

AMBITO 14

Torrente Sturla



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 – T. STURLA

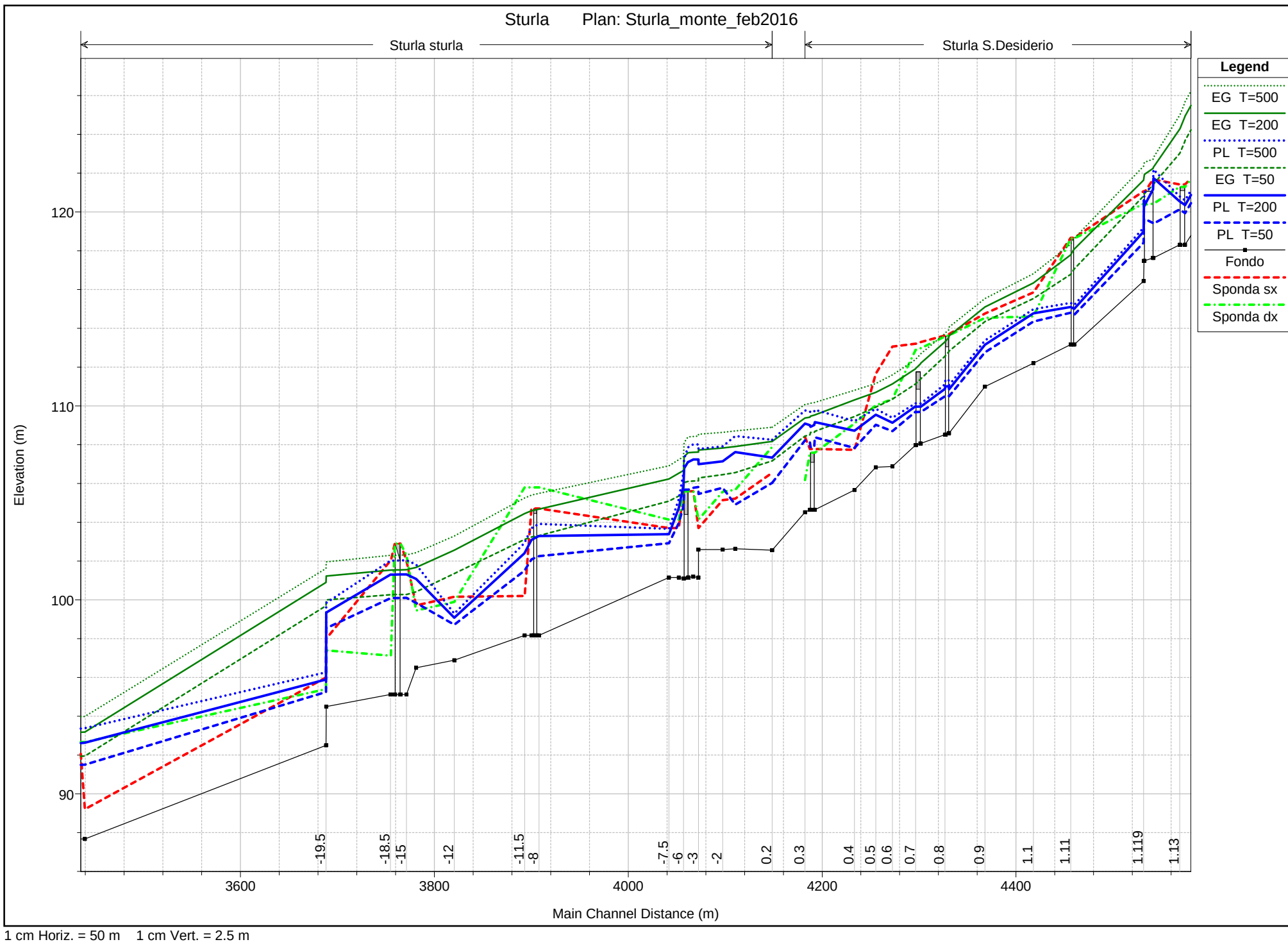
APPROVAZIONE	Delibera del Consiglio Provinciale di Genova n. 66 del 12/12/2002
ULTIMA MODIFICA DELL'ELABORATO	Delibera della Giunta Regionale n. 329 del 19/4/2016
ENTRATA IN VIGORE	BURL n.19 del 11/5/2016

Torrente Sturla

Asta principale – Tratto di monte

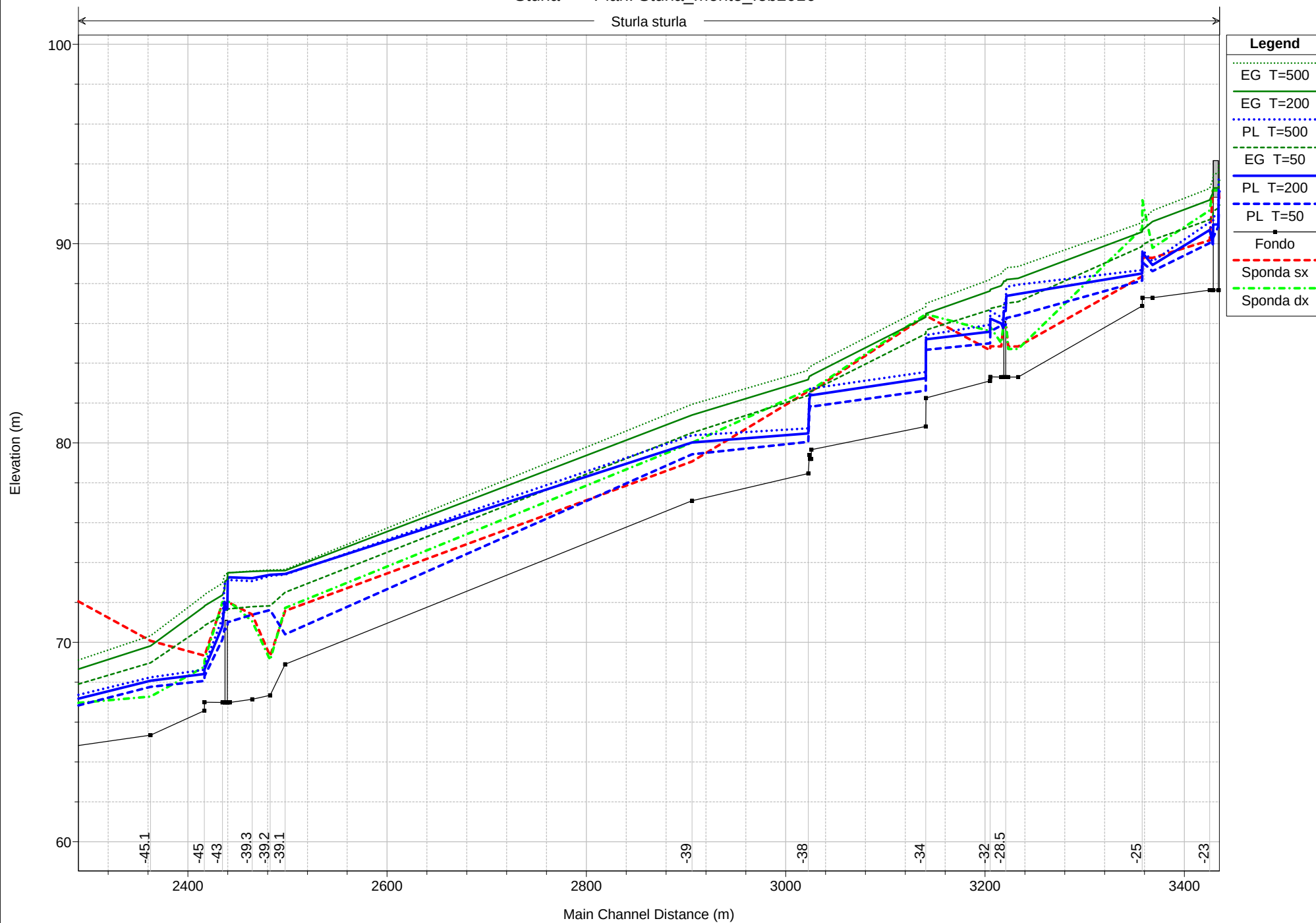
dalla sezione SM12 alla SM1 e dalla 0 alla 107

- Profili di corrente
- Sezioni idrauliche
- Tabelle dei risultati



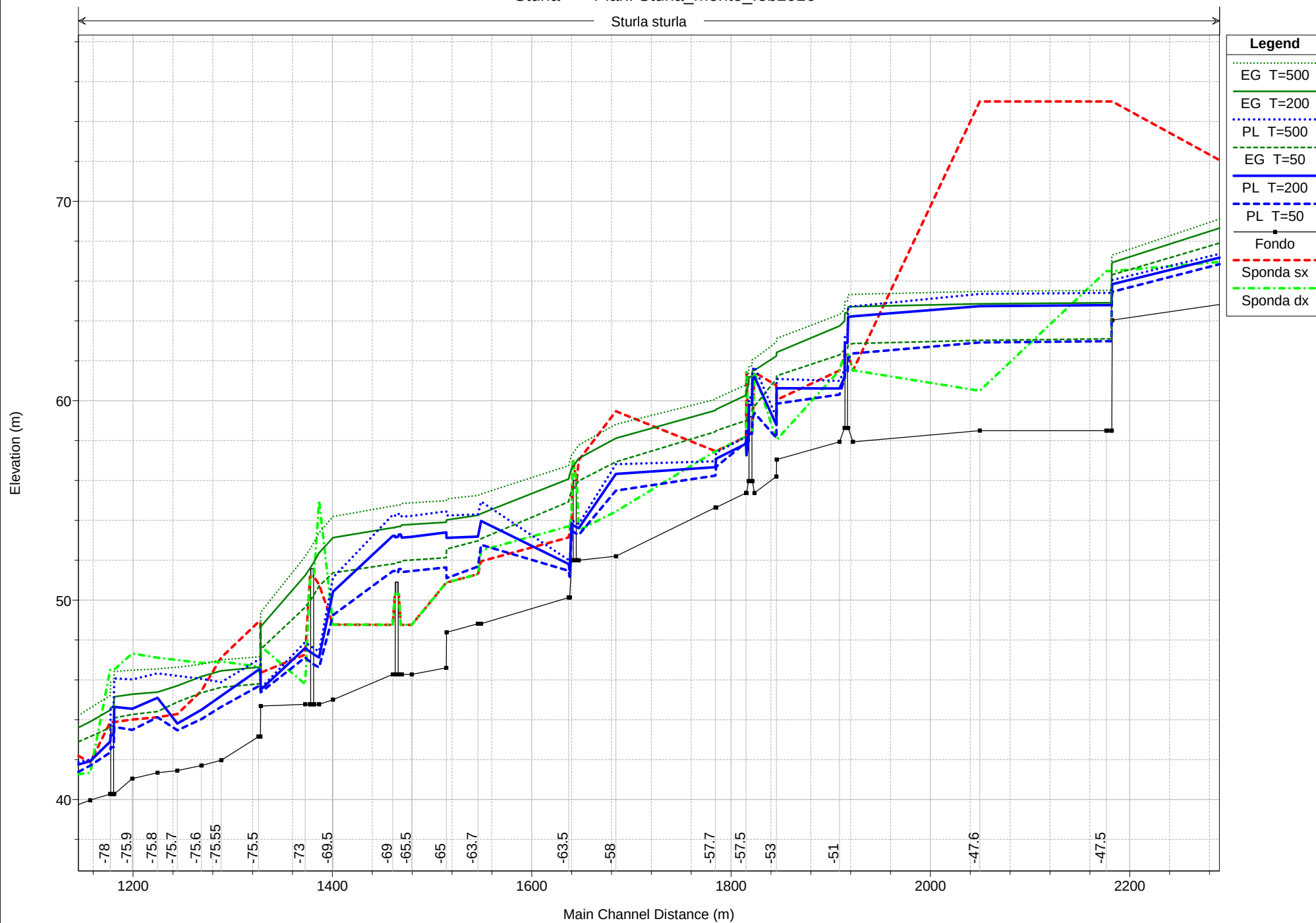
Sturla Plan: Sturla_monte_feb2016

Sturla sturla



Sturla Plan: Sturla_monte_feb2016

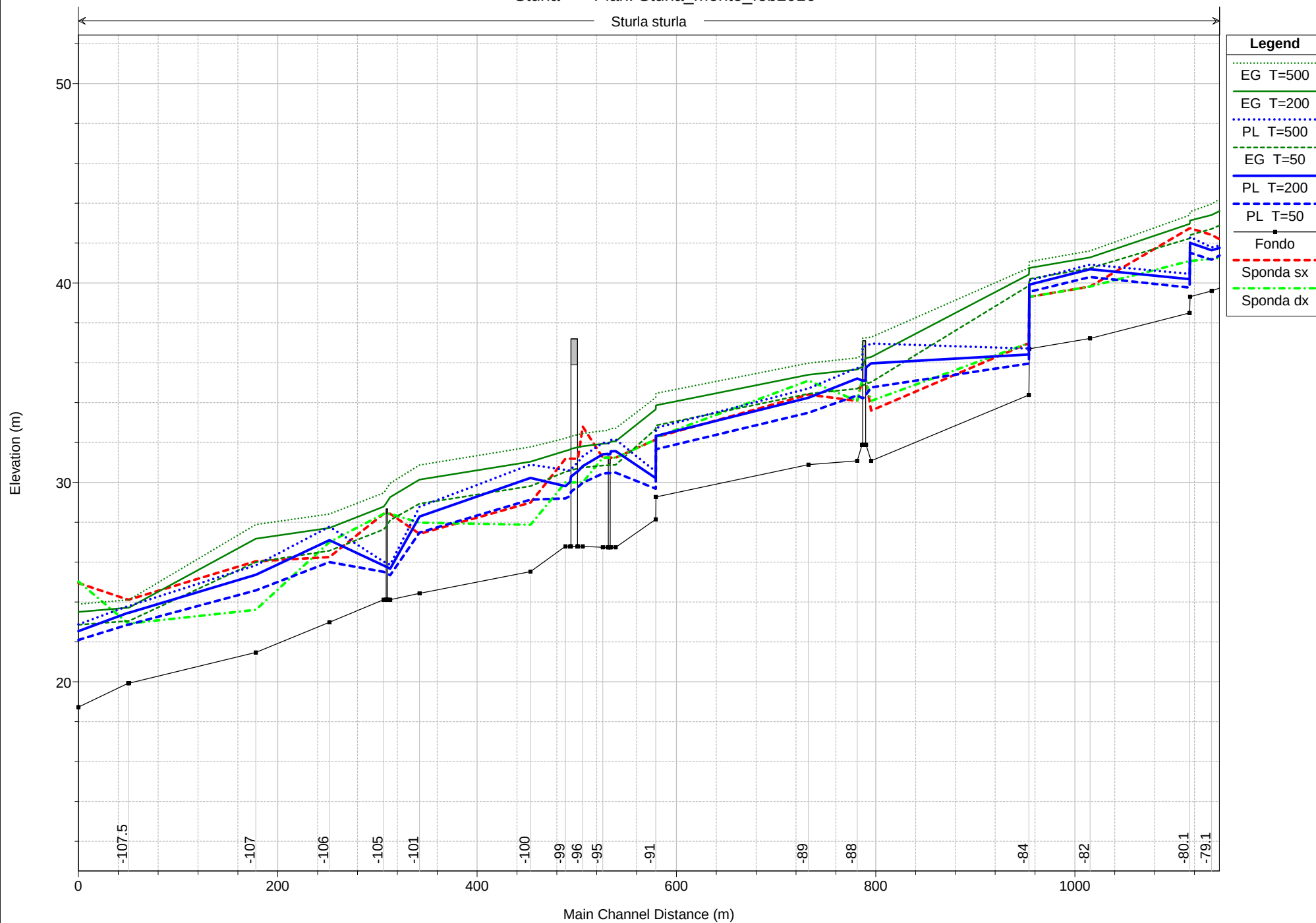
Sturla sturla



1 cm Horiz. = 50 m 1 cm Vert. = 2.5 m

Sturla Plan: Sturla_monte_feb2016

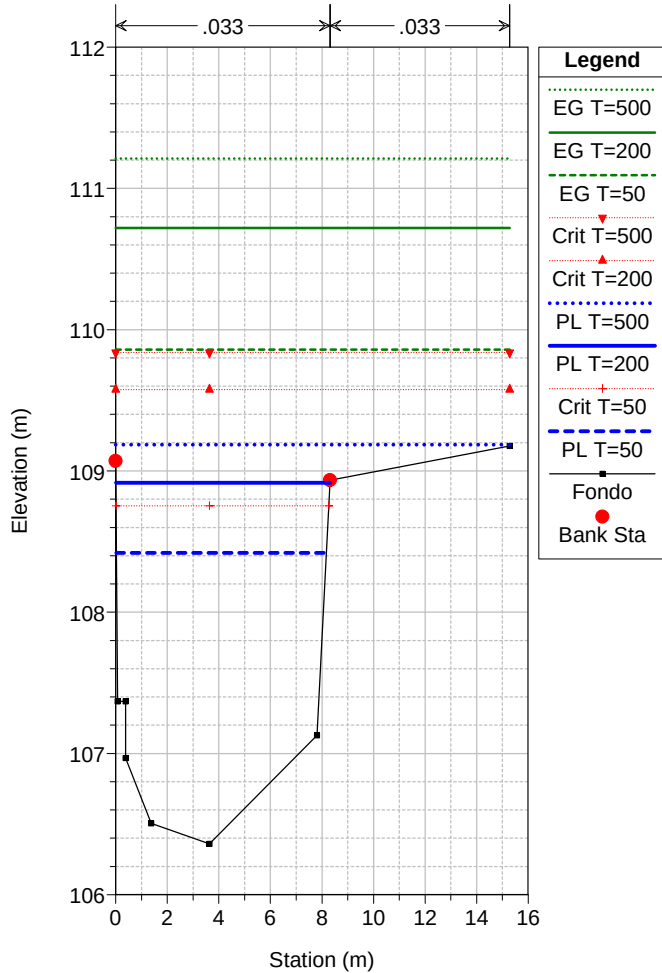
Sturla sturla



1 cm Horiz. = 50 m 1 cm Vert. = 2.5 m

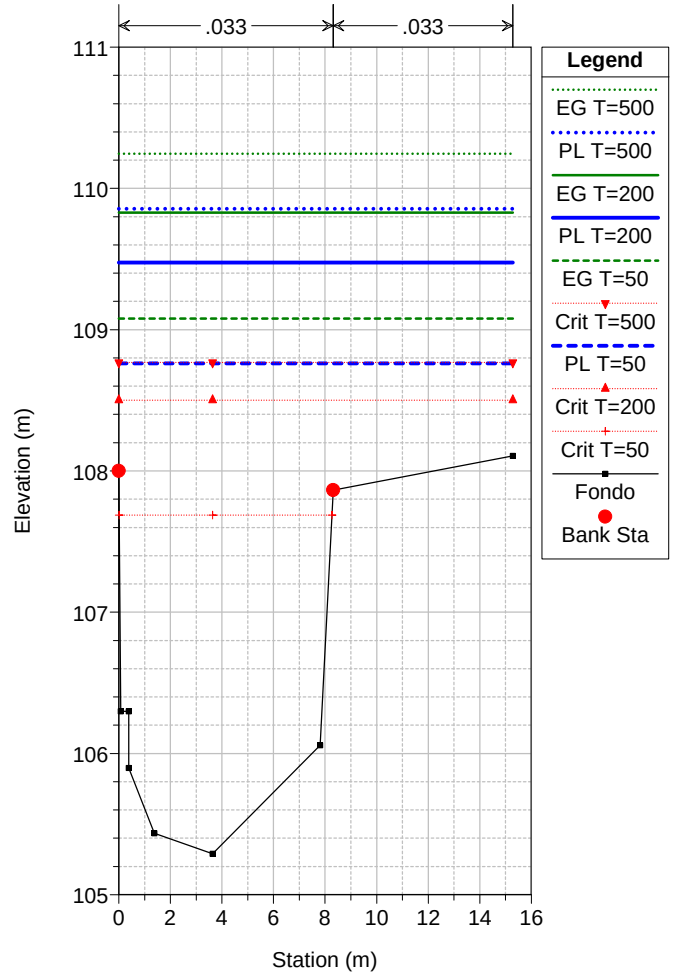
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River = Pomà Reach = Pomà RS = 4



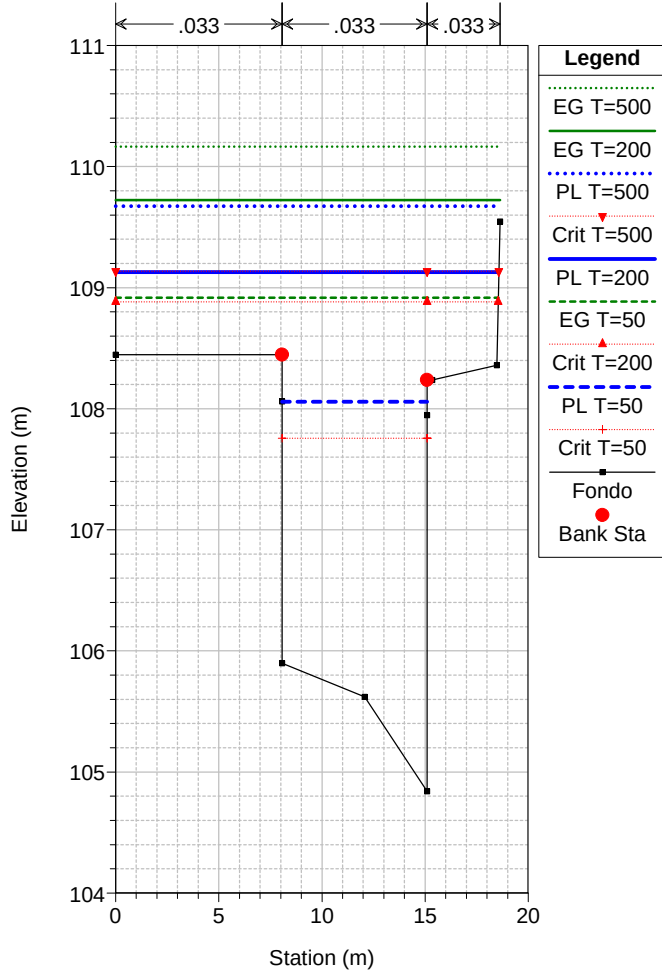
Sturla Plan: Sturla_monte_feb2016

River = Pomà Reach = Pomà RS = 3



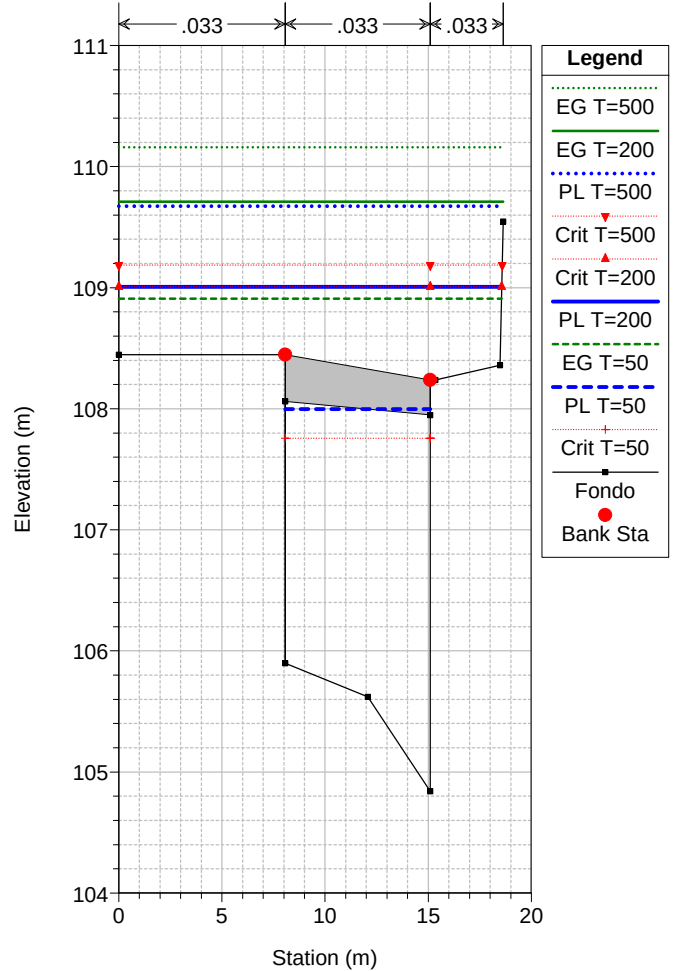
Sturla Plan: Sturla_monte_feb2016

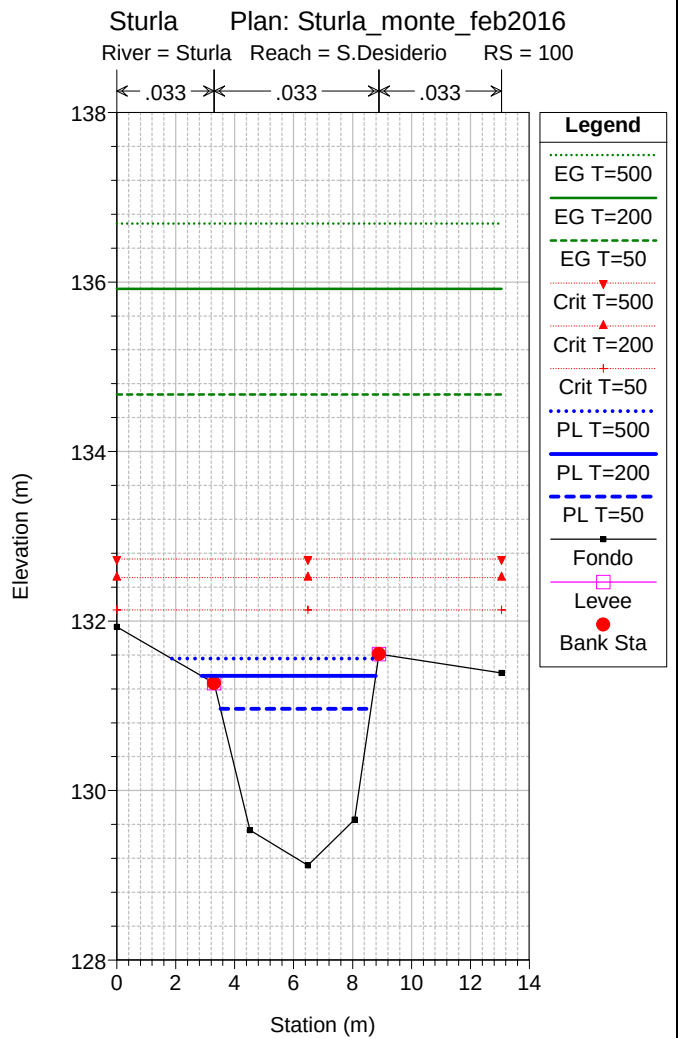
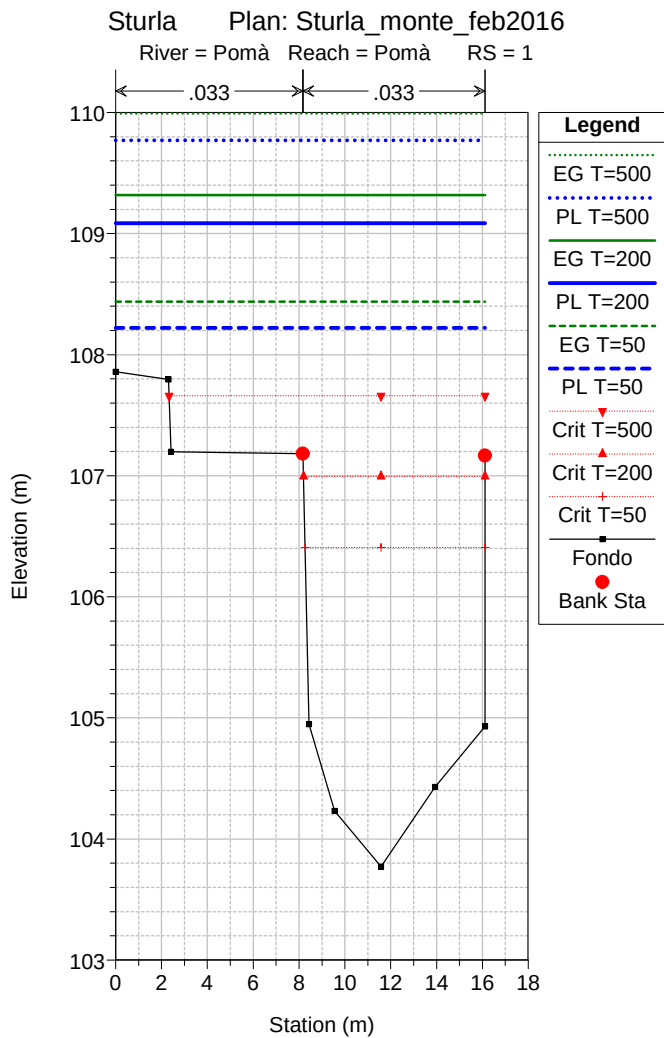
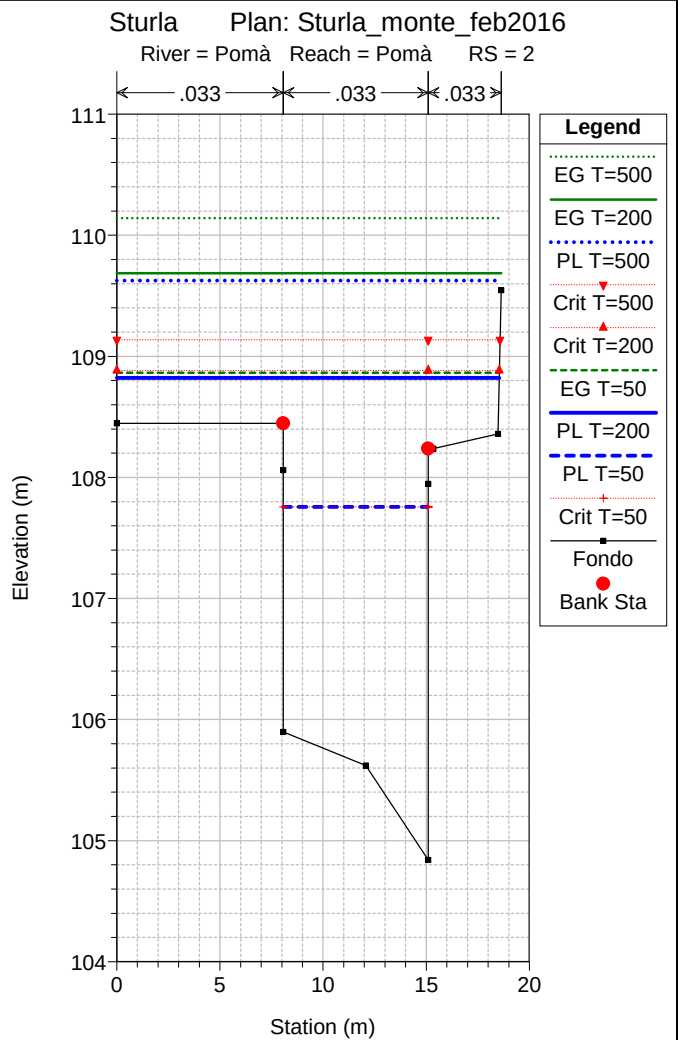
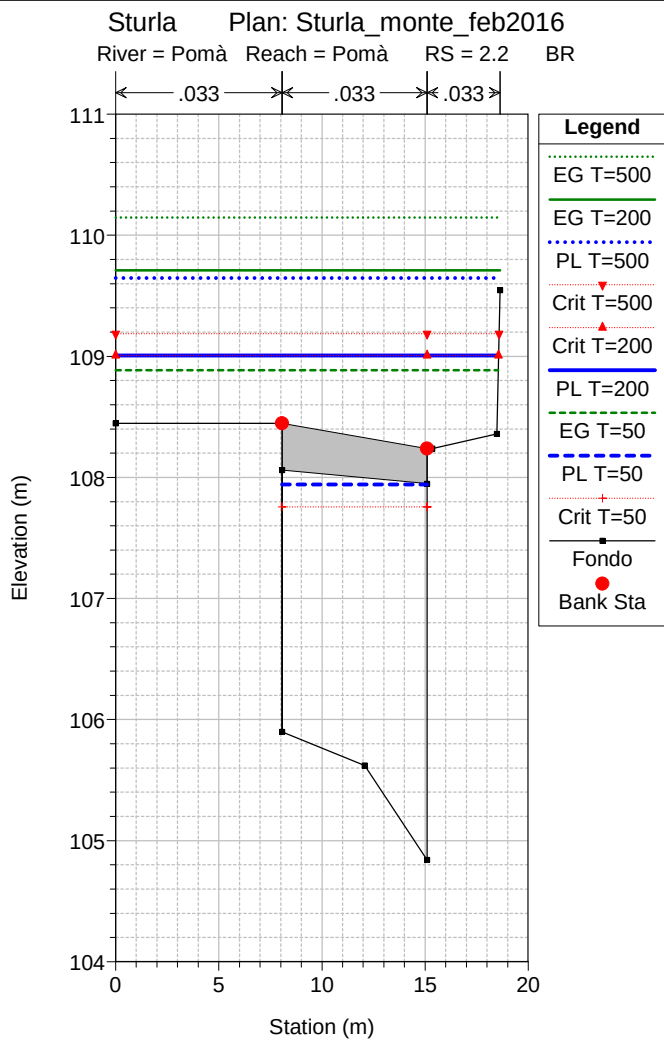
River = Pomà Reach = Pomà RS = 2.5



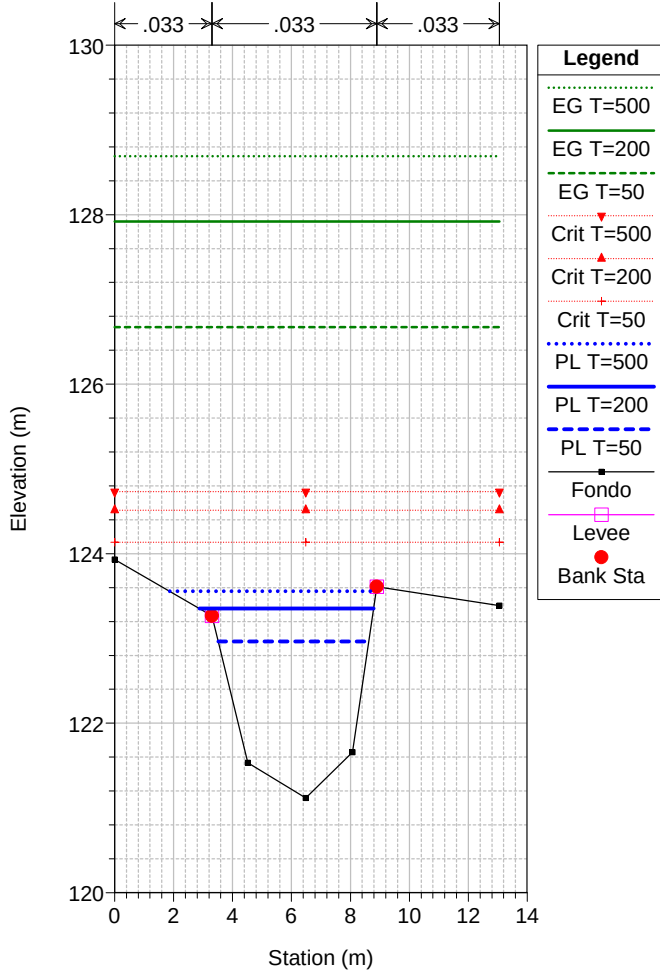
Sturla Plan: Sturla_monte_feb2016

River = Pomà Reach = Pomà RS = 2.2 BR

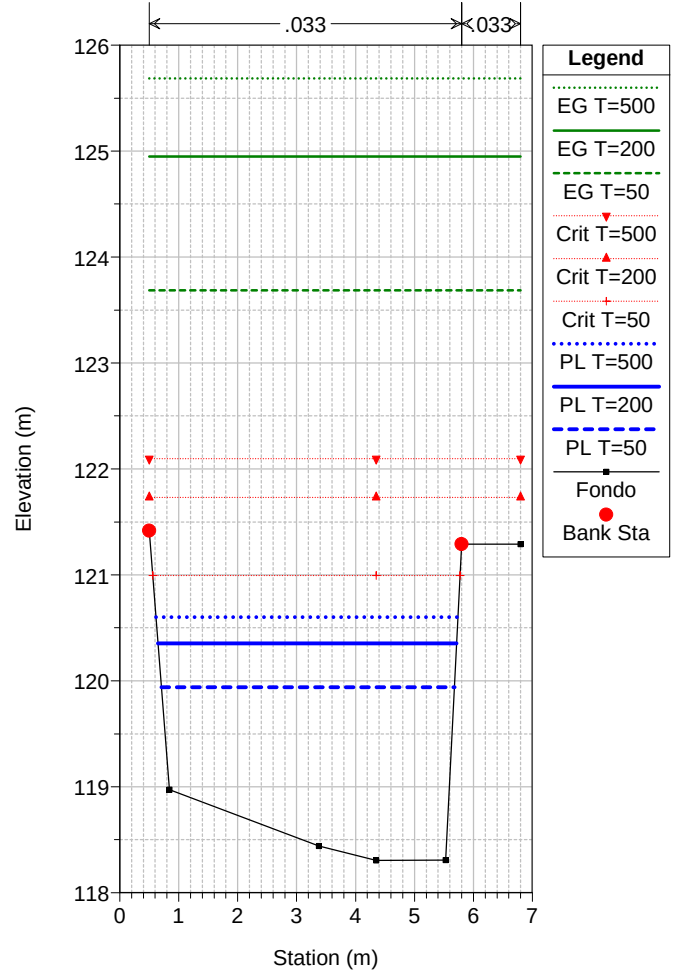




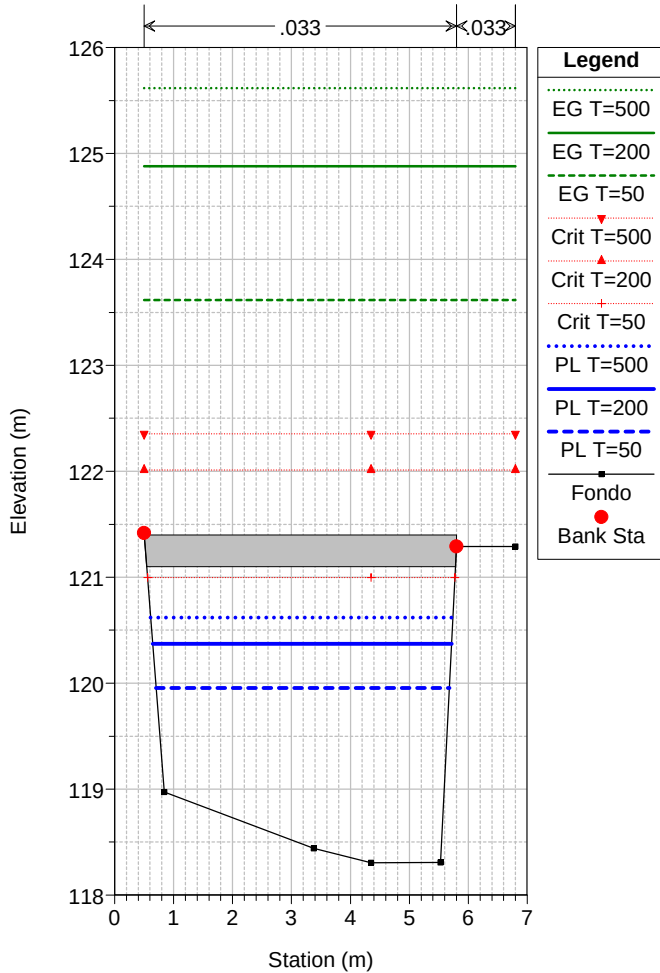
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River = Sturla Reach = S.Desiderio RS = 1.14



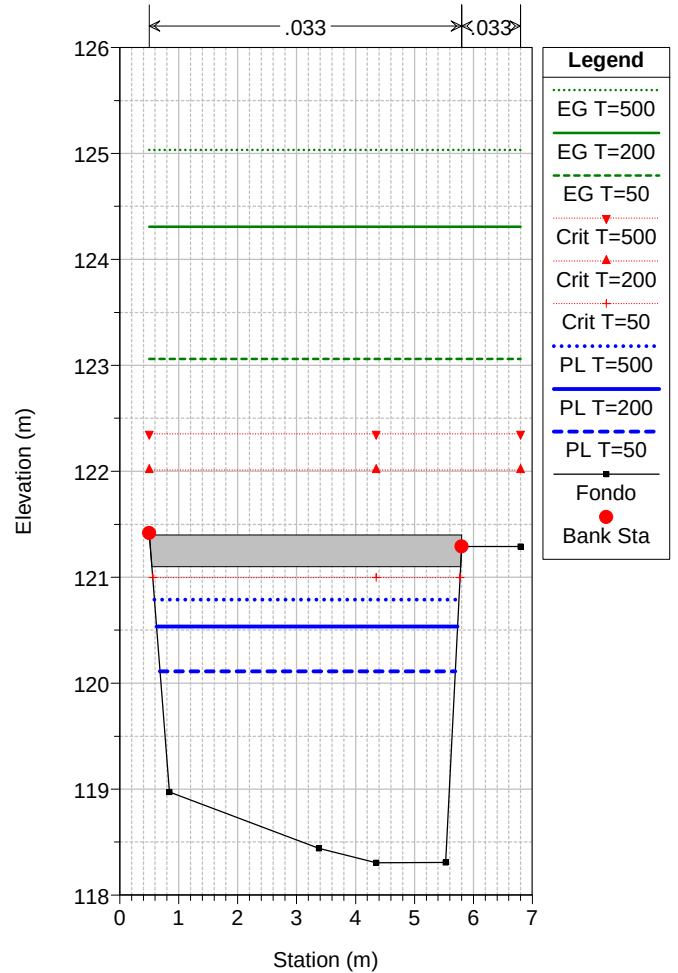
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River = Sturla Reach = S.Desiderio RS = 1.135

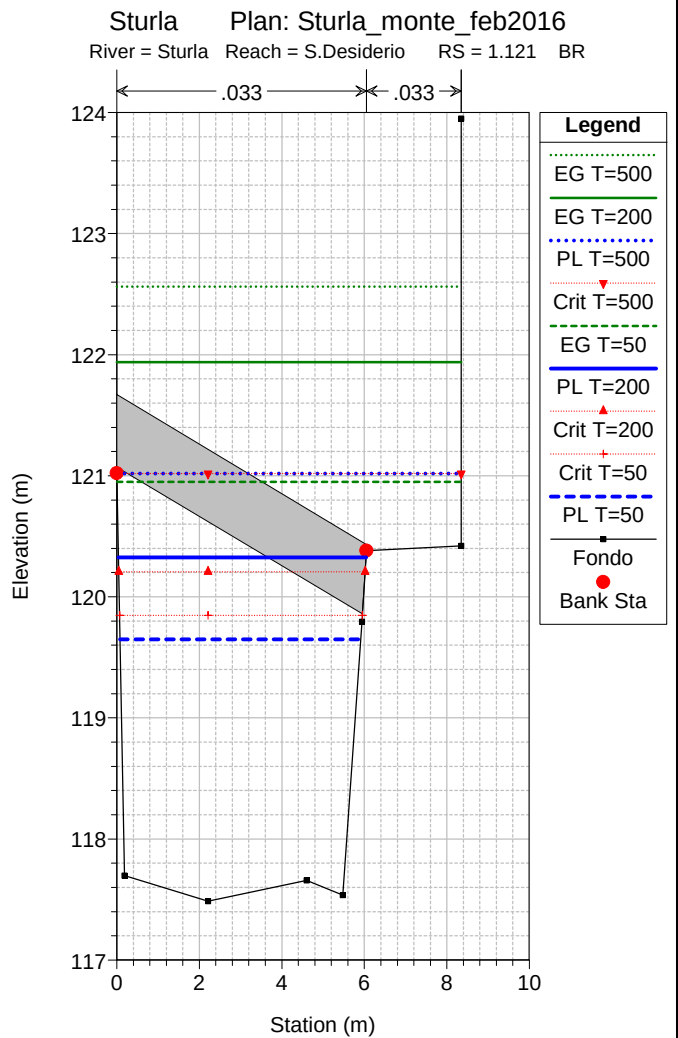
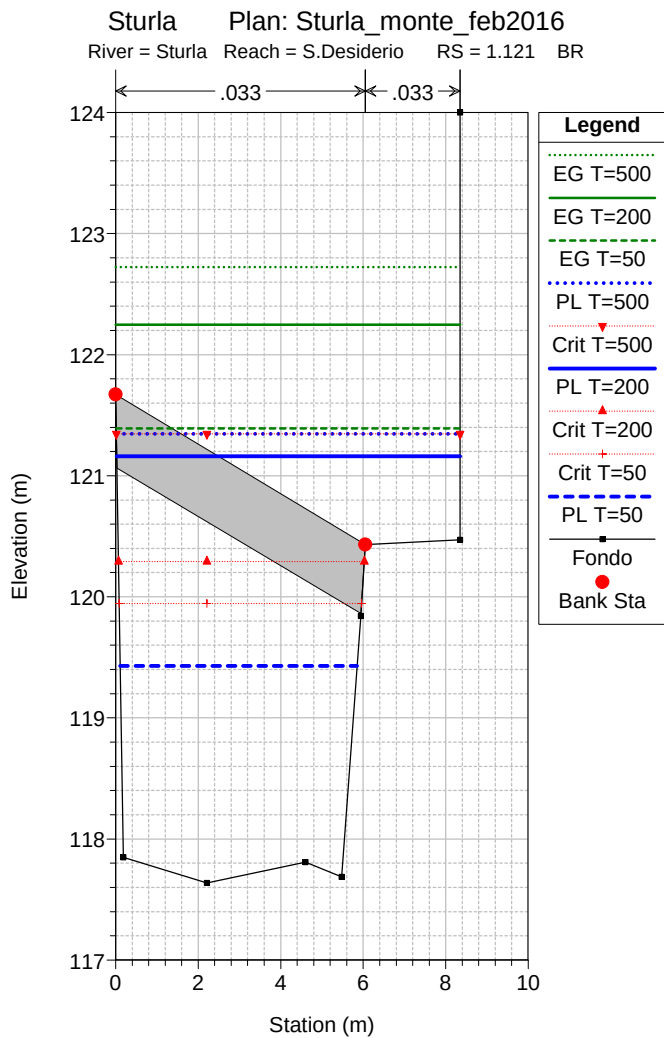
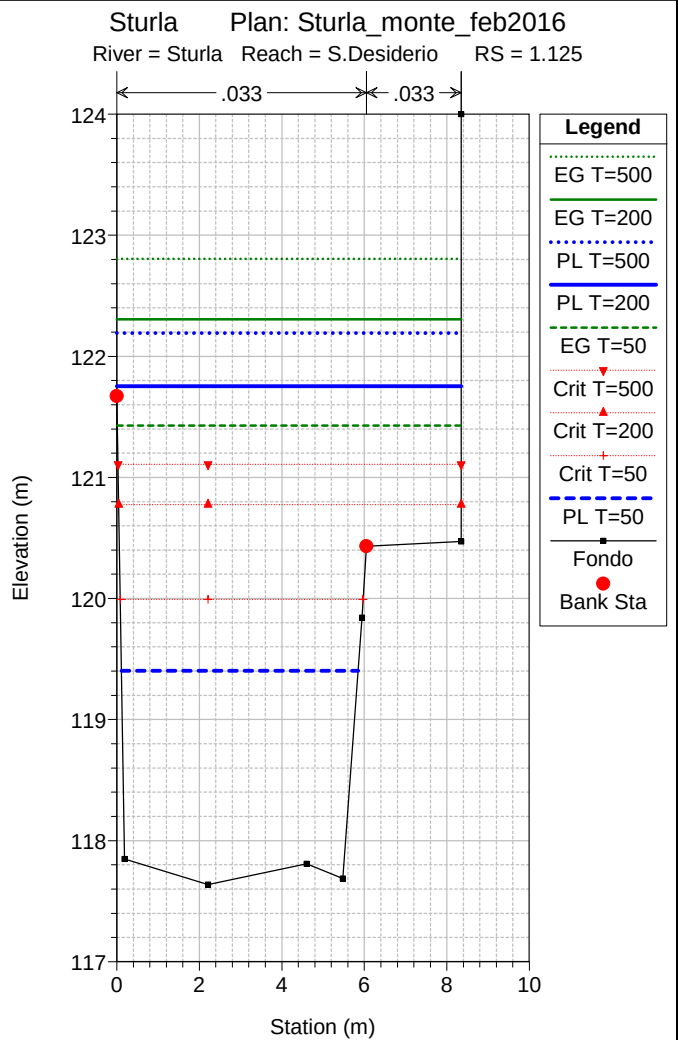
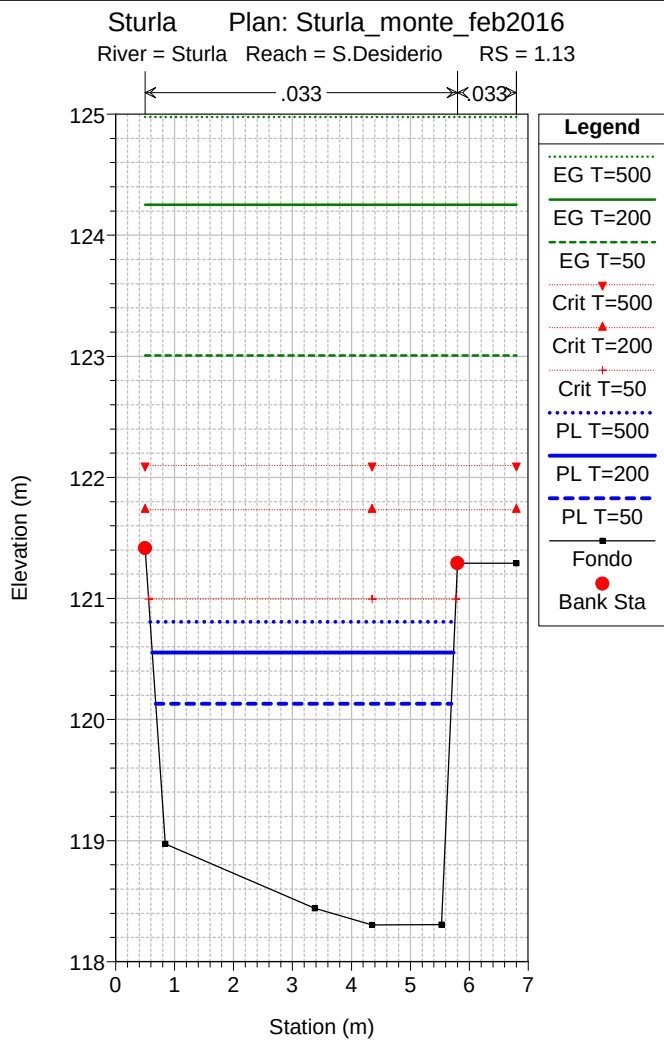


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River = Sturla Reach = S.Desiderio RS = 1.131 BR

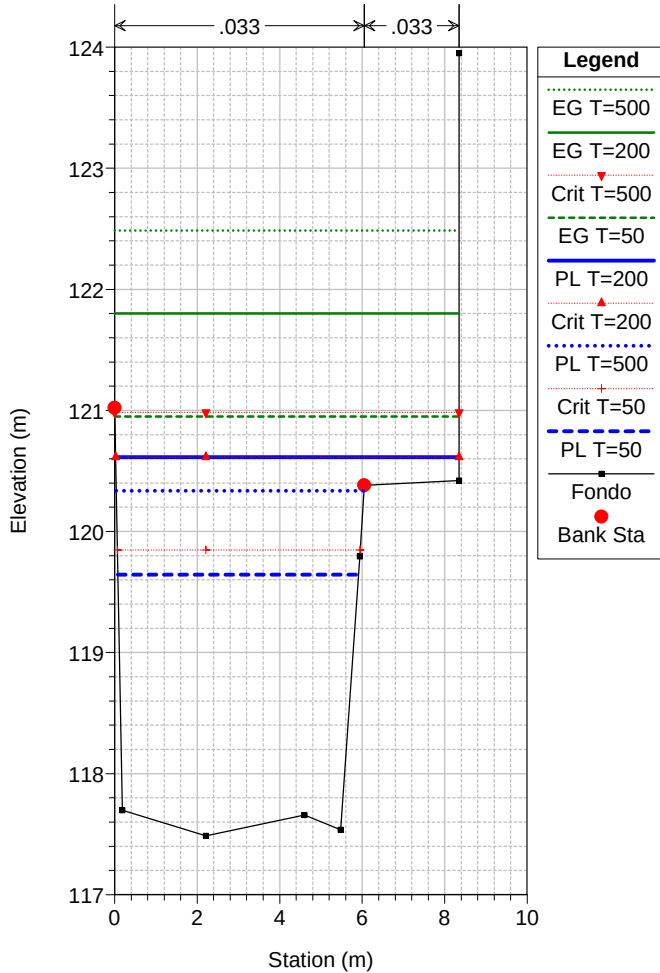


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River = Sturla Reach = S.Desiderio RS = 1.131 BR

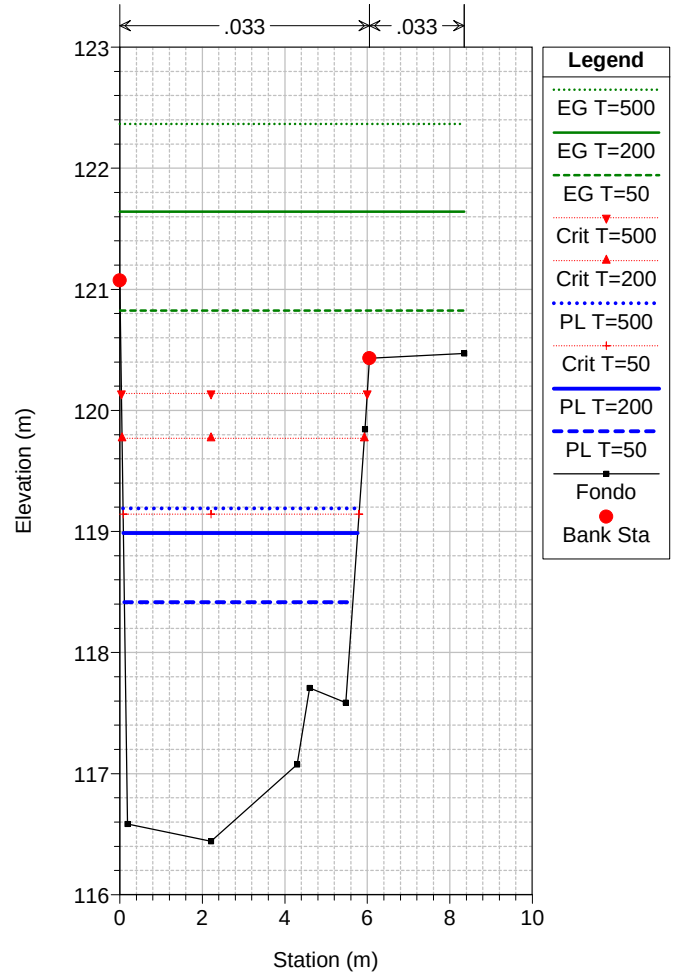




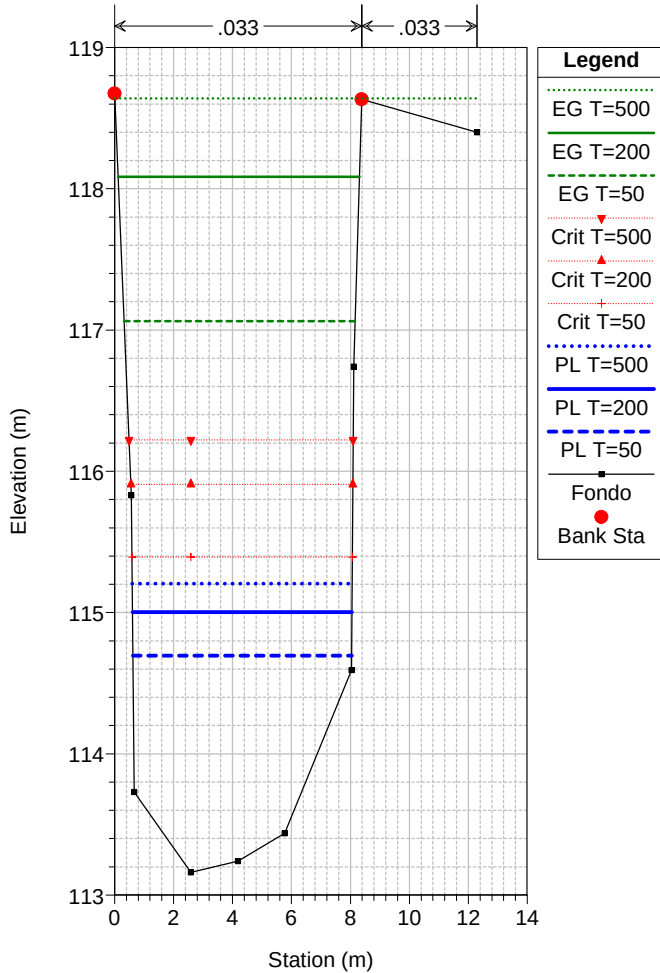
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River = Sturla Reach = S.Desiderio RS = 1.112



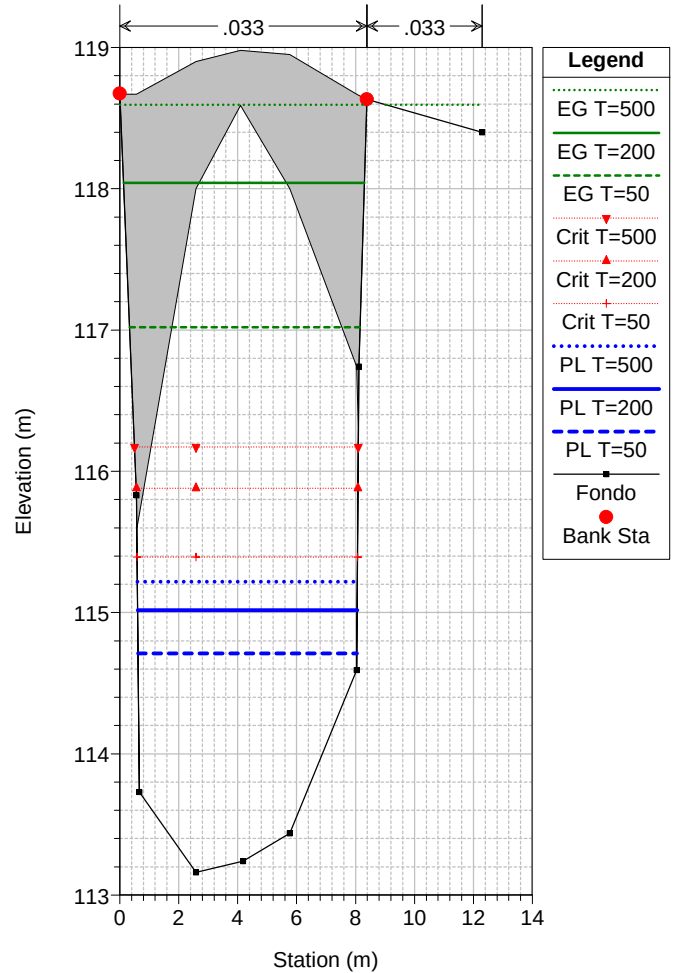
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River = Sturla Reach = S.Desiderio RS = 1.119

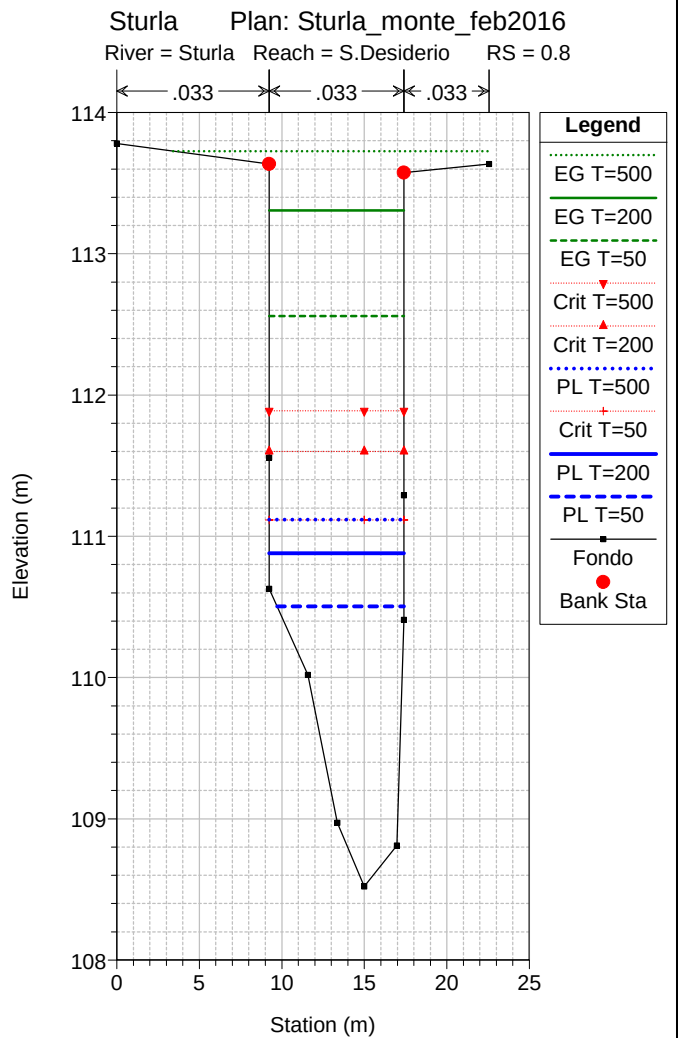
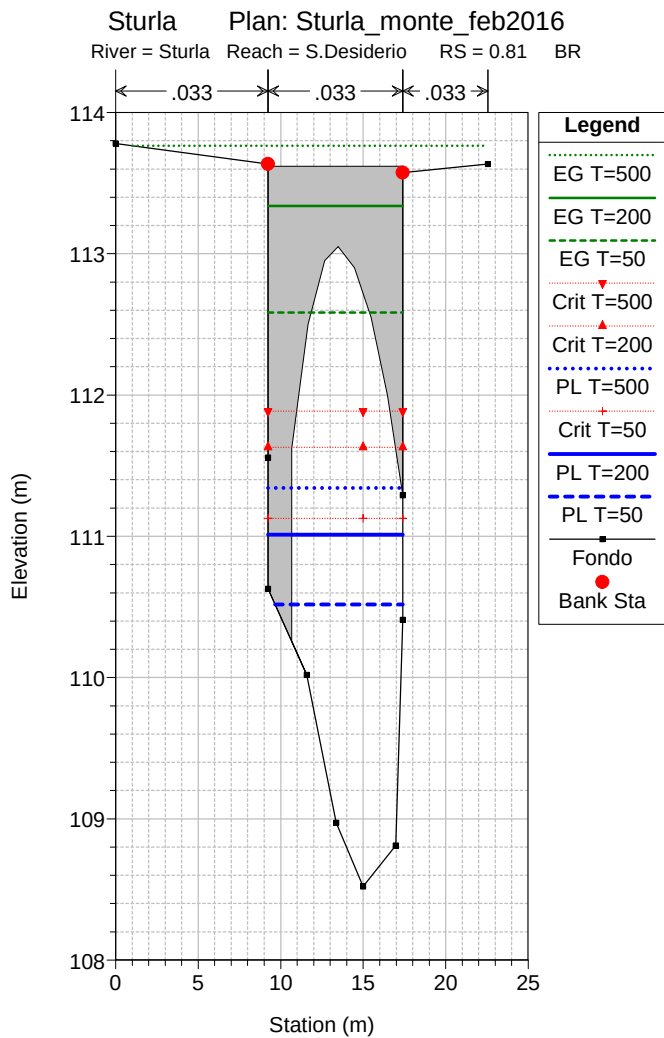
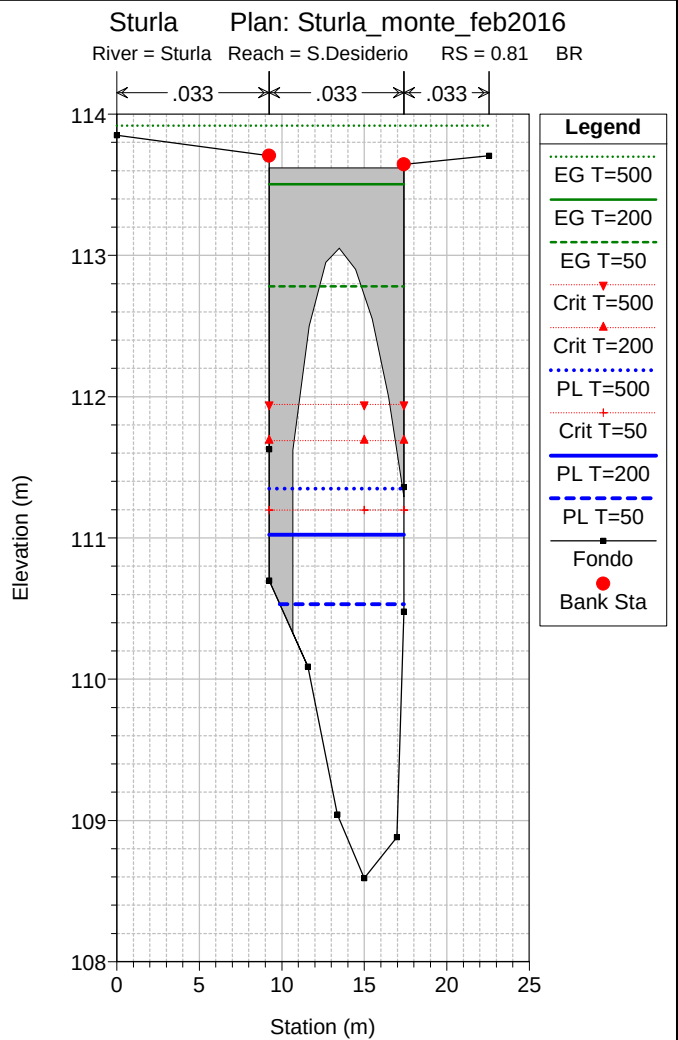
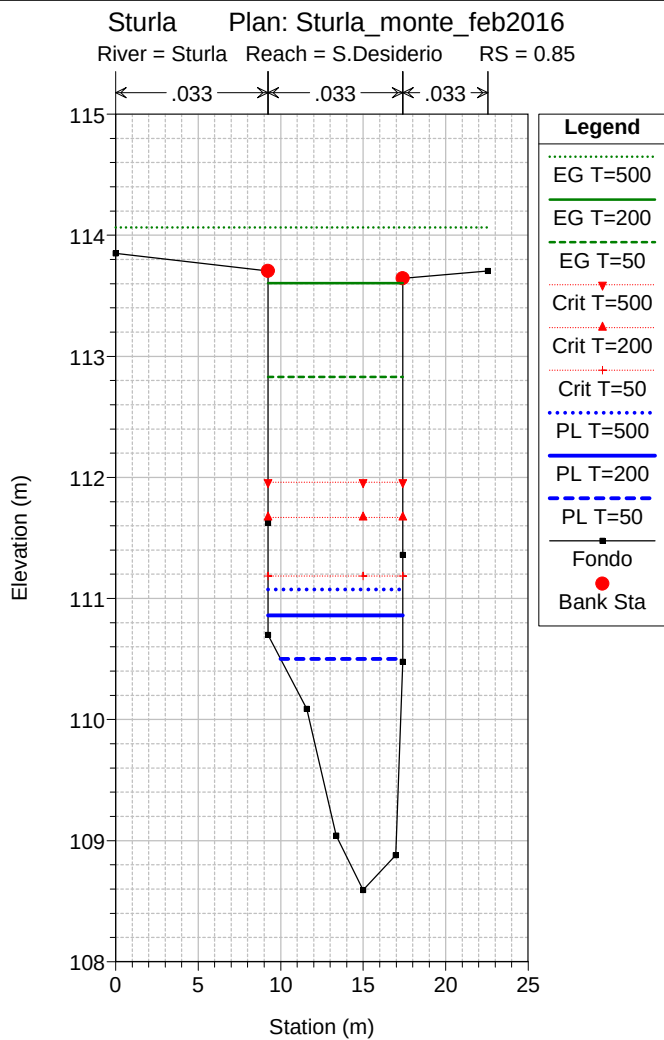


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River = Sturla Reach = S.Desiderio RS = 1.115

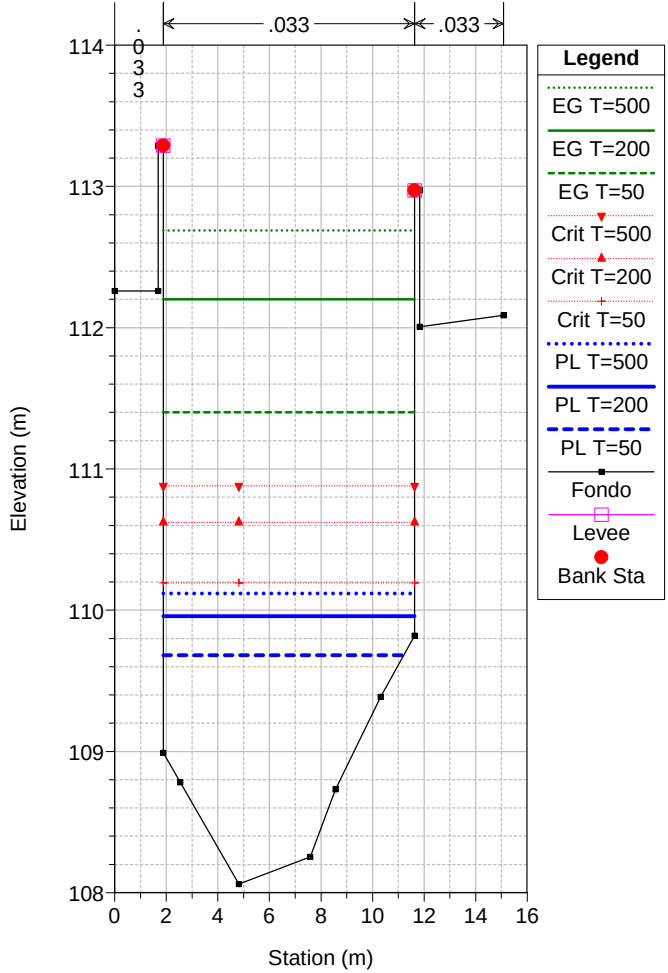


Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = S.Desiderio RS = 1.111 BR

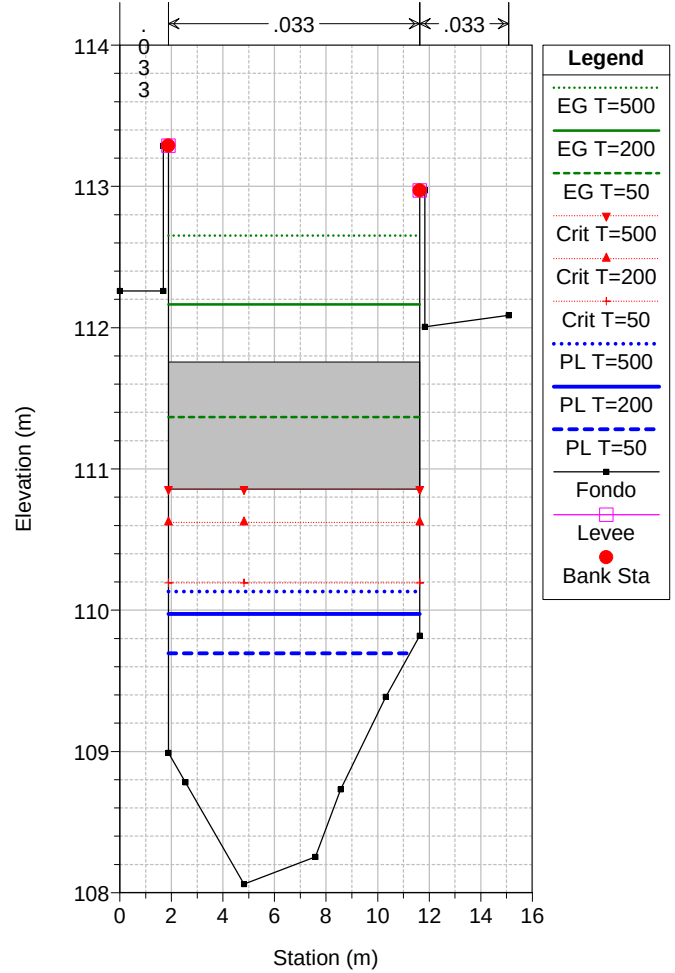




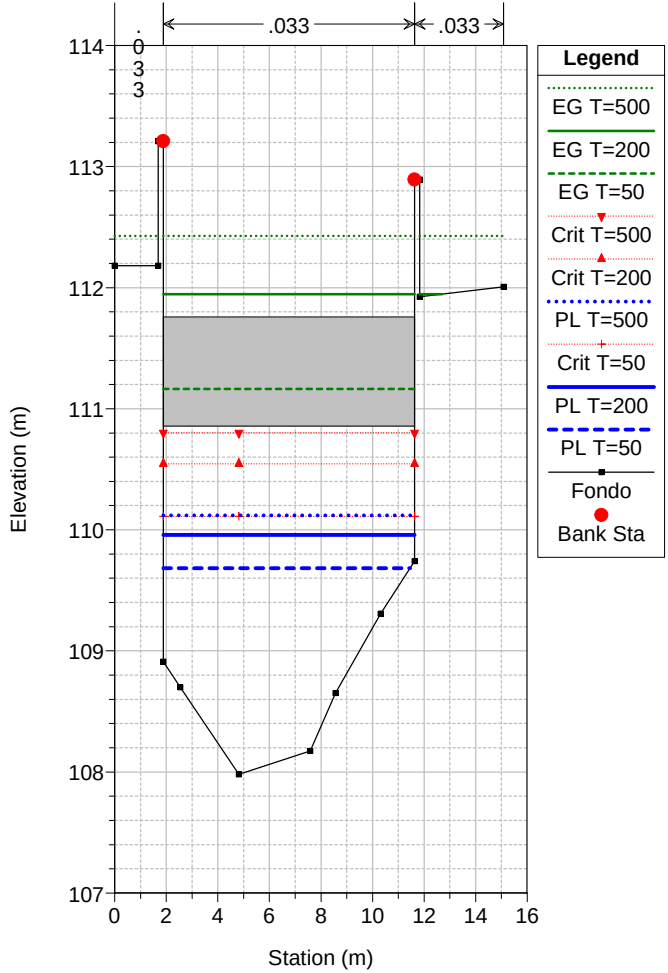
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River = Sturla Reach = S.Desiderio RS = 0.75



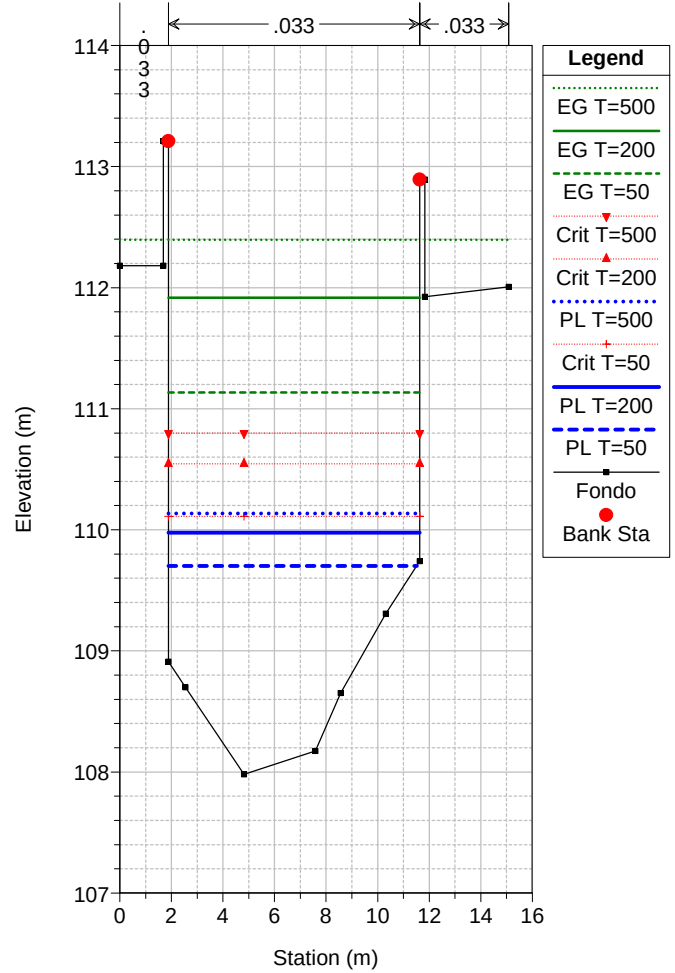
Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = S.Desiderio RS = 0.71 BR

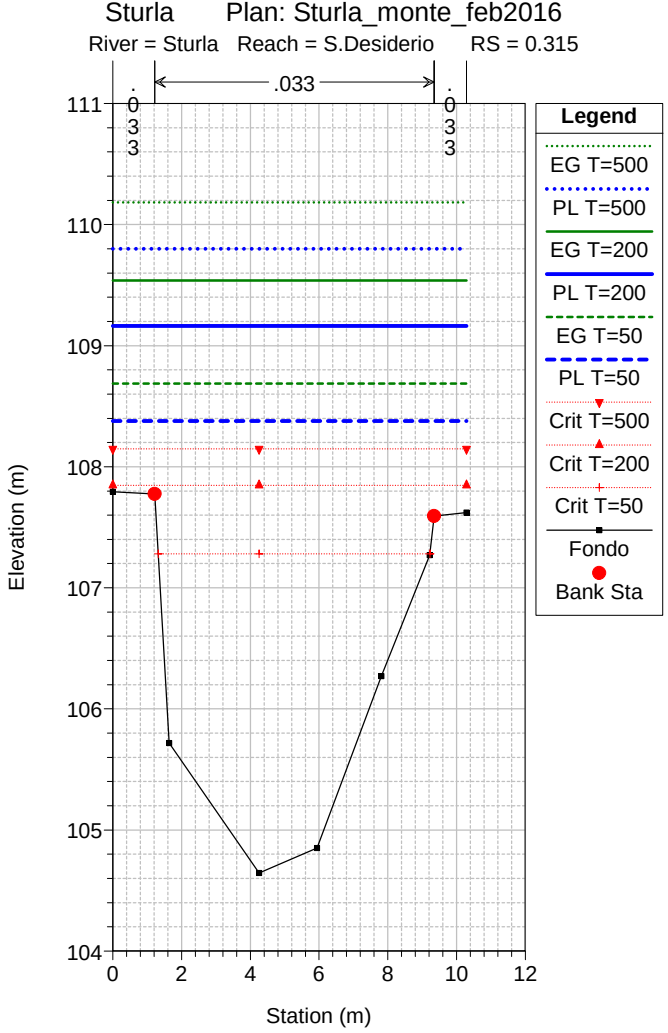
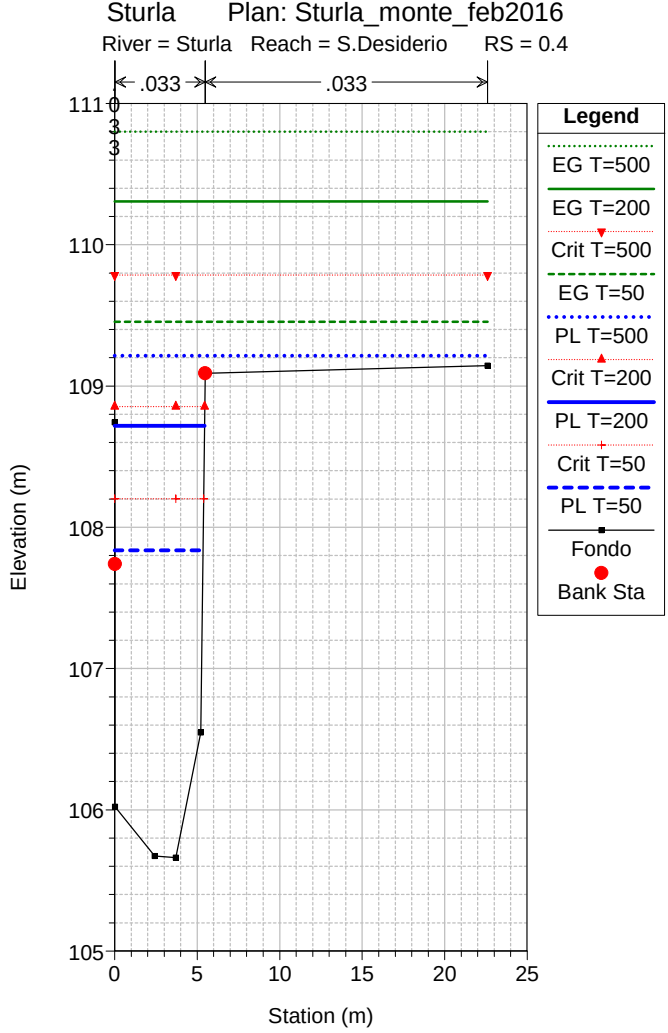
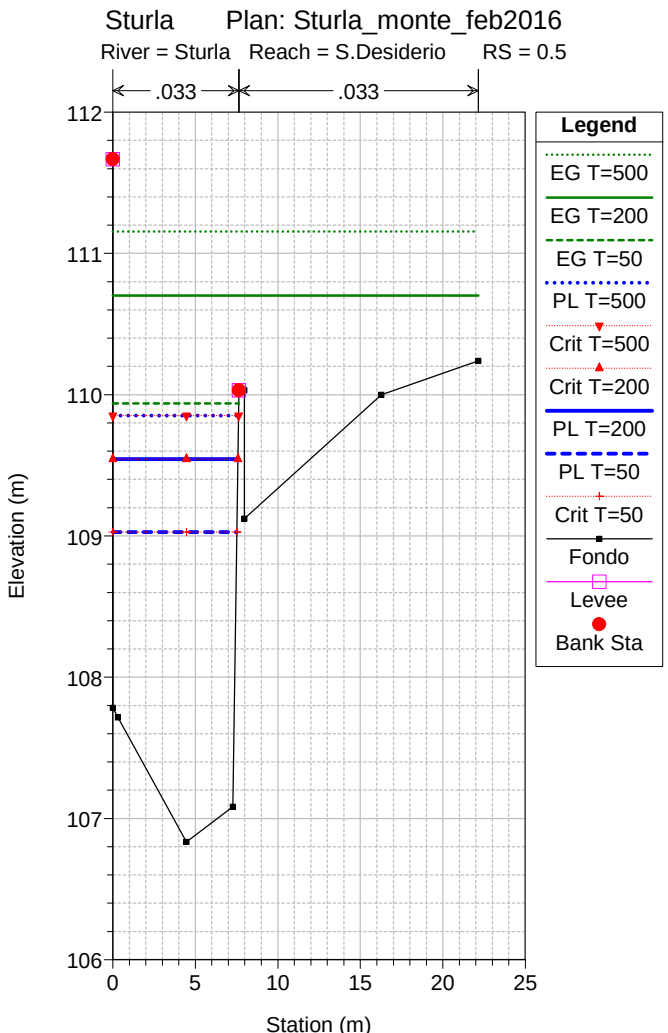
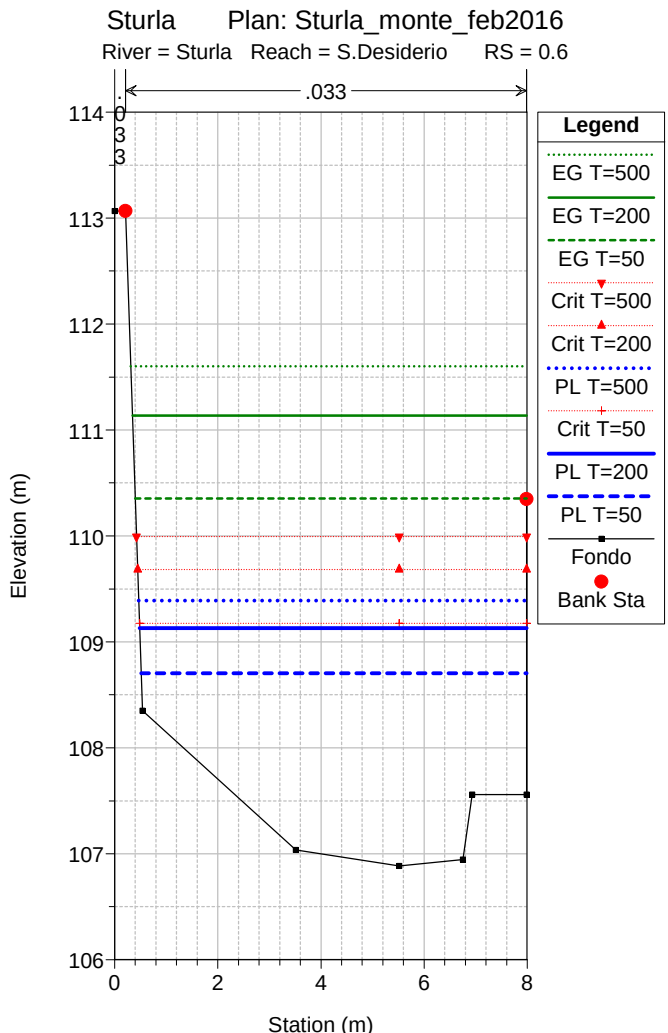


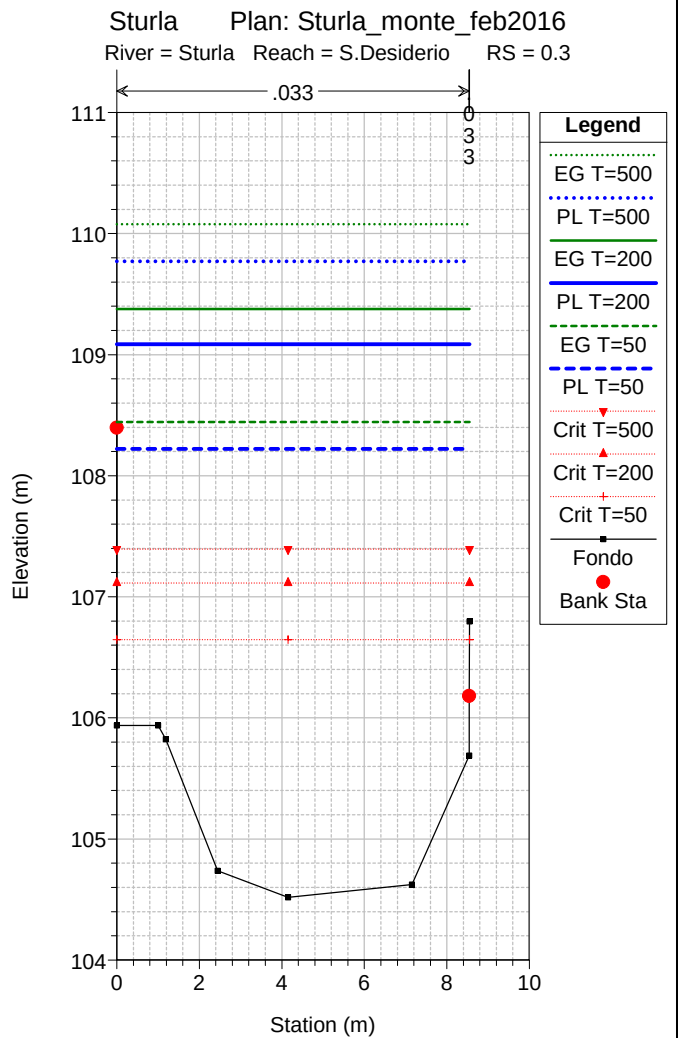
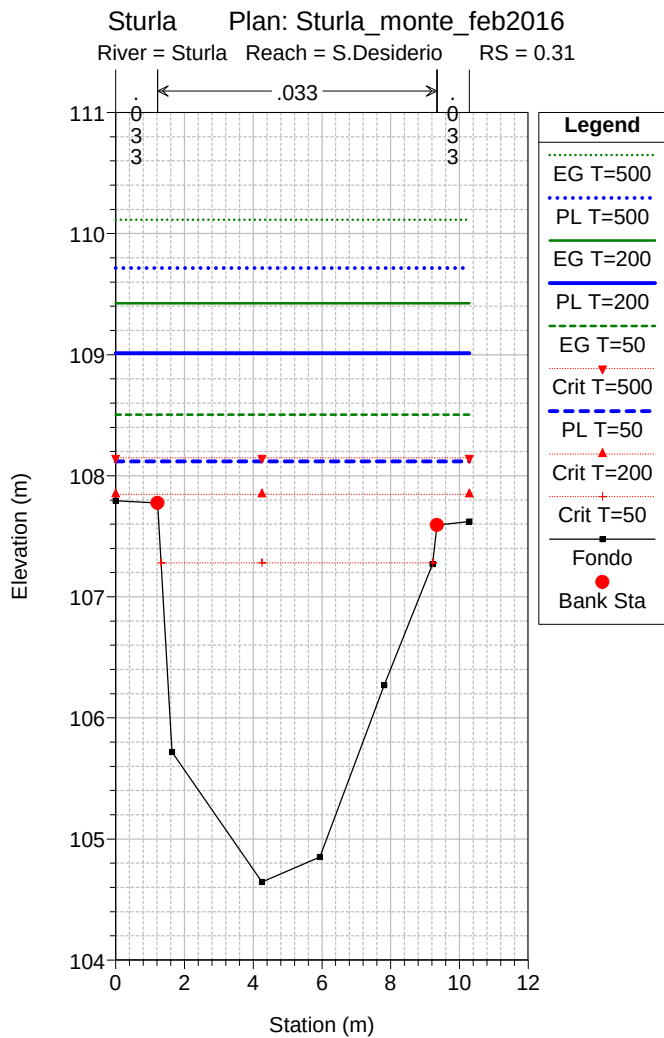
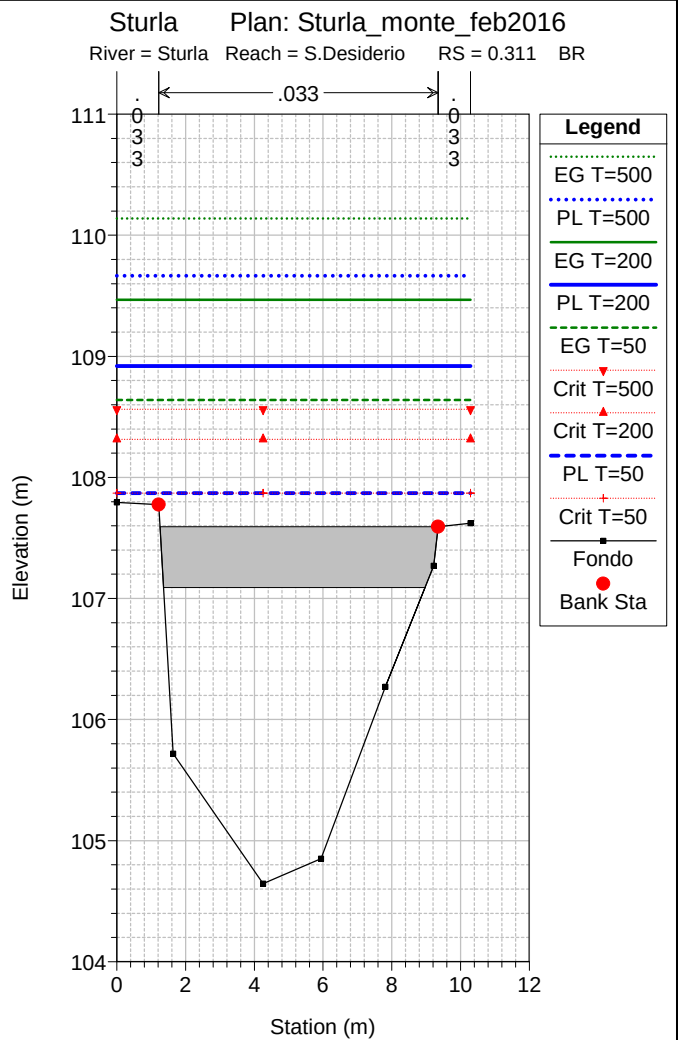
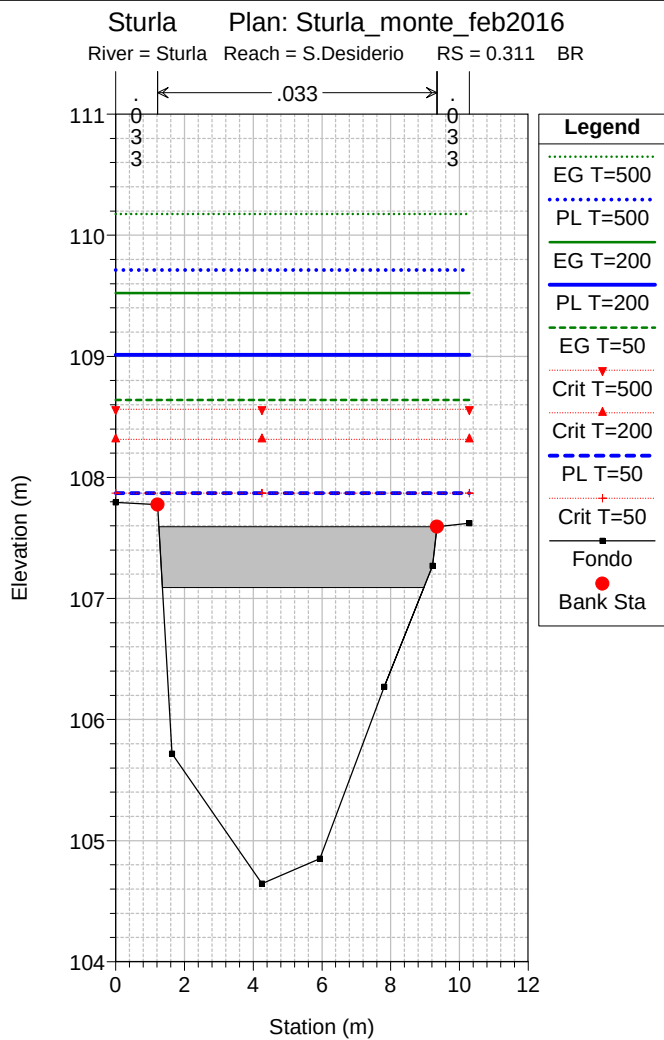
Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = S.Desiderio RS = 0.71 BR



Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = S.Desiderio RS = 0.7

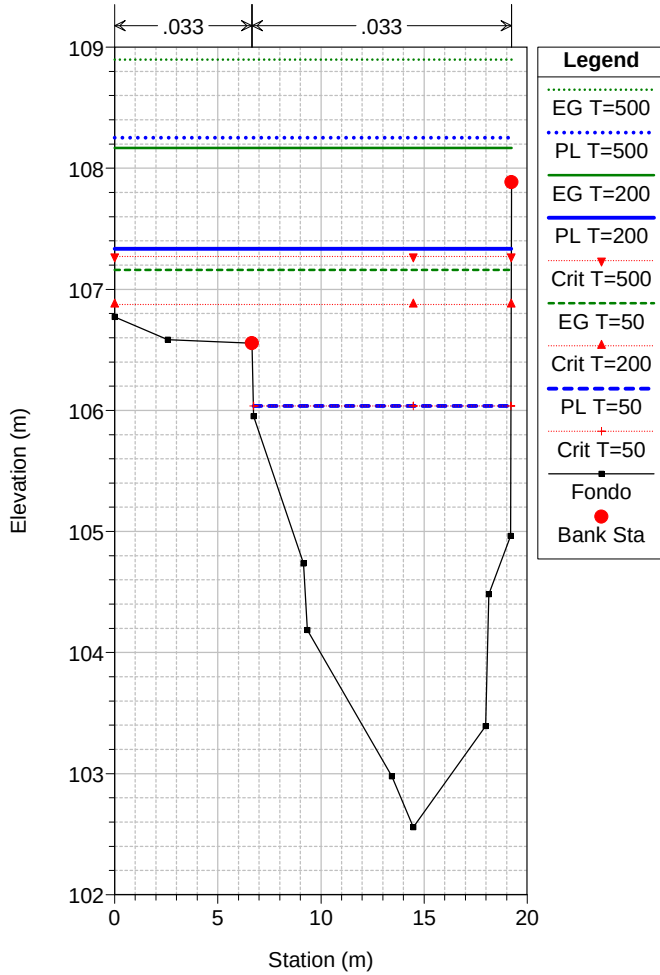






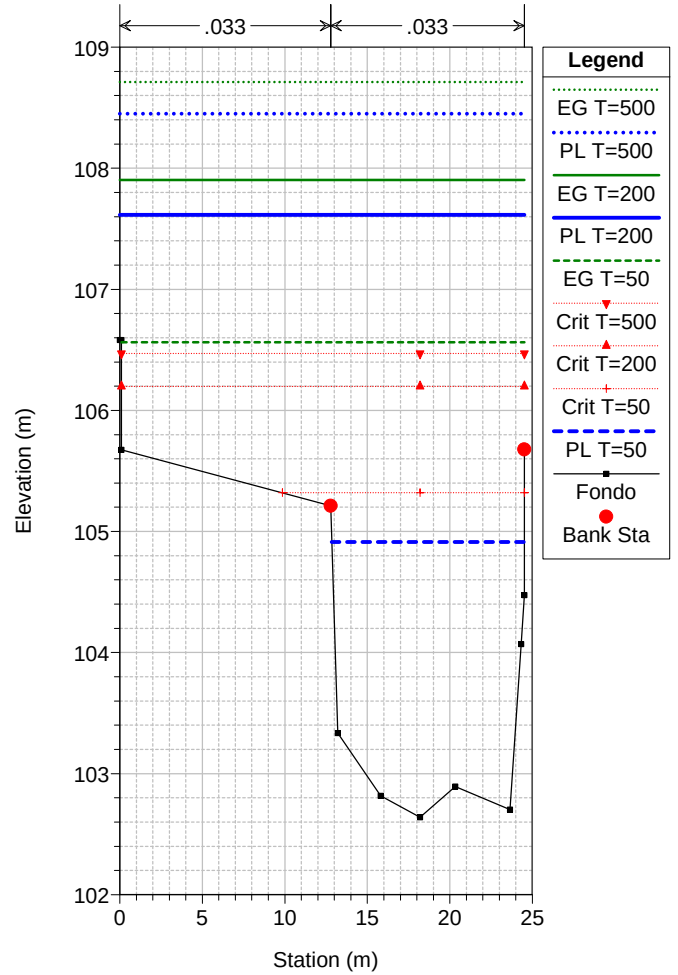
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = 0.2



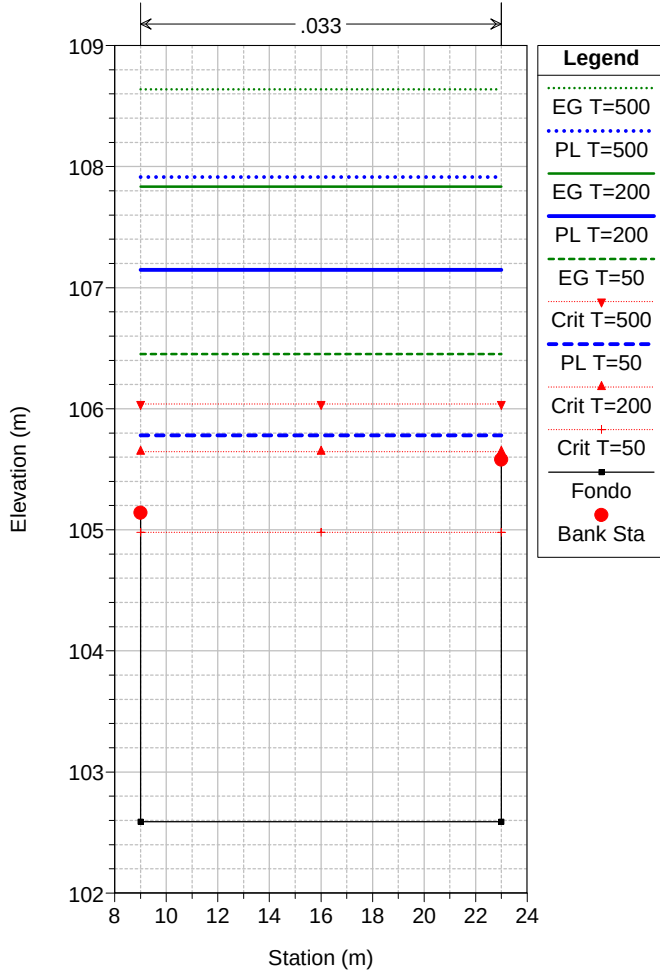
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = 0.1



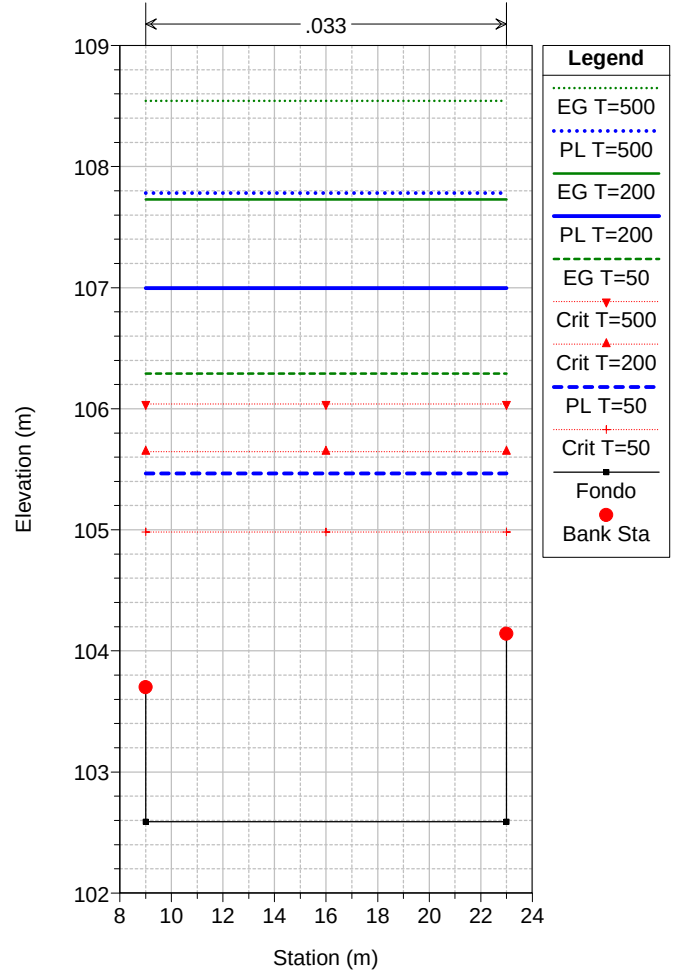
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -2



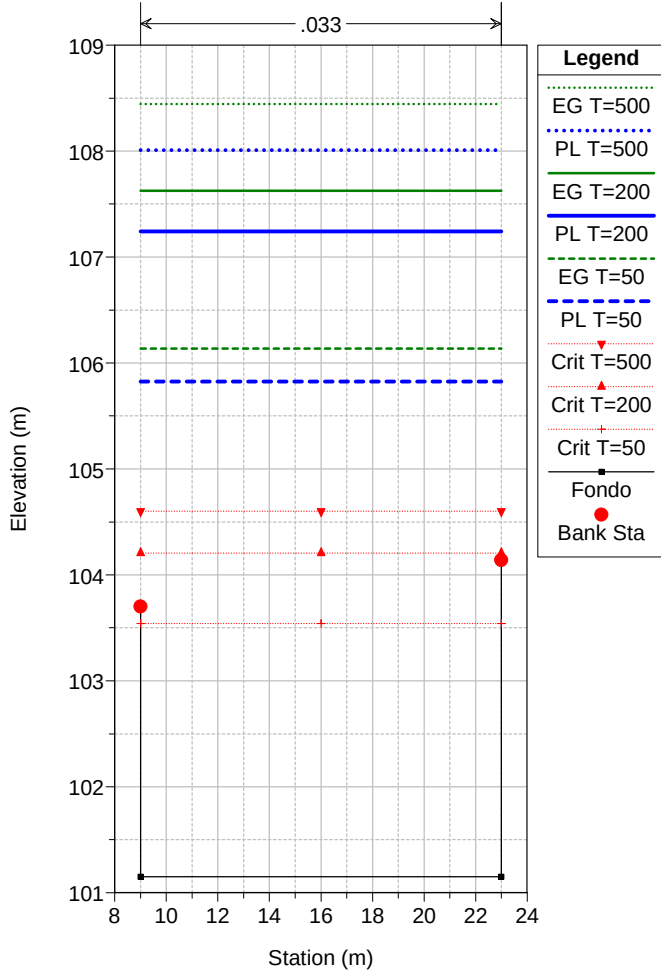
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River = Sturla Reach = sturla RS = -2.9



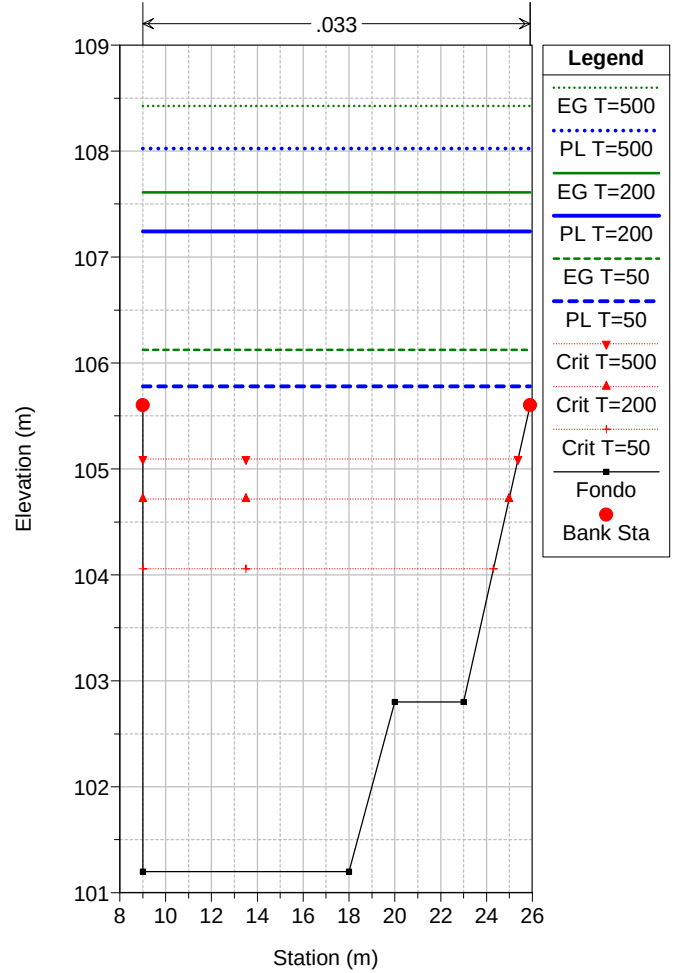
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -3



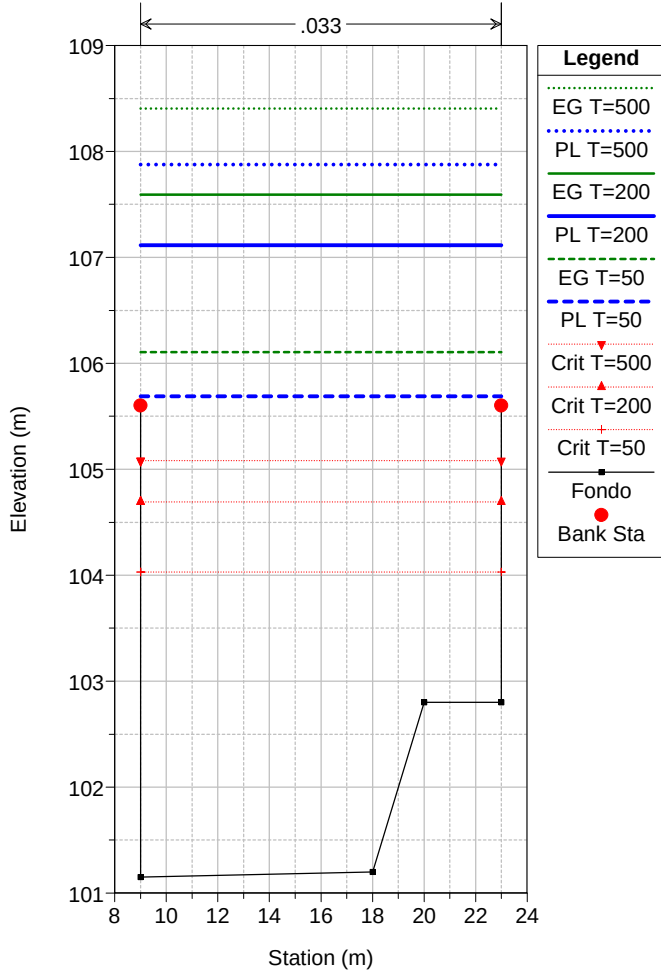
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -4.5



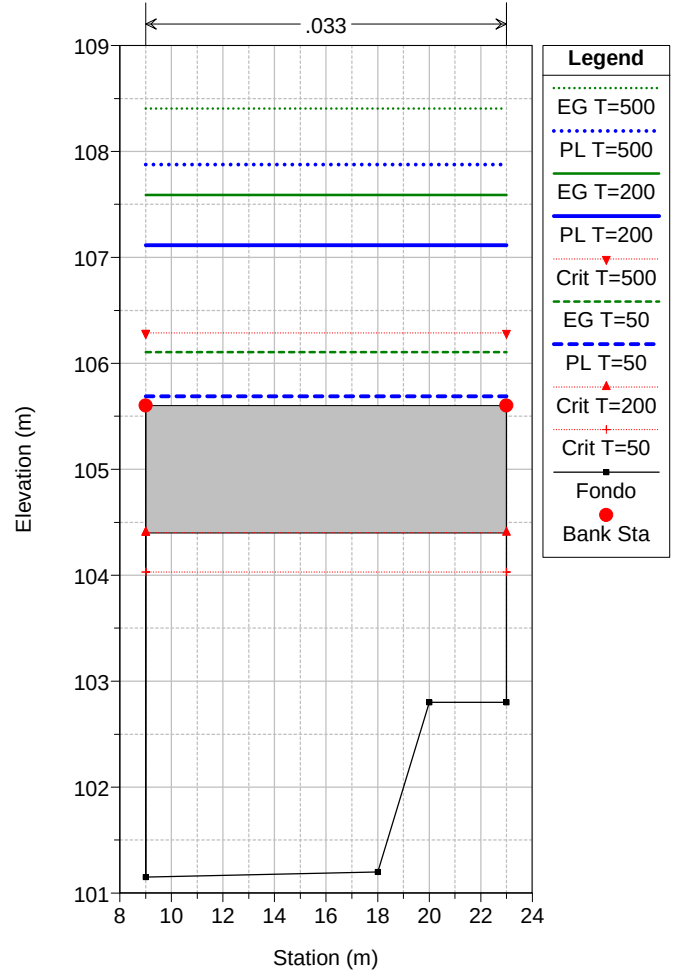
Sturla Plan: Sturla_monte_feb2016

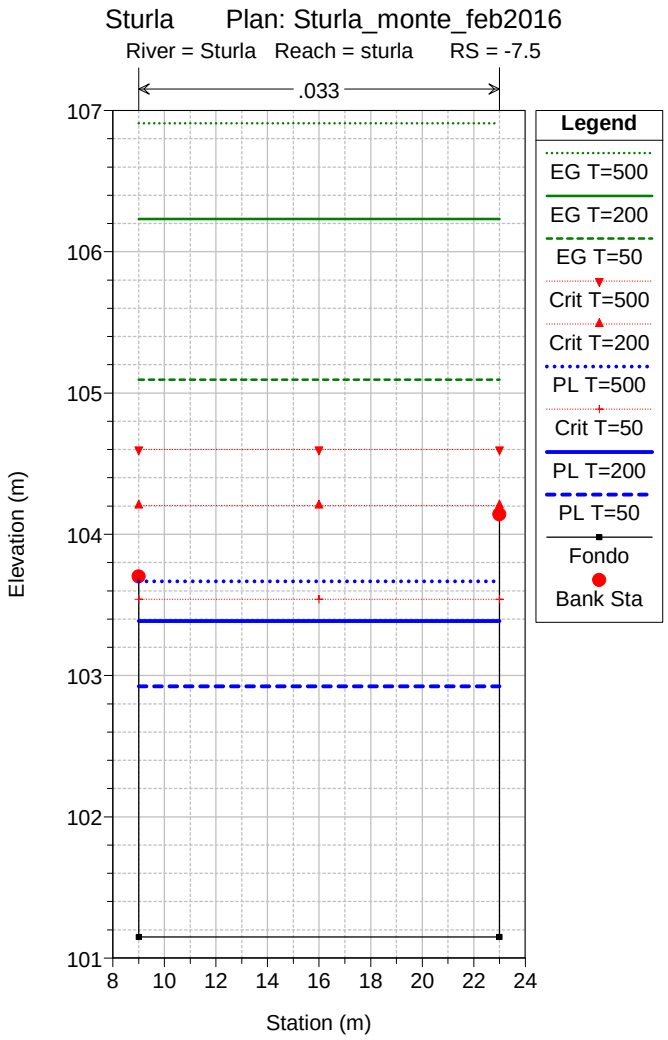
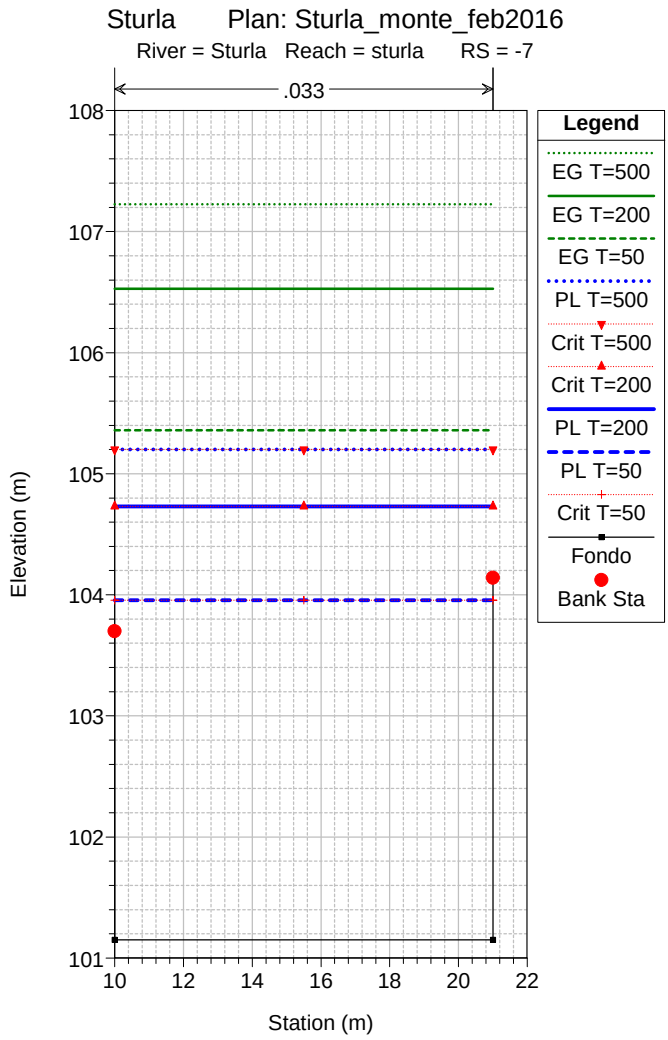
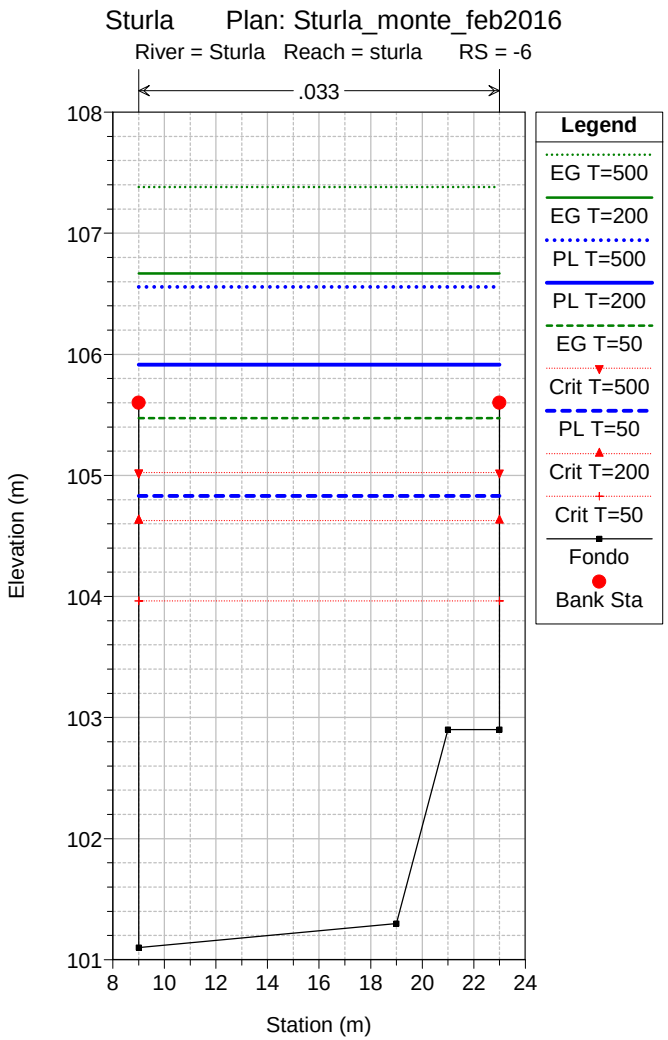
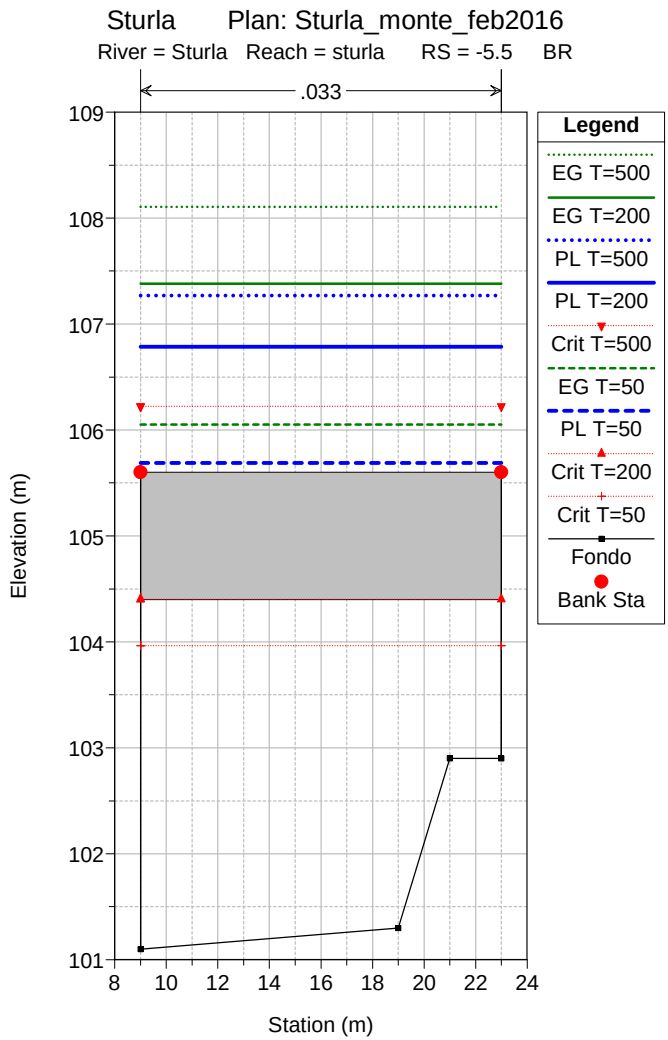
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Sturla Plan: Sturla_monte_feb2016

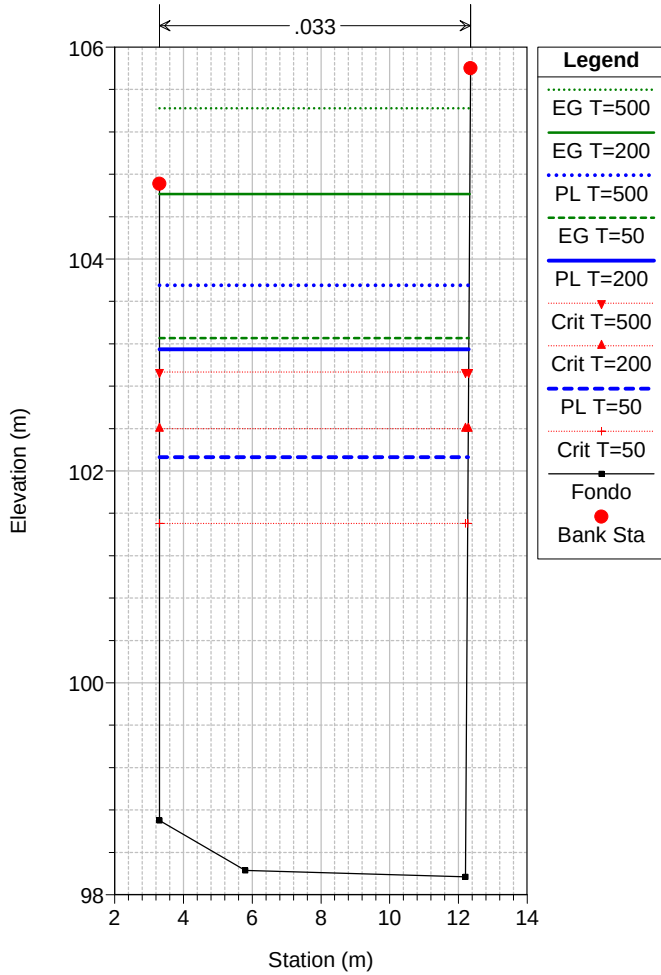
River = Sturla Reach = sturla RS = -5.5 BR





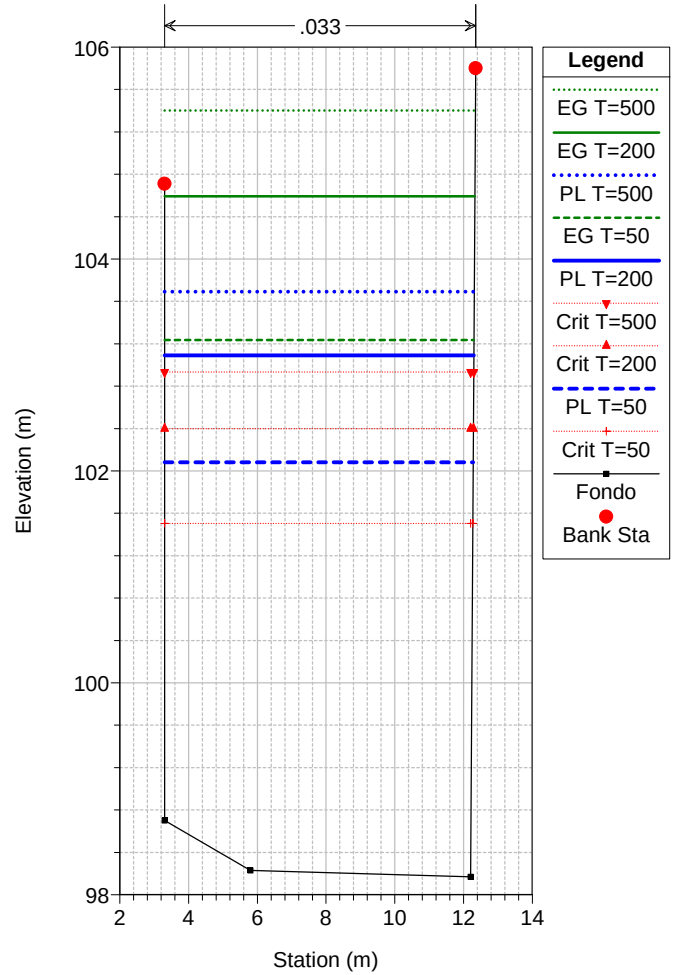
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River = Sturla Reach = sturla RS = -10



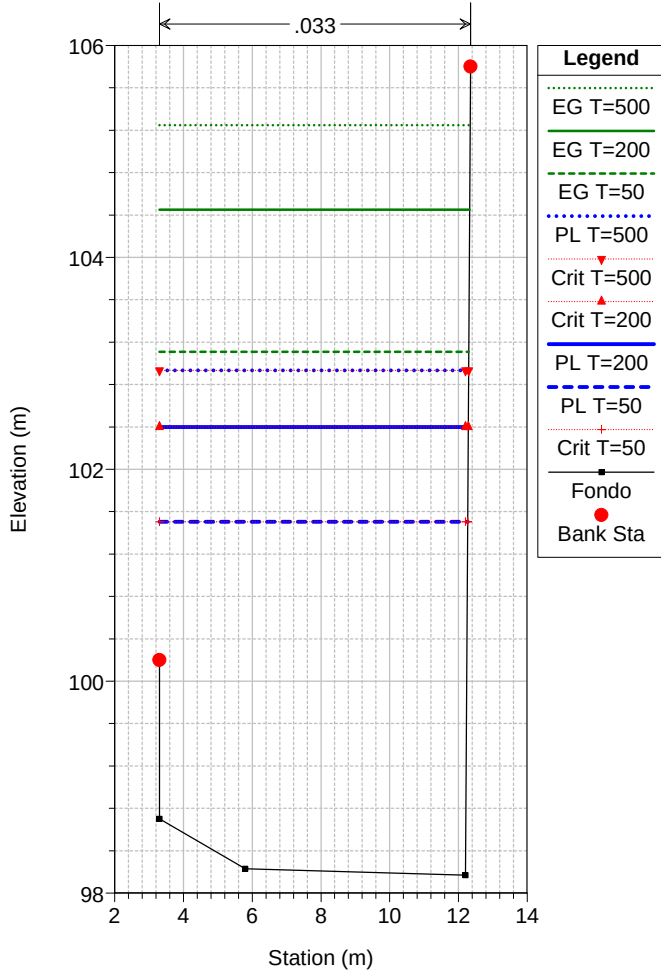
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River = Sturla Reach = sturla RS = -11



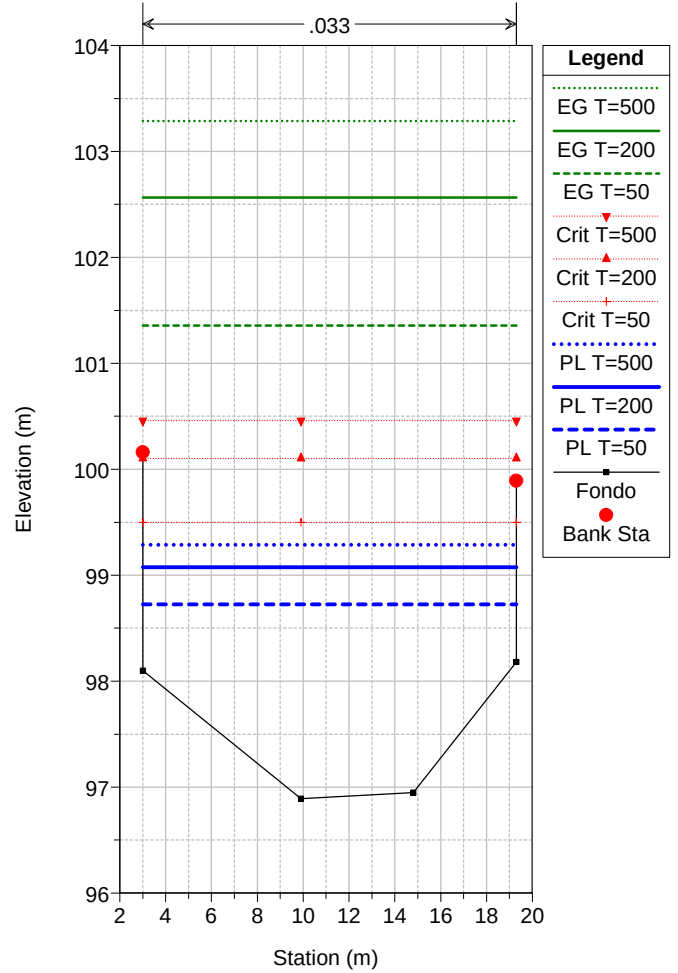
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River = Sturla Reach = sturla RS = -11.5



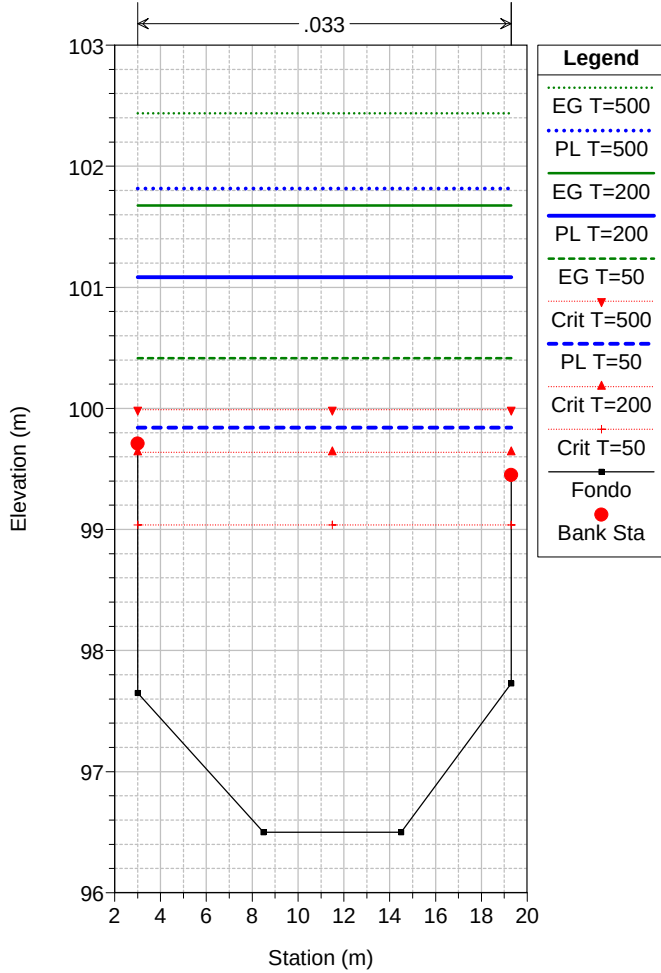
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -12



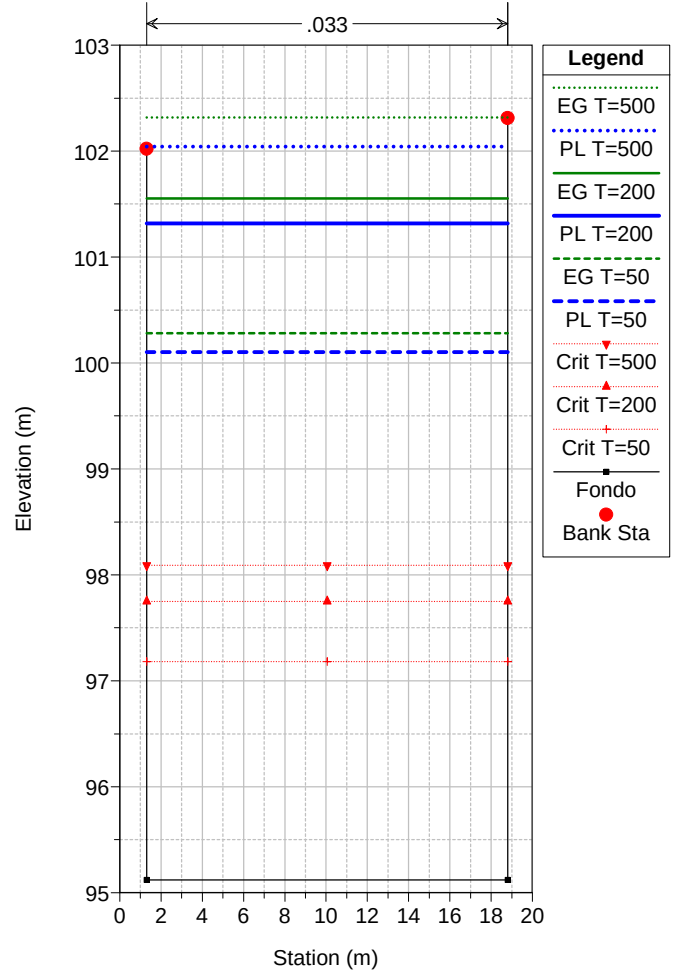
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -13



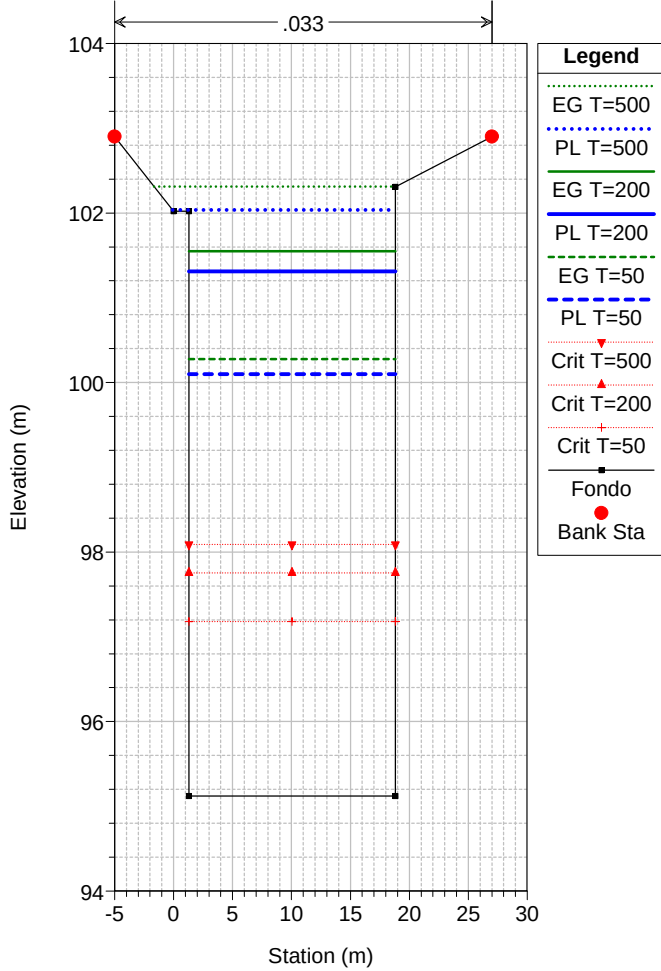
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -15



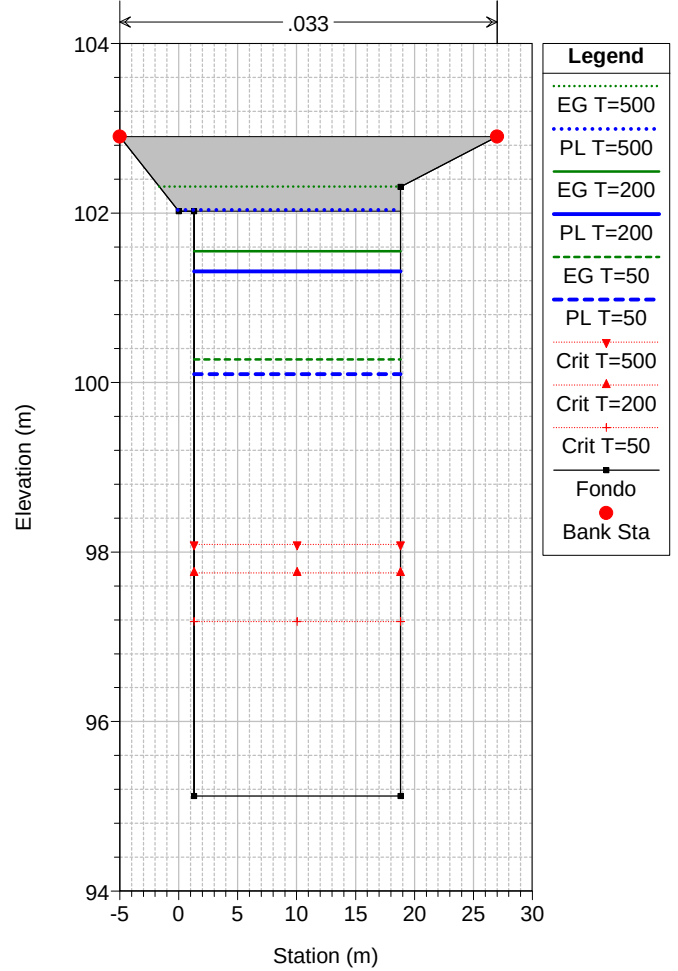
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -16

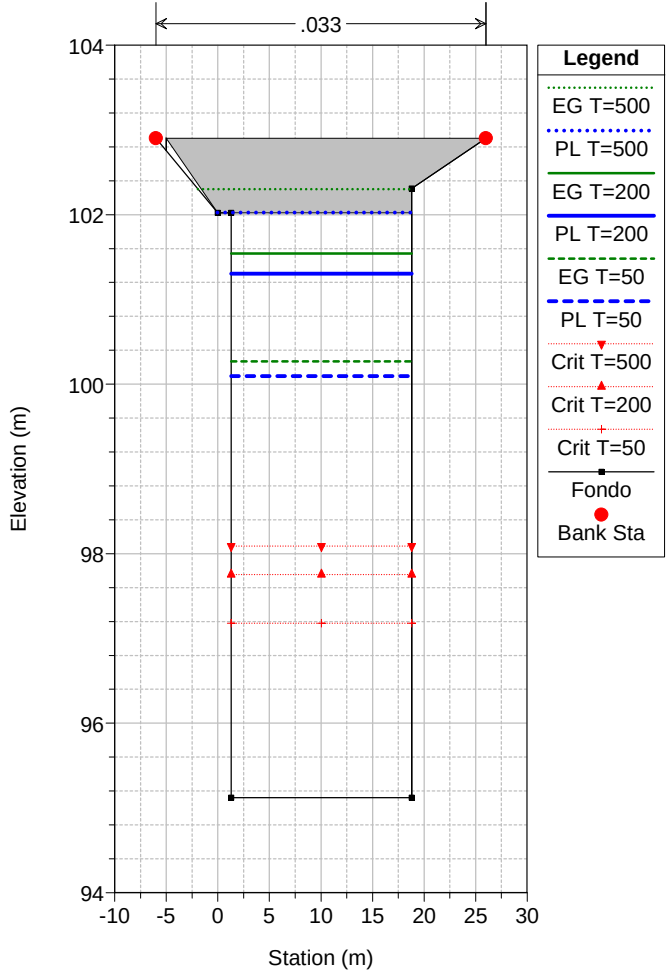


Sturla Plan: Sturla_monte_feb2016

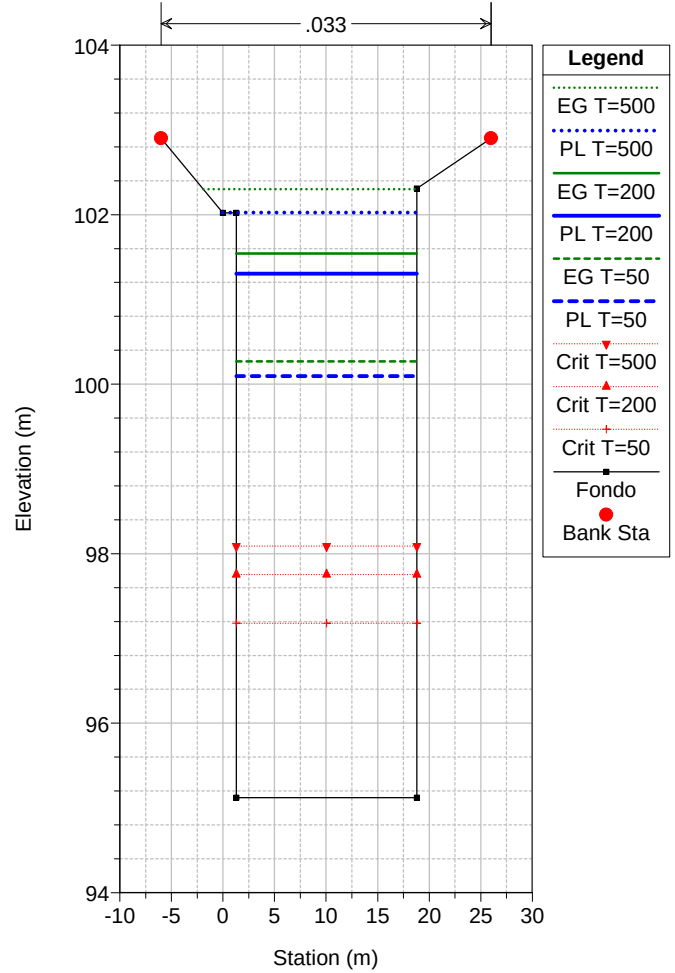
River = Sturla Reach = sturla RS = -16.5 BR



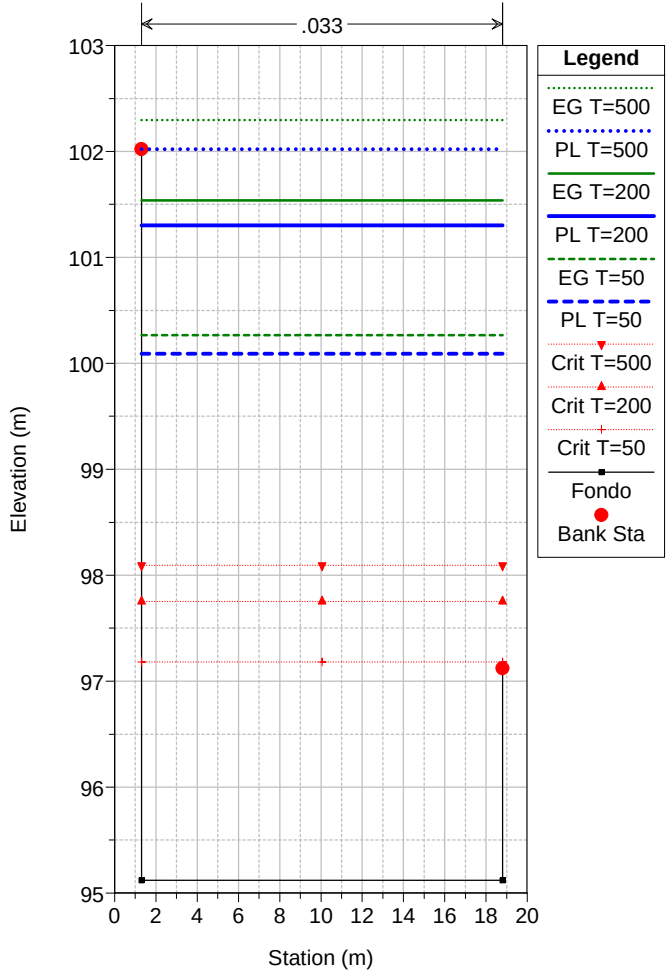
Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -16.5 BR



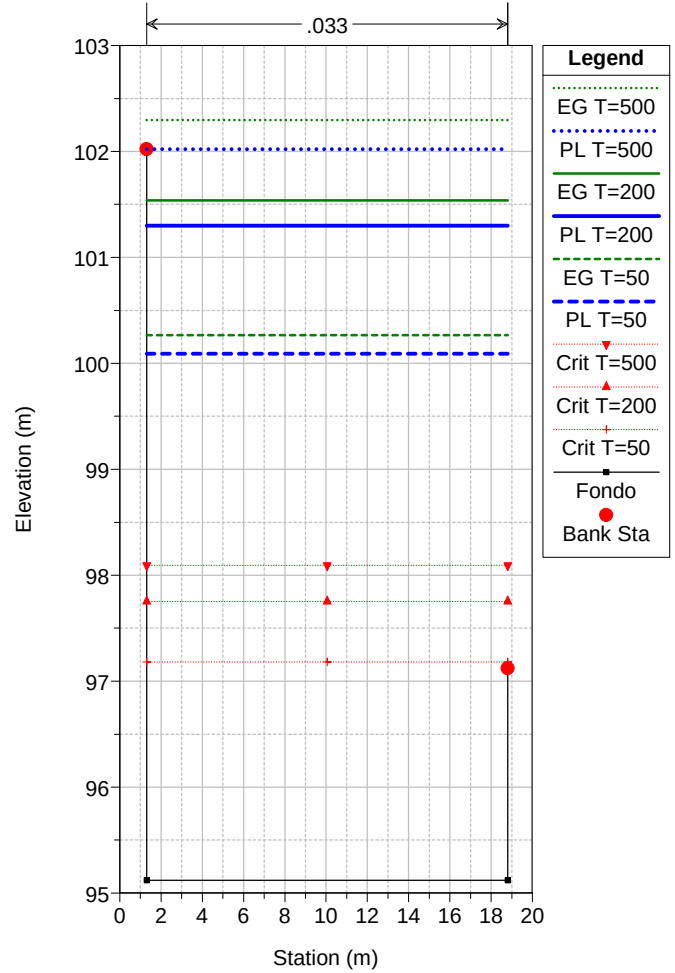
Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -17



Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -18

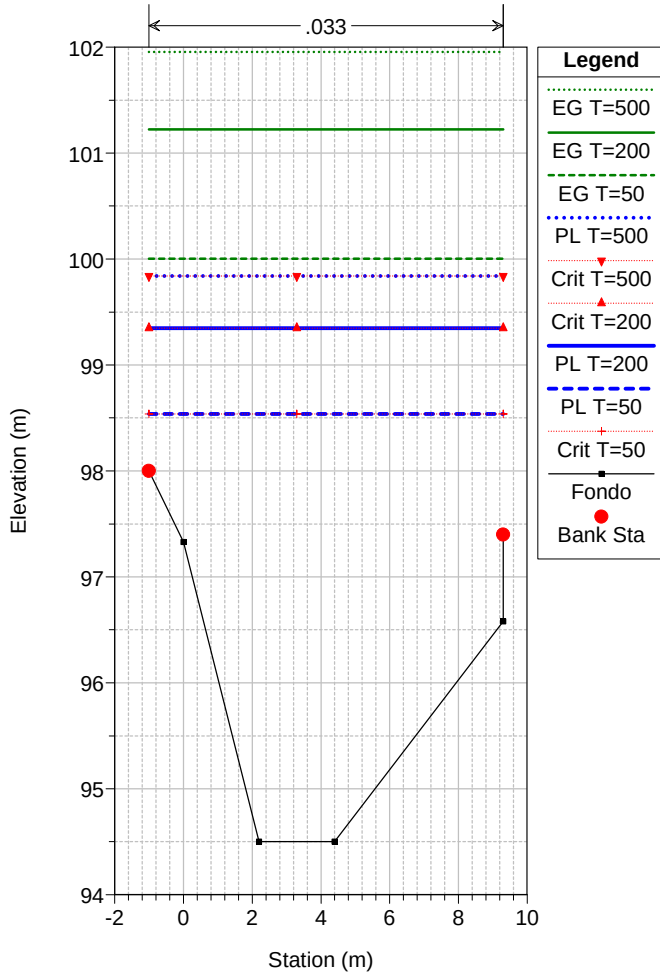


Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -18.5



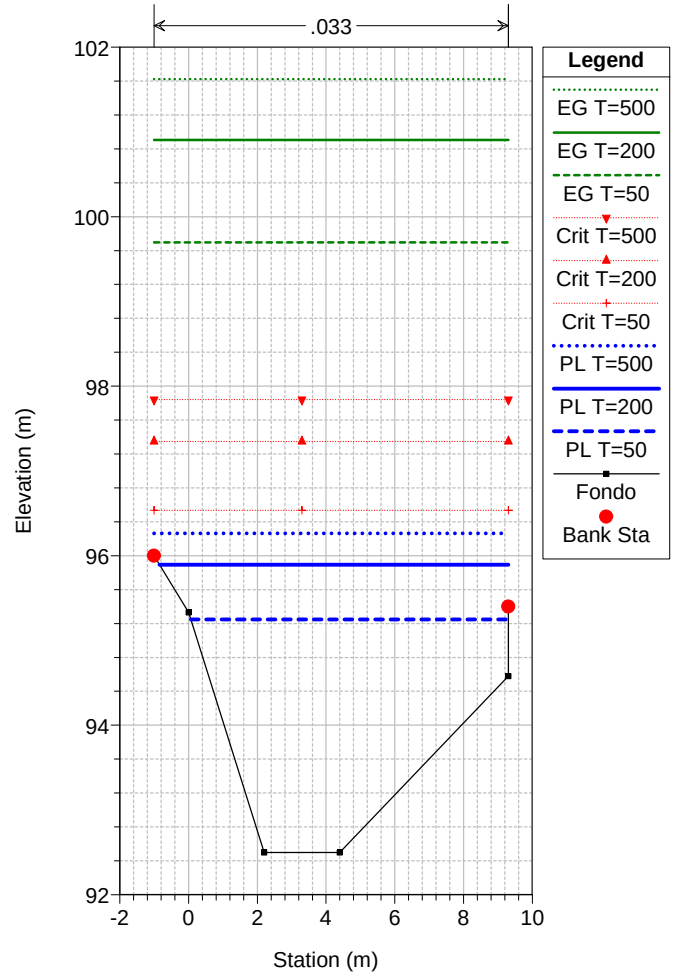
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -19



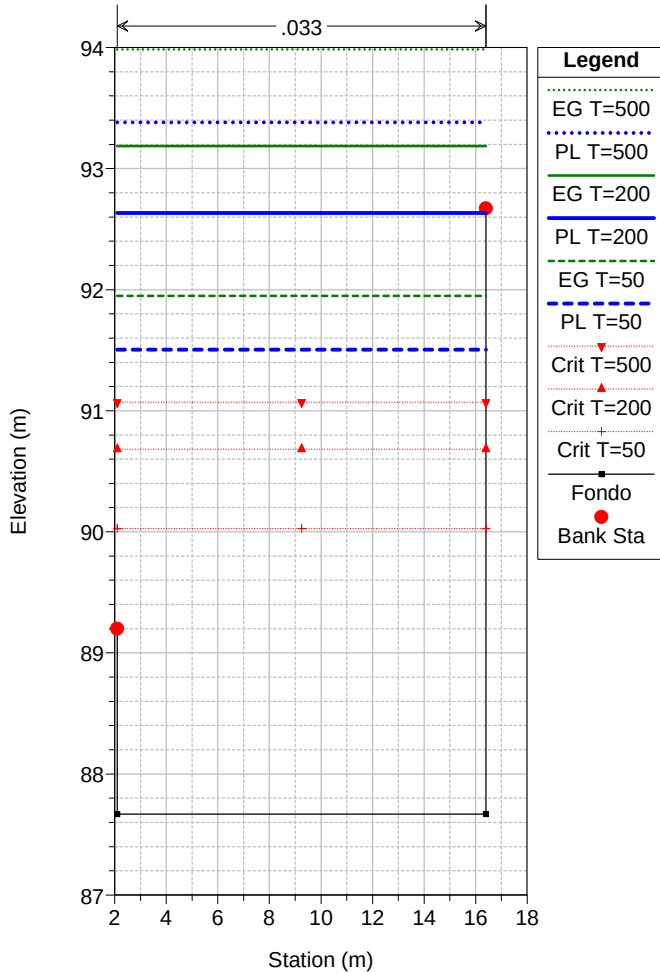
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -19.5



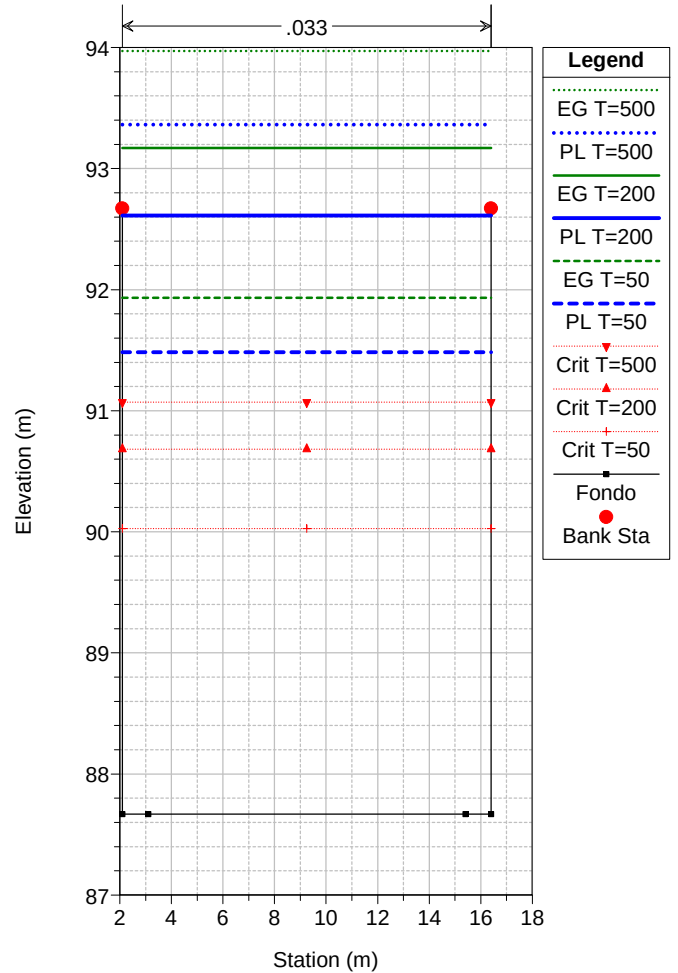
Sturla Plan: Sturla_monte_feb2016

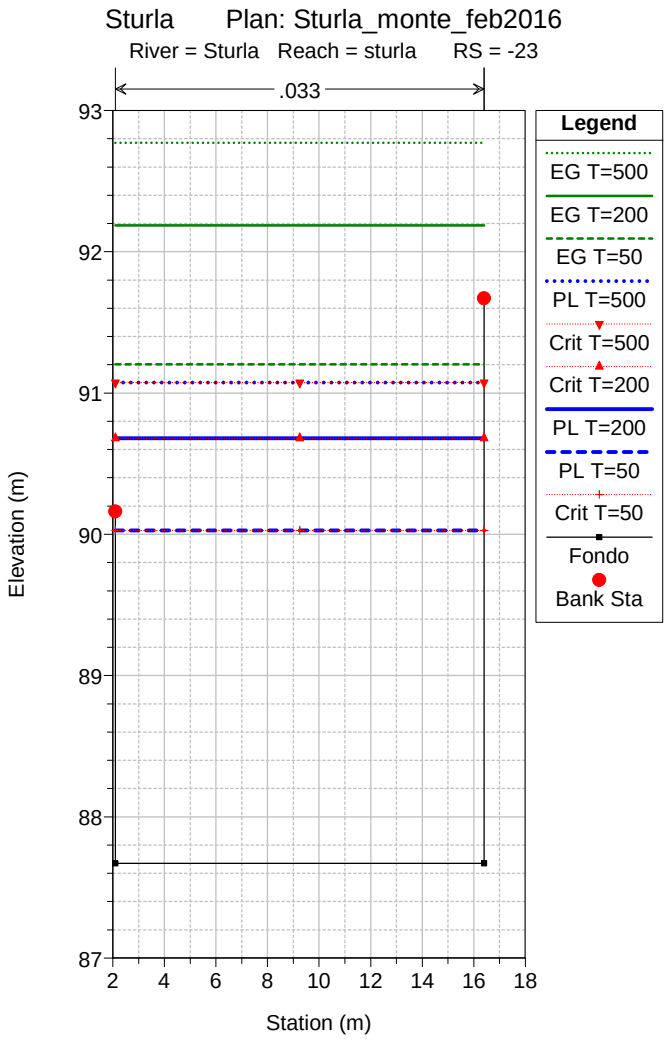
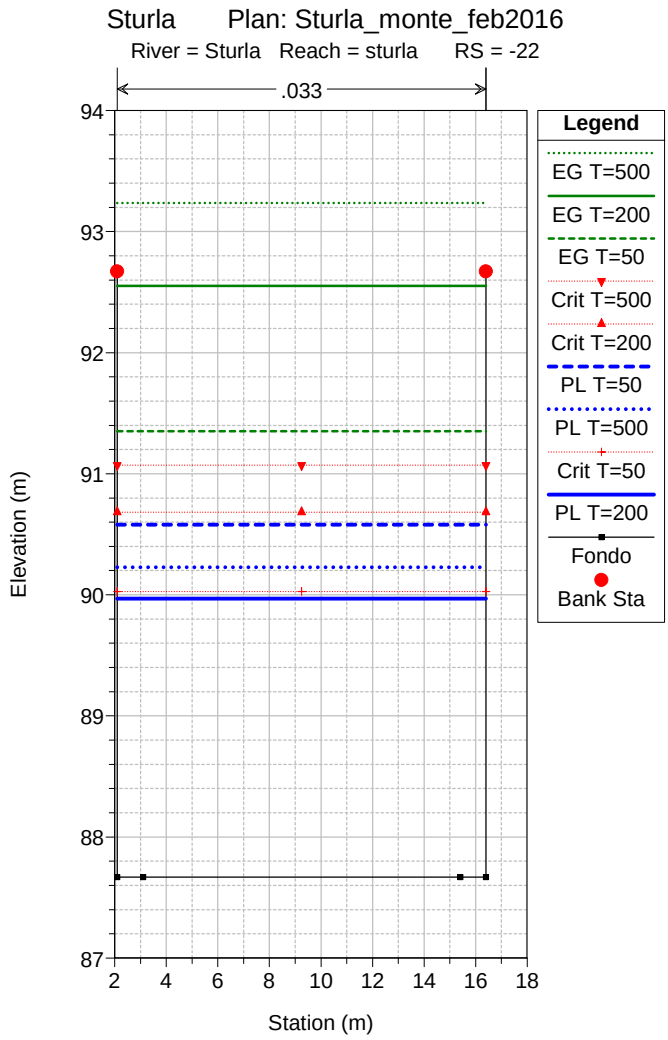
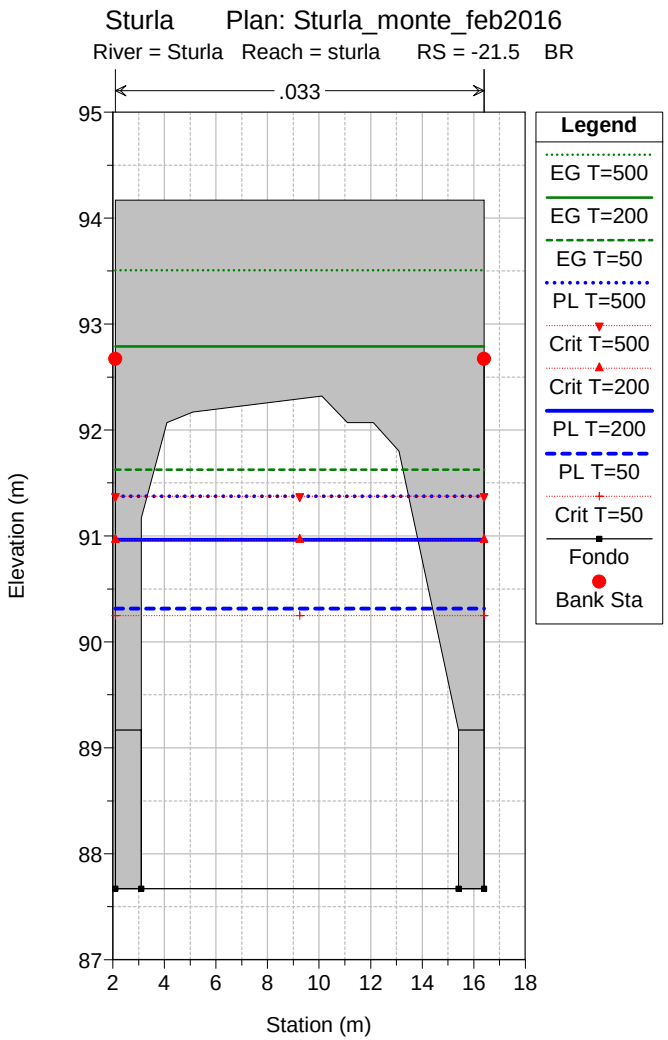
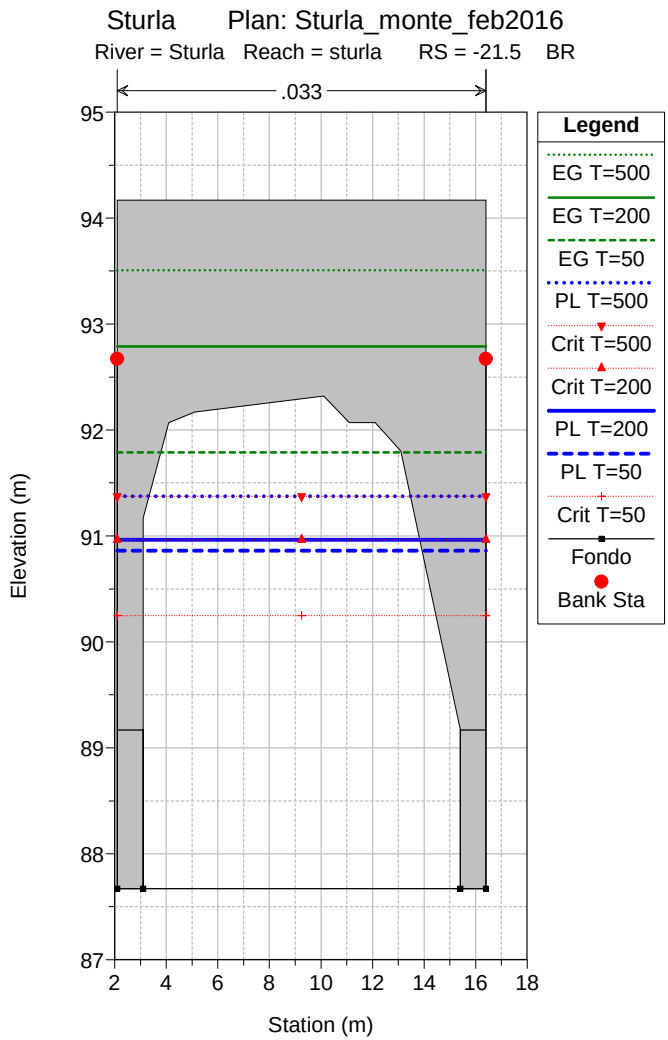
River = Sturla Reach = sturla RS = -20



Sturla Plan: Sturla_monte_feb2016

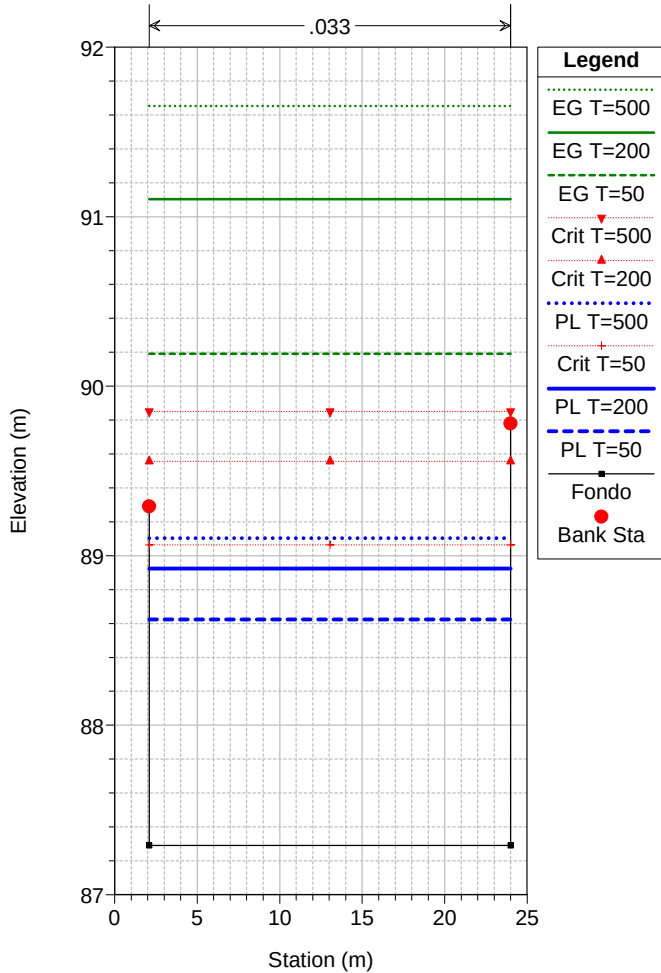
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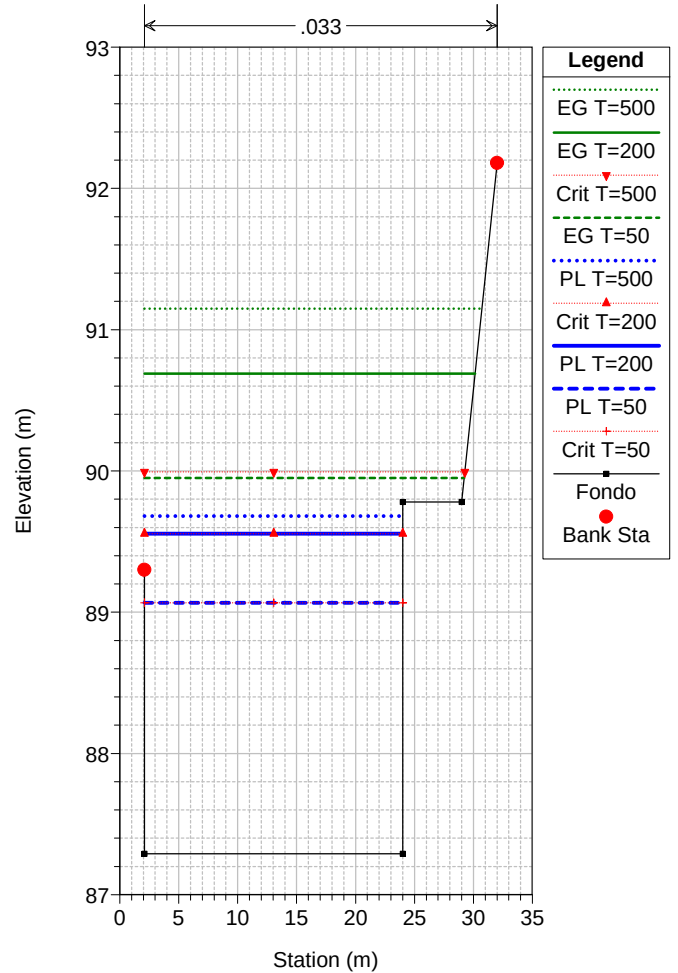
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River = Sturla Reach = sturla RS = -23.5



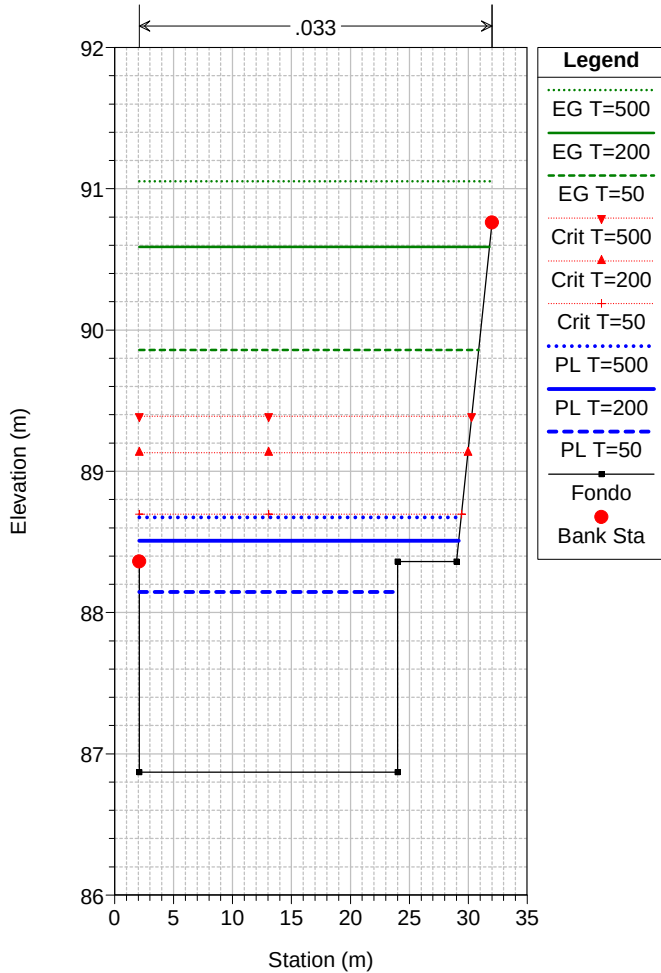
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River = Sturla Reach = sturla RS = -24



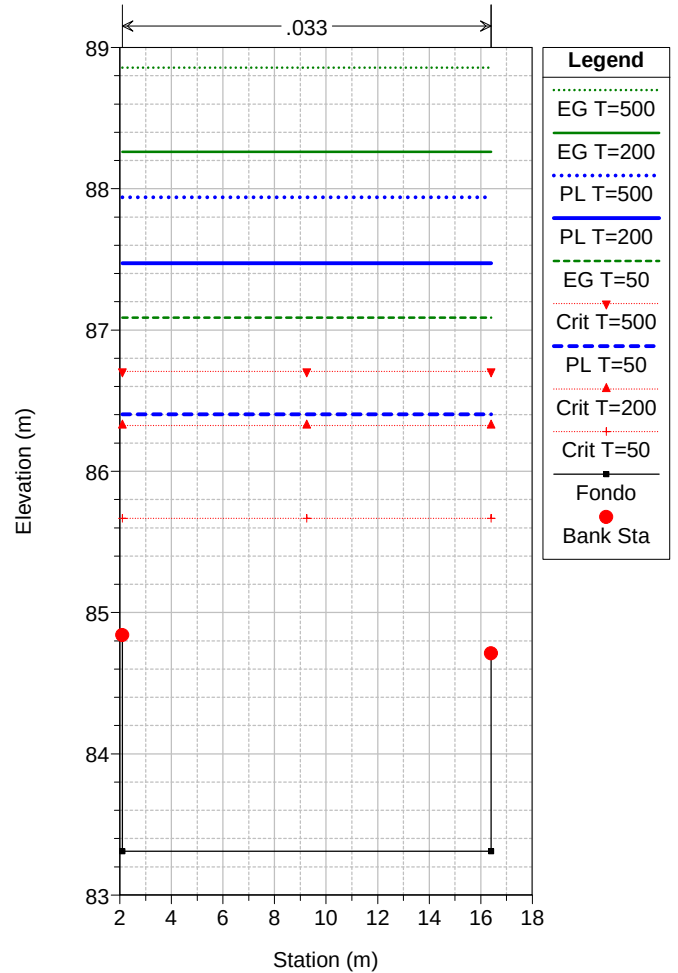
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -25



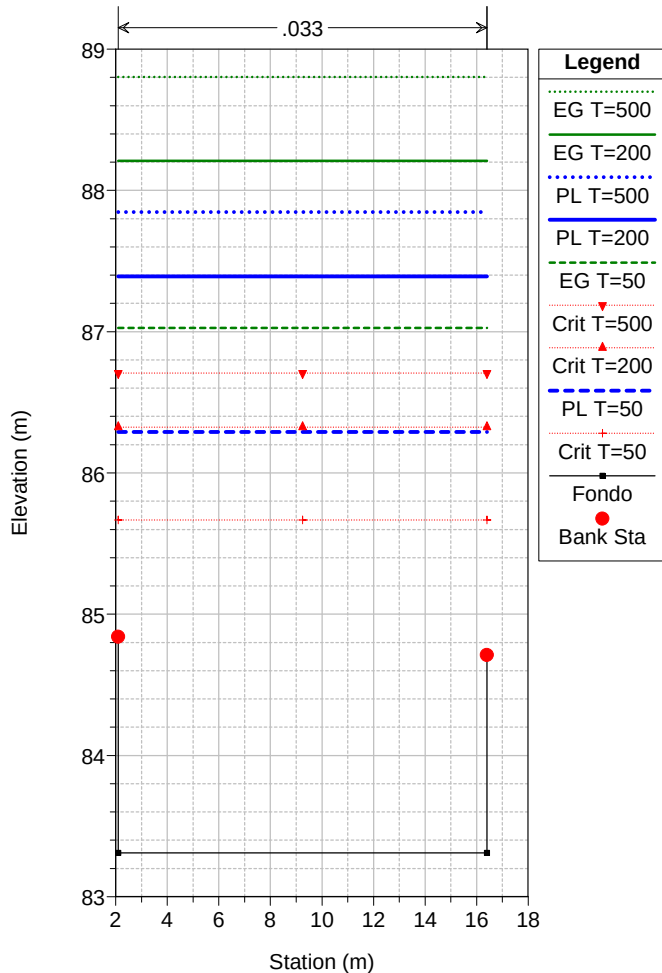
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -25.5



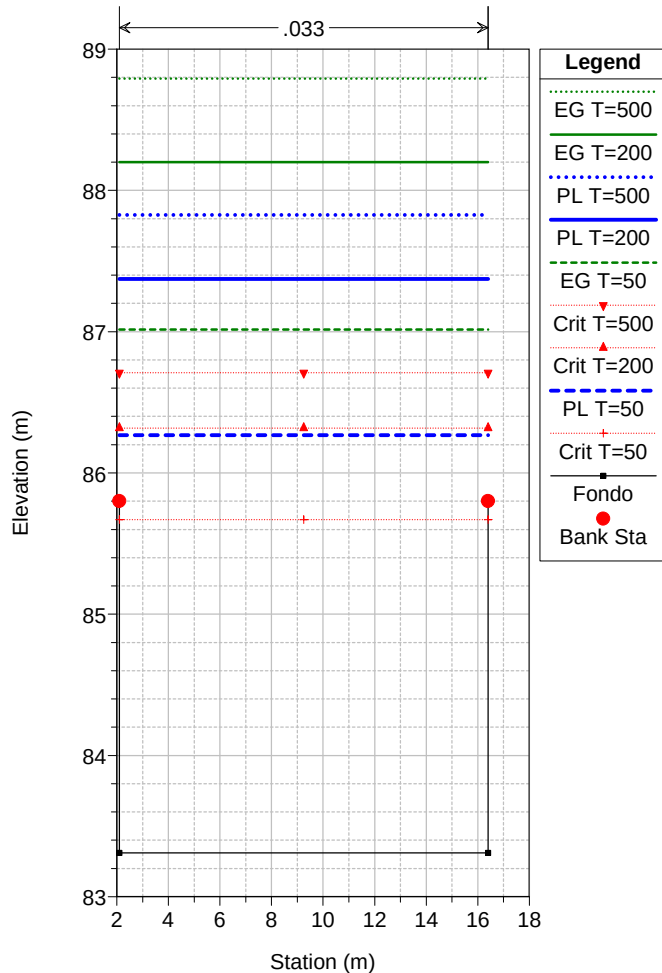
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -27



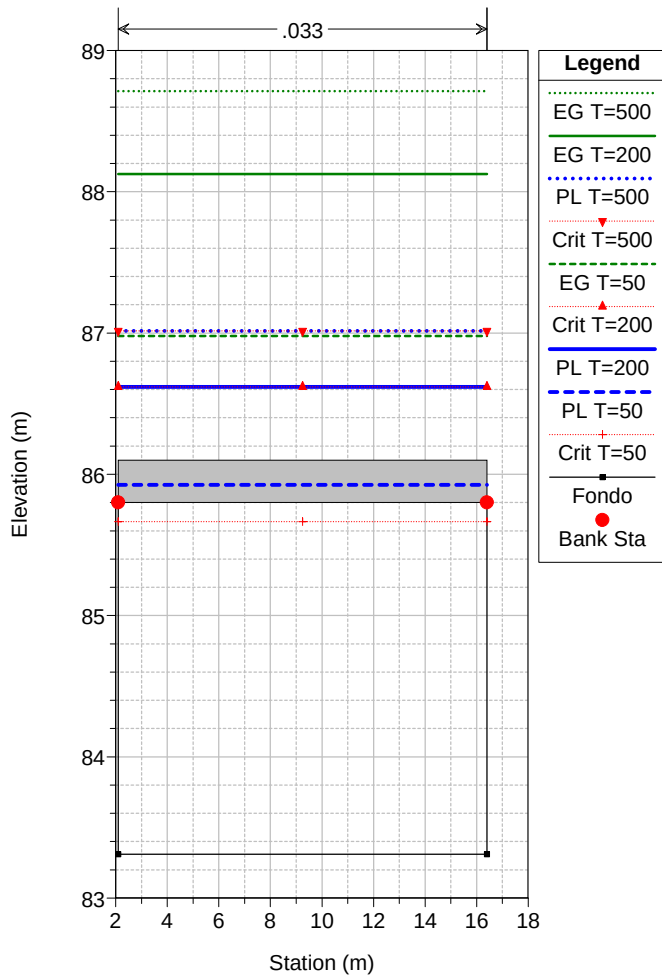
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -28



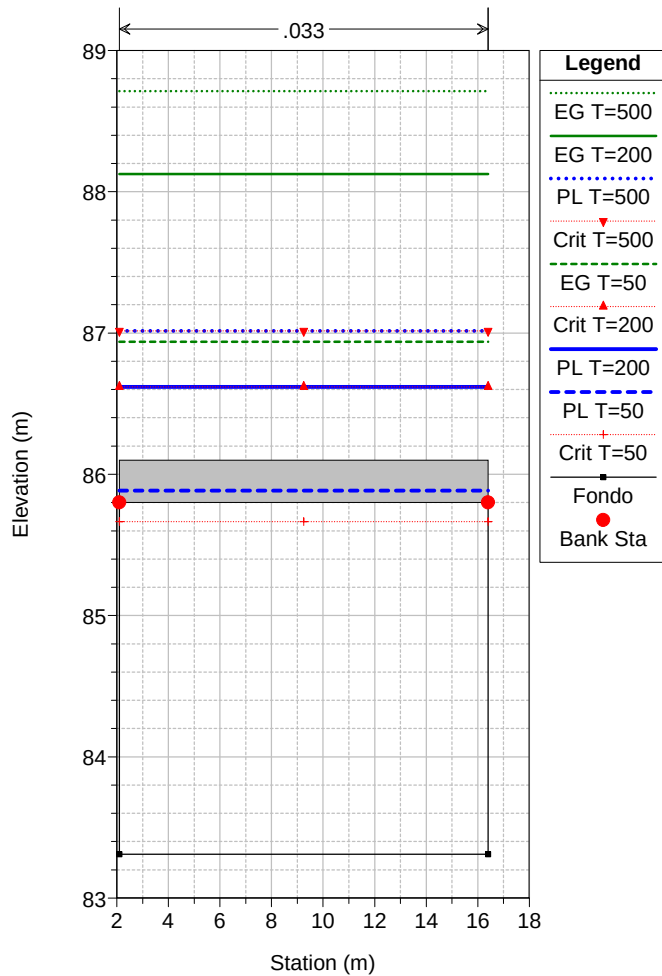
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -28.5 BR



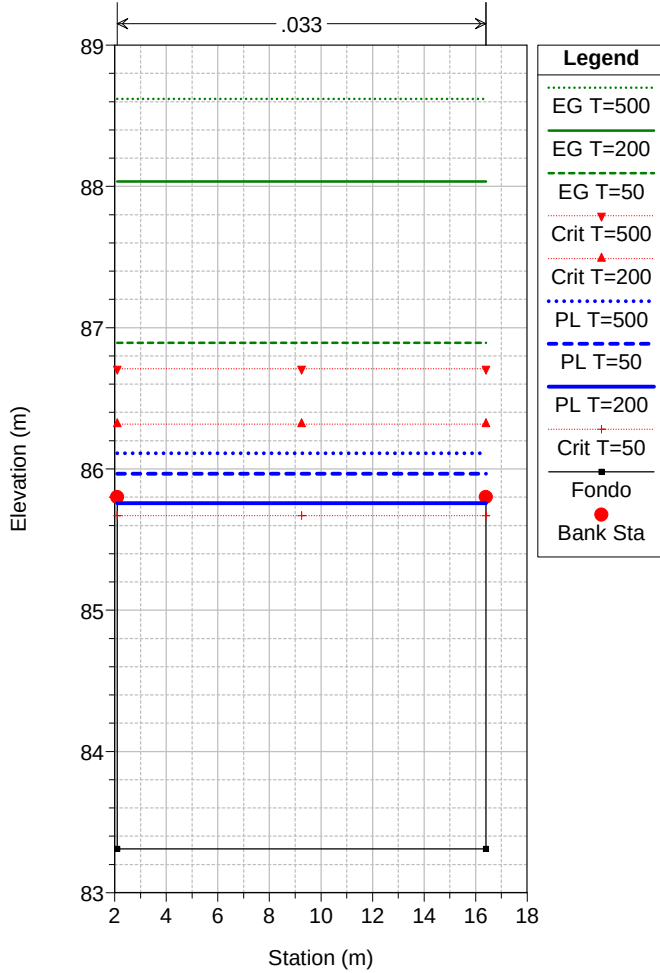
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -28.5 BR



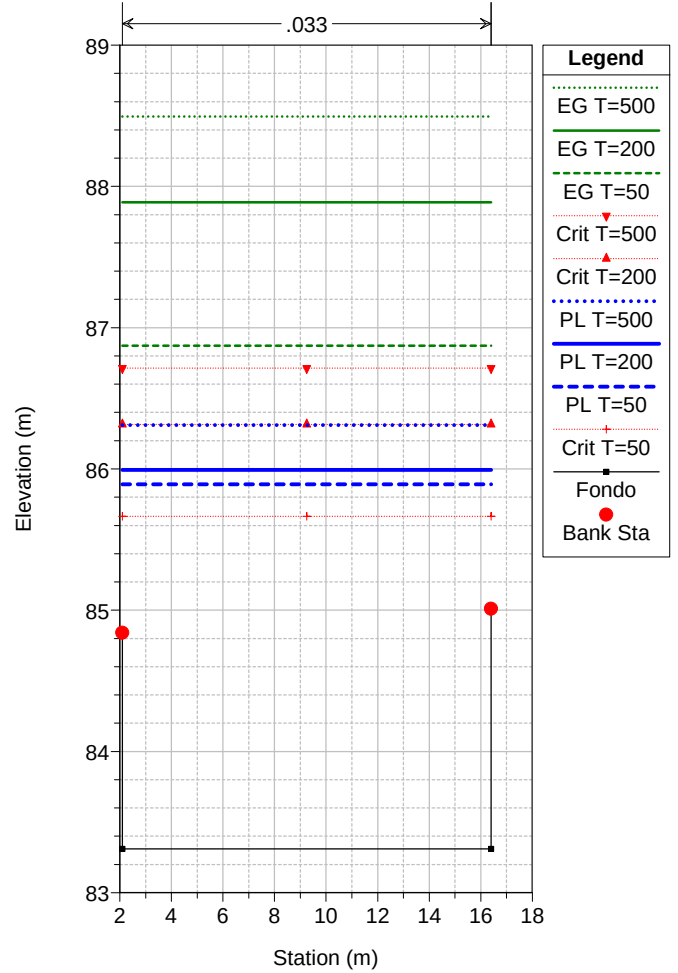
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -29



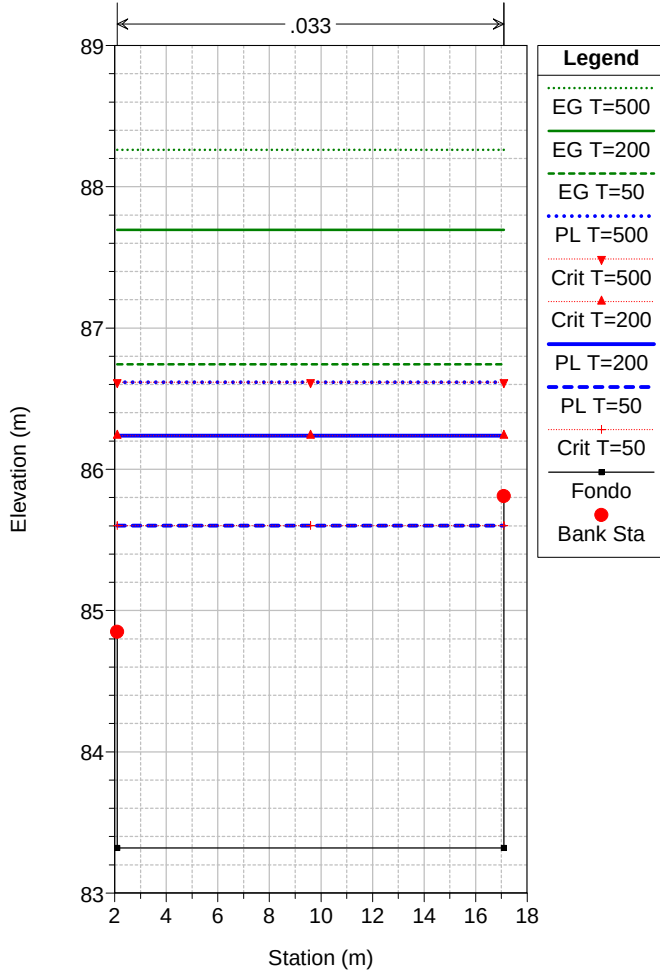
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -30



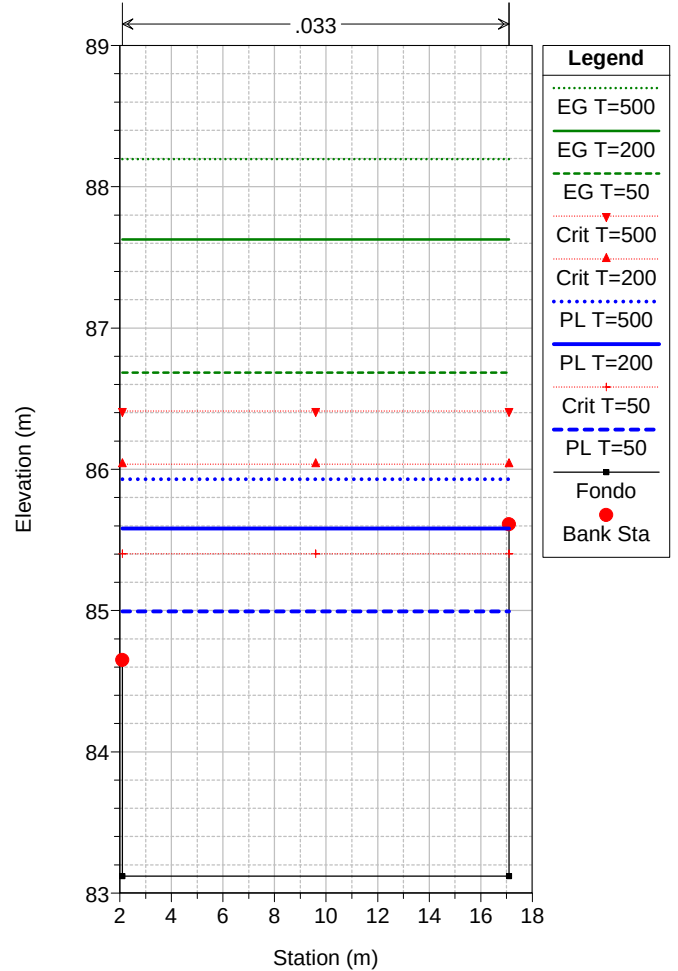
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -31



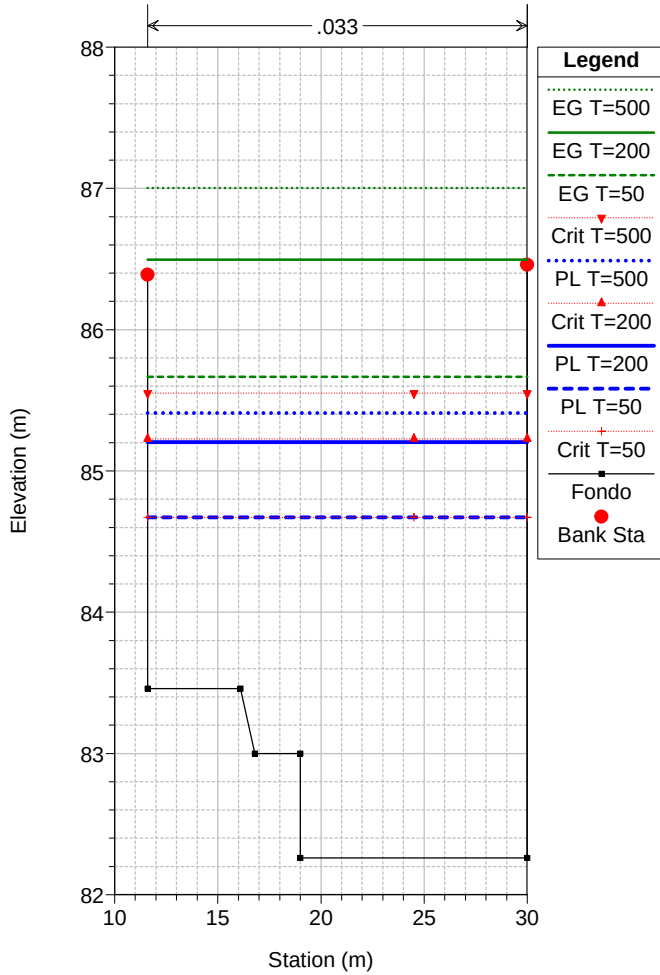
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -32



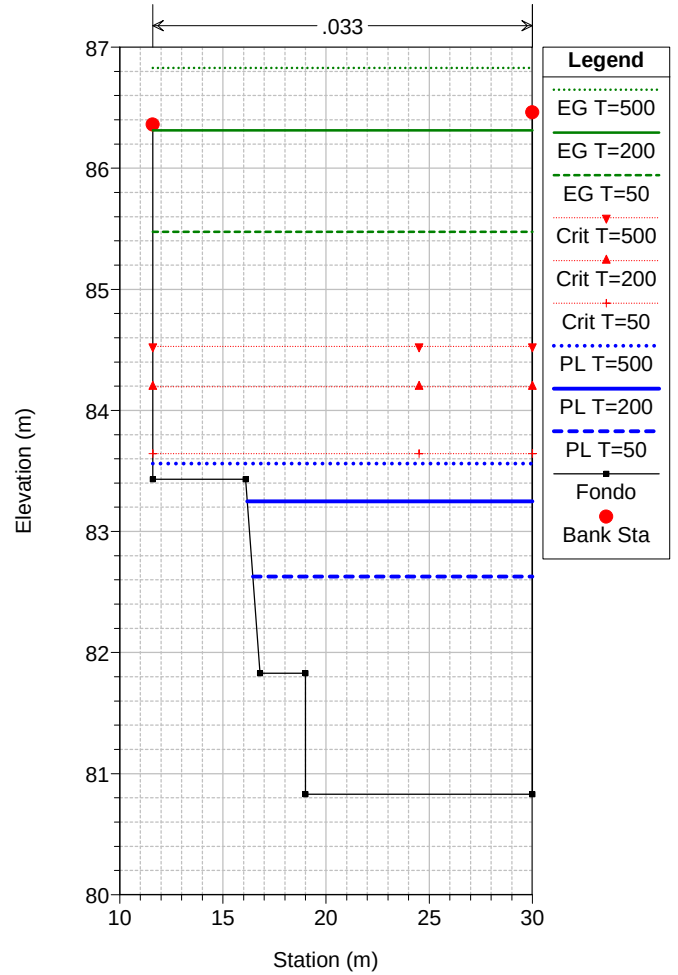
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -33



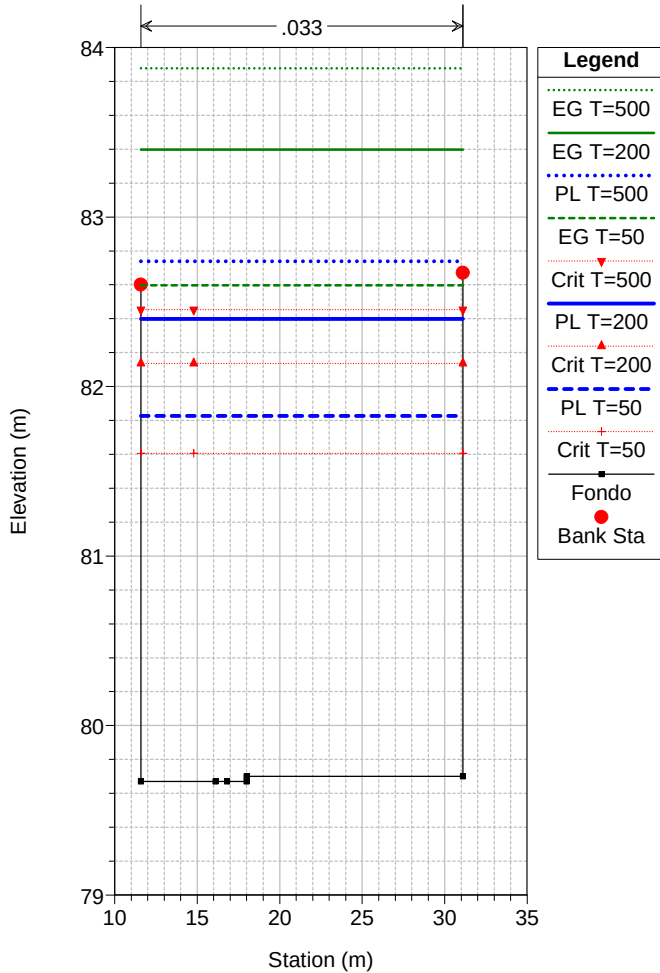
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -34



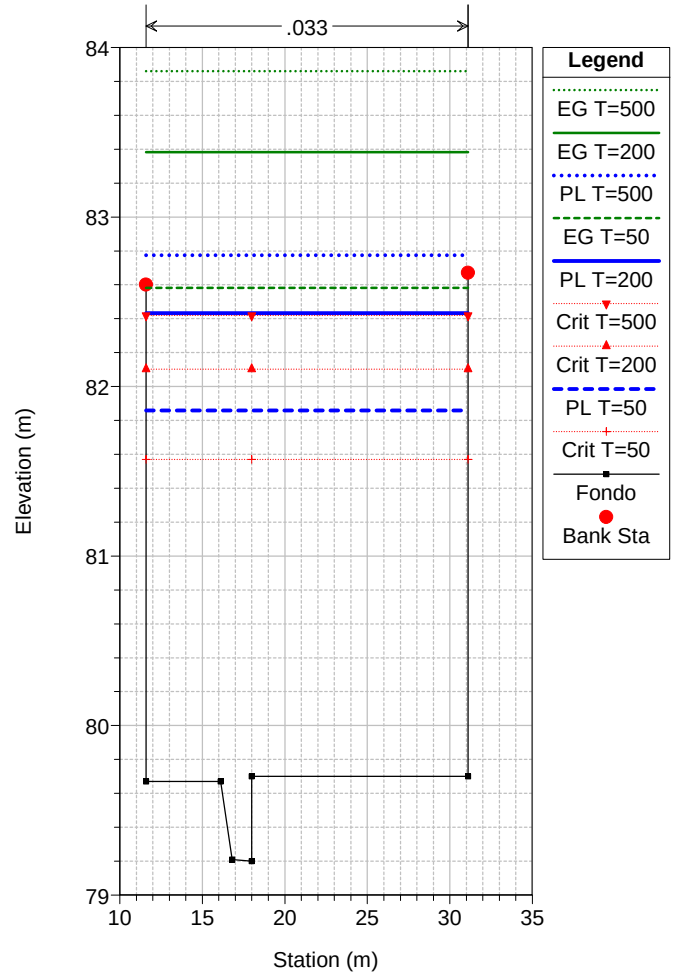
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -34.5



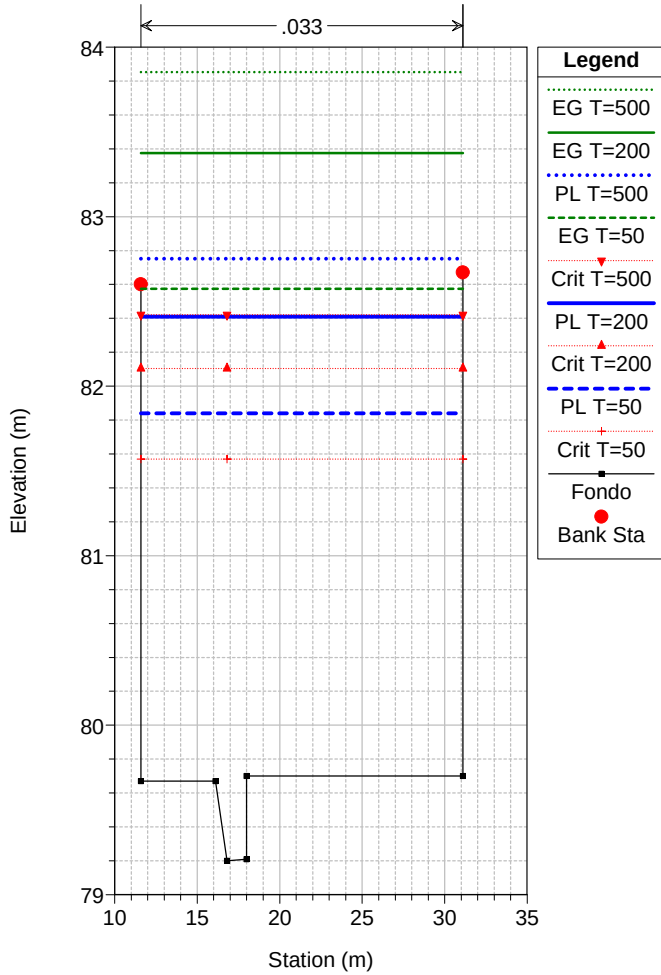
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -35



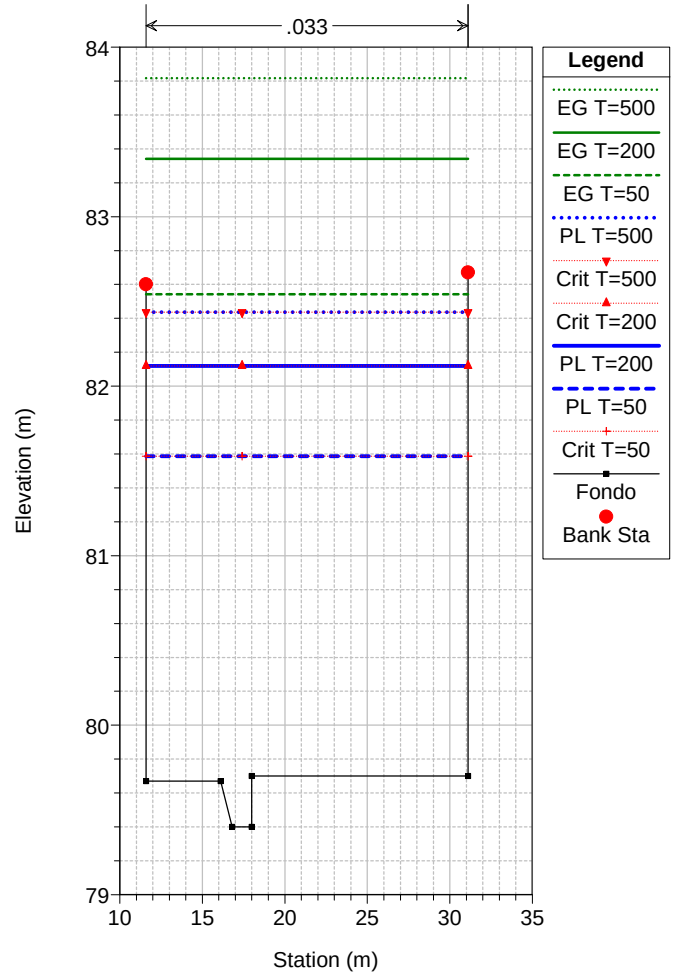
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -36



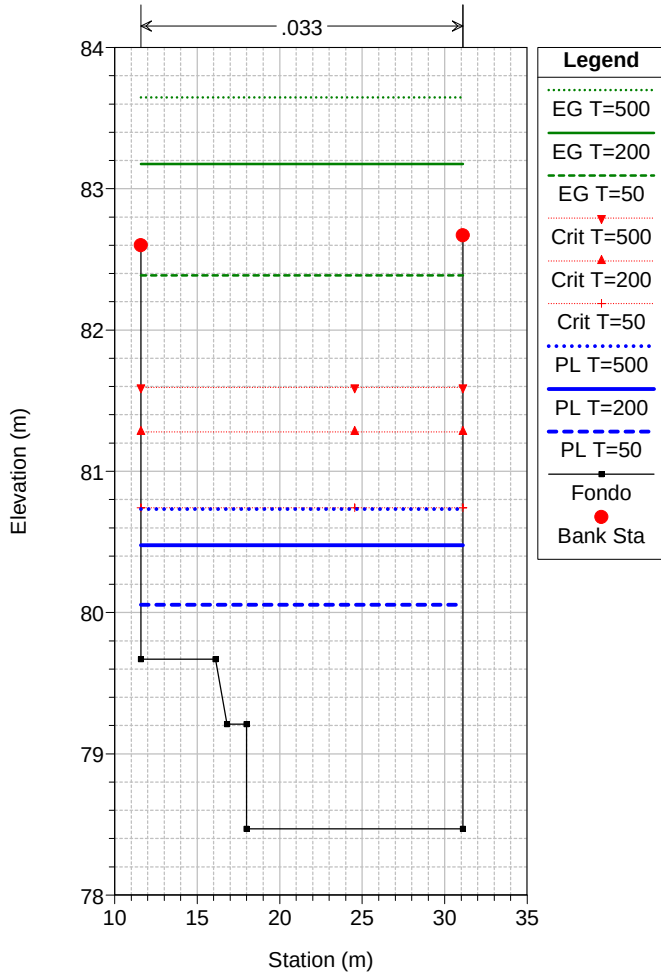
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -37



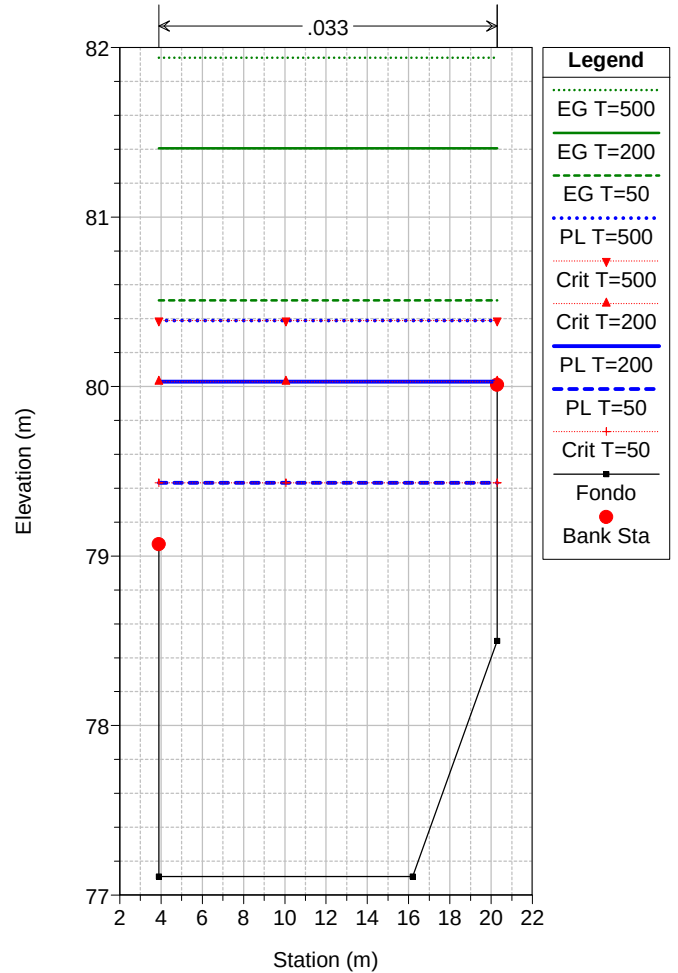
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -38



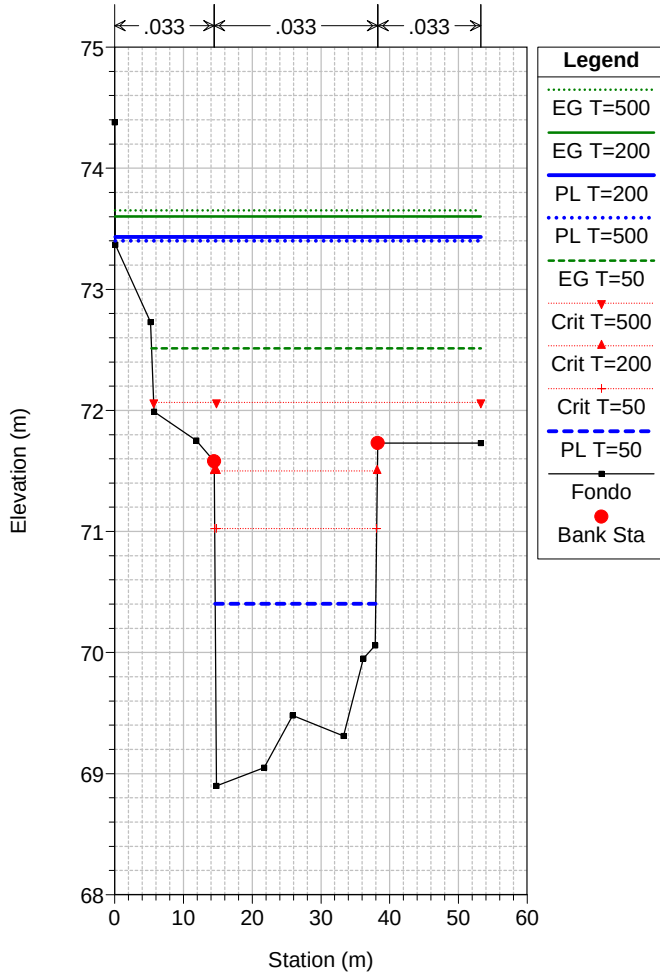
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -39



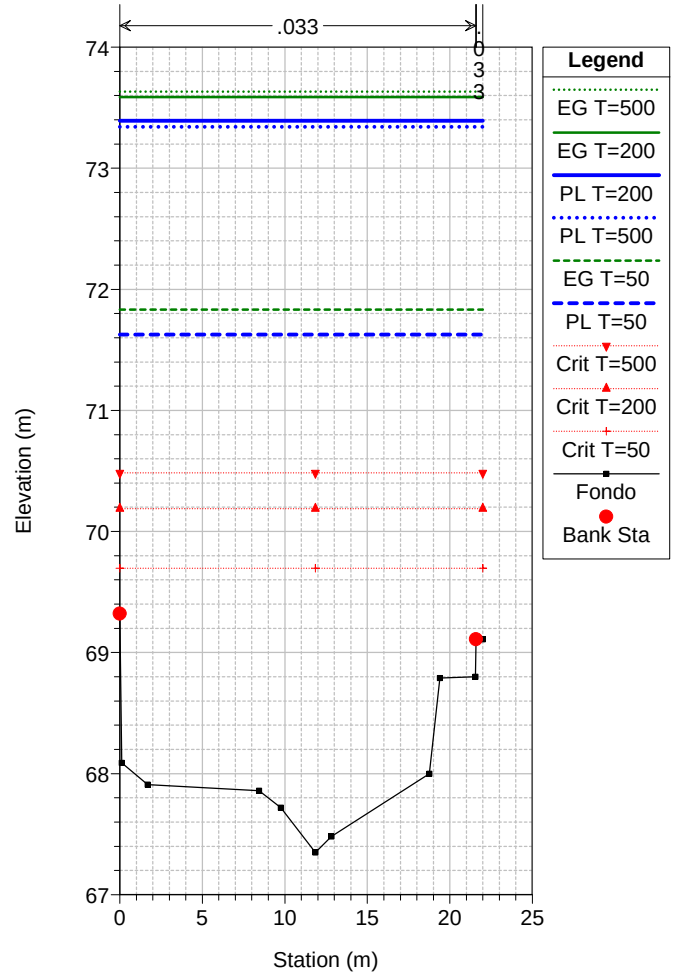
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -39.1



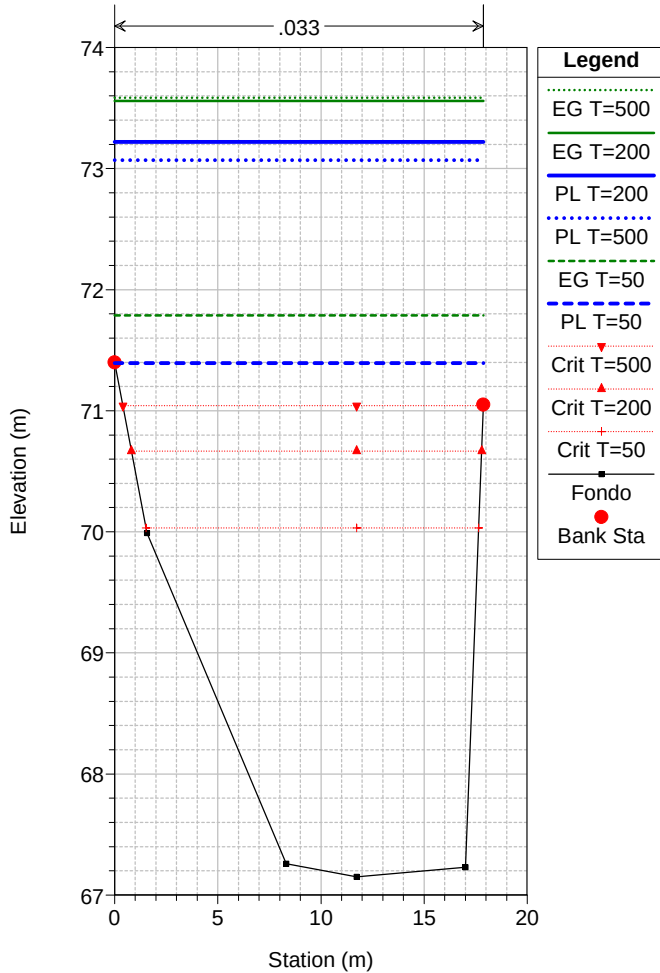
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -39.2



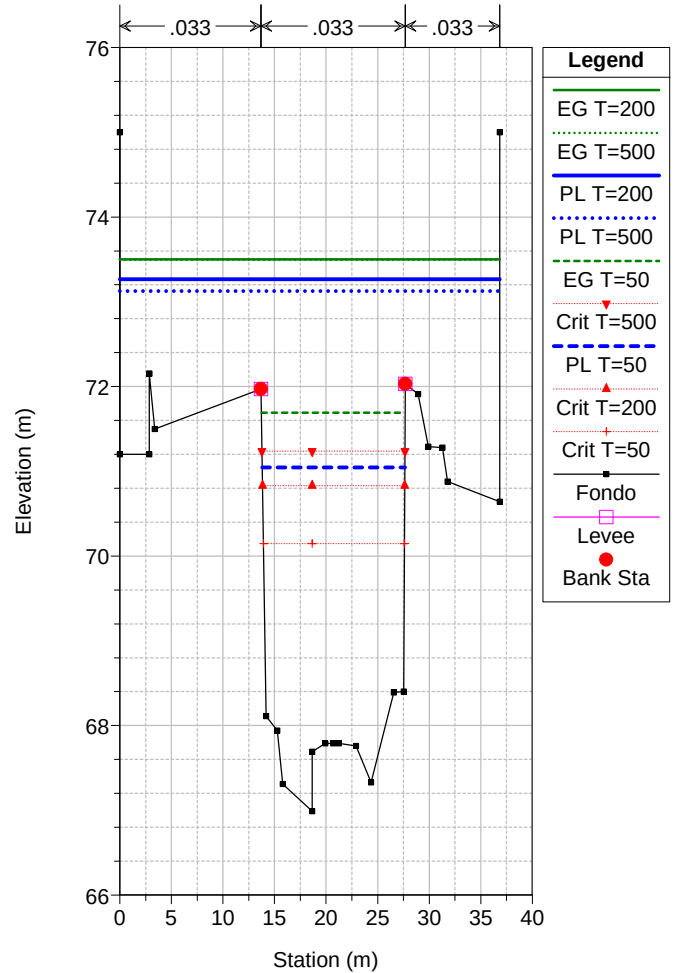
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -39.3



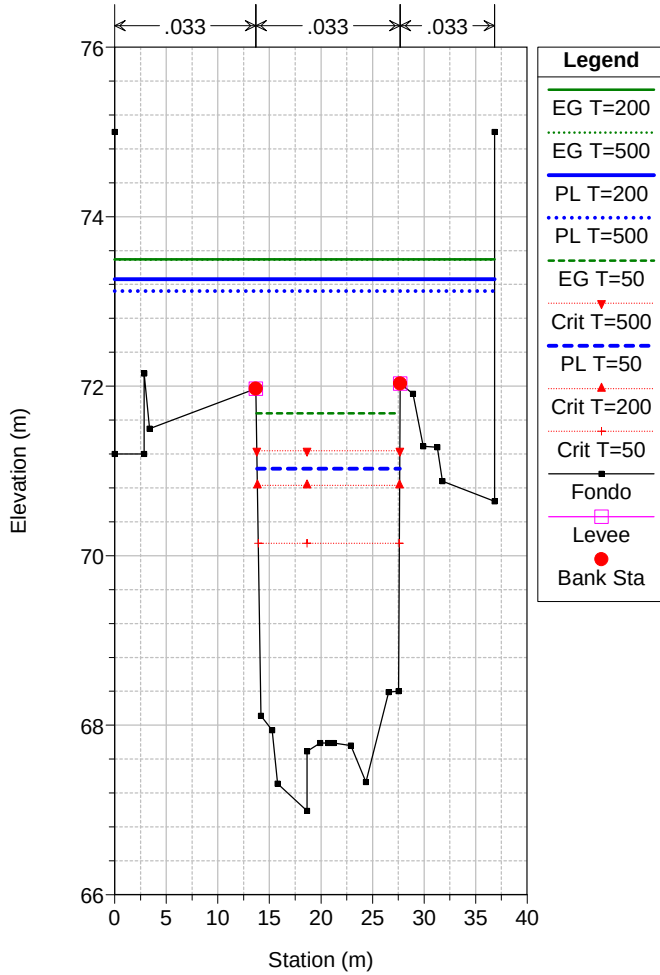
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -40



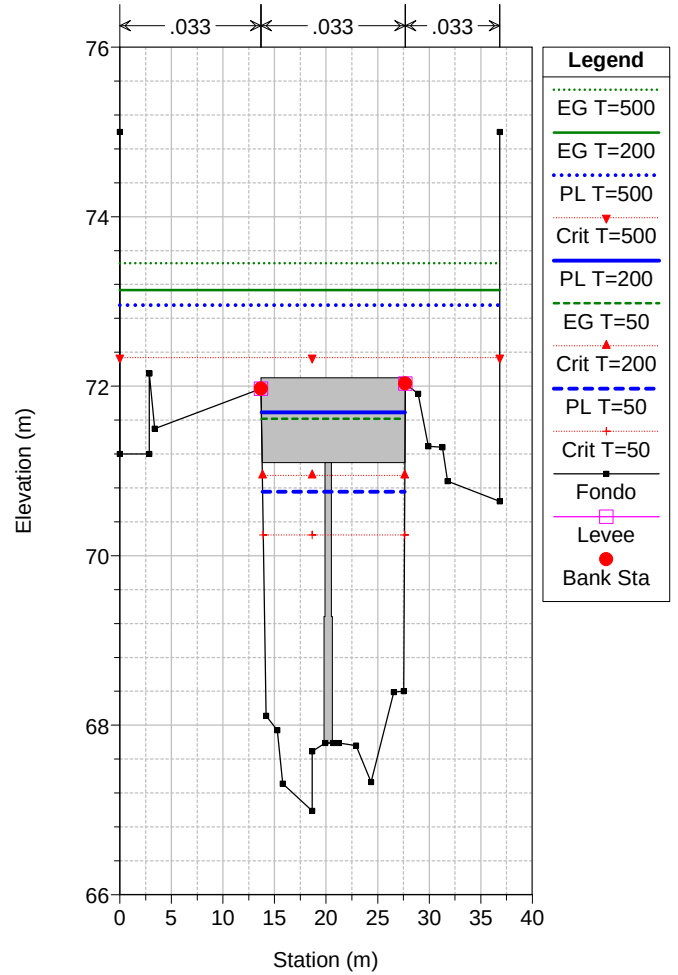
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -41



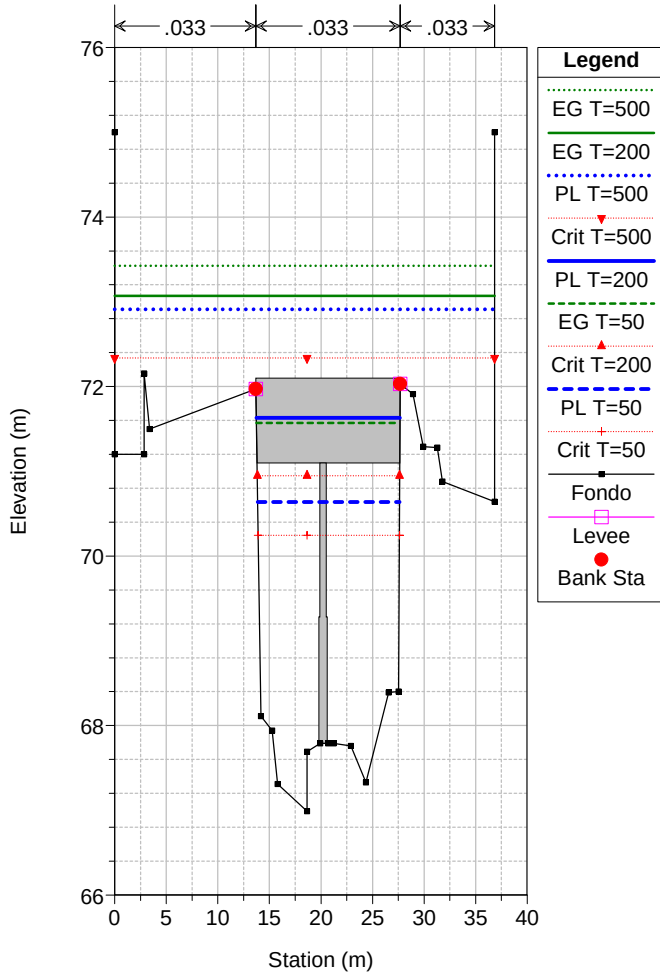
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -41.5 BR



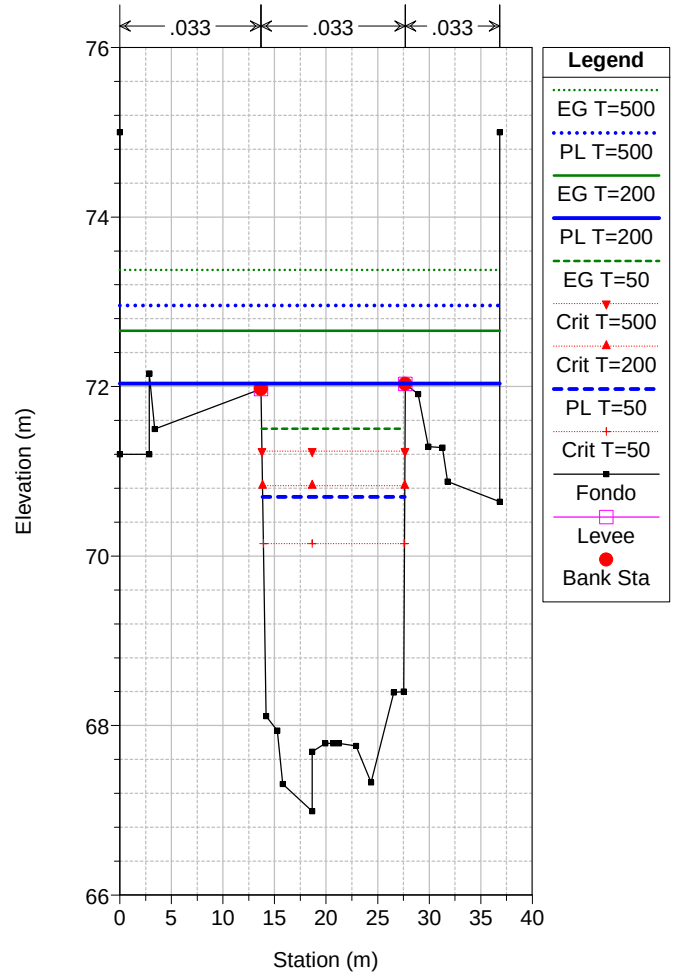
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -41.5 BR



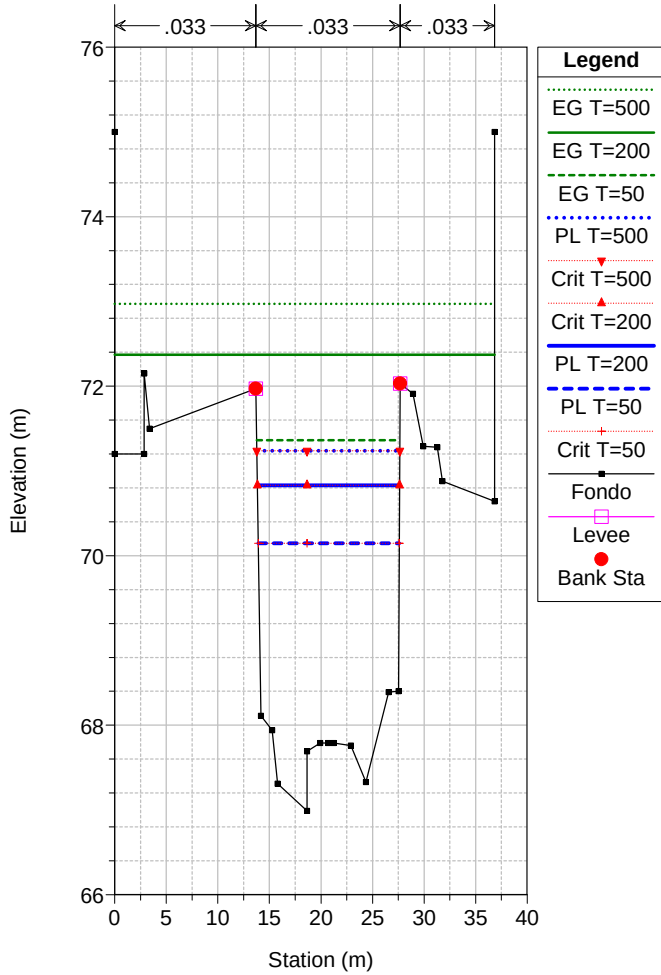
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -42



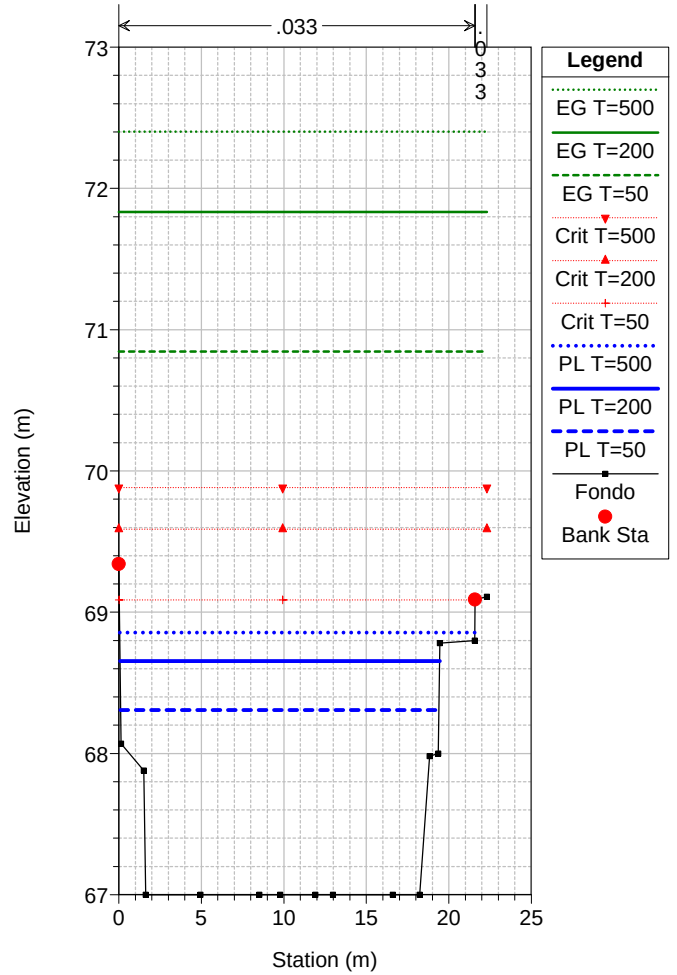
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -43



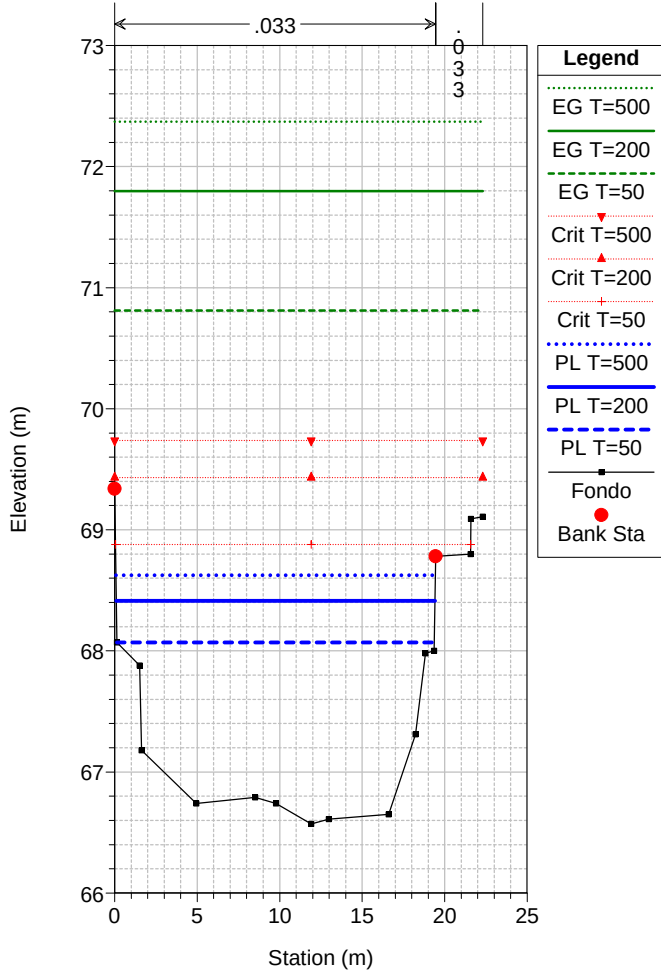
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -44



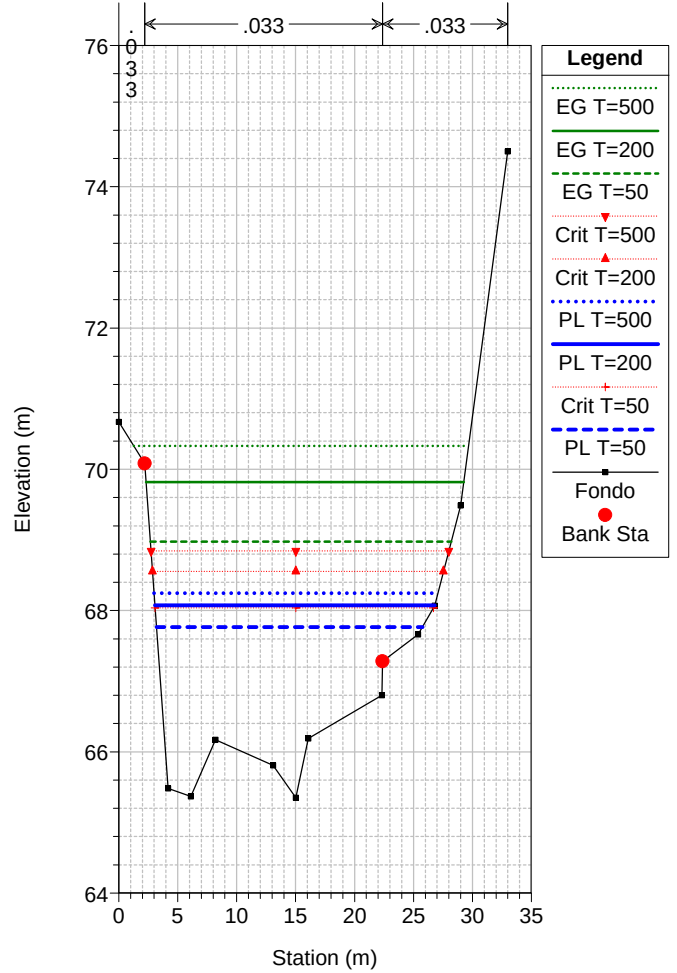
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -45



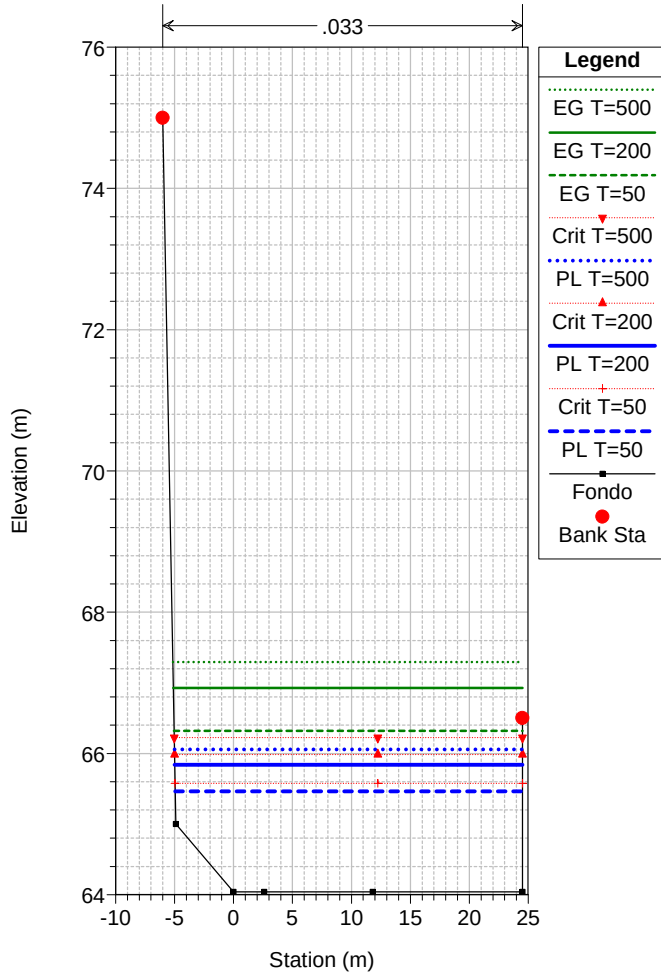
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -45.1



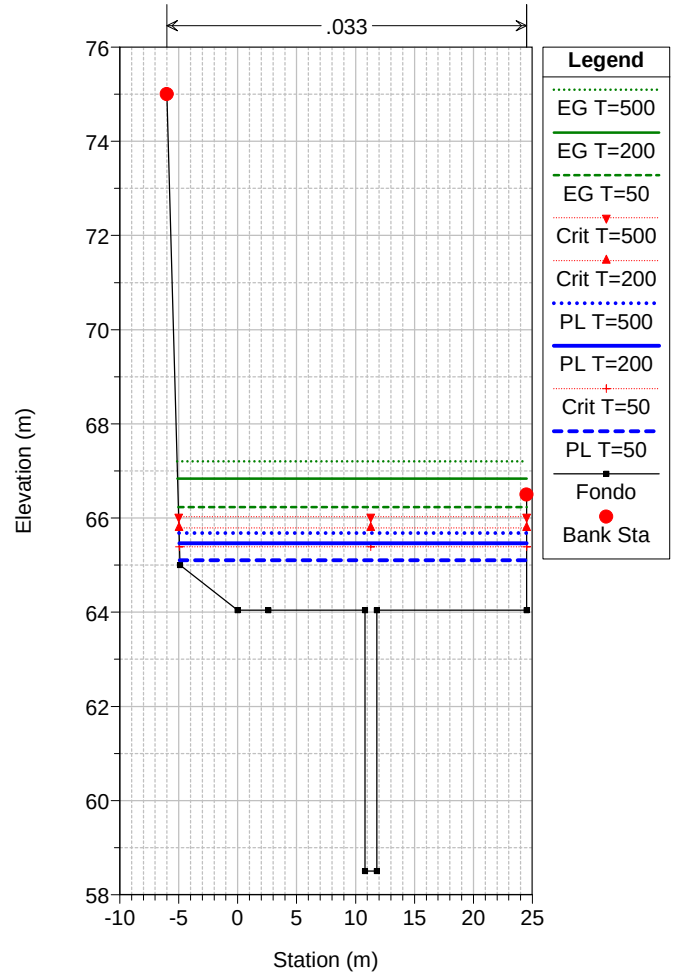
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -45.5



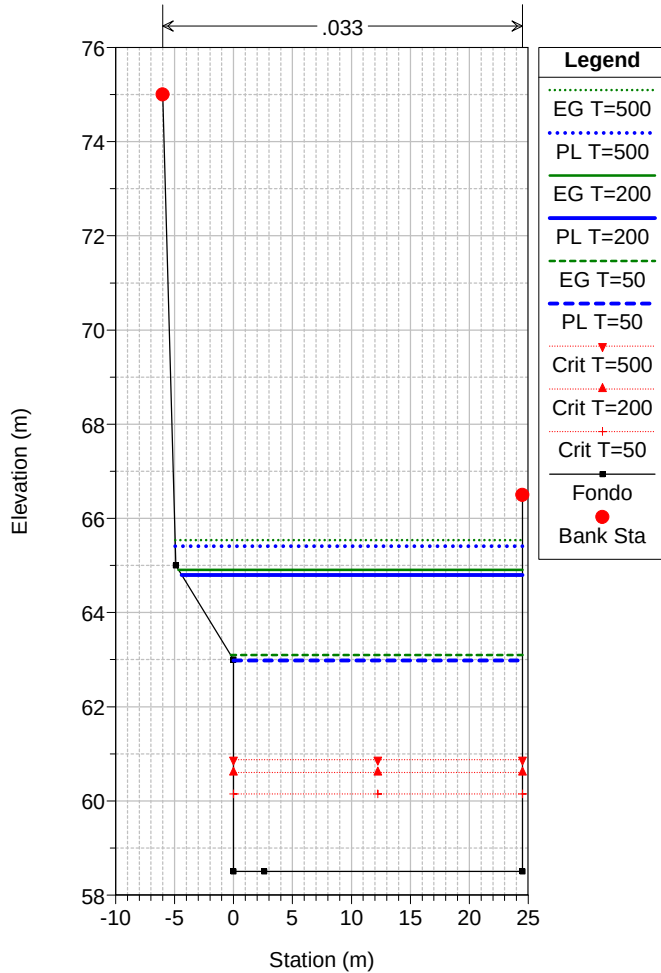
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -45.7



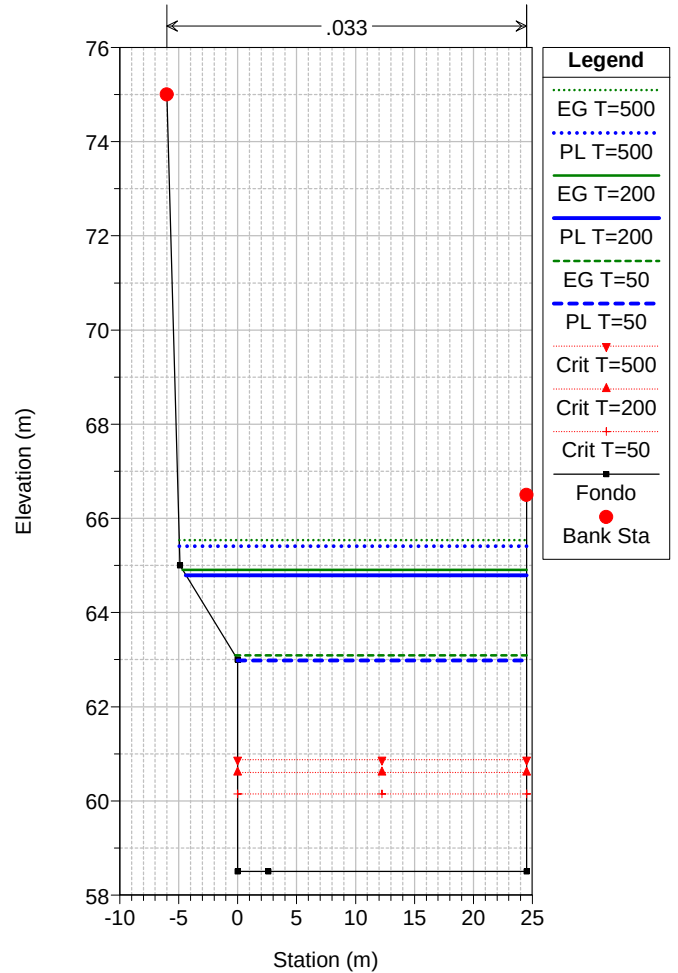
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -46



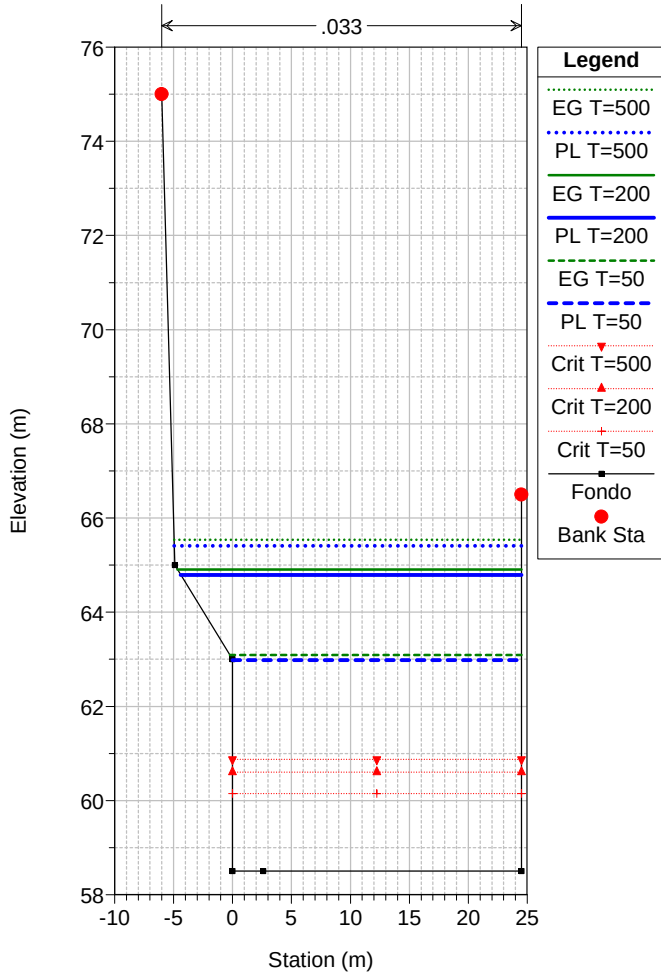
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -47



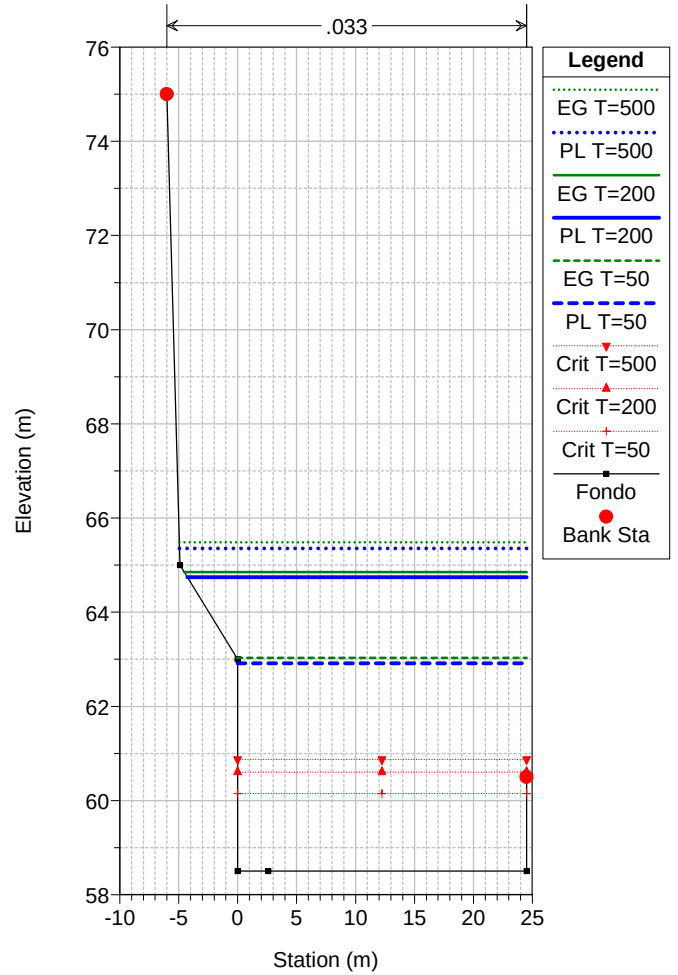
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -47.5



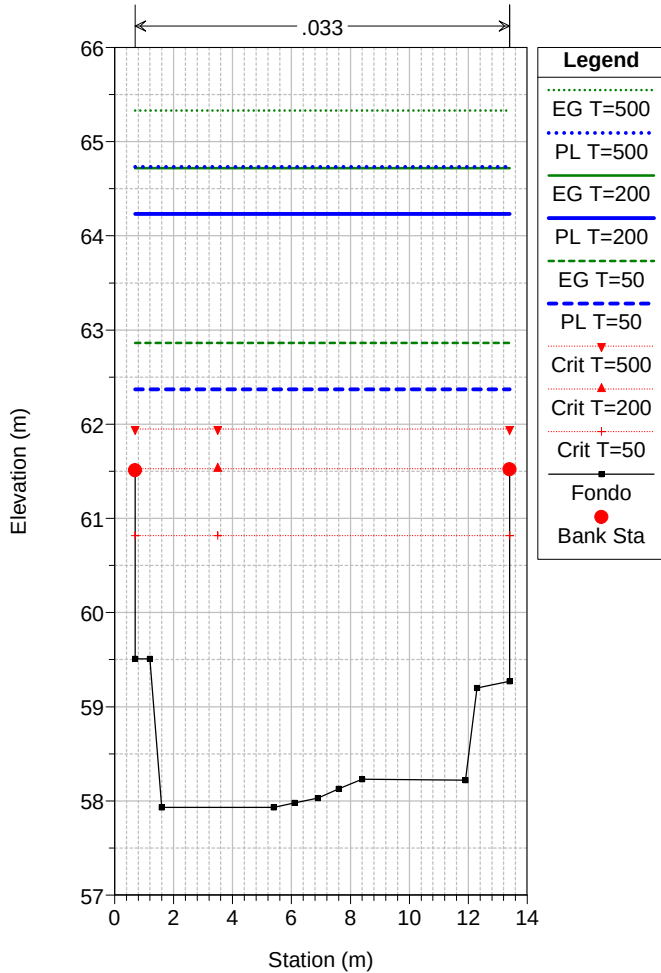
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -47.6



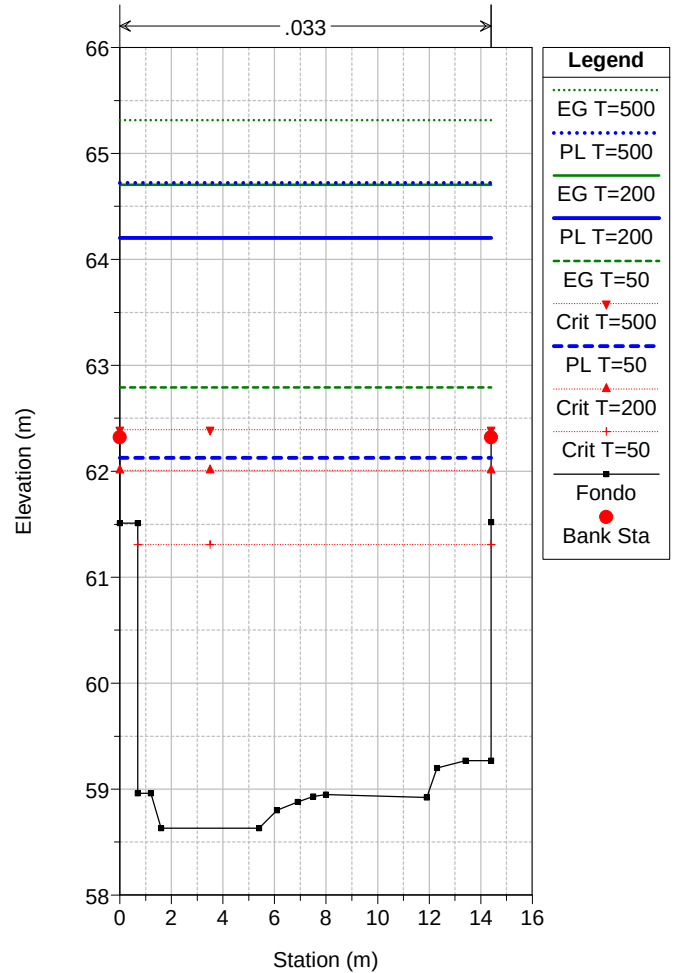
Sturla Plan: Sturla_monte_feb2016

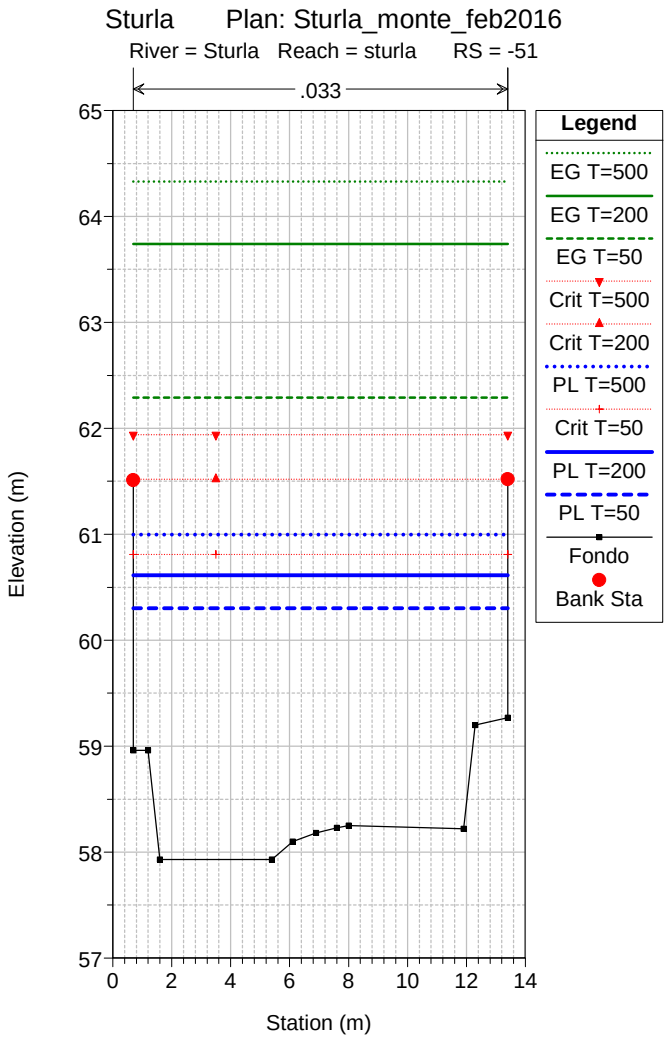
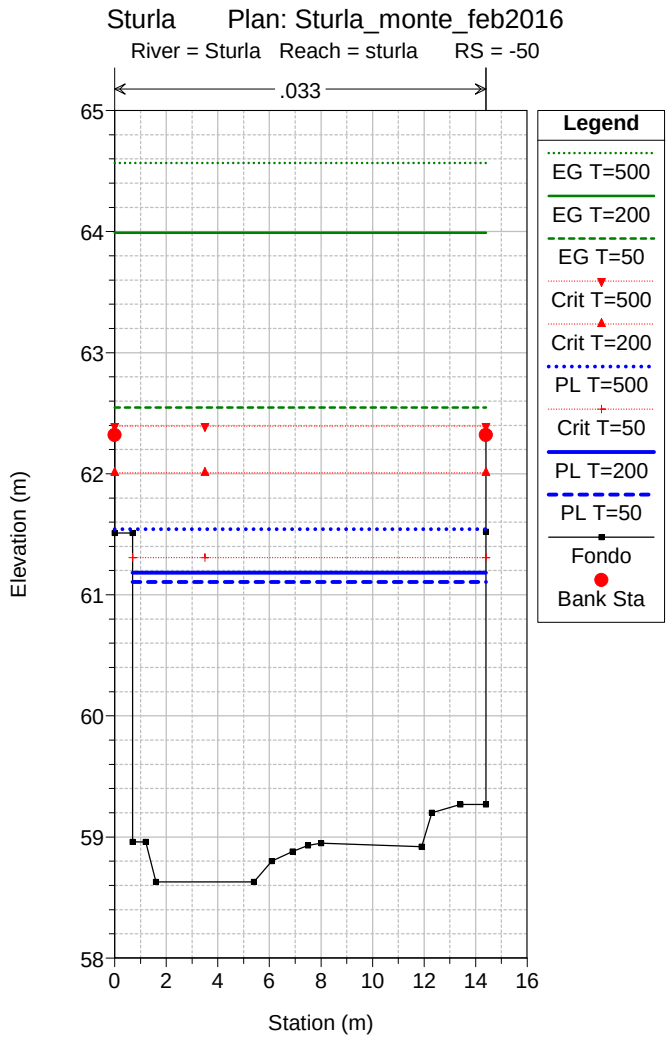
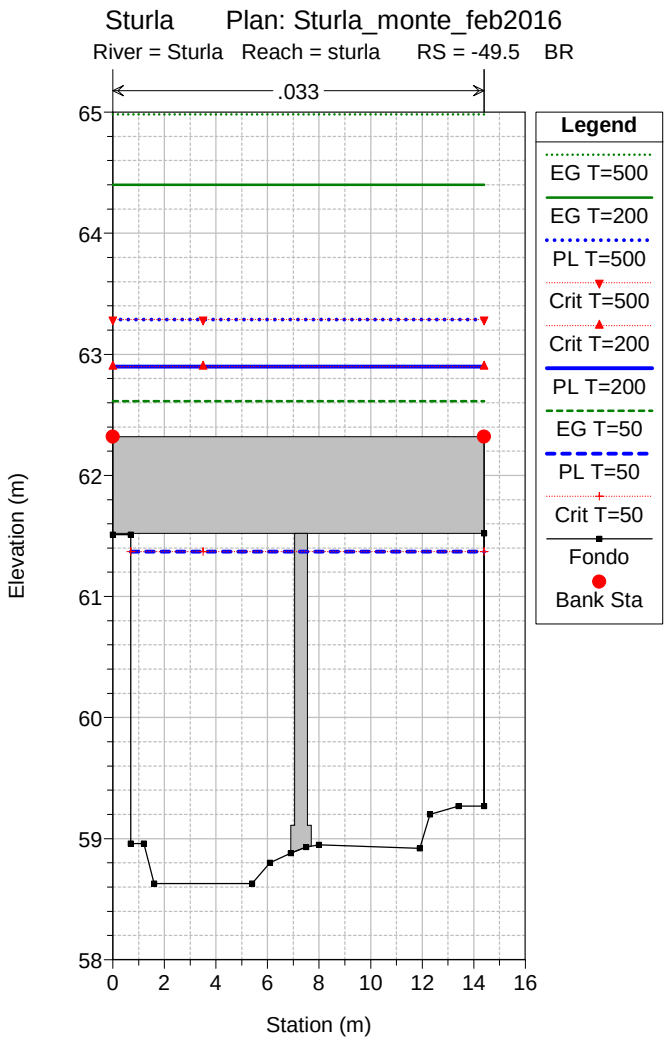
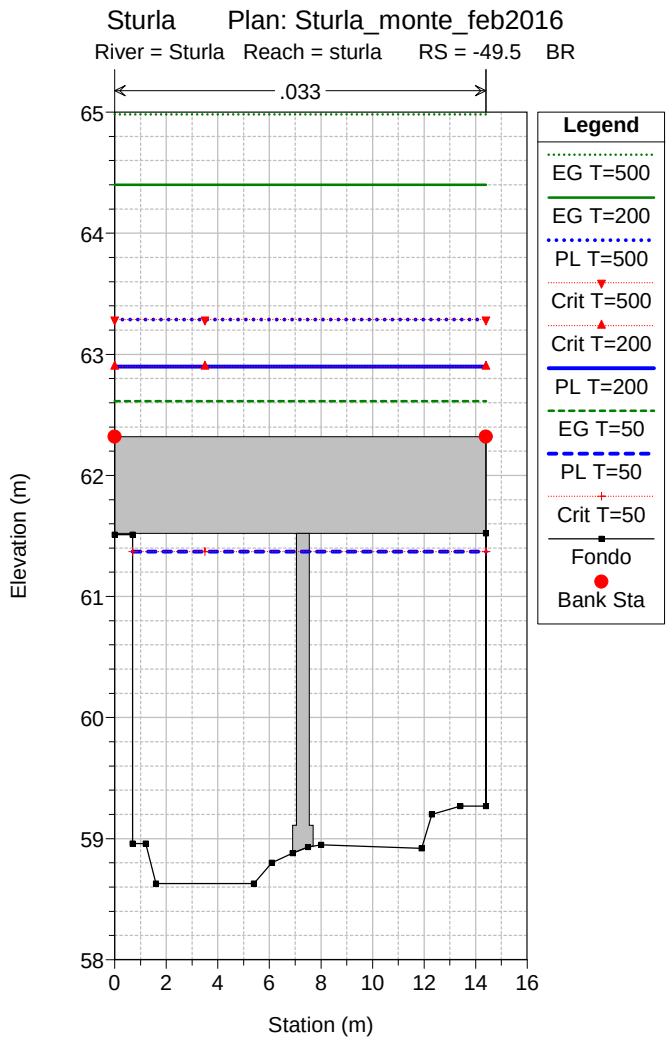
River = Sturla Reach = sturla RS = -48



Sturla Plan: Sturla_monte_feb2016

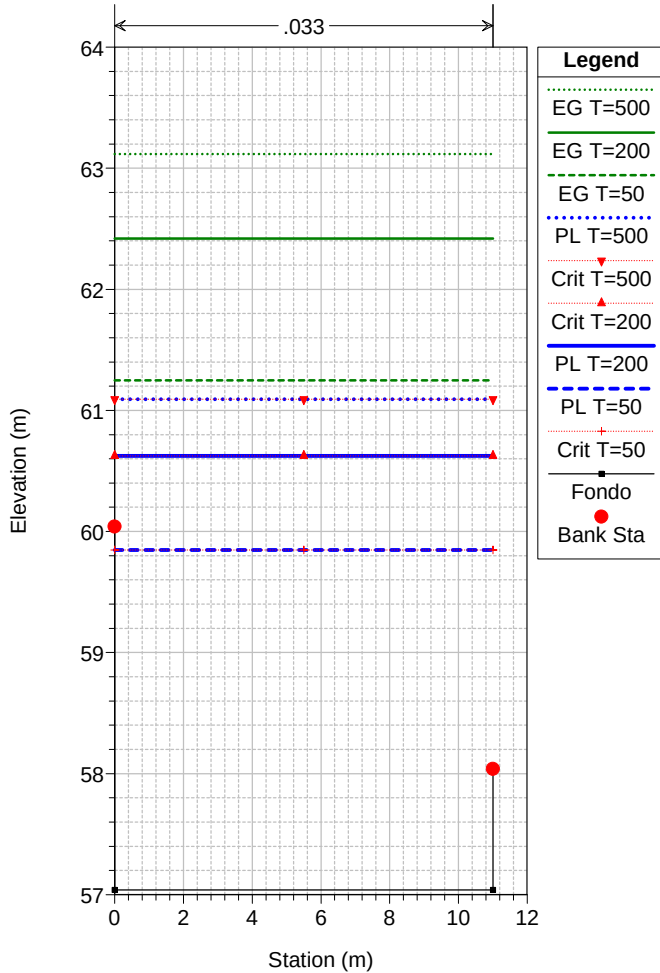
River = Sturla Reach = sturla RS = -49





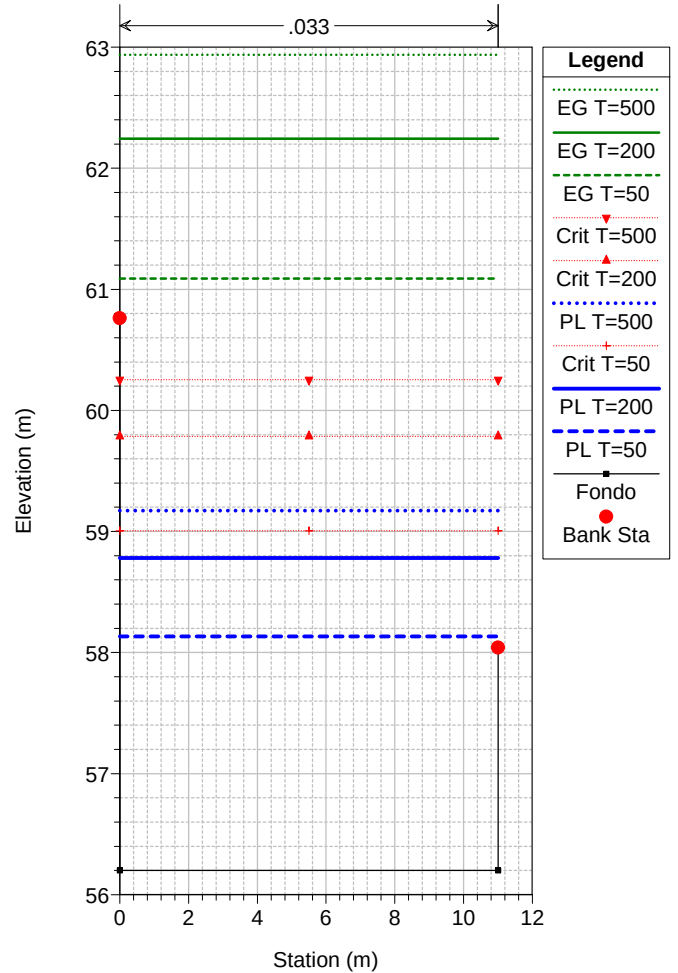
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -52



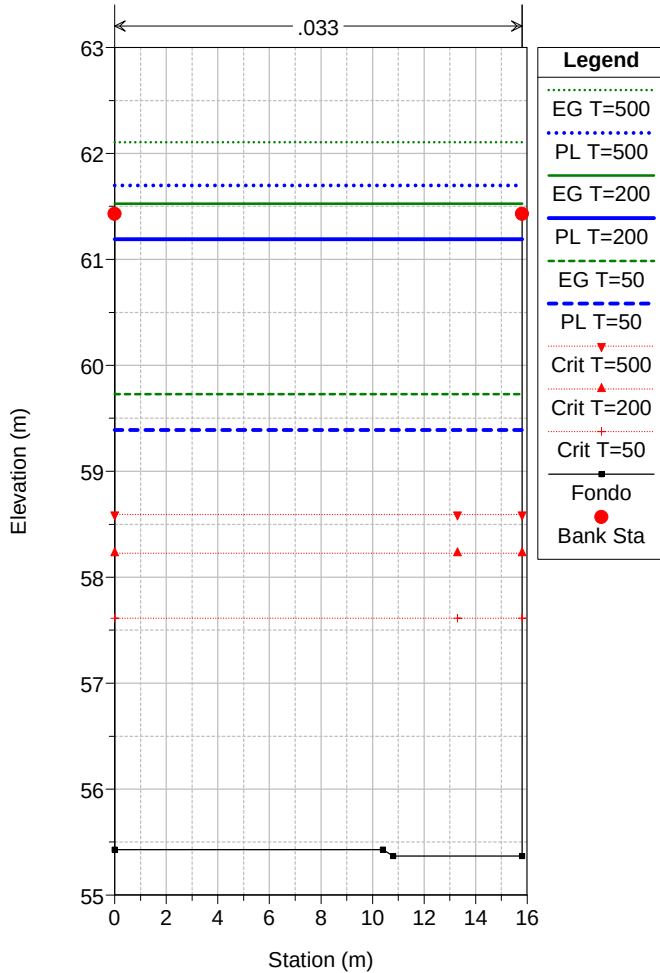
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -53



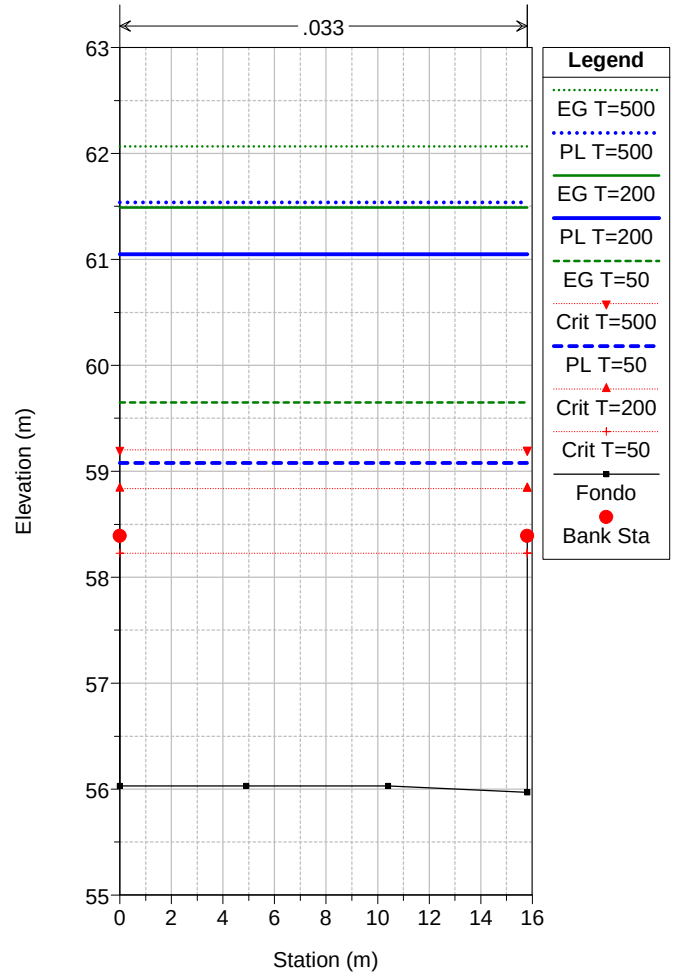
Sturla Plan: Sturla_monte_feb2016

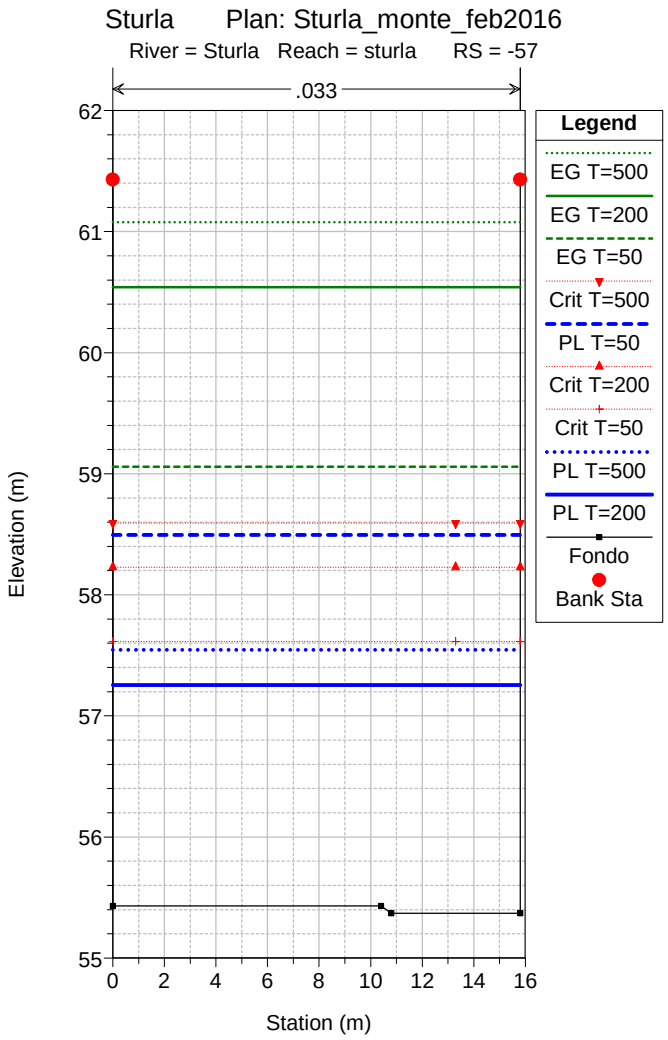
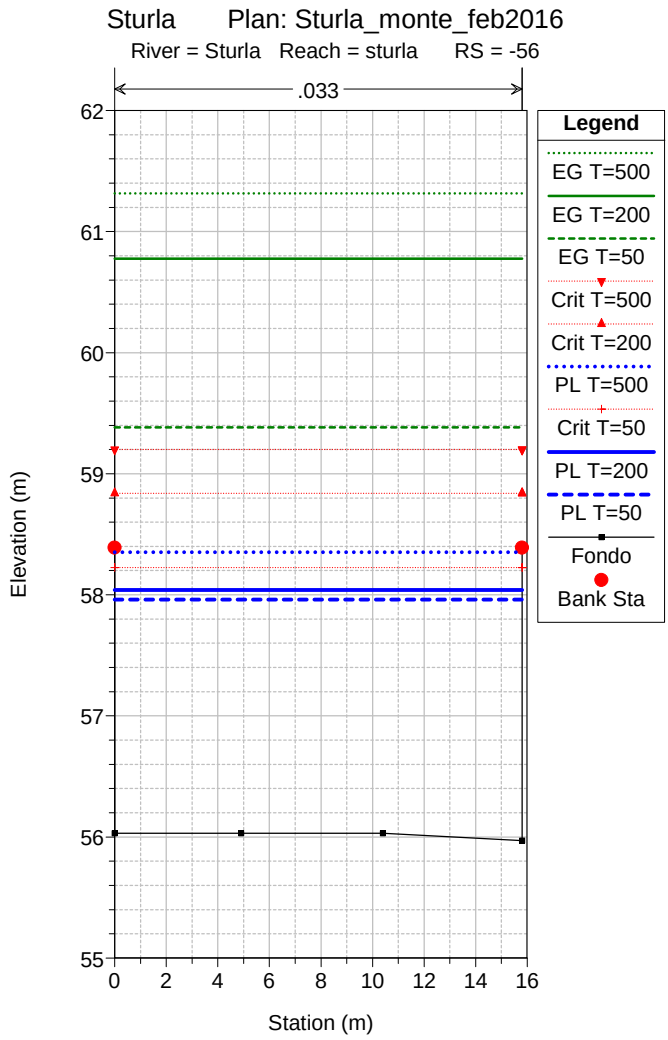
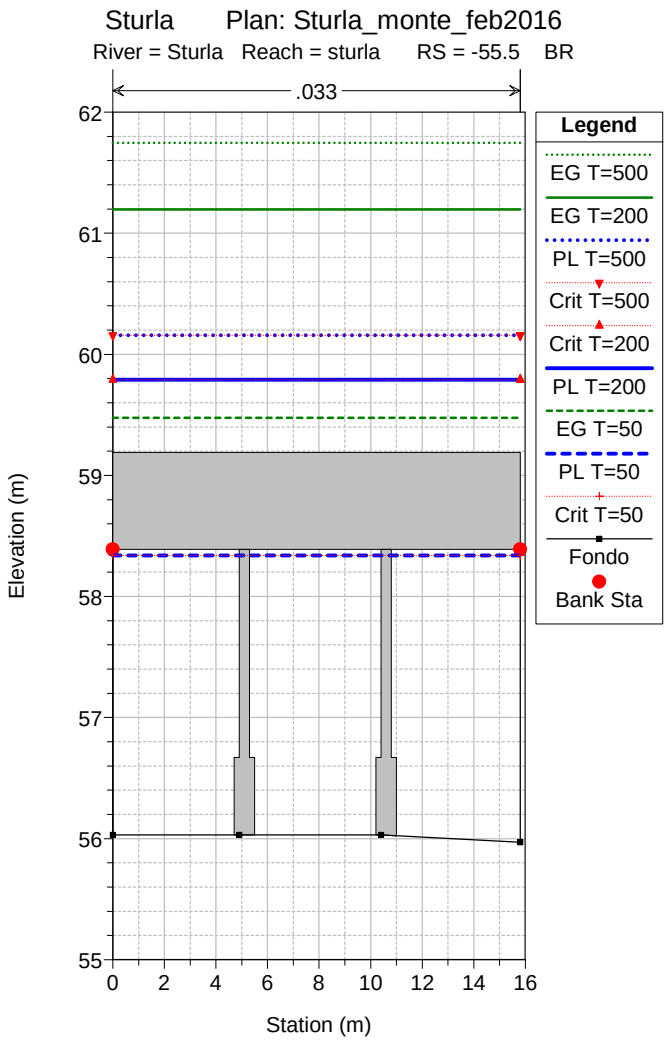
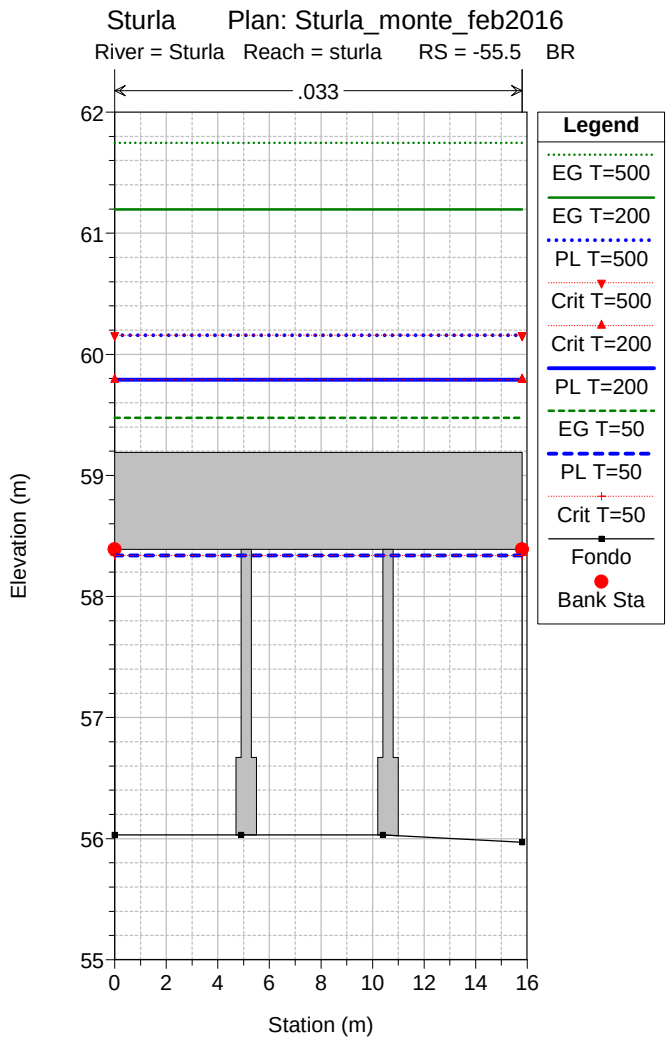
River = Sturla Reach = sturla RS = -54



Sturla Plan: Sturla_monte_feb2016

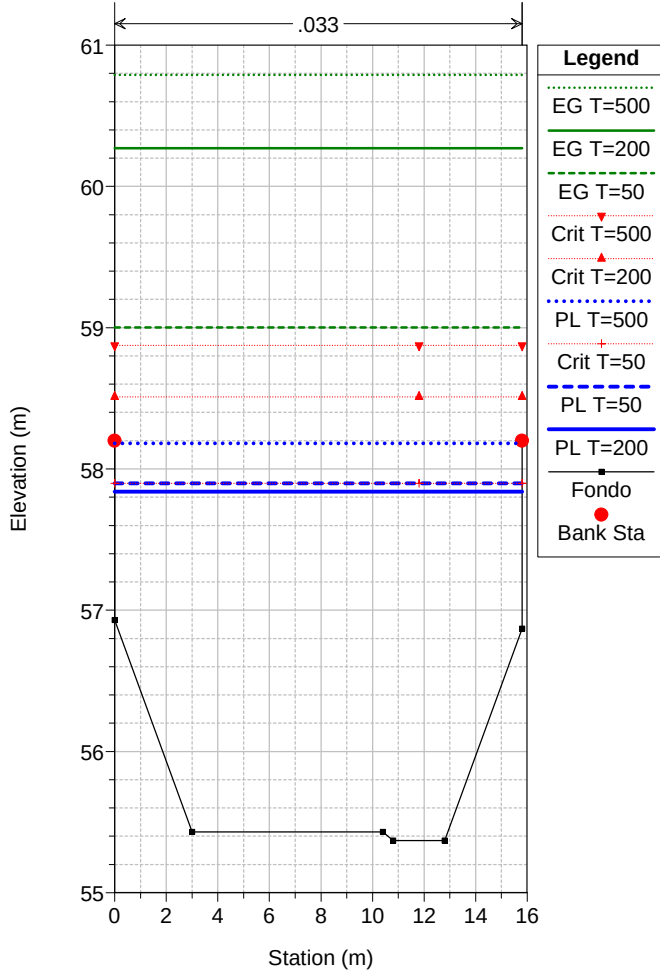
River = Sturla Reach = sturla RS = -55





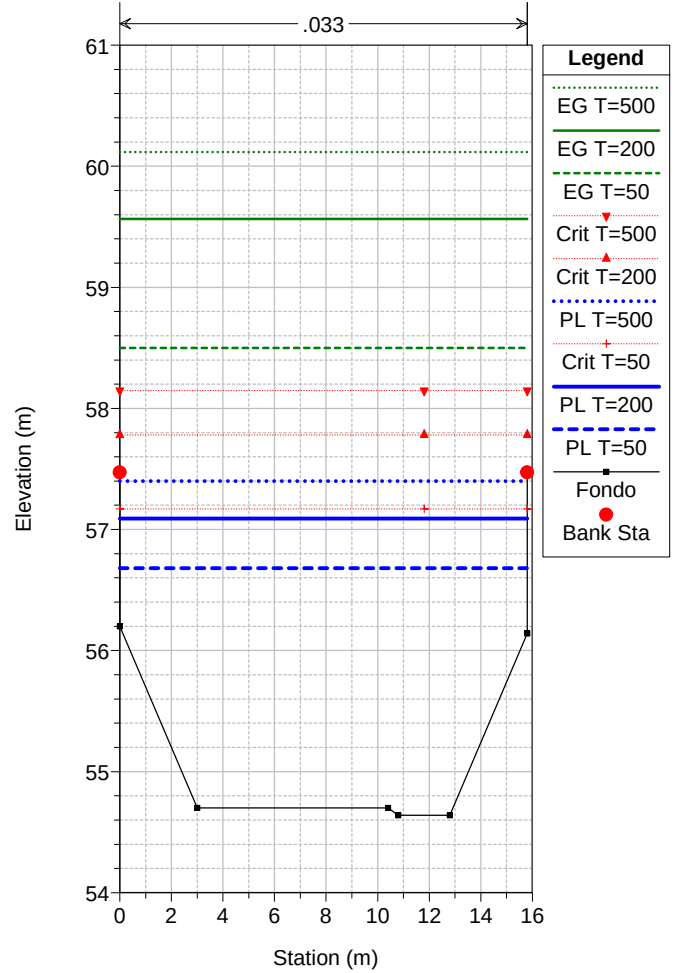
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -57.5



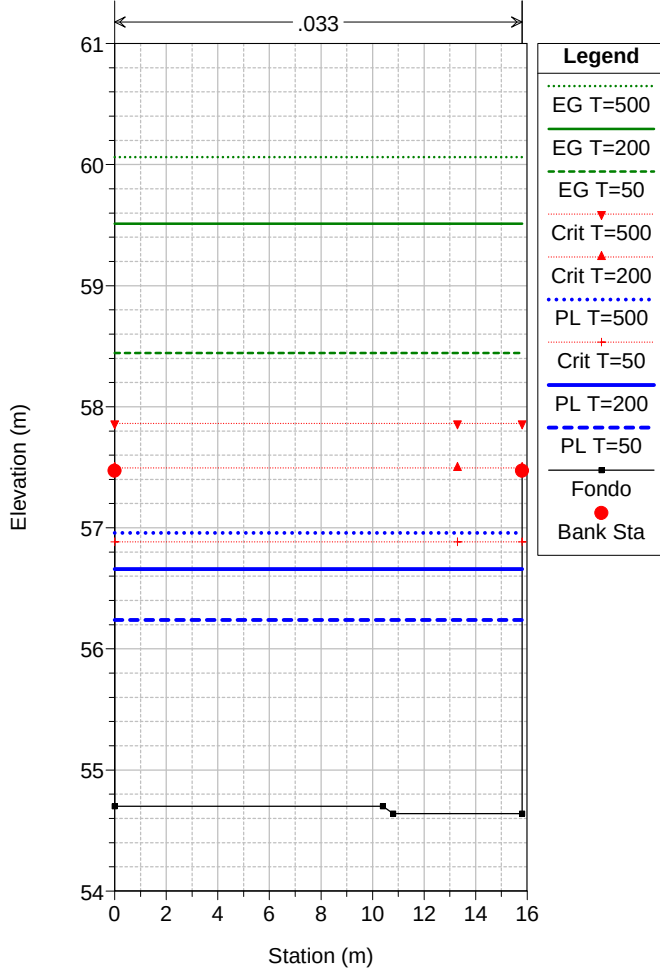
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -57.6



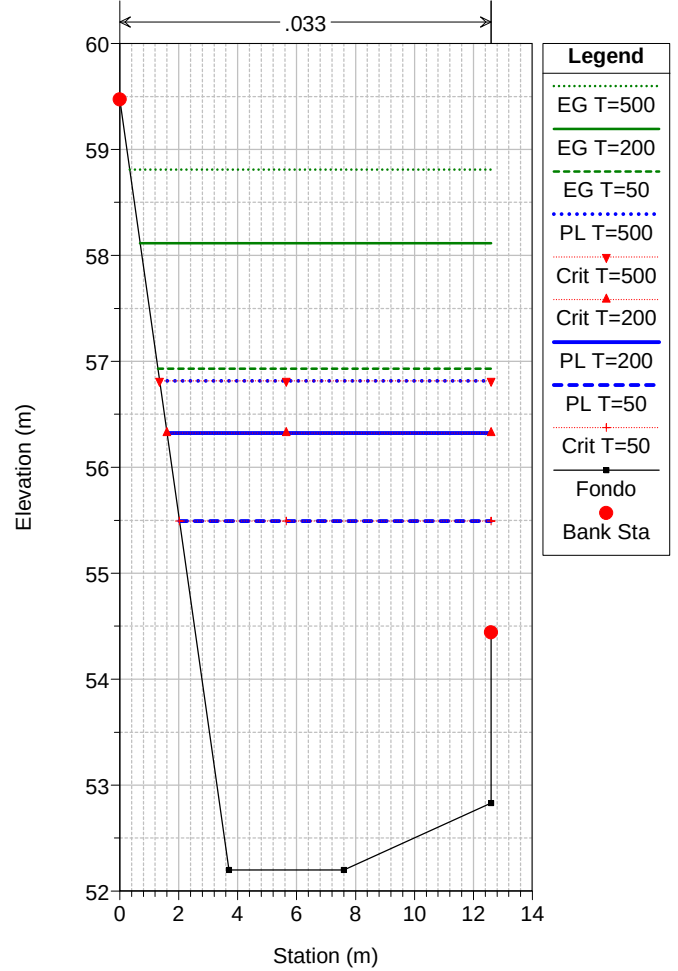
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -57.7



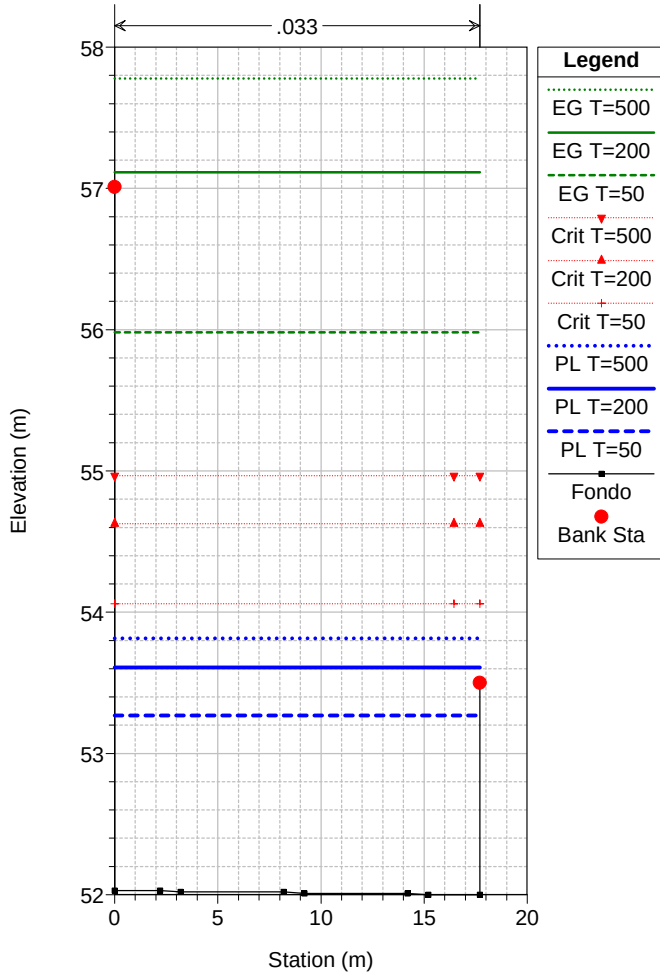
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -58



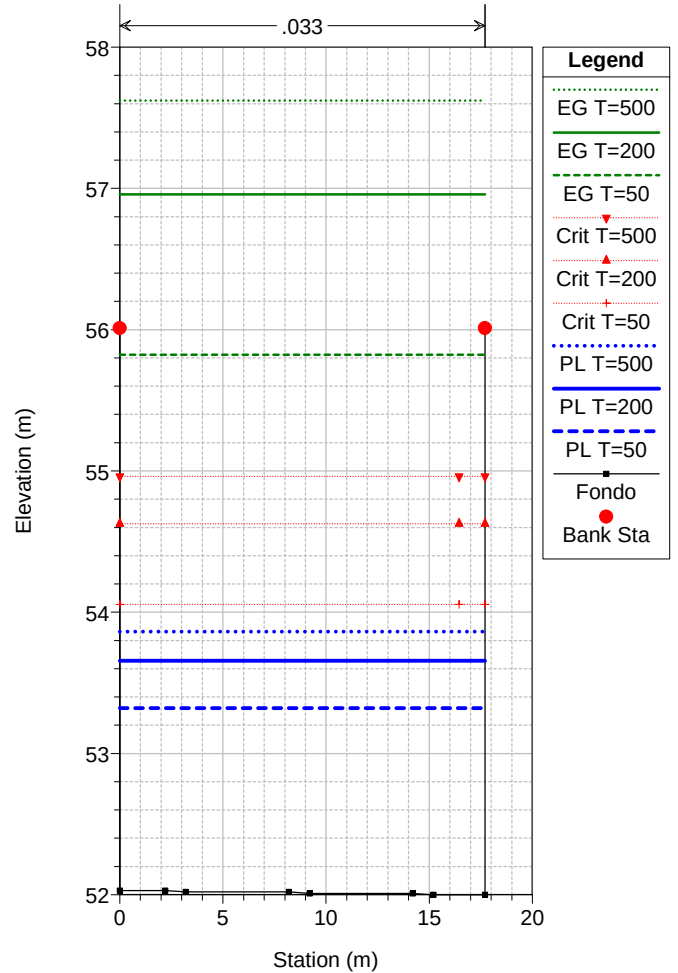
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -59



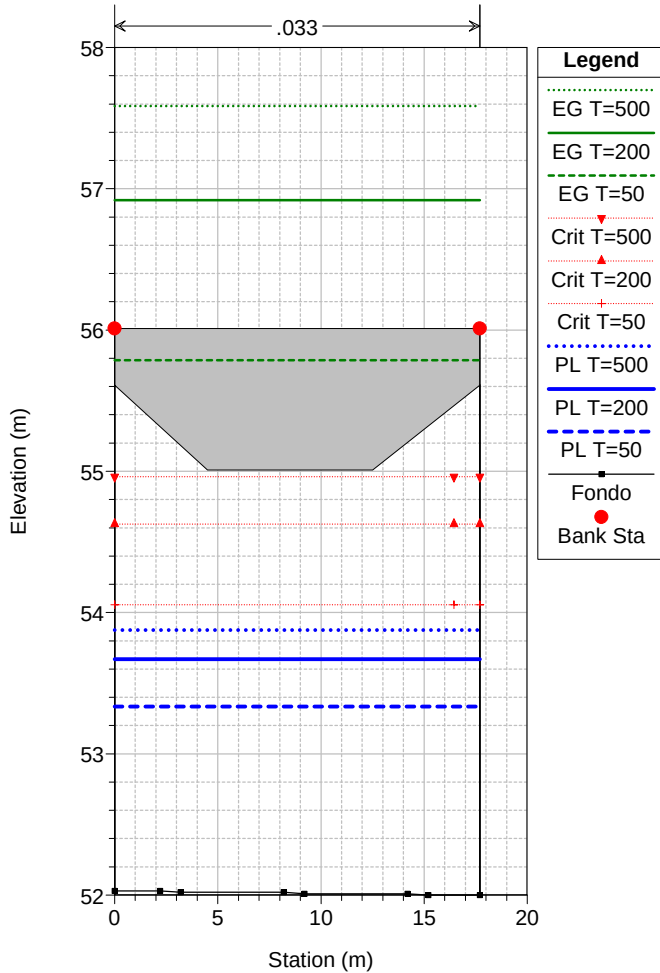
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -60



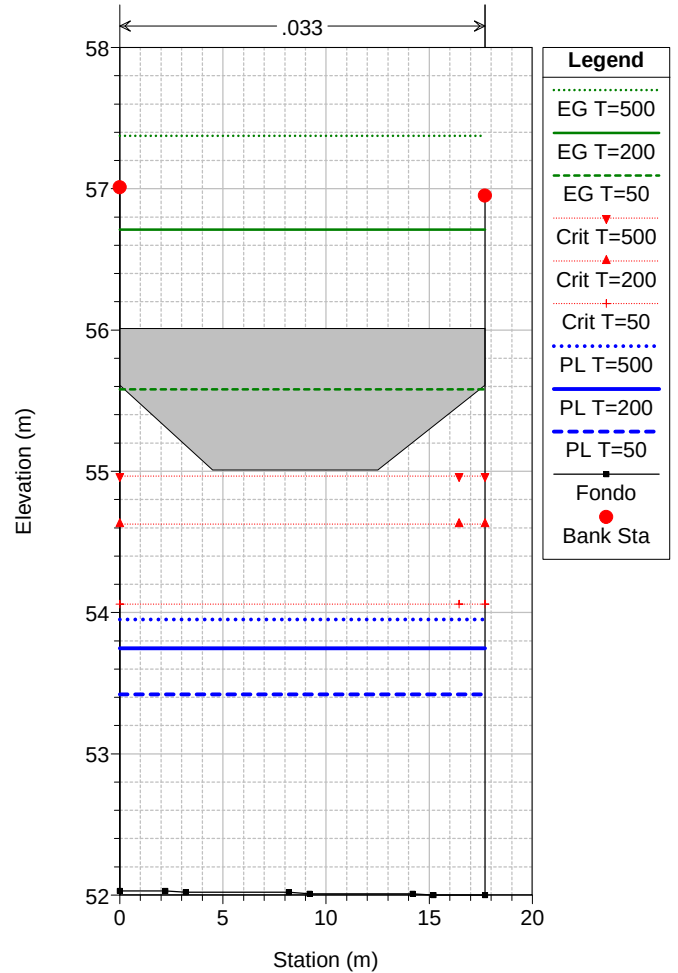
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -60.5 BR



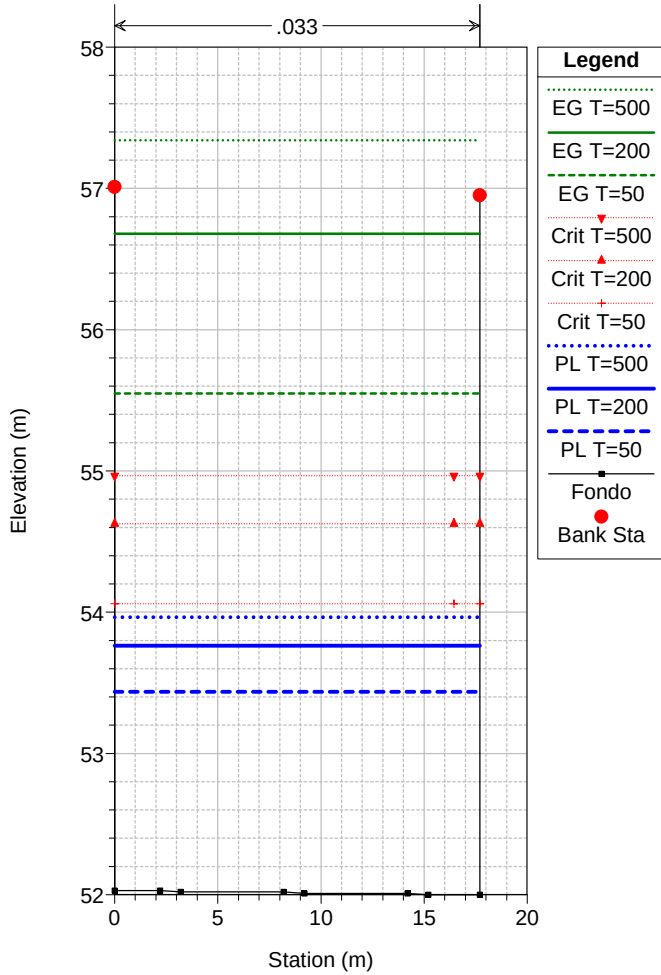
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -60.5 BR



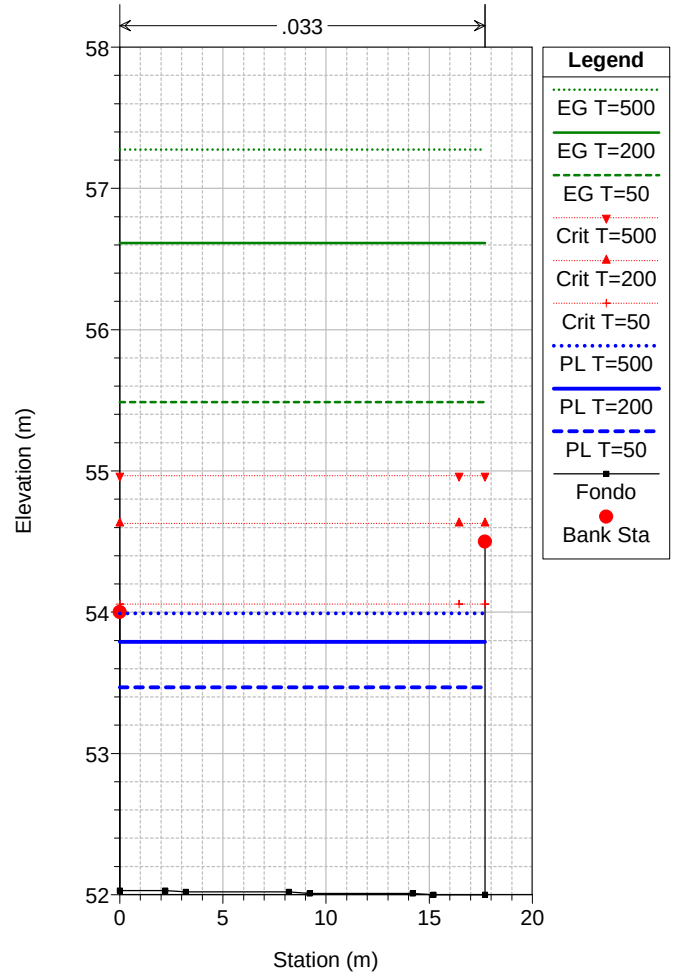
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -61



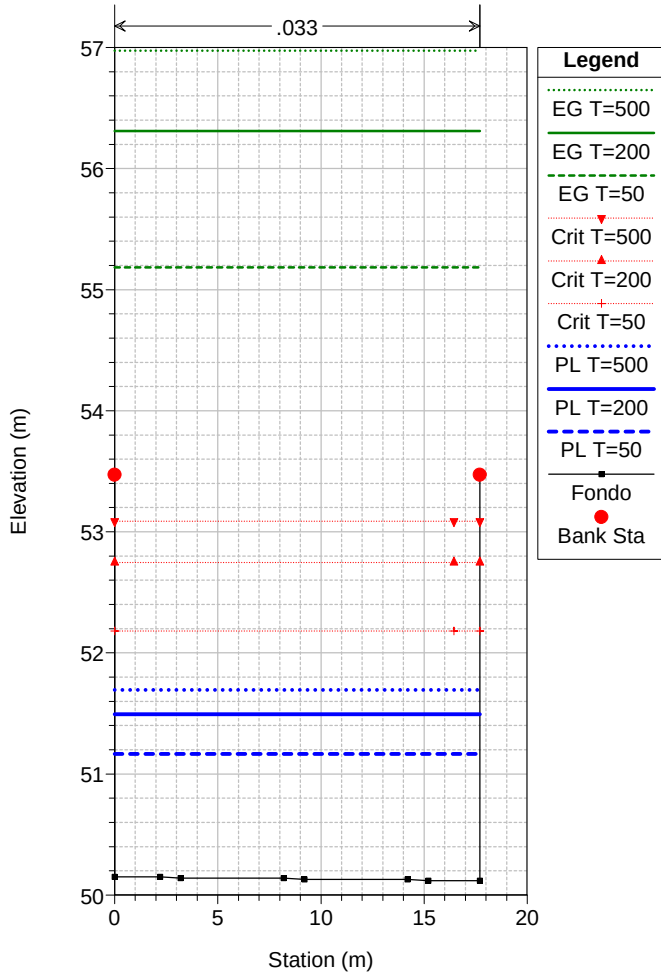
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -62



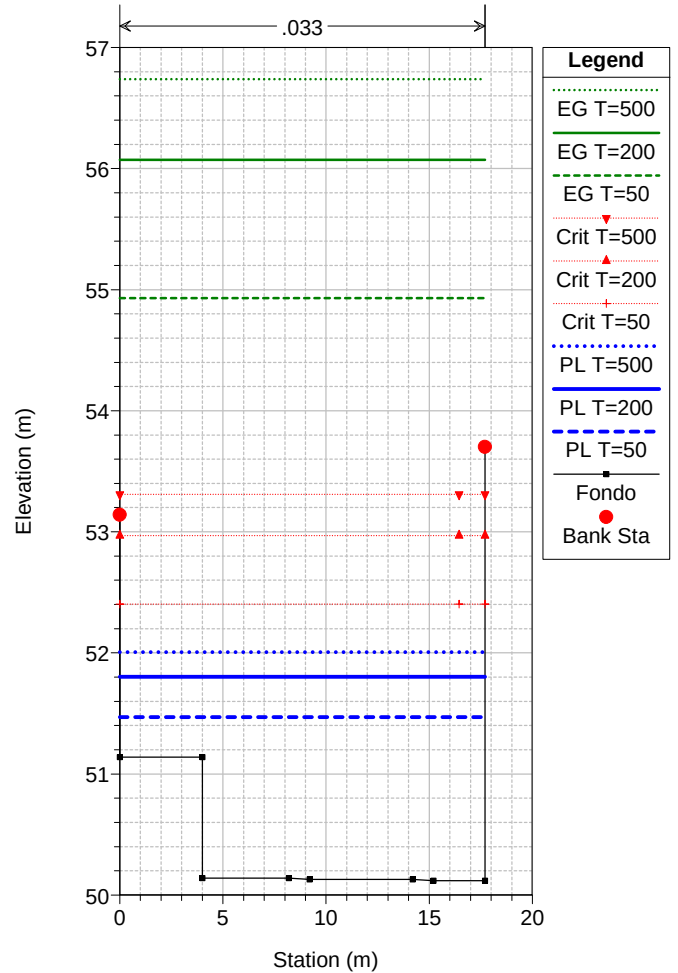
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -63



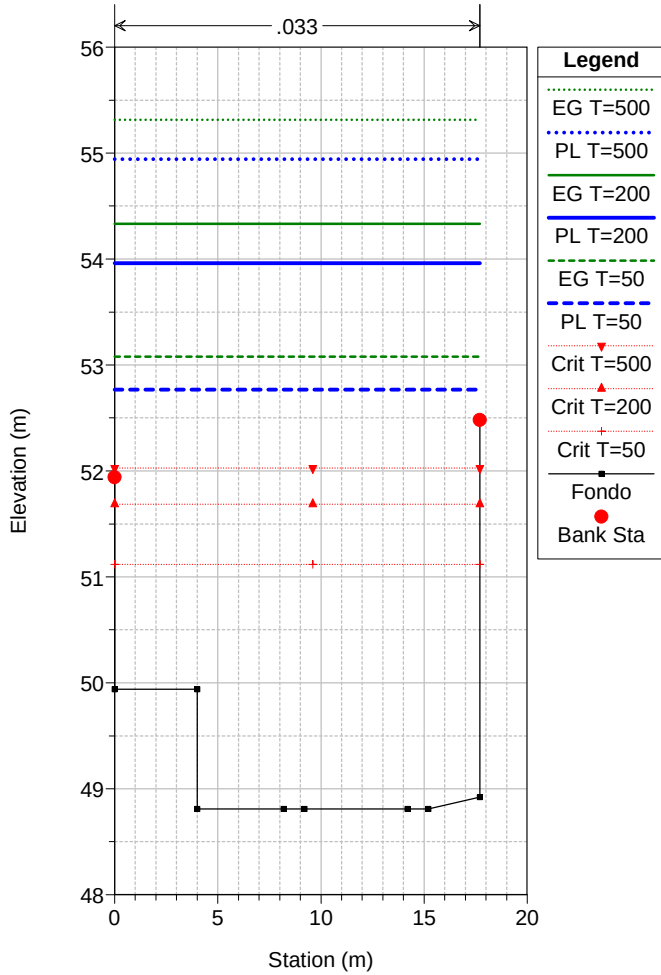
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -63.5



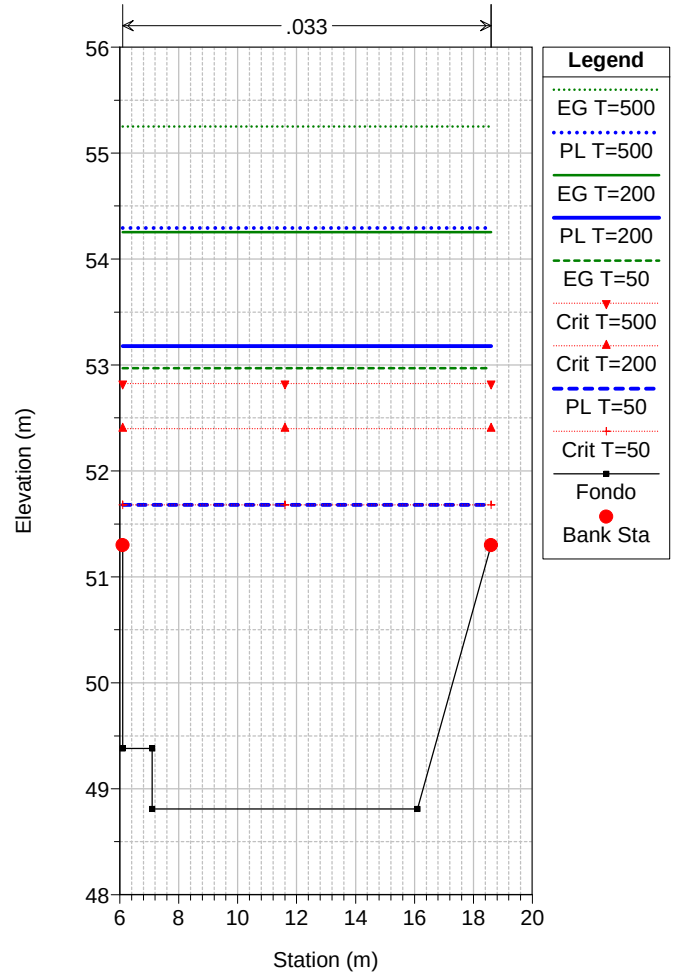
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -63.6



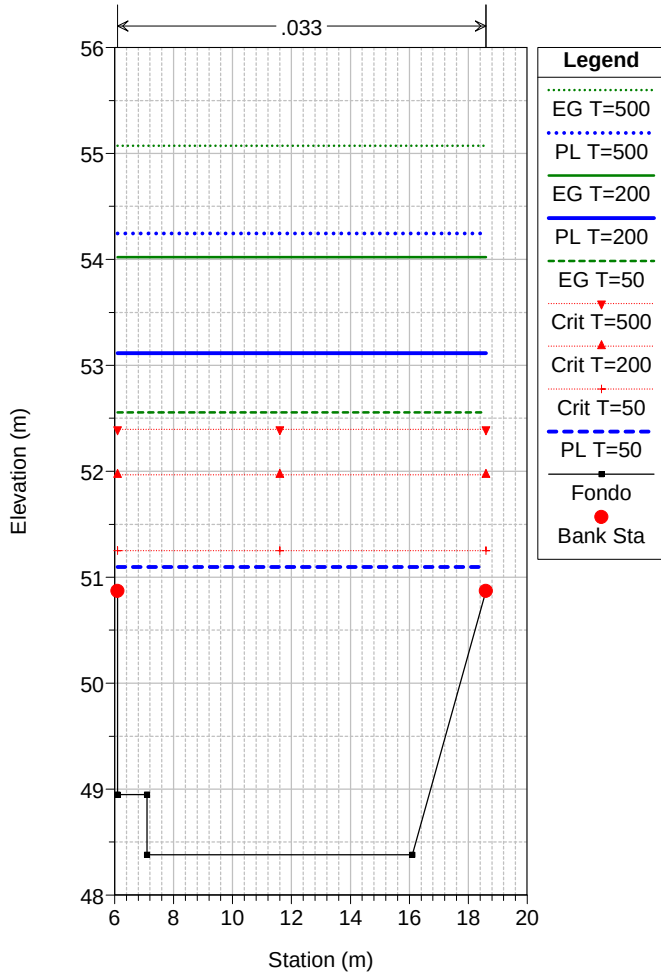
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -63.7



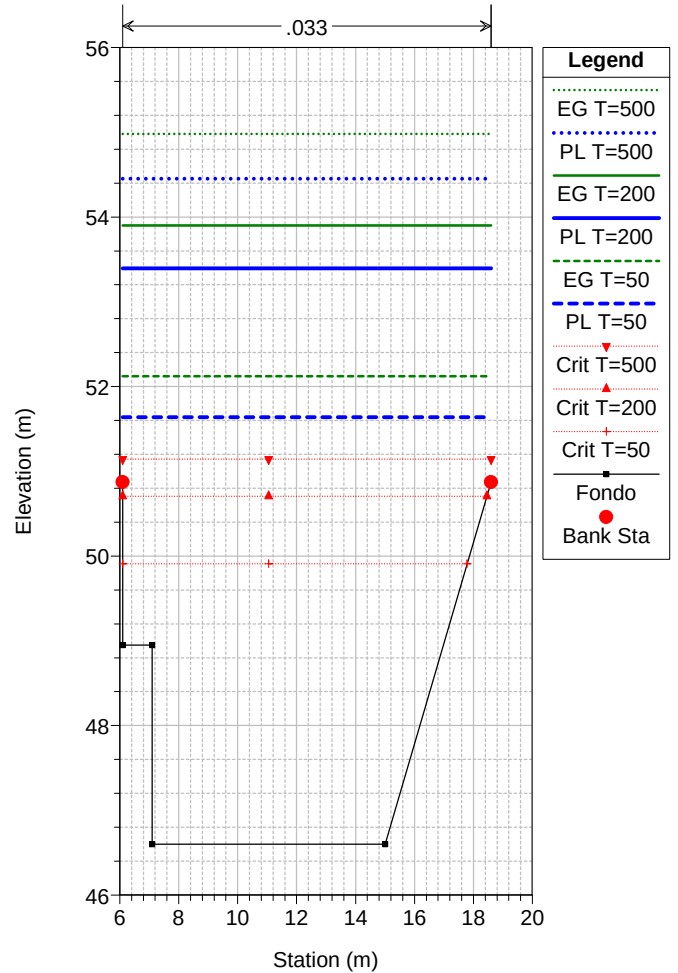
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -64



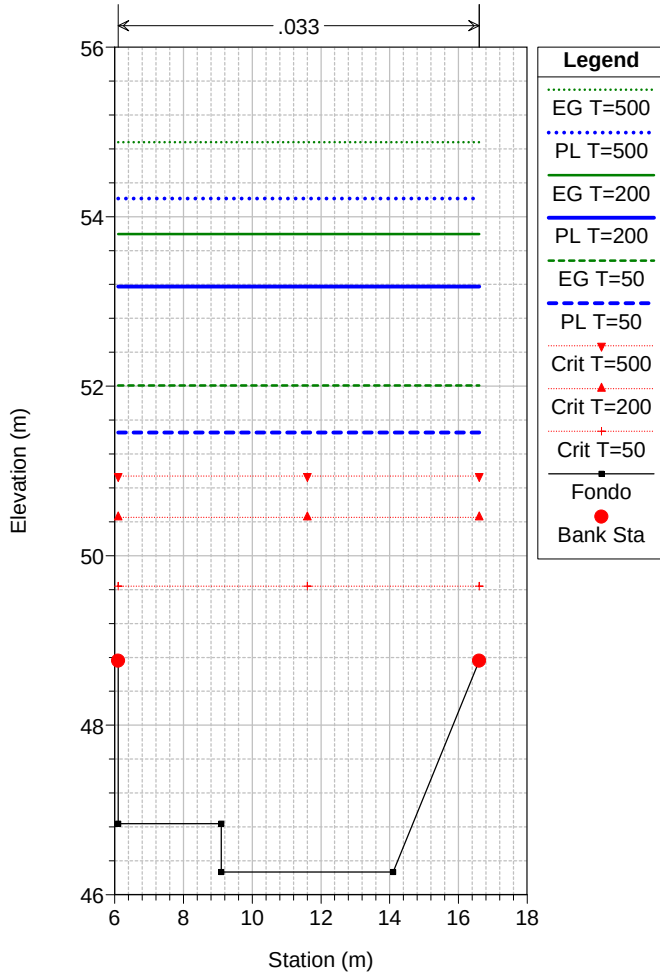
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -65



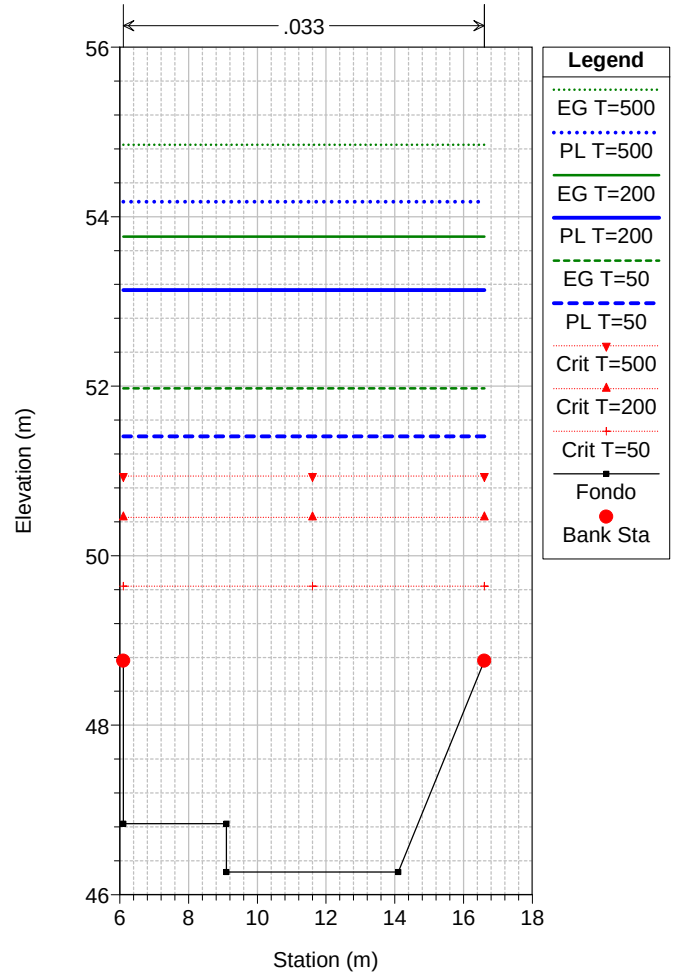
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -65.5



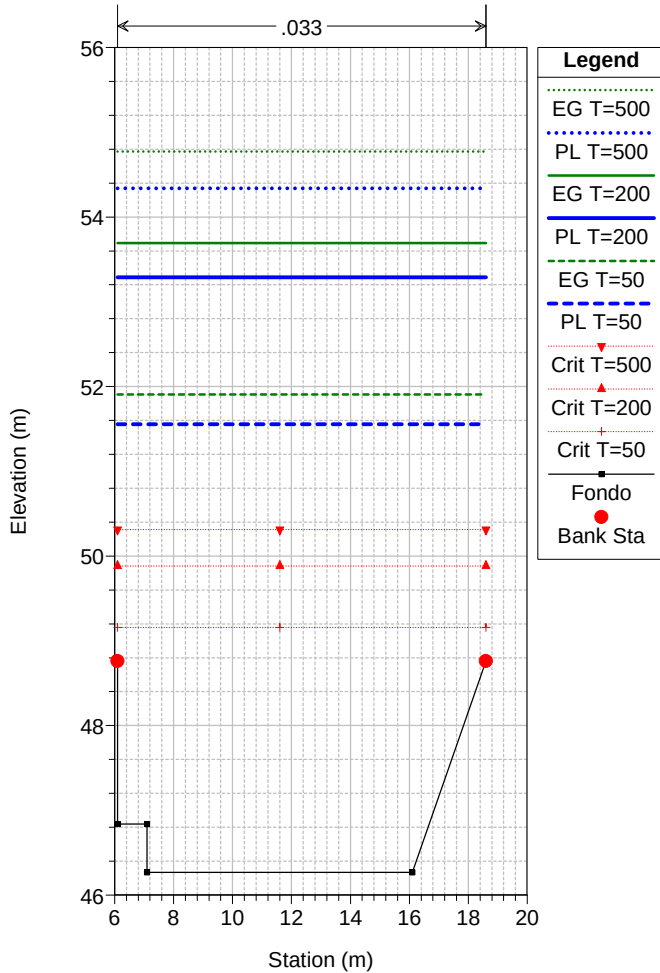
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -65.7



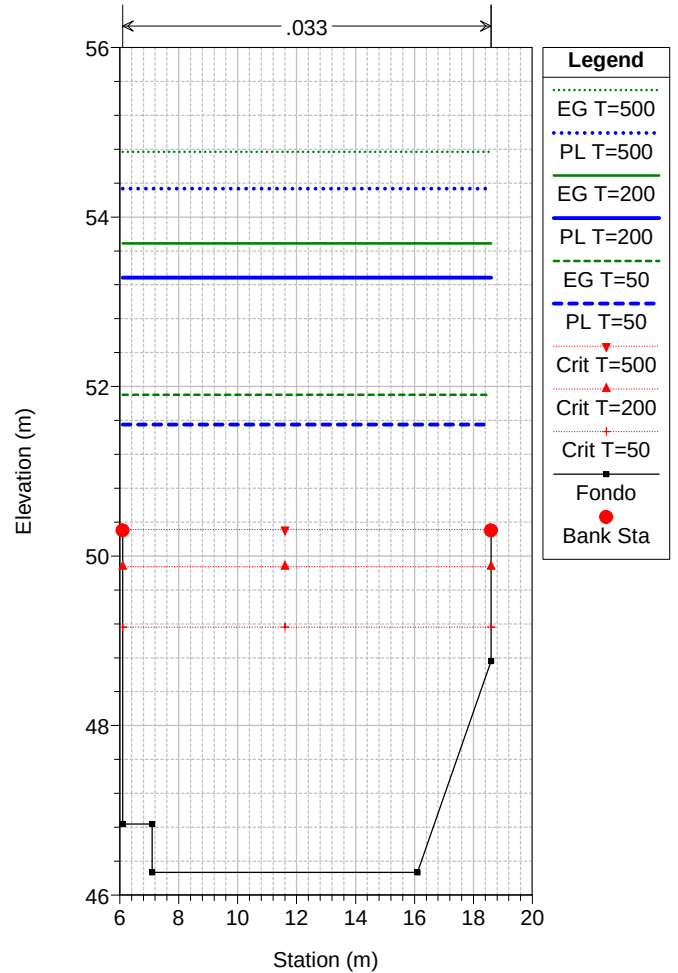
Sturla Plan: Sturla_monte_feb2016

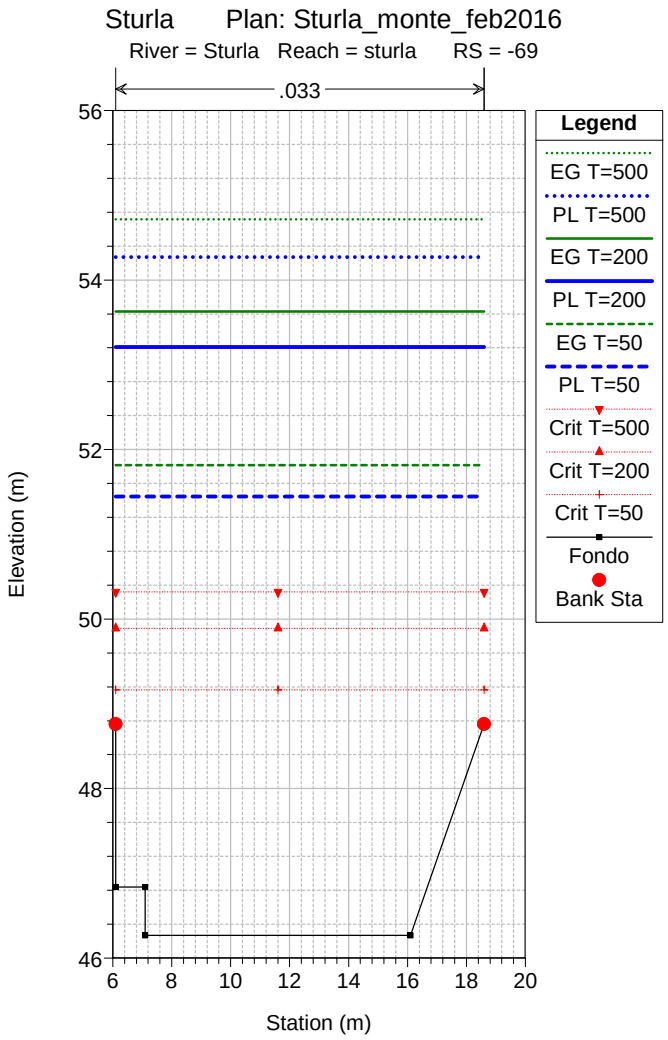
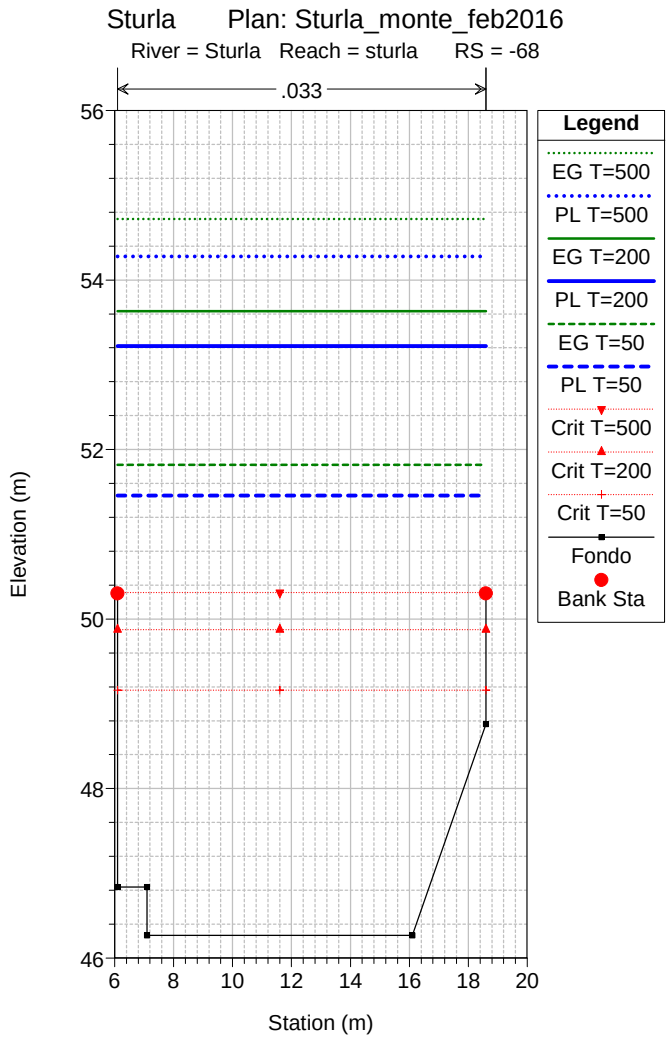
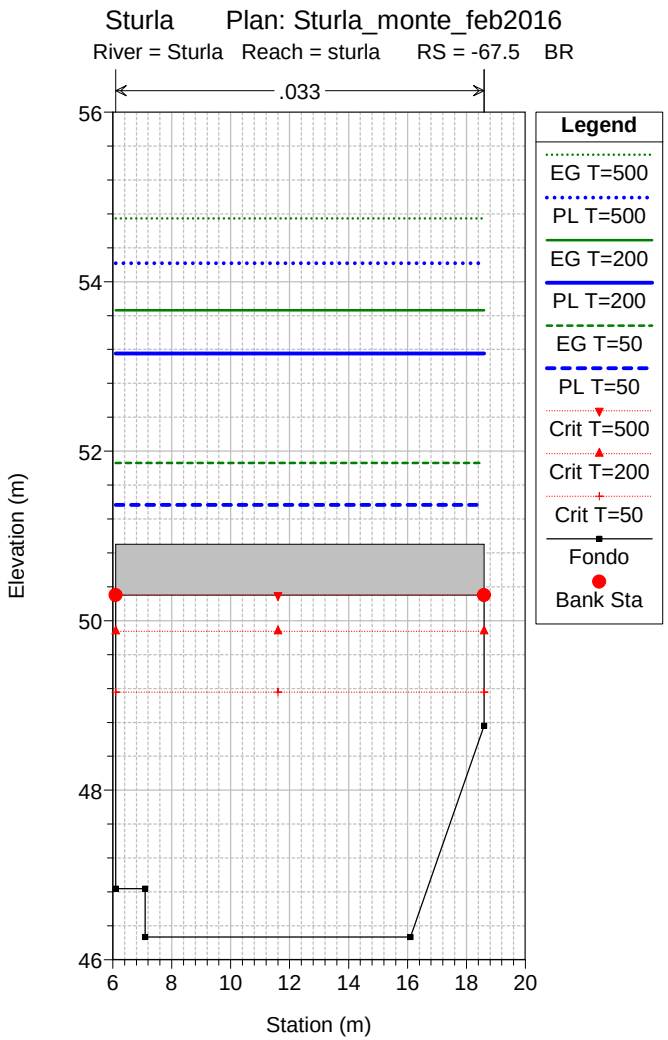
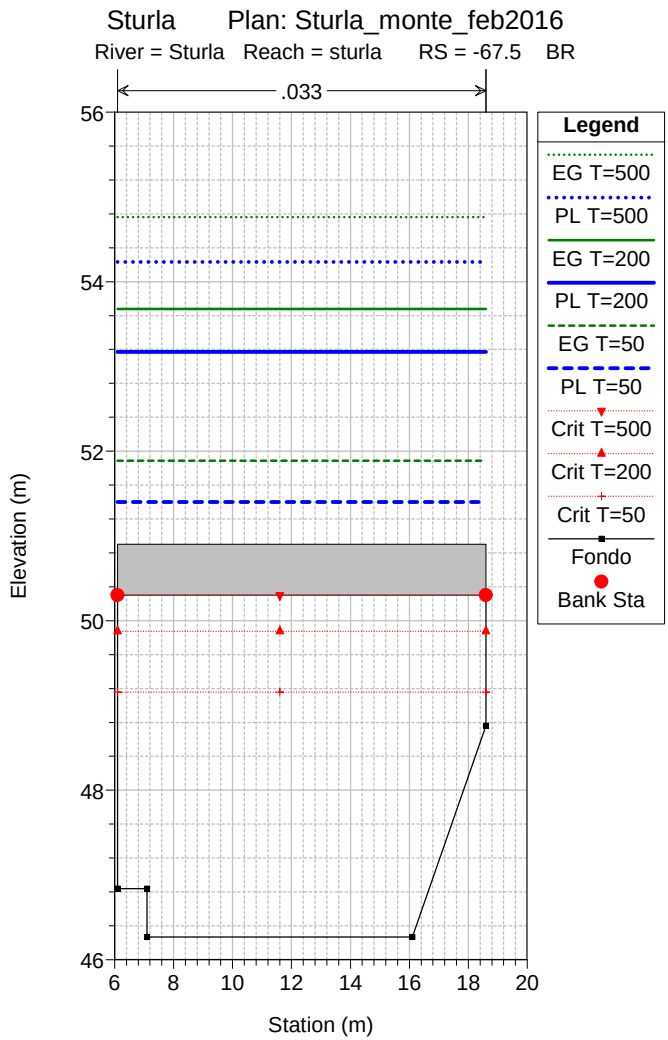
River = Sturla Reach = sturla RS = -66



Sturla Plan: Sturla_monte_feb2016

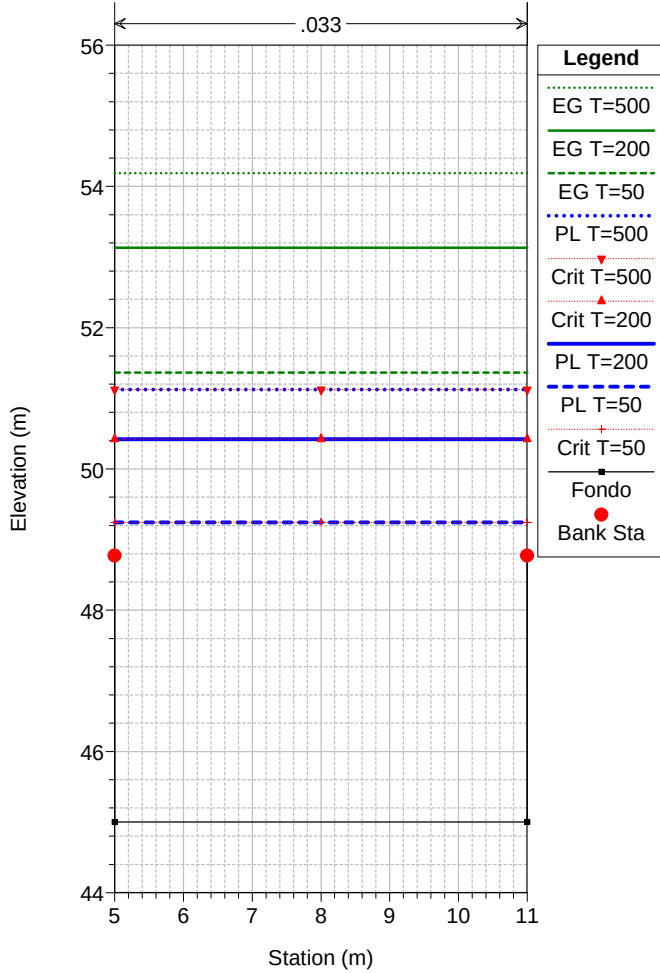
River = Sturla Reach = sturla RS = -67





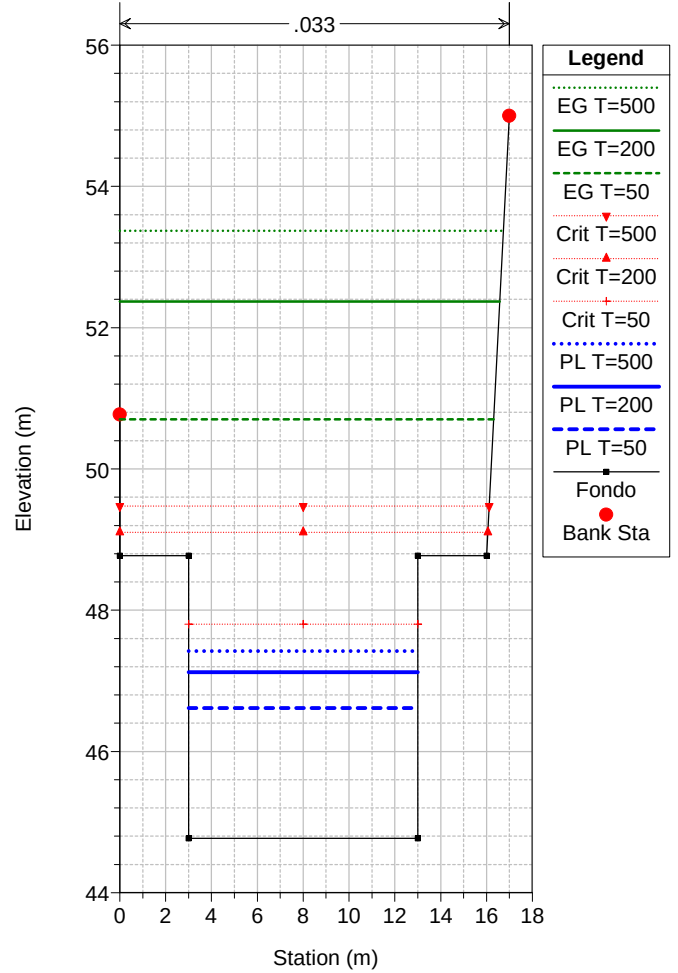
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -69.5



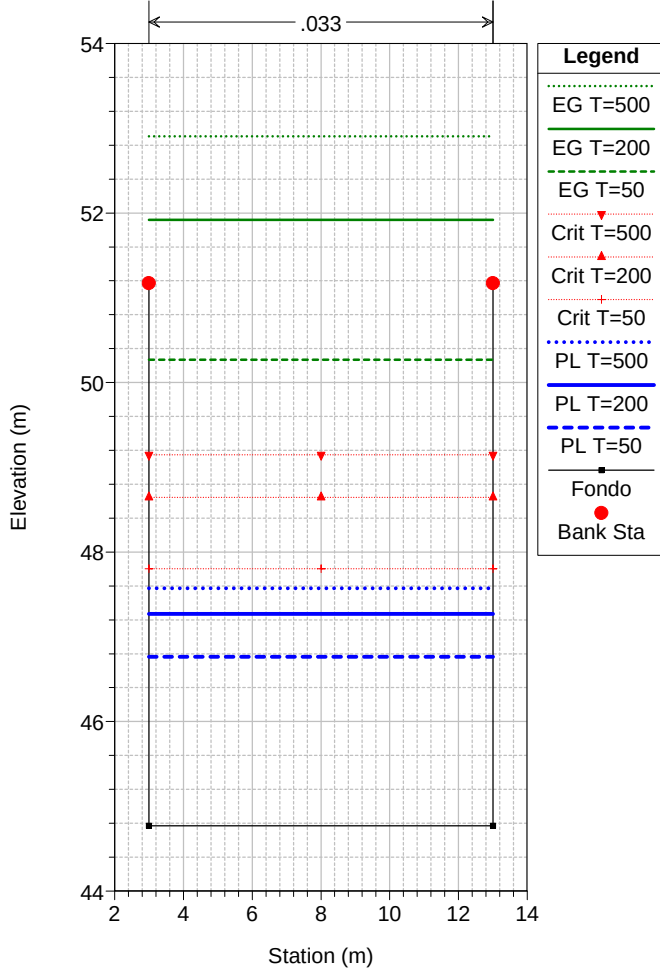
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -70



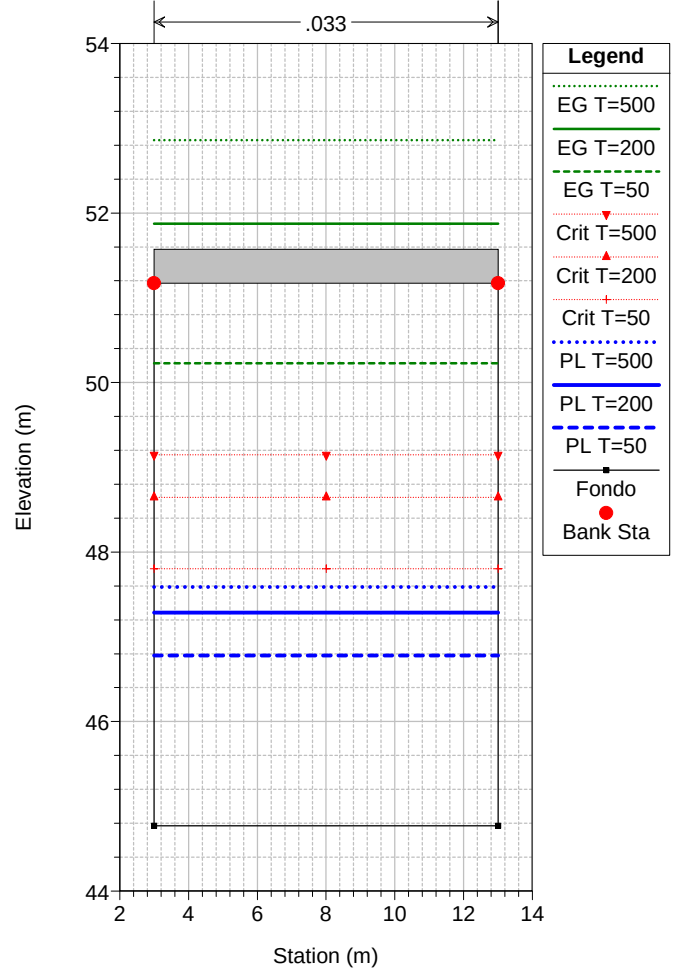
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -71

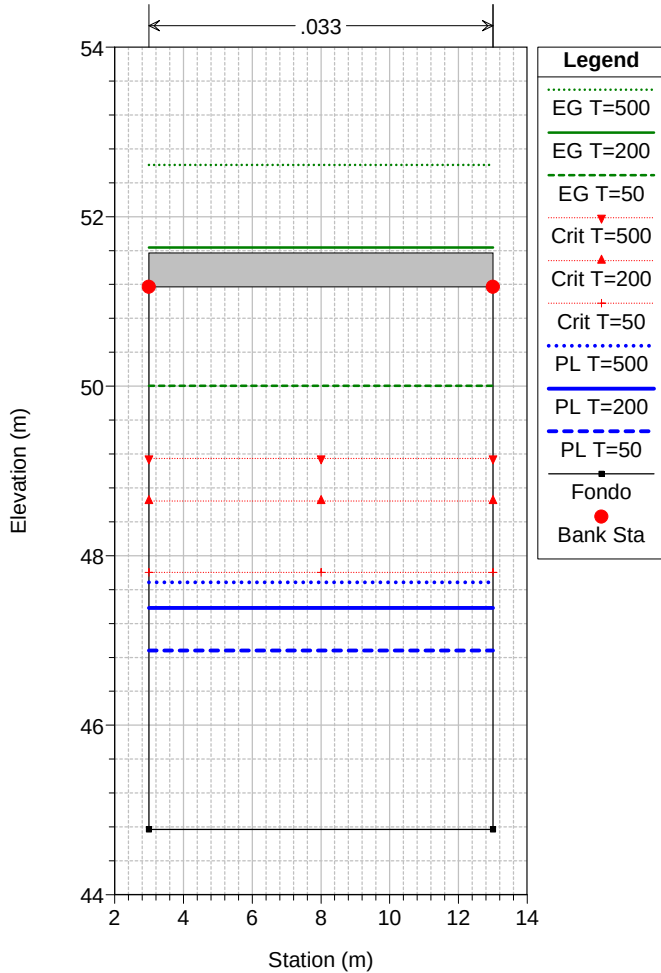


Sturla Plan: Sturla_monte_feb2016

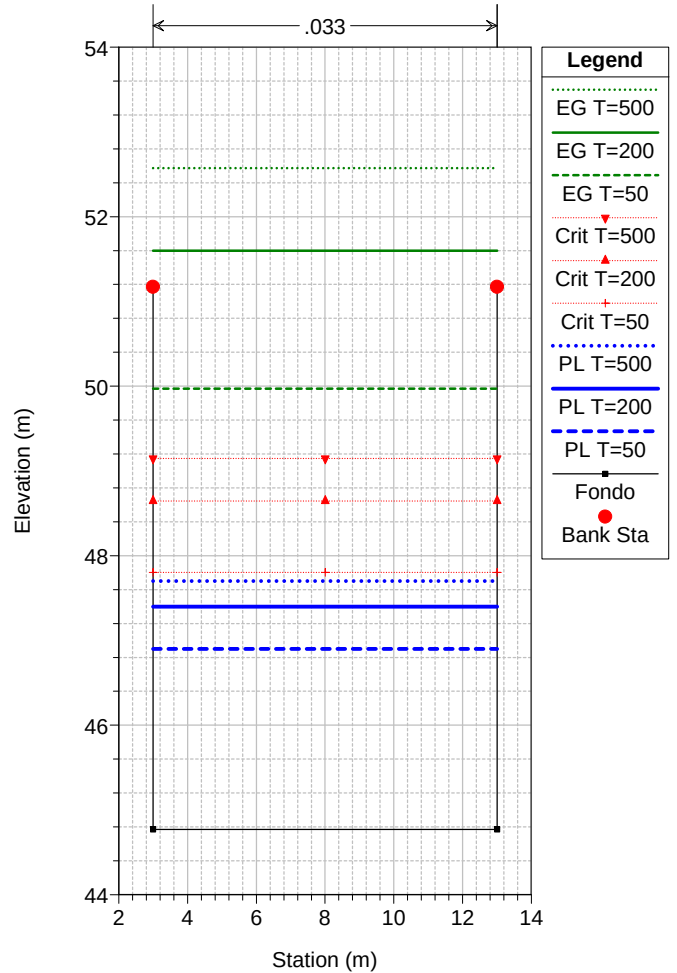
River = Sturla Reach = sturla RS = -71.5 BR



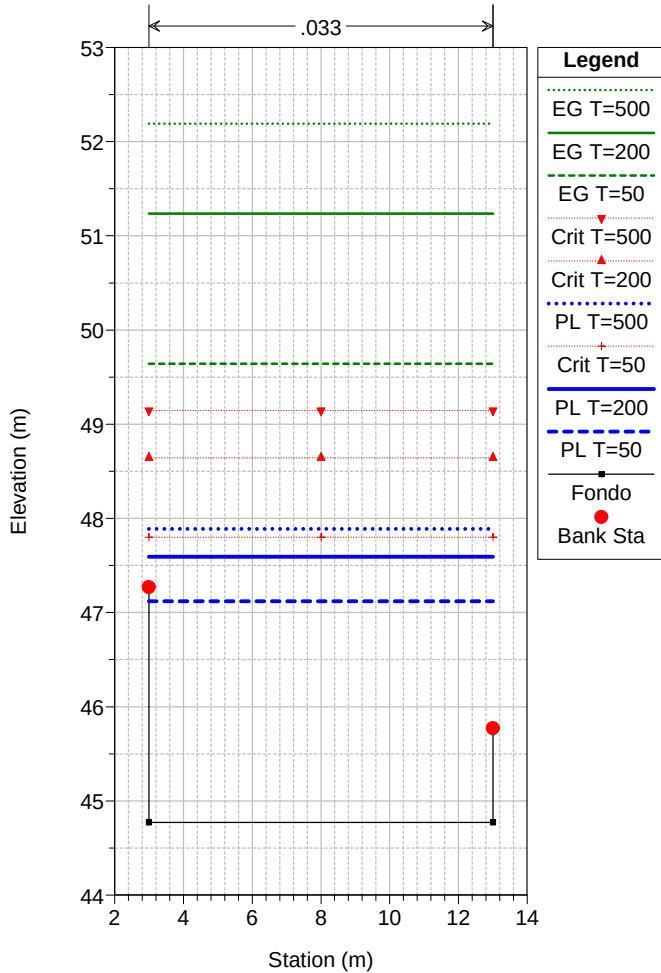
Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -71.5 BR



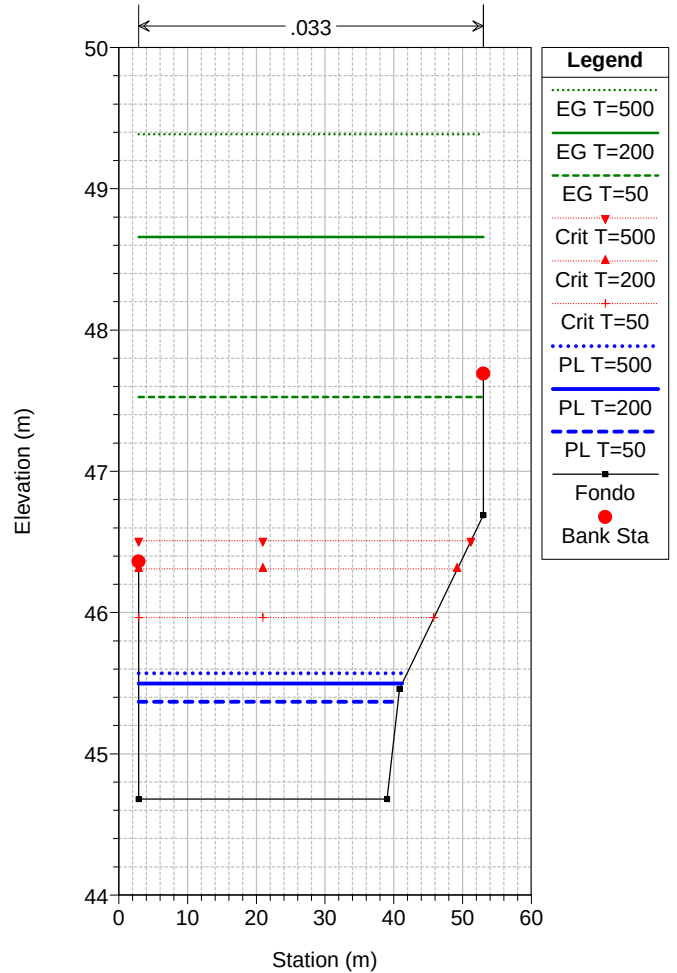
Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -72



Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -73

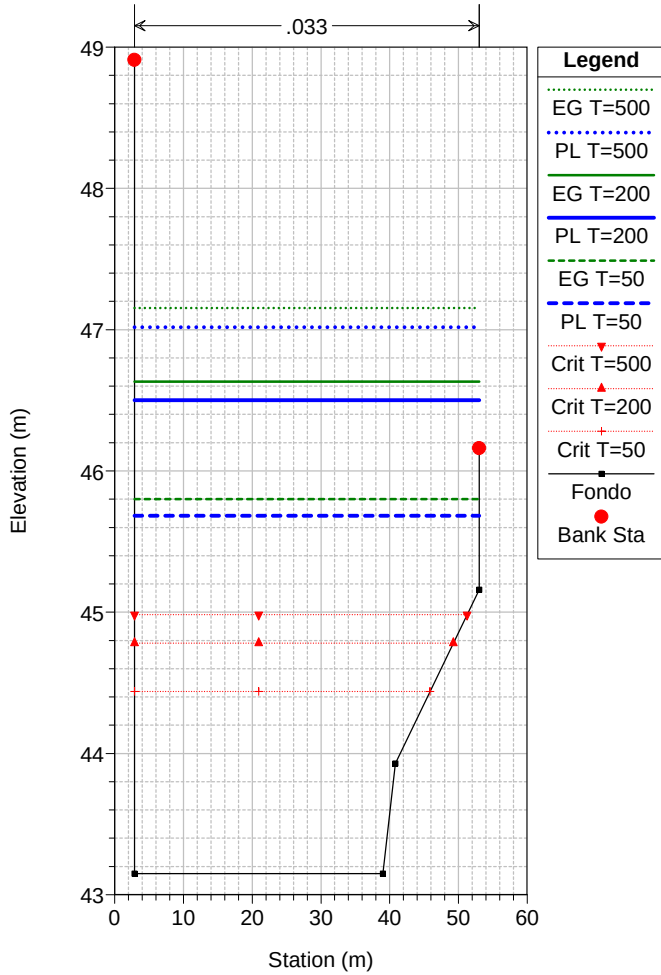


Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -74



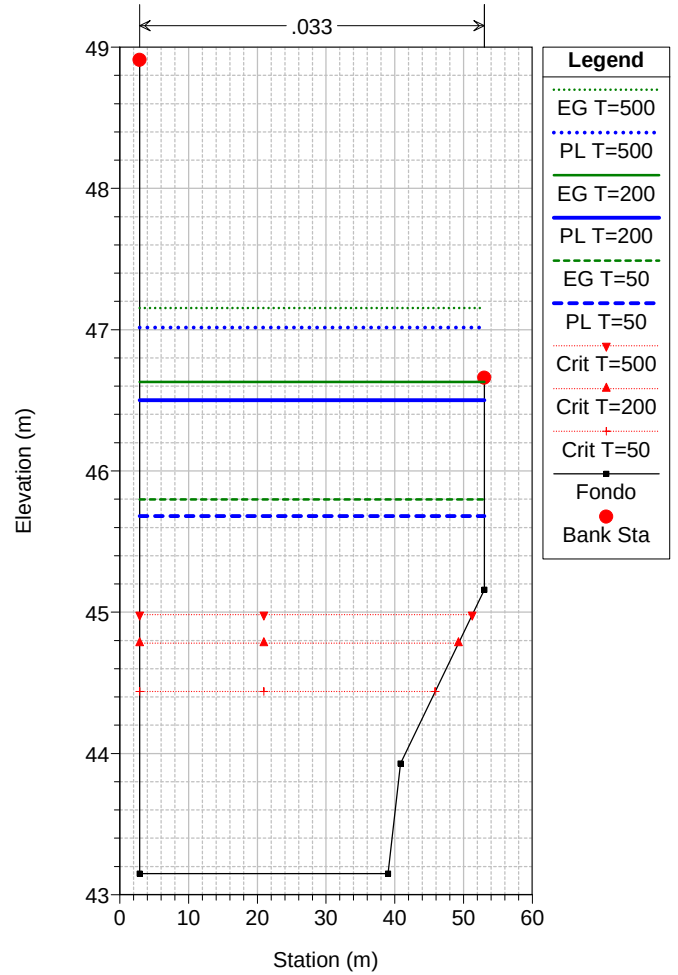
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -75



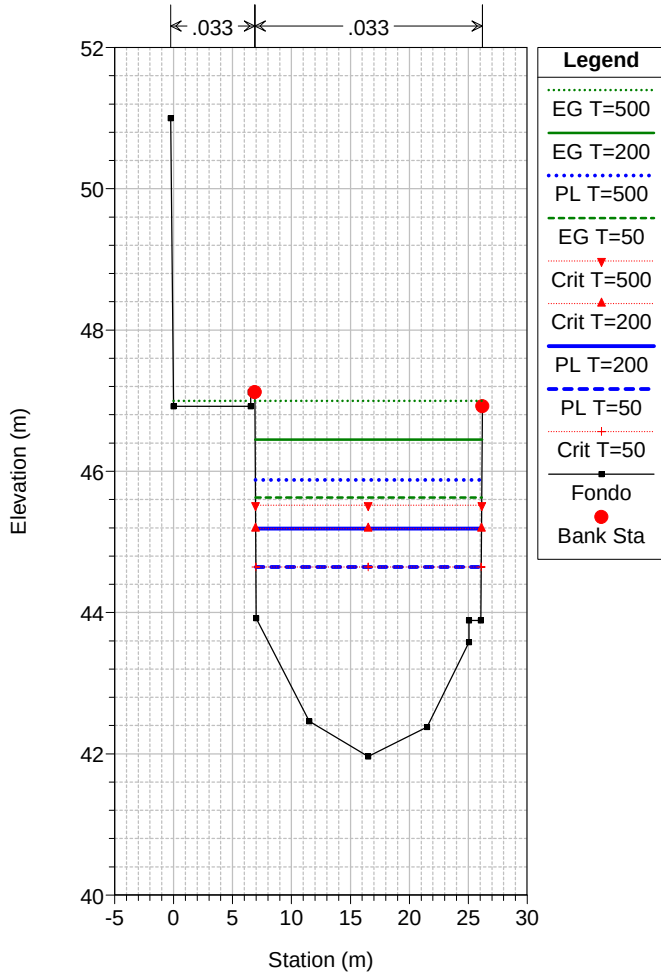
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -75.5



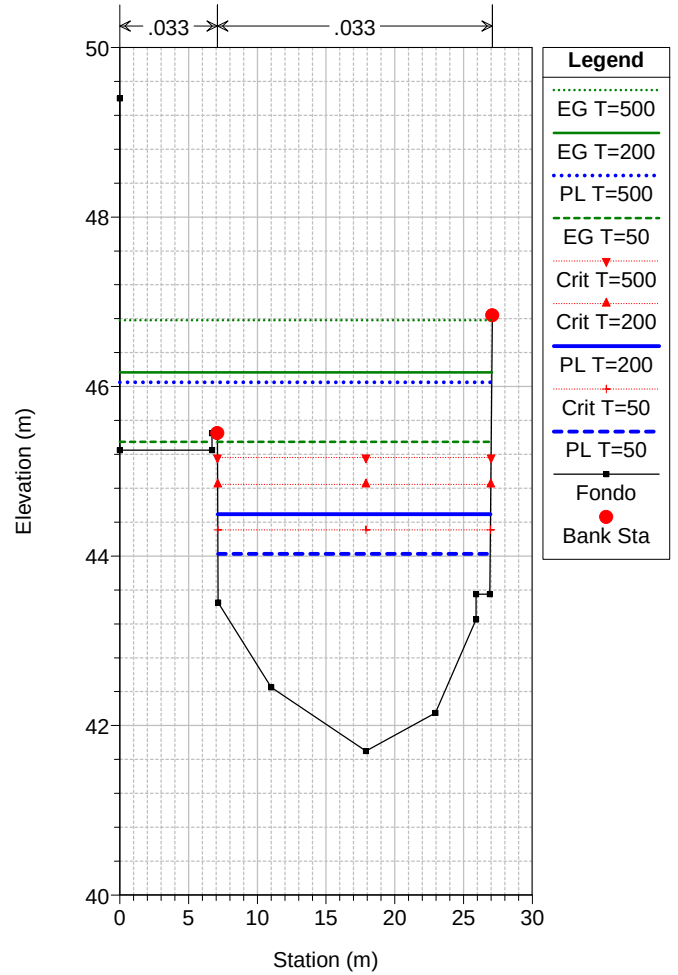
Sturla Plan: Sturla_monte_feb2016

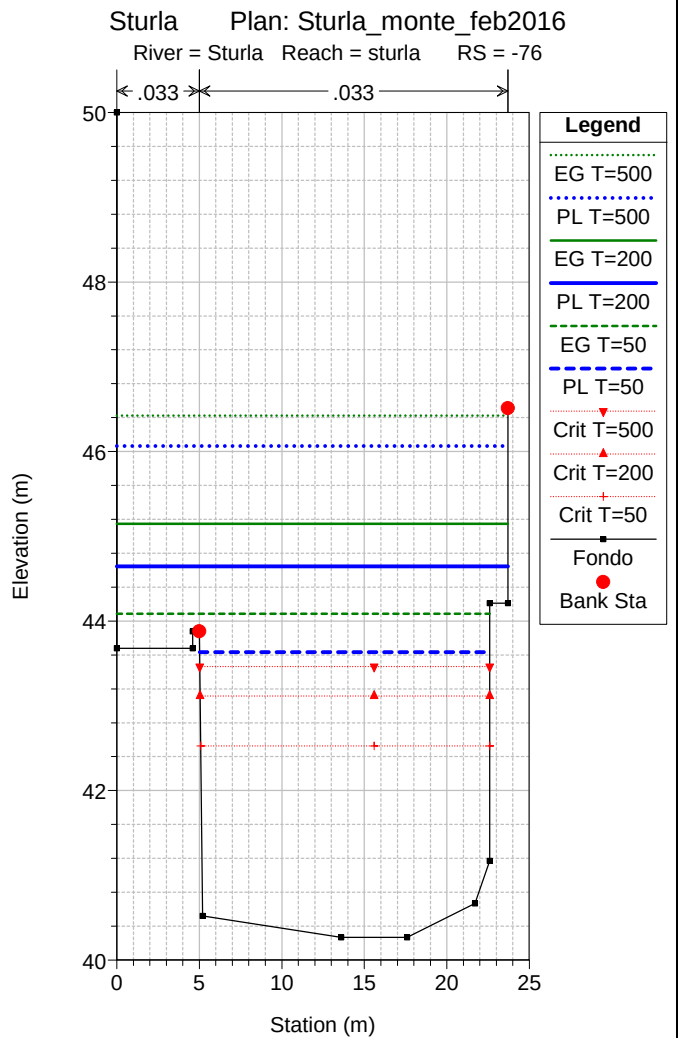
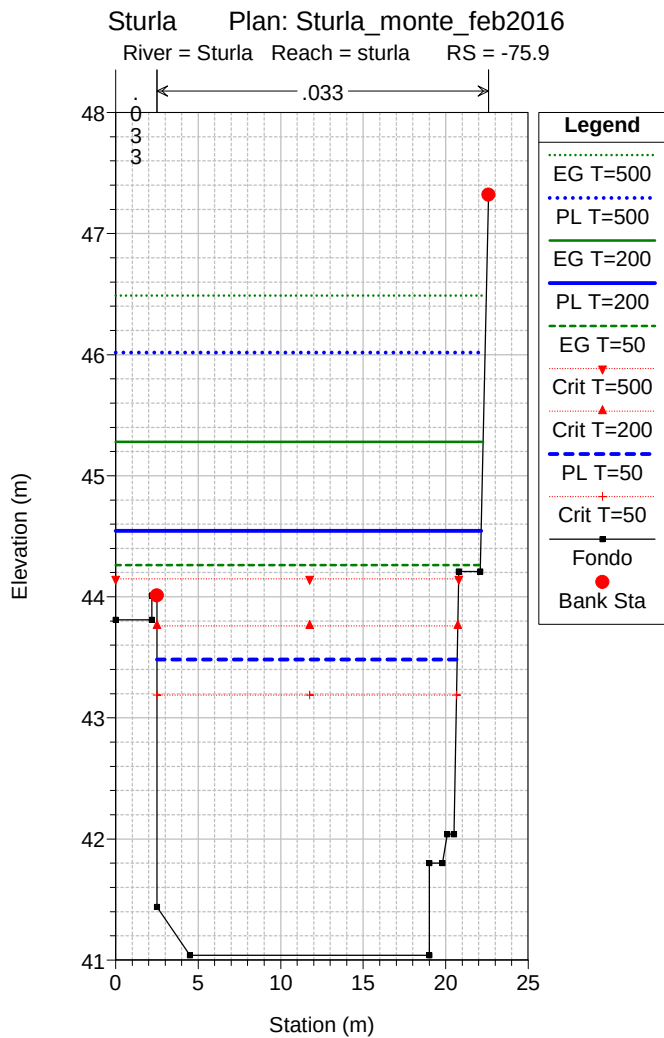
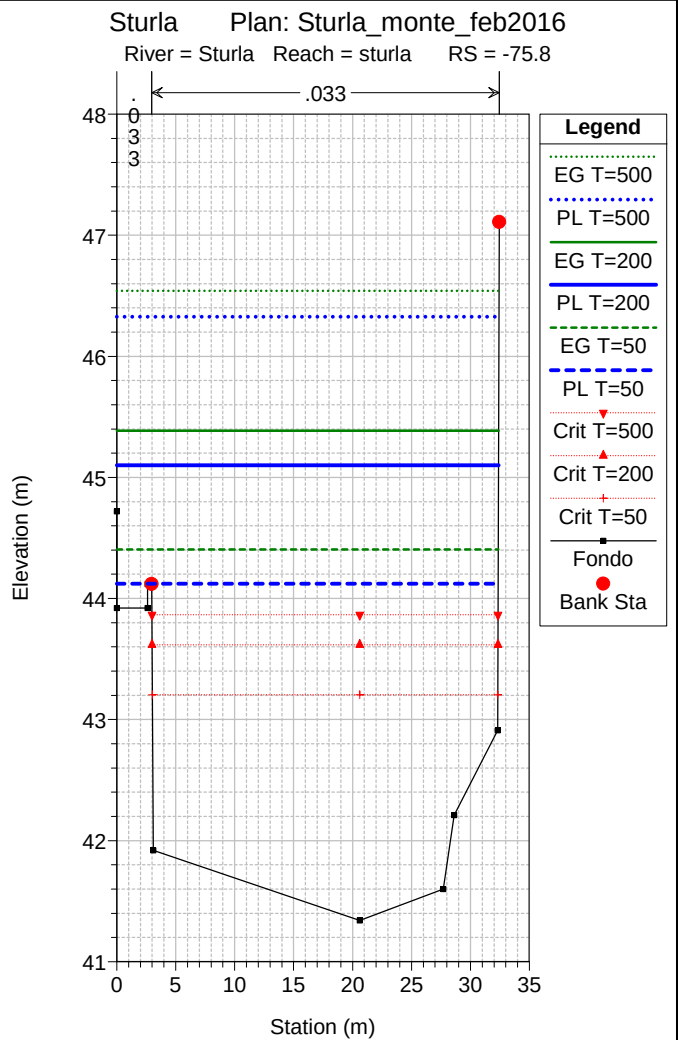
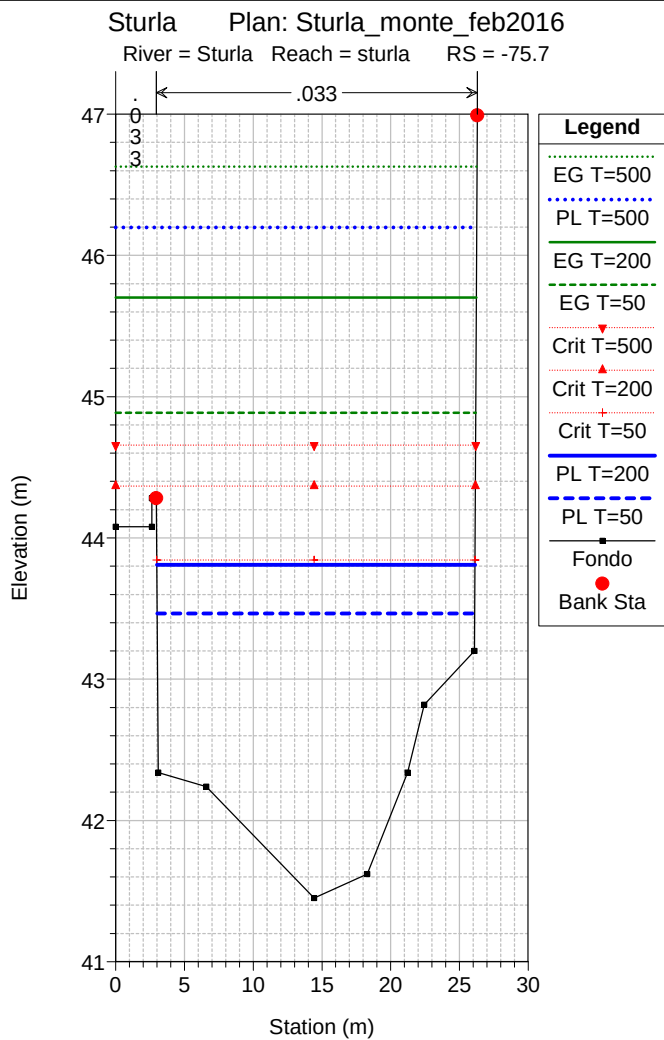
River = Sturla Reach = sturla RS = -75.55



Sturla Plan: Sturla_monte_feb2016

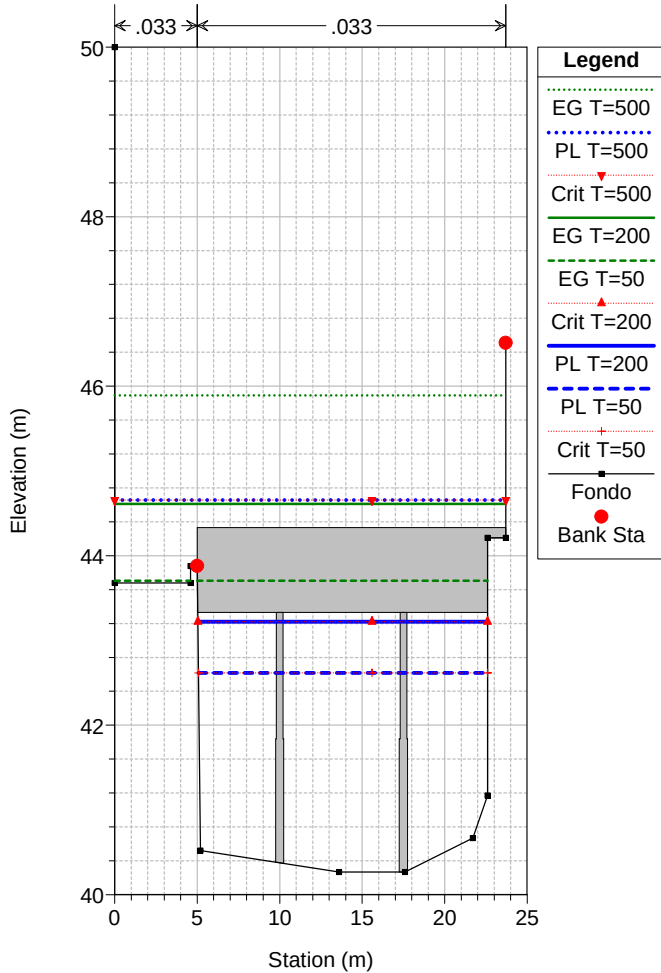
River = Sturla Reach = sturla RS = -75.6





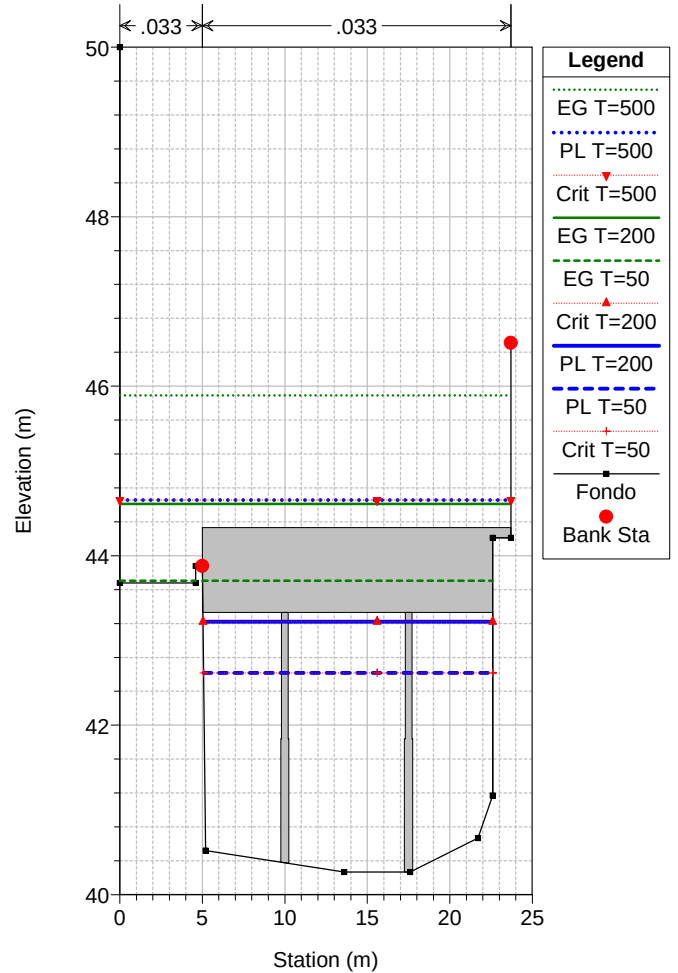
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -77.5 BR



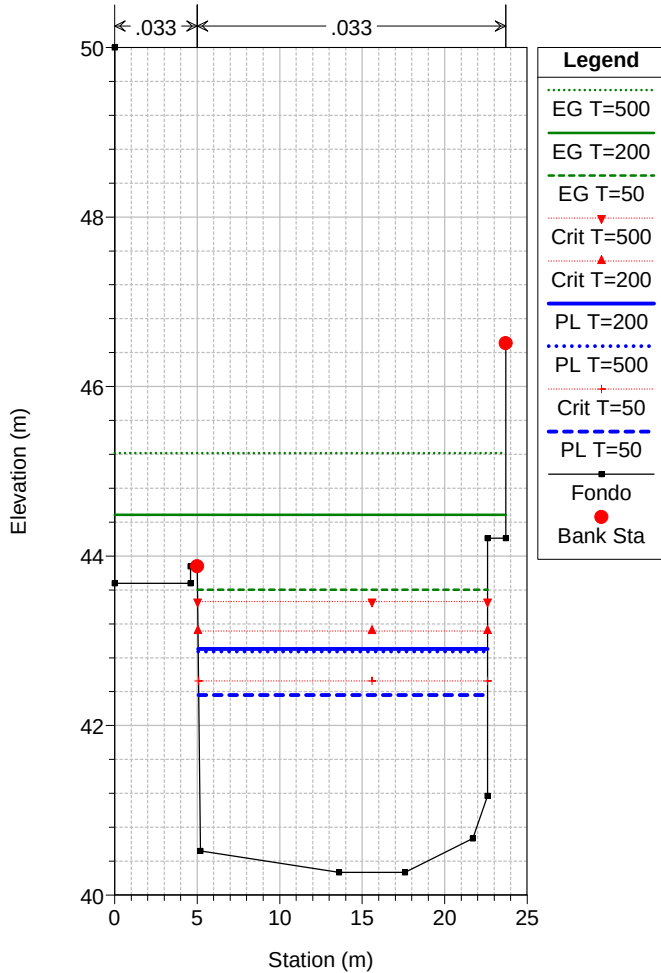
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -77.5 BR



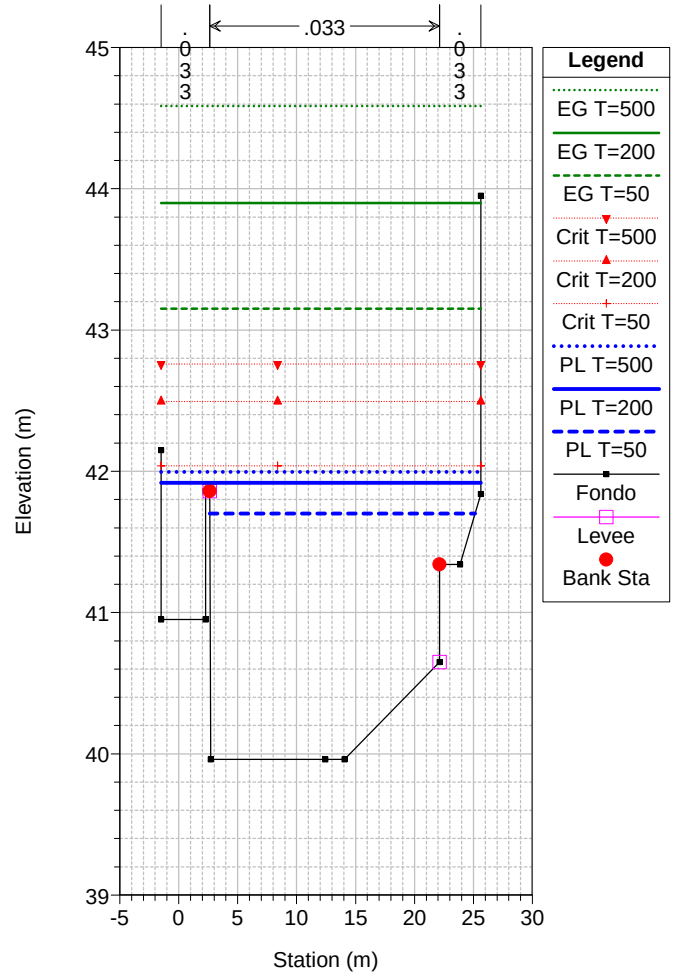
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -78



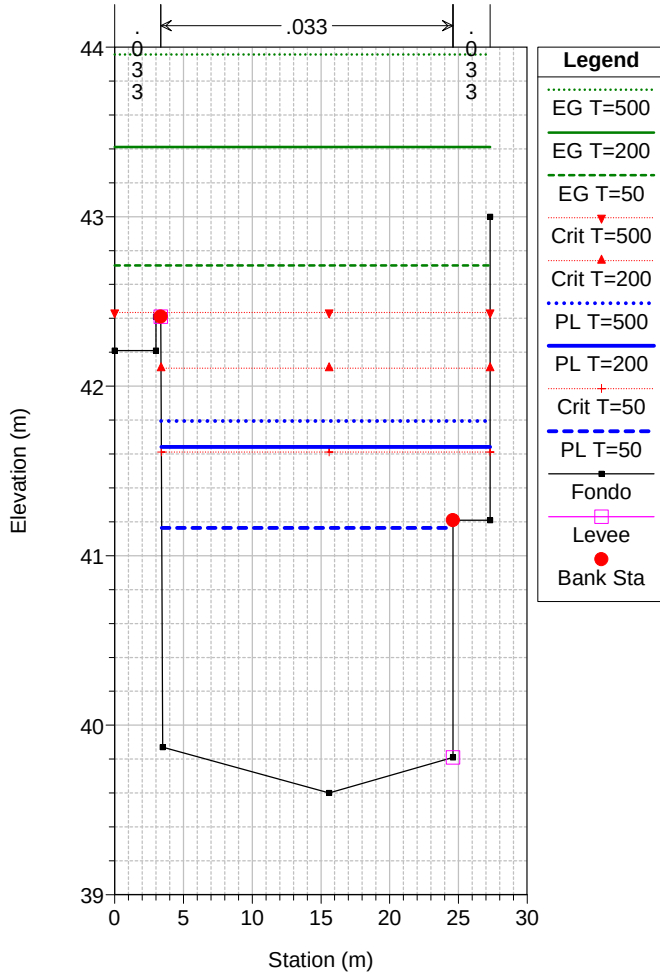
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -79



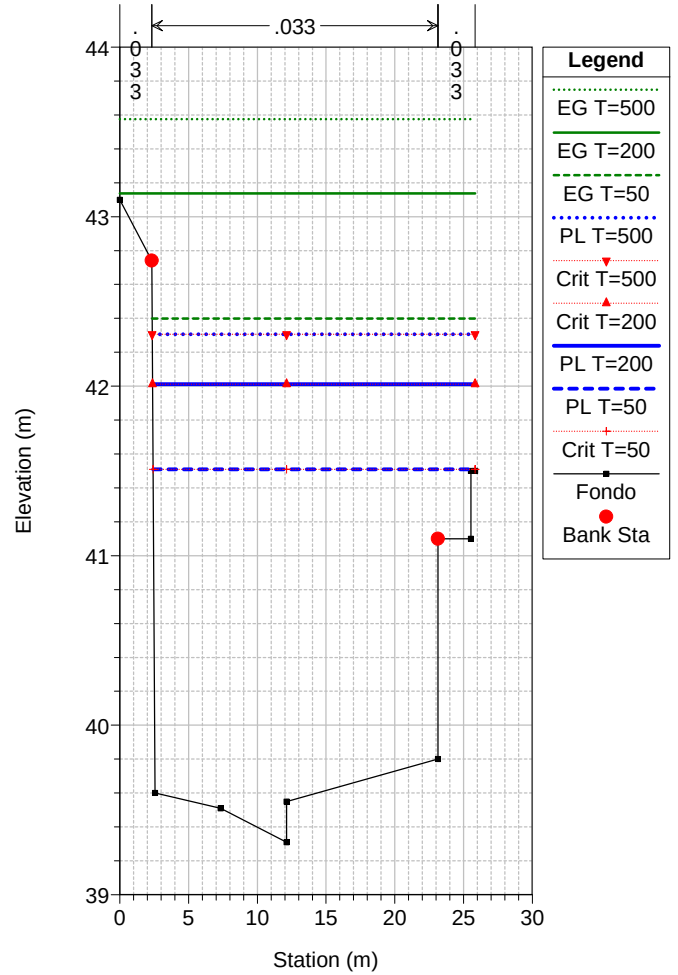
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -79.1



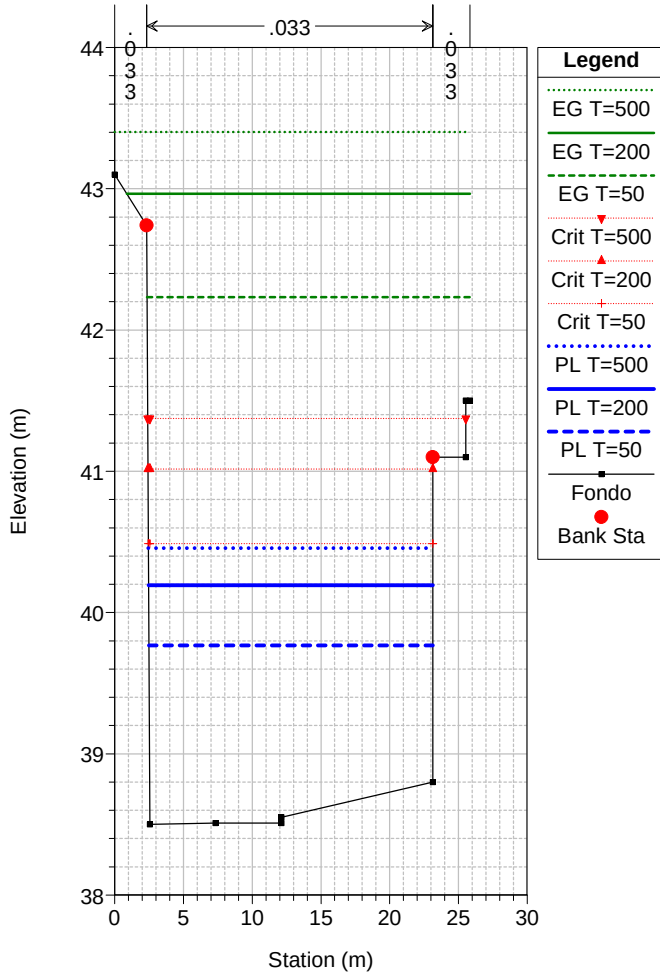
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -80



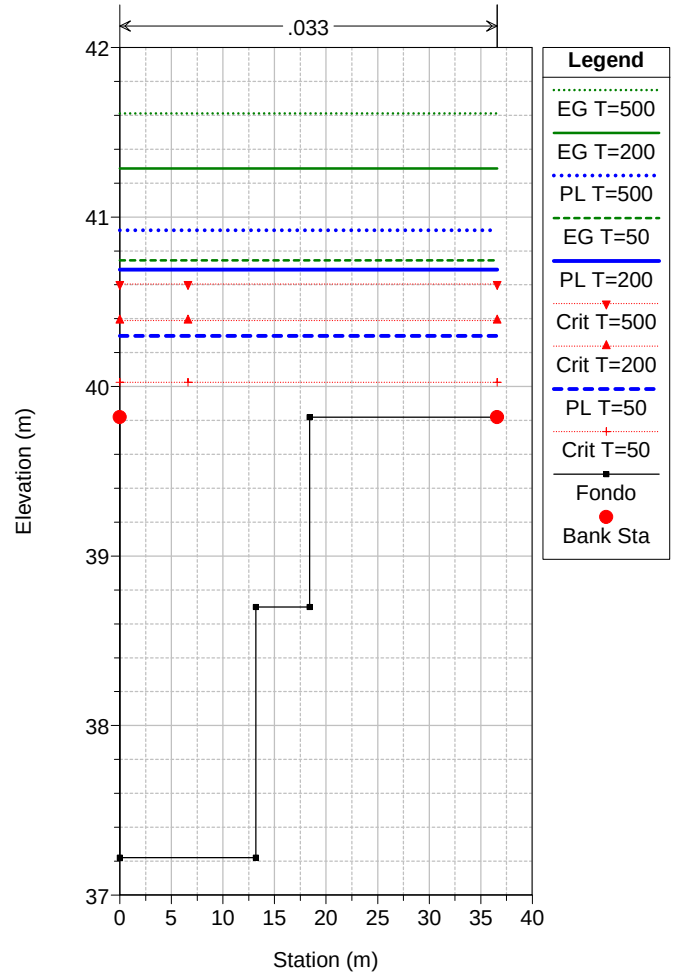
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -80.1



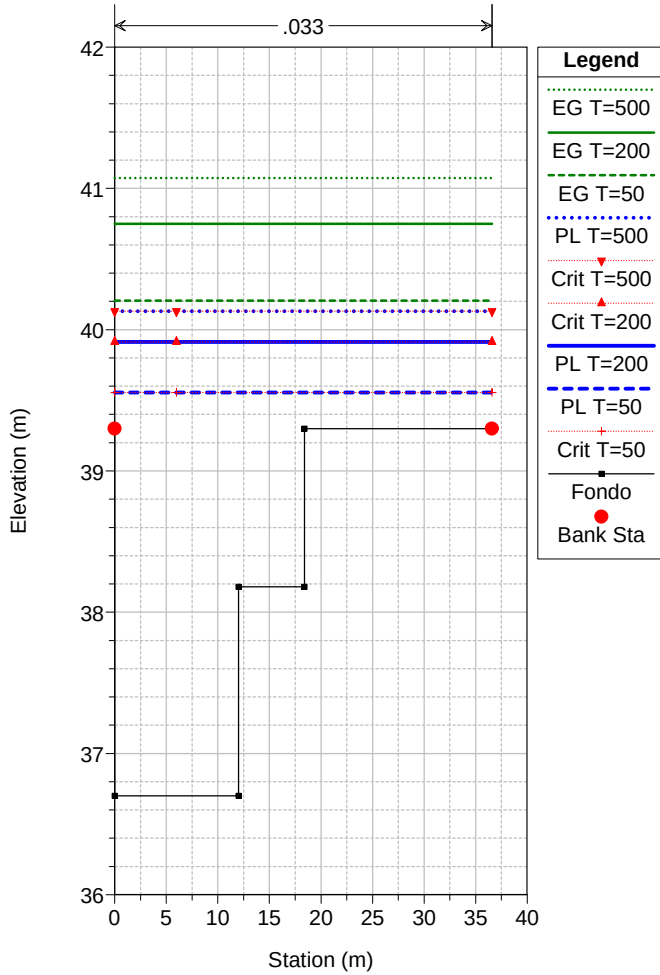
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -82



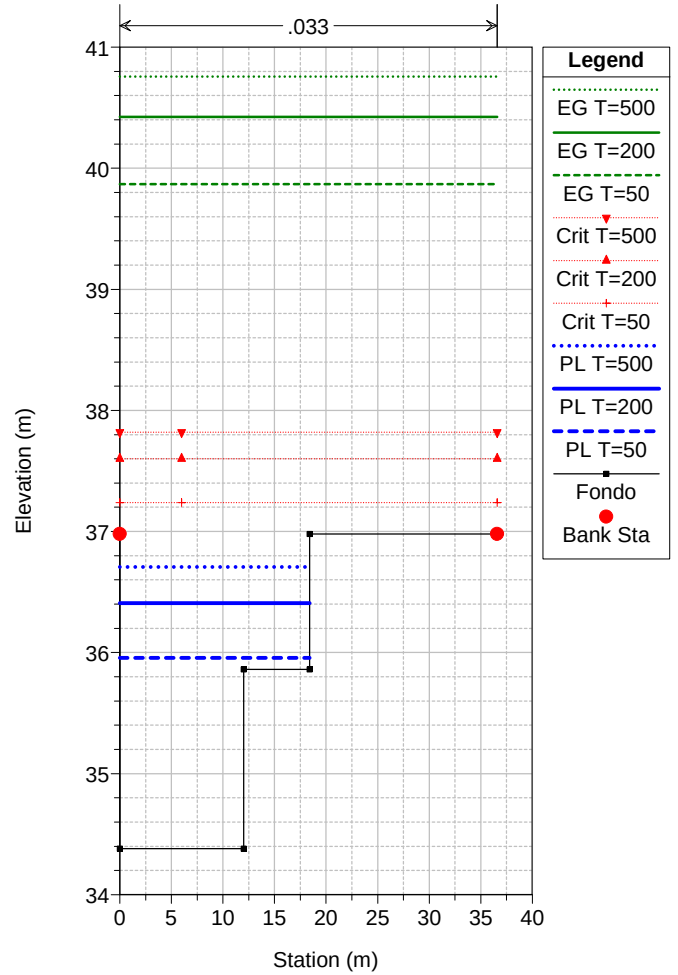
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -83



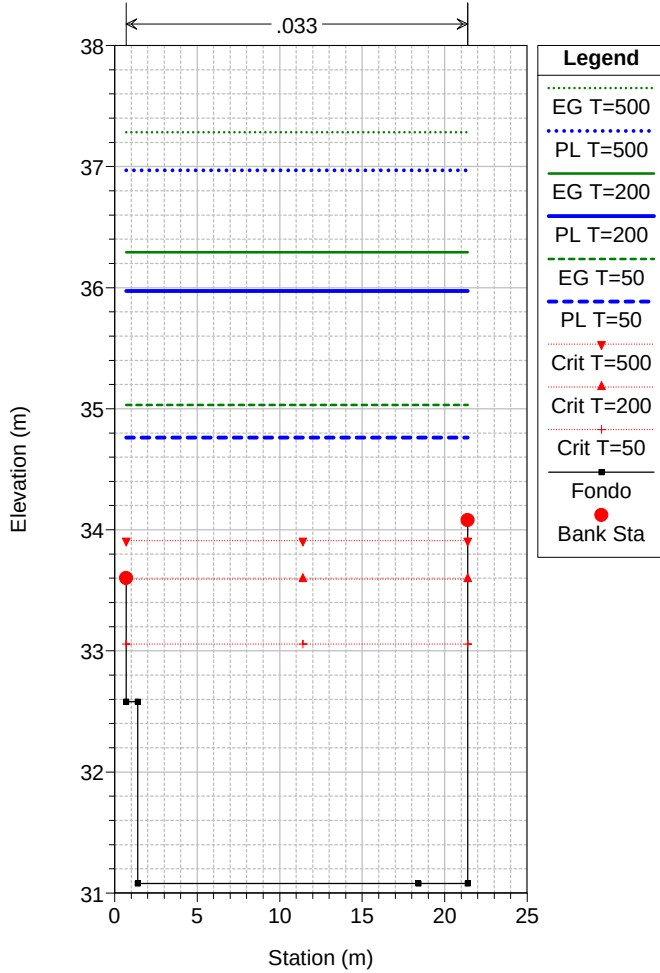
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -84



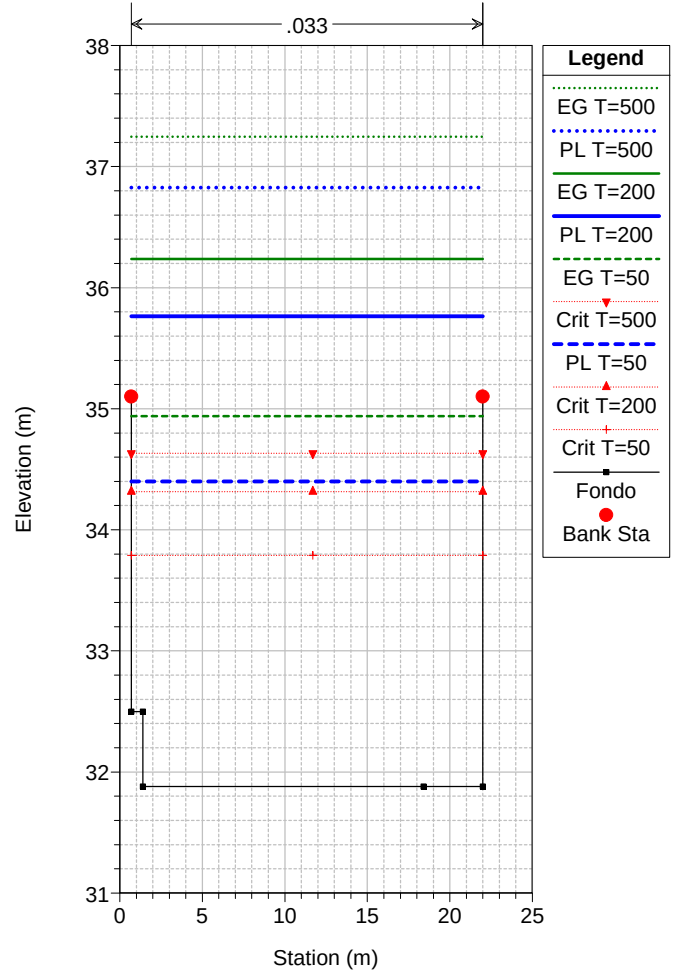
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -85



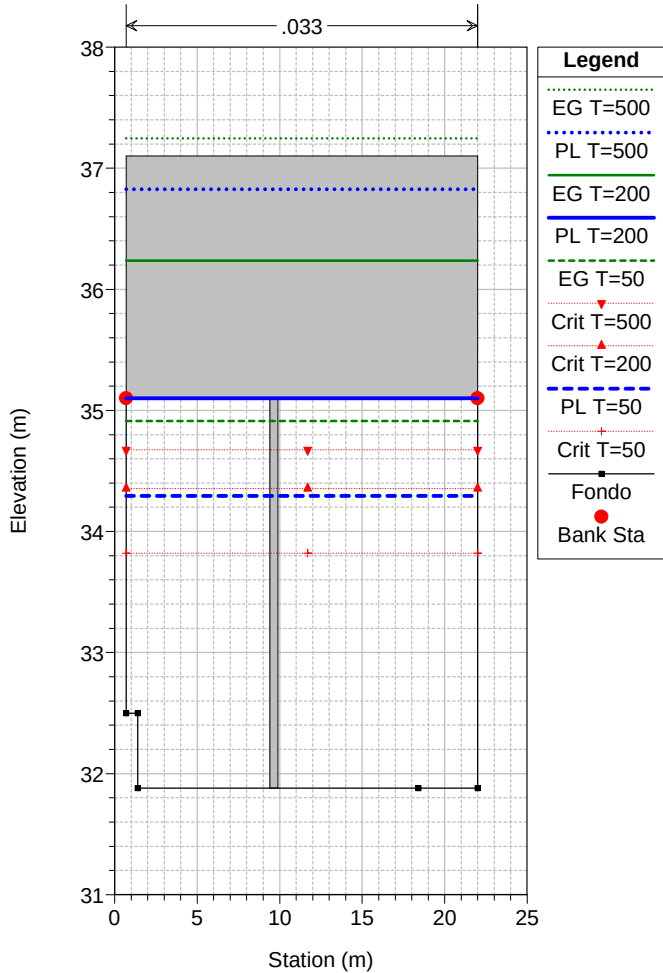
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -86



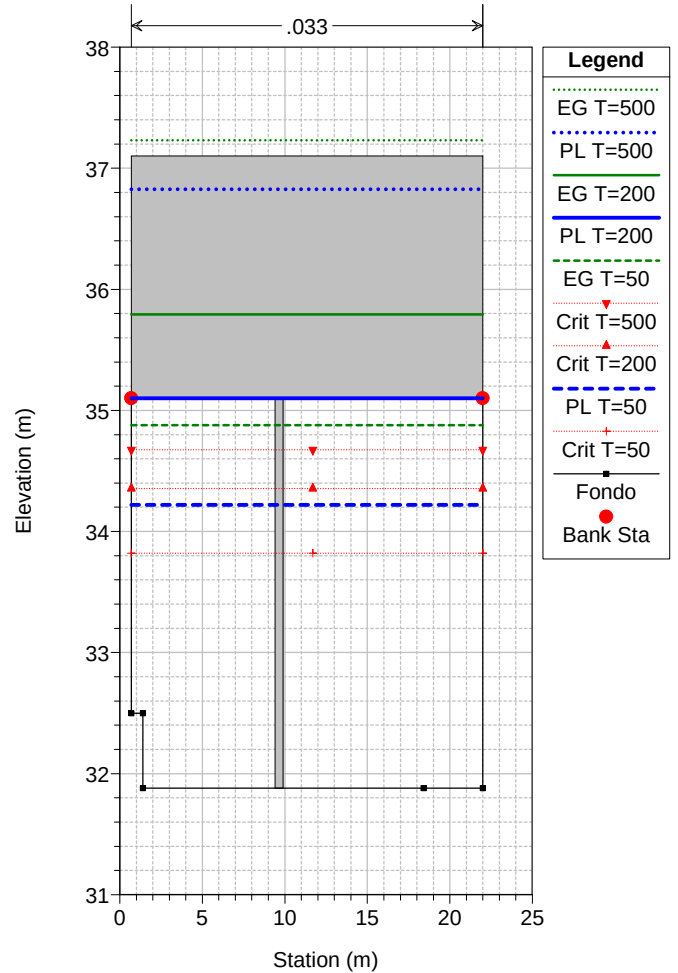
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -86.5 BR



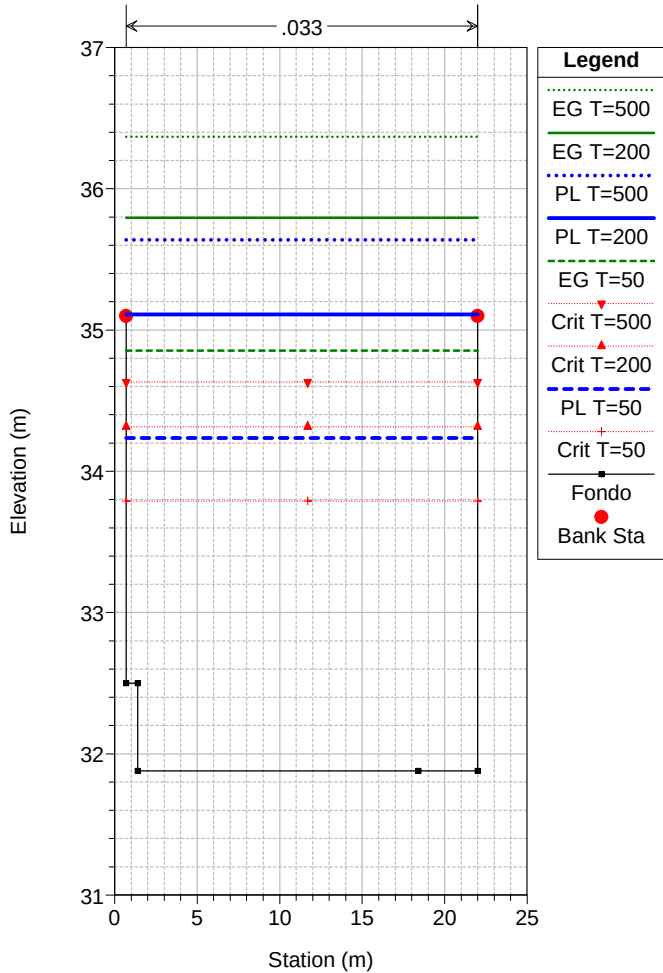
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -86.5 BR



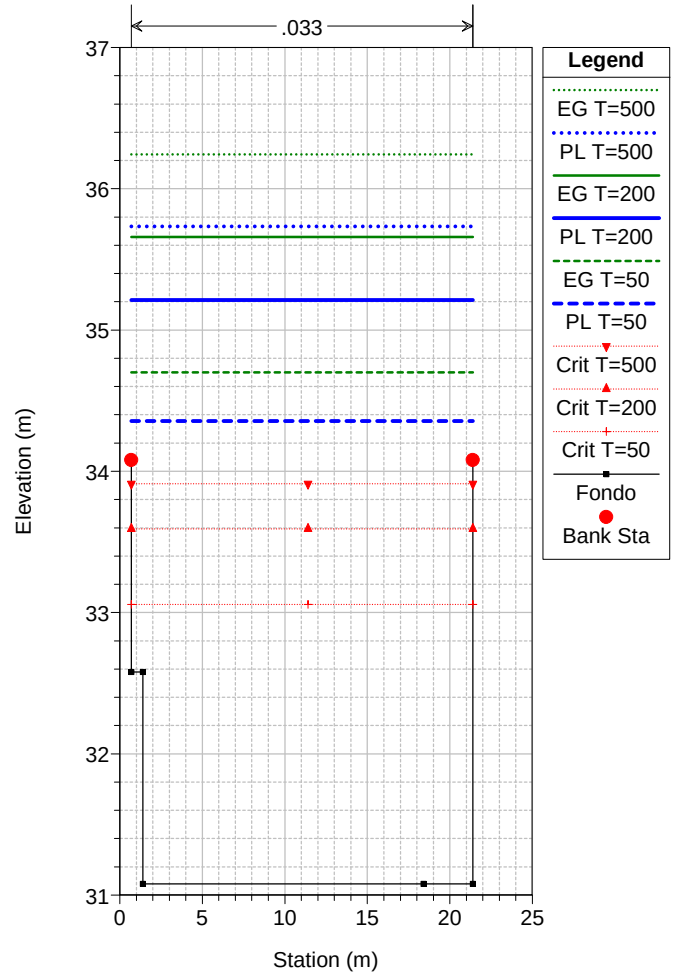
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -87



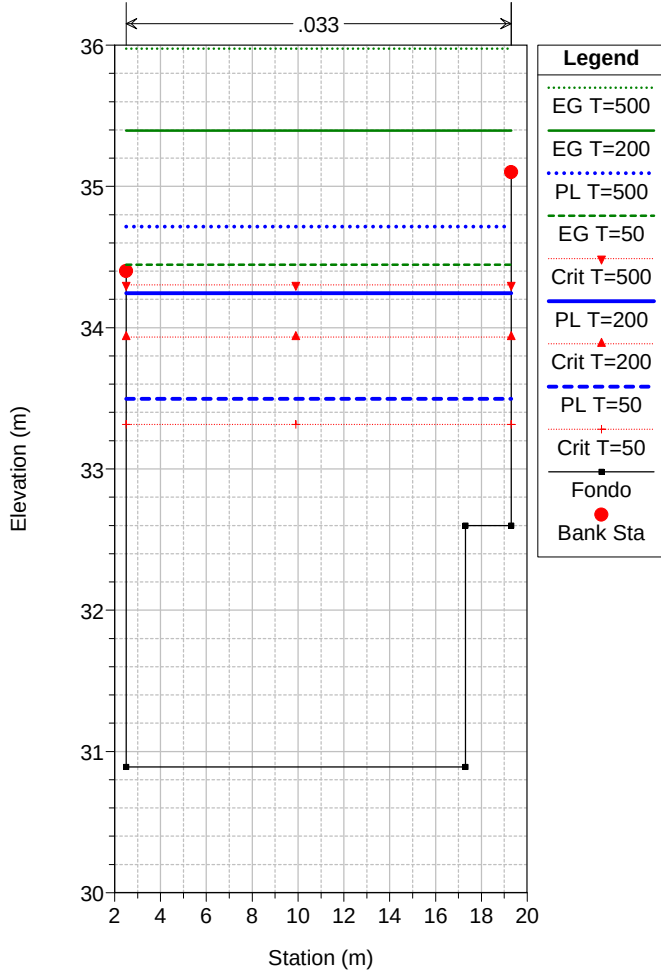
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -88



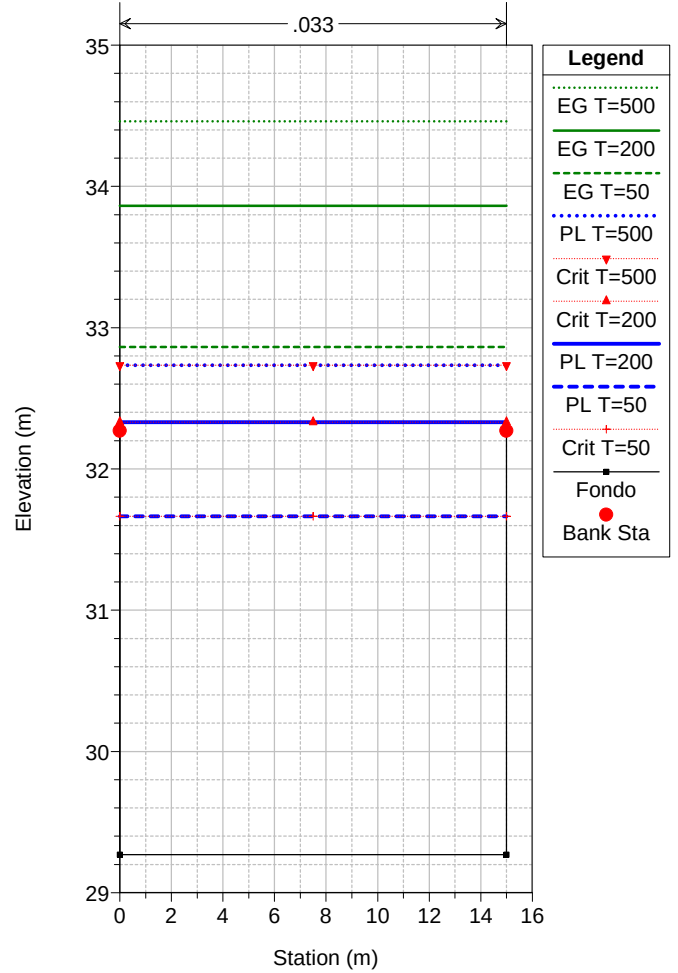
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -89



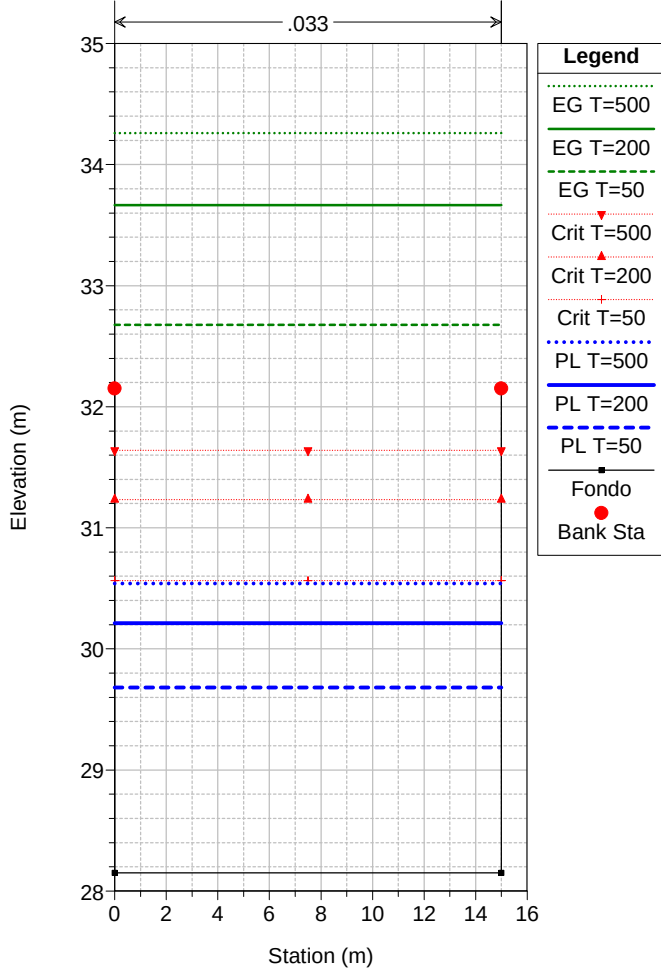
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -90



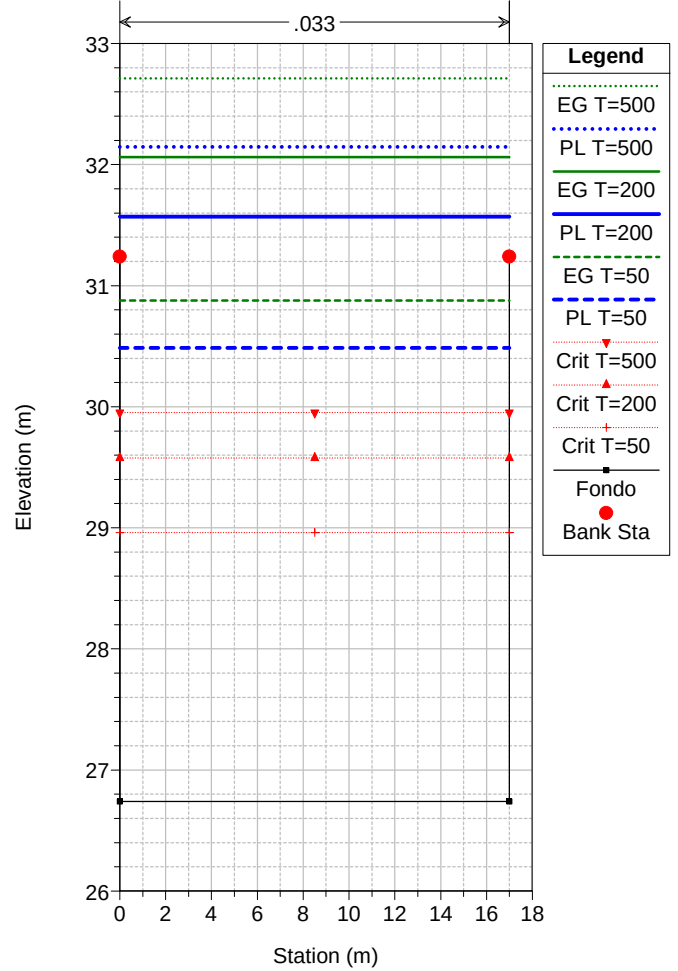
Sturla Plan: Sturla_monte_feb2016

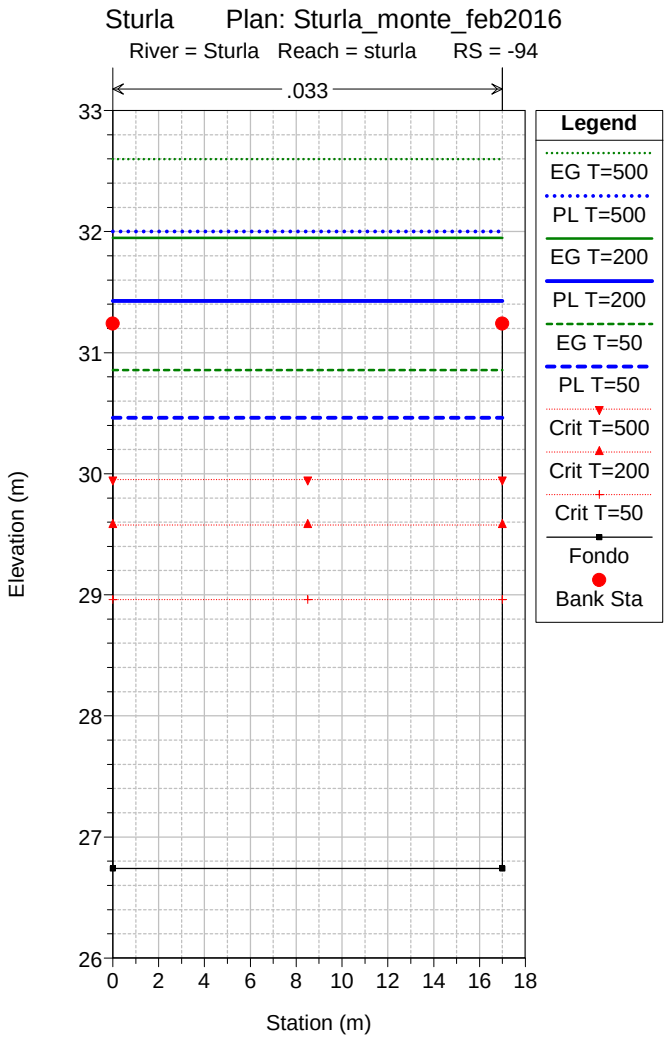
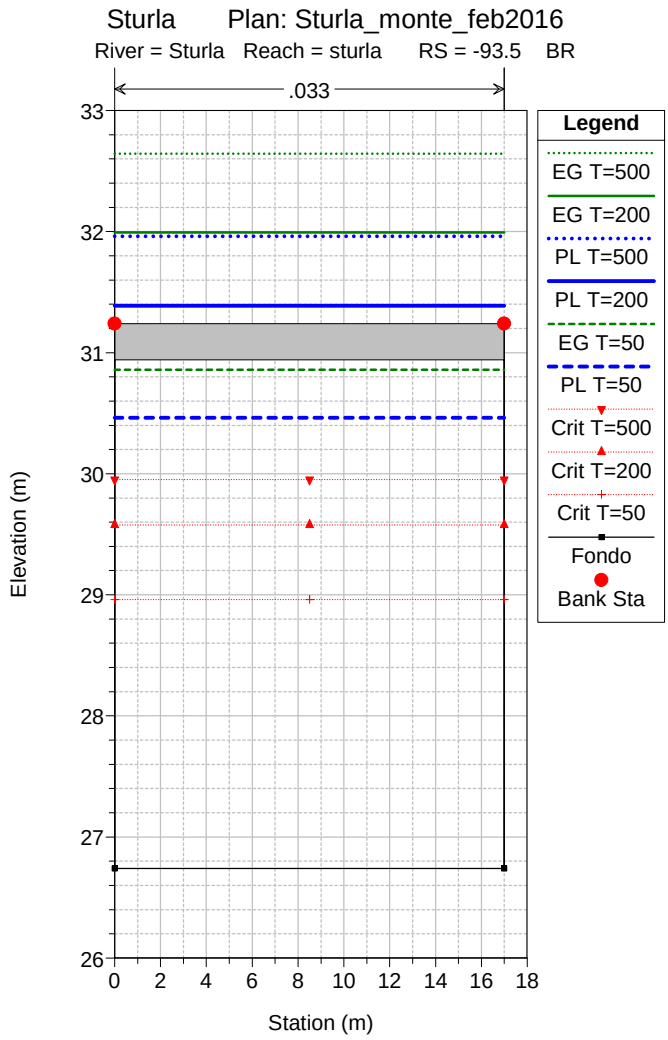
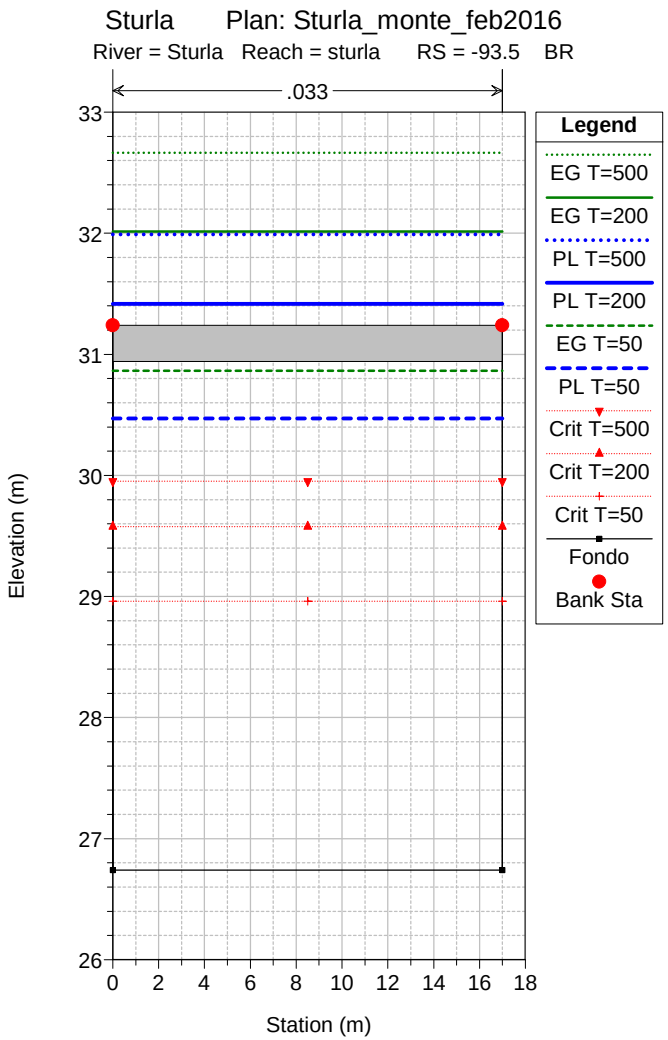
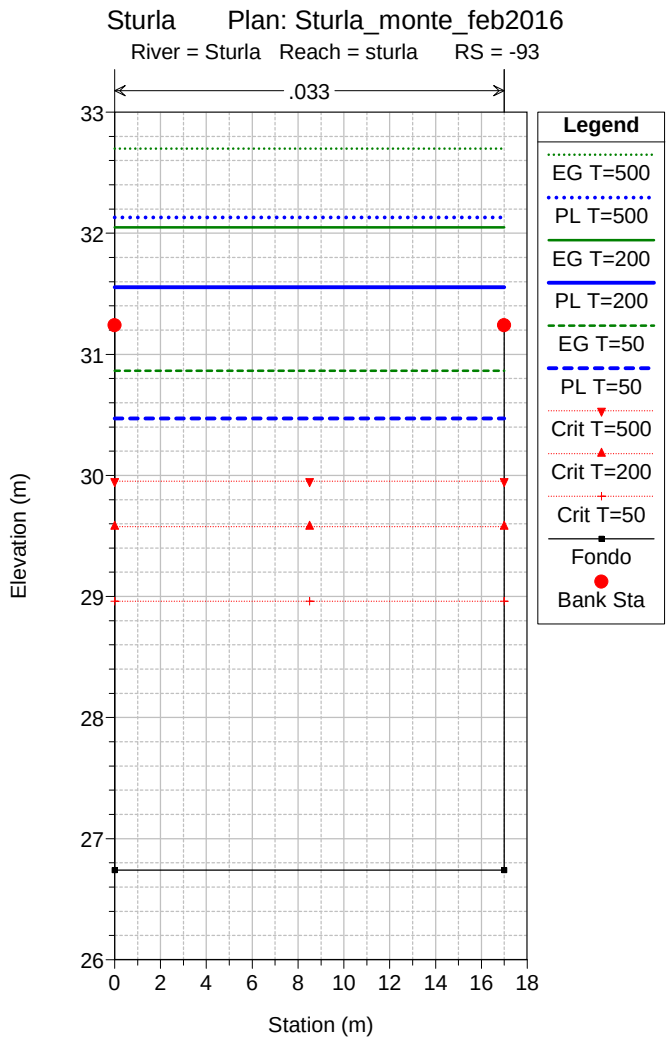
River = Sturla Reach = sturla RS = -91



Sturla Plan: Sturla_monte_feb2016

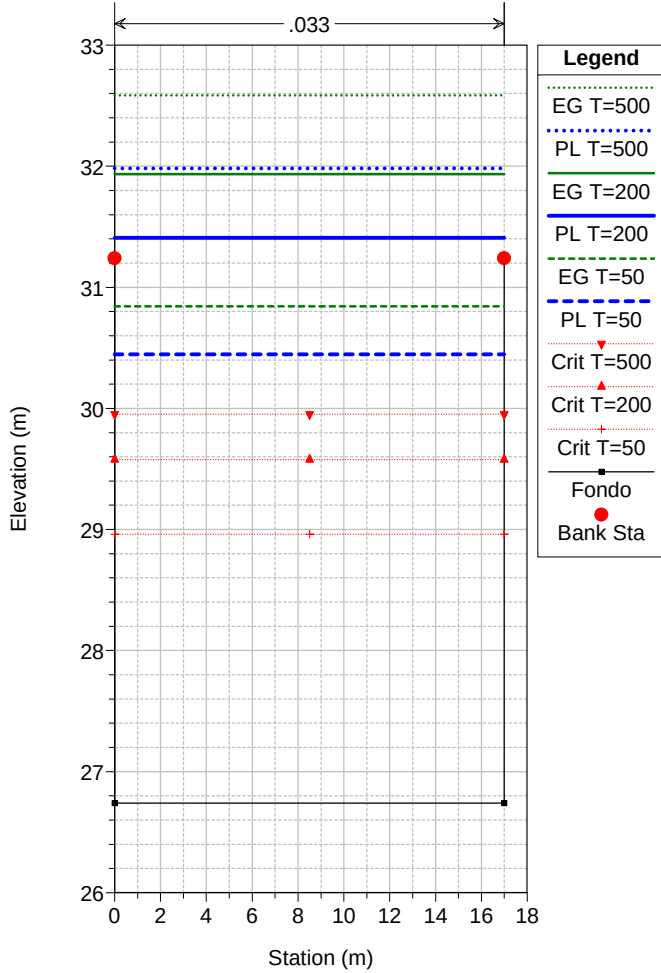
River = Sturla Reach = sturla RS = -92





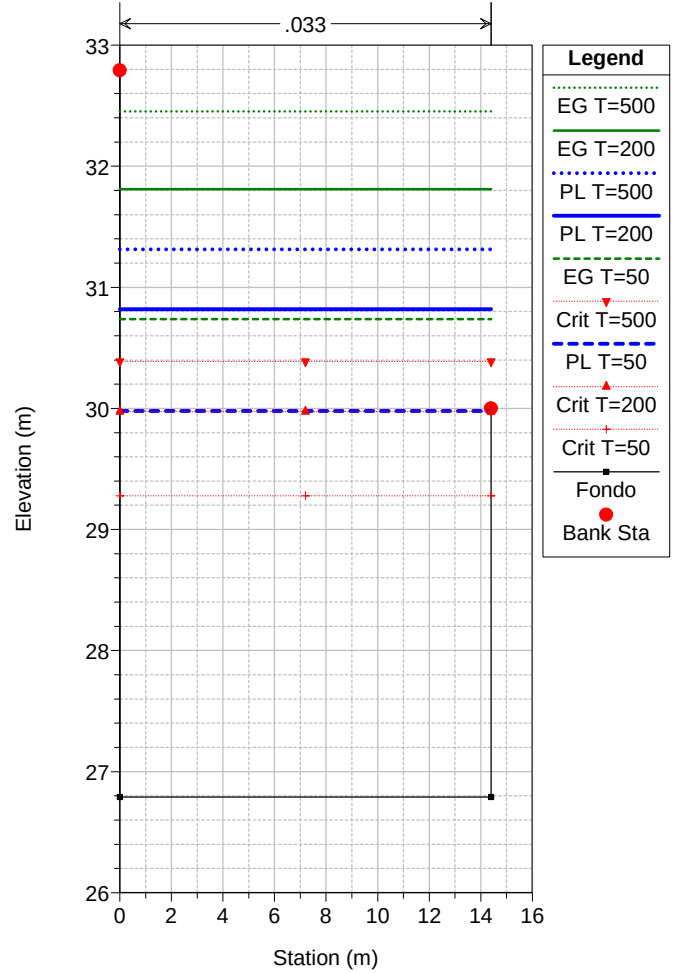
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -95



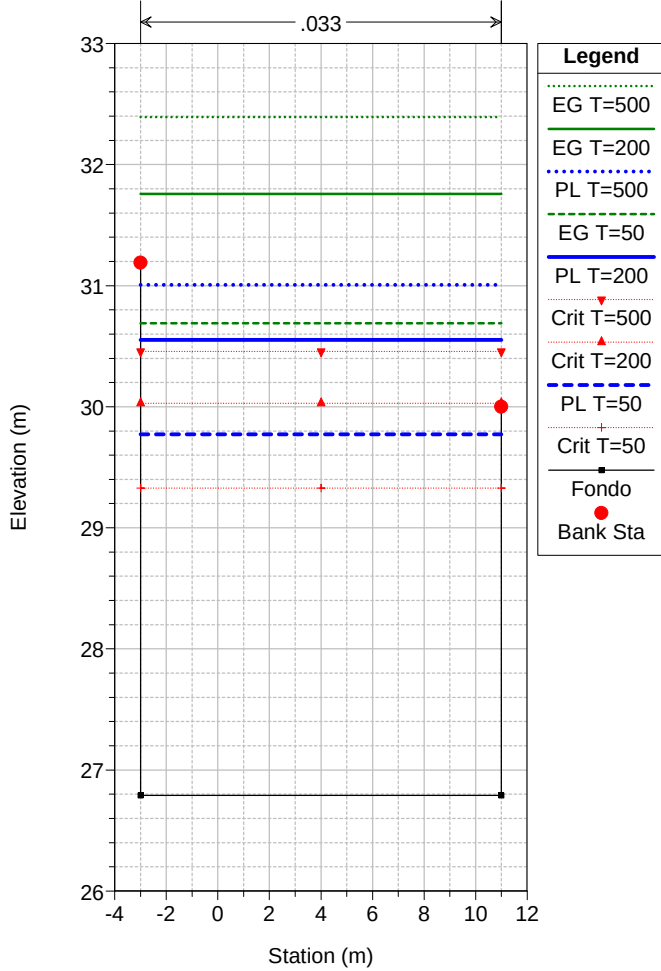
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -96



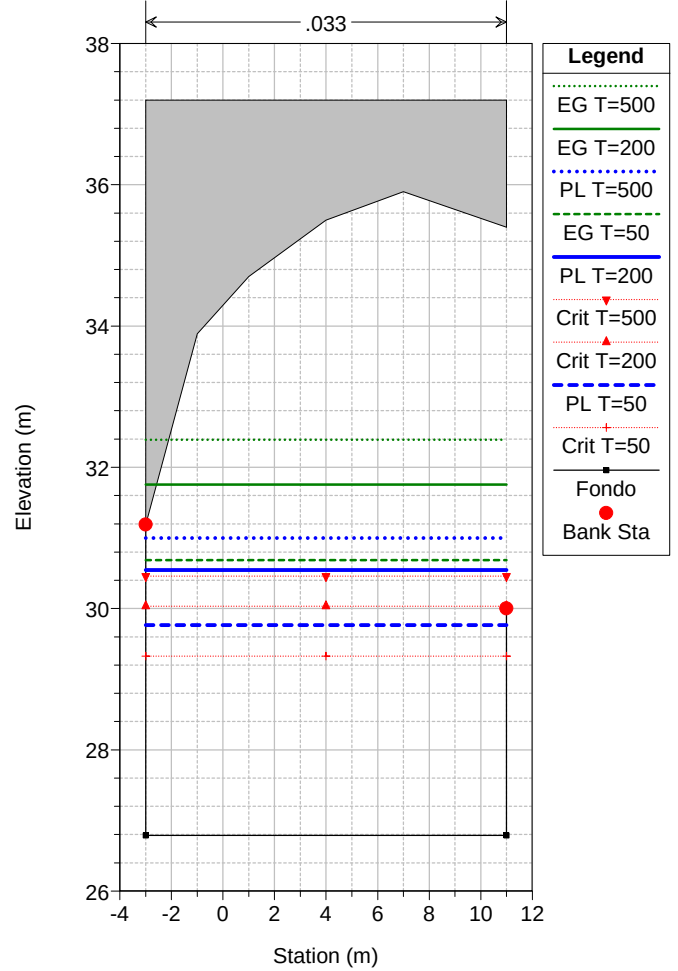
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -97

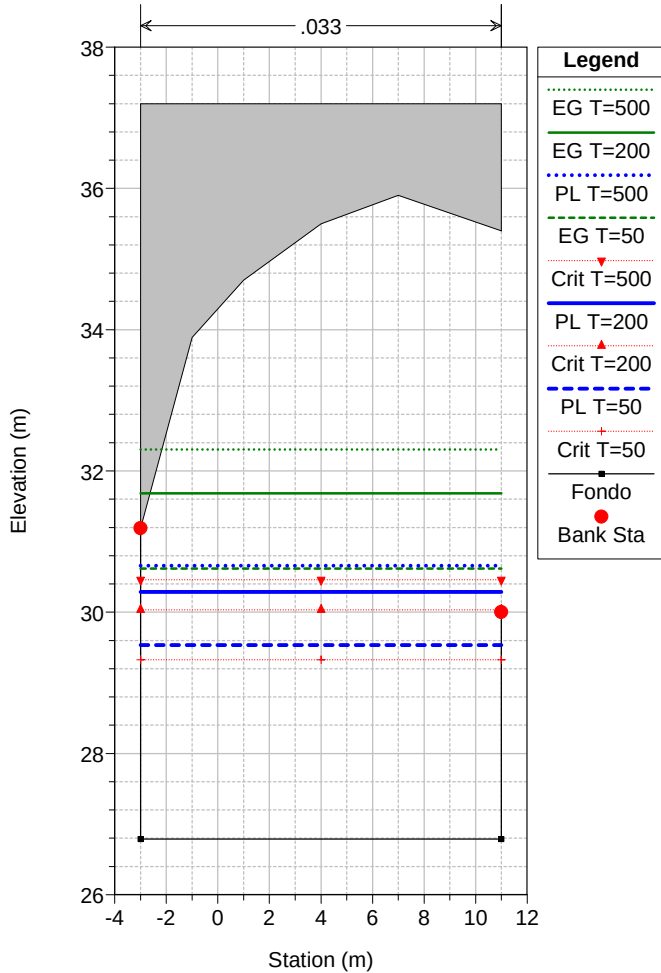


Sturla Plan: Sturla_monte_feb2016

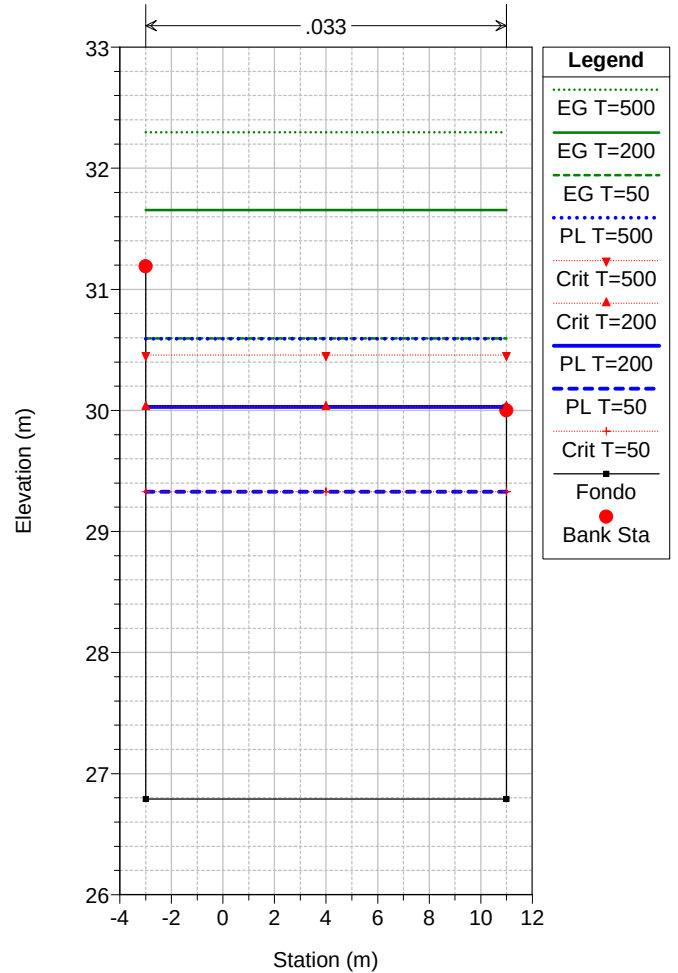
River = Sturla Reach = sturla RS = -97.5 BR



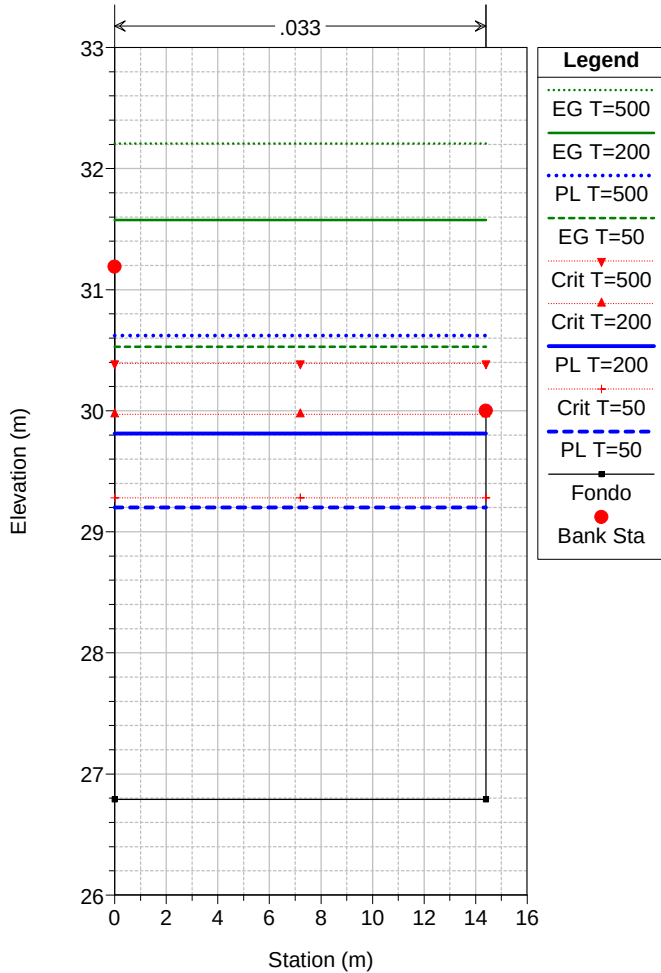
Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -97.5 BR



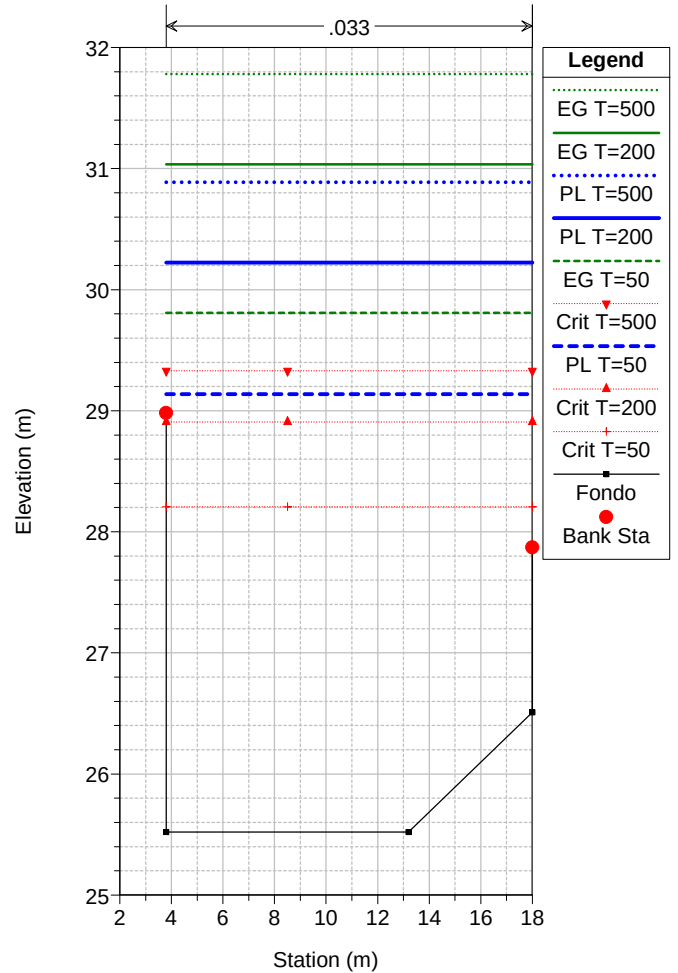
Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -98



Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -99

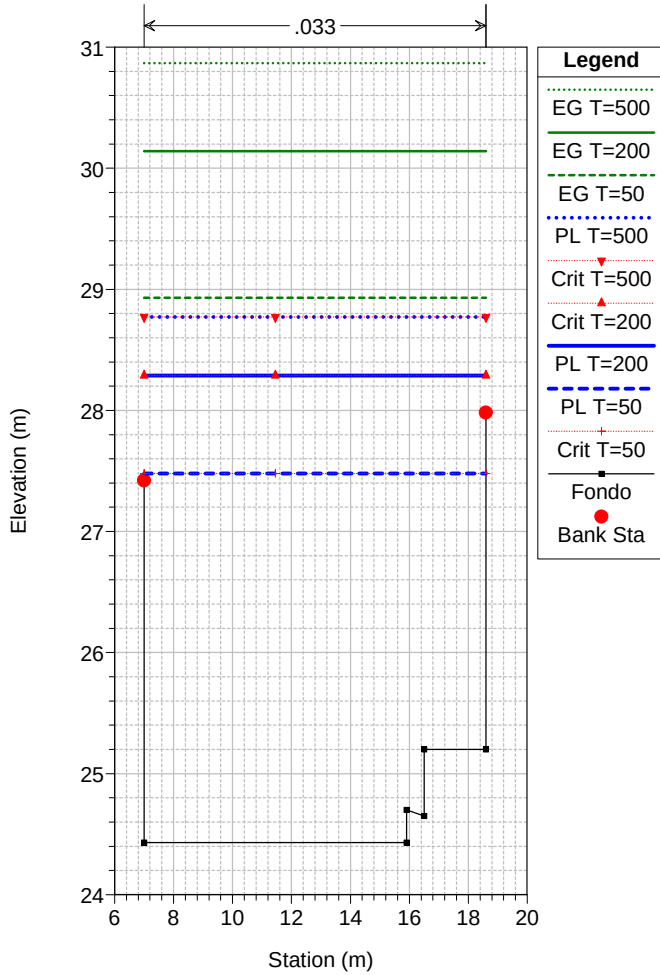


Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -100



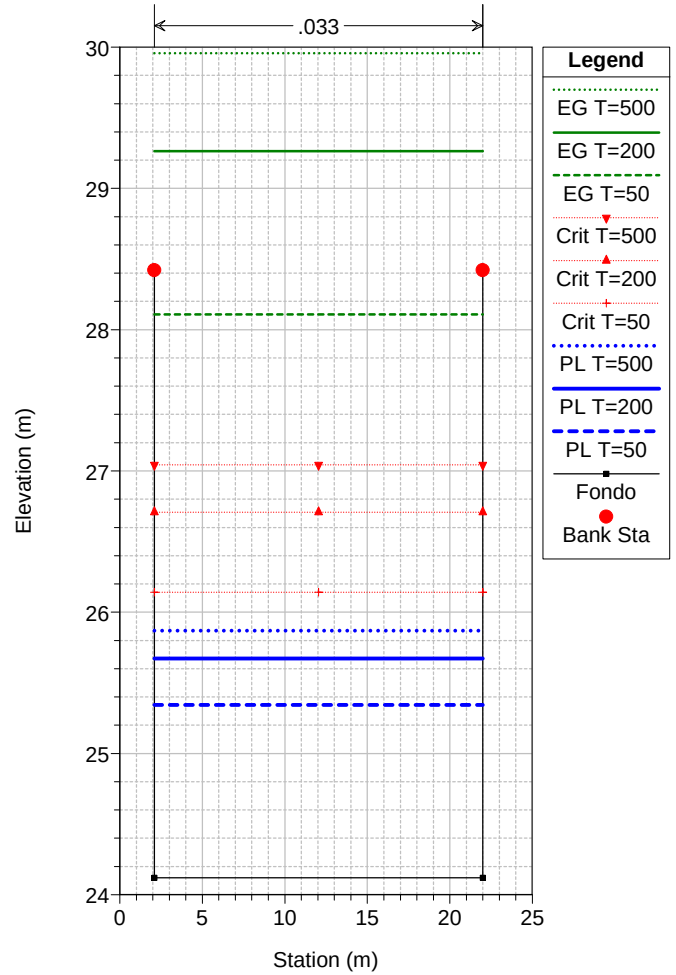
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -101



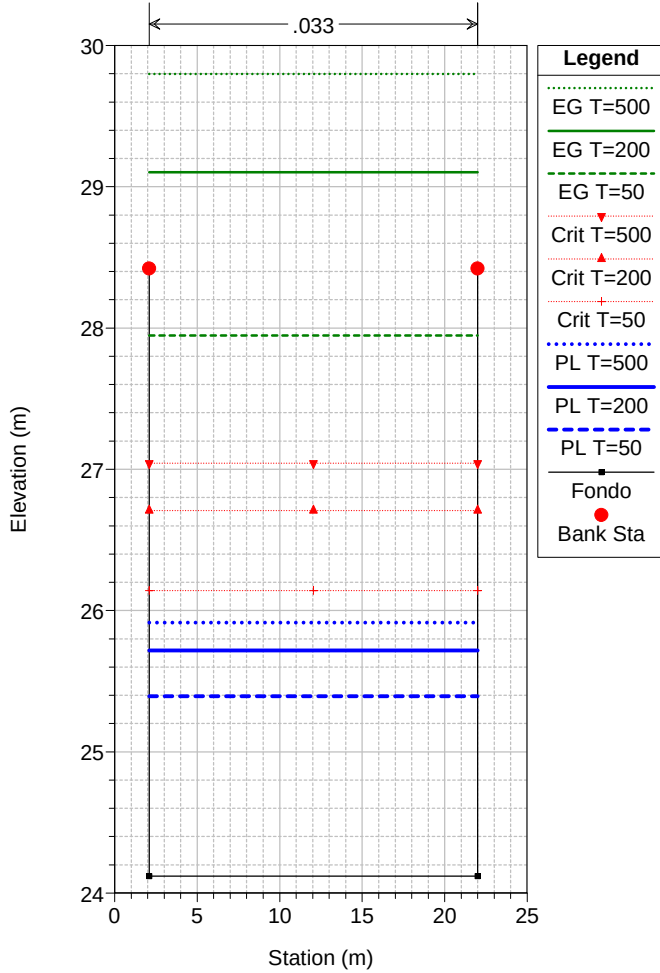
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -102



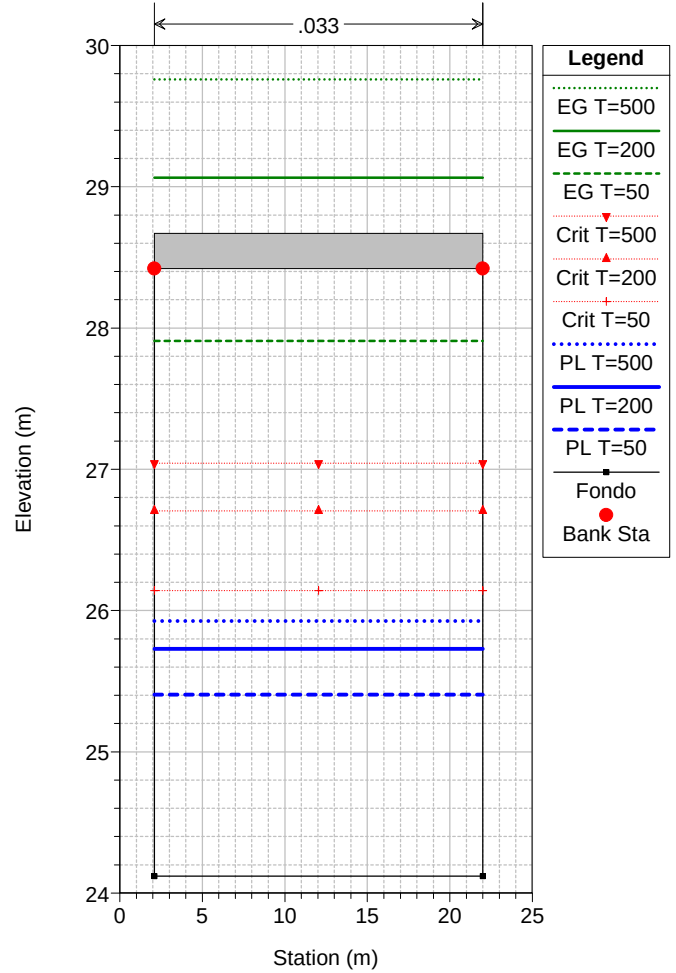
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -103

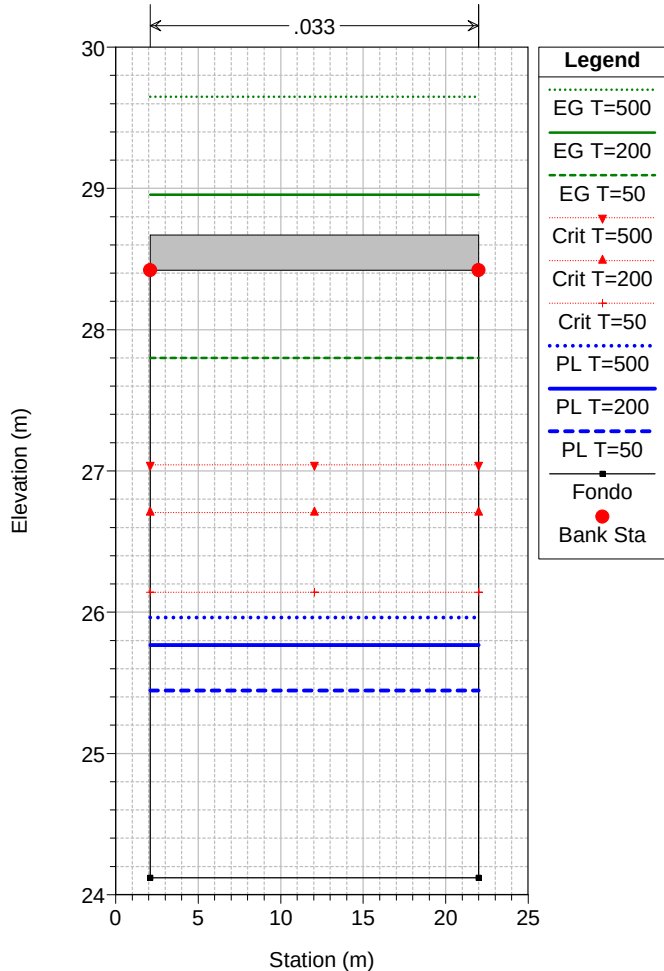


Sturla Plan: Sturla_monte_feb2016

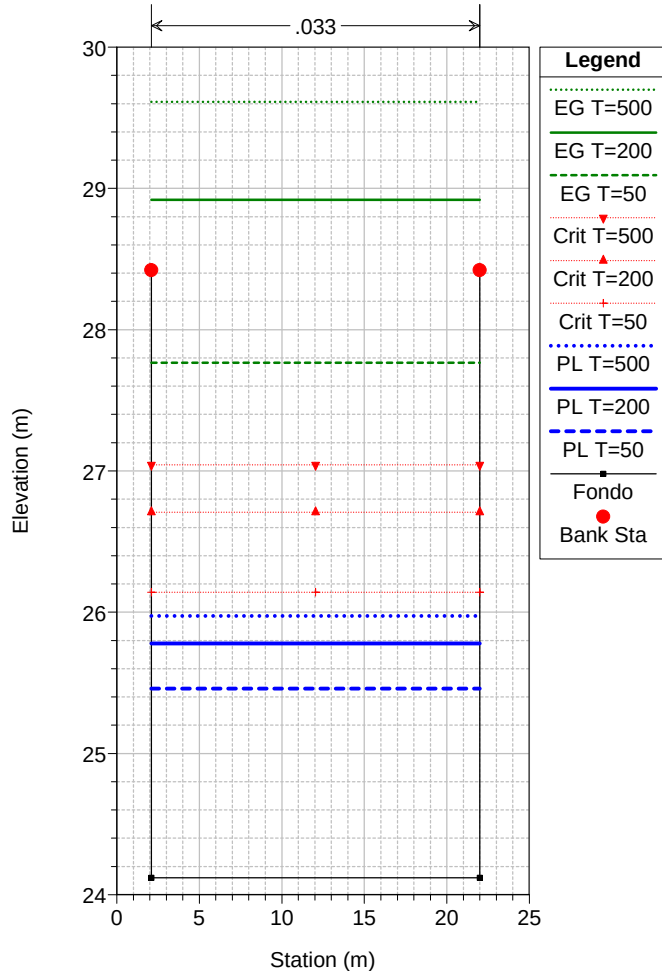
River = Sturla Reach = sturla RS = -103.5 BR



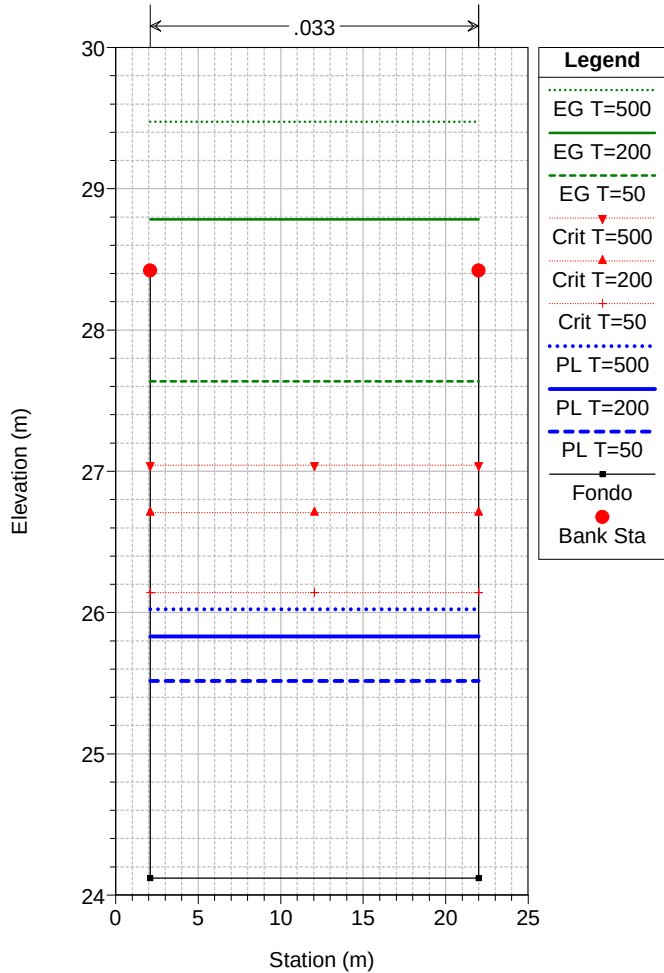
Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -103.5 BR



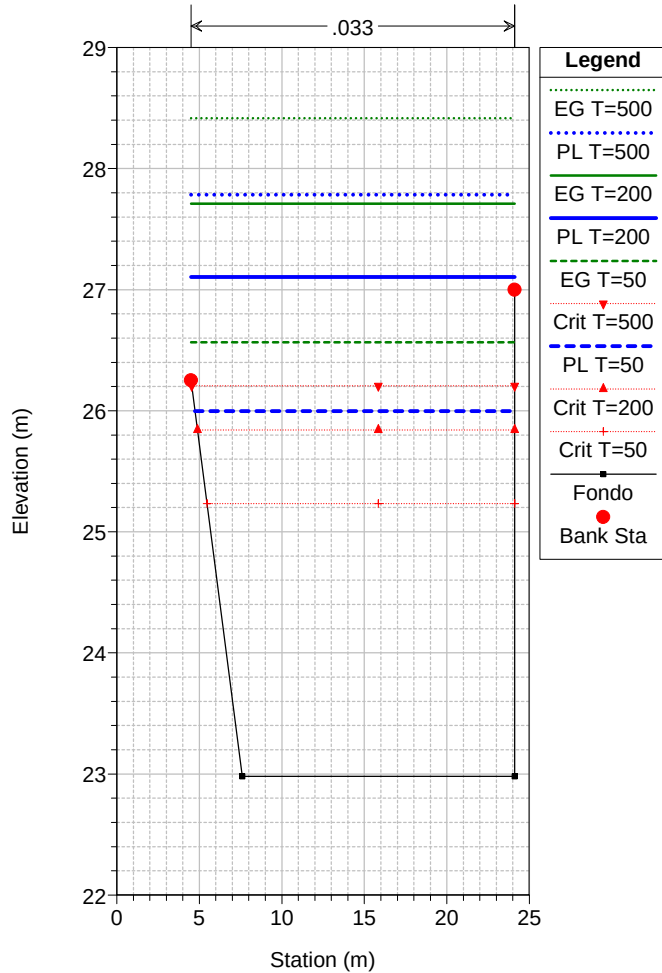
Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -104



Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -105

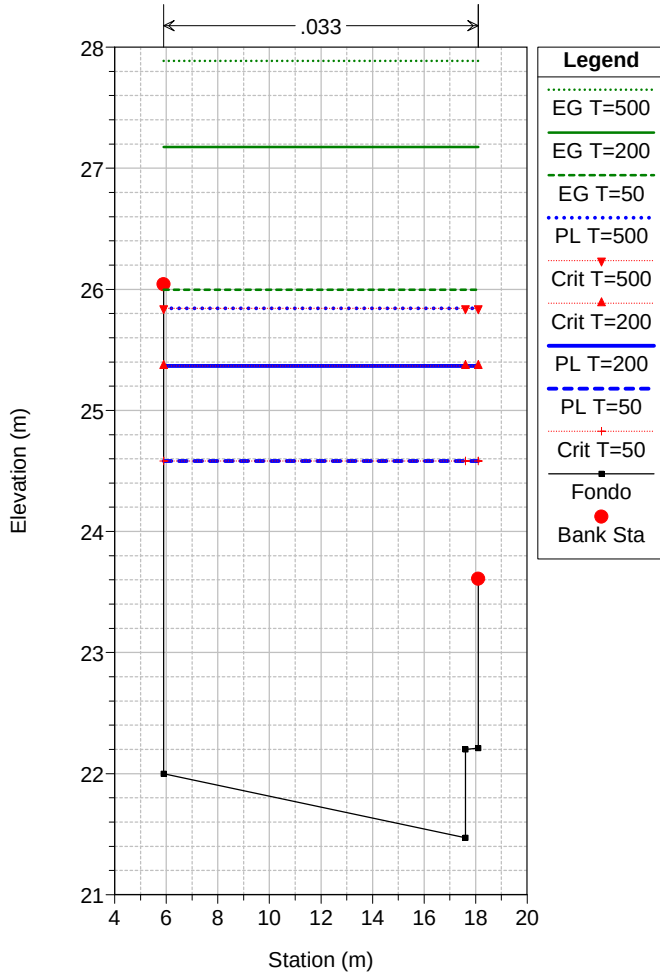


Sturla Plan: Sturla_monte_feb2016
River = Sturla Reach = sturla RS = -106



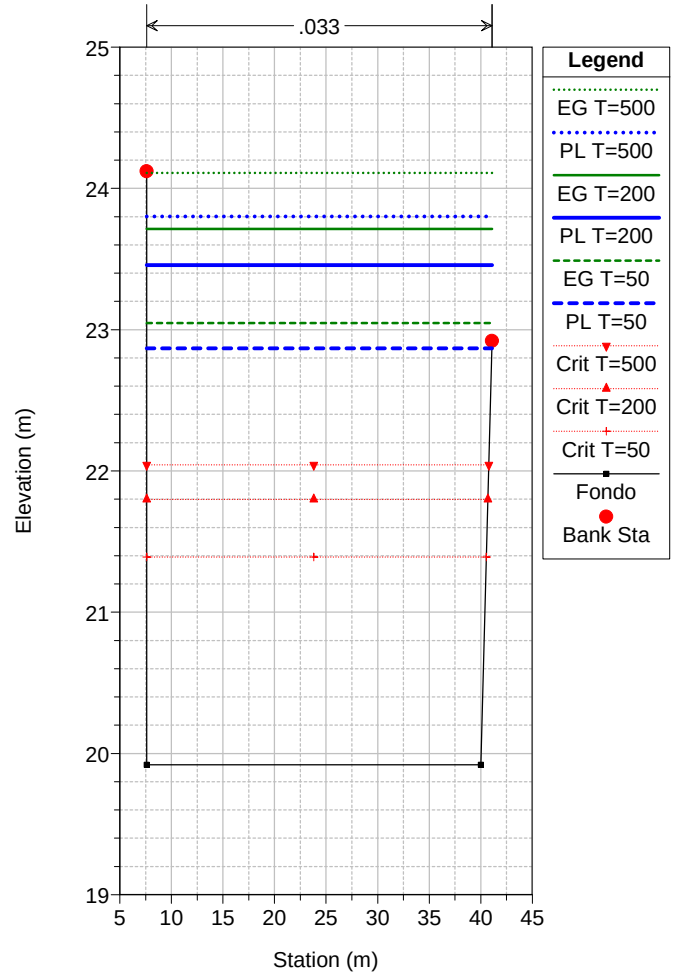
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -107



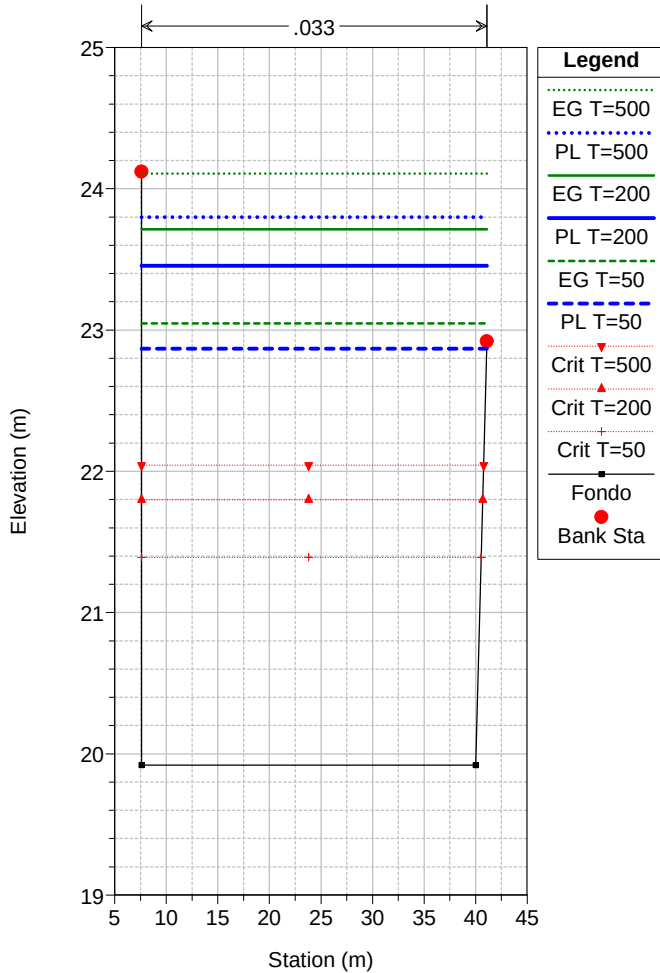
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -107.4



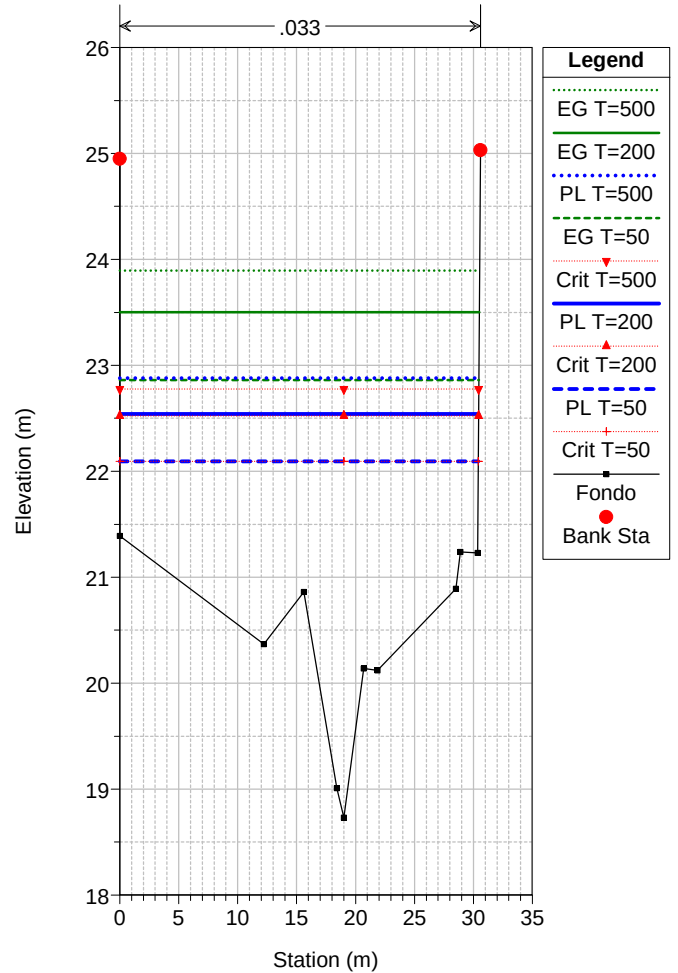
Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -107.5



Sturla Plan: Sturla_monte_feb2016

River = Sturla Reach = sturla RS = -108



HEC-RAS Plan: Sturla monte

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Sturla	S.Desiderio	100	T=50	58.00	129.12	130.96	131.27	0.30	131.61	0.65	132.13	134.67	0.080079	8.53	6.80	5.11	2.36
Sturla	S.Desiderio	100	T=200	84.00	129.12	131.35	131.27	-0.09	131.61	0.26	132.51	135.92	0.080092	9.47	8.89	5.91	2.38
Sturla	S.Desiderio	100	T=500	101.00	129.12	131.56	131.27	-0.29	131.61	0.05	132.73	136.69	0.080125	10.06	10.20	7.01	2.40
Sturla	S.Desiderio	1.14	T=50	58.00	121.12	122.96	123.27	0.30	123.61	0.65	124.14	126.67	0.080079	8.53	6.80	5.11	2.36
Sturla	S.Desiderio	1.14	T=200	84.00	121.12	123.35	123.27	-0.09	123.61	0.26	124.51	127.92	0.080092	9.47	8.89	5.91	2.38
Sturla	S.Desiderio	1.14	T=500	101.00	121.12	123.56	123.27	-0.29	123.61	0.05	124.73	128.69	0.080125	10.06	10.20	7.01	2.40
Sturla	S.Desiderio	1.135	T=50	58.00	118.30	119.94	121.42	1.48	121.29	1.35	120.99	123.68	0.089741	8.57	6.77	4.97	2.35
Sturla	S.Desiderio	1.135	T=200	84.00	118.30	120.35	121.42	1.06	121.29	0.94	121.73	124.95	0.088875	9.50	8.84	5.07	2.29
Sturla	S.Desiderio	1.135	T=500	101.00	118.30	120.60	121.42	0.81	121.29	0.69	122.10	125.69	0.089024	9.99	10.11	5.12	2.27
Sturla	S.Desiderio	1.131		Bridge													
Sturla	S.Desiderio	1.13	T=50	58.00	118.30	120.13	121.42	1.29	121.29	1.16	120.99	123.01	0.061896	7.52	7.72	5.02	1.93
Sturla	S.Desiderio	1.13	T=200	84.00	118.30	120.55	121.42	0.86	121.29	0.74	121.73	124.25	0.065954	8.52	9.86	5.11	1.96
Sturla	S.Desiderio	1.13	T=500	101.00	118.30	120.81	121.42	0.61	121.29	0.48	122.10	124.98	0.068011	9.05	11.17	5.17	1.97
Sturla	S.Desiderio	1.125	T=50	58.00	117.64	119.40	121.67	2.27	120.43	1.03	119.99	121.43	0.039764	6.31	9.20	5.73	1.59
Sturla	S.Desiderio	1.125	T=200	84.00	117.64	121.75	121.67	-0.08	120.43	-1.32	120.77	122.31	0.005165	3.37	26.18	8.35	0.55
Sturla	S.Desiderio	1.125	T=500	101.00	117.64	122.19	121.67	-0.52	120.43	-1.76	121.11	122.81	0.005251	3.57	29.84	8.35	0.55
Sturla	S.Desiderio	1.121		Bridge													
Sturla	S.Desiderio	1.12	T=50	58.00	117.49	119.64	121.02	1.38	120.38	0.74	119.85	120.95	0.021501	5.06	11.45	5.83	1.15
Sturla	S.Desiderio	1.12	T=200	84.00	117.49	120.61	121.02	0.41	120.38	-0.23	120.61	121.80	0.014264	4.84	17.72	8.33	0.91
Sturla	S.Desiderio	1.12	T=500	101.00	117.49	120.33	121.02	0.69	120.38	0.05	120.98	122.49	0.028336	6.50	15.54	6.00	1.29
Sturla	S.Desiderio	1.119	T=50	58.00	116.44	118.42	121.07	2.66	120.43	2.01	119.14	120.83	0.051846	6.88	8.43	5.54	1.78
Sturla	S.Desiderio	1.119	T=200	84.00	116.44	118.99	121.07	2.08	120.43	1.44	119.77	121.64	0.044099	7.22	11.64	5.68	1.61
Sturla	S.Desiderio	1.119	T=500	101.00	116.44	119.19	121.07	1.88	120.43	1.24	120.14	122.37	0.049146	7.89	12.79	5.73	1.69
Sturla	S.Desiderio	1.115	T=50	58.00	113.16	114.70	118.67	3.98	118.63	3.94	115.39	117.06	0.053078	6.82	8.51	7.42	2.03
Sturla	S.Desiderio	1.115	T=200	84.00	113.16	115.00	118.67	3.67	118.63	3.63	115.91	118.09	0.055060	7.78	10.80	7.45	2.06
Sturla	S.Desiderio	1.115	T=500	101.00	113.16	115.20	118.67	3.47	118.63	3.43	116.22	118.64	0.054528	8.21	12.30	7.46	2.04
Sturla	S.Desiderio	1.111		Bridge													
Sturla	S.Desiderio	1.11	T=50	58.00	113.16	114.80	118.67	3.87	118.63	3.83	115.39	116.78	0.040629	6.23	9.31	7.43	1.78
Sturla	S.Desiderio	1.11	T=200	84.00	113.16	115.11	118.67	3.57	118.63	3.53	115.91	117.79	0.045036	7.26	11.57	7.46	1.86
Sturla	S.Desiderio	1.11	T=500	101.00	113.16	115.31	118.67	3.36	118.63	3.32	116.22	118.34	0.045614	7.72	13.09	7.47	1.86
Sturla	S.Desiderio	1.1	T=50	58.00	112.20	114.35	115.85	1.50	114.62	0.27	114.54	115.54	0.018255	4.83	12.01	6.75	1.15
Sturla	S.Desiderio	1.1	T=200	84.00	112.20	114.77	115.85	1.08	114.62	-0.15	115.13	116.34	0.020231	5.58	15.42	8.43	1.21
Sturla	S.Desiderio	1.1	T=500	101.00	112.20	114.98	115.85	0.87	114.62	-0.36	115.43	116.82	0.021583	6.06	17.23	8.46	1.26
Sturla	S.Desiderio	0.9	T=50	58.00	110.99	112.77	114.77	2.00	114.54	1.77	113.24	114.35	0.029752	5.58	10.40	7.92	1.55
Sturla	S.Desiderio	0.9	T=200	84.00	110.99	113.16	114.77	1.61	114.54	1.38	113.74	115.10	0.029381	6.17	13.62	8.50	1.56
Sturla	S.Desiderio	0.9	T=500	101.00	110.99	113.38	114.77	1.38	114.54	1.16	114.01	115.53	0.029531	6.50	15.54	8.83	1.56
Sturla	S.Desiderio	0.85	T=50	58.00	108.59	110.50	113.71	3.21	113.64	3.14	111.19	112.83	0.053726	6.76	8.57	7.39	2.00
Sturla	S.Desiderio	0.85	T=200	84.00	108.59	110.86	113.71	2.84	113.64	2.78	111.67	113.61	0.051565	7.34	11.44	8.16	1.98
Sturla	S.Desiderio	0.85	T=500	101.00	108.59	111.07	113.71	2.63	113.64	2.57	111.96	114.06	0.049089	7.66	13.18	8.16	1.92
Sturla	S.Desiderio	0.81		Bridge													

HEC-RAS Plan: Sturla monte (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Sturla	S.Desiderio	0.8	T=50	58.00	108.52	110.50	113.63	3.13	113.57	3.07	111.12	112.56	0.045984	6.35	9.13	7.68	1.86
Sturla	S.Desiderio	0.8	T=200	84.00	108.52	110.88	113.63	2.76	113.57	2.69	111.60	113.31	0.042947	6.90	12.17	8.16	1.80
Sturla	S.Desiderio	0.8	T=500	101.00	108.52	111.12	113.63	2.52	113.57	2.46	111.89	113.73	0.040207	7.16	14.11	8.16	1.74
Sturla	S.Desiderio	0.75	T=50	58.00	108.06	109.68	113.29	3.61	112.97	3.29	110.19	111.40	0.039012	5.81	9.98	9.32	1.79
Sturla	S.Desiderio	0.75	T=200	84.00	108.06	109.96	113.29	3.33	112.97	3.01	110.62	112.20	0.041152	6.63	12.66	9.74	1.86
Sturla	S.Desiderio	0.75	T=500	101.00	108.06	110.12	113.29	3.17	112.97	2.85	110.88	112.69	0.041939	7.10	14.22	9.74	1.88
Sturla	S.Desiderio	0.71	Bridge														
Sturla	S.Desiderio	0.7	T=50	58.00	107.98	109.70	113.21	3.51	112.89	3.19	110.11	111.13	0.030296	5.30	10.94	9.62	1.59
Sturla	S.Desiderio	0.7	T=200	84.00	107.98	109.98	113.21	3.23	112.89	2.92	110.54	111.92	0.033076	6.17	13.61	9.74	1.67
Sturla	S.Desiderio	0.7	T=500	101.00	107.98	110.14	113.21	3.07	112.89	2.76	110.80	112.39	0.034586	6.66	15.17	9.74	1.70
Sturla	S.Desiderio	0.6	T=50	58.00	106.88	108.70	113.06	4.36	110.35	1.64	109.18	110.35	0.032962	5.69	10.20	7.47	1.55
Sturla	S.Desiderio	0.6	T=200	84.00	106.88	109.13	113.06	3.94	110.35	1.22	109.68	111.14	0.031238	6.28	13.38	7.50	1.50
Sturla	S.Desiderio	0.6	T=500	101.00	106.88	109.39	113.06	3.68	110.35	0.96	109.99	111.60	0.030608	6.59	15.33	7.52	1.47
Sturla	S.Desiderio	0.5	T=50	58.00	106.83	109.03	111.67	2.64	110.03	1.00	109.03	109.94	0.013756	4.23	13.72	7.52	1.00
Sturla	S.Desiderio	0.5	T=200	84.00	106.83	109.54	111.67	2.12	110.03	0.49	109.54	110.70	0.014198	4.77	17.63	7.59	1.00
Sturla	S.Desiderio	0.5	T=500	101.00	106.83	109.85	111.67	1.81	110.03	0.18	109.85	111.16	0.014522	5.06	19.96	7.63	1.00
Sturla	S.Desiderio	0.4	T=50	58.00	105.66	107.84	107.74	-0.10	109.09	1.25	108.20	109.46	0.026775	5.64	10.29	5.34	1.30
Sturla	S.Desiderio	0.4	T=200	84.00	105.66	108.72	107.74	-0.98	109.09	0.37	108.86	110.31	0.018079	5.58	15.05	5.44	1.07
Sturla	S.Desiderio	0.4	T=500	101.00	105.66	109.21	107.74	-1.47	109.09	-0.13	109.79	110.80	0.015453	5.62	19.43	22.60	1.00
Sturla	S.Desiderio	0.315	T=50	58.00	104.64	108.38	107.77	-0.60	107.59	-0.79	107.28	108.69	0.002559	2.49	24.28	10.29	0.47
Sturla	S.Desiderio	0.315	T=200	84.00	104.64	109.16	107.77	-1.39	107.59	-1.57	107.85	109.54	0.002277	2.76	32.34	10.29	0.47
Sturla	S.Desiderio	0.315	T=500	101.00	104.64	109.80	107.77	-2.03	107.59	-2.21	108.15	110.18	0.001877	2.80	38.91	10.29	0

HEC-RAS Plan: Sturla_monte (Continued)

River	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)	
Pomà	Pomà	2	T=50	73.00	104.84	107.76	108.45	0.69	108.24	0.48	107.76	108.87	0.016480	4.67	15.65	7.03	1.00
Pomà	Pomà	2	T=200	106.00	104.84	108.82	108.45	-0.37	108.24	-0.58	108.88	109.69	0.009222	4.25	27.95	18.54	0.75
Pomà	Pomà	2	T=500	128.00	104.84	109.63	108.45	-1.18	108.24	-1.39	109.14	110.14	0.004497	3.44	42.92	18.63	0.54
Pomà	Pomà	1	T=50	73.00	103.77	108.22	107.18	-1.04	107.17	-1.05	106.41	108.44	0.001706	2.15	37.55	16.12	0.35
Pomà	Pomà	1	T=200	106.00	103.77	109.09	107.18	-1.90	107.17	-1.92	106.99	109.32	0.001569	2.26	51.50	16.12	0.33
Pomà	Pomà	1	T=500	128.00	103.77	109.77	107.18	-2.59	107.17	-2.60	107.66	109.99	0.001340	2.22	62.51	16.12	0.30

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla

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
sturla	0.2	T=50	131.00	102.56	106.04	106.55	0.52	107.88	1.85	106.04	107.16	0.011168	4.70	27.89	12.48	1.00
sturla	0.2	T=200	190.00	102.56	107.34	106.55	-0.78	107.88	0.55	106.88	108.17	0.005370	4.11	49.01	19.23	0.70
sturla	0.2	T=500	229.00	102.56	108.25	106.55	-1.70	107.88	-0.37	107.27	108.90	0.003394	3.69	66.62	19.24	0.56
sturla	0.1	T=50	131.00	102.64	104.91	105.21	0.30	105.68	0.76	105.32	106.56	0.019101	5.69	23.03	11.67	1.29
sturla	0.1	T=200	190.00	102.64	107.62	105.21	-2.40	105.68	-1.94	106.20	107.90	0.001558	2.55	82.38	24.52	0.38
sturla	0.1	T=500	229.00	102.64	108.45	105.21	-3.24	105.68	-2.77	106.47	108.71	0.001193	2.42	102.82	24.52	0.33
sturla	-2	T=50	162.00	102.59	105.78	105.14	-0.64	105.58	-0.20	104.98	106.45	0.005027	3.63	44.68	14.00	0.65
sturla	-2	T=200	234.00	102.59	107.15	105.14	-2.01	105.58	-1.57	105.64	107.83	0.003782	3.67	63.81	14.00	0.55
sturla	-2	T=500	281.00	102.59	107.91	105.14	-2.77	105.58	-2.33	106.04	108.64	0.003539	3.77	74.54	14.00	0.52
sturla	-2.9	T=50	162.00	102.59	105.46	103.70	-1.76	104.14	-1.32	104.98	106.29	0.006828	4.02	40.25	14.00	0.76
sturla	-2.9	T=200	234.00	102.59	107.00	103.70	-3.30	104.14	-2.86	105.65	107.73	0.004161	3.79	61.68	14.00	0.58
sturla	-2.9	T=500	281.00	102.59	107.78	103.70	-4.08	104.14	-3.64	106.04	108.54	0.003794	3.87	72.68	14.00	0.54
sturla	-3	T=50	162.00	101.15	105.82	103.70	-2.12	104.14	-1.68	103.54	106.14	0.001690	2.48	65.43	14.00	0.37
sturla	-3	T=200	234.00	101.15	107.24	103.70	-3.54	104.14	-3.10	104.20	107.62	0.001699	2.74	85.26	14.00	0.35
sturla	-3	T=500	281.00	101.15	108.01	103.70	-4.31	104.14	-3.87	104.60	108.45	0.001779	2.93	96.02	14.00	0.36
sturla	-4.5	T=50	162.00	101.20	105.78	105.60	-0.18	105.60	-0.18	104.06	106.12	0.001993	2.60	62.27	16.90	0.43
sturla	-4.5	T=200	234.00	101.20	107.24	105.60	-1.64	105.60	-1.64	104.71	107.61	0.001596	2.69	87.01	16.90	0.38
sturla	-4.5	T=500	281.00	101.20	108.03	105.60	-2.43	105.60	-2.43	105.09	108.43	0.001551	2.80	100.25	16.90	0.37
sturla	-5	T=50	162.00	101.15	105.69	105.60	-0.09	105.60	-0.09	104.03	106.10	0.002520	2.86	56.66	14.00	0.45
sturla	-5	T=200	234.00	101.15	107.12	105.60	-1.52	105.60	-1.52	104.69	107.59	0.002260	3.05	76.64	14.00	0.42
sturla	-5	T=500	281.00	101.15	107.88	105.60	-2.28	105.60	-2.28	105.08	108.40	0.002288	3.22	87.28	14.00	0.41
sturla	-5.5	Bridge														
sturla	-6	T=50	162.00	101.10	104.83	105.60	0.77	105.60	0.77	103.96	105.47	0.004643	3.55	45.62	14.00	0.63
sturla	-6	T=200	234.00	101.10	105.91	105.60	-0.31	105.60	-0.31	104.63	106.67	0.004261	3.85	60.79	14.00	0.59
sturla	-6	T=500	281.00	101.10	106.56	105.60	-0.96	105.60	-0.96	105.02	107.38	0.004179	4.03	69.78	14.00	0.58
sturla	-7	T=50	162.00	101.15	103.95	103.70	-0.25	104.14	0.19	103.95	105.36	0.013150	5.25	30.85	11.00	1.00
sturla	-7	T=200	234.00	101.15	104.73	103.70	-1.03	104.14	-0.59	104.73	106.53	0.013691	5.94	39.39	11.00	1.00
sturla	-7	T=500	281.00	101.15	105.20	103.70	-1.50	104.14	-1.06	105.20	107.23	0.014009	6.31	44.55	11.00	1.00
sturla	-7.5	T=50	162.00	101.15	102.92	103.70	0.78	104.14	1.22	103.54	105.09	0.029230	6.53	24.82	14.00	1.57
sturla	-7.5	T=200	234.00	101.15	103.39	103.70	0.31	104.14	0.75	104.20	106.23	0.030079	7.47	31.32	14.00	1.59
sturla	-7.5	T=500	281.00	101.15	103.67	103.70	0.03	104.14	0.47	104.60	106.91	0.030504	7.98	35.22	14.00	1.61
sturla	-8	T=50	162.00	98.17	102.25	104.71	2.46	105.80	3.55	101.50	103.31	0.008180	4.56	35.54	8.98	0.73
sturla	-8	T=200	234.00	98.17	103.30	104.71	1.41	105.80	2.50	102.40	104.68	0.009148	5.21	44.94	9.00	0.74
sturla	-8	T=500	281.00	98.17	103.92	104.71	0.79	105.80	1.88	102.93	105.49	0.009727	5.56	50.53	9.01	0.75
sturla	-9	T=50	162.00	98.17	102.21	104.71	2.50	105.80	3.59	101.50	103.29	0.008392	4.60	35.21	8.98	0.74
sturla	-9	T=200	234.00	98.17	103.25	104.71	1.46	105.80	2.55	102.40	104.66	0.009385	5.26	44.51	9.00	0.75
sturla	-9	T=500	281.00	98.17	103.86	104.71	0.85	105.80	1.94	102.93	105.47	0.009969	5.61	50.05	9.01	0.76

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla (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
sturla	-9.5		Bridge													
sturla	-10	T=50	162.00	98.17	102.13	104.71	2.58	105.80	3.67	101.50	103.25	0.008897	4.70	34.46	8.98	0.77
sturla	-10	T=200	234.00	98.17	103.15	104.71	1.56	105.80	2.65	102.40	104.61	0.009901	5.37	43.61	9.00	0.78
sturla	-10	T=500	281.00	98.17	103.75	104.71	0.96	105.80	2.05	102.93	105.42	0.010498	5.73	49.06	9.01	0.78
sturla	-11	T=50	162.00	98.17	102.08	104.71	2.63	105.80	3.72	101.50	103.24	0.009207	4.76	34.02	8.98	0.78
sturla	-11	T=200	234.00	98.17	103.09	104.71	1.62	105.80	2.71	102.40	104.59	0.010215	5.43	43.09	9.00	0.79
sturla	-11	T=500	281.00	98.17	103.69	104.71	1.02	105.80	2.11	102.93	105.40	0.010814	5.79	48.50	9.01	0.80
sturla	-11.5	T=50	162.00	98.17	101.50	100.20	-1.30	105.80	4.30	101.50	103.11	0.014468	5.62	28.85	8.97	1.00
sturla	-11.5	T=200	234.00	98.17	102.40	100.20	-2.20	105.80	3.40	102.40	104.45	0.015450	6.34	36.88	8.98	1.00
sturla	-11.5	T=500	281.00	98.17	102.93	100.20	-2.73	105.80	2.87	102.93	105.25	0.016069	6.74	41.70	8.99	1.00
sturla	-12	T=50	162.00	96.89	98.72	100.16	1.44	99.89	1.17	99.50	101.36	0.040876	7.19	22.54	16.30	1.95
sturla	-12	T=200	234.00	96.89	99.08	100.16	1.08	99.89	0.81	100.10	102.56	0.042171	8.27	28.28	16.30	2.01
sturla	-12	T=500	281.00	96.89	99.29	100.16	0.87	99.89	0.60	100.46	103.29	0.042796	8.86	31.71	16.30	2.03
sturla	-13	T=50	162.00	96.50	99.84	99.71	-0.13	99.45	-0.39	99.04	100.41	0.003987	3.35	48.36	16.30	0.62
sturla	-13	T=200	234.00	96.50	101.08	99.71	-1.37	99.45	-1.63	99.64	101.68	0.003015	3.41	68.59	16.30	0.53
sturla	-13	T=500	281.00	96.50	101.82	99.71	-2.11	99.45	-2.37	99.99	102.44	0.002760	3.49	80.55	16.30	0.50
sturla	-15	T=50	162.00	95.12	100.10	102.02	1.92	102.31	2.21	97.18	100.28	0.000805	1.86	87.22	17.50	0.27
sturla	-15	T=200	234.00	95.12	101.32	102.02	0.70	102.31	0.99	97.75	101.55	0.000910	2.16	108.44	17.50	0.28
sturla	-15	T=500	281.00	95.12	102.04	102.02	-0.02	102.31	0.27	98.09	102.32	0.000966	2.32	121.16	17.50	0.28
sturla	-16	T=50	162.00	95.12	100.10	102.90	2.80	102.90	2.80	97.18	100.27	0.000807	1.86	87.13	17.50	0.27
sturla	-16	T=200	234.00	95.12	101.31	102.90	1.59	102.90	1.59	97.75	101.55	0.000912	2.16	108.34	17.50	0.28
sturla	-16	T=500	281.00	95.12	102.04	102.90	0.86	102.90	0.86	98.09	102.31	0.001025	2.32	121.07	18.90	0.29
sturla	-16.5		Bridge													
sturla	-17	T=50	162.00	95.12	100.09	102.90	2.81	102.90	2.81	97.18	100.27	0.000810	1.86	87.04	17.50	0.27
sturla	-17	T=200	234.00	95.12	101.30	102.90	1.60	102.90	1.60	97.75	101.54	0.000915	2.16	108.24	17.50	0.28
sturla	-17	T=500	281.00	95.12	102.03	102.90	0.87	102.90	0.87	98.09	102.30	0.001028	2.33	120.86	18.84	0.29
sturla	-18	T=50	162.00	95.12	100.09	102.02	1.93	97.12	-2.97	97.18	100.27	0.000811	1.86	86.98	17.50	0.27
sturla	-18	T=200	234.00	95.12	101.30	102.02	0.72	97.12	-4.18	97.75	101.54	0.000916	2.16	108.17	17.50	0.28
sturla	-18	T=500	281.00	95.12	102.02	102.02	0.00	97.12	-4.90	98.09	102.30	0.000974	2.33	120.77	17.50	0.28
sturla	-18.5	T=50	162.00	95.12	100.09	102.02	1.93	97.12	-2.97	97.18	100.27	0.000812	1.86	86.97	17.50	0.27
sturla	-18.5	T=200	234.00	95.12	101.30	102.02	0.72	97.12	-4.18	97.75	101.54	0.000916	2.16	108.16	17.50	0.28
sturla	-18.5	T=500	281.00	95.12	102.02	102.02	0.00	97.12	-4.90	98.09	102.30	0.000974	2.33	120.76	17.50	0.28
sturla	-19	T=50	162.00	94.50	98.54	98.00	-0.54	97.40	-1.14	98.54	100.00	0.012087	5.36	30.22	10.30	1.00
sturla	-19	T=200	234.00	94.50	99.35	98.00	-1.35	97.40	-1.95	99.35	101.22	0.012861	6.07	38.55	10.30	1.00
sturla	-19	T=500	281.00	94.50	99.84	98.00	-1.84	97.40	-2.44	99.84	101.95	0.013264	6.44	43.64	10.30	1.00
sturla	-19.5	T=50	162.00	92.50	95.25	96.00	0.75	95.40	0.15	96.54	99.70	0.056096	9.34	17.34	9.24	2.18
sturla	-19.5	T=200	234.00	92.50	95.89	96.00	0.11	95.40	-0.49	97.35	100.90	0.050522	9.92	23.60	10.14	2.07

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla (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
sturla	-19.5	T=500	281.00	92.50	96.26	96.00	-0.26	95.40	-0.86	97.84	101.62	0.047934	10.25	27.40	10.30	2.01
sturla	-20	T=50	162.00	87.67	91.50	89.20	-2.30	92.67	1.17	90.03	91.95	0.002809	2.96	54.82	14.30	0.48
sturla	-20	T=200	234.00	87.67	92.63	89.20	-3.43	92.67	0.04	90.68	93.19	0.002824	3.30	70.97	14.30	0.47
sturla	-20	T=500	281.00	87.67	93.38	89.20	-4.18	92.67	-0.71	91.07	93.98	0.002762	3.44	81.68	14.30	0.46
sturla	-21	T=50	162.00	87.67	91.48	92.67	1.19	92.67	1.19	90.03	91.93	0.002854	2.97	54.52	14.30	0.49
sturla	-21	T=200	234.00	87.67	92.61	92.67	0.06	92.67	0.06	90.68	93.17	0.002856	3.31	70.68	14.30	0.48
sturla	-21	T=500	281.00	87.67	93.36	92.67	-0.69	92.67	-0.69	91.07	93.97	0.002787	3.45	81.41	14.30	0.46
sturla	-21.5	Bridge														
sturla	-22	T=50	162.00	87.67	90.58	92.67	2.09	92.67	2.09	90.03	91.35	0.006270	3.89	41.60	14.30	0.73
sturla	-22	T=200	234.00	87.67	89.97	92.67	2.70	92.67	2.70	90.68	92.55	0.026395	7.12	32.87	14.30	1.50
sturla	-22	T=500	281.00	87.67	90.23	92.67	2.44	92.67	2.44	91.07	93.24	0.027652	7.69	36.56	14.30	1.53
sturla	-23	T=50	162.00	87.67	90.03	90.16	0.13	91.67	1.64	90.03	91.20	0.011722	4.81	33.71	14.30	1.00
sturla	-23	T=200	234.00	87.67	90.68	90.16	-0.52	91.67	0.99	90.68	92.19	0.011836	5.44	43.04	14.30	1.00
sturla	-23	T=500	281.00	87.67	91.07	90.16	-0.91	91.67	0.60	91.07	92.77	0.011912	5.77	48.68	14.30	1.00
sturla	-23.5	T=50	162.00	87.29	88.62	89.29	0.67	89.78	1.16	89.06	90.19	0.026578	5.55	29.22	21.90	1.53
sturla	-23.5	T=200	234.00	87.29	88.92	89.29	0.37	89.78	0.86	89.56	91.10	0.029149	6.54	35.78	21.90	1.63
sturla	-23.5	T=500	281.00	87.29	89.10	89.29	0.19	89.78	0.68	89.85	91.65	0.030211	7.07	39.73	21.90	1.68
sturla	-24	T=50	162.00	87.29	89.07	89.30	0.23	92.18	3.11	89.07	89.95	0.010725	4.16	38.90	21.90	1.00
sturla	-24	T=200	234.00	87.29	89.56	89.30	-0.26	92.18	2.62	89.56	90.69	0.010465	4.72	49.61	21.90	1.00
sturla	-24	T=500	281.00	87.29	89.68	89.30	-0.38	92.18	2.50	89.99	91.15	0.012759	5.37	52.37	21.90	1.11
sturla	-25	T=50	162.00	86.87	88.15	88.36	0.21	90.76	2.61	88.70	89.86	0.030675	5.80	27.93	21.90	1.64
sturla	-25	T=200	234.00	86.87	88.51	88.36	-0.15	90.76	2.25	89.13	90.59	0.034521	6.39	36.61	27.08	1.75
sturla	-25	T=500	281.00	86.87	88.67	88.36	-0.31	90.76	2.09	89.39	91.05	0.034423	6.83	41.13	27.29	1.78
sturla	-25.5	T=50	162.00	83.31	86.40	84.84	-1.56	84.71	-1.69	85.67	87.09	0.005229	3.66	44.25	14.30	0.66
sturla	-25.5	T=200	234.00	83.31	87.47	84.84	-2.63	84.71	-2.76	86.32	88.26	0.004630	3.93	59.54	14.30	0.61
sturla	-25.5	T=500	281.00	83.31	87.94	84.84	-3.10	84.71	-3.23	86.71	88.86	0.004951	4.25	66.19	14.30	0.63
sturla	-27	T=50	162.00	83.31	86.29	84.84	-1.45	84.71	-1.58	85.67	87.03	0.005838	3.80	42.62	14.30	0.70
sturla	-27	T=200	234.00	83.31	87.39	84.84	-2.55	84.71	-2.68	86.32	88.21	0.004905	4.01	58.35	14.30	0.63
sturla	-27	T=500	281.00	83.31	87.85	84.84	-3.01	84.71	-3.14	86.71	88.80	0.005241	4.33	64.86	14.30	0.65
sturla	-28	T=50	162.00	83.31	86.27	85.80	-0.47	85.80	-0.47	85.67	87.01	0.005973	3.83	42.29	14.30	0.71
sturla	-28	T=200	234.00	83.31	87.37	85.80	-1.57	85.80	-1.57	86.32	88.20	0.004966	4.03	58.09	14.30	0.64
sturla	-28	T=500	281.00	83.31	87.83	85.80	-2.03	85.80	-2.03	86.71	88.79	0.005306	4.35	64.58	14.30	0.65
sturla	-28.5	Bridge														
sturla	-29	T=50	162.00	83.31	85.97	85.80	-0.17	85.80	-0.17	85.67	86.89	0.008199	4.26	37.99	14.30	0.83
sturla	-29	T=200	234.00	83.31	85.76	85.80	0.04	85.80	0.04	86.32	88.03	0.021843	6.68	35.00	14.30	1.36
sturla	-29	T=500	281.00	83.31	86.11	85.80	-0.31	85.80	-0.31	86.71	88.62	0.021103	7.02	40.05	14.30	1.34

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla (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
sturla	-30	T=50	162.00	83.31	85.89	84.84	-1.05	85.01	-0.88	85.66	86.87	0.008940	4.39	36.90	14.30	0.87
sturla	-30	T=200	234.00	83.31	85.99	84.84	-1.15	85.01	-0.98	86.31	87.89	0.016625	6.10	38.36	14.30	1.19
sturla	-30	T=500	281.00	83.31	86.31	84.84	-1.47	85.01	-1.30	86.71	88.50	0.017206	6.55	42.92	14.30	1.21
sturla	-31	T=50	162.00	83.32	85.60	84.85	-0.75	85.81	0.21	85.60	86.74	0.011568	4.73	34.23	15.00	1.00
sturla	-31	T=200	234.00	83.32	86.24	84.85	-1.39	85.81	-0.43	86.24	87.69	0.011567	5.35	43.77	15.00	1.00
sturla	-31	T=500	281.00	83.32	86.62	84.85	-1.77	85.81	-0.81	86.62	88.26	0.011659	5.68	49.44	15.00	1.00
sturla	-32	T=50	162.00	83.12	84.99	84.65	-0.34	85.61	0.62	85.40	86.69	0.021044	5.76	28.12	15.00	1.34
sturla	-32	T=200	234.00	83.12	85.58	84.65	-0.93	85.61	0.03	86.04	87.63	0.019225	6.34	36.92	15.00	1.29
sturla	-32	T=500	281.00	83.12	85.93	84.65	-1.28	85.61	-0.32	86.41	88.19	0.018670	6.67	42.14	15.00	1.27
sturla	-33	T=50	162.00	82.26	84.67	86.39	1.72	86.46	1.79	84.67	85.67	0.011368	4.42	36.65	18.40	1.00
sturla	-33	T=200	234.00	82.26	85.20	86.39	1.19	86.46	1.26	85.23	86.50	0.011436	5.04	46.45	18.40	1.01
sturla	-33	T=500	281.00	82.26	85.41	86.39	0.98	86.46	1.05	85.55	87.00	0.012981	5.59	50.25	18.40	1.08
sturla	-34	T=50	162.00	80.83	82.63	86.36	3.73	86.46	3.83	83.64	85.48	0.043617	7.48	21.66	13.55	1.89
sturla	-34	T=200	234.00	80.83	83.25	86.36	3.11	86.46	3.21	84.20	86.31	0.033324	7.76	30.17	13.82	1.68
sturla	-34	T=500	281.00	80.83	83.56	86.36	2.80	86.46	2.90	84.53	86.83	0.040512	8.01	35.08	18.40	1.85
sturla	-34.5	T=50	162.00	79.67	81.83	82.60	0.77	82.67	0.84	81.61	82.60	0.007812	3.89	41.66	19.50	0.85
sturla	-34.5	T=200	234.00	79.67	82.40	82.60	0.20	82.67	0.27	82.14	83.40	0.007874	4.43	52.80	19.50	0.86
sturla	-34.5	T=500	281.00	79.67	82.74	82.60	-0.14	82.67	-0.07	82.45	83.88	0.007931	4.73	59.44	19.50	0.86
sturla	-35	T=50	162.00	79.20	81.86	82.60	0.74	82.67	0.81	81.57	82.58	0.007284	3.77	43.02	19.50	0.81
sturla	-35	T=200	234.00	79.20	82.43	82.60	0.17	82.67	0.24	82.10	83.38	0.007474	4.32	54.21	19.50	0.83
sturla	-35	T=500	281.00	79.20	82.78	82.60	-0.18	82.67	-0.11	82.42	83.86	0.007586	4.62	60.87	19.50	0.83
sturla	-36	T=50	162.00	79.20	81.84	82.60	0.76	82.67	0.83	81.57	82.58	0.007489	3.80	42.63	19.50	0.82
sturla	-36	T=200	234.00	79.20	82.41	82.60	0.19	82.67	0.26	82.10	83.38	0.007664	4.35	53.76	19.50	0.84
sturla	-36	T=500	281.00	79.20	82.75	82.60	-0.15	82.67	-0.08	82.42	83.85	0.007762	4.65	60.41	19.50	0.84
sturla	-37	T=50	162.00	79.40	81.59	82.60	1.01	82.67	1.08	81.59	82.54	0.011102	4.33	37.39	19.50	1.00
sturla	-37	T=200	234.00	79.40	82.12	82.60	0.48	82.67	0.55	82.12	83.34	0.010835	4.90	47.80	19.50	1.00
sturla	-37	T=500	281.00	79.40	82.44	82.60	0.16	82.67	0.23	82.44	83.82	0.010785	5.21	53.96	19.50	1.00
sturla	-38	T=50	162.00	78.47	80.06	82.60	2.54	82.67	2.61	80.74	82.39	0.045414	6.76	23.95	19.50	1.95
sturla	-38	T=200	234.00	78.47	80.48	82.60	2.12	82.67	2.19	81.28	83.17	0.037302	7.28	32.15	19.50	1.81
sturla	-38	T=500	281.00	78.47	80.73	82.60	1.87	82.67	1.94	81.59	83.65	0.034228	7.56	37.15	19.50	1.75
sturla	-39	T=50	162.00	77.11	79.43	79.07	-0.36	80.01	0.58	79.43	80.51	0.010727	4.60	35.24	16.40	1.00
sturla	-39	T=200	234.00	77.11	80.03	79.07	-0.96	80.01	-0.02	80.03	81.41	0.010692	5.20	45.02	16.40	1.00
sturla	-39	T=500	281.00	77.11	80.39	79.07	-1.32	80.01	-0.38	80.39	81.94	0.010696	5.52	50.92	16.40	1.00
sturla	-39.1	T=50	162.00	68.90	70.40	71.58	1.18	71.73	1.33	71.02	72.51	0.044744	6.43	25.19	23.34	1.98
sturla	-39.1	T=200	234.00	68.90	73.43	71.58	-1.85	71.73	-1.70	71.50	73.60	0.000785	1.96	139.09	53.17	0.31
sturla	-39.1	T=500	281.00	68.90	73.40	71.58	-1.82	71.73	-1.67	72.07	73.65	0.001172	2.38	137.40	53.16	0.38
sturla	-39.2	T=50	162.00	67.35	71.63	69.32	-2.31	69.11	-2.52	69.70	71.83	0.000964	2.01	81.39	22.00	0.33
sturla	-39.2	T=200	234.00	67.35	73.39	69.32	-4.07	69.11	-4.28	70.19	73.59	0.000603	1.97	120.19	22.00	0.27

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla (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
sturla	-39.2	T=500	281.00	67.35	73.34	69.32	-4.02	69.11	-4.23	70.48	73.63	0.000894	2.39	119.12	22.00	0.33
sturla	-39.3	T=50	162.00	67.15	71.39	71.40	0.01	71.05	-0.34	70.03	71.79	0.002345	2.78	58.27	17.87	0.49
sturla	-39.3	T=200	234.00	67.15	73.22	71.40	-1.82	71.05	-2.17	70.67	73.56	0.001358	2.57	90.93	17.88	0.36
sturla	-39.3	T=500	281.00	67.15	73.07	71.40	-1.67	71.05	-2.02	71.04	73.59	0.002134	3.19	88.20	17.88	0.46
sturla	-40	T=50	162.00	66.99	71.04	71.97	0.93	72.03	0.99	70.15	71.69	0.004707	3.56	45.50	13.82	0.63
sturla	-40	T=200	234.00	66.99	73.27	71.97	-1.30	72.03	-1.24	70.83	73.50	0.001141	2.33	118.66	36.83	0.32
sturla	-40	T=500	281.00	66.99	73.13	71.97	-1.16	72.03	-1.10	71.24	73.50	0.001860	2.93	113.52	36.83	0.40
sturla	-41	T=50	162.00	66.99	71.03	71.97	0.94	72.03	1.00	70.15	71.68	0.004780	3.58	45.26	13.82	0.63
sturla	-41	T=200	234.00	66.99	73.26	71.97	-1.29	72.03	-1.23	70.83	73.50	0.001144	2.34	118.55	36.83	0.32
sturla	-41	T=500	281.00	66.99	73.12	71.97	-1.15	72.03	-1.09	71.24	73.49	0.001870	2.93	113.30	36.83	0.41
sturla	-41.5	Bridge														
sturla	-42	T=50	162.00	66.99	70.70	71.97	1.27	72.03	1.33	70.15	71.50	0.006512	3.98	40.70	13.77	0.74
sturla	-42	T=200	234.00	66.99	72.03	71.97	-0.06	72.03	0.00	70.83	72.66	0.003876	3.63	73.27	36.71	0.56
sturla	-42	T=500	281.00	66.99	72.96	71.97	-0.99	72.03	-0.93	71.24	73.37	0.002174	3.10	107.24	36.83	0.44
sturla	-43	T=50	162.00	66.99	70.15	71.97	1.82	72.03	1.88	70.15	71.36	0.011920	4.88	33.18	13.68	1.00
sturla	-43	T=200	234.00	66.99	70.83	71.97	1.14	72.03	1.20	70.83	72.37	0.011930	5.50	42.56	13.79	1.00
sturla	-43	T=500	281.00	66.99	71.24	71.97	0.73	72.03	0.79	71.24	72.97	0.012013	5.83	48.16	13.85	1.00
sturla	-44	T=50	162.00	67.00	68.31	69.34	1.03	69.09	0.78	69.09	70.85	0.048580	7.06	22.95	19.29	2.07
sturla	-44	T=200	234.00	67.00	68.65	69.34	0.69	69.09	0.44	69.59	71.83	0.045212	7.90	29.62	19.37	2.04
sturla	-44	T=500	281.00	67.00	68.86	69.34	0.48	69.09	0.23	69.88	72.40	0.049139	8.34	33.67	21.52	2.13
sturla	-45	T=50	162.00	66.57	68.07	69.34	1.27	68.78	0.71	68.88	70.81	0.052646	7.33	22.09	19.24	2.18
sturla	-45	T=200	234.00	66.57	68.41	69.34	0.93	68.78	0.37	69.43	71.80	0.047919	8.15	28.71	19.32	2.13
sturla	-45	T=500	281.00	66.57	68.62	69.34	0.72	68.78	0.16	69.74	72.37	0.045650	8.57	32.77	19.37	2.10
sturla	-45.1	T=50	162.00	65.35	67.77	70.08	2.31	67.28	-0.49	68.04	68.98	0.014938	4.89	33.77	22.57	1.19
sturla	-45.1	T=200	234.00	65.35	68.07	70.08	2.01	67.28	-0.79	68.55	69.82	0.017862	5.91	40.85	23.73	1.33
sturla	-45.1	T=500	281.00	65.35	68.24	70.08	1.84	67.28	-0.96	68.84	70.33	0.019481	6.48	44.93	24.07	1.40
sturla	-45.5	T=50	162.00	64.04	65.46	75.00	9.54	66.50	1.04	65.58	66.32	0.013482	4.10	39.50	29.45	1.13
sturla	-45.5	T=200	234.00	64.04	65.84	75.00	9.16	66.50	0.66	65.98	66.93	0.012732	4.63	50.58	29.49	1.13
sturla	-45.5	T=500	281.00	64.04	66.06	75.00	8.94	66.50	0.44	66.22	67.30	0.012565	4.93	56.98	29.52	1.13
sturla	-45.7	T=50	162.00	58.50	65.10	75.00	9.90	66.50	1.40	65.39	66.23	0.031094	4.70	34.45	29.41	1.39
sturla	-45.7	T=200	234.00	58.50	65.46	75.00	9.54	66.50	1.04	65.79	66.84	0.027105	5.19	45.07	29.45	1.34
sturla	-45.7	T=500	281.00	58.50	65.68	75.00	9.32	66.50	0.82	66.03	67.20	0.025589	5.47	51.39	29.47	1.32
sturla	-46	T=50	162.00	58.50	62.99	75.00	12.01	66.50	3.51	60.15	63.10	0.000485	1.47	109.89	24.50	0.22
sturla	-46	T=200	234.00	58.50	64.80	75.00	10.20	66.50	1.70	60.60	64.91	0.000382	1.48	158.18	28.90	0.20
sturla	-46	T=500	281.00	58.50	65.41	75.00	9.59	66.50	1.09	60.88	65.54	0.000404	1.59	176.21	29.45	0.21
sturla	-47	T=50	162.00	58.50	62.98	75.00	12.02	66.50	3.52	60.15	63.09	0.000486	1.47	109.84	24.50	0.22
sturla	-47	T=200	234.00	58.50	64.79	75.00	10.21	66.50	1.71	60.60	64.91	0.000382	1.48	158.14	28.89	0.20

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla (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
sturla	-47	T=500	281.00	58.50	65.41	75.00	9.59	66.50	1.09	60.88	65.54	0.000405	1.60	176.16	29.44	0.21
sturla	-47.5	T=50	162.00	58.50	62.98	75.00	12.02	66.50	3.52	60.15	63.09	0.000486	1.48	109.83	24.50	0.22
sturla	-47.5	T=200	234.00	58.50	64.79	75.00	10.21	66.50	1.71	60.60	64.90	0.000382	1.48	158.12	28.89	0.20
sturla	-47.5	T=500	281.00	58.50	65.41	75.00	9.59	66.50	1.09	60.88	65.54	0.000405	1.60	176.15	29.44	0.21
sturla	-47.6	T=50	162.00	58.50	62.92	75.00	12.08	60.50	-2.42	60.15	63.03	0.000508	1.50	108.17	24.50	0.23
sturla	-47.6	T=200	234.00	58.50	64.74	75.00	10.26	60.50	-4.24	60.60	64.85	0.000392	1.49	156.63	28.77	0.20
sturla	-47.6	T=500	281.00	58.50	65.35	75.00	9.65	60.50	-4.85	60.88	65.48	0.000416	1.61	174.52	29.44	0.21
sturla	-48	T=50	162.00	57.93	62.37	61.51	-0.86	61.52	-0.85	60.82	62.86	0.003048	3.11	52.10	12.70	0.49
sturla	-48	T=200	234.00	57.93	64.23	61.51	-2.72	61.52	-2.71	61.53	64.72	0.002279	3.09	75.77	12.70	0.40
sturla	-48	T=500	281.00	57.93	64.73	61.51	-3.22	61.52	-3.21	61.95	65.33	0.002651	3.42	82.13	12.70	0.43
sturla	-49	T=50	162.00	58.63	62.13	62.32	0.19	62.32	0.19	61.31	62.79	0.005040	3.61	44.89	14.40	0.65
sturla	-49	T=200	234.00	58.63	64.20	62.32	-1.88	62.32	-1.88	62.01	64.70	0.002447	3.13	74.80	14.40	0.44
sturla	-49	T=500	281.00	58.63	64.72	62.32	-2.40	62.32	-2.40	62.39	65.32	0.002716	3.42	82.25	14.40	0.46
sturla	-49.5	Bridge														
sturla	-50	T=50	162.00	58.63	61.10	62.32	1.22	62.32	1.22	61.31	62.55	0.015180	5.32	30.46	13.70	1.14
sturla	-50	T=200	234.00	58.63	61.18	62.32	1.14	62.32	1.14	62.01	63.99	0.028574	7.42	31.52	13.70	1.56
sturla	-50	T=500	281.00	58.63	61.54	62.32	0.78	62.32	0.78	62.39	64.57	0.028041	7.71	36.47	14.40	1.55
sturla	-51	T=50	162.00	57.93	60.30	61.51	1.21	61.52	1.22	60.81	62.29	0.023214	6.25	25.93	12.70	1.40
sturla	-51	T=200	234.00	57.93	60.61	61.51	0.90	61.52	0.91	61.52	63.74	0.031762	7.84	29.86	12.70	1.63
sturla	-51	T=500	281.00	57.93	61.00	61.51	0.51	61.52	0.52	61.94	64.33	0.029349	8.09	34.73	12.70	1.56
sturla	-52	T=50	162.00	57.04	59.85	60.04	0.19	58.04	-1.81	59.85	61.25	0.013134	5.25	30.87	11.00	1.00
sturla	-52	T=200	234.00	57.04	60.62	60.04	-0.58	58.04	-2.58	60.62	62.42	0.013663	5.94	39.42	11.00	1.00
sturla	-52	T=500	281.00	57.04	61.09	60.04	-1.05	58.04	-3.05	61.09	63.12	0.013981	6.30	44.58	11.00	1.00
sturla	-53	T=50	162.00	56.20	58.13	60.76	2.63	58.04	-0.09	59.01	61.09	0.039210	7.62	21.27	11.00	1.75
sturla	-53	T=200	234.00	56.20	58.78	60.76	1.98	58.04	-0.74	59.79	62.24	0.034940	8.25	28.38	11.00	1.64
sturla	-53	T=500	281.00	56.20	59.17	60.76	1.59	58.04	-1.13	60.25	62.94	0.033510	8.60	32.69	11.00	1.59
sturla	-54	T=50	162.00	55.37	59.39	61.43	2.04	61.43	2.04	57.61	59.73	0.001980	2.58	62.85	15.80	0.41
sturla	-54	T=200	234.00	55.37	61.19	61.43	0.24	61.43	0.24	58.23	61.52	0.001435	2.56	91.33	15.80	0.34
sturla	-54	T=500	281.00	55.37	61.70	61.43	-0.27	61.43	-0.27	58.59	62.11	0.001640	2.83	99.36	15.80	0.36
sturla	-55	T=50	162.00	55.97	59.08	58.39	-0.69	58.39	-0.69	58.23	59.65	0.004274	3.35	48.33	15.80	0.61
sturla	-55	T=200	234.00	55.97	61.05	58.39	-2.66	58.39	-2.66	58.84	61.49	0.002120	2.95	79.43	15.80	0.42
sturla	-55	T=500	281.00	55.97	61.54	58.39	-3.15	58.39	-3.15	59.20	62.07	0.002357	3.22	87.17	15.80	0.44
sturla	-55.5	Bridge														
sturla	-56	T=50	162.00	55.97	57.96	58.39	0.43	58.39	0.43	58.23	59.38	0.016867	5.28	30.67	15.80	1.21
sturla	-56	T=200	234.00	55.97	58.04	58.39	0.35	58.39	0.35	58.84	60.78	0.031116	7.33	31.92	15.80	1.65
sturla	-56	T=500	281.00	55.97	58.35	58.39	0.04	58.39	0.04	59.20	61.32	0.029001	7.63	36.84	15.80	1.59

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla (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
sturla	-57	T=50	162.00	55.37	58.50	61.43	2.93	61.43	2.93	57.61	59.06	0.004162	3.32	48.75	15.80	0.60
sturla	-57	T=200	234.00	55.37	57.25	61.43	4.18	61.43	4.18	58.23	60.54	0.041172	8.03	29.13	15.80	1.89
sturla	-57	T=500	281.00	55.37	57.55	61.43	3.88	61.43	3.88	58.59	61.08	0.037824	8.33	33.75	15.80	1.82
sturla	-57.5	T=50	162.00	55.37	57.90	58.20	0.30	58.20	0.30	57.90	59.00	0.010175	4.66	34.79	15.80	1.00
sturla	-57.5	T=200	234.00	55.37	57.84	58.20	0.36	58.20	0.36	58.51	60.27	0.023040	6.91	33.86	15.80	1.51
sturla	-57.5	T=500	281.00	55.37	58.18	58.20	0.02	58.20	0.02	58.87	60.79	0.021271	7.15	39.28	15.80	1.45
sturla	-57.6	T=50	162.00	54.64	56.68	57.47	0.79	57.47	0.79	57.17	58.50	0.021721	5.97	27.12	15.80	1.46
sturla	-57.6	T=200	234.00	54.64	57.09	57.47	0.38	57.47	0.38	57.78	59.57	0.023672	6.97	33.56	15.80	1.53
sturla	-57.6	T=500	281.00	54.64	57.40	57.47	0.07	57.47	0.07	58.15	60.12	0.022621	7.30	38.48	15.80	1.49
sturla	-57.7	T=50	162.00	54.64	56.24	57.47	1.23	57.47	1.23	56.88	58.44	0.033241	6.58	24.62	15.80	1.68
sturla	-57.7	T=200	234.00	54.64	56.66	57.47	0.81	57.47	0.81	57.50	59.51	0.033099	7.48	31.28	15.80	1.70
sturla	-57.7	T=500	281.00	54.64	56.96	57.47	0.51	57.47	0.51	57.86	60.06	0.031052	7.80	36.01	15.80	1.65
sturla	-58	T=50	162.00	52.20	55.49	59.47	3.98	54.44	-1.05	55.49	56.93	0.012250	5.31	30.50	10.58	1.00
sturla	-58	T=200	234.00	52.20	56.32	59.47	3.15	54.44	-1.88	56.32	58.12	0.012518	5.93	39.46	11.00	1.00
sturla	-58	T=500	281.00	52.20	56.82	59.47	2.65	54.44	-2.38	56.82	58.81	0.012680	6.25	44.93	11.25	1.00
sturla	-59	T=50	162.00	52.00	53.27	57.01	3.74	53.50	0.23	54.06	55.98	0.051094	7.29	22.21	17.70	2.08
sturla	-59	T=200	234.00	52.00	53.61	57.01	3.40	53.50	-0.11	54.63	57.11	0.050189	8.29	28.21	17.70	2.10
sturla	-59	T=500	281.00	52.00	53.81	57.01	3.20	53.50	-0.31	54.97	57.78	0.049520	8.82	31.86	17.70	2.10
sturla	-60	T=50	162.00	52.00	53.32	56.01	2.69	56.01	2.69	54.06	55.82	0.045023	7.01	23.11	17.70	1.96
sturla	-60	T=200	234.00	52.00	53.66	56.01	2.35	56.01	2.35	54.63	56.96	0.045669	8.05	29.07	17.70	2.00
sturla	-60	T=500	281.00	52.00	53.86	56.01	2.15	56.01	2.15	54.96	57.62	0.045629	8.59	32.71	17.70	2.02
sturla	-60.5	Bridge														
sturla	-61	T=50	162.00	52.00	53.44	57.01	3.57	56.95	3.51	54.06	55.55	0.034472	6.44	25.16	17.70	1.72
sturla	-61	T=200	234.00	52.00	53.76	57.01	3.25	56.95	3.19	54.63	56.68	0.037666	7.57	30.93	17.70	1.83
sturla	-61	T=500	281.00	52.00	53.96	57.01	3.05	56.95	2.99	54.97	57.34	0.038630	8.14	34.52	17.70	1.86
sturla	-62	T=50	162.00	52.00	53.47	54.00	0.53	54.50	1.03	54.06	55.49	0.032100	6.30	25.73	17.70	1.67
sturla	-62	T=200	234.00	52.00	53.79	54.00	0.21	54.50	0.71	54.63	56.61	0.035815	7.44	31.43	17.70	1.78
sturla	-62	T=500	281.00	52.00	53.99	54.00	0.01	54.50	0.51	54.97	57.28	0.036999	8.03	35.00	17.70	1.82
sturla	-63	T=50	162.00	50.12	51.17	53.47	2.30	53.47	2.30	52.18	55.18	0.095615	8.88	18.24	17.70	2.79
sturla	-63	T=200	234.00	50.12	51.49	53.47	1.98	53.47	1.98	52.75	56.31	0.082648	9.72	24.07	17.70	2.66
sturla	-63	T=500	281.00	50.12	51.69	53.47	1.78	53.47	1.78	53.09	56.97	0.077445	10.18	27.61	17.70	2.60
sturla	-63.5	T=50	162.00	50.12	51.47	53.14	1.67	53.70	2.23	52.40	54.93	0.077673	8.24	19.65	17.70	2.50
sturla	-63.5	T=200	234.00	50.12	51.80	53.14	1.34	53.70	1.90	52.97	56.07	0.070400	9.15	25.56	17.70	2.43
sturla	-63.5	T=500	281.00	50.12	52.01	53.14	1.13	53.70	1.69	53.31	56.74	0.067175	9.64	29.16	17.70	2.40
sturla	-63.6	T=50	162.00	48.81	52.77	51.94	-0.83	52.48	-0.29	51.12	53.08	0.001906	2.48	65.38	17.70	0.41
sturla	-63.6	T=200	234.00	48.81	53.96	51.94	-2.02	52.48	-1.48	51.69	54.33	0.001762	2.71	86.50	17.70	0.39
sturla	-63.6	T=500	281.00	48.81	54.94	51.94	-3.00	52.48	-2.46	52.03	55.32	0.001511	2.70	103.90	17.70	0.36

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla (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
sturla	-63.7	T=50	162.00	48.81	51.68	51.30	-0.38	51.30	-0.38	51.68	52.97	0.011584	5.03	32.18	12.50	1.00
sturla	-63.7	T=200	234.00	48.81	53.18	51.30	-1.88	51.30	-1.88	52.40	54.25	0.006519	4.60	50.91	12.50	0.73
sturla	-63.7	T=500	281.00	48.81	54.29	51.30	-2.99	51.30	-2.99	52.83	55.25	0.004836	4.33	64.87	12.50	0.61
sturla	-64	T=50	162.00	48.38	51.10	50.87	-0.23	50.87	-0.23	51.25	52.56	0.013863	5.35	30.26	12.50	1.10
sturla	-64	T=200	234.00	48.38	53.11	50.87	-2.24	50.87	-2.24	51.97	54.02	0.005132	4.22	55.50	12.50	0.64
sturla	-64	T=500	281.00	48.38	54.24	50.87	-3.37	50.87	-3.37	52.40	55.07	0.003999	4.04	69.61	12.50	0.55
sturla	-65	T=50	163.60	46.60	51.64	50.87	-0.77	50.87	-0.77	49.91	52.12	0.002898	3.09	52.92	12.50	0.48
sturla	-65	T=200	236.30	46.60	53.39	50.87	-2.52	50.87	-2.52	50.71	53.90	0.002353	3.16	74.87	12.50	0.41
sturla	-65	T=500	283.80	46.60	54.45	50.87	-3.58	50.87	-3.58	51.14	54.98	0.002209	3.22	88.13	12.50	0.39
sturla	-65.5	T=50	163.60	46.27	51.45	48.76	-2.69	48.76	-2.69	49.64	52.01	0.003387	3.30	49.61	10.50	0.48
sturla	-65.5	T=200	236.30	46.27	53.17	48.76	-4.41	48.76	-4.41	50.45	53.80	0.003122	3.49	67.67	10.50	0.44
sturla	-65.5	T=500	283.80	46.27	54.21	48.76	-5.45	48.76	-5.45	50.94	54.88	0.003071	3.61	78.59	10.50	0.42
sturla	-65.7	T=50	163.60	46.27	51.41	48.76	-2.65	48.76	-2.65	49.64	51.97	0.003479	3.33	49.13	10.50	0.49
sturla	-65.7	T=200	236.30	46.27	53.13	48.76	-4.37	48.76	-4.37	50.45	53.76	0.003172	3.51	67.25	10.50	0.44
sturla	-65.7	T=500	283.80	46.27	54.18	48.76	-5.42	48.76	-5.42	50.94	54.85	0.003112	3.63	78.19	10.50	0.42
sturla	-66	T=50	163.60	46.27	51.56	48.76	-2.80	48.76	-2.80	49.16	51.91	0.001821	2.62	62.39	12.50	0.37
sturla	-66	T=200	236.30	46.27	53.29	48.76	-4.53	48.76	-4.53	49.88	53.69	0.001715	2.81	84.07	12.50	0.35
sturla	-66	T=500	283.80	46.27	54.34	48.76	-5.58	48.76	-5.58	50.31	54.77	0.001698	2.92	97.19	12.50	0.33
sturla	-67	T=50	163.60	46.27	51.55	50.30	-1.25	50.30	-1.25	49.16	51.90	0.001826	2.62	62.33	12.50	0.38
sturla	-67	T=200	236.30	46.27	53.29	50.30	-2.99	50.30	-2.99	49.87	53.69	0.001718	2.81	84.02	12.50	0.35
sturla	-67	T=500	283.80	46.27	54.34	50.30	-4.04	50.30	-4.04	50.31	54.77	0.001700	2.92	97.14	12.50	0.33
sturla	-67.5		Bridge													
sturla	-68	T=50	163.60	46.27	51.46	50.30	-1.16	50.30	-1.16	49.16	51.82	0.001925	2.68	61.14	12.50	0.39
sturla	-68	T=200	236.30	46.27	53.22	50.30	-2.92	50.30	-2.92	49.87	53.63	0.001763	2.84	83.19	12.50	0.35
sturla	-68	T=500	283.80	46.27	54.28	50.30	-3.98	50.30	-3.98	50.31	54.72	0.001733	2.94	96.42	12.50	0.34
sturla	-69	T=50	164.30	46.27	51.45	48.76	-2.69	48.76	-2.69	49.16	51.82	0.001951	2.69	61.03	12.50	0.39
sturla	-69	T=200	237.30	46.27	53.21	48.76	-4.45	48.76	-4.45	49.89	53.63	0.001784	2.86	83.08	12.50	0.35
sturla	-69	T=500	285.00	46.27	54.27	48.76	-5.51	48.76	-5.51	50.32	54.72	0.001753	2.96	96.31	12.50	0.34
sturla	-69.5	T=50	164.30	45.00	49.25	48.77	-0.48	48.77	-0.48	49.25	51.36	0.021357	6.45	25.47	6.00	1.00
sturla	-69.5	T=200	237.30	45.00	50.42	48.77	-1.65	48.77	-1.65	50.42	53.13	0.024082	7.29	32.54	6.00	1.00
sturla	-69.5	T=500	285.00	45.00	51.12	48.77	-2.35	48.77	-2.35	51.12	54.19	0.025759	7.76	36.75	6.00	1.00
sturla	-70	T=50	165.30	44.77	46.62	50.77	4.15	55.00	8.38	47.80	50.70	0.058663	8.96	18.46	10.00	2.10
sturla	-70	T=200	238.75	44.77	47.12	50.77	3.65	55.00	7.88	49.10	52.37	0.059999	10.15	23.52	10.00	2.11
sturla	-70	T=500	286.70	44.77	47.42	50.77	3.35	55.00	7.58	49.47	53.37	0.061053	10.80	26.53	10.00	2.12
sturla	-71	T=50	165.30	44.77	46.76	51.17	4.41	51.17	4.41	47.80	50.27	0.046704	8.29	19.93	10.00	1.88
sturla	-71	T=200	238.75	44.77	47.27	51.17	3.90	51.17	3.90	48.64	51.92	0.050290	9.55	25.00	10.00	1.93
sturla	-71	T=500	286.70	44.77	47.57	51.17	3.60	51.17	3.60	49.15	52.90	0.052221	10.23	28.02	10.00	1.95

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla (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
sturla	-71.5		Bridge													
sturla	-72	T=50	165.30	44.77	46.90	51.17	4.27	51.17	4.27	47.80	49.97	0.038478	7.77	21.29	10.00	1.70
sturla	-72	T=200	238.75	44.77	47.40	51.17	3.77	51.17	3.77	48.64	51.60	0.043409	9.08	26.30	10.00	1.79
sturla	-72	T=500	286.70	44.77	47.70	51.17	3.47	51.17	3.47	49.15	52.57	0.045881	9.78	29.33	10.00	1.82
sturla	-73	T=50	165.30	44.77	47.12	47.27	0.15	45.77	-1.35	47.80	49.64	0.028855	7.04	23.49	10.00	1.47
sturla	-73	T=200	238.75	44.77	47.59	47.27	-0.32	45.77	-1.82	48.64	51.24	0.035436	8.46	28.24	10.00	1.61
sturla	-73	T=500	286.70	44.77	47.89	47.27	-0.62	45.77	-2.12	49.15	52.19	0.038514	9.19	31.20	10.00	1.66
sturla	-74	T=50	165.30	44.68	45.37	46.36	0.99	47.69	2.32	45.97	47.53	0.080398	6.51	25.40	37.69	2.53
sturla	-74	T=200	238.75	44.68	45.50	46.36	0.86	47.69	2.19	46.31	48.66	0.095376	7.88	30.31	38.28	2.83
sturla	-74	T=500	286.70	44.68	45.57	46.36	0.79	47.69	2.12	46.51	49.38	0.105000	8.65	33.14	39.00	3.00
sturla	-75	T=50	166.00	43.15	45.68	48.91	3.23	46.16	0.48	44.44	45.80	0.000971	1.52	109.12	50.10	0.33
sturla	-75	T=200	239.90	43.15	46.50	48.91	2.41	46.16	-0.34	44.78	46.63	0.000728	1.60	150.20	50.10	0.29
sturla	-75	T=500	288.10	43.15	47.02	48.91	1.89	46.16	-0.86	44.98	47.15	0.000634	1.64	176.03	50.10	0.28
sturla	-75.5	T=50	166.00	43.15	45.68	48.91	3.23	46.66	0.98	44.44	45.80	0.000975	1.52	109.01	50.10	0.33
sturla	-75.5	T=200	239.90	43.15	46.50	48.91	2.41	46.66	0.16	44.78	46.63	0.000729	1.60	150.11	50.10	0.29
sturla	-75.5	T=500	288.10	43.15	47.02	48.91	1.89	46.66	-0.36	44.98	47.15	0.000635	1.64	175.96	50.10	0.28
sturla	-75.55	T=50	166.00	41.96	44.64	47.12	2.48	46.92	2.28	44.64	45.63	0.009809	4.39	37.77	19.12	1.00
sturla	-75.55	T=200	239.90	41.96	45.19	47.12	1.93	46.92	1.73	45.19	46.45	0.009702	4.97	48.22	19.16	1.00
sturla	-75.55	T=500	288.10	41.96	45.88	47.12	1.24	46.92	1.04	45.52	47.00	0.006746	4.69	61.48	19.21	0.84
sturla	-75.6	T=50	166.00	41.70	44.03	45.45	1.42	46.84	2.81	44.31	45.35	0.016200	5.09	32.60	19.79	1.27
sturla	-75.6	T=200	239.90	41.70	44.49	45.45	0.96	46.84	2.35	44.85	46.17	0.015562	5.73	41.86	19.83	1.26
sturla	-75.6	T=500	288.10	41.70	46.05	45.45	-0.60	46.84	0.79	45.16	46.78	0.003856	3.84	78.41	27.05	0.64
sturla	-75.7	T=50	166.00	41.45	43.47	44.28	0.81	46.99	3.52	43.84	44.89	0.021956	5.28	31.44	23.10	1.44
sturla	-75.7	T=200	239.90	41.45	43.81	44.28	0.47	46.99	3.18	44.37	45.70	0.022489	6.10	39.36	23.14	1.49
sturla	-75.7	T=500	288.10	41.45	46.20	44.28	-1.92	46.99	0.79	44.66	46.63	0.001868	2.94	101.09	26.26	0.47
sturla	-75.8	T=50	166.00	41.34	44.12	44.12	0.00	47.11	2.99	43.20	44.40	0.002187	2.35	70.96	32.35	0.49
sturla	-75.8	T=200	239.90	41.34	45.10	44.12	-0.98	47.11	2.01	43.62	45.39	0.001478	2.38	102.62	32.39	0.41
sturla	-75.8	T=500	288.10	41.34	46.33	44.12	-2.21	47.11	0.78	43.87	46.54	0.000778	2.08	142.34	32.43	0.31
sturla	-75.9	T=50	166.00	41.04	43.48	44.01	0.53	47.32	3.84	43.19	44.26	0.007099	3.91	42.44	18.20	0.82
sturla	-75.9	T=200	239.90	41.04	44.54	44.01	-0.53	47.32	2.78	43.76	45.28	0.004761	3.81	64.05	22.15	0.68
sturla	-75.9	T=500	288.10	41.04	46.02	44.01	-2.01	47.32	1.30	44.15	46.49	0.001990	3.06	96.88	22.39	0.46
sturla	-76	T=50	168.00	40.27	43.63	43.88	0.25	46.51	2.88	42.53	44.09	0.002953	2.98	56.35	17.59	0.53
sturla	-76	T=200	242.80	40.27	44.65	43.88	-0.77	46.51	1.86	43.11	45.15	0.002612	3.17	79.40	23.70	0.51
sturla	-76	T=500	291.70	40.27	46.07	43.88	-2.19	46.51	0.44	43.46	46.42	0.001363	2.71	113.07	23.70	0.37
sturla	-77.5		Bridge													
sturla	-78	T=50	168.00	40.27	42.36	43.88	1.52	46.51	4.15	42.53	43.60	0.013591	4.94	34.02	17.51	1.13
sturla	-78	T=200	242.80	40.27	42.90	43.88	0.98	46.51	3.61	43.11	44.49	0.013344	5.57	43.56	17.54	1.13

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla (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
sturla	-78	T=500	291.70	40.27	42.87	43.88	1.01	46.51	3.64	43.46	45.22	0.020013	6.78	43.01	17.54	1.38
sturla	-79	T=50	168.00	39.96	41.70	41.86	0.16	41.34	-0.36	42.04	43.15	0.019585	5.36	31.92	22.50	1.36
sturla	-79	T=200	242.80	39.96	41.92	41.86	-0.06	41.34	-0.58	42.49	43.90	0.023770	6.40	40.59	27.12	1.52
sturla	-79	T=500	291.70	39.96	41.99	41.86	-0.13	41.34	-0.65	42.76	44.59	0.029562	7.34	42.64	27.12	1.70
sturla	-79.1	T=50	168.00	39.60	41.16	42.41	1.25	41.21	0.05	41.61	42.71	0.023722	5.51	30.48	21.18	1.47
sturla	-79.1	T=200	242.80	39.60	41.64	42.41	0.77	41.21	-0.43	42.11	43.41	0.019249	5.92	41.74	23.90	1.37
sturla	-79.1	T=500	291.70	39.60	41.79	42.41	0.61	41.21	-0.59	42.43	43.96	0.021458	6.55	45.42	23.91	1.46
sturla	-80	T=50	168.00	39.31	41.51	42.74	1.23	41.10	-0.41	41.51	42.40	0.009790	4.19	40.73	23.42	0.97
sturla	-80	T=200	242.80	39.31	42.01	42.74	0.73	41.10	-0.91	42.01	43.14	0.009443	4.74	52.47	23.46	0.97
sturla	-80	T=500	291.70	39.31	42.31	42.74	0.43	41.10	-1.21	42.31	43.58	0.009314	5.04	59.40	23.48	0.98
sturla	-80.1	T=50	168.00	38.50	39.77	42.74	2.97	41.10	1.33	40.49	42.23	0.048983	6.96	24.15	20.65	2.05
sturla	-80.1	T=200	242.80	38.50	40.19	42.74	2.55	41.10	0.91	41.02	42.96	0.038244	7.38	32.92	20.67	1.87
sturla	-80.1	T=500	291.70	38.50	40.46	42.74	2.28	41.10	0.64	41.37	43.40	0.034127	7.60	38.37	20.69	1.78
sturla	-82	T=50	170.40	37.22	40.30	39.82	-0.48	39.82	-0.48	40.02	40.74	0.006375	2.95	57.68	36.60	0.75
sturla	-82	T=200	246.20	37.22	40.69	39.82	-0.87	39.82	-0.87	40.39	41.29	0.006521	3.42	71.97	36.60	0.78
sturla	-82	T=500	295.90	37.22	40.92	39.82	-1.10	39.82	-1.10	40.60	41.61	0.006589	3.68	80.45	36.60	0.79
sturla	-83	T=50	170.40	36.70	39.56	39.30	-0.26	39.30	-0.26	39.56	40.21	0.011835	3.57	47.71	36.60	1.00
sturla	-83	T=200	246.20	36.70	39.91	39.30	-0.61	39.30	-0.61	39.91	40.75	0.011237	4.05	60.84	36.60	1.00
sturla	-83	T=500	295.90	36.70	40.13	39.30	-0.83	39.30	-0.83	40.13	41.07	0.010940	4.30	68.76	36.60	1.00
sturla	-84	T=50	171.20	34.38	35.96	36.98	1.02	36.98	1.02	37.24	39.87	0.095337	8.76	19.54	18.40	2.71
sturla	-84	T=200	247.40	34.38	36.41	36.98	0.57	36.98	0.57	37.60	40.42	0.064338	8.88	27.87	18.40	2.30
sturla	-84	T=500	297.30	34.38	36.71	36.98	0.27	36.98	0.27	37.82	40.76	0.052930	8.92	33.34	18.40	2.11
sturla	-85	T=50	173.30	31.08	34.76	33.60	-1.16	34.08	-0.68	33.06	35.03	0.001557	2.31	75.15	20.70	0.39
sturla	-85	T=200	250.50	31.08	35.97	33.60	-2.37	34.08	-1.89	33.59	36.29	0.001391	2.50	100.23	20.70	0.36
sturla	-85	T=500	301.10	31.08	36.97	33.60	-3.37	34.08	-2.89	33.91	37.28	0.001173	2.49	120.84	20.70	0.33
sturla	-86	T=50	173.30	31.88	34.40	35.10	0.70	35.10	0.70	33.79	34.94	0.004519	3.26	53.22	21.30	0.66
sturla	-86	T=200	250.50	31.88	35.76	35.10	-0.66	35.10	-0.66	34.31	36.24	0.002520	3.04	82.29	21.30	0.49
sturla	-86	T=500	301.10	31.88	36.83	35.10	-1.73	35.10	-1.73	34.63	37.25	0.001779	2.87	104.94	21.30	0.41
sturla	-86.5		Bridge													
sturla	-87	T=50	173.30	31.88	34.24	35.10	0.86	35.10	0.86	33.79	34.85	0.005566	3.48	49.75	21.30	0.73
sturla	-87	T=200	250.50	31.88	35.11	35.10	-0.01	35.10	-0.01	34.31	35.79	0.004398	3.66	68.36	21.30	0.65
sturla	-87	T=500	301.10	31.88	35.64	35.10	-0.54	35.10	-0.54	34.63	36.37	0.004018	3.78	79.61	21.30	0.62
sturla	-88	T=50	173.30	31.08	34.36	34.08	-0.28	34.08	-0.28	33.06	34.70	0.002221	2.60	66.77	20.70	0.46
sturla	-88	T=200	250.50	31.08	35.21	34.08	-1.13	34.08	-1.13	33.59	35.66	0.002298	2.97	84.47	20.70	0.47
sturla	-88	T=500	301.10	31.08	35.73	34.08	-1.65	34.08	-1.65	33.91	36.24	0.002331	3.16	95.27	20.70	0.47
sturla	-89	T=50	174.20	30.89	33.50	34.40	0.90	35.10	1.60	33.32	34.45	0.009024	4.31	40.38	16.80	0.89
sturla	-89	T=200	251.70	30.89	34.24	34.40	0.16	35.10	0.86	33.93	35.40	0.008350	4.76	52.92	16.80	0.86

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla (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
sturla	-89	T=500	302.60	30.89	34.71	34.40	-0.31	35.10	0.39	34.30	35.98	0.007993	4.97	60.83	16.80	0.83
sturla	-90	T=50	174.20	29.27	31.66	32.27	0.61	32.27	0.61	31.66	32.86	0.011571	4.85	35.92	15.00	1.00
sturla	-90	T=200	251.70	29.27	32.33	32.27	-0.06	32.27	-0.06	32.33	33.86	0.011610	5.48	45.93	15.00	1.00
sturla	-90	T=500	302.60	29.27	32.73	32.27	-0.46	32.27	-0.46	32.73	34.46	0.011700	5.83	51.95	15.00	1.00
sturla	-91	T=50	176.20	28.15	29.68	32.15	2.47	32.15	2.47	30.56	32.68	0.046425	7.67	22.98	15.00	1.98
sturla	-91	T=200	254.70	28.15	30.21	32.15	1.94	32.15	1.94	31.23	33.66	0.038835	8.23	30.95	15.00	1.83
sturla	-91	T=500	306.30	28.15	30.54	32.15	1.61	32.15	1.61	31.64	34.26	0.035967	8.54	35.85	15.00	1.76
sturla	-92	T=50	176.20	26.74	30.49	31.24	0.75	31.24	0.75	28.96	30.88	0.002331	2.77	63.69	17.00	0.46
sturla	-92	T=200	254.70	26.74	31.57	31.24	-0.33	31.24	-0.33	29.58	32.06	0.002338	3.10	82.11	17.00	0.45
sturla	-92	T=500	306.30	26.74	32.15	31.24	-0.91	31.24	-0.91	29.95	32.71	0.002457	3.33	91.91	17.00	0.46
sturla	-93	T=50	176.20	26.74	30.47	31.24	0.77	31.24	0.77	28.96	30.86	0.002359	2.78	63.43	17.00	0.46
sturla	-93	T=200	254.70	26.74	31.55	31.24	-0.31	31.24	-0.31	29.58	32.05	0.002361	3.11	81.83	17.00	0.45
sturla	-93	T=500	306.30	26.74	32.13	31.24	-0.89	31.24	-0.89	29.95	32.70	0.002480	3.34	91.61	17.00	0.46
sturla	-93.5	Bridge														
sturla	-94	T=50	176.20	26.74	30.46	31.24	0.78	31.24	0.78	28.96	30.86	0.002376	2.78	63.27	17.00	0.46
sturla	-94	T=200	254.70	26.74	31.43	31.24	-0.19	31.24	-0.19	29.58	31.95	0.002548	3.20	79.68	17.00	0.47
sturla	-94	T=500	306.30	26.74	32.00	31.24	-0.76	31.24	-0.76	29.95	32.60	0.002653	3.42	89.44	17.00	0.48
sturla	-95	T=50	176.20	26.74	30.45	31.24	0.79	31.24	0.79	28.96	30.84	0.002408	2.80	62.99	17.00	0.46
sturla	-95	T=200	254.70	26.74	31.41	31.24	-0.17	31.24	-0.17	29.58	31.93	0.002576	3.21	79.37	17.00	0.47
sturla	-95	T=500	306.30	26.74	31.98	31.24	-0.74	31.24	-0.74	29.95	32.58	0.002681	3.44	89.11	17.00	0.48
sturla	-96	T=50	177.20	26.79	29.98	32.79	2.81	30.00	0.02	29.28	30.74	0.005636	3.86	45.91	14.40	0.69
sturla	-96	T=200	256.10	26.79	30.82	32.79	1.97	30.00	-0.82	29.97	31.81	0.005988	4.41	58.01	14.40	0.70
sturla	-96	T=500	307.90	26.79	31.31	32.79	1.48	30.00	-1.31	30.39	32.45	0.006228	4.73	65.15	14.40	0.71
sturla	-97	T=50	177.20	26.79	29.77	31.19	1.42	30.00	0.23	29.33	30.69	0.007343	4.25	41.74	14.00	0.78
sturla	-97	T=200	256.10	26.79	30.55	31.19	0.64	30.00	-0.55	30.03	31.76	0.007806	4.86	52.68	14.00	0.80
sturla	-97	T=500	307.90	26.79	31.01	31.19	0.18	30.00	-1.01	30.46	32.39	0.008156	5.22	59.03	14.00	0.81
sturla	-97.5	Bridge														
sturla	-98	T=50	177.20	26.79	29.33	31.19	1.86	30.00	0.67	29.33	30.60	0.011824	4.99	35.53	14.00	1.00
sturla	-98	T=200	256.10	26.79	30.03	31.19	1.16	30.00	-0.03	30.03	31.65	0.012042	5.65	45.34	14.00	1.00
sturla	-98	T=500	307.90	26.79	30.59	31.19	0.60	30.00	-0.59	30.46	32.30	0.010956	5.79	53.22	14.00	0.95
sturla	-99	T=50	177.20	26.79	29.20	31.19	1.99	30.00	0.80	29.28	30.53	0.012908	5.11	34.71	14.40	1.05
sturla	-99	T=200	256.10	26.79	29.81	31.19	1.38	30.00	0.19	29.97	31.58	0.013760	5.88	43.53	14.40	1.08
sturla	-99	T=500	307.90	26.79	30.62	31.19	0.57	30.00	-0.62	30.39	32.21	0.009988	5.58	55.18	14.40	0.91
sturla	-100	T=50	177.90	25.52	29.14	28.98	-0.16	27.87	-1.27	28.21	29.81	0.004511	3.63	48.98	14.20	0.62
sturla	-100	T=200	257.10	25.52	30.22	28.98	-1.24	27.87	-2.35	28.91	31.03	0.004326	3.99	64.40	14.20	0.60
sturla	-100	T=500	309.10	25.52	30.89	28.98	-1.91	27.87	-3.02	29.33	31.78	0.004275	4.19	73.84	14.20	0.59

HEC-RAS Plan: Sturla_monte River: Sturla Reach: sturla (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
sturla	-101	T=50	179.30	24.43	27.48	27.42	-0.06	27.98	0.50	27.48	28.93	0.013236	5.34	33.61	11.60	1.00
sturla	-101	T=200	259.20	24.43	28.29	27.42	-0.87	27.98	-0.31	28.29	30.14	0.013682	6.03	42.98	11.60	1.00
sturla	-101	T=500	311.80	24.43	28.77	27.42	-1.35	27.98	-0.79	28.77	30.87	0.014022	6.41	48.61	11.60	1.00
sturla	-102	T=50	179.30	24.12	25.34	28.42	3.08	28.42	3.08	26.14	28.11	0.052706	7.37	24.34	19.90	2.13
sturla	-102	T=200	259.20	24.12	25.67	28.42	2.75	28.42	2.75	26.71	29.26	0.051888	8.40	30.87	19.90	2.15
sturla	-102	T=500	311.80	24.12	25.87	28.42	2.55	28.42	2.55	27.04	29.96	0.051474	8.96	34.80	19.90	2.16
sturla	-103	T=50	179.30	24.12	25.39	28.42	3.03	28.42	3.03	26.14	27.95	0.046474	7.08	25.32	19.90	2.00
sturla	-103	T=200	259.20	24.12	25.72	28.42	2.70	28.42	2.70	26.71	29.10	0.047256	8.15	31.80	19.90	2.06
sturla	-103	T=500	311.80	24.12	25.91	28.42	2.51	28.42	2.51	27.04	29.80	0.047480	8.73	35.71	19.90	2.08
sturla	-103.5		Bridge													
sturla	-104	T=50	179.30	24.12	25.46	28.42	2.96	28.42	2.96	26.14	27.77	0.039534	6.73	26.65	19.90	1.86
sturla	-104	T=200	259.20	24.12	25.78	28.42	2.64	28.42	2.64	26.71	28.92	0.041964	7.85	33.02	19.90	1.95
sturla	-104	T=500	311.80	24.12	25.97	28.42	2.45	28.42	2.45	27.04	29.61	0.042866	8.45	36.90	19.90	1.98
sturla	-105	T=50	179.30	24.12	25.52	28.42	2.90	28.42	2.90	26.14	27.64	0.034603	6.45	27.79	19.90	1.74
sturla	-105	T=200	259.20	24.12	25.83	28.42	2.59	28.42	2.59	26.71	28.78	0.038107	7.61	34.05	19.90	1.86
sturla	-105	T=500	311.80	24.12	26.02	28.42	2.40	28.42	2.40	27.04	29.47	0.039465	8.23	37.89	19.90	1.90
sturla	-106	T=50	180.70	22.98	26.00	26.25	0.25	27.00	1.00	25.23	26.57	0.004034	3.34	54.11	19.36	0.64
sturla	-106	T=200	261.20	22.98	27.10	26.25	-0.85	27.00	-0.10	25.84	27.71	0.003106	3.45	75.77	19.60	0.56
sturla	-106	T=500	314.10	22.98	27.78	26.25	-1.53	27.00	-0.78	26.21	28.42	0.002805	3.53	89.06	19.60	0.53
sturla	-107	T=50	181.70	21.47	24.58	26.04	1.46	23.61	-0.97	24.58	26.00	0.012588	5.27	34.50	12.20	1.00
sturla	-107	T=200	262.60	21.47	25.37	26.04	0.67	23.61	-1.76	25.37	27.18	0.012988	5.96	44.09	12.20	1.00
sturla	-107	T=500	315.90	21.47	25.84	26.04	0.20	23.61	-2.23	25.84	27.89	0.013269	6.33	49.89	12.20	1.00
sturla	-107.4	T=50	181.70	19.92	22.87	24.12	1.25	22.92	0.05	21.39	23.05	0.001110	1.87	97.12	33.48	0.35
sturla	-107.4	T=200	262.60	19.92	23.46	24.12	0.66	22.92	-0.54	21.80	23.71	0.001304	2.25	116.81	33.50	0.38
sturla	-107.4	T=500	315.90	19.92	23.80	24.12	0.32	22.92	-0.88	22.04	24.11	0.001410	2.46	128.35	33.50	0.40
sturla	-107.5	T=50	181.70	19.92	22.87	24.12	1.25	22.92	0.05	21.39	23.05	0.001111	1.87	97.09	33.48	0.35
sturla	-107.5	T=200	262.60	19.92	23.46	24.12	0.66	22.92	-0.54	21.80	23.71	0.001305	2.25	116.78	33.50	0.38
sturla	-107.5	T=500	315.90	19.92	23.80	24.12	0.32	22.92	-0.88	22.04	24.11	0.001411	2.46	128.32	33.50	0.40
sturla	-108	T=50	181.70	18.73	22.09	24.95	2.86	25.03	2.94	22.09	22.86	0.010432	3.88	46.79	30.41	1.00
sturla	-108	T=200	262.60	18.73	22.54	24.95	2.41	25.03	2.49	22.52	23.50	0.009636	4.35	60.41	30.44	0.98
sturla	-108	T=500	315.90	18.73	22.88	24.95	2.07	25.03	2.15	22.78	23.90	0.008448	4.46	70.76	30.46	0.93

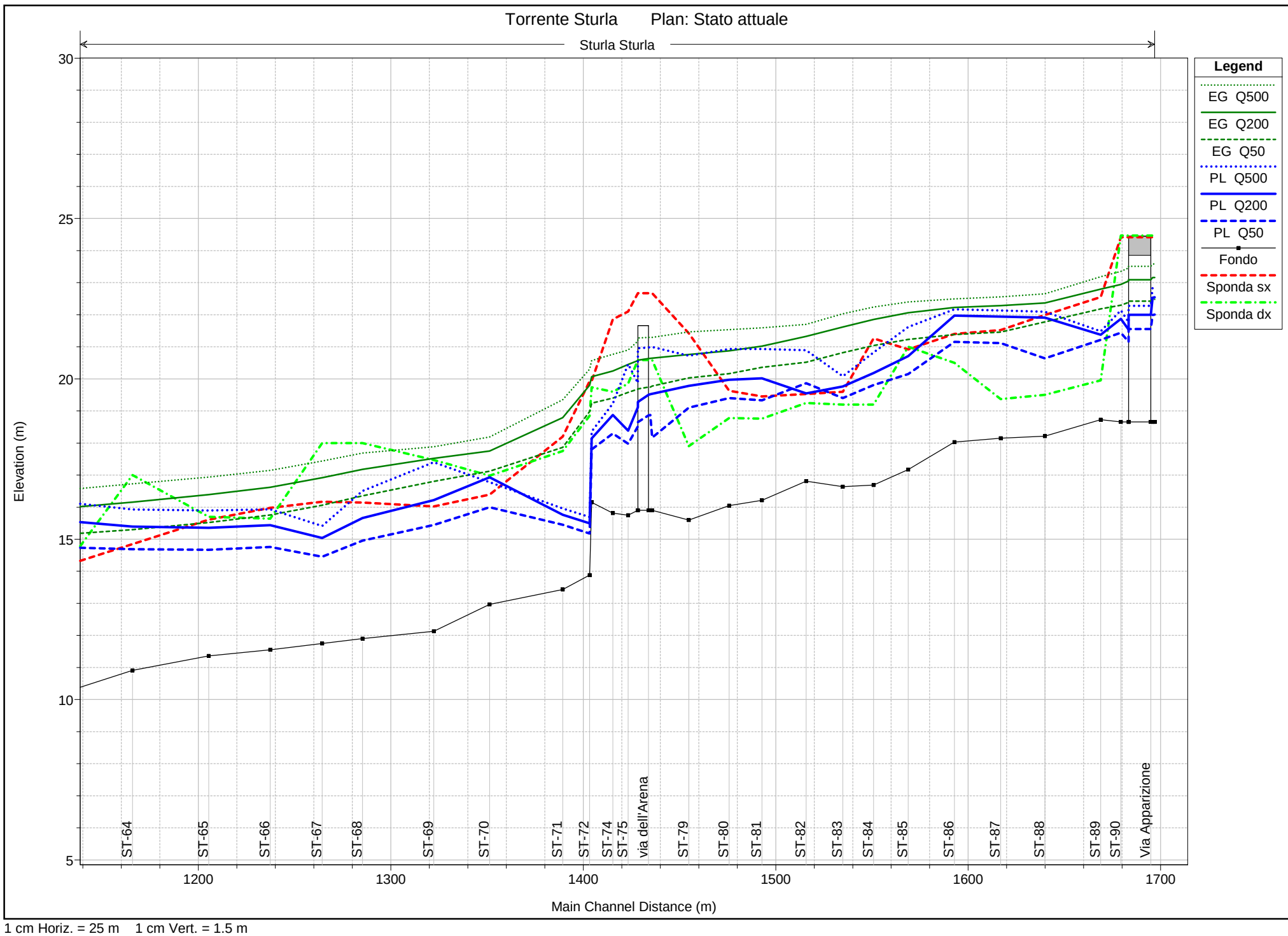
Torrente Sturla

Asta principale

Tratto a valle del ponte di via Apparizione

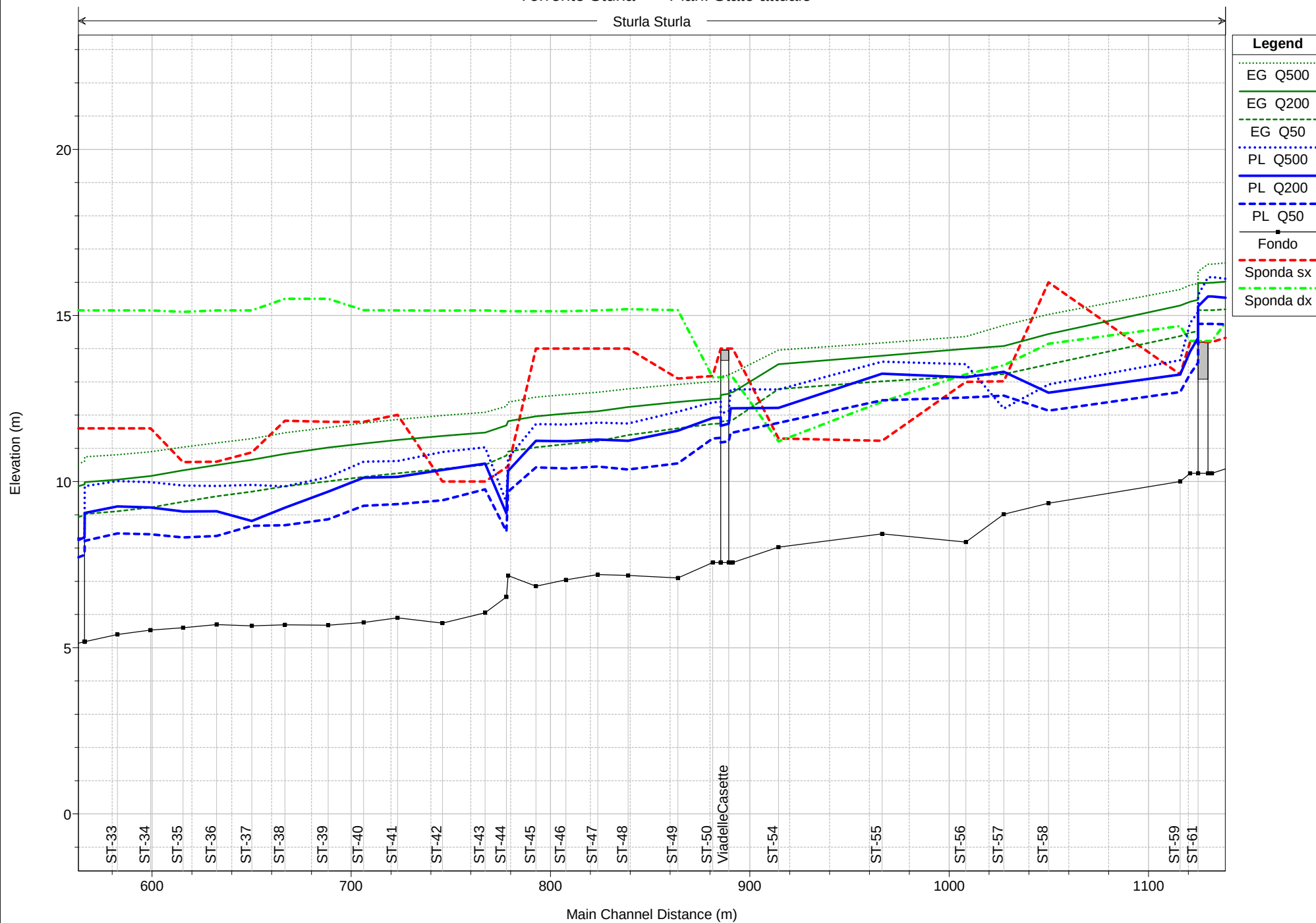
dalla sezione ST-93 alla ST-1

- Profili di corrente
- Sezioni idrauliche
- Tabelle dei risultati



Torrente Sturla Plan: Stato attuale

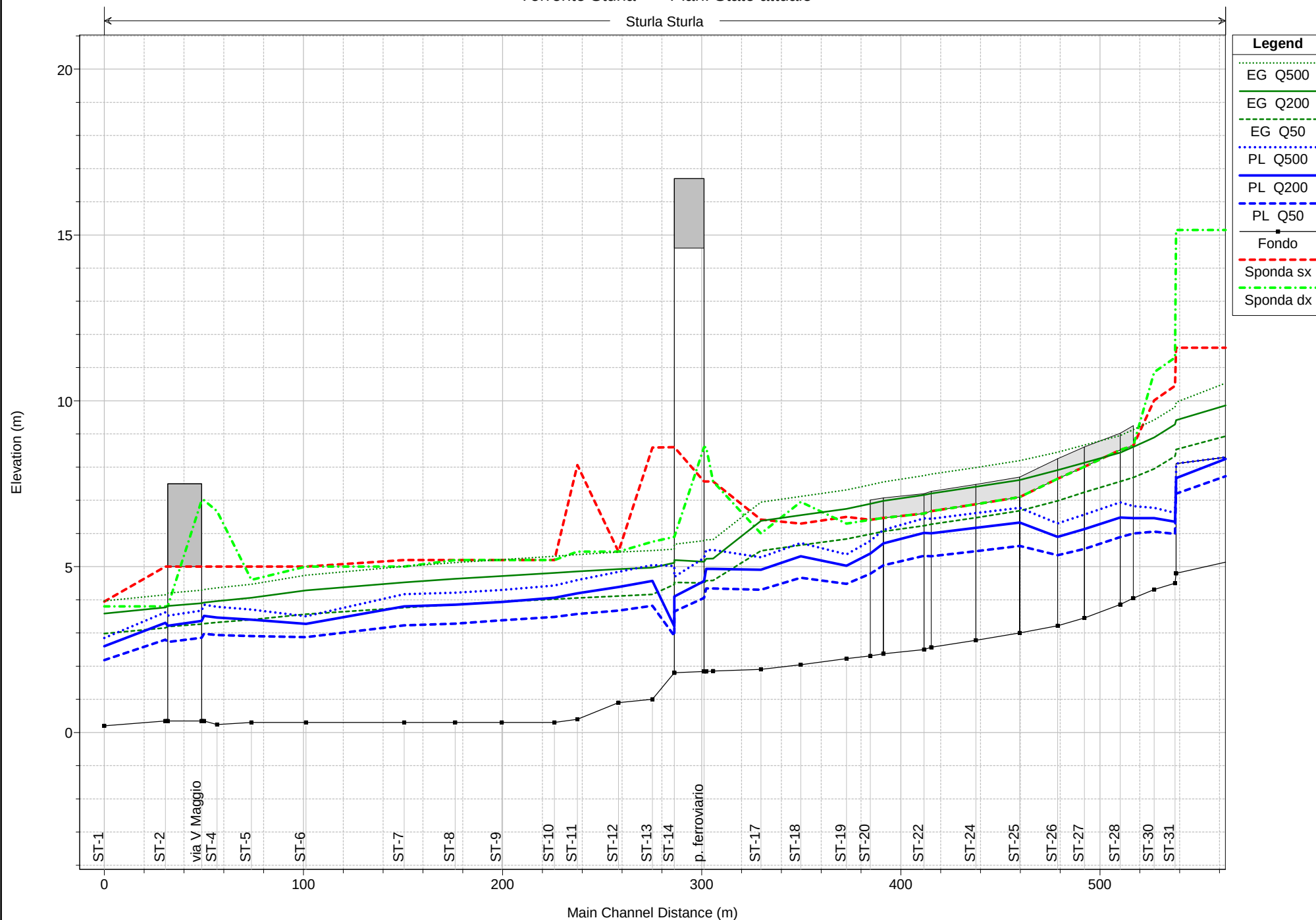
Sturla Sturla



1 cm Horiz. = 25 m 1 cm Vert. = 1.5 m

Torrente Sturla Plan: Stato attuale

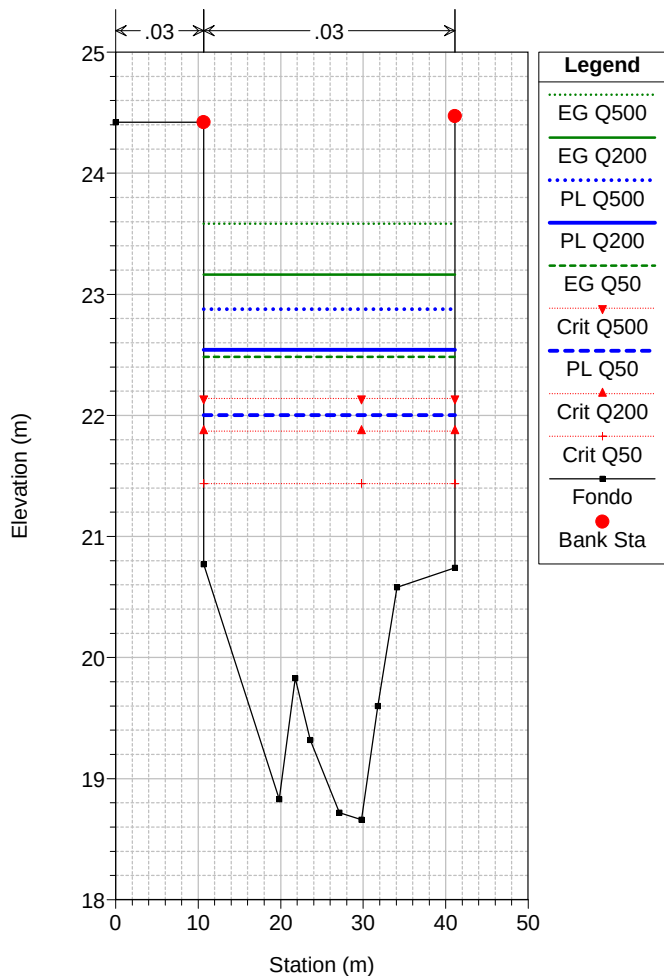
Sturla Sturla



1 cm Horiz. = 25 m 1 cm Vert. = 1.5 m

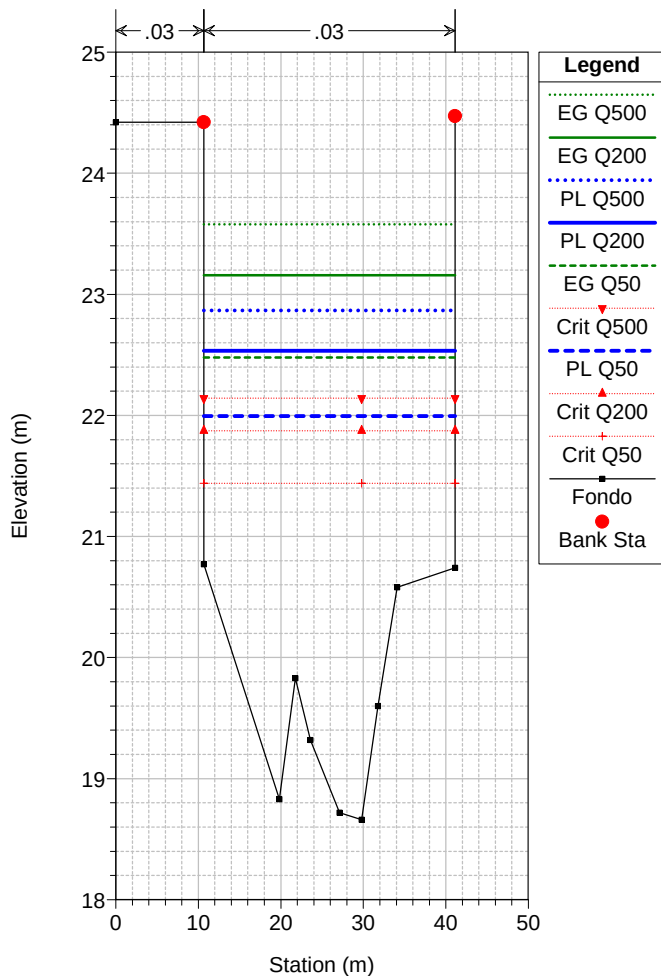
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-93



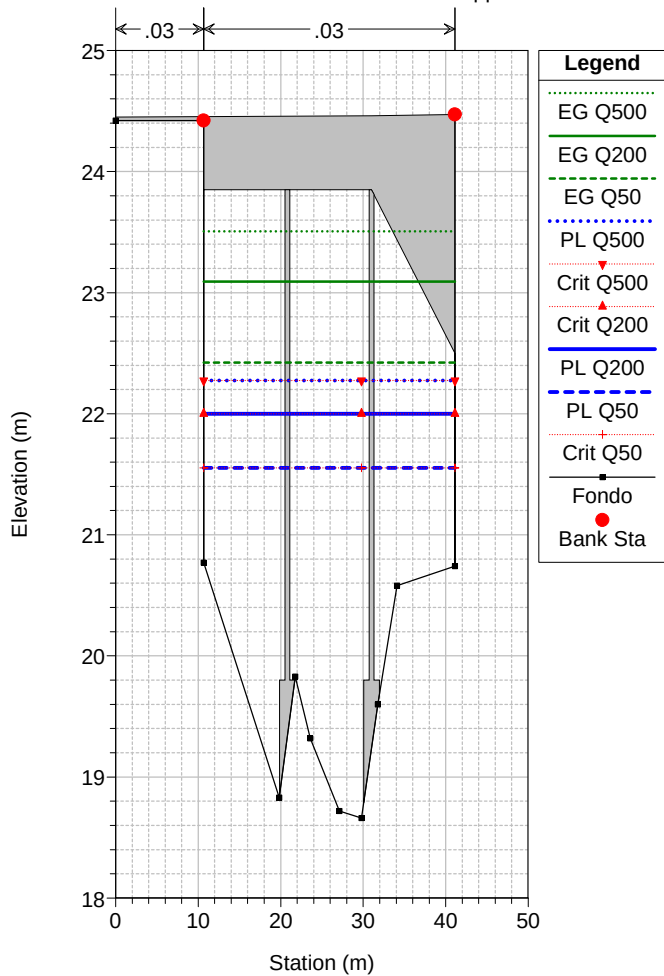
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-92



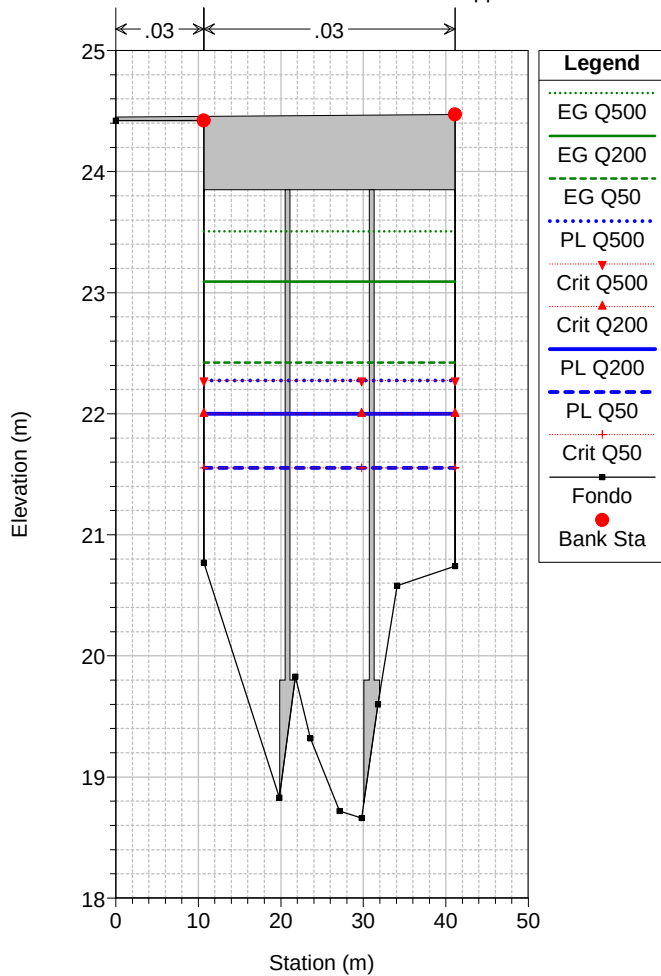
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla Via Apparizione



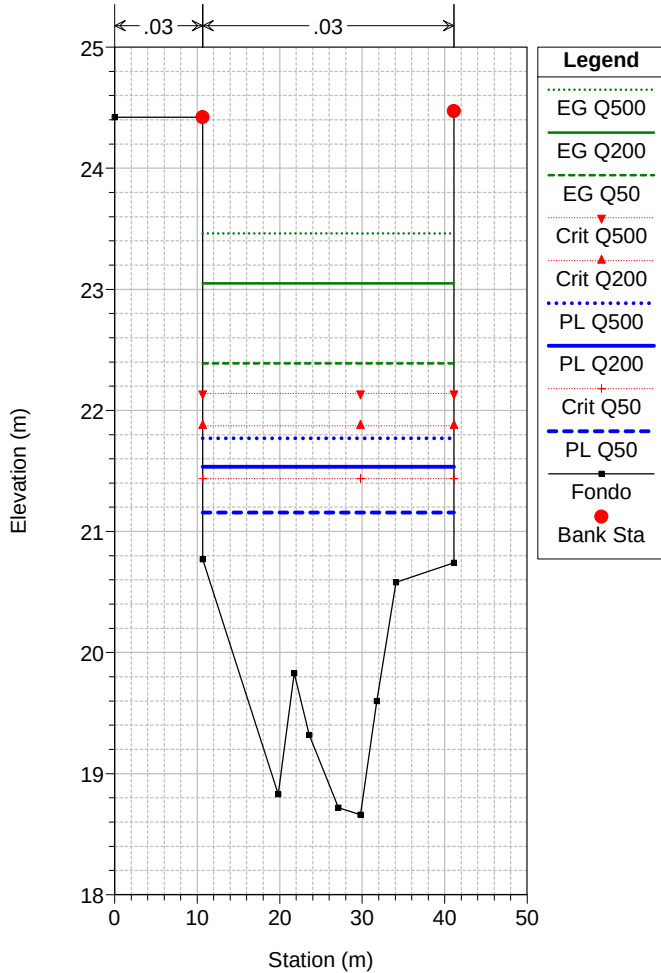
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla Via Apparizione



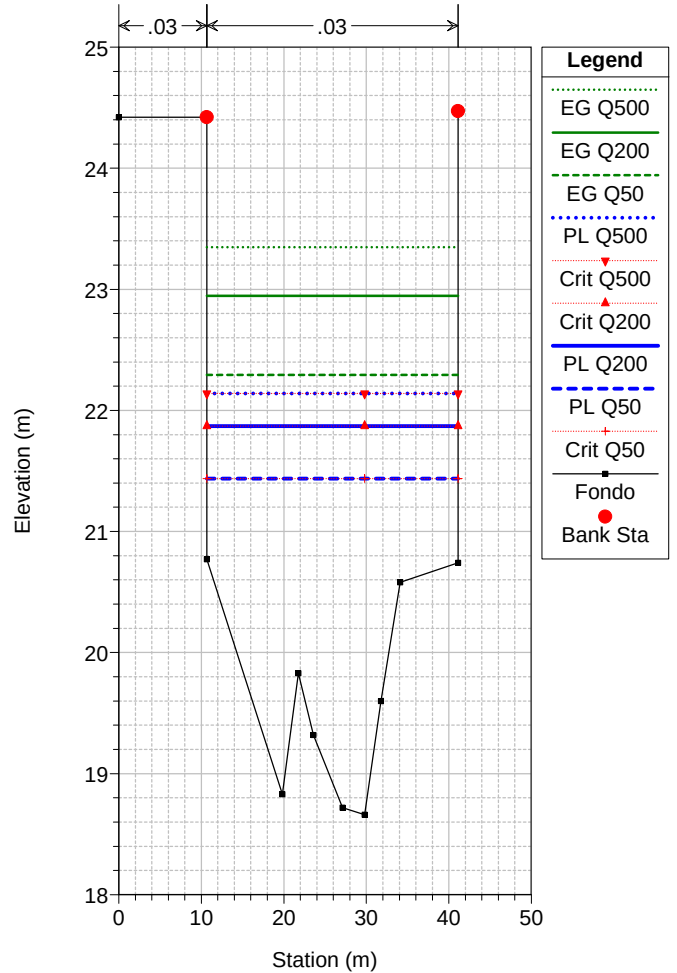
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-91



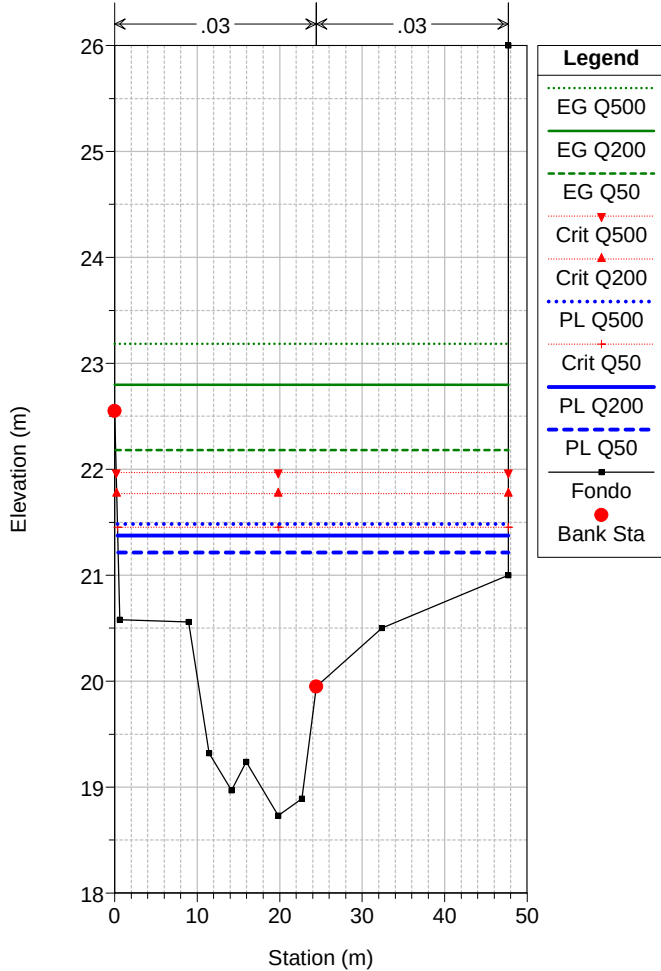
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-90



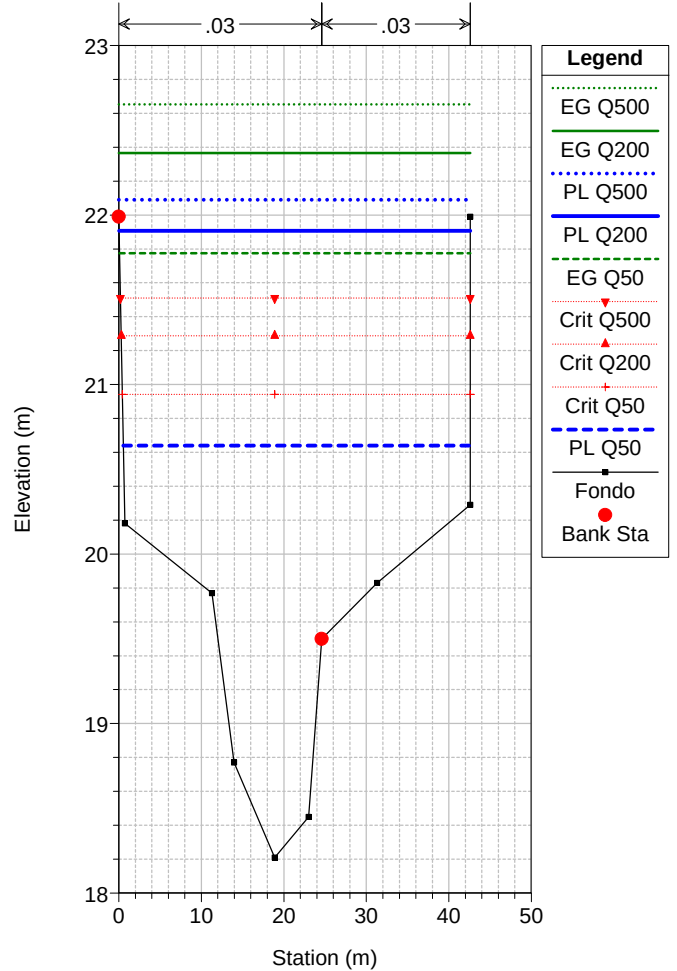
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-89



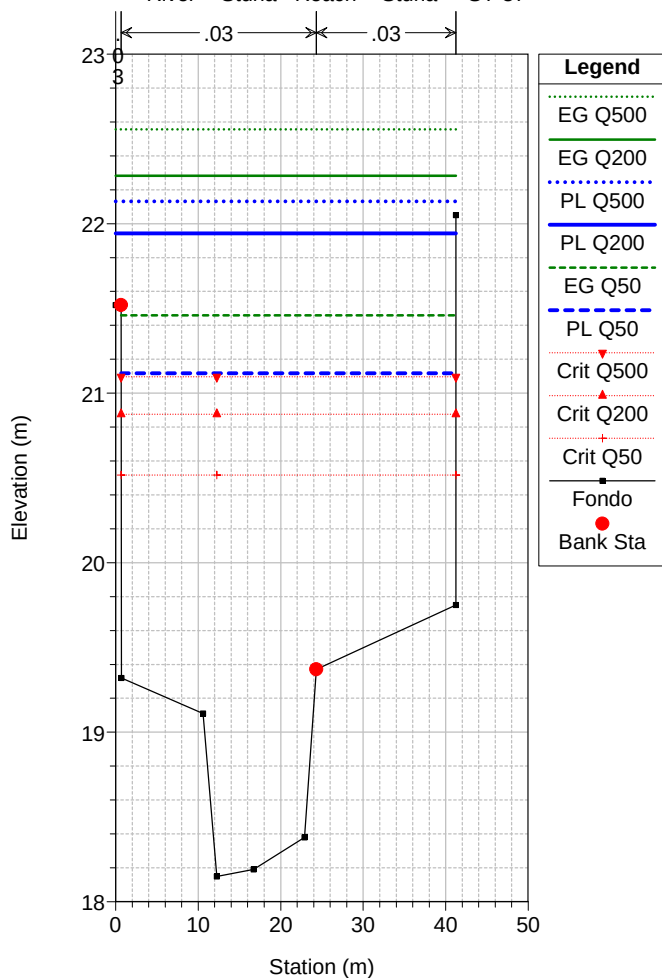
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-88



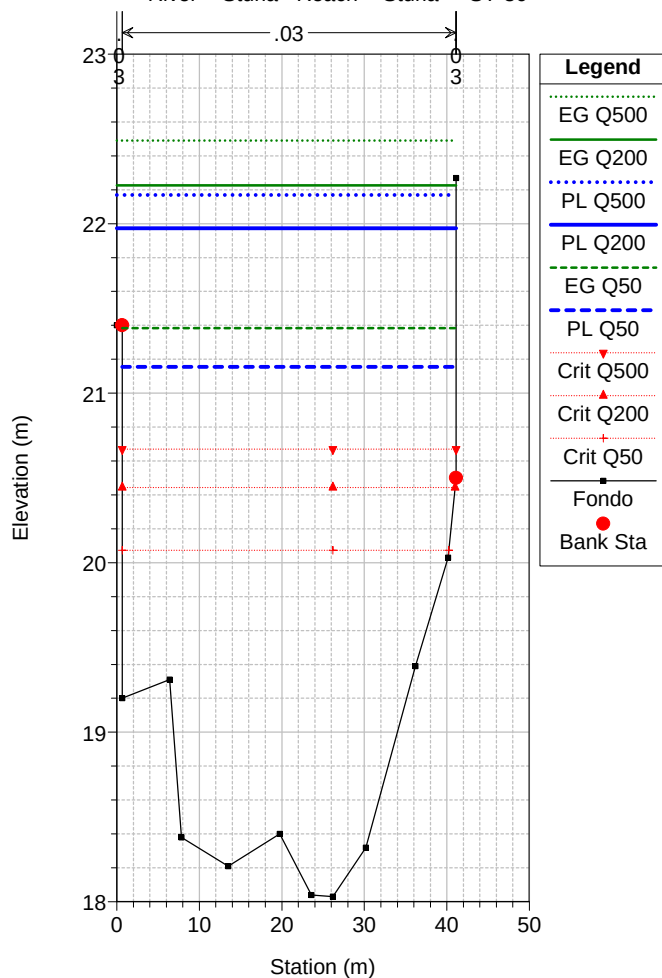
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-87



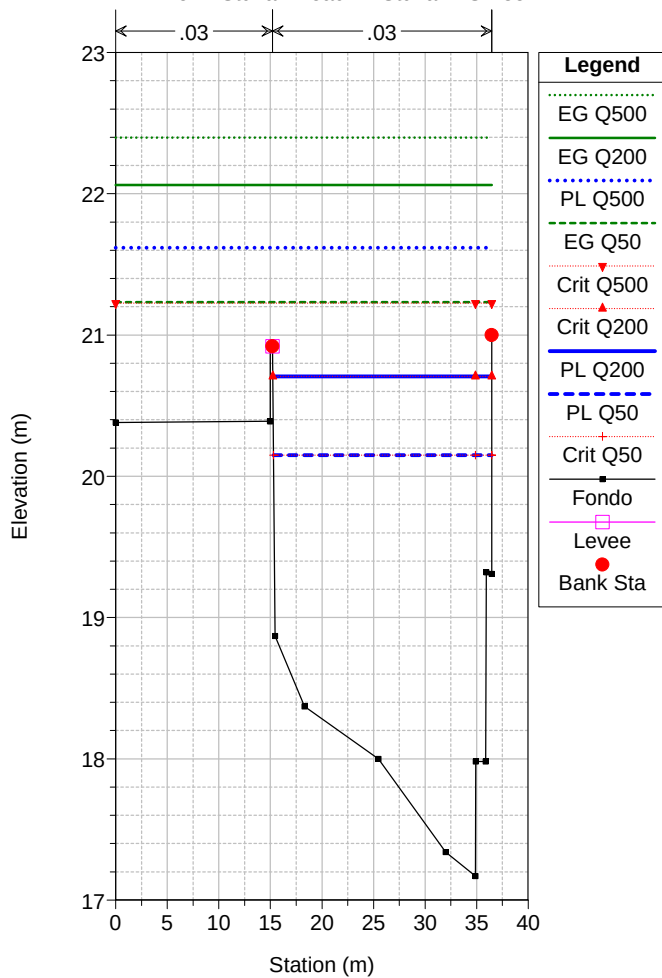
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-86



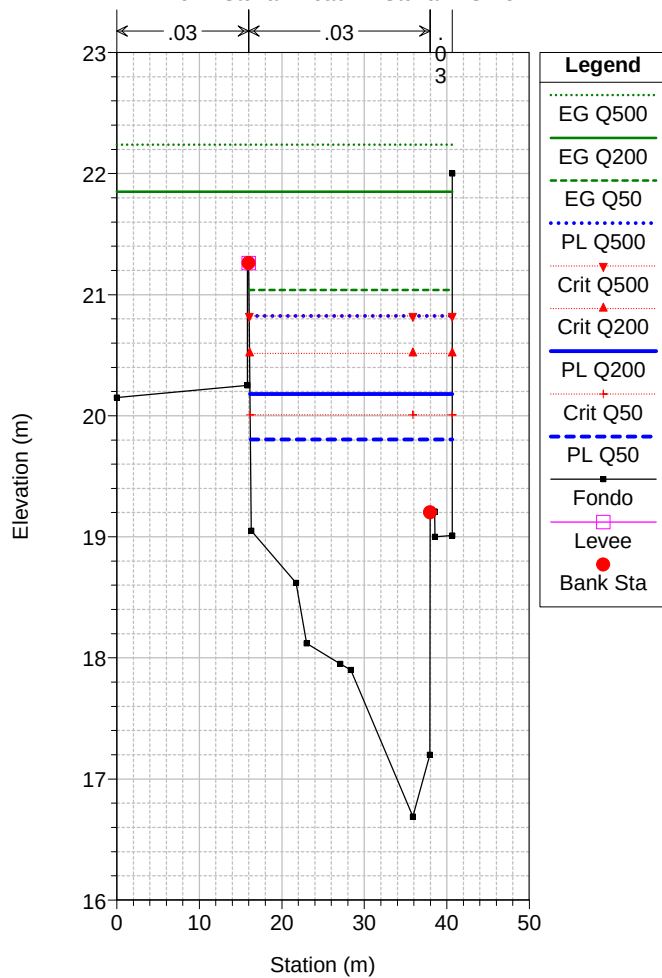
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-85



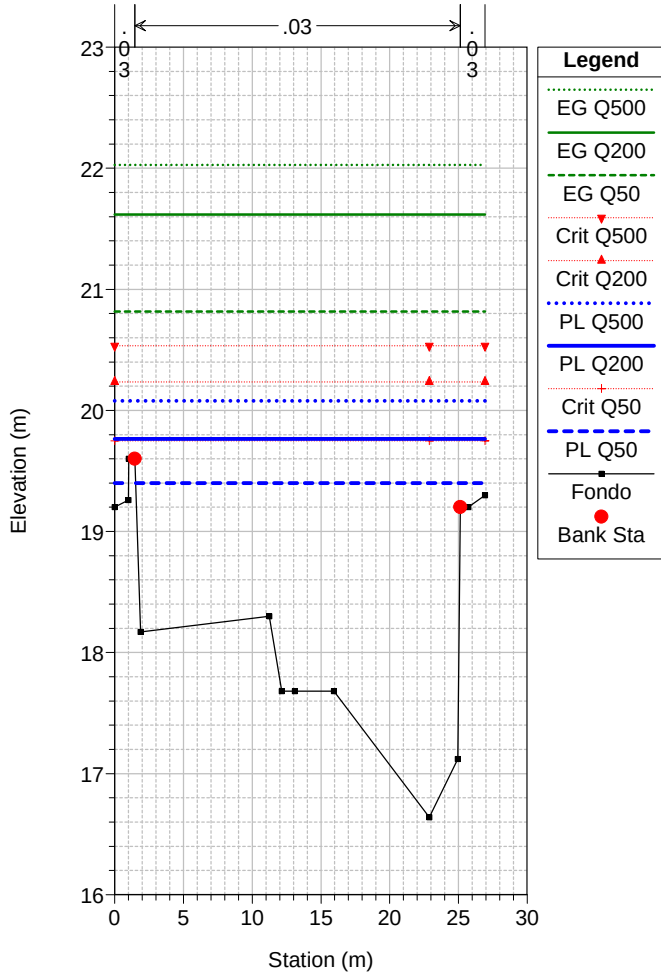
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-84



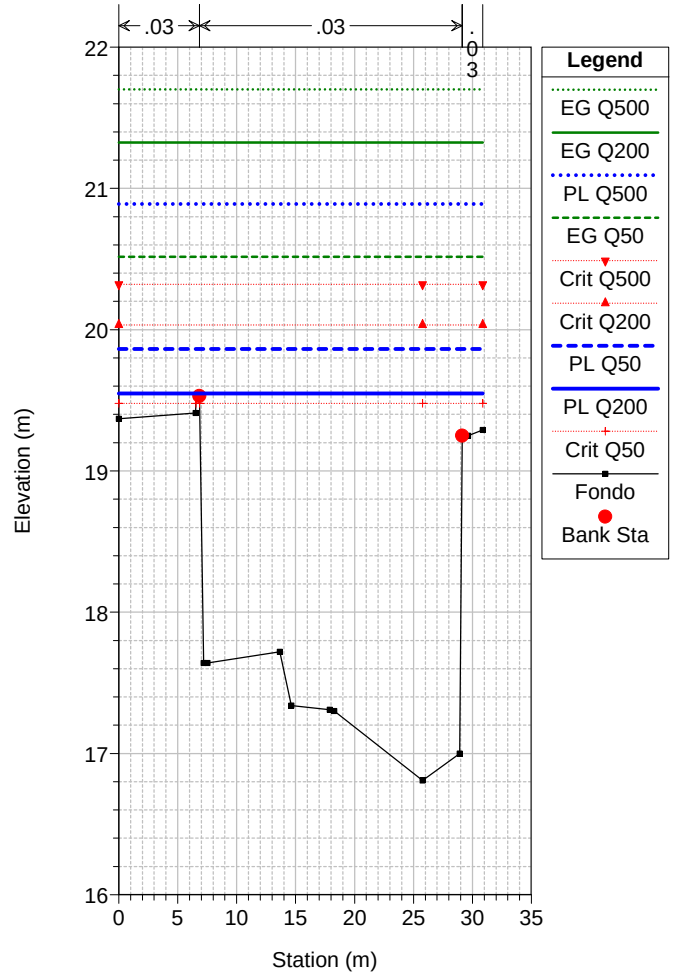
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-83



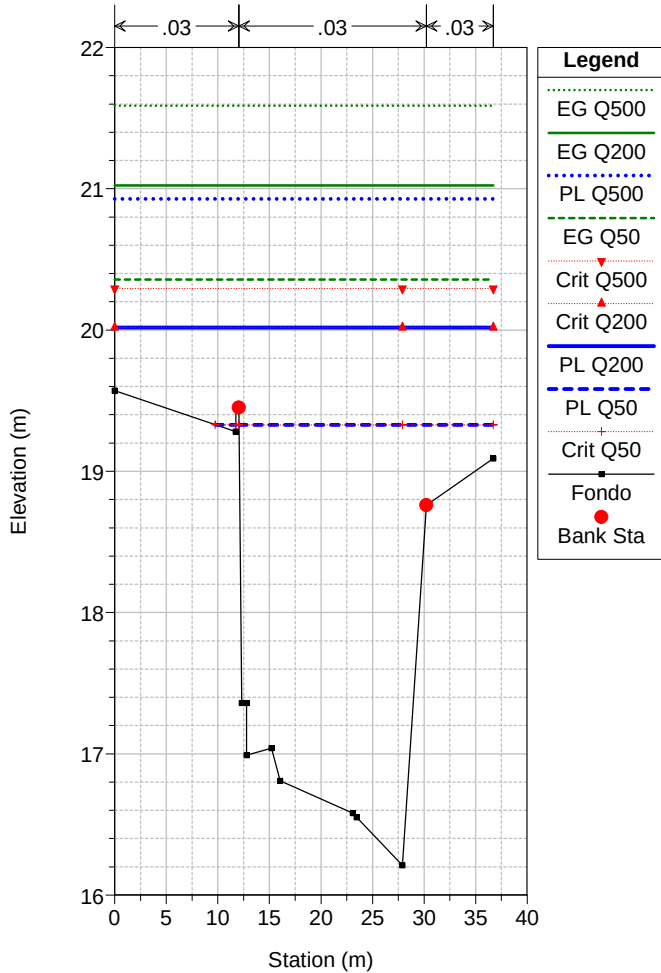
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-82



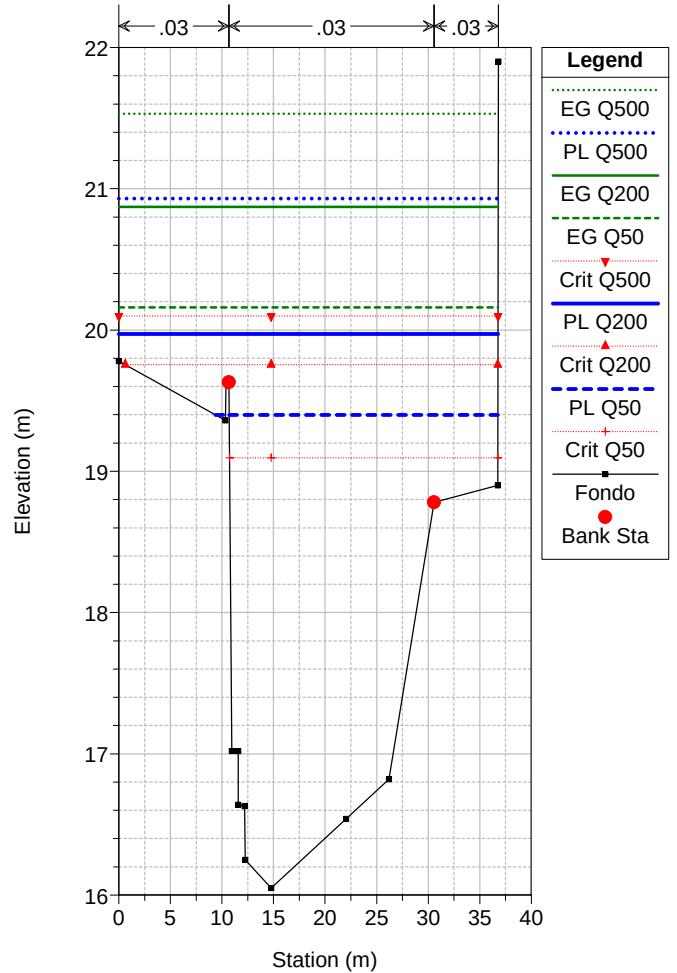
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-81



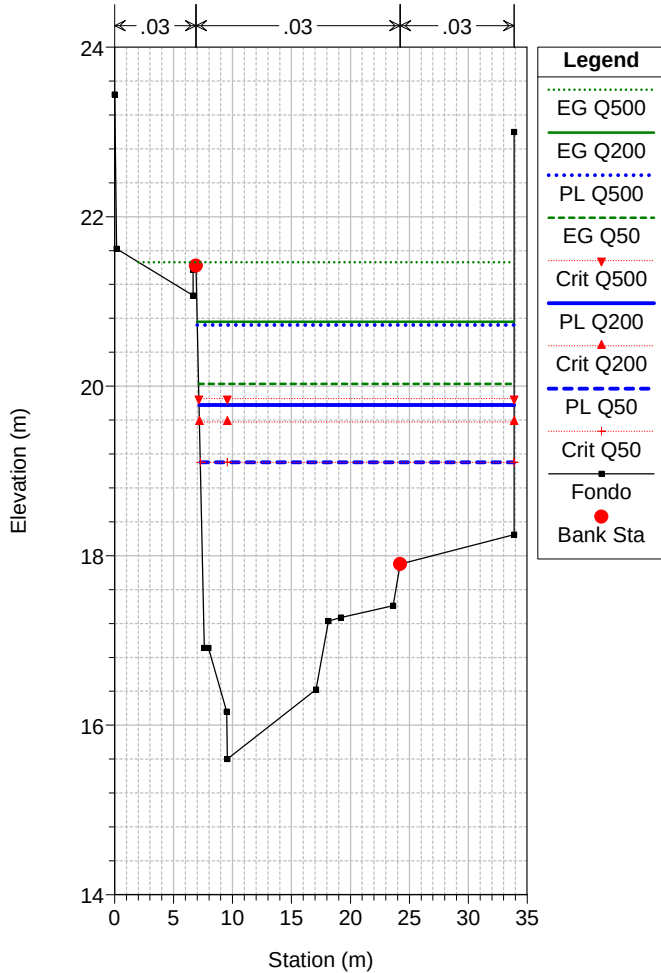
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-80



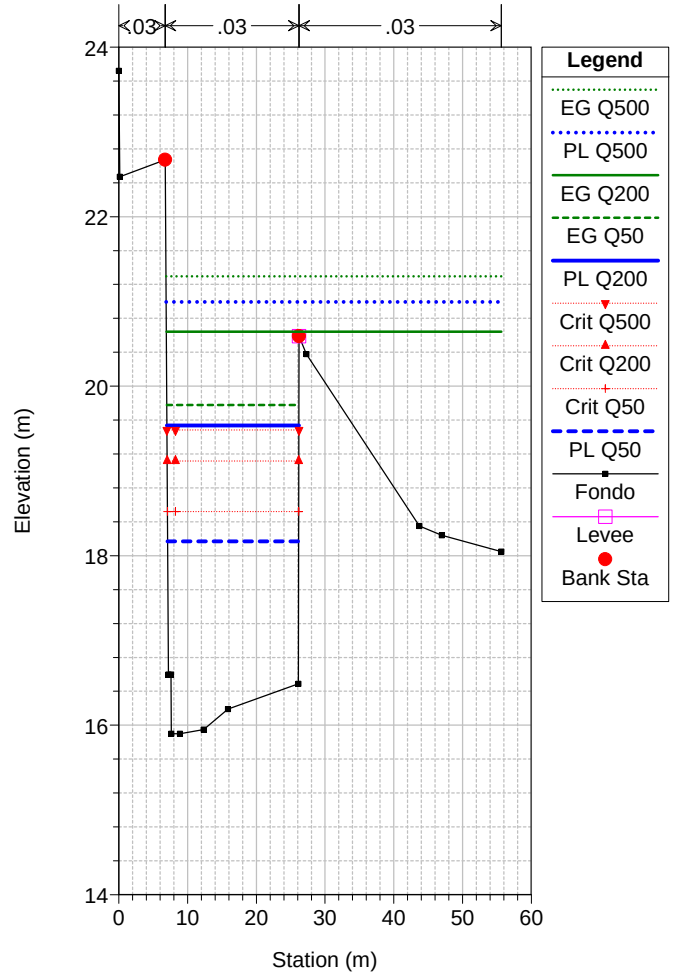
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-79



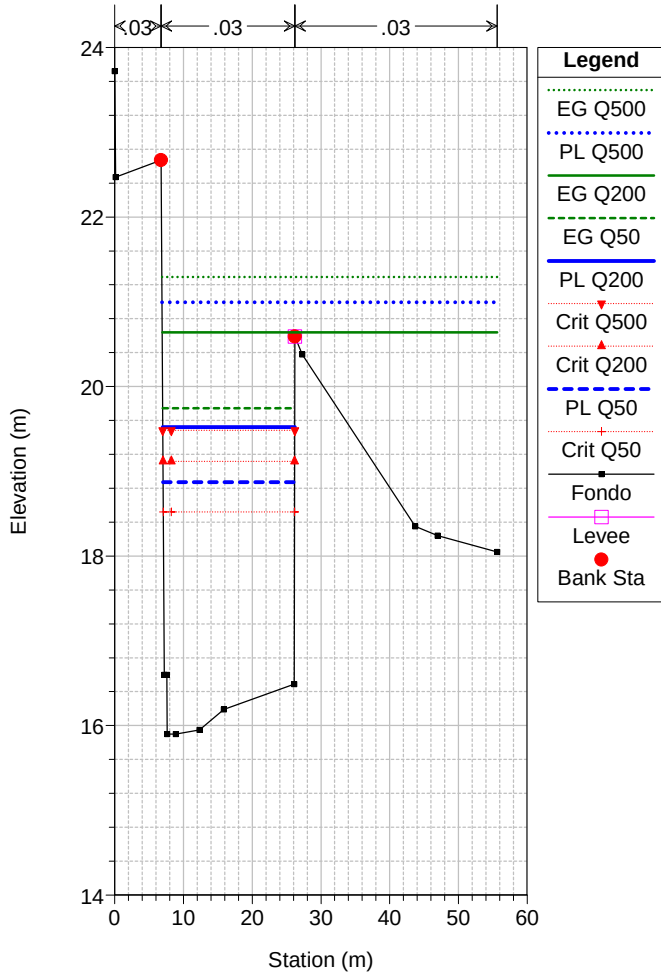
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-78



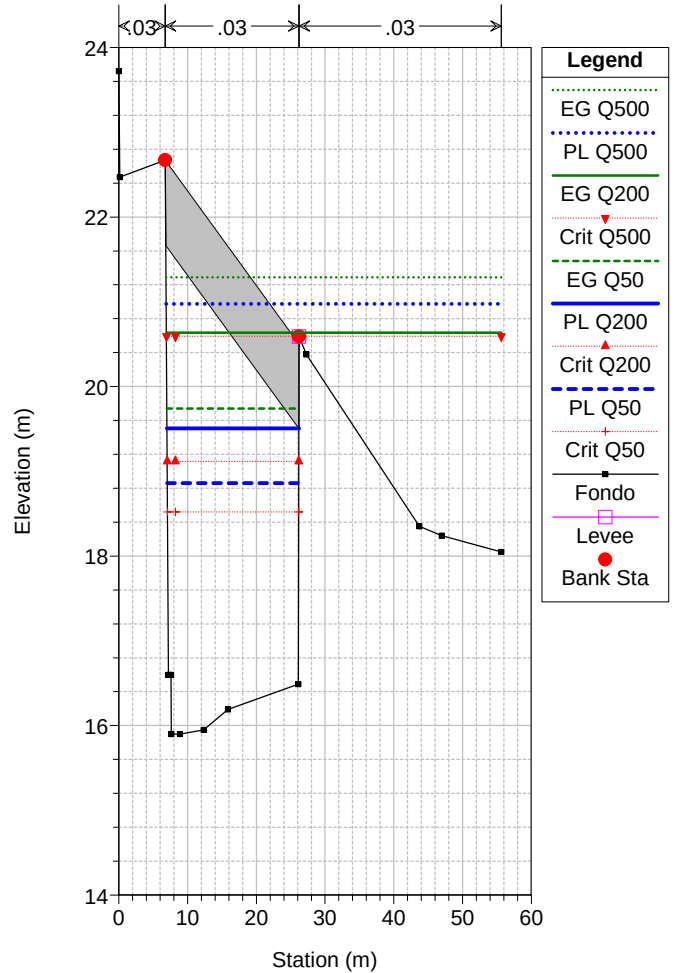
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-77

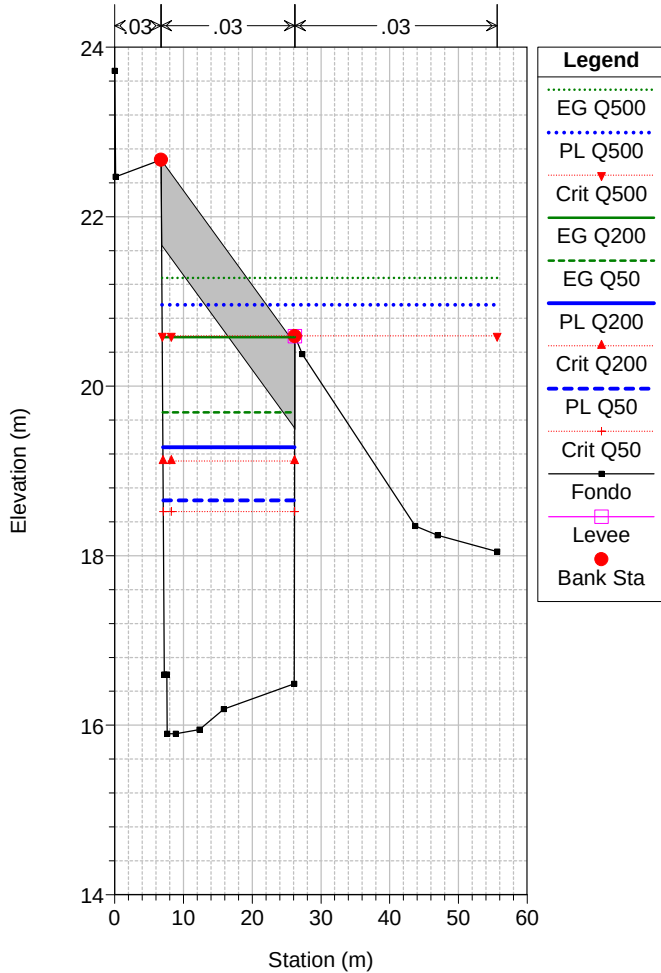


Torrente Sturla Plan: Stato attuale

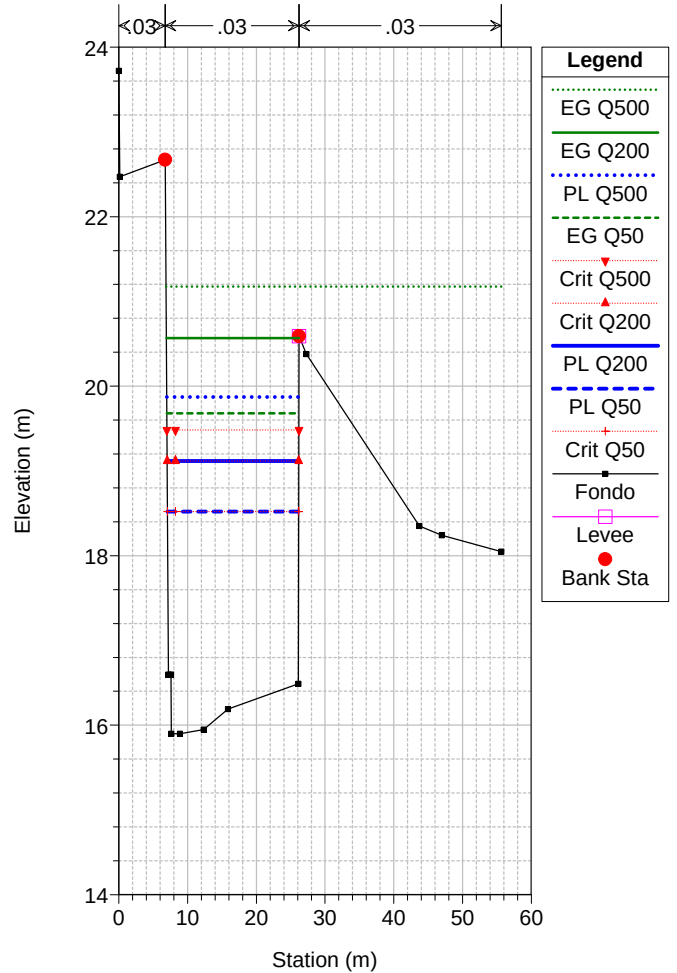
River = Sturla Reach = Sturla via dell'Arena



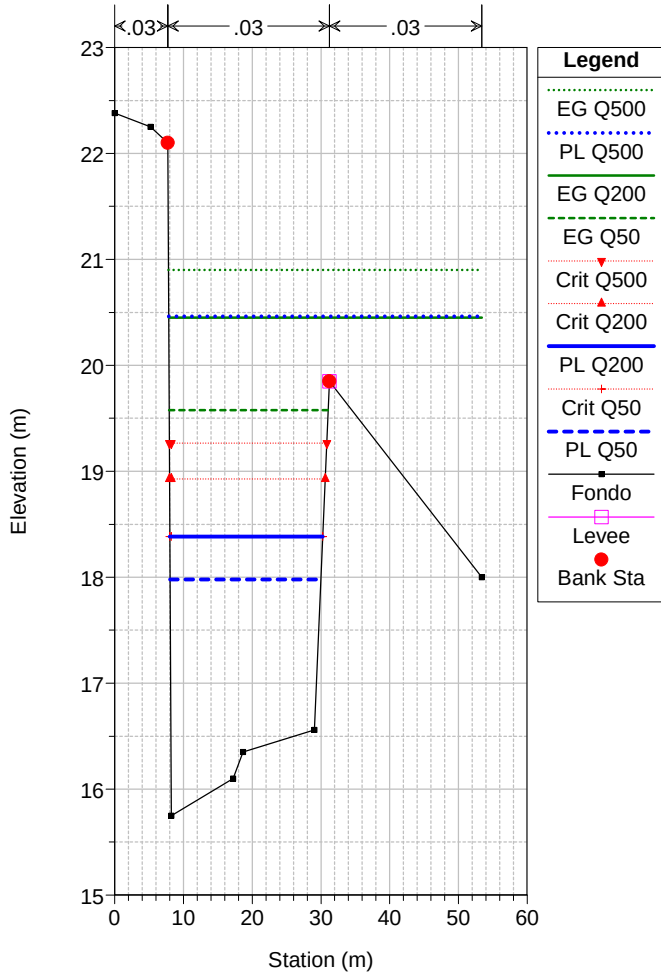
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla via dell'Arena



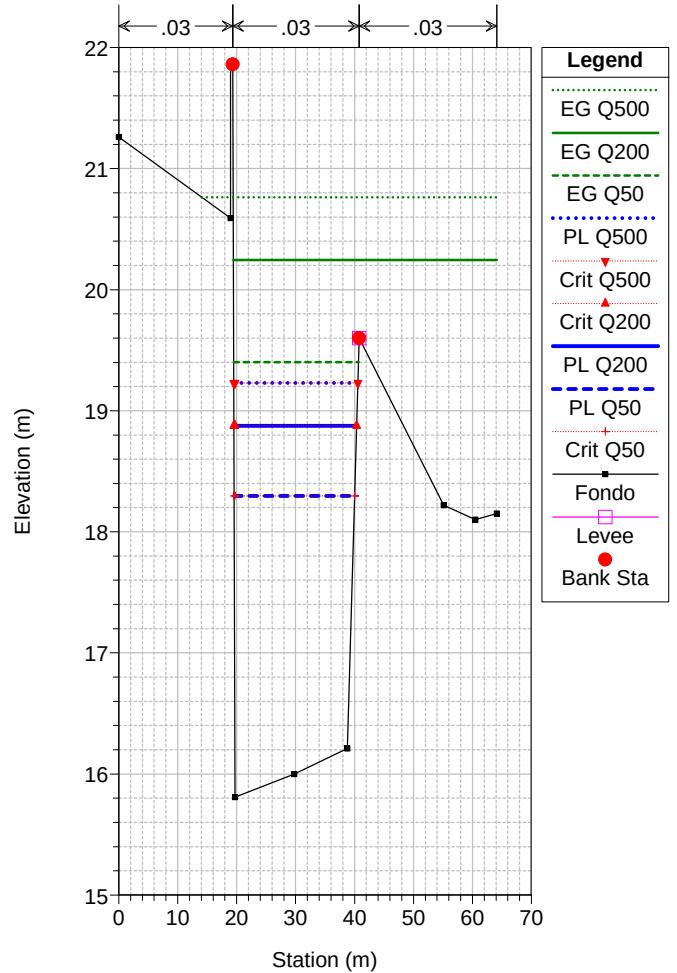
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-76



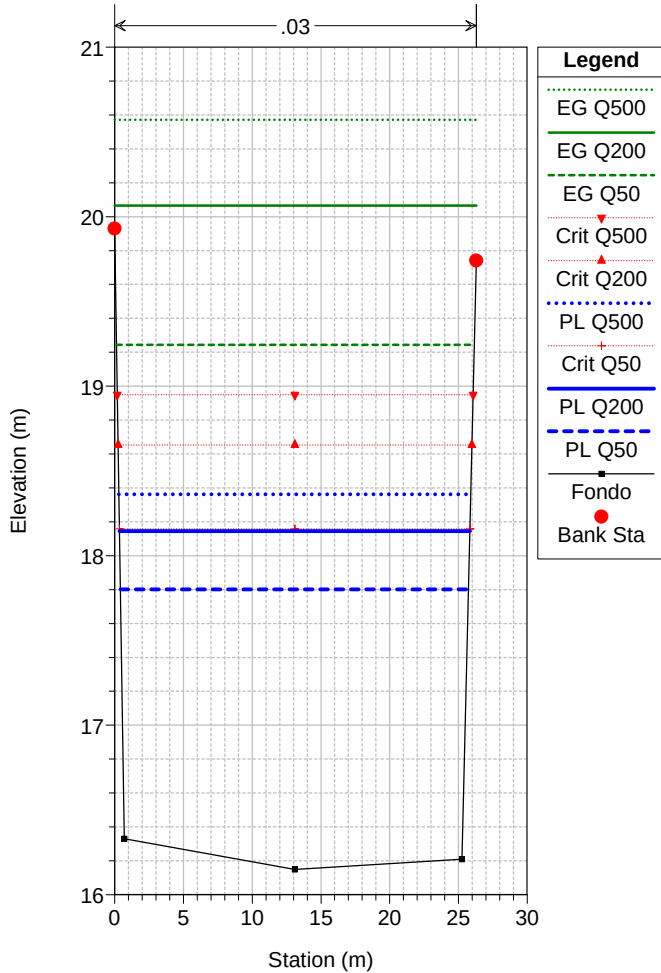
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-75



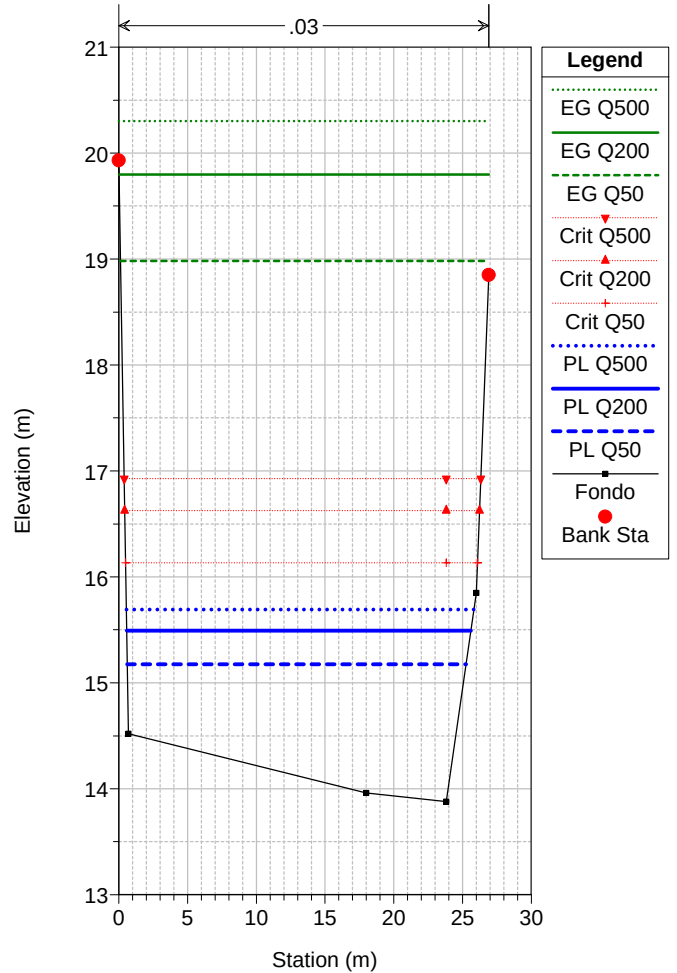
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-74



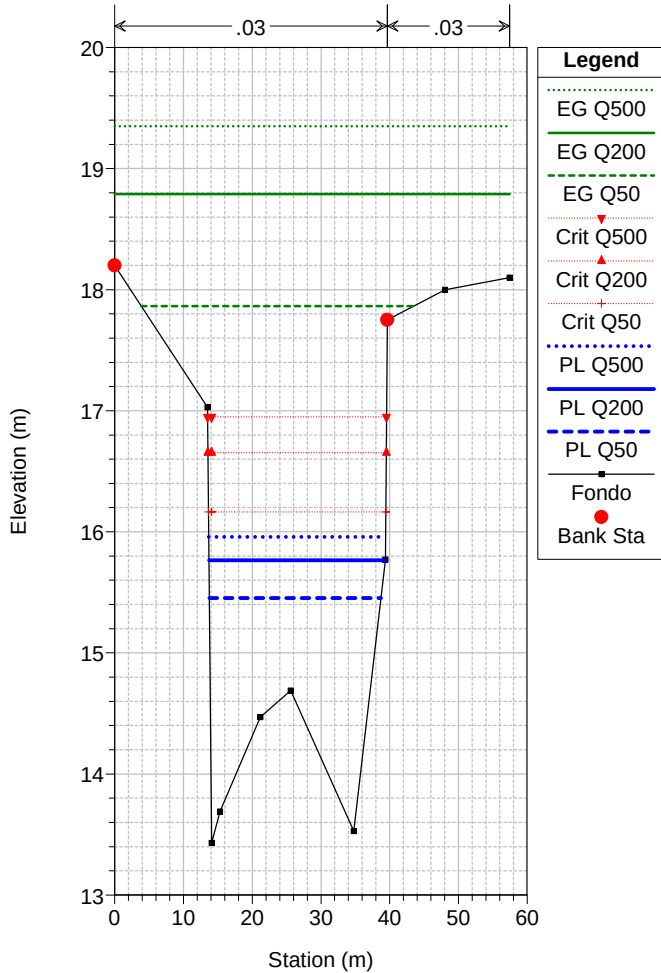
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-73



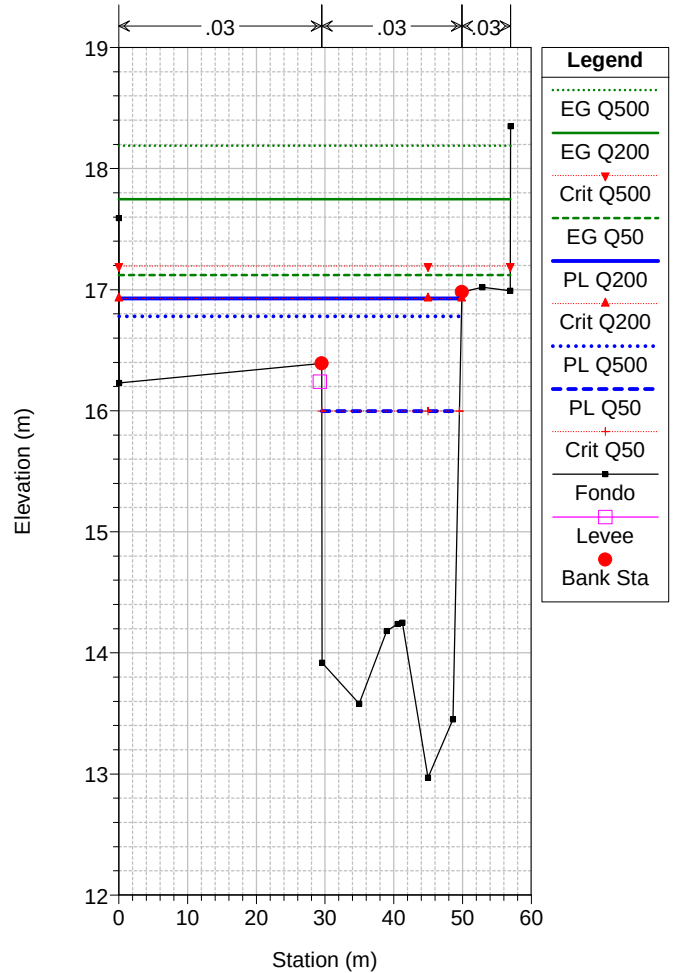
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-72

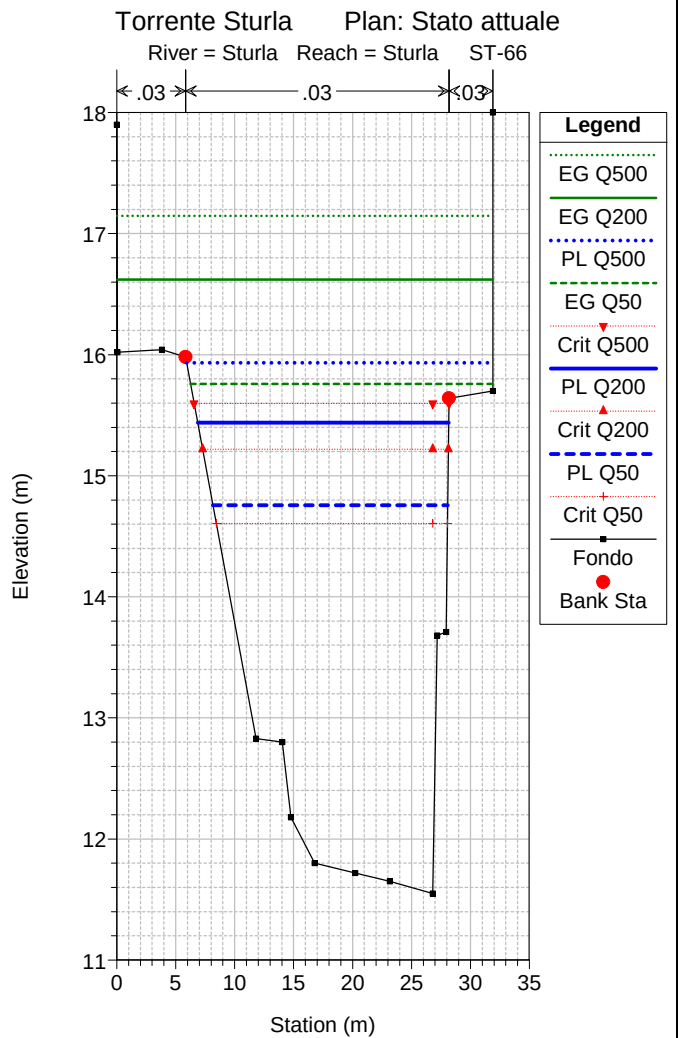
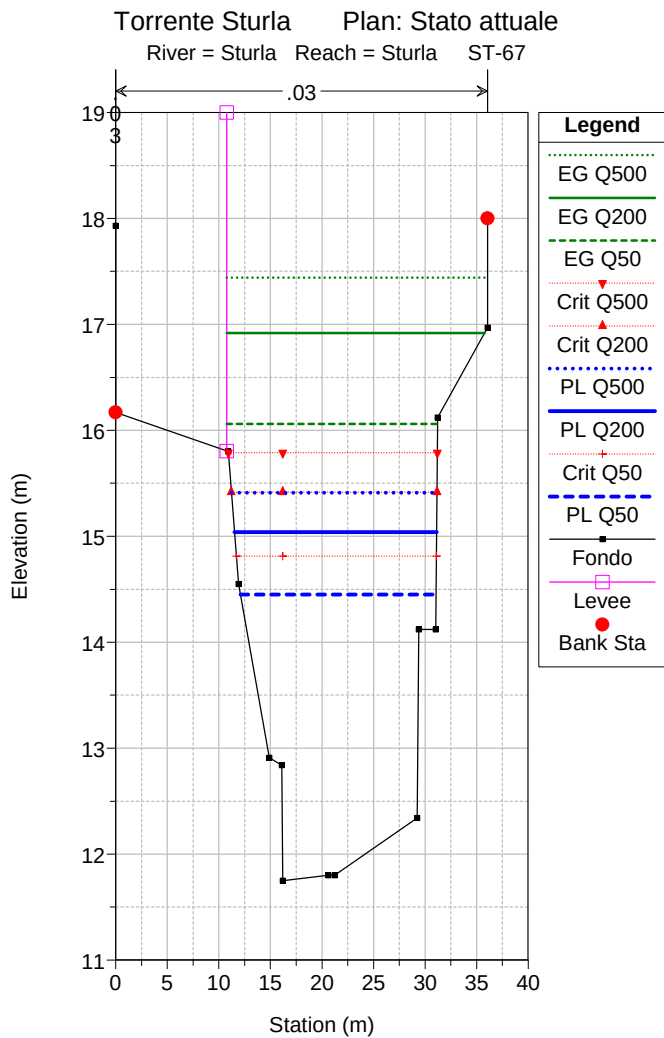
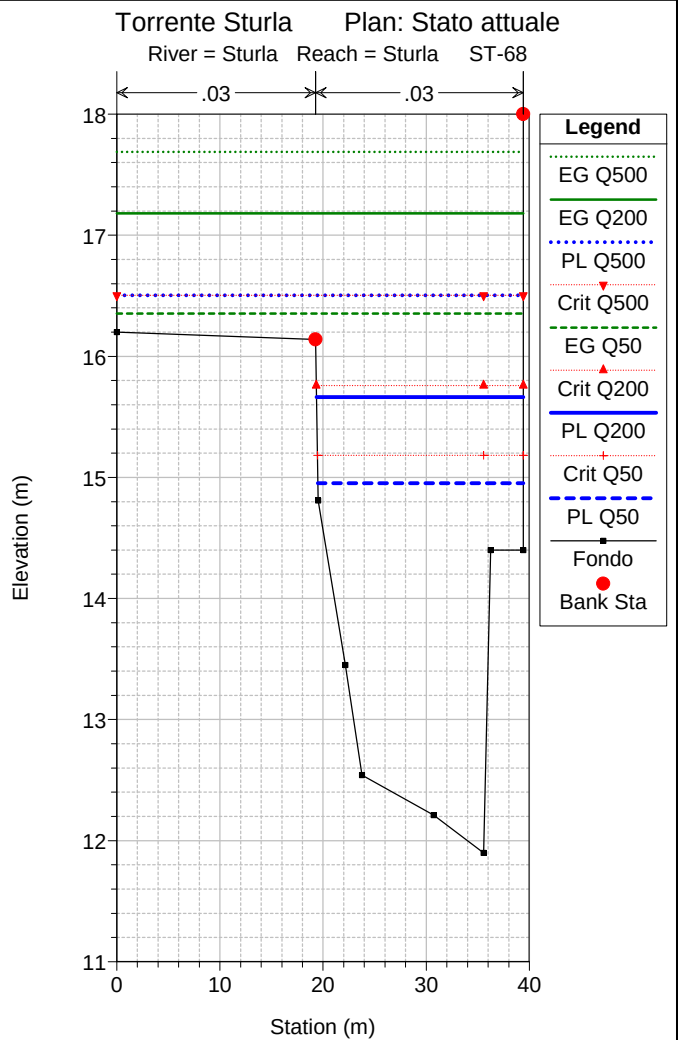
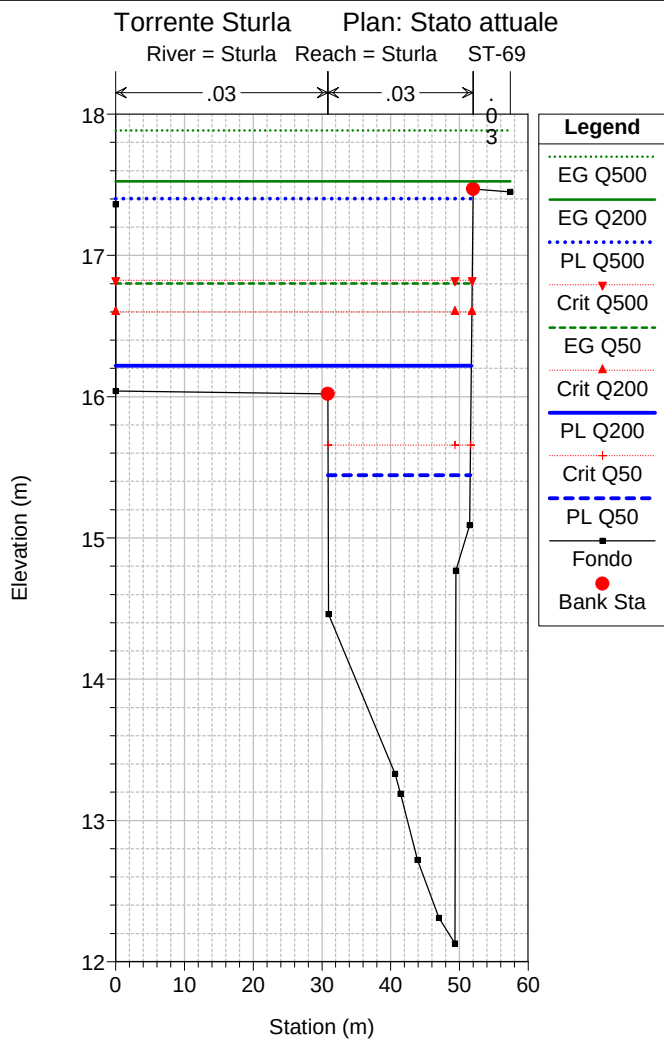


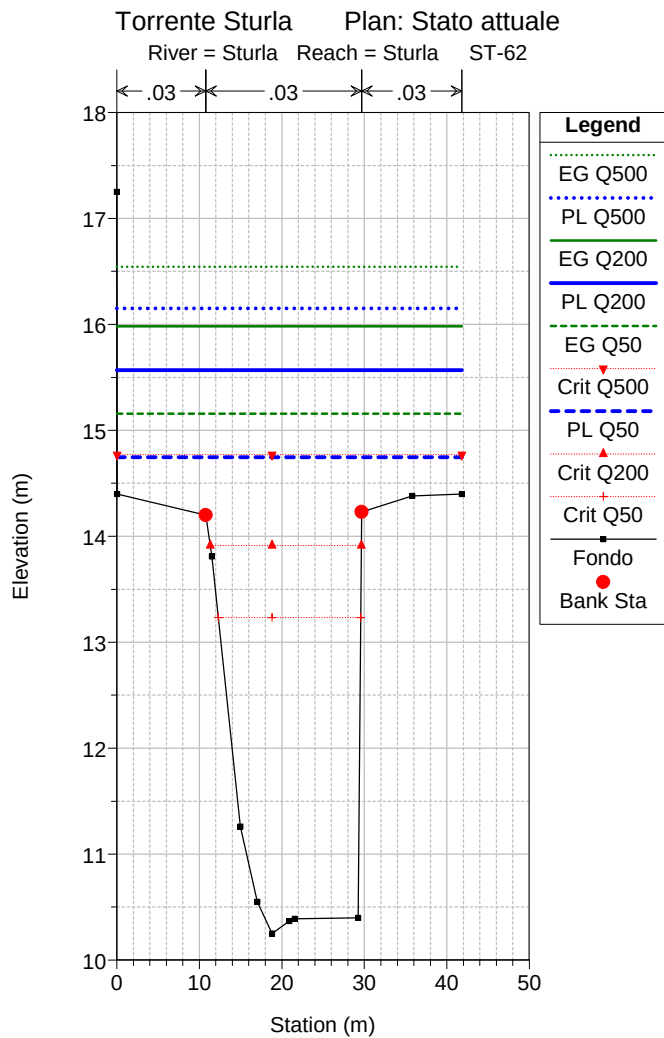
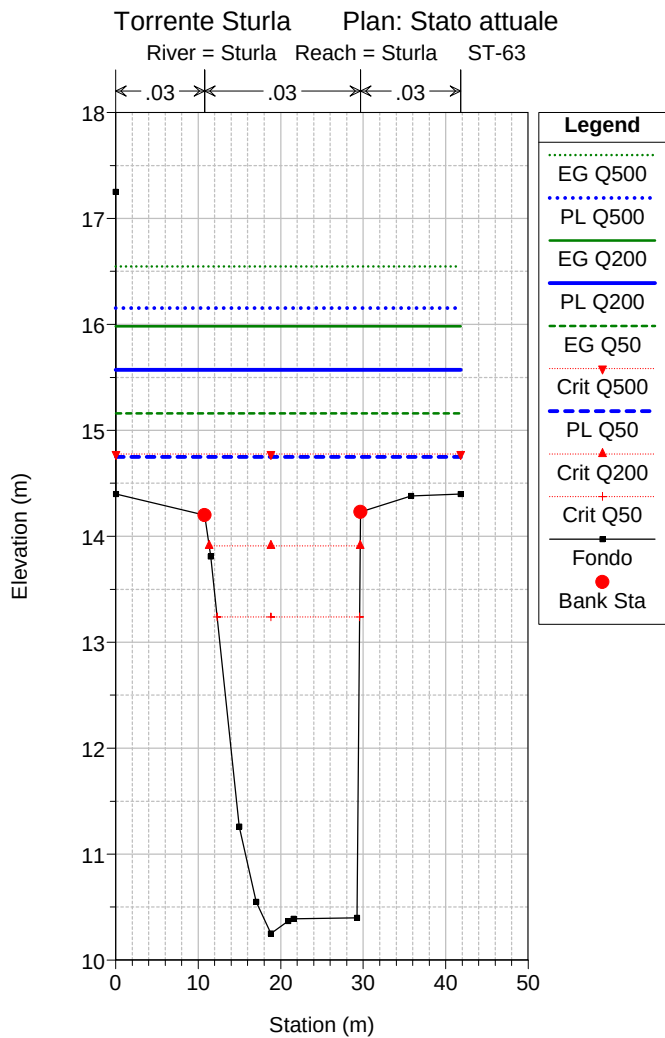
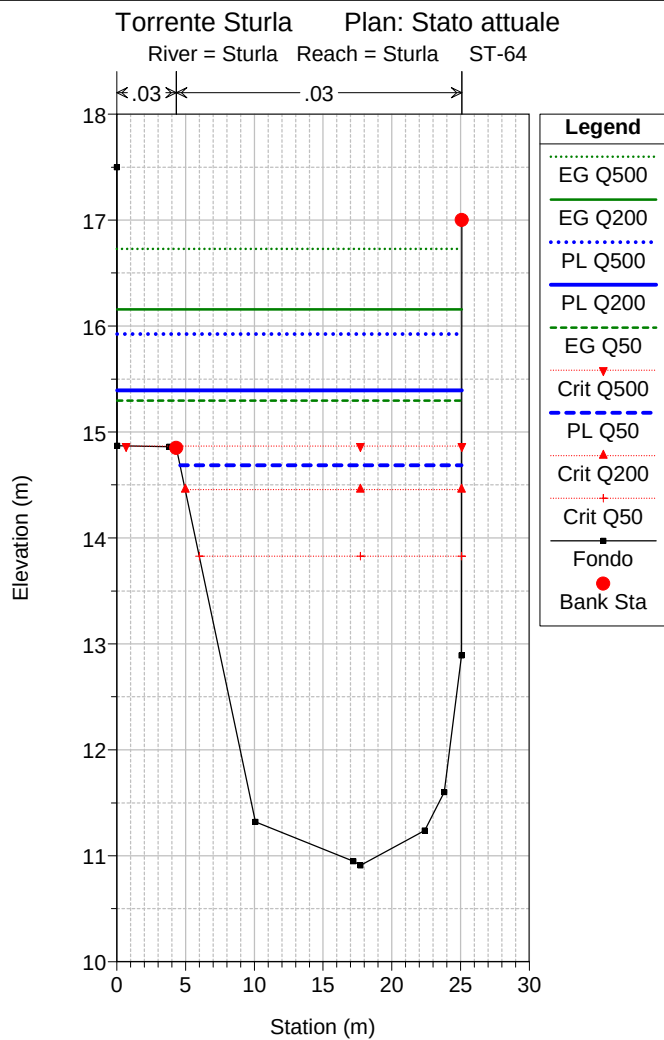
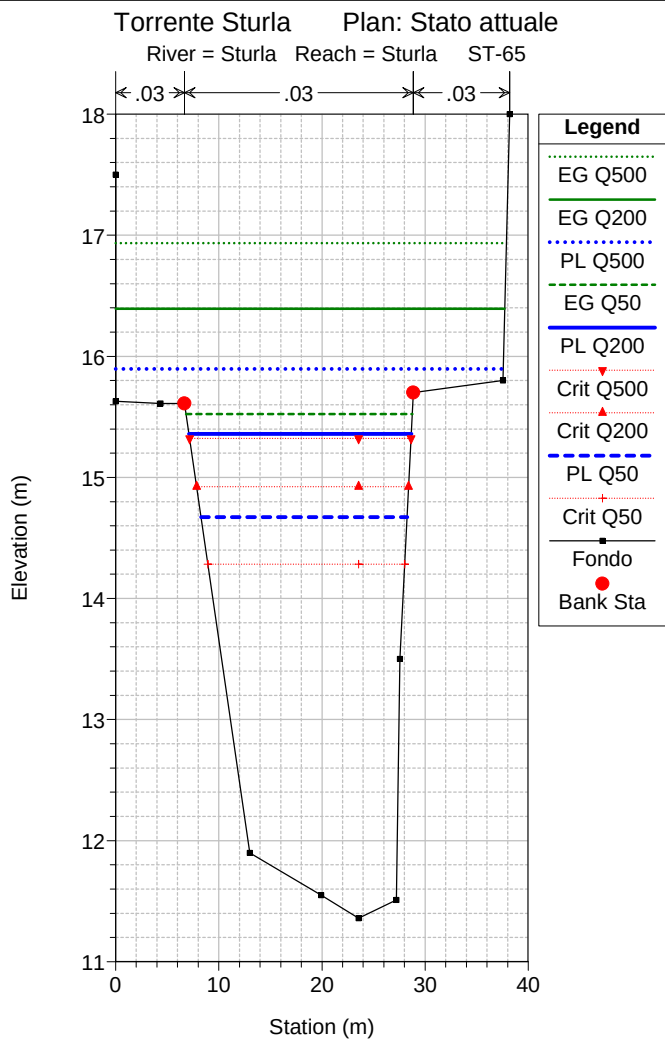
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-71

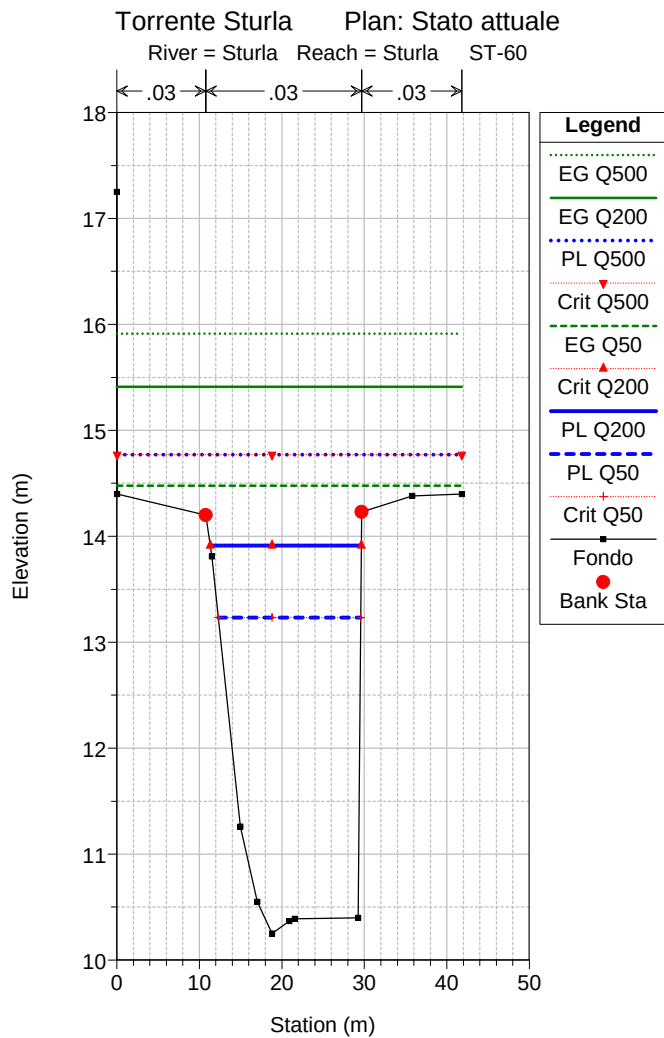
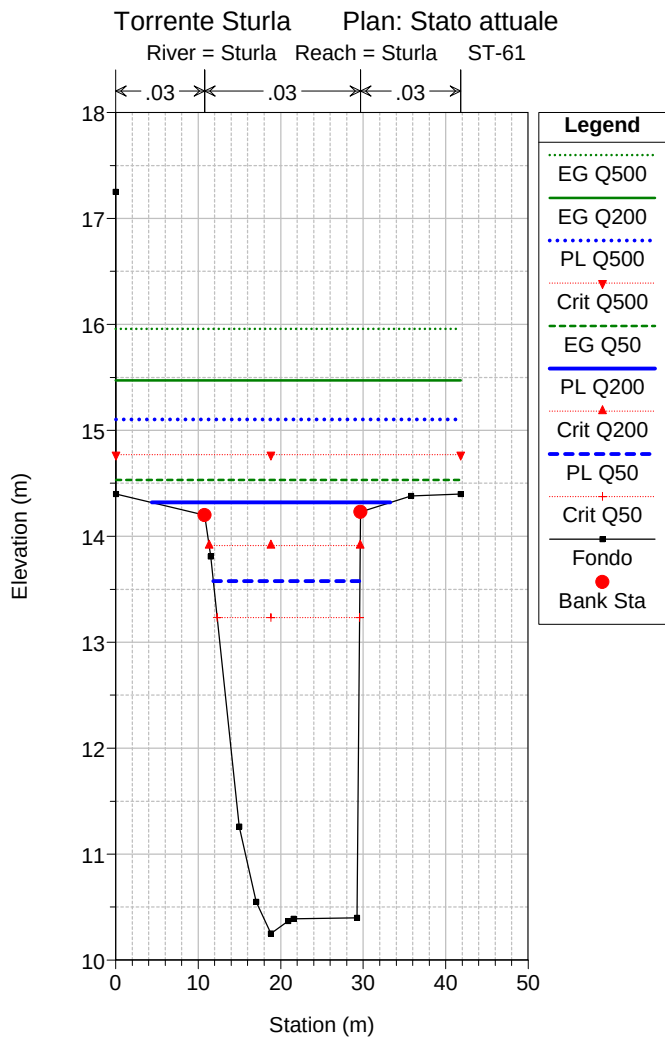
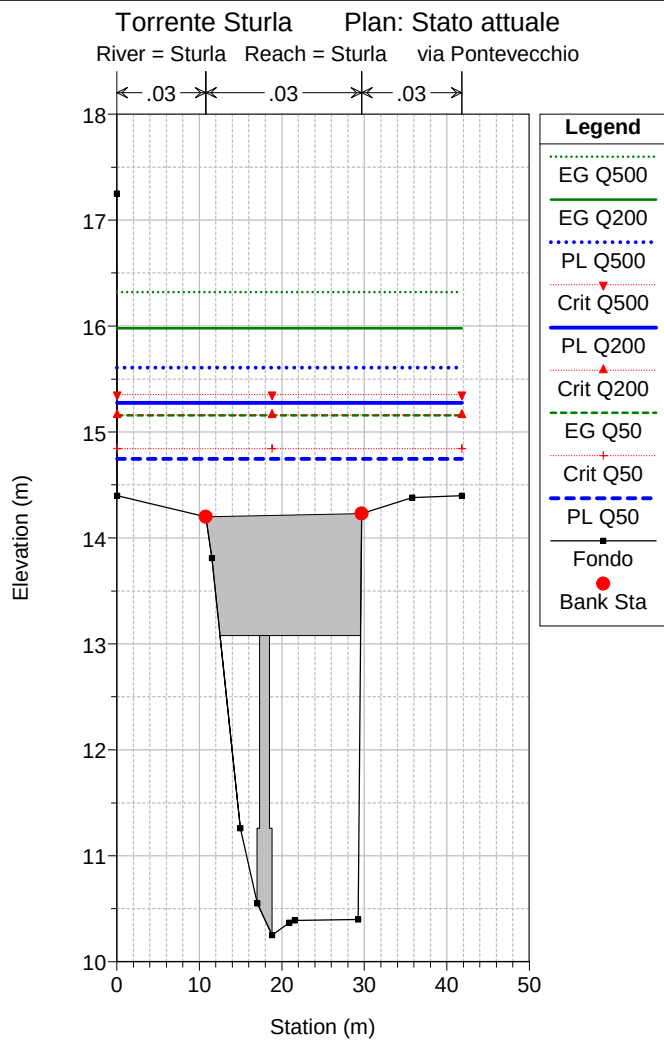
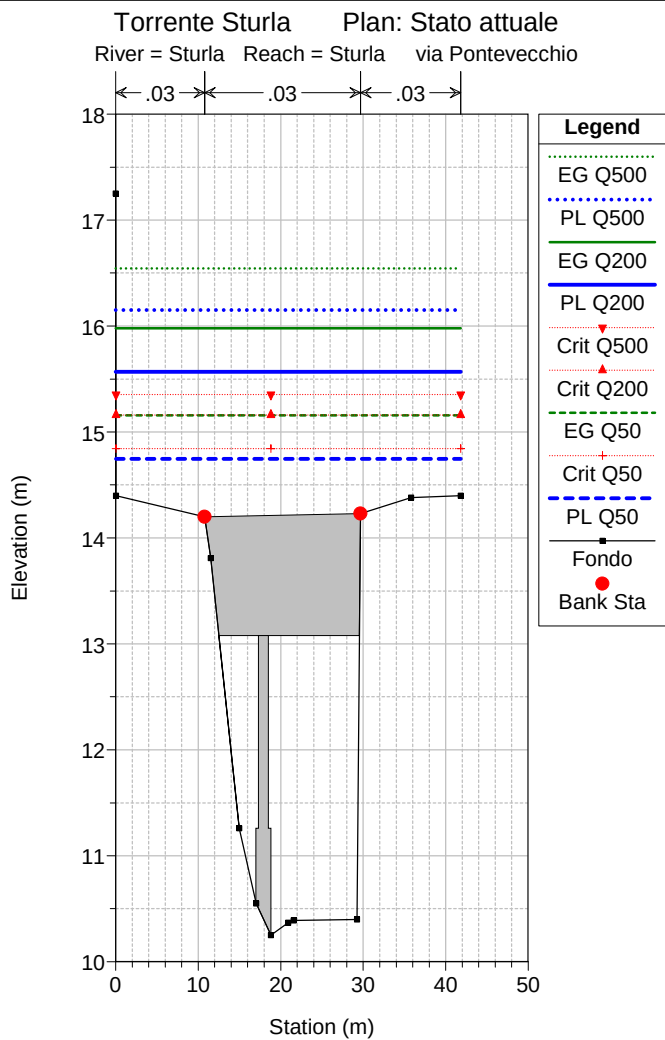


Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-70

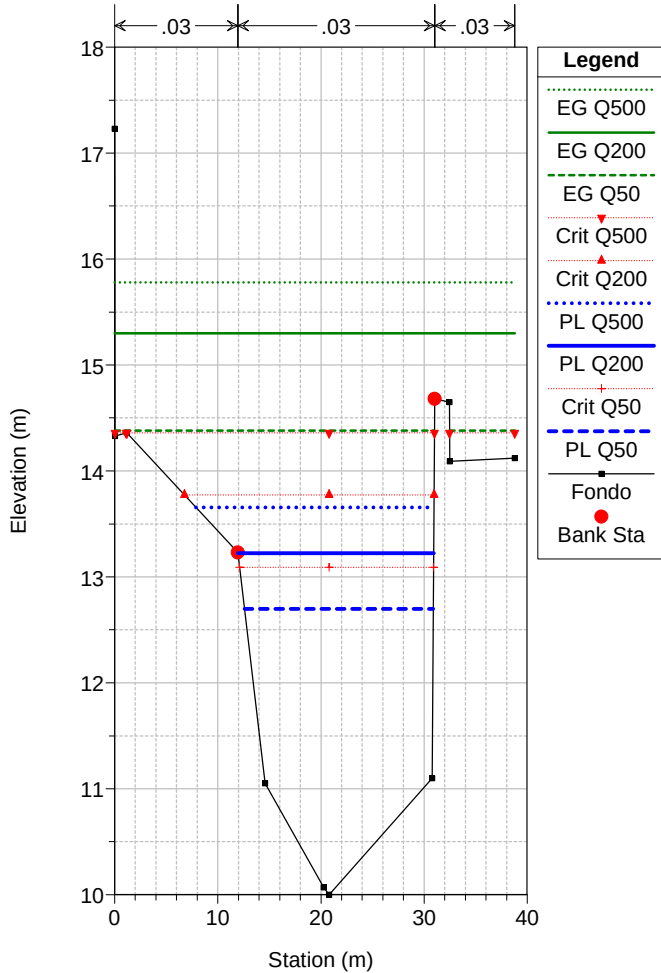




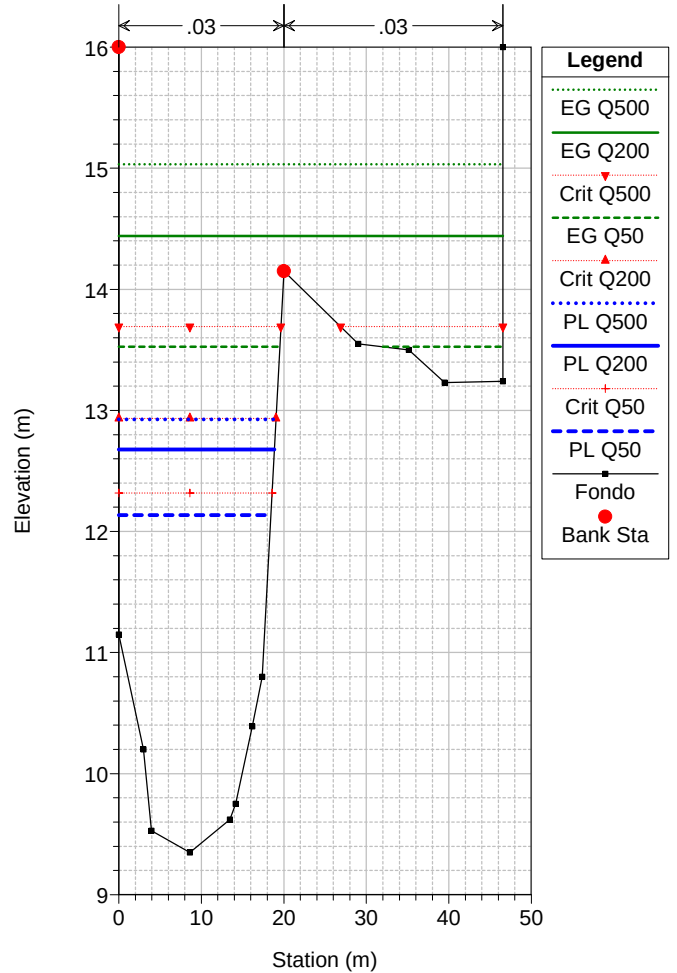




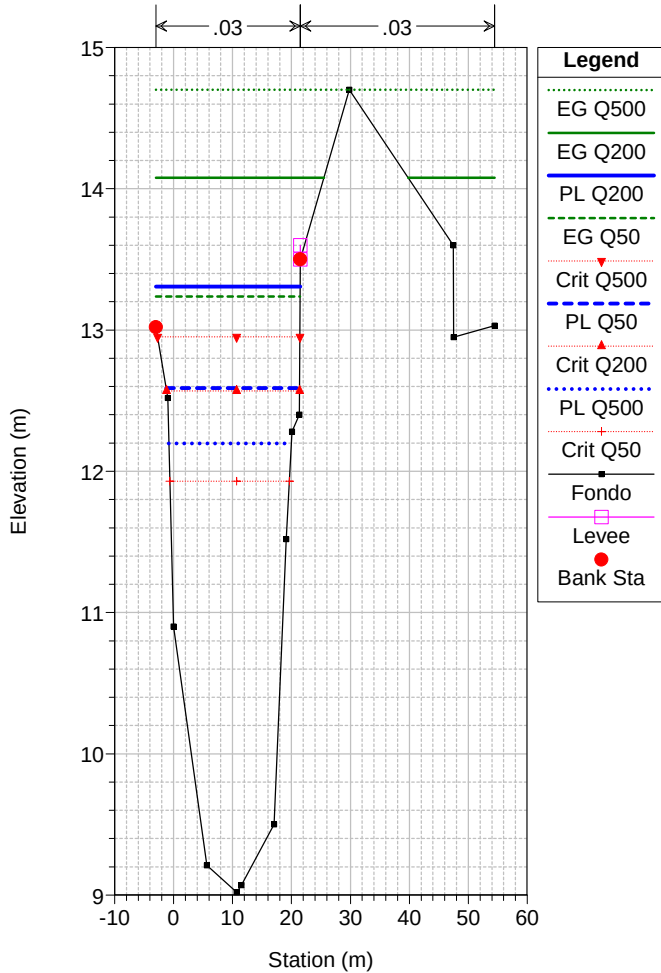
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-59



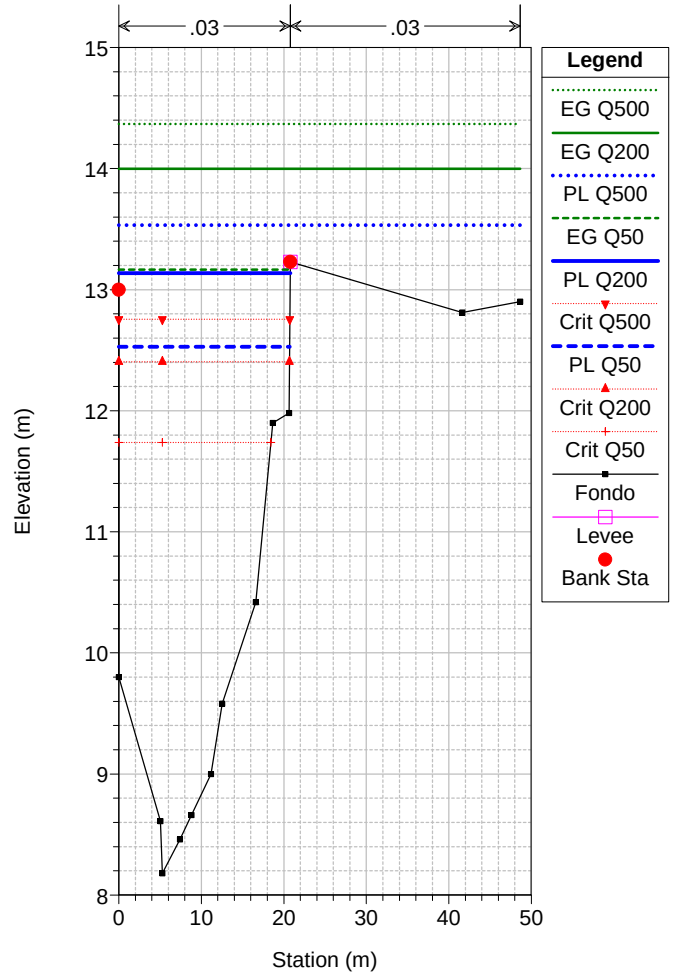
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-58



Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-57

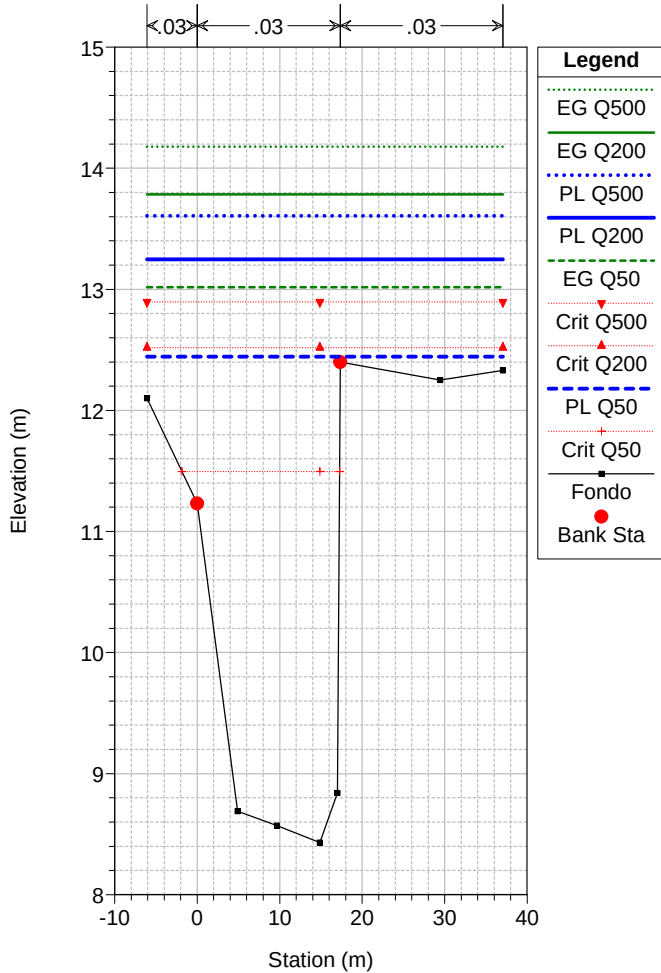


Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-56



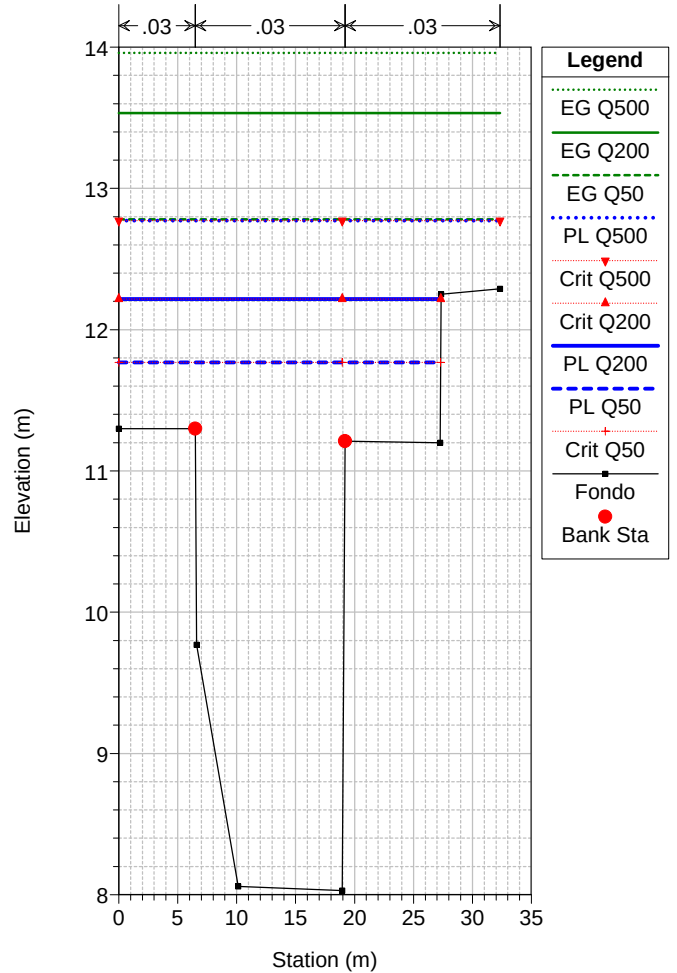
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-55



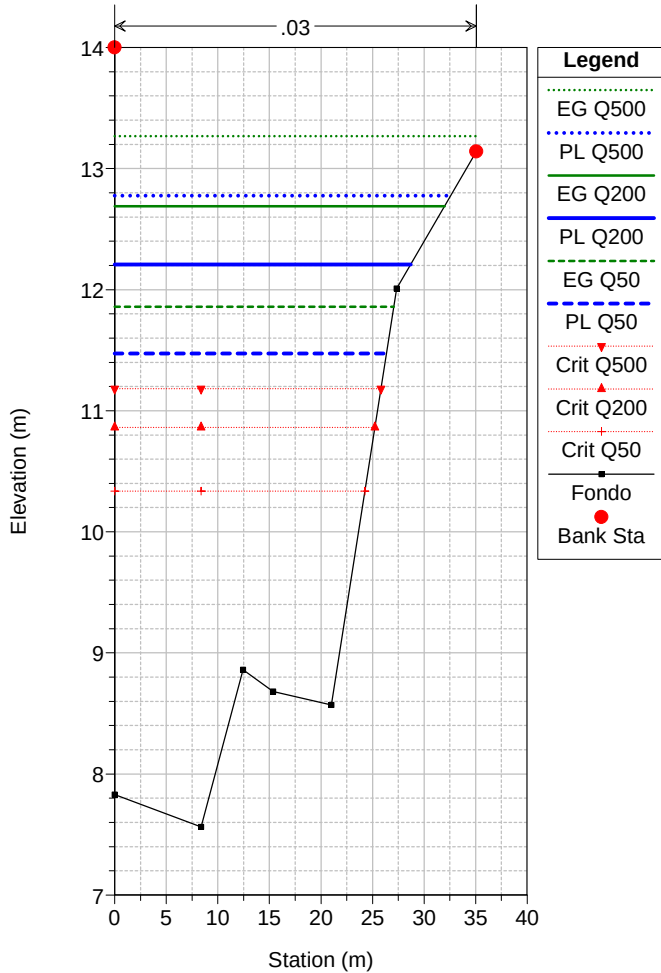
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-54



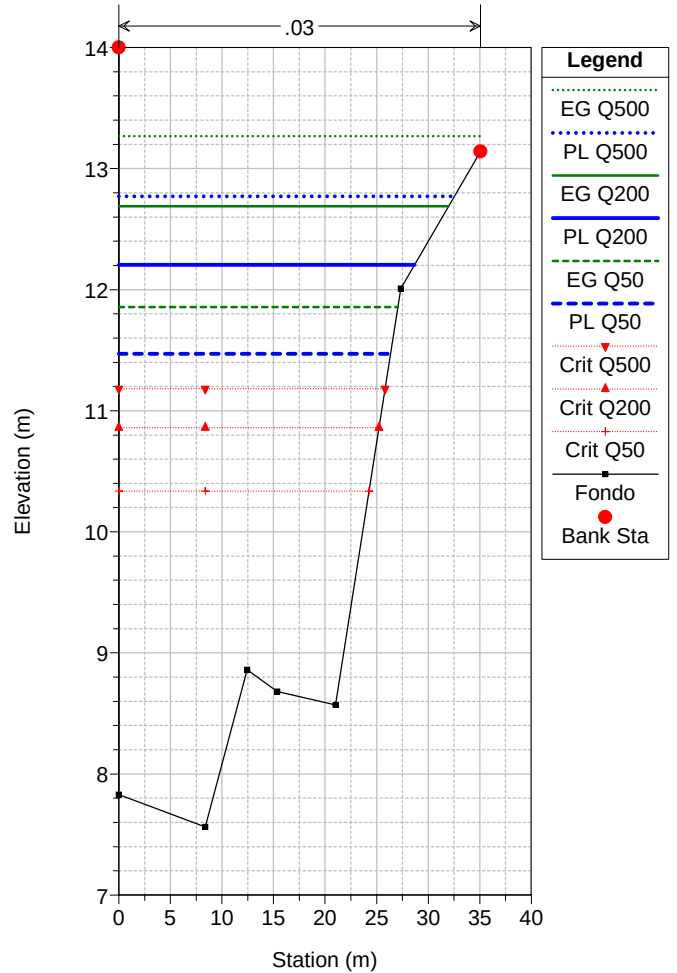
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-53

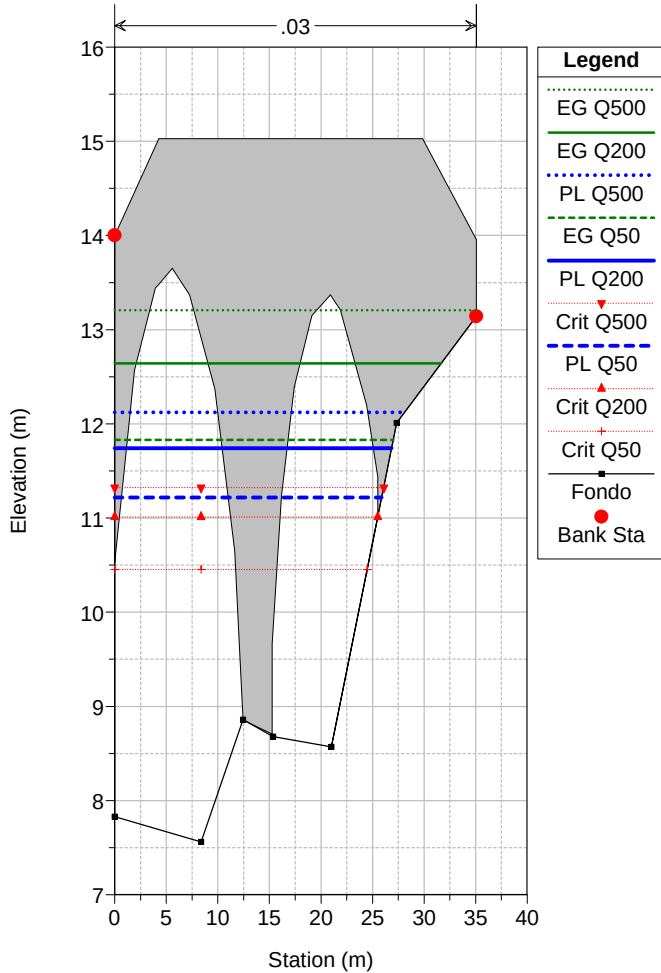


Torrente Sturla Plan: Stato attuale

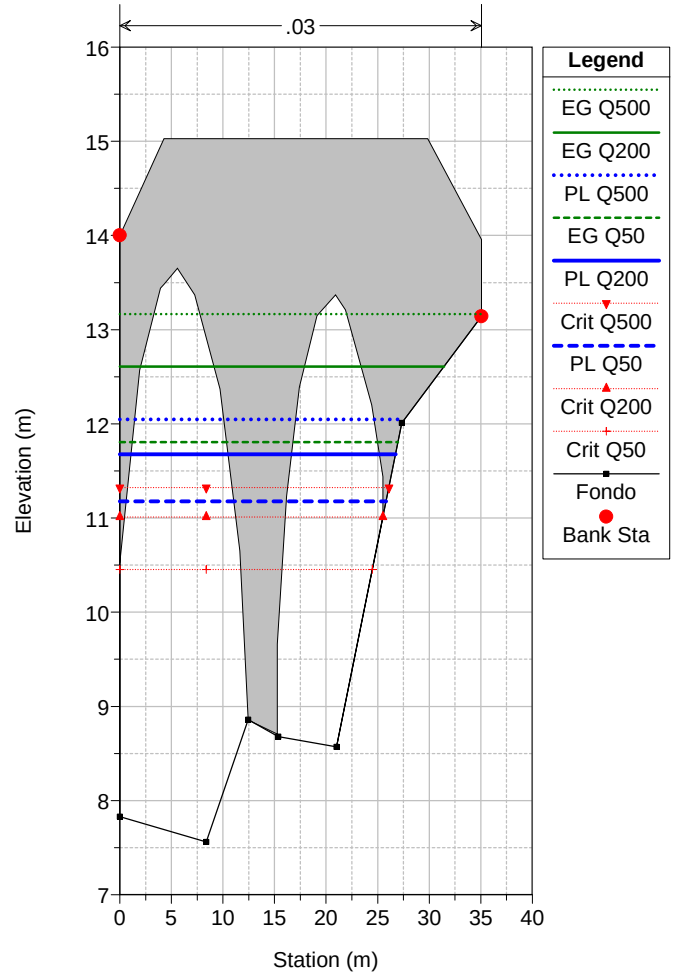
River = Sturla Reach = Sturla ST-52



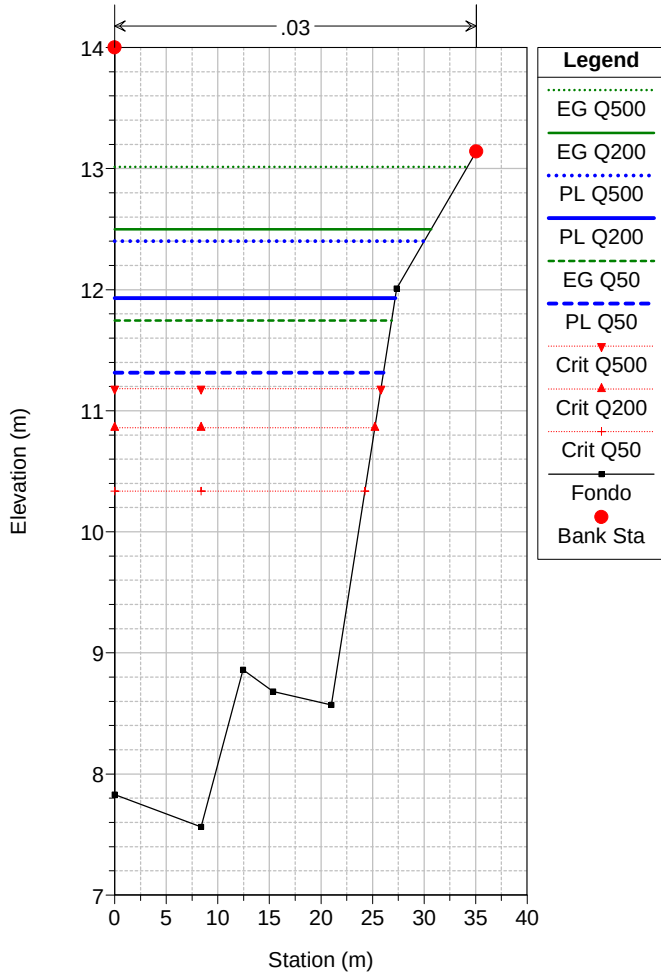
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ViadelleCasette



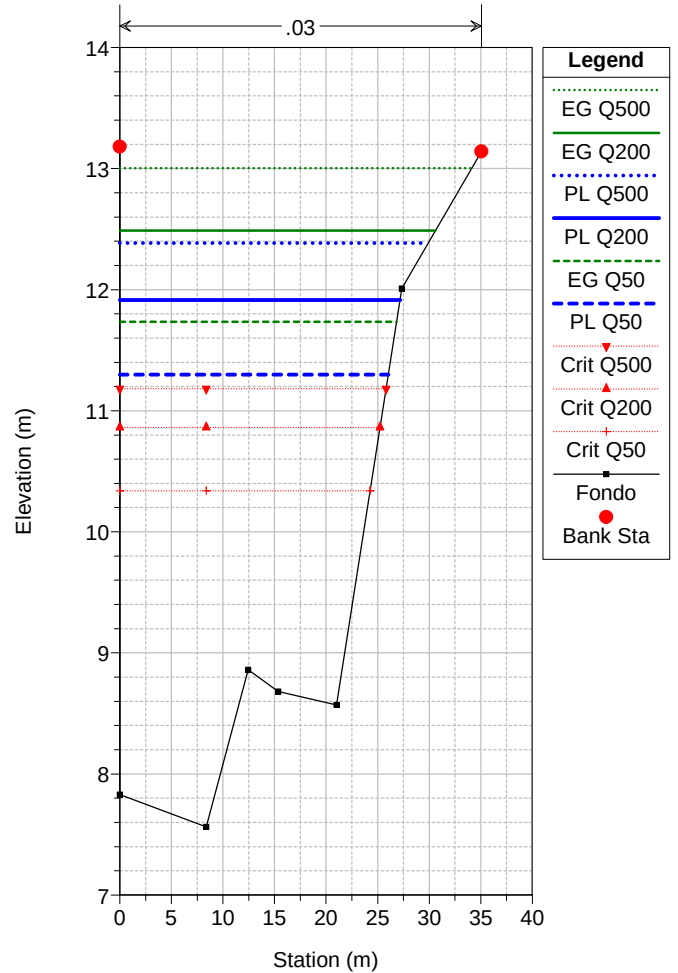
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ViadelleCasette



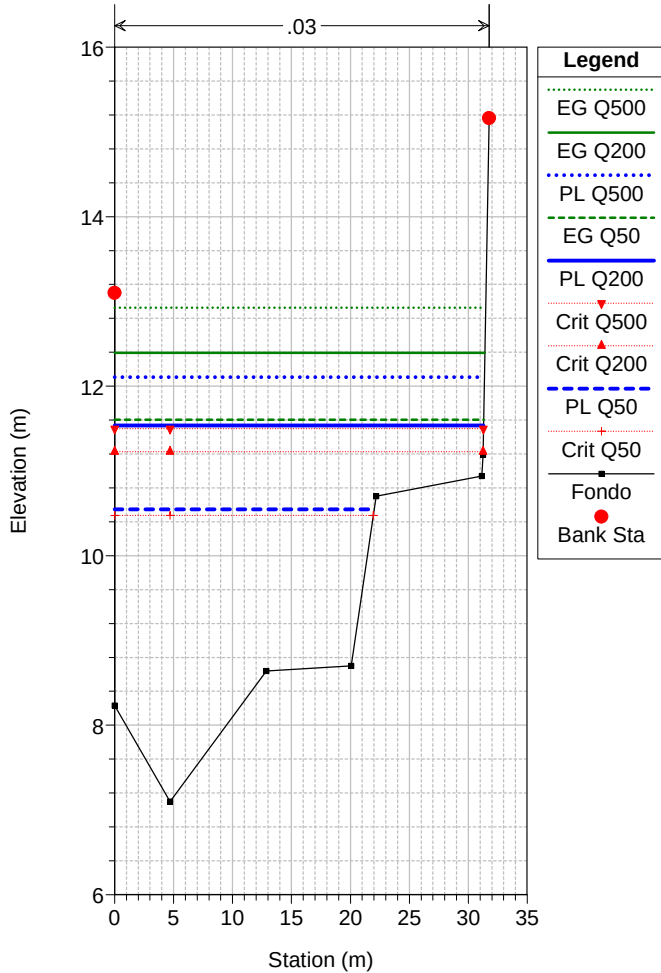
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-51



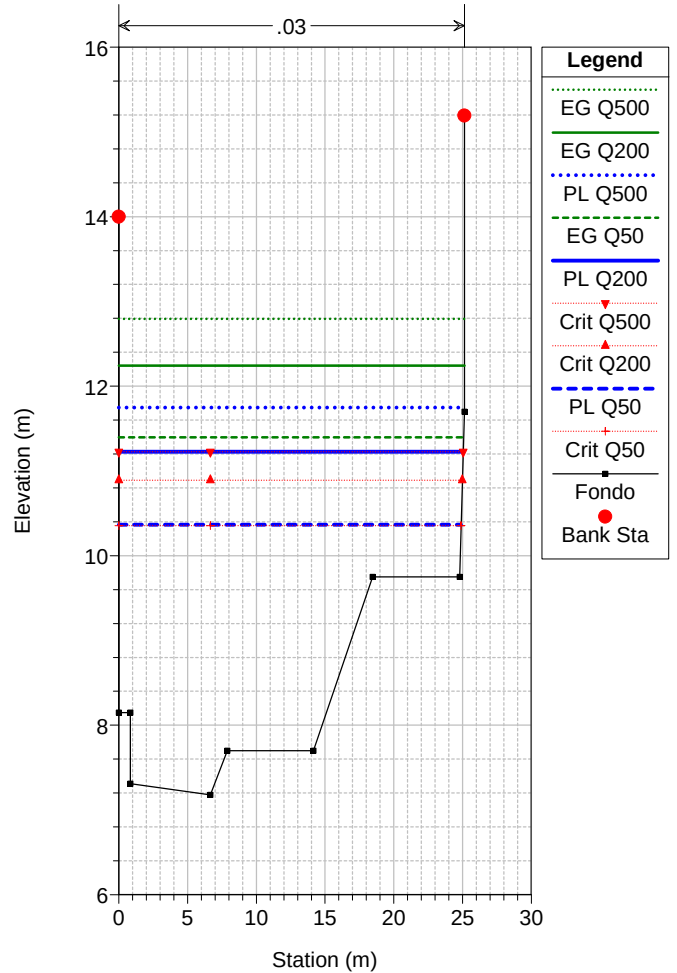
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-50



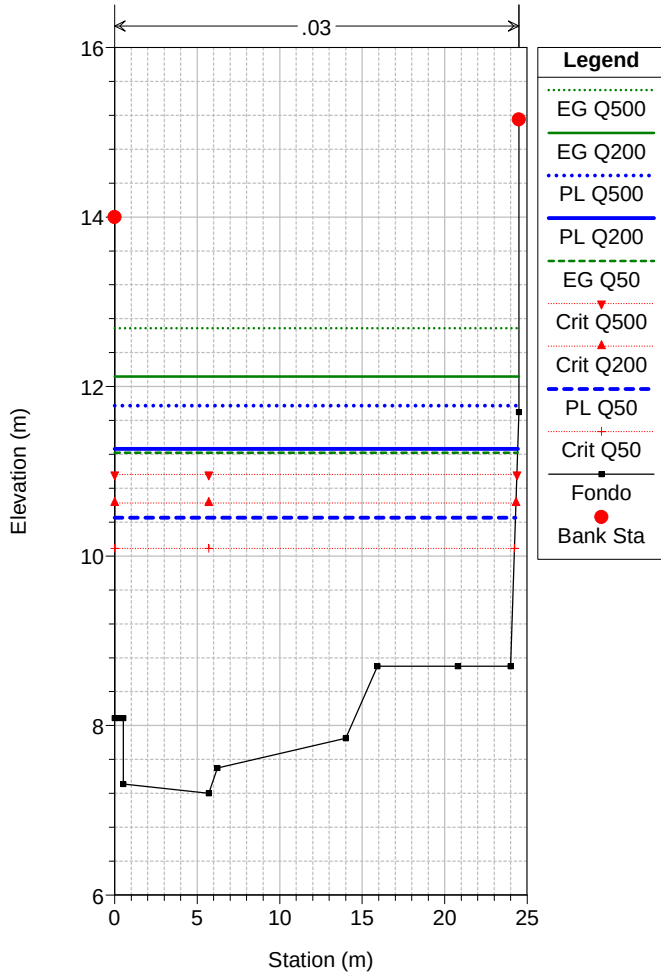
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-49



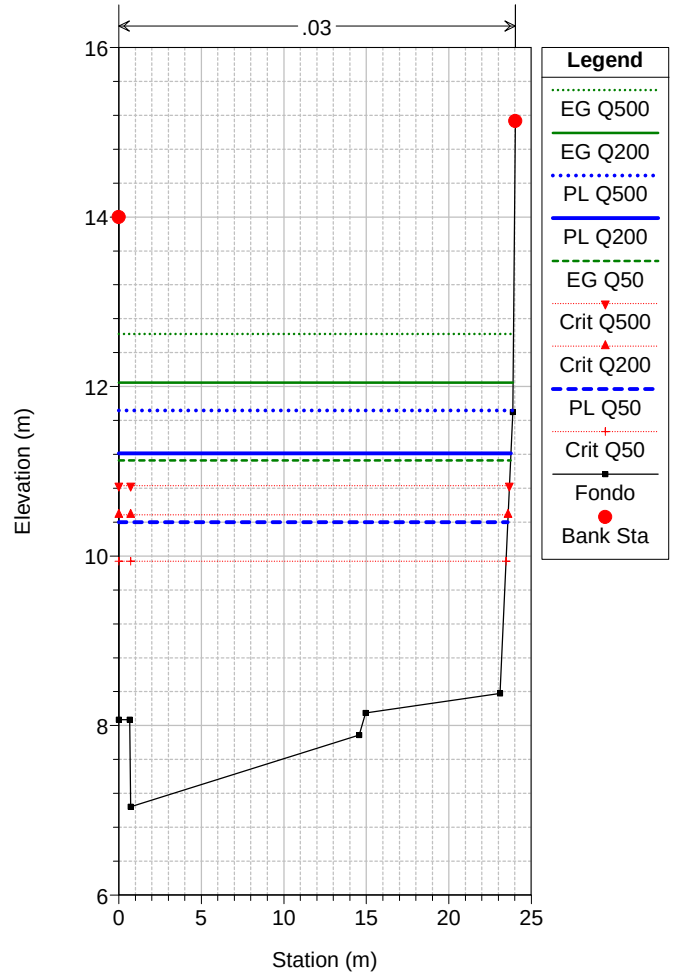
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-48



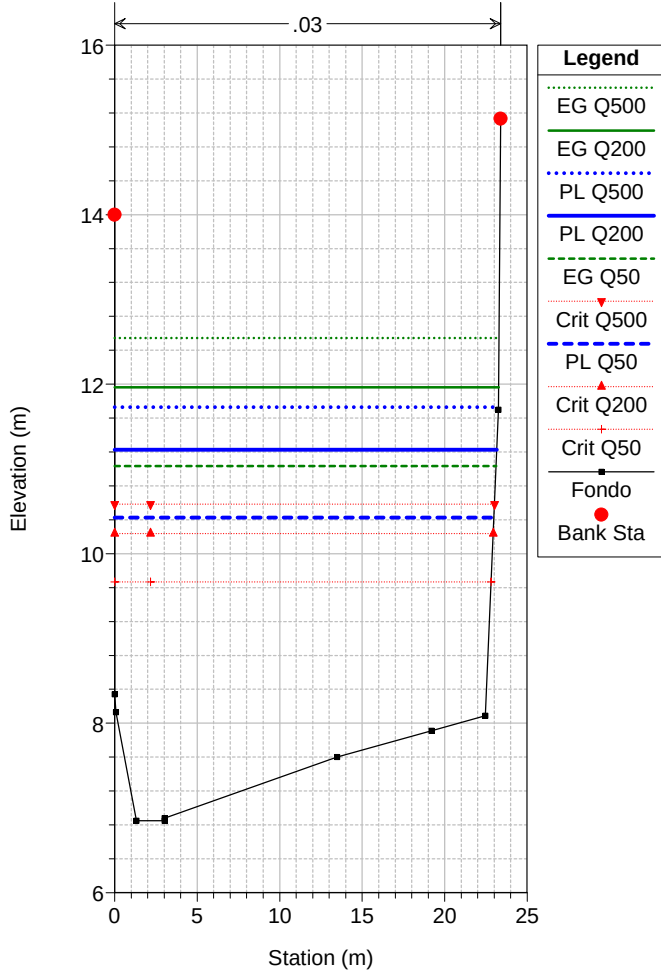
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-47



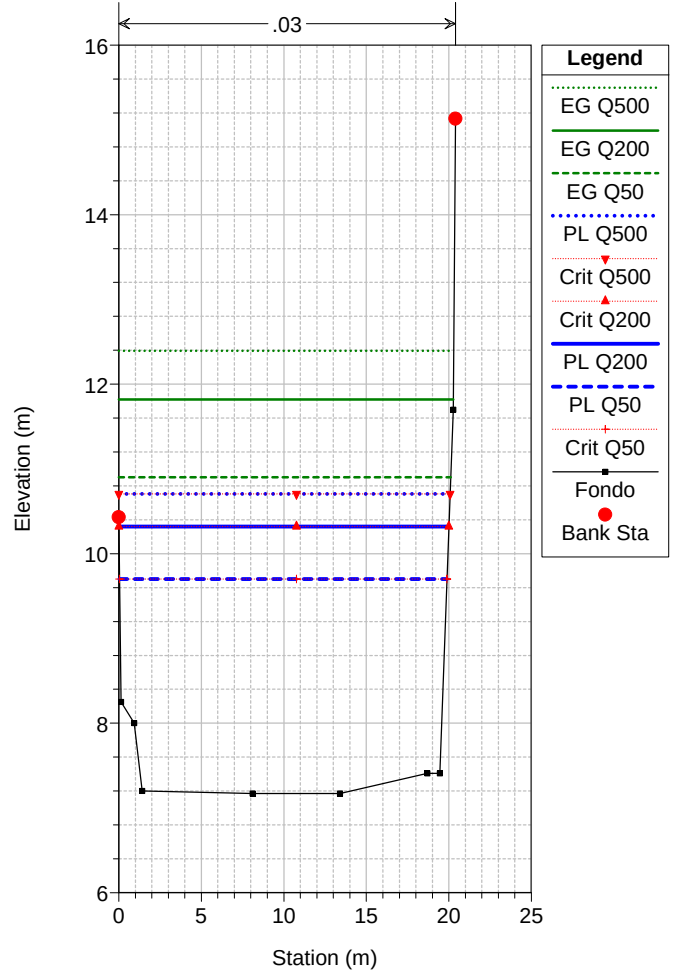
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-46



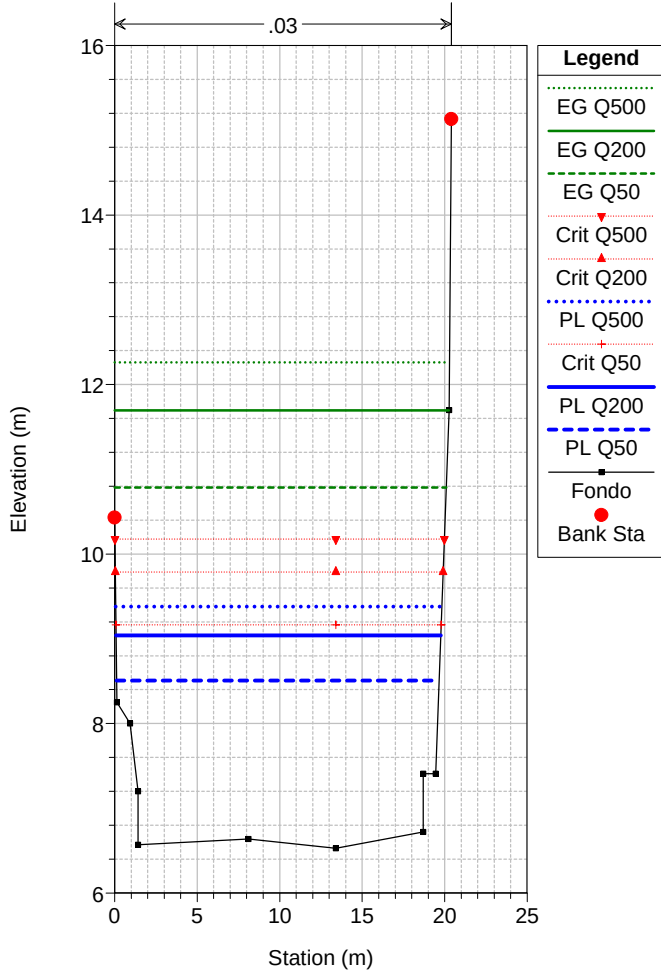
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-45



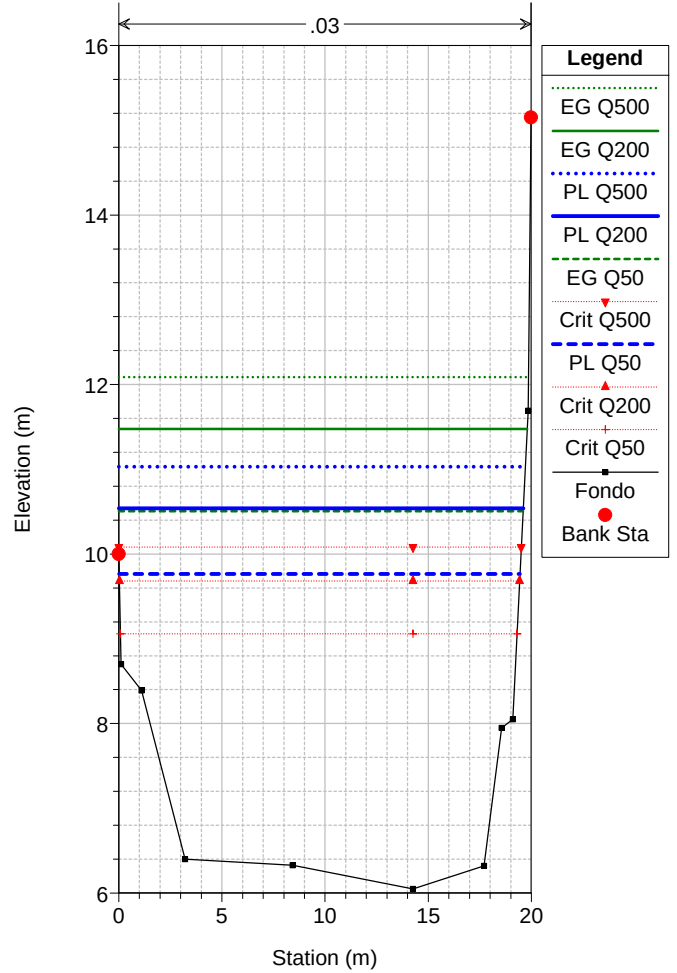
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-44



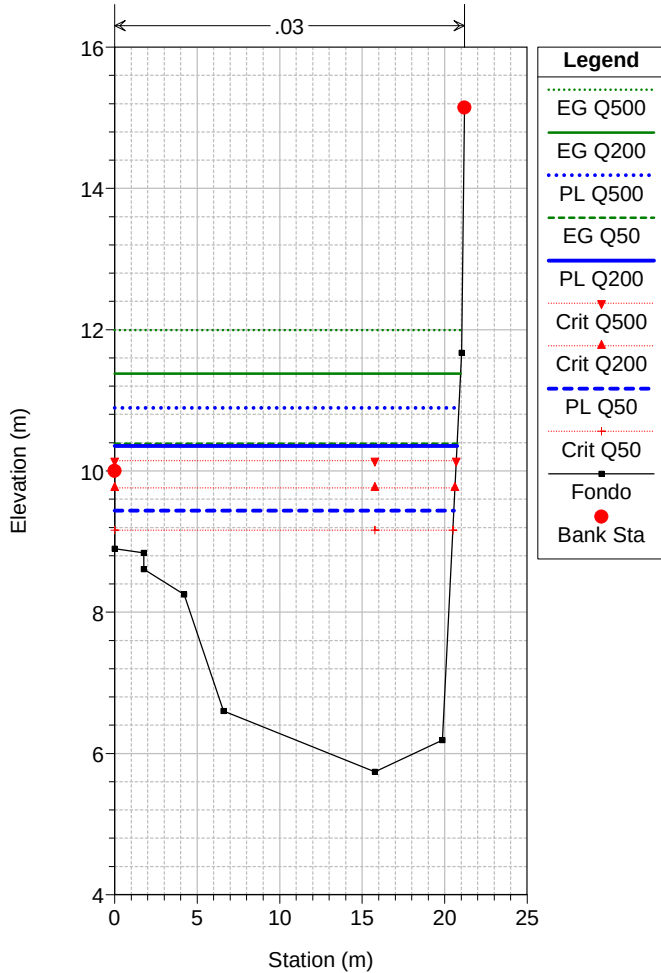
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-44



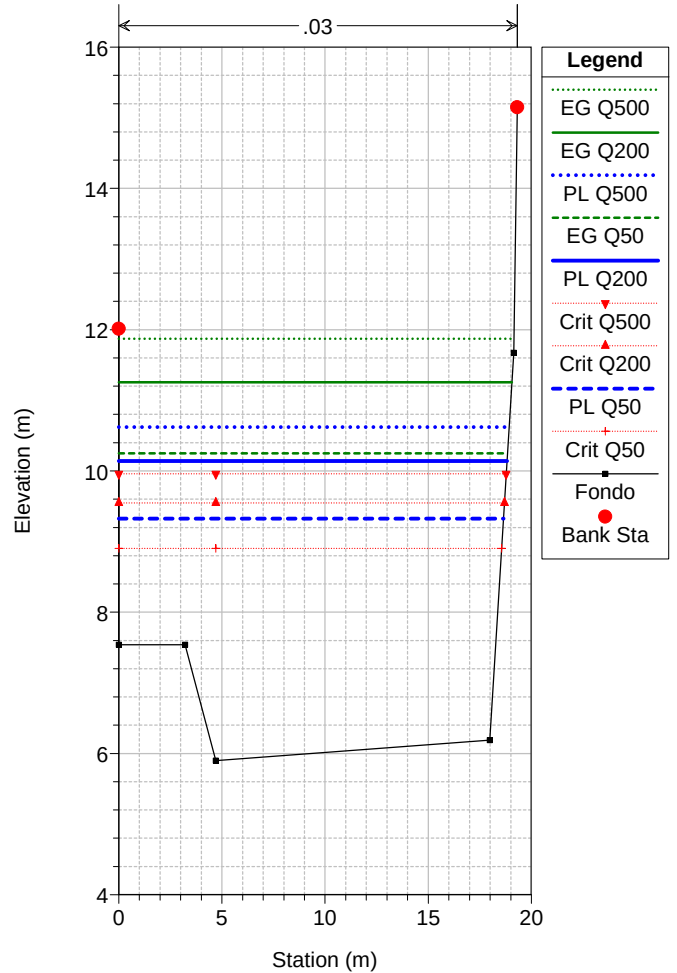
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-43



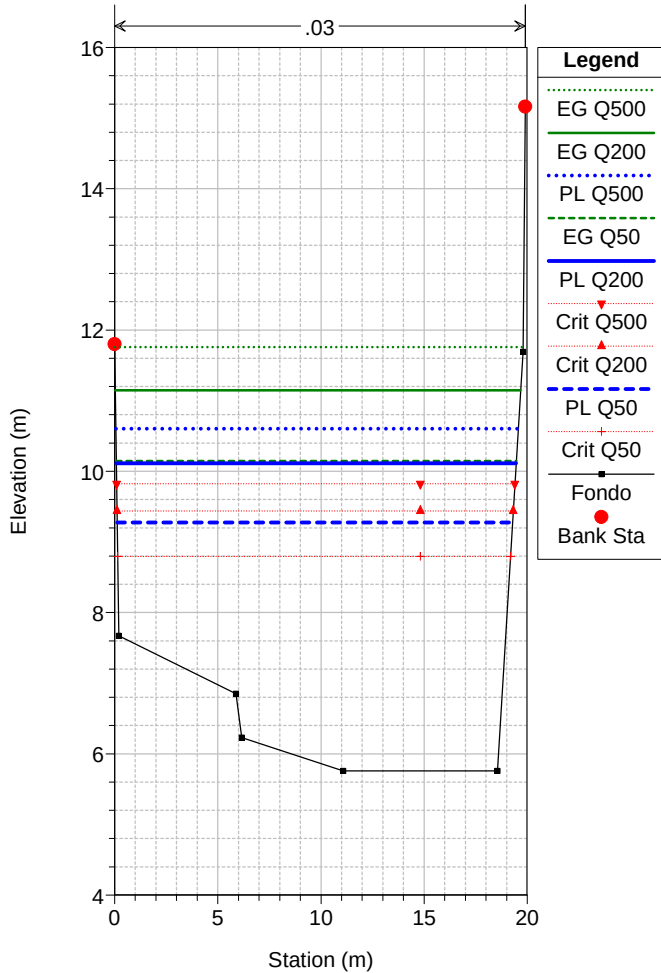
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-42



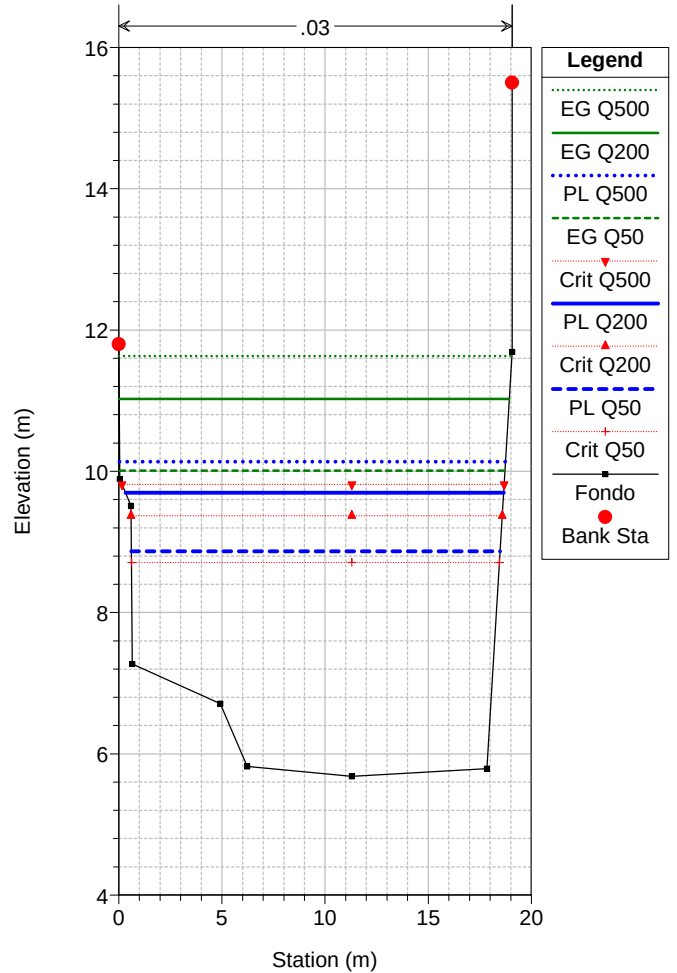
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-41



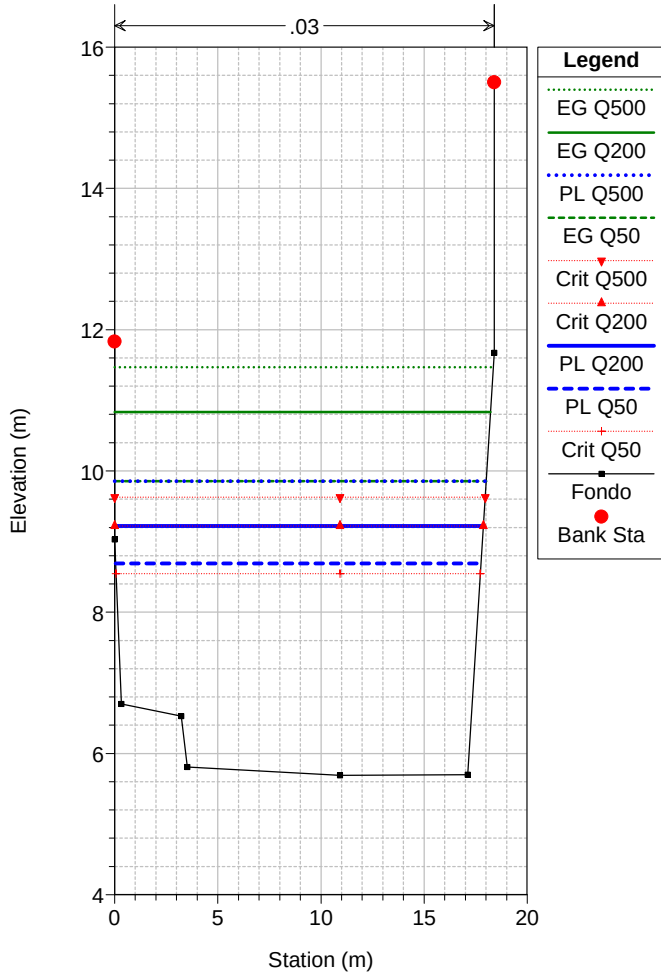
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-40



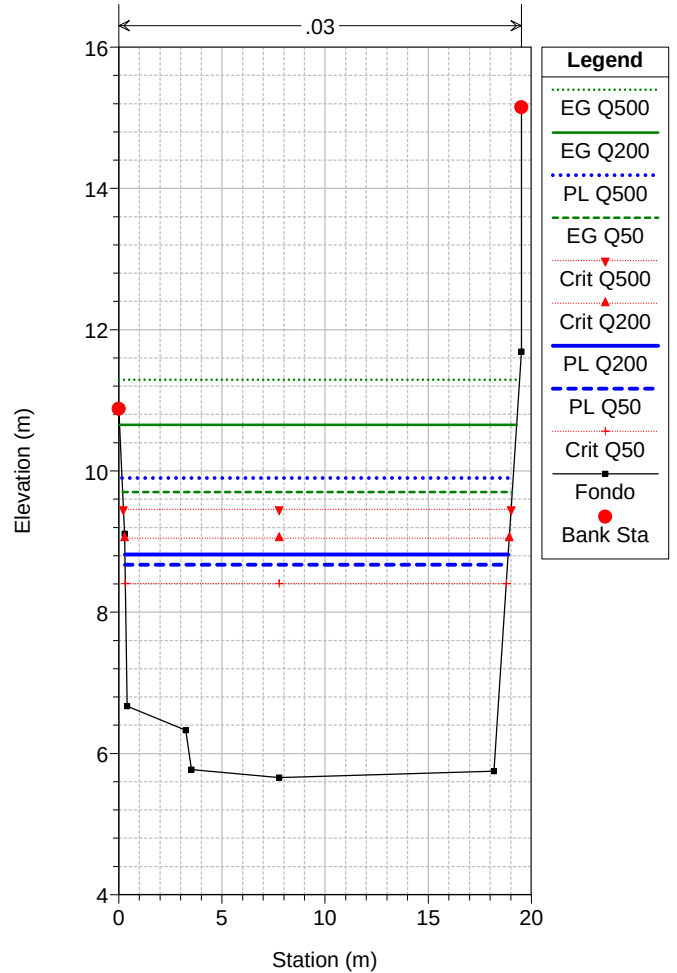
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-39



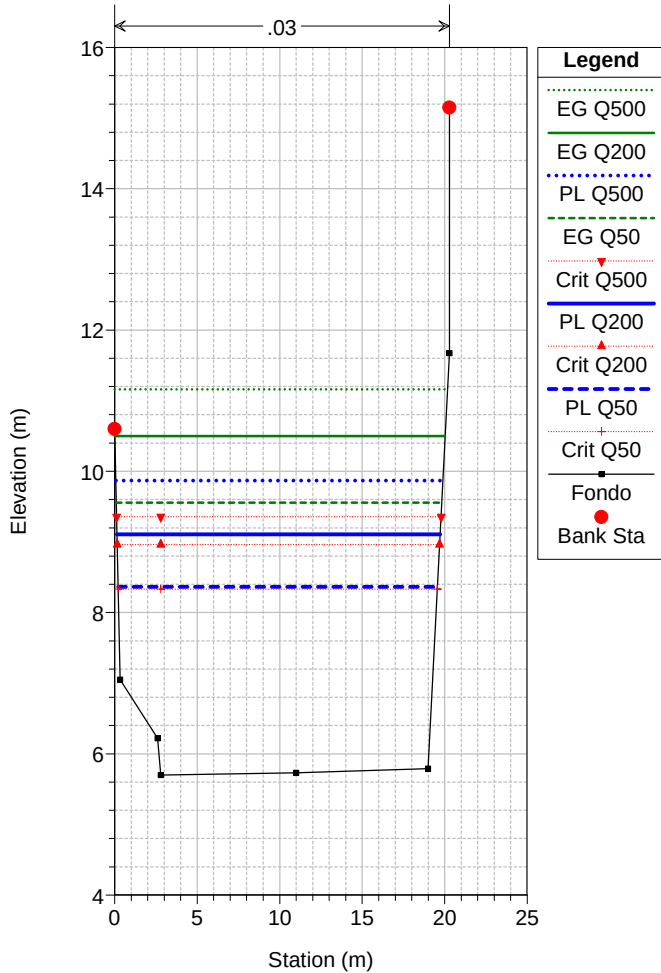
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-38



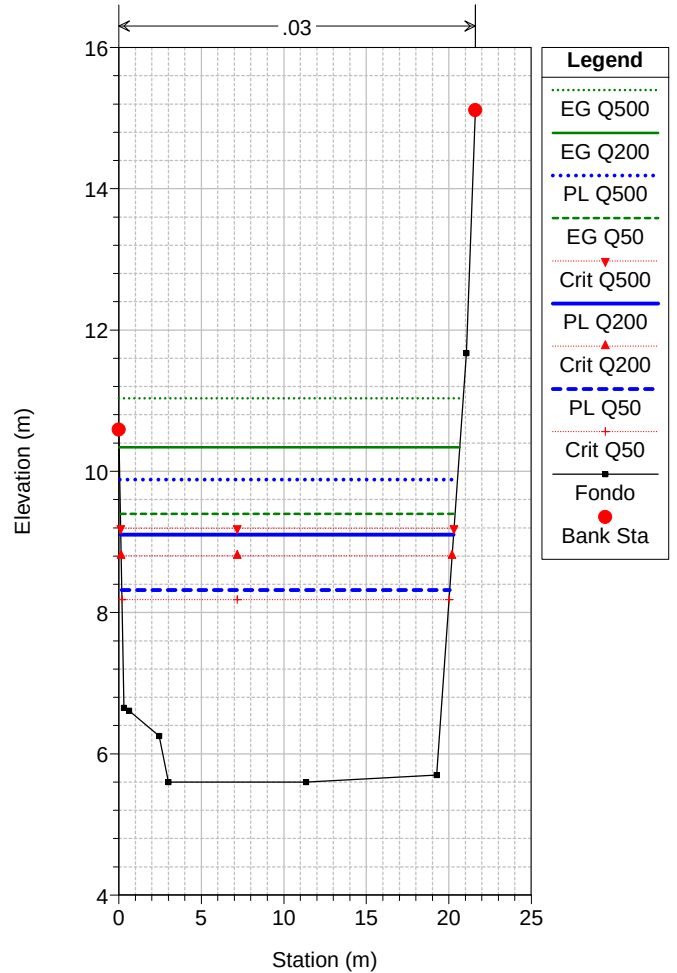
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-37



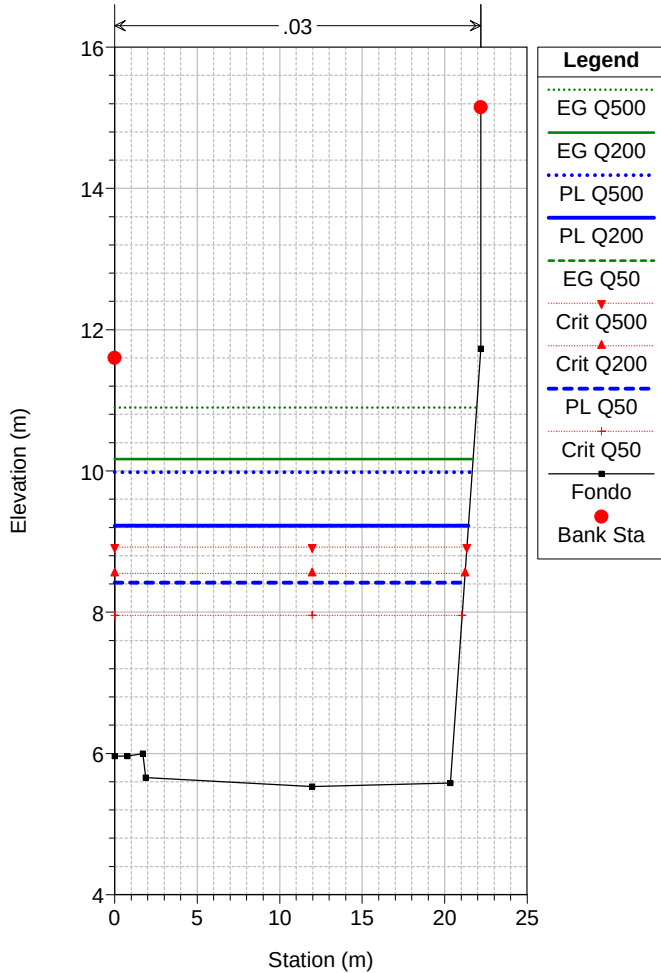
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-36



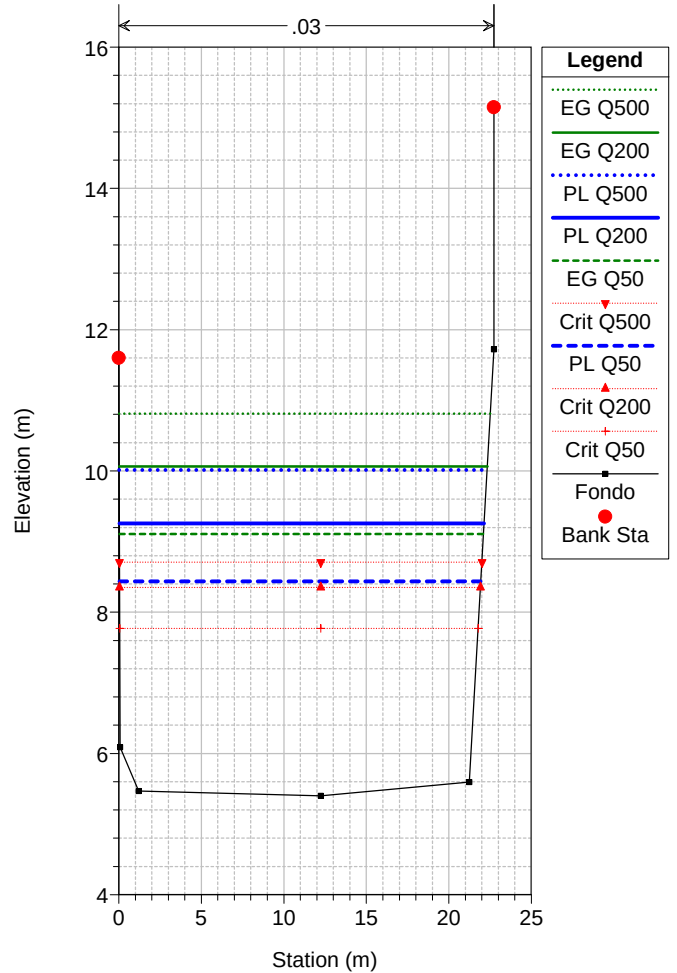
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-35



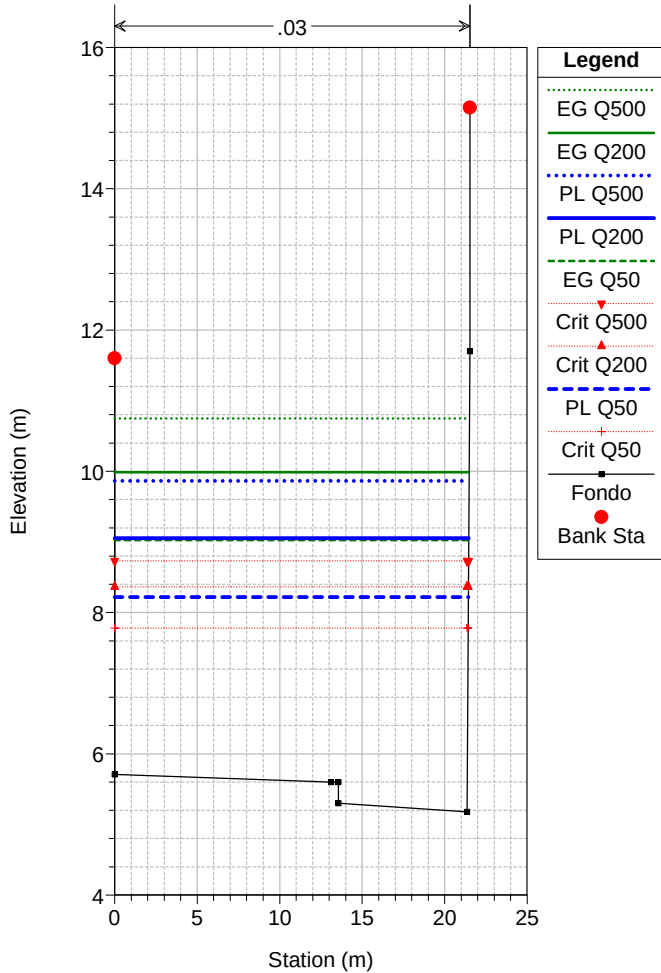
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-34



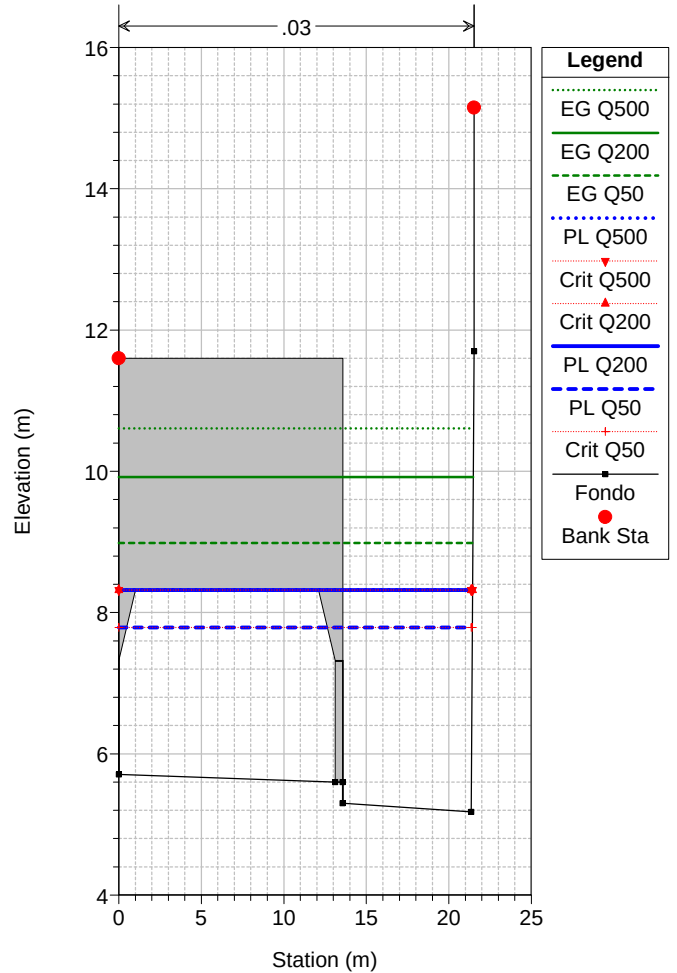
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-33



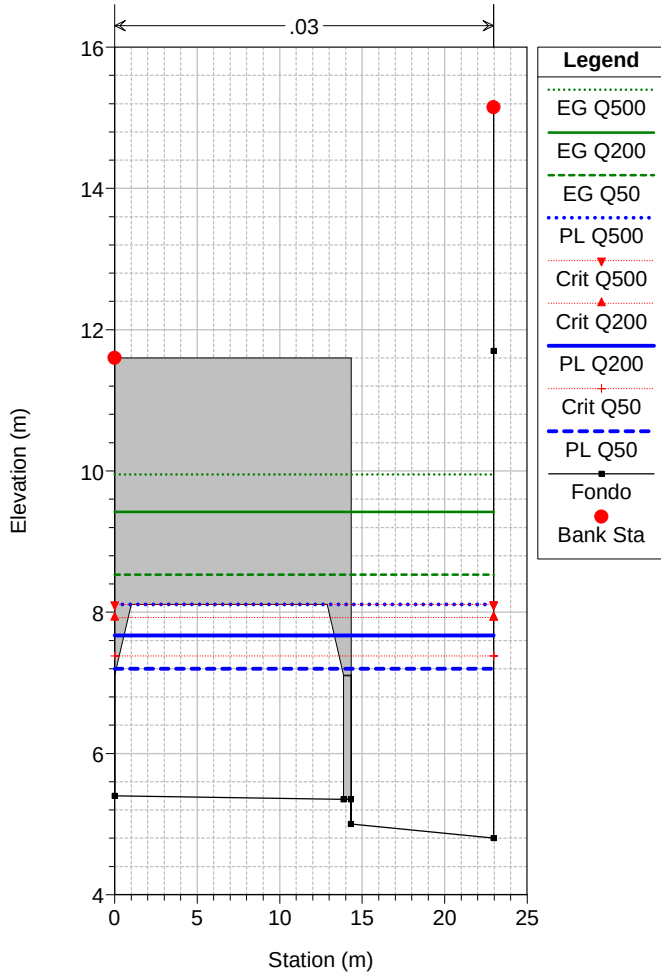
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-32



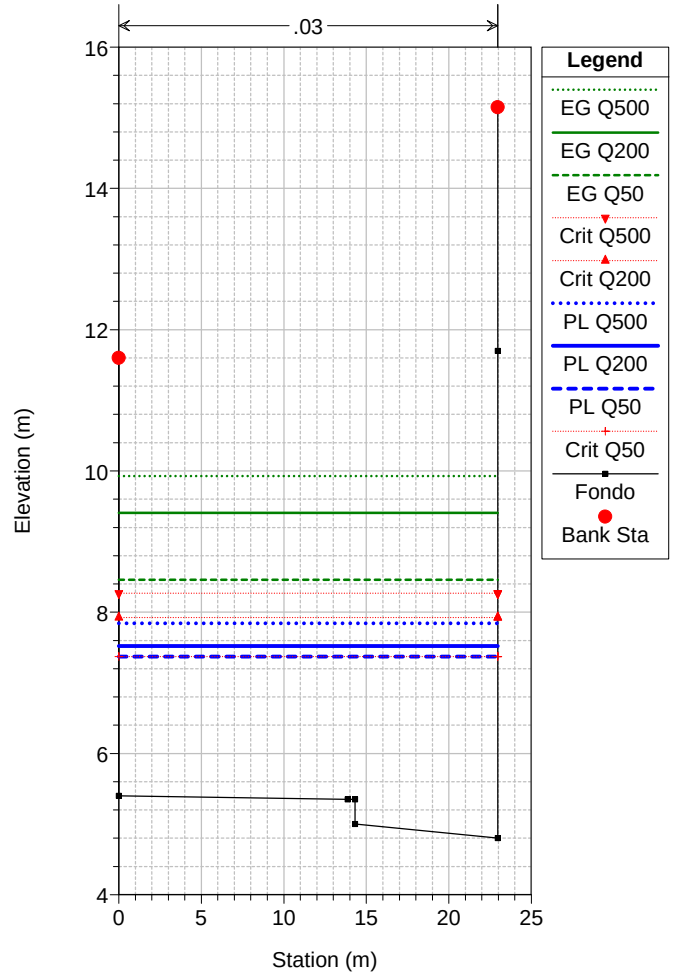
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ex Sutter



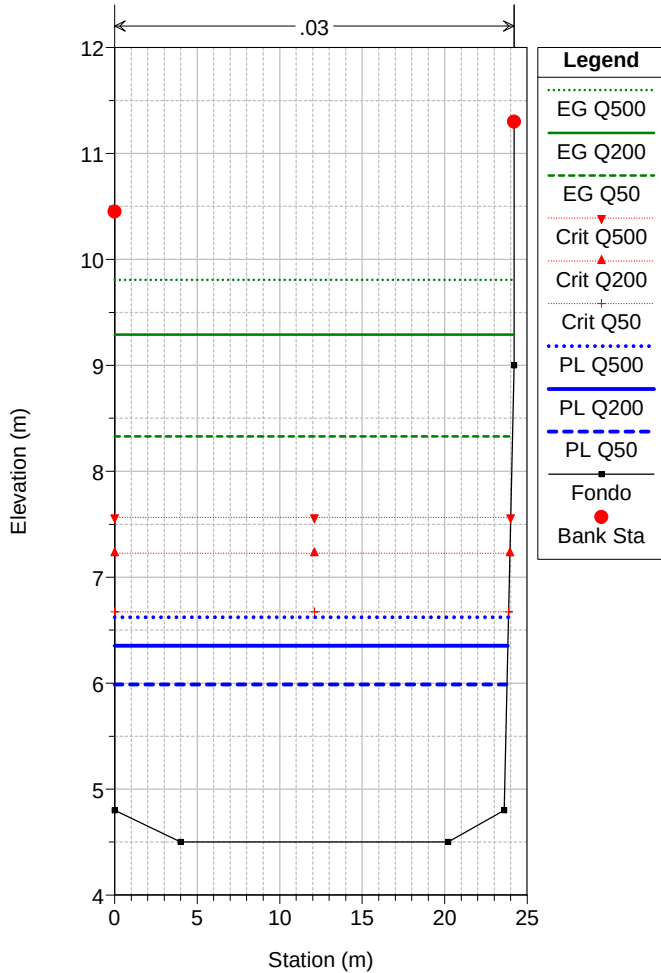
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ex Sutter



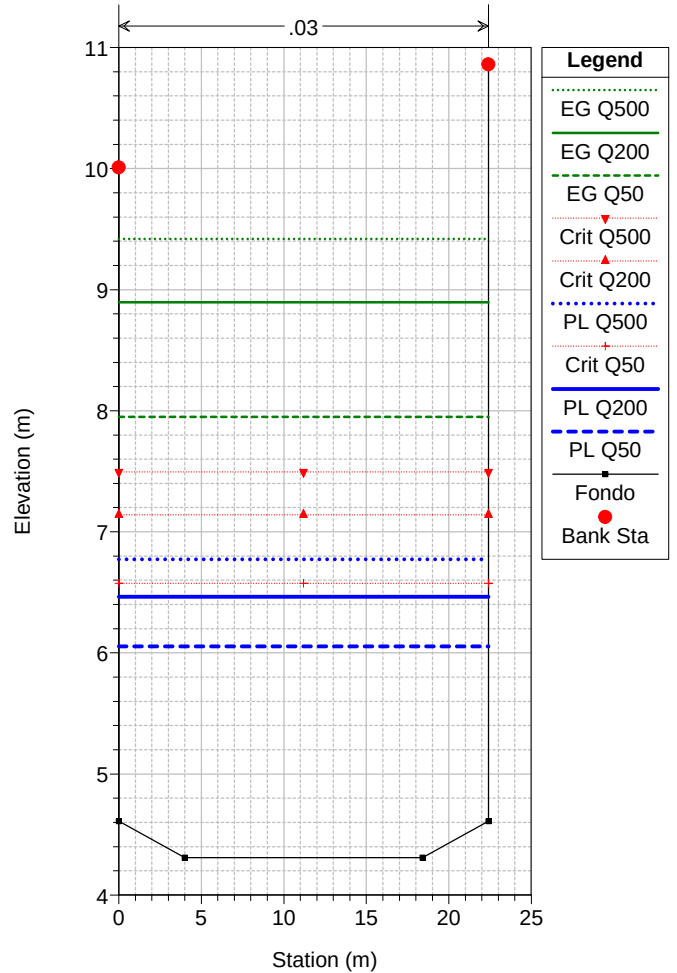
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-31



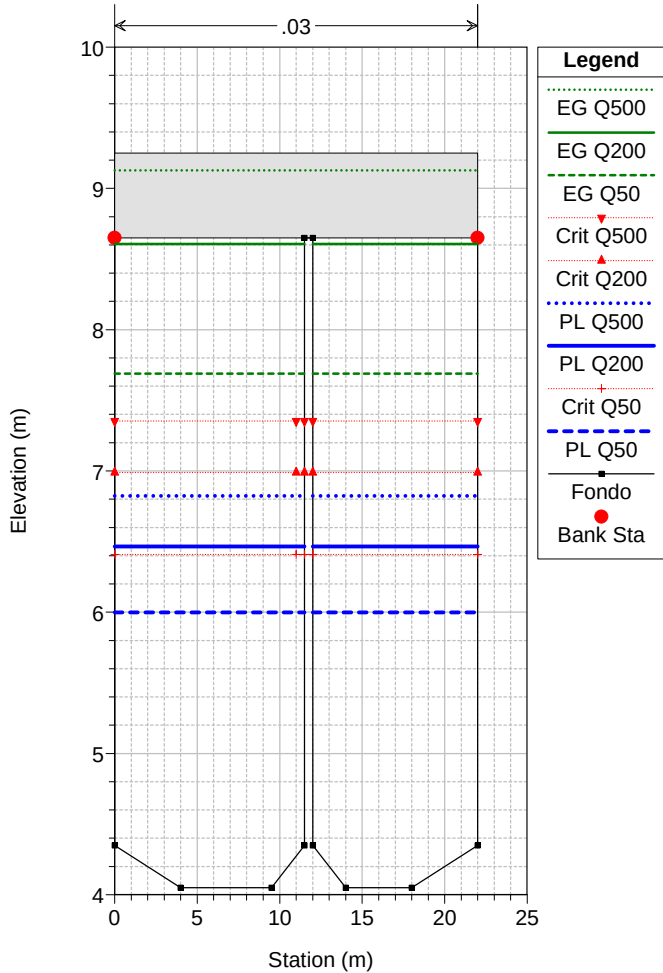
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-31



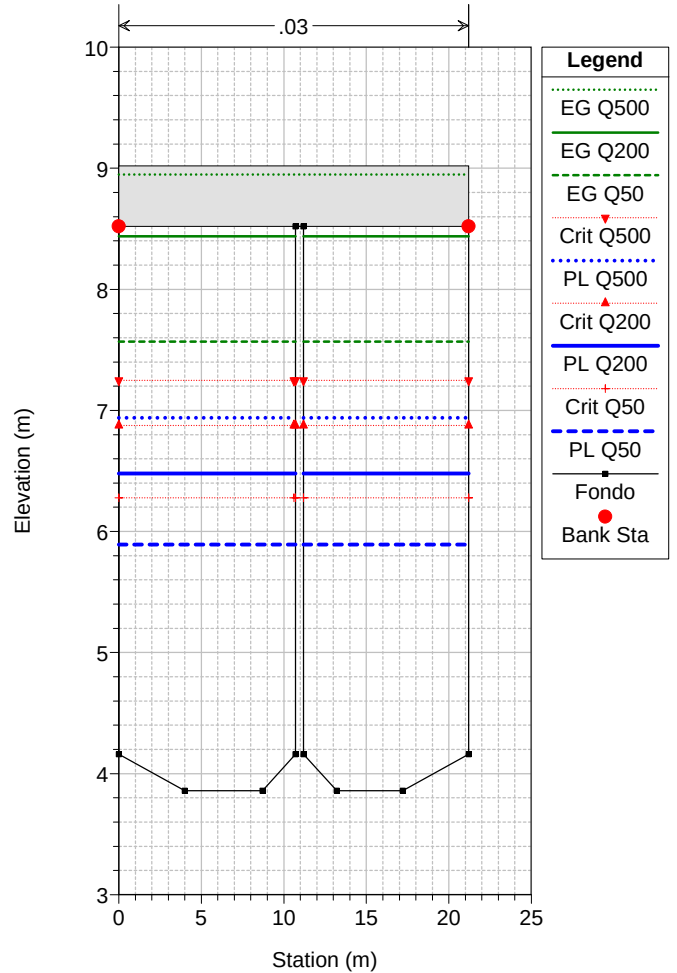
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-30



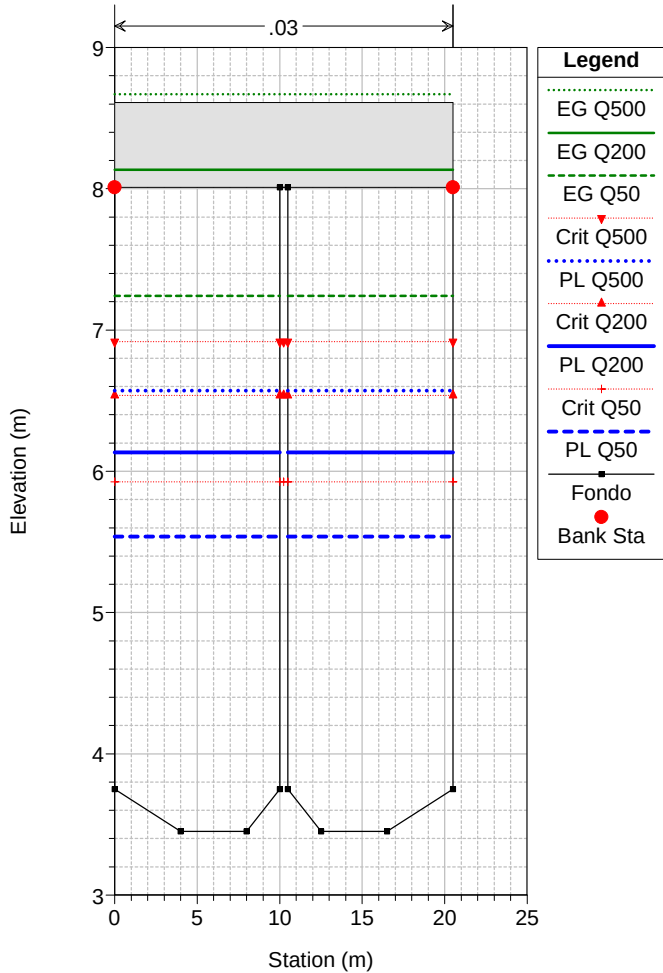
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-29



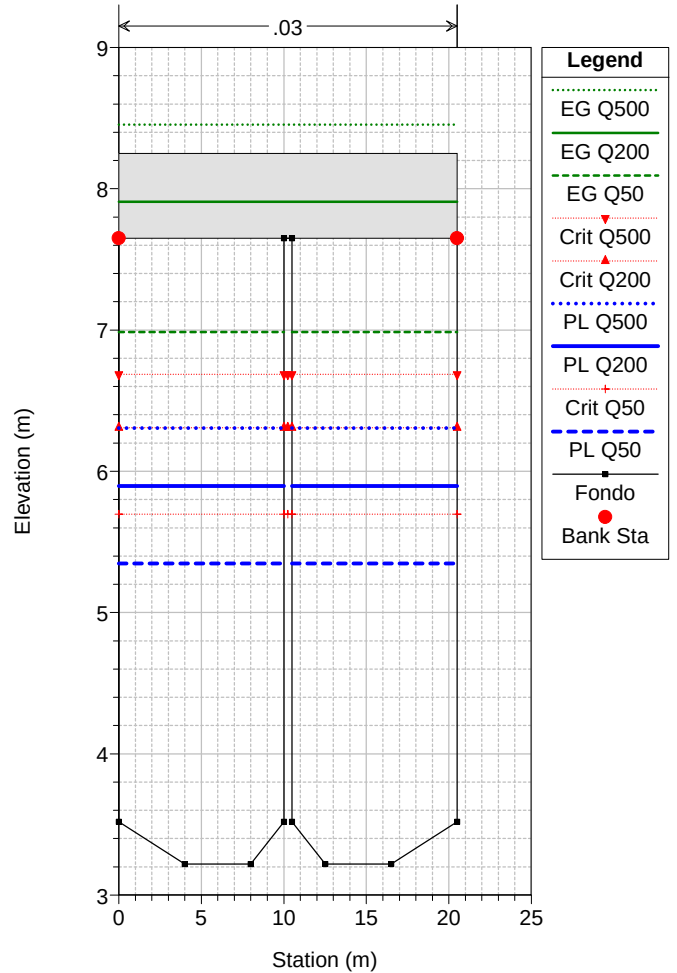
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-28



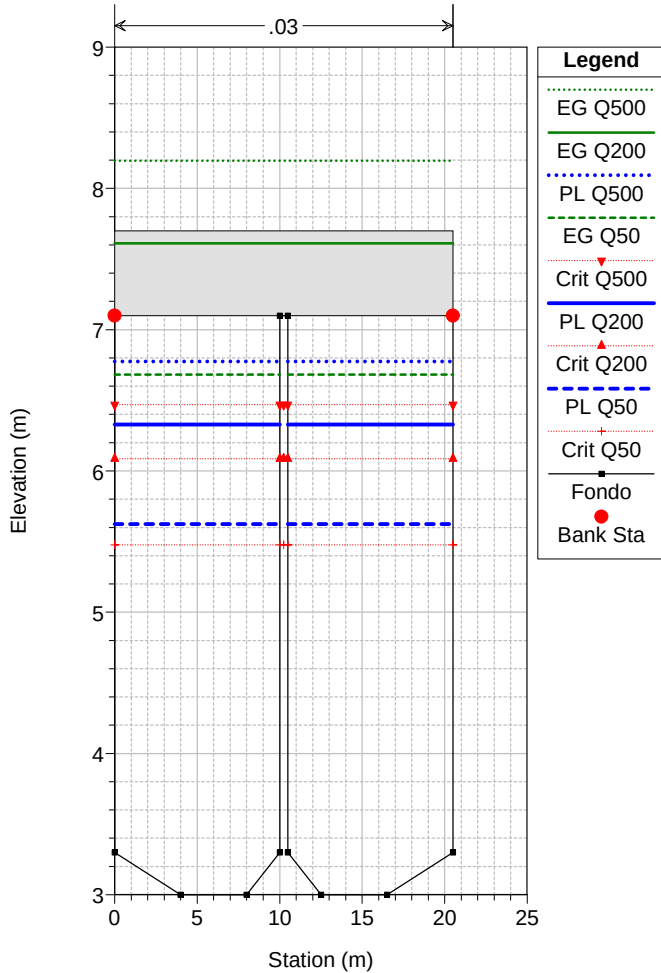
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-27



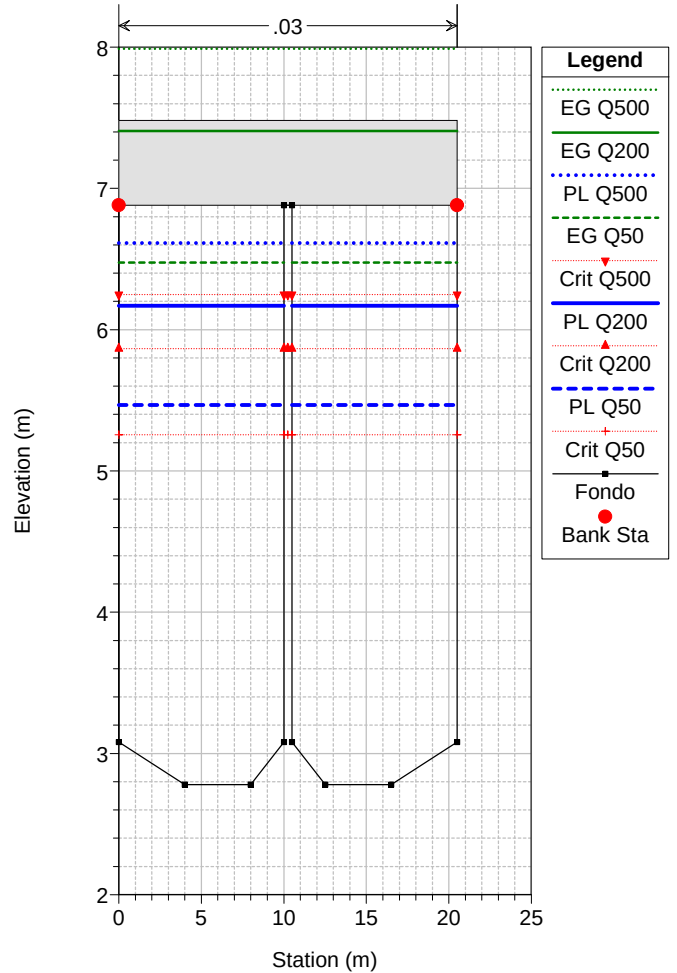
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-26



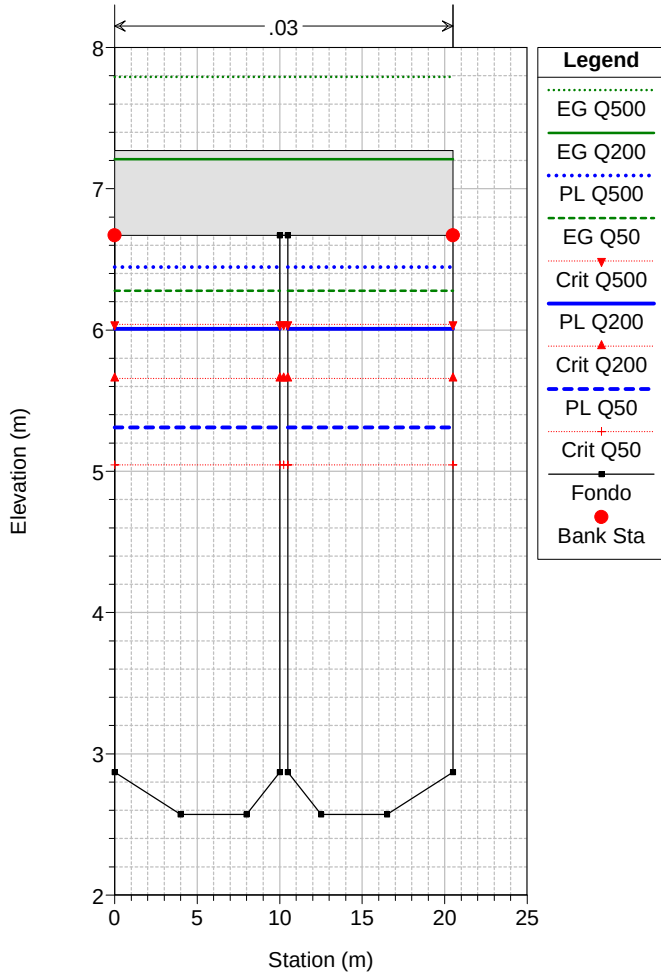
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-25



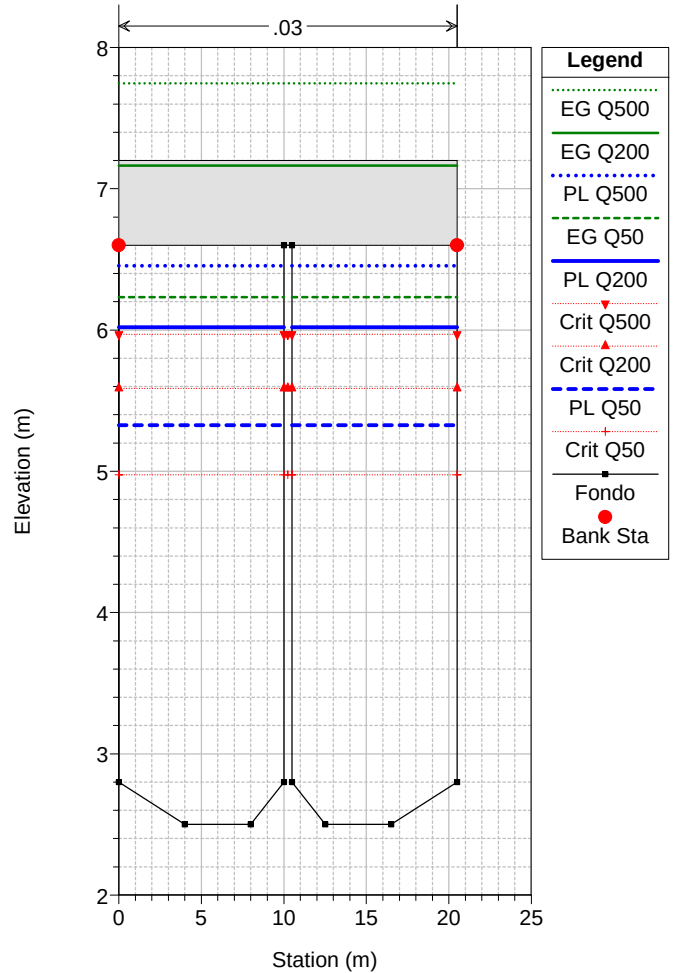
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-24



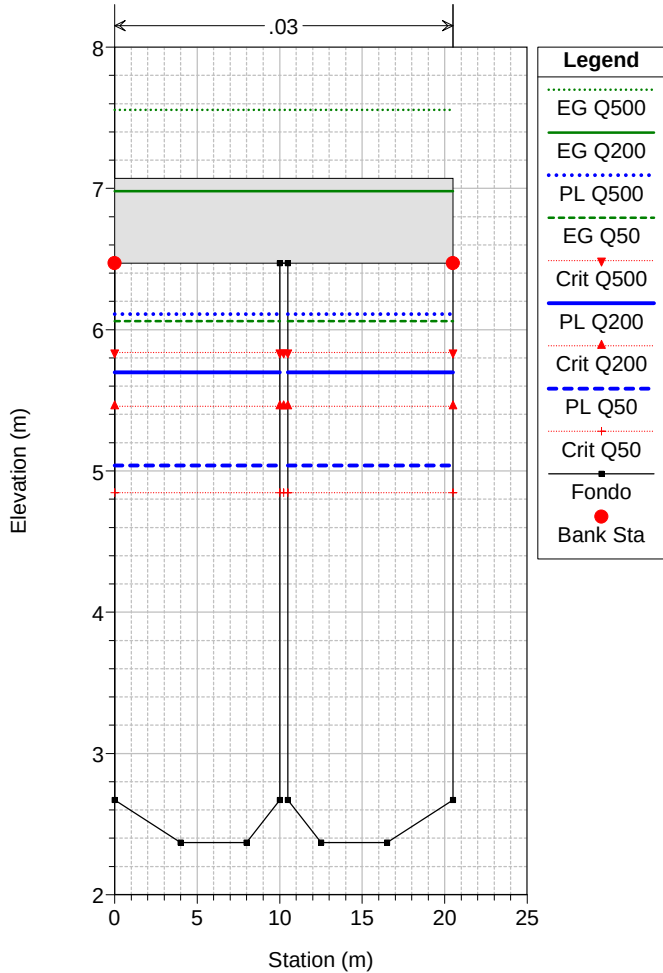
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-23



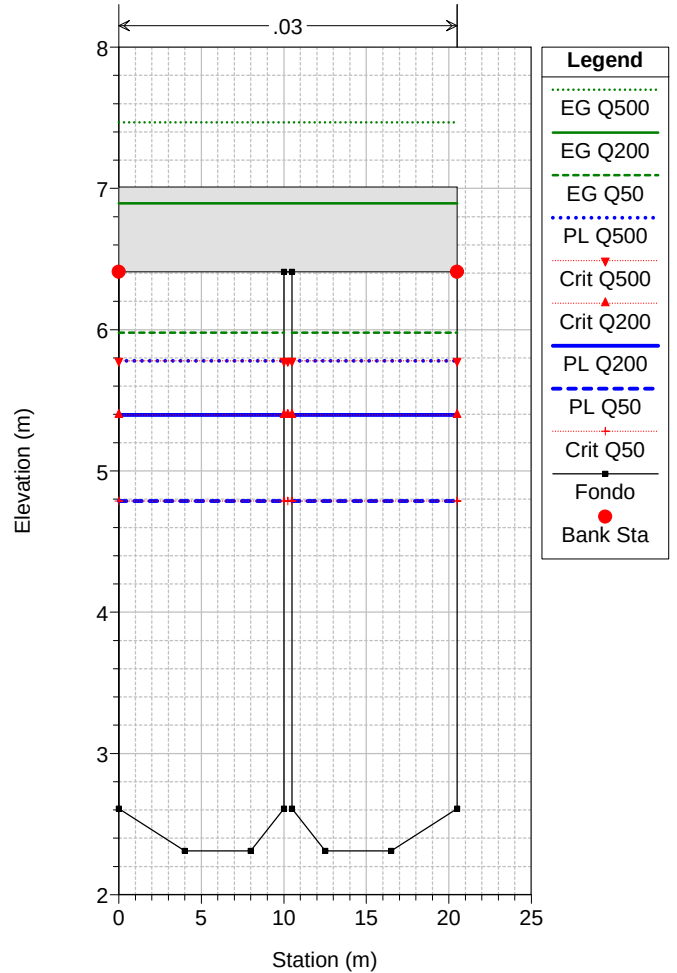
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-22



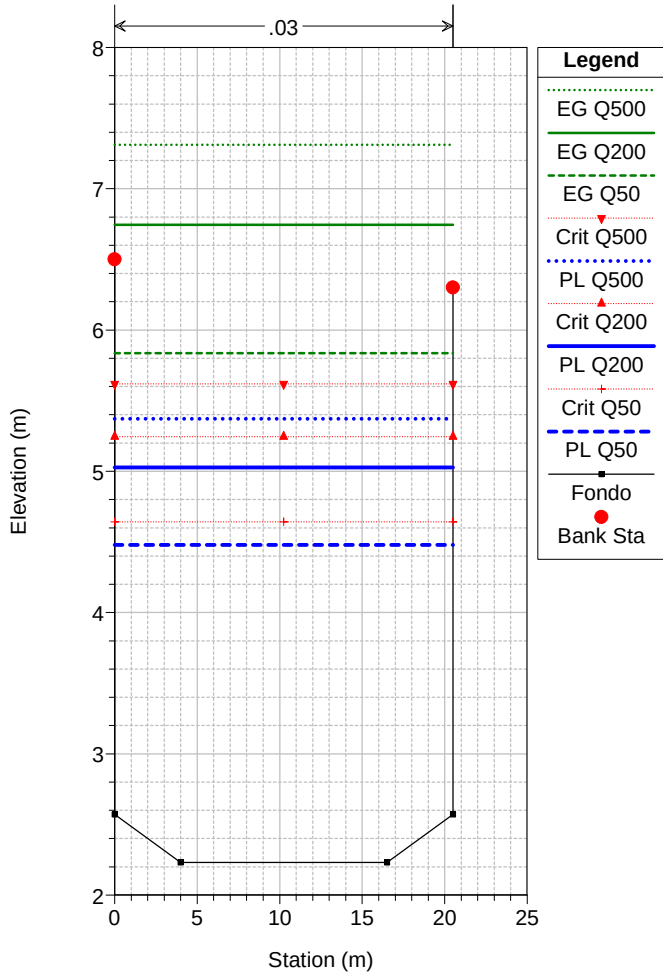
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-21



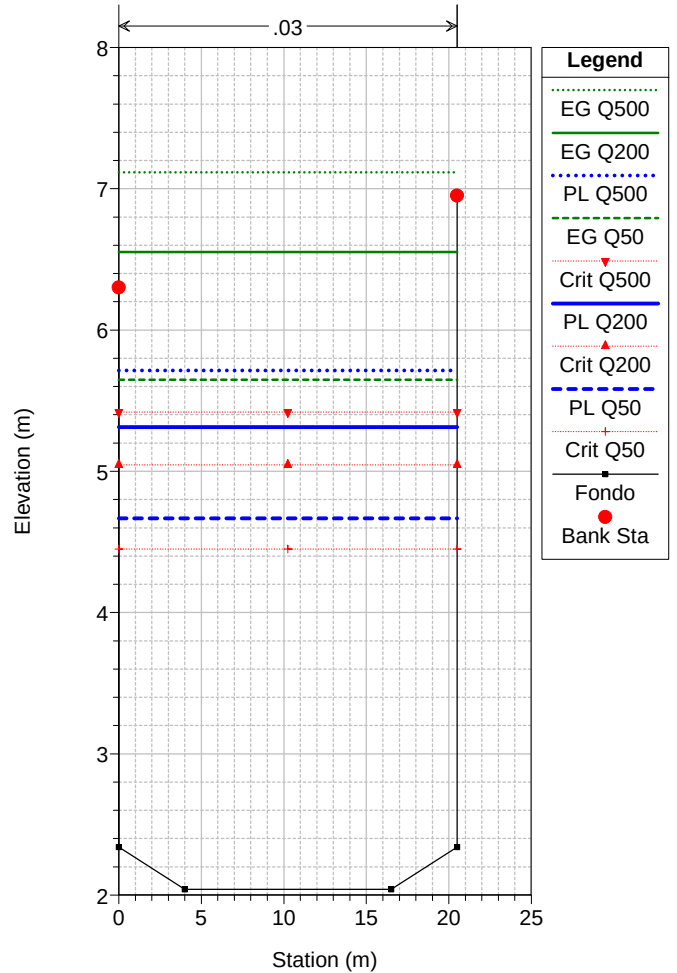
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-20



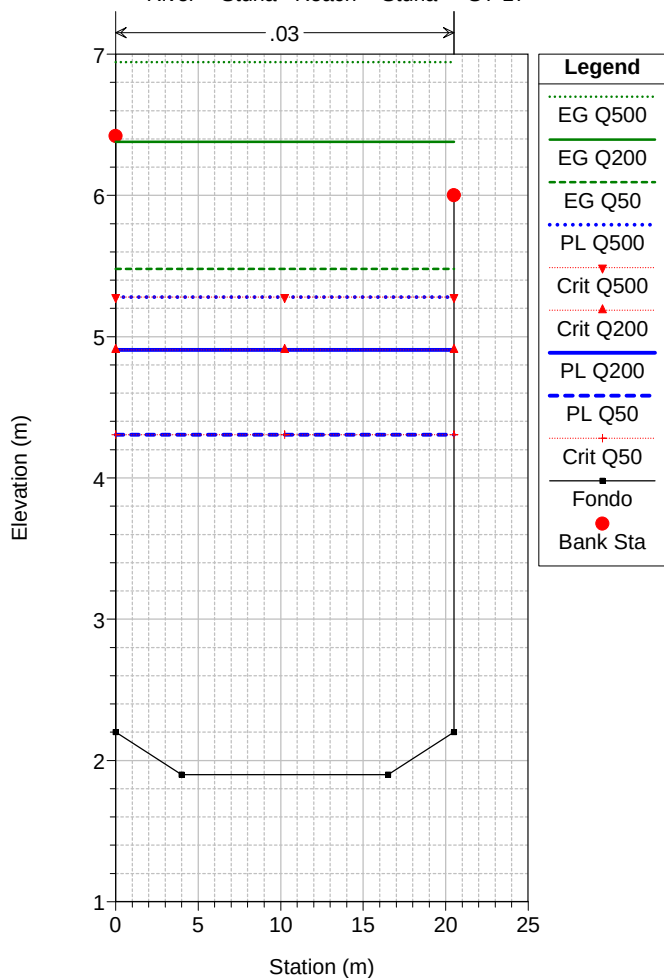
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-19



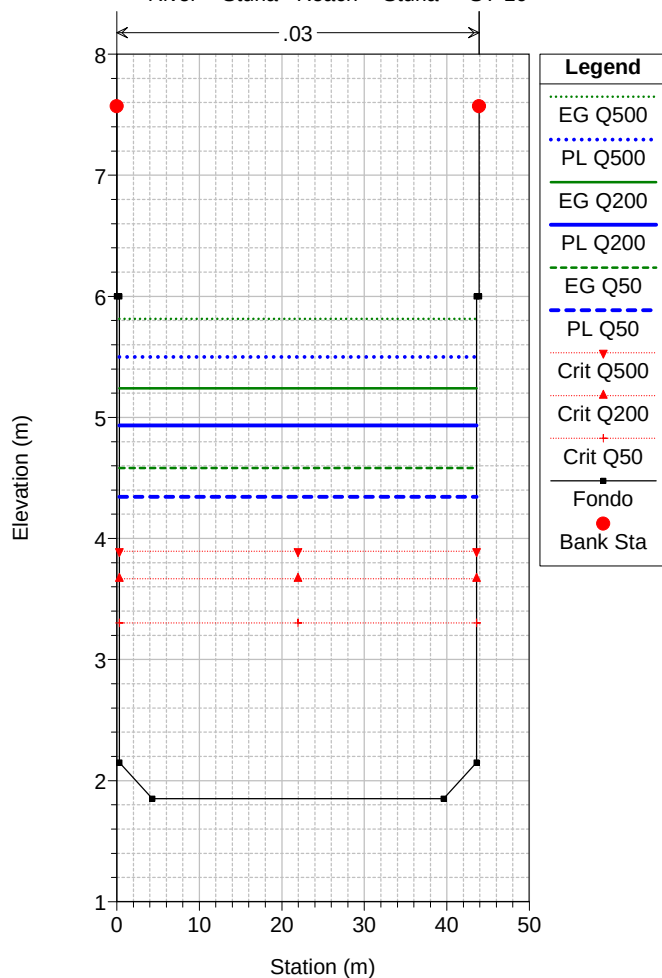
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-18



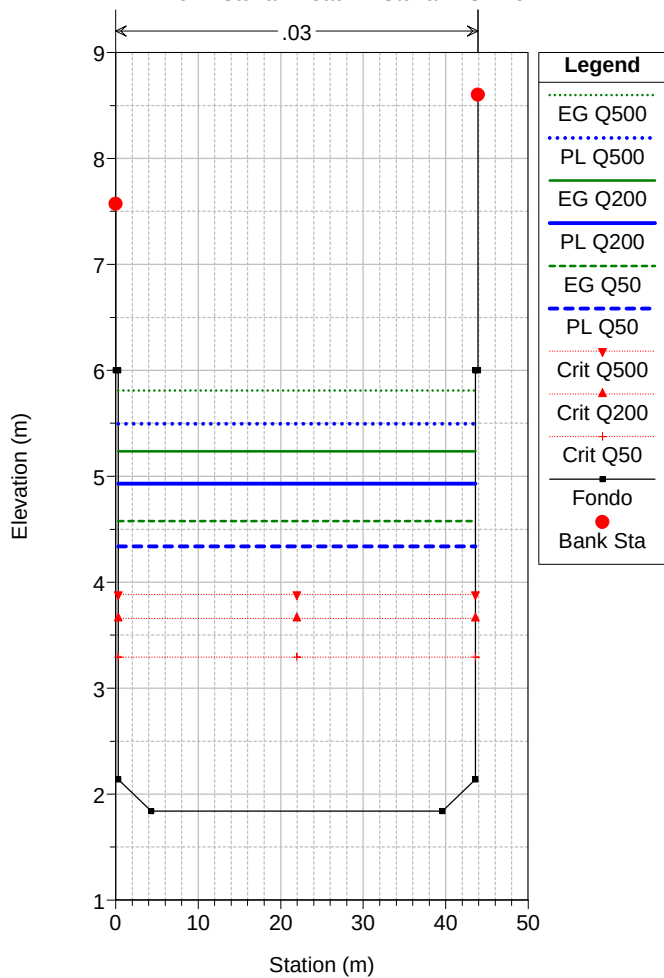
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-17



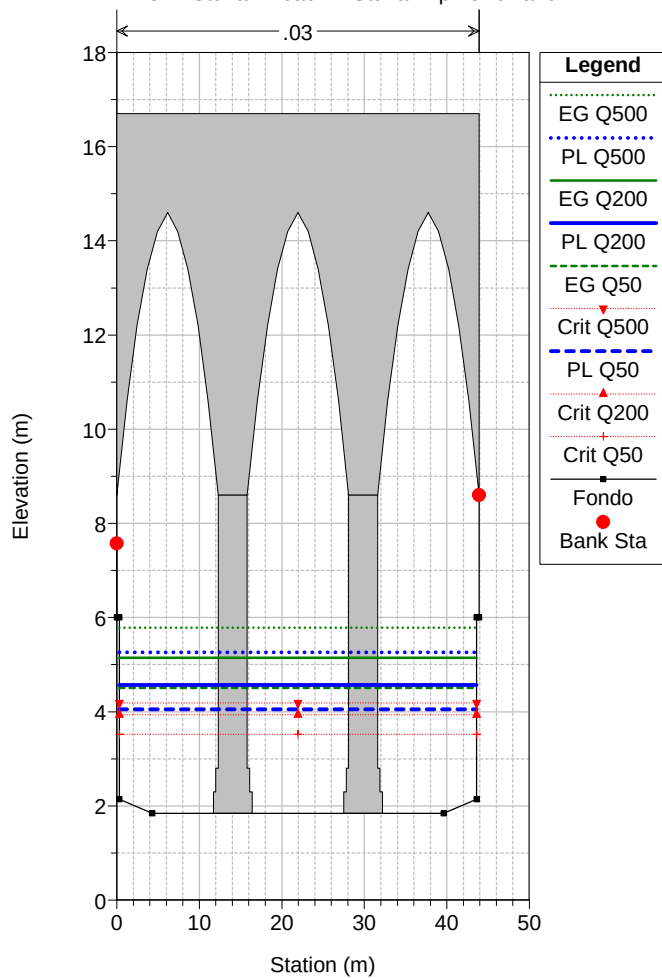
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-16

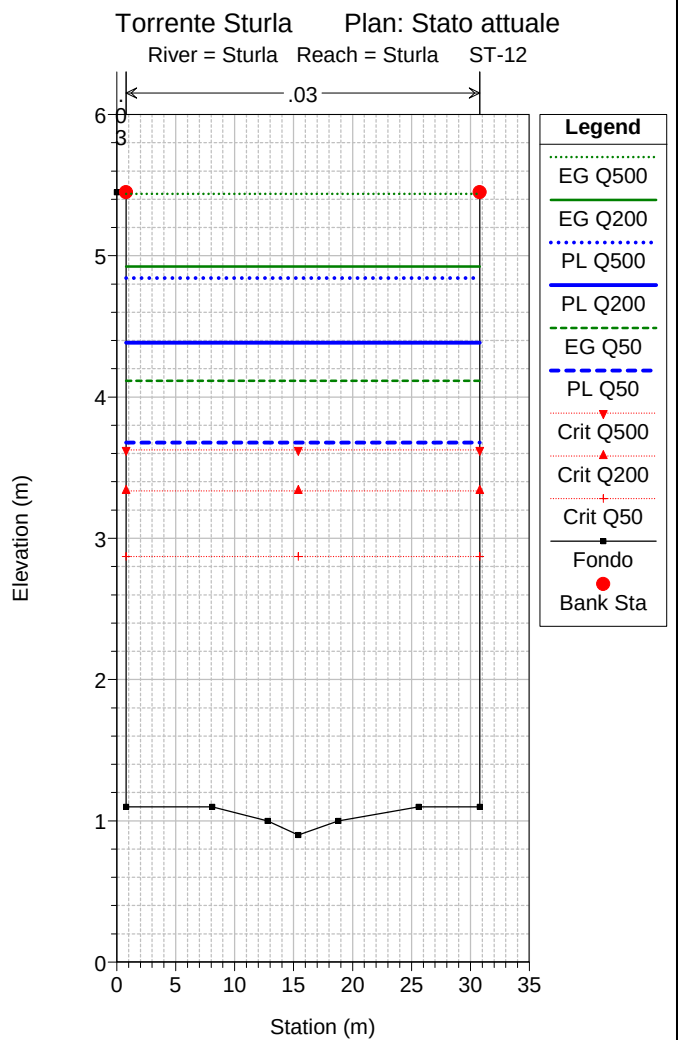
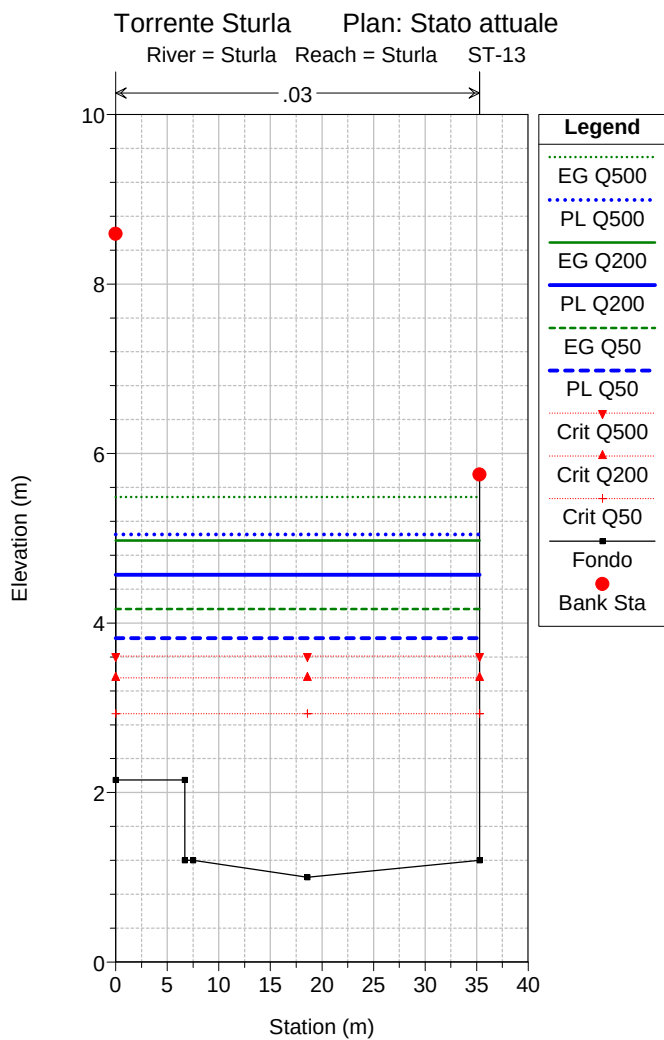
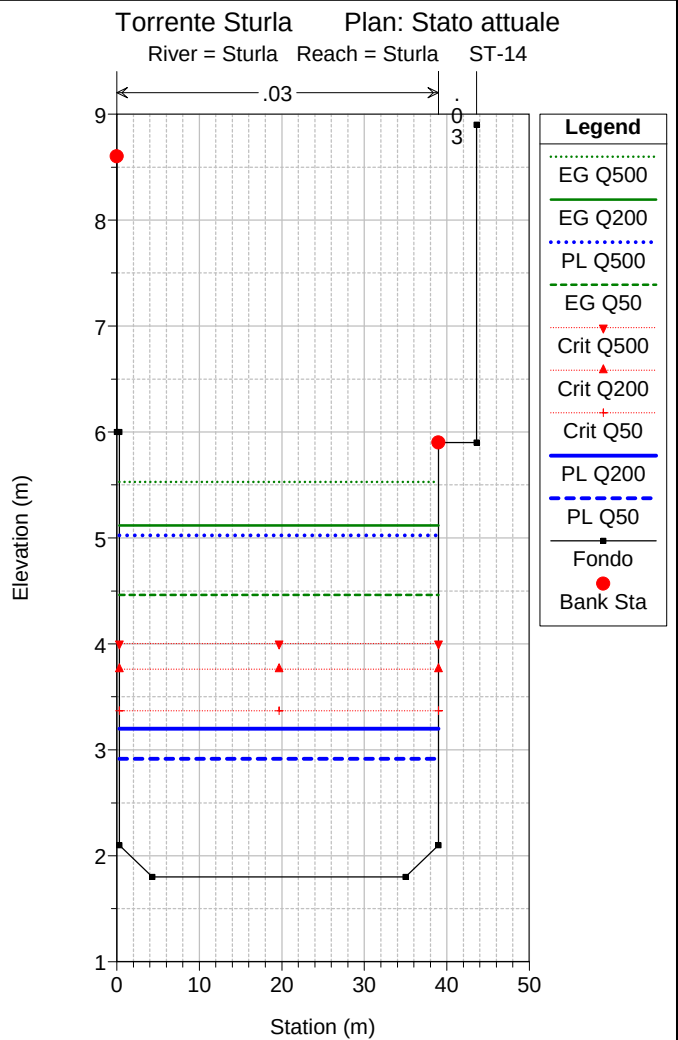
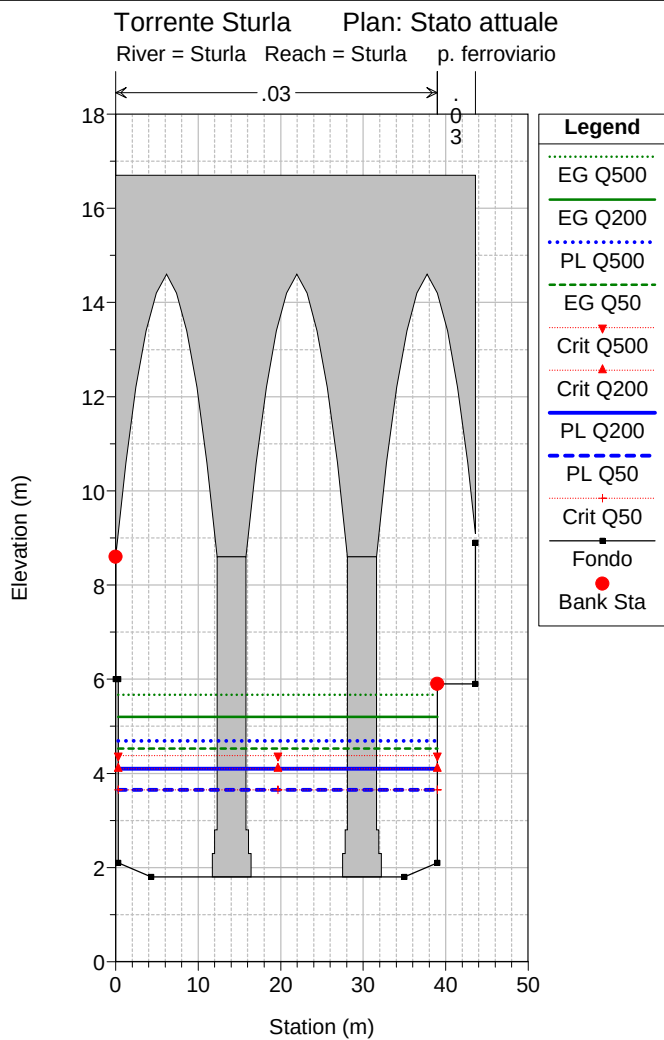


Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-15

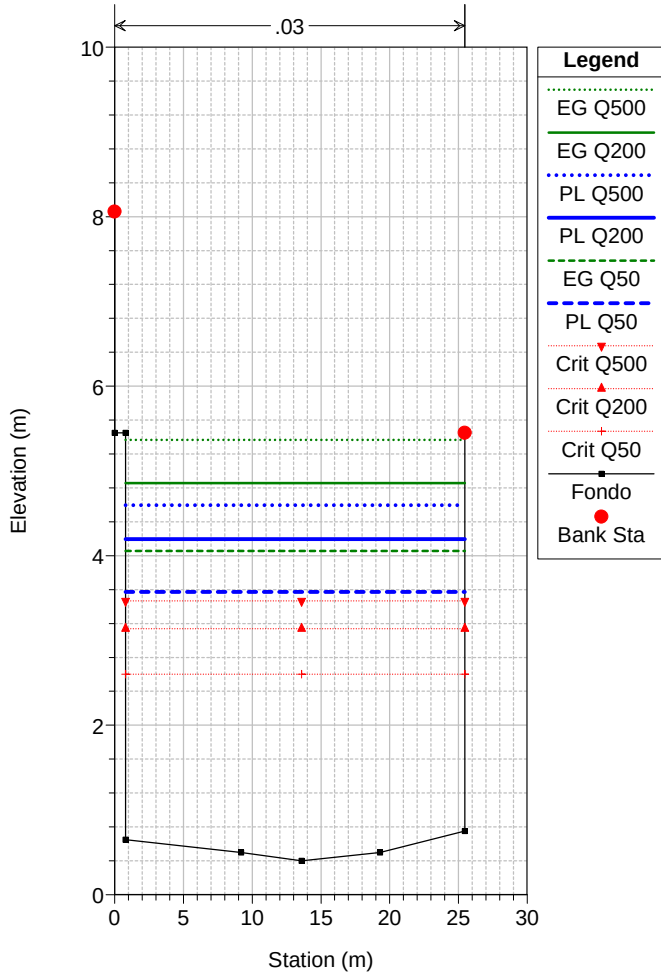


Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla p. ferroviario

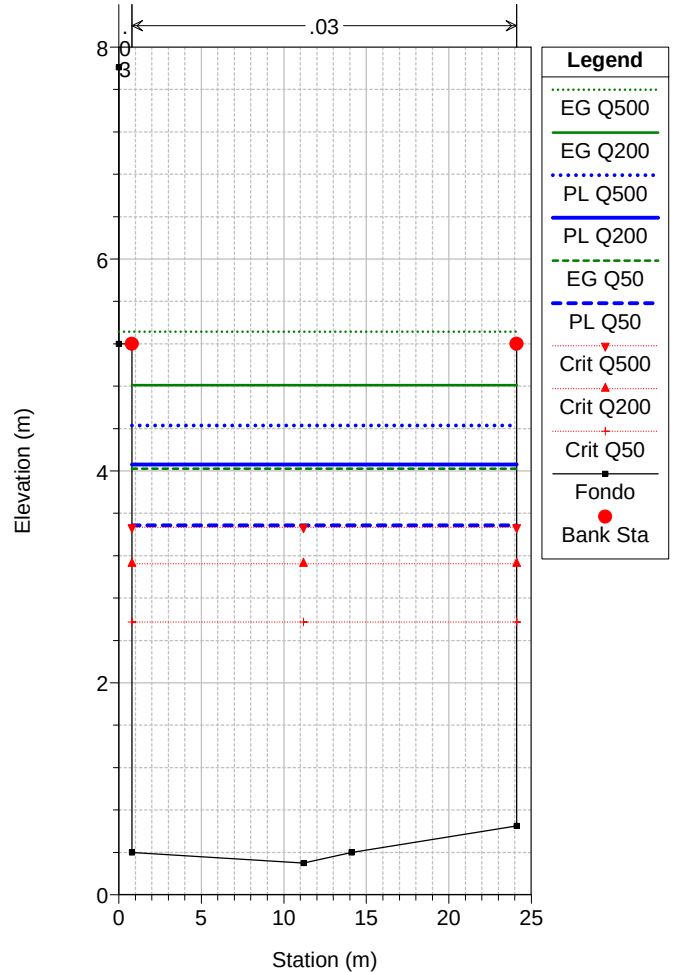




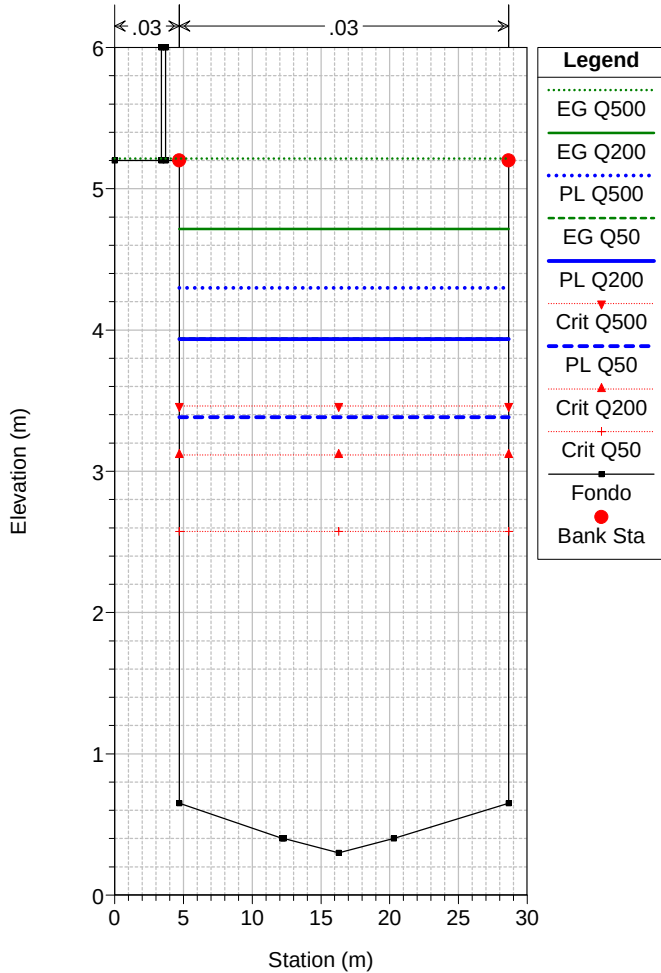
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-11



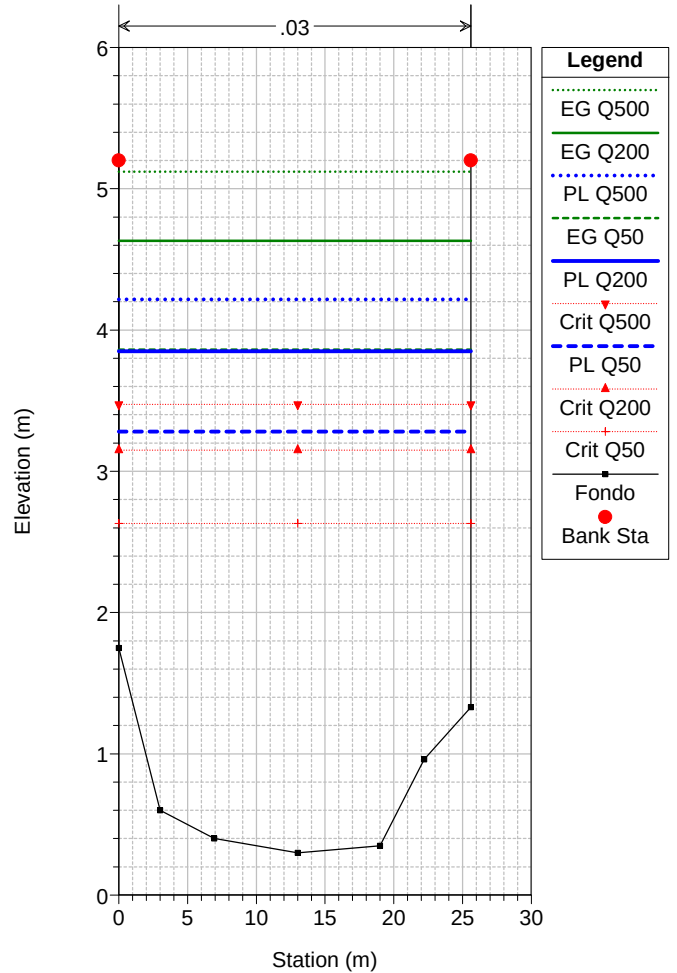
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-10



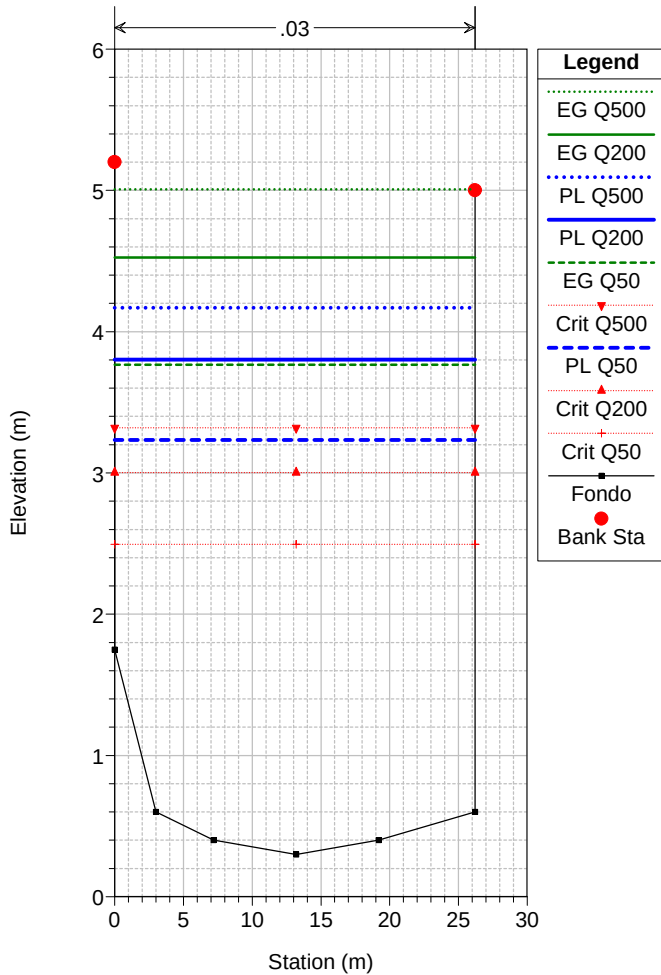
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-9



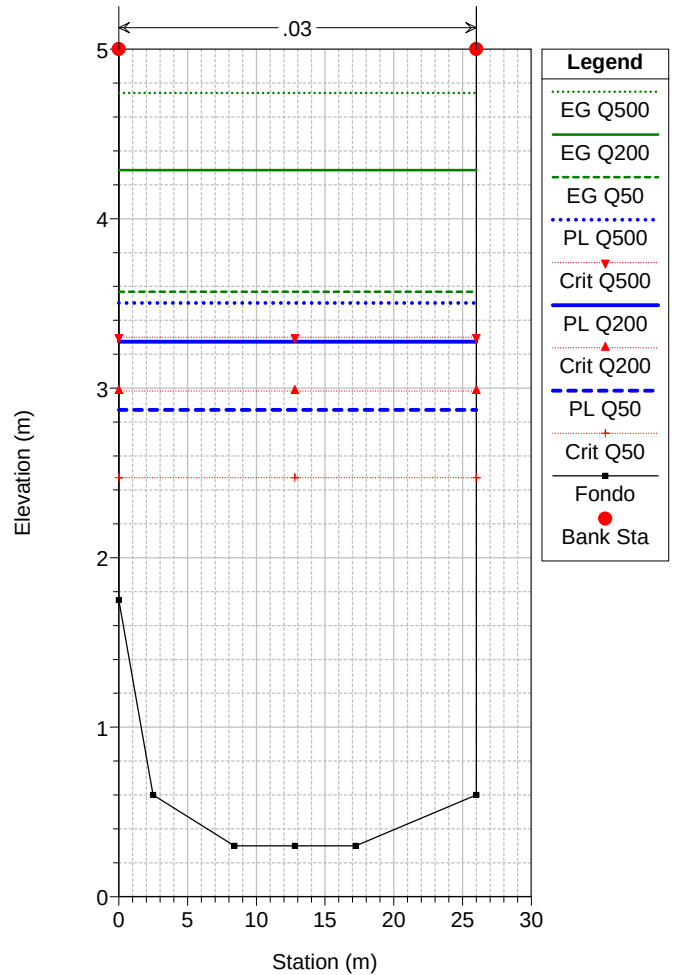
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-8



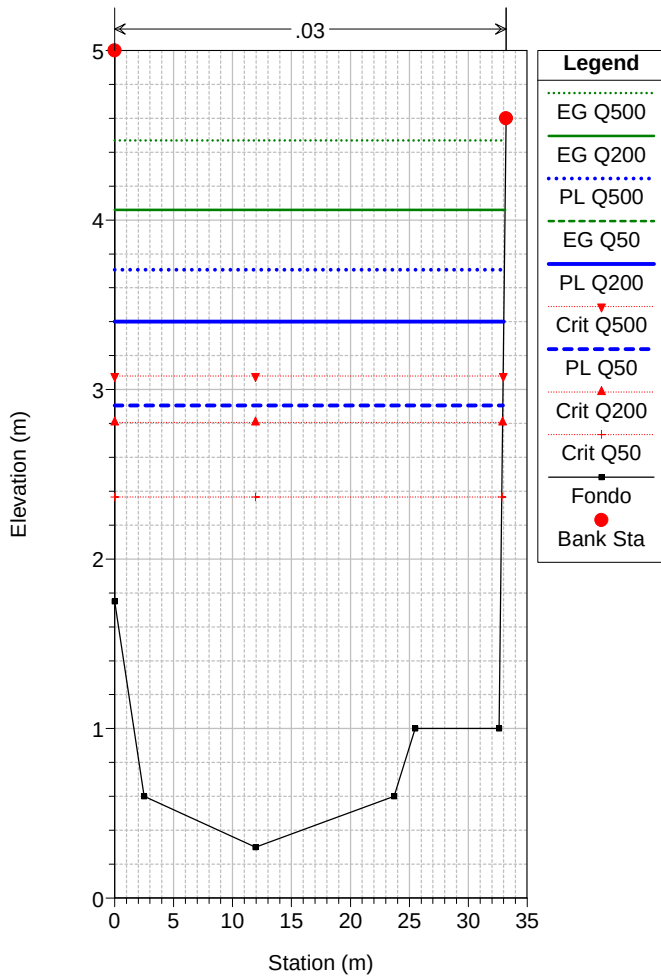
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-7



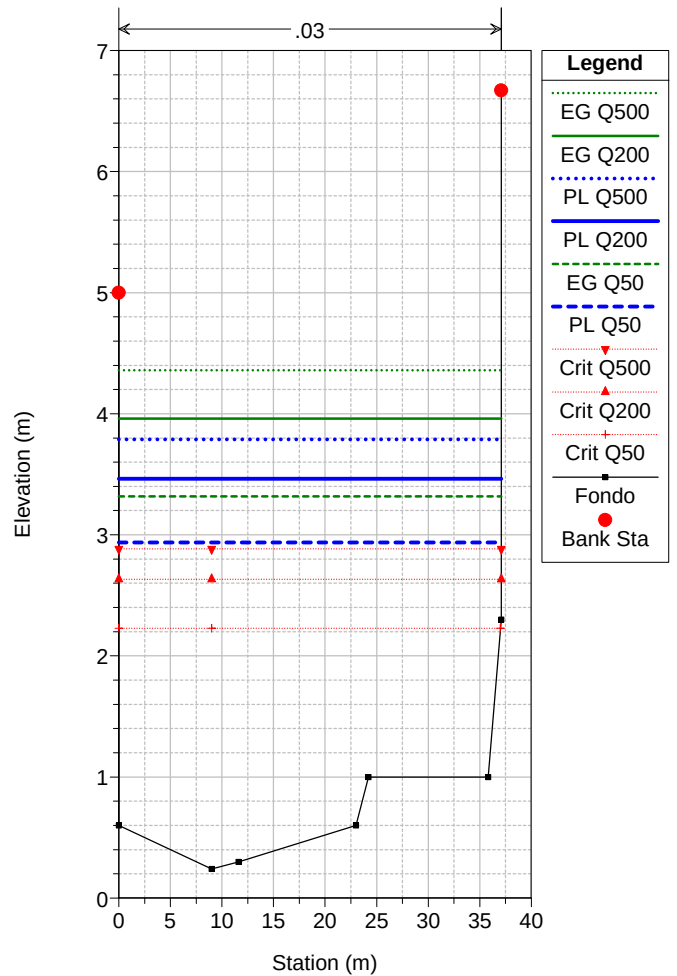
Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-6



Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-5

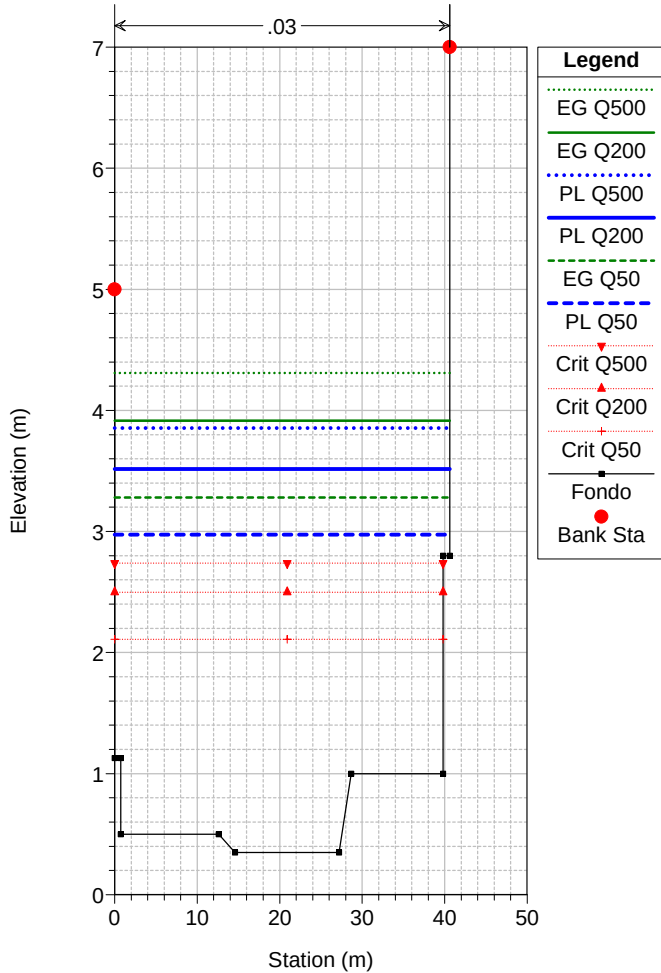


Torrente Sturla Plan: Stato attuale
River = Sturla Reach = Sturla ST-4



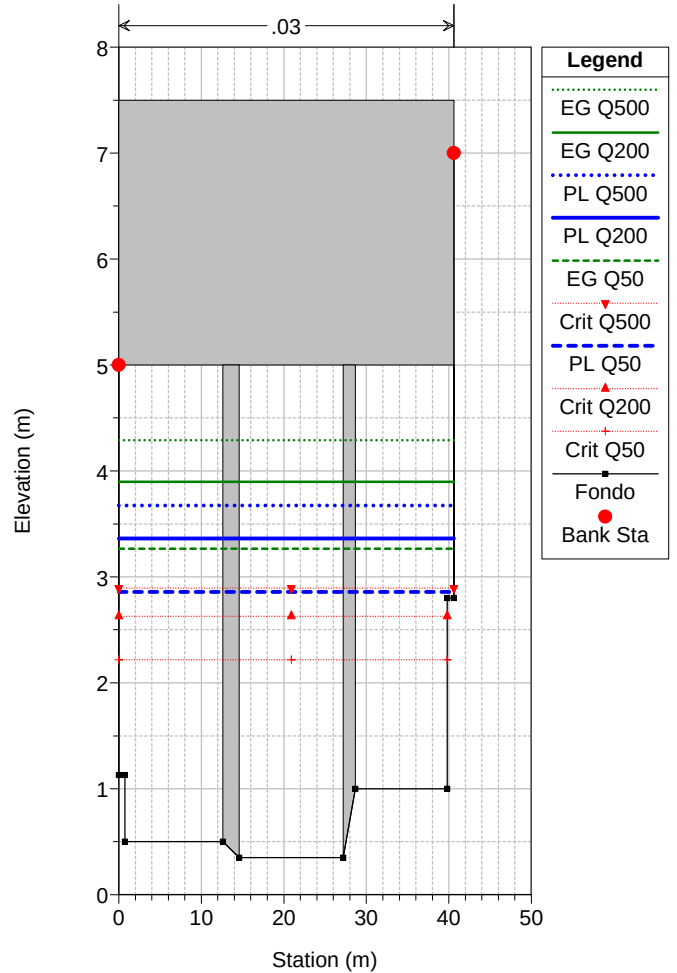
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-3



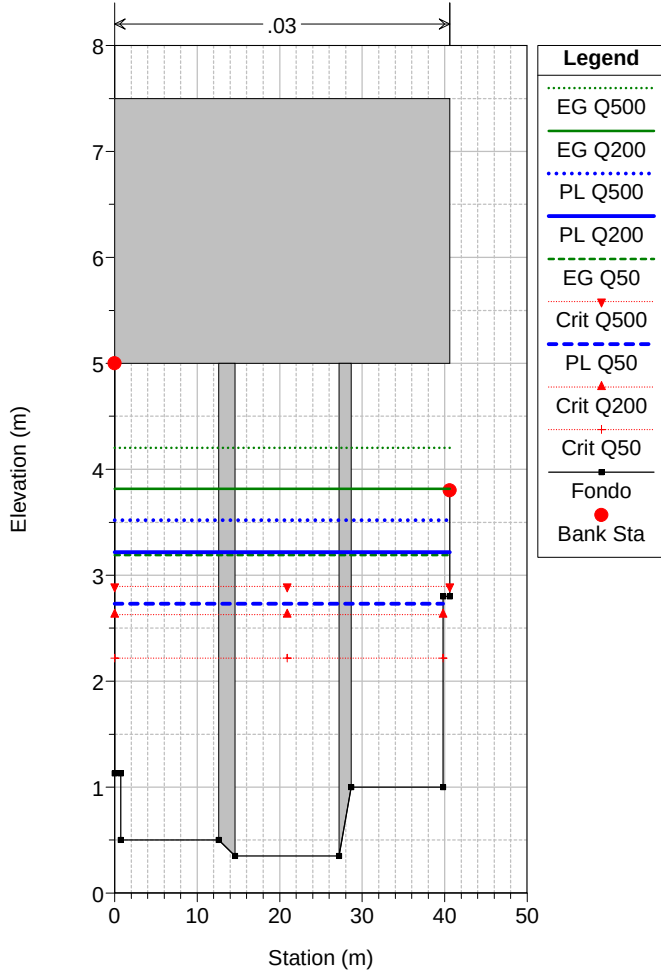
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla via V Maggio



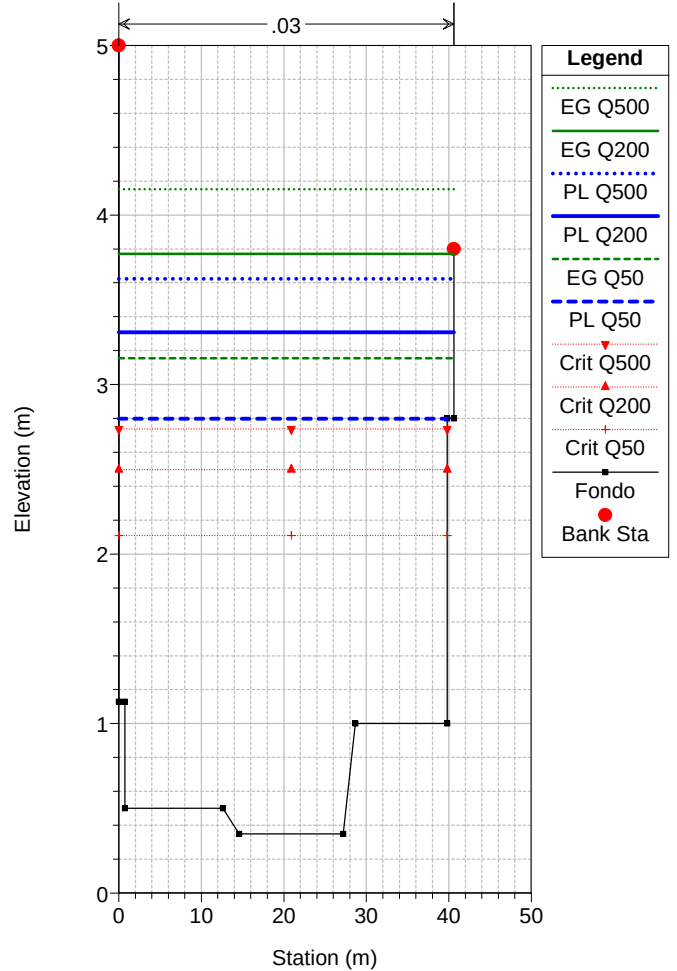
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla via V Maggio



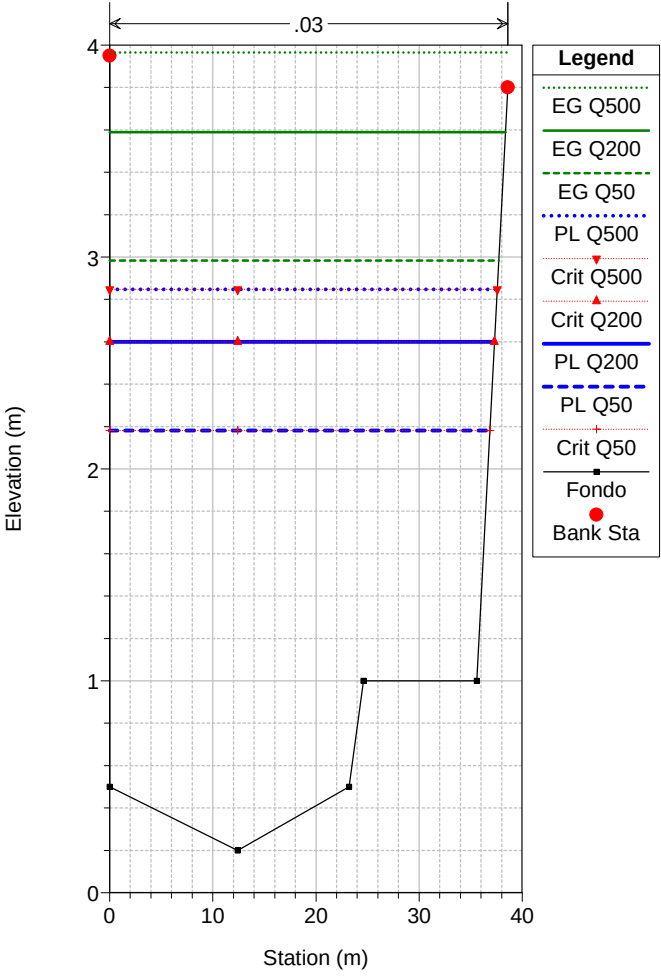
Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-2



Torrente Sturla Plan: Stato attuale

River = Sturla Reach = Sturla ST-1



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
Sturla	363	ST-93	Q50	211.00	18.66	22.00	24.42	2.42	24.47	2.47	21.44	22.48	0.003316	3.07	68.67	30.44	0.65
Sturla	363	ST-93	Q200	297.00	18.66	22.54	24.42	1.88	24.47	1.93	21.87	23.16	0.003353	3.49	85.09	30.44	0.67
Sturla	363	ST-93	Q500	355.00	18.66	22.88	24.42	1.54	24.47	1.59	22.14	23.58	0.003370	3.73	95.27	30.44	0.67
Sturla	362	ST-92	Q50	211.00	18.66	21.99	24.42	2.43	24.47	2.48	21.44	22.48	0.003355	3.08	68.42	30.44	0.66
Sturla	362	ST-92	Q200	297.00	18.66	22.53	24.42	1.89	24.47	1.94	21.87	23.16	0.003385	3.50	84.83	30.44	0.67
Sturla	362	ST-92	Q500	355.00	18.66	22.87	24.42	1.55	24.47	1.60	22.14	23.58	0.003402	3.74	94.98	30.44	0.68
Sturla	361.5	Via Apparizione	Bridge														
Sturla	361	ST-91	Q50	211.00	18.66	21.16	24.42	3.26	24.47	3.31	21.44	22.39	0.014836	4.92	42.92	30.44	1.32
Sturla	361	ST-91	Q200	297.00	18.66	21.54	24.42	2.88	24.47	2.93	21.87	23.05	0.013705	5.45	54.47	30.44	1.30
Sturla	361	ST-91	Q500	355.00	18.66	21.77	24.42	2.65	24.47	2.70	22.14	23.46	0.013225	5.76	61.62	30.44	1.29
Sturla	360	ST-90	Q50	211.00	18.66	21.44	24.42	2.98	24.47	3.03	21.44	22.29	0.008284	4.10	51.48	30.44	1.01
Sturla	360	ST-90	Q200	297.00	18.66	21.87	24.42	2.55	24.47	2.60	21.87	22.95	0.007939	4.59	64.68	30.44	1.01
Sturla	360	ST-90	Q500	355.00	18.66	22.14	24.42	2.28	24.47	2.33	22.14	23.35	0.007788	4.87	72.87	30.44	1.01
Sturla	350	ST-89	Q50	211.00	18.73	21.21	22.55	1.34	19.95	-1.26	21.45	22.18	0.011836	4.66	51.62	47.29	1.20
Sturla	350	ST-89	Q200	297.00	18.73	21.38	22.55	1.17	19.95	-1.43	21.77	22.80	0.015532	5.68	59.26	47.34	1.40
Sturla	350	ST-89	Q500	355.00	18.73	21.48	22.55	1.07	19.95	-1.53	21.97	23.18	0.017270	6.23	64.37	47.37	1.49
Sturla	340	ST-88	Q50	211.00	18.21	20.64	21.99	1.35	19.50	-1.14	20.94	21.77	0.015294	5.02	46.54	42.04	1.36
Sturla	340	ST-88	Q200	297.00	18.21	21.91	21.99	0.08	19.50	-2.41	21.29	22.37	0.002737	3.17	100.14	42.58	0.62
Sturla	340	ST-88	Q500	355.00	18.21	22.09	21.99	-0.10	19.50	-2.59	21.51	22.65	0.003082	3.50	107.99	42.61	0.67
Sturla	330	ST-87	Q50	211.00	18.15	21.12	21.52	0.40	19.37	-1.75	20.52	21.46	0.002396	2.75	83.17	40.59	0.57
Sturla	330	ST-87	Q200	297.00	18.15	21.94	21.52	-0.42	19.37	-2.57	20.88	22.28	0.001617	2.72	116.98	41.25	0.48
Sturla	330	ST-87	Q500	355.00	18.15	22.13	21.52	-0.61	19.37	-2.76	21.10	22.56	0.001880	3.05	124.78	41.25	0.53
Sturla	320	ST-86	Q50	211.00	18.03	21.16	21.40	0.24	20.50	-0.66	20.07	21.38	0.001302	2.11	99.93	40.45	0.43
Sturla	320	ST-86	Q200	297.00	18.03	21.97	21.40	-0.57	20.50	-1.47	20.44	22.23	0.001002	2.23	133.34	41.11	0.39
Sturla	320	ST-86	Q500	355.00	18.03	22.17	21.40	-0.77	20.50	-1.67	20.67	22.49	0.001180	2.52	141.41	41.11	0.43
Sturla	310	ST-85	Q50	211.00	17.17	20.15	20.92	0.77	21.00	0.85	20.15	21.23	0.008658	4.61	45.79	21.15	1.00
Sturla	310	ST-85	Q200	297.00	17.17	20.71	20.92	0.21	21.00	0.29	20.71	22.06	0.008466	5.16	57.58	21.22	1.00
Sturla	310	ST-85	Q500	355.00	17.17	21.62	20.92	-0.70	21.00	-0.62	21.23	22.40	0.003814	4.08	95.56	36.46	0.69
Sturla	300	ST-84	Q50	211.00	16.69	19.80	21.26	1.46	19.20	-0.60	20.01	21.04	0.011072	4.97	43.56	24.45	1.15
Sturla	300	ST-84	Q200	297.00	16.69	20.18	21.26	1.08	19.20	-0.98	20.51	21.85	0.012101	5.79	52.73	24.50	1.22
Sturla	300	ST-84	Q500	355.00	16.69	20.82	21.26	0.44	19.20	-1.62	20.82	22.24	0.007643	5.34	68.56	24.59	1.00
Sturla	290	ST-83	Q50	211.00	16.64	19.40	19.60	0.20	19.20	-0.20	19.75	20.82	0.014749	5.28	40.31	26.41	1.30
Sturla	290	ST-83	Q200	297.00	16.64	19.76	19.60	-0.16	19.20	-0.56	20.24	21.62	0.015104	6.06	50.05	26.93	1.35
Sturla	290	ST-83	Q500	355.00	16.64	20.08	19.60	-0.48	19.20	-0.88	20.53	22.03	0.013183	6.23	58.57	26.93	1.29
Sturla	280	ST-82	Q50	211.00	16.81	19.86	19.53	-0.33	19.25	-0.61	19.48	20.52	0.004157	3.62	61.07	30.86	0.72
Sturla	280	ST-82	Q200	297.00	16.81	19.55	19.53	-0.02	19.25	-0.30	20.03	21.32	0.013270	5.92	51.36	30.86	1.27
Sturla	280	ST-82	Q500	355.00	16.81	20.89	19.53	-1.36	19.25	-1.64	20.32	21.70	0.003407	4.11	92.77	30.86	0.69
Sturla	270	ST-81	Q50	211.00	16.21	19.33	19.45	0.12	18.76	-0.57	19.33	20.36	0.006721	4.53	48.40	26.64	0.91
Sturla	270	ST-81	Q200	297.00	16.21	20.02	19.45	-0.57	18.76	-1.26	20.02	21.02	0.005106	4.62	72.44	36.71	0.82
Sturla	270	ST-81	Q500	355.00	16.21	20.93	19.45	-1.48	18.76	-2.17	20.29	21.59	0.002550	3.86	105.89	36.71	0.61

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
Sturla	260	ST-80	Q50	211.00	16.05	19.40	19.63	0.23	18.78	-0.62	19.10	20.16	0.004594	3.91	56.17	27.01	0.77
Sturla	260	ST-80	Q200	297.00	16.05	19.97	19.63	-0.34	18.78	-1.19	19.75	20.87	0.004377	4.32	75.39	36.76	0.77
Sturla	260	ST-80	Q500	355.00	16.05	20.93	19.63	-1.30	18.78	-2.15	20.10	21.53	0.002185	3.63	110.65	36.77	0.57
Sturla	250	ST-79	Q50	211.00	15.60	19.10	21.42	2.32	17.90	-1.20	19.10	20.03	0.006714	4.45	51.51	26.62	0.91
Sturla	250	ST-79	Q200	297.00	15.60	19.78	21.42	1.64	17.90	-1.88	19.58	20.76	0.005442	4.61	69.56	26.72	0.83
Sturla	250	ST-79	Q500	355.00	15.60	20.72	21.42	0.70	17.90	-2.82	19.85	21.46	0.003066	4.01	94.83	26.86	0.64
Sturla	232	ST-78	Q50	211.00	15.90	18.17	22.67	4.50	20.59	2.42	18.52	19.78	0.014654	5.62	37.54	19.06	1.28
Sturla	232	ST-78	Q200	297.00	15.90	19.53	22.67	3.14	20.59	1.05	19.12	20.64	0.005803	4.66	63.67	19.20	0.82
Sturla	232	ST-78	Q500	355.00	15.90	20.99	22.67	1.68	20.59	-0.40	19.48	21.29	0.001309	2.66	152.57	48.74	0.39
Sturla	231	ST-77	Q50	211.00	15.90	18.87	22.67	3.80	20.59	1.72	18.52	19.75	0.005723	4.14	50.98	19.13	0.81
Sturla	231	ST-77	Q200	297.00	15.90	19.52	22.67	3.15	20.59	1.07	19.12	20.64	0.005885	4.69	63.37	19.20	0.82
Sturla	231	ST-77	Q500	355.00	15.90	20.99	22.67	1.68	20.59	-0.40	19.48	21.29	0.001311	2.66	152.49	48.74	0.39
Sturla	230.5	via dell'Arena	Bridge														
Sturla	230	ST-76	Q50	211.00	15.90	18.52	22.67	4.15	20.59	2.07	18.52	19.68	0.008821	4.77	44.25	19.10	1.00
Sturla	230	ST-76	Q200	297.00	15.90	19.12	22.67	3.55	20.59	1.47	19.12	20.57	0.008706	5.34	55.63	19.16	1.00
Sturla	230	ST-76	Q500	355.00	15.90	19.87	22.67	2.80	20.59	0.72	19.48	21.18	0.006223	5.06	70.12	19.23	0.85
Sturla	220	ST-75	Q50	211.00	15.75	17.98	22.10	4.12	19.85	1.87	18.38	19.58	0.016168	5.60	37.67	21.94	1.36
Sturla	220	ST-75	Q200	297.00	15.75	18.38	22.10	3.72	19.85	1.47	18.93	20.45	0.016467	6.37	46.65	22.24	1.40
Sturla	220	ST-75	Q500	355.00	15.75	20.46	22.10	1.64	19.85	-0.61	19.26	20.90	0.001863	3.12	128.37	45.53	0.50
Sturla	210	ST-74	Q50	211.00	15.81	18.30	21.86	3.56	19.60	1.30	18.30	19.40	0.008378	4.66	45.29	20.48	1.00
Sturla	210	ST-74	Q200	297.00	15.81	18.87	21.86	2.99	19.60	0.73	18.87	20.25	0.008132	5.19	57.25	20.86	1.00
Sturla	210	ST-74	Q500	355.00	15.81	19.23	21.86	2.63	19.60	0.37	19.23	20.76	0.008043	5.49	64.70	21.10	1.00
Sturla	200	ST-73	Q50	211.00	16.15	17.80	19.93	2.13	19.74	1.94	18.16	19.24	0.015802	5.32	39.65	25.31	1.36
Sturla	200	ST-73	Q200	297.00	16.15	18.14	19.93	1.79	19.74	1.60	18.65	20.07	0.016701	6.14	48.37	25.48	1.42
Sturla	200	ST-73	Q500	355.00	16.15	18.36	19.93	1.57	19.74	1.38	18.95	20.57	0.016981	6.59	53.90	25.58	1.45
Sturla	190	ST-72	Q50	211.00	13.88	15.17	19.93	4.76	18.85	3.68	16.13	18.98	0.072051	8.64	24.41	24.63	2.77
Sturla	190	ST-72	Q200	297.00	13.88	15.49	19.93	4.44	18.85	3.36	16.63	19.80	0.058440	9.19	32.30	25.03	2.58
Sturla	190	ST-72	Q500	355.00	13.88	15.69	19.93	4.24	18.85	3.16	16.93	20.30	0.052950	9.51	37.31	25.27	2.50
Sturla	170	ST-71	Q50	211.00	13.43	15.45	18.20	2.75	17.75	2.30	16.16	17.87	0.036435	6.88	30.67	24.96	1.98
Sturla	170	ST-71	Q200	297.00	13.43	15.76	18.20	2.44	17.75	1.99	16.65	18.79	0.035377	7.70	38.55	25.65	2.01
Sturla	170	ST-71	Q500	355.00	13.43	15.96	18.20	2.24	17.75	1.79	16.95	19.35	0.034403	8.16	43.51	25.72	2.00
Sturla	160	ST-70	Q50	211.00	12.97	16.00	16.39	0.39	16.98	0.98	16.00	17.12	0.008661	4.69	44.95	20.03	1.00
Sturla	160	ST-70	Q200	297.00	12.97	16.93	16.39	-0.54	16.98	0.05	16.93	17.75	0.004672	4.19	81.97	49.85	0.76
Sturla	160	ST-70	Q500	355.00	12.97	16.78	16.39	-0.39	16.98	0.20	17.20	18.19	0.008283	5.43	74.62	49.79	1.00
Sturla	150	ST-69	Q50	211.00	12.13	15.44	16.02	0.58	17.47	2.03	15.66	16.80	0.012161	5.16	40.88	20.67	1.17
Sturla	150	ST-69	Q200	297.00	12.13	16.22	16.02	-0.20	17.47	1.25	16.60	17.52	0.008217	5.11	62.86	51.71	0.99
Sturla	150	ST-69	Q500	355.00	12.13	17.40	16.02	-1.38	17.47	0.07	16.82	17.88	0.002311	3.34	124.14	51.97	0.54
Sturla	140	ST-68	Q50	211.00	11.90	14.95	16.14	1.19	18.00	3.05	15.18	16.35	0.011781	5.24	40.24	19.91	1.18
Sturla	140	ST-68	Q200	297.00	11.90	15.66	16.14	0.48	18.00	2.34	15.76	17.18	0.009256	5.46	54.41	20.04	1.06

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
Sturla	140	ST-68	Q500	355.00	11.90	16.50	16.14	-0.36	18.00	1.50	16.50	17.69	0.005515	4.87	77.72	39.41	0.83
Sturla	130	ST-67	Q50	211.00	11.75	14.45	16.17	1.72	18.00	3.55	14.81	16.06	0.014223	5.62	37.53	18.97	1.28
Sturla	130	ST-67	Q200	297.00	11.75	15.04	16.17	1.13	18.00	2.96	15.42	16.92	0.012659	6.07	48.91	19.60	1.23
Sturla	130	ST-67	Q500	355.00	11.75	15.41	16.17	0.76	18.00	2.59	15.79	17.44	0.011899	6.31	56.24	19.94	1.20
Sturla	120	ST-66	Q50	211.00	11.55	14.76	15.98	1.22	15.64	0.88	14.61	15.76	0.006853	4.43	47.58	19.92	0.92
Sturla	120	ST-66	Q200	297.00	11.55	15.44	15.98	0.54	15.64	0.20	15.22	16.62	0.006443	4.82	61.64	21.30	0.90
Sturla	120	ST-66	Q500	355.00	11.55	15.93	15.98	0.05	15.64	-0.29	15.60	17.15	0.005702	4.89	73.42	25.99	0.86
Sturla	110	ST-65	Q50	211.00	11.36	14.67	15.61	0.94	15.70	1.03	14.28	15.52	0.005132	4.08	51.67	19.99	0.81
Sturla	110	ST-65	Q200	297.00	11.36	15.36	15.61	0.25	15.70	0.34	14.92	16.39	0.005086	4.51	65.91	21.56	0.82
Sturla	110	ST-65	Q500	355.00	11.36	15.89	15.61	-0.28	15.70	-0.19	15.32	16.94	0.004333	4.54	80.84	37.56	0.77
Sturla	100	ST-64	Q50	211.00	10.91	14.69	14.85	0.16	17.00	2.31	13.83	15.30	0.003068	3.46	61.03	20.47	0.64
Sturla	100	ST-64	Q200	297.00	10.91	15.39	14.85	-0.54	17.00	1.61	14.46	16.16	0.003090	3.89	77.92	25.06	0.65
Sturla	100	ST-64	Q500	355.00	10.91	15.92	14.85	-1.07	17.00	1.08	14.87	16.73	0.002814	4.01	91.26	25.07	0.63
Sturla	93	ST-63	Q50	211.00	10.25	14.75	14.20	-0.55	14.23	-0.52	13.24	15.16	0.001726	2.89	80.16	41.79	0.48
Sturla	93	ST-63	Q200	297.00	10.25	15.57	14.20	-1.37	14.23	-1.34	13.91	15.98	0.001427	3.00	114.56	41.80	0.45
Sturla	93	ST-63	Q500	355.00	10.25	16.15	14.20	-1.95	14.23	-1.92	14.78	16.55	0.001201	2.98	138.90	41.81	0.42
Sturla	92	ST-62	Q50	211.00	10.25	14.75	14.20	-0.55	14.23	-0.52	13.23	15.16	0.001732	2.89	80.04	41.79	0.48
Sturla	92	ST-62	Q200	297.00	10.25	15.57	14.20	-1.37	14.23	-1.34	13.91	15.98	0.001430	3.00	114.47	41.80	0.45
Sturla	92	ST-62	Q500	355.00	10.25	16.15	14.20	-1.95	14.23	-1.92	14.77	16.54	0.001202	2.98	138.83	41.81	0.42
Sturla	91.5	via Pontevocchio	Bridge														
Sturla	91	ST-61	Q50	211.00	10.25	13.58	14.20	0.62	14.23	0.65	13.23	14.53	0.005679	4.33	48.71	17.76	0.83
Sturla	91	ST-61	Q200	297.00	10.25	14.32	14.20	-0.12	14.23	-0.09	13.91	15.47	0.005515	4.76	62.90	28.91	0.84
Sturla	91	ST-61	Q500	355.00	10.25	15.10	14.20	-0.90	14.23	-0.87	14.77	15.96	0.003292	4.24	95.04	41.80	0.67
Sturla	90	ST-60	Q50	211.00	10.25	13.23	14.20	0.97	14.23	1.00	13.23	14.48	0.008305	4.94	42.70	17.26	1.00
Sturla	90	ST-60	Q200	297.00	10.25	13.91	14.20	0.29	14.23	0.32	13.91	15.41	0.008070	5.42	54.75	18.30	1.00
Sturla	90	ST-60	Q500	355.00	10.25	14.77	14.20	-0.57	14.23	-0.54	14.77	15.91	0.004757	4.82	81.15	41.79	0.79
Sturla	80	ST-59	Q50	211.00	10.00	12.70	13.23	0.53	14.68	1.98	13.09	14.38	0.013699	5.75	36.71	18.30	1.30
Sturla	80	ST-59	Q200	297.00	10.00	13.22	13.23	0.01	14.68	1.46	13.77	15.30	0.013410	6.38	46.54	18.98	1.30
Sturla	80	ST-59	Q500	355.00	10.00	13.66	13.23	-0.43	14.68	1.02	14.36	15.78	0.011373	6.46	55.62	23.09	1.22
Sturla	70	ST-58	Q50	211.00	9.35	12.14	16.00	3.86	14.15	2.01	12.32	13.53	0.010019	5.22	40.39	18.43	1.13
Sturla	70	ST-58	Q200	297.00	9.35	12.68	16.00	3.32	14.15	1.47	12.93	14.44	0.010181	5.88	50.51	18.85	1.15
Sturla	70	ST-58	Q500	355.00	9.35	12.93	16.00	3.07	14.15	1.22	13.69	15.03	0.011197	6.43	55.19	19.05	1.21
Sturla	60	ST-57	Q50	211.00	9.02	12.59	13.02	0.43	13.50	0.91	11.93	13.24	0.003633	3.56	59.21	22.64	0.70
Sturla	60	ST-57	Q200	297.00	9.02	13.31	13.02	-0.29	13.50	0.19	12.57	14.08	0.003544	3.89	76.36	24.45	0.70
Sturla	60	ST-57	Q500	355.00	9.02	12.20	13.02	0.82	13.50	1.30	12.95	14.70	0.015292	7.01	50.65	20.80	1.43
Sturla	50	ST-56	Q50	211.00	8.18	12.53	13.00	0.47	13.23	0.70	11.74	13.17	0.003552	3.54	59.60	20.70	0.67
Sturla	50	ST-56	Q200	297.00	8.18	13.14	13.00	-0.14	13.23	0.09	12.40	14.00	0.003950	4.11	72.25	20.78	0.70
Sturla	50	ST-56	Q500	355.00	8.18	13.53	13.00	-0.53	13.23	-0.30	12.76	14.37	0.003587	4.16	95.88	48.65	0.67
Sturla	40	ST-55	Q50	211.00	8.43	12.44	11.23	-1.21	12.40	-0.04	11.49	13.02	0.002642	3.41	66.99	43.17	0.59

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)	
Sturla	40	ST-55	Q200	297.00	8.43	13.25	11.23	-2.02	12.40	-0.85	12.52	13.78	0.002043	3.45	101.67	43.17	0.53
Sturla	40	ST-55	Q500	355.00	8.43	13.61	11.23	-2.38	12.40	-1.21	12.90	14.18	0.002006	3.61	117.19	43.17	0.54
Sturla	30	ST-54	Q50	211.00	8.03	11.77	11.30	-0.47	11.21	-0.56	11.77	12.78	0.005565	4.57	51.15	27.29	0.79
Sturla	30	ST-54	Q200	297.00	8.03	12.22	11.30	-0.92	11.21	-1.01	12.22	13.53	0.006414	5.33	63.45	27.33	0.86
Sturla	30	ST-54	Q500	355.00	8.03	12.77	11.30	-1.47	11.21	-1.56	12.77	13.96	0.005078	5.19	81.13	32.35	0.79
Sturla	23	ST-53	Q50	211.00	7.56	11.47	14.00	2.53	13.14	1.67	10.34	11.86	0.002034	2.75	76.67	26.36	0.52
Sturla	23	ST-53	Q200	297.00	7.56	12.21	14.00	1.79	13.14	0.93	10.86	12.69	0.002125	3.07	96.66	28.70	0.53
Sturla	23	ST-53	Q500	355.00	7.56	12.77	14.00	1.23	13.14	0.37	11.18	13.27	0.002064	3.11	113.99	32.56	0.53
Sturla	22	ST-52	Q50	211.00	7.56	11.47	14.00	2.53	13.14	1.67	10.33	11.86	0.002040	2.75	76.59	26.35	0.52
Sturla	22	ST-52	Q200	297.00	7.56	12.21	14.00	1.79	13.14	0.93	10.86	12.69	0.002130	3.08	96.56	28.68	0.54
Sturla	22	ST-52	Q500	355.00	7.56	12.77	14.00	1.23	13.14	0.37	11.18	13.27	0.002068	3.12	113.89	32.54	0.53
Sturla	21.5	ViadelleCasette		Bridge													
Sturla	21	ST-51	Q50	211.00	7.56	11.31	14.00	2.69	13.14	1.83	10.34	11.75	0.002398	2.91	72.51	26.07	0.56
Sturla	21	ST-51	Q200	297.00	7.56	11.93	14.00	2.07	13.14	1.21	10.86	12.50	0.002609	3.34	88.93	27.20	0.59
Sturla	21	ST-51	Q500	355.00	7.56	12.40	14.00	1.60	13.14	0.74	11.18	13.01	0.002664	3.47	102.29	30.01	0.60
Sturla	20	ST-50	Q50	211.00	7.56	11.30	13.18	1.88	13.14	1.84	10.34	11.74	0.002437	2.93	72.11	26.04	0.56
Sturla	20	ST-50	Q200	297.00	7.56	11.91	13.18	1.27	13.14	1.23	10.86	12.49	0.002647	3.36	88.48	27.17	0.59
Sturla	20	ST-50	Q500	355.00	7.56	12.38	13.18	0.80	13.14	0.76	11.18	13.00	0.002693	3.49	101.81	29.90	0.60
Sturla	19	ST-49	Q50	231.00	7.10	10.55	13.10	2.55	15.16	4.61	10.47	11.60	0.007386	4.55	50.76	22.01	0.96
Sturla	19	ST-49	Q200	325.00	7.10	11.53	13.10	1.57	15.16	3.63	11.23	12.39	0.005349	4.11	79.09	31.29	0.82
Sturla	19	ST-49	Q500	389.00	7.10	12.11	13.10	0.99	15.16	3.05	11.50	12.93	0.004049	4.01	96.99	31.36	0.73
Sturla	18	ST-48	Q50	231.00	7.18	10.37	14.00	3.63	15.19	4.82	10.35	11.40	0.008539	4.50	51.30	24.89	1.00
Sturla	18	ST-48	Q200	325.00	7.18	11.23	14.00	2.77	15.19	3.96	10.89	12.24	0.005677	4.46	72.84	25.05	0.84
Sturla	18	ST-48	Q500	389.00	7.18	11.75	14.00	2.25	15.19	3.44	11.23	12.79	0.004911	4.53	85.89	25.13	0.78
Sturla	17	ST-47	Q50	231.00	7.20	10.45	14.00	3.55	15.15	4.70	10.09	11.22	0.005217	3.88	59.60	24.29	0.79
Sturla	17	ST-47	Q200	325.00	7.20	11.27	14.00	2.73	15.15	3.88	10.63	12.12	0.004266	4.09	79.42	24.43	0.72
Sturla	17	ST-47	Q500	389.00	7.20	11.77	14.00	2.23	15.15	3.38	10.96	12.69	0.003935	4.24	91.82	24.50	0.70
Sturla	16	ST-46	Q50	231.00	7.04	10.40	14.00	3.60	15.13	4.73	9.94	11.13	0.004671	3.78	61.10	23.57	0.75
Sturla	16	ST-46	Q200	325.00	7.04	11.21	14.00	2.79	15.13	3.92	10.49	12.05	0.003997	4.04	80.36	23.76	0.70
Sturla	16	ST-46	Q500	389.00	7.04	11.72	14.00	2.28	15.13	3.41	10.83	12.62	0.003760	4.21	92.39	23.87	0.68
Sturla	15	ST-45	Q50	231.00	6.85	10.43	14.00	3.57	15.13	4.70	9.67	11.03	0.003287	3.45	67.04	22.98	0.64
Sturla	15	ST-45	Q200	325.00	6.85	11.23	14.00	2.77	15.13	3.90	10.24	11.96	0.003120	3.80	85.51	23.16	0.63
Sturla	15	ST-45	Q500	389.00	6.85	11.73	14.00	2.27	15.13	3.40	10.59	12.55	0.003060	4.01	97.10	23.26	0.63
Sturla	14	ST-44	Q50	231.00	7.17	9.70	10.43	0.73	15.13	5.43	9.70	10.90	0.008353	4.86	47.53	19.84	1.00
Sturla	14	ST-44	Q200	325.00	7.17	10.32	10.43	0.11	15.13	4.81	10.32	11.82	0.008204	5.43	59.88	19.99	1.00
Sturla	14	ST-44	Q500	389.00	7.17	10.71	10.43	-0.28	15.13	4.42	10.71	12.39	0.008170	5.75	67.61	20.07	1.00
Sturla	13	ST-44	Q50	231.00	6.53	8.51	10.43	1.92	15.13	6.62	9.17	10.78	0.022682	6.68	34.56	19.53	1.60
Sturla	13	ST-44	Q200	325.00	6.53	9.04	10.43	1.39	15.13	6.09	9.79	11.69	0.019768	7.22	45.04	19.67	1.52
Sturla	13	ST-44	Q500	389.00	6.53	9.38	10.43	1.05	15.13	5.75	10.18	12.26	0.018557	7.52	51.72	19.75	1.48

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
Sturla	12	ST-43	Q50	231.00	6.05	9.77	10.00	0.23	15.15	5.38	9.06	10.50	0.003713	3.81	60.70	19.43	0.69
Sturla	12	ST-43	Q200	325.00	6.05	10.54	10.00	-0.54	15.15	4.61	9.68	11.48	0.003815	4.29	75.81	19.60	0.70
Sturla	12	ST-43	Q500	389.00	6.05	11.03	10.00	-1.03	15.15	4.12	10.08	12.09	0.003863	4.55	85.43	19.70	0.70
Sturla	11	ST-42	Q50	231.00	5.74	9.44	10.00	0.56	15.14	5.71	9.16	10.38	0.005914	4.31	53.58	20.55	0.85
Sturla	11	ST-42	Q200	325.00	5.74	10.35	10.00	-0.35	15.14	4.79	9.76	11.38	0.004715	4.49	72.45	20.74	0.77
Sturla	11	ST-42	Q500	389.00	5.74	10.89	10.00	-0.89	15.14	4.25	10.15	11.99	0.004413	4.65	83.67	20.86	0.74
Sturla	10	ST-41	Q50	231.00	5.90	9.32	12.01	2.69	15.15	5.83	8.90	10.25	0.005434	4.26	54.17	18.64	0.80
Sturla	10	ST-41	Q200	325.00	5.90	10.14	12.01	1.87	15.15	5.01	9.55	11.26	0.005124	4.67	69.52	18.82	0.78
Sturla	10	ST-41	Q500	389.00	5.90	10.62	12.01	1.39	15.15	4.53	9.96	11.87	0.005139	4.95	78.54	18.92	0.78
Sturla	9	ST-40	Q50	231.00	5.76	9.28	11.80	2.52	15.16	5.88	8.79	10.14	0.004962	4.13	55.98	19.16	0.77
Sturla	9	ST-40	Q200	325.00	5.76	10.12	11.80	1.68	15.16	5.04	9.44	11.15	0.004614	4.50	72.17	19.38	0.74
Sturla	9	ST-40	Q500	389.00	5.76	10.60	11.80	1.20	15.16	4.56	9.82	11.76	0.004608	4.77	81.63	19.51	0.74
Sturla	8	ST-39	Q50	231.00	5.68	8.87	11.80	2.93	15.50	6.63	8.71	10.01	0.007086	4.74	48.78	17.88	0.92
Sturla	8	ST-39	Q200	325.00	5.68	9.70	11.80	2.10	15.50	5.80	9.37	11.02	0.006404	5.10	63.68	18.34	0.87
Sturla	8	ST-39	Q500	389.00	5.68	10.14	11.80	1.66	15.50	5.36	9.81	11.63	0.006483	5.41	71.87	18.71	0.88
Sturla	7	ST-38	Q50	231.00	5.69	8.69	11.83	3.14	15.50	6.81	8.55	9.85	0.007367	4.78	48.30	17.71	0.92
Sturla	7	ST-38	Q200	325.00	5.69	9.22	11.83	2.61	15.50	6.28	9.22	10.83	0.008576	5.63	57.71	17.87	1.00
Sturla	7	ST-38	Q500	389.00	5.69	9.86	11.83	1.97	15.50	5.64	9.63	11.47	0.007220	5.62	69.16	18.01	0.92
Sturla	6.5	ST-37	Q50	231.00	5.66	8.67	10.88	2.21	15.15	6.48	8.40	9.70	0.006271	4.49	51.41	18.55	0.86
Sturla	6.5	ST-37	Q200	325.00	5.66	8.82	10.88	2.06	15.15	6.33	9.05	10.65	0.010654	6.01	54.10	18.59	1.12
Sturla	6.5	ST-37	Q500	389.00	5.66	9.90	10.88	0.98	15.15	5.25	9.46	11.29	0.005930	5.22	74.47	18.97	0.84
Sturla	6	ST-36	Q50	231.00	5.70	8.37	10.60	2.23	15.15	6.78	8.33	9.56	0.007999	4.84	47.77	19.35	0.98
Sturla	6	ST-36	Q200	325.00	5.70	9.11	10.60	1.49	15.15	6.04	8.96	10.50	0.007137	5.22	62.22	19.58	0.94
Sturla	6	ST-36	Q500	389.00	5.70	9.87	10.60	0.73	15.15	5.28	9.36	11.16	0.005398	5.04	77.22	19.82	0.81
Sturla	5.5	ST-35	Q50	231.00	5.60	8.32	10.59	2.27	15.11	6.79	8.18	9.40	0.006980	4.60	50.25	19.87	0.92
Sturla	5.5	ST-35	Q200	325.00	5.60	9.10	10.59	1.49	15.11	6.01	8.81	10.34	0.006090	4.93	65.95	20.17	0.87
Sturla	5.5	ST-35	Q500	389.00	5.60	9.88	10.59	0.71	15.11	5.23	9.19	11.04	0.004617	4.76	81.81	20.46	0.76
Sturla	5	ST-34	Q50	231.00	5.53	8.42	11.60	3.18	15.15	6.73	7.96	9.22	0.004817	3.96	58.26	21.19	0.76
Sturla	5	ST-34	Q200	325.00	5.53	9.22	11.60	2.38	15.15	5.93	8.55	10.17	0.004375	4.31	75.43	21.43	0.73
Sturla	5	ST-34	Q500	389.00	5.53	9.98	11.60	1.62	15.15	5.17	8.92	10.90	0.003502	4.24	91.81	21.66	0.66
Sturla	4	ST-33	Q50	231.00	5.40	8.44	11.60	3.16	15.15	6.71	7.77	9.11	0.003702	3.63	63.67	21.90	0.68
Sturla	4	ST-33	Q200	325.00	5.40	9.26	11.60	2.34	15.15	5.89	8.35	10.06	0.003467	3.98	81.65	22.11	0.66
Sturla	4	ST-33	Q500	389.00	5.40	10.02	11.60	1.58	15.15	5.13	8.71	10.81	0.002850	3.95	98.52	22.30	0.60
Sturla	3	ST-32	Q50	231.00	5.18	8.22	11.60	3.38	15.15	6.93	7.78	9.02	0.005166	3.97	58.12	21.43	0.77
Sturla	3	ST-32	Q200	325.00	5.18	9.05	11.60	2.55	15.15	6.10	8.37	9.99	0.004523	4.27	76.03	21.45	0.72
Sturla	3	ST-32	Q500	389.00	5.18	9.87	11.60	1.73	15.15	5.28	8.73	10.75	0.003505	4.16	93.44	21.47	0.64
Sturla	2.5	ex Sutter	Bridge														
Sturla	2	ST-31	Q50	231.00	4.80	7.37	11.60	4.23	15.15	7.78	7.37	8.46	0.008845	4.63	49.94	22.97	1.00
Sturla	2	ST-31	Q200	325.00	4.80	7.52	11.60	4.08	15.15	7.63	7.92	9.41	0.014157	6.08	53.46	22.97	1.27
Sturla	2	ST-31	Q500	389.00	4.80	7.84	11.60	3.76	15.15	7.31	8.27	9.93	0.013589	6.40	60.83	22.97	1.25

HEC-RAS Plan: att River: Sturla Reach: Sturla (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
Sturla	1.28	ST-31	Q50	231.00	4.50	5.99	10.45	4.46	11.30	5.31	6.67	8.33	0.028861	6.78	34.07	23.77	1.81
Sturla	1.28	ST-31	Q200	325.00	4.50	6.35	10.45	4.10	11.30	4.95	7.23	9.29	0.027695	7.59	42.82	23.82	1.81
Sturla	1.28	ST-31	Q500	389.00	4.50	6.62	10.45	3.83	11.30	4.68	7.56	9.81	0.025661	7.91	49.18	23.86	1.76
Sturla	1.27	ST-30	Q50	231.00	4.31	6.05	10.01	3.96	10.86	4.81	6.58	7.95	0.019586	6.10	37.86	22.40	1.50
Sturla	1.27	ST-30	Q200	325.00	4.31	6.46	10.01	3.55	10.86	4.40	7.14	8.90	0.019638	6.91	47.02	22.40	1.52
Sturla	1.27	ST-30	Q500	389.00	4.31	6.77	10.01	3.24	10.86	4.09	7.50	9.42	0.018351	7.21	53.96	22.40	1.48
Sturla	1.26	ST-29	Q50	231.00	4.05	6.00	8.65	2.65	8.65	2.65	6.41	7.69	0.018622	5.76	40.12	21.50	1.35
Sturla	1.26	ST-29	Q200	325.00	4.05	6.46	8.65	2.19	8.65	2.19	6.99	8.61	0.019126	6.49	50.11	21.50	1.36
Sturla	1.26	ST-29	Q500	389.00	4.05	6.82	8.65	1.83	8.65	1.83	7.35	9.13	0.018079	6.73	57.84	21.50	1.31
Sturla	1.25	ST-28	Q50	231.00	3.86	5.89	8.52	2.63	8.52	2.63	6.28	7.57	0.017953	5.73	40.29	20.70	1.31
Sturla	1.25	ST-28	Q200	325.00	3.86	6.48	8.52	2.04	8.52	2.04	6.88	8.44	0.016463	6.20	52.43	20.70	1.24
Sturla	1.25	ST-28	Q500	389.00	3.86	6.94	8.52	1.58	8.52	1.58	7.25	8.95	0.014660	6.28	61.92	20.70	1.16
Sturla	1.24	ST-27	Q50	231.00	3.45	5.54	8.01	2.47	8.01	2.47	5.93	7.24	0.018033	5.78	39.95	20.00	1.31
Sturla	1.24	ST-27	Q200	325.00	3.45	6.13	8.01	1.88	8.01	1.88	6.54	8.13	0.016724	6.27	51.87	20.00	1.24
Sturla	1.24	ST-27	Q500	389.00	3.45	6.57	8.01	1.44	8.01	1.44	6.92	8.67	0.015389	6.42	60.61	20.00	1.18
Sturla	1.231	ST-26	Q50	231.00	3.22	5.35	7.65	2.30	7.65	2.30	5.70	6.99	0.017036	5.67	40.73	20.00	1.27
Sturla	1.231	ST-26	Q200	325.00	3.22	5.90	7.65	1.75	7.65	1.75	6.31	7.91	0.016849	6.28	51.74	20.00	1.25
Sturla	1.231	ST-26	Q500	389.00	3.22	6.31	7.65	1.34	7.65	1.34	6.69	8.45	0.015886	6.49	59.93	20.00	1.20
Sturla	1.23	ST-25	Q50	231.00	3.00	5.62	7.10	1.48	7.10	1.48	5.48	6.68	0.009044	4.56	50.65	20.00	0.91
Sturla	1.23	ST-25	Q200	325.00	3.00	6.33	7.10	0.77	7.10	0.77	6.09	7.61	0.008923	5.02	64.76	20.00	0.89
Sturla	1.23	ST-25	Q500	389.00	3.00	6.78	7.10	0.32	7.10	0.32	6.47	8.19	0.008925	5.28	73.70	20.00	0.88
Sturla	1.22	ST-24	Q50	231.00	2.78	5.47	6.88	1.41	6.88	1.41	5.26	6.47	0.008421	4.45	51.93	20.00	0.88
Sturla	1.22	ST-24	Q200	325.00	2.78	6.17	6.88	0.71	6.88	0.71	5.87	7.41	0.008460	4.92	66.00	20.00	0.87
Sturla	1.22	ST-24	Q500	389.00	2.78	6.61	6.88	0.27	6.88	0.27	6.25	7.99	0.008545	5.20	74.88	20.00	0.86
Sturla	1.21	ST-23	Q50	231.00	2.57	5.31	6.67	1.36	6.67	1.36	5.05	6.28	0.007933	4.36	53.03	20.00	0.85
Sturla	1.21	ST-23	Q200	325.00	2.57	6.01	6.67	0.66	6.67	0.66	5.66	7.21	0.008127	4.85	66.96	20.00	0.85
Sturla	1.21	ST-23	Q500	389.00	2.57	6.45	6.67	0.22	6.67	0.22	6.04	7.79	0.008289	5.14	75.71	20.00	0.84
Sturla	1.201	ST-22	Q50	231.00	2.50	5.33	6.60	1.27	6.60	1.27	4.98	6.23	0.007258	4.22	54.70	20.00	0.82
Sturla	1.201	ST-22	Q200	325.00	2.50	6.02	6.60	0.58	6.60	0.58	5.59	7.16	0.007600	4.74	68.59	20.00	0.82
Sturla	1.201	ST-22	Q500	389.00	2.50	6.46	6.60	0.14	6.60	0.14	5.97	7.75	0.007826	5.03	77.32	20.00	0.82
Sturla	1.2	ST-21	Q50	231.00	2.37	5.04	6.47	1.43	6.47	1.43	4.85	6.06	0.008597	4.48	51.56	20.00	0.89
Sturla	1.2	ST-21	Q200	325.00	2.37	5.70	6.47	0.77	6.47	0.77	5.46	6.98	0.008927	5.02	64.74	20.00	0.89
Sturla	1.2	ST-21	Q500	389.00	2.37	6.11	6.47	0.36	6.47	0.36	5.84	7.56	0.009166	5.33	73.00	20.00	0.89
Sturla	1.19	ST-20	Q50	231.00	2.31	4.79	6.41	1.62	6.41	1.62	4.79	5.98	0.010743	4.84	47.72	20.00	1.00
Sturla	1.19	ST-20	Q200	325.00	2.31	5.40	6.41	1.01	6.41	1.01	5.40	6.89	0.011093	5.42	59.93	20.00	1.00
Sturla	1.19	ST-20	Q500	389.00	2.31	5.78	6.41	0.63	6.41	0.63	5.78	7.47	0.011344	5.76	67.59	20.00	1.00
Sturla	1.18	ST-19	Q50	231.00	2.23	4.48	6.50	2.02	6.30	1.82	4.64	5.84	0.010647	5.16	44.76	20.50	1.11
Sturla	1.18	ST-19	Q200	325.00	2.23	5.03	6.50	1.47	6.30	1.27	5.24	6.74	0.010596	5.80	55.99	20.50	1.12
Sturla	1.18	ST-19	Q500	389.00	2.23	5.37	6.50	1.13	6.30	0.93	5.62	7.31	0.010597	6.17	63.03	20.50	1.12

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
Sturla	1.17	ST-18	Q50	231.00	2.04	4.67	6.30	1.63	6.95	2.28	4.45	5.65	0.006486	4.39	52.63	20.50	0.87
Sturla	1.17	ST-18	Q200	325.00	2.04	5.31	6.30	0.99	6.95	1.64	5.05	6.55	0.006486	4.93	65.90	20.50	0.88
Sturla	1.17	ST-18	Q500	389.00	2.04	5.71	6.30	0.59	6.95	1.24	5.42	7.12	0.006543	5.25	74.09	20.50	0.88
Sturla	1.16	ST-17	Q50	231.00	1.90	4.31	6.42	2.11	6.00	1.69	4.31	5.48	0.008540	4.80	48.12	20.50	1.00
Sturla	1.16	ST-17	Q200	325.00	1.90	4.91	6.42	1.51	6.00	1.09	4.91	6.38	0.008432	5.38	60.42	20.50	1.00
Sturla	1.16	ST-17	Q500	389.00	1.90	5.28	6.42	1.14	6.00	0.72	5.28	6.94	0.008416	5.71	68.11	20.50	1.00
Sturla	1.15	ST-16	Q50	231.00	1.85	4.34	7.57	3.23	7.57	3.23	3.30	4.58	0.001440	2.16	106.74	43.30	0.44
Sturla	1.15	ST-16	Q200	325.00	1.85	4.93	7.57	2.64	7.57	2.64	3.67	5.24	0.001439	2.46	132.33	43.30	0.45
Sturla	1.15	ST-16	Q500	389.00	1.85	5.50	7.57	2.07	7.57	2.07	3.90	5.81	0.001206	2.48	156.86	43.30	0.42
Sturla	1.14	ST-15	Q50	231.00	1.84	4.34	7.57	3.23	8.60	4.26	3.29	4.58	0.001429	2.16	107.00	43.30	0.44
Sturla	1.14	ST-15	Q200	325.00	1.84	4.93	7.57	2.64	8.60	3.67	3.66	5.24	0.001430	2.45	132.58	43.30	0.45
Sturla	1.14	ST-15	Q500	389.00	1.84	5.50	7.57	2.07	8.60	3.10	3.89	5.81	0.001199	2.48	157.14	43.30	0.41
Sturla	1.131	p. ferroviario	Bridge														
Sturla	1.13	ST-14	Q50	231.00	1.80	2.91	8.60	5.69	5.90	2.99	3.37	4.46	0.025953	5.51	41.93	38.70	1.69
Sturla	1.13	ST-14	Q200	325.00	1.80	3.20	8.60	5.40	5.90	2.70	3.76	5.12	0.024061	6.14	52.94	38.70	1.68
Sturla	1.13	ST-14	Q500	389.00	1.80	5.02	8.60	3.58	5.90	0.88	4.00	5.53	0.002292	3.15	123.54	38.70	0.56
Sturla	1.12	ST-13	Q50	231.00	1.00	3.82	8.59	4.77	5.75	1.93	2.93	4.17	0.002131	2.60	88.92	35.29	0.52
Sturla	1.12	ST-13	Q200	325.00	1.00	4.57	8.59	4.02	5.75	1.18	3.35	4.97	0.001864	2.82	115.27	35.29	0.50
Sturla	1.12	ST-13	Q500	389.00	1.00	5.05	8.59	3.54	5.75	0.70	3.61	5.49	0.001745	2.94	132.14	35.29	0.49
Sturla	1.11	ST-12	Q50	231.00	0.90	3.68	5.45	1.77	5.45	1.77	2.87	4.12	0.002636	2.93	78.81	30.00	0.58
Sturla	1.11	ST-12	Q200	325.00	0.90	4.39	5.45	1.06	5.45	1.06	3.33	4.92	0.002483	3.25	100.04	30.00	0.57
Sturla	1.11	ST-12	Q500	389.00	0.90	4.84	5.45	0.61	5.45	0.61	3.63	5.44	0.002399	3.42	113.71	30.00	0.56
Sturla	1.1	ST-11	Q50	231.00	0.40	3.57	8.06	4.49	5.45	1.88	2.60	4.06	0.002575	3.08	74.90	24.67	0.56
Sturla	1.1	ST-11	Q200	325.00	0.40	4.20	8.06	3.86	5.45	1.25	3.14	4.86	0.002887	3.60	90.27	24.67	0.60
Sturla	1.1	ST-11	Q500	389.00	0.40	4.60	8.06	3.46	5.45	0.85	3.47	5.36	0.003023	3.88	100.17	24.67	0.62
Sturla	1.09	ST-10	Q50	231.00	0.30	3.49	5.20	1.71	5.20	1.71	2.57	4.02	0.002874	3.24	71.32	23.30	0.59
Sturla	1.09	ST-10	Q200	325.00	0.30	4.06	5.20	1.14	5.20	1.14	3.12	4.81	0.003375	3.84	84.71	23.30	0.64
Sturla	1.09	ST-10	Q500	389.00	0.30	4.43	5.20	0.77	5.20	0.77	3.47	5.31	0.003620	4.17	93.29	23.30	0.67
Sturla	1.08	ST-9	Q50	231.00	0.30	3.38	5.20	1.82	5.20	1.82	2.57	3.94	0.003110	3.31	69.84	23.95	0.62
Sturla	1.08	ST-9	Q200	325.00	0.30	3.94	5.20	1.26	5.20	1.26	3.11	4.72	0.003620	3.91	83.12	23.95	0.67
Sturla	1.08	ST-9	Q500	389.00	0.30	4.30	5.20	0.90	5.20	0.90	3.46	5.21	0.003846	4.24	91.77	23.95	0.69
Sturla	1.07	ST-8	Q50	231.00	0.30	3.28	5.20	1.92	5.20	1.92	2.63	3.86	0.003316	3.37	68.46	25.60	0.66
Sturla	1.07	ST-8	Q200	325.00	0.30	3.85	5.20	1.35	5.20	1.35	3.15	4.63	0.003631	3.91	83.02	25.60	0.69
Sturla	1.07	ST-8	Q500	389.00	0.30	4.22	5.20	0.98	5.20	0.98	3.47	5.12	0.003758	4.21	92.41	25.60	0.71
Sturla	1.06	ST-7	Q50	231.00	0.30	3.23	5.20	1.97	5.00	1.77	2.49	3.77	0.003038	3.24	71.39	26.20	0.63
Sturla	1.06	ST-7	Q200	325.00	0.30	3.80	5.20	1.40	5.00	1.20	3.00	4.52	0.003357	3.77	86.28	26.20	0.66
Sturla	1.06	ST-7	Q500	389.00	0.30	4.17	5.20	1.03	5.00	0.83	3.32	5.01	0.003482	4.05	95.93	26.20	0.68
Sturla	1.05	ST-6	Q50	231.00	0.30	2.87	5.00	2.13	5.00	2.13	2.47	3.57	0.004549	3.70	62.51	26.00	0.76
Sturla	1.05	ST-6	Q200	325.00	0.30	3.28	5.00	1.72	5.00	1.72	2.98	4.29	0.005573	4.45	72.96	26.00	0.85
Sturla	1.05	ST-6	Q500	389.00	0.30	3.50	5.00	1.50	5.00	1.50	3.30	4.74	0.006278	4.93	78.89	26.00	0.90

HEC-RAS Plan: att River: Sturla Reach: Sturla (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)	
Sturla	1.04	ST-5	Q50	231.00	0.30	2.91	5.00	2.09	4.60	1.69	2.37	3.40	0.003347	3.12	74.07	32.94	0.66
Sturla	1.04	ST-5	Q200	325.00	0.30	3.40	5.00	1.60	4.60	1.20	2.81	4.06	0.003536	3.60	90.40	33.02	0.69
Sturla	1.04	ST-5	Q500	389.00	0.30	3.71	5.00	1.29	4.60	0.89	3.08	4.47	0.003640	3.87	100.48	33.07	0.71
Sturla	1.03	ST-4	Q50	231.00	0.24	2.94	5.00	2.06	6.67	3.73	2.23	3.32	0.002524	2.73	84.63	37.07	0.58
Sturla	1.03	ST-4	Q200	325.00	0.24	3.46	5.00	1.54	6.67	3.21	2.63	3.96	0.002592	3.12	104.09	37.07	0.59
Sturla	1.03	ST-4	Q500	389.00	0.24	3.79	5.00	1.21	6.67	2.88	2.88	4.36	0.002632	3.35	116.14	37.07	0.60
Sturla	1.02	ST-3	Q50	231.00	0.35	2.97	5.00	2.03	7.00	4.03	2.11	3.28	0.002019	2.45	94.39	40.60	0.51
Sturla	1.02	ST-3	Q200	325.00	0.35	3.52	5.00	1.48	7.00	3.48	2.50	3.91	0.002051	2.79	116.41	40.60	0.53
Sturla	1.02	ST-3	Q500	389.00	0.35	3.85	5.00	1.15	7.00	3.15	2.74	4.31	0.002070	2.99	130.05	40.60	0.53
Sturla	1.018	via V Maggio		Bridge													
Sturla	1.01	ST-2	Q50	231.00	0.35	2.80	5.00	2.20	3.80	1.00	2.11	3.16	0.002537	2.65	87.24	39.80	0.57
Sturla	1.01	ST-2	Q200	325.00	0.35	3.31	5.00	1.69	3.80	0.49	2.50	3.77	0.002608	3.01	107.91	40.60	0.59
Sturla	1.01	ST-2	Q500	389.00	0.35	3.62	5.00	1.38	3.80	0.18	2.74	4.15	0.002619	3.22	120.72	40.60	0.60
Sturla	1	ST-1	Q50	231.00	0.20	2.18	3.95	1.77	3.80	1.62	2.18	2.98	0.008318	3.97	58.26	36.87	1.01
Sturla	1	ST-1	Q200	325.00	0.20	2.60	3.95	1.35	3.80	1.20	2.60	3.59	0.007760	4.41	73.77	37.31	1.00
Sturla	1	ST-1	Q500	389.00	0.20	2.85	3.95	1.10	3.80	0.95	2.85	3.97	0.007649	4.69	83.03	37.58	1.01