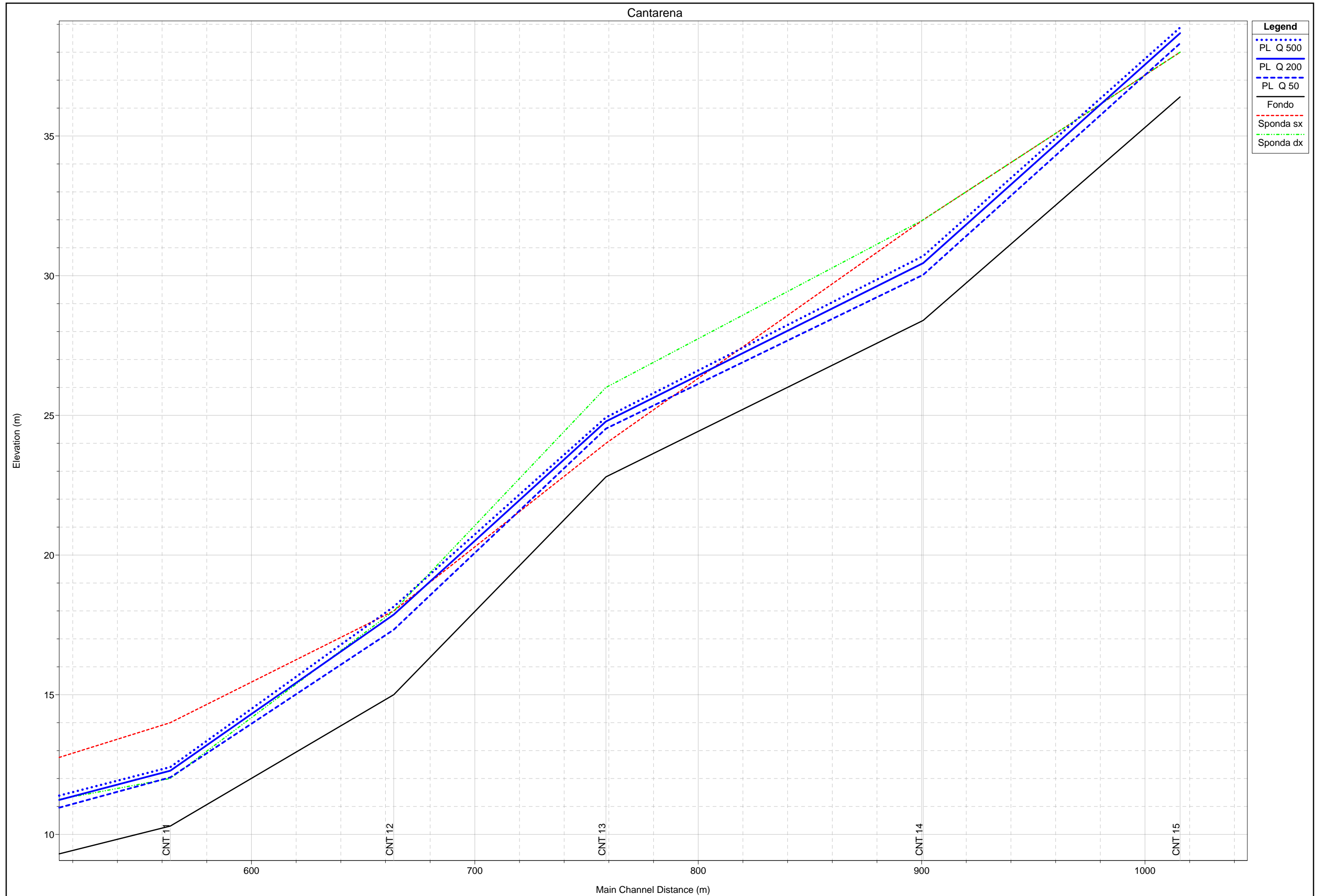


Torrente Cantarena (Arenzano)

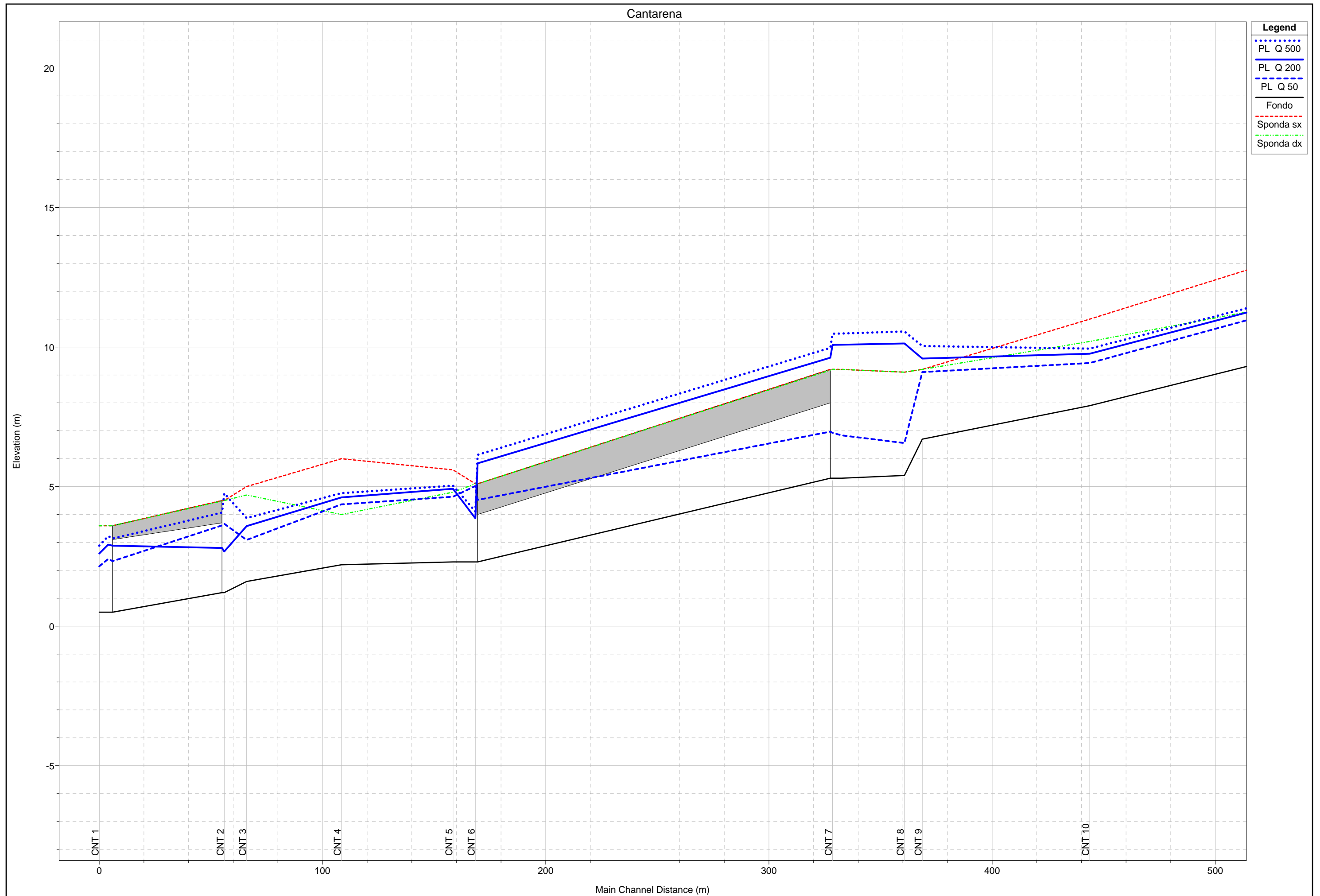
dalla sezione CNT 15 alla CNT 1

- Profili di corrente
- Sezioni idrauliche
- Tabelle dei risultati



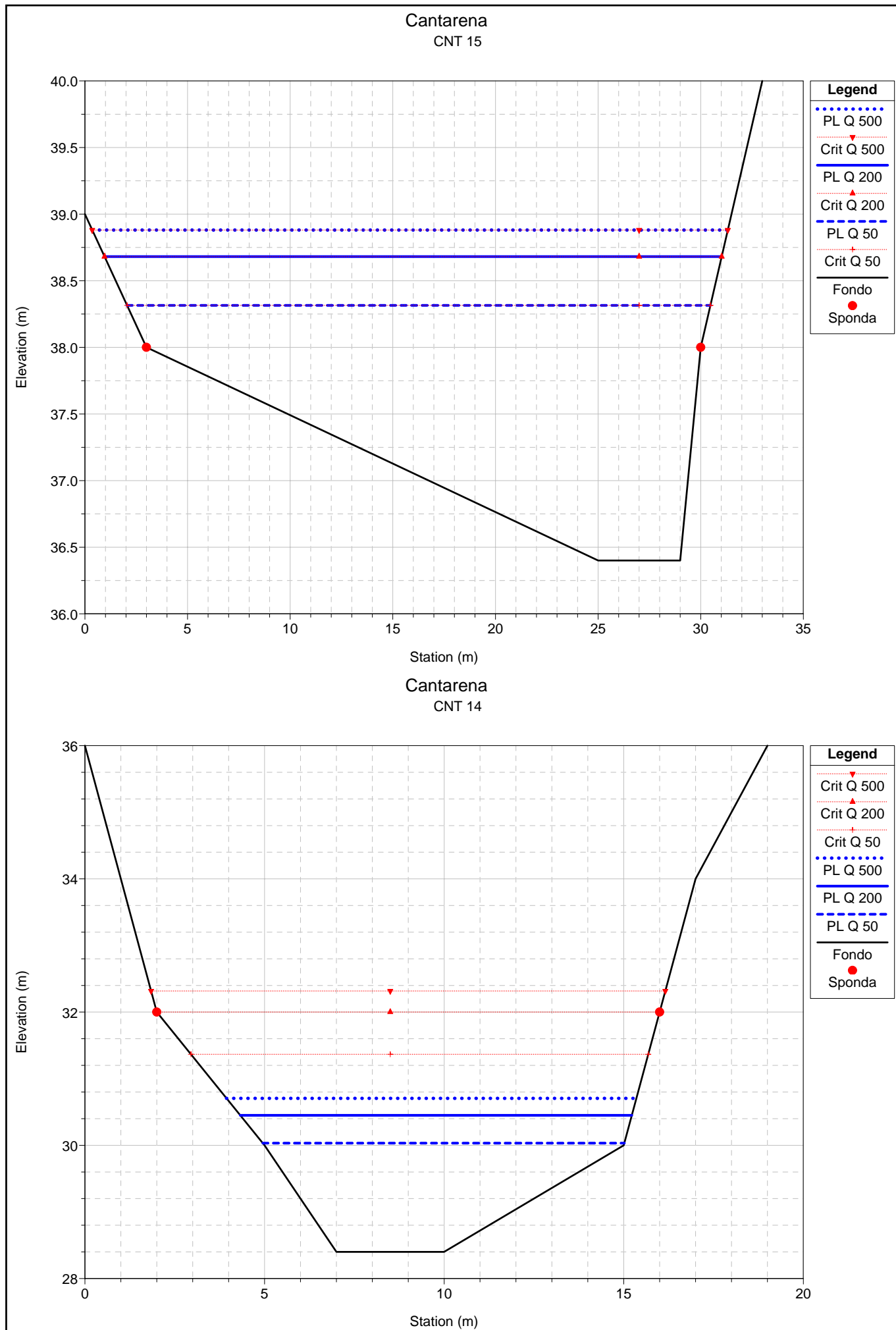
1 cm Horiz. = 15 m 1 cm Vert. = 1.2 m

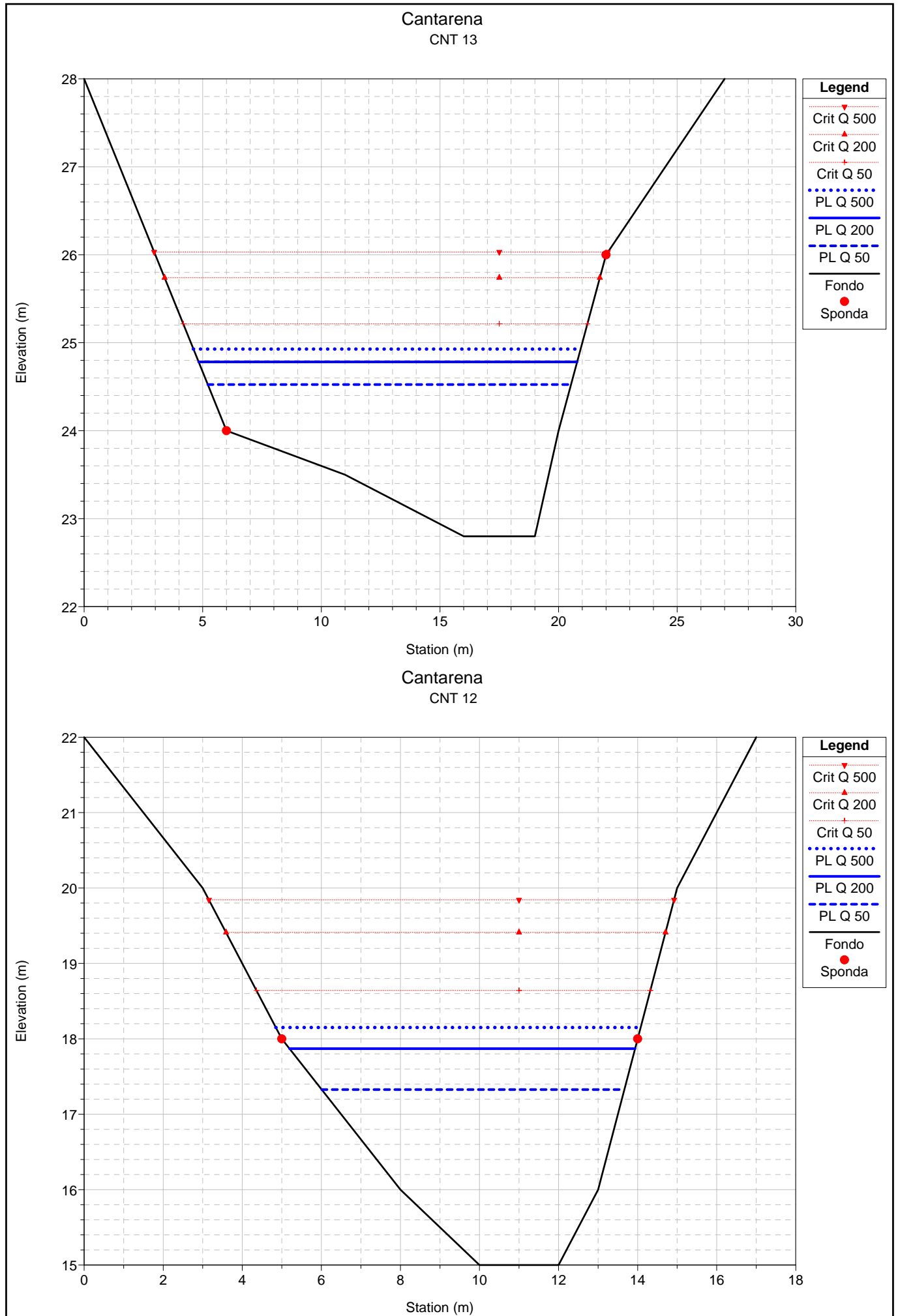
Approvato con D.C.P. n. 28 del 28-03-2007

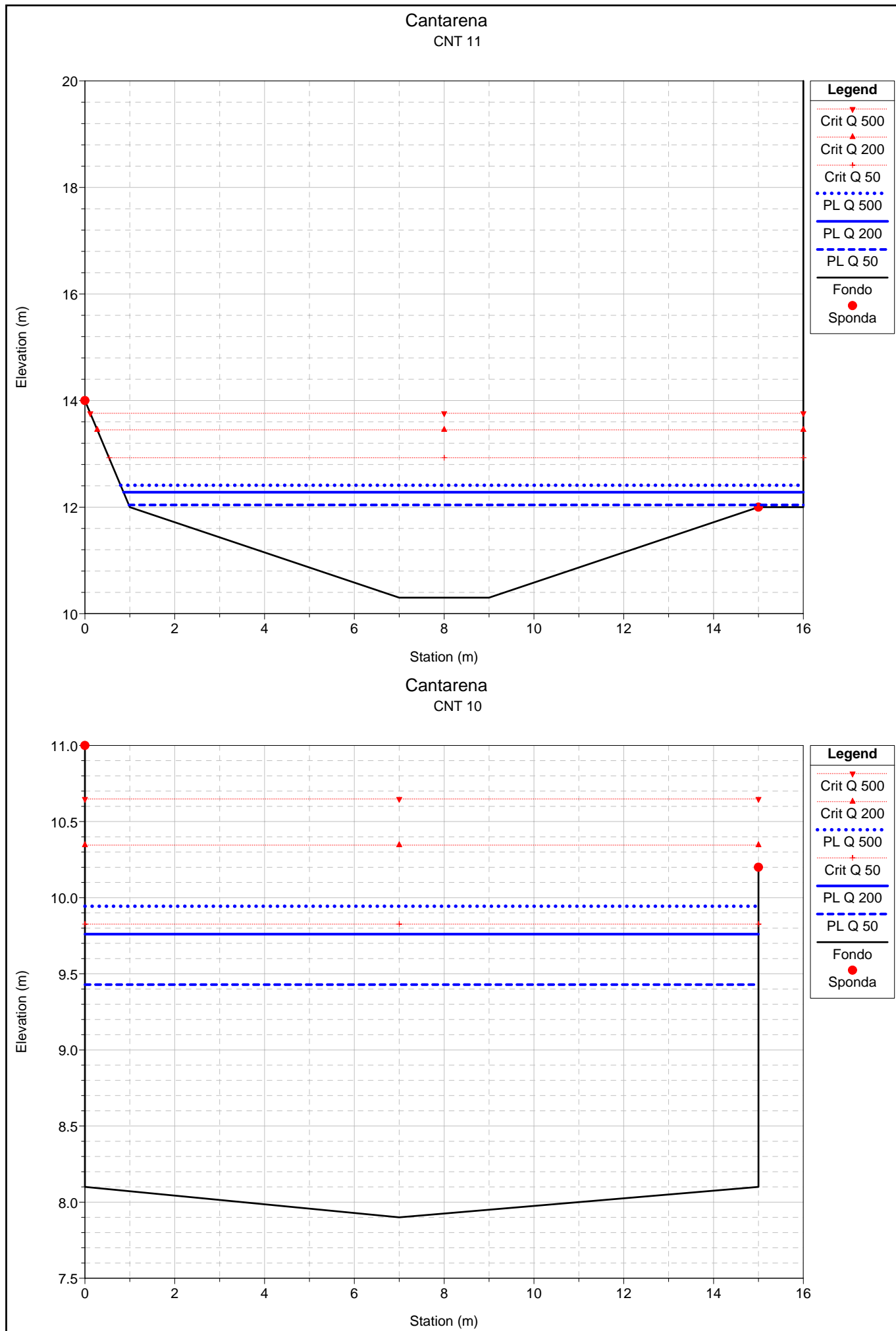


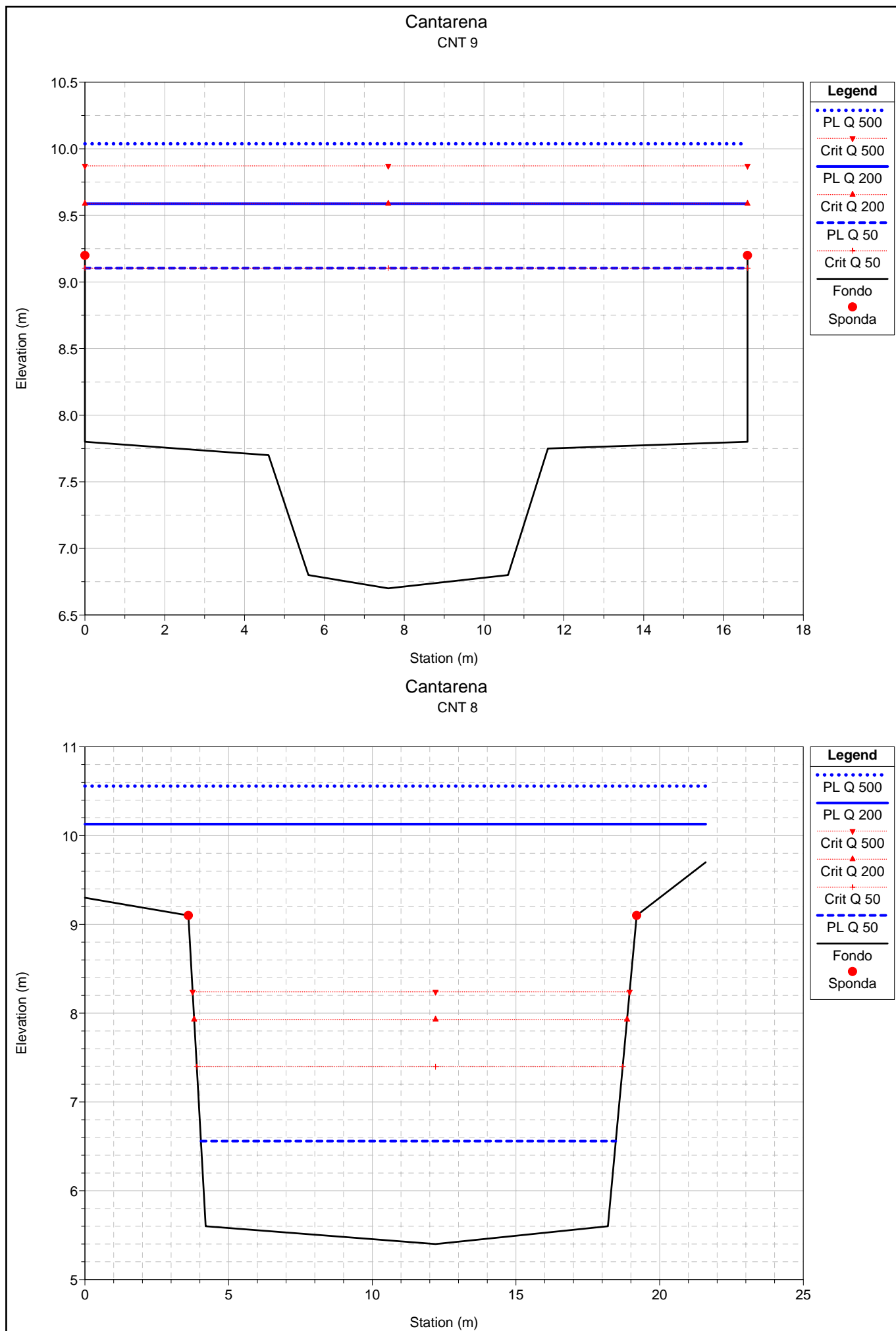
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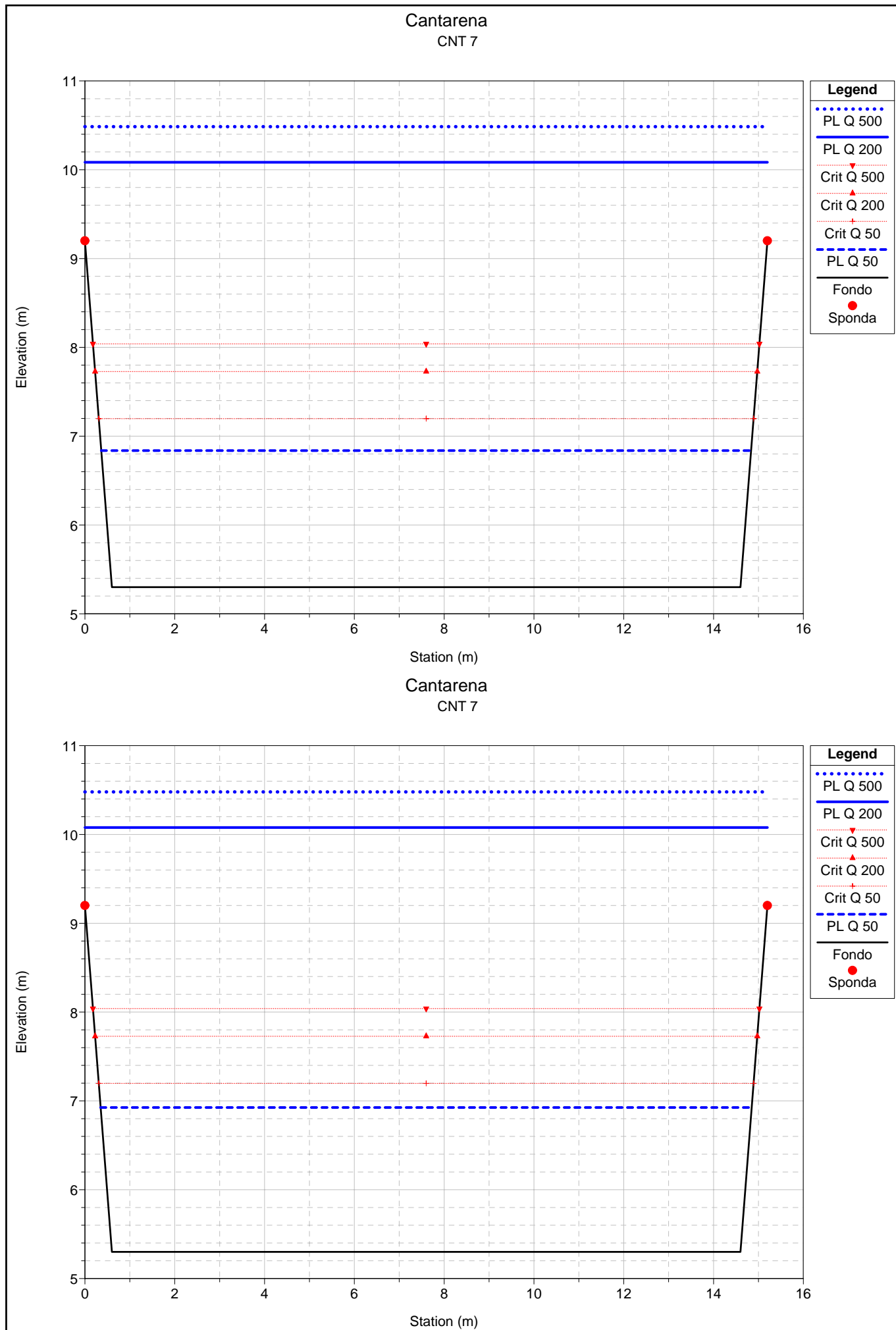
Approvato con D.C.P. n. 28 del 28-03-2007

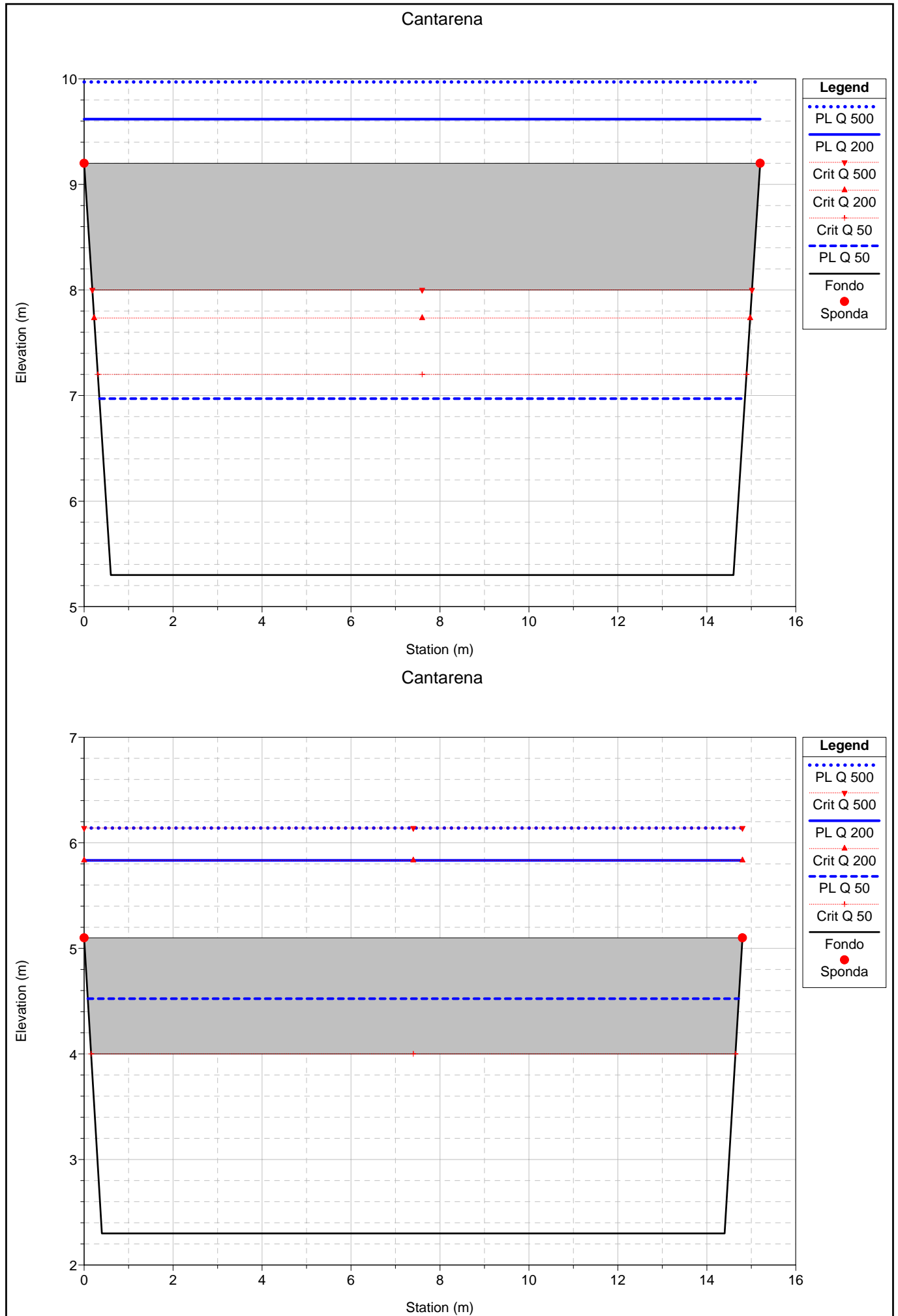


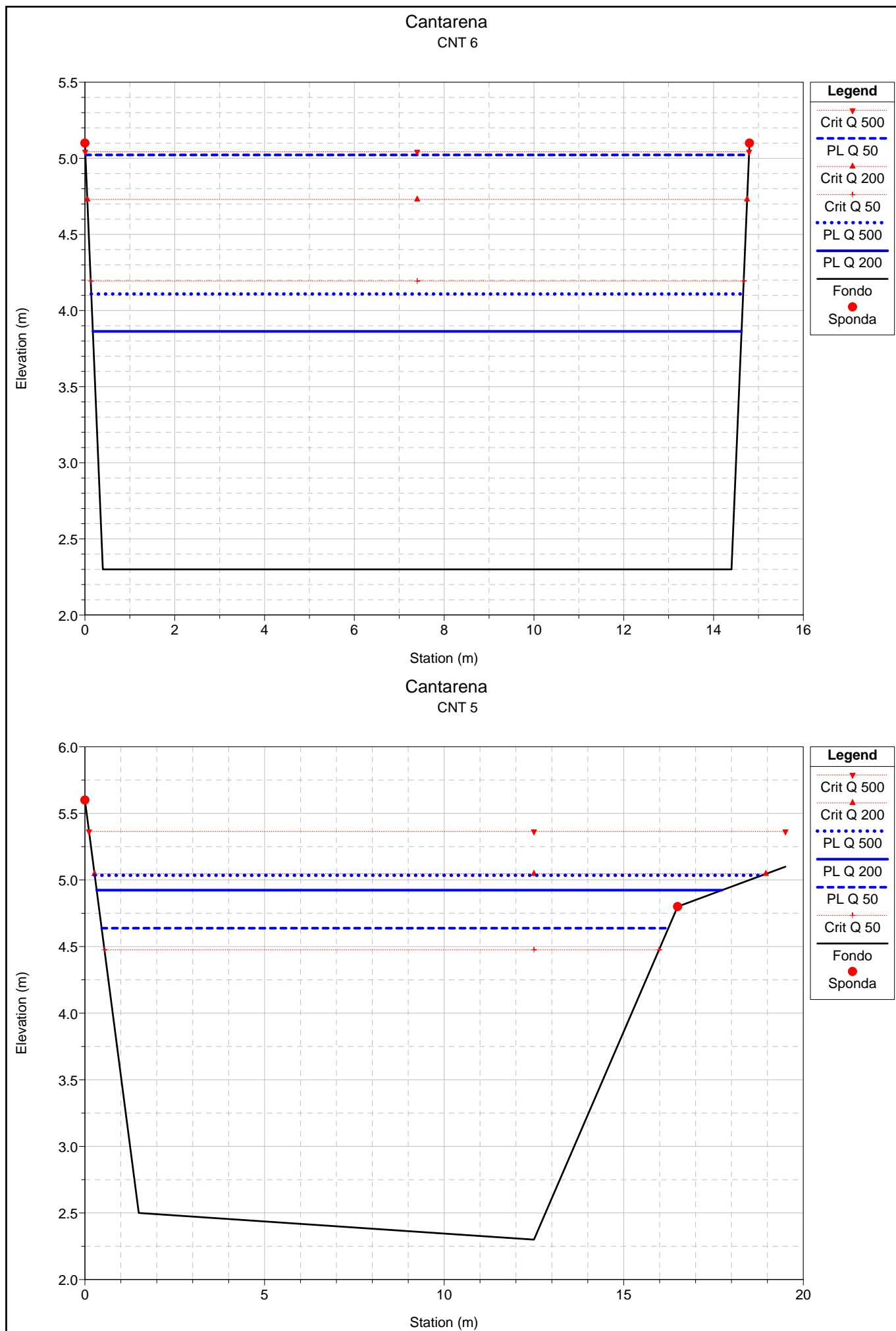


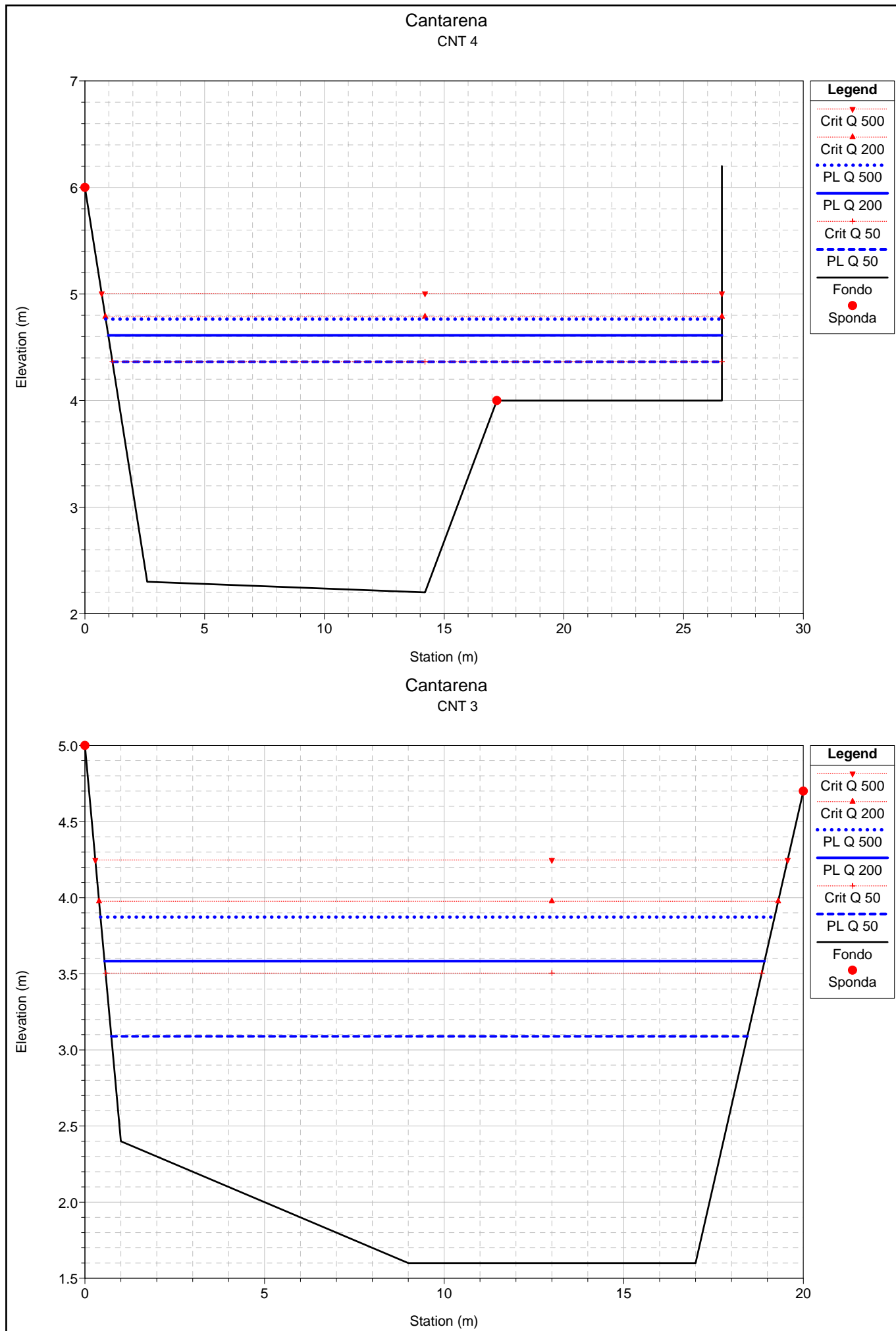


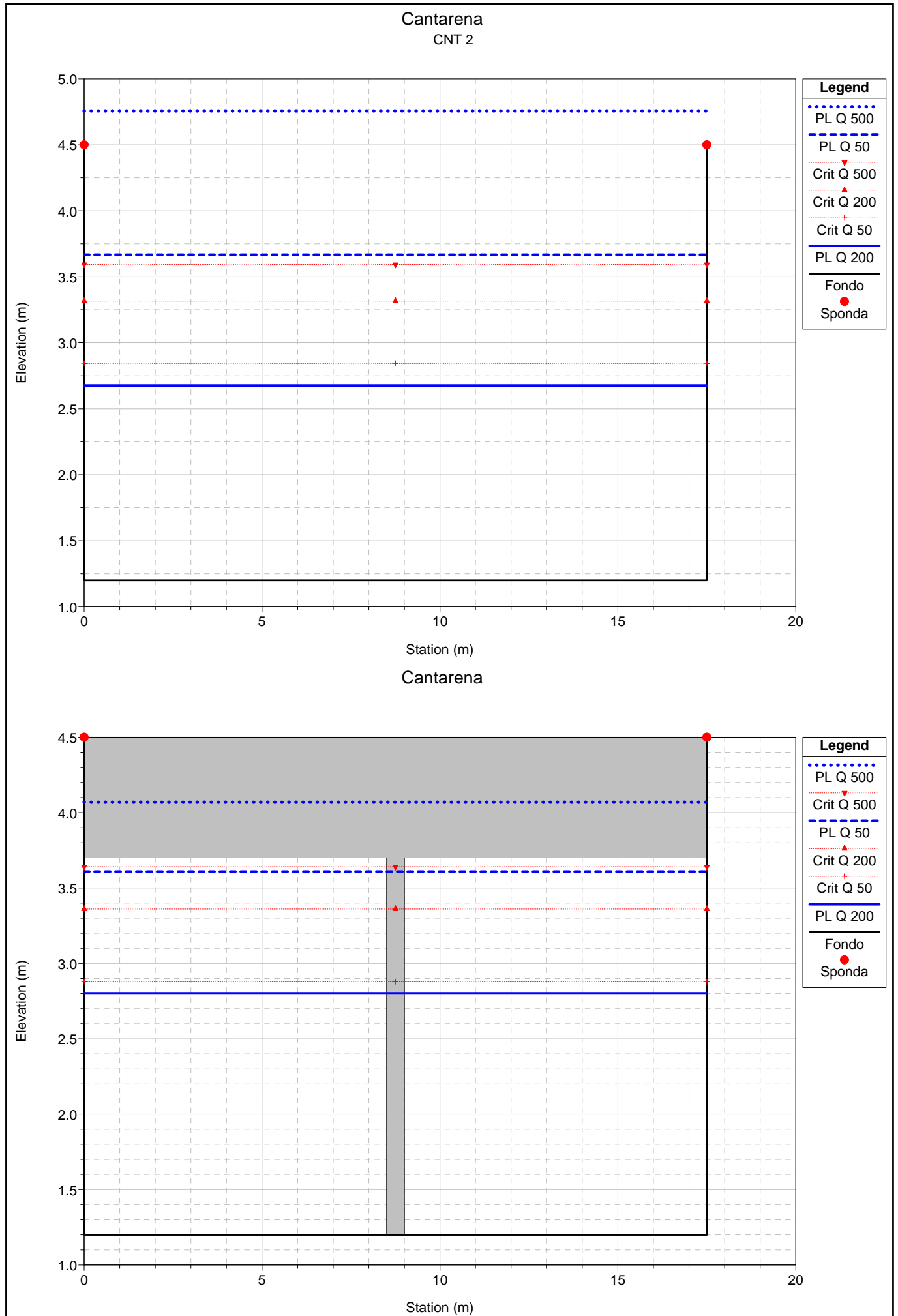


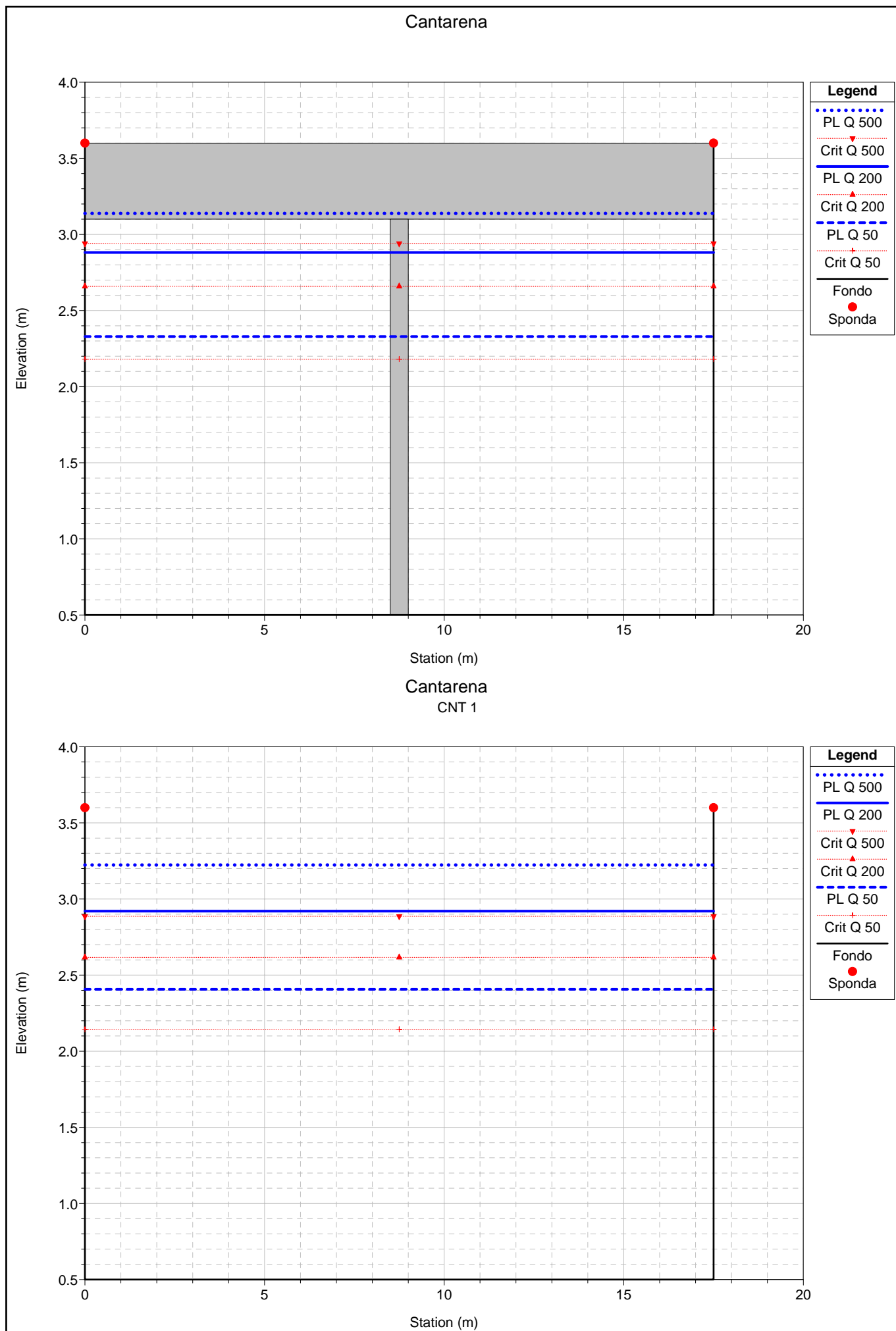


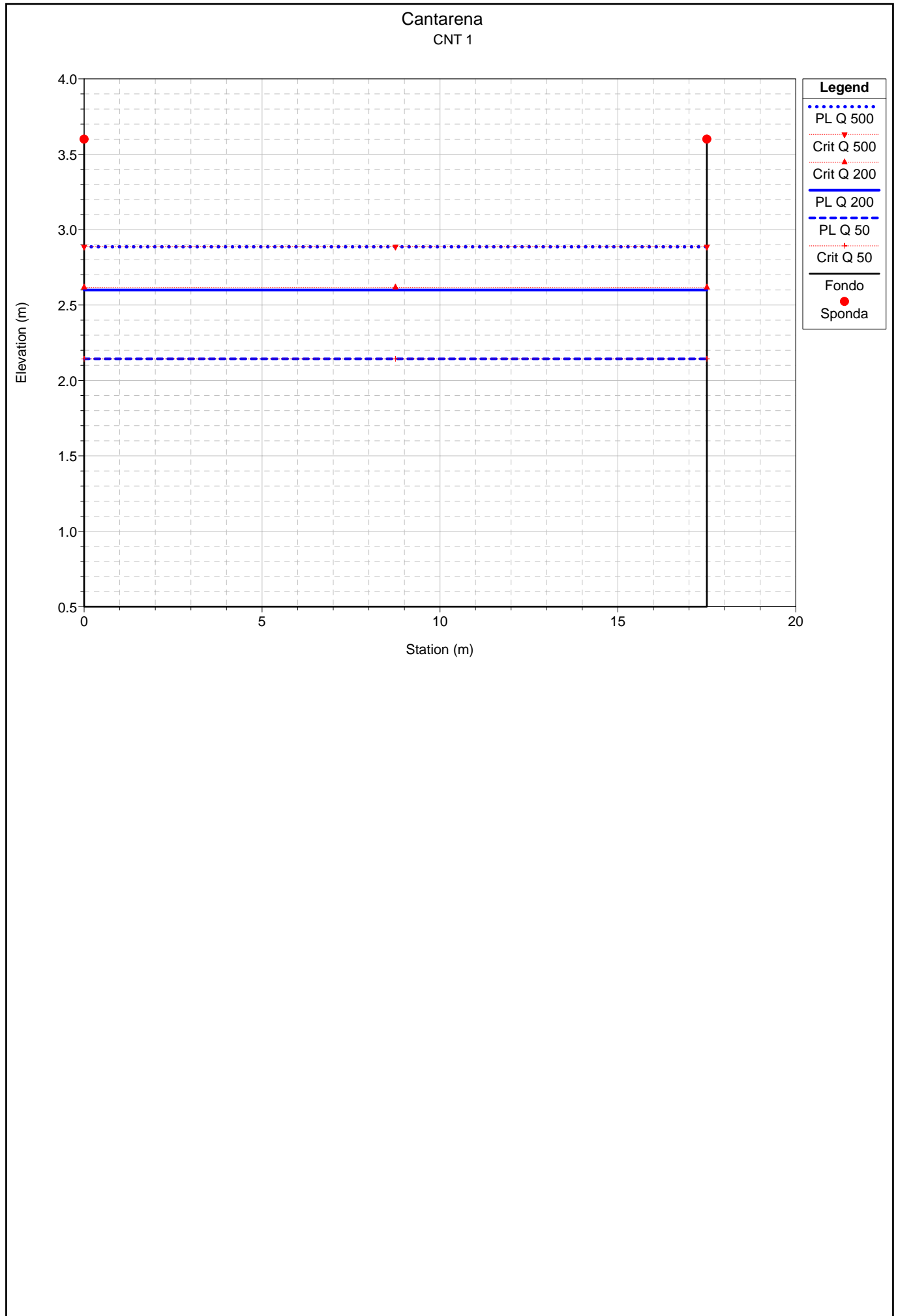












HEC-RAS Plan: Cantarena River: Cantarena Reach: Cantarena

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
Cantarena	15	CNT 15	Q 50	116.00	36.40	38.31	38.00	-0.31	38.00	-0.31	38.31	38.93	0.008615	3.48	33.52	28.42	1.00
Cantarena	15	CNT 15	Q 200	169.00	36.40	38.68	38.00	-0.68	38.00	-0.68	38.68	39.44	0.007587	3.88	44.23	30.06	0.98
Cantarena	15	CNT 15	Q 500	203.00	36.40	38.88	38.00	-0.88	38.00	-0.88	38.88	39.74	0.007315	4.12	50.34	30.96	0.98
Cantarena	14	CNT 14	Q 50	116.00	28.40	30.03	32.00	1.97	32.00	1.97	31.37	35.99	0.107558	10.81	10.73	10.07	3.34
Cantarena	14	CNT 14	Q 200	169.00	28.40	30.45	32.00	1.55	32.00	1.55	32.00	36.82	0.083886	11.18	15.12	10.90	3.03
Cantarena	14	CNT 14	Q 500	203.00	28.40	30.70	32.00	1.30	32.00	1.30	32.32	37.22	0.073935	11.31	17.94	11.41	2.88
Cantarena	13	CNT 13	Q 50	116.00	22.80	24.52	24.00	-0.53	26.00	1.48	25.21	26.82	0.035058	6.72	17.39	15.31	1.97
Cantarena	13	CNT 13	Q 200	169.00	22.80	24.78	24.00	-0.78	26.00	1.22	25.74	28.01	0.039264	7.99	21.42	15.96	2.14
Cantarena	13	CNT 13	Q 500	203.00	22.80	24.93	24.00	-0.93	26.00	1.07	26.03	28.73	0.041271	8.68	23.78	16.32	2.22
Cantarena	12	CNT 12	Q 50	116.00	15.00	17.33	18.00	0.67	18.00	0.67	18.64	22.17	0.063682	9.75	11.89	7.65	2.50
Cantarena	12	CNT 12	Q 200	169.00	15.00	17.87	18.00	0.13	18.00	0.13	19.41	23.32	0.057549	10.34	16.34	8.74	2.41
Cantarena	12	CNT 12	Q 500	203.00	15.00	18.15	18.00	-0.15	18.00	-0.15	19.84	24.06	0.053914	10.77	18.87	9.23	2.37
Cantarena	11	CNT 11	Q 50	116.00	10.30	12.04	14.00	1.96	12.00	-0.04	12.93	15.45	0.062170	8.18	14.22	15.02	2.60
Cantarena	11	CNT 11	Q 200	169.00	10.30	12.28	14.00	1.72	12.00	-0.28	13.45	16.94	0.065748	9.58	17.83	15.14	2.75
Cantarena	11	CNT 11	Q 500	203.00	10.30	12.41	14.00	1.59	12.00	-0.41	13.76	17.87	0.068445	10.38	19.81	15.21	2.84
Cantarena	10	CNT 10	Q 50	116.00	7.90	9.43	11.00	1.57	10.20	0.77	9.83	10.92	0.020373	5.41	21.43	15.00	1.45
Cantarena	10	CNT 10	Q 200	169.00	7.90	9.76	11.00	1.24	10.20	0.44	10.35	11.85	0.022658	6.40	26.40	15.00	1.54
Cantarena	10	CNT 10	Q 500	203.00	7.90	9.94	11.00	1.06	10.20	0.26	10.65	12.41	0.024109	6.96	29.16	15.00	1.59
Cantarena	9	CNT 9	Q 50	116.00	6.70	9.10	9.20	0.10	9.20	0.10	9.10	9.96	0.009446	4.09	28.33	16.60	1.00
Cantarena	9	CNT 9	Q 200	169.00	6.70	9.59	9.20	-0.39	9.20	-0.39	9.59	10.69	0.009301	4.65	36.35	16.60	1.00
Cantarena	9	CNT 9	Q 500	203.00	6.70	10.04	9.20	-0.84	9.20	-0.84	9.87	11.13	0.007610	4.63	43.83	16.60	0.91
Cantarena	8	CNT 8	Q 50	116.00	5.40	6.56	9.10	2.54	9.10	2.54	7.40	9.59	0.058013	7.71	15.04	14.44	2.41
Cantarena	8	CNT 8	Q 200	169.00	5.40	10.13	9.10	-1.03	9.10	-1.03	7.93	10.41	0.001050	2.38	74.34	21.60	0.36
Cantarena	8	CNT 8	Q 500	203.00	5.40	10.56	9.10	-1.46	9.10	-1.46	8.24	10.88	0.001082	2.57	83.60	21.60	0.37
Cantarena	7.1	CNT 7	Q 50	116.00	5.30	6.84	9.20	2.36	9.20	2.36	7.20	8.27	0.018164	5.30	21.90	14.47	1.37
Cantarena	7.1	CNT 7	Q 200	169.00	5.30	10.08	9.20	-0.88	9.20	-0.88	7.73	10.38	0.001213	2.40	70.37	15.20	0.36
Cantarena	7.1	CNT 7	Q 500	203.00	5.30	10.49	9.20	-1.29	9.20	-1.29	8.04	10.84	0.001387	2.65	76.48	15.20	0.38
Cantarena	7	CNT 7	Q 50	116.00	5.30	6.93	9.20	2.27	9.20	2.27	7.20	8.20	0.015288	5.01	23.16	14.50	1.26
Cantarena	7	CNT 7	Q 200	169.00	5.30	10.08	9.20	-0.88	9.20	-0.88	7.73	10.37	0.001218	2.40	70.28	15.20	0.36
Cantarena	7	CNT 7	Q 500	203.00	5.30	10.48	9.20	-1.28	9.20	-1.28	8.04	10.84	0.001392	2.66	76.38	15.20	0.38
Cantarena	6.1			Bridge													
Cantarena	6	CNT 6	Q 50	116.00	2.30	5.02	5.10	0.08	5.10	0.08	4.19	5.47	0.003113	2.96	39.17	14.78	0.58
Cantarena	6	CNT 6	Q 200	169.00	2.30	3.86	5.10	1.24	5.10	1.24	4.73	6.81	0.036805	7.60	22.23	14.45	1.96
Cantarena	6	CNT 6	Q 500	203.00	2.30	4.11	5.10	0.99	5.10	0.99	5.04	7.26	0.033624	7.87	25.79	14.52	1.88
Cantarena	5	CNT 5	Q 50	116.00	2.30	4.64	5.60	0.96	4.80	0.16	4.48	5.39	0.006629	3.85	30.10	15.78	0.89
Cantarena	5	CNT 5	Q 200	169.00	2.30	4.92	5.60	0.68	4.80	-0.12	5.05	6.13	0.009188	4.87	34.75	17.41	1.06
Cantarena	5	CNT 5	Q 500	203.00	2.30	5.04	5.60	0.56	4.80	-0.24	5.36	6.61	0.011272	5.56	36.76	18.58	1.18

HEC-RAS Plan: Cantarena River: Cantarena Reach: Cantarena (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
Cantarena	4 CNT 4	Q 50	116.00	2.20	4.36	6.00	1.64	4.00	-0.36	4.36	5.05	0.006250	3.74	33.23	25.45	0.88
Cantarena	4 CNT 4	Q 200	169.00	2.20	4.61	6.00	1.39	4.00	-0.61	4.79	5.65	0.008307	4.64	39.58	25.62	1.03
Cantarena	4 CNT 4	Q 500	203.00	2.20	4.76	6.00	1.24	4.00	-0.76	5.01	6.00	0.009234	5.09	43.47	25.73	1.09
Cantarena	3 CNT 3	Q 50	116.00	1.60	3.09	5.00	1.91	4.70	1.61	3.50	4.53	0.021014	5.32	21.79	17.71	1.53
Cantarena	3 CNT 3	Q 200	169.00	1.60	3.58	5.00	1.42	4.70	1.12	3.98	5.13	0.015464	5.50	30.70	18.37	1.36
Cantarena	3 CNT 3	Q 500	203.00	1.60	3.87	5.00	1.13	4.70	0.83	4.25	5.49	0.013651	5.63	36.08	18.77	1.30
Cantarena	2 CNT 2	Q 50	116.00	1.20	3.67	4.50	0.83	4.50	0.83	2.84	4.03	0.002715	2.69	43.17	17.50	0.55
Cantarena	2 CNT 2	Q 200	169.00	1.20	2.68	4.50	1.82	4.50	1.82	3.32	4.86	0.028257	6.55	25.82	17.50	1.72
Cantarena	2 CNT 2	Q 500	203.00	1.20	4.76	4.50	-0.26	4.50	-0.26	3.59	5.30	0.002777	3.26	62.26	17.50	0.55
Cantarena	1.11	Bridge														
Cantarena	1.1 CNT 1	Q 50	116.00	0.50	2.41	3.60	1.19	3.60	1.19	2.14	3.02	0.005982	3.48	33.37	17.50	0.80
Cantarena	1.1 CNT 1	Q 200	169.00	0.50	2.92	3.60	0.68	3.60	0.68	2.62	3.73	0.006107	3.99	42.35	17.50	0.82
Cantarena	1.1 CNT 1	Q 500	203.00	0.50	3.22	3.60	0.38	3.60	0.38	2.89	4.15	0.006159	4.26	47.67	17.50	0.82
Cantarena	1 CNT 1	Q 50	116.00	0.50	2.14	3.60	1.46	3.60	1.46	2.14	2.97	0.009502	4.03	28.76	17.50	1.00
Cantarena	1 CNT 1	Q 200	169.00	0.50	2.60	3.60	1.00	3.60	1.00	2.62	3.68	0.009432	4.60	36.75	17.50	1.01
Cantarena	1 CNT 1	Q 500	203.00	0.50	2.89	3.60	0.71	3.60	0.71	2.89	4.09	0.009199	4.86	41.76	17.50	1.00