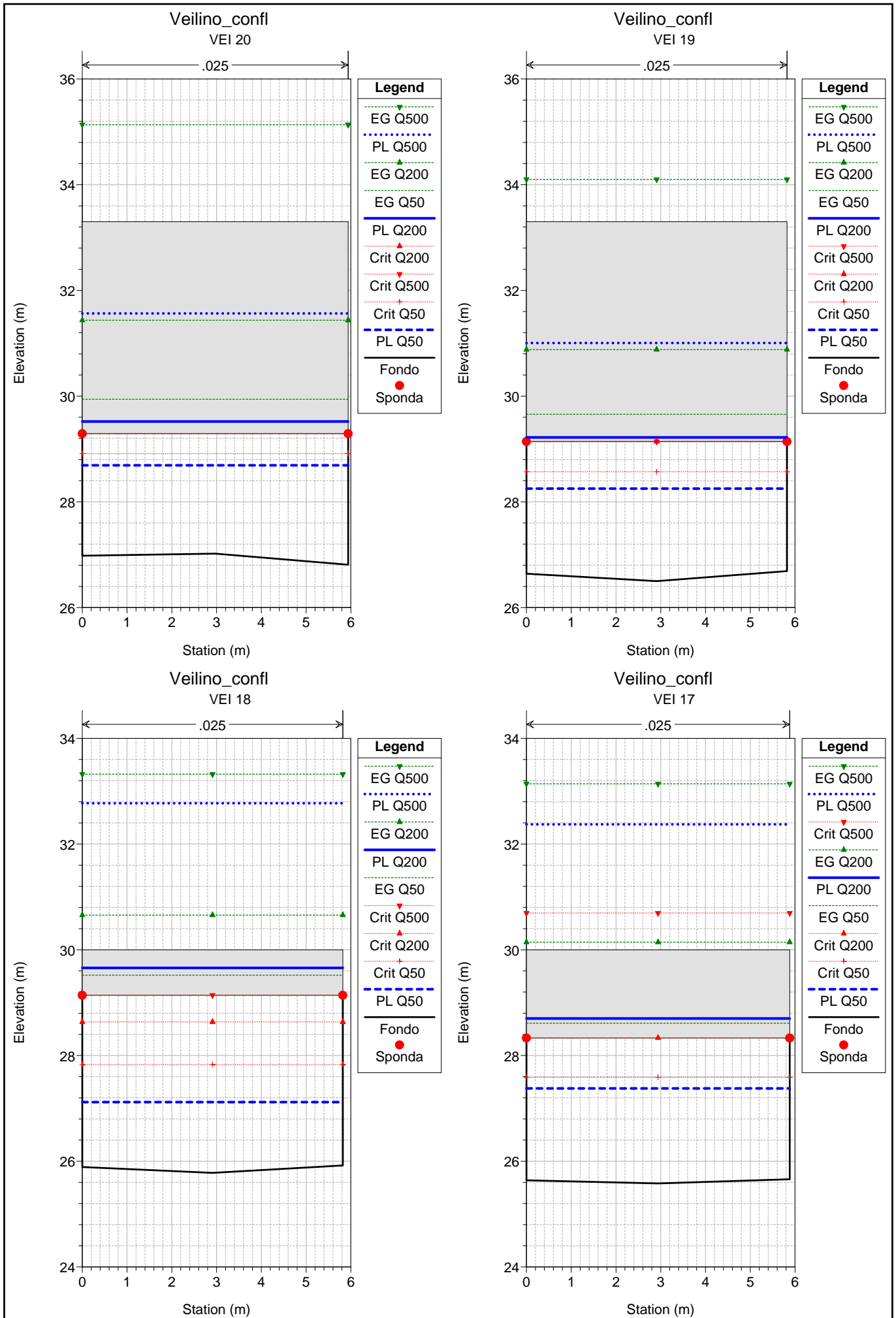


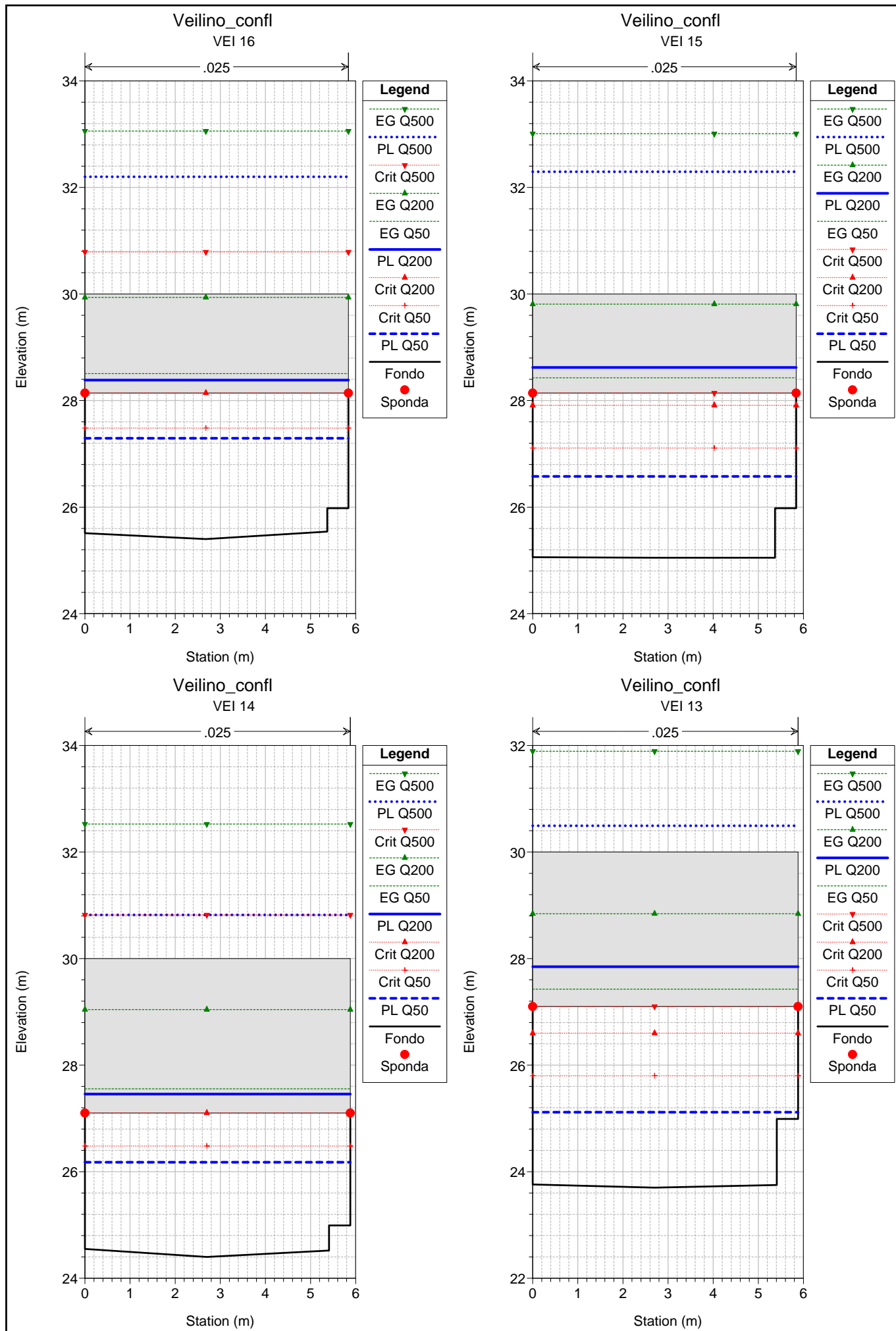


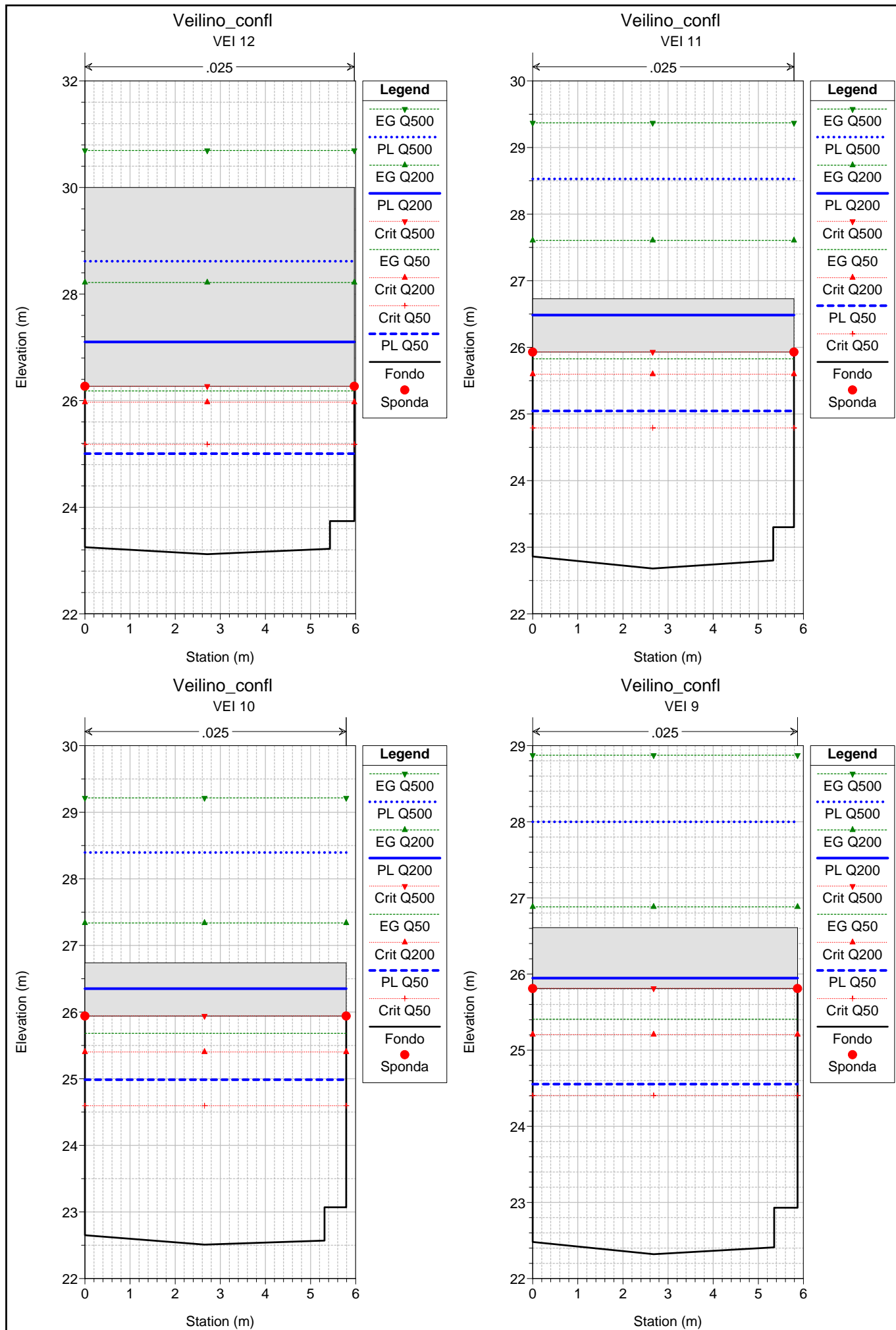


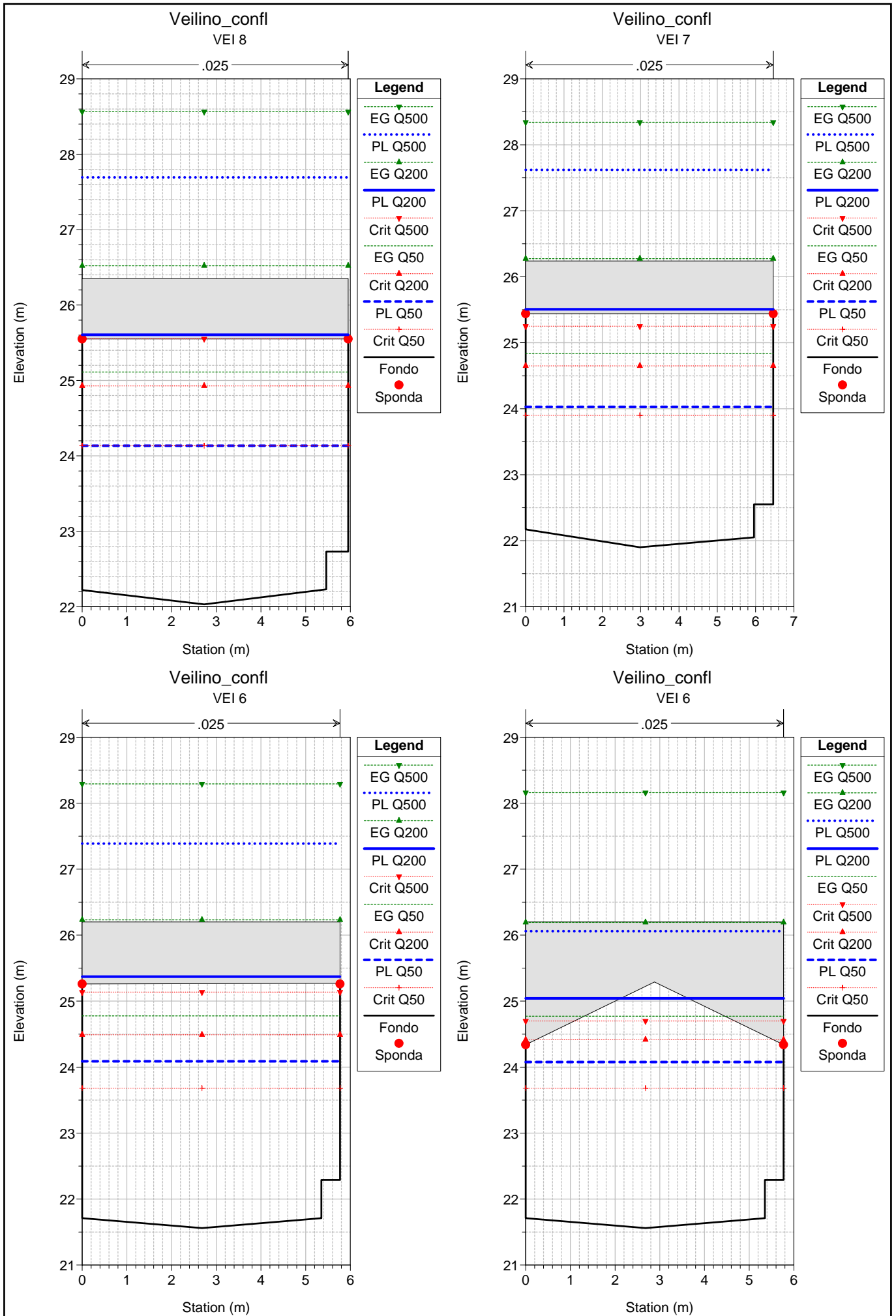


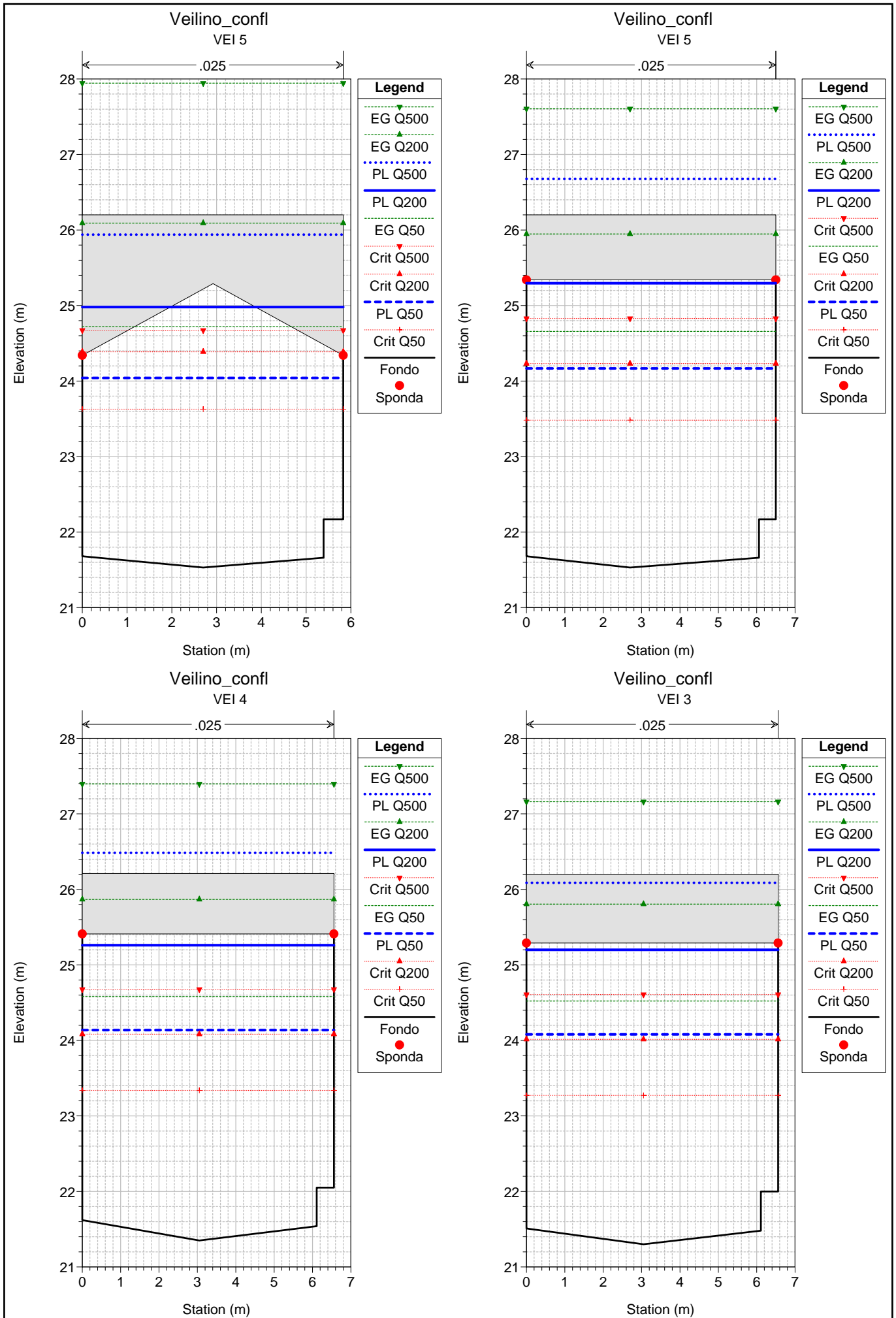


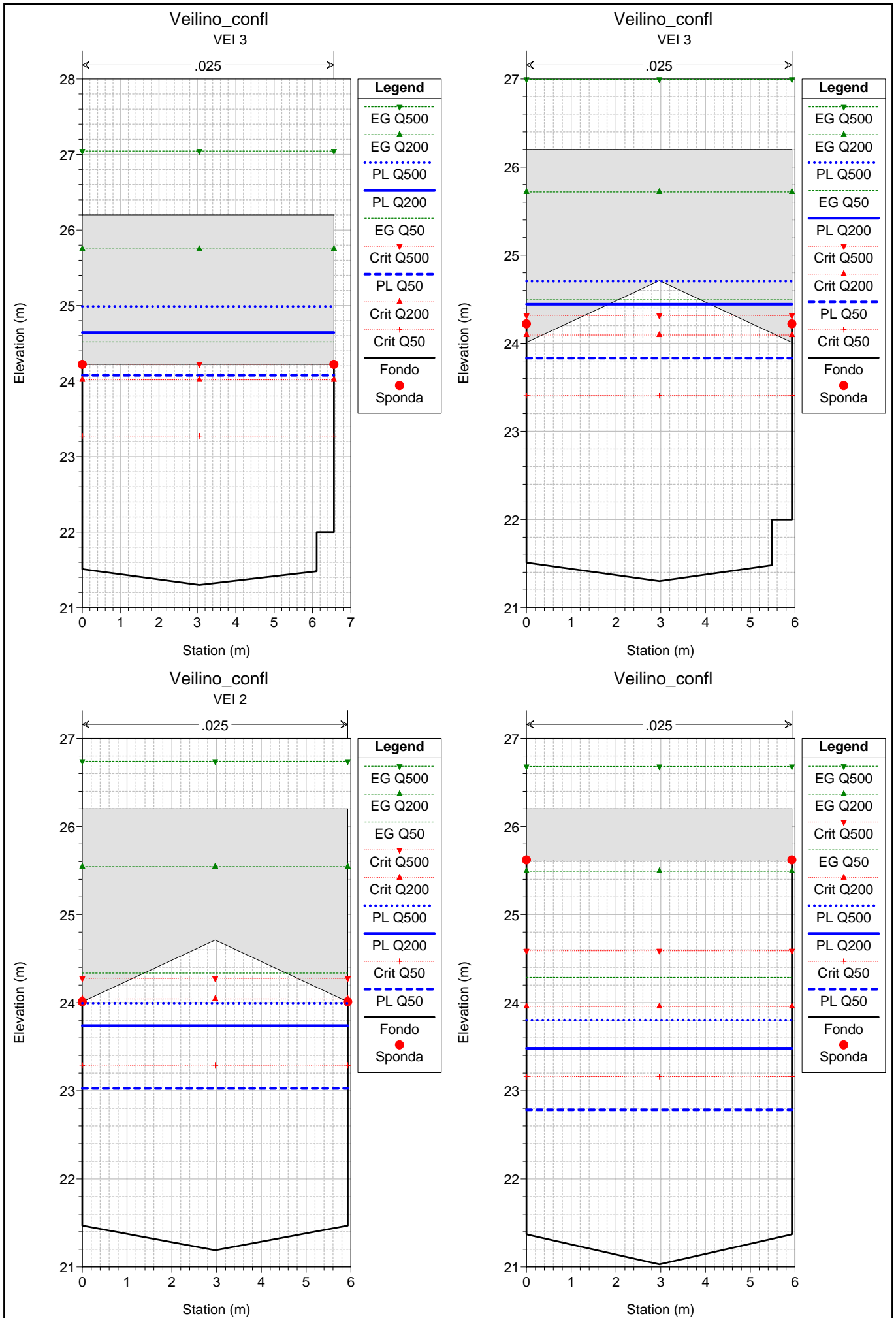


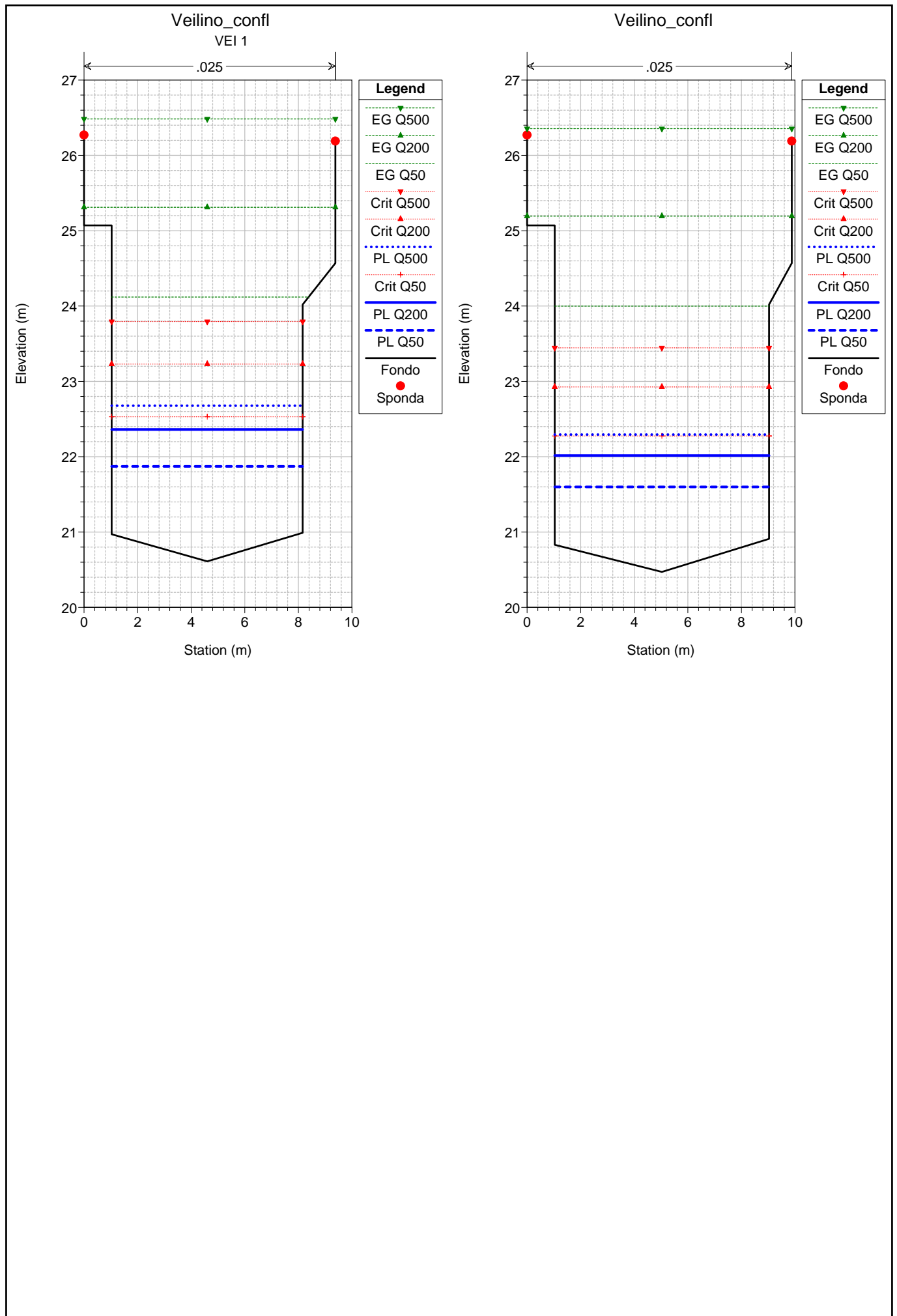












HEC-RAS Plan: 01-08-06 River: Veilino Reach: unico

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
unico	100	Q50	51.00	47.13	48.05	62.00	13.95	57.00	8.95	48.41	49.27	0.020017	4.88	10.45	11.46	1.63
unico	100	Q200	85.00	47.13	48.41	62.00	13.59	57.00	8.59	48.92	50.16	0.020015	5.86	14.51	11.57	1.67
unico	100	Q500	116.00	47.13	48.69	62.00	13.31	57.00	8.31	49.33	50.86	0.020014	6.53	17.77	11.67	1.69
unico	51	VEI 51	51.00	45.13	46.05	60.00	13.95	55.00	8.95	46.41	47.27	0.020002	4.88	10.45	11.46	1.63
unico	51	VEI 51	85.00	45.13	46.41	60.00	13.59	55.00	8.59	46.92	48.15	0.019973	5.85	14.52	11.57	1.67
unico	51	VEI 51	116.00	45.13	46.69	60.00	13.31	55.00	8.31	47.33	48.86	0.019987	6.52	17.78	11.67	1.69
unico	50	VEI 50	51.00	43.93	44.83	48.51	3.68	45.55	0.72	45.19	46.03	0.024187	4.85	10.52	14.01	1.78
unico	50	VEI 50	85.00	43.93	45.11	48.51	3.40	45.55	0.44	45.64	46.87	0.024448	5.88	14.46	14.08	1.85
unico	50	VEI 50	116.00	43.93	45.34	48.51	3.17	45.55	0.21	45.99	47.54	0.024344	6.57	17.65	14.15	1.88
unico	49.	VEI 49	51.00	42.76	43.76	48.51	4.75	44.71	0.95	44.13	44.99	0.020428	4.92	10.37	12.30	1.71
unico	49.	VEI 49	85.00	42.76	44.09	48.51	4.42	44.71	0.62	44.62	45.82	0.019956	5.82	14.61	12.99	1.75
unico	49.	VEI 49	116.00	42.76	44.37	48.51	4.14	44.71	0.34	45.03	46.43	0.019087	6.36	18.24	13.56	1.75
unico	48.	VEI 48	51.00	41.29	42.26	48.51	6.25	44.71	2.45	43.14	44.85	0.044233	7.13	7.16	7.75	2.37
unico	48.	VEI 48	85.00	41.29	42.78	48.51	5.73	44.71	1.93	43.56	45.70	0.033687	7.57	11.23	8.55	2.11
unico	48.	VEI 48	116.00	41.29	43.04	48.51	5.47	44.71	1.67	43.90	46.30	0.052681	8.00	14.49	15.41	2.63
unico	47.	VEI 47	51.00	41.19	41.69	48.41	6.72	44.61	2.92	42.26	44.27	0.094322	7.12	7.16	15.47	3.34
unico	47.	VEI 47	85.00	41.19	41.90	48.41	6.51	44.61	2.71	42.68	45.21	0.074540	8.05	10.55	15.57	3.12
unico	47.	VEI 47	116.00	41.19	42.11	48.41	6.30	44.61	2.50	43.01	45.75	0.059737	8.45	13.73	15.67	2.88
unico	46.	VEI 46	51.00	40.53	41.34	48.01	6.67	43.21	1.87	41.61	42.30	0.018480	4.34	11.74	15.29	1.58
unico	46.	VEI 46	85.00	40.53	41.56	48.01	6.45	43.21	1.65	42.04	43.15	0.022481	5.59	15.21	15.40	1.79
unico	46.	VEI 46	116.00	40.53	41.76	48.01	6.25	43.21	1.45	42.38	43.83	0.023781	6.37	18.20	15.50	1.88
unico	45.	VEI 45	51.00	40.29	41.14	47.81	6.67	41.79	0.65	41.43	42.12	0.017756	4.39	11.61	14.48	1.57
unico	45.	VEI 45	85.00	40.29	41.40	47.81	6.41	41.79	0.39	41.87	42.94	0.020212	5.50	15.46	14.94	1.72
unico	45.	VEI 45	116.00	40.29	41.61	47.81	6.20	41.79	0.18	42.20	43.59	0.021339	6.24	18.60	15.30	1.81
unico	44.3	VEI 44.3	51.00	39.85	41.65	47.61	5.96	42.36	0.71	40.99	41.85	0.001494	1.96	26.08	15.30	0.48
unico	44.3	VEI 44.3	85.00	39.85	42.27	47.61	5.34	42.36	0.09	41.41	42.56	0.001606	2.39	35.60	15.40	0.50
unico	44.3	VEI 44.3	116.00	39.85	42.71	47.61	4.90	42.36	-0.35	41.75	43.09	0.001788	2.74	42.27	15.45	0.53
unico	44.2	VEI 44.2	51.00	39.85	41.35	47.61	6.26	42.36	1.01	41.21	41.82	0.004615	3.05	16.72	12.79	0.85
unico	44.2	VEI 44.2	85.00	39.85	41.88	47.61	5.73	42.36	0.48	41.71	42.53	0.005019	3.57	23.83	15.10	0.91
unico	44.2	VEI 44.2	116.00	39.85	42.31	47.61	5.30	42.36	0.05	42.12	43.05	0.004508	3.83	30.25	15.18	0.87
unico	44.1	VEI 44.1	51.00	39.85	41.21	47.61	6.40	42.36	1.15	41.21	41.80	0.006472	3.41	14.95	12.54	1.00
unico	44.1	VEI 44.1	85.00	39.85	41.71	47.61	5.90	42.36	0.65	41.71	42.51	0.006080	3.96	21.48	13.44	1.00
unico	44.1	VEI 44.1	116.00	39.85	42.12	47.61	5.49	42.36	0.24	42.12	43.03	0.006043	4.22	27.47	15.15	1.00
unico	44.	VEI 44	51.00	39.85	40.67	47.61	6.94	42.36	1.69	40.99	41.75	0.022408	4.61	11.06	15.15	1.72
unico	44.	VEI 44	85.00	39.85	40.99	47.61	6.62	42.36	1.37	41.41	42.44	0.019519	5.35	15.90	15.20	1.67
unico	44.	VEI 44	116.00	39.85	41.27	47.61	6.34	42.36	1.09	41.75	42.95	0.017165	5.75	20.18	15.24	1.59
unico	43.	VEI 43	51.00	38.41	38.91	47.61	8.71	42.36	3.45	39.49	41.54	0.092140	7.20	7.09	14.67	3.31
unico	43.	VEI 43	85.00	38.41	39.17	47.61	8.44	42.36	3.19	39.93	42.24	0.062849	7.77	10.94	14.74	2.88
unico	43.	VEI 43	116.00	38.41	39.39	47.61	8.22	42.36	2.97	40.28	42.75	0.049910	8.12	14.29	14.79	2.64
unico	42.	VEI 42	51.00	37.71	38.60	45.41	6.81	41.71	3.11	38.85	39.53	0.016424	4.27	11.94	14.20	1.49

HEC-RAS Plan: 01-08-06 River: Veilino Reach: unico (Continued)

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
unico	42. VEI 42	Q200	85.00	37.71	38.87	45.41	6.54	41.71	2.84	39.30	40.34	0.018792	5.38	15.80	14.23	1.63
unico	42. VEI 42	Q500	116.00	37.71	39.09	45.41	6.32	41.71	2.62	39.65	41.00	0.019694	6.11	18.97	14.26	1.69
unico	41. VEI 41	Q50	51.00	37.29	38.13	45.01	6.88	41.26	3.13	38.40	39.10	0.018259	4.36	11.69	14.70	1.56
unico	41. VEI 41	Q200	85.00	37.29	38.41	45.01	6.60	41.26	2.85	38.84	39.88	0.019371	5.37	15.82	14.73	1.65
unico	41. VEI 41	Q500	116.00	37.29	38.63	45.01	6.38	41.26	2.63	39.18	40.51	0.019932	6.07	19.11	14.76	1.70
unico	40.2 VEI 40	Q50	51.00	36.71	38.22	43.01	4.79	40.71	2.49	38.09	38.66	0.005159	2.91	17.51	14.31	0.84
unico	40.2 VEI 40	Q200	85.00	36.71	38.72	43.01	4.29	40.71	1.99	38.53	39.33	0.005128	3.46	24.59	14.75	0.85
unico	40.2 VEI 40	Q500	116.00	36.71	39.07	43.01	3.94	40.71	1.64	38.90	39.84	0.005291	3.89	29.81	14.88	0.88
unico	40.11 VEI 40		Bridge													
unico	40.1 VEI 40	Q50	51.00	36.71	38.09	43.01	4.92	40.71	2.62	38.09	38.64	0.007427	3.27	15.60	14.30	1.00
unico	40.1 VEI 40	Q200	85.00	36.71	38.54	43.01	4.47	40.71	2.17	38.53	39.30	0.007070	3.87	21.96	14.33	1.00
unico	40.1 VEI 40	Q500	116.00	36.71	38.96	43.01	4.05	40.71	1.75	38.90	39.82	0.006318	4.12	28.13	14.84	0.96
unico	39. VEI 39	Q50	51.00	36.57	38.11	42.81	4.70	40.21	2.10	37.83	38.46	0.003551	2.61	19.55	14.21	0.71
unico	39. VEI 39	Q200	85.00	36.57	38.62	42.81	4.19	40.21	1.59	38.27	39.13	0.003872	3.18	26.77	14.78	0.75
unico	39. VEI 39	Q500	116.00	36.57	39.03	42.81	3.78	40.21	1.18	38.65	39.66	0.003849	3.53	32.89	14.89	0.76
unico	38.4	Q50	51.00	36.57	37.96	42.81	4.85	40.21	2.26	37.83	38.40	0.005154	2.94	17.35	14.19	0.85
unico	38.4	Q200	85.00	36.57	38.45	42.81	4.36	40.21	1.76	38.27	39.07	0.004936	3.48	24.44	14.26	0.85
unico	38.4	Q500	116.00	36.57	38.85	42.81	3.96	40.21	1.36	38.65	39.60	0.004966	3.84	30.24	14.84	0.86
unico	38.3	Q50	51.00	36.57	37.96	40.81	2.85	40.21	2.26	37.83	38.40	0.005155	2.94	17.35	14.19	0.85
unico	38.3	Q200	85.00	36.57	38.45	40.81	2.36	40.21	1.76	38.27	39.07	0.004937	3.48	24.44	14.26	0.85
unico	38.3	Q500	116.00	36.57	38.85	40.81	1.96	40.21	1.36	38.65	39.60	0.004966	3.83	30.25	14.87	0.86
unico	38.2	Q50	51.00	36.57	37.89	40.81	2.92	40.21	2.32	37.83	38.38	0.006092	3.10	16.45	14.18	0.92
unico	38.2	Q200	85.00	36.57	38.36	40.81	2.45	40.21	1.85	38.27	39.05	0.005865	3.68	23.11	14.25	0.92
unico	38.2	Q500	116.00	36.57	38.76	40.81	2.05	40.21	1.45	38.65	39.58	0.005738	4.02	28.85	14.83	0.92
unico	38.1	Q50	51.00	36.57	37.83	42.81	4.98	40.21	2.38	37.83	38.38	0.007299	3.28	15.53	14.17	1.00
unico	38.1	Q200	85.00	36.57	38.27	42.81	4.54	40.21	1.94	38.27	39.04	0.006935	3.88	21.89	14.23	1.00
unico	38.1	Q500	116.00	36.57	38.65	42.81	4.16	40.21	1.56	38.65	39.57	0.006824	4.26	27.26	14.79	1.00
unico	38. VEI 38	Q50	51.00	36.07	37.00	42.41	5.41	39.66	2.66	37.25	37.92	0.015825	4.25	11.99	13.95	1.46
unico	38. VEI 38	Q200	85.00	36.07	37.37	42.41	5.04	39.66	2.29	37.70	38.62	0.014228	4.96	17.14	14.00	1.43
unico	38. VEI 38	Q500	116.00	36.07	37.68	42.41	4.73	39.66	1.98	38.06	39.16	0.013171	5.40	21.46	14.04	1.40
unico	37. VEI 37	Q50	51.00	34.79	35.40	42.41	7.01	39.66	4.26	35.97	37.74	0.070697	6.78	7.52	13.85	2.94
unico	37. VEI 37	Q200	85.00	34.79	35.69	42.41	6.72	39.66	3.97	36.42	38.44	0.049174	7.35	11.57	13.88	2.57
unico	37. VEI 37	Q500	116.00	34.79	35.94	42.41	6.47	39.66	3.72	36.78	38.98	0.040137	7.73	15.01	13.91	2.37
unico	36. VEI 36	Q50	51.00	34.23	35.25	41.91	6.66	39.01	3.76	35.43	36.03	0.012411	3.93	12.97	14.05	1.31
unico	36. VEI 36	Q200	85.00	34.23	35.53	41.91	6.38	39.01	3.48	35.88	36.81	0.014915	5.03	16.91	14.08	1.46
unico	36. VEI 36	Q500	116.00	34.23	35.76	41.91	6.15	39.01	3.25	36.23	37.45	0.016118	5.76	20.13	14.11	1.54
unico	35.6	Q50	51.00	33.81	35.36	41.91	6.55	38.29	2.93	34.90	35.62	0.002256	2.24	22.76	15.09	0.58
unico	35.6	Q200	85.00	33.81	35.87	41.91	6.04	38.29	2.42	35.33	36.27	0.002547	2.79	30.49	15.20	0.63
unico	35.6	Q500	116.00	33.81	36.27	41.91	5.64	38.29	2.02	35.67	36.78	0.002749	3.18	36.52	15.29	0.66

HEC-RAS Plan: 01-08-06 River: Veilino Reach: unico (Continued)

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
unico	35.5	Q50	51.00	33.81	35.37	36.36	0.99	38.29	2.92	34.90	35.62	0.002148	2.20	23.16	15.51	0.58
unico	35.5	Q200	85.00	33.81	35.89	36.36	0.47	38.29	2.40	35.33	36.26	0.002371	2.72	31.27	15.77	0.62
unico	35.5	Q500	116.00	33.81	36.29	36.36	0.07	38.29	2.00	35.67	36.77	0.002516	3.08	37.66	15.97	0.64
unico	35.4	Q50	51.00	33.81	35.36	36.36	1.00	38.29	2.93	34.90	35.61	0.002174	2.21	23.07	15.50	0.58
unico	35.4	Q200	85.00	33.81	35.88	36.36	0.48	38.29	2.41	35.33	36.26	0.002396	2.73	31.16	15.76	0.62
unico	35.4	Q500	116.00	33.81	36.28	36.36	0.08	38.29	2.01	35.67	36.77	0.002540	3.09	37.54	15.96	0.64
unico	35.35	Q50	51.00	33.81	35.36	36.63	1.27	38.29	2.93	34.90	35.61	0.002193	2.22	22.99	15.44	0.58
unico	35.35	Q200	85.00	33.81	35.88	36.63	0.75	38.29	2.41	35.33	36.26	0.002426	2.74	31.02	15.68	0.62
unico	35.35	Q500	116.00	33.81	36.28	36.63	0.35	38.29	2.01	35.67	36.77	0.002580	3.11	37.33	15.87	0.65
unico	35.3 VEI 35.3	Q50	51.00	33.81	35.32	36.63	1.31	38.29	2.97	34.90	35.58	0.002415	2.29	22.29	15.42	0.61
unico	35.3 VEI 35.3	Q200	85.00	33.81	35.82	36.63	0.81	38.29	2.47	35.33	36.23	0.002637	2.82	30.18	15.66	0.65
unico	35.3 VEI 35.3	Q500	116.00	33.81	36.22	36.63	0.41	38.29	2.07	35.67	36.73	0.002792	3.19	36.37	15.84	0.67
unico	35.2 VEI 35.2	Q50	51.00	33.81	35.14	36.63	1.49	38.29	3.15	35.02	35.57	0.005147	2.90	17.61	15.12	0.86
unico	35.2 VEI 35.2	Q200	85.00	33.81	35.61	36.63	1.02	38.29	2.68	35.45	36.21	0.004913	3.43	24.81	15.41	0.86
unico	35.2 VEI 35.2	Q500	116.00	33.81	35.96	36.63	0.67	38.29	2.32	35.80	36.71	0.004956	3.83	30.30	15.63	0.88
unico	35.1 VEI 35.1	Q50	51.00	33.81	35.02	36.63	1.61	38.29	3.27	35.02	35.55	0.007174	3.22	15.85	15.05	1.00
unico	35.1 VEI 35.1	Q200	85.00	33.81	35.45	36.63	1.18	38.29	2.84	35.45	36.19	0.006735	3.79	22.41	15.31	1.00
unico	35.1 VEI 35.1	Q500	116.00	33.81	35.94	36.63	0.69	38.29	2.35	35.80	36.71	0.005132	3.87	29.96	15.61	0.89
unico	35. VEI 35	Q50	51.00	33.81	34.68	36.63	1.95	38.29	3.61	34.90	35.52	0.014680	4.05	12.58	15.13	1.42
unico	35. VEI 35	Q200	85.00	33.81	35.06	36.63	1.57	38.29	3.23	35.33	36.15	0.012321	4.63	18.35	15.30	1.35
unico	35. VEI 35	Q500	116.00	33.81	36.06	36.63	0.57	38.29	2.23	35.67	36.66	0.003466	3.43	33.85	15.77	0.75
unico	34. VEI 34	Q50	51.00	32.65	33.26	36.63	3.37	38.29	5.03	33.79	35.36	0.063818	6.42	7.94	14.87	2.81
unico	34. VEI 34	Q200	85.00	32.65	33.55	36.63	3.08	38.29	4.74	34.22	35.99	0.043645	6.93	12.27	14.97	2.44
unico	34. VEI 34	Q500	116.00	32.65	36.32	36.63	0.31	38.29	1.97	34.56	36.54	0.000811	2.11	55.07	15.94	0.36
unico	33. VEI 33	Q50	51.00	32.41	33.02	36.41	3.39	37.97	4.95	33.51	34.89	0.055821	6.05	8.43	15.67	2.63
unico	33. VEI 33	Q200	85.00	32.41	33.27	36.41	3.14	37.97	4.70	33.93	35.68	0.045107	6.88	12.36	15.75	2.48
unico	33. VEI 33	Q500	116.00	32.41	36.35	36.41	0.06	37.97	1.62	34.26	36.52	0.000578	1.86	62.41	16.83	0.31
unico	32. VEI 32	Q50	51.00	32.16	32.70	36.41	3.71	37.97	5.27	33.22	34.83	0.069588	6.47	7.88	15.61	2.91
unico	32. VEI 32	Q200	85.00	32.16	32.94	36.41	3.47	37.97	5.03	33.64	35.63	0.053942	7.27	11.70	15.70	2.69
unico	32. VEI 32	Q500	116.00	32.16	36.36	36.41	0.05	37.97	1.61	33.97	36.51	0.000464	1.72	67.39	16.84	0.27
unico	31. VEI 31	Q50	51.00	31.95	32.70	33.77	1.07	37.71	5.01	33.18	34.42	0.041171	5.82	8.76	13.35	2.29
unico	31. VEI 31	Q200	85.00	31.95	33.01	33.77	0.76	37.71	4.70	33.80	35.23	0.033500	6.60	12.88	13.38	2.15
unico	31. VEI 31	Q500	116.00	31.95	36.38	33.77	-2.61	37.71	1.33	34.09	36.50	0.000421	1.59	72.96	19.08	0.26
unico	30 VEI 30	Q50	51.00	31.92	33.17	35.90	2.73	35.90	2.73	33.17	33.76	0.007267	3.39	15.04	12.84	1.00
unico	30 VEI 30	Q200	85.00	31.92	33.46	35.90	2.44	35.90	2.44	33.65	34.50	0.010061	4.52	18.82	12.84	1.19
unico	30 VEI 30	Q500	116.00	31.92	36.25	35.90	-0.35	35.90	-0.35	34.03	36.48	0.000806	2.12	54.60	12.84	0.33
unico	29 VEI 29	Q50	51.00	30.97	31.70	35.90	4.20	35.90	4.20	32.23	33.61	0.044851	6.12	8.34	12.34	2.38
unico	29 VEI 29	Q200	85.00	30.97	33.84	35.90	2.06	35.90	2.06	32.72	34.14	0.001528	2.41	35.22	12.84	0.47
unico	29 VEI 29	Q500	116.00	30.97	36.30	35.90	-0.40	35.90	-0.40	33.12	36.46	0.000461	1.74	66.85	12.84	0.24
unico	28 VEI 28	Q50	51.00	30.75	32.32	35.87	3.55	35.87	3.55	32.32	33.08	0.007954	3.88	13.13	8.55	1.00

HEC-RAS Plan: 01-08-06 River: Veilino Reach: unico (Continued)

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
unico	28 VEI 28	Q200	85.00	30.75	32.98	35.87	2.89	35.87	2.89	32.98	34.01	0.008087	4.52	18.82	9.05	1.00
unico	28 VEI 28	Q500	116.00	30.75	36.12	35.87	-0.25	35.87	-0.25	33.45	36.43	0.001166	2.45	47.32	9.05	0.34
unico	27 VEI 27	Q50	51.00	29.56	30.45	35.87	5.42	35.87	5.42	31.13	32.90	0.046689	6.93	7.36	8.55	2.38
unico	27 VEI 27	Q200	85.00	29.56	30.91	35.87	4.96	35.87	4.96	31.75	33.81	0.035228	7.55	11.26	8.55	2.10
unico	27 VEI 27	Q500	116.00	29.56	36.20	35.87	-0.33	35.87	-0.33	32.25	36.40	0.000691	2.00	58.12	9.05	0.25
unico	26 VEI 26	Q50	51.00	29.40	30.44	35.54	5.10	35.54	5.10	31.09	32.65	0.036232	6.59	7.74	7.68	2.09
unico	26 VEI 26	Q200	85.00	29.40	30.98	35.54	4.56	35.54	4.56	31.78	33.60	0.027979	7.17	11.86	7.68	1.84
unico	26 VEI 26	Q500	116.00	29.40	36.16	35.54	-0.62	35.54	-0.62	32.30	36.39	0.000850	2.15	53.96	8.18	0.27
unico	25 VEI 25	Q50	51.00	28.87	29.80	35.12	5.32	35.54	5.74	30.55	32.57	0.051529	7.38	6.91	7.68	2.48
unico	25 VEI 25	Q200	85.00	28.87	30.29	35.12	4.83	35.54	5.25	31.22	33.52	0.038287	7.96	10.68	7.68	2.16
unico	25 VEI 25	Q500	116.00	28.87	36.18	35.12	-1.06	35.54	-0.64	31.79	36.38	0.000704	1.99	58.27	8.18	0.24
unico	24 VEI 24	Q50	51.00	27.97	29.19	34.24	5.05	34.15	4.96	29.92	31.70	0.037318	7.01	7.28	6.12	2.05
unico	24 VEI 24	Q200	85.00	27.97	32.18	34.24	2.06	34.15	1.97	30.72	32.70	0.002955	3.20	26.58	6.62	0.51
unico	24 VEI 24	Q500	116.00	27.97	36.11	34.24	-1.87	34.15	-1.96	31.31	36.36	0.000993	2.20	52.64	6.62	0.25
unico	23 VEI 23	Q50	51.00	27.83	29.16	30.66	1.50	30.66	1.50	29.85	31.49	0.032707	6.76	7.54	5.84	1.90
unico	23 VEI 23	Q200	85.00	27.83	31.20	30.66	-0.54	30.66	-0.54	30.65	32.58	0.018255	5.22	16.29		0.91
unico	23 VEI 23	Q500	116.00	27.83	35.48	30.66	-4.82	30.66	-4.82	30.66	36.30	0.007316	3.99	29.04	5.84	0.46
unico	22 VEI 22	Q50	51.00	27.58	29.17	30.15	0.98	30.15	0.98	29.60	30.79	0.019397	5.65	9.03	5.84	1.45
unico	22 VEI 22	Q200	85.00	27.58	30.46	30.15	-0.31	30.15	-0.31	30.15	32.15	0.024347	5.76	14.76		1.09
unico	22 VEI 22	Q500	116.00	27.58	34.88	30.15	-4.73	30.15	-4.73	30.15	36.07	0.013400	4.83	23.99	5.84	0.57
unico	21 VEI 21	Q50	51.00	26.93	28.21	30.15	1.94	30.15	1.94	28.93	30.66	0.035477	6.94	7.35	5.84	1.97
unico	21 VEI 21	Q200	85.00	26.93	30.87	30.15	-0.72	30.15	-0.72	29.74	31.93	0.012361	4.55	18.67		0.73
unico	21 VEI 21	Q500	116.00	26.93	35.14	30.15	-4.99	30.15	-4.99	30.15	35.93	0.007337	3.94	29.44	5.84	0.44
unico	20 VEI 20	Q50	51.00	26.81	28.69	29.29	0.60	29.29	0.60	28.91	29.94	0.013857	4.95	10.29	5.94	1.20
unico	20 VEI 20	Q200	85.00	26.81	29.52	29.29	-0.23	29.29	-0.23	29.29	31.44	0.030117	6.13	13.86		1.22
unico	20 VEI 20	Q500	116.00	26.81	31.56	29.29	-2.27	29.29	-2.27	29.29	35.13	0.056090	8.37	13.86		1.25
unico	19 VEI 19	Q50	51.00	26.50	28.25	29.14	0.89	29.14	0.89	28.57	29.66	0.015603	5.25	9.71	5.82	1.30
unico	19 VEI 19	Q200	85.00	26.50	29.22	29.14	-0.08	29.14	-0.08	29.14	30.88	0.023570	5.71	14.88		1.12
unico	19 VEI 19	Q500	116.00	26.50	31.01	29.14	-1.87	29.14	-1.87	29.14	34.10	0.043898	7.79	14.88		1.18
unico	18 VEI 18	Q50	51.00	25.78	27.12	29.14	2.02	29.14	2.02	27.83	29.52	0.033883	6.86	7.43	5.82	1.94
unico	18 VEI 18	Q200	85.00	25.78	29.66	29.14	-0.52	29.14	-0.52	28.63	30.66	0.011352	4.43	19.19		0.72
unico	18 VEI 18	Q500	116.00	25.78	32.77	29.14	-3.63	29.14	-3.63	29.14	33.32	0.004012	3.28	35.32	5.82	0.40
unico	17 VEI 17	Q50	51.00	25.58	27.38	28.33	0.95	28.33	0.95	27.59	28.61	0.013170	4.92	10.36	5.88	1.18
unico	17 VEI 17	Q200	85.00	25.58	28.70	28.33	-0.37	28.33	-0.37	28.33	30.14	0.019454	5.32	15.96		0.97
unico	17 VEI 17	Q500	116.00	25.58	32.37	28.33	-4.04	28.33	-4.04	30.70	33.14	0.006616	3.88	29.92	5.88	0.48
unico	16 VEI 16	Q50	51.00	25.40	27.29	28.14	0.85	28.14	0.85	27.48	28.51	0.012903	4.88	10.45	5.84	1.16
unico	16 VEI 16	Q200	85.00	25.40	28.38	28.14	-0.24	28.14	-0.24	28.14	29.94	0.021609	5.52	15.39		1.04
unico	16 VEI 16	Q500	116.00	25.40	32.20	28.14	-4.06	28.14	-4.06	30.79	33.06	0.007904	4.11	28.24	5.84	0.51
unico	15 VEI 15	Q50	51.00	25.05	26.58	28.14	1.56	28.14	1.56	27.11	28.43	0.024217	6.03	8.46	5.84	1.60
unico	15 VEI 15	Q200	85.00	25.05	28.62	28.14	-0.48	28.14	-0.48	27.91	29.81	0.014868	4.83	17.60		0.82

HEC-RAS Plan: 01-08-06 River: Veilino Reach: unico (Continued)

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	
unico	15	VEI 15	Q500	116.00	25.05	32.30	28.14	-4.16	28.14	-4.16	28.14	33.01	0.006111	3.74	31.00	5.84	0.45
unico	14	VEI 14	Q50	51.00	24.40	26.18	27.10	0.92	27.10	0.92	26.48	27.55	0.015443	5.20	9.81	5.88	1.28
unico	14	VEI 14	Q200	85.00	24.40	27.46	27.10	-0.36	27.10	-0.36	27.10	29.04	0.022339	5.58	15.23		1.04
unico	14	VEI 14	Q500	116.00	24.40	30.82	27.10	-3.72	27.10	-3.72	30.82	32.52	0.024775	5.78	20.06	5.88	0.73
unico	13	VEI 13	Q50	51.00	23.70	25.12	27.10	1.98	27.10	1.98	25.80	27.43	0.033607	6.73	7.57	5.88	1.89
unico	13	VEI 13	Q200	85.00	23.70	27.85	27.10	-0.75	27.10	-0.75	26.60	28.84	0.011542	4.42	19.24		0.70
unico	13	VEI 13	Q500	116.00	23.70	30.49	27.10	-3.39	27.10	-3.39	27.10	31.89	0.019465	5.24	22.14	5.88	0.65
unico	12	VEI 12	Q50	51.00	23.12	25.01	26.27	1.26	26.27	1.26	25.18	26.18	0.012475	4.80	10.61	5.97	1.15
unico	12	VEI 12	Q200	85.00	23.12	27.10	26.27	-0.83	26.27	-0.83	25.97	28.22	0.013549	4.68	18.16		0.76
unico	12	VEI 12	Q500	116.00	23.12	28.62	26.27	-2.35	26.27	-2.35	26.27	30.69	0.025234	6.39	18.16		0.88
unico	11	VEI 11	Q50	51.00	22.68	25.04	25.93	0.89	25.93	0.89	24.79	25.83	0.006974	3.92	13.01	5.79	0.84
unico	11	VEI 11	Q200	85.00	22.68	26.48	25.93	-0.55	25.93	-0.55	25.60	27.60	0.013388	4.69	18.13		0.78
unico	11	VEI 11	Q500	116.00	22.68	28.53	25.93	-2.60	25.93	-2.60	25.93	29.37	0.008000	4.06	28.54	5.79	0.54
unico	10	VEI 10	Q50	51.00	22.51	24.99	25.94	0.95	25.94	0.95	24.59	25.68	0.005965	3.70	13.80	5.79	0.76
unico	10	VEI 10	Q200	85.00	22.51	26.35	25.94	-0.41	25.94	-0.41	25.40	27.34	0.011198	4.40	19.33		0.73
unico	10	VEI 10	Q500	116.00	22.51	28.40	25.94	-2.46	25.94	-2.46	25.94	29.22	0.007863	4.01	28.91	5.79	0.53
unico	9	VEI 9	Q50	51.00	22.32	24.55	25.81	1.26	25.81	1.26	24.41	25.41	0.007905	4.09	12.46	5.87	0.90
unico	9	VEI 9	Q200	85.00	22.32	25.95	25.81	-0.14	25.81	-0.14	25.20	26.88	0.010443	4.29	19.83		0.73
unico	9	VEI 9	Q500	116.00	22.32	28.00	25.81	-2.19	25.81	-2.19	25.81	28.87	0.008917	4.14	27.99	5.87	0.56
unico	8	VEI 8	Q50	51.00	22.03	24.13	25.55	1.42	25.55	1.42	24.13	25.11	0.009507	4.38	11.64	5.95	1.00
unico	8	VEI 8	Q200	85.00	22.03	25.61	25.55	-0.06	25.55	-0.06	24.93	26.52	0.010106	4.24	20.07		0.73
unico	8	VEI 8	Q500	116.00	22.03	27.69	25.55	-2.14	25.55	-2.14	25.55	28.56	0.008918	4.13	28.06	5.95	0.56
unico	7	VEI 7	Q50	51.00	21.90	24.03	25.44	1.41	25.44	1.41	23.90	24.84	0.007452	3.99	12.79	6.46	0.90
unico	7	VEI 7	Q200	85.00	21.90	25.51	25.44	-0.07	25.44	-0.07	24.65	26.27	0.008095	3.88	21.92		0.67
unico	7	VEI 7	Q500	116.00	21.90	27.62	25.44	-2.18	25.44	-2.18	25.25	28.34	0.007064	3.76	30.84	6.46	0.51
unico	6	VEI 6	Q50	51.00	21.56	24.09	25.26	1.17	25.27	1.18	23.68	24.78	0.005842	3.67	13.88	5.77	0.76
unico	6	VEI 6	Q200	85.00	21.56	25.37	25.26	-0.11	25.27	-0.10	24.49	26.23	0.009221	4.11	20.67		0.68
unico	6	VEI 6	Q500	116.00	21.56	27.39	25.26	-2.13	25.27	-2.12	25.14	28.29	0.009469	4.21	27.52	5.77	0.56
unico	5.1	VEI 6	Q50	51.00	21.56	24.08	24.34	0.26	24.34	0.26	23.68	24.77	0.005917	3.69	13.82	5.77	0.76
unico	5.1	VEI 6	Q200	85.00	21.56	25.04	24.34	-0.70	24.34	-0.70	24.42	26.19	0.011691	4.75	17.89	1.50	0.83
unico	5.1	VEI 6	Q500	116.00	21.56	26.06	24.34	-1.72	24.34	-1.72	24.70	28.16	0.023941	6.42	18.07		0.98
unico	5	VEI 5	Q50	51.00	21.53	24.04	24.34	0.30	24.34	0.30	23.63	24.72	0.005734	3.65	13.98	5.83	0.75
unico	5	VEI 5	Q200	85.00	21.53	24.98	24.34	-0.64	24.34	-0.64	24.39	26.09	0.010826	4.67	18.20	1.91	0.82
unico	5	VEI 5	Q500	116.00	21.53	25.94	24.34	-1.60	24.34	-1.60	24.67	27.94	0.022516	6.27	18.49		0.97
unico	4.1	VEI 5	Q50	51.00	21.53	24.17	25.34	1.17	25.34	1.17	23.48	24.66	0.003736	3.10	16.44	6.50	0.62
unico	4.1	VEI 5	Q200	85.00	21.53	25.30	25.34	0.04	25.34	0.04	24.23	25.95	0.003854	3.58	23.77	6.50	0.60
unico	4.1	VEI 5	Q500	116.00	21.53	26.68	25.34	-1.34	25.34	-1.34	24.83	27.61	0.011226	4.27	27.16	6.50	0.61
unico	4	VEI 4	Q50	51.00	21.35	24.14	25.41	1.27	25.41	1.27	23.34	24.58	0.003247	2.96	17.26	6.56	0.58
unico	4	VEI 4	Q200	85.00	21.35	25.26	25.41	0.15	25.41	0.15	24.08	25.87	0.003482	3.45	24.64	6.56	0.57
unico	4	VEI 4	Q500	116.00	21.35	26.48	25.41	-1.07	25.41	-1.07	24.68	27.40	0.011164	4.23	27.41	6.56	0.61

HEC-RAS Plan: 01-08-06 River: Veilino Reach: unico (Continued)

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
unico	3.1 VEI 3	Q50	51.00	21.30	24.08	25.29	1.21	25.29	1.21	23.27	24.52	0.003223	2.94	17.33	6.56	0.58
unico	3.1 VEI 3	Q200	85.00	21.30	25.20	25.29	0.09	25.29	0.09	24.01	25.80	0.003480	3.45	24.67	6.56	0.57
unico	3.1 VEI 3	Q500	116.00	21.30	26.09	25.29	-0.80	25.29	-0.80	24.61	27.16	0.010118	4.59	25.26		0.68
unico	3 VEI 3	Q50	51.00	21.30	24.08	24.22	0.14	24.22	0.14	23.27	24.52	0.003239	2.95	17.30	6.56	0.58
unico	3 VEI 3	Q200	85.00	21.30	24.64	24.22	-0.42	24.22	-0.42	24.02	25.75	0.013902	4.66	18.24		0.83
unico	3 VEI 3	Q500	116.00	21.30	24.99	24.22	-0.77	24.22	-0.77	24.22	27.05	0.025891	6.36	18.24		1.08
unico	2.1 VEI 3	Q50	51.00	21.30	23.83	24.01	0.18	24.01	0.18	23.41	24.49	0.005522	3.60	14.16	5.93	0.74
unico	2.1 VEI 3	Q200	85.00	21.30	24.44	24.01	-0.43	24.01	-0.43	24.09	25.72	0.012942	5.00	16.99	2.27	0.92
unico	2.1 VEI 3	Q500	116.00	21.30	24.70	24.01	-0.69	24.01	-0.69	24.31	27.00	0.027526	6.71	17.29	0.05	1.19
unico	2.05	Q50	51.00	21.24	23.46	24.01	0.55	24.01	0.55	23.46	24.44	0.009964	4.38	11.63	5.93	1.00
unico	2.05	Q200	85.00	21.24	24.12	24.01	-0.11	24.01	-0.11	24.12	25.65	0.013617	5.49	15.48	5.03	1.08
unico	2.05	Q500	116.00	21.24	24.33	24.01	-0.32	24.01	-0.32	24.33	26.89	0.025507	7.09	16.37	3.21	1.34
unico	2 VEI 2	Q50	51.00	21.19	23.03	24.01	0.98	24.01	0.98	23.29	24.34	0.013983	5.07	10.06	5.93	1.24
unico	2 VEI 2	Q200	85.00	21.19	23.74	24.01	0.27	24.01	0.27	24.04	25.54	0.014684	5.95	14.28	5.93	1.22
unico	2 VEI 2	Q500	116.00	21.19	23.99	24.01	0.02	24.01	0.02	24.28	26.74	0.020791	7.34	15.80	5.93	1.44
unico	1.2	Q50	51.00	21.19	23.02	25.62	2.60	25.62	2.60	23.28	24.33	0.014156	5.09	10.02	5.93	1.25
unico	1.2	Q200	85.00	21.19	23.73	25.62	1.89	25.62	1.89	24.08	25.54	0.014833	5.97	14.23	5.93	1.23
unico	1.2	Q500	116.00	21.19	23.99	25.62	1.63	25.62	1.63	24.71	26.74	0.020826	7.34	15.80	5.93	1.44
unico	1.1	Q50	51.00	21.03	22.78	25.62	2.84	25.62	2.84	23.16	24.29	0.016894	5.43	9.39	5.93	1.38
unico	1.1	Q200	85.00	21.03	23.48	25.62	2.14	25.62	2.14	23.96	25.49	0.016907	6.28	13.53	5.93	1.33
unico	1.1	Q500	116.00	21.03	23.80	25.62	1.82	25.62	1.82	24.59	26.68	0.022034	7.52	15.43	5.93	1.49
unico	1 VEI 1	Q50	51.00	20.61	21.87	26.27	4.40	26.19	4.32	22.53	24.12	0.033823	6.64	7.68	7.13	2.04
unico	1 VEI 1	Q200	85.00	20.61	22.36	26.27	3.91	26.19	3.83	23.23	25.31	0.030934	7.61	11.17	7.13	1.94
unico	1 VEI 1	Q500	116.00	20.61	22.68	26.27	3.59	26.19	3.51	23.79	26.48	0.033929	8.64	13.42	7.13	2.01
unico	0.1	Q50	51.00	20.47	21.60	26.27	4.67	26.19	4.59	22.28	24.00	0.040874	6.87	7.43	8.00	2.27
unico	0.1	Q200	85.00	20.47	22.02	26.27	4.25	26.19	4.17	22.93	25.19	0.036920	7.90	10.76	8.00	2.17
unico	0.1	Q500	116.00	20.47	22.29	26.27	3.98	26.19	3.90	23.44	26.36	0.039369	8.93	12.99	8.00	2.24