CITTA' METROPOLITANA DI GENOVA

TORRENTE POLCEVERA

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







Approvato con D.C.M. n.26 del 25/06/2015

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1 MODELLI DI CALCOLO IN MOTO PERMANENTE

1.1 SIMULAZIONI HEC-RAS

1.1.1 Formulazioni di moto permanente

La determinazione del profilo di rigurgito è stata ottenuta applicando le usuali formulazioni per il calcolo delle caratteristiche del moto permanente in alvei cilindrici o quasi cilindrici:

$$dH = -1/g \bullet [Q^2 / (A^2 \bullet C^2 \bullet R)] \bullet ds$$

dove dH (m) nel tratto ds rappresenta la variazione del carico totale della corrente, Q (m^3/sec) è la portata di calcolo (ricavata nel capitolo 2 dell'allegato 3 - Idrologia), g (m/sec^2) l'accelerazione di gravità, A (m^2) l'area della sezione liquida, C il coefficiente di resistenza adimensionale, R (m) il raggio idraulico ed s (m) l'ascissa corrente.

Il coefficiente di resistenza C è stato calcolato secondo la formulazione di *Gauckler-Strickler*

$$C = k_s \bullet R^{1/6} \bullet g^{-0,5}$$

dove k_s ($m^{1/3}$ sec^{-1}) è il parametro rappresentativo della scabrezza di fondo.

Nelle verifiche sono stati adottati valori di k_s variabili in funzione delle caratteristiche del fondo (geometria e granulometria dei sedimenti), dello stato di pulizia e manutenzione previsto.

CARATTERISTICHE ALVEO	**k_S ($m^{1/3}$ sec^{-1})**
Alvei irregolari, fortemente dissestati, con presenza di massi e salti di fondo	28
Alvei con ciottoli, ricchi di vegetazione, con fondo regolare	30
Alvei naturali regolari con fondo in ciottoli e ghiaia, liberi da vegetazione a fusto rigido	35
Tratti plateati o tombinati con scatolari chiusi o con fondo regolare sabbioso e privo di vegetazione	45

Tabella 1.2 Valori caratteristici del parametro di scabrezza.

1.1.1.1 Confluenza tra corsi d'acqua

Nelle sezioni di confluenza tra i corsi d'acqua, dove non sono applicabili le relazioni precedenti, si è ricorsi all'applicazione del teorema della quantità di moto, espresso nella forma:

$$F_E + F_G = QM_U - QM_E$$

dove F_E è la risultante delle forze di superficie agenti dall'esterno sul volume di controllo, F_G la risultante delle forze di massa, QM_E e QM_U le quantità di moto delle masse che, nell'unità di tempo, entrano ed escono dal volume di controllo.

É stata imposta l'uguaglianza delle spinte nelle sezioni a monte e a valle della confluenza. I "nodi" di confluenza sono stati analizzati prendendo in considerazione separatamente le due ipotesi evento di massima piena su ognuna delle due (o più) aste convergenti e valutando la configurazione più punitiva.

1.1.1.2 Restringimenti della sezione

La presenza di *opere in alveo*, quali le pile dei ponti, è causa di restringimenti improvvisi della sezione libera di deflusso, che provocano disturbi al moto della corrente.

L'analisi del *numero di Froude* della corrente in condizioni indisturbate, calcolato cioè in assenza di restringimento (Fr_0), del rapporto di restringimento r tra la larghezza libera b, depurata dall'ingombro delle pile, e la larghezza totale b_0, forniscono indicazioni sulla tipologia del moto di transizione, che può essere:

1) **subcritico**, se la corrente mantiene le caratteristiche di corrente lenta (Fr < 1) a monte ed a valle del restringimento,
2) **con transizione attraverso lo stato critico** all'interno del restringimento,
3) **supercritico**, se la corrente mantiene le caratteristiche di corrente veloce (Fr >1) a monte ed a valle del restringimento, nel qual caso non sono presenti rigurgiti.

Nel **caso 1.** si è usata la *formulazione di Yarnell*, che fornisce il valore della sopraelevazione Y_m del pelo libero a monte di un restringimento, una volta note le caratteristiche del moto a valle dello stesso, come il tirante idrico Y_v:

$$Y_m = Y_v + Y_v \bullet \{K_2 \bullet (K_2 - 0.6 + Fr_0^2) \bullet [1 - r + 15 \bullet (1 - r)^4] \bullet Fr_0^2\}$$

nel quale K_2 è un fattore di forma delle pile.

Nel **caso 2.** l'entità del rigurgito a monte in corrente lenta è stata stimata con la *formula di Marchi*:

$$Y_m = K_f \bullet [Q^2 / (g \bullet b_0^2 \bullet Fr_L^2)^{1/3}]$$

dove K_f rappresenta un coefficiente sperimentale dipendente dalla forma delle pile in alveo e Fr_L^2 è il valore limite del numero di Froude, letto sulla curva di stabilità in funzione di $r = b/b_0$.

Nel **caso 3.** non sono presenti rigurgiti in corrente lenta.

1.1.2 Origine dei dati utilizzati nel modello di calcolo

La geometria delle sezioni dell'alveo, le quote sul livello del mare e le pendenze medie longitudinali, necessarie al modello matematico di calcolo dei profili di rigurgito utilizzato nel programma "HEC-RAS", sono stati ricavati:

- dalla cartografia C.T.R. esistente in scala 1:5.000;
- dal rilievo del Genio Civile in scala 1:1.000;

- dal C.T.C. del Comune di Genova in scala 1:1000;
- dai rilievi effettuati nel corso del presente studio.

I risultati delle verifiche sono rappresentati nelle tavole allegate che riportano, oltre alle grandezze idrauliche significative, anche la rappresentazione grafica del profilo del pelo libero. Una estrapolazione delle aree soggette ad esondazione è stata riprodotta graficamente sulla cartografia in scala 1:5.000. Tali aree sono state diversamente rappresentate: con il colore rosso si sono indicate le zone soggette ad inondazione per effetto di fenomeni di tipo idraulico (tracimazione del corso d'acqua dagli argini), con il colore verde quelle nelle quali l'esondazione è per lo più dovuta all'elevato carico cinetico della corrente.

Si osserva che i tratti analizzati presentano tutti un rischio idraulico elevato per lo più dovuto alla presenza di manufatti aventi caratteristiche geometrico-strutturali che interferiscono pesantemente sul deflusso dell'acqua, restringendone l'alveo od insistendo in aree caratterizzate da brusche variazioni delle sezioni (curve, restringimenti naturali) causa di forti sopraelevazioni del pelo libero.

2 TORRENTE POLCEVERA

2.1 CONFLUENZA VERDE – RICCÒ E RIO CASELLA
2.2 TRATTO TRA LA CONFLUENZA VERDE-RICCÒ E IL PONTE PIERAGOSTINI
2.2.1 Affluenti minori diretti: Rio Mainose
2.2.2 Affluenti minori diretti: Rio Fulle
2.2.3 Affluenti minori diretti: Rio Boschetto
2.3 TRATTO FIUMARA COMPRESO TRA IL PONTE PIERAGOSTINI E LA FOCE

2 TORRENTE POLCEVERA

2.1 Confluenza Verde – Riccò e rio Casella

La confluenza Verde-Riccò è stata studiata nelle due configurazioni che prevedono la portata al colmo con tempo di ritorno assegnato a valle della confluenza e, alternativamente, sui due affluenti; sull'altro affluente è imposta, ai fini della conservazione della massa, la differenza delle portate. In particolare risulta:

	TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
			T = 50 anni	T = 200 anni	T = 500 anni
Verde in piena	Torrente Verde	V0	464	580	657
	Torrente Riccò	differenza	216	280	303
	Torrente Polcevera	POL1t	680	860	960
Riccò in piena	Torrente Verde	differenza	381	480	529
	Torrente Riccò	RIC4	299	380	431
	Torrente Polcevera	POL1t	680	860	960

L'area di indagine è stata scelta in modo da essere delimitata da briglie, cosicché risulta idraulicamente indipendente dai tratti contigui; pertanto sul t. Verde si parte dalla sezione VER-1, sul t. Riccò dalla sezione RIC-8, sul t. Polcevera dalla POL-121.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 33 $m^{1/3}/s$.

Nell'ambito dello studio della confluenza è stato indagato anche il rio Casella, affluente in sponda destra subito a valle della stessa.

Le portate di riferimento sono state calcolate tramite il metodo suggerito dal CIMA per i bacini di piccole dimensioni (A< 2 km^2).

- $Q_{TR=50\ anni}$ = 7.6 m^3/s;
- $Q_{TR=200\ anni}$ = 11 m^3/s;
- $Q_{TR=500\ anni}$ = 13.3 m^3/s

Come condizione al contorno di valle è stata simulata la confluenza con il t. Polcevera; a monte è stata imposta la profondità critica.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 45 $m^{1/3}/s$ in quanto l'alveo è rivestito in calcestruzzo in discrete condizioni.

2.2 Tratto tra la confluenza Verde-Riccò e il ponte Pieragostini

L'analisi idraulica dell'asta principale del torrente Polcevera ha subìto, in questa fase di aggiornamento del Piano, una profonda revisione globale che ha portato ad avere un unico tratto studiato interamente, da valle della confluenza tra Riccò e Verde fino al ponte Pieragostini a Sampierdarena. Per ottenere tale risultato, oltre ad avere ricontrollato le sezioni provenienti da progetti e pratiche presentate all'Amministrazione provinciale, sono state rilevate in proprio molte nuove sezioni del corso d'acqua ad integrazione di quelle già esistenti, e si è conclusa la fase di trasferimento dei dati dal software Mike 11 verso Hec Ras, permettendo così un controllo più accurato dei risultati delle verifiche idrauliche.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 30 $m^{1/3}s^{-1}$ per i tratti naturali e pari a 40 $m^{1/3}s^{-1}$ per i tratti plateati.

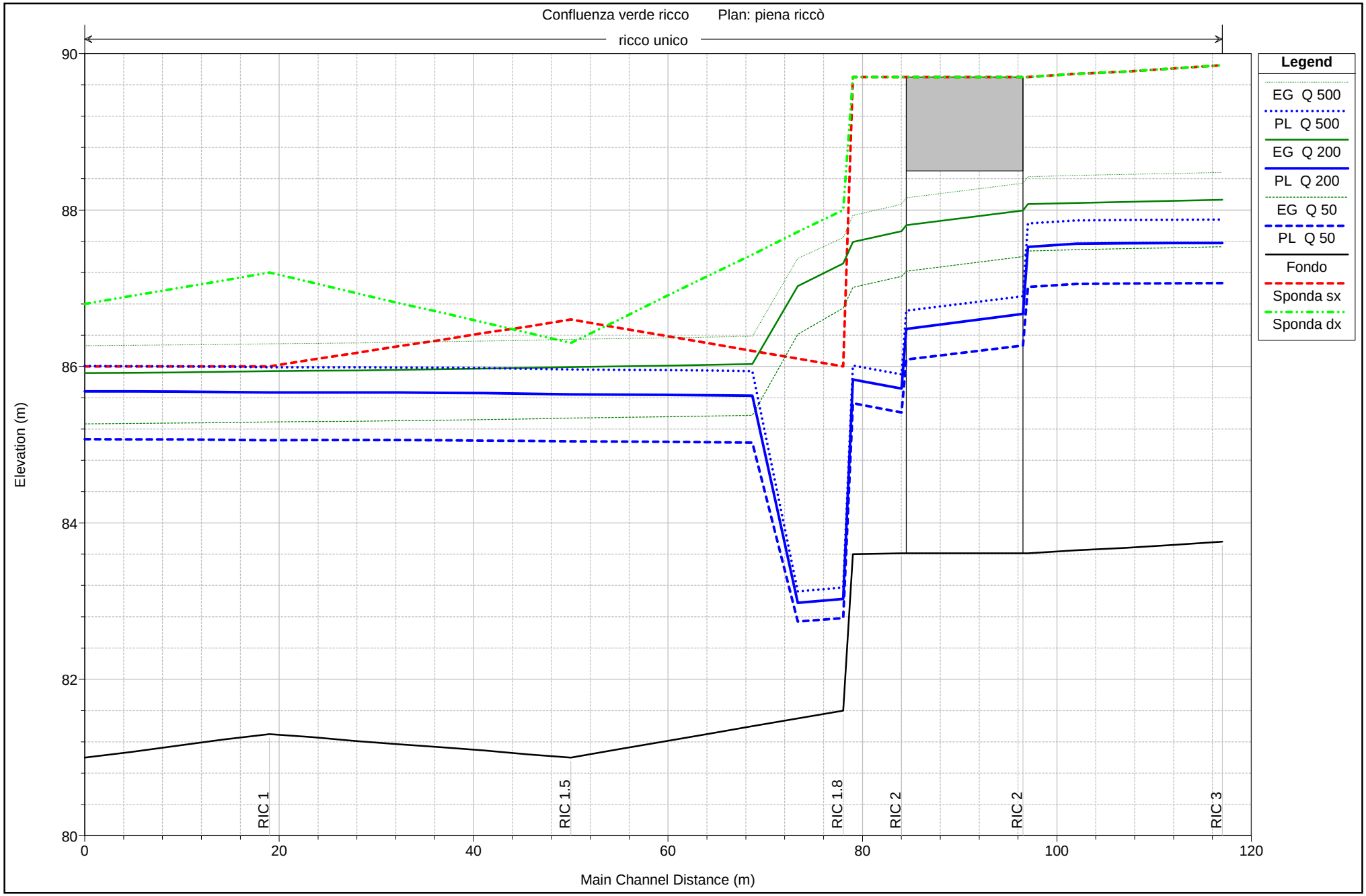
A monte il tratto è delimitato da una briglia nella sezione POL 121, per cui si è scelto quale condizione al contorno la profondità critica; a valle si sono imposti nella sezione POL-1 i livelli ottenuti nella sezione a monte del ponte Pieragostini dalle verifiche idrauliche allegate al progetto di riqualificazione urbana dell'area di Fiumara, nella configurazione di stato attuale; in particolare risulta:

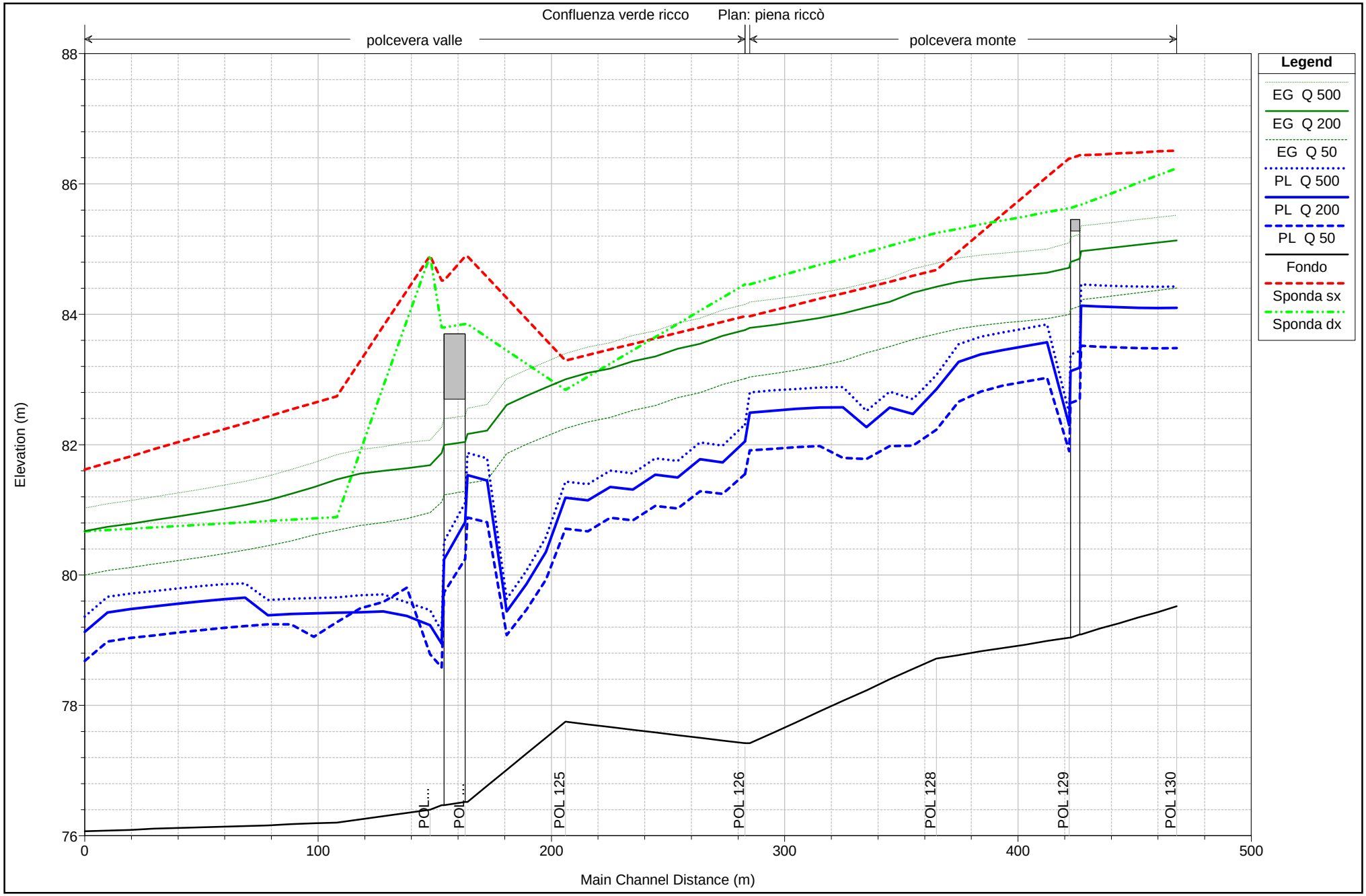
SEZIONE	h_{50} (m)	h_{200} (m)	h_{500} (m)
POL-1	**5,9**	**7,2**	**8,4**

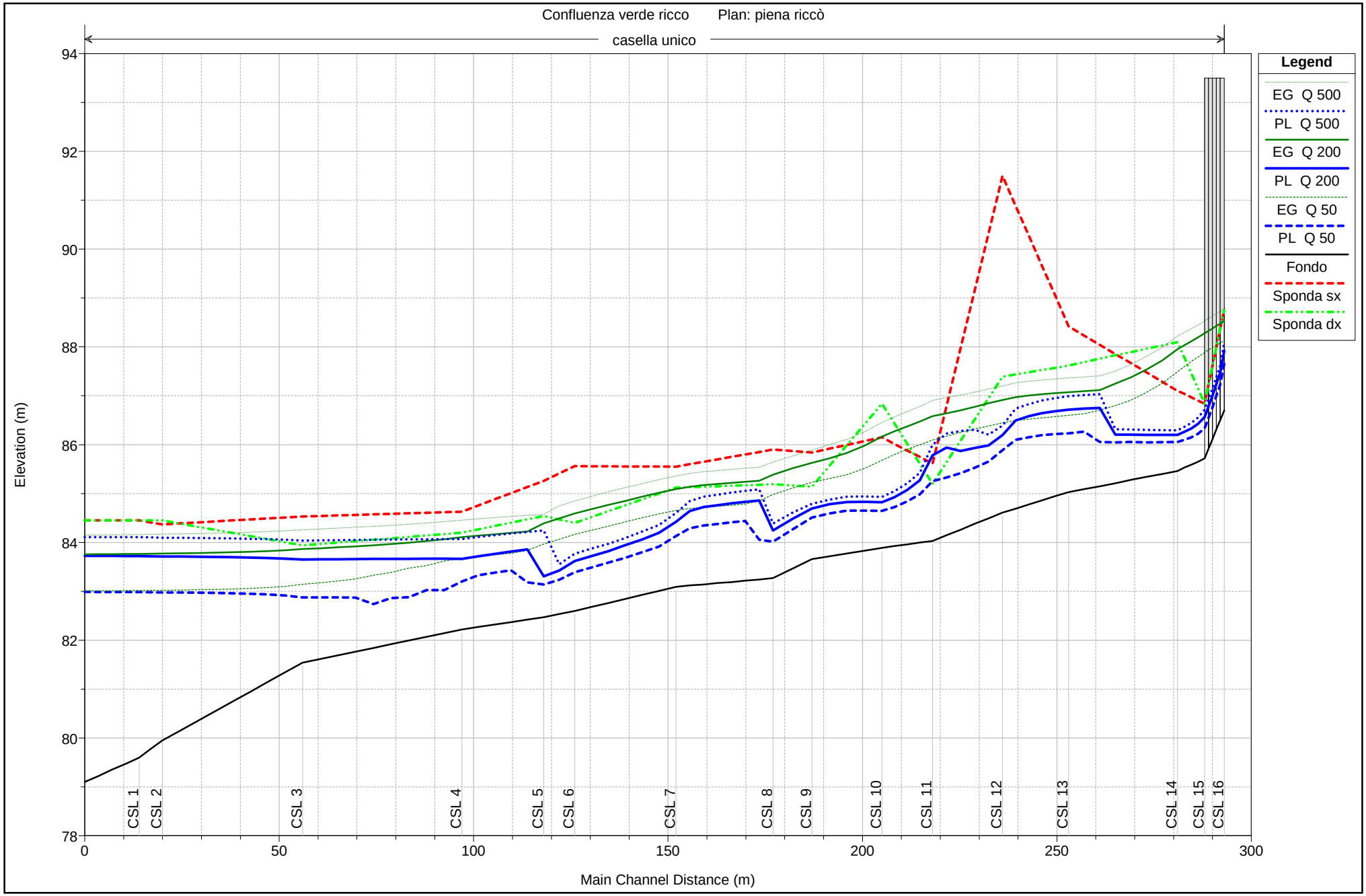
Sono state simulate le confluenze con il torrente Secca ed il torrente Burba in quanto bacini di dimensioni maggiori con portate tali da poter influenzare il comportamento del torrente Polcevera; non sono state modellate invece le confluenze con gli affluenti Trasta, Geminiano, Fegino e Torbella in quanto si è ritenuto che le portate di questi corsi d'acqua siano tali da non influenzare l'affluente principale.

Nella tabella seguente sono riassunte le portate utilizzate per il calcolo in moto permanente dei profili di rigurgito; la sigla della sezione richiama la carta dei sottobacini e di ubicazione delle sezioni di chiusura. Le portate sugli affluenti sono la differenza tra la portata calcolata nella sezione a valle e quella a monte della confluenza.

TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
		T = 50 anni	**T = 200 anni**	**T = 500 anni**
da PonteX al T. Secca	POL1t	680	860	960
dal T. Secca al T. Burba	-	1128	1447	1643
dal T. Burba al T. Trasta	PoSeBu	1265	1622	1847
dal T.Trasta al nodo Torbella-Fegino	PoTr	1294	1657	1886
dal nodo Torbella-Fegino fino al ponte Pieragostini	PoFeTo	1377	1763	2006
T. Secca	-	448	587	683
T. Burba	-	137	175	204

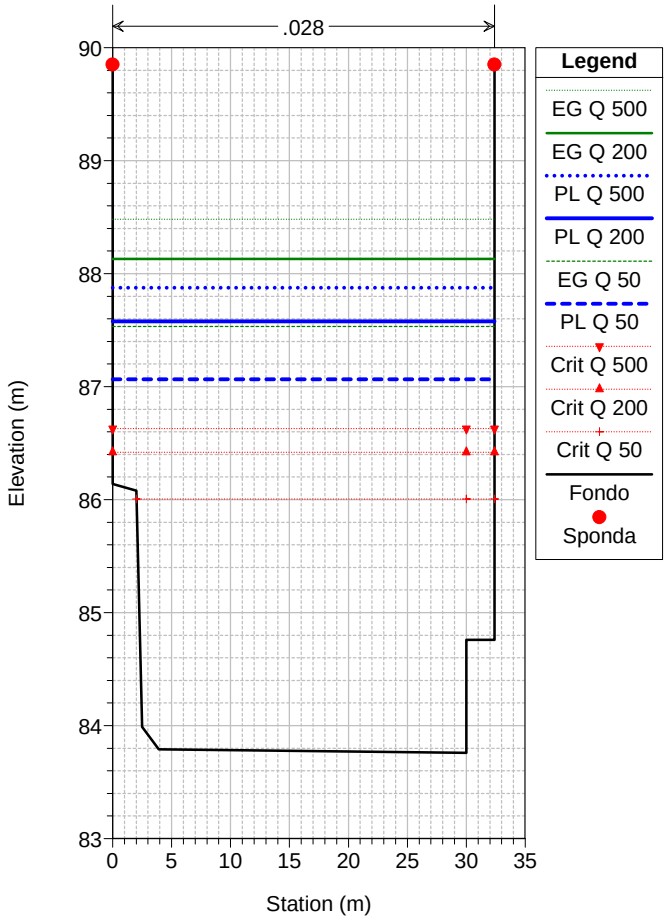

Confluenza verde ricco
Plan: piena riccò
ricco unico
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
90
88
86
84
82
80
0
20
40
60
80
100
120
RIC 1
RIC 1.5
RIC 1.8
RIC 2
RIC 2
RIC 3


Confluenza verde ricco
Plan: piena riccò
polcevera valle
polcevera monte
Legend
EG Q 500
EG Q 200
EG Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
88
86
84
82
80
78
76
0
100
200
300
400
500
POL...
POL...
POL 125
POL 126
POL 128
POL 129
POL 130


Confluenza verde ricco
Plan: piena riccò
casella unico
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
94
92
90
88
86
84
82
80
78
0
50
100
150
200
250
300
CSL 1
CSL 2
CSL 3
CSL 4
CSL 5
CSL 6
CSL 7
CSL 8
CSL 9
CSL 10
CSL 11
CSL 12
CSL 13
CSL 14
CSL 15
CSL 16

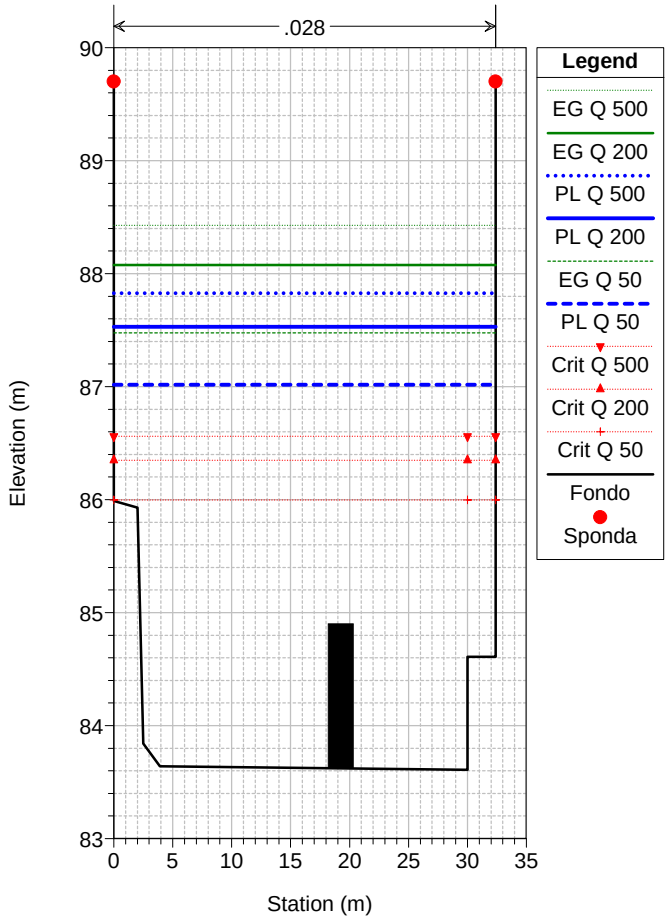
Confluenza verde ricco Plan: piena riccò

River = ricco Reach = unico RIC 3



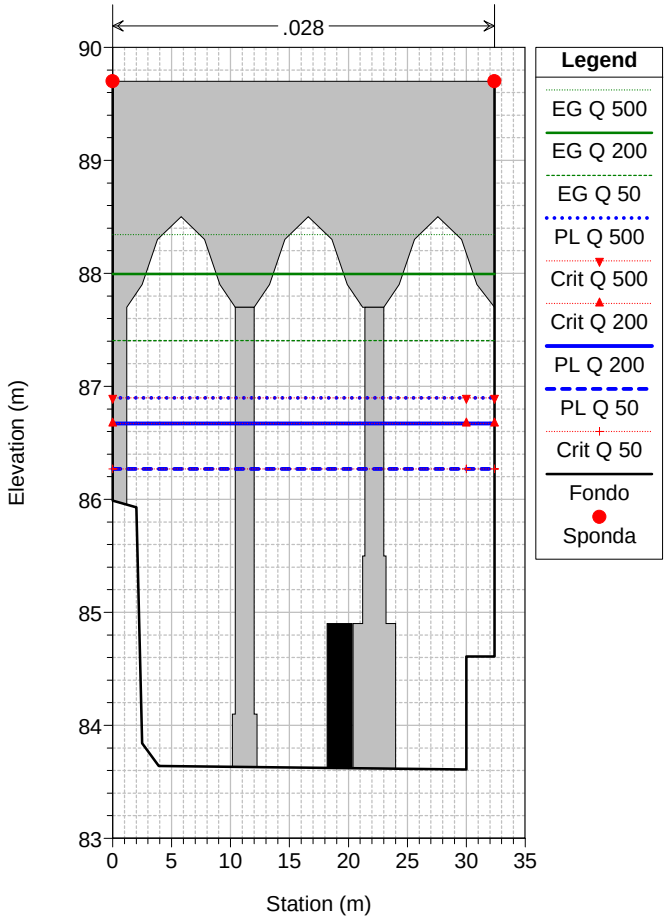
Confluenza verde ricco Plan: piena riccò

River = ricco Reach = unico RIC 2



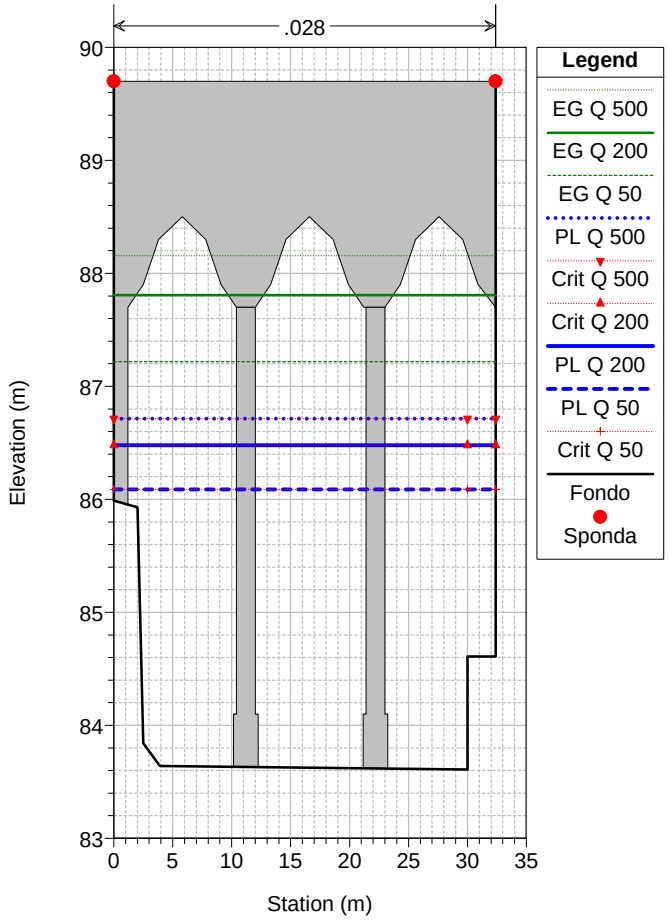
Confluenza verde ricco Plan: piena riccò

River = ricco Reach = unico RIC 2



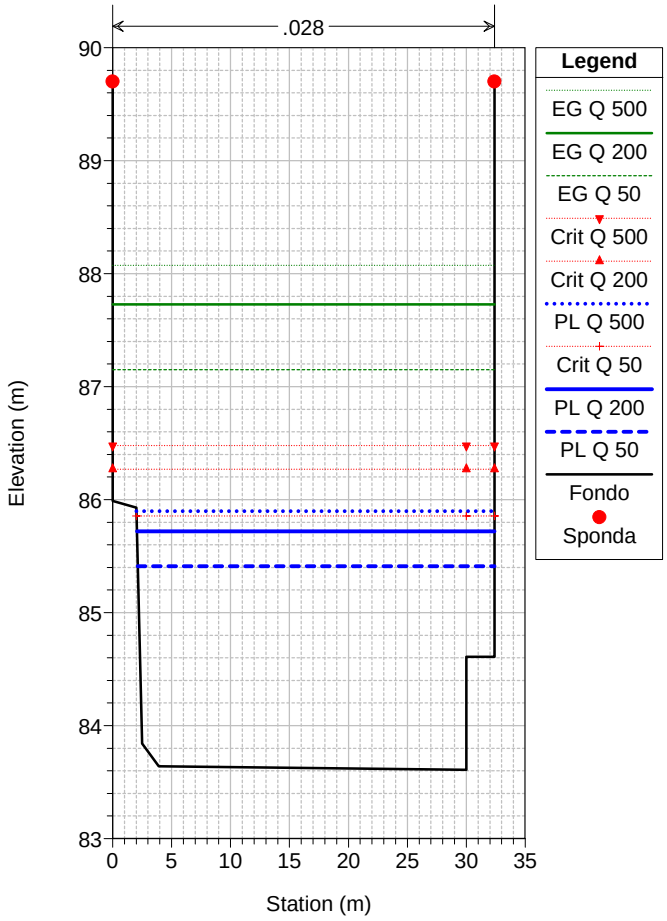
Confluenza verde ricco Plan: piena riccò

River = ricco Reach = unico RIC 2



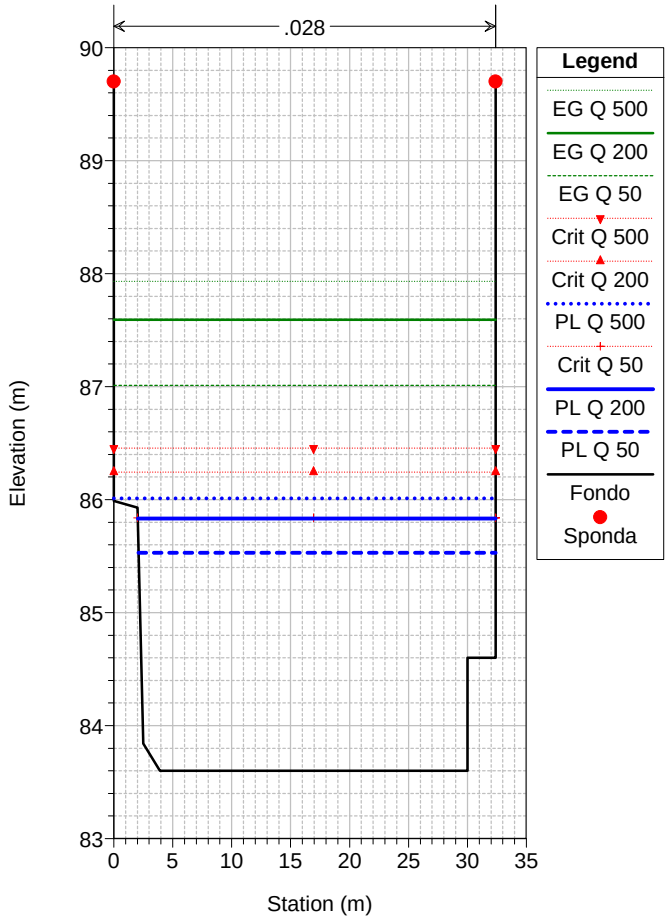
Confluenza verde ricco Plan: piena riccò

River = ricco Reach = unico RIC 2



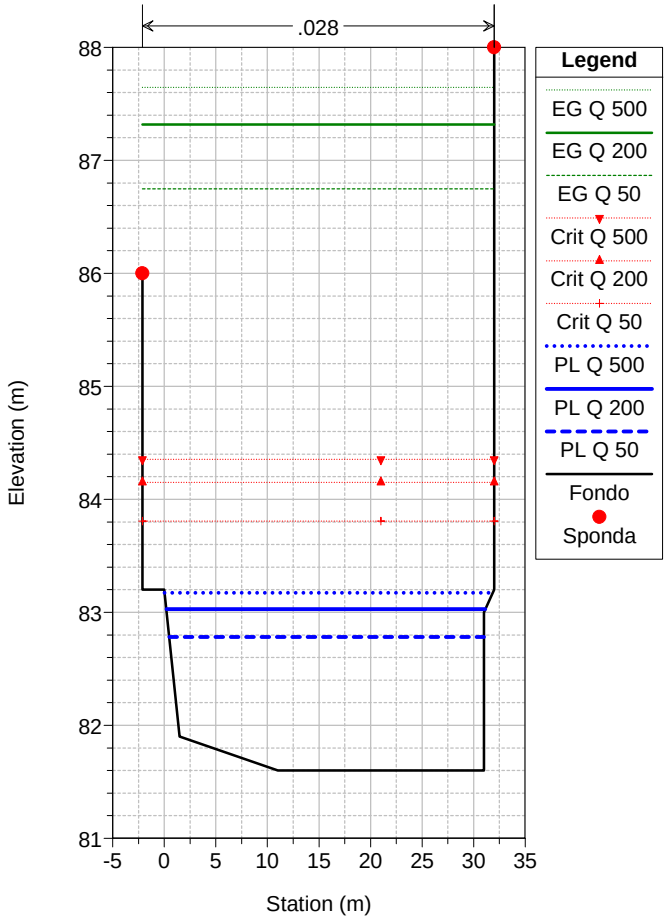
Confluenza verde ricco Plan: piena riccò

River = ricco Reach = unico RIC 1.8



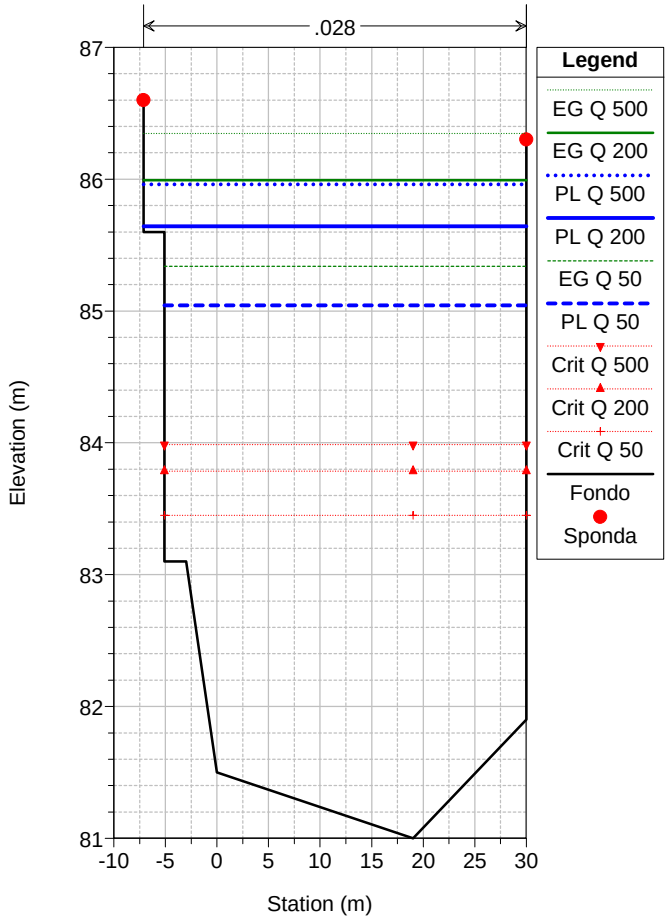
Confluenza verde ricco Plan: piena riccò

River = ricco Reach = unico RIC 1.8



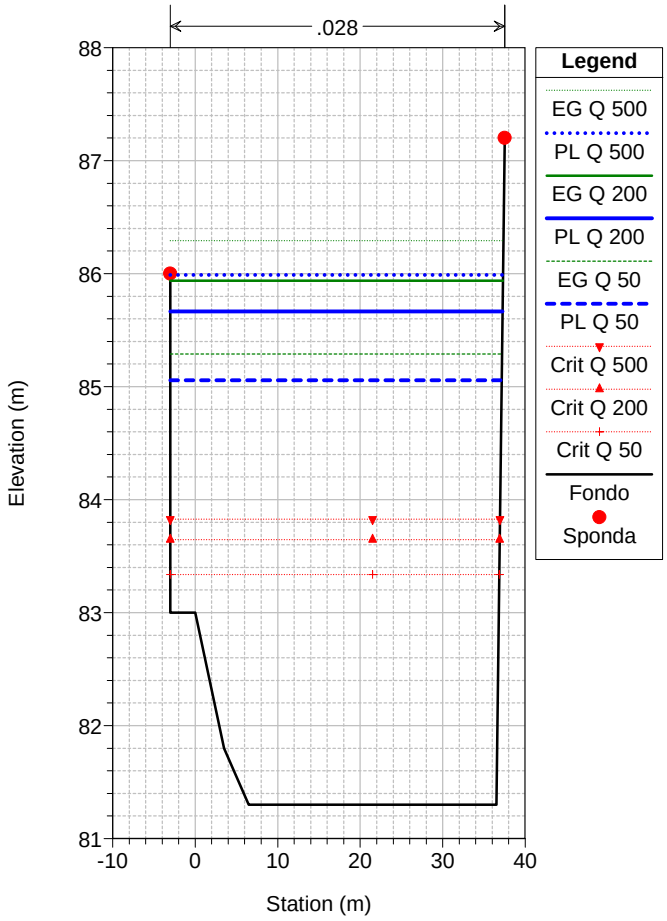
Confluenza verde ricco Plan: piena riccò

River = ricco Reach = unico RIC 1.5



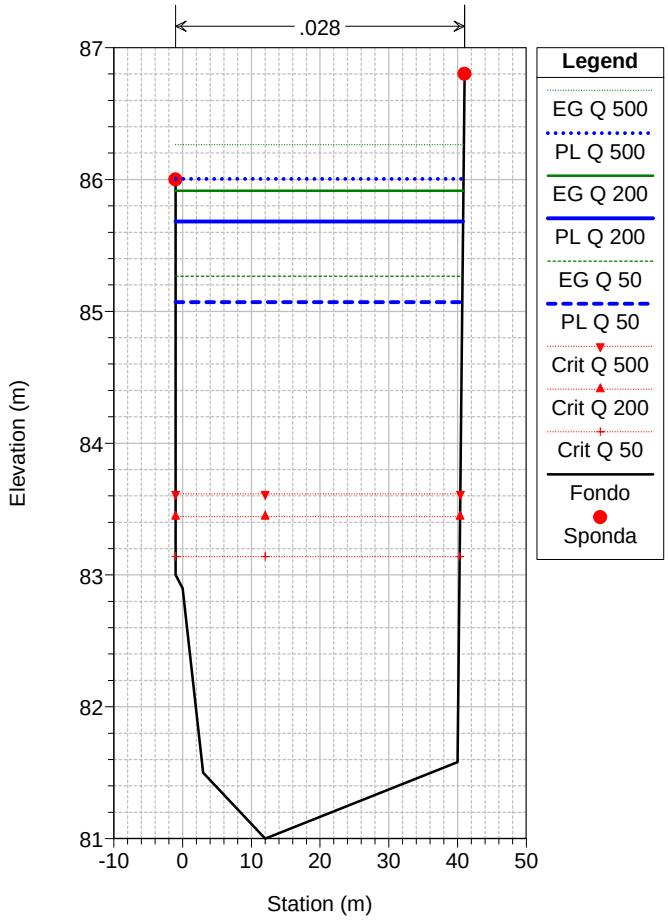
Confluenza verde ricco Plan: piena riccò

River = ricco Reach = unico RIC 1



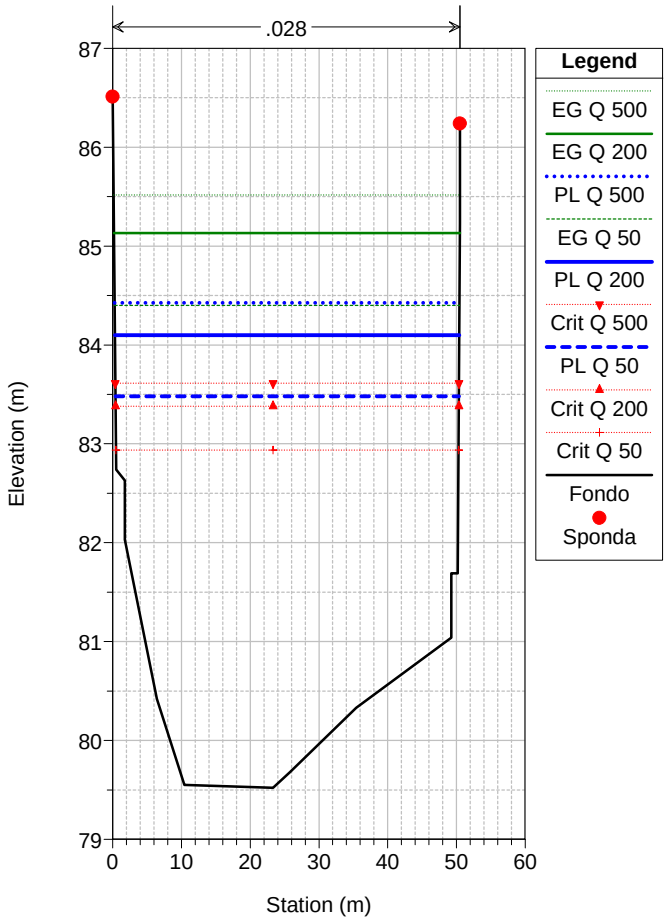
Confluenza verde ricco Plan: piena riccò

River = ricco Reach = unico RIC 0.5



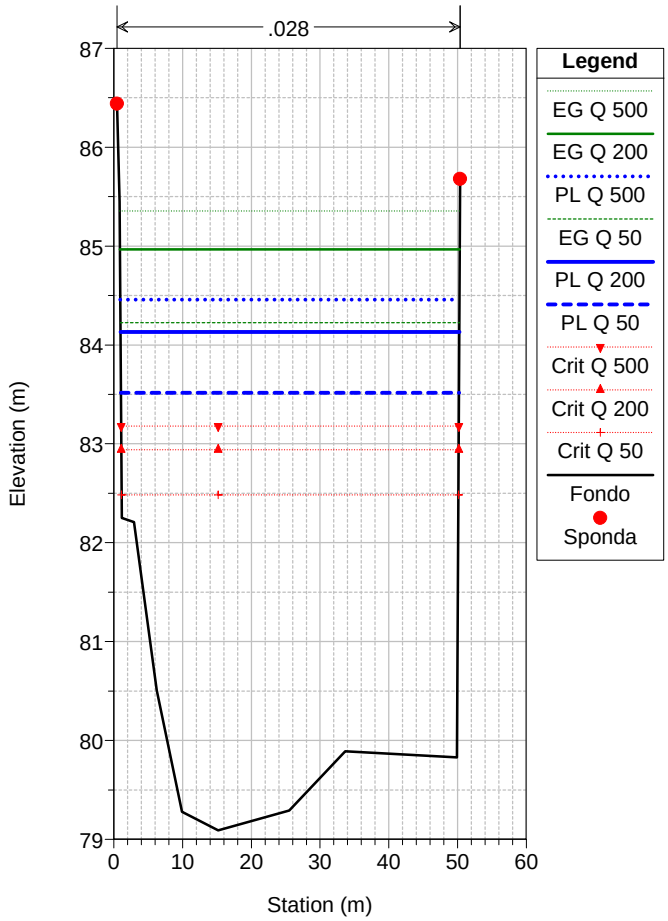
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = monte POL 130



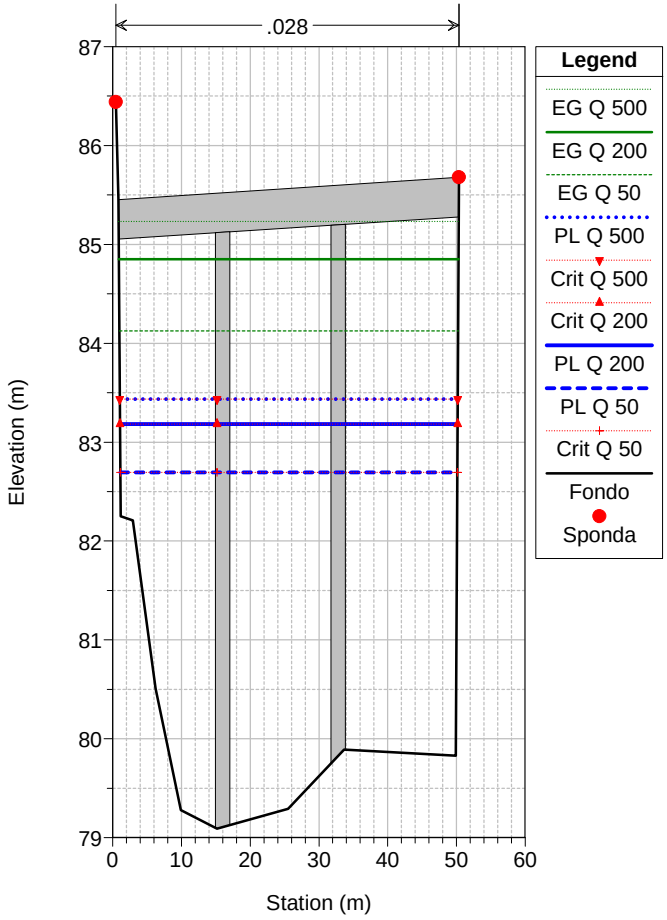
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = monte POL 129



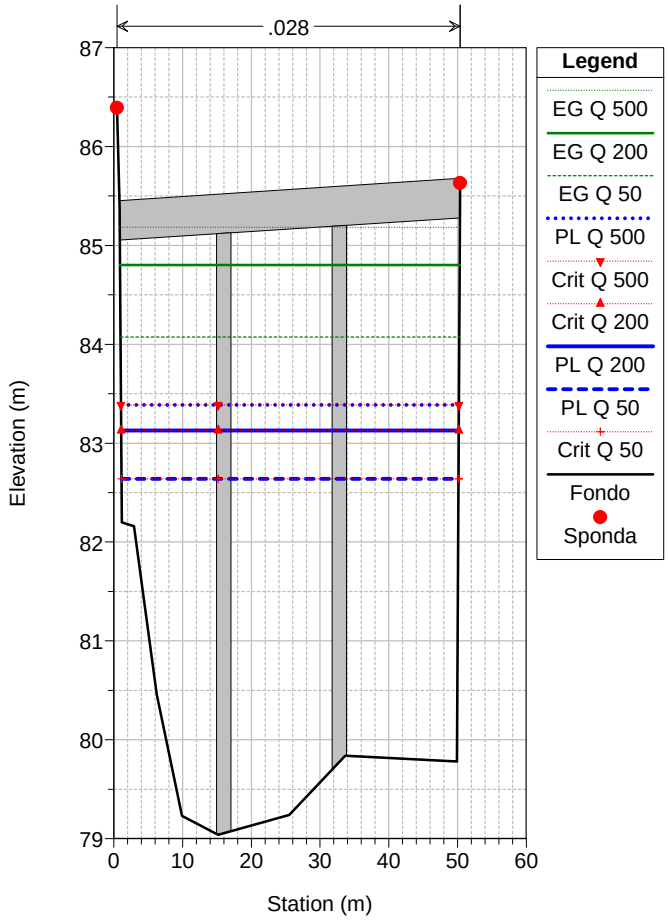
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = monte POL 129



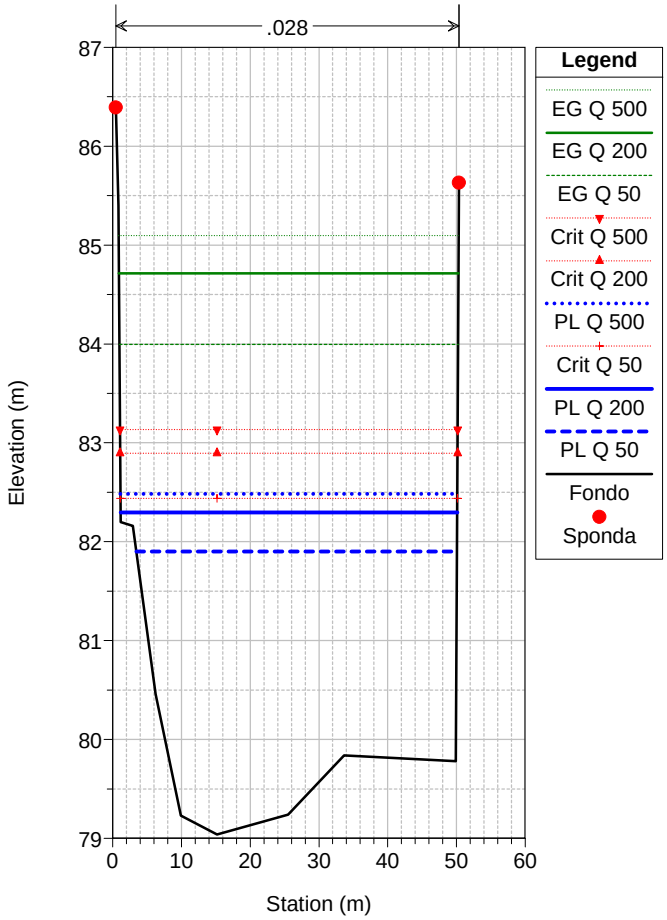
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = monte POL 129



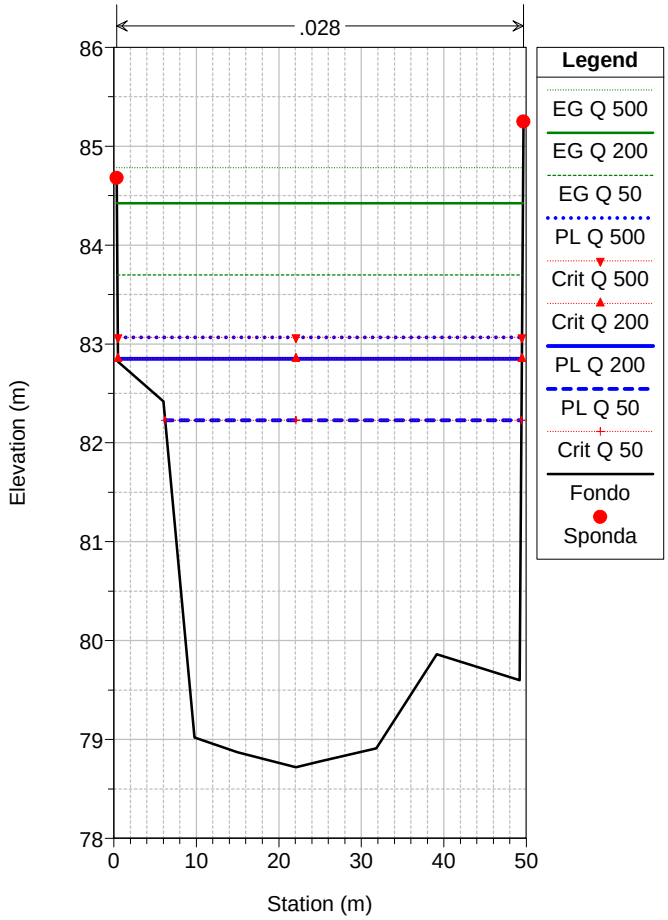
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = monte POL 129



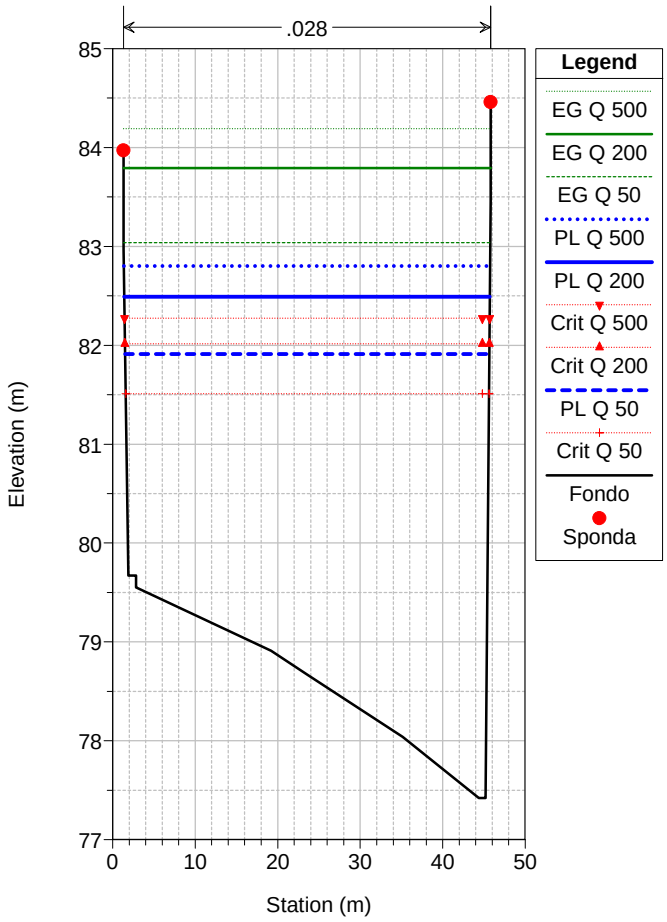
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = monte POL 128



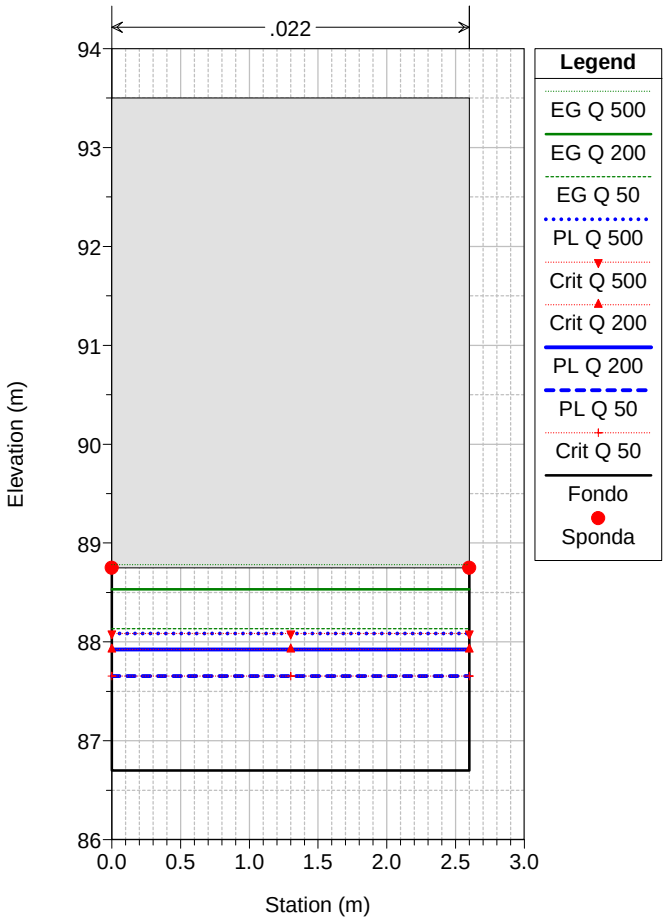
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = monte POL 127



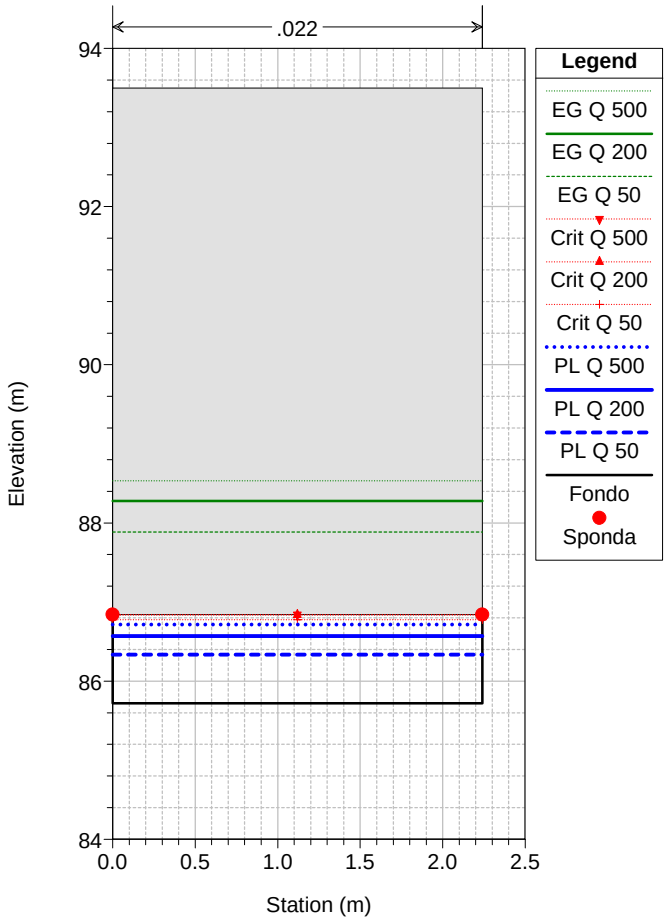
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 16



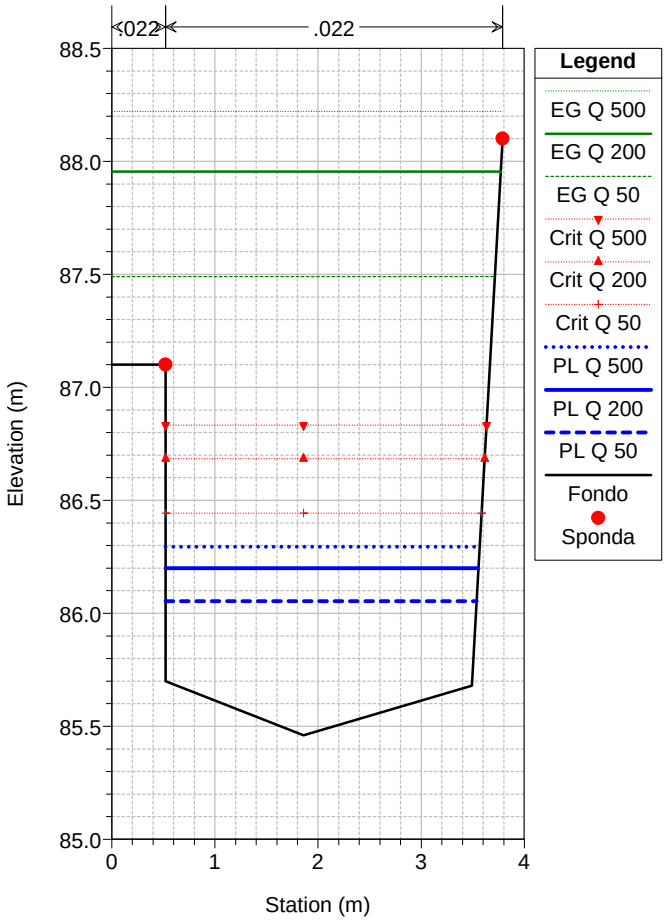
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 15



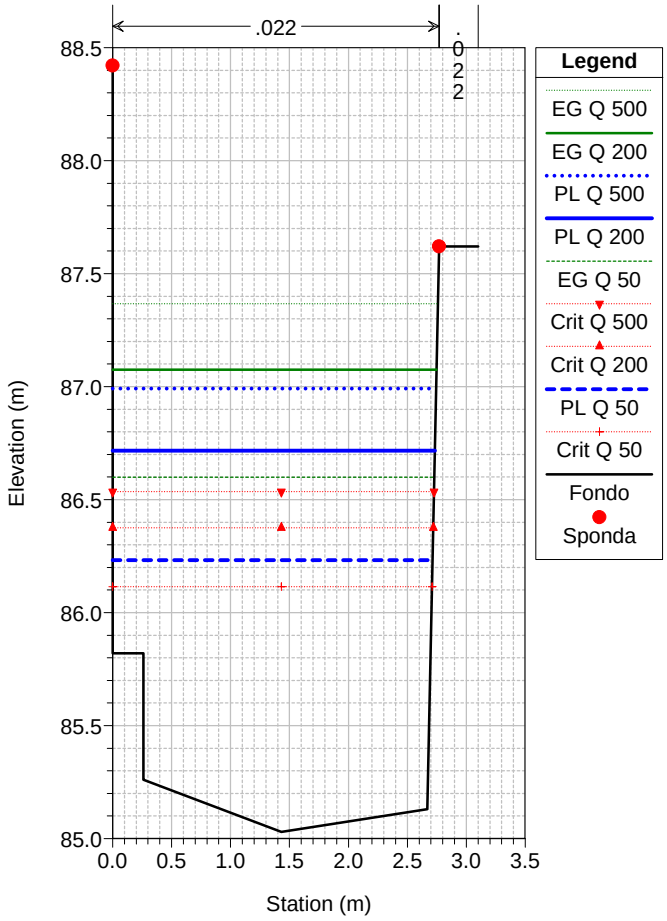
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 14



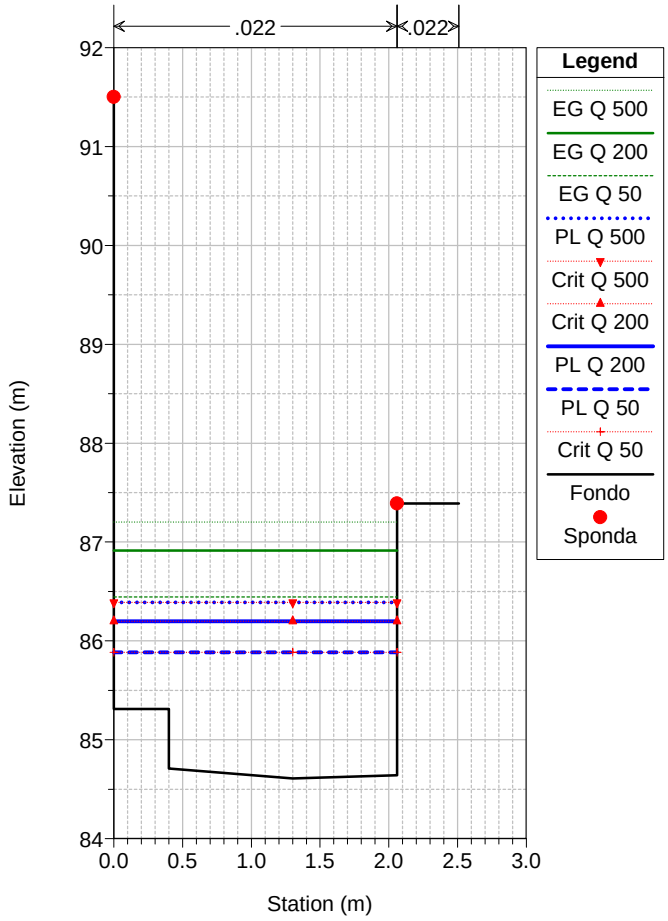
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 13



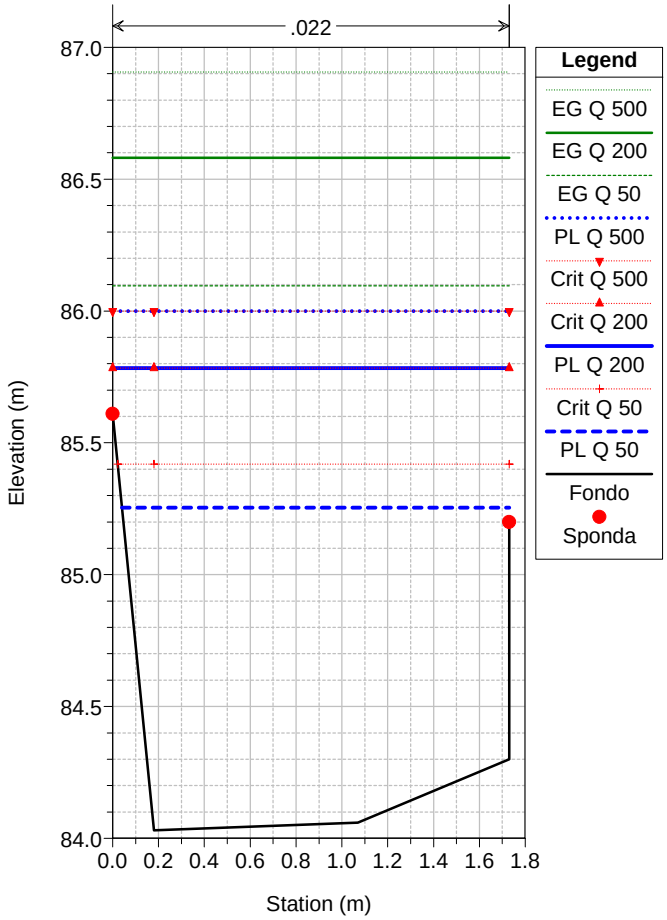
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 12



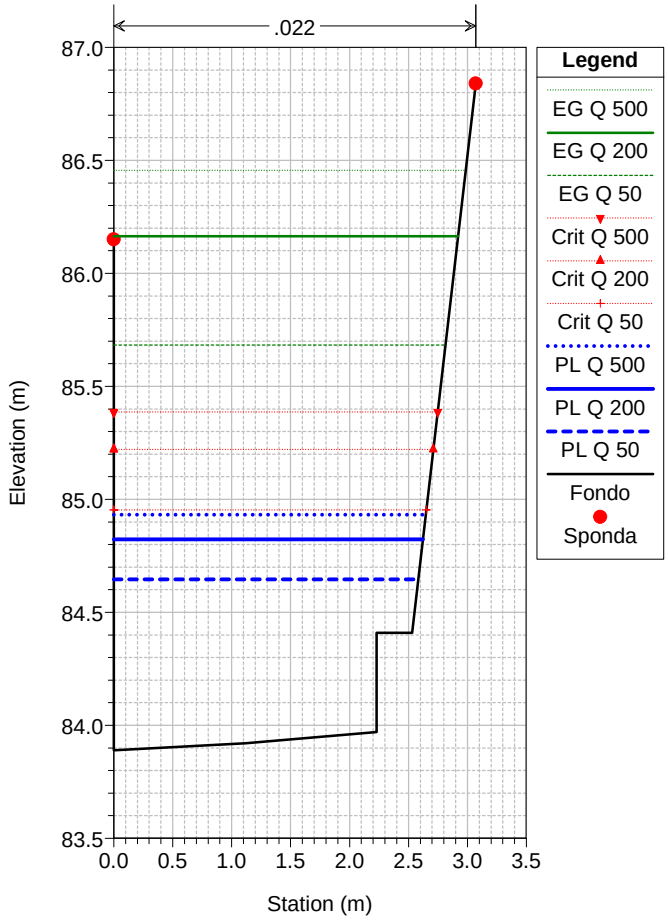
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 11



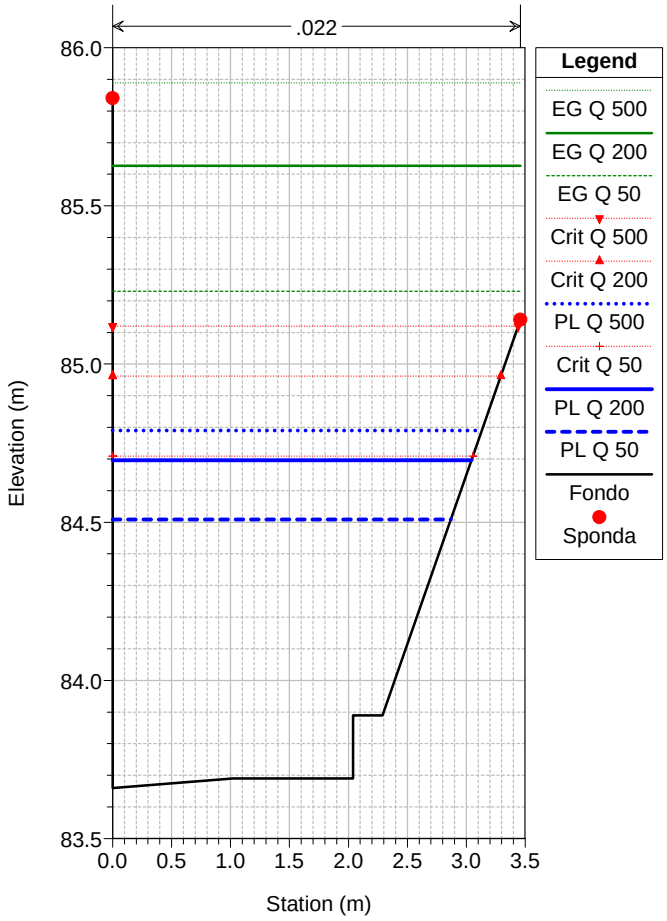
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 10



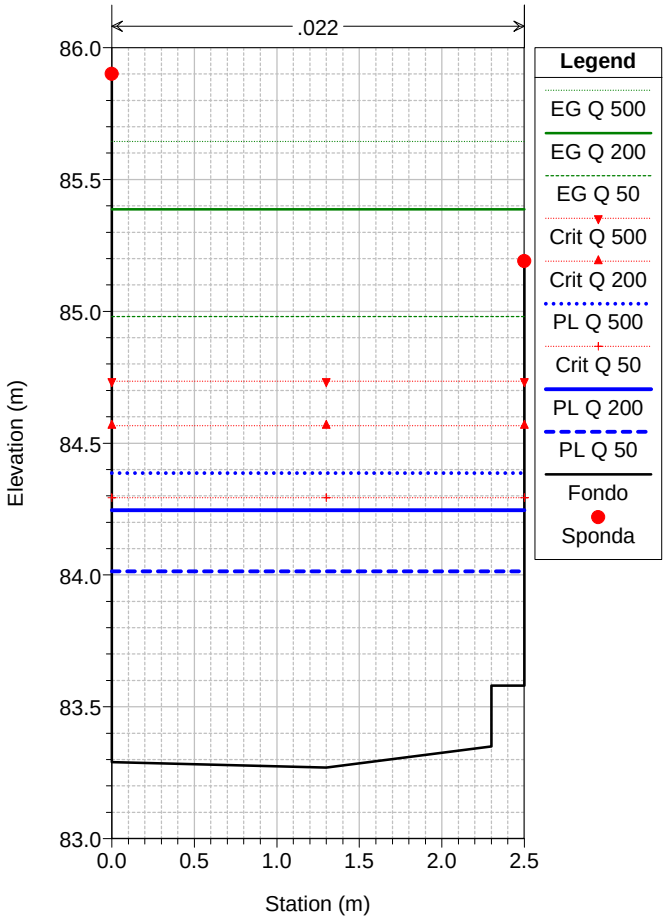
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 9



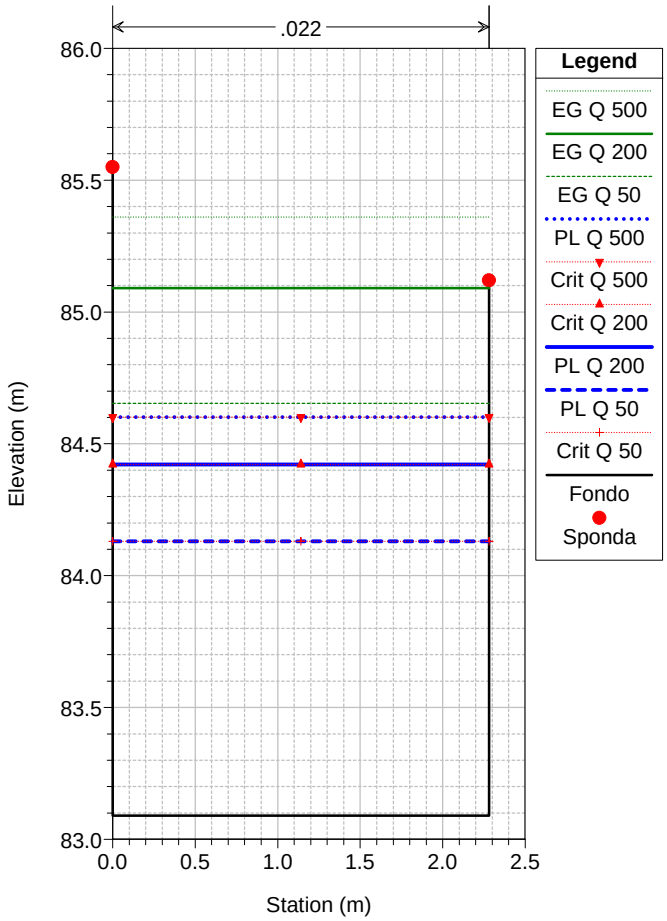
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 8



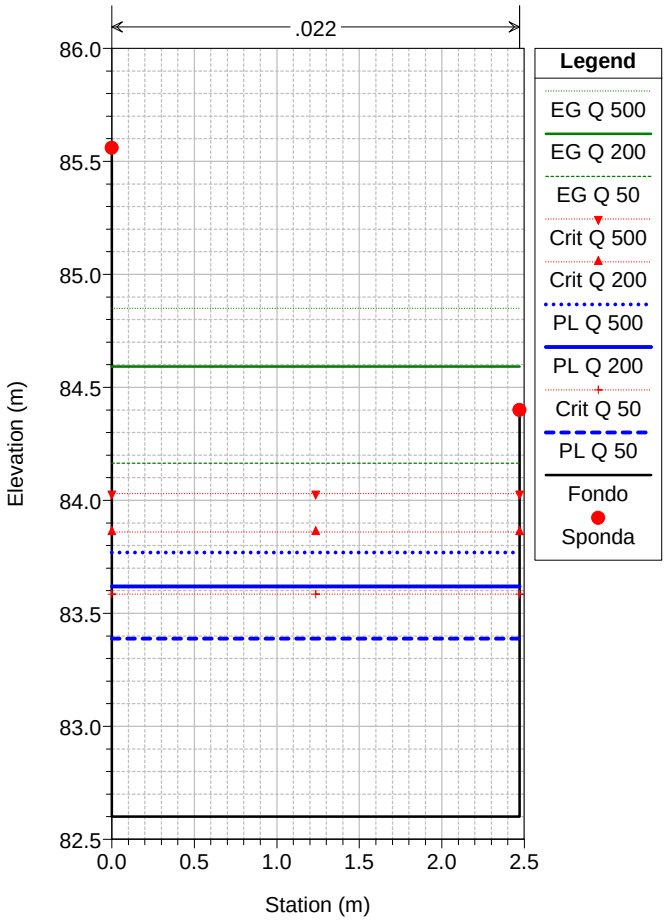
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 7



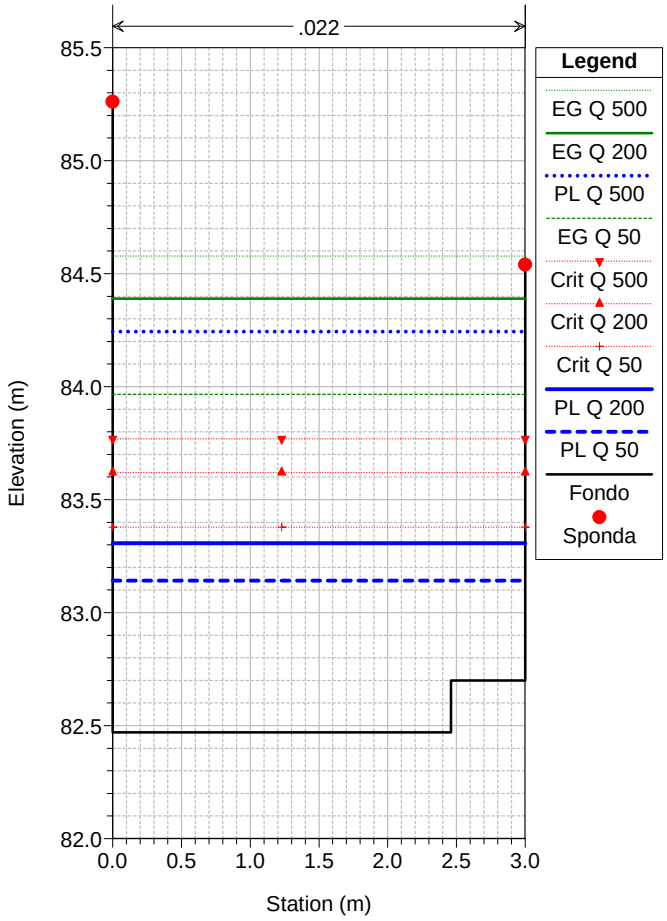
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 6



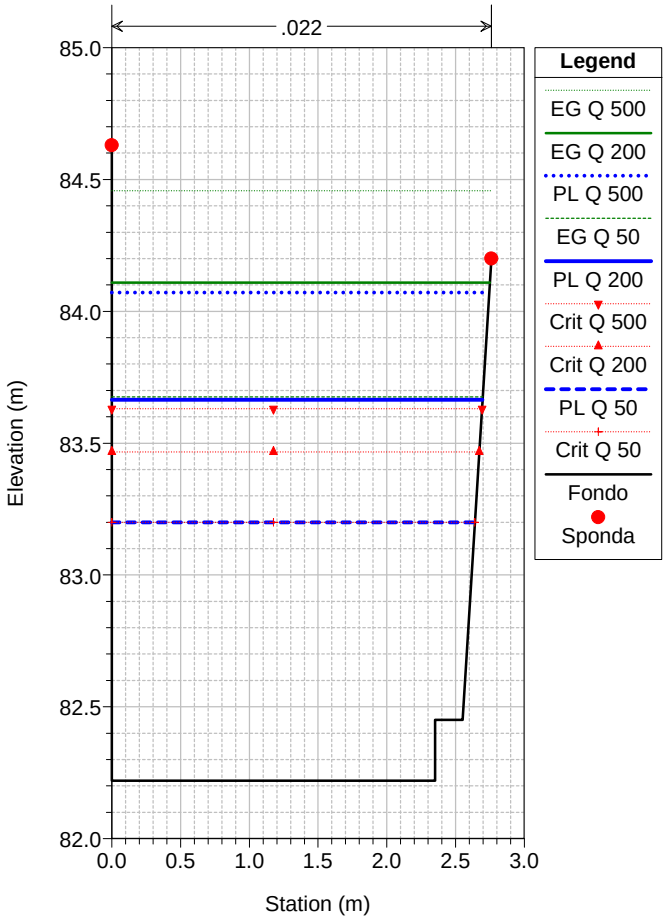
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 5



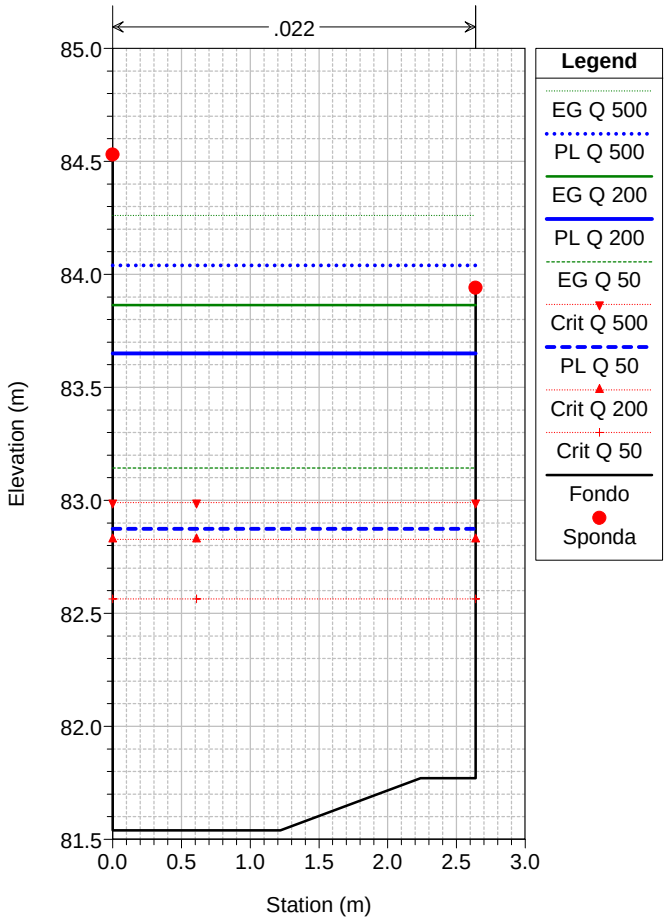
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 4



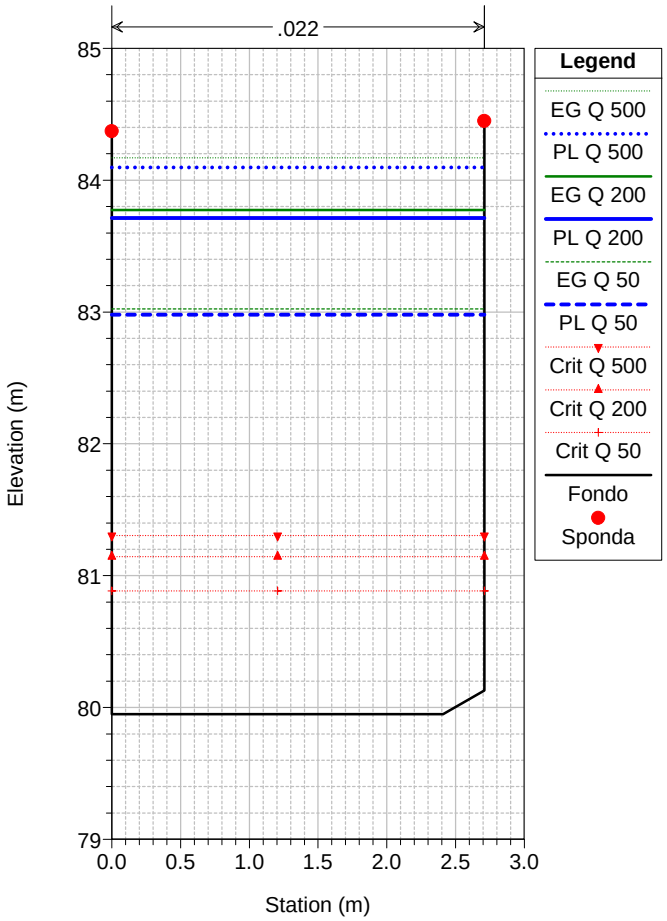
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 3



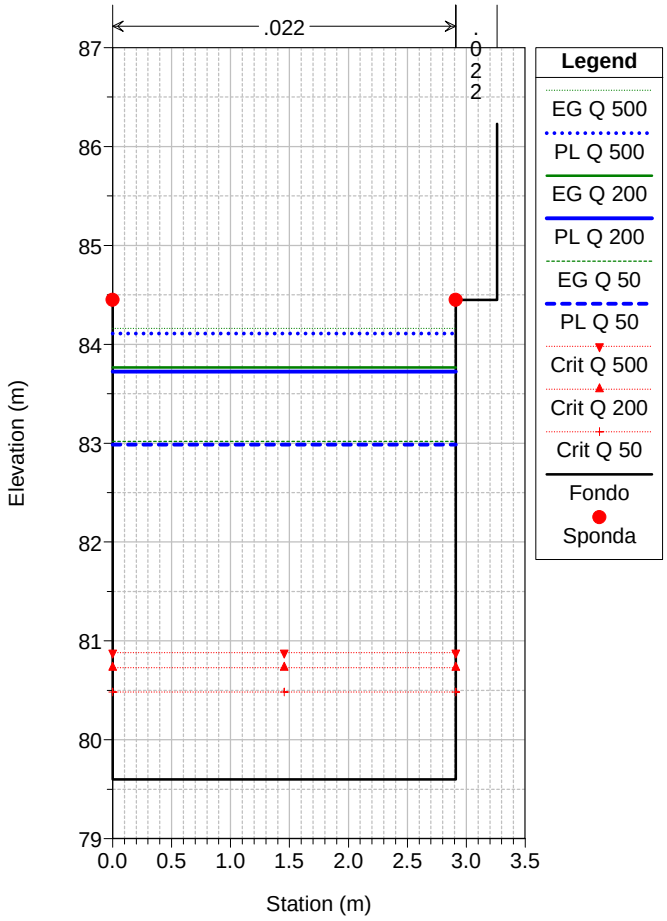
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 2



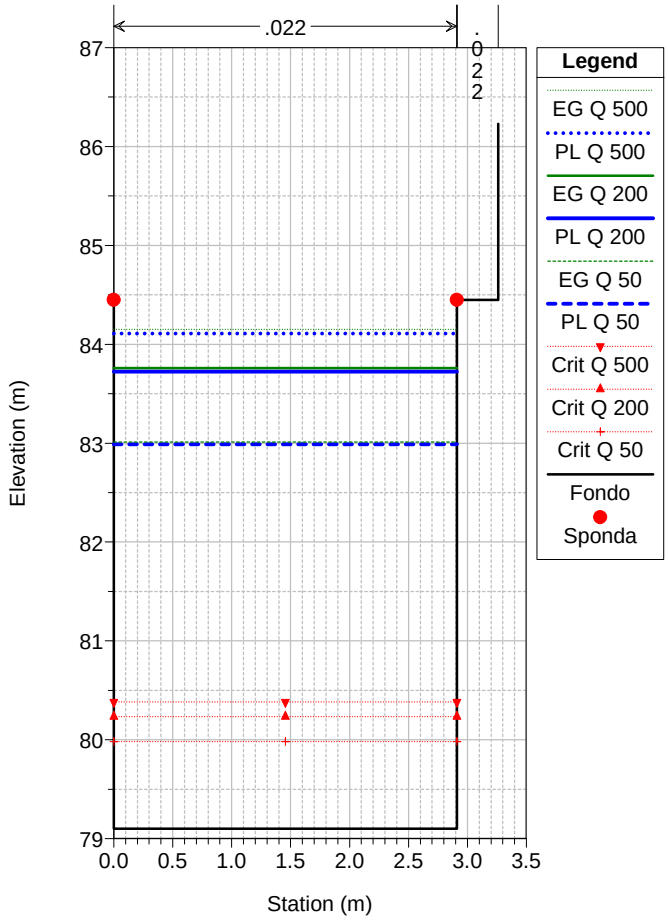
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 1



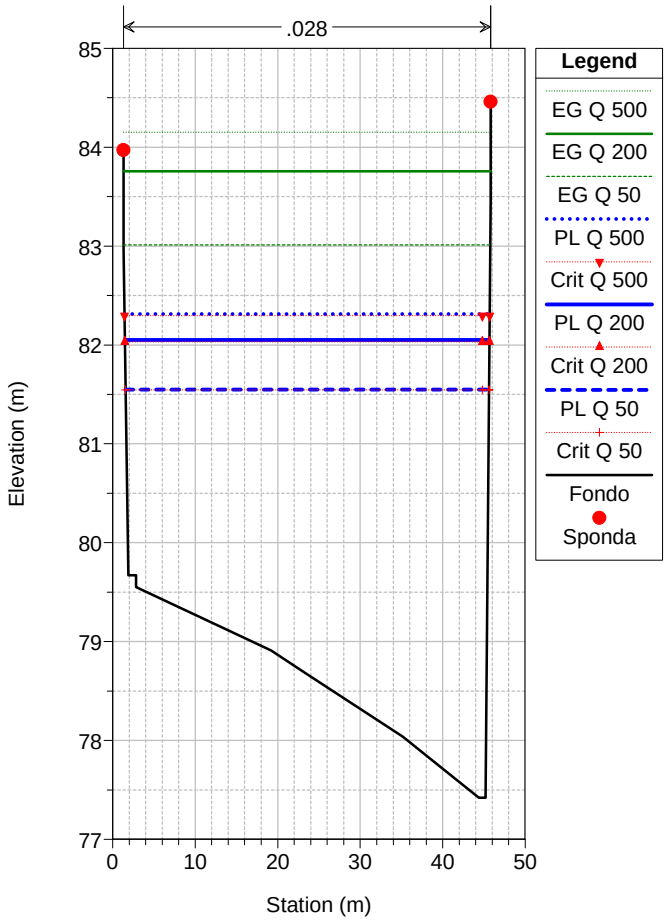
Confluenza verde ricco Plan: piena riccò

River = casella Reach = unico CSL 0



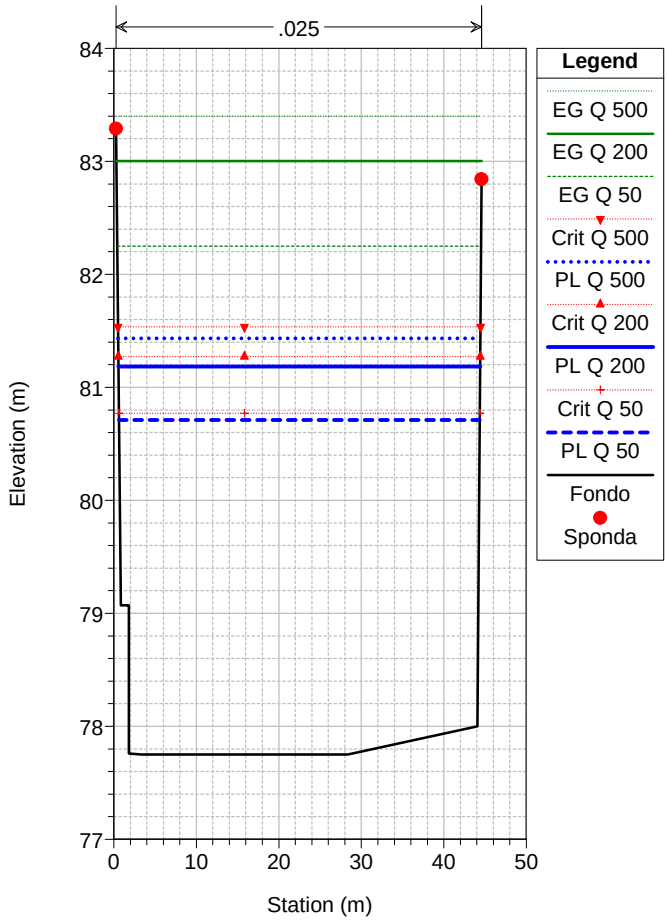
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = valle POL 126



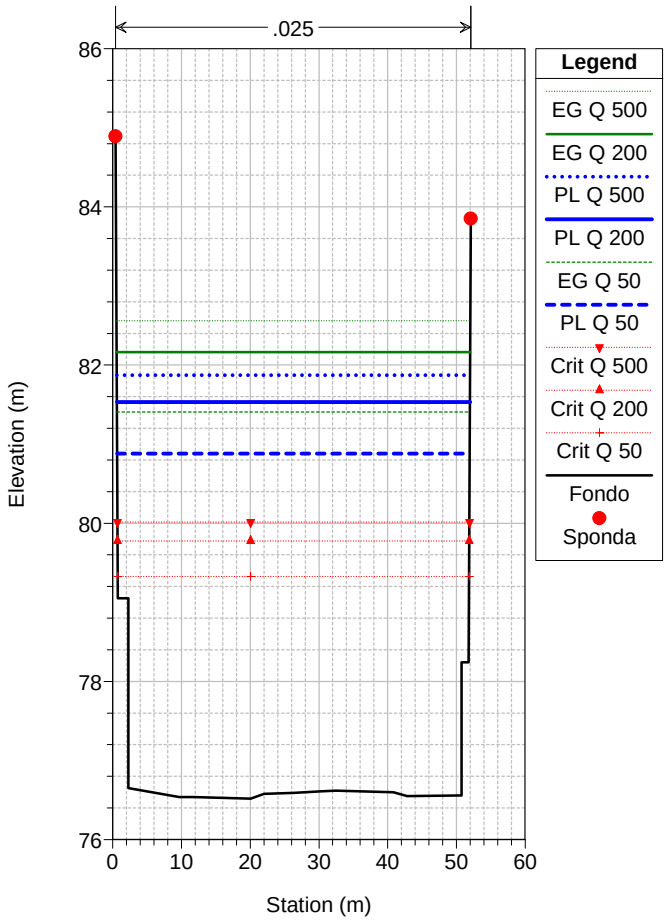
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = valle POL 125



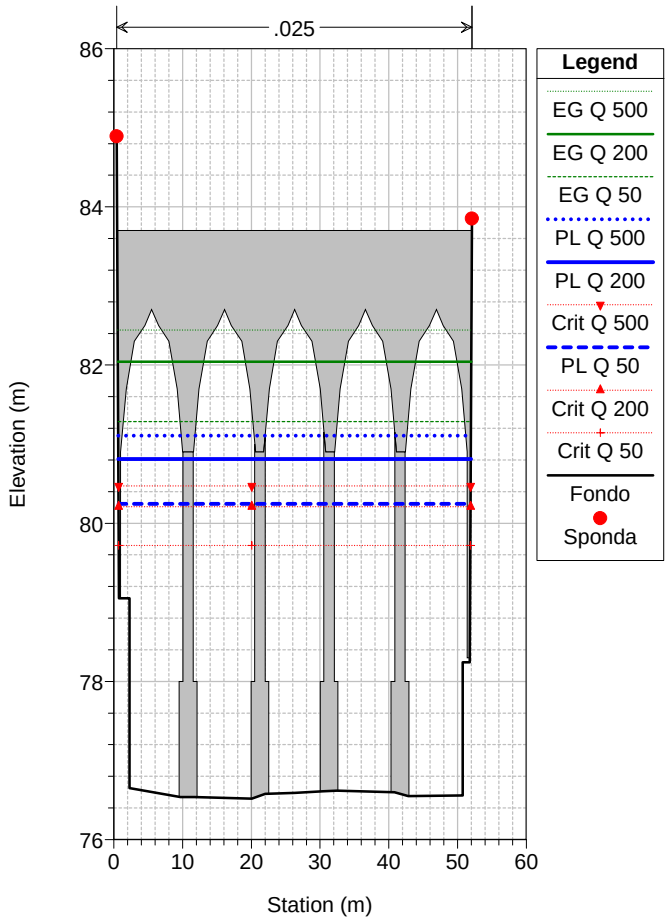
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = valle POL 124



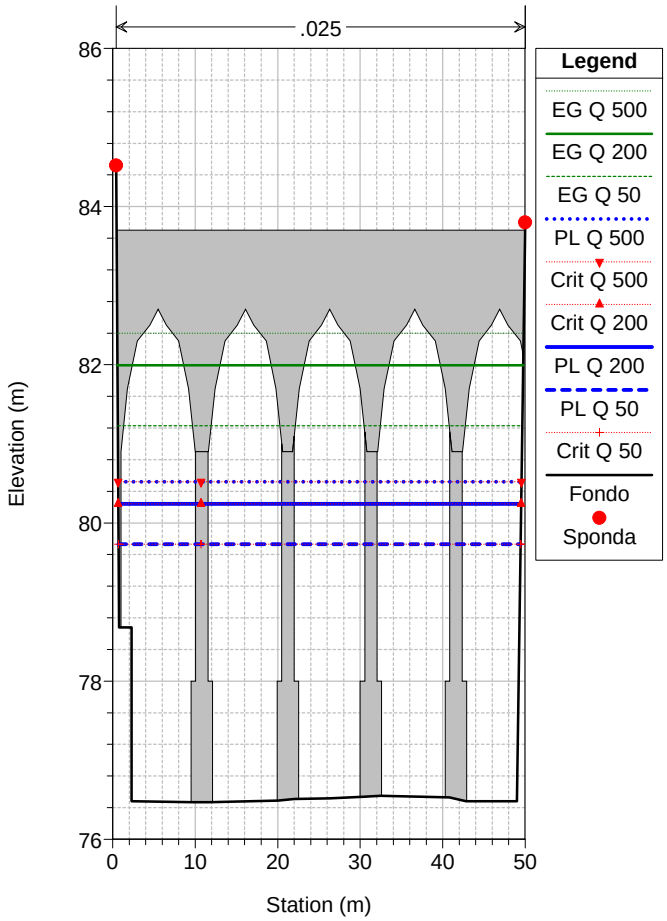
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = valle POL 124



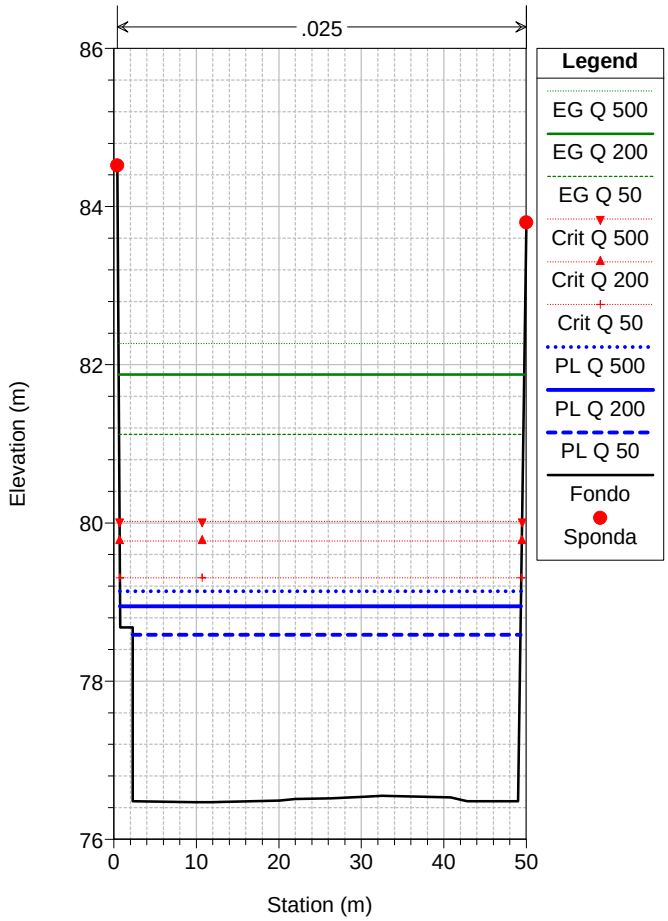
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = valle POL 124



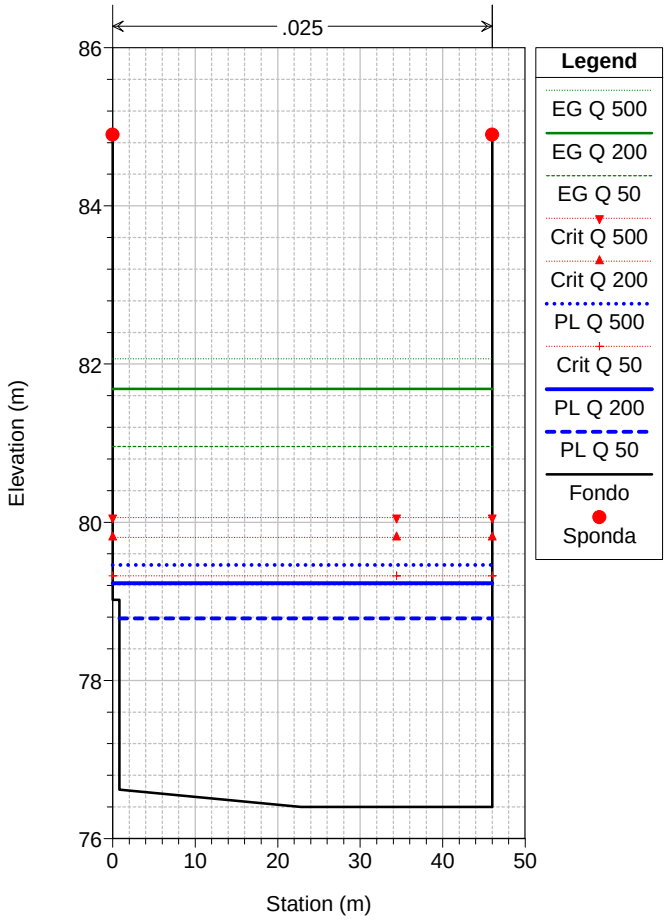
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = valle POL 124



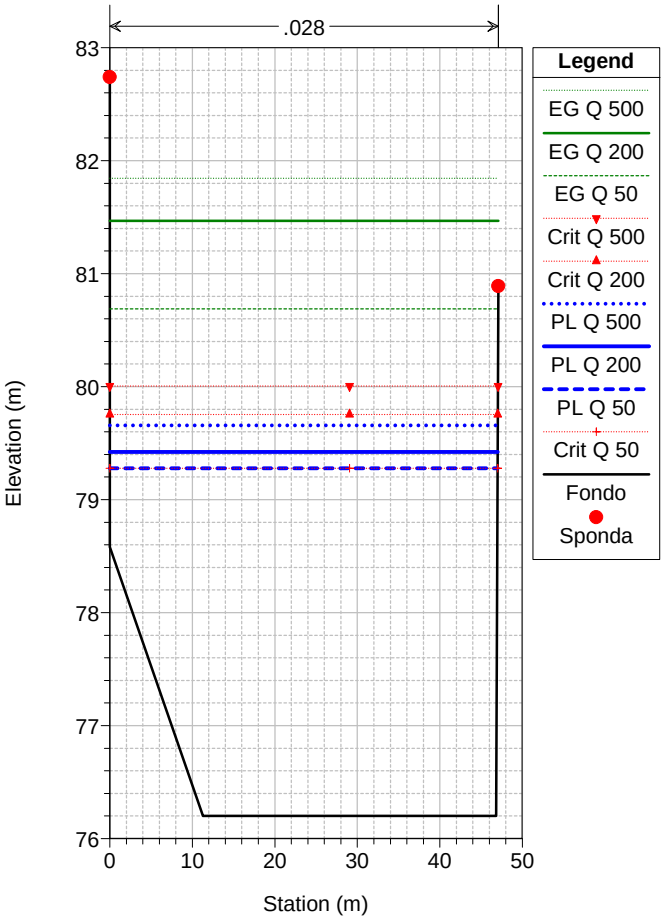
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = valle POL 123



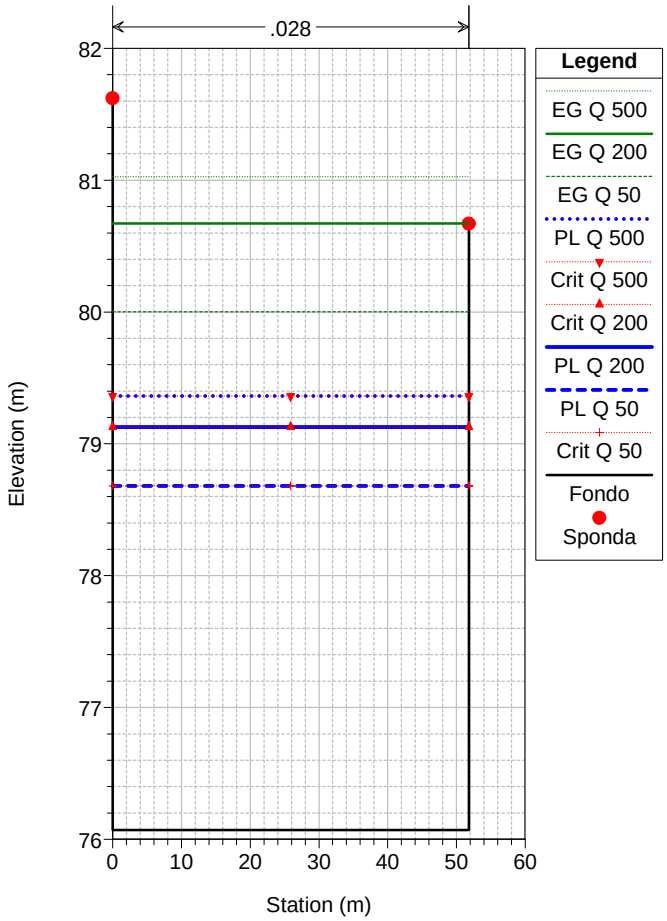
Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = valle POL 122



Confluenza verde ricco Plan: piena riccò

River = polcevera Reach = valle POL 121



HEC-RAS Plan: riccò

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)	
ricco	unico	3 RIC 3	Q 50	299.00	83.76	87.06	89.85	2.79	89.85	2.79	86.01	87.53	0.002032	3.03	98.75	32.40	0.55
ricco	unico	3 RIC 3	Q 200	380.00	83.76	87.58	89.85	2.27	89.85	2.27	86.42	88.13	0.002023	3.29	115.40	32.40	0.56
ricco	unico	3 RIC 3	Q 500	431.00	83.76	87.88	89.85	1.97	89.85	1.97	86.63	88.48	0.002031	3.45	125.06	32.40	0.56
ricco	unico	2.5 RIC 2	Q 50	299.00	83.61	87.02	89.70	2.68	89.70	2.68	86.00	87.48	0.002185	3.01	99.36	32.40	0.55
ricco	unico	2.5 RIC 2	Q 200	380.00	83.61	87.53	89.70	2.17	89.70	2.17	86.35	88.08	0.002177	3.28	116.00	32.40	0.55
ricco	unico	2.5 RIC 2	Q 500	431.00	83.61	87.83	89.70	1.87	89.70	1.87	86.56	88.43	0.002186	3.43	125.64	32.40	0.56
ricco	unico	2.2 RIC 2		Bridge													
ricco	unico	2 RIC 2	Q 50	299.00	83.61	85.41	89.70	4.29	89.70	4.29	85.86	87.15	0.015100	5.84	51.19	30.28	1.43
ricco	unico	2 RIC 2	Q 200	380.00	83.61	85.72	89.70	3.98	89.70	3.98	86.27	87.73	0.014327	6.28	60.49	30.35	1.42
ricco	unico	2 RIC 2	Q 500	431.00	83.61	85.90	89.70	3.80	89.70	3.80	86.48	88.07	0.014010	6.53	65.96	30.39	1.42
ricco	unico	1.81 RIC 1.8	Q 50	299.00	83.60	85.53	89.70	4.17	89.70	4.17	85.84	87.01	0.011677	5.39	55.46	30.30	1.27
ricco	unico	1.81 RIC 1.8	Q 200	380.00	83.60	85.83	89.70	3.87	89.70	3.87	86.24	87.59	0.011582	5.88	64.66	30.38	1.29
ricco	unico	1.81 RIC 1.8	Q 500	431.00	83.60	86.01	89.70	3.69	89.70	3.69	86.46	87.93	0.012341	6.14	70.23	32.40	1.33
ricco	unico	1.8 RIC 1.8	Q 50	299.00	81.60	82.78	86.00	3.22	88.00	5.22	83.81	86.75	0.056603	8.82	33.89	30.52	2.67
ricco	unico	1.8 RIC 1.8	Q 200	380.00	81.60	83.03	86.00	2.97	88.00	4.97	84.15	87.32	0.048319	9.18	41.41	30.94	2.53
ricco	unico	1.8 RIC 1.8	Q 500	431.00	81.60	83.17	86.00	2.83	88.00	4.83	84.35	87.65	0.045529	9.37	46.00	31.84	2.49
ricco	unico	1.5 RIC 1.5	Q 50	299.00	81.00	85.04	86.60	1.56	86.30	1.26	83.45	85.34	0.001033	2.41	123.88	35.10	0.41
ricco	unico	1.5 RIC 1.5	Q 200	380.00	81.00	85.64	86.60	0.96	86.30	0.66	83.79	85.99	0.001091	2.62	145.05	37.10	0.42
ricco	unico	1.5 RIC 1.5	Q 500	431.00	81.00	85.96	86.60	0.64	86.30	0.34	83.99	86.35	0.001102	2.75	156.88	37.10	0.43
ricco	unico	1. RIC 1	Q 50	299.00	81.30	85.06	86.00	0.94	87.20	2.14	83.34	85.29	0.000803	2.14	139.91	40.14	0.37
ricco	unico	1. RIC 1	Q 200	380.00	81.30	85.67	86.00	0.33	87.20	1.53	83.65	85.94	0.000785	2.31	164.41	40.24	0.36
ricco	unico	1. RIC 1	Q 500	431.00	81.30	85.99	86.00	0.01	87.20	1.21	83.83	86.29	0.000798	2.43	177.41	40.29	0.37
ricco	unico	0.5 RIC 0.5	Q 50	299.00	81.00	85.07	86.00	0.93	86.80	1.73	83.14	85.27	0.000633	1.97	152.07	41.67	0.33
ricco	unico	0.5 RIC 0.5	Q 200	380.00	81.00	85.68	86.00	0.32	86.80	1.12	83.44	85.91	0.000630	2.14	177.62	41.79	0.33
ricco	unico	0.5 RIC 0.5	Q 500	431.00	81.00	86.01	86.00	-0.01	86.80	0.79	83.62	86.26	0.000646	2.25	191.19	41.85	0.34
polcevera	monte	130. POL 130	Q 50	680.00	79.52	83.48	86.51	3.03	86.24	2.76	82.94	84.40	0.003319	4.25	160.00	49.94	0.76
polcevera	monte	130. POL 130	Q 200	860.00	79.52	84.10	86.51	2.41	86.24	2.14	83.38	85.13	0.003039	4.51	190.87	50.08	0.74
polcevera	monte	130. POL 130	Q 500	960.00	79.52	84.42	86.51	2.09	86.24	1.82	83.61	85.52	0.002926	4.63	207.21	50.16	0.73
polcevera	monte	129. POL 129	Q 50	680.00	79.09	83.52	86.44	2.92	85.68	2.16	82.48	84.23	0.002175	3.73	182.26	49.18	0.62
polcevera	monte	129. POL 129	Q 200	860.00	79.09	84.13	86.44	2.31	85.68	1.55	82.94	84.97	0.002145	4.04	212.63	49.30	0.62
polcevera	monte	129. POL 129	Q 500	960.00	79.09	84.46	86.44	1.98	85.68	1.22	83.18	85.36	0.002130	4.20	228.67	49.36	0.62
polcevera	monte	128.8 POL 129		Bridge													
polcevera	monte	128.5 POL 129	Q 50	680.00	79.04	81.90	86.39	4.49	85.63	3.73	82.44	84.00	0.011565	6.41	106.05	46.63	1.36
polcevera	monte	128.5 POL 129	Q 200	860.00	79.04	82.30	86.39	4.09	85.63	3.33	82.89	84.71	0.011572	6.89	124.86	48.96	1.38
polcevera	monte	128.5 POL 129	Q 500	960.00	79.04	82.48	86.39	3.91	85.63	3.15	83.13	85.10	0.011494	7.16	134.03	49.00	1.38
polcevera	monte	128. POL 128	Q 50	680.00	78.72	82.23	84.68	2.45	85.25	3.02	82.23	83.70	0.006021	5.37	126.59	43.18	1.00
polcevera	monte	128. POL 128	Q 200	860.00	78.72	82.85	84.68	1.83	85.25	2.40	82.85	84.42	0.005848	5.56	154.78	48.93	1.00
polcevera	monte	128. POL 128	Q 500	960.00	78.72	83.07	84.68	1.61	85.25	2.18	83.07	84.78	0.005893	5.80	165.51	48.96	1.01

HEC-RAS Plan: riccò (Continued)

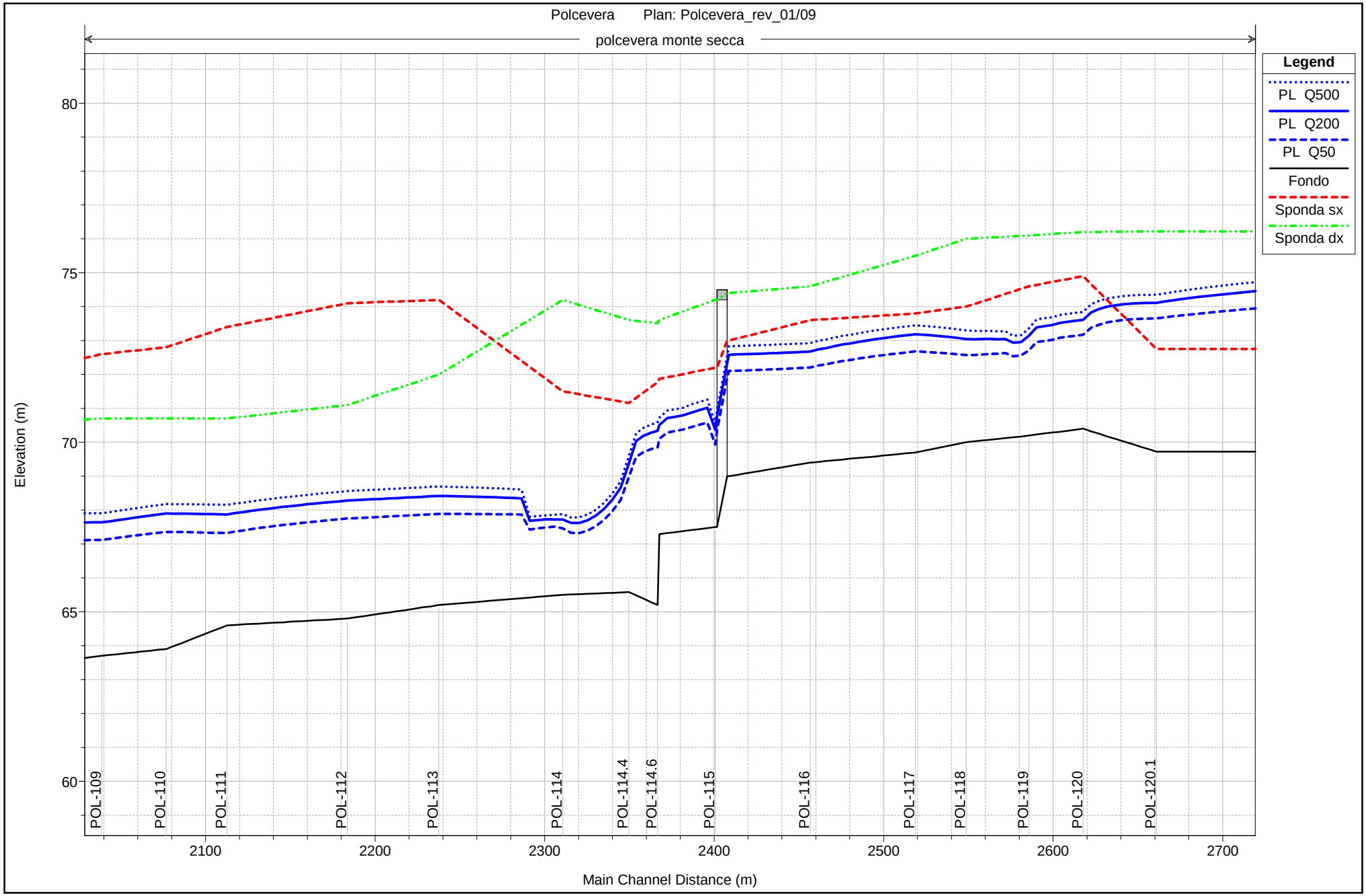
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
polcevera	monte	127.1 POL 127	Q 50	680.00	77.42	81.91	83.97	2.06	84.46	2.55	81.51	83.04	0.004243	4.70	144.54	44.14	0.83
polcevera	monte	127.1 POL 127	Q 200	860.00	77.42	82.49	83.97	1.48	84.46	1.97	82.02	83.79	0.004067	5.06	170.09	44.30	0.82
polcevera	monte	127.1 POL 127	Q 500	960.00	77.42	82.80	83.97	1.17	84.46	1.66	82.27	84.19	0.003973	5.22	183.87	44.38	0.82
polcevera	valle	126. POL 126	Q 50	688.50	77.42	81.55	83.97	2.42	84.46	2.91	81.55	83.01	0.006306	5.36	128.54	44.04	1.00
polcevera	valle	126. POL 126	Q 200	872.20	77.42	82.05	83.97	1.92	84.46	2.41	82.03	83.76	0.006128	5.79	150.63	44.18	1.00
polcevera	valle	126. POL 126	Q 500	974.70	77.42	82.31	83.97	1.66	84.46	2.15	82.30	84.15	0.006054	6.01	162.28	44.25	1.00
polcevera	valle	125. POL 125	Q 50	688.50	77.75	80.71	83.29	2.58	82.84	2.13	80.77	82.25	0.005386	5.50	125.30	43.73	1.04
polcevera	valle	125. POL 125	Q 200	872.20	77.75	81.19	83.29	2.10	82.84	1.65	81.27	83.00	0.005319	5.97	146.07	43.84	1.04
polcevera	valle	125. POL 125	Q 500	974.70	77.75	81.43	83.29	1.86	82.84	1.41	81.54	83.40	0.005292	6.21	157.00	43.90	1.05
polcevera	valle	124. POL 124	Q 50	688.50	76.52	80.88	84.89	4.01	83.85	2.97	79.33	81.41	0.001167	3.21	214.49	51.28	0.50
polcevera	valle	124. POL 124	Q 200	872.20	76.52	81.53	84.89	3.36	83.85	2.32	79.78	82.16	0.001191	3.52	247.83	51.36	0.51
polcevera	valle	124. POL 124	Q 500	974.70	76.52	81.87	84.89	3.02	83.85	1.98	80.02	82.56	0.001202	3.67	265.41	51.40	0.52
polcevera	valle	123.8 POL 124		Bridge													
polcevera	valle	123.5 POL 124	Q 50	688.50	76.47	78.58	84.52	5.94	83.80	5.22	79.31	81.12	0.013080	7.06	97.58	47.00	1.56
polcevera	valle	123.5 POL 124	Q 200	872.20	76.47	78.95	84.52	5.57	83.80	4.85	79.77	81.87	0.012835	7.58	115.08	48.59	1.57
polcevera	valle	123.5 POL 124	Q 500	974.70	76.47	79.14	84.52	5.38	83.80	4.66	80.02	82.27	0.012508	7.84	124.32	48.63	1.57
polcevera	valle	123 POL 123	Q 50	688.50	76.40	78.79	84.90	6.11	84.90	6.11	79.32	80.96	0.009793	6.53	105.43	45.20	1.36
polcevera	valle	123 POL 123	Q 200	872.20	76.40	79.23	84.90	5.67	84.90	5.67	79.81	81.68	0.009150	6.94	125.67	46.00	1.34
polcevera	valle	123 POL 123	Q 500	974.70	76.40	79.46	84.90	5.44	84.90	5.44	80.06	82.07	0.008824	7.15	136.29	46.00	1.33
polcevera	valle	122	Q 50	688.50	76.20	79.28	82.74	3.46	80.89	1.61	79.28	80.69	0.006150	5.26	130.86	47.00	1.01
polcevera	valle	122	Q 200	872.20	76.20	79.42	82.74	3.32	80.89	1.47	79.75	81.47	0.008392	6.33	137.70	47.01	1.18
polcevera	valle	122	Q 500	974.70	76.20	79.66	82.74	3.08	80.89	1.23	80.01	81.85	0.008211	6.55	148.70	47.02	1.18
polcevera	valle	121	Q 50	688.50	76.07	78.68	81.62	2.94	80.67	1.99	78.68	80.00	0.006416	5.09	135.29	51.80	1.01
polcevera	valle	121	Q 200	872.20	76.07	79.13	81.62	2.49	80.67	1.54	79.13	80.67	0.006220	5.51	158.36	51.80	1.01
polcevera	valle	121	Q 500	974.70	76.07	79.36	81.62	2.26	80.67	1.31	79.36	81.03	0.006134	5.72	170.54	51.80	1.01
casella	unico	16 CSL 16	Q 50	7.60	86.70	87.65	88.75	1.10	88.75	1.10	87.65	88.13	0.010069	3.06	2.48	2.60	1.00
casella	unico	16 CSL 16	Q 200	11.00	86.70	87.92	88.75	0.83	88.75	0.83	87.92	88.53	0.010728	3.46	3.18	2.60	1.00
casella	unico	16 CSL 16	Q 500	13.30	86.70	88.08	88.75	0.67	88.75	0.67	88.08	88.78	0.011254	3.69	3.60	2.60	1.00
casella	unico	15 CSL 15	Q 50	7.60	85.72	86.34	86.84	0.50	86.84	0.50	86.78	87.89	0.050466	5.52	1.38	2.24	2.25
casella	unico	15 CSL 15	Q 200	11.00	85.72	86.57	86.84	0.27	86.84	0.27	86.84	88.28	0.042906	5.79	1.90	2.24	2.01
casella	unico	15 CSL 15	Q 500	13.30	85.72	86.71	86.84	0.13	86.84	0.13	86.84	88.53	0.040585	5.97	2.23	2.24	1.91
casella	unico	14 CSL 14	Q 50	7.60	85.46	86.05	87.10	1.05	88.10	2.05	86.44	87.49	0.049034	5.31	1.43	3.02	2.46
casella	unico	14 CSL 14	Q 200	11.00	85.46	86.20	87.10	0.90	88.10	1.90	86.68	87.95	0.046257	5.87	1.87	3.03	2.38
casella	unico	14 CSL 14	Q 500	13.30	85.46	86.29	87.10	0.80	88.10	1.81	86.83	88.22	0.044616	6.15	2.16	3.05	2.33
casella	unico	13 CSL 13	Q 50	7.60	85.03	86.23	88.42	2.19	87.62	1.39	86.11	86.60	0.006973	2.68	2.83	2.71	0.84
casella	unico	13 CSL 13	Q 200	11.00	85.03	86.72	88.42	1.70	87.62	0.90	86.37	87.07	0.005228	2.65	4.15	2.73	0.69
casella	unico	13 CSL 13	Q 500	13.30	85.03	86.99	88.42	1.43	87.62	0.63	86.54	87.37	0.004955	2.71	4.91	2.74	0.65
casella	unico	12 CSL 12	Q 50	7.60	84.61	85.89	91.50	5.61	87.39	1.50	85.89	86.45	0.013040	3.32	2.29	2.06	1.00
casella	unico	12 CSL 12	Q 200	11.00	84.61	86.20	91.50	5.30	87.39	1.19	86.20	86.91	0.014276	3.75	2.93	2.06	1.00

HEC-RAS Plan: riccò (Continued)

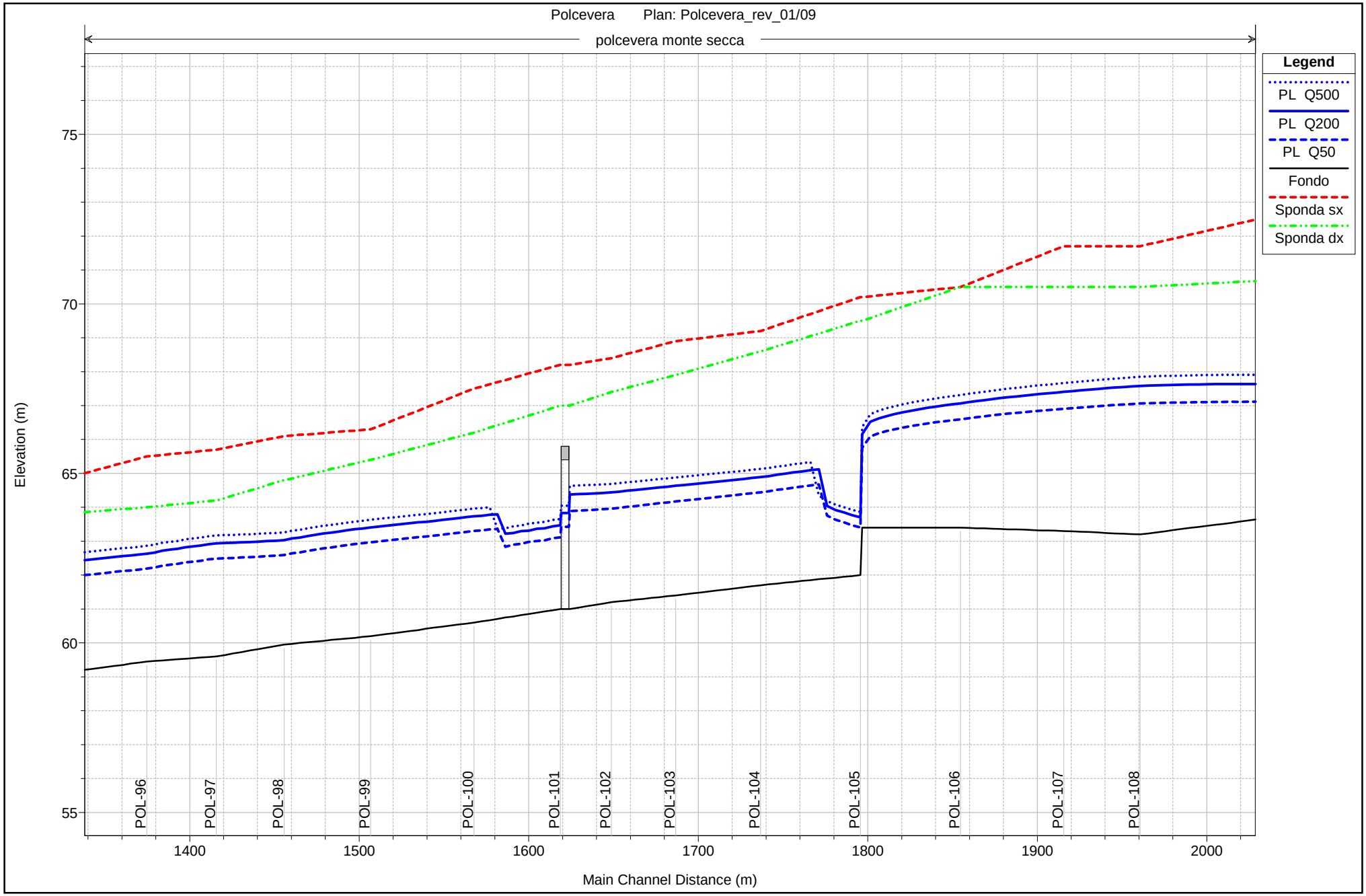
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
casella	unico	12 CSL 12	Q 500	13.30	84.61	86.39	91.50	5.11	87.39	1.00	86.39	87.20	0.015071	4.00	3.33	2.06	1.00
casella	unico	11 CSL 11	Q 50	7.60	84.03	85.25	85.61	0.36	85.20	-0.05	85.42	86.10	0.020398	4.06	1.87	1.69	1.23
casella	unico	11 CSL 11	Q 200	11.00	84.03	85.78	85.61	-0.17	85.20	-0.58	85.78	86.58	0.015900	3.96	2.78	1.73	1.00
casella	unico	11 CSL 11	Q 500	13.30	84.03	86.00	85.61	-0.39	85.20	-0.80	86.00	86.91	0.017097	4.22	3.15	1.73	1.00
casella	unico	10 CSL 10	Q 50	7.60	83.89	84.65	86.15	1.50	86.84	2.19	84.95	85.68	0.030874	4.51	1.68	2.58	1.78
casella	unico	10 CSL 10	Q 200	11.00	83.89	84.82	86.15	1.33	86.84	2.02	85.22	86.16	0.032514	5.13	2.14	2.62	1.81
casella	unico	10 CSL 10	Q 500	13.30	83.89	84.93	86.15	1.22	86.84	1.91	85.39	86.46	0.033353	5.47	2.43	2.65	1.82
casella	unico	9 CSL 9	Q 50	7.60	83.66	84.51	85.84	1.33	85.14	0.63	84.71	85.23	0.018101	3.76	2.02	2.87	1.43
casella	unico	9 CSL 9	Q 200	11.00	83.66	84.70	85.84	1.14	85.14	0.44	84.96	85.63	0.019370	4.28	2.57	3.04	1.48
casella	unico	9 CSL 9	Q 500	13.30	83.66	84.79	85.84	1.05	85.14	0.35	85.12	85.89	0.021084	4.64	2.86	3.13	1.55
casella	unico	8 CSL 8	Q 50	7.60	83.27	84.01	85.90	1.89	85.19	1.18	84.29	84.98	0.026727	4.35	1.75	2.50	1.66
casella	unico	8 CSL 8	Q 200	11.00	83.27	84.25	85.90	1.65	85.19	0.94	84.57	85.39	0.025047	4.73	2.32	2.50	1.57
casella	unico	8 CSL 8	Q 500	13.30	83.27	84.39	85.90	1.51	85.19	0.80	84.73	85.64	0.024851	4.97	2.68	2.50	1.53
casella	unico	7 CSL 7	Q 50	7.60	83.09	84.13	85.55	1.42	85.12	0.99	84.13	84.65	0.011191	3.20	2.37	2.28	1.00
casella	unico	7 CSL 7	Q 200	11.00	83.09	84.42	85.55	1.13	85.12	0.70	84.42	85.09	0.012177	3.62	3.04	2.28	1.00
casella	unico	7 CSL 7	Q 500	13.30	83.09	84.60	85.55	0.95	85.12	0.52	84.60	85.36	0.012819	3.86	3.44	2.28	1.00
casella	unico	6 CSL 6	Q 50	7.60	82.60	83.39	85.56	2.17	84.40	1.01	83.58	84.16	0.019520	3.90	1.95	2.47	1.40
casella	unico	6 CSL 6	Q 200	11.00	82.60	83.62	85.56	1.94	84.40	0.78	83.86	84.59	0.020076	4.37	2.52	2.47	1.38
casella	unico	6 CSL 6	Q 500	13.30	82.60	83.77	85.56	1.79	84.40	0.63	84.03	84.85	0.020278	4.61	2.89	2.47	1.36
casella	unico	5 CSL 5	Q 50	7.60	82.47	83.14	85.26	2.12	84.54	1.40	83.38	83.97	0.023760	4.02	1.89	3.00	1.62
casella	unico	5 CSL 5	Q 200	11.00	82.47	83.31	85.26	1.95	84.54	1.23	83.62	84.39	0.025177	4.61	2.39	3.00	1.65
casella	unico	5 CSL 5	Q 500	13.30	82.47	84.24	85.26	1.02	84.54	0.30	83.77	84.58	0.004312	2.56	5.20	3.00	0.62
casella	unico	4 CSL 4	Q 50	7.60	82.22	83.20	84.63	1.43	84.20	1.00	83.20	83.68	0.010016	3.06	2.49	2.64	1.01
casella	unico	4 CSL 4	Q 200	11.00	82.22	83.67	84.63	0.96	84.20	0.54	83.47	84.11	0.006994	2.95	3.73	2.70	0.80
casella	unico	4 CSL 4	Q 500	13.30	82.22	84.07	84.63	0.56	84.20	0.13	83.63	84.46	0.005187	2.75	4.83	2.74	0.66
casella	unico	3 CSL 3	Q 50	7.60	81.54	82.87	84.53	1.66	83.94	1.07	82.56	83.14	0.004529	2.29	3.31	2.64	0.65
casella	unico	3 CSL 3	Q 200	11.00	81.54	83.65	84.53	0.88	83.94	0.29	82.83	83.86	0.002720	2.05	5.36	2.64	0.46
casella	unico	3 CSL 3	Q 500	13.30	81.54	84.04	84.53	0.49	83.94	-0.10	82.99	84.26	0.002567	2.08	6.39	2.64	0.43
casella	unico	2 CSL 2	Q 50	7.60	79.95	82.98	84.37	1.39	84.45	1.47	80.89	83.02	0.000449	0.93	8.18	2.71	0.17
casella	unico	2 CSL 2	Q 200	11.00	79.95	83.71	84.37	0.66	84.45	0.74	81.14	83.77	0.000561	1.08	10.17	2.71	0.18
casella	unico	2 CSL 2	Q 500	13.30	79.95	84.10	84.37	0.27	84.45	0.35	81.30	84.17	0.000654	1.19	11.21	2.71	0.19
casella	unico	1 CSL 1	Q 50	7.60	79.60	82.99	84.45	1.46	84.45	1.46	80.48	83.02	0.000281	0.77	9.85	2.91	0.13
casella	unico	1 CSL 1	Q 200	11.00	79.60	83.72	84.45	0.73	84.45	0.73	80.73	83.77	0.000369	0.92	12.00	2.91	0.14
casella	unico	1 CSL 1	Q 500	13.30	79.60	84.11	84.45	0.34	84.45	0.34	80.88	84.16	0.000438	1.01	13.12	2.91	0.15
casella	unico	0.9 CSL 0	Q 50	7.60	79.10	82.99	84.45	1.46	84.45	1.46	79.98	83.01	0.000202	0.67	11.31	2.91	0.18
casella	unico	0.9 CSL 0	Q 200	11.00	79.10	83.72	84.45	0.73	84.45	0.73	80.23	83.76	0.000283	0.82	13.46	2.91	0.19
casella	unico	0.9 CSL 0	Q 500	13.30	79.10	84.11	84.45	0.34	84.45	0.34	80.38	84.15	0.000343	0.91	14.58	2.91	0.20



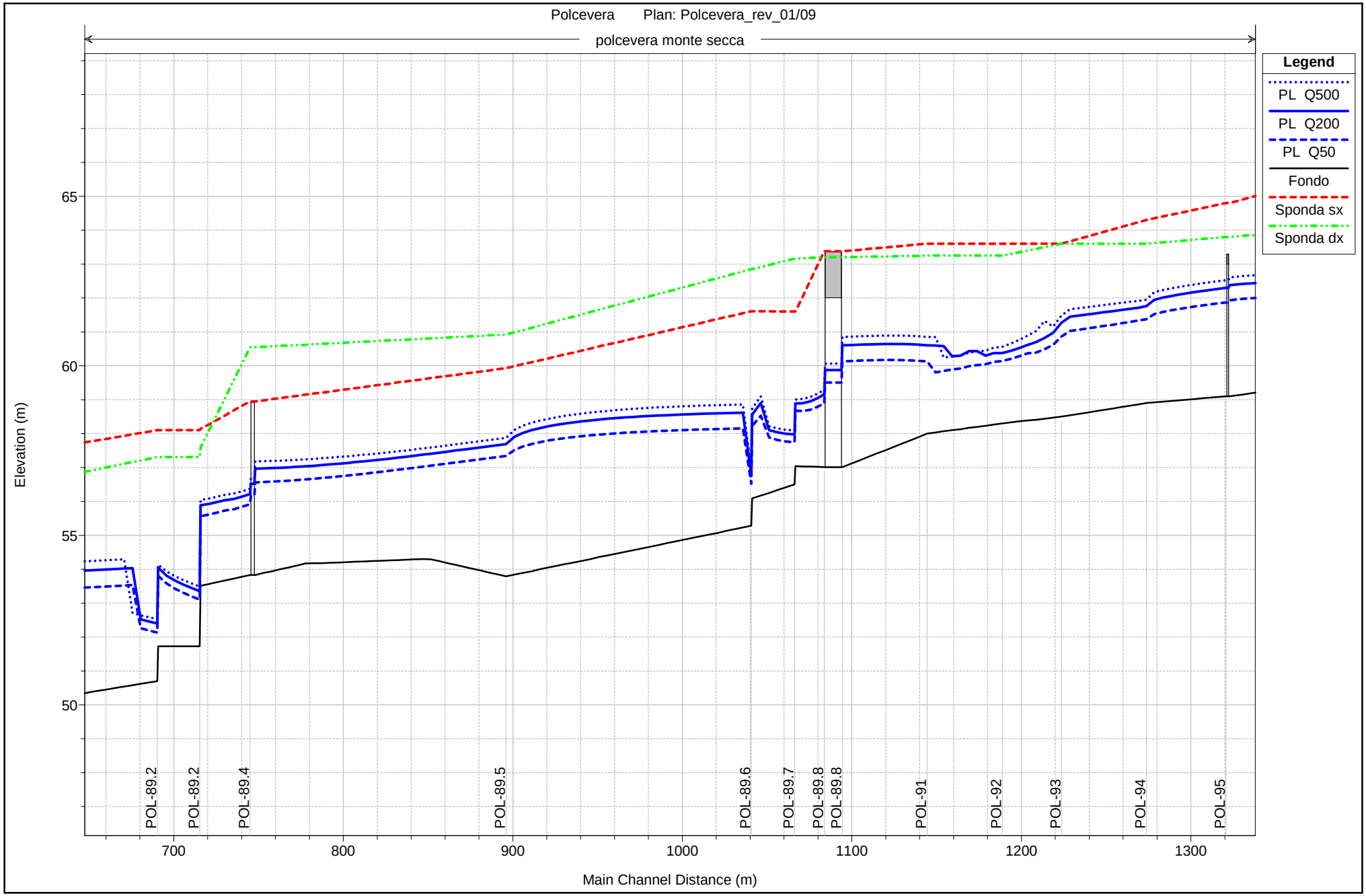
1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m



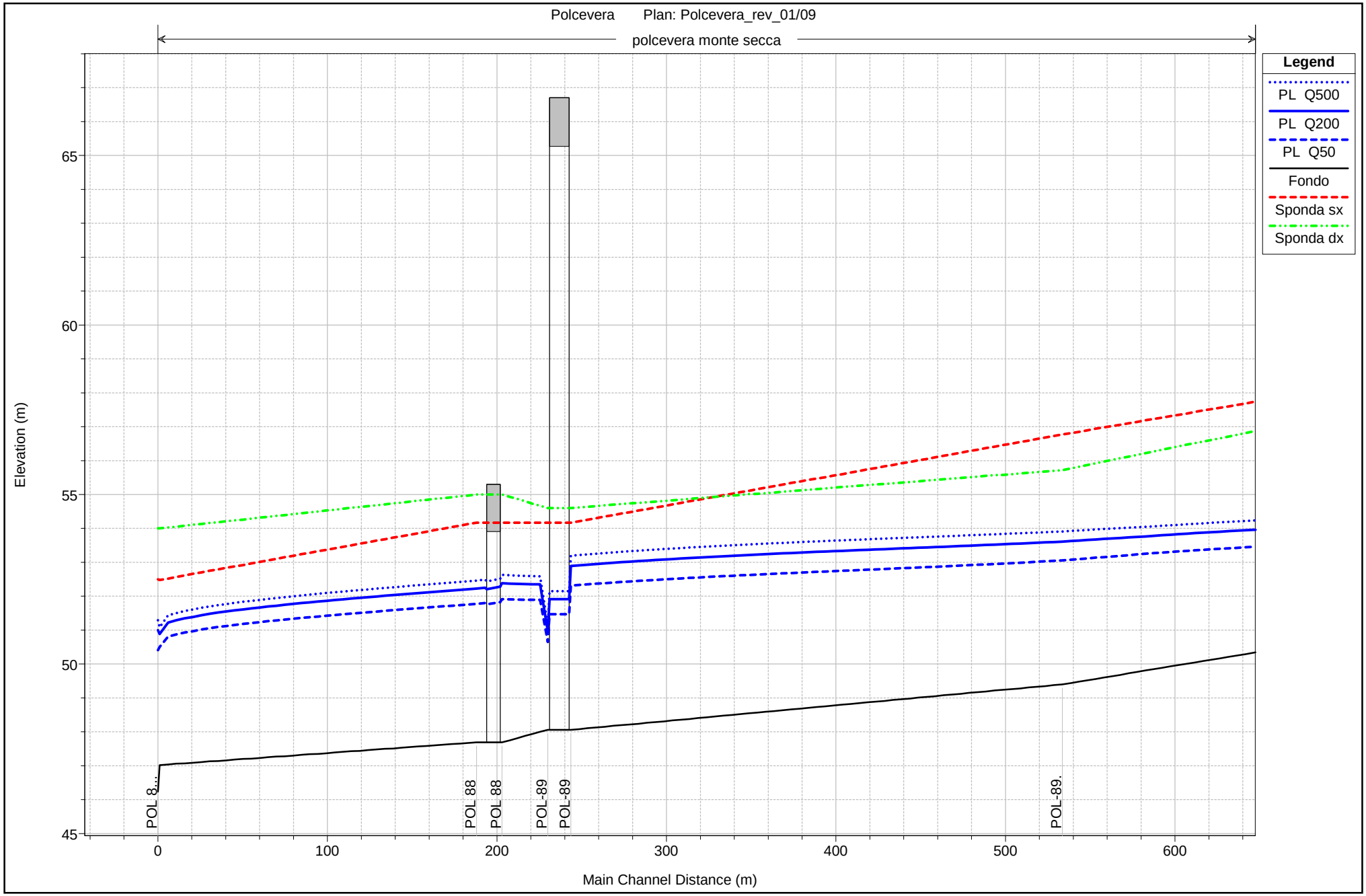
1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m



1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m

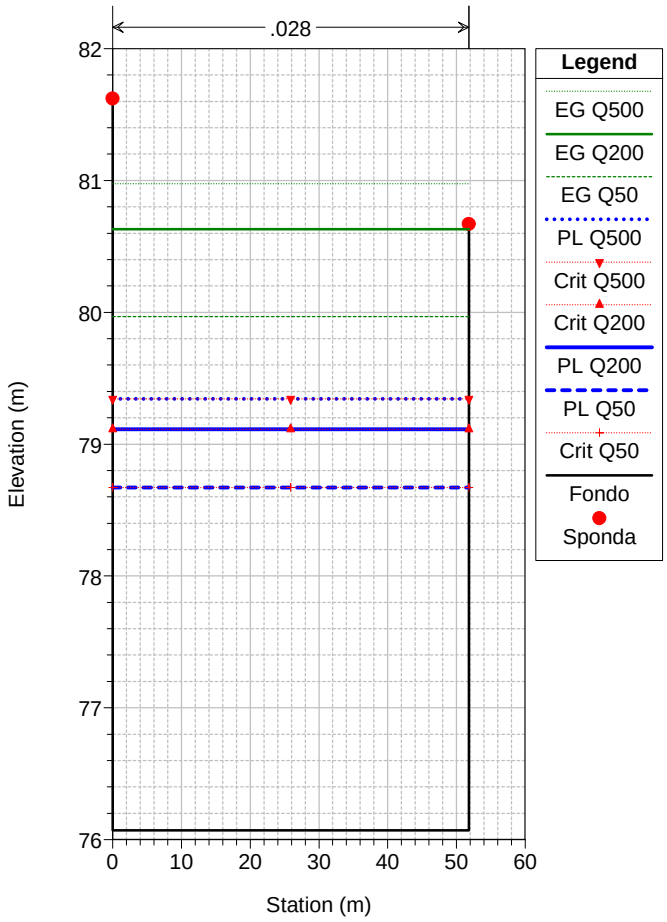


1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m

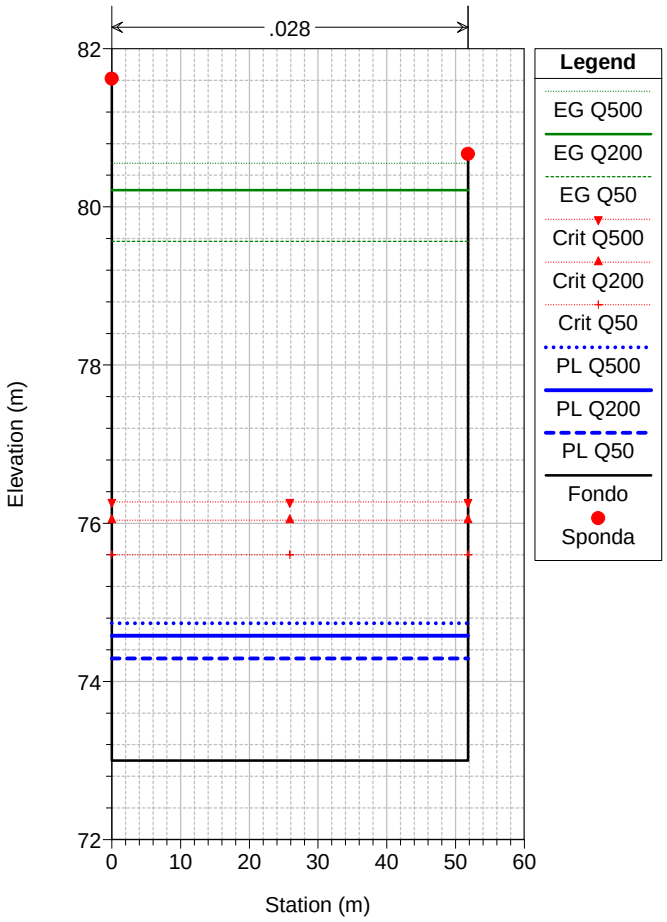


1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m

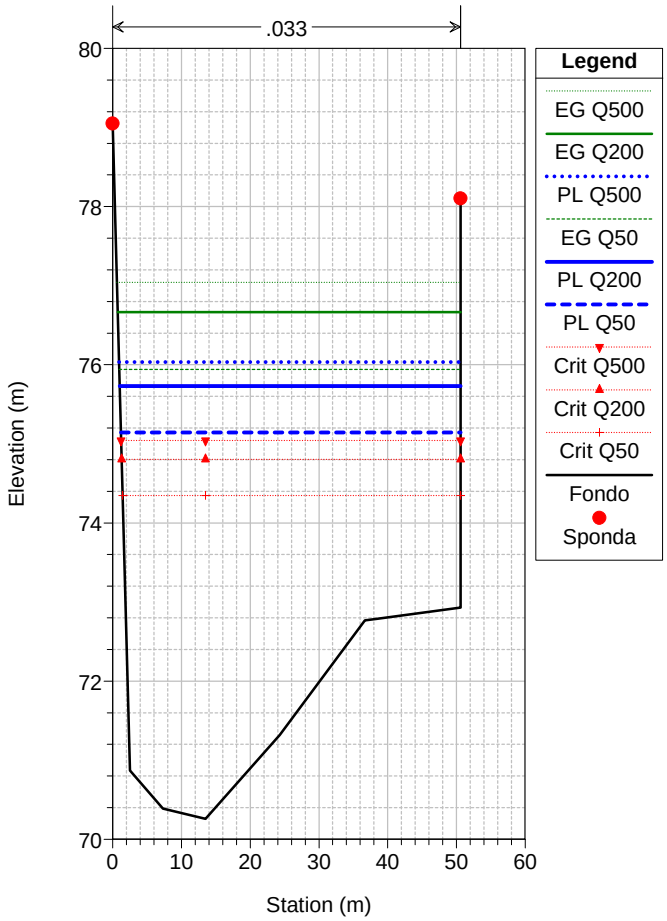
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-121



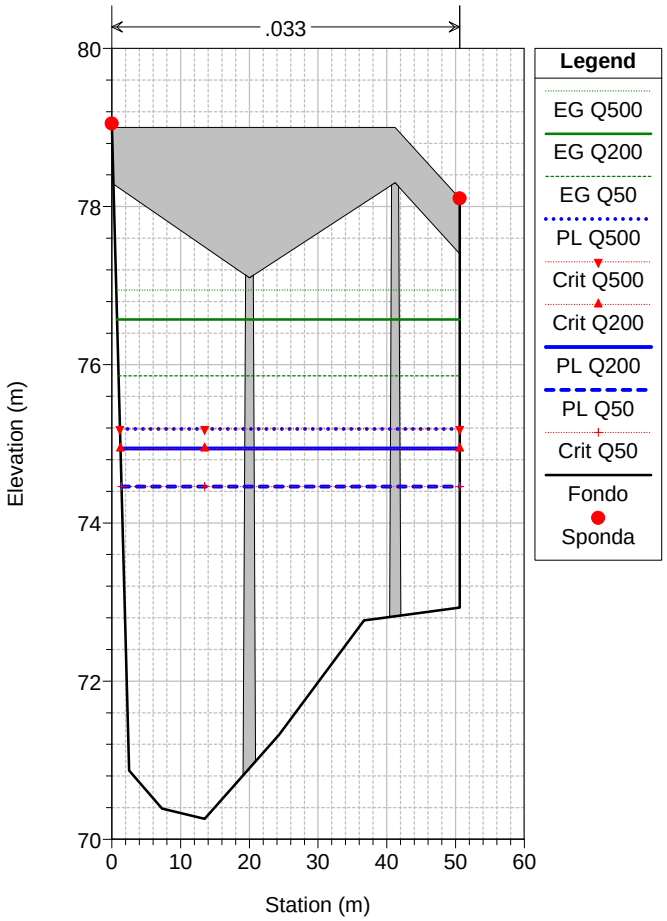
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-121



Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-120.3

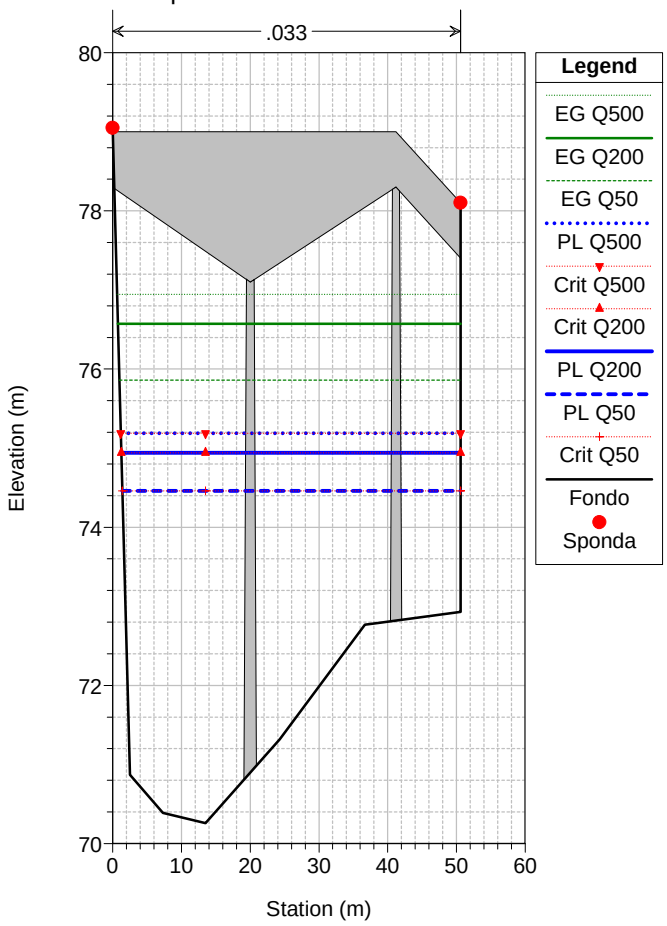


Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca



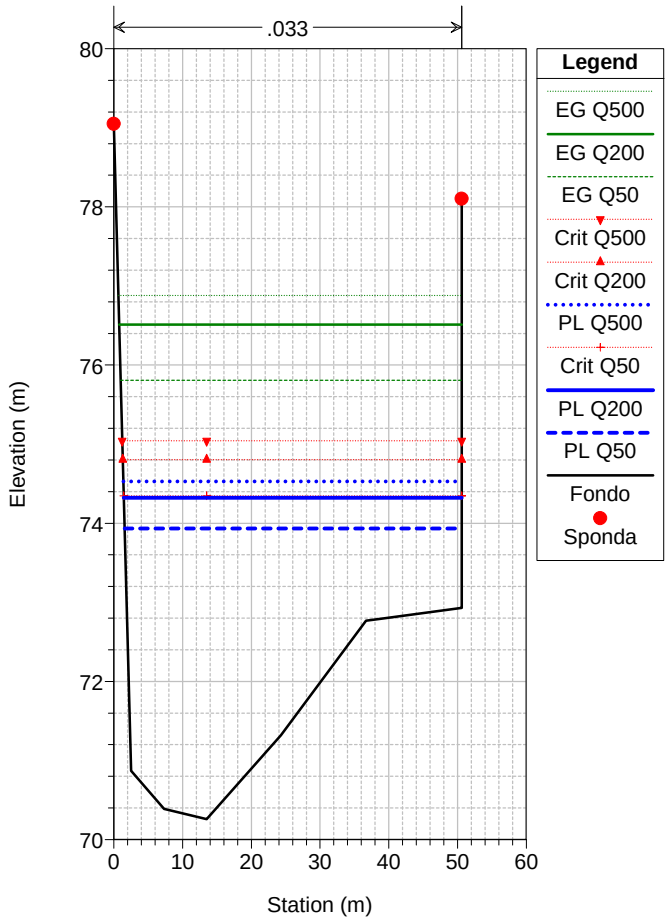
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca



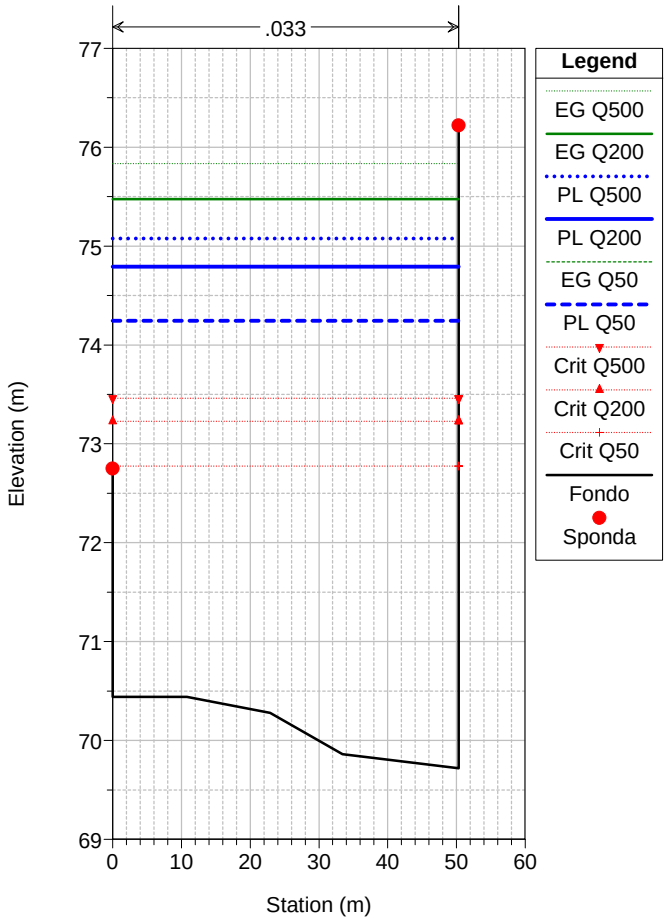
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca POL-120.3



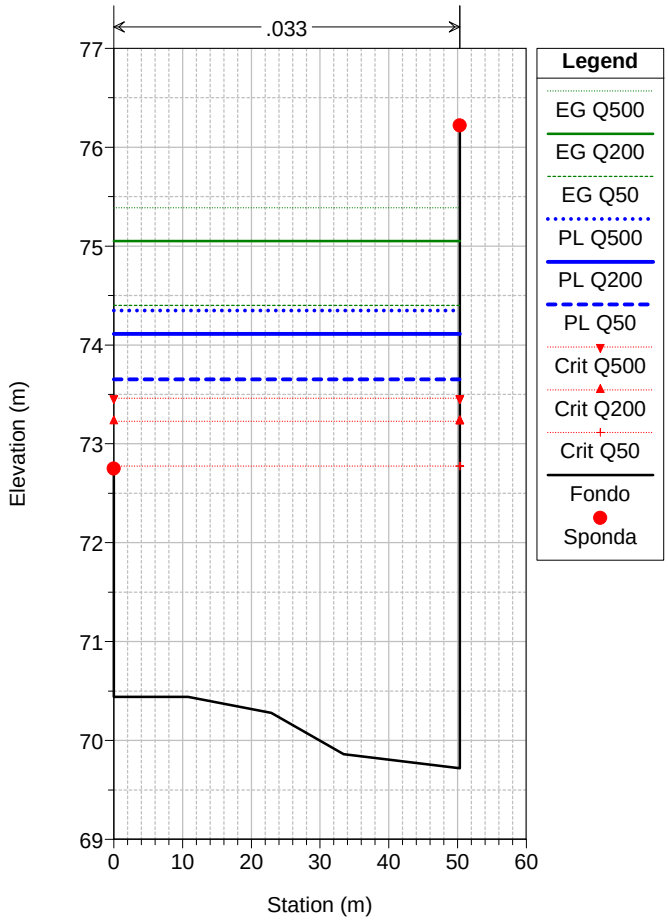
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca POL-120.2

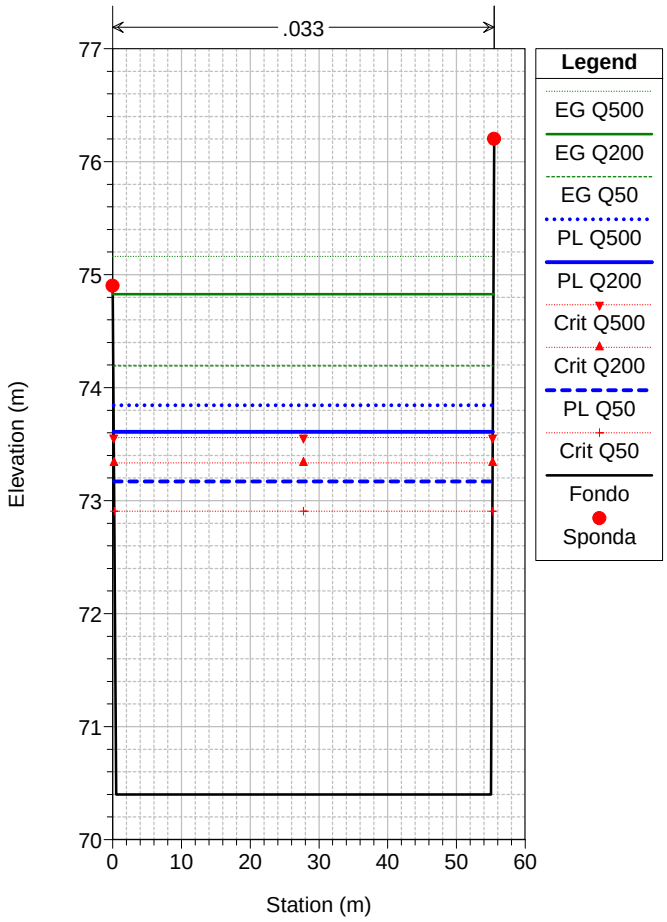


Polcevera Plan: Polcevera_rev_01/09

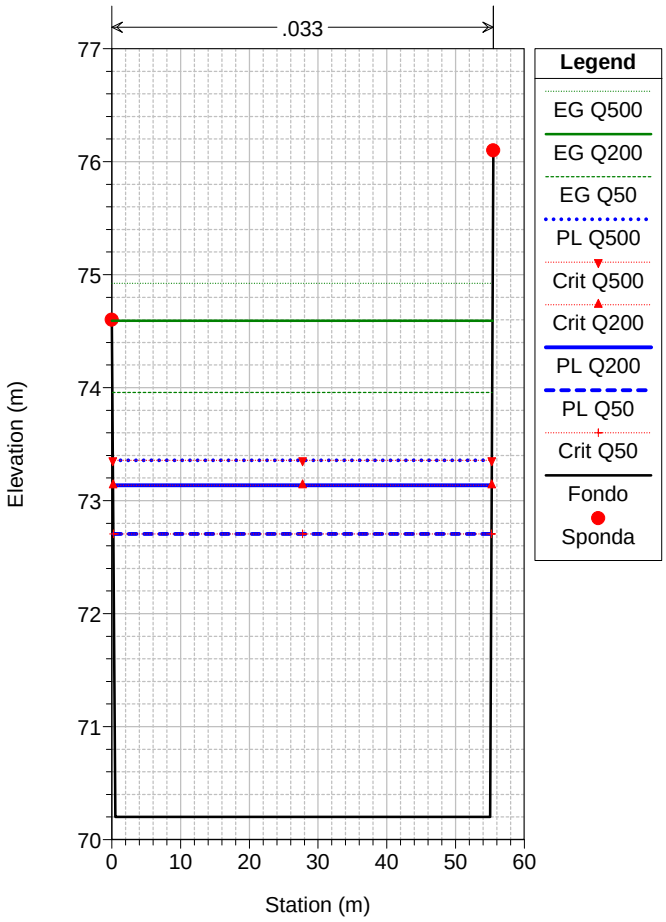
River = polcevera Reach = monte secca POL-120.1



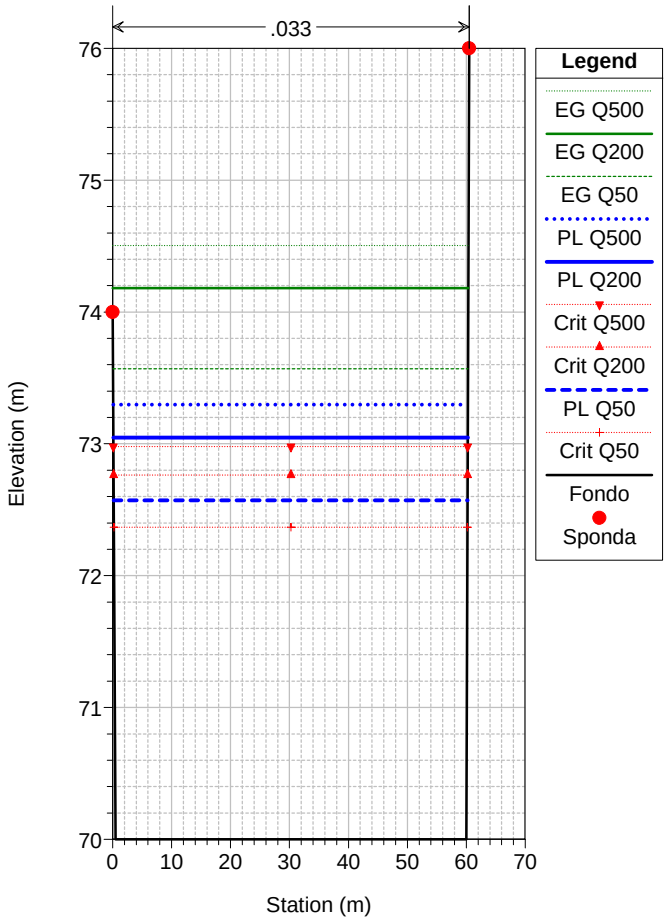
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-120



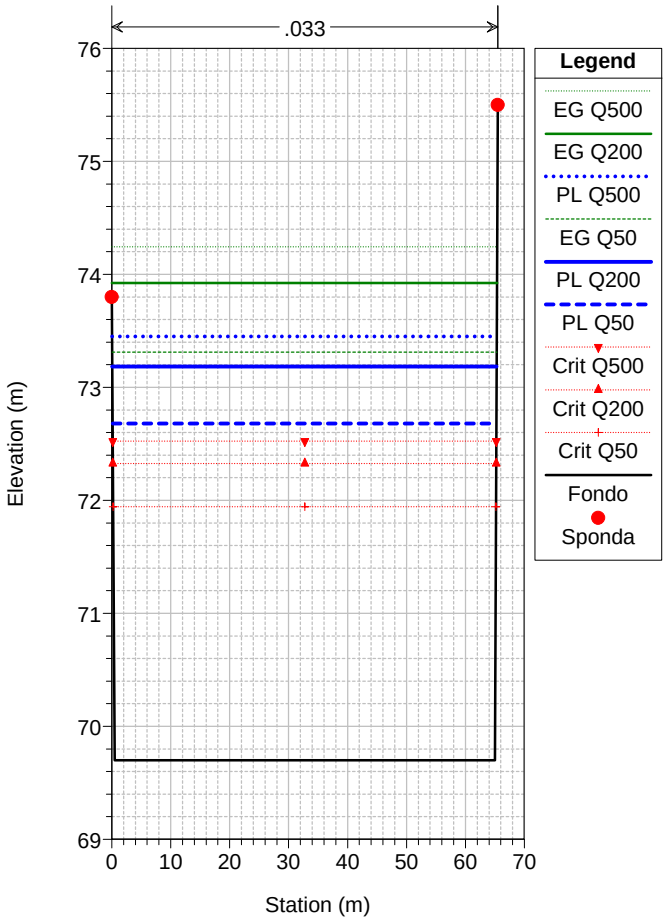
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-119



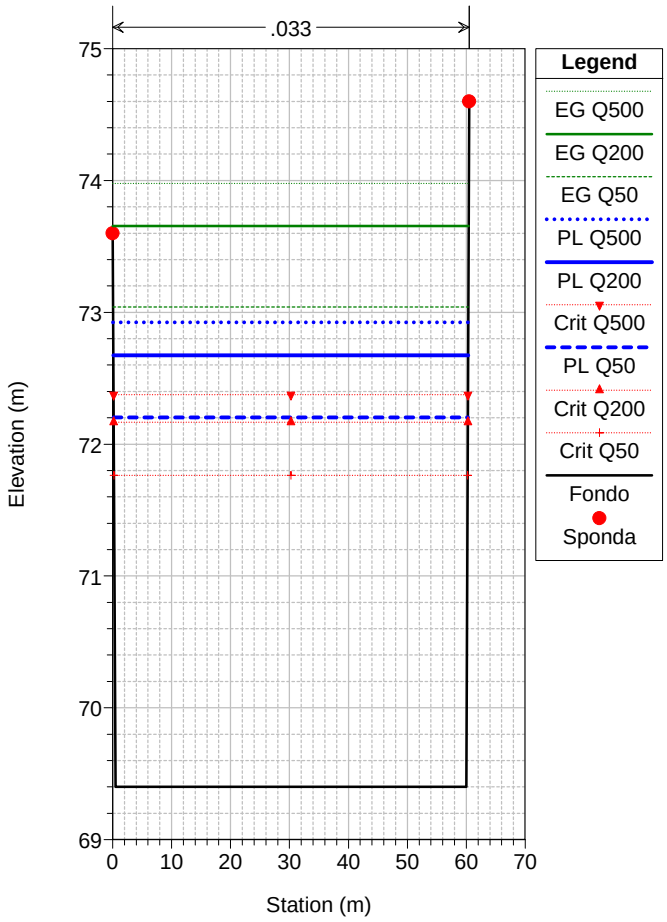
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-118



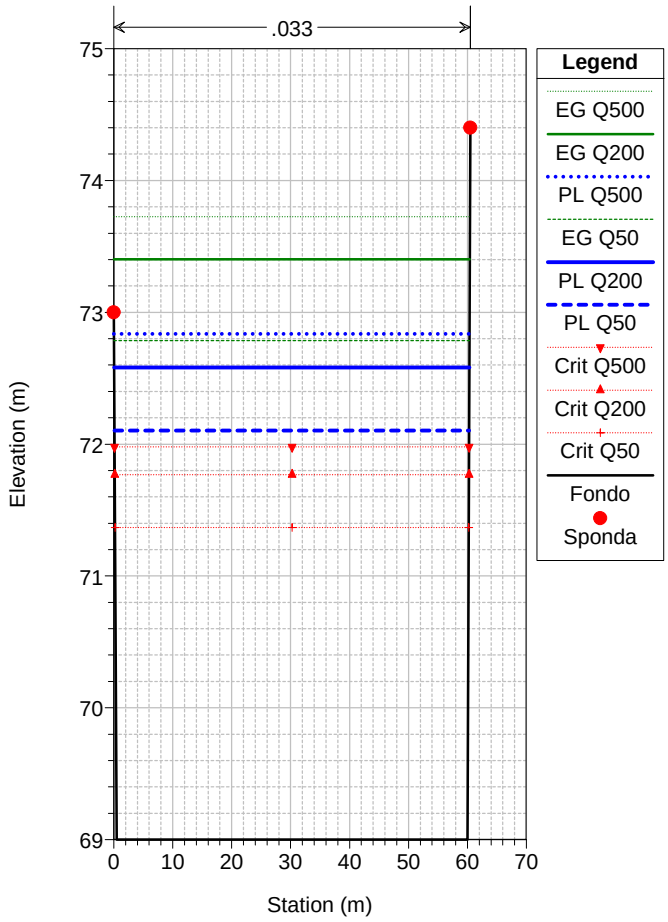
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-117



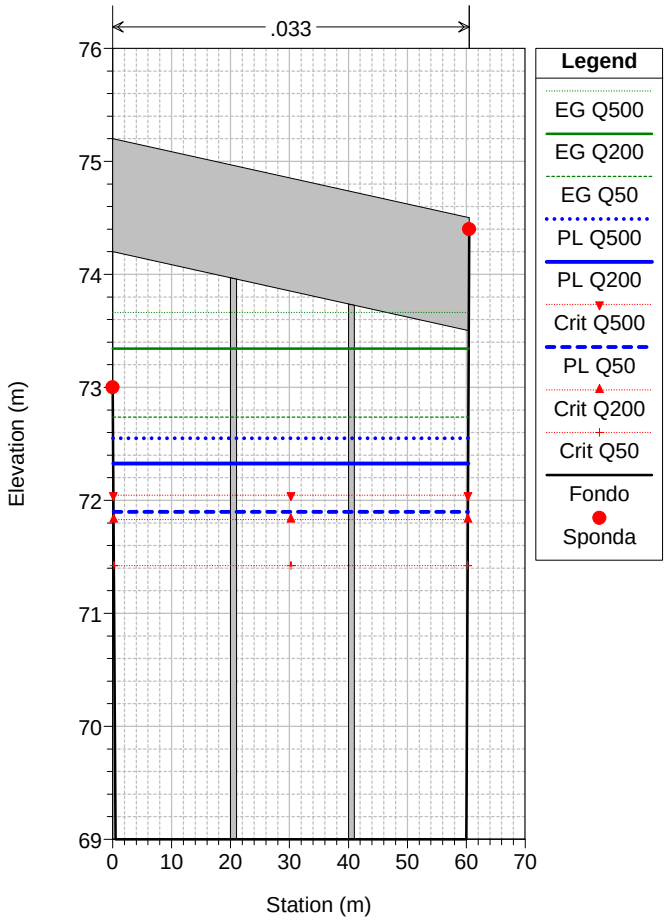
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-116



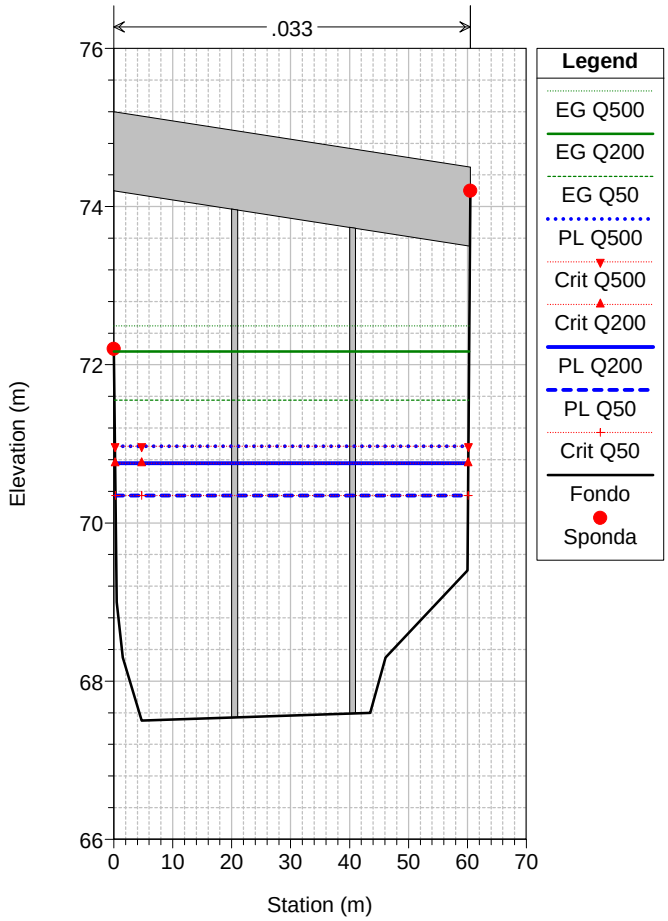
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-115



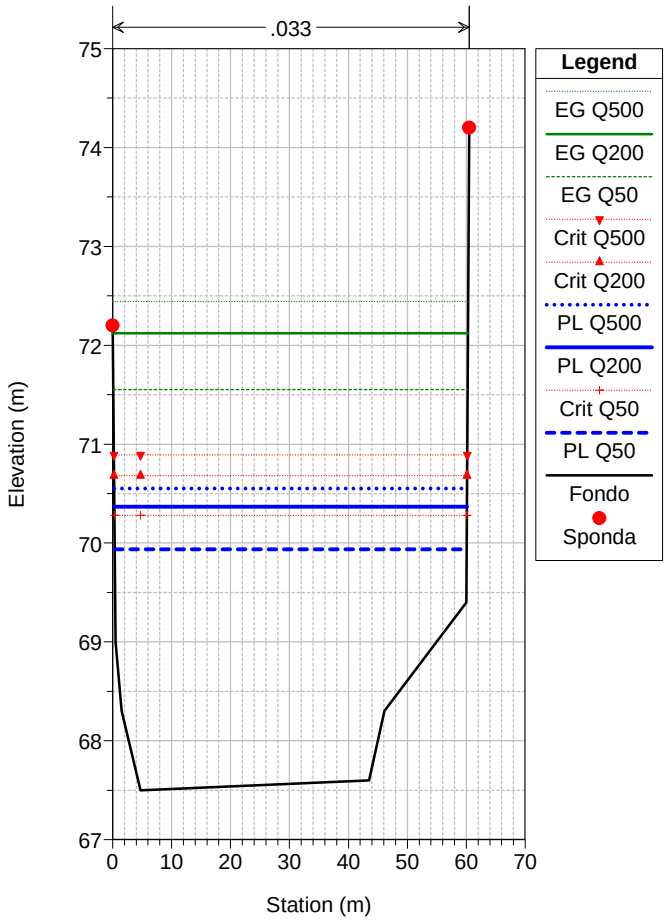
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca



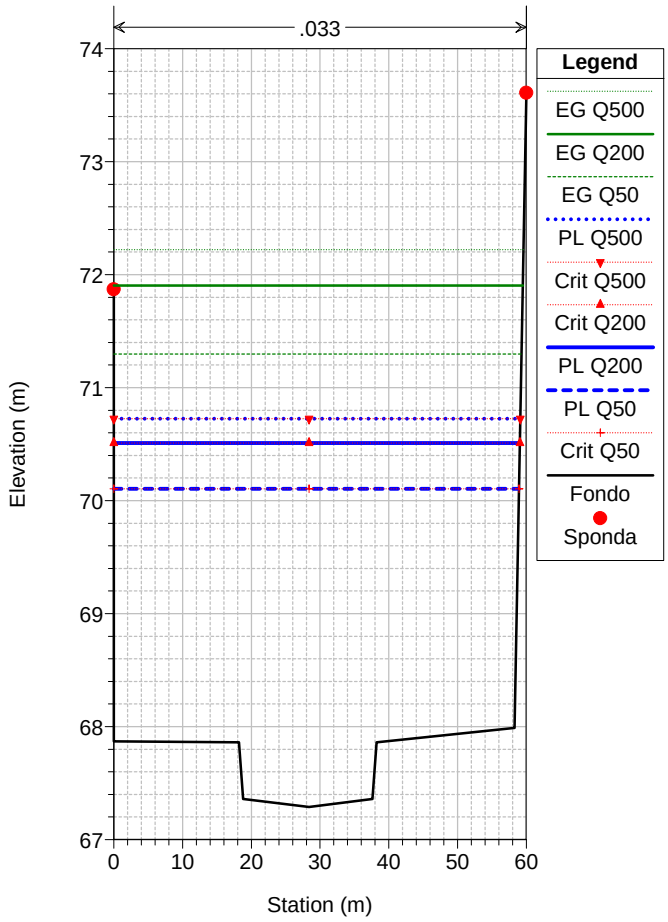
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca



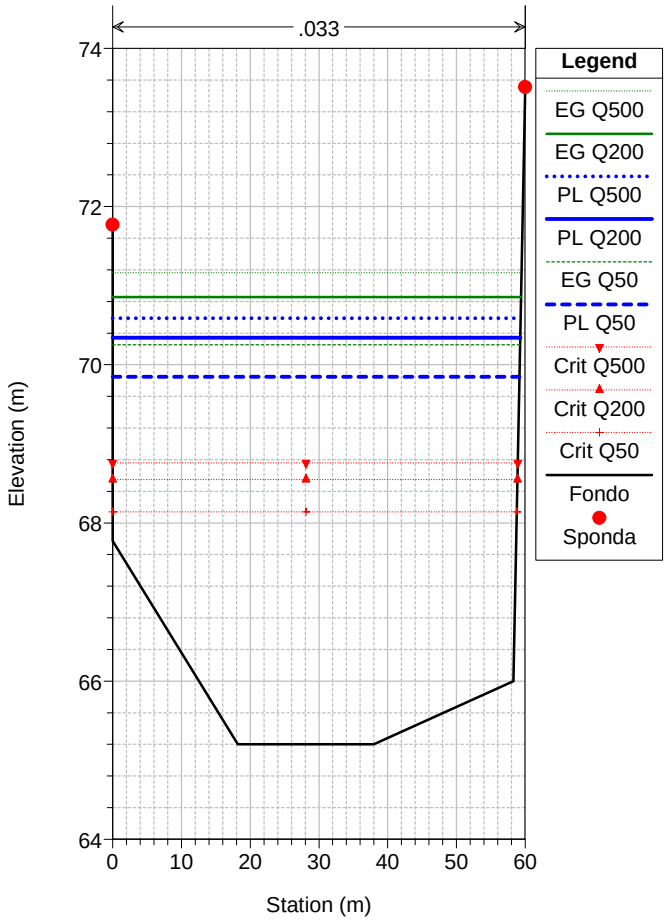
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-115



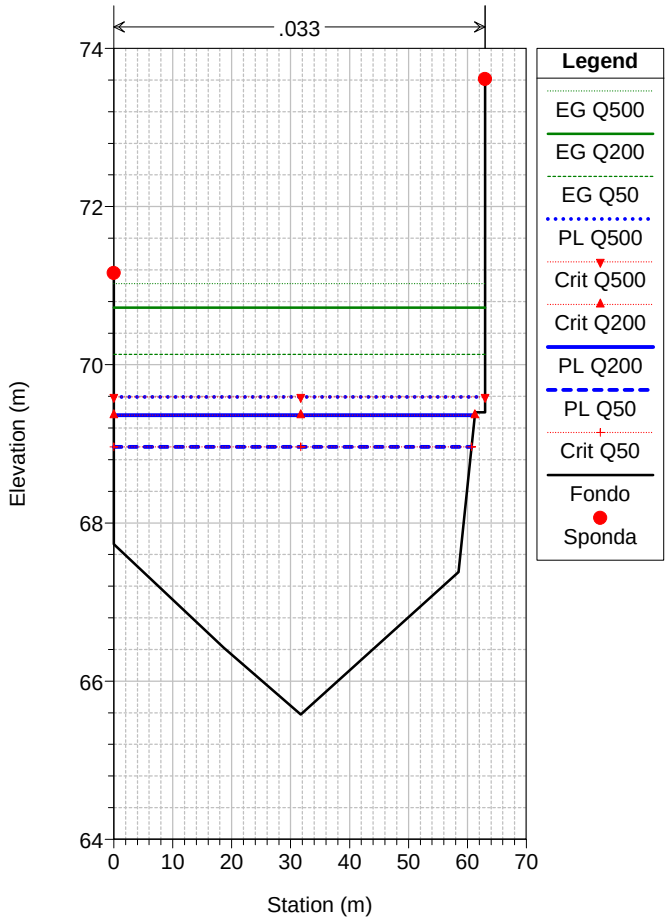
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-114.6



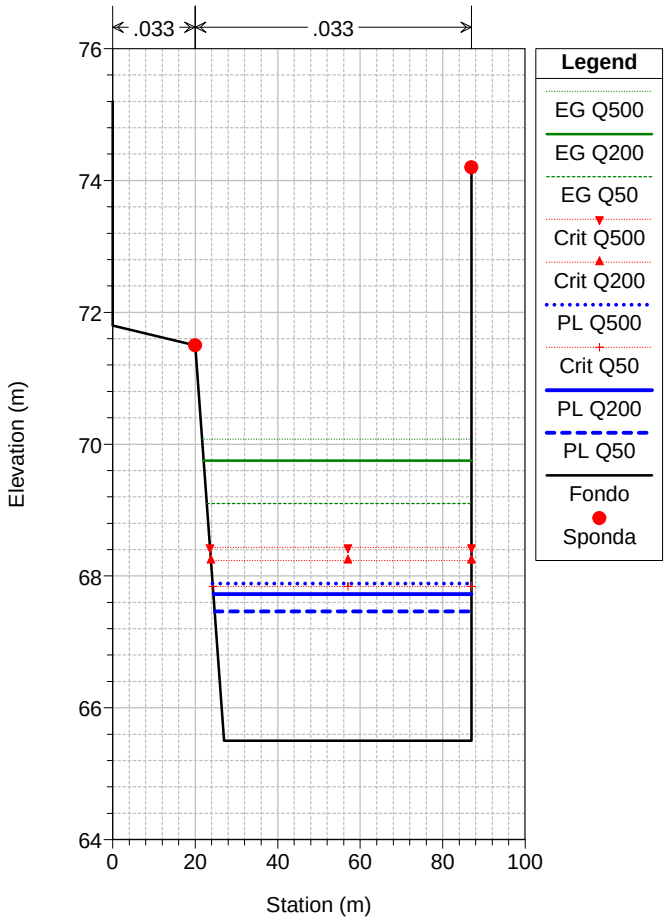
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-114.6



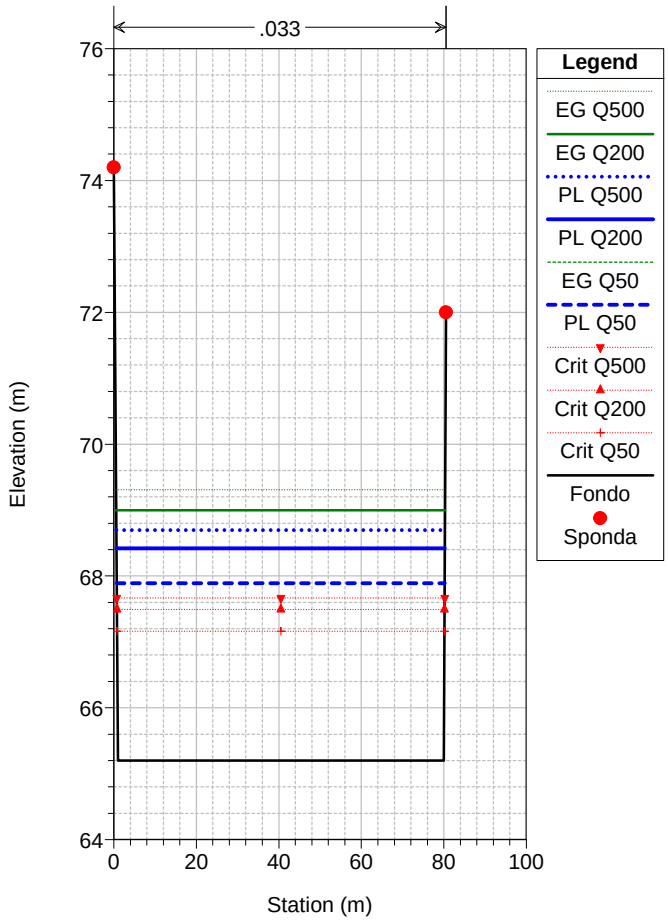
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-114.4



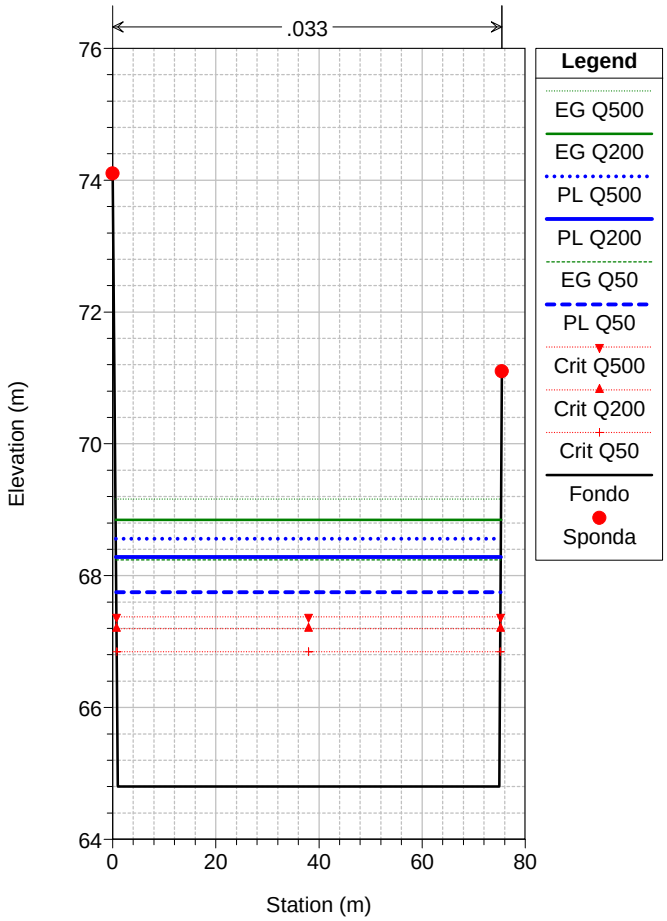
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-114



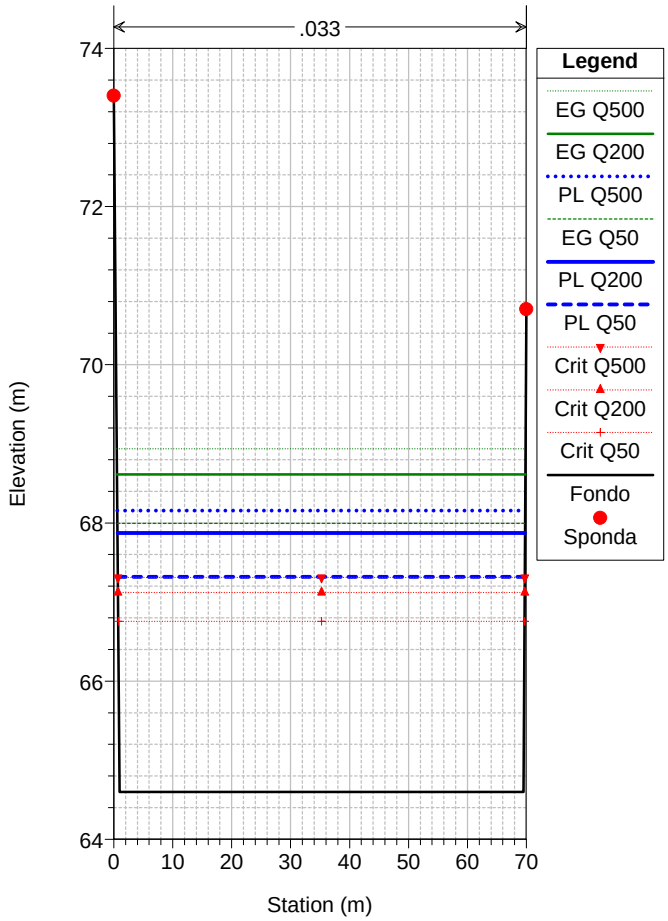
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-113



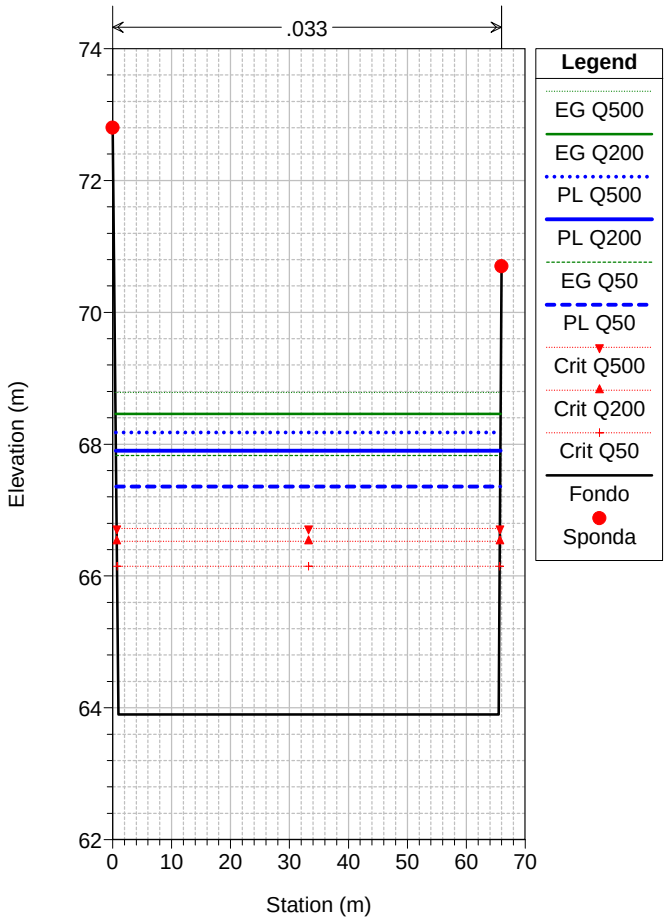
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-112



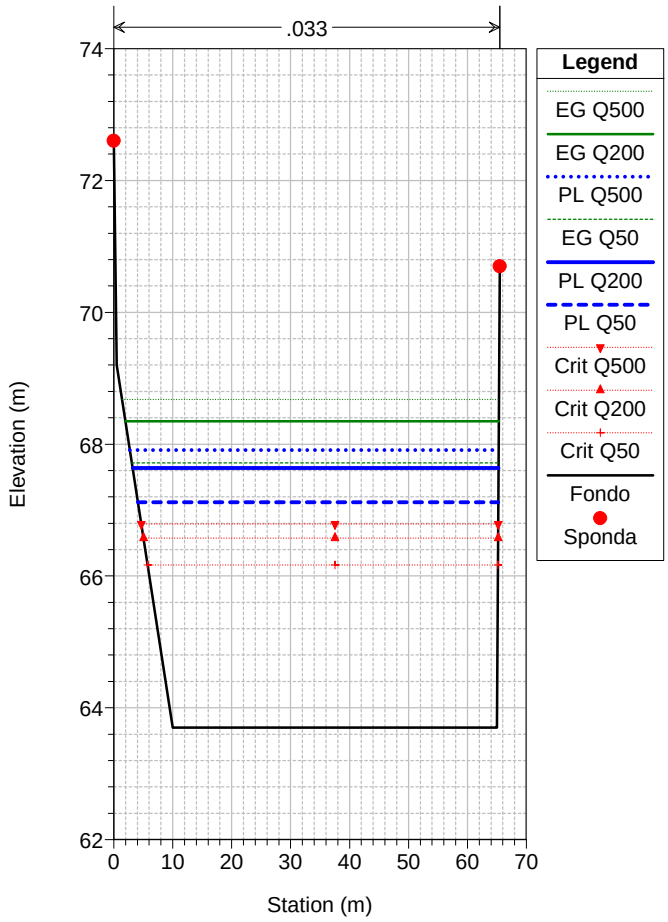
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-111



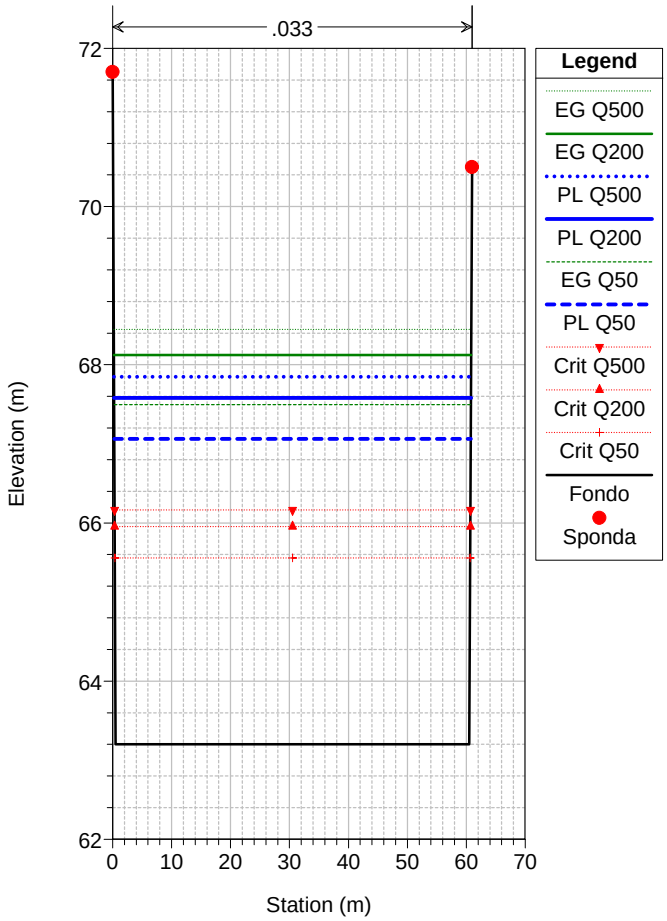
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-110



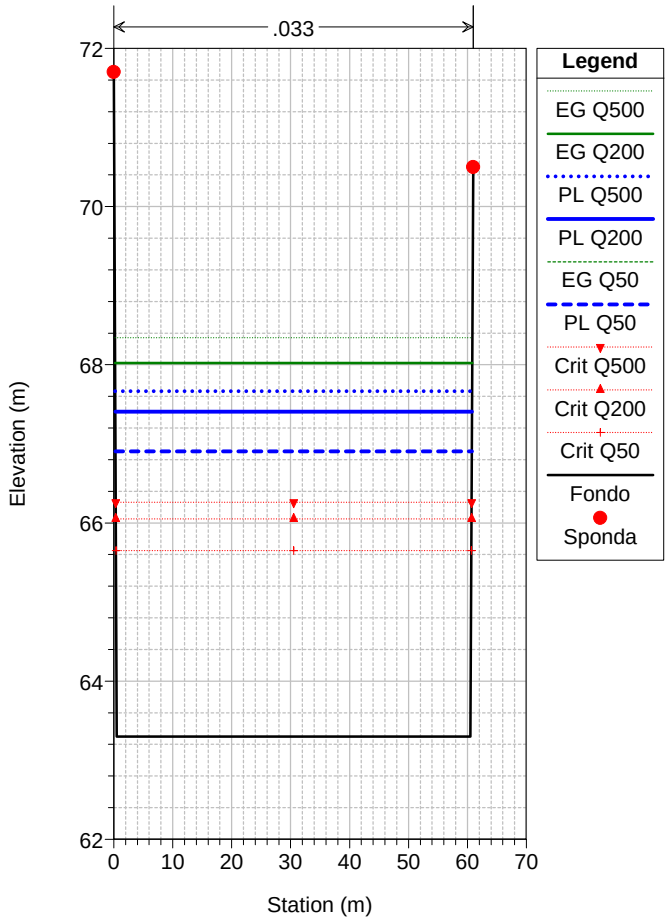
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-109



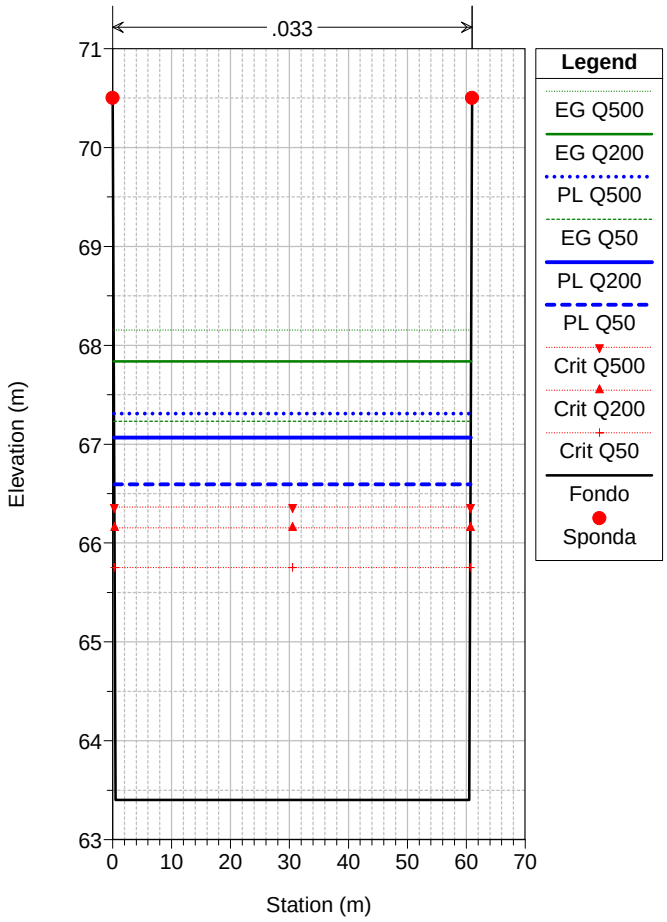
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-108



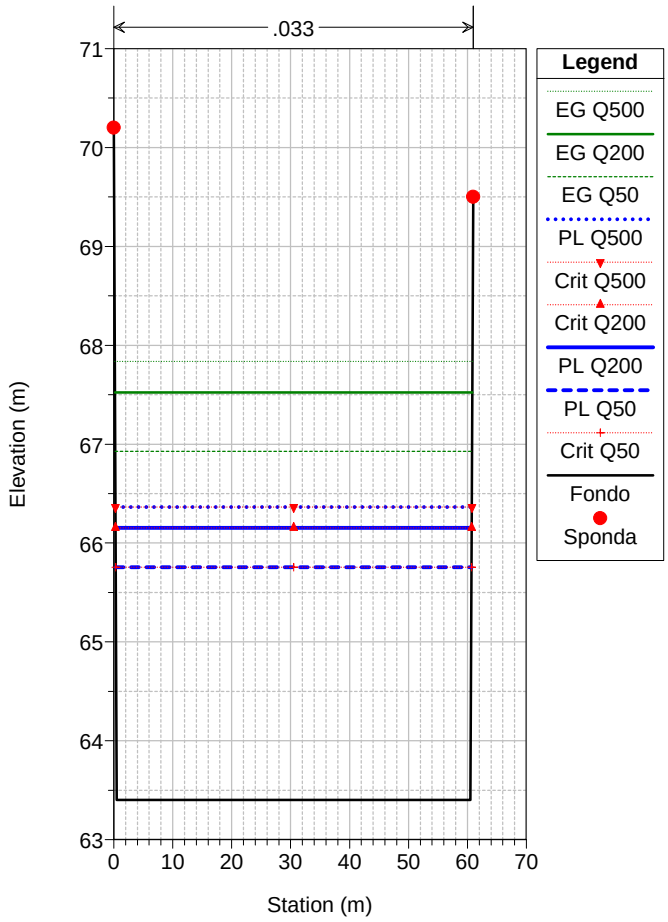
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-107



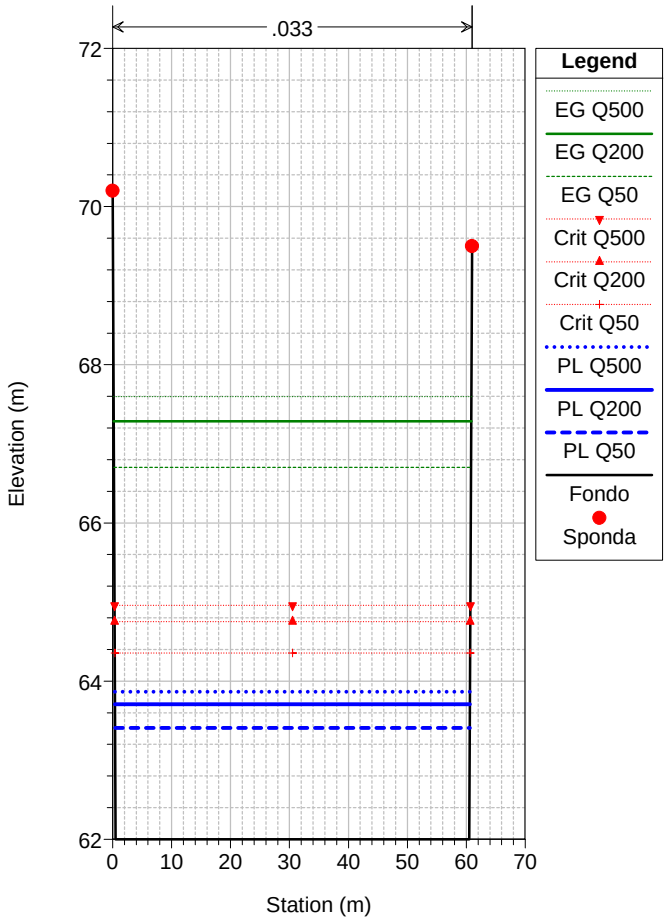
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-106



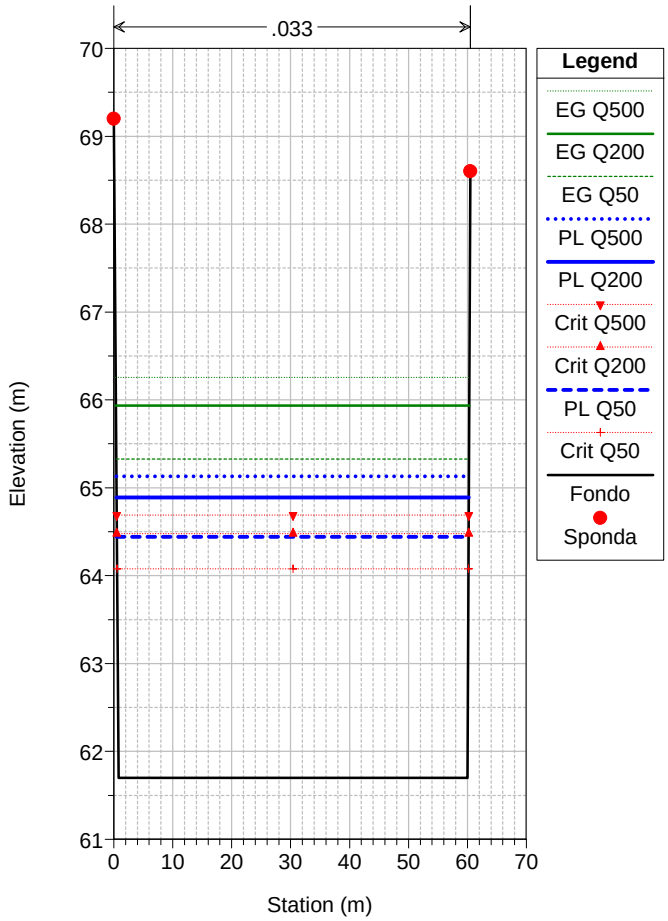
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-105



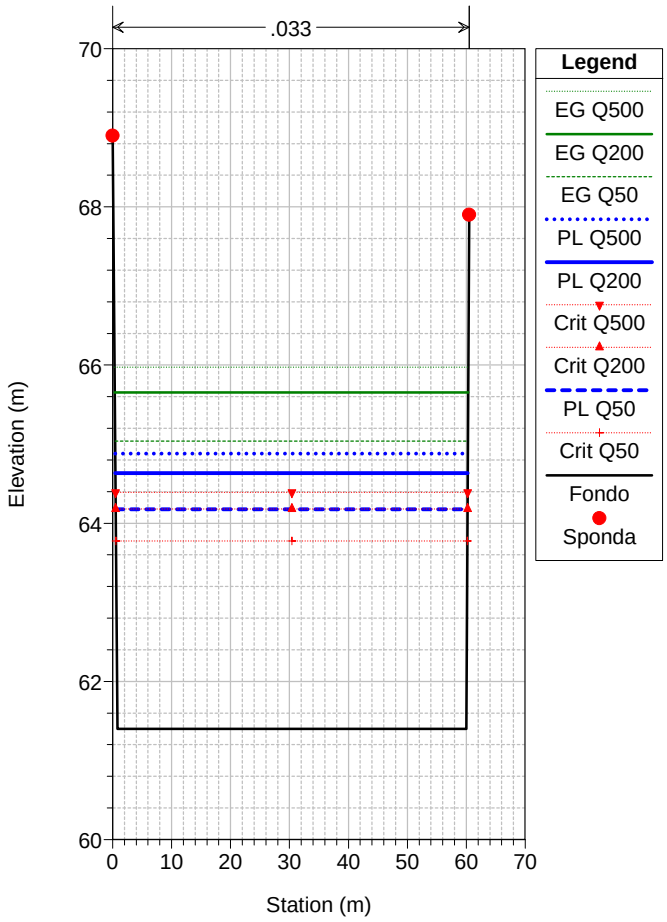
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-105



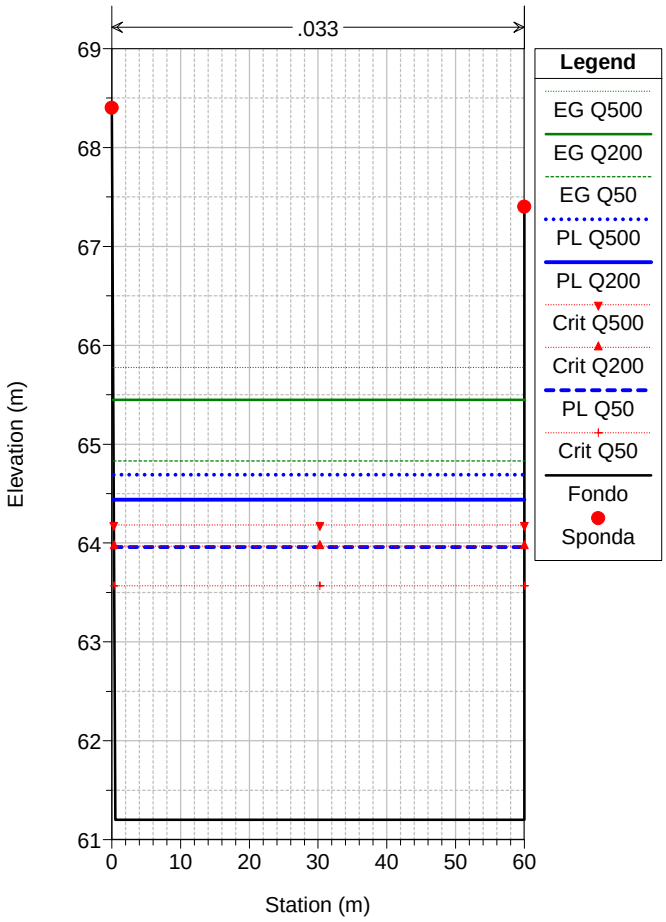
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-104



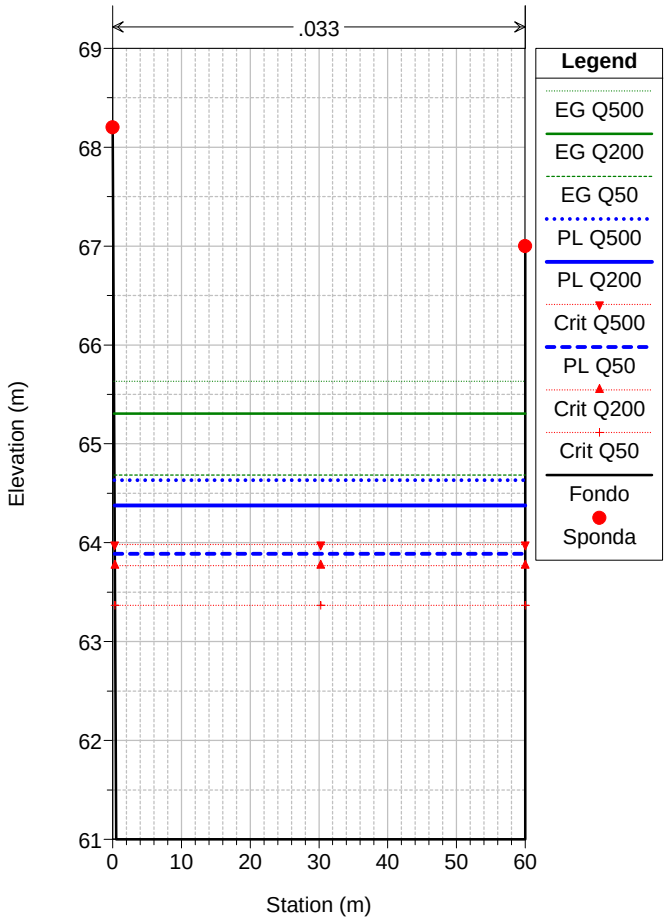
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-103



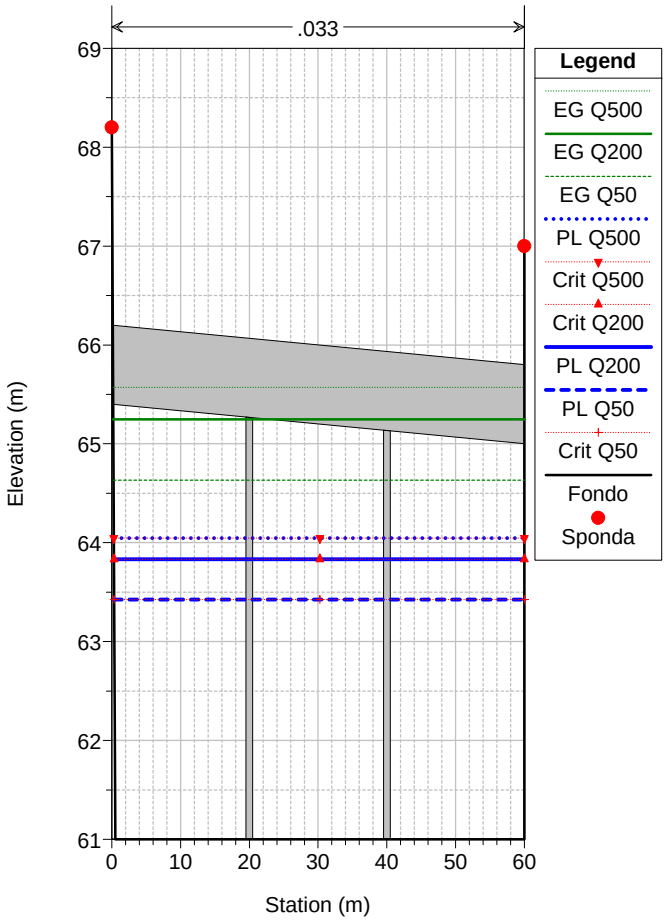
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-102



Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-101

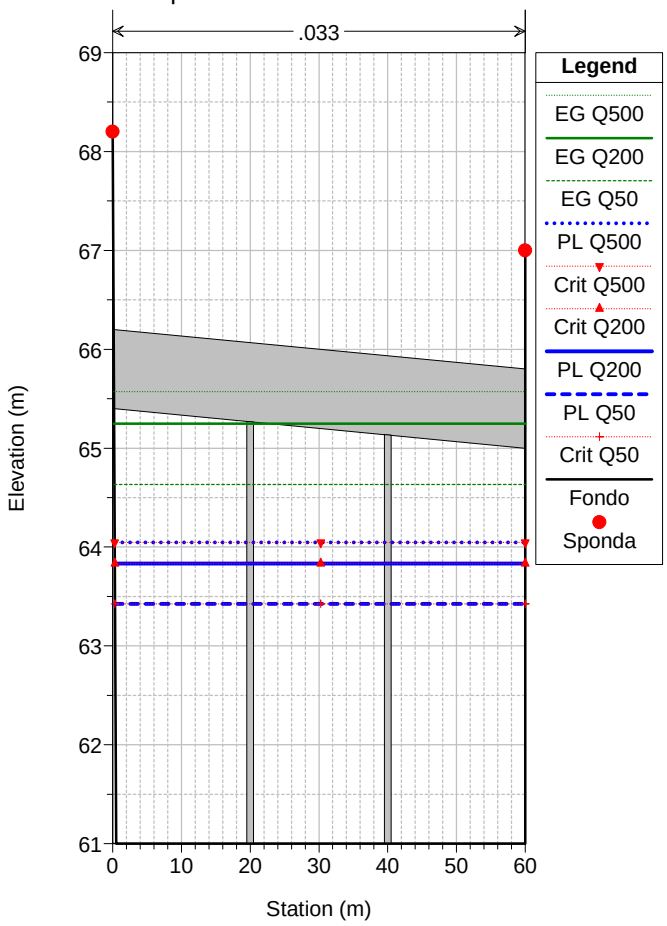


Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca



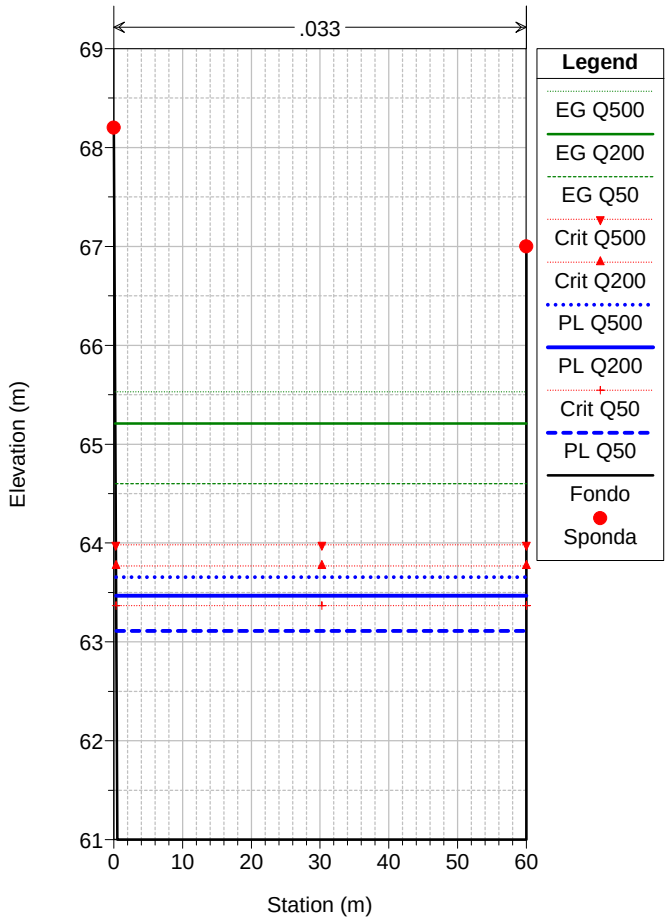
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca



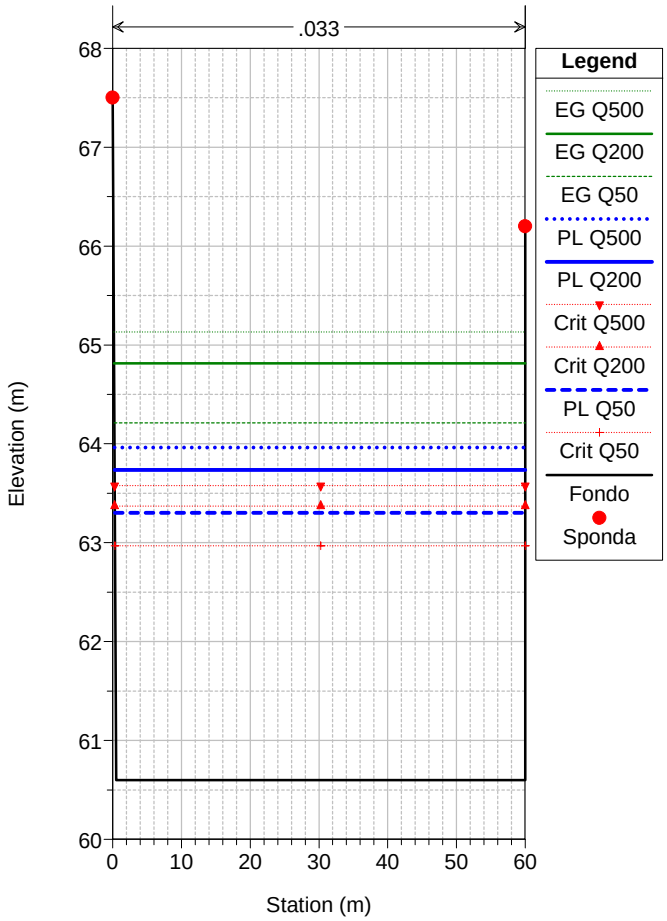
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca POL-101



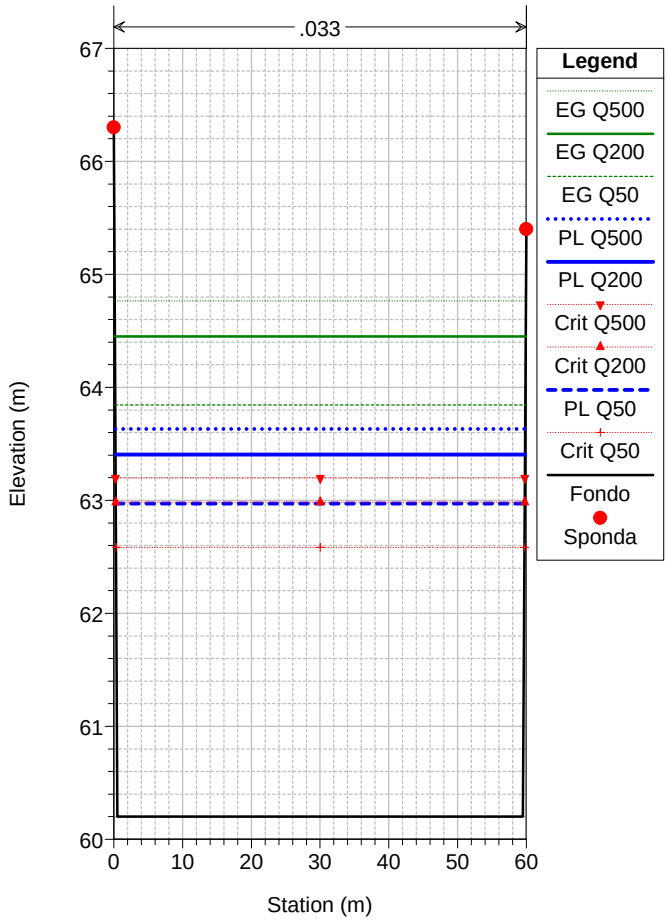
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca POL-100

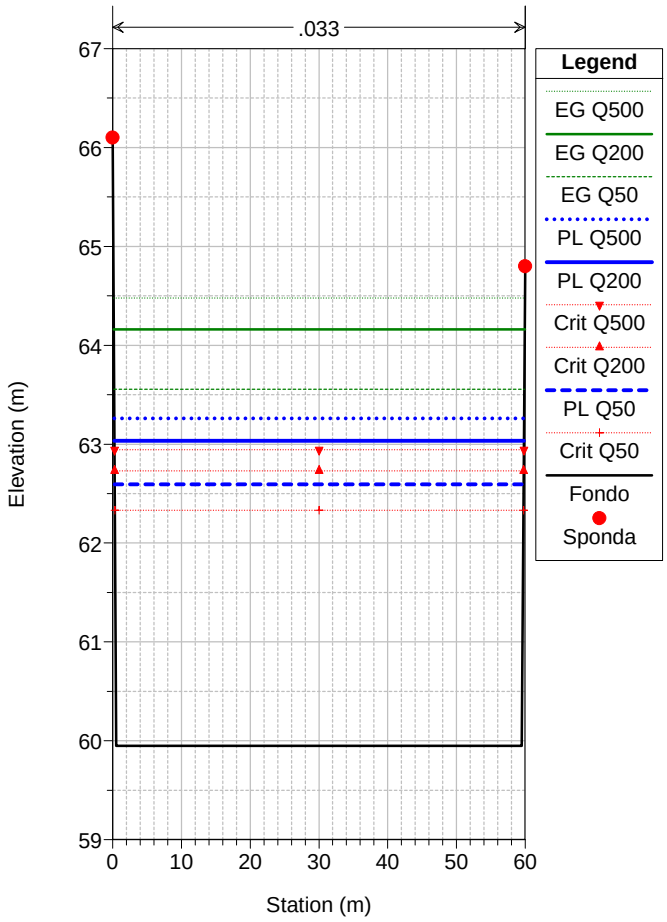


Polcevera Plan: Polcevera_rev_01/09

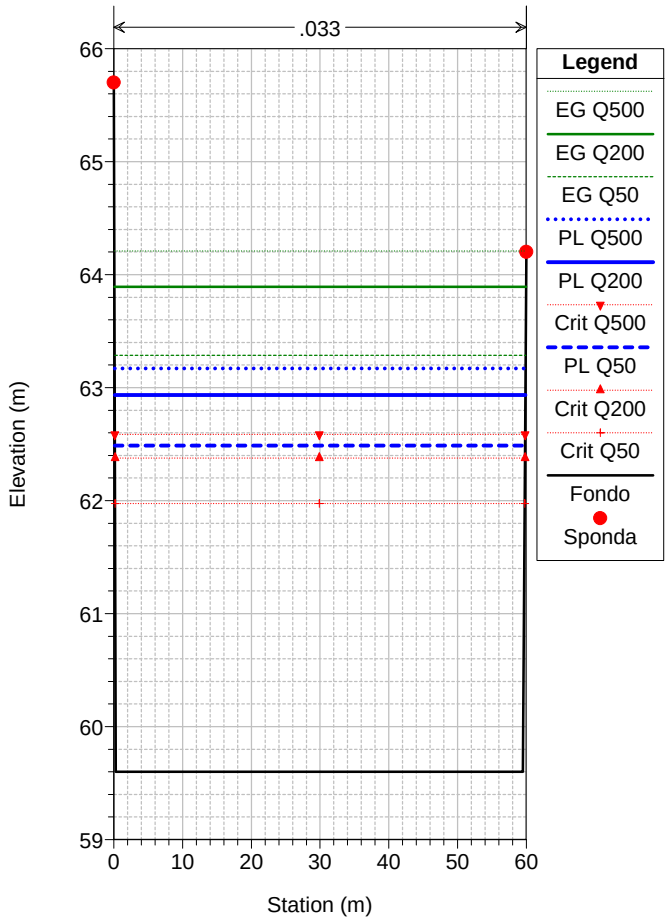
River = polcevera Reach = monte secca POL-99



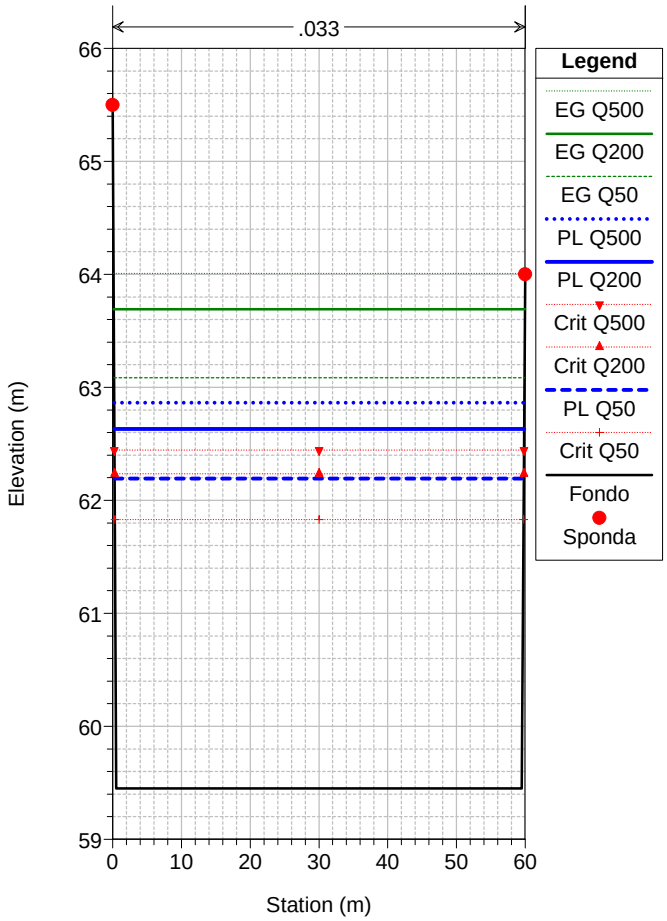
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-98



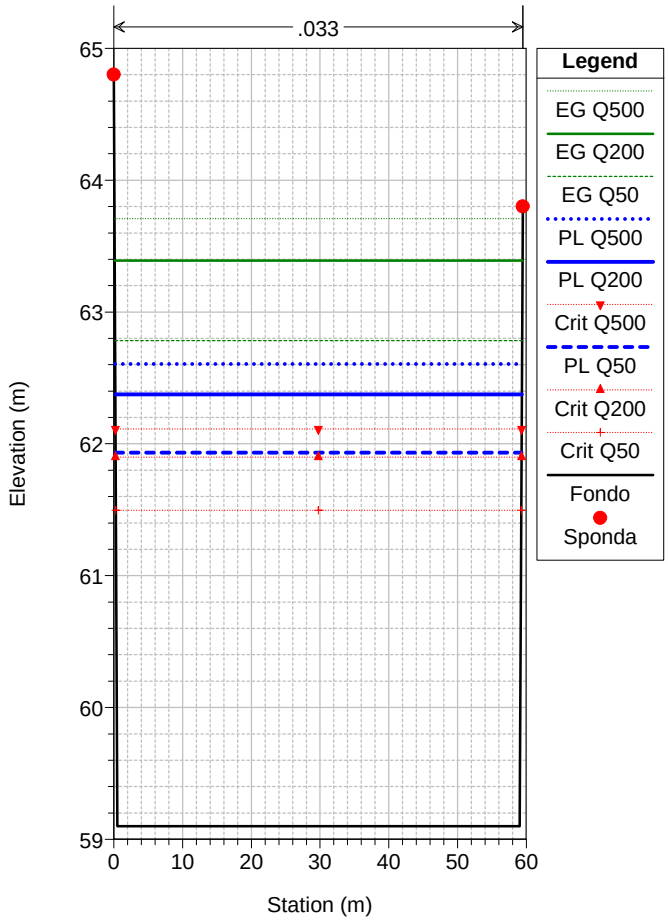
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-97



Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-96

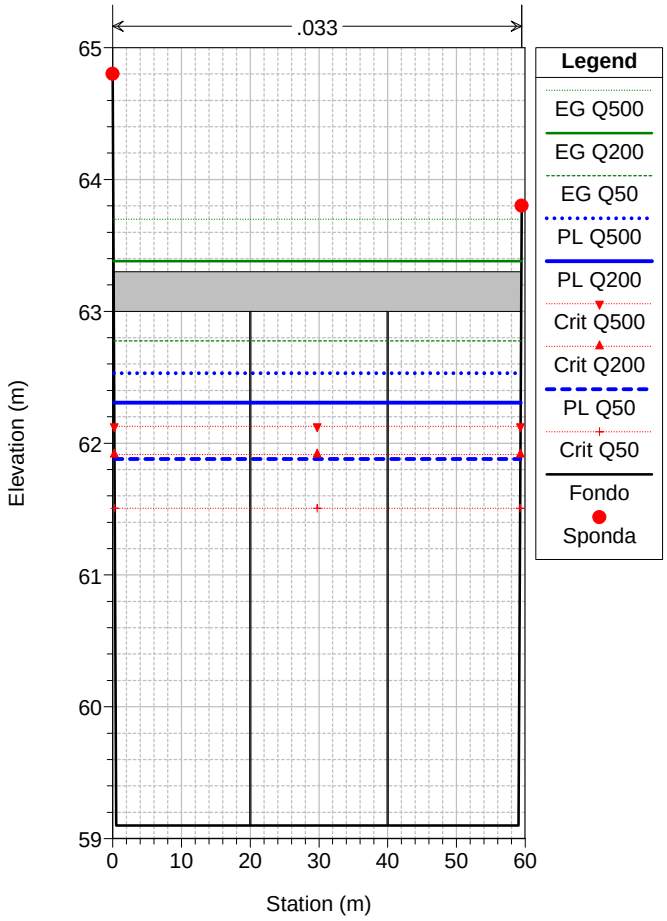


Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-95



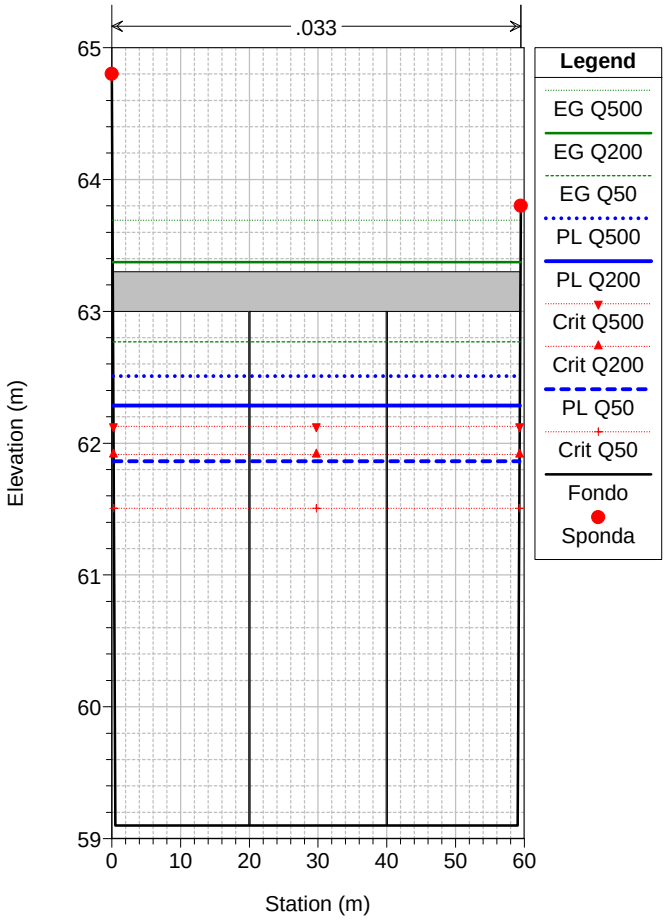
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca



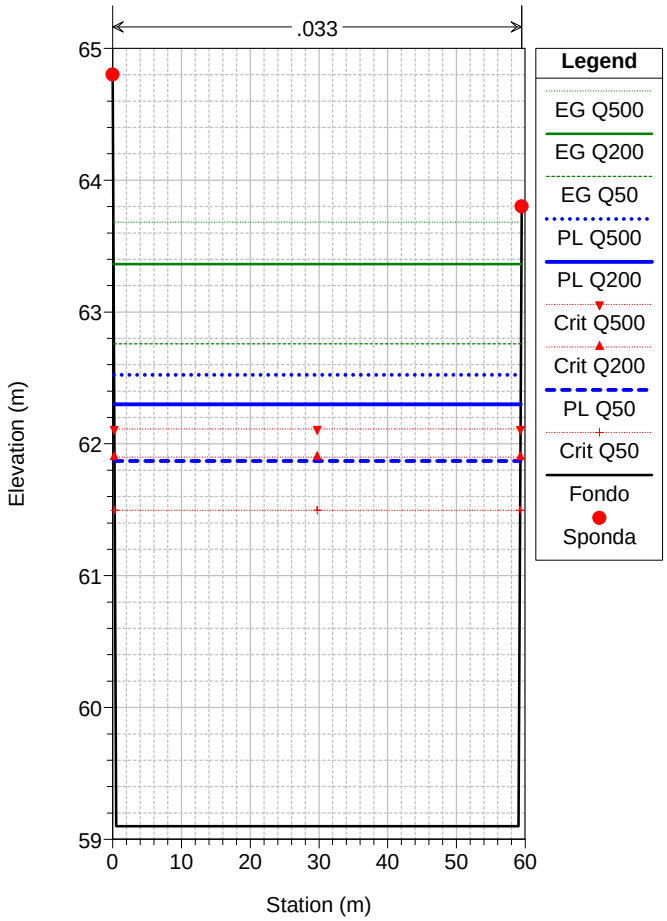
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca



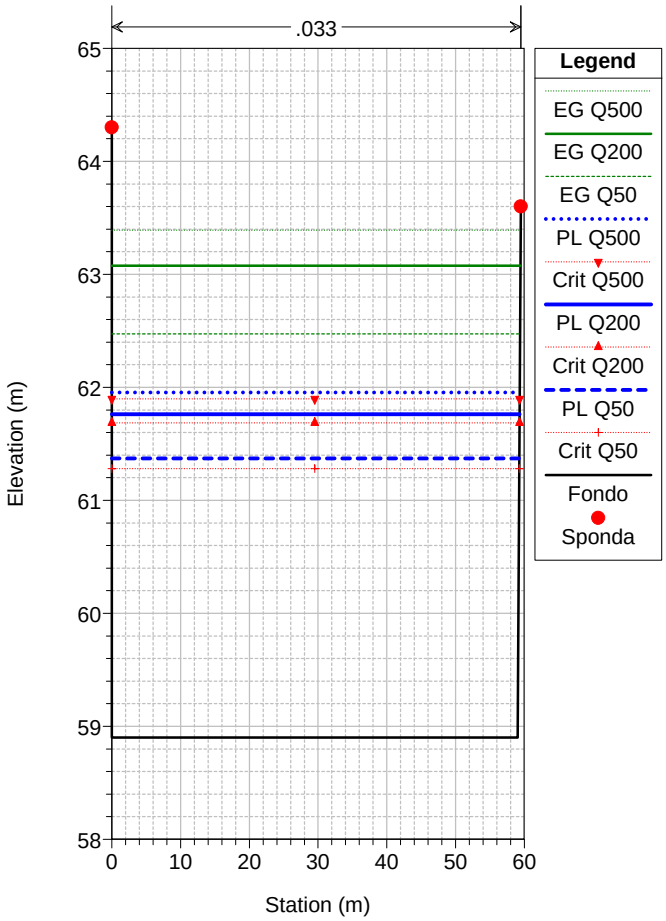
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca POL-95

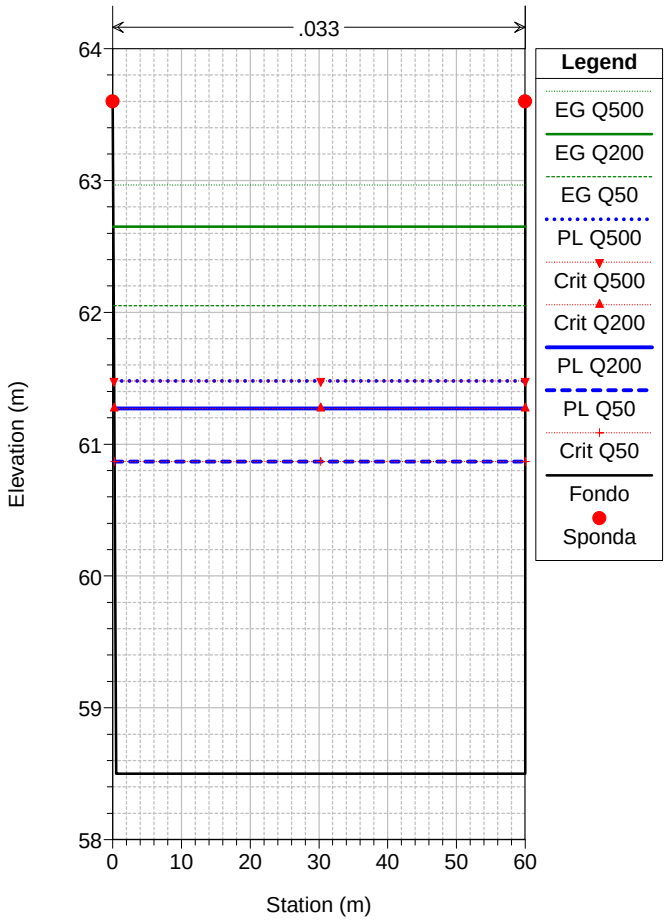


Polcevera Plan: Polcevera_rev_01/09

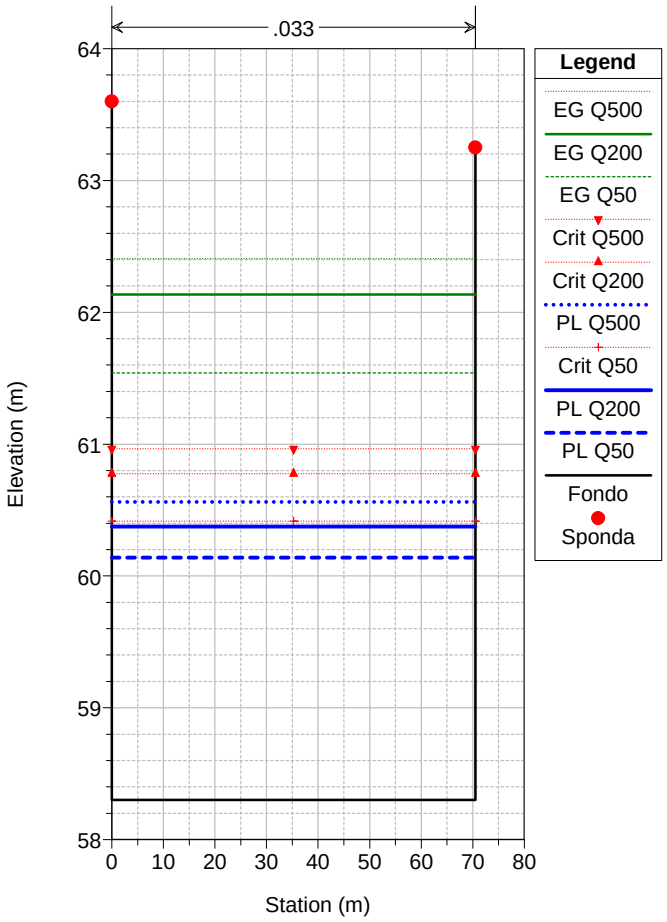
River = polcevera Reach = monte secca POL-94



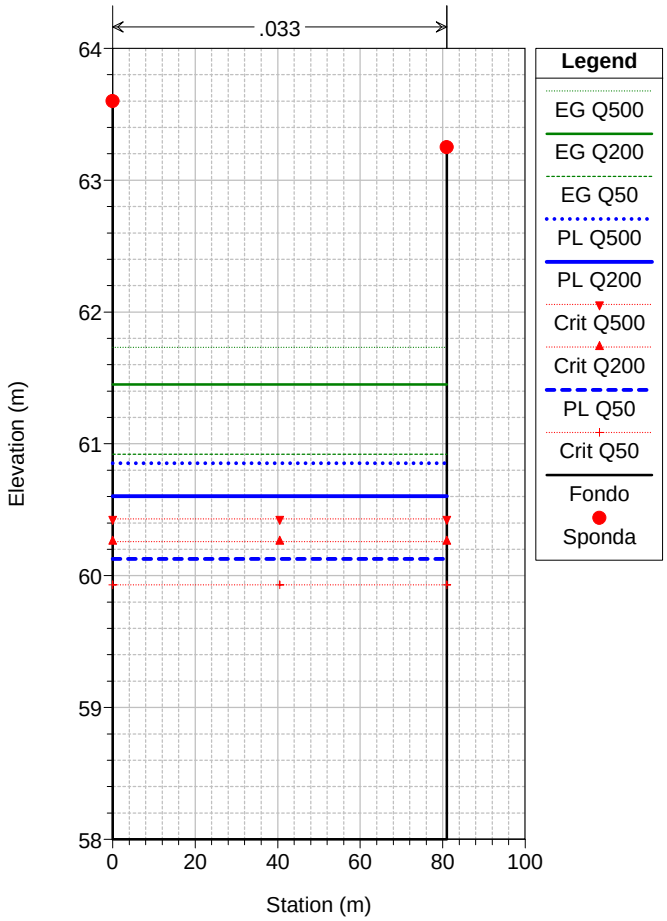
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-93



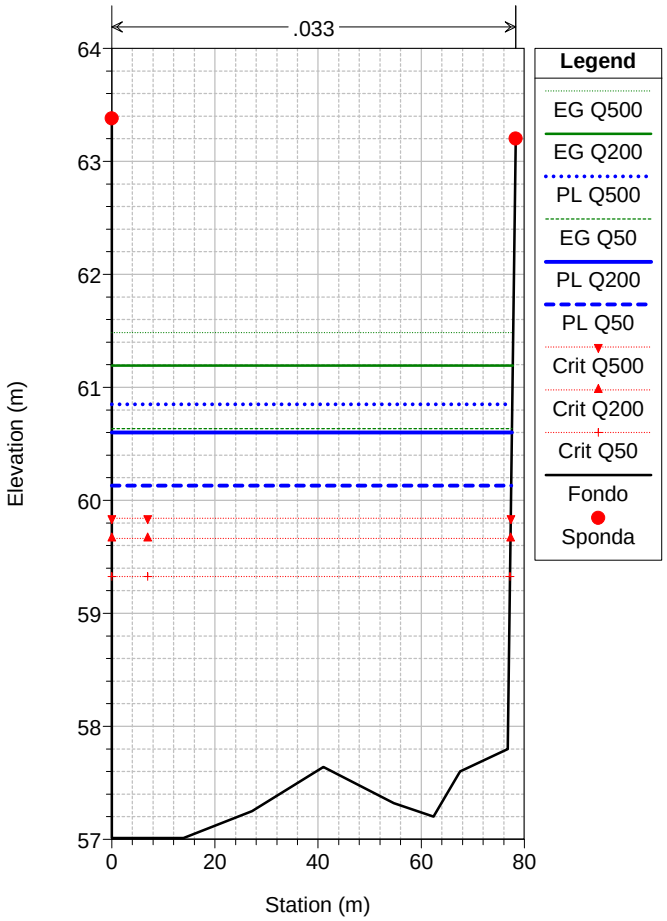
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-92



Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-91

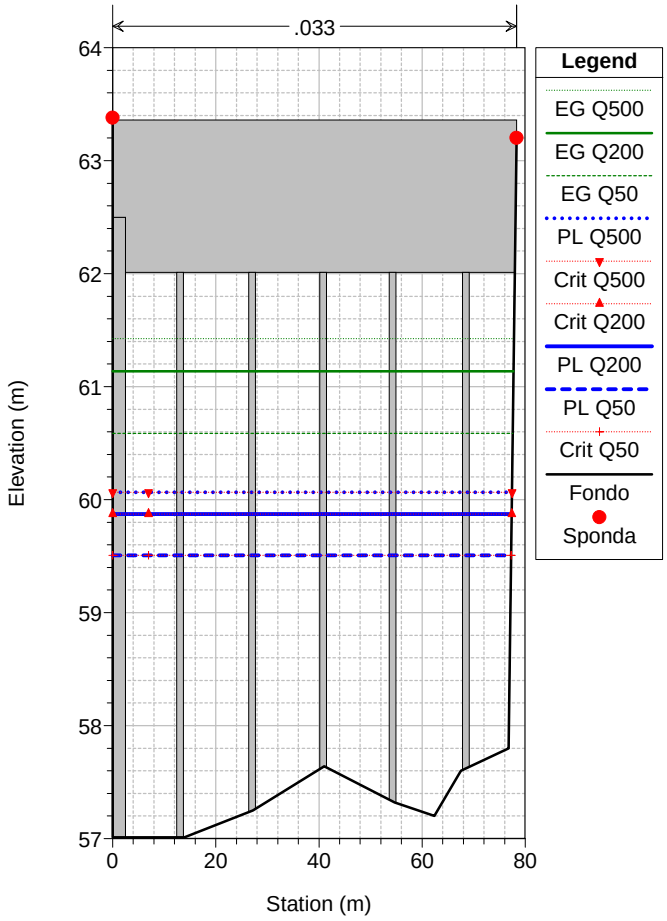


Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-89.8



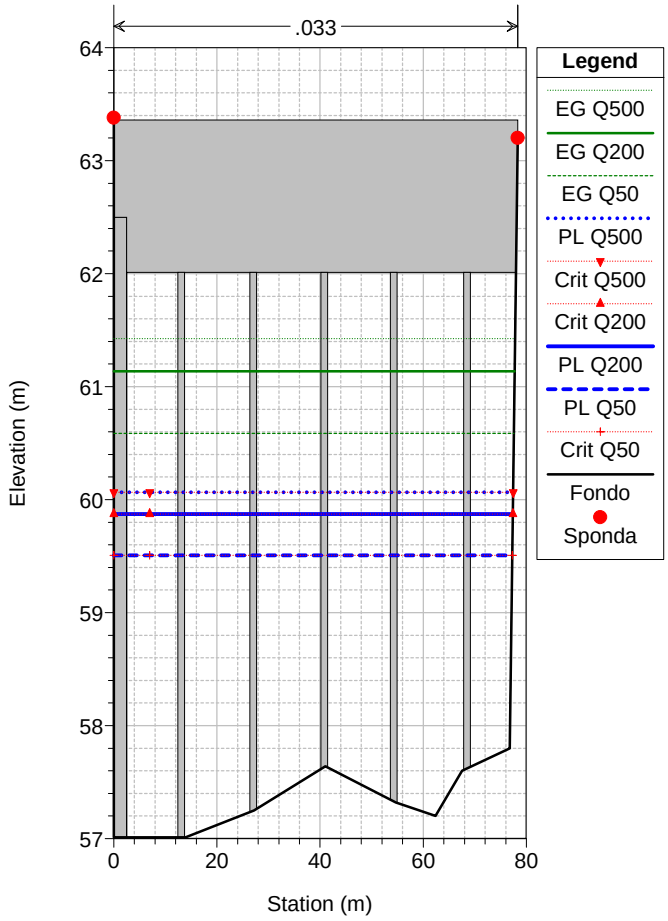
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca



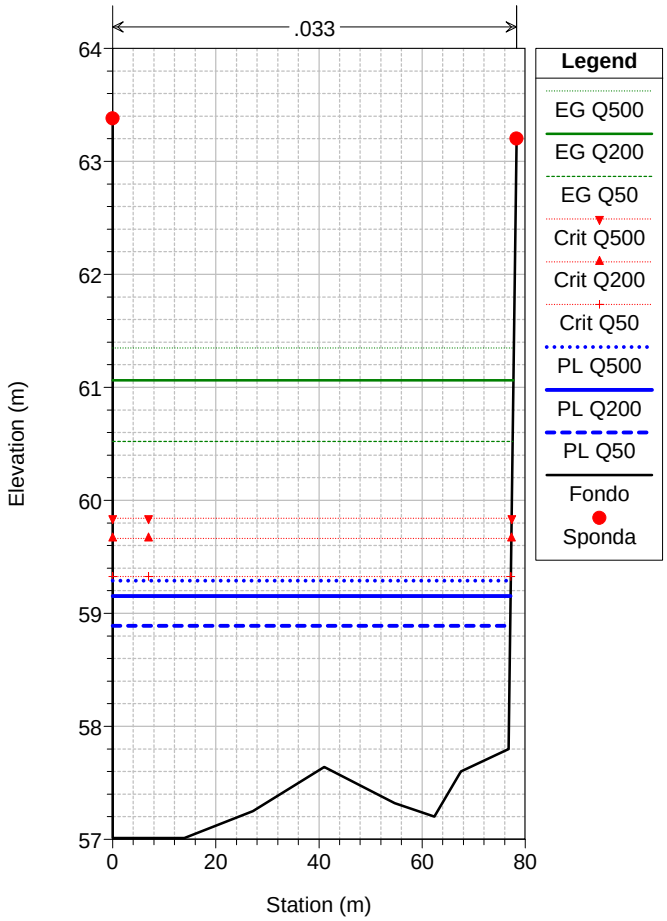
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca



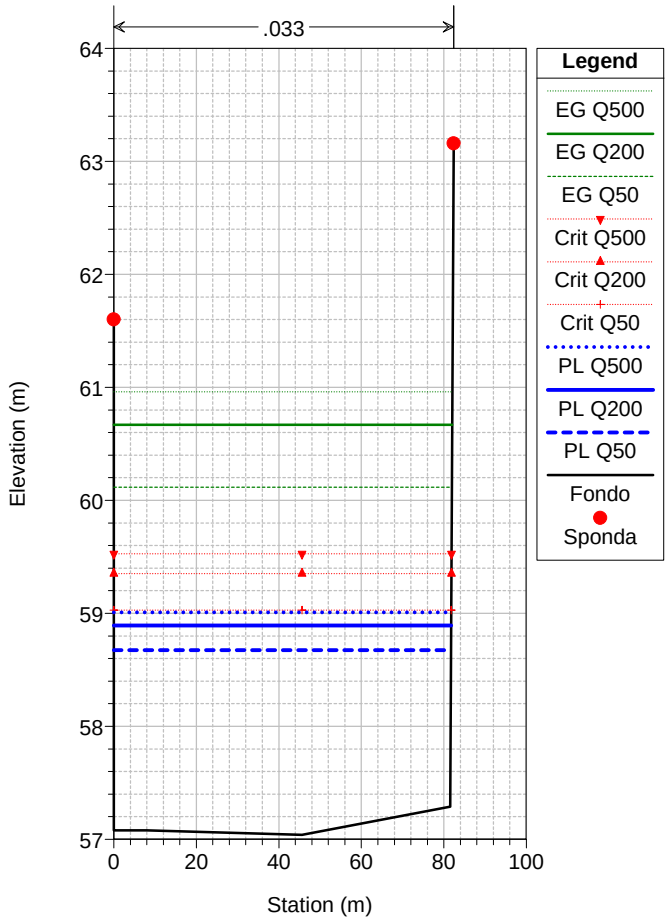
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca POL-89.8

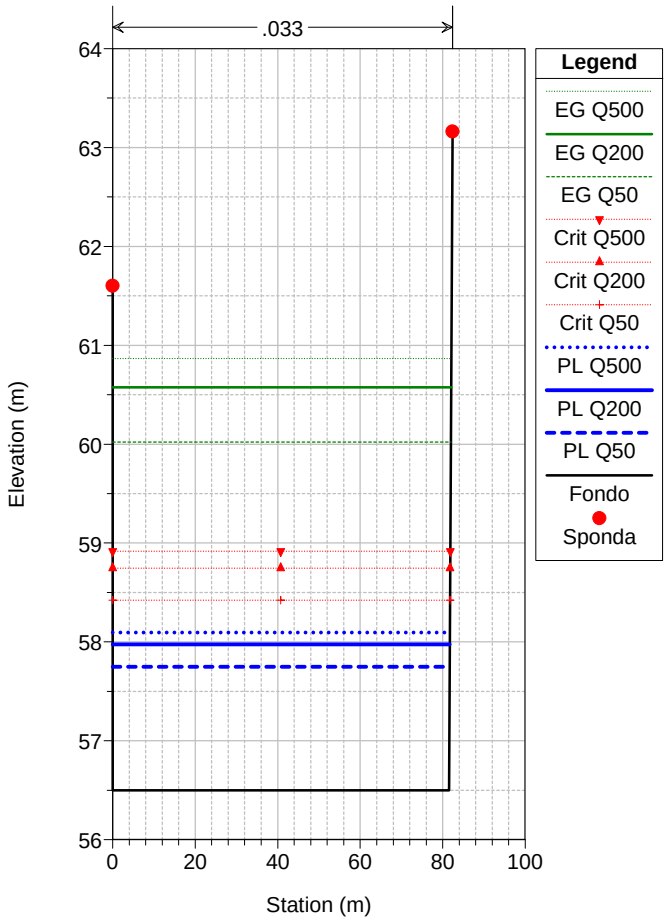


Polcevera Plan: Polcevera_rev_01/09

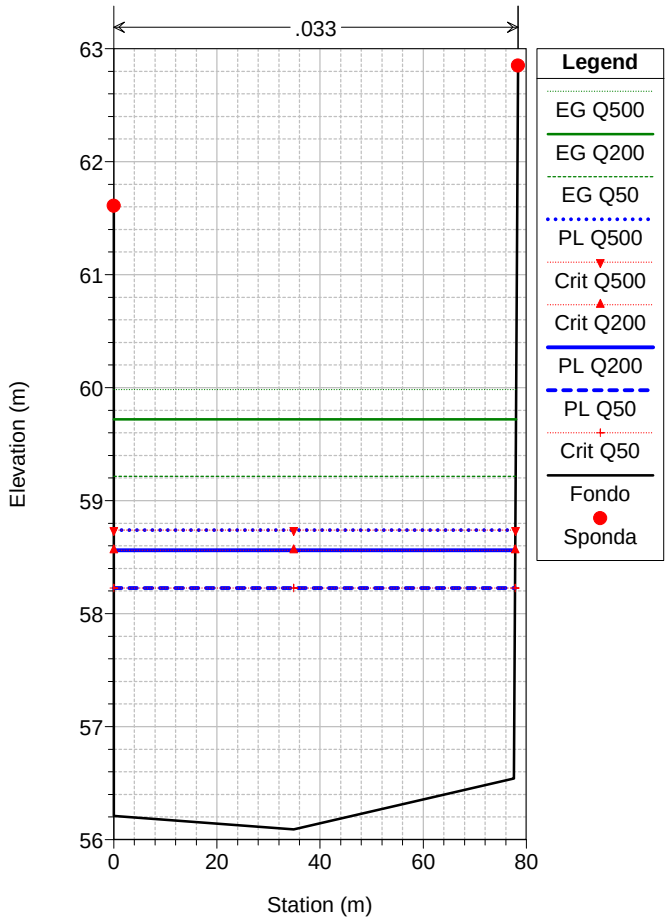
River = polcevera Reach = monte secca POL-89.7



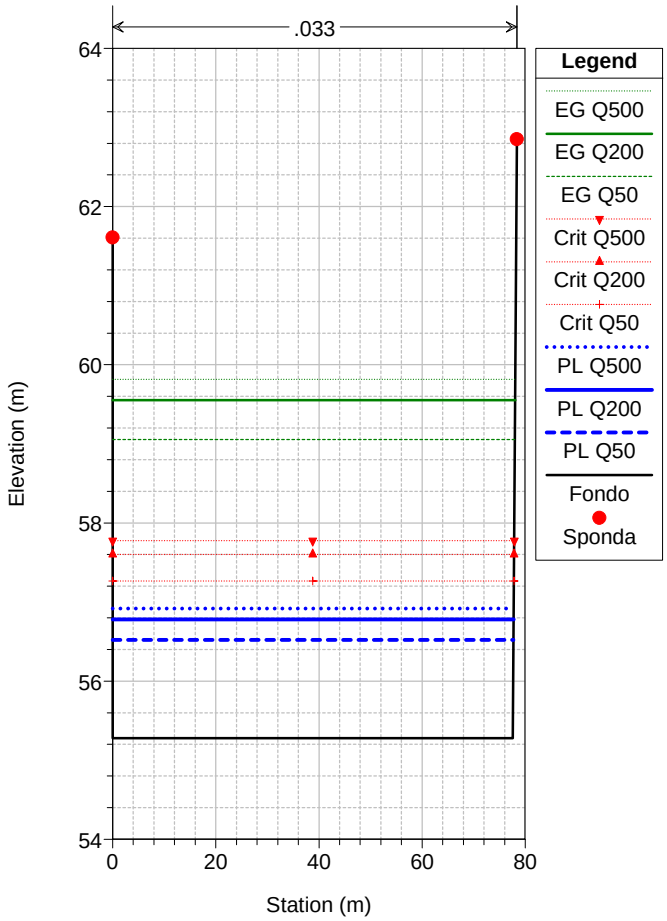
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-89.7



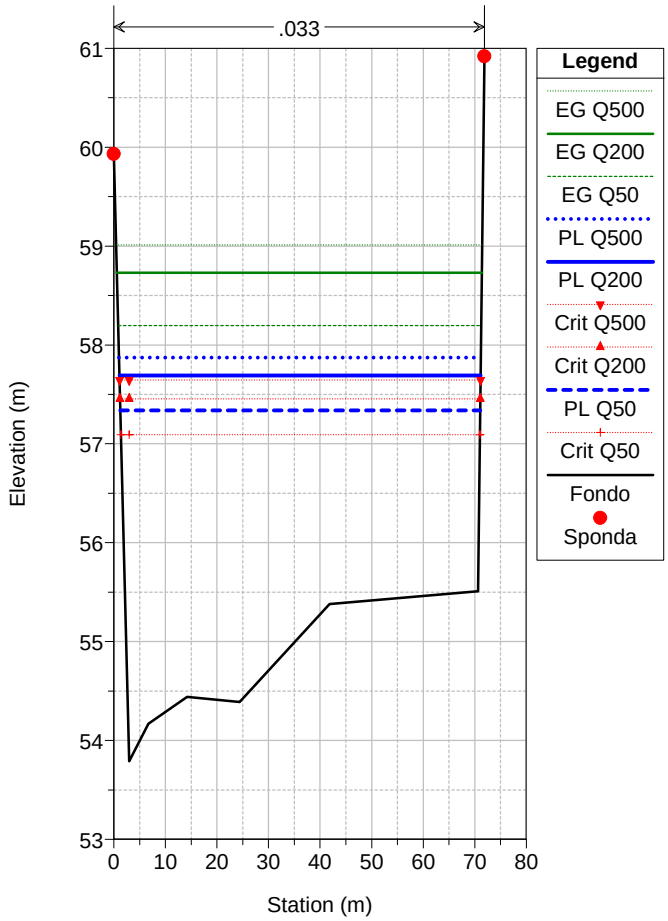
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-89.6



Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-89.6

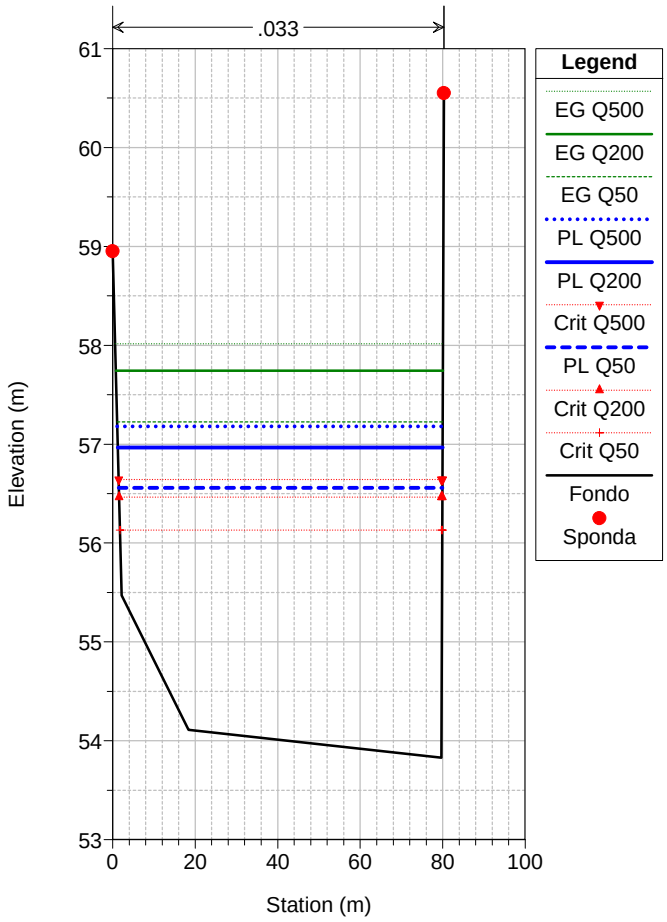


Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-89.5



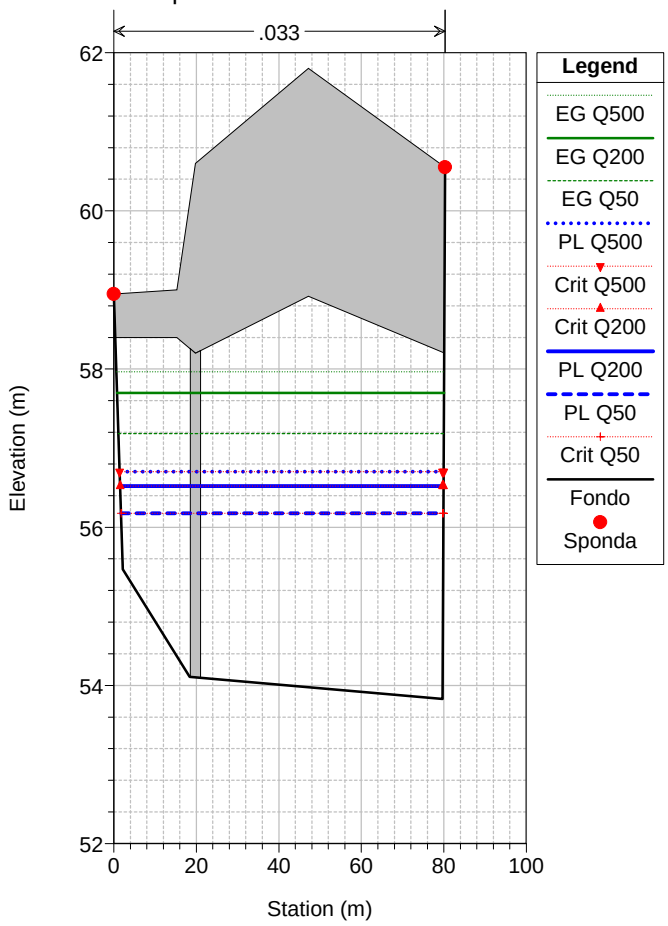
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca POL-89.4



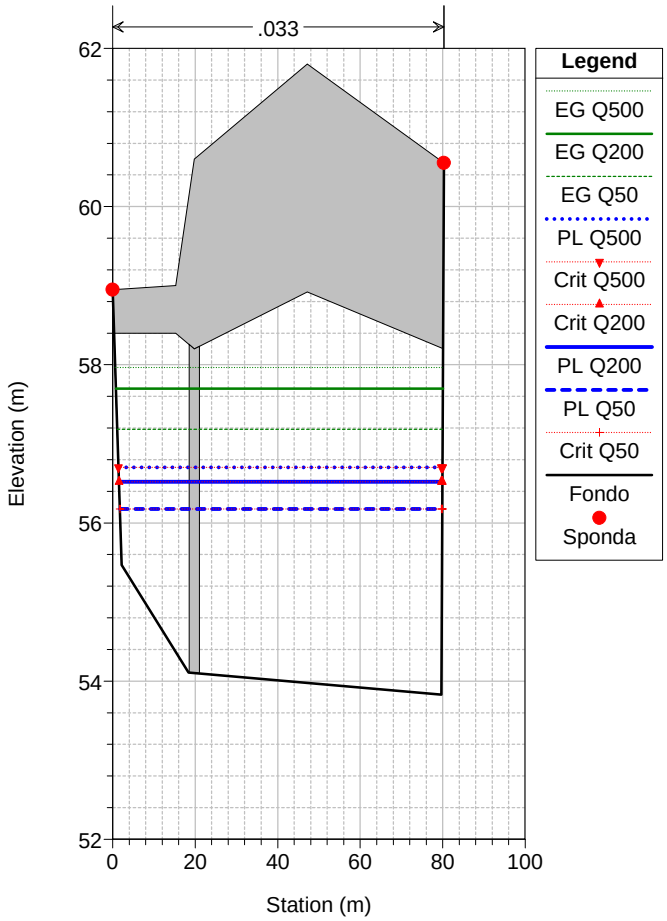
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca



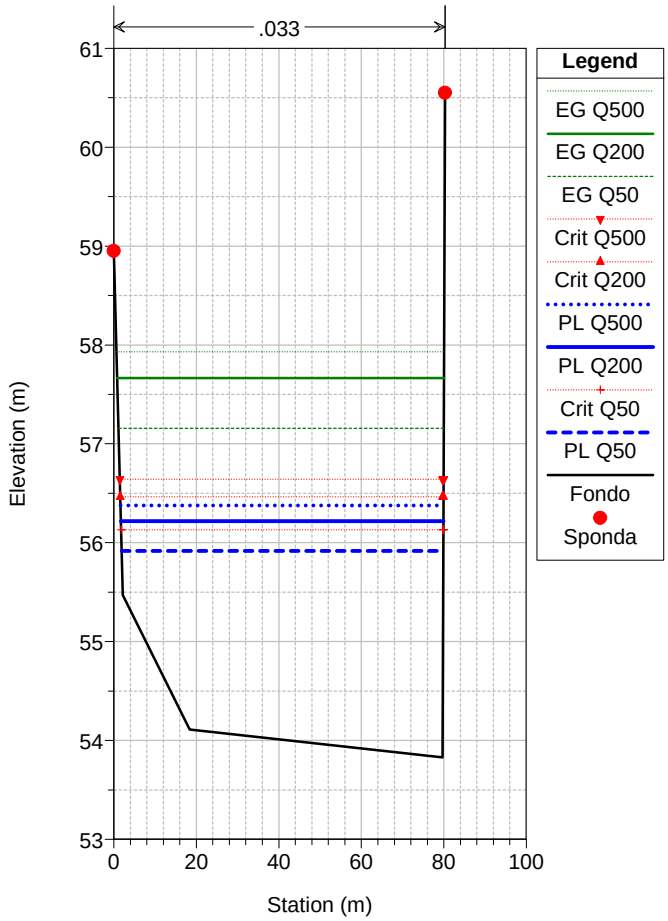
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca

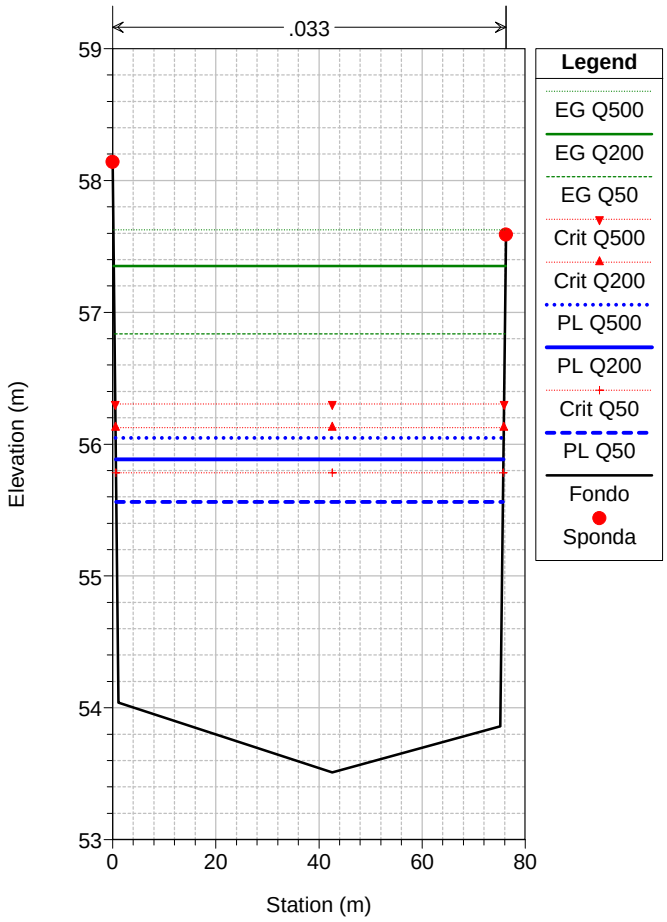


Polcevera Plan: Polcevera_rev_01/09

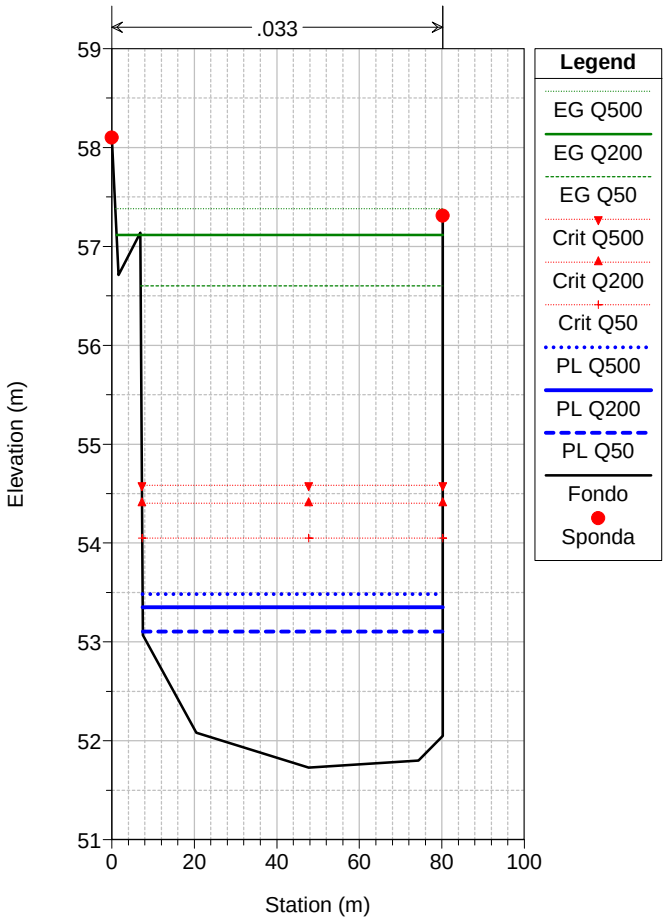
River = polcevera Reach = monte secca POL-89.4



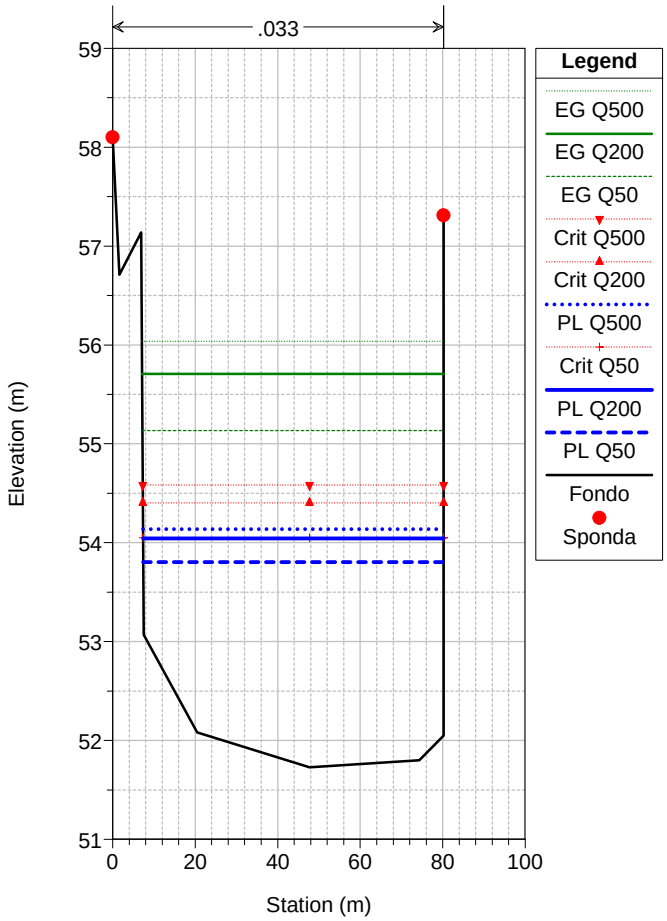
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-89.3



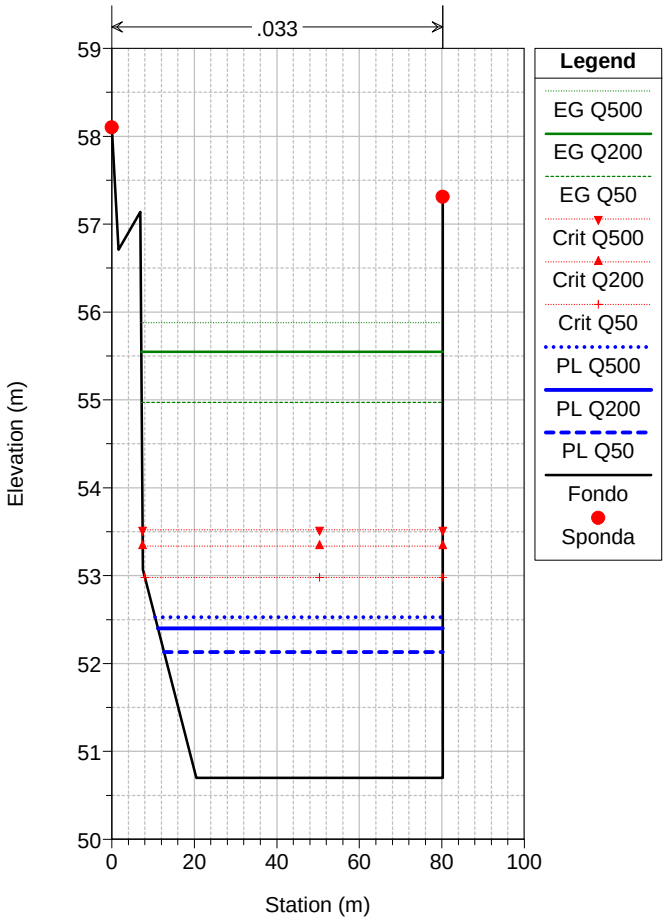
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-89.2



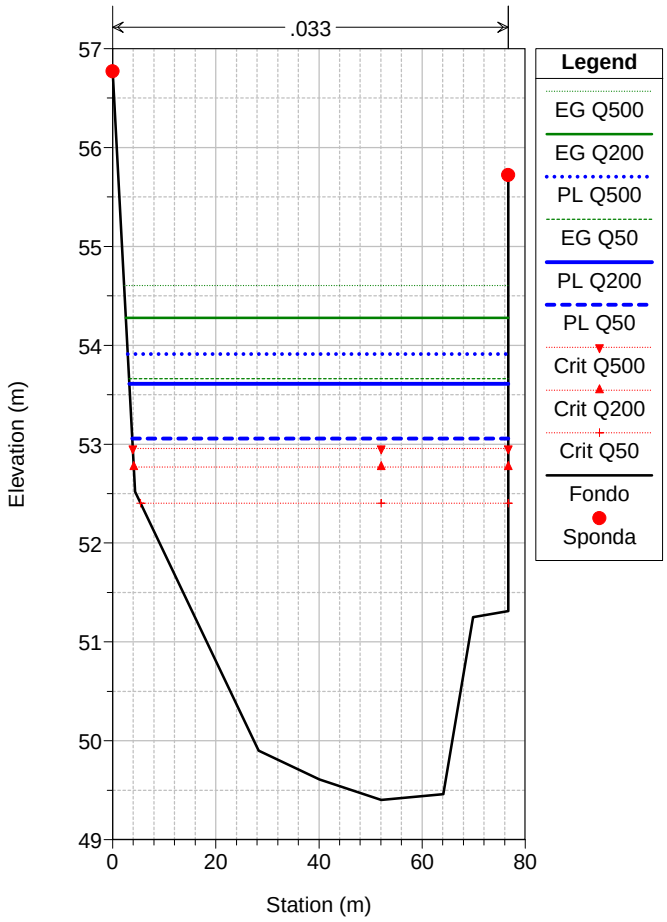
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-89.2



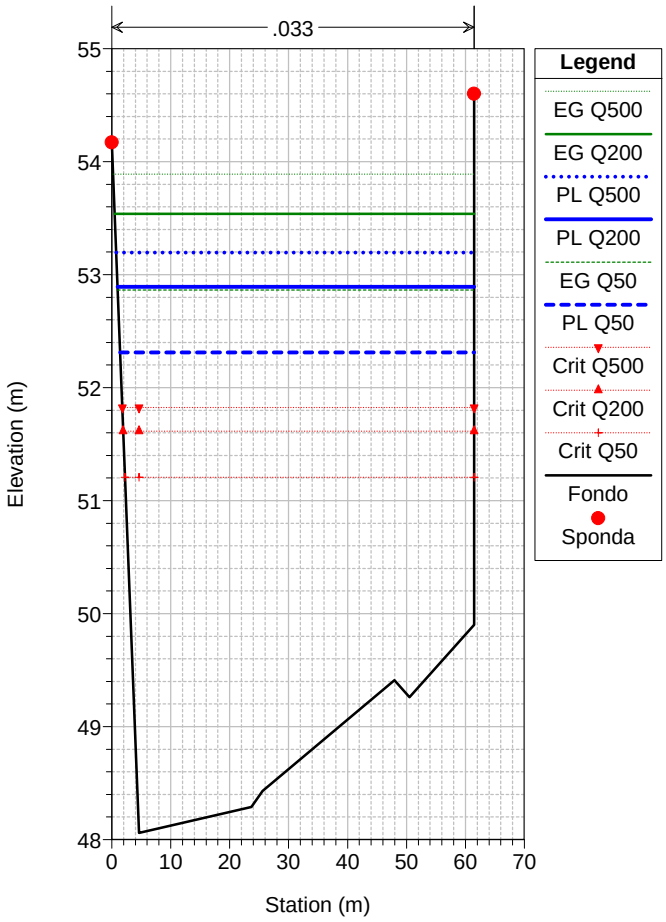
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-89.2



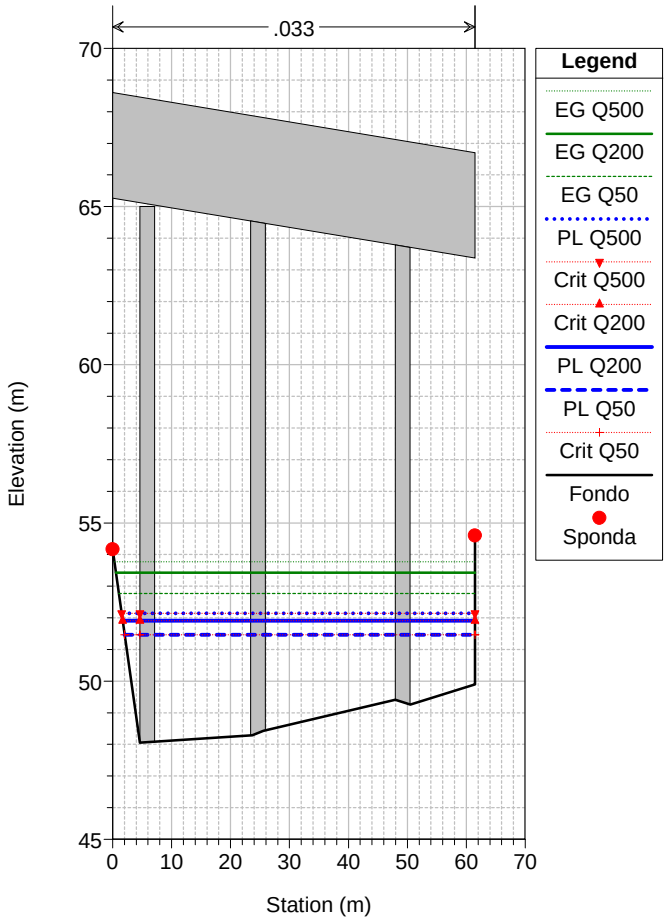
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-89.



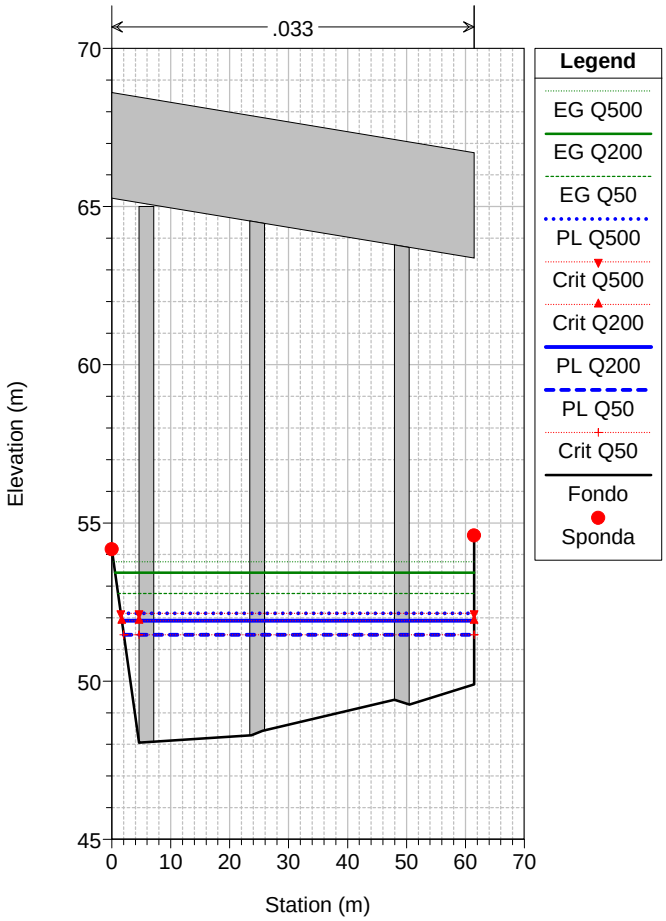
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL-89



Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca

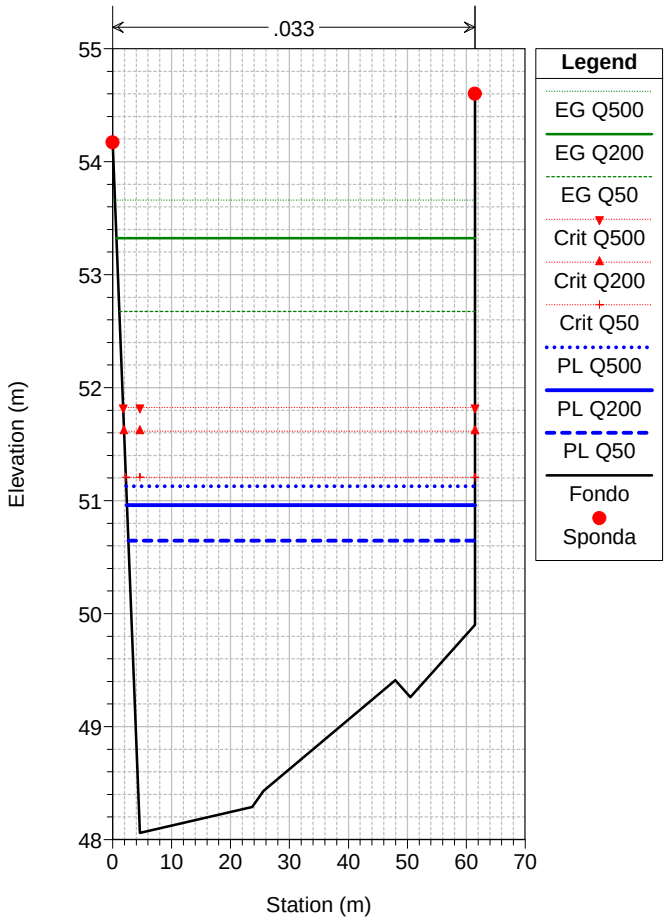


Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca



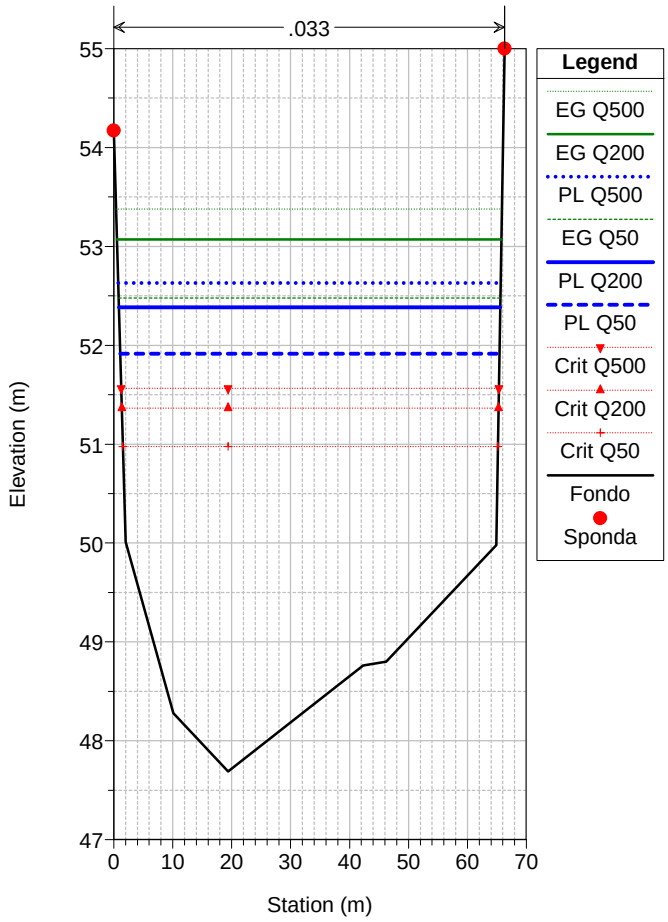
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca POL-89



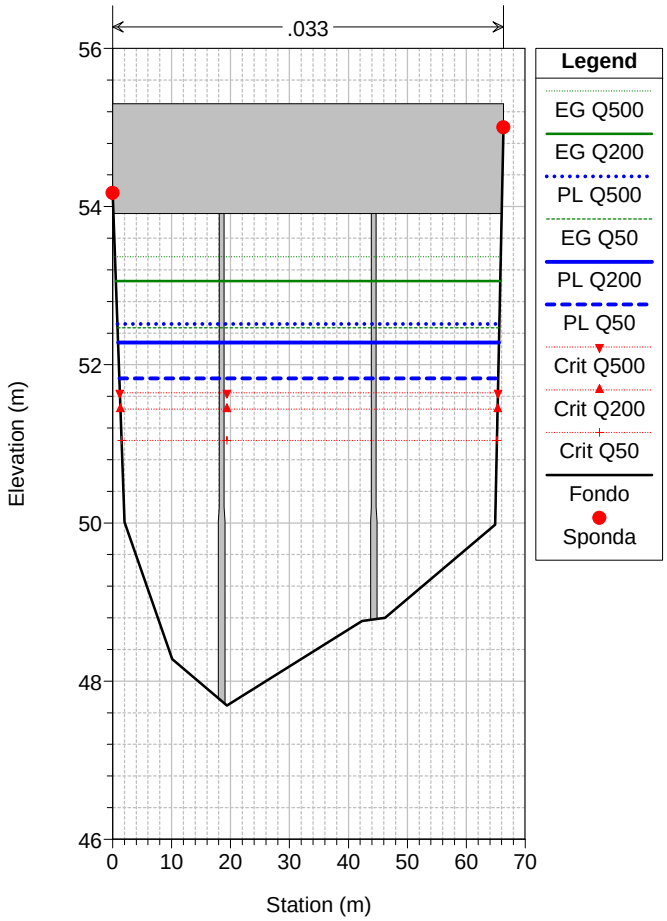
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca POL 88



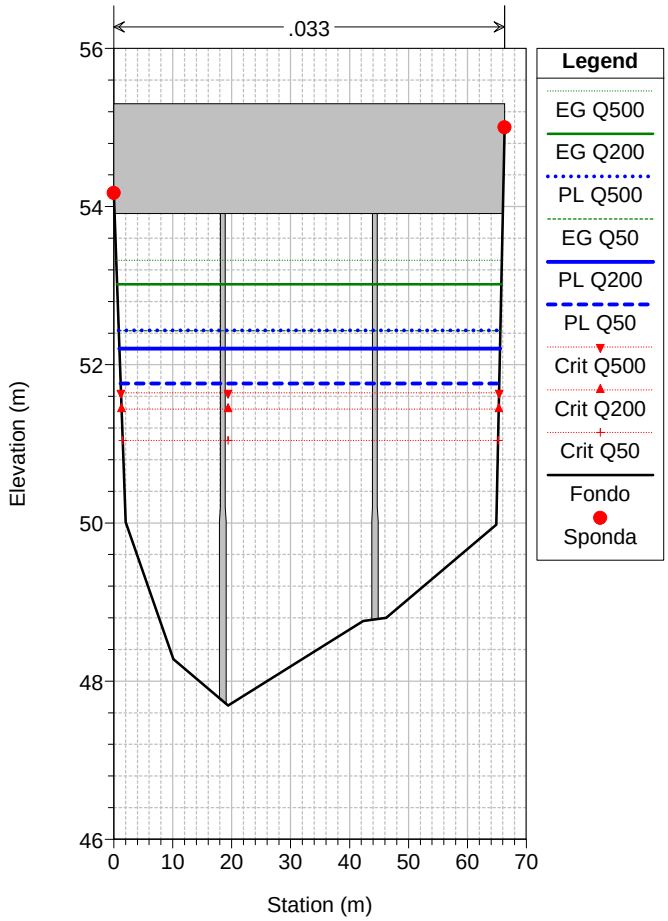
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = monte secca

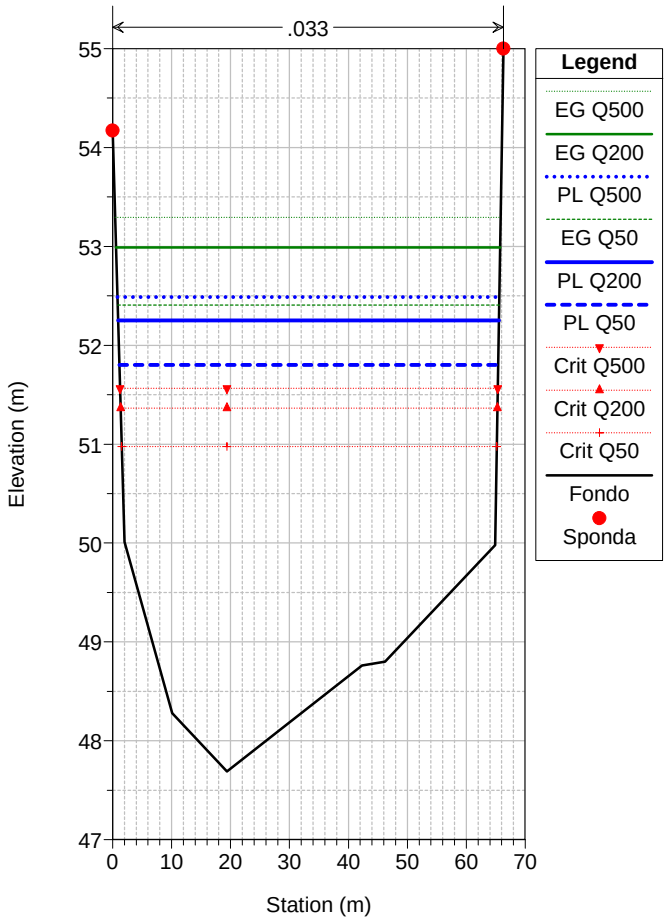


Polcevera Plan: Polcevera_rev_01/09

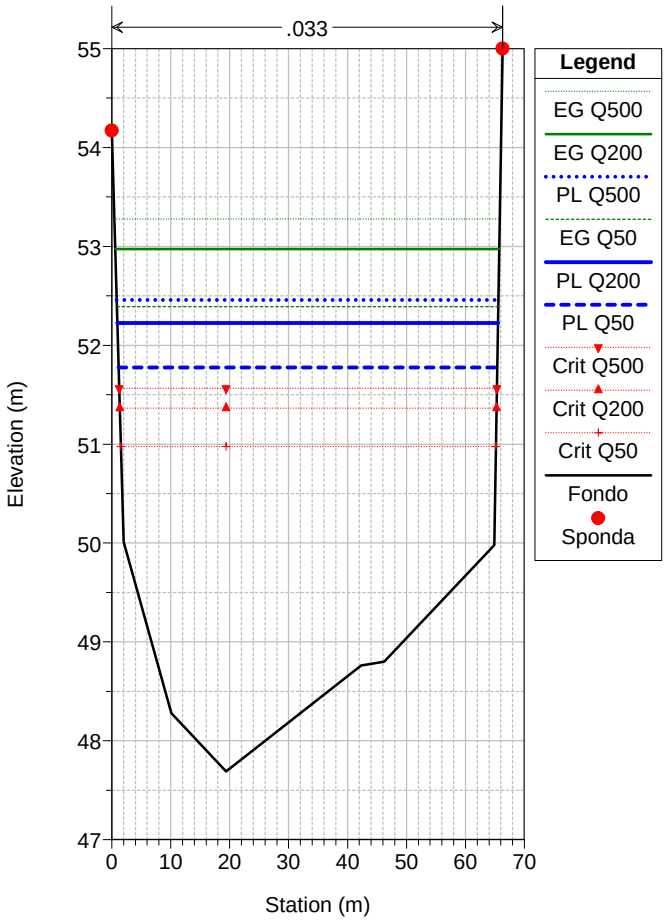
River = polcevera Reach = monte secca



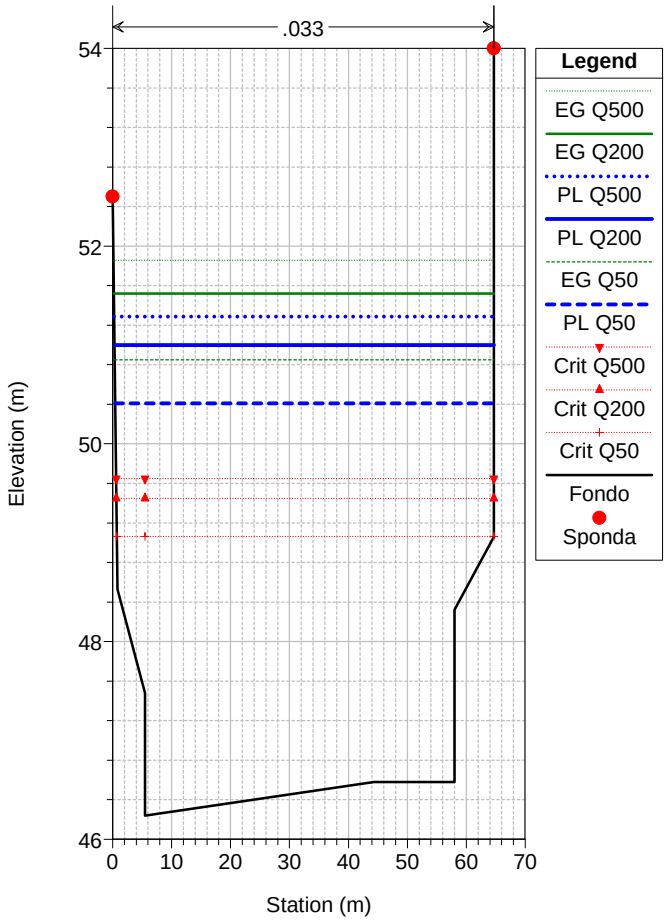
Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL 88



Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL 88



Polcevera Plan: Polcevera_rev_01/09
River = polcevera Reach = monte secca POL 87



HEC-RAS Plan: 01_Apr09 River: polcevera Reach: monte secca

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte secca	121 POL-121	Q50	680.00	76.07	78.67	81.62	2.95	80.67	2.00	78.67	79.97	0.006339	5.05	134.76	51.80	1.00
monte secca	121 POL-121	Q200	860.00	76.07	79.11	81.62	2.51	80.67	1.56	79.11	80.63	0.006142	5.46	157.59	51.80	1.00
monte secca	121 POL-121	Q500	960.00	76.07	79.34	81.62	2.28	80.67	1.33	79.34	80.98	0.006054	5.66	169.61	51.80	1.00
monte secca	120.9 POL-121	Q50	680.00	73.00	74.29	81.62	7.33	80.67	6.38	75.60	79.56	0.061646	10.17	66.84	51.80	2.86
monte secca	120.9 POL-121	Q200	860.00	73.00	74.58	81.62	7.04	80.67	6.09	76.04	80.21	0.051010	10.51	81.79	51.80	2.67
monte secca	120.9 POL-121	Q500	960.00	73.00	74.73	81.62	6.89	80.67	5.94	76.27	80.55	0.046838	10.69	89.84	51.80	2.59
monte secca	120.31 POL-120.3	Q50	680.00	70.26	75.14	79.05	3.91	78.10	2.96	74.35	75.94	0.003748	3.96	171.56	49.41	0.68
monte secca	120.31 POL-120.3	Q200	860.00	70.26	75.73	79.05	3.32	78.10	2.37	74.80	76.66	0.003663	4.29	200.62	49.58	0.68
monte secca	120.31 POL-120.3	Q500	960.00	70.26	76.03	79.05	3.02	78.10	2.07	75.04	77.04	0.003634	4.45	215.77	49.68	0.68
monte secca	120.3		Bridge													
monte secca	120.29 POL-120.3	Q50	680.00	70.26	73.93	79.05	5.12	78.10	4.17	74.35	75.81	0.014561	6.07	112.10	49.04	1.28
monte secca	120.29 POL-120.3	Q200	860.00	70.26	74.32	79.05	4.73	78.10	3.78	74.80	76.51	0.014044	6.55	131.27	49.16	1.28
monte secca	120.29 POL-120.3	Q500	960.00	70.26	74.53	79.05	4.52	78.10	3.57	75.04	76.88	0.013837	6.79	141.29	49.22	1.28
monte secca	120.2 POL-120.2	Q50	680.00	69.72	74.24	72.75	-1.49	76.22	1.98	72.78	74.79	0.002180	3.28	207.19	50.30	0.52
monte secca	120.2 POL-120.2	Q200	860.00	69.72	74.79	72.75	-2.04	76.22	1.43	73.23	75.48	0.002355	3.66	234.80	50.30	0.54
monte secca	120.2 POL-120.2	Q500	960.00	69.72	75.08	72.75	-2.33	76.22	1.14	73.46	75.83	0.002440	3.85	249.12	50.30	0.55
monte secca	120.1 POL-120.1	Q50	680.00	69.72	73.65	72.75	-0.90	76.22	2.57	72.78	74.40	0.003553	3.83	177.49	50.30	0.65
monte secca	120.1 POL-120.1	Q200	860.00	69.72	74.11	72.75	-1.36	76.22	2.11	73.23	75.05	0.003859	4.29	200.62	50.30	0.69
monte secca	120.1 POL-120.1	Q500	960.00	69.72	74.35	72.75	-1.60	76.22	1.87	73.46	75.39	0.004013	4.52	212.49	50.30	0.70
monte secca	120 POL-120	Q50	680.00	70.40	73.17	74.90	1.73	76.20	3.03	72.91	74.19	0.006354	4.48	151.76	55.05	0.86
monte secca	120 POL-120	Q200	860.00	70.40	73.61	74.90	1.29	76.20	2.59	73.33	74.83	0.006329	4.89	175.95	55.13	0.87
monte secca	120 POL-120	Q500	960.00	70.40	73.84	74.90	1.06	76.20	2.36	73.56	75.16	0.006290	5.08	188.89	55.18	0.88
monte secca	119 POL-119	Q50	680.00	70.20	72.70	74.60	1.90	76.10	3.40	72.70	73.96	0.008802	4.96	137.13	55.00	1.00
monte secca	119 POL-119	Q200	860.00	70.20	73.14	74.60	1.46	76.10	2.96	73.14	74.59	0.008426	5.35	160.89	55.08	1.00
monte secca	119 POL-119	Q500	960.00	70.20	73.36	74.60	1.24	76.10	2.74	73.36	74.92	0.008318	5.55	173.04	55.13	1.00
monte secca	118 POL-118	Q50	680.00	70.00	72.57	74.00	1.43	76.00	3.43	72.37	73.57	0.006725	4.43	153.67	60.04	0.88
monte secca	118 POL-118	Q200	860.00	70.00	73.05	74.00	0.95	76.00	2.95	72.76	74.18	0.006216	4.72	182.21	60.13	0.87
monte secca	118 POL-118	Q500	960.00	70.00	73.30	74.00	0.70	76.00	2.70	72.98	74.50	0.006002	4.87	197.31	60.19	0.86
monte secca	117 POL-117	Q50	680.00	69.70	72.68	73.80	1.12	75.50	2.82	71.94	73.31	0.003524	3.52	193.08	65.12	0.65
monte secca	117 POL-117	Q200	860.00	69.70	73.19	73.80	0.61	75.50	2.31	72.32	73.92	0.003398	3.80	226.05	65.23	0.65
monte secca	117 POL-117	Q500	960.00	69.70	73.45	73.80	0.35	75.50	2.05	72.52	74.24	0.003342	3.94	243.39	65.28	0.65
monte secca	116 POL-116	Q50	680.00	69.40	72.20	73.60	1.40	74.60	2.40	71.76	73.04	0.005083	4.06	167.61	60.10	0.78
monte secca	116 POL-116	Q200	860.00	69.40	72.67	73.60	0.93	74.60	1.93	72.17	73.66	0.004920	4.39	196.01	60.20	0.78
monte secca	116 POL-116	Q500	960.00	69.40	72.92	73.60	0.68	74.60	1.68	72.38	73.98	0.004843	4.55	211.01	60.26	0.78
monte secca	115.2 POL-115	Q50	680.00	69.00	72.10	73.00	0.90	74.40	2.30	71.37	72.79	0.003657	3.66	185.71	60.18	0.67
monte secca	115.2 POL-115	Q200	860.00	69.00	72.58	73.00	0.42	74.40	1.82	71.77	73.40	0.003685	4.01	214.57	60.28	0.68
monte secca	115.2 POL-115	Q500	960.00	69.00	72.84	73.00	0.16	74.40	1.56	71.98	73.72	0.003689	4.18	229.83	60.33	0.68

HEC-RAS Plan: 01_Apr09 River: polcevera Reach: monte secca (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte secca	115.1		Bridge													
monte secca	115 POL-115	Q50	680.00	67.50	69.94	72.20	2.26	74.20	4.26	70.28	71.55	0.014051	5.63	120.69	59.70	1.26
monte secca	115 POL-115	Q200	860.00	67.50	70.37	72.20	1.83	74.20	3.83	70.68	72.12	0.012008	5.87	146.49	59.81	1.20
monte secca	115 POL-115	Q500	960.00	67.50	70.55	72.20	1.65	74.20	3.65	70.89	72.44	0.011842	6.09	157.51	59.86	1.20
monte secca	114.8 POL-114.6	Q50	680.00	67.29	70.11	71.87	1.76	73.61	3.50	70.11	71.30	0.008766	4.84	140.54	58.94	1.00
monte secca	114.8 POL-114.6	Q200	860.00	67.29	70.51	71.87	1.36	73.61	3.10	70.51	71.90	0.008445	5.23	164.49	59.06	1.00
monte secca	114.8 POL-114.6	Q500	960.00	67.29	70.73	71.87	1.14	73.61	2.88	70.73	72.22	0.008291	5.42	177.17	59.13	1.00
monte secca	114.6 POL-114.6	Q50	680.00	65.20	69.85	71.77	1.92	73.51	3.66	68.14	70.25	0.001494	2.82	241.12	59.17	0.45
monte secca	114.6 POL-114.6	Q200	860.00	65.20	70.34	71.77	1.43	73.51	3.17	68.55	70.86	0.001665	3.18	270.37	59.28	0.48
monte secca	114.6 POL-114.6	Q500	960.00	65.20	70.59	71.77	1.18	73.51	2.92	68.76	71.16	0.001760	3.37	284.90	59.34	0.49
monte secca	114.4 POL-114.4	Q50	680.00	65.58	68.96	71.16	2.20	73.61	4.65	68.96	70.13	0.008367	4.79	142.03	60.69	1.00
monte secca	114.4 POL-114.4	Q200	860.00	65.58	69.36	71.16	1.80	73.61	4.25	69.36	70.72	0.008071	5.17	166.44	61.25	1.00
monte secca	114.4 POL-114.4	Q500	960.00	65.58	69.59	71.16	1.57	73.61	4.02	69.59	71.03	0.007984	5.31	180.80	63.00	1.00
monte secca	114 POL-114	Q50	680.00	65.50	67.46	71.50	4.04	74.20	6.74	67.84	69.10	0.015406	5.66	120.07	62.29	1.30
monte secca	114 POL-114	Q200	860.00	65.50	67.73	71.50	3.77	74.20	6.47	68.23	69.75	0.016318	6.30	136.42	62.60	1.36
monte secca	114 POL-114	Q500	960.00	65.50	67.88	71.50	3.62	74.20	6.32	68.44	70.08	0.016228	6.56	146.33	62.78	1.37
monte secca	113 POL-113	Q50	680.00	65.20	67.89	74.20	6.31	72.00	4.11	67.16	68.41	0.003224	3.19	213.13	79.50	0.62
monte secca	113 POL-113	Q200	860.00	65.20	68.42	74.20	5.78	72.00	3.58	67.49	69.00	0.002880	3.37	255.10	79.59	0.60
monte secca	113 POL-113	Q500	960.00	65.20	68.70	74.20	5.50	72.00	3.30	67.67	69.31	0.002740	3.46	277.32	79.65	0.59
monte secca	112 POL-112	Q50	680.00	64.80	67.75	74.10	6.35	71.10	3.35	66.85	68.24	0.002729	3.10	219.23	74.55	0.58
monte secca	112 POL-112	Q200	860.00	64.80	68.28	74.10	5.82	71.10	2.82	67.20	68.84	0.002555	3.32	258.82	74.65	0.57
monte secca	112 POL-112	Q500	960.00	64.80	68.56	74.10	5.54	71.10	2.54	67.37	69.16	0.002482	3.43	279.65	74.70	0.57
monte secca	111 POL-111	Q50	680.00	64.60	67.32	73.40	6.08	70.70	3.38	66.76	67.99	0.004178	3.64	187.04	69.03	0.71
monte secca	111 POL-111	Q200	860.00	64.60	67.87	73.40	5.53	70.70	2.83	67.12	68.61	0.003675	3.82	225.12	69.14	0.68
monte secca	111 POL-111	Q500	960.00	64.60	68.15	73.40	5.25	70.70	2.55	67.31	68.94	0.003502	3.92	244.74	69.20	0.67
monte secca	110 POL-110	Q50	680.00	63.90	67.36	72.80	5.44	70.70	3.34	66.15	67.83	0.002184	3.03	224.11	65.14	0.52
monte secca	110 POL-110	Q200	860.00	63.90	67.90	72.80	4.90	70.70	2.80	66.53	68.46	0.002190	3.32	259.36	65.24	0.53
monte secca	110 POL-110	Q500	960.00	63.90	68.18	72.80	4.62	70.70	2.52	66.72	68.79	0.002198	3.46	277.58	65.30	0.54
monte secca	109 POL-109	Q50	680.00	63.70	67.12	72.60	5.48	70.70	3.58	66.17	67.72	0.002896	3.42	198.56	61.15	0.61
monte secca	109 POL-109	Q200	860.00	63.70	67.64	72.60	4.96	70.70	3.06	66.57	68.35	0.002904	3.73	230.59	62.09	0.62
monte secca	109 POL-109	Q500	960.00	63.70	67.91	72.60	4.69	70.70	2.79	66.79	68.68	0.002908	3.88	247.40	62.57	0.62
monte secca	108 POL-108	Q50	680.00	63.20	67.06	71.70	4.64	70.50	3.44	65.56	67.50	0.001795	2.92	232.66	60.49	0.48
monte secca	108 POL-108	Q200	860.00	63.20	67.58	71.70	4.12	70.50	2.92	65.95	68.12	0.001921	3.26	264.07	60.56	0.50
monte secca	108 POL-108	Q500	960.00	63.20	67.85	71.70	3.85	70.50	2.65	66.16	68.45	0.001982	3.42	280.33	60.59	0.51
monte secca	107 POL-107	Q50	680.00	63.30	66.91	71.70	4.79	70.50	3.59	65.65	67.41	0.002235	3.13	217.21	60.47	0.53
monte secca	107 POL-107	Q200	860.00	63.30	67.41	71.70	4.29	70.50	3.09	66.05	68.02	0.002361	3.48	247.43	60.53	0.55
monte secca	107 POL-107	Q500	960.00	63.30	67.66	71.70	4.04	70.50	2.84	66.26	68.34	0.002422	3.65	263.10	60.56	0.56

HEC-RAS Plan: 01_Apr09 River: polcevera Reach: monte secca (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte secca	106 POL-106	Q50	680.00	63.40	66.59	70.50	3.91	70.50	3.91	65.75	67.23	0.003294	3.53	192.38	60.45	0.63
monte secca	106 POL-106	Q200	860.00	63.40	67.06	70.50	3.44	70.50	3.44	66.15	67.84	0.003390	3.89	220.84	60.52	0.65
monte secca	106 POL-106	Q500	960.00	63.40	67.31	70.50	3.19	70.50	3.19	66.36	68.15	0.003435	4.07	235.65	60.55	0.66
monte secca	105 POL-105	Q50	680.00	63.40	65.75	70.20	4.45	69.50	3.75	65.75	66.93	0.008823	4.80	141.69	60.37	1.00
monte secca	105 POL-105	Q200	860.00	63.40	66.15	70.20	4.05	69.50	3.35	66.15	67.52	0.008503	5.19	165.76	60.43	1.00
monte secca	105 POL-105	Q500	960.00	63.40	66.36	70.20	3.84	69.50	3.14	66.36	67.84	0.008353	5.38	178.48	60.46	1.00
monte secca	104.9 POL-105	Q50	680.00	62.00	63.41	70.20	6.79	69.50	6.09	64.36	66.70	0.047364	8.04	84.57	60.18	2.17
monte secca	104.9 POL-105	Q200	860.00	62.00	63.71	70.20	6.49	69.50	5.79	64.75	67.29	0.040314	8.38	102.58	60.22	2.05
monte secca	104.9 POL-105	Q500	960.00	62.00	63.87	70.20	6.33	69.50	5.63	64.96	67.60	0.037520	8.56	112.19	60.24	2.00
monte secca	104 POL-104	Q50	680.00	61.70	64.44	69.20	4.76	68.60	4.16	64.08	65.33	0.005530	4.17	163.00	59.69	0.81
monte secca	104 POL-104	Q200	860.00	61.70	64.89	69.20	4.31	68.60	3.71	64.48	65.94	0.005427	4.53	189.76	59.77	0.81
monte secca	104 POL-104	Q500	960.00	61.70	65.13	69.20	4.07	68.60	3.47	64.69	66.26	0.005356	4.70	204.11	59.81	0.81
monte secca	103 POL-103	Q50	680.00	61.40	64.17	68.90	4.73	67.90	3.73	63.78	65.04	0.005321	4.12	164.96	59.71	0.79
monte secca	103 POL-103	Q200	860.00	61.40	64.64	68.90	4.27	67.90	3.26	64.18	65.65	0.005187	4.47	192.47	59.79	0.79
monte secca	103 POL-103	Q500	960.00	61.40	64.88	68.90	4.02	67.90	3.02	64.39	65.97	0.005107	4.63	207.18	59.84	0.79
monte secca	102 POL-102	Q50	680.00	61.20	63.96	68.40	4.44	67.40	3.44	63.57	64.83	0.005410	4.14	164.39	59.69	0.80
monte secca	102 POL-102	Q200	860.00	61.20	64.44	68.40	3.96	67.40	2.96	63.97	65.45	0.005165	4.45	193.05	59.72	0.79
monte secca	102 POL-102	Q500	960.00	61.20	64.69	68.40	3.71	67.40	2.71	64.18	65.77	0.005058	4.61	208.16	59.74	0.79
monte secca	101.2 POL-101	Q50	680.00	61.00	63.89	68.20	4.31	67.00	3.11	63.37	64.68	0.004661	3.95	172.18	59.70	0.74
monte secca	101.2 POL-101	Q200	860.00	61.00	64.38	68.20	3.82	67.00	2.62	63.77	65.31	0.004518	4.27	201.30	59.73	0.74
monte secca	101.2 POL-101	Q500	960.00	61.00	64.63	68.20	3.57	67.00	2.37	63.98	65.63	0.004455	4.43	216.60	59.75	0.74
monte secca	101.1		Bridge													
monte secca	101 POL-101	Q50	680.00	61.00	63.11	68.20	5.09	67.00	3.89	63.37	64.60	0.012833	5.40	125.85	59.65	1.19
monte secca	101 POL-101	Q200	860.00	61.00	63.47	68.20	4.73	67.00	3.53	63.77	65.21	0.012400	5.85	147.04	59.67	1.19
monte secca	101 POL-101	Q500	960.00	61.00	63.65	68.20	4.55	67.00	3.35	63.98	65.53	0.012208	6.07	158.18	59.68	1.19
monte secca	100 POL-100	Q50	680.00	60.60	63.30	67.50	4.20	66.20	2.90	62.97	64.21	0.005772	4.22	161.12	59.70	0.82
monte secca	100 POL-100	Q200	860.00	60.60	63.74	67.50	3.76	66.20	2.46	63.37	64.81	0.005717	4.60	187.03	59.73	0.83
monte secca	100 POL-100	Q500	960.00	60.60	63.96	67.50	3.54	66.20	2.24	63.58	65.13	0.005699	4.79	200.53	59.74	0.83
monte secca	99 POL-99	Q50	680.00	60.20	62.97	66.30	3.33	65.40	2.43	62.58	63.84	0.005388	4.14	164.12	59.49	0.80
monte secca	99 POL-99	Q200	860.00	60.20	63.41	66.30	2.89	65.40	1.99	62.98	64.45	0.005379	4.52	190.08	59.57	0.81
monte secca	99 POL-99	Q500	960.00	60.20	63.63	66.30	2.67	65.40	1.77	63.20	64.77	0.005382	4.72	203.57	59.61	0.81
monte secca	98 POL-98	Q50	680.00	59.95	62.59	66.10	3.51	64.80	2.21	62.33	63.55	0.006262	4.34	156.64	59.49	0.85
monte secca	98 POL-98	Q200	860.00	59.95	63.03	66.10	3.07	64.80	1.77	62.73	64.16	0.006099	4.71	182.77	59.57	0.86
monte secca	98 POL-98	Q500	960.00	59.95	63.26	66.10	2.84	64.80	1.54	62.94	64.48	0.006034	4.89	196.42	59.61	0.86
monte secca	97 POL-97	Q50	680.00	59.60	62.49	65.70	3.21	64.20	1.71	61.98	63.29	0.004693	3.96	171.52	59.66	0.75
monte secca	97 POL-97	Q200	860.00	59.60	62.94	65.70	2.76	64.20	1.26	62.38	63.89	0.004710	4.34	198.35	59.73	0.76
monte secca	97 POL-97	Q500	960.00	59.60	63.17	65.70	2.53	64.20	1.03	62.59	64.21	0.004723	4.52	212.31	59.76	0.77

HEC-RAS Plan: 01_Apr09 River: polcevera Reach: monte secca (Continued)

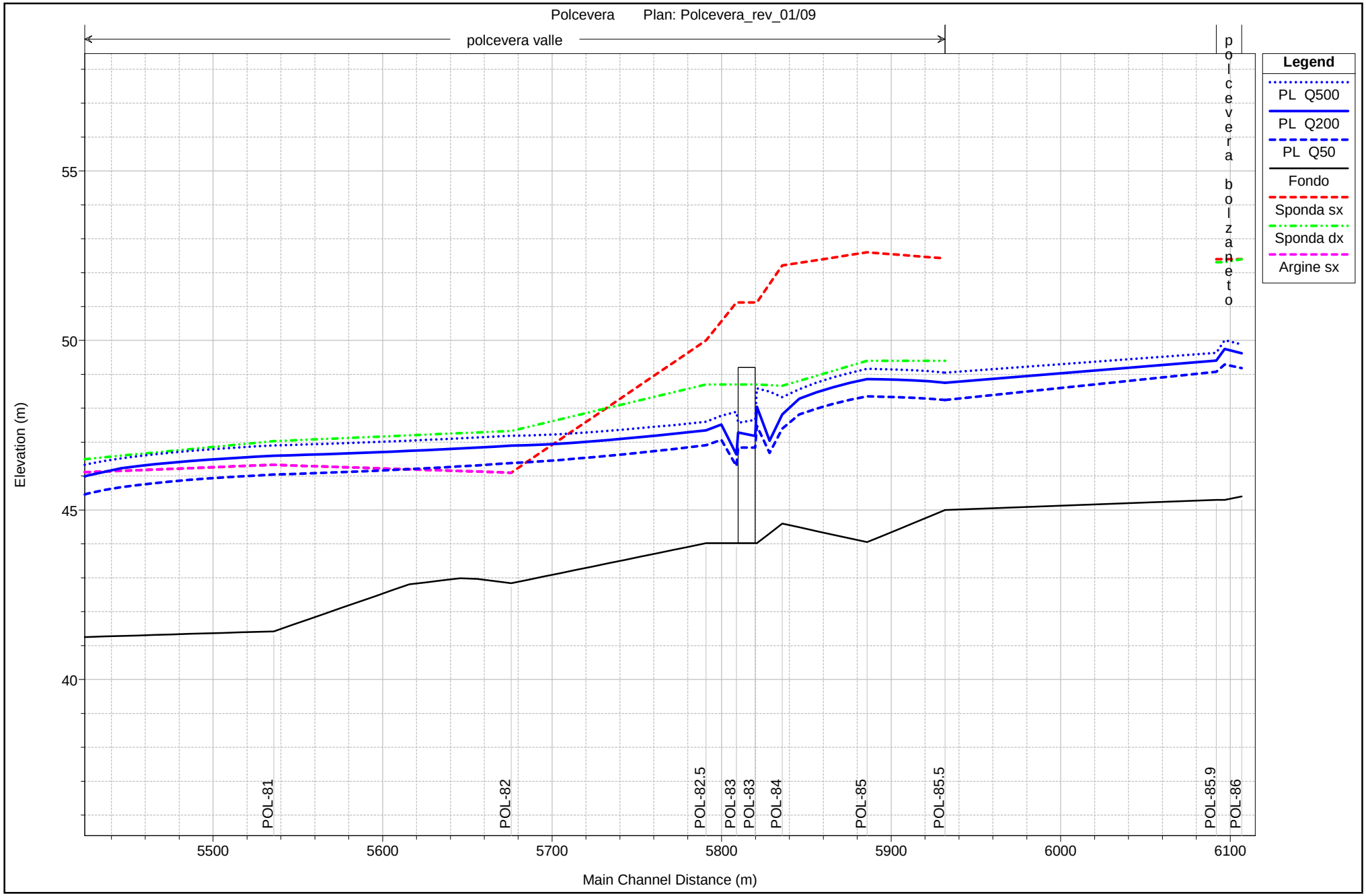
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte secca	96 POL-96	Q50	680.00	59.45	62.19	65.50	3.31	64.00	1.81	61.83	63.08	0.005566	4.19	162.48	59.53	0.81
monte secca	96 POL-96	Q200	860.00	59.45	62.63	65.50	2.87	64.00	1.37	62.23	63.69	0.005499	4.56	188.78	59.61	0.82
monte secca	96 POL-96	Q500	960.00	59.45	62.86	65.50	2.64	64.00	1.14	62.44	64.01	0.005468	4.74	202.57	59.66	0.82
monte secca	95.2 POL-95	Q50	680.00	59.10	61.93	64.80	2.87	63.80	1.87	61.50	62.78	0.005094	4.08	166.53	59.05	0.78
monte secca	95.2 POL-95	Q200	860.00	59.10	62.37	64.80	2.43	63.80	1.43	61.90	63.39	0.005110	4.47	192.60	59.14	0.79
monte secca	95.2 POL-95	Q500	960.00	59.10	62.61	64.80	2.19	63.80	1.19	62.11	63.71	0.005113	4.65	206.29	59.18	0.80
monte secca	95.1		Bridge													
monte secca	95 POL-95	Q50	680.00	59.10	61.87	64.80	2.93	63.80	1.93	61.50	62.76	0.005474	4.18	162.85	59.04	0.80
monte secca	95 POL-95	Q200	860.00	59.10	62.30	64.80	2.50	63.80	1.50	61.90	63.36	0.005506	4.57	188.17	59.12	0.82
monte secca	95 POL-95	Q500	960.00	59.10	62.52	64.80	2.28	63.80	1.28	62.11	63.68	0.005520	4.77	201.40	59.16	0.82
monte secca	94 POL-94	Q50	680.00	58.90	61.37	64.30	2.93	63.60	2.23	61.28	62.47	0.007825	4.65	146.19	59.26	0.95
monte secca	94 POL-94	Q200	860.00	58.90	61.76	64.30	2.54	63.60	1.84	61.68	63.08	0.007803	5.08	169.27	59.30	0.96
monte secca	94 POL-94	Q500	960.00	58.90	61.95	64.30	2.35	63.60	1.65	61.90	63.39	0.007888	5.31	180.67	59.32	0.97
monte secca	93 POL-93	Q50	680.00	58.50	60.87	63.60	2.73	63.60	2.73	60.87	62.05	0.008850	4.82	141.15	59.73	1.00
monte secca	93 POL-93	Q200	860.00	58.50	61.27	63.60	2.33	63.60	2.33	61.27	62.65	0.008521	5.21	165.18	59.77	1.00
monte secca	93 POL-93	Q500	960.00	58.50	61.48	63.60	2.12	63.60	2.12	61.48	62.97	0.008399	5.40	177.68	59.79	1.00
monte secca	92 POL-92	Q50	680.00	58.30	60.14	63.60	3.46	63.25	3.11	60.42	61.54	0.014204	5.24	129.72	70.50	1.23
monte secca	92 POL-92	Q200	860.00	58.30	60.38	63.60	3.22	63.25	2.87	60.78	62.14	0.015332	5.88	146.33	70.50	1.30
monte secca	92 POL-92	Q500	960.00	58.30	60.56	63.60	3.04	63.25	2.69	60.96	62.41	0.014442	6.02	159.46	70.50	1.28
monte secca	91 POL-91	Q50	680.00	58.00	60.13	63.60	3.47	63.25	3.12	59.93	60.92	0.006641	3.95	172.27	81.00	0.86
monte secca	91 POL-91	Q200	860.00	58.00	60.60	63.60	3.00	63.25	2.65	60.26	61.45	0.005497	4.08	210.86	81.00	0.81
monte secca	91 POL-91	Q500	960.00	58.00	60.85	63.60	2.75	63.25	2.40	60.43	61.73	0.005084	4.15	231.12	81.00	0.78
monte secca	89.81 POL-89.8	Q50	680.00	57.01	60.13	63.38	3.25	63.20	3.07	59.33	60.63	0.002985	3.15	215.99	77.45	0.60
monte secca	89.81 POL-89.8	Q200	860.00	57.01	60.60	63.38	2.78	63.20	2.60	59.66	61.19	0.002879	3.41	252.56	77.58	0.60
monte secca	89.81 POL-89.8	Q500	960.00	57.01	60.85	63.38	2.53	63.20	2.35	59.84	61.49	0.002831	3.53	271.80	77.65	0.60
monte secca	89.8		Bridge													
monte secca	89.79 POL-89.8	Q50	680.00	57.01	58.89	63.38	4.49	63.20	4.31	59.33	60.52	0.020266	5.66	120.08	77.10	1.45
monte secca	89.79 POL-89.8	Q200	860.00	57.01	59.15	63.38	4.23	63.20	4.05	59.66	61.06	0.019369	6.12	140.52	77.18	1.45
monte secca	89.79 POL-89.8	Q500	960.00	57.01	59.29	63.38	4.09	63.20	3.91	59.84	61.35	0.019043	6.35	151.08	77.21	1.45
monte secca	89.7 POL-89.7	Q50	680.00	57.04	58.68	61.60	2.92	63.16	4.48	59.03	60.12	0.017734	5.32	127.85	81.71	1.36
monte secca	89.7 POL-89.7	Q200	860.00	57.04	58.89	61.60	2.71	63.16	4.27	59.35	60.67	0.018518	5.91	145.60	81.75	1.41
monte secca	89.7 POL-89.7	Q500	960.00	57.04	59.01	61.60	2.59	63.16	4.15	59.53	60.96	0.018793	6.19	155.02	81.76	1.44
monte secca	89.69 POL-89.7	Q50	680.00	56.50	57.75	61.60	3.85	63.16	5.41	58.42	60.02	0.037564	6.68	101.84	81.67	1.91
monte secca	89.69 POL-89.7	Q200	860.00	56.50	57.98	61.60	3.62	63.16	5.18	58.75	60.57	0.034602	7.14	120.43	81.70	1.88
monte secca	89.69 POL-89.7	Q500	960.00	56.50	58.10	61.60	3.50	63.16	5.06	58.92	60.86	0.033375	7.37	130.20	81.72	1.86
monte secca	89.6 POL-89.6	Q50	680.00	56.09	58.23	61.61	3.38	62.85	4.62	58.23	59.22	0.009019	4.41	154.22	77.81	1.00
monte secca	89.6 POL-89.6	Q200	860.00	56.09	58.56	61.61	3.05	62.85	4.29	58.56	59.72	0.008654	4.77	180.37	77.86	1.00

HEC-RAS Plan: 01_Apr09 River: polcevera Reach: monte secca (Continued)

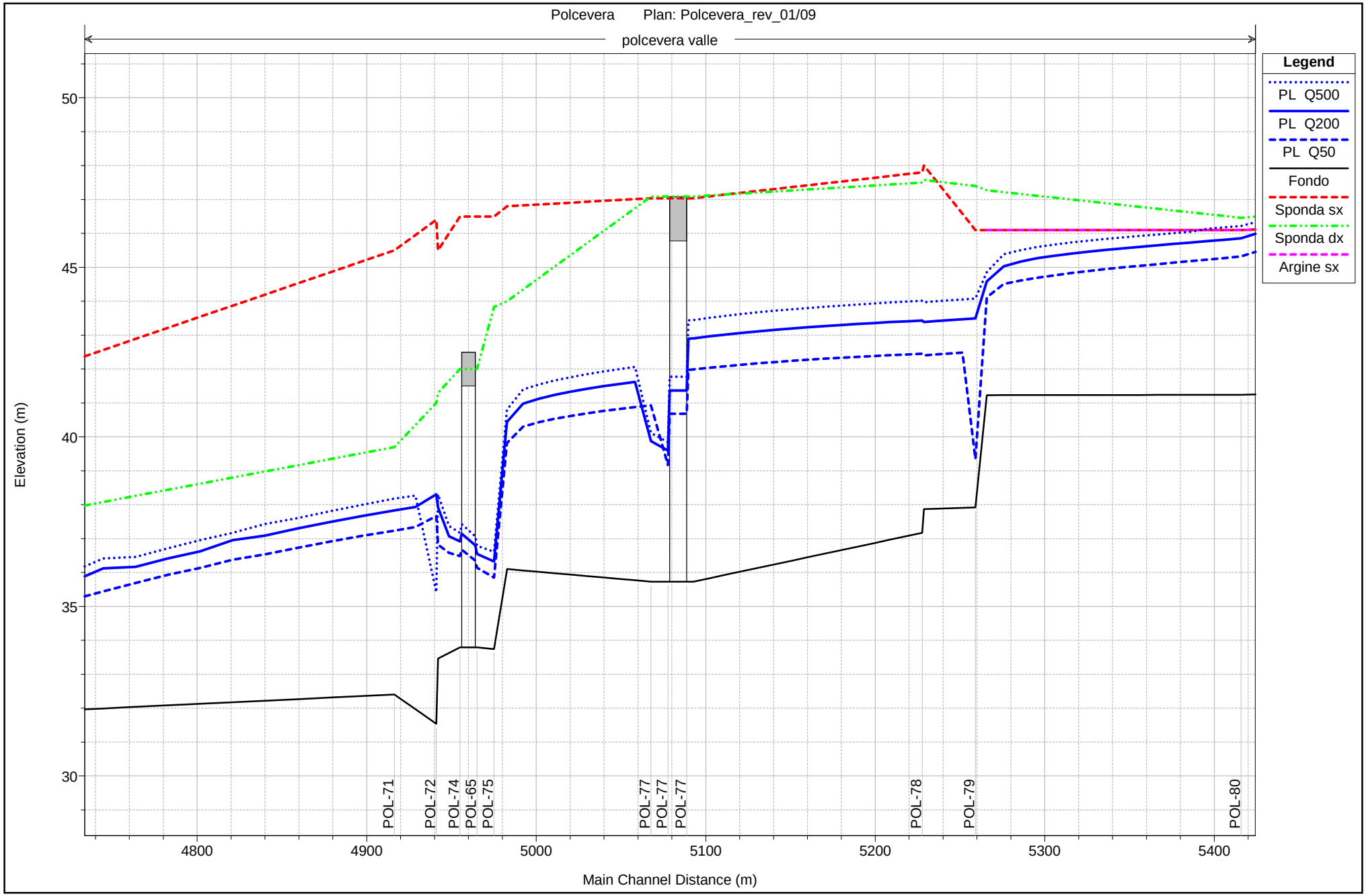
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte secca	89.6 POL-89.6	Q500	960.00	56.09	58.74	61.61	2.87	62.85	4.11	58.74	59.98	0.008488	4.95	194.13	77.88	1.00
monte secca	89.59 POL-89.6	Q50	680.00	55.28	56.52	61.61	5.09	62.85	6.33	57.26	59.05	0.042235	7.05	96.46	77.73	2.02
monte secca	89.59 POL-89.6	Q200	860.00	55.28	56.78	61.61	4.83	62.85	6.07	57.60	59.55	0.036198	7.37	116.62	77.76	1.92
monte secca	89.59 POL-89.6	Q500	960.00	55.28	56.92	61.61	4.69	62.85	5.93	57.78	59.81	0.033771	7.54	127.37	77.77	1.88
monte secca	89.5 POL-89.5	Q50	680.00	53.79	57.34	59.93	2.59	60.92	3.58	57.09	58.20	0.006198	4.10	165.73	69.77	0.85
monte secca	89.5 POL-89.5	Q200	860.00	53.79	57.69	59.93	2.24	60.92	3.23	57.46	58.73	0.006345	4.52	190.24	70.03	0.88
monte secca	89.5 POL-89.5	Q500	960.00	53.79	57.87	59.93	2.06	60.92	3.05	57.65	59.01	0.006416	4.73	202.97	70.16	0.89
monte secca	89.41 POL-89.4	Q50	680.00	53.83	56.56	58.95	2.39	60.55	3.99	56.13	57.23	0.004673	3.62	188.09	78.43	0.75
monte secca	89.41 POL-89.4	Q200	860.00	53.83	56.97	58.95	1.98	60.55	3.58	56.46	57.74	0.004495	3.91	220.05	78.73	0.75
monte secca	89.41 POL-89.4	Q500	960.00	53.83	57.18	58.95	1.77	60.55	3.37	56.64	58.02	0.004415	4.05	236.87	78.88	0.75
monte secca	89.4		Bridge													
monte secca	89.39 POL-89.4	Q50	680.00	53.83	55.92	58.95	3.03	60.55	4.63	56.13	57.16	0.012832	4.93	137.96	77.97	1.18
monte secca	89.39 POL-89.4	Q200	860.00	53.83	56.22	58.95	2.73	60.55	4.33	56.46	57.66	0.012293	5.33	161.42	78.19	1.18
monte secca	89.39 POL-89.4	Q500	960.00	53.83	56.38	58.95	2.57	60.55	4.17	56.64	57.93	0.012043	5.52	173.80	78.30	1.18
monte secca	89.3 POL-89.3	Q50	680.00	53.51	55.56	58.14	2.58	57.59	2.03	55.78	56.84	0.012859	5.00	135.95	74.99	1.19
monte secca	89.3 POL-89.3	Q200	860.00	53.51	55.88	58.14	2.26	57.59	1.71	56.13	57.35	0.012041	5.37	160.20	75.17	1.17
monte secca	89.3 POL-89.3	Q500	960.00	53.51	56.05	58.14	2.09	57.59	1.54	56.30	57.63	0.011785	5.56	172.53	75.27	1.17
monte secca	89.29 POL-89.2	Q50	680.00	51.73	53.10	58.10	5.00	57.31	4.21	54.05	56.60	0.064938	8.29	82.07	72.71	2.49
monte secca	89.29 POL-89.2	Q200	860.00	51.73	53.35	58.10	4.75	57.31	3.96	54.40	57.11	0.054110	8.59	100.07	72.74	2.34
monte secca	89.29 POL-89.2	Q500	960.00	51.73	53.48	58.10	4.62	57.31	3.83	54.58	57.38	0.049794	8.75	109.75	72.76	2.27
monte secca	89.2 POL-89.2	Q50	680.00	51.73	53.81	58.10	4.29	57.31	3.50	54.05	55.14	0.013291	5.11	133.09	72.81	1.21
monte secca	89.2 POL-89.2	Q200	860.00	51.73	54.04	58.10	4.06	57.31	3.27	54.40	55.71	0.014230	5.71	150.50	72.84	1.27
monte secca	89.2 POL-89.2	Q500	960.00	51.73	54.14	58.10	3.96	57.31	3.17	54.58	56.04	0.015395	6.11	157.17	72.86	1.33
monte secca	89.19 POL-89.2	Q50	680.00	50.70	52.13	58.10	5.97	57.31	5.18	52.98	54.97	0.042063	7.47	91.05	67.55	2.05
monte secca	89.19 POL-89.2	Q200	860.00	50.70	52.40	58.10	5.70	57.31	4.91	53.33	55.55	0.037697	7.86	109.43	69.03	1.99
monte secca	89.19 POL-89.2	Q500	960.00	50.70	52.53	58.10	5.57	57.31	4.78	53.52	55.88	0.036729	8.11	118.37	69.73	1.99
monte secca	89.1 POL-89.	Q50	680.00	49.40	53.06	56.77	3.71	55.72	2.66	52.40	53.66	0.003581	3.45	197.28	72.90	0.67
monte secca	89.1 POL-89.	Q200	860.00	49.40	53.61	56.77	3.16	55.72	2.11	52.77	54.28	0.003148	3.62	237.77	73.47	0.64
monte secca	89.1 POL-89.	Q500	960.00	49.40	53.91	56.77	2.86	55.72	1.81	52.96	54.61	0.002956	3.69	259.83	73.77	0.63
monte secca	89 POL-89	Q50	680.00	48.06	52.31	54.17	1.86	54.60	2.29	51.21	52.86	0.002499	3.29	206.82	60.10	0.57
monte secca	89 POL-89	Q200	860.00	48.06	52.89	54.17	1.28	54.60	1.71	51.61	53.54	0.002438	3.56	241.81	60.54	0.57
monte secca	89 POL-89	Q500	960.00	48.06	53.20	54.17	0.97	54.60	1.40	51.82	53.89	0.002412	3.69	260.22	60.77	0.57
monte secca	88.8		Bridge													
monte secca	88.7 POL-89	Q50	680.00	48.06	50.65	54.17	3.52	54.60	3.95	51.21	52.67	0.020264	6.31	107.78	58.85	1.49
monte secca	88.7 POL-89	Q200	860.00	48.06	50.96	54.17	3.21	54.60	3.64	51.61	53.32	0.019388	6.81	126.33	59.08	1.49
monte secca	88.7 POL-89	Q500	960.00	48.06	51.13	54.17	3.04	54.60	3.47	51.82	53.66	0.018982	7.05	136.14	59.21	1.48

HEC-RAS Plan: 01_Apr09 River: polcevera Reach: monte secca (Continued)

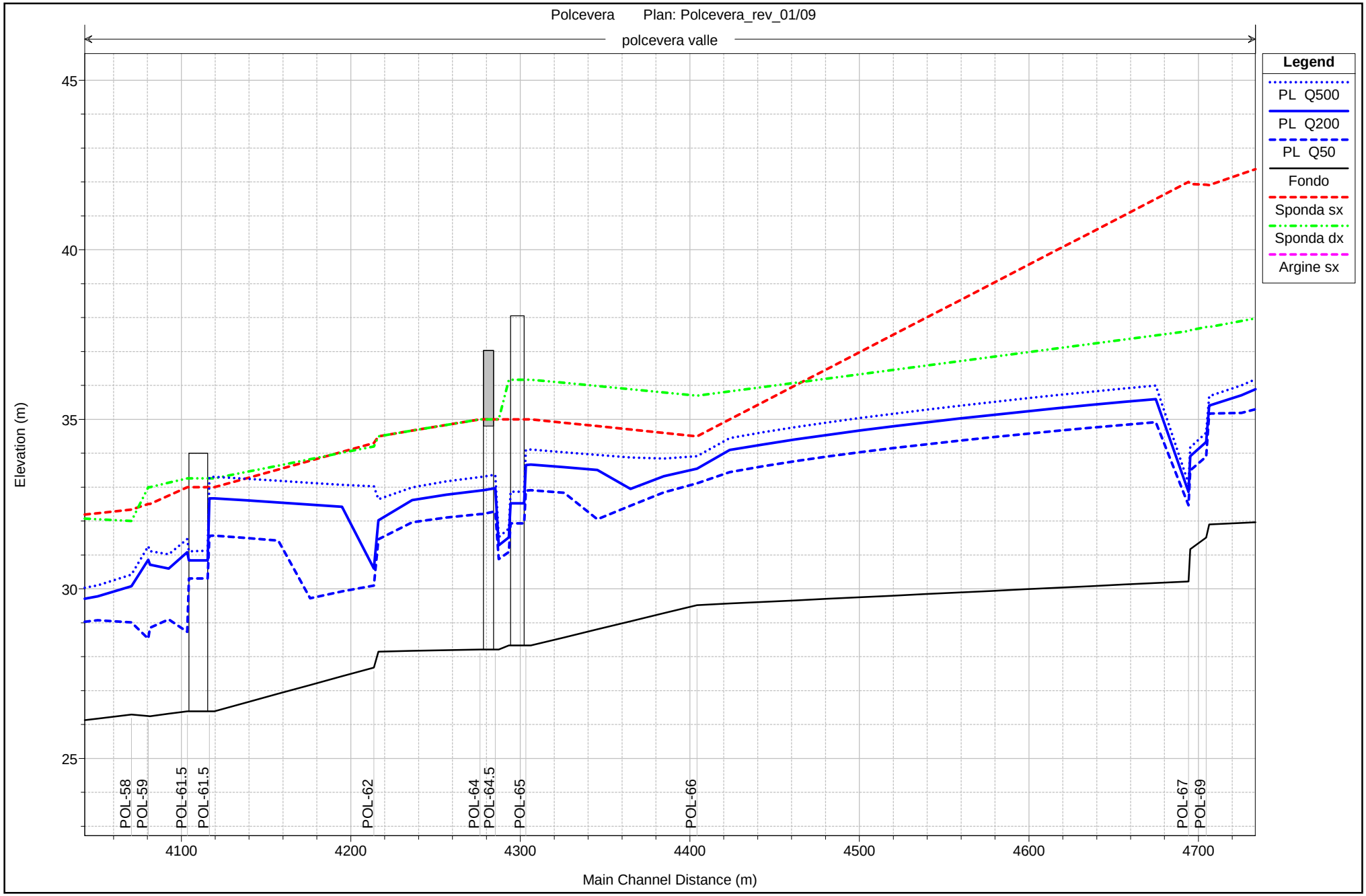
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte secca	88.6 POL 88	Q50	680.00	47.69	51.91	54.17	2.26	55.00	3.09	50.97	52.48	0.002744	3.33	204.29	64.36	0.60
monte secca	88.6 POL 88	Q200	860.00	47.69	52.38	54.17	1.79	55.00	2.61	51.36	53.07	0.002821	3.66	234.66	64.71	0.61
monte secca	88.6 POL 88	Q500	960.00	47.69	52.63	54.17	1.54	55.00	2.37	51.57	53.38	0.002853	3.83	250.60	64.90	0.62
monte secca	88.5		Bridge													
monte secca	88.3 POL 88	Q50	680.00	47.69	51.80	54.17	2.37	55.00	3.20	50.97	52.41	0.003085	3.45	196.96	64.27	0.63
monte secca	88.3 POL 88	Q200	860.00	47.69	52.25	54.17	1.92	55.00	2.75	51.36	52.99	0.003176	3.80	226.09	64.61	0.65
monte secca	88.3 POL 88	Q500	960.00	47.69	52.49	54.17	1.68	55.00	2.51	51.57	53.29	0.003213	3.98	241.38	64.79	0.66
monte secca	88.1 POL 88	Q50	680.00	47.69	51.77	54.17	2.40	55.00	3.23	50.97	52.39	0.003170	3.48	195.29	64.25	0.64
monte secca	88.1 POL 88	Q200	860.00	47.69	52.22	54.17	1.95	55.00	2.78	51.36	52.97	0.003258	3.83	224.30	64.59	0.66
monte secca	88.1 POL 88	Q500	960.00	47.69	52.46	54.17	1.71	55.00	2.54	51.57	53.28	0.003296	4.01	239.46	64.77	0.67
monte secca	88.	Q50	680.00	47.02	50.50	52.48	1.98	54.00	3.50	50.50	51.62	0.008939	4.69	144.87	64.60	1.00
monte secca	88.	Q200	860.00	47.02	50.88	52.48	1.60	54.00	3.12	50.88	52.19	0.008581	5.07	169.59	64.68	1.00
monte secca	88.	Q500	960.00	47.02	51.08	52.48	1.40	54.00	2.92	51.08	52.49	0.008454	5.26	182.40	64.72	1.00
monte secca	87. POL 87	Q50	680.00	46.24	50.41	52.50	2.09	54.00	3.59	49.06	50.85	0.001939	2.95	230.73	64.28	0.50
monte secca	87. POL 87	Q200	860.00	46.24	51.00	52.50	1.50	54.00	3.00	49.45	51.52	0.001907	3.20	268.80	64.40	0.50
monte secca	87. POL 87	Q500	960.00	46.24	51.29	52.50	1.21	54.00	2.71	49.65	51.86	0.001922	3.34	287.39	64.46	0.50



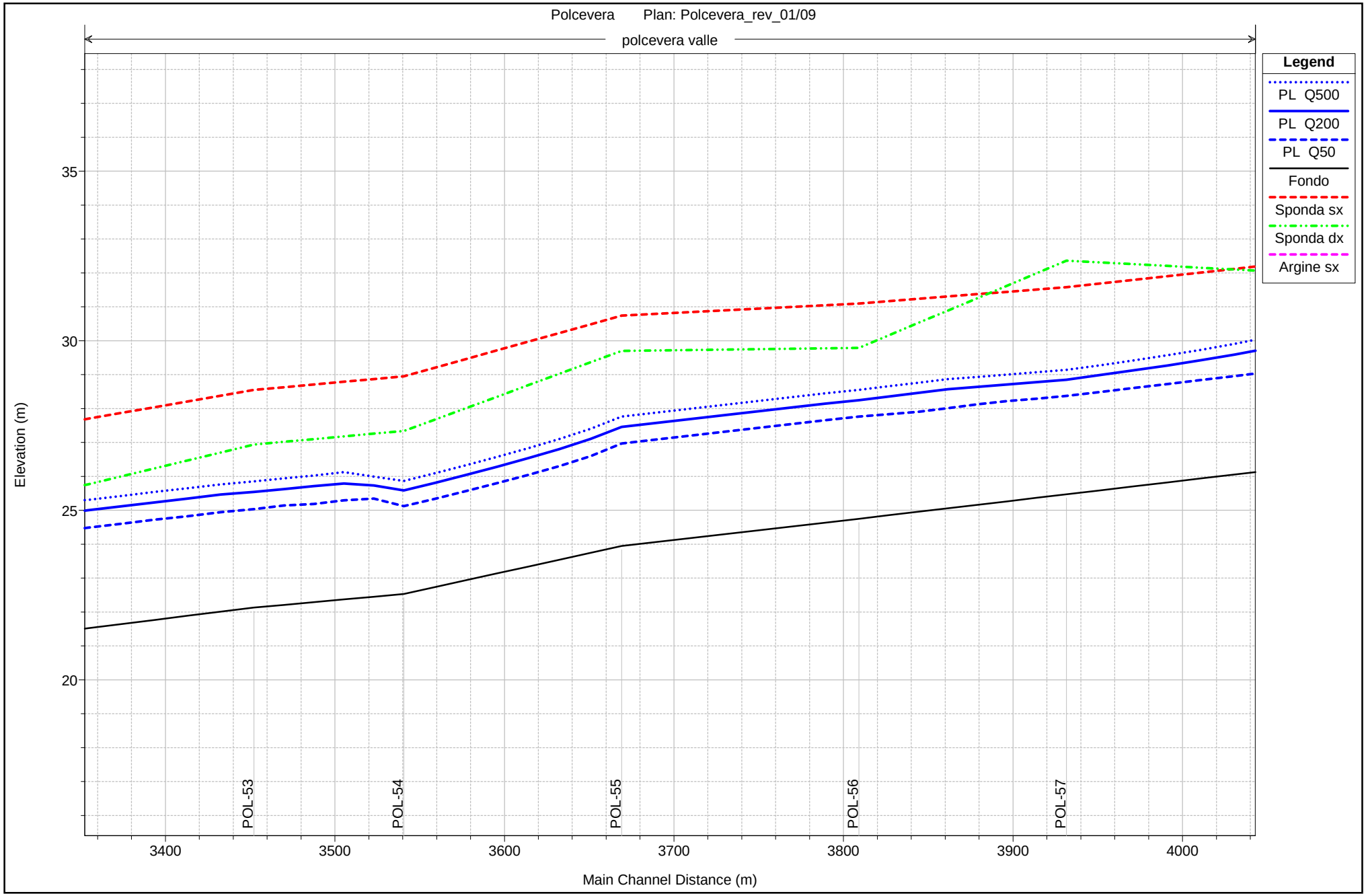
1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m



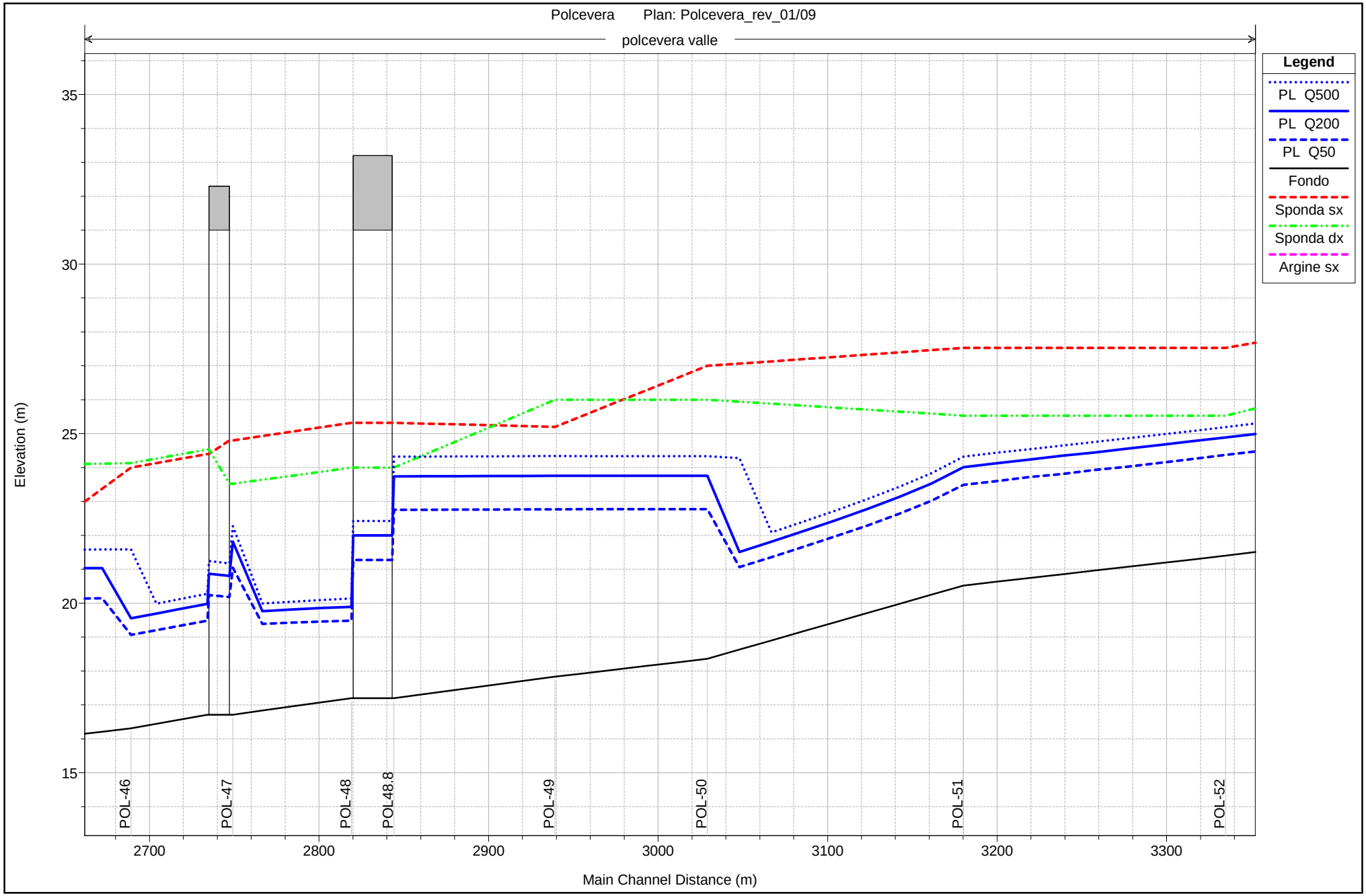
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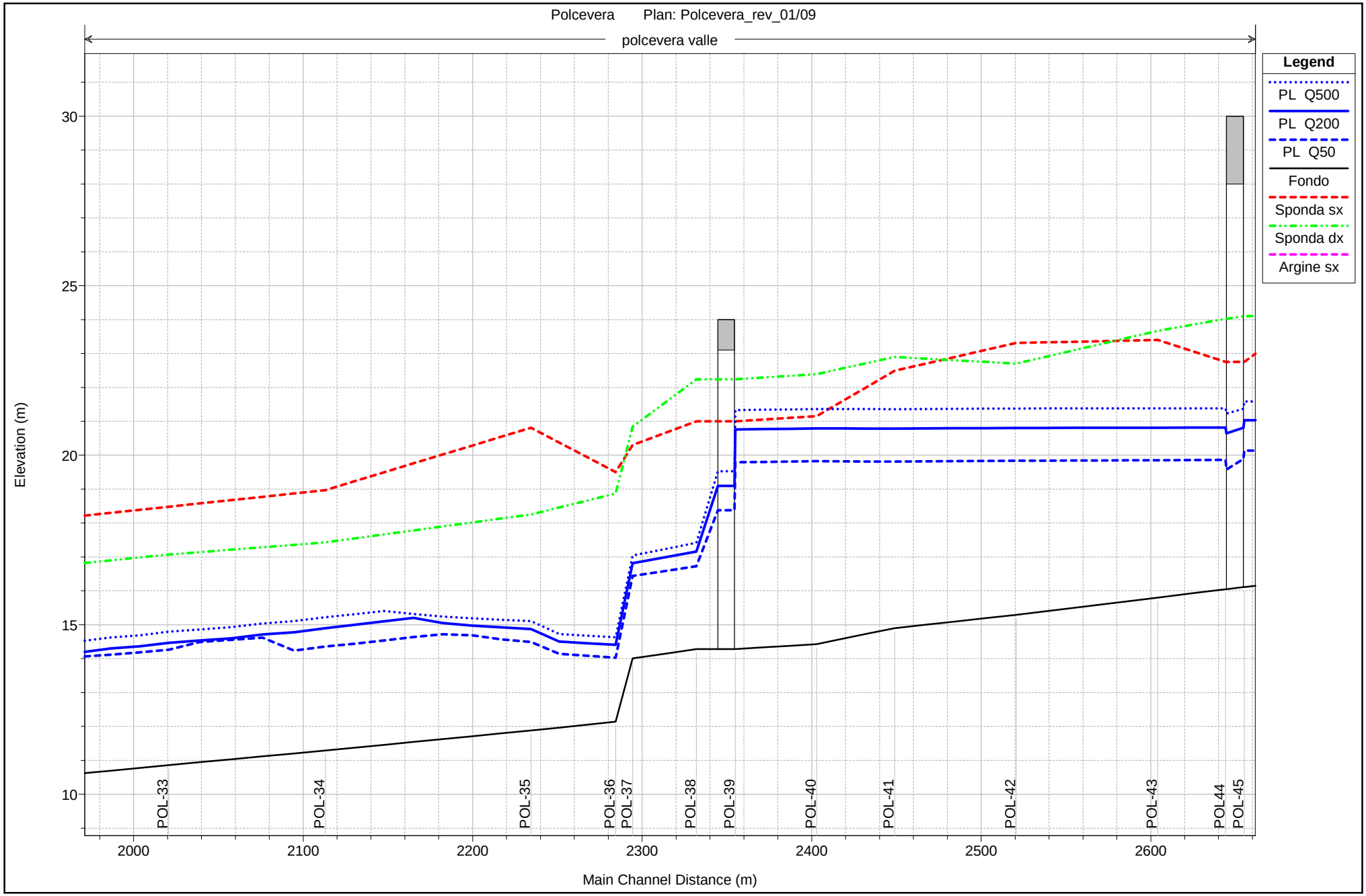
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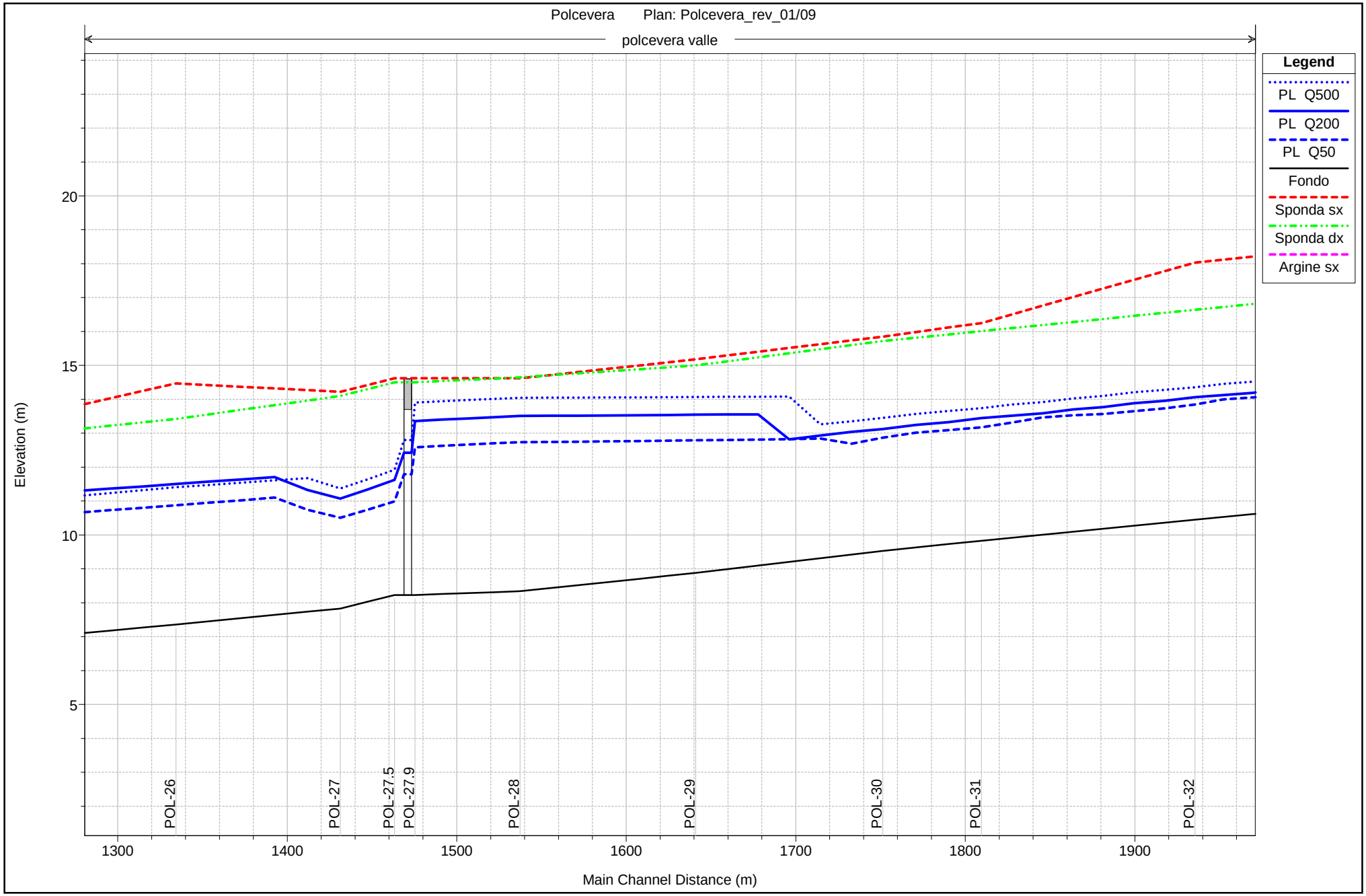
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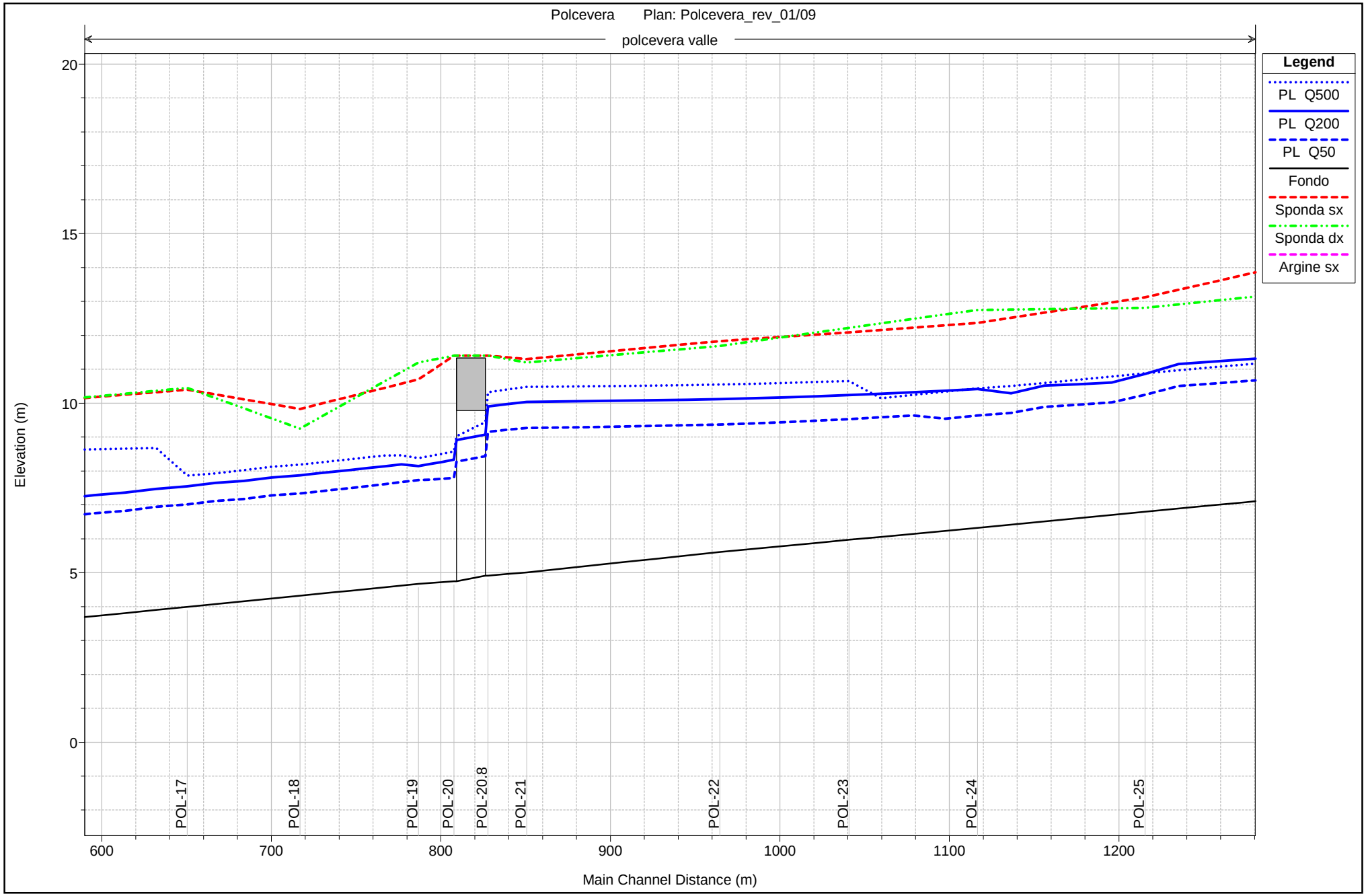
1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m



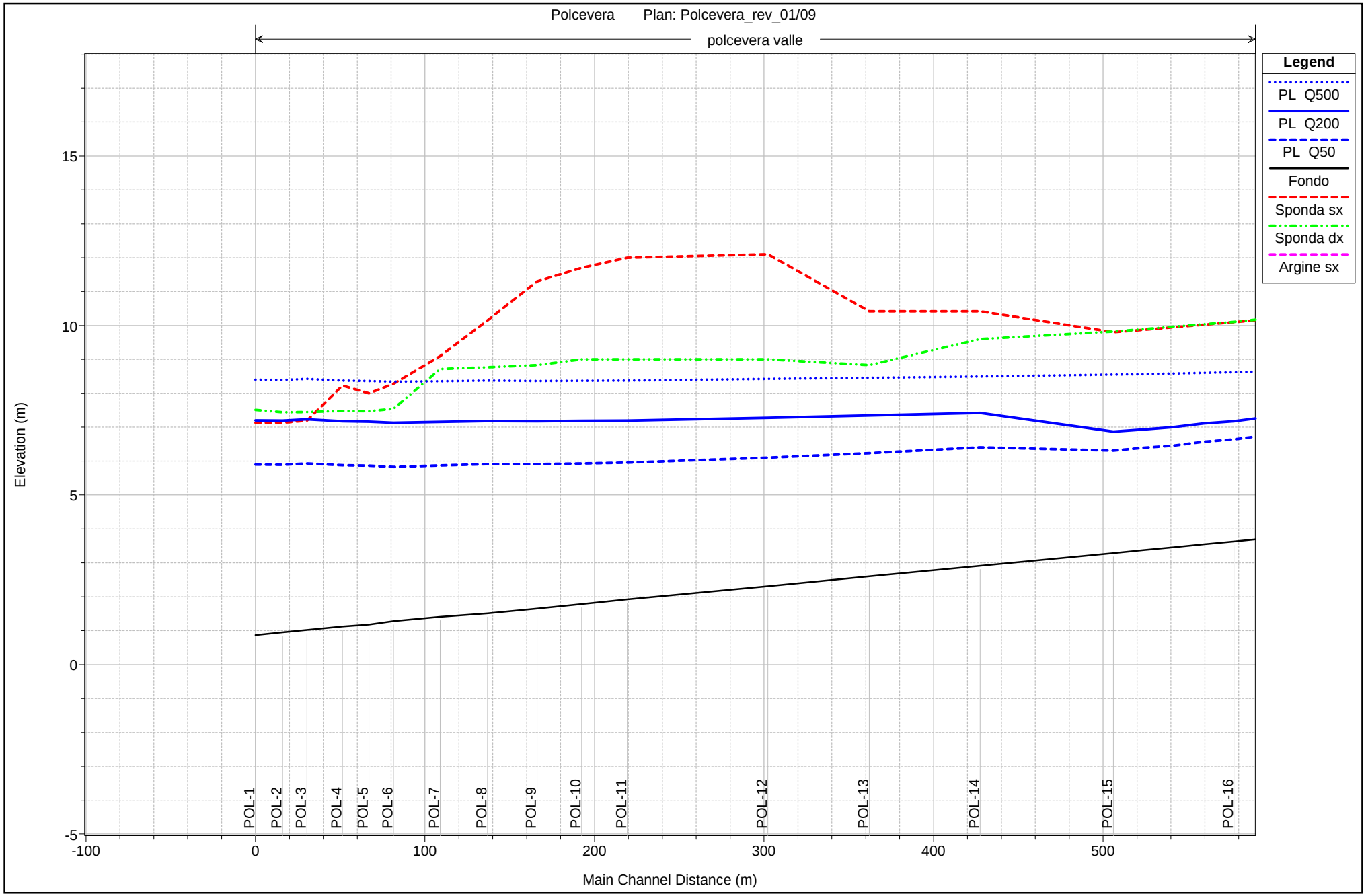
1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m



1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m



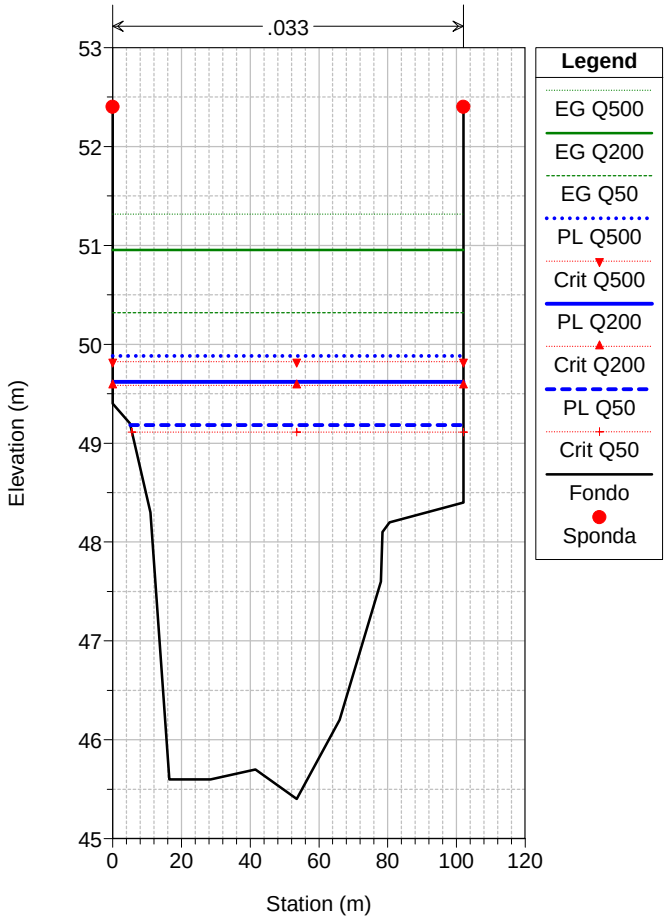
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1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m

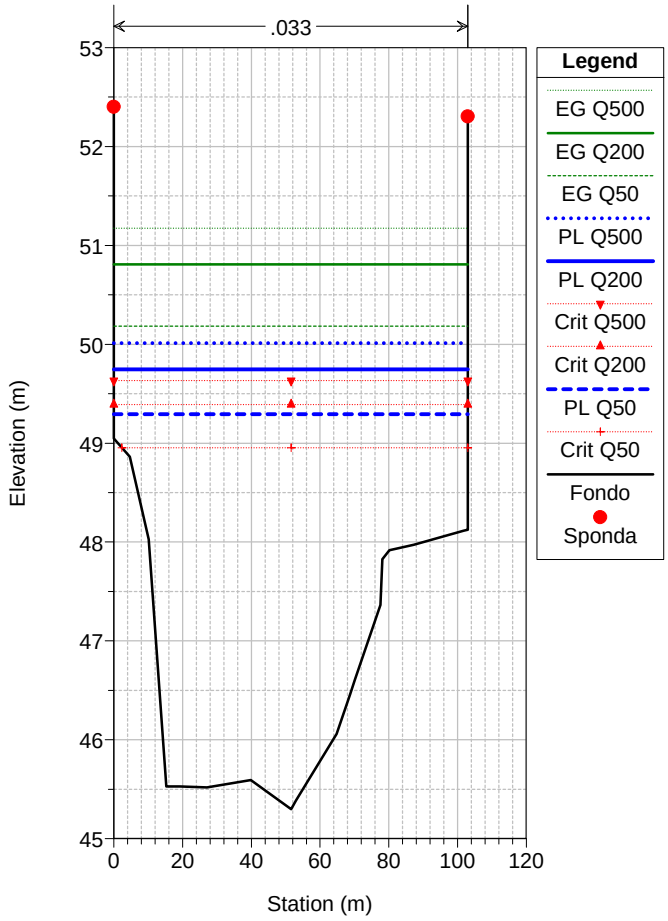
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = bolzaneto POL-86



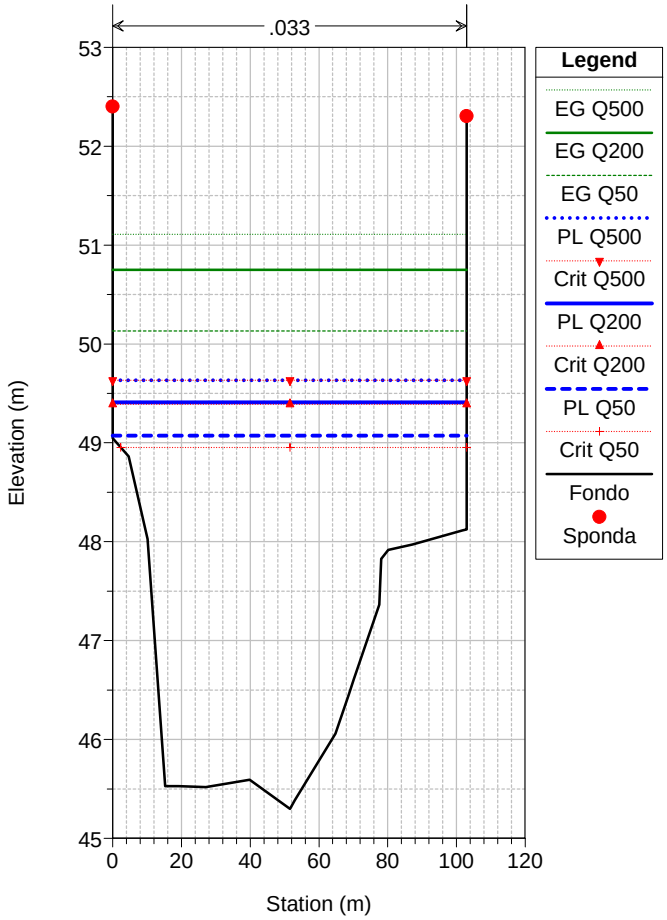
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = bolzaneto POL-85.9



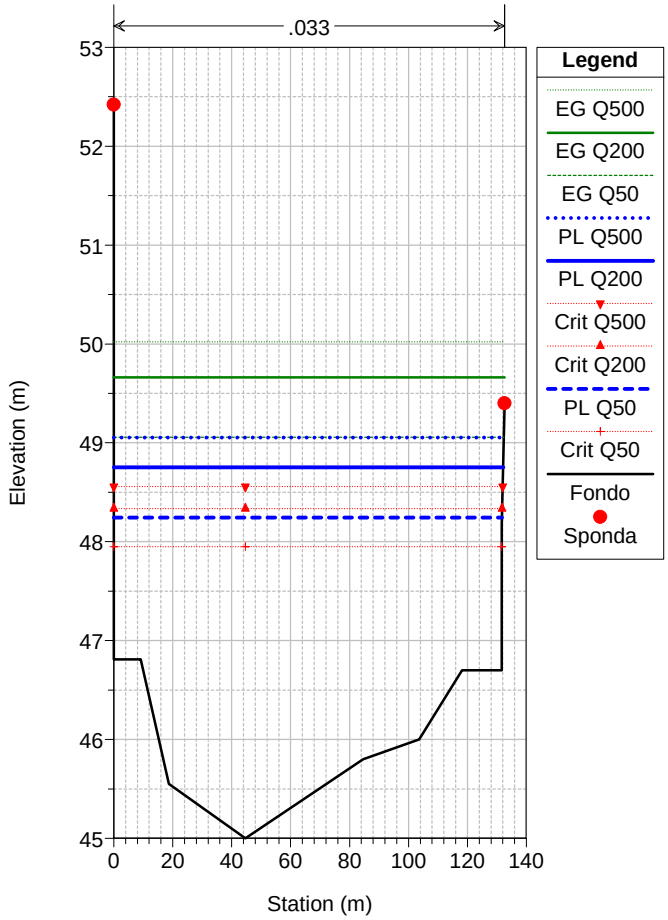
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = bolzaneto POL-85.9



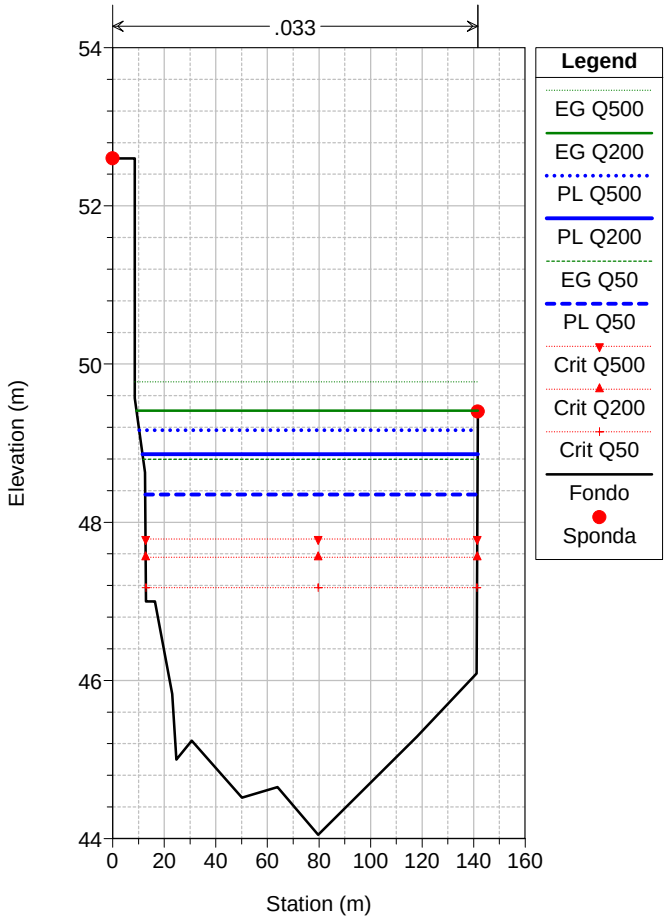
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-85.5



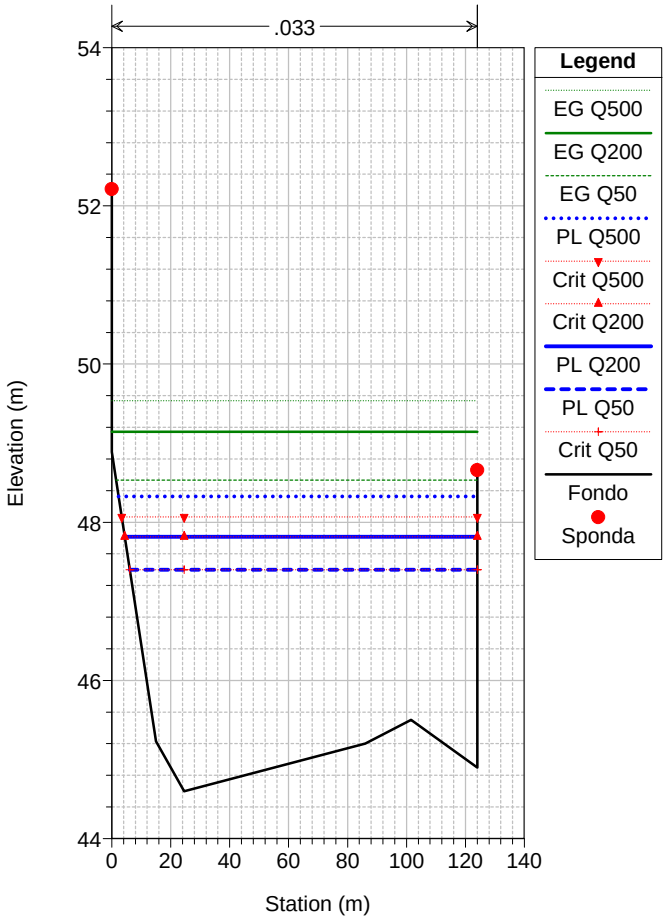
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-85



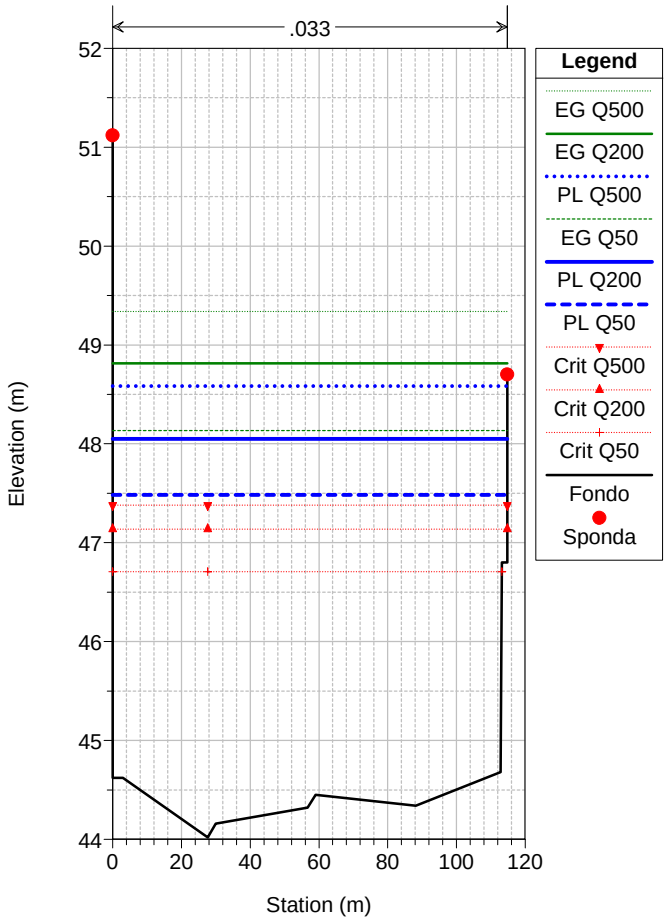
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-84



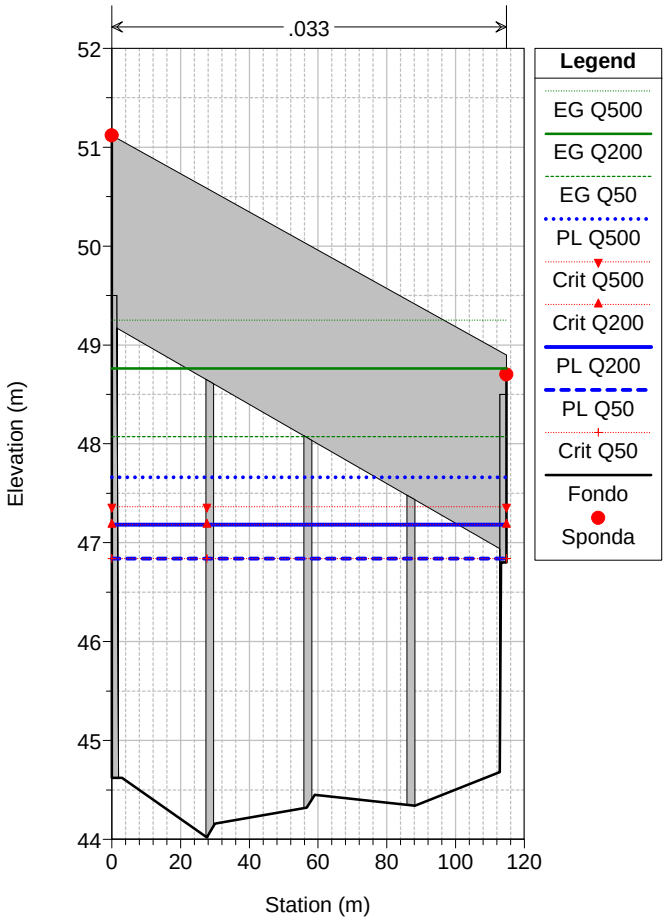
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-83



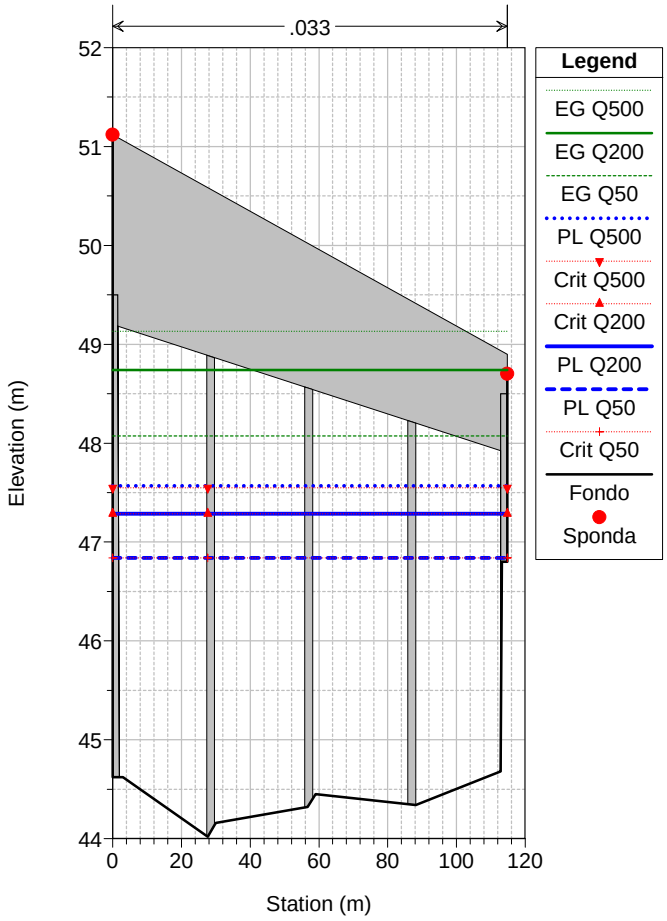
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-83



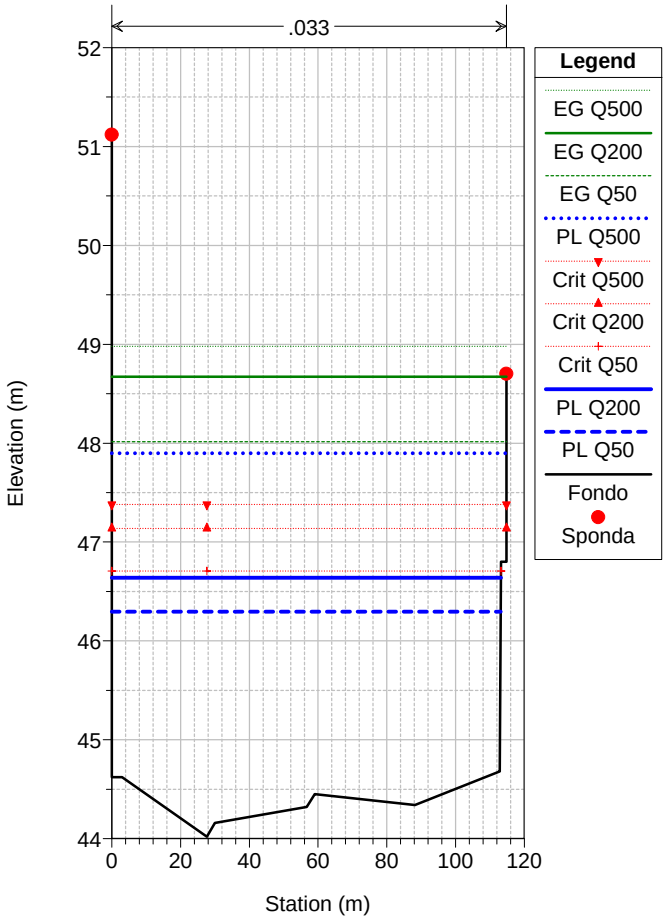
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-83



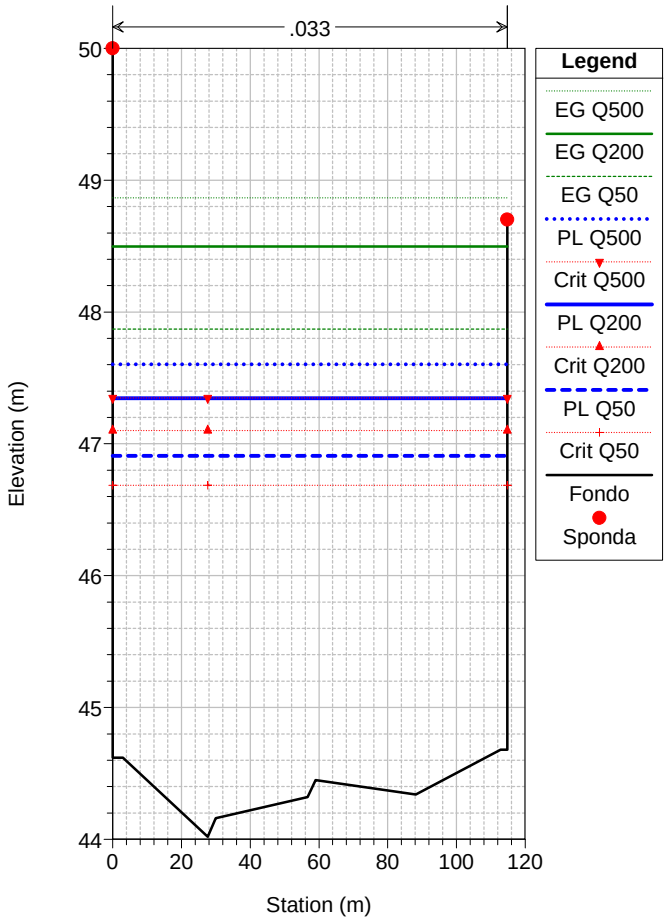
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-83



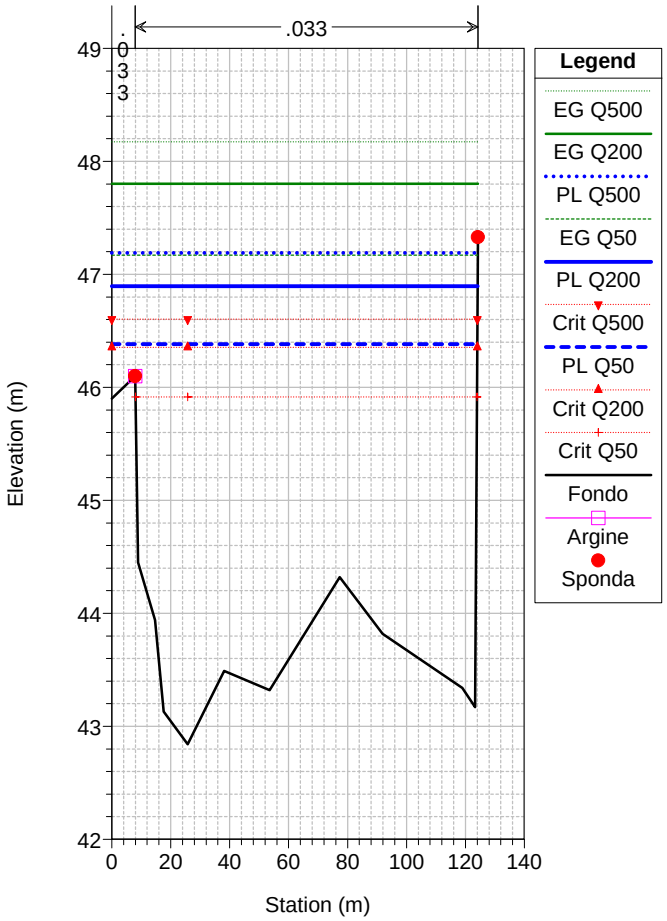
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-82.5



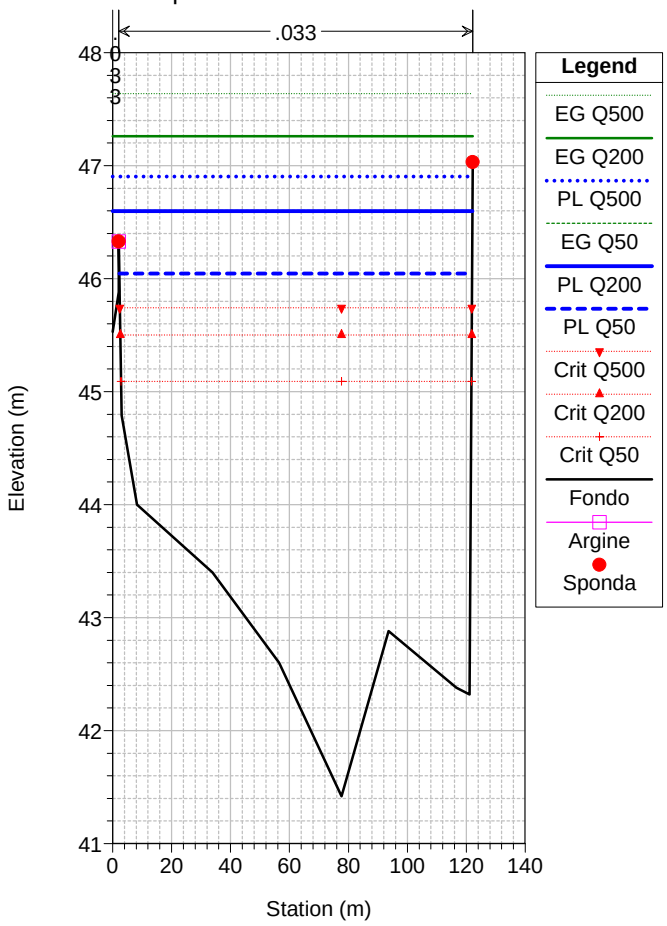
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-82



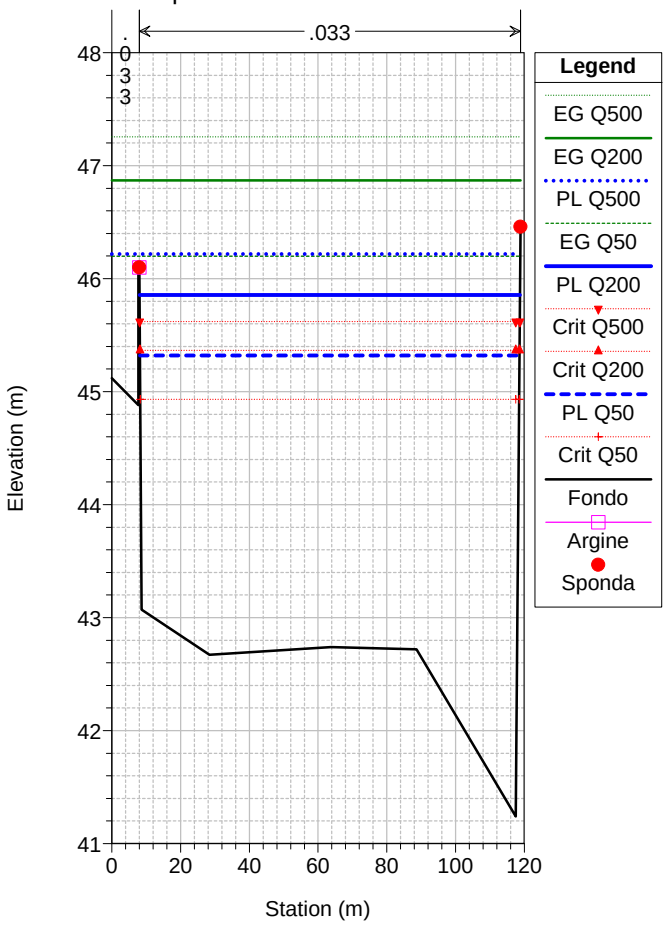
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-81



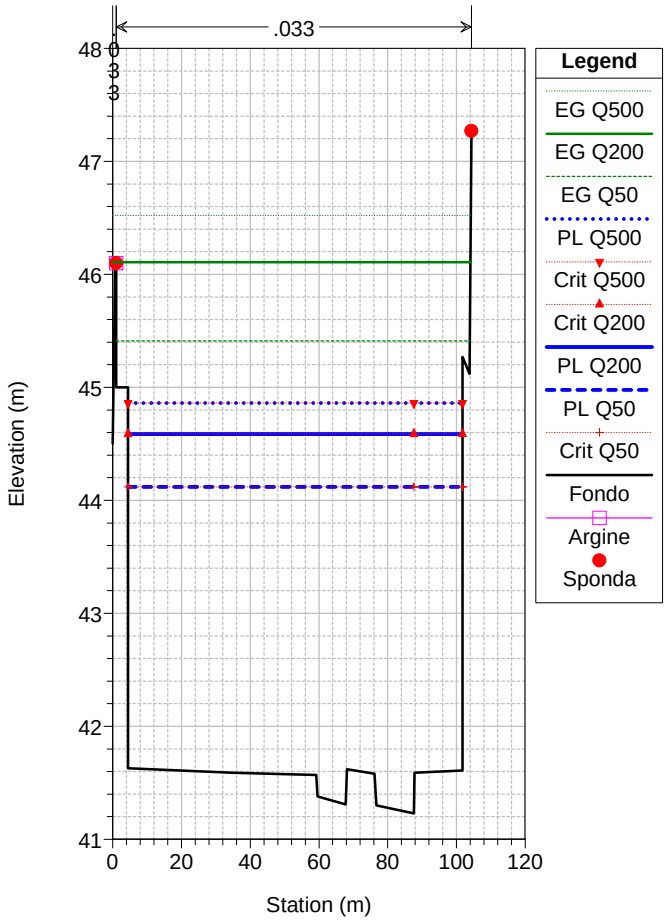
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-80



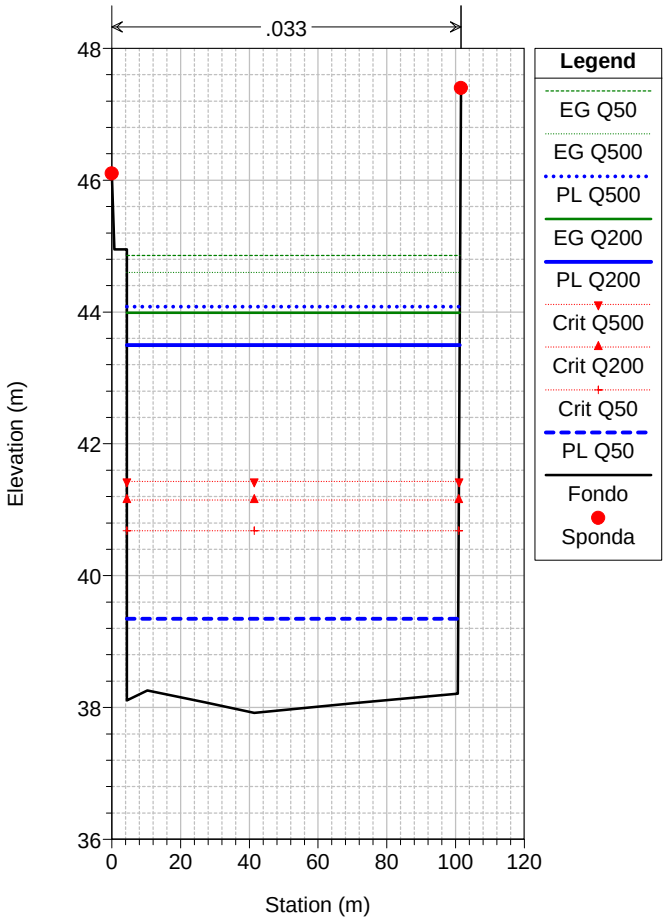
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-79



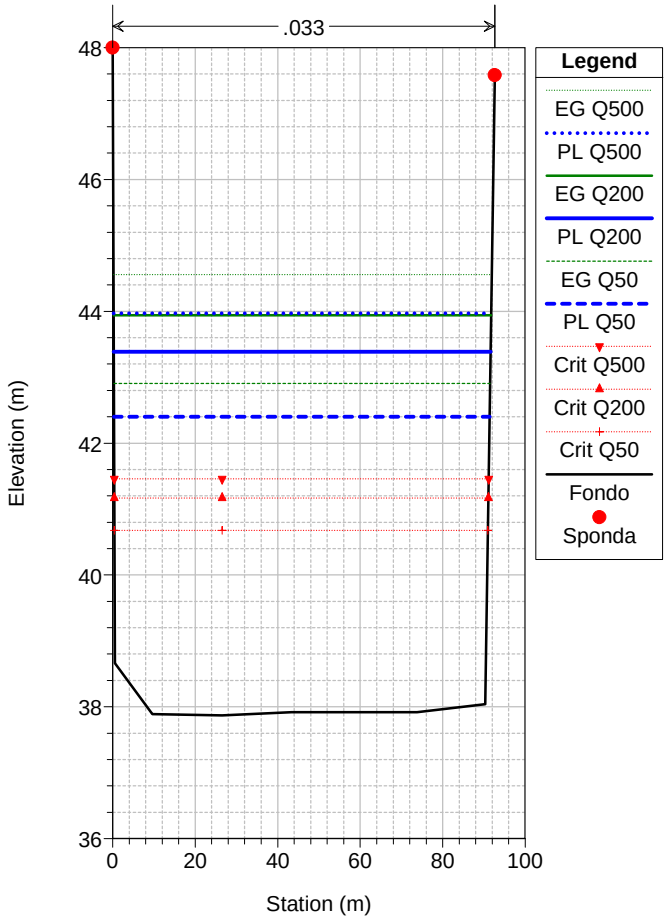
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-79



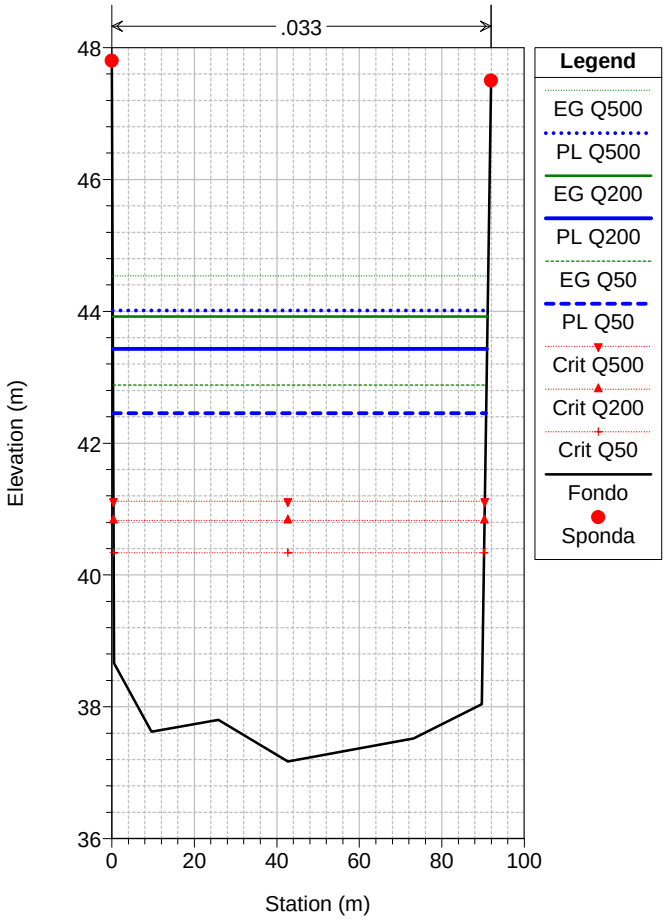
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-78



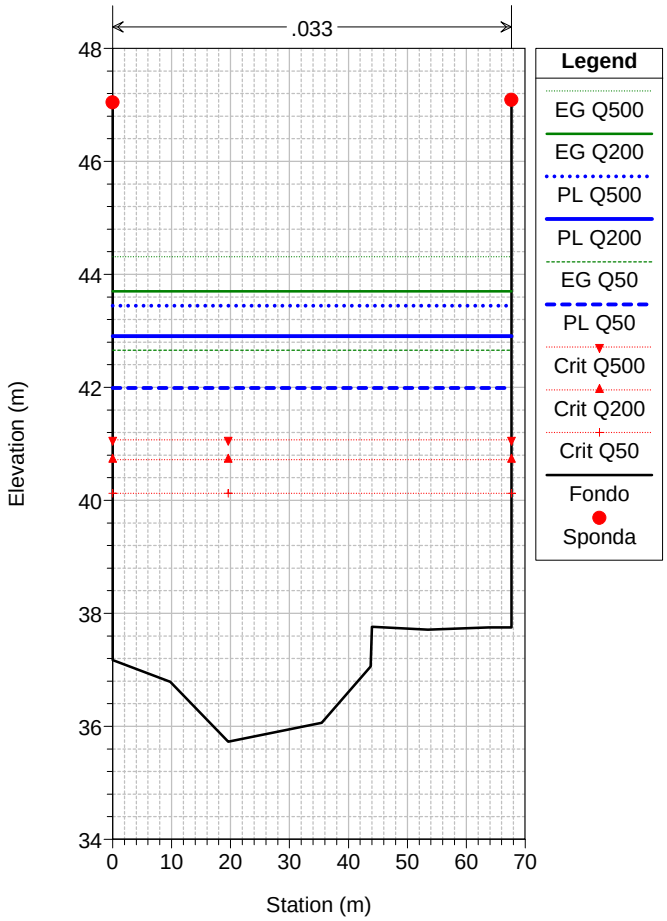
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-78



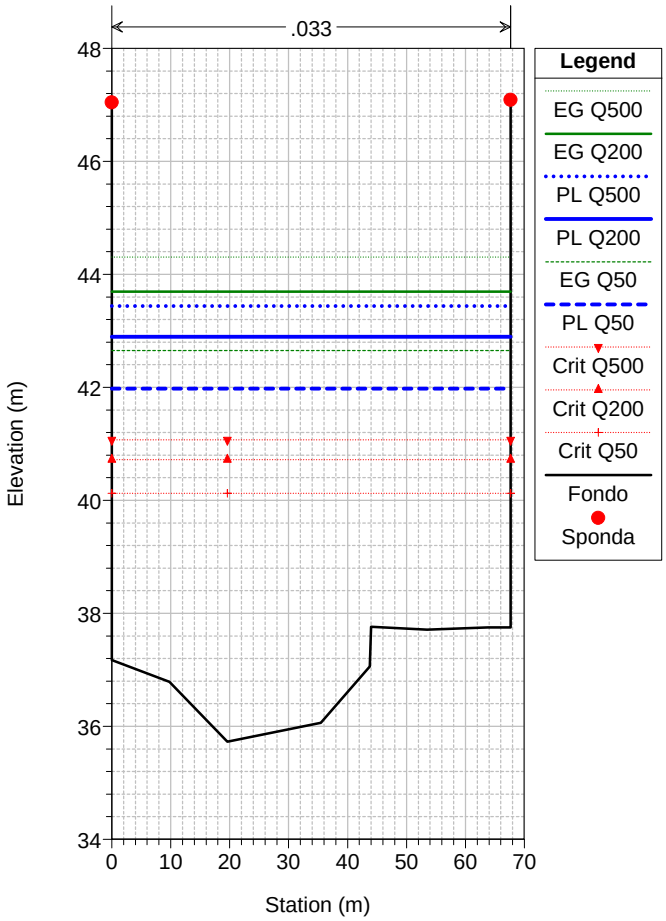
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-77



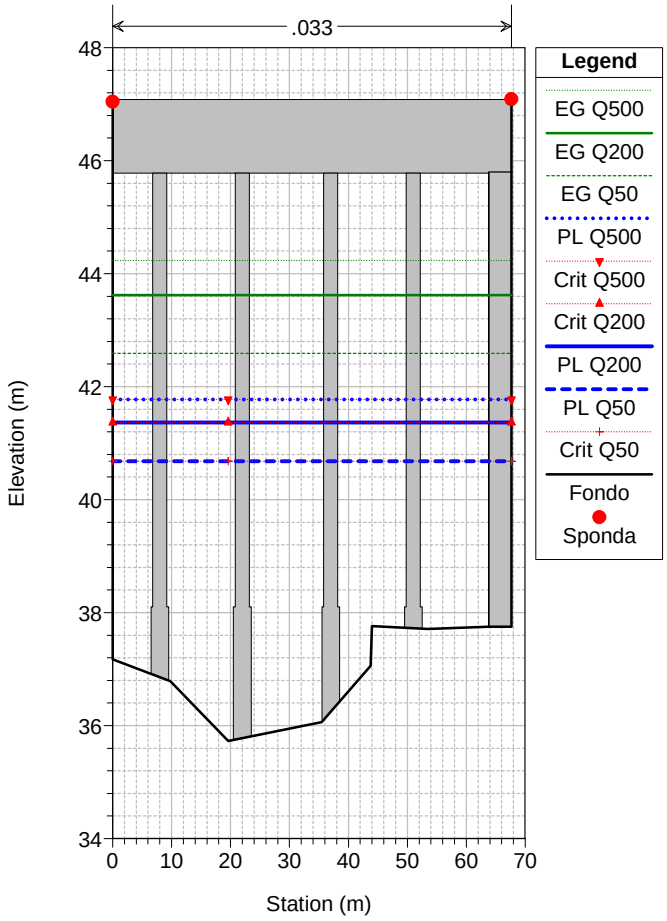
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-77



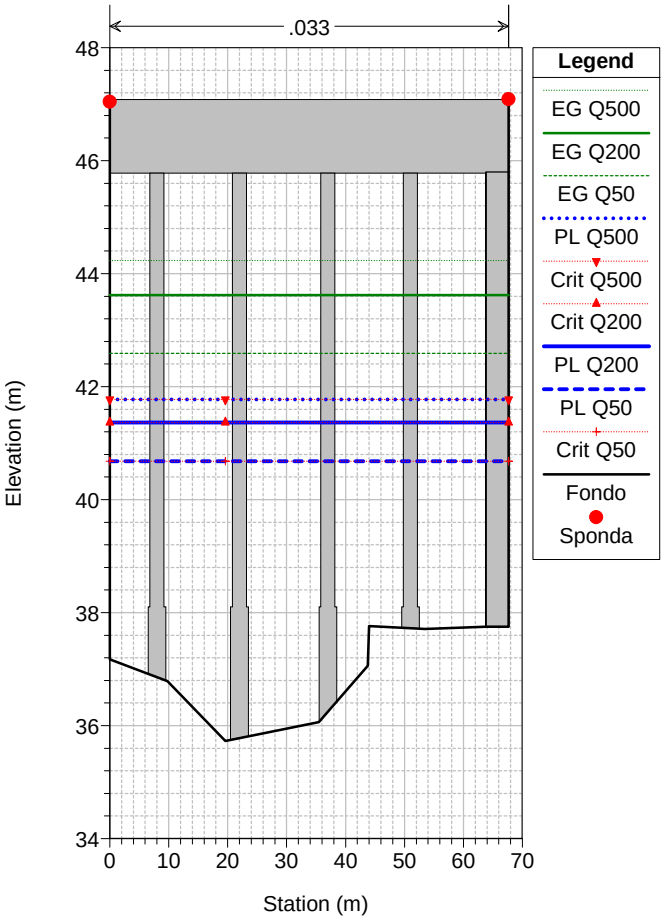
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-77



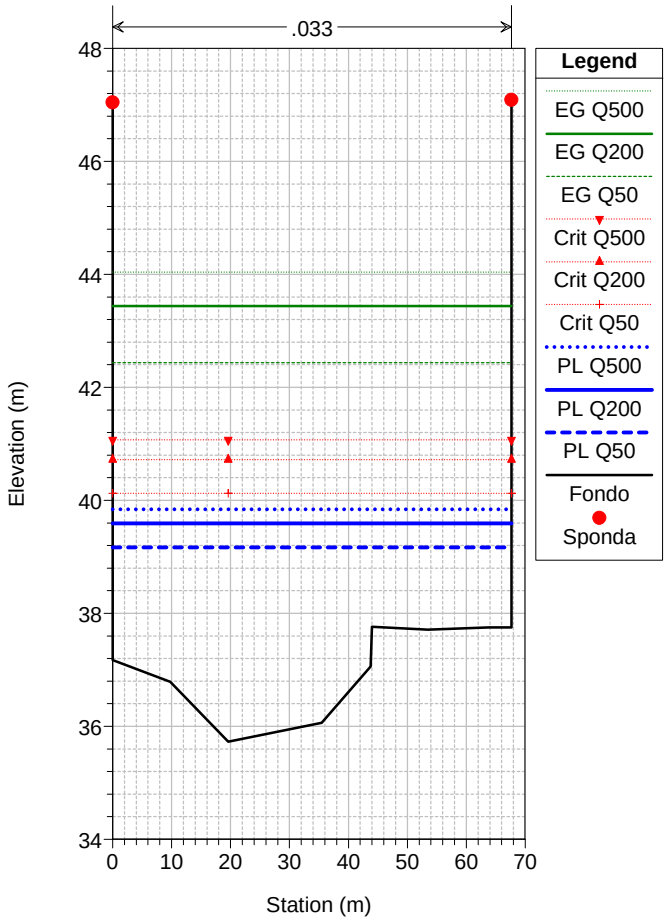
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-77



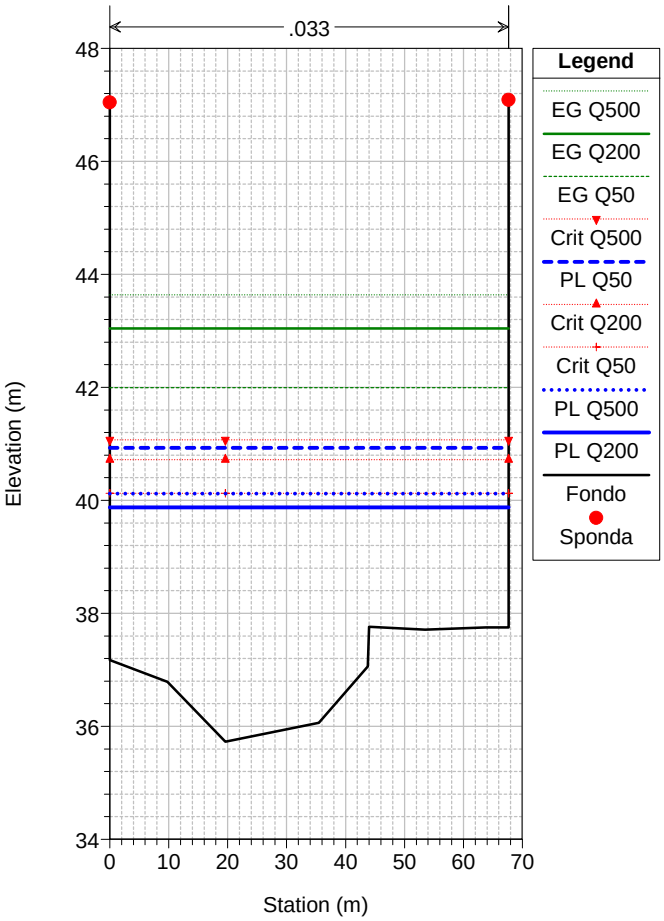
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-77



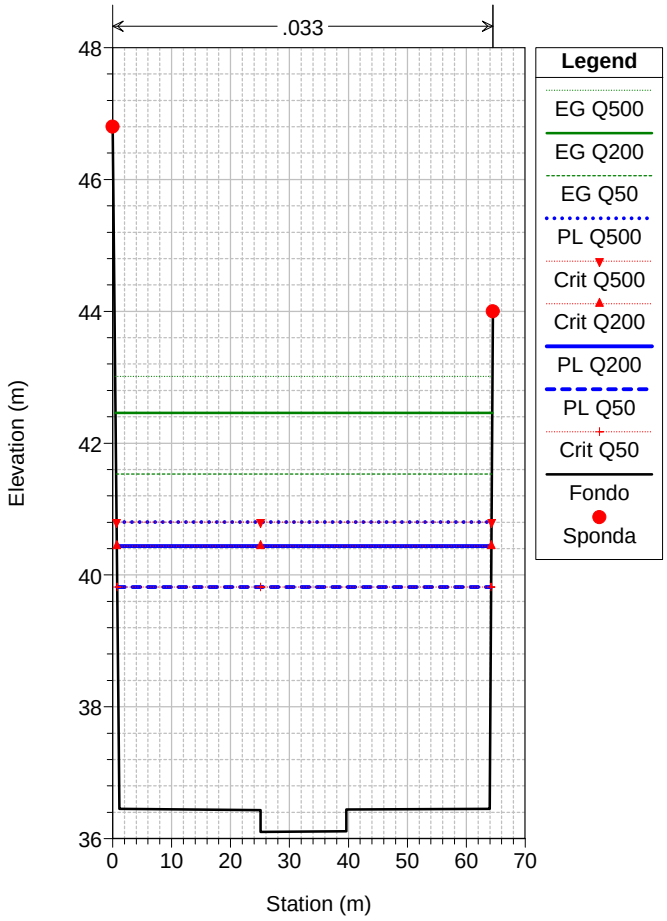
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-77



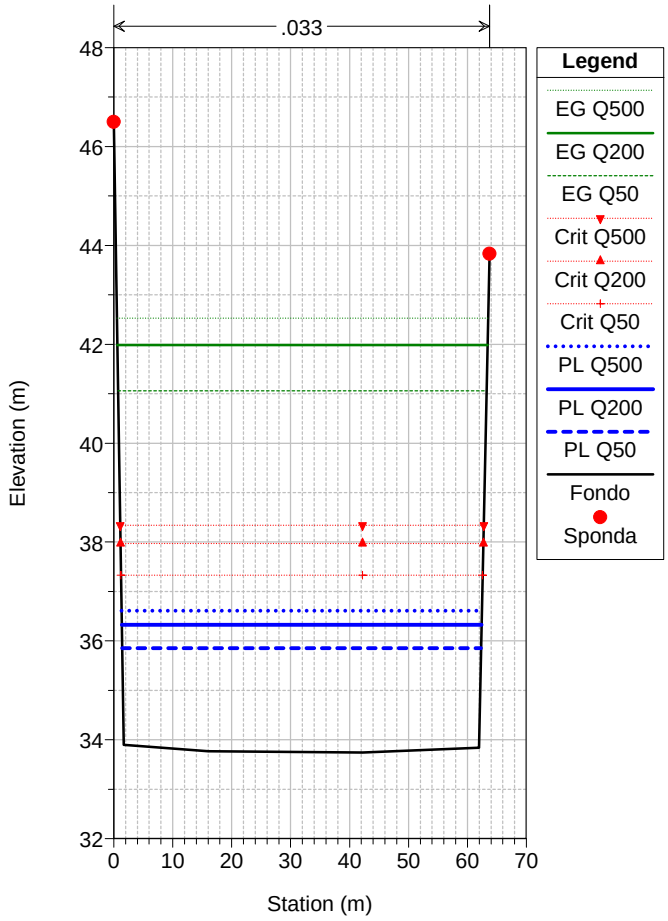
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-76



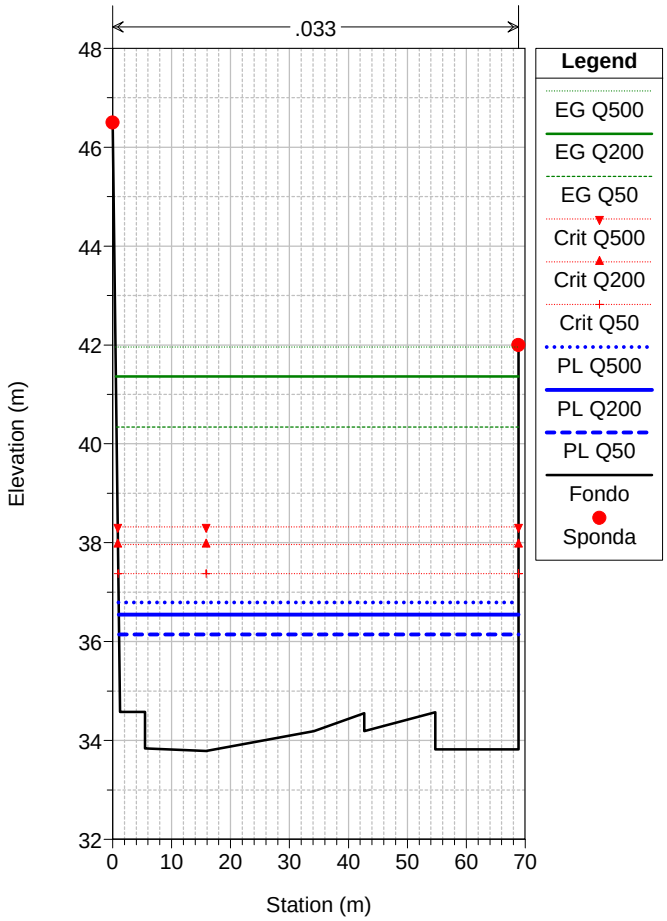
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-75



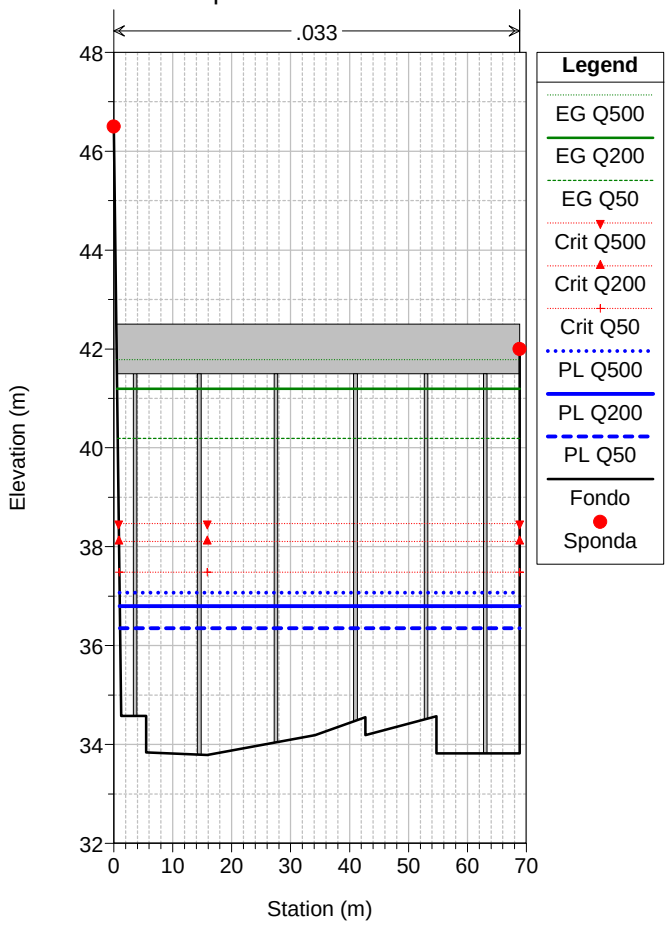
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-65



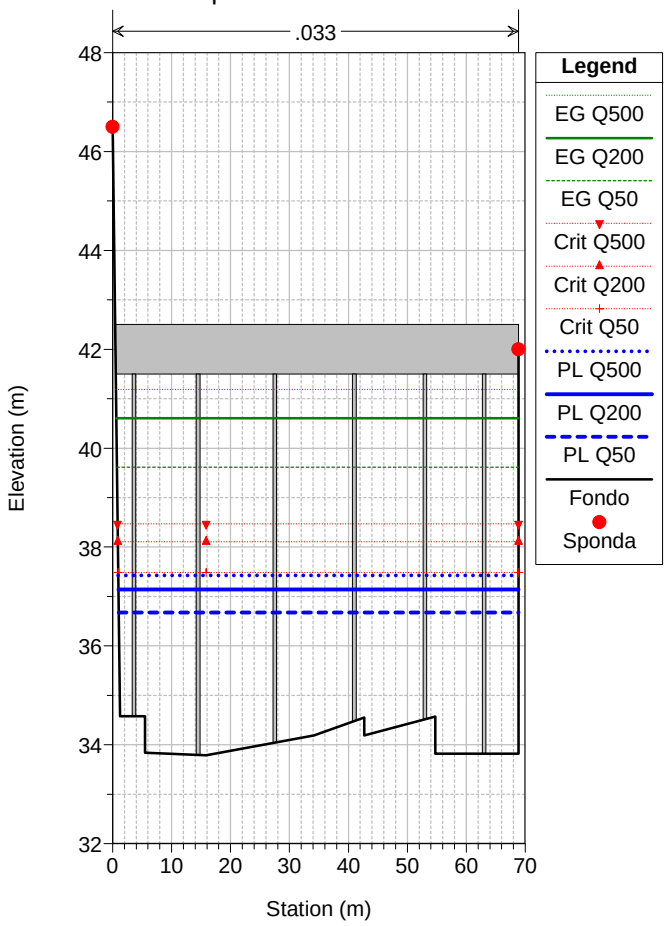
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



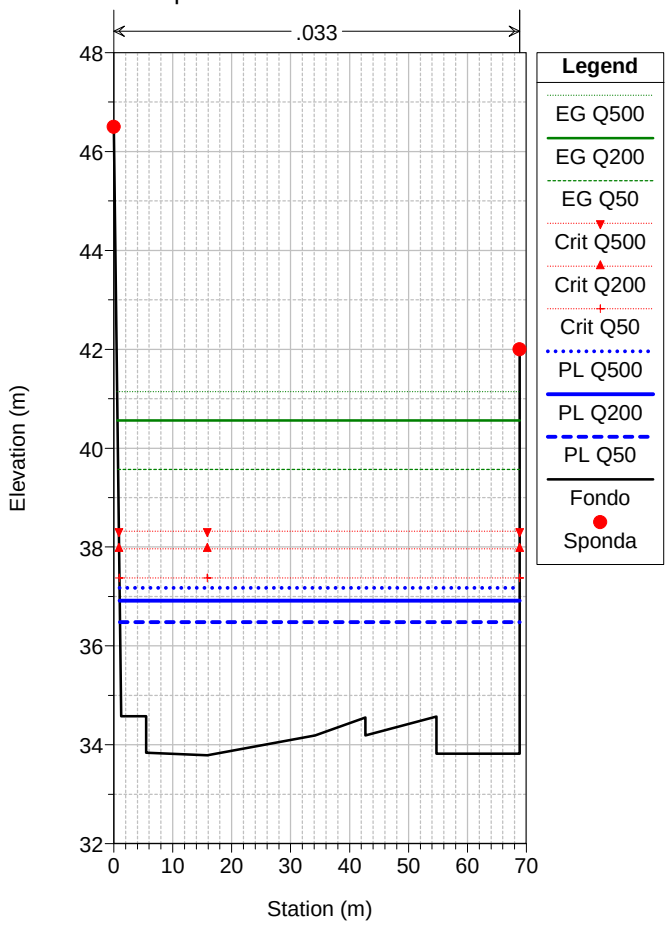
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



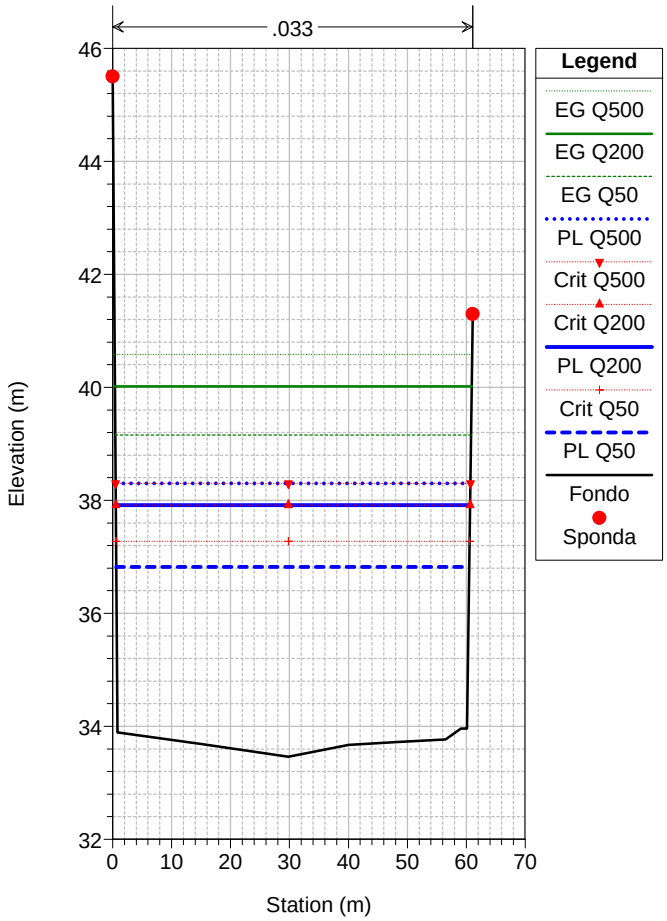
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-74



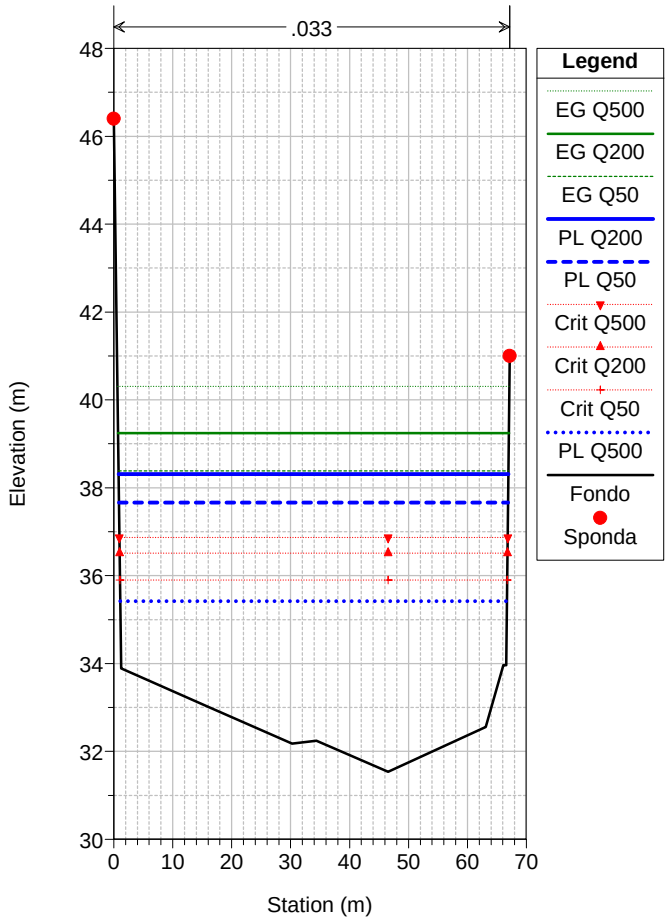
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-73



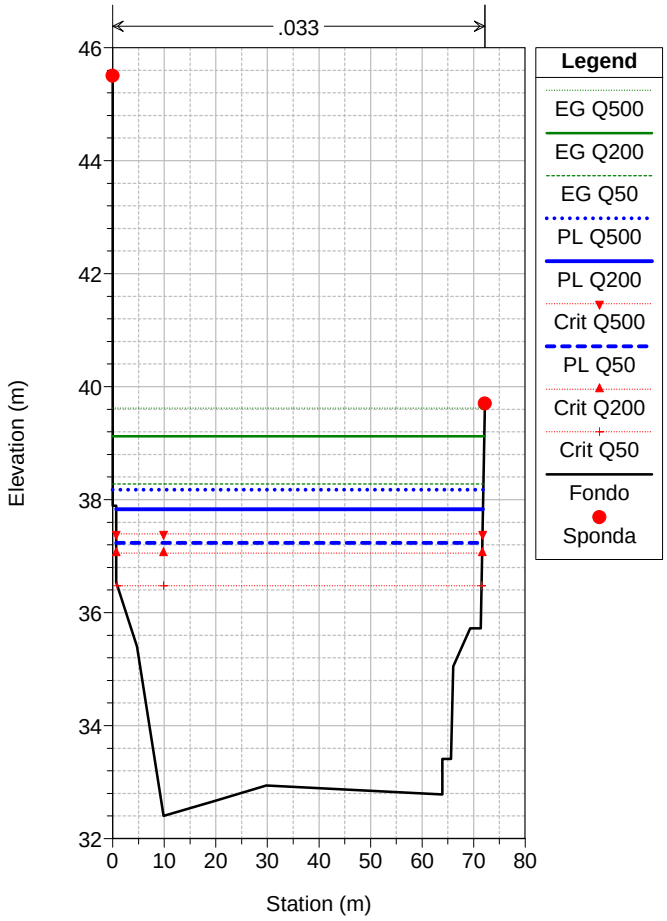
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-72



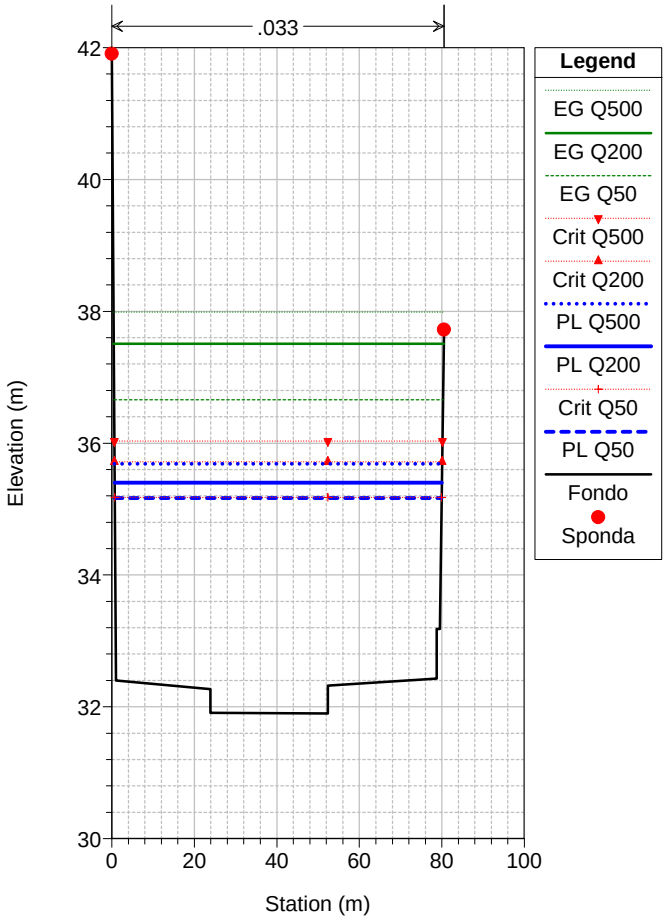
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-71



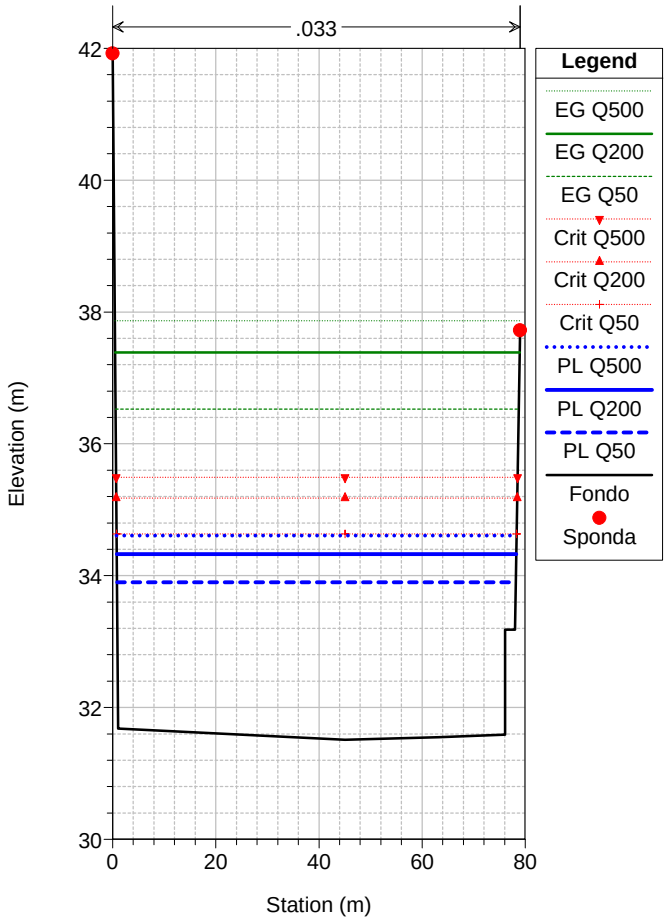
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-70



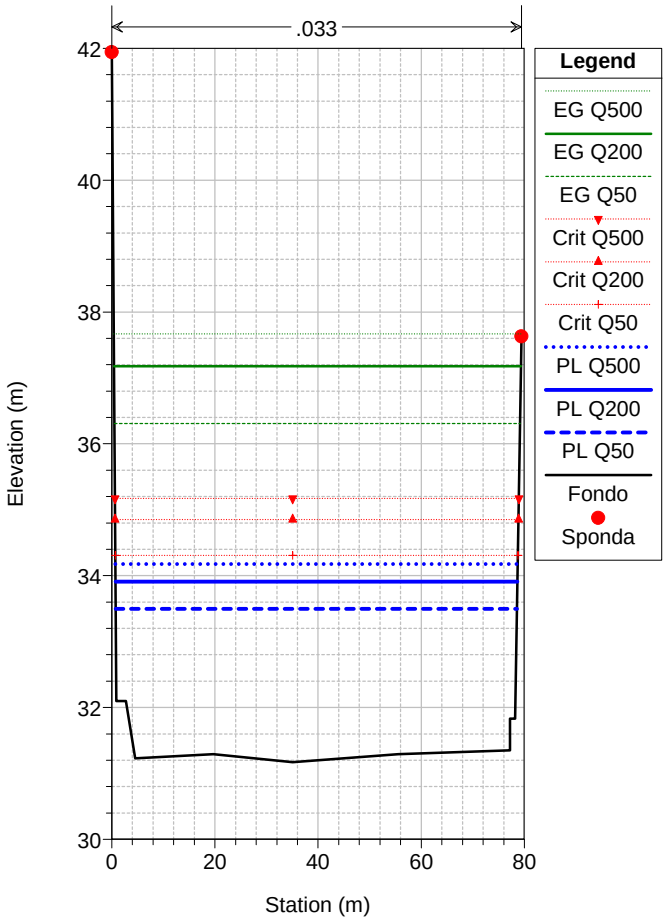
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-69



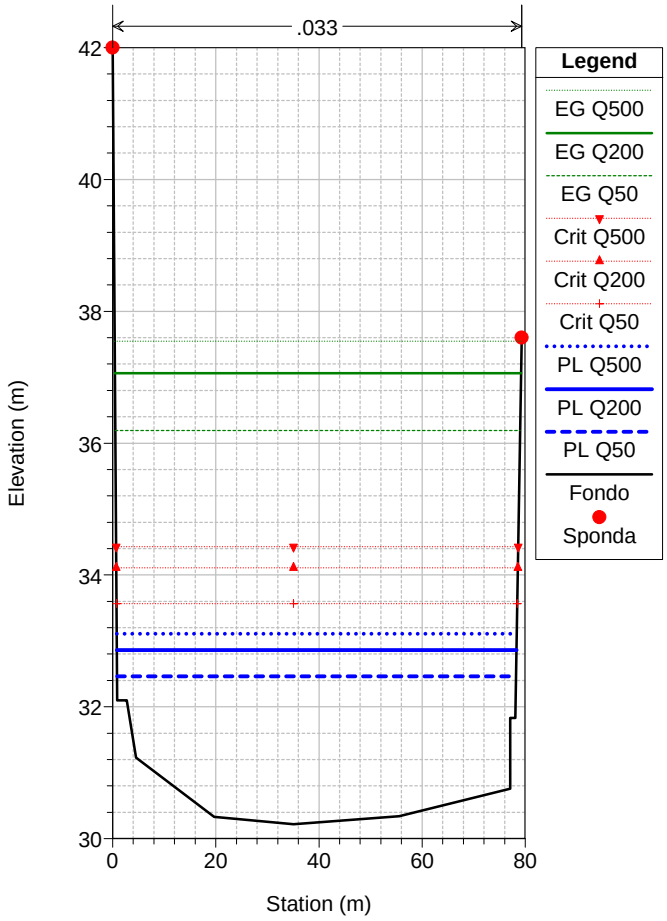
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-68



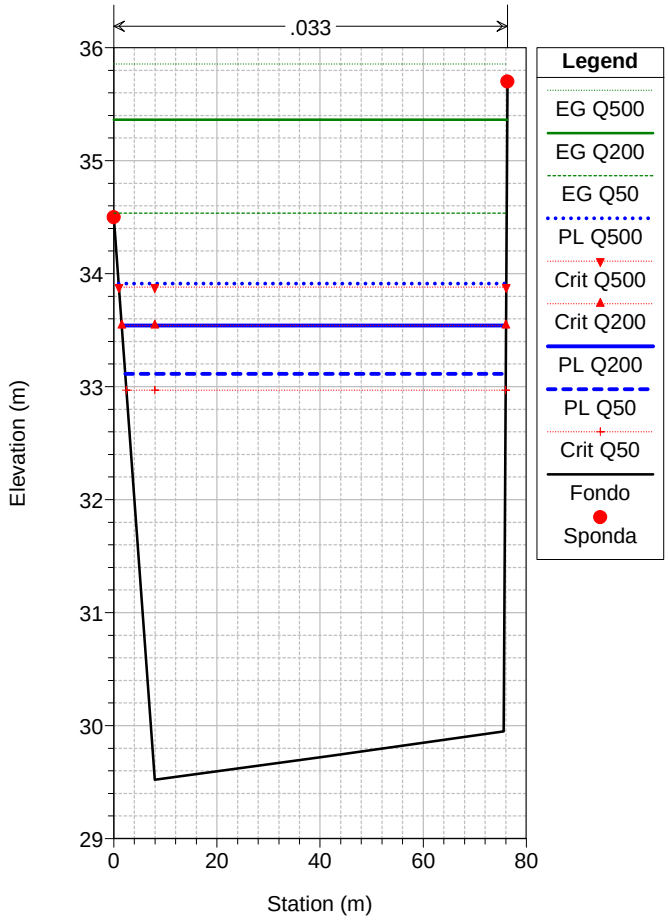
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-67



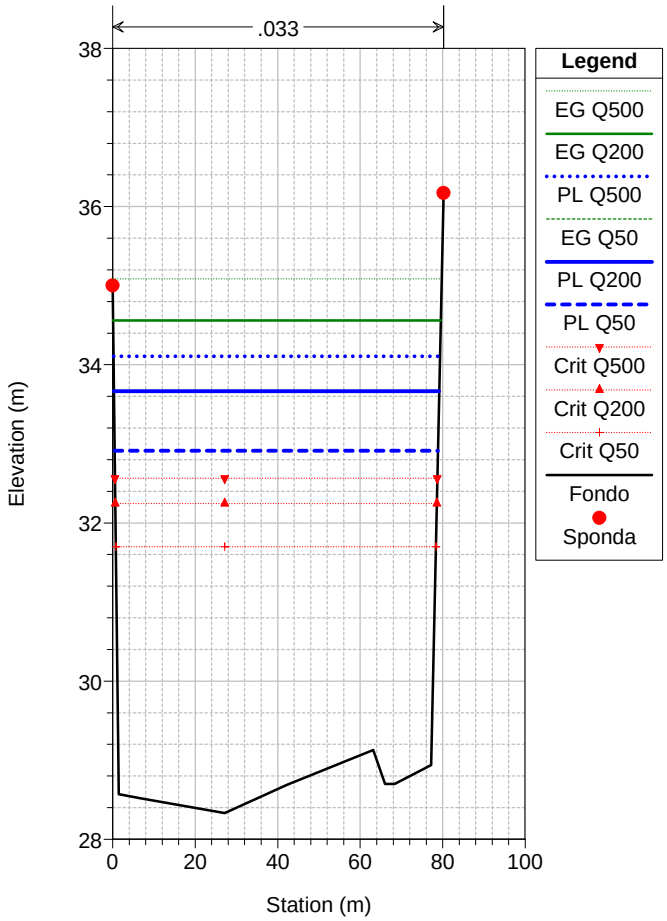
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-66



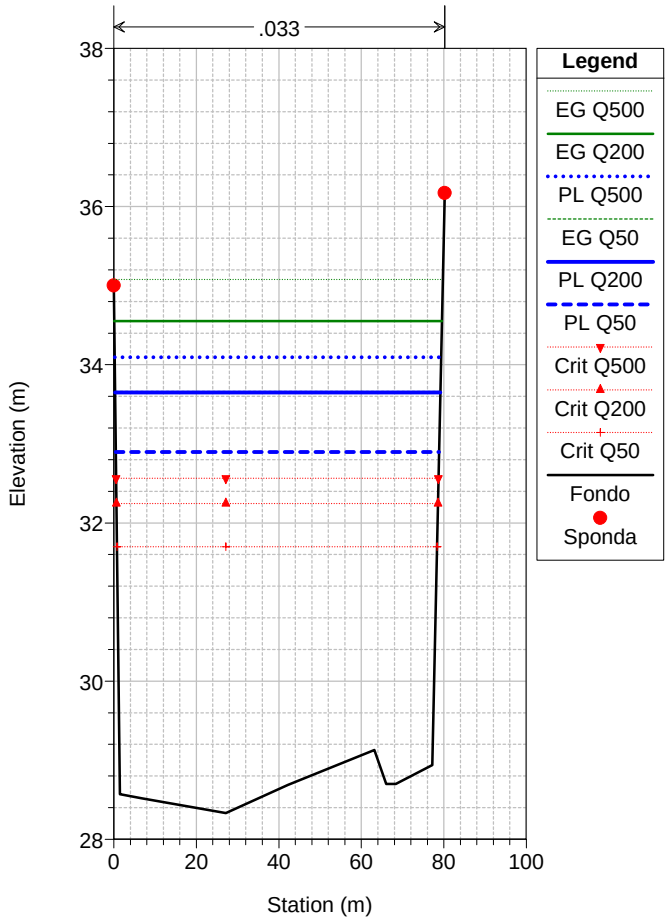
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-65



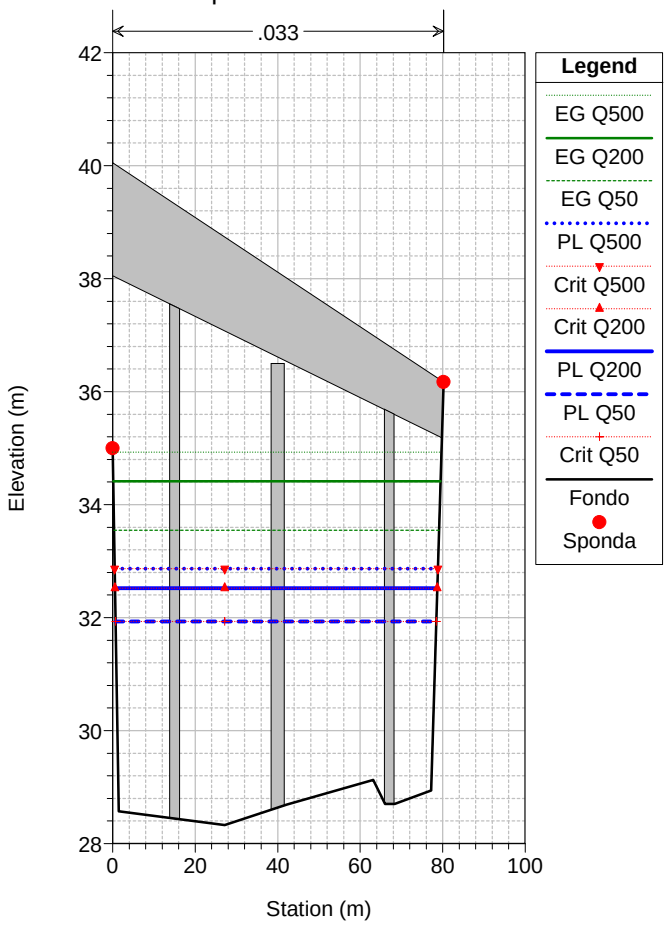
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-65



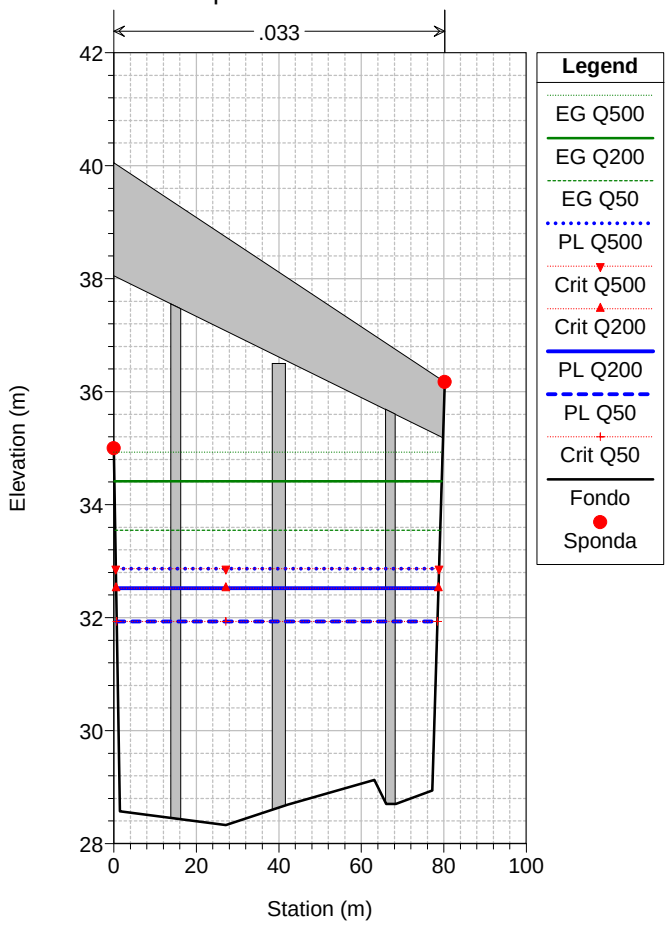
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



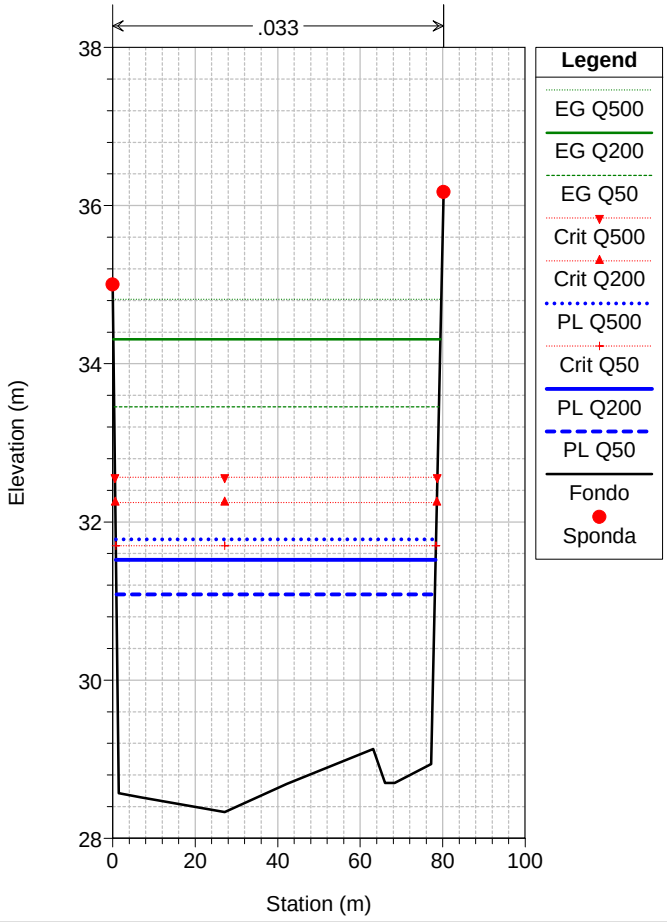
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



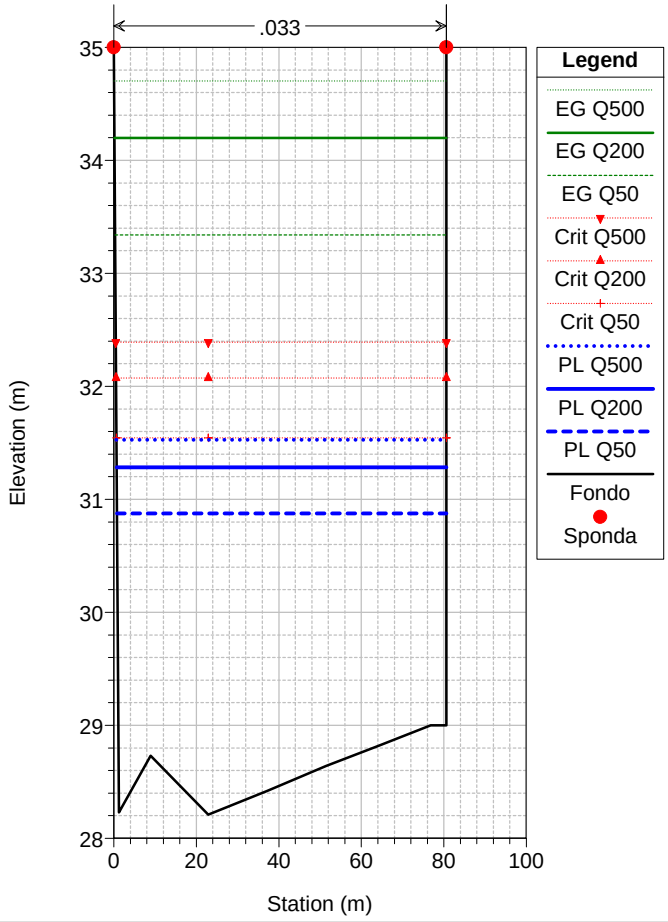
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-65



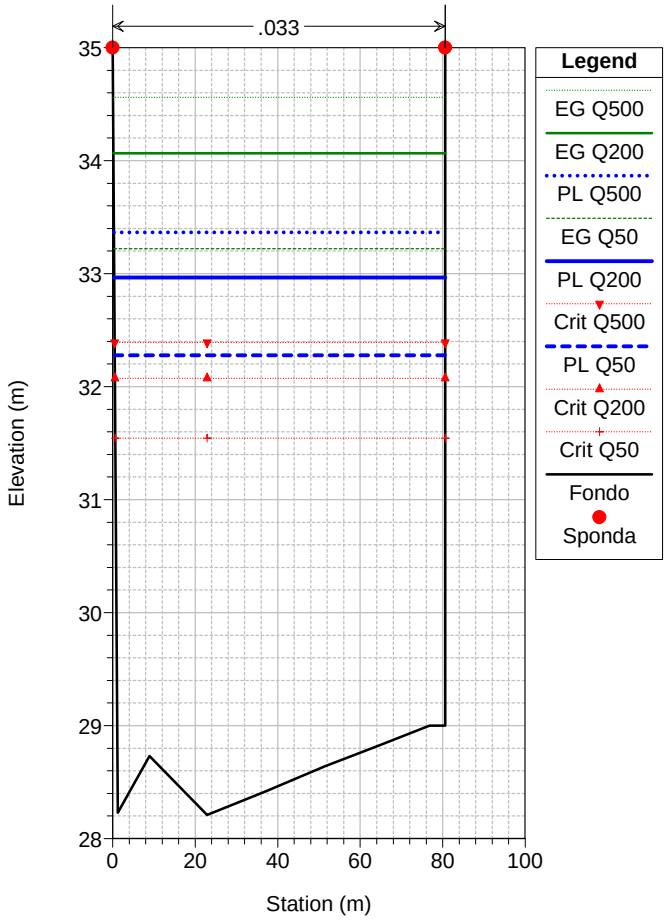
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-64.5



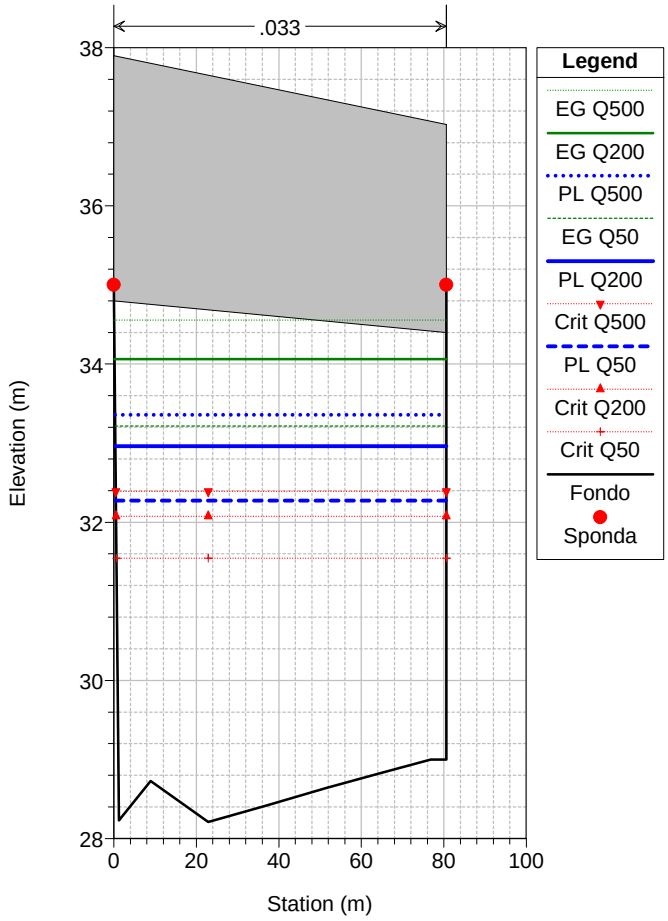
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-64.5



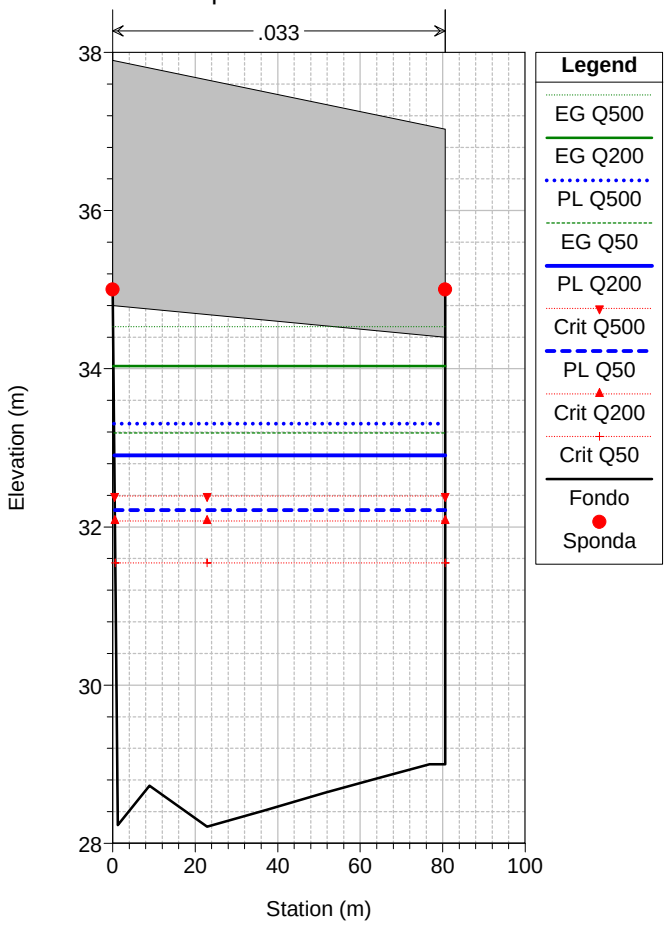
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



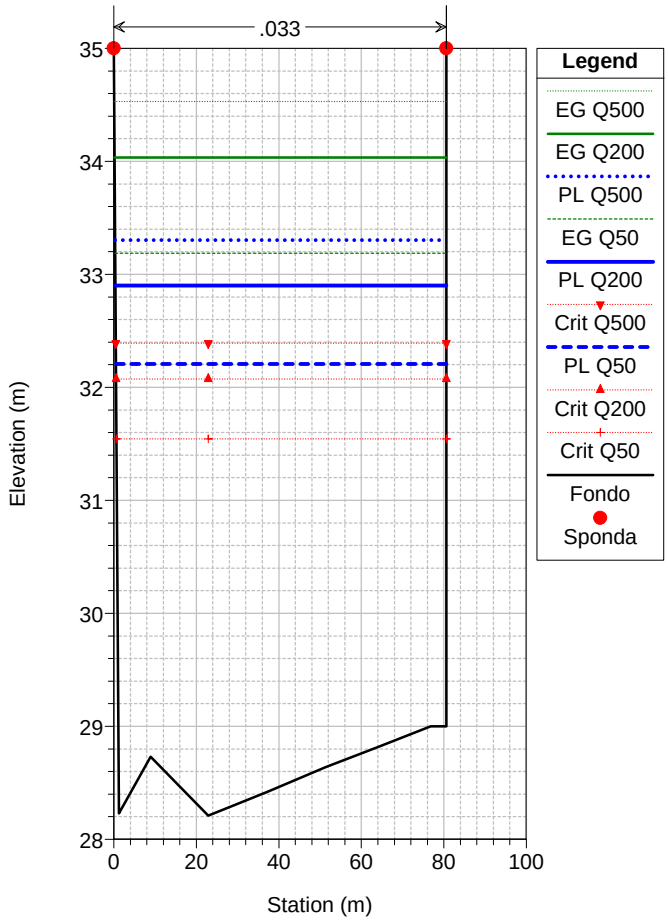
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



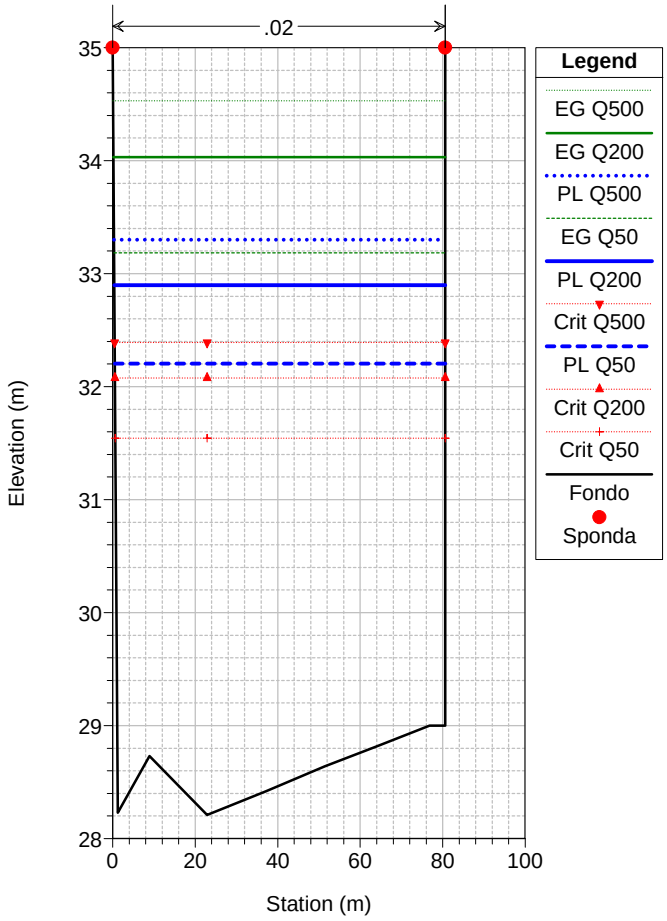
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-64



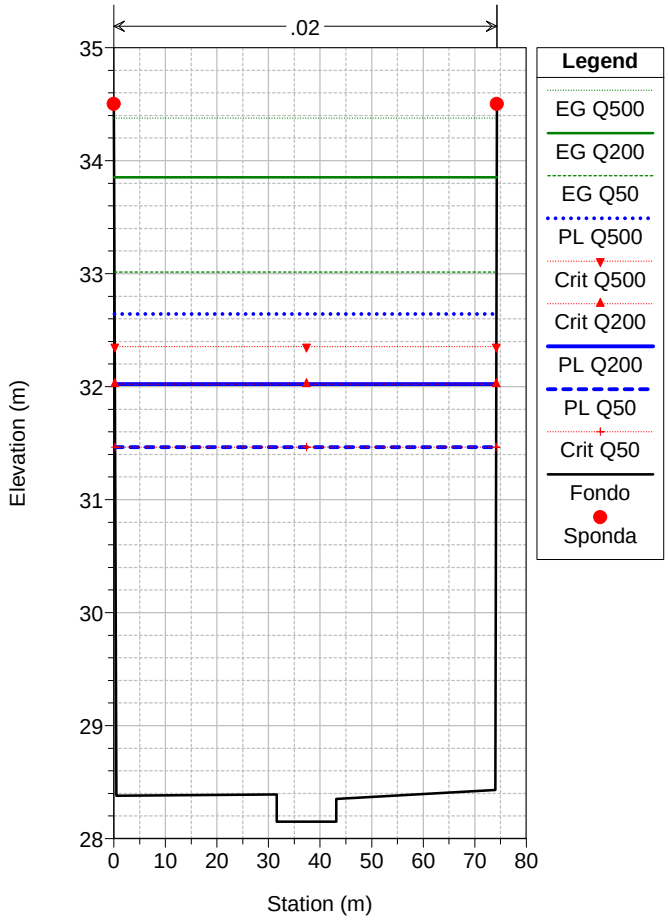
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-64



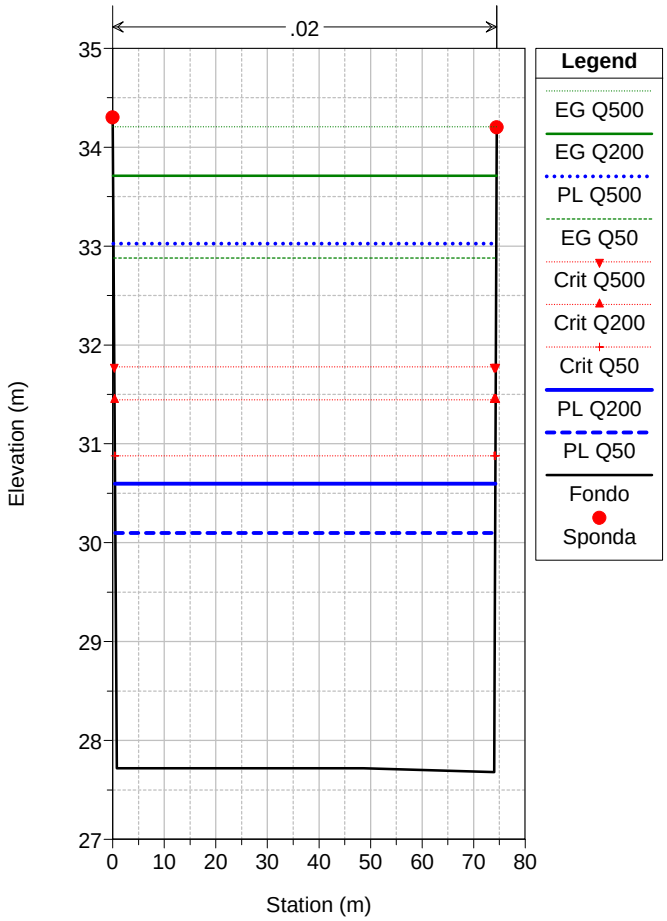
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-63



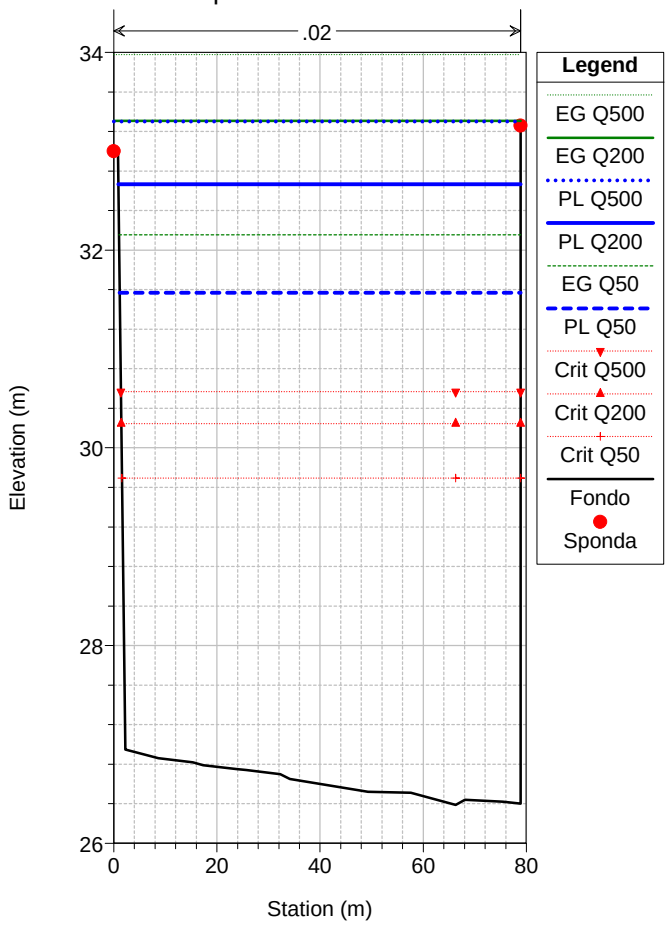
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-62



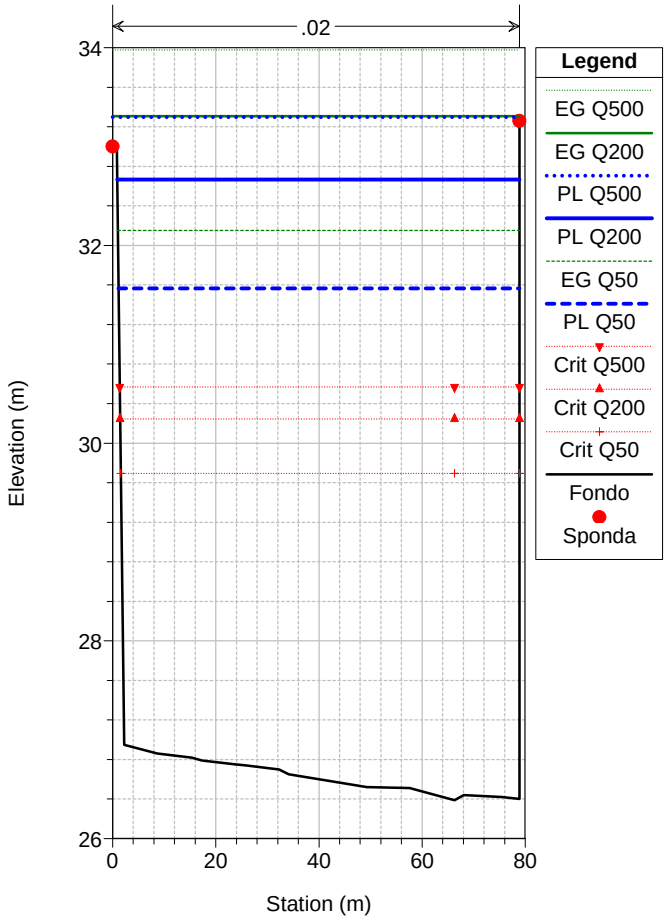
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



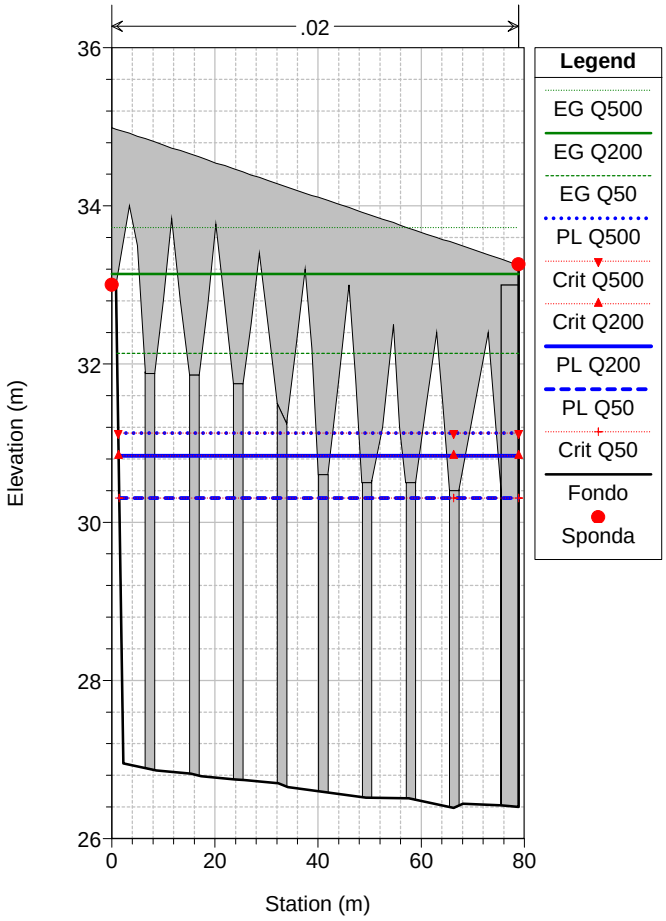
Polcevera Plan: Piena Secca

River = polcevera Reach = valle POL-61.5



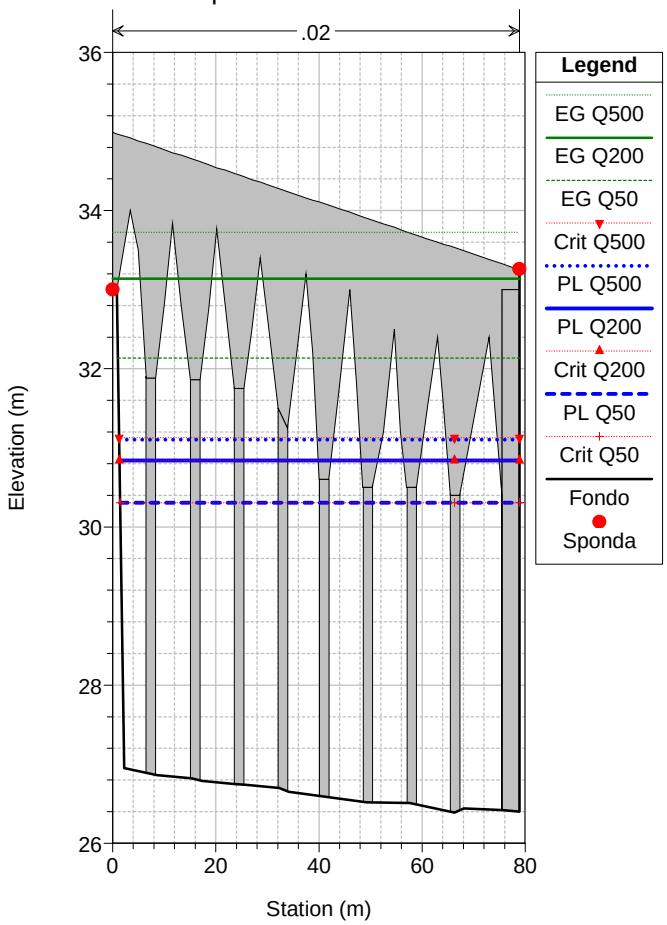
Polcevera Plan: Piena Secca

River = polcevera Reach = valle



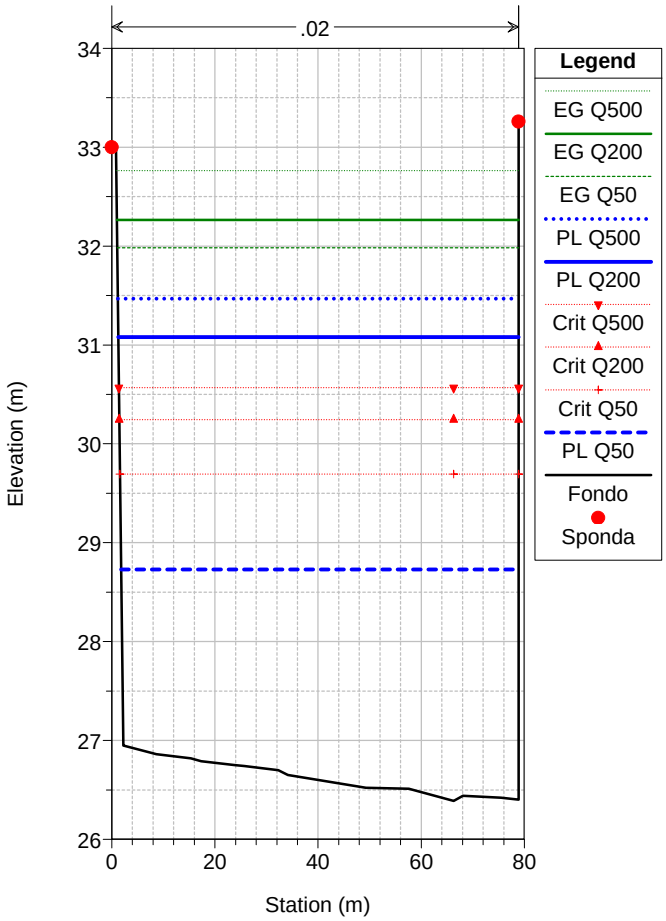
Polcevera Plan: Piena Secca

River = polcevera Reach = valle



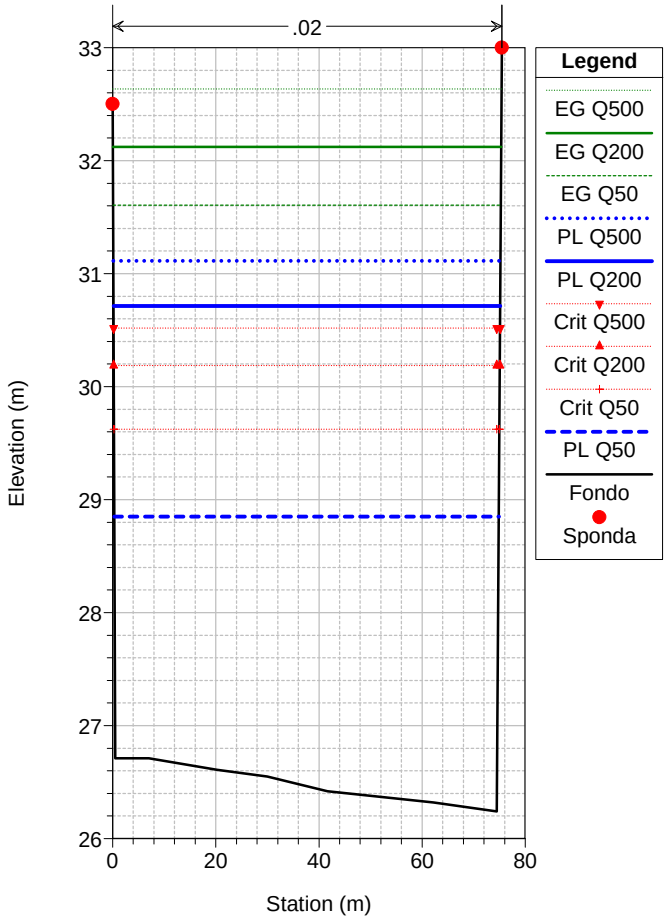
Polcevera Plan: Piena Secca

River = polcevera Reach = valle POL-61.5



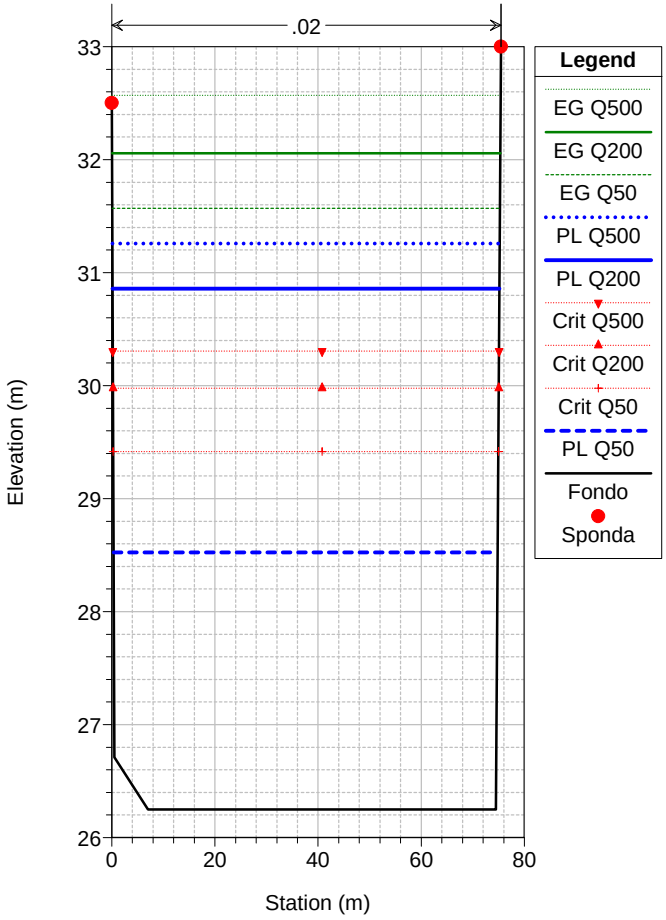
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-60



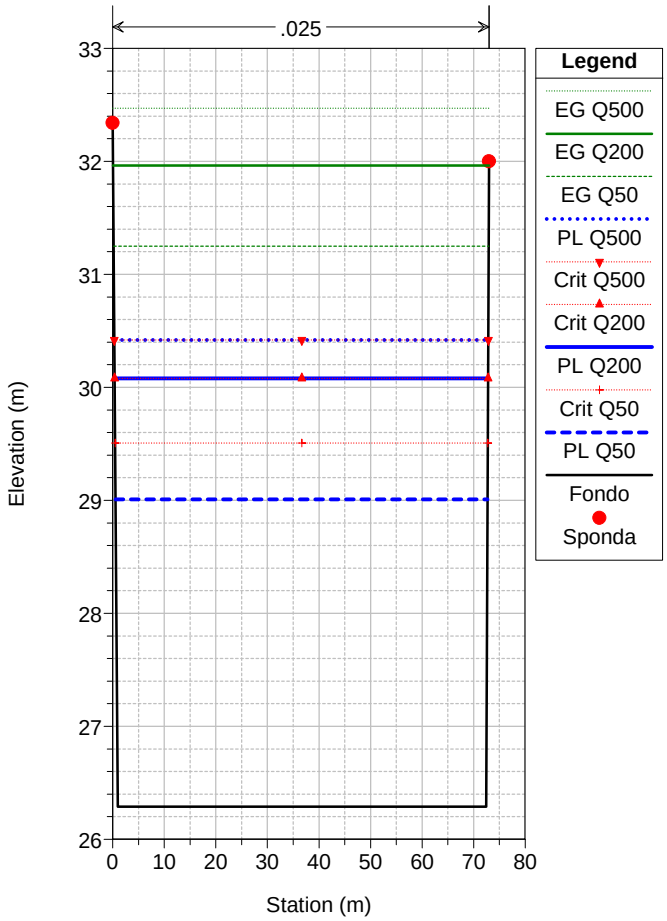
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-59



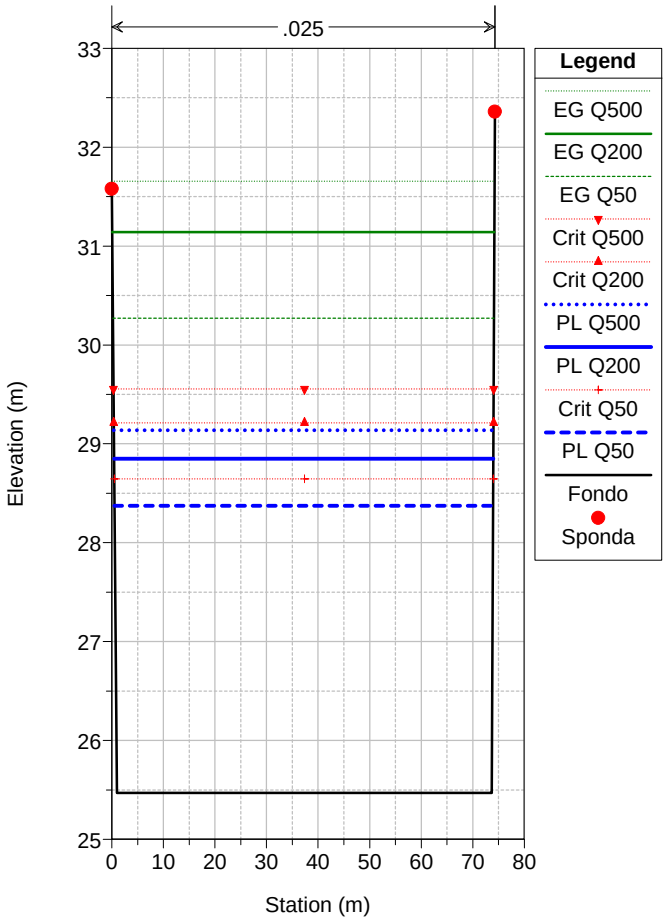
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-58



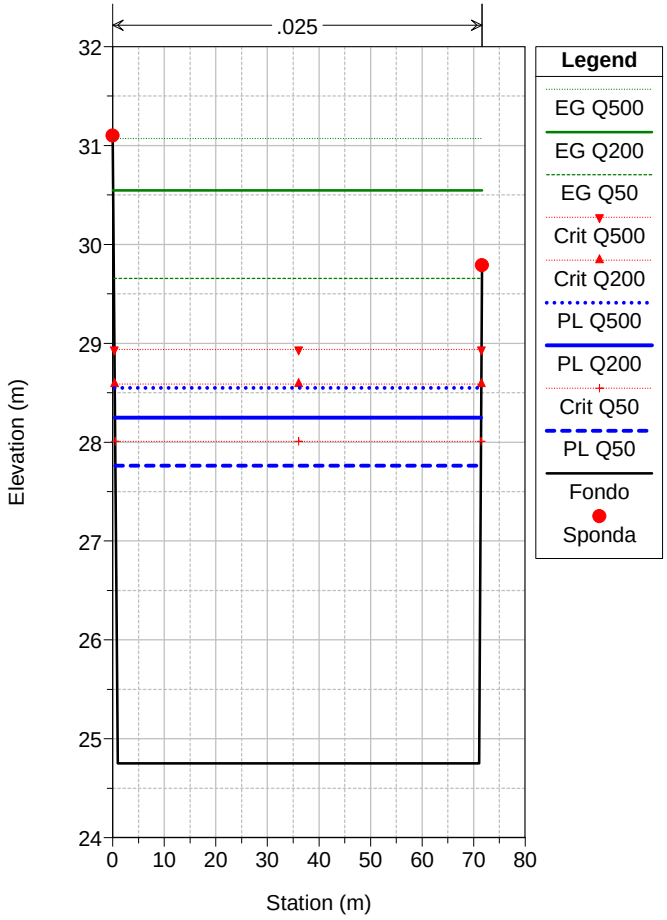
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-57



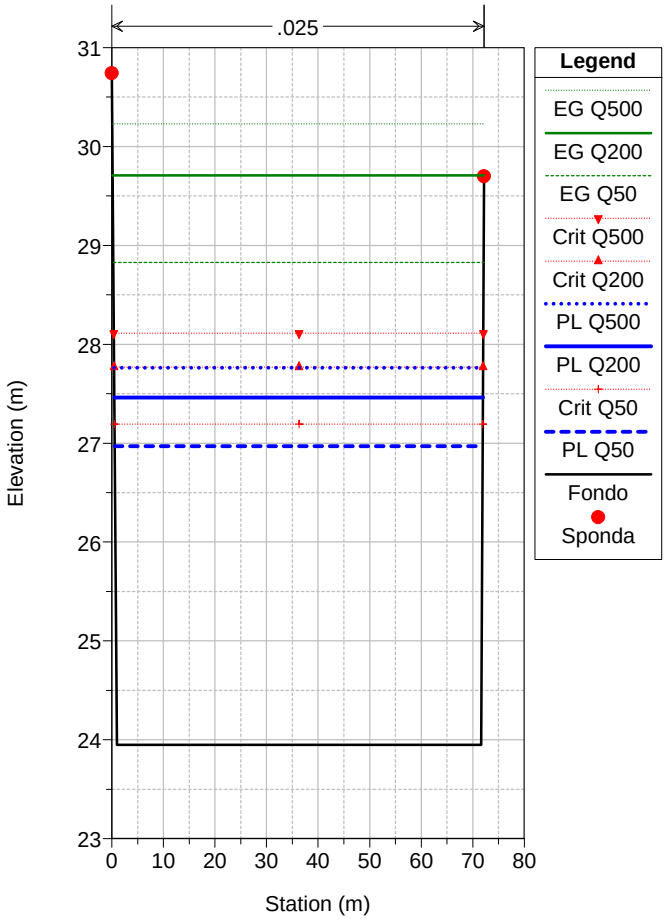
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-56



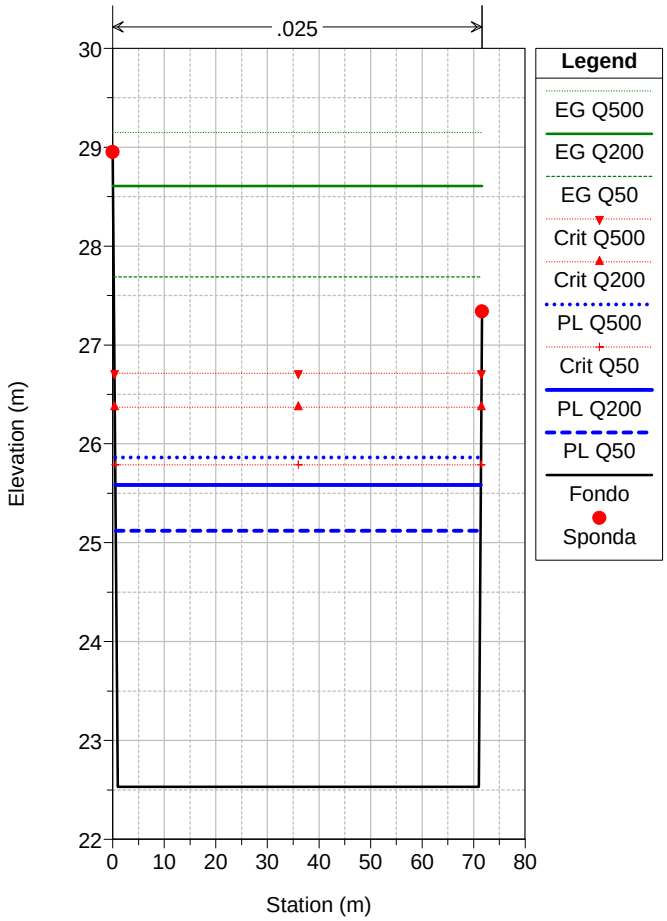
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-55



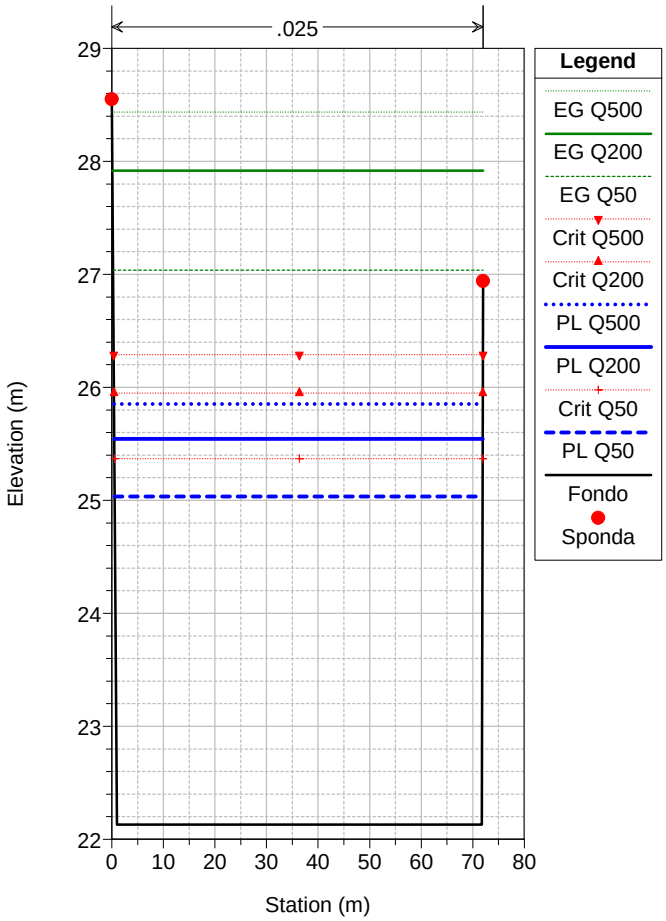
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-54



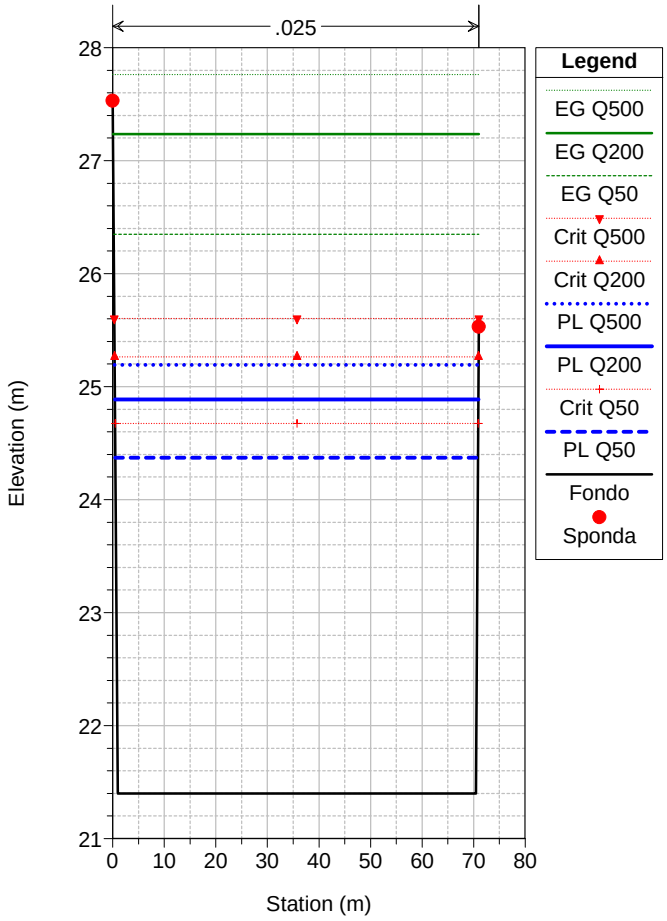
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-53



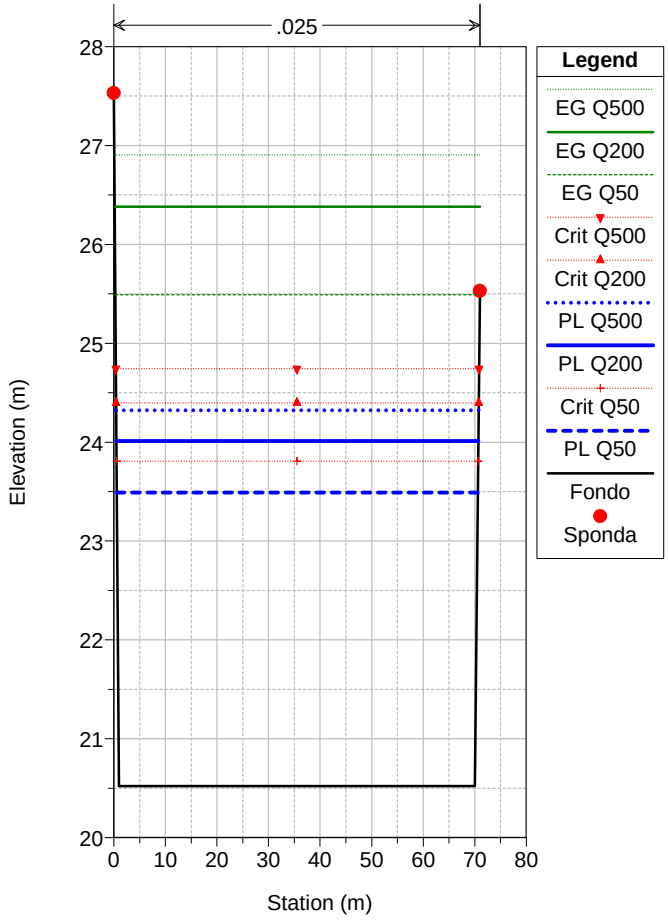
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-52



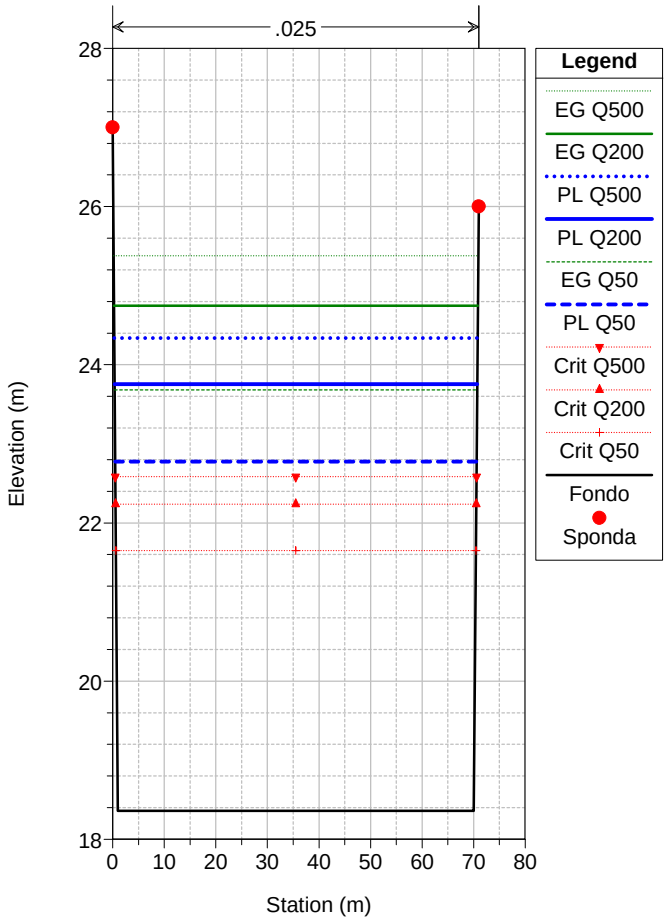
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-51



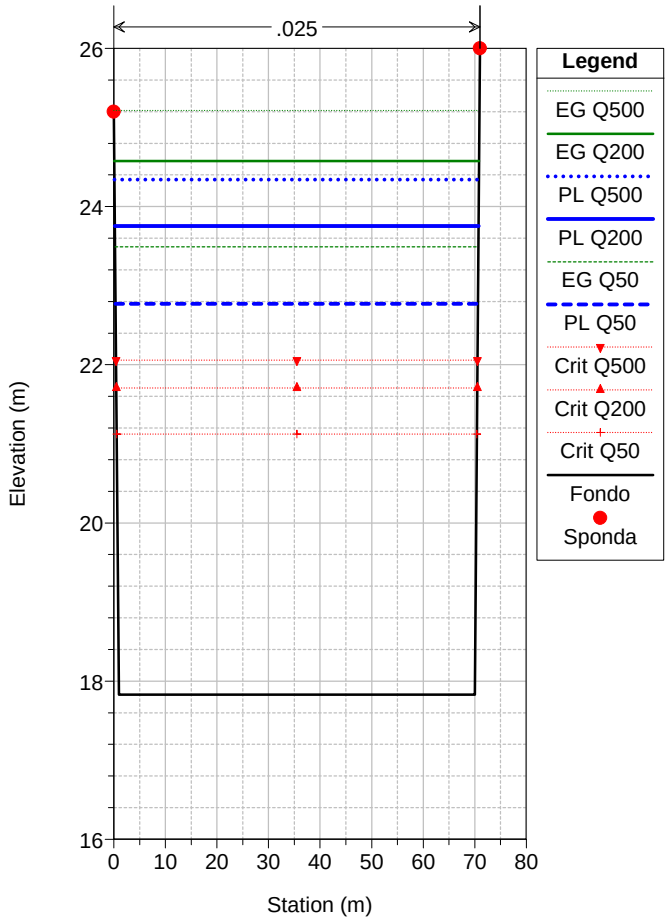
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-50



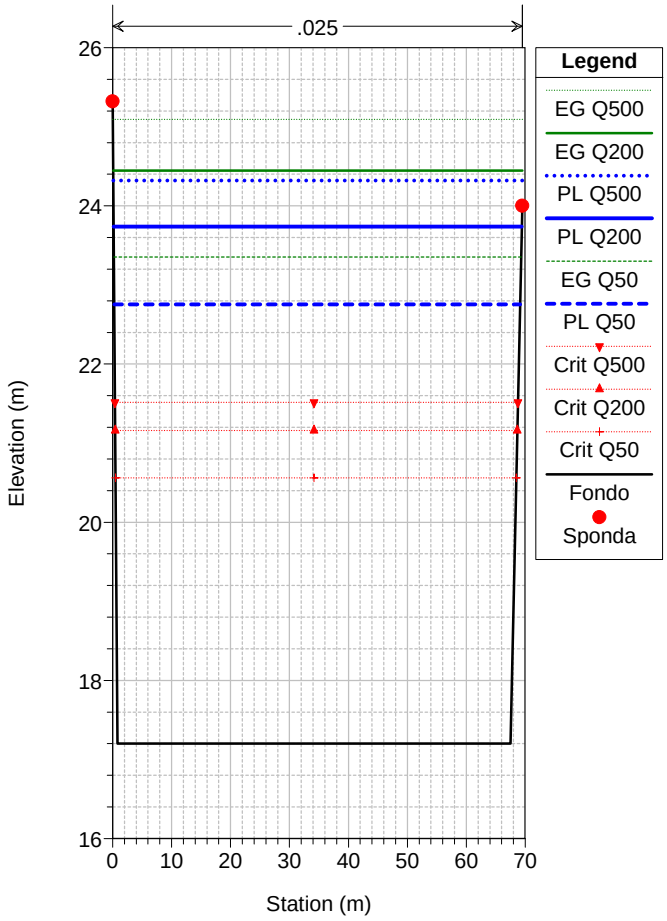
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-49



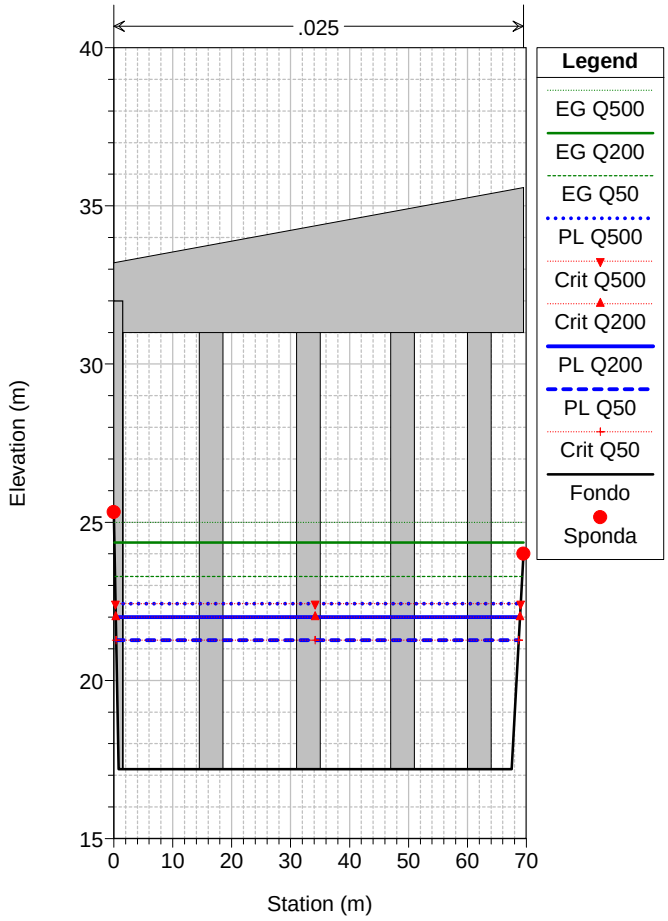
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL48.8



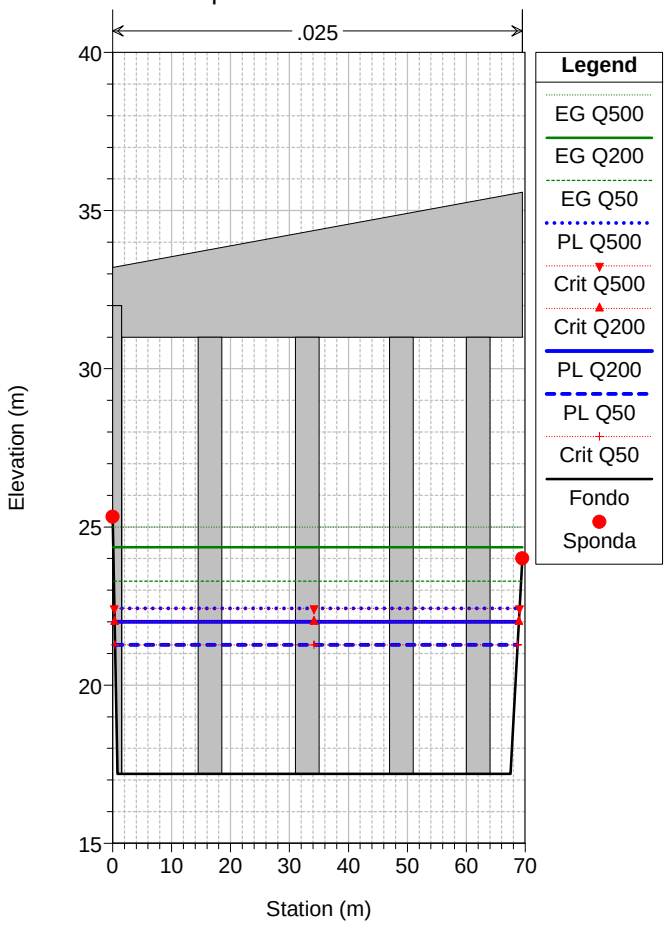
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



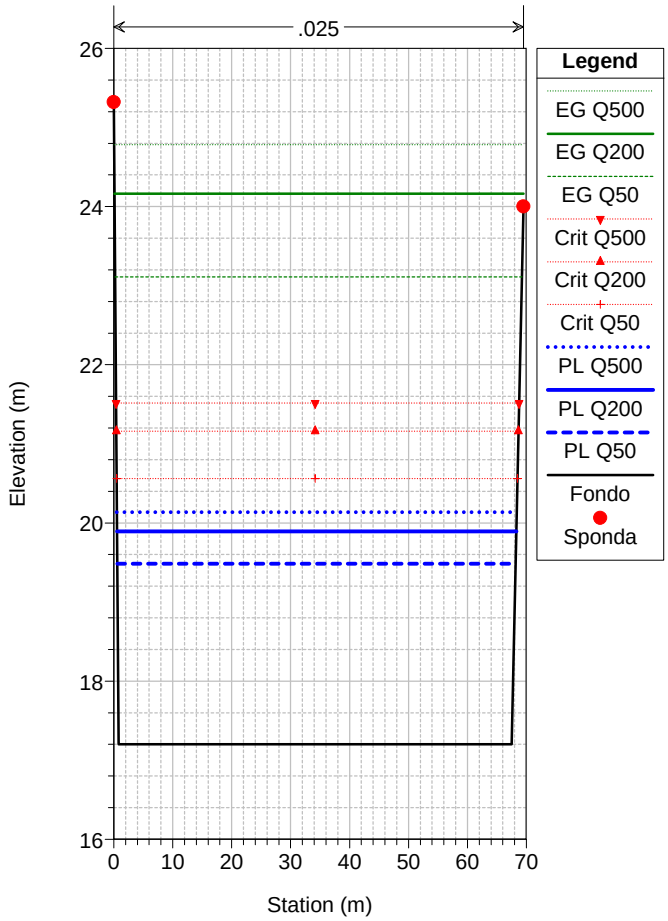
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



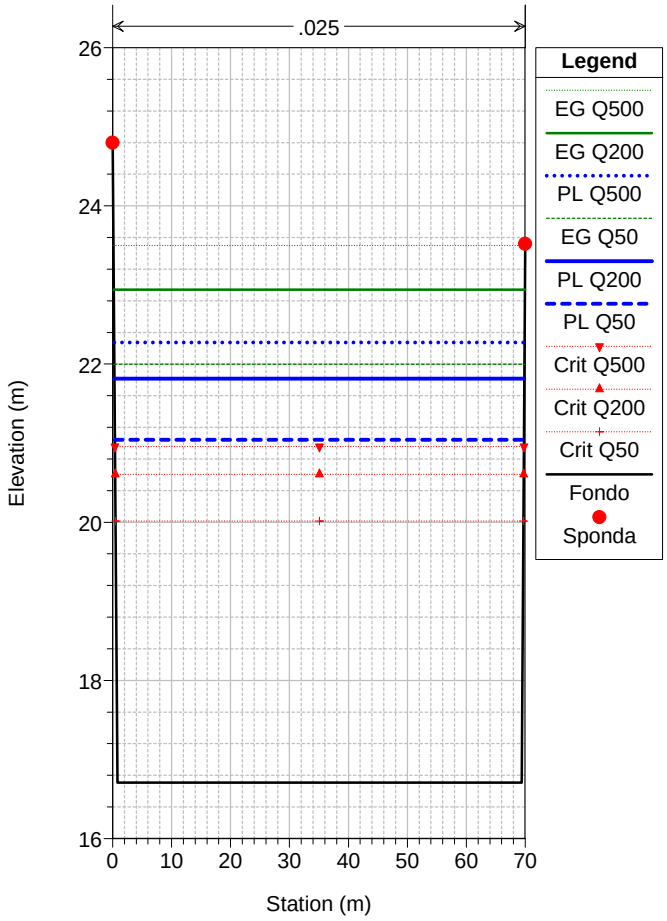
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-48



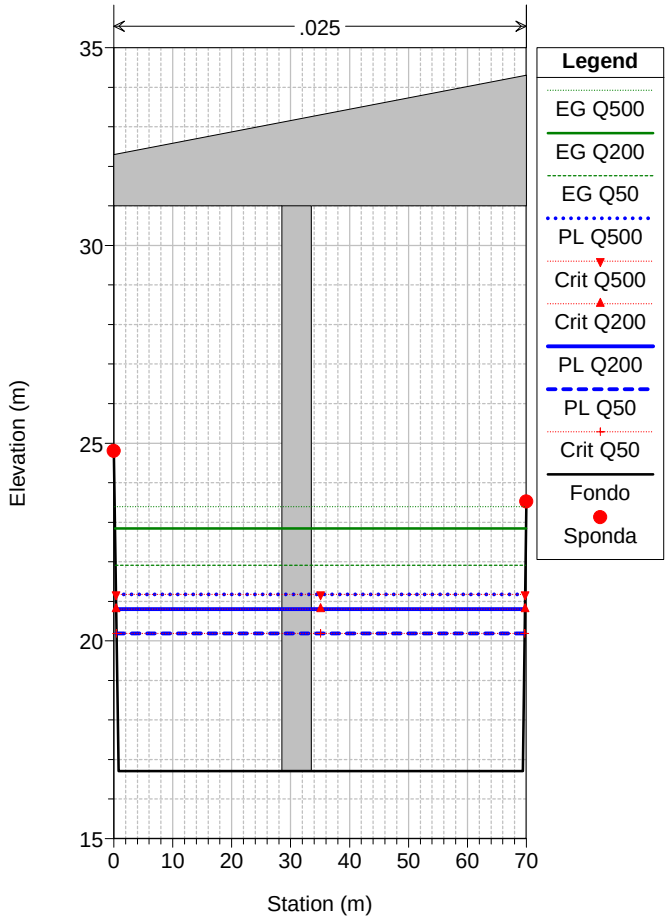
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-47



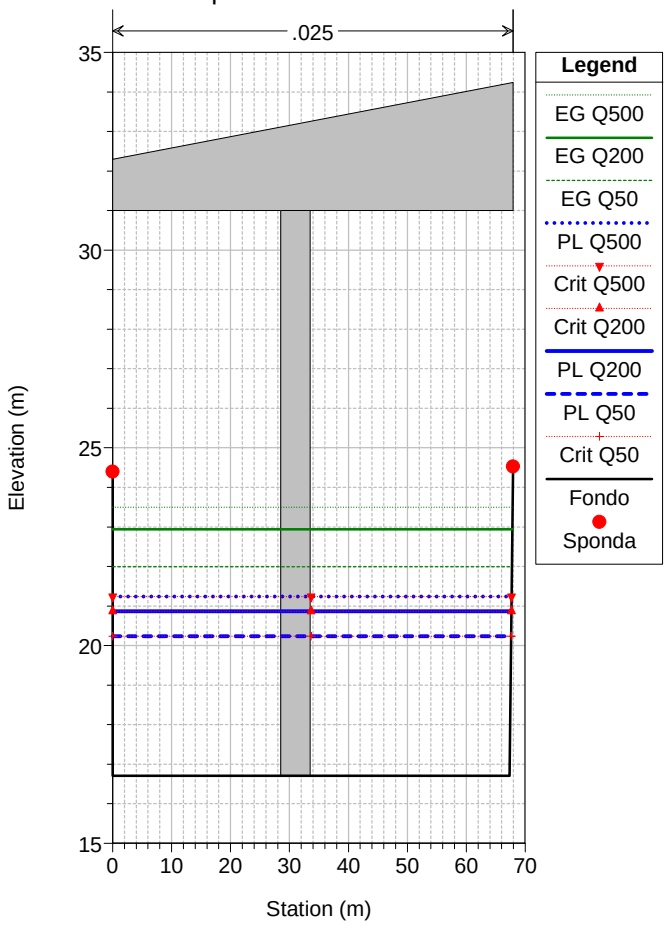
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



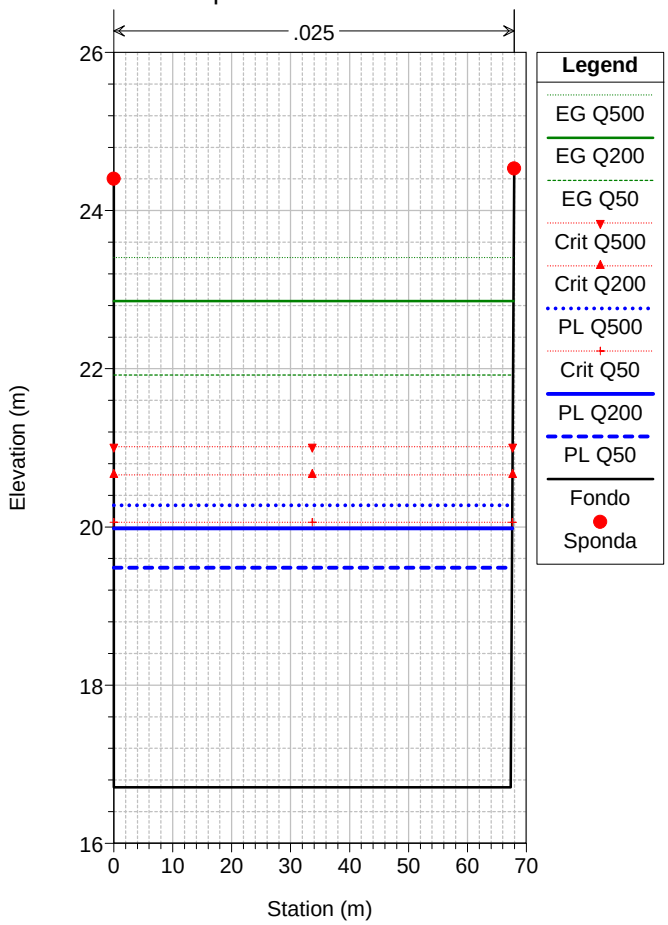
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



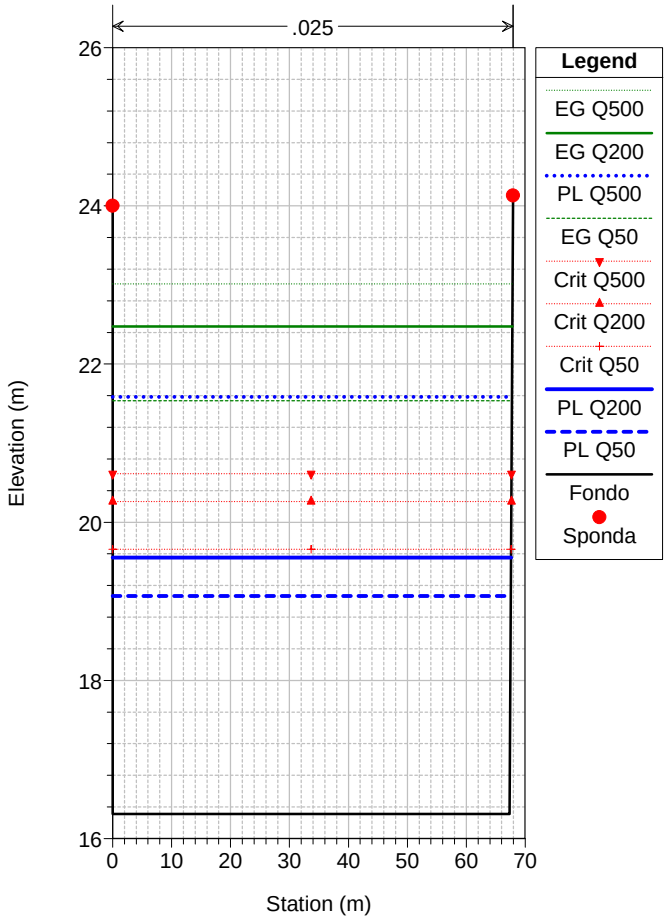
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



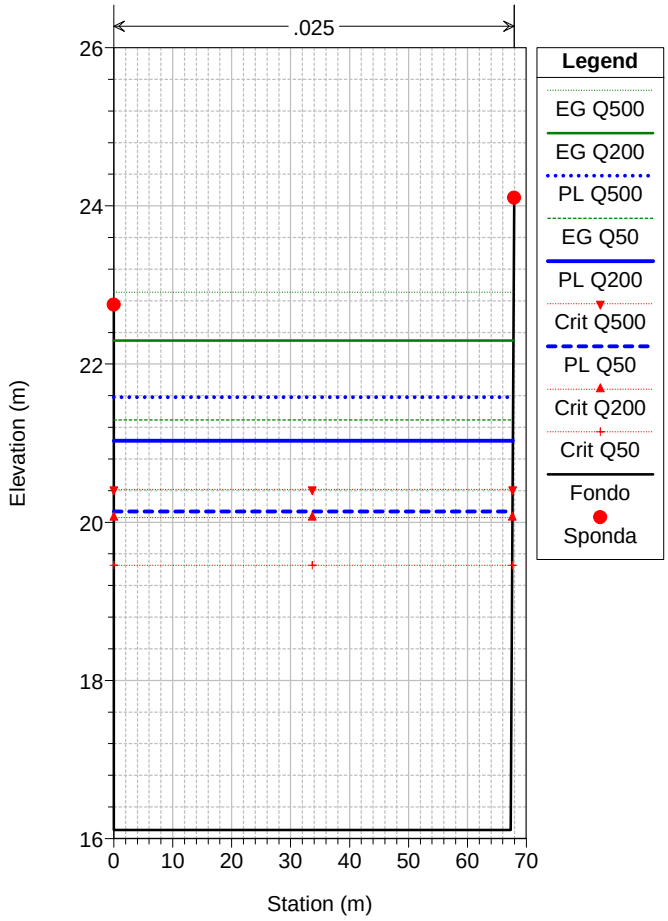
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-46



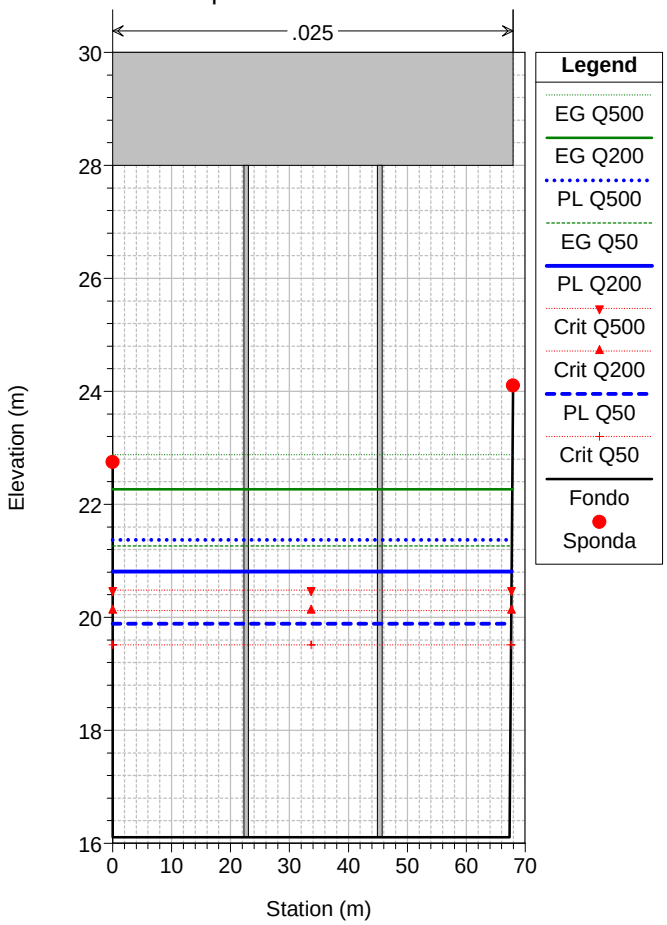
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-45



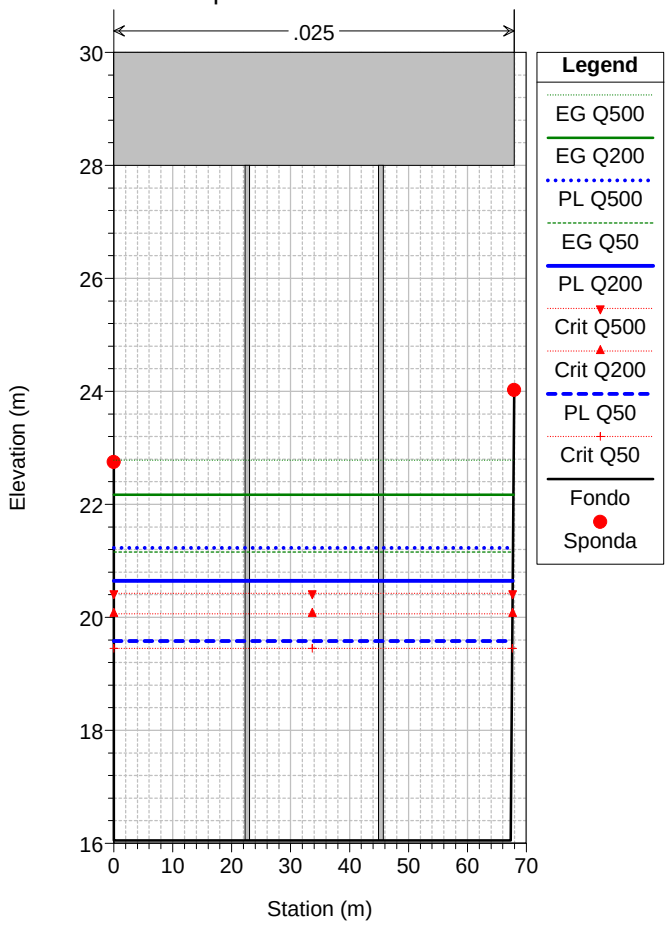
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



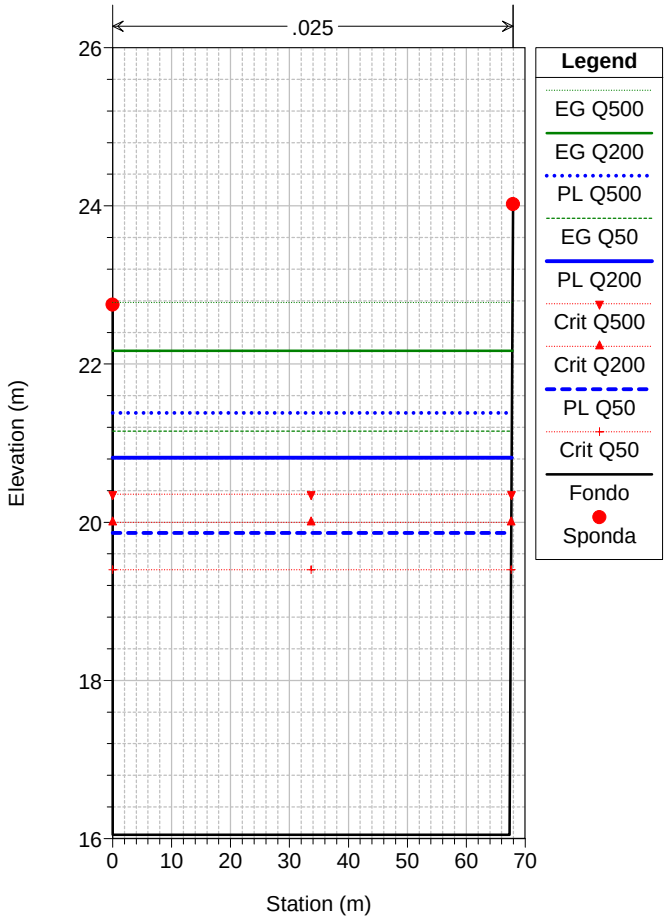
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



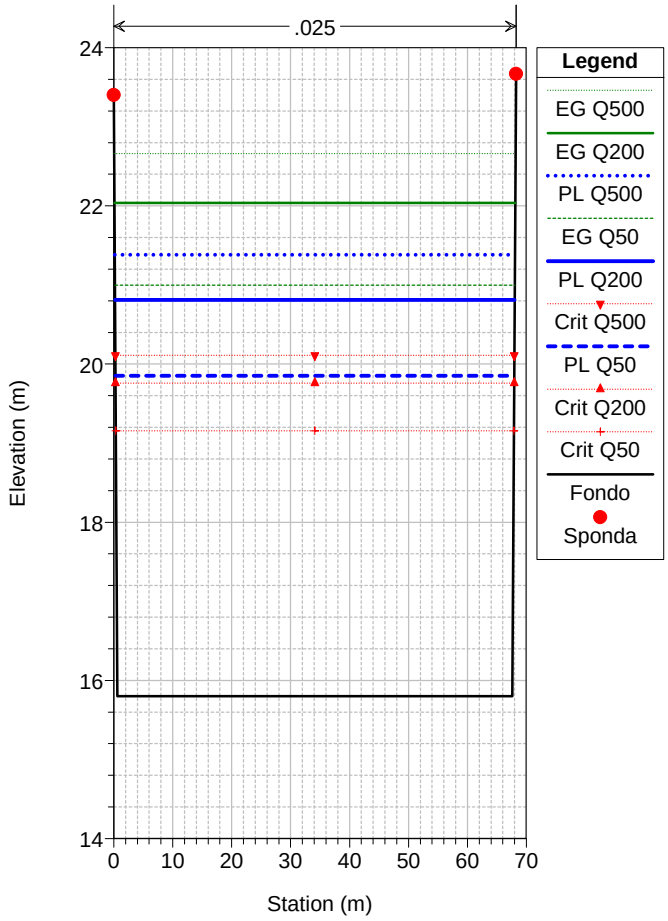
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL44



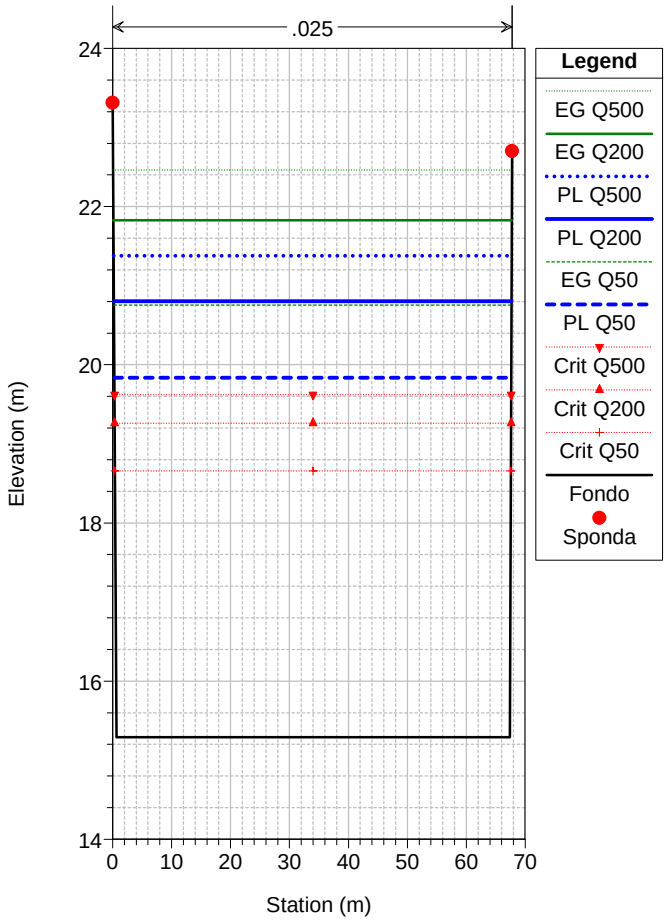
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-43



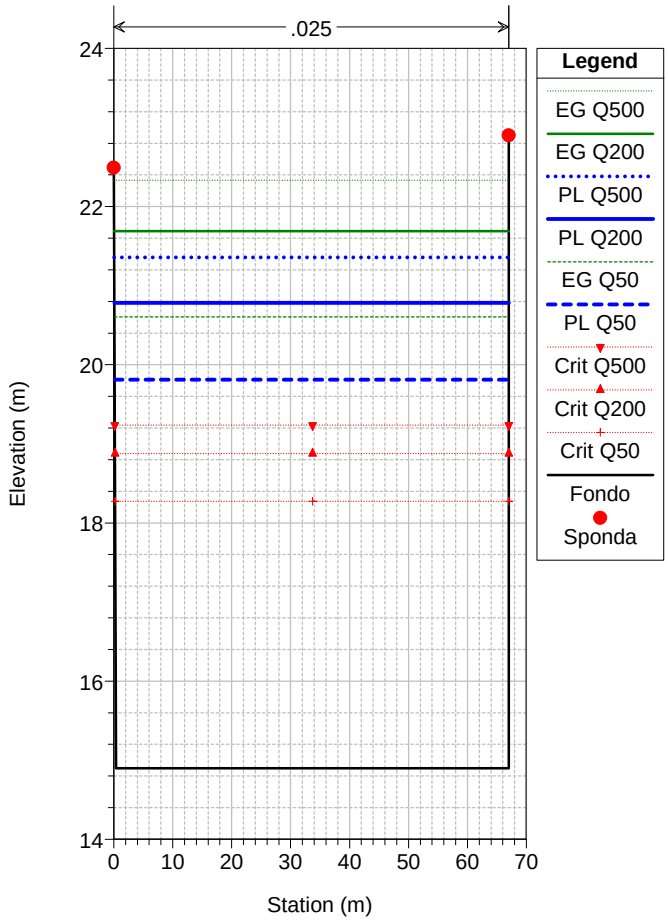
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-42



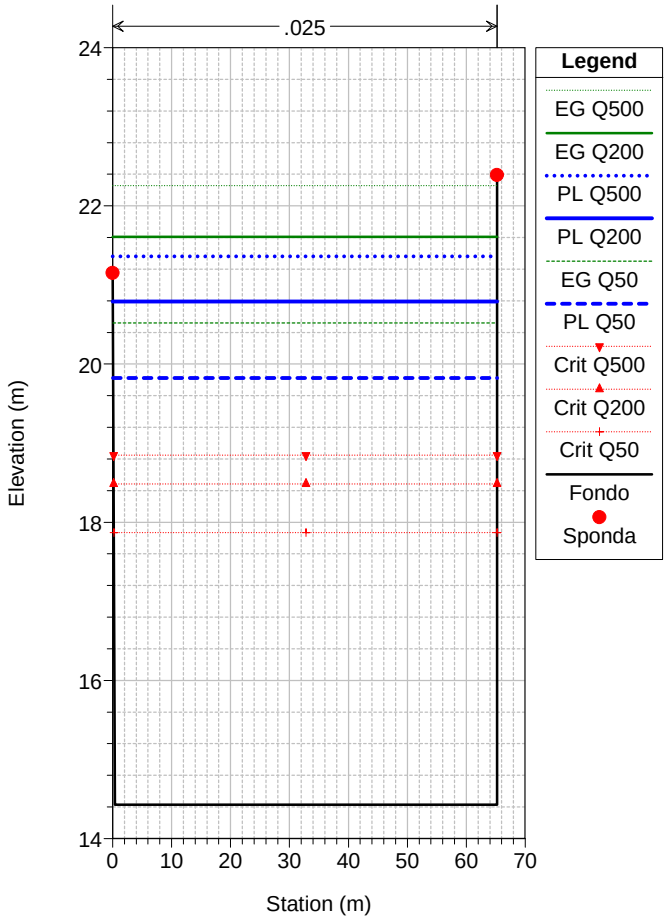
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-41



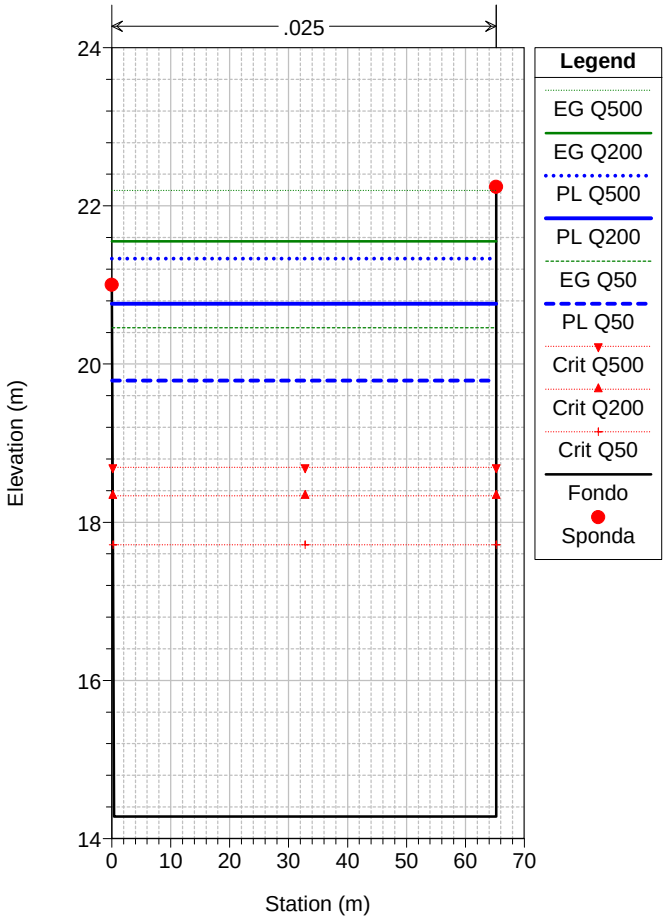
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-40



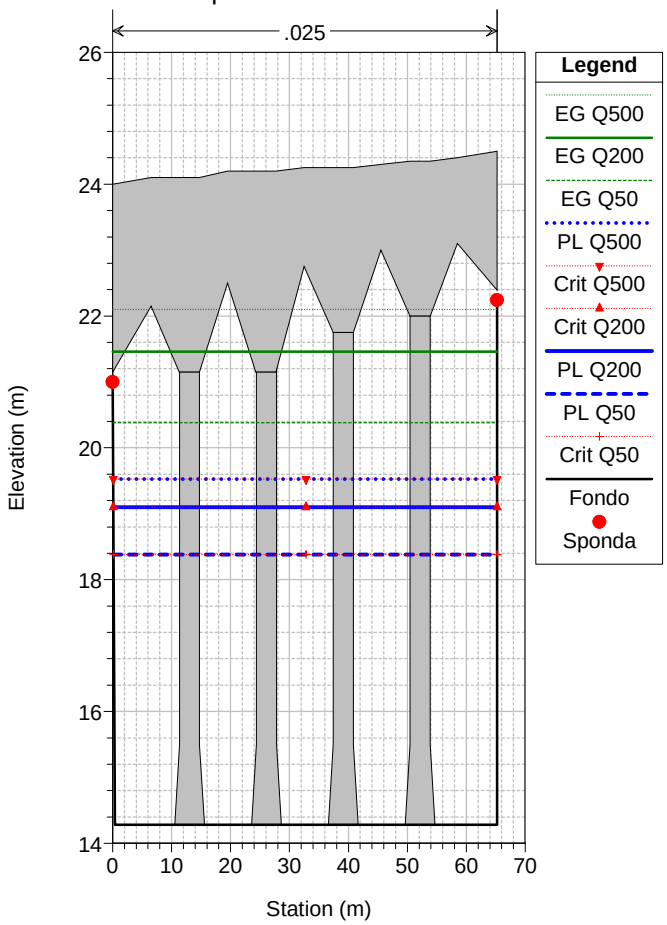
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-39



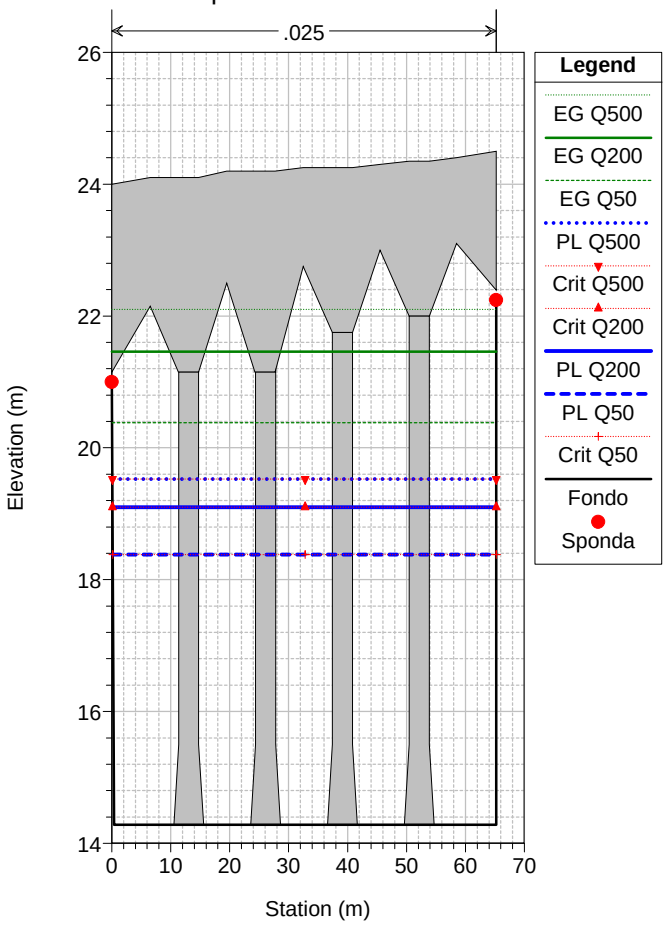
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



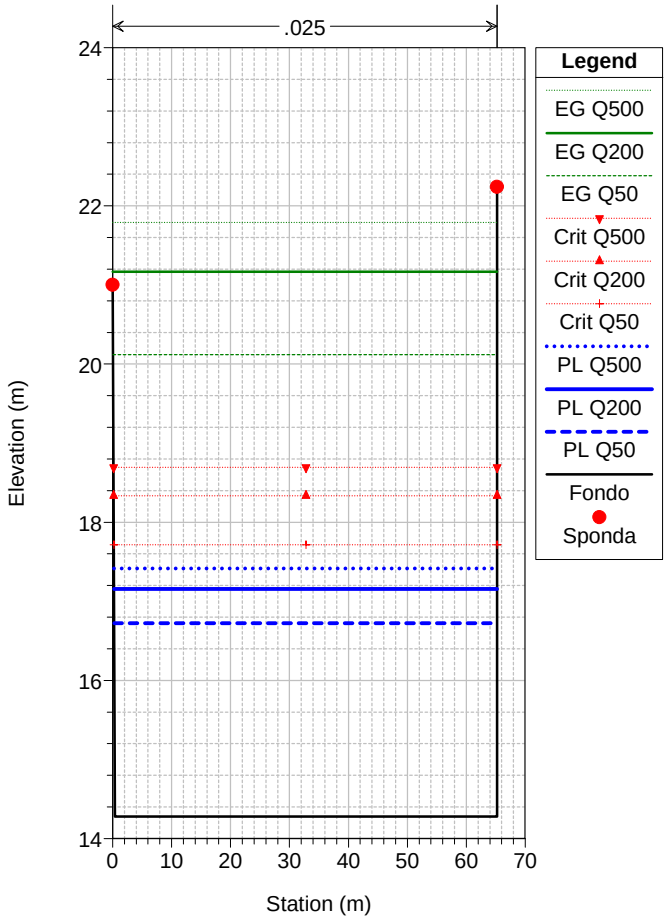
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



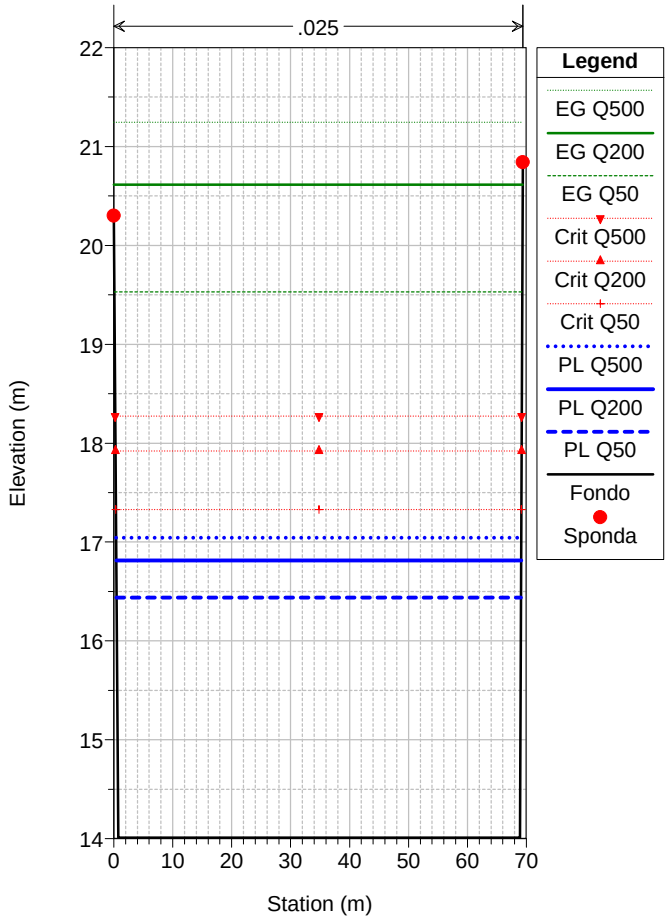
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-38



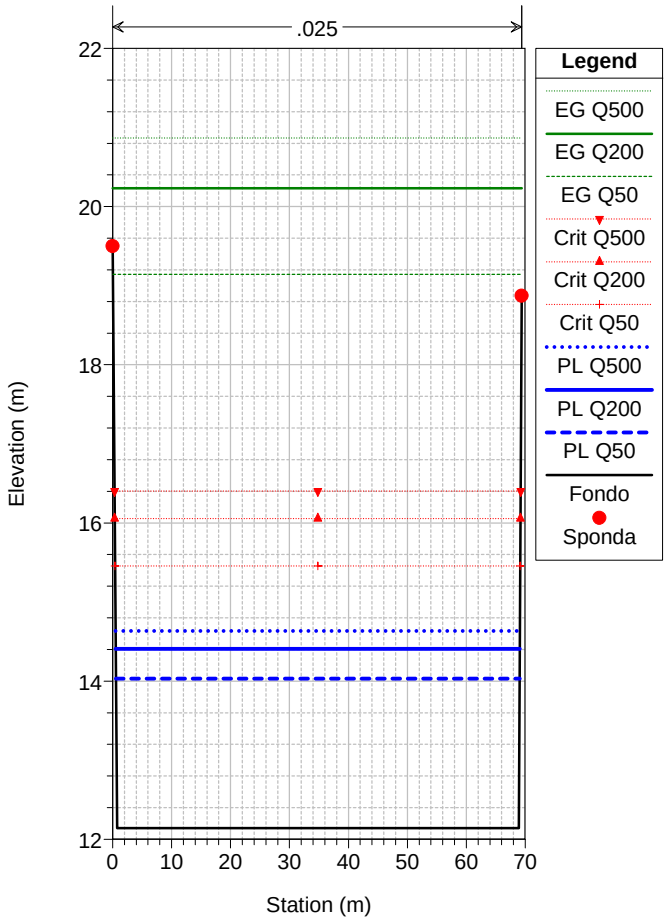
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-37



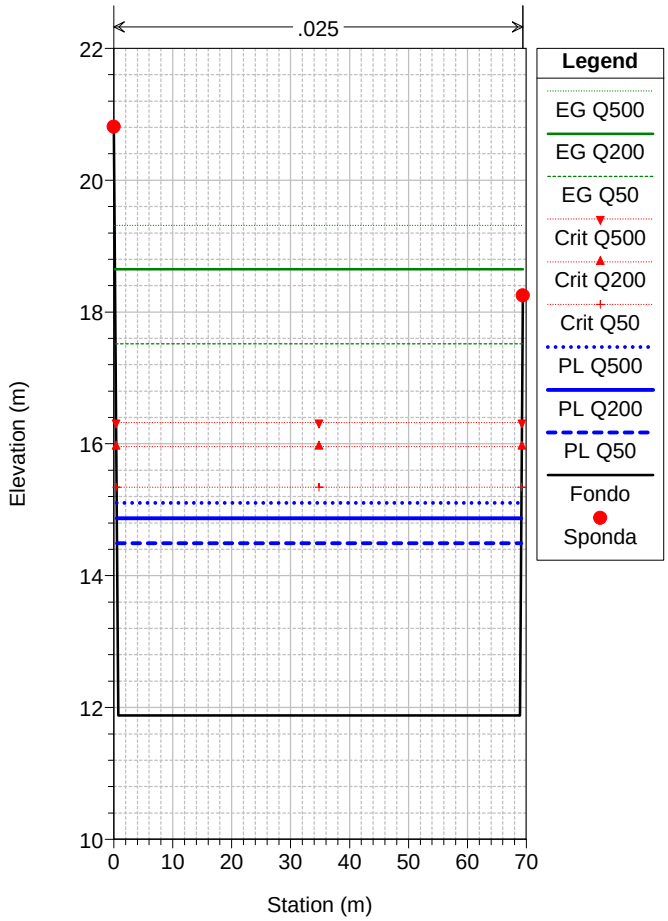
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-36



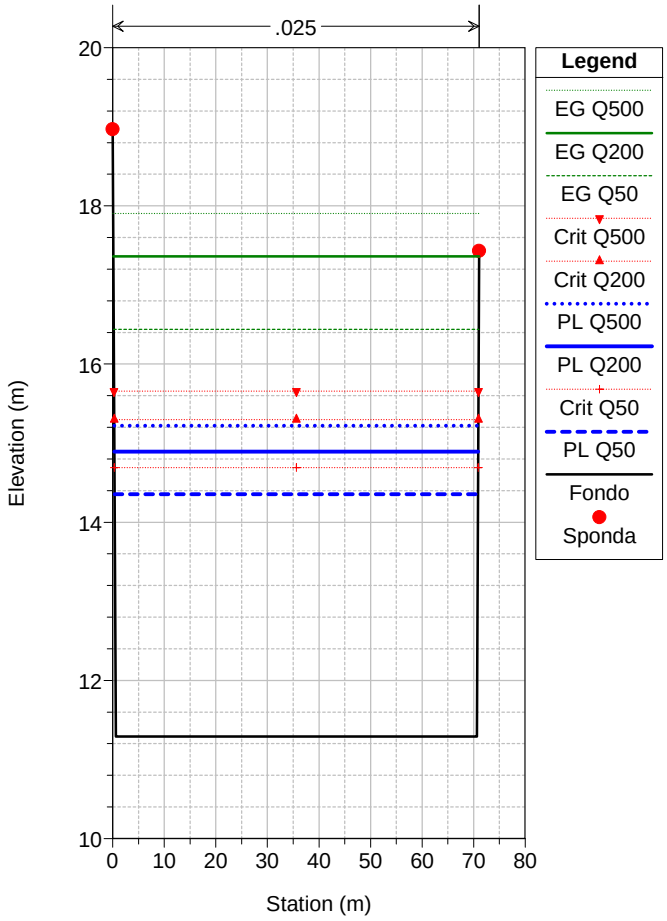
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-35



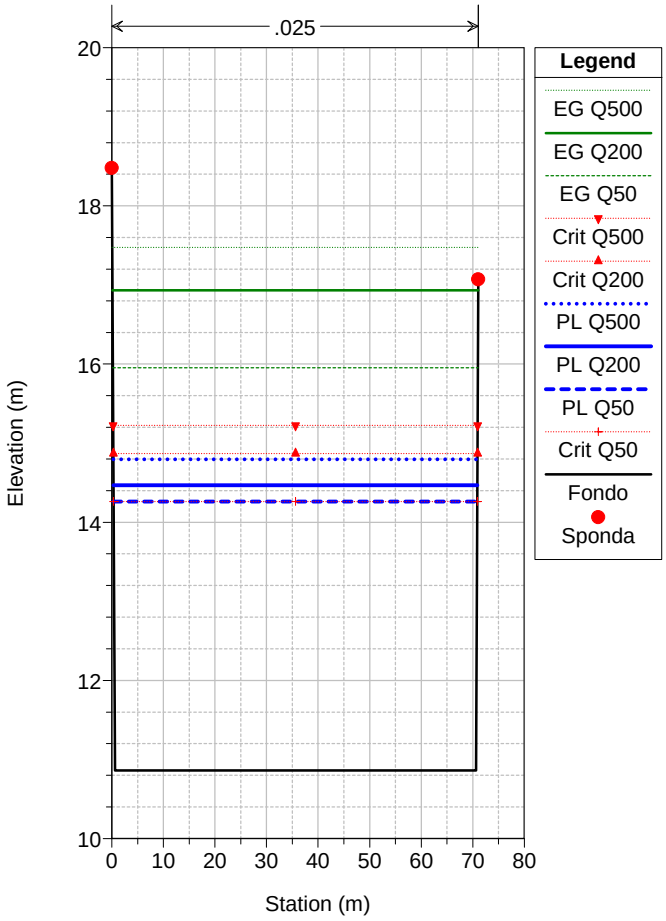
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-34



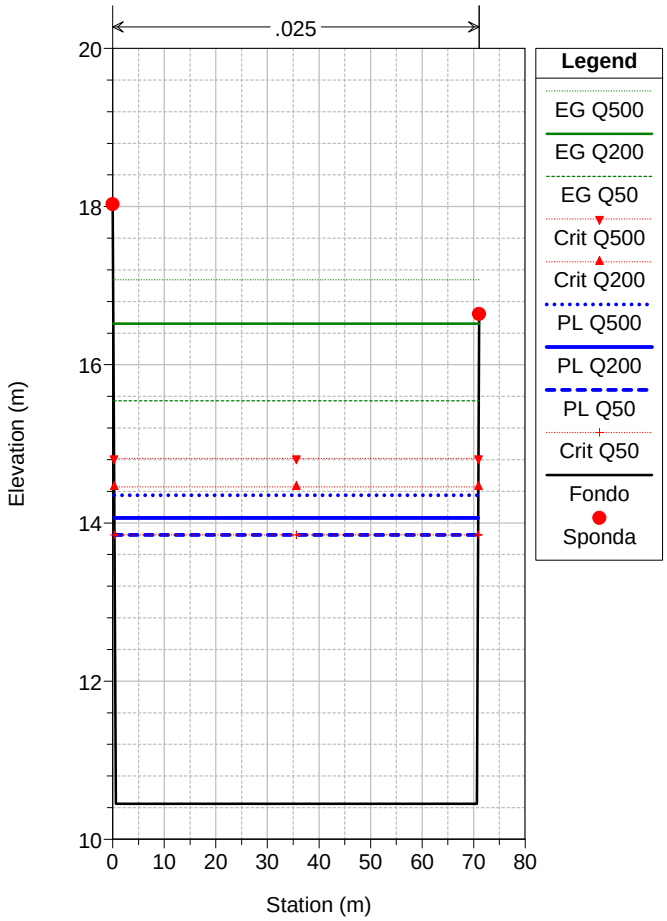
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-33



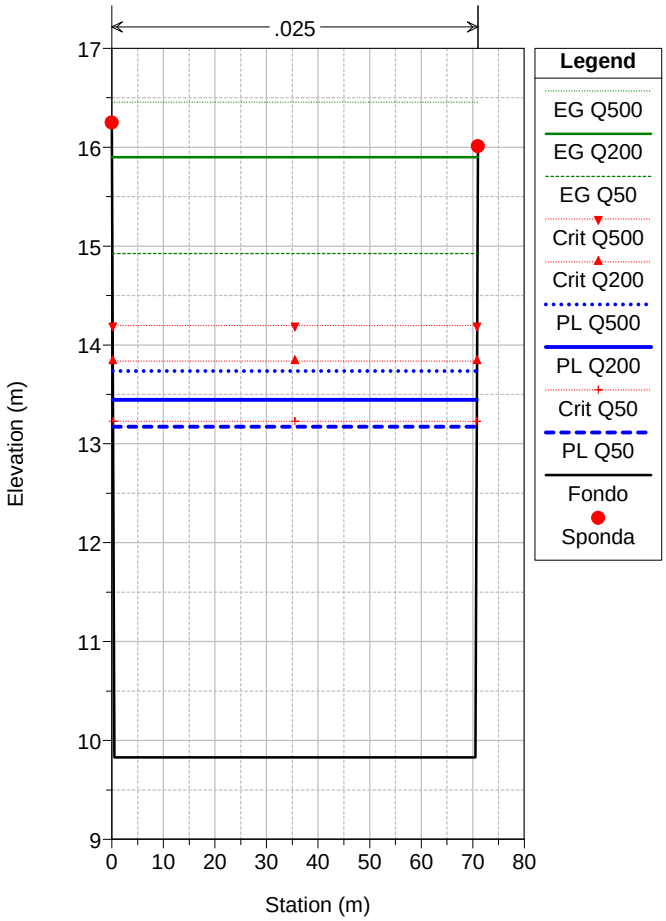
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-32



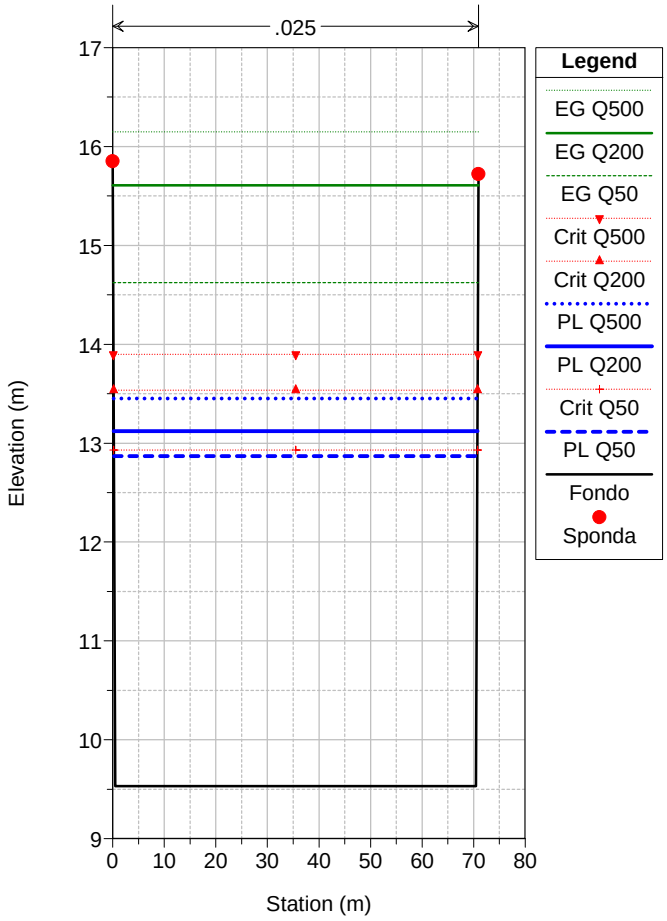
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-31



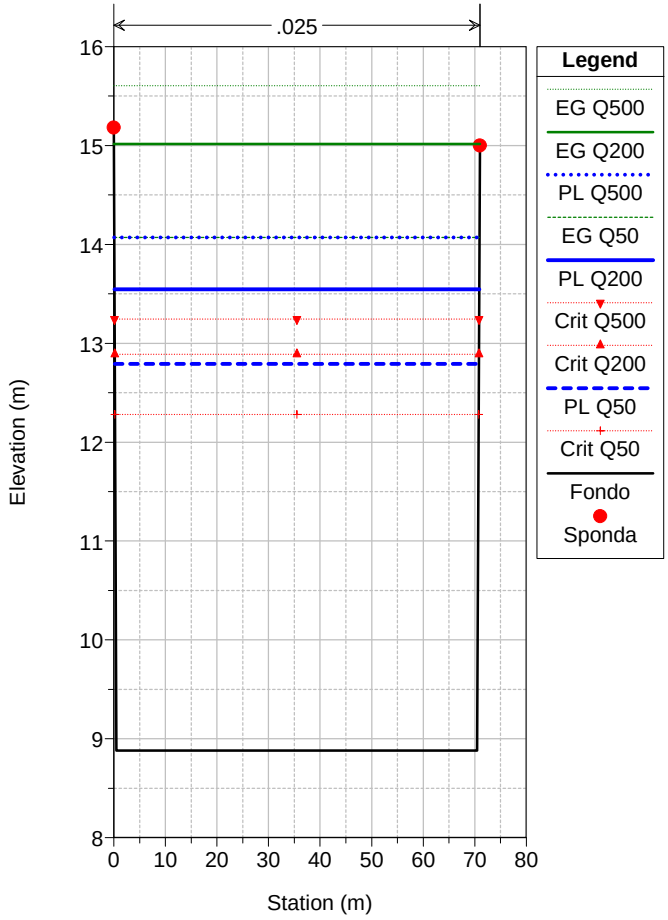
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-30



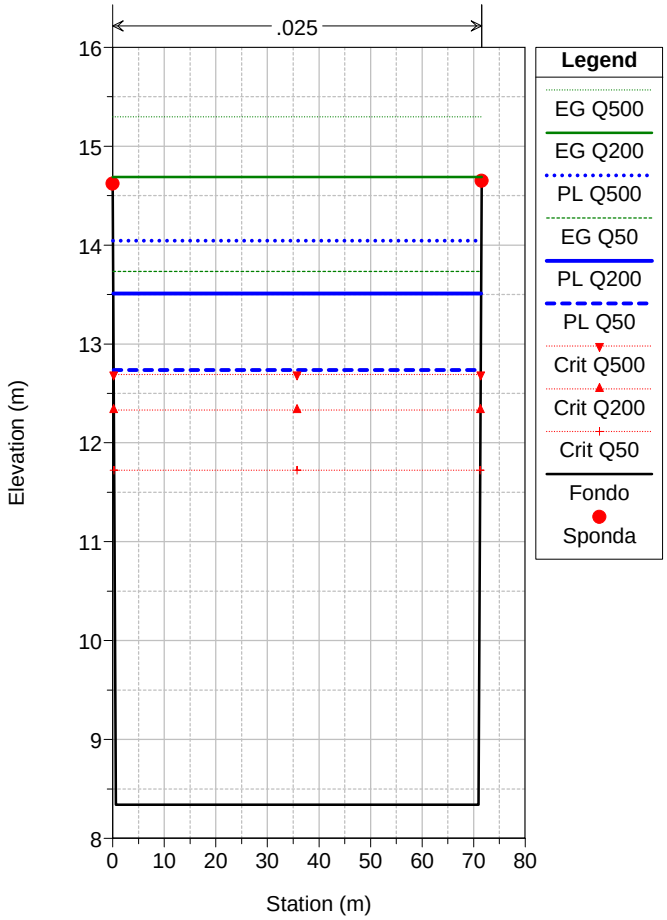
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-29



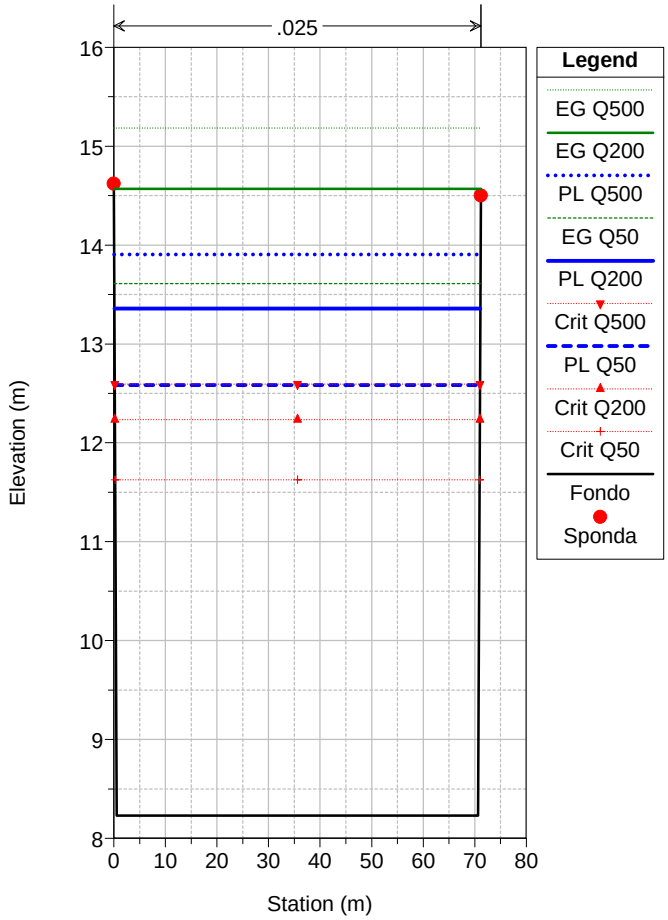
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-28



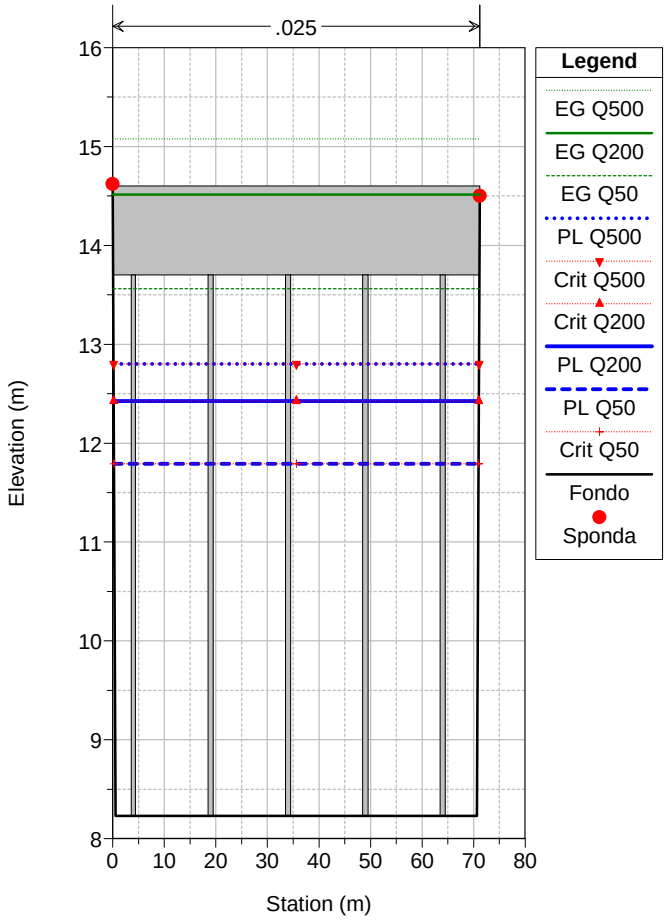
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-27.9



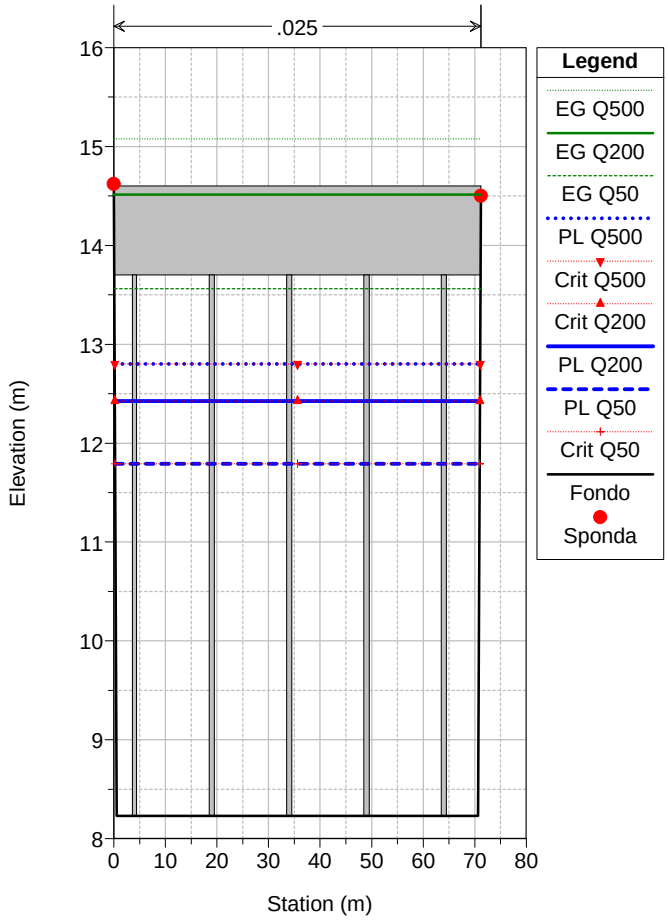
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



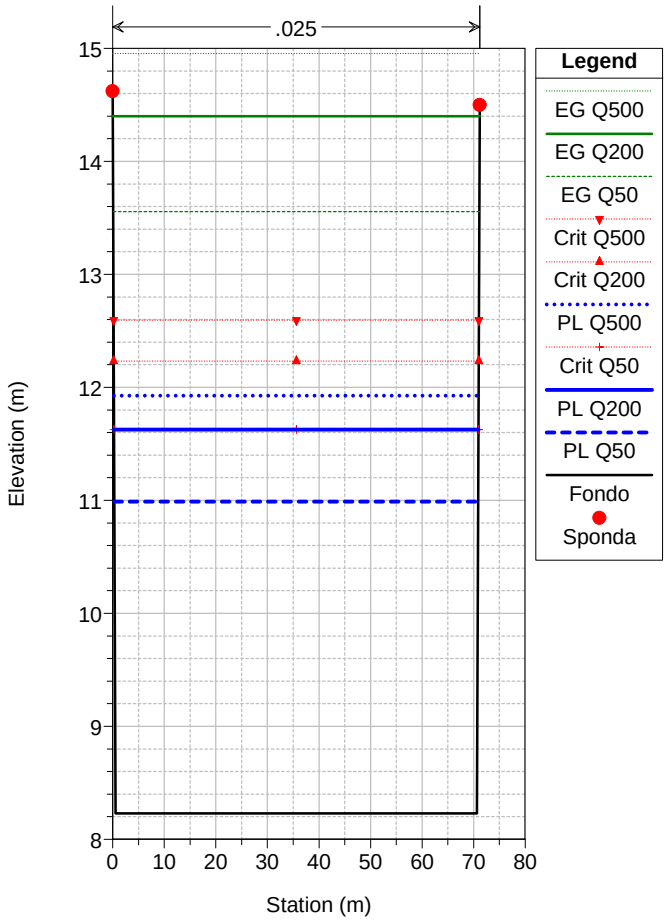
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



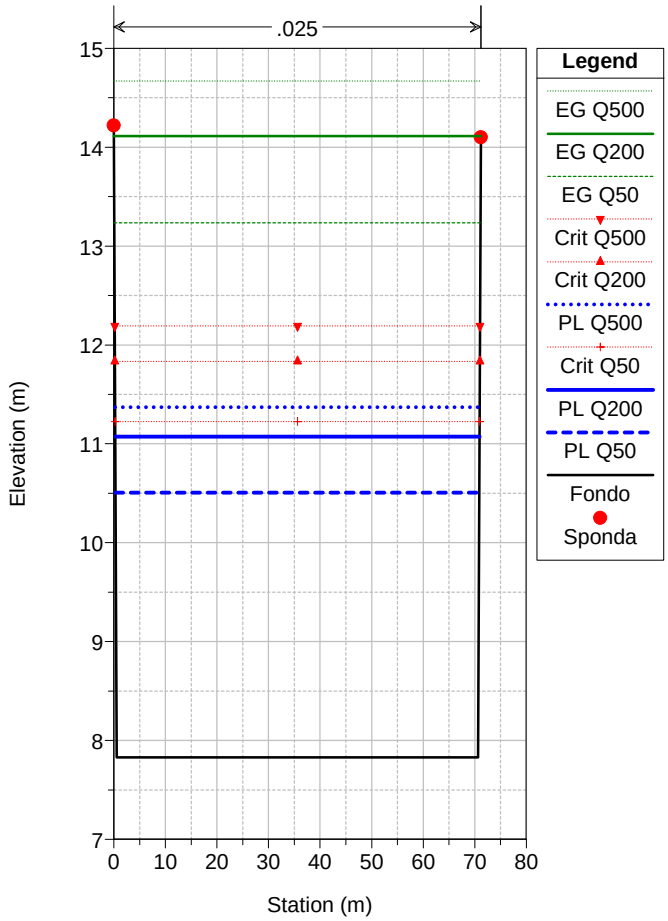
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-27.5



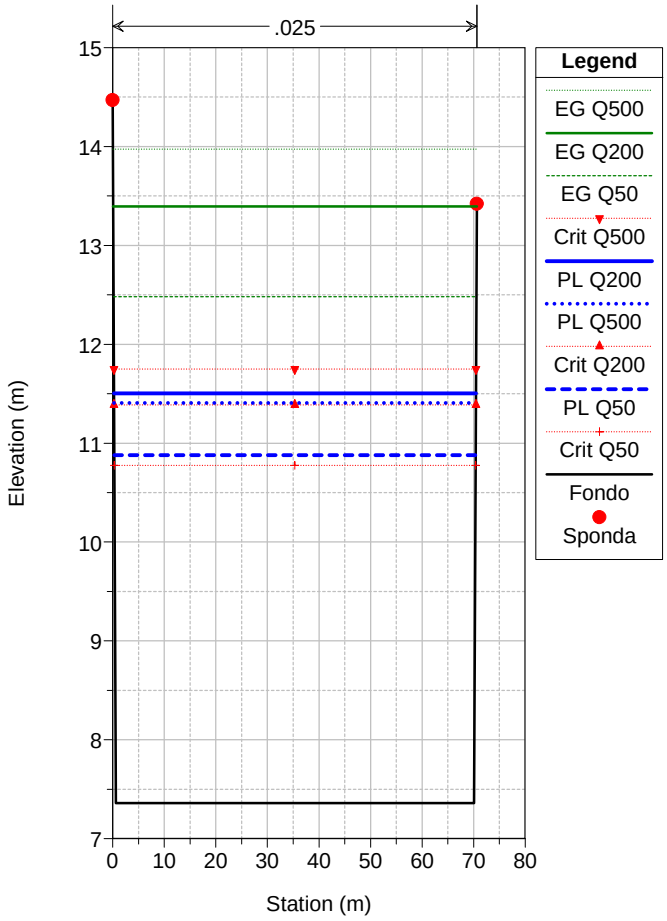
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-27



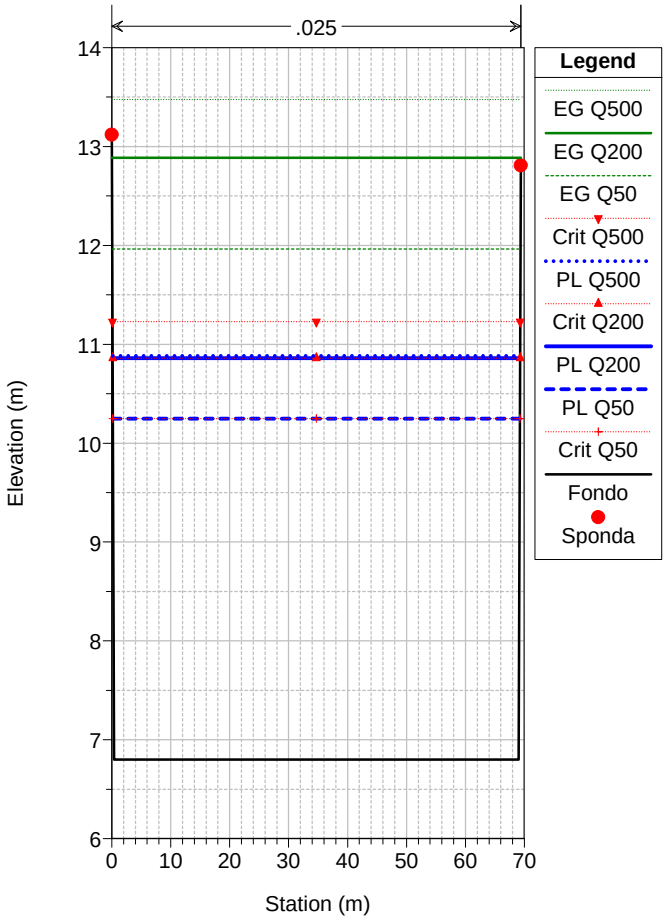
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-26



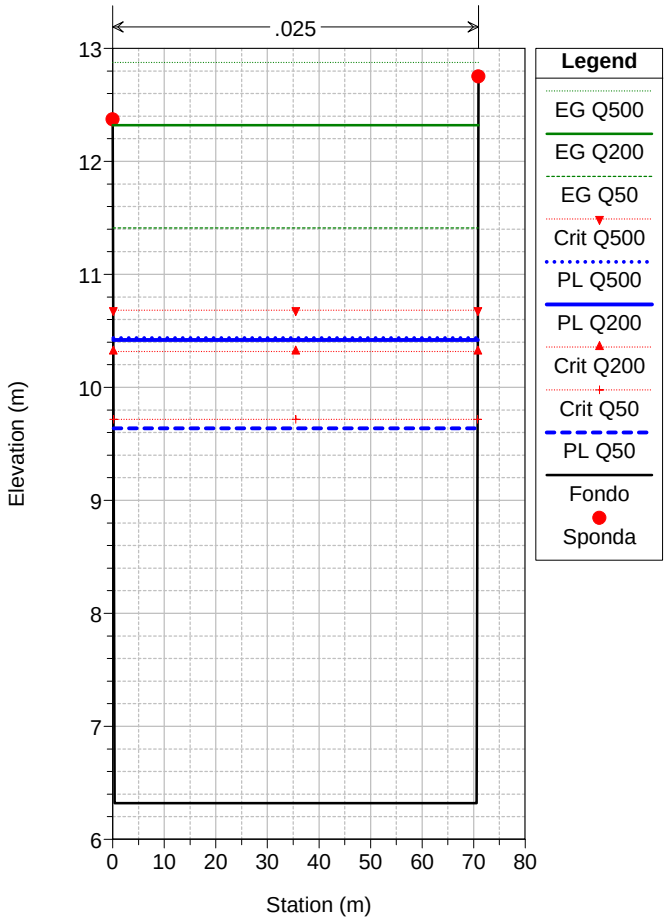
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-25



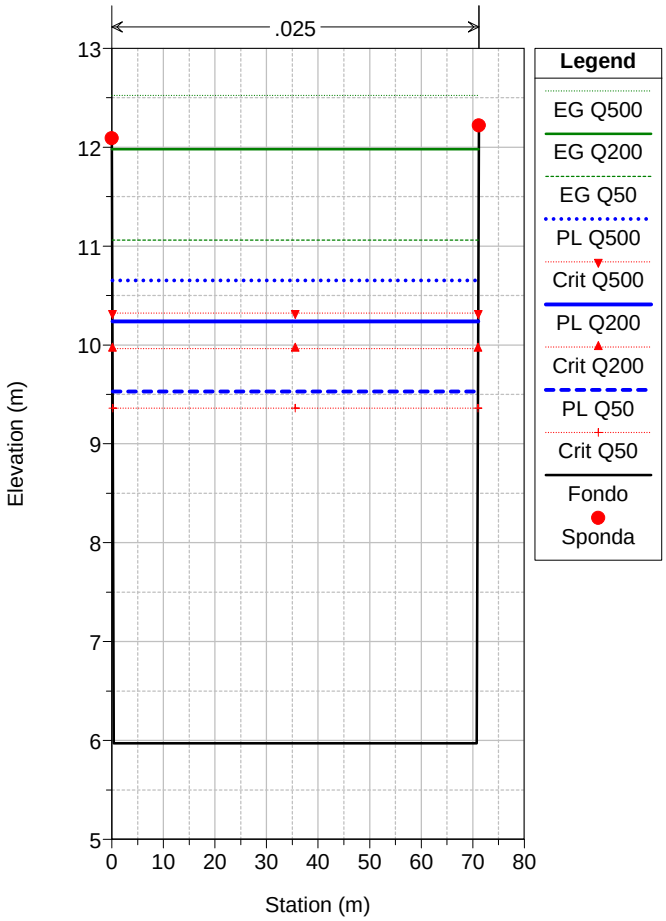
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-24



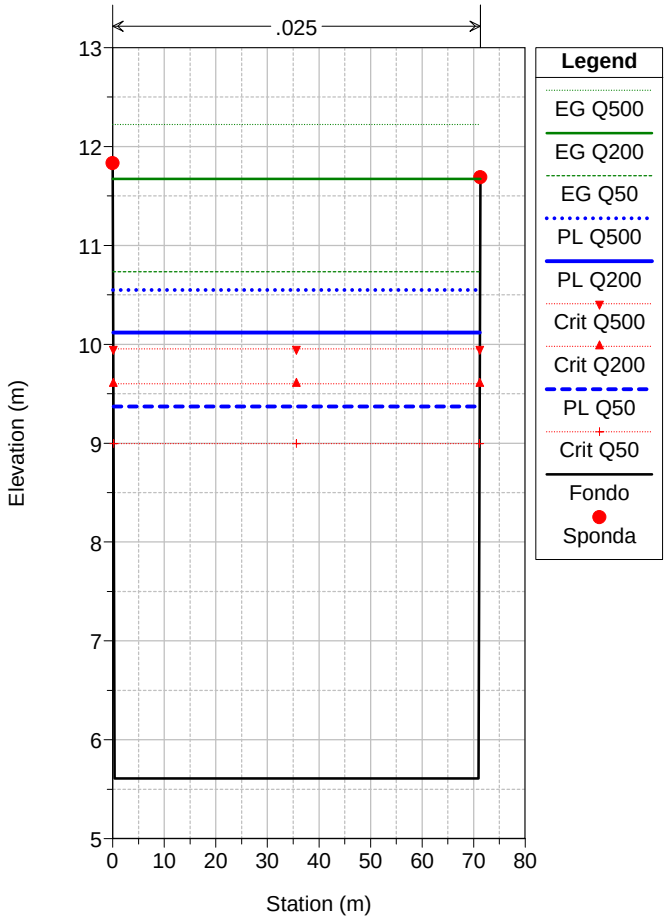
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-23



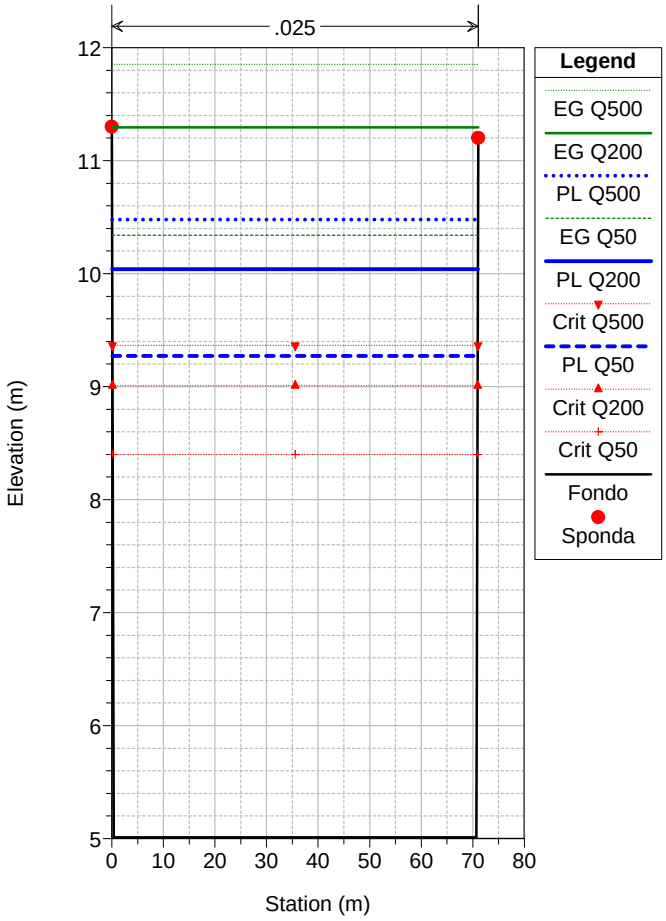
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-22



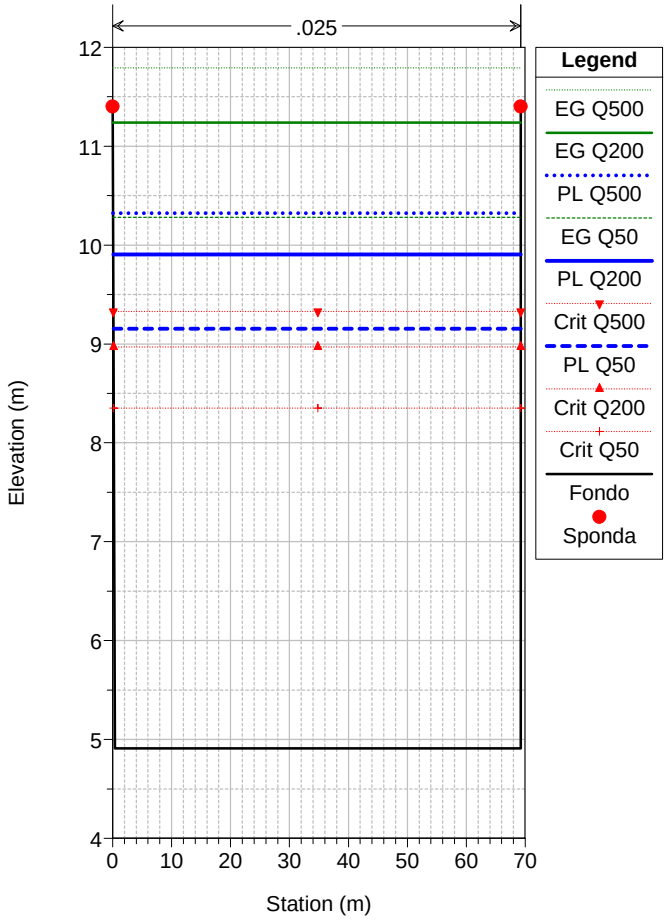
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-21



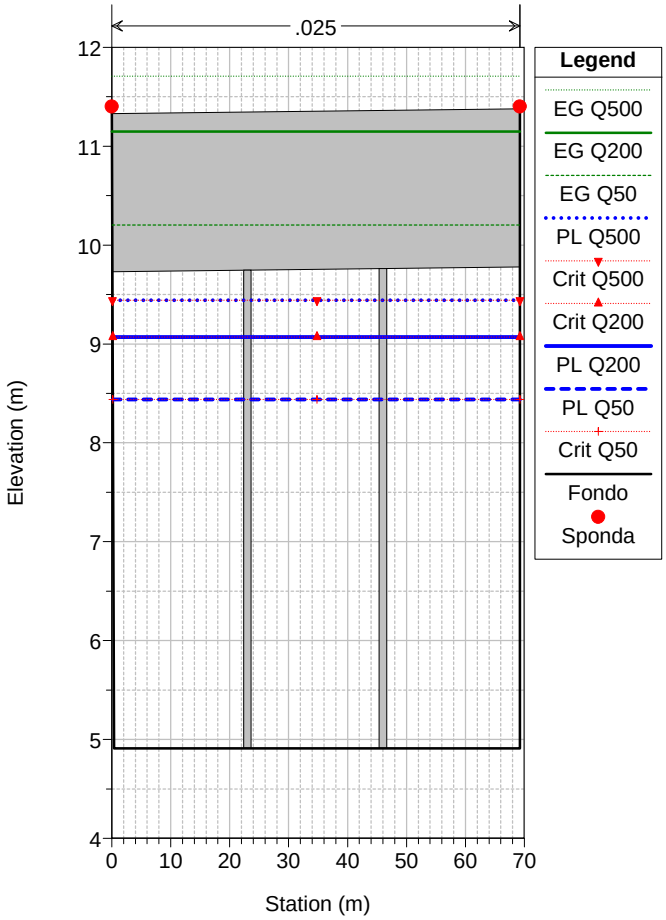
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-20.8



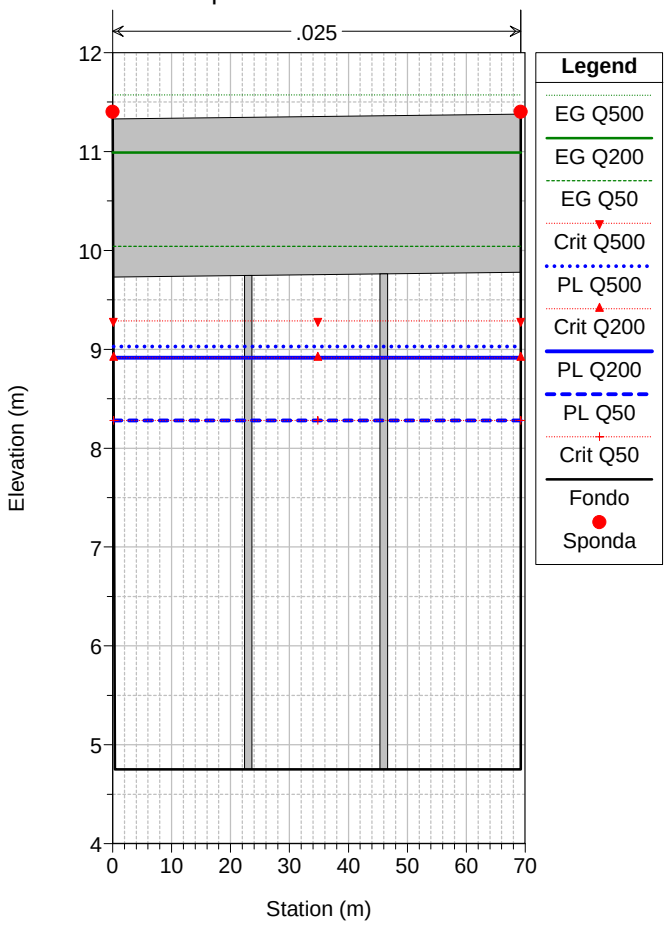
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



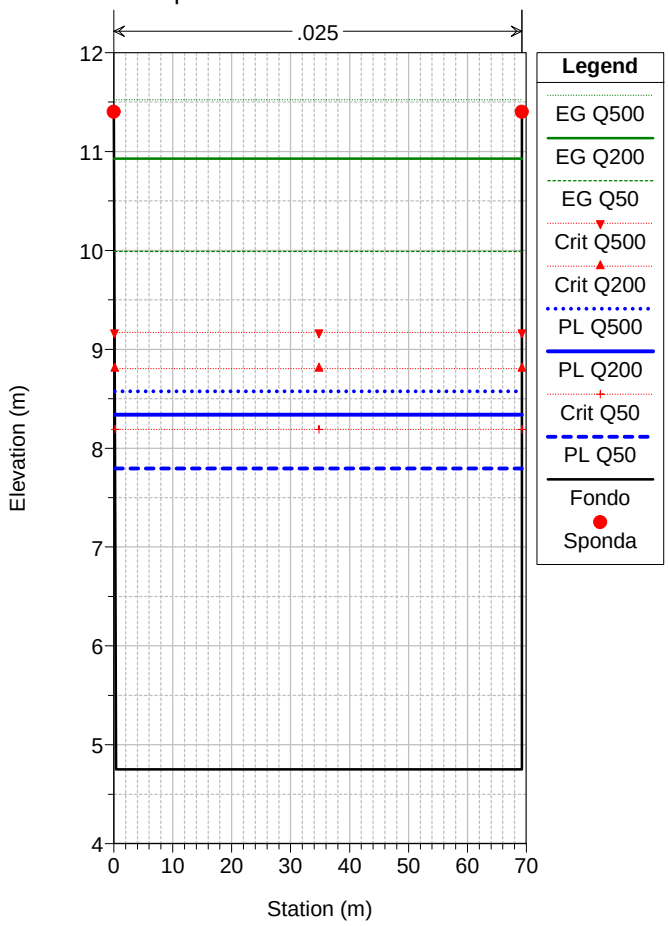
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle



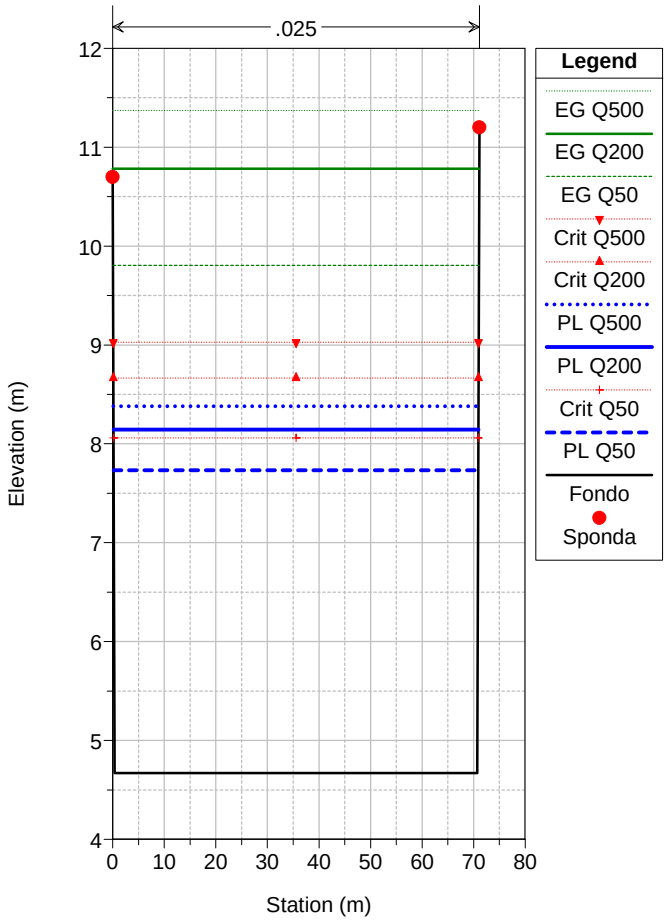
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-20



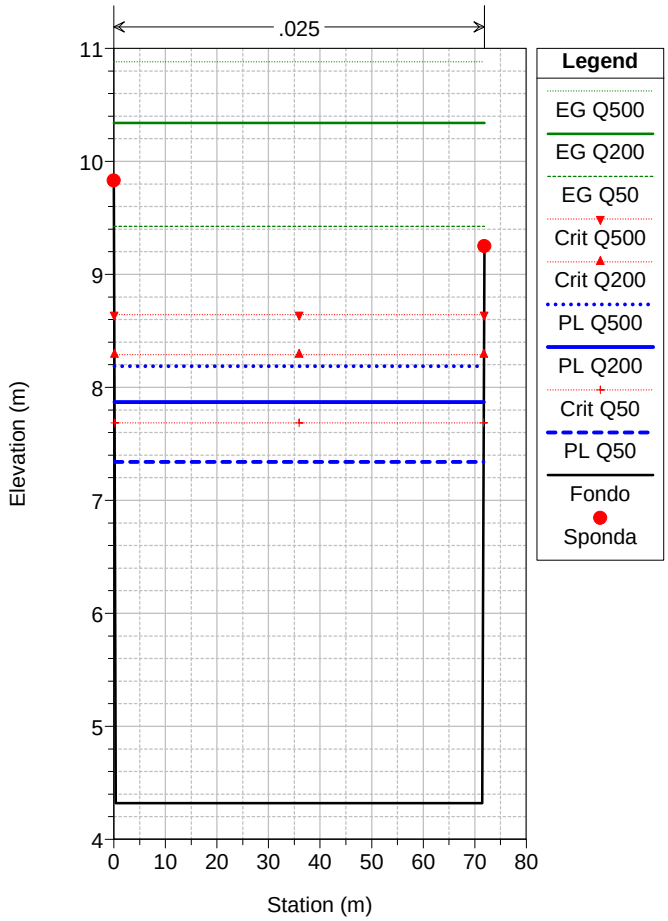
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-19



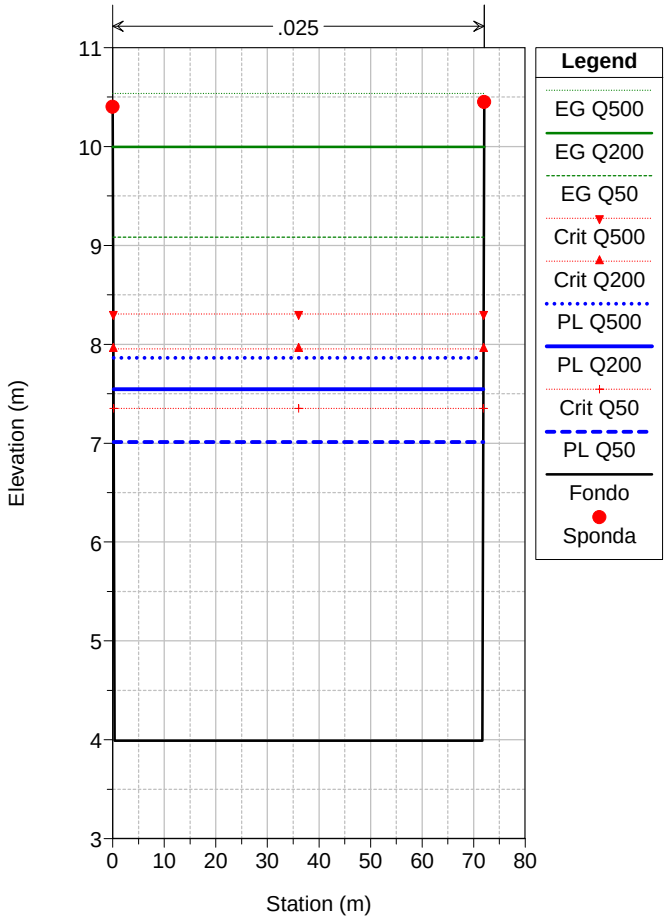
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-18



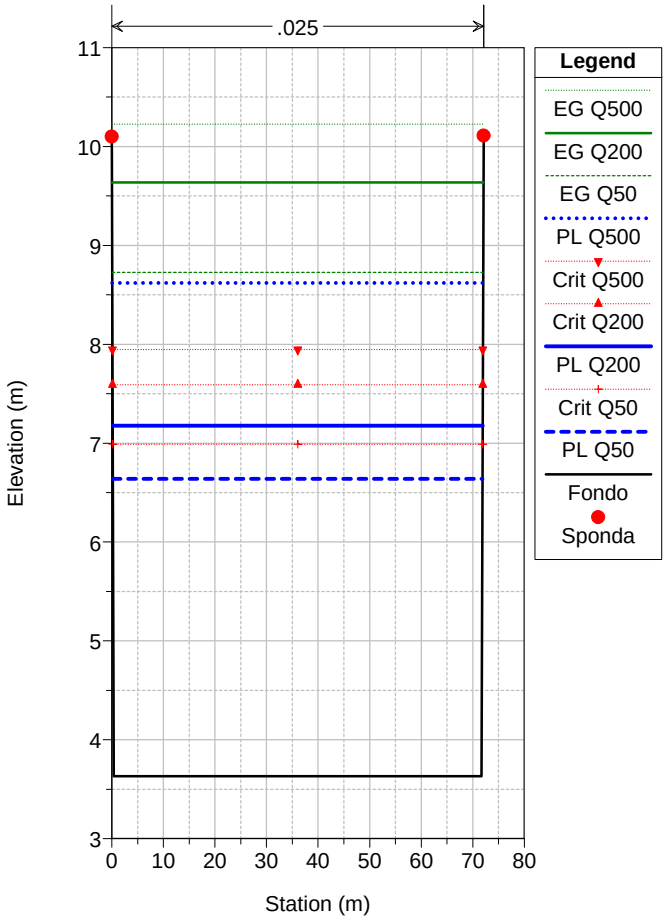
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-17



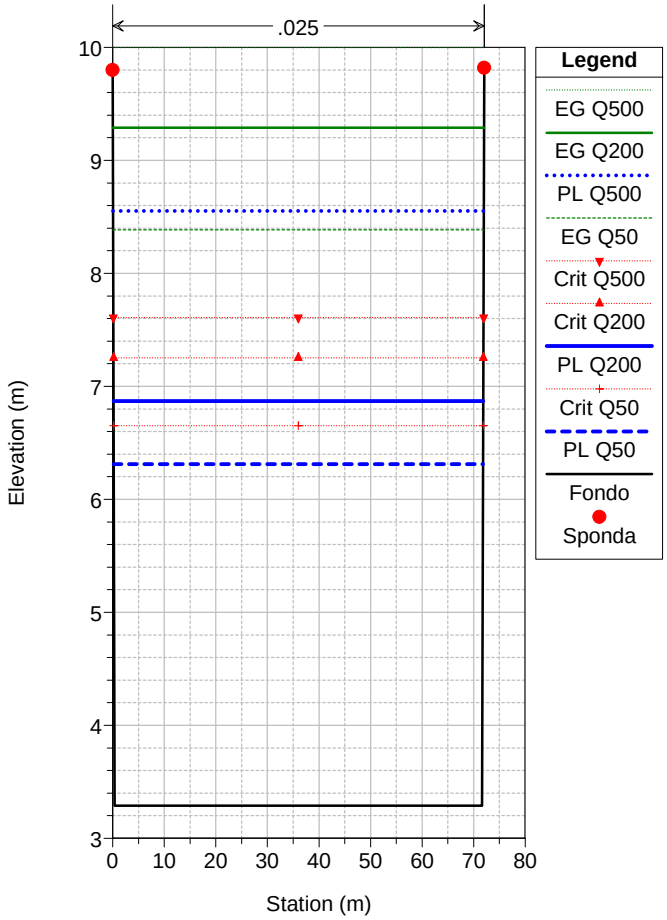
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-16



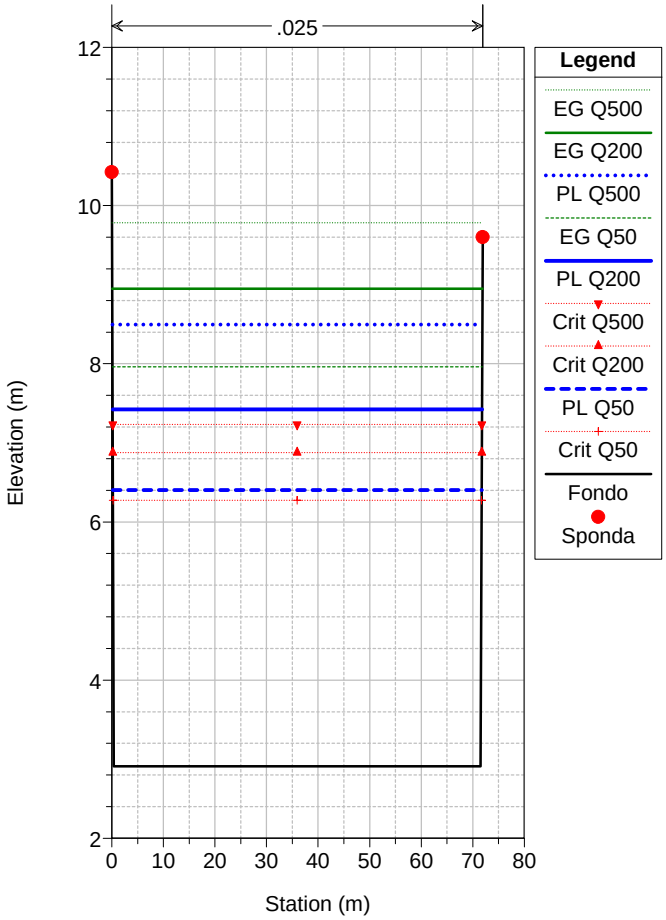
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-15



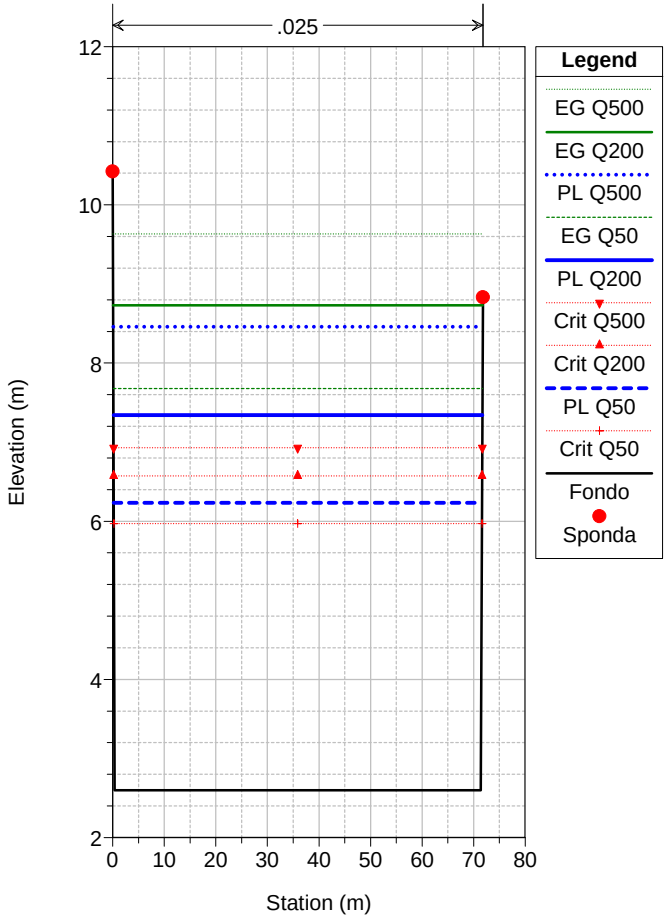
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-14



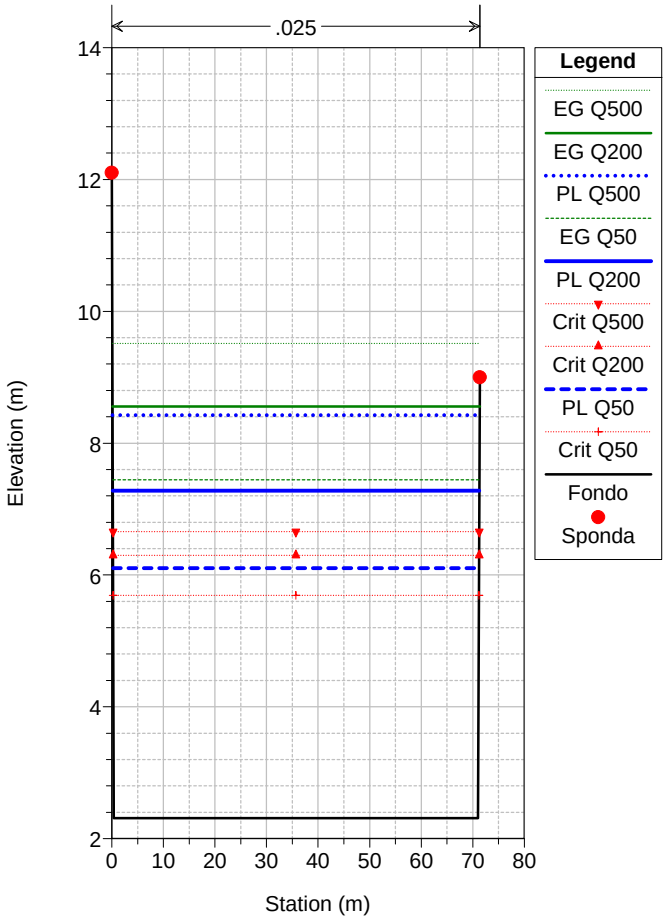
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-13



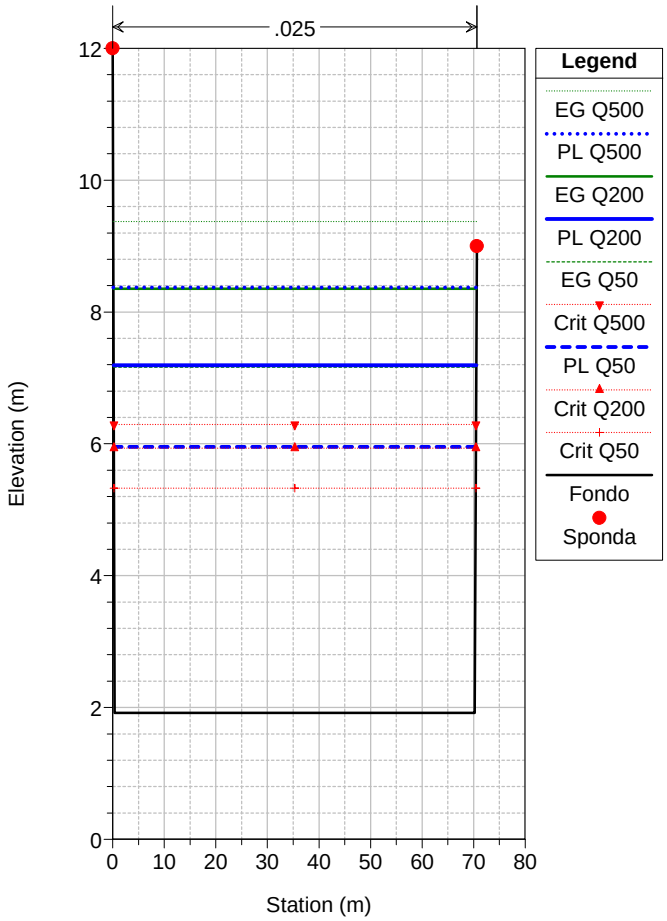
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-12



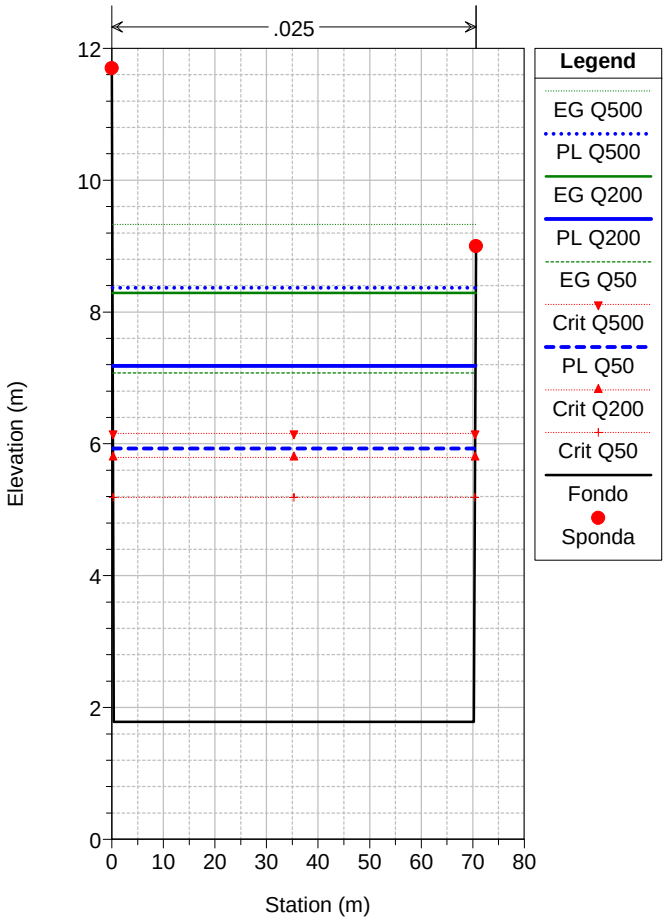
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-11



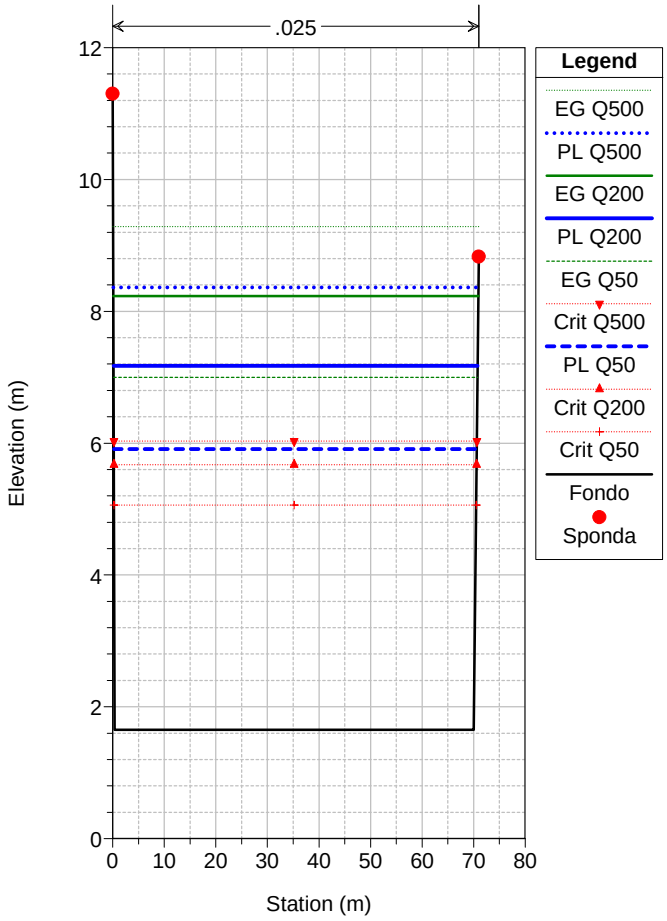
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-10



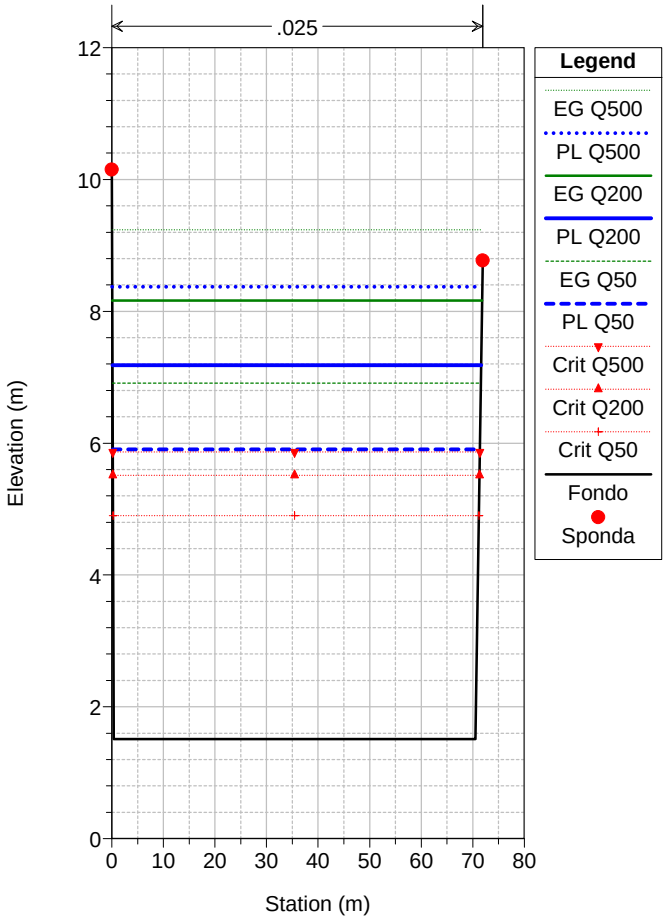
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-9



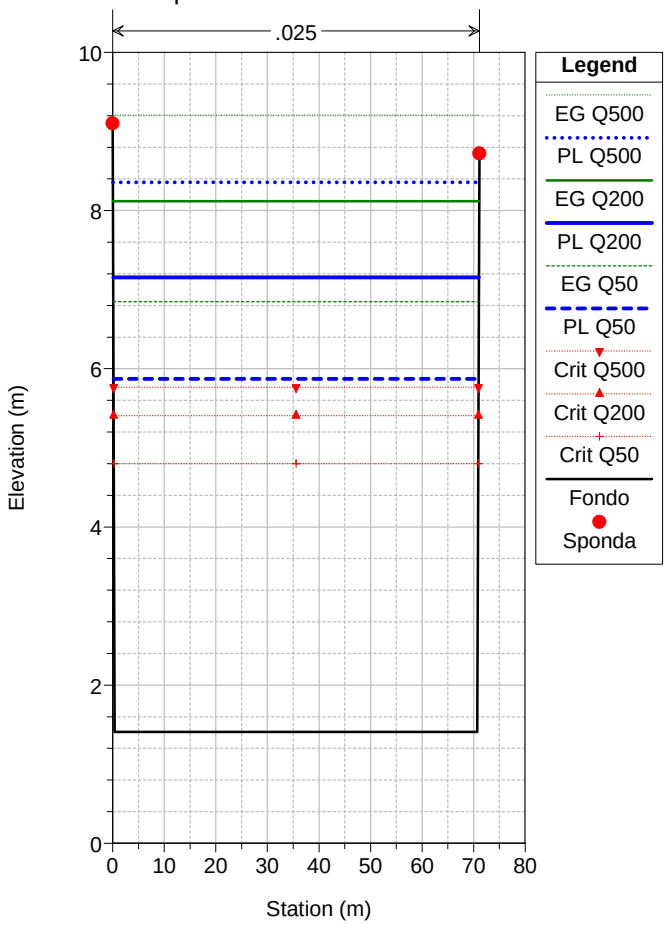
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-8



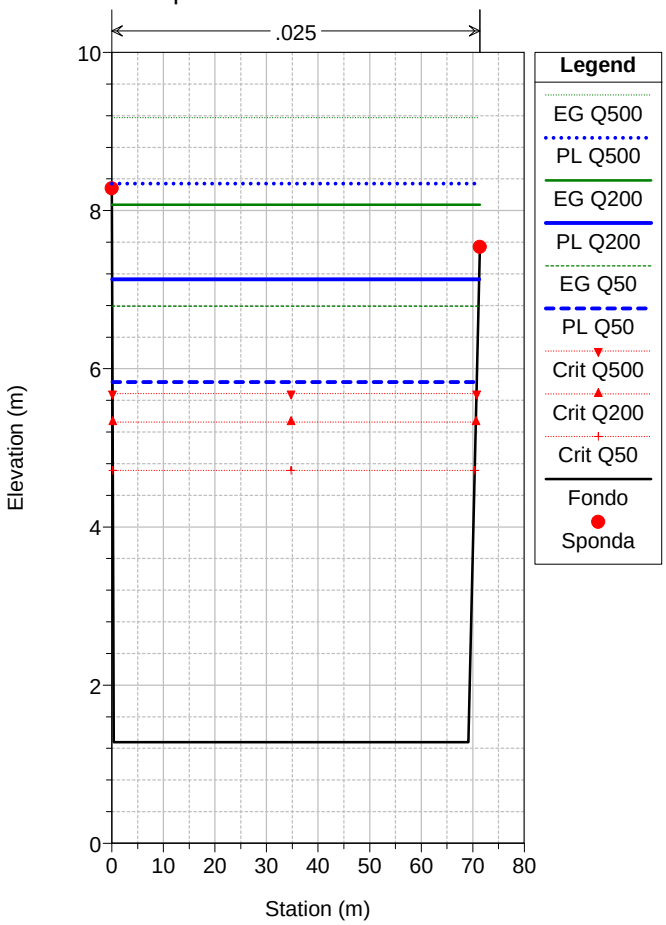
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-7



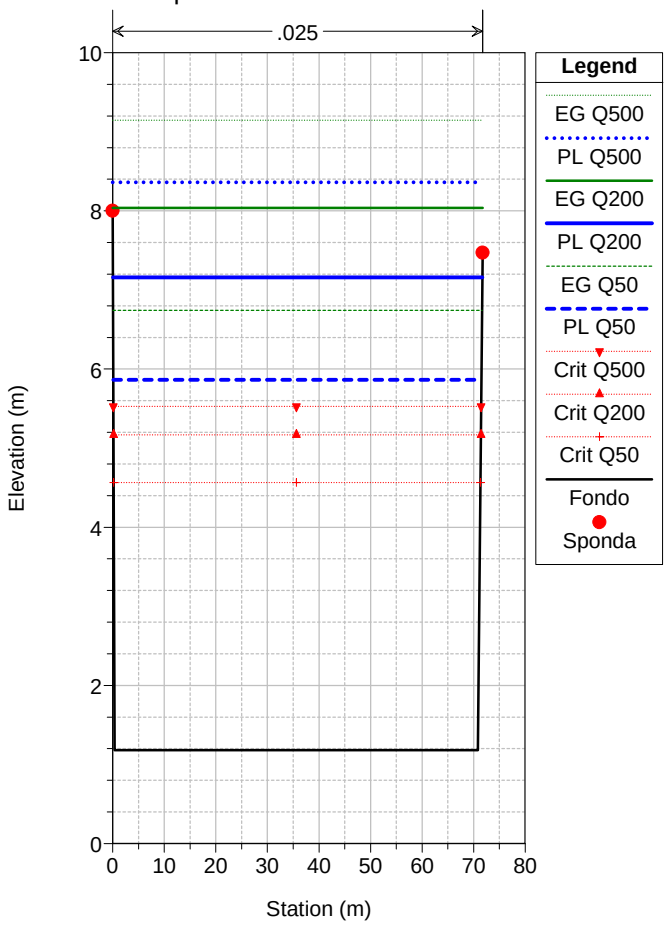
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-6



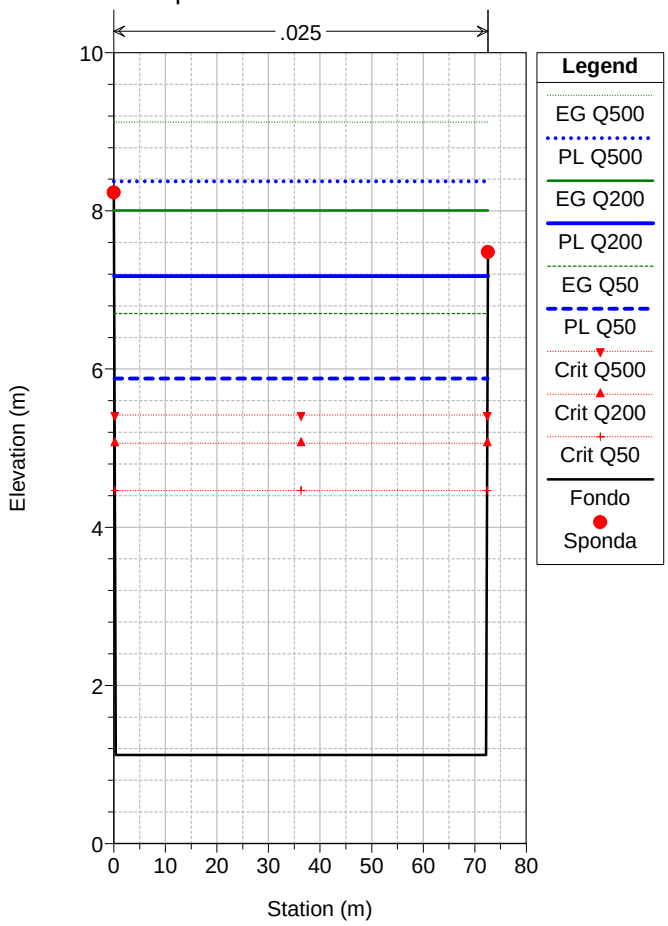
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-5



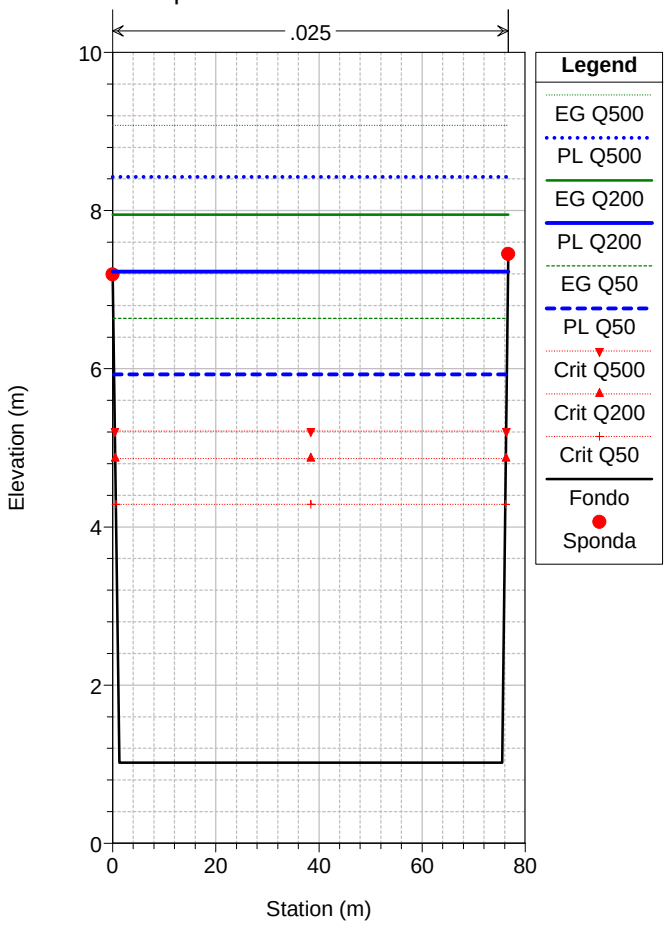
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-4



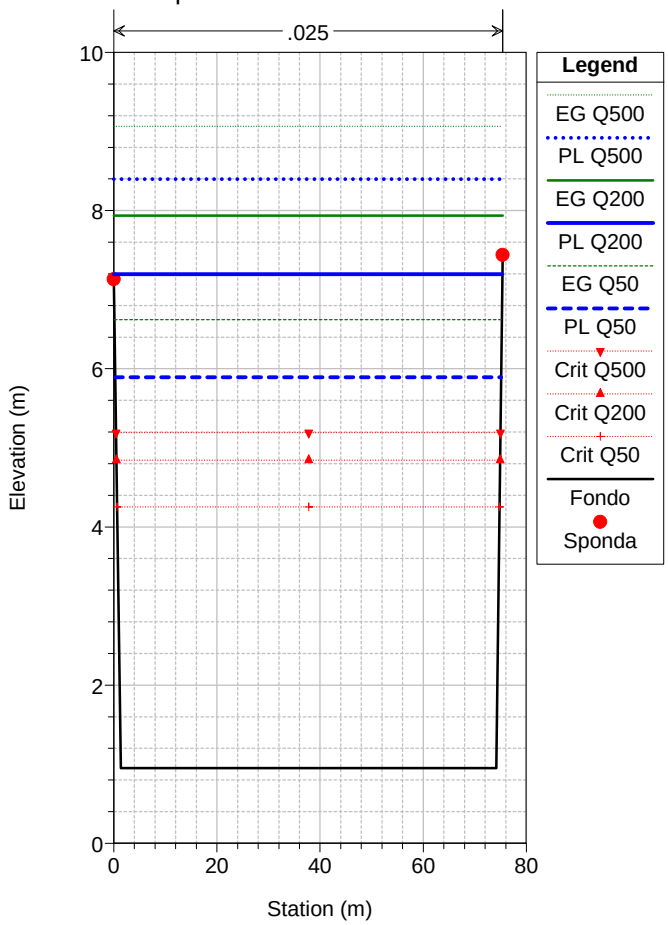
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-3



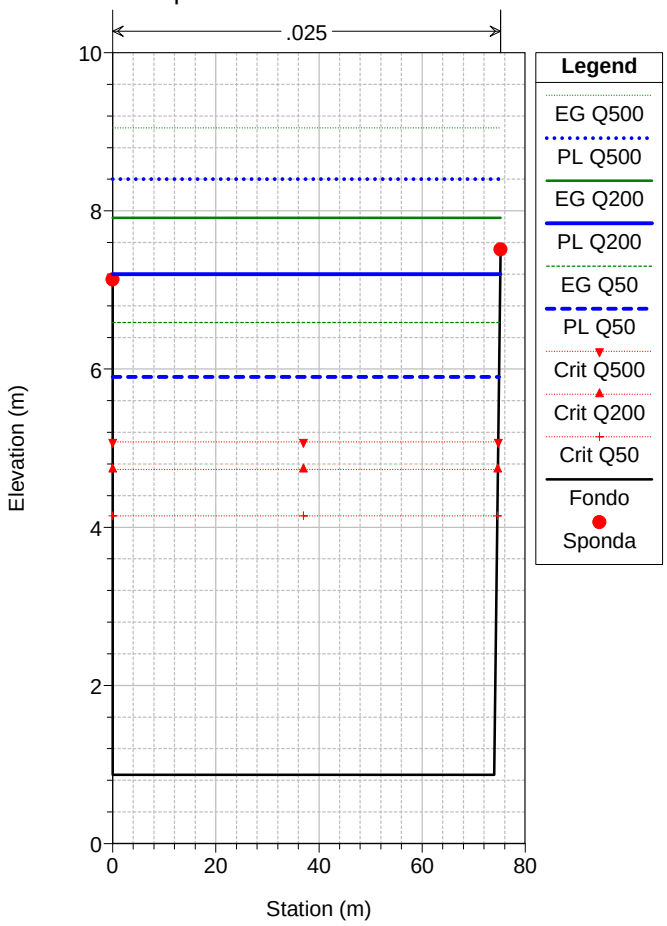
Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-2



Polcevera Plan: Polcevera_rev_01/09

River = polcevera Reach = valle POL-1



HEC-RAS Plan: 01_Apr09

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)	
bolzaneto	86. POL-86	Q50	1128.00	45.40	49.18	52.40	3.22	52.40	3.22	49.11	50.32	0.007465	4.72	238.95	96.90	0.96
bolzaneto	86. POL-86	Q200	1447.00	45.40	49.62	52.40	2.78	52.40	2.78	49.59	50.95	0.007546	5.11	282.91	102.00	0.98
bolzaneto	86. POL-86	Q500	1643.00	45.40	49.88	52.40	2.52	52.40	2.52	49.83	51.32	0.007255	5.31	309.57	102.00	0.97
bolzaneto	85.9 POL-85.9	Q50	1128.00	45.30	49.29	52.40	3.11	52.30	3.01	48.95	50.18	0.005404	4.18	270.17	102.95	0.82
bolzaneto	85.9 POL-85.9	Q200	1447.00	45.30	49.75	52.40	2.65	52.30	2.56	49.39	50.81	0.005294	4.57	316.73	102.95	0.83
bolzaneto	85.9 POL-85.9	Q500	1643.00	45.30	50.01	52.40	2.39	52.30	2.29	49.63	51.17	0.005211	4.77	344.12	102.95	0.83
bolzaneto	85.85 POL-85.9	Q50	1128.00	45.30	49.07	52.40	3.33	52.30	3.23	48.95	50.13	0.007193	4.56	247.53	102.95	0.94
bolzaneto	85.85 POL-85.9	Q200	1447.00	45.30	49.41	52.40	2.99	52.30	2.90	49.39	50.75	0.007730	5.13	282.01	102.95	0.99
bolzaneto	85.85 POL-85.9	Q500	1643.00	45.30	49.63	52.40	2.77	52.30	2.67	49.63	51.11	0.007724	5.39	304.92	102.95	1.00
valle	85.5 POL-85.5	Q50	1265.00	45.00	48.24	52.42	4.18	49.40	1.16	47.95	49.06	0.005567	4.00	316.60	131.71	0.82
valle	85.5 POL-85.5	Q200	1622.00	45.00	48.75	52.42	3.67	49.40	0.65	48.33	49.66	0.004879	4.23	383.69	132.13	0.79
valle	85.5 POL-85.5	Q500	1847.00	45.00	49.05	52.42	3.37	49.40	0.35	48.56	50.02	0.004591	4.36	423.29	132.37	0.78
valle	85 POL-85	Q50	1265.00	44.05	48.35	52.60	4.25	49.40	1.05	47.17	48.80	0.001995	2.96	427.51	128.88	0.52
valle	85 POL-85	Q200	1622.00	44.05	48.86	52.60	3.74	49.40	0.54	47.56	49.41	0.002069	3.29	493.53	130.03	0.54
valle	85 POL-85	Q500	1847.00	44.05	49.16	52.60	3.44	49.40	0.24	47.79	49.78	0.002111	3.47	532.95	131.37	0.55
valle	84 POL-84	Q50	1265.00	44.60	47.40	52.21	4.81	48.66	1.26	47.40	48.53	0.008375	4.72	267.99	117.88	1.00
valle	84 POL-84	Q200	1622.00	44.60	47.82	52.21	4.39	48.66	0.84	47.82	49.14	0.007987	5.10	317.83	119.60	1.00
valle	84 POL-84	Q500	1847.00	44.60	48.33	52.21	3.88	48.66	0.33	48.07	49.53	0.005918	4.87	379.16	121.69	0.88
valle	83.1 POL-83	Q50	1265.00	44.02	47.48	51.12	3.64	48.70	1.22	46.71	48.14	0.003310	3.58	353.39	114.80	0.65
valle	83.1 POL-83	Q200	1622.00	44.02	48.05	51.12	3.07	48.70	0.65	47.14	48.82	0.003137	3.88	418.47	114.80	0.65
valle	83.1 POL-83	Q500	1847.00	44.02	48.58	51.12	2.54	48.70	0.12	47.38	49.34	0.002608	3.85	479.83	114.80	0.60
valle	83 POL-83		Bridge													
valle	82.9 POL-83	Q50	1265.00	44.02	46.29	51.12	4.83	48.70	2.41	46.71	48.01	0.015891	5.81	217.79	113.13	1.34
valle	82.9 POL-83	Q200	1622.00	44.02	46.64	51.12	4.48	48.70	2.06	47.14	48.67	0.015205	6.32	256.80	113.20	1.34
valle	82.9 POL-83	Q500	1847.00	44.02	47.90	51.12	3.22	48.70	0.80	47.38	48.98	0.004674	4.61	400.98	114.80	0.79
valle	82.5 POL-82.5	Q50	1265.00	44.02	46.91	50.00	3.09	48.70	1.79	46.68	47.87	0.006256	4.34	291.20	114.80	0.87
valle	82.5 POL-82.5	Q200	1622.00	44.02	47.35	50.00	2.65	48.70	1.35	47.10	48.50	0.006103	4.75	341.56	114.80	0.88
valle	82.5 POL-82.5	Q500	1847.00	44.02	47.60	50.00	2.40	48.70	1.10	47.35	48.87	0.006043	4.98	370.97	114.80	0.88
valle	82 POL-82	Q50	1265.00	42.84	46.38	46.10	-0.28	47.33	0.95	45.92	47.17	0.004534	3.93	323.75	124.00	0.76
valle	82 POL-82	Q200	1622.00	42.84	46.89	46.10	-0.79	47.33	0.44	46.35	47.80	0.004212	4.24	387.26	124.11	0.75
valle	82 POL-82	Q500	1847.00	42.84	47.19	46.10	-1.09	47.33	0.14	46.60	48.17	0.004091	4.41	423.76	124.17	0.75
valle	81 POL-81	Q50	1265.00	41.42	46.04	46.33	0.29	47.03	0.99	45.09	46.60	0.002644	3.31	382.38	119.74	0.59
valle	81 POL-81	Q200	1622.00	41.42	46.60	46.33	-0.27	47.03	0.43	45.50	47.26	0.002569	3.61	450.60	122.10	0.60
valle	81 POL-81	Q500	1847.00	41.42	46.90	46.33	-0.57	47.03	0.13	45.74	47.64	0.002570	3.80	487.90	122.17	0.60
valle	80 POL-80	Q50	1265.00	41.24	45.32	46.10	0.78	46.46	1.14	44.93	46.20	0.005149	4.15	304.61	110.42	0.80
valle	80 POL-80	Q200	1622.00	41.24	45.86	46.10	0.24	46.46	0.60	45.37	46.87	0.004744	4.46	363.80	110.68	0.78
valle	80 POL-80	Q500	1847.00	41.24	46.22	46.10	-0.12	46.46	0.24	45.62	47.26	0.004291	4.53	413.27	118.83	0.76

HEC-RAS Plan: 01_Apr09 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	79.1 POL-79	Q50	1265.00	41.23	44.12	46.10	1.98	47.27	3.15	44.12	45.41	0.008380	5.04	251.19	97.30	1.00
valle	79.1 POL-79	Q200	1622.00	41.23	44.59	46.10	1.51	47.27	2.68	44.59	46.11	0.008005	5.47	296.70	97.30	1.00
valle	79.1 POL-79	Q500	1847.00	41.23	44.86	46.10	1.24	47.27	2.41	44.86	46.52	0.007831	5.71	323.57	97.30	1.00
valle	79 POL-79	Q50	1265.00	37.92	39.35	46.10	6.75	47.40	8.05	40.68	44.86	0.089080	10.40	121.62	96.35	2.96
valle	79 POL-79	Q200	1622.00	37.92	43.50	46.10	2.60	47.40	3.90	41.15	43.99	0.001266	3.10	522.47	96.76	0.43
valle	79 POL-79	Q500	1847.00	37.92	44.08	46.10	2.02	47.40	3.32	41.43	44.60	0.001183	3.19	579.02	96.82	0.42
valle	78.1 POL-78	Q50	1265.00	37.87	42.40	48.00	5.60	47.58	5.18	40.68	42.91	0.001645	3.15	401.87	91.03	0.48
valle	78.1 POL-78	Q200	1622.00	37.87	43.39	48.00	4.61	47.58	4.19	41.17	43.94	0.001418	3.30	491.73	91.33	0.45
valle	78.1 POL-78	Q500	1847.00	37.87	43.97	48.00	4.03	47.58	3.61	41.46	44.56	0.001325	3.39	545.05	91.50	0.44
valle	78. POL-78	Q50	1265.00	37.17	42.45	47.80	5.35	47.50	5.05	40.34	42.88	0.001252	2.91	435.23	90.41	0.42
valle	78. POL-78	Q200	1622.00	37.17	43.43	47.80	4.37	47.50	4.07	40.83	43.92	0.001140	3.10	523.97	90.71	0.41
valle	78. POL-78	Q500	1847.00	37.17	44.01	47.80	3.79	47.50	3.49	41.12	44.54	0.001090	3.20	576.70	90.88	0.41
valle	77.8 POL-77	Q50	1265.00	35.73	41.99	47.04	5.05	47.09	5.10	40.13	42.66	0.001926	3.63	348.64	67.68	0.51
valle	77.8 POL-77	Q200	1622.00	35.73	42.90	47.04	4.14	47.09	4.19	40.72	43.70	0.001892	3.95	410.73	67.68	0.51
valle	77.8 POL-77	Q500	1847.00	35.73	43.45	47.04	3.59	47.09	3.64	41.07	44.31	0.001878	4.13	447.41	67.68	0.51
valle	77.7 POL-77	Q50	1265.00	35.73	41.98	47.04	5.06	47.09	5.11	40.13	42.65	0.001936	3.63	348.08	67.68	0.51
valle	77.7 POL-77	Q200	1622.00	35.73	42.90	47.04	4.14	47.09	4.19	40.72	43.69	0.001900	3.95	410.18	67.68	0.51
valle	77.7 POL-77	Q500	1847.00	35.73	43.44	47.04	3.60	47.09	3.65	41.07	44.31	0.001885	4.13	446.87	67.68	0.51
valle	77.5 POL-77		Bridge													
valle	77.3 POL-77	Q50	1265.00	35.73	39.17	47.04	7.87	47.09	7.92	40.13	42.44	0.024373	8.01	157.97	67.68	1.67
valle	77.3 POL-77	Q200	1622.00	35.73	39.59	47.04	7.45	47.09	7.50	40.72	43.44	0.023356	8.69	186.61	67.68	1.67
valle	77.3 POL-77	Q500	1847.00	35.73	39.84	47.04	7.20	47.09	7.25	41.07	44.04	0.022883	9.07	203.54	67.68	1.67
valle	77. POL-77	Q50	1265.00	35.73	40.93	47.04	6.11	47.09	6.16	40.13	41.99	0.003990	4.56	277.12	67.68	0.72
valle	77. POL-77	Q200	1622.00	35.73	39.88	47.04	7.16	47.09	7.21	40.72	43.04	0.017009	7.88	205.87	67.68	1.44
valle	77. POL-77	Q500	1847.00	35.73	40.12	47.04	6.92	47.09	6.97	41.07	43.64	0.017270	8.31	222.13	67.68	1.47
valle	76. POL-76	Q50	1265.00	36.10	39.82	46.80	6.98	44.00	4.18	39.82	41.53	0.008098	5.80	218.04	63.44	1.00
valle	76. POL-76	Q200	1622.00	36.10	40.44	46.80	6.36	44.00	3.56	40.44	42.46	0.007842	6.30	257.35	63.55	1.00
valle	76. POL-76	Q500	1847.00	36.10	40.80	46.80	6.00	44.00	3.20	40.80	43.01	0.007722	6.58	280.65	63.61	1.00
valle	75. POL-75	Q50	1265.00	33.74	35.85	46.50	10.65	43.83	7.98	37.33	41.06	0.045833	10.11	125.10	60.90	2.25
valle	75. POL-75	Q200	1622.00	33.74	36.32	46.50	10.18	43.83	7.51	37.97	41.98	0.038535	10.54	153.88	61.05	2.12
valle	75. POL-75	Q500	1847.00	33.74	36.61	46.50	9.89	43.83	7.22	38.34	42.53	0.035336	10.78	171.34	61.14	2.06
valle	74.7 POL-65	Q50	1265.00	33.79	36.14	46.50	10.36	42.00	5.86	37.37	40.34	0.038146	9.08	139.36	67.77	2.02
valle	74.7 POL-65	Q200	1622.00	33.79	36.55	46.50	9.95	42.00	5.45	37.97	41.36	0.034914	9.72	166.86	67.81	1.98
valle	74.7 POL-65	Q500	1847.00	33.79	36.79	46.50	9.71	42.00	5.21	38.32	41.96	0.033352	10.07	183.36	67.84	1.96
valle	74.5		Bridge													

HEC-RAS Plan: 01_Apr09 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	74. POL-74	Q50	1265.00	33.79	36.48	46.50	10.02	42.00	5.52	37.37	39.57	0.023138	7.78	162.51	67.81	1.60
valle	74. POL-74	Q200	1622.00	33.79	36.91	46.50	9.59	42.00	5.09	37.97	40.56	0.022304	8.46	191.63	67.85	1.61
valle	74. POL-74	Q500	1847.00	33.79	37.17	46.50	9.33	42.00	4.83	38.32	41.14	0.021780	8.83	209.22	67.88	1.61
valle	73. POL-73	Q50	1265.00	33.46	36.82	45.50	8.68	41.30	4.48	37.27	39.15	0.012214	6.76	187.00	59.89	1.22
valle	73. POL-73	Q200	1622.00	33.46	37.92	45.50	7.58	41.30	3.38	37.92	40.02	0.007696	6.42	252.69	60.12	1.00
valle	73. POL-73	Q500	1847.00	33.46	38.30	45.50	7.20	41.30	3.00	38.30	40.59	0.007576	6.70	275.70	60.19	1.00
valle	72. POL-72	Q50	1265.00	31.54	37.66	46.40	8.74	41.00	3.34	35.90	38.38	0.002017	3.76	336.48	66.05	0.53
valle	72. POL-72	Q200	1622.00	31.54	38.31	46.40	8.09	41.00	2.69	36.51	39.24	0.002281	4.28	379.11	66.17	0.57
valle	72. POL-72	Q500	1847.00	31.54	35.42	46.40	10.98	41.00	5.58	36.87	40.31	0.027284	9.80	188.44	65.64	1.85
valle	71. POL-71	Q50	1265.00	32.40	37.23	45.50	8.27	39.70	2.47	36.47	38.28	0.003915	4.52	279.67	71.03	0.73
valle	71. POL-71	Q200	1622.00	32.40	37.83	45.50	7.67	39.70	1.87	37.05	39.12	0.004098	5.03	322.28	71.16	0.75
valle	71. POL-71	Q500	1847.00	32.40	38.18	45.50	7.32	39.70	1.52	37.39	39.62	0.004251	5.32	347.01	71.89	0.77
valle	70. POL-70	Q50	1265.00	31.90	35.17	41.91	6.74	37.72	2.55	35.18	36.66	0.008261	5.41	233.74	79.24	1.01
valle	70. POL-70	Q200	1622.00	31.90	35.40	41.91	6.51	37.72	2.32	35.72	37.51	0.010602	6.43	252.33	79.31	1.15
valle	70. POL-70	Q500	1847.00	31.90	35.69	41.91	6.22	37.72	2.03	36.03	37.99	0.010437	6.72	274.81	79.40	1.15
valle	69. POL-69	Q50	1265.00	31.51	33.90	41.92	8.02	37.72	3.82	34.64	36.53	0.020091	7.18	176.16	77.32	1.52
valle	69. POL-69	Q200	1622.00	31.51	34.33	41.92	7.59	37.72	3.39	35.18	37.39	0.018843	7.75	209.35	77.47	1.50
valle	69. POL-69	Q500	1847.00	31.51	34.61	41.92	7.31	37.72	3.11	35.49	37.87	0.017788	8.00	230.90	77.56	1.48
valle	68. POL-68	Q50	1265.00	31.17	33.50	41.94	8.44	37.63	4.13	34.31	36.31	0.022388	7.43	170.21	77.81	1.60
valle	68. POL-68	Q200	1622.00	31.17	33.91	41.94	8.03	37.63	3.72	34.85	37.18	0.020916	8.01	202.50	77.93	1.59
valle	68. POL-68	Q500	1847.00	31.17	34.17	41.94	7.77	37.63	3.46	35.17	37.67	0.019826	8.28	223.04	78.01	1.56
valle	67. POL-67	Q50	1265.00	30.22	32.46	42.00	9.54	37.60	5.14	33.56	36.19	0.034826	8.55	147.90	77.37	1.97
valle	67. POL-67	Q200	1622.00	30.22	32.86	42.00	9.14	37.60	4.74	34.11	37.06	0.030918	9.08	178.65	77.48	1.91
valle	67. POL-67	Q500	1847.00	30.22	33.11	42.00	8.89	37.60	4.49	34.43	37.55	0.028770	9.34	197.84	77.56	1.87
valle	66. POL-66	Q50	1265.00	29.52	33.11	34.50	1.39	35.70	2.59	32.97	34.53	0.006746	5.28	239.63	73.77	0.93
valle	66. POL-66	Q200	1622.00	29.52	33.54	34.50	0.96	35.70	2.16	33.54	35.36	0.007486	5.98	271.34	74.51	1.00
valle	66. POL-66	Q500	1847.00	29.52	33.91	34.50	0.59	35.70	1.79	33.88	35.86	0.007151	6.18	299.00	75.15	0.99
valle	65.8 POL-65	Q50	1265.00	28.33	32.91	35.00	2.09	36.17	3.26	31.70	33.67	0.002669	3.86	327.50	78.36	0.60
valle	65.8 POL-65	Q200	1622.00	28.33	33.66	35.00	1.34	36.17	2.51	32.24	34.56	0.002587	4.20	386.63	78.85	0.60
valle	65.8 POL-65	Q500	1847.00	28.33	34.11	35.00	0.89	36.17	2.06	32.57	35.09	0.002547	4.38	421.73	79.13	0.61
valle	65.7 POL-65	Q50	1265.00	28.33	32.90	35.00	2.10	36.17	3.27	31.70	33.66	0.002697	3.88	326.44	78.35	0.61
valle	65.7 POL-65	Q200	1622.00	28.33	33.65	35.00	1.35	36.17	2.52	32.24	34.55	0.002609	4.21	385.60	78.84	0.61
valle	65.7 POL-65	Q500	1847.00	28.33	34.10	35.00	0.90	36.17	2.07	32.57	35.08	0.002567	4.39	420.71	79.13	0.61
valle	65.5		Bridge													
valle	65. POL-65	Q50	1265.00	28.33	31.08	35.00	3.91	36.17	5.09	31.70	33.46	0.016696	6.82	185.45	77.17	1.40
valle	65. POL-65	Q200	1622.00	28.33	31.52	35.00	3.48	36.17	4.65	32.24	34.31	0.015963	7.40	219.19	77.46	1.40
valle	65. POL-65	Q500	1847.00	28.33	31.78	35.00	3.22	36.17	4.39	32.57	34.82	0.015602	7.72	239.23	77.62	1.40

HEC-RAS Plan: 01_Apr09 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	64.8 POL-64.5	Q50	1265.00	28.21	30.87	35.00	4.12	35.00	4.12	31.54	33.34	0.018787	6.95	181.90	79.84	1.47
valle	64.8 POL-64.5	Q200	1622.00	28.21	31.28	35.00	3.72	35.00	3.72	32.07	34.20	0.018075	7.56	214.45	79.92	1.47
valle	64.8 POL-64.5	Q500	1847.00	28.21	31.53	35.00	3.47	35.00	3.47	32.39	34.70	0.017682	7.90	233.91	79.96	1.47
valle	64.7 POL-64.5	Q50	1265.00	28.21	32.28	35.00	2.72	35.00	2.72	31.54	33.22	0.003956	4.30	294.14	80.10	0.72
valle	64.7 POL-64.5	Q200	1622.00	28.21	32.97	35.00	2.03	35.00	2.03	32.07	34.06	0.003748	4.64	349.24	80.23	0.71
valle	64.7 POL-64.5	Q500	1847.00	28.21	33.37	35.00	1.63	35.00	1.63	32.39	34.56	0.003672	4.84	381.28	80.30	0.71
valle	64.5		Bridge													
valle	64.3 POL-64	Q50	1265.00	28.21	32.21	35.00	2.79	35.00	2.79	31.54	33.19	0.004217	4.39	288.37	80.09	0.74
valle	64.3 POL-64	Q200	1622.00	28.21	32.90	35.00	2.10	35.00	2.10	32.07	34.03	0.003936	4.72	343.95	80.22	0.73
valle	64.3 POL-64	Q500	1847.00	28.21	33.30	35.00	1.70	35.00	1.70	32.39	34.53	0.003831	4.91	376.24	80.29	0.72
valle	64. POL-64	Q50	1265.00	28.21	32.20	35.00	2.80	35.00	2.80	31.54	33.19	0.001554	4.39	288.10	80.09	0.74
valle	64. POL-64	Q200	1622.00	28.21	32.90	35.00	2.10	35.00	2.10	32.08	34.03	0.001449	4.72	343.70	80.21	0.73
valle	64. POL-64	Q500	1847.00	28.21	33.30	35.00	1.70	35.00	1.70	32.39	34.53	0.001410	4.91	376.00	80.29	0.72
valle	63. POL-63	Q50	1265.00	28.15	31.46	34.50	3.04	34.50	3.04	31.46	33.01	0.002989	5.52	229.37	73.88	1.00
valle	63. POL-63	Q200	1622.00	28.15	32.02	34.50	2.48	34.50	2.48	32.02	33.85	0.002880	5.99	270.76	73.96	1.00
valle	63. POL-63	Q500	1847.00	28.15	32.64	34.50	1.86	34.50	1.86	32.35	34.38	0.002260	5.83	316.69	74.04	0.90
valle	62.1 POL-62	Q50	1294.00	27.68	30.10	34.30	4.20	34.20	4.10	30.88	32.88	0.007422	7.39	175.19	73.67	1.53
valle	62.1 POL-62	Q200	1657.00	27.68	30.60	34.30	3.70	34.20	3.60	31.44	33.71	0.006563	7.82	211.93	73.77	1.47
valle	62.1 POL-62	Q500	1886.00	27.68	33.03	34.30	1.27	34.20	1.17	31.78	34.21	0.001188	4.81	391.73	74.26	0.67
valle	61.7	Q50	1294.00	26.39	31.57	33.00	1.43	33.26	1.69	29.69	32.15	0.000636	3.39	381.67	77.77	0.49
valle	61.7	Q200	1657.00	26.39	32.67	33.00	0.33	33.26	0.59	30.24	33.31	0.000550	3.55	467.30	78.03	0.46
valle	61.7	Q500	1886.00	26.39	33.30	33.00	-0.30	33.26	-0.04	30.57	33.98	0.000524	3.65	517.00	78.91	0.45
valle	61.5 POL-61.5	Q50	1294.00	26.39	31.57	33.00	1.43	33.26	1.69	29.69	32.15	0.000637	3.39	381.47	77.77	0.49
valle	61.5 POL-61.5	Q200	1657.00	26.39	32.67	33.00	0.34	33.26	0.60	30.24	33.31	0.000550	3.55	467.13	78.03	0.46
valle	61.5 POL-61.5	Q500	1886.00	26.39	33.30	33.00	-0.30	33.26	-0.04	30.57	33.98	0.000525	3.65	516.84	78.91	0.46
valle	61.4		Bridge													
valle	61. POL-61.5	Q50	1294.00	26.39	28.73	33.00	4.27	33.26	4.53	29.69	31.98	0.010118	7.99	161.92	77.10	1.76
valle	61. POL-61.5	Q200	1657.00	26.39	31.08	33.00	1.92	33.26	2.18	30.24	32.26	0.001457	4.82	343.72	77.66	0.73
valle	61. POL-61.5	Q500	1886.00	26.39	31.47	33.00	1.53	33.26	1.79	30.57	32.76	0.001443	5.04	373.89	77.75	0.73
valle	60. POL-60	Q50	1294.00	26.24	28.85	32.50	3.65	33.00	4.15	29.62	31.61	0.007415	7.36	175.92	74.56	1.53
valle	60. POL-60	Q200	1657.00	26.24	30.71	32.50	1.79	33.00	2.29	30.19	32.12	0.001850	5.26	315.31	75.00	0.82
valle	60. POL-60	Q500	1886.00	26.24	31.11	32.50	1.39	33.00	1.89	30.52	32.63	0.001795	5.46	345.20	75.10	0.81
valle	59. POL-59	Q50	1294.00	26.25	28.53	32.50	3.97	33.00	4.47	29.42	31.57	0.008657	7.73	167.36	74.48	1.65
valle	59. POL-59	Q200	1657.00	26.25	30.86	32.50	1.64	33.00	2.14	29.98	32.06	0.001420	4.85	341.79	75.03	0.73
valle	59. POL-59	Q500	1886.00	26.25	31.26	32.50	1.24	33.00	1.74	30.31	32.57	0.001410	5.07	371.66	75.12	0.73

HEC-RAS Plan: 01_Apr09 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	58 POL-58	Q50	1294.00	26.29	29.01	32.34	3.33	32.00	2.99	29.51	31.25	0.007935	6.63	195.17	72.14	1.29
valle	58 POL-58	Q200	1657.00	26.29	30.08	32.34	2.26	32.00	1.92	30.08	31.96	0.004434	6.08	272.58	72.42	1.00
valle	58 POL-58	Q500	1886.00	26.29	30.42	32.34	1.92	32.00	1.58	30.42	32.47	0.004354	6.35	297.23	72.52	1.00
valle	57 POL-57	Q50	1294.00	25.47	28.37	31.58	3.21	32.36	3.99	28.64	30.27	0.006190	6.10	212.05	73.42	1.15
valle	57 POL-57	Q200	1657.00	25.47	28.85	31.58	2.73	32.36	3.51	29.21	31.14	0.006193	6.70	247.14	73.54	1.17
valle	57 POL-57	Q500	1886.00	25.47	29.14	31.58	2.44	32.36	3.22	29.56	31.66	0.006155	7.03	268.37	73.61	1.17
valle	56 POL-56	Q50	1294.00	24.75	27.76	31.10	3.34	29.79	2.03	28.01	29.66	0.005930	6.10	212.15	70.86	1.13
valle	56 POL-56	Q200	1657.00	24.75	28.25	31.10	2.85	29.79	1.54	28.59	30.55	0.005977	6.72	246.76	70.99	1.15
valle	56 POL-56	Q500	1886.00	24.75	28.55	31.10	2.55	29.79	1.24	28.94	31.07	0.005932	7.03	268.14	71.07	1.16
valle	55 POL-55	Q50	1294.00	23.95	26.97	30.74	3.77	29.70	2.73	27.19	28.83	0.005784	6.04	214.37	71.36	1.11
valle	55 POL-55	Q200	1657.00	23.95	27.46	30.74	3.28	29.70	2.24	27.77	29.71	0.005820	6.64	249.48	71.49	1.13
valle	55 POL-55	Q500	1886.00	23.95	27.76	30.74	2.98	29.70	1.94	28.11	30.23	0.005774	6.96	271.11	71.56	1.14
valle	54 POL-54	Q50	1294.00	22.53	25.12	28.95	3.83	27.34	2.22	25.79	27.69	0.009670	7.10	182.33	70.73	1.41
valle	54 POL-54	Q200	1657.00	22.53	25.58	28.95	3.37	27.34	1.76	26.37	28.61	0.009296	7.70	215.07	70.86	1.41
valle	54 POL-54	Q500	1886.00	22.53	25.86	28.95	3.09	27.34	1.48	26.71	29.15	0.009073	8.03	234.83	70.93	1.41
valle	53 POL-53	Q50	1294.00	22.13	25.03	28.55	3.52	26.94	1.91	25.37	27.04	0.006563	6.27	206.30	71.36	1.18
valle	53 POL-53	Q200	1657.00	22.13	25.54	28.55	3.01	26.94	1.40	25.95	27.92	0.006372	6.83	242.71	71.46	1.18
valle	53 POL-53	Q500	1886.00	22.13	25.85	28.55	2.70	26.94	1.09	26.29	28.44	0.006242	7.12	264.79	71.53	1.18
valle	52 POL-52	Q50	1294.00	21.40	24.37	27.53	3.16	25.53	1.16	24.67	26.35	0.006300	6.23	207.60	70.33	1.16
valle	52 POL-52	Q200	1657.00	21.40	24.89	27.53	2.64	25.53	0.64	25.26	27.24	0.006139	6.79	244.02	70.48	1.16
valle	52 POL-52	Q500	1886.00	21.40	25.19	27.53	2.34	25.53	0.34	25.60	27.76	0.006057	7.10	265.64	70.58	1.17
valle	51 POL-51	Q50	1294.00	20.52	23.49	27.53	4.04	25.53	2.04	23.81	25.49	0.006373	6.27	206.40	70.02	1.17
valle	51 POL-51	Q200	1657.00	20.52	24.01	27.53	3.52	25.53	1.52	24.40	26.38	0.006181	6.82	242.97	70.19	1.17
valle	51 POL-51	Q500	1886.00	20.52	24.32	27.53	3.21	25.53	1.21	24.74	26.91	0.006070	7.12	264.90	70.30	1.17
valle	50 POL-50	Q50	1294.00	18.36	22.78	27.00	4.22	26.00	3.22	21.65	23.68	0.001782	4.21	307.07	70.09	0.64
valle	50 POL-50	Q200	1657.00	18.36	23.76	27.00	3.24	26.00	2.24	22.24	24.75	0.001540	4.41	375.87	70.33	0.61
valle	50 POL-50	Q500	1886.00	18.36	24.34	27.00	2.66	26.00	1.66	22.59	25.38	0.001442	4.53	416.75	70.47	0.59
valle	49 POL-49	Q50	1294.00	17.83	22.77	25.20	2.43	26.00	3.23	21.12	23.49	0.001243	3.76	343.96	70.27	0.54
valle	49 POL-49	Q200	1657.00	17.83	23.76	25.20	1.44	26.00	2.24	21.71	24.57	0.001142	4.01	413.41	70.53	0.53
valle	49 POL-49	Q500	1886.00	17.83	24.34	25.20	0.86	26.00	1.66	22.06	25.22	0.001099	4.15	454.58	70.68	0.52
valle	48.8 POL48.8	Q50	1294.00	17.20	22.75	25.32	2.57	24.00	1.25	20.56	23.36	0.000906	3.44	376.46	68.88	0.47
valle	48.8 POL48.8	Q200	1657.00	17.20	23.74	25.32	1.58	24.00	0.26	21.16	24.45	0.000883	3.73	444.59	69.27	0.47
valle	48.8 POL48.8	Q500	1886.00	17.20	24.32	25.32	1.00	24.00	-0.32	21.52	25.09	0.000873	3.89	484.95	69.40	0.47
valle	48.5		Bridge													
valle	48 POL-48	Q50	1294.00	17.20	19.48	25.32	5.84	24.00	4.52	20.56	23.11	0.016038	8.44	153.39	67.60	1.79
valle	48 POL-48	Q200	1657.00	17.20	19.89	25.32	5.43	24.00	4.11	21.16	24.16	0.015377	9.15	181.03	67.76	1.79
valle	48 POL-48	Q500	1886.00	17.20	20.13	25.32	5.19	24.00	3.87	21.52	24.78	0.015052	9.55	197.44	67.85	1.79

HEC-RAS Plan: 01_Apr09 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	47 POL-47	Q50	1294.00	16.71	21.04	24.80	3.76	23.52	2.48	20.02	22.00	0.001926	4.33	299.08	69.41	0.67
valle	47 POL-47	Q200	1657.00	16.71	21.82	24.80	2.98	23.52	1.70	20.61	22.94	0.001872	4.70	352.72	69.55	0.67
valle	47 POL-47	Q500	1886.00	16.71	22.27	24.80	2.53	23.52	1.25	20.96	23.50	0.001846	4.90	384.53	69.64	0.67
valle	46.5	Bridge														
valle	46.3	Q50	1294.00	16.71	19.49	24.40	4.91	24.53	5.04	20.06	21.92	0.008500	6.91	187.13	67.55	1.33
valle	46.3	Q200	1657.00	16.71	19.98	24.40	4.42	24.53	4.55	20.66	22.85	0.008198	7.51	220.62	67.59	1.33
valle	46.3	Q500	1886.00	16.71	20.28	24.40	4.12	24.53	4.25	21.02	23.41	0.008049	7.84	240.51	67.61	1.33
valle	46 POL-46	Q50	1294.00	16.31	19.07	24.00	4.93	24.13	5.06	19.66	21.54	0.008693	6.96	185.83	67.55	1.34
valle	46 POL-46	Q200	1657.00	16.31	19.55	24.00	4.45	24.13	4.58	20.26	22.48	0.008420	7.57	218.79	67.59	1.34
valle	46 POL-46	Q500	1886.00	16.31	21.59	24.00	2.41	24.13	2.55	20.61	23.01	0.002307	5.29	356.26	67.75	0.74
valle	45 POL-45	Q50	1294.00	16.11	20.14	22.75	2.61	24.10	3.96	19.46	21.29	0.002566	4.76	271.68	67.64	0.76
valle	45 POL-45	Q200	1657.00	16.11	21.03	22.75	1.72	24.10	3.07	20.06	22.30	0.002221	4.99	332.17	67.71	0.72
valle	45 POL-45	Q500	1886.00	16.11	21.58	22.75	1.17	24.10	2.52	20.41	22.91	0.002056	5.10	369.52	67.76	0.70
valle	44.5	Bridge														
valle	44 POL44	Q50	1294.00	16.05	19.86	22.75	2.89	24.02	4.16	19.40	21.15	0.003053	5.03	257.30	67.63	0.82
valle	44 POL44	Q200	1657.00	16.05	20.81	22.75	1.94	24.02	3.21	20.00	22.17	0.002459	5.15	321.67	67.70	0.75
valle	44 POL44	Q500	1886.00	16.05	21.38	22.75	1.37	24.02	2.64	20.36	22.78	0.002230	5.24	360.09	67.75	0.73
valle	43 POL-43	Q50	1294.00	15.80	19.85	23.40	3.55	23.67	3.82	19.16	21.00	0.002518	4.74	272.84	67.65	0.75
valle	43 POL-43	Q200	1657.00	15.80	20.81	23.40	2.59	23.67	2.86	19.76	22.04	0.002095	4.90	337.87	67.81	0.70
valle	43 POL-43	Q500	1886.00	15.80	21.38	23.40	2.02	23.67	2.29	20.11	22.66	0.001928	5.01	376.57	67.90	0.68
valle	42 POL-42	Q50	1294.00	15.29	19.84	23.31	3.47	22.70	2.86	18.66	20.75	0.001764	4.25	304.78	67.35	0.64
valle	42 POL-42	Q200	1657.00	15.29	20.80	23.31	2.51	22.70	1.90	19.26	21.83	0.001566	4.48	370.08	67.48	0.61
valle	42 POL-42	Q500	1886.00	15.29	21.38	23.31	1.93	22.70	1.32	19.62	22.46	0.001485	4.61	408.77	67.55	0.60
valle	41 POL-41	Q50	1294.00	14.90	19.81	22.49	2.68	22.90	3.09	18.27	20.60	0.001399	3.95	327.77	66.88	0.57
valle	41 POL-41	Q200	1657.00	14.90	20.78	22.49	1.71	22.90	2.12	18.88	21.69	0.001296	4.22	392.86	66.93	0.56
valle	41 POL-41	Q500	1886.00	14.90	21.36	22.49	1.13	22.90	1.54	19.24	22.33	0.001255	4.37	431.30	66.96	0.55
valle	40 POL-40	Q50	1294.00	14.43	19.82	21.15	1.33	22.39	2.57	17.87	20.52	0.001104	3.69	350.31	65.12	0.51
valle	40 POL-40	Q200	1657.00	14.43	20.79	21.15	0.36	22.39	1.60	18.48	21.61	0.001078	4.01	413.36	65.18	0.51
valle	40 POL-40	Q500	1886.00	14.43	21.36	21.15	-0.21	22.39	1.03	18.85	22.25	0.001069	4.19	450.59	65.20	0.51
valle	39 POL-39	Q50	1294.00	14.28	19.79	21.00	1.21	22.24	2.45	17.72	20.46	0.001030	3.61	358.13	65.13	0.49
valle	39 POL-39	Q200	1657.00	14.28	20.76	21.00	0.24	22.24	1.48	18.33	21.55	0.001017	3.93	421.27	65.19	0.49
valle	39 POL-39	Q500	1886.00	14.28	21.33	21.00	-0.33	22.24	0.91	18.69	22.19	0.001012	4.11	458.52	65.20	0.50
valle	38.5	Bridge														
valle	38 POL-38	Q50	1294.00	14.28	16.72	21.00	4.28	22.24	5.52	17.72	20.12	0.013919	8.16	158.53	64.95	1.67
valle	38 POL-38	Q200	1657.00	14.28	17.16	21.00	3.84	22.24	5.08	18.33	21.17	0.013437	8.87	186.77	64.97	1.67

HEC-RAS Plan: 01_Apr09 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	38 POL-38	Q500	1886.00	14.28	17.42	21.00	3.58	22.24	4.82	18.69	21.79	0.013200	9.27	203.52	64.99	1.67
valle	37 POL-37	Q50	1294.00	14.01	16.44	20.30	3.86	20.84	4.40	17.33	19.53	0.012684	7.79	166.13	68.64	1.60
valle	37 POL-37	Q200	1657.00	14.01	16.81	20.30	3.49	20.84	4.03	17.92	20.61	0.013046	8.64	191.86	68.70	1.65
valle	37 POL-37	Q500	1886.00	14.01	17.04	20.30	3.26	20.84	3.80	18.27	21.24	0.013083	9.08	207.70	68.75	1.67
valle	36 POL-36	Q50	1294.00	12.14	14.03	19.50	5.47	18.87	4.84	15.46	19.14	0.028775	10.02	129.16	68.51	2.33
valle	36 POL-36	Q200	1657.00	12.14	14.41	19.50	5.09	18.87	4.46	16.05	20.23	0.026073	10.69	154.96	68.57	2.27
valle	36 POL-36	Q500	1886.00	12.14	14.63	19.50	4.87	18.87	4.24	16.40	20.87	0.024758	11.06	170.52	68.61	2.24
valle	35 POL-35	Q50	1377.00	11.88	14.49	20.81	6.32	18.25	3.76	15.34	17.52	0.011346	7.71	178.66	68.59	1.52
valle	35 POL-35	Q200	1763.00	11.88	14.87	20.81	5.94	18.25	3.38	15.96	18.65	0.011982	8.61	204.69	68.65	1.59
valle	35 POL-35	Q500	2006.00	11.88	15.11	20.81	5.70	18.25	3.14	16.33	19.31	0.012164	9.09	220.74	68.69	1.62
valle	34 POL-34	Q50	1377.00	11.29	14.36	18.97	4.61	17.43	3.07	14.69	16.44	0.006391	6.39	215.34	70.48	1.17
valle	34 POL-34	Q200	1763.00	11.29	14.89	18.97	4.08	17.43	2.54	15.30	17.36	0.006210	6.96	253.34	70.57	1.17
valle	34 POL-34	Q500	2006.00	11.29	15.22	18.97	3.75	17.43	2.21	15.66	17.91	0.006091	7.26	276.26	70.62	1.17
valle	33 POL-33	Q50	1377.00	10.86	14.26	18.48	4.22	17.07	2.81	14.26	15.95	0.004560	5.76	239.13	70.54	1.00
valle	33 POL-33	Q200	1763.00	10.86	14.47	18.48	4.01	17.07	2.60	14.87	16.93	0.006192	6.95	253.57	70.57	1.17
valle	33 POL-33	Q500	2006.00	10.86	14.79	18.48	3.69	17.07	2.28	15.22	17.47	0.006066	7.25	276.63	70.62	1.17
valle	32 POL-32	Q50	1377.00	10.45	13.85	18.03	4.18	16.64	2.79	13.85	15.54	0.004582	5.77	238.78	70.53	1.00
valle	32 POL-32	Q200	1763.00	10.45	14.06	18.03	3.97	16.64	2.58	14.46	16.52	0.006162	6.94	253.96	70.57	1.17
valle	32 POL-32	Q500	2006.00	10.45	14.35	18.03	3.68	16.64	2.29	14.81	17.08	0.006228	7.31	274.36	70.61	1.18
valle	31 POL-31	Q50	1377.00	9.83	13.17	16.25	3.08	16.01	2.84	13.23	14.92	0.004834	5.86	234.83	70.51	1.03
valle	31 POL-31	Q200	1763.00	9.83	13.45	16.25	2.80	16.01	2.56	13.84	15.90	0.006147	6.94	254.15	70.56	1.17
valle	31 POL-31	Q500	2006.00	9.83	13.74	16.25	2.51	16.01	2.27	14.20	16.45	0.006208	7.30	274.63	70.60	1.18
valle	30 POL-30	Q50	1377.00	9.53	12.87	15.85	2.98	15.72	2.85	12.93	14.62	0.004850	5.87	234.60	70.51	1.03
valle	30 POL-30	Q200	1763.00	9.53	13.12	15.85	2.73	15.72	2.60	13.54	15.61	0.006280	6.98	252.46	70.55	1.18
valle	30 POL-30	Q500	2006.00	9.53	13.45	15.85	2.40	15.72	2.27	13.90	16.15	0.006127	7.27	275.77	70.60	1.17
valle	29 POL-29	Q50	1377.00	8.88	12.79	15.18	2.39	15.00	2.21	12.28	14.07	0.002910	5.01	275.08	70.61	0.81
valle	29 POL-29	Q200	1763.00	8.88	13.55	15.18	1.63	15.00	1.45	12.89	15.02	0.002712	5.37	328.39	70.73	0.80
valle	29 POL-29	Q500	2006.00	8.88	14.07	15.18	1.11	15.00	0.93	13.25	15.61	0.002503	5.49	365.39	70.81	0.77
valle	28 POL-28	Q50	1377.00	8.34	12.74	14.62	1.88	14.65	1.91	11.72	13.73	0.001972	4.42	311.30	71.19	0.68
valle	28 POL-28	Q200	1763.00	8.34	13.51	14.62	1.11	14.65	1.14	12.33	14.69	0.001928	4.81	366.33	71.34	0.68
valle	28 POL-28	Q500	2006.00	8.34	14.04	14.62	0.58	14.65	0.61	12.69	15.30	0.001825	4.96	404.50	71.44	0.67
valle	27.9 POL-27.9	Q50	1377.00	8.23	12.58	14.62	2.04	14.50	1.92	11.63	13.61	0.002058	4.49	306.69	70.84	0.69
valle	27.9 POL-27.9	Q200	1763.00	8.23	13.36	14.62	1.26	14.50	1.14	12.23	14.57	0.001999	4.88	361.62	70.98	0.69
valle	27.9 POL-27.9	Q500	2006.00	8.23	13.91	14.62	0.71	14.50	0.59	12.60	15.18	0.001875	5.01	400.54	71.07	0.67
valle	27.8		Bridge													
valle	27.5 POL-27.5	Q50	1377.00	8.23	10.99	14.62	3.63	14.50	3.51	11.63	13.56	0.008955	7.10	194.05	70.55	1.37

HEC-RAS Plan: 01_Apr09 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	27.5 POL-27.5	Q200	1763.00	8.23	11.62	14.62	3.00	14.50	2.88	12.23	14.40	0.007508	7.38	238.88	70.67	1.28
valle	27.5 POL-27.5	Q500	2006.00	8.23	11.93	14.62	2.69	14.50	2.57	12.60	14.95	0.007391	7.71	260.15	70.72	1.28
valle	27 POL-27	Q50	1377.00	7.83	10.51	14.22	3.71	14.10	3.59	11.23	13.24	0.009910	7.32	188.07	70.54	1.43
valle	27 POL-27	Q200	1763.00	7.83	11.07	14.22	3.15	14.10	3.03	11.83	14.11	0.008696	7.72	228.22	70.64	1.37
valle	27 POL-27	Q500	2006.00	7.83	11.37	14.22	2.85	14.10	2.73	12.19	14.67	0.008476	8.05	249.28	70.69	1.37
valle	26 POL-26	Q50	1377.00	7.36	10.88	14.47	3.59	13.42	2.54	10.78	12.48	0.004160	5.61	245.41	70.08	0.96
valle	26 POL-26	Q200	1763.00	7.36	11.50	14.47	2.97	13.42	1.92	11.39	13.40	0.004027	6.09	289.30	70.20	0.96
valle	26 POL-26	Q500	2006.00	7.36	11.41	14.47	3.06	13.42	2.01	11.75	13.98	0.005625	7.10	282.50	70.18	1.13
valle	25 POL-25	Q50	1377.00	6.80	10.25	13.12	2.87	12.81	2.56	10.25	11.96	0.004577	5.80	237.22	69.05	1.00
valle	25 POL-25	Q200	1763.00	6.80	10.86	13.12	2.26	12.81	1.95	10.86	12.89	0.004434	6.31	279.55	69.13	1.00
valle	25 POL-25	Q500	2006.00	6.80	10.88	13.12	2.24	12.81	1.93	11.23	13.48	0.005645	7.14	281.04	69.13	1.13
valle	24 POL-24	Q50	1377.00	6.32	9.64	12.37	2.73	12.75	3.11	9.72	11.41	0.004942	5.90	233.40	70.59	1.04
valle	24 POL-24	Q200	1763.00	6.32	10.42	12.37	1.95	12.75	2.33	10.32	12.32	0.004100	6.11	288.64	70.69	0.96
valle	24 POL-24	Q500	2006.00	6.32	10.44	12.37	1.93	12.75	2.31	10.68	12.88	0.005234	6.92	289.91	70.69	1.09
valle	23 POL-23	Q50	1377.00	5.97	9.53	12.09	2.56	12.22	2.69	9.36	11.06	0.003911	5.48	251.28	70.83	0.93
valle	23 POL-23	Q200	1763.00	5.97	10.24	12.09	1.85	12.22	1.98	9.96	11.98	0.003580	5.85	301.45	70.92	0.91
valle	23 POL-23	Q500	2006.00	5.97	10.65	12.09	1.44	12.22	1.57	10.32	12.52	0.003441	6.06	331.03	70.98	0.90
valle	22 POL-22	Q50	1377.00	5.61	9.37	11.83	2.46	11.69	2.32	8.99	10.74	0.003262	5.18	266.08	71.00	0.85
valle	22 POL-22	Q200	1763.00	5.61	10.12	11.83	1.71	11.69	1.57	9.60	11.67	0.002992	5.52	319.14	71.10	0.83
valle	22 POL-22	Q500	2006.00	5.61	10.55	11.83	1.28	11.69	1.14	9.95	12.22	0.002893	5.73	349.84	71.15	0.83
valle	21 POL-21	Q50	1377.00	5.01	9.27	11.30	2.03	11.20	1.93	8.40	10.34	0.002200	4.58	300.67	70.84	0.71
valle	21 POL-21	Q200	1763.00	5.01	10.04	11.30	1.26	11.20	1.16	9.01	11.29	0.002124	4.96	355.15	70.93	0.71
valle	21 POL-21	Q500	2006.00	5.01	10.48	11.30	0.82	11.20	0.72	9.37	11.85	0.002107	5.19	386.35	70.99	0.71
valle	20.8 POL-20.8	Q50	1377.00	4.91	9.15	11.40	2.25	11.40	2.25	8.35	10.28	0.002349	4.71	292.54	69.08	0.73
valle	20.8 POL-20.8	Q200	1763.00	4.91	9.90	11.40	1.50	11.40	1.50	8.97	11.24	0.002292	5.12	344.44	69.13	0.73
valle	20.8 POL-20.8	Q500	2006.00	4.91	10.32	11.40	1.08	11.40	1.08	9.33	11.79	0.002298	5.37	373.46	69.15	0.74
valle	20.5		Bridge													
valle	20 POL-20	Q50	1377.00	4.75	7.79	11.40	3.61	11.40	3.61	8.19	9.99	0.006823	6.56	209.78	69.00	1.20
valle	20 POL-20	Q200	1763.00	4.75	8.34	11.40	3.06	11.40	3.06	8.81	10.93	0.006594	7.13	247.23	69.04	1.20
valle	20 POL-20	Q500	2006.00	4.75	8.57	11.40	2.83	11.40	2.83	9.17	11.52	0.006946	7.61	263.67	69.05	1.24
valle	19 POL-19	Q50	1377.00	4.67	7.73	10.70	2.97	11.20	3.47	8.06	9.81	0.006374	6.38	215.83	70.69	1.17
valle	19 POL-19	Q200	1763.00	4.67	8.14	10.70	2.56	11.20	3.06	8.67	10.78	0.006956	7.20	244.90	70.74	1.23
valle	19 POL-19	Q500	2006.00	4.67	8.38	10.70	2.32	11.20	2.82	9.03	11.37	0.007271	7.66	261.78	70.77	1.27
valle	18 POL-18	Q50	1377.00	4.32	7.34	9.83	2.49	9.25	1.91	7.69	9.43	0.006513	6.40	215.18	71.50	1.18
valle	18 POL-18	Q200	1763.00	4.32	7.87	9.83	1.96	9.25	1.38	8.29	10.34	0.006325	6.96	253.15	71.59	1.18
valle	18 POL-18	Q500	2006.00	4.32	8.19	9.83	1.64	9.25	1.06	8.64	10.88	0.006213	7.27	275.92	71.63	1.18

HEC-RAS Plan: 01_Apr09 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	17 POL-17	Q50	1377.00	3.99	7.01	10.40	3.39	10.45	3.44	7.35	9.08	0.006466	6.38	215.90	71.65	1.17
valle	17 POL-17	Q200	1763.00	3.99	7.55	10.40	2.85	10.45	2.90	7.95	10.00	0.006266	6.94	254.18	71.71	1.18
valle	17 POL-17	Q500	2006.00	3.99	7.86	10.40	2.54	10.45	2.59	8.31	10.54	0.006162	7.24	276.93	71.75	1.18
valle	16 POL-16	Q50	1377.00	3.63	6.64	10.10	3.46	10.11	3.47	6.99	8.73	0.006546	6.40	215.10	71.66	1.18
valle	16 POL-16	Q200	1763.00	3.63	7.18	10.10	2.92	10.11	2.93	7.59	9.64	0.006316	6.95	253.57	71.73	1.18
valle	16 POL-16	Q500	2006.00	3.63	8.62	10.10	1.48	10.11	1.49	7.95	10.23	0.002738	5.62	357.21	71.91	0.80
valle	15 POL-15	Q50	1377.00	3.29	6.31	9.80	3.49	9.82	3.51	6.65	8.39	0.006477	6.38	215.77	71.62	1.17
valle	15 POL-15	Q200	1763.00	3.29	6.87	9.80	2.93	9.82	2.95	7.25	9.29	0.006141	6.89	255.75	71.69	1.16
valle	15 POL-15	Q500	2006.00	3.29	8.55	9.80	1.25	9.82	1.27	7.61	10.00	0.002313	5.33	376.70	71.90	0.74
valle	14 POL-14	Q50	1377.00	2.91	6.40	10.42	4.02	9.60	3.20	6.27	7.96	0.004069	5.53	249.09	71.50	0.95
valle	14 POL-14	Q200	1763.00	2.91	7.42	10.42	3.00	9.60	2.18	6.88	8.95	0.002934	5.48	321.98	71.62	0.82
valle	14 POL-14	Q500	2006.00	2.91	8.50	10.42	1.92	9.60	1.10	7.23	9.78	0.001924	5.03	399.06	71.74	0.68
valle	13 POL-13	Q50	1377.00	2.60	6.23	10.42	4.19	8.83	2.60	5.97	7.68	0.003602	5.33	258.57	71.40	0.89
valle	13 POL-13	Q200	1763.00	2.60	7.34	10.42	3.08	8.83	1.49	6.57	8.73	0.002512	5.22	337.92	71.53	0.77
valle	13 POL-13	Q500	2006.00	2.60	8.46	10.42	1.96	8.83	0.37	6.93	9.63	0.001662	4.80	417.87	71.66	0.63
valle	12 POL-12	Q50	1377.00	2.31	6.10	12.10	6.00	9.00	2.90	5.69	7.44	0.003175	5.13	268.44	70.96	0.84
valle	12 POL-12	Q200	1763.00	2.31	7.28	12.10	4.82	9.00	1.72	6.30	8.56	0.002197	5.01	351.83	71.08	0.72
valle	12 POL-12	Q500	2006.00	2.31	8.42	12.10	3.68	9.00	0.58	6.65	9.51	0.001474	4.63	433.36	71.20	0.60
valle	11 POL-11	Q50	1377.00	1.92	5.95	12.00	6.05	9.00	3.05	5.33	7.16	0.002671	4.88	282.30	70.21	0.78
valle	11 POL-11	Q200	1763.00	1.92	7.19	12.00	4.81	9.00	1.81	5.94	8.35	0.001861	4.77	369.55	70.33	0.66
valle	11 POL-11	Q500	2006.00	1.92	8.37	12.00	3.63	9.00	0.63	6.29	9.37	0.001274	4.43	452.58	70.44	0.56
valle	10 POL-10	Q50	1377.00	1.78	5.93	11.70	5.77	9.00	3.07	5.19	7.07	0.002434	4.74	290.66	70.22	0.74
valle	10 POL-10	Q200	1763.00	1.78	7.18	11.70	4.52	9.00	1.82	5.80	8.29	0.001722	4.66	378.72	70.34	0.64
valle	10 POL-10	Q500	2006.00	1.78	8.37	11.70	3.33	9.00	0.63	6.16	9.33	0.001194	4.34	462.10	70.45	0.54
valle	9 POL-9	Q50	1377.00	1.65	5.91	11.30	5.39	8.83	2.92	5.06	7.00	0.002239	4.62	298.08	70.37	0.72
valle	9 POL-9	Q200	1763.00	1.65	7.17	11.30	4.13	8.83	1.66	5.67	8.23	0.001601	4.55	387.24	70.60	0.62
valle	9 POL-9	Q500	2006.00	1.65	8.36	11.30	2.94	8.83	0.47	6.03	9.29	0.001119	4.26	471.41	70.81	0.53
valle	8 POL-8	Q50	1377.00	1.51	5.91	10.15	4.24	8.77	2.86	4.90	6.91	0.001979	4.43	310.61	71.16	0.68
valle	8 POL-8	Q200	1763.00	1.51	7.18	10.15	2.97	8.77	1.59	5.51	8.16	0.001440	4.39	401.42	71.47	0.59
valle	8 POL-8	Q500	2006.00	1.51	8.37	10.15	1.78	8.77	0.40	5.87	9.24	0.001019	4.12	486.83	71.75	0.50
valle	7 POL-7	Q50	1377.00	1.41	5.87	9.10	3.23	8.72	2.85	4.80	6.85	0.001901	4.37	314.77	70.79	0.66
valle	7 POL-7	Q200	1763.00	1.41	7.16	9.10	1.94	8.72	1.56	5.41	8.12	0.001395	4.34	405.78	70.92	0.58
valle	7 POL-7	Q500	2006.00	1.41	8.36	9.10	0.74	8.72	0.36	5.77	9.21	0.000995	4.09	490.93	71.05	0.50
valle	6 POL-6	Q50	1377.00	1.28	5.83	8.28	2.45	7.54	1.71	4.71	6.79	0.001820	4.34	317.16	70.64	0.65
valle	6 POL-6	Q200	1763.00	1.28	7.13	8.28	1.15	7.54	0.41	5.33	8.08	0.001333	4.31	409.32	71.19	0.57
valle	6 POL-6	Q500	2006.00	1.28	8.34	8.28	-0.06	7.54	-0.80	5.69	9.17	0.000949	4.05	495.64	71.40	0.49
valle	5 POL-5	Q50	1377.00	1.18	5.87	8.00	2.14	7.47	1.60	4.57	6.74	0.001605	4.15	332.16	71.39	0.61

HEC-RAS Plan: 01_Apr09 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	5 POL-5	Q200	1763.00	1.18	7.16	8.00	0.84	7.47	0.31	5.17	8.04	0.001210	4.15	424.69	71.66	0.54
valle	5 POL-5	Q500	2006.00	1.18	8.36	8.00	-0.36	7.47	-0.89	5.53	9.15	0.000879	3.93	510.97	71.76	0.47
valle	4 POL-4	Q50	1377.00	1.12	5.88	8.23	2.35	7.48	1.60	4.46	6.70	0.001480	4.02	342.81	72.33	0.59
valle	4 POL-4	Q200	1763.00	1.12	7.17	8.23	1.06	7.48	0.31	5.06	8.00	0.001130	4.04	436.58	72.48	0.53
valle	4 POL-4	Q500	2006.00	1.12	8.37	8.23	-0.14	7.48	-0.89	5.42	9.12	0.000828	3.83	523.69	72.56	0.46
valle	3 POL-3	Q50	1377.00	1.02	5.93	7.19	1.26	7.45	1.52	4.28	6.64	0.001211	3.73	369.35	76.19	0.54
valle	3 POL-3	Q200	1763.00	1.02	7.23	7.19	-0.04	7.45	0.22	4.87	7.95	0.000935	3.76	468.64	76.70	0.49
valle	3 POL-3	Q500	2006.00	1.02	8.43	7.19	-1.24	7.45	-0.98	5.21	9.08	0.000692	3.58	560.44	76.74	0.42
valle	2 POL-2	Q50	1377.00	0.95	5.89	7.13	1.24	7.44	1.55	4.25	6.62	0.001233	3.77	364.96	74.83	0.55
valle	2 POL-2	Q200	1763.00	0.95	7.19	7.13	-0.06	7.44	0.25	4.84	7.93	0.000956	3.81	462.66	75.34	0.49
valle	2 POL-2	Q500	2006.00	0.95	8.40	7.13	-1.27	7.44	-0.96	5.19	9.07	0.000708	3.63	553.24	75.39	0.43
valle	1 POL-1	Q50	1377.00	0.87	5.90	7.13	1.23	7.51	1.61	4.15	6.59	0.001154	3.68	374.48	74.91	0.52
valle	1 POL-1	Q200	1763.00	0.87	7.20	7.13	-0.07	7.51	0.31	4.73	7.91	0.000911	3.74	472.01	75.14	0.48
valle	1 POL-1	Q500	2006.00	0.87	8.40	7.13	-1.27	7.51	-0.89	5.08	9.05	0.000683	3.57	562.24	75.20	0.42

2.2.1 Affluenti minori diretti: Rio Mainose

Il rio Mainose è un affluente di destra del Polcevera, dove sfocia a monte della sezione indicata nella cartografia come POL-114.

Le portate di riferimento sono state calcolate tramite il metodo suggerito dal CIMA per i bacini di piccole dimensioni (A< 2 km^2).

- $Q_{TR=50\ anni}$ = 10.5 m^3/s;
- $Q_{TR=200\ anni}$ = 15.2 m^3/s;
- $Q_{TR=500\ anni}$ = 18.3 m^3/s.

Come condizioni al contorno di valle sono state imposte le quote del pelo libero del Polcevera nella sezione POL-114; come condizione al contorno di monte è stata imposta la profondità critica in quanto è presente una briglia che rende indipendente il moto di valle da quello di monte.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 38 $m^{1/3}/s$ in quanto l'alveo è rivestito in calcestruzzo in discrete condizioni. Al''interno del tombino di monte è stato assunto un valore del coefficiente di scabrezza k_s di Strickler pari a 45 $m^{1/3}/s$ in quanto in buone condizioni di manutenzione.

2.2.2 Affluenti minori diretti: Rio Fulle

Il rio Fulle è un affluente di sinistra del Polcevera, dove sfocia in corrispondenza della sezione indicata nella cartografia come POL-101.

Le portate di riferimento sono state calcolate tramite il metodo suggerito dal CIMA per i bacini di piccole dimensioni (A< 2 km^2).

- $Q_{TR=50\ anni}$ = 15.3 m^3/s;
- $Q_{TR=200\ anni}$ = 18.0 m^3/s;
- $Q_{TR=500\ anni}$ = 21.7 m^3/s.

Come condizioni al contorno di valle sono state imposte le quote del pelo libero del Polcevera nella sezione POL-101, a monte è stata imposta la profondità critica.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 33 $m^{1/3}/s$.

2.2.3 Affluenti minori diretti: Rio Boschetto

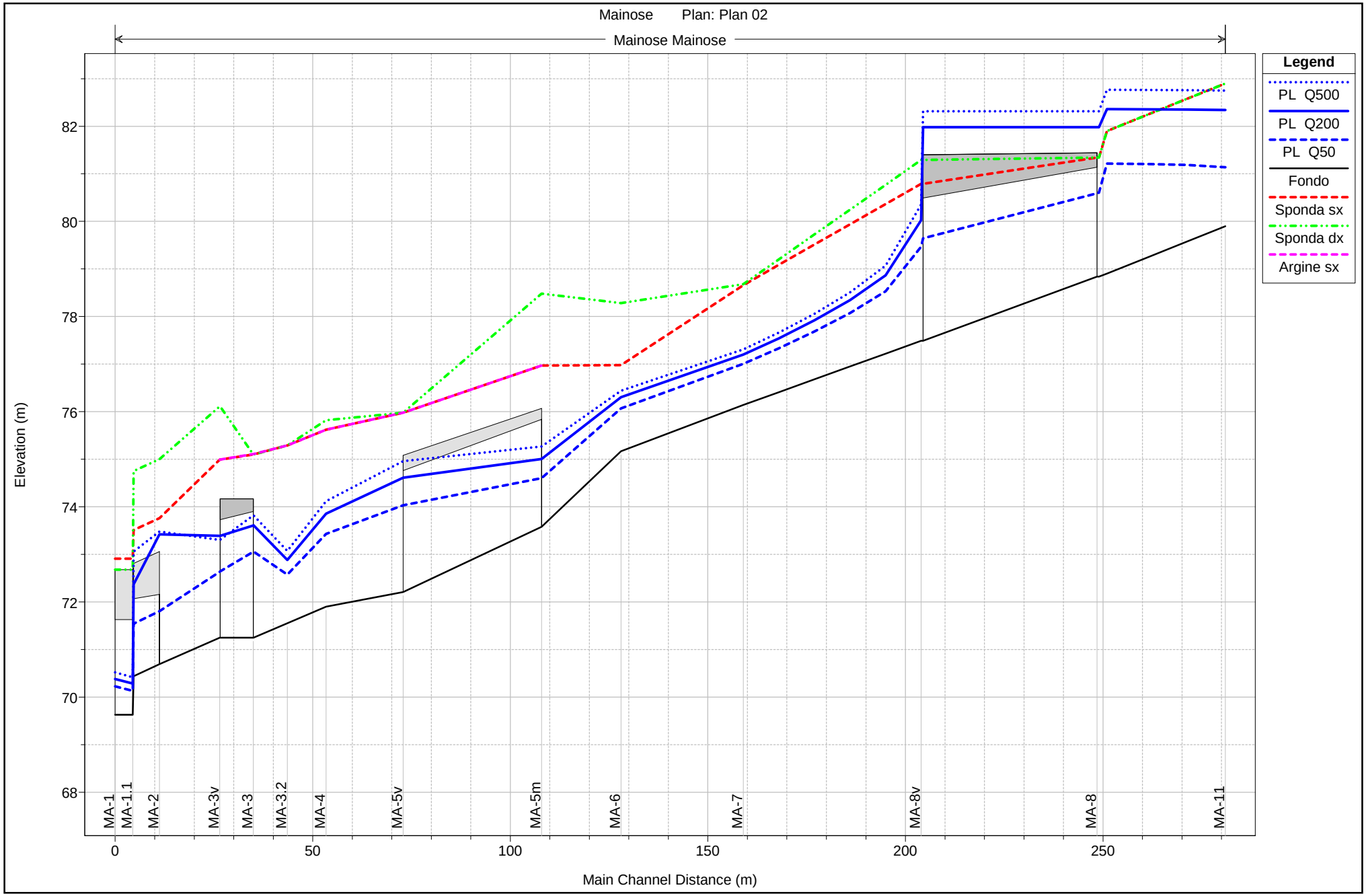
Il rio Boschetto è un affluente di destra del Polcevera, dove sfocia poco a valle della confluenza con il rio Fegino.

Le portate di riferimento sono state calcolate tramite il metodo suggerito dal CIMA per i bacini di piccole dimensioni (A< 2 km^2).

- $Q_{TR=50\ anni}$ = 3.6 m^3/s;
- $Q_{TR=200\ anni}$ = 5.2 m^3/s;
- $Q_{TR=500\ anni}$ = 6.3 m^3/s.

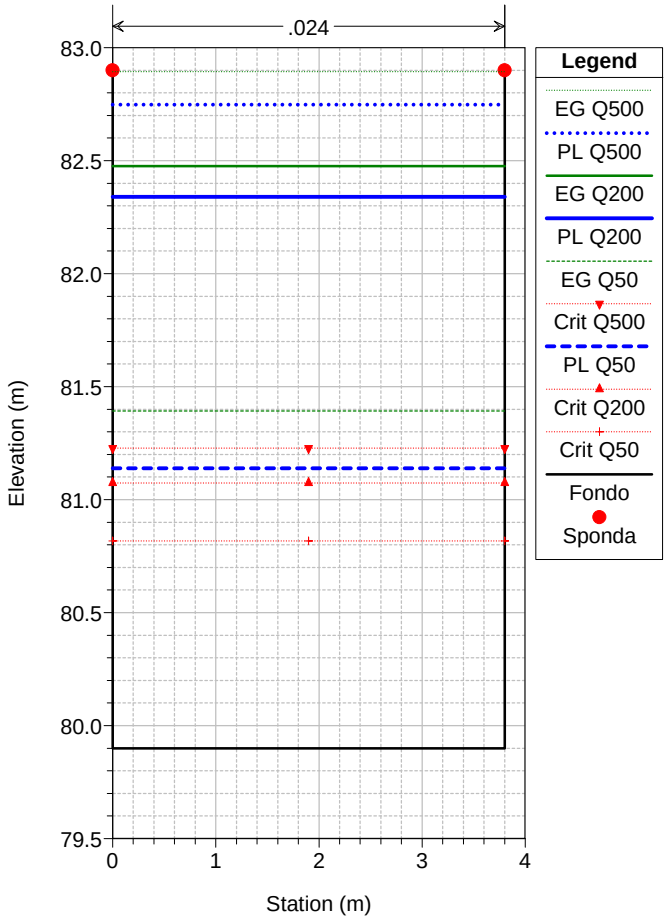
Come condizioni al contorno di valle sono state imposte le condizioni di corrente critica..

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 25 $m^{1/3}/s$.


Mainose Plan: Plan 02
Mainose Mainose
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Argine sx
Elevation (m)
82
80
78
76
74
72
70
68
MA-1
MA-1.1
MA-2
MA-3v
MA-3
MA-3.2
MA-4
MA-5v
MA-5m
MA-6
MA-7
MA-8v
MA-8
MA-11
0
50
100
150
200
250
Main Channel Distance (m)

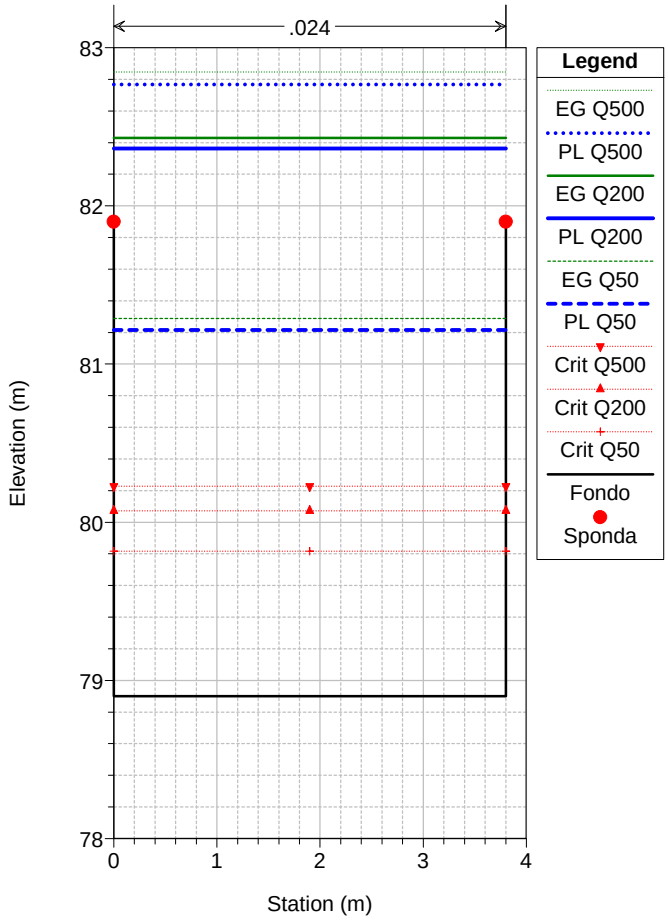
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-11



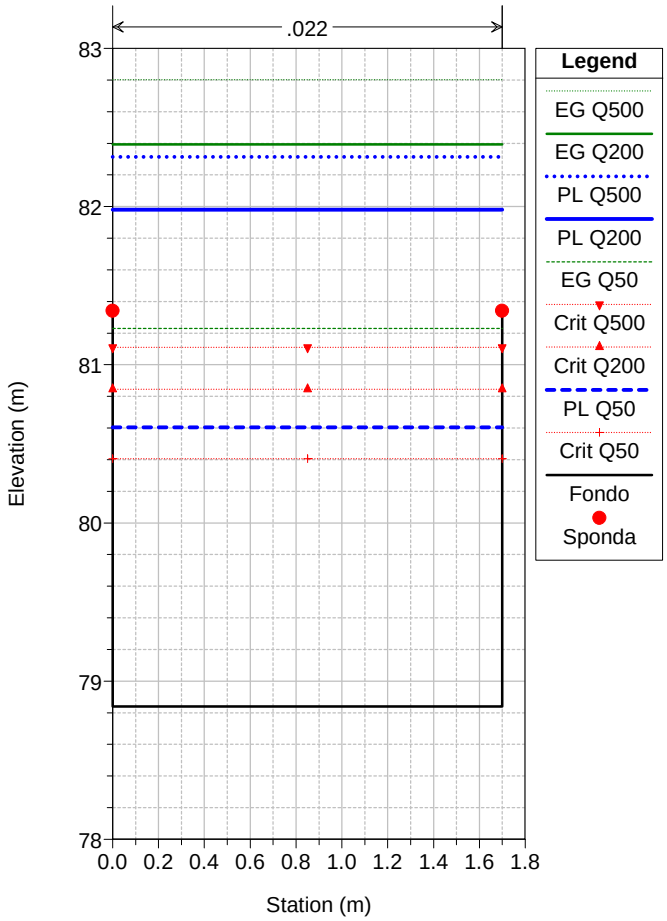
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-10



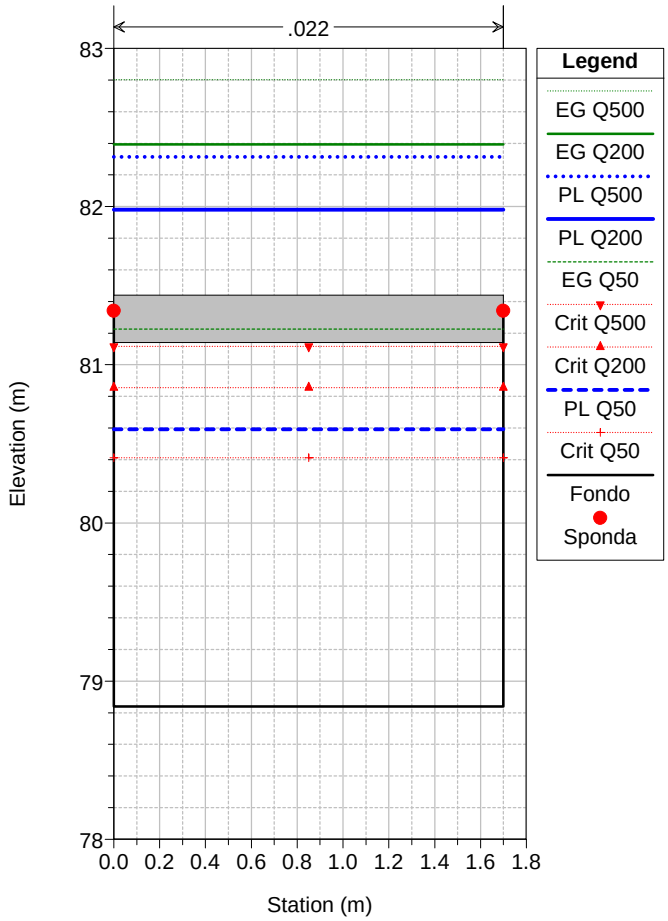
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-9



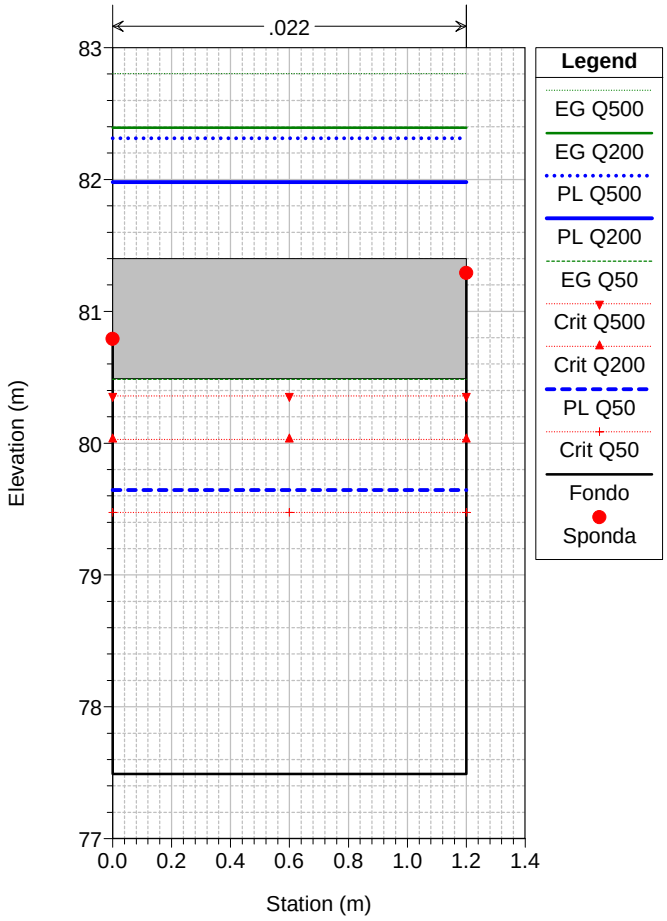
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-8



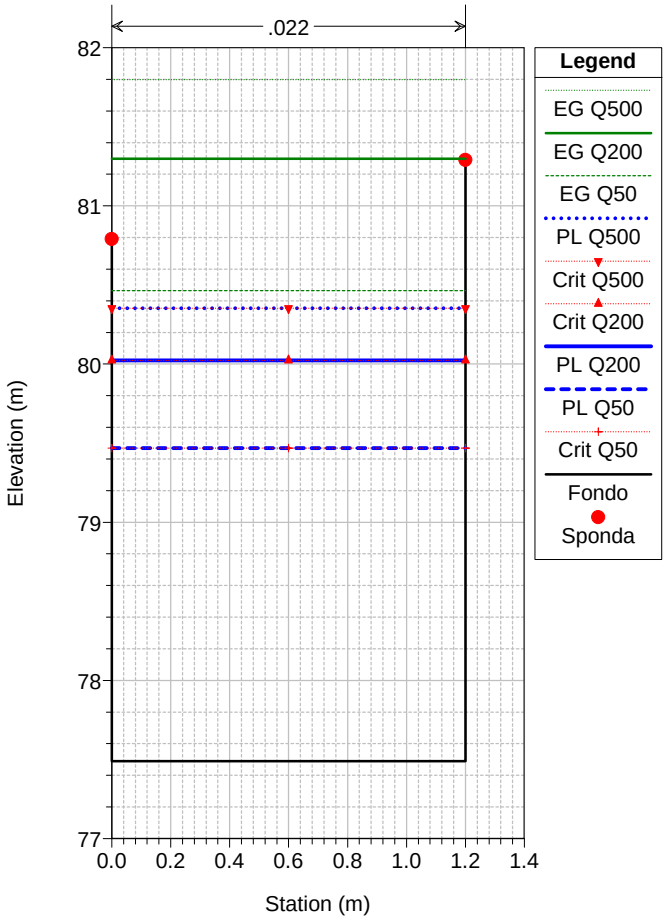
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-8



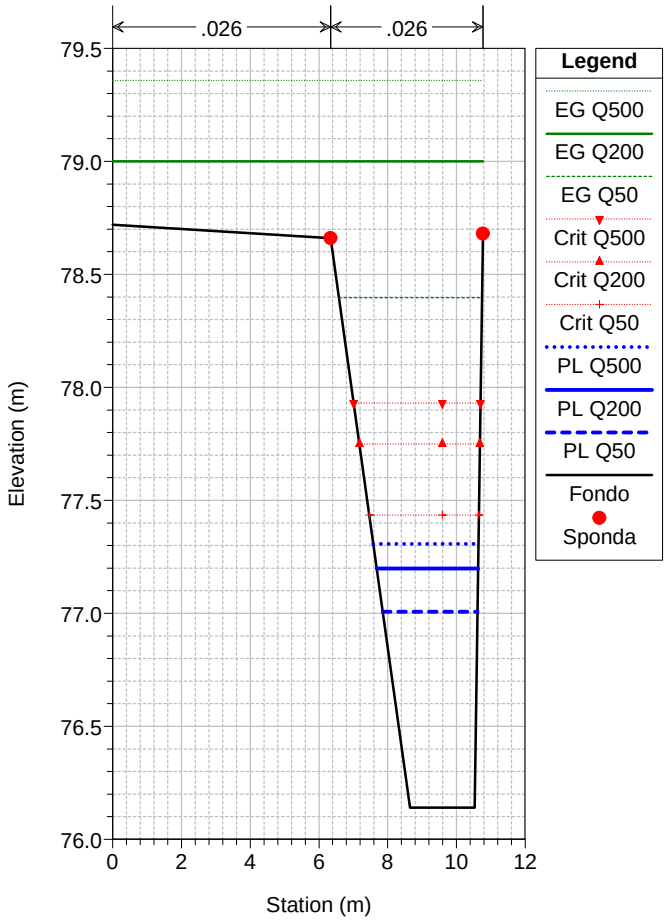
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-8v



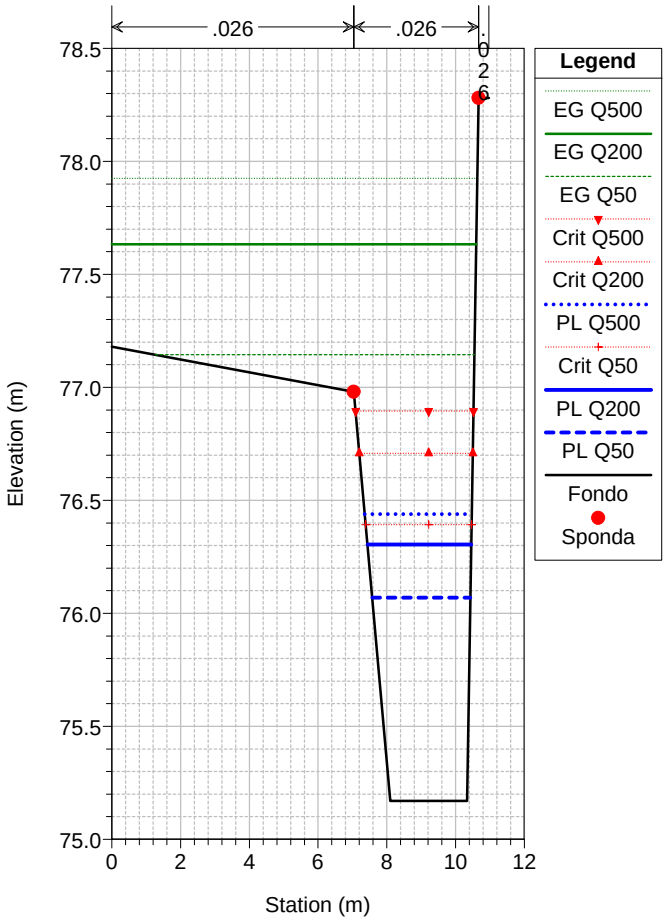
Mainose Plan: Plan 02

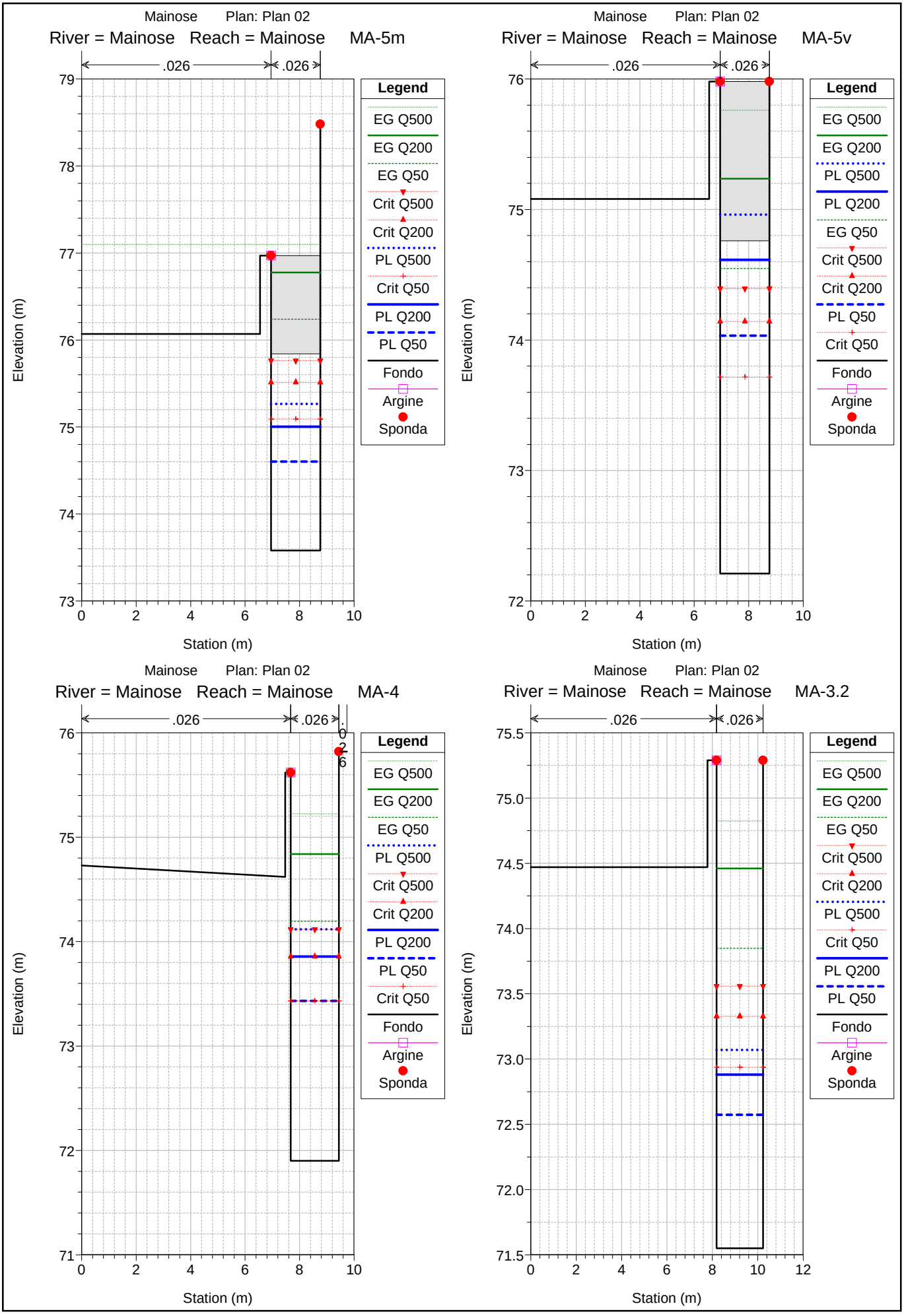
River = Mainose Reach = Mainose MA-7



Mainose Plan: Plan 02

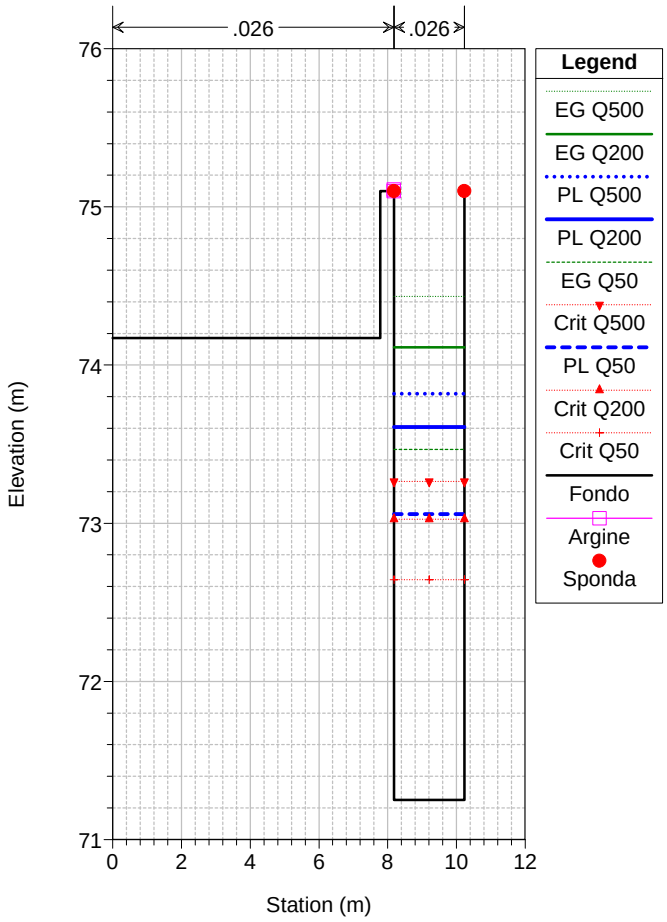
River = Mainose Reach = Mainose MA-6




Mainose Plan: Plan 02
River = Mainose Reach = Mainose MA-5m
.026
.026
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Argine
Sponda
Mainose Plan: Plan 02
River = Mainose Reach = Mainose MA-5v
.026
.026
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda
Mainose Plan: Plan 02
River = Mainose Reach = Mainose MA-4
.026
.026
.026
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda
Mainose Plan: Plan 02
River = Mainose Reach = Mainose MA-3.2
.026
.026
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Argine
Sponda

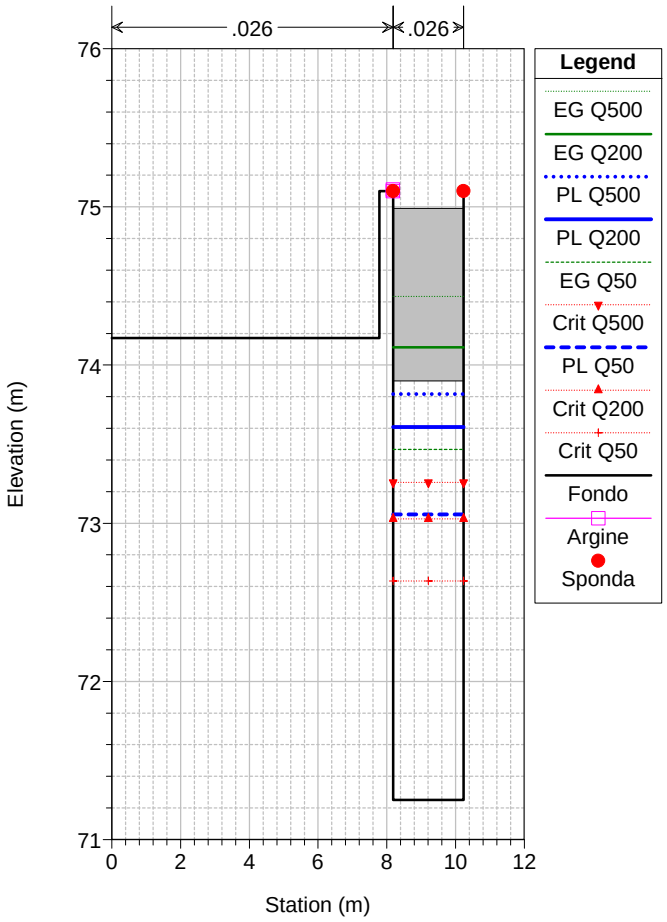
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-3m



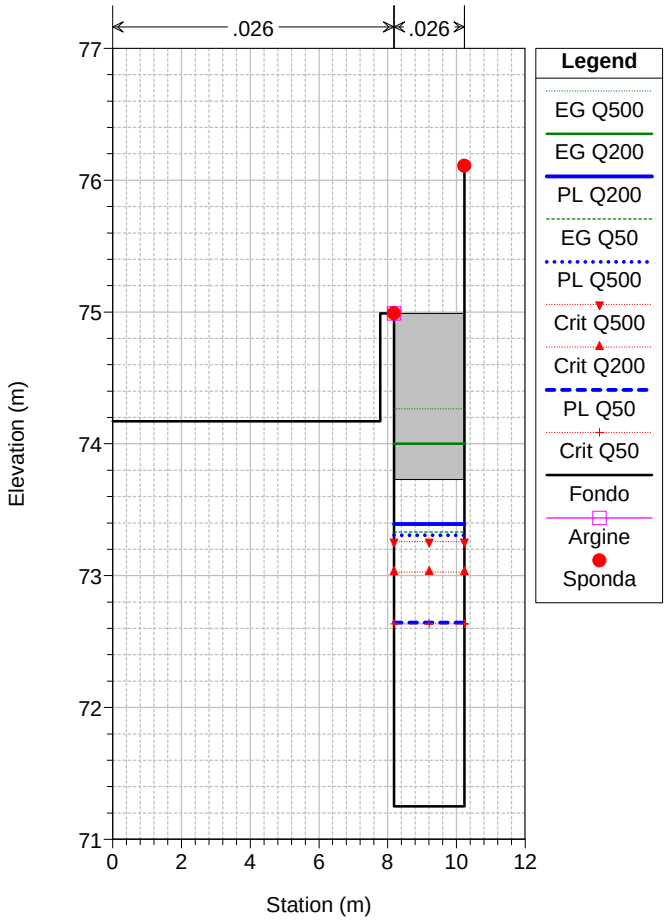
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-3



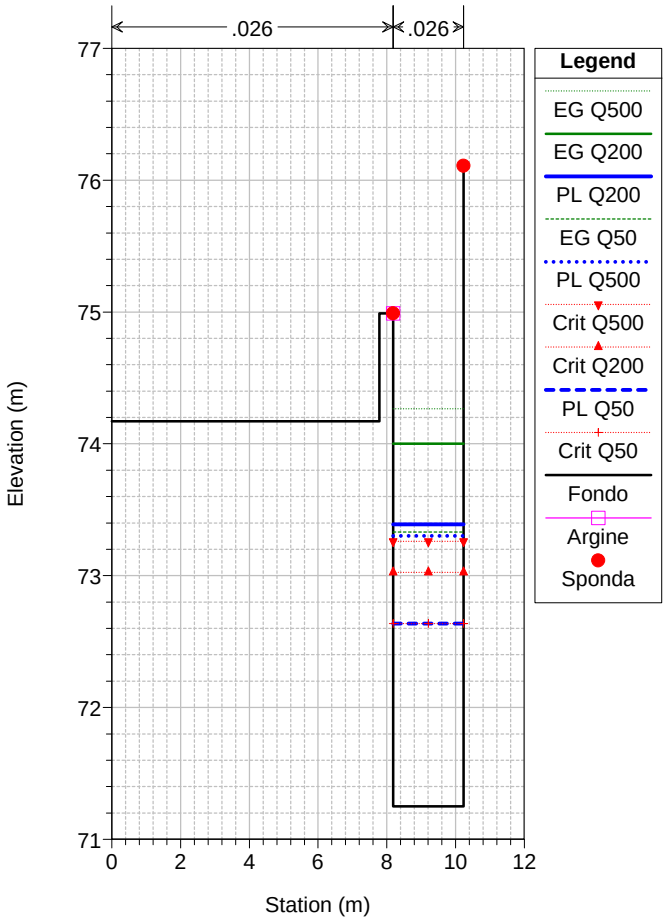
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-3



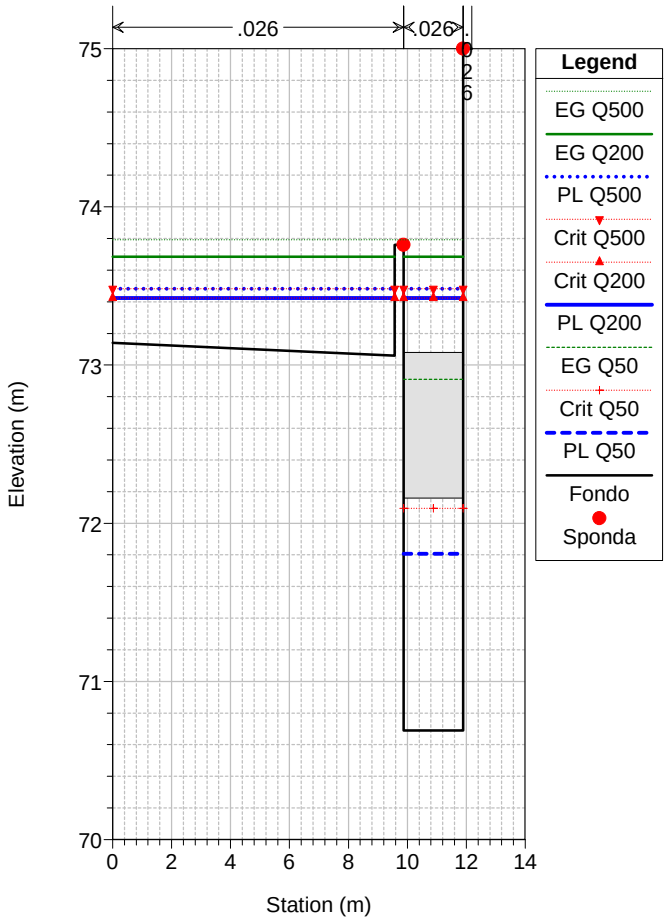
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-3v



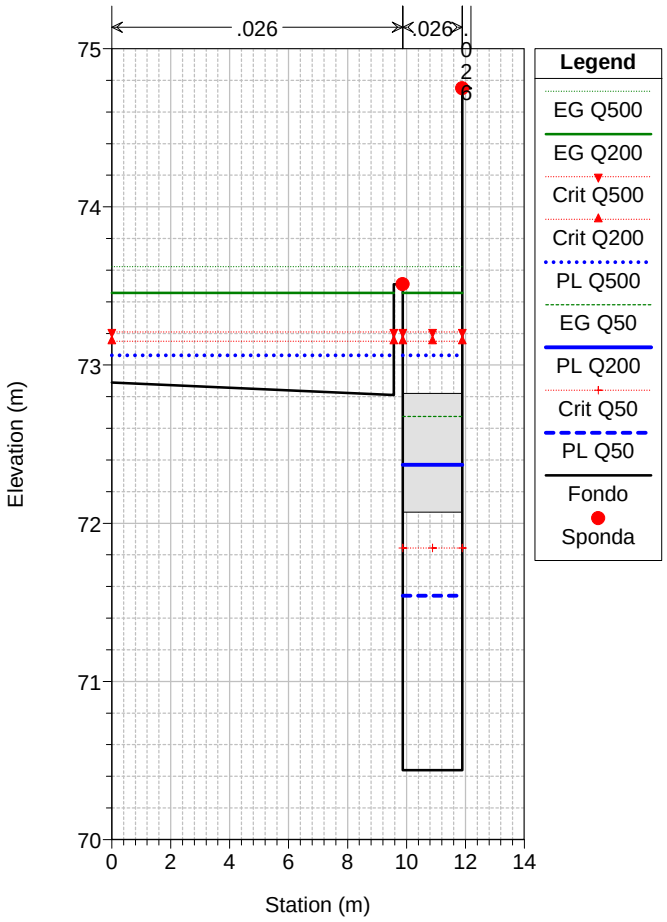
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-2



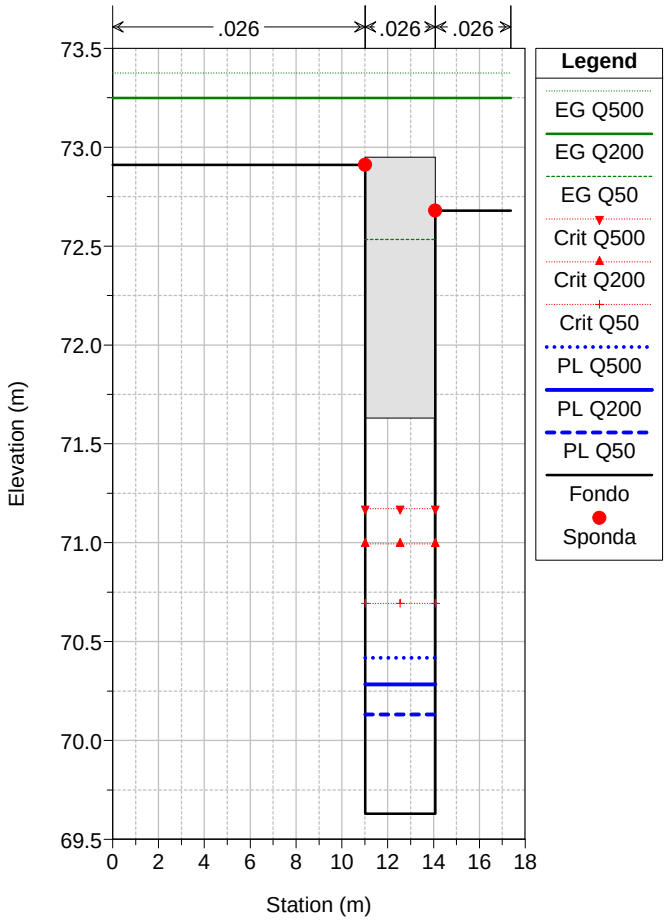
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-1.9



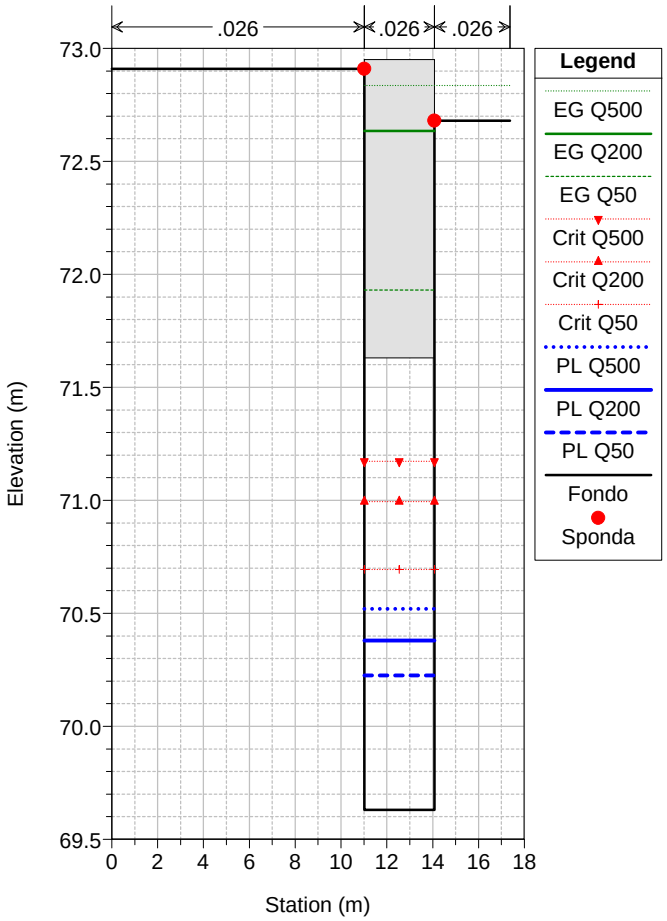
Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-1.1



Mainose Plan: Plan 02

River = Mainose Reach = Mainose MA-1

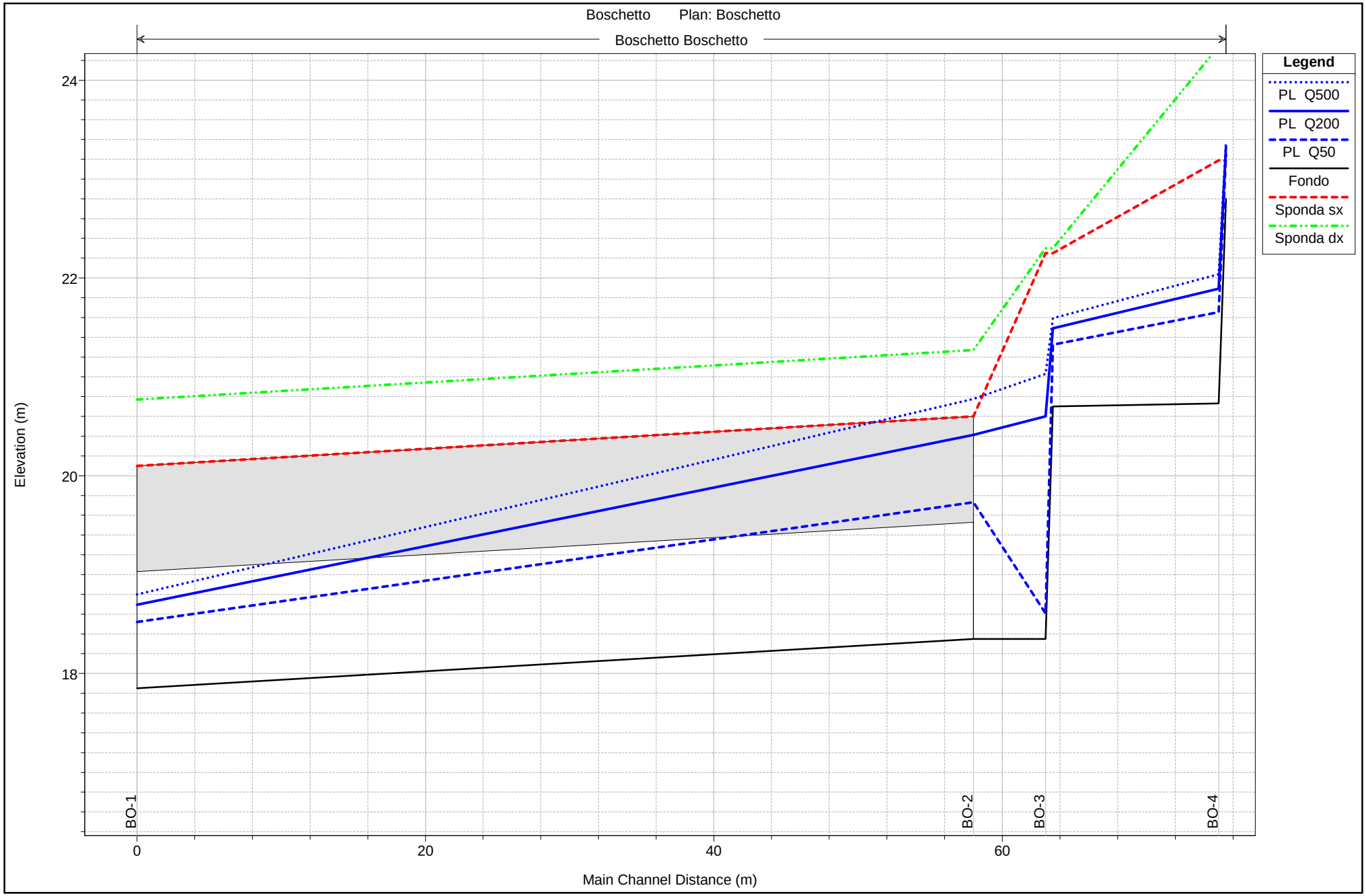


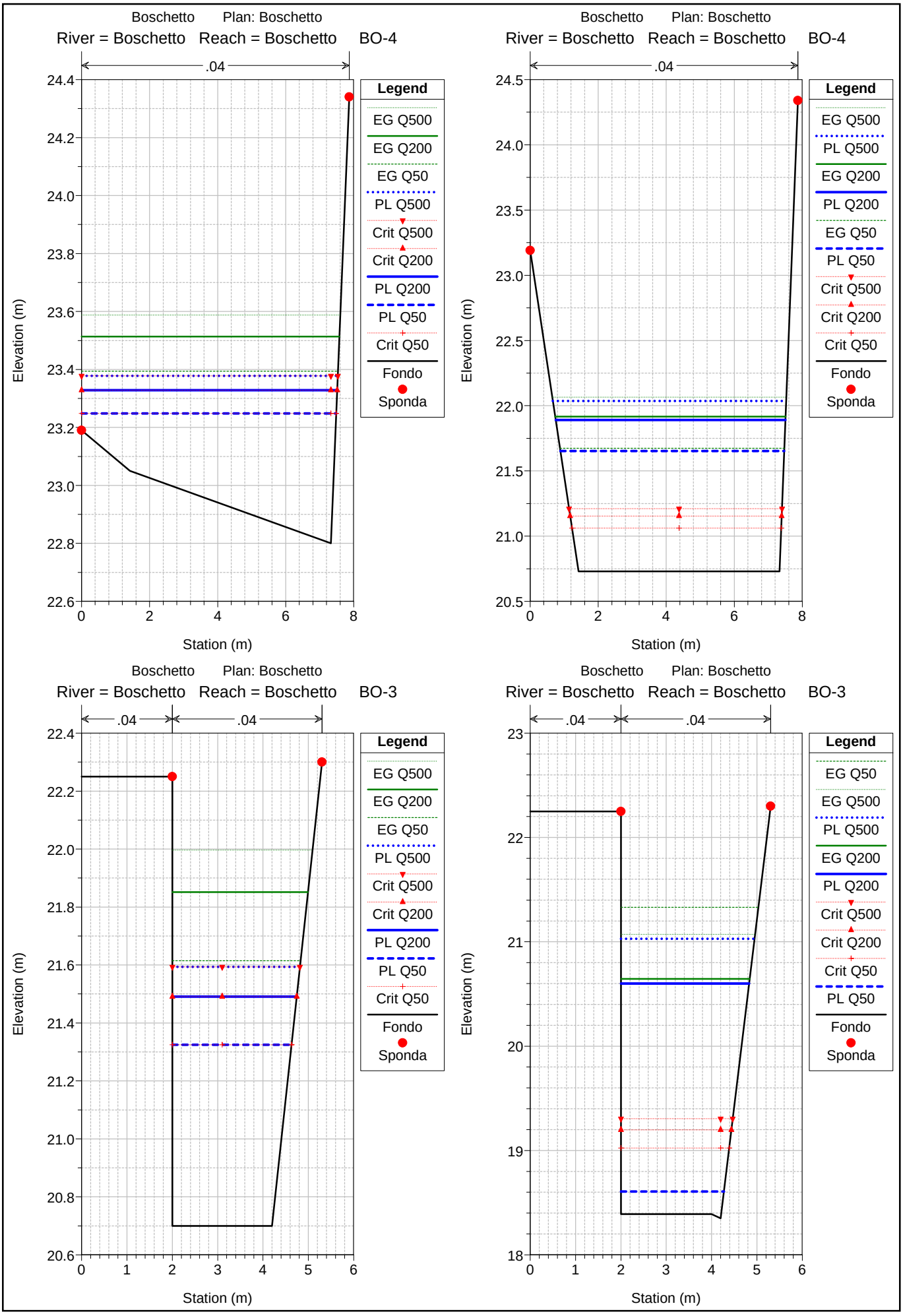
HEC-RAS Plan: Plan 02 River: Mainose Reach: Mainose

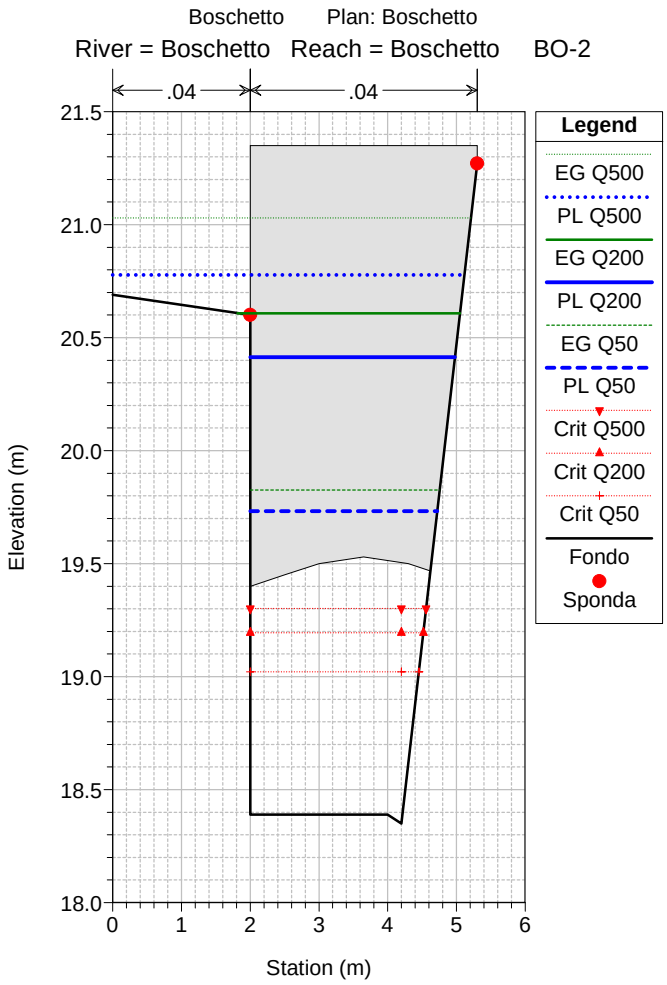
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Mainose	11	Q50	10.50	79.90	81.14	82.90	1.76	82.90	1.76	80.82	81.39	0.004205	2.23	4.71	3.80	0.64
Mainose	11	Q200	15.20	79.90	82.34	82.90	0.56	82.90	0.56	81.07	82.48	0.001418	1.64	9.27	3.80	0.34
Mainose	11	Q500	18.30	79.90	82.75	82.90	0.15	82.90	0.15	81.23	82.89	0.001384	1.69	10.82	3.80	0.32
Mainose	10	Q50	10.50	78.90	81.22	81.90	0.68	81.90	0.68	79.82	81.29	0.000775	1.19	8.80	3.80	0.25
Mainose	10	Q200	15.20	78.90	82.36	81.90	-0.46	81.90	-0.46	80.07	82.43	0.000586	1.16	13.16	3.80	0.20
Mainose	10	Q500	18.30	78.90	82.77	81.90	-0.87	81.90	-0.87	80.23	82.85	0.000646	1.25	14.70	3.80	0.20
Mainose	9	Q50	10.50	78.84	80.60	81.34	0.74	81.34	0.74	80.41	81.23	0.012453	3.50	3.00	1.70	0.84
Mainose	9	Q200	15.20	78.84	81.98	81.34	-0.64	81.34	-0.64	80.85	82.39	0.006712	2.85	5.34	1.70	0.51
Mainose	9	Q500	18.30	78.84	82.31	81.34	-0.97	81.34	-0.97	81.11	82.80	0.007733	3.10	5.90	1.70	0.53
Mainose	8.5		Bridge													
Mainose	8	Q50	10.50	77.49	79.47	80.79	1.32	81.29	1.82	79.47	80.46	0.026621	4.42	2.37	1.20	1.00
Mainose	8	Q200	15.20	77.49	80.02	80.79	0.77	81.29	1.27	80.02	81.30	0.031743	5.00	3.04	1.20	1.00
Mainose	8	Q500	18.30	77.49	80.35	80.79	0.44	81.29	0.94	80.35	81.80	0.034959	5.33	3.44	1.20	1.00
Mainose	7	Q50	10.50	76.14	77.01	78.66	1.65	78.68	1.67	77.43	78.40	0.045009	5.22	2.01	2.76	1.95
Mainose	7	Q200	15.20	76.14	77.20	78.66	1.46	78.68	1.48	77.75	79.00	0.048993	5.95	2.56	2.95	2.04
Mainose	7	Q500	18.30	76.14	77.31	78.66	1.35	78.68	1.37	77.93	79.36	0.051230	6.34	2.88	3.06	2.09
Mainose	6	Q50	10.50	75.17	76.07	76.98	0.91	78.28	2.21	76.39	77.14	0.031847	4.59	2.29	2.85	1.64
Mainose	6	Q200	15.20	75.17	76.30	76.98	0.68	78.28	1.98	76.71	77.63	0.032315	5.11	2.98	3.02	1.64
Mainose	6	Q500	18.30	75.17	76.44	76.98	0.54	78.28	1.84	76.89	77.93	0.032944	5.40	3.39	3.11	1.65
Mainose	5.1	Q50	10.50	73.58	74.60	75.84	1.24	75.84	1.24	75.09	76.24	0.057744	5.67	1.85	1.81	1.79
Mainose	5.1	Q200	15.20	73.58	75.00	75.84	0.84	75.84	0.84	75.51	76.78	0.051746	5.90	2.58	1.81	1.58
Mainose	5.1	Q500	18.30	73.58	75.27	75.84	0.57	75.84	0.57	75.76	77.10	0.049222	6.00	3.05	1.81	1.47
Mainose	4.9	Q50	10.50	72.21	74.03	74.76	0.73	74.76	0.73	73.72	74.55	0.013388	3.18	3.30	1.81	0.75
Mainose	4.9	Q200	15.20	72.21	74.61	74.76	0.15	74.76	0.15	74.14	75.24	0.014435	3.49	4.35	1.81	0.72
Mainose	4.9	Q500	18.30	72.21	74.96	74.76	-0.20	74.76	-0.20	74.39	75.76	0.024818	3.96	4.62		0.76
Mainose	4	Q50	10.50	71.90	73.43	75.62	2.19	75.82	2.39	73.43	74.20	0.021911	3.87	2.71	1.77	1.00
Mainose	4	Q200	15.20	71.90	73.86	75.62	1.76	75.82	1.96	73.86	74.84	0.025176	4.39	3.46	1.77	1.00
Mainose	4	Q500	18.30	71.90	74.12	75.62	1.50	75.82	1.70	74.12	75.22	0.027055	4.66	3.93	1.77	1.00
Mainose	3.2	Q50	10.50	71.55	72.57	75.29	2.72	75.29	2.72	72.94	73.85	0.041293	5.00	2.10	2.05	1.58
Mainose	3.2	Q200	15.20	71.55	72.88	75.29	2.41	75.29	2.41	73.33	74.46	0.043409	5.57	2.73	2.05	1.54
Mainose	3.2	Q500	18.30	71.55	73.07	75.29	2.22	75.29	2.22	73.56	74.83	0.044773	5.87	3.12	2.05	1.52
Mainose	3.1	Q50	10.50	71.25	73.06	75.10	2.04	75.10	2.04	72.64	73.47	0.009559	2.83	3.71	2.05	0.67
Mainose	3.1	Q200	15.20	71.25	73.61	75.10	1.49	75.10	1.49	73.03	74.11	0.010451	3.14	4.84	2.05	0.65
Mainose	3.1	Q500	18.30	71.25	73.82	75.10	1.28	75.10	1.28	73.26	74.43	0.012350	3.47	5.27	2.05	0.69

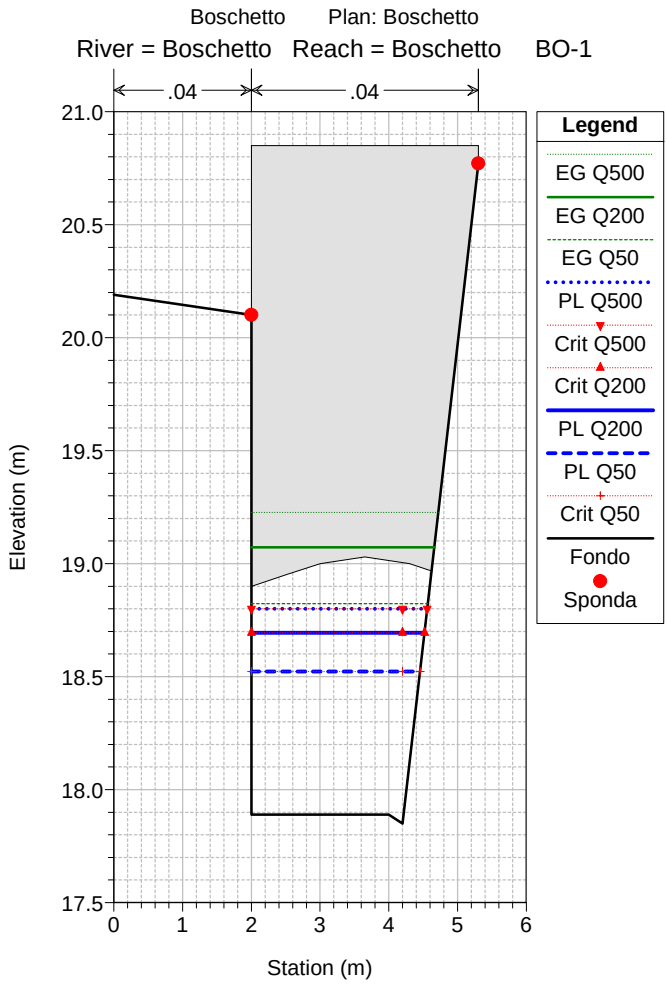
HEC-RAS Plan: Plan 02 River: Mainose Reach: Mainose (Continued)

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)	
Mainose	3		Bridge													
Mainose	2.9	Q50	10.50	71.25	72.64	74.99	2.35	76.11	3.47	72.64	73.33	0.018689	3.70	2.84	2.05	1.00
Mainose	2.9	Q200	15.20	71.25	73.39	74.99	1.60	76.11	2.72	73.03	74.00	0.013250	3.47	4.38	2.05	0.76
Mainose	2.9	Q500	18.30	71.25	73.30	74.99	1.69	76.11	2.81	73.26	74.27	0.021221	4.35	4.21	2.05	0.97
Mainose	2	Q50	10.50	70.69	71.81	72.16	0.35	72.16	0.35	72.09	72.91	0.034118	4.65	2.26	2.02	1.41
Mainose	2	Q200	15.20	70.69	73.42	72.16	-1.26	72.16	-1.26	73.42	73.69	0.014283	2.40	6.75	11.59	0.44
Mainose	2	Q500	18.30	70.69	73.48	72.16	-1.32	72.16	-1.32	73.48	73.79	0.015402	2.53	7.44	11.59	0.47
Mainose	1.9	Q50	10.50	70.44	71.54	72.07	0.53	72.07	0.53	71.84	72.68	0.035363	4.72	2.23	2.02	1.43
Mainose	1.9	Q200	15.20	70.44	72.37	72.07	-0.30	72.07	-0.30	73.15	73.46	0.041649	4.62	3.29		1.06
Mainose	1.9	Q500	18.30	70.44	73.06	72.07	-0.99	72.07	-0.99	73.21	73.62	0.031162	3.60	5.80	11.59	0.65
Mainose	1.1	Q50	10.50	69.63	70.13	71.63	1.50	71.63	1.50	70.69	72.53	0.116901	6.87	1.53	3.05	3.10
Mainose	1.1	Q200	15.20	69.63	70.28	71.63	1.35	71.63	1.35	70.99	73.25	0.111687	7.63	1.99	3.05	3.01
Mainose	1.1	Q500	18.30	69.63	70.42	71.63	1.21	71.63	1.21	71.17	73.38	0.094030	7.62	2.40	3.05	2.74
Mainose	1	Q50	10.50	69.63	70.23	71.63	1.41	71.63	1.41	70.69	71.93	0.070176	5.79	1.81	3.05	2.39
Mainose	1	Q200	15.20	69.63	70.38	71.63	1.25	71.63	1.25	70.99	72.64	0.074982	6.65	2.28	3.05	2.45
Mainose	1	Q500	18.30	69.63	70.52	71.63	1.11	71.63	1.11	71.17	72.84	0.066266	6.74	2.71	3.05	2.28


Boschetto Plan: Boschetto
Boschetto Boschetto
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
24
22
20
18
0
20
40
60
Main Channel Distance (m)
BO-1
BO-2
BO-3
BO-4


Boschetto Plan: Boschetto
River = Boschetto Reach = Boschetto BO-4
.04
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Boschetto Plan: Boschetto
River = Boschetto Reach = Boschetto BO-4
.04
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Boschetto Plan: Boschetto
River = Boschetto Reach = Boschetto BO-3
.04
.04
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Boschetto Plan: Boschetto
River = Boschetto Reach = Boschetto BO-3
.04
.04
Elevation (m)
Station (m)
Legend
EG Q50
EG Q500
PL Q500
EG Q200
PL Q200
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda


Boschetto Plan: Boschetto
River = Boschetto Reach = Boschetto BO-2
.04
.04
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


Boschetto Plan: Boschetto
River = Boschetto Reach = Boschetto BO-1
.04
.04
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda

HEC-RAS Plan: Bosc River: Boschetto Reach: Boschetto

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)	
Boschetto	4. BO-4	Q50	3.60	22.80	23.25	23.19	-0.06	24.34	1.09	23.25	23.39	0.026116	1.69	2.13	7.49	1.01
Boschetto	4. BO-4	Q200	5.20	22.80	23.33	23.19	-0.14	24.34	1.01	23.33	23.51	0.024571	1.91	2.73	7.52	1.01
Boschetto	4. BO-4	Q500	6.30	22.80	23.38	23.19	-0.19	24.34	0.96	23.38	23.59	0.023878	2.03	3.10	7.53	1.01
Boschetto	3.9 BO-4	Q50	3.60	20.73	21.65	23.19	1.54	24.34	2.69	21.06	21.67	0.000951	0.62	5.77	6.58	0.21
Boschetto	3.9 BO-4	Q200	5.20	20.73	21.89	23.19	1.30	24.34	2.45	21.15	21.92	0.000961	0.71	7.35	6.75	0.22
Boschetto	3.9 BO-4	Q500	6.30	20.73	22.04	23.19	1.15	24.34	2.30	21.21	22.07	0.000971	0.76	8.34	6.86	0.22
Boschetto	3. BO-3	Q50	3.60	20.70	21.32	22.25	0.93	22.30	0.98	21.32	21.61	0.028849	2.39	1.51	2.63	1.01
Boschetto	3. BO-3	Q200	5.20	20.70	21.49	22.25	0.76	22.30	0.81	21.49	21.85	0.028895	2.66	1.96	2.74	1.01
Boschetto	3. BO-3	Q500	6.30	20.70	21.59	22.25	0.66	22.30	0.71	21.59	22.00	0.029037	2.81	2.24	2.81	1.01
Boschetto	2.9 BO-3	Q50	3.60	18.35	18.61	22.25	3.64	22.30	3.69	19.02	21.33	0.822335	7.31	0.49	2.27	5.01
Boschetto	2.9 BO-3	Q200	5.20	18.35	20.60	22.25	1.65	22.30	1.70	19.20	20.65	0.001799	0.93	5.57	2.83	0.21
Boschetto	2.9 BO-3	Q500	6.30	18.35	21.03	22.25	1.22	22.30	1.27	19.30	21.07	0.001594	0.93	6.81	2.95	0.19
Boschetto	2. BO-2	Q50	3.60	18.35	19.73	19.40	-0.33	19.47	-0.26	19.02	19.83	0.010738	1.35	2.66		0.38
Boschetto	2. BO-2	Q200	5.20	18.35	20.41	19.40	-1.01	19.47	-0.95	19.19	20.61	0.022404	1.96	2.66		0.45
Boschetto	2. BO-2	Q500	6.30	18.35	20.78	19.40	-1.38	19.47	-1.31	19.30	21.03	0.030084	2.27	2.92	2.00	0.45
Boschetto	1 BO-1	Q50	3.60	17.85	18.52	18.90	0.38	18.97	0.45	18.52	18.82	0.030475	2.43	1.48	2.45	1.00
Boschetto	1 BO-1	Q200	5.20	17.85	18.69	18.90	0.21	18.97	0.27	18.69	19.07	0.030941	2.73	1.91	2.52	1.00
Boschetto	1 BO-1	Q500	6.30	17.85	18.80	18.90	0.10	18.97	0.17	18.80	19.23	0.031493	2.89	2.18	2.56	1.00

2.3 Tratto Fiumara compreso tra il ponte Pieragostini e la foce

Il tratto terminale del Torrente Polcevera, compreso tra il Ponte Pieragostini POL P 4P e la foce, è caratterizzato da argini in c.a. di modesta altezza ed è attraversato da numerosi ponti (FS GE-Ventimiglia, ponti a servizio dell'ILVA) che interferiscono pesantemente con il deflusso della corrente.

In sponda sinistra si sviluppa la "Fiumara", area destinata ad ospitare quartieri residenziali e diverse attività commerciali e sportive; la sponda destra attualmente è occupata dallo stabilimento dell'ILVA, la cui dismissione è prevista a breve termine.

Nel tratto terminale è stata inoltre realizzata una grande "vasca di decantazione" destinata all'accumulo del trasporto solido, a cui si sovrappone quello di origine antropica dovuto alle scorie d'alto forno (banchina Italsider – portuale) prodotto dalle Acciaierie di Cornigliano.

L'area è interessata dal progetto 'Raccordi terminali viabilità Polcevera da Ponte Pieragostini all'area portuale e lungomare Canepa – Lungomare Canepa e alternativa parcheggio mezzi pesanti – collegamento zona franca' che prevede la realizzazione di una viabilità su entrambe le sponde con conseguente arginatura e la demolizione e ricostruzione dei numerosi ponti presenti nel tratto in esame.

Per la simulazione idraulica di questo tratto sono risultate disponibili 14 sezioni trasversali d'alveo di rilievo, comprese tra il ponte stradale POL P 4P (sezione 1) e l'ultimo ponte ILVA in prossimità del bacino portuale (sezione 12). Tali sezioni sono state realizzate nell'ambito dello studio idraulico, eseguito dallo studio dell'Ing. Paolo Noce, inerente al " Progetto di riqualificazione urbana dell'area di Fiumara a Genova Sampierdarena" e pertanto non sono riportate nel presente allegato. Per il medesimo motivo non verranno riportati i profili longitudinali relativi ai tre periodi di ritorno.

Si allegano al Piano le verifiche idrauliche del suddetto progetto che il Comitato Tecnico Provinciale ha deliberato essere parte integrante del piano stesso.

Nella tabella 2.1.5.1, in corrispondenza di ogni sezione di rilievo o di calcolo del modello, sono indicate le distanze progressive in km a partire dalla sezione di testata del tratto (sezione 1 a monte) e i livelli idrici di piena in quote assolute di assegnato tempo di ritorno in relazione alle seguenti portate di progetto, elaborate nello studio idraulico relativo al " Progetto di riqualificazione urbana dell'area di Fiumara a Genova Sampierdarena":

- $Q_{TR=50\ anni}$ = 1340 m^3/s;
- $Q_{TR=200\ anni}$ = 1750 m^3/s;
- $Q_{TR=500\ anni}$ = 2025 m^3/s;

SEZIONE	PROGRESSIVA (km)	Y-TR50 (m s.m.)	Y-TR200 (m s.m.)	Y-TR500 (m s.m.)
1/93	0.000	5.84	7.17	8.38
2/95	0.066	5.45	6.78	7.99
3	0.070	5.65	6.95	8.11
4	0.111	5.63	6.93	8.10
5	0.164	5.56	6.88	8.07
6	0.219	5.50	6.83	8.03
7	0.281	5.50	6.83	8.03
PONTE FS	0.308	4.94	6.27	7.54
8	0.342	4.91	6.25	7.53

9	0.385	4.97	6.32	7.59
PONTE ILVA	0.422	2.71	3.24	3.56
10	0.474	2.29	2.84	3.19
11	0.532	0.95	1.42	1.72
12	0.580	1.40	1.98	2.34

Tab. 2.1.5.1 - Torrente Polcevera - tratto “Fiumara”: risultati delle simulazioni.

3. TORRENTE TORBELLA
3.1 Rio Rivassa

3. TORRENTE TORBELLA

Il Torrente Torbella è stato indagato da monte del cimitero fino alla confluenza nel Torrente Polcevera.

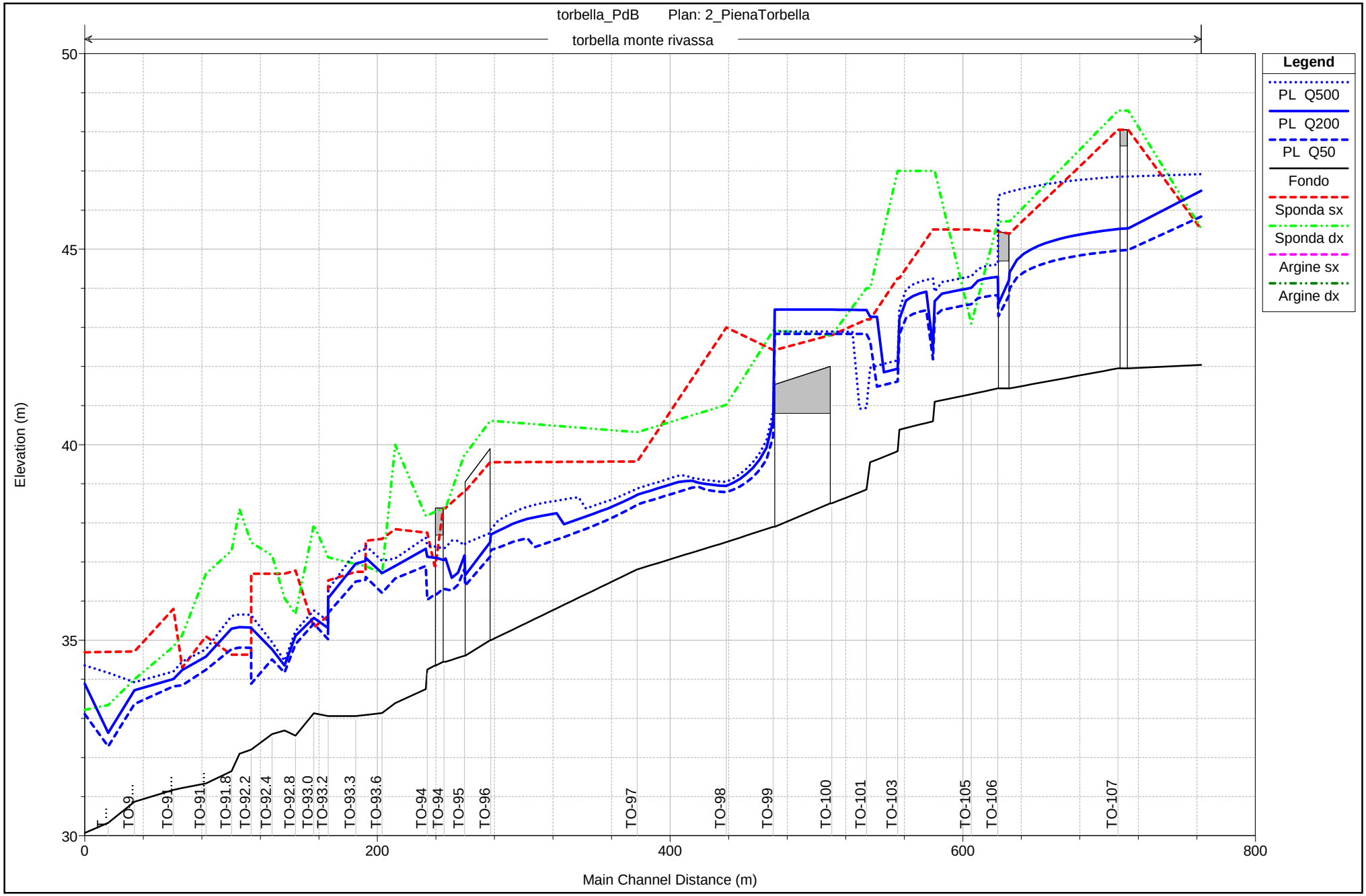
Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 33 $m^{1/3}/s$ per i tratti naturali e pari a 40 $m^{1/3}/s$ per i tratti plateati.

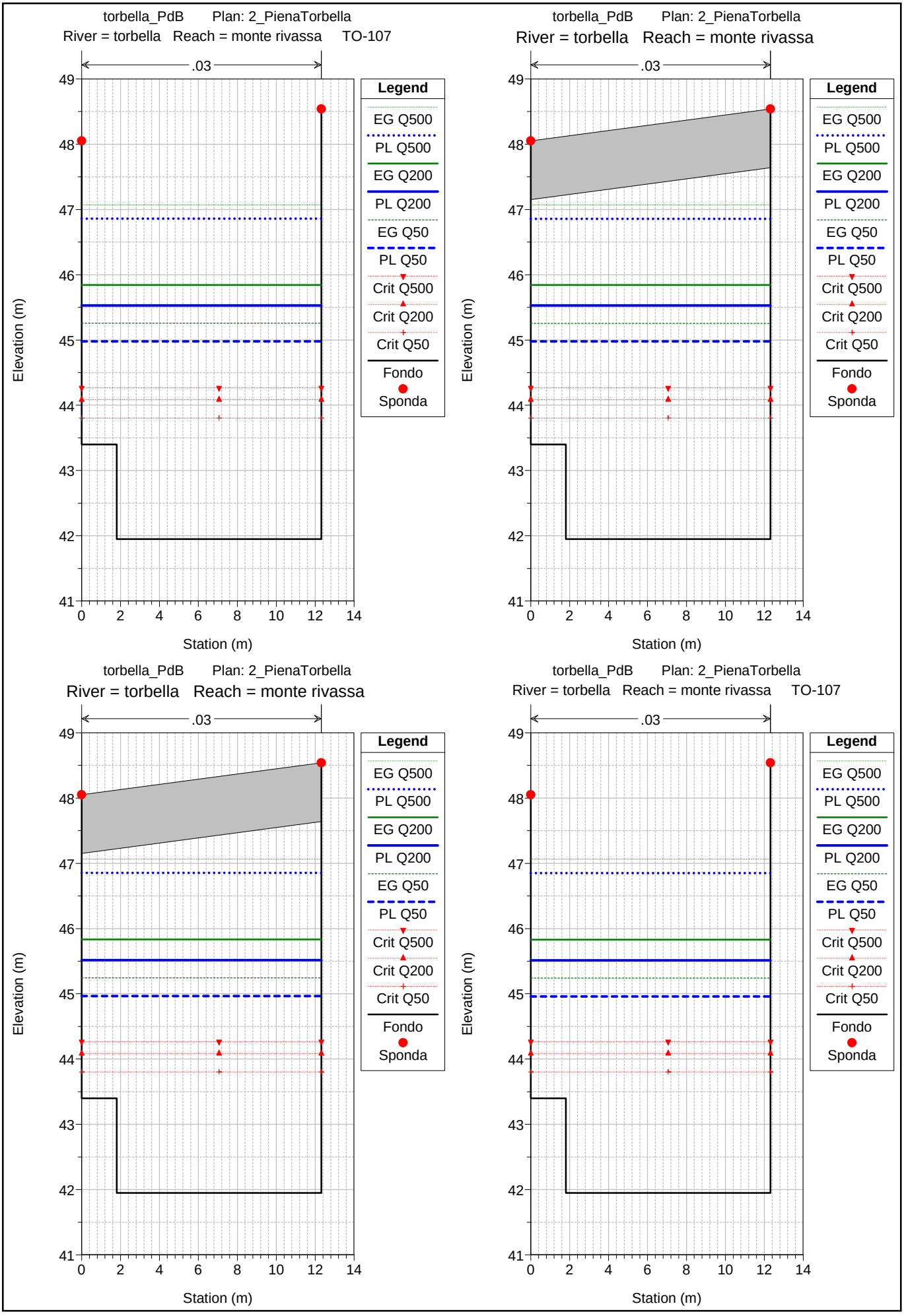
Come condizioni al contorno di monte è stata imposta la profondità critica, a valle è stata simulata la confluenza nel torrente Polcevera.

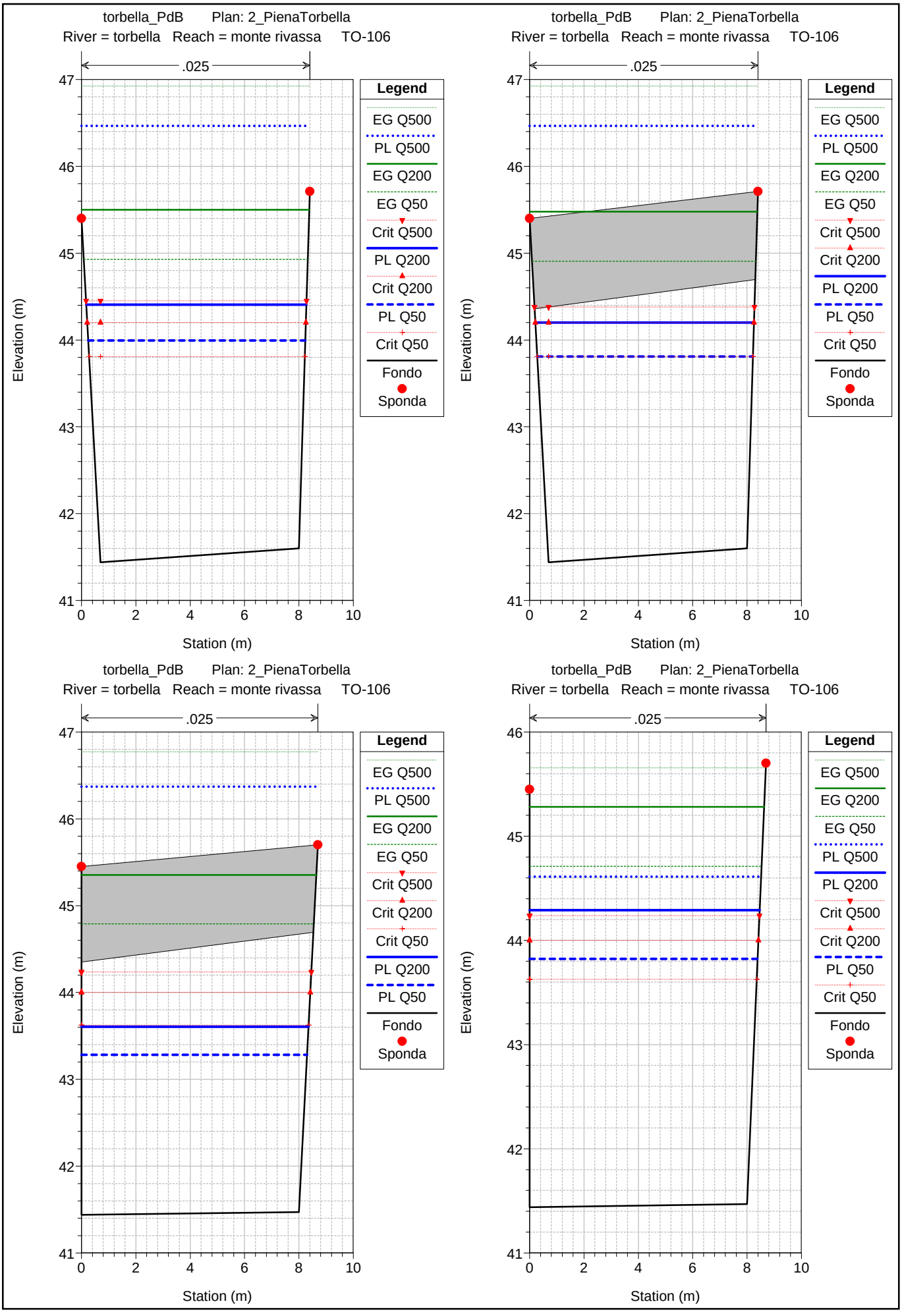
Le portate utilizzate per la verifica sono le seguenti:

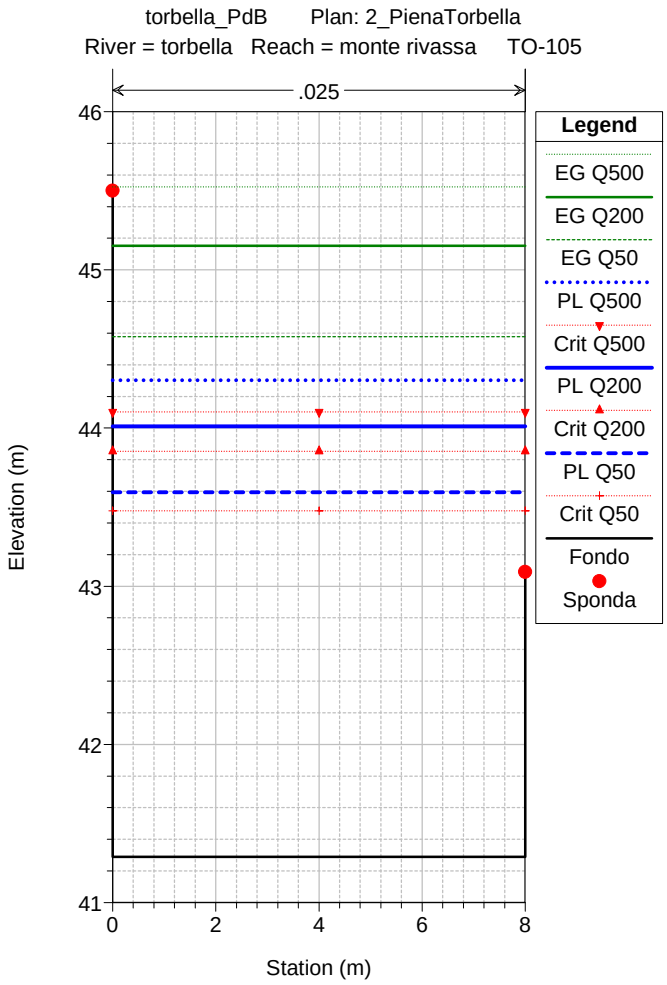
TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
		T = 50 anni	**T = 200 anni**	**T = 500 anni**
T. Torbella (monte Rivassa)	TOR1	81	103	118
T. Torbella (confluenza)	TOR2	115	145	165
T. Polcevera (monte)	diff.	1209	1542	1750
T. Polcevera (valle)	PoFeTo	1377	1763	2006

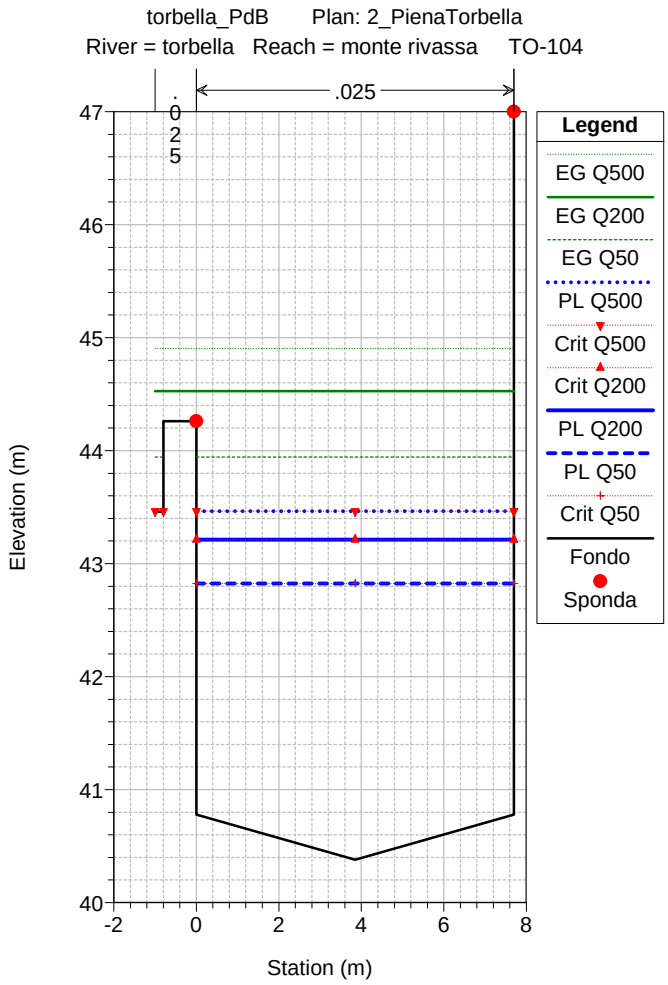
Per studiare la confluenza sono state utilizzate per il torrente Polcevera le portate di massima piena a valle della confluenza e a monte la differenza tra le portate di valle e quella dei due affluenti (Torbella e Fegino).

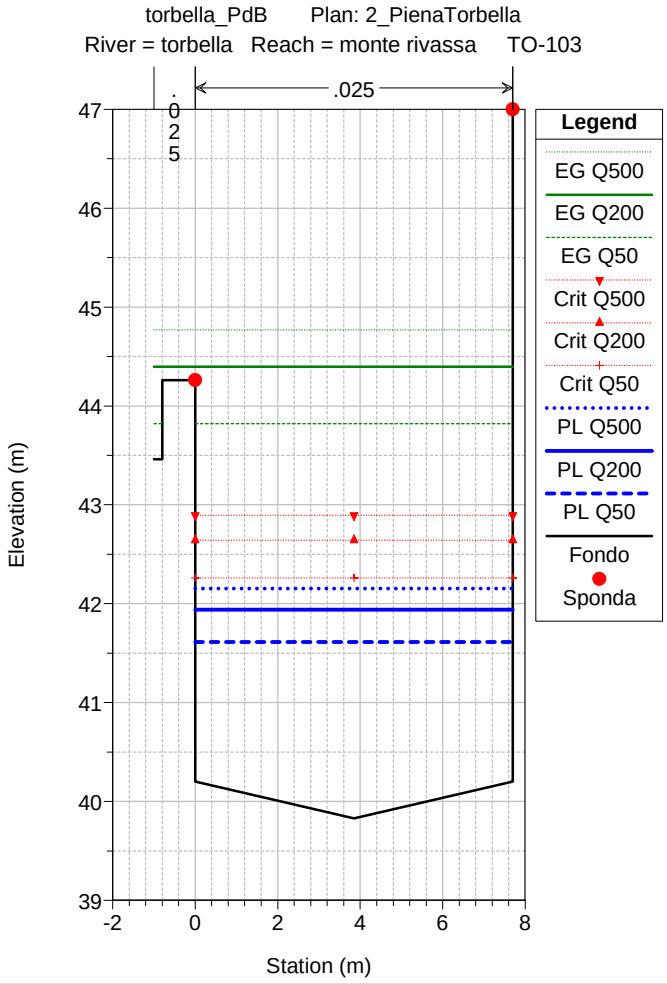

torbella_PdB Plan: 2_PienaTorbella
torbella monte rivassa
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Argine sx
Argine dx
Elevation (m)
Main Channel Distance (m)
50
45
40
35
30
0
200
400
600
800
T...
TO-9...
TO-91....
TO-91....
TO-91.8
TO-92.2
TO-92.4
TO-92.8
TO-93.0
TO-93.2
TO-93.3
TO-93.6
TO-94
TO-94
TO-95
TO-96
TO-97
TO-98
TO-99
TO-100
TO-101
TO-103
TO-105
TO-106
TO-107

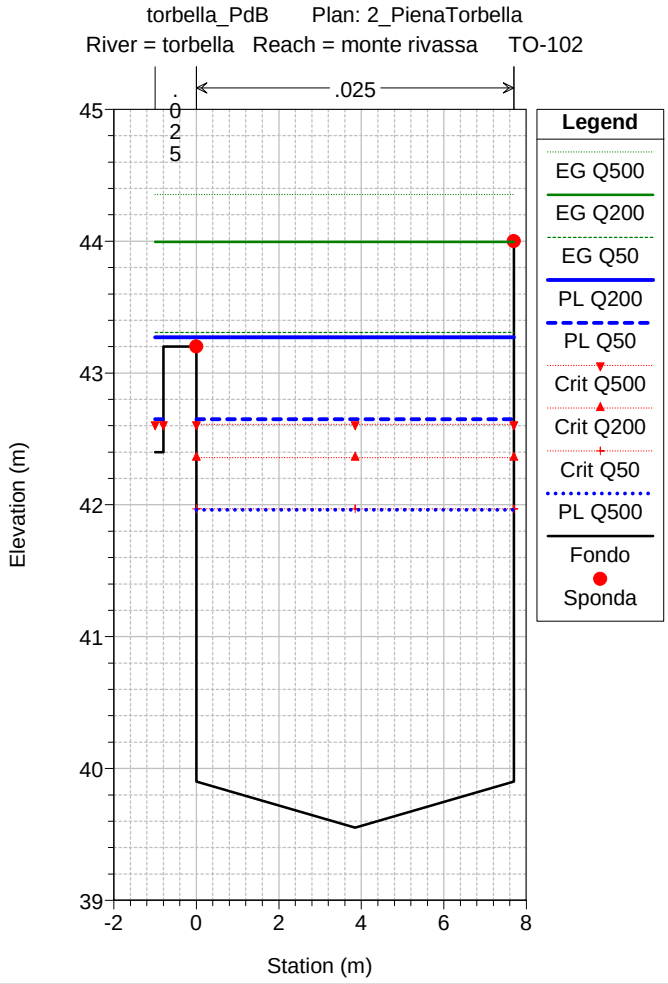

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-107
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-107
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

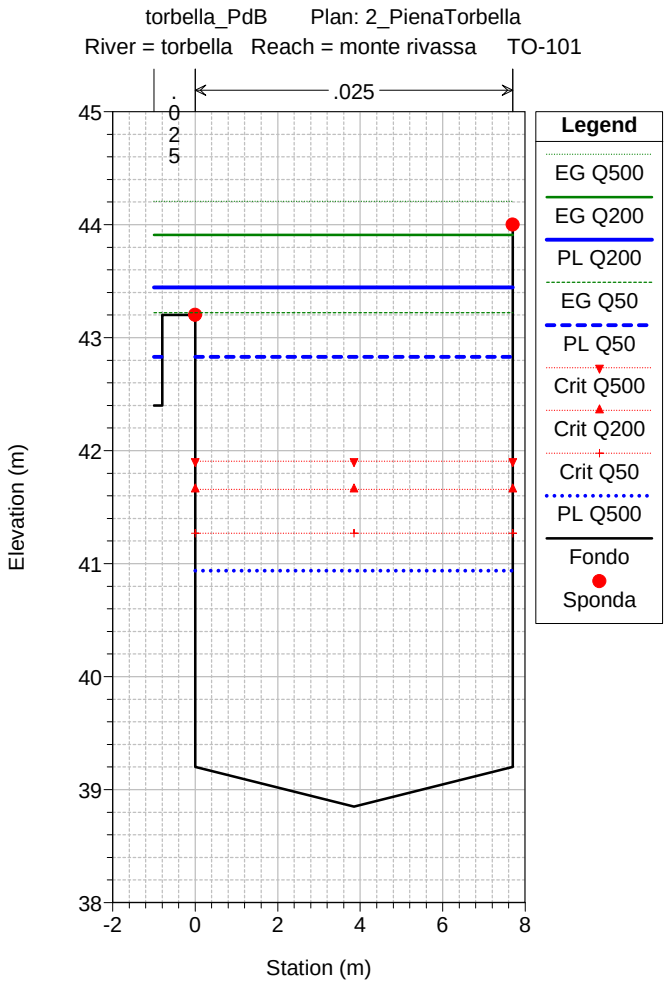

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-106
.025
Legend
EG Q500
PL Q500
EG Q200
EG Q50
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-106
.025
Legend
EG Q500
PL Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-106
.025
Legend
EG Q500
PL Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-106
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

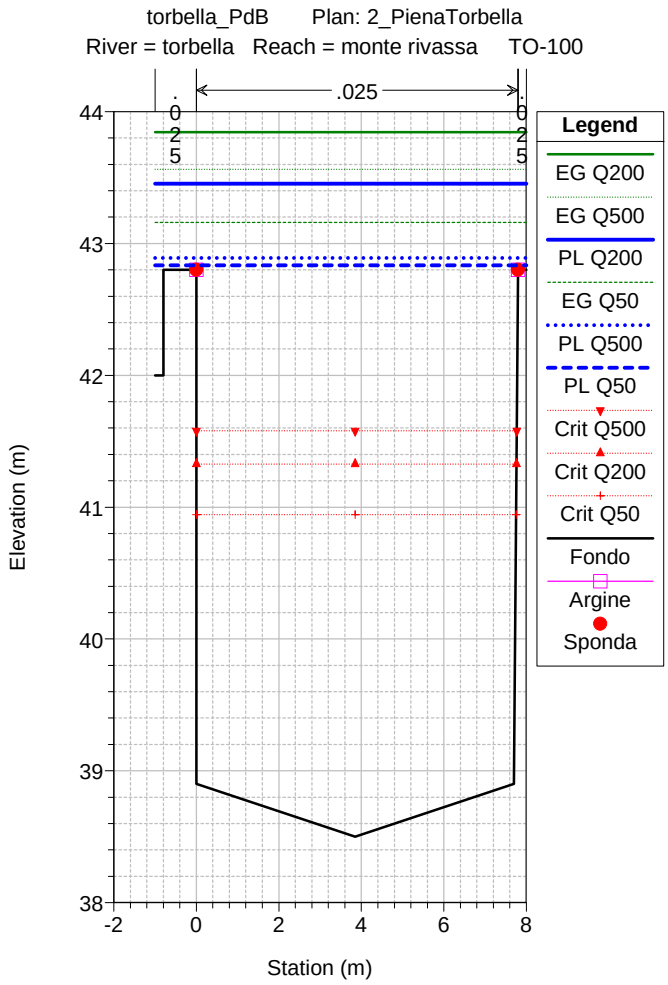

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-105
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

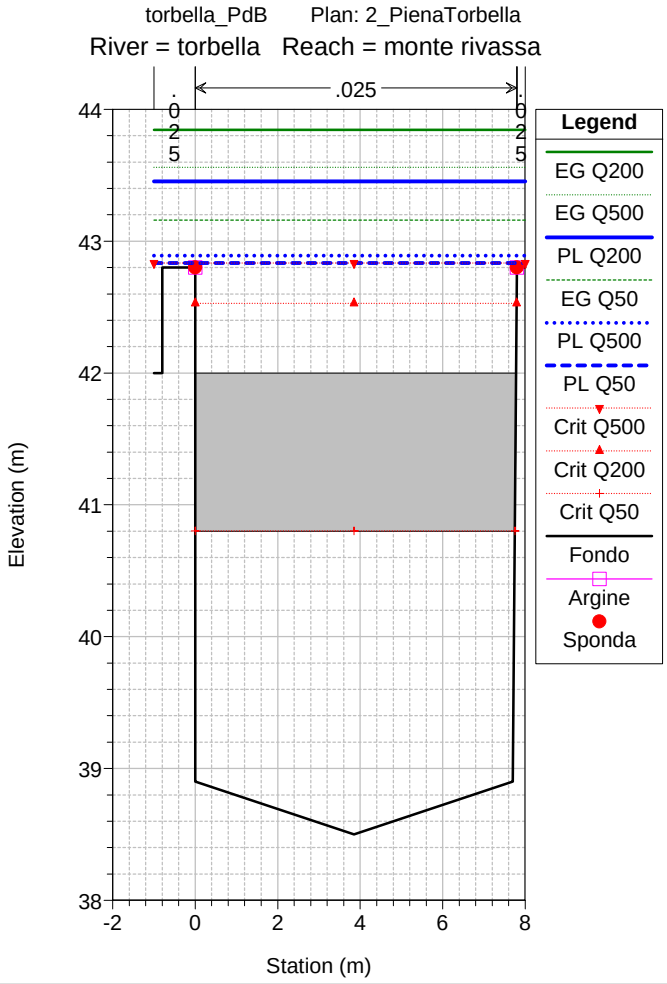

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-104
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

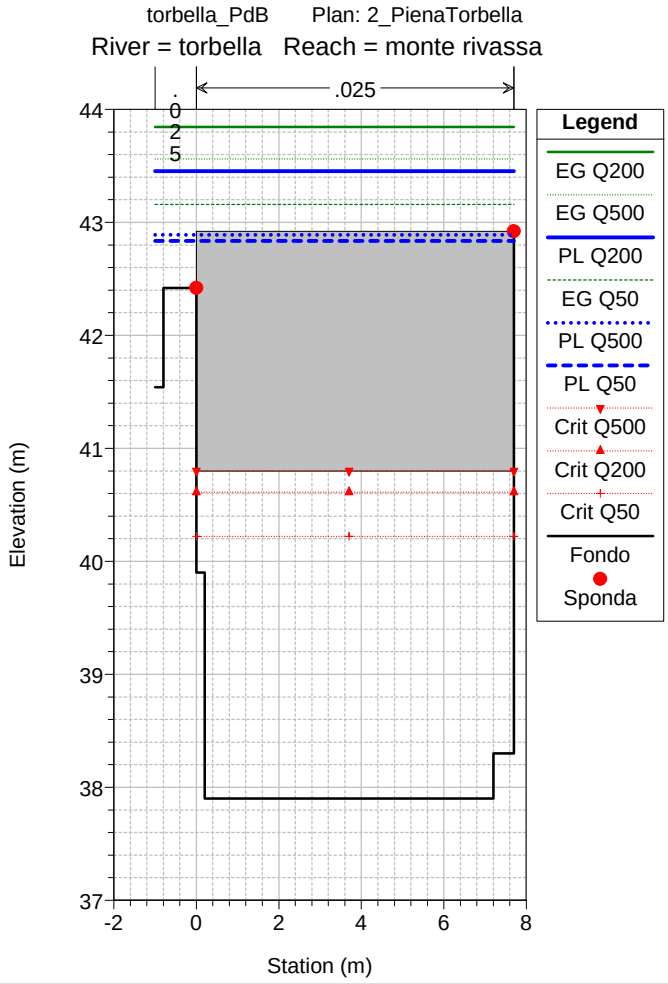

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-103
.025
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

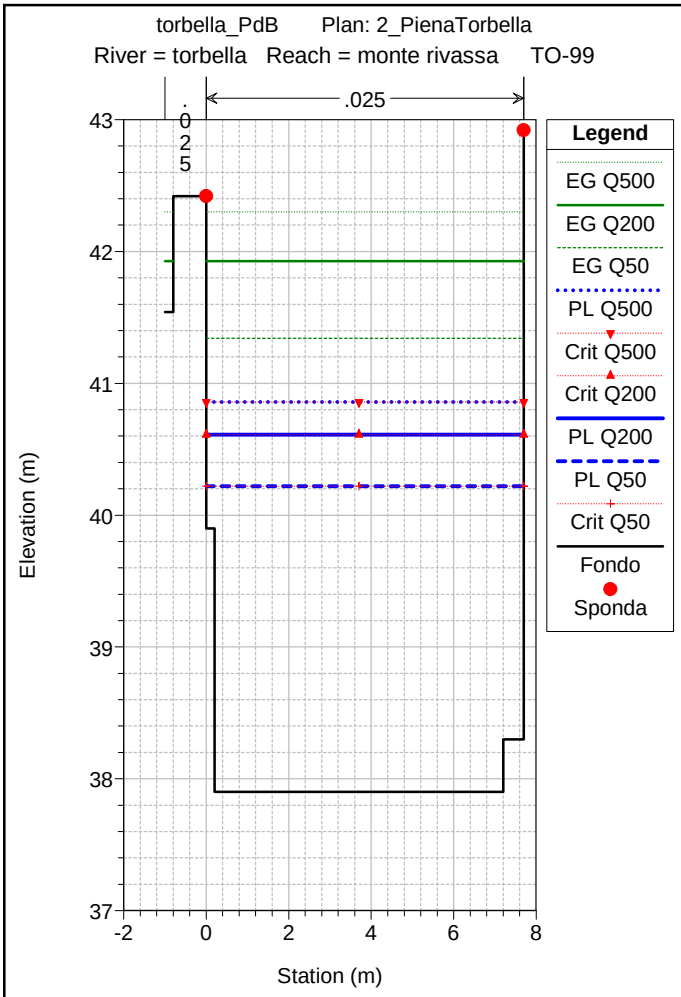

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-102
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
Fondo
Sponda
Elevation (m)
Station (m)

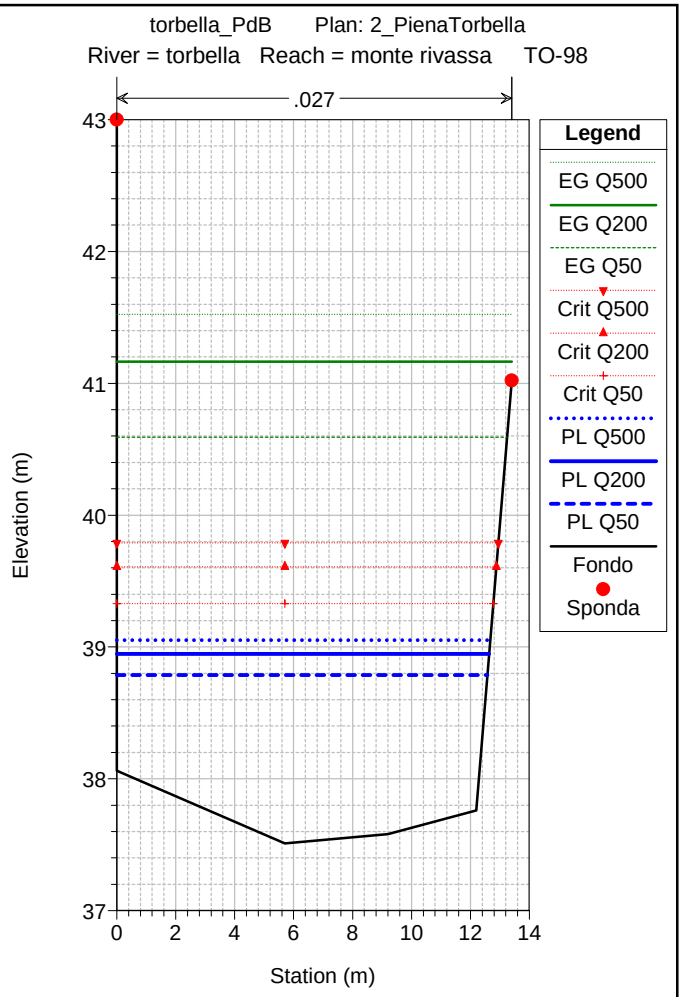

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-101
.025
.025
Legend
EG Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
Fondo
Sponda
Elevation (m)
Station (m)

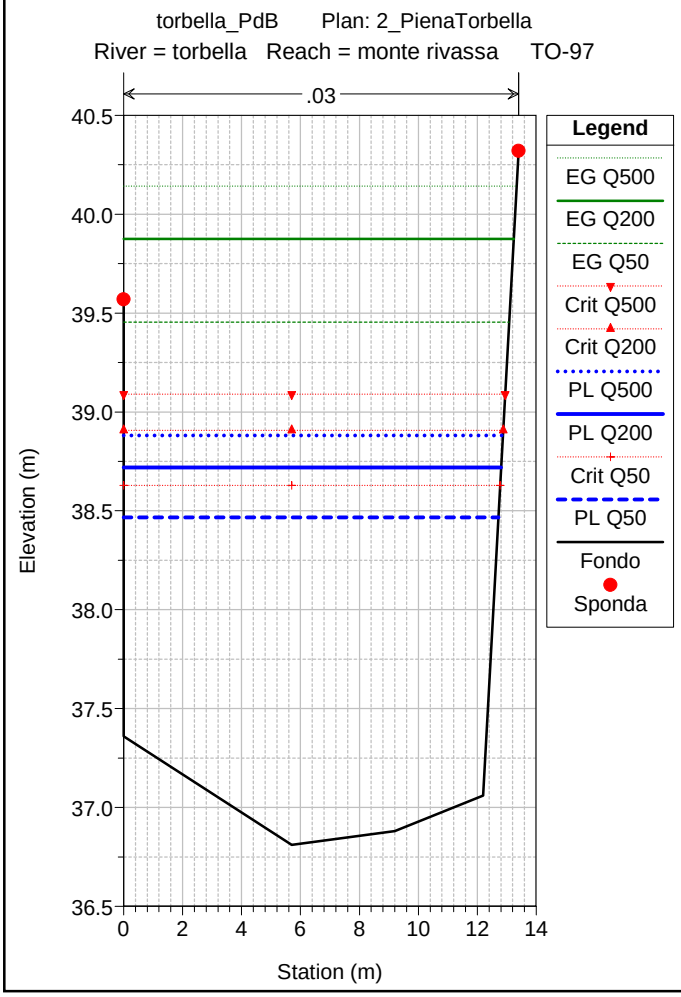

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-100
.025
.025
Legend
EG Q200
EG Q500
PL Q200
EG Q50
PL Q500
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

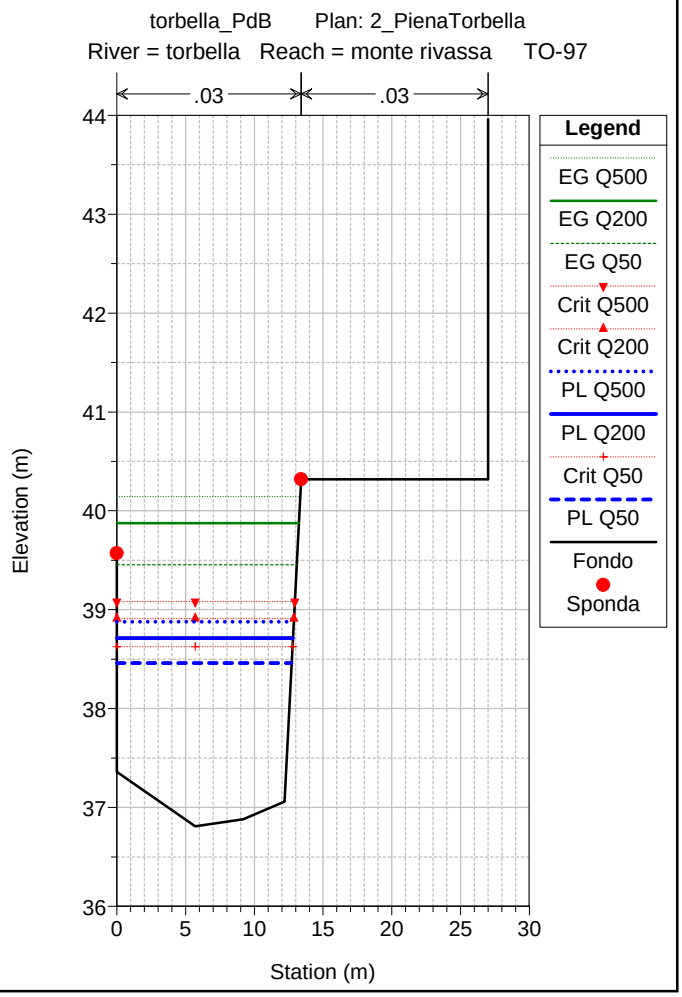

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa
.025
.025
Legend
EG Q200
EG Q500
PL Q200
EG Q50
PL Q500
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

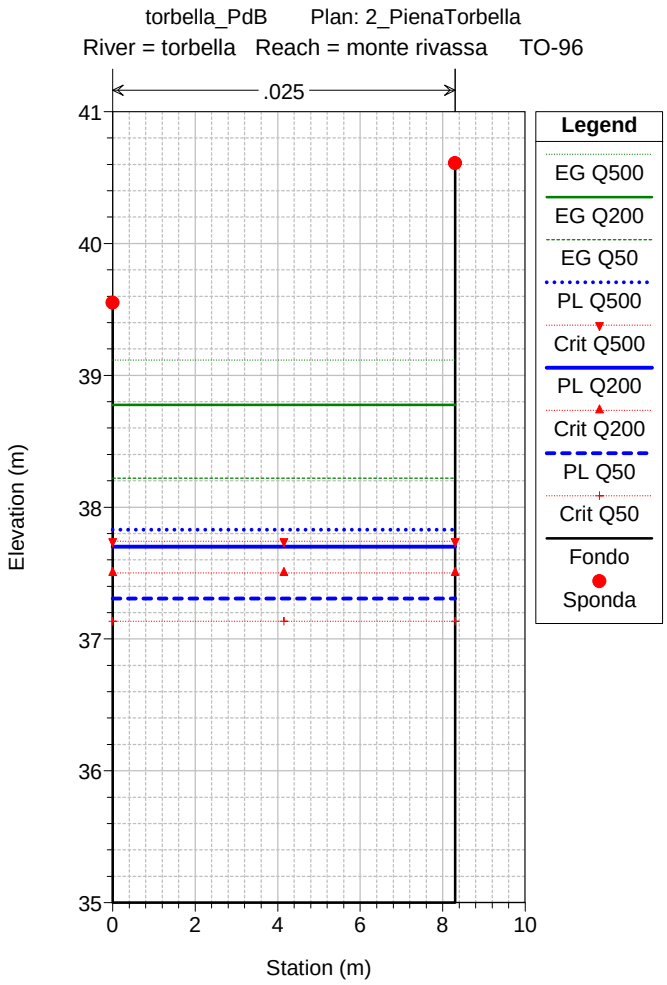

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa
.025
.025
Legend
EG Q200
EG Q500
PL Q200
EG Q50
PL Q500
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

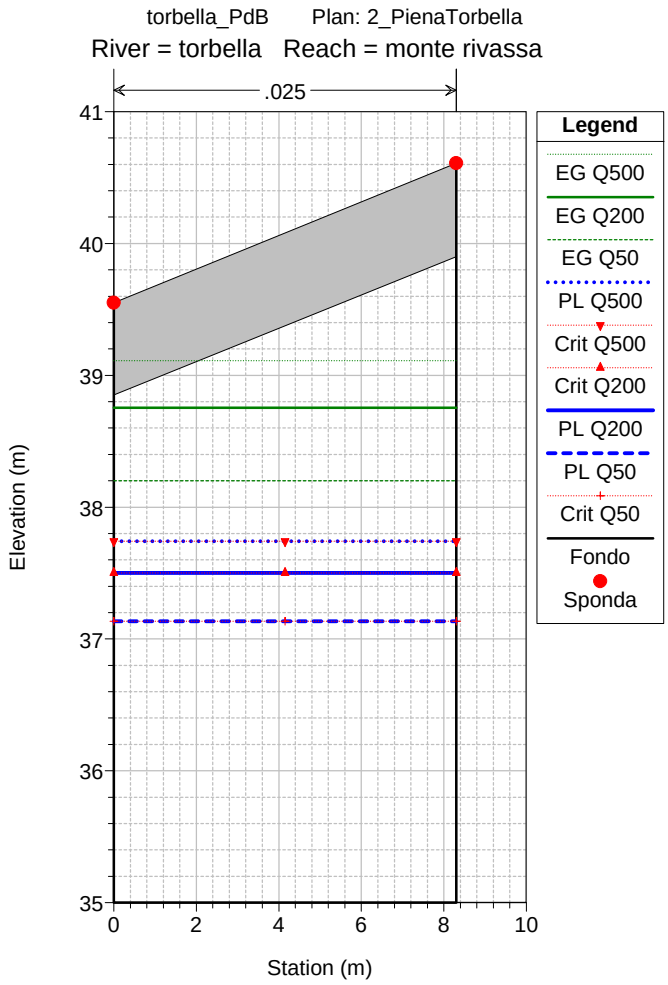

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-99
.025
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda

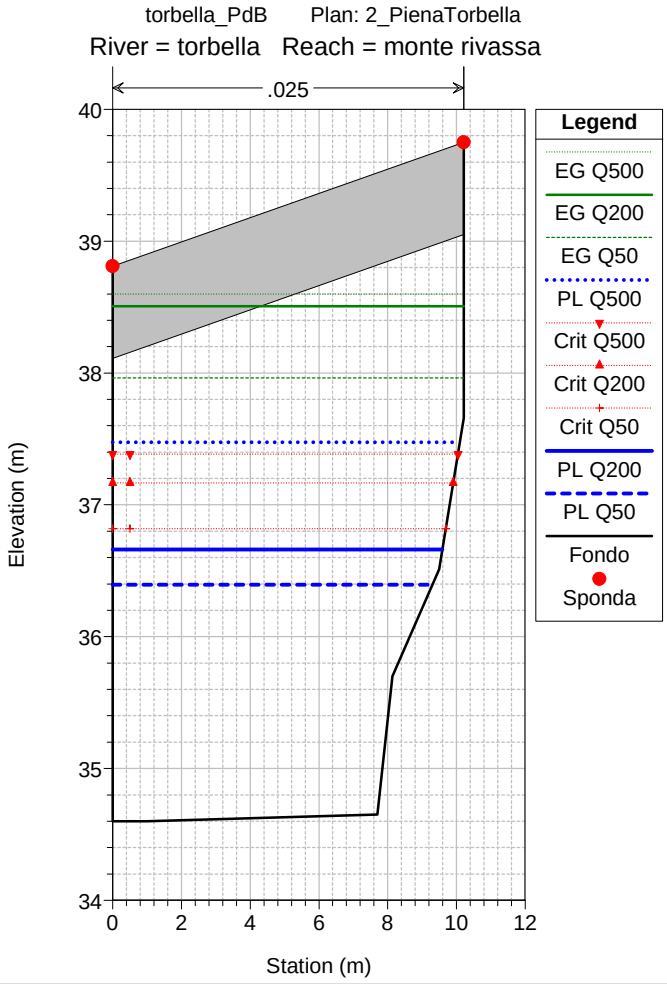

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-98
.027
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

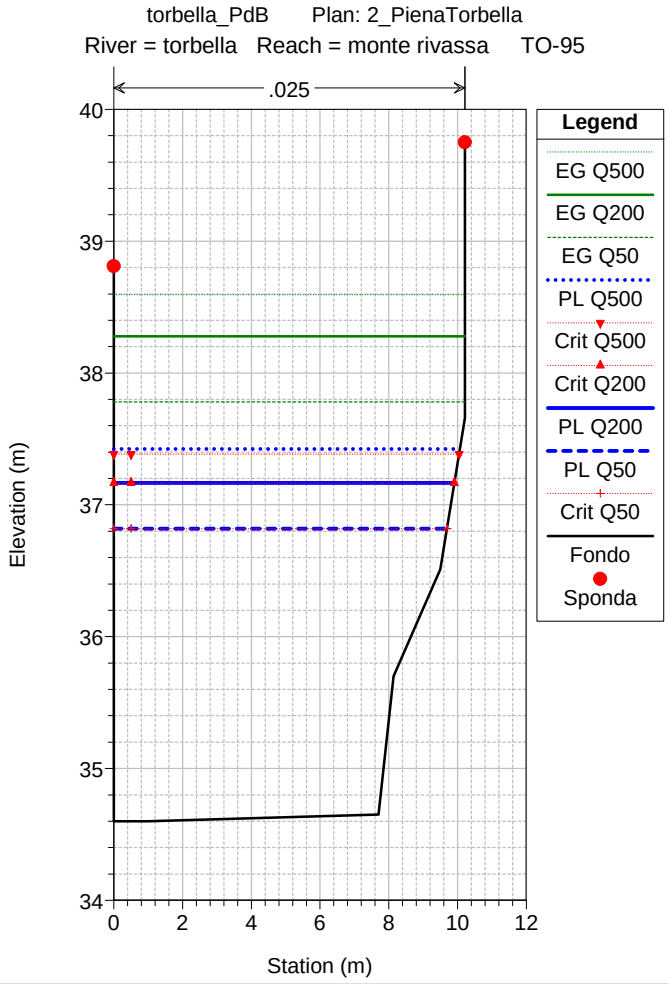

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-97
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Sponda

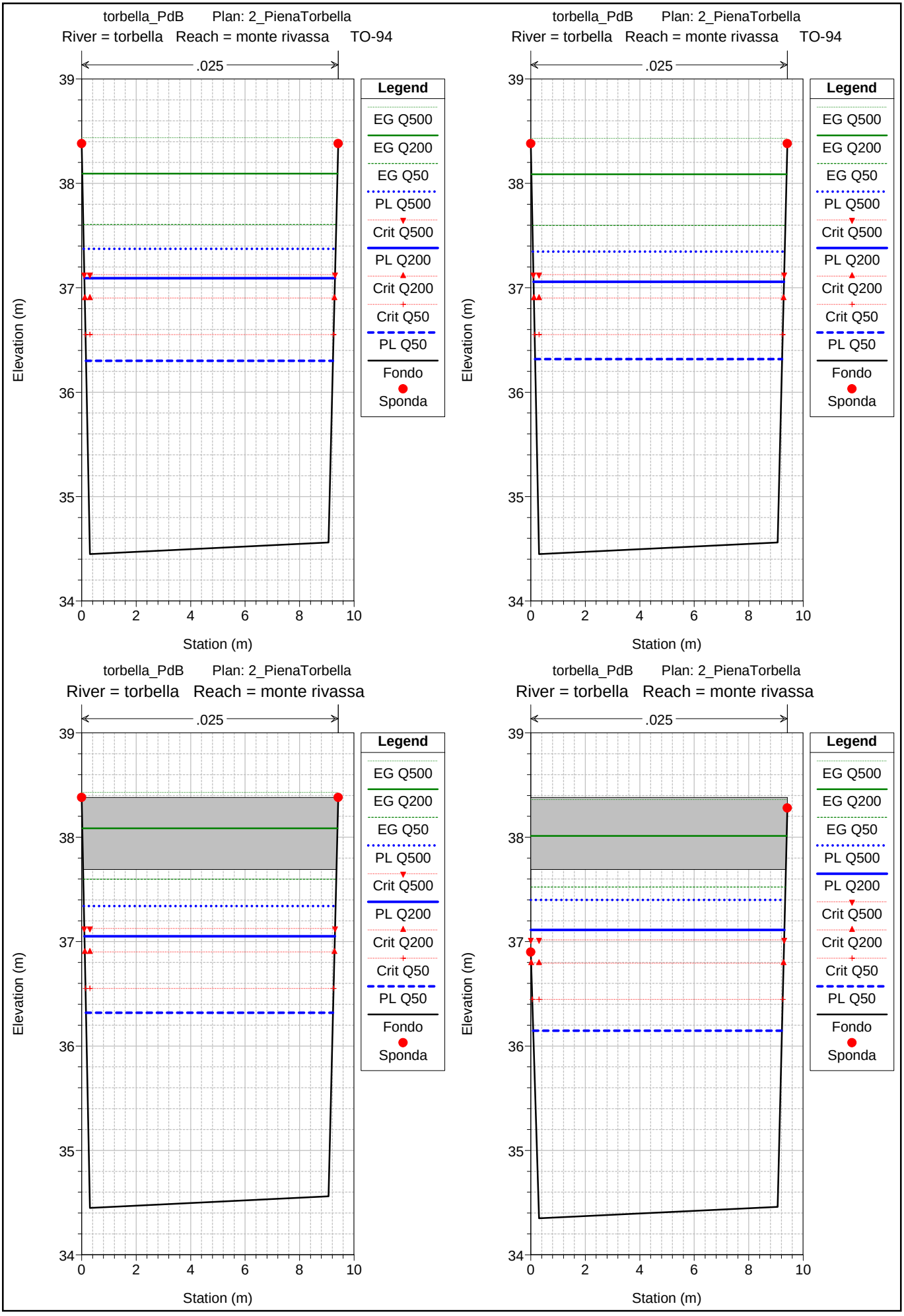

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-97
.03
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Sponda

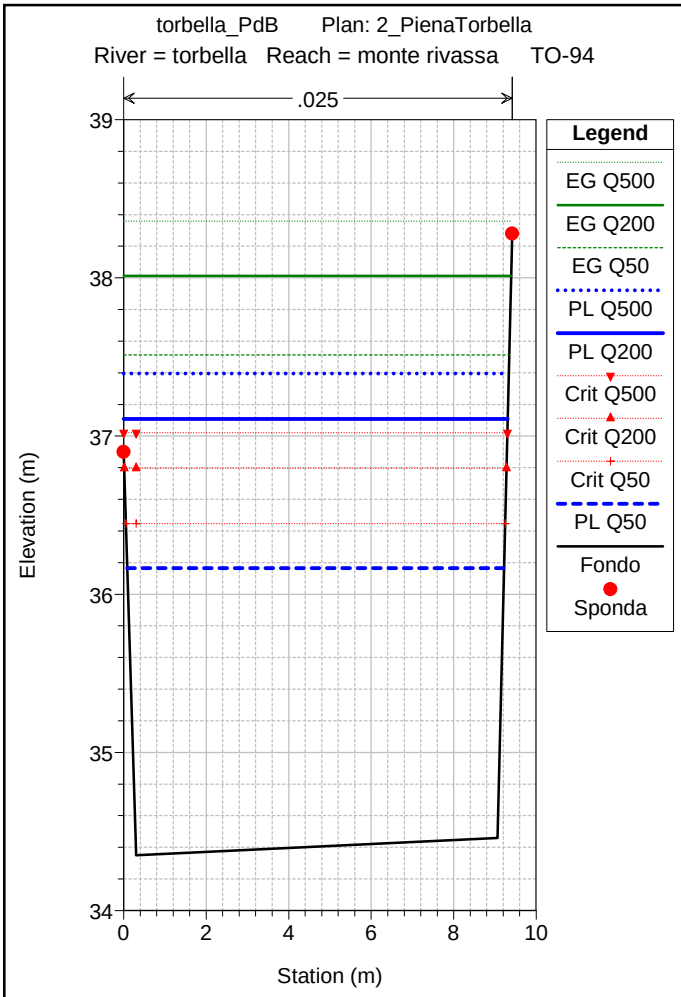

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-96
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

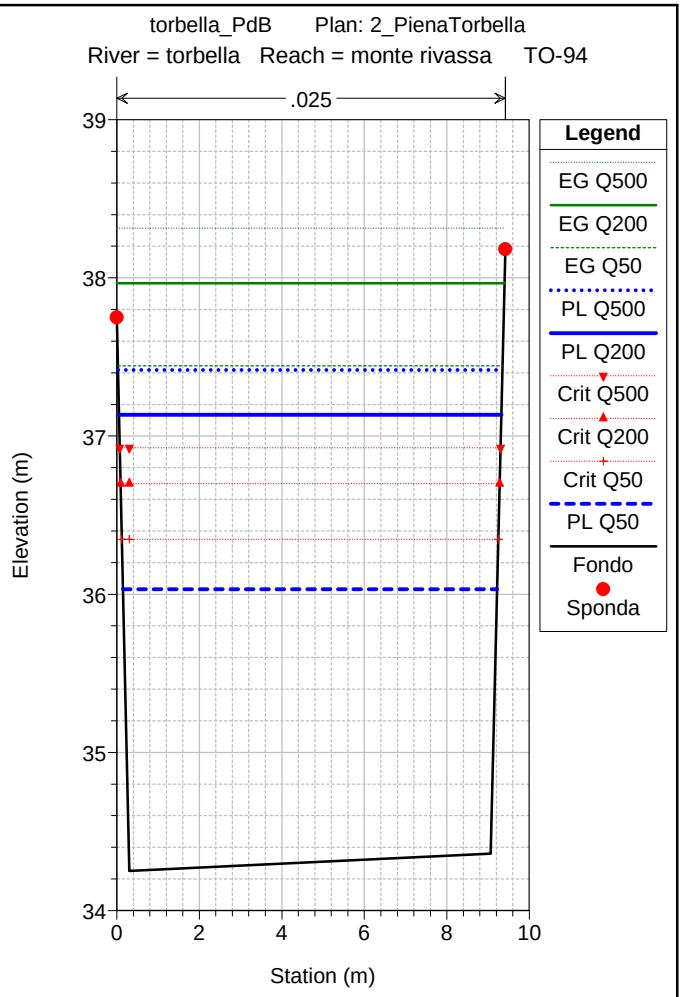

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

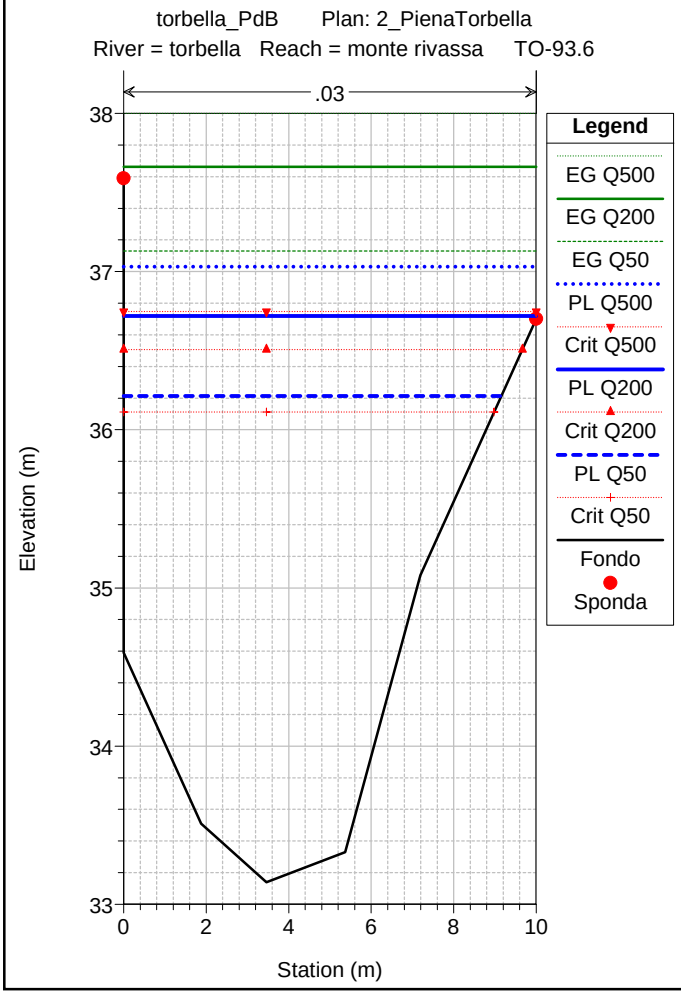

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

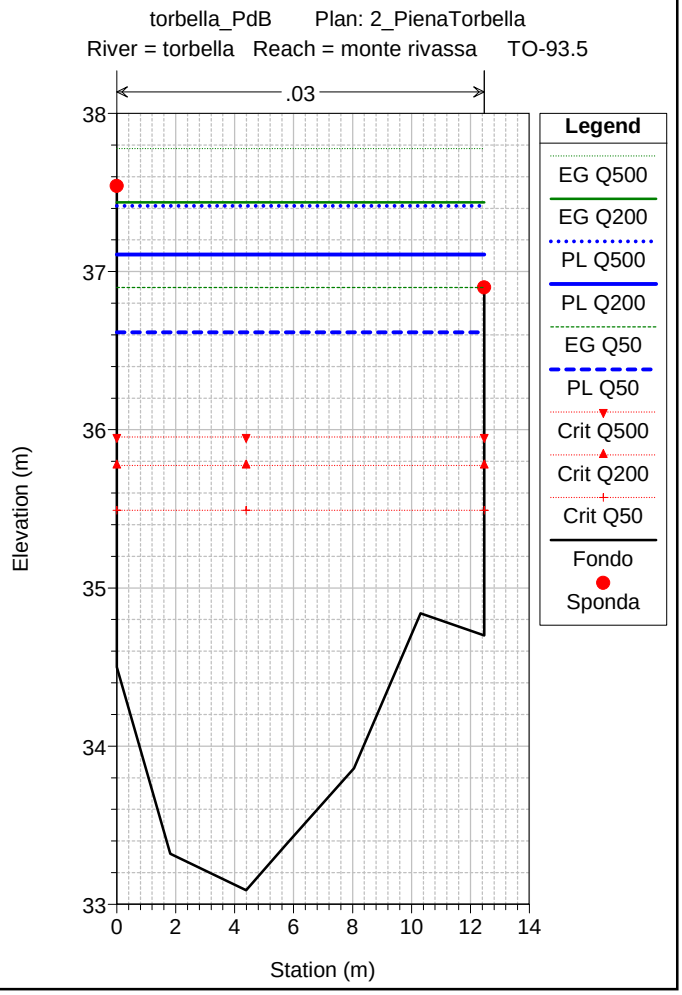

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-95
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

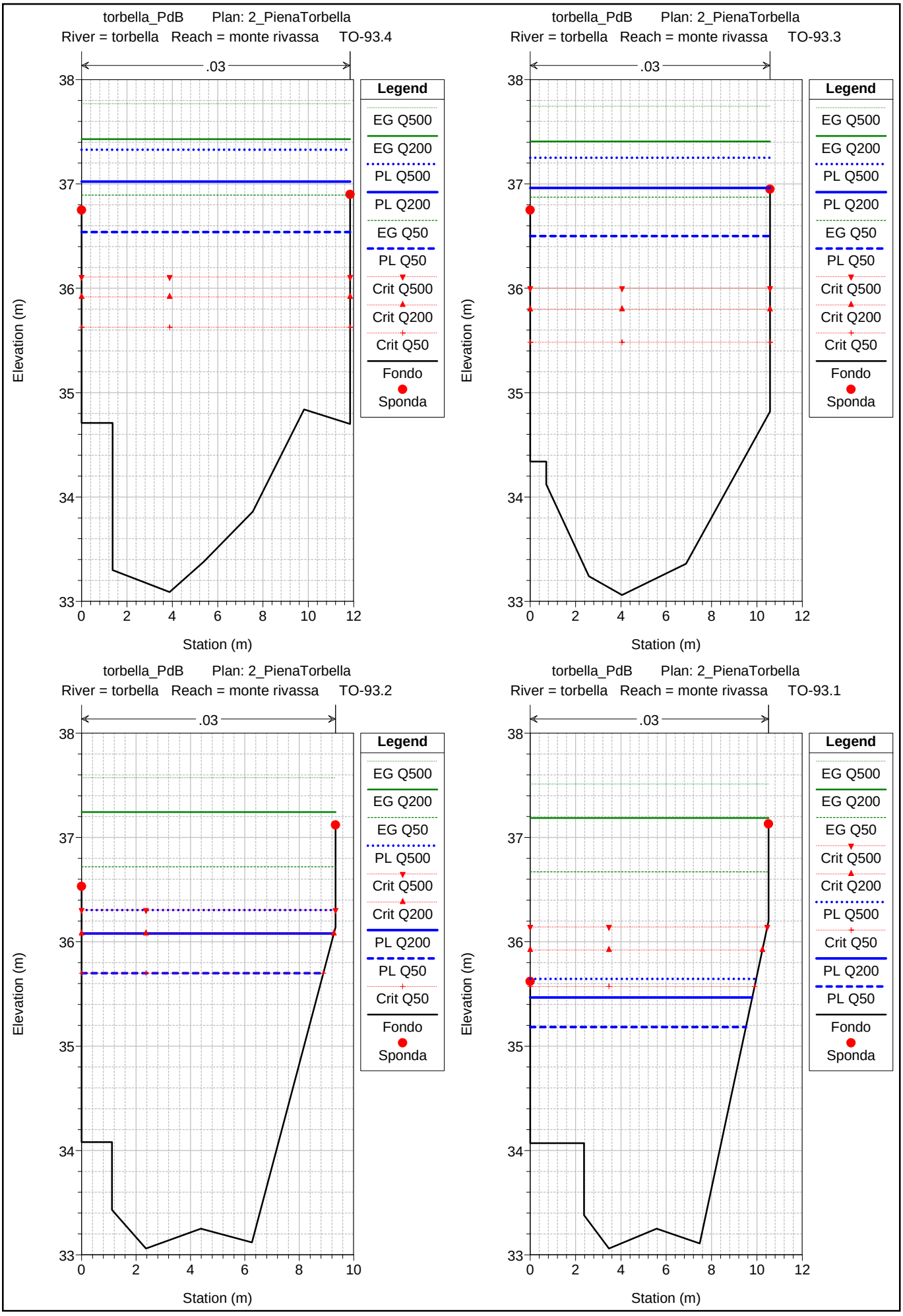

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-94
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
39
38
37
36
35
34
0
2
4
6
8
10

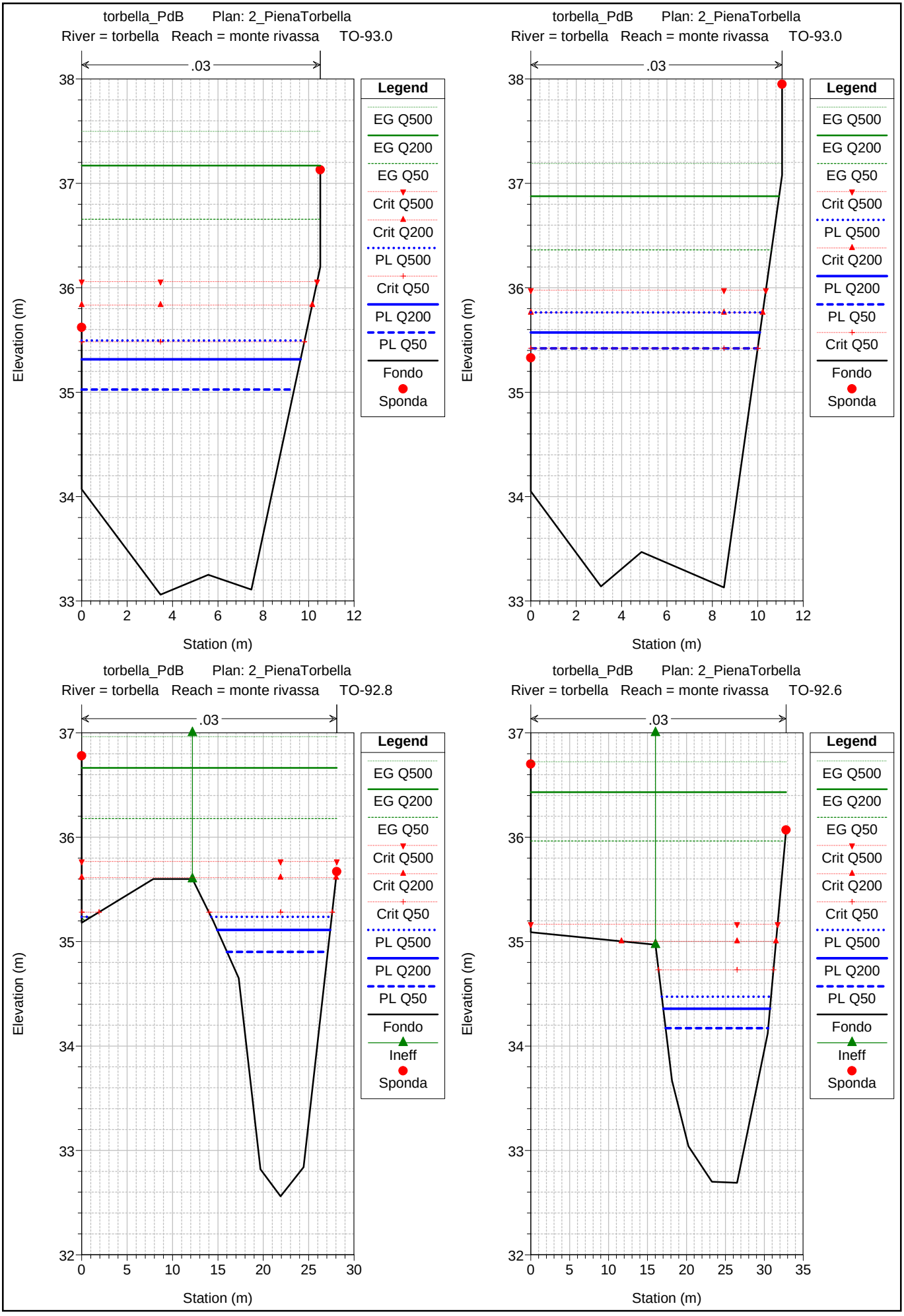

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-94
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

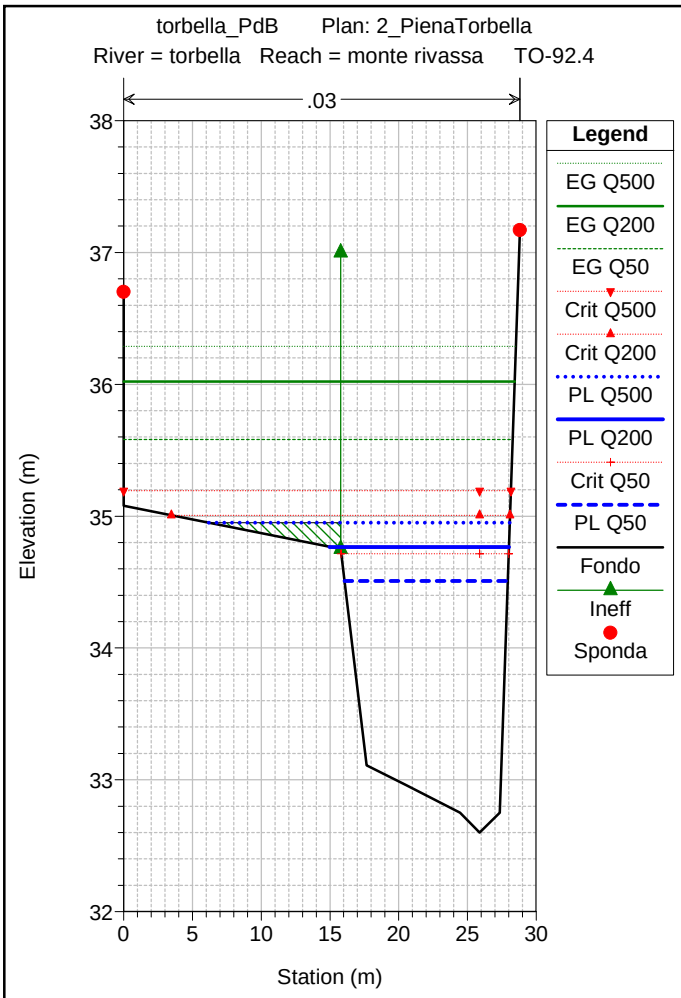

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-94
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

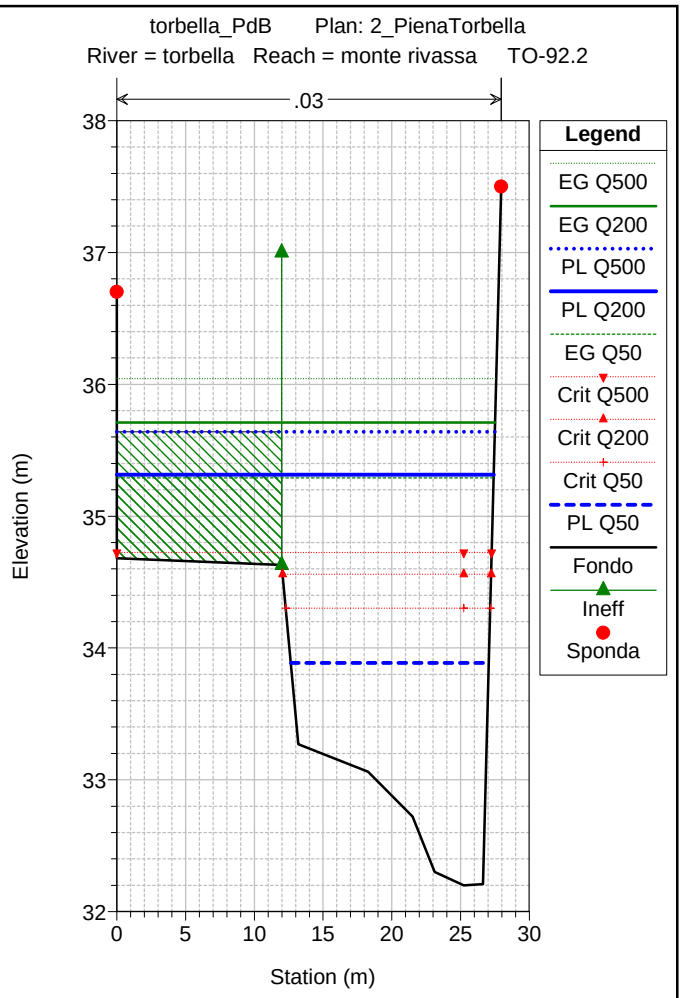

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-93.6
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

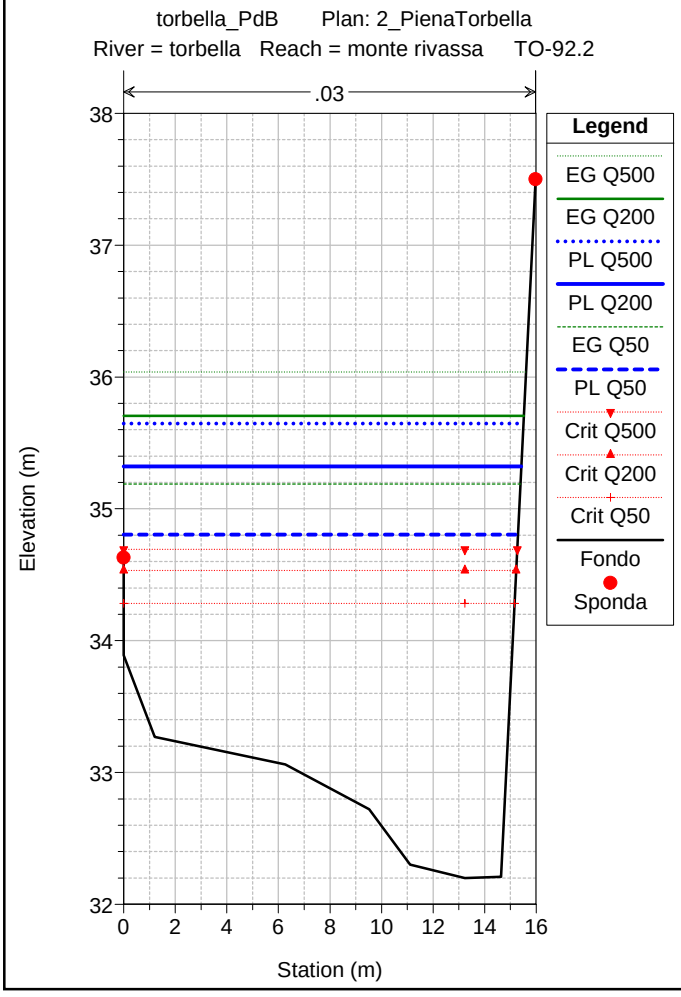

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-93.5
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

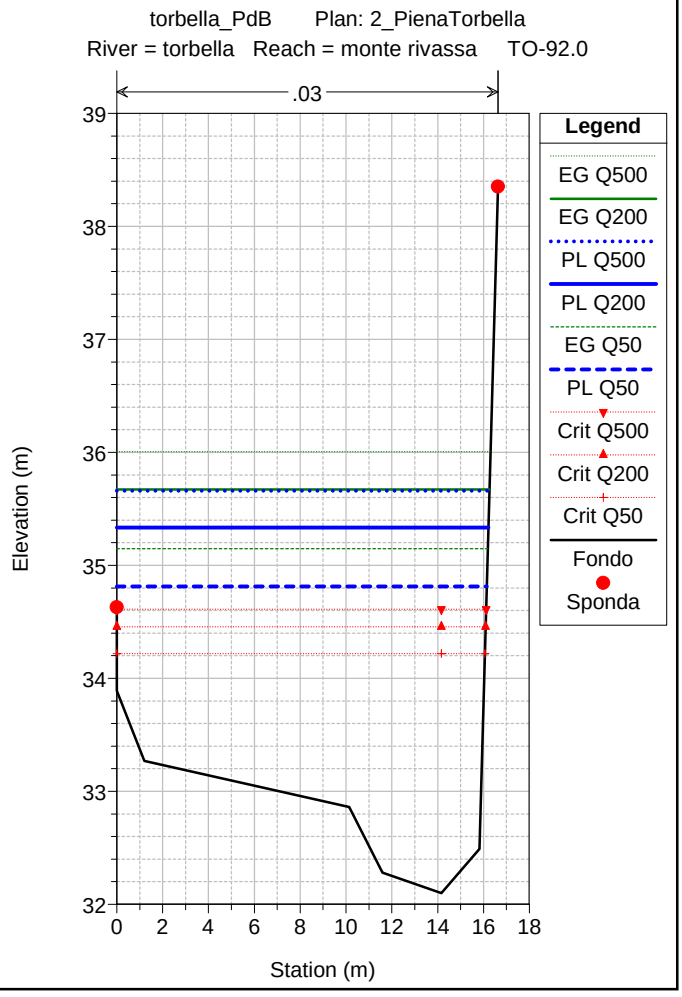

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-93.4
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-93.3
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-93.2
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-93.1
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

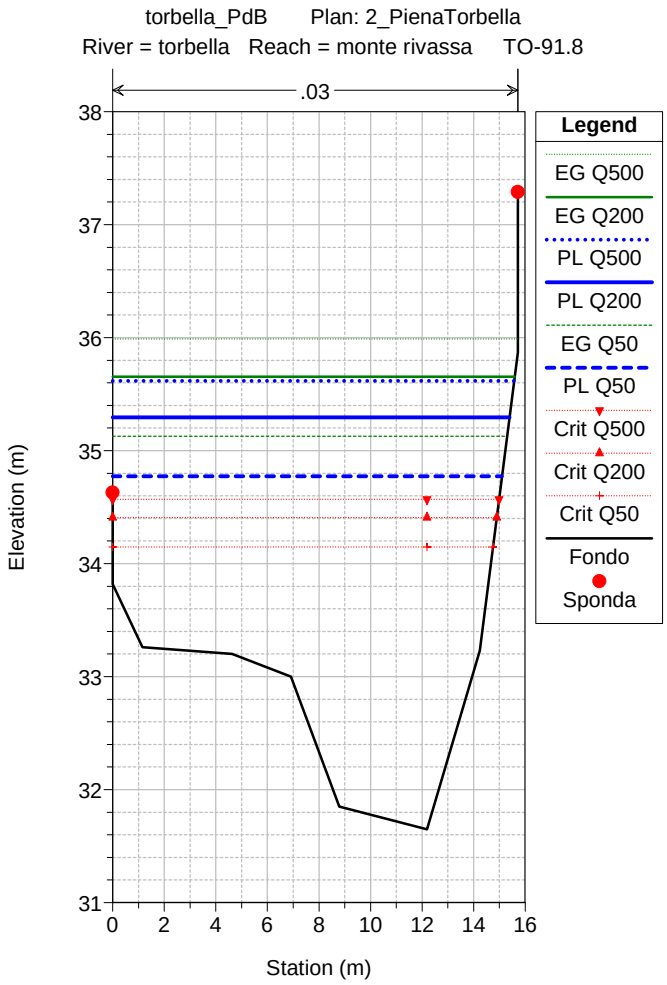

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-93.0
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-93.0
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-92.8
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Ineff
Sponda
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-92.6
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Ineff
Sponda

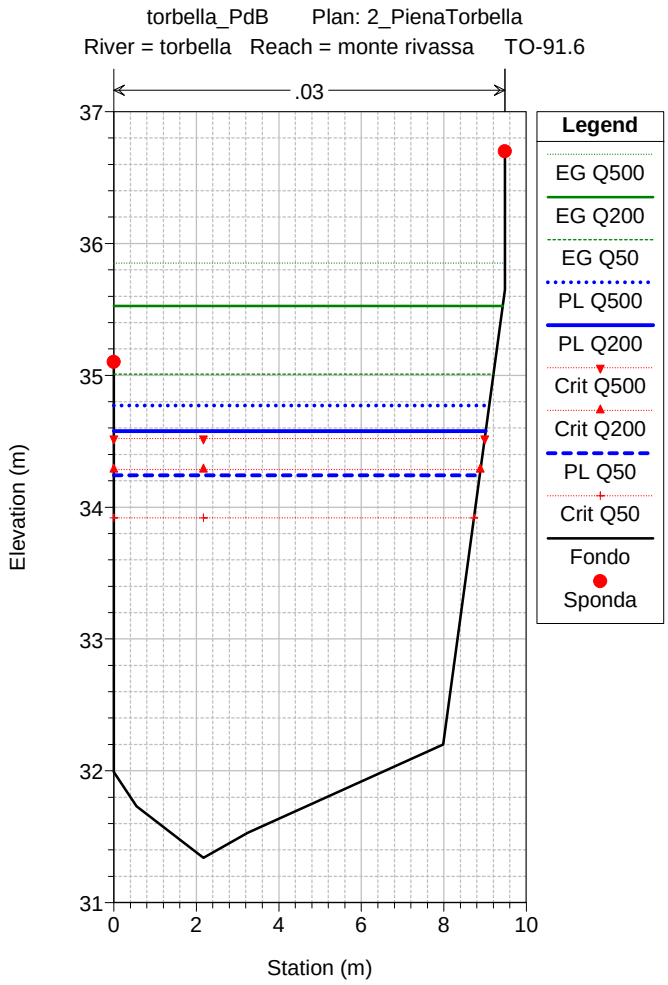

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-92.4
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Ineff
Sponda

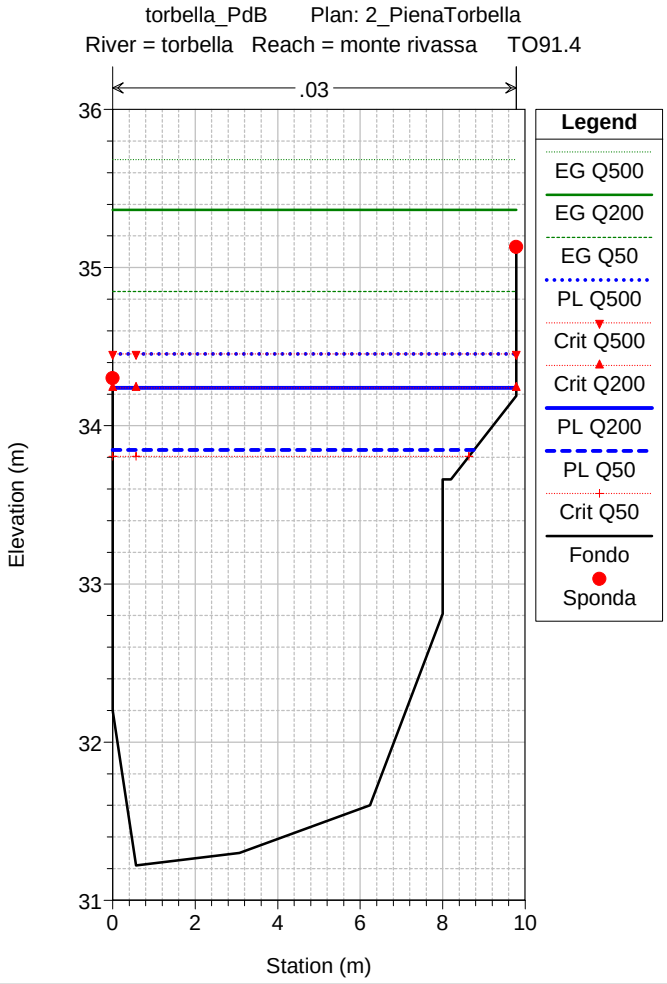

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-92.2
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Ineff
Sponda

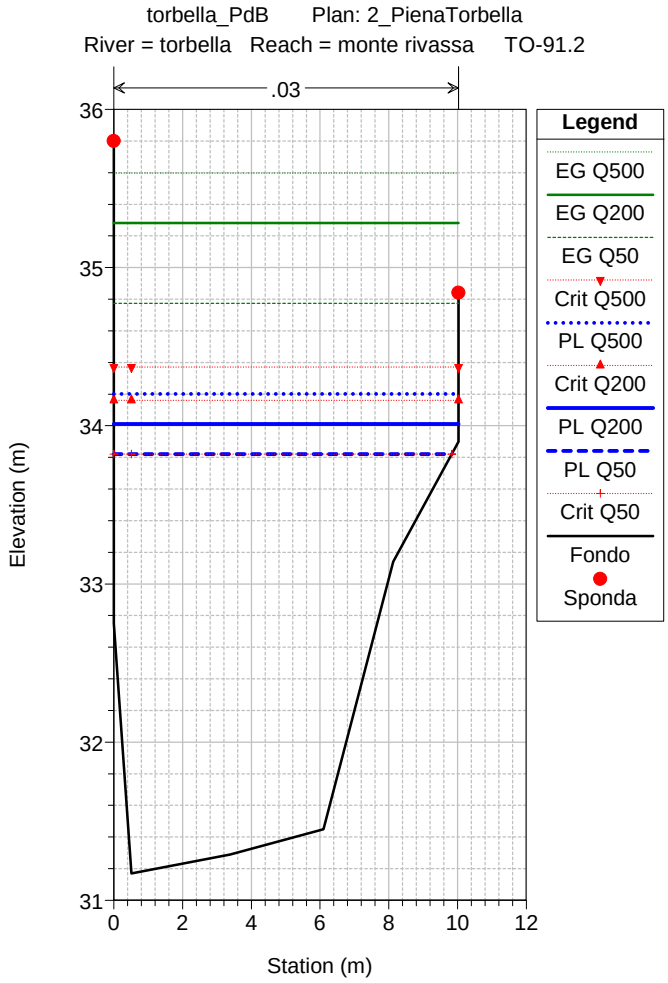

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-92.2
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

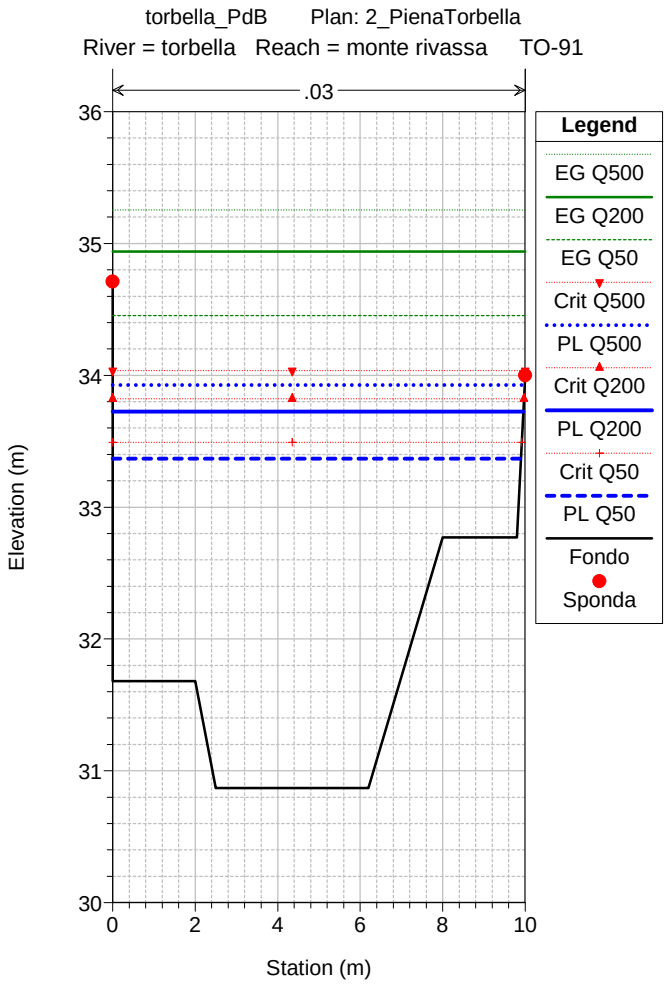

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-92.0
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

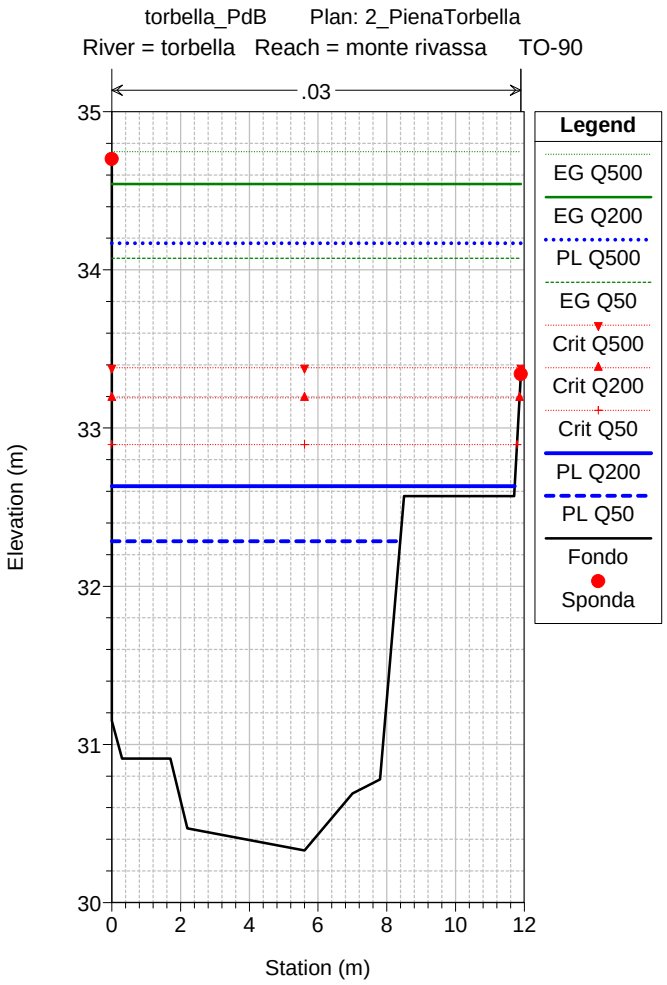

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-91.8
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-91.6
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO91.4
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-91.2
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-91
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Sponda


torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = monte rivassa TO-90
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Sponda

HEC-RAS Plan: Torbella River: torbella Reach: monte rivassa

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte rivassa	110	Q50	81.00	42.04	45.83	45.50	-0.33	45.53	-0.30	45.83	47.73	0.026329	6.10	13.28	3.50	1.00
monte rivassa	110	Q200	103.00	42.04	46.49	45.50	-0.99	45.53	-0.96	46.49	48.72	0.028999	6.61	15.59	3.50	1.00
monte rivassa	110	Q500	118.00	42.04	46.92	45.50	-1.42	45.53	-1.39	46.92	49.35	0.030714	6.91	17.06	3.50	1.00
monte rivassa	107.1 TO-107	Q50	81.00	41.95	44.98	48.05	3.07	48.54	3.56	43.80	45.26	0.002100	2.33	34.70	12.32	0.44
monte rivassa	107.1 TO-107	Q200	103.00	41.95	45.53	48.05	2.52	48.54	3.01	44.09	45.84	0.002022	2.48	41.50	12.32	0.43
monte rivassa	107.1 TO-107	Q500	118.00	41.95	46.86	48.05	1.19	48.54	1.68	44.27	47.07	0.001040	2.04	57.86	12.32	0.30
monte rivassa	107		Bridge													
monte rivassa	106.9 TO-107	Q50	81.00	41.95	44.96	48.05	3.09	48.54	3.58	43.80	45.24	0.002141	2.35	34.48	12.32	0.45
monte rivassa	106.9 TO-107	Q200	103.00	41.95	45.51	48.05	2.54	48.54	3.03	44.09	45.83	0.002052	2.49	41.29	12.32	0.43
monte rivassa	106.9 TO-107	Q500	118.00	41.95	46.85	48.05	1.20	48.54	1.69	44.27	47.06	0.001044	2.04	57.76	12.32	0.30
monte rivassa	106.1 TO-106	Q50	81.00	41.44	43.99	45.40	1.41	45.71	1.72	43.81	44.93	0.006467	4.28	18.91	7.98	0.89
monte rivassa	106.1 TO-106	Q200	103.00	41.44	44.41	45.40	0.99	45.71	1.30	44.20	45.50	0.006649	4.63	22.23	8.10	0.89
monte rivassa	106.1 TO-106	Q500	118.00	41.44	46.47	45.40	-1.07	45.71	-0.76	44.45	46.92	0.001872	3.00	39.37	8.40	0.44
monte rivassa	106 TO-106		Bridge													
monte rivassa	105.9 TO-106	Q50	81.00	41.44	43.82	45.45	1.63	45.70	1.88	43.63	44.71	0.006237	4.18	19.40	8.39	0.88
monte rivassa	105.9 TO-106	Q200	103.00	41.44	44.29	45.45	1.16	45.70	1.41	44.00	45.28	0.005983	4.41	23.35	8.47	0.85
monte rivassa	105.9 TO-106	Q500	118.00	41.44	44.61	45.45	0.84	45.70	1.09	44.24	45.66	0.005783	4.53	26.06	8.52	0.83
monte rivassa	105 TO-105	Q50	81.00	41.29	43.59	45.50	1.91	43.09	-0.50	43.48	44.58	0.007280	4.40	18.43	8.00	0.92
monte rivassa	105 TO-105	Q200	103.00	41.29	44.01	45.50	1.49	43.09	-0.92	43.85	45.15	0.007357	4.73	21.77	8.00	0.92
monte rivassa	105 TO-105	Q500	118.00	41.29	44.30	45.50	1.20	43.09	-1.21	44.10	45.52	0.007275	4.89	24.11	8.00	0.90
monte rivassa	104.7	Q50	81.00	41.10	43.29	45.50	2.21	47.00	3.71	43.29	44.38	0.008440	4.63	17.50	8.00	1.00
monte rivassa	104.7	Q200	103.00	41.10	43.67	45.50	1.83	47.00	3.33	43.67	44.95	0.008658	5.01	20.54	8.00	1.00
monte rivassa	104.7	Q500	118.00	41.10	43.91	45.50	1.59	47.00	3.09	43.91	45.31	0.008836	5.25	22.47	8.00	1.00
monte rivassa	104.6	Q50	81.00	40.60	42.18	45.50	3.32	47.00	4.82	42.79	44.26	0.021554	6.39	12.68	8.00	1.62
monte rivassa	104.6	Q200	103.00	40.60	42.51	45.50	2.99	47.00	4.49	43.16	44.83	0.020256	6.75	15.26	8.00	1.56
monte rivassa	104.6	Q500	118.00	40.60	44.25	45.50	1.25	47.00	2.75	43.41	45.08	0.004321	4.04	29.18	8.00	0.68
monte rivassa	104 TO-104	Q50	81.00	40.38	42.82	44.26	1.44	47.00	4.18	42.82	43.94	0.008289	4.69	17.28	7.70	1.00
monte rivassa	104 TO-104	Q200	103.00	40.38	43.21	44.26	1.05	47.00	3.79	43.21	44.53	0.008574	5.08	20.26	7.70	1.00
monte rivassa	104 TO-104	Q500	118.00	40.38	43.47	44.26	0.79	47.00	3.53	43.47	44.90	0.008729	5.31	22.22	7.90	1.00
monte rivassa	103 TO-103	Q50	81.00	39.83	41.61	44.26	2.65	47.00	5.39	42.26	43.82	0.022060	6.58	12.31	7.70	1.66
monte rivassa	103 TO-103	Q200	103.00	39.83	41.94	44.26	2.32	47.00	5.06	42.64	44.40	0.020771	6.94	14.83	7.70	1.60
monte rivassa	103 TO-103	Q500	118.00	39.83	42.15	44.26	2.11	47.00	4.85	42.90	44.77	0.020208	7.17	16.47	7.70	1.56
monte rivassa	102 TO-102	Q50	81.00	39.55	42.65	43.20	0.55	44.00	1.35	41.97	43.31	0.003977	3.60	22.57	7.90	0.67
monte rivassa	102 TO-102	Q200	103.00	39.55	43.27	43.20	-0.07	44.00	0.73	42.36	43.99	0.003783	3.77	27.53	8.70	0.64
monte rivassa	102 TO-102	Q500	118.00	39.55	41.96	43.20	1.24	44.00	2.04	42.61	44.35	0.017826	6.85	17.22	7.70	1.46
monte rivassa	101 TO-101	Q50	81.00	38.85	42.83	43.20	0.37	44.00	1.17	41.27	43.22	0.001952	2.76	29.39	7.90	0.45
monte rivassa	101 TO-101	Q200	103.00	38.85	43.44	43.20	-0.24	44.00	0.56	41.66	43.91	0.002081	3.02	34.44	8.70	0.46

HEC-RAS Plan: Torbella River: torbella Reach: monte rivassa (Continued)

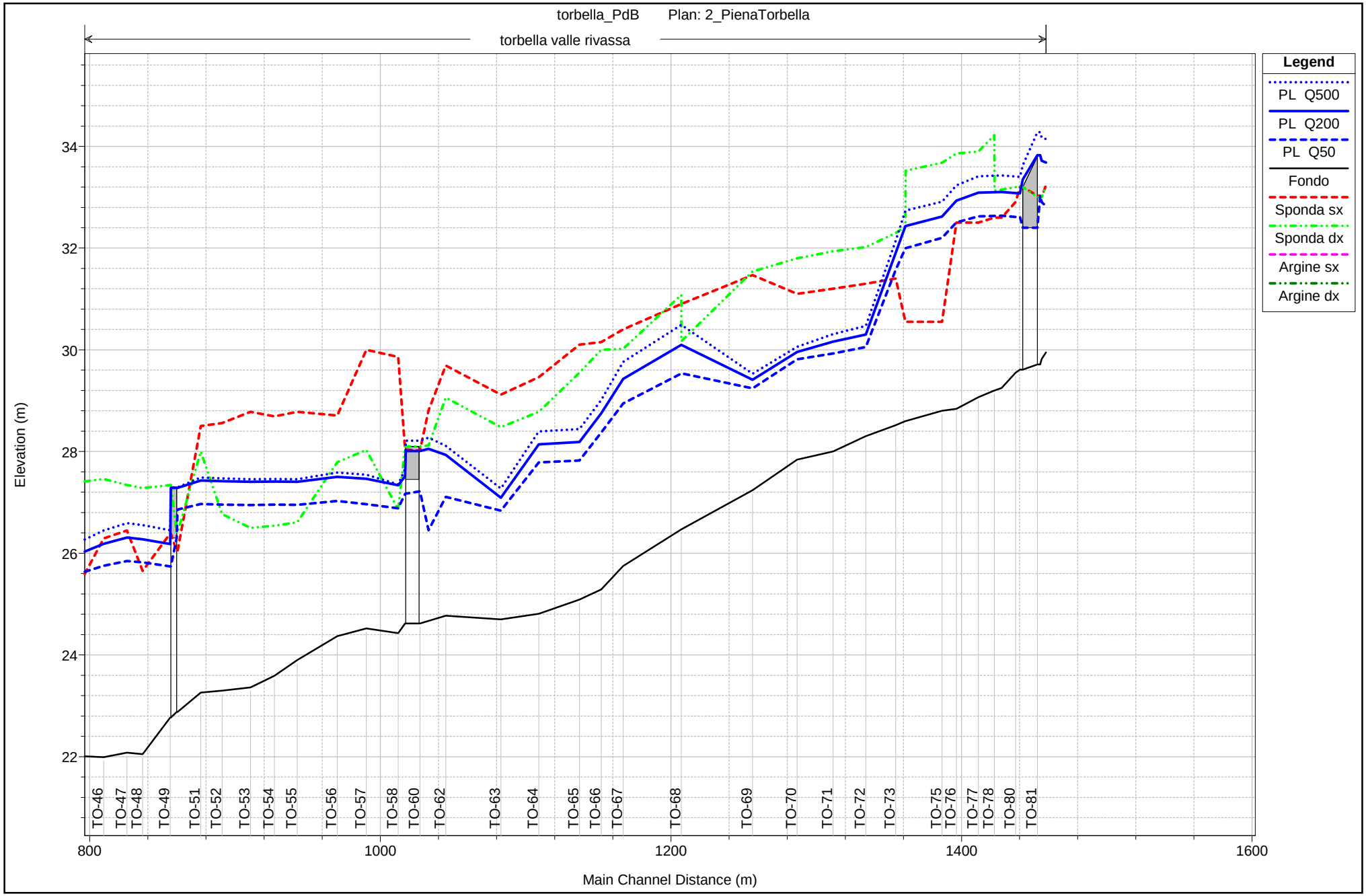
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte rivassa	101 TO-101	Q500	118.00	38.85	40.94	43.20	2.26	44.00	3.06	41.91	44.21	0.027862	8.01	14.73	7.70	1.85
monte rivassa	100 TO-100	Q50	81.00	38.50	42.83	42.80	-0.03	42.80	-0.03	40.94	43.16	0.001521	2.53	32.24	9.00	0.40
monte rivassa	100 TO-100	Q200	103.00	38.50	43.45	42.80	-0.65	42.80	-0.65	41.33	43.84	0.001527	2.78	37.80	9.00	0.41
monte rivassa	100 TO-100	Q500	118.00	38.50	42.89	42.80	-0.09	42.80	-0.09	41.58	43.56	0.003085	3.63	32.74	9.00	0.57
monte rivassa	99.5		Bridge													
monte rivassa	99 TO-99	Q50	81.00	37.90	40.22	42.42	2.20	42.92	2.70	40.22	41.34	0.008805	4.69	17.26	7.70	1.00
monte rivassa	99 TO-99	Q200	103.00	37.90	40.61	42.42	1.81	42.92	2.31	40.61	41.93	0.009027	5.08	20.28	7.70	1.00
monte rivassa	99 TO-99	Q500	118.00	37.90	40.86	42.42	1.56	42.92	2.06	40.86	42.30	0.009240	5.32	22.17	7.70	1.00
monte rivassa	98 TO-98	Q50	81.00	37.51	38.79	43.00	4.21	41.02	2.23	39.33	40.59	0.026966	5.95	13.61	12.58	1.83
monte rivassa	98 TO-98	Q200	103.00	37.51	38.95	43.00	4.05	41.02	2.07	39.61	41.16	0.028447	6.60	15.61	12.64	1.89
monte rivassa	98 TO-98	Q500	118.00	37.51	39.05	43.00	3.95	41.02	1.97	39.79	41.52	0.029006	6.97	16.94	12.68	1.92
monte rivassa	97.1 TO-97	Q50	81.00	36.81	38.47	39.57	1.10	40.32	1.85	38.63	39.45	0.013090	4.40	18.40	12.72	1.17
monte rivassa	97.1 TO-97	Q200	103.00	36.81	38.72	39.57	0.85	40.32	1.60	38.91	39.87	0.012939	4.76	21.62	12.81	1.17
monte rivassa	97.1 TO-97	Q500	118.00	36.81	38.88	39.57	0.69	40.32	1.44	39.09	40.14	0.012845	4.97	23.72	12.87	1.17
monte rivassa	97 TO-97	Q50	81.00	36.81	38.46	39.57	1.11	40.32	1.86	38.63	39.46	0.013232	4.42	18.34	12.72	1.17
monte rivassa	97 TO-97	Q200	103.00	36.81	38.71	39.57	0.86	40.32	1.61	38.91	39.88	0.013057	4.78	21.56	12.81	1.18
monte rivassa	97 TO-97	Q500	118.00	36.81	38.88	39.57	0.69	40.32	1.44	39.08	40.14	0.012951	4.99	23.65	12.87	1.17
monte rivassa	96 TO-96	Q50	81.00	35.00	37.31	39.55	2.24	40.61	3.30	37.13	38.22	0.006607	4.23	19.16	8.30	0.89
monte rivassa	96 TO-96	Q200	103.00	35.00	37.70	39.55	1.85	40.61	2.91	37.50	38.78	0.006842	4.59	22.42	8.30	0.89
monte rivassa	96 TO-96	Q500	118.00	35.00	37.83	39.55	1.72	40.61	2.78	37.74	39.12	0.007889	5.03	23.48	8.30	0.95
monte rivassa	95.5		Bridge													
monte rivassa	95 TO-95	Q50	81.00	34.60	36.82	38.81	1.99	39.75	2.93	36.82	37.78	0.007298	4.34	18.64	9.69	1.00
monte rivassa	95 TO-95	Q200	103.00	34.60	37.17	38.81	1.64	39.75	2.58	37.17	38.28	0.007268	4.67	22.05	9.91	1.00
monte rivassa	95 TO-95	Q500	118.00	34.60	37.42	38.81	1.39	39.75	2.33	37.39	38.59	0.006966	4.79	24.63	10.06	0.98
monte rivassa	94.2 TO-94	Q50	81.00	34.45	36.30	38.38	2.08	38.38	2.08	36.55	37.61	0.011352	5.06	16.00	9.07	1.22
monte rivassa	94.2 TO-94	Q200	103.00	34.45	37.09	38.38	1.29	38.38	1.29	36.90	38.09	0.006222	4.43	23.24	9.20	0.89
monte rivassa	94.2 TO-94	Q500	118.00	34.45	37.37	38.38	1.01	38.38	1.01	37.13	38.44	0.006054	4.57	25.83	9.25	0.87
monte rivassa	94.1 TO-94	Q50	81.00	34.45	36.32	38.38	2.06	38.38	2.06	36.55	37.60	0.011055	5.02	16.15	9.07	1.20
monte rivassa	94.1 TO-94	Q200	103.00	34.45	37.06	38.38	1.32	38.38	1.32	36.90	38.09	0.006469	4.49	22.92	9.19	0.91
monte rivassa	94.1 TO-94	Q500	118.00	34.45	37.35	38.38	1.03	38.38	1.03	37.13	38.43	0.006216	4.61	25.58	9.24	0.88
monte rivassa	94		Bridge													
monte rivassa	93.9 TO-94	Q50	81.00	34.35	36.17	36.90	0.73	38.28	2.11	36.45	37.51	0.011873	5.14	15.76	9.13	1.25
monte rivassa	93.9 TO-94	Q200	103.00	34.35	37.11	36.90	-0.21	38.28	1.17	36.80	38.01	0.005369	4.21	24.46	9.31	0.83
monte rivassa	93.9 TO-94	Q500	118.00	34.35	37.40	36.90	-0.50	38.28	0.88	37.02	38.36	0.005254	4.35	27.14	9.34	0.81
monte rivassa	93.8 TO-94	Q50	81.00	34.25	36.03	37.75	1.72	38.18	2.15	36.35	37.44	0.012752	5.26	15.38	9.07	1.29
monte rivassa	93.8 TO-94	Q200	103.00	34.25	37.13	37.75	0.62	38.18	1.05	36.70	37.97	0.004780	4.04	25.50	9.27	0.78

HEC-RAS Plan: Torbella River: torbella Reach: monte rivassa (Continued)

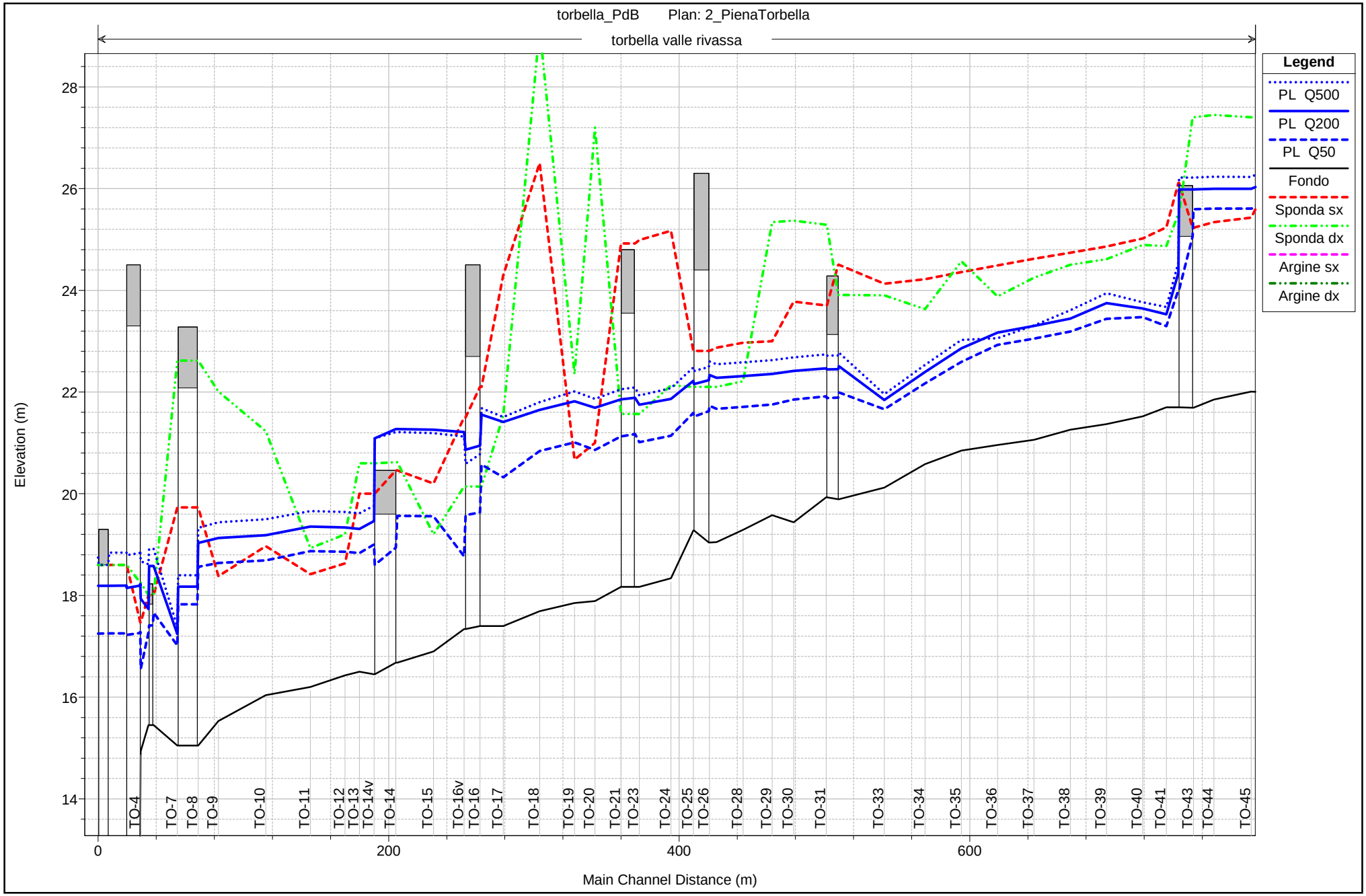
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte rivassa	93.8 TO-94	Q500	118.00	34.25	37.42	37.75	0.33	38.18	0.76	36.93	38.31	0.004754	4.19	28.14	9.32	0.77
monte rivassa	93.7	Q50	81.00	33.75	36.90	37.75	0.85	38.18	1.28	35.85	37.33	0.003323	2.91	27.86	9.25	0.53
monte rivassa	93.7	Q200	103.00	33.75	37.34	37.75	0.41	38.18	0.84	36.20	37.87	0.003673	3.22	31.95	9.32	0.56
monte rivassa	93.7	Q500	118.00	33.75	37.63	37.75	0.12	38.18	0.55	36.43	38.22	0.003868	3.41	34.62	9.36	0.57
monte rivassa	93.65	Q50	81.00	33.39	36.58	37.84	1.26	40.00	3.42	35.91	37.22	0.005389	3.55	22.83	8.00	0.67
monte rivassa	93.65	Q200	103.00	33.39	36.90	37.84	0.94	40.00	3.10	36.29	37.74	0.006523	4.06	25.38	8.00	0.73
monte rivassa	93.65	Q500	118.00	33.39	37.09	37.84	0.75	40.00	2.91	36.54	38.07	0.007307	4.38	26.91	8.00	0.76
monte rivassa	93.6 TO-93.6	Q50	81.00	33.14	36.21	37.59	1.38	36.70	0.49	36.11	37.13	0.008862	4.25	19.08	9.15	0.94
monte rivassa	93.6 TO-93.6	Q200	103.00	33.14	36.72	37.59	0.87	36.70	-0.02	36.51	37.66	0.007861	4.30	23.94	10.00	0.89
monte rivassa	93.6 TO-93.6	Q500	118.00	33.14	37.03	37.59	0.56	36.70	-0.33	36.75	38.00	0.007288	4.36	27.05	10.00	0.85
monte rivassa	93.5 TO-93.5	Q50	81.00	33.09	36.62	37.54	0.92	36.90	0.28	35.49	36.90	0.001993	2.36	34.29	12.47	0.45
monte rivassa	93.5 TO-93.5	Q200	103.00	33.09	37.11	37.54	0.43	36.90	-0.21	35.77	37.44	0.002007	2.55	40.42	12.47	0.45
monte rivassa	93.5 TO-93.5	Q500	118.00	33.09	37.42	37.54	0.12	36.90	-0.52	35.95	37.78	0.002033	2.67	44.27	12.47	0.45
monte rivassa	93.4 TO-93.4	Q50	81.00	33.09	36.54	36.75	0.21	36.90	0.36	35.63	36.89	0.002890	2.64	30.72	11.84	0.52
monte rivassa	93.4 TO-93.4	Q200	103.00	33.09	37.02	36.75	-0.27	36.90	-0.12	35.92	37.43	0.002839	2.82	36.46	11.84	0.51
monte rivassa	93.4 TO-93.4	Q500	118.00	33.09	37.33	36.75	-0.58	36.90	-0.43	36.11	37.77	0.002845	2.95	40.07	11.84	0.51
monte rivassa	93.3 TO-93.3	Q50	81.00	33.06	36.50	36.75	0.25	36.95	0.45	35.48	36.87	0.002653	2.71	29.94	10.58	0.51
monte rivassa	93.3 TO-93.3	Q200	103.00	33.06	36.96	36.75	-0.21	36.95	-0.01	35.80	37.41	0.002806	2.96	34.82	10.58	0.52
monte rivassa	93.3 TO-93.3	Q500	118.00	33.06	37.25	36.75	-0.50	36.95	-0.30	36.00	37.74	0.002916	3.11	37.88	10.58	0.53
monte rivassa	93.2 TO-93.2	Q50	81.00	33.06	35.70	36.53	0.83	37.12	1.42	35.70	36.72	0.010719	4.47	18.11	8.88	1.00
monte rivassa	93.2 TO-93.2	Q200	103.00	33.06	36.08	36.53	0.45	37.12	1.04	36.08	37.24	0.010689	4.78	21.55	9.27	1.00
monte rivassa	93.2 TO-93.2	Q500	118.00	33.06	36.30	36.53	0.23	37.12	0.82	36.30	37.57	0.010784	4.99	23.65	9.33	1.00
monte rivassa	93.1 TO-93.1	Q50	81.00	33.06	35.18	35.62	0.44	37.13	1.95	35.57	36.67	0.020088	5.41	14.99	9.51	1.37
monte rivassa	93.1 TO-93.1	Q200	103.00	33.06	35.47	35.62	0.15	37.13	1.66	35.92	37.19	0.019938	5.81	17.73	9.79	1.38
monte rivassa	93.1 TO-93.1	Q500	118.00	33.06	35.65	35.62	-0.03	37.13	1.48	36.14	37.51	0.019916	6.05	19.49	9.97	1.38
monte rivassa	93.05 TO-93.0	Q50	81.00	33.06	35.03	35.62	0.59	37.13	2.10	35.48	36.66	0.020943	5.66	14.32	9.36	1.46
monte rivassa	93.05 TO-93.0	Q200	103.00	33.06	35.31	35.62	0.31	37.13	1.82	35.84	37.17	0.020449	6.04	17.06	9.64	1.45
monte rivassa	93.05 TO-93.0	Q500	118.00	33.06	35.49	35.62	0.13	37.13	1.64	36.06	37.50	0.020301	6.27	18.82	9.82	1.45
monte rivassa	93.0 TO-93.0	Q50	81.00	33.13	35.42	35.33	-0.09	37.95	2.53	35.42	36.36	0.009941	4.30	18.83	9.99	1.00
monte rivassa	93.0 TO-93.0	Q200	103.00	33.13	35.57	35.33	-0.24	37.95	2.38	35.76	36.88	0.012844	5.06	20.35	10.09	1.14
monte rivassa	93.0 TO-93.0	Q500	118.00	33.13	35.76	35.33	-0.43	37.95	2.19	35.98	37.19	0.012948	5.29	22.31	10.22	1.14
monte rivassa	92.8 TO-92.8	Q50	81.00	32.56	34.90	36.78	1.88	35.67	0.77	35.28	36.18	0.015935	5.00	16.19	11.10	1.32
monte rivassa	92.8 TO-92.8	Q200	103.00	32.56	35.11	36.78	1.67	35.67	0.56	35.61	36.66	0.018534	5.52	18.67	12.45	1.44
monte rivassa	92.8 TO-92.8	Q500	118.00	32.56	35.24	36.78	1.54	35.67	0.43	35.77	36.96	0.020036	5.82	20.28	14.36	1.50
monte rivassa	92.6 TO-92.6	Q50	81.00	32.69	34.17	36.70	2.53	36.07	1.90	34.73	35.96	0.031784	5.93	13.66	13.18	1.86
monte rivassa	92.6 TO-92.6	Q200	103.00	32.69	34.36	36.70	2.34	36.07	1.71	35.00	36.43	0.031312	6.38	16.14	13.71	1.88
monte rivassa	92.6 TO-92.6	Q500	118.00	32.69	34.47	36.70	2.23	36.07	1.60	35.17	36.72	0.031046	6.65	17.76	14.04	1.89

HEC-RAS Plan: Torbella River: torbella Reach: monte rivassa (Continued)

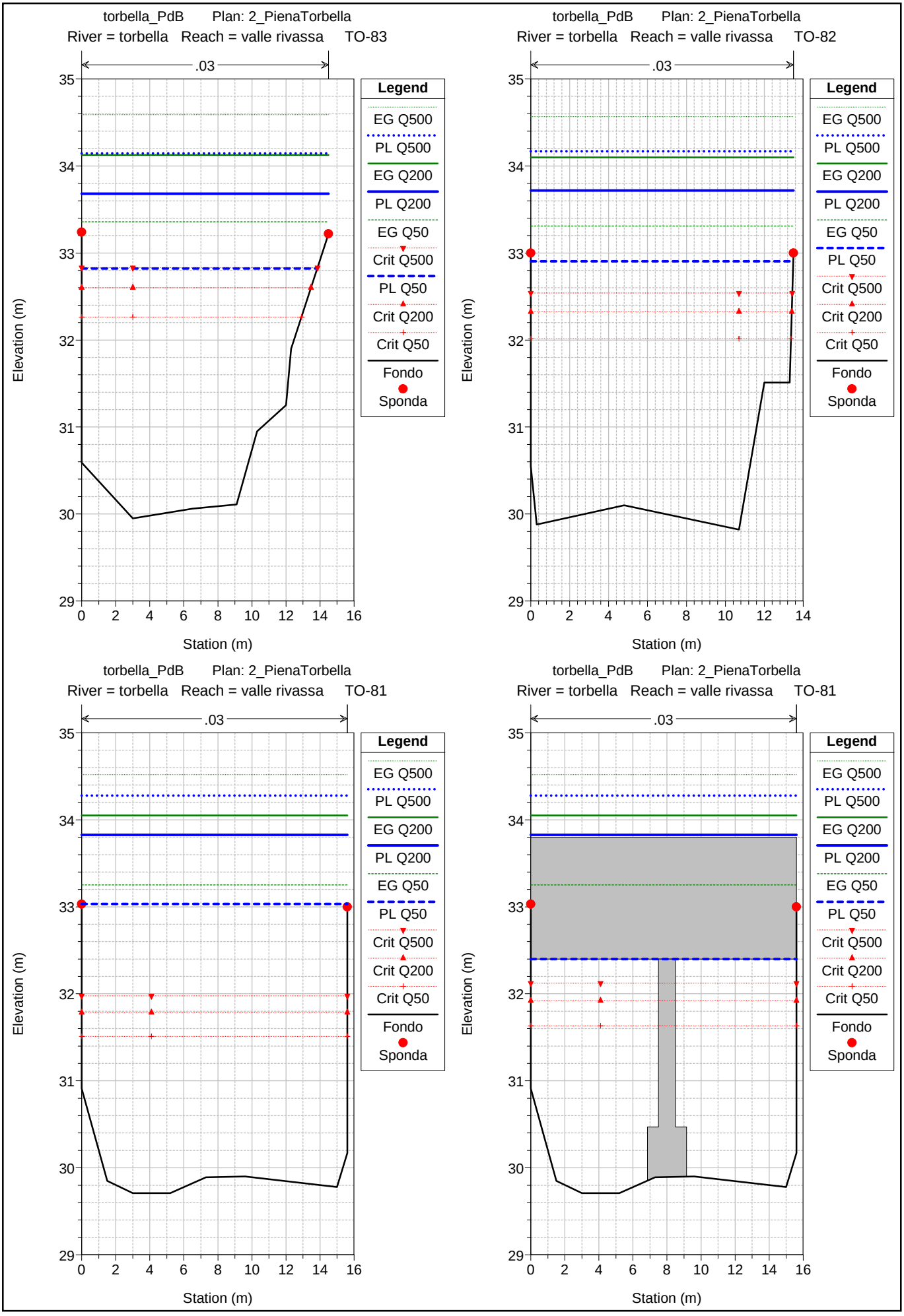
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte rivassa	92.4 TO-92.4	Q50	81.00	32.60	34.51	36.70	2.19	37.17	2.66	34.71	35.58	0.013527	4.59	17.65	11.88	1.20
monte rivassa	92.4 TO-92.4	Q200	103.00	32.60	34.77	36.70	1.93	37.17	2.40	35.01	36.02	0.013511	4.96	20.77	13.06	1.22
monte rivassa	92.4 TO-92.4	Q500	118.00	32.60	34.95	36.70	1.75	37.17	2.22	35.19	36.29	0.012804	5.13	23.02	21.89	1.20
monte rivassa	92.25 TO-92.2	Q50	81.00	32.20	33.89	36.70	2.81	37.50	3.61	34.30	35.29	0.026150	5.25	15.43	14.40	1.62
monte rivassa	92.25 TO-92.2	Q200	103.00	32.20	35.32	36.70	1.39	37.50	2.18	34.56	35.71	0.002782	2.79	36.97	27.41	0.57
monte rivassa	92.25 TO-92.2	Q500	118.00	32.20	35.64	36.70	1.06	37.50	1.86	34.72	36.04	0.002447	2.81	41.98	27.49	0.55
monte rivassa	92.2 TO-92.2	Q50	81.00	32.20	34.81	34.63	-0.18	37.50	2.69	34.28	35.19	0.003595	2.74	29.59	15.29	0.63
monte rivassa	92.2 TO-92.2	Q200	103.00	32.20	35.32	34.63	-0.69	37.50	2.18	34.53	35.71	0.002835	2.74	37.52	15.42	0.56
monte rivassa	92.2 TO-92.2	Q500	118.00	32.20	35.65	34.63	-1.02	37.50	1.85	34.69	36.04	0.002562	2.77	42.53	15.50	0.53
monte rivassa	92.0 TO-92.0	Q50	81.00	32.10	34.81	34.63	-0.18	38.35	3.54	34.22	35.15	0.003072	2.56	31.65	16.14	0.58
monte rivassa	92.0 TO-92.0	Q200	103.00	32.10	35.33	34.63	-0.70	38.35	3.02	34.46	35.67	0.002422	2.57	40.09	16.21	0.52
monte rivassa	92.0 TO-92.0	Q500	118.00	32.10	35.66	34.63	-1.03	38.35	2.69	34.61	36.01	0.002193	2.60	45.38	16.26	0.50
monte rivassa	91.8 TO-91.8	Q50	81.00	31.65	34.77	34.63	-0.14	37.29	2.52	34.15	35.13	0.003051	2.63	30.75	15.10	0.59
monte rivassa	91.8 TO-91.8	Q200	103.00	31.65	35.29	34.63	-0.66	37.29	2.00	34.41	35.65	0.002490	2.66	38.67	15.39	0.54
monte rivassa	91.8 TO-91.8	Q500	118.00	31.65	35.62	34.63	-0.99	37.29	1.67	34.57	35.99	0.002280	2.70	43.70	15.57	0.51
monte rivassa	91.6 TO-91.6	Q50	81.00	31.34	34.24	35.10	0.86	36.70	2.46	33.92	35.01	0.006934	3.88	20.87	8.87	0.81
monte rivassa	91.6 TO-91.6	Q200	103.00	31.34	34.58	35.10	0.52	36.70	2.12	34.28	35.53	0.007700	4.31	23.88	9.01	0.85
monte rivassa	91.6 TO-91.6	Q500	118.00	31.34	34.77	35.10	0.33	36.70	1.93	34.52	35.85	0.008316	4.61	25.62	9.10	0.88
monte rivassa	91.4 TO91.4	Q50	81.00	31.22	33.85	34.30	0.45	35.13	1.28	33.81	34.85	0.010387	4.44	18.26	8.76	0.98
monte rivassa	91.4 TO91.4	Q200	103.00	31.22	34.24	34.30	0.06	35.13	0.89	34.24	35.36	0.010676	4.70	21.92	9.78	1.00
monte rivassa	91.4 TO91.4	Q500	118.00	31.22	34.45	34.30	-0.15	35.13	0.68	34.45	35.68	0.010753	4.91	24.03	9.78	1.00
monte rivassa	91.2 TO-91.2	Q50	81.00	31.17	33.82	35.80	1.98	34.84	1.02	33.82	34.77	0.010134	4.32	18.73	9.83	1.00
monte rivassa	91.2 TO-91.2	Q200	103.00	31.17	34.01	35.80	1.79	34.84	0.83	34.16	35.28	0.012539	5.00	20.62	10.03	1.11
monte rivassa	91.2 TO-91.2	Q500	118.00	31.17	34.20	35.80	1.60	34.84	0.64	34.37	35.60	0.012704	5.24	22.54	10.03	1.12
monte rivassa	84. TO-91	Q50	81.00	30.87	33.37	34.71	1.34	34.00	0.63	33.49	34.45	0.013333	4.62	17.55	9.90	1.11
monte rivassa	84. TO-91	Q200	103.00	30.87	33.72	34.71	0.99	34.00	0.28	33.82	34.94	0.012528	4.88	21.09	9.95	1.07
monte rivassa	84. TO-91	Q500	118.00	30.87	33.93	34.71	0.78	34.00	0.07	34.04	35.25	0.012578	5.10	23.12	9.99	1.07
monte rivassa	83. TO-90	Q50	81.00	30.33	32.28	34.70	2.42	33.34	1.06	32.90	34.07	0.023262	5.93	13.66	8.39	1.48
monte rivassa	83. TO-90	Q200	103.00	30.33	32.63	34.70	2.07	33.34	0.71	33.19	34.54	0.028380	6.12	16.82	11.72	1.63
monte rivassa	83. TO-90	Q500	118.00	30.33	34.17	34.70	0.53	33.34	-0.83	33.38	34.75	0.004161	3.37	35.04	11.90	0.63
monte rivassa	82.1	Q50	81.00	30.07	33.11	34.69	1.58	33.22	0.11	32.09	33.40	0.002178	2.39	33.86	14.30	0.50
monte rivassa	82.1	Q200	103.00	30.07	33.89	34.69	0.80	33.22	-0.67	32.40	34.15	0.001524	2.28	45.13	14.50	0.41
monte rivassa	82.1	Q500	118.00	30.07	34.35	34.69	0.34	33.22	-1.13	32.59	34.62	0.001339	2.28	51.87	14.50	0.38

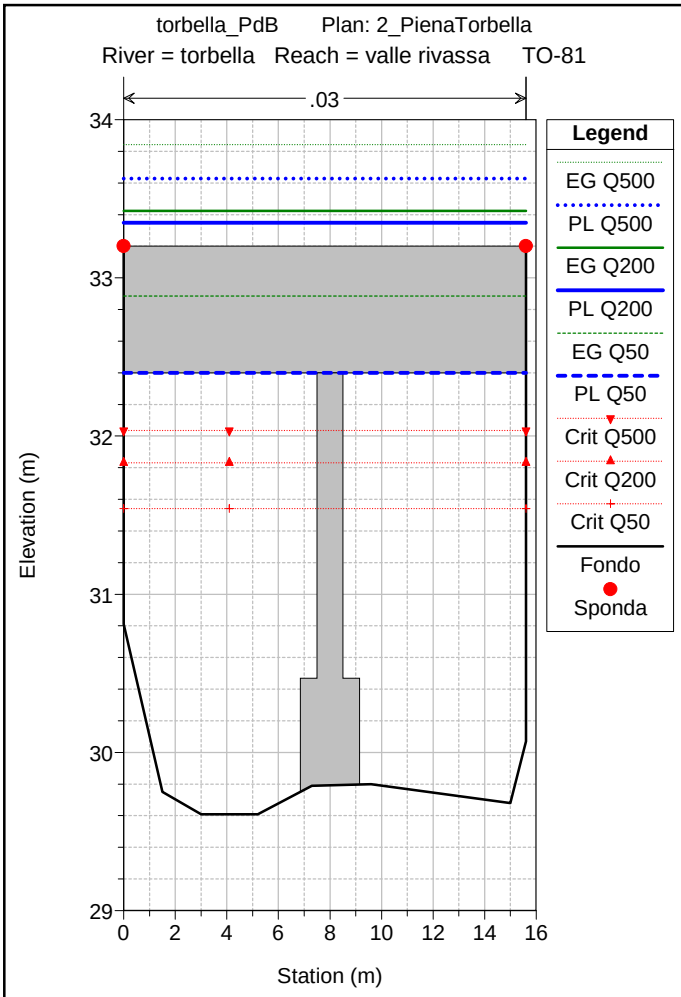


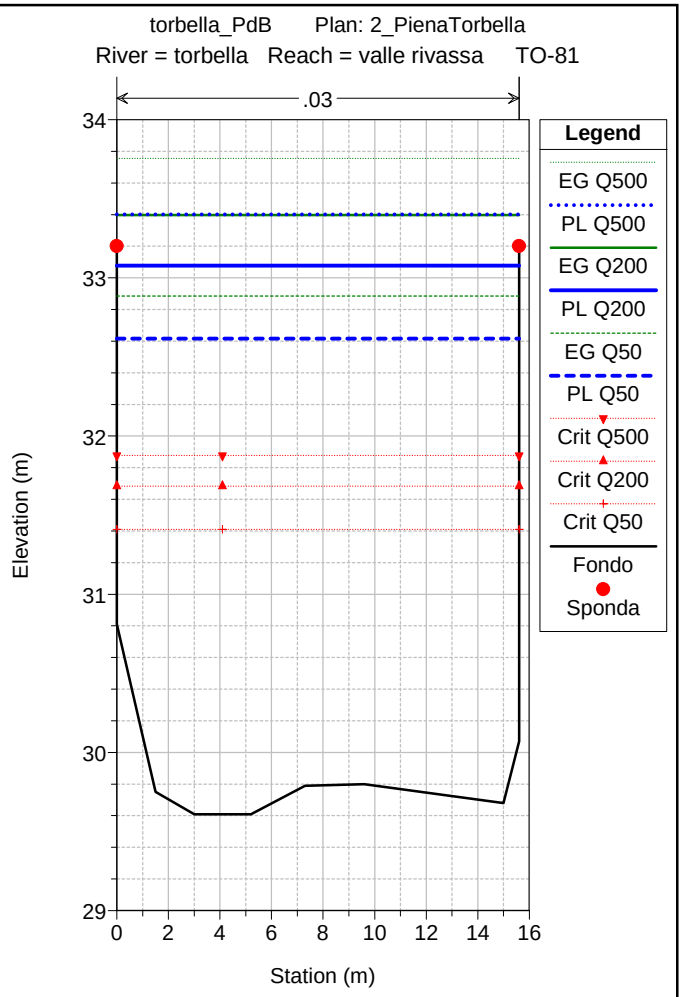
1 cm Horiz. = 35 m 1 cm Vert. = 1 m

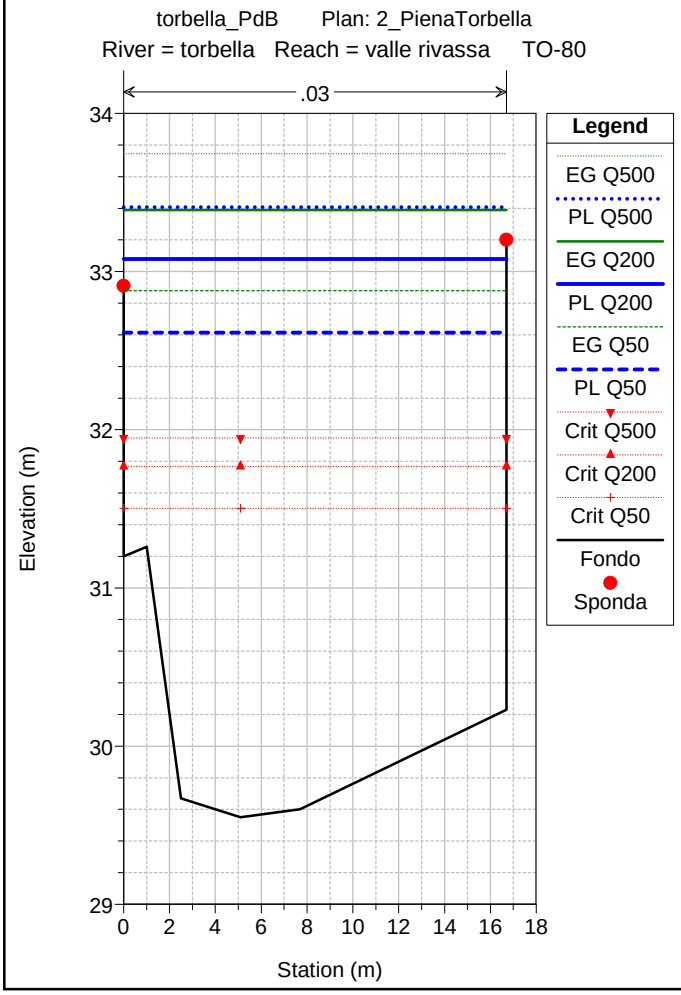


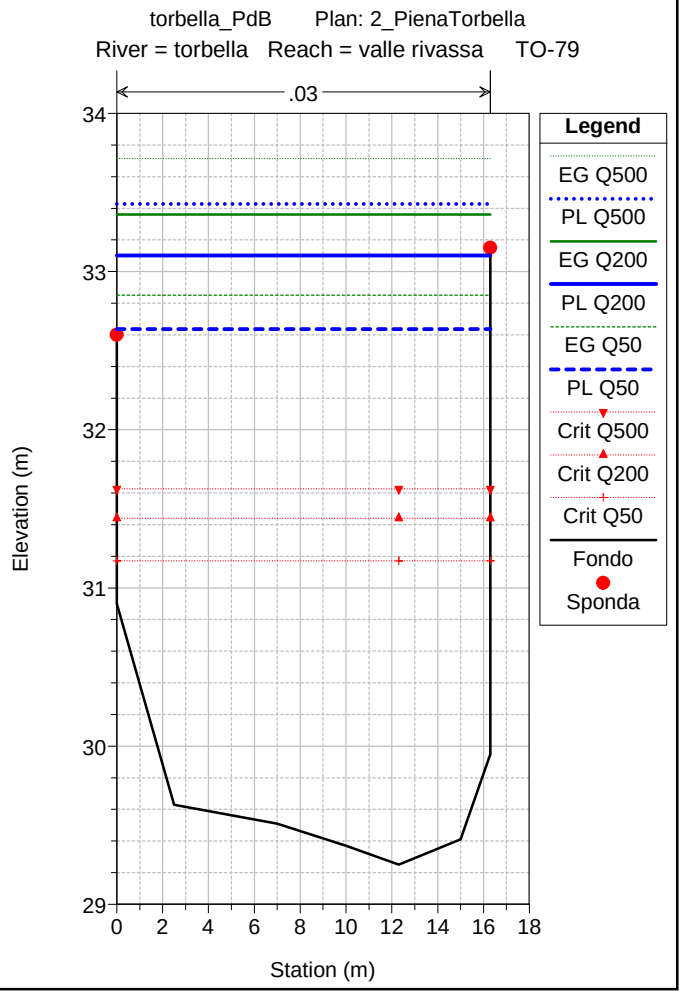
1 cm Horiz. = 35 m 1 cm Vert. = 1 m

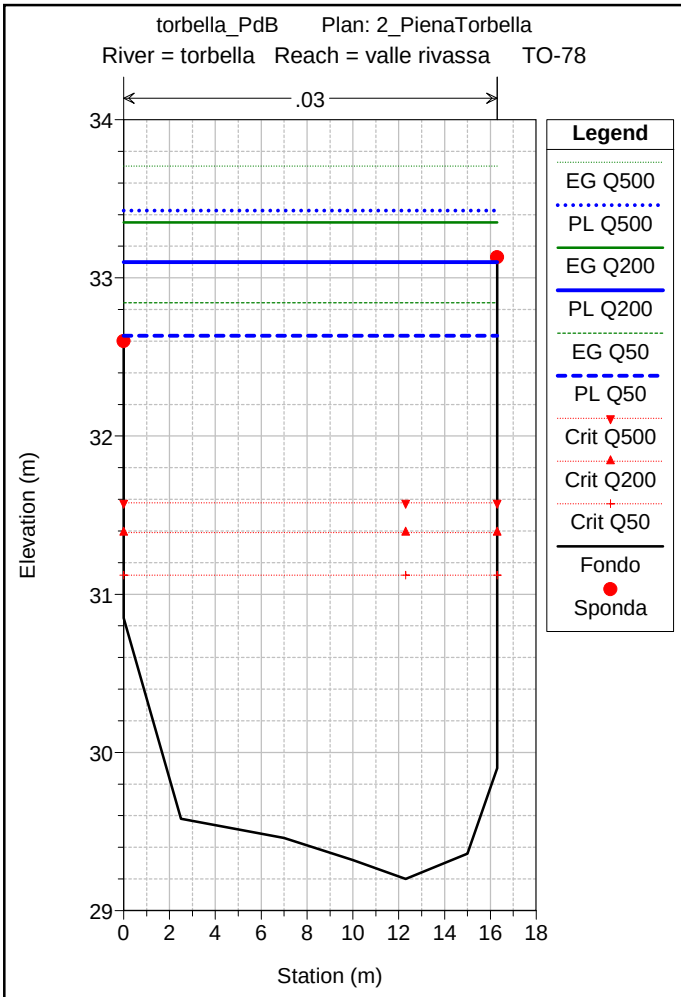

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-83
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-82
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-81
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-81
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

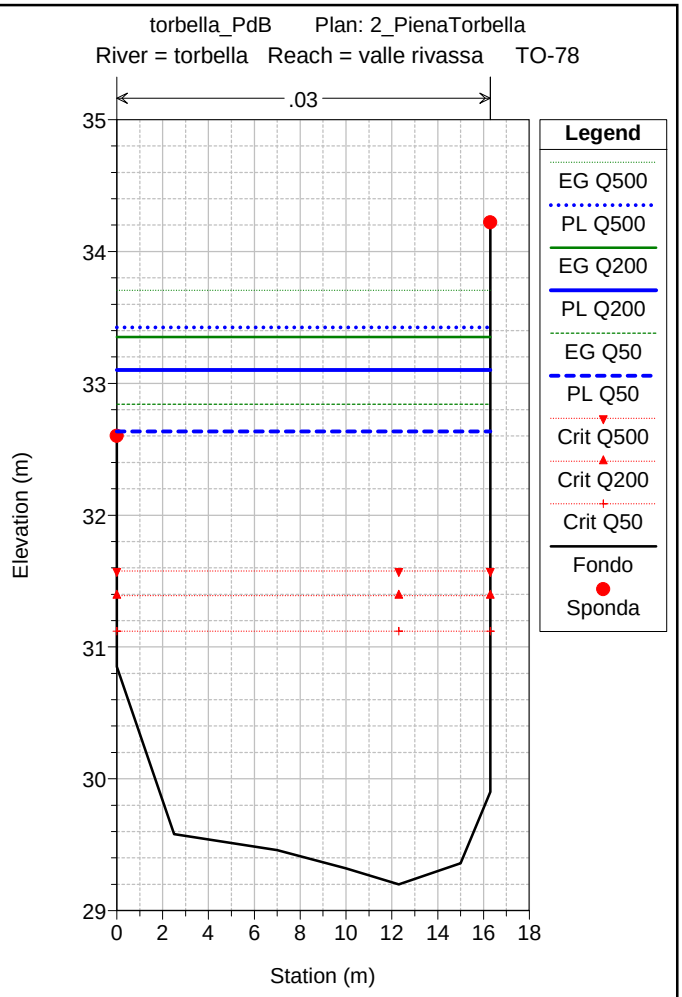

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-81
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

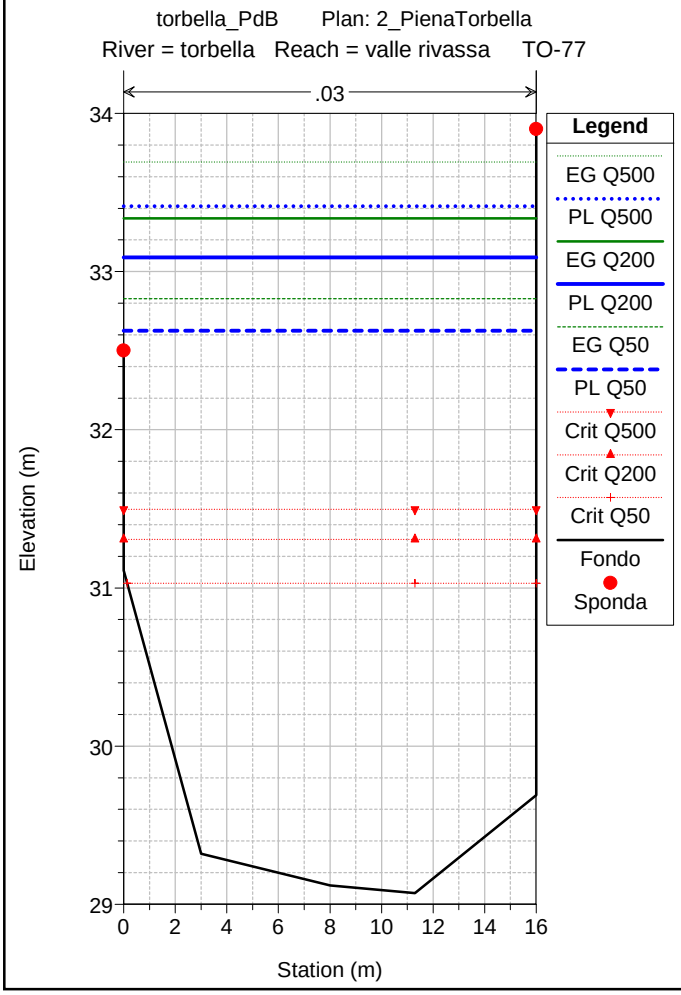

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-81
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

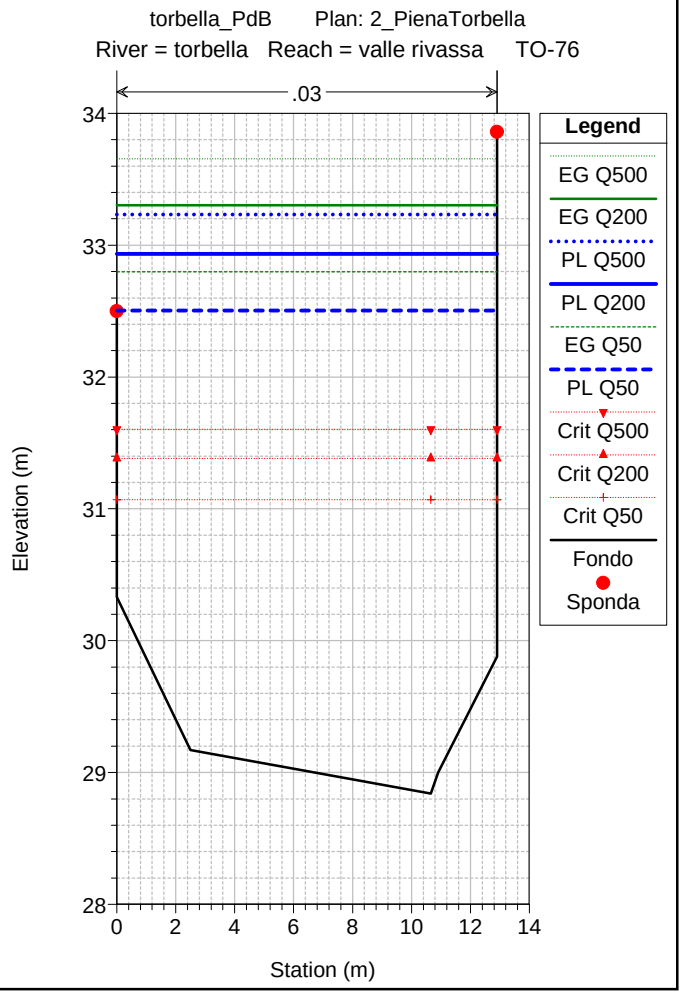

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-80
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

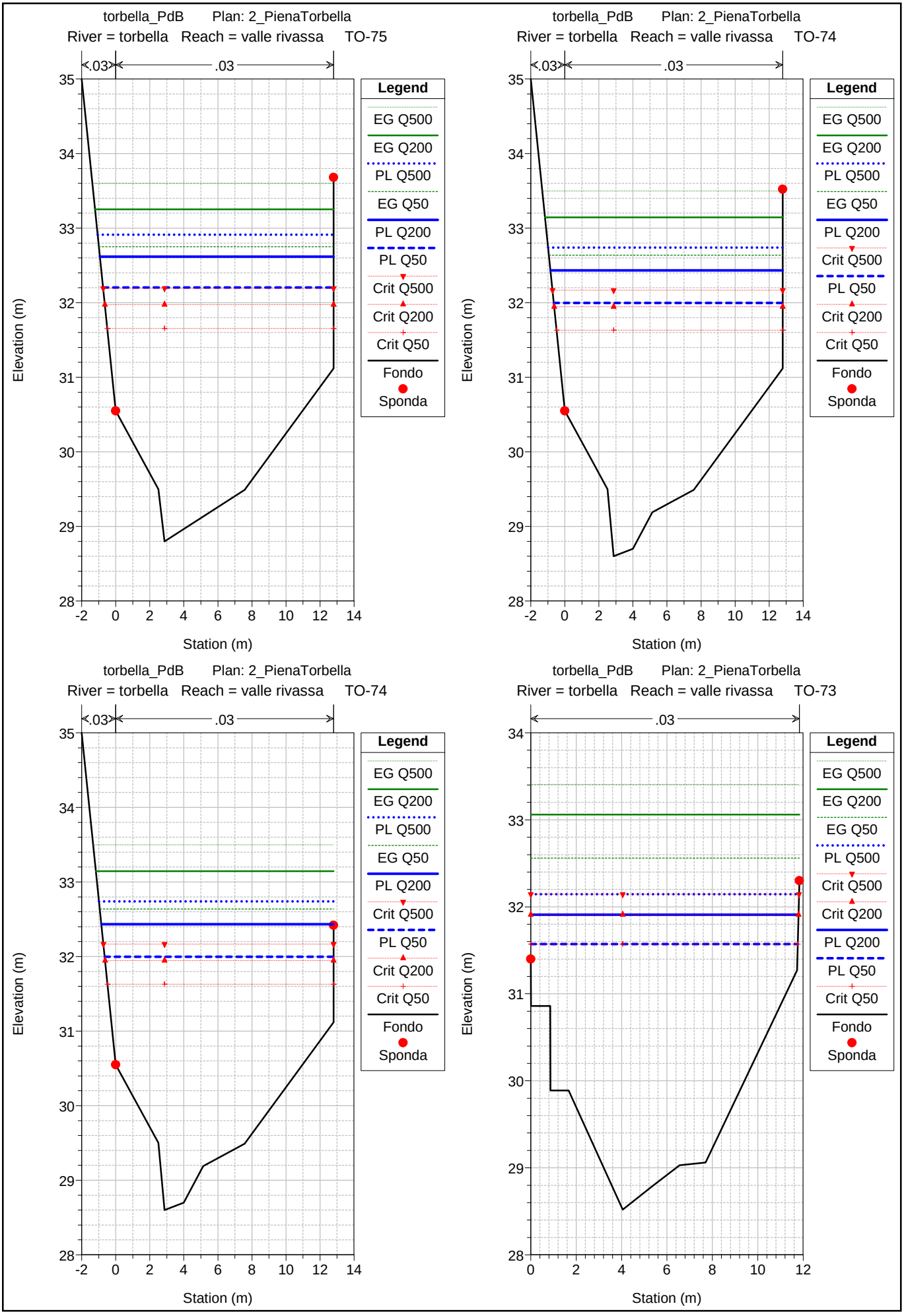

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-79
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

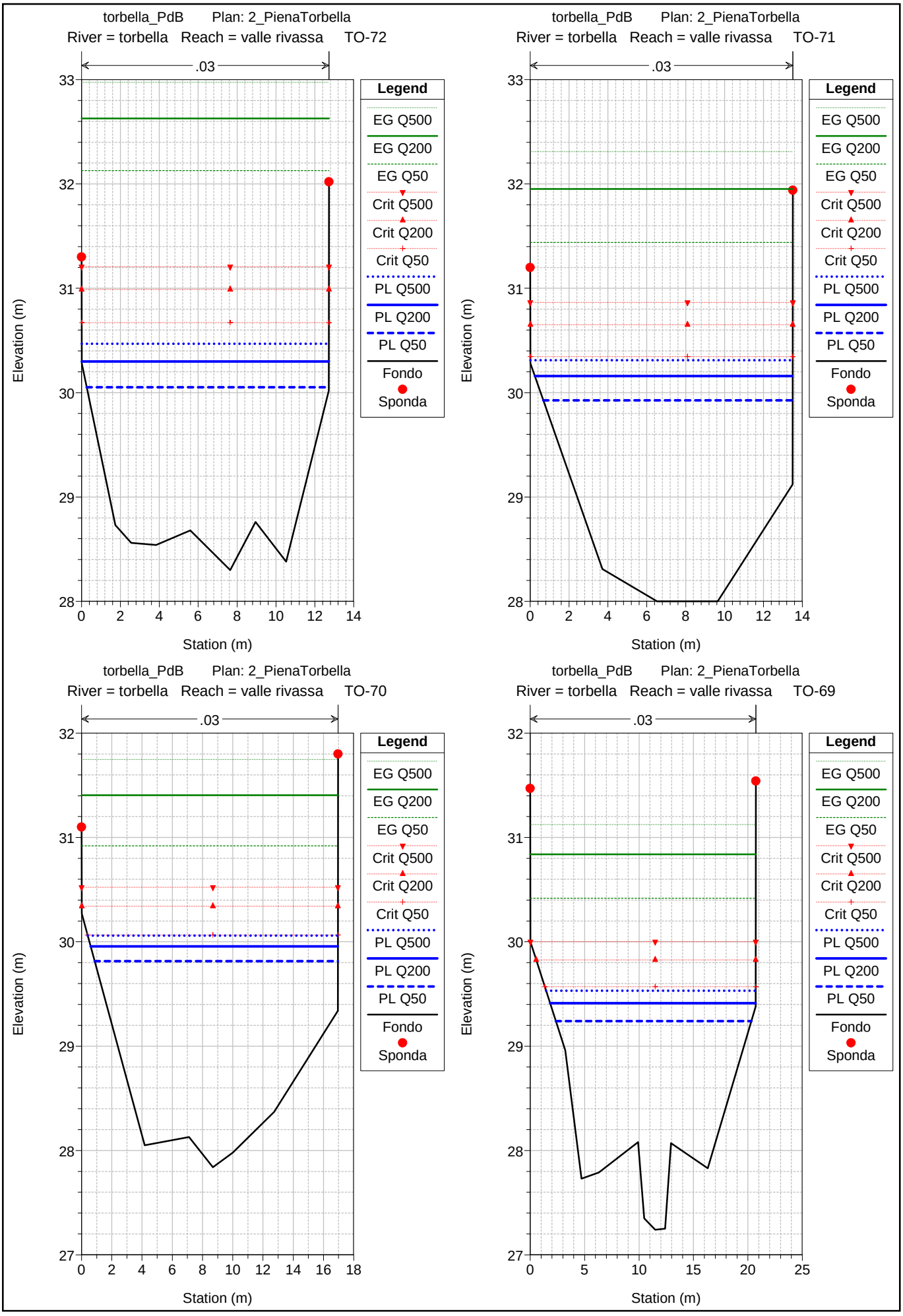

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-78
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

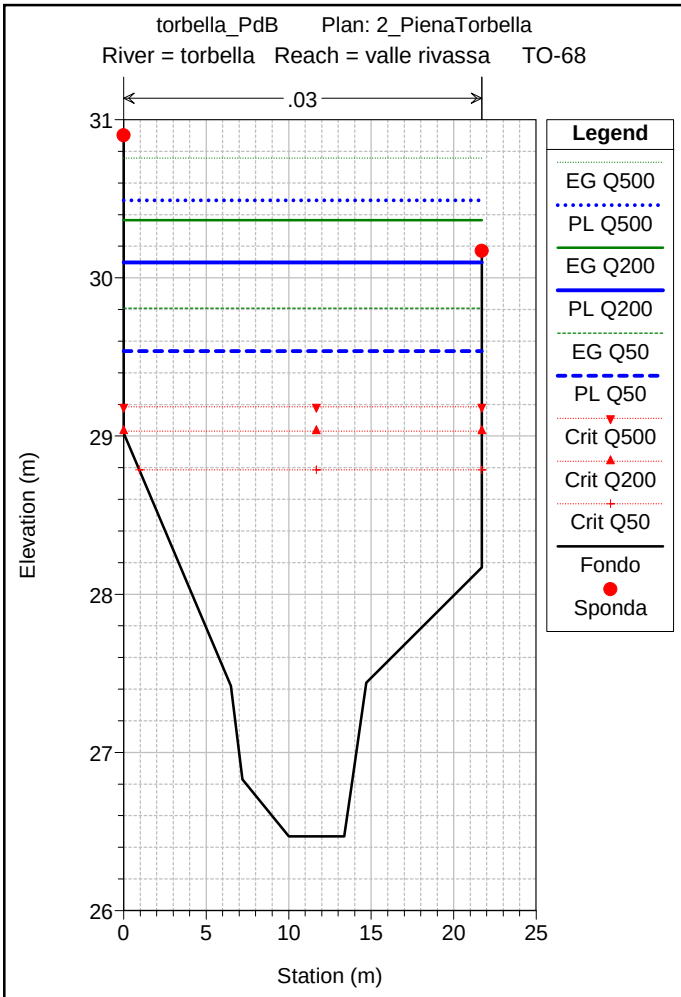

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-78
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

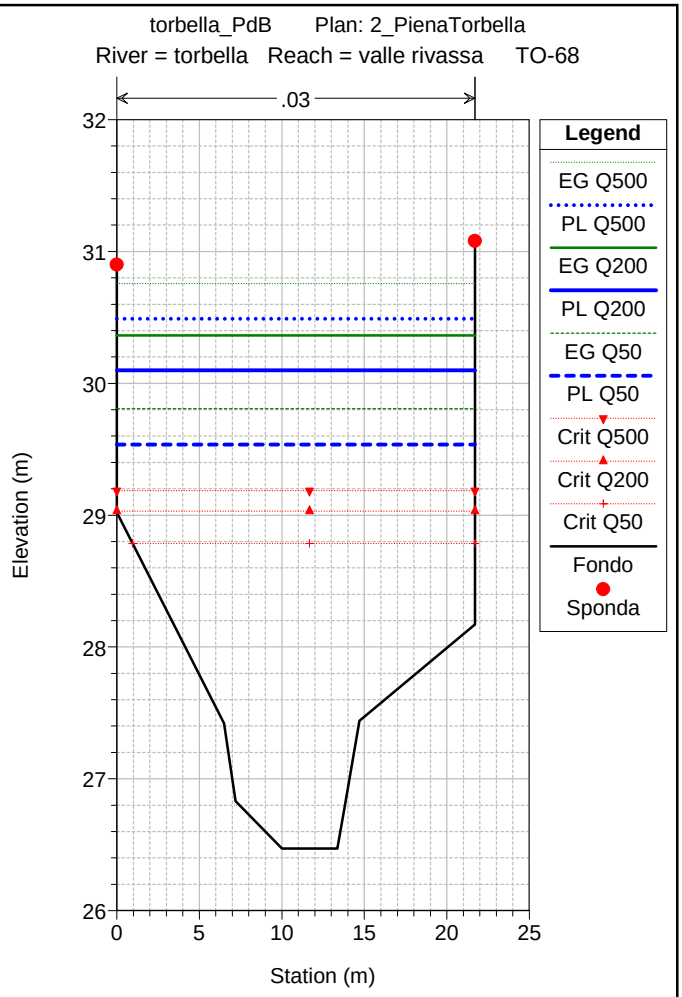

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-77
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

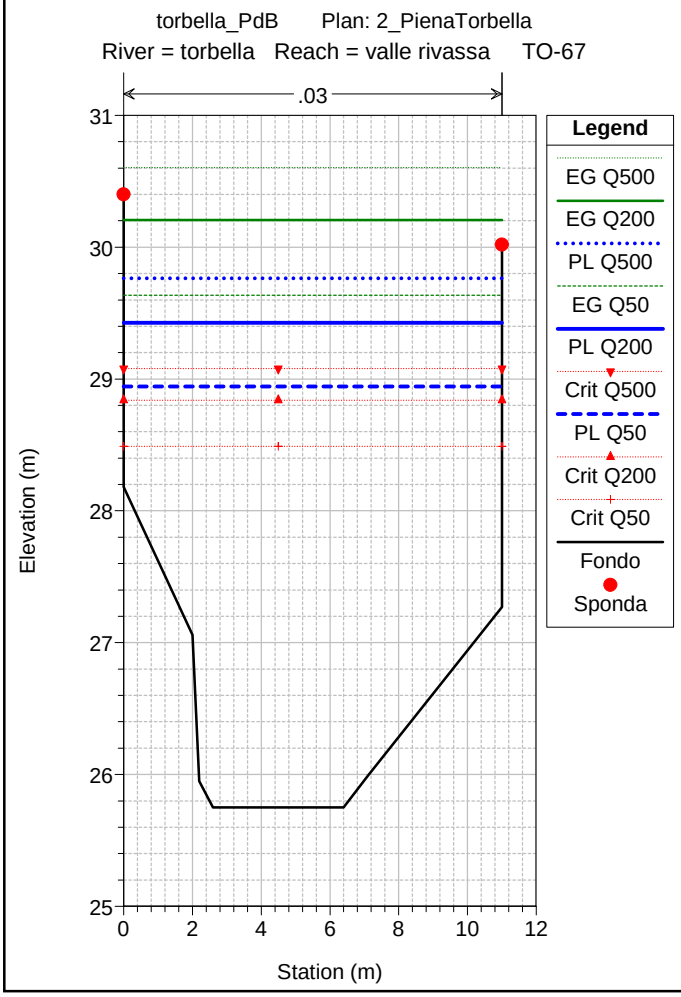

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-76
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

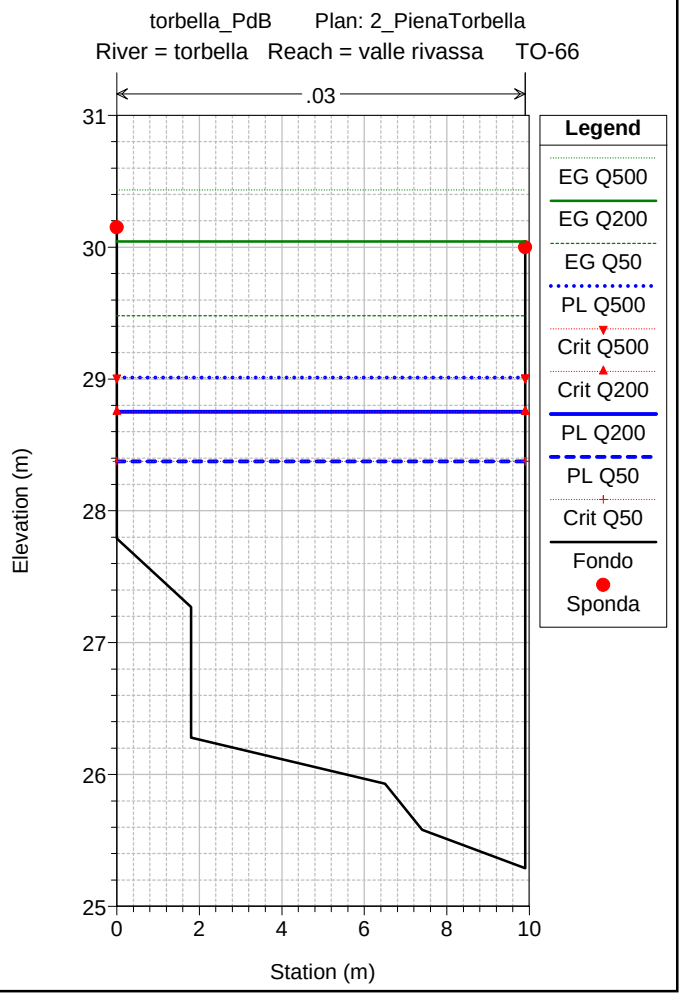

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-75
.03
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-74
.03
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-74
.03
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-73
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

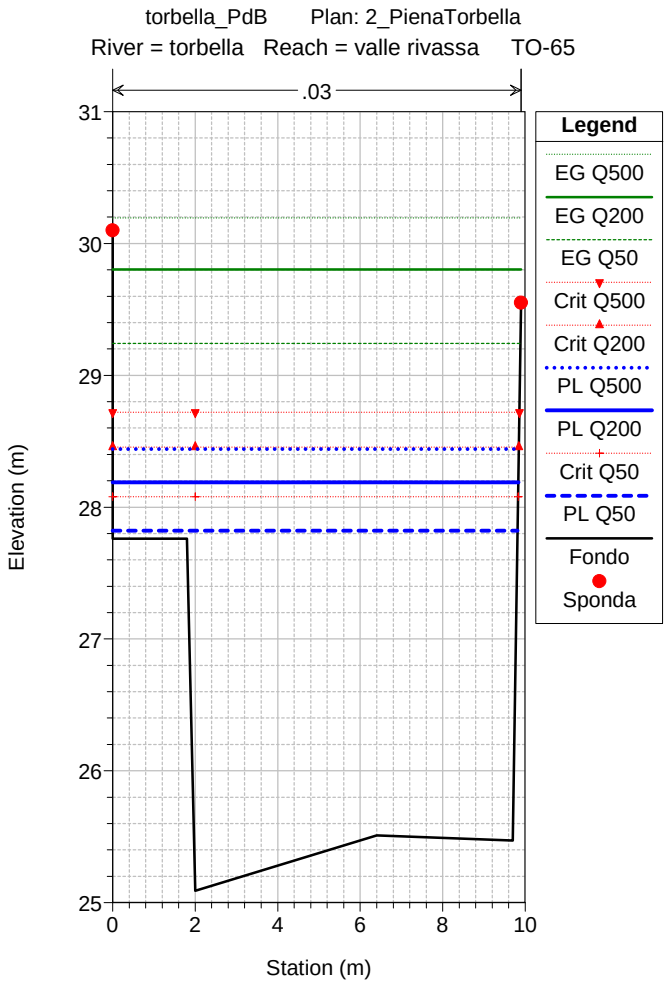

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-72
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-71
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-70
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-69
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

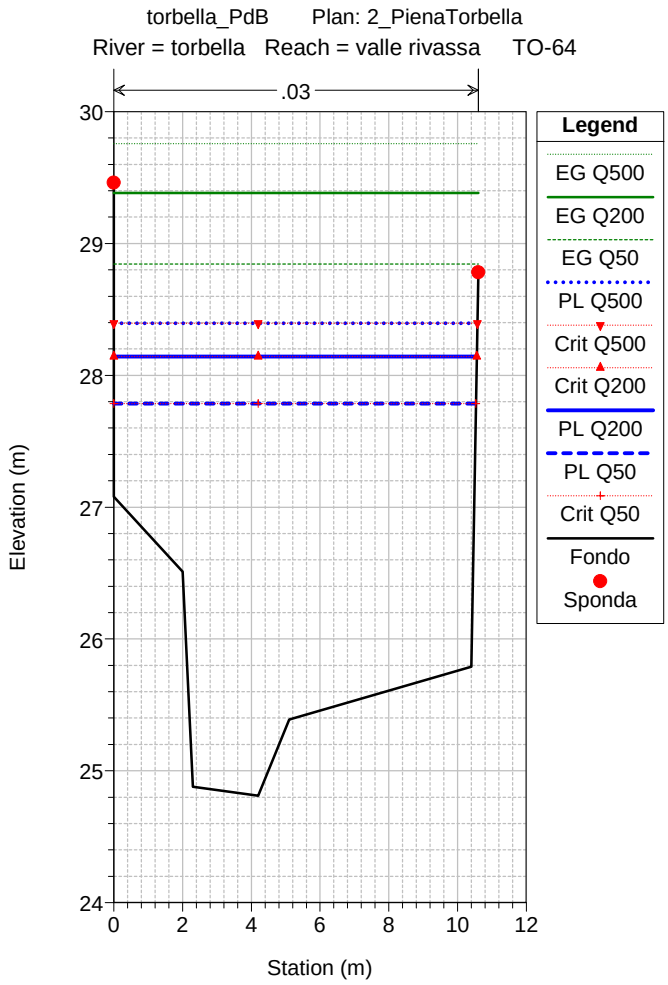

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-68
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

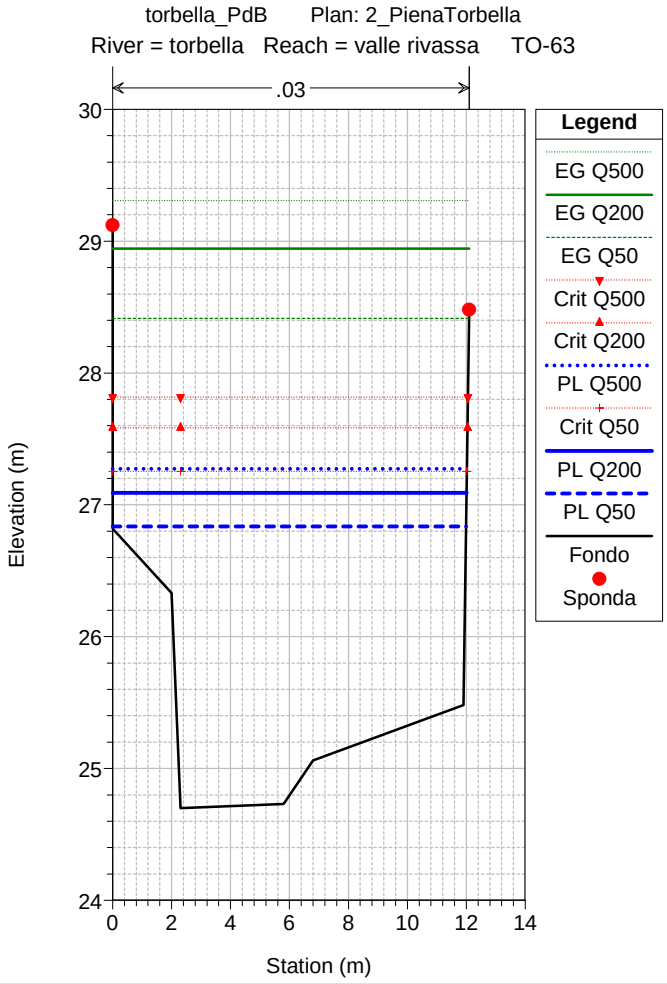

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-68
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

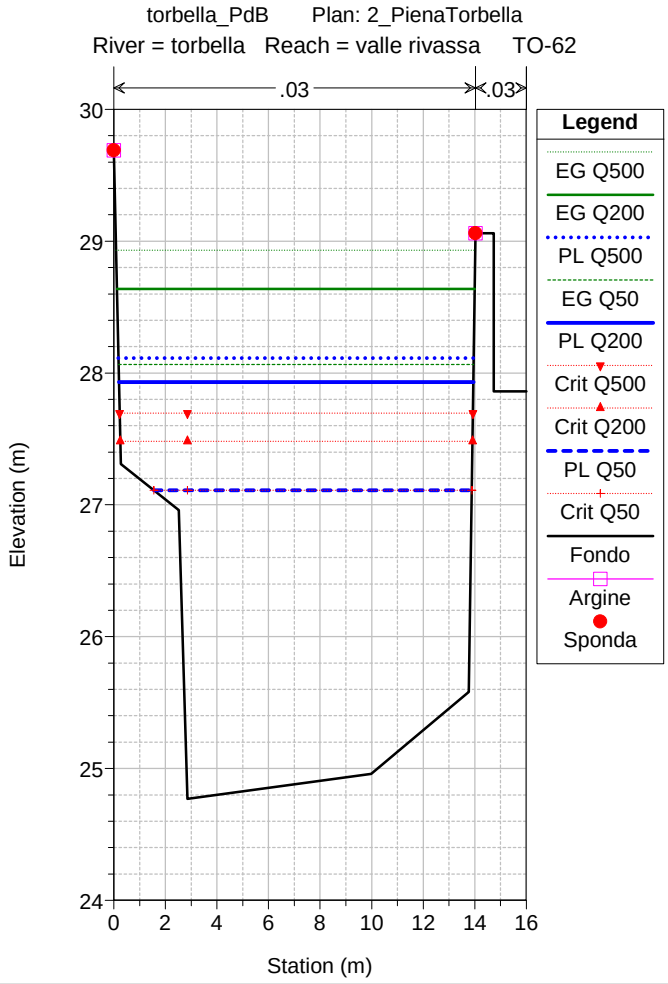

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-67
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

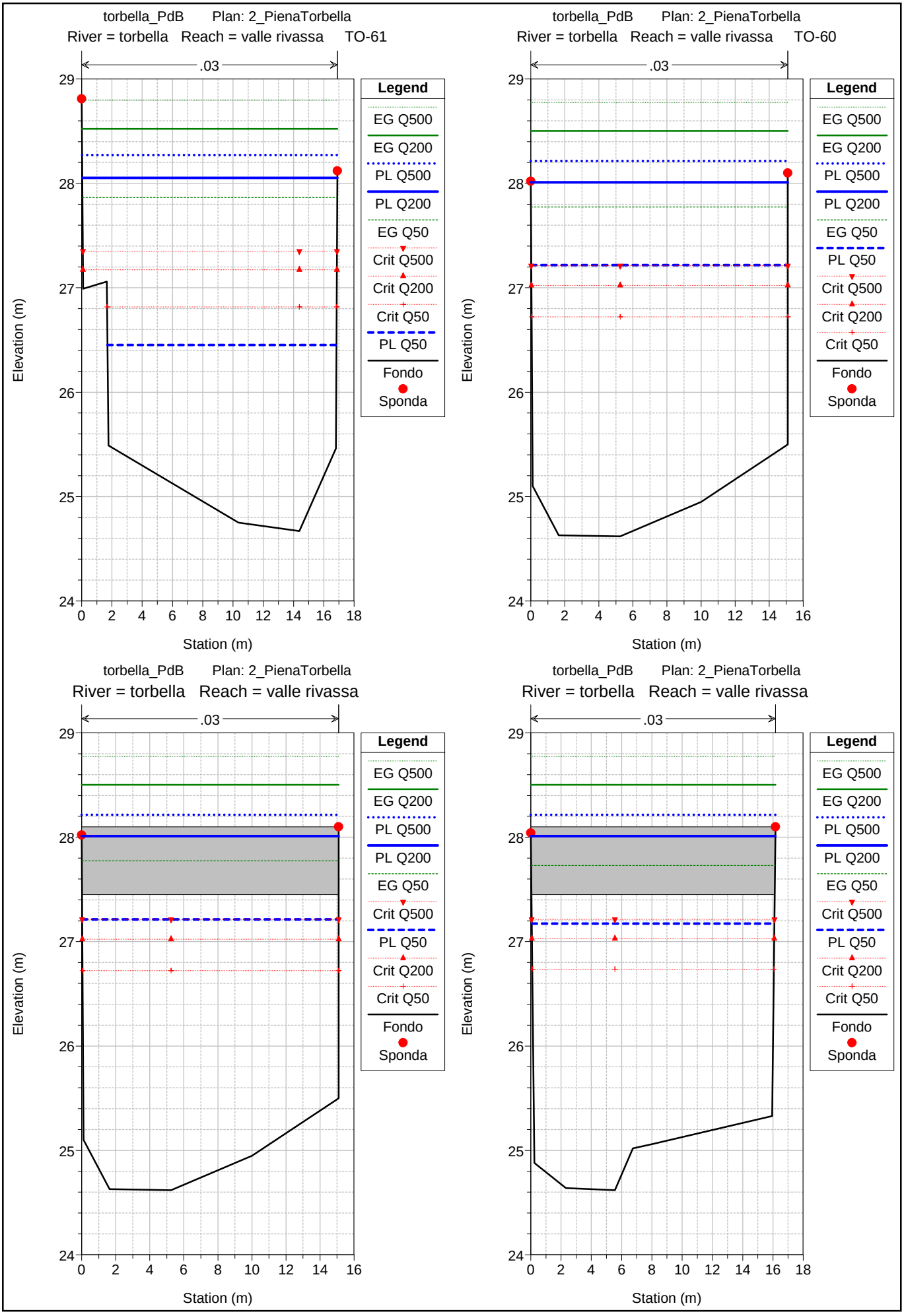

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-66
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

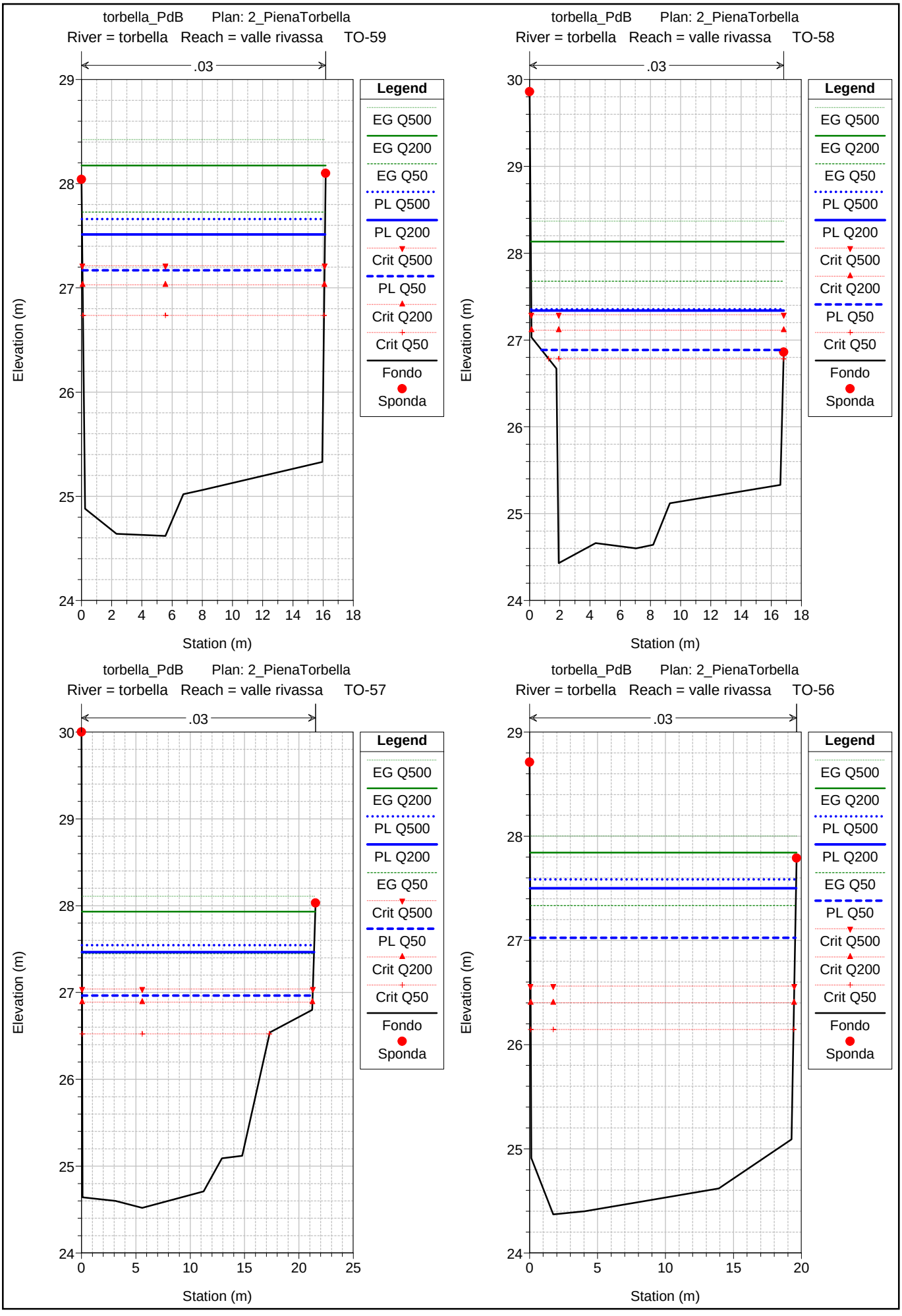

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-65
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

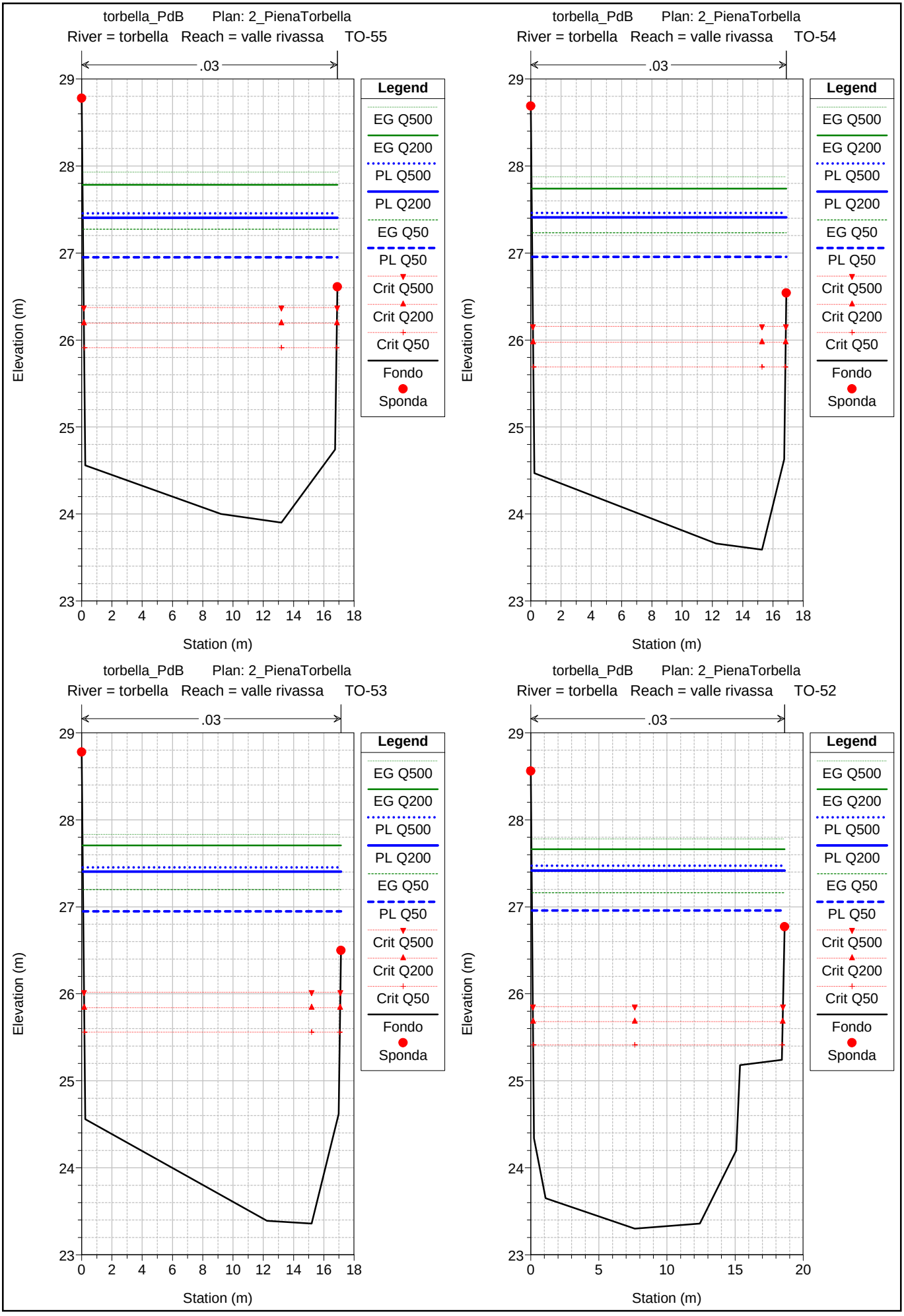

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-64
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

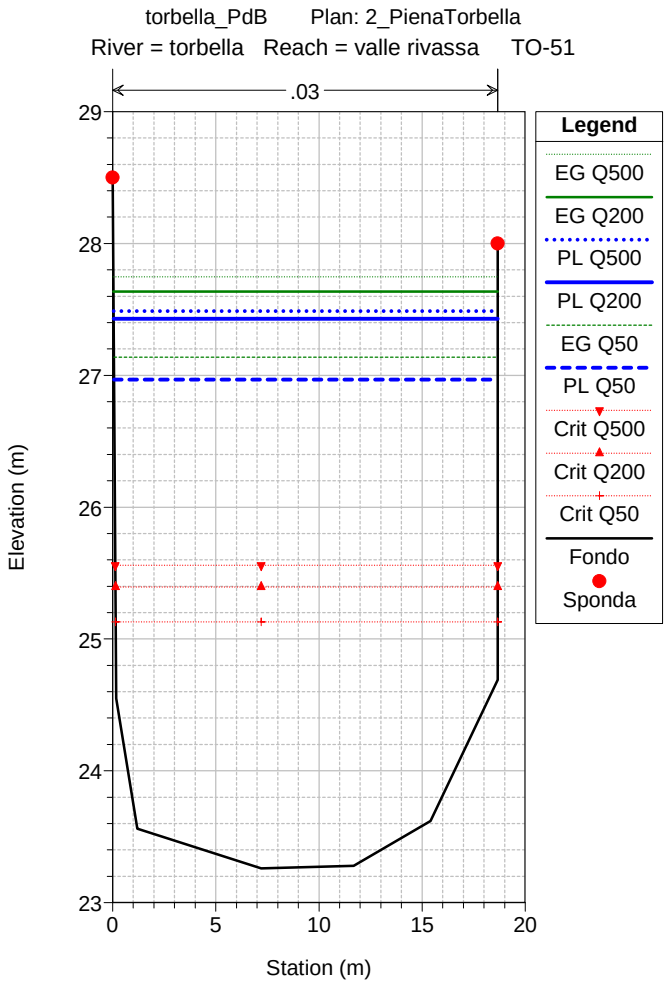

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-63
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

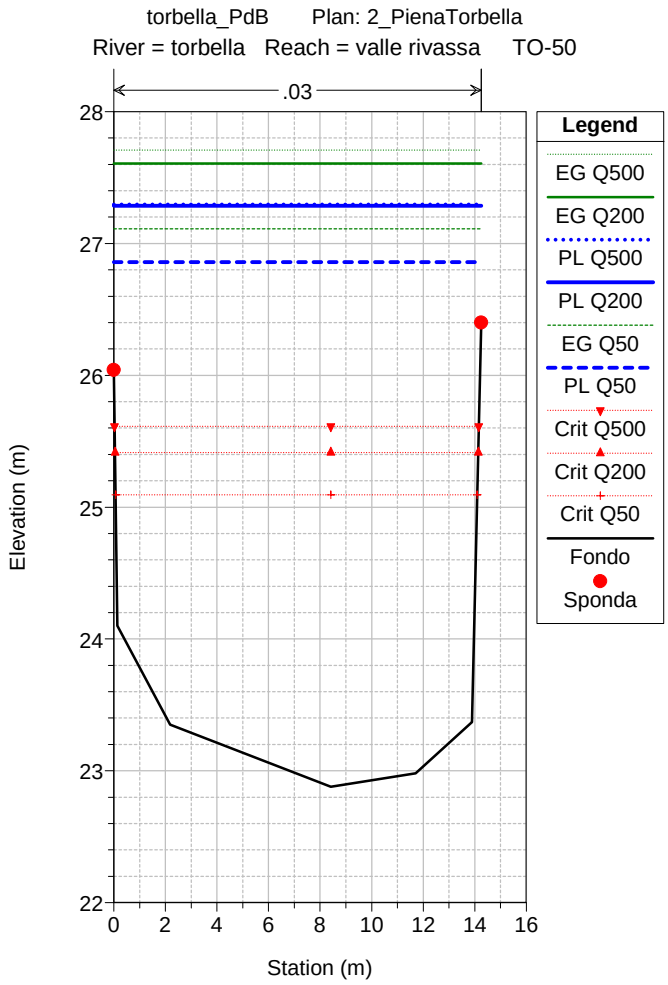

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-62
.03
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

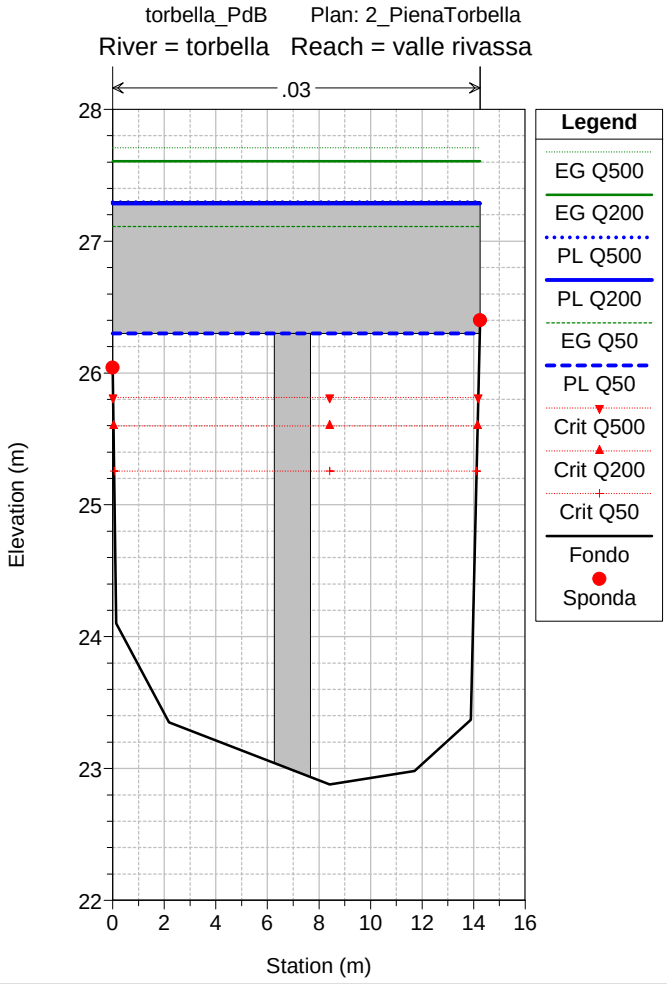

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-61
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-60
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

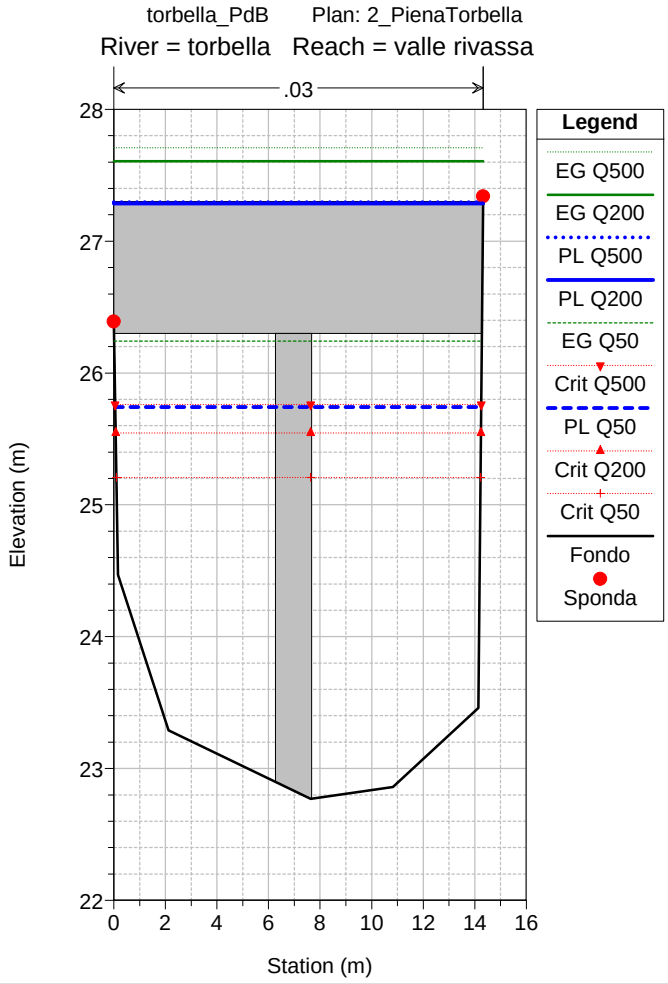

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-59
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-58
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-57
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-56
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

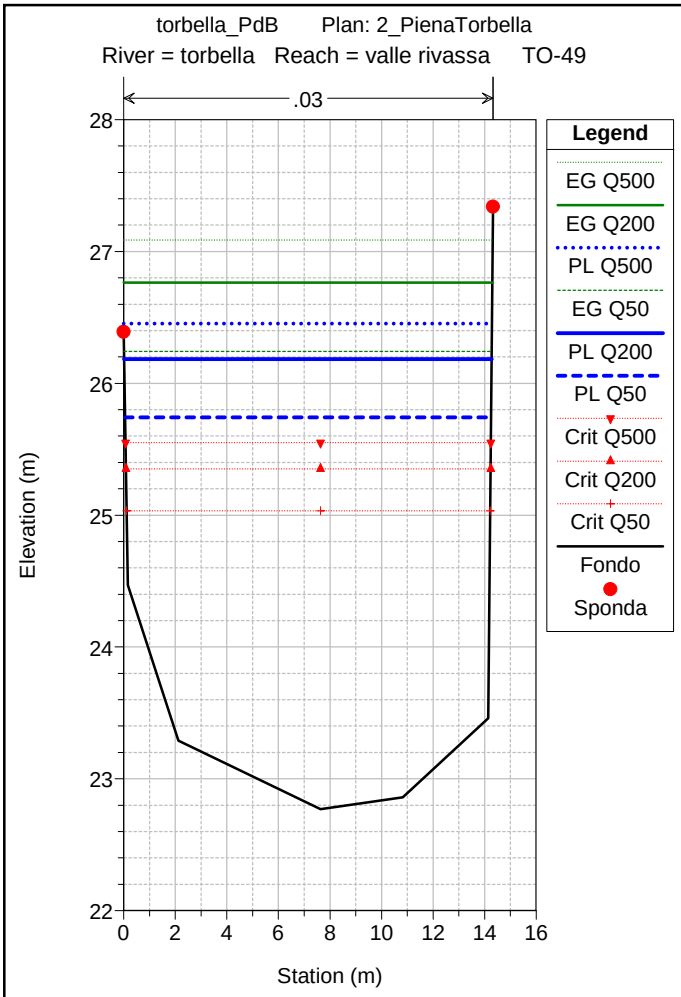

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-55
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-54
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-53
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-52
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

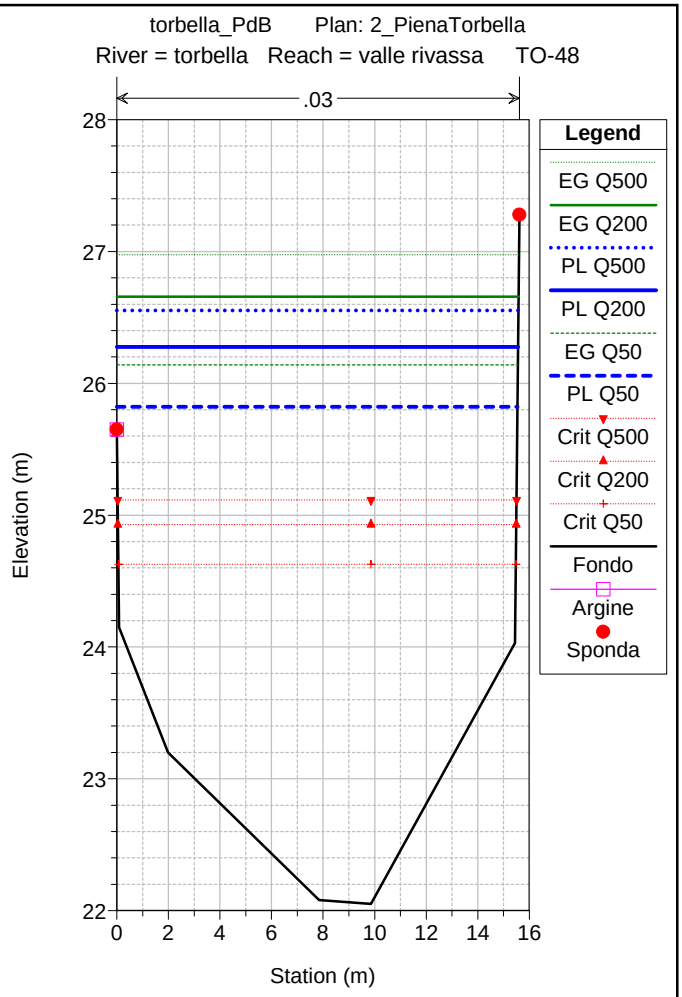

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-51
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

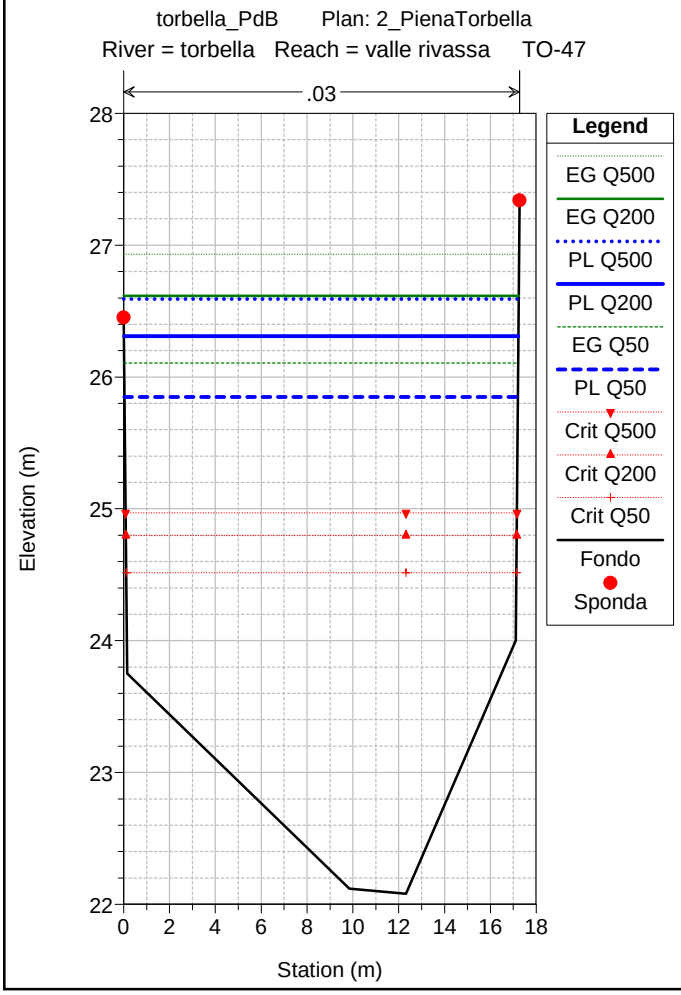

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-50
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

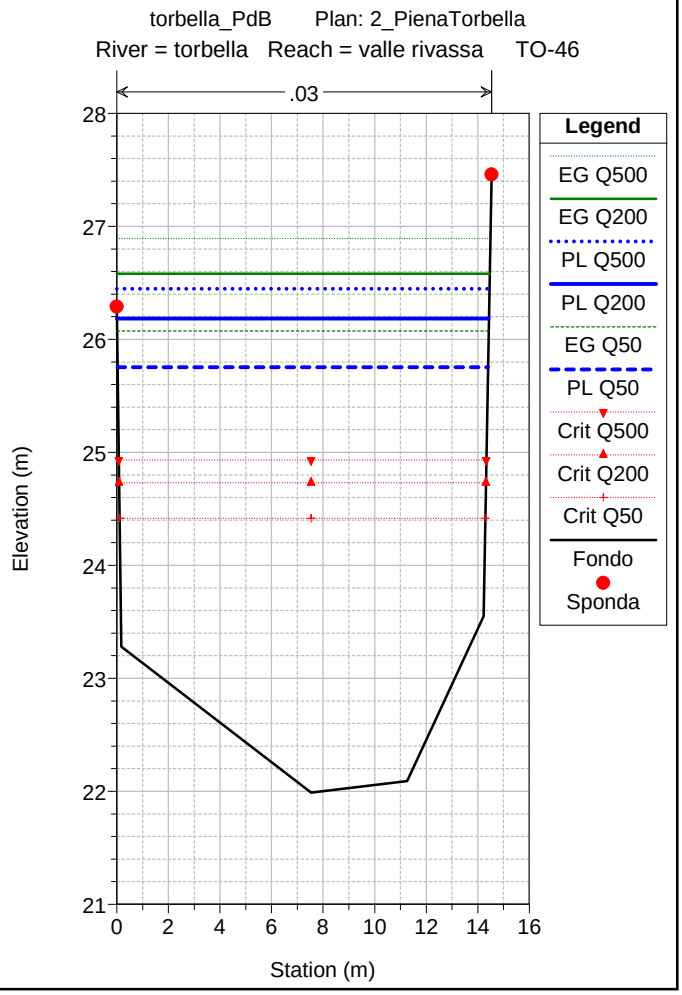

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

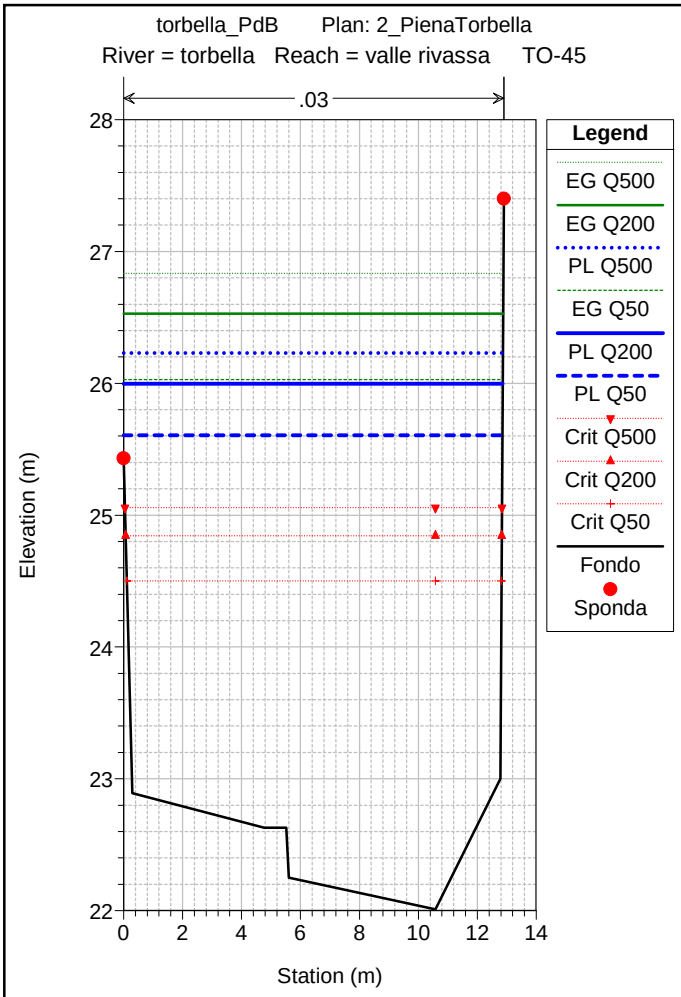

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

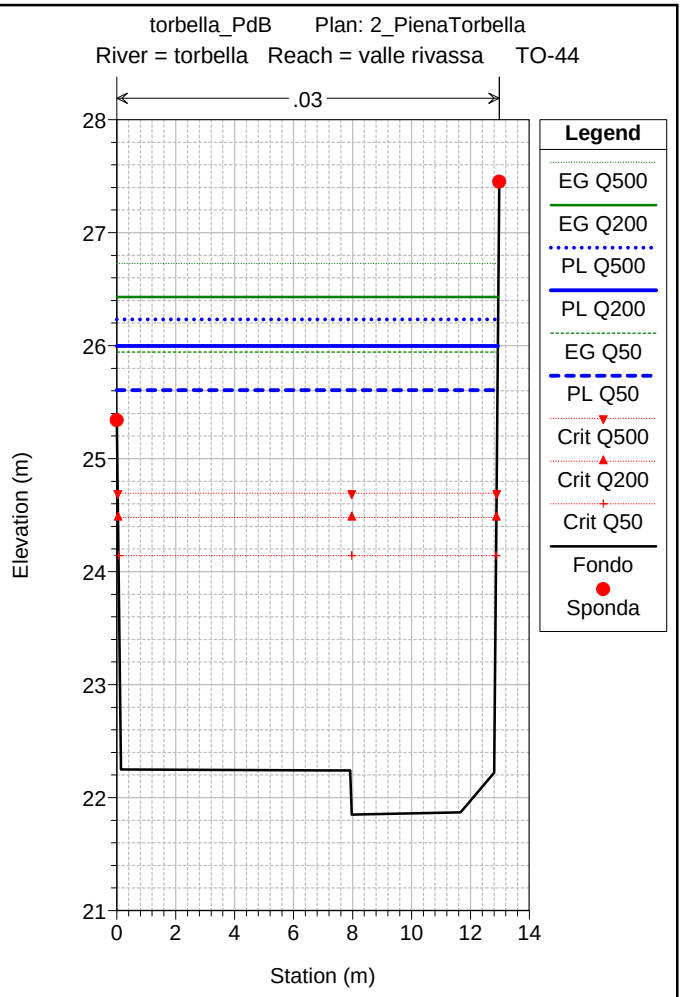

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-49
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

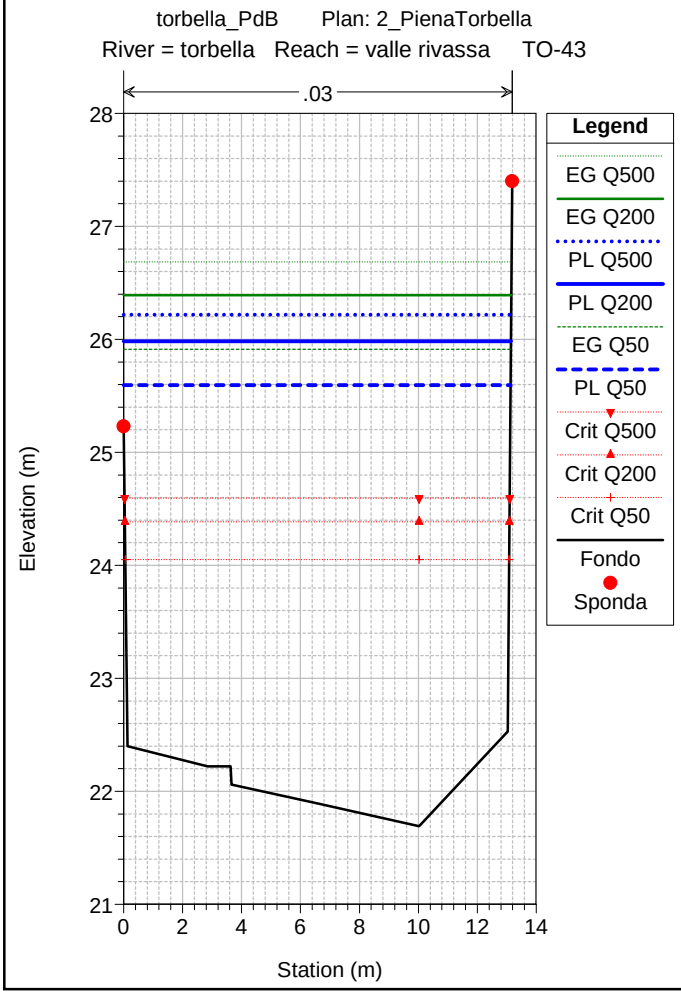

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-48
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

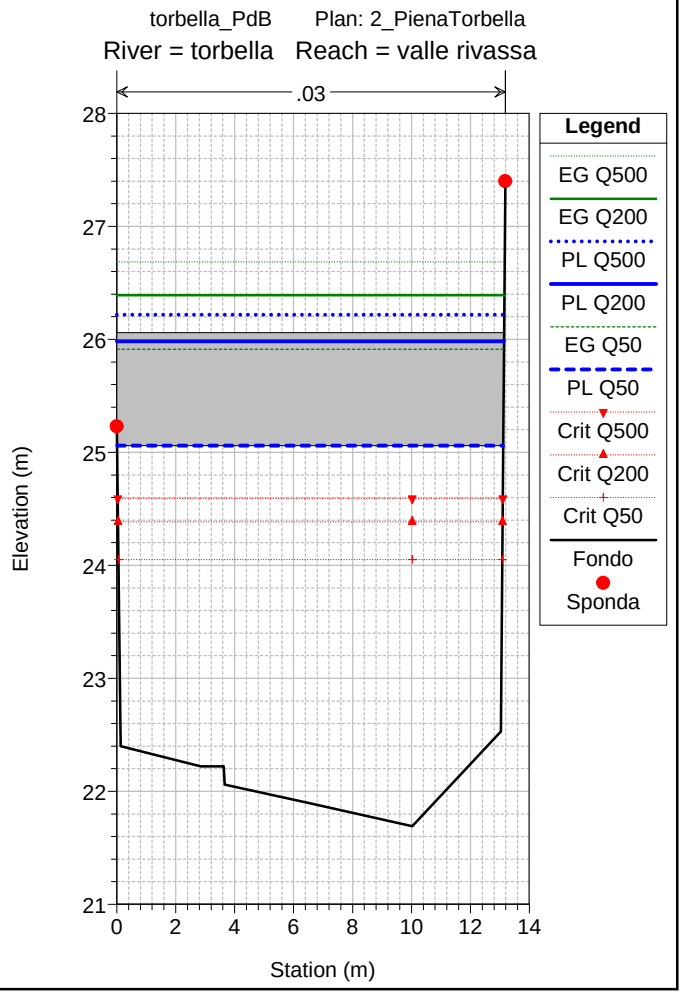

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-47
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

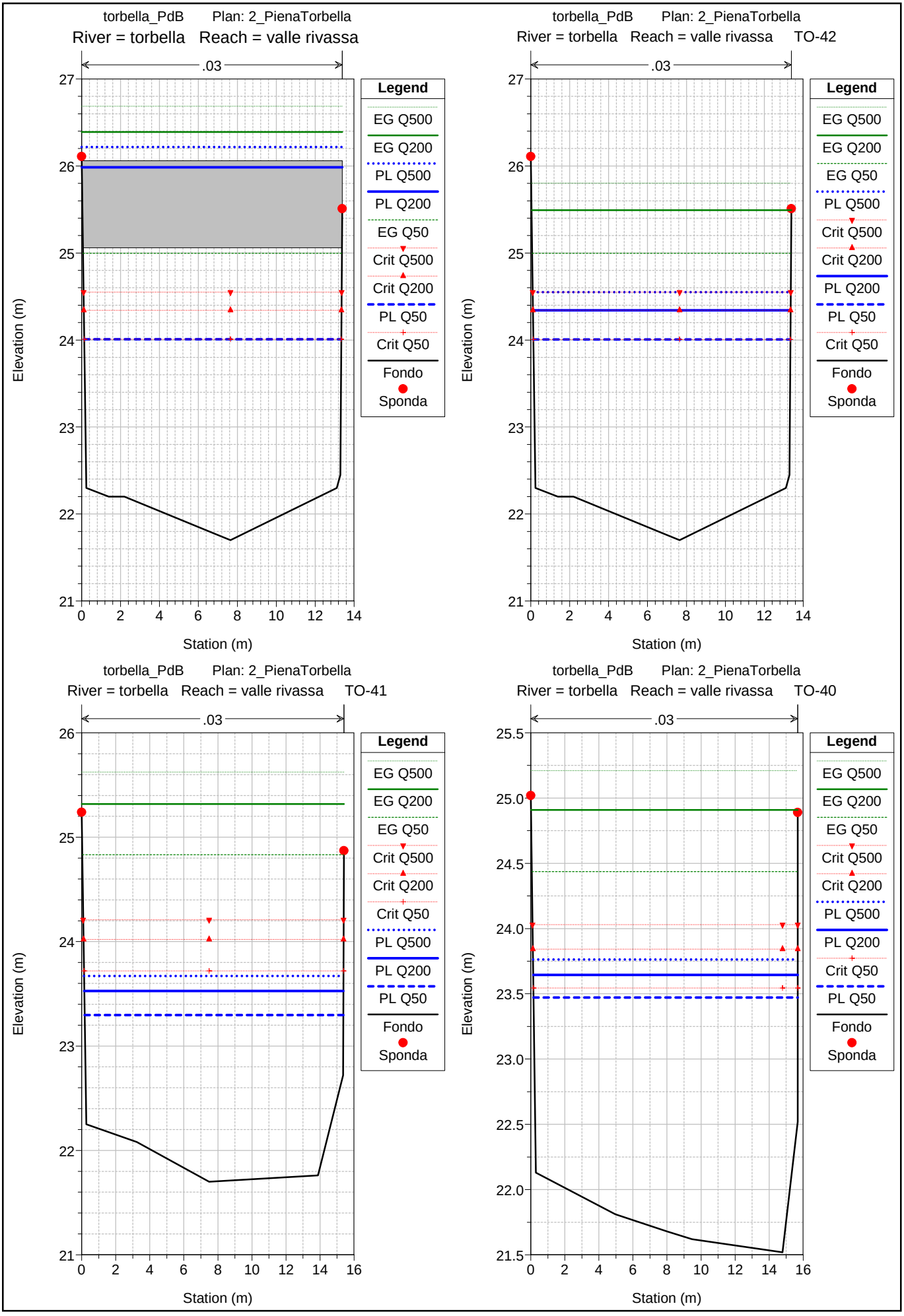

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-46
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

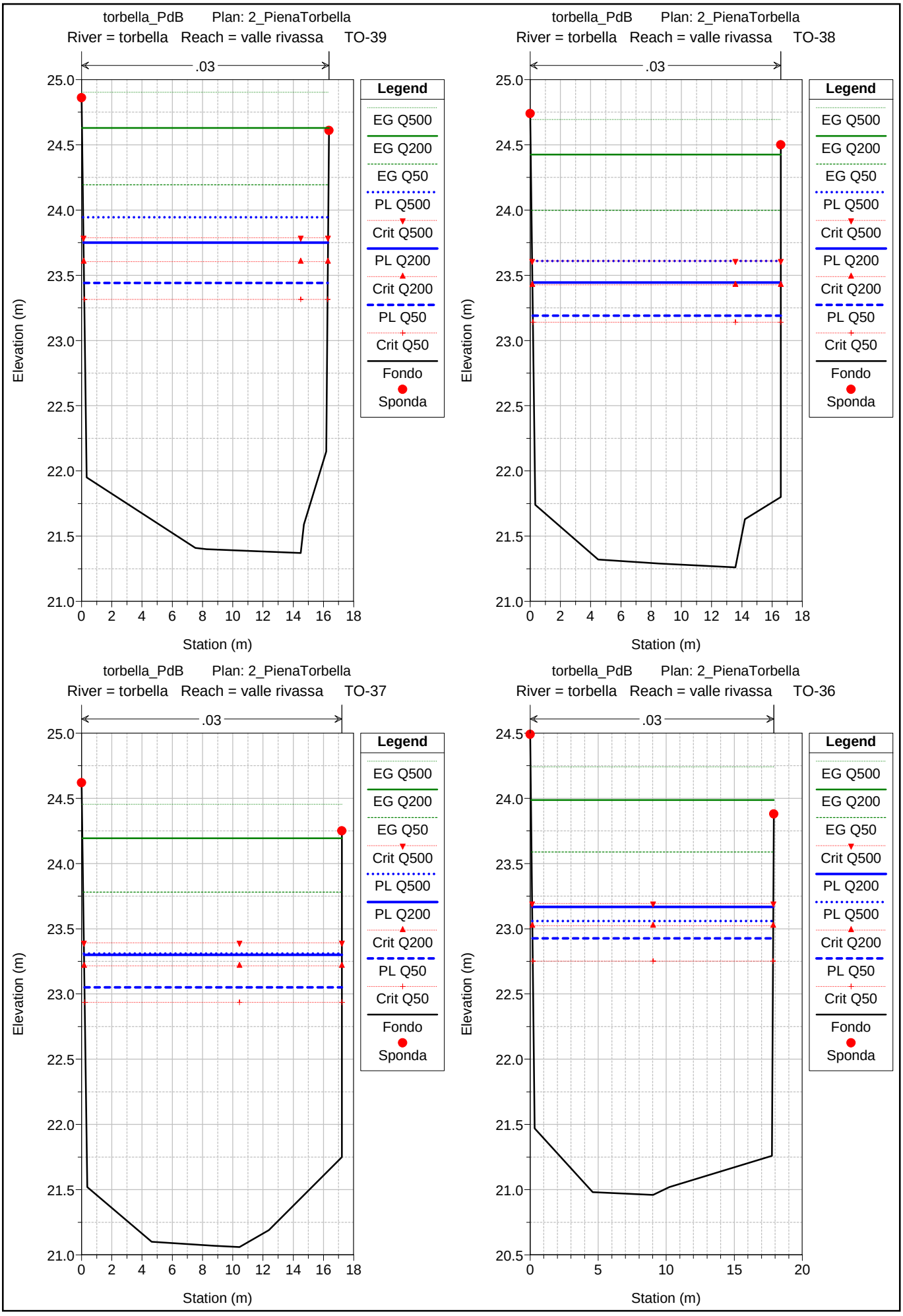

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-45
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

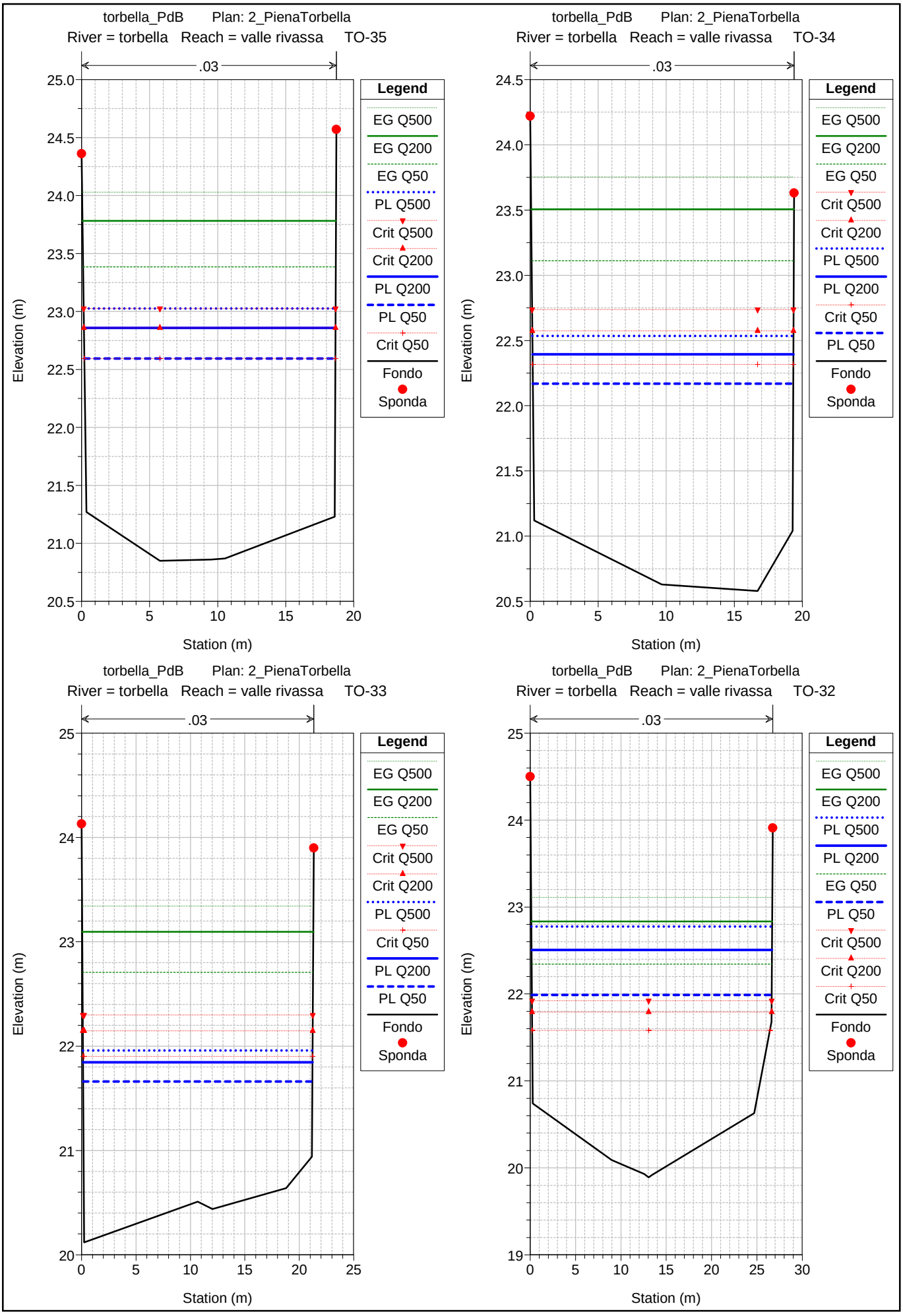

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-44
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

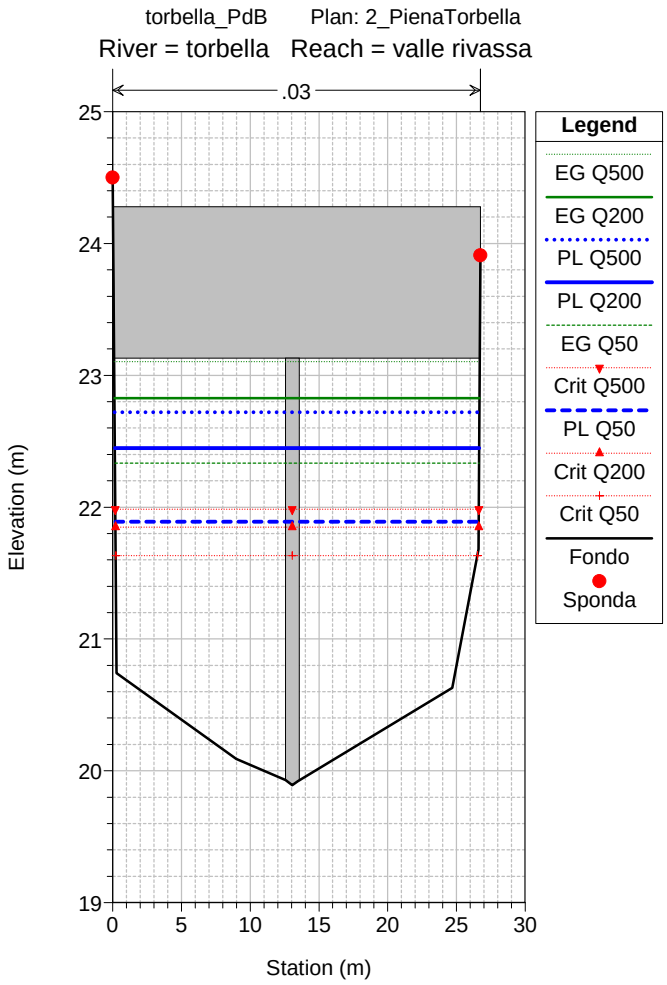

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-43
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

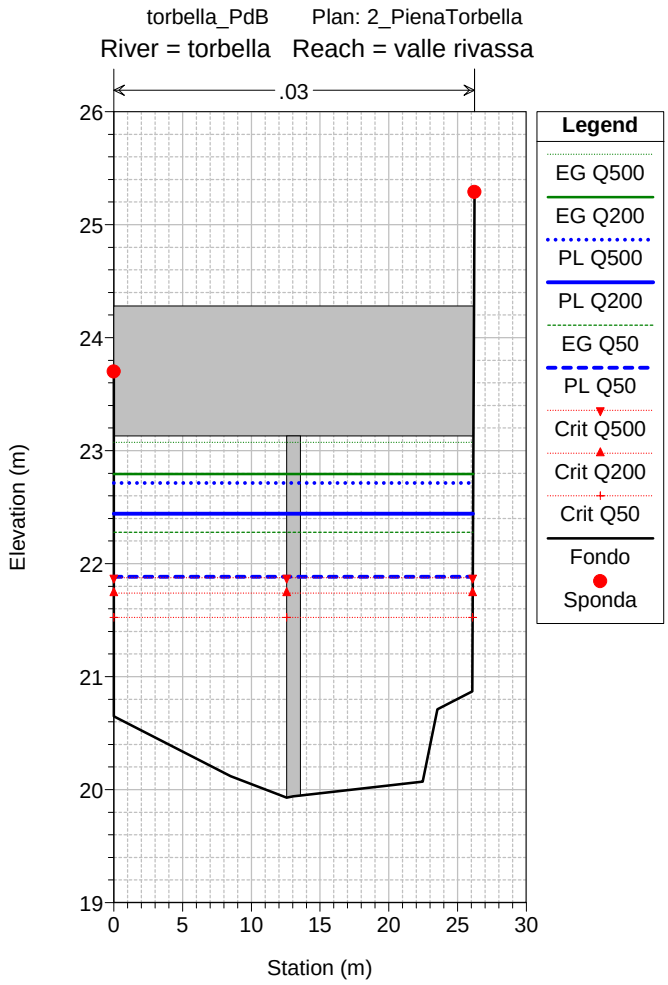

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

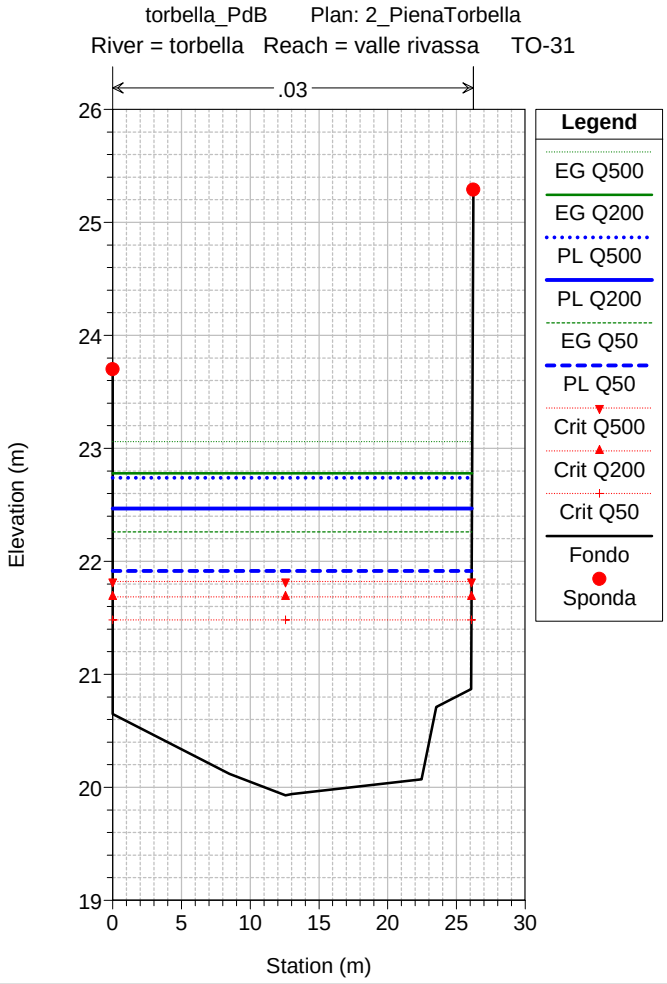

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-42
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-41
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-40
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

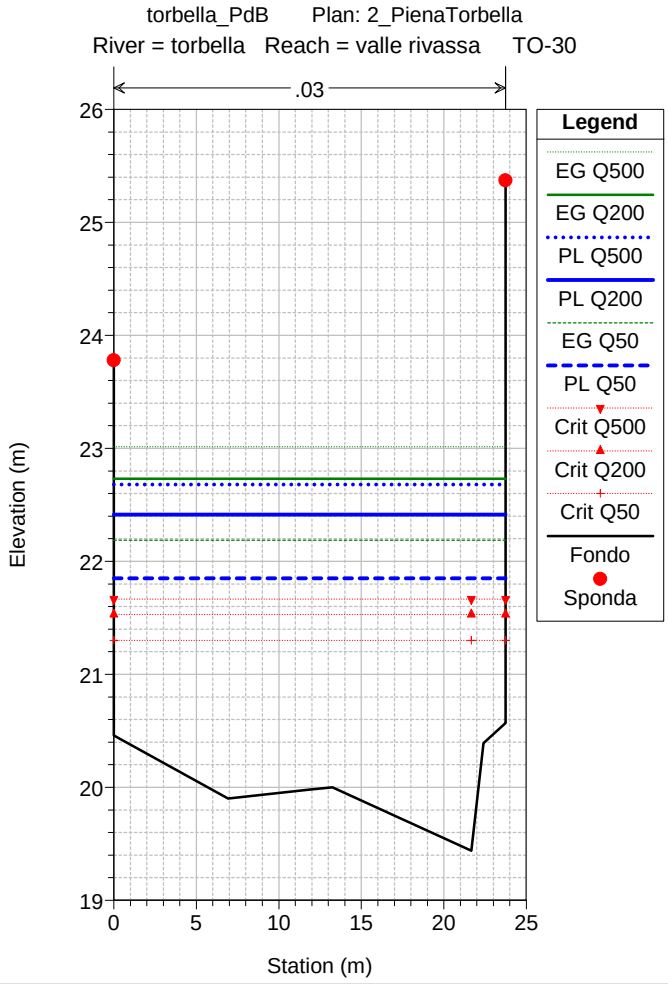

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-39
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-38
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-37
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-36
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q200
PL Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

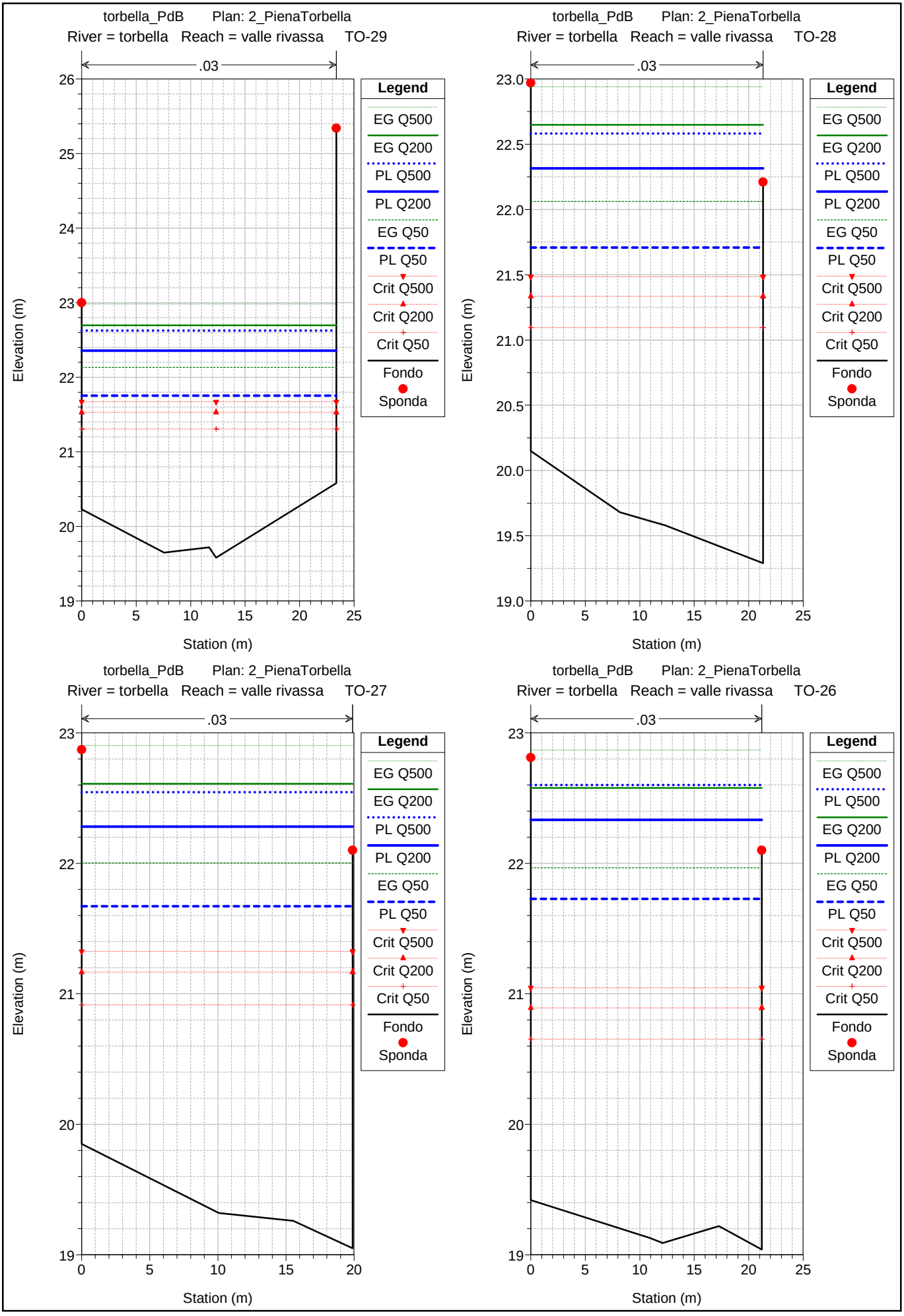

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-35
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-34
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-33
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-32
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

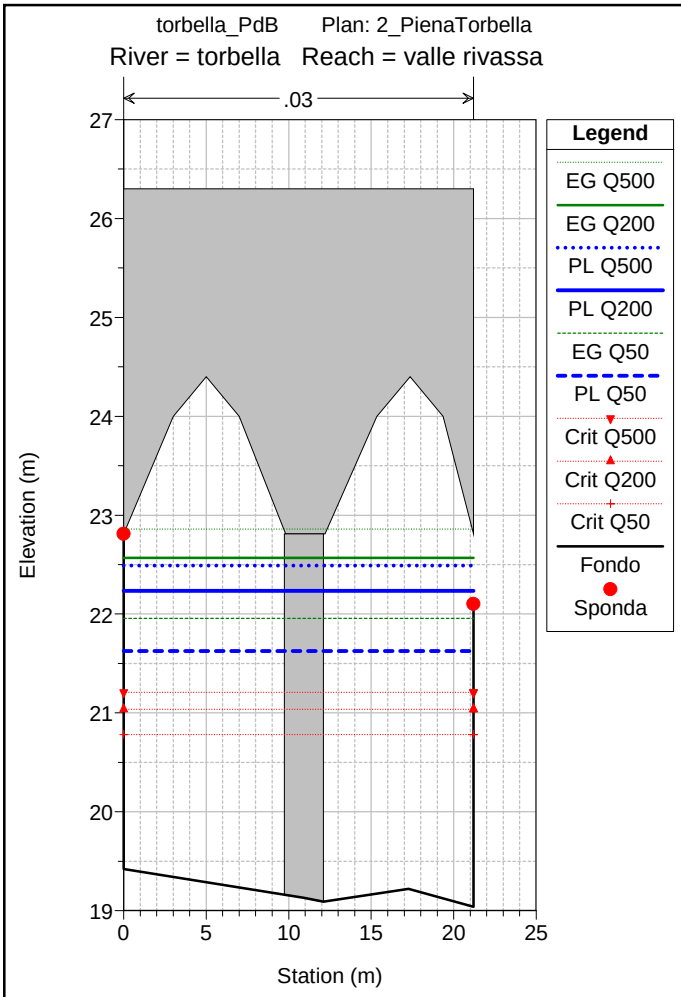

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda

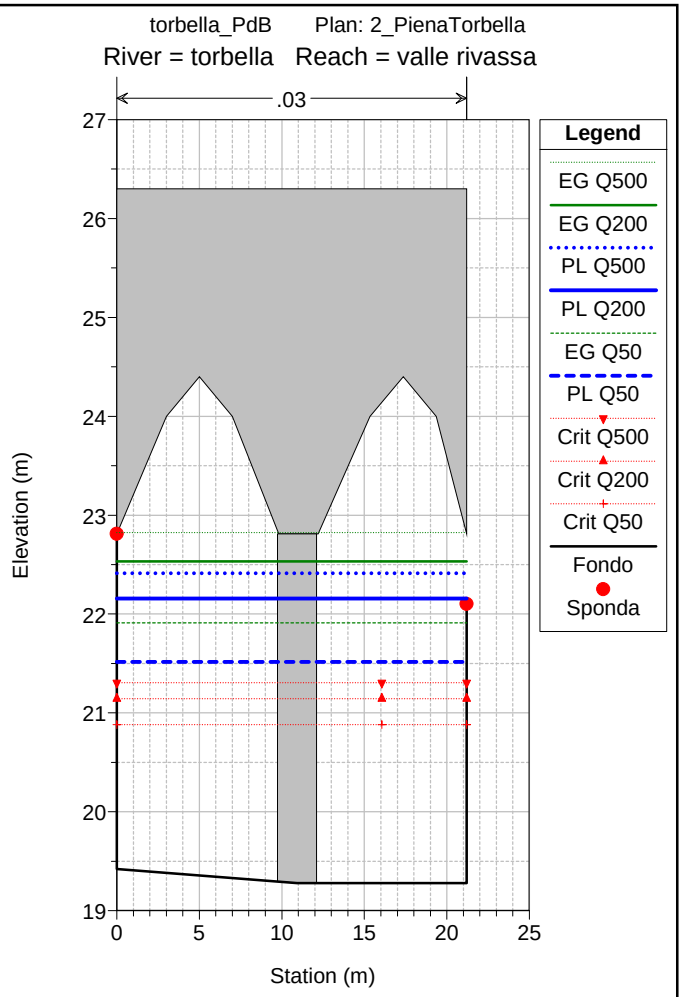

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

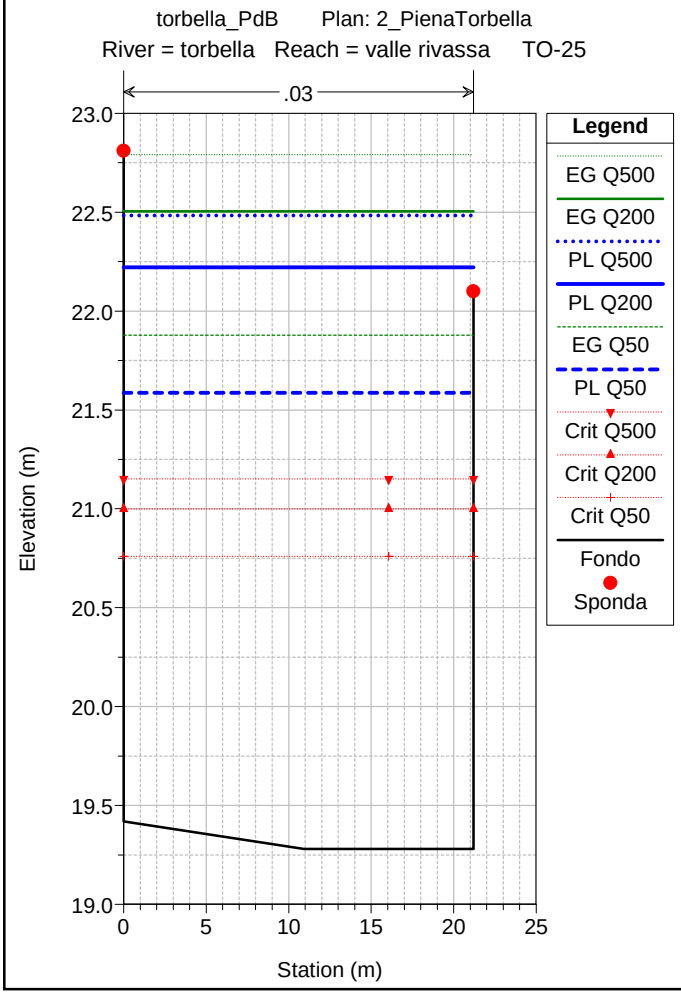

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-31
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

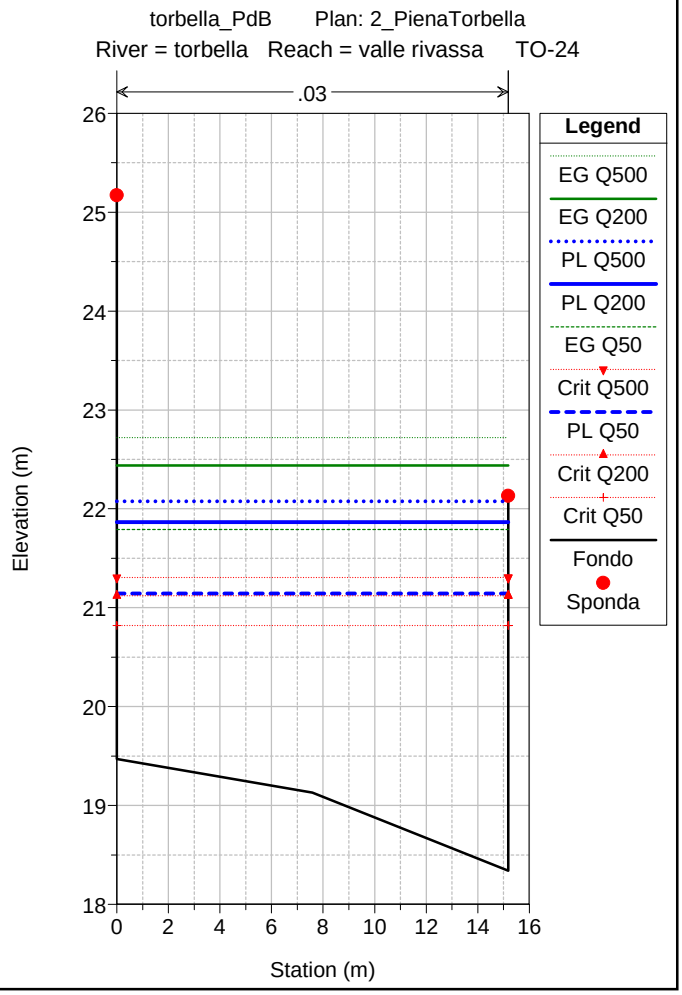

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-30
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

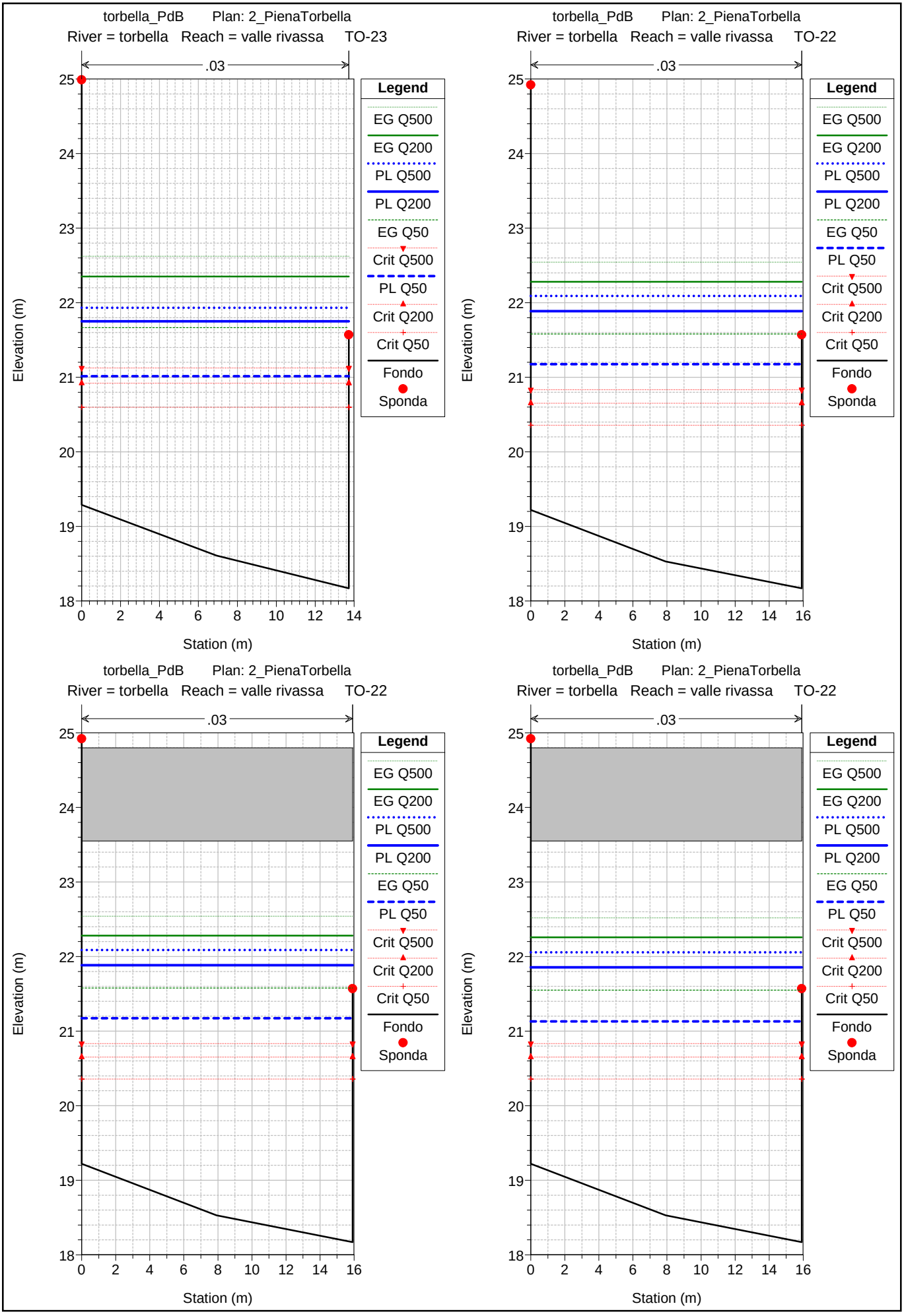

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-29
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-28
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-27
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-26
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

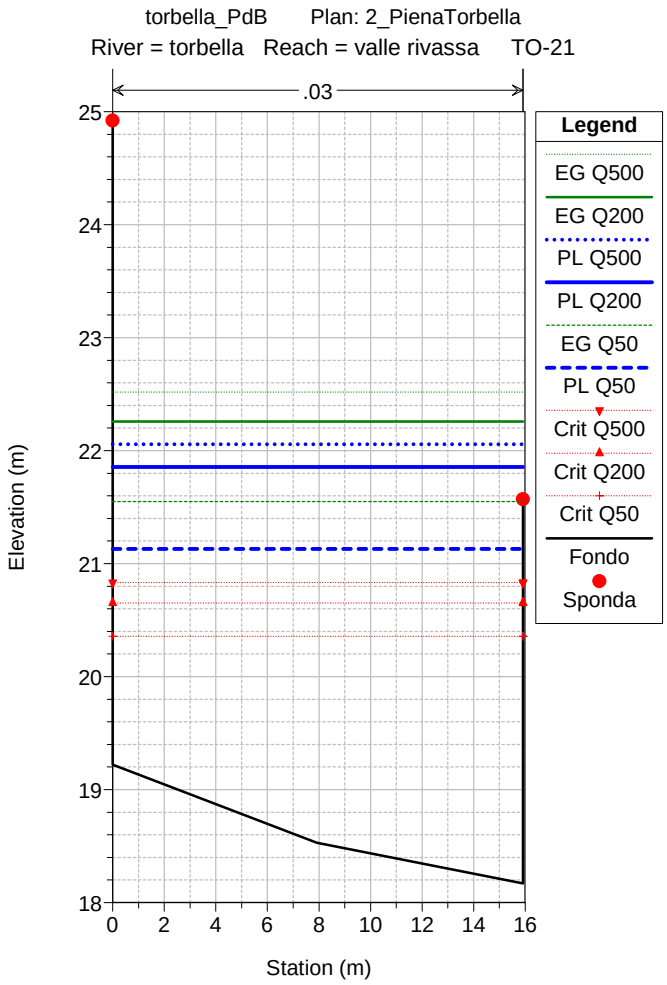

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

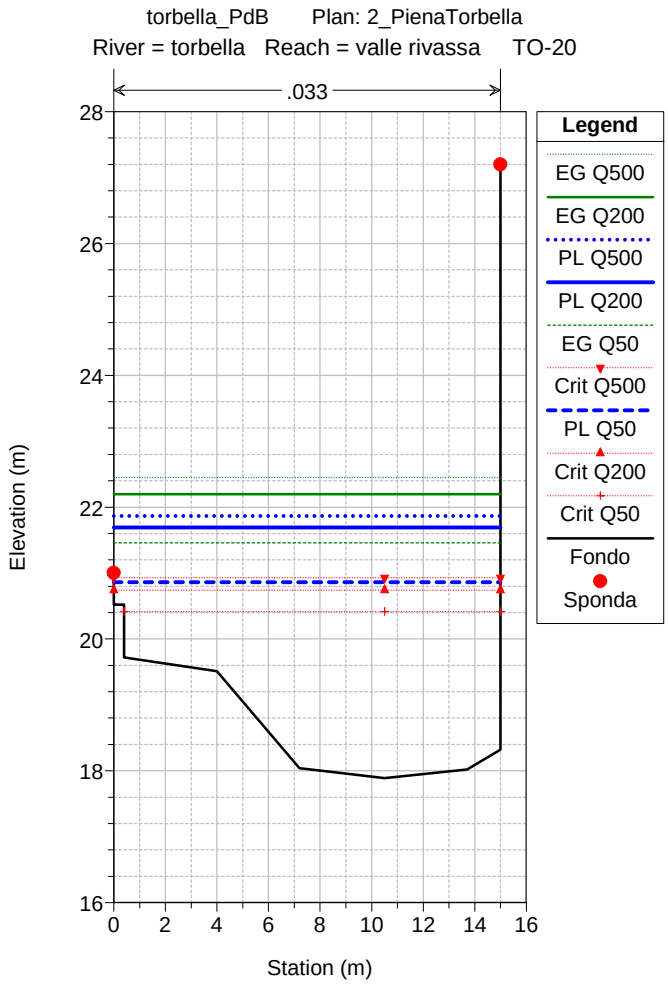

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

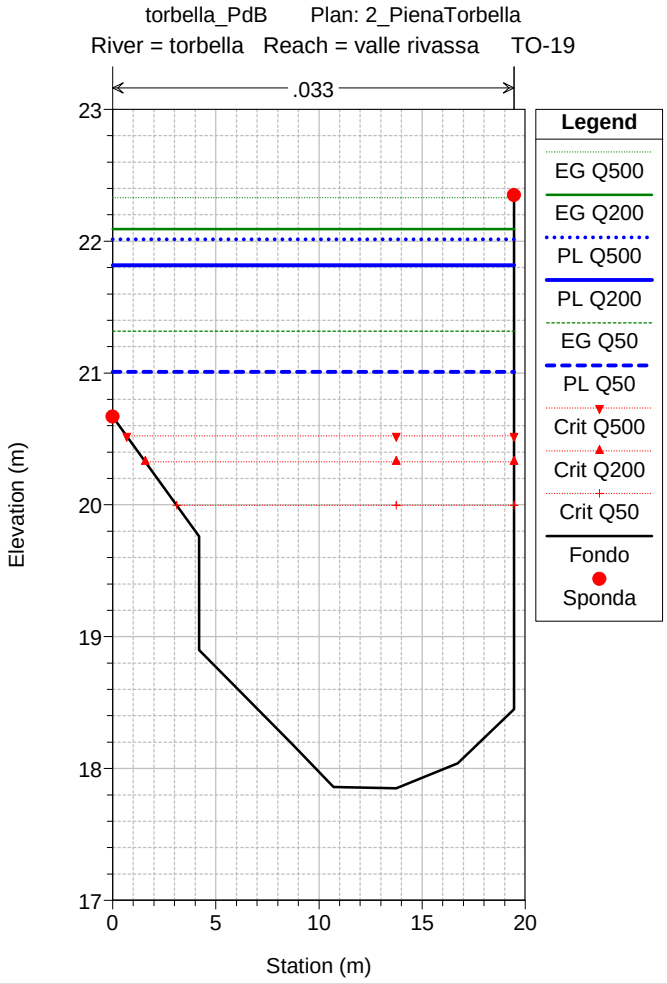

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-25
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

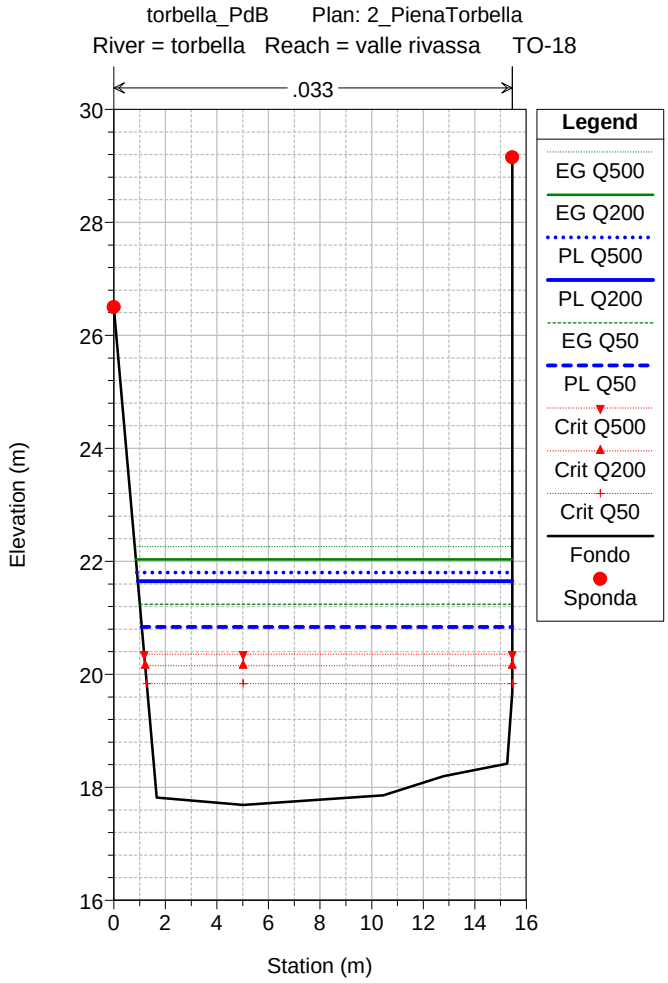

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-24
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

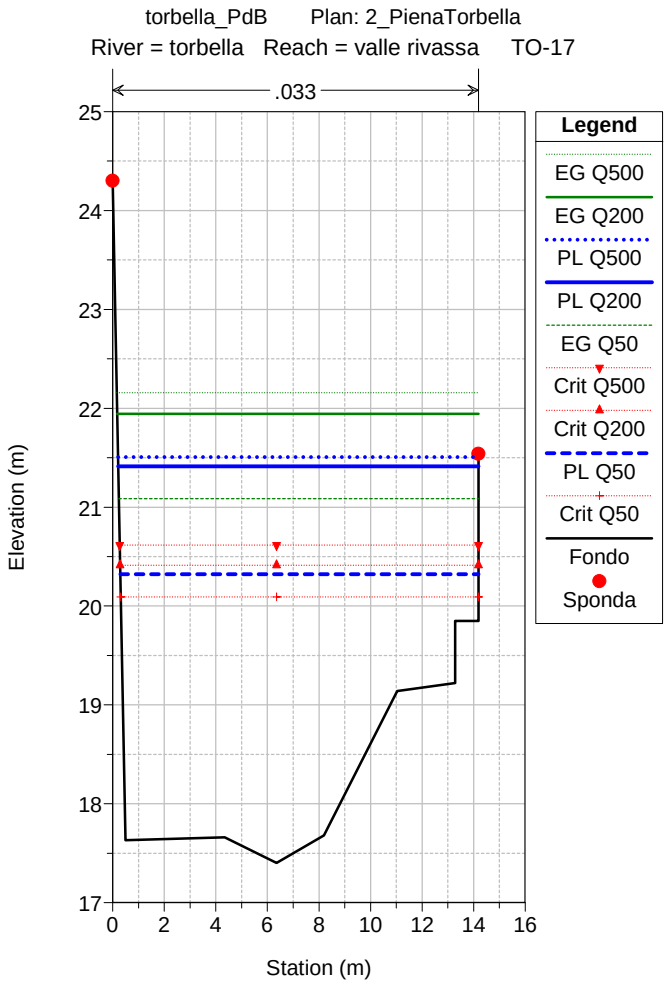

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-23
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-22
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-22
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-22
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

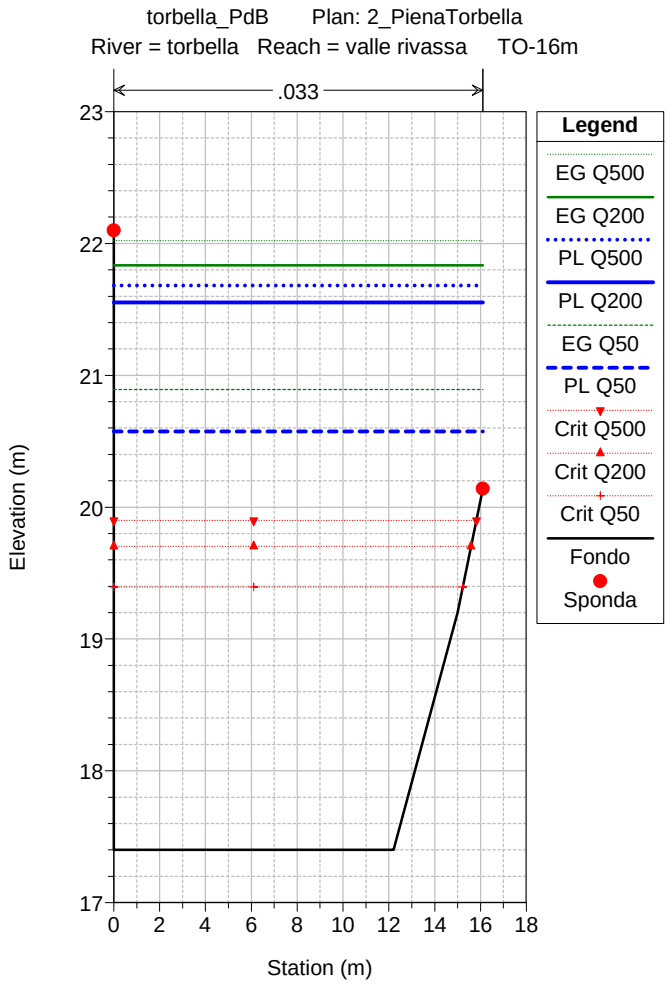

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-21
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

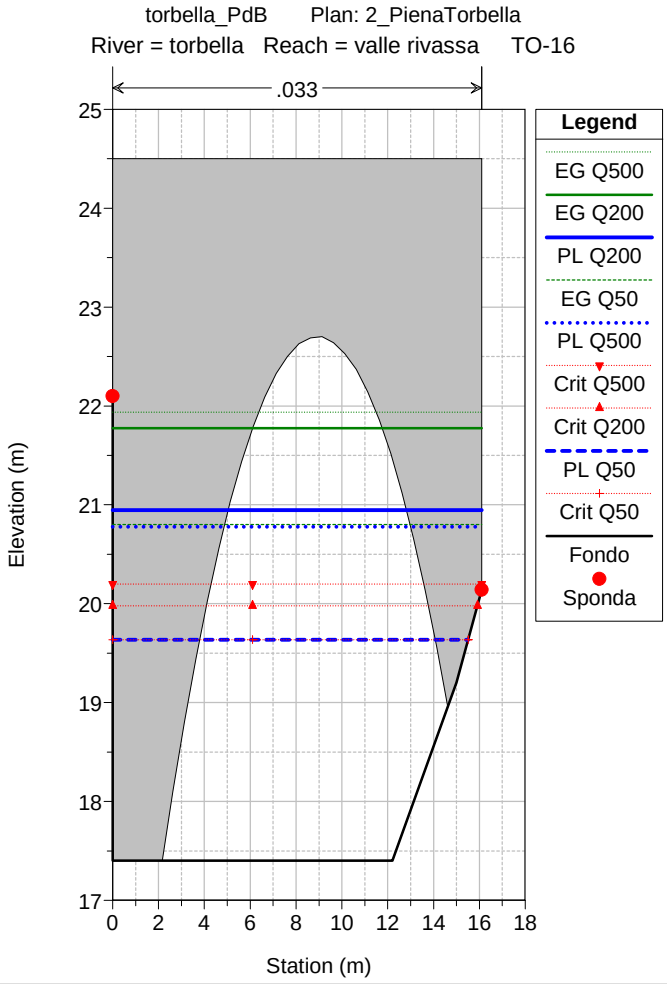

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-20
.033
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

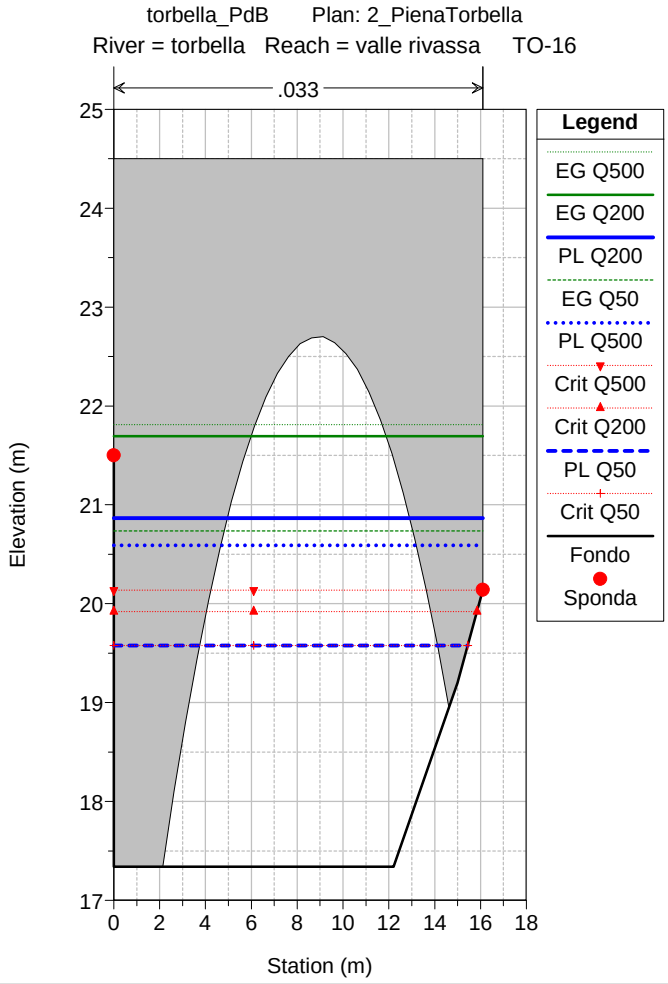

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-19
.033
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

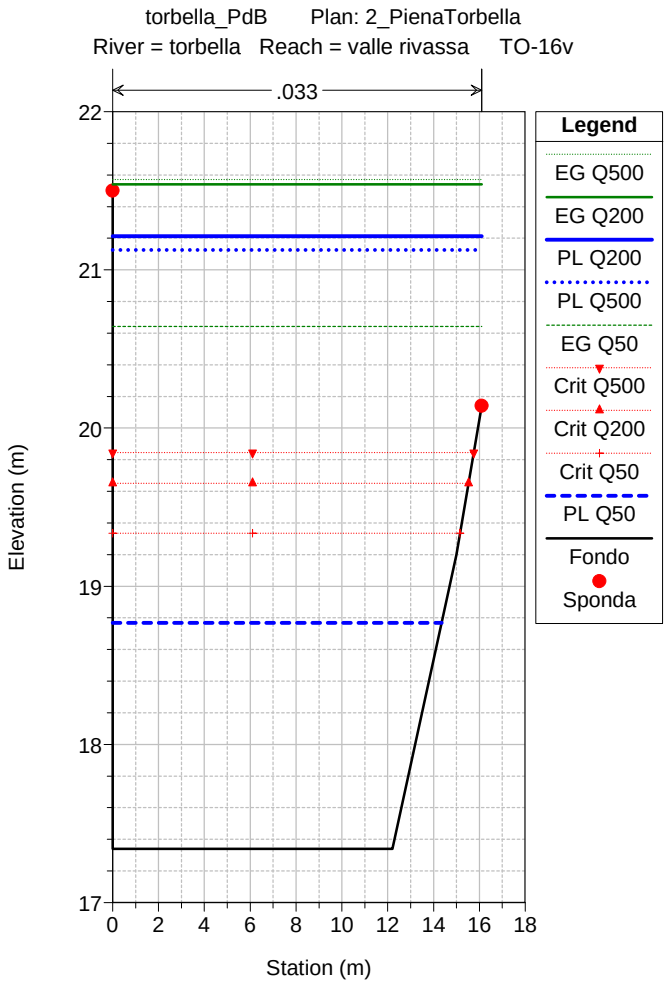

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-18
.033
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

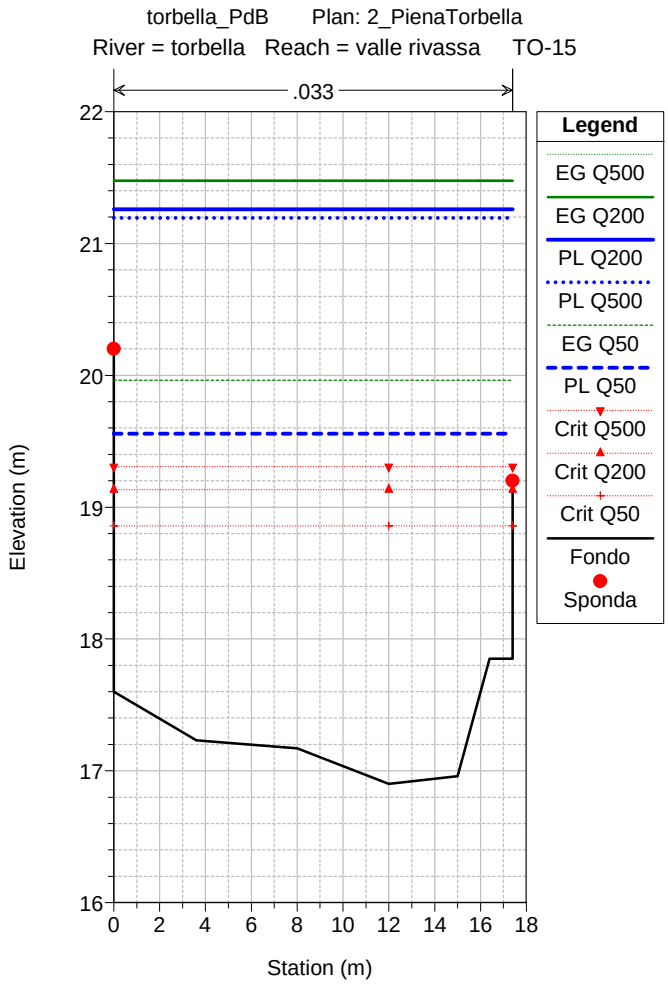

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-17
.033
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

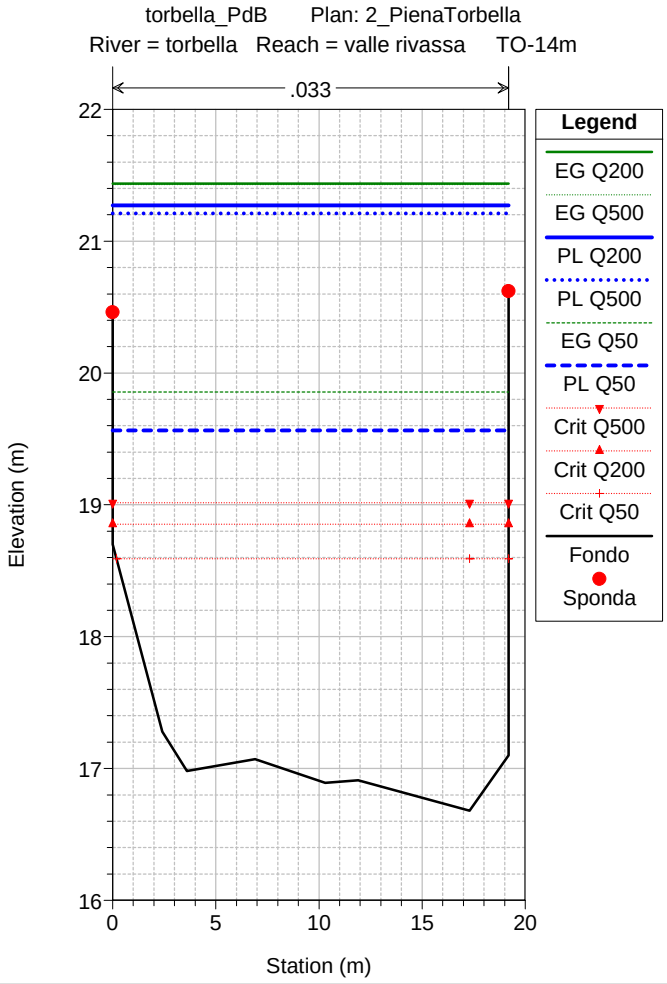

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-16m
.033
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

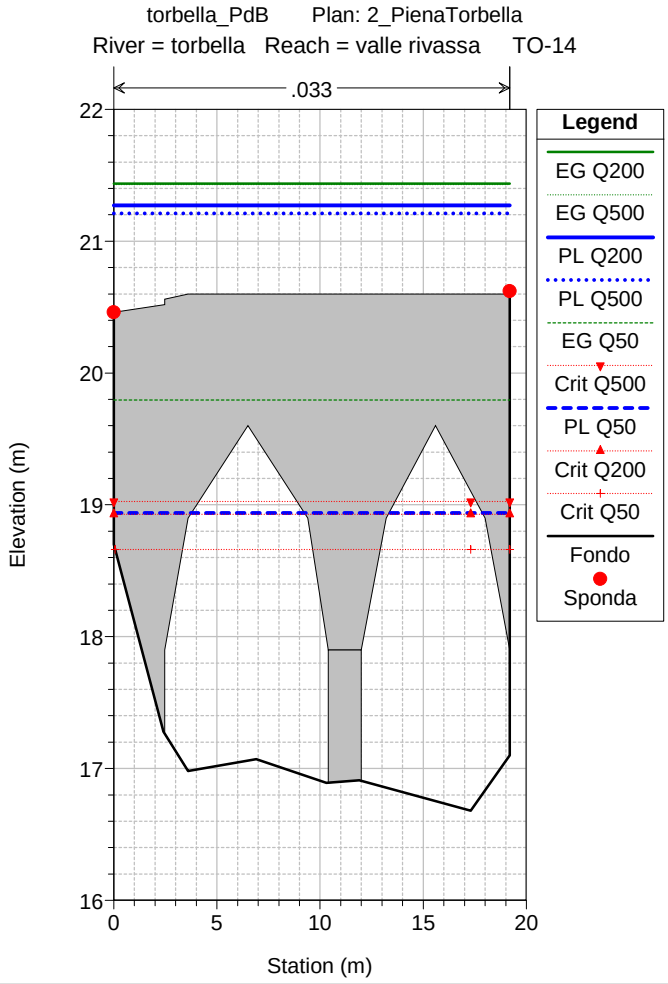

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-16
.033
Legend
EG Q500
EG Q200
PL Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

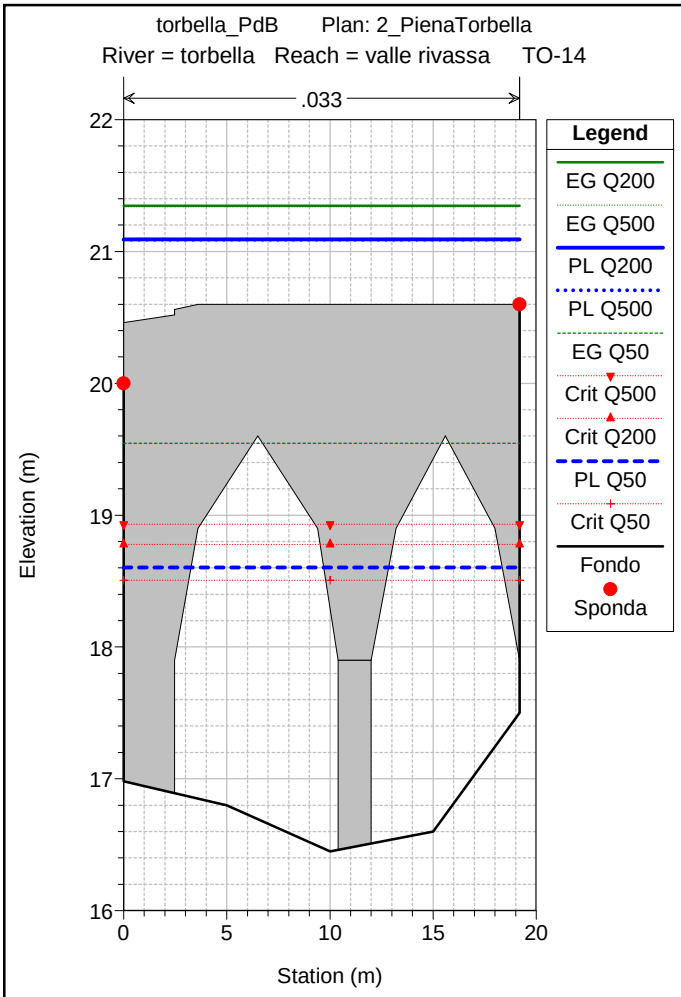

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-16
.033
Legend
EG Q500
EG Q200
PL Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

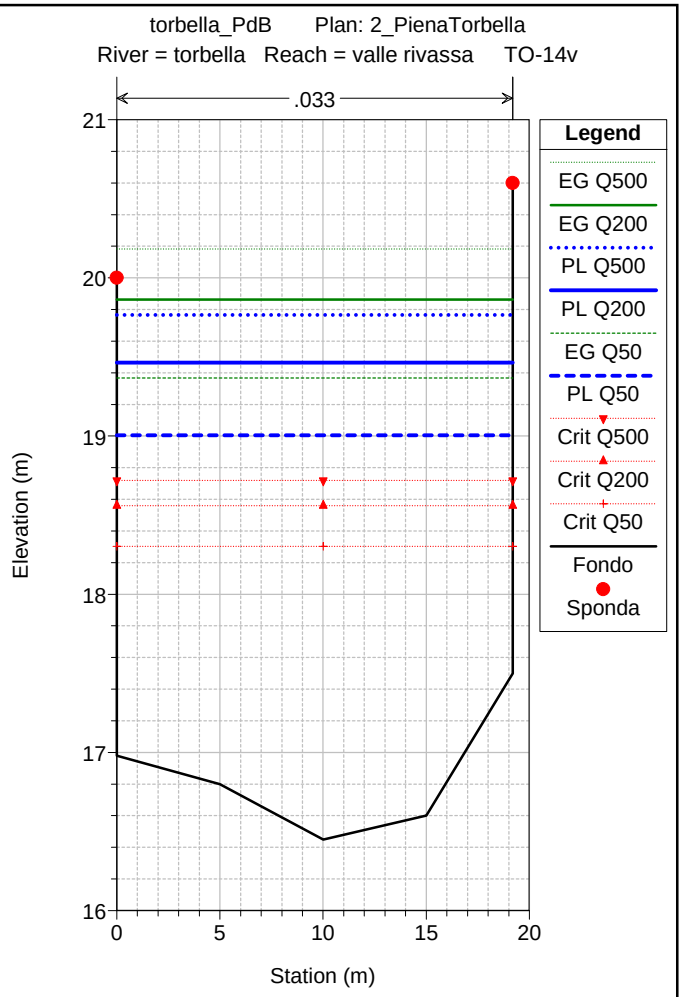

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-16v
.033
Legend
EG Q500
EG Q200
PL Q200
PL Q500
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

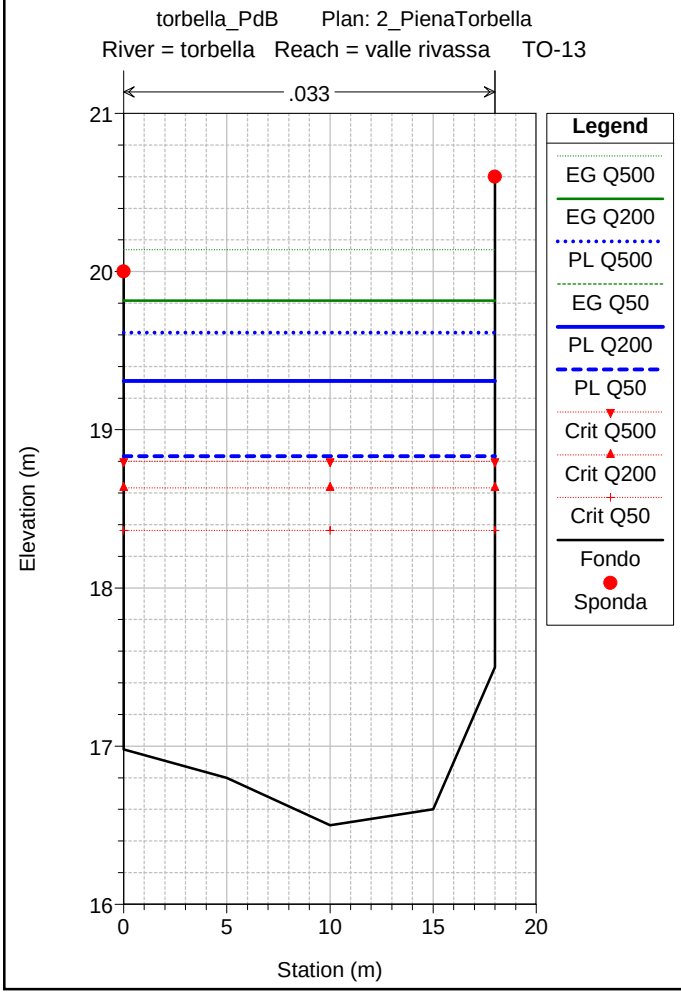

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-15
.033
Legend
EG Q500
EG Q200
PL Q200
PL Q500
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

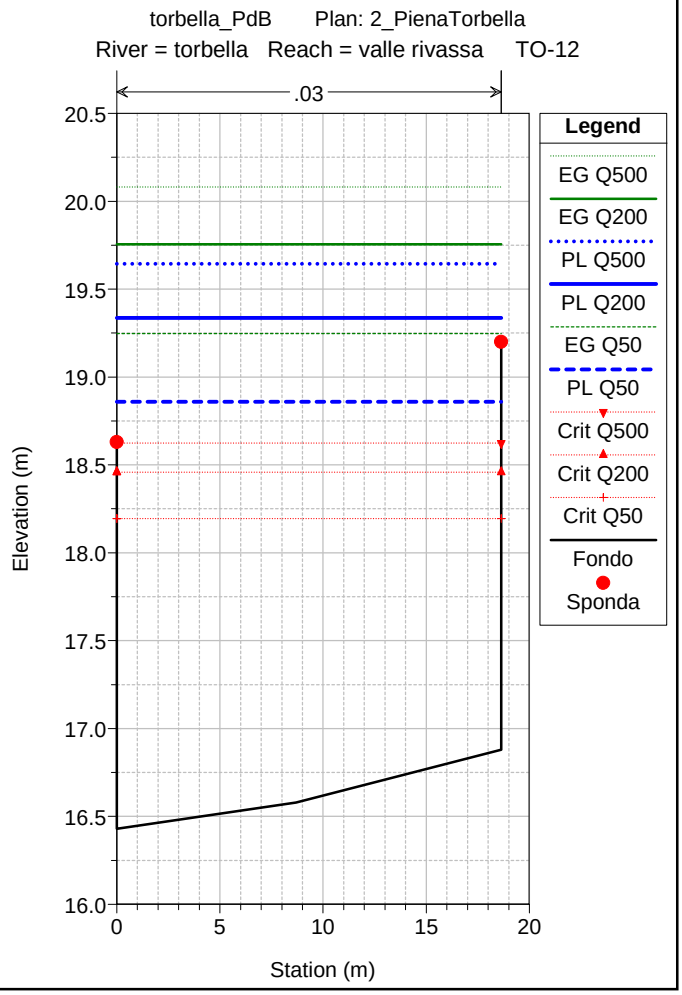

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-14m
.033
Legend
EG Q200
EG Q500
PL Q200
PL Q500
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

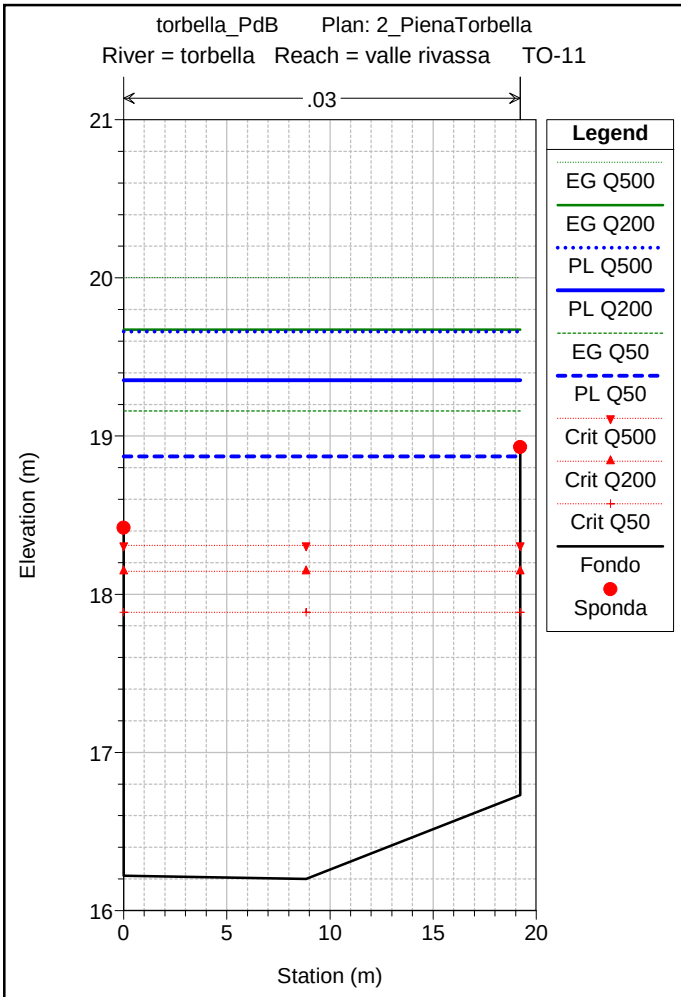

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-14
.033
Legend
EG Q200
EG Q500
PL Q200
PL Q500
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

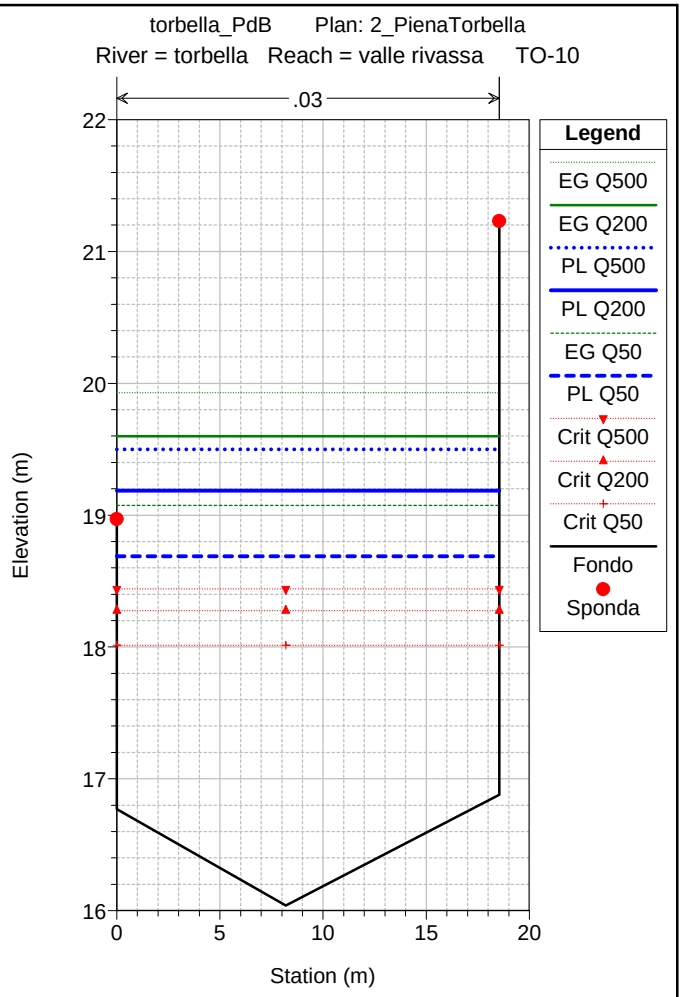

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-14
.033
Legend
EG Q200
EG Q500
PL Q200
PL Q500
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

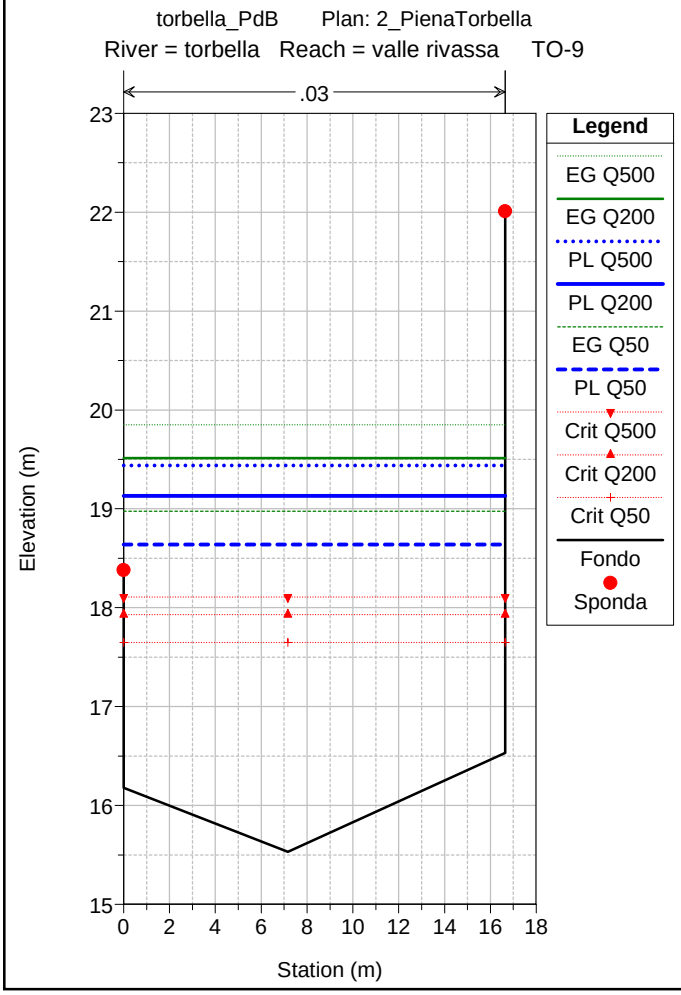

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-14v
.033
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

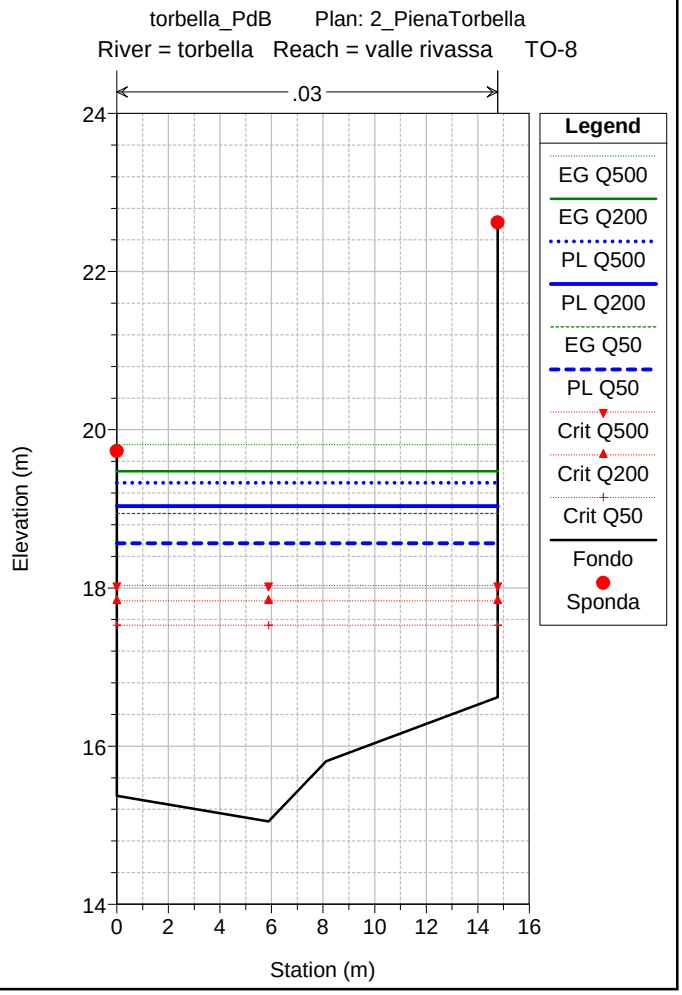

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-13
.033
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

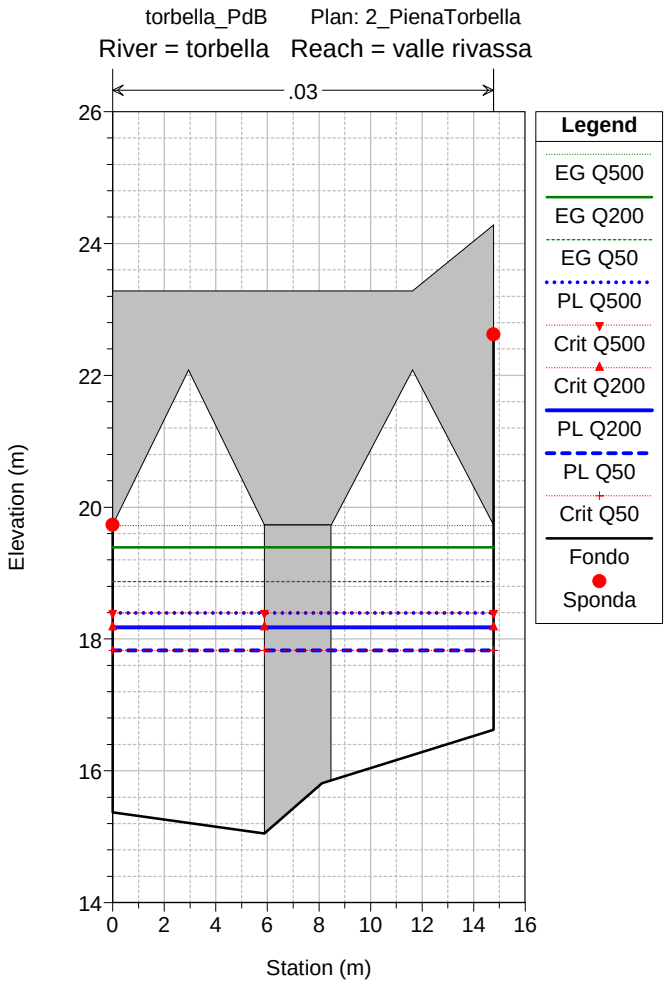

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-12
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

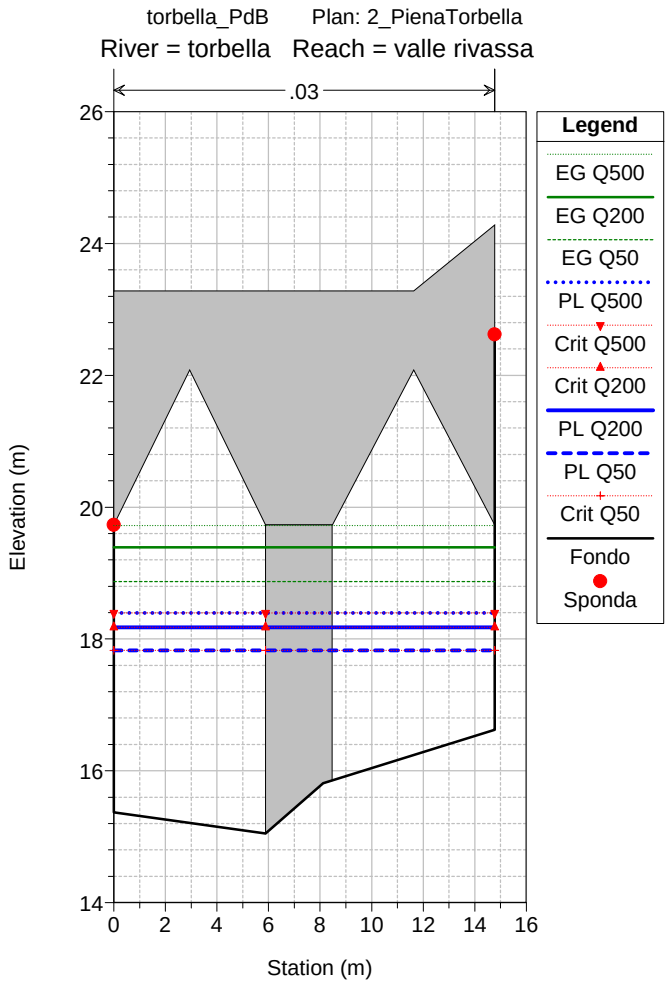

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-11
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

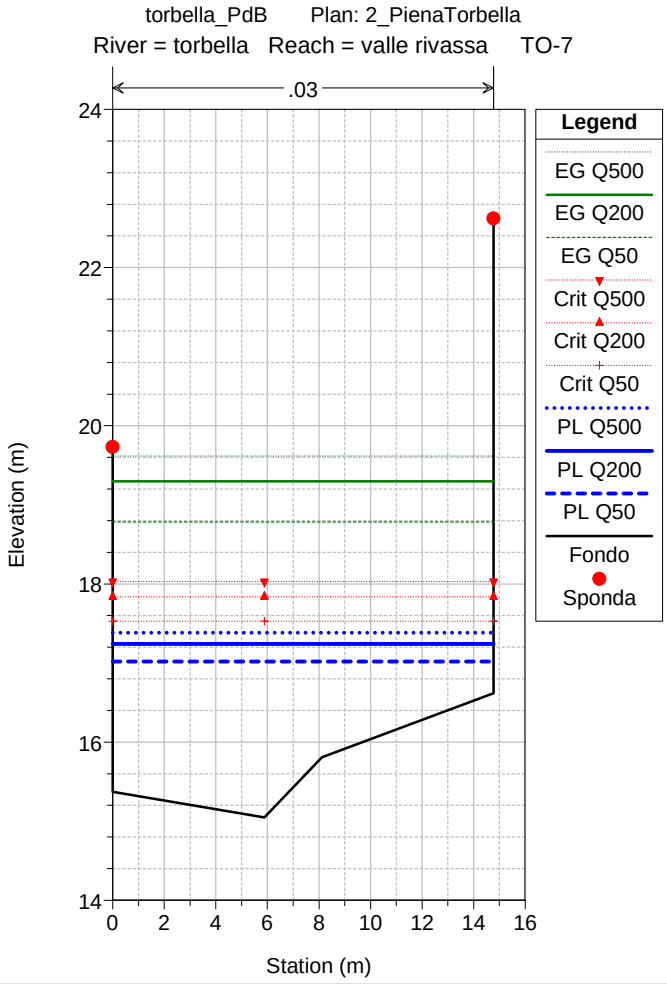

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-10
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

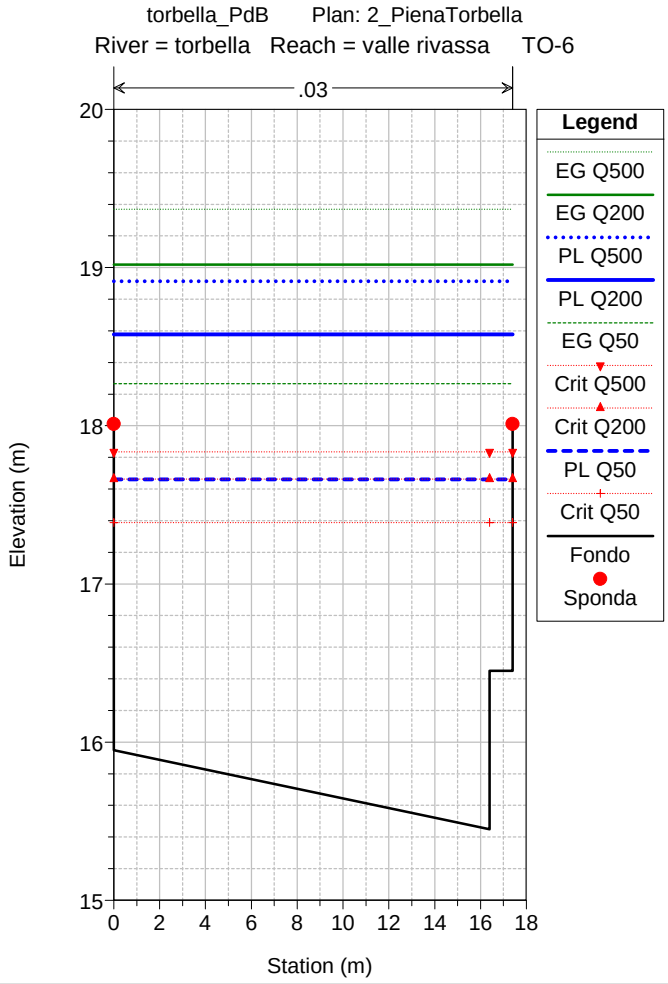

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-9
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

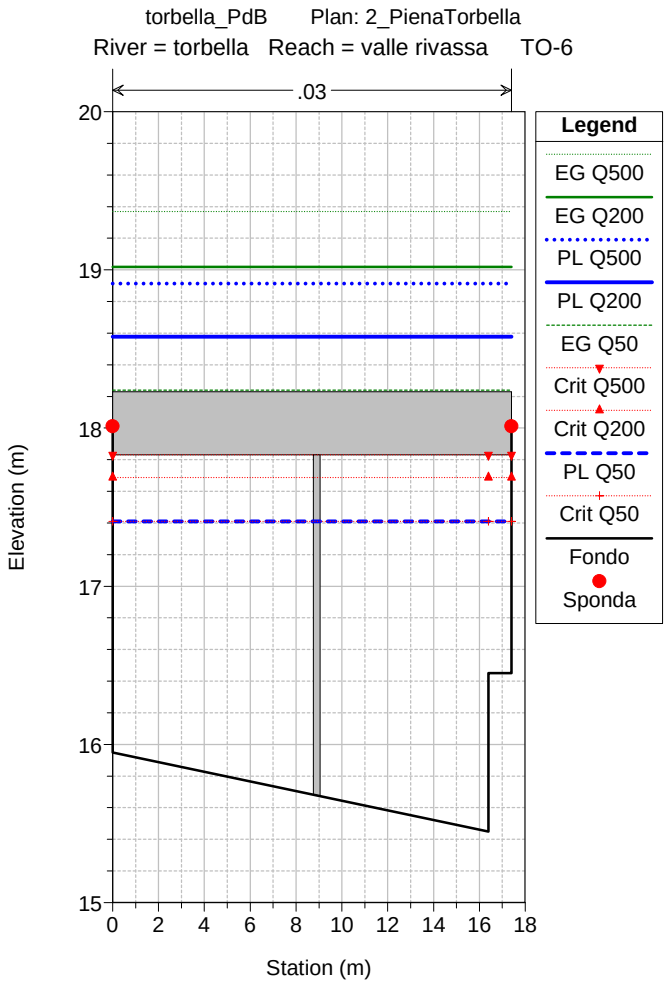

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-8
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

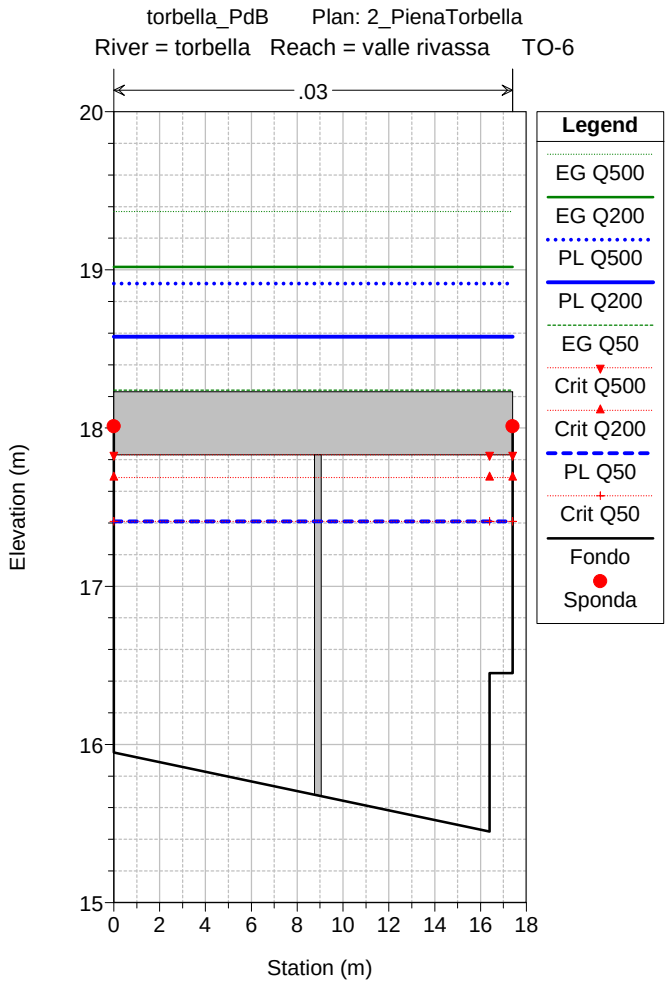

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

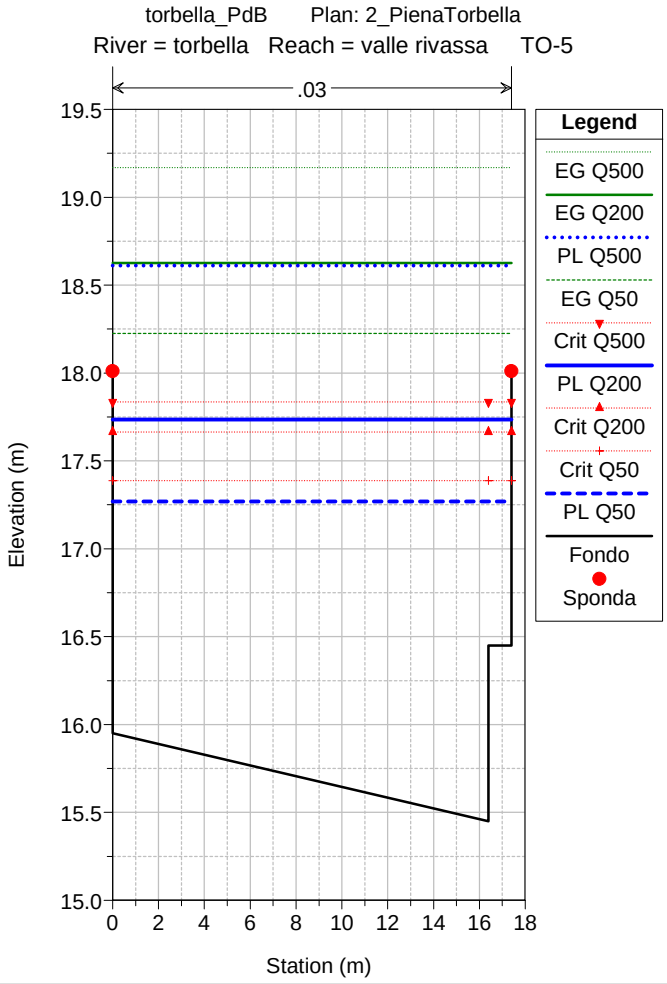

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

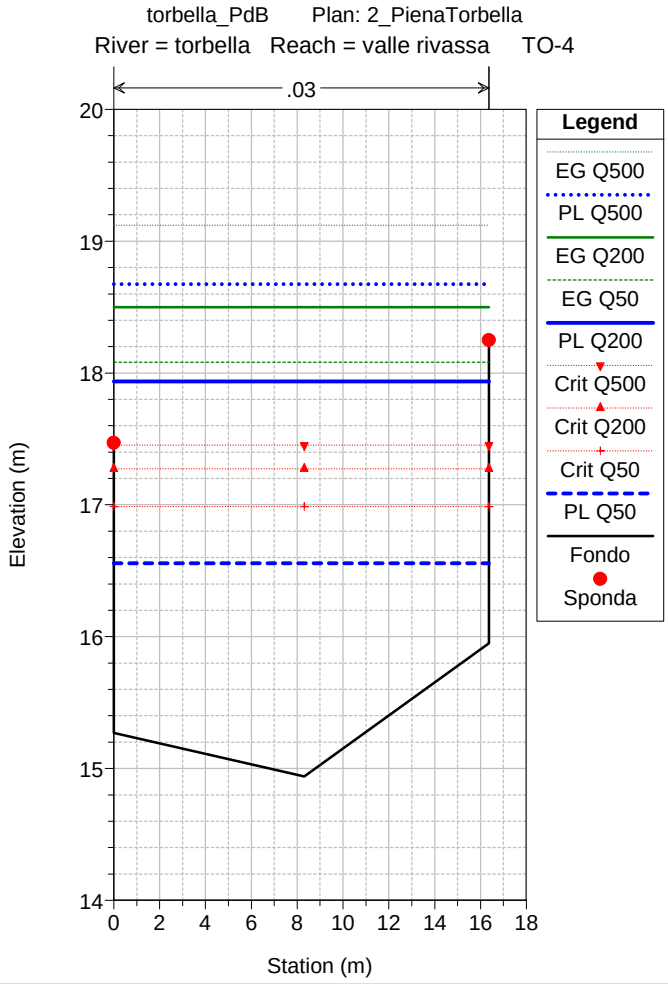

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-7
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

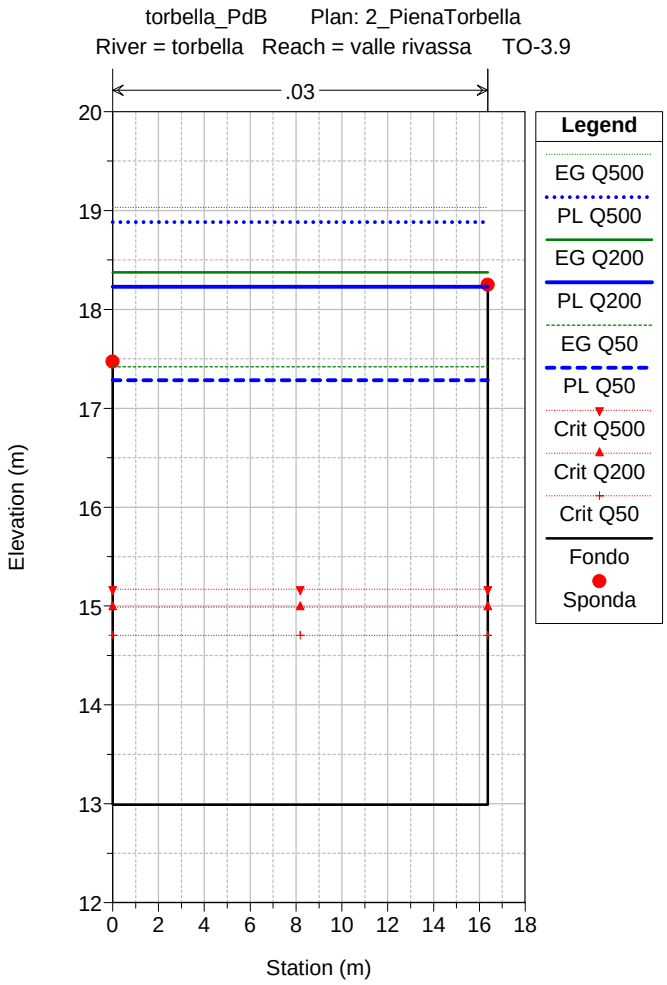

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-6
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

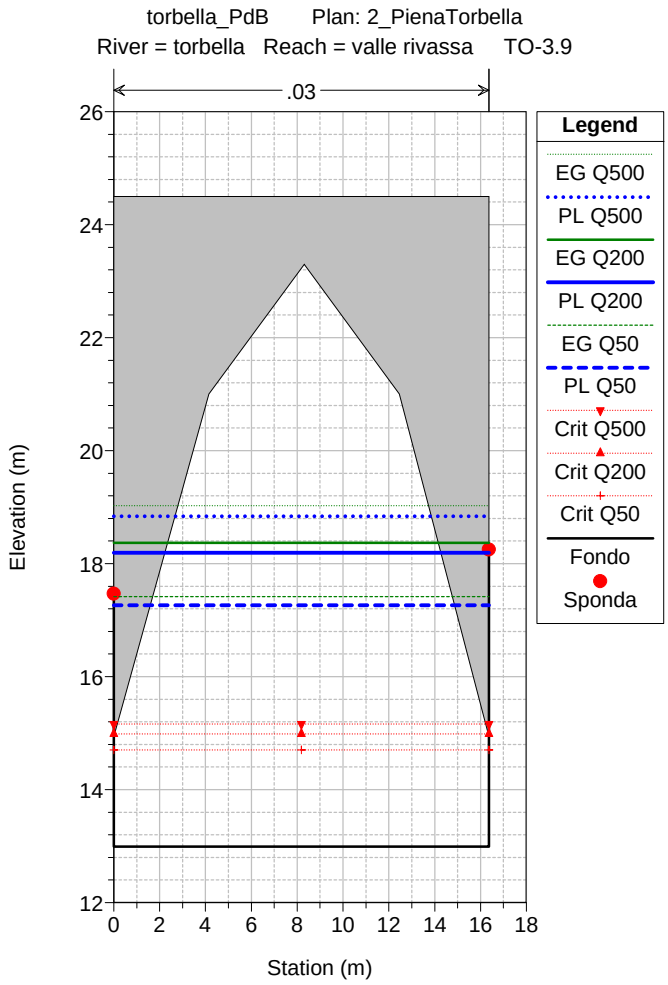

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-6
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda

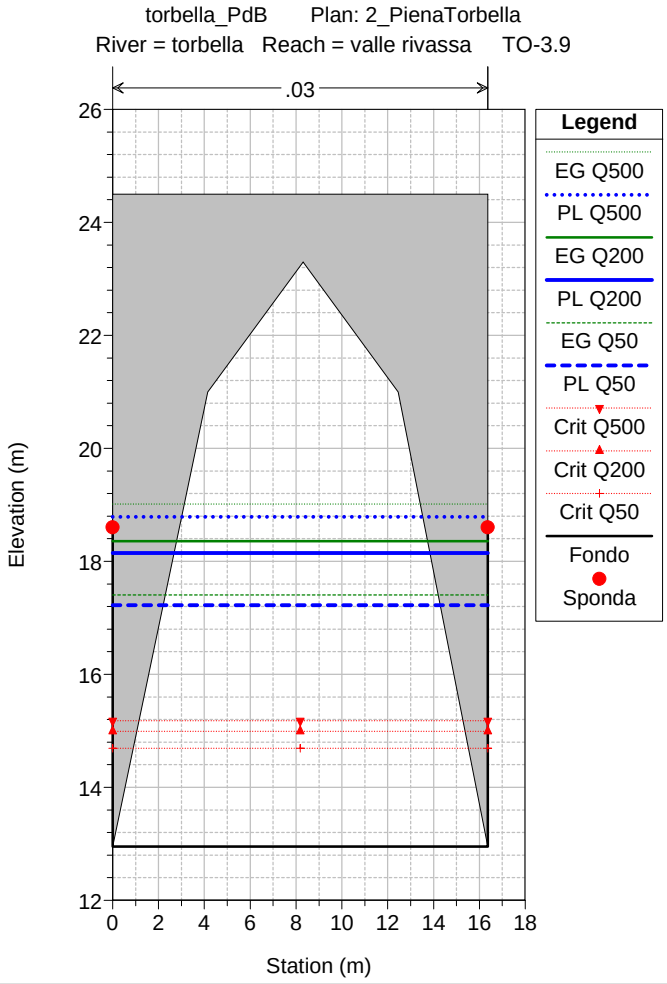

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-6
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda

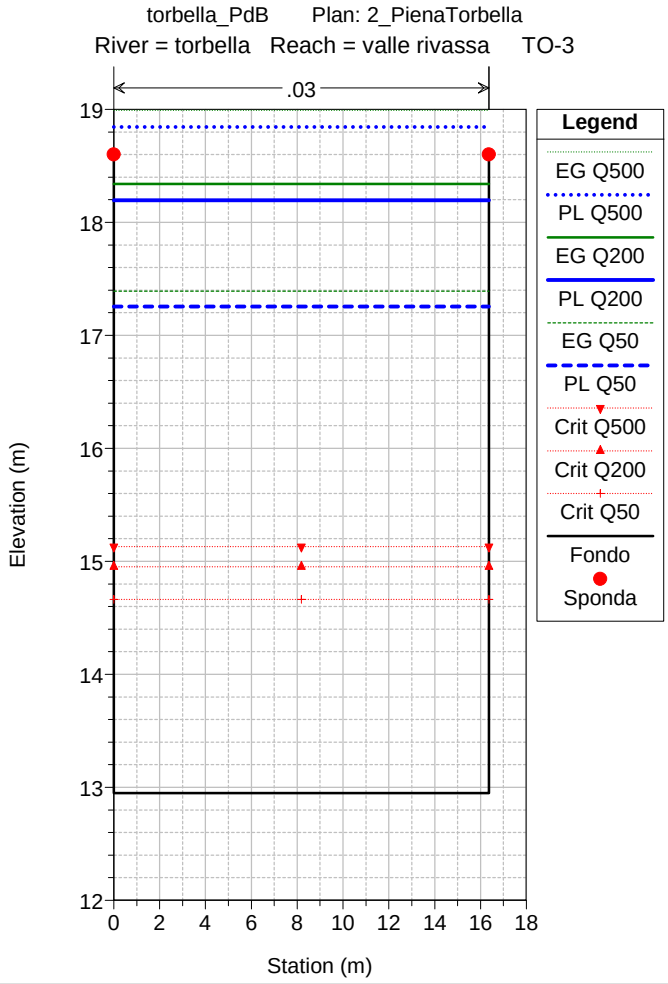

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-5
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
Crit Q500
PL Q200
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda

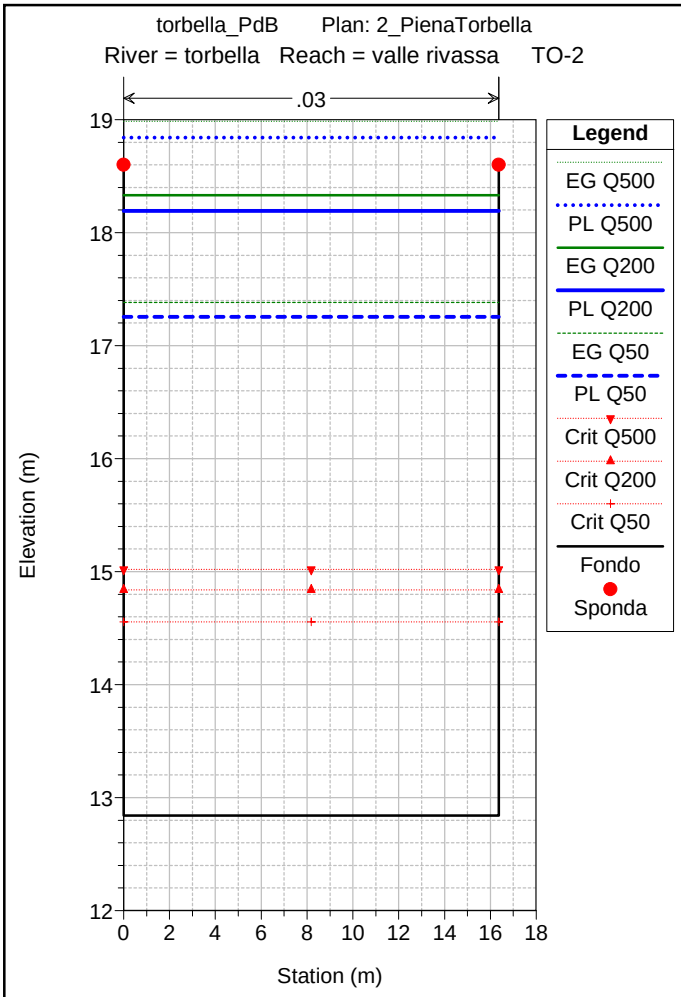

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-4
.03
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
EG Q50
PL Q200
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda

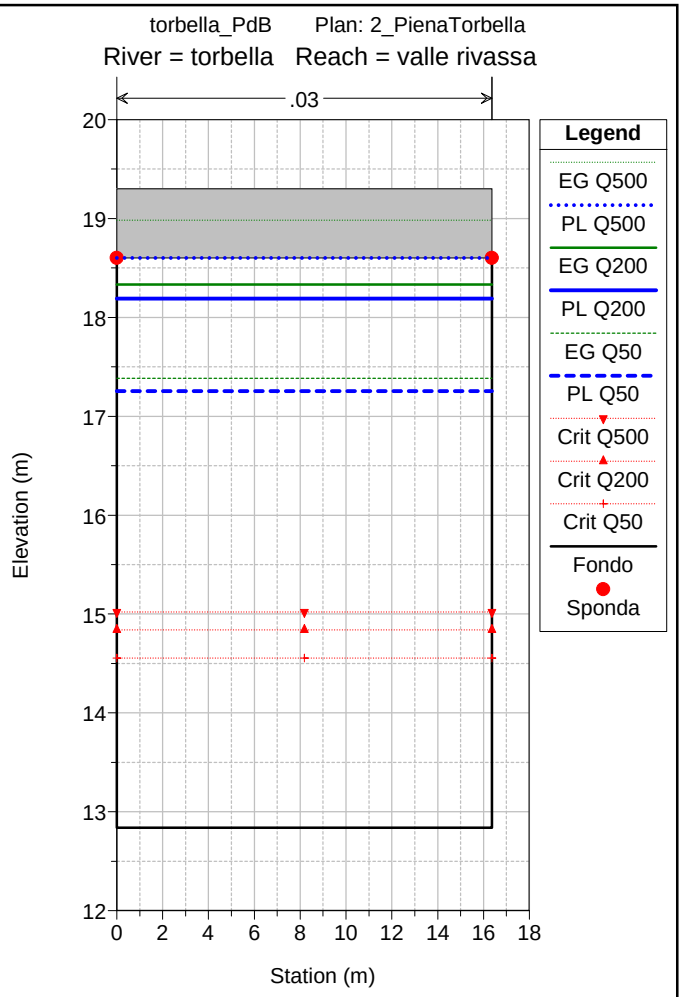

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-3.9
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

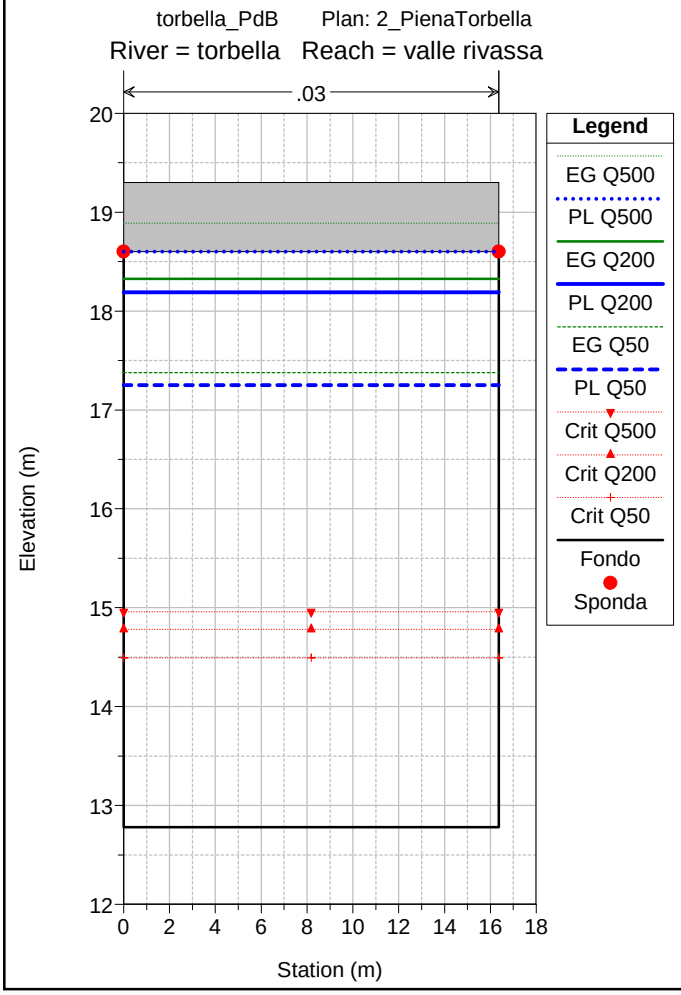

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-3.9
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

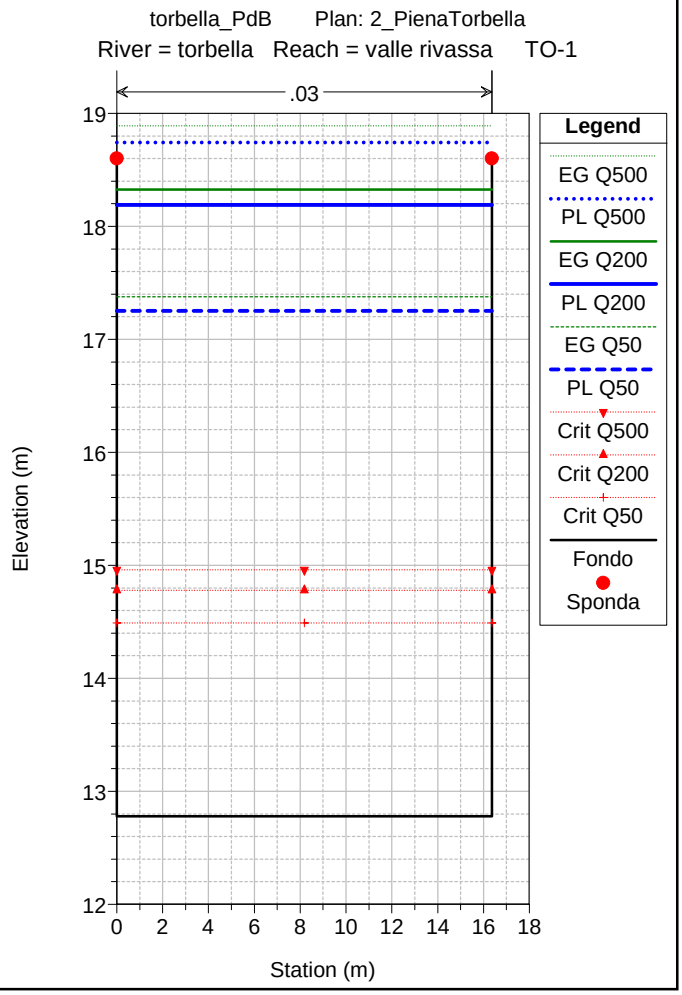

torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-3.9
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-3
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-2
.03
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa
.03
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


torbella_PdB Plan: 2_PienaTorbella
River = torbella Reach = valle rivassa TO-1
.03
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

HEC-RAS Plan: Torbella River: torbella Reach: valle rivassa

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle rivassa	617.7 TO-83	Q50	102.00	29.95	32.82	33.24	0.42	33.22	0.40	32.26	33.36	0.004231	3.25	31.38	13.84	0.69
valle rivassa	617.7 TO-83	Q200	129.00	29.95	33.68	33.24	-0.44	33.22	-0.46	32.60	34.12	0.002615	2.95	43.72	14.50	0.54
valle rivassa	617.7 TO-83	Q500	149.00	29.95	34.14	33.24	-0.90	33.22	-0.92	32.83	34.59	0.002307	2.95	50.43	14.50	0.51
valle rivassa	614.7 TO-82	Q50	102.00	29.82	32.90	33.00	0.10	33.00	0.10	32.01	33.31	0.002903	2.82	36.13	13.49	0.55
valle rivassa	614.7 TO-82	Q200	129.00	29.82	33.72	33.00	-0.72	33.00	-0.72	32.32	34.10	0.002147	2.74	47.12	13.50	0.47
valle rivassa	614.7 TO-82	Q500	149.00	29.82	34.17	33.00	-1.17	33.00	-1.17	32.54	34.57	0.002024	2.80	53.23	13.50	0.45
valle rivassa	613.7 TO-81	Q50	102.00	29.71	33.03	33.03	0.00	33.00	-0.03	31.51	33.25	0.001244	2.07	49.24	15.60	0.37
valle rivassa	613.7 TO-81	Q200	129.00	29.71	33.83	33.03	-0.80	33.00	-0.83	31.79	34.05	0.001037	2.09	61.63	15.60	0.34
valle rivassa	613.7 TO-81	Q500	149.00	29.71	34.28	33.03	-1.25	33.00	-1.28	31.98	34.52	0.001015	2.17	68.70	15.60	0.33
valle rivassa	606.7 TO-81		Bridge													
valle rivassa	599.7 TO-81	Q50	102.00	29.61	32.62	33.20	0.58	33.20	0.58	31.41	32.89	0.001698	2.30	44.31	15.60	0.44
valle rivassa	599.7 TO-81	Q200	129.00	29.61	33.08	33.20	0.12	33.20	0.12	31.68	33.40	0.001743	2.50	51.51	15.60	0.44
valle rivassa	599.7 TO-81	Q500	149.00	29.61	33.40	33.20	-0.20	33.20	-0.20	31.88	33.75	0.001773	2.63	56.55	15.60	0.44
valle rivassa	596.7 TO-80	Q50	102.00	29.55	32.61	32.91	0.30	33.20	0.59	31.50	32.88	0.001747	2.29	44.60	16.70	0.45
valle rivassa	596.7 TO-80	Q200	129.00	29.55	33.08	32.91	-0.17	33.20	0.12	31.77	33.39	0.001730	2.46	52.40	16.70	0.44
valle rivassa	596.7 TO-80	Q500	149.00	29.55	33.41	32.91	-0.50	33.20	-0.21	31.95	33.74	0.001725	2.58	57.84	16.70	0.44
valle rivassa	587.2 TO-79	Q50	102.00	29.25	32.64	32.60	-0.04	33.15	0.51	31.17	32.85	0.001211	2.05	49.73	16.30	0.37
valle rivassa	587.2 TO-79	Q200	129.00	29.25	33.10	32.60	-0.50	33.15	0.05	31.44	33.36	0.001277	2.25	57.32	16.30	0.38
valle rivassa	587.2 TO-79	Q500	149.00	29.25	33.43	32.60	-0.83	33.15	-0.28	31.63	33.72	0.001319	2.38	62.62	16.30	0.39
valle rivassa	582.2 TO-78	Q50	102.00	29.20	32.63	32.60	-0.03	33.13	0.50	31.12	32.84	0.001155	2.02	50.53	16.30	0.37
valle rivassa	582.2 TO-78	Q200	129.00	29.20	33.10	32.60	-0.50	33.13	0.03	31.39	33.35	0.001227	2.22	58.11	16.30	0.38
valle rivassa	582.2 TO-78	Q500	149.00	29.20	33.43	32.60	-0.83	33.13	-0.30	31.58	33.71	0.001272	2.35	63.41	16.30	0.38
valle rivassa	582.1 TO-78	Q50	102.00	29.20	32.63	32.60	-0.03	34.22	1.59	31.12	32.84	0.001156	2.02	50.52	16.30	0.37
valle rivassa	582.1 TO-78	Q200	129.00	29.20	33.10	32.60	-0.50	34.22	1.12	31.39	33.35	0.001228	2.22	58.11	16.30	0.38
valle rivassa	582.1 TO-78	Q500	149.00	29.20	33.43	32.60	-0.83	34.22	0.79	31.58	33.71	0.001272	2.35	63.41	16.30	0.38
valle rivassa	571.1 TO-77	Q50	102.00	29.07	32.63	32.50	-0.13	33.90	1.27	31.03	32.83	0.001090	1.99	51.17	16.00	0.36
valle rivassa	571.1 TO-77	Q200	129.00	29.07	33.09	32.50	-0.59	33.90	0.81	31.31	33.34	0.001176	2.20	58.59	16.00	0.37
valle rivassa	571.1 TO-77	Q500	149.00	29.07	33.41	32.50	-0.91	33.90	0.49	31.50	33.69	0.001229	2.34	63.78	16.00	0.37
valle rivassa	556.1 TO-76	Q50	102.00	28.84	32.50	32.50	0.00	33.86	1.36	31.07	32.80	0.001681	2.40	42.44	12.90	0.42
valle rivassa	556.1 TO-76	Q200	129.00	28.84	32.93	32.50	-0.43	33.86	0.93	31.38	33.30	0.001899	2.69	47.98	12.90	0.45
valle rivassa	556.1 TO-76	Q500	149.00	28.84	33.23	32.50	-0.73	33.86	0.63	31.60	33.65	0.002041	2.87	51.83	12.90	0.46
valle rivassa	546.1 TO-75	Q50	102.00	28.80	32.20	30.55	-1.65	33.68	1.48	31.65	32.75	0.003652	3.29	31.47	13.54	0.68
valle rivassa	546.1 TO-75	Q200	129.00	28.80	32.62	30.55	-2.07	33.68	1.06	31.97	33.25	0.003549	3.54	37.13	13.73	0.67
valle rivassa	546.1 TO-75	Q500	149.00	28.80	32.91	30.55	-2.36	33.68	0.77	32.19	33.60	0.003477	3.69	41.20	13.86	0.67
valle rivassa	536.1 TO-74	Q50	102.00	28.60	32.00	30.55	-1.45	33.52	1.52	31.63	32.64	0.004740	3.55	29.06	13.44	0.76
valle rivassa	536.1 TO-74	Q200	129.00	28.60	32.43	30.55	-1.88	33.52	1.09	31.95	33.15	0.004334	3.75	34.95	13.64	0.73
valle rivassa	536.1 TO-74	Q500	149.00	28.60	32.74	30.55	-2.19	33.52	0.78	32.17	33.50	0.004117	3.88	39.15	13.78	0.72
valle rivassa	536 TO-74	Q50	102.00	28.60	32.00	30.55	-1.45	32.42	0.42	31.63	32.64	0.004745	3.55	29.05	13.45	0.76
valle rivassa	536 TO-74	Q200	129.00	28.60	32.43	30.55	-1.88	32.42	-0.01	31.95	33.14	0.004336	3.75	34.94	13.65	0.73

HEC-RAS Plan: Torbella River: torbella Reach: valle rivassa (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle rivassa	536 TO-74	Q500	149.00	28.60	32.74	30.55	-2.19	32.42	-0.32	32.17	33.50	0.004118	3.88	39.15	13.78	0.72
valle rivassa	529.3 TO-73	Q50	102.00	28.52	31.57	31.40	-0.17	32.30	0.73	31.57	32.56	0.009487	4.40	23.17	11.76	1.00
valle rivassa	529.3 TO-73	Q200	129.00	28.52	31.91	31.40	-0.51	32.30	0.39	31.91	33.06	0.009509	4.75	27.15	11.79	1.00
valle rivassa	529.3 TO-73	Q500	149.00	28.52	32.14	31.40	-0.74	32.30	0.16	32.14	33.41	0.009554	4.98	29.92	11.81	1.00
valle rivassa	508.6 TO-72	Q50	102.00	28.30	30.05	31.30	1.25	32.02	1.97	30.67	32.13	0.029910	6.38	15.98	12.46	1.80
valle rivassa	508.6 TO-72	Q200	129.00	28.30	30.30	31.30	1.00	32.02	1.72	30.99	32.63	0.028085	6.76	19.08	12.71	1.76
valle rivassa	508.6 TO-72	Q500	149.00	28.30	30.47	31.30	0.83	32.02	1.55	31.21	32.97	0.026985	7.01	21.25	12.71	1.73
valle rivassa	486.2 TO-71	Q50	102.00	28.00	29.93	31.20	1.27	31.94	2.01	30.34	31.44	0.018525	5.45	18.71	12.83	1.44
valle rivassa	486.2 TO-71	Q200	129.00	28.00	30.16	31.20	1.04	31.94	1.78	30.65	31.95	0.019189	5.93	21.75	13.27	1.48
valle rivassa	486.2 TO-71	Q500	149.00	28.00	30.31	31.20	0.89	31.94	1.63	30.86	32.31	0.019765	6.27	23.78	13.49	1.51
valle rivassa	461.4 TO-70	Q50	102.00	27.84	29.81	31.10	1.29	31.80	1.99	30.07	30.92	0.014133	4.66	21.89	16.09	1.27
valle rivassa	461.4 TO-70	Q200	129.00	27.84	29.96	31.10	1.14	31.80	1.84	30.34	31.40	0.016766	5.33	24.19	16.35	1.40
valle rivassa	461.4 TO-70	Q500	149.00	27.84	30.06	31.10	1.04	31.80	1.74	30.52	31.75	0.018289	5.76	25.88	16.55	1.47
valle rivassa	430.7 TO-69	Q50	102.00	27.24	29.24	31.47	2.23	31.54	2.30	29.57	30.42	0.018622	4.81	21.22	17.98	1.41
valle rivassa	430.7 TO-69	Q200	129.00	27.24	29.41	31.47	2.06	31.54	2.13	29.83	30.84	0.020063	5.29	24.37	18.90	1.49
valle rivassa	430.7 TO-69	Q500	149.00	27.24	29.53	31.47	1.94	31.54	2.01	30.00	31.12	0.020548	5.59	26.64	19.27	1.52
valle rivassa	381.7 TO-68	Q50	102.00	26.47	29.54	30.90	1.36	30.17	0.63	28.79	29.81	0.002165	2.31	44.21	21.70	0.52
valle rivassa	381.7 TO-68	Q200	129.00	26.47	30.10	30.90	0.80	30.17	0.07	29.03	30.36	0.001634	2.29	56.39	21.70	0.45
valle rivassa	381.7 TO-68	Q500	149.00	26.47	30.49	30.90	0.41	30.17	-0.32	29.19	30.76	0.001422	2.30	64.88	21.70	0.42
valle rivassa	381.6 TO-68	Q50	102.00	26.47	29.54	30.90	1.36	31.08	1.54	28.79	29.81	0.002167	2.31	44.20	21.70	0.52
valle rivassa	381.6 TO-68	Q200	129.00	26.47	30.10	30.90	0.80	31.08	0.98	29.03	30.36	0.001634	2.29	56.39	21.70	0.45
valle rivassa	381.6 TO-68	Q500	149.00	26.47	30.49	30.90	0.41	31.08	0.59	29.19	30.76	0.001422	2.30	64.88	21.70	0.42
valle rivassa	341.6 TO-67	Q50	102.00	25.75	28.94	30.40	1.46	30.02	1.08	28.49	29.64	0.005371	3.68	27.69	11.00	0.74
valle rivassa	341.6 TO-67	Q200	129.00	25.75	29.43	30.40	0.97	30.02	0.59	28.84	30.21	0.005200	3.91	33.00	11.00	0.72
valle rivassa	341.6 TO-67	Q500	149.00	25.75	29.76	30.40	0.64	30.02	0.26	29.08	30.60	0.005147	4.06	36.70	11.00	0.71
valle rivassa	326.6 TO-66	Q50	102.00	25.29	28.38	30.15	1.77	30.00	1.62	28.38	29.48	0.011498	4.66	21.90	9.90	1.00
valle rivassa	326.6 TO-66	Q200	129.00	25.29	28.75	30.15	1.40	30.00	1.25	28.75	30.04	0.011665	5.04	25.61	9.90	1.00
valle rivassa	326.6 TO-66	Q500	149.00	25.29	29.01	30.15	1.14	30.00	0.99	29.01	30.43	0.011805	5.28	28.20	9.90	1.00
valle rivassa	311.6 TO-65	Q50	102.00	25.09	27.82	30.10	2.28	29.55	1.73	28.08	29.24	0.017276	5.28	19.33	9.82	1.20
valle rivassa	311.6 TO-65	Q200	129.00	25.09	28.19	30.10	1.91	29.55	1.36	28.46	29.80	0.016727	5.63	22.91	9.83	1.18
valle rivassa	311.6 TO-65	Q500	149.00	25.09	28.44	30.10	1.66	29.55	1.11	28.72	30.19	0.016514	5.87	25.40	9.85	1.17
valle rivassa	283.6 TO-64	Q50	102.00	24.81	27.78	29.46	1.68	28.78	1.00	27.78	28.84	0.010710	4.56	22.37	10.53	1.00
valle rivassa	283.6 TO-64	Q200	129.00	24.81	28.14	29.46	1.32	28.78	0.64	28.14	29.38	0.010860	4.93	26.14	10.56	1.00
valle rivassa	283.6 TO-64	Q500	149.00	24.81	28.40	29.46	1.06	28.78	0.38	28.40	29.76	0.010931	5.17	28.82	10.57	1.00
valle rivassa	257.6 TO-63	Q50	102.00	24.70	26.84	29.12	2.28	28.48	1.64	27.25	28.41	0.020906	5.57	18.32	11.99	1.44
valle rivassa	257.6 TO-63	Q200	129.00	24.70	27.09	29.12	2.03	28.48	1.39	27.58	28.94	0.020866	6.03	21.40	12.01	1.44
valle rivassa	257.6 TO-63	Q500	149.00	24.70	27.27	29.12	1.85	28.48	1.21	27.82	29.31	0.020793	6.32	23.58	12.02	1.44
valle rivassa	219.6 TO-62	Q50	102.00	24.77	27.11	29.69	2.58	29.06	1.95	27.11	28.07	0.009830	4.33	23.55	12.33	1.00
valle rivassa	219.6 TO-62	Q200	129.00	24.77	27.93	29.69	1.76	29.06	1.13	27.48	28.64	0.005376	3.72	34.67	13.75	0.75

HEC-RAS Plan: Torbella River: torbella Reach: valle rivassa (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle rivassa	219.6 TO-62	Q500	149.00	24.77	28.11	29.69	1.58	29.06	0.95	27.69	28.93	0.005848	4.01	37.14	13.78	0.78
valle rivassa	207.8 TO-61	Q50	115.00	24.67	26.45	28.81	2.36	28.12	1.67	26.82	27.86	0.018066	5.27	21.84	15.13	1.40
valle rivassa	207.8 TO-61	Q200	145.00	24.67	28.05	28.81	0.76	28.12	0.07	27.17	28.52	0.002936	3.03	47.81	16.86	0.57
valle rivassa	207.8 TO-61	Q500	165.00	24.67	28.27	28.81	0.54	28.12	-0.15	27.35	28.80	0.003045	3.20	51.51	16.87	0.59
valle rivassa	201.8 TO-60	Q50	115.00	24.62	27.22	28.02	0.80	28.10	0.88	26.72	27.77	0.004389	3.31	34.75	15.07	0.70
valle rivassa	201.8 TO-60	Q200	145.00	24.62	28.01	28.02	0.01	28.10	0.09	27.02	28.50	0.002894	3.10	46.72	15.10	0.56
valle rivassa	201.8 TO-60	Q500	165.00	24.62	28.21	28.02	-0.19	28.10	-0.11	27.21	28.78	0.003111	3.31	49.80	15.10	0.58
valle rivassa	196.7		Bridge													
valle rivassa	191.6 TO-59	Q50	115.00	24.62	27.17	28.04	0.87	28.10	0.93	26.74	27.73	0.004716	3.31	34.71	16.03	0.72
valle rivassa	191.6 TO-59	Q200	145.00	24.62	27.51	28.04	0.53	28.10	0.59	27.03	28.17	0.004793	3.60	40.24	16.08	0.73
valle rivassa	191.6 TO-59	Q500	165.00	24.62	27.66	28.04	0.38	28.10	0.44	27.21	28.42	0.005225	3.87	42.62	16.11	0.76
valle rivassa	186.9 TO-58	Q50	115.00	24.43	26.89	29.86	2.97	26.86	-0.03	26.78	27.68	0.008227	3.94	29.19	16.04	0.93
valle rivassa	186.9 TO-58	Q200	145.00	24.43	27.34	29.86	2.52	26.86	-0.48	27.11	28.13	0.006690	3.95	36.71	16.71	0.85
valle rivassa	186.9 TO-58	Q500	165.00	24.43	27.35	29.86	2.51	26.86	-0.49	27.29	28.37	0.008482	4.46	36.97	16.71	0.96
valle rivassa	164.9 TO-57	Q50	115.00	24.52	26.96	30.00	3.04	28.03	1.07	26.52	27.45	0.004772	3.09	37.28	21.20	0.74
valle rivassa	164.9 TO-57	Q200	145.00	24.52	27.47	30.00	2.53	28.03	0.56	26.89	27.93	0.003465	3.02	47.94	21.34	0.64
valle rivassa	164.9 TO-57	Q500	165.00	24.52	27.55	30.00	2.45	28.03	0.48	27.04	28.11	0.004027	3.32	49.65	21.36	0.70
valle rivassa	144.9 TO-56	Q50	115.00	24.37	27.03	28.71	1.68	27.79	0.76	26.15	27.33	0.002156	2.46	46.75	19.49	0.51
valle rivassa	144.9 TO-56	Q200	145.00	24.37	27.50	28.71	1.21	27.79	0.29	26.40	27.84	0.001978	2.59	56.02	19.57	0.49
valle rivassa	144.9 TO-56	Q500	165.00	24.37	27.59	28.71	1.12	27.79	0.20	26.56	28.00	0.002343	2.86	57.70	19.59	0.53
valle rivassa	117.4 TO-55	Q50	115.00	23.90	26.95	28.78	1.83	26.61	-0.34	25.91	27.27	0.002063	2.52	45.63	16.80	0.49
valle rivassa	117.4 TO-55	Q200	145.00	23.90	27.40	28.78	1.38	26.61	-0.80	26.19	27.78	0.002070	2.72	53.26	16.82	0.49
valle rivassa	117.4 TO-55	Q500	165.00	23.90	27.46	28.78	1.32	26.61	-0.85	26.37	27.93	0.002556	3.05	54.13	16.82	0.54
valle rivassa	101.7 TO-54	Q50	115.00	23.59	26.95	28.69	1.74	26.54	-0.41	25.69	27.23	0.001636	2.33	49.31	16.78	0.43
valle rivassa	101.7 TO-54	Q200	145.00	23.59	27.41	28.69	1.28	26.54	-0.87	25.97	27.74	0.001701	2.55	56.94	16.81	0.44
valle rivassa	101.7 TO-54	Q500	165.00	23.59	27.46	28.69	1.23	26.54	-0.92	26.16	27.88	0.002106	2.85	57.81	16.81	0.49
valle rivassa	85.3 TO-53	Q50	115.00	23.36	26.95	28.78	1.83	26.50	-0.45	25.56	27.20	0.001401	2.22	51.90	17.03	0.41
valle rivassa	85.3 TO-53	Q200	145.00	23.36	27.40	28.78	1.38	26.50	-0.90	25.84	27.70	0.001478	2.43	59.65	17.05	0.41
valle rivassa	85.3 TO-53	Q500	165.00	23.36	27.45	28.78	1.33	26.50	-0.95	26.02	27.83	0.001835	2.73	60.51	17.05	0.46
valle rivassa	65.6 TO-52	Q50	115.00	23.30	26.96	28.56	1.60	26.77	-0.19	25.41	27.16	0.001102	2.00	57.50	18.54	0.36
valle rivassa	65.6 TO-52	Q200	145.00	23.30	27.42	28.56	1.14	26.77	-0.65	25.68	27.66	0.001163	2.20	66.02	18.57	0.37
valle rivassa	65.6 TO-52	Q500	165.00	23.30	27.47	28.56	1.09	26.77	-0.70	25.85	27.78	0.001439	2.46	67.04	18.57	0.41
valle rivassa	51 TO-51	Q50	115.00	23.26	26.97	28.50	1.53	28.00	1.03	25.13	27.14	0.000804	1.82	63.34	18.60	0.31
valle rivassa	51 TO-51	Q200	145.00	23.26	27.43	28.50	1.07	28.00	0.57	25.40	27.64	0.000881	2.02	71.92	18.62	0.33
valle rivassa	51 TO-51	Q500	165.00	23.26	27.49	28.50	1.01	28.00	0.51	25.56	27.75	0.001092	2.26	73.00	18.63	0.36
valle rivassa	50 TO-50	Q50	115.00	22.88	26.86	26.04	-0.82	26.40	-0.46	25.09	27.11	0.001274	2.23	51.68	14.25	0.37
valle rivassa	50 TO-50	Q200	145.00	22.88	27.29	26.04	-1.25	26.40	-0.89	25.41	27.61	0.001479	2.51	57.75	14.25	0.40
valle rivassa	50 TO-50	Q500	165.00	22.88	27.30	26.04	-1.26	26.40	-0.90	25.61	27.71	0.001901	2.85	57.90	14.25	0.45

HEC-RAS Plan: Torbella River: torbella Reach: valle rivassa (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle rivassa	49.5		Bridge													
valle rivassa	49 TO-49	Q50	115.00	22.77	25.74	26.39	0.65	27.34	1.60	25.03	26.24	0.003410	3.14	36.68	14.20	0.62
valle rivassa	49 TO-49	Q200	145.00	22.77	26.18	26.39	0.21	27.34	1.16	25.35	26.76	0.003411	3.37	42.97	14.26	0.62
valle rivassa	49 TO-49	Q500	165.00	22.77	26.45	26.39	-0.06	27.34	0.89	25.55	27.09	0.003443	3.52	46.84	14.29	0.62
valle rivassa	48 TO-48	Q50	115.00	22.05	25.82	25.65	-0.17	27.28	1.46	24.63	26.14	0.001791	2.50	45.99	15.54	0.46
valle rivassa	48 TO-48	Q200	145.00	22.05	26.28	25.65	-0.63	27.28	1.00	24.93	26.66	0.001882	2.73	53.03	15.56	0.47
valle rivassa	48 TO-48	Q500	165.00	22.05	26.55	25.65	-0.90	27.28	0.73	25.12	26.97	0.001945	2.88	57.36	15.58	0.48
valle rivassa	47 TO-47	Q50	115.00	22.08	25.85	26.45	0.60	27.34	1.49	24.52	26.11	0.001423	2.25	51.17	17.17	0.42
valle rivassa	47 TO-47	Q200	145.00	22.08	26.31	26.45	0.14	27.34	1.03	24.80	26.62	0.001481	2.45	59.10	17.21	0.42
valle rivassa	47 TO-47	Q500	165.00	22.08	26.59	26.45	-0.14	27.34	0.75	24.97	26.93	0.001522	2.58	63.97	17.23	0.43
valle rivassa	46 TO-46	Q50	115.00	21.99	25.75	26.29	0.54	27.46	1.71	24.42	26.07	0.001773	2.51	45.85	14.36	0.45
valle rivassa	46 TO-46	Q200	145.00	21.99	26.18	26.29	0.11	27.46	1.28	24.73	26.58	0.001959	2.79	52.05	14.42	0.47
valle rivassa	46 TO-46	Q500	165.00	21.99	26.45	26.29	-0.16	27.46	1.01	24.93	26.89	0.002076	2.95	55.85	14.45	0.48
valle rivassa	45 TO-45	Q50	115.00	22.01	25.61	25.43	-0.18	27.40	1.79	24.50	26.03	0.002662	2.88	39.87	12.85	0.52
valle rivassa	45 TO-45	Q200	145.00	22.01	26.00	25.43	-0.57	27.40	1.40	24.84	26.53	0.003013	3.23	44.90	12.86	0.55
valle rivassa	45 TO-45	Q500	165.00	22.01	26.23	25.43	-0.80	27.40	1.17	25.06	26.84	0.003243	3.44	47.92	12.87	0.57
valle rivassa	44 TO-44	Q50	115.00	21.85	25.61	25.34	-0.27	27.45	1.84	24.14	25.94	0.002013	2.57	44.70	12.92	0.44
valle rivassa	44 TO-44	Q200	145.00	21.85	26.00	25.34	-0.66	27.45	1.45	24.48	26.43	0.002359	2.91	49.75	12.93	0.47
valle rivassa	44 TO-44	Q500	165.00	21.85	26.23	25.34	-0.89	27.45	1.22	24.70	26.73	0.002585	3.13	52.78	12.94	0.49
valle rivassa	43 TO-43	Q50	115.00	21.69	25.60	25.23	-0.37	27.40	1.80	24.05	25.91	0.001756	2.49	46.21	13.13	0.42
valle rivassa	43 TO-43	Q200	145.00	21.69	25.98	25.23	-0.75	27.40	1.42	24.39	26.39	0.002075	2.83	51.31	13.14	0.46
valle rivassa	43 TO-43	Q500	165.00	21.69	26.22	25.23	-0.99	27.40	1.18	24.60	26.69	0.002283	3.03	54.37	13.15	0.48
valle rivassa	42.5		Bridge													
valle rivassa	42 TO-42	Q50	115.00	21.70	24.01	26.11	2.10	25.51	1.50	24.01	25.00	0.009478	4.41	26.06	13.21	1.00
valle rivassa	42 TO-42	Q200	145.00	21.70	24.34	26.11	1.77	25.51	1.17	24.34	25.49	0.009404	4.75	30.50	13.24	1.00
valle rivassa	42 TO-42	Q500	165.00	21.70	24.55	26.11	1.56	25.51	0.96	24.55	25.80	0.009423	4.96	33.26	13.26	1.00
valle rivassa	41 TO-41	Q50	115.00	21.70	23.30	25.24	1.94	24.87	1.57	23.72	24.83	0.020571	5.49	20.94	15.19	1.49
valle rivassa	41 TO-41	Q200	145.00	21.70	23.53	25.24	1.71	24.87	1.34	24.02	25.32	0.020230	5.93	24.45	15.21	1.49
valle rivassa	41 TO-41	Q500	165.00	21.70	23.67	25.24	1.57	24.87	1.20	24.21	25.62	0.020085	6.19	26.65	15.23	1.49
valle rivassa	40 TO-40	Q50	115.00	21.52	23.47	25.02	1.55	24.89	1.42	23.54	24.44	0.010332	4.35	26.42	15.52	1.07
valle rivassa	40 TO-40	Q200	145.00	21.52	23.64	25.02	1.38	24.89	1.25	23.84	24.91	0.012200	4.98	29.10	15.54	1.16
valle rivassa	40 TO-40	Q500	165.00	21.52	23.76	25.02	1.26	24.89	1.13	24.03	25.21	0.013077	5.33	30.96	15.55	1.21
valle rivassa	39 TO-39	Q50	115.00	21.37	23.44	24.86	1.42	24.61	1.17	23.31	24.19	0.007189	3.84	29.92	16.12	0.90
valle rivassa	39 TO-39	Q200	145.00	21.37	23.75	24.86	1.11	24.61	0.86	23.60	24.63	0.007138	4.15	34.91	16.17	0.90
valle rivassa	39 TO-39	Q500	165.00	21.37	23.94	24.86	0.92	24.61	0.66	23.79	24.90	0.007115	4.33	38.06	16.21	0.90
valle rivassa	38 TO-38	Q50	115.00	21.26	23.19	24.74	1.55	24.50	1.31	23.14	24.00	0.008279	3.98	28.89	16.40	0.96
valle rivassa	38 TO-38	Q200	145.00	21.26	23.44	24.74	1.30	24.50	1.06	23.43	24.42	0.008695	4.39	33.06	16.43	0.99
valle rivassa	38 TO-38	Q500	165.00	21.26	23.61	24.74	1.13	24.50	0.89	23.61	24.69	0.008865	4.61	35.76	16.45	1.00

HEC-RAS Plan: Torbella River: torbella Reach: valle rivassa (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle rivassa	37 TO-37	Q50	115.00	21.06	23.05	24.62	1.57	24.25	1.20	22.94	23.78	0.007246	3.78	30.40	17.03	0.90
valle rivassa	37 TO-37	Q200	145.00	21.06	23.30	24.62	1.32	24.25	0.95	23.22	24.19	0.007705	4.19	34.64	17.06	0.94
valle rivassa	37 TO-37	Q500	165.00	21.06	23.31	24.62	1.31	24.25	0.94	23.39	24.46	0.009830	4.74	34.81	17.06	1.06
valle rivassa	36 TO-36	Q50	115.00	20.96	22.93	24.49	1.56	23.88	0.95	22.75	23.59	0.006524	3.60	31.91	17.68	0.86
valle rivassa	36 TO-36	Q200	145.00	20.96	23.17	24.49	1.32	23.88	0.71	23.02	23.99	0.007028	4.01	36.19	17.72	0.89
valle rivassa	36 TO-36	Q500	165.00	20.96	23.06	24.49	1.43	23.88	0.82	23.19	24.24	0.010771	4.82	34.26	17.71	1.10
valle rivassa	35 TO-35	Q50	115.00	20.85	22.59	24.36	1.77	24.57	1.98	22.59	23.39	0.009007	3.94	29.17	18.45	1.00
valle rivassa	35 TO-35	Q200	145.00	20.85	22.86	24.36	1.50	24.57	1.71	22.86	23.78	0.008821	4.26	34.08	18.49	1.00
valle rivassa	35 TO-35	Q500	165.00	20.85	23.03	24.36	1.33	24.57	1.54	23.03	24.03	0.008727	4.44	37.17	18.52	1.00
valle rivassa	34 TO-34	Q50	115.00	20.58	22.17	24.22	2.05	23.63	1.46	22.32	23.11	0.012235	4.30	26.75	19.14	1.16
valle rivassa	34 TO-34	Q200	145.00	20.58	22.39	24.22	1.83	23.63	1.24	22.57	23.51	0.012187	4.67	31.03	19.17	1.17
valle rivassa	34 TO-34	Q500	165.00	20.58	22.53	24.22	1.69	23.63	1.10	22.74	23.75	0.012155	4.89	33.73	19.19	1.18
valle rivassa	33 TO-33	Q50	115.00	20.12	21.66	24.13	2.47	23.90	2.24	21.90	22.71	0.016415	4.53	25.38	21.06	1.32
valle rivassa	33 TO-33	Q200	145.00	20.12	21.84	24.13	2.29	23.90	2.06	22.15	23.10	0.016587	4.96	29.26	21.08	1.34
valle rivassa	33 TO-33	Q500	165.00	20.12	21.96	24.13	2.17	23.90	1.94	22.30	23.34	0.016730	5.21	31.66	21.09	1.36
valle rivassa	32 TO-32	Q50	115.00	19.89	21.99	24.50	2.51	23.91	1.92	21.58	22.34	0.003516	2.64	43.55	26.43	0.66
valle rivassa	32 TO-32	Q200	145.00	19.89	22.51	24.50	1.99	23.91	1.40	21.79	22.83	0.002356	2.53	57.26	26.50	0.55
valle rivassa	32 TO-32	Q500	165.00	19.89	22.78	24.50	1.72	23.91	1.13	21.92	23.11	0.002114	2.56	64.39	26.54	0.53
valle rivassa	31.5		Bridge													
valle rivassa	31 TO-31	Q50	115.00	19.93	21.91	23.70	1.79	25.29	3.38	21.48	22.26	0.003429	2.61	44.11	26.10	0.64
valle rivassa	31 TO-31	Q200	145.00	19.93	22.47	23.70	1.23	25.29	2.82	21.69	22.78	0.002233	2.48	58.54	26.12	0.53
valle rivassa	31 TO-31	Q500	165.00	19.93	22.74	23.70	0.96	25.29	2.55	21.82	23.06	0.002022	2.51	65.64	26.13	0.51
valle rivassa	30 TO-30	Q50	115.00	19.44	21.85	23.78	1.93	25.37	3.52	21.30	22.19	0.003020	2.57	44.74	23.73	0.60
valle rivassa	30 TO-30	Q200	145.00	19.44	22.41	23.78	1.37	25.37	2.96	21.53	22.73	0.002121	2.50	58.11	23.73	0.51
valle rivassa	30 TO-30	Q500	165.00	19.44	22.68	23.78	1.10	25.37	2.69	21.67	23.01	0.001994	2.56	64.46	23.73	0.50
valle rivassa	29 TO-29	Q50	115.00	19.58	21.75	23.00	1.25	25.34	3.59	21.31	22.13	0.003564	2.73	42.09	23.38	0.65
valle rivassa	29 TO-29	Q200	145.00	19.58	22.36	23.00	0.64	25.34	2.98	21.53	22.70	0.002297	2.58	56.19	23.38	0.53
valle rivassa	29 TO-29	Q500	165.00	19.58	22.63	23.00	0.37	25.34	2.71	21.67	22.98	0.002138	2.64	62.52	23.38	0.52
valle rivassa	28 TO-28	Q50	115.00	19.29	21.71	22.97	1.26	22.21	0.50	21.09	22.06	0.003009	2.63	43.70	21.31	0.59
valle rivassa	28 TO-28	Q200	145.00	19.29	22.32	22.97	0.65	22.21	-0.11	21.33	22.65	0.002144	2.56	56.65	21.31	0.50
valle rivassa	28 TO-28	Q500	165.00	19.29	22.58	22.97	0.39	22.21	-0.37	21.49	22.94	0.002071	2.65	62.35	21.31	0.49
valle rivassa	27 TO-27	Q50	115.00	19.05	21.67	22.87	1.20	22.10	0.43	20.91	22.00	0.002599	2.56	44.96	19.89	0.54
valle rivassa	27 TO-27	Q200	145.00	19.05	22.28	22.87	0.59	22.10	-0.18	21.17	22.61	0.001987	2.54	57.12	19.89	0.48
valle rivassa	27 TO-27	Q500	165.00	19.05	22.55	22.87	0.32	22.10	-0.45	21.32	22.90	0.001971	2.65	62.38	19.89	0.48
valle rivassa	26 TO-26	Q50	115.00	19.04	21.73	22.81	1.08	22.10	0.37	20.65	21.96	0.001618	2.15	53.37	21.19	0.43
valle rivassa	26 TO-26	Q200	145.00	19.04	22.33	22.81	0.48	22.10	-0.23	20.89	22.58	0.001334	2.19	66.17	21.19	0.40
valle rivassa	26 TO-26	Q500	165.00	19.04	22.60	22.81	0.21	22.10	-0.50	21.05	22.87	0.001348	2.30	71.83	21.19	0.40
valle rivassa	25.5		Bridge													

HEC-RAS Plan: Torbella River: torbella Reach: valle rivassa (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle rivassa	25 TO-25	Q50	115.00	19.28	21.59	22.81	1.22	22.10	0.51	20.76	21.88	0.002222	2.39	48.13	21.19	0.51
valle rivassa	25 TO-25	Q200	145.00	19.28	22.22	22.81	0.59	22.10	-0.12	21.00	22.50	0.001658	2.35	61.57	21.19	0.44
valle rivassa	25 TO-25	Q500	165.00	19.28	22.48	22.81	0.33	22.10	-0.38	21.15	22.79	0.001652	2.46	67.12	21.19	0.44
valle rivassa	24 TO-24	Q50	115.00	18.34	21.14	25.17	4.03	22.13	0.99	20.82	21.79	0.005927	3.56	32.26	15.18	0.78
valle rivassa	24 TO-24	Q200	145.00	18.34	21.86	25.17	3.31	22.13	0.27	21.12	22.44	0.003907	3.36	43.22	15.18	0.63
valle rivassa	24 TO-24	Q500	165.00	18.34	22.08	25.17	3.09	22.13	0.05	21.31	22.72	0.004085	3.55	46.45	15.18	0.65
valle rivassa	23 TO-23	Q50	115.00	18.17	21.01	24.99	3.98	21.57	0.56	20.60	21.67	0.005460	3.58	32.13	13.73	0.75
valle rivassa	23 TO-23	Q200	145.00	18.17	21.75	24.99	3.24	21.57	-0.18	20.92	22.35	0.003858	3.43	42.27	13.73	0.62
valle rivassa	23 TO-23	Q500	165.00	18.17	21.93	24.99	3.06	21.57	-0.36	21.12	22.62	0.004230	3.69	44.75	13.73	0.65
valle rivassa	22 TO-22	Q50	115.00	18.17	21.17	24.92	3.75	21.57	0.40	20.36	21.58	0.002938	2.82	40.78	15.91	0.56
valle rivassa	22 TO-22	Q200	145.00	18.17	21.89	24.92	3.03	21.57	-0.32	20.65	22.28	0.002254	2.78	52.09	15.91	0.49
valle rivassa	22 TO-22	Q500	165.00	18.17	22.09	24.92	2.83	21.57	-0.52	20.83	22.54	0.002443	2.98	55.35	15.91	0.51
valle rivassa	21.5 TO-22		Bridge													
valle rivassa	21 TO-21	Q50	115.00	18.17	21.13	24.92	3.79	21.57	0.44	20.36	21.55	0.003098	2.87	40.06	15.91	0.58
valle rivassa	21 TO-21	Q200	145.00	18.17	21.86	24.92	3.06	21.57	-0.29	20.65	22.26	0.002314	2.81	51.63	15.91	0.50
valle rivassa	21 TO-21	Q500	165.00	18.17	22.06	24.92	2.86	21.57	-0.49	20.83	22.52	0.002513	3.01	54.82	15.91	0.52
valle rivassa	20	Q50	115.00	17.89	20.86	21.00	0.14	27.20	6.34	20.42	21.46	0.005943	3.42	33.67	15.00	0.73
valle rivassa	20	Q200	145.00	17.89	21.69	21.00	-0.69	27.20	5.51	20.74	22.20	0.003700	3.14	46.13	15.00	0.57
valle rivassa	20	Q500	165.00	17.89	21.86	21.00	-0.86	27.20	5.34	20.93	22.45	0.004086	3.39	48.70	15.00	0.60
valle rivassa	19	Q50	115.00	17.85	21.01	20.67	-0.34	22.35	1.34	20.00	21.32	0.002631	2.46	46.71	19.46	0.51
valle rivassa	19	Q200	145.00	17.85	21.82	20.67	-1.15	22.35	0.53	20.33	22.09	0.001736	2.32	62.46	19.46	0.41
valle rivassa	19	Q500	165.00	17.85	22.01	20.67	-1.34	22.35	0.34	20.52	22.33	0.001883	2.49	66.28	19.46	0.43
valle rivassa	18	Q50	115.00	17.69	20.84	26.50	5.66	29.15	8.31	19.84	21.24	0.003091	2.80	41.05	14.37	0.53
valle rivassa	18	Q200	145.00	17.69	21.65	26.50	4.85	29.15	7.50	20.15	22.03	0.002381	2.75	52.71	14.52	0.46
valle rivassa	18	Q500	165.00	17.69	21.80	26.50	4.70	29.15	7.35	20.35	22.26	0.002735	3.00	54.97	14.55	0.49
valle rivassa	17	Q50	115.00	17.40	20.32	24.30	3.98	21.54	1.22	20.09	21.09	0.008273	3.87	29.73	13.89	0.84
valle rivassa	17	Q200	145.00	17.40	21.41	24.30	2.89	21.54	0.13	20.41	21.94	0.003875	3.23	44.92	13.97	0.57
valle rivassa	17	Q500	165.00	17.40	21.51	24.30	2.79	21.54	0.03	20.62	22.16	0.004612	3.57	46.25	13.98	0.63
valle rivassa	16.1	Q50	115.00	17.40	20.58	22.10	1.53	20.14	-0.44	19.39	20.89	0.002313	2.49	46.10	16.10	0.47
valle rivassa	16.1	Q200	145.00	17.40	21.55	22.10	0.55	20.14	-1.41	19.70	21.83	0.001558	2.34	61.85	16.10	0.38
valle rivassa	16.1	Q500	165.00	17.40	21.68	22.10	0.42	20.14	-1.54	19.90	22.02	0.001835	2.58	63.93	16.10	0.41
valle rivassa	16.		Bridge													
valle rivassa	15.9	Q50	115.00	17.34	18.77	21.50	2.73	20.14	1.37	19.33	20.64	0.032521	6.07	18.96	14.35	1.68
valle rivassa	15.9	Q200	145.00	17.34	21.21	21.50	0.29	20.14	-1.07	19.65	21.54	0.001955	2.54	57.17	16.10	0.43
valle rivassa	15.9	Q500	165.00	17.34	21.13	21.50	0.37	20.14	-0.99	19.84	21.57	0.002719	2.96	55.78	16.10	0.51
valle rivassa	15	Q50	115.00	16.90	19.56	20.20	0.64	19.20	-0.36	18.86	19.96	0.003656	2.82	40.78	17.40	0.59
valle rivassa	15	Q200	145.00	16.90	21.26	20.20	-1.06	19.20	-2.06	19.13	21.48	0.001147	2.06	70.39	17.40	0.33
valle rivassa	15	Q500	165.00	16.90	21.19	20.20	-0.99	19.20	-1.99	19.31	21.48	0.001559	2.38	69.23	17.40	0.38

HEC-RAS Plan: Torbella River: torbella Reach: valle rivassa (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle rivassa	14.1	Q50	115.00	16.68	19.57	20.46	0.89	20.62	1.05	18.59	19.86	0.002315	2.39	48.19	19.20	0.48
valle rivassa	14.1	Q200	145.00	16.68	21.27	20.46	-0.81	20.62	-0.65	18.85	21.44	0.000785	1.79	80.96	19.20	0.28
valle rivassa	14.1	Q500	165.00	16.68	21.21	20.46	-0.75	20.62	-0.59	19.02	21.43	0.001061	2.07	79.78	19.20	0.32
valle rivassa	14.		Bridge													
valle rivassa	13.9	Q50	115.00	16.45	19.00	20.00	1.00	20.60	1.60	18.30	19.37	0.003334	2.67	43.06	19.20	0.57
valle rivassa	13.9	Q200	145.00	16.45	19.46	20.00	0.54	20.60	1.14	18.56	19.86	0.002997	2.79	51.92	19.20	0.54
valle rivassa	13.9	Q500	165.00	16.45	19.77	20.00	0.24	20.60	0.83	18.72	20.18	0.002825	2.86	57.68	19.20	0.53
valle rivassa	13	Q50	115.00	16.50	18.83	20.00	1.17	20.60	1.77	18.36	19.31	0.004878	3.08	37.38	18.00	0.68
valle rivassa	13	Q200	145.00	16.50	19.31	20.00	0.69	20.60	1.29	18.63	19.82	0.004129	3.16	45.96	18.00	0.63
valle rivassa	13	Q500	165.00	16.50	19.61	20.00	0.39	20.60	0.99	18.80	20.14	0.003802	3.21	51.46	18.00	0.61
valle rivassa	12 TO-12	Q50	115.00	16.43	18.86	18.63	-0.23	19.20	0.34	18.19	19.25	0.003121	2.76	41.64	18.64	0.59
valle rivassa	12 TO-12	Q200	145.00	16.43	19.34	18.63	-0.71	19.20	-0.14	18.46	19.76	0.002745	2.87	50.55	18.64	0.56
valle rivassa	12 TO-12	Q500	165.00	16.43	19.64	18.63	-1.01	19.20	-0.44	18.62	20.08	0.002572	2.93	56.26	18.64	0.54
valle rivassa	11 TO-11	Q50	115.00	16.20	18.87	18.42	-0.45	18.93	0.06	17.89	19.16	0.001979	2.37	48.54	19.23	0.48
valle rivassa	11 TO-11	Q200	145.00	16.20	19.35	18.42	-0.93	18.93	-0.42	18.14	19.67	0.001855	2.51	57.77	19.23	0.46
valle rivassa	11 TO-11	Q500	165.00	16.20	19.66	18.42	-1.24	18.93	-0.73	18.31	20.00	0.001793	2.59	63.69	19.23	0.45
valle rivassa	10 TO-10	Q50	115.00	16.04	18.69	18.97	0.28	21.23	2.54	18.01	19.07	0.002965	2.75	41.75	18.54	0.59
valle rivassa	10 TO-10	Q200	145.00	16.04	19.19	18.97	-0.22	21.23	2.04	18.28	19.60	0.002567	2.84	50.98	18.54	0.55
valle rivassa	10 TO-10	Q500	165.00	16.04	19.50	18.97	-0.53	21.23	1.73	18.44	19.93	0.002401	2.90	56.80	18.54	0.53
valle rivassa	9 TO-9	Q50	115.00	15.53	18.64	18.38	-0.26	22.01	3.37	17.65	18.98	0.002218	2.57	44.69	16.65	0.50
valle rivassa	9 TO-9	Q200	145.00	15.53	19.13	18.38	-0.75	22.01	2.88	17.93	19.51	0.002140	2.74	52.86	16.65	0.49
valle rivassa	9 TO-9	Q500	165.00	15.53	19.44	18.38	-1.06	22.01	2.57	18.11	19.85	0.002109	2.84	58.00	16.65	0.49
valle rivassa	8 TO-8	Q50	115.00	15.05	18.56	19.73	1.17	22.62	4.06	17.53	18.94	0.002452	2.71	42.37	14.77	0.51
valle rivassa	8 TO-8	Q200	145.00	15.05	19.03	19.73	0.70	22.62	3.59	17.84	19.48	0.002499	2.94	49.31	14.77	0.51
valle rivassa	8 TO-8	Q500	165.00	15.05	19.33	19.73	0.40	22.62	3.29	18.03	19.81	0.002530	3.07	53.68	14.77	0.51
valle rivassa	7.5		Bridge													
valle rivassa	7 TO-7	Q50	115.00	15.05	17.02	19.73	2.71	22.62	5.60	17.53	18.78	0.025898	5.89	19.54	14.77	1.63
valle rivassa	7 TO-7	Q200	145.00	15.05	17.24	19.73	2.49	22.62	5.38	17.84	19.30	0.025374	6.35	22.83	14.77	1.63
valle rivassa	7 TO-7	Q500	165.00	15.05	17.38	19.73	2.35	22.62	5.24	18.03	19.62	0.025110	6.63	24.90	14.77	1.63
valle rivassa	6 TO-6	Q50	115.00	15.45	17.66	18.01	0.35	18.01	0.35	17.39	18.27	0.005876	3.44	33.39	17.40	0.79
valle rivassa	6 TO-6	Q200	145.00	15.45	18.58	18.01	-0.57	18.01	-0.57	17.66	19.02	0.002838	2.94	49.33	17.40	0.56
valle rivassa	6 TO-6	Q500	165.00	15.45	18.91	18.01	-0.90	18.01	-0.90	17.84	19.37	0.002632	2.99	55.15	17.40	0.54
valle rivassa	5.5 TO-6		Bridge													
valle rivassa	5 TO-5	Q50	115.00	15.45	17.27	18.01	0.74	18.01	0.74	17.39	18.22	0.011974	4.33	26.57	17.40	1.12
valle rivassa	5 TO-5	Q200	145.00	15.45	17.73	18.01	0.28	18.01	0.28	17.66	18.63	0.008325	4.18	34.66	17.40	0.95
valle rivassa	5 TO-5	Q500	165.00	15.45	18.61	18.01	-0.60	18.01	-0.60	17.84	19.17	0.003546	3.31	49.92	17.40	0.62
valle rivassa	4 TO-4	Q50	115.00	14.94	16.56	17.47	0.91	18.25	1.69	16.99	18.08	0.022449	5.47	21.02	16.37	1.54
valle rivassa	4 TO-4	Q200	145.00	14.94	17.94	17.47	-0.47	18.25	0.31	17.27	18.50	0.003781	3.33	43.60	16.37	0.65

HEC-RAS Plan: Torbella River: torbella Reach: valle rivassa (Continued)

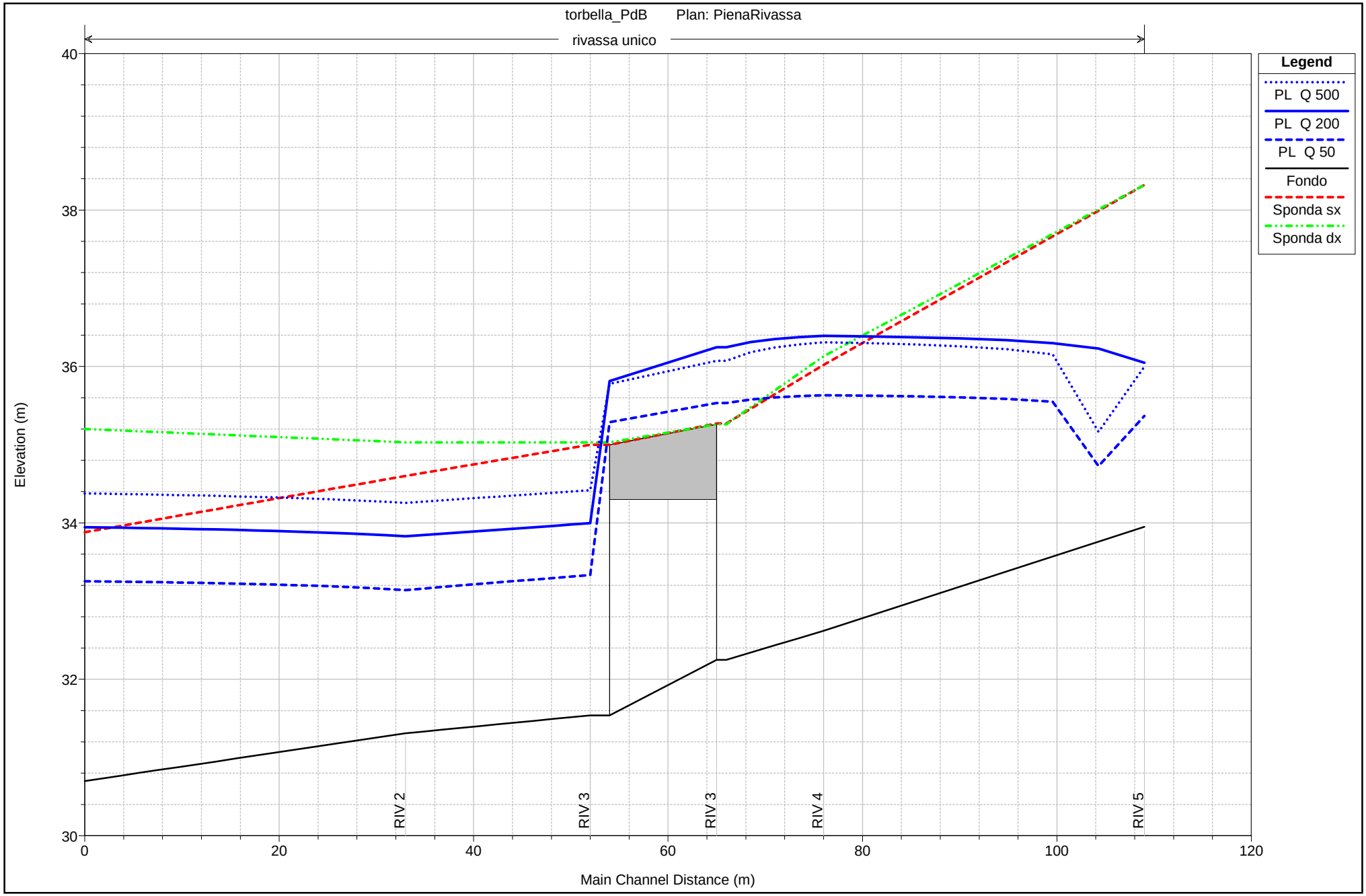
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle rivassa	4 TO-4	Q500	165.00	14.94	18.67	17.47	-1.20	18.25	-0.42	17.45	19.12	0.002372	2.96	55.67	16.37	0.51
valle rivassa	3.9 TO-3.9	Q50	115.00	12.99	17.28	17.47	0.19	18.25	0.97	14.70	17.42	0.000606	1.64	70.26	16.37	0.25
valle rivassa	3.9 TO-3.9	Q200	145.00	12.99	18.23	17.47	-0.76	18.25	0.02	14.99	18.37	0.000547	1.69	85.74	16.37	0.24
valle rivassa	3.9 TO-3.9	Q500	165.00	12.99	18.88	17.47	-1.41	18.25	-0.63	15.17	19.03	0.000510	1.71	96.45	16.37	0.22
valle rivassa	3.5 TO-3.9		Bridge													
valle rivassa	3 TO-3	Q50	115.00	12.95	17.26	18.60	1.34	18.60	1.34	14.66	17.39	0.000601	1.63	70.49	16.37	0.25
valle rivassa	3 TO-3	Q200	145.00	12.95	18.19	18.60	0.41	18.60	0.41	14.95	18.34	0.000545	1.69	85.85	16.37	0.24
valle rivassa	3 TO-3	Q500	165.00	12.95	18.84	18.60	-0.24	18.60	-0.24	15.13	18.99	0.000510	1.71	96.47	16.37	0.22
valle rivassa	2 TO-2	Q50	115.00	12.84	17.25	18.60	1.35	18.60	1.35	14.56	17.38	0.000560	1.59	72.25	16.37	0.24
valle rivassa	2 TO-2	Q200	145.00	12.84	18.19	18.60	0.41	18.60	0.41	14.84	18.33	0.000515	1.66	87.61	16.37	0.23
valle rivassa	2 TO-2	Q500	165.00	12.84	18.84	18.60	-0.24	18.60	-0.24	15.02	18.99	0.000485	1.68	98.23	16.37	0.22
valle rivassa	1.5		Bridge													
valle rivassa	1 TO-1	Q50	115.00	12.78	17.25	18.60	1.35	18.60	1.35	14.49	17.38	0.000539	1.57	73.20	16.37	0.24
valle rivassa	1 TO-1	Q200	145.00	12.78	18.19	18.60	0.41	18.60	0.41	14.78	18.33	0.000500	1.64	88.56	16.37	0.22
valle rivassa	1 TO-1	Q500	165.00	12.78	18.74	18.60	-0.14	18.60	-0.14	14.96	18.89	0.000493	1.69	97.61	16.37	0.22

3.1 Rio Rivassa

Il rio Rivassa, affluente di sinistra del t. Torbella, è stato indagato per un tratto di circa 110 m a monte della confluenza. Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 35 $m^{1/3}/s$. Come condizioni al contorno di monte è stata imposta la profondità critica, a valle è stata simulata la confluenza nel torrente Torbella.

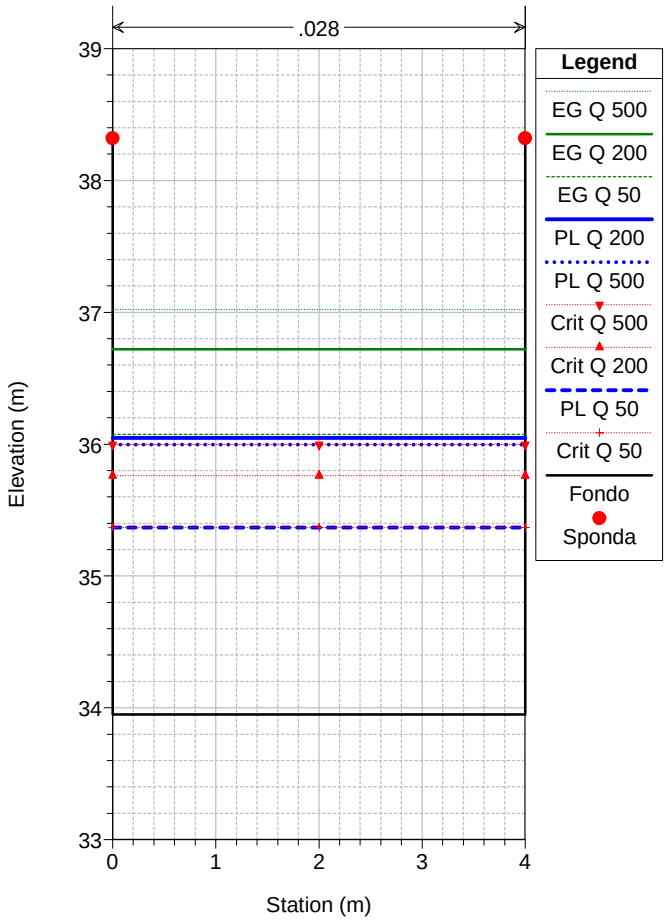
Le portate utilizzate per la verifica sono le seguenti:

TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
		T = 50 anni	**T = 200 anni**	**T = 500 anni**
rio Rivassa	RIV	21.1	30.5	36.7


torbella_PdB Plan: PienaRivassa
rivassa unico
Legend
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
40
38
36
34
32
30
0
20
40
60
80
100
120
RIV 2
RIV 3
RIV 3
RIV 4
RIV 5

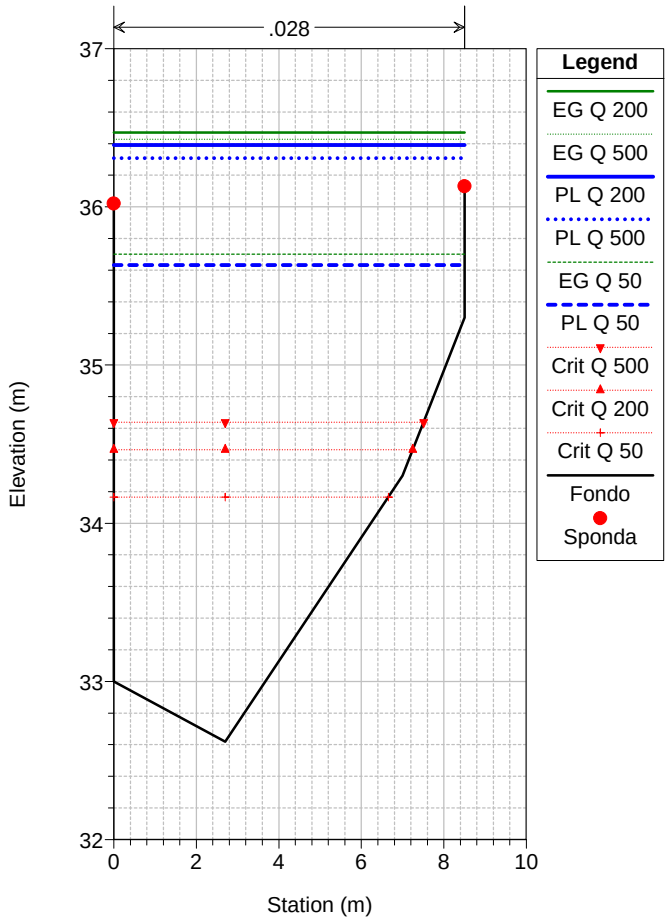
torbella_PdB Plan: PienaRivassa

River = rivassa Reach = unico RIV 5



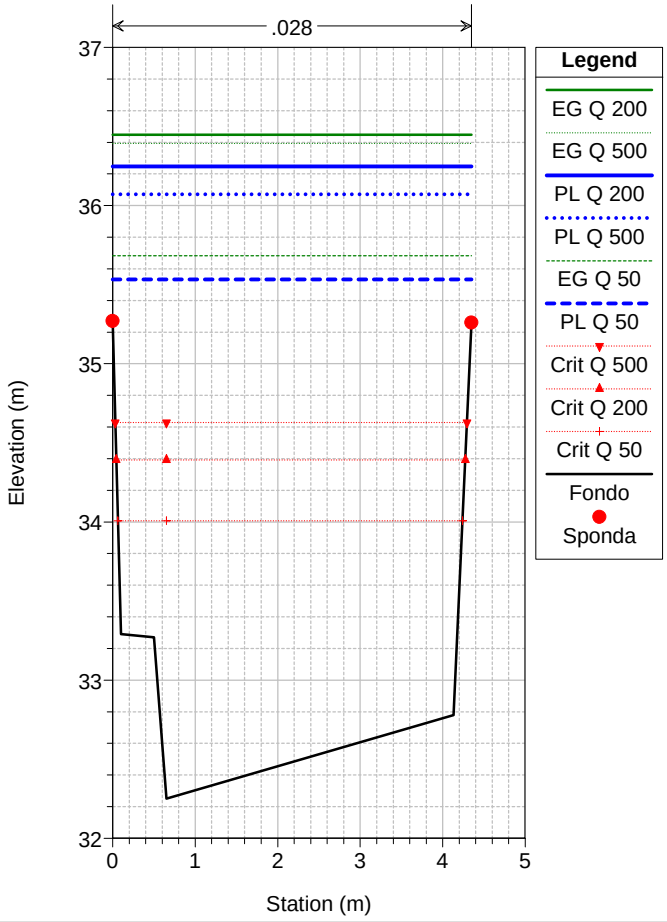
torbella_PdB Plan: PienaRivassa

River = rivassa Reach = unico RIV 4



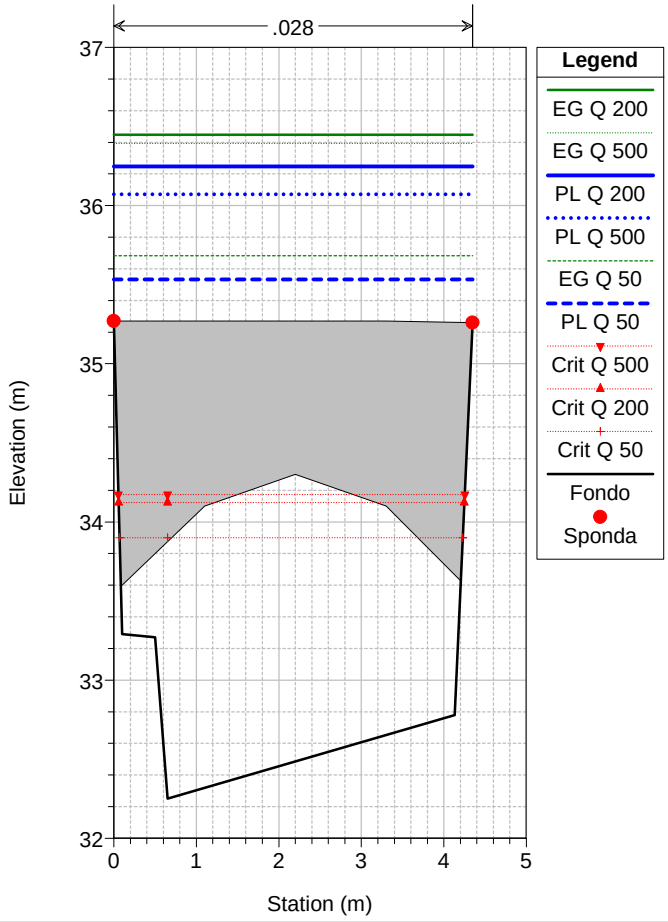
torbella_PdB Plan: PienaRivassa

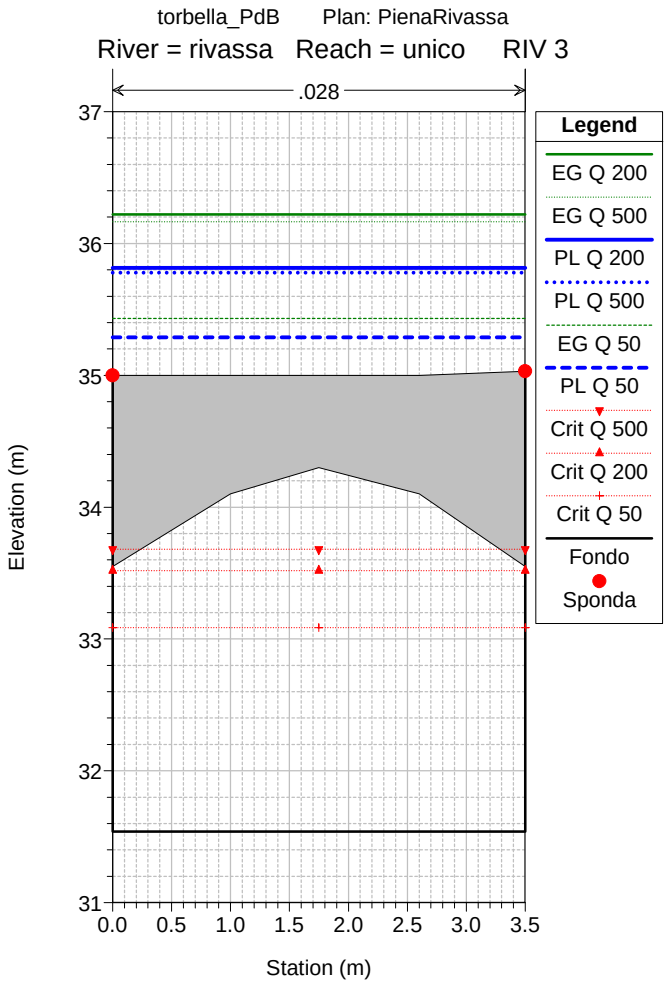
River = rivassa Reach = unico RIV 3

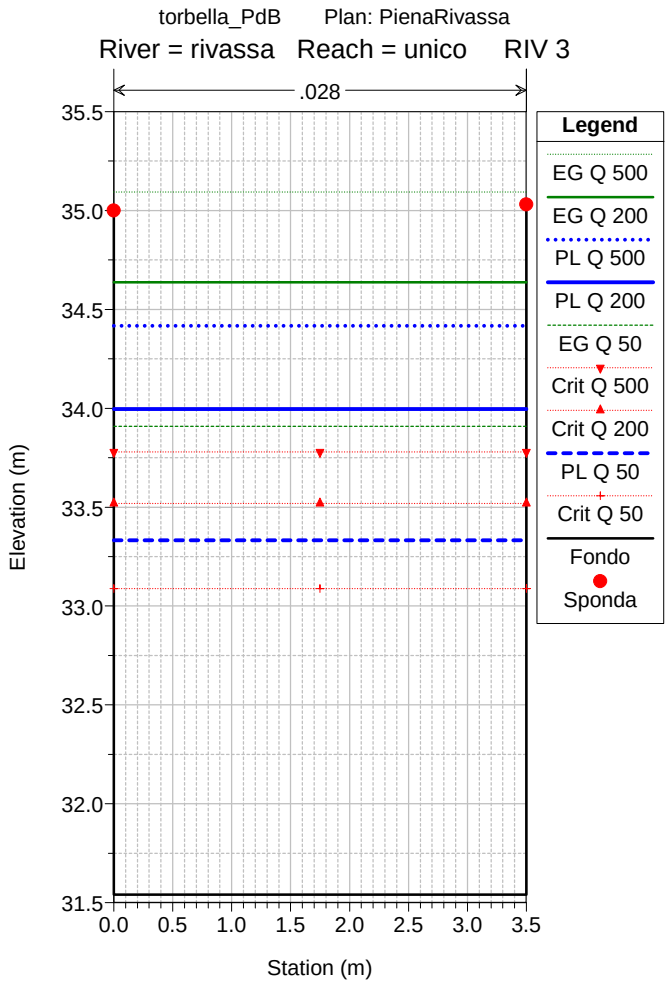


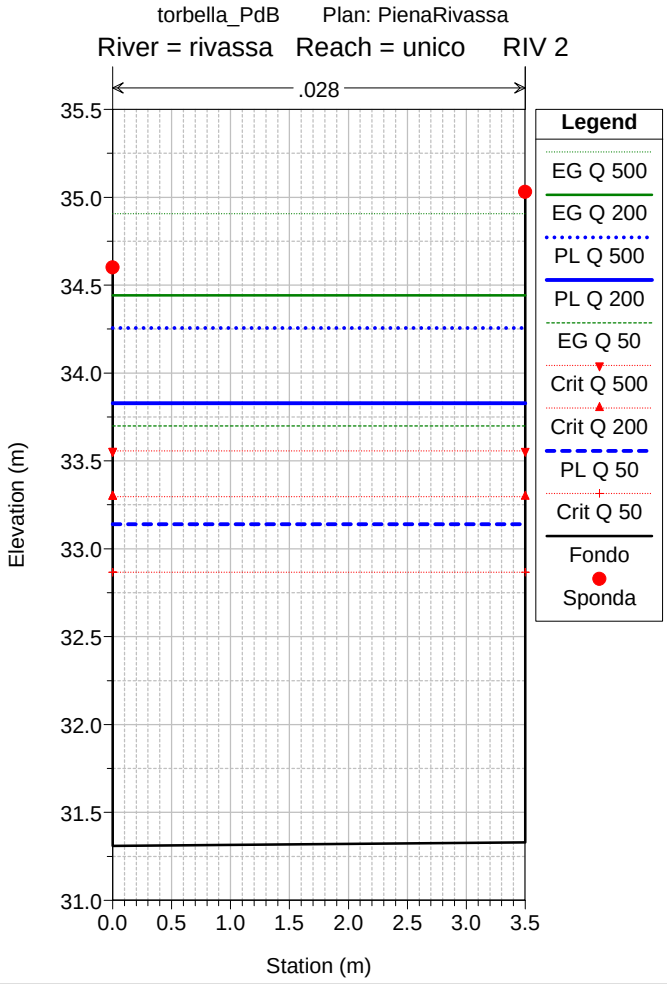
torbella_PdB Plan: PienaRivassa

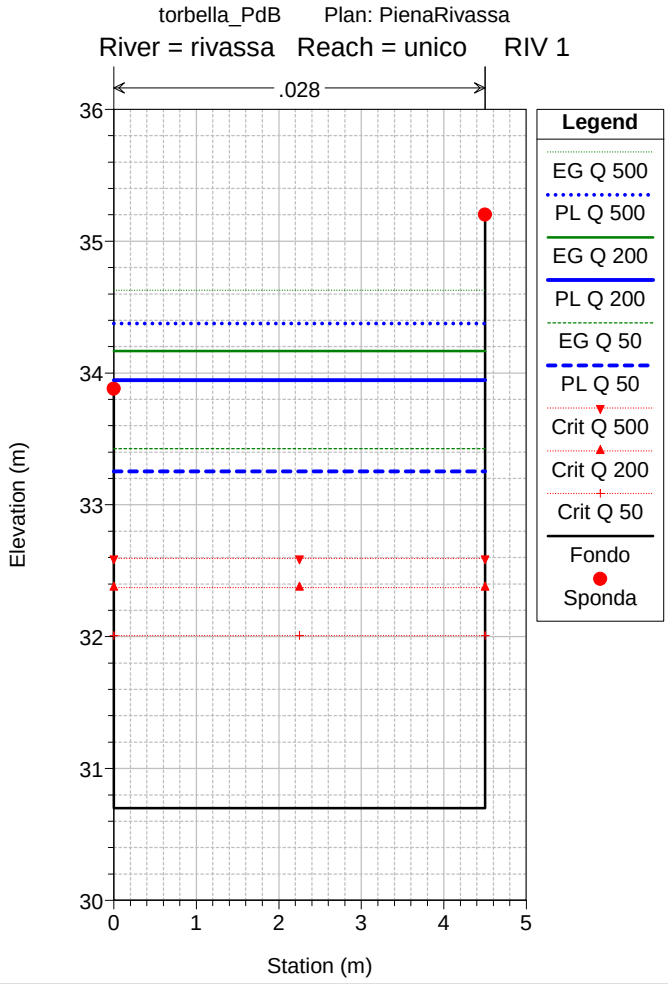
River = rivassa Reach = unico RIV 3




torbella_PdB Plan: PienaRivassa
River = rivassa Reach = unico RIV 3
.028
Legend
EG Q 200
EG Q 500
PL Q 200
PL Q 500
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


torbella_PdB Plan: PienaRivassa
River = rivassa Reach = unico RIV 3
.028
Legend
EG Q 500
EG Q 200
PL Q 500
PL Q 200
EG Q 50
Crit Q 500
Crit Q 200
PL Q 50
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


torbella_PdB Plan: PienaRivassa
River = rivassa Reach = unico RIV 2
.028
Legend
EG Q 500
EG Q 200
PL Q 500
PL Q 200
EG Q 50
Crit Q 500
Crit Q 200
PL Q 50
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


torbella_PdB Plan: PienaRivassa
River = rivassa Reach = unico RIV 1
.028
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)

HEC-RAS Plan: 2_Rivassa River: rivassa Reach: unico

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)	
unico	5 RIV 5	Q 50	21.10	33.95	35.37	38.32	2.95	38.32	2.95	35.37	36.07	0.013962	3.72	5.67	4.00	1.00
unico	5 RIV 5	Q 200	30.50	33.95	36.05	38.32	2.27	38.32	2.27	35.76	36.72	0.010044	3.64	8.39	4.00	0.80
unico	5 RIV 5	Q 500	36.70	33.95	36.00	38.32	2.32	38.32	2.32	36.00	37.02	0.015510	4.48	8.19	4.00	1.00
unico	4 RIV 4	Q 50	21.10	32.62	35.63	36.02	0.39	36.13	0.50	34.17	35.70	0.000611	1.16	18.21	8.50	0.25
unico	4 RIV 4	Q 200	30.50	32.62	36.39	36.02	-0.37	36.13	-0.26	34.47	36.47	0.000544	1.24	24.66	8.50	0.23
unico	4 RIV 4	Q 500	36.70	32.62	36.31	36.02	-0.29	36.13	-0.18	34.64	36.43	0.000853	1.53	23.96	8.50	0.29
unico	3.1 RIV 3	Q 50	21.10	32.25	35.53	35.27	-0.26	35.26	-0.27	34.01	35.68	0.001752	1.72	12.28	4.35	0.33
unico	3.1 RIV 3	Q 200	30.50	32.25	36.25	35.27	-0.98	35.26	-0.99	34.39	36.45	0.002064	1.98	15.38	4.35	0.34
unico	3.1 RIV 3	Q 500	36.70	32.25	36.07	35.27	-0.80	35.26	-0.81	34.63	36.39	0.003397	2.51	14.62	4.35	0.44
unico	3 RIV 3		Bridge													
unico	2.9 RIV 3	Q 50	21.10	31.54	33.33	35.00	1.67	35.03	1.70	33.09	33.91	0.010425	3.36	6.27	3.50	0.80
unico	2.9 RIV 3	Q 200	30.50	31.54	34.00	35.00	1.00	35.03	1.03	33.52	34.64	0.009591	3.55	8.60	3.50	0.72
unico	2.9 RIV 3	Q 500	36.70	31.54	34.42	35.00	0.58	35.03	0.61	33.78	35.09	0.009302	3.64	10.07	3.50	0.69
unico	2 RIV 2	Q 50	21.10	31.31	33.14	34.60	1.46	35.03	1.89	32.87	33.70	0.010012	3.31	6.37	3.50	0.78
unico	2 RIV 2	Q 200	30.50	31.31	33.83	34.60	0.77	35.03	1.20	33.30	34.44	0.009095	3.48	8.78	3.50	0.70
unico	2 RIV 2	Q 500	36.70	31.31	34.26	34.60	0.34	35.03	0.77	33.56	34.91	0.008842	3.57	10.28	3.50	0.67
unico	1 RIV 1	Q 50	21.10	30.70	33.25	33.88	0.63	35.20	1.95	32.01	33.43	0.002081	1.84	11.49	4.50	0.37
unico	1 RIV 1	Q 200	30.50	30.70	33.95	33.88	-0.07	35.20	1.25	32.37	34.17	0.002341	2.09	14.60	4.50	0.37
unico	1 RIV 1	Q 500	36.70	30.70	34.38	33.88	-0.50	35.20	0.82	32.59	34.63	0.002473	2.22	16.54	4.50	0.37

4 TORRENTE FEGINO

4.1 Rio Burlo

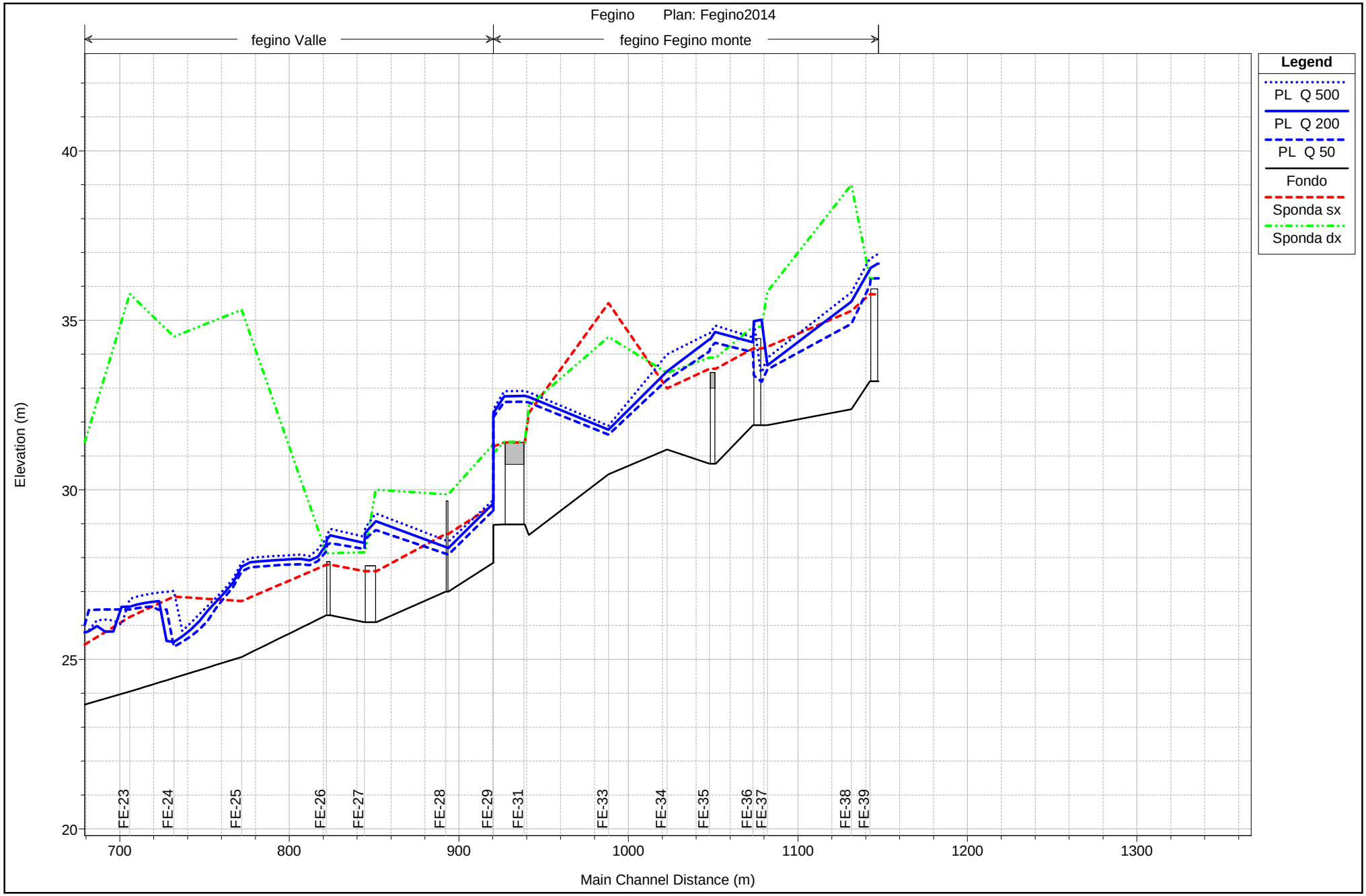
TORRENTE FEGINO

Il torrente Fegino è stato indagato in un unico tratto da monte della confluenza con il rio Burlo fino alla confluenza nel t. Polcevera. Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 35 $m^{1/3}/s$. Come condizioni al contorno di monte è stata imposta la profondità critica, a valle è stata simulata la confluenza nel torrente Polcevera.

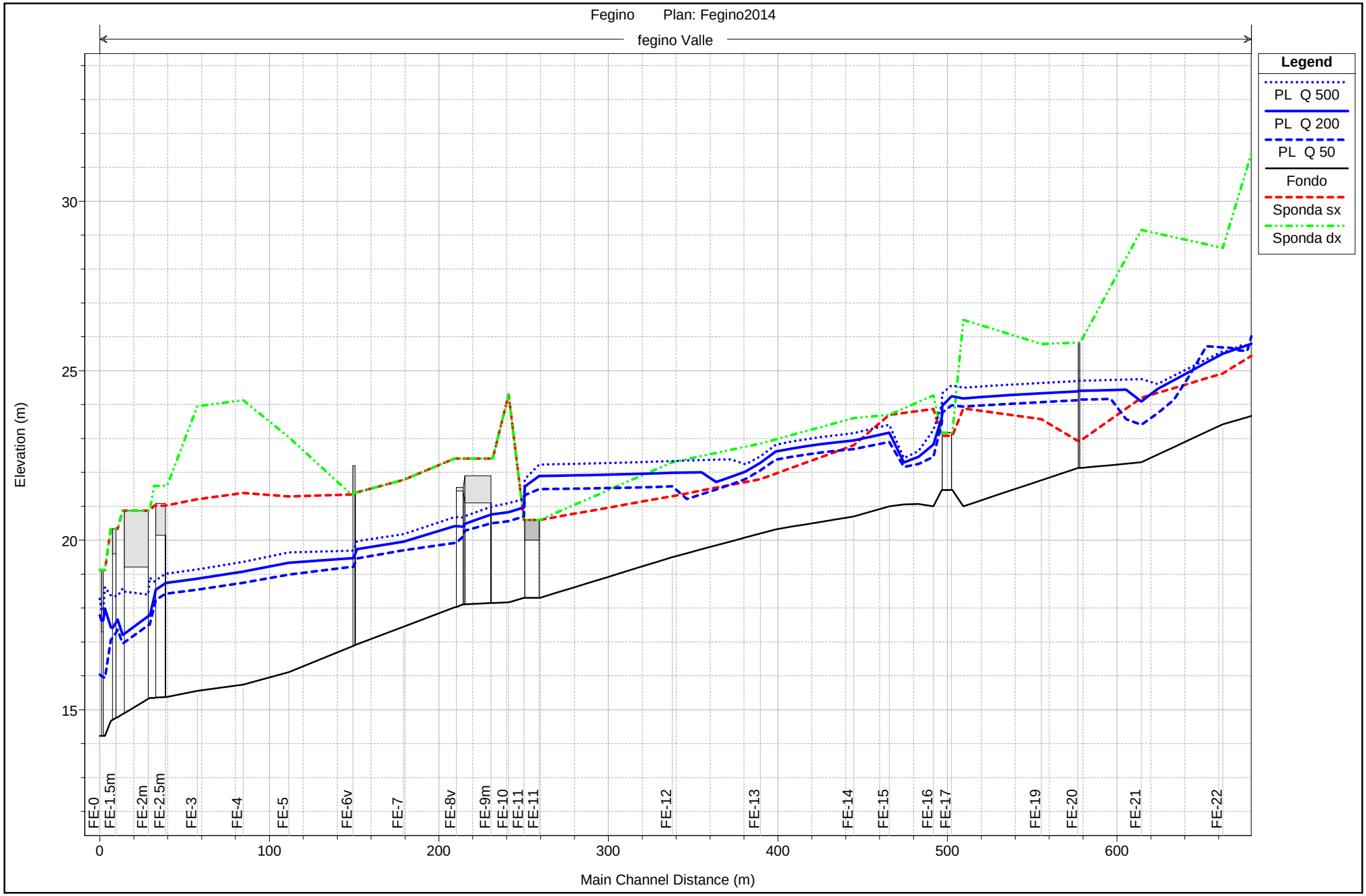
Le sezioni del tratto finale che attraversa lo stabilimento Ansaldo sono state aggiornate sulla base del rilievo as-built a seguito dei lavori di sistemazione effettuati.

Le portate utilizzate per la verifica sono le seguenti:

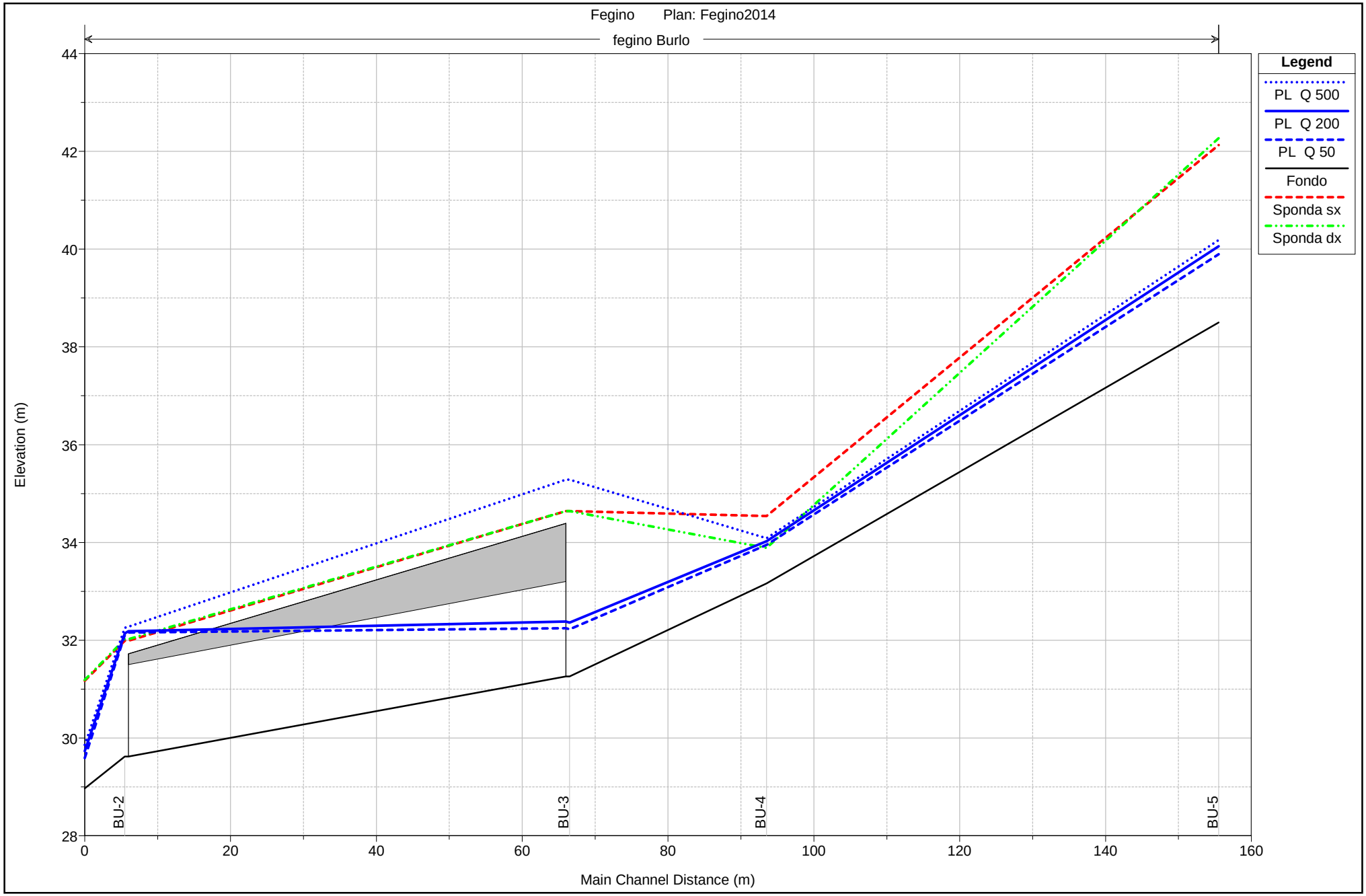
TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
		T = 50 anni	**T = 200 anni**	**T = 500 anni**
T. Fegino (monte Burlo)	FEG1	33.7	48.8	58.7
T. Fegino (confluenza)	FEG2	52.6	76.1	91.5
T. Polcevera (monte)	diff.	1209	1542	1750
T. Polcevera (valle)	PoFeTo	1377	1763	2006



1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m

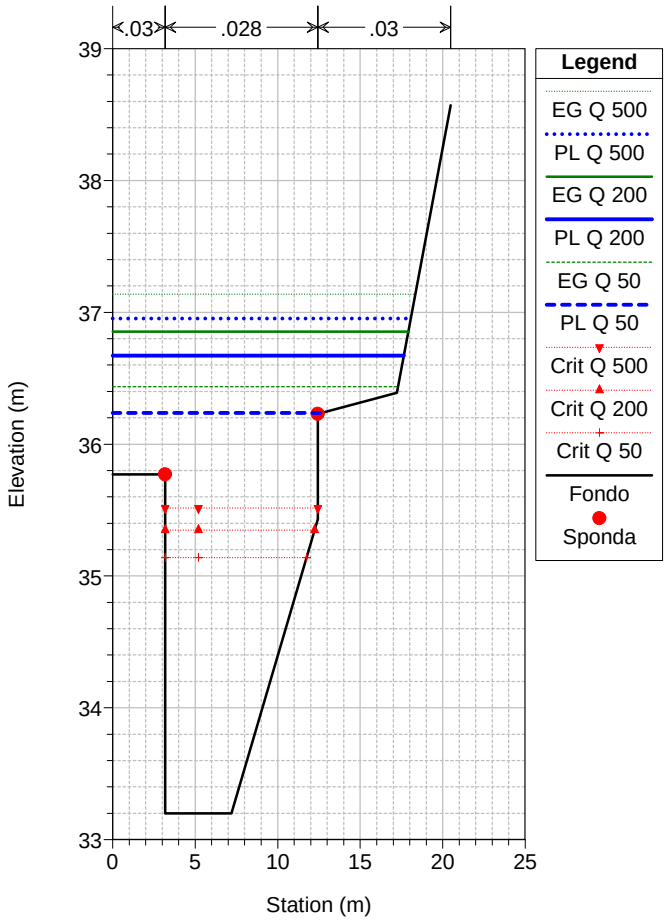


1 cm Horiz. = 30 m 1 cm Vert. = 1.5 m


Fegino Plan: Fegino2014
fegino Burlo
Legend
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
BU-2
BU-3
BU-4
BU-5
44
42
40
38
36
34
32
30
28
0
20
40
60
80
100
120
140
160

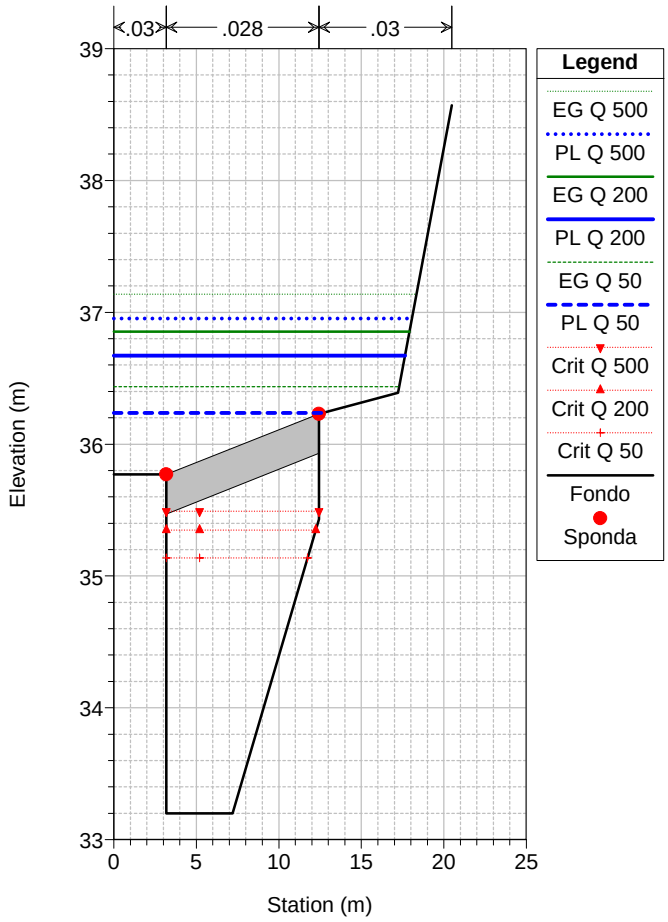
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-39



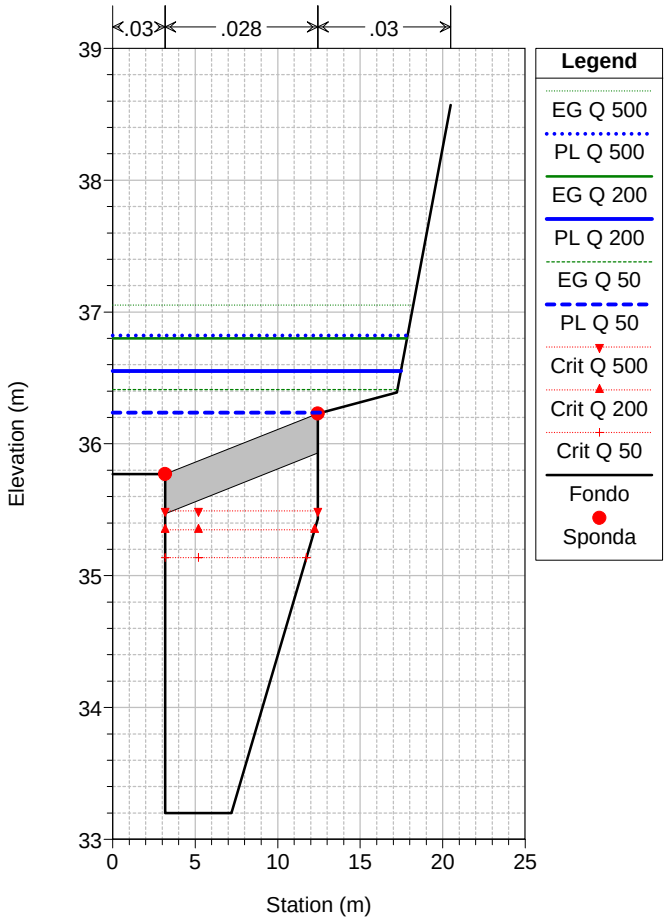
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-39



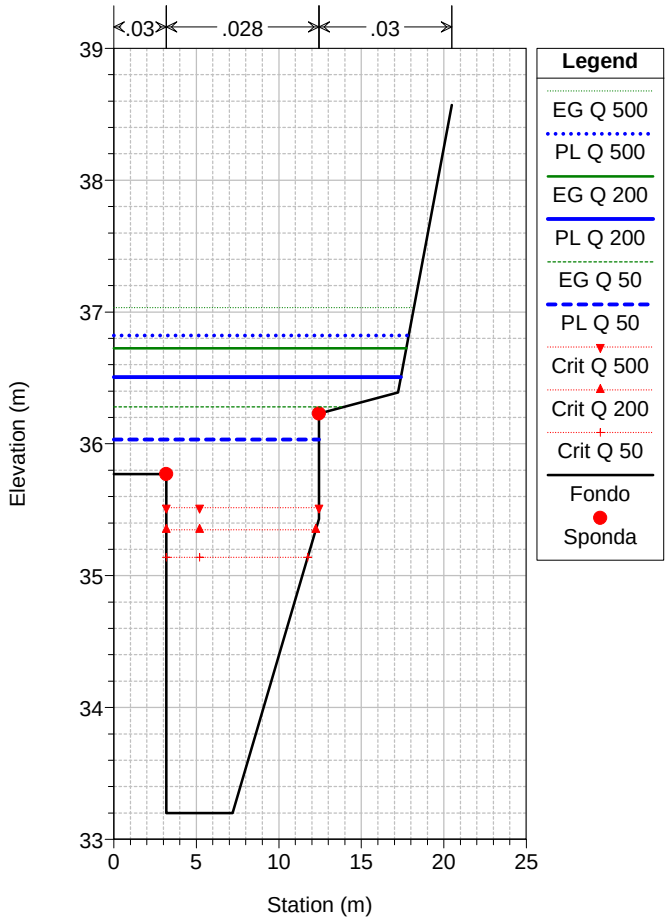
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-39



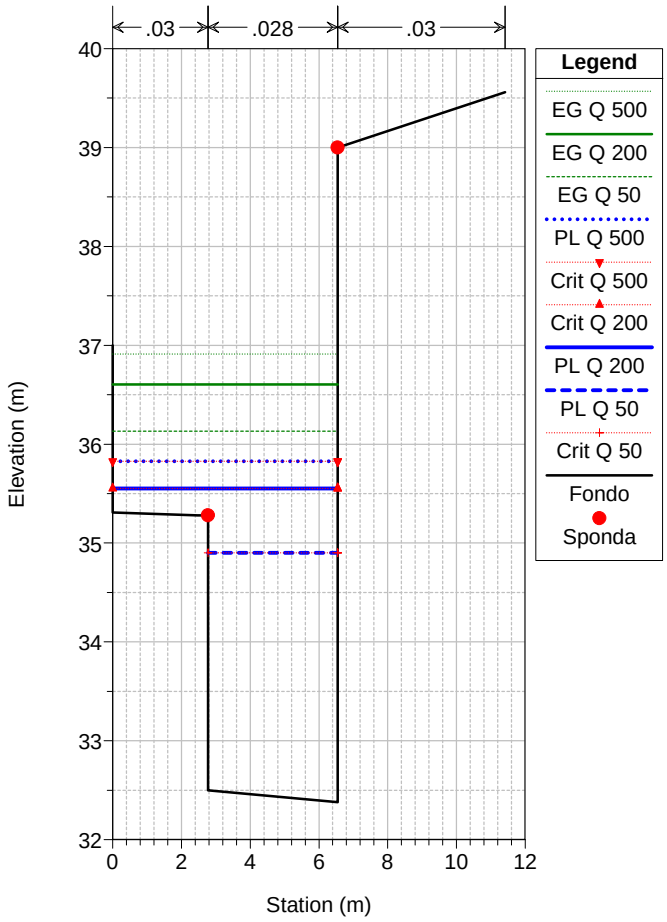
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-39



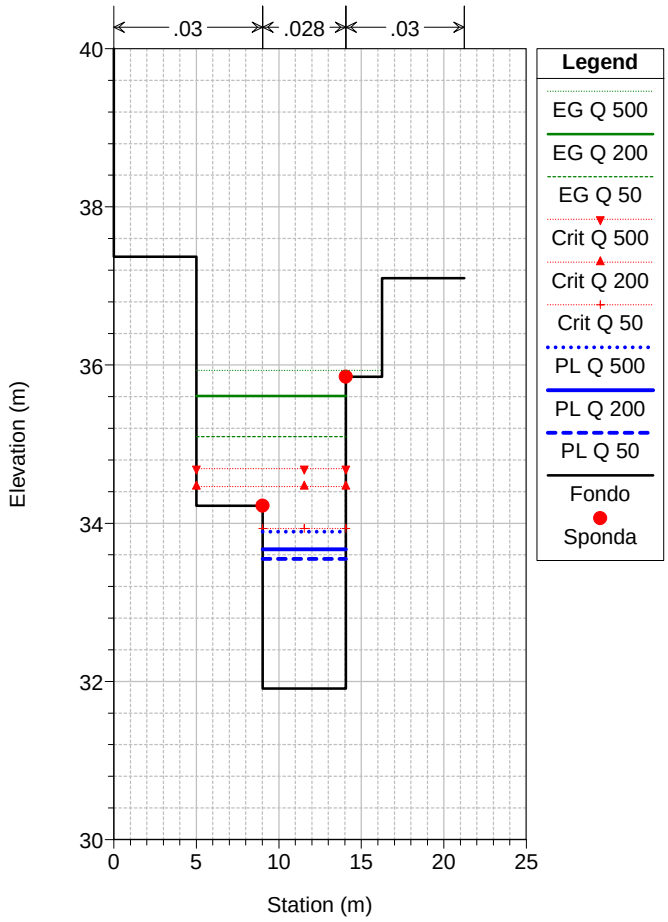
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-38



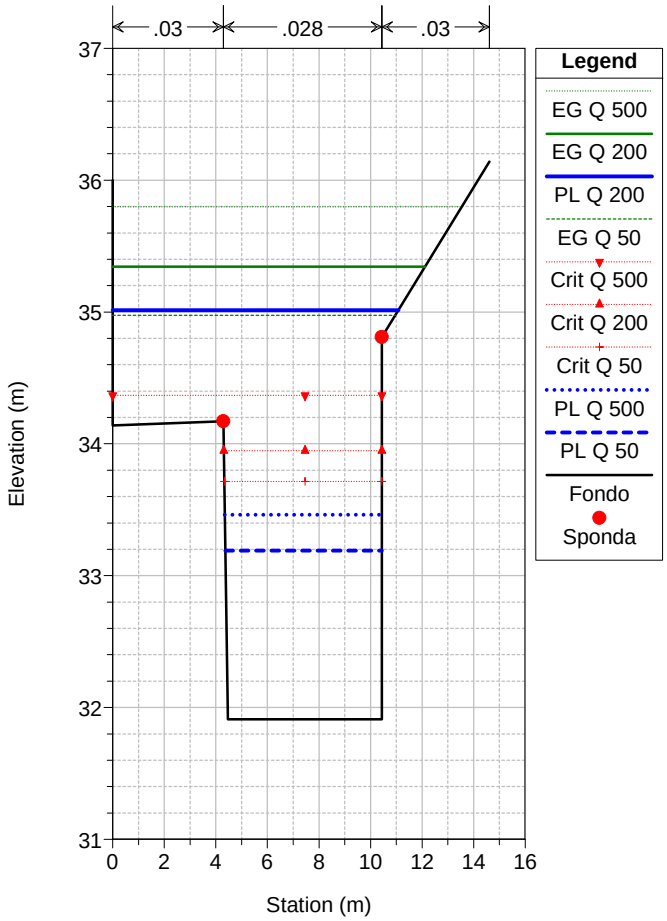
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-37



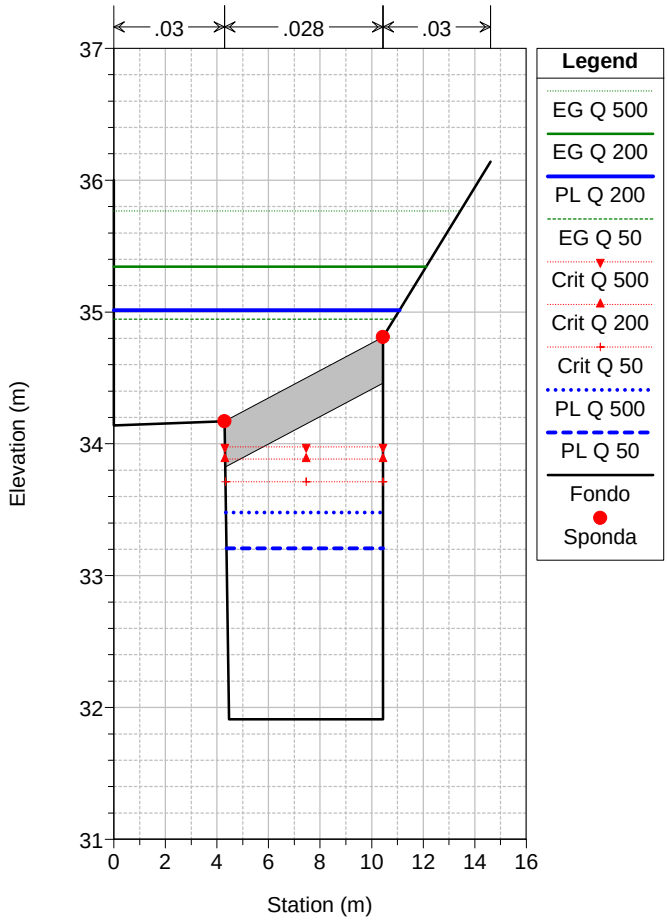
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-36



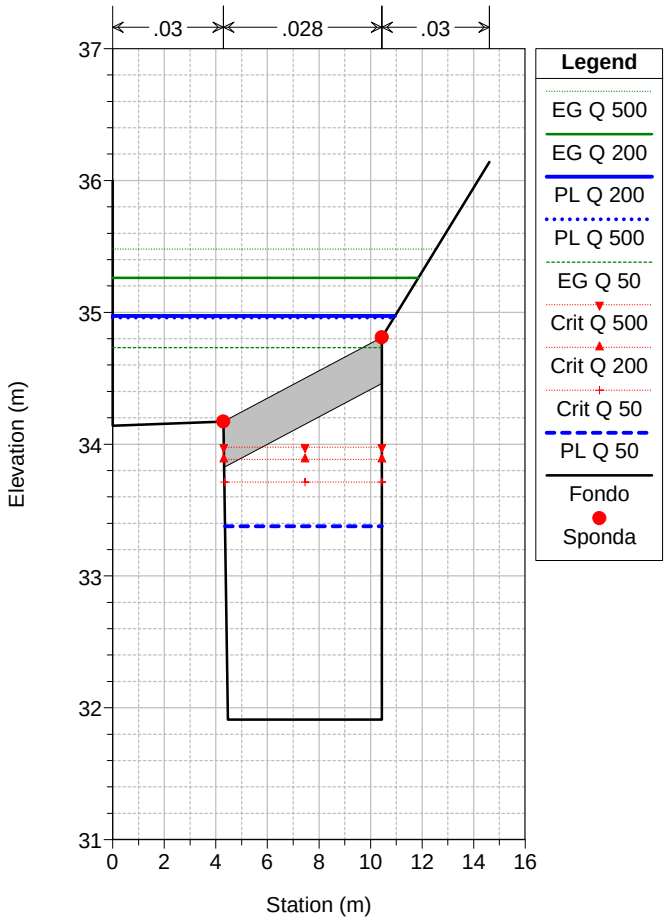
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-36



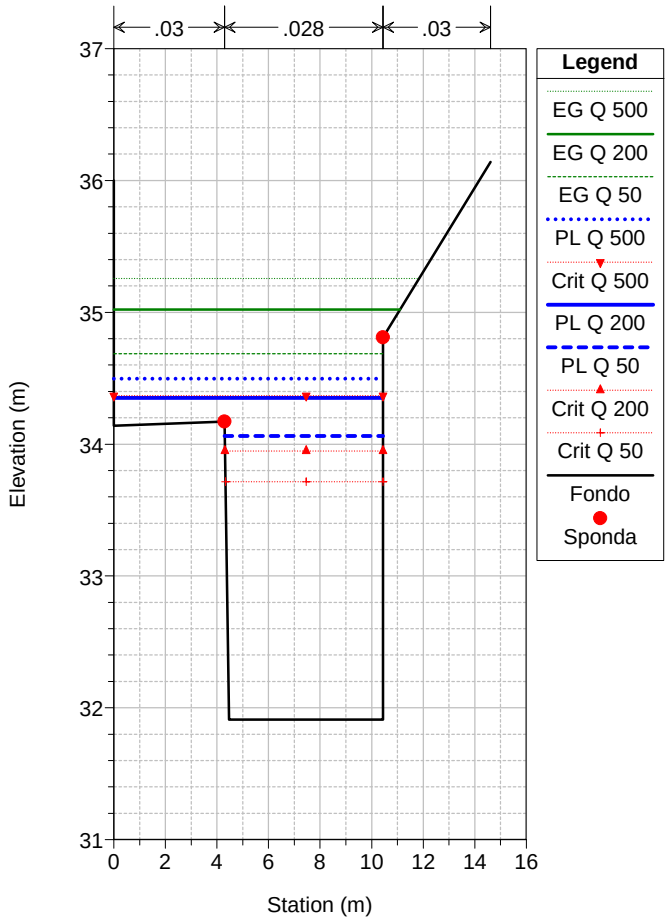
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-36



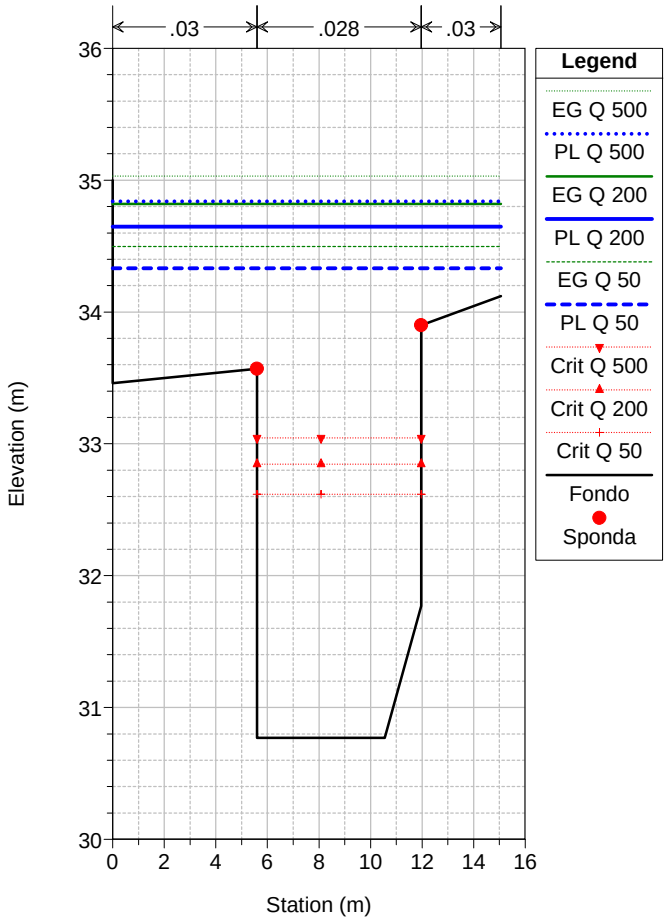
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-36



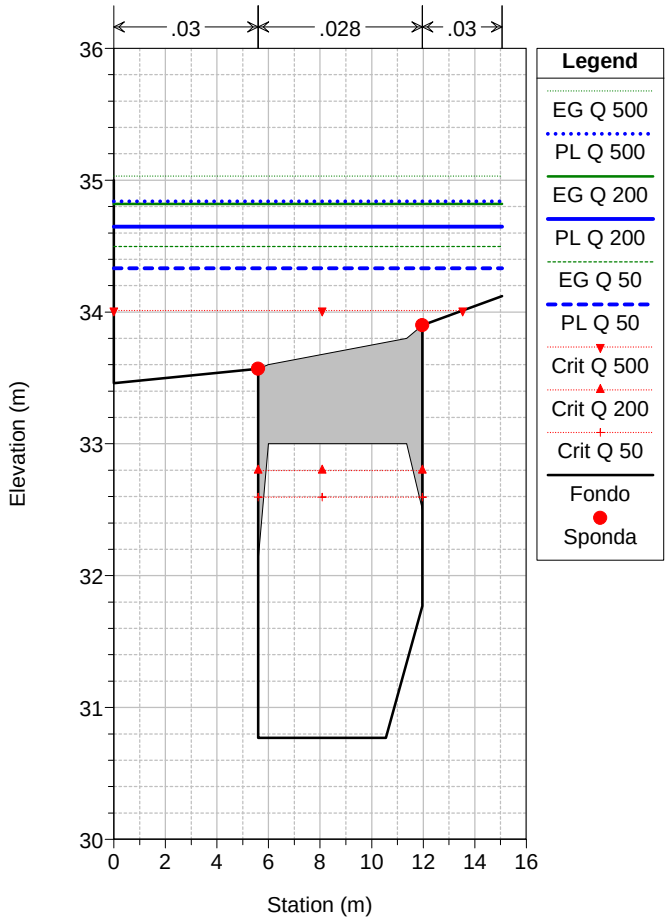
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-35



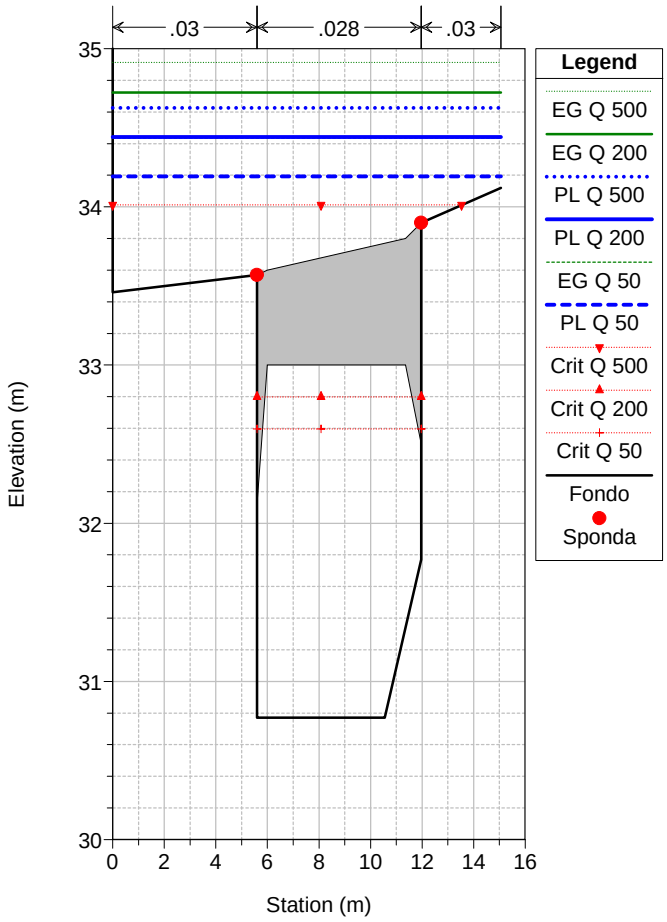
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-35



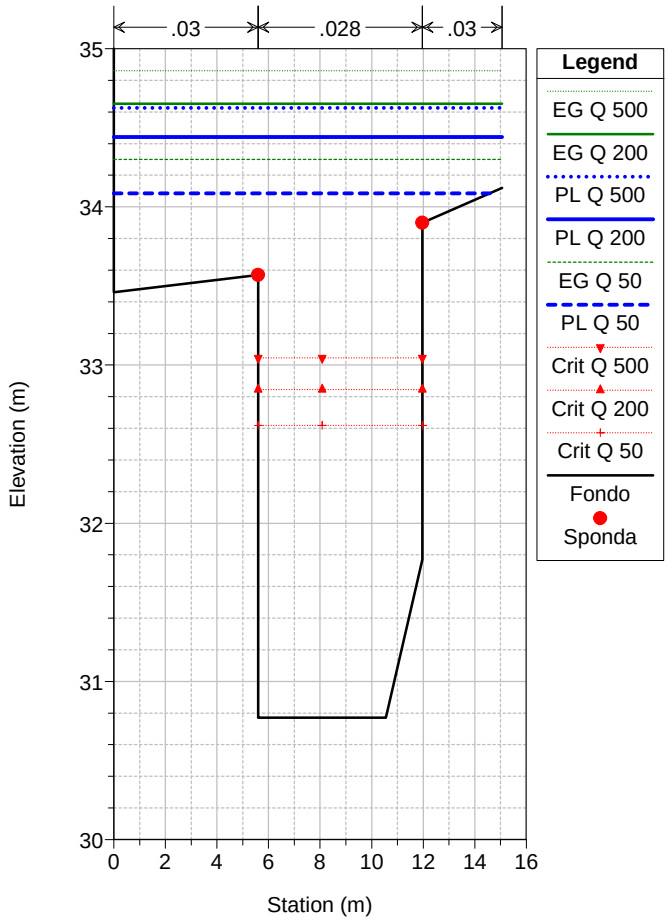
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-35



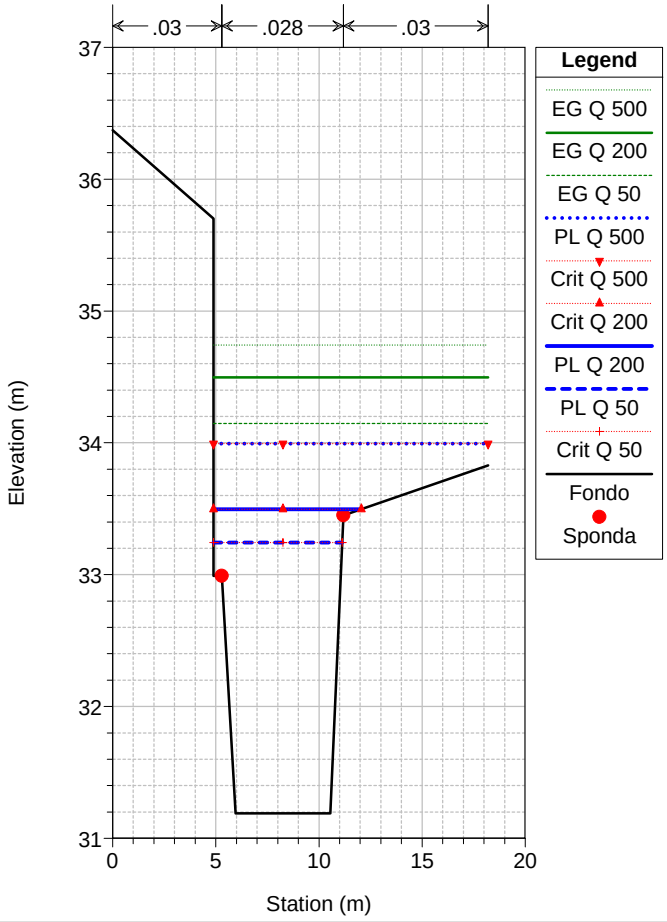
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-35



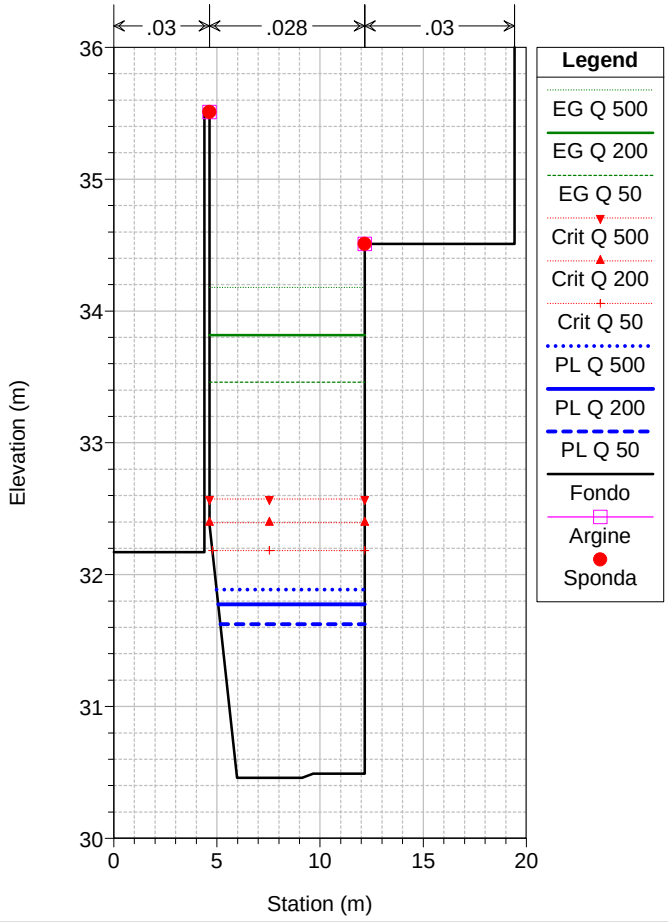
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-34



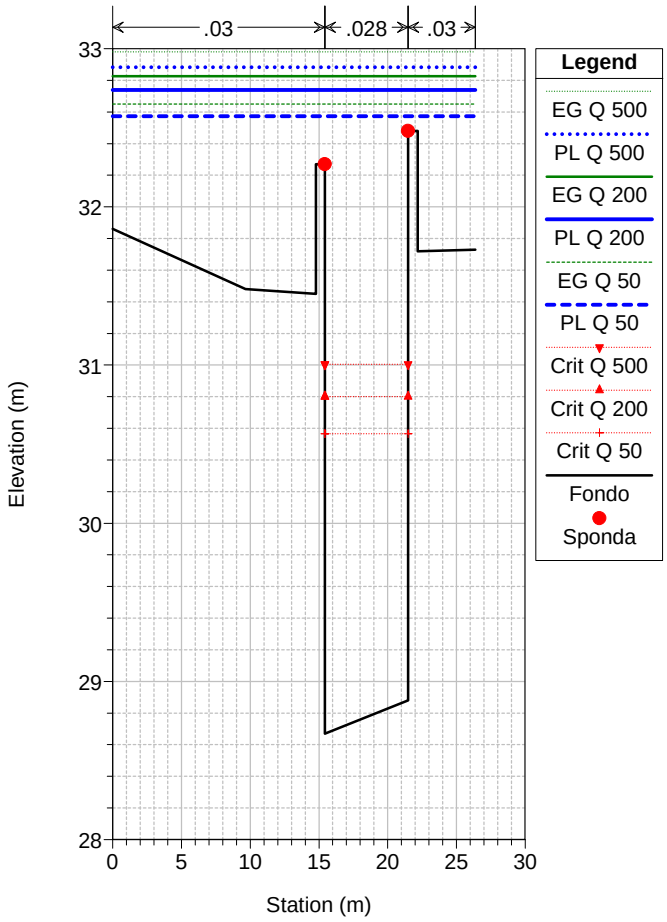
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-33



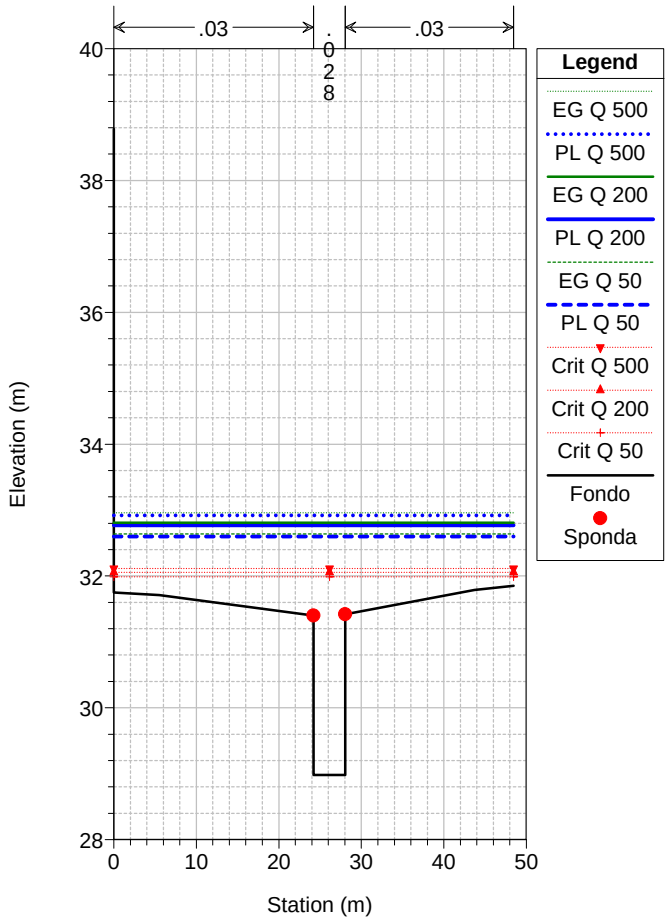
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-32



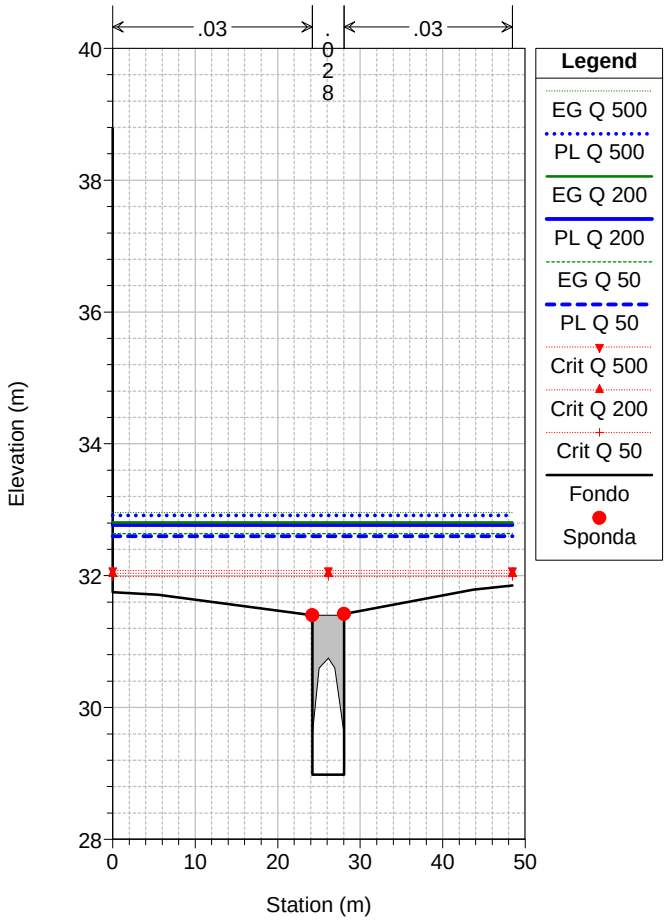
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-31



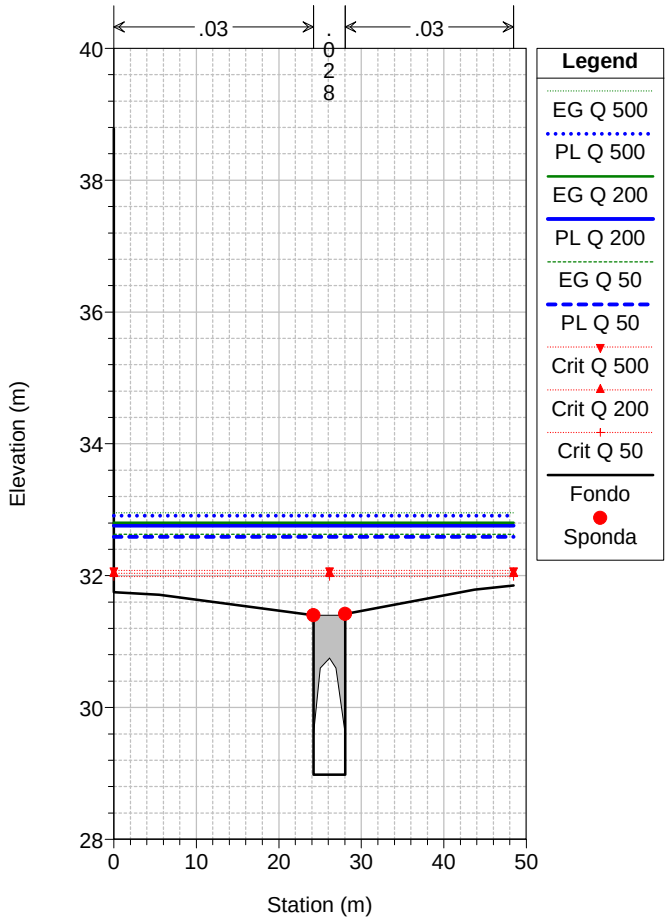
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-31



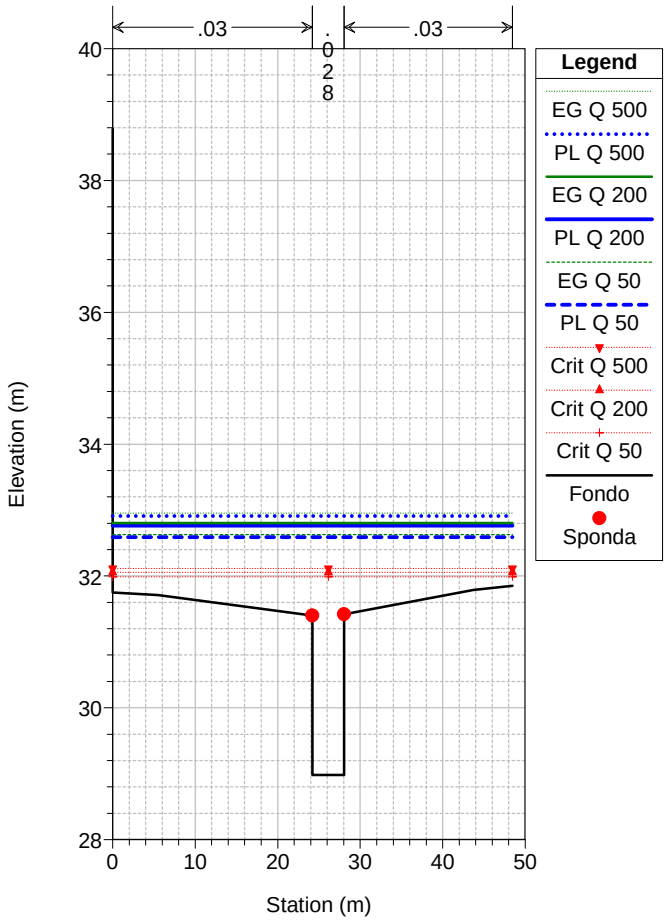
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-31



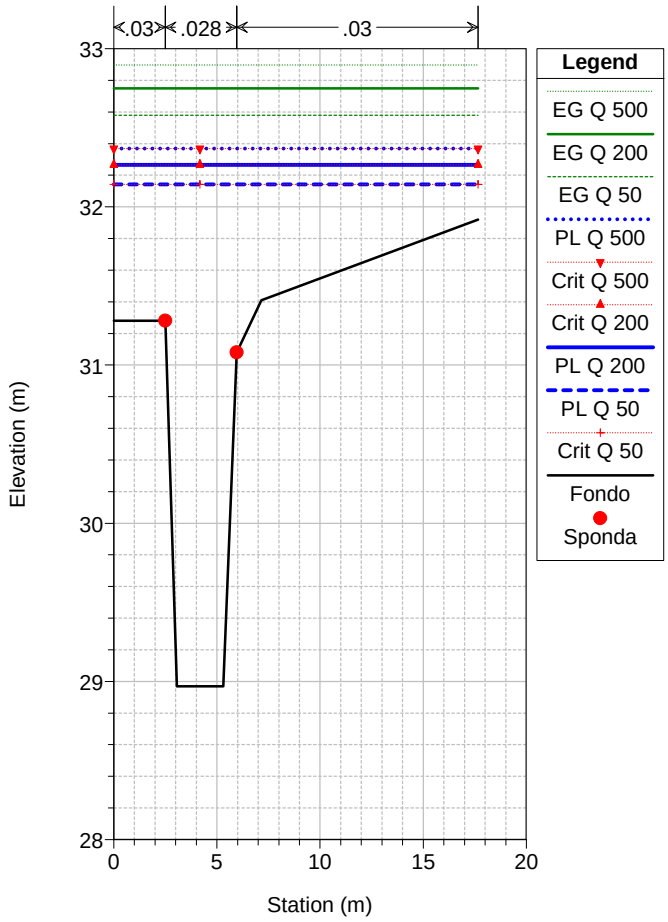
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-31



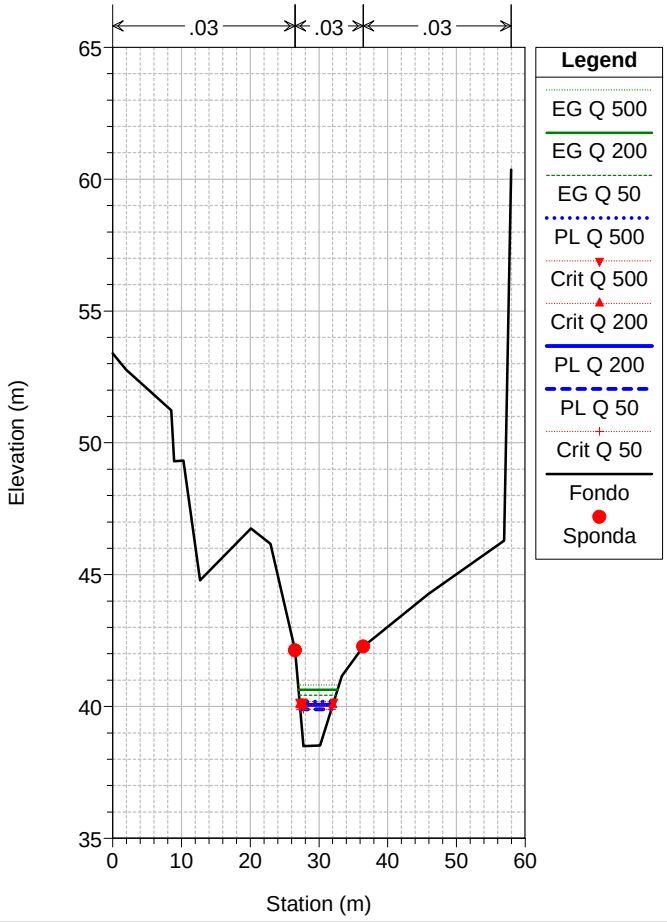
Fegino Plan: Fegino2014

River = fegino Reach = Fegino monte FE-30



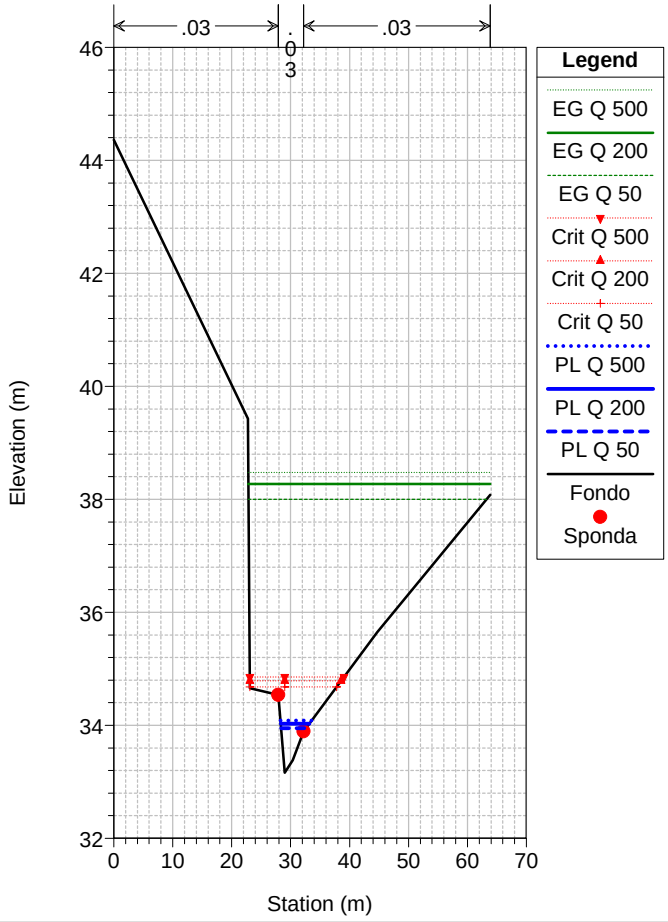
Fegino Plan: Fegino2014

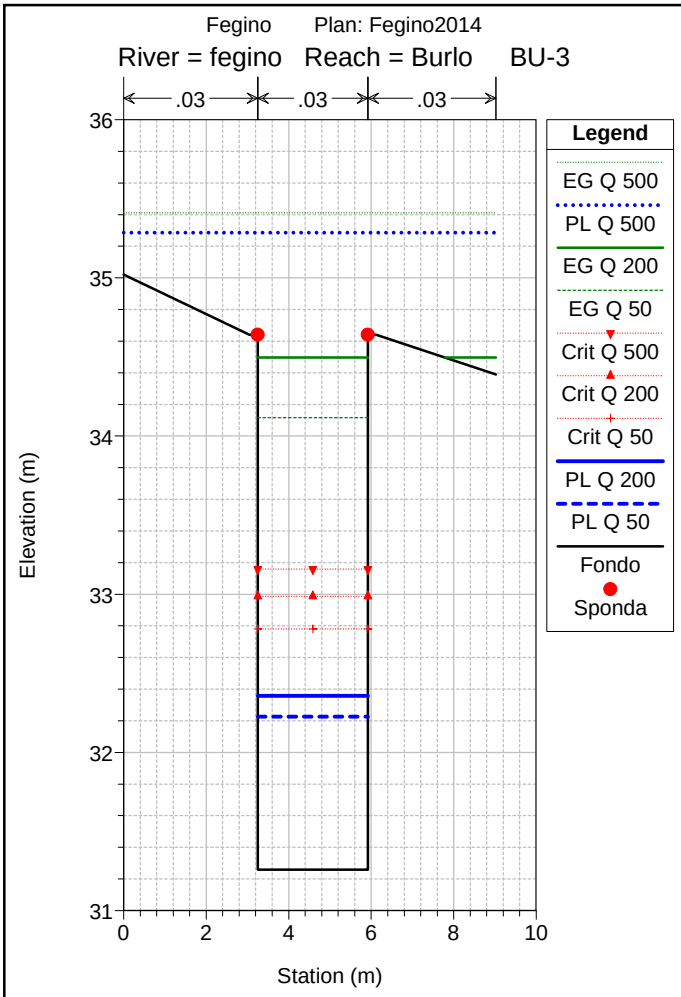
River = fegino Reach = Burlo BU-5

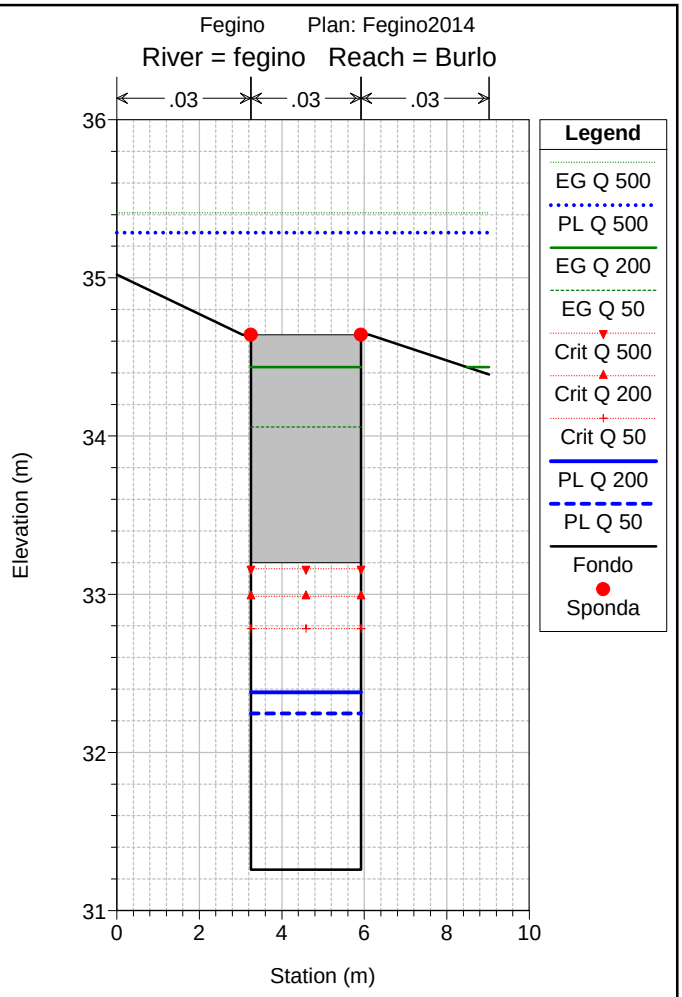


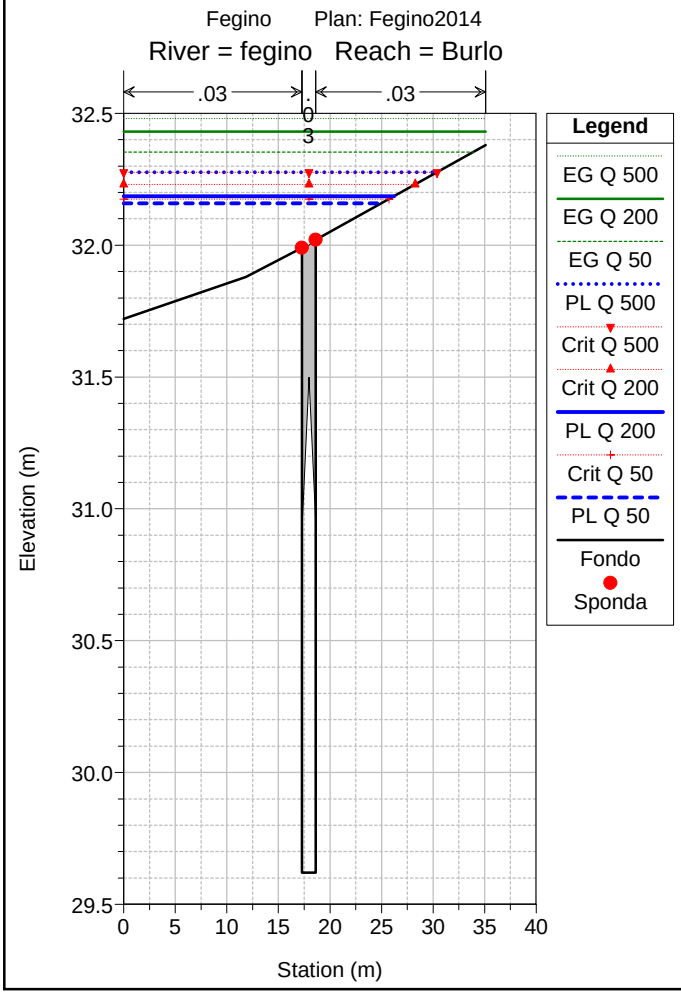
Fegino Plan: Fegino2014

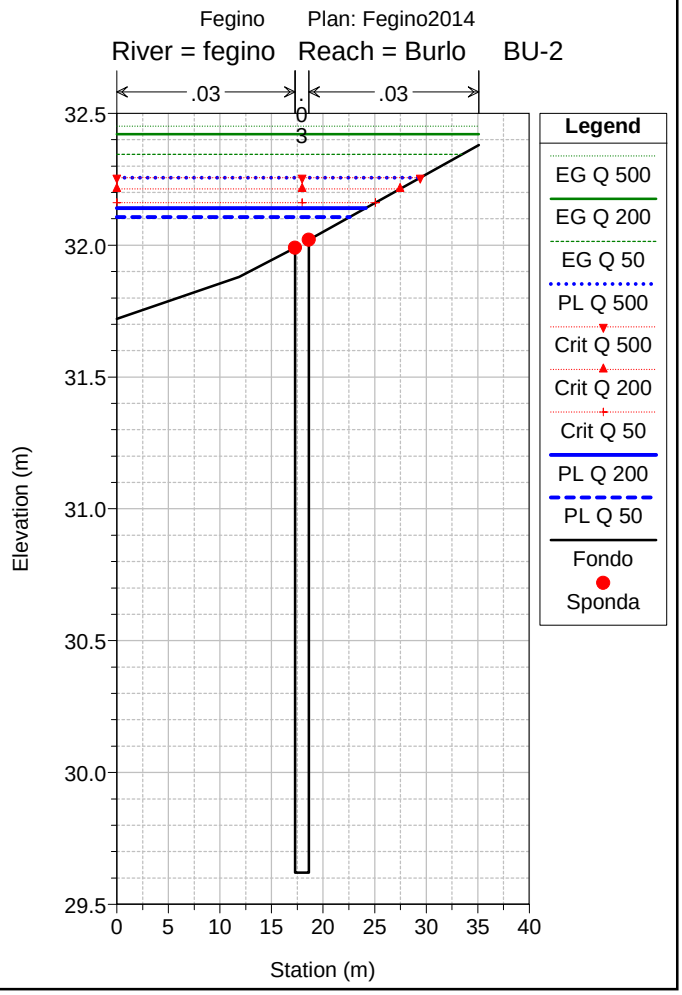
River = fegino Reach = Burlo BU-4

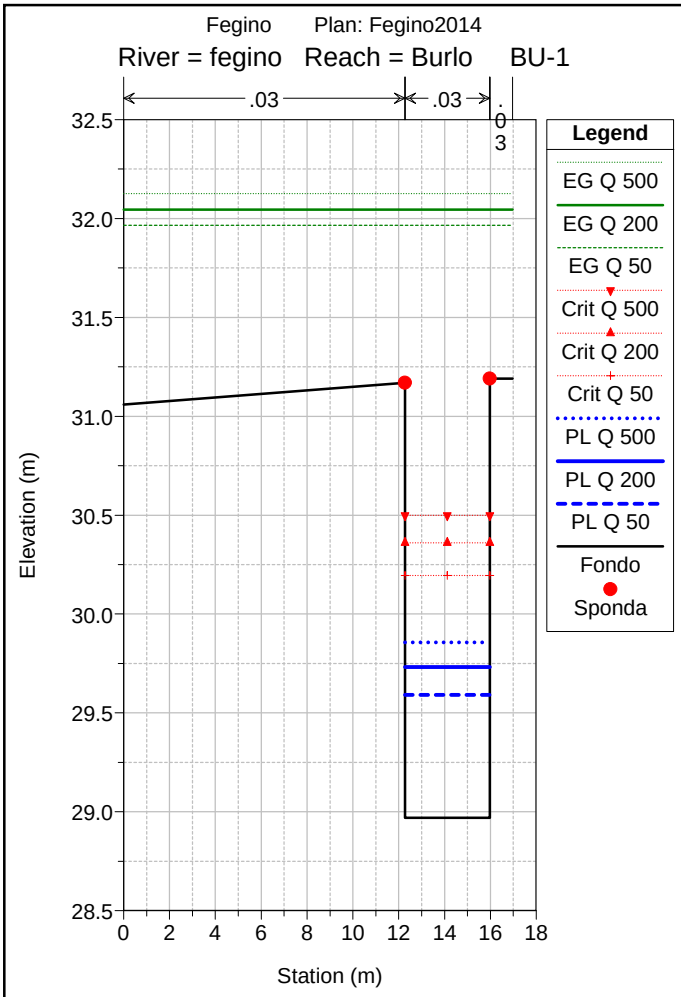


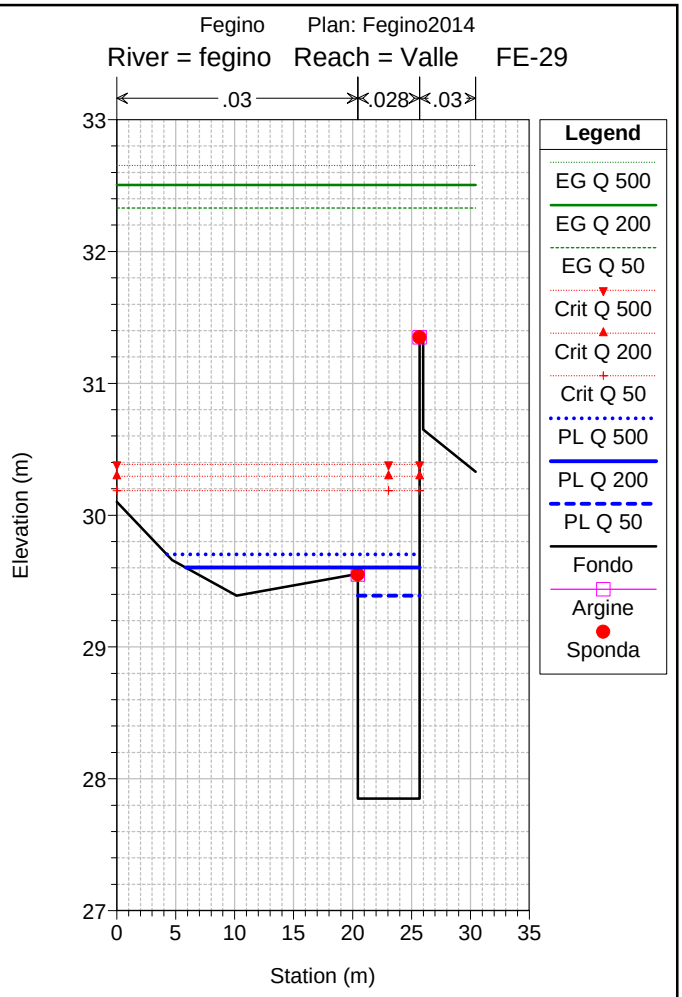

Fegino Plan: Fegino2014
River = fegino Reach = Burlo BU-3
.03 .03 .03
Legend
EG Q 500
PL Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)

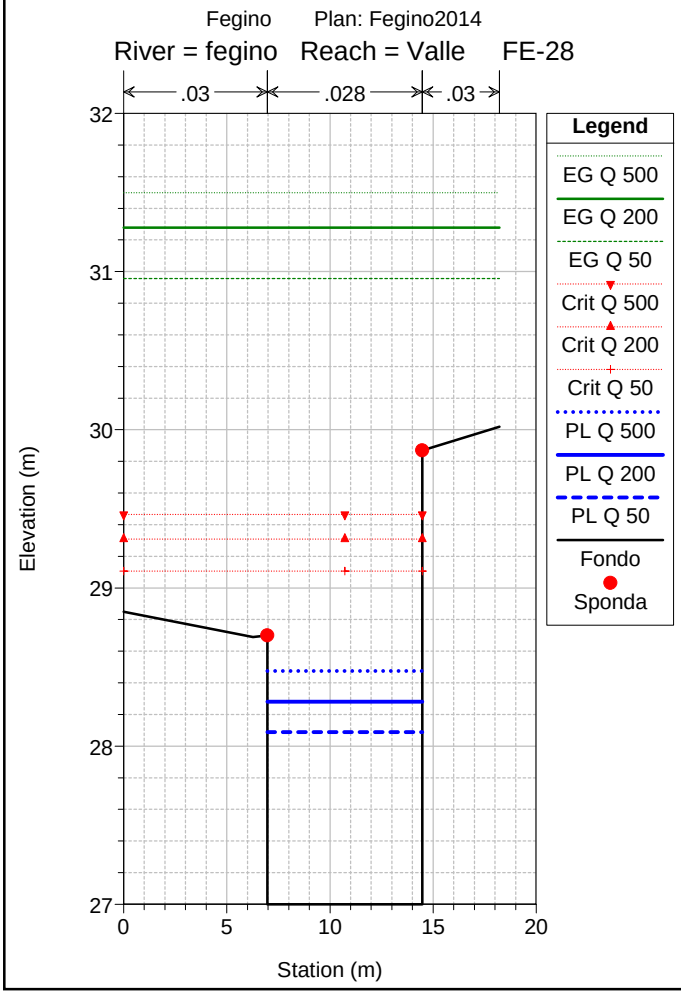

Fegino Plan: Fegino2014
River = fegino Reach = Burlo
.03 .03 .03
Legend
EG Q 500
PL Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)

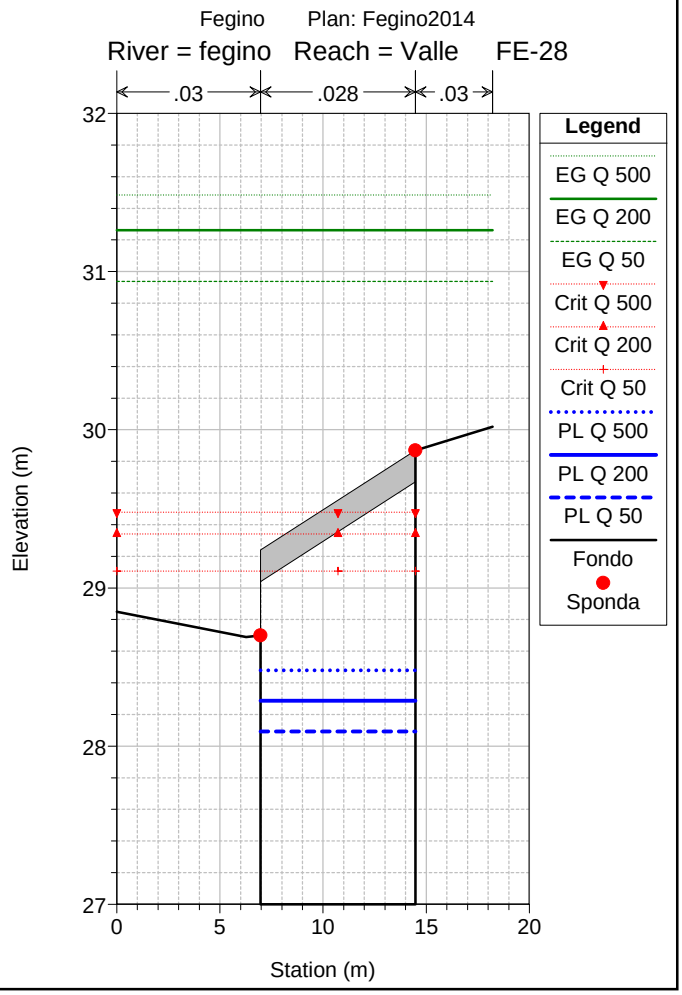

Fegino Plan: Fegino2014
River = fegino Reach = Burlo
.03 .03
Legend
EG Q 500
EG Q 200
EG Q 50
PL Q 500
Crit Q 500
Crit Q 200
PL Q 200
Crit Q 50
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)

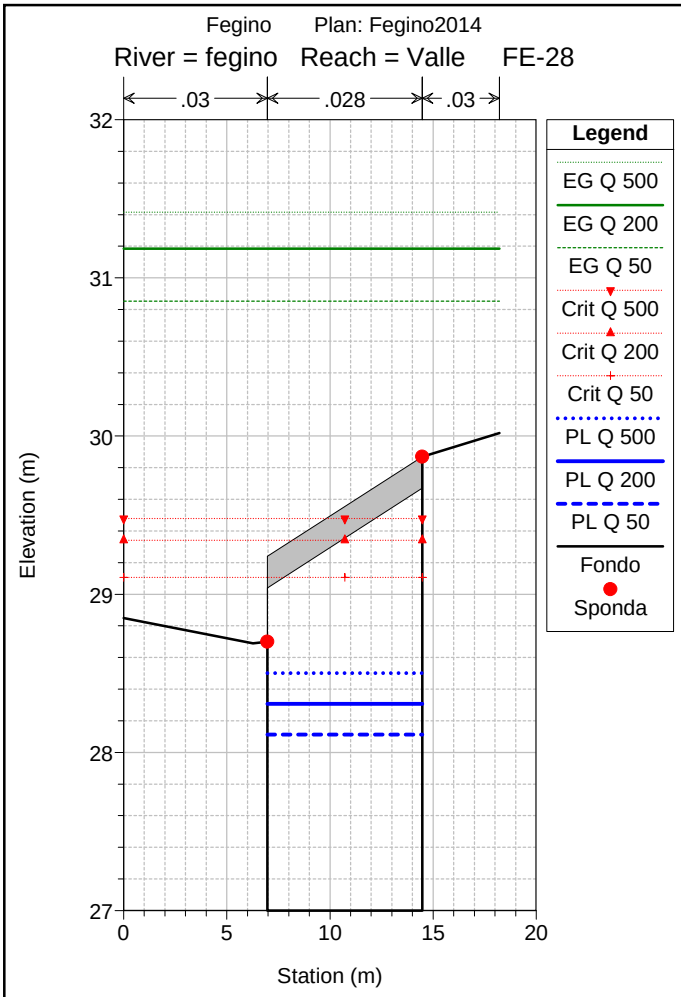

Fegino Plan: Fegino2014
River = fegino Reach = Burlo BU-2
.03 .03
Legend
EG Q 500
EG Q 200
EG Q 50
PL Q 500
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)

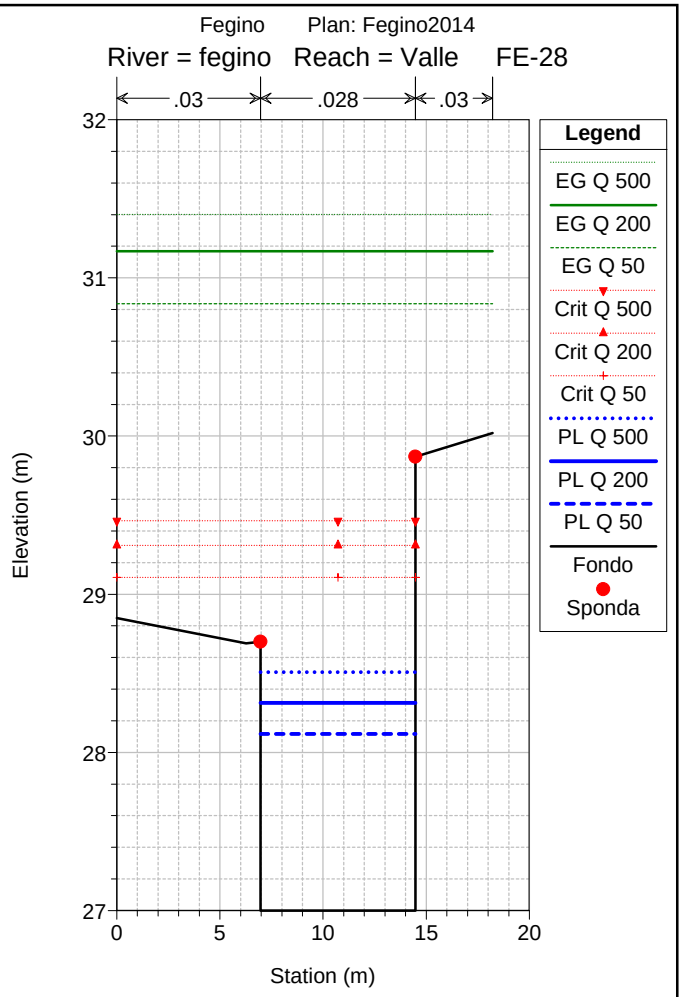

Fegino Plan: Fegino2014
River = fegino Reach = Burlo BU-1
.03
.03
.03
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)

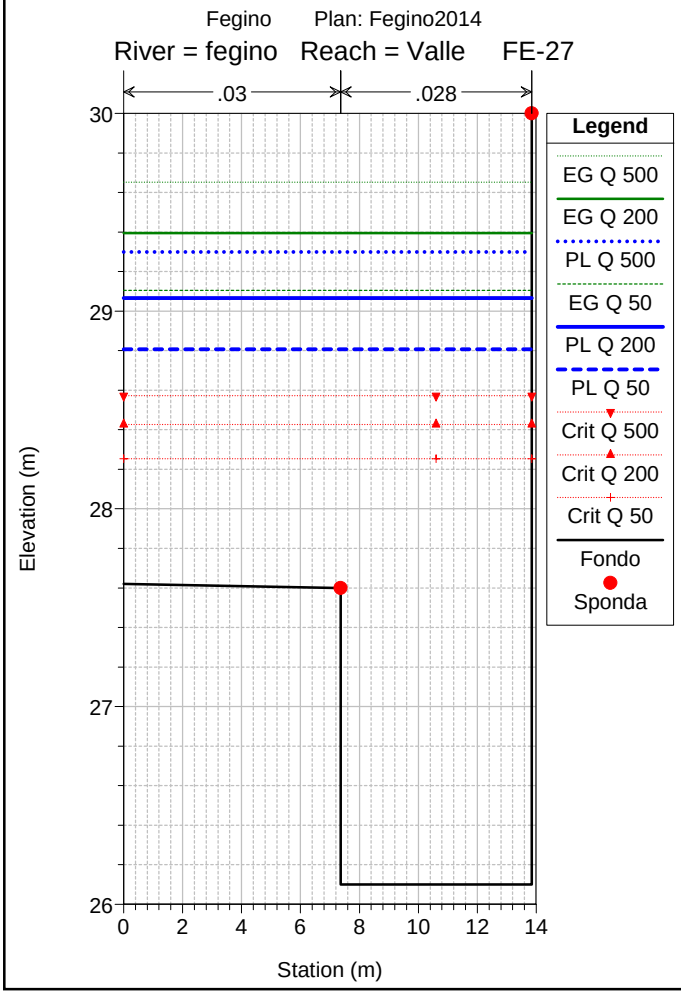

Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-29
.03
.028
.03
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

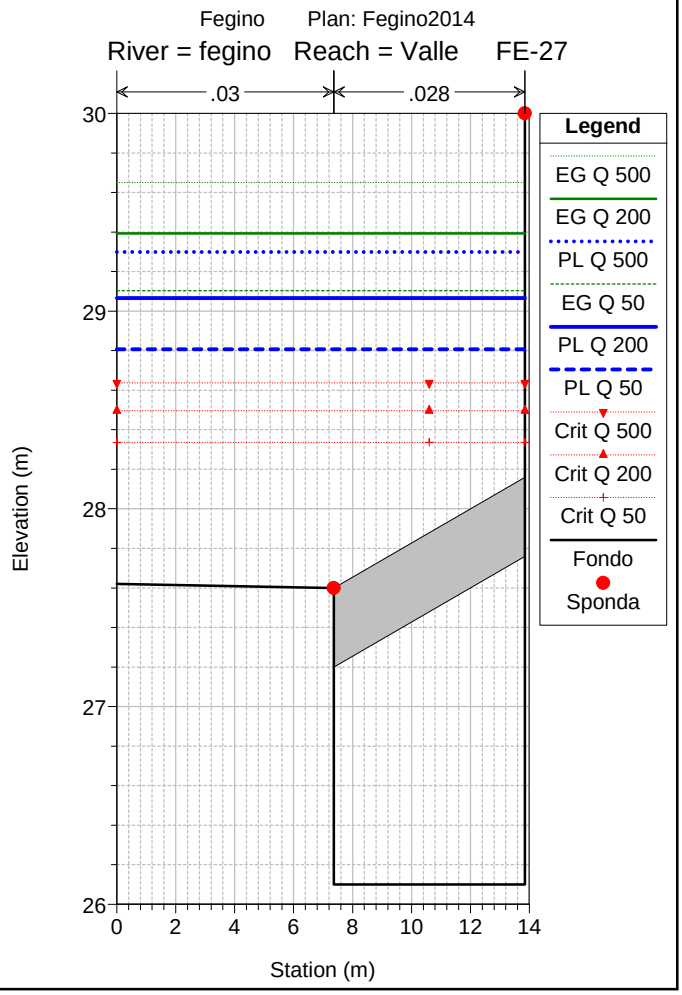

Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-28
.03
.028
.03
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-28
.03
.028
.03
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-28
.03
.028
.03
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)

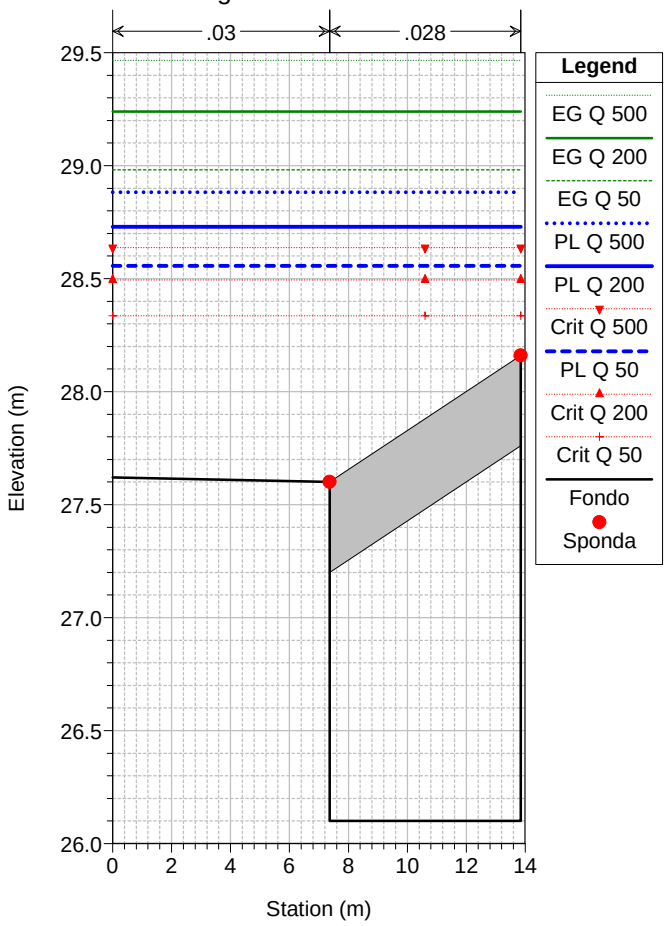

Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-28
.03
.028
.03
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-27
.03
.028
Legend
EG Q 500
EG Q 200
PL Q 500
EG Q 50
PL Q 200
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-27
.03
.028
Legend
EG Q 500
EG Q 200
PL Q 500
EG Q 50
PL Q 200
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)

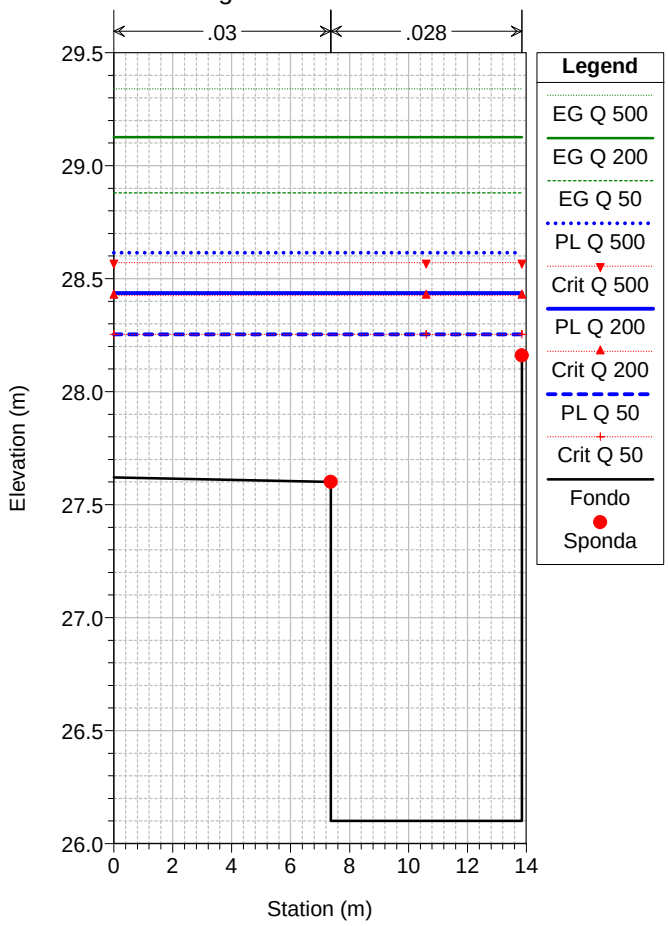
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-27



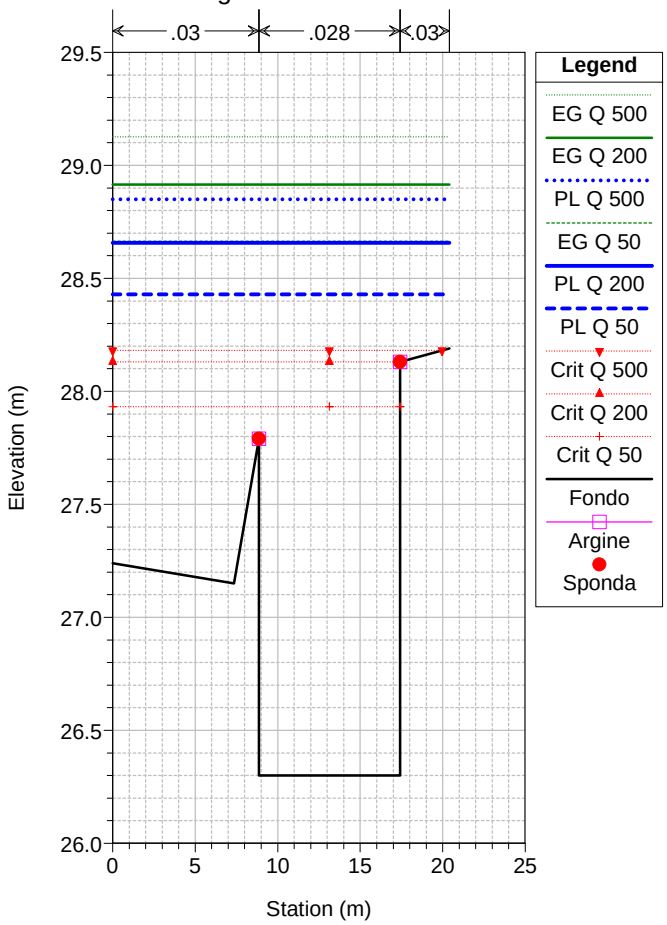
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-27



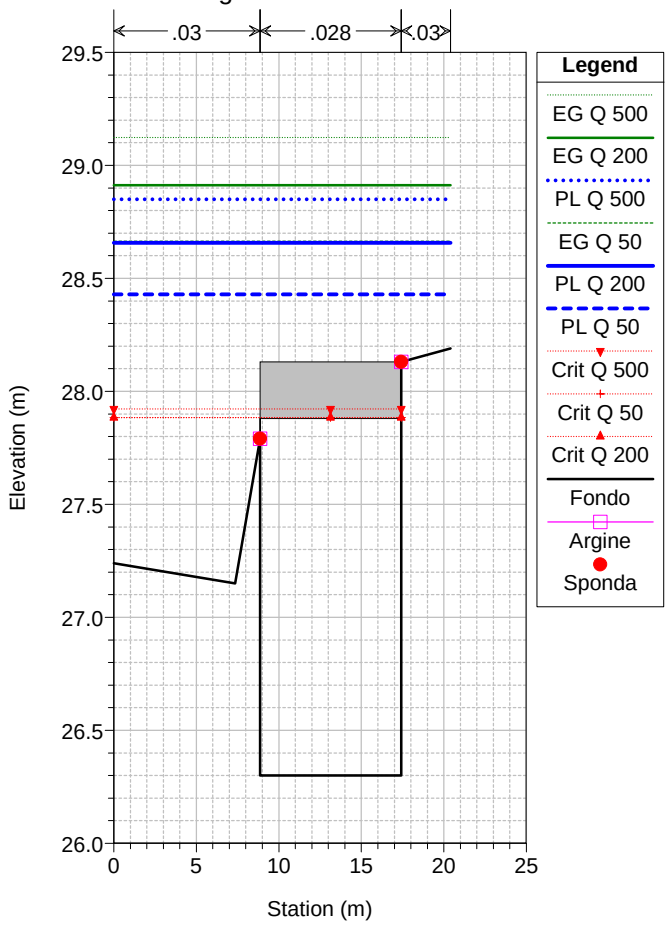
Fegino Plan: Fegino2014

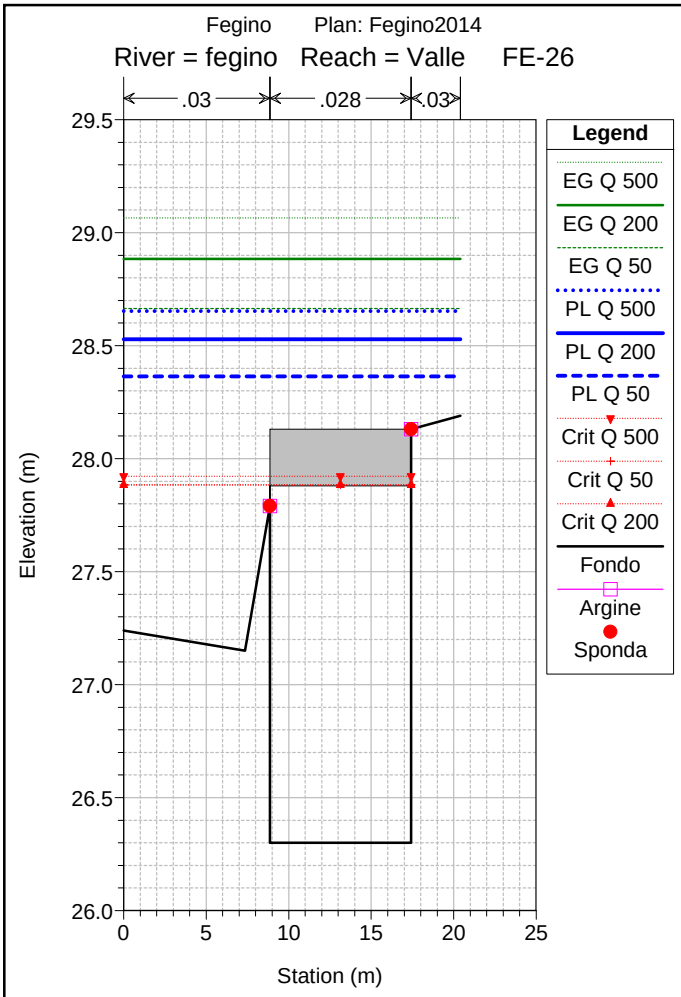
River = fegino Reach = Valle FE-26

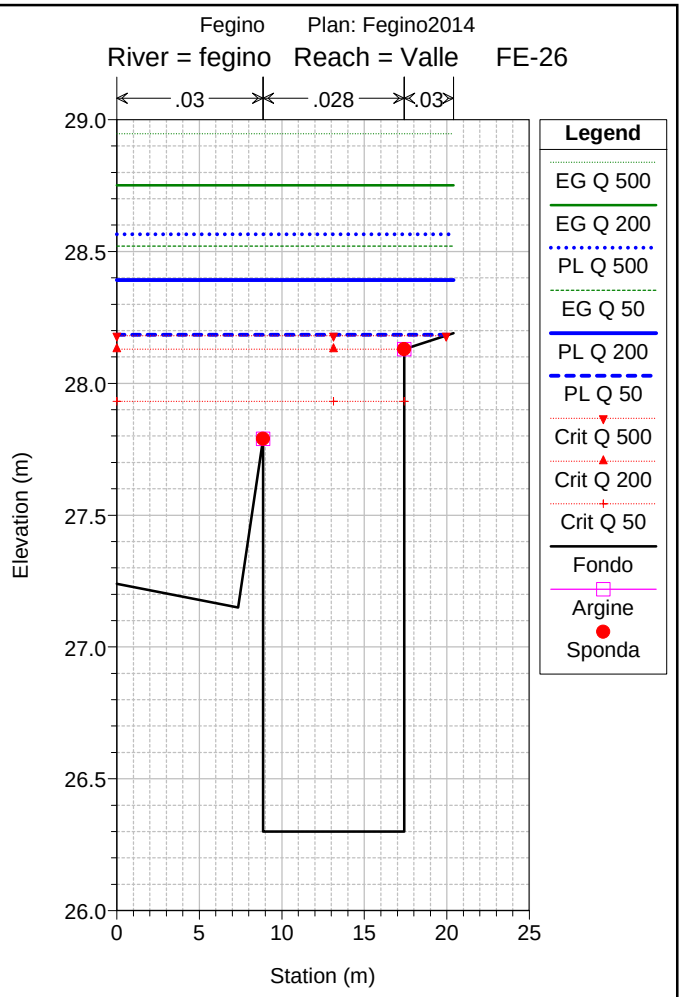


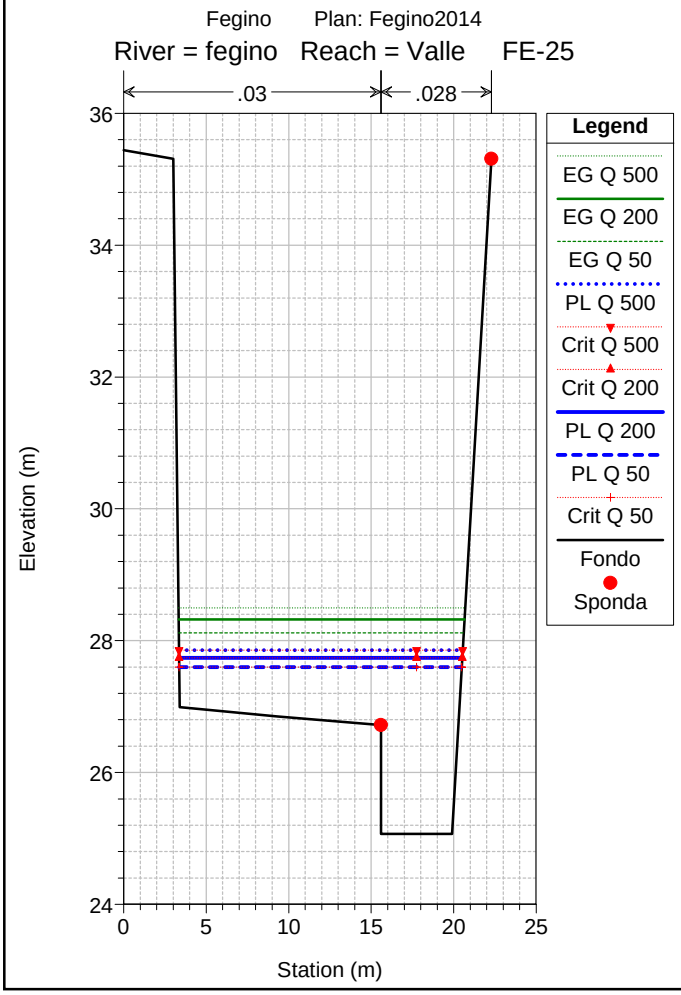
Fegino Plan: Fegino2014

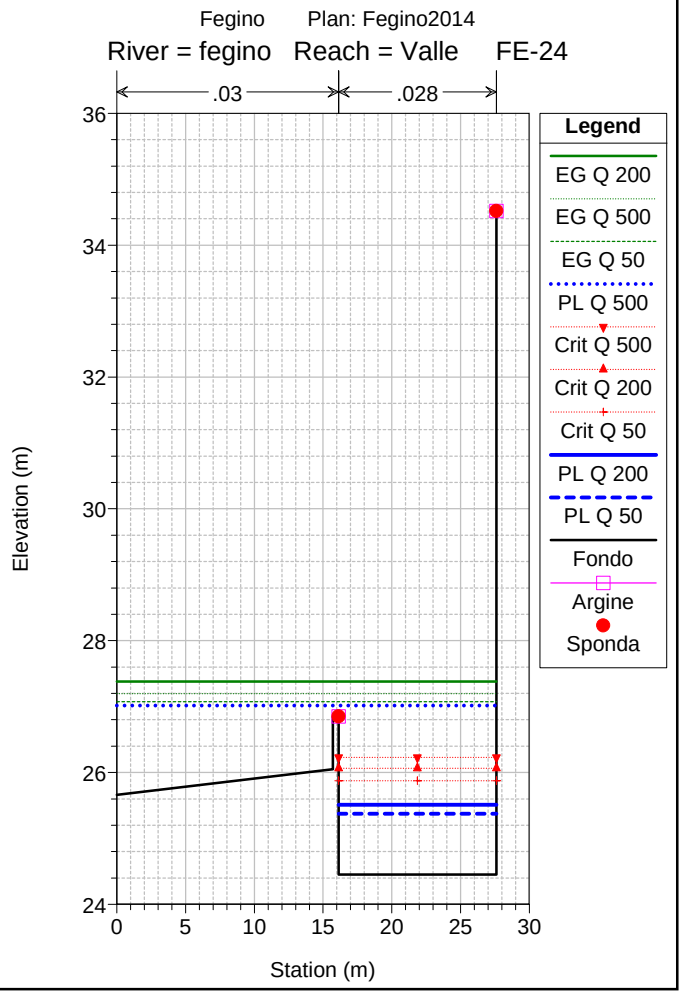
River = fegino Reach = Valle FE-26




Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-26
.03
.028
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q 200
EG Q 50
PL Q 500
PL Q 200
PL Q 50
Crit Q 500
Crit Q 50
Crit Q 200
Fondo
Argine
Sponda

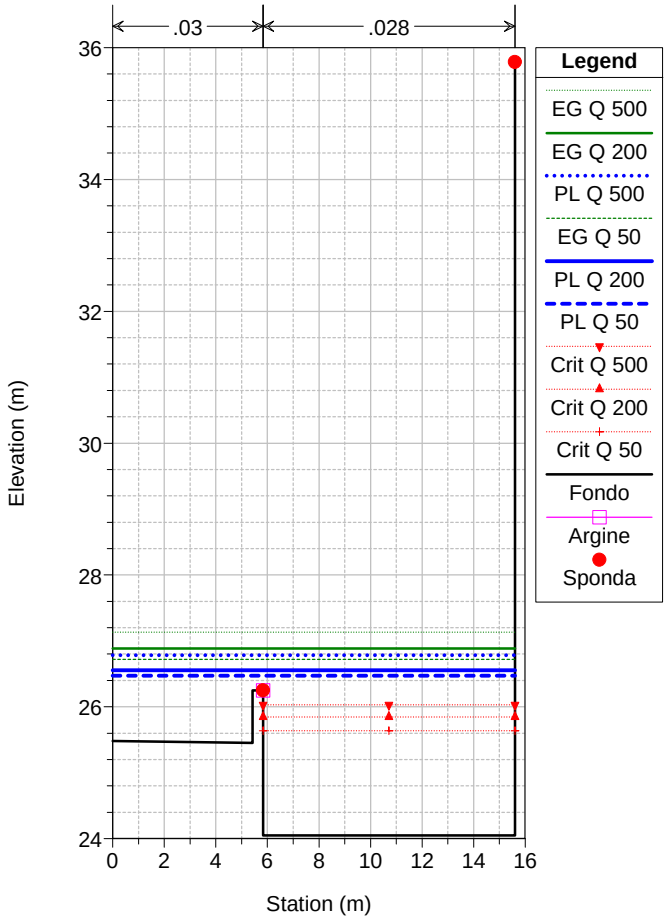

Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-26
.03
.028
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q 200
PL Q 500
EG Q 50
PL Q 200
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Argine
Sponda


Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-25
.03
.028
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q 200
EG Q 50
PL Q 500
Crit Q 500
Crit Q 200
PL Q 200
PL Q 50
Crit Q 50
Fondo
Sponda


Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-24
.03
.028
Elevation (m)
Station (m)
Legend
EG Q 200
EG Q 500
EG Q 50
PL Q 500
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 200
PL Q 50
Fondo
Argine
Sponda

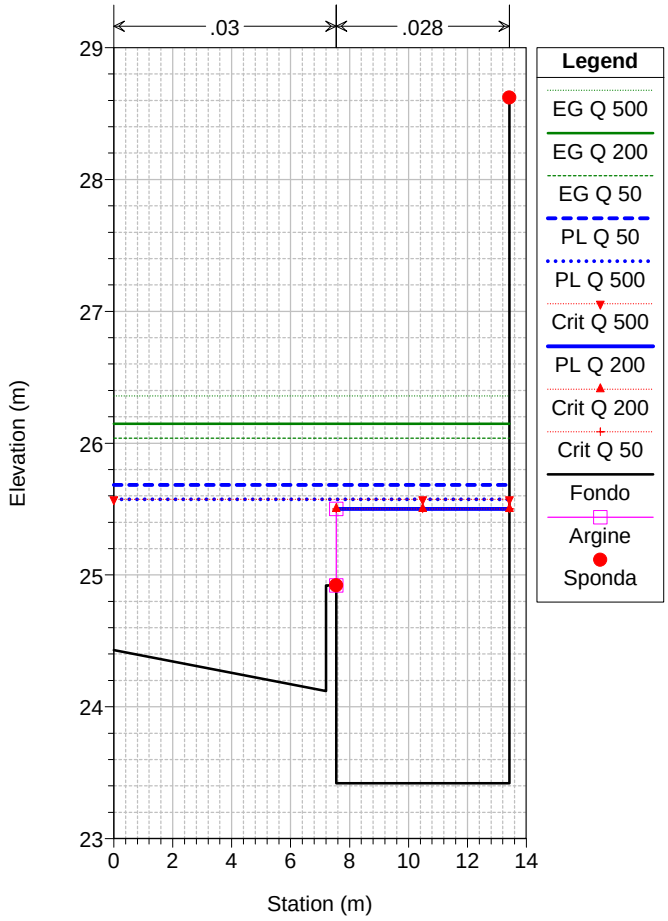
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-23



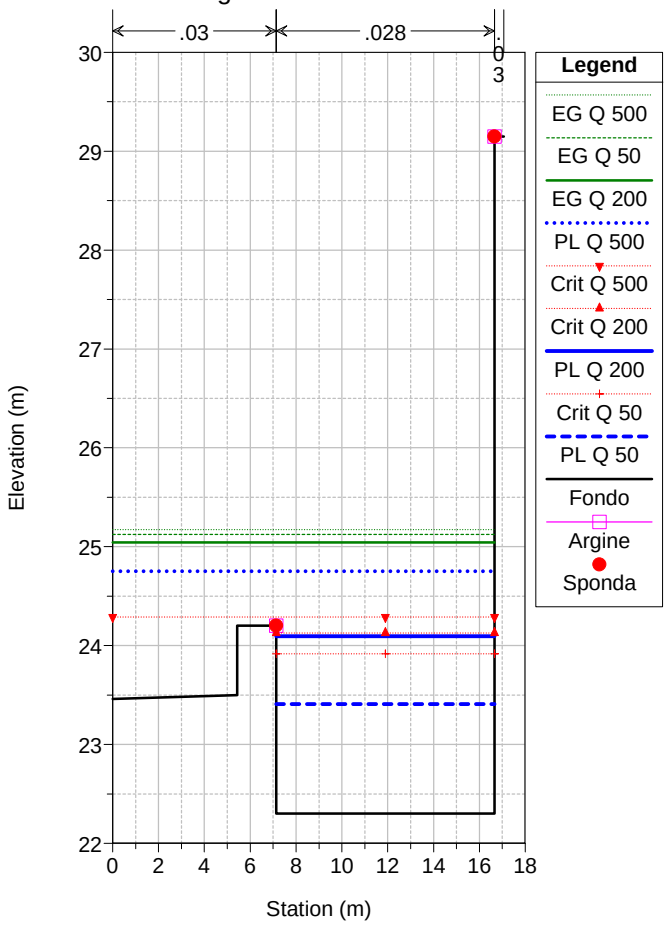
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-22



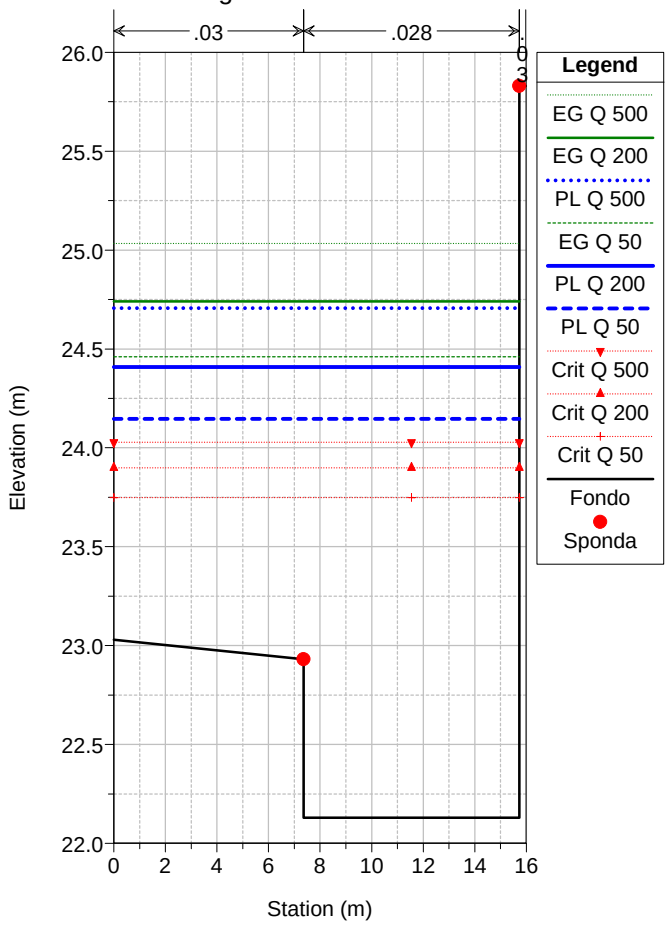
Fegino Plan: Fegino2014

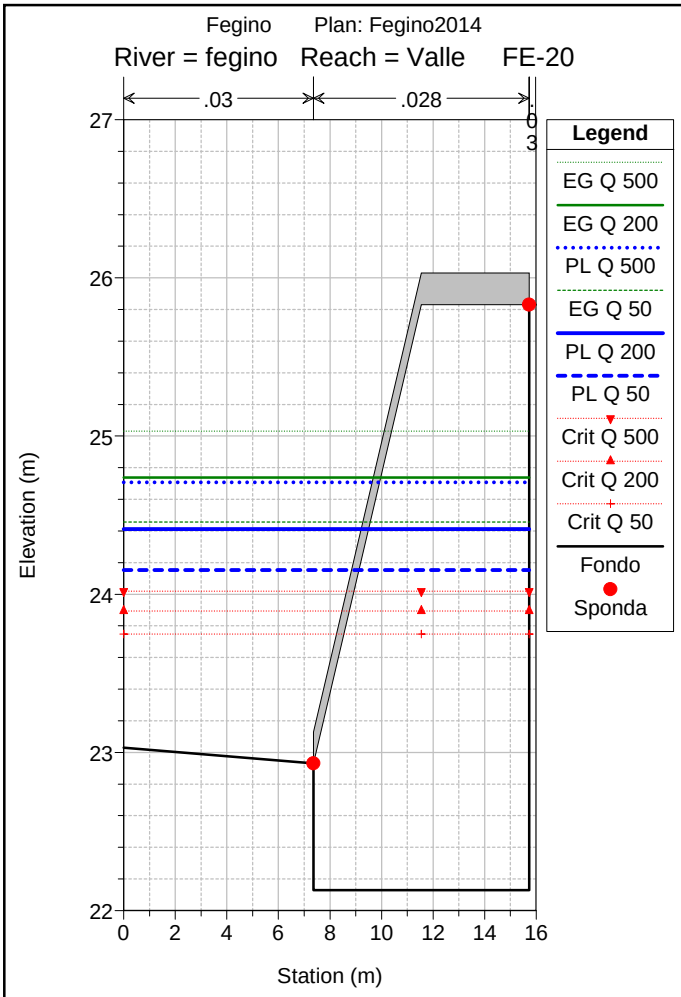
River = fegino Reach = Valle FE-21

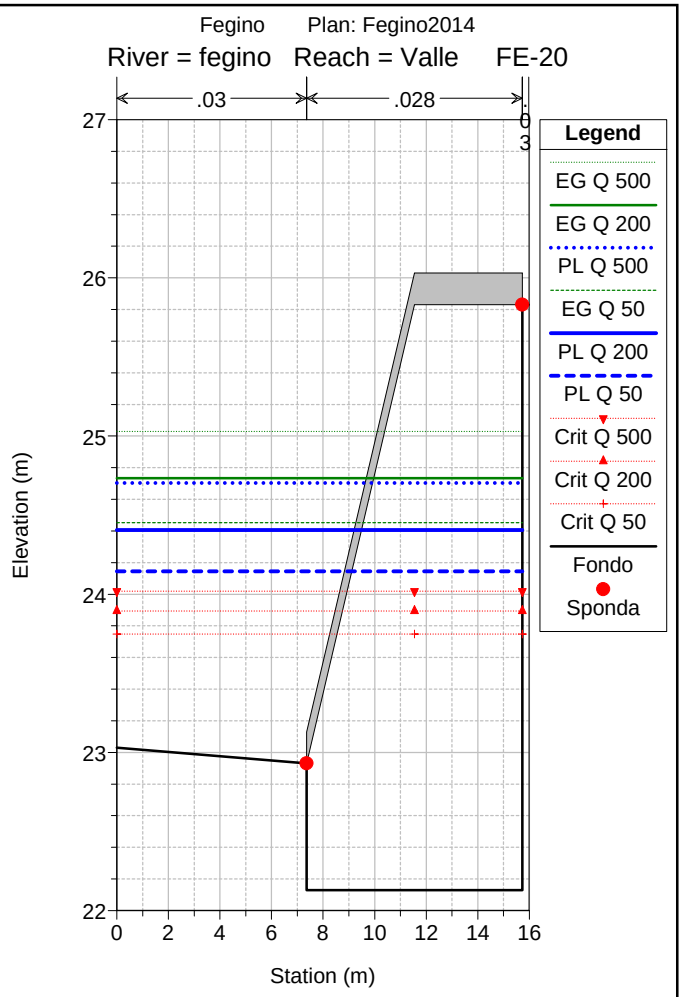


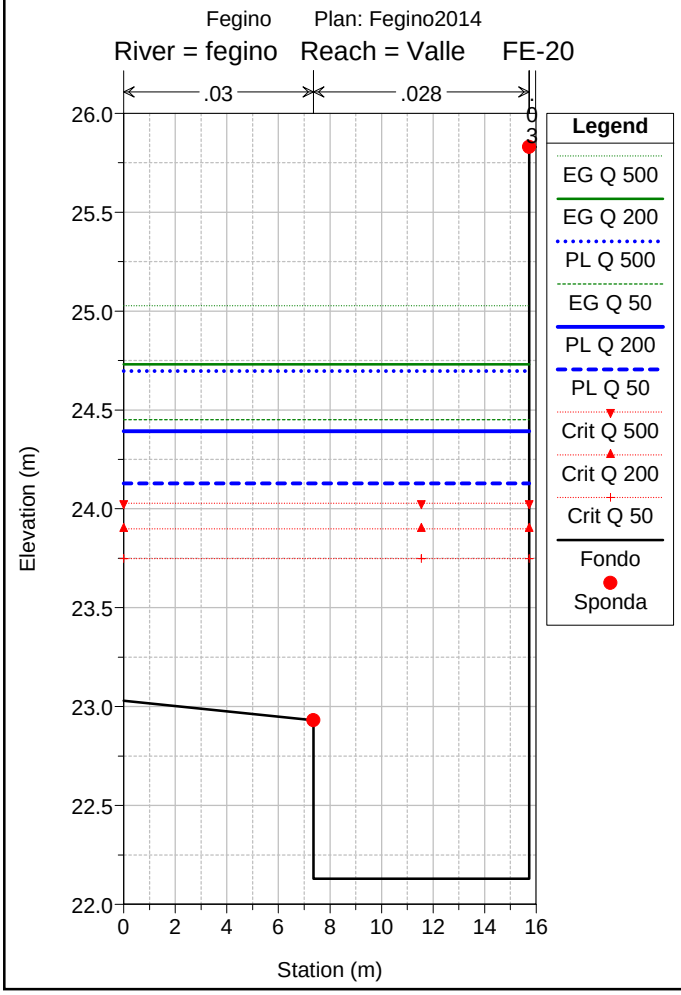
Fegino Plan: Fegino2014

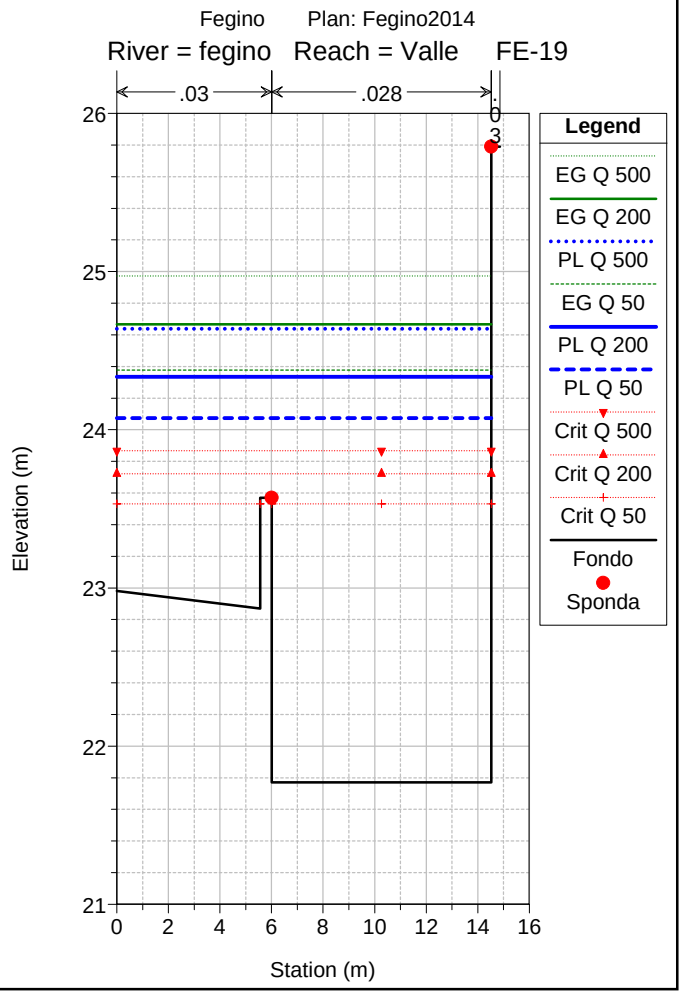
River = fegino Reach = Valle FE-20

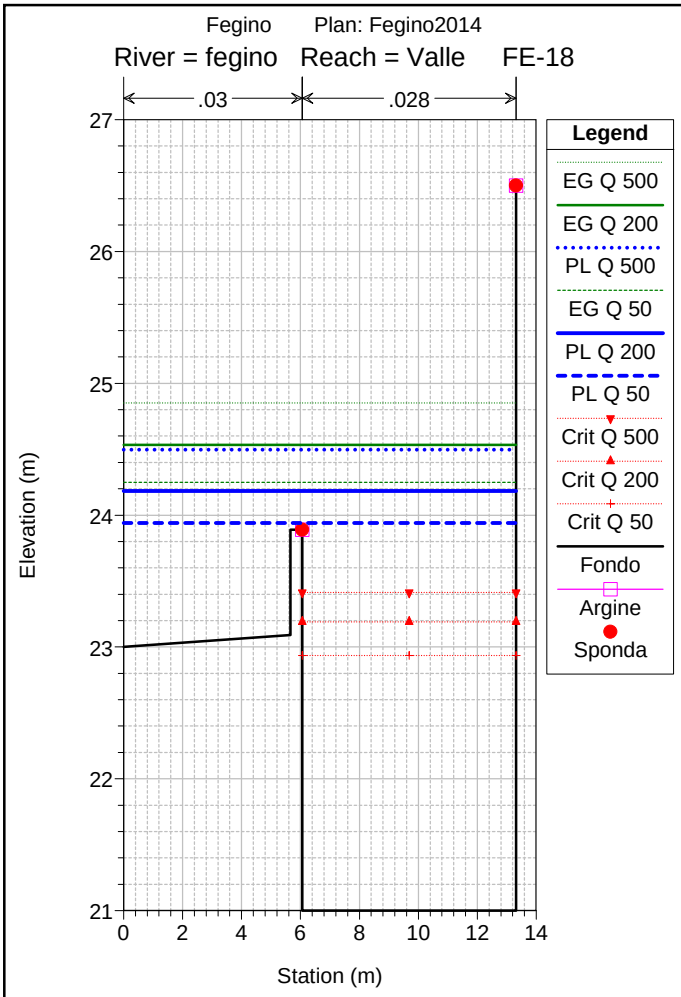


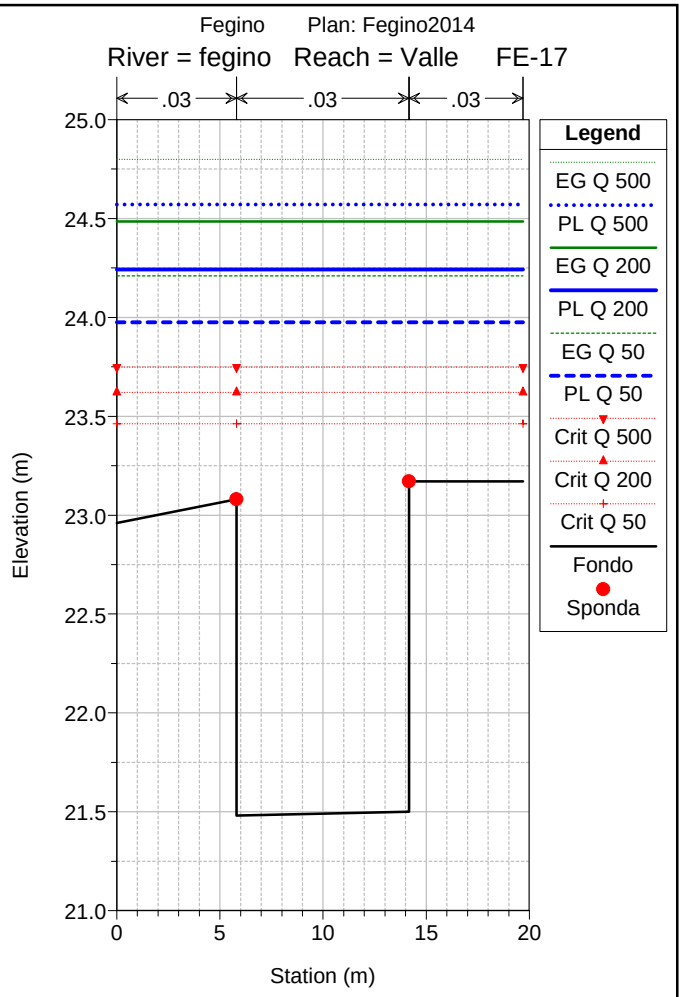

Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-20
.03
.028
Legend
EG Q 500
EG Q 200
PL Q 500
EG Q 50
PL Q 200
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)

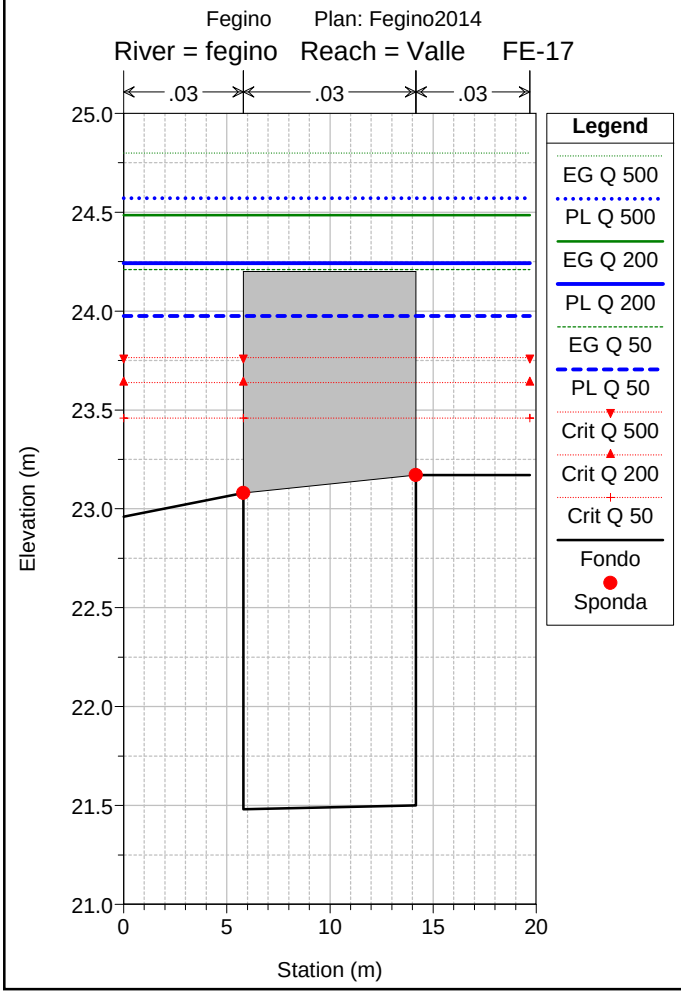

Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-20
.03
.028
Legend
EG Q 500
EG Q 200
PL Q 500
EG Q 50
PL Q 200
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)

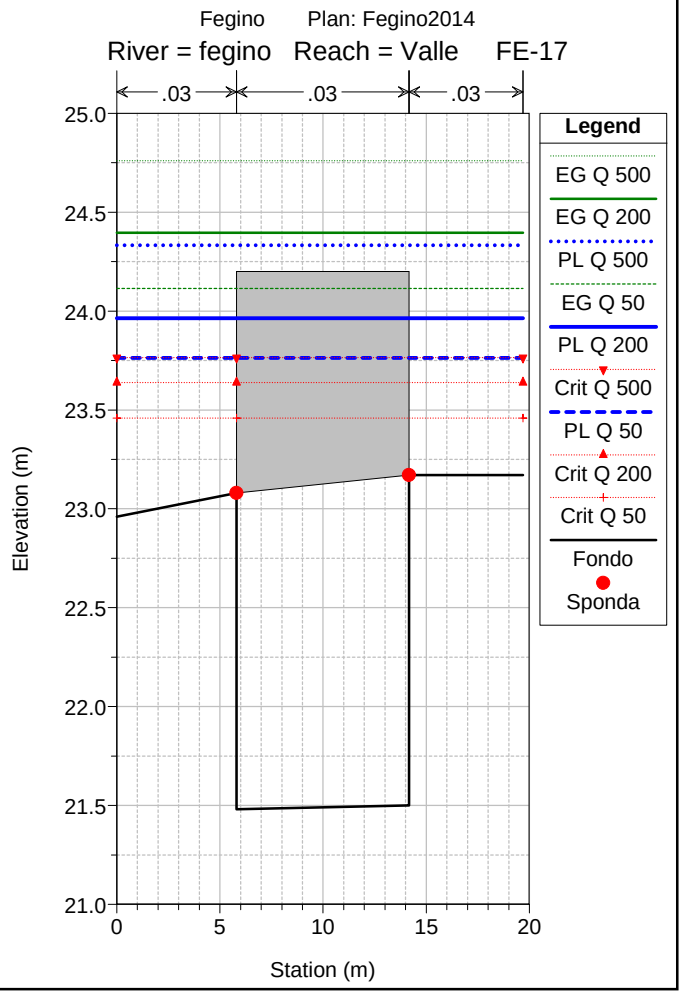

Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-20
.03
.028
Legend
EG Q 500
EG Q 200
PL Q 500
EG Q 50
PL Q 200
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-19
.03
.028
Legend
EG Q 500
EG Q 200
PL Q 500
EG Q 50
PL Q 200
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-18
.03
.028
Legend
EG Q 500
EG Q 200
PL Q 500
EG Q 50
PL Q 200
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

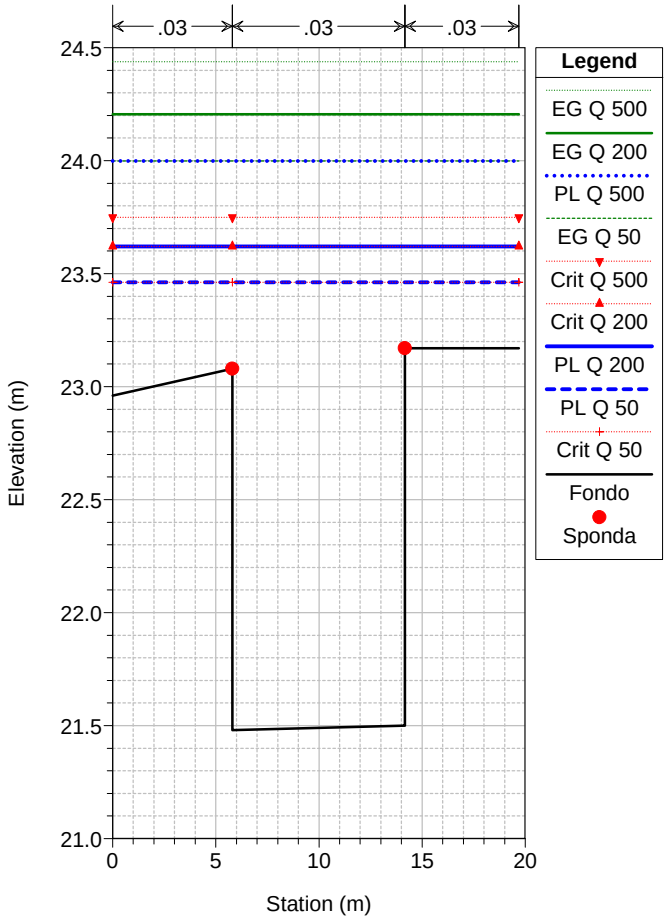

Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-17
.03
.03
.03
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-17
.03
.03
.03
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-17
.03
.03
.03
Legend
EG Q 500
EG Q 200
PL Q 500
EG Q 50
PL Q 200
Crit Q 500
PL Q 50
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)

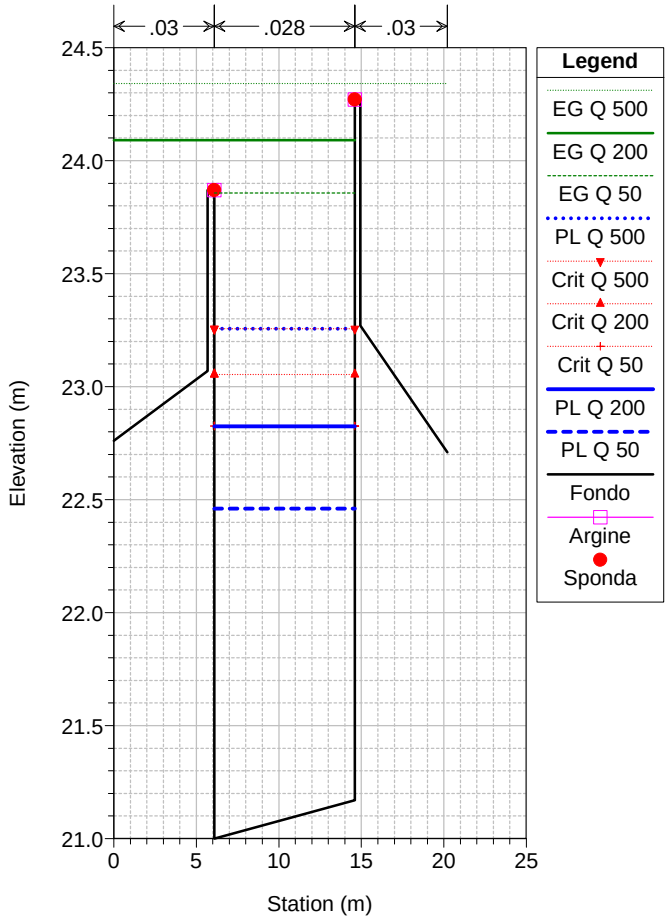
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-17



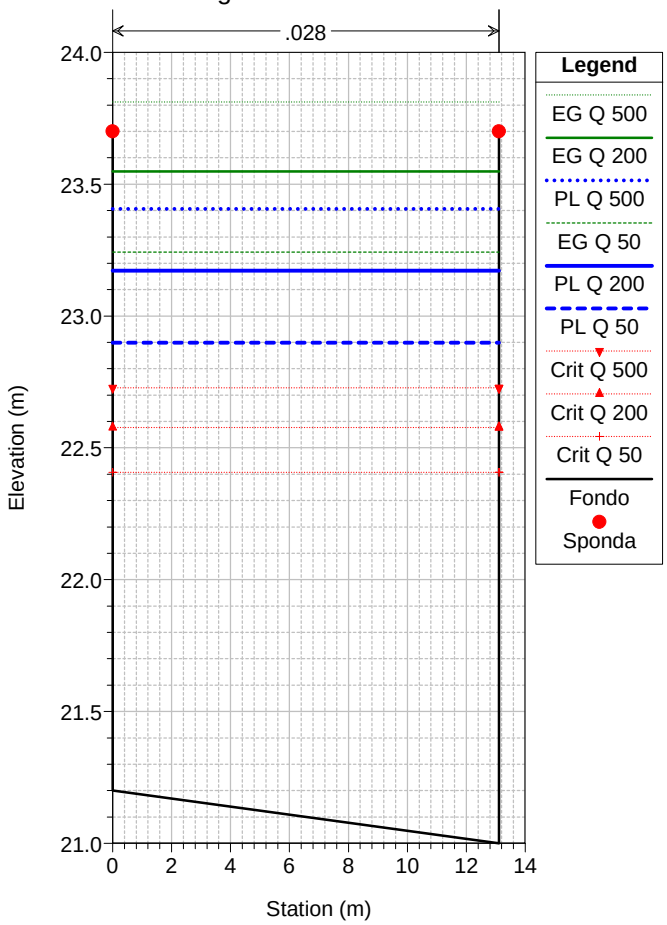
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-16



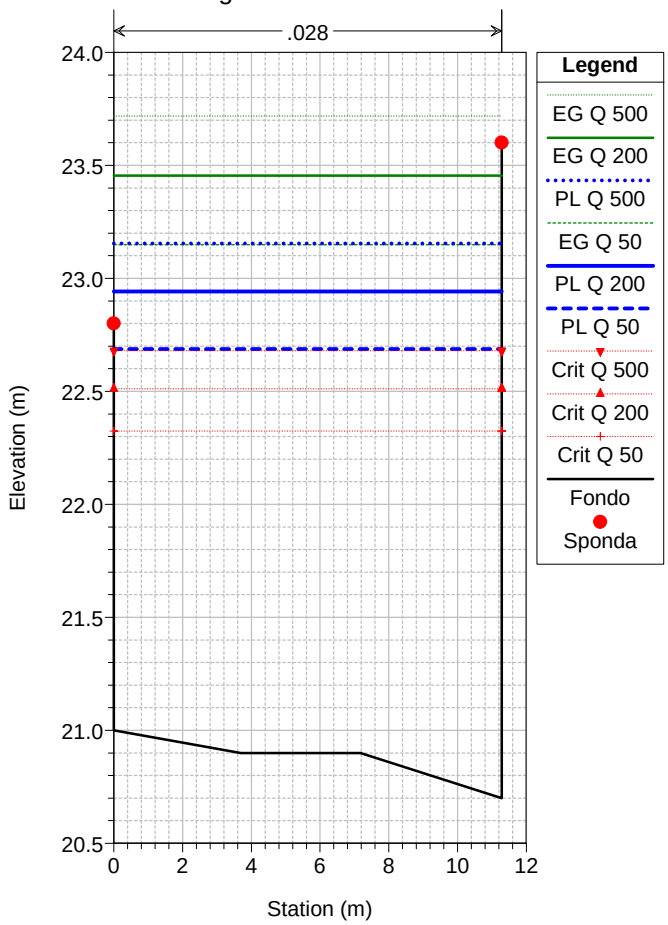
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-15



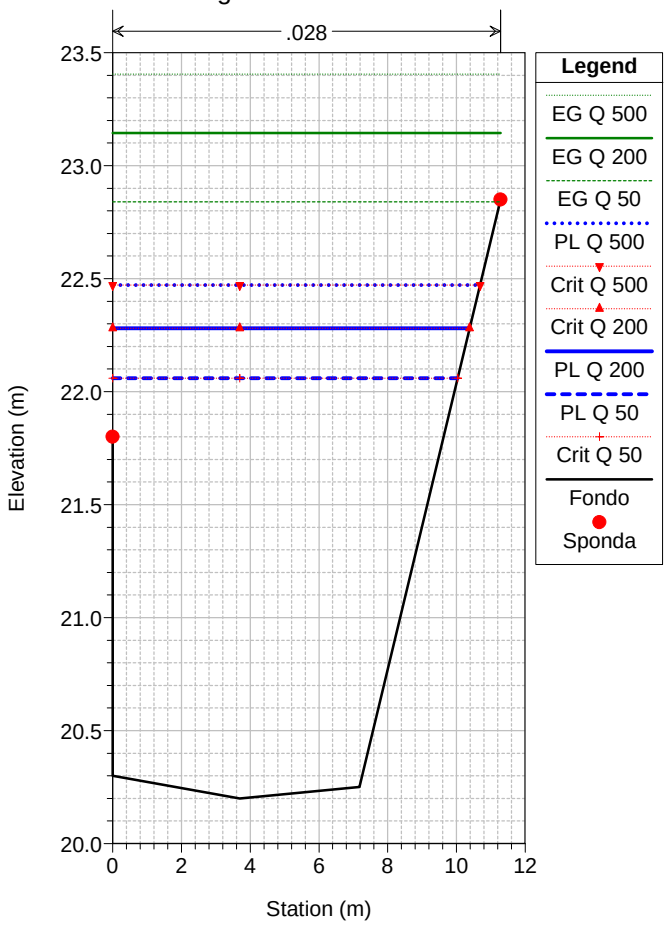
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-14



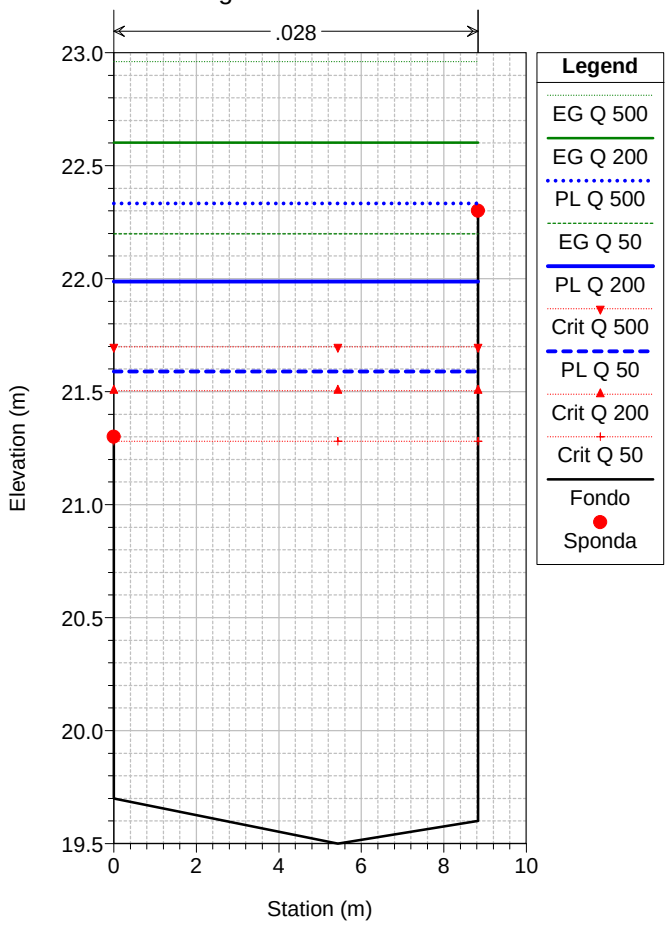
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-13



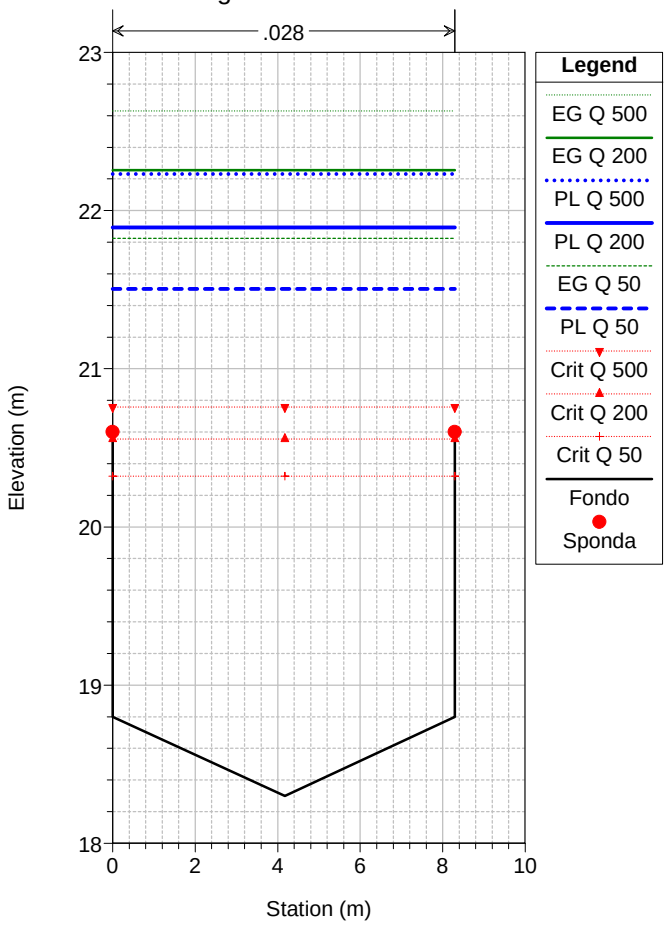
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-12



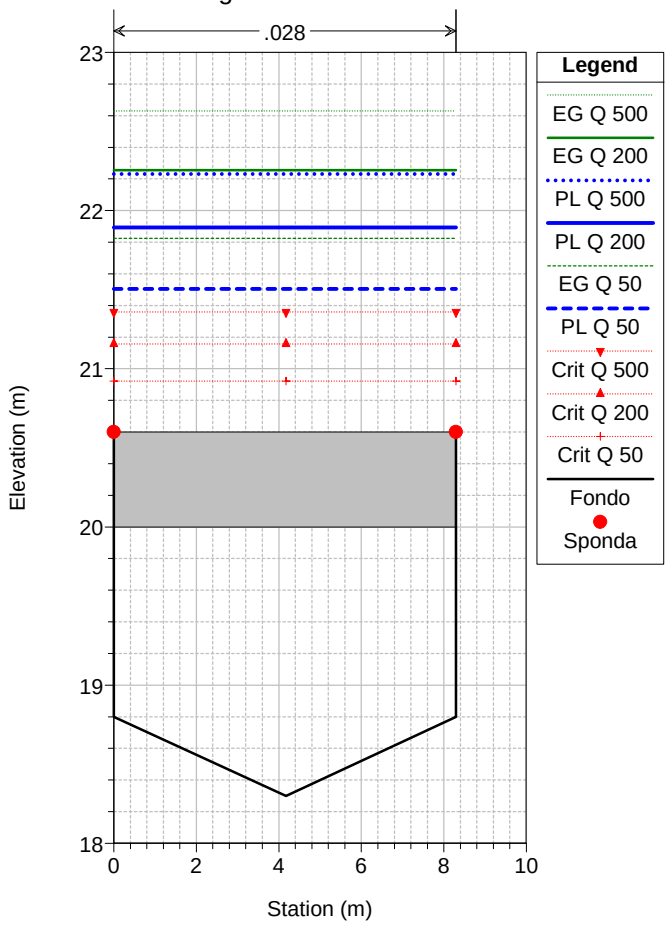
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-11



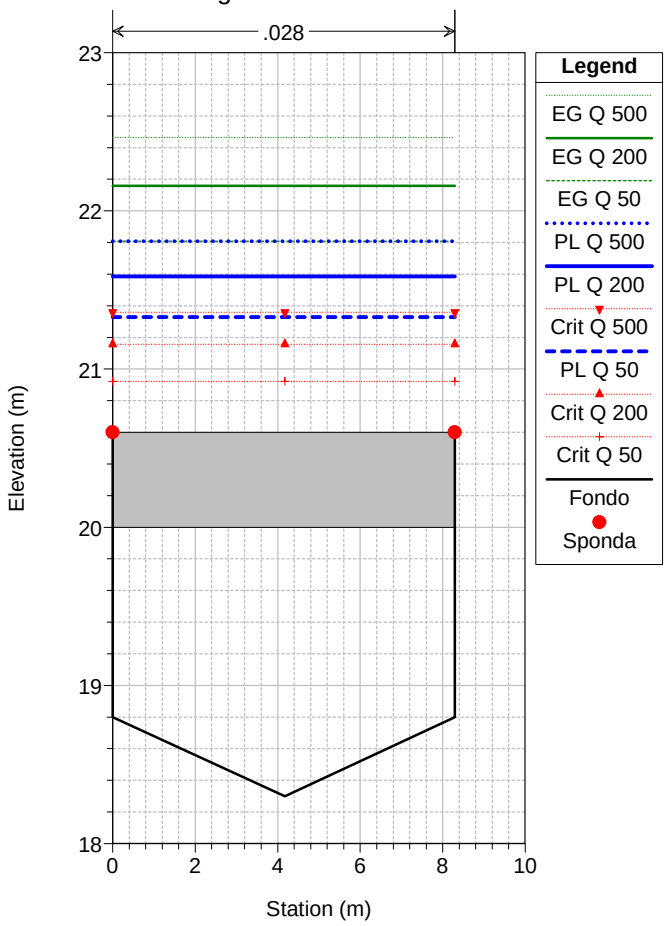
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-11



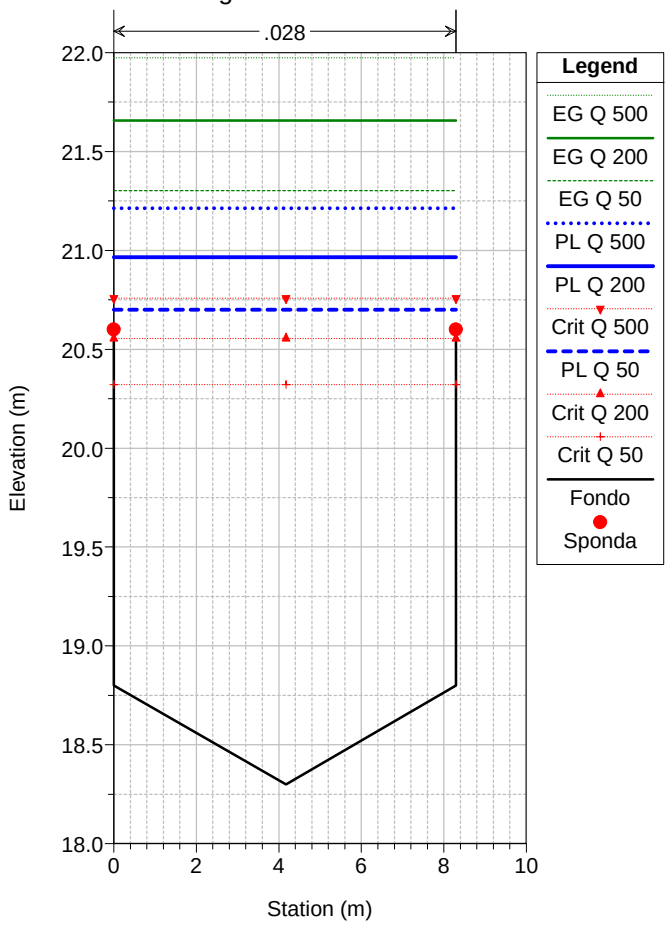
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-11



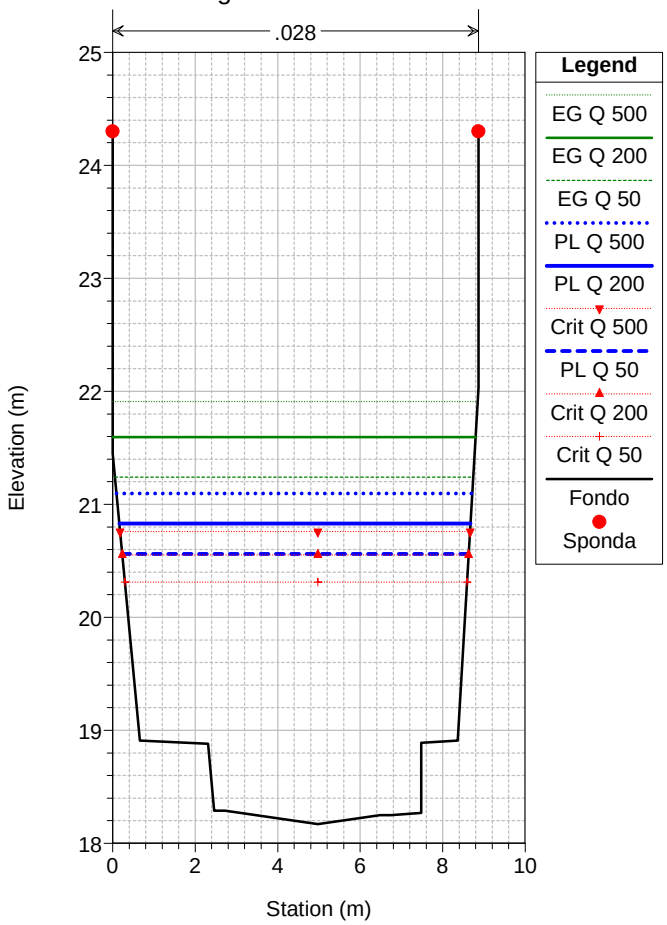
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-11



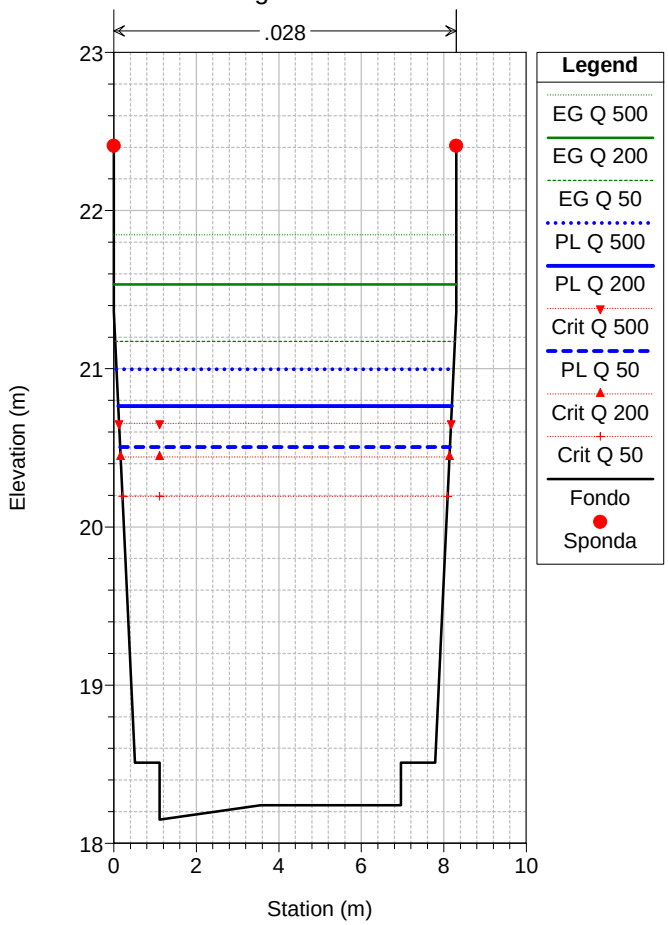
Fegino Plan: Fegino2014

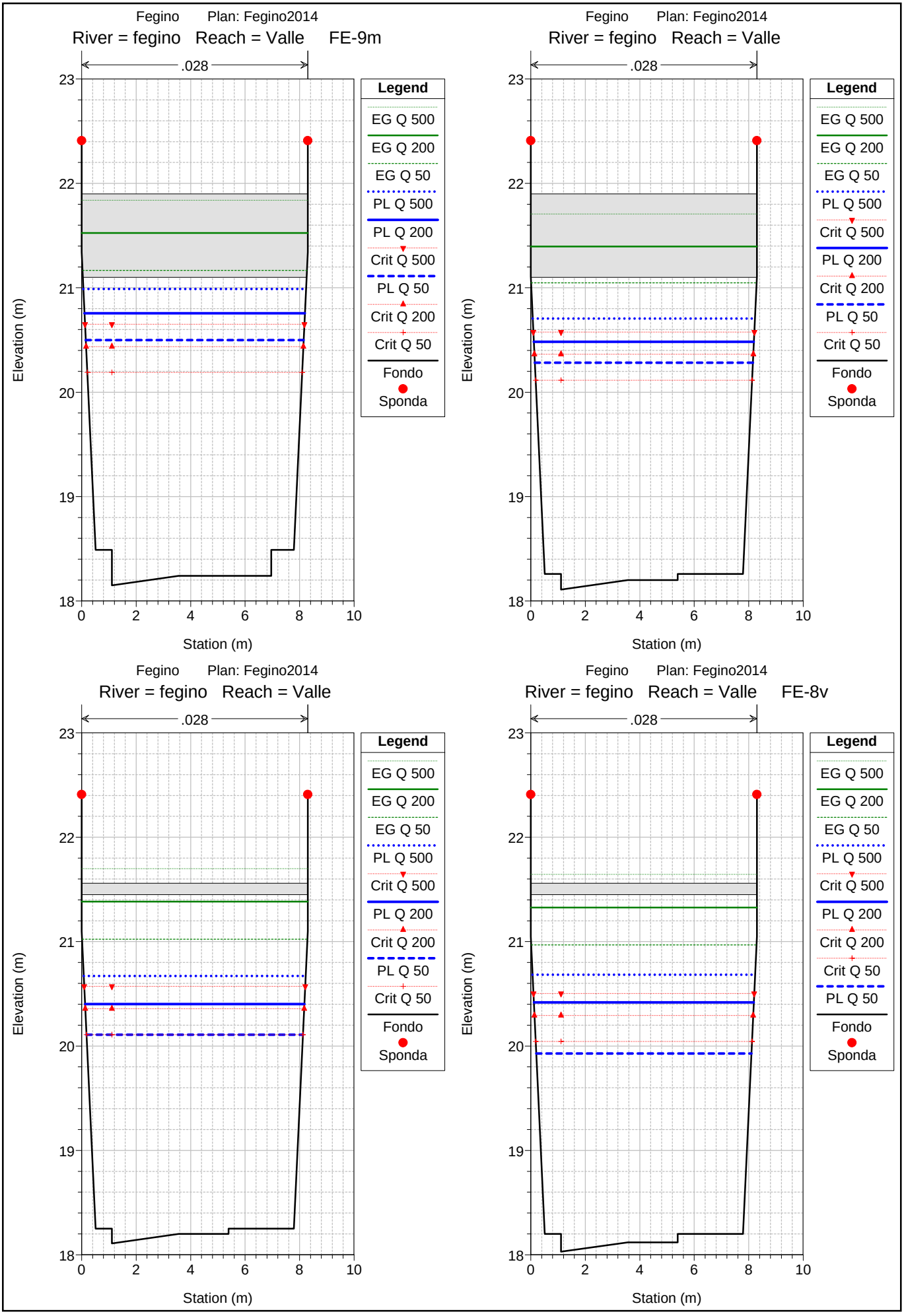
River = fegino Reach = Valle FE-10



Fegino Plan: Fegino2014

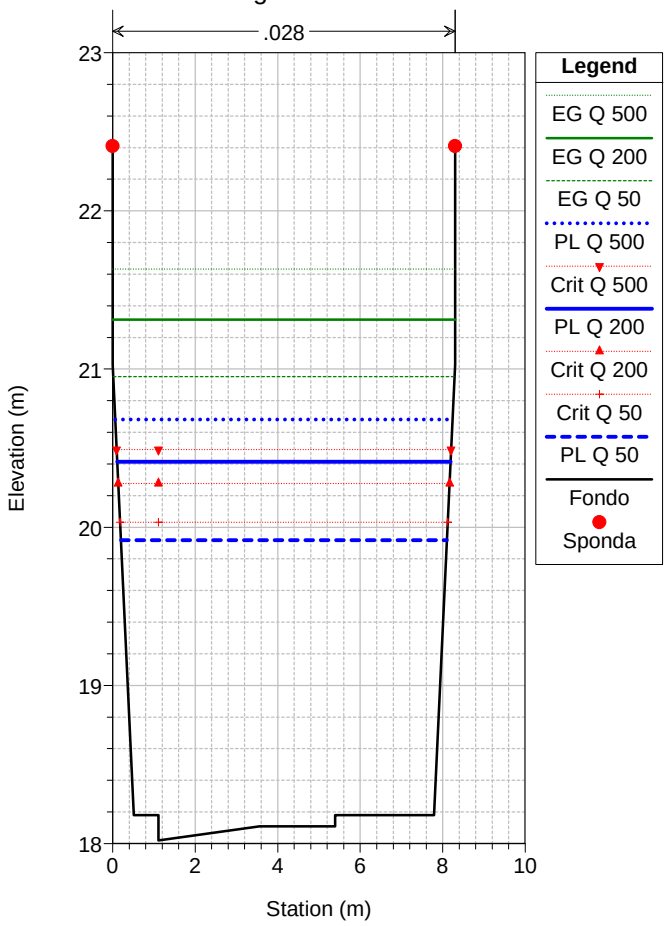
River = fegino Reach = Valle




Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-9m
.028
Legend
EG Q 500
EG Q 200
EG Q 50
PL Q 500
PL Q 200
Crit Q 500
PL Q 50
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)
Fegino Plan: Fegino2014
River = fegino Reach = Valle
.028
Legend
EG Q 500
EG Q 200
EG Q 50
PL Q 500
Crit Q 500
PL Q 200
Crit Q 200
PL Q 50
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)
Fegino Plan: Fegino2014
River = fegino Reach = Valle
.028
Legend
EG Q 500
EG Q 200
EG Q 50
PL Q 500
Crit Q 500
PL Q 200
Crit Q 200
PL Q 50
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)
Fegino Plan: Fegino2014
River = fegino Reach = Valle FE-8v
.028
Legend
EG Q 500
EG Q 200
EG Q 50
PL Q 500
Crit Q 500
PL Q 200
Crit Q 200
Crit Q 50
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)

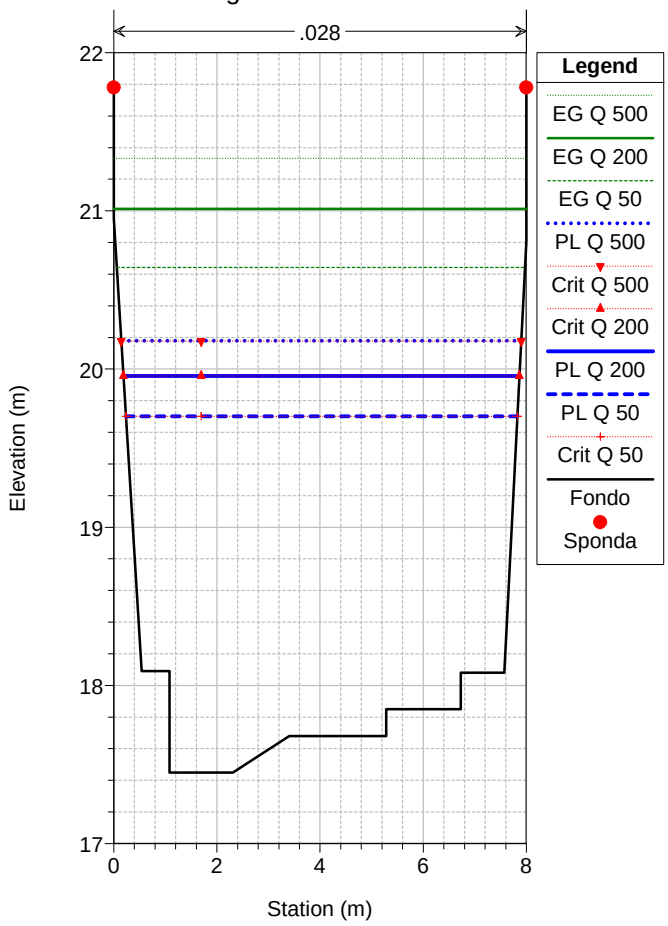
Fegino Plan: Fegino2014

River = fegino Reach = Valle



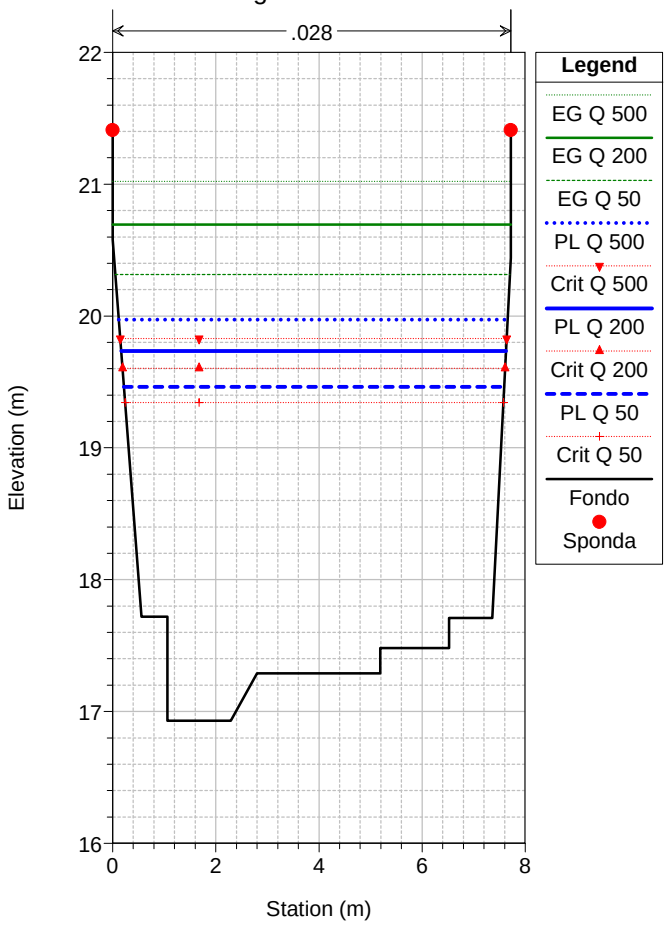
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-7



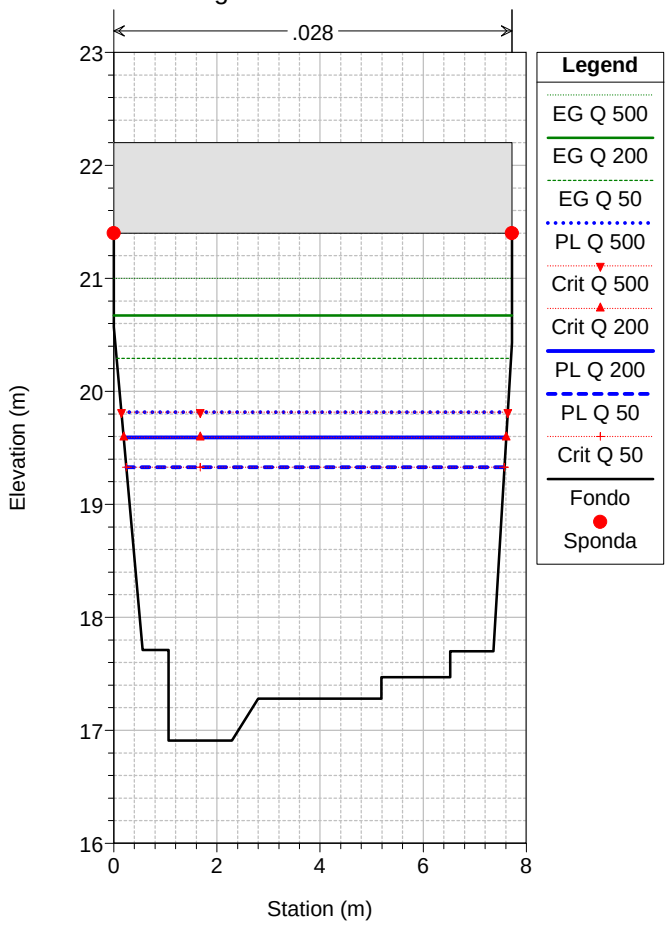
Fegino Plan: Fegino2014

River = fegino Reach = Valle



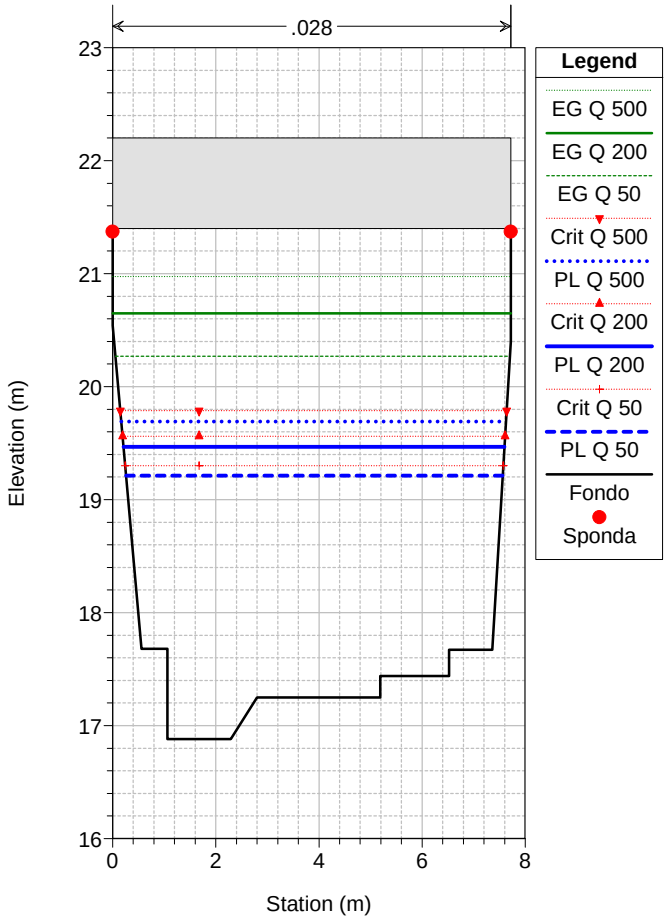
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-6m



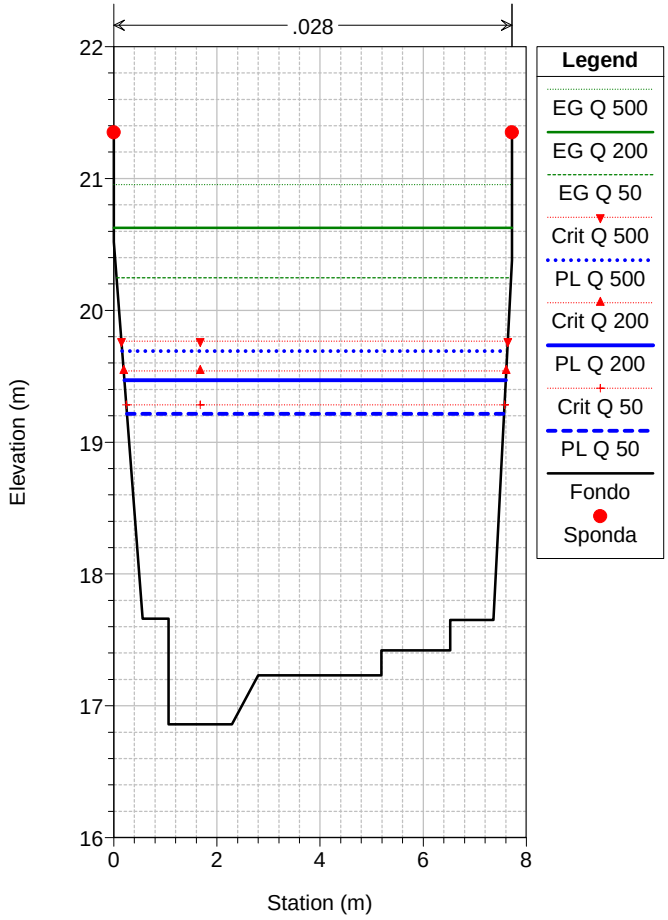
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-6v



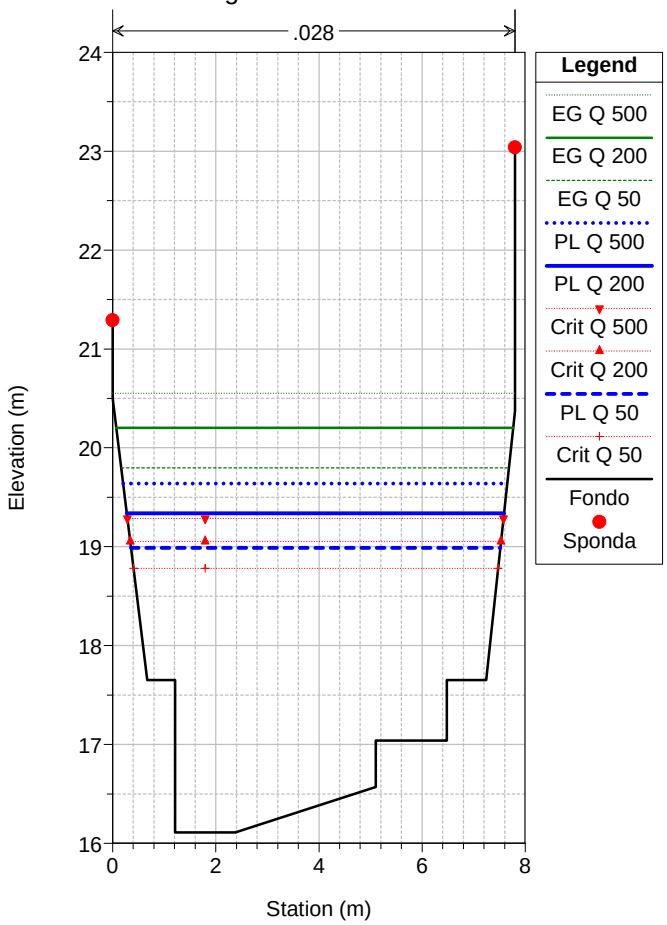
Fegino Plan: Fegino2014

River = fegino Reach = Valle



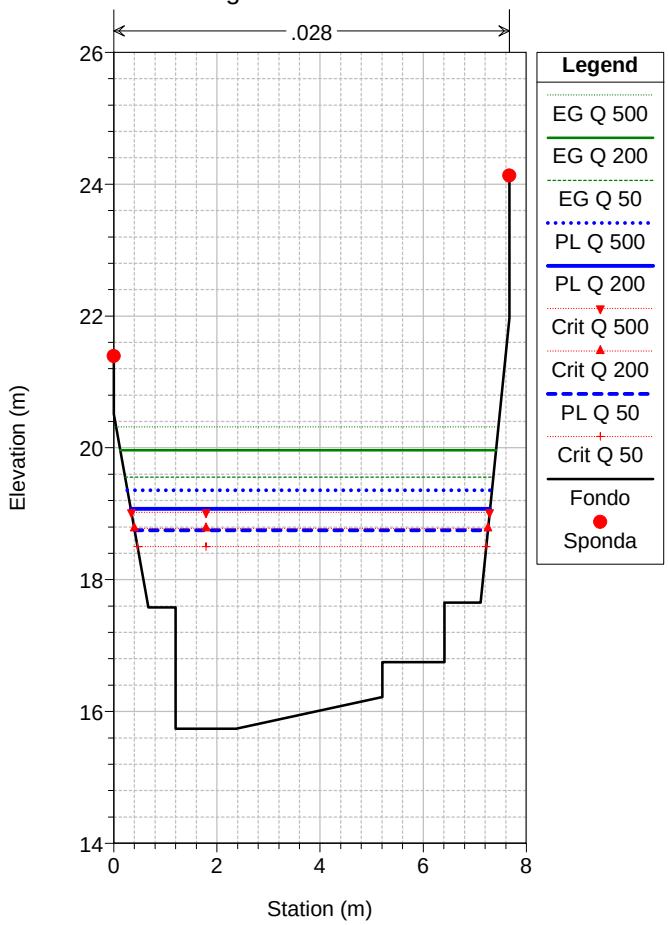
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-5



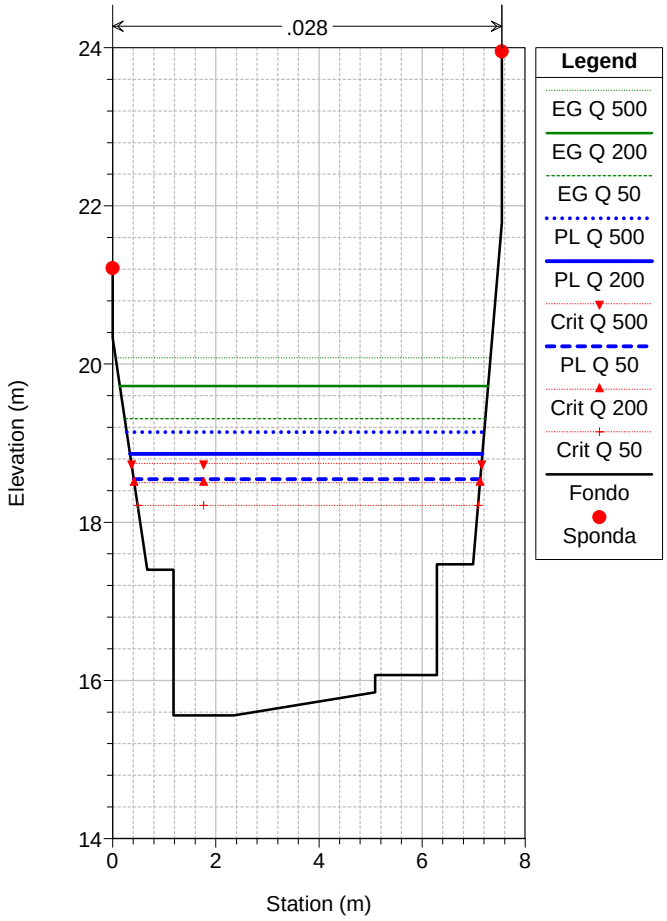
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-4



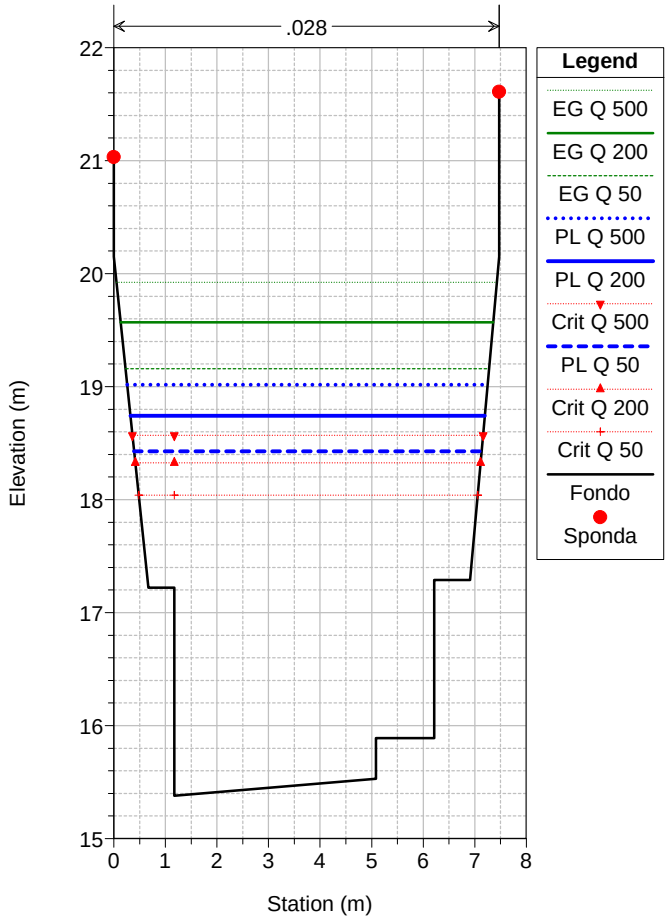
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-3



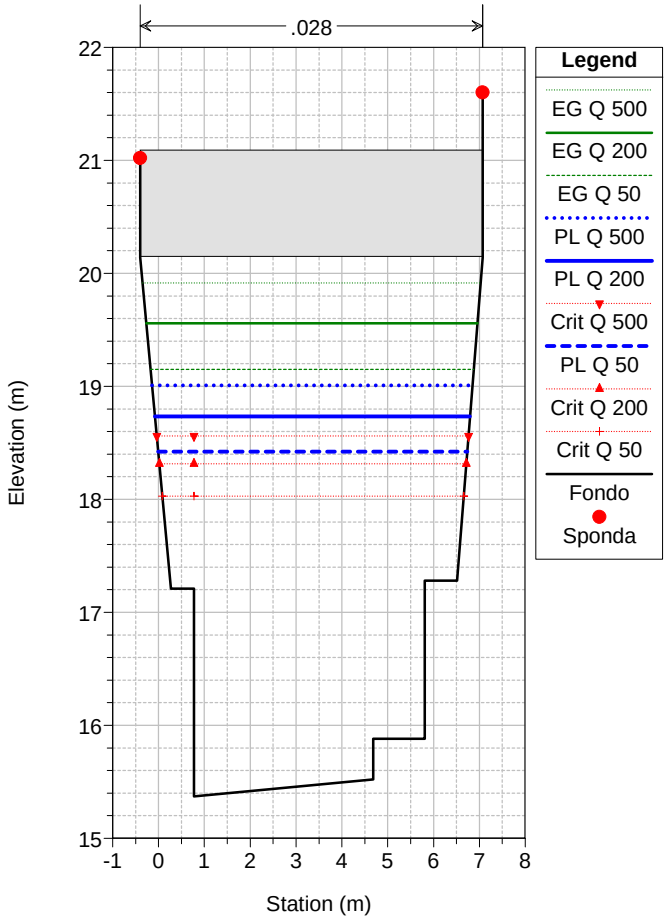
Fegino Plan: Fegino2014

River = fegino Reach = Valle



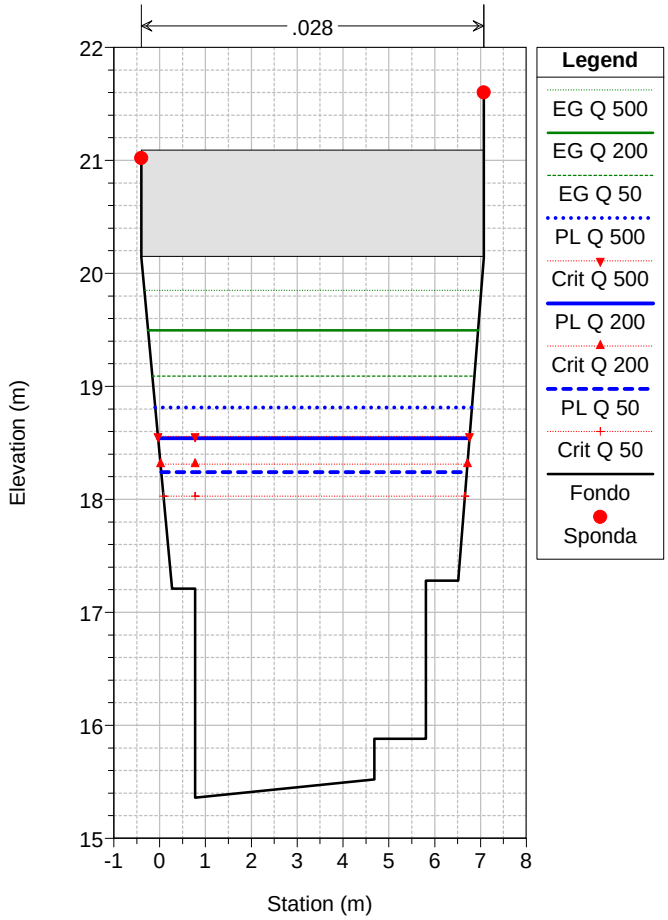
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-2.5m



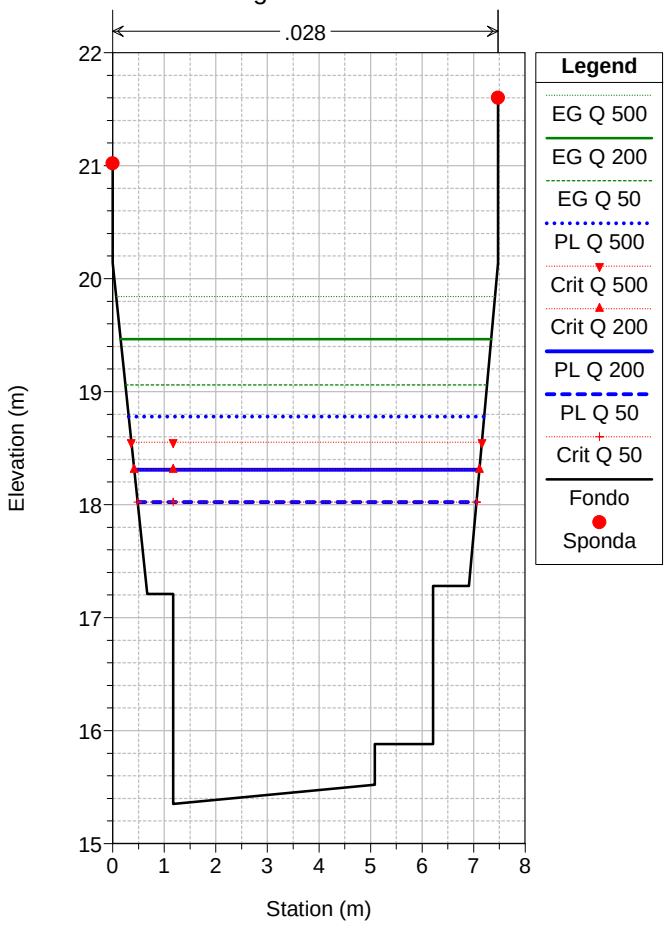
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-2.5v



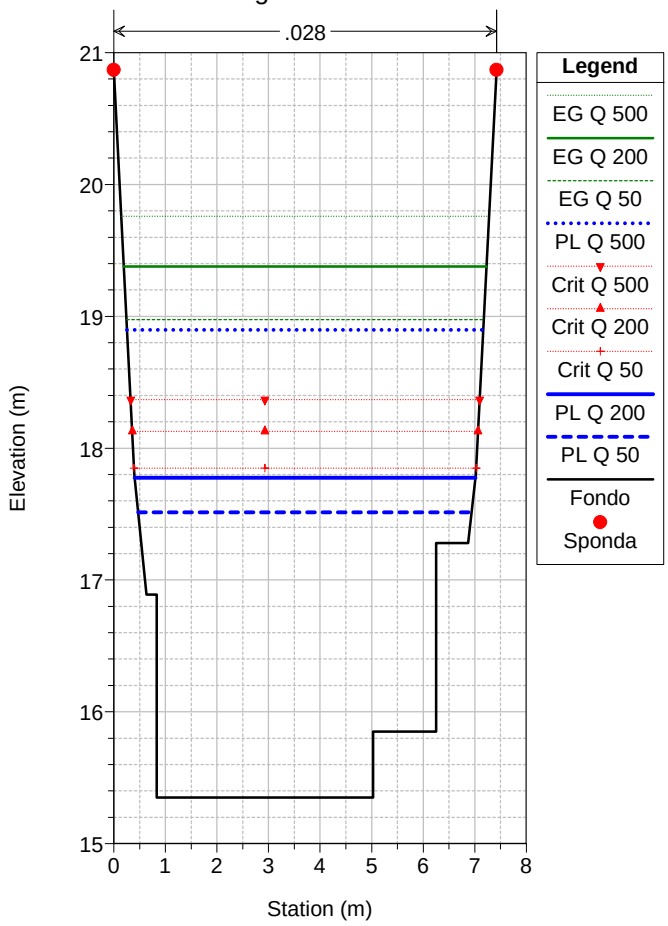
Fegino Plan: Fegino2014

River = fegino Reach = Valle



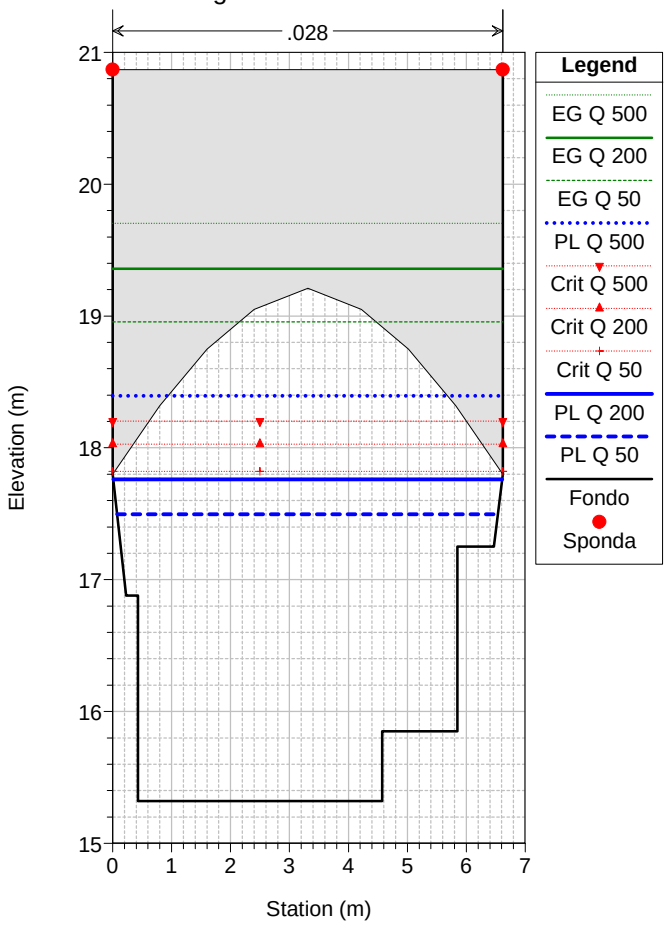
Fegino Plan: Fegino2014

River = fegino Reach = Valle



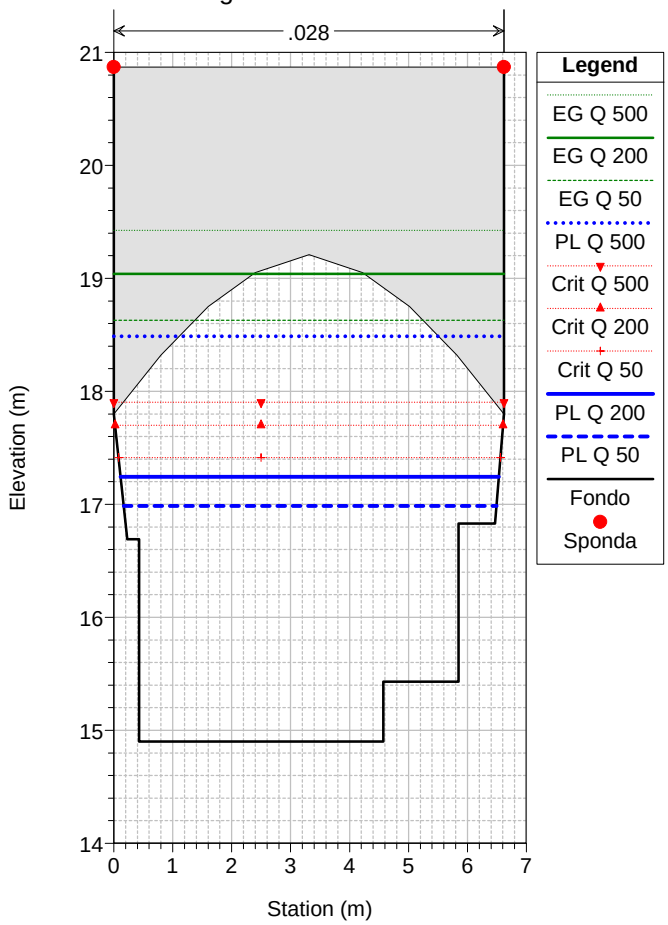
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-2m



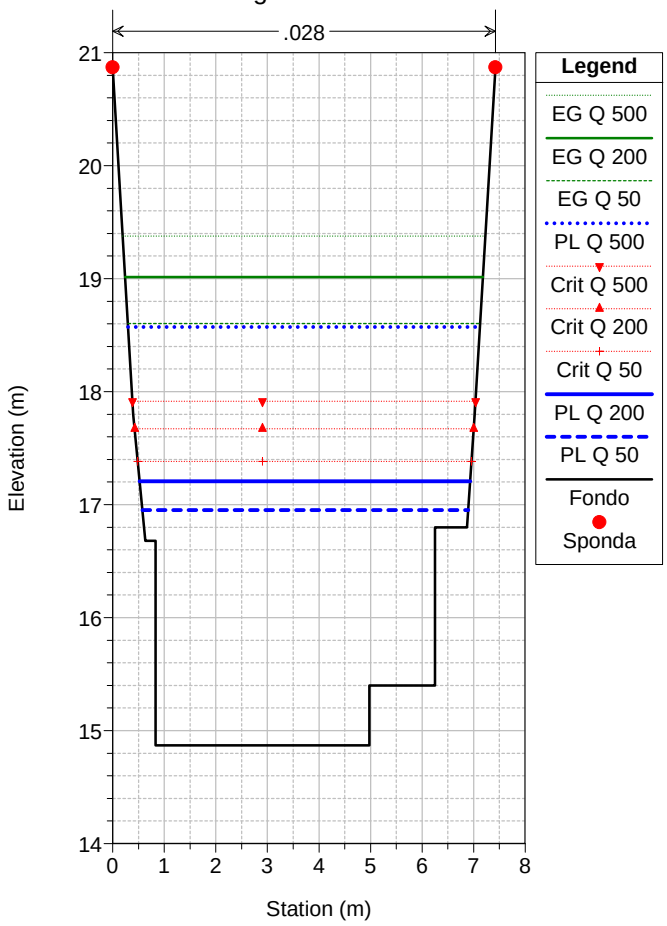
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-2v



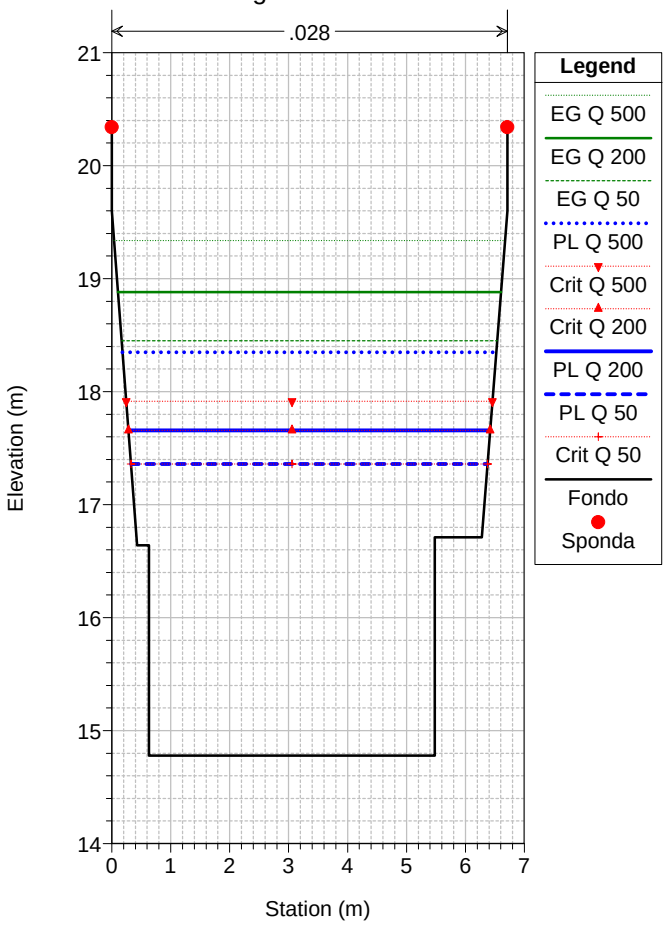
Fegino Plan: Fegino2014

River = fegino Reach = Valle



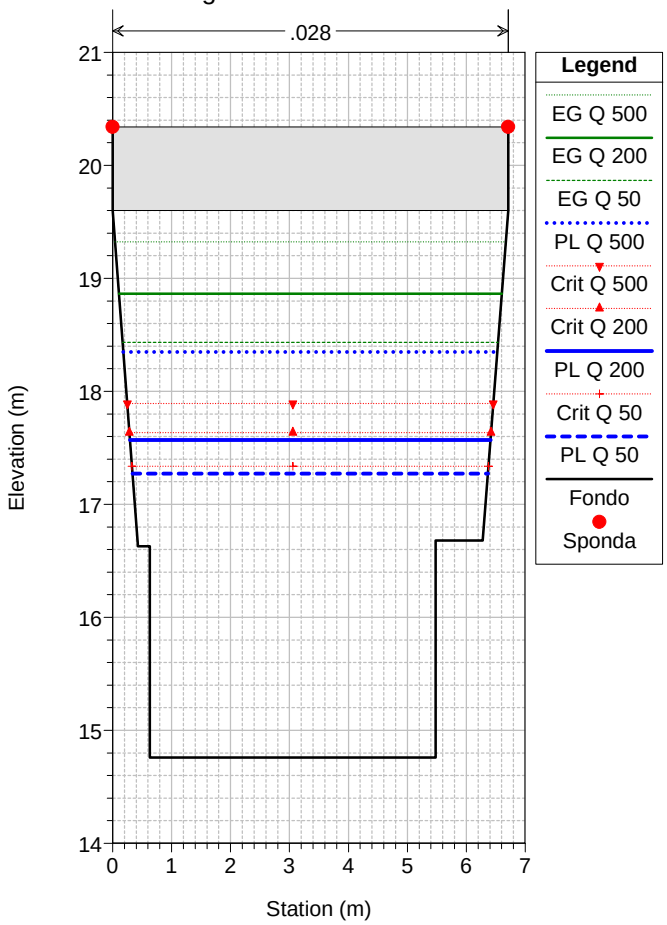
Fegino Plan: Fegino2014

River = fegino Reach = Valle



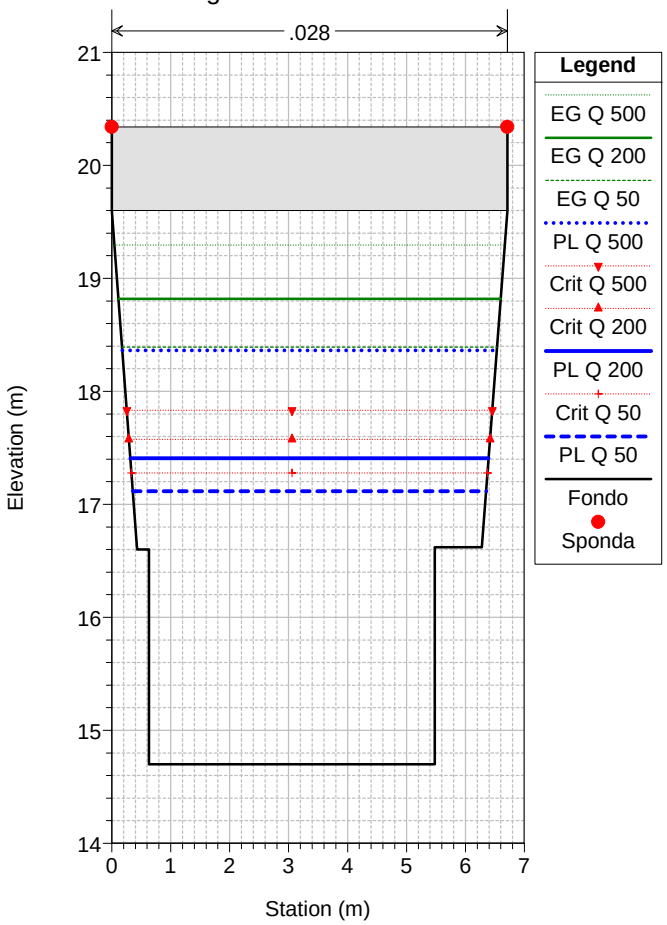
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-1.5m



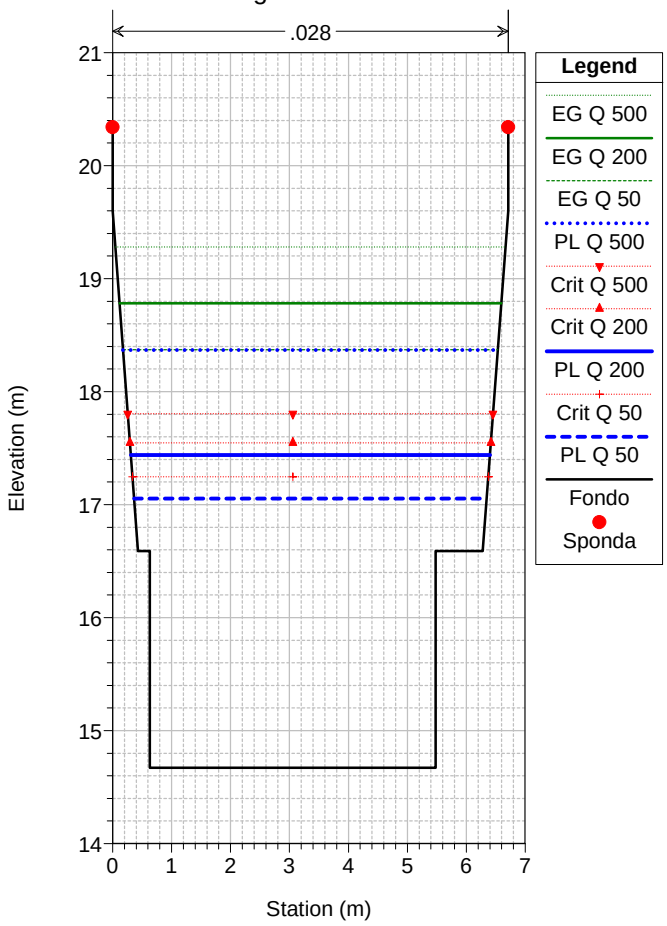
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-1.5v



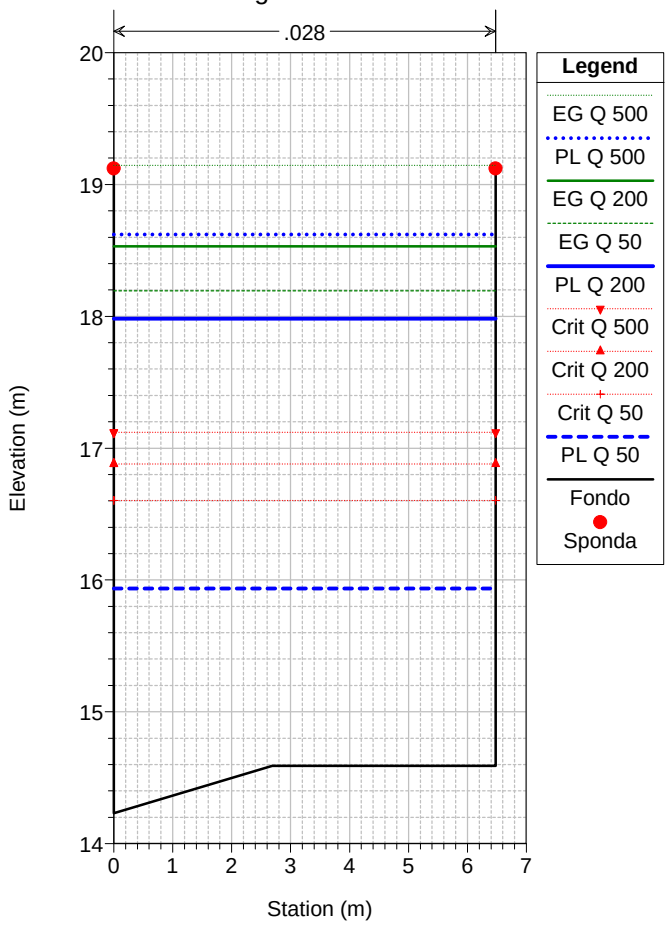
Fegino Plan: Fegino2014

River = fegino Reach = Valle



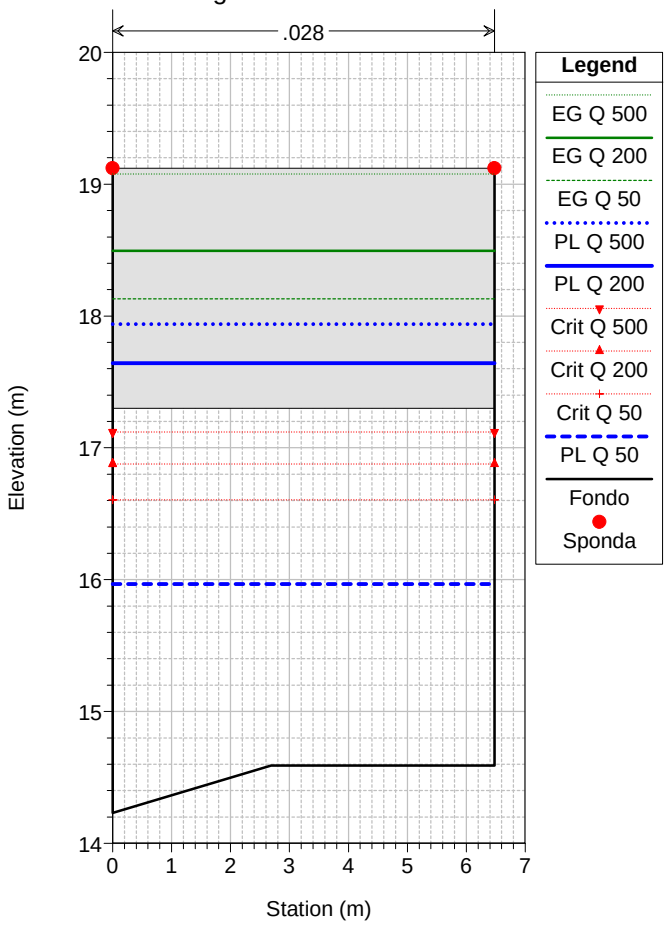
Fegino Plan: Fegino2014

River = fegino Reach = Valle



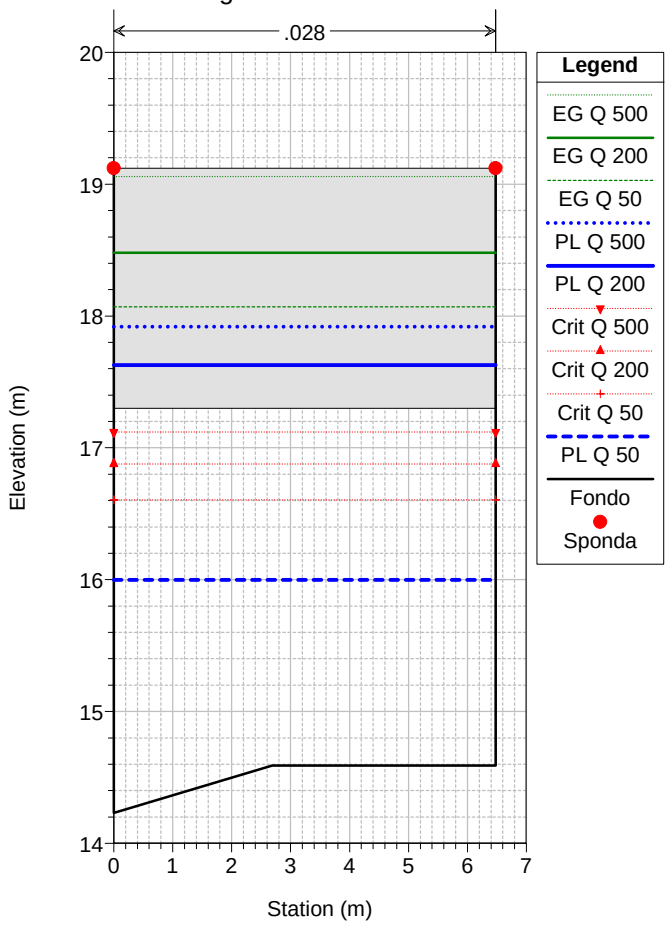
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-1m



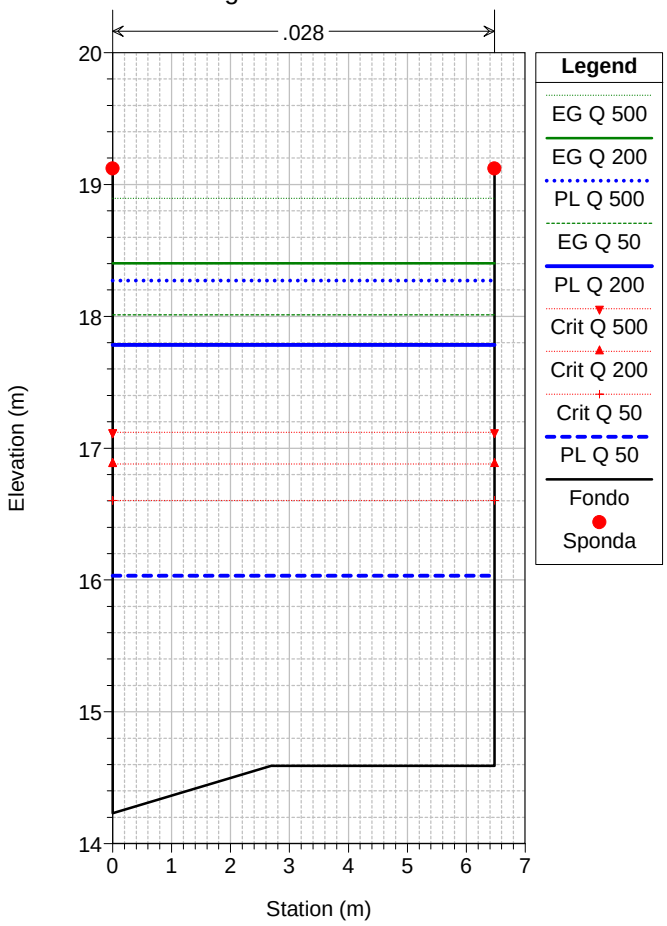
Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-1v



Fegino Plan: Fegino2014

River = fegino Reach = Valle FE-0



HEC-RAS Plan: Fegino2014

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)	
Fegino monte	41.1 FE-39	Q 50	45.60	33.20	36.24	35.77	-0.47	36.23	-0.01	35.14	36.44	0.001543	2.00	23.75	12.64	0.41
Fegino monte	41.1 FE-39	Q 200	54.80	33.20	36.67	35.77	-0.90	36.23	-0.44	35.35	36.85	0.001175	1.95	30.93	17.65	0.37
Fegino monte	41.1 FE-39	Q 500	63.40	33.20	36.95	35.77	-1.18	36.23	-0.72	35.51	37.14	0.001070	1.98	35.95	18.07	0.36
Fegino monte	41. FE-39		Bridge													
Fegino monte	40.9 FE-39	Q 50	45.60	33.20	36.03	35.77	-0.26	36.23	0.20	35.14	36.28	0.002083	2.21	21.22	12.43	0.48
Fegino monte	40.9 FE-39	Q 200	54.80	33.20	36.51	35.77	-0.73	36.23	-0.28	35.35	36.72	0.001495	2.11	28.02	17.40	0.41
Fegino monte	40.9 FE-39	Q 500	63.40	33.20	36.82	35.77	-1.05	36.23	-0.59	35.51	37.03	0.001272	2.10	33.63	17.88	0.39
Fegino monte	40. FE-38	Q 50	45.60	32.38	34.90	35.28	0.38	39.00	4.10	34.90	36.13	0.017369	4.92	9.28	3.77	1.00
Fegino monte	40. FE-38	Q 200	54.80	32.38	35.55	35.28	-0.27	39.00	3.45	35.55	36.60	0.012832	4.58	12.44	6.54	0.83
Fegino monte	40. FE-38	Q 500	63.40	32.38	35.83	35.28	-0.55	39.00	3.17	35.83	36.91	0.012548	4.71	14.25	6.54	0.82
Fegino monte	39. FE-37	Q 50	45.60	31.91	33.55	34.22	0.67	35.85	2.30	33.94	35.09	0.023969	5.51	8.28	5.05	1.37
Fegino monte	39. FE-37	Q 200	54.80	31.91	33.67	34.22	0.55	35.85	2.18	34.47	35.61	0.028413	6.17	8.89	5.05	1.48
Fegino monte	39. FE-37	Q 500	63.40	31.91	33.89	34.22	0.33	35.85	1.96	34.69	35.93	0.027304	6.33	10.02	5.05	1.43
Fegino monte	38.1 FE-36	Q 50	45.60	31.91	33.19	34.17	0.98	34.81	1.62	33.71	34.97	0.031462	5.92	7.71	6.07	1.68
Fegino monte	38.1 FE-36	Q 200	54.80	31.91	35.01	34.17	-0.84	34.81	-0.20	33.95	35.34	0.002685	2.63	22.64	11.08	0.48
Fegino monte	38.1 FE-36	Q 500	63.40	31.91	33.46	34.17	0.71	34.81	1.35	34.37	35.80	0.034469	6.77	9.37	6.09	1.74
Fegino monte	38. FE-36		Bridge													
Fegino monte	37.9 FE-36	Q 50	45.60	31.91	34.06	34.17	0.11	34.81	0.75	33.71	34.69	0.006995	3.50	13.03	6.14	0.77
Fegino monte	37.9 FE-36	Q 200	54.80	31.91	34.35	34.17	-0.18	34.81	0.46	33.95	35.02	0.006762	3.65	15.64	10.44	0.75
Fegino monte	37.9 FE-36	Q 500	63.40	31.91	34.50	34.17	-0.33	34.81	0.31	34.37	35.26	0.007316	3.91	17.17	10.44	0.78
Fegino monte	37.1 FE-35	Q 50	45.60	30.77	34.33	33.57	-0.76	33.90	-0.43	32.62	34.50	0.001166	1.87	27.54	15.06	0.32
Fegino monte	37.1 FE-35	Q 200	54.80	30.77	34.65	33.57	-1.08	33.90	-0.75	32.84	34.82	0.001125	1.94	32.29	15.06	0.32
Fegino monte	37.1 FE-35	Q 500	63.40	30.77	34.84	33.57	-1.27	33.90	-0.94	33.04	35.03	0.001200	2.07	35.17	15.06	0.33
Fegino monte	37. FE-35		Bridge													
Fegino monte	36.9 FE-35	Q 50	45.60	30.77	34.09	33.57	-0.52	33.90	-0.19	32.62	34.30	0.001629	2.10	23.83	14.59	0.37
Fegino monte	36.9 FE-35	Q 200	54.80	30.77	34.44	33.57	-0.87	33.90	-0.54	32.84	34.65	0.001460	2.13	29.17	15.06	0.36
Fegino monte	36.9 FE-35	Q 500	63.40	30.77	34.63	33.57	-1.06	33.90	-0.73	33.04	34.86	0.001548	2.27	31.96	15.06	0.37
Fegino monte	36. FE-34	Q 50	45.60	31.19	33.24	32.99	-0.25	33.45	0.21	33.24	34.15	0.010346	4.21	10.90	6.24	0.99
Fegino monte	36. FE-34	Q 200	54.80	31.19	33.50	32.99	-0.51	33.45	-0.05	33.50	34.50	0.009992	4.44	12.51	7.17	0.98
Fegino monte	36. FE-34	Q 500	63.40	31.19	33.99	32.99	-1.00	33.45	-0.54	33.99	34.74	0.005894	3.93	18.10	13.31	0.78
Fegino monte	35. FE-33	Q 50	45.60	30.46	31.62	35.51	3.89	34.51	2.89	32.18	33.46	0.034062	6.00	7.60	7.00	1.84
Fegino monte	35. FE-33	Q 200	54.80	30.46	31.78	35.51	3.74	34.51	2.73	32.39	33.82	0.033465	6.33	8.66	7.10	1.83
Fegino monte	35. FE-33	Q 500	63.40	30.46	31.89	35.51	3.62	34.51	2.62	32.58	34.18	0.034661	6.71	9.45	7.18	1.87
Fegino monte	34. FE-32	Q 50	45.60	28.67	32.57	32.27	-0.30	32.48	-0.09	30.57	32.65	0.000709	1.37	41.29	26.38	0.23
Fegino monte	34. FE-32	Q 200	54.80	28.67	32.74	32.27	-0.47	32.48	-0.26	30.80	32.83	0.000780	1.48	45.63	26.38	0.24
Fegino monte	34. FE-32	Q 500	63.40	28.67	32.88	32.27	-0.61	32.48	-0.40	31.01	32.98	0.000836	1.57	49.42	26.38	0.25

HEC-RAS Plan: Fegino2014 (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)	
Fegino monte	33.1 FE-31	Q 50	45.60	28.98	32.60	31.40	-1.20	31.42	-1.18	31.99	32.64	0.000483	1.07	57.46	48.44	0.18
Fegino monte	33.1 FE-31	Q 200	54.80	28.98	32.77	31.40	-1.37	31.42	-1.35	32.05	32.81	0.000462	1.08	65.74	48.44	0.18
Fegino monte	33.1 FE-31	Q 500	63.40	28.98	32.92	31.40	-1.52	31.42	-1.50	32.11	32.96	0.000447	1.09	72.96	48.44	0.18
Fegino monte	33. FE-31		Bridge													
Fegino monte	32.9 FE-31	Q 50	45.60	28.98	32.59	31.40	-1.19	31.42	-1.17	31.99	32.63	0.000496	1.08	56.99	48.44	0.18
Fegino monte	32.9 FE-31	Q 200	54.80	28.98	32.76	31.40	-1.36	31.42	-1.34	32.05	32.80	0.000472	1.09	65.29	48.44	0.18
Fegino monte	32.9 FE-31	Q 500	63.40	28.98	32.91	31.40	-1.51	31.42	-1.49	32.11	32.95	0.000455	1.10	72.52	48.44	0.18
Fegino monte	32. FE-30	Q 50	45.60	28.97	32.14	31.28	-0.86	31.08	-1.06	32.14	32.58	0.005474	3.32	17.89	17.65	0.64
Fegino monte	32. FE-30	Q 200	54.80	28.97	32.26	31.28	-0.98	31.08	-1.18	32.26	32.75	0.005898	3.55	20.06	17.65	0.66
Fegino monte	32. FE-30	Q 500	63.40	28.97	32.37	31.28	-1.09	31.08	-1.29	32.37	32.90	0.006257	3.74	21.87	17.65	0.69
Burlo	5 BU-5	Q 50	15.70	38.50	39.89	42.13	2.24	42.27	2.38	39.89	40.43	0.012690	3.23	4.85	4.57	1.00
Burlo	5 BU-5	Q 200	19.00	38.50	40.06	42.13	2.07	42.27	2.21	40.06	40.64	0.012480	3.38	5.62	4.82	1.00
Burlo	5 BU-5	Q 500	21.90	38.50	40.18	42.13	1.95	42.27	2.09	40.18	40.81	0.012449	3.50	6.25	5.01	1.00
Burlo	4 BU-4	Q 50	15.70	33.16	33.95	34.54	0.59	33.89	-0.06	34.68	38.00	0.236236	8.92	1.77	4.25	4.20
Burlo	4 BU-4	Q 200	19.00	33.16	34.03	34.54	0.51	33.89	-0.14	34.79	38.27	0.208762	9.17	2.12	4.85	4.03
Burlo	4 BU-4	Q 500	21.90	33.16	34.09	34.54	0.45	33.89	-0.20	34.86	38.48	0.192340	9.36	2.43	5.33	3.91
Burlo	3 BU-3	Q 50	15.70	31.26	32.23	34.64	2.41	34.64	2.41	32.78	34.12	0.072309	6.09	2.58	2.67	1.98
Burlo	3 BU-3	Q 200	19.00	31.26	32.36	34.64	2.28	34.64	2.28	32.99	34.50	0.074201	6.48	2.93	2.67	1.97
Burlo	3 BU-3	Q 500	21.90	31.26	35.28	34.64	-0.64	34.64	-0.64	33.16	35.41	0.002127	1.68	14.62	9.02	0.27
Burlo	2.5		Bridge													
Burlo	2 BU-2	Q 50	15.70	29.62	32.11	31.99	-0.12	32.02	-0.09	32.16	32.34	0.013373	2.56	8.05	22.59	0.52
Burlo	2 BU-2	Q 200	19.00	29.62	32.14	31.99	-0.15	32.02	-0.12	32.21	32.42	0.015598	2.79	8.84	24.15	0.56
Burlo	2 BU-2	Q 500	21.90	29.62	32.26	31.99	-0.27	32.02	-0.24	32.26	32.45	0.009880	2.29	11.92	29.41	0.45
Burlo	1 BU-1	Q 50	15.70	28.97	29.59	31.17	1.58	31.19	1.60	30.20	31.97	0.116374	6.83	2.30	3.70	2.76
Burlo	1 BU-1	Q 200	19.00	28.97	29.73	31.17	1.44	31.19	1.46	30.36	32.04	0.092958	6.74	2.82	3.70	2.46
Burlo	1 BU-1	Q 500	21.90	28.97	29.86	31.17	1.31	31.19	1.33	30.50	32.13	0.079289	6.67	3.28	3.70	2.26
Valle	31. FE-29	Q 50	61.30	27.85	29.39	29.55	0.16	31.35	1.96	30.19	32.33	0.047129	7.60	8.07	5.24	1.95
Valle	31. FE-29	Q 200	73.80	27.85	29.60	29.55	-0.05	31.35	1.75	30.29	32.51	0.043240	7.70	10.97	19.81	1.86
Valle	31. FE-29	Q 500	85.30	27.85	29.70	29.55	-0.15	31.35	1.65	30.38	32.65	0.043575	7.96	13.03	21.42	1.87
Valle	30.1 FE-28	Q 50	61.30	27.00	28.09	28.70	0.61	29.87	1.78	29.11	30.96	0.055350	7.50	8.17	7.51	2.30
Valle	30.1 FE-28	Q 200	73.80	27.00	28.28	28.70	0.42	29.87	1.59	29.31	31.28	0.048986	7.67	9.62	7.51	2.16
Valle	30.1 FE-28	Q 500	85.30	27.00	28.47	28.70	0.23	29.87	1.40	29.46	31.50	0.043149	7.71	11.07	7.51	2.03
Valle	30. FE-28		Bridge													
Valle	29.9 FE-28	Q 50	61.30	27.00	28.12	28.70	0.58	29.87	1.75	29.11	30.84	0.051056	7.30	8.39	7.51	2.21
Valle	29.9 FE-28	Q 200	73.80	27.00	28.31	28.70	0.39	29.87	1.56	29.31	31.17	0.045630	7.49	9.86	7.51	2.09
Valle	29.9 FE-28	Q 500	85.30	27.00	28.51	28.70	0.19	29.87	1.36	29.46	31.40	0.040426	7.54	11.32	7.51	1.96

HEC-RAS Plan: Fegino2014 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Valle	28.1 FE-27	Q 50	61.30	26.10	28.81	27.60	-1.21	30.00	1.19	28.25	29.10	0.002734	2.60	26.37	13.85	0.50
Valle	28.1 FE-27	Q 200	73.80	26.10	29.07	27.60	-1.47	30.00	0.93	28.43	29.39	0.002745	2.72	29.97	13.85	0.50
Valle	28.1 FE-27	Q 500	85.30	26.10	29.30	27.60	-1.70	30.00	0.70	28.57	29.65	0.002733	2.82	33.19	13.85	0.50
Valle	28. FE-27		Bridge													
Valle	27.9 FE-27	Q 50	61.30	26.10	28.25	27.60	-0.65	28.16	-0.09	28.25	28.88	0.007054	3.71	18.72	13.85	0.81
Valle	27.9 FE-27	Q 200	73.80	26.10	28.44	27.60	-0.84	28.16	-0.28	28.43	29.13	0.007269	3.93	21.24	13.85	0.82
Valle	27.9 FE-27	Q 500	85.30	26.10	28.61	27.60	-1.01	28.16	-0.46	28.57	29.34	0.007143	4.05	23.72	13.85	0.82
Valle	27.1 FE-26	Q 50	61.30	26.30	28.43	27.79	-0.64	28.13	-0.30	27.93	28.66	0.002833	2.30	29.52	20.41	0.50
Valle	27.1 FE-26	Q 200	73.80	26.30	28.66	27.79	-0.87	28.13	-0.53	28.13	28.91	0.002681	2.39	34.18	20.41	0.50
Valle	27.1 FE-26	Q 500	85.30	26.30	28.85	27.79	-1.06	28.13	-0.72	28.18	29.13	0.002594	2.48	38.11	20.41	0.50
Valle	27. FE-26		Bridge													
Valle	26.9 FE-26	Q 50	61.30	26.30	28.18	27.79	-0.39	28.13	-0.05	27.93	28.52	0.004751	2.74	24.54	20.13	0.64
Valle	26.9 FE-26	Q 200	73.80	26.30	28.39	27.79	-0.60	28.13	-0.26	28.13	28.75	0.004425	2.84	28.76	20.41	0.63
Valle	26.9 FE-26	Q 500	85.30	26.30	28.57	27.79	-0.78	28.13	-0.44	28.18	28.95	0.004221	2.92	32.32	20.41	0.62
Valle	25. FE-25	Q 50	61.30	25.07	27.60	26.72	-0.88	35.31	7.71	27.60	28.12	0.006675	3.58	20.72	17.12	0.74
Valle	25. FE-25	Q 200	73.80	25.07	27.74	26.72	-1.02	35.31	7.57	27.74	28.32	0.007146	3.80	23.11	17.16	0.77
Valle	25. FE-25	Q 500	85.30	25.07	27.86	26.72	-1.14	35.31	7.45	27.86	28.50	0.007510	3.98	25.15	17.19	0.79
Valle	24. FE-24	Q 50	61.30	24.45	25.37	26.85	1.48	34.52	9.15	25.88	27.08	0.035553	5.78	10.61	11.49	1.92
Valle	24. FE-24	Q 200	73.80	24.45	25.51	26.85	1.34	34.52	9.01	26.06	27.38	0.033362	6.06	12.18	11.49	1.88
Valle	24. FE-24	Q 500	85.30	24.45	27.01	26.85	-0.16	34.52	7.51	26.23	27.20	0.001557	2.08	47.76	27.61	0.41
Valle	23. FE-23	Q 50	61.30	24.05	26.47	26.25	-0.22	35.78	9.31	25.64	26.72	0.002127	2.30	29.25	15.60	0.47
Valle	23. FE-23	Q 200	73.80	24.05	26.55	26.25	-0.30	35.78	9.23	25.85	26.88	0.002735	2.65	30.51	15.60	0.53
Valle	23. FE-23	Q 500	85.30	24.05	26.78	26.25	-0.53	35.78	9.00	26.03	27.13	0.002661	2.74	34.07	15.60	0.53
Valle	22. FE-22	Q 50	61.30	23.42	25.68	24.92	-0.76	28.62	2.94	25.50	26.04	0.004468	2.84	23.69	13.42	0.60
Valle	22. FE-22	Q 200	73.80	23.42	25.50	24.92	-0.58	28.62	3.12	25.50	26.15	0.009002	3.86	21.23	13.42	0.86
Valle	22. FE-22	Q 500	85.30	23.42	25.57	24.92	-0.65	28.62	3.05	25.57	26.36	0.010506	4.25	22.21	13.42	0.92
Valle	21. FE-21	Q 50	61.30	22.30	23.41	24.20	0.79	29.15	5.74	23.92	25.13	0.030464	5.81	10.56	9.53	1.76
Valle	21. FE-21	Q 200	73.80	22.30	24.09	24.20	0.11	29.15	5.06	24.13	25.04	0.010271	4.32	17.09	9.53	1.03
Valle	21. FE-21	Q 500	85.30	22.30	24.75	24.20	-0.55	29.15	4.40	24.29	25.17	0.003622	3.04	31.21	16.66	0.62
Valle	20.9 FE-20	Q 50	61.30	22.13	24.15	22.93	-1.22	25.83	1.68	23.75	24.46	0.003210	2.66	25.47	15.73	0.60
Valle	20.9 FE-20	Q 200	73.80	22.13	24.41	22.93	-1.48	25.83	1.42	23.90	24.74	0.002976	2.74	29.58	15.73	0.58
Valle	20.9 FE-20	Q 500	85.30	22.13	24.71	22.93	-1.78	25.83	1.12	24.03	25.03	0.002561	2.71	34.26	15.73	0.54
Valle	20.5 FE-20		Bridge													
Valle	20.1 FE-20	Q 50	61.30	22.13	24.13	22.93	-1.20	25.83	1.70	23.75	24.45	0.003322	2.69	25.18	15.73	0.61
Valle	20.1 FE-20	Q 200	73.80	22.13	24.39	22.93	-1.46	25.83	1.44	23.90	24.73	0.003049	2.76	29.33	15.73	0.59
Valle	20.1 FE-20	Q 500	85.30	22.13	24.70	22.93	-1.77	25.83	1.13	24.03	25.03	0.002594	2.72	34.11	15.73	0.54

HEC-RAS Plan: Fegino2014 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Valle	20. FE-19	Q 50	61.30	21.77	24.07	23.57	-0.50	25.79	1.72	23.53	24.38	0.002904	2.58	26.23	14.52	0.54
Valle	20. FE-19	Q 200	73.80	21.77	24.33	23.57	-0.76	25.79	1.46	23.72	24.67	0.002848	2.71	30.00	14.52	0.54
Valle	20. FE-19	Q 500	85.30	21.77	24.64	23.57	-1.07	25.79	1.15	23.87	24.97	0.002545	2.72	34.42	14.52	0.51
Valle	19. FE-18	Q 50	61.30	21.00	23.94	23.89	-0.05	26.50	2.56	22.94	24.25	0.002683	2.56	26.43	13.32	0.48
Valle	19. FE-18	Q 200	73.80	21.00	24.18	23.89	-0.29	26.50	2.32	23.19	24.53	0.002852	2.75	29.67	13.32	0.49
Valle	19. FE-18	Q 500	85.30	21.00	24.50	23.89	-0.61	26.50	2.00	23.41	24.85	0.002652	2.78	33.86	13.32	0.47
Valle	18.9 FE-17	Q 50	61.30	21.48	23.98	23.08	-0.90	23.17	-0.81	23.46	24.21	0.002223	2.32	30.80	19.69	0.47
Valle	18.9 FE-17	Q 200	73.80	21.48	24.24	23.08	-1.16	23.17	-1.07	23.62	24.49	0.002047	2.38	36.06	19.69	0.46
Valle	18.9 FE-17	Q 500	85.30	21.48	24.57	23.08	-1.49	23.17	-1.40	23.75	24.80	0.001682	2.32	42.52	19.69	0.42
Valle	18.5 FE-17		Bridge													
Valle	18.1 FE-17	Q 50	61.30	21.48	23.46	23.08	-0.38	23.17	-0.29	23.46	24.00	0.006427	3.37	20.69	19.69	0.77
Valle	18.1 FE-17	Q 200	73.80	21.48	23.62	23.08	-0.54	23.17	-0.45	23.62	24.20	0.006526	3.58	23.81	19.69	0.78
Valle	18.1 FE-17	Q 500	85.30	21.48	24.00	23.08	-0.92	23.17	-0.83	23.75	24.44	0.004128	3.17	31.26	19.69	0.64
Valle	18. FE-16	Q 50	61.30	21.00	22.46	23.87	1.41	24.27	1.81	22.83	23.86	0.020405	5.24	11.71	8.51	1.42
Valle	18. FE-16	Q 200	73.80	21.00	22.82	23.87	1.05	24.27	1.45	23.05	24.09	0.014729	4.99	14.80	8.51	1.21
Valle	18. FE-16	Q 500	85.30	21.00	23.26	23.87	0.61	24.27	1.01	23.26	24.34	0.010296	4.62	18.48	8.51	1.00
Valle	17. FE-15	Q 50	61.30	21.00	22.90	23.70	0.80	23.70	0.80	22.41	23.24	0.003350	2.60	23.57	13.11	0.62
Valle	17. FE-15	Q 200	73.80	21.00	23.17	23.70	0.53	23.70	0.53	22.58	23.55	0.003162	2.72	27.16	13.11	0.60
Valle	17. FE-15	Q 500	85.30	21.00	23.41	23.70	0.29	23.70	0.29	22.73	23.81	0.003063	2.82	30.23	13.11	0.59
Valle	16. FE-14	Q 50	61.30	20.70	22.69	22.80	0.11	23.60	0.91	22.32	23.15	0.004692	3.01	20.39	11.28	0.71
Valle	16. FE-14	Q 200	73.80	20.70	22.94	22.80	-0.14	23.60	0.66	22.51	23.45	0.004588	3.17	23.25	11.28	0.71
Valle	16. FE-14	Q 500	85.30	20.70	23.16	22.80	-0.36	23.60	0.44	22.68	23.72	0.004574	3.32	25.66	11.28	0.70
Valle	15. FE-13	Q 50	61.30	20.20	22.06	21.80	-0.26	22.85	0.79	22.06	22.84	0.008720	3.91	15.66	10.03	1.00
Valle	15. FE-13	Q 200	73.80	20.20	22.28	21.80	-0.48	22.85	0.57	22.28	23.14	0.008632	4.12	17.92	10.38	1.00
Valle	15. FE-13	Q 500	85.30	20.20	22.47	21.80	-0.67	22.85	0.38	22.47	23.40	0.008549	4.28	19.93	10.68	1.00
Valle	14. FE-12	Q 50	61.30	19.50	21.59	21.30	-0.29	22.30	0.71	21.28	22.20	0.006005	3.46	17.74	8.83	0.78
Valle	14. FE-12	Q 200	73.80	19.50	21.99	21.30	-0.69	22.30	0.31	21.50	22.60	0.005172	3.47	21.25	8.83	0.71
Valle	14. FE-12	Q 500	85.30	19.50	22.33	21.30	-1.03	22.30	-0.03	21.70	22.96	0.004717	3.51	24.31	8.83	0.68
Valle	13.1 FE-11	Q 50	61.30	18.30	21.50	20.60	-0.90	20.60	-0.90	20.32	21.82	0.002277	2.50	24.49	8.29	0.46
Valle	13.1 FE-11	Q 200	73.80	18.30	21.89	20.60	-1.29	20.60	-1.29	20.56	22.25	0.002351	2.66	27.72	8.29	0.46
Valle	13.1 FE-11	Q 500	85.30	18.30	22.23	20.60	-1.63	20.60	-1.63	20.76	22.63	0.002420	2.79	30.52	8.29	0.46
Valle	13. FE-11		Bridge													
Valle	12.9 FE-11	Q 50	61.30	18.30	20.70	20.60	-0.10	20.60	-0.10	20.32	21.30	0.005562	3.44	17.83	8.29	0.75
Valle	12.9 FE-11	Q 200	73.80	18.30	20.97	20.60	-0.37	20.60	-0.37	20.56	21.66	0.005794	3.69	20.02	8.29	0.76
Valle	12.9 FE-11	Q 500	85.30	18.30	21.21	20.60	-0.61	20.60	-0.61	20.76	21.97	0.005879	3.86	22.08	8.29	0.76
Valle	0.077 FE-10	Q 50	61.30	18.17	20.56	24.30	3.74	24.30	3.74	20.31	21.24	0.006830	3.66	16.77	8.40	0.83
Valle	0.077 FE-10	Q 200	73.80	18.17	20.83	24.30	3.47	24.30	3.47	20.55	21.59	0.006863	3.87	19.05	8.51	0.83

HEC-RAS Plan: Fegino2014 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Valle	0.077 FE-10	Q 500	85.30	18.17	21.10	24.30	3.20	24.30	3.20	20.76	21.91	0.006662	4.00	21.32	8.62	0.81
Valle	0.076	Q 50	61.30	18.15	20.51	22.41	1.90	22.41	1.90	20.19	21.17	0.006470	3.62	16.93	7.99	0.79
Valle	0.076	Q 200	73.80	18.15	20.76	22.41	1.65	22.41	1.65	20.44	21.53	0.006748	3.88	19.01	8.09	0.81
Valle	0.076	Q 500	85.30	18.15	21.00	22.41	1.41	22.41	1.41	20.65	21.85	0.006903	4.08	20.91	8.17	0.81
Valle	0.075 FE-9m	Q 50	61.30	18.15	20.50	21.10	0.60	21.10	0.60	20.19	21.17	0.006483	3.62	16.91	8.00	0.80
Valle	0.075 FE-9m	Q 200	73.80	18.15	20.76	21.10	0.34	21.10	0.34	20.44	21.53	0.006763	3.89	18.99	8.09	0.81
Valle	0.075 FE-9m	Q 500	85.30	18.15	20.99	21.10	0.11	21.10	0.11	20.65	21.84	0.006916	4.08	20.88	8.17	0.82
Valle	0.074	Q 50	61.30	18.11	20.28	21.10	0.82	21.10	0.82	20.11	21.05	0.007787	3.88	15.82	8.00	0.88
Valle	0.074	Q 200	73.80	18.11	20.48	21.10	0.62	21.10	0.62	20.36	21.40	0.008539	4.23	17.44	8.08	0.92
Valle	0.074	Q 500	85.30	18.11	20.70	21.10	0.40	21.10	0.40	20.58	21.71	0.008644	4.44	19.23	8.15	0.92
Valle	0.073	Q 50	61.30	18.11	20.11	21.45	1.34	21.45	1.34	20.11	21.02	0.010035	4.23	14.48	7.95	1.00
Valle	0.073	Q 200	73.80	18.11	20.40	21.45	1.05	21.45	1.05	20.36	21.38	0.009459	4.39	16.82	8.05	0.97
Valle	0.073	Q 500	85.30	18.11	20.67	21.45	0.78	21.45	0.78	20.57	21.70	0.008928	4.49	19.01	8.15	0.94
Valle	0.072 FE-8v	Q 50	61.30	18.03	19.93	21.45	1.52	21.45	1.52	20.04	20.97	0.012168	4.52	13.57	7.90	1.10
Valle	0.072 FE-8v	Q 200	73.80	18.03	20.42	21.45	1.03	21.45	1.03	20.29	21.33	0.008504	4.22	17.48	8.07	0.92
Valle	0.072 FE-8v	Q 500	85.30	18.03	20.68	21.45	0.77	21.45	0.77	20.50	21.64	0.008165	4.34	19.64	8.17	0.89
Valle	0.071	Q 50	61.30	18.02	19.92	22.41	2.49	22.41	2.49	20.03	20.95	0.012063	4.51	13.60	7.90	1.10
Valle	0.071	Q 200	73.80	18.02	20.41	22.41	2.00	22.41	2.00	20.28	21.31	0.008364	4.20	17.57	8.08	0.91
Valle	0.071	Q 500	85.30	18.02	20.68	22.41	1.73	22.41	1.73	20.49	21.63	0.008041	4.32	19.74	8.18	0.89
Valle	0.06 FE-7	Q 50	61.30	17.45	19.70	21.78	2.08	21.78	2.08	19.70	20.64	0.010707	4.30	14.26	7.59	1.00
Valle	0.06 FE-7	Q 200	73.80	17.45	19.96	21.78	1.82	21.78	1.82	19.96	21.01	0.010754	4.55	16.21	7.68	1.00
Valle	0.06 FE-7	Q 500	85.30	17.45	20.18	21.78	1.60	21.78	1.60	20.18	21.33	0.010780	4.76	17.93	7.76	1.00
Valle	0.053	Q 50	61.30	16.93	19.46	21.41	1.95	21.41	1.95	19.34	20.32	0.009379	4.09	15.00	7.37	0.91
Valle	0.053	Q 200	73.80	16.93	19.74	21.41	1.67	21.41	1.67	19.60	20.69	0.009493	4.34	17.01	7.46	0.92
Valle	0.053	Q 500	85.30	16.93	19.97	21.41	1.44	21.41	1.44	19.83	21.02	0.009583	4.54	18.79	7.54	0.92
Valle	0.052 FE-6m	Q 50	61.30	16.91	19.33	21.40	2.07	21.40	2.07	19.33	20.29	0.011226	4.35	14.09	7.33	1.00
Valle	0.052 FE-6m	Q 200	73.80	16.91	19.59	21.40	1.81	21.40	1.81	19.59	20.67	0.011262	4.61	16.02	7.42	1.00
Valle	0.052 FE-6m	Q 500	85.30	16.91	19.82	21.40	1.58	21.40	1.58	19.82	21.00	0.011347	4.82	17.70	7.49	1.00
Valle	0.051 FE-6v	Q 50	61.30	16.88	19.21	21.40	2.19	21.40	2.19	19.30	20.27	0.012829	4.56	13.45	7.30	1.07
Valle	0.051 FE-6v	Q 200	73.80	16.88	19.47	21.40	1.93	21.40	1.93	19.56	20.65	0.012755	4.81	15.34	7.39	1.07
Valle	0.051 FE-6v	Q 500	85.30	16.88	19.69	21.40	1.71	21.40	1.71	19.79	20.97	0.012745	5.02	16.99	7.46	1.06
Valle	0.050	Q 50	61.30	16.86	19.21	21.35	2.14	21.35	2.14	19.28	20.25	0.012384	4.50	13.62	7.31	1.05
Valle	0.050	Q 200	73.80	16.86	19.47	21.35	1.88	21.35	1.88	19.54	20.63	0.012403	4.76	15.49	7.39	1.05
Valle	0.050	Q 500	85.30	16.86	19.69	21.35	1.66	21.35	1.66	19.77	20.95	0.012429	4.98	17.14	7.47	1.05
Valle	0.040 FE-5	Q 50	61.30	16.11	18.99	21.29	2.30	23.04	4.05	18.78	19.80	0.008878	3.98	15.40	7.16	0.87
Valle	0.040 FE-5	Q 200	73.80	16.11	19.34	21.29	1.95	23.04	3.70	19.05	20.20	0.008383	4.12	17.92	7.31	0.84
Valle	0.040 FE-5	Q 500	85.30	16.11	19.64	21.29	1.65	23.04	3.40	19.29	20.55	0.008089	4.24	20.14	7.45	0.82

HEC-RAS Plan: Fegino2014 (Continued)

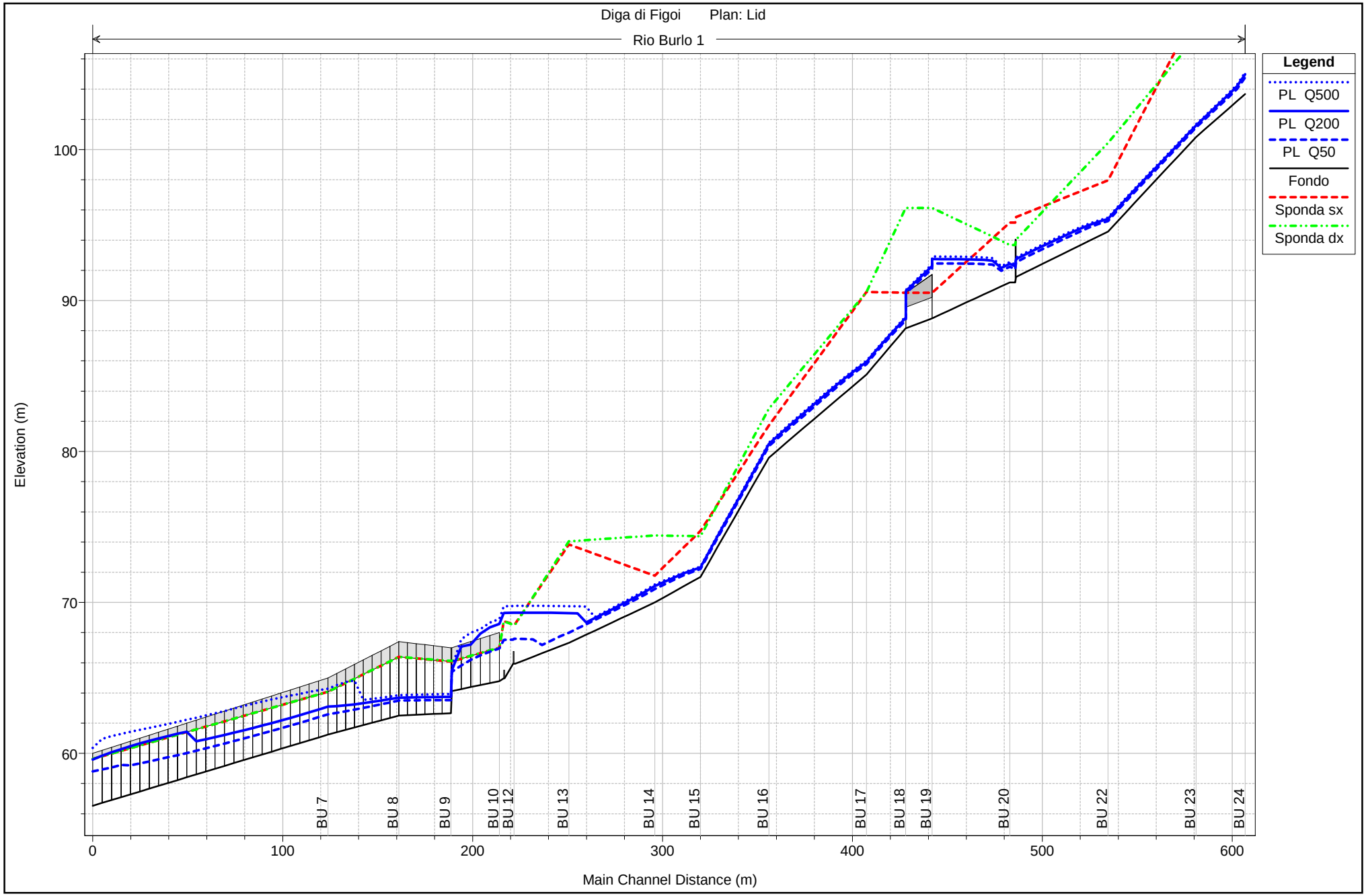
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Valle	0.030 FE-4	Q 50	61.30	15.74	18.75	21.39	2.64	24.13	5.38	18.50	19.56	0.008965	3.98	15.40	6.85	0.85
Valle	0.030 FE-4	Q 200	73.80	15.74	19.07	21.39	2.32	24.13	5.06	18.78	19.96	0.008848	4.18	17.65	6.97	0.84
Valle	0.030 FE-4	Q 500	85.30	15.74	19.36	21.39	2.03	24.13	4.77	19.02	20.32	0.008776	4.34	19.65	7.07	0.83
Valle	0.020 FE-3	Q 50	61.30	15.56	18.54	21.21	2.67	23.95	5.41	18.21	19.31	0.008224	3.88	15.80	6.72	0.81
Valle	0.020 FE-3	Q 200	73.80	15.56	18.86	21.21	2.35	23.95	5.09	18.50	19.72	0.008343	4.11	17.96	6.83	0.81
Valle	0.020 FE-3	Q 500	85.30	15.56	19.14	21.21	2.07	23.95	4.81	18.74	20.08	0.008425	4.29	19.87	6.93	0.81
Valle	0.014	Q 50	61.30	15.38	18.43	21.03	2.60	21.61	3.18	18.04	19.16	0.007745	3.79	16.19	6.74	0.78
Valle	0.014	Q 200	73.80	15.38	18.74	21.03	2.29	21.61	2.87	18.32	19.57	0.007950	4.03	18.32	6.87	0.79
Valle	0.014	Q 500	85.30	15.38	19.02	21.03	2.01	21.61	2.59	18.57	19.92	0.008079	4.22	20.24	6.99	0.79
Valle	0.013 FE-2.5m	Q 50	61.30	15.37	18.42	20.15	1.73	20.15	1.73	18.03	19.15	0.007724	3.78	16.20	6.74	0.78
Valle	0.013 FE-2.5m	Q 200	73.80	15.37	18.73	20.15	1.42	20.15	1.42	18.32	19.56	0.007933	4.02	18.34	6.87	0.79
Valle	0.013 FE-2.5m	Q 500	85.30	15.37	19.01	20.15	1.14	20.15	1.14	18.56	19.91	0.008064	4.21	20.25	6.99	0.79
Valle	0.012 FE-2.5v	Q 50	61.30	15.36	18.24	20.15	1.91	20.15	1.91	18.03	19.09	0.009580	4.08	15.01	6.66	0.87
Valle	0.012 FE-2.5v	Q 200	73.80	15.36	18.54	20.15	1.61	20.15	1.61	18.31	19.50	0.009736	4.33	17.04	6.79	0.87
Valle	0.012 FE-2.5v	Q 500	85.30	15.36	18.81	20.15	1.34	20.15	1.34	18.56	19.85	0.009744	4.51	18.91	6.91	0.87
Valle	0.011	Q 50	61.30	15.35	18.02	21.02	3.00	21.60	3.58	18.02	19.06	0.012665	4.51	13.60	6.57	1.00
Valle	0.011	Q 200	73.80	15.35	18.31	21.02	2.71	21.60	3.29	18.31	19.46	0.012714	4.76	15.49	6.69	1.00
Valle	0.011	Q 500	85.30	15.35	18.78	21.02	2.24	21.60	2.82	18.55	19.84	0.010068	4.56	18.69	6.89	0.88
Valle	0.0034	Q 50	61.30	15.35	17.51	20.87	3.36	20.87	3.36	17.85	18.98	0.020326	5.36	11.44	6.46	1.29
Valle	0.0034	Q 200	73.80	15.35	17.78	20.87	3.09	20.87	3.09	18.13	19.38	0.019742	5.61	13.16	6.61	1.27
Valle	0.0034	Q 500	85.30	15.35	18.90	20.87	1.97	20.87	1.97	18.37	19.76	0.007410	4.11	20.74	6.91	0.76
Valle	0.0033 FE-2m	Q 50	61.30	15.32	17.50	17.80	0.30	17.80	0.30	17.82	18.96	0.020303	5.35	11.45	6.46	1.28
Valle	0.0033 FE-2m	Q 200	73.80	15.32	17.76	17.80	0.04	17.80	0.04	18.03	19.36	0.019728	5.60	13.18	6.60	1.27
Valle	0.0033 FE-2m	Q 500	85.30	15.32	18.39	17.80	-0.59	17.80	-0.59	18.20	19.70	0.014987	5.07	16.82	4.75	0.92
Valle	0.0032 FE-2v	Q 50	61.30	14.90	16.99	17.80	0.81	17.80	0.81	17.41	18.63	0.024130	5.68	10.79	6.33	1.39
Valle	0.0032 FE-2v	Q 200	73.80	14.90	17.24	17.80	0.56	17.80	0.56	17.70	19.04	0.023306	5.94	12.43	6.42	1.36
Valle	0.0032 FE-2v	Q 500	85.30	14.90	18.49	17.80	-0.69	17.80	-0.69	17.90	19.43	0.009647	4.29	19.88	4.40	0.72
Valle	0.0031	Q 50	61.30	14.87	16.95	20.87	3.92	20.87	3.92	17.38	18.60	0.024317	5.69	10.76	6.32	1.39
Valle	0.0031	Q 200	73.80	14.87	17.21	20.87	3.66	20.87	3.66	17.67	19.01	0.023544	5.96	12.39	6.41	1.37
Valle	0.0031	Q 500	85.30	14.87	18.57	20.87	2.30	20.87	2.30	17.92	19.38	0.006824	3.98	21.44	6.82	0.72
Valle	0.0024	Q 50	61.30	14.78	17.36	20.34	2.98	20.34	2.98	17.36	18.45	0.013173	4.63	13.24	6.05	1.00
Valle	0.0024	Q 200	73.80	14.78	17.66	20.34	2.68	20.34	2.68	17.66	18.88	0.013351	4.90	15.05	6.14	1.00
Valle	0.0024	Q 500	85.30	14.78	18.35	20.34	1.99	20.34	1.99	17.91	19.34	0.008950	4.40	19.37	6.34	0.80
Valle	0.0023 FE-1.5m	Q 50	61.30	14.76	17.27	19.60	2.33	19.60	2.33	17.34	18.43	0.014314	4.77	12.85	6.03	1.04
Valle	0.0023 FE-1.5m	Q 200	73.80	14.76	17.57	19.60	2.03	19.60	2.03	17.63	18.86	0.014415	5.04	14.64	6.12	1.04
Valle	0.0023 FE-1.5m	Q 500	85.30	14.76	18.35	19.60	1.25	19.60	1.25	17.89	19.32	0.008783	4.37	19.51	6.34	0.80
Valle	0.0022 FE-1.5v	Q 50	61.30	14.70	17.12	19.60	2.48	19.60	2.48	17.28	18.39	0.016330	5.00	12.26	6.00	1.12
Valle	0.0022 FE-1.5v	Q 200	73.80	14.70	17.41	19.60	2.19	19.60	2.19	17.58	18.82	0.016254	5.26	14.02	6.08	1.11

HEC-RAS Plan: Fegino2014 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Valle	0.0022 FE-1.5v	Q 500	85.30	14.70	18.36	19.60	1.24	19.60	1.24	17.83	19.29	0.008269	4.27	19.95	6.35	0.77
Valle	0.0021	Q 50	61.30	14.67	17.05	20.34	3.29	20.34	3.29	17.25	18.37	0.017155	5.09	12.05	5.98	1.14
Valle	0.0021	Q 200	73.80	14.67	17.44	20.34	2.90	20.34	2.90	17.55	18.78	0.015158	5.13	14.38	6.09	1.07
Valle	0.0021	Q 500	85.30	14.67	18.37	20.34	1.97	20.34	1.97	17.81	19.28	0.008035	4.23	20.17	6.36	0.76
Valle	0.0014	Q 50	61.30	14.23	15.94	19.12	3.18	19.12	3.18	16.60	18.19	0.036525	6.66	9.21	6.48	1.78
Valle	0.0014	Q 200	73.80	14.23	17.98	19.12	1.14	19.12	1.14	16.88	18.53	0.004355	3.29	22.46	6.48	0.56
Valle	0.0014	Q 500	85.30	14.23	18.62	19.12	0.50	19.12	0.50	17.12	19.14	0.003729	3.21	26.60	6.48	0.51
Valle	0.0013 FE-1m	Q 50	61.30	14.23	15.97	17.30	1.33	17.30	1.33	16.60	18.13	0.034326	6.52	9.40	6.48	1.73
Valle	0.0013 FE-1m	Q 200	73.80	14.23	17.64	17.30	-0.34	17.30	-0.34	16.88	18.49	0.013810	4.09	18.05		0.71
Valle	0.0013 FE-1m	Q 500	85.30	14.23	17.94	17.30	-0.64	17.30	-0.64	17.12	19.08	0.018450	4.73	18.05		0.78
Valle	0.0012 FE-1v	Q 50	61.30	14.23	16.00	17.30	1.30	17.30	1.30	16.60	18.07	0.032186	6.38	9.61	6.48	1.67
Valle	0.0012 FE-1v	Q 200	73.80	14.23	17.63	17.30	-0.33	17.30	-0.33	16.88	18.48	0.013810	4.09	18.05		0.71
Valle	0.0012 FE-1v	Q 500	85.30	14.23	17.92	17.30	-0.62	17.30	-0.62	17.12	19.06	0.018450	4.73	18.05		0.79
Valle	0.0011 FE-0	Q 50	61.30	14.23	16.03	19.12	3.09	19.12	3.09	16.60	18.01	0.030088	6.23	9.84	6.48	1.61
Valle	0.0011 FE-0	Q 200	73.80	14.23	17.78	19.12	1.34	19.12	1.34	16.88	18.40	0.005091	3.48	21.18	6.48	0.62
Valle	0.0011 FE-0	Q 500	85.30	14.23	18.27	19.12	0.85	19.12	0.85	17.12	18.90	0.004709	3.51	24.33	6.48	0.58

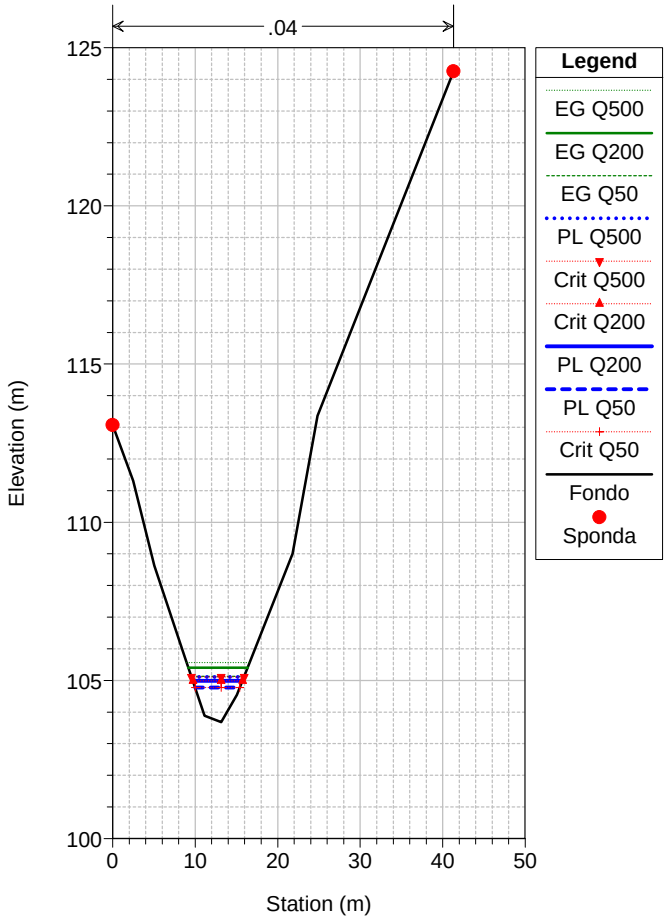
Rio Burlo

Il rio Burlo è stato indagato in due tratti distinti: il tratto più a monte compreso tra la diga di lago Figoi e lo sbocco della tombinatura sottostante gli impianti sportivi, quello più a valle dal tratto incassato a valle degli impianti fino alla confluenza nel t. Fegino. Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 25 $m^{1/3}/s$ per i tratti naturali e pari a 50 $m^{1/3}/s$ per i tratti plateati. Come condizioni al contorno di monte è stata imposta la profondità critica, a valle è stata simulata la confluenza nel torrente Fegino.


Diga di Figoi
Plan: Lid
Rio Burlo 1
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
100
90
80
70
60
0
100
200
300
400
500
600
Main Channel Distance (m)
BU 7
BU 8
BU 9
BU 10
BU 12
BU 13
BU 14
BU 15
BU 16
BU 17
BU 18
BU 19
BU 20
BU 22
BU 23
BU 24

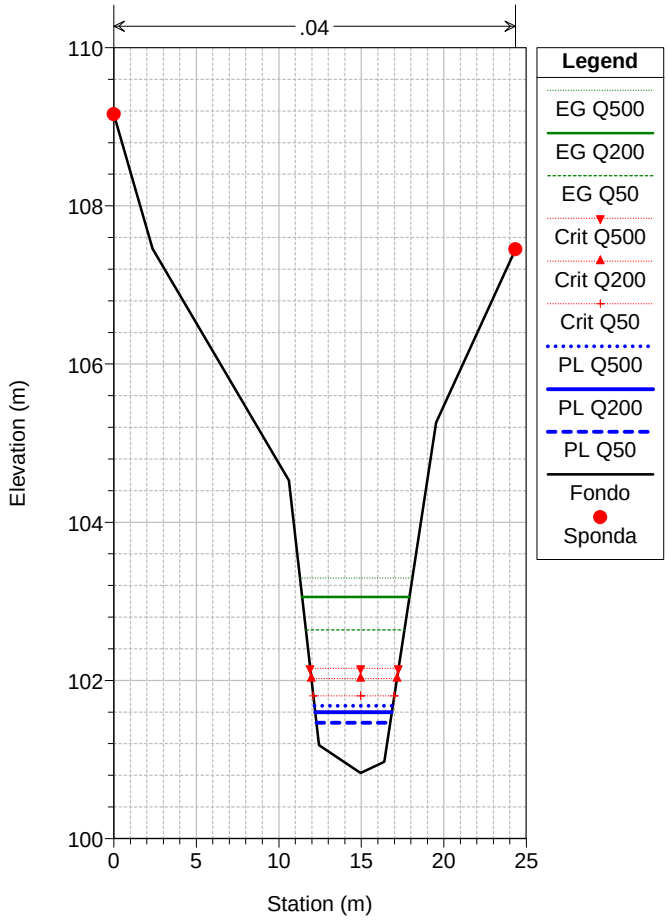
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 24



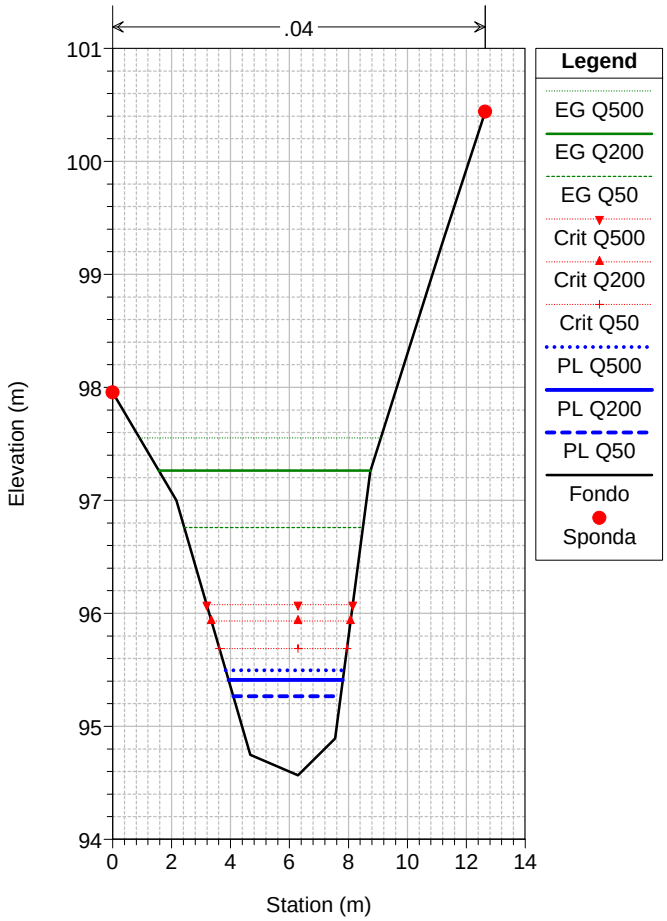
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 23



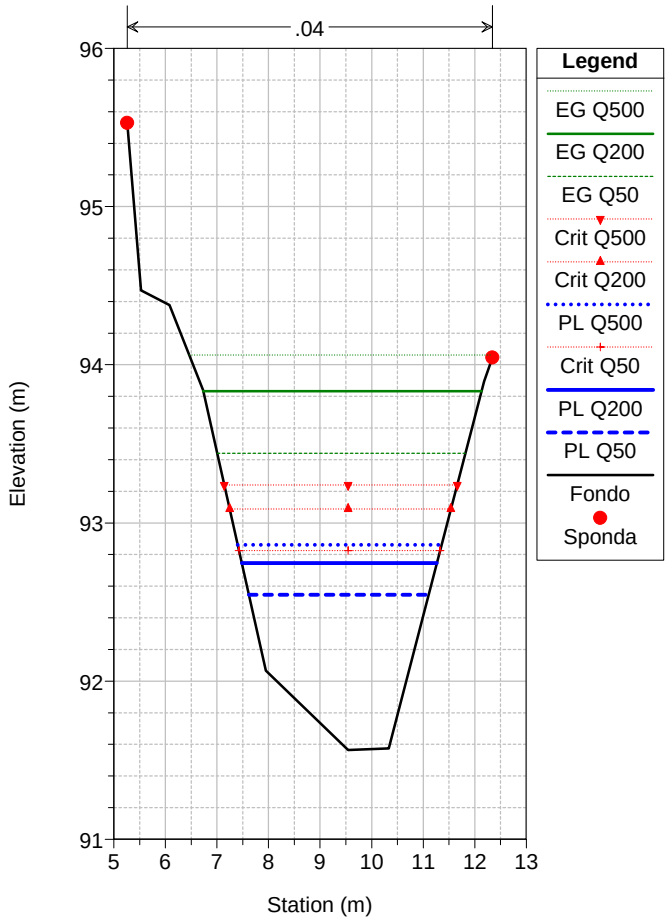
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 22



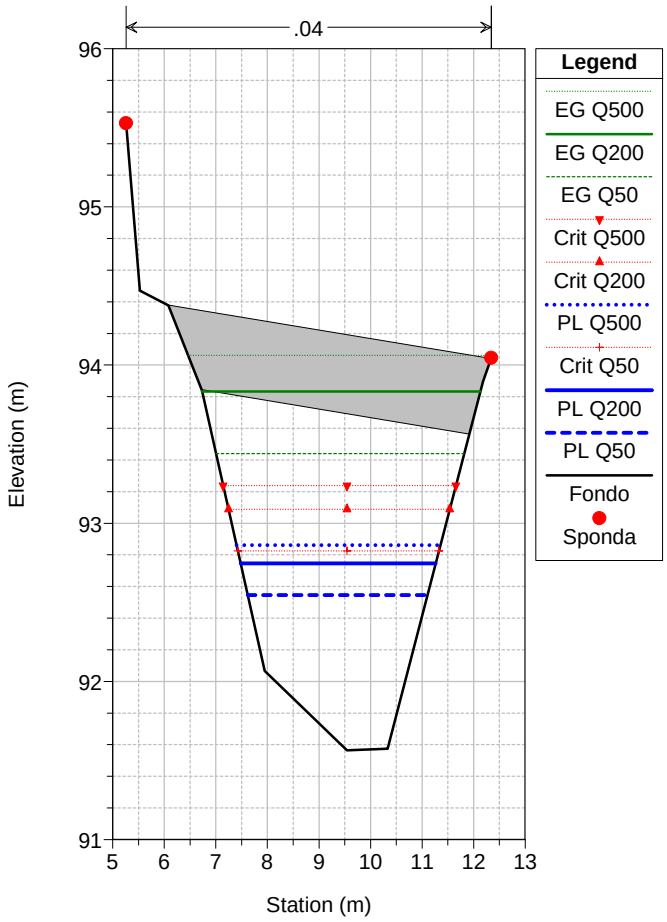
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 22



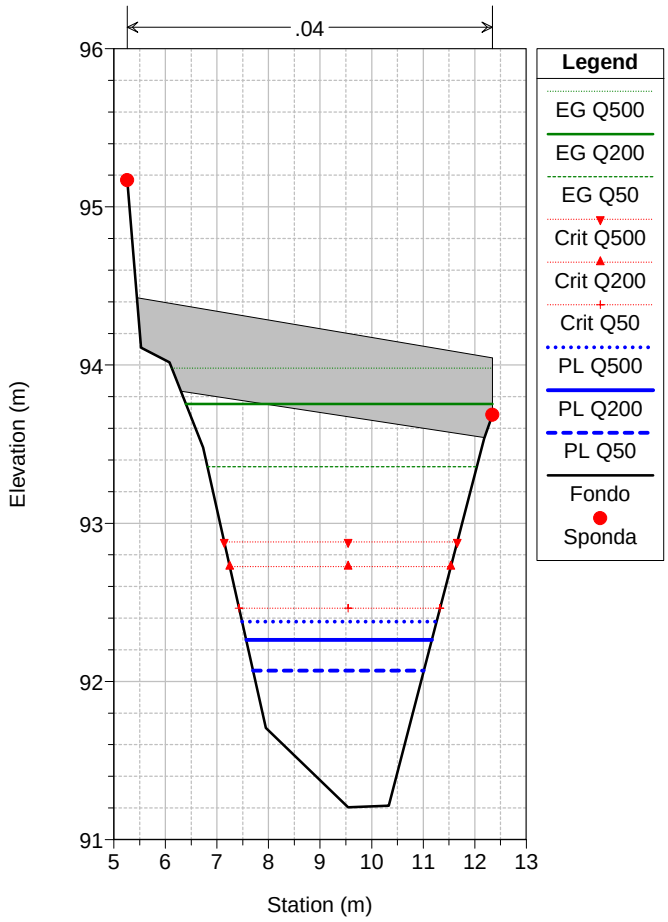
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 21



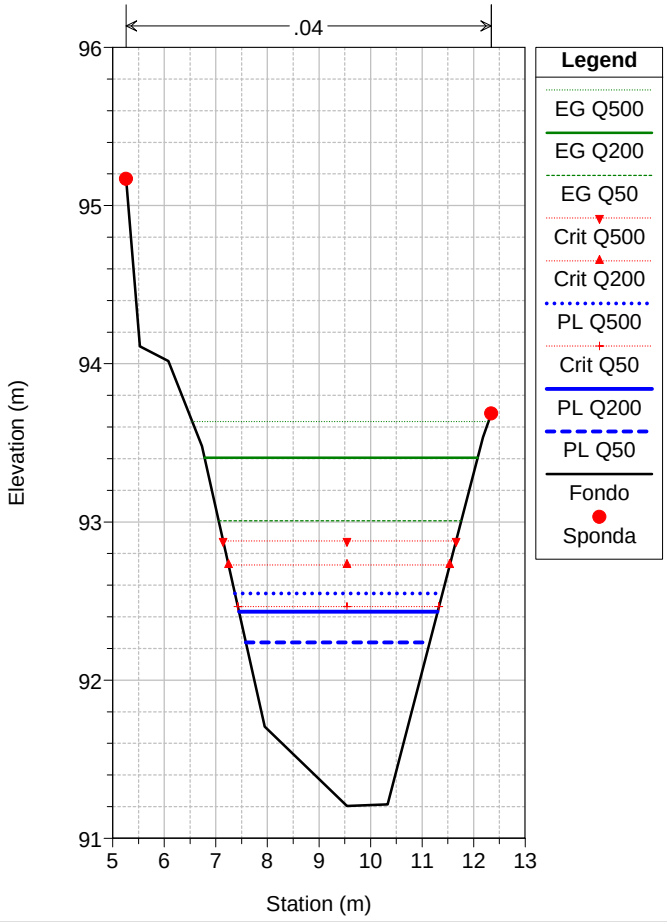
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 21



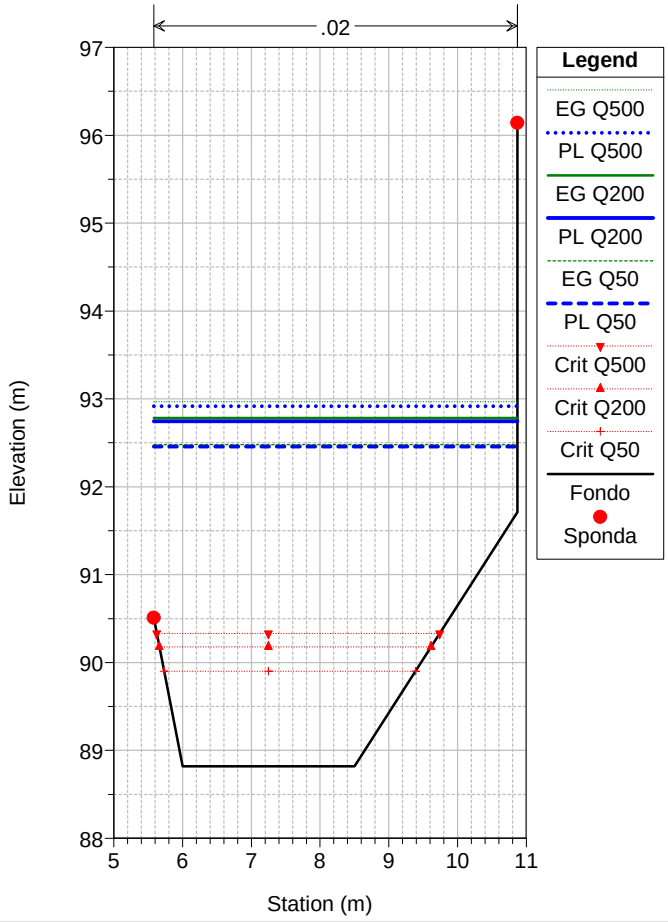
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 20



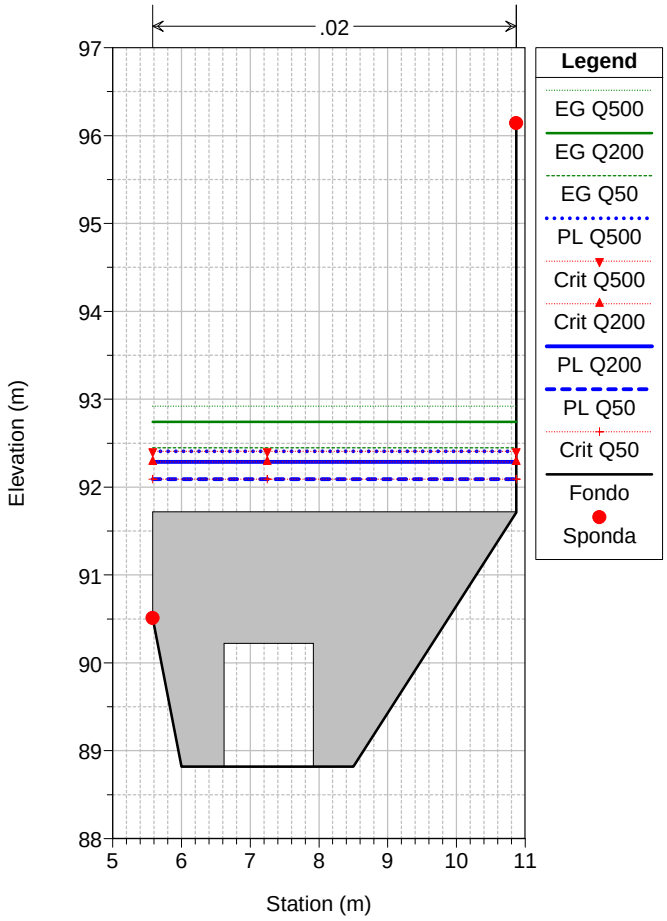
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 19



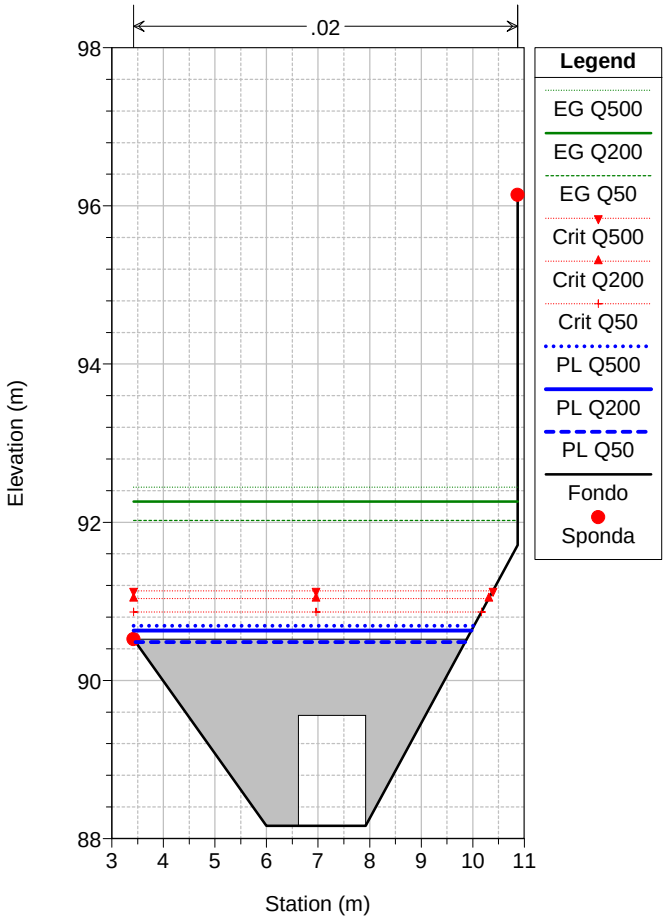
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 19



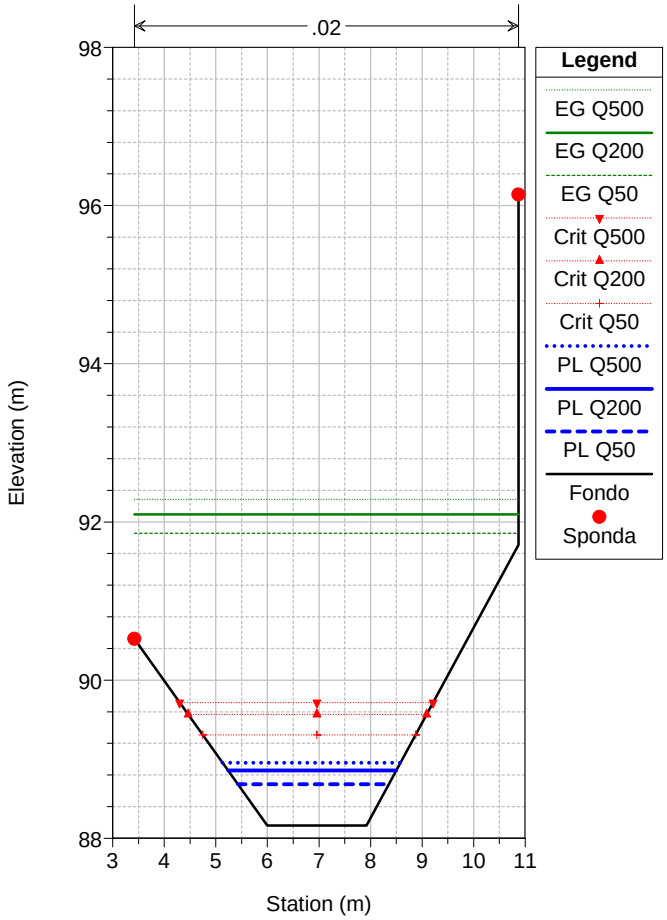
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 19



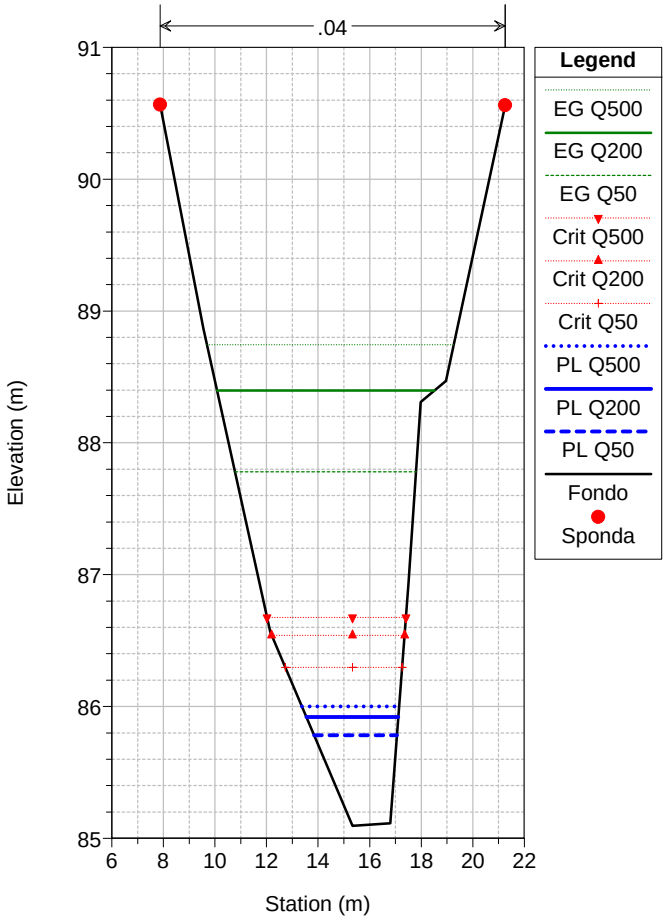
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 18



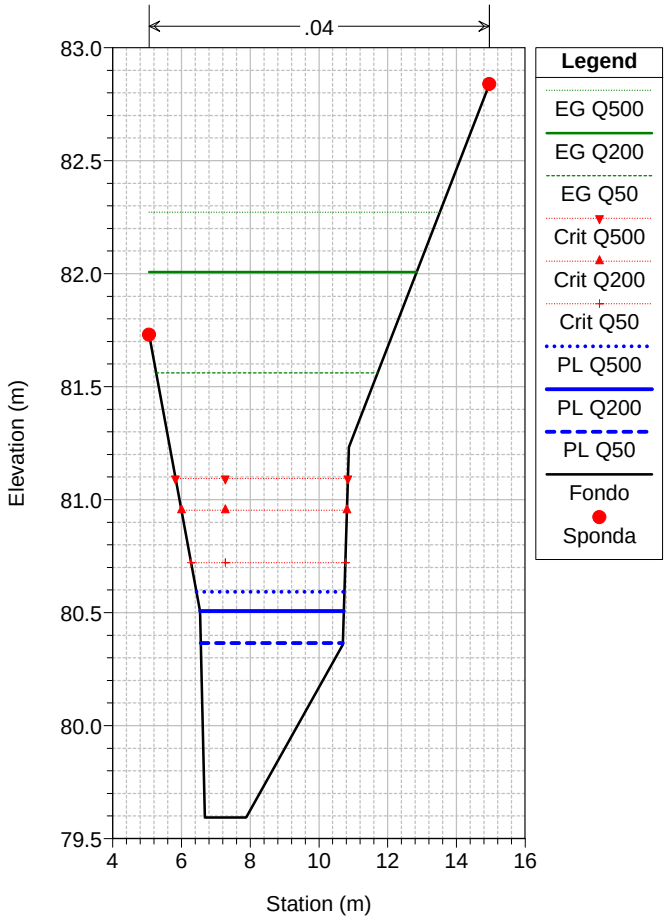
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 17



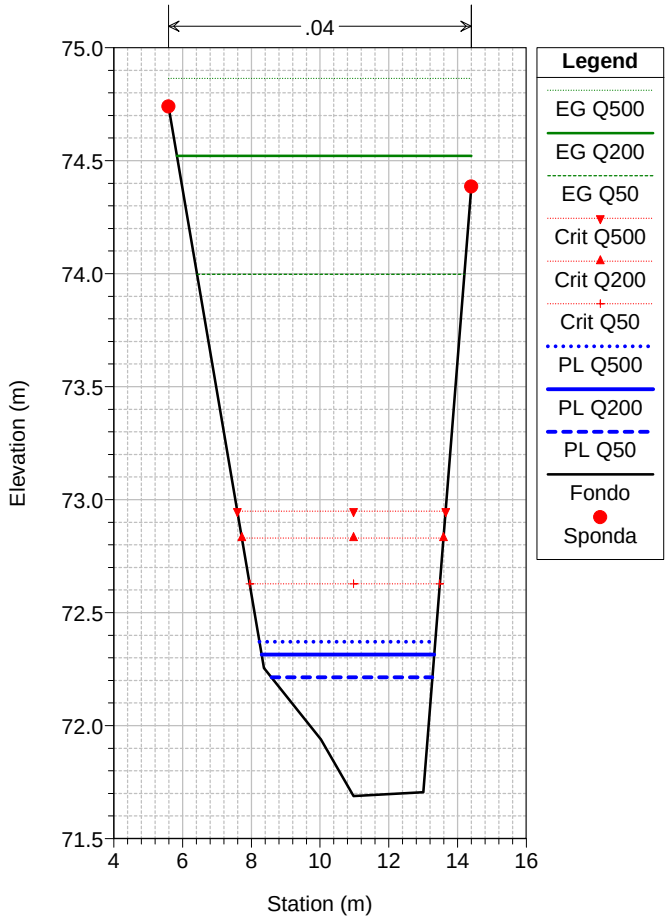
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 16



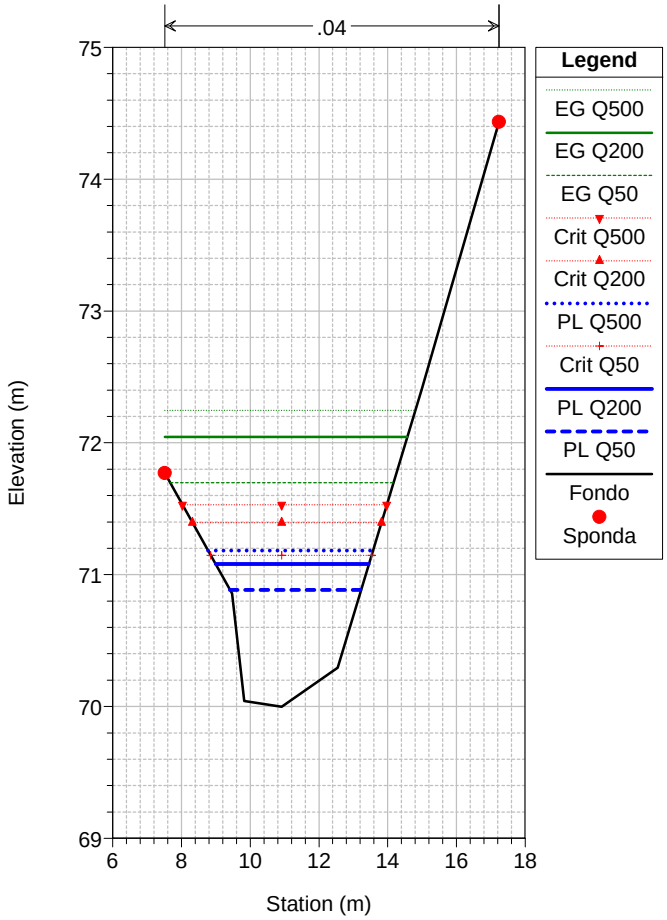
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 15



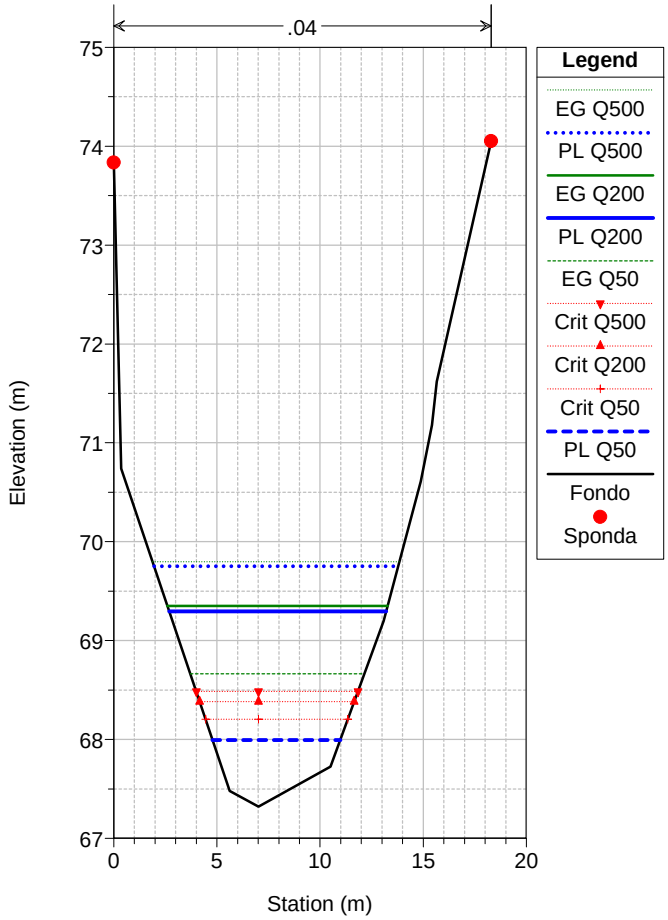
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 14



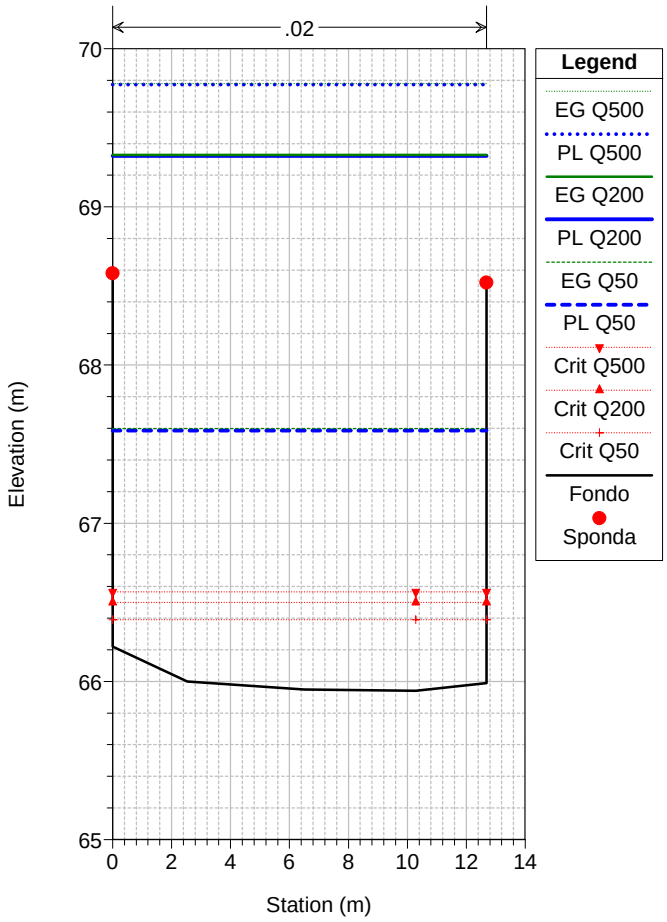
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 13



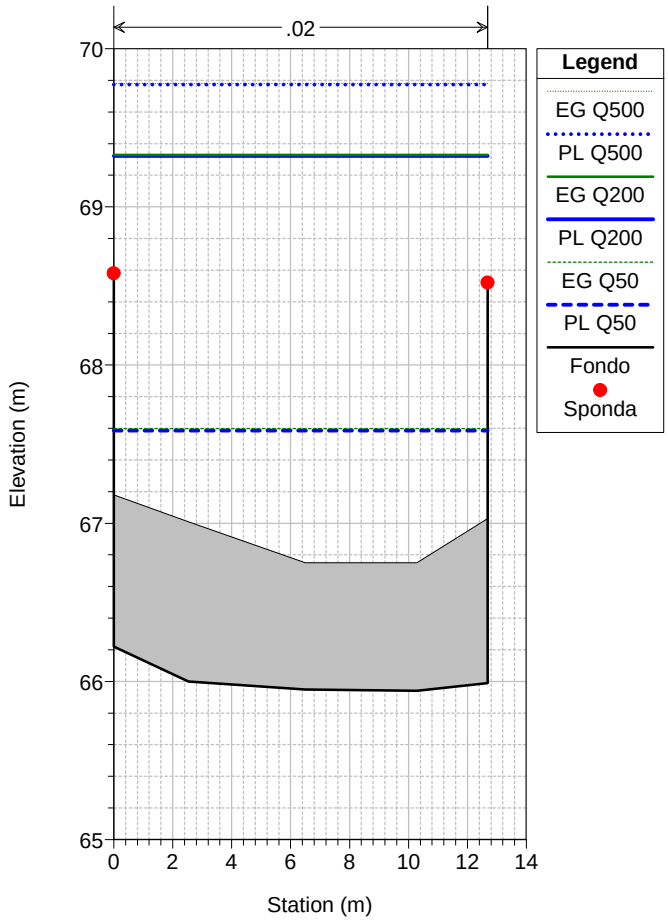
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 12



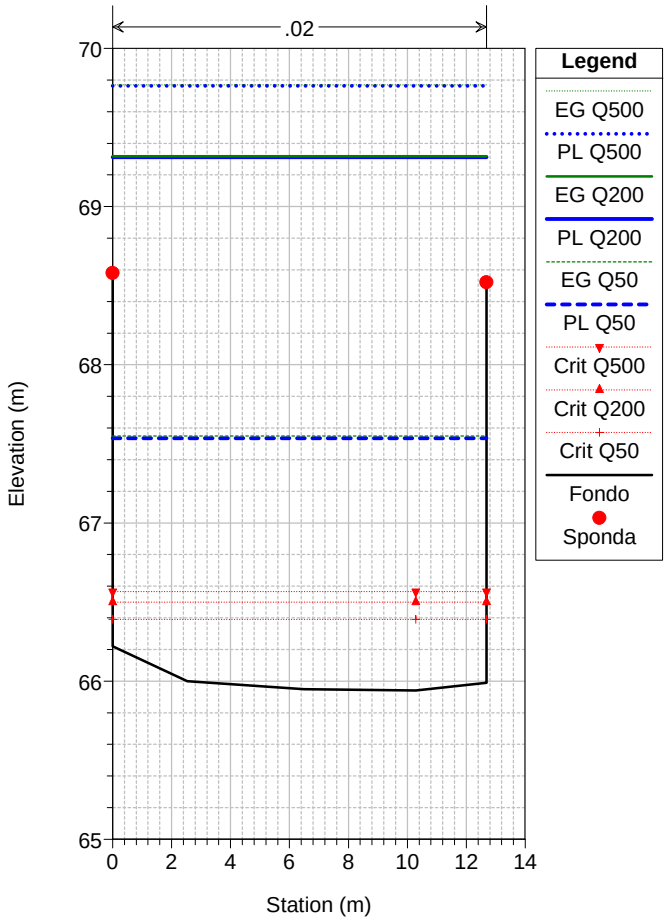
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 12



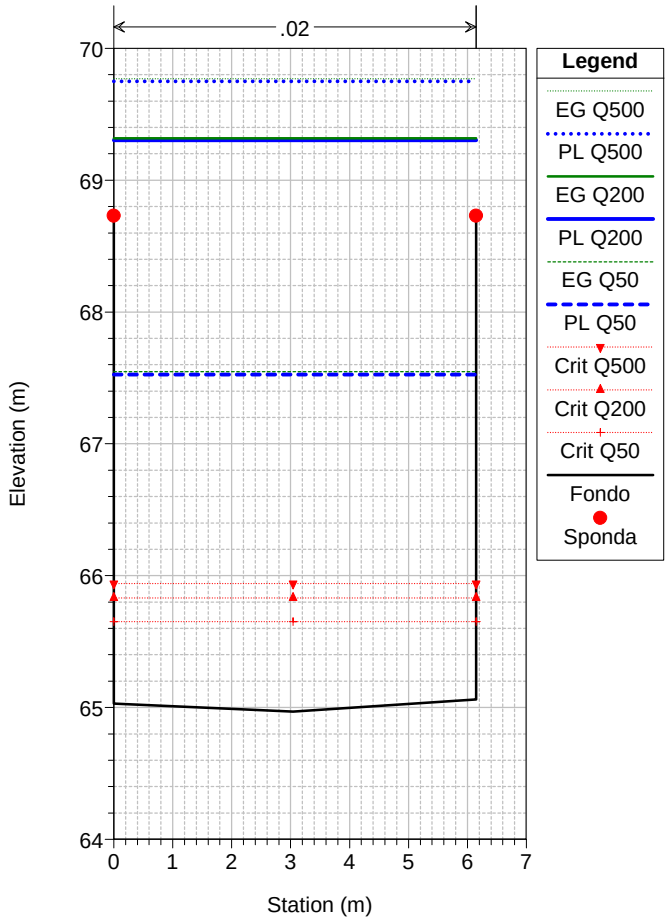
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 12



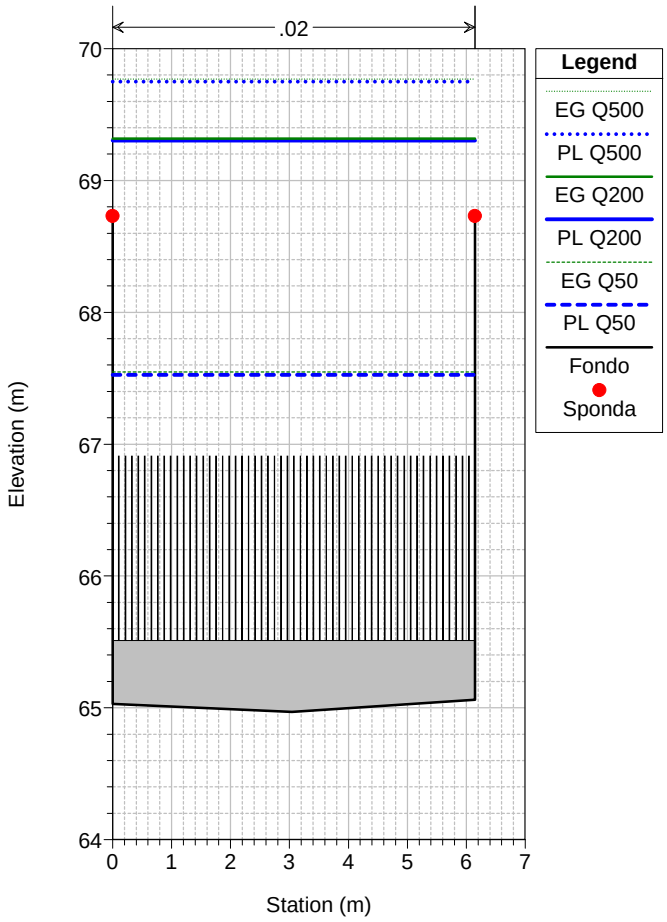
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 11



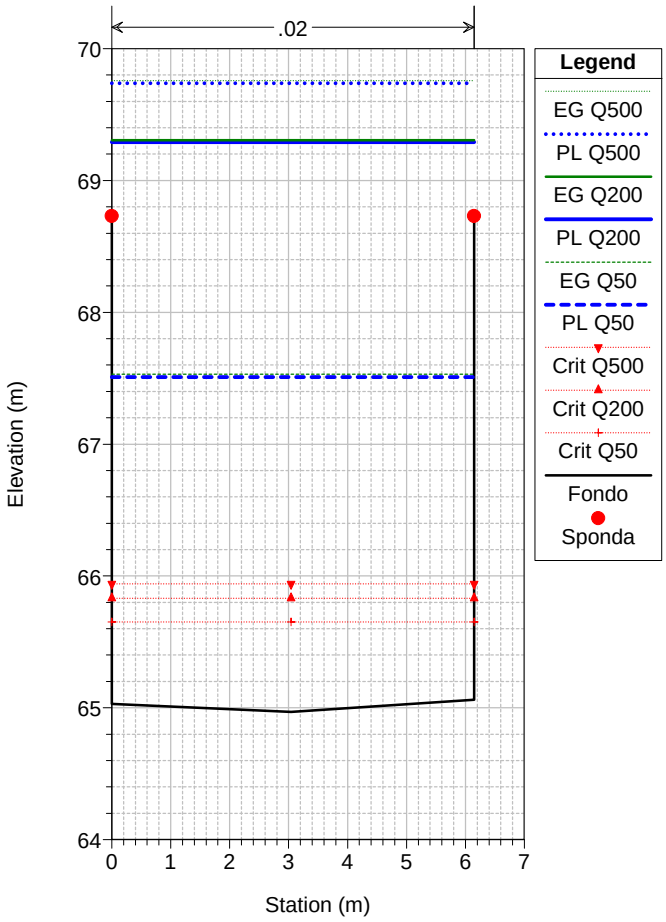
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 11



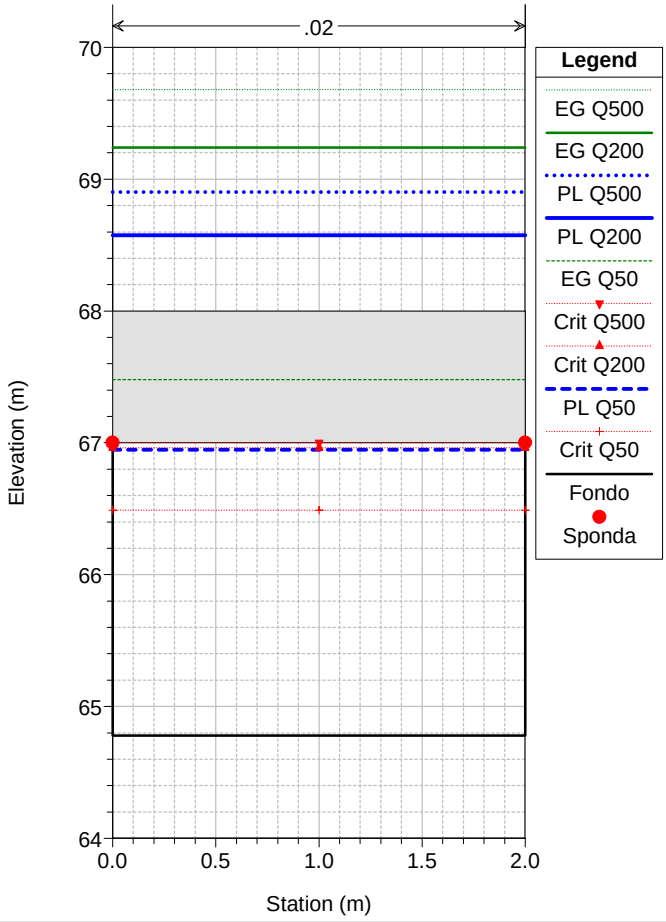
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 11



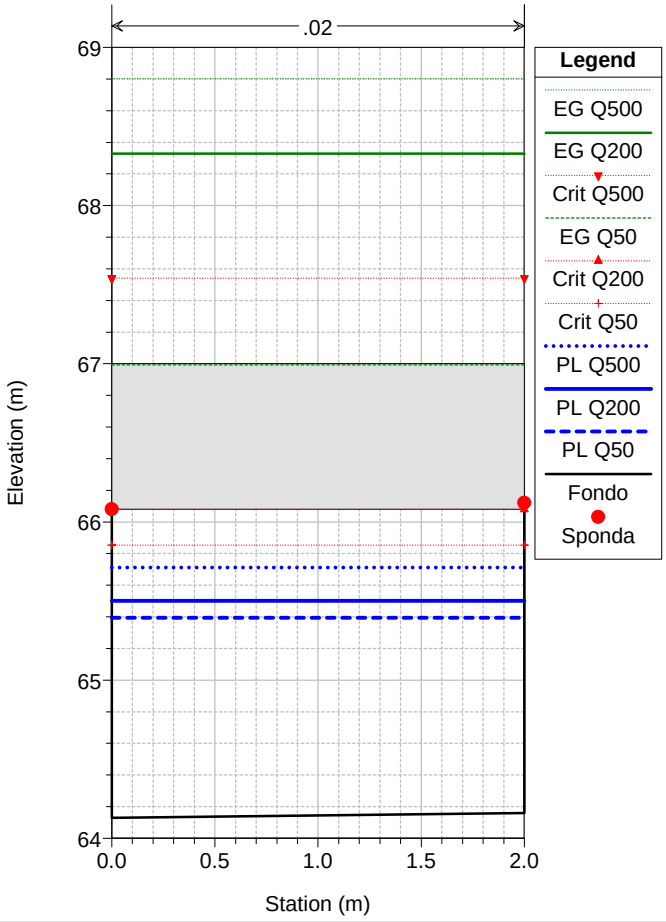
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 10



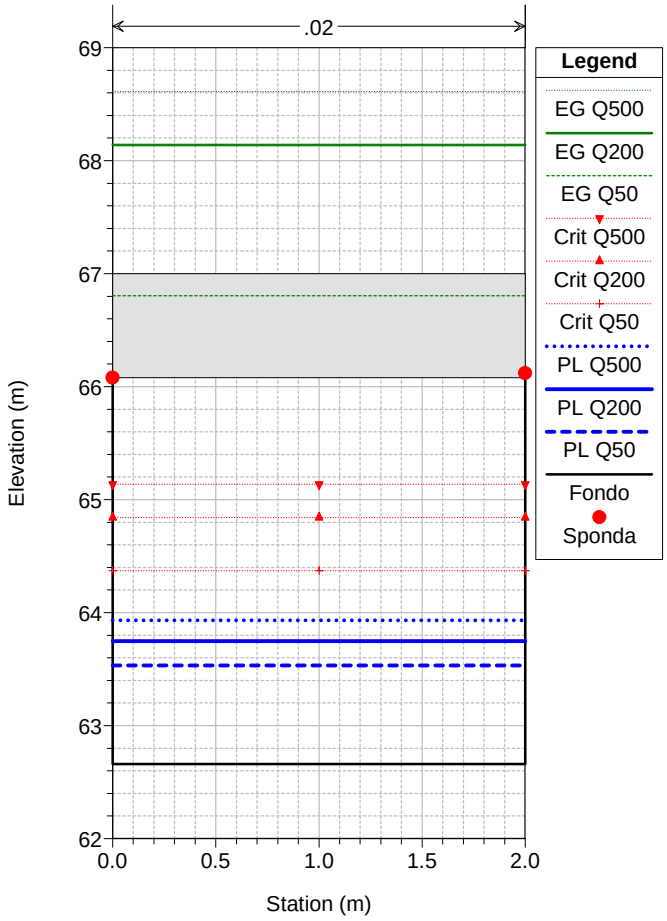
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 9



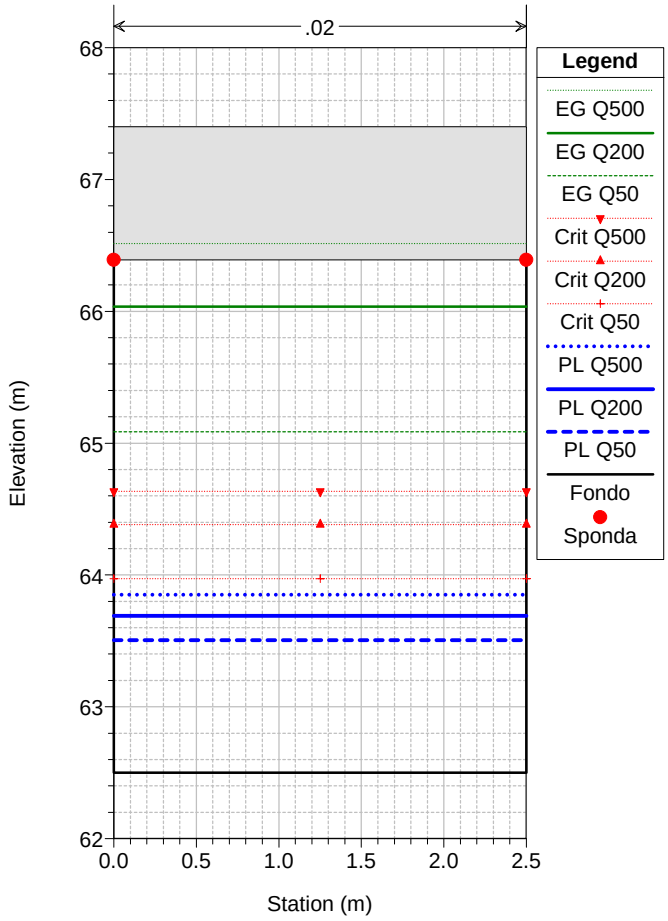
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 9



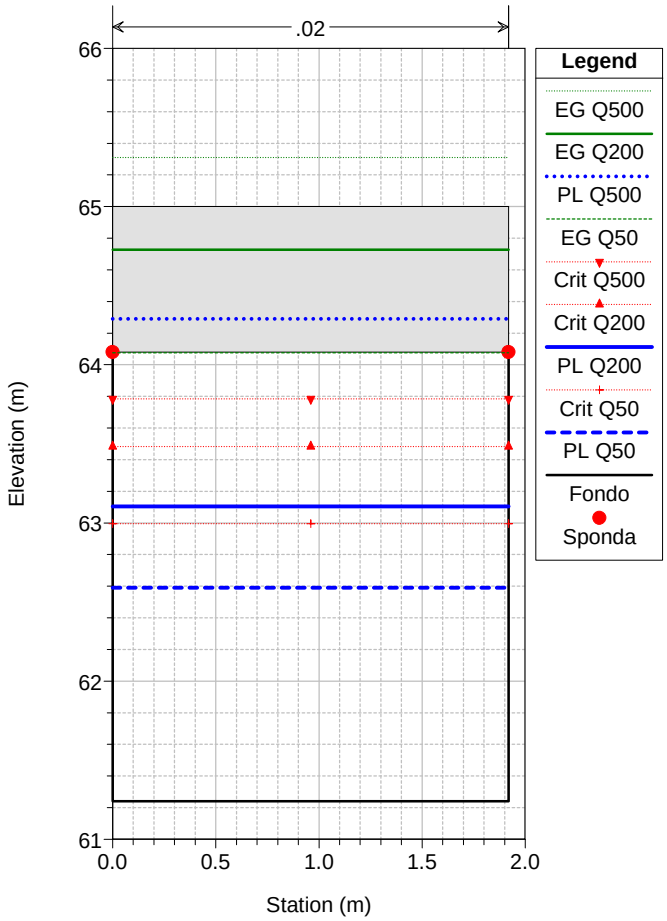
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 8



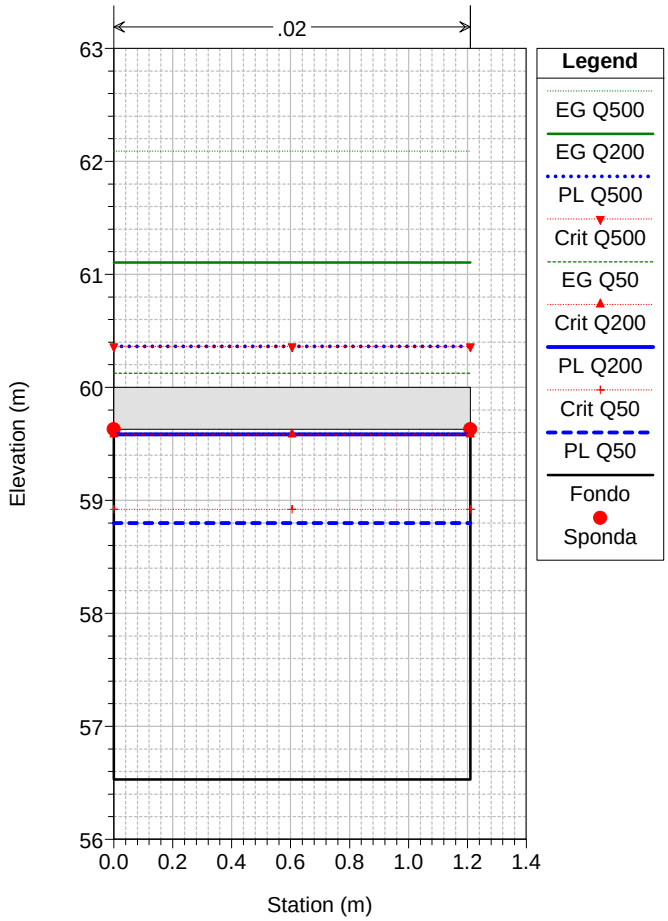
Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 7



Diga di Figoi Plan: Lid

River = Rio Burlo Reach = 1 BU 6



HEC-RAS Plan: Lid River: Rio Burlo Reach: 1

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)	
1	606.86 BU 24	Q50	10.00	103.68	104.78	113.07	8.29	124.25	19.47	104.78	105.13	0.020176	2.63	3.81	5.42	1.00
1	606.86 BU 24	Q200	14.40	103.68	104.99	113.07	8.08	124.25	19.26	104.99	105.41	0.019593	2.88	5.01	6.01	1.01
1	606.86 BU 24	Q500	17.30	103.68	105.11	113.07	7.96	124.25	19.14	105.11	105.57	0.018845	2.98	5.80	6.37	1.00
1	581.00 BU 23	Q50	10.00	100.83	101.47	109.16	7.69	107.45	5.98	101.81	102.64	0.115610	4.79	2.09	4.47	2.24
1	581.00 BU 23	Q200	14.40	100.83	101.60	109.16	7.56	107.45	5.85	102.03	103.05	0.110943	5.34	2.69	4.64	2.24
1	581.00 BU 23	Q500	17.30	100.83	101.68	109.16	7.48	107.45	5.77	102.15	103.29	0.108077	5.62	3.08	4.75	2.23
1	534.56 BU 22	Q50	10.00	94.57	95.27	97.95	2.69	100.44	5.17	95.69	96.76	0.136747	5.41	1.85	3.65	2.43
1	534.56 BU 22	Q200	14.40	94.57	95.41	97.95	2.54	100.44	5.03	95.93	97.26	0.135544	6.03	2.39	3.88	2.45
1	534.56 BU 22	Q500	17.30	94.57	95.49	97.95	2.46	100.44	4.95	96.08	97.55	0.134880	6.36	2.72	4.01	2.46
1	486.26 BU 22	Q50	10.00	91.56	92.55	95.53	2.98	94.05	1.50	92.83	93.44	0.061189	4.19	2.39	3.48	1.62
1	486.26 BU 22	Q200	14.40	91.56	92.75	95.53	2.78	94.05	1.30	93.09	93.83	0.060445	4.62	3.12	3.78	1.62
1	486.26 BU 22	Q500	17.30	91.56	92.86	95.53	2.67	94.05	1.18	93.24	94.06	0.060160	4.85	3.57	3.96	1.63
1	486.00 BU 21		Bridge													
1	482.91 BU 20	Q50	10.00	91.20	92.24	95.17	2.93	93.68	1.45	92.47	93.01	0.049583	3.89	2.57	3.56	1.46
1	482.91 BU 20	Q200	14.40	91.20	92.43	95.17	2.74	93.68	1.25	92.73	93.41	0.051753	4.37	3.30	3.85	1.51
1	482.91 BU 20	Q500	17.30	91.20	92.55	95.17	2.62	93.68	1.14	92.88	93.63	0.052690	4.62	3.74	4.02	1.53
1	442.00 BU 19	Q50	10.00	88.82	92.46	90.51	-1.95	96.14	3.68	89.90	92.48	0.000102	0.65	15.47	5.29	0.12
1	442.00 BU 19	Q200	14.40	88.82	92.75	90.51	-2.24	96.14	3.39	90.18	92.78	0.000166	0.85	17.00	5.29	0.15
1	442.00 BU 19	Q500	17.30	88.82	92.92	90.51	-2.41	96.14	3.22	90.33	92.97	0.000209	0.97	17.90	5.29	0.17
1	435.03 BU 19		Bridge													
1	428.10 BU 18	Q50	10.00	88.16	88.68	90.52	1.84	96.14	7.46	89.31	91.86	0.092045	7.89	1.27	2.93	3.83
1	428.10 BU 18	Q200	14.40	88.16	88.86	90.52	1.66	96.14	7.28	89.56	92.10	0.070000	7.97	1.81	3.26	3.42
1	428.10 BU 18	Q500	17.30	88.16	88.96	90.52	1.56	96.14	7.18	89.72	92.29	0.062959	8.09	2.14	3.45	3.28
1	407.40 BU 17	Q50	10.00	85.09	85.78	90.57	4.78	90.56	4.78	86.30	87.78	0.201499	6.26	1.60	3.22	2.84
1	407.40 BU 17	Q200	14.40	85.09	85.92	90.57	4.65	90.56	4.64	86.54	88.40	0.207242	6.97	2.07	3.57	2.93
1	407.40 BU 17	Q500	17.30	85.09	86.00	90.57	4.57	90.56	4.56	86.67	88.74	0.208985	7.34	2.36	3.78	2.96
1	356.02 BU 16	Q50	10.00	79.59	80.36	81.73	1.36	82.84	2.47	80.72	81.56	0.119045	4.85	2.06	4.13	2.19
1	356.02 BU 16	Q200	14.40	79.59	80.51	81.73	1.22	82.84	2.33	80.95	82.01	0.115286	5.43	2.65	4.18	2.18
1	356.02 BU 16	Q500	17.30	79.59	80.59	81.73	1.14	82.84	2.25	81.09	82.27	0.115092	5.74	3.01	4.30	2.19
1	320.00 BU 15	Q50	10.00	71.69	72.21	74.74	2.53	74.38	2.17	72.63	74.00	0.240728	5.92	1.69	4.68	3.14
1	320.00 BU 15	Q200	14.40	71.69	72.31	74.74	2.43	74.38	2.07	72.83	74.52	0.235153	6.58	2.19	5.02	3.18
1	320.00 BU 15	Q500	17.30	71.69	72.37	74.74	2.37	74.38	2.01	72.95	74.86	0.233737	6.99	2.47	5.11	3.21
1	295.98 BU 14	Q50	10.00	70.00	70.88	71.77	0.89	74.43	3.55	71.15	71.70	0.057584	4.00	2.50	3.81	1.58
1	295.98 BU 14	Q200	14.40	70.00	71.08	71.77	0.69	74.43	3.35	71.39	72.04	0.057642	4.35	3.31	4.46	1.61
1	295.98 BU 14	Q500	17.30	70.00	71.18	71.77	0.59	74.43	3.25	71.53	72.25	0.058287	4.56	3.79	4.80	1.64
1	250.74 BU 13	Q50	10.00	67.32	68.00	73.84	5.84	74.05	6.05	68.21	68.66	0.065096	3.62	2.76	6.20	1.73

HEC-RAS Plan: Lid River: Rio Burlo Reach: 1 (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)	
1	250.74 BU 13	Q200	14.40	67.32	69.29	73.84	4.54	74.05	4.76	68.38	69.35	0.001419	1.06	13.64	10.51	0.30
1	250.74 BU 13	Q500	17.30	67.32	69.75	73.84	4.08	74.05	4.30	68.48	69.80	0.000844	0.92	18.75	11.83	0.23
1	222.40 BU 12	Q50	10.00	65.94	67.59	68.58	0.99	68.52	0.93	66.39	67.60	0.000069	0.49	20.24	12.69	0.12
1	222.40 BU 12	Q200	14.40	65.94	69.32	68.58	-0.74	68.52	-0.80	66.50	69.33	0.000016	0.34	42.27	12.69	0.06
1	222.40 BU 12	Q500	17.30	65.94	69.77	68.58	-1.19	68.52	-1.25	66.57	69.78	0.000016	0.36	47.99	12.69	0.06
1	221.60 BU 12		Inl Struct													
1	221.34 BU 12	Q50	10.00	65.94	67.54	68.58	1.04	68.52	0.98	66.39	67.55	0.000077	0.51	19.60	12.69	0.13
1	221.34 BU 12	Q200	14.40	65.94	69.31	68.58	-0.73	68.52	-0.79	66.50	69.32	0.000016	0.34	42.15	12.69	0.06
1	221.34 BU 12	Q500	17.30	65.94	69.76	68.58	-1.18	68.52	-1.24	66.57	69.77	0.000016	0.36	47.87	12.69	0.06
1	216.80 BU 11	Q50	10.00	64.97	67.53	68.73	1.20	68.73	1.20	65.65	67.55	0.000107	0.65	15.49	6.15	0.13
1	216.80 BU 11	Q200	14.40	64.97	69.30	68.73	-0.57	68.73	-0.57	65.83	69.32	0.000054	0.55	26.41	6.15	0.08
1	216.80 BU 11	Q500	17.30	64.97	69.75	68.73	-1.02	68.73	-1.02	65.94	69.77	0.000061	0.59	29.17	6.15	0.09
1	216.61 BU 11		Inl Struct													
1	216.41 BU 11	Q50	10.00	64.97	67.51	68.73	1.22	68.73	1.22	65.65	67.53	0.000109	0.65	15.39	6.15	0.13
1	216.41 BU 11	Q200	14.40	64.97	69.29	68.73	-0.56	68.73	-0.56	65.83	69.31	0.000055	0.55	26.34	6.15	0.08
1	216.41 BU 11	Q500	17.30	64.97	69.74	68.73	-1.01	68.73	-1.01	65.94	69.76	0.000061	0.59	29.09	6.15	0.09
1	214.09 BU 10	Q50	14.00	64.78	66.95	67.00	0.05	67.00	0.05	66.49	67.48	0.006916	3.23	4.34	2.00	0.70
1	214.09 BU 10	Q200	20.20	64.78	68.57	67.00	-1.57	67.00	-1.57	66.96	69.24	0.012030	3.62	5.59	2.00	0.59
1	214.09 BU 10	Q500	24.40	64.78	68.90	67.00	-1.90	67.00	-1.90	67.00	69.68	0.012127	3.91	6.24	2.00	0.61
1	189.09 BU 9	Q50	14.00	64.13	65.39	66.08	0.69	66.08	0.69	65.85	66.99	0.027489	5.60	2.50	2.00	1.60
1	189.09 BU 9	Q200	20.20	64.13	65.50	66.08	0.58	66.08	0.58	66.08	68.33	0.046369	7.45	2.71	2.00	2.04
1	189.09 BU 9	Q500	24.40	64.13	65.71	66.08	0.37	66.08	0.37	67.54	68.80	0.046857	7.79	3.13	2.00	1.99
1	188.57 BU 9	Q50	14.00	62.66	63.53	66.08	2.55	66.08	2.55	64.37	66.80	0.071015	8.01	1.75	2.00	2.74
1	188.57 BU 9	Q200	20.20	62.66	63.75	66.08	2.33	66.08	2.33	64.84	68.14	0.082250	9.28	2.18	2.00	2.84
1	188.57 BU 9	Q500	24.40	62.66	63.93	66.08	2.15	66.08	2.15	65.14	68.61	0.079552	9.58	2.55	2.00	2.71
1	161.16 BU 8	Q50	14.00	62.50	63.50	66.39	2.89	66.39	2.89	63.97	65.09	0.027097	5.57	2.51	2.50	1.77
1	161.16 BU 8	Q200	20.20	62.50	63.69	66.39	2.70	66.39	2.70	64.38	66.04	0.035618	6.79	2.98	2.50	1.99
1	161.16 BU 8	Q500	24.40	62.50	63.85	66.39	2.54	66.39	2.54	64.63	66.51	0.037228	7.23	3.37	2.50	1.99
1	123.83 BU 7	Q50	14.00	61.24	62.59	64.08	1.49	64.08	1.49	63.00	64.08	0.025176	5.40	2.59	1.92	1.48
1	123.83 BU 7	Q200	20.20	61.24	63.10	64.08	0.98	64.08	0.98	63.48	64.73	0.023420	5.64	3.58	1.92	1.32
1	123.83 BU 7	Q500	24.40	61.24	64.29	64.08	-0.21	64.08	-0.21	63.78	65.31	0.016842	4.48	5.45		0.82
1	0.00 BU 6	Q50	14.00	56.53	58.80	59.63	0.83	59.63	0.83	58.92	60.12	0.027853	5.10	2.75	1.21	1.08
1	0.00 BU 6	Q200	20.20	56.53	59.58	59.63	0.05	59.63	0.05	59.58	61.11	0.029740	5.47	3.69	1.21	1.00
1	0.00 BU 6	Q500	24.40	56.53	60.36	59.63	-0.73	59.63	-0.73	60.36	62.09	0.042285	5.82	4.19	1.21	1.00

5 TORRENTE TRASTA

Per il Torrente Trasta è stato considerato un unico tratto di circa 700 m a partire dalla confluenza nel T. Polcevera.

Per studiare la confluenza sono state utilizzate per il torrente Polcevera le portate di massima piena a valle della confluenza e a monte le portate ottenute per differenza tra quelle del Polcevera a valle e quelle del torrente Trasta.

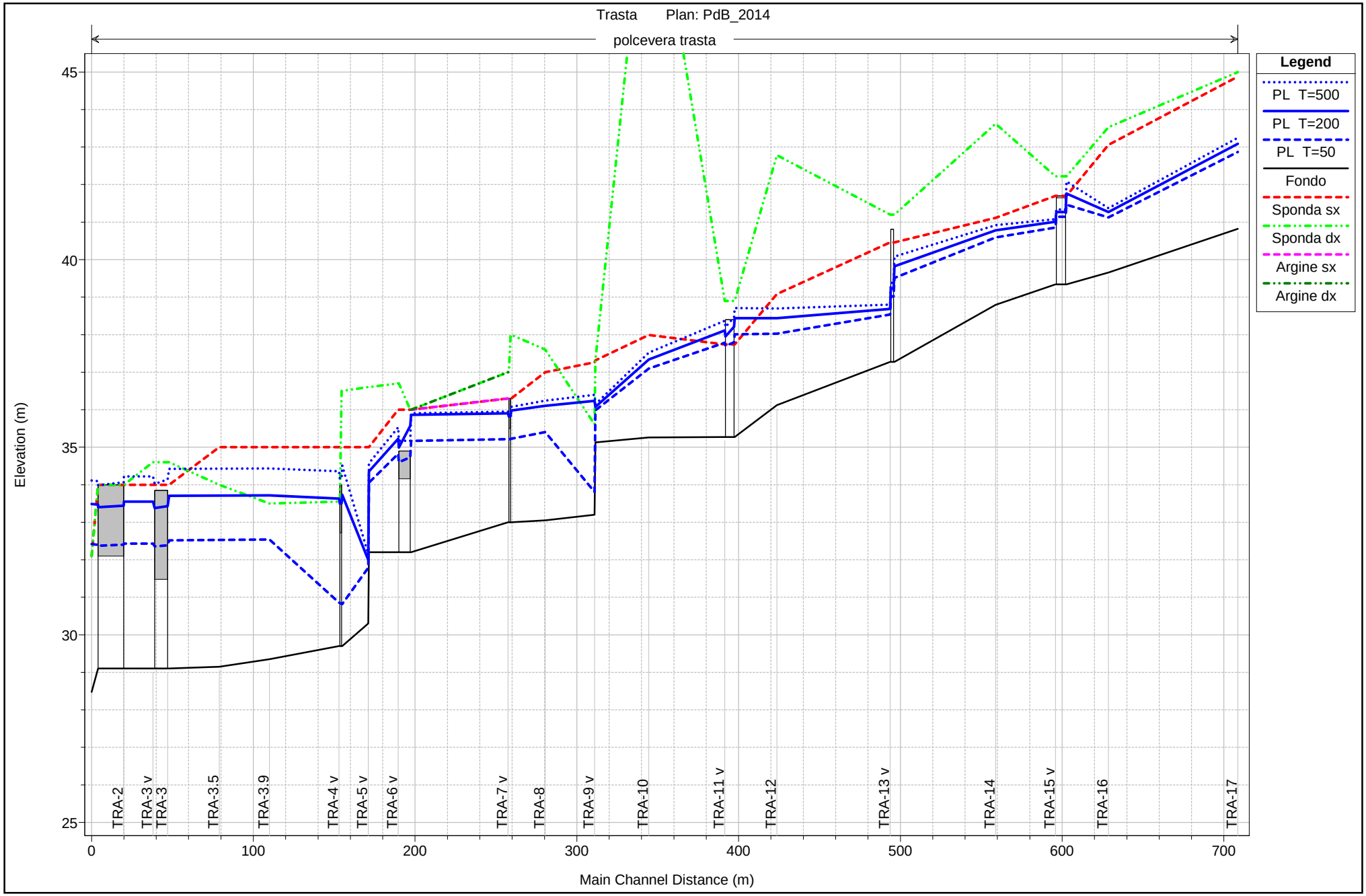
I risultati delle simulazioni sono riportati in tabella:

Per lo studio della confluenza in particolare sono state utilizzate le seguenti portate:

	TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
			T = 50 anni	**T = 200 anni**	**T = 500 anni**
	Torrente Trasta	TRA	82	102	118
	Torrente Polc.monte	differenza	1212	1555	1768
	Torrente Polcevera valle	PoTr	1294	1657	1886

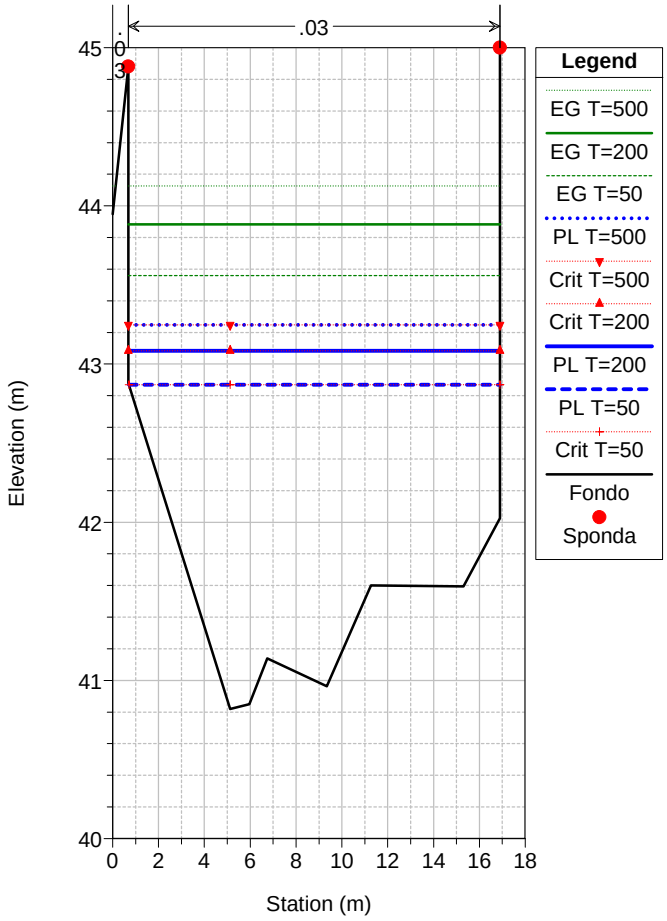
Come condizioni al contorno è stata imposta la profondità critica a monte ed è stata simulata la confluenza con il torrente Polcevera a valle.

Nelle simulazioni è stato assegnato un valore del coefficiente di scabrezza k_s di Strickler pari a 33 $m^{1/3}/s$ lungo tutto il tratto.


Trasta
Plan: PdB_2014
polcevera trasta
Legend
PL T=500
PL T=200
PL T=50
Fondo
Sponda sx
Sponda dx
Argine sx
Argine dx
Elevation (m)
45
40
35
30
25
0
100
200
300
400
500
600
700
Main Channel Distance (m)
TRA-2
TRA-3 v
TRA-3
TRA-3.5
TRA-3.9
TRA-4 v
TRA-5 v
TRA-6 v
TRA-7 v
TRA-8
TRA-9 v
TRA-10
TRA-11 v
TRA-12
TRA-13 v
TRA-14
TRA-15 v
TRA-16
TRA-17

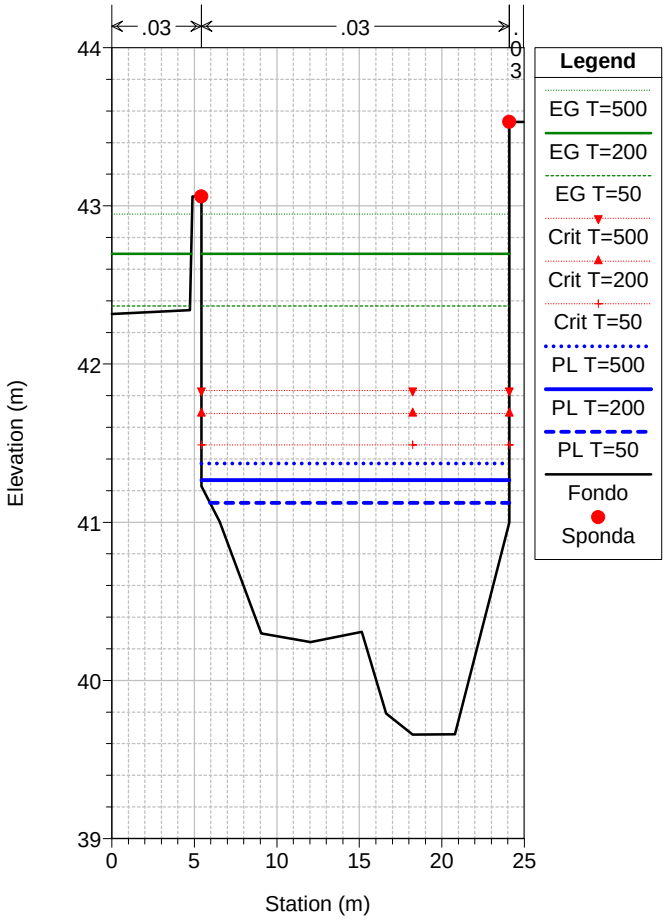
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-17



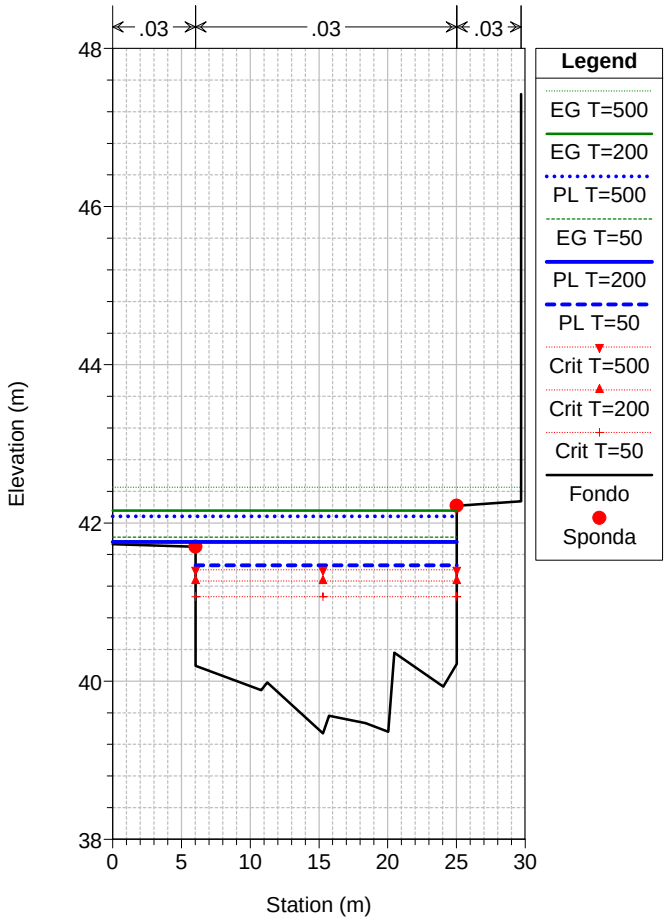
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-16



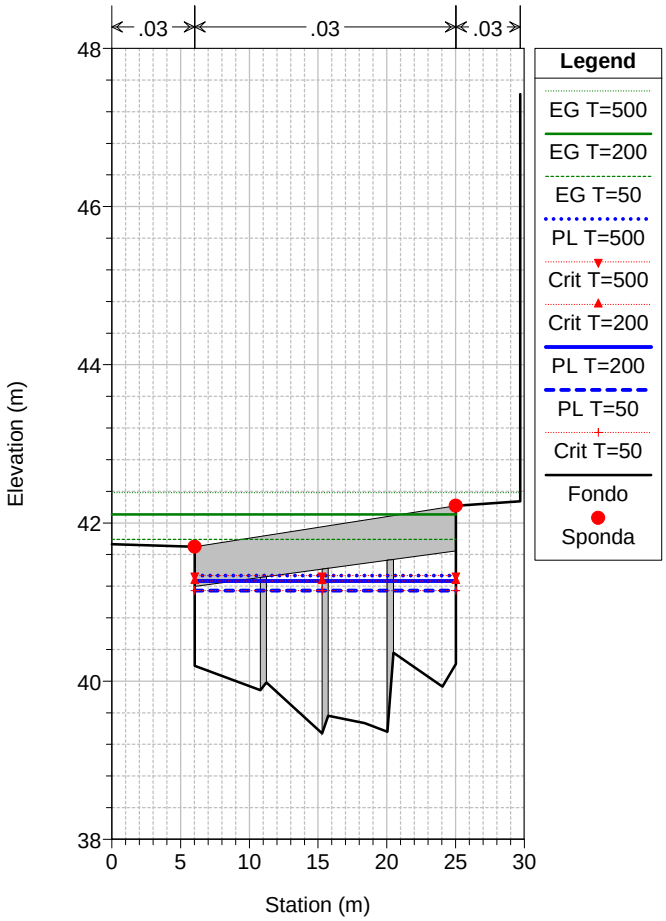
Trasta Plan: PdB_2014

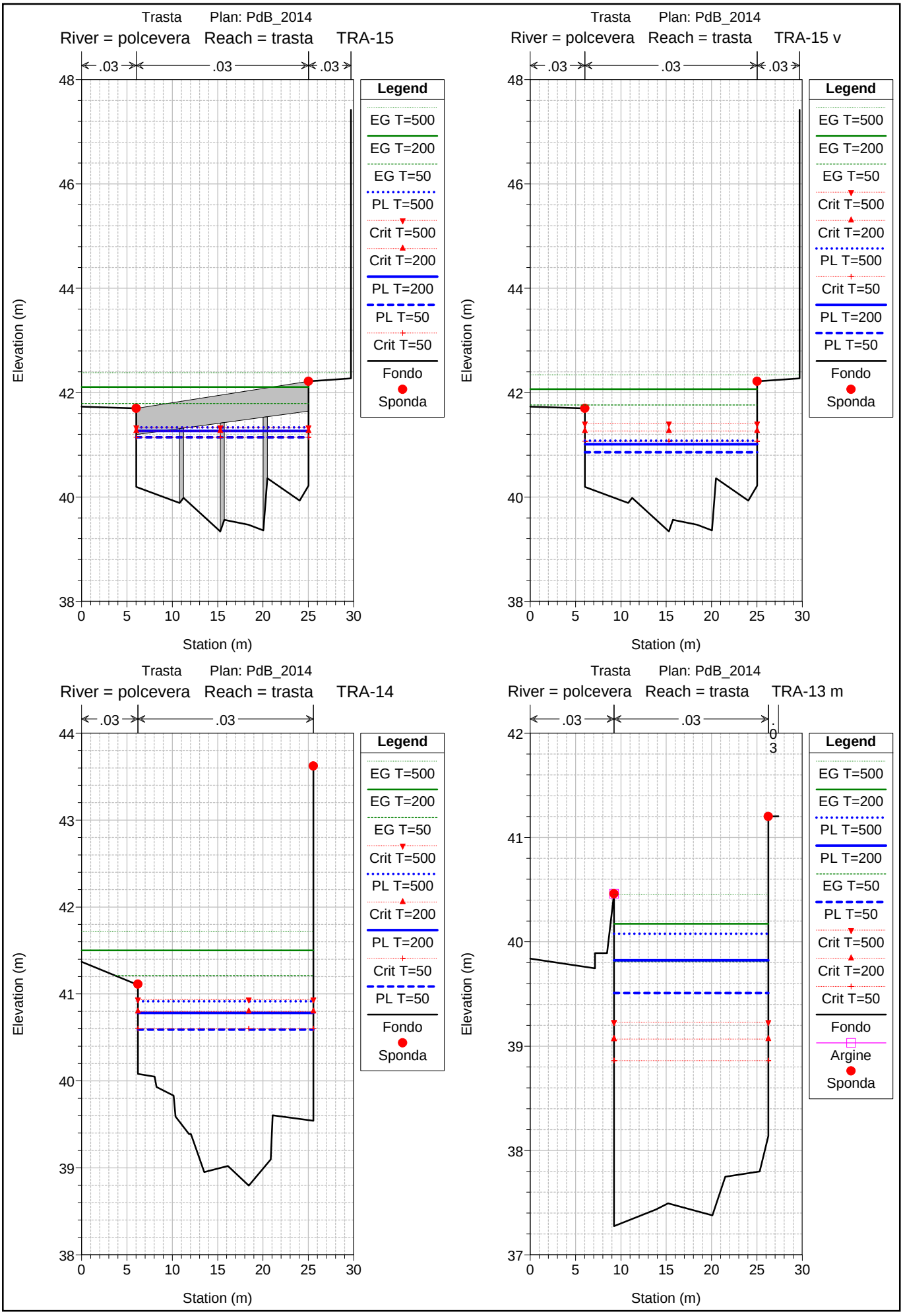
River = polcevera Reach = trasta TRA-15 m



Trasta Plan: PdB_2014

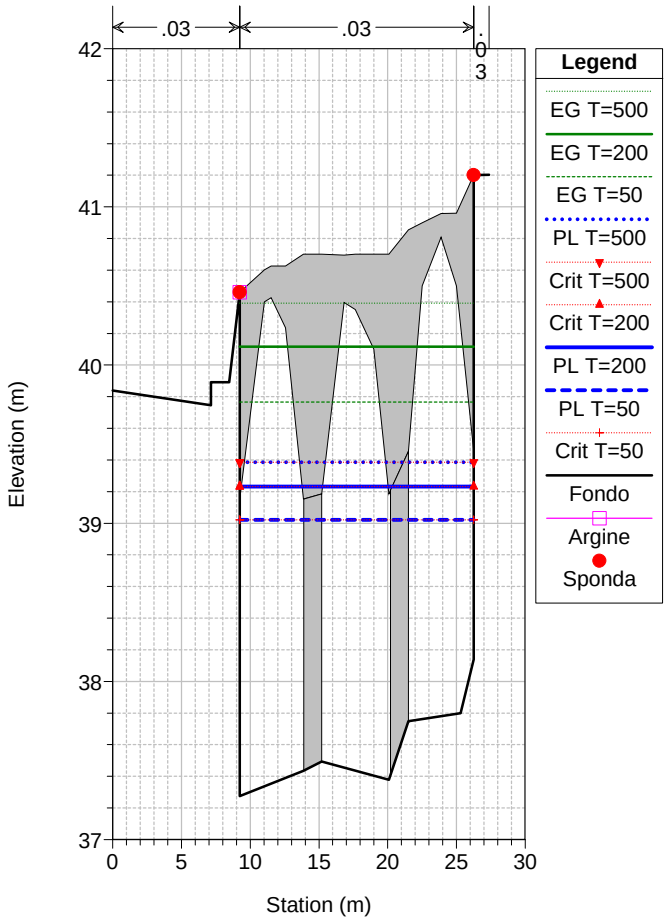
River = polcevera Reach = trasta TRA-15




Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-15
.03 .03 .03
Elevation (m)
Station (m)
Legend
EG T=500
EG T=200
EG T=50
PL T=500
Crit T=500
Crit T=200
PL T=200
PL T=50
Crit T=50
Fondo
Sponda
Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-15 v
.03 .03 .03
Elevation (m)
Station (m)
Legend
EG T=500
EG T=200
EG T=50
Crit T=500
Crit T=200
PL T=500
Crit T=50
PL T=200
PL T=50
Fondo
Sponda
Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-14
.03 .03
Elevation (m)
Station (m)
Legend
EG T=500
EG T=200
EG T=50
Crit T=500
PL T=500
Crit T=200
PL T=200
Crit T=50
PL T=50
Fondo
Sponda
Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-13 m
.03 .03 .03
Elevation (m)
Station (m)
Legend
EG T=500
EG T=200
PL T=500
PL T=200
EG T=50
PL T=50
Crit T=500
Crit T=200
Crit T=50
Fondo
Argine
Sponda

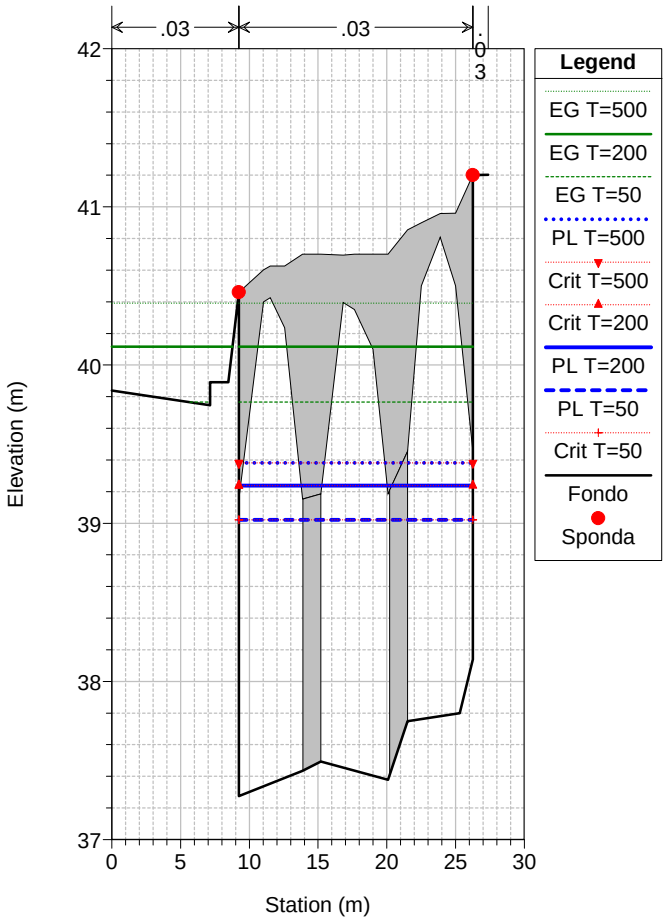
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-13



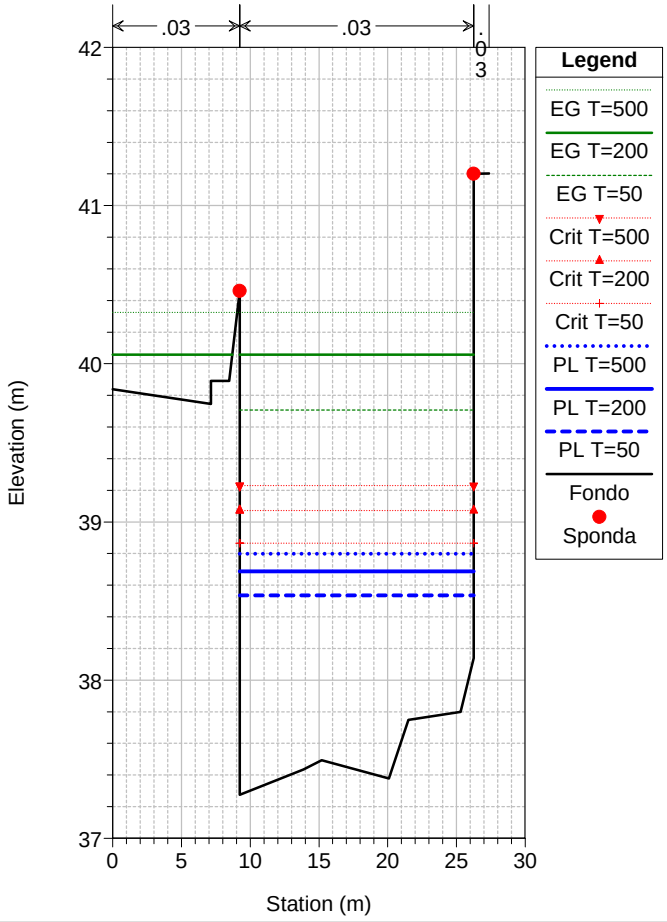
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-13



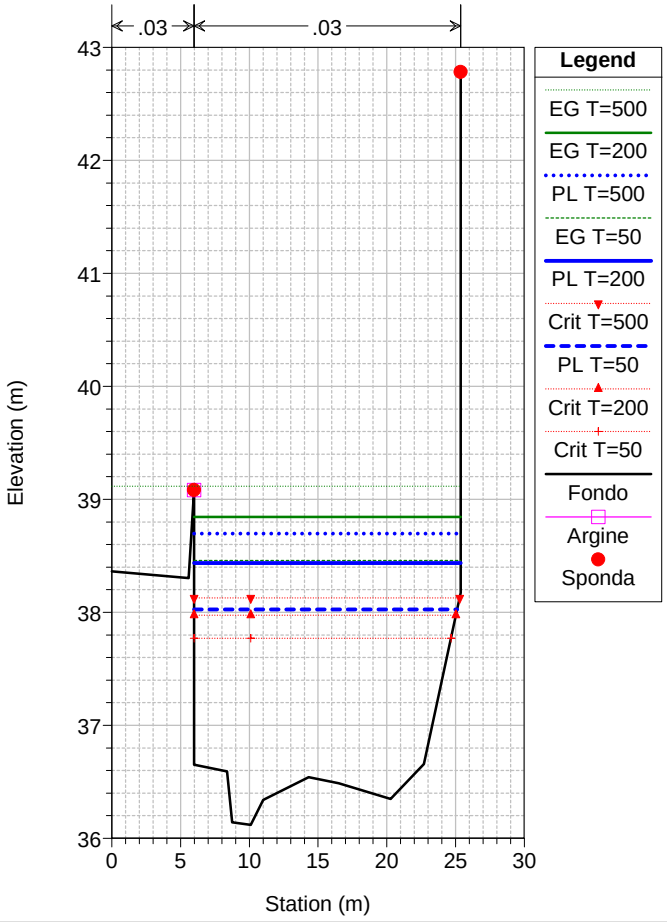
Trasta Plan: PdB_2014

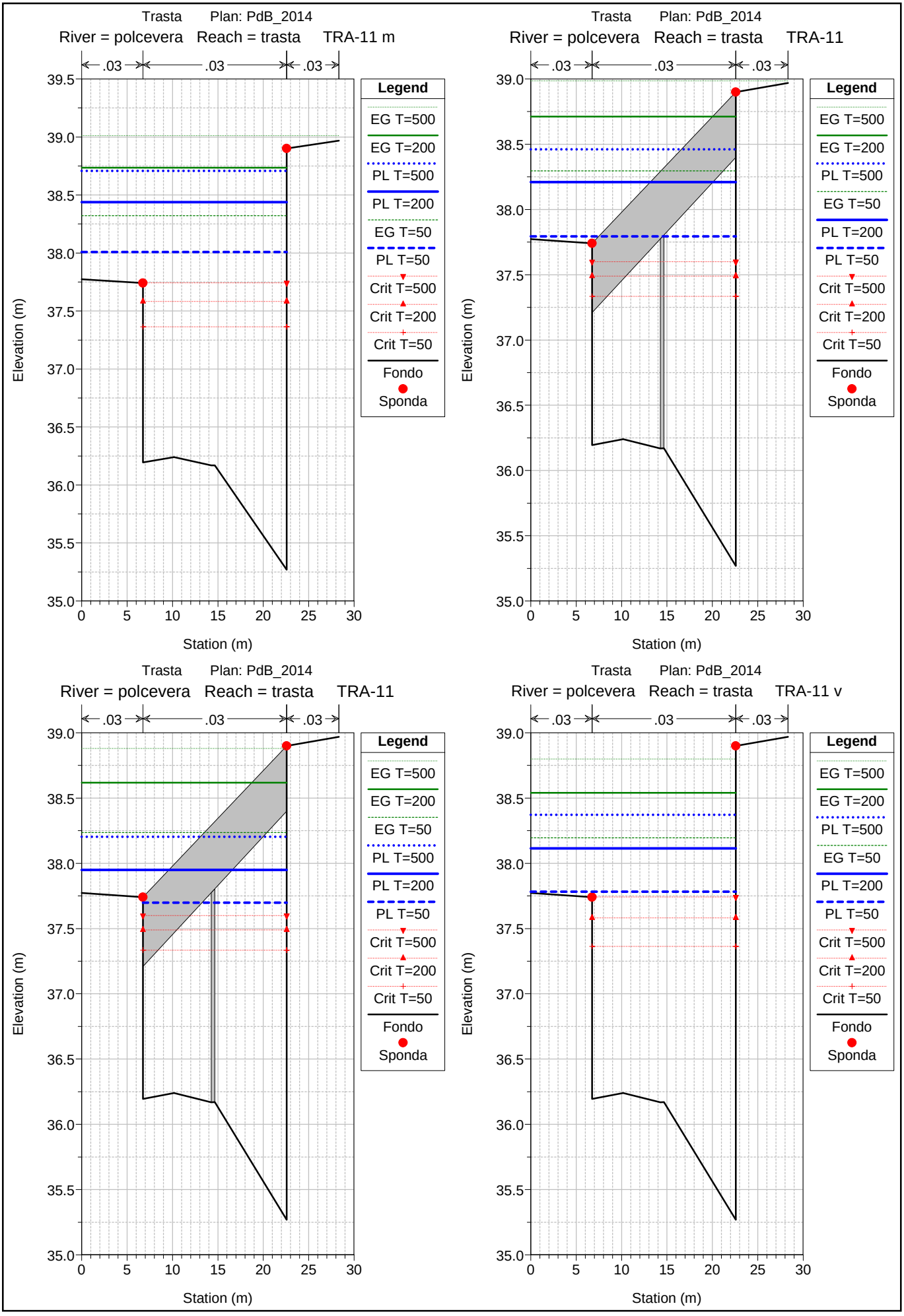
River = polcevera Reach = trasta TRA-13 v



Trasta Plan: PdB_2014

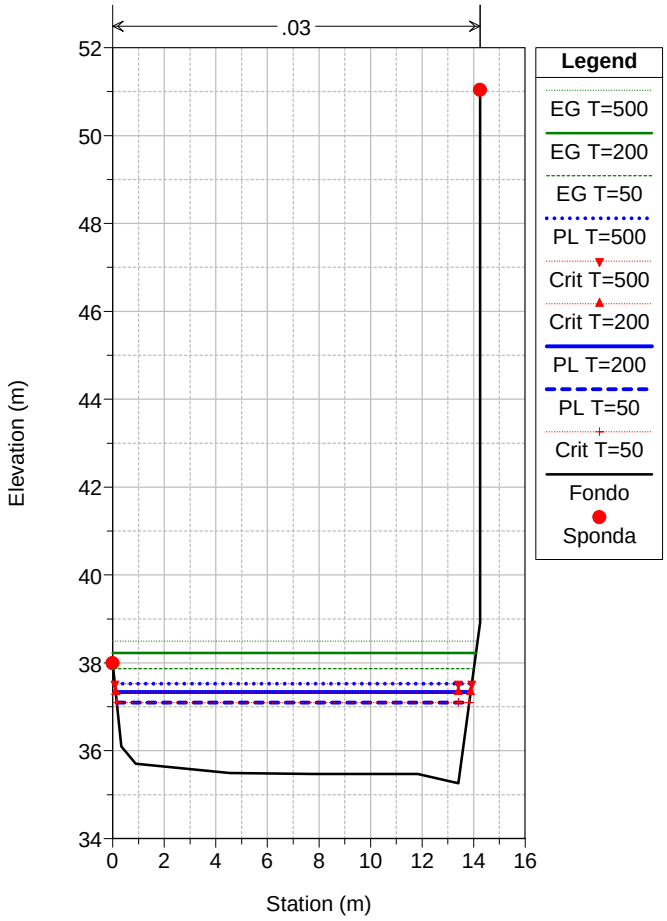
River = polcevera Reach = trasta TRA-12




Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-11 m
.03 .03 .03
Legend
EG T=500
EG T=200
PL T=500
PL T=200
EG T=50
PL T=50
Crit T=500
Crit T=200
Crit T=50
Fondo
Sponda
Elevation (m)
Station (m)
Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-11
.03 .03 .03
Legend
EG T=500
EG T=200
PL T=500
EG T=50
PL T=200
PL T=50
Crit T=500
Crit T=200
Crit T=50
Fondo
Sponda
Elevation (m)
Station (m)
Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-11
.03 .03 .03
Legend
EG T=500
EG T=200
EG T=50
PL T=500
PL T=200
PL T=50
Crit T=500
Crit T=200
Crit T=50
Fondo
Sponda
Elevation (m)
Station (m)
Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-11 v
.03 .03 .03
Legend
EG T=500
EG T=200
PL T=500
EG T=50
PL T=200
PL T=50
Crit T=500
Crit T=200
Crit T=50
Fondo
Sponda
Elevation (m)
Station (m)

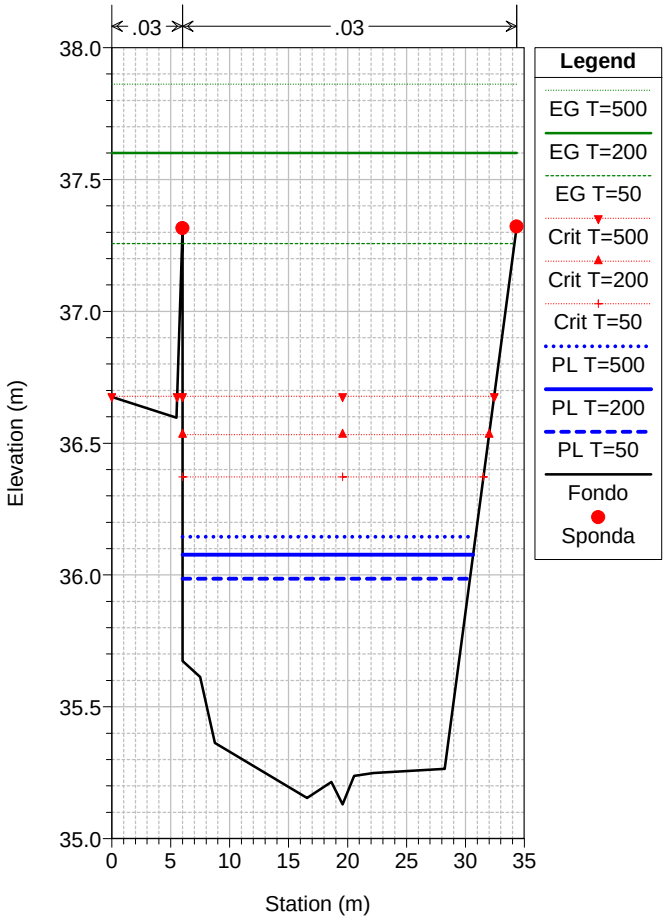
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-10



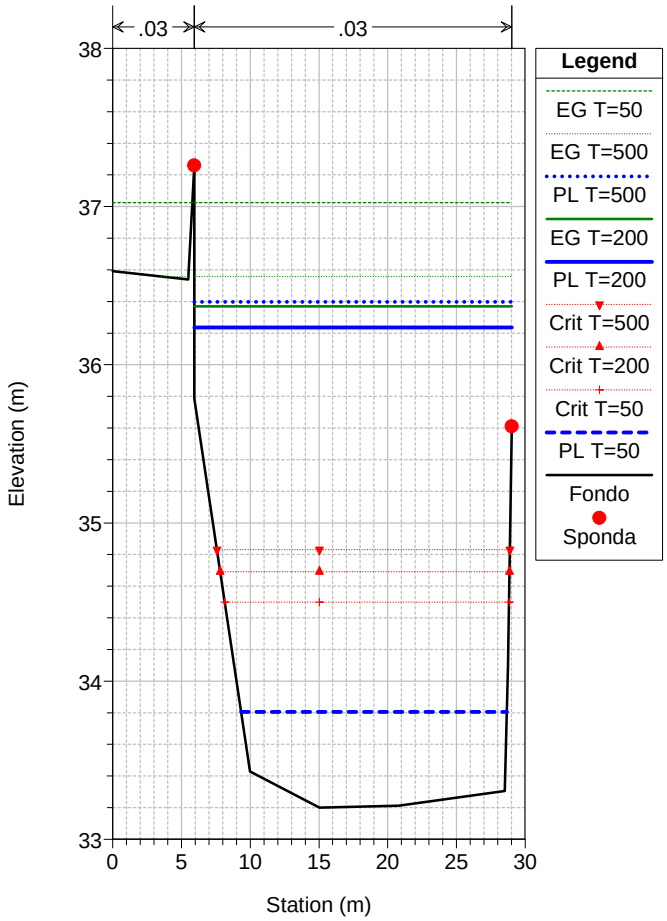
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-9 m



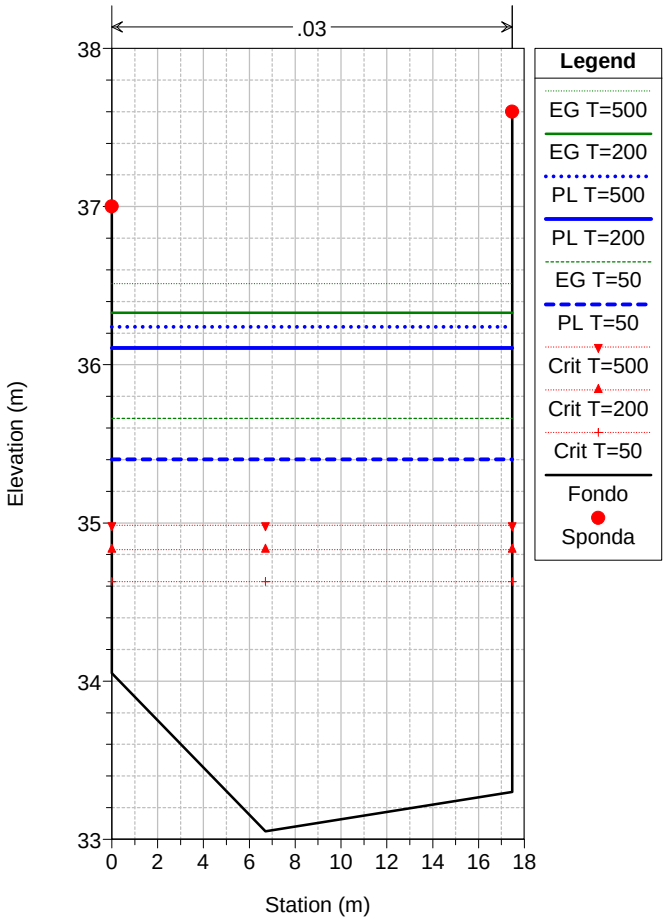
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-9 v



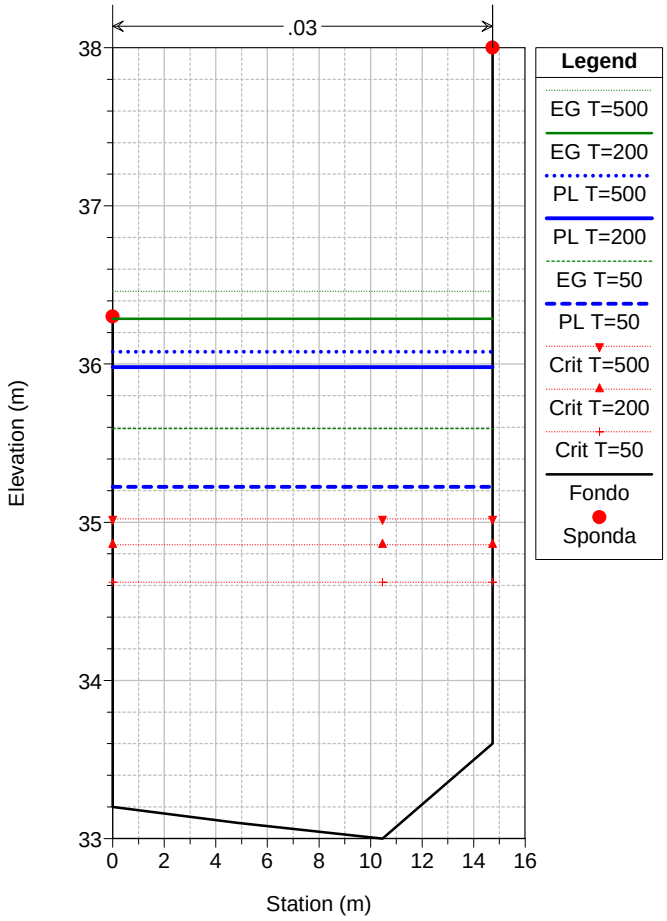
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-8



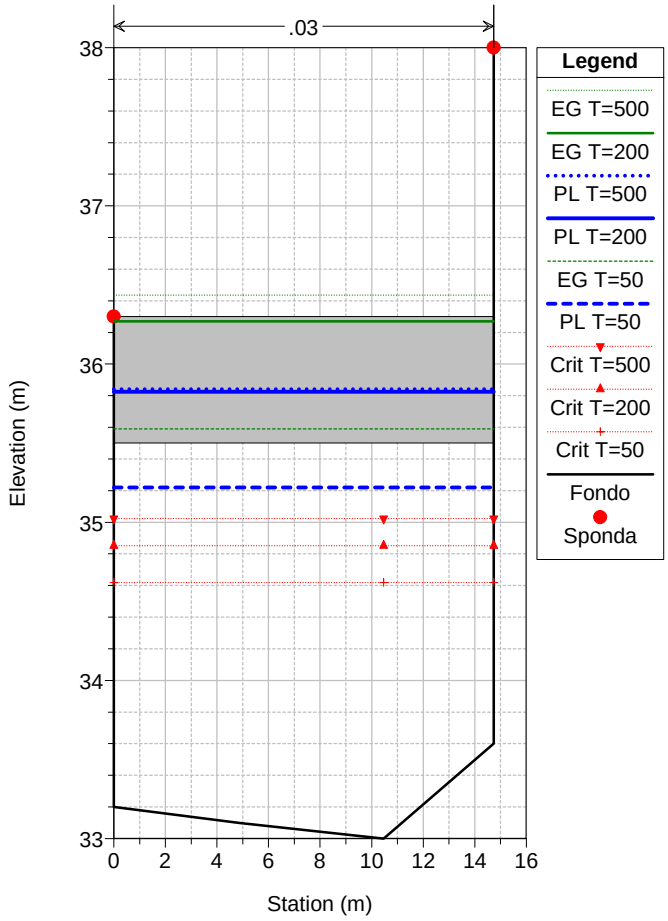
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-7 m



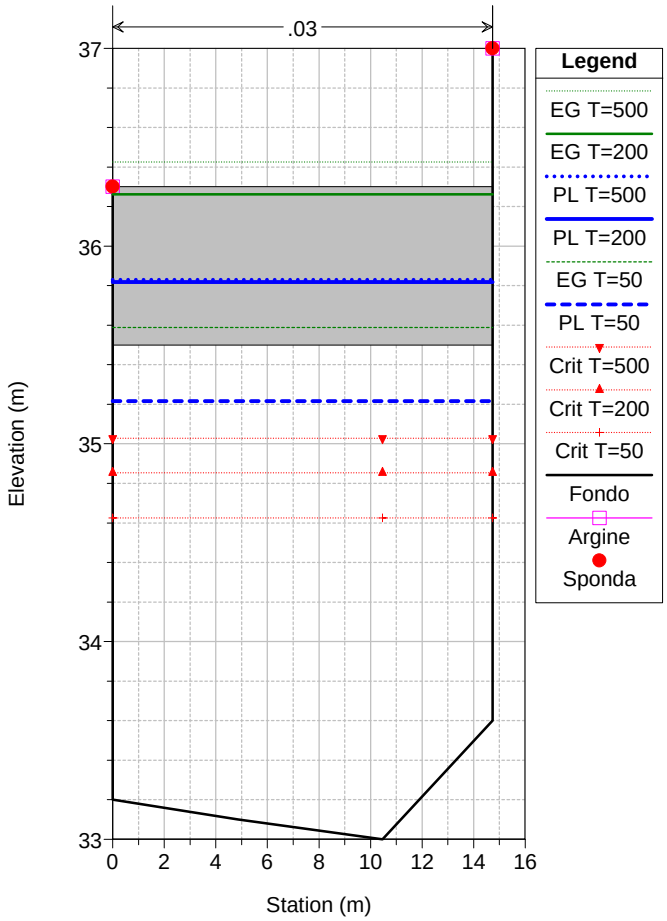
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-7



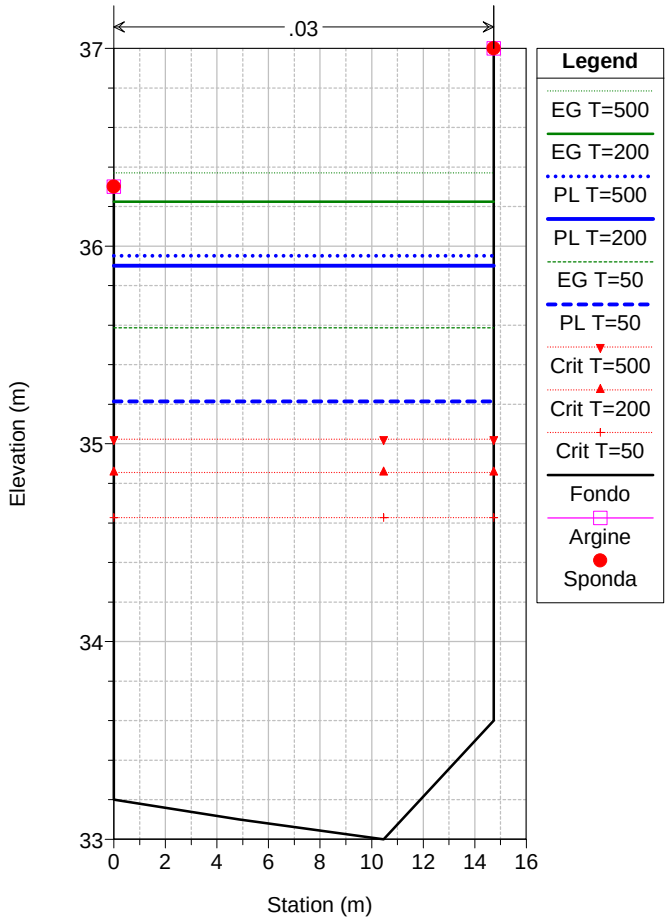
Trasta Plan: PdB_2014

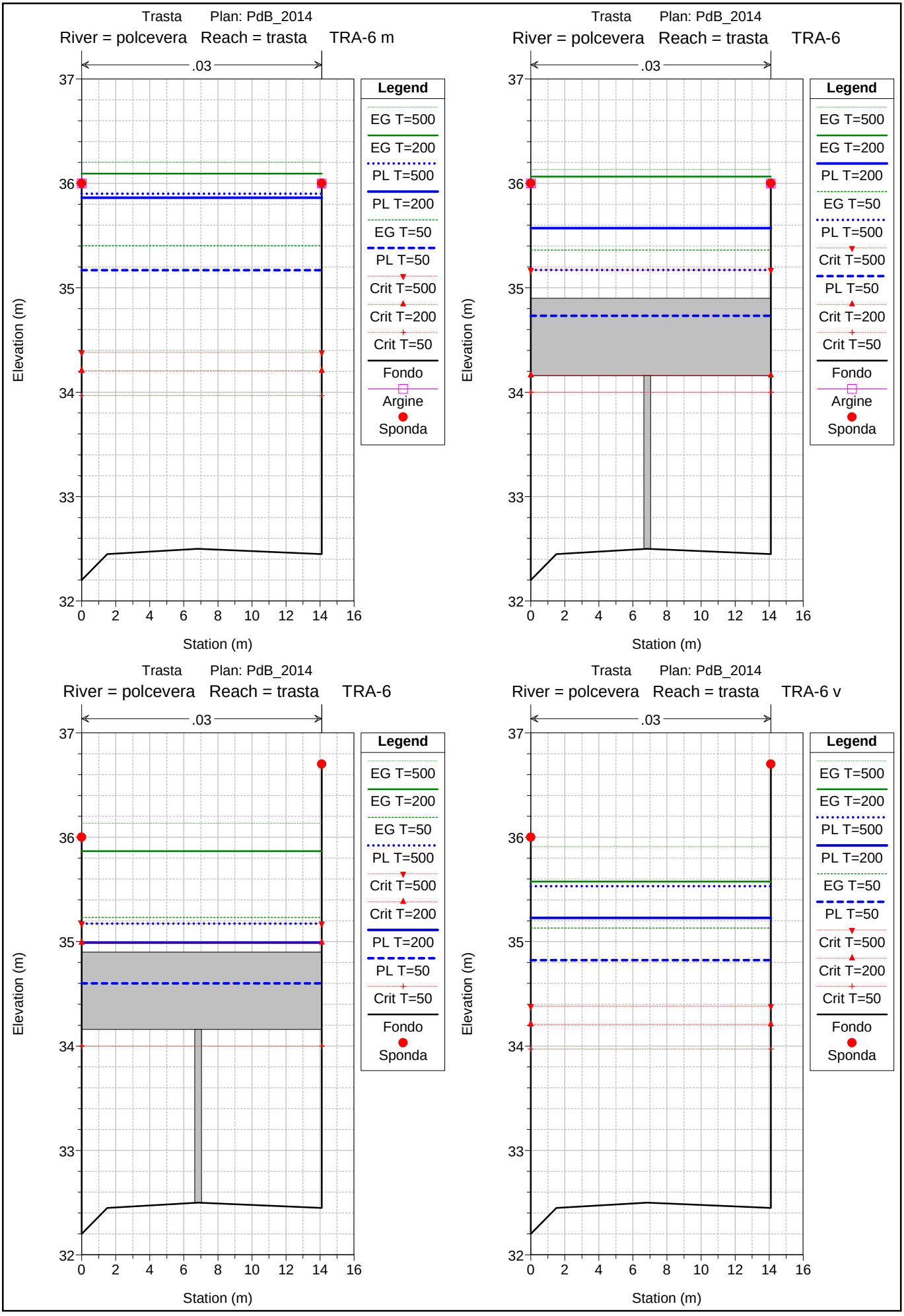
River = polcevera Reach = trasta TRA-7



Trasta Plan: PdB_2014

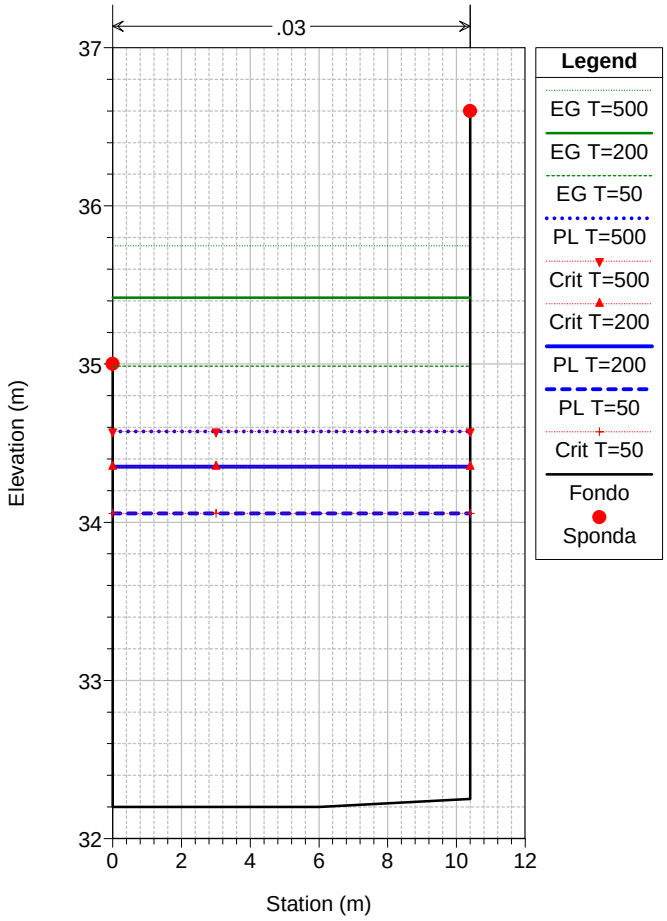
River = polcevera Reach = trasta TRA-7 v




Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-6 m
.03
Legend
EG T=500
EG T=200
PL T=500
PL T=200
EG T=50
PL T=50
Crit T=500
Crit T=200
Crit T=50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-6
.03
Legend
EG T=500
EG T=200
PL T=200
EG T=50
PL T=500
Crit T=500
PL T=50
Crit T=200
Crit T=50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-6
.03
Legend
EG T=500
EG T=200
EG T=50
PL T=500
Crit T=500
Crit T=200
PL T=200
PL T=50
Crit T=50
Fondo
Sponda
Elevation (m)
Station (m)
Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-6 v
.03
Legend
EG T=500
EG T=200
PL T=500
PL T=200
EG T=50
PL T=50
Crit T=500
Crit T=200
Crit T=50
Fondo
Sponda
Elevation (m)
Station (m)

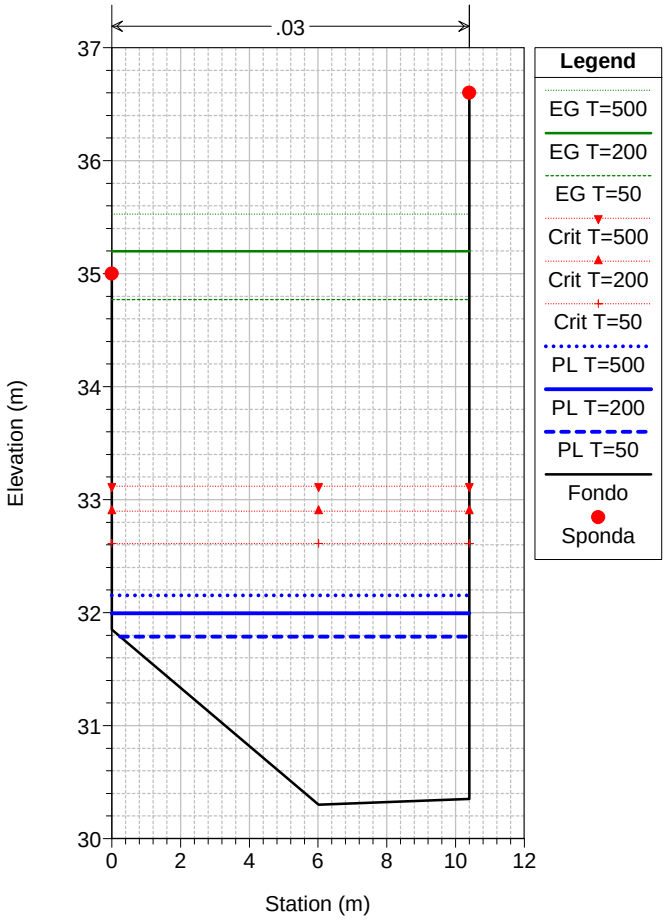
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-5 m



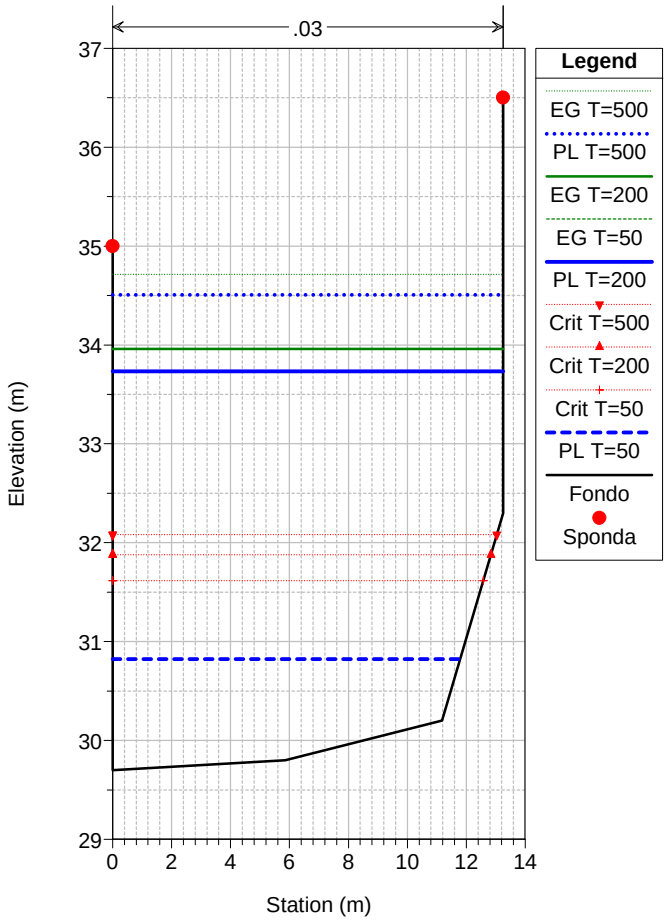
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-5 v



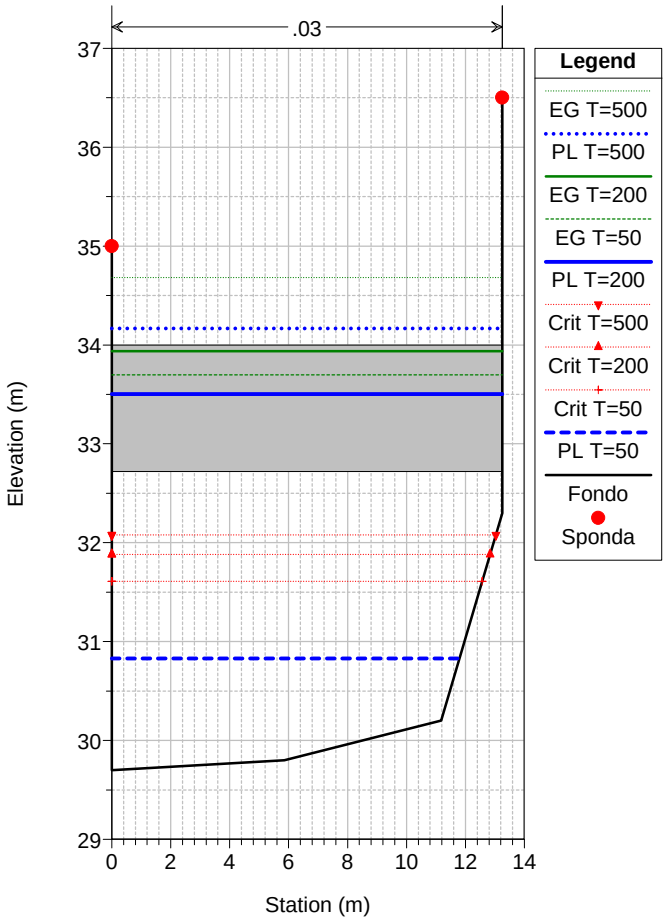
Trasta Plan: PdB_2014

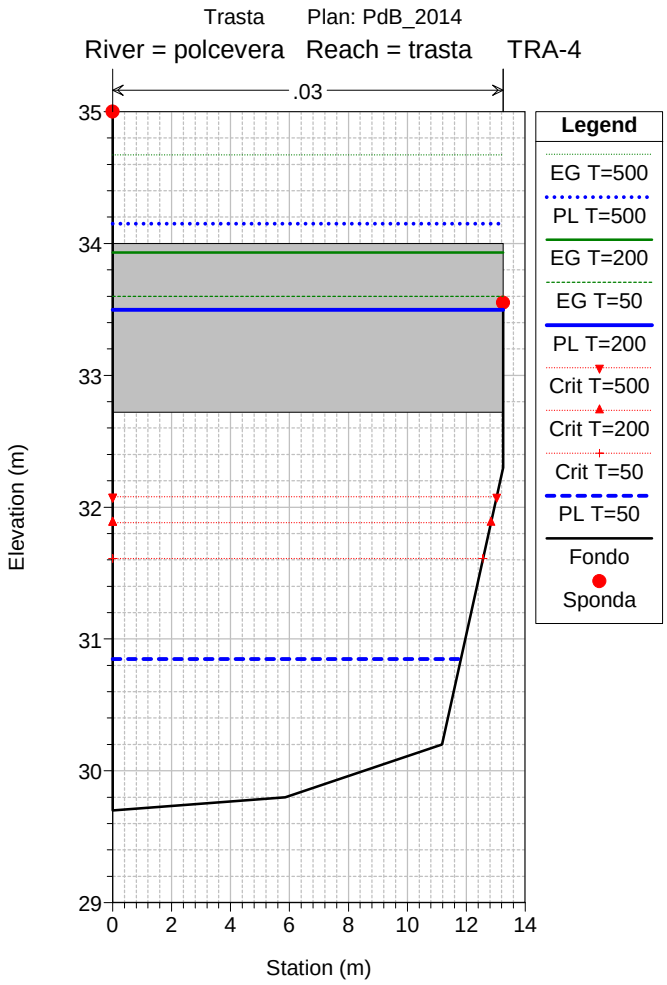
River = polcevera Reach = trasta TRA-4.1

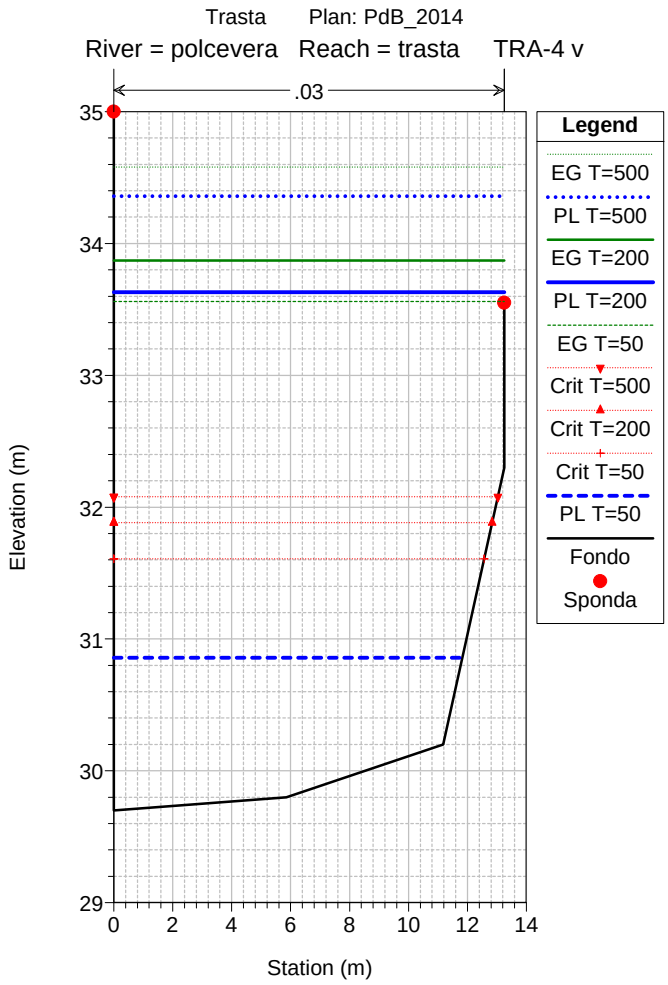


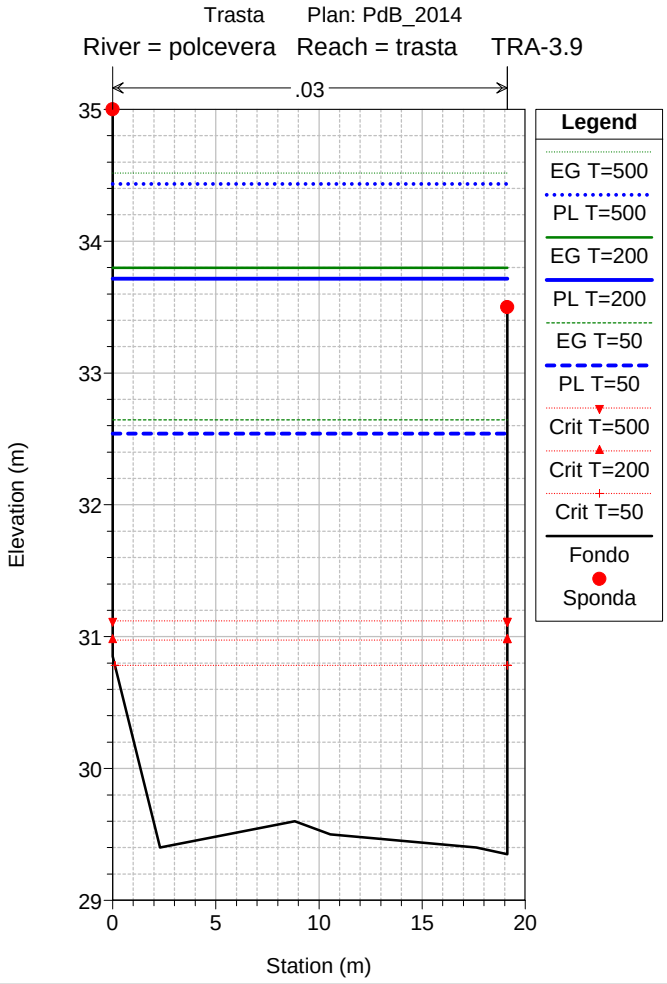
Trasta Plan: PdB_2014

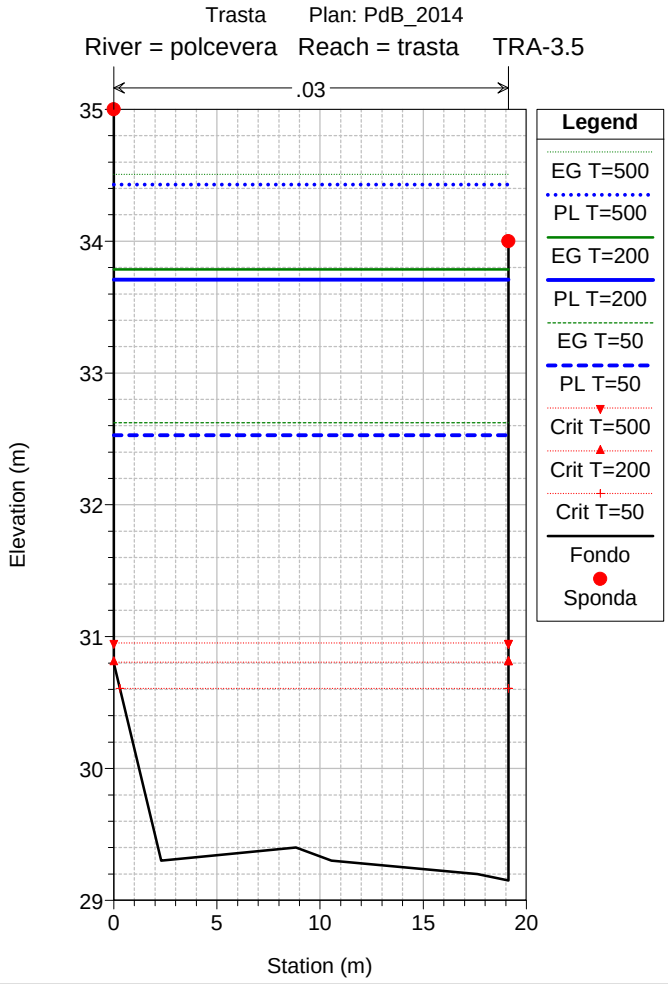
River = polcevera Reach = trasta TRA-4




Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-4
.03
Legend
EG T=500
PL T=500
EG T=200
EG T=50
PL T=200
Crit T=500
Crit T=200
Crit T=50
PL T=50
Fondo
Sponda
Elevation (m)
Station (m)

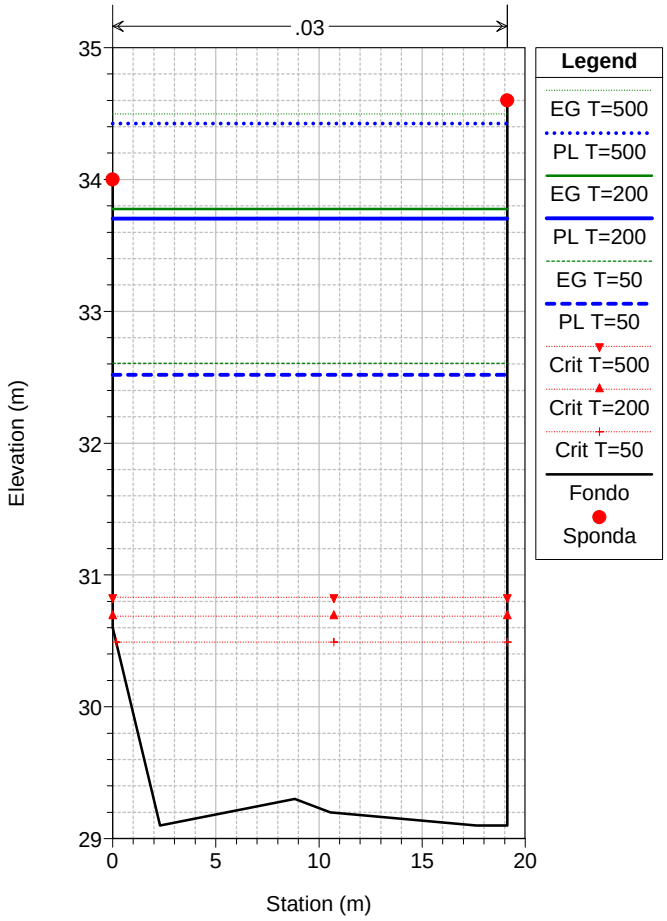

Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-4 v
.03
Legend
EG T=500
PL T=500
EG T=200
PL T=200
EG T=50
Crit T=500
Crit T=200
Crit T=50
PL T=50
Fondo
Sponda
Elevation (m)
Station (m)


Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-3.9
.03
Legend
EG T=500
PL T=500
EG T=200
PL T=200
EG T=50
PL T=50
Crit T=500
Crit T=200
Crit T=50
Fondo
Sponda
Elevation (m)
Station (m)


Trasta Plan: PdB_2014
River = polcevera Reach = trasta TRA-3.5
.03
Legend
EG T=500
PL T=500
EG T=200
PL T=200
EG T=50
PL T=50
Crit T=500
Crit T=200
Crit T=50
Fondo
Sponda
Elevation (m)
Station (m)

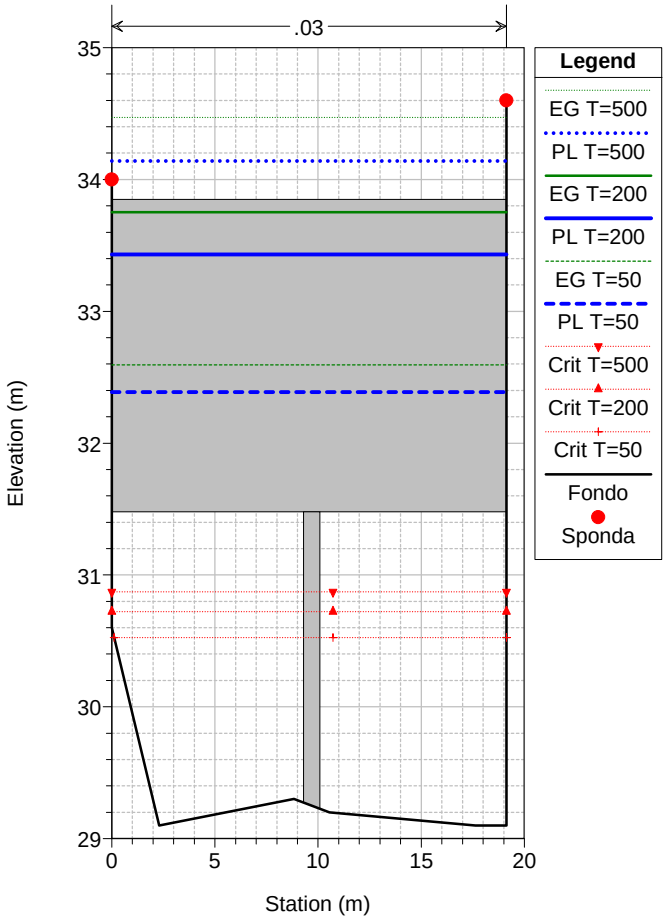
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-3 m



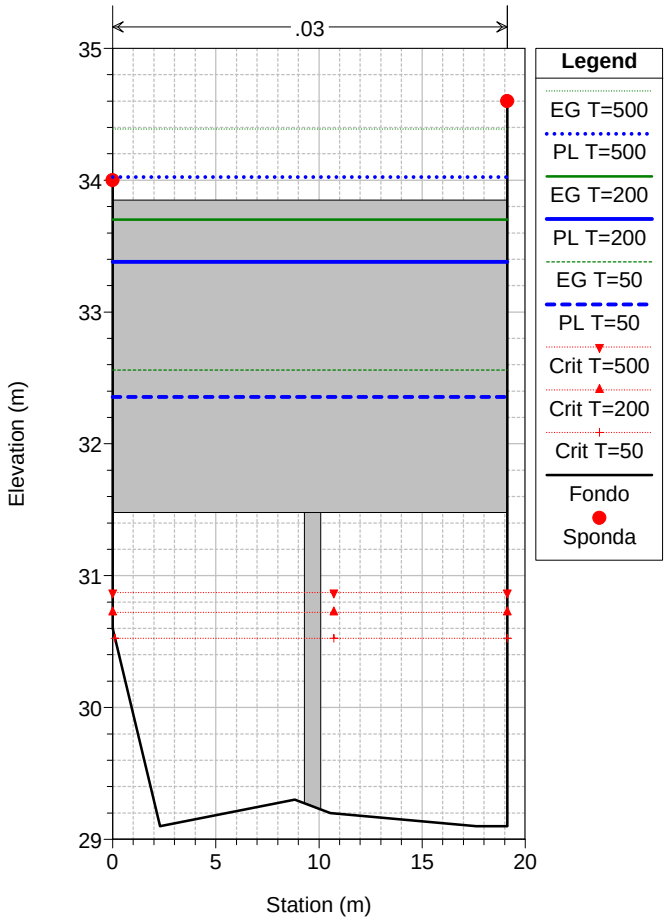
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-3



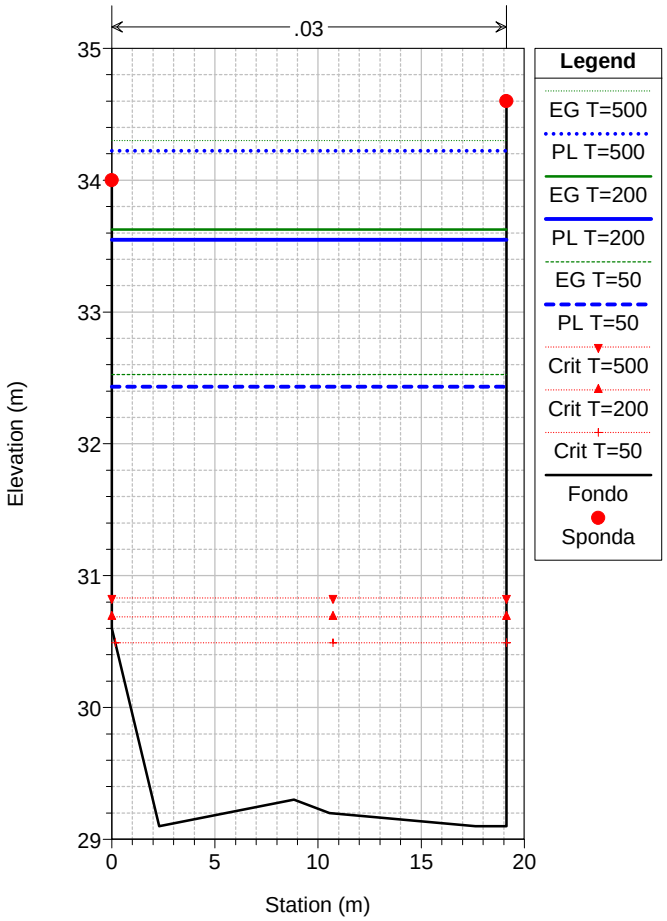
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-3



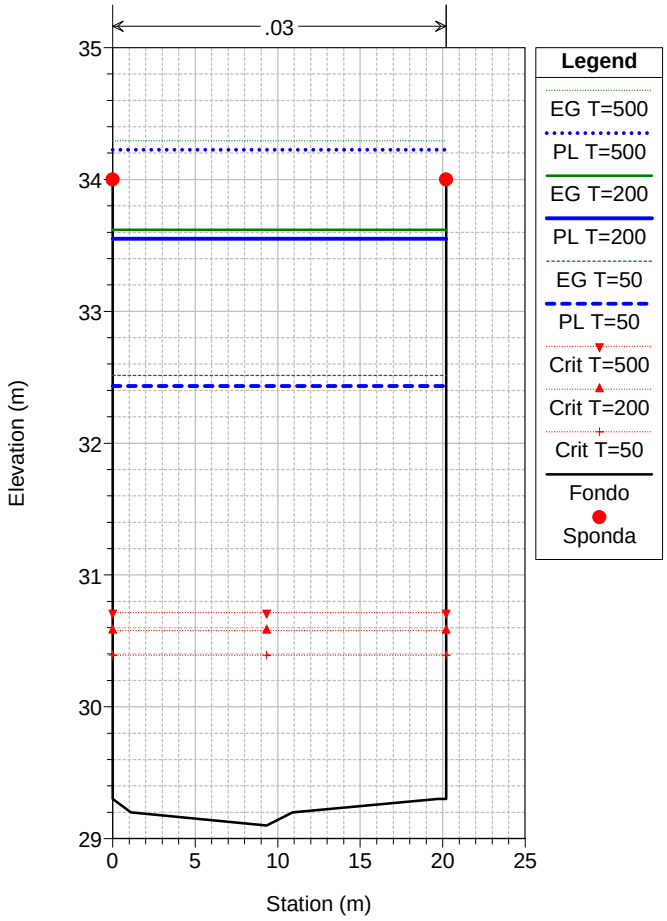
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-3 v



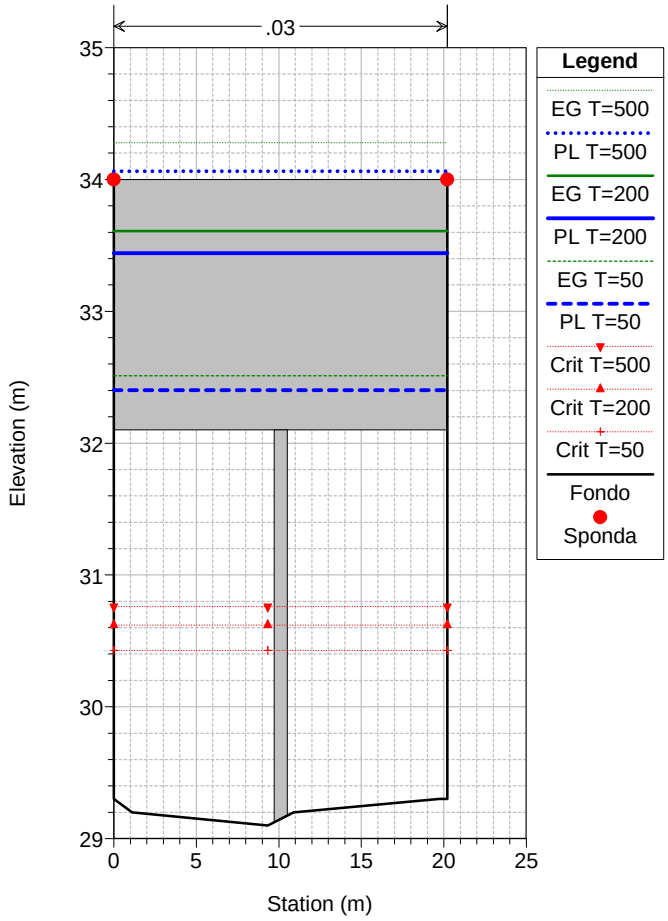
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-2 m



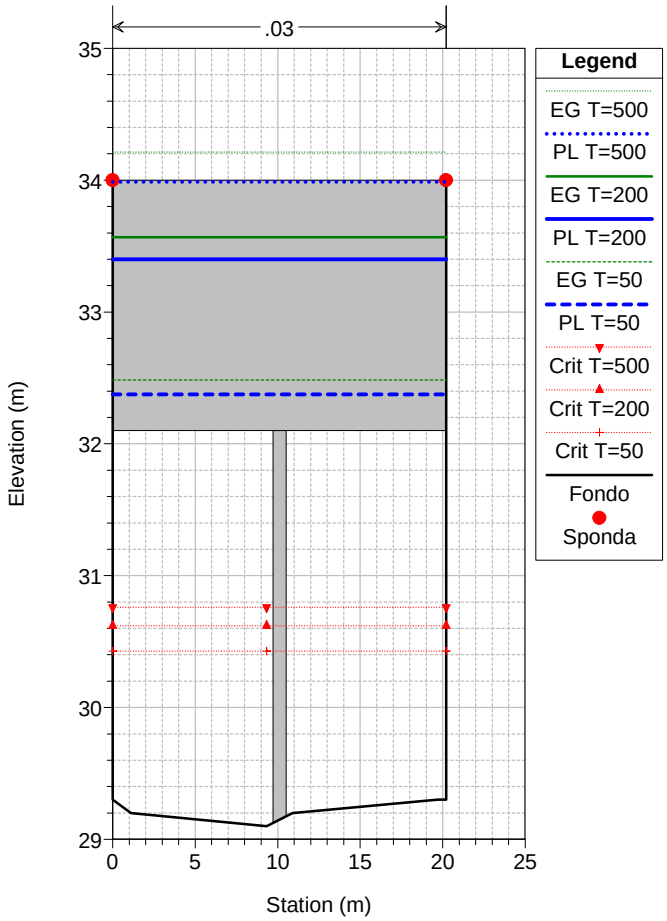
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-2



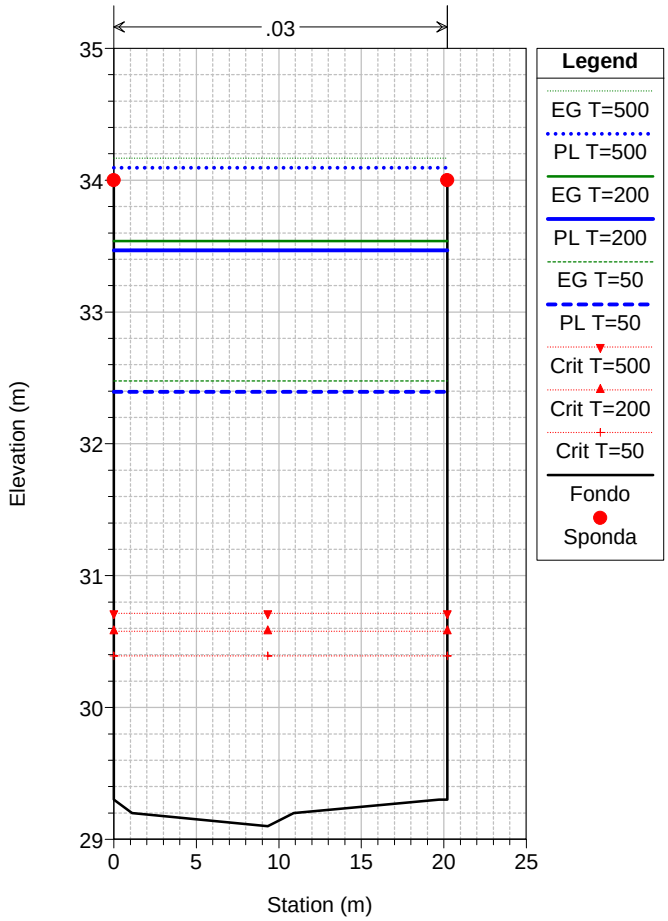
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-2



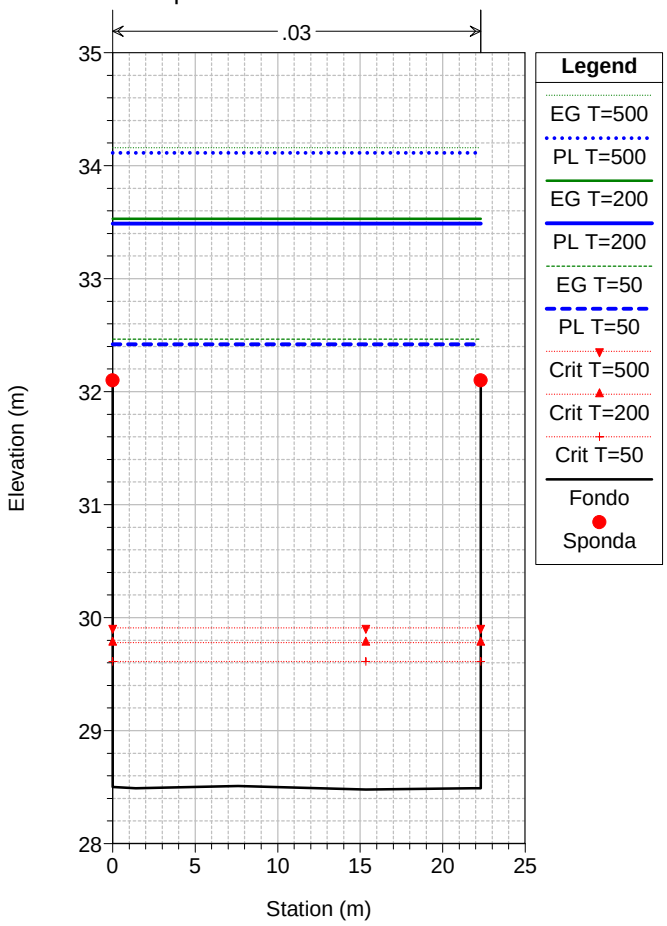
Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-2 v



Trasta Plan: PdB_2014

River = polcevera Reach = trasta TRA-1



HEC-RAS Plan: PdB2014 River: polcevera Reach: trasta

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)	
trasta	17 TRA-17	T=50	82.00	40.82	42.87	44.88	2.01	45.00	2.13	42.87	43.56	0.008954	3.68	22.29	16.19	1.00
trasta	17 TRA-17	T=200	102.00	40.82	43.08	44.88	1.80	45.00	1.92	43.08	43.88	0.008827	3.96	25.78	16.21	1.00
trasta	17 TRA-17	T=500	118.00	40.82	43.25	44.88	1.63	45.00	1.75	43.25	44.13	0.008730	4.15	28.43	16.21	1.00
trasta	16 TRA-16	T=50	82.00	39.66	41.12	43.06	1.94	43.53	2.41	41.49	42.37	0.025852	4.94	16.59	18.14	1.65
trasta	16 TRA-16	T=200	102.00	39.66	41.27	43.06	1.79	43.53	2.26	41.69	42.70	0.025621	5.30	19.25	18.66	1.67
trasta	16 TRA-16	T=500	118.00	39.66	41.37	43.06	1.69	43.53	2.16	41.83	42.95	0.025179	5.56	21.20	18.66	1.67
trasta	15.1 TRA-15 m	T=50	82.00	39.34	41.46	41.70	0.23	42.22	0.75	41.07	41.82	0.004083	2.65	30.98	19.00	0.66
trasta	15.1 TRA-15 m	T=200	102.00	39.34	41.76	41.70	-0.06	42.22	0.46	41.27	42.16	0.003720	2.78	36.92	25.02	0.64
trasta	15.1 TRA-15 m	T=500	118.00	39.34	42.08	41.70	-0.38	42.22	0.14	41.41	42.45	0.002944	2.72	44.92	25.02	0.58
trasta	15 TRA-15		Bridge													
trasta	14.9 TRA-15 v	T=50	82.00	39.34	40.86	41.70	0.84	42.22	1.36	41.07	41.76	0.017878	4.22	19.45	19.00	1.33
trasta	14.9 TRA-15 v	T=200	102.00	39.34	41.01	41.70	0.69	42.22	1.21	41.27	42.07	0.017659	4.56	22.38	19.00	1.34
trasta	14.9 TRA-15 v	T=500	118.00	39.34	41.08	41.70	0.62	42.22	1.14	41.41	42.34	0.019703	4.98	23.70	19.00	1.42
trasta	14 TRA-14	T=50	82.00	38.80	40.59	41.11	0.52	43.62	3.03	40.60	41.21	0.009786	3.50	23.46	19.34	1.01
trasta	14 TRA-14	T=200	102.00	38.80	40.78	41.11	0.33	43.62	2.84	40.80	41.50	0.009533	3.76	27.14	19.34	1.01
trasta	14 TRA-14	T=500	118.00	38.80	40.92	41.11	0.20	43.62	2.70	40.94	41.72	0.009539	3.96	29.76	19.34	1.02
trasta	13.1 TRA-13 m	T=50	82.00	37.28	39.51	40.46	0.95	41.20	1.69	38.86	39.81	0.002799	2.44	33.67	17.03	0.55
trasta	13.1 TRA-13 m	T=200	102.00	37.28	39.82	40.46	0.64	41.20	1.38	39.07	40.17	0.002756	2.61	39.02	17.03	0.55
trasta	13.1 TRA-13 m	T=500	118.00	37.28	40.08	40.46	0.38	41.20	1.12	39.23	40.46	0.002680	2.72	43.35	17.03	0.54
trasta	13 TRA-13		Bridge													
trasta	12.9 TRA-13 v	T=50	82.00	37.28	38.54	40.46	1.92	41.20	2.66	38.86	39.71	0.023469	4.79	17.10	17.03	1.53
trasta	12.9 TRA-13 v	T=200	102.00	37.28	38.69	40.46	1.77	41.20	2.51	39.07	40.06	0.023257	5.18	19.67	17.03	1.54
trasta	12.9 TRA-13 v	T=500	118.00	37.28	38.80	40.46	1.66	41.20	2.40	39.23	40.33	0.023324	5.48	21.55	17.03	1.55
trasta	12 TRA-12	T=50	82.00	36.12	38.02	39.08	1.06	42.78	4.76	37.77	38.46	0.005240	2.92	28.10	19.12	0.77
trasta	12 TRA-12	T=200	102.00	36.12	38.44	39.08	0.65	42.78	4.35	37.97	38.84	0.003751	2.83	36.05	19.38	0.66
trasta	12 TRA-12	T=500	118.00	36.12	38.70	39.08	0.39	42.78	4.09	38.13	39.12	0.003348	2.87	41.09	19.38	0.63
trasta	11.1 TRA-11 m	T=50	82.00	35.27	38.01	37.74	-0.27	38.90	0.89	37.36	38.32	0.002986	2.50	34.06	22.58	0.56
trasta	11.1 TRA-11 m	T=200	102.00	35.27	38.44	37.74	-0.70	38.90	0.46	37.58	38.74	0.002325	2.47	43.77	22.58	0.50
trasta	11.1 TRA-11 m	T=500	118.00	35.27	38.71	37.74	-0.97	38.90	0.19	37.74	39.01	0.002140	2.51	49.86	22.58	0.48
trasta	11 TRA-11		Bridge													
trasta	10.9 TRA-11 v	T=50	82.00	35.27	37.78	37.74	-0.04	38.90	1.12	37.36	38.19	0.004470	2.85	28.97	22.58	0.67
trasta	10.9 TRA-11 v	T=200	102.00	35.27	38.11	37.74	-0.37	38.90	0.79	37.58	38.54	0.003858	2.92	36.46	22.58	0.64
trasta	10.9 TRA-11 v	T=500	118.00	35.27	38.37	37.74	-0.63	38.90	0.53	37.74	38.80	0.003428	2.95	42.29	22.58	0.61
trasta	10 TRA-10	T=50	82.00	35.26	37.10	37.99	0.89	51.04	13.94	37.10	37.86	0.009466	3.88	21.11	13.67	1.00
trasta	10 TRA-10	T=200	102.00	35.26	37.34	37.99	0.65	51.04	13.70	37.34	38.23	0.009387	4.18	24.42	13.77	1.00
trasta	10 TRA-10	T=500	118.00	35.26	37.52	37.99	0.47	51.04	13.52	37.52	38.50	0.009282	4.37	26.98	13.84	1.00

HEC-RAS Plan: PdB2014 River: polcevera Reach: trasta (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)	
trasta	9 TRA-9 m	T=50	82.00	35.13	35.99	37.32	1.33	37.32	1.34	36.37	37.26	0.039029	5.00	16.41	24.36	1.94
trasta	9 TRA-9 m	T=200	102.00	35.13	36.08	37.32	1.24	37.32	1.24	36.53	37.60	0.040210	5.47	18.65	24.64	2.01
trasta	9 TRA-9 m	T=500	118.00	35.13	36.14	37.32	1.17	37.32	1.18	36.68	37.86	0.041045	5.81	20.32	24.84	2.05
trasta	8.9 TRA-9 v	T=50	82.00	33.20	33.81	37.26	3.45	35.61	1.80	34.50	37.02	0.135723	7.95	10.32	19.33	3.47
trasta	8.9 TRA-9 v	T=200	102.00	33.20	36.23	37.26	1.03	35.61	-0.62	34.69	36.37	0.000760	1.63	62.74	23.09	0.31
trasta	8.9 TRA-9 v	T=500	118.00	33.20	36.40	37.26	0.86	35.61	-0.79	34.83	36.56	0.000851	1.77	66.50	23.09	0.33
trasta	8 TRA-8	T=50	82.00	33.05	35.40	37.00	1.60	37.60	2.20	34.63	35.66	0.002198	2.25	36.38	17.47	0.50
trasta	8 TRA-8	T=200	102.00	33.05	36.11	37.00	0.89	37.60	1.49	34.83	36.33	0.001404	2.10	48.69	17.47	0.40
trasta	8 TRA-8	T=500	118.00	33.05	36.24	37.00	0.76	37.60	1.36	34.99	36.51	0.001631	2.31	51.04	17.47	0.43
trasta	7.1 TRA-7 m	T=50	82.00	33.00	35.22	36.30	1.08	38.00	2.78	34.62	35.59	0.003337	2.69	30.45	14.73	0.60
trasta	7.1 TRA-7 m	T=200	102.00	33.00	35.98	36.30	0.32	38.00	2.02	34.86	36.29	0.002029	2.45	41.60	14.73	0.47
trasta	7.1 TRA-7 m	T=500	118.00	33.00	36.08	36.30	0.22	38.00	1.92	35.02	36.46	0.002457	2.74	43.03	14.73	0.51
trasta	7.05 TRA-7		Bridge													
trasta	7 TRA-7 v	T=50	82.00	33.00	35.21	36.30	1.09	37.00	1.79	34.63	35.59	0.003383	2.70	30.32	14.73	0.60
trasta	7 TRA-7 v	T=200	102.00	33.00	35.90	36.30	0.40	37.00	1.10	34.85	36.22	0.002208	2.52	40.43	14.73	0.49
trasta	7 TRA-7 v	T=500	118.00	33.00	35.95	36.30	0.35	37.00	1.05	35.02	36.37	0.002797	2.87	41.18	14.73	0.55
trasta	6.1 TRA-6 m	T=50	82.00	32.20	35.17	36.00	0.83	36.00	0.83	33.97	35.40	0.001728	2.15	38.20	14.10	0.42
trasta	6.1 TRA-6 m	T=200	102.00	32.20	35.86	36.00	0.14	36.00	0.14	34.21	36.09	0.001367	2.13	48.00	14.10	0.37
trasta	6.1 TRA-6 m	T=500	118.00	32.20	35.90	36.00	0.10	36.00	0.10	34.38	36.20	0.001771	2.43	48.54	14.10	0.42
trasta	6.05 TRA-6		Bridge													
trasta	6 TRA-6 v	T=50	82.00	32.20	34.82	36.00	1.18	36.70	1.88	33.97	35.13	0.002596	2.46	33.33	14.10	0.51
trasta	6 TRA-6 v	T=200	102.00	32.20	35.23	36.00	0.77	36.70	1.47	34.21	35.57	0.002508	2.61	39.03	14.10	0.50
trasta	6 TRA-6 v	T=500	118.00	32.20	35.53	36.00	0.47	36.70	1.17	34.38	35.91	0.002469	2.72	43.32	14.10	0.50
trasta	5 TRA-5 m	T=50	82.00	32.20	34.06	35.00	0.94	36.60	2.54	34.06	34.99	0.010841	4.27	19.20	10.40	1.00
trasta	5 TRA-5 m	T=200	102.00	32.20	34.35	35.00	0.65	36.60	2.25	34.35	35.42	0.010816	4.58	22.26	10.40	1.00
trasta	5 TRA-5 m	T=500	118.00	32.20	34.57	35.00	0.43	36.60	2.03	34.57	35.75	0.010841	4.80	24.57	10.40	1.00
trasta	4.9 TRA-5 v	T=50	82.00	30.30	31.79	35.00	3.21	36.60	4.81	32.61	34.77	0.059806	7.65	10.72	10.16	2.38
trasta	4.9 TRA-5 v	T=200	102.00	30.30	31.99	35.00	3.00	36.60	4.61	32.90	35.20	0.053852	7.93	12.86	10.40	2.28
trasta	4.9 TRA-5 v	T=500	118.00	30.30	32.15	35.00	2.85	36.60	4.45	33.12	35.53	0.049968	8.14	14.50	10.40	2.20
trasta	4.1 TRA-4.1	T=50	82.00	29.70	30.82	35.00	4.18	36.50	5.68	31.62	33.74	0.067005	7.57	10.83	11.79	2.52
trasta	4.1 TRA-4.1	T=200	102.00	29.70	33.73	35.00	1.27	36.50	2.77	31.88	33.96	0.001203	2.11	48.34	13.25	0.35
trasta	4.1 TRA-4.1	T=500	118.00	29.70	34.51	35.00	0.49	36.50	1.99	32.08	34.71	0.000939	2.01	58.59	13.25	0.31
trasta	4.05 TRA-4		Bridge													
trasta	4 TRA-4 v	T=50	82.00	29.70	30.86	35.00	4.14	33.55	2.69	31.61	33.56	0.059528	7.29	11.26	11.83	2.38
trasta	4 TRA-4 v	T=200	102.00	29.70	33.63	35.00	1.37	33.55	-0.08	31.88	33.87	0.001304	2.17	46.99	13.25	0.37

HEC-RAS Plan: PdB2014 River: polcevera Reach: trasta (Continued)

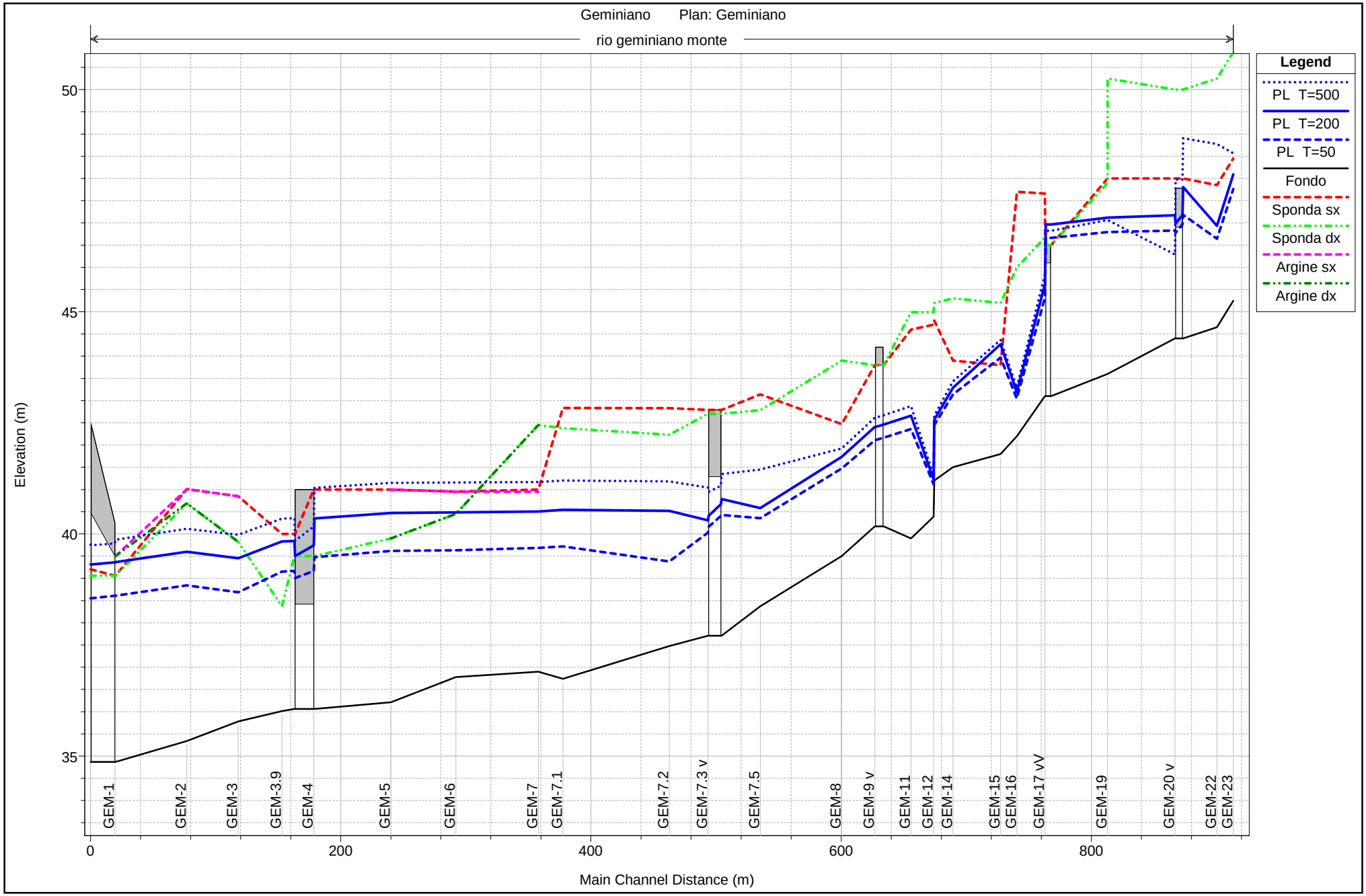
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
trasta	4 TRA-4 v	T=500	118.00	29.70	34.36	35.00	0.64	33.55	-0.81	32.08	34.58	0.001032	2.08	56.62	13.25	0.32
trasta	3.9 TRA-3.9	T=50	82.00	29.35	32.54	35.00	2.46	33.50	0.96	30.78	32.64	0.000597	1.43	57.15	19.13	0.26
trasta	3.9 TRA-3.9	T=200	102.00	29.35	33.72	35.00	1.28	33.50	-0.22	30.97	33.80	0.000345	1.28	79.65	19.13	0.20
trasta	3.9 TRA-3.9	T=500	118.00	29.35	34.43	35.00	0.57	33.50	-0.93	31.12	34.52	0.000291	1.26	93.42	19.13	0.18
trasta	3.5 TRA-3.5	T=50	82.00	29.15	32.53	35.00	2.47	34.00	1.47	30.61	32.62	0.000509	1.36	60.18	19.13	0.25
trasta	3.5 TRA-3.5	T=200	102.00	29.15	33.71	35.00	1.29	34.00	0.29	30.81	33.79	0.000308	1.23	82.75	19.13	0.19
trasta	3.5 TRA-3.5	T=500	118.00	29.15	34.43	35.00	0.57	34.00	-0.43	30.95	34.51	0.000264	1.22	96.54	19.13	0.17
trasta	3.1 TRA-3 m	T=50	82.00	29.10	32.52	34.00	1.48	34.60	2.08	30.49	32.61	0.000457	1.31	62.41	19.13	0.23
trasta	3.1 TRA-3 m	T=200	102.00	29.10	33.70	34.00	0.30	34.60	0.90	30.69	33.78	0.000284	1.20	85.07	19.13	0.18
trasta	3.1 TRA-3 m	T=500	118.00	29.10	34.42	34.00	-0.42	34.60	0.18	30.83	34.50	0.000247	1.19	98.87	19.13	0.17
trasta	3.05 TRA-3		Bridge													
trasta	3 TRA-3 v	T=50	82.00	29.10	32.43	34.00	1.57	34.60	2.17	30.49	32.53	0.000495	1.35	60.77	19.13	0.24
trasta	3 TRA-3 v	T=200	102.00	29.10	33.55	34.00	0.45	34.60	1.05	30.69	33.63	0.000315	1.24	82.10	19.13	0.19
trasta	3 TRA-3 v	T=500	118.00	29.10	34.22	34.00	-0.22	34.60	0.38	30.83	34.30	0.000277	1.24	95.00	19.13	0.18
trasta	2.1 TRA-2 m	T=50	82.00	29.10	32.43	34.00	1.57	34.00	1.57	30.39	32.51	0.000426	1.26	65.29	20.21	0.22
trasta	2.1 TRA-2 m	T=200	102.00	29.10	33.55	34.00	0.45	34.00	0.45	30.58	33.62	0.000273	1.16	87.85	20.21	0.18
trasta	2.1 TRA-2 m	T=500	118.00	29.10	34.22	34.00	-0.22	34.00	-0.22	30.71	34.29	0.000240	1.16	101.48	20.21	0.17
trasta	2.05 TRA-2		Bridge													
trasta	2 TRA-2 v	T=50	82.00	29.10	32.39	34.00	1.61	34.00	1.61	30.39	32.48	0.000442	1.27	64.50	20.21	0.23
trasta	2 TRA-2 v	T=200	102.00	29.10	33.47	34.00	0.53	34.00	0.53	30.58	33.54	0.000289	1.18	86.19	20.21	0.18
trasta	2 TRA-2 v	T=500	118.00	29.10	34.09	34.00	-0.09	34.00	-0.09	30.71	34.17	0.000259	1.19	98.86	20.21	0.17
trasta	1 TRA-1	T=50	82.00	28.48	32.42	32.10	-0.32	32.10	-0.32	29.61	32.46	0.000191	0.94	87.55	22.30	0.15
trasta	1 TRA-1	T=200	102.00	28.48	33.49	32.10	-1.39	32.10	-1.39	29.78	33.53	0.000145	0.92	111.35	22.30	0.13
trasta	1 TRA-1	T=500	118.00	28.48	34.11	32.10	-2.01	32.10	-2.01	29.91	34.16	0.000138	0.94	125.32	22.30	0.13

6 TORRENTE GEMINIANO

Il Torrente Geminiano è stato studiato dalla confluenza con il torrente Polcevera per un tratto di circa 900 m.

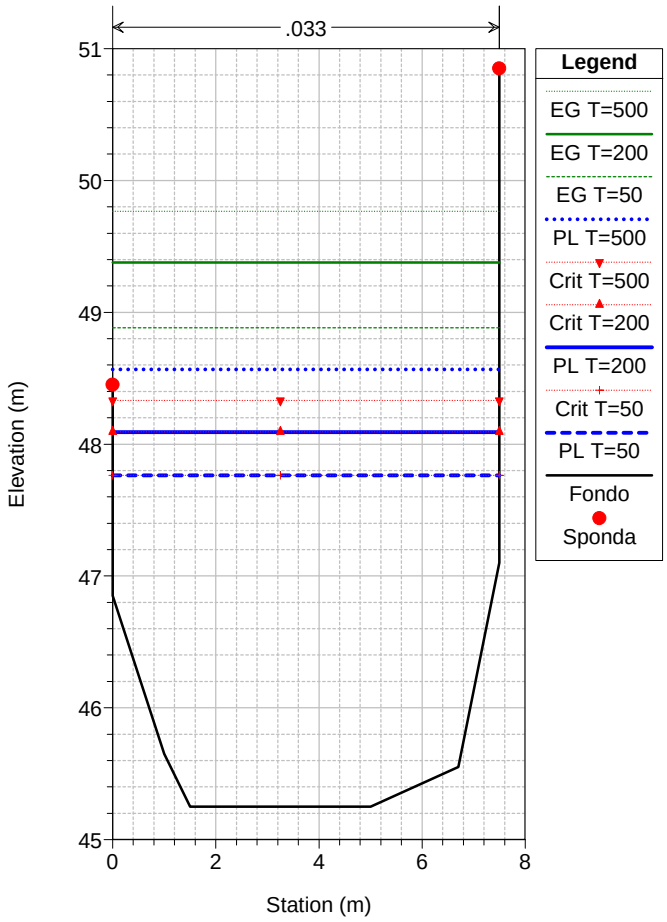
Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler variabile da 30 $m^{1/3}/s$ a 33 $m^{1/3}/s$.
Come condizioni al contorno è stata imposta a monte la condizione critica, a valle è stata simulata la confluenza nel torrente Polcevera.

TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
		T = 50 anni	**T = 200 anni**	**T = 500 anni**
Torrente Geminiano	GEM	78	96	110
Torrente Polc.monte	differenza	1216	1561	1776
Torrente Polcevera valle	PoTr	1294	1657	1886


Geminiano Plan: Geminiano
rio geminiano monte
Legend
PL T=500
PL T=200
PL T=50
Fondo
Sponda sx
Sponda dx
Argine sx
Argine dx
Elevation (m)
50
45
40
35
0
200
400
600
800
Main Channel Distance (m)
GEM-1
GEM-2
GEM-3
GEM-3.9
GEM-4
GEM-5
GEM-6
GEM-7
GEM-7.1
GEM-7.2
GEM-7.3 v
GEM-7.5
GEM-8
GEM-9 v
GEM-11
GEM-12
GEM-14
GEM-15
GEM-16
GEM-17 vV
GEM-19
GEM-20 v
GEM-22
GEM-23

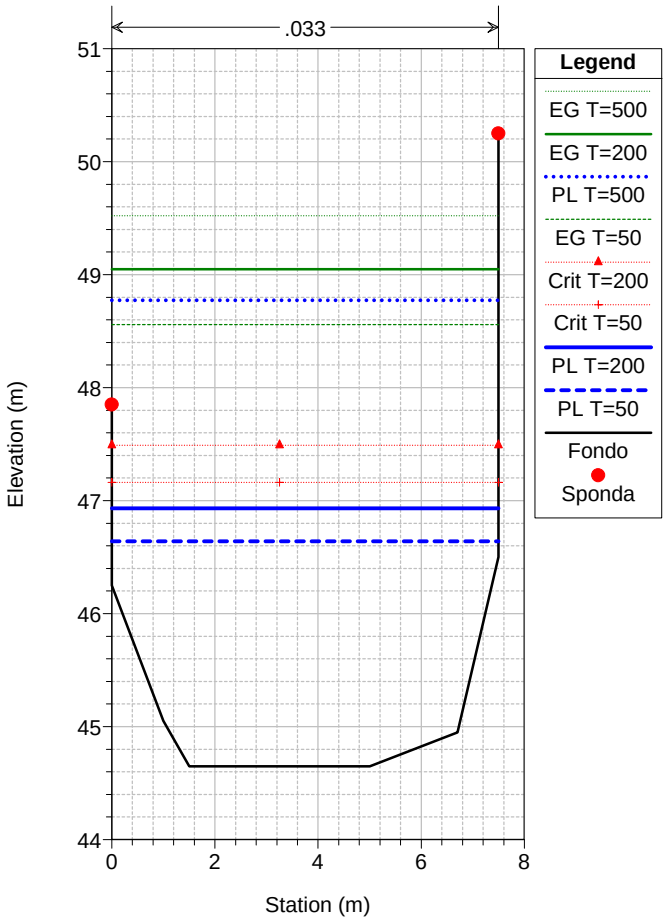
Geminiano Plan: Geminiano

River = rio geminiano Reach = monte GEM-23



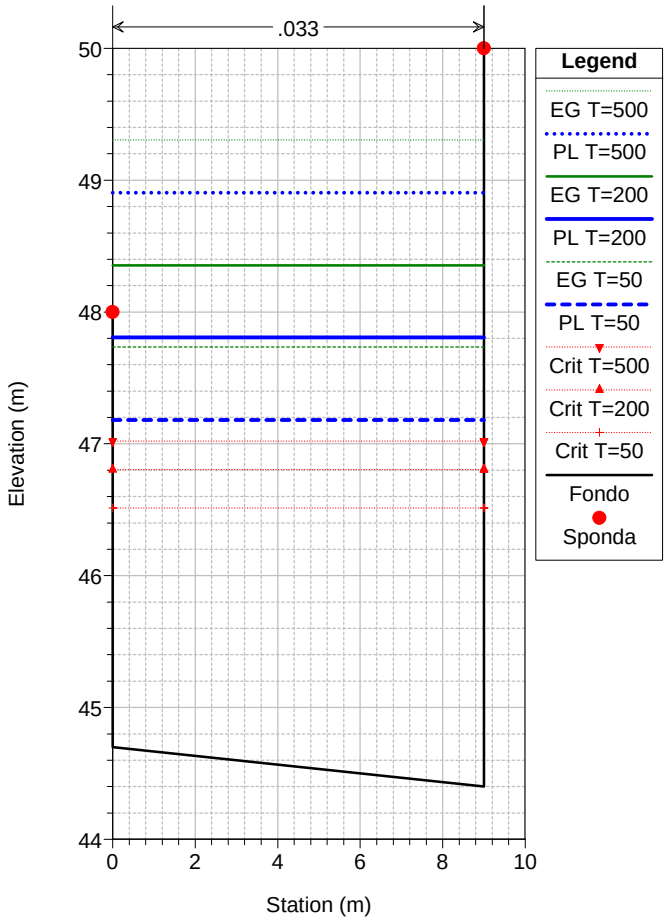
Geminiano Plan: Geminiano

River = rio geminiano Reach = monte GEM-22



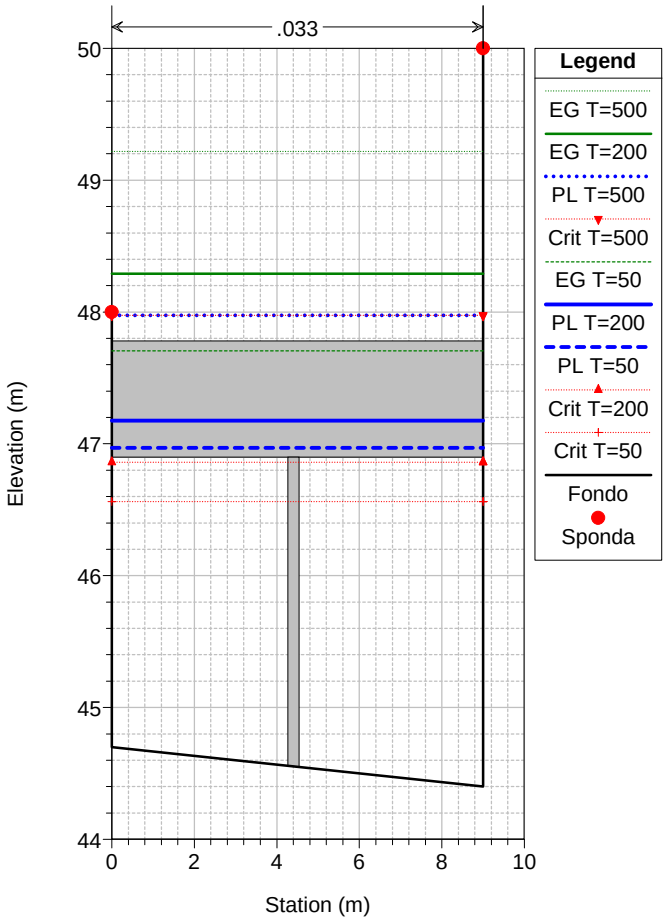
Geminiano Plan: Geminiano

River = rio geminiano Reach = monte GEM-21

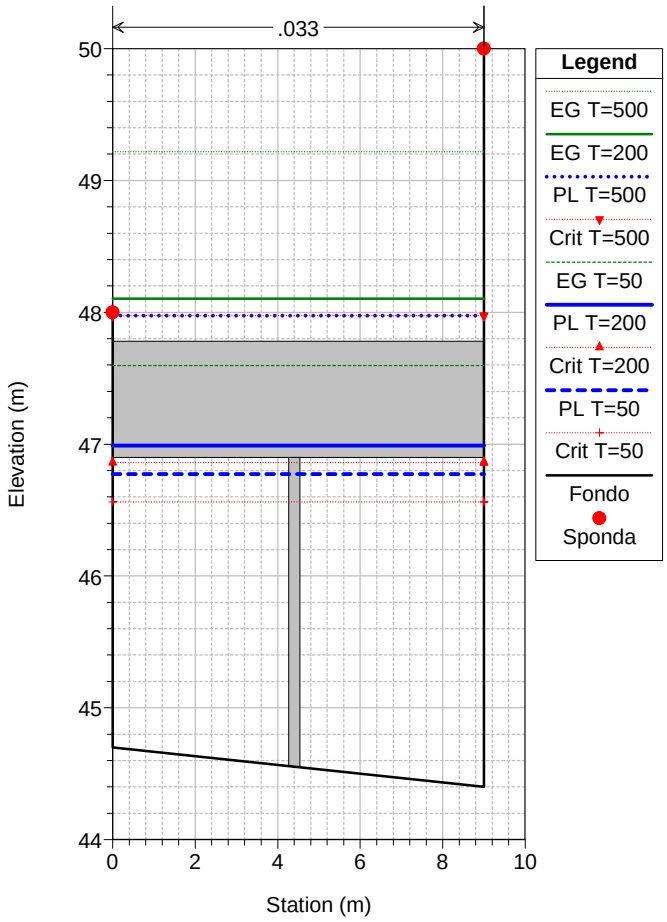


Geminiano Plan: Geminiano

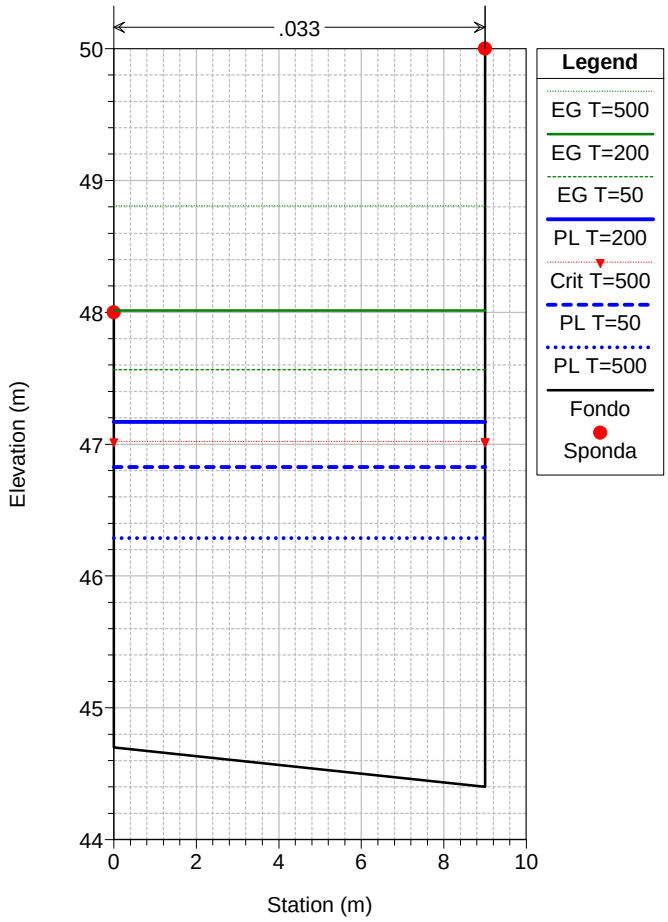
River = rio geminiano Reach = monte GEM-20



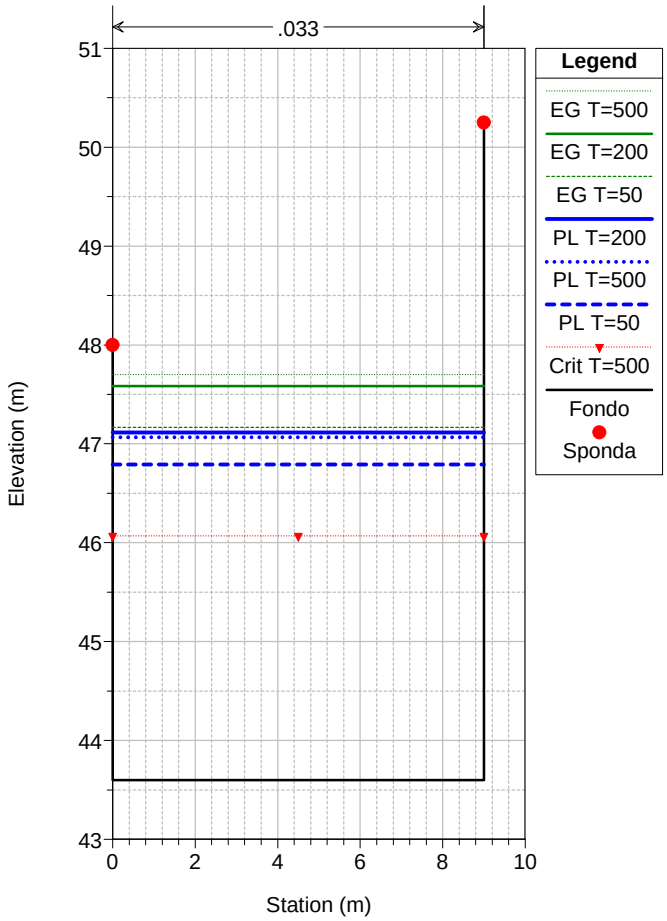
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-20



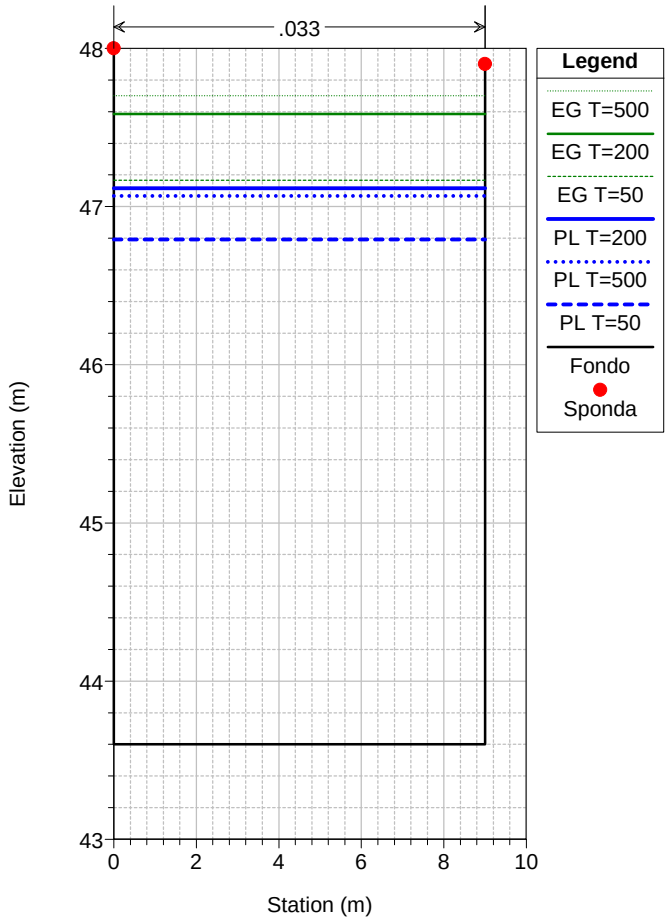
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-20 v



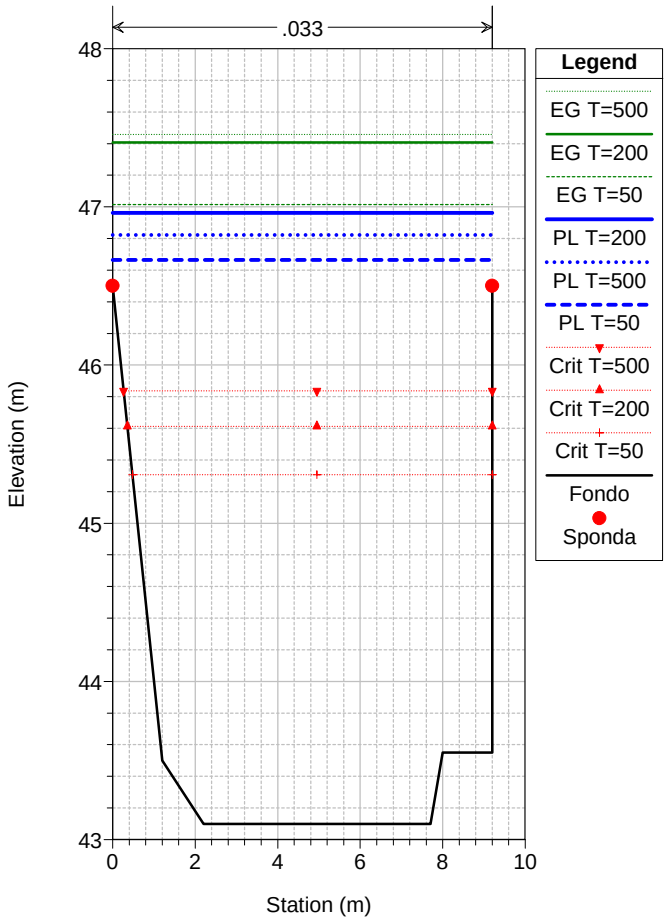
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-19.1



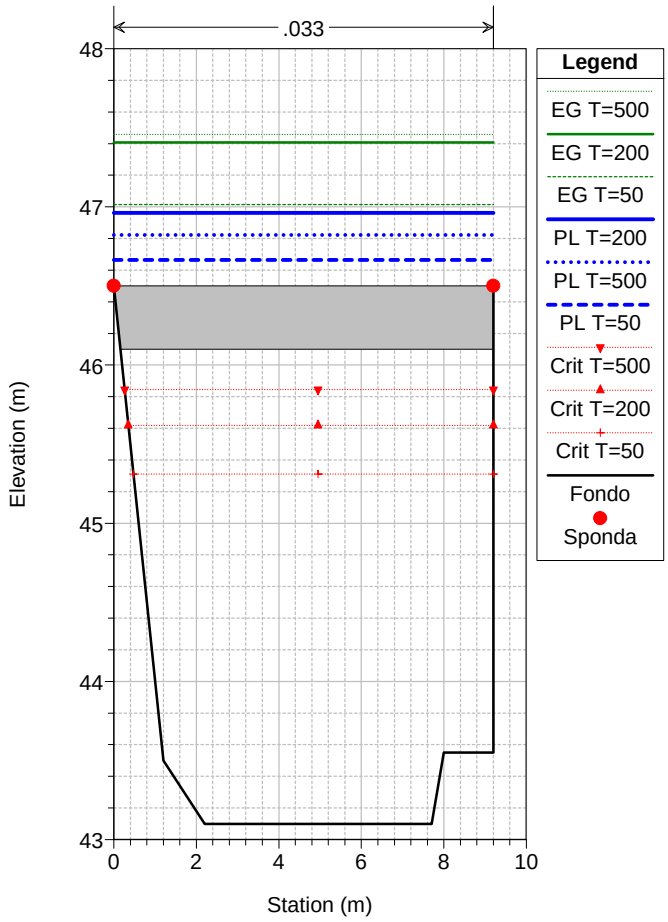
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-19



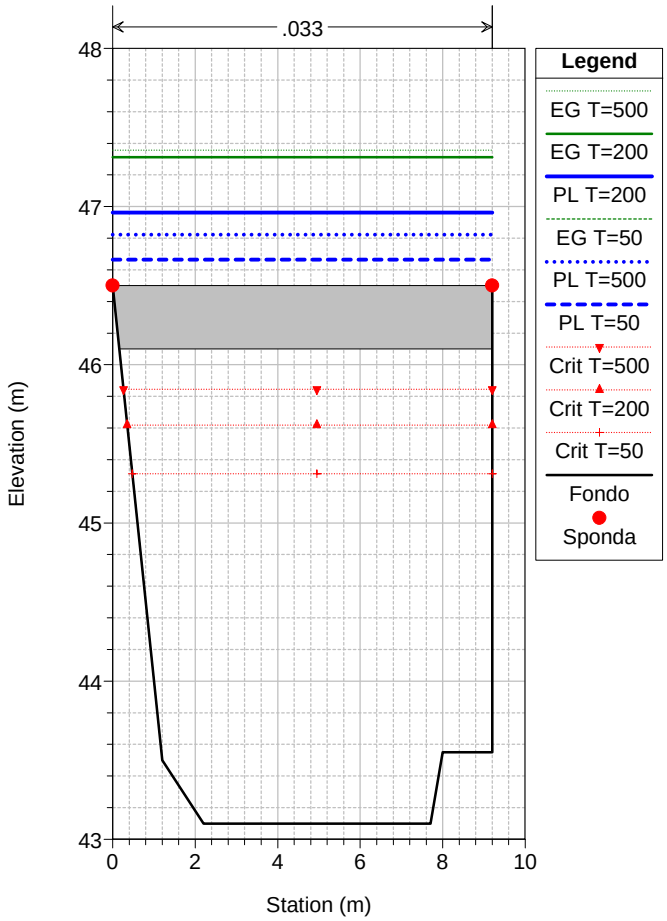
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-18



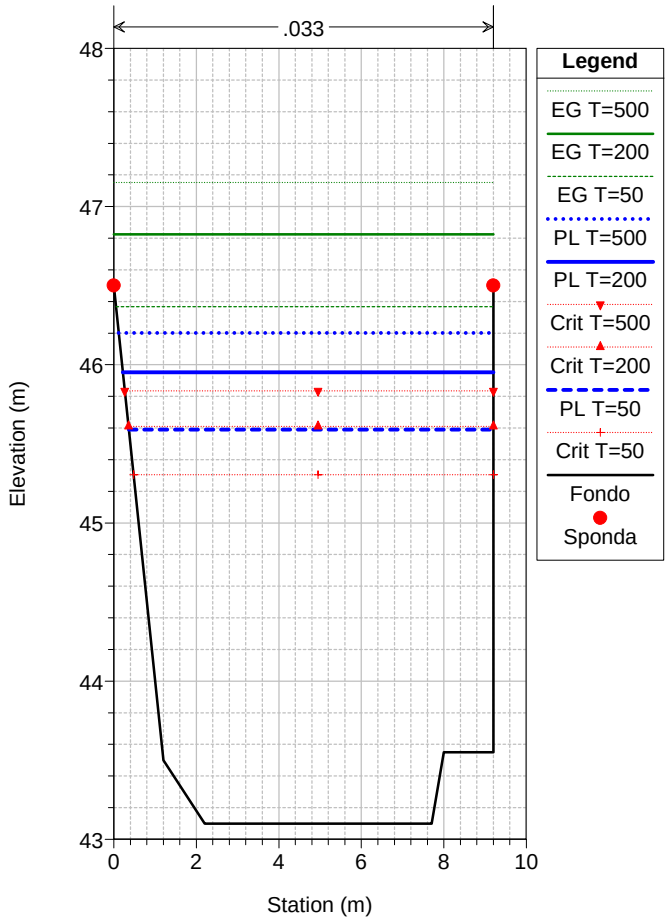
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-17



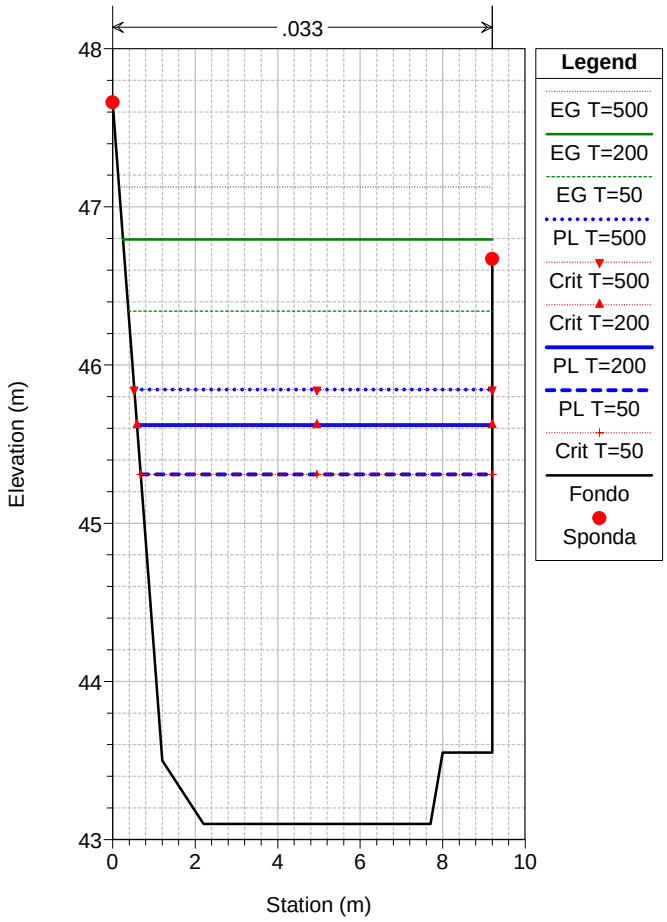
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-17



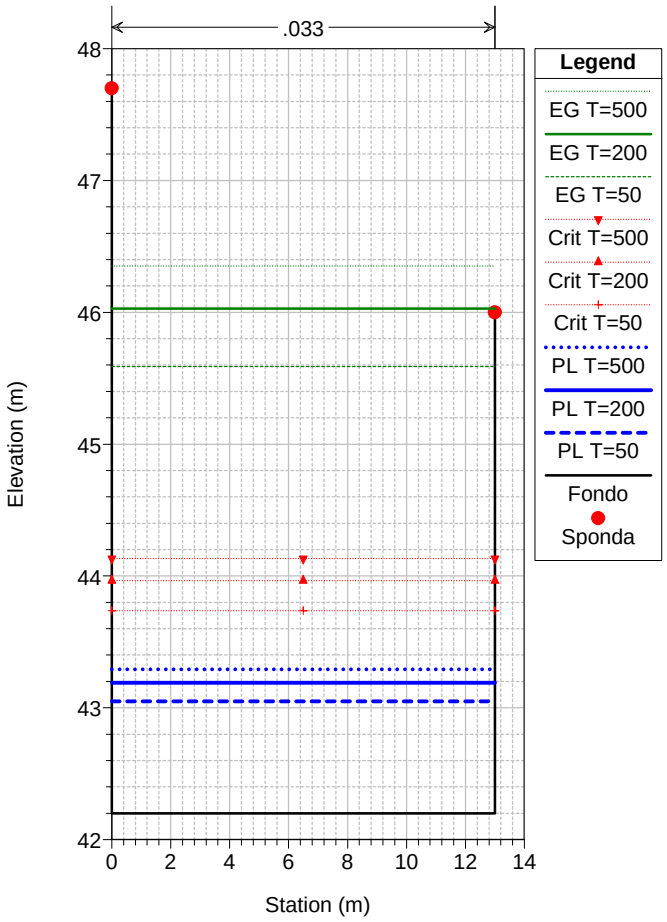
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-17 v



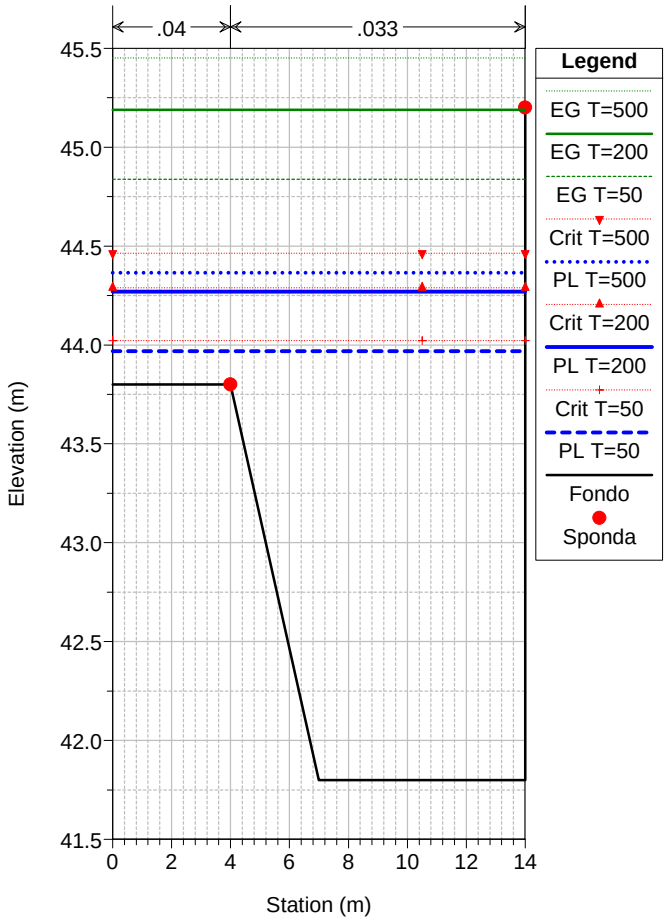
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-17 vV



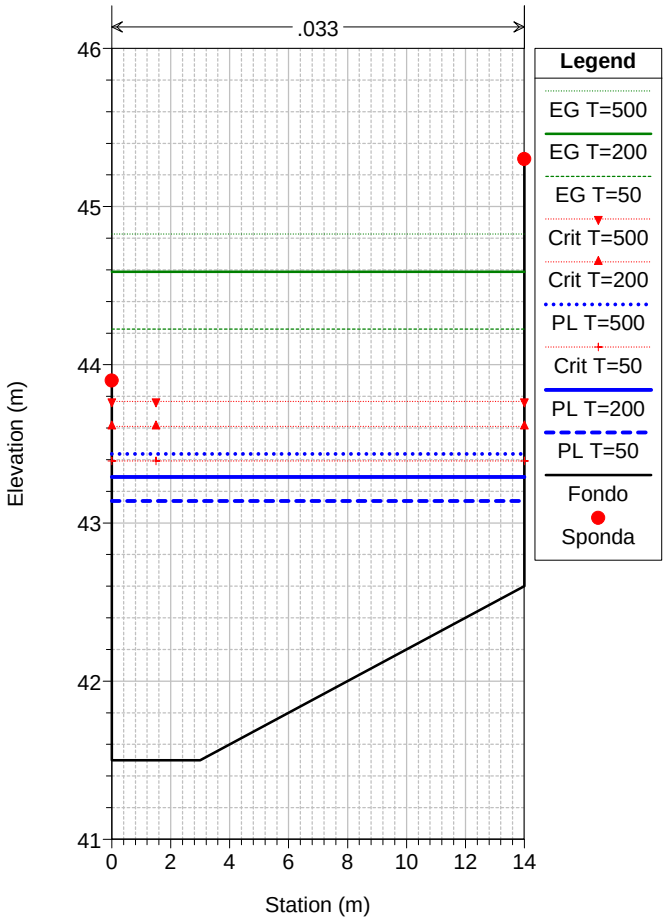
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-16



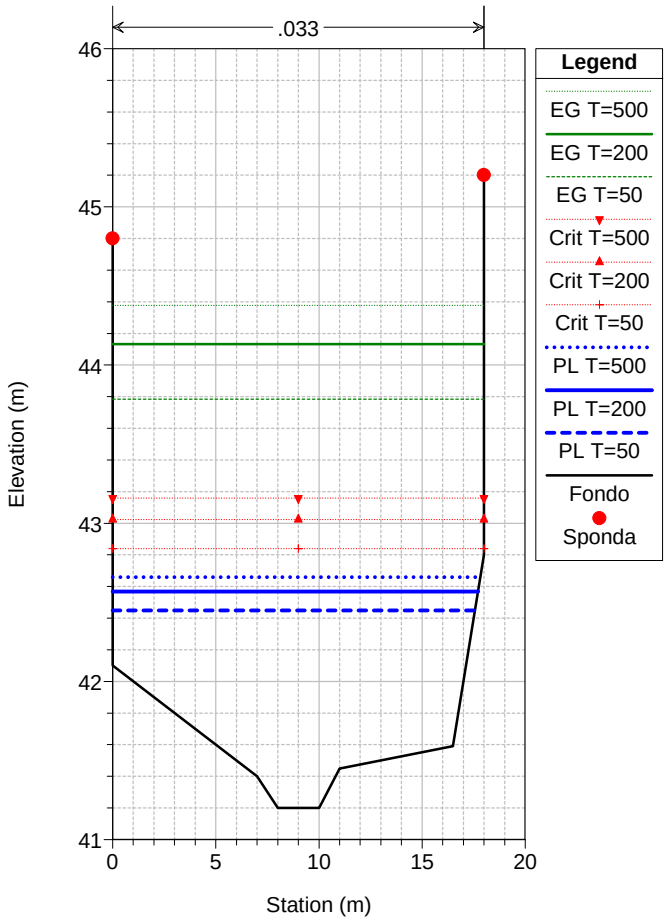
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-15



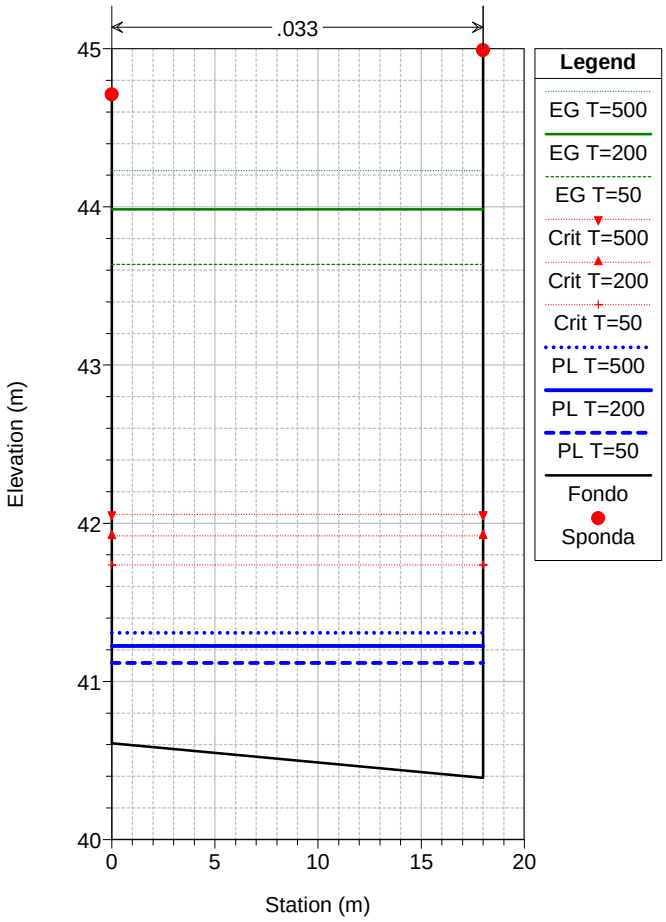
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-14



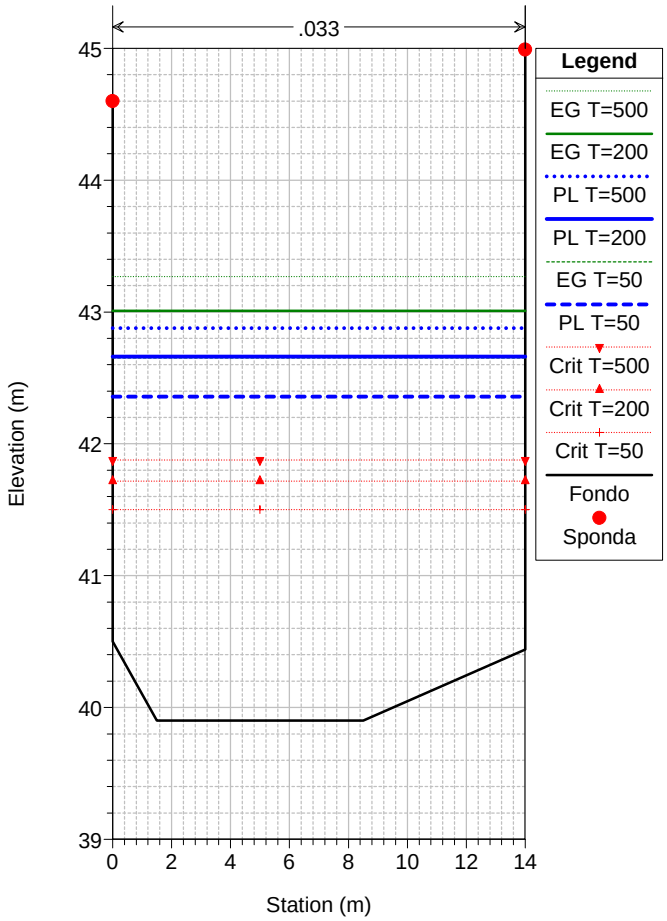
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-13



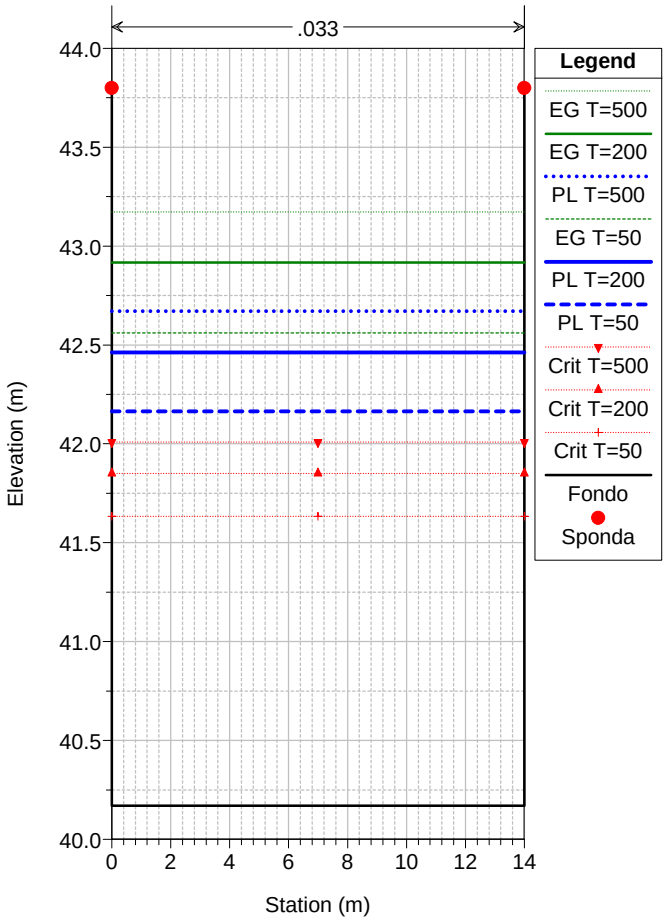
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-12

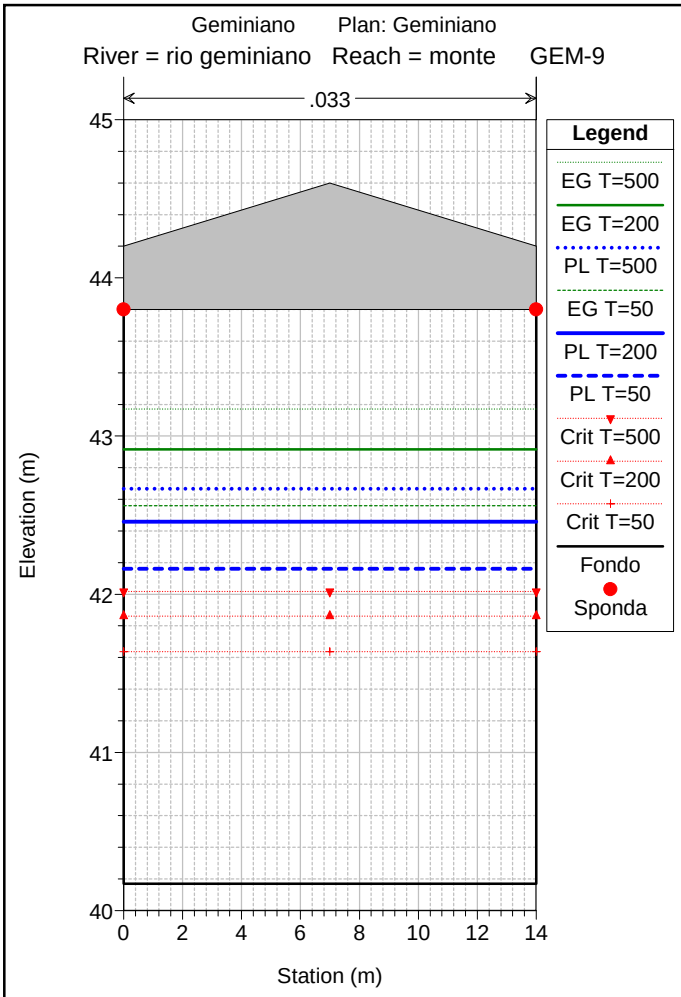


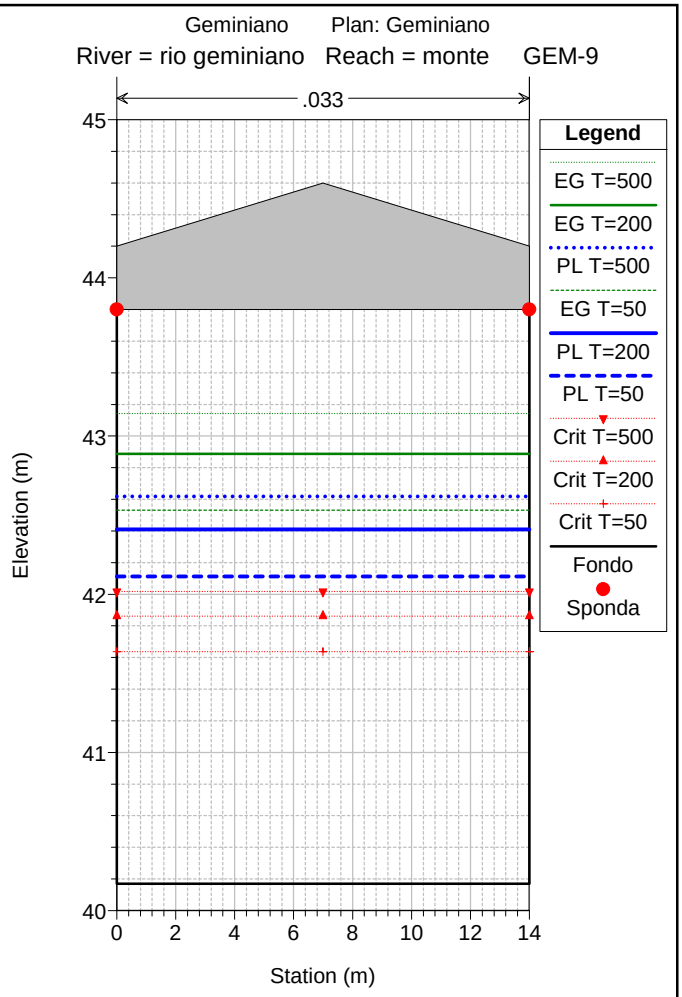
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-11

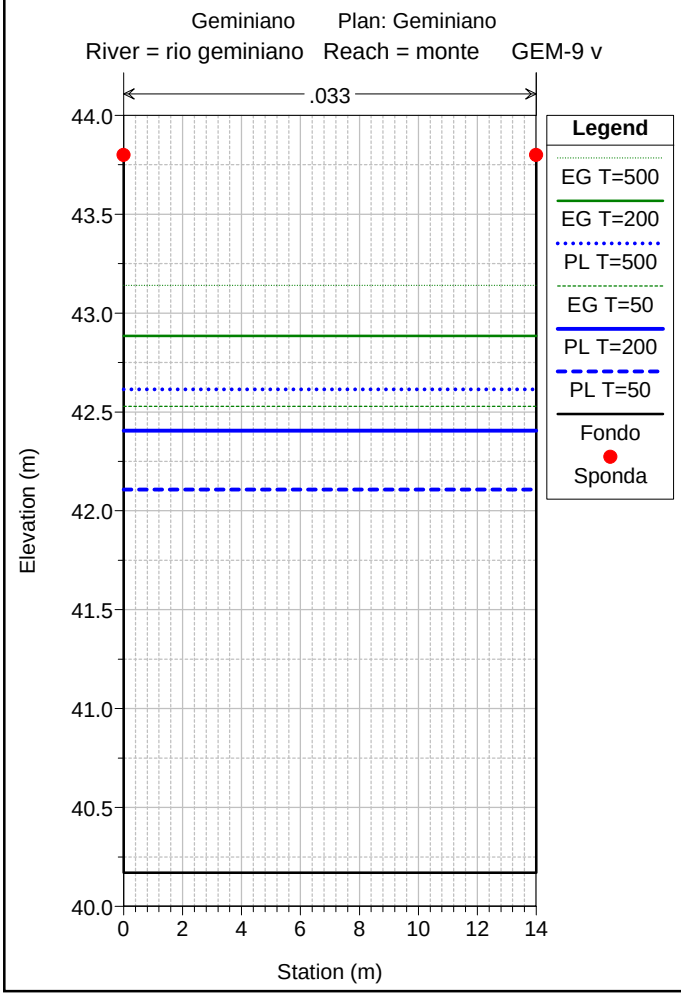


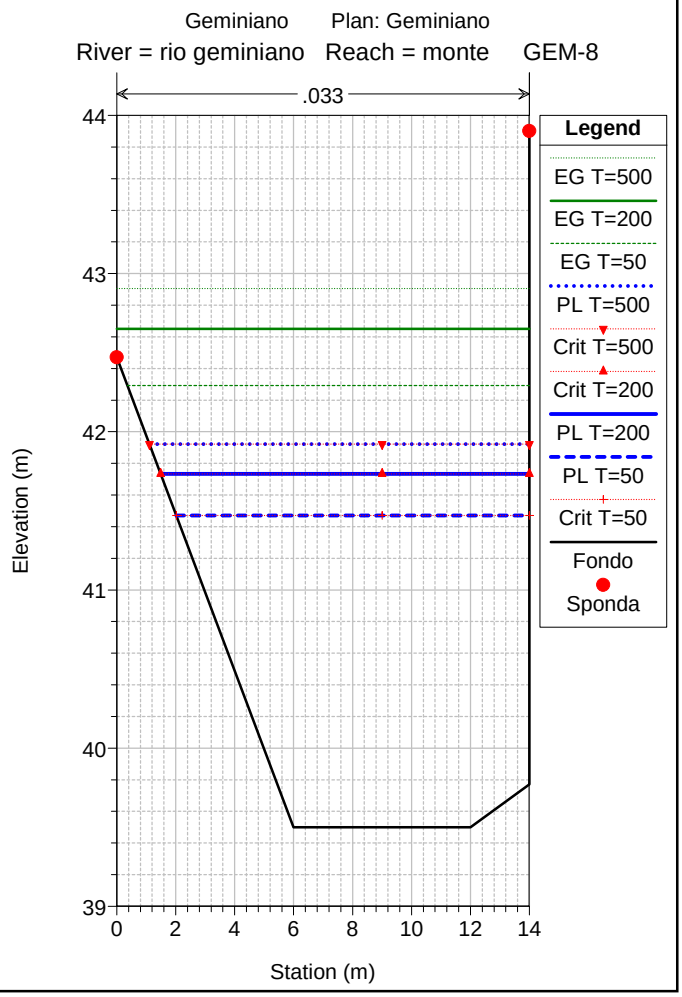
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-10



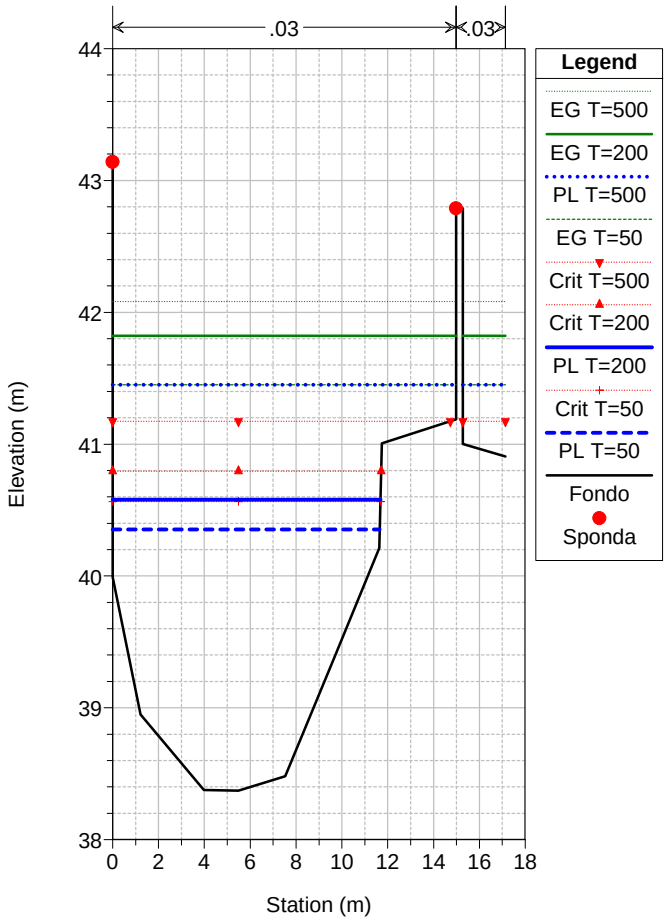

Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-9
.033
Legend
EG T=500
EG T=200
PL T=500
EG T=50
PL T=200
PL T=50
Crit T=500
Crit T=200
Crit T=50
Fondo
Sponda
Elevation (m)
Station (m)


Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-9
.033
Legend
EG T=500
EG T=200
PL T=500
EG T=50
PL T=200
PL T=50
Crit T=500
Crit T=200
Crit T=50
Fondo
Sponda
Elevation (m)
Station (m)

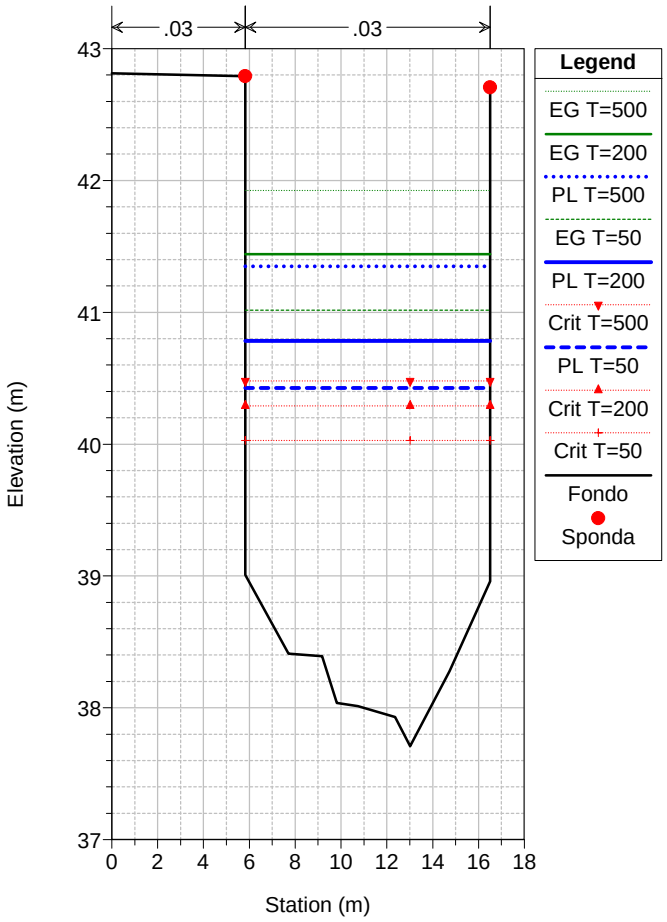

Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-9 v
.033
Legend
EG T=500
EG T=200
PL T=500
EG T=50
PL T=200
PL T=50
Fondo
Sponda
Elevation (m)
Station (m)


Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-8
.033
Legend
EG T=500
EG T=200
EG T=50
PL T=500
Crit T=500
Crit T=200
PL T=200
PL T=50
Crit T=50
Fondo
Sponda
Elevation (m)
Station (m)

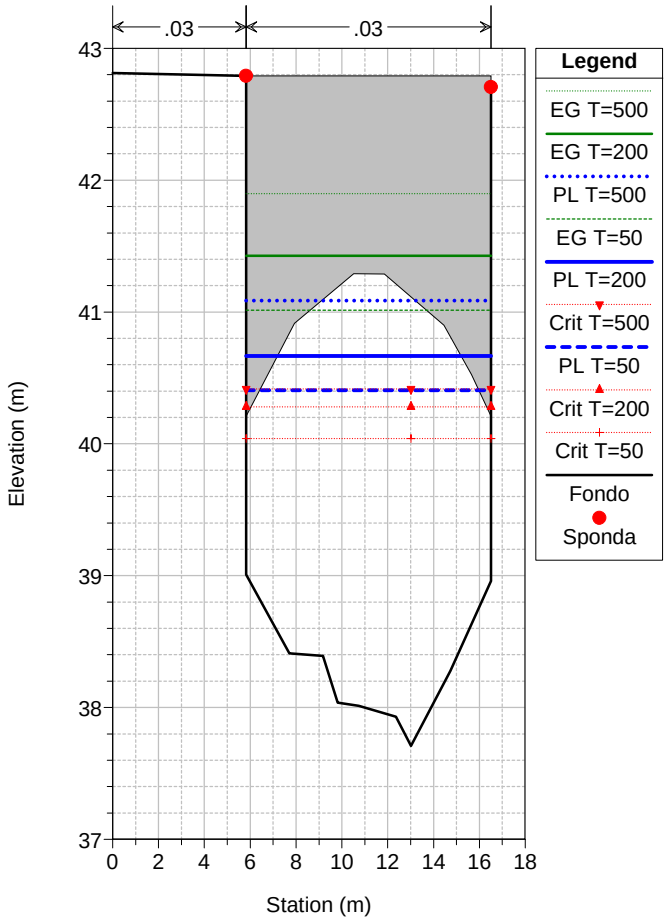
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-7.5



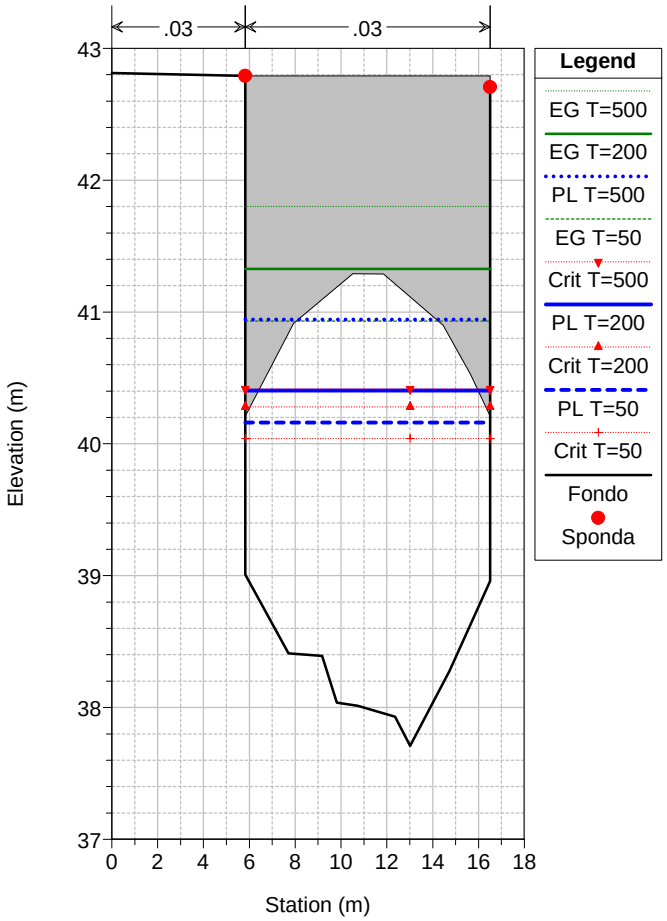
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-7.3 m



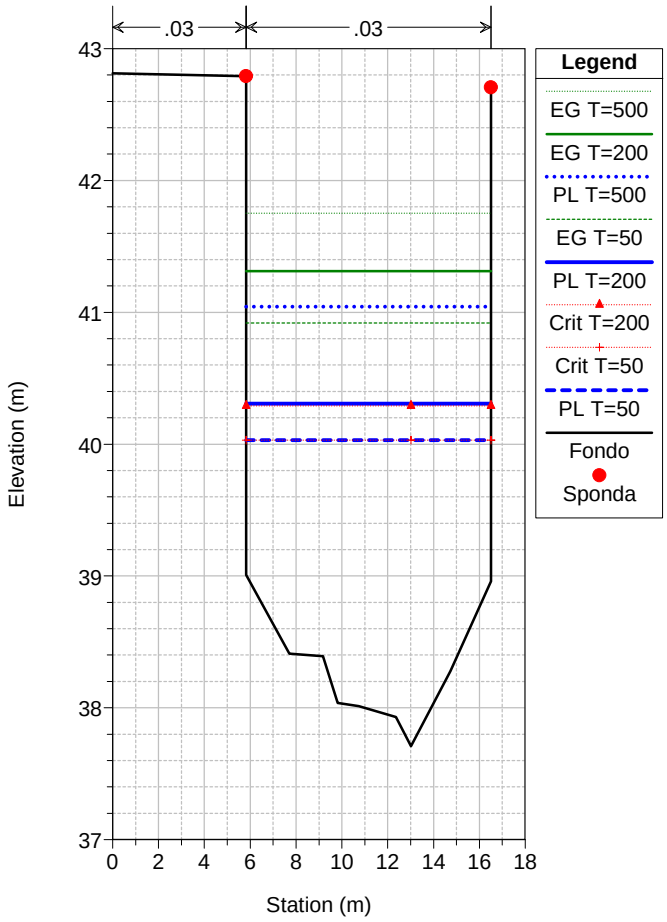
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-7.3



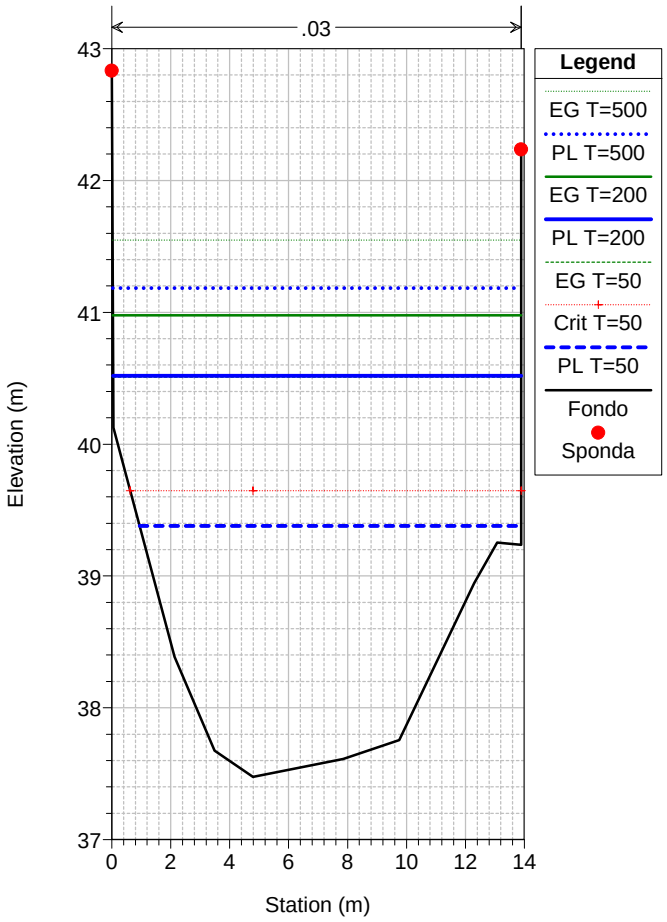
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-7.3



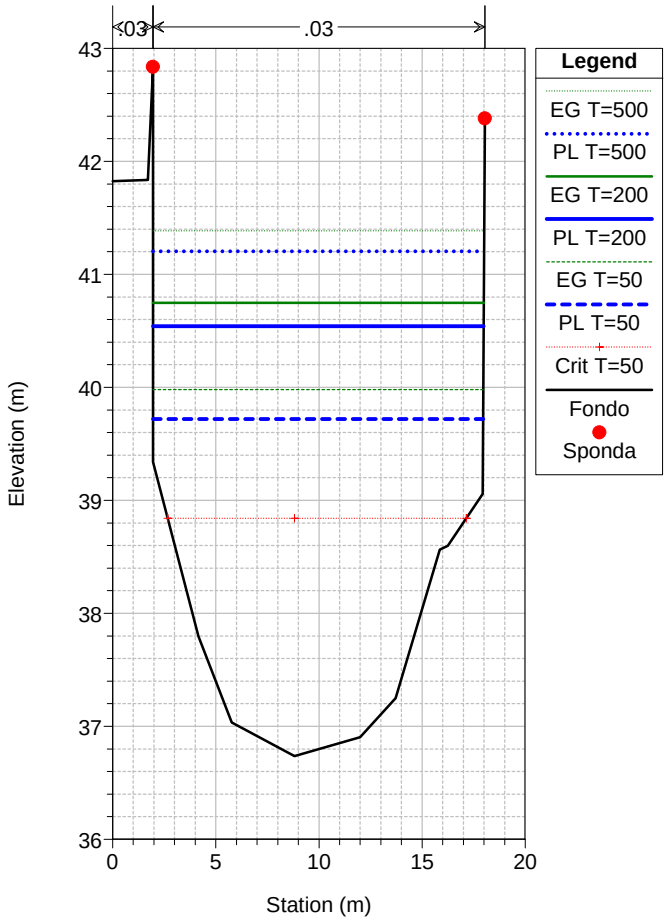
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-7.3 v



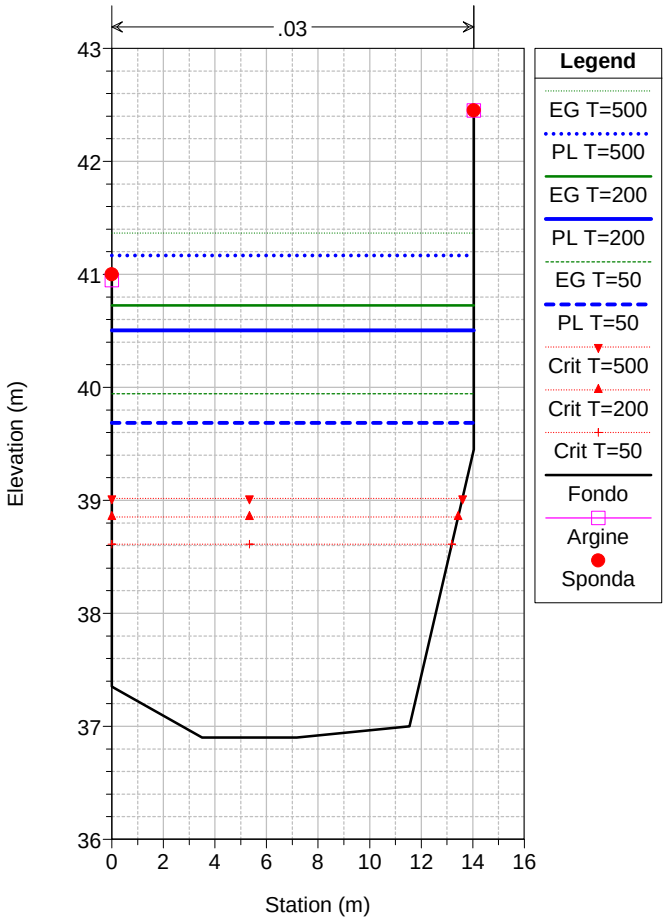
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-7.2



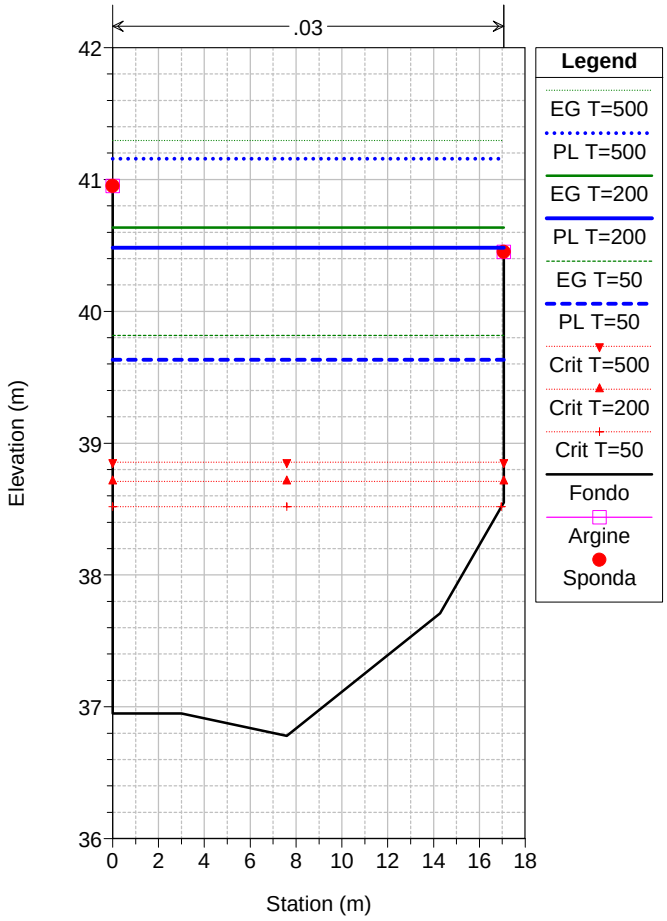
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-7.1



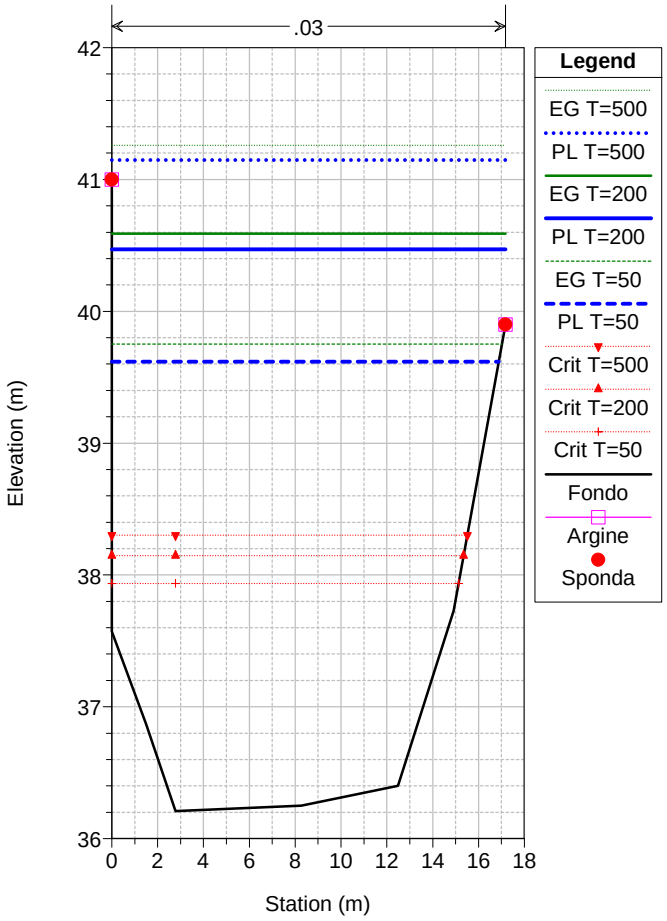
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-7



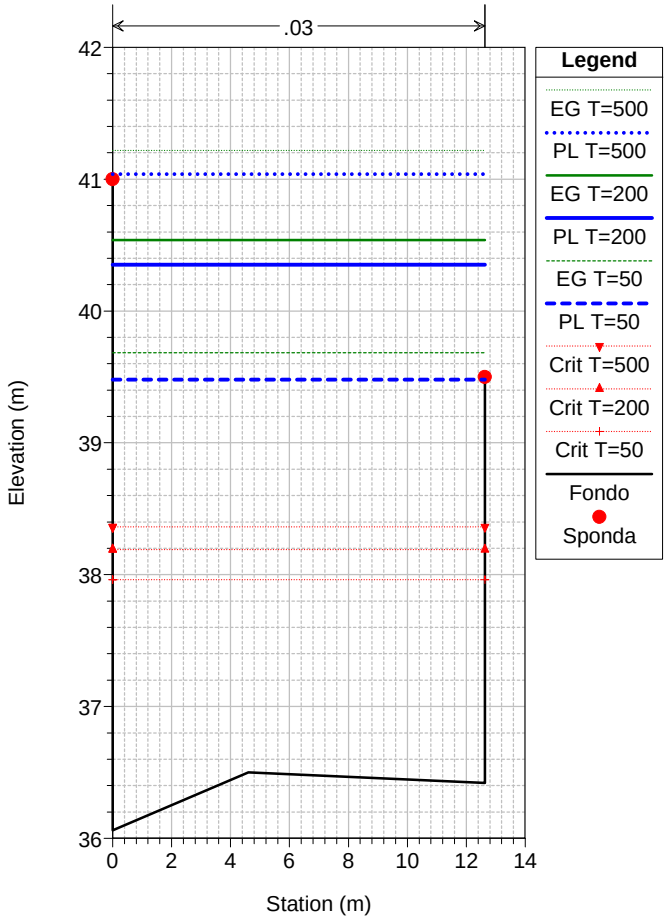
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-6



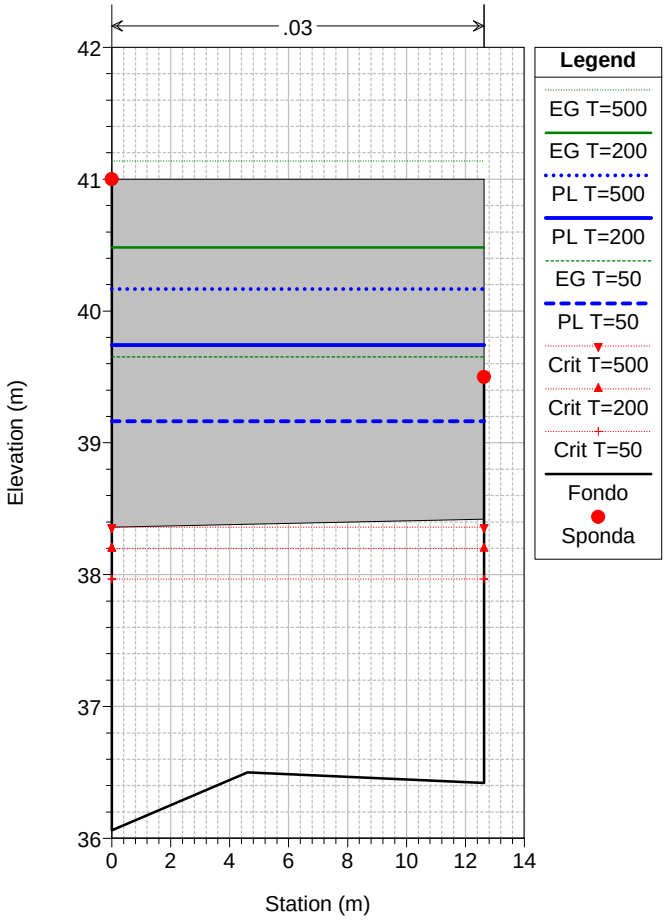
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-5



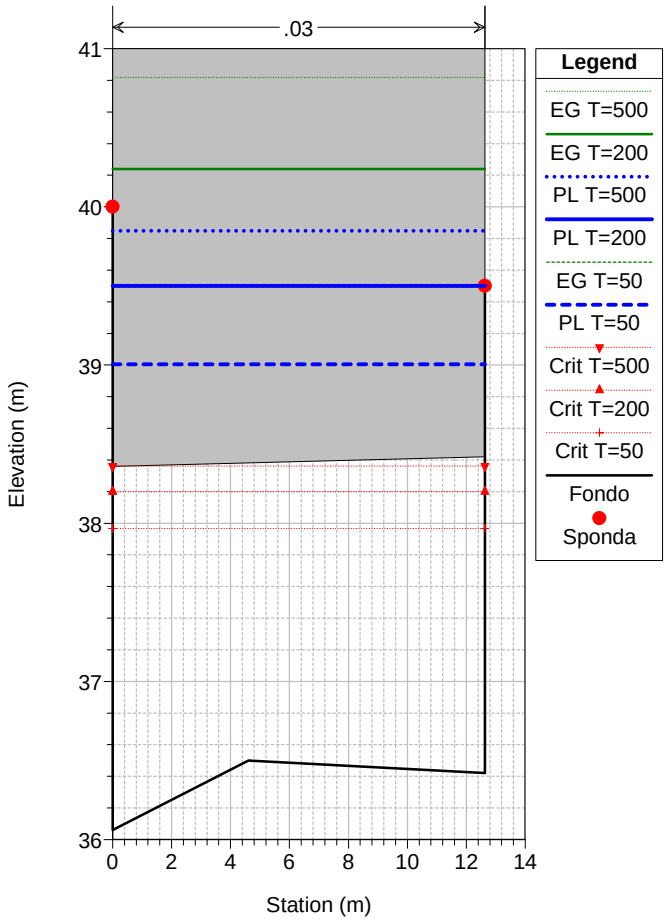
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-4 m



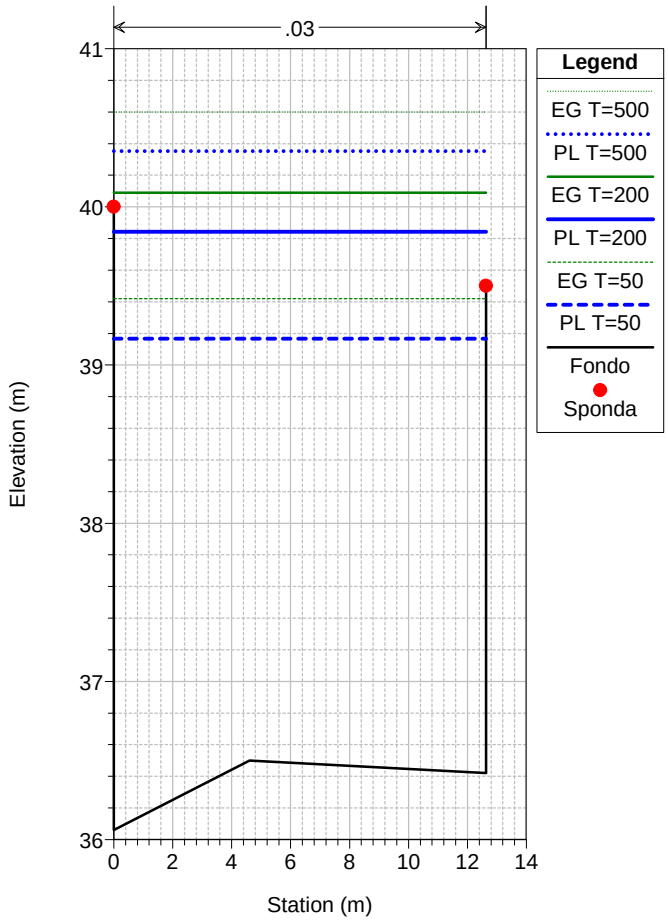
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-4



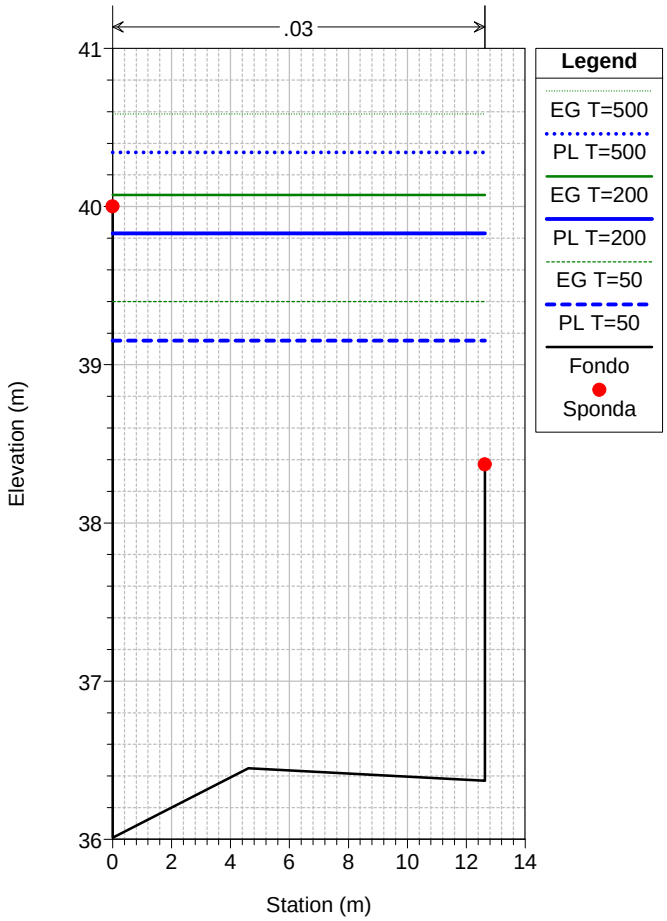
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-4



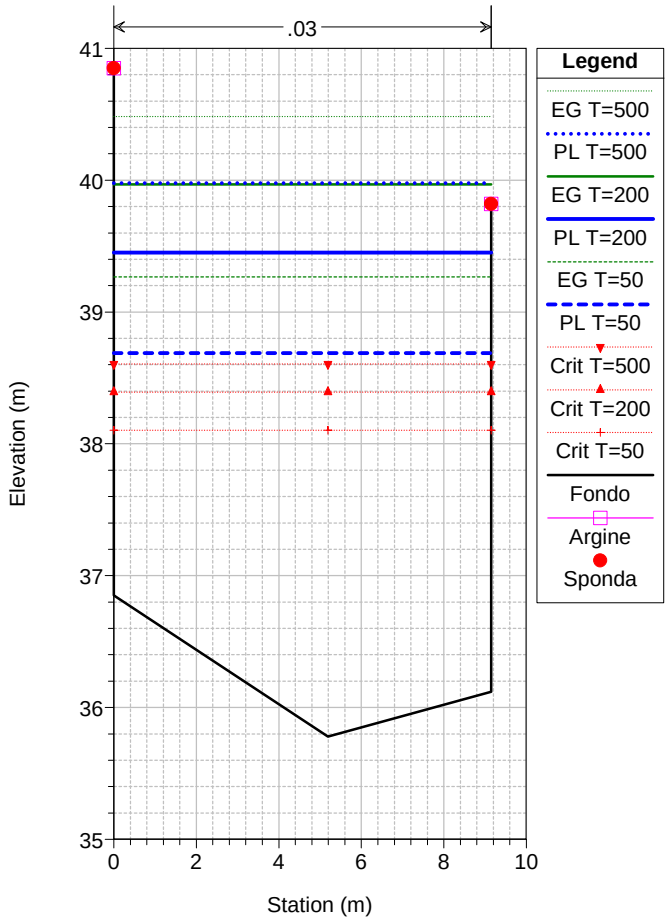
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-4 v



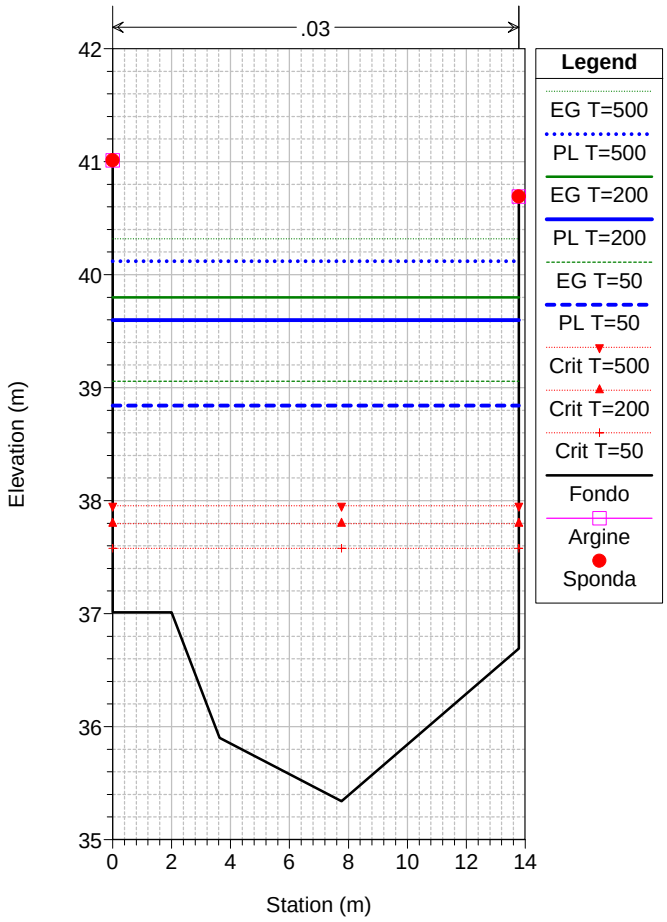
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-3.9



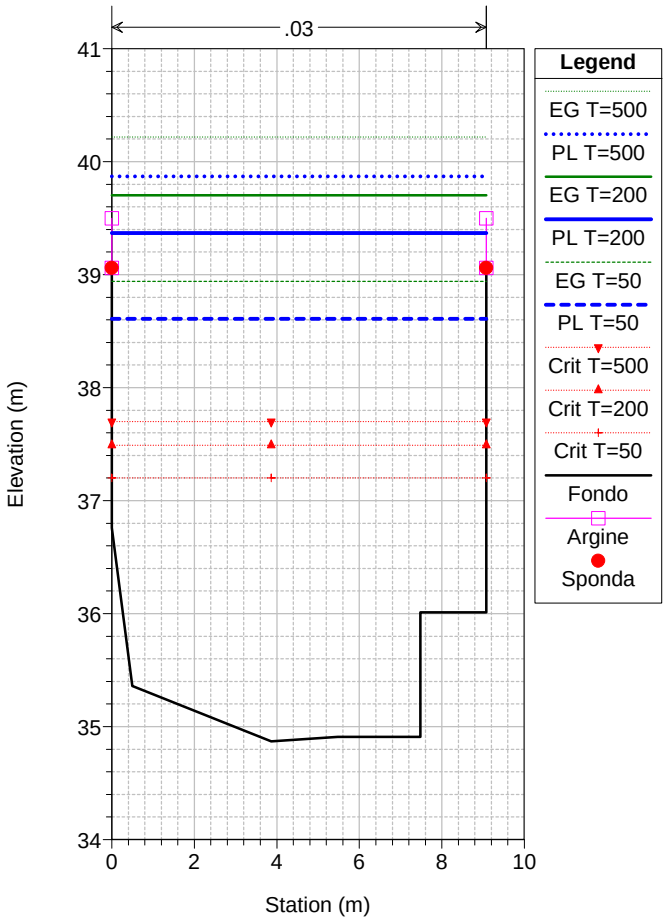
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-3



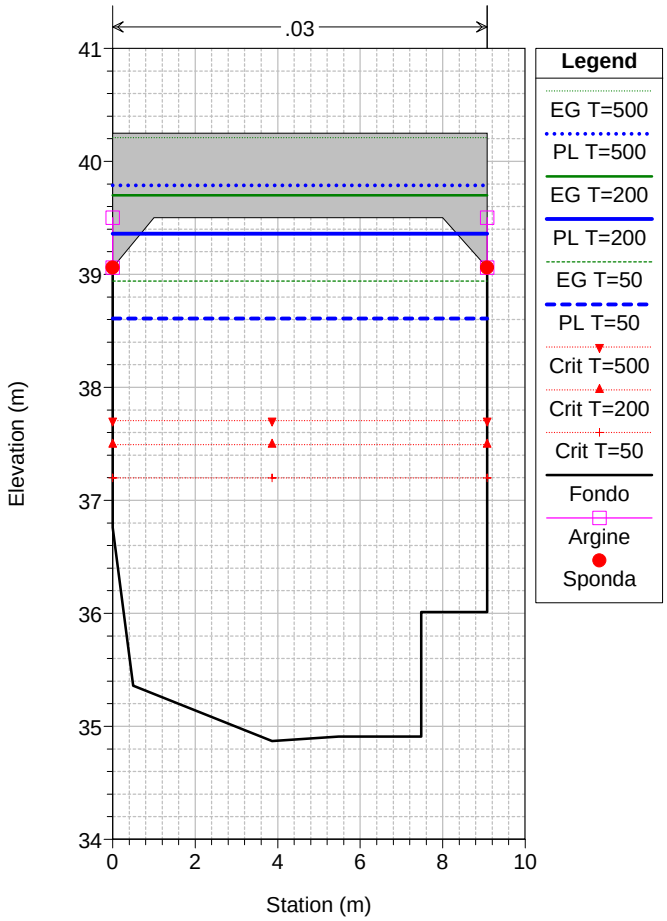
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-2



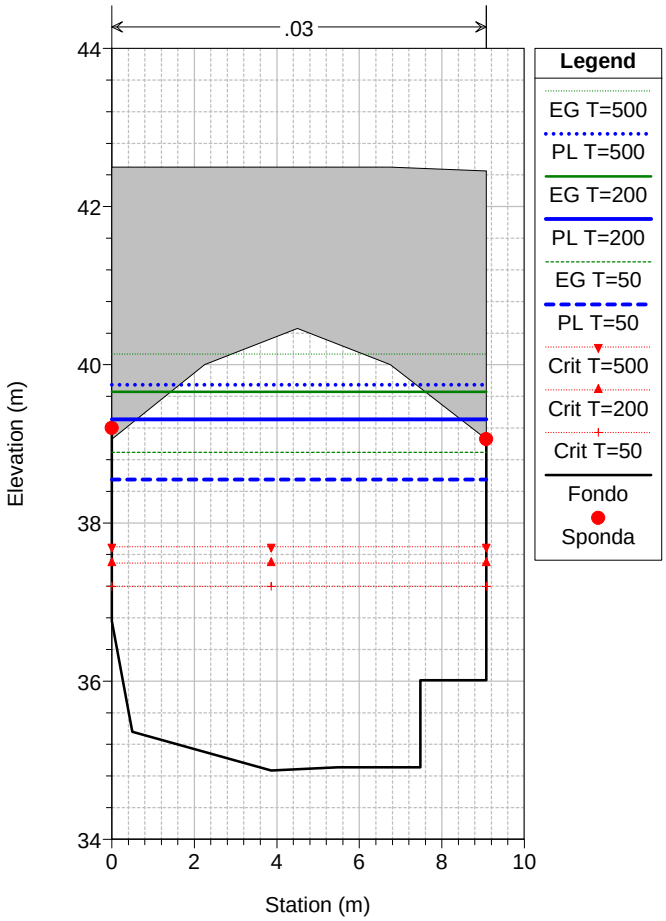
Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-1 m



Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-1

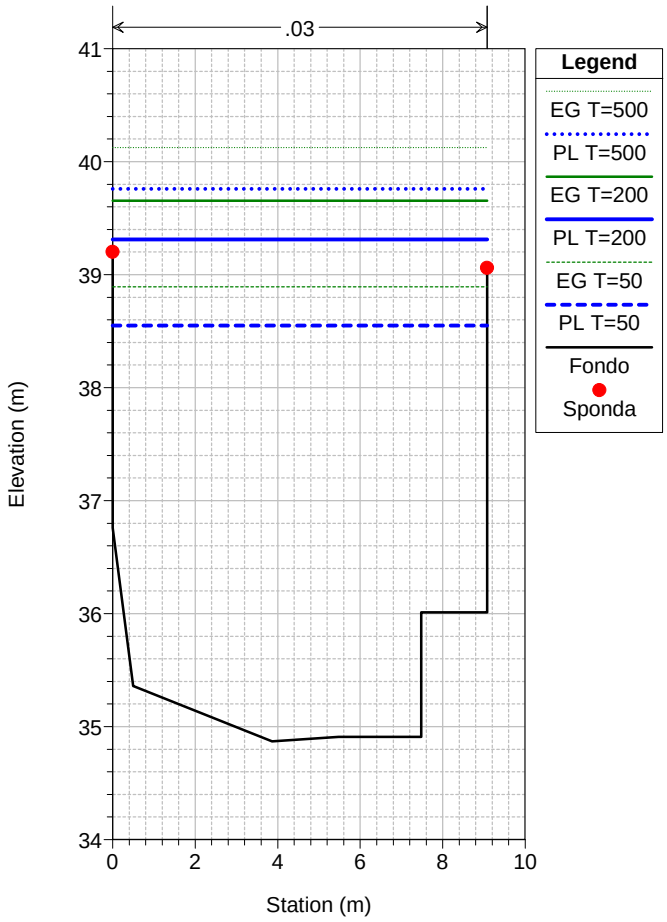


Geminiano Plan: Geminiano
River = rio geminiano Reach = monte GEM-1



Geminiano Plan: Geminiano

River = rio geminiano Reach = monte GEM-1 v



HEC-RAS Plan: Gem River: rio geminiano Reach: monte

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte	23 GEM-23	T=50	78.00	45.25	47.76	48.45	0.69	50.85	3.09	47.76	48.88	0.013386	4.69	16.63	7.50	1.01
monte	23 GEM-23	T=200	96.00	45.25	48.09	48.45	0.36	50.85	2.76	48.09	49.38	0.013833	5.03	19.10	7.50	1.01
monte	23 GEM-23	T=500	110.00	45.25	48.57	48.45	-0.12	50.85	2.28	48.33	49.77	0.011441	4.86	22.65	7.50	0.89
monte	22 GEM-22	T=50	78.00	44.65	46.64	47.85	1.21	50.25	3.61	47.16	48.56	0.028581	6.13	12.72	7.50	1.50
monte	22 GEM-22	T=200	96.00	44.65	46.93	47.85	0.92	50.25	3.32	47.49	49.05	0.027600	6.44	14.90	7.50	1.46
monte	22 GEM-22	T=500	110.00	44.65	48.77	47.85	-0.92	50.25	1.48		49.52	0.006117	3.83	28.71	7.50	0.63
monte	21 GEM-21	T=50	78.00	44.40	47.18	48.00	0.82	50.00	2.82	46.51	47.73	0.006007	3.29	23.69	9.00	0.65
monte	21 GEM-21	T=200	96.00	44.40	47.81	48.00	0.19	50.00	2.19	46.80	48.35	0.005002	3.27	29.31	9.00	0.58
monte	21 GEM-21	T=500	110.00	44.40	48.90	48.00	-0.90	50.00	1.10	47.02	49.31	0.002977	2.81	39.19	9.00	0.43
monte	20.5 GEM-20		Bridge													
monte	20 GEM-20 v	T=50	78.00	44.40	46.83	48.00	1.17	50.00	3.17		47.56	0.009112	3.81	20.48	9.00	0.81
monte	20 GEM-20 v	T=200	96.00	44.40	47.17	48.00	0.83	50.00	2.83		48.01	0.009219	4.07	23.58	9.00	0.80
monte	20 GEM-20 v	T=500	110.00	44.40	46.29	48.00	1.71	50.00	3.71	47.02	48.81	0.039886	7.03	15.64	9.00	1.70
monte	19.1 GEM-19.1	T=50	78.00	43.60	46.79	48.00	1.21	50.25	3.46		47.17	0.003494	2.72	28.72	9.00	0.49
monte	19.1 GEM-19.1	T=200	96.00	43.60	47.12	48.00	0.88	50.25	3.13		47.58	0.004049	3.03	31.64	9.00	0.52
monte	19.1 GEM-19.1	T=500	110.00	43.60	47.07	48.00	0.93	50.25	3.18	46.07	47.70	0.005525	3.53	31.20	9.00	0.60
monte	19 GEM-19	T=50	78.00	43.60	46.79	48.00	1.21	47.90	1.11		47.17	0.003494	2.72	28.72	9.00	0.49
monte	19 GEM-19	T=200	96.00	43.60	47.12	48.00	0.88	47.90	0.78		47.58	0.004049	3.03	31.64	9.00	0.52
monte	19 GEM-19	T=500	110.00	43.60	47.07	48.00	0.93	47.90	0.83		47.70	0.005526	3.53	31.20	9.00	0.60
monte	18 GEM-18	T=50	78.00	43.10	46.66	46.50	-0.16	46.50	-0.16	45.31	47.02	0.002975	2.63	29.70	9.20	0.47
monte	18 GEM-18	T=200	96.00	43.10	46.96	46.50	-0.46	46.50	-0.46	45.61	47.41	0.003538	2.96	32.44	9.20	0.50
monte	18 GEM-18	T=500	110.00	43.10	46.82	46.50	-0.32	46.50	-0.32	45.84	47.46	0.005185	3.53	31.16	9.20	0.61
monte	17.5 GEM-17		Bridge													
monte	17 GEM-17 v	T=50	78.00	43.10	45.59	46.50	0.91	46.50	0.91	45.31	46.37	0.008970	3.90	19.99	8.84	0.83
monte	17 GEM-17 v	T=200	96.00	43.10	45.95	46.50	0.55	46.50	0.55	45.61	46.82	0.008912	4.13	23.22	8.98	0.82
monte	17 GEM-17 v	T=500	110.00	43.10	46.20	46.50	0.30	46.50	0.30	45.83	47.15	0.009057	4.32	25.45	9.08	0.82
monte	16.9 GEM-17 vV	T=50	78.00	43.10	45.31	47.66	2.35	46.67	1.36	45.31	46.34	0.013423	4.50	17.34	8.52	1.01
monte	16.9 GEM-17 vV	T=200	96.00	43.10	45.62	47.66	2.04	46.67	1.05	45.62	46.79	0.013541	4.80	20.00	8.61	1.01
monte	16.9 GEM-17 vV	T=500	110.00	43.10	45.85	47.66	1.82	46.67	0.83	45.85	47.12	0.013686	5.01	21.95	8.68	1.01
monte	16 GEM-16	T=50	78.00	42.20	43.05	47.70	4.65	46.00	2.95	43.74	45.59	0.079376	7.06	11.05	13.00	2.44
monte	16 GEM-16	T=200	96.00	42.20	43.19	47.70	4.51	46.00	2.81	43.96	46.03	0.074374	7.47	12.86	13.00	2.40
monte	16 GEM-16	T=500	110.00	42.20	43.29	47.70	4.41	46.00	2.71	44.13	46.35	0.071596	7.75	14.19	13.00	2.37
monte	15 GEM-15	T=50	78.00	41.80	43.97	43.80	-0.17	45.20	1.23	44.02	44.84	0.011266	4.15	19.36	14.00	0.97
monte	15 GEM-15	T=200	96.00	41.80	44.27	43.80	-0.47	45.20	0.93	44.29	45.19	0.010245	4.30	23.59	14.00	0.93
monte	15 GEM-15	T=500	110.00	41.80	44.37	43.80	-0.57	45.20	0.83	44.46	45.45	0.011614	4.69	24.91	14.00	0.99
monte	14 GEM-14	T=50	78.00	41.50	43.14	43.90	0.76	45.30	2.16	43.39	44.23	0.022050	4.62	16.88	14.00	1.34

HEC-RAS Plan: Gem River: rio geminiano Reach: monte (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte	14 GEM-14	T=200	96.00	41.50	43.29	43.90	0.61	45.30	2.01	43.61	44.59	0.023015	5.05	19.02	14.00	1.38
monte	14 GEM-14	T=500	110.00	41.50	43.44	43.90	0.46	45.30	1.86	43.77	44.83	0.022035	5.22	21.06	14.00	1.36
monte	13 GEM-13	T=50	78.00	41.20	42.45	44.80	2.35	45.20	2.75	42.84	43.78	0.036471	5.12	15.23	17.57	1.75
monte	13 GEM-13	T=200	96.00	41.20	42.57	44.80	2.23	45.20	2.63	43.02	44.13	0.036780	5.54	17.33	17.71	1.79
monte	13 GEM-13	T=500	110.00	41.20	42.66	44.80	2.14	45.20	2.54	43.16	44.38	0.036496	5.81	18.94	17.82	1.80
monte	12 GEM-12	T=50	78.00	40.39	41.12	44.71	3.59	44.99	3.87	41.74	43.64	0.112275	7.03	11.09	18.00	2.86
monte	12 GEM-12	T=200	96.00	40.39	41.22	44.71	3.49	44.99	3.77	41.92	43.98	0.100447	7.36	13.05	18.00	2.76
monte	12 GEM-12	T=500	110.00	40.39	41.31	44.71	3.40	44.99	3.68	42.06	44.23	0.093228	7.57	14.53	18.00	2.69
monte	11 GEM-11	T=50	78.00	39.90	42.36	44.60	2.24	44.99	2.63	41.50	42.65	0.002844	2.40	32.47	14.00	0.50
monte	11 GEM-11	T=200	96.00	39.90	42.66	44.60	1.94	44.99	2.33	41.72	43.01	0.002986	2.61	36.73	14.00	0.52
monte	11 GEM-11	T=500	110.00	39.90	42.88	44.60	1.72	44.99	2.11	41.88	43.27	0.003104	2.77	39.77	14.00	0.52
monte	10 GEM-10	T=50	78.00	40.17	42.16	43.80	1.64	43.80	1.64	41.63	42.56	0.004732	2.79	27.92	14.00	0.63
monte	10 GEM-10	T=200	96.00	40.17	42.46	43.80	1.34	43.80	1.34	41.85	42.92	0.004708	2.99	32.08	14.00	0.63
monte	10 GEM-10	T=500	110.00	40.17	42.67	43.80	1.13	43.80	1.13	42.01	43.17	0.004761	3.14	35.01	14.00	0.63
monte	9.5 GEM-9		Bridge													
monte	9 GEM-9 v	T=50	78.00	40.17	42.11	43.80	1.69	43.80	1.69		42.53	0.005161	2.88	27.13	14.00	0.66
monte	9 GEM-9 v	T=200	96.00	40.17	42.41	43.80	1.39	43.80	1.39		42.89	0.005066	3.07	31.31	14.00	0.65
monte	9 GEM-9 v	T=500	110.00	40.17	42.61	43.80	1.19	43.80	1.19		43.14	0.005092	3.21	34.23	14.00	0.66
monte	8 GEM-8	T=50	78.00	39.50	41.47	42.47	1.00	43.90	2.43	41.47	42.29	0.011515	4.01	19.43	11.98	1.01
monte	8 GEM-8	T=200	96.00	39.50	41.73	42.47	0.74	43.90	2.17	41.73	42.65	0.011337	4.24	22.63	12.51	1.01
monte	8 GEM-8	T=500	110.00	39.50	41.92	42.47	0.55	43.90	1.98	41.92	42.91	0.011223	4.39	25.03	12.89	1.01
monte	7.5 GEM-7.5	T=50	78.00	38.37	40.35	43.14	2.79	42.79	2.44	40.57	41.45	0.013683	4.64	16.80	11.65	1.23
monte	7.5 GEM-7.5	T=200	96.00	38.37	40.58	43.14	2.56	42.79	2.21	40.79	41.82	0.013337	4.94	19.44	11.69	1.22
monte	7.5 GEM-7.5	T=500	110.00	38.37	41.45	43.14	1.69	42.79	1.34	41.17	42.08	0.005566	3.53	31.74	16.83	0.79
monte	7.4 GEM-7.3 m	T=50	78.00	37.71	40.43	42.79	2.36	42.71	2.28	40.03	41.02	0.005428	3.41	22.88	10.67	0.74
monte	7.4 GEM-7.3 m	T=200	96.00	37.71	40.78	42.79	2.01	42.71	1.92	40.29	41.44	0.005254	3.60	26.70	10.67	0.73
monte	7.4 GEM-7.3 m	T=500	110.00	37.71	41.35	42.79	1.44	42.71	1.36	40.48	41.92	0.003860	3.36	32.74	10.67	0.61
monte	7.3 GEM-7.3		Bridge													
monte	7.22 GEM-7.3 v	T=50	78.00	37.71	40.03	42.79	2.76	42.71	2.68	40.03	40.92	0.009922	4.18	18.66	10.67	1.01
monte	7.22 GEM-7.3 v	T=200	96.00	37.71	40.31	42.79	2.48	42.71	2.40	40.29	41.31	0.009727	4.44	21.61	10.67	1.00
monte	7.22 GEM-7.3 v	T=500	110.00	37.71	41.04	42.79	1.75	42.71	1.66		41.75	0.005200	3.73	29.47	10.67	0.72
monte	7.2 GEM-7.2	T=50	78.00	37.48	39.38	42.83	3.45	42.24	2.86	39.65	40.51	0.015916	4.71	16.56	12.95	1.33
monte	7.2 GEM-7.2	T=200	96.00	37.48	40.52	42.83	2.31	42.24	1.72		40.98	0.003394	3.00	32.01	13.85	0.63
monte	7.2 GEM-7.2	T=500	110.00	37.48	41.18	42.83	1.65	42.24	1.05		41.55	0.002124	2.67	41.22	13.86	0.49
monte	7.1 GEM-7.1	T=50	78.00	36.74	39.72	42.84	3.12	42.38	2.66	38.84	39.98	0.001960	2.26	34.49	16.01	0.49
monte	7.1 GEM-7.1	T=200	96.00	36.74	40.54	42.84	2.29	42.38	1.84		40.75	0.001135	2.01	47.64	16.03	0.37

HEC-RAS Plan: Gem River: rio geminiano Reach: monte (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte	7.1 GEM-7.1	T=500	110.00	36.74	41.20	42.84	1.63	42.38	1.18		41.39	0.000830	1.89	58.28	16.05	0.32
monte	7 GEM-7	T=50	78.00	36.90	39.69	41.00	1.31	42.45	2.76	38.61	39.94	0.001828	2.24	34.80	14.04	0.45
monte	7 GEM-7	T=200	96.00	36.90	40.51	41.00	0.49	42.45	1.94	38.85	40.72	0.001203	2.07	46.30	14.04	0.36
monte	7 GEM-7	T=500	110.00	36.90	41.17	41.00	-0.17	42.45	1.28	39.02	41.37	0.000938	1.98	55.60	14.04	0.32
monte	6 GEM-6	T=50	78.00	36.78	39.63	40.95	1.32	40.45	0.82	38.52	39.82	0.001347	1.91	40.91	17.06	0.39
monte	6 GEM-6	T=200	96.00	36.78	40.48	40.95	0.47	40.45	-0.03	38.71	40.64	0.000916	1.73	55.40	17.06	0.31
monte	6 GEM-6	T=500	110.00	36.78	41.16	40.95	-0.21	40.45	-0.71	38.86	41.30	0.000688	1.64	66.92	17.06	0.26
monte	5 GEM-5	T=50	78.00	36.21	39.62	41.00	1.38	39.90	0.28	37.94	39.75	0.000753	1.62	48.06	16.88	0.31
monte	5 GEM-5	T=200	96.00	36.21	40.47	41.00	0.53	39.90	-0.57	38.15	40.59	0.000528	1.53	62.67	17.17	0.26
monte	5 GEM-5	T=500	110.00	36.21	41.15	41.00	-0.15	39.90	-1.25	38.30	41.26	0.000426	1.48	74.31	17.17	0.23
monte	4.1 GEM-4 m	T=50	78.00	36.06	39.48	41.00	1.52	39.50	0.02	37.96	39.68	0.001398	2.00	38.96	12.63	0.36
monte	4.1 GEM-4 m	T=200	96.00	36.06	40.35	41.00	0.65	39.50	-0.85	38.19	40.54	0.001037	1.92	49.97	12.63	0.31
monte	4.1 GEM-4 m	T=500	110.00	36.06	41.04	41.00	-0.04	39.50	-1.54	38.36	41.22	0.000869	1.88	58.65	12.63	0.28
monte	4.05 GEM-4		Bridge													
monte	4 GEM-4 v	T=50	78.00	36.06	39.17	40.00	0.83	39.50	0.33		39.42	0.001907	2.23	35.02	12.63	0.43
monte	4 GEM-4 v	T=200	96.00	36.06	39.84	40.00	0.16	39.50	-0.34		40.09	0.001535	2.20	43.55	12.63	0.38
monte	4 GEM-4 v	T=500	110.00	36.06	40.35	40.00	-0.35	39.50	-0.85		40.60	0.001360	2.20	50.00	12.63	0.35
monte	3.9 GEM-3.9	T=50	78.00	36.01	39.15	40.00	0.85	38.37	-0.78		39.40	0.001836	2.20	35.48	12.63	0.42
monte	3.9 GEM-3.9	T=200	96.00	36.01	39.83	40.00	0.17	38.37	-1.46		40.07	0.001486	2.18	44.04	12.63	0.37
monte	3.9 GEM-3.9	T=500	110.00	36.01	40.34	40.00	-0.34	38.37	-1.97		40.58	0.001322	2.18	50.50	12.63	0.35
monte	3 GEM-3	T=50	78.00	35.78	38.69	40.85	2.16	39.82	1.13	38.10	39.27	0.005058	3.37	23.16	9.15	0.68
monte	3 GEM-3	T=200	96.00	35.78	39.45	40.85	1.40	39.82	0.37	38.39	39.97	0.003665	3.18	30.15	9.15	0.56
monte	3 GEM-3	T=500	110.00	35.78	39.98	40.85	0.87	39.82	-0.16	38.60	40.48	0.004218	3.15	34.97	9.15	0.51
monte	2 GEM-2	T=50	78.00	35.34	38.84	41.01	2.17	40.69	1.85	37.58	39.06	0.001448	2.06	37.86	13.78	0.40
monte	2 GEM-2	T=200	96.00	35.34	39.60	41.01	1.41	40.69	1.09	37.79	39.80	0.001084	1.99	48.28	13.78	0.34
monte	2 GEM-2	T=500	110.00	35.34	40.12	41.01	0.89	40.69	0.57	37.95	40.32	0.000960	1.98	55.46	13.78	0.32
monte	1.1 GEM-1 m	T=50	78.00	34.87	38.61	39.06	0.45	39.06	0.45	37.20	38.94	0.002392	2.55	30.60	9.08	0.44
monte	1.1 GEM-1 m	T=200	96.00	34.87	39.37	39.06	-0.31	39.06	-0.31	37.49	39.70	0.002085	2.56	37.48	9.08	0.40
monte	1.1 GEM-1 m	T=500	110.00	34.87	39.87	39.06	-0.81	39.06	-0.81	37.70	40.22	0.002543	2.62	42.05	9.08	0.39
monte	1.05 GEM-1		Bridge													
monte	1 GEM-1 v	T=50	78.00	34.87	38.55	39.20	0.65	39.06	0.51		38.89	0.002515	2.60	30.05	9.08	0.46
monte	1 GEM-1 v	T=200	96.00	34.87	39.31	39.20	-0.11	39.06	-0.25		39.65	0.002164	2.60	36.97	9.08	0.41
monte	1 GEM-1 v	T=500	110.00	34.87	39.76	39.20	-0.56	39.06	-0.70		40.13	0.002146	2.68	41.05	9.08	0.40

7. TORRENTE BURBA

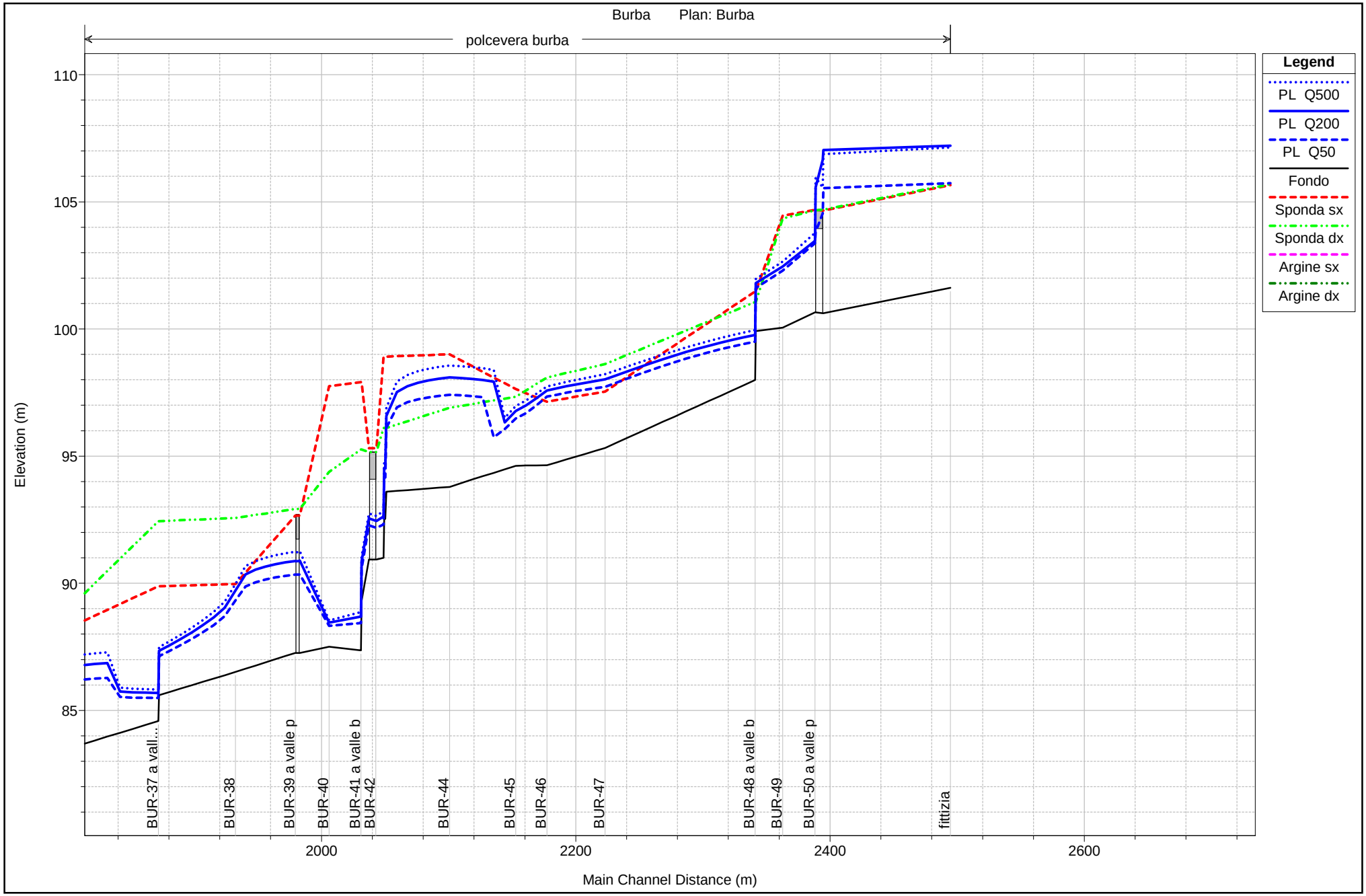
Per il Torrente Burba è stato considerato un unico tratto, compreso tra la località Canonero e la confluenza nel T. Polcevera, per una lunghezza di circa 2,5 km.
Per studiare la confluenza con il suddetto torrente sono state utilizzate per il Polcevera le portate di massima piena a valle della confluenza e a monte le portate ottenute per differenza tra quelle del Polcevera a valle e quelle del torrente Burba.
Nel tratto è compreso anche un'affluente in sponda destra, il rio Molinassi che non è stato indagato, ma è stata imposta una variazione di portata in prossimità della suddetta confluenza.

Per lo studio sono state utilizzate le seguenti portate:

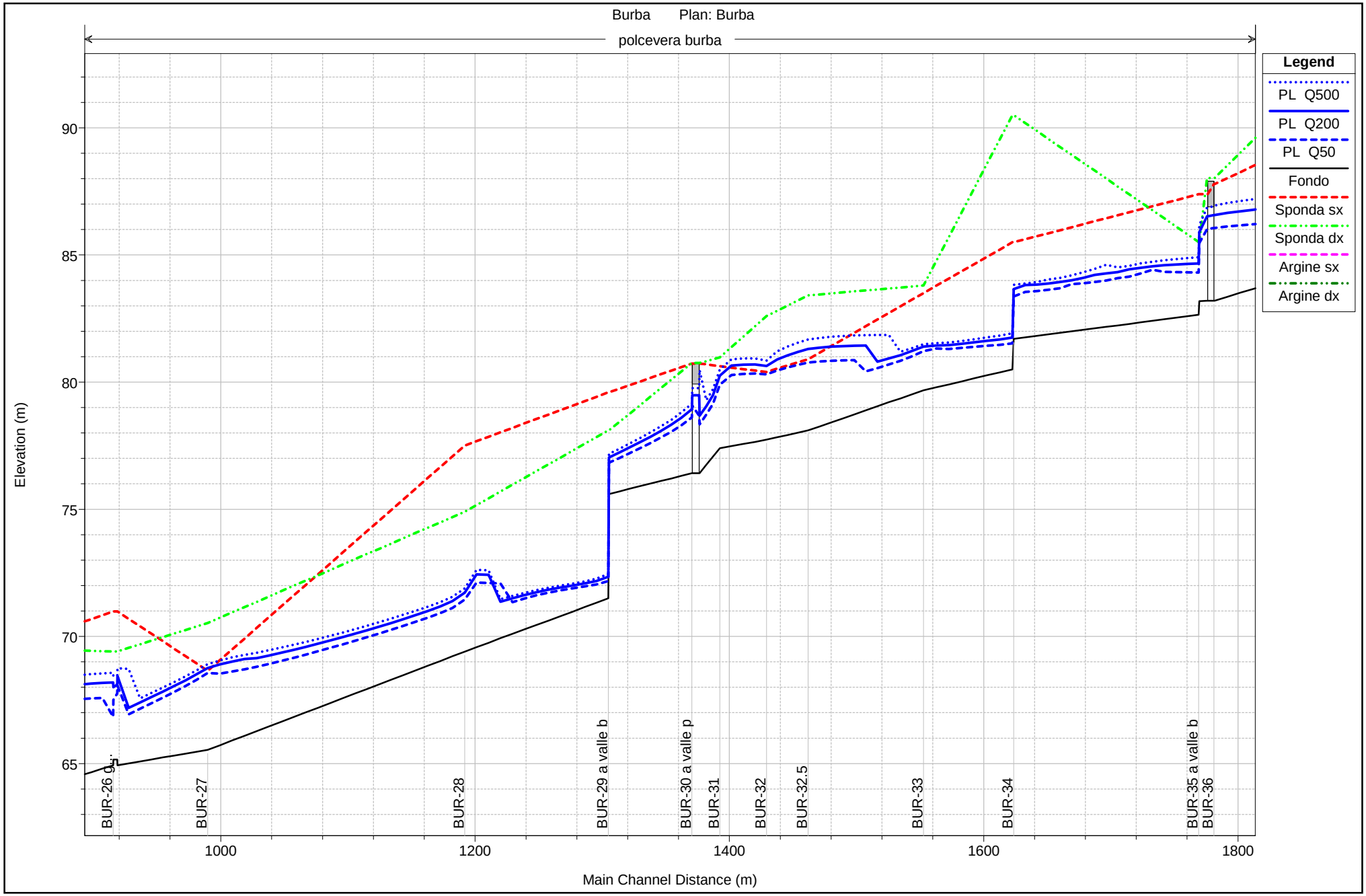
TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
		T = 50 anni	**T = 200 anni**	**T = 500 anni**
Torrente Burba a monte Molinassi	BUR1	133	171	199
Torrente Burba a valla Molinassi	BUR2	190	235	265
Torrente Polc.monte	differenza	1075	1387	1582
Torrente Polcevera valle	PoSeBu	1265	1622	1847

Come condizioni al contorno è stata imposta la profondità critica a monte ed è stata simulata la confluenza con il torrente Polcevera a valle.

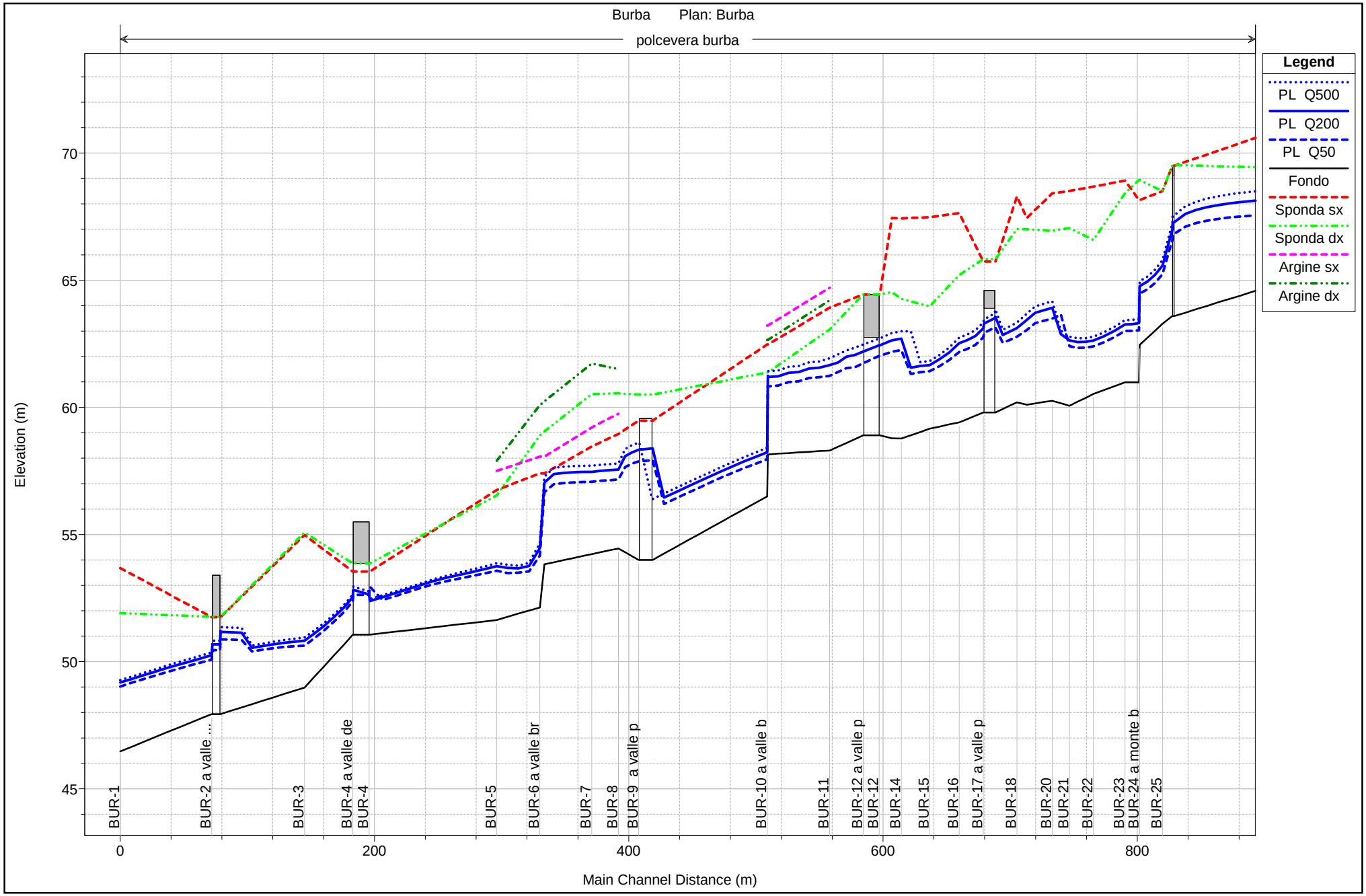
Nelle simulazioni è stato assegnato un valore del coefficiente di scabrezza k_s di Strickler pari a 35 $m^{1/3}/s$ lungo tutto il tratto.



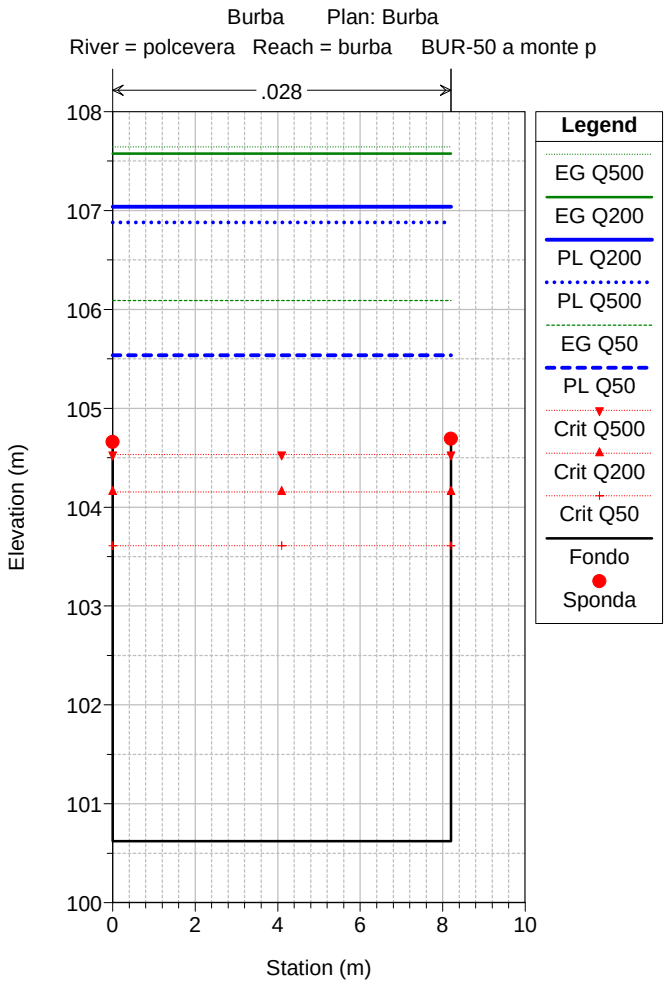
1 cm Horiz. = 40 m 1 cm Vert. = 2 m

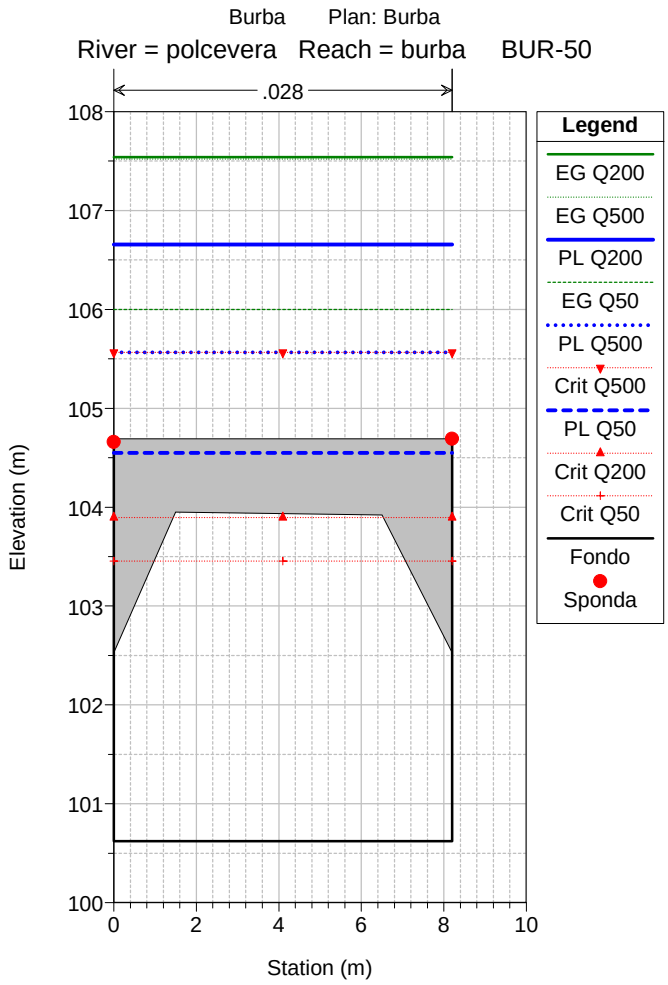


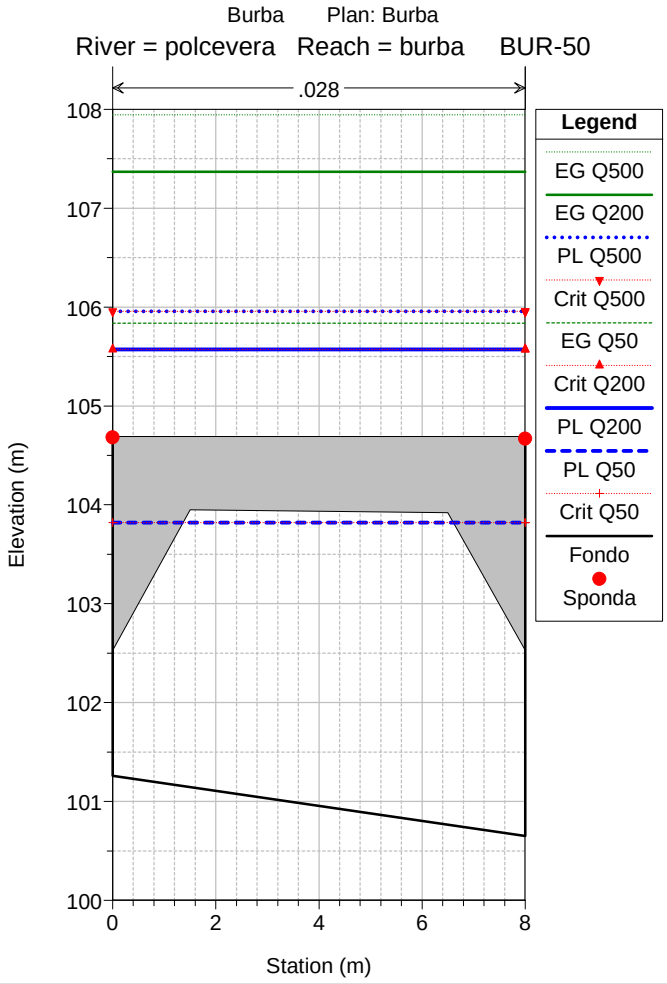
1 cm Horiz. = 40 m 1 cm Vert. = 2 m

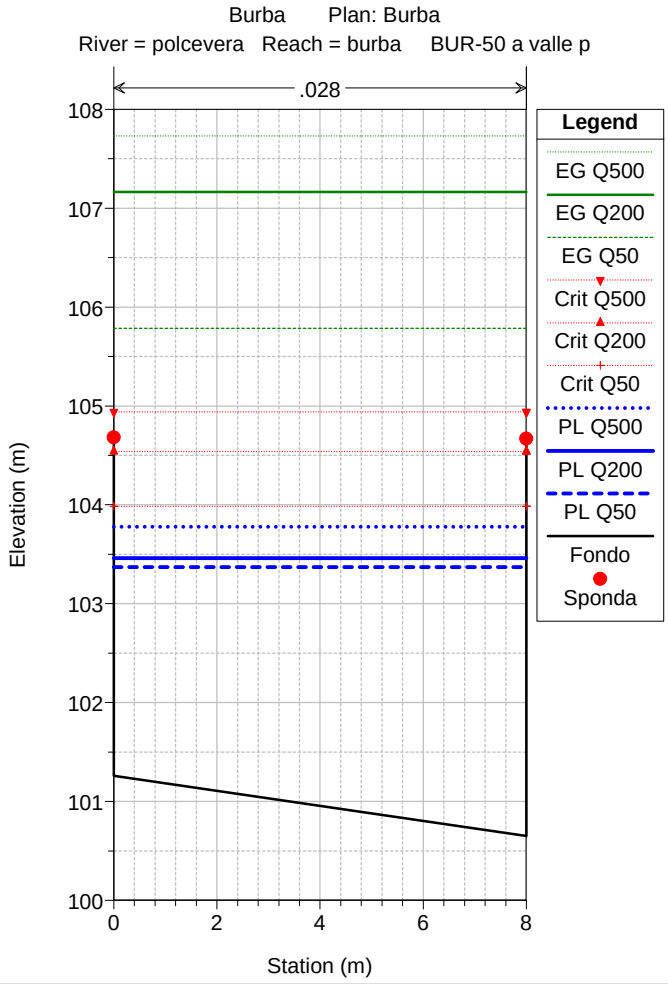


1 cm Horiz. = 40 m 1 cm Vert. = 2 m


Burba Plan: Burba
River = polcevera Reach = burba BUR-50 a monte p
.028
Legend
EG Q500
EG Q200
PL Q200
PL Q500
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

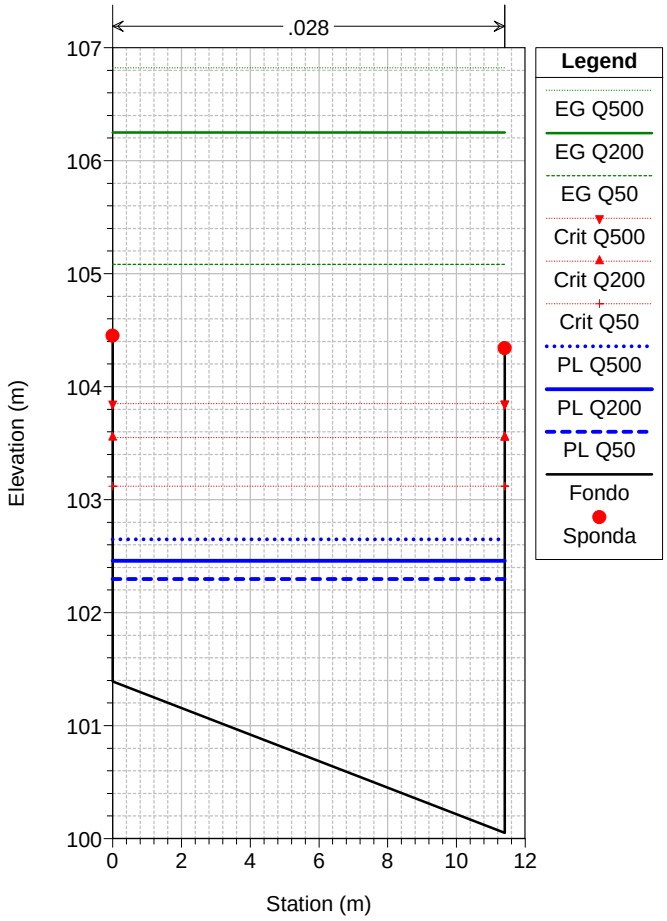

Burba Plan: Burba
River = polcevera Reach = burba BUR-50
.028
Legend
EG Q200
EG Q500
PL Q200
EG Q50
PL Q500
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Burba Plan: Burba
River = polcevera Reach = burba BUR-50
.028
Legend
EG Q500
EG Q200
PL Q500
Crit Q500
EG Q50
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Burba Plan: Burba
River = polcevera Reach = burba BUR-50 a valle p
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

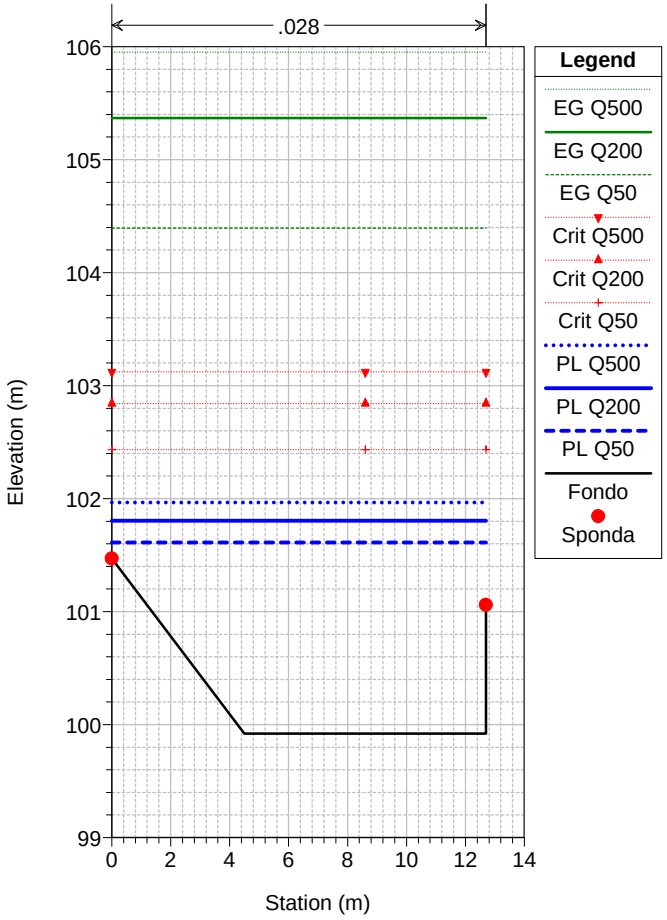
Burba Plan: Burba

River = polcevera Reach = burba BUR-49



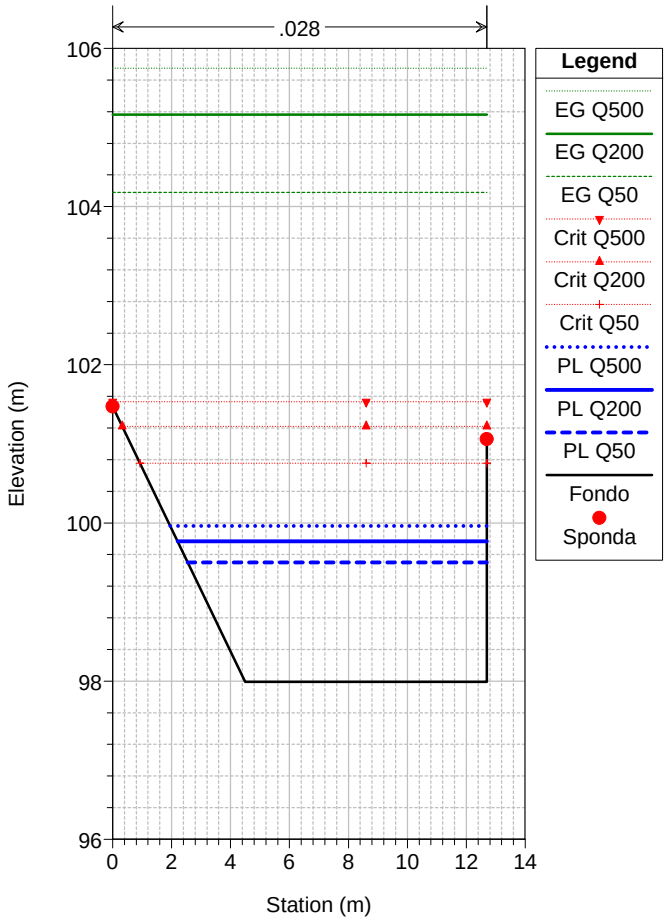
Burba Plan: Burba

River = polcevera Reach = burba BUR-48 a monte b



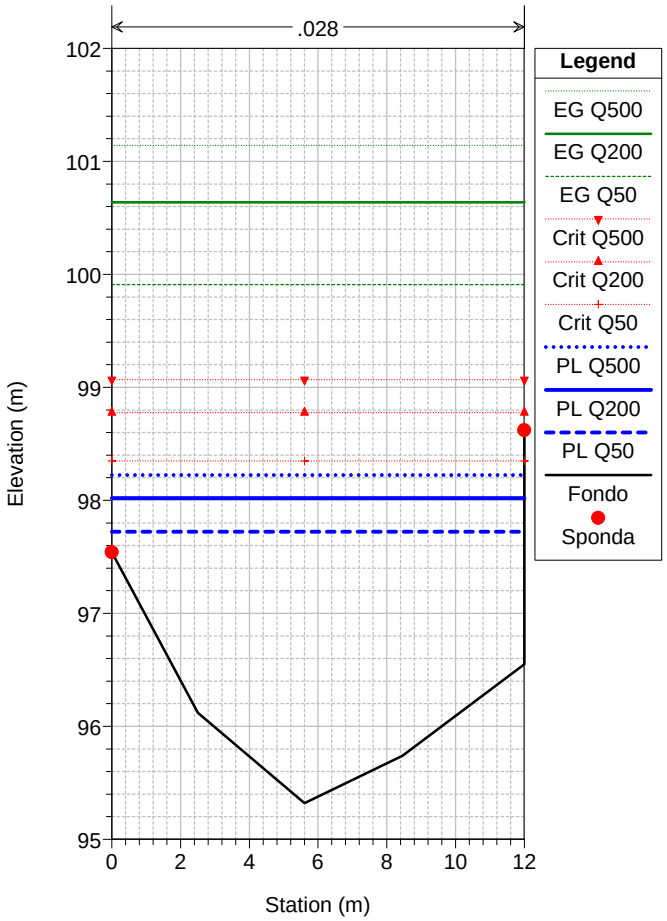
Burba Plan: Burba

River = polcevera Reach = burba BUR-48 a valle b



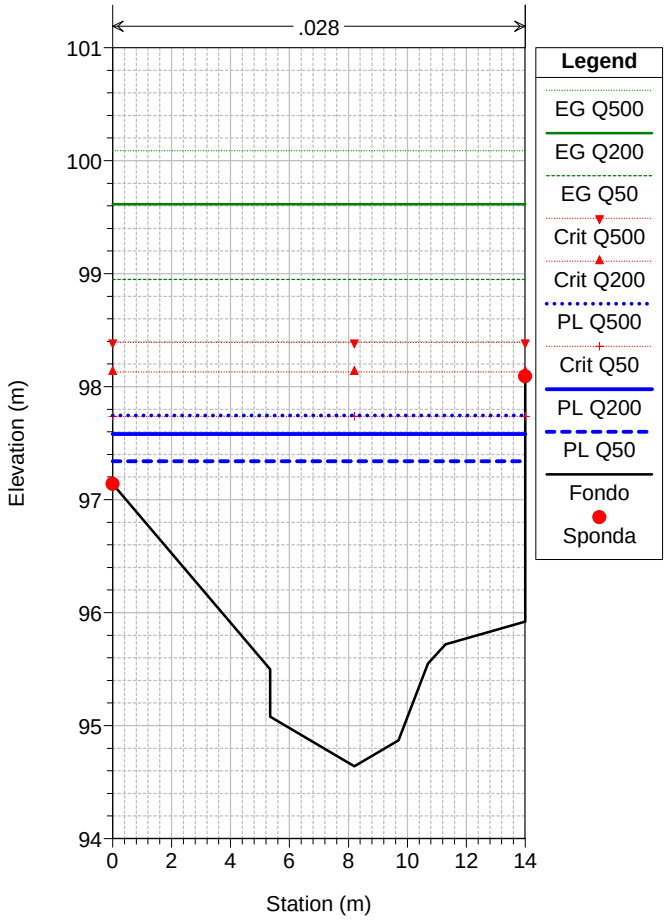
Burba Plan: Burba

River = polcevera Reach = burba BUR-47



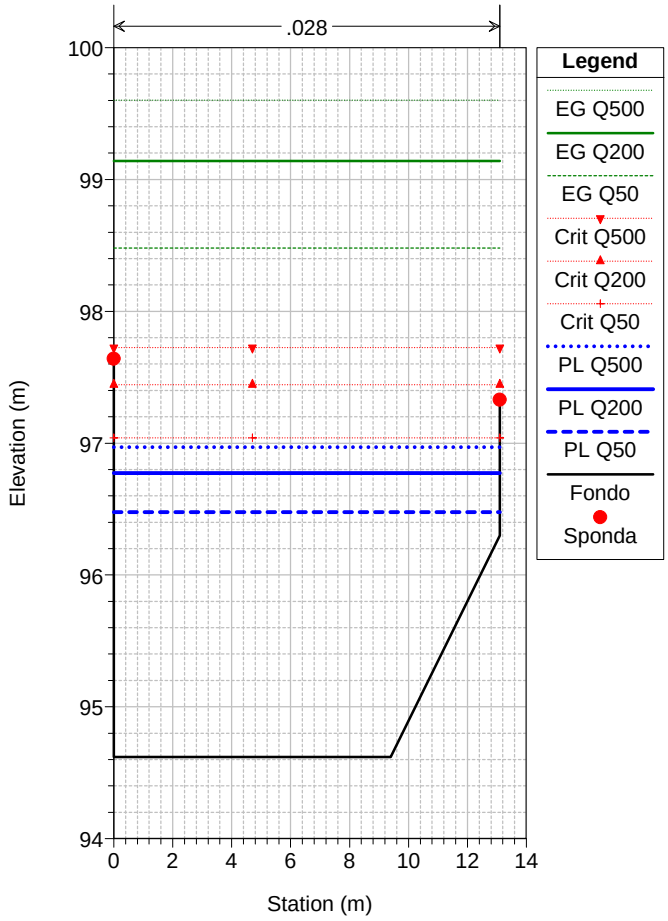
Burba Plan: Burba

River = polcevera Reach = burba BUR-46



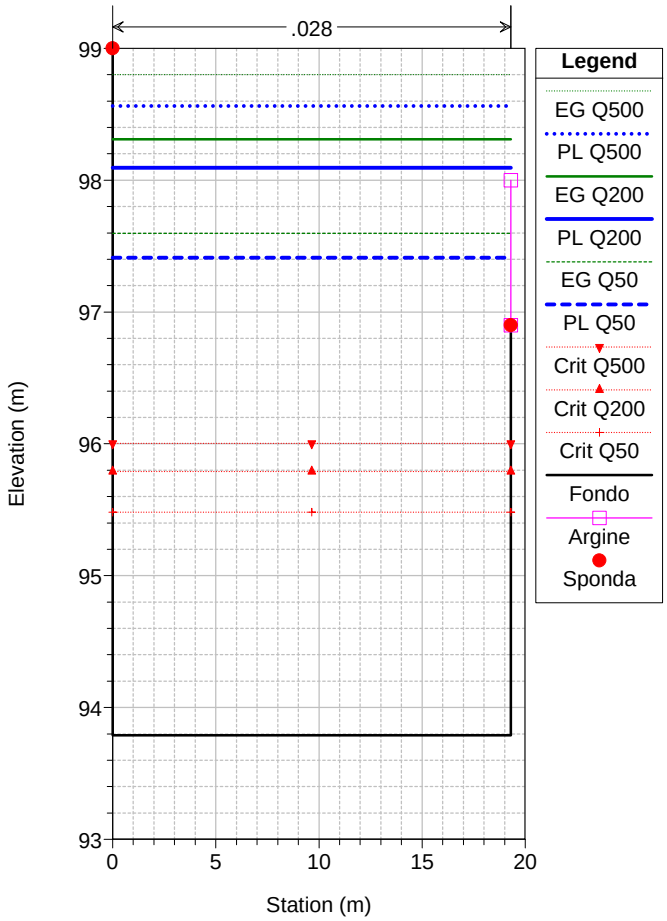
Burba Plan: Burba

River = polcevera Reach = burba BUR-45



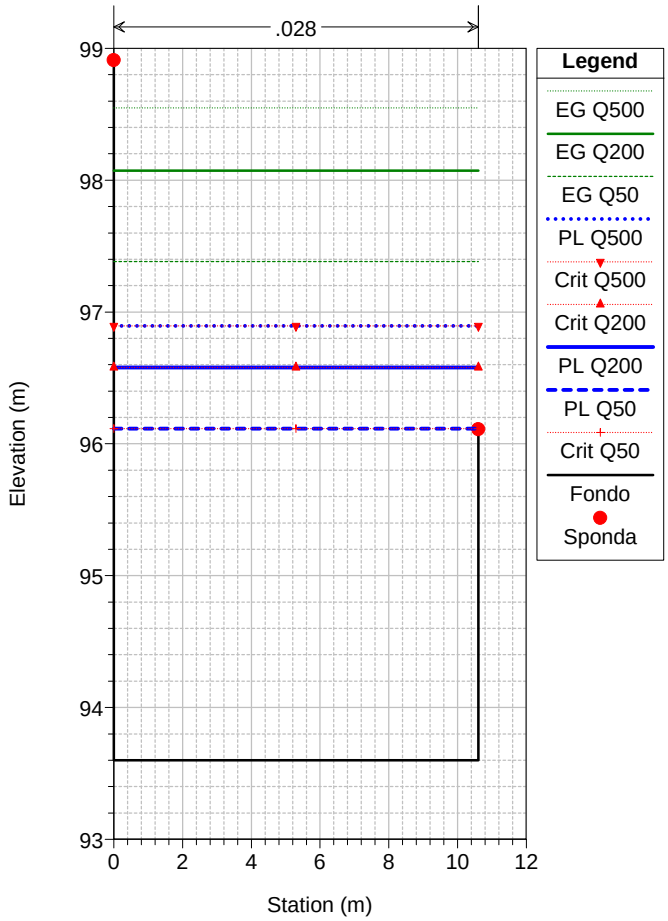
Burba Plan: Burba

River = polcevera Reach = burba BUR-44

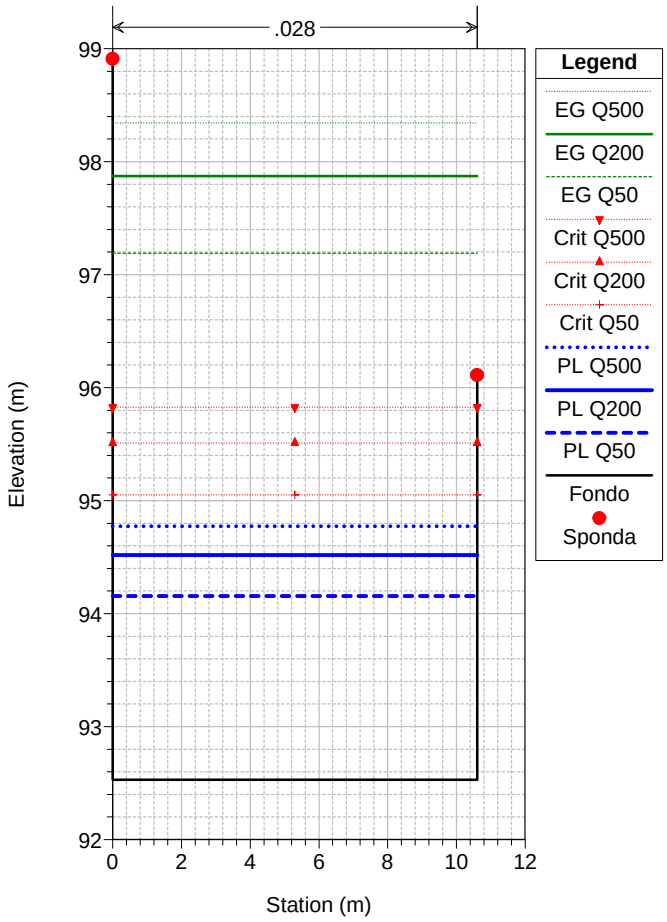


Burba Plan: Burba

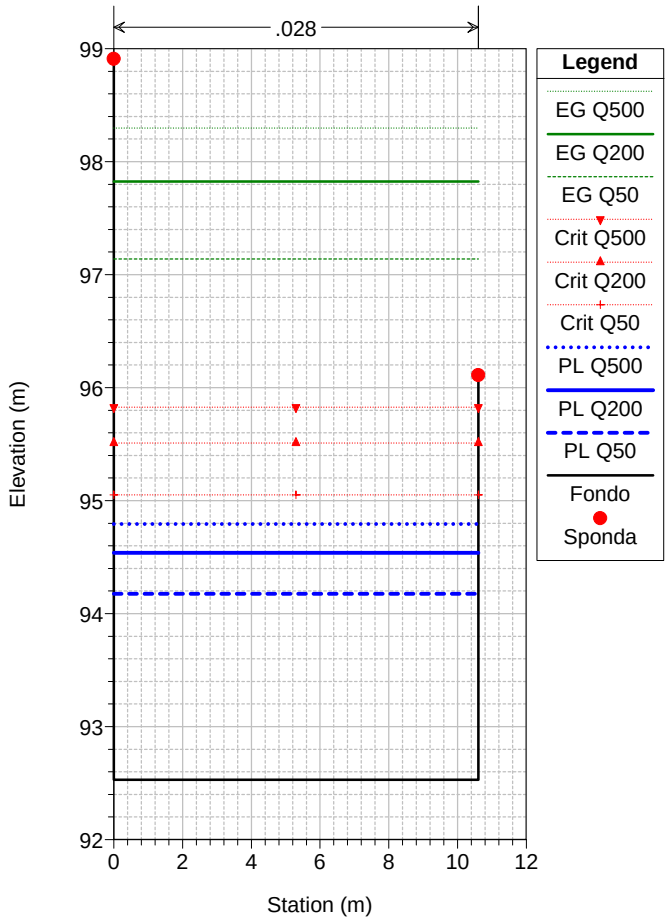
River = polcevera Reach = burba BUR-43 sopra sec



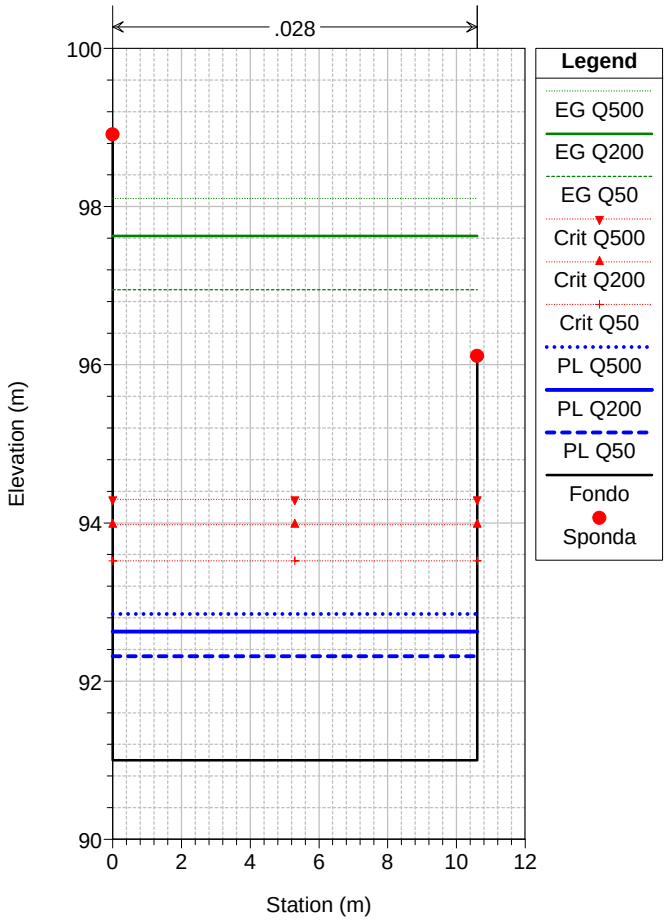
Burba Plan: Burba
River = polcevera Reach = burba BUR-43 sotto sec



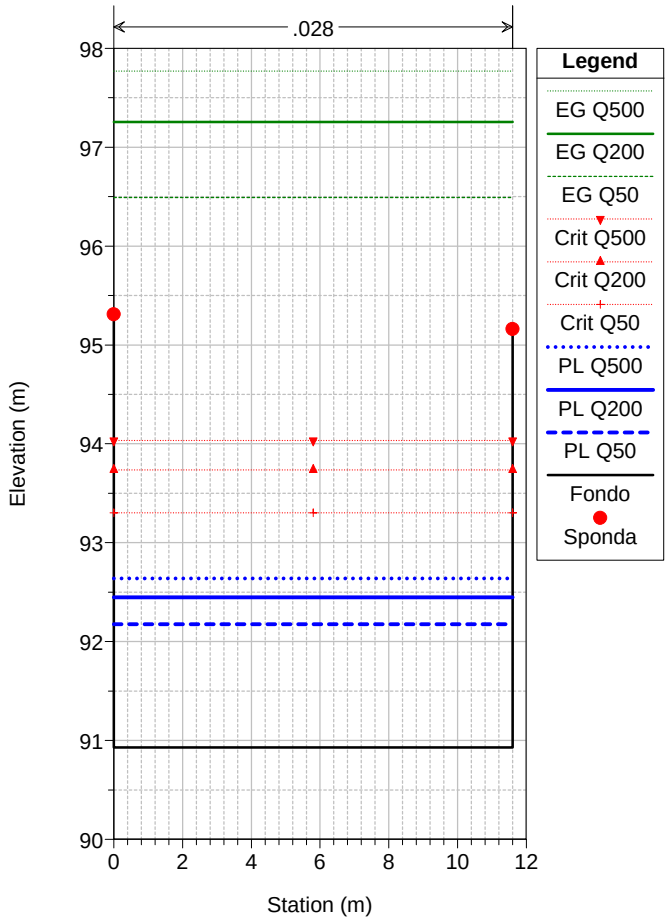
Burba Plan: Burba
River = polcevera Reach = burba BUR-43 sotto sec



Burba Plan: Burba
River = polcevera Reach = burba BUR-43 sotto pri

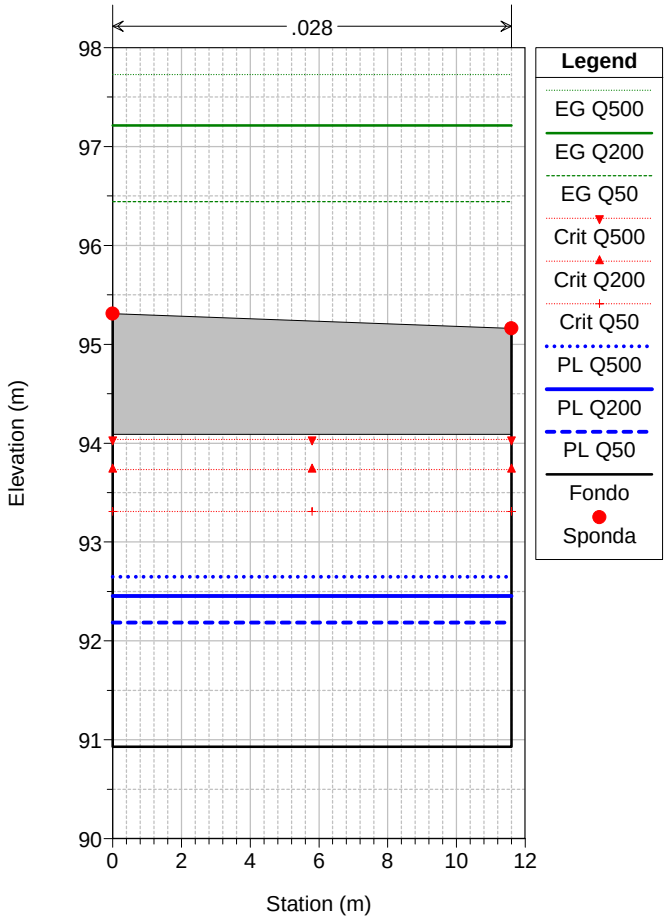


Burba Plan: Burba
River = polcevera Reach = burba BUR-42 a monte p



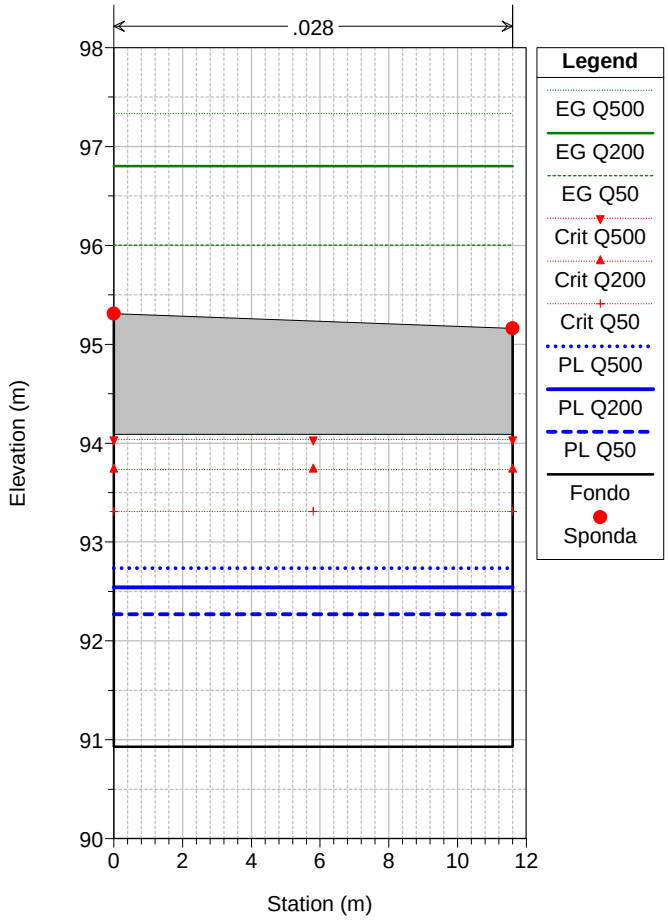
Burba Plan: Burba

River = polcevera Reach = burba BUR-42



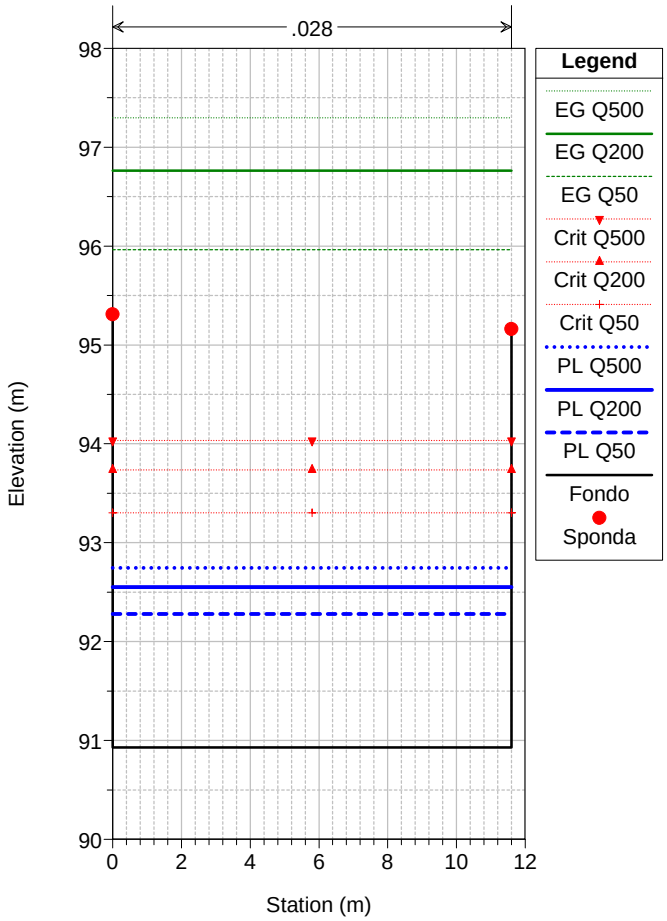
Burba Plan: Burba

River = polcevera Reach = burba BUR-42



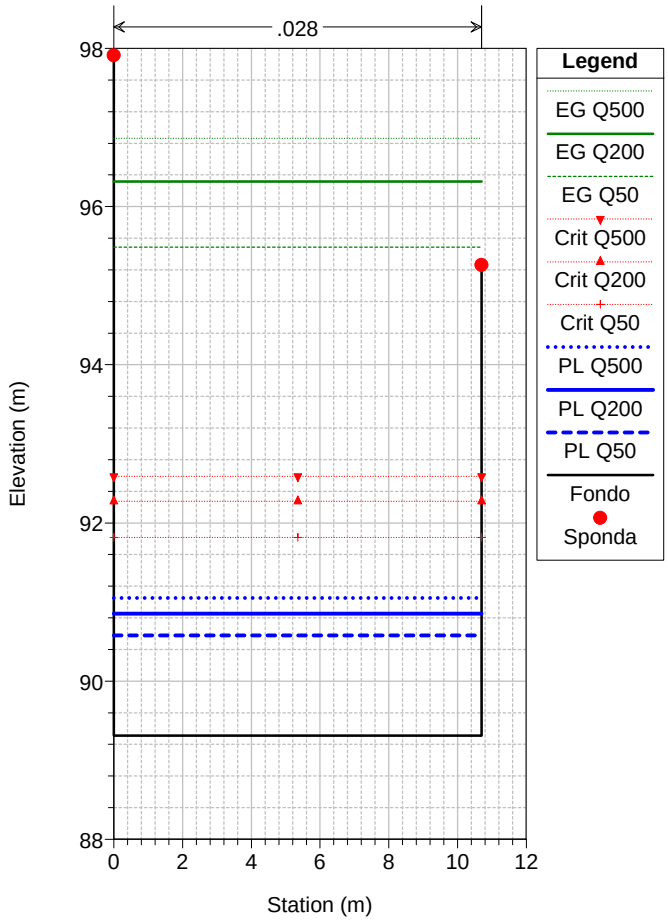
Burba Plan: Burba

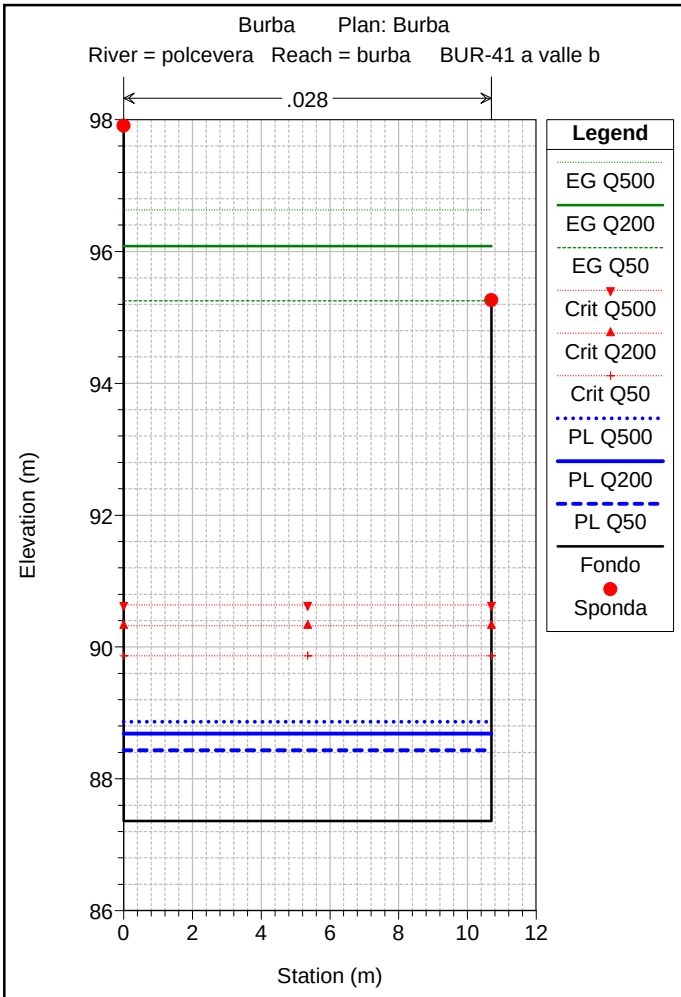
River = polcevera Reach = burba BUR-42 a valle p

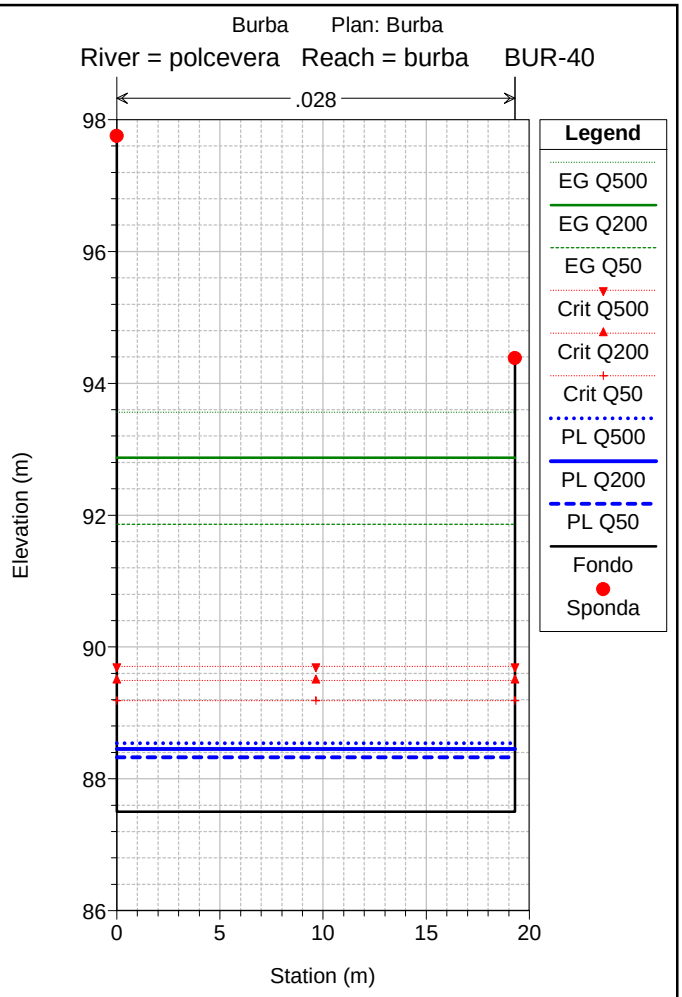


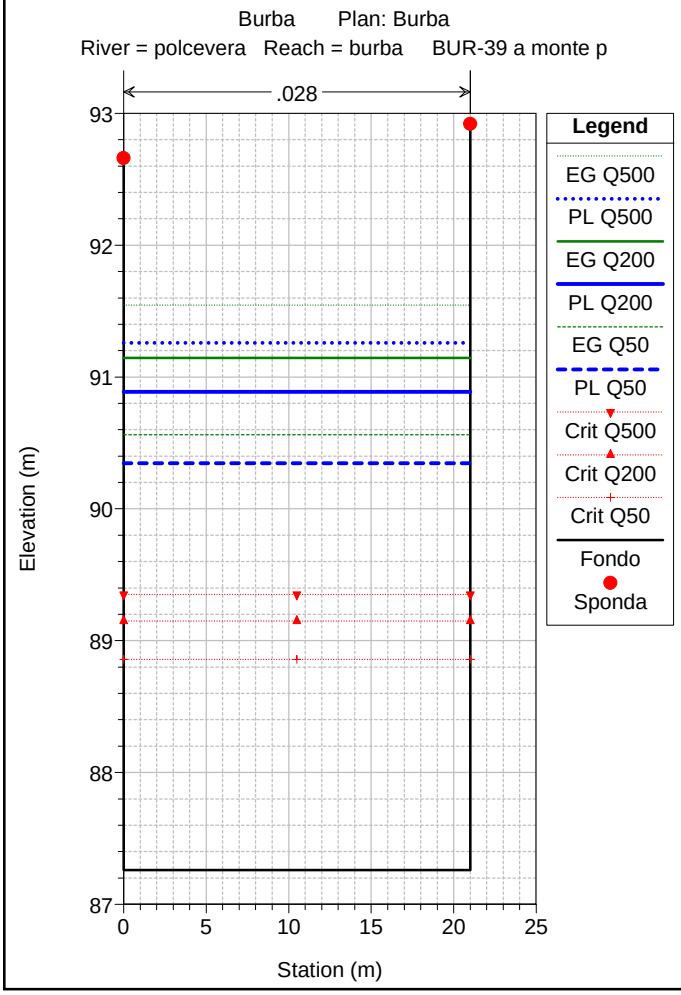
Burba Plan: Burba

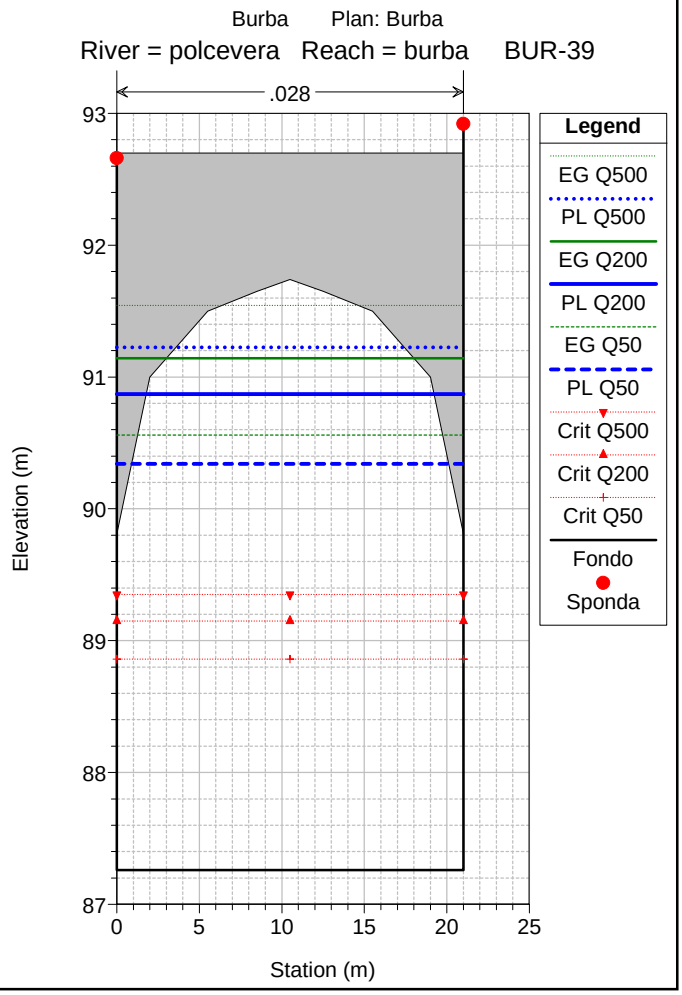
River = polcevera Reach = burba BUR-41 a monte b




Burba Plan: Burba
River = polcevera Reach = burba BUR-41 a valle b
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

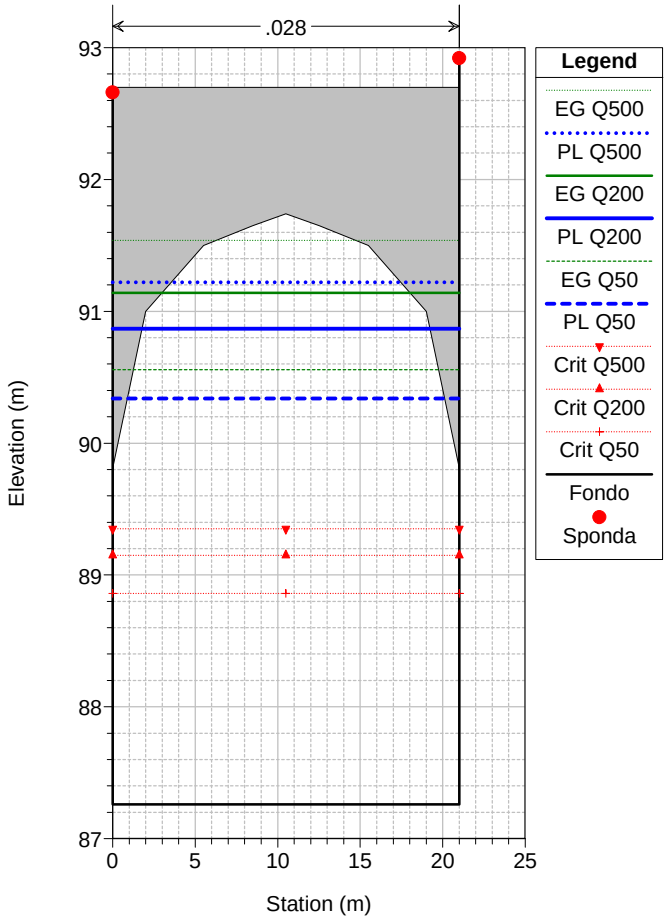

Burba Plan: Burba
River = polcevera Reach = burba BUR-40
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


Burba Plan: Burba
River = polcevera Reach = burba BUR-39 a monte p
.028
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


Burba Plan: Burba
River = polcevera Reach = burba BUR-39
.028
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

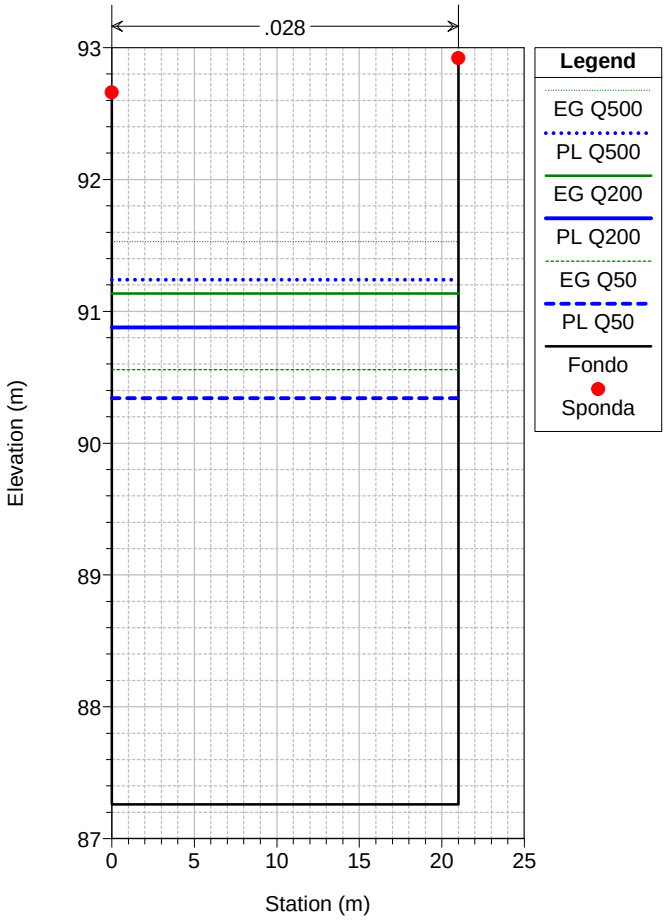
Burba Plan: Burba

River = polcevera Reach = burba BUR-39



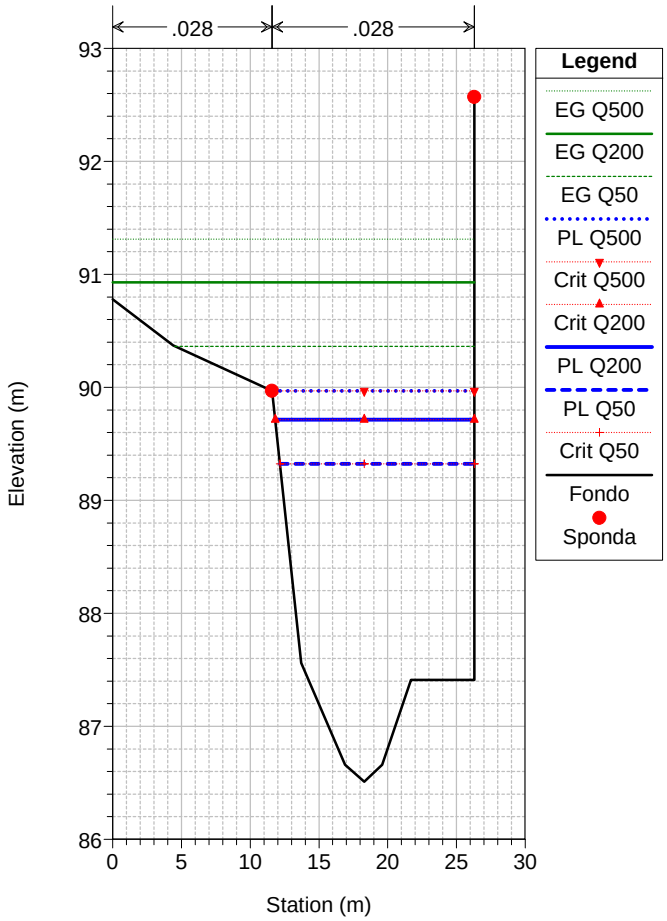
Burba Plan: Burba

River = polcevera Reach = burba BUR-39 a valle p



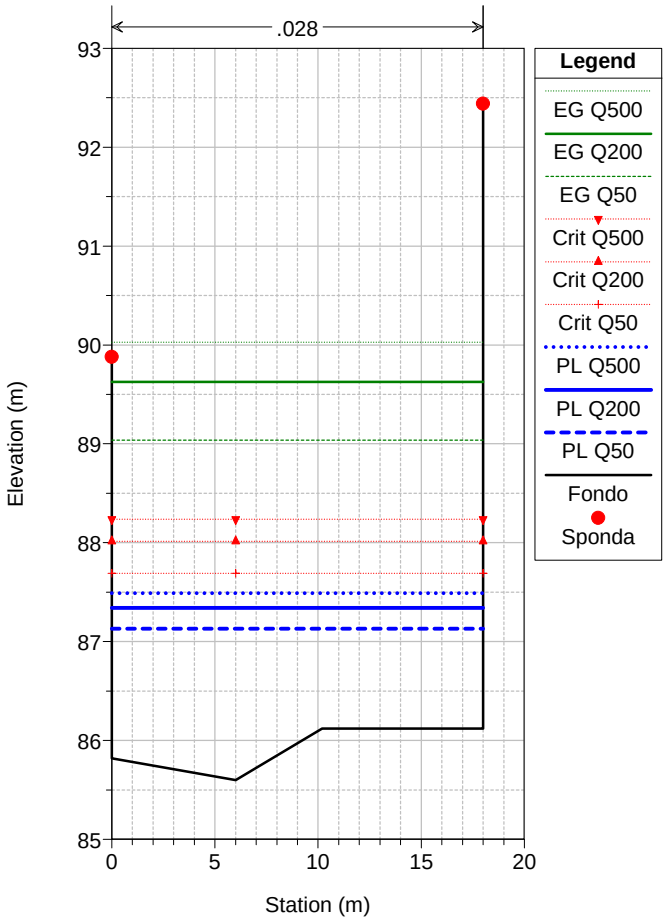
Burba Plan: Burba

River = polcevera Reach = burba BUR-38



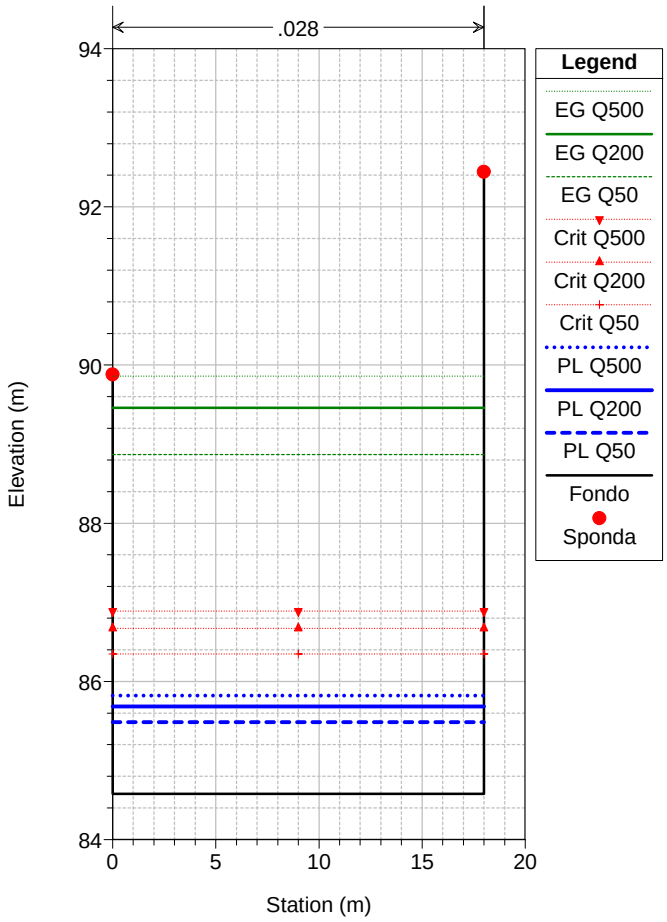
Burba Plan: Burba

River = polcevera Reach = burba BUR-37 a monte b



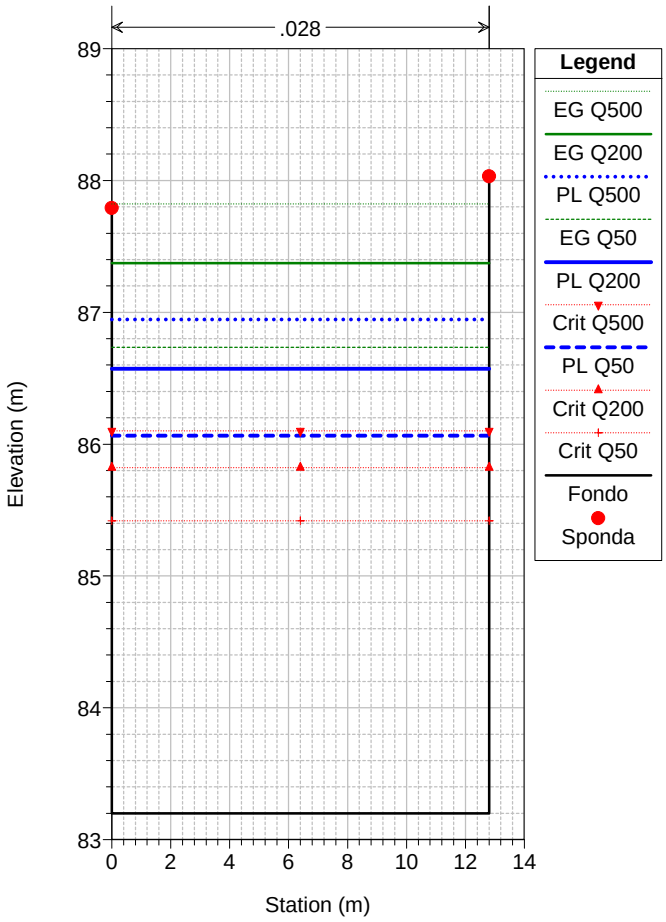
Burba Plan: Burba

River = polcevera Reach = burba BUR-37 a valle b



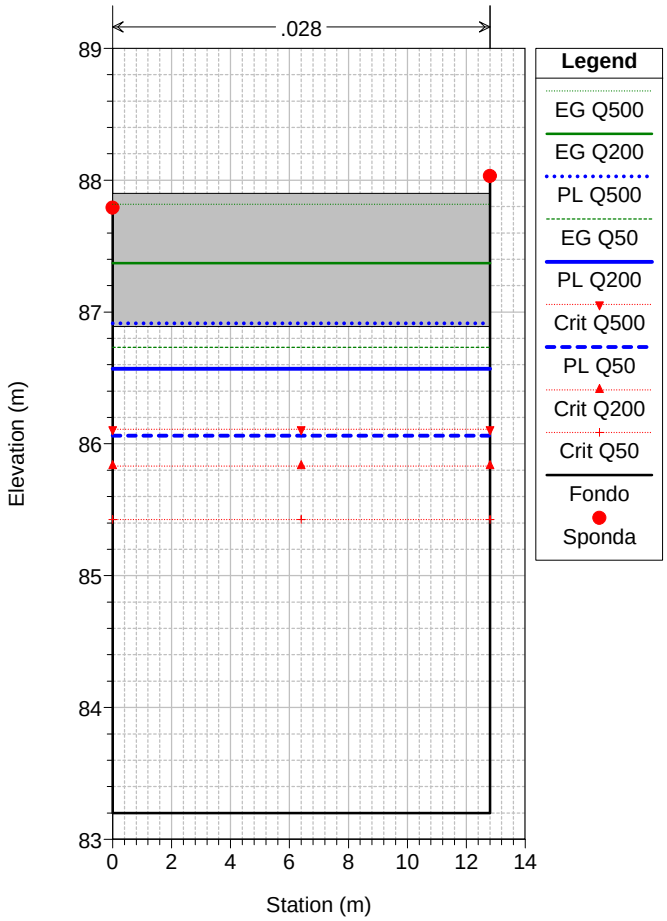
Burba Plan: Burba

River = polcevera Reach = burba BUR-36 a monte p



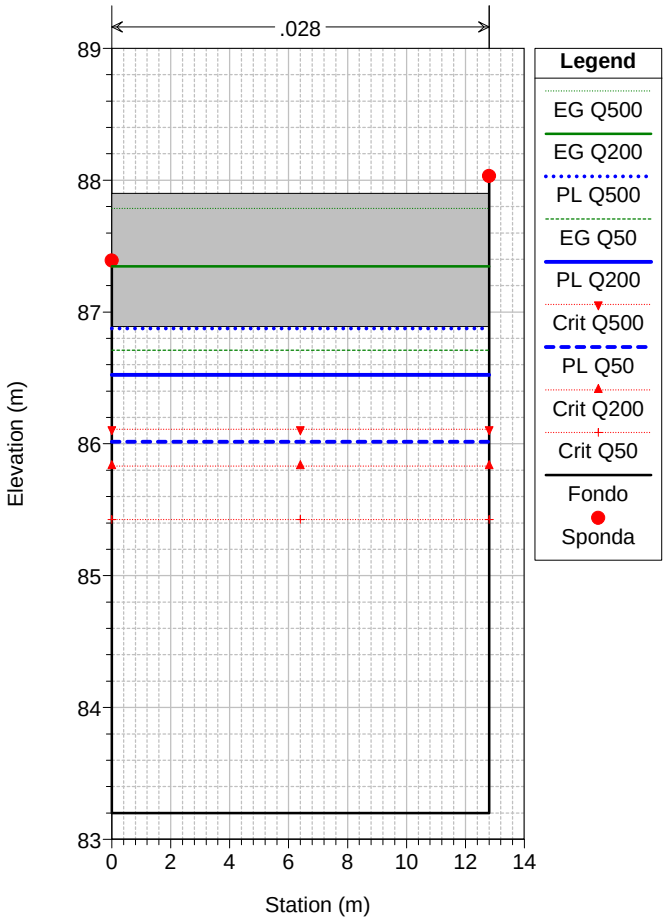
Burba Plan: Burba

River = polcevera Reach = burba BUR-36



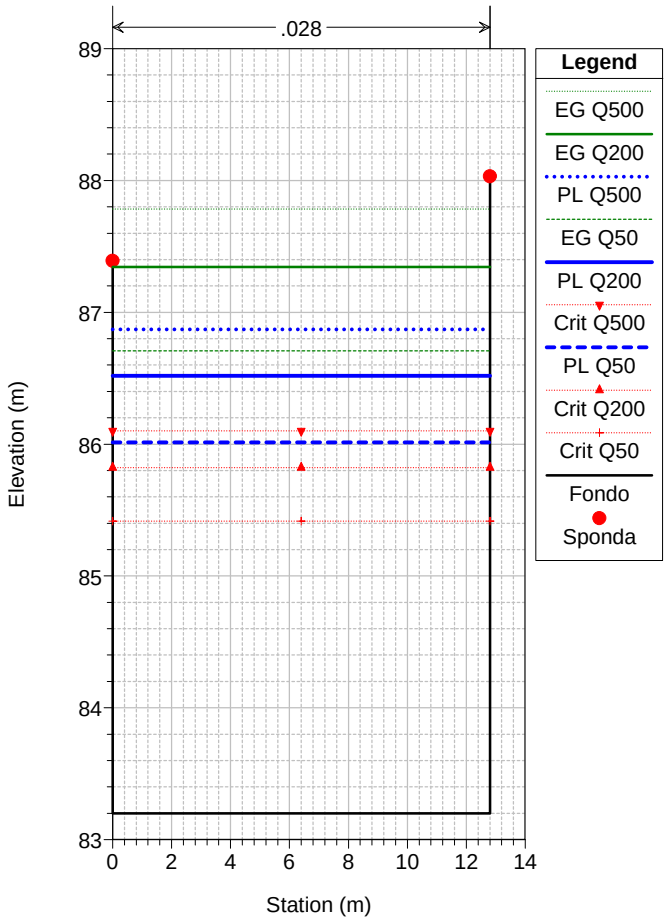
Burba Plan: Burba

River = polcevera Reach = burba BUR-36



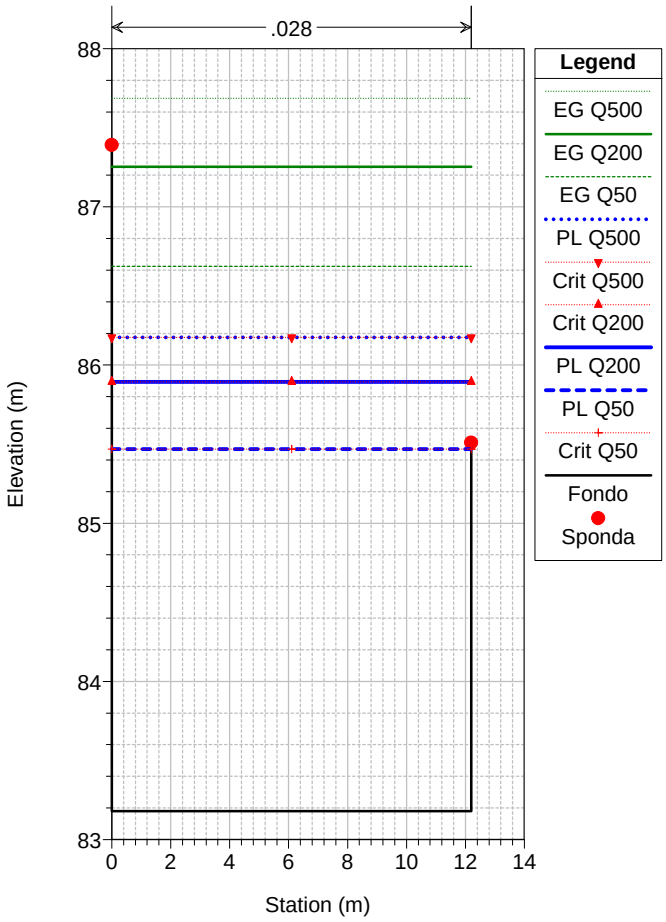
Burba Plan: Burba

River = polcevera Reach = burba BUR-36 a valle p



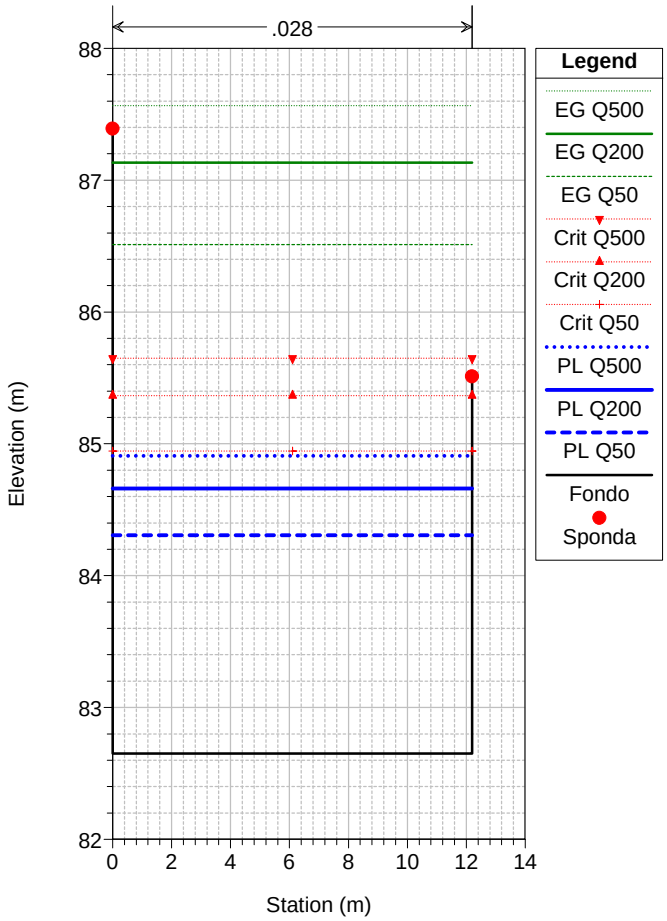
Burba Plan: Burba

River = polcevera Reach = burba BUR-35 a monte b



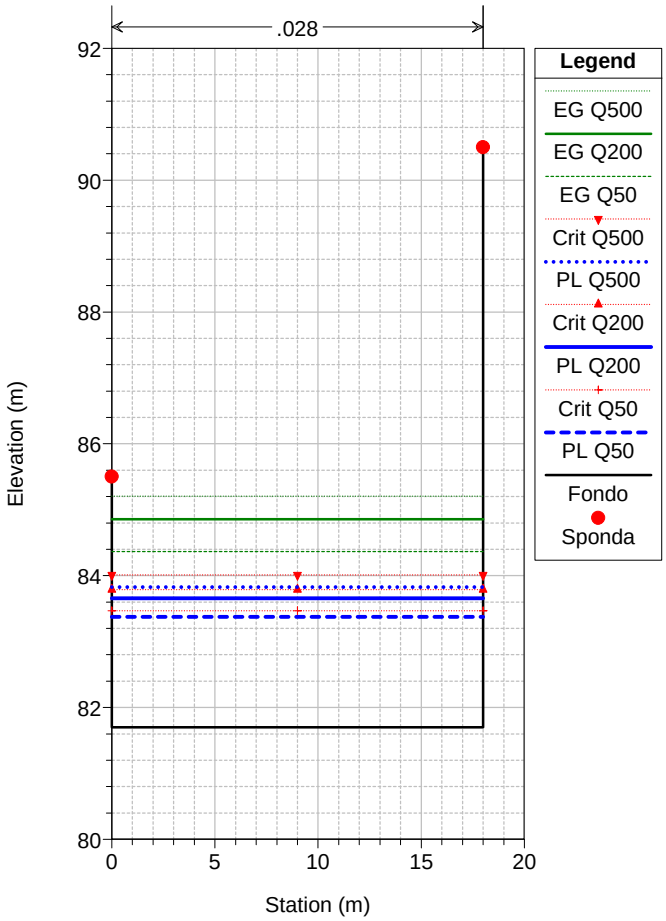
Burba Plan: Burba

River = polcevera Reach = burba BUR-35 a valle b



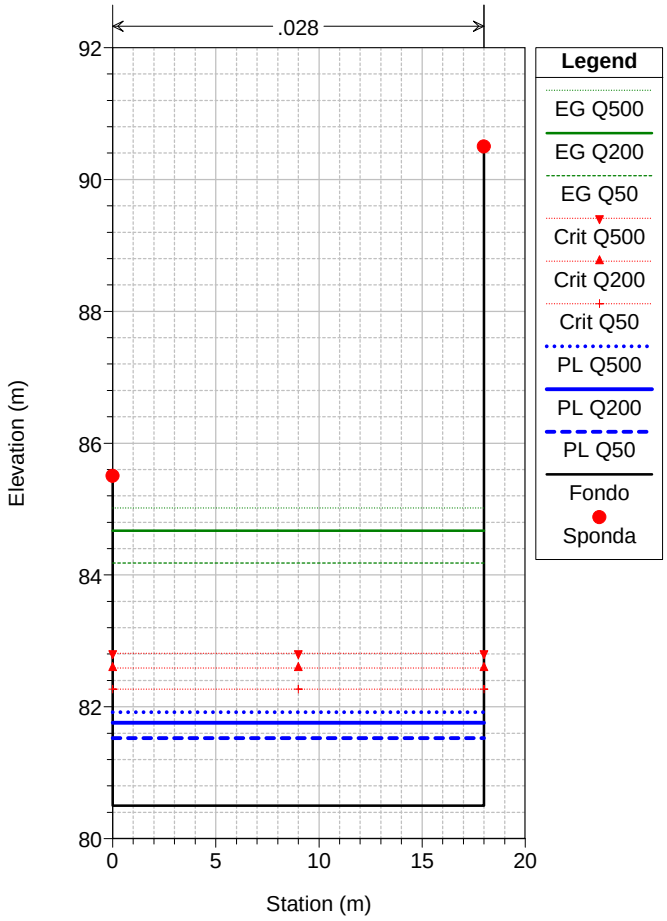
Burba Plan: Burba

River = polcevera Reach = burba BUR-34



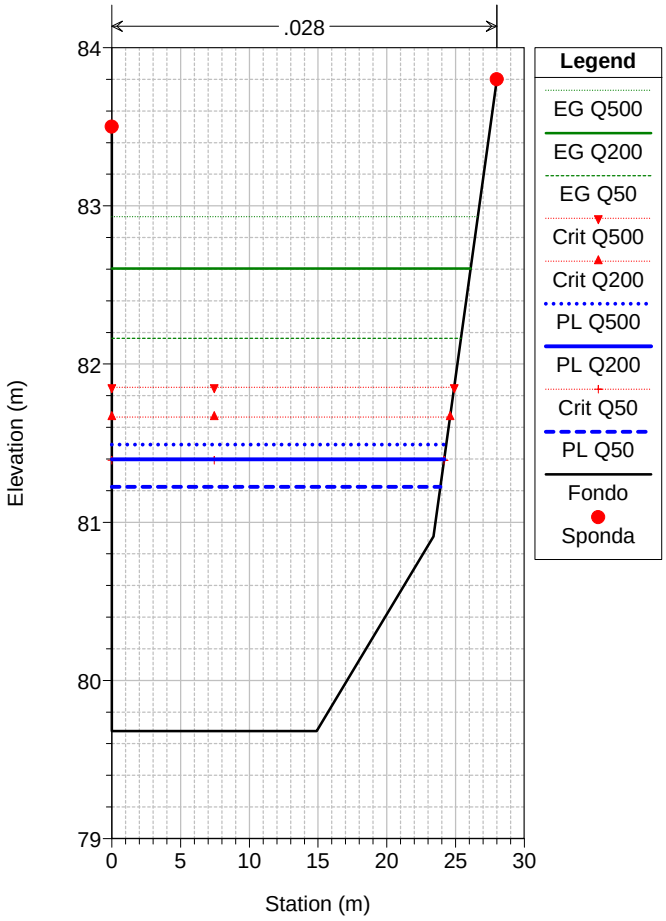
Burba Plan: Burba

River = polcevera Reach = burba



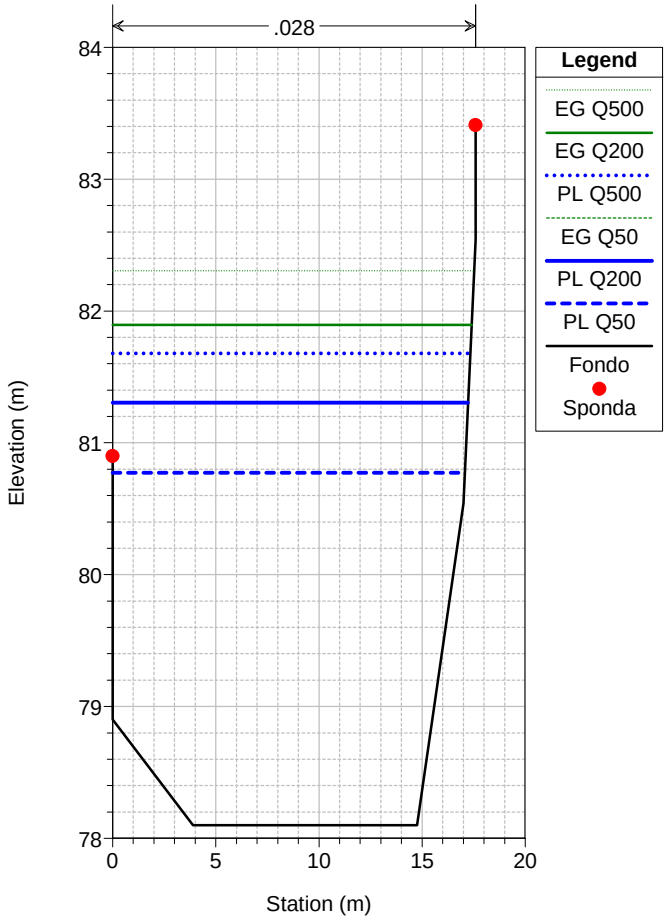
Burba Plan: Burba

River = polcevera Reach = burba BUR-33



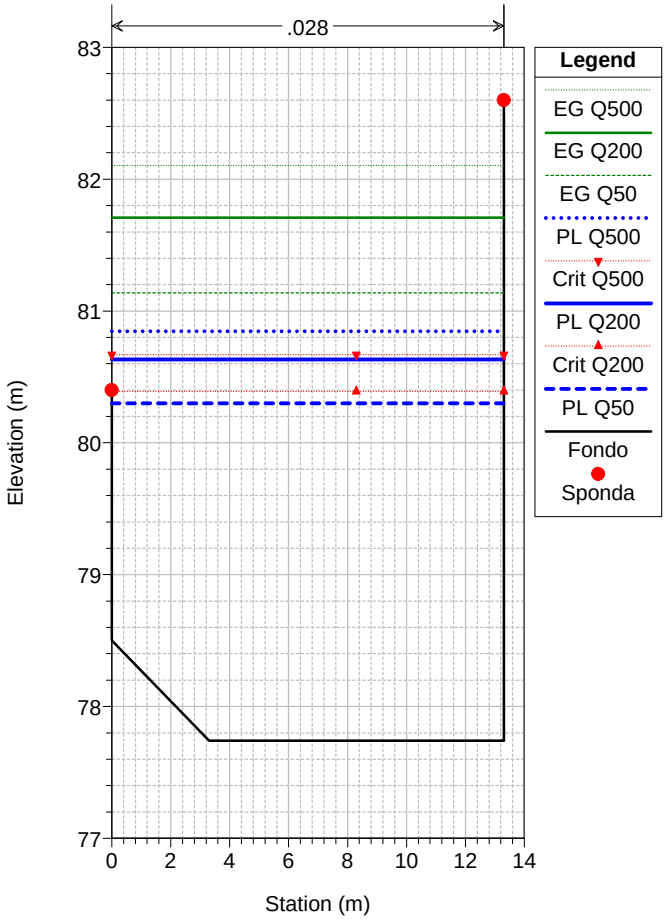
Burba Plan: Burba

River = polcevera Reach = burba BUR-32.5



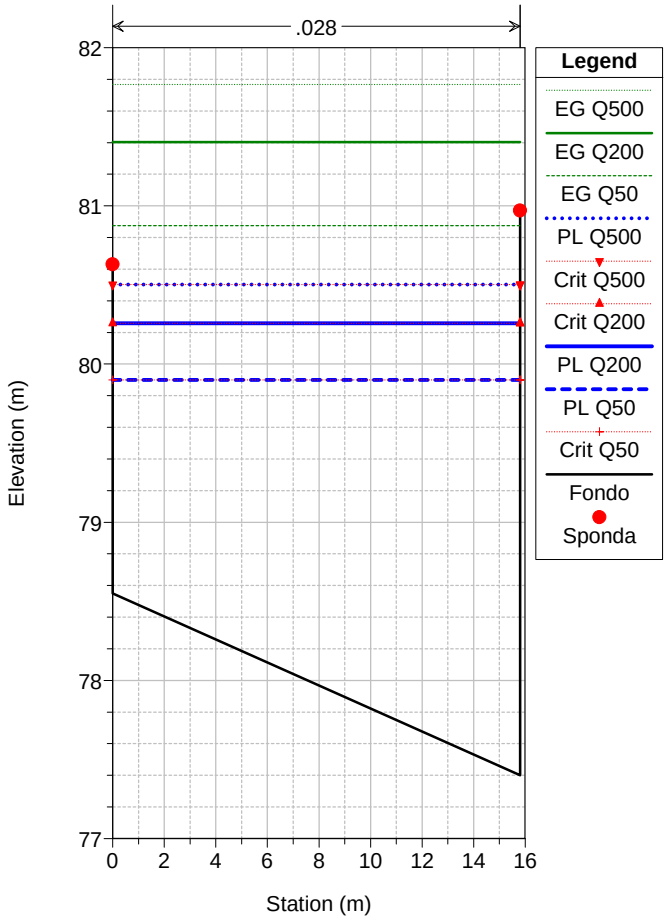
Burba Plan: Burba

River = polcevera Reach = burba BUR-32



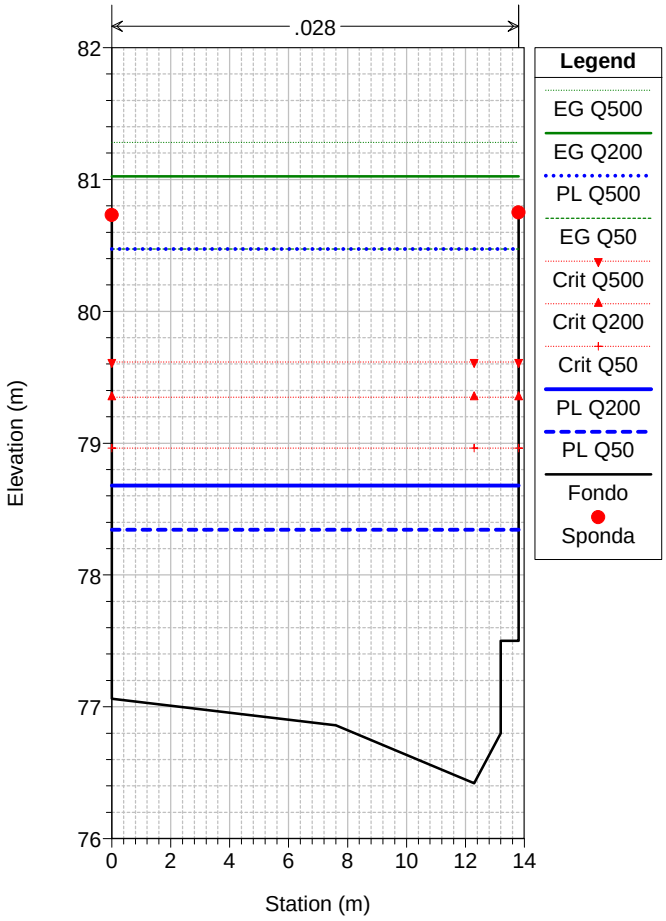
Burba Plan: Burba

River = polcevera Reach = burba BUR-31



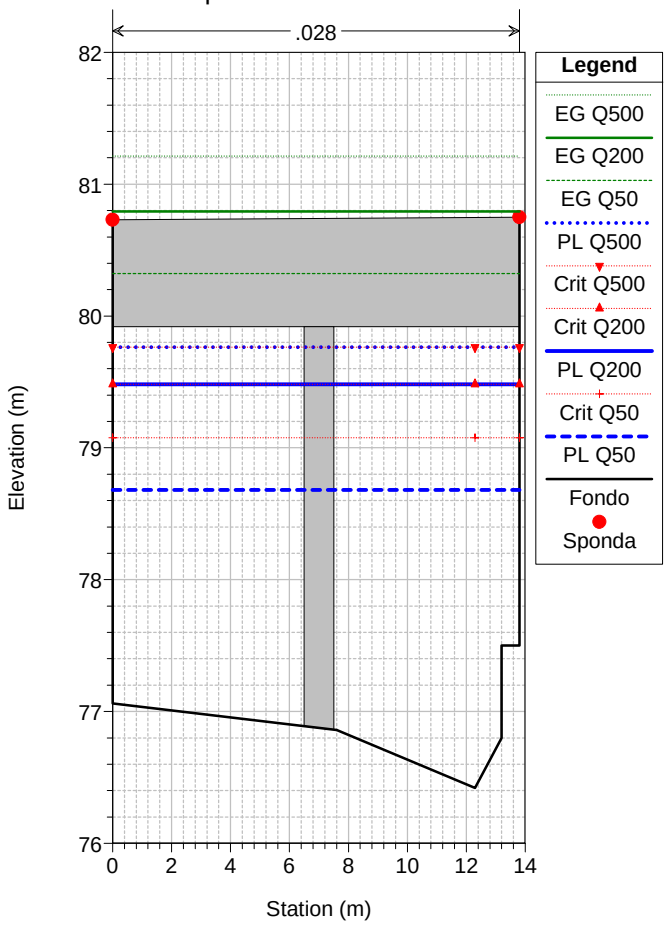
Burba Plan: Burba

River = polcevera Reach = burba BUR-30 a monte p



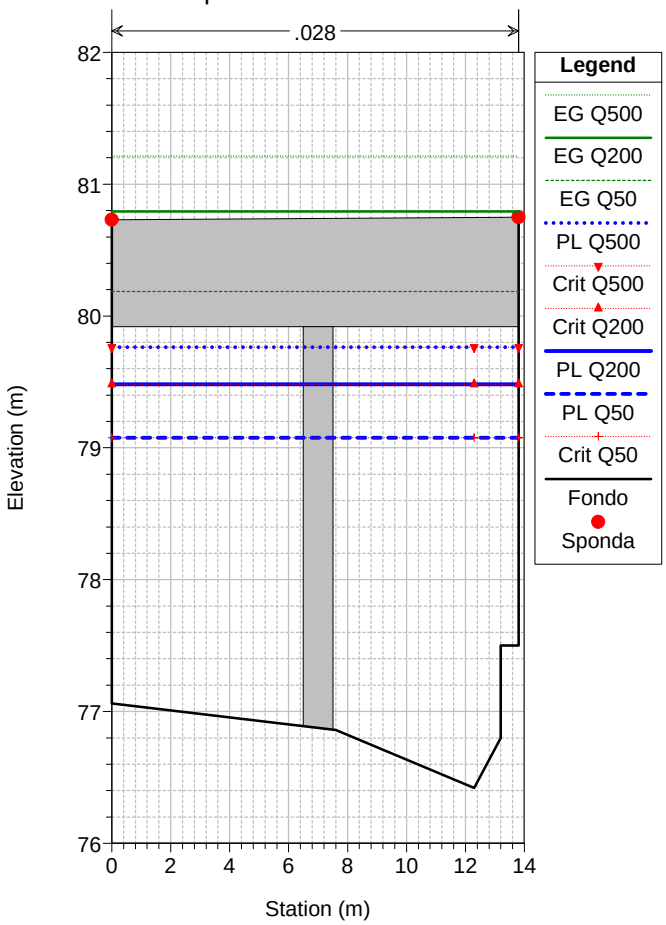
Burba Plan: Burba

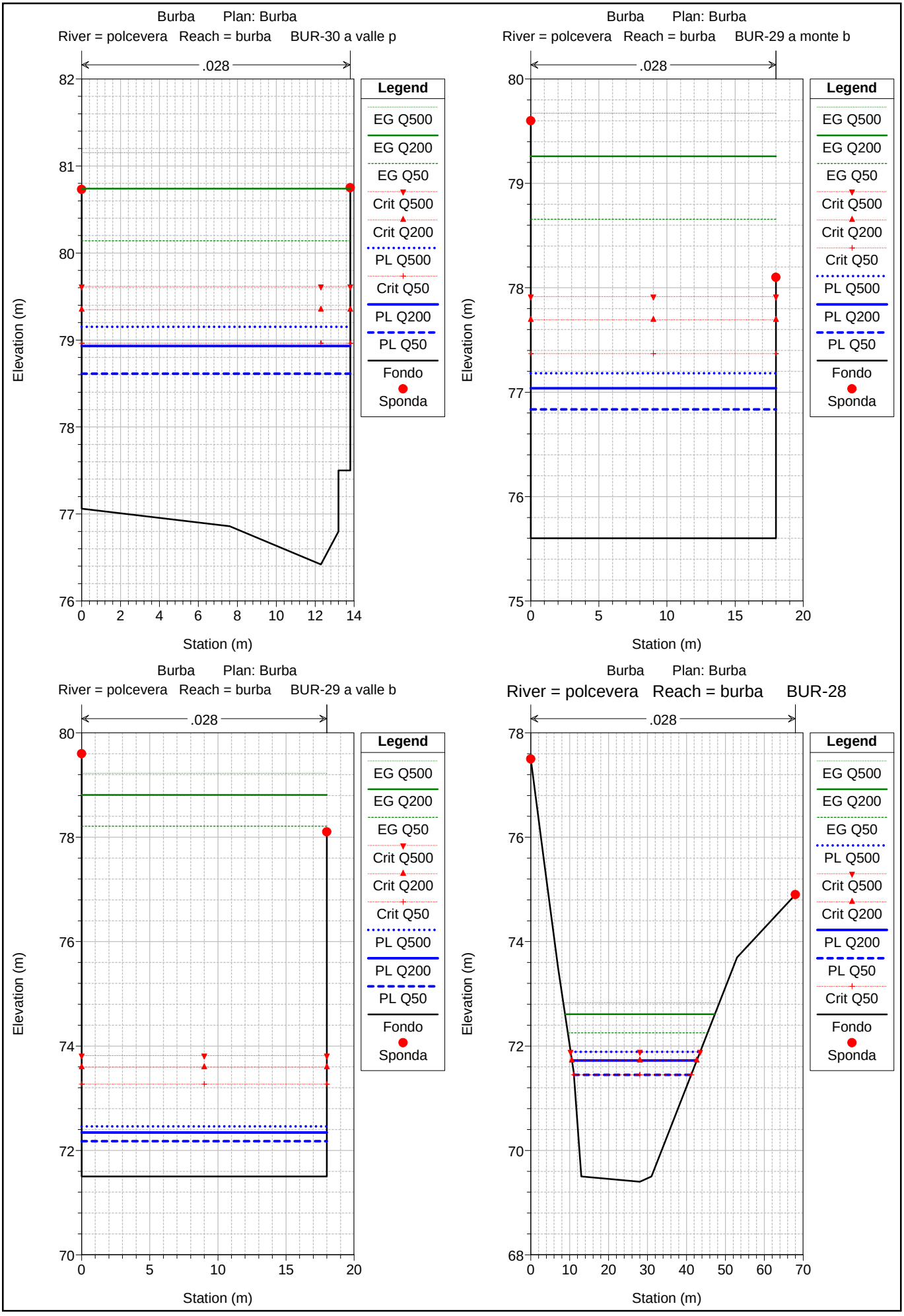
River = polcevera Reach = burba

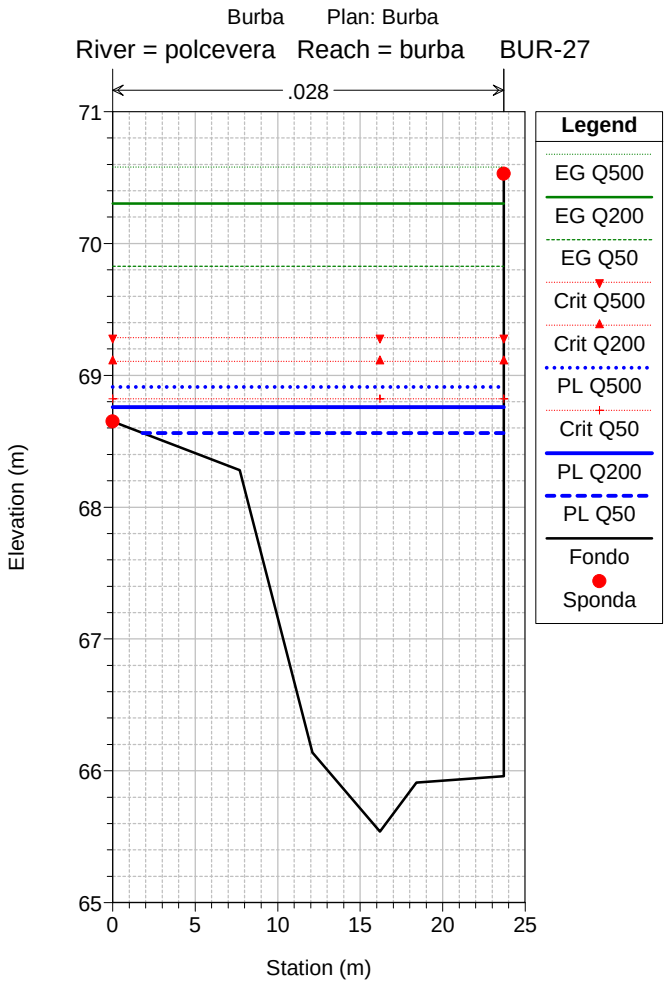


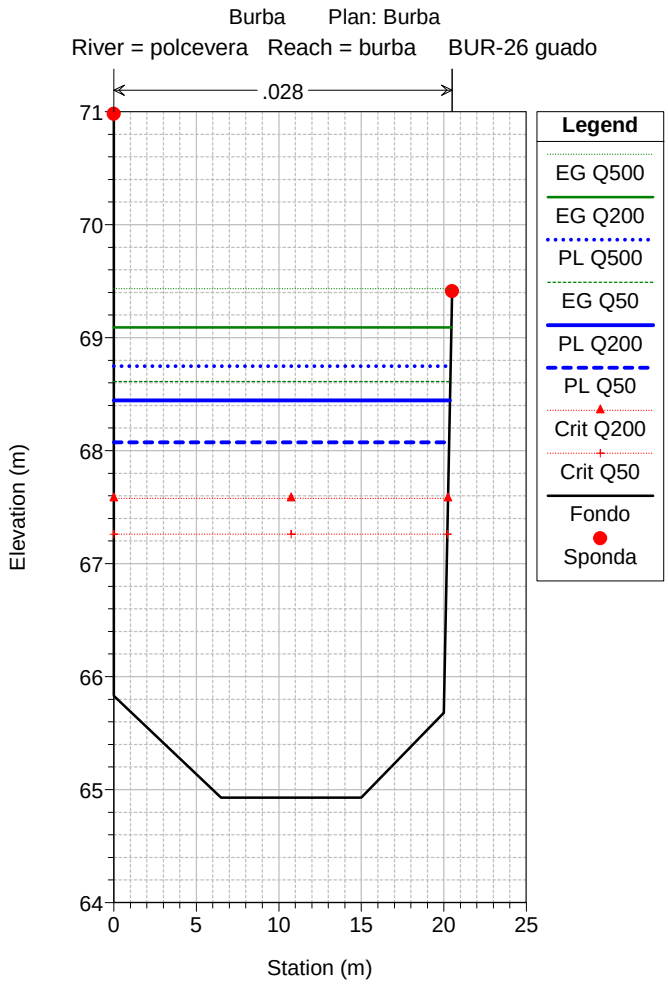
Burba Plan: Burba

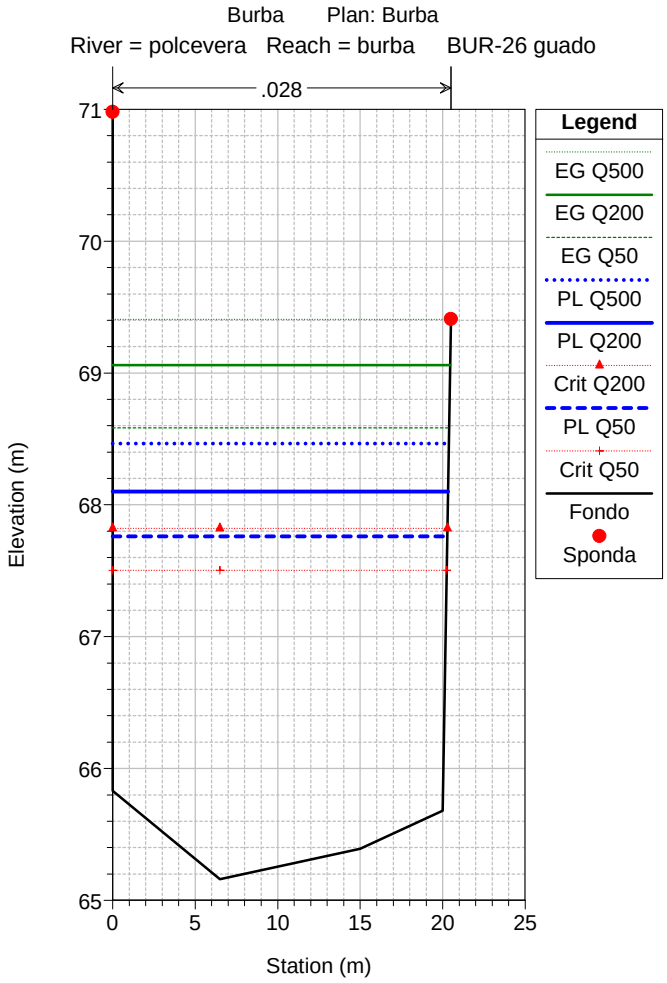
River = polcevera Reach = burba

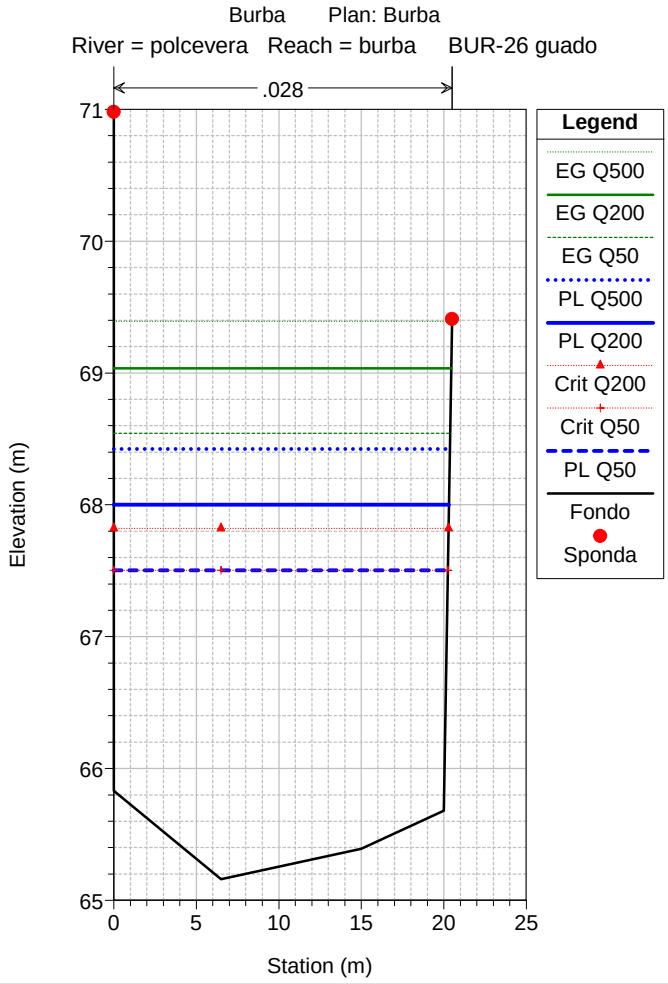


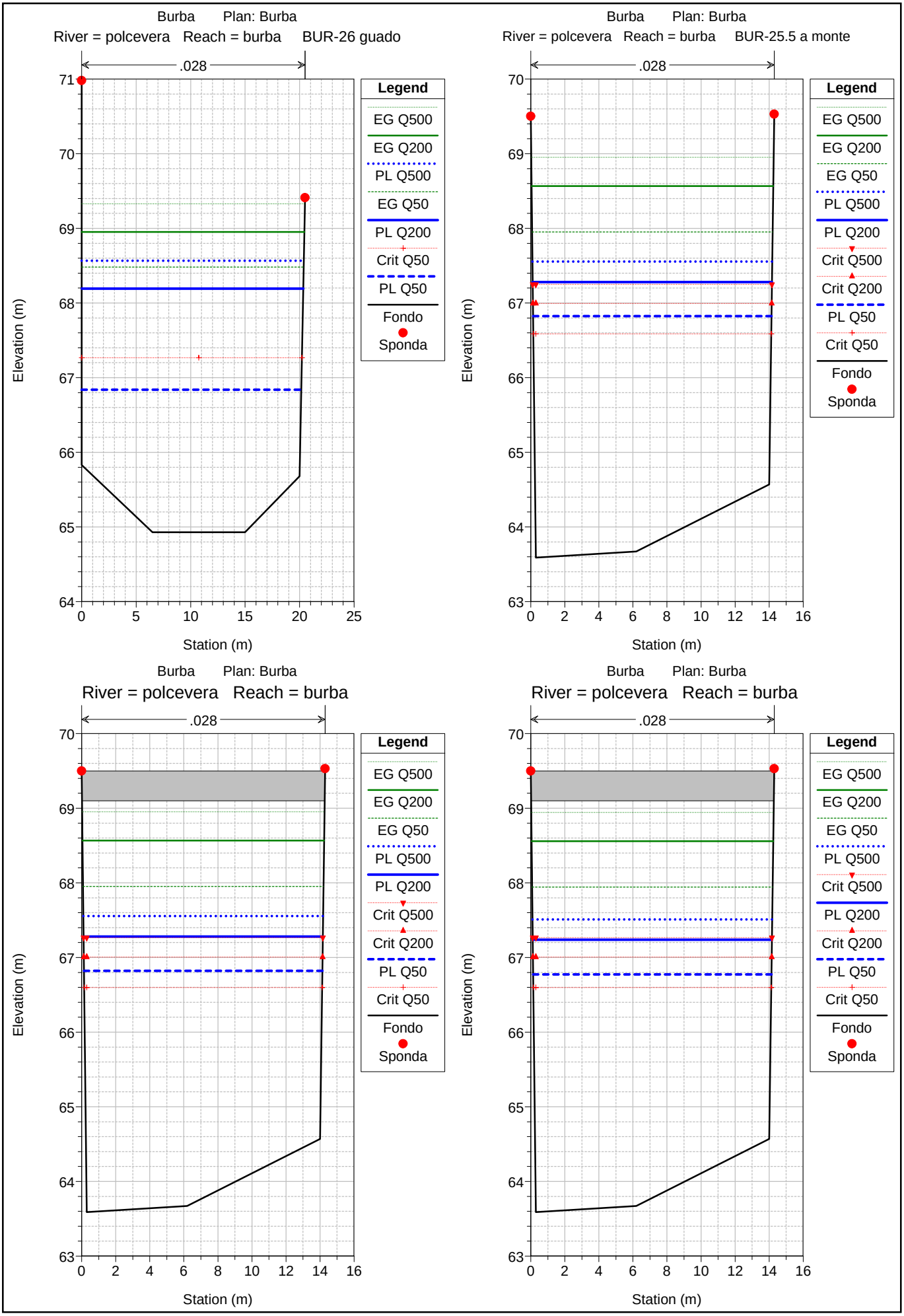

Burba Plan: Burba
River = polcevera Reach = burba BUR-30 a valle p
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Burba Plan: Burba
River = polcevera Reach = burba BUR-29 a monte b
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Burba Plan: Burba
River = polcevera Reach = burba BUR-29 a valle b
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Burba Plan: Burba
River = polcevera Reach = burba BUR-28
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda


Burba Plan: Burba
River = polcevera Reach = burba BUR-27
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda


Burba Plan: Burba
River = polcevera Reach = burba BUR-26 guado
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda

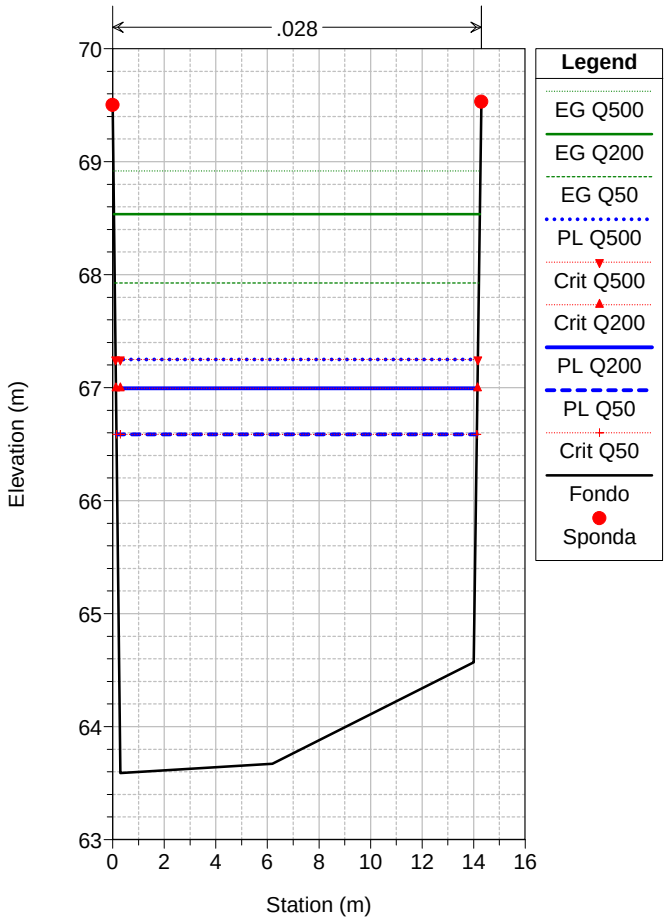

Burba Plan: Burba
River = polcevera Reach = burba BUR-26 guado
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda


Burba Plan: Burba
River = polcevera Reach = burba BUR-26 guado
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda


Burba Plan: Burba
River = polcevera Reach = burba BUR-26 guado
.028
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Burba Plan: Burba
River = polcevera Reach = burba BUR-25.5 a monte
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Burba Plan: Burba
River = polcevera Reach = burba
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Burba Plan: Burba
River = polcevera Reach = burba
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

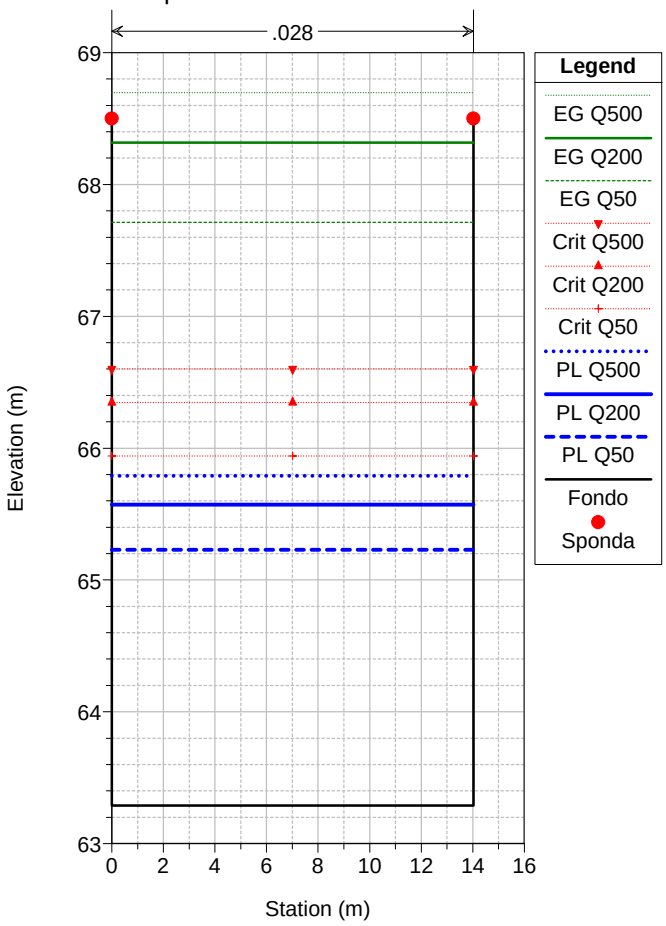
Burba Plan: Burba

River = polcevera Reach = burba BUR-25.5 a valle



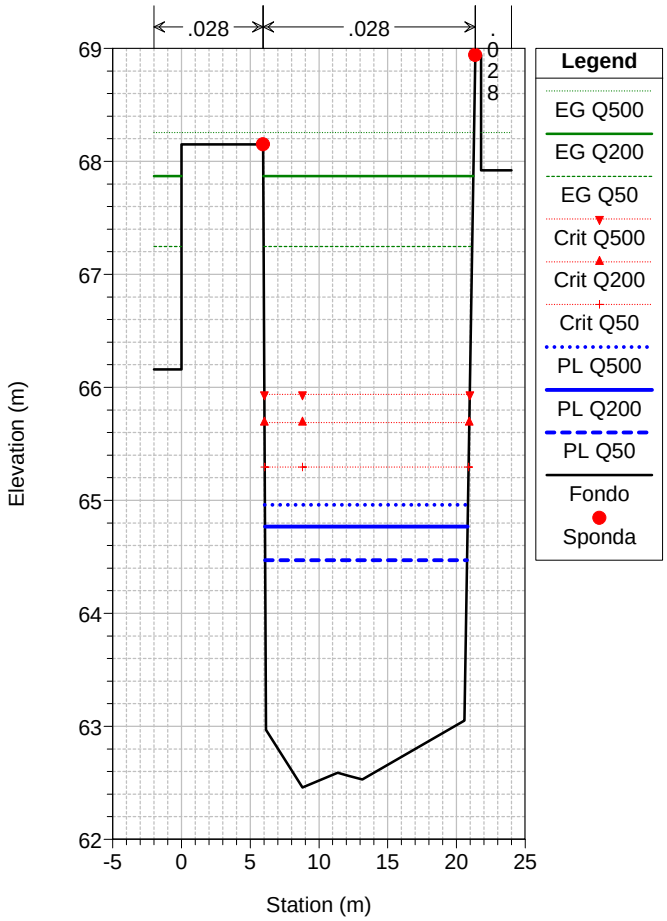
Burba Plan: Burba

River = polcevera Reach = burba BUR-25



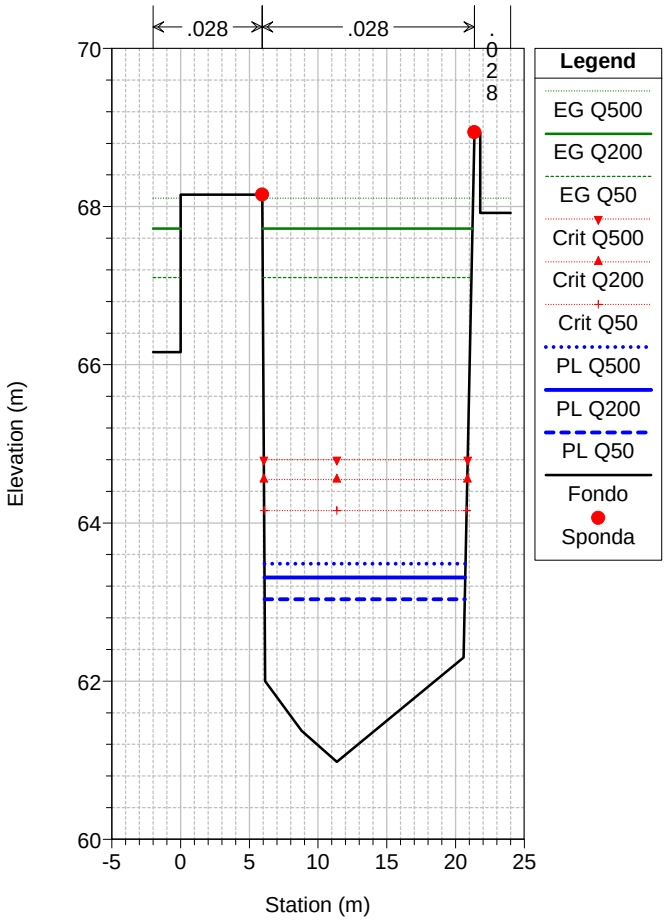
Burba Plan: Burba

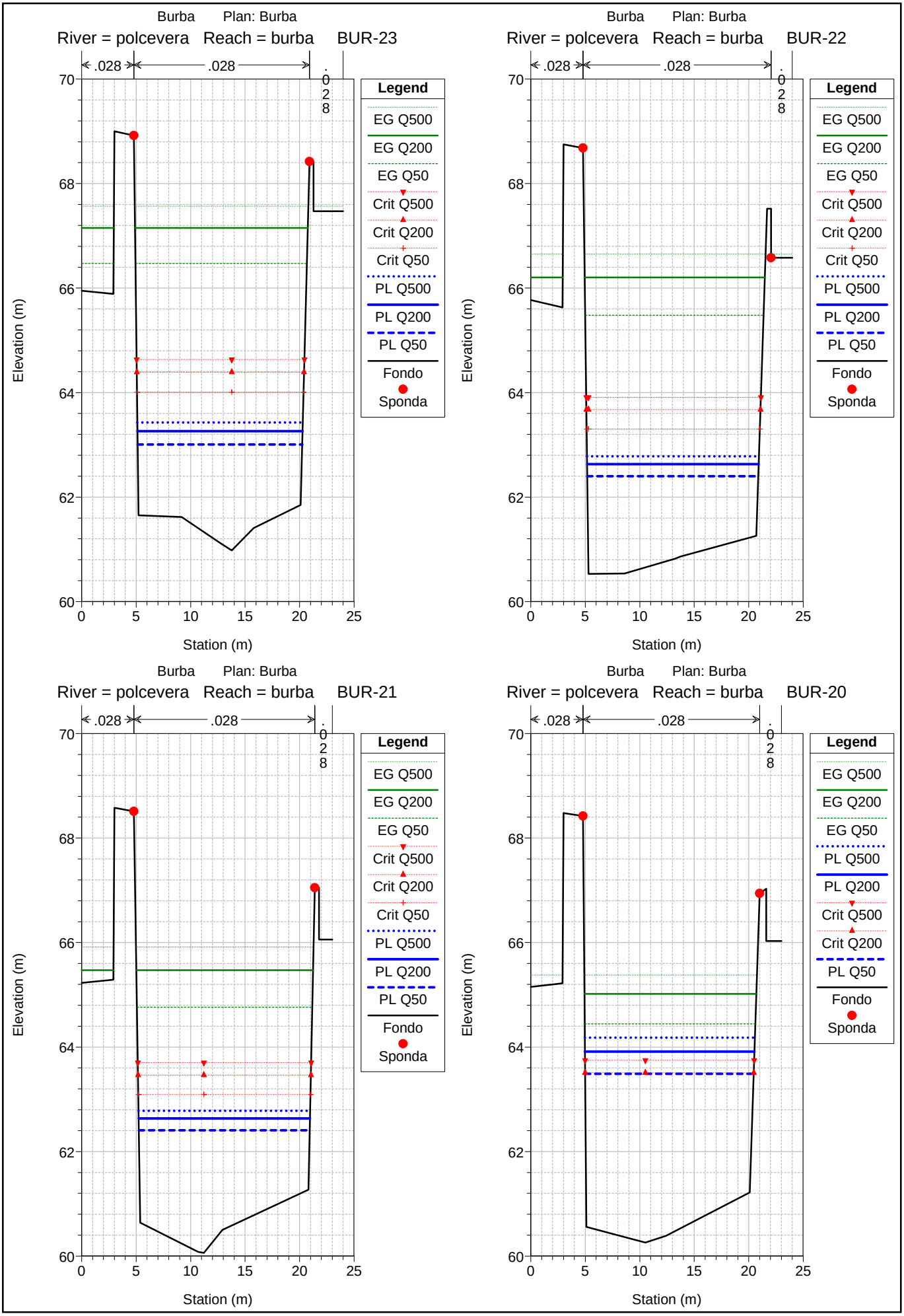
River = polcevera Reach = burba BUR-24 a monte b

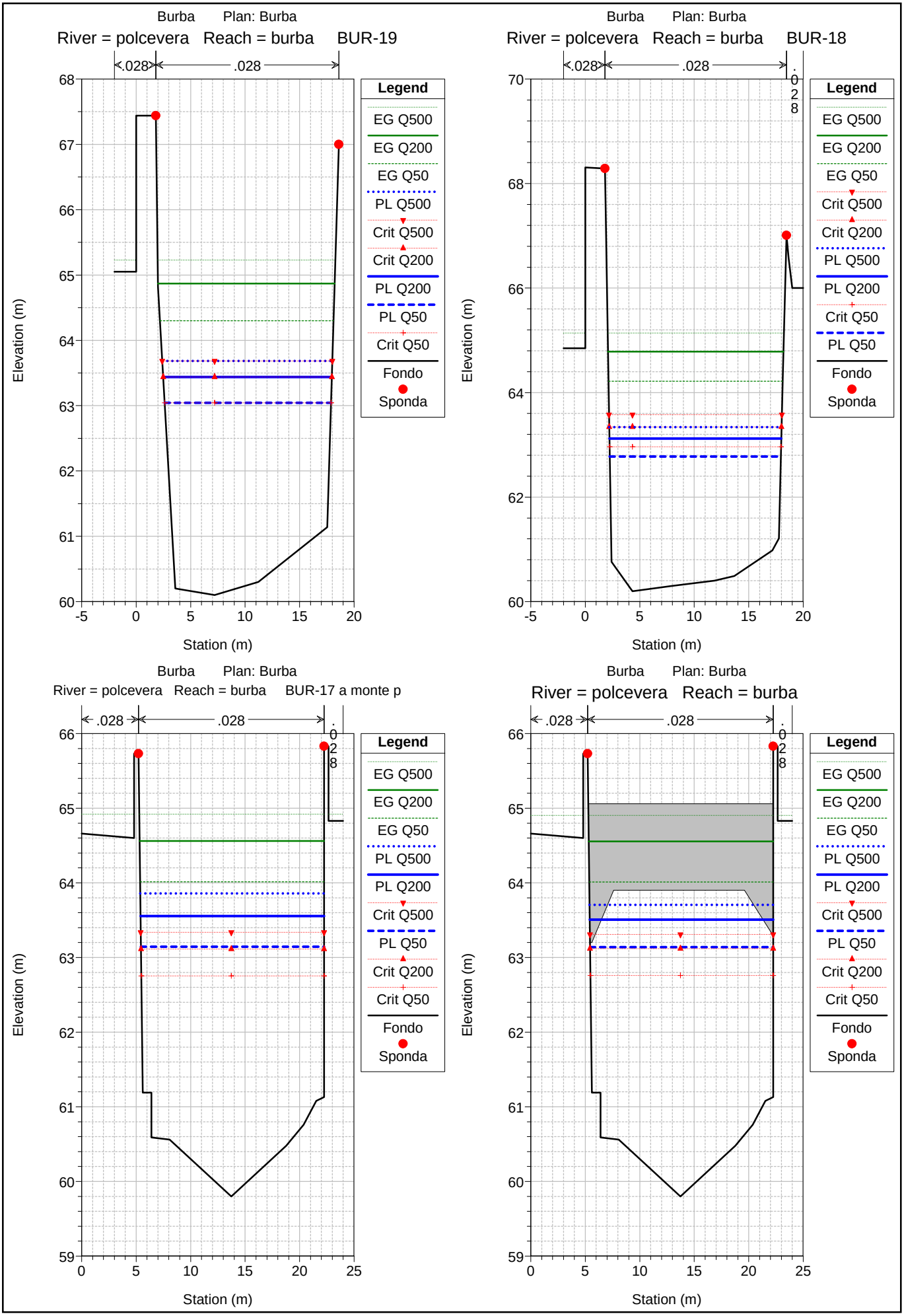


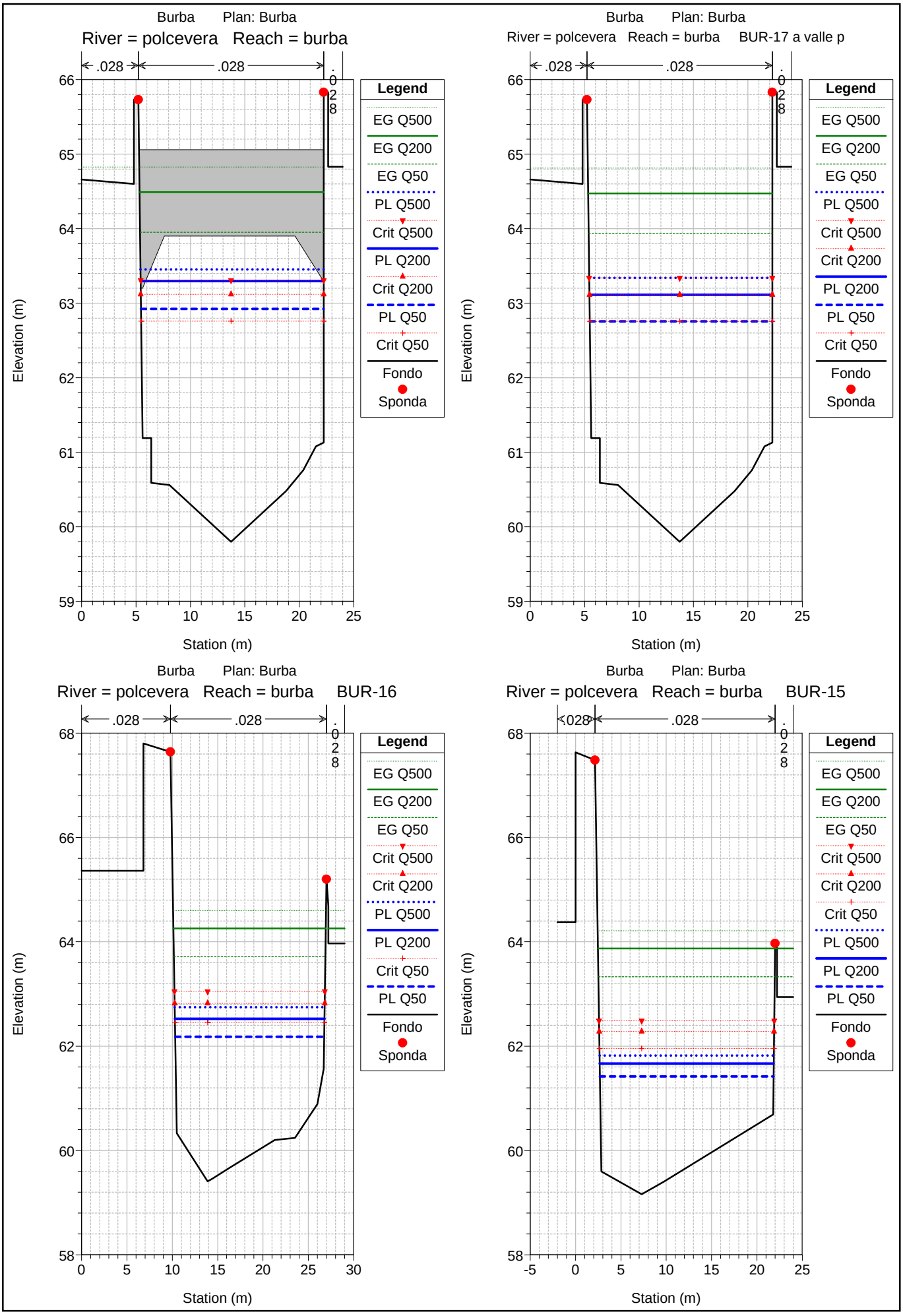
Burba Plan: Burba

River = polcevera Reach = burba BUR-24 a valle b



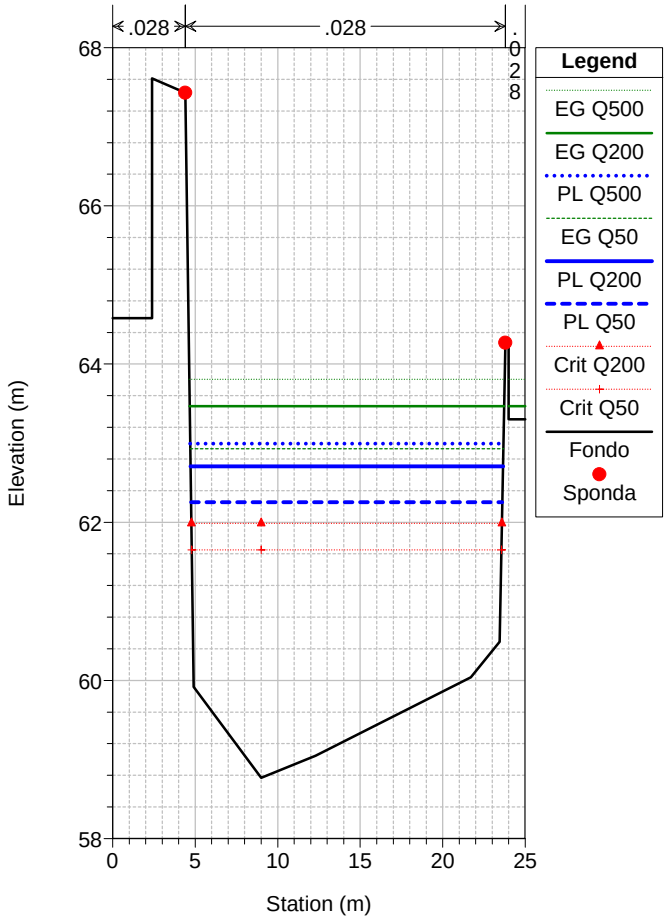

Burba Plan: Burba
River = polcevera Reach = burba BUR-23
.028
.028
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Burba Plan: Burba
River = polcevera Reach = burba BUR-22
Burba Plan: Burba
River = polcevera Reach = burba BUR-21
Burba Plan: Burba
River = polcevera Reach = burba BUR-20


Burba Plan: Burba
River = polcevera Reach = burba BUR-19
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Burba Plan: Burba
River = polcevera Reach = burba BUR-18
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
Burba Plan: Burba
River = polcevera Reach = burba BUR-17 a monte p
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Burba Plan: Burba
River = polcevera Reach = burba
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda


Burba Plan: Burba
River = polcevera Reach = burba
.028
.028
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Burba Plan: Burba
River = polcevera Reach = burba BUR-17 a valle p
Burba Plan: Burba
River = polcevera Reach = burba BUR-16
Burba Plan: Burba
River = polcevera Reach = burba BUR-15

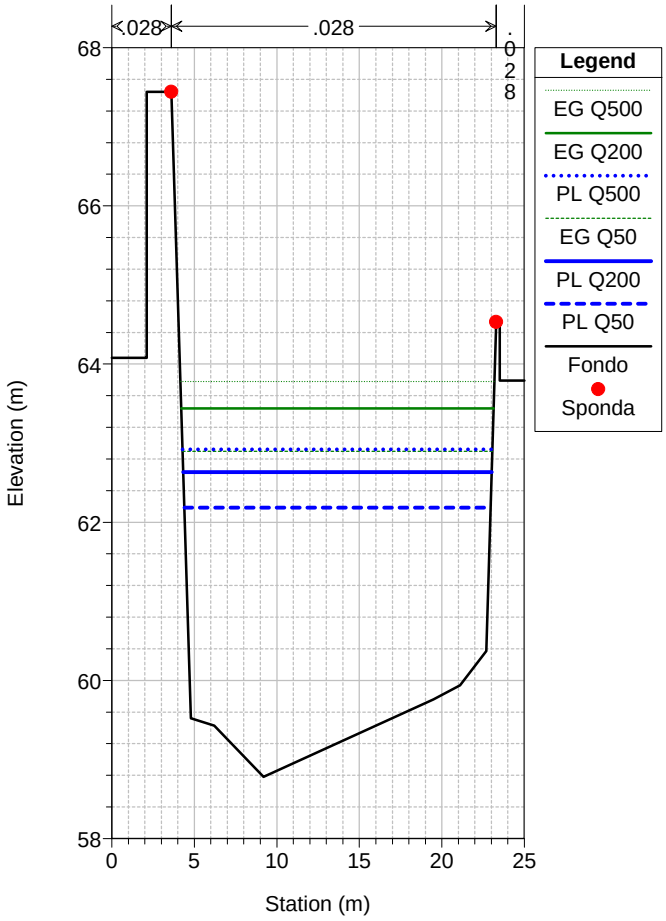
Burba Plan: Burba

River = polcevera Reach = burba BUR-14



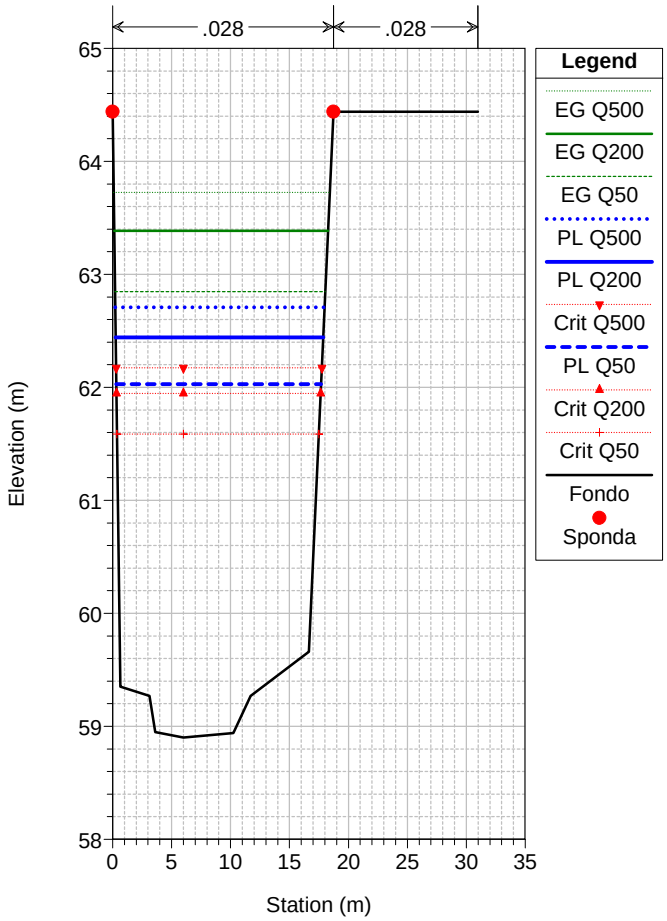
Burba Plan: Burba

River = polcevera Reach = burba BUR-13



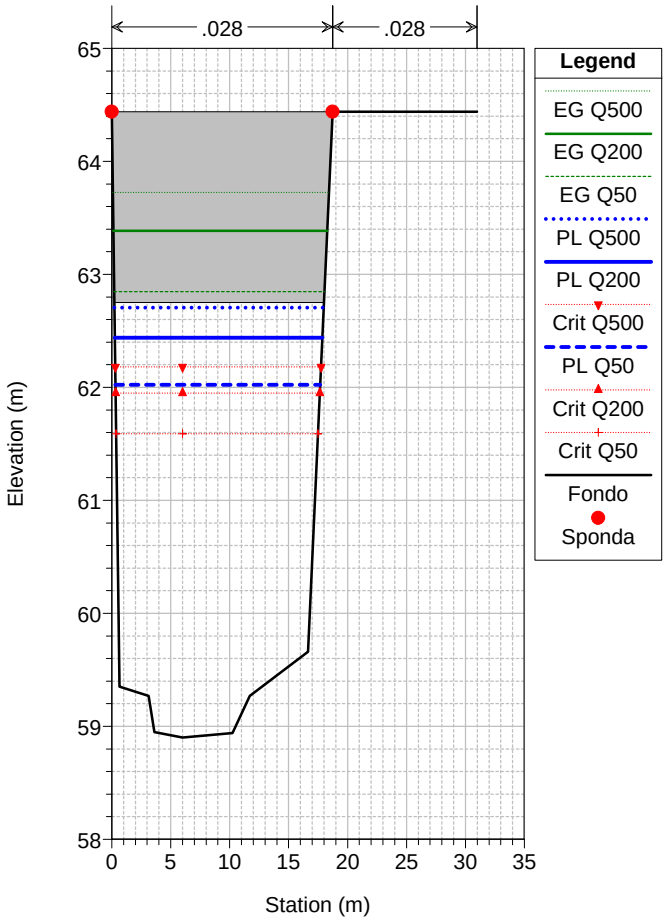
Burba Plan: Burba

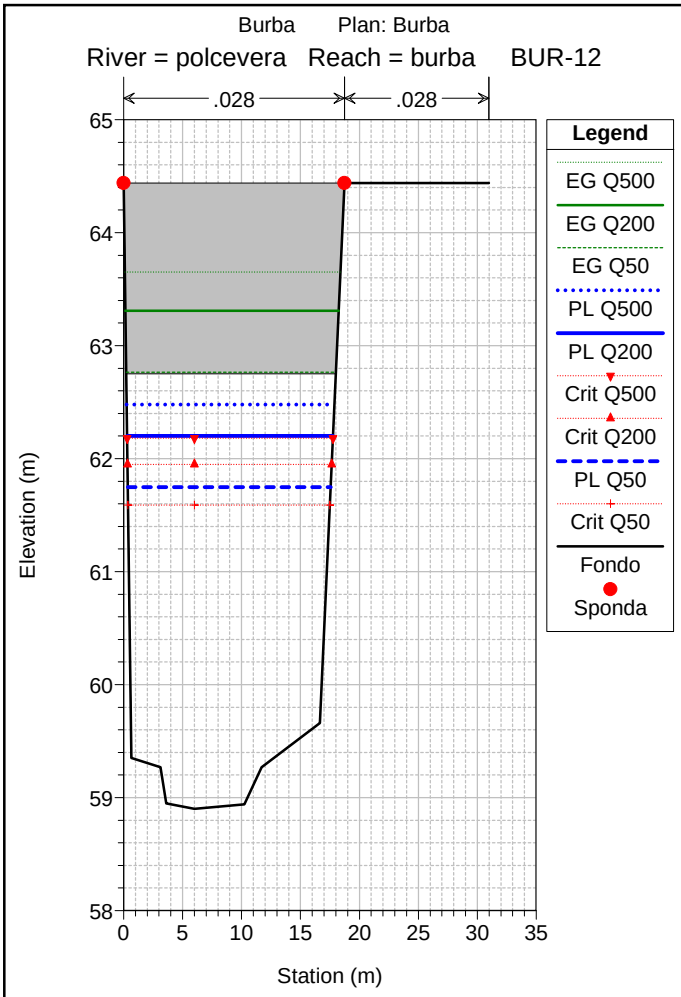
River = polcevera Reach = burba BUR-12 a monte p

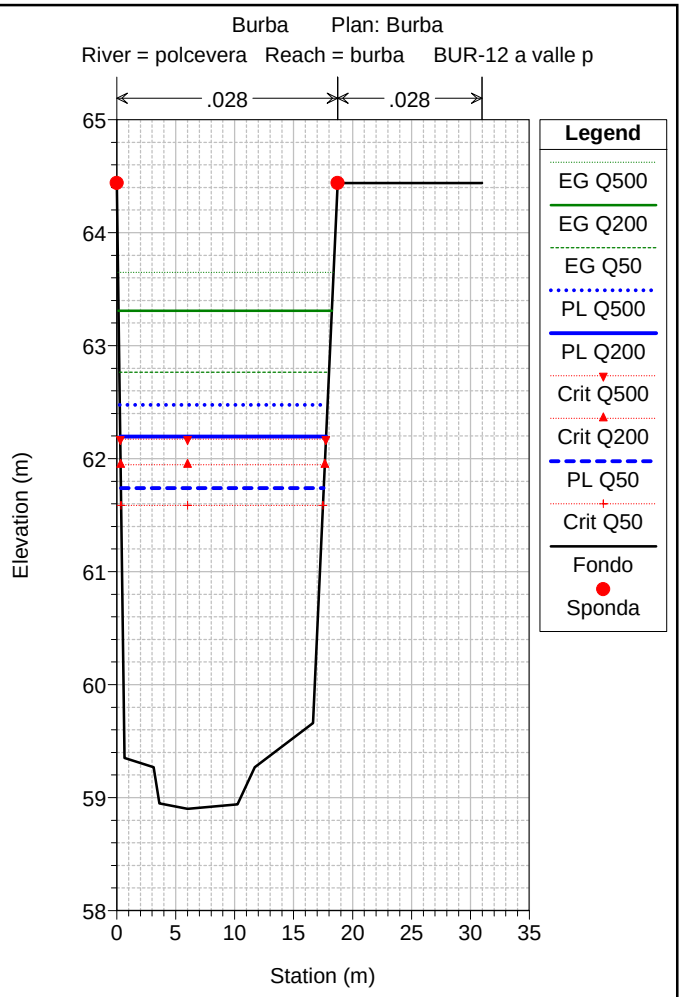


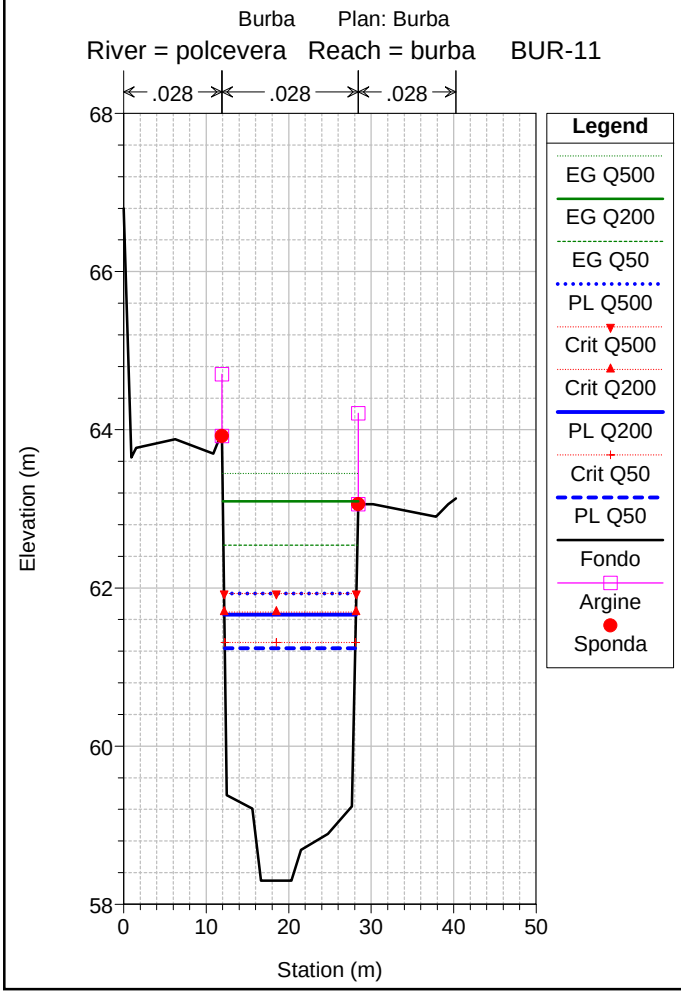
Burba Plan: Burba

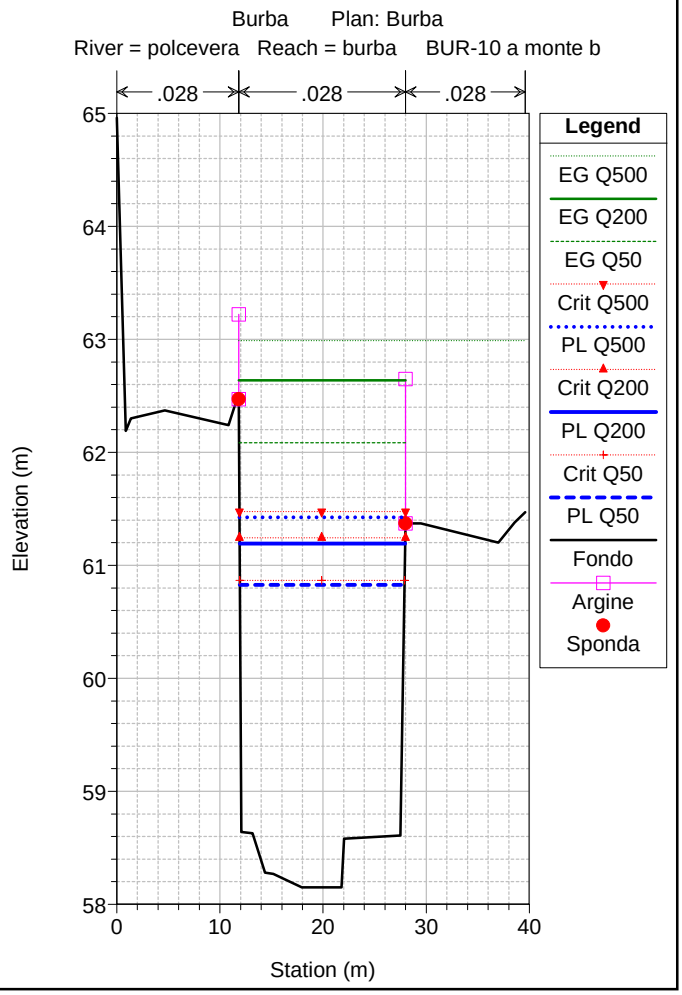
River = polcevera Reach = burba BUR-12

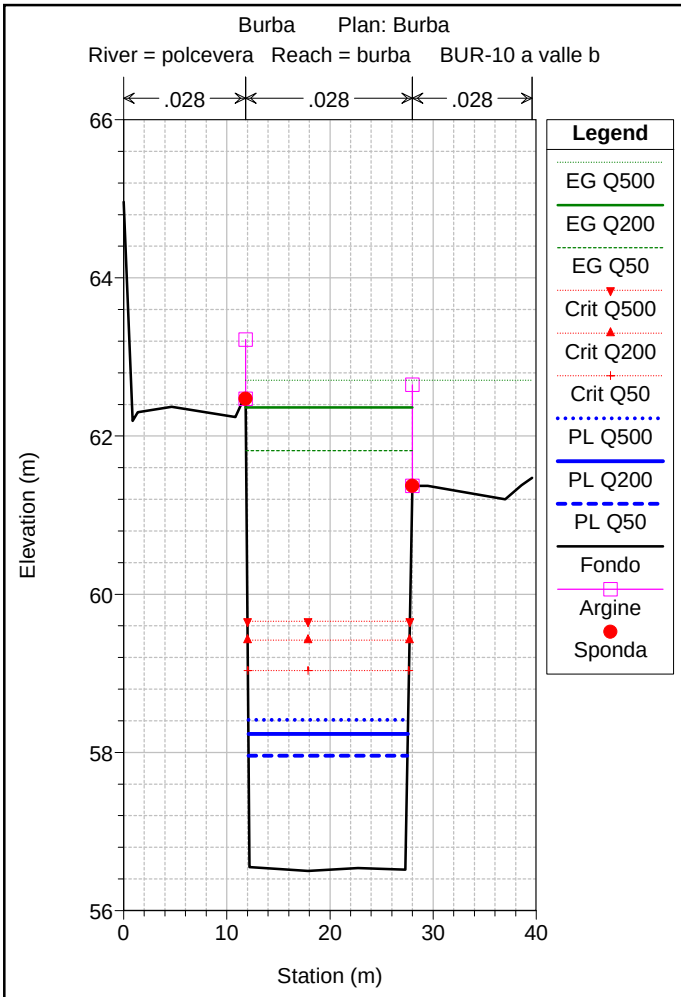


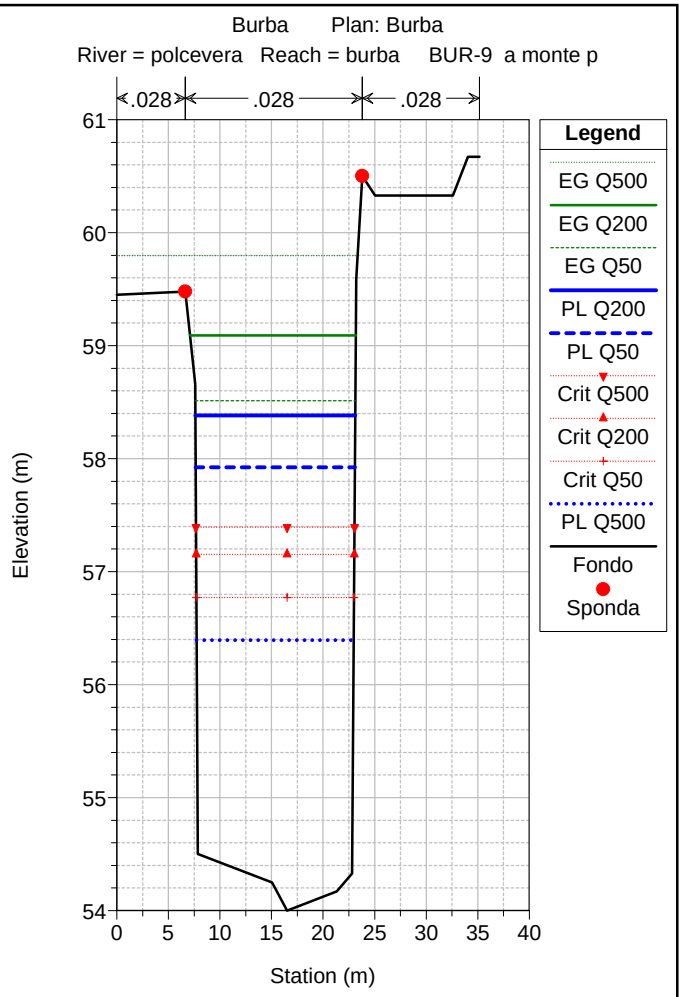

Burba Plan: Burba
River = polcevera Reach = burba BUR-12
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda

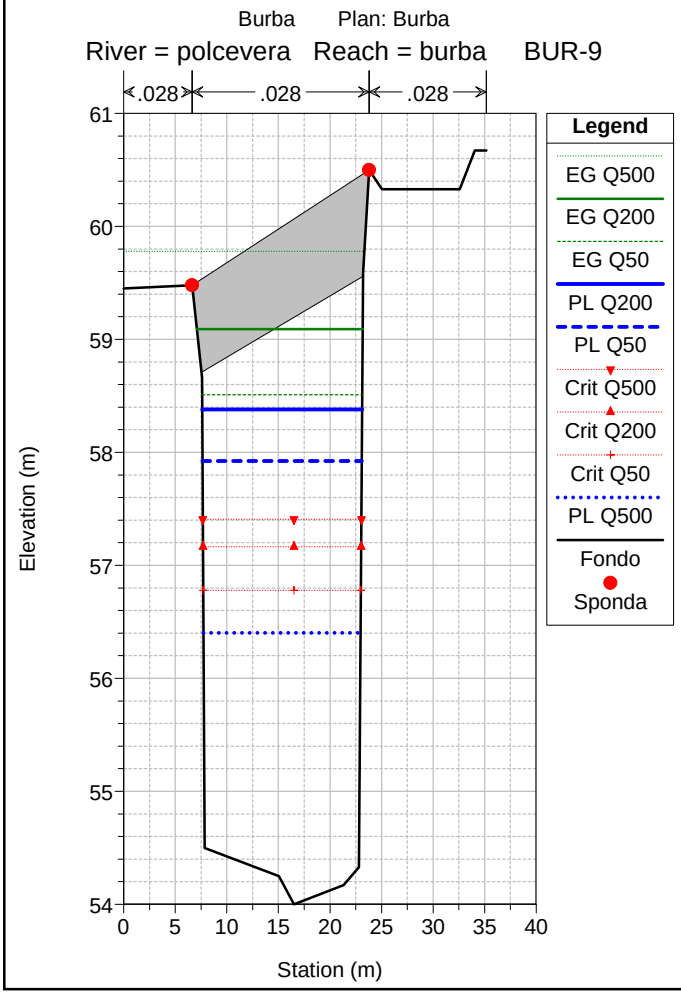

Burba Plan: Burba
River = polcevera Reach = burba BUR-12 a valle p
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda

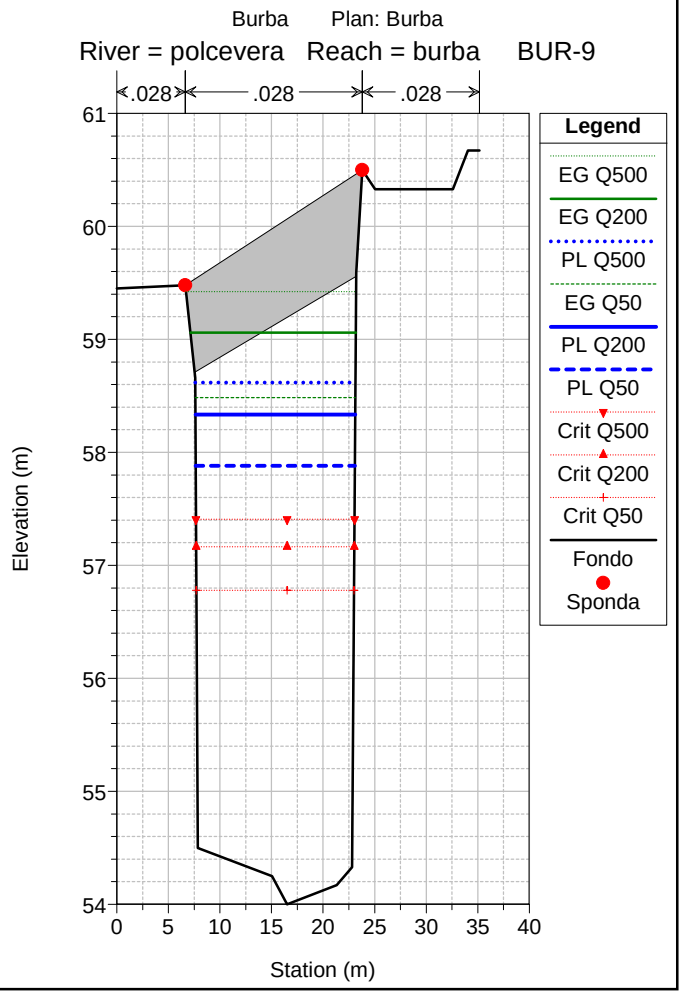

Burba Plan: Burba
River = polcevera Reach = burba BUR-11
.028
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Argine
Sponda

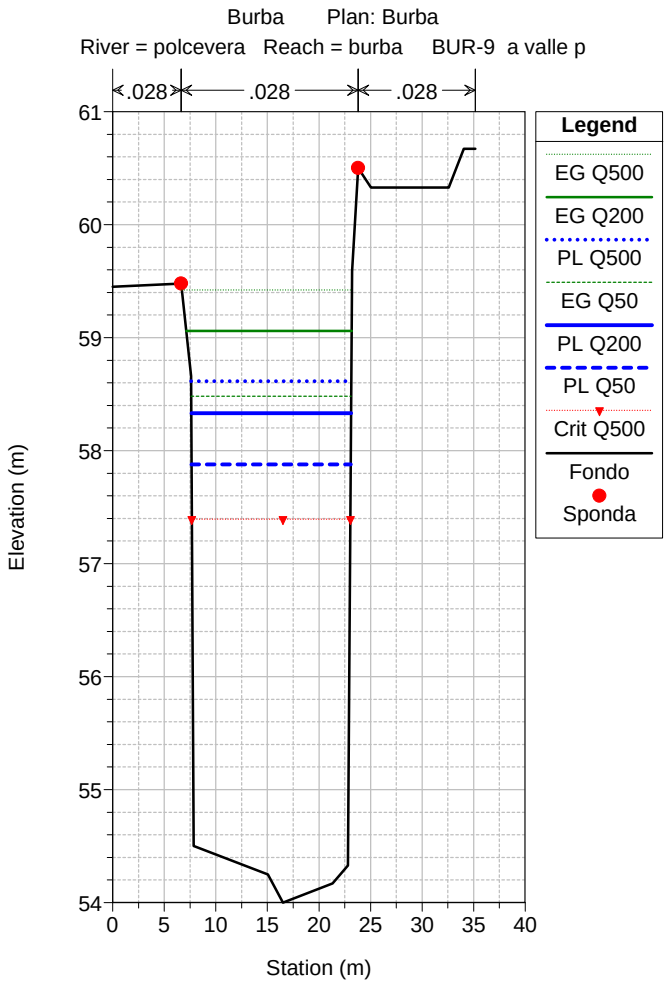

Burba Plan: Burba
River = polcevera Reach = burba BUR-10 a monte b
.028
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Argine
Sponda

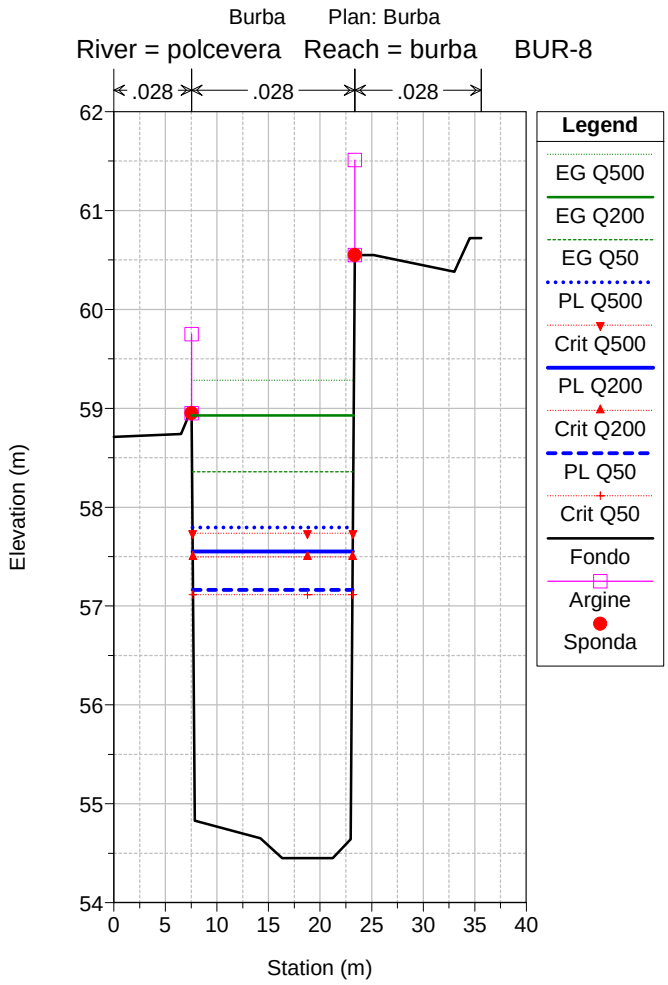

Burba Plan: Burba
River = polcevera Reach = burba BUR-10 a valle b
.028
.028
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

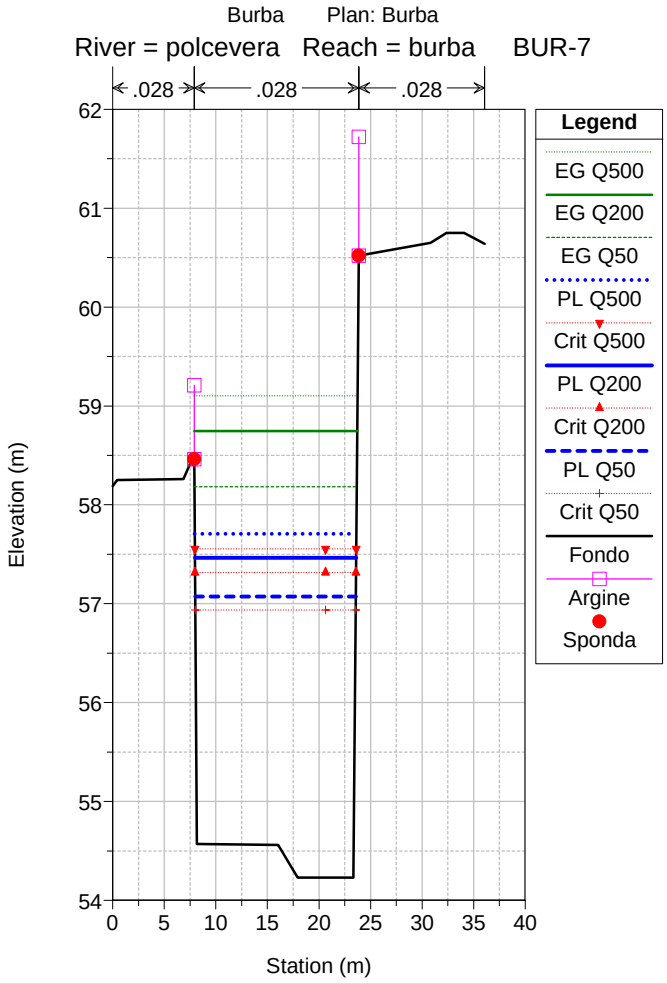

Burba Plan: Burba
River = polcevera Reach = burba BUR-9 a monte p
.028
.028
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
Fondo
Sponda
Elevation (m)
Station (m)

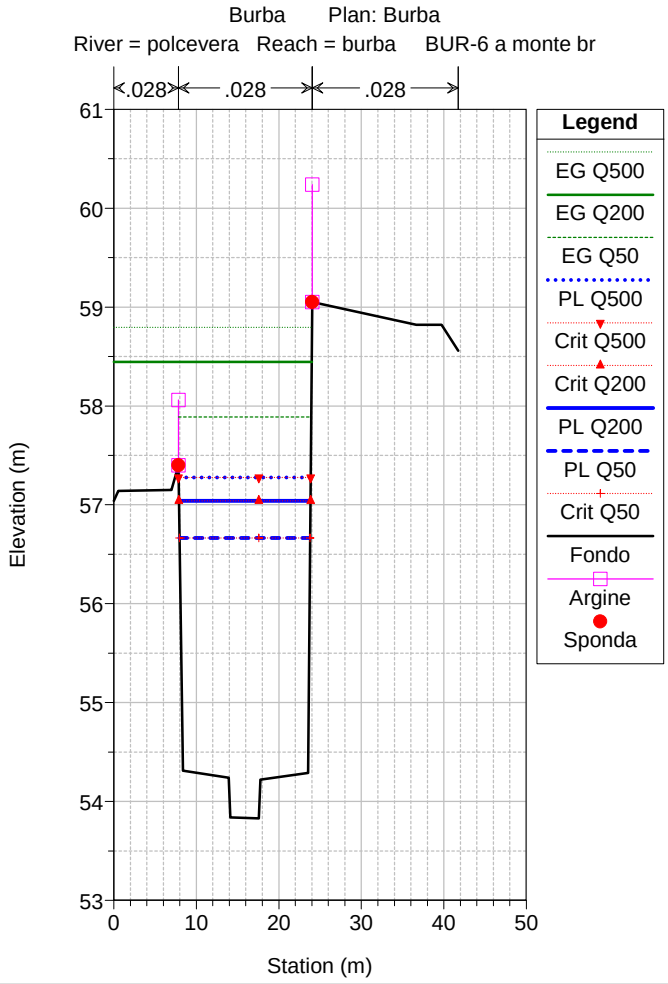

Burba Plan: Burba
River = polcevera Reach = burba BUR-9
.028
.028
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
Fondo
Sponda
Elevation (m)
Station (m)

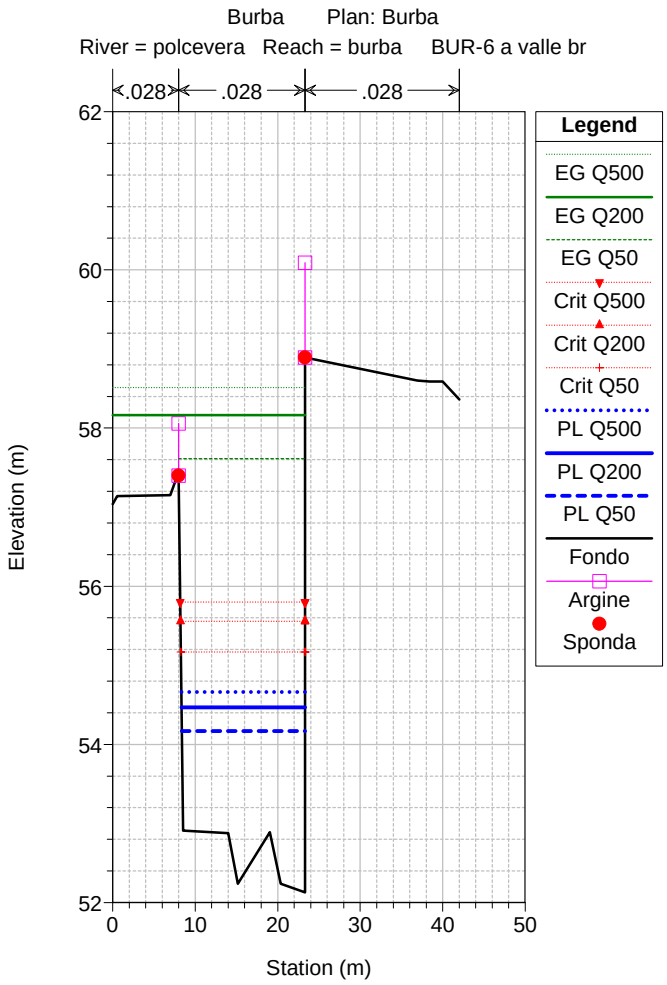

Burba Plan: Burba
River = polcevera Reach = burba BUR-9
.028
.028
.028
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

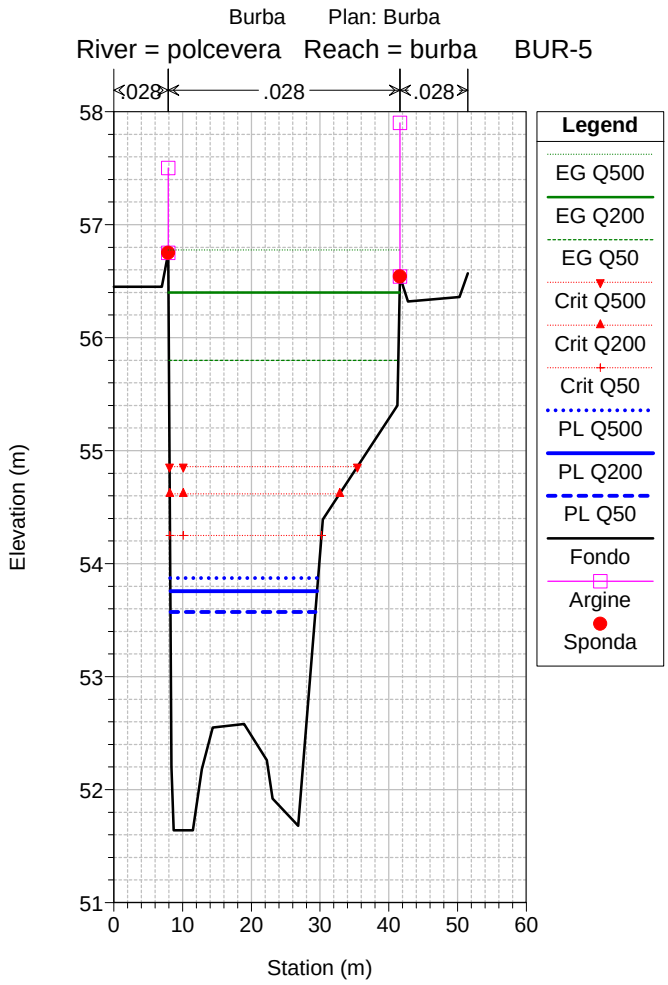

Burba Plan: Burba
River = polcevera Reach = burba BUR-9 a valle p
.028
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Fondo
Sponda

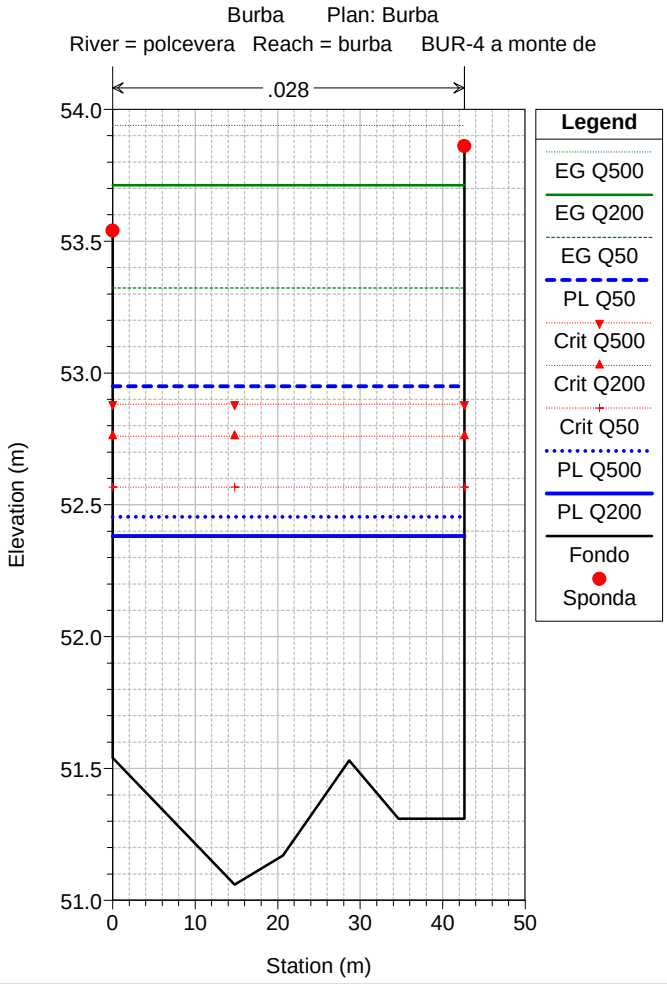

Burba Plan: Burba
River = polcevera Reach = burba BUR-8
.028
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda

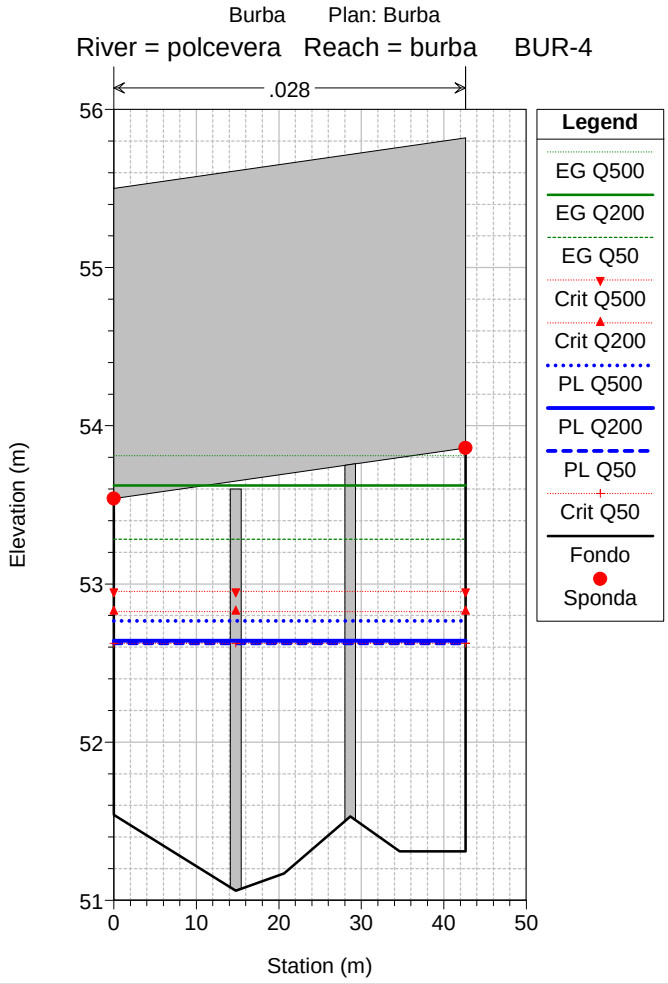

Burba Plan: Burba
River = polcevera Reach = burba BUR-7
.028
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda

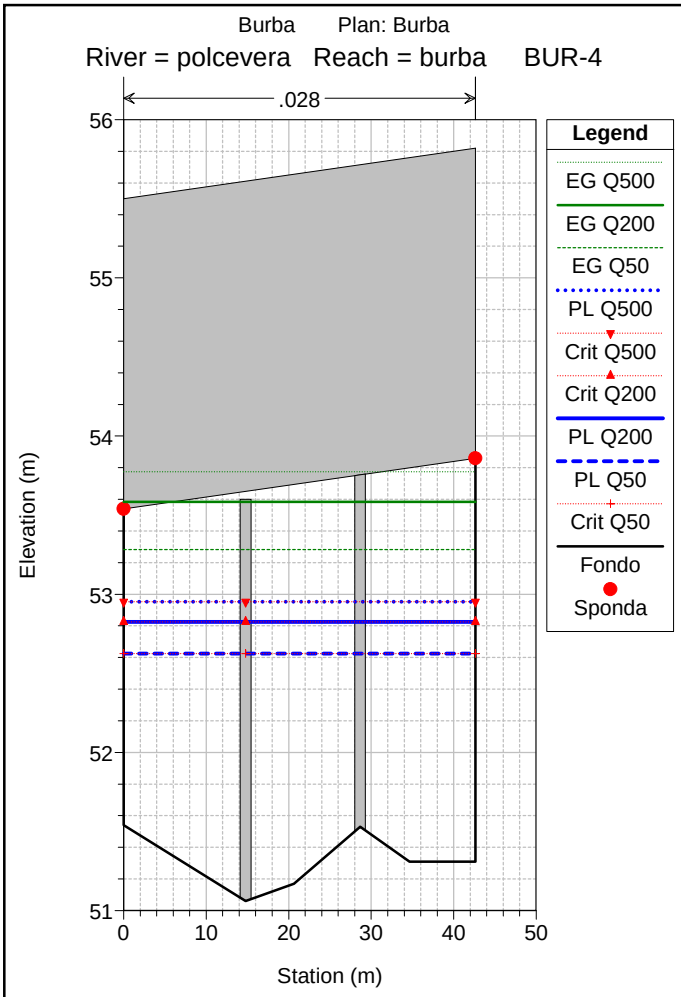

Burba Plan: Burba
River = polcevera Reach = burba BUR-6 a monte br
.028
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda

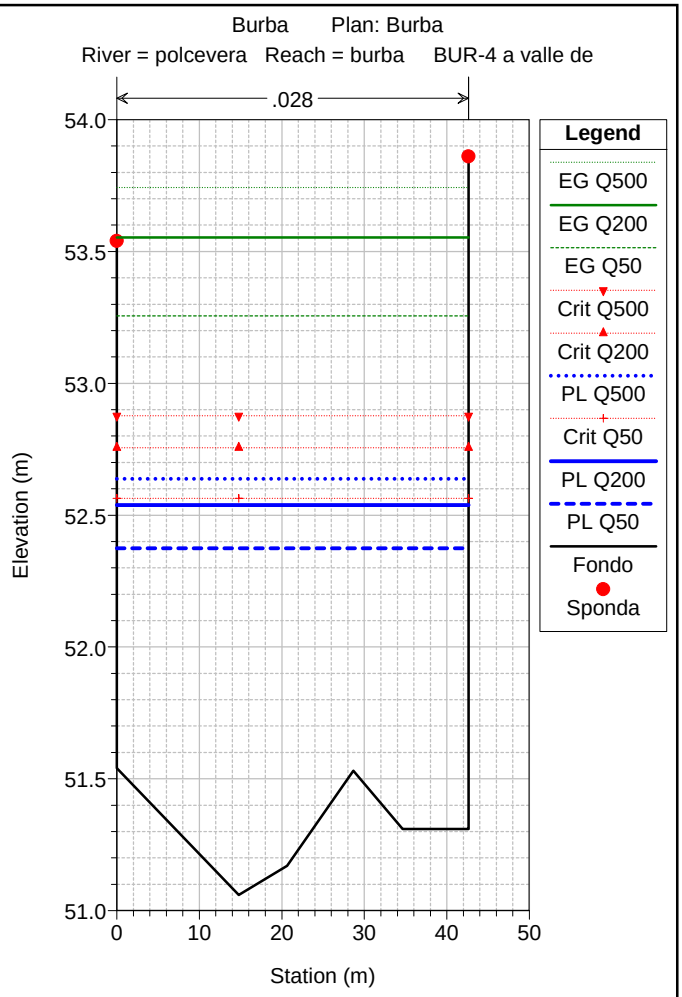

Burba Plan: Burba
River = polcevera Reach = burba BUR-6 a valle br
.028
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda

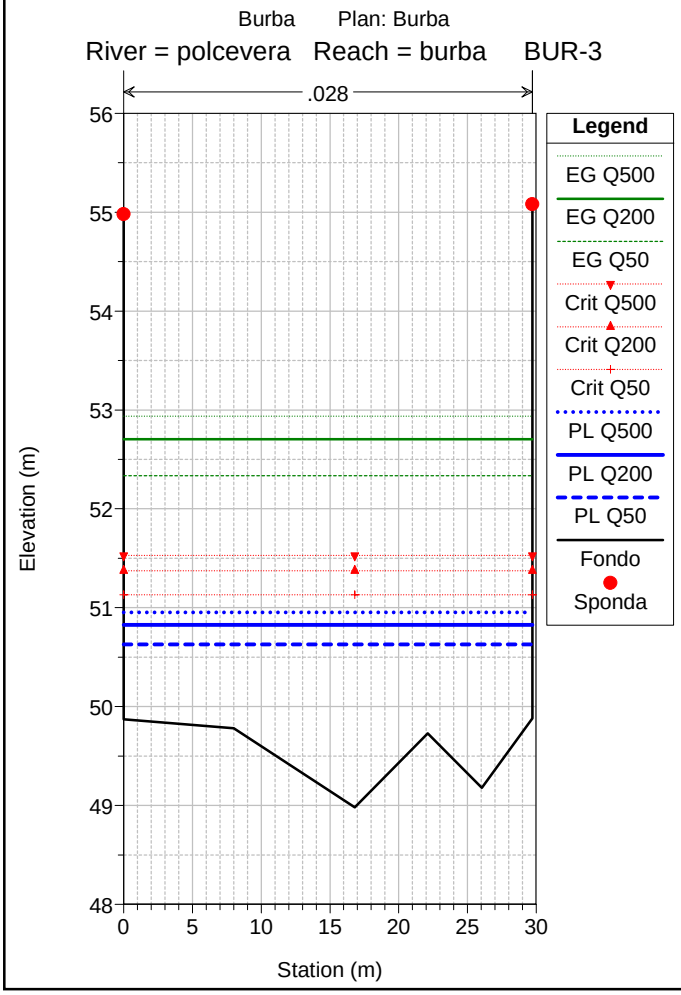

Burba Plan: Burba
River = polcevera Reach = burba BUR-5
.028
.028
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda

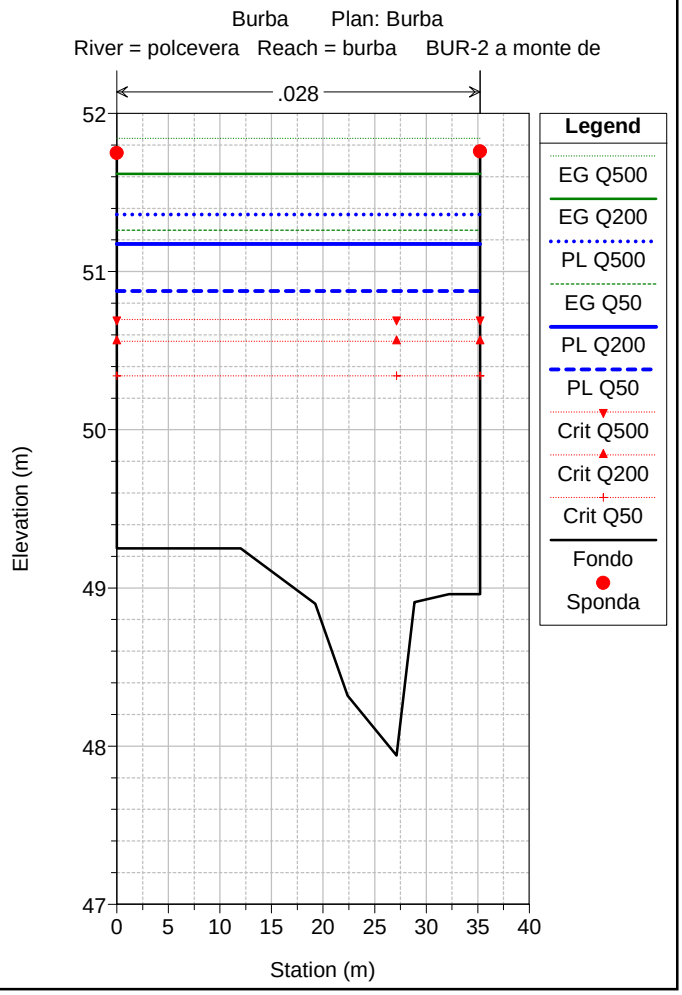

Burba Plan: Burba
River = polcevera Reach = burba BUR-4 a monte de
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
Fondo
Sponda

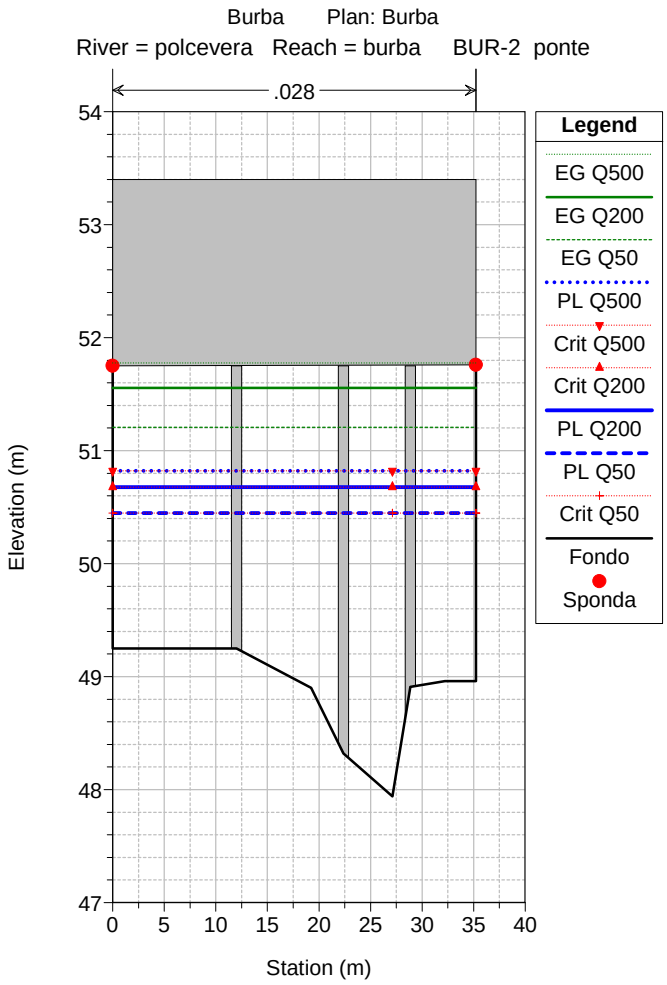

Burba Plan: Burba
River = polcevera Reach = burba BUR-4
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
PL Q50
Crit Q50
Fondo
Sponda

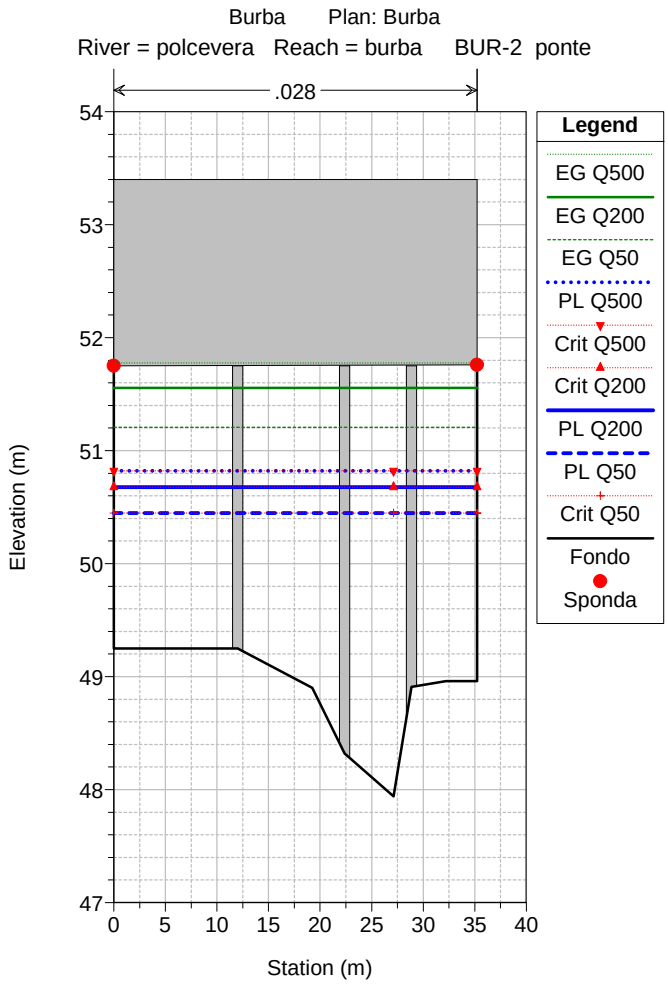

Burba Plan: Burba
River = polcevera Reach = burba BUR-4
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda

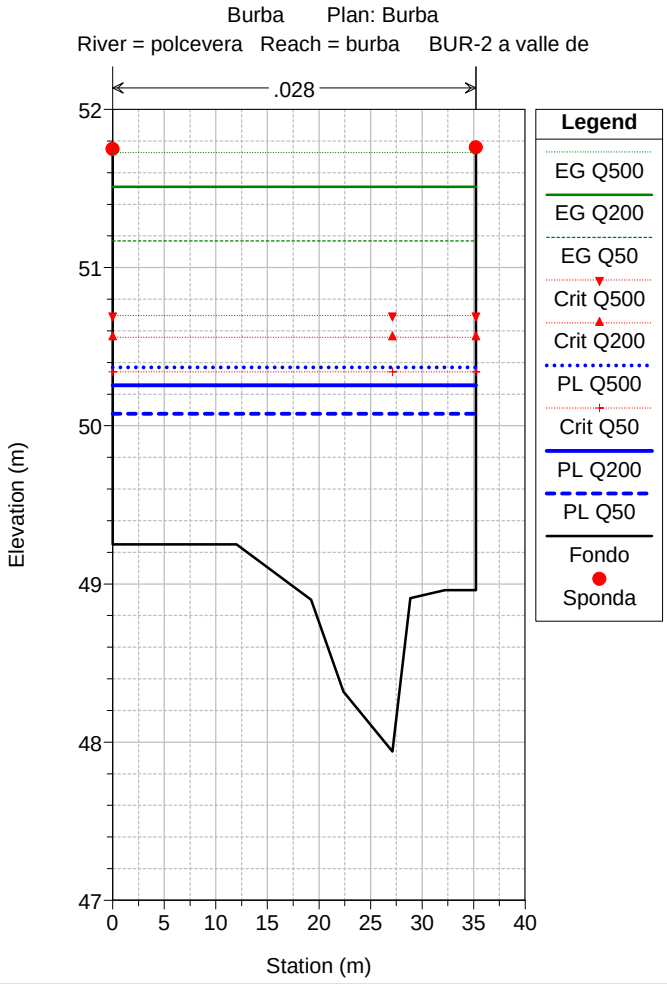

Burba Plan: Burba
River = polcevera Reach = burba BUR-4 a valle de
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda

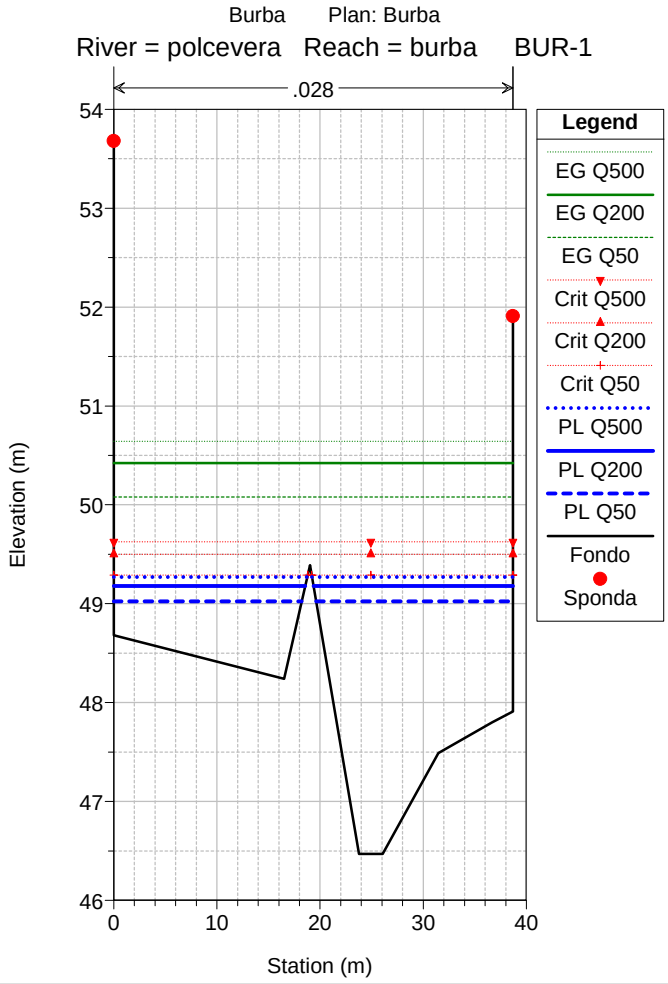

Burba Plan: Burba
River = polcevera Reach = burba BUR-3
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


Burba Plan: Burba
River = polcevera Reach = burba BUR-2 a monte de
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


Burba Plan: Burba
River = polcevera Reach = burba BUR-2 ponte
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Burba Plan: Burba
River = polcevera Reach = burba BUR-2 ponte
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Burba Plan: Burba
River = polcevera Reach = burba BUR-2 a valle de
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Burba Plan: Burba
River = polcevera Reach = burba BUR-1
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

HEC-RAS Plan: Burba River: polcevera Reach: burba

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)	
burba	51 fittizia	Q50	133.00	101.62	105.73	105.66	-0.07	105.69	-0.04	104.61	106.53	0.004669	3.94	33.73	8.20	0.62
burba	51 fittizia	Q200	171.00	101.62	107.21	105.66	-1.55	105.69	-1.52	105.15	107.92	0.003467	3.73	45.81	8.20	0.50
burba	51 fittizia	Q500	199.00	101.62	107.13	105.66	-1.47	105.69	-1.44	105.53	108.12	0.004855	4.40	45.22	8.20	0.60
burba	50.1 BUR-50 a monte p	Q50	133.00	100.62	105.54	104.66	-0.88	104.69	-0.85	103.61	106.09	0.002920	3.30	40.31	8.20	0.48
burba	50.1 BUR-50 a monte p	Q200	171.00	100.62	107.04	104.66	-2.38	104.69	-2.35	104.15	107.58	0.002436	3.25	52.64	8.20	0.41
burba	50.1 BUR-50 a monte p	Q500	199.00	100.62	106.88	104.66	-2.22	104.69	-2.19	104.53	107.64	0.003517	3.88	51.32	8.20	0.49
burba	50 BUR-50		Bridge													
burba	49.9 BUR-50 a valle p	Q50	133.00	100.65	103.37	104.68	1.31	104.67	1.30	103.99	105.78	0.021590	6.89	19.32	8.00	1.41
burba	49.9 BUR-50 a valle p	Q200	171.00	100.65	103.46	104.68	1.22	104.67	1.21	104.54	107.16	0.032083	8.53	20.06	8.00	1.72
burba	49.9 BUR-50 a valle p	Q500	199.00	100.65	103.78	104.68	0.90	104.67	0.89	104.94	107.73	0.031150	8.81	22.59	8.00	1.67
burba	49 BUR-49	Q50	133.00	100.05	102.30	104.45	2.15	104.34	2.04	103.12	105.08	0.032512	7.39	18.00	11.40	1.88
burba	49 BUR-49	Q200	171.00	100.05	102.46	104.45	1.99	104.34	1.88	103.55	106.25	0.040035	8.62	19.83	11.40	2.09
burba	49 BUR-49	Q500	199.00	100.05	102.65	104.45	1.80	104.34	1.69	103.85	106.82	0.039707	9.05	21.99	11.40	2.08
burba	48 BUR-48 a monte b	Q50	133.00	99.92	101.61	101.47	-0.14	101.06	-0.55	102.43	104.39	0.032930	7.39	18.00	12.70	1.98
burba	48 BUR-48 a monte b	Q200	171.00	99.92	101.80	101.47	-0.33	101.06	-0.74	102.84	105.37	0.036893	8.37	20.44	12.70	2.10
burba	48 BUR-48 a monte b	Q500	199.00	99.92	101.97	101.47	-0.50	101.06	-0.91	103.12	105.95	0.037336	8.85	22.50	12.70	2.12
burba	47.9 BUR-48 a valle b	Q50	133.00	97.99	99.50	101.47	1.97	101.06	1.56	100.75	104.18	0.060518	9.58	13.88	10.16	2.62
burba	47.9 BUR-48 a valle b	Q200	171.00	97.99	99.77	101.47	1.70	101.06	1.29	101.22	105.16	0.059150	10.29	16.62	10.50	2.61
burba	47.9 BUR-48 a valle b	Q500	199.00	97.99	99.96	101.47	1.51	101.06	1.10	101.53	105.75	0.057203	10.66	18.67	10.75	2.58
burba	47 BUR-47	Q50	133.00	95.32	97.72	97.54	-0.18	98.62	0.90	98.35	99.91	0.020416	6.55	20.30	12.00	1.61
burba	47 BUR-47	Q200	171.00	95.32	98.02	97.54	-0.48	98.62	0.60	98.78	100.64	0.020850	7.17	23.85	12.00	1.62
burba	47 BUR-47	Q500	199.00	95.32	98.22	97.54	-0.68	98.62	0.40	99.07	101.14	0.021168	7.57	26.29	12.00	1.63
burba	46 BUR-46	Q50	133.00	94.64	97.34	97.14	-0.20	98.09	0.75	97.74	98.95	0.015416	5.62	23.66	14.00	1.38
burba	46 BUR-46	Q200	171.00	94.64	97.58	97.14	-0.44	98.09	0.51	98.13	99.62	0.016922	6.32	27.06	14.00	1.45
burba	46 BUR-46	Q500	199.00	94.64	97.74	97.14	-0.60	98.09	0.35	98.39	100.09	0.017971	6.78	29.33	14.00	1.50
burba	45 BUR-45	Q50	133.00	94.62	96.48	97.64	1.16	97.33	0.85	97.04	98.48	0.020299	6.27	21.21	13.10	1.57
burba	45 BUR-45	Q200	171.00	94.62	96.77	97.64	0.87	97.33	0.56	97.44	99.14	0.020152	6.82	25.08	13.10	1.57
burba	45 BUR-45	Q500	199.00	94.62	96.97	97.64	0.67	97.33	0.36	97.73	99.60	0.020293	7.19	27.68	13.10	1.58
burba	44 BUR-44	Q50	133.00	93.79	97.41	99.00	1.59	96.90	-0.51	95.48	97.60	0.000780	1.90	69.92	19.30	0.32
burba	44 BUR-44	Q200	171.00	93.79	98.09	99.00	0.91	96.90	-1.19	95.79	98.31	0.000936	2.06	83.07	19.30	0.32
burba	44 BUR-44	Q500	199.00	93.79	98.56	99.00	0.44	96.90	-1.66	96.00	98.80	0.000932	2.16	92.14	19.30	0.32
burba	43 BUR-43 sopra sec	Q50	133.00	93.60	96.11	98.91	2.80	96.11	0.00	96.11	97.38	0.009579	4.99	26.66	10.60	1.00
burba	43 BUR-43 sopra sec	Q200	171.00	93.60	96.58	98.91	2.33	96.11	-0.47	96.58	98.07	0.009719	5.41	31.58	10.60	1.00
burba	43 BUR-43 sopra sec	Q500	199.00	93.60	96.89	98.91	2.02	96.11	-0.78	96.89	98.55	0.009901	5.70	34.91	10.60	1.00
burba	42.91 BUR-43 sotto sec	Q50	133.00	92.53	94.16	98.91	4.75	96.11	1.95	95.05	97.19	0.034923	7.72	17.23	10.60	1.93
burba	42.91 BUR-43 sotto sec	Q200	171.00	92.53	94.52	98.91	4.39	96.11	1.59	95.51	97.87	0.031581	8.11	21.07	10.60	1.84
burba	42.91 BUR-43 sotto sec	Q500	199.00	92.53	94.77	98.91	4.14	96.11	1.34	95.83	98.34	0.029981	8.37	23.77	10.60	1.78

HEC-RAS Plan: Burba River: polcevera Reach: burba (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)	
burba	42.9 BUR-43 sotto sec	Q50	133.00	92.53	94.17	98.91	4.74	96.11	1.94	95.05	97.14	0.033681	7.63	17.44	10.60	1.90
burba	42.9 BUR-43 sotto sec	Q200	171.00	92.53	94.54	98.91	4.37	96.11	1.57	95.51	97.82	0.030609	8.03	21.30	10.60	1.81
burba	42.9 BUR-43 sotto sec	Q500	199.00	92.53	94.79	98.91	4.12	96.11	1.32	95.83	98.30	0.029128	8.29	24.00	10.60	1.76
burba	42.8 BUR-43 sotto pri	Q50	133.00	91.00	92.32	98.91	6.59	96.11	3.79	93.52	96.95	0.066470	9.54	13.95	10.60	2.65
burba	42.8 BUR-43 sotto pri	Q200	171.00	91.00	92.63	98.91	6.28	96.11	3.48	93.98	97.63	0.057440	9.91	17.26	10.60	2.48
burba	42.8 BUR-43 sotto pri	Q500	199.00	91.00	92.85	98.91	6.06	96.11	3.26	94.30	98.10	0.053100	10.15	19.60	10.60	2.38
burba	42.1 BUR-42 a monte p	Q50	133.00	90.93	92.18	95.31	3.13	95.16	2.98	93.30	96.49	0.064246	9.20	14.45	11.60	2.63
burba	42.1 BUR-42 a monte p	Q200	171.00	90.93	92.45	95.31	2.86	95.16	2.71	93.74	97.26	0.057875	9.72	17.60	11.60	2.52
burba	42.1 BUR-42 a monte p	Q500	199.00	90.93	92.64	95.31	2.67	95.16	2.52	94.03	97.77	0.054482	10.03	19.83	11.60	2.45
burba	42 BUR-42		Bridge													
burba	41.9 BUR-42 a valle p	Q50	133.00	90.93	92.28	95.31	3.03	95.16	2.88	93.30	95.96	0.050289	8.50	15.64	11.60	2.34
burba	41.9 BUR-42 a valle p	Q200	171.00	90.93	92.55	95.31	2.76	95.16	2.61	93.74	96.76	0.047303	9.09	18.80	11.60	2.28
burba	41.9 BUR-42 a valle p	Q500	199.00	90.93	92.74	95.31	2.57	95.16	2.42	94.03	97.30	0.045503	9.45	21.05	11.60	2.24
burba	41 BUR-41 a monte b	Q50	133.00	89.31	90.58	97.91	7.33	95.26	4.68	91.82	95.49	0.073271	9.82	13.54	10.70	2.79
burba	41 BUR-41 a monte b	Q200	171.00	89.31	90.85	97.91	7.06	95.26	4.41	92.27	96.32	0.066089	10.36	16.51	10.70	2.66
burba	41 BUR-41 a monte b	Q500	199.00	89.31	91.05	97.91	6.86	95.26	4.21	92.59	96.86	0.062191	10.68	18.63	10.70	2.58
burba	40.9 BUR-41 a valle b	Q50	133.00	87.36	88.43	97.91	9.48	95.26	6.83	89.87	95.25	0.121631	11.57	11.50	10.70	3.56
burba	40.9 BUR-41 a valle b	Q200	171.00	87.36	88.69	97.91	9.22	95.26	6.57	90.32	96.08	0.104899	12.05	14.19	10.70	3.34
burba	40.9 BUR-41 a valle b	Q500	199.00	87.36	88.87	97.91	9.04	95.26	6.39	90.64	96.63	0.096349	12.35	16.12	10.70	3.21
burba	40 BUR-40	Q50	133.00	87.50	88.33	97.75	9.42	94.38	6.05	89.19	91.86	0.078083	8.33	15.97	19.30	2.92
burba	40 BUR-40	Q200	171.00	87.50	88.45	97.75	9.30	94.38	5.93	89.49	92.87	0.082467	9.32	18.36	19.30	3.05
burba	40 BUR-40	Q500	199.00	87.50	88.54	97.75	9.21	94.38	5.84	89.71	93.56	0.084203	9.93	20.04	19.30	3.11
burba	39.1 BUR-39 a monte p	Q50	133.00	87.26	90.35	92.66	2.31	92.92	2.57	88.86	90.56	0.001035	2.05	64.83	21.00	0.37
burba	39.1 BUR-39 a monte p	Q200	171.00	87.26	90.89	92.66	1.77	92.92	2.03	89.15	91.15	0.001052	2.24	76.20	21.00	0.38
burba	39.1 BUR-39 a monte p	Q500	199.00	87.26	91.26	92.66	1.40	92.92	1.66	89.35	91.55	0.001066	2.37	84.00	21.00	0.38
burba	39 BUR-39		Bridge													
burba	38.9 BUR-39 a valle p	Q50	133.00	87.26	90.34	92.66	2.32	92.92	2.58		90.56	0.001041	2.06	64.70	21.00	0.37
burba	38.9 BUR-39 a valle p	Q200	171.00	87.26	90.88	92.66	1.78	92.92	2.04		91.13	0.001062	2.25	75.95	21.00	0.38
burba	38.9 BUR-39 a valle p	Q500	199.00	87.26	91.24	92.66	1.42	92.92	1.68		91.53	0.001082	2.38	83.58	21.00	0.38
burba	38 BUR-38	Q50	133.00	86.51	89.32	89.97	0.65	92.57	3.25	89.32	90.36	0.007785	4.52	29.42	14.14	1.00
burba	38 BUR-38	Q200	171.00	86.51	89.71	89.97	0.26	92.57	2.86	89.71	90.93	0.007723	4.88	35.01	14.48	1.00
burba	38 BUR-38	Q500	199.00	86.51	89.97	89.97	0.00	92.57	2.60	89.97	91.31	0.007800	5.14	38.72	14.70	1.01
burba	37 BUR-37 a monte b	Q50	133.00	85.60	87.13	89.88	2.75	92.44	5.31	87.69	89.04	0.026880	6.12	21.74	18.00	1.78
burba	37 BUR-37 a monte b	Q200	171.00	85.60	87.34	89.88	2.54	92.44	5.10	88.01	89.63	0.026742	6.70	25.53	18.00	1.80
burba	37 BUR-37 a monte b	Q500	199.00	85.60	87.49	89.88	2.39	92.44	4.95	88.24	90.03	0.026534	7.06	28.18	18.00	1.80
burba	36.9 BUR-37 a valle b	Q50	133.00	84.58	85.49	89.88	4.39	92.44	6.95	86.35	88.87	0.067400	8.15	16.32	18.00	2.73
burba	36.9 BUR-37 a valle b	Q200	171.00	84.58	85.68	89.88	4.20	92.44	6.76	86.67	89.46	0.059438	8.61	19.86	18.00	2.62

HEC-RAS Plan: Burba River: polcevera Reach: burba (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)	
burba	36.9 BUR-37 a valle b	Q500	199.00	84.58	85.82	89.88	4.06	92.44	6.62	86.89	89.86	0.055321	8.90	22.35	18.00	2.55
burba	36.1 BUR-36 a monte p	Q50	133.00	83.20	86.06	87.79	1.73	88.03	1.97	85.42	86.73	0.004152	3.63	36.67	12.80	0.68
burba	36.1 BUR-36 a monte p	Q200	171.00	83.20	86.57	87.79	1.22	88.03	1.46	85.82	87.37	0.004277	3.96	43.17	12.80	0.69
burba	36.1 BUR-36 a monte p	Q500	199.00	83.20	86.95	87.79	0.84	88.03	1.08	86.10	87.82	0.004291	4.15	47.95	12.80	0.68
burba	36 BUR-36		Bridge													
burba	35.9 BUR-36 a valle p	Q50	133.00	83.20	86.01	87.39	1.38	88.03	2.02	85.42	86.71	0.004382	3.69	36.00	12.80	0.70
burba	35.9 BUR-36 a valle p	Q200	171.00	83.20	86.52	87.39	0.87	88.03	1.51	85.82	87.34	0.004481	4.03	42.47	12.80	0.71
burba	35.9 BUR-36 a valle p	Q500	199.00	83.20	86.87	87.39	0.52	88.03	1.16	86.10	87.78	0.004546	4.24	46.98	12.80	0.71
burba	35 BUR-35 a monte b	Q50	133.00	83.18	85.47	87.39	1.92	85.51	0.04	85.47	86.62	0.009010	4.76	27.93	12.20	1.00
burba	35 BUR-35 a monte b	Q200	171.00	83.18	85.89	87.39	1.50	85.51	-0.38	85.89	87.25	0.009021	5.16	33.11	12.20	1.00
burba	35 BUR-35 a monte b	Q500	199.00	83.18	86.17	87.39	1.22	85.51	-0.66	86.17	87.69	0.009175	5.45	36.54	12.20	1.00
burba	34.9 BUR-35 a valle b	Q50	133.00	82.65	84.31	87.39	3.08	85.51	1.20	84.94	86.51	0.023828	6.58	20.22	12.20	1.63
burba	34.9 BUR-35 a valle b	Q200	171.00	82.65	84.66	87.39	2.73	85.51	0.85	85.36	87.13	0.021899	6.97	24.55	12.20	1.57
burba	34.9 BUR-35 a valle b	Q500	199.00	82.65	84.91	87.39	2.48	85.51	0.60	85.65	87.56	0.020986	7.22	27.56	12.20	1.53
burba	34 BUR-34	Q50	133.00	81.70	83.37	85.50	2.13	90.50	7.13	83.47	84.37	0.009656	4.42	30.12	18.00	1.09
burba	34 BUR-34	Q200	171.00	81.70	83.66	85.50	1.84	90.50	6.84	83.79	84.86	0.009833	4.86	35.20	18.00	1.11
burba	34 BUR-34	Q500	199.00	81.70	83.83	85.50	1.67	90.50	6.67	84.01	85.20	0.010305	5.20	38.25	18.00	1.14
burba	33.9	Q50	133.00	80.50	81.52	85.50	3.98	90.50	8.98	82.27	84.18	0.045834	7.22	18.41	18.00	2.28
burba	33.9	Q200	171.00	80.50	81.76	85.50	3.74	90.50	8.74	82.59	84.67	0.039425	7.57	22.60	18.00	2.16
burba	33.9	Q500	199.00	80.50	81.92	85.50	3.58	90.50	8.58	82.81	85.01	0.036352	7.80	25.53	18.00	2.09
burba	33 BUR-33	Q50	133.00	79.68	81.22	83.50	2.28	83.80	2.58	81.39	82.16	0.011240	4.30	30.96	23.90	1.20
burba	33 BUR-33	Q200	171.00	79.68	81.40	83.50	2.10	83.80	2.40	81.67	82.60	0.012491	4.86	35.15	24.18	1.29
burba	33 BUR-33	Q500	199.00	79.68	81.49	83.50	2.01	83.80	2.31	81.85	82.93	0.013922	5.32	37.42	24.32	1.37
burba	32.5 BUR-32.5	Q50	133.00	78.10	80.77	80.90	0.13	83.41	2.64		81.31	0.003185	3.23	41.15	17.07	0.66
burba	32.5 BUR-32.5	Q200	171.00	78.10	81.30	80.90	-0.40	83.41	2.11		81.89	0.002898	3.40	50.26	17.23	0.64
burba	32.5 BUR-32.5	Q500	199.00	78.10	81.68	80.90	-0.78	83.41	1.73		82.30	0.002751	3.51	56.71	17.34	0.62
burba	32 BUR-32	Q50	133.00	77.74	80.30	80.40	0.10	82.60	2.30		81.14	0.005679	4.05	32.81	13.30	0.82
burba	32 BUR-32	Q200	171.00	77.74	80.63	80.40	-0.23	82.60	1.97	80.39	81.71	0.006481	4.60	37.21	13.30	0.88
burba	32 BUR-32	Q500	199.00	77.74	80.85	80.40	-0.45	82.60	1.75	80.67	82.10	0.007072	4.97	40.07	13.30	0.91
burba	31 BUR-31	Q50	133.00	77.40	79.90	80.63	0.73	80.97	1.07	79.90	80.87	0.008393	4.37	30.42	15.80	1.01
burba	31 BUR-31	Q200	171.00	77.40	80.26	80.63	0.37	80.97	0.71	80.26	81.40	0.008255	4.74	36.06	15.80	1.00
burba	31 BUR-31	Q500	199.00	77.40	80.50	80.63	0.13	80.97	0.47	80.50	81.77	0.008216	4.98	39.92	15.80	1.00
burba	30.1 BUR-30 a monte p	Q50	133.00	76.42	78.34	80.73	2.39	80.75	2.41	78.96	80.47	0.024867	6.47	20.57	13.80	1.69
burba	30.1 BUR-30 a monte p	Q200	171.00	76.42	78.68	80.73	2.05	80.75	2.07	79.35	81.02	0.022015	6.78	25.20	13.80	1.60
burba	30.1 BUR-30 a monte p	Q500	199.00	76.42	80.47	80.73	0.26	80.75	0.28	79.61	81.28	0.003912	3.98	49.96	13.80	0.67
burba	30		Bridge													

HEC-RAS Plan: Burba River: polcevera Reach: burba (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)	
burba	29.9 BUR-30 a valle p	Q50	133.00	76.42	78.61	80.73	2.12	80.75	2.14	78.96	80.14	0.014914	5.48	24.29	13.80	1.32
burba	29.9 BUR-30 a valle p	Q200	171.00	76.42	78.93	80.73	1.80	80.75	1.82	79.35	80.74	0.014824	5.96	28.71	13.80	1.32
burba	29.9 BUR-30 a valle p	Q500	199.00	76.42	79.15	80.73	1.58	80.75	1.60	79.62	81.15	0.014811	6.27	31.76	13.80	1.32
burba	29 BUR-29 a monte b	Q50	133.00	75.60	76.84	79.60	2.76	78.10	1.26	77.37	78.66	0.025093	5.98	22.24	18.00	1.72
burba	29 BUR-29 a monte b	Q200	171.00	75.60	77.04	79.60	2.56	78.10	1.06	77.69	79.26	0.025656	6.60	25.89	18.00	1.76
burba	29 BUR-29 a monte b	Q500	199.00	75.60	77.18	79.60	2.42	78.10	0.92	77.92	79.67	0.025855	7.00	28.45	18.00	1.78
burba	28.9 BUR-29 a valle b	Q50	133.00	71.50	72.18	79.60	7.42	78.10	5.92	73.27	78.21	0.171296	10.88	12.22	18.00	4.21
burba	28.9 BUR-29 a valle b	Q200	171.00	71.50	72.34	79.60	7.26	78.10	5.76	73.59	78.81	0.140784	11.27	15.18	18.00	3.92
burba	28.9 BUR-29 a valle b	Q500	199.00	71.50	72.46	79.60	7.14	78.10	5.64	73.82	79.22	0.125843	11.52	17.27	18.00	3.75
burba	28. BUR-28	Q50	190.00	69.40	71.45	77.50	6.05	74.90	3.45	71.45	72.25	0.006971	3.97	47.86	30.16	1.01
burba	28. BUR-28	Q200	235.00	69.40	71.72	77.50	5.78	74.90	3.18	71.72	72.61	0.006744	4.17	56.31	32.08	1.01
burba	28. BUR-28	Q500	265.00	69.40	71.89	77.50	5.61	74.90	3.01	71.89	72.83	0.006625	4.29	61.76	33.29	1.01
burba	27. BUR-27	Q50	190.00	65.54	68.56	68.65	0.09	70.53	1.97	68.82	69.83	0.011131	4.98	38.13	21.89	1.21
burba	27. BUR-27	Q200	235.00	65.54	68.76	68.65	-0.11	70.53	1.77	69.11	70.30	0.013046	5.51	42.66	23.70	1.31
burba	27. BUR-27	Q500	265.00	65.54	68.91	68.65	-0.26	70.53	1.62	69.29	70.58	0.012794	5.72	46.33	23.70	1.31
burba	26.3 BUR-26 guado	Q50	190.00	64.93	68.07	70.98	2.91	69.41	1.34	67.26	68.61	0.002637	3.25	58.45	20.32	0.61
burba	26.3 BUR-26 guado	Q200	235.00	64.93	68.44	70.98	2.54	69.41	0.97	67.58	69.09	0.002801	3.56	65.99	20.37	0.63
burba	26.3 BUR-26 guado	Q500	265.00	64.93	68.75	70.98	2.23	69.41	0.66		69.43	0.002729	3.67	72.16	20.41	0.62
burba	26.2 BUR-26 guado	Q50	190.00	65.16	67.76	70.98	3.22	69.41	1.65	67.50	68.58	0.005149	4.02	47.28	20.28	0.84
burba	26.2 BUR-26 guado	Q200	235.00	65.16	68.10	70.98	2.88	69.41	1.31	67.82	69.06	0.005186	4.34	54.20	20.32	0.85
burba	26.2 BUR-26 guado	Q500	265.00	65.16	68.46	70.98	2.52	69.41	0.95		69.41	0.004479	4.30	61.58	20.37	0.79
burba	26.1 BUR-26 guado	Q50	190.00	65.16	67.50	70.98	3.48	69.41	1.91	67.50	68.54	0.007385	4.52	42.06	20.24	1.00
burba	26.1 BUR-26 guado	Q200	235.00	65.16	68.00	70.98	2.98	69.41	1.41	67.82	69.04	0.005831	4.51	52.15	20.31	0.90
burba	26.1 BUR-26 guado	Q500	265.00	65.16	68.42	70.98	2.56	69.41	0.99		69.39	0.004671	4.36	60.73	20.37	0.81
burba	26. BUR-26 guado	Q50	190.00	64.93	66.84	70.98	4.14	69.41	2.57	67.27	68.48	0.014731	5.68	33.45	20.16	1.41
burba	26. BUR-26 guado	Q200	235.00	64.93	68.19	70.98	2.79	69.41	1.22		68.95	0.003574	3.86	60.85	20.34	0.71
burba	26. BUR-26 guado	Q500	265.00	64.93	68.57	70.98	2.41	69.41	0.84		69.33	0.003185	3.87	68.51	20.39	0.67
burba	25.8 BUR-25.5 a monte	Q50	190.00	63.59	66.82	69.50	2.68	69.53	2.71	66.59	67.95	0.006481	4.71	40.35	14.00	0.89
burba	25.8 BUR-25.5 a monte	Q200	235.00	63.59	67.28	69.50	2.22	69.53	2.25	66.99	68.57	0.006446	5.02	46.77	14.05	0.88
burba	25.8 BUR-25.5 a monte	Q500	265.00	63.59	67.56	69.50	1.94	69.53	1.97	67.25	68.95	0.006520	5.23	50.64	14.08	0.88
burba	25.5		Bridge													
burba	25.2 BUR-25.5 a valle	Q50	190.00	63.59	66.59	69.50	2.91	69.53	2.94	66.59	67.93	0.008337	5.13	37.04	13.97	1.01
burba	25.2 BUR-25.5 a valle	Q200	235.00	63.59	66.99	69.50	2.51	69.53	2.54	66.99	68.53	0.008379	5.50	42.74	14.02	1.01
burba	25.2 BUR-25.5 a valle	Q500	265.00	63.59	67.25	69.50	2.25	69.53	2.28	67.25	68.92	0.008422	5.72	46.34	14.05	1.01
burba	25. BUR-25	Q50	190.00	63.29	65.23	68.50	3.27	68.50	3.27	65.94	67.71	0.021858	6.98	27.22	14.03	1.60
burba	25. BUR-25	Q200	235.00	63.29	65.57	68.50	2.93	68.50	2.93	66.35	68.32	0.020478	7.34	32.01	14.03	1.55
burba	25. BUR-25	Q500	265.00	63.29	65.79	68.50	2.71	68.50	2.71	66.60	68.70	0.019791	7.55	35.08	14.03	1.52

HEC-RAS Plan: Burba River: polcevera Reach: burba (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)	
burba	24. BUR-24 a monte b	Q50	190.00	62.46	64.47	68.15	3.68	68.94	4.47	65.30	67.25	0.025437	7.38	25.74	14.69	1.78
burba	24. BUR-24 a monte b	Q200	235.00	62.46	64.77	68.15	3.38	68.94	4.17	65.69	67.87	0.024087	7.80	30.13	14.74	1.74
burba	24. BUR-24 a monte b	Q500	265.00	62.46	64.96	68.15	3.19	68.94	3.98	65.94	68.25	0.023366	8.04	32.95	14.78	1.72
burba	23.9 BUR-24 a valle b	Q50	190.00	60.98	63.04	68.15	5.11	68.94	5.90	64.16	67.10	0.044280	8.93	21.27	14.56	2.36
burba	23.9 BUR-24 a valle b	Q200	235.00	60.98	63.31	68.15	4.84	68.94	5.63	64.55	67.72	0.039954	9.31	25.25	14.60	2.26
burba	23.9 BUR-24 a valle b	Q500	265.00	60.98	63.48	68.15	4.67	68.94	5.46	64.80	68.11	0.037802	9.53	27.82	14.63	2.20
burba	23. BUR-23	Q50	190.00	60.98	63.01	68.92	5.91	68.42	5.41	64.01	66.47	0.037008	8.24	23.04	15.11	2.13
burba	23. BUR-23	Q200	235.00	60.98	63.26	68.92	5.66	68.42	5.16	64.39	67.15	0.035108	8.73	26.91	15.15	2.09
burba	23. BUR-23	Q500	265.00	60.98	63.43	68.92	5.49	68.42	4.99	64.63	67.57	0.034019	9.01	29.40	15.18	2.07
burba	22. BUR-22	Q50	190.00	60.53	62.40	68.68	6.28	66.58	4.18	63.30	65.48	0.032553	7.77	24.44	15.69	1.99
burba	22. BUR-22	Q200	235.00	60.53	62.63	68.68	6.05	66.58	3.95	63.68	66.20	0.032489	8.38	28.06	15.74	2.00
burba	22. BUR-22	Q500	265.00	60.53	62.78	68.68	5.90	66.58	3.80	63.91	66.65	0.032310	8.72	30.39	15.77	2.00
burba	21. BUR-21	Q50	190.00	60.06	62.41	68.51	6.10	67.05	4.64	63.09	64.76	0.020850	6.80	27.96	15.68	1.62
burba	21. BUR-21	Q200	235.00	60.06	62.63	68.51	5.88	67.05	4.42	63.47	65.47	0.022190	7.47	31.48	15.72	1.68
burba	21. BUR-21	Q500	265.00	60.06	62.78	68.51	5.73	67.05	4.27	63.70	65.91	0.022753	7.84	33.78	15.75	1.71
burba	20. BUR-20	Q50	190.00	60.26	63.49	68.42	4.93	66.94	3.45		64.44	0.005252	4.33	43.89	15.47	0.82
burba	20. BUR-20	Q200	235.00	60.26	63.91	68.42	4.51	66.94	3.03	63.51	65.02	0.005332	4.66	50.46	15.55	0.83
burba	20. BUR-20	Q500	265.00	60.26	64.18	68.42	4.24	66.94	2.76	63.75	65.38	0.005389	4.85	54.60	15.60	0.83
burba	19. BUR-19	Q50	190.00	60.10	63.04	67.44	4.40	67.00	3.96	63.04	64.30	0.007568	4.96	38.27	15.27	1.00
burba	19. BUR-19	Q200	235.00	60.10	63.44	67.44	4.00	67.00	3.56	63.44	64.87	0.007517	5.30	44.30	15.48	1.00
burba	19. BUR-19	Q500	265.00	60.10	63.68	67.44	3.76	67.00	3.32	63.68	65.23	0.007499	5.50	48.14	15.61	1.00
burba	18. BUR-18	Q50	190.00	60.20	62.78	68.29	5.51	67.01	4.23	62.96	64.22	0.009634	5.32	35.73	15.70	1.13
burba	18. BUR-18	Q200	235.00	60.20	63.12	68.29	5.17	67.01	3.89	63.34	64.78	0.009664	5.71	41.13	15.77	1.13
burba	18. BUR-18	Q500	265.00	60.20	63.34	68.29	4.95	67.01	3.67	63.58	65.14	0.009653	5.94	44.61	15.81	1.13
burba	17.1 BUR-17 a monte p	Q50	190.00	59.80	63.14	65.73	2.59	65.83	2.69	62.75	64.01	0.004813	4.13	46.01	16.81	0.80
burba	17.1 BUR-17 a monte p	Q200	235.00	59.80	63.56	65.73	2.17	65.83	2.27	63.11	64.56	0.004851	4.44	52.94	16.85	0.80
burba	17.1 BUR-17 a monte p	Q500	265.00	59.80	63.86	65.73	1.87	65.83	1.97	63.34	64.92	0.004708	4.57	58.03	16.88	0.79
burba	17.		Bridge													
burba	16.9 BUR-17 a valle p	Q50	190.00	59.80	62.76	65.73	2.97	65.83	3.07	62.76	63.94	0.007613	4.81	39.51	16.78	1.00
burba	16.9 BUR-17 a valle p	Q200	235.00	59.80	63.11	65.73	2.62	65.83	2.72	63.11	64.47	0.007620	5.17	45.49	16.81	1.00
burba	16.9 BUR-17 a valle p	Q500	265.00	59.80	63.34	65.73	2.39	65.83	2.49	63.34	64.81	0.007620	5.38	49.30	16.83	1.00
burba	16. BUR-16	Q50	190.00	59.41	62.18	67.64	5.46	65.20	3.02	62.46	63.71	0.010749	5.49	34.63	16.43	1.21
burba	16. BUR-16	Q200	235.00	59.41	62.52	67.64	5.12	65.20	2.68	62.82	64.26	0.010406	5.83	40.28	16.49	1.19
burba	16. BUR-16	Q500	265.00	59.41	62.75	67.64	4.89	65.20	2.45	63.05	64.60	0.010185	6.03	43.97	16.53	1.18
burba	15. BUR-15	Q50	190.00	59.16	61.42	67.48	6.06	63.97	2.55	61.95	63.33	0.018136	6.12	31.03	19.15	1.54
burba	15. BUR-15	Q200	235.00	59.16	61.67	67.48	5.81	63.97	2.30	62.28	63.87	0.017905	6.58	35.71	19.19	1.54
burba	15. BUR-15	Q500	265.00	59.16	61.82	67.48	5.66	63.97	2.15	62.49	64.21	0.017787	6.85	38.67	19.21	1.54

HEC-RAS Plan: Burba River: polcevera Reach: burba (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)	
burba	14. BUR-14	Q50	190.00	58.77	62.25	67.43	5.18	64.27	2.02	61.65	62.93	0.003468	3.64	52.21	18.87	0.70
burba	14. BUR-14	Q200	235.00	58.77	62.71	67.43	4.72	64.27	1.56	61.99	63.47	0.003367	3.87	60.78	18.94	0.69
burba	14. BUR-14	Q500	265.00	58.77	62.99	67.43	4.44	64.27	1.28		63.81	0.003323	4.00	66.21	18.99	0.68
burba	13. BUR-13	Q50	190.00	58.78	62.18	67.44	5.26	64.53	2.35		62.90	0.003725	3.74	50.81	18.57	0.72
burba	13. BUR-13	Q200	235.00	58.78	62.64	67.44	4.80	64.53	1.90		63.44	0.003608	3.97	59.20	18.70	0.71
burba	13. BUR-13	Q500	265.00	58.78	62.92	67.44	4.52	64.53	1.61		63.78	0.003554	4.11	64.54	18.78	0.71
burba	12.1 BUR-12 a monte p	Q50	190.00	58.90	62.03	64.44	2.41	64.44	2.41	61.59	62.85	0.004386	4.01	47.35	17.37	0.78
burba	12.1 BUR-12 a monte p	Q200	235.00	58.90	62.44	64.44	2.00	64.44	2.00	61.95	63.39	0.004399	4.30	54.60	17.61	0.78
burba	12.1 BUR-12 a monte p	Q500	265.00	58.90	62.71	64.44	1.73	64.44	1.73	62.17	63.73	0.004388	4.47	59.32	17.76	0.78
burba	12. BUR-12		Bridge													
burba	11.9 BUR-12 a valle p	Q50	190.00	58.90	61.74	64.44	2.70	64.44	2.70	61.59	62.76	0.006108	4.48	42.38	17.21	0.91
burba	11.9 BUR-12 a valle p	Q200	235.00	58.90	62.20	64.44	2.24	64.44	2.24	61.95	63.31	0.005618	4.68	50.27	17.47	0.88
burba	11.9 BUR-12 a valle p	Q500	265.00	58.90	62.48	64.44	1.96	64.44	1.96	62.17	63.65	0.005425	4.80	55.18	17.63	0.87
burba	11. BUR-11	Q50	190.00	58.30	61.24	63.92	2.68	63.06	1.82	61.31	62.54	0.008381	5.06	37.55	15.81	1.05
burba	11. BUR-11	Q200	235.00	58.30	61.66	63.92	2.26	63.06	1.40	61.69	63.10	0.007823	5.30	44.31	15.95	1.02
burba	11. BUR-11	Q500	265.00	58.30	61.93	63.92	1.99	63.06	1.13	61.93	63.45	0.007581	5.45	48.58	16.04	1.00
burba	10.1 BUR-10 a monte b	Q50	190.00	58.15	60.83	62.47	1.64	61.37	0.54	60.87	62.08	0.008253	4.97	38.24	15.97	1.03
burba	10.1 BUR-10 a monte b	Q200	235.00	58.15	61.19	62.47	1.28	61.37	0.18	61.24	62.64	0.008222	5.33	44.12	16.06	1.03
burba	10.1 BUR-10 a monte b	Q500	265.00	58.15	61.43	62.47	1.04	61.37	-0.06	61.48	62.99	0.008214	5.54	47.85	16.11	1.03
burba	10. BUR-10 a valle b	Q50	190.00	56.50	57.96	62.47	4.51	61.37	3.41	59.04	61.82	0.045776	8.70	21.83	15.39	2.33
burba	10. BUR-10 a valle b	Q200	235.00	56.50	58.23	62.47	4.24	61.37	3.14	59.42	62.36	0.040170	9.00	26.11	15.45	2.21
burba	10. BUR-10 a valle b	Q500	265.00	56.50	58.41	62.47	4.06	61.37	2.96	59.66	62.71	0.037496	9.18	28.86	15.49	2.15
burba	9.1 BUR-9 a monte p	Q50	190.00	54.00	57.92	59.48	1.56	60.50	2.58	56.77	58.51	0.002618	3.40	55.91	15.44	0.57
burba	9.1 BUR-9 a monte p	Q200	235.00	54.00	58.38	59.48	1.10	60.50	2.12	57.15	59.09	0.002839	3.73	63.00	15.50	0.59
burba	9.1 BUR-9 a monte p	Q500	265.00	54.00	56.39	59.48	3.09	60.50	4.11	57.39	59.80	0.025623	8.17	32.43	15.24	1.79
burba	9. BUR-9		Bridge													
burba	8.9 BUR-9 a valle p	Q50	190.00	54.00	57.88	59.48	1.60	60.50	2.62		58.48	0.002716	3.44	55.20	15.43	0.58
burba	8.9 BUR-9 a valle p	Q200	235.00	54.00	58.33	59.48	1.15	60.50	2.17		59.06	0.002945	3.78	62.20	15.50	0.60
burba	8.9 BUR-9 a valle p	Q500	265.00	54.00	58.61	59.48	0.87	60.50	1.89	57.39	59.42	0.003082	3.98	66.60	15.53	0.61
burba	8. BUR-8	Q50	190.00	54.45	57.16	58.95	1.79	60.55	3.39	57.11	58.36	0.007504	4.85	39.22	15.46	0.97
burba	8. BUR-8	Q200	235.00	54.45	57.55	58.95	1.40	60.55	3.00	57.50	58.93	0.007493	5.19	45.26	15.52	0.97
burba	8. BUR-8	Q500	265.00	54.45	57.80	58.95	1.15	60.55	2.75	57.74	59.28	0.007526	5.40	49.03	15.55	0.97
burba	7. BUR-7	Q50	190.00	54.23	57.07	58.46	1.39	60.52	3.45	56.93	58.18	0.006854	4.66	40.73	15.58	0.92
burba	7. BUR-7	Q200	235.00	54.23	57.46	58.46	1.00	60.52	3.05	57.31	58.75	0.006921	5.02	46.83	15.64	0.93
burba	7. BUR-7	Q500	265.00	54.23	57.71	58.46	0.75	60.52	2.81	57.55	59.10	0.006997	5.23	50.62	15.68	0.93
burba	6.1 BUR-6 a monte br	Q50	190.00	53.83	56.67	57.40	0.73	59.05	2.38	56.67	57.89	0.007996	4.90	38.79	15.85	1.00
burba	6.1 BUR-6 a monte br	Q200	235.00	53.83	57.04	57.40	0.36	59.05	2.01	57.04	58.45	0.007961	5.25	44.78	15.95	1.00

HEC-RAS Plan: Burba River: polcevera Reach: burba (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)	
burba	6.1 BUR-6 a monte br	Q500	265.00	53.83	57.28	57.40	0.12	59.05	1.77	57.28	58.80	0.007965	5.46	48.55	16.02	1.00
burba	6. BUR-6 a valle br	Q50	190.00	52.13	54.17	57.40	3.23	58.89	4.72	55.17	57.61	0.039330	8.22	23.10	14.93	2.11
burba	6. BUR-6 a valle br	Q200	235.00	52.13	54.47	57.40	2.93	58.89	4.42	55.56	58.16	0.034762	8.52	27.59	14.97	2.00
burba	6. BUR-6 a valle br	Q500	265.00	52.13	54.66	57.40	2.74	58.89	4.23	55.80	58.51	0.032556	8.69	30.48	14.99	1.95
burba	5. BUR-5	Q50	190.00	51.64	53.57	56.75	3.18	56.54	2.97	54.25	55.80	0.026195	6.61	28.75	21.09	1.81
burba	5. BUR-5	Q200	235.00	51.64	53.76	56.75	2.99	56.54	2.78	54.62	56.40	0.027041	7.21	32.61	21.35	1.86
burba	5. BUR-5	Q500	265.00	51.64	53.87	56.75	2.88	56.54	2.67	54.86	56.78	0.027385	7.55	35.10	21.51	1.89
burba	4.1 BUR-4 a monte de	Q50	190.00	51.06	52.95	53.54	0.59	53.86	0.91	52.57	53.32	0.003244	2.71	70.17	42.62	0.67
burba	4.1 BUR-4 a monte de	Q200	235.00	51.06	52.38	53.54	1.16	53.86	1.48	52.76	53.71	0.019635	5.11	45.98	42.62	1.57
burba	4.1 BUR-4 a monte de	Q500	265.00	51.06	52.45	53.54	1.09	53.86	1.41	52.88	53.94	0.020147	5.40	49.10	42.62	1.60
burba	4.05 BUR-4		Bridge													
burba	4 BUR-4 a valle de	Q50	190.00	51.06	52.37	53.54	1.17	53.86	1.49	52.56	53.26	0.013106	4.16	45.69	42.62	1.28
burba	4 BUR-4 a valle de	Q200	235.00	51.06	52.54	53.54	1.00	53.86	1.32	52.76	53.55	0.012618	4.46	52.65	42.62	1.28
burba	4 BUR-4 a valle de	Q500	265.00	51.06	52.64	53.54	0.90	53.86	1.22	52.88	53.74	0.012463	4.66	56.90	42.62	1.29
burba	3 BUR-3	Q50	190.00	48.98	50.63	54.98	4.35	55.08	4.45	51.13	52.34	0.024800	5.79	32.82	29.72	1.76
burba	3 BUR-3	Q200	235.00	48.98	50.83	54.98	4.15	55.08	4.25	51.37	52.71	0.022288	6.07	38.69	29.72	1.70
burba	3 BUR-3	Q500	265.00	48.98	50.95	54.98	4.03	55.08	4.13	51.53	52.94	0.021006	6.24	42.46	29.72	1.67
burba	2.1 BUR-2 a monte de	Q50	190.00	47.94	50.88	51.75	0.87	51.76	0.88	50.34	51.26	0.002749	2.74	69.28	35.22	0.62
burba	2.1 BUR-2 a monte de	Q200	235.00	47.94	51.17	51.75	0.58	51.76	0.59	50.56	51.62	0.002689	2.95	79.71	35.22	0.63
burba	2.1 BUR-2 a monte de	Q500	265.00	47.94	51.36	51.75	0.39	51.76	0.40	50.70	51.84	0.002658	3.07	86.29	35.22	0.63
burba	2.05 BUR-2 ponte		Bridge													
burba	2 BUR-2 a valle de	Q50	190.00	47.94	50.08	51.75	1.67	51.76	1.68	50.34	51.17	0.014876	4.63	41.06	35.22	1.37
burba	2 BUR-2 a valle de	Q200	235.00	47.94	50.25	51.75	1.49	51.76	1.50	50.56	51.51	0.014329	4.96	47.35	35.22	1.37
burba	2 BUR-2 a valle de	Q500	265.00	47.94	50.37	51.75	1.38	51.76	1.39	50.70	51.73	0.014029	5.16	51.33	35.22	1.36
burba	1 BUR-1	Q50	190.00	46.47	49.02	53.68	4.66	51.91	2.89	49.29	50.08	0.015275	4.56	41.70	37.29	1.38
burba	1 BUR-1	Q200	235.00	46.47	49.18	53.68	4.50	51.91	2.73	49.50	50.42	0.015520	4.94	47.61	37.89	1.41
burba	1 BUR-1	Q500	265.00	46.47	49.27	53.68	4.41	51.91	2.64	49.63	50.64	0.015921	5.19	51.06	38.24	1.43

8 TORRENTE SECCA

8 TORRENTE SECCA
8.1 Confluenza Secca-Polcevera fino a Serra Riccò a valle del t. Pernecco
8.2 Rio Alle scuole di Morego
8.3 Rio Morego
8.4 Rio Rialasco
8.5 Torrente Sardorella
8.5.1 Confluenza Sardorella-Secca fino al ponte per Arvigo
8.5.2 Rio Busso
8.5.3 Sardorella e affluenti in corrispondenza dell'abitato di Picarello
8.5.4 Sardorella – tratto di monte
8.6 Rii Fondega, Cascinette e Valle
8.6.1 Rio Valle
8.6.2 Rio Fondega
8.6.3 Rio Cascinette
8.7 T. Secca in corrispondenza della confluenza con il t. Pernecco
8.8 Torrente Serra
8.9 Torrente Pernecco
8.9.1 Tratto alla confluenza con il torrente Secca
8.9.2 Tratto di monte

8.1 Confluenza Secca-Polcevera fino a Serra Riccò a valle del t. Pernecco

Il tratto più a valle, si estende a valle della confluenza con il Torrente Sardorella fino alla confluenza nel Polcevera ed è stato recentemente interessato nell'ambito della S.A.U. relativa ai progetti 4, 6 e 7 del Programma Comunitario Resider II, riguardanti l'area TR n. 5/8 in Genova-Bolzaneto, approvato dal Comitato Tecnico Provinciale in data 23/09/99.

Tale progetto costituisce quindi parte integrante del Piano nella sua configurazione di progetto essendo stato realizzato..

In tale tratto sono presenti numerosi salti di fondo, che rendono particolarmente stabile il profilo di fondo dell'alveo; sono presenti altresì tre ponti, che interagiscono con la dinamica fluviale del corso d'acqua. Essi sono:

(sezione 11.11): è il ponte dell'autostrada della Genova - Serravalle, disposto con una inclinazione di circa 45 gradi rispetto all'asse del corso d'acqua, con impalcato in c.a. di spessore pari a circa 1.4 m sostenuto da quattro pile in alveo di larghezza2.1m.

(sezione 4.11): sono i ponti di via Colano , affiancati e realizzati in direzione perpendicolare all'asse del torrente con 3 pile in alveo.

(sezione 1.11): è il ponte ferroviario della Genova – Milano; si tratta in realtà di una coppia di ponti, entrambi con cinque campate e quattro pile in alveo allineate (setti in c.a.).

La confluenza nel torrente Polcevera avviene con un angolo d'incidenza prossimo a 30°. Gli effetti della confluenza sul torrente Polcevera sono stati studiati in maniera più esaustiva nel "tratto compreso tra la confluenza con il T. Secca e il ponte FF.SS".

I valori di portata del torrente Secca risultano praticamente identici a quelli del Piano; le portate utilizzate sul torrente Polcevera tengono conto della non contemporaneità della piena.

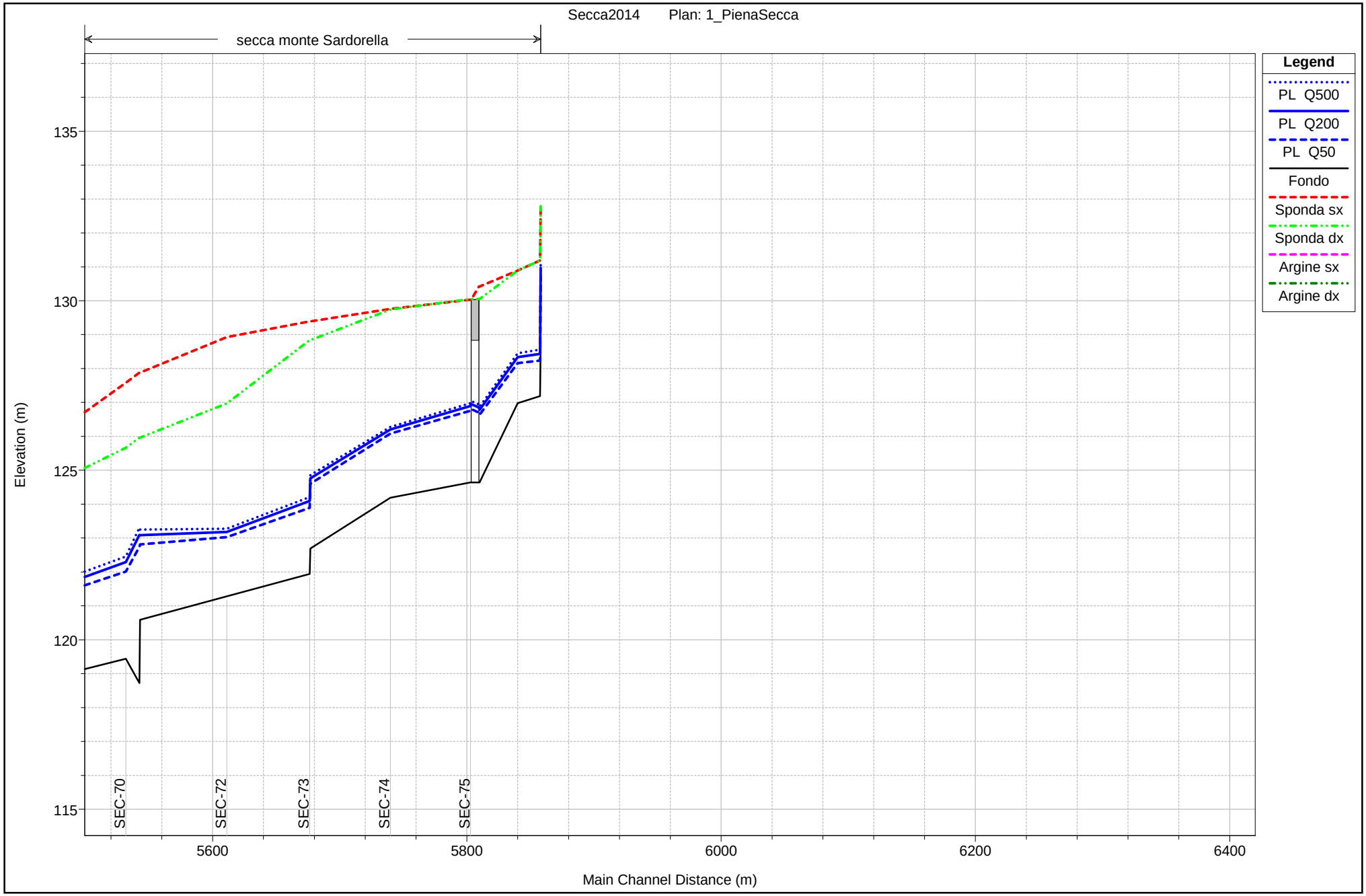
In particolare le portate utilizzate sono:

tratto	**Tr= 50 anni [mc/s]**	**Tr= 200 anni [mc/s]**	**Tr= 500 anni [mc/s]**
Torrente Polcevera a monte	550	670	750
Torrente Polcevera a valle	1210	1470	1640
Torrente Secca	660	800	890

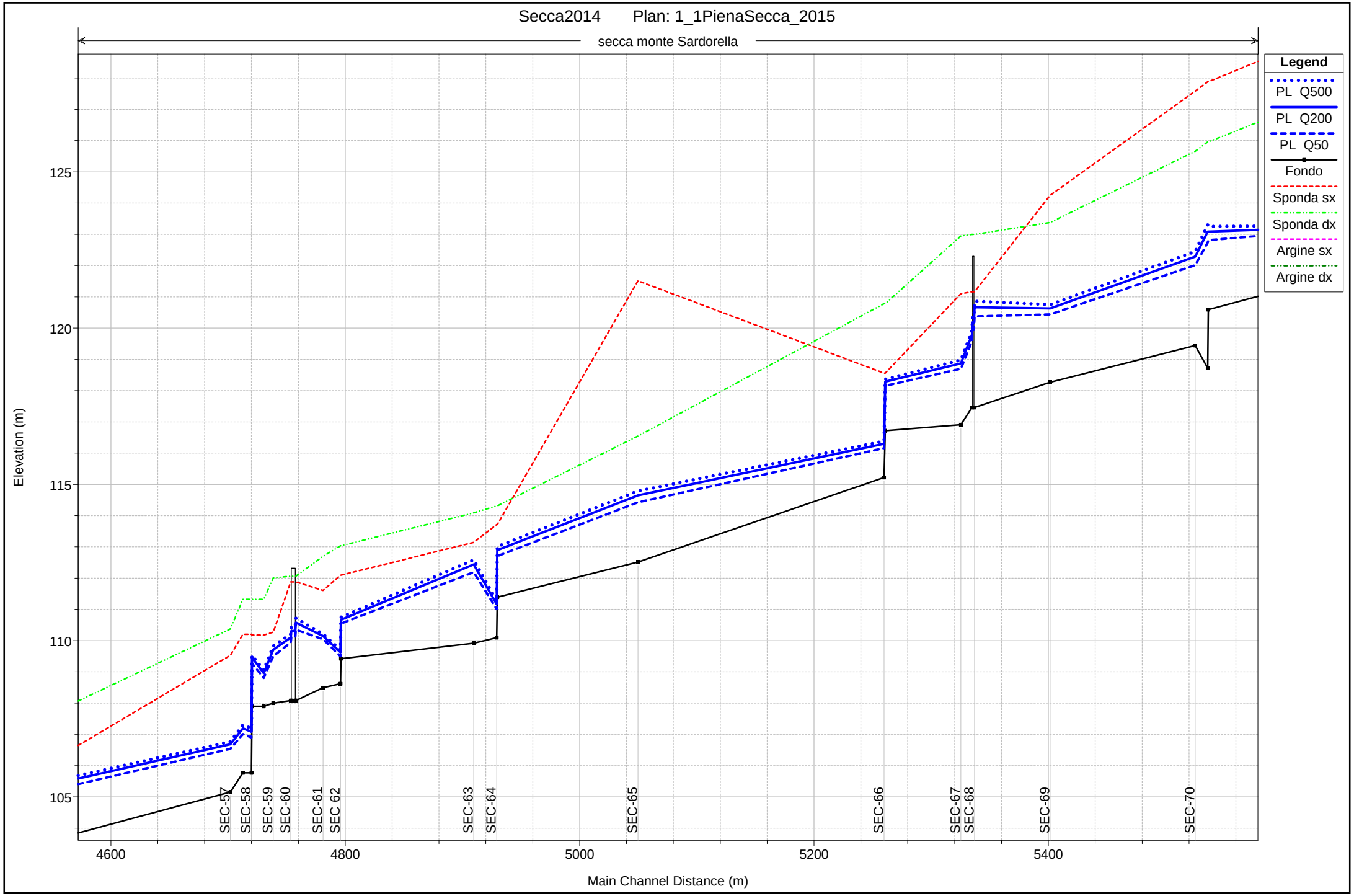
Il tratto più a monte, comprende la confluenza con il torrente Sardorella che è stata studiata nelle due configurazioni che prevedono la portata al colmo con tempo di ritorno assegnato a valle e a monte della confluenza e sull' affluente è imposta, ai fini della conservazione della massa, la differenza delle portate. Data la lunghezza del tratto indagato è stata imposta una variazione di portata in una sezione intermedia.

	TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
			T = 50 anni	**T = 200 anni**	**T = 500 anni**
	Torrente Secca a valle confluenza	SEC4	620	770	900
	Torrente Secca a monte confluenza	SEC3	405	505	575
	Torrente Secca monte	SEC2	357	441	496
	Torrente Sardorella	differenza	215	265	325

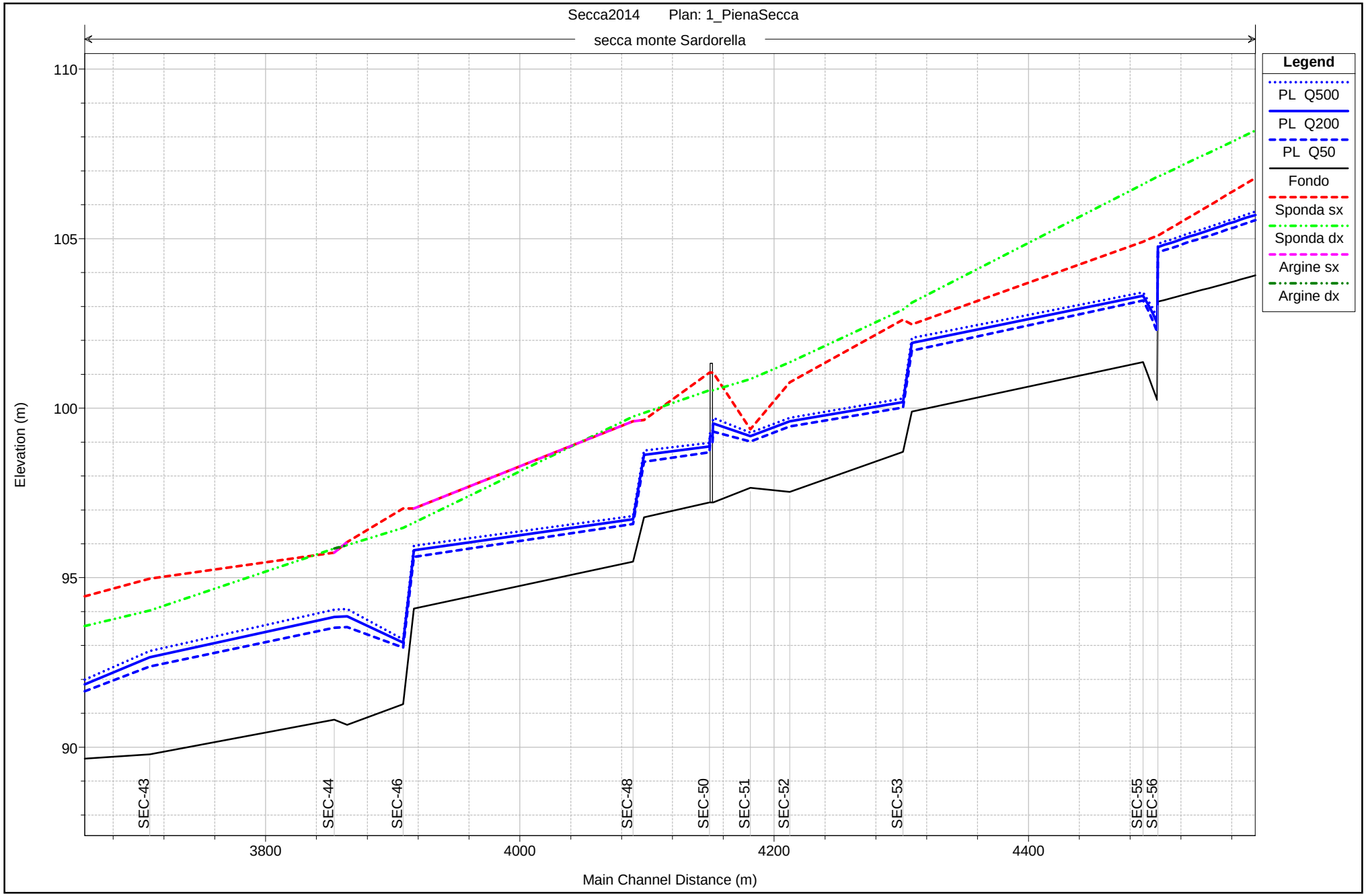
Nelle simulazioni è stato assegnato un valore del coefficiente di scabrezza k_s di Strickler pari a $35 m^{1/3}/s$ nel tratto a monte e pari a $28 m^{1/3}/s$ nel tratto in prossimità della confluenza con il torrente Sardorella.



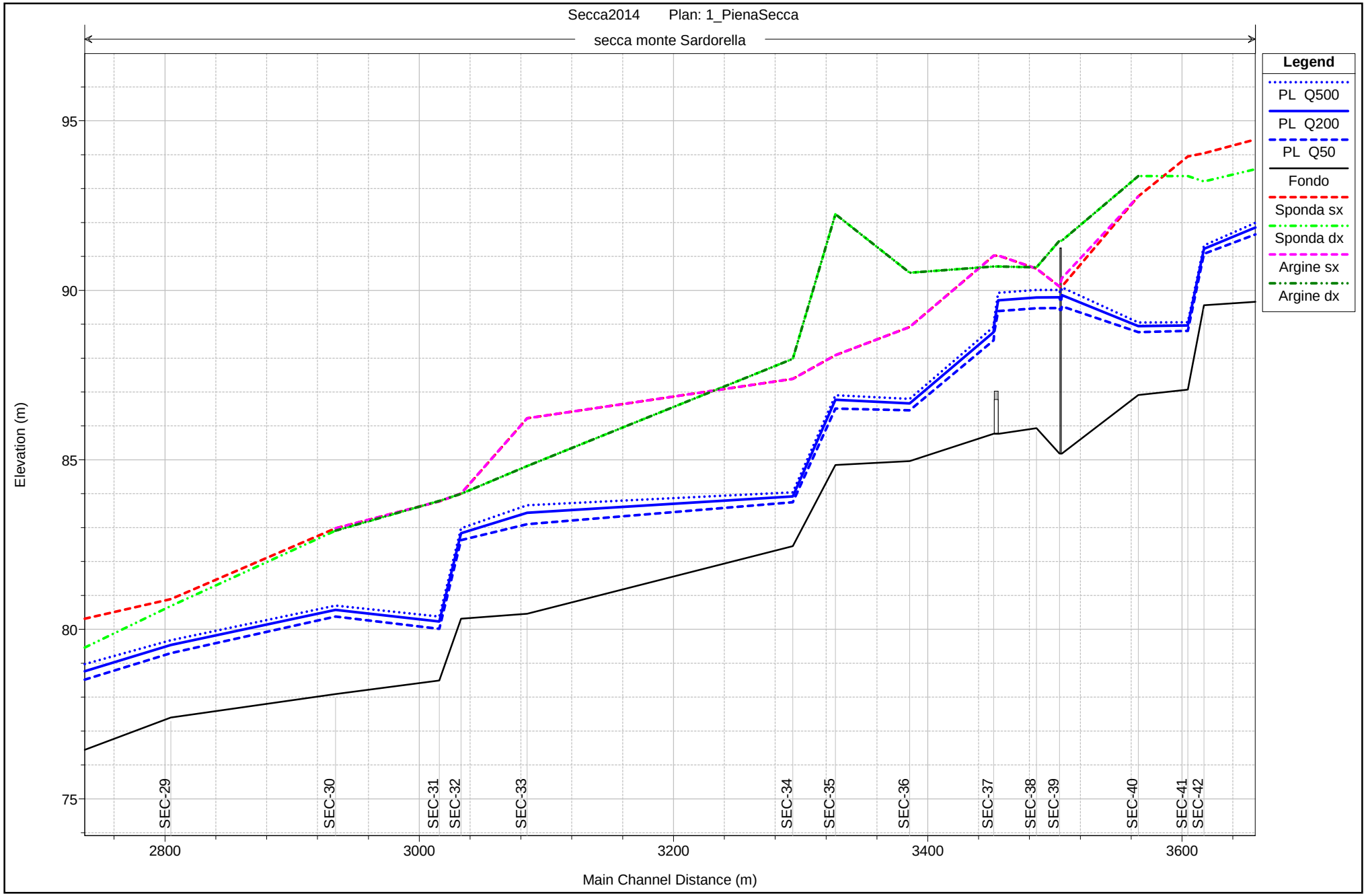
1 cm Horiz. = 40 m 1 cm Vert. = 1.5 m



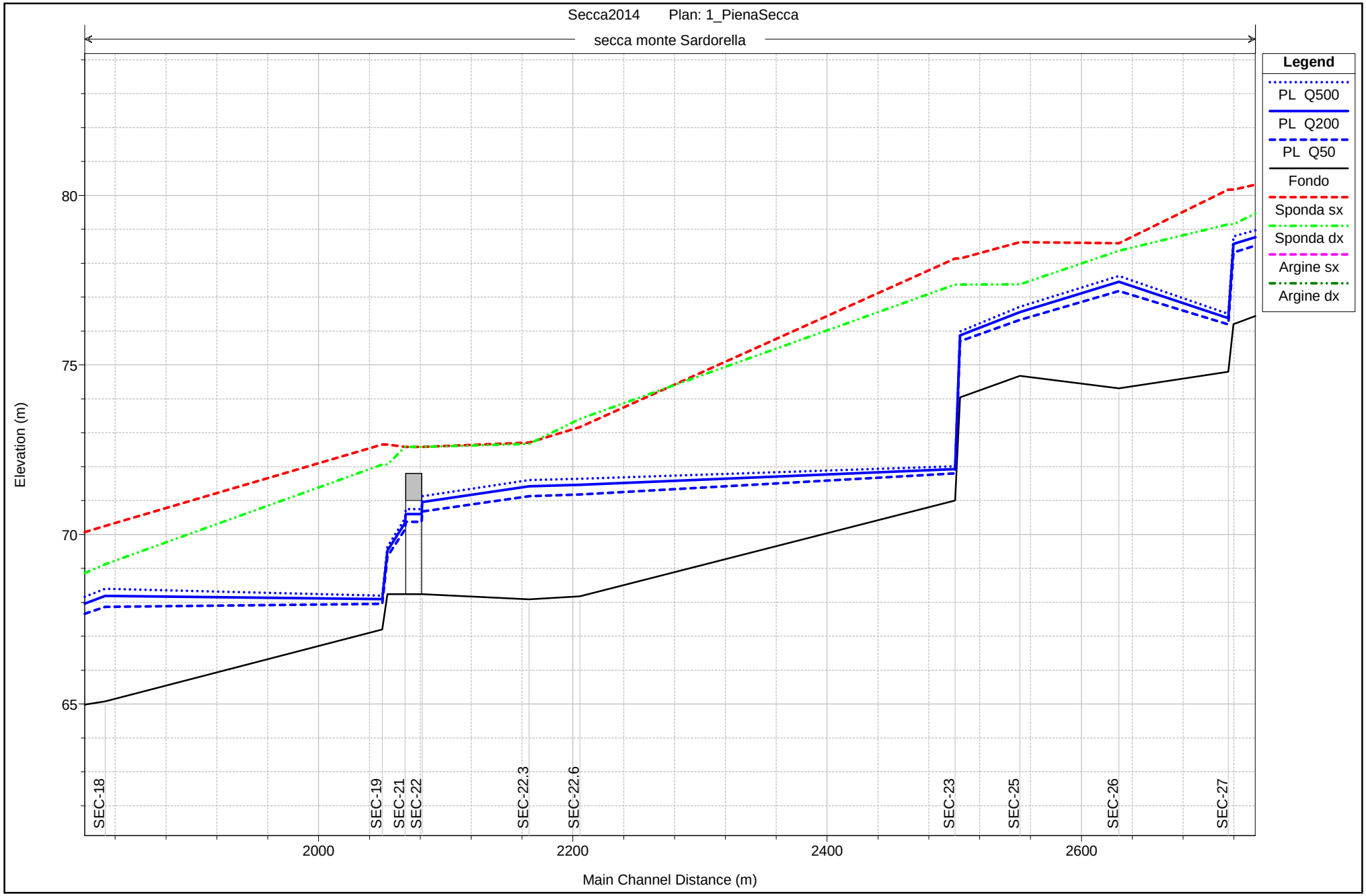
1 cm Horiz. = 40 m 1 cm Vert. = 1.5 m



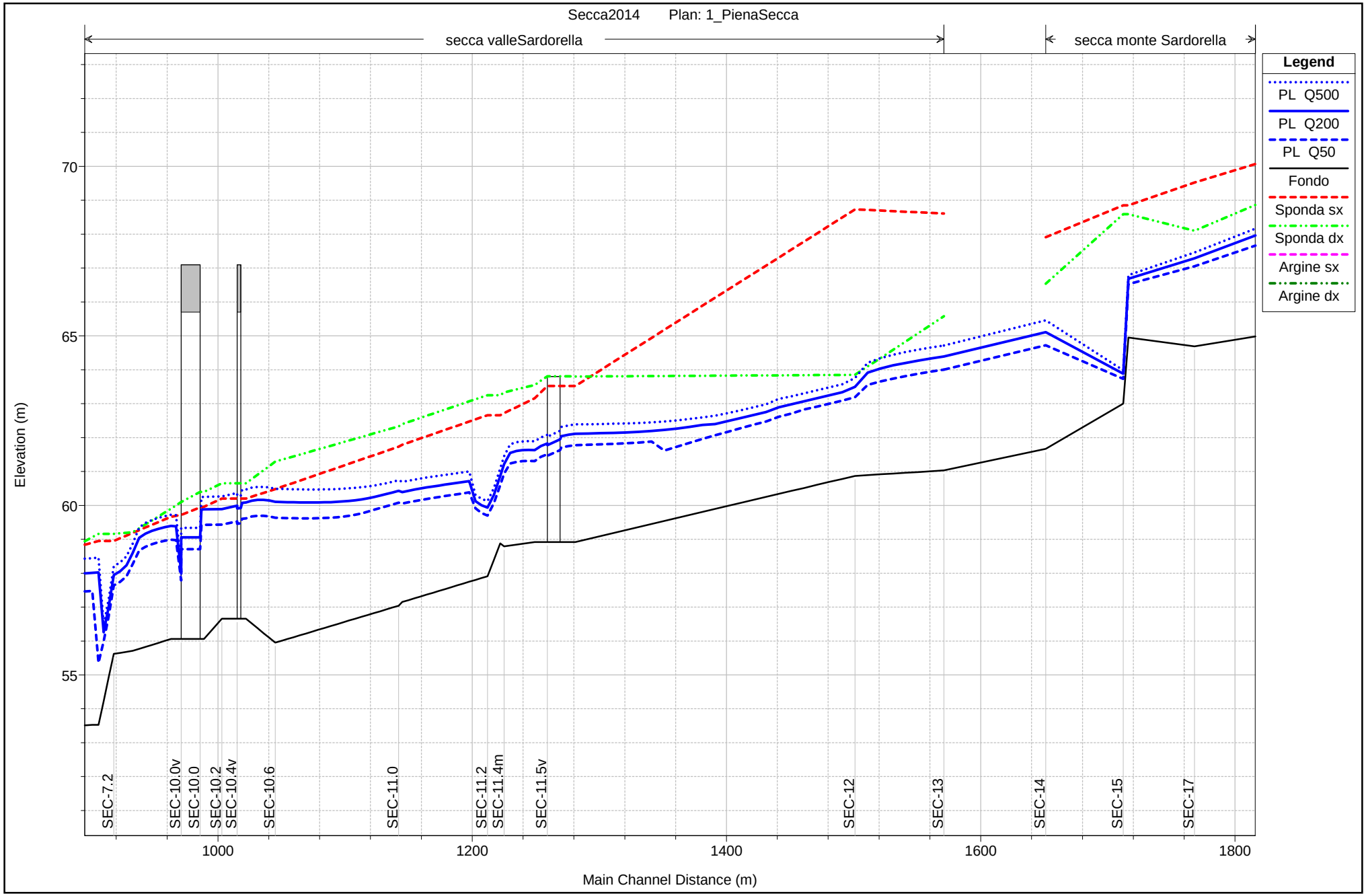
1 cm Horiz. = 40 m 1 cm Vert. = 1.5 m



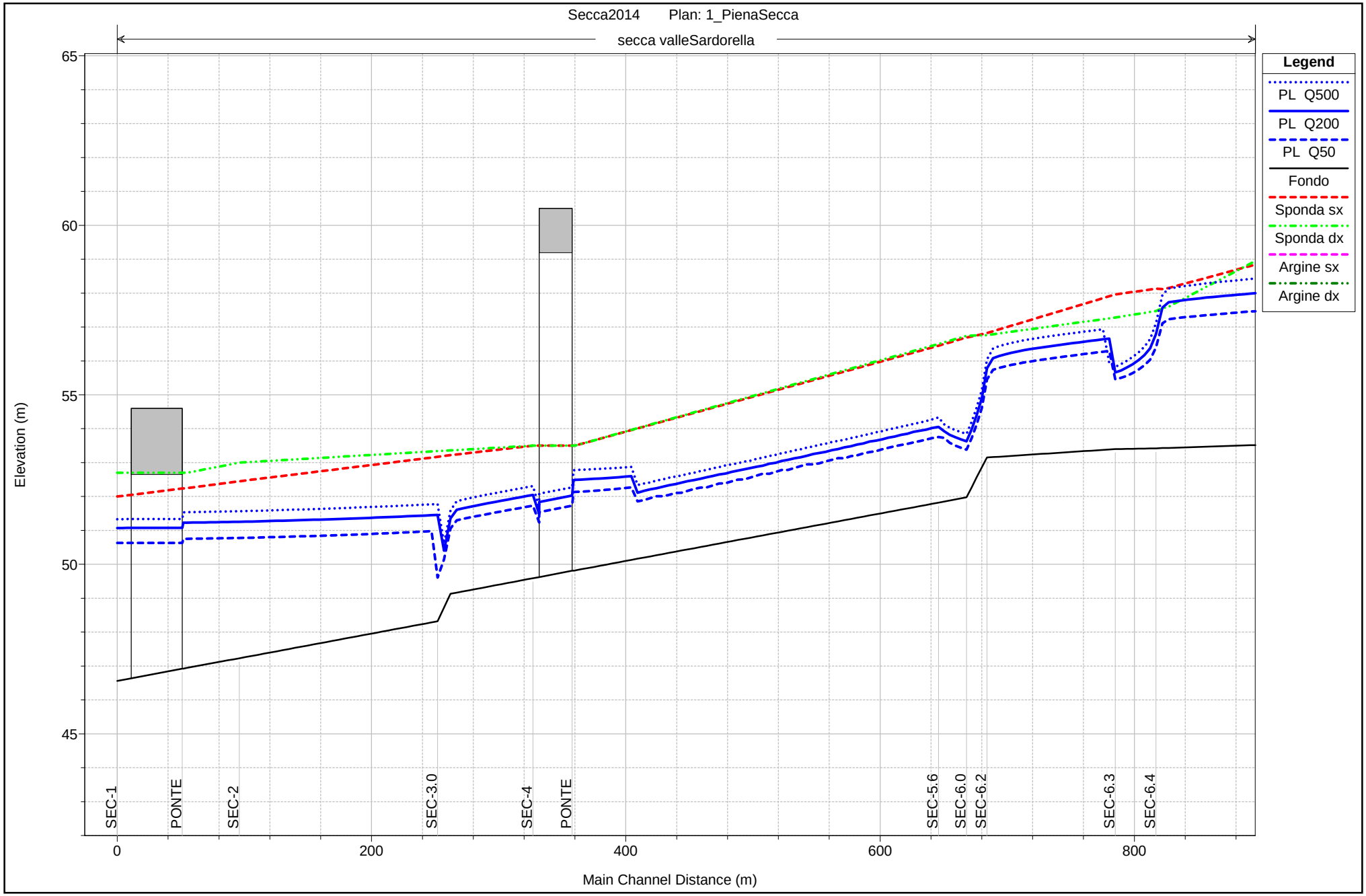
1 cm Horiz. = 40 m 1 cm Vert. = 1.5 m



1 cm Horiz. = 40 m 1 cm Vert. = 1.5 m

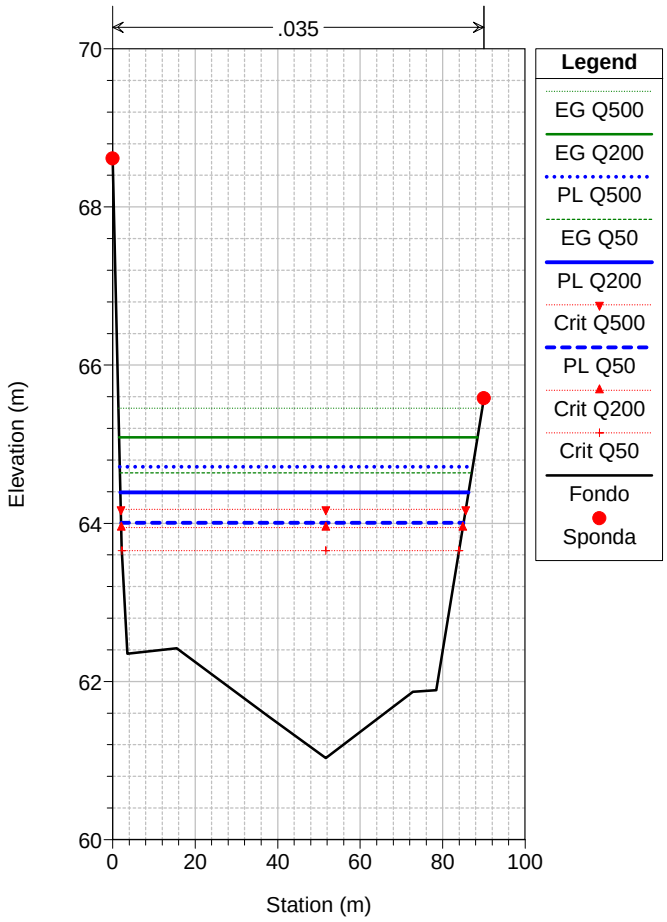


1 cm Horiz. = 40 m 1 cm Vert. = 1.5 m

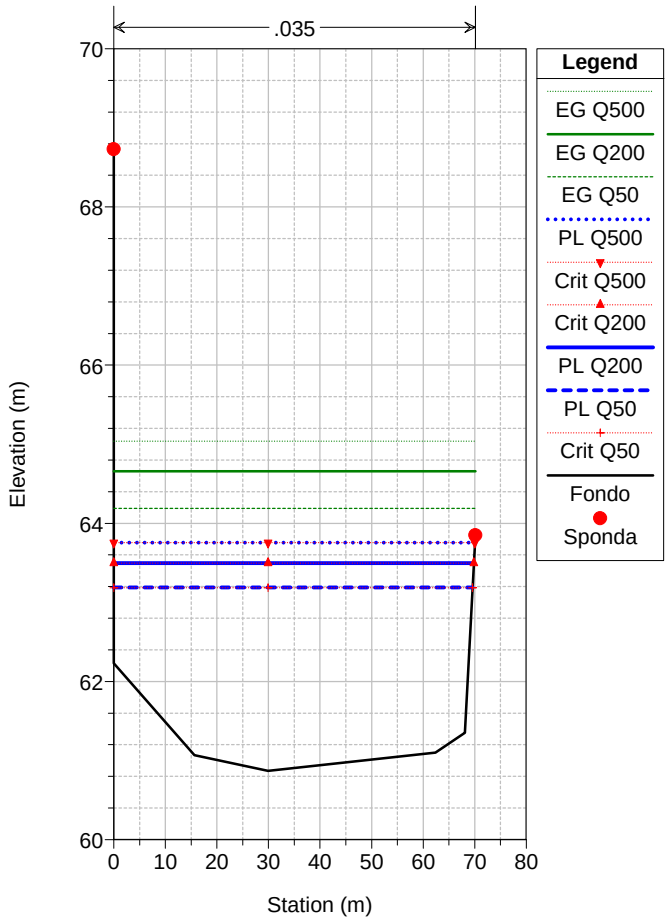


1 cm Horiz. = 40 m 1 cm Vert. = 1.5 m

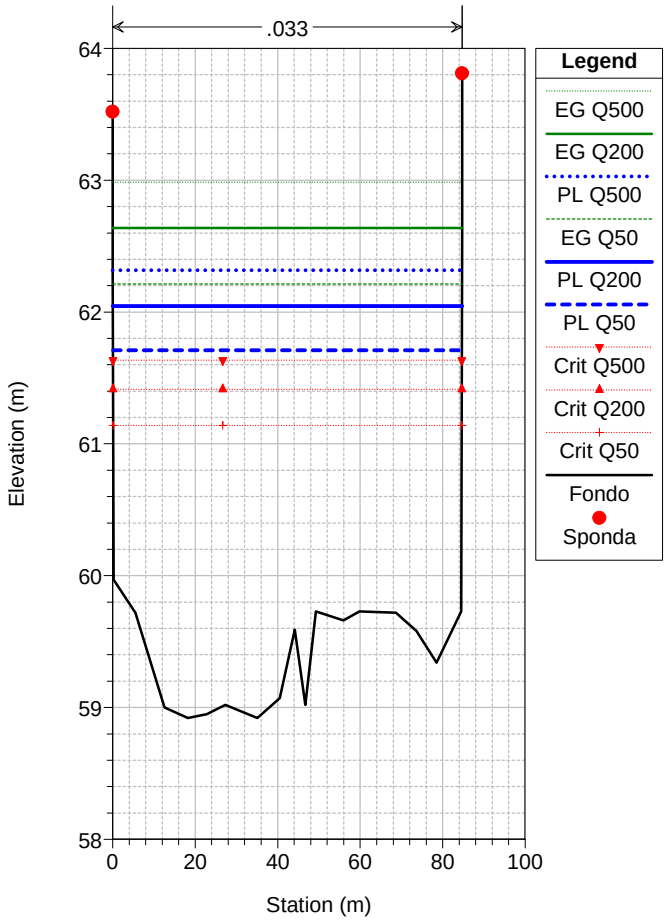
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-13



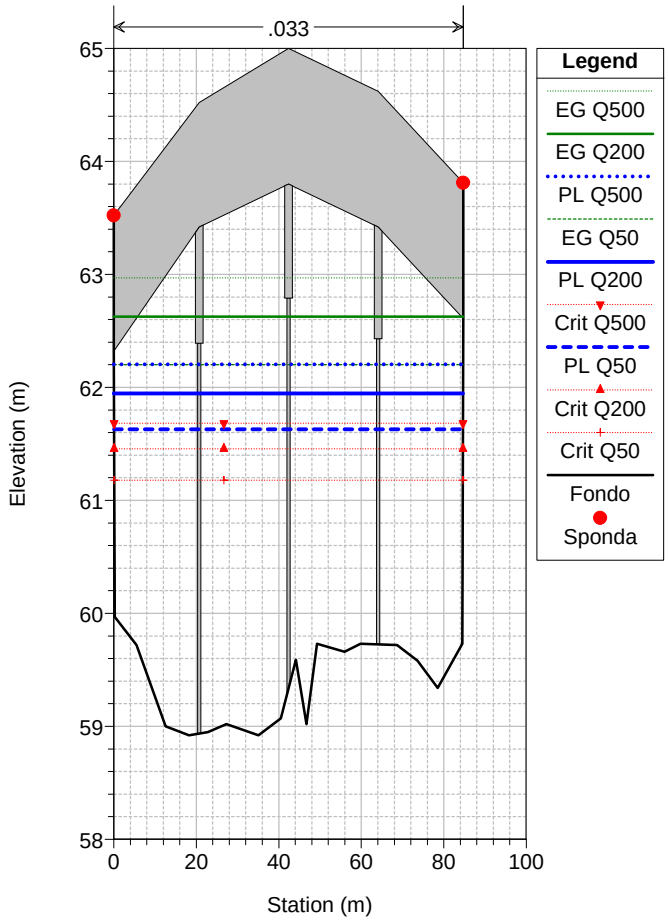
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-12



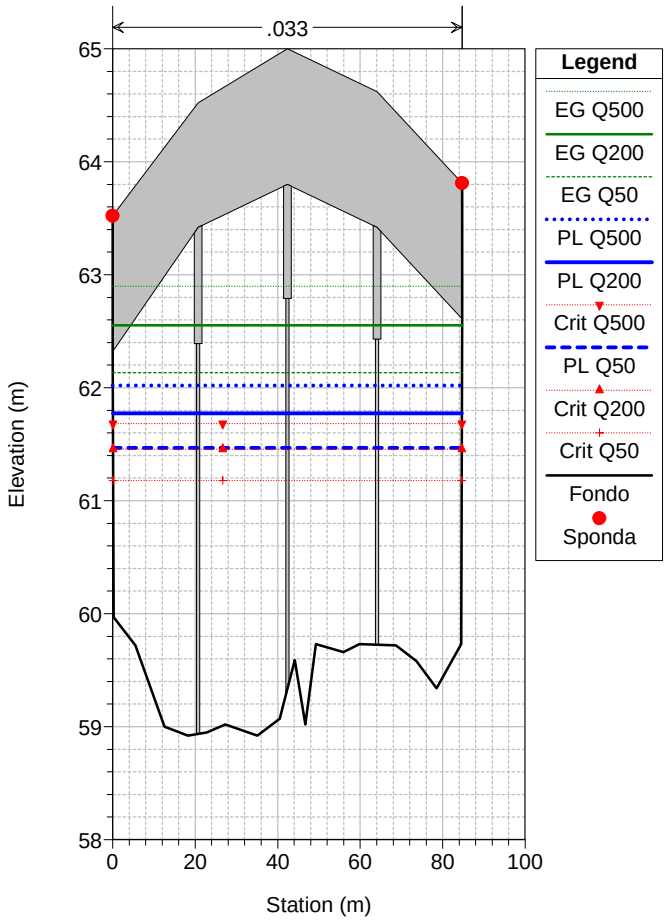
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-11.5m



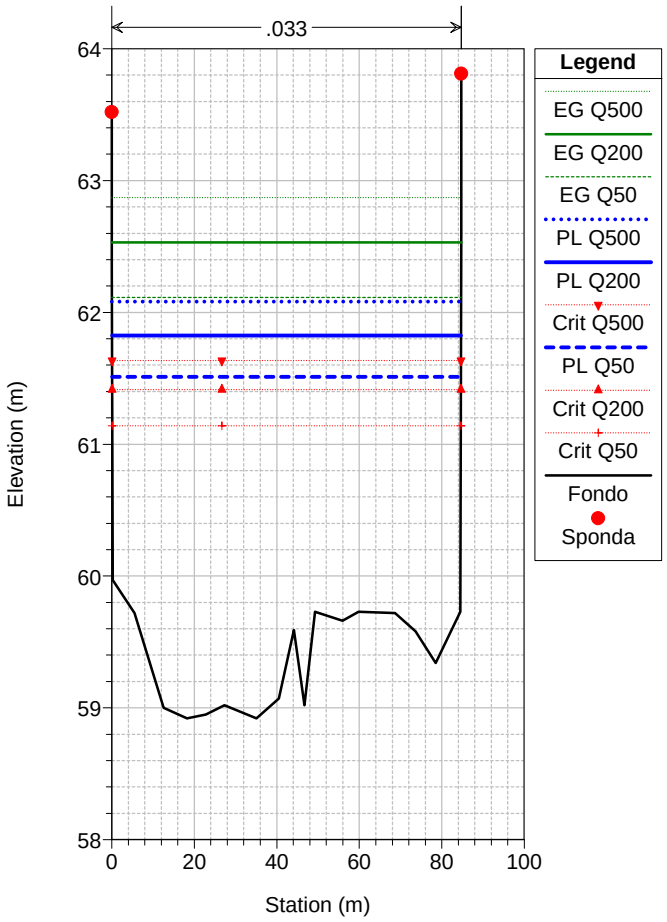
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-11.5



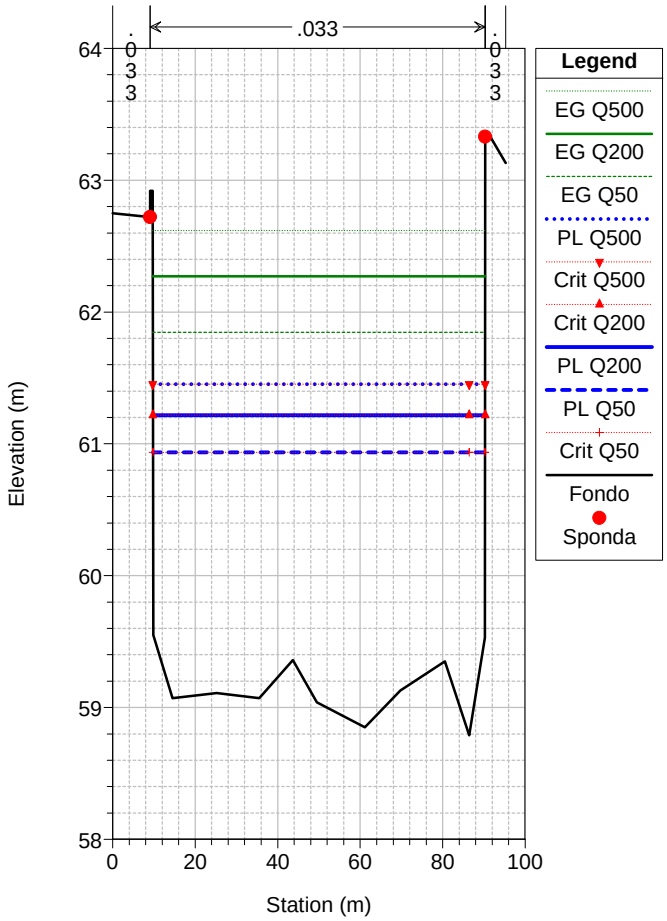
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-11.5



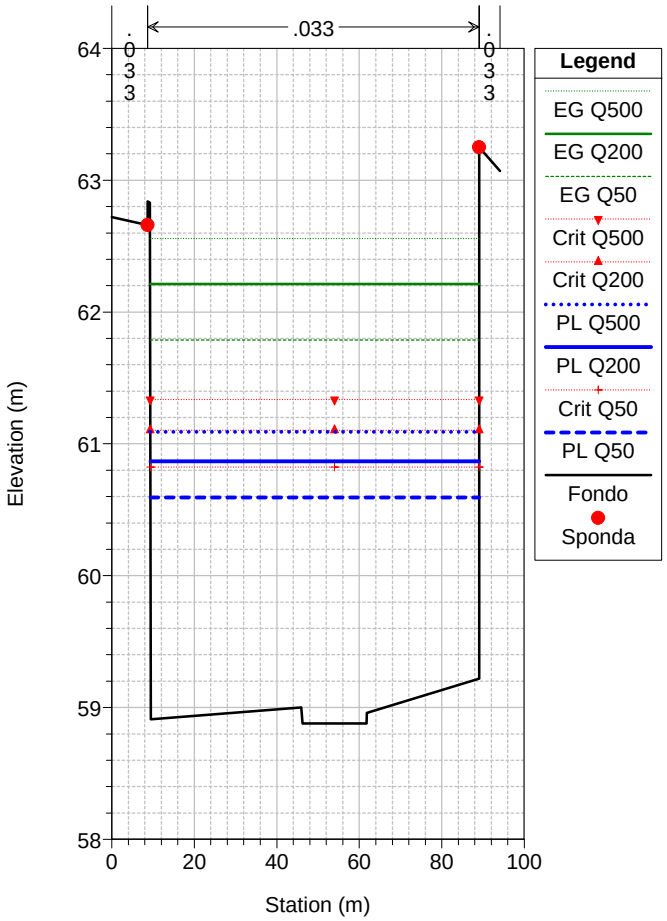
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-11.5v



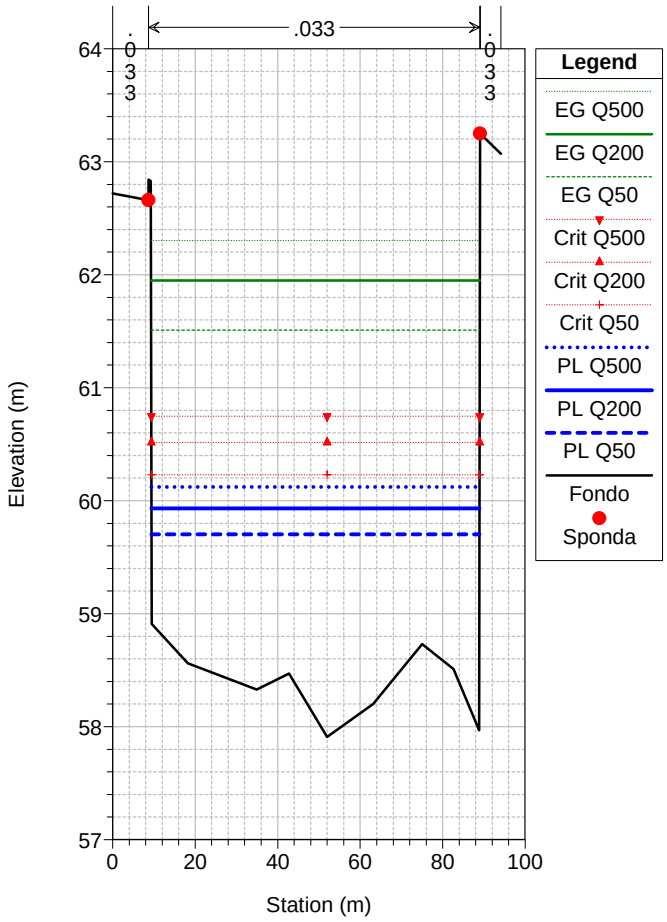
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-11.4m



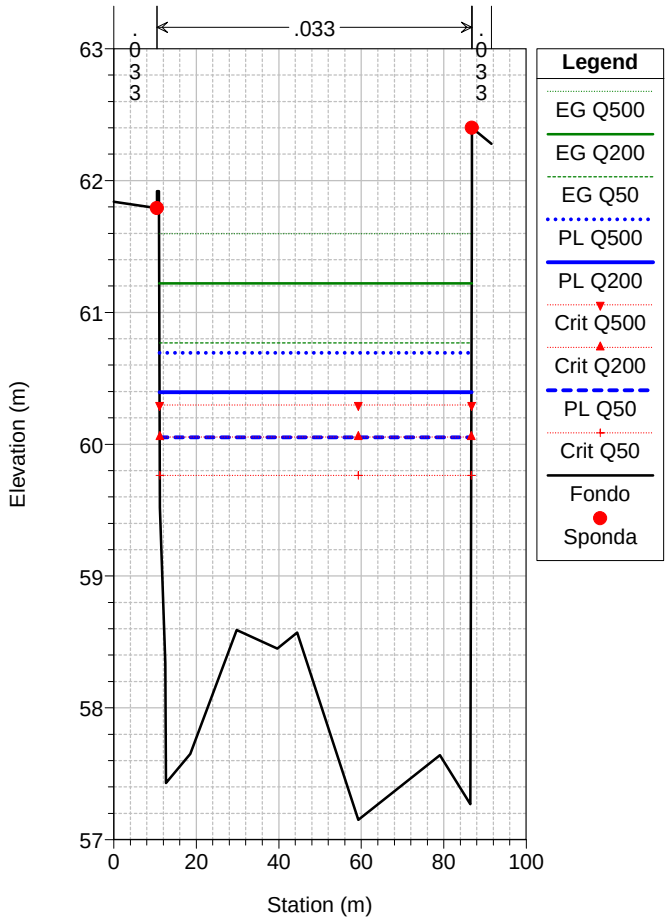
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-11.4v



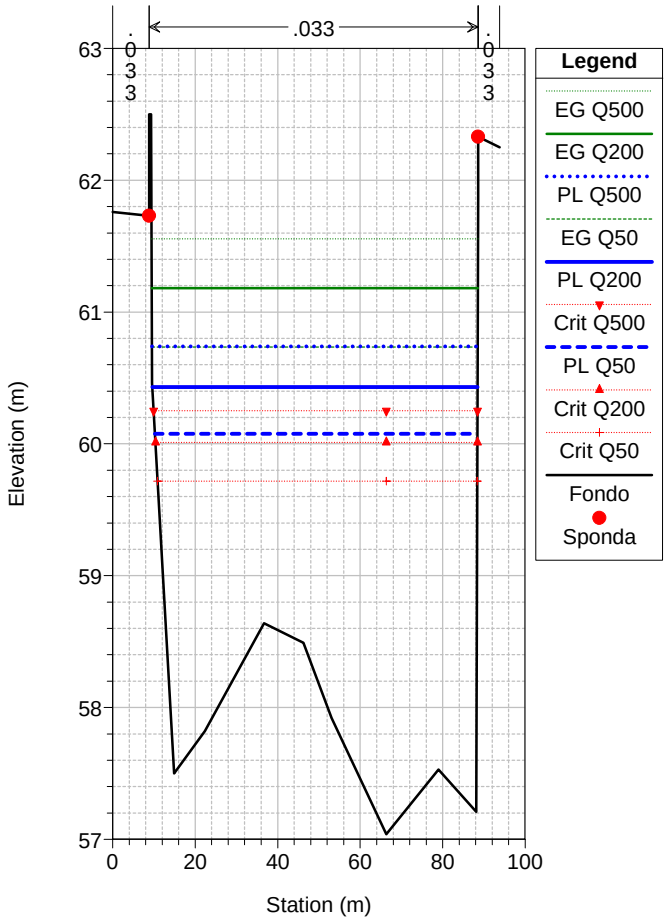
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-11.2



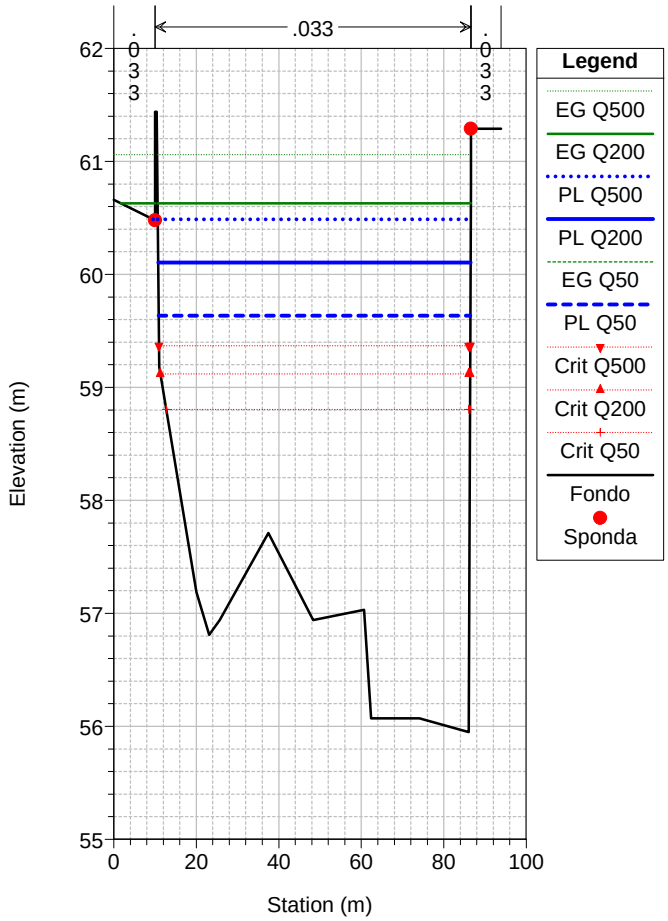
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-11.0

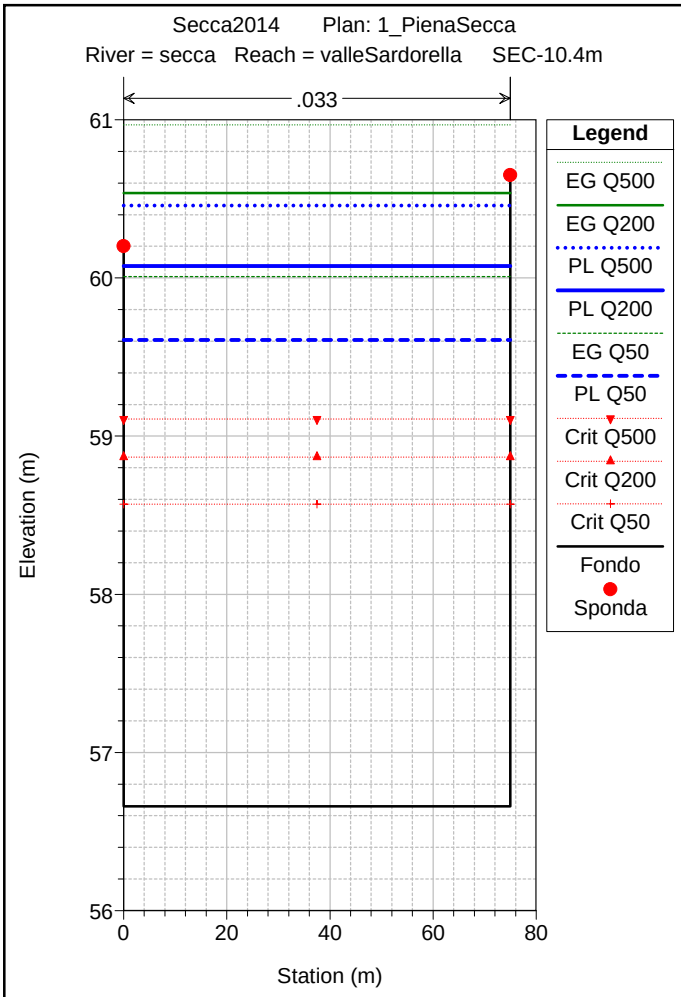


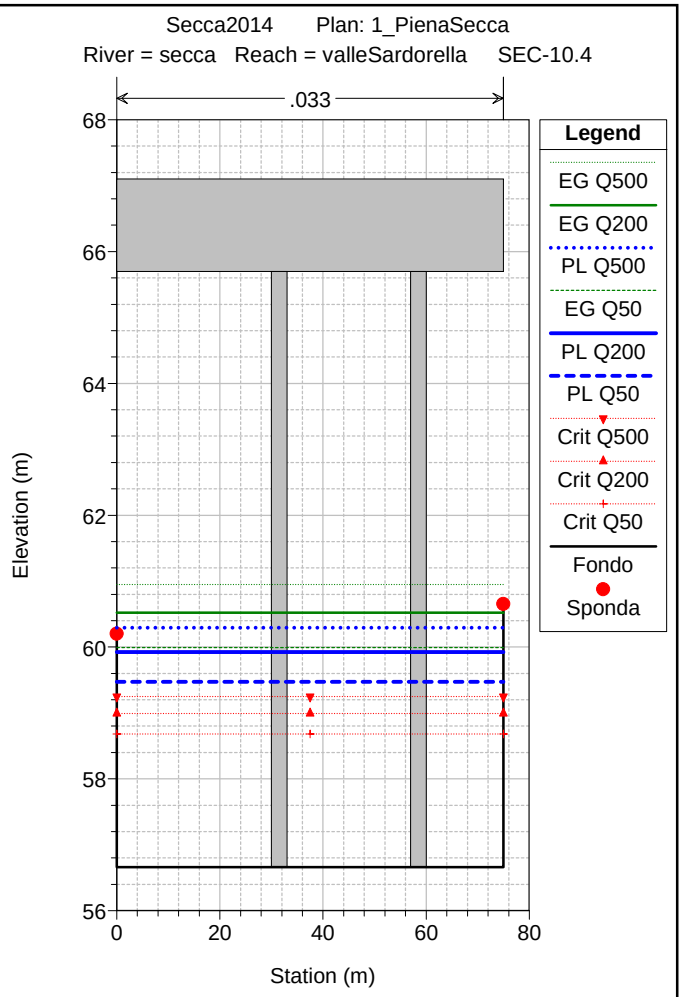
Secca2014 Plan: 1_PienaSecca
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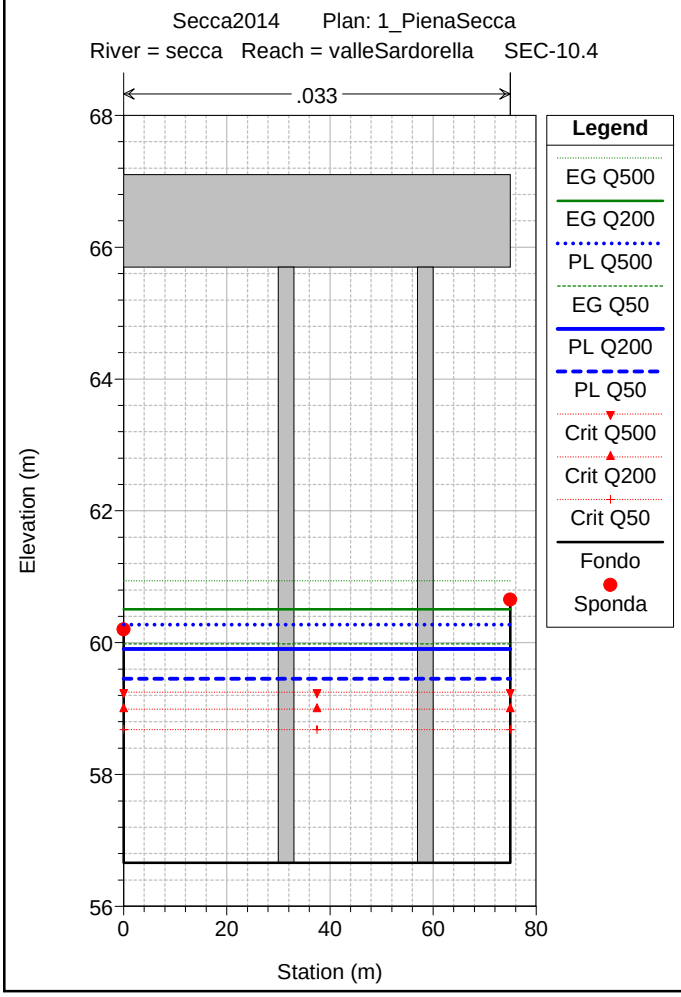


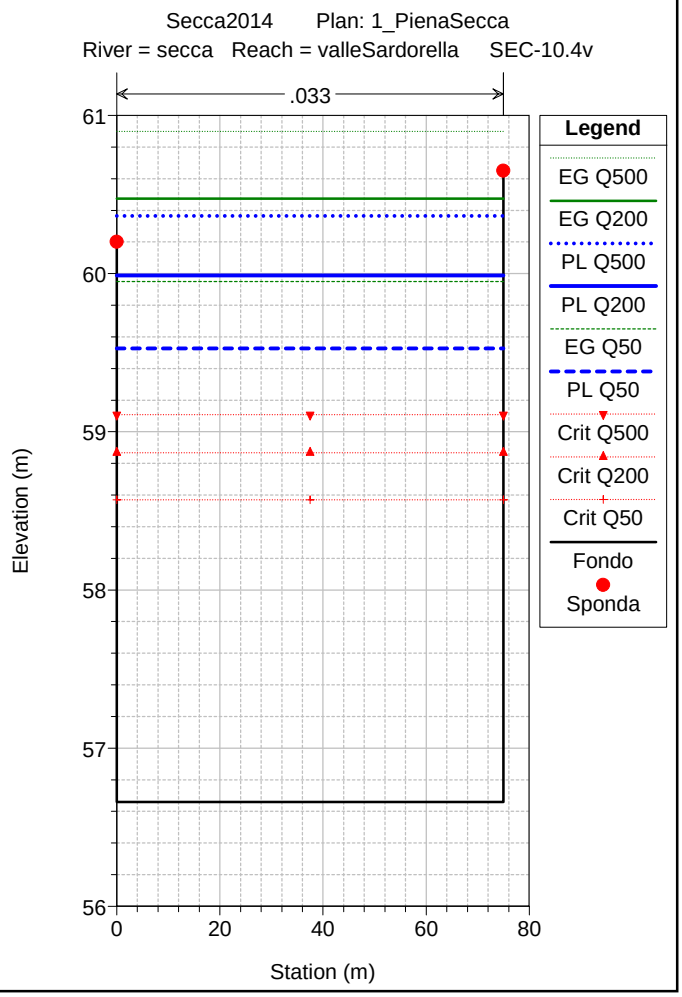
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-10.6



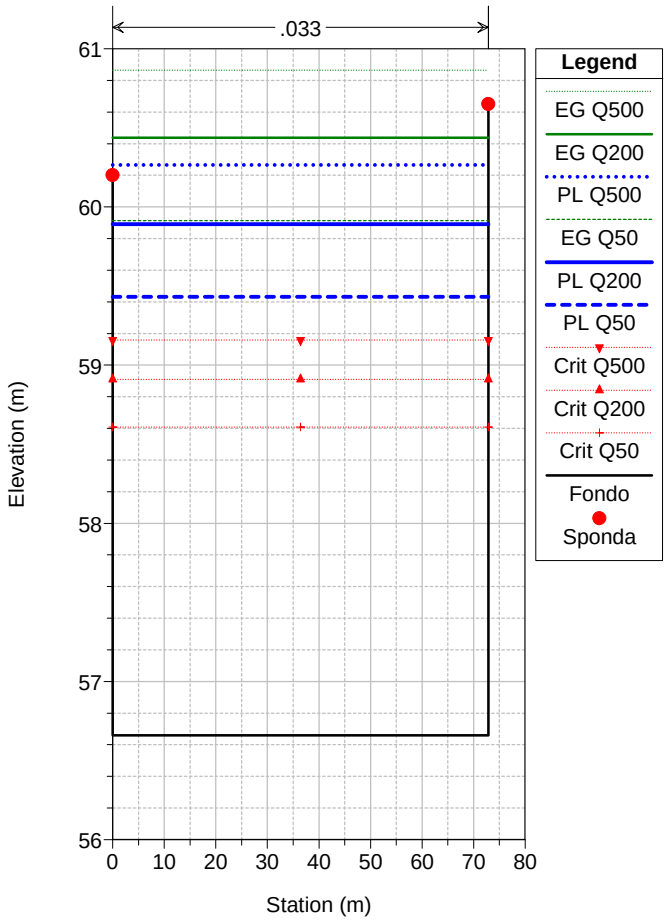

Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-10.4m
.033
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-10.4
.033
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

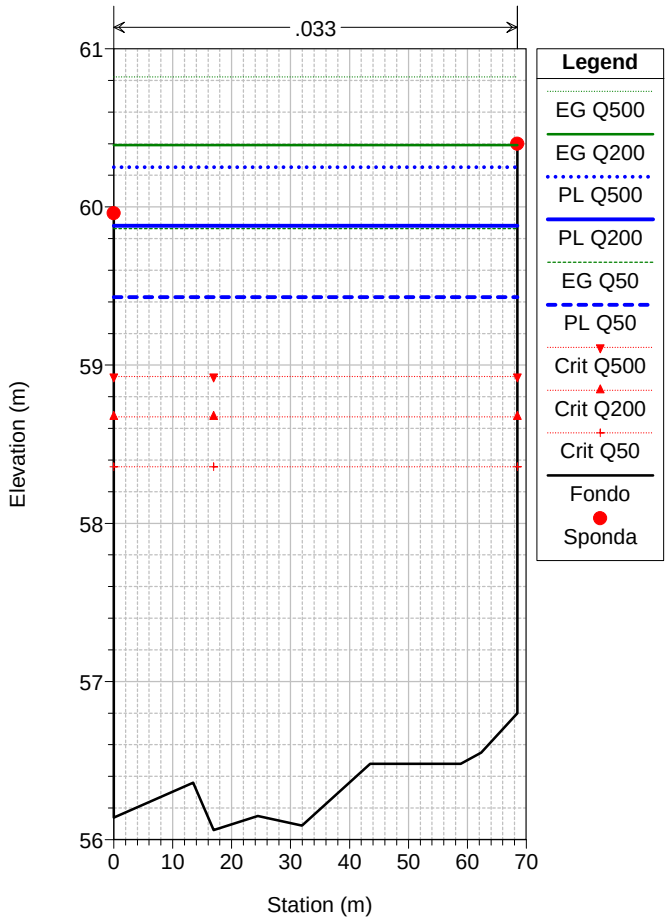

Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-10.4
.033
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-10.4v
.033
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

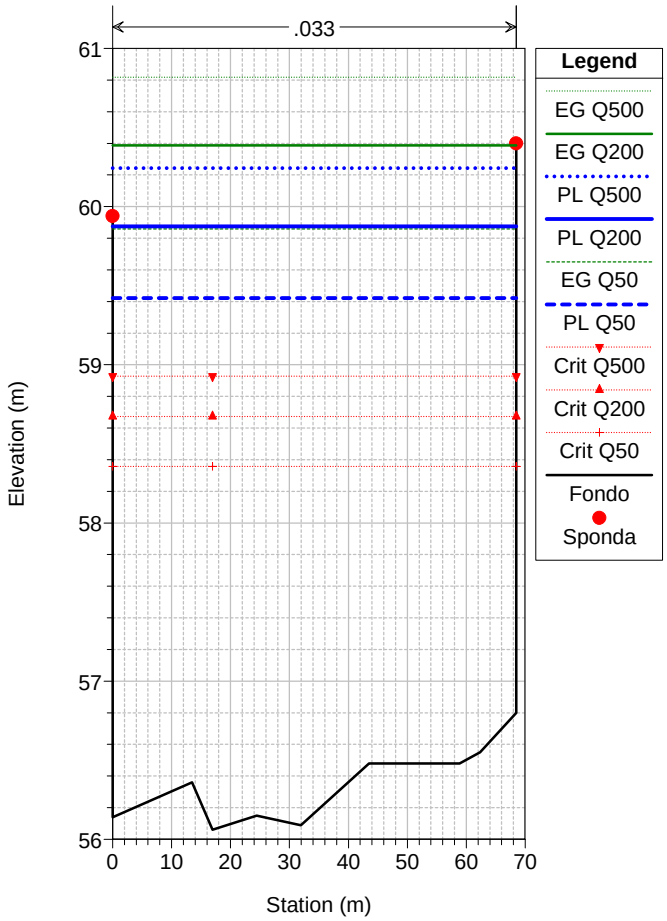
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-10.2



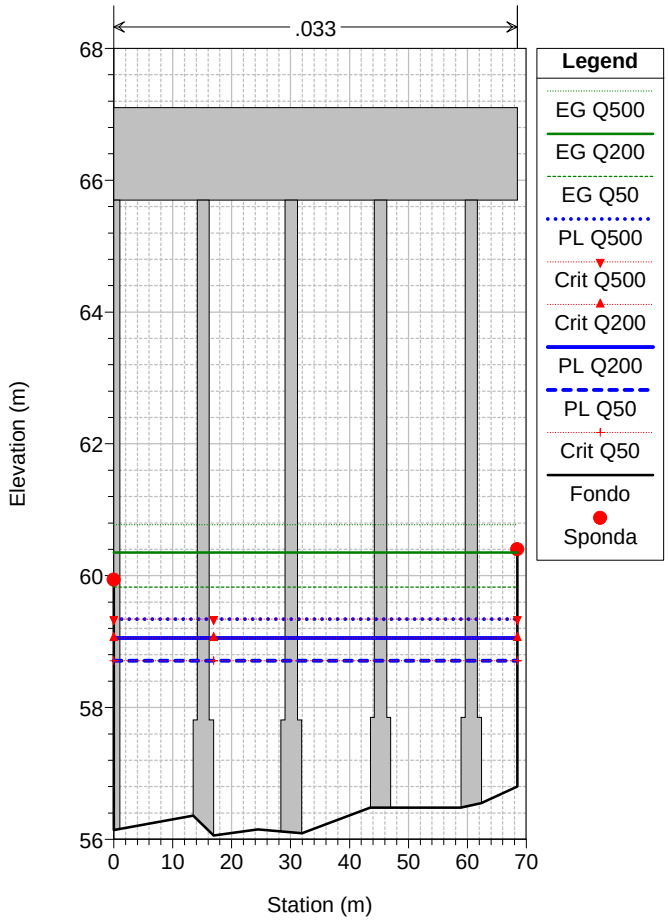
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River = secca Reach = valleSardorella SEC-10.1



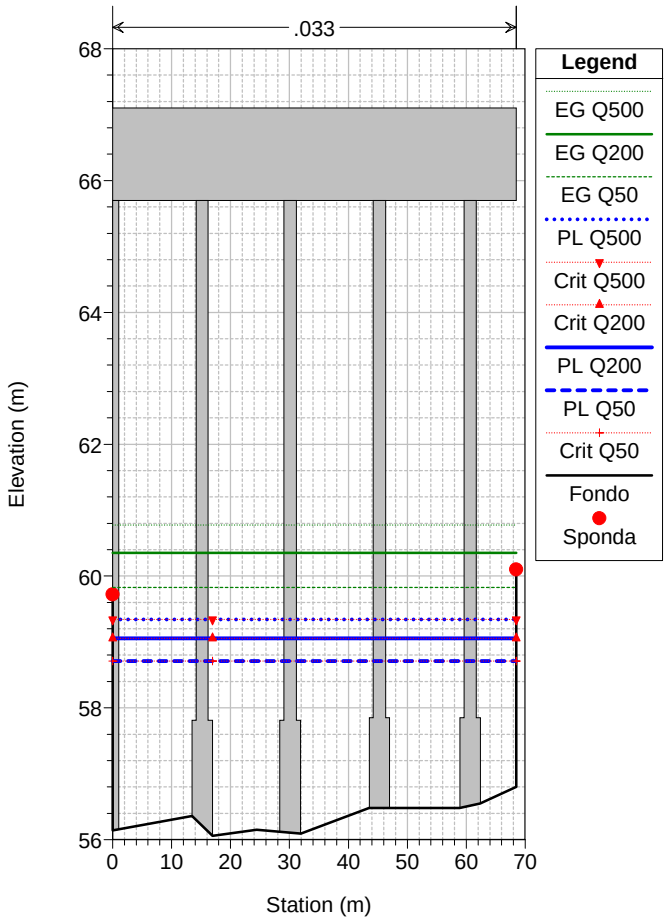
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-10.0m



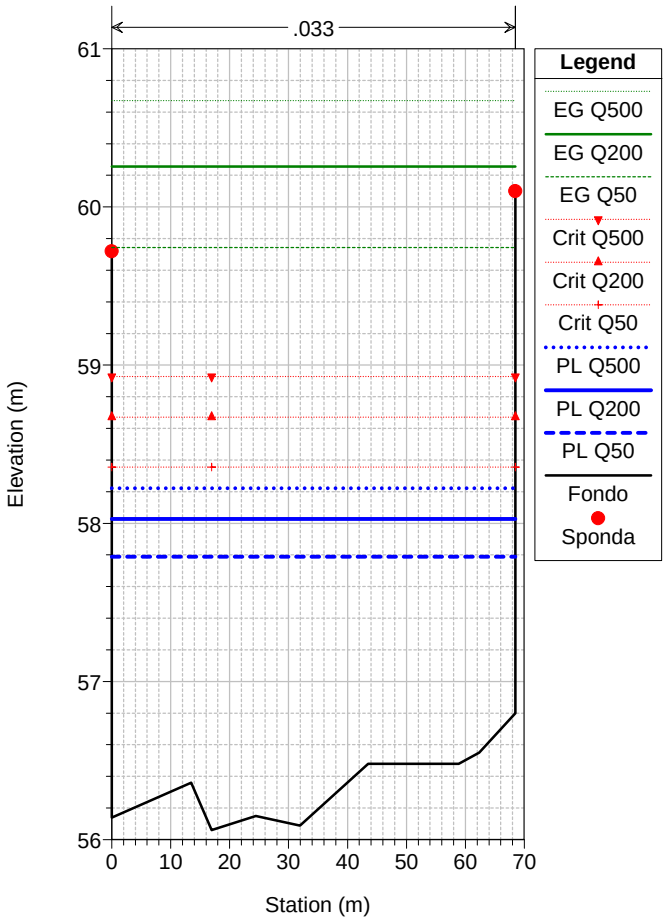
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-10.0



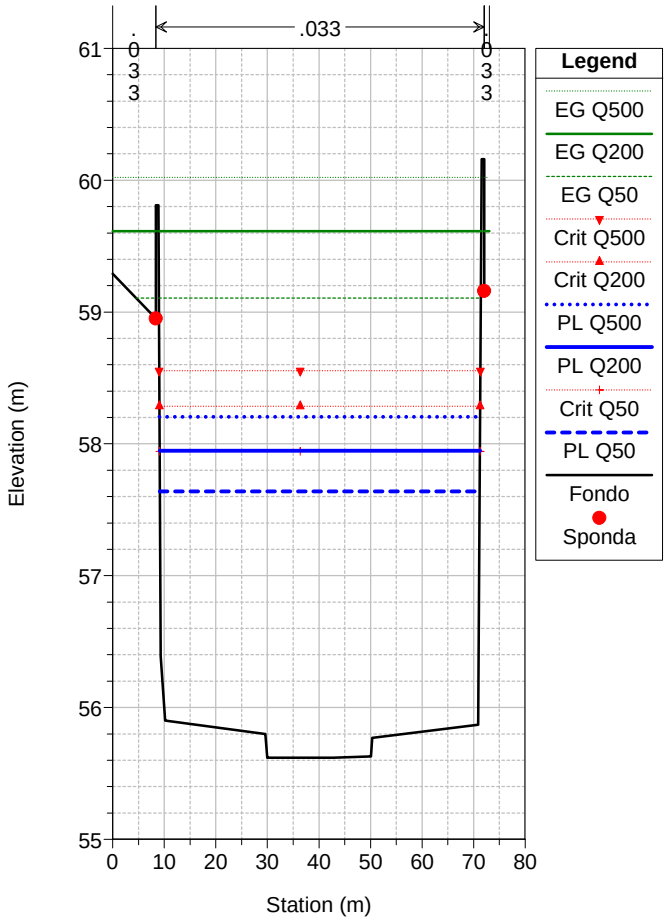
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-10.0



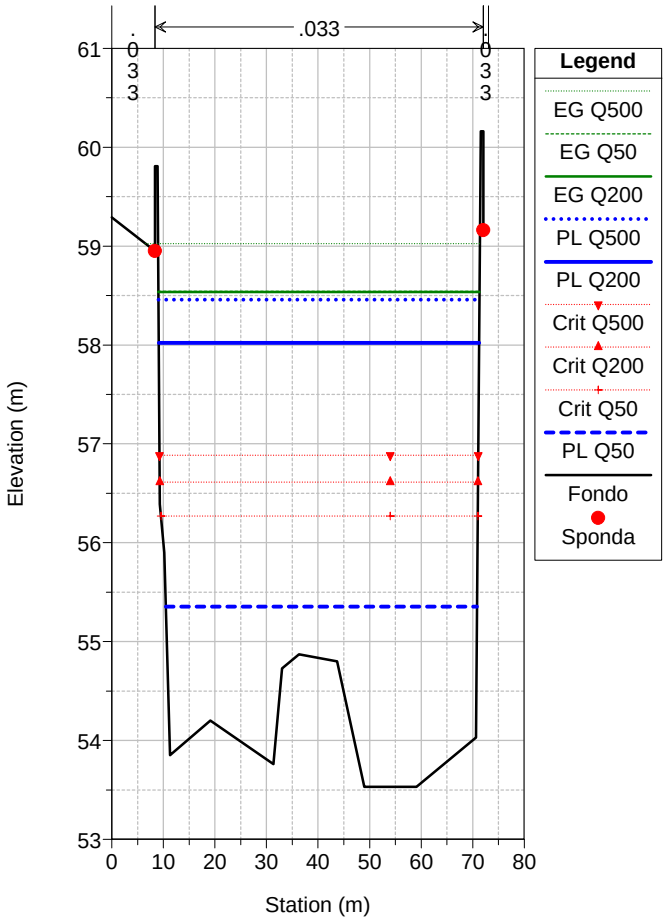
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-10.0v



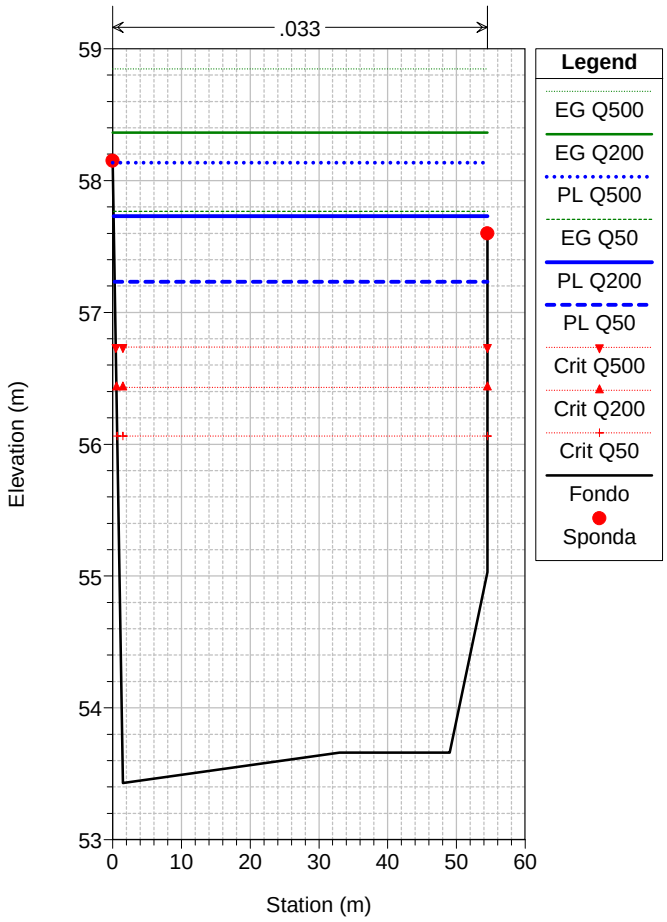
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-7.2



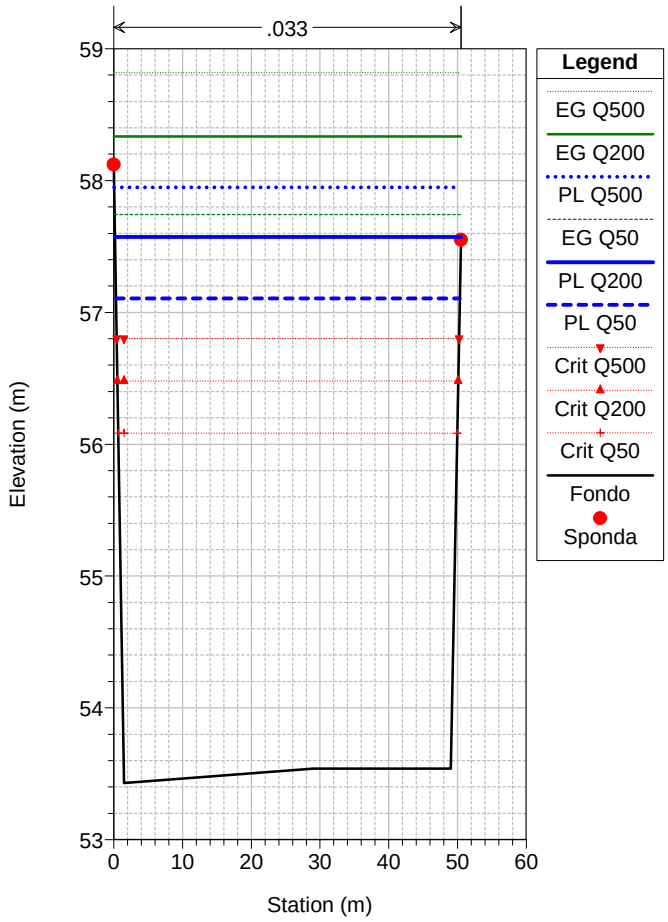
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-7.0



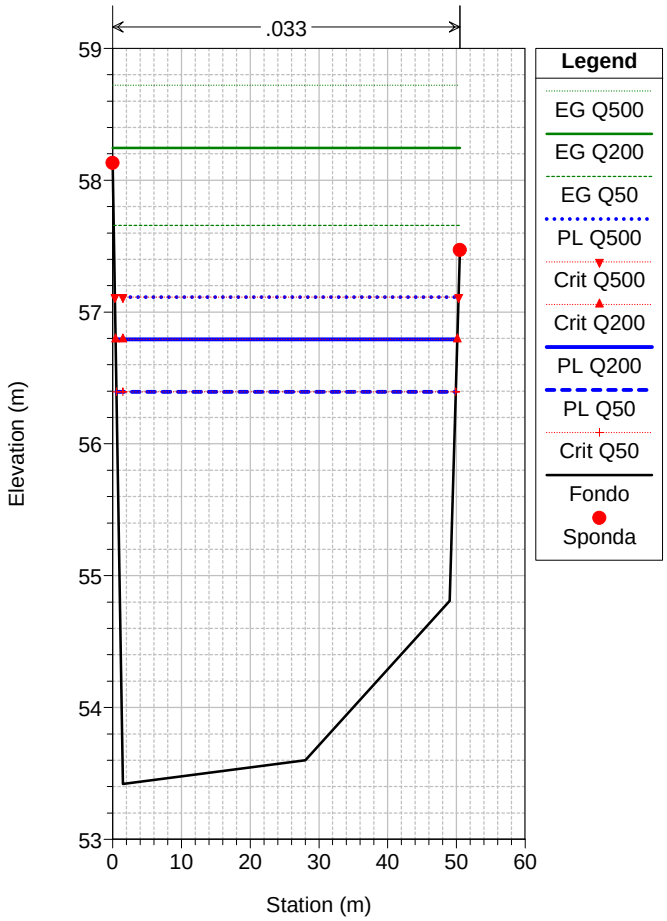
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-6.6



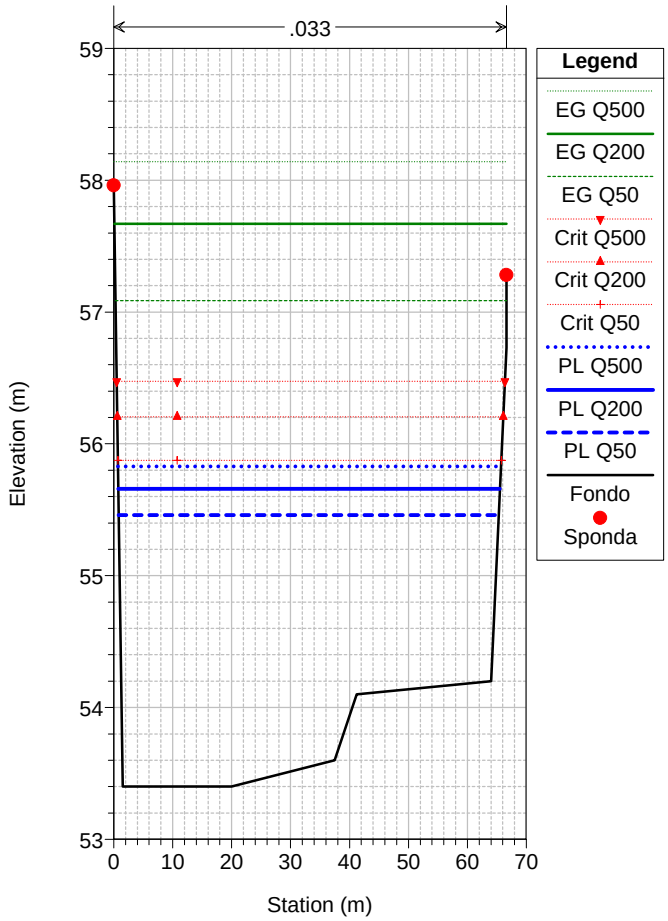
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-6.5



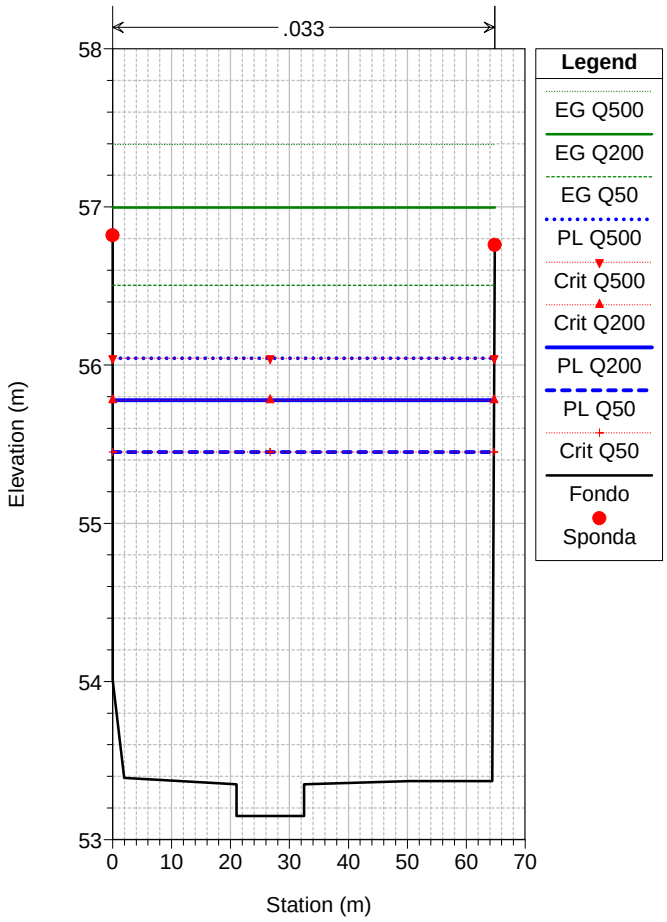
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-6.4



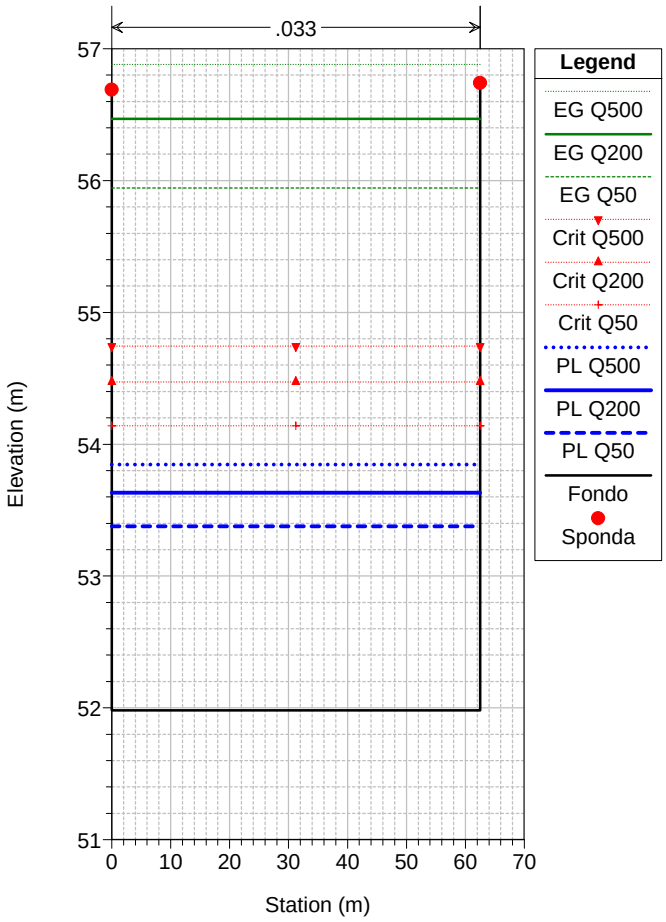
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-6.3



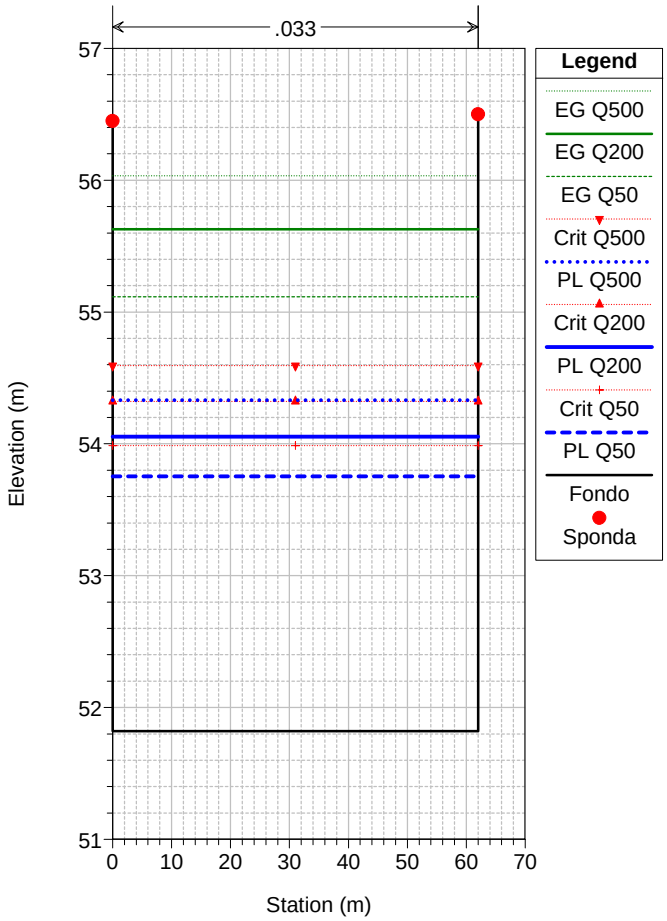
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-6.2



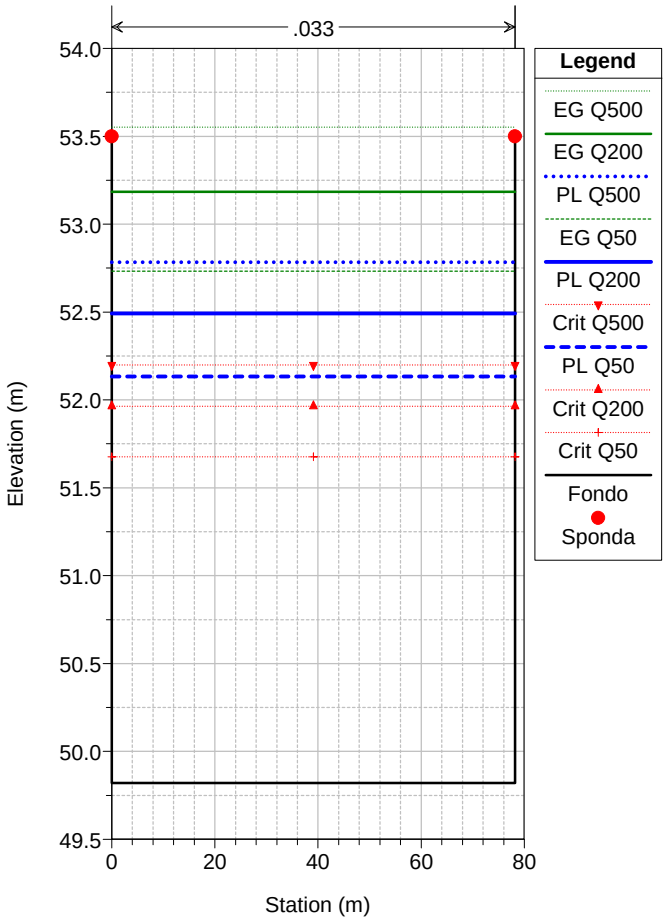
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-6.0



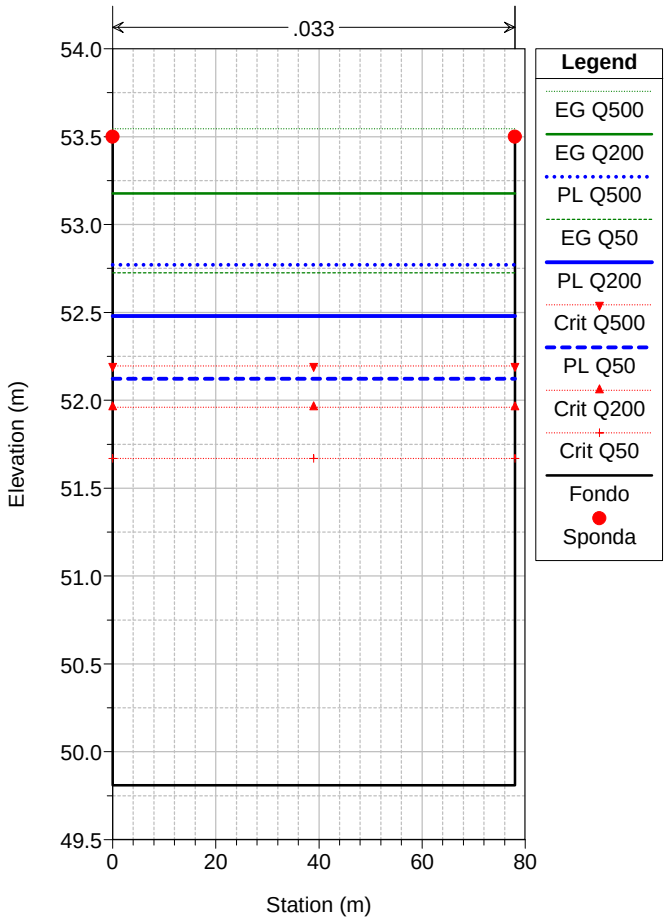
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-5.6



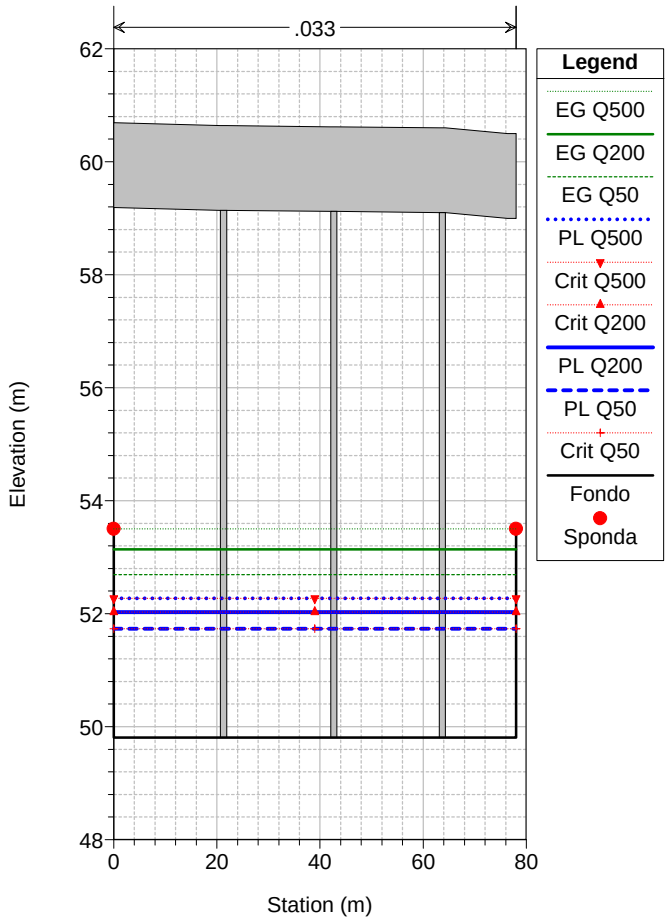
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-5



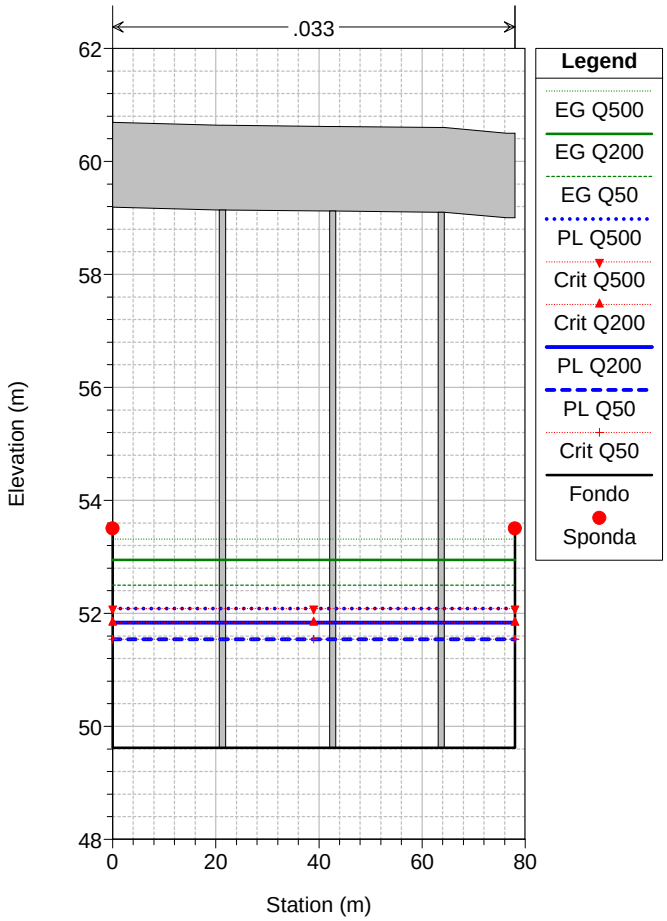
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-4.2



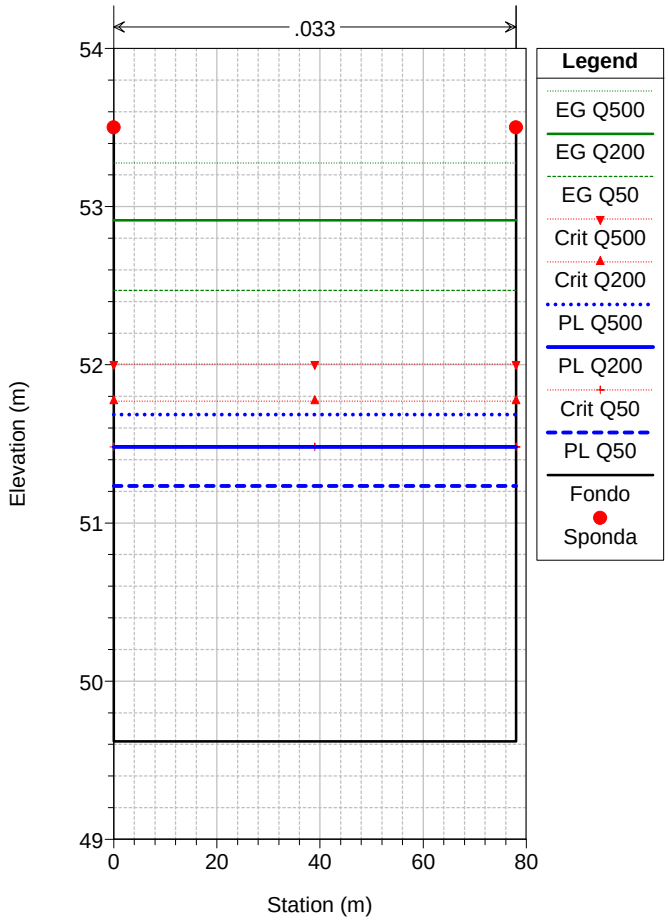
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella PONTE



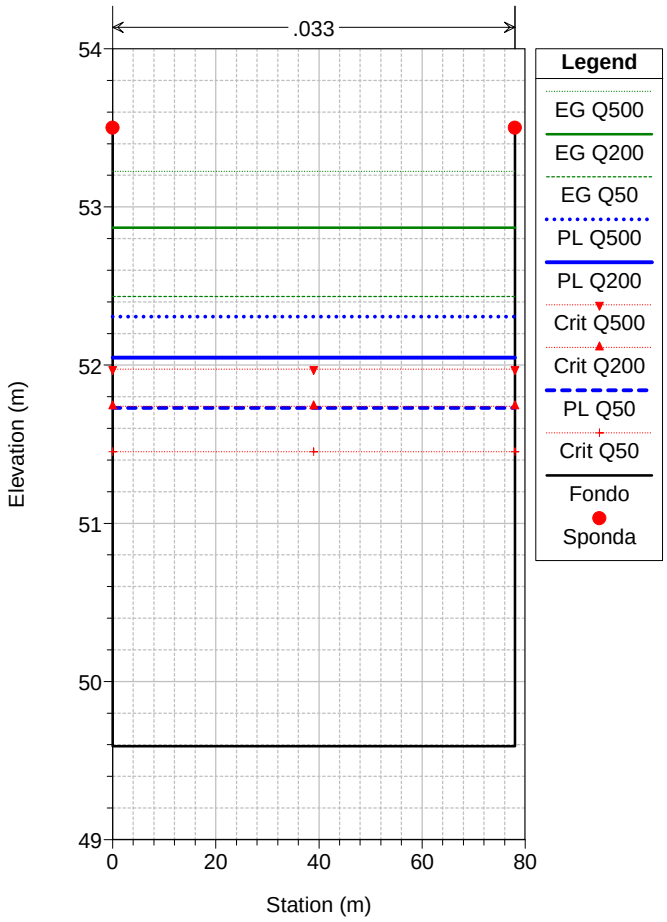
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella PONTE



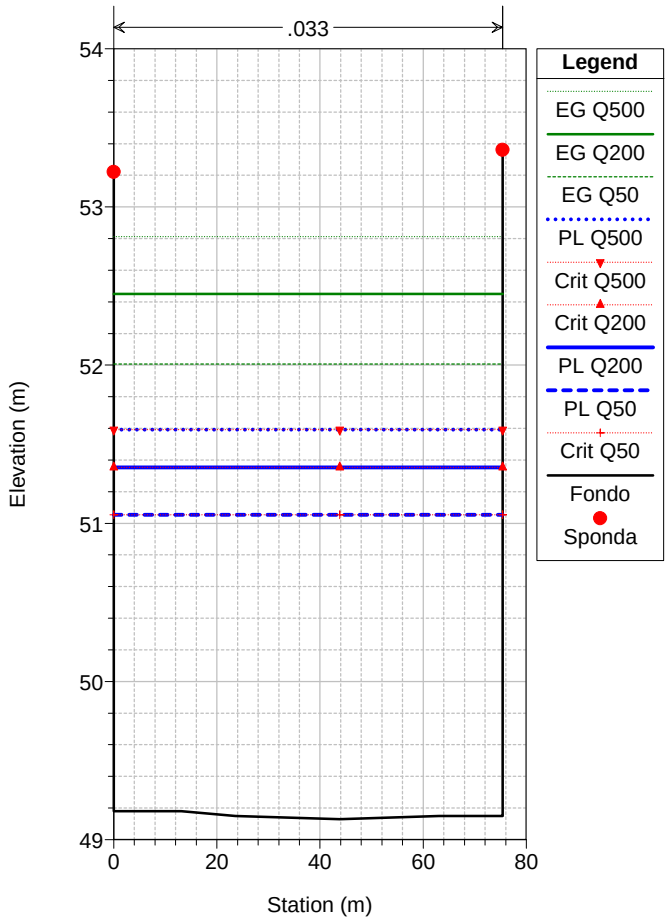
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-4.1



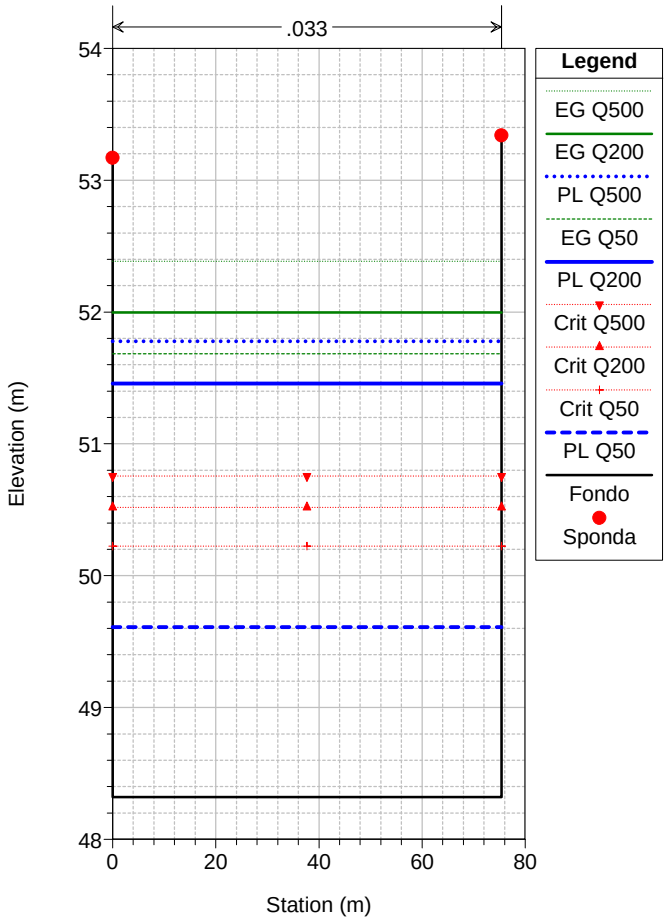
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-4



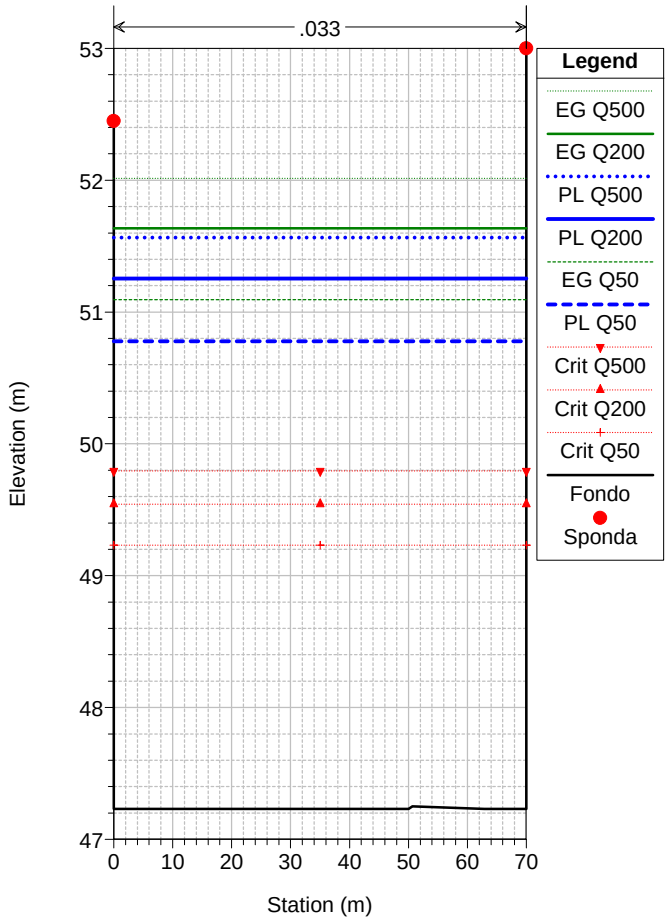
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-3.2



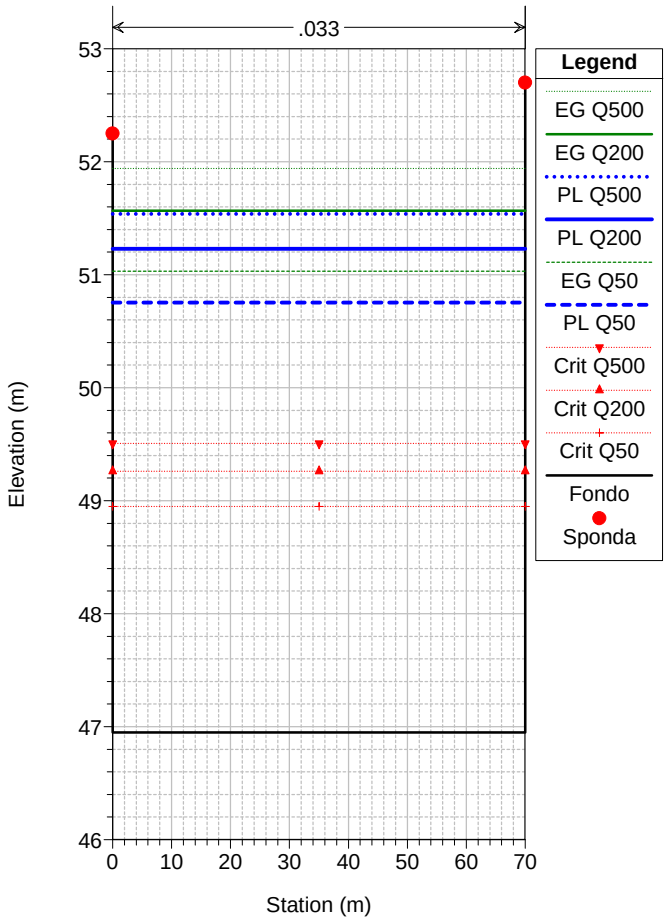
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-3.0



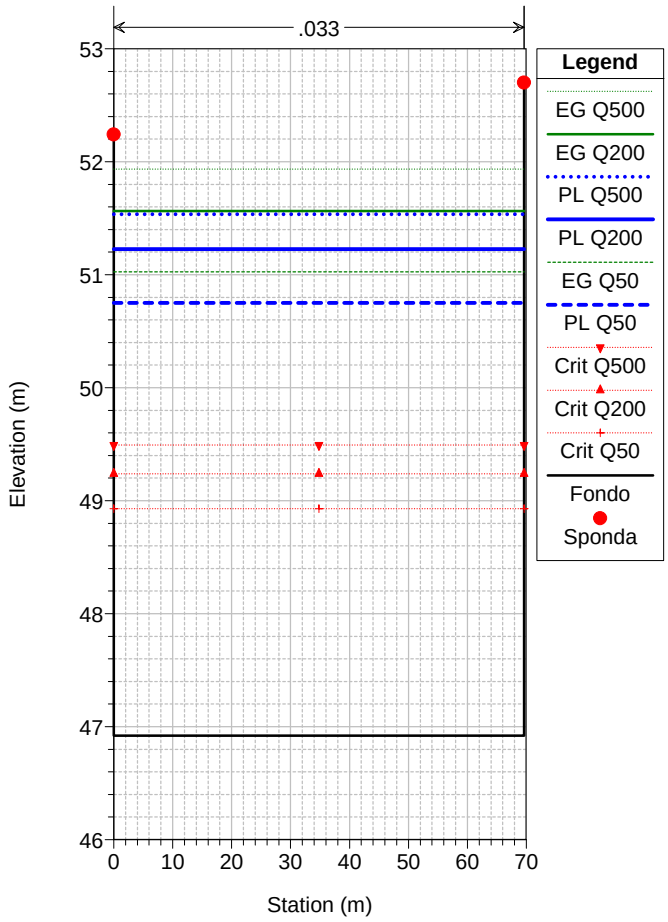
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-2



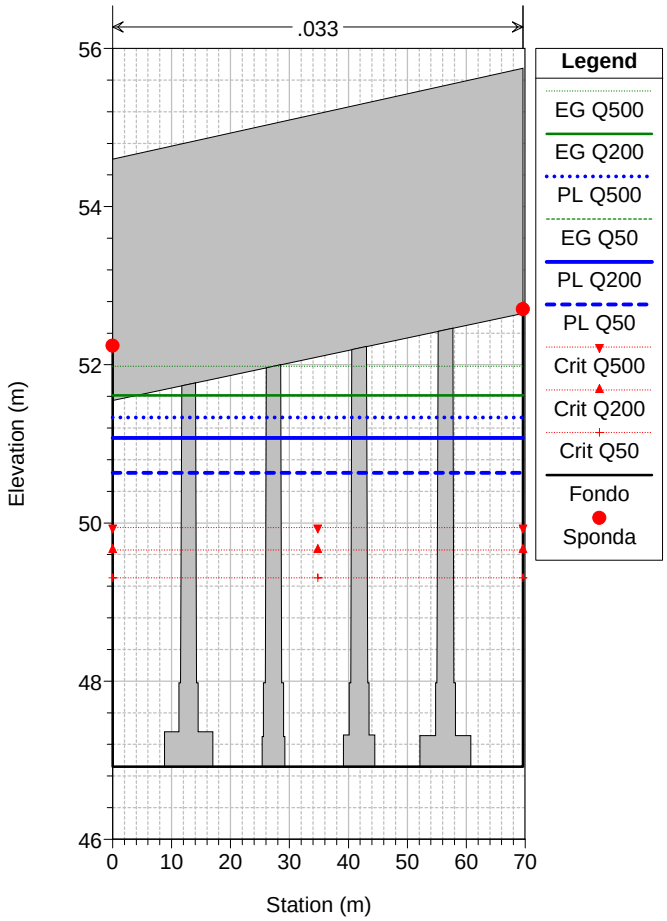
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-1.3



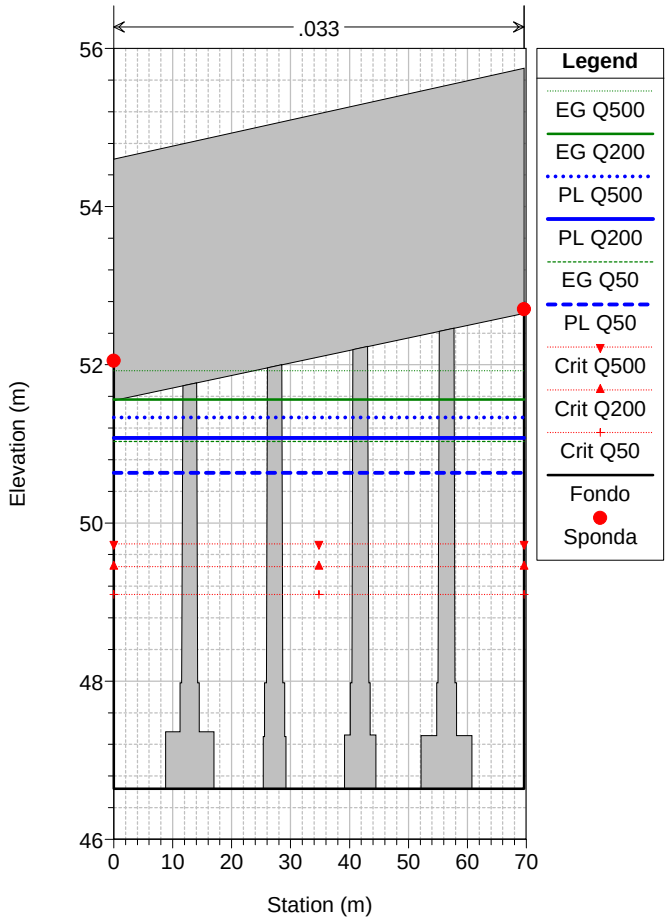
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-1.2



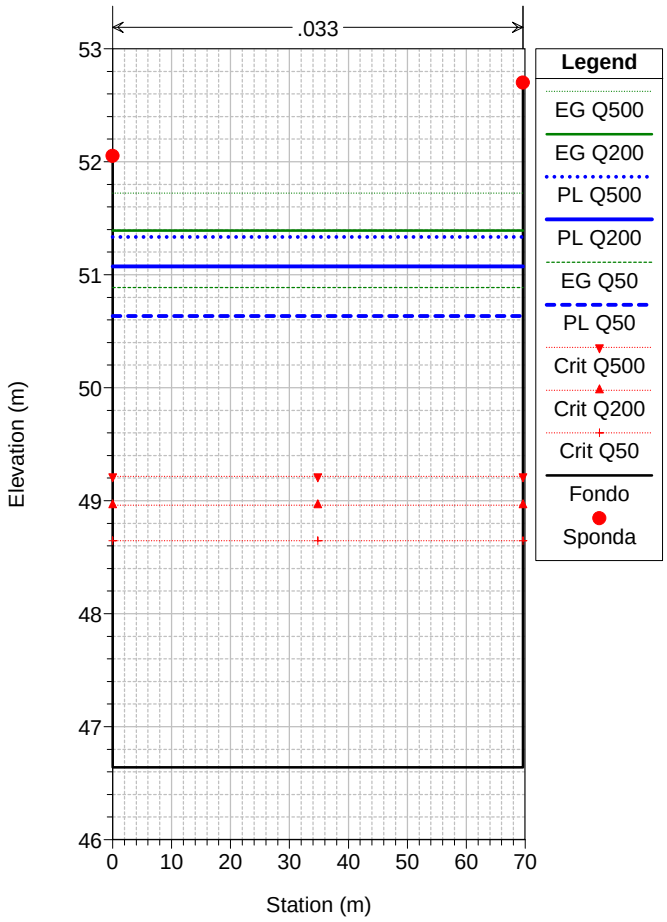
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella PONTE



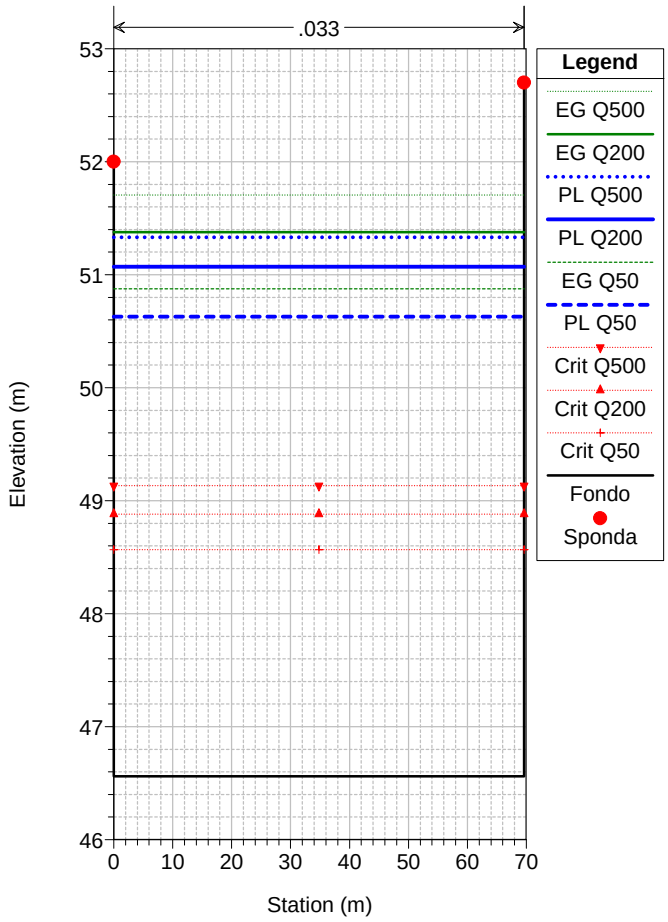
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella PONTE



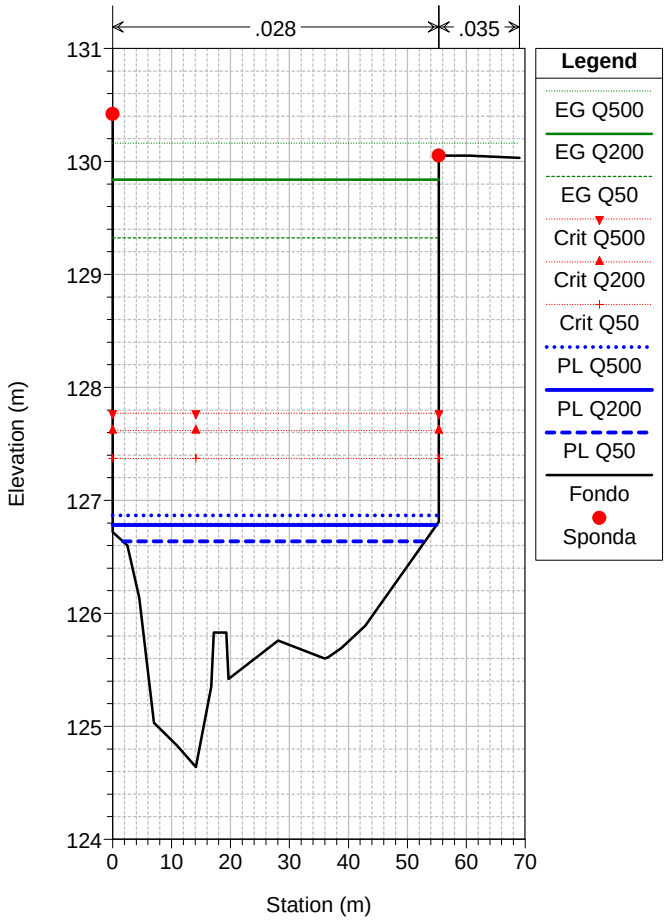
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-1.1



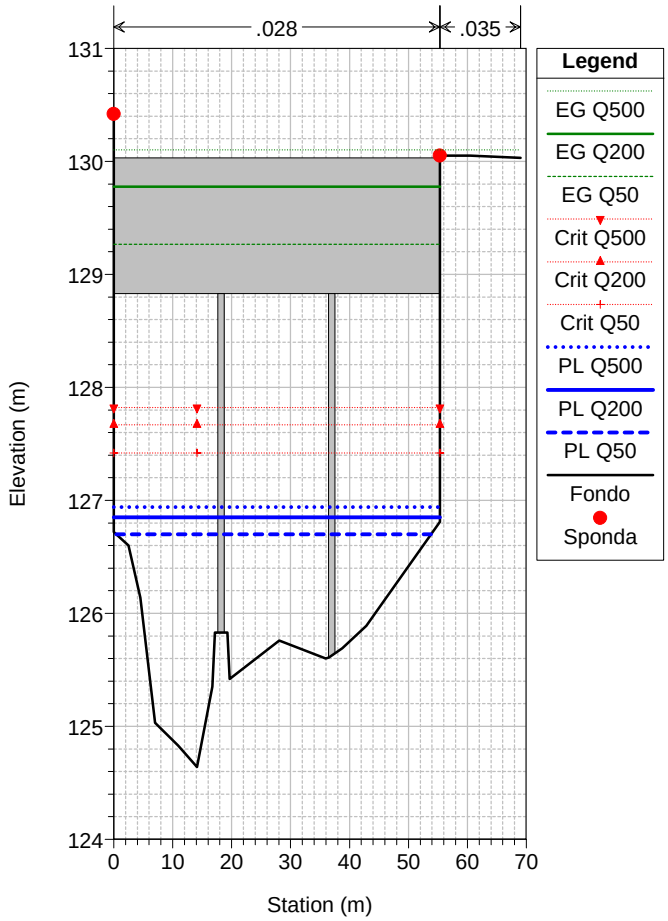
Secca2014 Plan: 1_PienaSecca
River = secca Reach = valleSardorella SEC-1

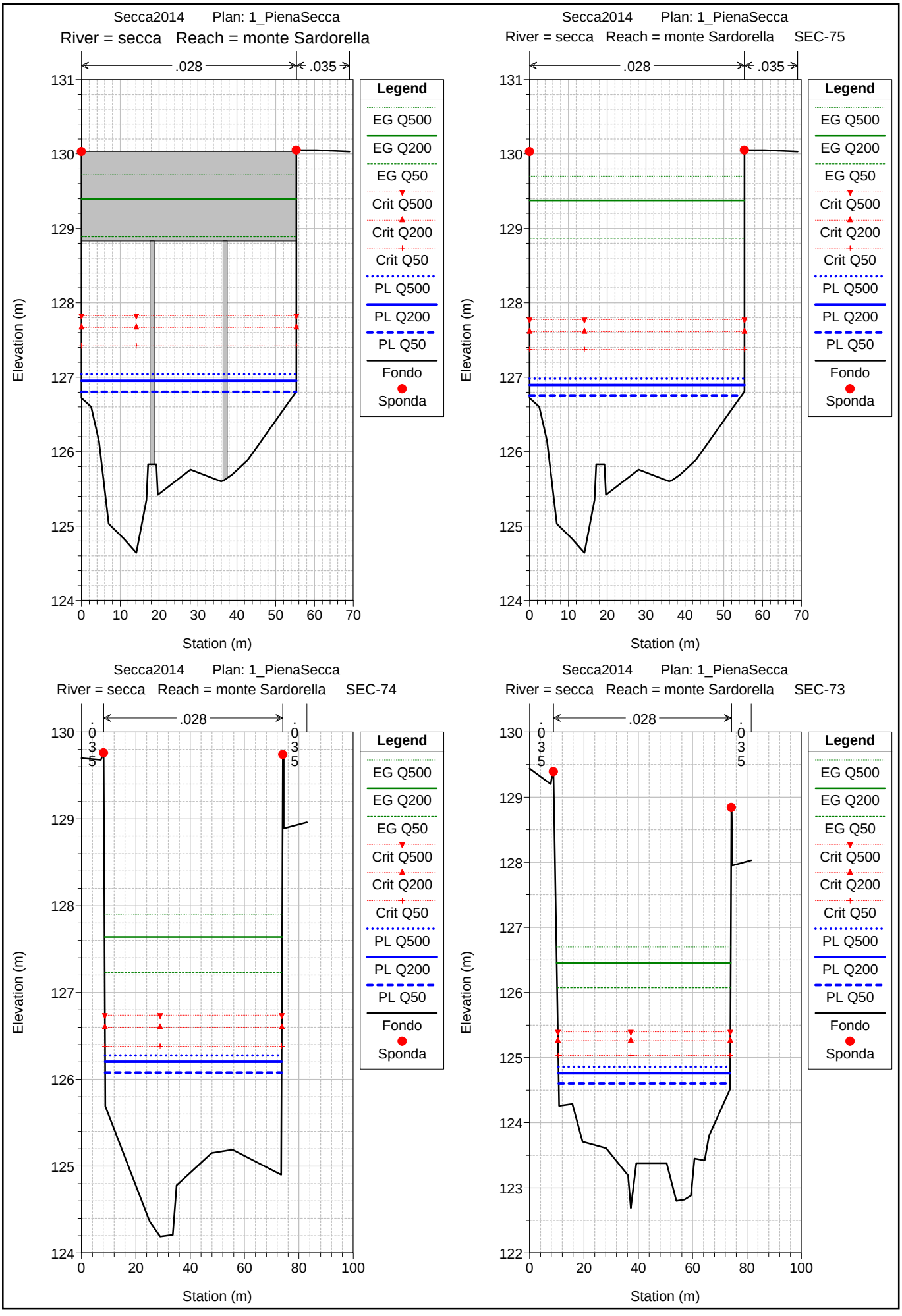


Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-75

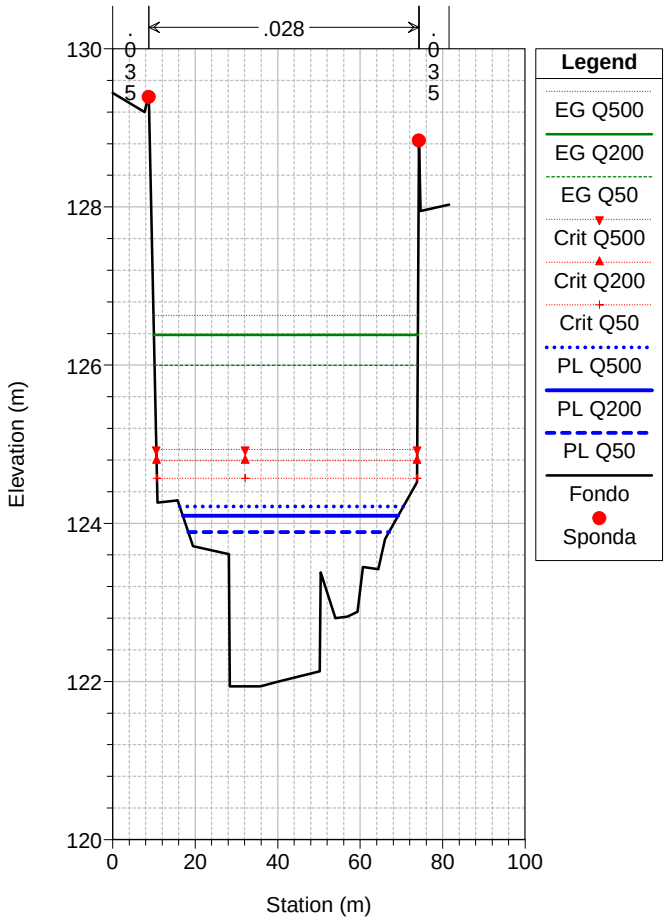


Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella

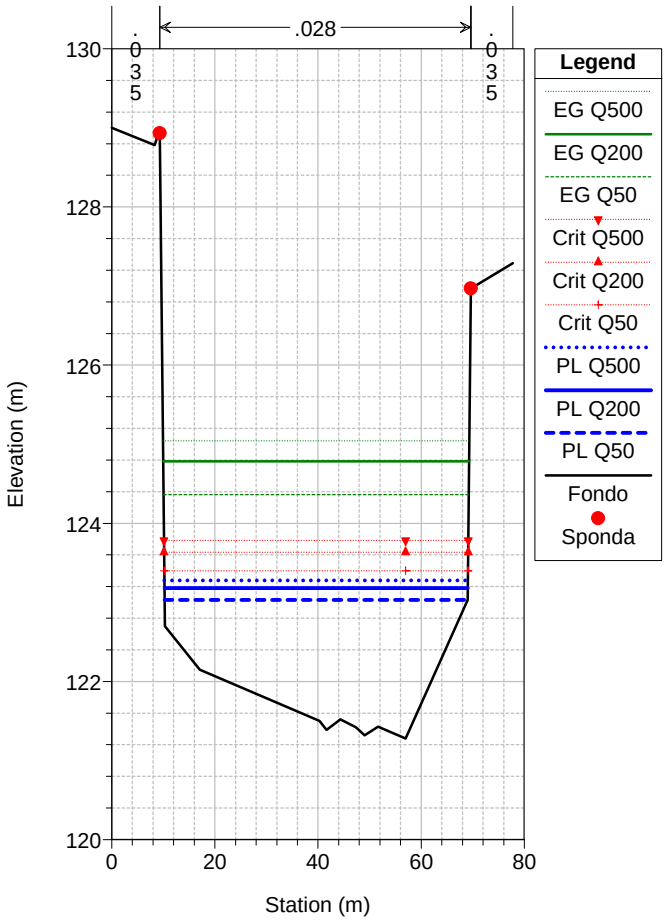



Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-75
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-74
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-73

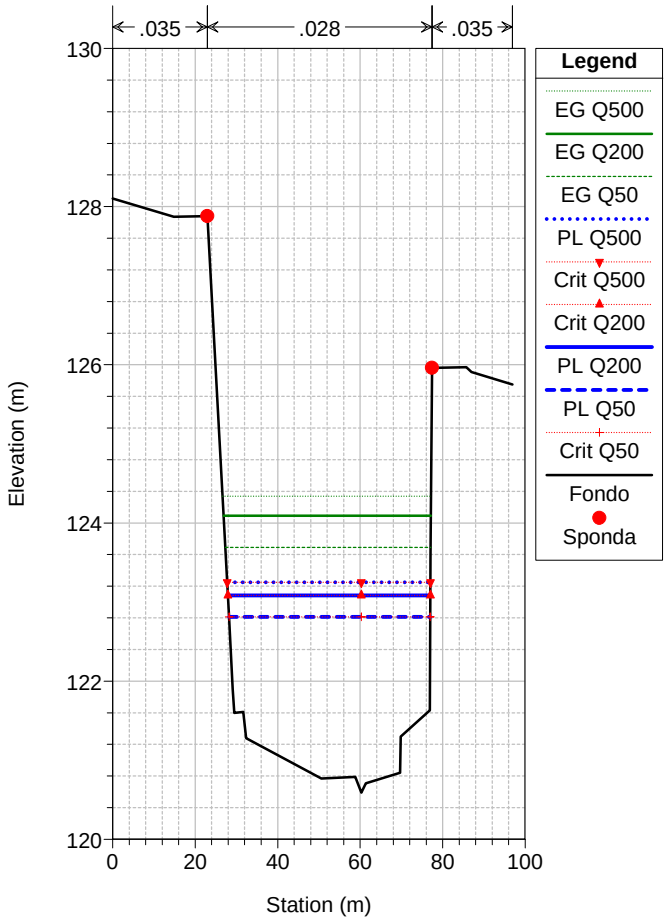
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-73



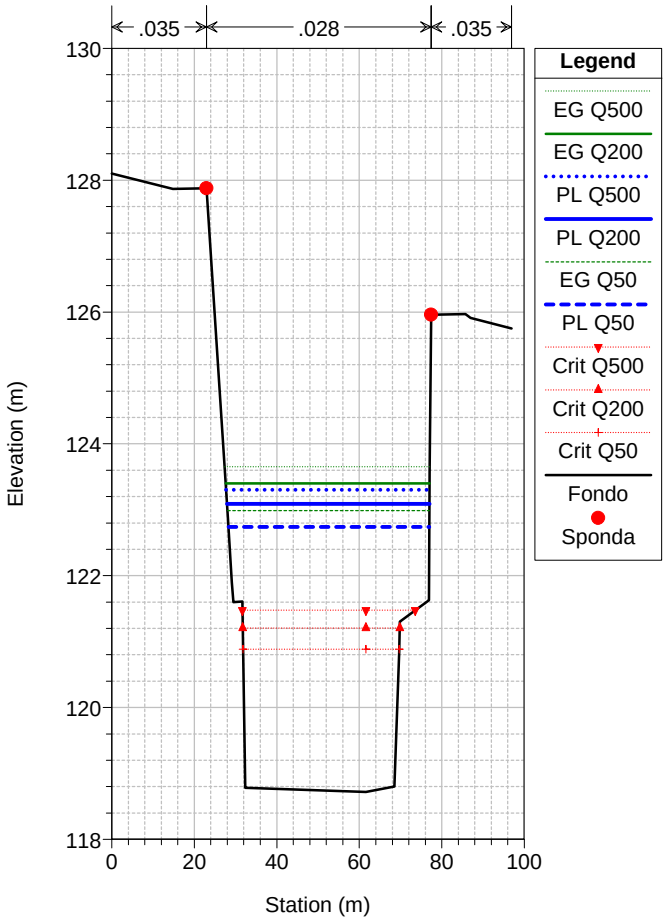
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-72

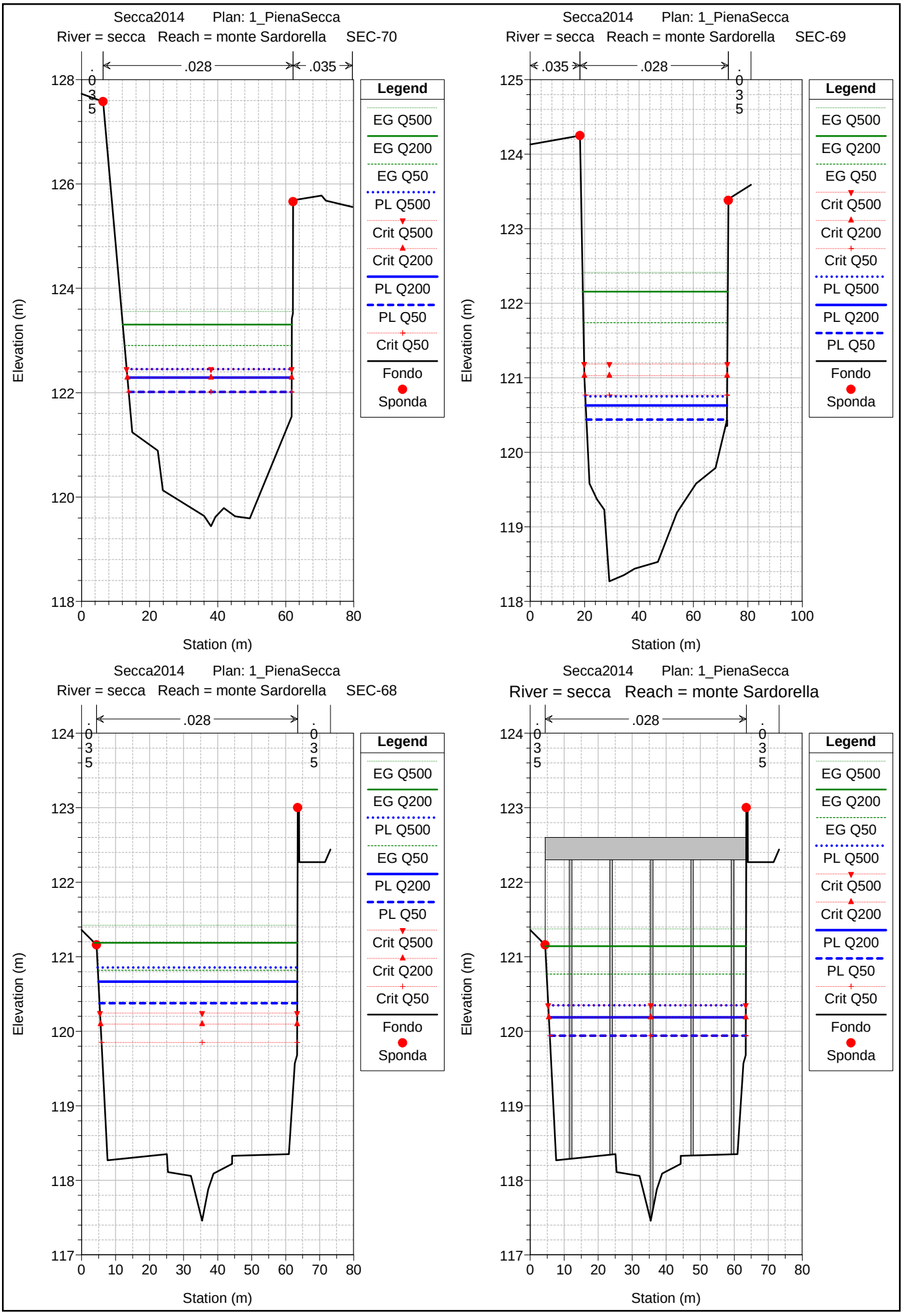


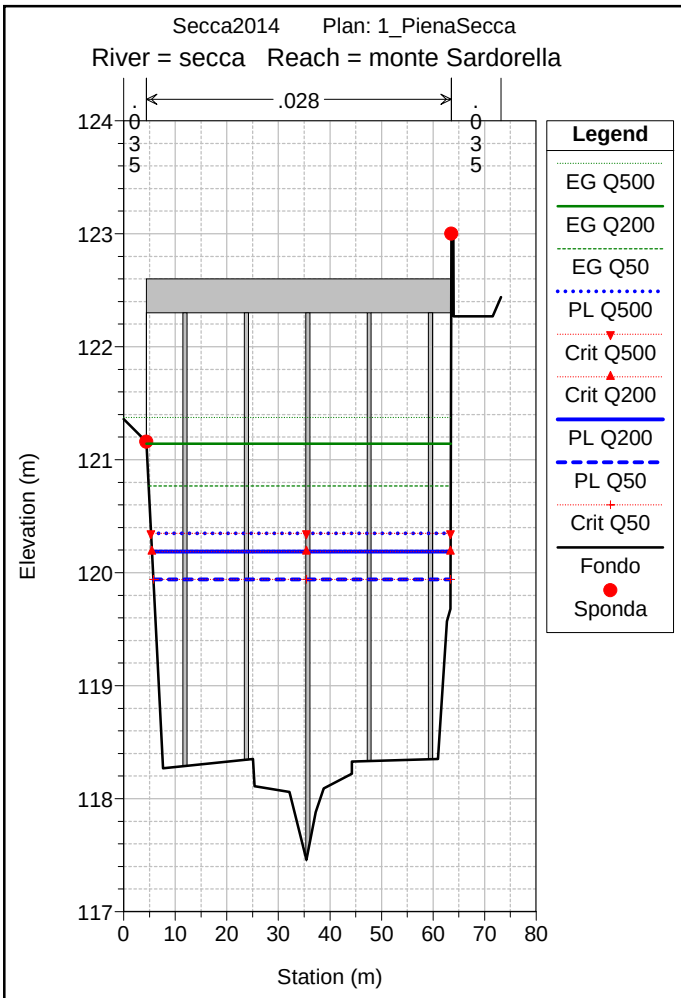
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-71

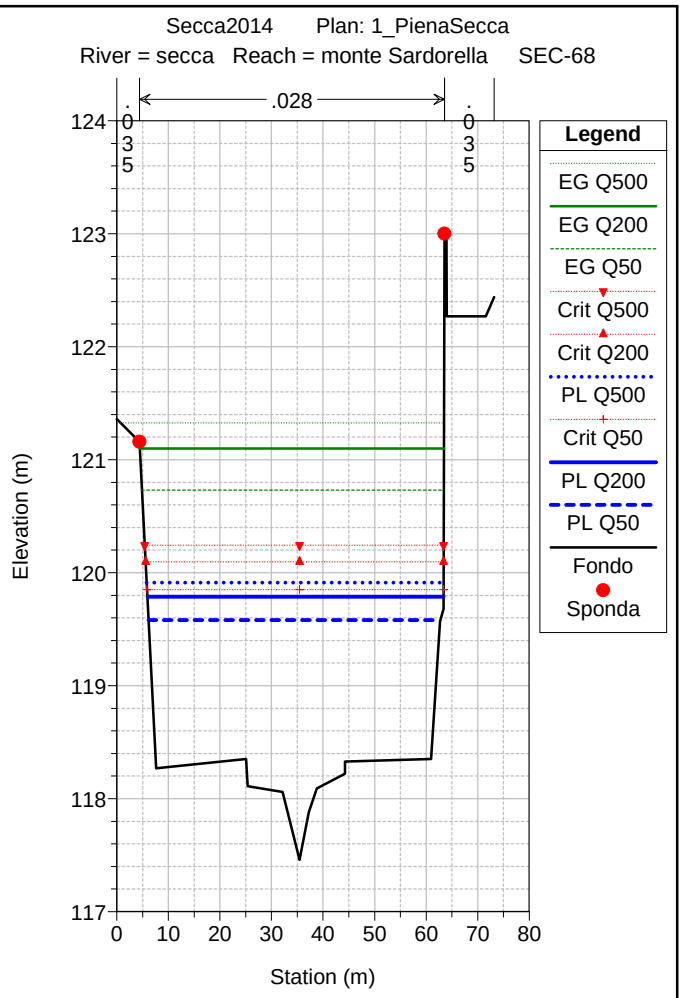


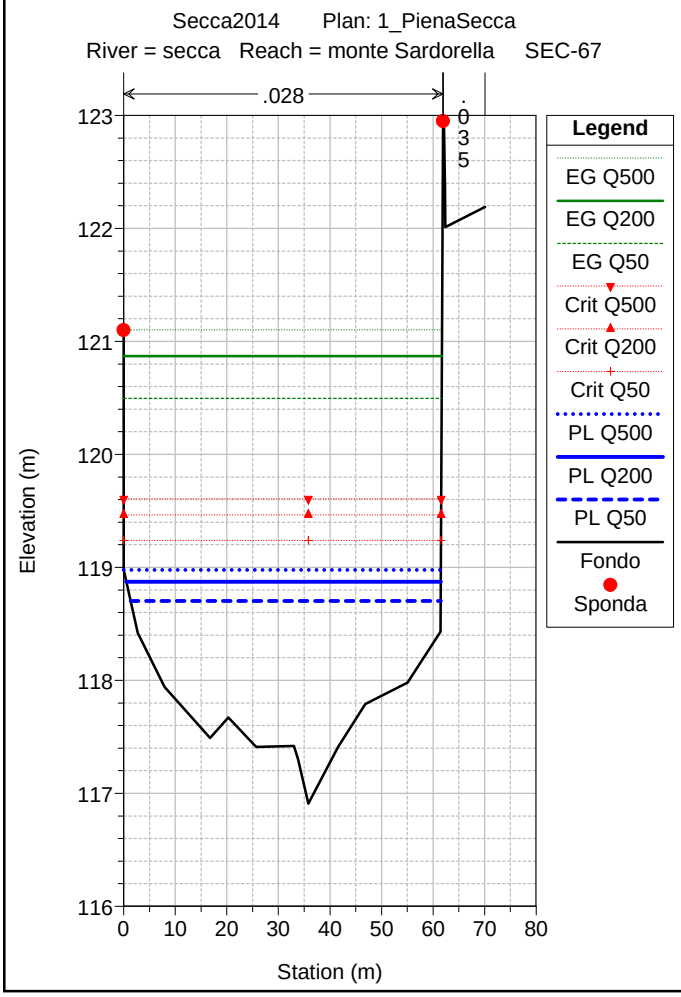
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-71

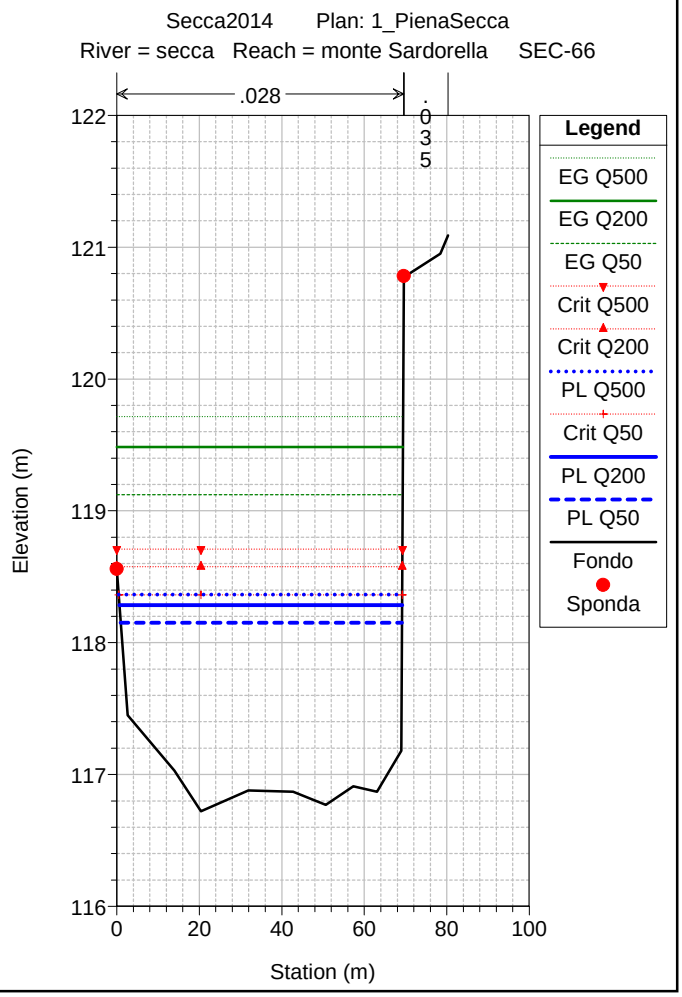


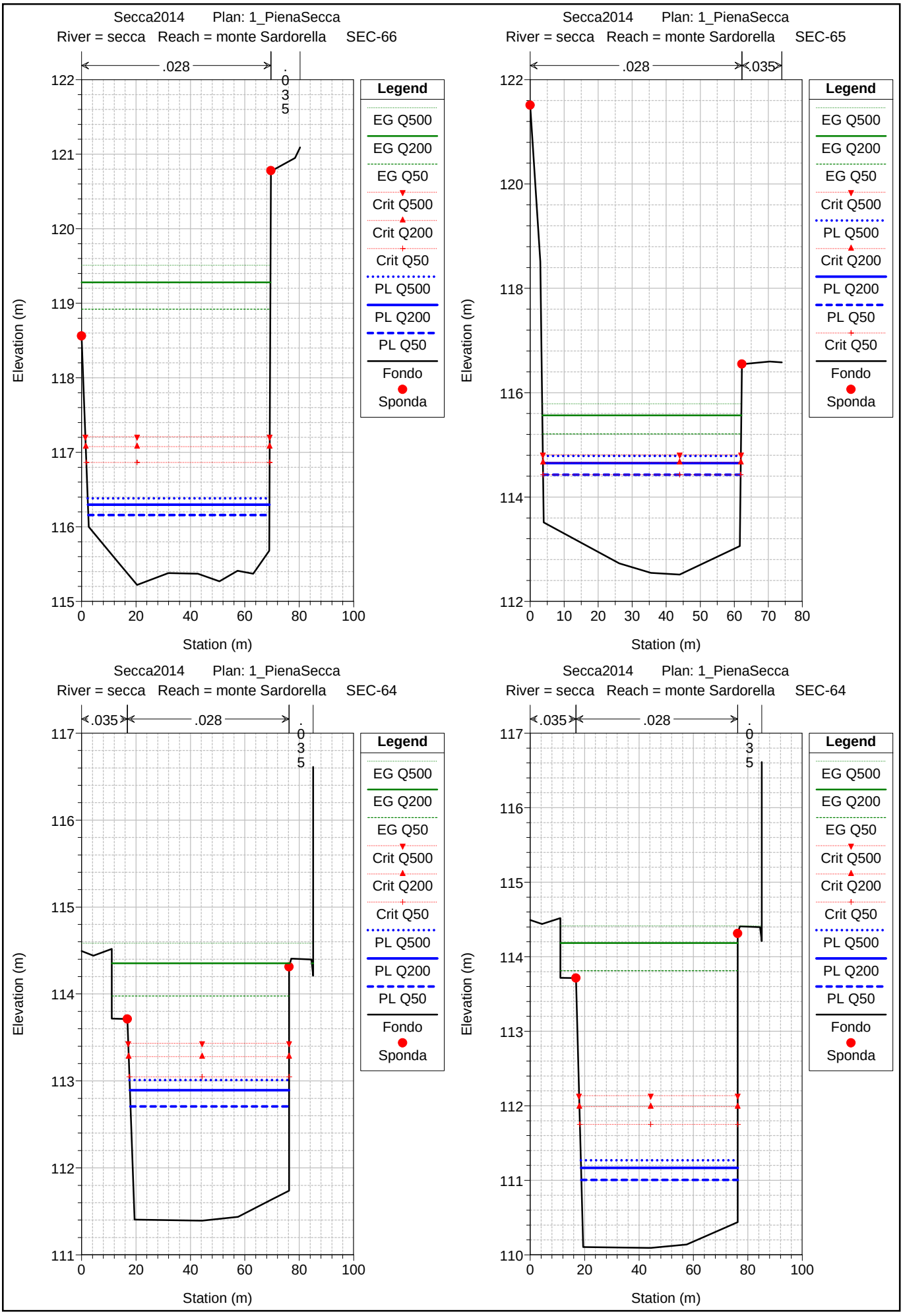

Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-70
.028
.035
.035
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-69
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-68
.035
.028
.035
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

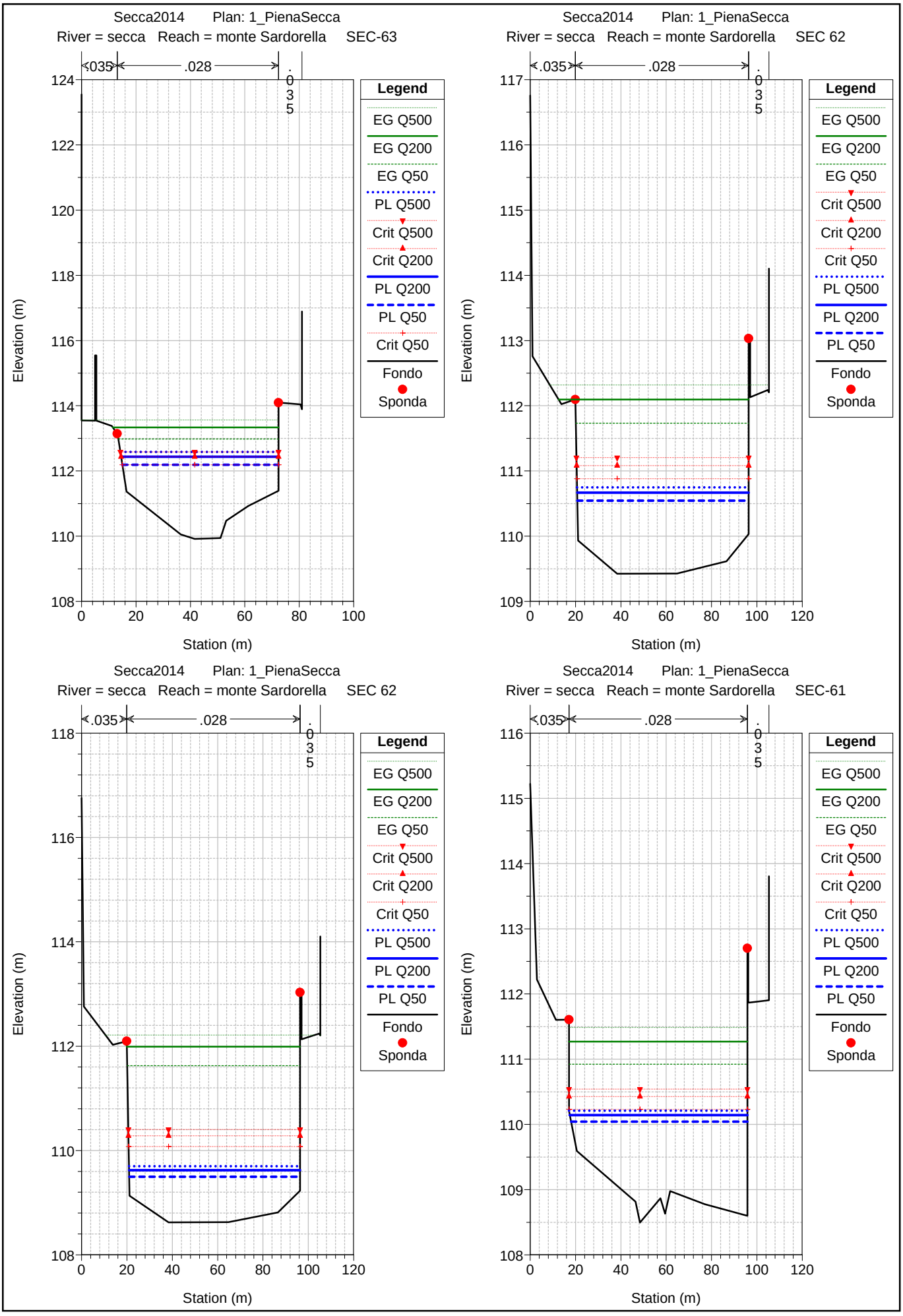

Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella
.028
.035
.035
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

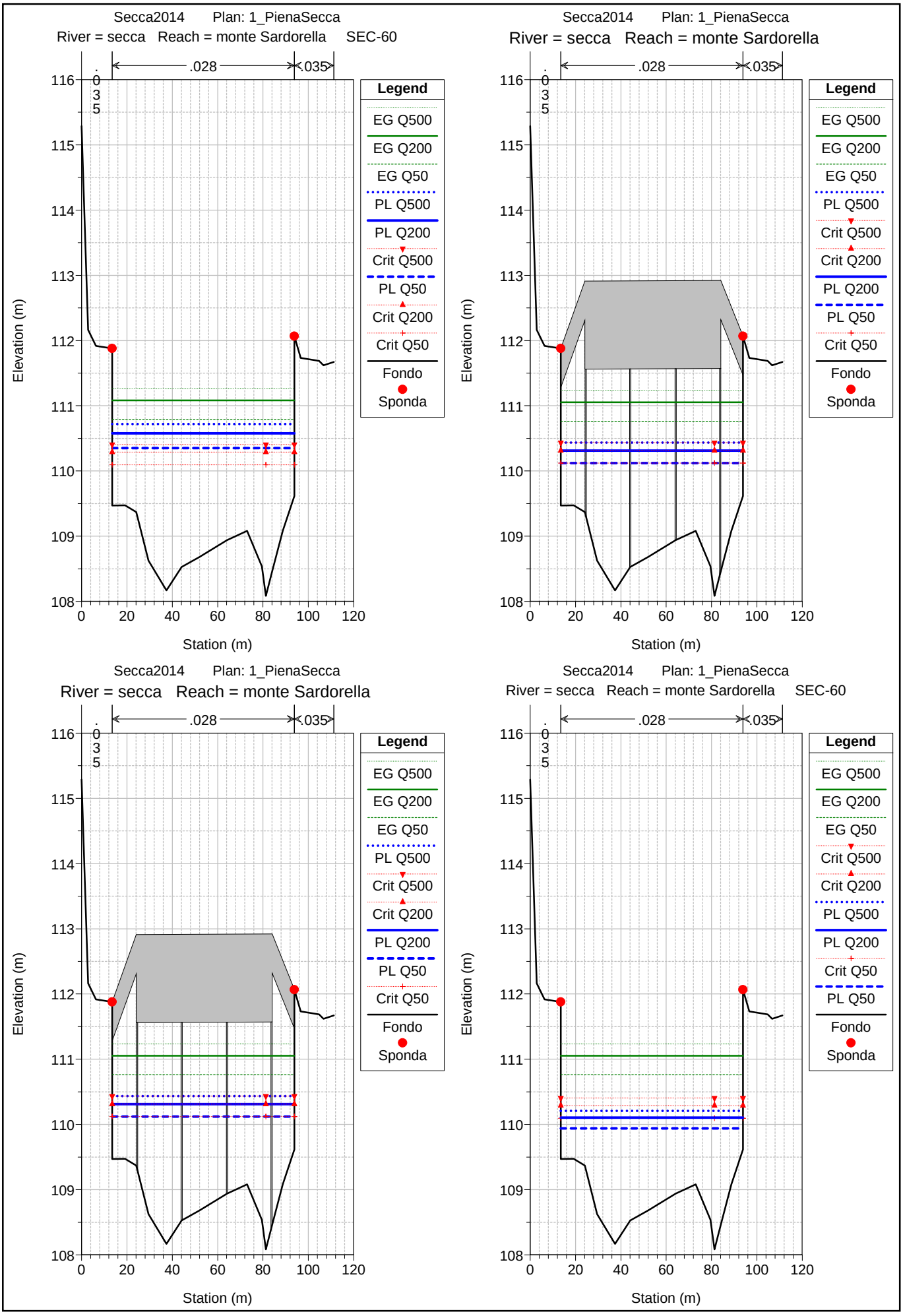

Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-68
.028
.035
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

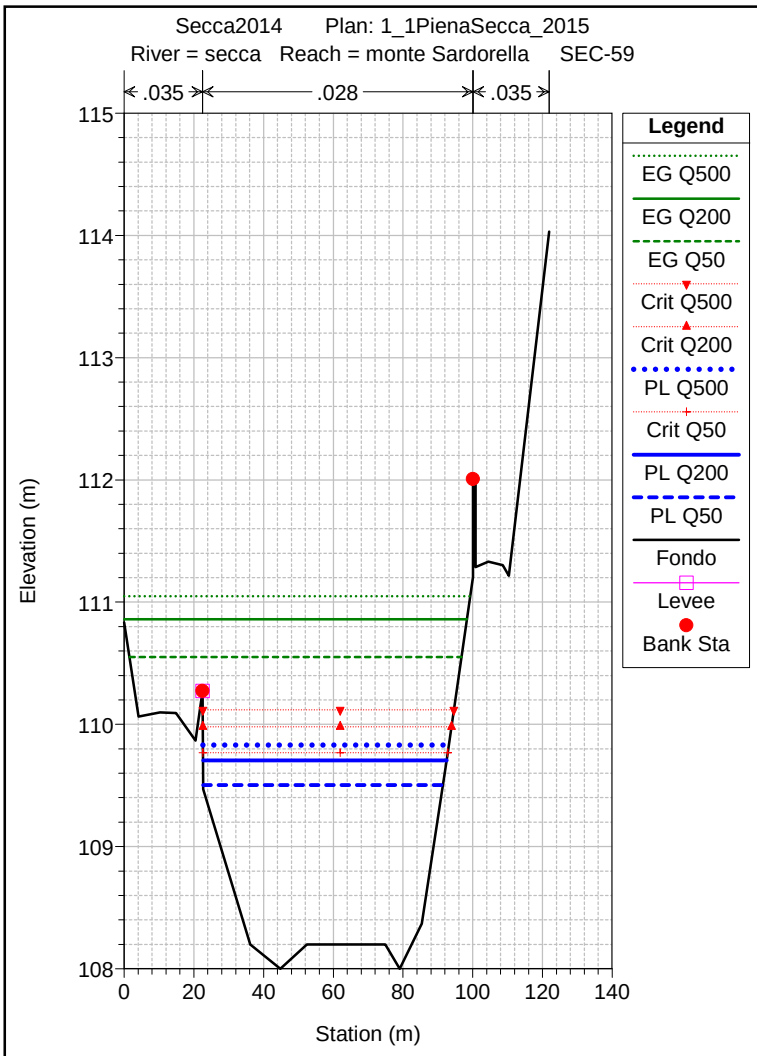

Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-67
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

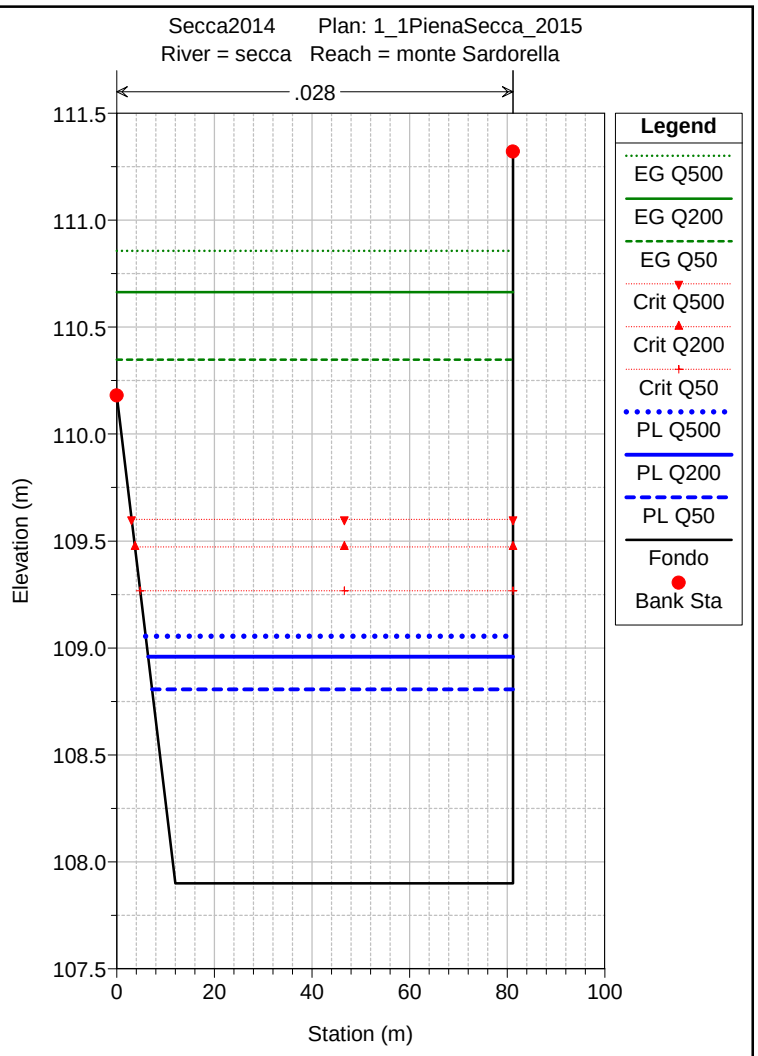

Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-66
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

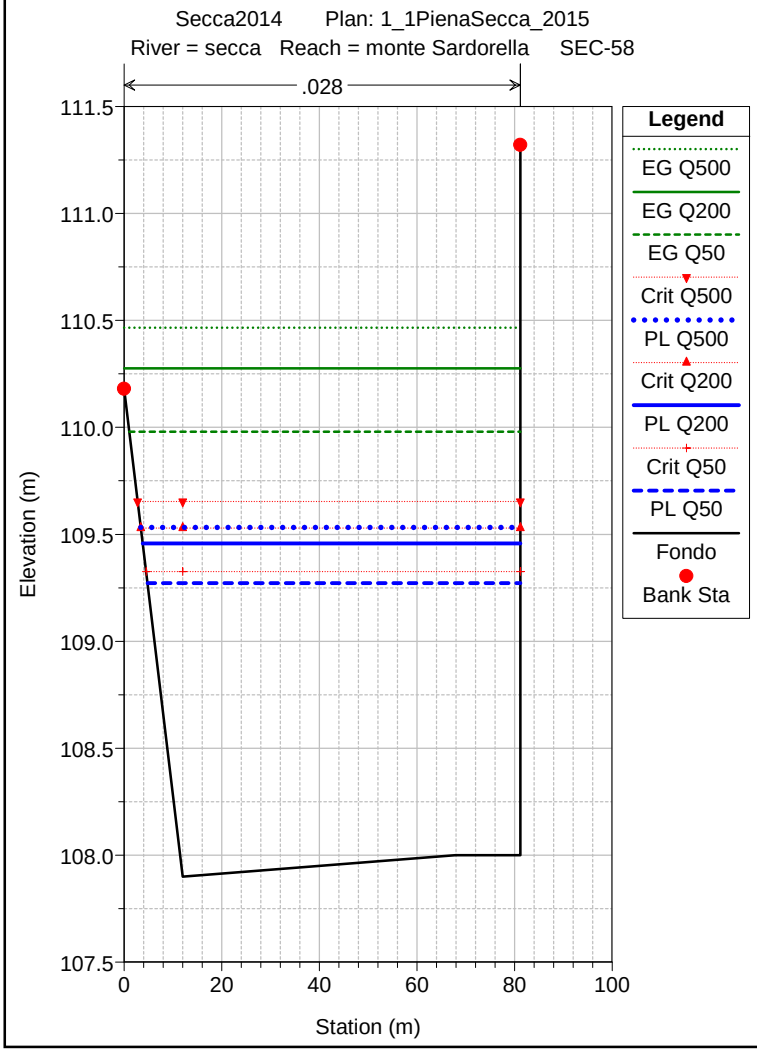

Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-66
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-65
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-64
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-64
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

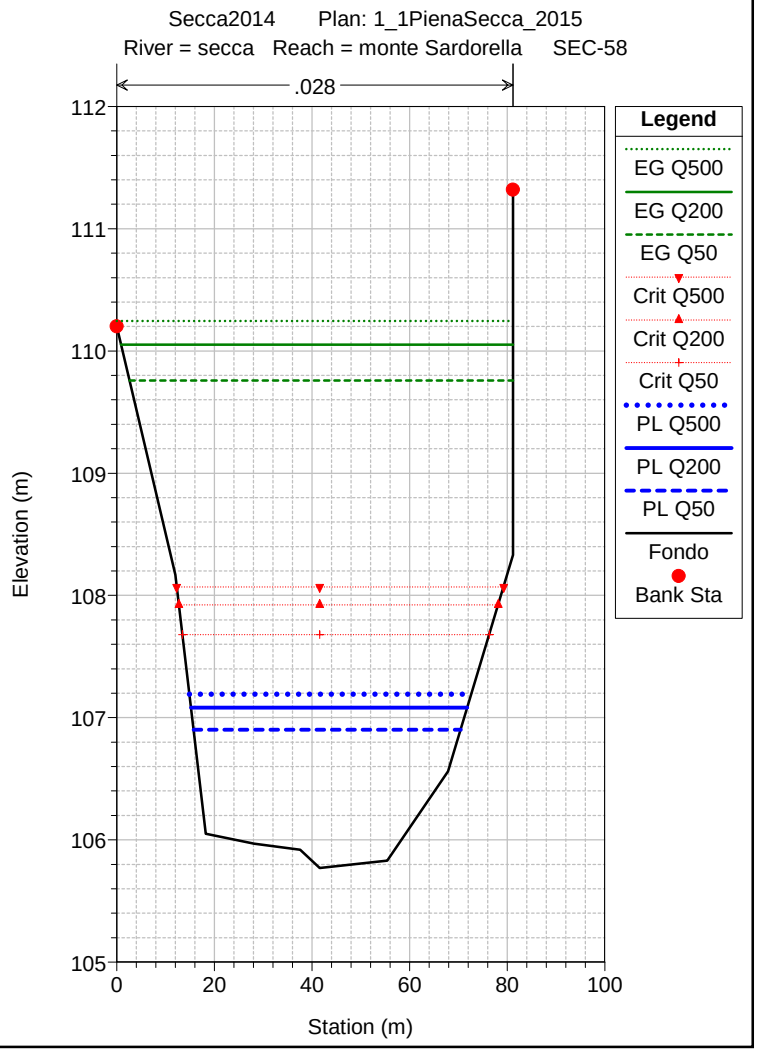

Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-63
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC 62
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC 62
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-61
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

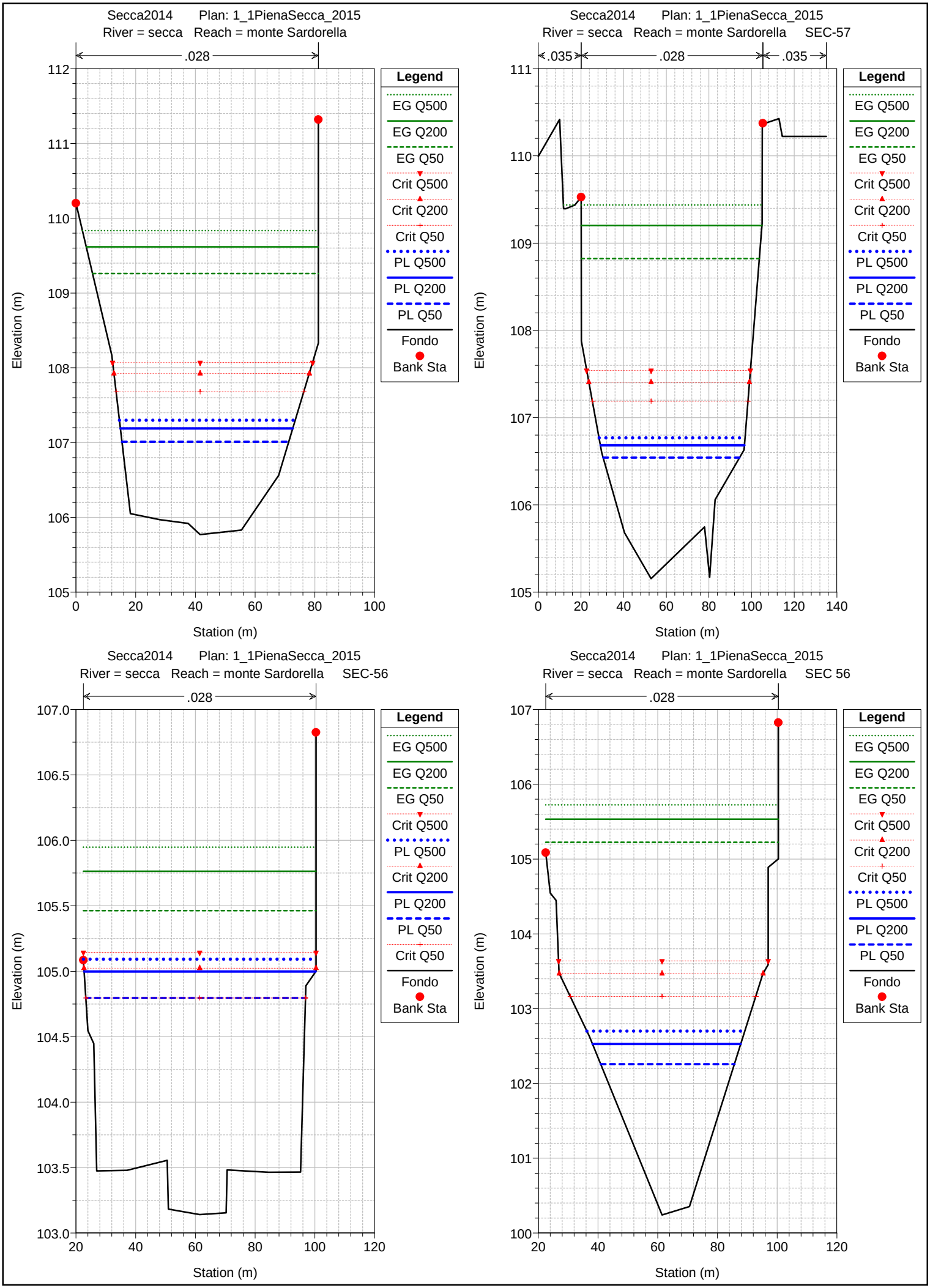

Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-60
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-60


Secca2014 Plan: 1_1PienaSecca_2015
River = secca Reach = monte Sardorella SEC-59
.035
.028
.035
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Levee
Bank Sta

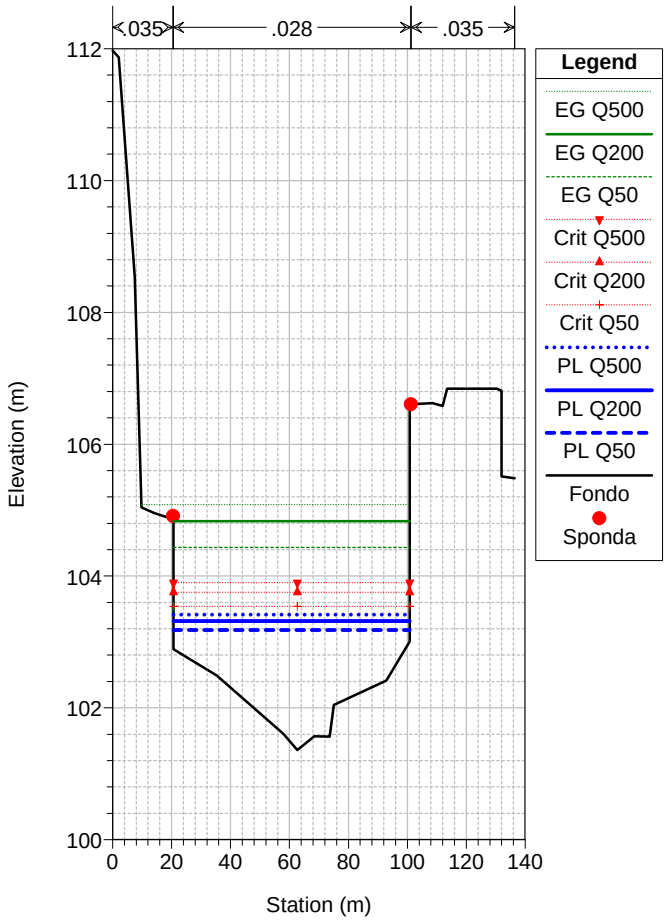

Secca2014 Plan: 1_1PienaSecca_2015
River = secca Reach = monte Sardorella
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta


Secca2014 Plan: 1_1PienaSecca_2015
River = secca Reach = monte Sardorella SEC-58
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Bank Sta

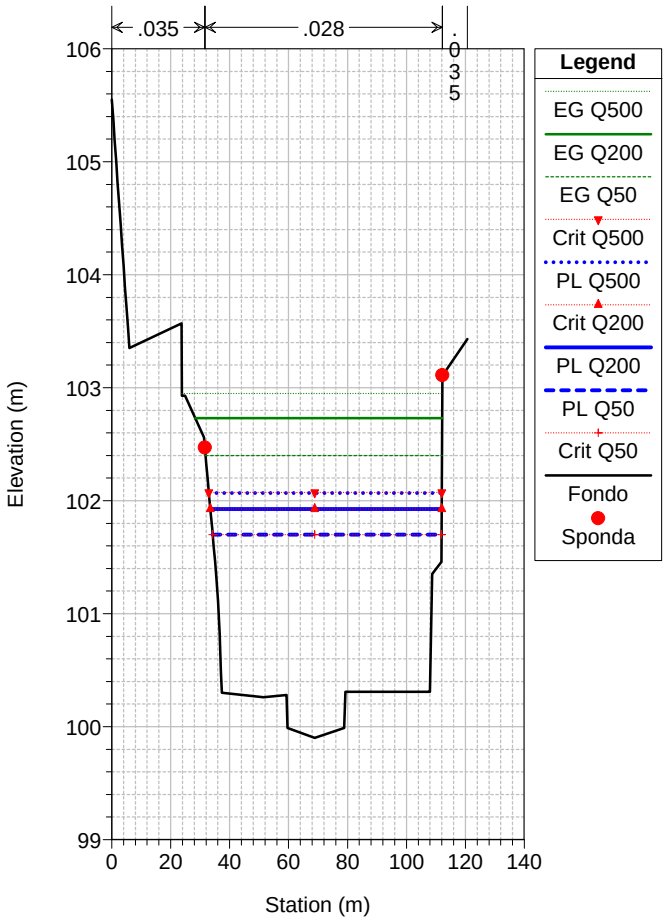

Secca2014 Plan: 1_1PienaSecca_2015
River = secca Reach = monte Sardorella SEC-58
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta


Secca2014 Plan: 1_1PienaSecca_2015
River = secca Reach = monte Sardorella
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)
Secca2014 Plan: 1_1PienaSecca_2015
River = secca Reach = monte Sardorella SEC-57
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)
Secca2014 Plan: 1_1PienaSecca_2015
River = secca Reach = monte Sardorella SEC-56
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)
Secca2014 Plan: 1_1PienaSecca_2015
River = secca Reach = monte Sardorella SEC 56
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

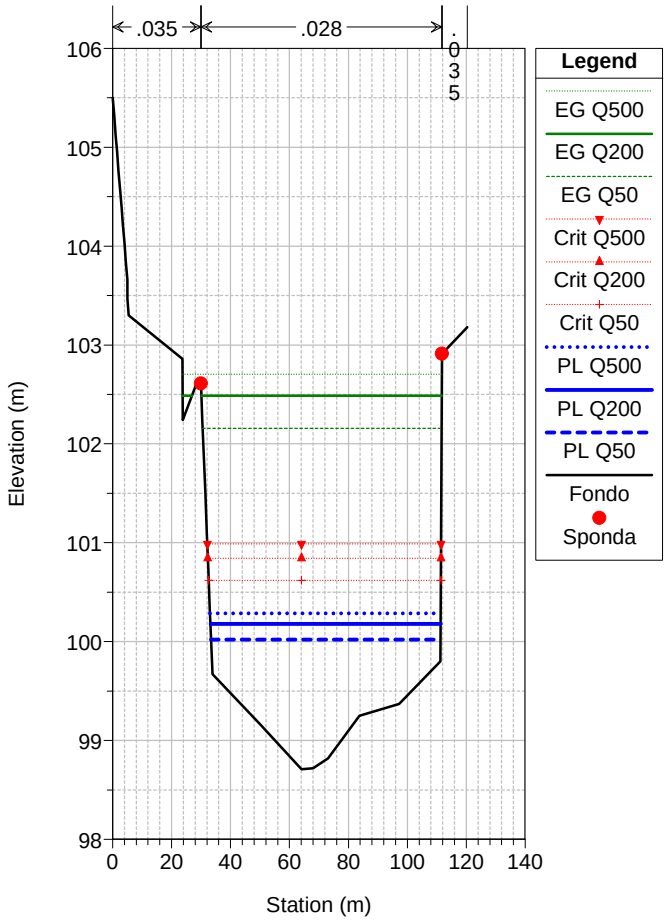
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-55



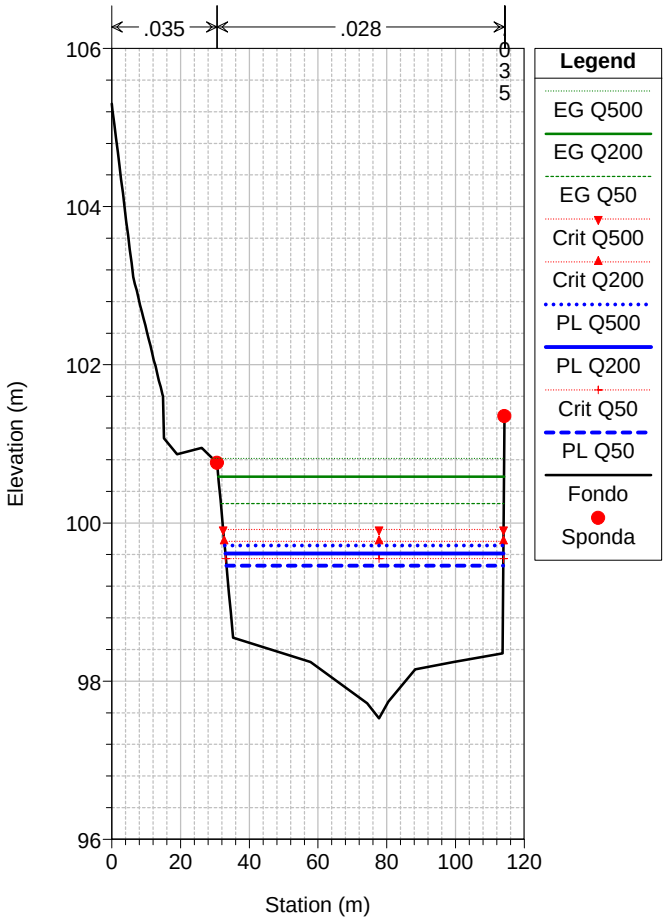
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-54



Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-53

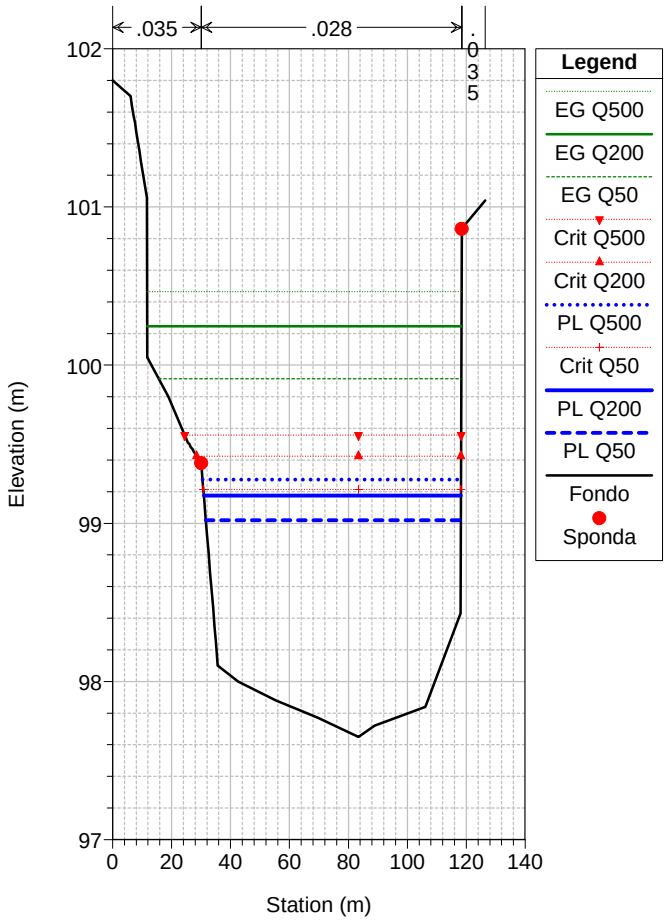


Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-52



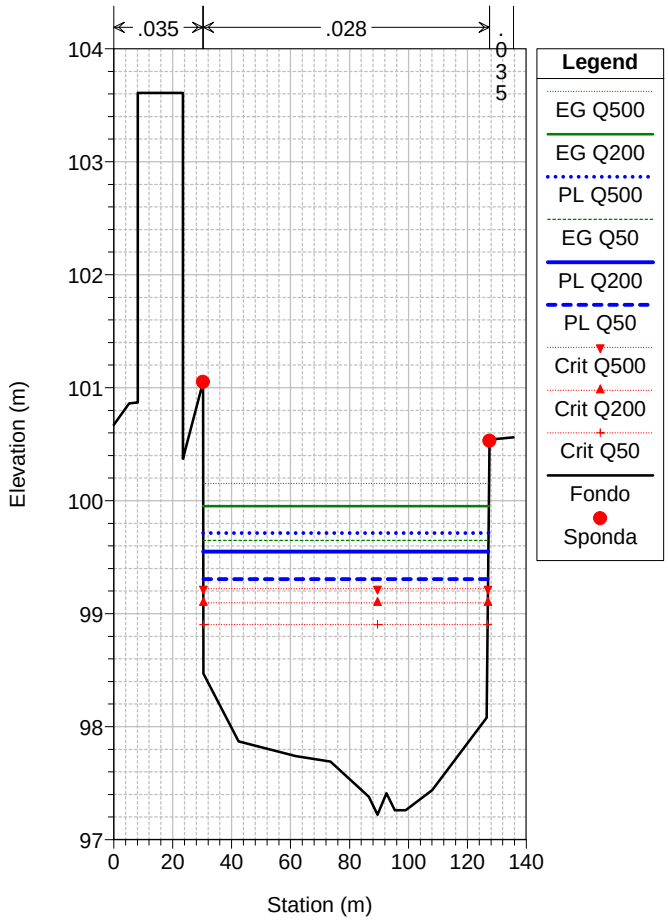
Secca2014 Plan: 1_PienaSecca

River = secca Reach = monte Sardorella SEC-51



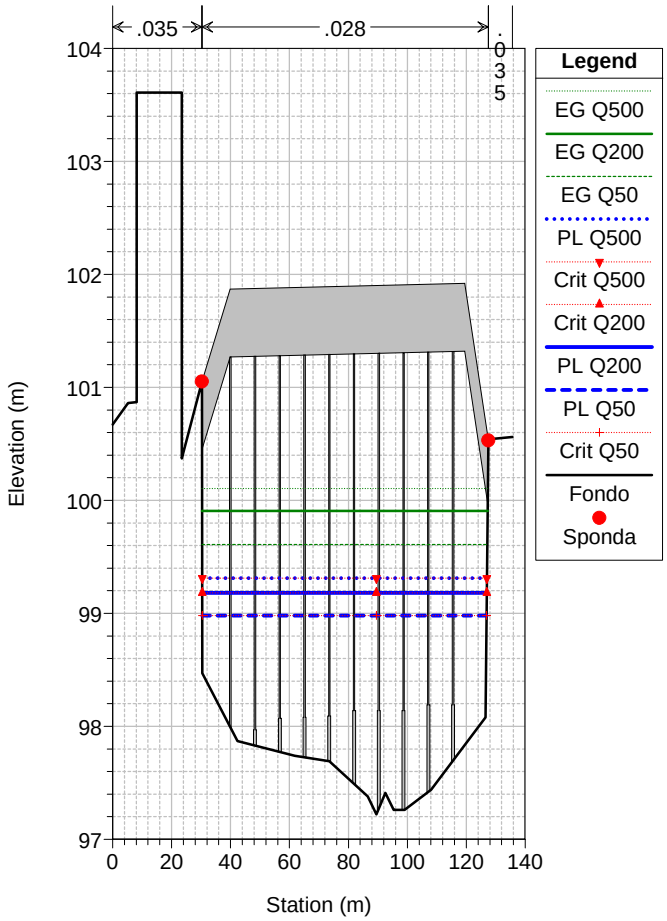
Secca2014 Plan: 1_PienaSecca

River = secca Reach = monte Sardorella SEC-50



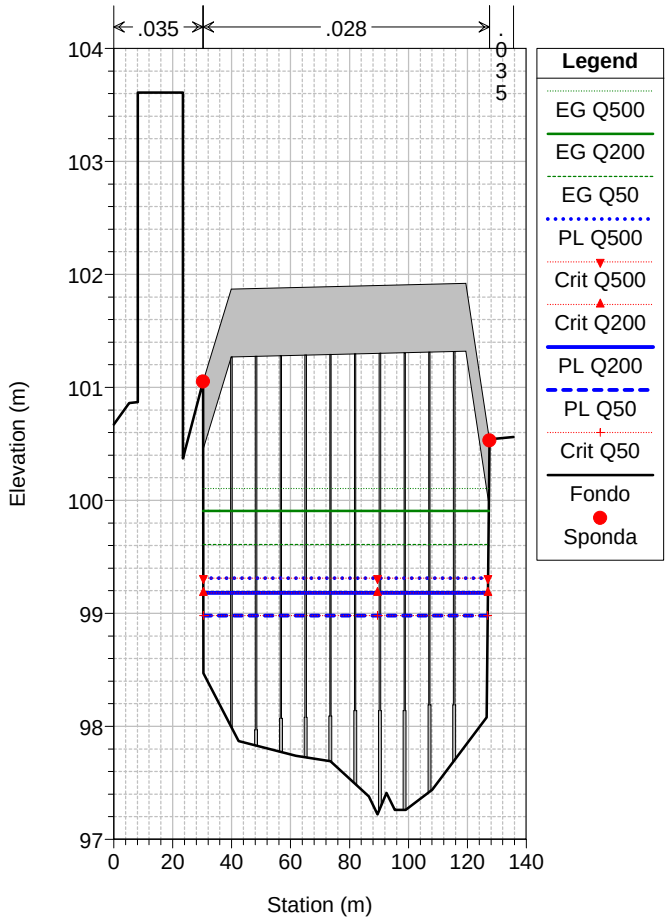
Secca2014 Plan: 1_PienaSecca

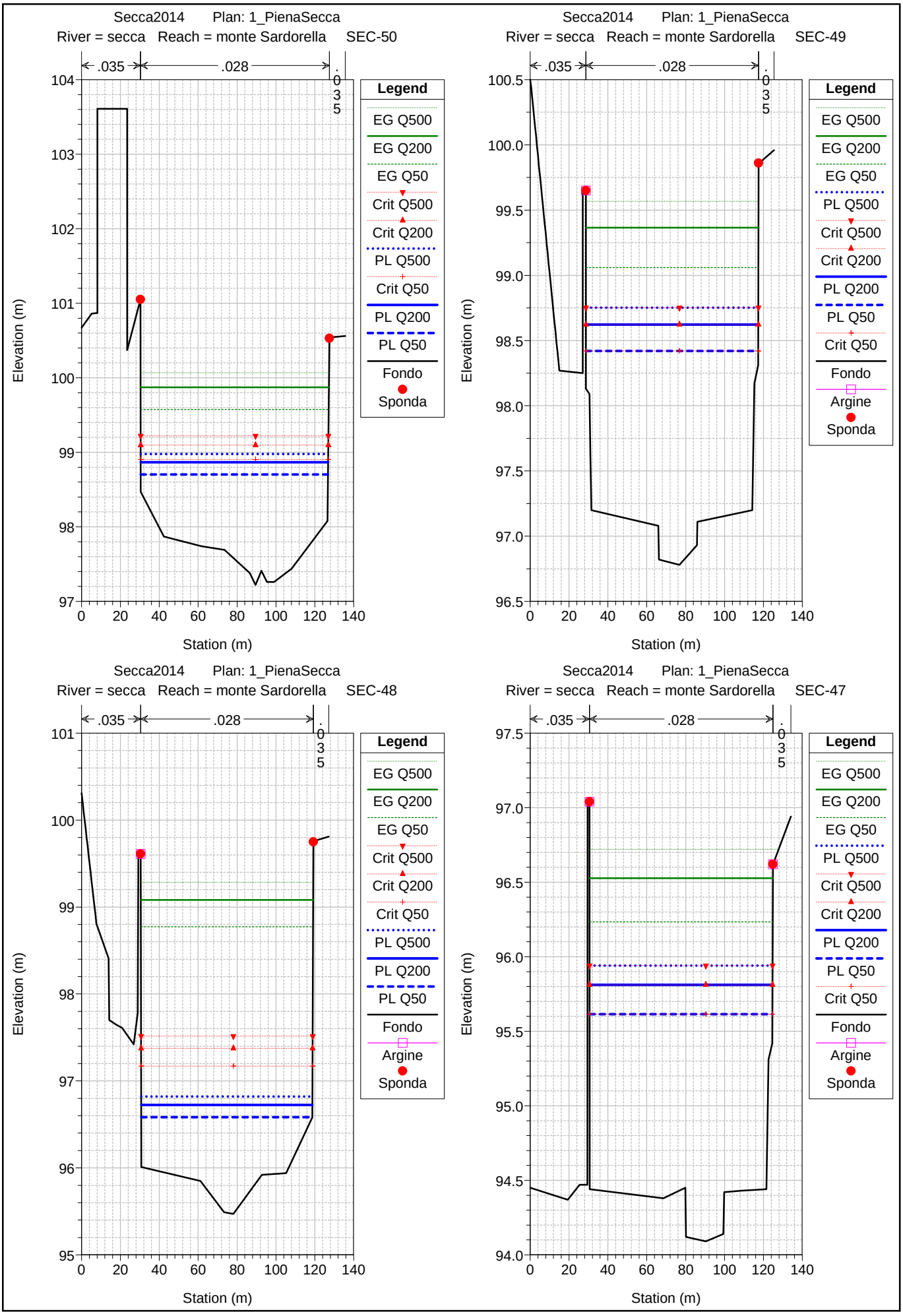
River = secca Reach = monte Sardorella



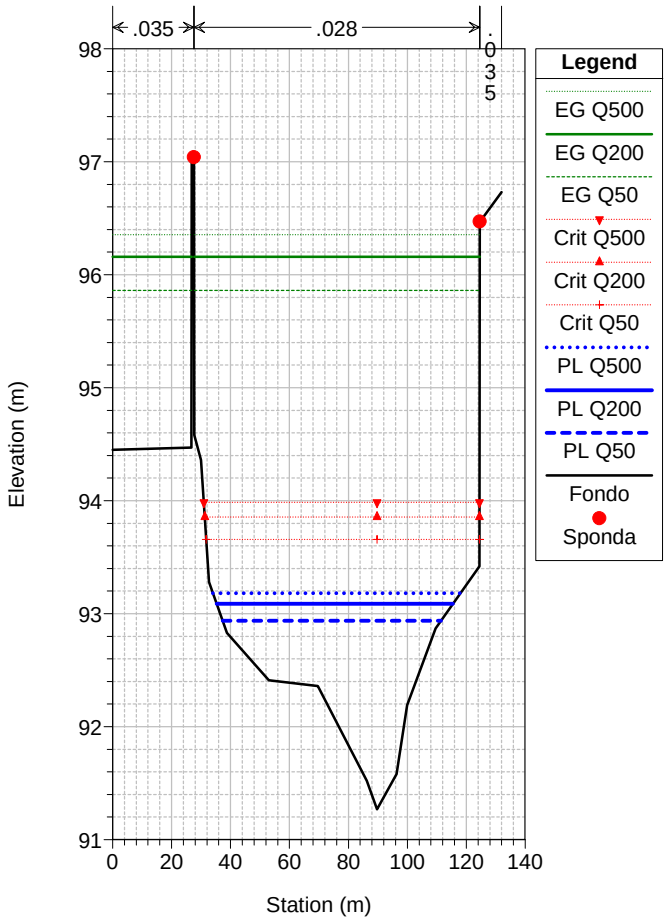
Secca2014 Plan: 1_PienaSecca

River = secca Reach = monte Sardorella

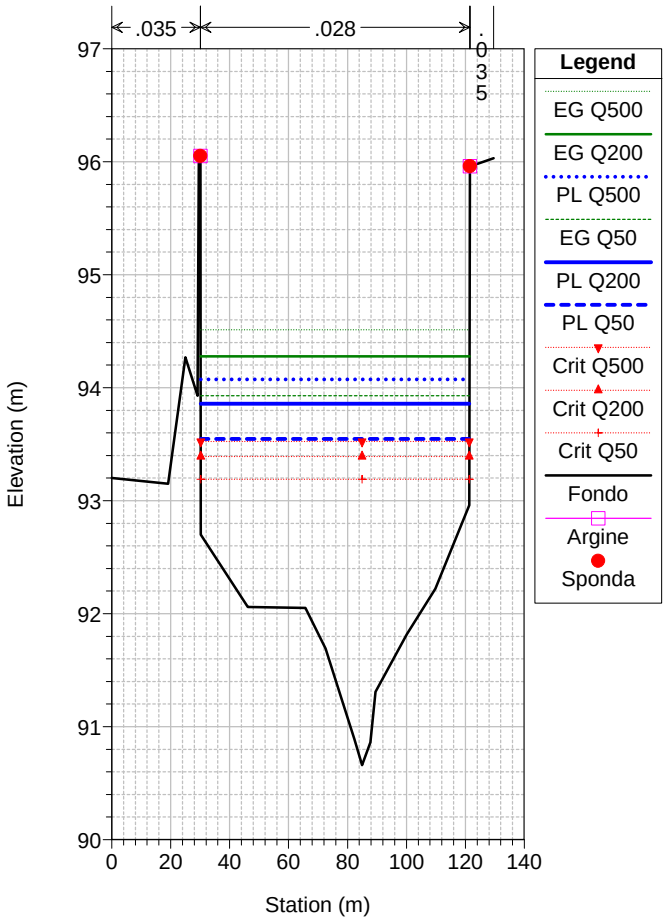



Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-50
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-49
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-48
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-47
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

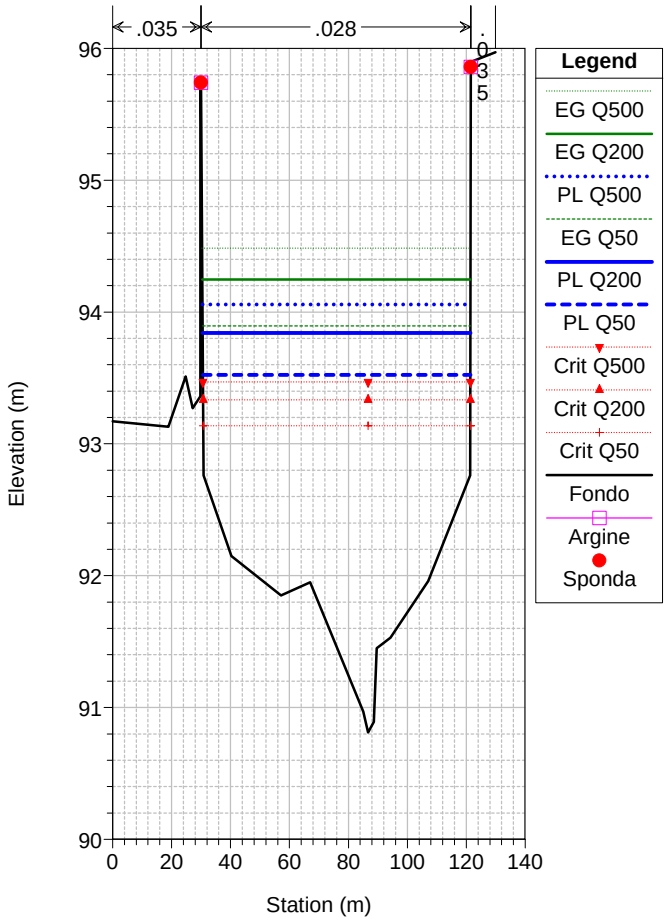
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-46



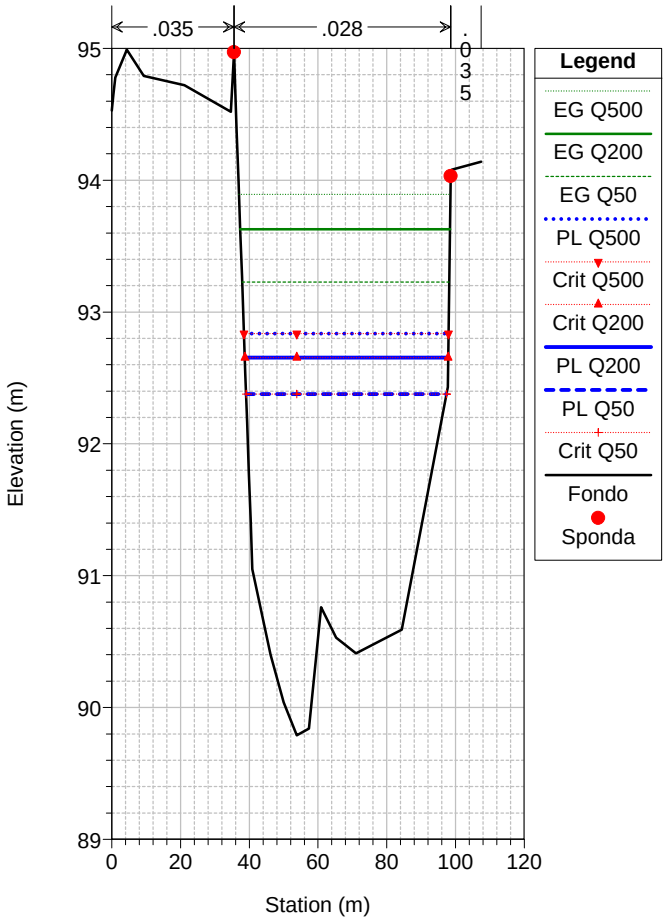
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-45



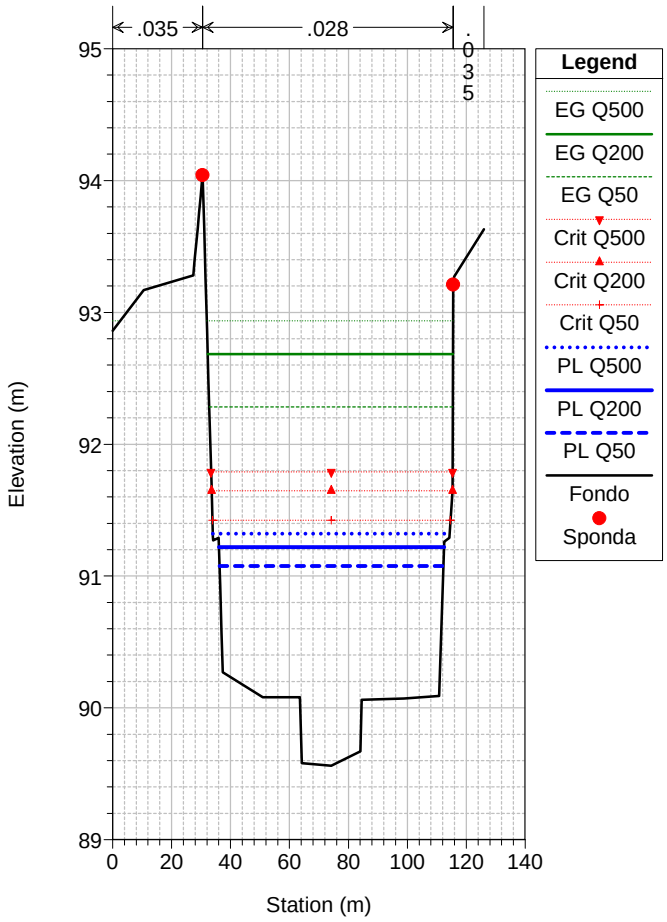
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-44



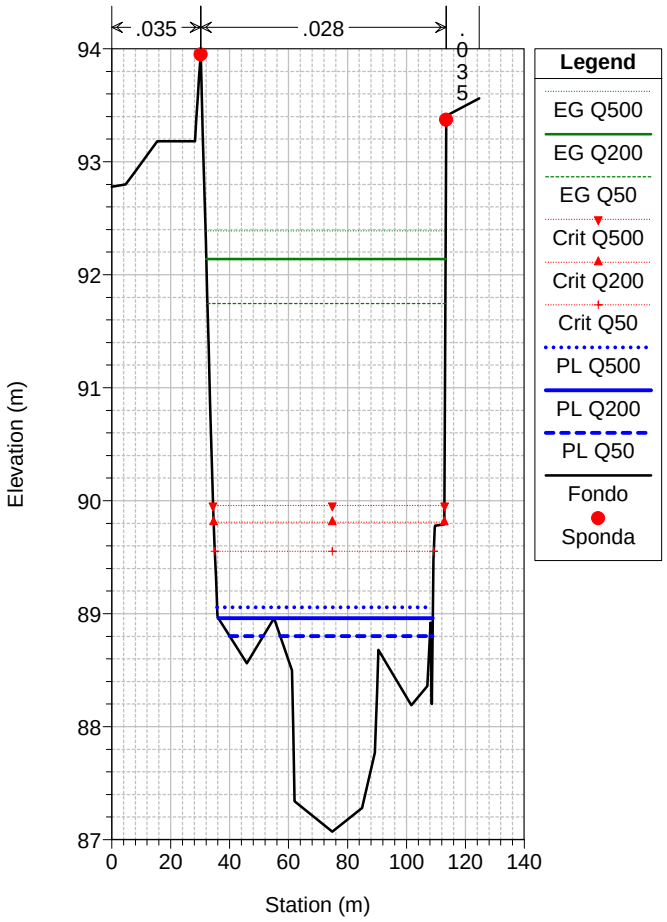
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-43



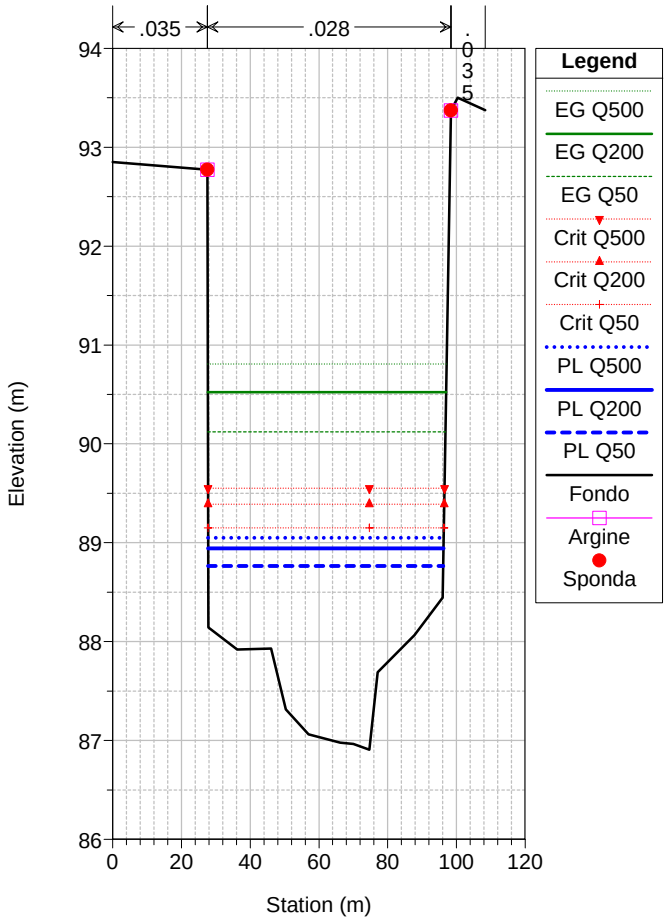
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-42



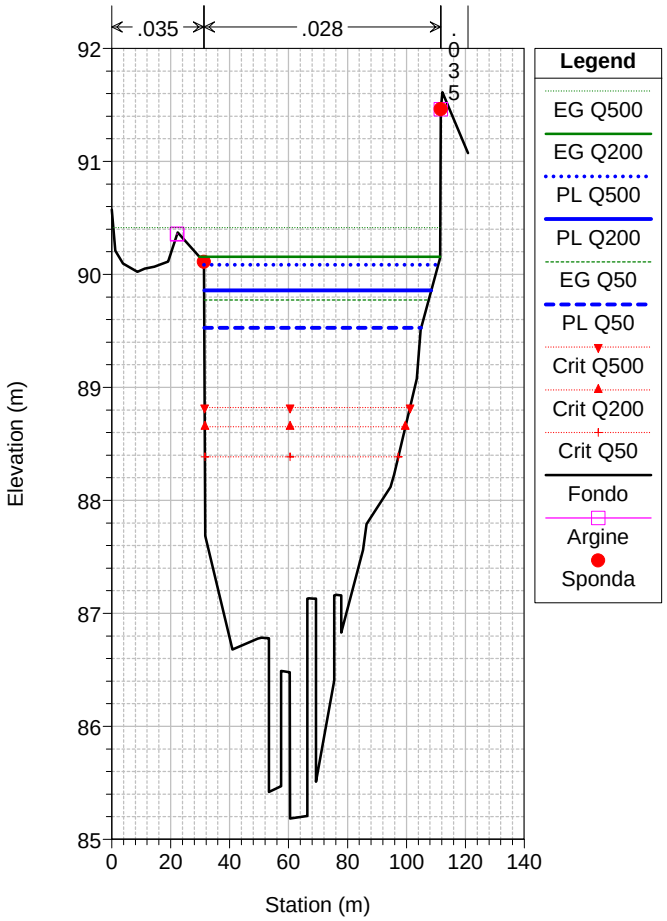
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-41



Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-40

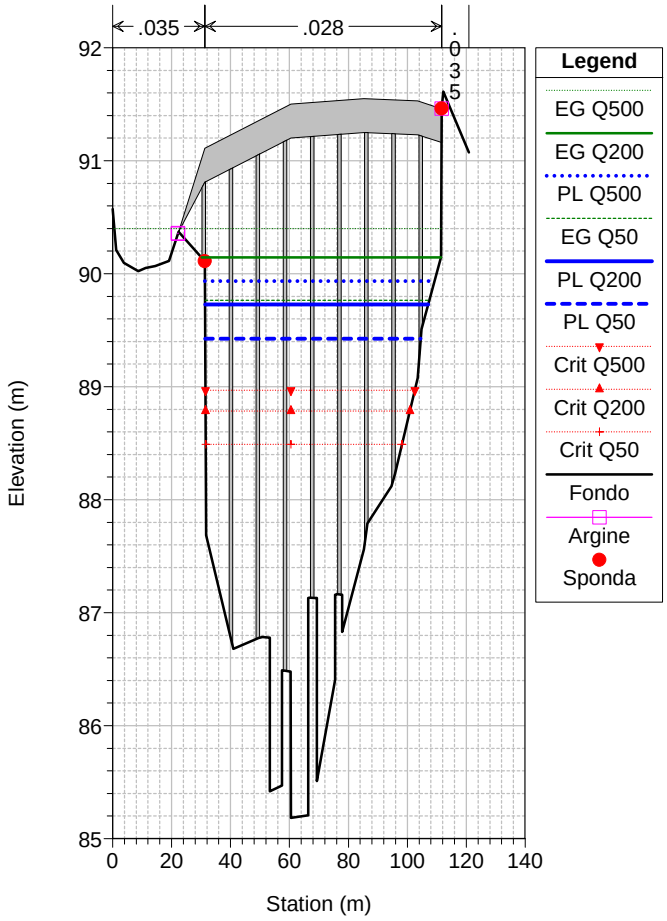


Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-39



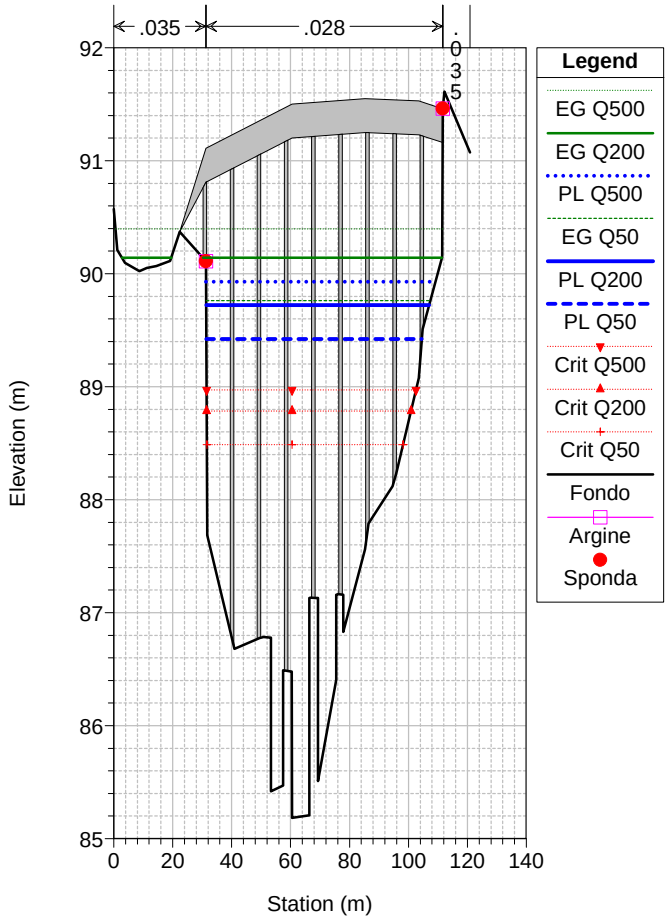
Secca2014 Plan: 1_PienaSecca

River = secca Reach = monte Sardorella



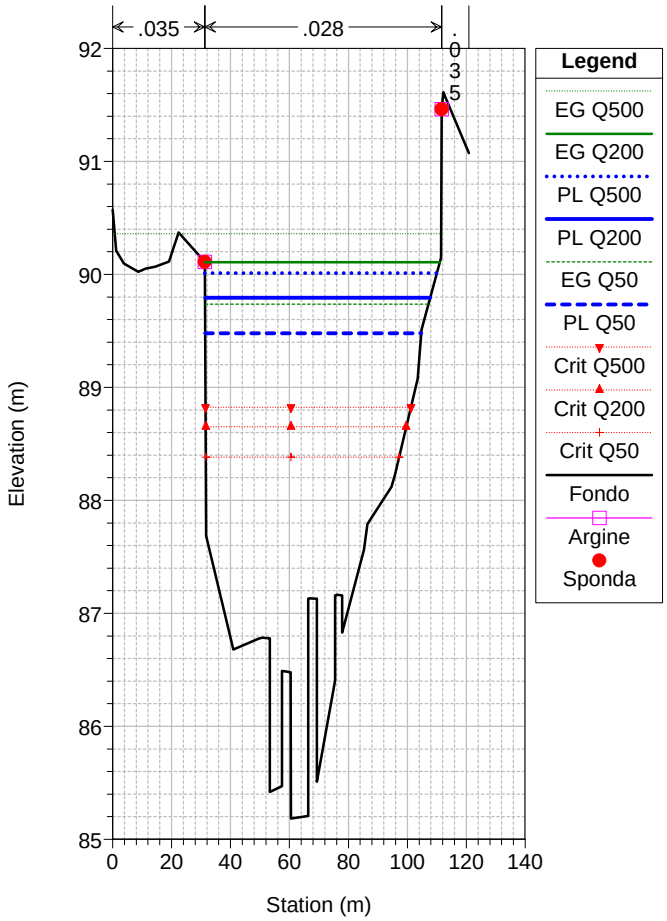
Secca2014 Plan: 1_PienaSecca

River = secca Reach = monte Sardorella



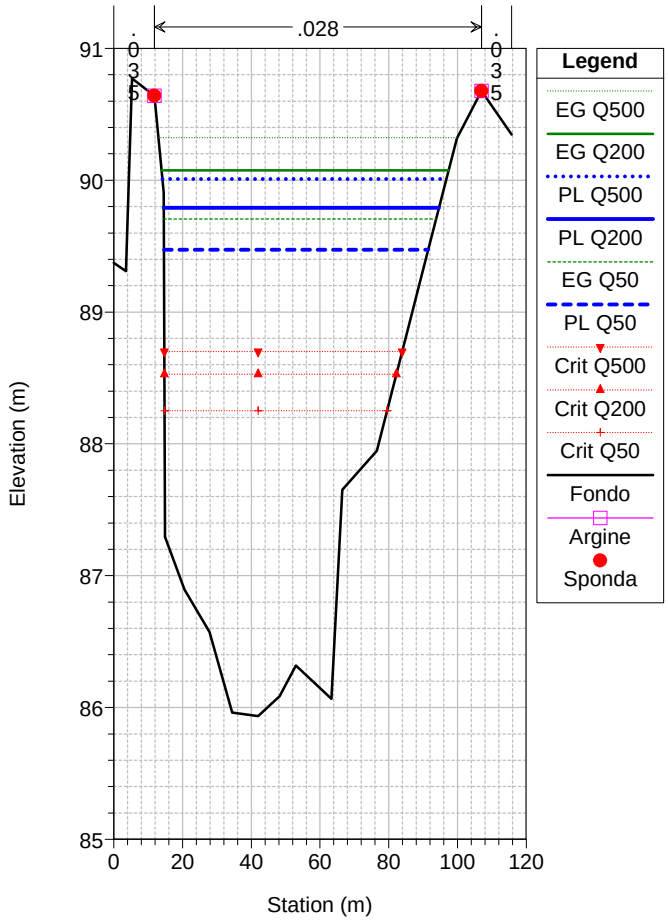
Secca2014 Plan: 1_PienaSecca

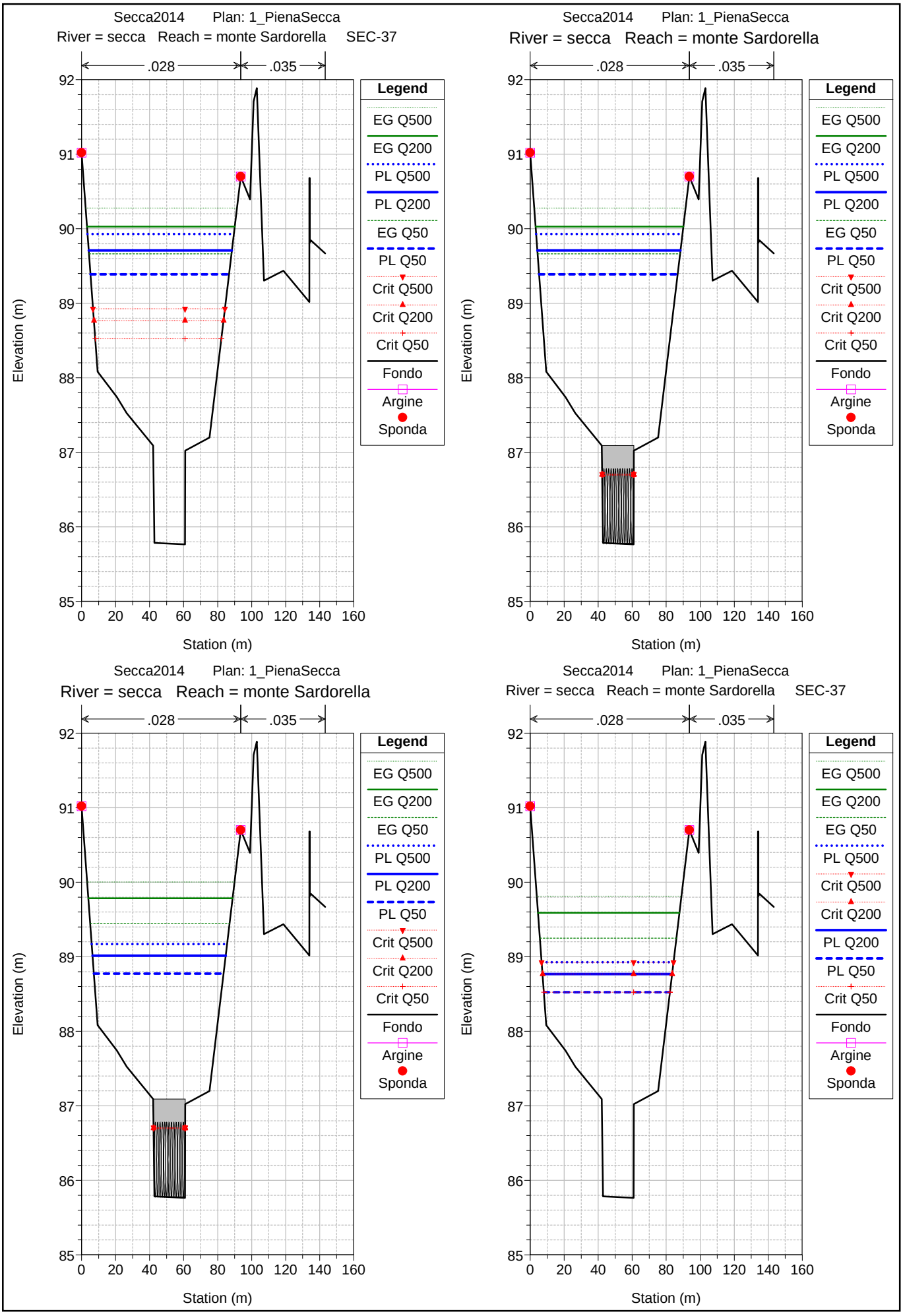
River = secca Reach = monte Sardorella SEC-39



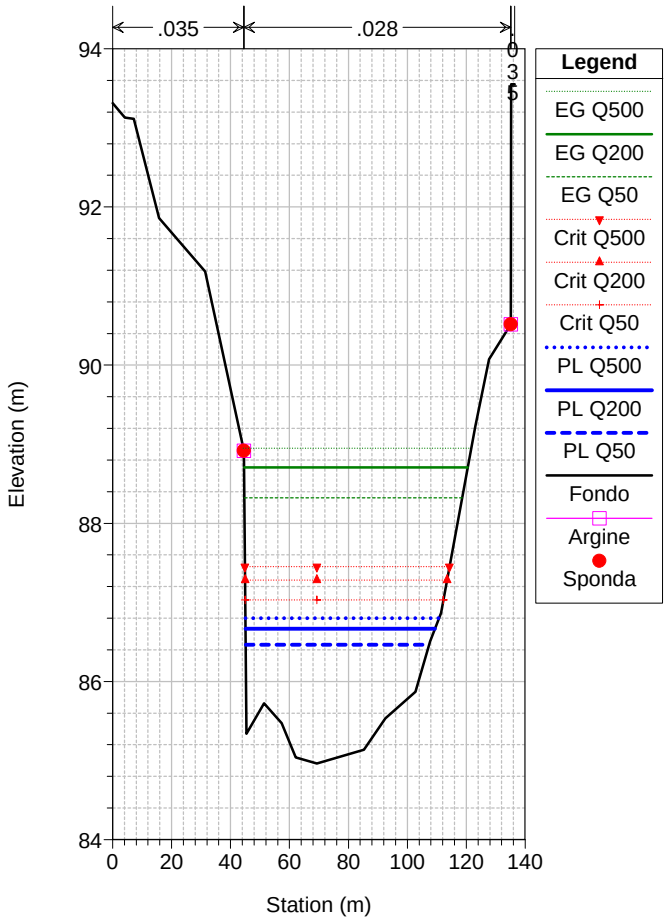
Secca2014 Plan: 1_PienaSecca

River = secca Reach = monte Sardorella SEC-38

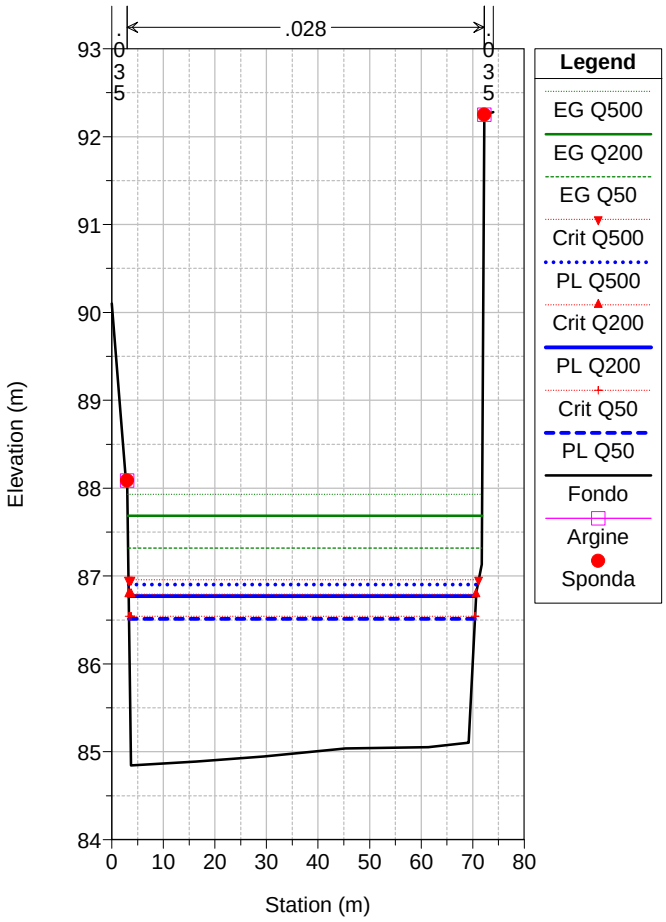



Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-37
.028
.035
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-37

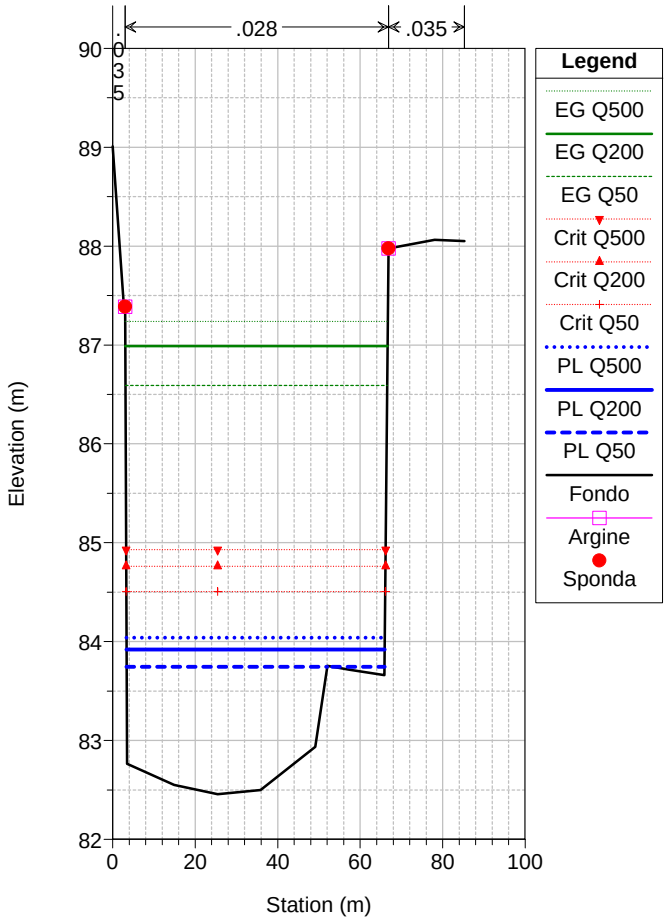
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-36



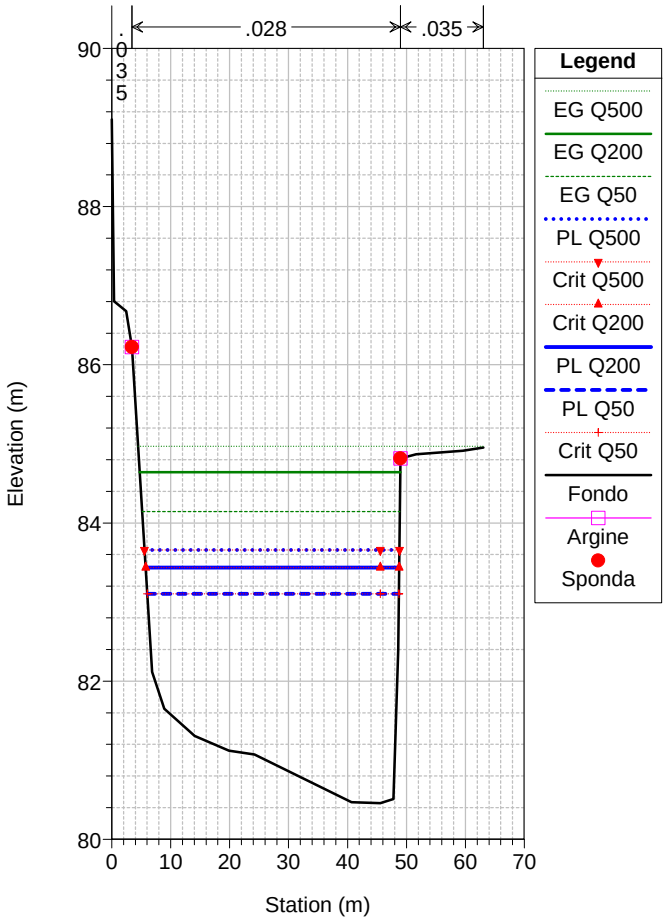
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-35



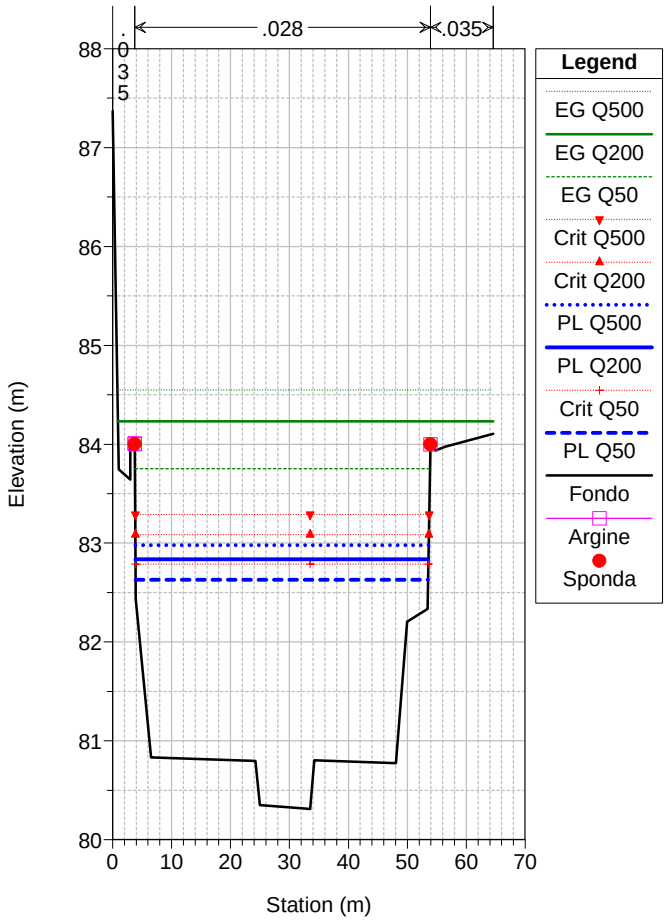
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-34



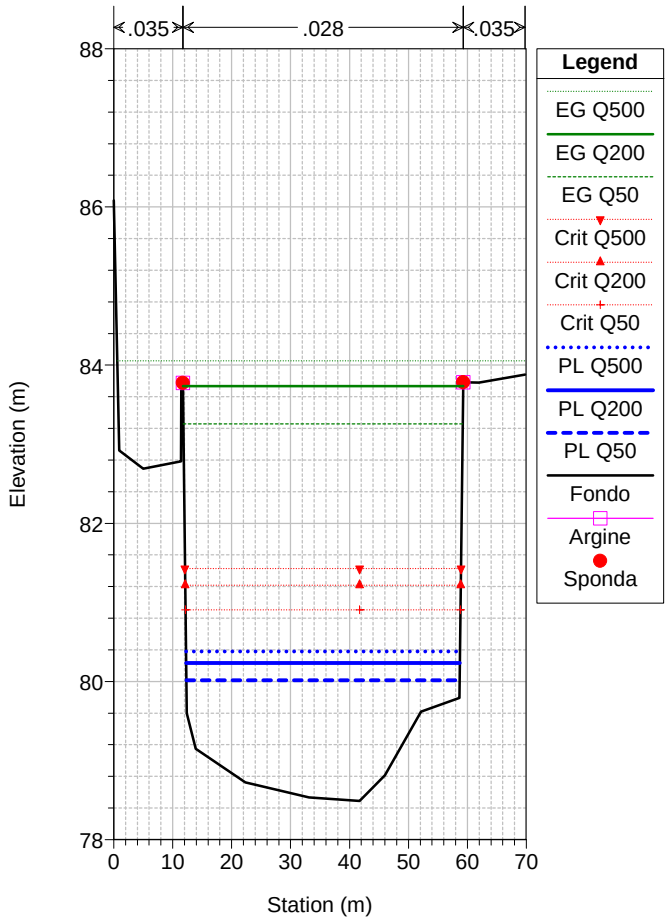
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-33



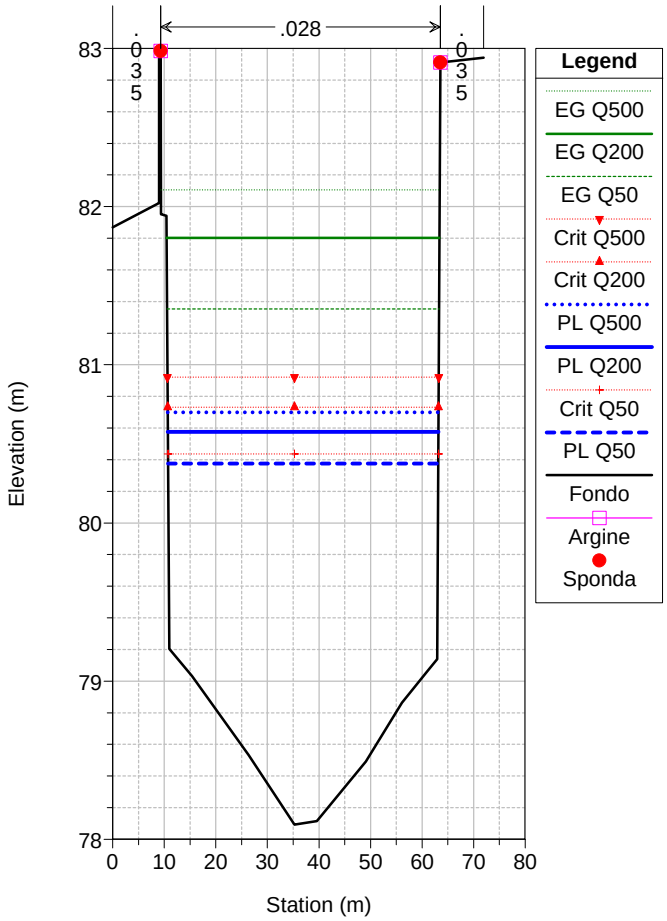
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-32



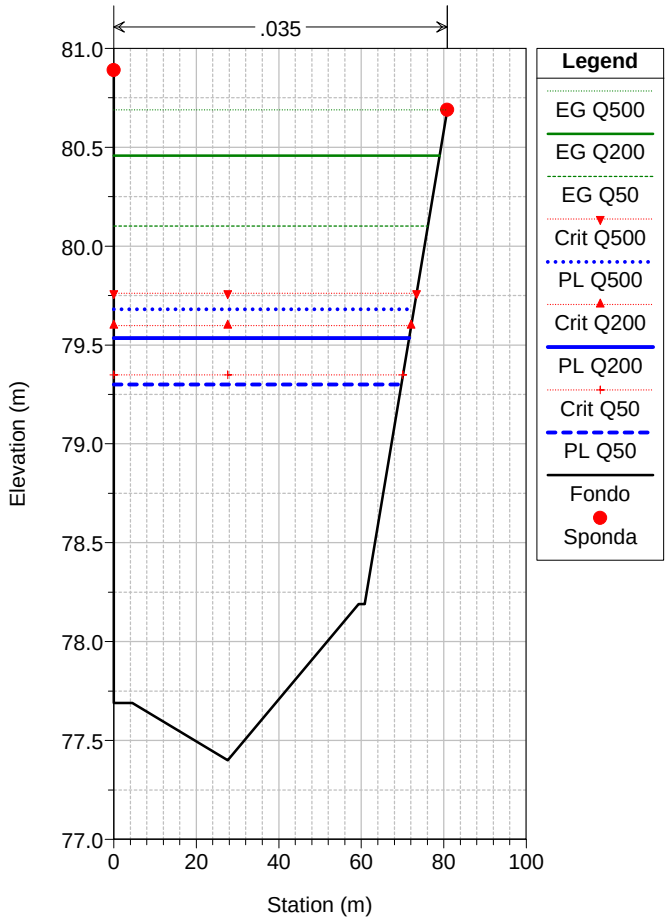
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-31



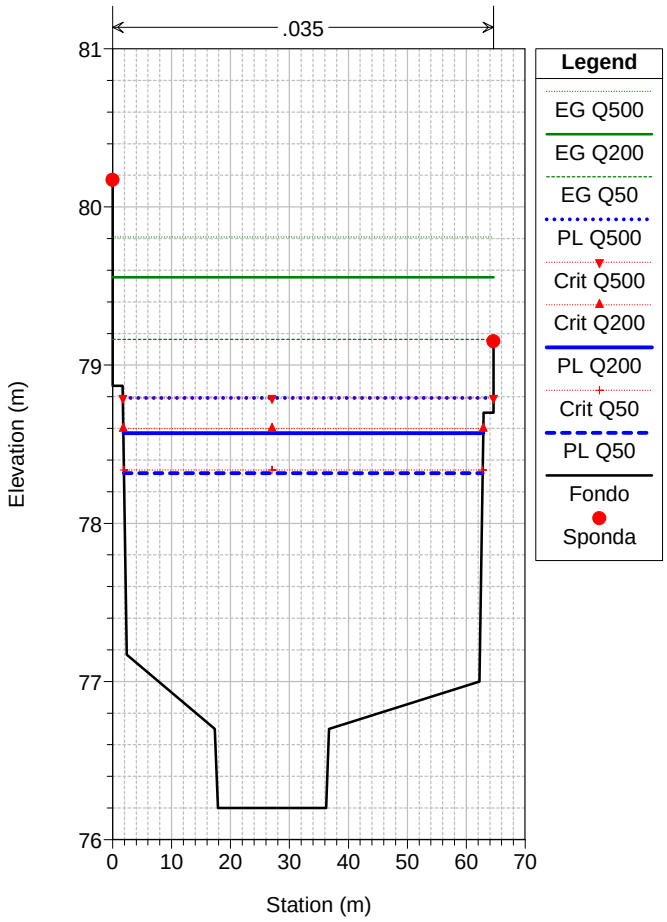
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-30



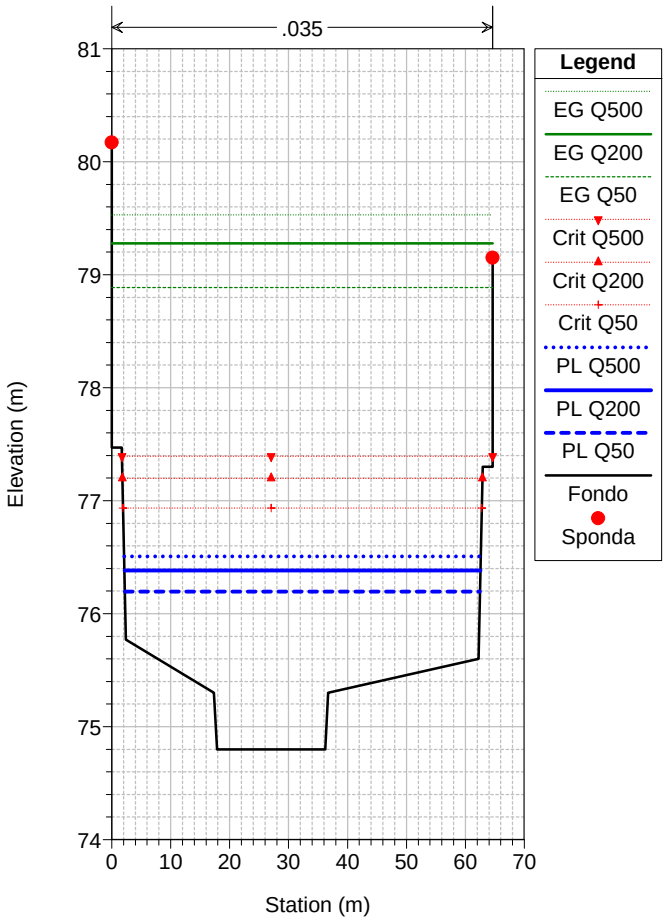
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-29



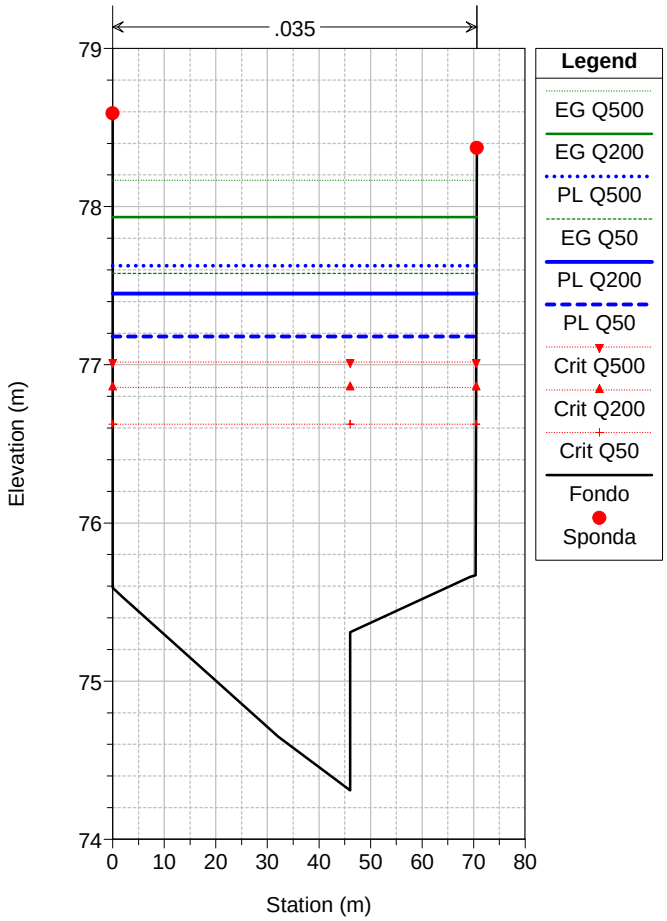
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-28



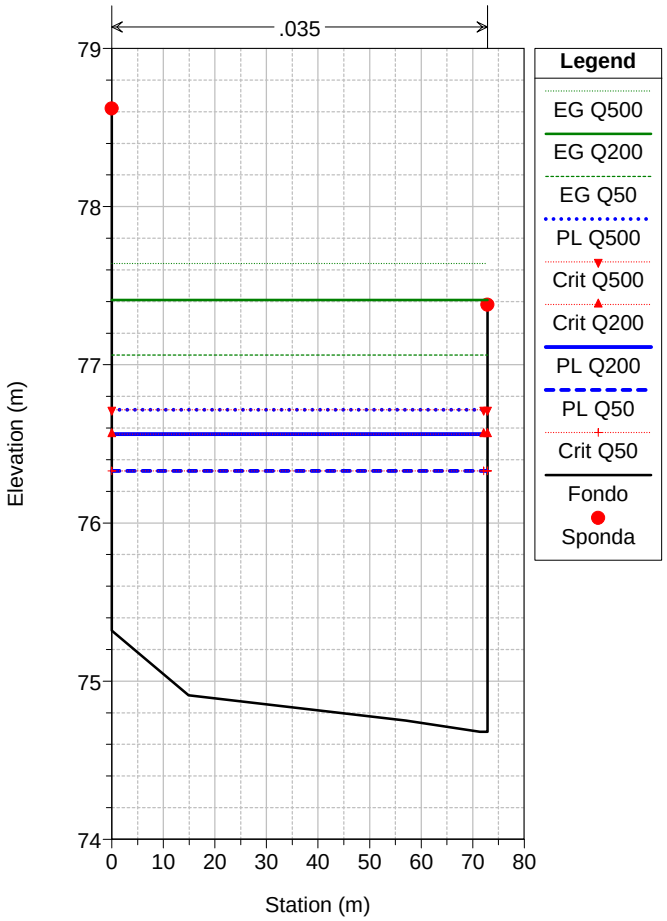
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-27



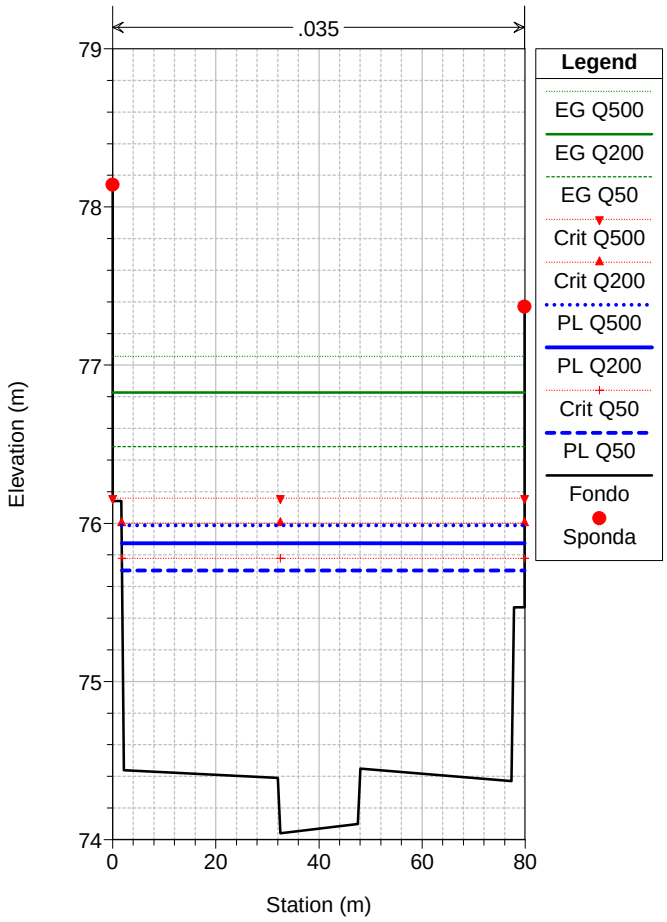
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-26



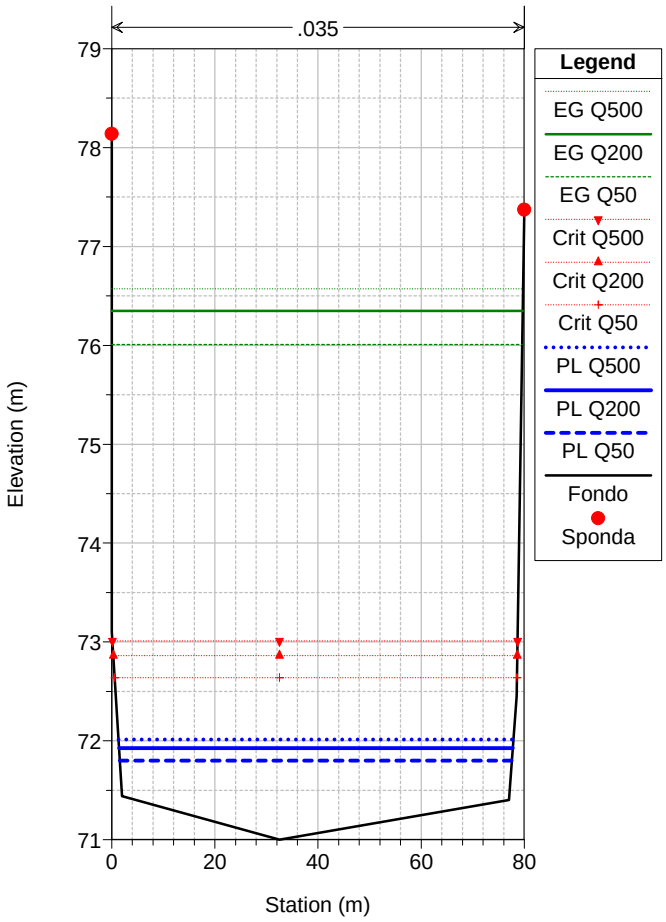
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-25



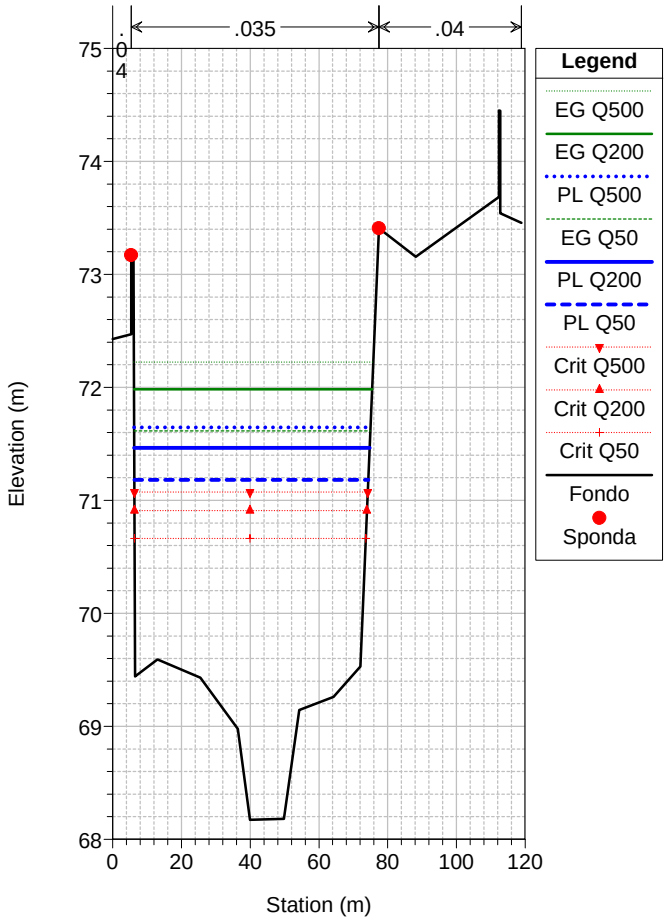
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-24



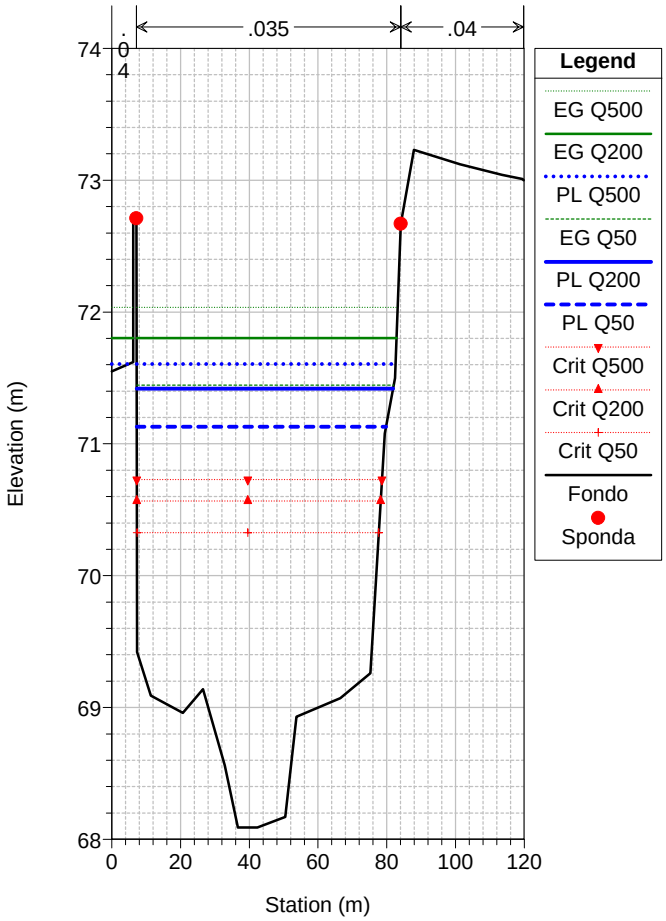
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-23



Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-22.6

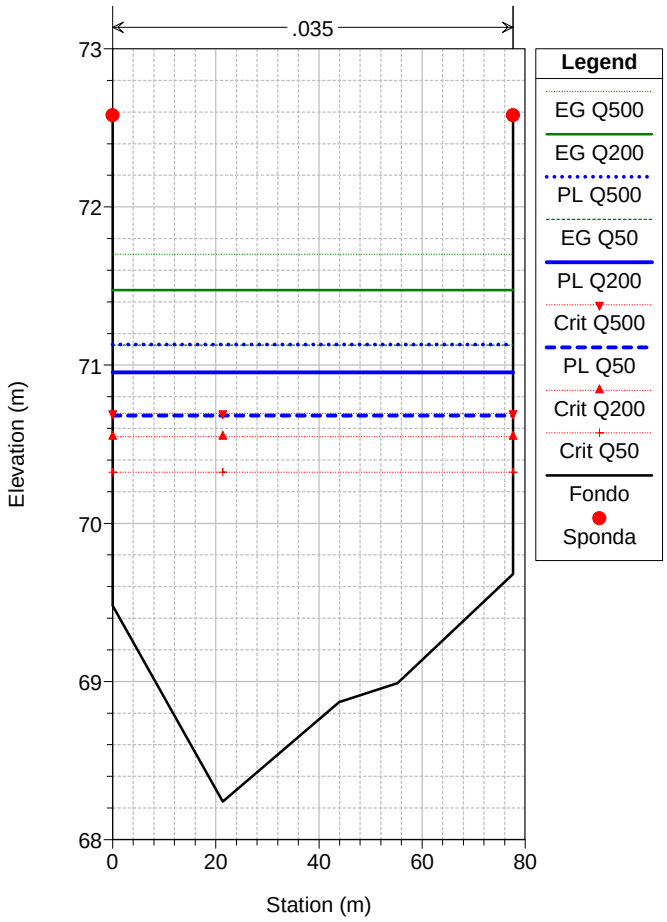


Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-22.3



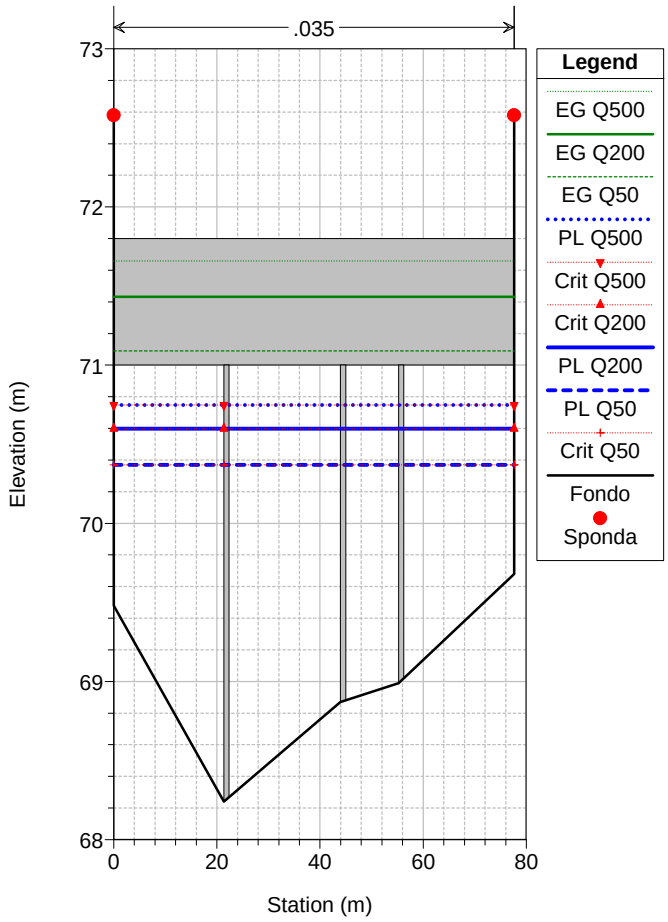
Secca2014 Plan: 1_PienaSecca

River = secca Reach = monte Sardorella SEC-22



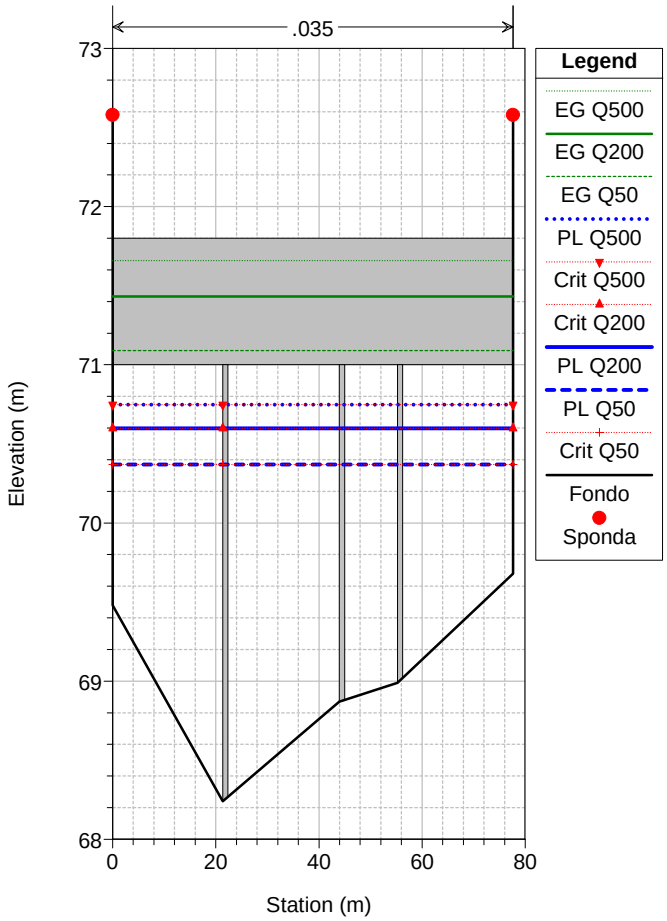
Secca2014 Plan: 1_PienaSecca

River = secca Reach = monte Sardorella



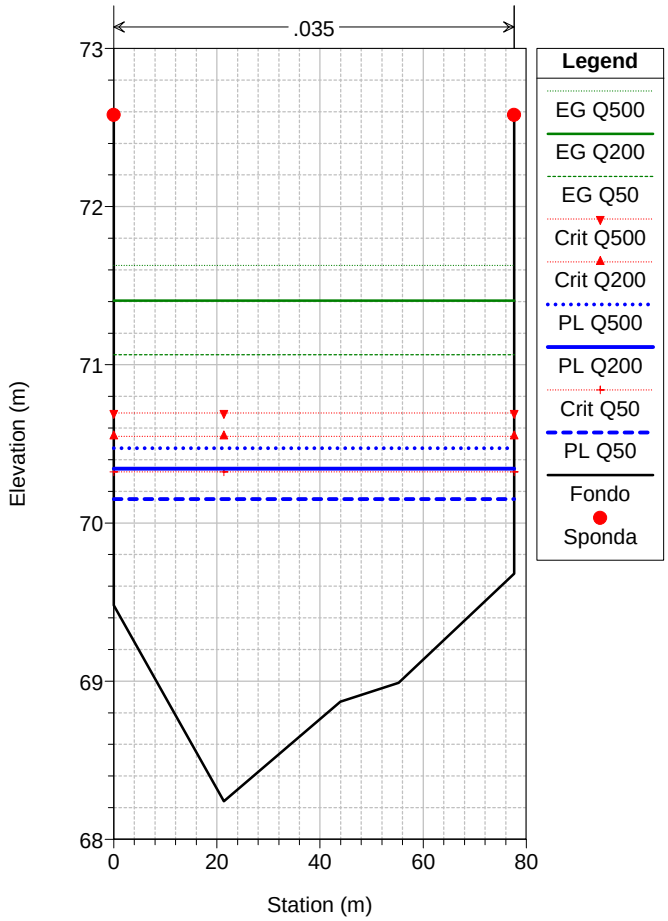
Secca2014 Plan: 1_PienaSecca

River = secca Reach = monte Sardorella

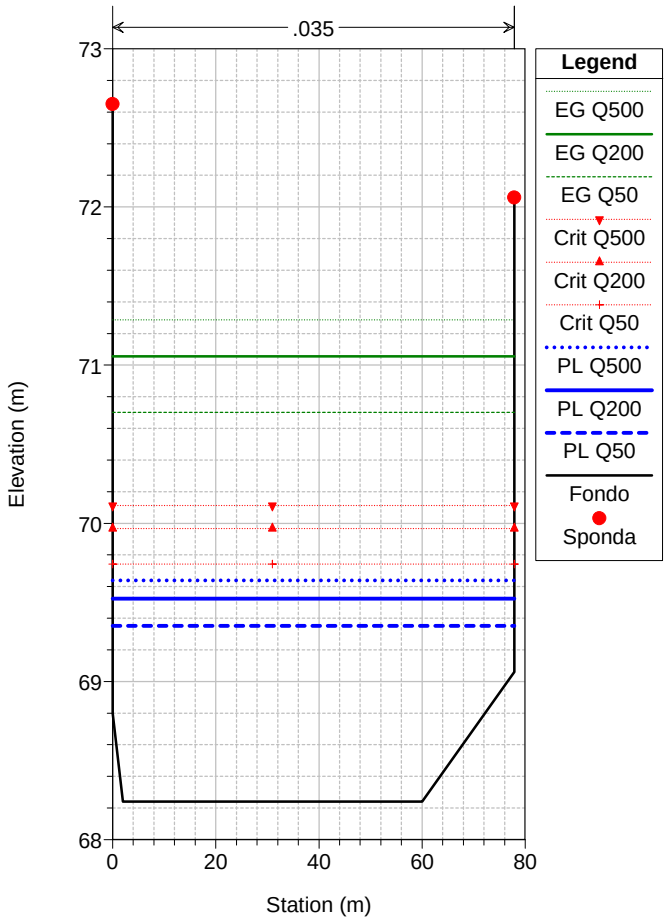


Secca2014 Plan: 1_PienaSecca

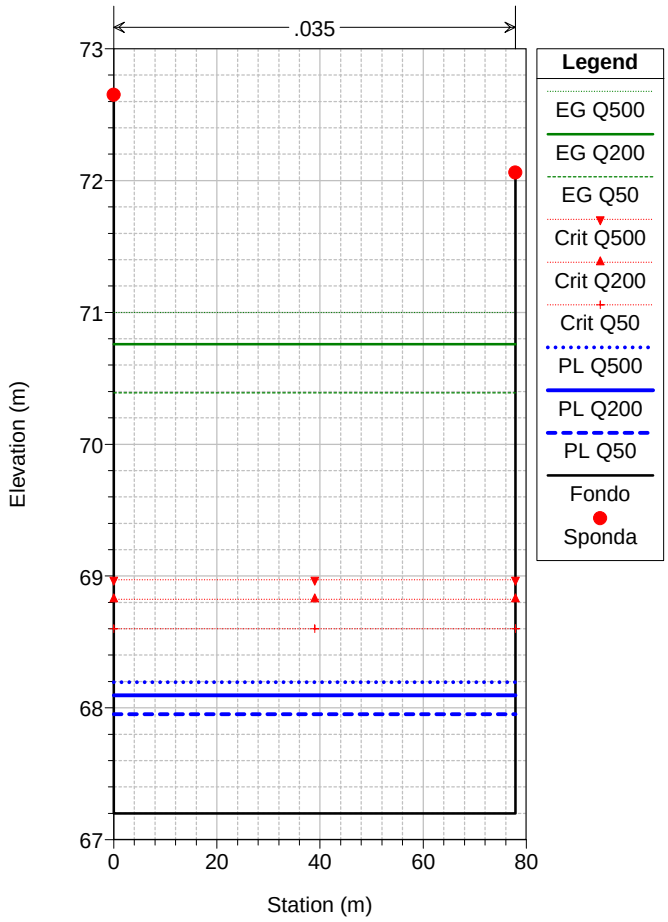
River = secca Reach = monte Sardorella SEC-21



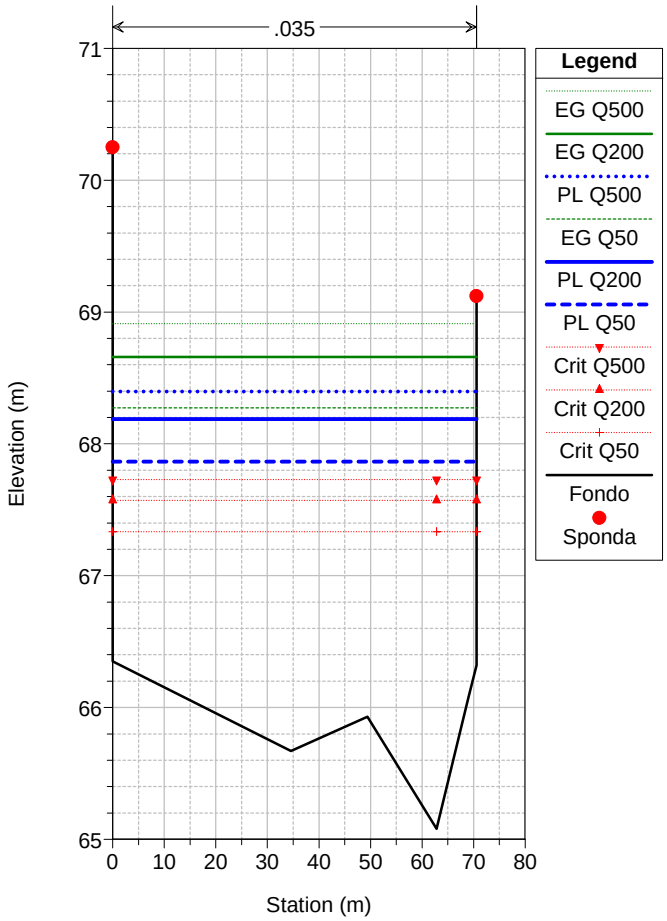
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-20



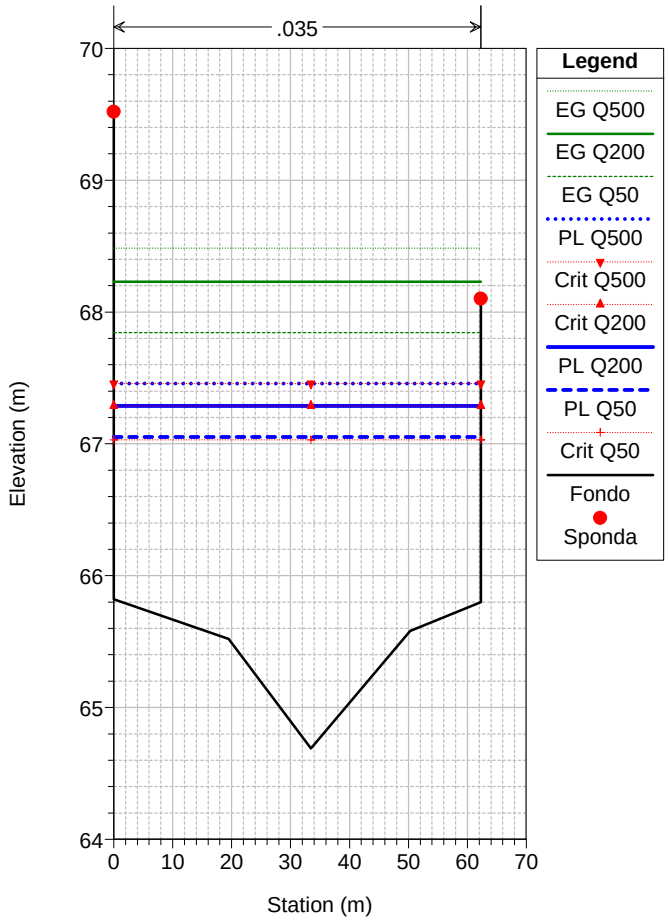
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-19



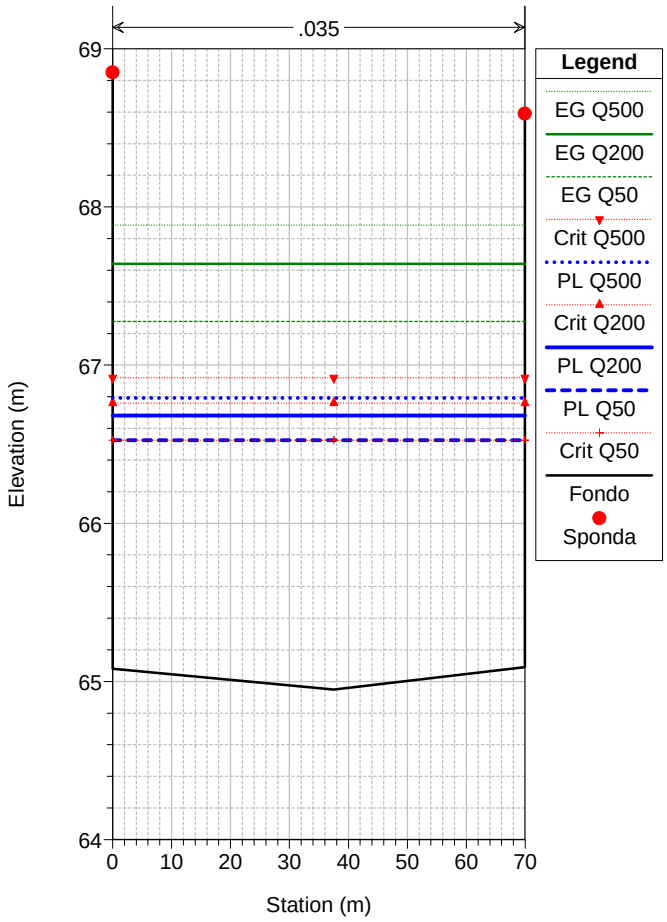
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-18



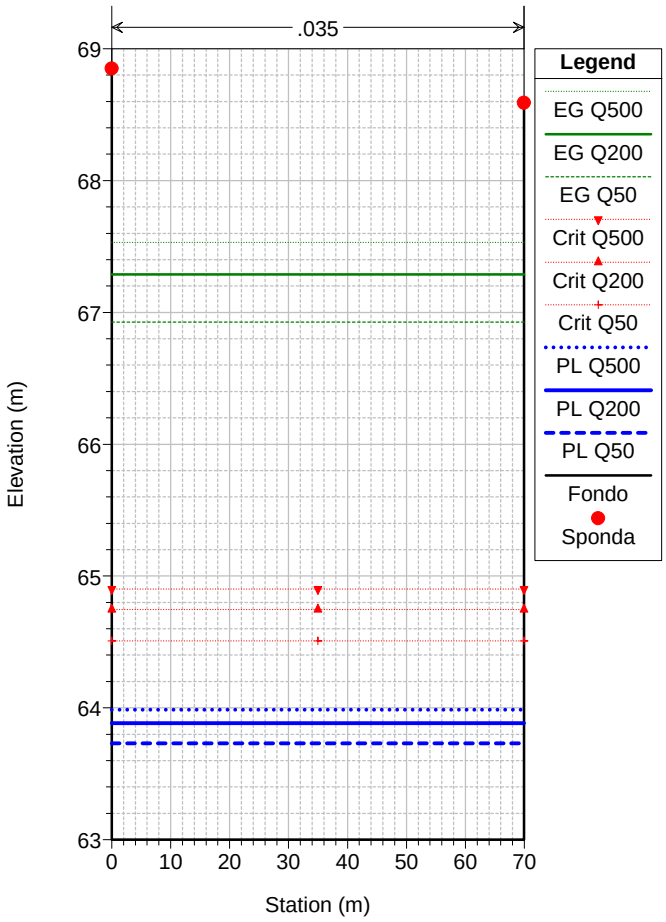
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-17



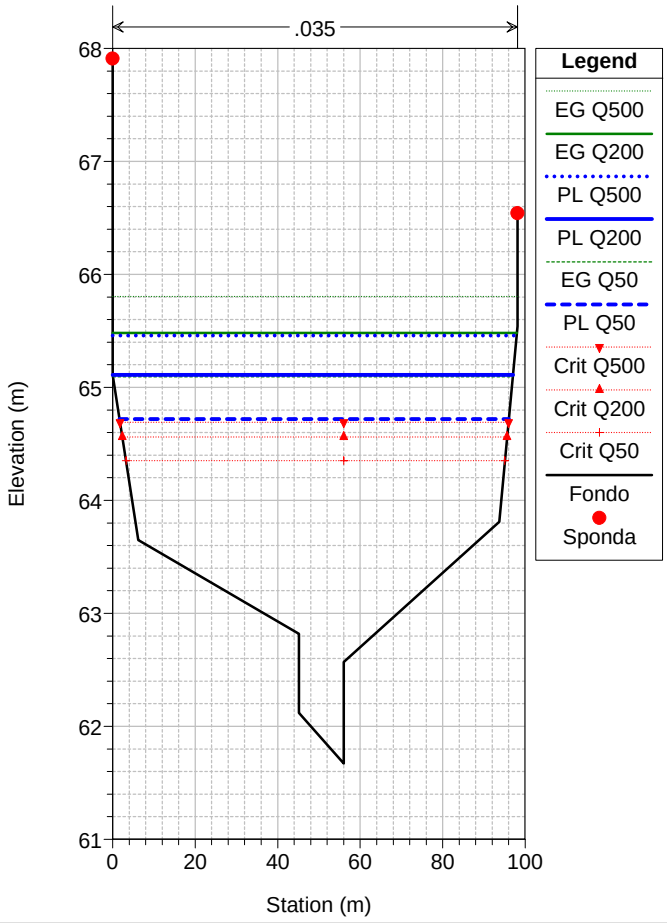
Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-16



Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-15



Secca2014 Plan: 1_PienaSecca
River = secca Reach = monte Sardorella SEC-14



HEC-RAS Plan: Secca15

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte Sardorella	6095.04	Q50	357.00	128.79	130.69	132.79	2.10	132.79	2.10	130.69	131.60	0.006577	4.23	84.44	46.30	1.00
monte Sardorella	6095.04	Q200	441.00	128.79	130.97	132.79	1.82	132.79	1.82	130.97	132.01	0.006365	4.53	97.44	46.86	1.00
monte Sardorella	6095.04	Q500	496.00	128.79	131.15	132.79	1.64	132.79	1.64	131.15	132.27	0.006206	4.69	105.78	47.22	1.00
monte Sardorella	6094.54	Q50	357.00	127.19	128.23	131.19	2.96	131.19	2.96	129.09	131.37	0.048248	7.85	45.49	44.59	2.48
monte Sardorella	6094.54	Q200	441.00	127.19	128.43	131.19	2.76	131.19	2.76	129.37	131.78	0.041145	8.10	54.43	44.99	2.35
monte Sardorella	6094.54	Q500	496.00	127.19	128.56	131.19	2.63	131.19	2.63	129.55	132.03	0.037764	8.25	60.11	45.24	2.28
monte Sardorella	6076.84	Q50	357.00	126.98	128.16	130.89	2.73	130.89	2.73	128.84	130.45	0.030264	6.71	53.17	46.35	2.00
monte Sardorella	6076.84	Q200	441.00	126.98	128.34	130.89	2.55	130.89	2.55	129.11	130.96	0.028868	7.17	61.48	46.71	2.00
monte Sardorella	6076.84	Q500	496.00	126.98	128.45	130.89	2.44	130.89	2.44	129.28	131.26	0.027985	7.43	66.77	46.94	1.99
monte Sardorella	6046.84 SEC-75	Q50	357.00	124.64	126.64	130.42	3.78	130.05	3.41	127.37	129.32	0.044628	7.26	49.16	51.23	2.37
monte Sardorella	6046.84 SEC-75	Q200	441.00	124.64	126.78	130.42	3.64	130.05	3.27	127.62	129.84	0.045803	7.74	56.95	54.94	2.43
monte Sardorella	6046.84 SEC-75	Q500	496.00	124.64	126.87	130.42	3.55	130.05	3.18	127.77	130.16	0.044949	8.04	61.68	55.32	2.43
monte Sardorella	6043.34		Bridge													
monte Sardorella	6039.84 SEC-75	Q50	357.00	124.64	126.76	130.03	3.28	130.05	3.29	127.37	128.87	0.032471	6.44	55.46	54.58	2.04
monte Sardorella	6039.84 SEC-75	Q200	441.00	124.64	126.90	130.03	3.14	130.05	3.15	127.61	129.38	0.032839	6.98	63.18	55.32	2.08
monte Sardorella	6039.84 SEC-75	Q500	496.00	124.64	126.98	130.03	3.05	130.05	3.07	127.77	129.70	0.032876	7.31	67.86	55.32	2.11
monte Sardorella	5976.84 SEC-74	Q50	357.00	124.19	126.08	129.76	3.68	129.74	3.66	126.38	127.23	0.015113	4.76	75.02	64.92	1.41
monte Sardorella	5976.84 SEC-74	Q200	441.00	124.19	126.20	129.76	3.56	129.74	3.54	126.60	127.64	0.016492	5.31	83.08	64.95	1.50
monte Sardorella	5976.84 SEC-74	Q500	496.00	124.19	126.28	129.76	3.48	129.74	3.46	126.74	127.90	0.017395	5.65	87.81	64.97	1.55
monte Sardorella	5913.84 SEC-73	Q50	357.00	122.69	124.60	129.39	4.79	128.84	4.24	125.03	126.07	0.021500	5.37	66.42	63.05	1.67
monte Sardorella	5913.84 SEC-73	Q200	441.00	122.69	124.76	129.39	4.63	128.84	4.08	125.26	126.45	0.020615	5.76	76.52	63.14	1.67
monte Sardorella	5913.84 SEC-73	Q500	496.00	122.69	124.86	129.39	4.53	128.84	3.98	125.40	126.70	0.020335	6.01	82.55	63.19	1.68
monte Sardorella	5913.34 SEC-73	Q50	357.00	121.94	123.89	129.39	5.50	128.84	4.95	124.57	126.00	0.029236	6.43	55.53	48.70	1.92
monte Sardorella	5913.34 SEC-73	Q200	441.00	121.94	124.09	129.39	5.30	128.84	4.75	124.79	126.38	0.027677	6.70	65.80	52.19	1.91
monte Sardorella	5913.34 SEC-73	Q500	496.00	121.94	124.21	129.39	5.18	128.84	4.63	124.93	126.63	0.027230	6.89	71.98	54.19	1.91
monte Sardorella	5848.14 SEC-72	Q50	357.00	121.28	123.03	128.93	5.90	126.97	3.94	123.40	124.36	0.016470	5.11	69.81	58.78	1.50
monte Sardorella	5848.14 SEC-72	Q200	441.00	121.28	123.18	128.93	5.75	126.97	3.79	123.64	124.78	0.016973	5.60	78.70	58.83	1.55
monte Sardorella	5848.14 SEC-72	Q500	496.00	121.28	123.28	128.93	5.65	126.97	3.69	123.78	125.04	0.017178	5.89	84.25	58.86	1.57
monte Sardorella	5779.84 SEC-71	Q50	357.00	120.59	122.81	127.88	5.07	125.96	3.15	122.81	123.69	0.006703	4.16	85.92	48.75	1.00
monte Sardorella	5779.84 SEC-71	Q200	441.00	120.59	123.08	127.88	4.80	125.96	2.88	123.08	124.09	0.006454	4.45	99.16	49.06	1.00
monte Sardorella	5779.84 SEC-71	Q500	496.00	120.59	123.25	127.88	4.63	125.96	2.71	123.25	124.34	0.006324	4.62	107.39	49.25	1.00
monte Sardorella	5779.34 SEC-71	Q50	357.00	118.72	122.74	127.88	5.14	125.96	3.22	120.88	122.99	0.000880	2.21	161.82	48.67	0.39
monte Sardorella	5779.34 SEC-71	Q200	441.00	118.72	123.09	127.88	4.79	125.96	2.87	121.20	123.40	0.000981	2.46	178.91	49.07	0.41
monte Sardorella	5779.34 SEC-71	Q500	496.00	118.72	123.30	127.88	4.58	125.96	2.66	121.48	123.65	0.001039	2.62	189.47	49.31	0.43
monte Sardorella	5768.64 SEC-70	Q50	357.00	119.44	122.01	127.58	5.57	125.66	3.65	122.01	122.90	0.006529	4.18	85.44	47.94	1.00
monte Sardorella	5768.64 SEC-70	Q200	441.00	119.44	122.29	127.58	5.29	125.66	3.37	122.29	123.31	0.006304	4.47	98.60	48.31	1.00
monte Sardorella	5768.64 SEC-70	Q500	496.00	119.44	122.45	127.58	5.13	125.66	3.21	122.45	123.56	0.006222	4.65	106.60	48.54	1.00

HEC-RAS Plan: Secca15 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte Sardorella	5644.84 SEC-69	Q50	357.00	118.27	120.44	124.25	3.81	123.38	2.94	120.77	121.74	0.013457	5.05	70.63	51.63	1.38
monte Sardorella	5644.84 SEC-69	Q200	441.00	118.27	120.63	124.25	3.62	123.38	2.75	121.03	122.16	0.013402	5.47	80.59	51.91	1.40
monte Sardorella	5644.84 SEC-69	Q500	496.00	118.27	120.75	124.25	3.50	123.38	2.63	121.18	122.41	0.013329	5.71	86.82	52.09	1.41
monte Sardorella	5580.44 SEC-68	Q50	357.00	117.46	120.38	121.16	0.78	123.00	2.62	119.85	120.82	0.002699	2.95	120.93	58.12	0.65
monte Sardorella	5580.44 SEC-68	Q200	441.00	117.46	120.67	121.16	0.50	123.00	2.33	120.10	121.19	0.002708	3.20	137.79	58.47	0.67
monte Sardorella	5580.44 SEC-68	Q500	496.00	117.46	120.86	121.16	0.30	123.00	2.14	120.24	121.42	0.002666	3.33	149.02	58.69	0.67
monte Sardorella	5579.34		Bridge													
monte Sardorella	5578.24 SEC-68	Q50	357.00	117.46	119.58	121.16	1.58	123.00	3.42	119.85	120.73	0.012478	4.75	75.10	56.57	1.32
monte Sardorella	5578.24 SEC-68	Q200	441.00	117.46	119.79	121.16	1.37	123.00	3.21	120.10	121.10	0.011984	5.07	86.90	57.41	1.32
monte Sardorella	5578.24 SEC-68	Q500	496.00	117.46	119.91	121.16	1.25	123.00	3.09	120.24	121.33	0.011688	5.27	94.16	57.56	1.31
monte Sardorella	5568.74 SEC-67	Q50	357.00	116.91	118.70	121.10	2.40	122.95	4.25	119.24	120.50	0.027872	5.94	60.14	60.13	1.89
monte Sardorella	5568.74 SEC-67	Q200	441.00	116.91	118.87	121.10	2.23	122.95	4.08	119.46	120.87	0.025741	6.27	70.39	60.97	1.86
monte Sardorella	5568.74 SEC-67	Q500	496.00	116.91	118.98	121.10	2.12	122.95	3.97	119.61	121.10	0.024674	6.46	76.80	61.49	1.84
monte Sardorella	5504.14 SEC-66	Q50	357.00	116.72	118.15	118.56	0.41	120.78	2.63	118.36	119.12	0.011941	4.36	81.79	68.17	1.27
monte Sardorella	5504.14 SEC-66	Q200	441.00	116.72	118.29	118.56	0.27	120.78	2.49	118.58	119.48	0.012933	4.85	90.90	68.51	1.34
monte Sardorella	5504.14 SEC-66	Q500	496.00	116.72	118.37	118.56	0.19	120.78	2.42	118.71	119.71	0.013534	5.15	96.38	68.72	1.39
monte Sardorella	5503.14 SEC-66	Q50	357.00	115.22	116.16	118.56	2.40	120.78	4.62	116.86	118.92	0.065438	7.36	48.50	66.56	2.75
monte Sardorella	5503.14 SEC-66	Q200	441.00	115.22	116.30	118.56	2.26	120.78	4.48	117.08	119.28	0.056592	7.65	57.62	66.71	2.63
monte Sardorella	5503.14 SEC-66	Q500	496.00	115.22	116.38	118.56	2.18	120.78	4.40	117.21	119.51	0.052592	7.84	63.29	66.81	2.57
monte Sardorella	5293.14 SEC-65	Q50	357.00	112.51	114.43	121.51	7.08	116.55	2.12	114.43	115.21	0.006904	3.92	91.09	58.09	1.00
monte Sardorella	5293.14 SEC-65	Q200	441.00	112.51	114.65	121.51	6.86	116.55	1.90	114.66	115.57	0.006838	4.24	104.01	58.17	1.01
monte Sardorella	5293.14 SEC-65	Q500	496.00	112.51	114.79	121.51	6.72	116.55	1.76	114.81	115.79	0.006779	4.42	112.11	58.22	1.02
monte Sardorella	5173.14 SEC-64	Q50	357.00	111.39	112.71	113.71	1.01	114.31	1.60	113.05	113.98	0.015361	4.99	71.54	58.30	1.44
monte Sardorella	5173.14 SEC-64	Q200	441.00	111.39	112.89	113.71	0.82	114.31	1.42	113.28	114.35	0.014777	5.35	82.42	58.52	1.44
monte Sardorella	5173.14 SEC-64	Q500	496.00	111.39	113.01	113.71	0.70	114.31	1.30	113.43	114.58	0.014426	5.56	89.25	58.65	1.44
monte Sardorella	5172.64 SEC-64	Q50	357.00	110.09	111.01	113.71	2.71	114.31	3.30	111.75	113.81	0.056022	7.42	48.11	57.48	2.59
monte Sardorella	5172.64 SEC-64	Q200	441.00	110.09	111.17	113.71	2.55	114.31	3.14	111.99	114.18	0.048108	7.69	57.31	57.59	2.46
monte Sardorella	5172.64 SEC-64	Q500	496.00	110.09	111.27	113.71	2.45	114.31	3.04	112.14	114.41	0.044320	7.86	63.13	57.67	2.40
monte Sardorella	5153.05 SEC-63	Q50	357.00	109.92	112.19	113.14	0.95	114.09	1.90	112.19	112.98	0.006782	3.94	90.68	57.41	1.00
monte Sardorella	5153.05 SEC-63	Q200	441.00	109.92	112.44	113.14	0.70	114.09	1.66	112.44	113.34	0.006508	4.21	104.75	57.86	1.00
monte Sardorella	5153.05 SEC-63	Q500	496.00	109.92	112.58	113.14	0.56	114.09	1.51	112.58	113.56	0.006419	4.38	113.21	58.13	1.00
monte Sardorella	5039.79 SEC 62	Q50	357.00	109.42	110.54	112.09	1.55	113.03	2.49	110.88	111.73	0.019163	4.83	73.88	75.57	1.56
monte Sardorella	5039.79 SEC 62	Q200	441.00	109.42	110.67	112.09	1.43	113.03	2.36	111.08	112.10	0.019691	5.29	83.30	75.64	1.61
monte Sardorella	5039.79 SEC 62	Q500	496.00	109.42	110.75	112.09	1.35	113.03	2.28	111.20	112.32	0.019788	5.55	89.33	75.68	1.63
monte Sardorella	5039.42 SEC 62	Q50	357.00	108.62	109.50	112.09	2.60	113.03	3.54	110.08	111.63	0.050104	6.47	55.21	75.37	2.41
monte Sardorella	5039.42 SEC 62	Q200	441.00	108.62	109.62	112.09	2.47	113.03	3.41	110.28	111.99	0.045282	6.82	64.69	75.42	2.35
monte Sardorella	5039.42 SEC 62	Q500	496.00	108.62	109.70	112.09	2.39	113.03	3.33	110.40	112.21	0.042820	7.02	70.66	75.46	2.32

HEC-RAS Plan: Secca15 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte Sardorella	5024.42 SEC-61	Q50	357.00	108.50	110.04	111.61	1.56	112.70	2.66	110.23	110.92	0.012200	4.16	85.84	77.72	1.26
monte Sardorella	5024.42 SEC-61	Q200	441.00	108.50	110.14	111.61	1.46	112.70	2.56	110.43	111.27	0.014001	4.70	93.82	78.30	1.37
monte Sardorella	5024.42 SEC-61	Q500	496.00	108.50	110.21	111.61	1.39	112.70	2.49	110.54	111.49	0.014884	5.01	99.06	78.65	1.42
monte Sardorella	5001.22 SEC-60	Q50	357.00	108.09	110.35	111.88	1.53	112.06	1.71	110.10	110.79	0.003975	2.93	121.94	80.39	0.76
monte Sardorella	5001.22 SEC-60	Q200	441.00	108.09	110.58	111.88	1.30	112.06	1.49	110.29	111.08	0.003832	3.14	140.27	80.39	0.76
monte Sardorella	5001.22 SEC-60	Q500	496.00	108.09	110.72	111.88	1.16	112.06	1.35	110.41	111.26	0.003756	3.27	151.64	80.39	0.76
monte Sardorella	4999.07		Bridge													
monte Sardorella	4996.92 SEC-60	Q50	357.00	108.09	109.94	111.88	1.94	112.06	2.13	110.10	110.76	0.011277	4.02	88.83	80.39	1.22
monte Sardorella	4996.92 SEC-60	Q200	441.00	108.09	110.10	111.88	1.78	112.06	1.96	110.29	111.05	0.010849	4.32	102.18	80.39	1.22
monte Sardorella	4996.92 SEC-60	Q500	496.00	108.09	110.21	111.88	1.67	112.06	1.86	110.41	111.23	0.010641	4.49	110.40	80.39	1.22
monte Sardorella	4978.34 SEC-59	Q50	357.00	108.00	109.50	110.27	0.77	112.01	2.50	109.77	110.55	0.013511	4.53	78.72	68.74	1.35
monte Sardorella	4978.34 SEC-59	Q200	441.00	108.00	109.71	110.27	0.57	112.01	2.30	109.98	110.86	0.012280	4.76	92.65	69.87	1.32
monte Sardorella	4978.34 SEC-59	Q500	496.00	108.00	109.83	110.27	0.44	112.01	2.18	110.12	111.05	0.011662	4.89	101.42	70.53	1.30
monte Sardorella	4967.24	Q50	357.00	107.90	108.81	110.18	1.37	111.32	2.51	109.27	110.35	0.028746	5.50	64.90	73.97	1.87
monte Sardorella	4967.24	Q200	441.00	107.90	108.96	110.18	1.22	111.32	2.36	109.47	110.66	0.026085	5.78	76.25	74.77	1.83
monte Sardorella	4967.24	Q500	496.00	107.90	109.05	110.18	1.13	111.32	2.27	109.60	110.86	0.024731	5.95	83.40	75.28	1.80
monte Sardorella	4957.24 SEC-58	Q50	357.00	107.90	109.27	110.18	0.91	111.32	2.05	109.33	109.98	0.008280	3.73	95.70	76.42	1.06
monte Sardorella	4957.24 SEC-58	Q200	441.00	107.90	109.46	110.18	0.72	111.32	1.86	109.53	110.28	0.008088	4.01	110.07	77.40	1.07
monte Sardorella	4957.24 SEC-58	Q500	496.00	107.90	109.53	110.18	0.65	111.32	1.79	109.65	110.47	0.008694	4.28	115.86	77.79	1.12
monte Sardorella	4956.74 SEC-58	Q50	357.00	105.77	106.90	110.20	3.30	111.32	4.42	107.68	109.76	0.053083	7.49	47.69	54.76	2.56
monte Sardorella	4956.74 SEC-58	Q200	441.00	105.77	107.08	110.20	3.12	111.32	4.24	107.92	110.05	0.044790	7.64	57.75	56.65	2.41
monte Sardorella	4956.74 SEC-58	Q500	496.00	105.77	107.19	110.20	3.01	111.32	4.13	108.07	110.24	0.041168	7.74	64.09	57.80	2.35
monte Sardorella	4956.7	Q50	357.00	105.77	107.01	110.20	3.19	111.32	4.31	107.68	109.26	0.036732	6.65	53.70	55.90	2.16
monte Sardorella	4956.7	Q200	441.00	105.77	107.19	110.20	3.01	111.32	4.13	107.92	109.62	0.032828	6.90	63.90	57.77	2.09
monte Sardorella	4956.7	Q500	496.00	105.77	107.30	110.20	2.90	111.32	4.02	108.07	109.83	0.031007	7.05	70.32	58.92	2.06
monte Sardorella	4938.82 SEC-57	Q50	357.00	105.15	106.54	109.53	2.99	110.37	3.83	107.19	108.82	0.044859	6.69	53.36	63.87	2.34
monte Sardorella	4938.82 SEC-57	Q200	441.00	105.15	106.68	109.53	2.85	110.37	3.69	107.41	109.20	0.043003	7.03	62.71	67.47	2.33
monte Sardorella	4938.82 SEC-57	Q500	496.00	105.15	106.77	109.53	2.76	110.37	3.60	107.54	109.44	0.041218	7.24	68.53	68.40	2.31
monte Sardorella	4738.82 SEC-56	Q50	357.00	103.14	104.80	105.09	0.29	106.83	2.03	104.80	105.46	0.007113	3.62	98.57	73.55	1.00
monte Sardorella	4738.82 SEC-56	Q200	441.00	103.14	105.00	105.09	0.09	106.83	1.83	105.02	105.76	0.007241	3.88	113.67	77.54	1.02
monte Sardorella	4738.82 SEC-56	Q500	496.00	103.14	105.09	105.09	-0.01	106.83	1.73	105.14	105.95	0.007487	4.10	121.04	77.88	1.05
monte Sardorella	4738.32 SEC 56	Q50	405.00	100.24	102.26	105.09	2.83	106.83	4.57	103.16	105.23	0.036641	7.63	53.07	44.77	2.24
monte Sardorella	4738.32 SEC 56	Q200	505.00	100.24	102.53	105.09	2.56	106.83	4.30	103.47	105.53	0.032001	7.68	65.75	49.62	2.13
monte Sardorella	4738.32 SEC 56	Q500	575.00	100.24	102.70	105.09	2.38	106.83	4.12	103.64	105.72	0.029592	7.70	74.64	52.90	2.07
monte Sardorella	4727.16 SEC-55	Q50	405.00	101.36	103.19	104.91	1.72	106.61	3.42	103.54	104.42	0.018544	4.92	82.24	80.11	1.55
monte Sardorella	4727.16 SEC-55	Q200	505.00	101.36	103.33	104.91	1.58	106.61	3.27	103.76	104.81	0.018625	5.38	93.90	80.11	1.59
monte Sardorella	4727.16 SEC-55	Q500	575.00	101.36	103.44	104.91	1.47	106.61	3.17	103.90	105.05	0.018207	5.62	102.30	80.11	1.59

HEC-RAS Plan: Secca15 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte Sardorella	4545.16 SEC-54	Q50	405.00	99.90	101.70	102.47	0.77	103.11	1.41	101.70	102.40	0.006982	3.71	109.28	77.69	1.00
monte Sardorella	4545.16 SEC-54	Q200	505.00	99.90	101.90	102.47	0.57	103.11	1.21	101.93	102.73	0.007093	4.05	124.74	78.42	1.02
monte Sardorella	4545.16 SEC-54	Q500	575.00	99.90	102.07	102.47	0.40	103.11	1.04	102.07	102.95	0.006641	4.16	138.06	79.03	1.01
monte Sardorella	4538.26 SEC-53	Q50	405.00	98.71	100.02	102.61	2.59	102.91	2.89	100.62	102.16	0.044317	6.48	62.53	77.88	2.31
monte Sardorella	4538.26 SEC-53	Q200	505.00	98.71	100.18	102.61	2.43	102.91	2.73	100.84	102.49	0.037877	6.73	74.99	78.13	2.19
monte Sardorella	4538.26 SEC-53	Q500	575.00	98.71	100.29	102.61	2.32	102.91	2.62	100.99	102.71	0.034554	6.89	83.46	78.29	2.13
monte Sardorella	4449.16 SEC-52	Q50	405.00	97.53	99.46	100.76	1.30	101.35	1.89	99.55	100.24	0.008865	3.93	103.13	80.54	1.11
monte Sardorella	4449.16 SEC-52	Q200	505.00	97.53	99.61	100.76	1.15	101.35	1.74	99.77	100.59	0.009493	4.37	115.63	80.89	1.17
monte Sardorella	4449.16 SEC-52	Q500	575.00	97.53	99.71	100.76	1.05	101.35	1.64	99.92	100.81	0.009886	4.65	123.68	81.11	1.20
monte Sardorella	4418.16 SEC-51	Q50	405.00	97.65	99.02	99.38	0.36	100.86	1.84	99.21	99.91	0.012008	4.19	96.59	86.49	1.27
monte Sardorella	4418.16 SEC-51	Q200	505.00	97.65	99.17	99.38	0.21	100.86	1.69	99.42	100.25	0.012208	4.58	110.16	87.23	1.30
monte Sardorella	4418.16 SEC-51	Q500	575.00	97.65	99.28	99.38	0.10	100.86	1.58	99.56	100.46	0.012304	4.83	119.11	87.71	1.32
monte Sardorella	4388.91 SEC-50	Q50	405.00	97.22	99.31	101.05	1.74	100.53	1.22	98.90	99.65	0.002858	2.60	155.97	96.65	0.65
monte Sardorella	4388.91 SEC-50	Q200	505.00	97.22	99.55	101.05	1.50	100.53	0.98	99.10	99.95	0.002788	2.81	179.75	96.75	0.66
monte Sardorella	4388.91 SEC-50	Q500	575.00	97.22	99.71	101.05	1.34	100.53	0.82	99.22	100.15	0.002748	2.94	195.43	96.82	0.66
monte Sardorella	4387.51		Bridge													
monte Sardorella	4386.11 SEC-50	Q50	405.00	97.22	98.70	101.05	2.35	100.53	1.83	98.90	99.58	0.013345	4.14	97.74	96.40	1.31
monte Sardorella	4386.11 SEC-50	Q200	505.00	97.22	98.87	101.05	2.18	100.53	1.66	99.10	99.87	0.012589	4.44	113.71	96.47	1.31
monte Sardorella	4386.11 SEC-50	Q500	575.00	97.22	98.98	101.05	2.07	100.53	1.55	99.22	100.07	0.012193	4.63	124.21	96.52	1.30
monte Sardorella	4334.51 SEC-49	Q50	405.00	96.78	98.42	99.65	1.23	99.86	1.44	98.42	99.06	0.007163	3.54	114.25	88.72	1.00
monte Sardorella	4334.51 SEC-49	Q200	505.00	96.78	98.62	99.65	1.03	99.86	1.24	98.62	99.37	0.006897	3.82	132.16	88.75	1.00
monte Sardorella	4334.51 SEC-49	Q500	575.00	96.78	98.75	99.65	0.90	99.86	1.11	98.75	99.57	0.006783	4.00	143.74	88.77	1.00
monte Sardorella	4326.01 SEC-48	Q50	405.00	95.47	96.58	99.61	3.03	99.75	3.17	97.17	98.77	0.054524	6.56	61.76	88.02	2.50
monte Sardorella	4326.01 SEC-48	Q200	505.00	95.47	96.72	99.61	2.89	99.75	3.03	97.38	99.08	0.046112	6.80	74.24	88.05	2.36
monte Sardorella	4326.01 SEC-48	Q500	575.00	95.47	96.82	99.61	2.79	99.75	2.93	97.51	99.29	0.041892	6.96	82.66	88.08	2.29
monte Sardorella	4153.55 SEC-47	Q50	405.00	94.09	95.61	97.04	1.43	96.62	1.01	95.61	96.23	0.007370	3.49	116.18	94.02	1.00
monte Sardorella	4153.55 SEC-47	Q200	505.00	94.09	95.81	97.04	1.23	96.62	0.81	95.81	96.53	0.007038	3.75	134.70	94.09	1.00
monte Sardorella	4153.55 SEC-47	Q500	575.00	94.09	95.94	97.04	1.10	96.62	0.68	95.94	96.72	0.006868	3.92	146.84	94.14	1.00
monte Sardorella	4145.10 SEC-46	Q50	405.00	91.27	92.94	97.04	4.10	96.47	3.53	93.66	95.86	0.069654	7.58	53.46	74.07	2.85
monte Sardorella	4145.10 SEC-46	Q200	505.00	91.27	93.09	97.04	3.95	96.47	3.38	93.85	96.16	0.062618	7.76	65.04	80.18	2.75
monte Sardorella	4145.10 SEC-46	Q500	575.00	91.27	93.18	97.04	3.86	96.47	3.29	93.98	96.35	0.059158	7.89	72.88	84.07	2.70
monte Sardorella	4101.00 SEC-45	Q50	405.00	90.66	93.55	96.05	2.50	95.96	2.41	93.19	93.93	0.003184	2.75	147.47	91.16	0.69
monte Sardorella	4101.00 SEC-45	Q200	505.00	90.66	93.86	96.05	2.19	95.96	2.10	93.39	94.28	0.002768	2.87	176.05	91.19	0.66
monte Sardorella	4101.00 SEC-45	Q500	575.00	90.66	94.07	96.05	1.98	95.96	1.89	93.52	94.51	0.002542	2.94	195.58	91.22	0.64
monte Sardorella	4090.90 SEC-44	Q50	405.00	90.81	93.52	95.74	2.22	95.86	2.34	93.14	93.90	0.003008	2.70	149.73	90.77	0.67
monte Sardorella	4090.90 SEC-44	Q200	505.00	90.81	93.84	95.74	1.90	95.86	2.02	93.33	94.25	0.002623	2.83	178.59	90.89	0.64
monte Sardorella	4090.90 SEC-44	Q500	575.00	90.81	94.06	95.74	1.68	95.86	1.80	93.47	94.48	0.002416	2.90	198.26	90.98	0.63

HEC-RAS Plan: Secca15 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte Sardorella	3945.75 SEC-43	Q50	405.00	89.79	92.38	94.97	2.59	94.03	1.65	92.38	93.23	0.006538	4.08	99.20	58.27	1.00
monte Sardorella	3945.75 SEC-43	Q200	505.00	89.79	92.66	94.97	2.31	94.03	1.37	92.66	93.63	0.006274	4.37	115.51	59.15	1.00
monte Sardorella	3945.75 SEC-43	Q500	575.00	89.79	92.84	94.97	2.13	94.03	1.19	92.84	93.89	0.006116	4.55	126.26	59.50	1.00
monte Sardorella	3854.20 SEC-42	Q50	405.00	89.56	91.08	94.04	2.96	93.21	2.13	91.42	92.28	0.016762	4.87	83.15	76.02	1.49
monte Sardorella	3854.20 SEC-42	Q200	505.00	89.56	91.22	94.04	2.82	93.21	1.99	91.65	92.68	0.017337	5.36	94.21	76.44	1.54
monte Sardorella	3854.20 SEC-42	Q500	575.00	89.56	91.32	94.04	2.72	93.21	1.89	91.79	92.94	0.018352	5.63	102.13	80.33	1.59
monte Sardorella	3841.47 SEC-41	Q50	405.00	87.07	88.80	93.95	5.15	93.37	4.57	89.55	91.75	0.058653	7.60	53.28	62.90	2.64
monte Sardorella	3841.47 SEC-41	Q200	505.00	87.07	88.96	93.95	4.99	93.37	4.41	89.81	92.14	0.060257	7.90	63.92	72.74	2.69
monte Sardorella	3841.47 SEC-41	Q500	575.00	87.07	89.06	93.95	4.89	93.37	4.31	89.96	92.39	0.055313	8.09	71.11	73.19	2.62
monte Sardorella	3802.47 SEC-40	Q50	405.00	86.91	88.77	92.77	4.01	93.37	4.61	89.15	90.12	0.017651	5.16	78.55	68.37	1.54
monte Sardorella	3802.47 SEC-40	Q200	505.00	86.91	88.94	92.77	3.83	93.37	4.43	89.39	90.52	0.017100	5.57	90.72	68.47	1.54
monte Sardorella	3802.47 SEC-40	Q500	575.00	86.91	89.05	92.77	3.73	93.37	4.32	89.55	90.81	0.017289	5.88	97.87	68.52	1.57
monte Sardorella	3742.47 SEC-39	Q50	405.00	85.18	89.53	90.11	0.59	91.46	1.94	88.38	89.77	0.001340	2.21	183.45	73.54	0.45
monte Sardorella	3742.47 SEC-39	Q200	505.00	85.18	89.86	90.11	0.25	91.46	1.60	88.65	90.16	0.001445	2.42	208.42	77.07	0.47
monte Sardorella	3742.47 SEC-39	Q500	575.00	85.18	90.08	90.11	0.03	91.46	1.38	88.82	90.41	0.001482	2.54	226.23	79.49	0.48
monte Sardorella	3741.47		Bridge													
monte Sardorella	3740.47 SEC-39	Q50	405.00	85.18	89.48	90.11	0.63	91.46	1.98	88.38	89.74	0.001422	2.25	179.92	73.27	0.46
monte Sardorella	3740.47 SEC-39	Q200	505.00	85.18	89.79	90.11	0.32	91.46	1.67	88.65	90.11	0.001545	2.48	203.59	76.40	0.49
monte Sardorella	3740.47 SEC-39	Q500	575.00	85.18	90.01	90.11	0.10	91.46	1.45	88.82	90.36	0.001595	2.61	220.51	78.72	0.50
monte Sardorella	3722.47 SEC-38	Q50	405.00	85.93	89.47	90.64	1.17	90.68	1.20	88.25	89.71	0.001134	2.15	188.80	76.85	0.44
monte Sardorella	3722.47 SEC-38	Q200	505.00	85.93	89.79	90.64	0.85	90.68	0.89	88.53	90.07	0.001233	2.36	213.80	80.06	0.46
monte Sardorella	3722.47 SEC-38	Q500	575.00	85.93	90.01	90.64	0.63	90.68	0.67	88.70	90.32	0.001278	2.48	231.64	82.63	0.47
monte Sardorella	3692.72 SEC-37	Q50	405.00	85.76	89.39	91.02	1.63	90.70	1.31	88.52	89.66	0.001583	2.32	174.64	81.48	0.51
monte Sardorella	3692.72 SEC-37	Q200	505.00	85.76	89.71	91.02	1.31	90.70	0.99	88.77	90.03	0.001607	2.51	201.08	84.18	0.52
monte Sardorella	3692.72 SEC-37	Q500	575.00	85.76	89.93	91.02	1.09	90.70	0.77	88.93	90.28	0.001590	2.61	220.00	86.06	0.52
monte Sardorella	3690.72		Culvert													
monte Sardorella	3688.72 SEC-37	Q50	405.00	85.76	88.52	91.02	2.50	90.70	2.18	88.52	89.25	0.007058	3.77	107.41	74.16	1.00
monte Sardorella	3688.72 SEC-37	Q200	505.00	85.76	88.77	91.02	2.25	90.70	1.93	88.77	89.59	0.006744	4.02	125.67	76.22	1.00
monte Sardorella	3688.72 SEC-37	Q500	575.00	85.76	88.93	91.02	2.09	90.70	1.77	88.93	89.81	0.006570	4.17	137.88	77.56	1.00
monte Sardorella	3622.72 SEC-36	Q50	405.00	84.96	86.46	88.92	2.45	90.51	4.05	87.03	88.32	0.026525	6.04	67.00	62.26	1.86
monte Sardorella	3622.72 SEC-36	Q200	505.00	84.96	86.67	88.92	2.25	90.51	3.85	87.28	88.70	0.024075	6.33	79.81	64.26	1.81
monte Sardorella	3622.72 SEC-36	Q500	575.00	84.96	86.80	88.92	2.12	90.51	3.72	87.45	88.95	0.022788	6.50	88.51	65.65	1.79
monte Sardorella	3564.22 SEC-35	Q50	405.00	84.85	86.51	88.09	1.57	92.25	5.73	86.54	87.32	0.007379	3.98	101.87	67.06	1.03
monte Sardorella	3564.22 SEC-35	Q200	505.00	84.85	86.77	88.09	1.31	92.25	5.47	86.79	87.69	0.006848	4.23	119.34	67.34	1.01
monte Sardorella	3564.22 SEC-35	Q500	575.00	84.85	86.90	88.09	1.18	92.25	5.34	86.96	87.93	0.007077	4.49	128.11	67.69	1.04
monte Sardorella	3530.72 SEC-34	Q50	405.00	82.46	83.75	87.39	3.64	87.98	4.23	84.51	86.59	0.052811	7.47	54.19	61.29	2.54
monte Sardorella	3530.72 SEC-34	Q200	505.00	82.46	83.92	87.39	3.47	87.98	4.06	84.76	86.99	0.046194	7.76	65.06	62.60	2.43

HEC-RAS Plan: Secca15 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte Sardorella	3530.72 SEC-34	Q500	575.00	82.46	84.04	87.39	3.35	87.98	3.94	84.93	87.24	0.041831	7.92	72.56	62.64	2.35
monte Sardorella	3321.72 SEC-33	Q50	405.00	80.46	83.10	86.22	3.12	84.81	1.71	83.10	84.15	0.006440	4.53	89.49	42.70	1.00
monte Sardorella	3321.72 SEC-33	Q200	505.00	80.46	83.44	86.22	2.79	84.81	1.38	83.44	84.64	0.006244	4.86	103.81	43.03	1.00
monte Sardorella	3321.72 SEC-33	Q500	575.00	80.46	83.66	86.22	2.57	84.81	1.16	83.66	84.97	0.006128	5.07	113.36	43.25	1.00
monte Sardorella	3269.72 SEC-32	Q50	405.00	80.31	82.63	84.00	1.37	84.00	1.37	82.79	83.75	0.008620	4.69	86.27	49.61	1.14
monte Sardorella	3269.72 SEC-32	Q200	505.00	80.31	82.84	84.00	1.17	84.00	1.16	83.09	84.23	0.009336	5.23	96.47	49.69	1.20
monte Sardorella	3269.72 SEC-32	Q500	575.00	80.31	82.98	84.00	1.02	84.00	1.02	83.29	84.55	0.009625	5.55	103.57	49.74	1.23
monte Sardorella	3252.72 SEC-31	Q50	405.00	78.49	80.02	83.77	3.76	83.78	3.77	80.90	83.26	0.045071	7.98	50.77	46.36	2.43
monte Sardorella	3252.72 SEC-31	Q200	505.00	78.49	80.23	83.77	3.54	83.78	3.55	81.22	83.74	0.038663	8.29	60.92	46.43	2.31
monte Sardorella	3252.72 SEC-31	Q500	575.00	78.49	80.38	83.77	3.40	83.78	3.41	81.43	84.06	0.035558	8.49	67.69	46.48	2.25
monte Sardorella	3171.02 SEC-30	Q50	405.00	78.09	80.38	82.98	2.61	82.91	2.53	80.44	81.35	0.007417	4.38	92.50	52.42	1.05
monte Sardorella	3171.02 SEC-30	Q200	505.00	78.09	80.58	82.98	2.41	82.91	2.34	80.73	81.80	0.008159	4.91	102.92	52.49	1.12
monte Sardorella	3171.02 SEC-30	Q500	575.00	78.09	80.70	82.98	2.28	82.91	2.21	80.92	82.11	0.008668	5.25	109.46	52.54	1.16
monte Sardorella	3041.52 SEC-29	Q50	405.00	77.40	79.30	80.89	1.59	80.69	1.39	79.35	80.10	0.011943	3.96	102.15	69.69	1.05
monte Sardorella	3041.52 SEC-29	Q200	505.00	77.40	79.54	80.89	1.35	80.69	1.15	79.60	80.46	0.011689	4.25	118.75	71.58	1.05
monte Sardorella	3041.52 SEC-29	Q500	575.00	77.40	79.68	80.89	1.21	80.69	1.01	79.76	80.69	0.011706	4.45	129.23	72.74	1.07
monte Sardorella	2956.52 SEC-28	Q50	405.00	76.20	78.32	80.17	1.85	79.15	0.83	78.34	79.16	0.011020	4.07	99.48	60.84	1.02
monte Sardorella	2956.52 SEC-28	Q200	505.00	76.20	78.57	80.17	1.60	79.15	0.58	78.60	79.55	0.010733	4.40	114.87	61.04	1.02
monte Sardorella	2956.52 SEC-28	Q500	575.00	76.20	78.79	80.17	1.38	79.15	0.36	78.79	79.81	0.009993	4.47	128.58	62.89	1.00
monte Sardorella	2952.52 SEC-27	Q50	405.00	74.80	76.19	80.17	3.98	79.15	2.96	76.93	78.89	0.073549	7.27	55.73	60.24	2.41
monte Sardorella	2952.52 SEC-27	Q200	505.00	74.80	76.38	80.17	3.79	79.15	2.77	77.20	79.28	0.062505	7.54	66.97	60.39	2.29
monte Sardorella	2952.52 SEC-27	Q500	575.00	74.80	76.51	80.17	3.66	79.15	2.64	77.39	79.53	0.056779	7.70	74.65	60.50	2.21
monte Sardorella	2866.52 SEC-26	Q50	405.00	74.31	77.18	78.59	1.41	78.37	1.19	76.62	77.58	0.003943	2.80	144.87	70.52	0.62
monte Sardorella	2866.52 SEC-26	Q200	505.00	74.31	77.45	78.59	1.14	78.37	0.92	76.86	77.93	0.004096	3.08	163.97	70.55	0.64
monte Sardorella	2866.52 SEC-26	Q500	575.00	74.31	77.63	78.59	0.96	78.37	0.74	77.02	78.17	0.004190	3.26	176.38	70.57	0.66
monte Sardorella	2788.52 SEC-25	Q50	405.00	74.68	76.33	78.62	2.29	77.38	1.05	76.33	77.06	0.011083	3.79	106.84	72.85	1.00
monte Sardorella	2788.52 SEC-25	Q200	505.00	74.68	76.56	78.62	2.06	77.38	0.82	76.56	77.41	0.010655	4.08	123.72	72.85	1.00
monte Sardorella	2788.52 SEC-25	Q500	575.00	74.68	76.72	78.62	1.90	77.38	0.66	76.72	77.64	0.010389	4.26	134.97	72.85	1.00
monte Sardorella	2741.52 SEC-24	Q50	405.00	74.04	75.70	78.14	2.44	77.37	1.67	75.78	76.49	0.013408	3.92	103.33	78.02	1.09
monte Sardorella	2741.52 SEC-24	Q200	505.00	74.04	75.87	78.14	2.27	77.37	1.50	76.00	76.83	0.013958	4.33	116.75	78.07	1.13
monte Sardorella	2741.52 SEC-24	Q500	575.00	74.04	75.99	78.14	2.15	77.37	1.38	76.16	77.06	0.014233	4.58	125.61	78.11	1.15
monte Sardorella	2737.52 SEC-23	Q50	405.00	71.00	71.80	78.14	6.34	77.37	5.57	72.64	76.01	0.207084	9.09	44.57	76.00	3.79
monte Sardorella	2737.52 SEC-23	Q200	505.00	71.00	71.93	78.14	6.21	77.37	5.44	72.86	76.35	0.168848	9.32	54.21	76.34	3.53
monte Sardorella	2737.52 SEC-23	Q500	575.00	71.00	72.01	78.14	6.13	77.37	5.36	73.01	76.57	0.150213	9.46	60.78	76.56	3.39
monte Sardorella	2442.51 SEC-22.6	Q50	405.00	68.17	71.18	73.17	1.99	73.41	2.23	70.66	71.61	0.004188	2.91	139.05	68.04	0.65
monte Sardorella	2442.51 SEC-22.6	Q200	505.00	68.17	71.47	73.17	1.70	73.41	1.94	70.91	71.98	0.004278	3.19	158.42	68.47	0.67
monte Sardorella	2442.51 SEC-22.6	Q500	575.00	68.17	71.64	73.17	1.53	73.41	1.76	71.07	72.22	0.004359	3.37	170.76	68.74	0.68

HEC-RAS Plan: Secca15 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte Sardorella	2402.51 SEC-22.3	Q50	405.00	68.09	71.13	72.71	1.58	72.67	1.54	70.33	71.45	0.002675	2.49	162.92	72.50	0.53
monte Sardorella	2402.51 SEC-22.3	Q200	505.00	68.09	71.42	72.71	1.29	72.67	1.25	70.57	71.80	0.002880	2.74	184.18	74.56	0.56
monte Sardorella	2402.51 SEC-22.3	Q500	575.00	68.09	71.61	72.71	1.10	72.67	1.06	70.73	72.03	0.002975	2.90	198.26	80.27	0.57
monte Sardorella	2318.51 SEC-22	Q50	405.00	68.24	70.68	72.58	1.90	72.58	1.90	70.32	71.13	0.005238	2.96	136.84	77.65	0.71
monte Sardorella	2318.51 SEC-22	Q200	505.00	68.24	70.96	72.58	1.62	72.58	1.62	70.55	71.47	0.005072	3.19	158.16	77.65	0.71
monte Sardorella	2318.51 SEC-22	Q500	575.00	68.24	71.13	72.58	1.45	72.58	1.45	70.69	71.70	0.005020	3.35	171.80	77.65	0.72
monte Sardorella	2311.76		Bridge													
monte Sardorella	2305.01 SEC-21	Q50	405.00	68.24	70.15	72.58	2.43	72.58	2.43	70.32	71.06	0.016984	4.23	95.63	77.65	1.22
monte Sardorella	2305.01 SEC-21	Q200	505.00	68.24	70.34	72.58	2.24	72.58	2.24	70.55	71.40	0.016365	4.57	110.61	77.65	1.22
monte Sardorella	2305.01 SEC-21	Q500	575.00	68.24	70.47	72.58	2.11	72.58	2.11	70.69	71.63	0.015934	4.76	120.69	77.65	1.22
monte Sardorella	2291.01 SEC-20	Q50	405.00	68.24	69.35	72.65	3.30	72.06	2.71	69.74	70.70	0.032512	5.15	78.71	77.92	1.63
monte Sardorella	2291.01 SEC-20	Q200	505.00	68.24	69.52	72.65	3.13	72.06	2.54	69.97	71.05	0.030098	5.48	92.12	77.92	1.61
monte Sardorella	2291.01 SEC-20	Q500	575.00	68.24	69.64	72.65	3.01	72.06	2.42	70.11	71.29	0.028710	5.69	101.12	77.92	1.59
monte Sardorella	2287.01 SEC-19	Q50	405.00	67.20	67.95	72.65	4.70	72.06	4.11	68.60	70.39	0.088099	6.92	58.53	77.92	2.55
monte Sardorella	2287.01 SEC-19	Q200	505.00	67.20	68.10	72.65	4.55	72.06	3.96	68.82	70.76	0.076391	7.23	69.84	77.92	2.44
monte Sardorella	2287.01 SEC-19	Q500	575.00	67.20	68.19	72.65	4.46	72.06	3.87	68.97	71.00	0.070281	7.42	77.49	77.92	2.38
monte Sardorella	2069.02 SEC-18	Q50	405.00	65.08	67.87	70.25	2.38	69.12	1.25	67.33	68.27	0.004046	2.83	143.18	70.54	0.63
monte Sardorella	2069.02 SEC-18	Q200	505.00	65.08	68.19	70.25	2.06	69.12	0.93	67.57	68.66	0.003898	3.04	165.86	70.54	0.63
monte Sardorella	2069.02 SEC-18	Q500	575.00	65.08	68.40	70.25	1.85	69.12	0.72	67.73	68.91	0.003834	3.18	180.60	70.54	0.64
monte Sardorella	2005.02 SEC-17	Q50	405.00	64.69	67.05	69.52	2.47	68.10	1.05	67.03	67.84	0.010317	3.94	102.69	62.29	0.98
monte Sardorella	2005.02 SEC-17	Q200	505.00	64.69	67.29	69.52	2.23	68.10	0.81	67.29	68.23	0.010340	4.30	117.50	62.29	1.00
monte Sardorella	2005.02 SEC-17	Q500	575.00	64.69	67.46	69.52	2.06	68.10	0.64	67.46	68.49	0.010140	4.49	128.02	62.29	1.00
monte Sardorella	1953.02 SEC-16	Q50	405.00	64.95	66.53	68.85	2.32	68.59	2.06	66.53	67.28	0.011026	3.84	105.46	69.94	1.00
monte Sardorella	1953.02 SEC-16	Q200	505.00	64.95	66.68	68.85	2.17	68.59	1.91	66.76	67.64	0.012402	4.34	116.42	69.94	1.07
monte Sardorella	1953.02 SEC-16	Q500	575.00	64.95	66.79	68.85	2.06	68.59	1.80	66.92	67.89	0.013028	4.63	124.15	69.94	1.11
monte Sardorella	1949.02 SEC-15	Q50	405.00	63.00	63.73	68.85	5.12	68.59	4.86	64.51	66.93	0.119949	7.92	51.13	69.94	2.96
monte Sardorella	1949.02 SEC-15	Q200	505.00	63.00	63.88	68.85	4.97	68.59	4.71	64.75	67.29	0.099846	8.17	61.78	69.94	2.78
monte Sardorella	1949.02 SEC-15	Q500	575.00	63.00	63.99	68.85	4.86	68.59	4.60	64.90	67.53	0.090183	8.34	68.93	69.94	2.68
monte Sardorella	1888.02 SEC-14	Q50	405.00	61.67	64.72	67.91	3.19	66.54	1.82	64.35	65.09	0.004995	2.71	149.55	94.35	0.69
monte Sardorella	1888.02 SEC-14	Q200	505.00	61.67	65.11	67.91	2.80	66.54	1.43	64.56	65.48	0.003833	2.70	186.96	97.02	0.62
monte Sardorella	1888.02 SEC-14	Q500	575.00	61.67	65.46	67.91	2.45	66.54	1.08	64.69	65.80	0.002901	2.60	220.88	97.91	0.55
valleSardorella	1571.10 SEC-13	Q50	620.00	61.03	64.00	68.61	4.61	65.58	1.58	63.66	64.64	0.005668	3.52	176.11	82.99	0.77
valleSardorella	1571.10 SEC-13	Q200	770.00	61.03	64.39	68.61	4.22	65.58	1.19	63.94	65.09	0.005124	3.70	208.38	84.37	0.75
valleSardorella	1571.10 SEC-13	Q500	900.00	61.03	64.71	68.61	3.90	65.58	0.87	64.18	65.46	0.004739	3.82	235.78	85.53	0.73
valleSardorella	1501.10 SEC-12	Q50	620.00	60.87	63.19	68.73	5.54	63.85	0.66	63.19	64.19	0.009834	4.43	139.87	69.58	1.00
valleSardorella	1501.10 SEC-12	Q200	770.00	60.87	63.50	68.73	5.23	63.85	0.35	63.50	64.66	0.009554	4.77	161.30	69.83	1.00
valleSardorella	1501.10 SEC-12	Q500	900.00	60.87	63.76	68.73	4.97	63.85	0.09	63.76	65.04	0.009241	5.01	179.50	70.04	1.00

HEC-RAS Plan: Secca15 (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)	
valleSardorella	1281.10	Q50	620.00	58.92	61.78	63.52	1.74	63.80	2.02	61.14	62.25	0.003357	3.05	202.98	84.62	0.63
valleSardorella	1281.10	Q200	770.00	58.92	62.11	63.52	1.41	63.80	1.69	61.41	62.68	0.003376	3.33	231.47	84.67	0.64
valleSardorella	1281.10	Q500	900.00	58.92	62.39	63.52	1.13	63.80	1.41	61.63	63.03	0.003380	3.53	254.72	84.70	0.65
valleSardorella	1271.10	Q50	620.00	58.92	61.72	63.52	1.80	63.81	2.09	61.14	62.22	0.003656	3.14	197.74	84.61	0.65
valleSardorella	1271.10	Q200	770.00	58.92	62.05	63.52	1.47	63.81	1.76	61.41	62.64	0.003645	3.41	226.07	84.66	0.67
valleSardorella	1271.10	Q500	900.00	58.92	62.32	63.52	1.20	63.81	1.49	61.64	62.99	0.003631	3.61	249.15	84.70	0.67
valleSardorella	1270.10 SEC-11.5m	Q50	620.00	58.92	61.71	63.52	1.81	63.81	2.10	61.14	62.21	0.003685	3.14	197.25	84.61	0.66
valleSardorella	1270.10 SEC-11.5m	Q200	770.00	58.92	62.05	63.52	1.47	63.81	1.76	61.41	62.64	0.003671	3.41	225.58	84.66	0.67
valleSardorella	1270.10 SEC-11.5m	Q500	900.00	58.92	62.32	63.52	1.20	63.81	1.49	61.64	62.98	0.003655	3.62	248.65	84.70	0.67
valleSardorella	1264.11 SEC-11.5		Bridge													
valleSardorella	1259.10 SEC-11.5v	Q50	620.00	58.92	61.51	63.52	2.01	63.81	2.30	61.14	62.11	0.004930	3.44	180.44	84.58	0.75
valleSardorella	1259.10 SEC-11.5v	Q200	770.00	58.92	61.83	63.52	1.69	63.81	1.98	61.41	62.53	0.004858	3.72	206.99	84.62	0.76
valleSardorella	1259.10 SEC-11.5v	Q500	900.00	58.92	62.08	63.52	1.44	63.81	1.73	61.64	62.87	0.004801	3.94	228.63	84.66	0.76
valleSardorella	1249.10	Q50	620.00	58.92	61.31	63.16	1.85	63.55	2.24	61.14	62.04	0.006860	3.80	163.10	84.54	0.87
valleSardorella	1249.10	Q200	770.00	58.92	61.63	63.16	1.53	63.55	1.92	61.41	62.46	0.006380	4.04	190.39	84.59	0.86
valleSardorella	1249.10	Q500	900.00	58.92	61.89	63.16	1.27	63.55	1.66	61.64	62.80	0.006093	4.24	212.49	84.63	0.85
valleSardorella	1225.10 SEC-11.4m	Q50	620.00	58.79	60.94	62.72	1.78	63.33	2.39	60.94	61.85	0.009180	4.23	146.57	80.50	1.00
valleSardorella	1225.10 SEC-11.4m	Q200	770.00	58.79	61.22	62.72	1.50	63.33	2.11	61.22	62.27	0.008846	4.55	169.23	80.52	1.00
valleSardorella	1225.10 SEC-11.4m	Q500	900.00	58.79	61.45	62.72	1.27	63.33	1.88	61.45	62.62	0.008559	4.78	188.11	80.54	1.00
valleSardorella	1222.10 SEC-11.4v	Q50	620.00	58.88	60.59	62.66	2.07	63.25	2.66	60.82	61.79	0.014245	4.84	128.10	79.72	1.22
valleSardorella	1222.10 SEC-11.4v	Q200	770.00	58.88	60.87	62.66	1.79	63.25	2.38	61.10	62.21	0.013111	5.13	149.95	79.73	1.20
valleSardorella	1222.10 SEC-11.4v	Q500	900.00	58.88	61.09	62.66	1.57	63.25	2.16	61.34	62.56	0.012418	5.37	167.73	79.74	1.18
valleSardorella	1212.10 SEC-11.2	Q50	620.00	57.91	59.70	62.66	2.96	63.25	3.55	60.23	61.51	0.028124	5.96	104.07	79.51	1.66
valleSardorella	1212.10 SEC-11.2	Q200	770.00	57.91	59.93	62.66	2.73	63.25	3.32	60.52	61.95	0.025437	6.29	122.41	79.53	1.62
valleSardorella	1212.10 SEC-11.2	Q500	900.00	57.91	60.12	62.66	2.54	63.25	3.13	60.75	62.30	0.023714	6.54	137.54	79.55	1.59
valleSardorella	1145.04 SEC-11.0	Q50	620.00	57.15	60.05	61.79	1.74	62.40	2.35	59.76	60.77	0.005801	3.75	165.38	75.55	0.81
valleSardorella	1145.04 SEC-11.0	Q200	770.00	57.15	60.39	61.79	1.40	62.40	2.01	60.05	61.22	0.005577	4.03	191.23	75.61	0.81
valleSardorella	1145.04 SEC-11.0	Q500	900.00	57.15	60.69	61.79	1.10	62.40	1.71	60.30	61.60	0.005297	4.21	213.90	75.66	0.80
valleSardorella	1142.04 SEC-11.0	Q50	620.00	57.04	60.08	61.73	1.65	62.33	2.25	59.72	60.73	0.005153	3.59	172.79	78.18	0.77
valleSardorella	1142.04 SEC-11.0	Q200	770.00	57.04	60.43	61.73	1.30	62.33	1.90	60.01	61.18	0.004929	3.84	200.46	78.84	0.77
valleSardorella	1142.04 SEC-11.0	Q500	900.00	57.04	60.74	61.73	0.99	62.33	1.59	60.25	61.56	0.004644	4.00	224.81	78.96	0.76
valleSardorella	1045.04 SEC-10.6	Q50	620.00	55.95	59.63	60.48	0.85	61.29	1.66	58.80	60.10	0.002863	3.04	204.25	75.53	0.59
valleSardorella	1045.04 SEC-10.6	Q200	770.00	55.95	60.10	60.48	0.38	61.29	1.19	59.12	60.63	0.002629	3.21	239.79	75.71	0.58
valleSardorella	1045.04 SEC-10.6	Q500	900.00	55.95	60.49	60.48	-0.01	61.29	0.80	59.37	61.06	0.002483	3.35	268.89	76.30	0.57
valleSardorella	1022.04	Q50	620.00	56.66	59.62	60.20	0.58	60.65	1.03	58.57	60.01	0.002221	2.80	221.72	75.00	0.52
valleSardorella	1022.04	Q200	770.00	56.66	60.08	60.20	0.12	60.65	0.57	58.87	60.54	0.002130	3.00	256.87	75.00	0.52
valleSardorella	1022.04	Q500	900.00	56.66	60.47	60.20	-0.27	60.65	0.18	59.11	60.97	0.002070	3.15	285.55	75.00	0.52

HEC-RAS Plan: Secca15 (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)	
valleSardorella	1019.04 SEC-10.4m	Q50	620.00	56.66	59.61	60.20	0.59	60.65	1.04	58.57	60.01	0.002243	2.81	221.03	75.00	0.52
valleSardorella	1019.04 SEC-10.4m	Q200	770.00	56.66	60.08	60.20	0.12	60.65	0.57	58.87	60.54	0.002148	3.01	256.20	75.00	0.52
valleSardorella	1019.04 SEC-10.4m	Q500	900.00	56.66	60.46	60.20	-0.26	60.65	0.19	59.11	60.97	0.002085	3.16	284.90	75.00	0.52
valleSardorella	1016.55 SEC-10.4		Bridge													
valleSardorella	1015.04 SEC-10.4v	Q50	620.00	56.66	59.53	60.20	0.67	60.65	1.12	58.57	59.95	0.002453	2.88	215.02	75.00	0.54
valleSardorella	1015.04 SEC-10.4v	Q200	770.00	56.66	59.99	60.20	0.21	60.65	0.66	58.87	60.47	0.002335	3.08	249.64	75.00	0.54
valleSardorella	1015.04 SEC-10.4v	Q500	900.00	56.66	60.36	60.20	-0.16	60.65	0.29	59.11	60.90	0.002259	3.24	277.88	75.00	0.54
valleSardorella	1003.04 SEC-10.2	Q50	620.00	56.66	59.43	60.20	0.77	60.65	1.22	58.61	59.91	0.002904	3.07	202.01	72.85	0.59
valleSardorella	1003.04 SEC-10.2	Q200	770.00	56.66	59.89	60.20	0.31	60.65	0.76	58.91	60.44	0.002730	3.27	235.45	72.85	0.58
valleSardorella	1003.04 SEC-10.2	Q500	900.00	56.66	60.27	60.20	-0.07	60.65	0.38	59.16	60.86	0.002622	3.43	262.68	72.85	0.58
valleSardorella	989.04 SEC-10.1	Q50	620.00	56.06	59.43	59.96	0.53	60.40	0.97	58.36	59.86	0.002289	2.92	212.50	68.50	0.53
valleSardorella	989.04 SEC-10.1	Q200	770.00	56.06	59.88	59.96	0.08	60.40	0.52	58.67	60.39	0.002279	3.16	243.51	68.50	0.54
valleSardorella	989.04 SEC-10.1	Q500	900.00	56.06	60.25	59.96	-0.29	60.40	0.15	58.93	60.82	0.002270	3.35	268.75	68.50	0.54
valleSardorella	987.04 SEC-10.0m	Q50	620.00	56.06	59.42	59.94	0.52	60.40	0.98	58.36	59.86	0.002305	2.92	212.04	68.50	0.53
valleSardorella	987.04 SEC-10.0m	Q200	770.00	56.06	59.88	59.94	0.06	60.40	0.52	58.67	60.39	0.002293	3.17	243.05	68.50	0.54
valleSardorella	987.04 SEC-10.0m	Q500	900.00	56.06	60.24	59.94	-0.30	60.40	0.16	58.93	60.82	0.002283	3.35	268.29	68.50	0.54
valleSardorella	978.55 SEC-10.0		Bridge													
valleSardorella	971.04 SEC-10.0v	Q50	620.00	56.06	57.79	59.72	1.93	60.10	2.31	58.35	59.74	0.026519	6.19	100.09	68.50	1.64
valleSardorella	971.04 SEC-10.0v	Q200	770.00	56.06	58.03	59.72	1.69	60.10	2.07	58.67	60.26	0.024933	6.61	116.42	68.50	1.62
valleSardorella	971.04 SEC-10.0v	Q500	900.00	56.06	58.22	59.72	1.50	60.10	1.88	58.93	60.67	0.023902	6.94	129.76	68.50	1.61
valleSardorella	963.04	Q50	620.00	56.06	58.99	59.66	0.67	59.90	0.91	58.16	59.51	0.003051	3.21	193.24	67.00	0.60
valleSardorella	963.04	Q200	770.00	56.06	59.39	59.66	0.27	59.90	0.51	58.48	60.02	0.003078	3.49	220.46	67.00	0.61
valleSardorella	963.04	Q500	900.00	56.06	59.72	59.66	-0.06	59.90	0.18	58.74	60.42	0.003098	3.71	242.48	67.00	0.62
valleSardorella	933.04	Q50	620.00	55.71	58.27	59.19	0.92	59.21	0.94	58.27	59.33	0.008797	4.57	135.72	63.54	1.00
valleSardorella	933.04	Q200	770.00	55.71	58.60	59.19	0.59	59.21	0.61	58.60	59.83	0.008500	4.91	156.79	63.63	1.00
valleSardorella	933.04	Q500	900.00	55.71	58.87	59.19	0.32	59.21	0.34	58.87	60.24	0.008297	5.17	173.98	63.69	1.00
valleSardorella	918.04 SEC-7.2	Q50	620.00	55.62	57.64	58.95	1.31	59.16	1.52	57.94	59.11	0.014500	5.37	115.56	62.02	1.25
valleSardorella	918.04 SEC-7.2	Q200	770.00	55.62	57.95	58.95	1.00	59.16	1.21	58.28	59.61	0.013603	5.72	134.66	62.11	1.24
valleSardorella	918.04 SEC-7.2	Q500	900.00	55.62	58.21	58.95	0.74	59.16	0.95	58.55	60.02	0.012896	5.97	150.74	62.19	1.22
valleSardorella	906.04 SEC-7.0	Q50	620.00	53.53	55.35	58.95	3.60	59.16	3.81	56.27	58.54	0.050764	7.91	78.37	60.34	2.22
valleSardorella	906.04 SEC-7.0	Q200	770.00	53.53	58.02	58.95	0.93	59.16	1.14	56.61	58.54	0.002048	3.18	242.47	62.15	0.51
valleSardorella	906.04 SEC-7.0	Q500	900.00	53.53	58.46	58.95	0.49	59.16	0.70	56.89	59.03	0.001999	3.34	269.56	62.28	0.51
valleSardorella	827.00 SEC-6.6	Q50	620.00	53.43	57.23	58.15	0.92	57.60	0.37	56.06	57.77	0.002396	3.24	191.46	54.21	0.55
valleSardorella	827.00 SEC-6.6	Q200	770.00	53.43	57.73	58.15	0.42	57.60	-0.13	56.43	58.36	0.002434	3.52	218.52	54.37	0.56
valleSardorella	827.00 SEC-6.6	Q500	900.00	53.43	58.13	58.15	0.02	57.60	-0.54	56.74	58.85	0.002458	3.74	240.54	54.50	0.57
valleSardorella	822.00 SEC-6.5	Q50	620.00	53.43	57.11	58.12	1.01	57.55	0.44	56.08	57.74	0.002907	3.53	175.46	50.01	0.60
valleSardorella	822.00 SEC-6.5	Q200	770.00	53.43	57.57	58.12	0.55	57.55	-0.02	56.48	58.34	0.003029	3.87	198.78	50.32	0.62

HEC-RAS Plan: Secca15 (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)	
valleSardorella	822.00 SEC-6.5	Q500	900.00	53.43	57.95	58.12	0.17	57.55	-0.40	56.80	58.82	0.003110	4.13	217.74	50.44	0.64
valleSardorella	817.00 SEC-6.4	Q50	620.00	53.42	56.40	58.13	1.73	57.47	1.07	56.40	57.66	0.008519	4.98	124.57	49.34	1.00
valleSardorella	817.00 SEC-6.4	Q200	770.00	53.42	56.79	58.13	1.34	57.47	0.68	56.79	58.24	0.008244	5.34	144.21	49.69	1.00
valleSardorella	817.00 SEC-6.4	Q500	900.00	53.42	57.11	58.13	1.02	57.47	0.36	57.11	58.72	0.008065	5.62	160.26	49.98	1.00
valleSardorella	785.01 SEC-6.3	Q50	620.00	53.40	55.46	57.96	2.50	57.28	1.82	55.88	57.09	0.017835	5.65	109.73	64.49	1.38
valleSardorella	785.01 SEC-6.3	Q200	770.00	53.40	55.66	57.96	2.30	57.28	1.62	56.21	57.67	0.019242	6.28	122.52	64.76	1.46
valleSardorella	785.01 SEC-6.3	Q500	900.00	53.40	55.83	57.96	2.13	57.28	1.45	56.48	58.14	0.019878	6.74	133.57	64.99	1.50
valleSardorella	684.00 SEC-6.2	Q50	620.00	53.15	55.45	56.82	1.37	56.76	1.31	55.45	56.50	0.008996	4.55	136.28	64.66	1.00
valleSardorella	684.00 SEC-6.2	Q200	770.00	53.15	55.78	56.82	1.04	56.76	0.98	55.78	57.00	0.008675	4.89	157.50	64.71	1.00
valleSardorella	684.00 SEC-6.2	Q500	900.00	53.15	56.04	56.82	0.78	56.76	0.72	56.04	57.40	0.008487	5.15	174.63	64.74	1.00
valleSardorella	668.00 SEC-6.0	Q50	620.00	51.98	53.38	56.69	3.31	56.74	3.36	54.14	55.94	0.037191	7.10	87.37	62.50	1.92
valleSardorella	668.00 SEC-6.0	Q200	770.00	51.98	53.63	56.69	3.06	56.74	3.11	54.47	56.47	0.033279	7.46	103.19	62.50	1.85
valleSardorella	668.00 SEC-6.0	Q500	900.00	51.98	53.85	56.69	2.85	56.74	2.90	54.75	56.88	0.030550	7.72	116.57	62.50	1.80
valleSardorella	646.00 SEC-5.6	Q50	620.00	51.82	53.75	56.45	2.70	56.50	2.75	53.99	55.12	0.013126	5.17	119.83	62.00	1.19
valleSardorella	646.00 SEC-5.6	Q200	770.00	51.82	54.05	56.45	2.40	56.50	2.45	54.32	55.63	0.012629	5.56	138.56	62.00	1.19
valleSardorella	646.00 SEC-5.6	Q500	900.00	51.82	54.33	56.45	2.12	56.50	2.17	54.59	56.03	0.011813	5.78	155.75	62.00	1.16
valleSardorella	360.00 SEC-5	Q50	620.00	49.82	52.13	53.50	1.37	53.50	1.37	51.68	52.73	0.004514	3.43	180.90	78.20	0.72
valleSardorella	360.00 SEC-5	Q200	770.00	49.82	52.49	53.50	1.01	53.50	1.01	51.96	53.18	0.004356	3.69	208.94	78.20	0.72
valleSardorella	360.00 SEC-5	Q500	900.00	49.82	52.78	53.50	0.72	53.50	0.72	52.20	53.55	0.004255	3.88	231.72	78.20	0.72
valleSardorella	358.80 SEC-4.2	Q50	620.00	49.81	52.12	53.50	1.38	53.50	1.38	51.67	52.72	0.004543	3.44	180.38	78.00	0.72
valleSardorella	358.80 SEC-4.2	Q200	770.00	49.81	52.48	53.50	1.02	53.50	1.02	51.96	53.18	0.004392	3.70	208.23	78.00	0.72
valleSardorella	358.80 SEC-4.2	Q500	900.00	49.81	52.77	53.50	0.73	53.50	0.73	52.20	53.54	0.004289	3.90	230.94	78.00	0.72
valleSardorella	344.81 PONTE		Bridge													
valleSardorella	331.80 SEC-4.1	Q50	620.00	49.62	51.23	53.50	2.27	53.50	2.27	51.48	52.47	0.014711	4.92	125.93	78.00	1.24
valleSardorella	331.80 SEC-4.1	Q200	770.00	49.62	51.48	53.50	2.02	53.50	2.02	51.77	52.91	0.014243	5.30	145.16	78.00	1.24
valleSardorella	331.80 SEC-4.1	Q500	900.00	49.62	51.69	53.50	1.81	53.50	1.81	52.01	53.28	0.013848	5.59	161.08	78.00	1.24
valleSardorella	327.00 SEC-4	Q50	620.00	49.59	51.73	53.50	1.77	53.50	1.77	51.45	52.43	0.005852	3.71	166.91	78.00	0.81
valleSardorella	327.00 SEC-4	Q200	770.00	49.59	52.05	53.50	1.45	53.50	1.45	51.74	52.87	0.005757	4.02	191.60	78.00	0.82
valleSardorella	327.00 SEC-4	Q500	900.00	49.59	52.31	53.50	1.19	53.50	1.19	51.98	53.23	0.005667	4.25	211.93	78.00	0.82
valleSardorella	262.00 SEC-3.2	Q50	620.00	49.13	51.05	53.22	2.17	53.36	2.31	51.05	52.01	0.009211	4.32	143.45	75.40	1.00
valleSardorella	262.00 SEC-3.2	Q200	770.00	49.13	51.35	53.22	1.87	53.36	2.01	51.35	52.45	0.008838	4.64	165.90	75.40	1.00
valleSardorella	262.00 SEC-3.2	Q500	900.00	49.13	51.59	53.22	1.63	53.36	1.77	51.59	52.81	0.008613	4.89	184.03	75.40	1.00
valleSardorella	252.00 SEC-3.0	Q50	620.00	48.32	49.61	53.17	3.56	53.34	3.73	50.22	51.68	0.033062	6.38	97.17	75.40	1.79
valleSardorella	252.00 SEC-3.0	Q200	770.00	48.32	51.46	53.17	1.71	53.34	1.88	50.52	52.00	0.002792	3.25	236.63	75.40	0.59
valleSardorella	252.00 SEC-3.0	Q500	900.00	48.32	51.78	53.17	1.39	53.34	1.56	50.76	52.39	0.002786	3.45	260.83	75.40	0.59
valleSardorella	96.00 SEC-2	Q50	620.00	47.23	50.78	52.45	1.67	53.00	2.22	49.23	51.10	0.001430	2.50	248.17	70.00	0.42
valleSardorella	96.00 SEC-2	Q200	770.00	47.23	51.25	52.45	1.20	53.00	1.75	49.54	51.63	0.001472	2.73	281.54	70.00	0.44

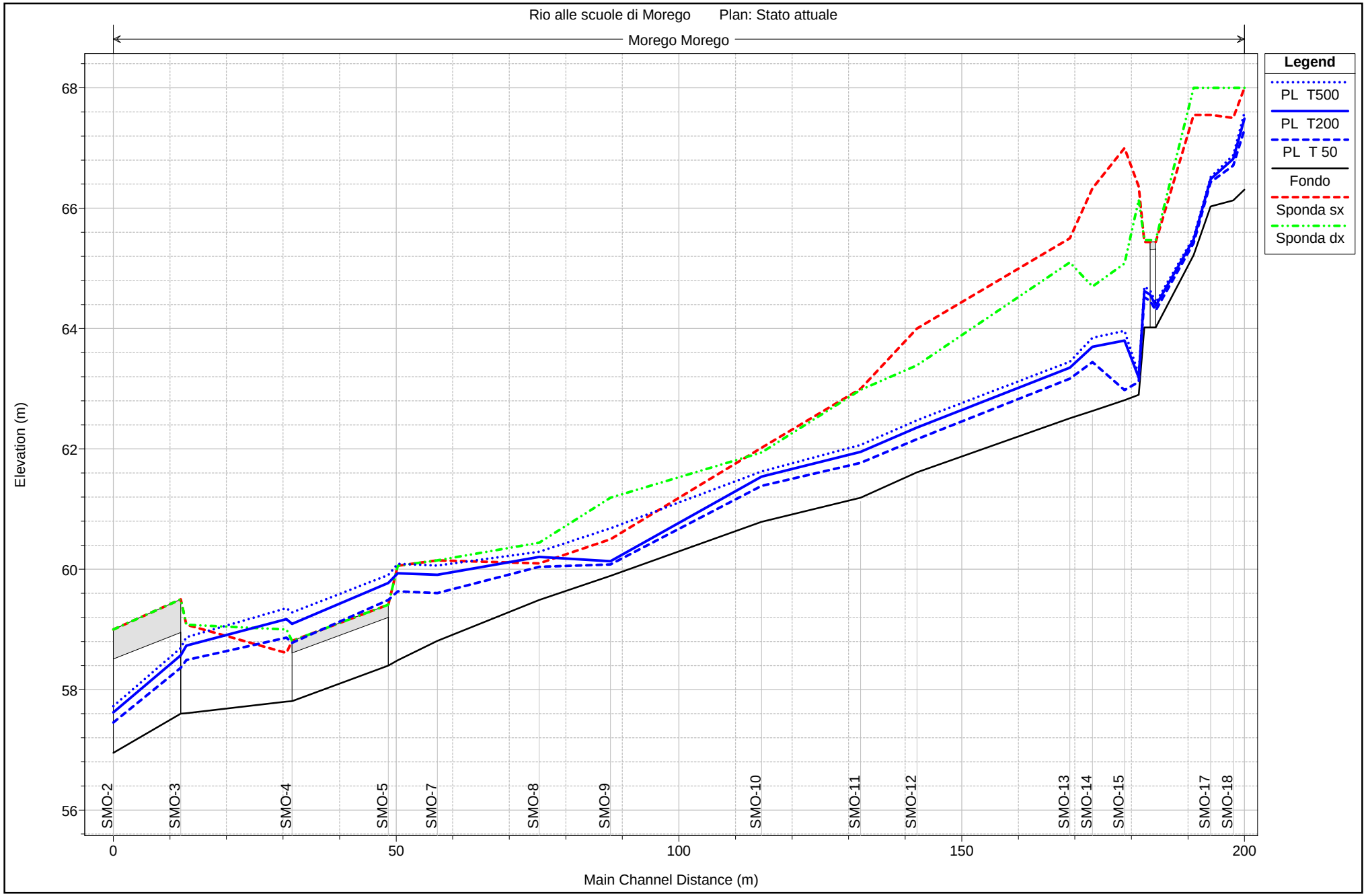
HEC-RAS Plan: Secca15 (Continued)

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)	
valleSardorella	96.00 SEC-2	Q500	900.00	47.23	51.56	52.45	0.89	53.00	1.44	49.80	52.01	0.001586	2.97	303.31	70.00	0.46
valleSardorella	55.00 SEC-1.3	Q50	620.00	46.95	50.75	52.25	1.50	52.70	1.95	48.95	51.03	0.001141	2.33	266.28	70.00	0.38
valleSardorella	55.00 SEC-1.3	Q200	770.00	46.95	51.23	52.25	1.02	52.70	1.47	49.26	51.57	0.001207	2.57	299.64	70.00	0.40
valleSardorella	55.00 SEC-1.3	Q500	900.00	46.95	51.54	52.25	0.71	52.70	1.16	49.51	51.94	0.001320	2.80	321.28	70.00	0.42
valleSardorella	52.00 SEC-1.2	Q50	620.00	46.92	50.75	52.24	1.49	52.70	1.95	48.93	51.03	0.001129	2.33	266.64	69.60	0.38
valleSardorella	52.00 SEC-1.2	Q200	770.00	46.92	51.23	52.24	1.01	52.70	1.47	49.24	51.56	0.001198	2.57	299.77	69.60	0.40
valleSardorella	52.00 SEC-1.2	Q500	900.00	46.92	51.54	52.24	0.70	52.70	1.16	49.49	51.94	0.001313	2.80	321.24	69.60	0.42
valleSardorella	31.01 PONTE		Bridge													
valleSardorella	11.00 SEC-1.1	Q50	620.00	46.64	50.63	52.05	1.42	52.70	2.07	48.64	50.89	0.000988	2.23	277.99	69.60	0.36
valleSardorella	11.00 SEC-1.1	Q200	770.00	46.64	51.07	52.05	0.98	52.70	1.63	48.96	51.39	0.001092	2.50	308.62	69.60	0.38
valleSardorella	11.00 SEC-1.1	Q500	900.00	46.64	51.33	52.05	0.72	52.70	1.37	49.21	51.72	0.001244	2.75	326.77	69.60	0.41
valleSardorella	0.00 SEC-1	Q50	620.00	46.56	50.63	52.00	1.37	52.70	2.07	48.57	50.87	0.000930	2.19	283.27	69.60	0.35
valleSardorella	0.00 SEC-1	Q200	770.00	46.56	51.07	52.00	0.93	52.70	1.63	48.88	51.38	0.001035	2.45	313.88	69.60	0.37
valleSardorella	0.00 SEC-1	Q500	900.00	46.56	51.33	52.00	0.67	52.70	1.37	49.13	51.70	0.001183	2.71	332.00	69.60	0.40

8.2 Rio Alle scuole di Morego

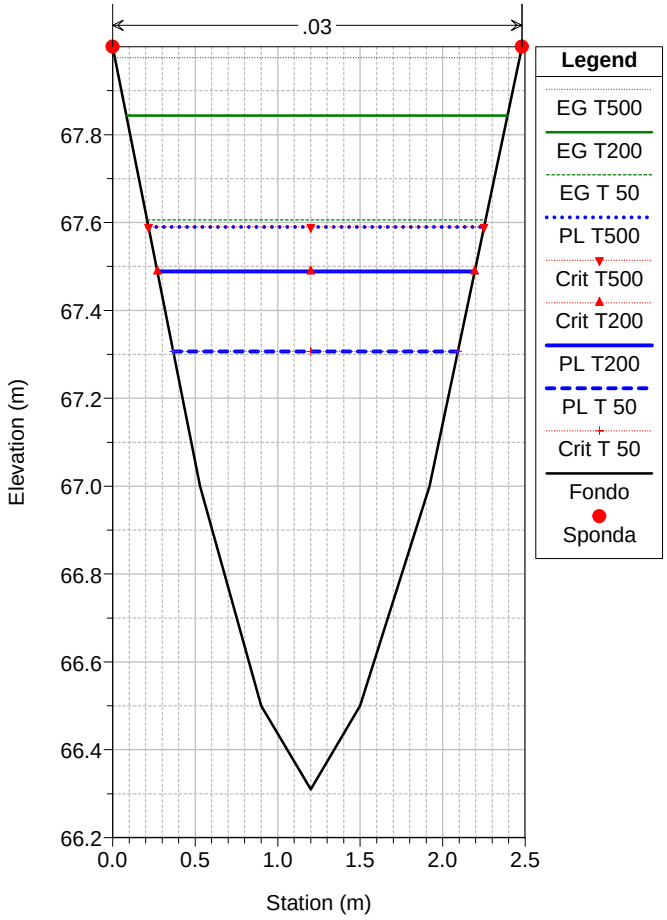
E' stato indagato un tratto di circa 200 m a partire dalla confluenza con il torrente Secca. Le portate utilizzate per il calcolo sono riportate in tabella.
Il coefficiente di scabrezza di Strickler è pari a 33 $m^{1/3}s^{-1}$.
Quale condizione al contorno di monte è stata imposta la profondità critica; a valle è stata imposta la quota del t. Secca, valutata nella sezione a valle della confluenza.

TRATTO	**PORTATE DI PIENA AL COLMO (m^3/s)**		
	T = 50 anni	**T = 200 anni**	**T = 500 anni**
Rio Alle scuole di Morego	2,5	3,6	4,3


Rio alle scuole di Morego Plan: Stato attuale
Morego Morego
Legend
PL T500
PL T200
PL T 50
Fondo
Sponda sx
Sponda dx
Elevation (m)
68
66
64
62
60
58
56
SMO-2
SMO-3
SMO-4
SMO-5
SMO-7
SMO-8
SMO-9
SMO-10
SMO-11
SMO-12
SMO-13
SMO-14
SMO-15
SMO-17
SMO-18
0
50
100
150
200
Main Channel Distance (m)

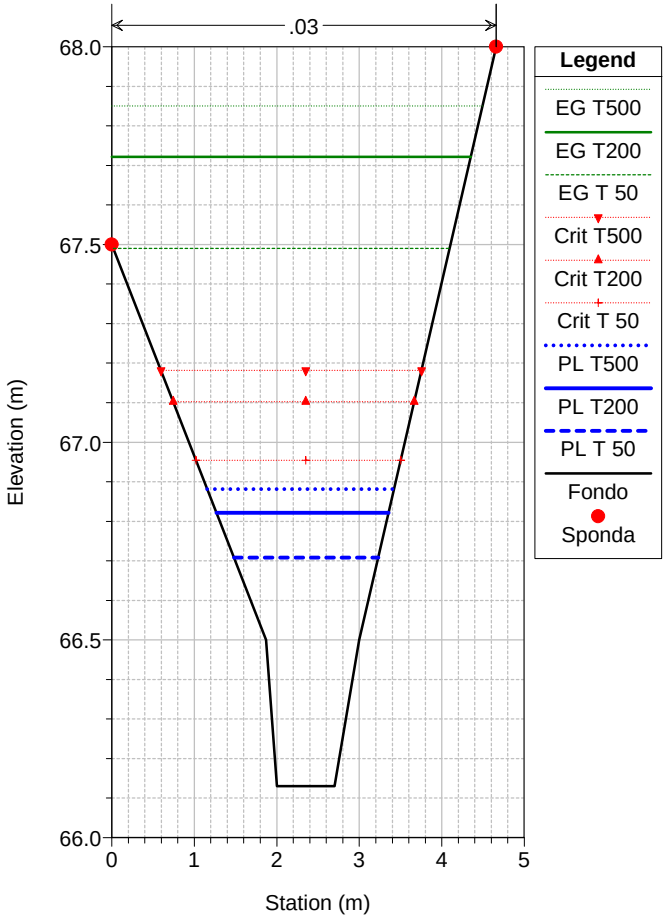
Rio alle scuole di Morego Plan: Stato attuale

River = Morego Reach = Morego SMO-19



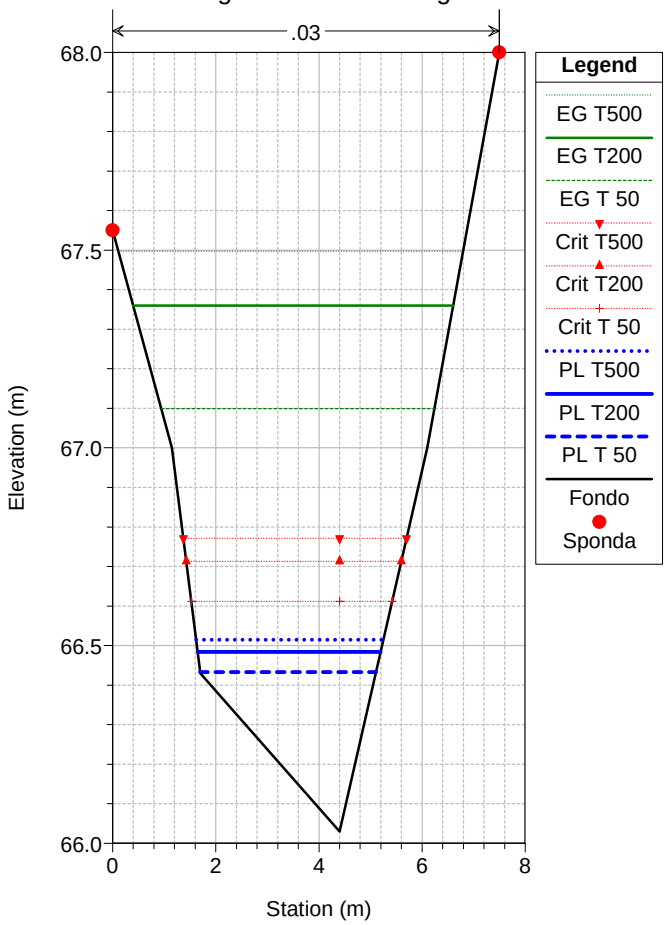
Rio alle scuole di Morego Plan: Stato attuale

River = Morego Reach = Morego SMO-18



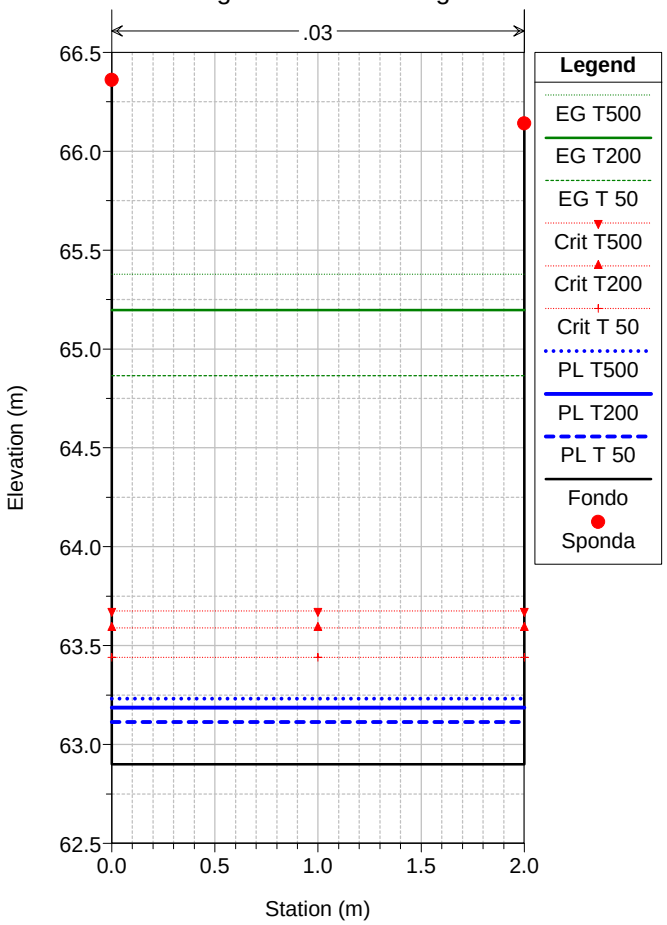
Rio alle scuole di Morego Plan: Stato attuale

River = Morego Reach = Morego SMO-17



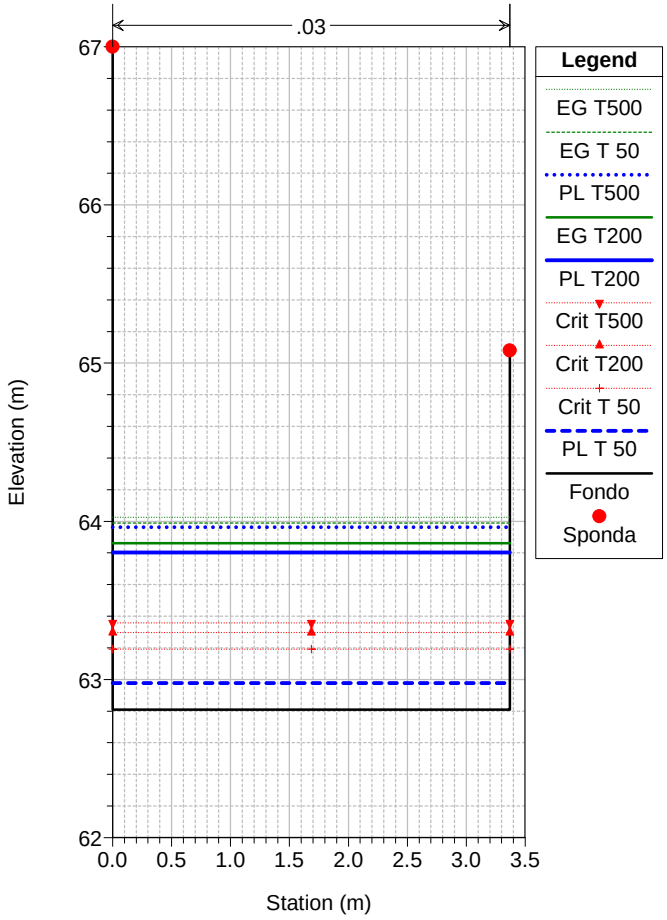
Rio alle scuole di Morego Plan: Stato attuale

River = Morego Reach = Morego SMO-16



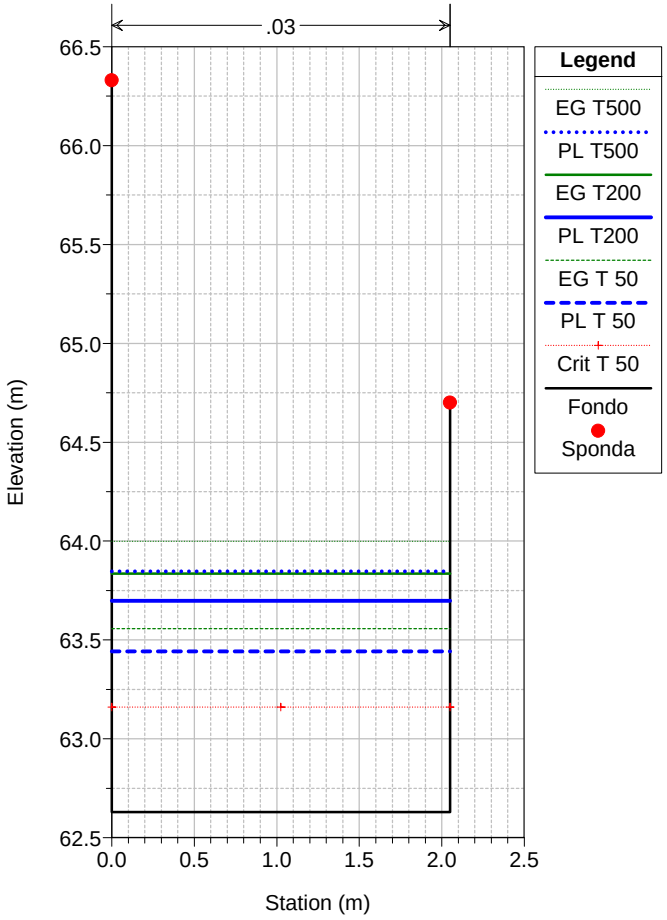
Rio alle scuole di Morego Plan: Stato attuale

River = Morego Reach = Morego SMO-15



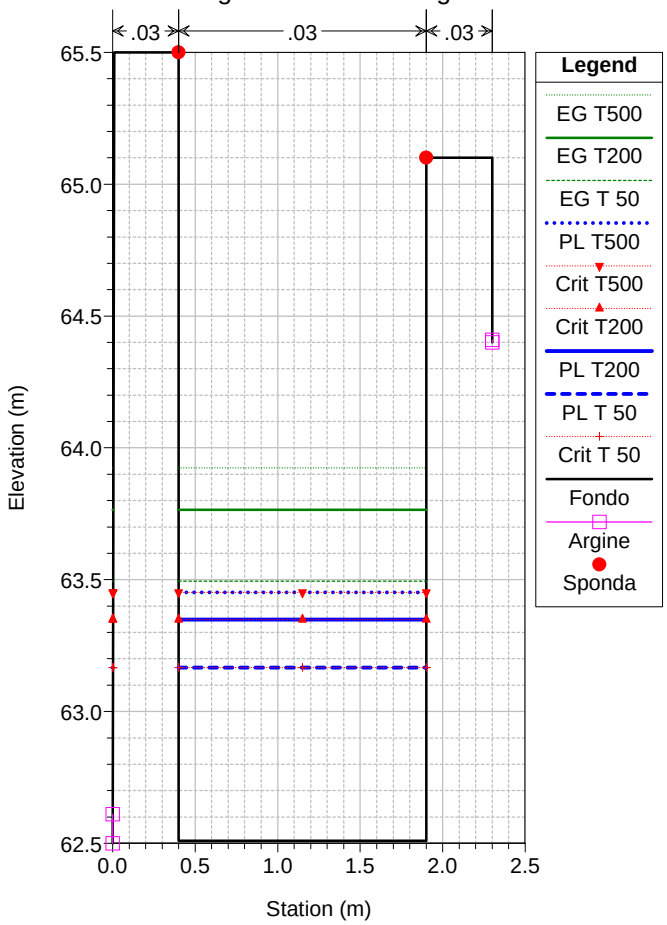
Rio alle scuole di Morego Plan: Stato attuale

River = Morego Reach = Morego SMO-14



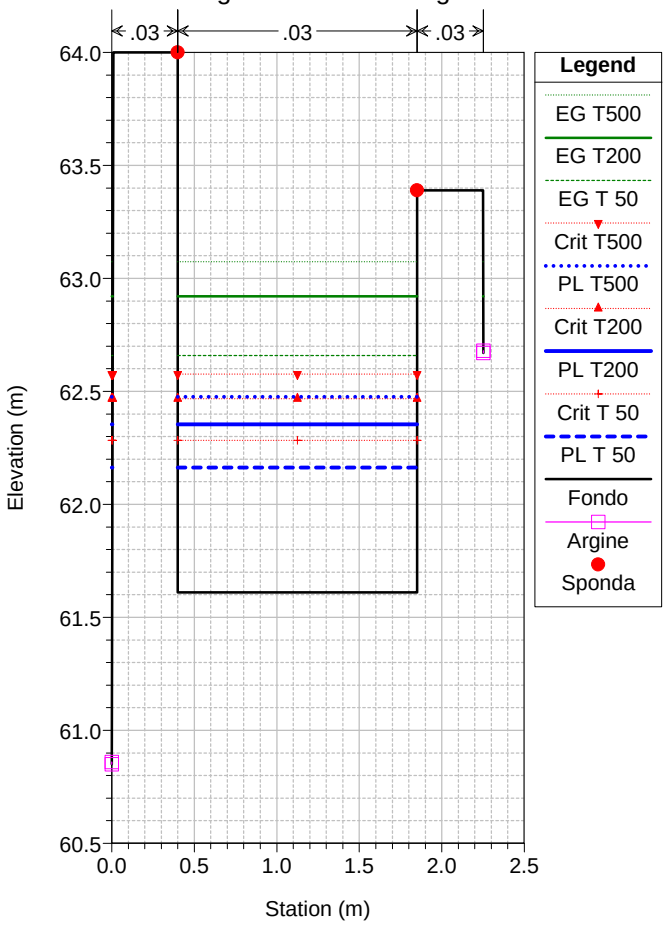
Rio alle scuole di Morego Plan: Stato attuale

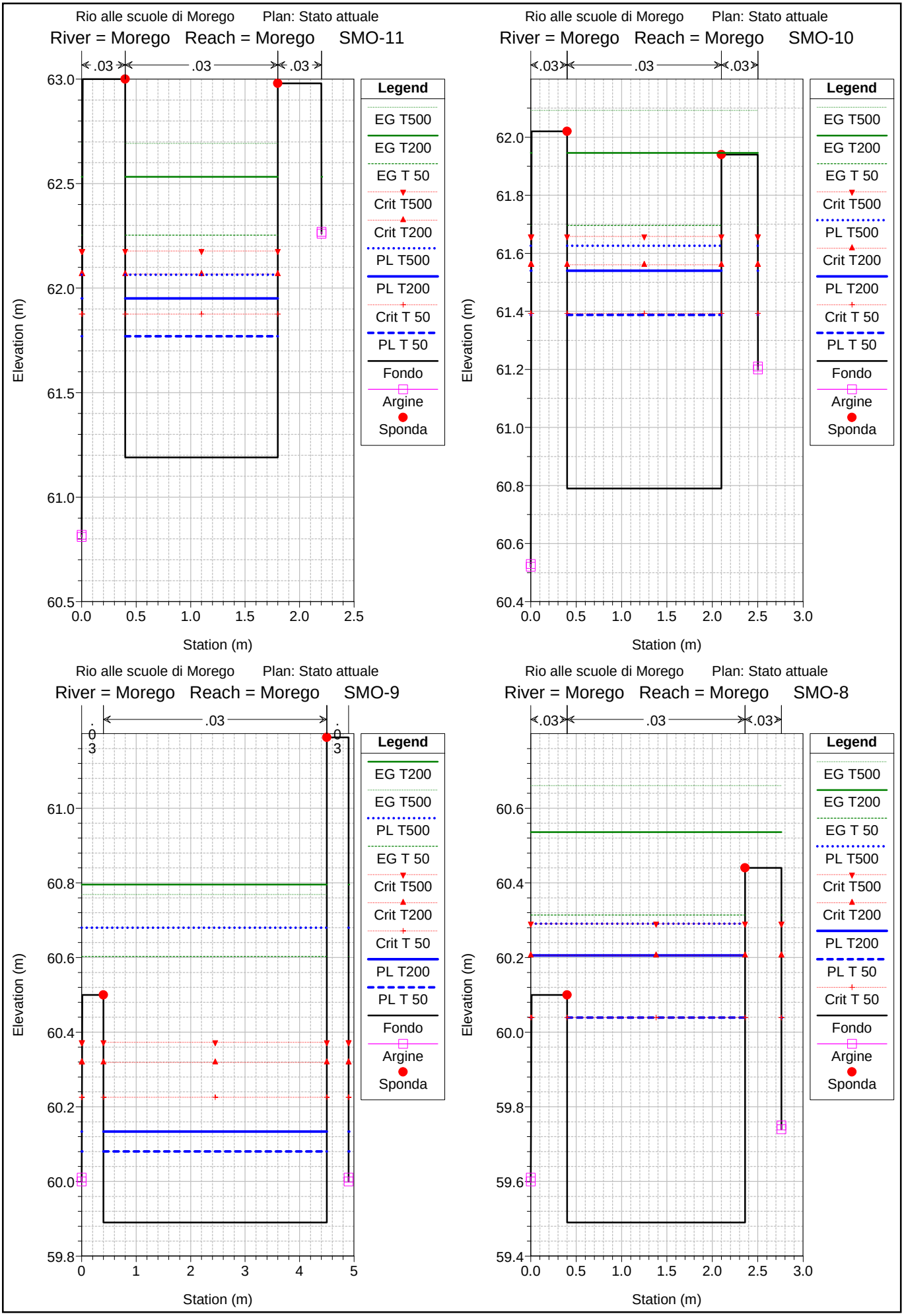
River = Morego Reach = Morego SMO-13

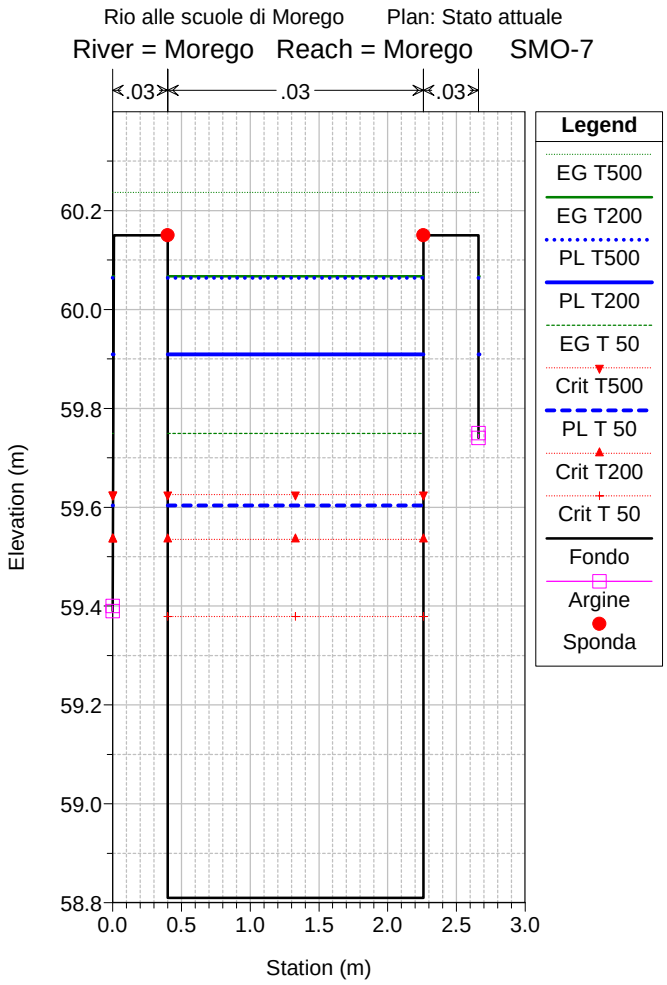


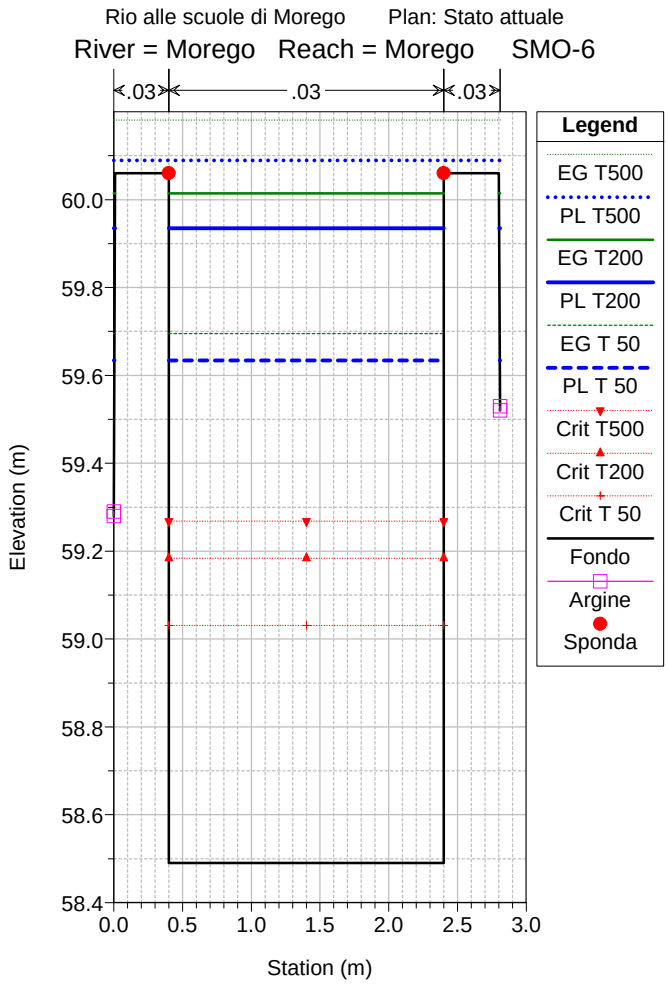
Rio alle scuole di Morego Plan: Stato attuale

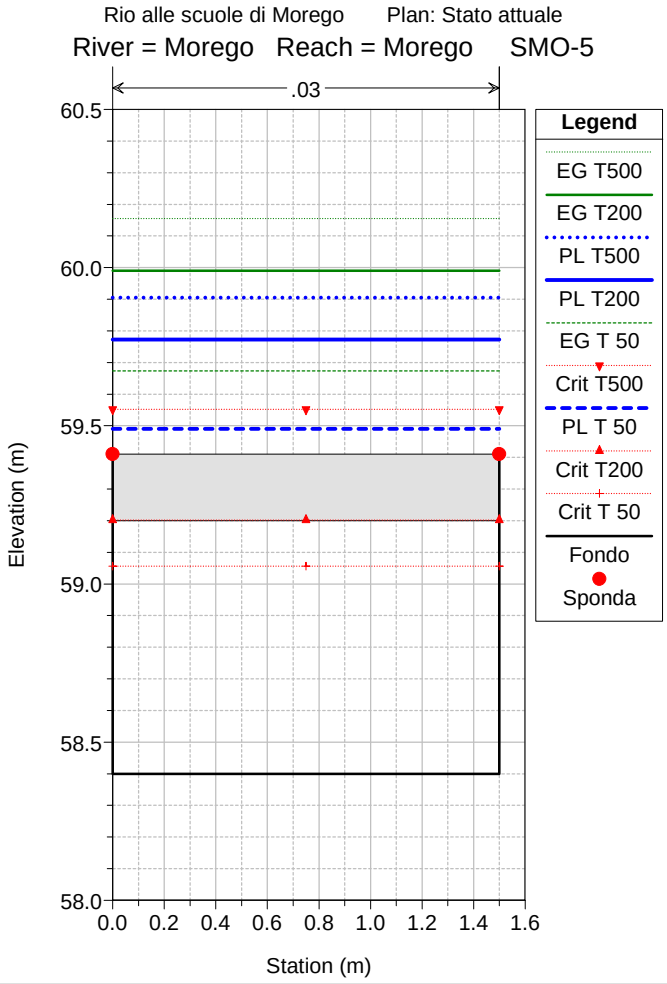
River = Morego Reach = Morego SMO-12

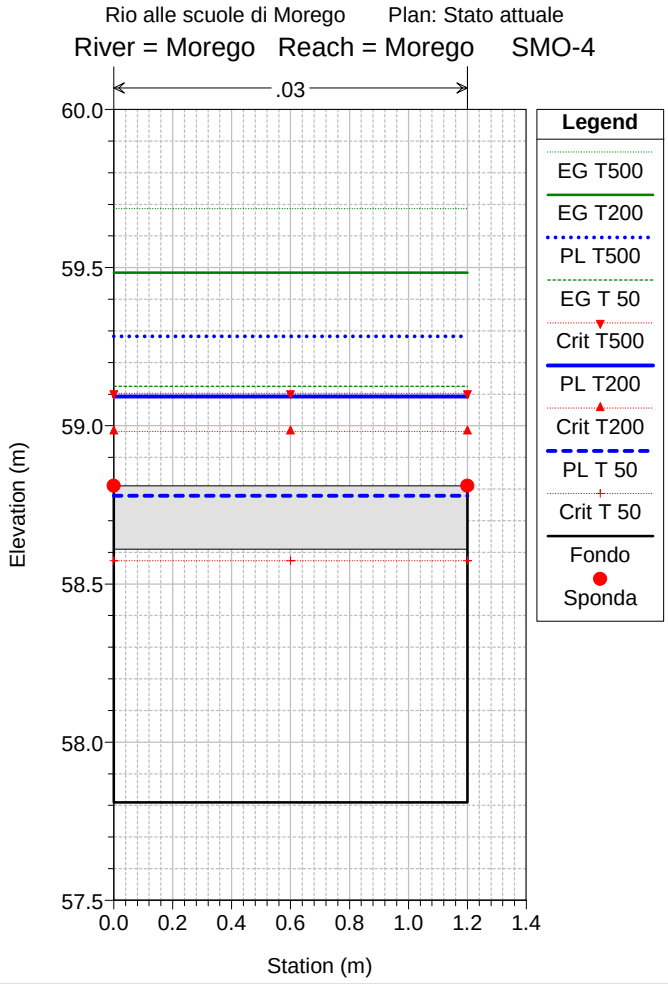


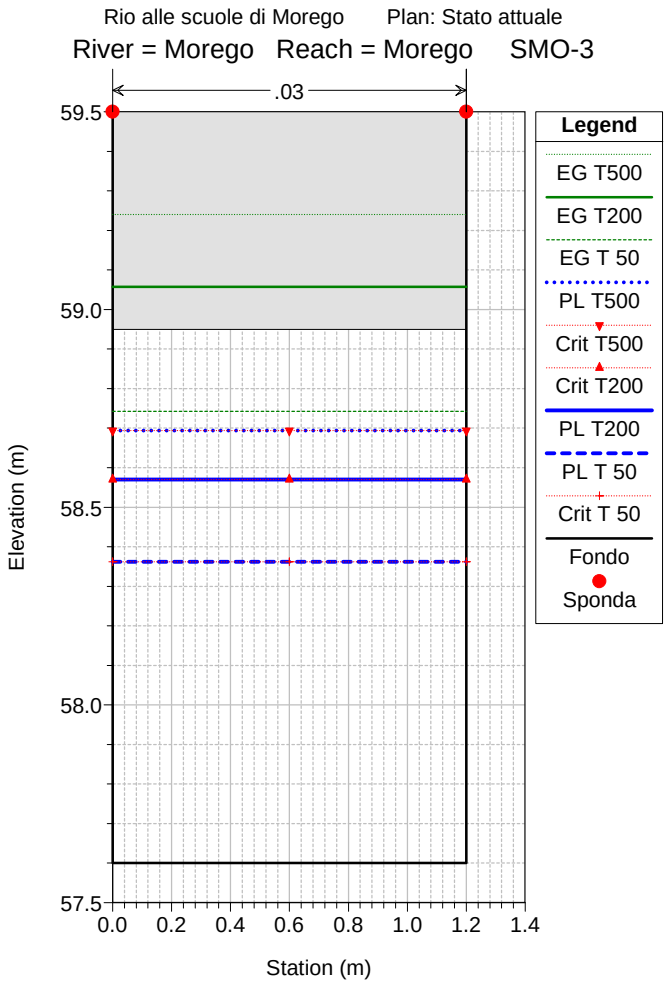

Rio alle scuole di Morego Plan: Stato attuale
River = Morego Reach = Morego SMO-11
.03 .03 .03
63.0
62.5
62.0
61.5
61.0
60.5
0.0 0.5 1.0 1.5 2.0 2.5
Station (m)
Elevation (m)
Legend
EG T500
EG T200
EG T 50
Crit T500
Crit T200
PL T500
PL T200
Crit T 50
PL T 50
Fondo
Argine
Sponda
Rio alle scuole di Morego Plan: Stato attuale
River = Morego Reach = Morego SMO-10
.03 .03 .03
62.0
61.8
61.6
61.4
61.2
61.0
60.8
60.6
60.4
0.0 0.5 1.0 1.5 2.0 2.5 3.0
Station (m)
Elevation (m)
Legend
EG T500
EG T200
EG T 50
Crit T500
PL T500
Crit T200
PL T200
Crit T 50
PL T 50
Fondo
Argine
Sponda
Rio alle scuole di Morego Plan: Stato attuale
River = Morego Reach = Morego SMO-9
.03
.03
.03
61.0
60.8
60.6
60.4
60.2
60.0
59.8
0 1 2 3 4 5
Station (m)
Elevation (m)
Legend
EG T200
EG T500
PL T500
EG T 50
Crit T500
Crit T200
Crit T 50
PL T200
PL T 50
Fondo
Argine
Sponda
Rio alle scuole di Morego Plan: Stato attuale
River = Morego Reach = Morego SMO-8
.03 .03 .03
60.6
60.4
60.2
60.0
59.8
59.6
59.4
0.0 0.5 1.0 1.5 2.0 2.5 3.0
Station (m)
Elevation (m)
Legend
EG T500
EG T200
EG T 50
PL T500
Crit T500
Crit T200
PL T200
PL T 50
Crit T 50
Fondo
Argine
Sponda

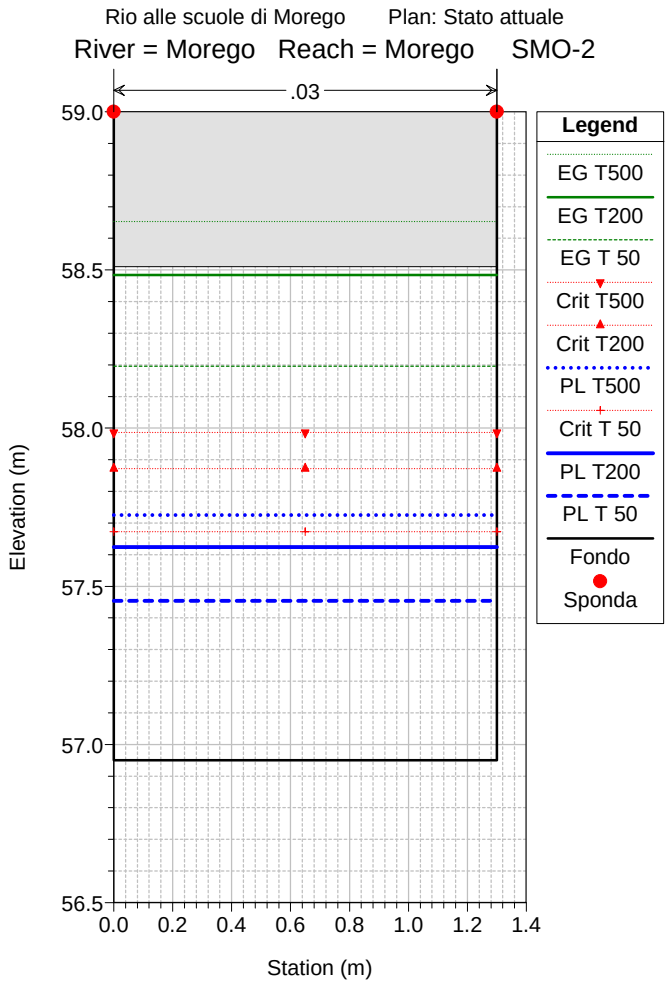

Rio alle scuole di Morego Plan: Stato attuale
River = Morego Reach = Morego SMO-7
.03
.03
.03
Legend
EG T500
EG T200
PL T500
PL T200
EG T 50
Crit T500
PL T 50
Crit T200
Crit T 50
Fondo
Argine
Sponda
Elevation (m)
Station (m)


Rio alle scuole di Morego Plan: Stato attuale
River = Morego Reach = Morego SMO-6
.03
.03
.03
Legend
EG T500
PL T500
EG T200
PL T200
EG T 50
PL T 50
Crit T500
Crit T200
Crit T 50
Fondo
Argine
Sponda
Elevation (m)
Station (m)


Rio alle scuole di Morego Plan: Stato attuale
River = Morego Reach = Morego SMO-5
.03
Legend
EG T500
EG T200
PL T500
PL T200
EG T 50
Crit T500
PL T 50
Crit T200
Crit T 50
Fondo
Sponda
Elevation (m)
Station (m)


Rio alle scuole di Morego Plan: Stato attuale
River = Morego Reach = Morego SMO-4
.03
Legend
EG T500
EG T200
PL T500
EG T 50
Crit T500
PL T200
Crit T200
PL T 50
Crit T 50
Fondo
Sponda
Elevation (m)
Station (m)


Rio alle scuole di Morego Plan: Stato attuale
River = Morego Reach = Morego SMO-3
.03
59.5
59.0
58.5
58.0
57.5
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4
Station (m)
Elevation (m)
Legend
EG T500
EG T200
EG T 50
PL T500
Crit T500
Crit T200
PL T200
PL T 50
Crit T 50
Fondo
Sponda


Rio alle scuole di Morego Plan: Stato attuale
River = Morego Reach = Morego SMO-2
.03
59.0
58.5
58.0
57.5
57.0
56.5
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4
Station (m)
Elevation (m)
Legend
EG T500
EG T200
EG T 50
Crit T500
Crit T200
PL T500
Crit T 50
PL T200
PL T 50
Fondo
Sponda

HEC-RAS Plan: att River: Morego Reach: Morego

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)	
Morego	19	T 50	2.50	66.31	67.31	68.00	0.69	68.00	0.69	67.31	67.61	0.018927	2.42	1.03	1.72	1.00
Morego	19	T200	3.60	66.31	67.49	68.00	0.51	68.00	0.51	67.49	67.84	0.018731	2.64	1.36	1.92	1.00
Morego	19	T500	4.30	66.31	67.59	68.00	0.41	68.00	0.41	67.59	67.97	0.018621	2.75	1.56	2.03	1.00
Morego	18	T 50	2.50	66.13	66.71	67.50	0.79	68.00	1.29	66.95	67.49	0.077195	3.92	0.64	1.75	2.07
Morego	18	T200	3.60	66.13	66.82	67.50	0.68	68.00	1.18	67.10	67.72	0.074627	4.20	0.86	2.09	2.09
Morego	18	T500	4.30	66.13	66.88	67.50	0.62	68.00	1.12	67.18	67.85	0.073642	4.36	0.99	2.27	2.11
Morego	17.1	T 50	2.50	66.03	66.43	67.55	1.12	68.00	1.57	66.61	67.10	0.103990	3.61	0.69	3.41	2.56
Morego	17.1	T200	3.60	66.03	66.48	67.55	1.07	68.00	1.52	66.71	67.36	0.107764	4.15	0.87	3.55	2.68
Morego	17.1	T500	4.30	66.03	66.52	67.55	1.04	68.00	1.48	66.77	67.50	0.106783	4.39	0.98	3.63	2.70
Morego	17	T 50	2.50	65.22	65.42	67.55	2.13	68.00	2.58	65.67	66.62	0.212809	4.84	0.52	2.69	3.53
Morego	17	T200	3.60	65.22	65.48	67.55	2.07	68.00	2.52	65.79	66.89	0.183839	5.26	0.68	2.76	3.37
Morego	17	T500	4.30	65.22	65.52	67.55	2.03	68.00	2.48	65.86	67.04	0.171545	5.47	0.79	2.80	3.30
Morego	16.3	T 50	2.50	64.02	64.30	65.29	0.99	65.32	1.02	64.58	65.41	0.148717	4.65	0.54	1.90	2.79
Morego	16.3	T200	3.60	64.02	64.38	65.29	0.91	65.32	0.94	64.74	65.79	0.149003	5.26	0.68	1.90	2.80
Morego	16.3	T500	4.30	64.02	64.43	65.29	0.86	65.32	0.89	64.83	65.98	0.145578	5.52	0.78	1.90	2.75
Morego	16.2	T 50	2.50	64.02	64.46	65.29	0.83	65.31	0.86	64.68	65.20	0.072577	3.81	0.66	1.50	1.84
Morego	16.2	T200	3.60	64.02	64.56	65.29	0.73	65.31	0.75	64.86	65.56	0.081791	4.41	0.82	1.50	1.91
Morego	16.2	T500	4.30	64.02	64.63	65.29	0.66	65.31	0.68	64.96	65.74	0.083198	4.66	0.92	1.50	1.90
Morego	16.1	T 50	2.50	64.02	64.52	65.44	0.92	65.47	0.95	64.67	65.09	0.049840	3.33	0.75	1.50	1.51
Morego	16.1	T200	3.60	64.02	64.62	65.44	0.82	65.47	0.85	64.85	65.43	0.061641	3.98	0.90	1.50	1.64
Morego	16.1	T500	4.30	64.02	64.70	65.44	0.74	65.47	0.77	64.96	65.61	0.064389	4.24	1.01	1.50	1.65
Morego	16	T 50	2.50	62.90	63.11	66.36	3.25	66.14	3.03	63.44	64.86	0.314352	5.86	0.43	2.00	4.05
Morego	16	T200	3.60	62.90	63.19	66.36	3.17	66.14	2.95	63.59	65.20	0.263128	6.28	0.57	2.00	3.75
Morego	16	T500	4.30	62.90	63.23	66.36	3.13	66.14	2.91	63.68	65.38	0.242303	6.49	0.66	2.00	3.60
Morego	15	T 50	2.50	62.81	62.98	67.00	4.02	65.08	2.10	63.19	63.99	0.221416	4.46	0.56	3.37	3.49
Morego	15	T200	3.60	62.81	63.80	67.00	3.20	65.08	1.28	63.30	63.86	0.001955	1.08	3.34	3.37	0.35
Morego	15	T500	4.30	62.81	63.96	67.00	3.04	65.08	1.12	63.36	64.02	0.001831	1.11	3.88	3.37	0.33
Morego	14	T 50	2.50	62.63	63.44	66.33	2.89	64.70	1.26	63.16	63.56	0.005821	1.50	1.67	2.05	0.53
Morego	14	T200	3.60	62.63	63.70	66.33	2.63	64.70	1.00		63.84	0.005774	1.64	2.19	2.05	0.51
Morego	14	T500	4.30	62.63	63.85	66.33	2.48	64.70	0.85		64.00	0.005835	1.72	2.50	2.05	0.50
Morego	13	T 50	2.50	62.51	63.17	65.50	2.33	65.10	1.93	63.17	63.49	0.023444	2.54	0.99	1.50	1.00
Morego	13	T200	3.60	62.51	63.35	65.50	2.15	65.10	1.75	63.35	63.77	0.025327	2.86	1.26	1.50	1.00
Morego	13	T500	4.30	62.51	63.45	65.50	2.05	65.10	1.65	63.45	63.92	0.026715	3.04	1.41	1.50	1.00
Morego	12	T 50	2.50	61.61	62.16	64.00	1.84	63.39	1.23	62.28	62.66	0.041102	3.12	0.80	1.45	1.34
Morego	12	T200	3.60	61.61	62.35	64.00	1.65	63.39	1.04	62.47	62.92	0.038074	3.34	1.08	1.46	1.23

HEC-RAS Plan: att River: Morego Reach: Morego (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)	
Morego	12	T500	4.30	61.61	62.48	64.00	1.52	63.39	0.91	62.58	63.07	0.036509	3.43	1.26	1.46	1.18
Morego	11	T 50	2.50	61.19	61.77	63.00	1.23	62.98	1.21	61.88	62.25	0.039492	3.08	0.81	1.40	1.29
Morego	11	T200	3.60	61.19	61.95	63.00	1.05	62.98	1.03	62.07	62.53	0.039474	3.38	1.07	1.41	1.24
Morego	11	T500	4.30	61.19	62.06	63.00	0.94	62.98	0.92	62.18	62.69	0.039140	3.51	1.23	1.41	1.20
Morego	10	T 50	2.50	60.79	61.39	62.02	0.63	61.94	0.55	61.39	61.70	0.022000	2.46	1.02	1.71	1.02
Morego	10	T200	3.60	60.79	61.54	62.02	0.48	61.94	0.40	61.56	61.95	0.024446	2.82	1.28	1.71	1.04
Morego	10	T500	4.30	60.79	61.63	62.02	0.39	61.94	0.31	61.66	62.09	0.026085	3.03	1.43	1.71	1.06
Morego	9	T 50	2.50	59.89	60.08	60.50	0.42	61.19	1.11	60.23	60.60	0.094784	3.20	0.78	4.10	2.34
Morego	9	T200	3.60	59.89	60.13	60.50	0.37	61.19	1.06	60.32	60.80	0.089220	3.60	1.00	4.10	2.33
Morego	9	T500	4.30	59.89	60.68	60.50	-0.18	61.19	0.51	60.37	60.77	0.003188	1.32	3.31	4.50	0.47
Morego	8	T 50	2.50	59.49	60.04	60.10	0.06	60.44	0.40	60.04	60.31	0.019509	2.32	1.08	1.97	1.00
Morego	8	T200	3.60	59.49	60.21	60.10	-0.11	60.44	0.23	60.21	60.54	0.018245	2.55	1.45	2.36	0.96
Morego	8	T500	4.30	59.49	60.29	60.10	-0.19	60.44	0.15	60.29	60.66	0.018297	2.71	1.65	2.36	0.97
Morego	7	T 50	2.50	58.81	59.60	60.15	0.55	60.15	0.55	59.38	59.75	0.008005	1.69	1.48	1.86	0.61
Morego	7	T200	3.60	58.81	59.91	60.15	0.24	60.15	0.24	59.54	60.07	0.006958	1.76	2.05	1.87	0.54
Morego	7	T500	4.30	58.81	60.06	60.15	0.09	60.15	0.09	59.63	60.24	0.007062	1.84	2.34	1.87	0.53
Morego	6	T 50	2.50	58.49	59.63	60.06	0.43	60.06	0.43	59.03	59.70	0.002480	1.09	2.29	2.01	0.33
Morego	6	T200	3.60	58.49	59.93	60.06	0.13	60.06	0.13	59.18	60.01	0.002815	1.25	2.89	2.02	0.33
Morego	6	T500	4.30	58.49	60.09	60.06	-0.03	60.06	-0.03	59.27	60.18	0.003056	1.34	3.23	2.81	0.34
Morego	5	T 50	2.50	58.40	59.49	59.20	-0.29	59.20	-0.29	59.06	59.67	0.024794	1.89	1.32	1.50	0.58
Morego	5	T200	3.60	58.40	59.77	59.20	-0.57	59.20	-0.57	59.20	59.99	0.020347	2.06	1.74	1.50	0.56
Morego	5	T500	4.30	58.40	59.91	59.20	-0.70	59.20	-0.70	59.55	60.15	0.020279	2.21	1.94	1.50	0.58
Morego	4	T 50	2.50	57.81	58.78	58.61	-0.17	58.61	-0.17	58.57	59.12	0.040909	2.60	0.96		0.84
Morego	4	T200	3.60	57.81	59.09	58.61	-0.48	58.61	-0.48	58.98	59.48	0.043876	2.77	1.30	1.20	0.78
Morego	4	T500	4.30	57.81	59.28	58.61	-0.67	58.61	-0.67	59.10	59.69	0.036537	2.82	1.53	1.20	0.74
Morego	3.9	T 50	2.50	57.80	58.86	58.61	-0.25	59.00	0.14		59.06	0.012404	1.96	1.28	1.20	0.61
Morego	3.9	T200	3.60	57.80	59.17	58.61	-0.56	59.00	-0.17		59.42	0.013799	2.19	1.65	1.20	0.60
Morego	3.9	T500	4.30	57.80	59.35	58.61	-0.74	59.00	-0.35		59.62	0.014650	2.31	1.86	1.20	0.59
Morego	3.1	T 50	2.50	57.61	58.49	59.08	0.59	59.08	0.59	58.37	58.78	0.019877	2.36	1.06	1.20	0.80
Morego	3.1	T200	3.60	57.61	58.73	59.08	0.35	59.08	0.35	58.58	59.10	0.022523	2.67	1.35	1.20	0.81
Morego	3.1	T500	4.30	57.61	58.87	59.08	0.21	59.08	0.21	58.70	59.28	0.024131	2.84	1.51	1.20	0.81
Morego	3	T 50	2.50	57.60	58.36	58.95	0.59	58.95	0.59	58.36	58.74	0.028849	2.73	0.91	1.20	1.00
Morego	3	T200	3.60	57.60	58.57	58.95	0.38	58.95	0.38	58.57	59.06	0.032330	3.09	1.16	1.20	1.00
Morego	3	T500	4.30	57.60	58.69	58.95	0.26	58.95	0.26	58.69	59.24	0.034191	3.28	1.31	1.20	1.00

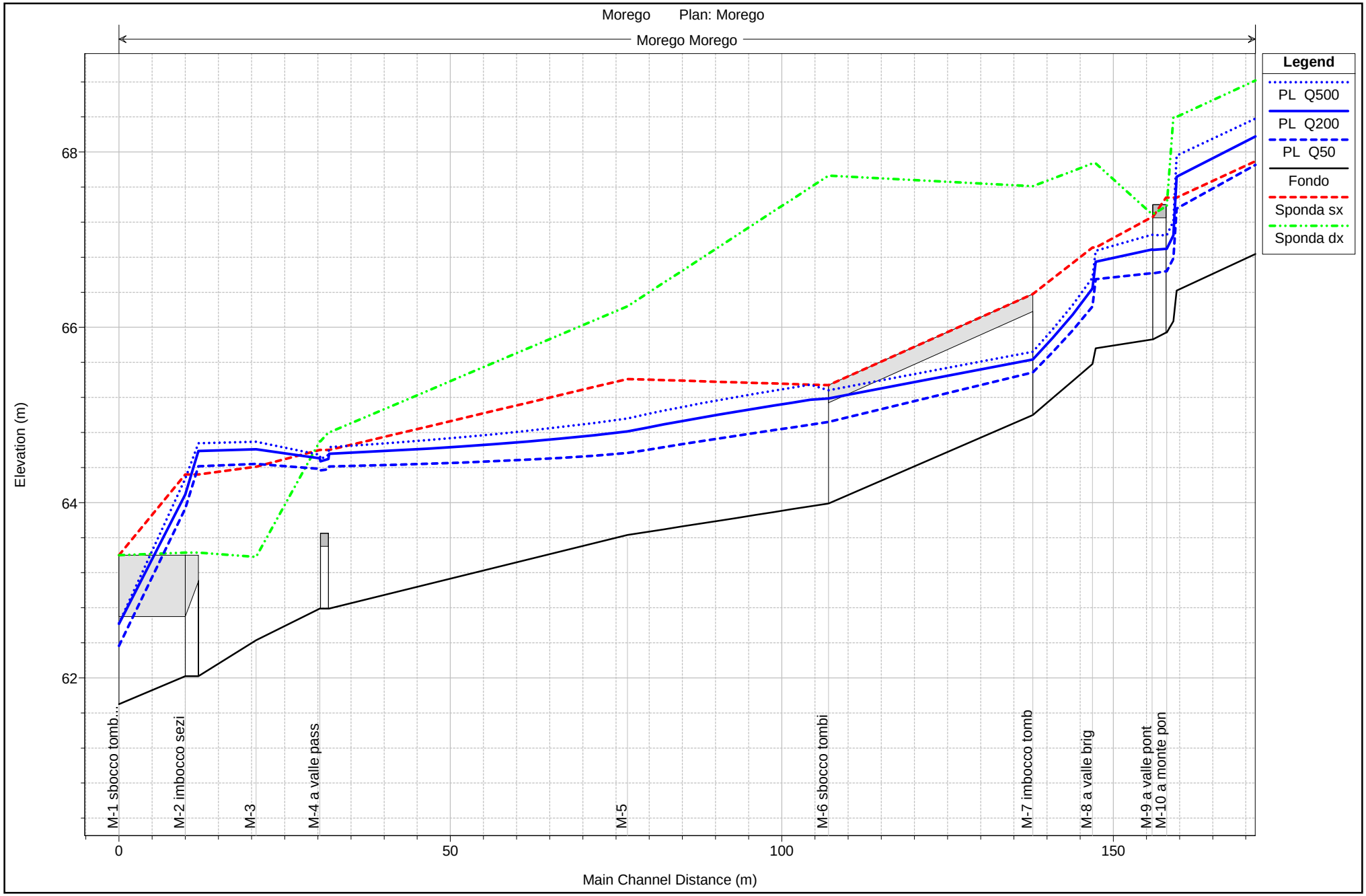
HEC-RAS Plan: att River: Morego Reach: Morego (Continued)

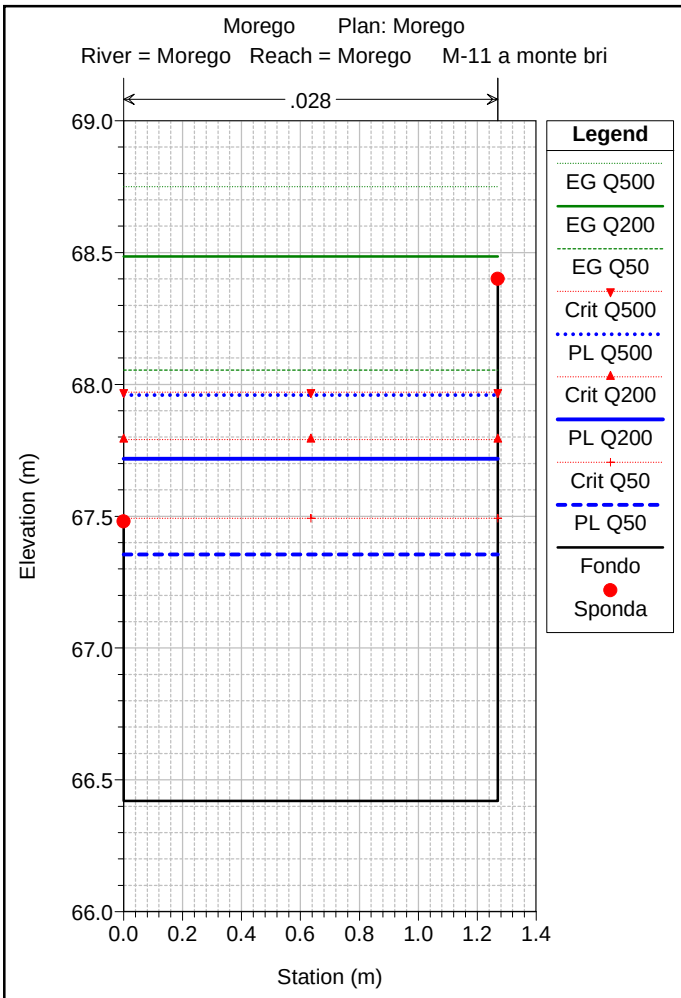
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Morego	2	T 50	2.50	56.95	57.45	58.51	1.06	58.51	1.06	57.67	58.20	0.070221	3.82	0.66	1.30	1.72
Morego	2	T200	3.60	56.95	57.62	58.51	0.89	58.51	0.89	57.87	58.48	0.066330	4.11	0.88	1.30	1.60
Morego	2	T500	4.30	56.95	57.73	58.51	0.79	58.51	0.79	57.99	58.65	0.065601	4.27	1.01	1.30	1.55

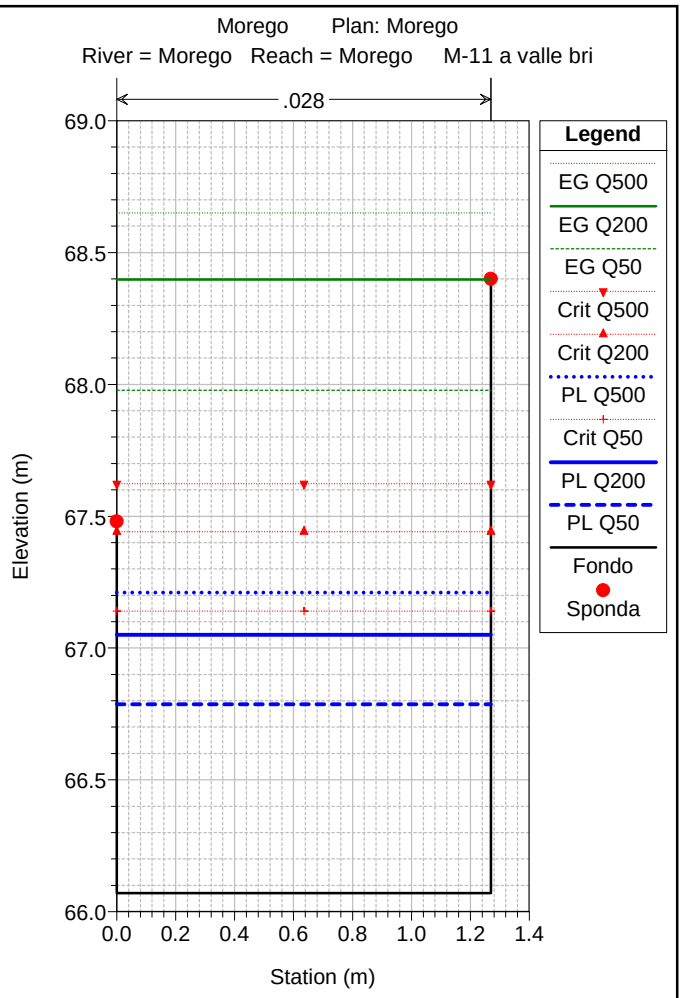
8.3 Rio Morego

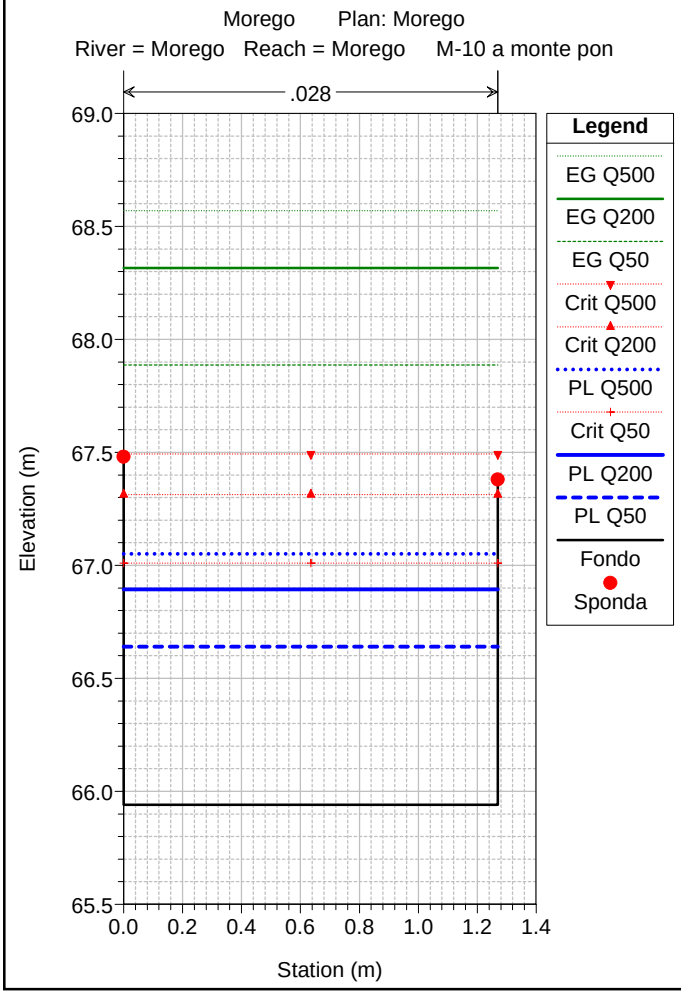
E’ stato indagato un tratto di circa 160 m a partire dalla confluenza con il torrente Secca. Le portate utilizzate per il calcolo sono riportate in tabella.
Il coefficiente di scabrezza di Strickler è pari a 35 $m^{1/3}s^{-1}$.
Quale condizione al contorno di monte è stata imposta la profondità critica; a valle è stata imposta la quota del t. Secca, valutata nella sezione a valle della confluenza.

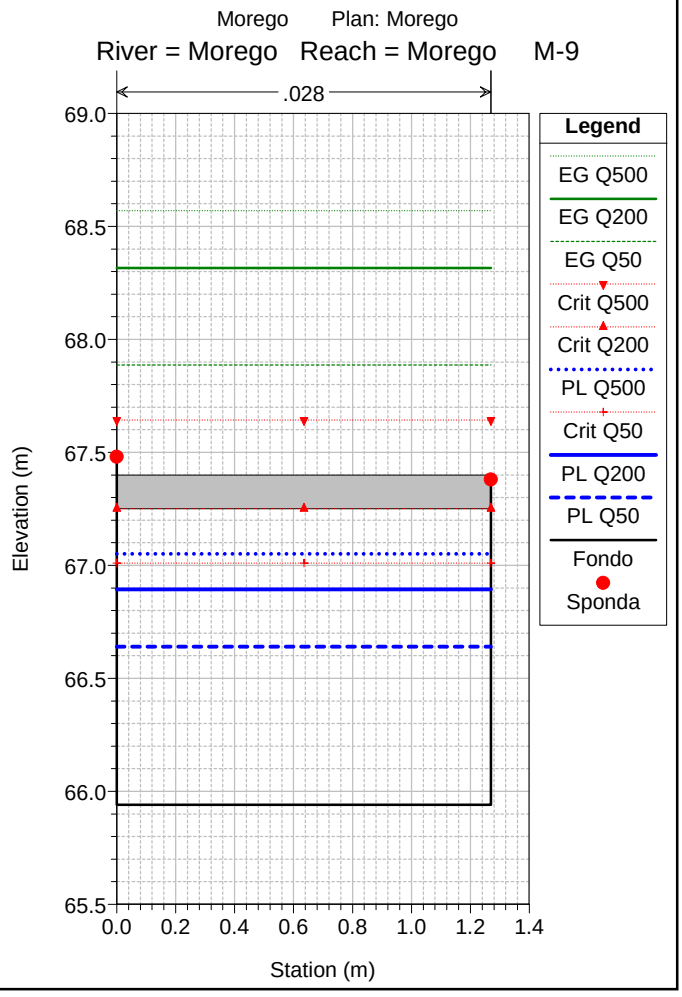
TRATTO	**PORTATE DI PIENA AL COLMO (m^3/s)**		
	T = 50 anni	**T = 200 anni**	**T = 500 anni**
Rio Morego	4,4	6,4	7,7


Morego Plan: Morego
Morego Morego
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
68
66
64
62
0
50
100
150
Main Channel Distance (m)
M-1 sbocco tomb...
M-2 imbocco sezi
M-3
M-4 a valle pass
M-5
M-6 sbocco tombi
M-7 imbocco tomb
M-8 a valle brig
M-9 a valle pont
M-10 a monte pon


Morego Plan: Morego
River = Morego Reach = Morego M-11 a monte bri
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Sponda

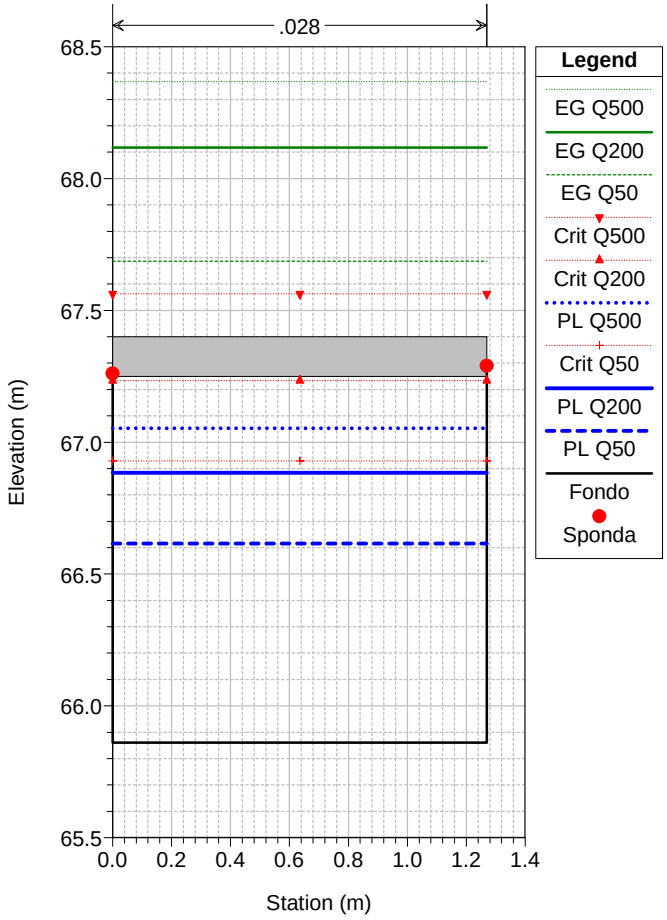

Morego Plan: Morego
River = Morego Reach = Morego M-11 a valle bri
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda


Morego Plan: Morego
River = Morego Reach = Morego M-10 a monte pon
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda


Morego Plan: Morego
River = Morego Reach = Morego M-9
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda

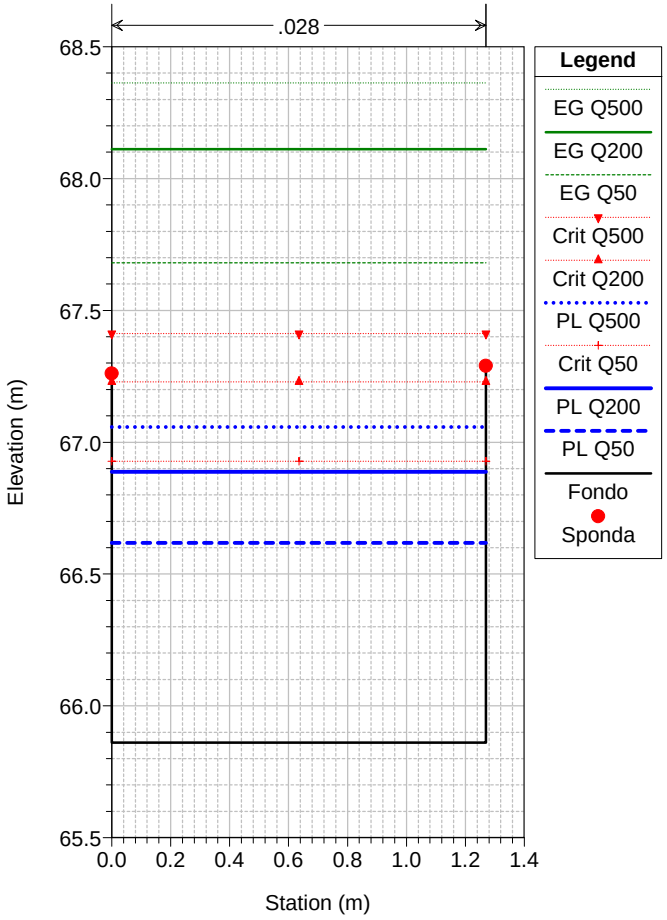
Morego Plan: Morego

River = Morego Reach = Morego M-9



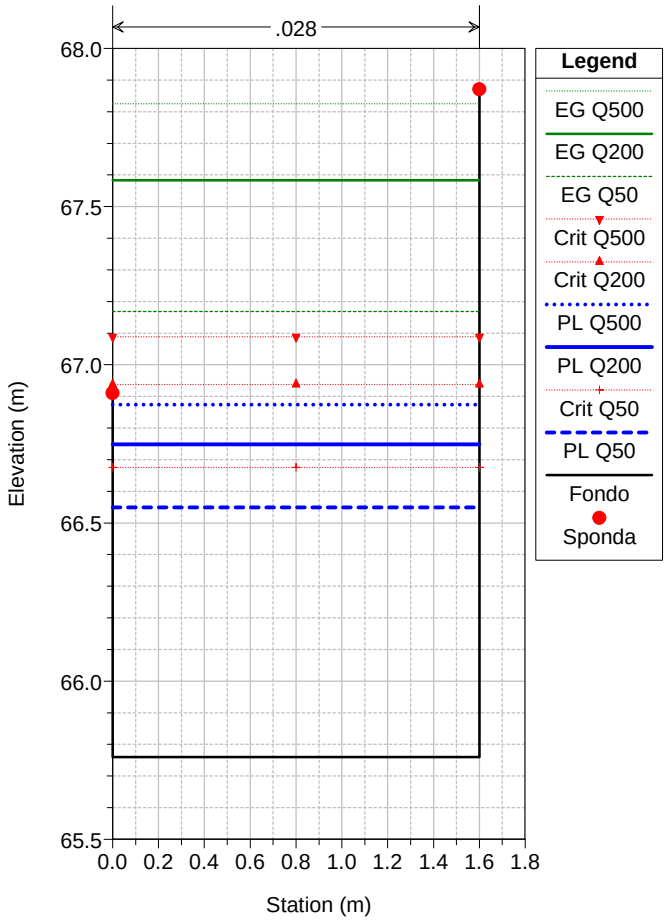
Morego Plan: Morego

River = Morego Reach = Morego M-9 a valle pont



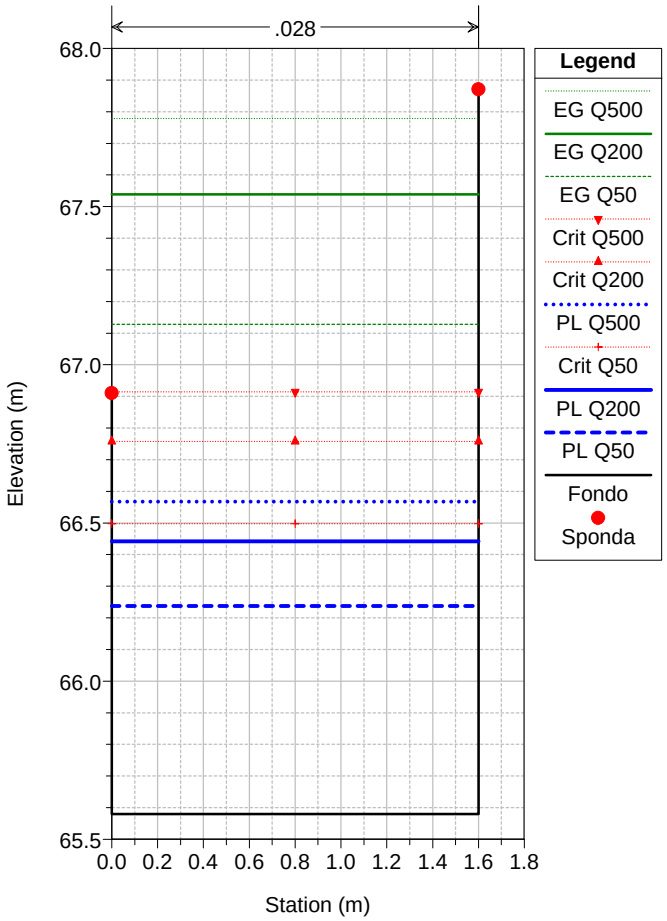
Morego Plan: Morego

River = Morego Reach = Morego M-8 a monte brig

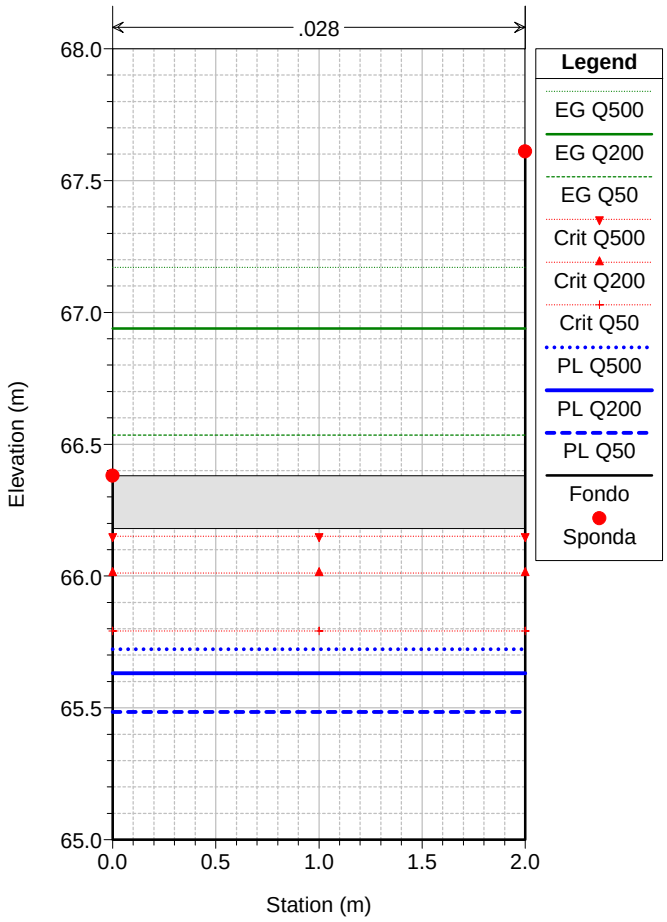


Morego Plan: Morego

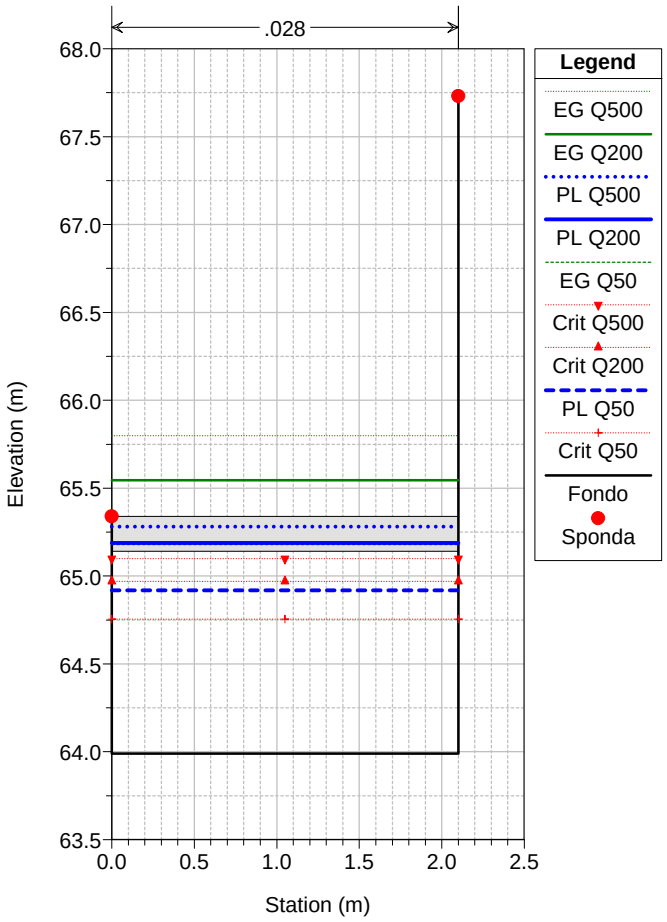
River = Morego Reach = Morego M-8 a valle brig



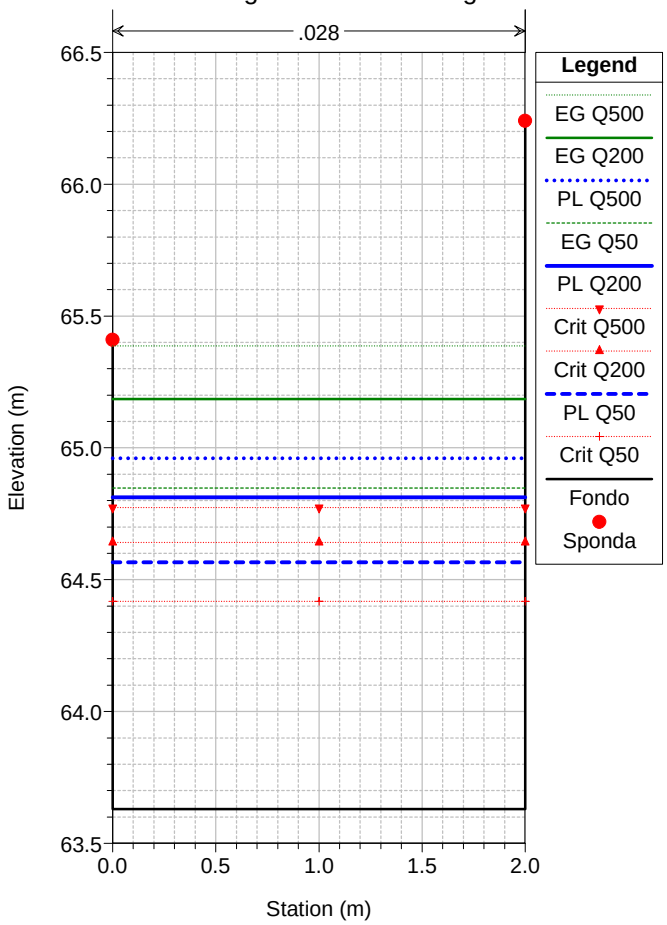
Morego Plan: Morego
River = Morego Reach = Morego M-7 imbocco tomb



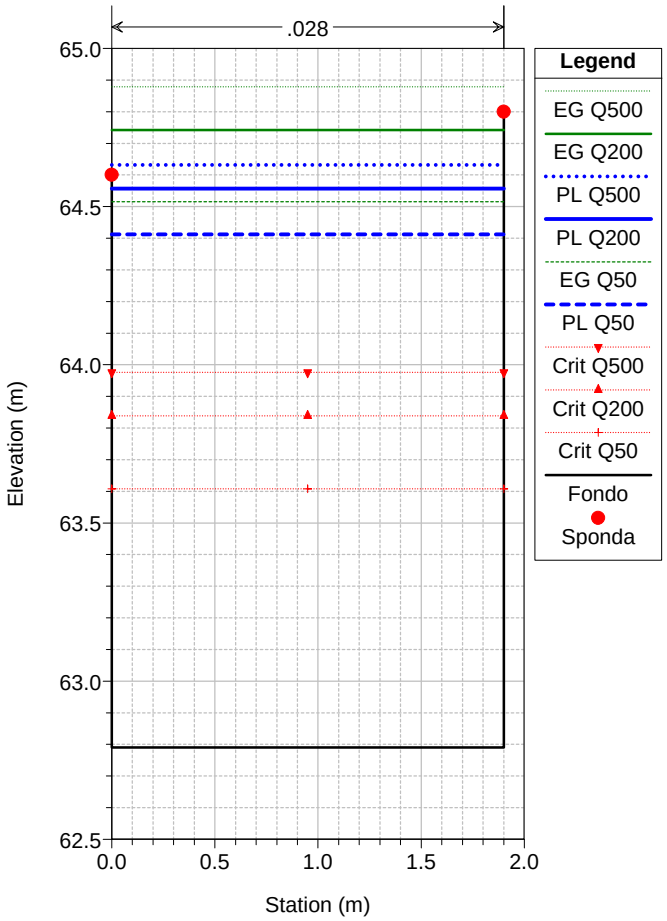
Morego Plan: Morego
River = Morego Reach = Morego M-6 sbocco tombi

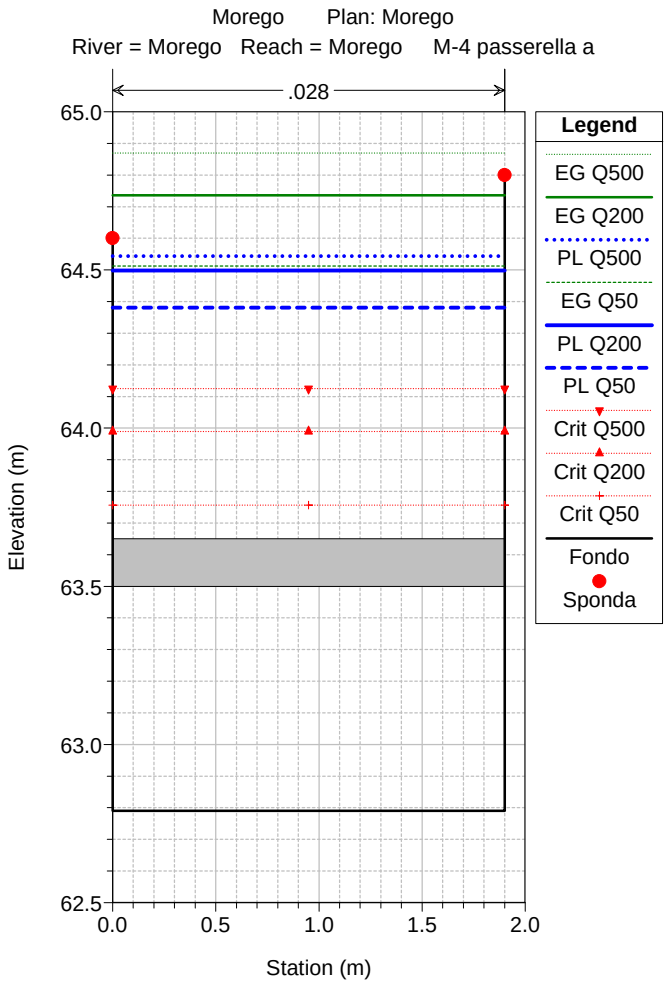


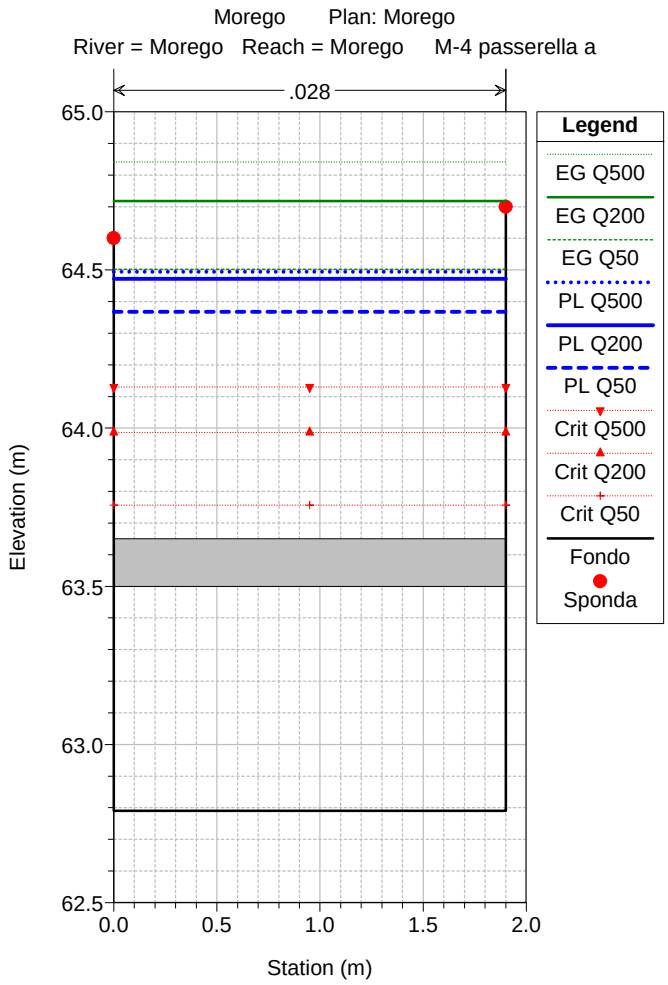
Morego Plan: Morego
River = Morego Reach = Morego M-5

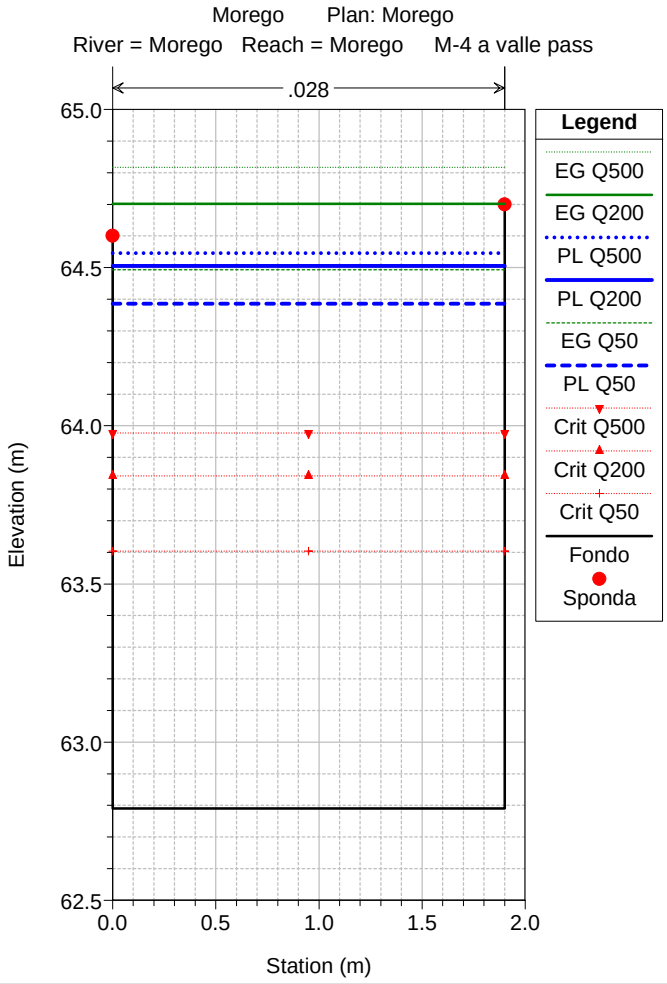


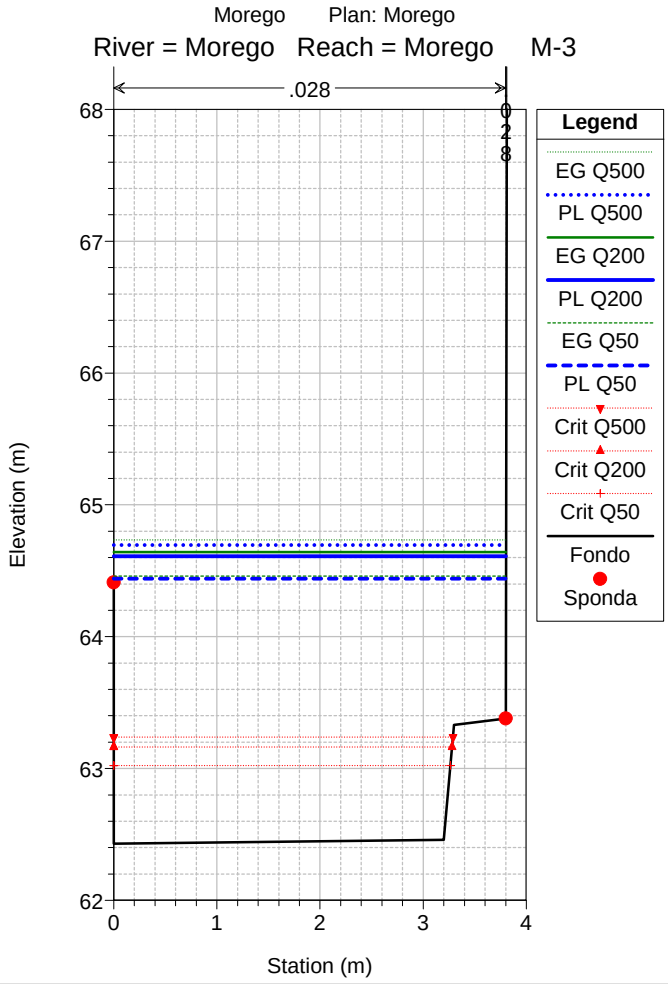
Morego Plan: Morego
River = Morego Reach = Morego M-4 a monte pass



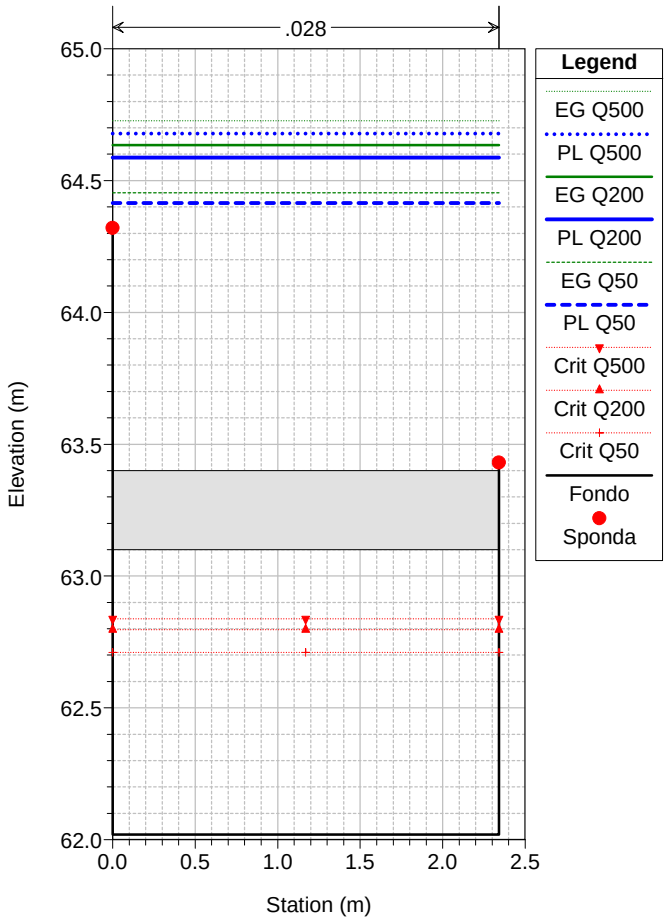

Morego Plan: Morego
River = Morego Reach = Morego M-4 passerella a
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


Morego Plan: Morego
River = Morego Reach = Morego M-4 passerella a
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

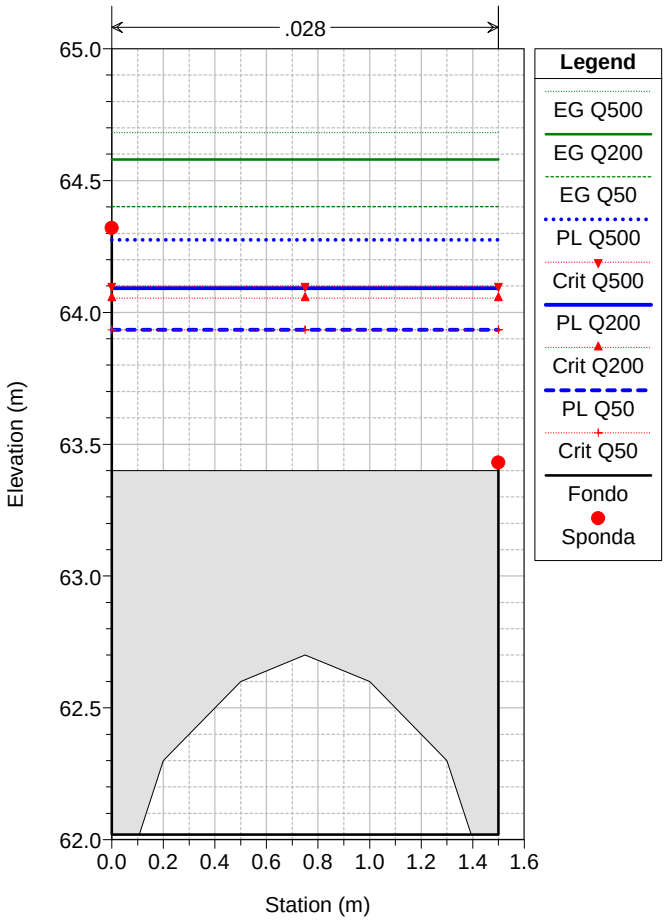

Morego Plan: Morego
River = Morego Reach = Morego M-4 a valle pass
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


Morego Plan: Morego
River = Morego Reach = Morego M-3
.028
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

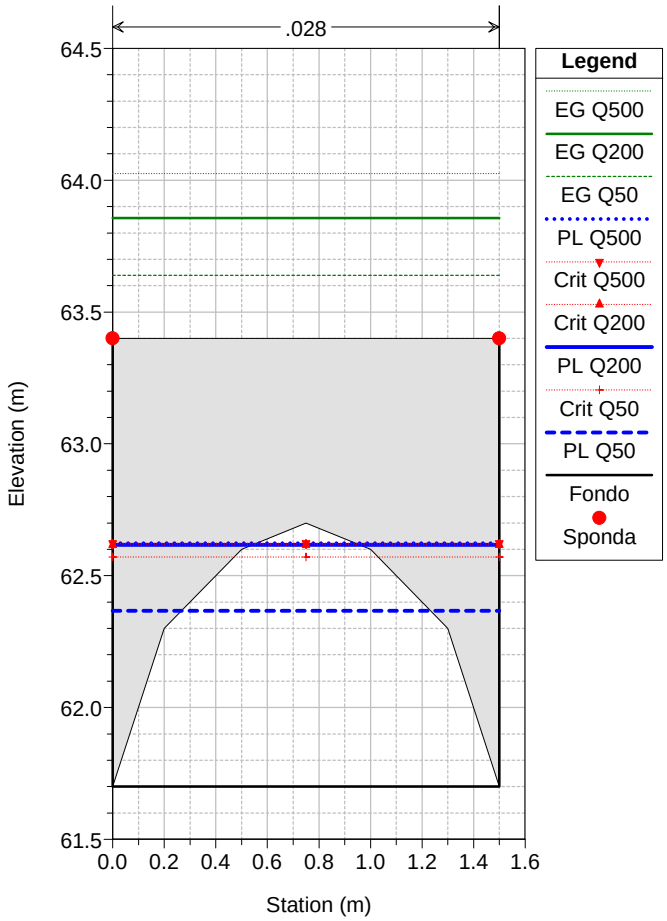
Morego Plan: Morego
River = Morego Reach = Morego M-2 imbocco tomb



Morego Plan: Morego
River = Morego Reach = Morego M-2 imbocco sezi



Morego Plan: Morego
River = Morego Reach = Morego M-1 sbocco tombi



HEC-RAS Plan: Morego River: Morego Reach: Morego

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)	
Morego	12 fittizia	Q50	4.40	67.12	68.19	68.18	-0.01	69.10	0.91	68.19	68.72	0.027868	3.23	1.36	1.27	1.00
Morego	12 fittizia	Q200	6.40	67.12	68.49	68.18	-0.31	69.10	0.61	68.49	69.18	0.032244	3.68	1.74	1.27	1.00
Morego	12 fittizia	Q500	7.70	67.12	68.67	68.18	-0.49	69.10	0.43	68.67	69.45	0.034728	3.91	1.97	1.27	1.00
Morego	11.1 M-11 a monte bri	Q50	4.40	66.42	67.35	67.48	0.13	68.40	1.05	67.49	68.05	0.039412	3.71	1.19	1.27	1.22
Morego	11.1 M-11 a monte bri	Q200	6.40	66.42	67.72	67.48	-0.24	68.40	0.68	67.79	68.49	0.036807	3.88	1.65	1.27	1.09
Morego	11.1 M-11 a monte bri	Q500	7.70	66.42	67.96	67.48	-0.48	68.40	0.44	67.97	68.75	0.035282	3.94	1.96	1.27	1.01
Morego	11 M-11 a valle bri	Q50	4.40	66.07	66.79	67.48	0.69	68.40	1.61	67.14	67.98	0.078307	4.84	0.91	1.27	1.82
Morego	11 M-11 a valle bri	Q200	6.40	66.07	67.05	67.48	0.43	68.40	1.35	67.44	68.40	0.073975	5.14	1.24	1.27	1.66
Morego	11 M-11 a valle bri	Q500	7.70	66.07	67.21	67.48	0.27	68.40	1.19	67.62	68.65	0.073299	5.32	1.45	1.27	1.59
Morego	10.1 M-10 a monte pon	Q50	4.40	65.94	66.64	67.48	0.84	67.38	0.74	67.01	67.89	0.083042	4.95	0.89	1.27	1.89
Morego	10.1 M-10 a monte pon	Q200	6.40	65.94	66.89	67.48	0.59	67.38	0.49	67.31	68.32	0.079098	5.28	1.21	1.27	1.73
Morego	10.1 M-10 a monte pon	Q500	7.70	65.94	67.05	67.48	0.43	67.38	0.33	67.49	68.57	0.078217	5.46	1.41	1.27	1.65
Morego	9.5 M-9		Bridge													
Morego	9 M-9 a valle pont	Q50	4.40	65.86	66.62	67.26	0.64	67.29	0.67	66.93	67.68	0.067400	4.57	0.96	1.27	1.67
Morego	9 M-9 a valle pont	Q200	6.40	65.86	66.89	67.26	0.37	67.29	0.40	67.23	68.11	0.065499	4.90	1.31	1.27	1.54
Morego	9 M-9 a valle pont	Q500	7.70	65.86	67.06	67.26	0.20	67.29	0.23	67.41	68.36	0.064870	5.06	1.52	1.27	1.48
Morego	8.1 M-8 a monte brig	Q50	4.40	65.76	66.55	66.91	0.36	67.87	1.32	66.68	67.17	0.032649	3.49	1.26	1.60	1.25
Morego	8.1 M-8 a monte brig	Q200	6.40	65.76	66.75	66.91	0.16	67.87	1.12	66.94	67.58	0.038107	4.05	1.58	1.60	1.30
Morego	8.1 M-8 a monte brig	Q500	7.70	65.76	66.87	66.91	0.04	67.87	1.00	67.09	67.82	0.040550	4.32	1.78	1.60	1.31
Morego	8 M-8 a valle brig	Q50	4.40	65.58	66.24	66.91	0.67	67.87	1.63	66.50	67.13	0.053267	4.18	1.05	1.60	1.64
Morego	8 M-8 a valle brig	Q200	6.40	65.58	66.44	66.91	0.47	67.87	1.43	66.76	67.54	0.054508	4.64	1.38	1.60	1.59
Morego	8 M-8 a valle brig	Q500	7.70	65.58	66.57	66.91	0.34	67.87	1.30	66.91	67.78	0.055378	4.88	1.58	1.60	1.57
Morego	7 M-7 imbocco tomb	Q50	4.40	65.00	65.48	66.18	0.70	66.18	0.70	65.79	66.53	0.071909	4.54	0.97	2.00	2.08
Morego	7 M-7 imbocco tomb	Q200	6.40	65.00	65.63	66.18	0.55	66.18	0.55	66.01	66.94	0.071276	5.07	1.26	2.00	2.03
Morego	7 M-7 imbocco tomb	Q500	7.70	65.00	65.72	66.18	0.46	66.18	0.46	66.15	67.17	0.071095	5.33	1.44	2.00	2.00
Morego	6 M-6 sbocco tombi	Q50	4.40	63.99	64.92	65.14	0.22	65.14	0.22	64.76	65.18	0.010234	2.25	1.95	2.10	0.75
Morego	6 M-6 sbocco tombi	Q200	6.40	63.99	65.19	65.14	-0.05	65.14	-0.05	64.97	65.55	0.020612	2.65	2.42		0.77
Morego	6 M-6 sbocco tombi	Q500	7.70	63.99	65.28	65.14	-0.14	65.14	-0.14	65.10	65.80	0.029836	3.19	2.42		0.90
Morego	5 M-5	Q50	4.40	63.63	64.57	65.41	0.84	66.24	1.67	64.42	64.85	0.011424	2.35	1.87	2.00	0.78
Morego	5 M-5	Q200	6.40	63.63	64.81	65.41	0.60	66.24	1.43	64.64	65.19	0.013001	2.71	2.36	2.00	0.79
Morego	5 M-5	Q500	7.70	63.63	64.96	65.41	0.45	66.24	1.28	64.77	65.39	0.013859	2.89	2.66	2.00	0.80
Morego	4.1 M-4 a monte pass	Q50	4.40	62.79	64.41	64.60	0.19	64.80	0.39	63.61	64.52	0.003165	1.43	3.08	1.90	0.36
Morego	4.1 M-4 a monte pass	Q200	6.40	62.79	64.56	64.60	0.04	64.80	0.24	63.84	64.74	0.005412	1.91	3.36	1.90	0.46
Morego	4.1 M-4 a monte pass	Q500	7.70	62.79	64.63	64.60	-0.03	64.80	0.17	63.98	64.88	0.007076	2.20	3.50	1.90	0.52
Morego	4 M-4 passerella a		Bridge													
Morego	3.9 M-4 a valle pass	Q50	4.40	62.79	64.39	64.60	0.21	64.70	0.31	63.60	64.49	0.003297	1.45	3.03	1.90	0.37
Morego	3.9 M-4 a valle pass	Q200	6.40	62.79	64.51	64.60	0.09	64.70	0.19	63.84	64.70	0.005822	1.96	3.26	1.90	0.48

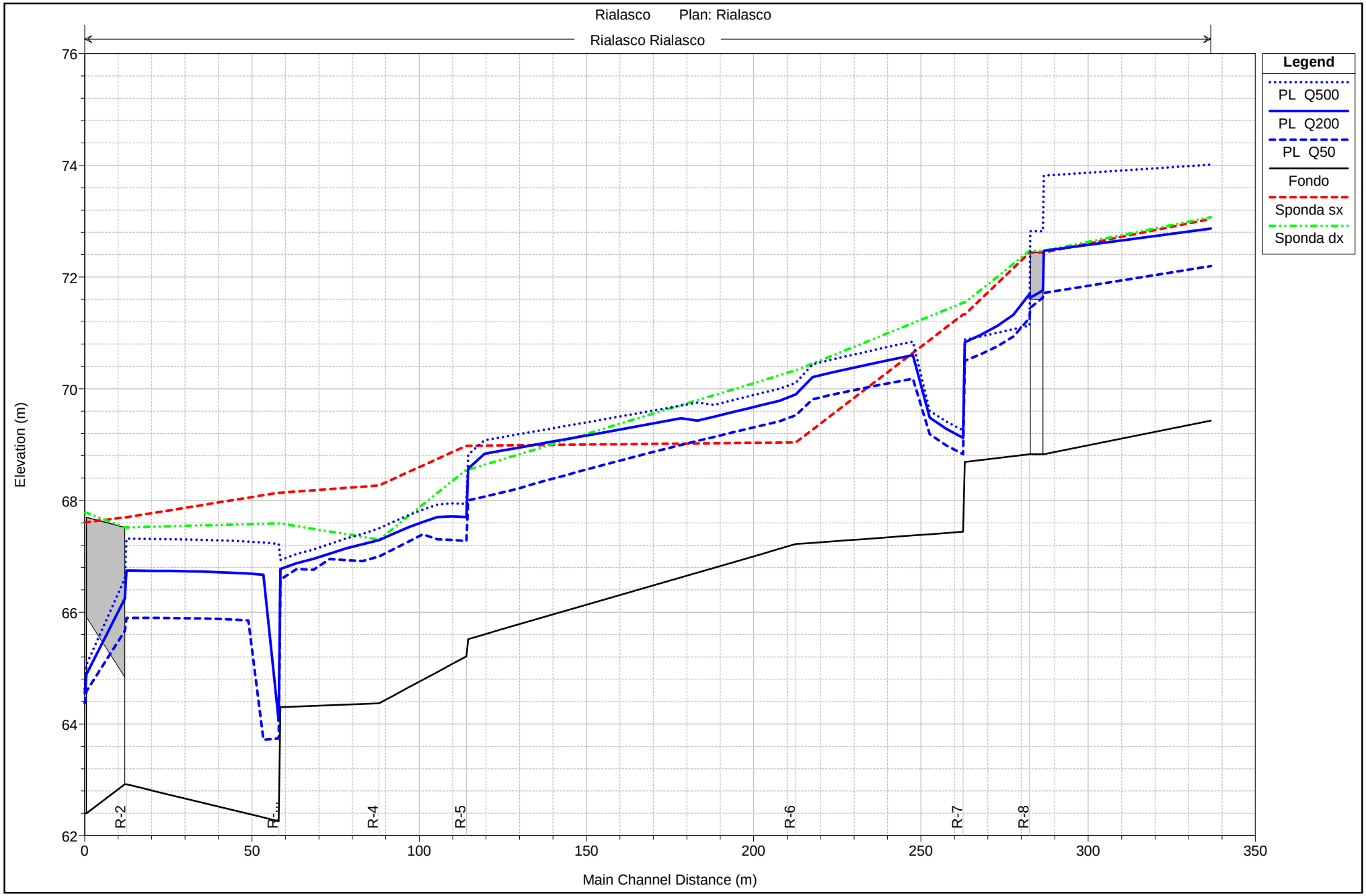
HEC-RAS Plan: Morego River: Morego Reach: Morego (Continued)

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)	
Morego	3.9 M-4 a valle pass	Q500	7.70	62.79	64.55	64.60	0.05	64.70	0.15	63.98	64.82	0.007964	2.31	3.34	1.90	0.56
Morego	3.5		Lat Struct													
Morego	3 M-3	Q50	4.40	62.43	64.44	64.41	-0.03	63.38	-1.06	63.02	64.46	0.000275	0.62	7.08	3.80	0.15
Morego	3 M-3	Q200	6.14	62.43	64.61	64.41	-0.20	63.38	-1.23	63.16	64.64	0.000415	0.79	7.73	3.80	0.18
Morego	3 M-3	Q500	7.15	62.43	64.69	64.41	-0.28	63.38	-1.31	63.24	64.73	0.000498	0.89	8.05	3.80	0.19
Morego	2.5		Lat Struct													
Morego	2 M-2 imbocco tomb	Q50	4.24	62.02	64.42	63.10	-1.32	63.10	-1.32	62.71	64.45	0.001544	0.87	4.90	2.34	0.18
Morego	2 M-2 imbocco tomb	Q200	5.07	62.02	64.59	63.10	-1.49	63.10	-1.49	62.80	64.63	0.001695	0.96	5.31	2.34	0.19
Morego	2 M-2 imbocco tomb	Q500	5.40	62.02	64.68	63.10	-1.58	63.10	-1.58	62.84	64.73	0.001690	0.98	5.52	2.34	0.19
Morego	1.9 M-2 imbocco sezi	Q50	4.24	62.02	63.93	62.02	-1.91	62.02	-1.91	63.93	64.40	0.048231	3.03	1.40	1.50	0.70
Morego	1.9 M-2 imbocco sezi	Q200	5.07	62.02	64.09	62.02	-2.07	62.02	-2.07	64.05	64.58	0.043942	3.10	1.64	1.50	0.69
Morego	1.9 M-2 imbocco sezi	Q500	5.40	62.02	64.28	62.02	-2.26	62.02	-2.26	64.10	64.68	0.032084	2.83	1.91	1.50	0.60
Morego	1 M-1 sbocco tombi	Q50	4.24	61.70	62.37	61.70	-0.67	61.70	-0.67	62.57	63.64	0.103222	5.00	0.85	0.97	1.95
Morego	1 M-1 sbocco tombi	Q200	5.07	61.70	62.62	61.70	-0.92	61.70	-0.92	62.62	63.86	0.105389	4.93	1.03	0.42	1.00
Morego	1 M-1 sbocco tombi	Q500	5.40	61.70	62.62	61.70	-0.92	61.70	-0.92	62.62	64.02	0.120218	5.25	1.03	0.39	1.03

8.4 Rio Rialasco

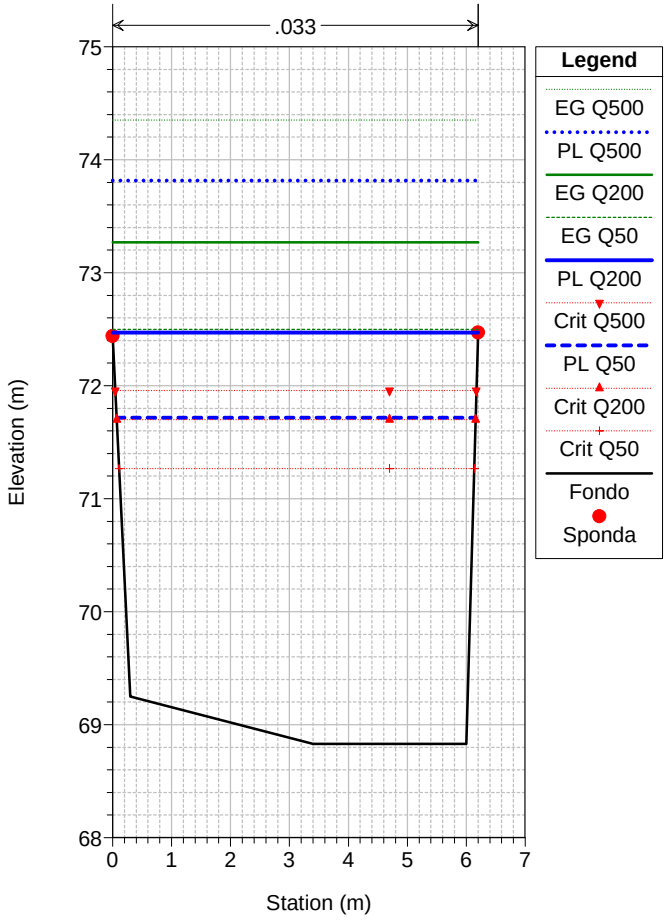
E’ stato indagato un tratto di circa 300 m a partire dalla confluenza con il torrente Secca. Le portate utilizzate per il calcolo sono riportate in tabella.
Il coefficiente di scabrezza di Strickler è pari a 30 $m^{1/3}s^{-1}$.
Quale condizione al contorno di monte è stata imposta la profondità critica in una sezione fittizia ubicata a monte del tratto indagato; a valle è stata imposta la quota del t. Secca, valutata nella sezione a valle della confluenza.

TRATTO	**PORTATE DI PIENA AL COLMO (m^3/s)**		
	T = 50 anni	**T = 200 anni**	**T = 500 anni**
Rio Rialasco	64	83	95


Rialasco Plan: Rialasco
Rialasco Rialasco
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
76
74
72
70
68
66
64
62
0
50
100
150
200
250
300
350
R-2
R-4
R-5
R-6
R-7
R-8

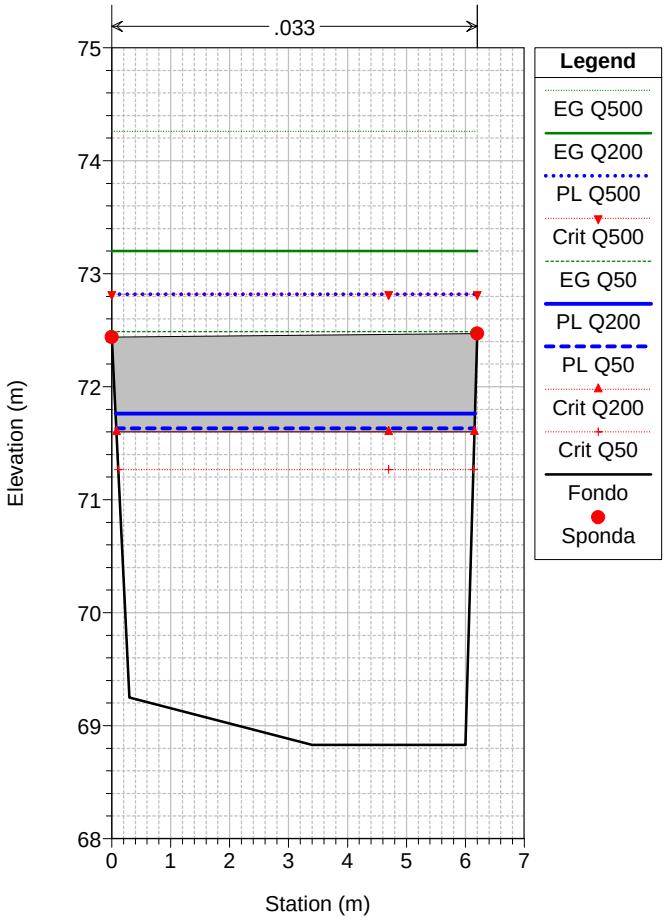
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-8



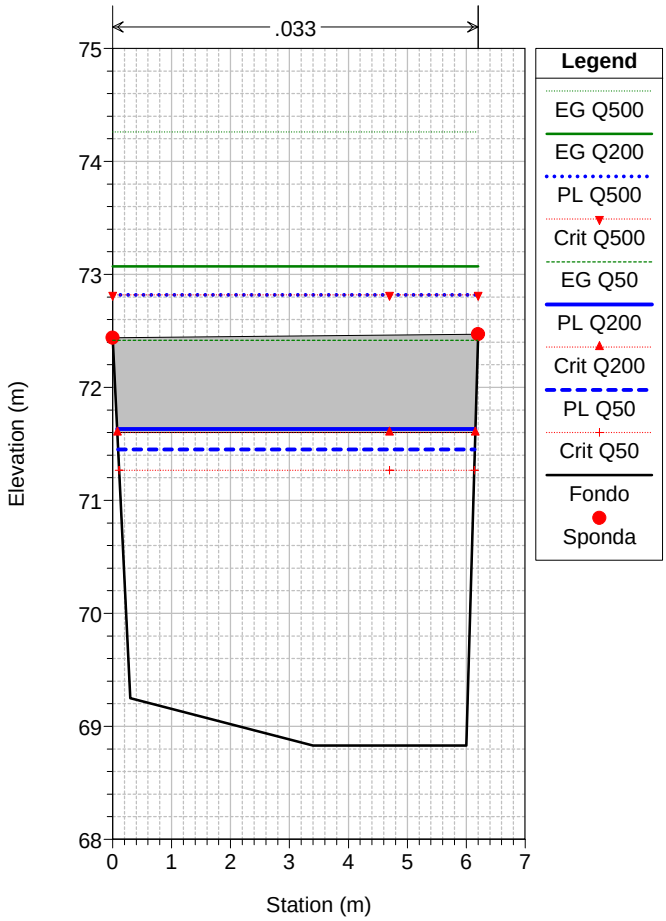
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco



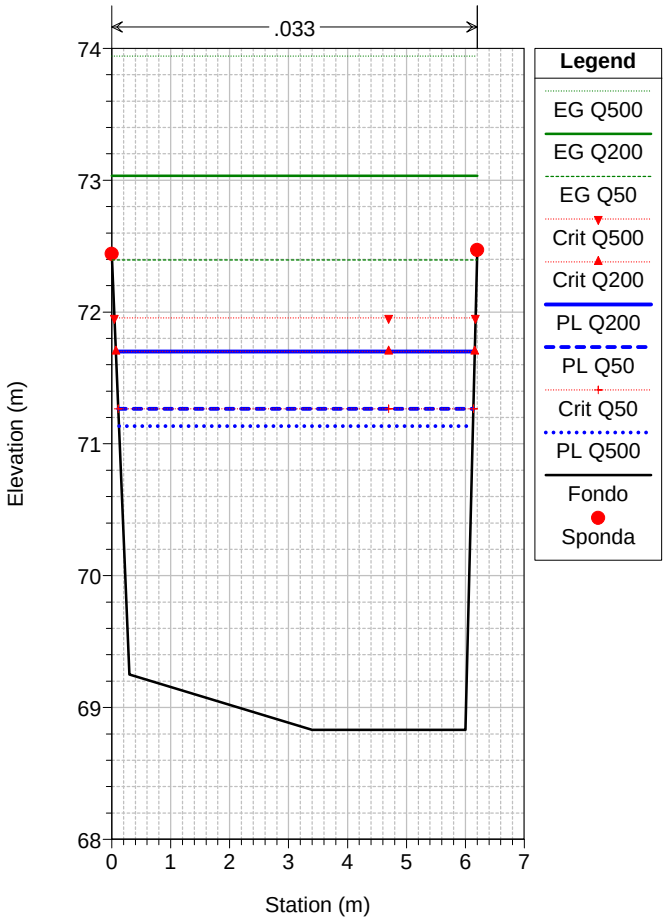
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco



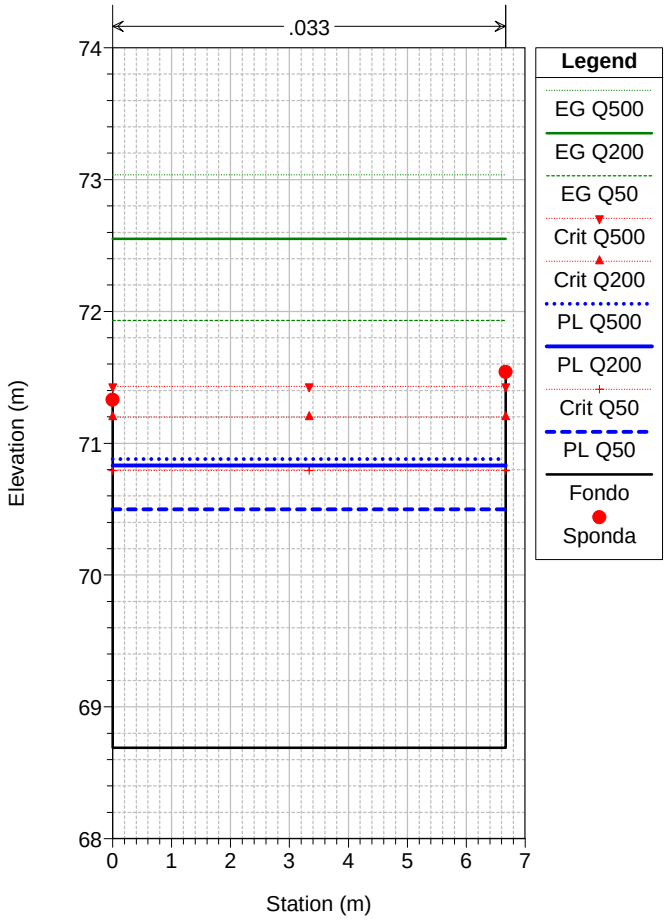
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-8



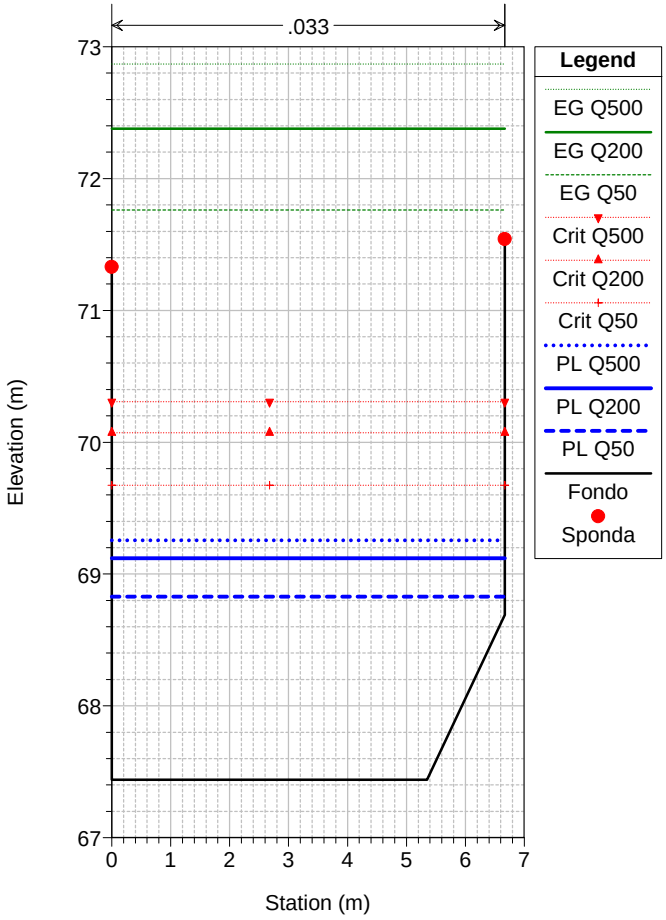
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-7



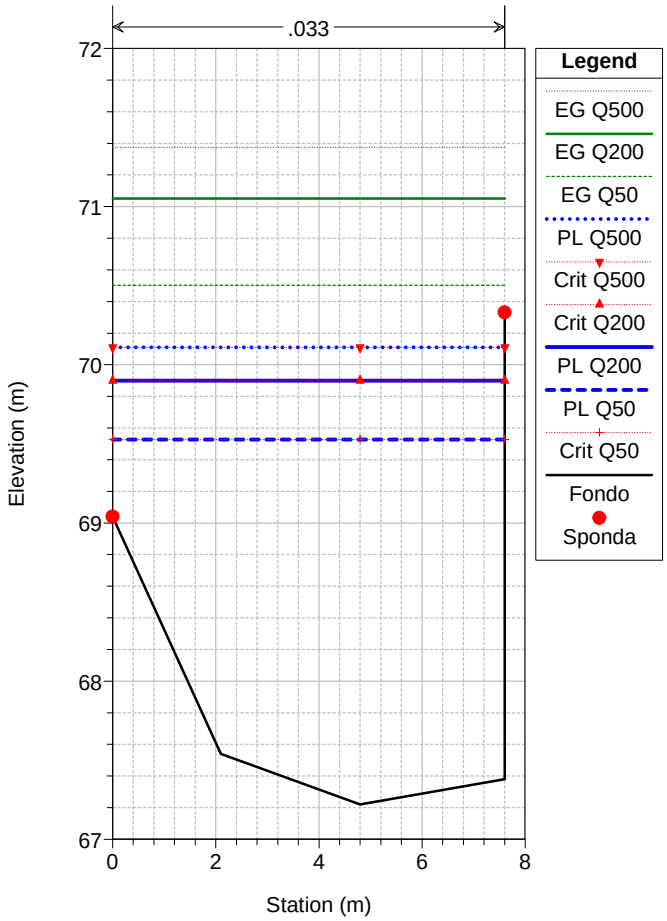
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-7



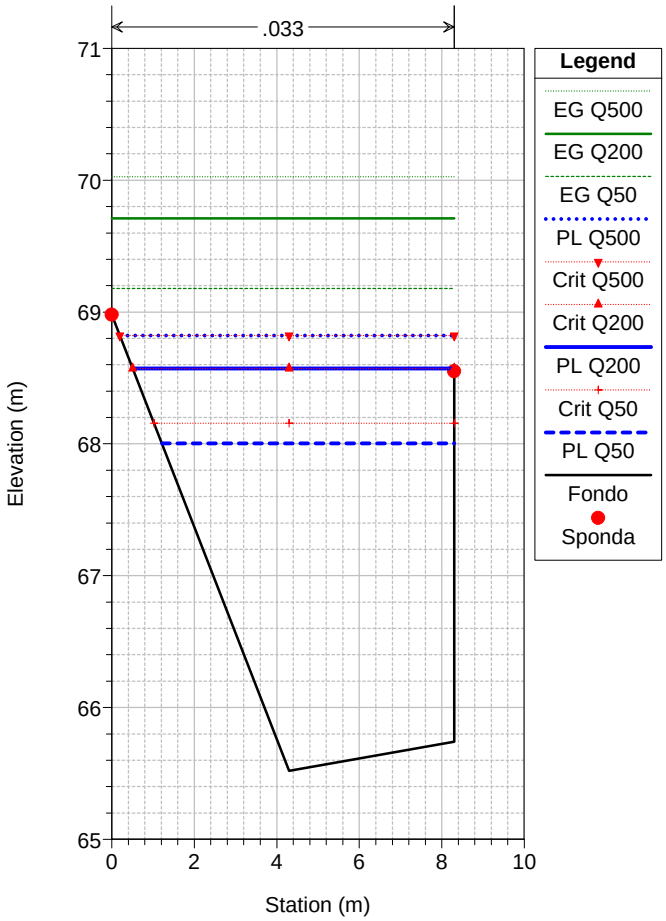
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-6



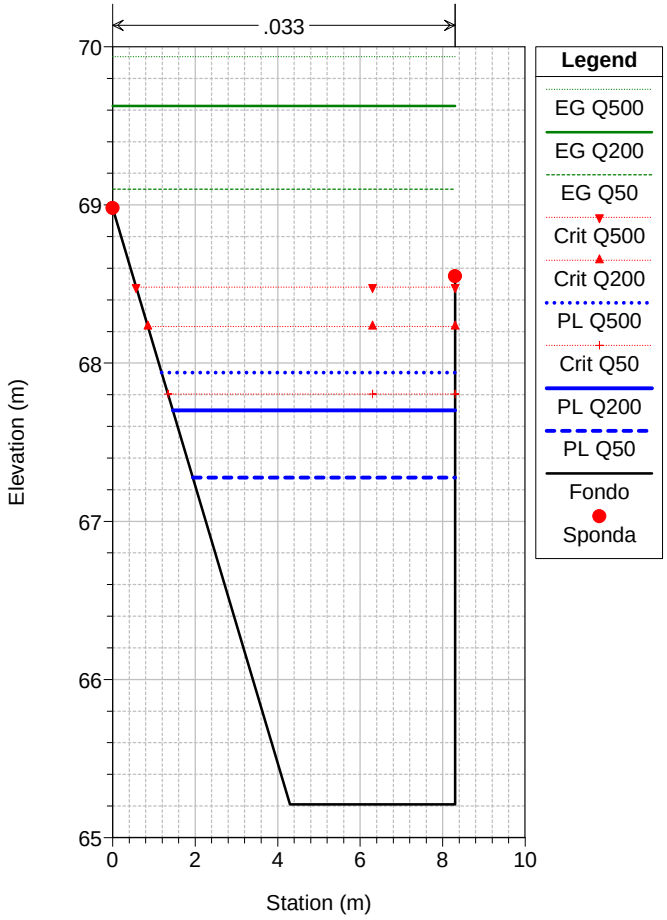
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-5



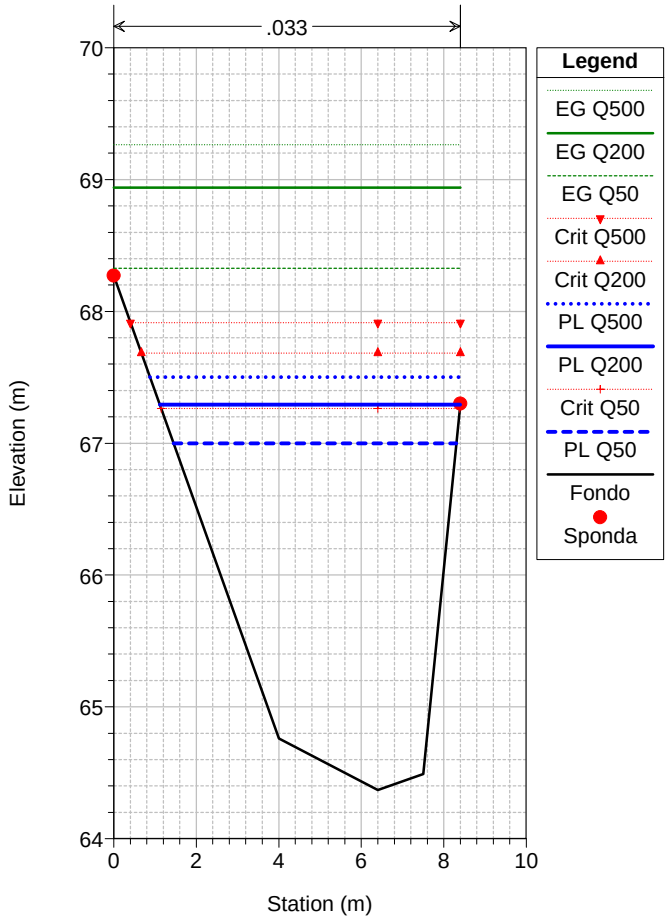
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-5



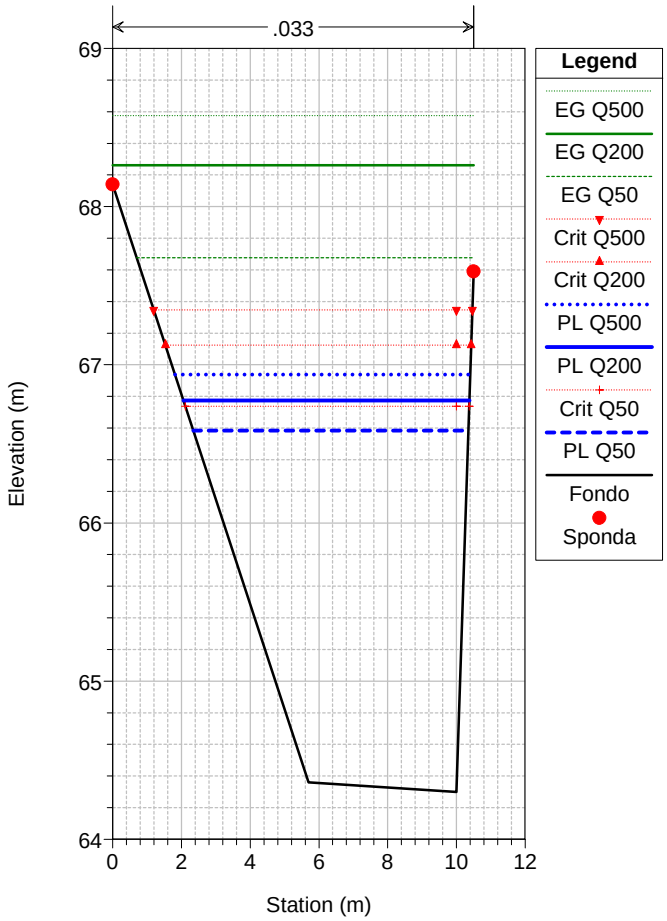
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-4



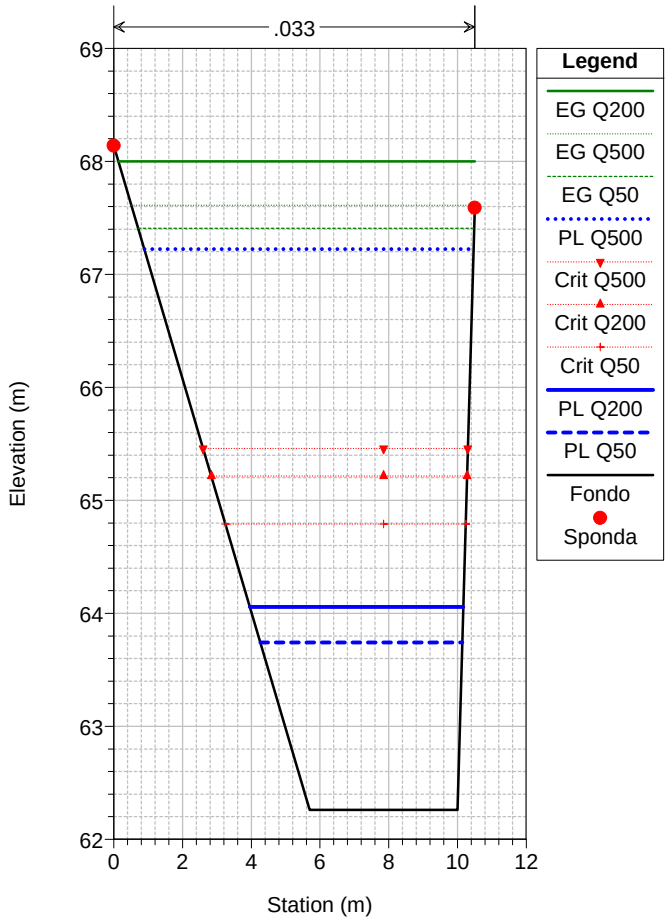
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-3



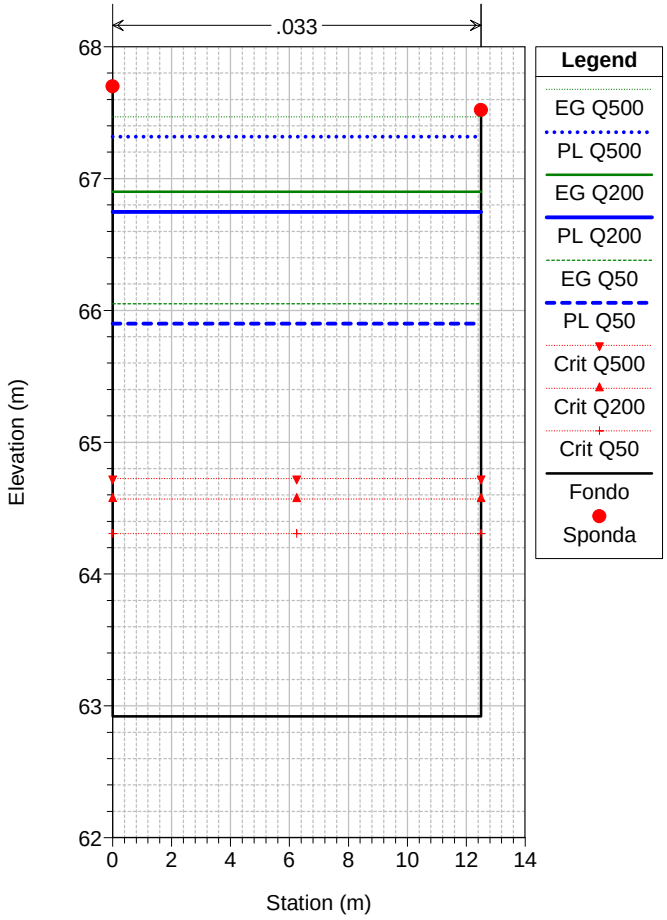
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-3



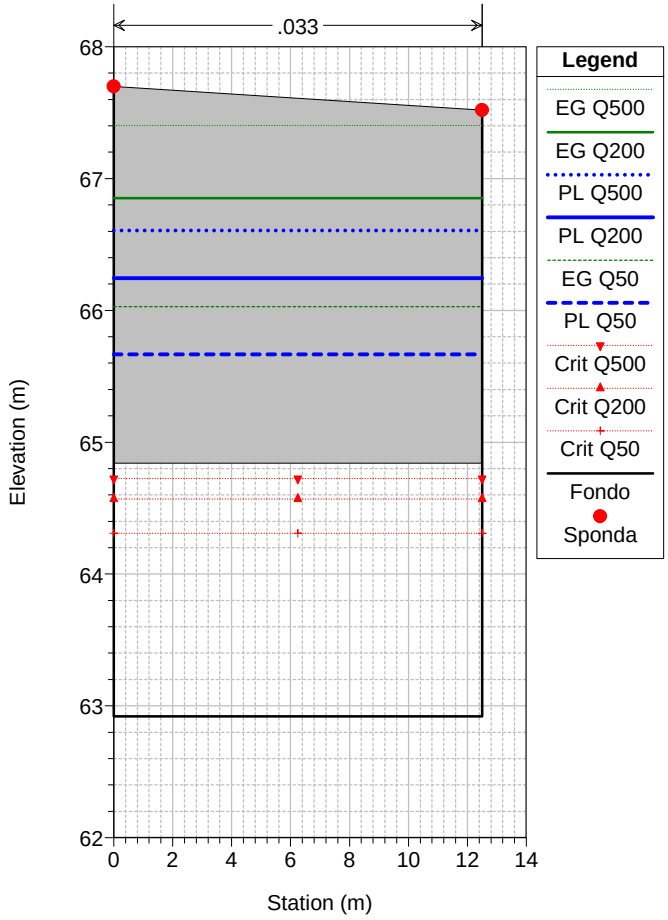
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-2



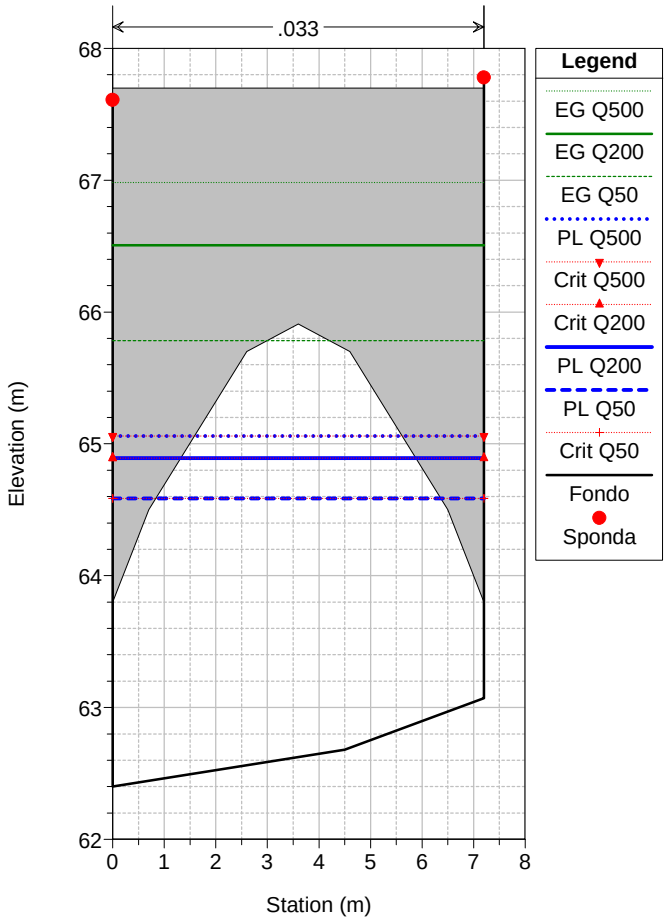
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco



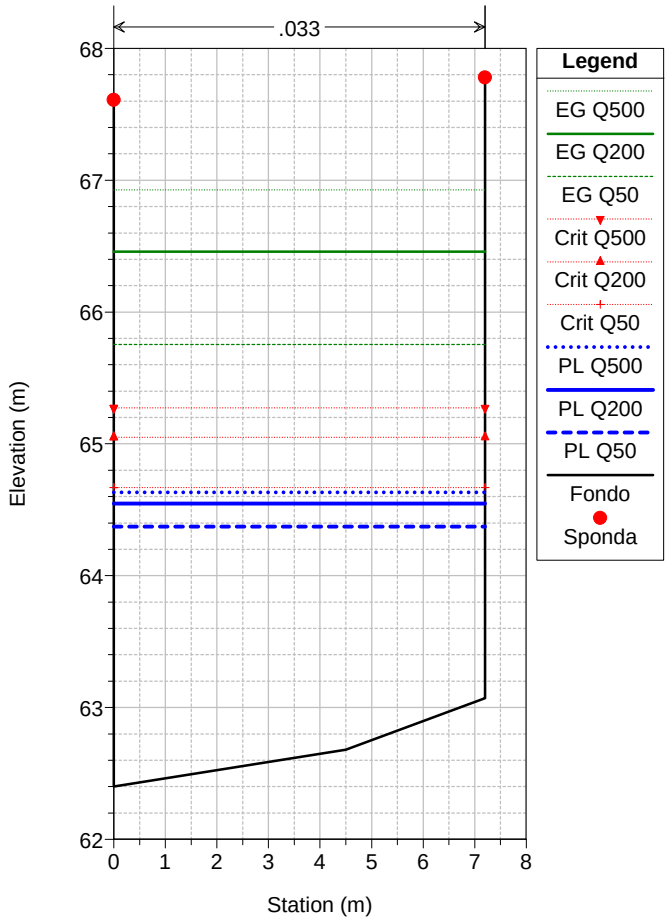
Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco



Rialasco Plan: Rialasco

River = Rialasco Reach = Rialasco R-1



HEC-RAS Plan: Riala River: Rialasco Reach: Rialasco

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)	
Rialasco	9	Q50	64.00	69.43	72.20	73.04	0.84	73.07	0.87	71.87	73.06	0.011345	4.11	15.58	6.07	0.82
Rialasco	9	Q200	83.00	69.43	72.87	73.04	0.17	73.07	0.20	72.30	73.77	0.010221	4.22	19.69	6.17	0.75
Rialasco	9	Q500	95.00	69.43	74.01	73.04	-0.97	73.07	-0.94	72.56	74.65	0.006039	3.55	26.79	6.20	0.54
Rialasco	8.1 R-8	Q50	64.00	68.83	71.72	72.44	0.72	72.47	0.75	71.27	72.50	0.010028	3.92	16.31	6.09	0.77
Rialasco	8.1 R-8	Q200	83.00	68.83	72.47	72.44	-0.03	72.47	0.00	71.70	73.27	0.008681	3.96	20.95	6.20	0.69
Rialasco	8.1 R-8	Q500	95.00	68.83	73.82	72.44	-1.38	72.47	-1.35	71.96	74.35	0.004816	3.24	29.30	6.20	0.48
Rialasco	8		Bridge													
Rialasco	7.9 R-8	Q50	64.00	68.83	71.27	72.44	1.17	72.47	1.20	71.27	72.40	0.016447	4.71	13.59	6.02	1.00
Rialasco	7.9 R-8	Q200	83.00	68.83	71.70	72.44	0.74	72.47	0.77	71.70	73.03	0.017116	5.12	16.22	6.09	1.00
Rialasco	7.9 R-8	Q500	95.00	68.83	71.13	72.44	1.31	72.47	1.34	71.96	73.94	0.042805	7.42	12.80	6.00	1.62
Rialasco	7.1 R-7	Q50	64.00	68.69	70.50	71.33	0.83	71.54	1.04	70.79	71.93	0.024756	5.30	12.07	6.67	1.26
Rialasco	7.1 R-7	Q200	83.00	68.69	70.83	71.33	0.50	71.54	0.71	71.20	72.55	0.025778	5.81	14.29	6.67	1.27
Rialasco	7.1 R-7	Q500	95.00	68.69	70.88	71.33	0.45	71.54	0.66	71.43	73.04	0.031765	6.50	14.60	6.67	1.40
Rialasco	7 R-7	Q50	64.00	67.44	68.83	71.33	2.50	71.54	2.71	69.67	71.76	0.065276	7.59	8.44	6.67	2.15
Rialasco	7 R-7	Q200	83.00	67.44	69.12	71.33	2.21	71.54	2.42	70.07	72.38	0.059980	8.00	10.38	6.67	2.05
Rialasco	7 R-7	Q500	95.00	67.44	69.26	71.33	2.07	71.54	2.28	70.31	72.87	0.061825	8.42	11.28	6.67	2.07
Rialasco	6 R-6	Q50	64.00	67.22	69.53	69.04	-0.49	70.33	0.80	69.53	70.50	0.013798	4.37	14.63	7.60	1.01
Rialasco	6 R-6	Q200	83.00	67.22	69.90	69.04	-0.86	70.33	0.43	69.90	71.05	0.014059	4.75	17.47	7.60	1.00
Rialasco	6 R-6	Q500	95.00	67.22	70.11	69.04	-1.07	70.33	0.22	70.11	71.38	0.014454	4.99	19.05	7.60	1.01
Rialasco	5.1 R-5	Q50	64.00	65.52	68.00	68.98	0.98	68.55	0.55	68.16	69.18	0.017681	4.80	13.32	7.09	1.12
Rialasco	5.1 R-5	Q200	83.00	65.52	68.57	68.98	0.41	68.55	-0.02	68.57	69.71	0.014193	4.73	17.55	7.79	1.01
Rialasco	5.1 R-5	Q500	95.00	65.52	68.82	68.98	0.16	68.55	-0.27	68.82	70.03	0.013976	4.86	19.54	8.10	1.00
Rialasco	5 R-5	Q50	64.00	65.21	67.28	68.98	1.70	68.55	1.27	67.80	69.10	0.031876	5.98	10.70	6.36	1.47
Rialasco	5 R-5	Q200	83.00	65.21	67.70	68.98	1.28	68.55	0.85	68.23	69.63	0.028536	6.14	13.51	6.84	1.40
Rialasco	5 R-5	Q500	95.00	65.21	67.94	68.98	1.04	68.55	0.61	68.48	69.94	0.027386	6.26	15.17	7.11	1.37
Rialasco	4 R-4	Q50	64.00	64.37	67.00	68.27	1.27	67.30	0.30	67.26	68.33	0.019812	5.11	12.53	6.86	1.21
Rialasco	4 R-4	Q200	83.00	64.37	67.29	68.27	0.98	67.30	0.01	67.68	68.94	0.022144	5.68	14.60	7.28	1.28
Rialasco	4 R-4	Q500	95.00	64.37	67.50	68.27	0.77	67.30	-0.20	67.91	69.26	0.022132	5.88	16.16	7.52	1.28
Rialasco	3.1 R-3	Q50	64.00	64.30	66.58	68.14	1.56	67.59	1.01	66.74	67.68	0.016479	4.63	13.82	8.00	1.13
Rialasco	3.1 R-3	Q200	83.00	64.30	66.77	68.14	1.37	67.59	0.82	67.12	68.26	0.020780	5.40	15.36	8.32	1.27
Rialasco	3.1 R-3	Q500	95.00	64.30	66.94	68.14	1.20	67.59	0.65	67.35	68.58	0.021524	5.67	16.76	8.59	1.30
Rialasco	3 R-3	Q50	64.00	62.26	63.74	68.14	4.40	67.59	3.85	64.79	67.41	0.082610	8.48	7.55	5.88	2.39
Rialasco	3 R-3	Q200	83.00	62.26	64.06	68.14	4.08	67.59	3.53	65.22	68.00	0.074565	8.80	9.43	6.21	2.28
Rialasco	3 R-3	Q500	95.00	62.26	67.22	68.14	0.92	67.59	0.37	65.46	67.61	0.003032	2.76	34.43	9.58	0.46
Rialasco	2 R-2	Q50	64.00	62.92	65.90	67.70	1.80	67.52	1.62	64.31	66.05	0.001260	1.72	37.26	12.50	0.32
Rialasco	2 R-2	Q200	83.00	62.92	66.75	67.70	0.95	67.52	0.77	64.57	66.90	0.001036	1.74	47.83	12.50	0.28
Rialasco	2 R-2	Q500	95.00	62.92	67.32	67.70	0.38	67.52	0.20	64.73	67.47	0.000919	1.73	54.96	12.50	0.26
Rialasco	1		Bridge													

HEC-RAS Plan: Riala River: Rialasco Reach: Rialasco (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)	
Rialasco	0.9 R-1	Q50	64.00	62.40	64.37	67.61	3.24	67.78	3.41	64.67	65.75	0.024018	5.21	12.28	7.20	1.27
Rialasco	0.9 R-1	Q200	83.00	62.40	64.55	67.61	3.06	67.78	3.23	65.05	66.46	0.030438	6.13	13.55	7.20	1.43
Rialasco	0.9 R-1	Q500	95.00	62.40	64.63	67.61	2.98	67.78	3.15	65.27	66.93	0.035160	6.71	14.16	7.20	1.53

8.5 Torrente Sardorella

8.5.1 Confluenza Sardorella-Secca fino al ponte per Arvigo

Il tratto si estende dalla confluenza con il torrente Secca che è stata studiata nella configurazione che prevede la portata al colmo con tempo di ritorno assegnato a valle e sull' affluente, mentre sul T.Secca a monte della confluenza è imposta, ai fini della conservazione della massa, la differenza delle portate.

In questo tratto è compresa anche la confluenza con il rio Busso per lo studio della quale è stata utilizzata la stessa metodologia sopra descritta.

In particolare risulta:

TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
		T = 50 anni	T = 200 anni	T = 500 anni
Torrente Secca a valle confluenza	SEC4	620	770	900
Torrente Secca a monte confluenza	differenza	375	480	575
Torrente Sardorella alla confluenza T. Secca	SAR4	245	290	325
Torrente Sardorella a monte confluenza Rio Busso	SAR3	197	245	280
Rio Busso	differenza	45	45	45

Come condizione al contorno è stata imposta la profondità critica a monte e la confluenza con il torrente Secca a valle.

Nelle simulazioni è stato assegnato un valore del coefficiente di scabrezza k_s di Strickler pari a $35 m^{1/3}/s$.

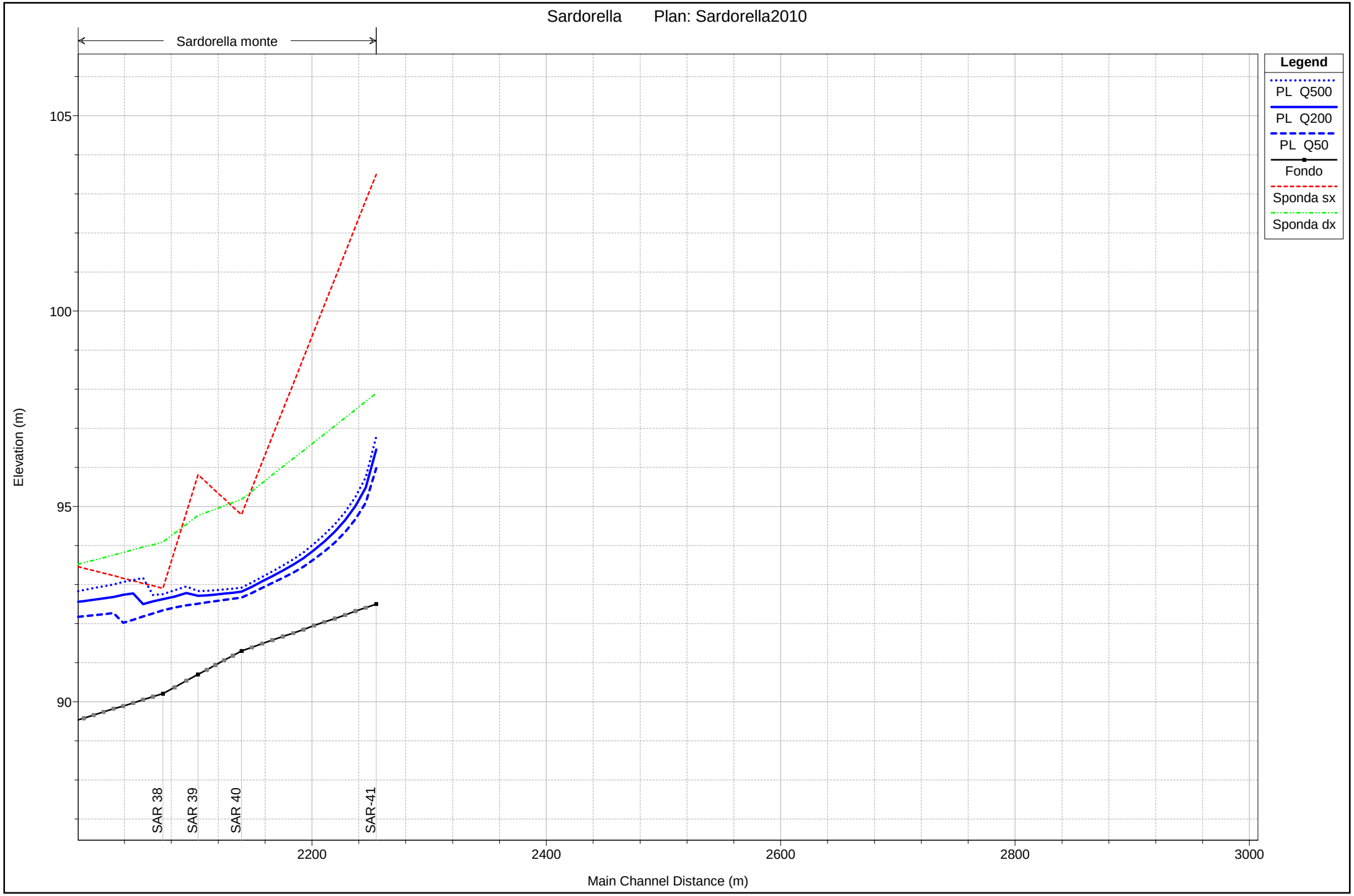
8.5.2 Rio Busso

E' stato studiato il tratto del rio Ciubeca nei pressi della confluenza con il torrente Sardorella, con la simulazione della stessa con la configurazione di portata precedentemente descritta per l'analisi delle confluenze.

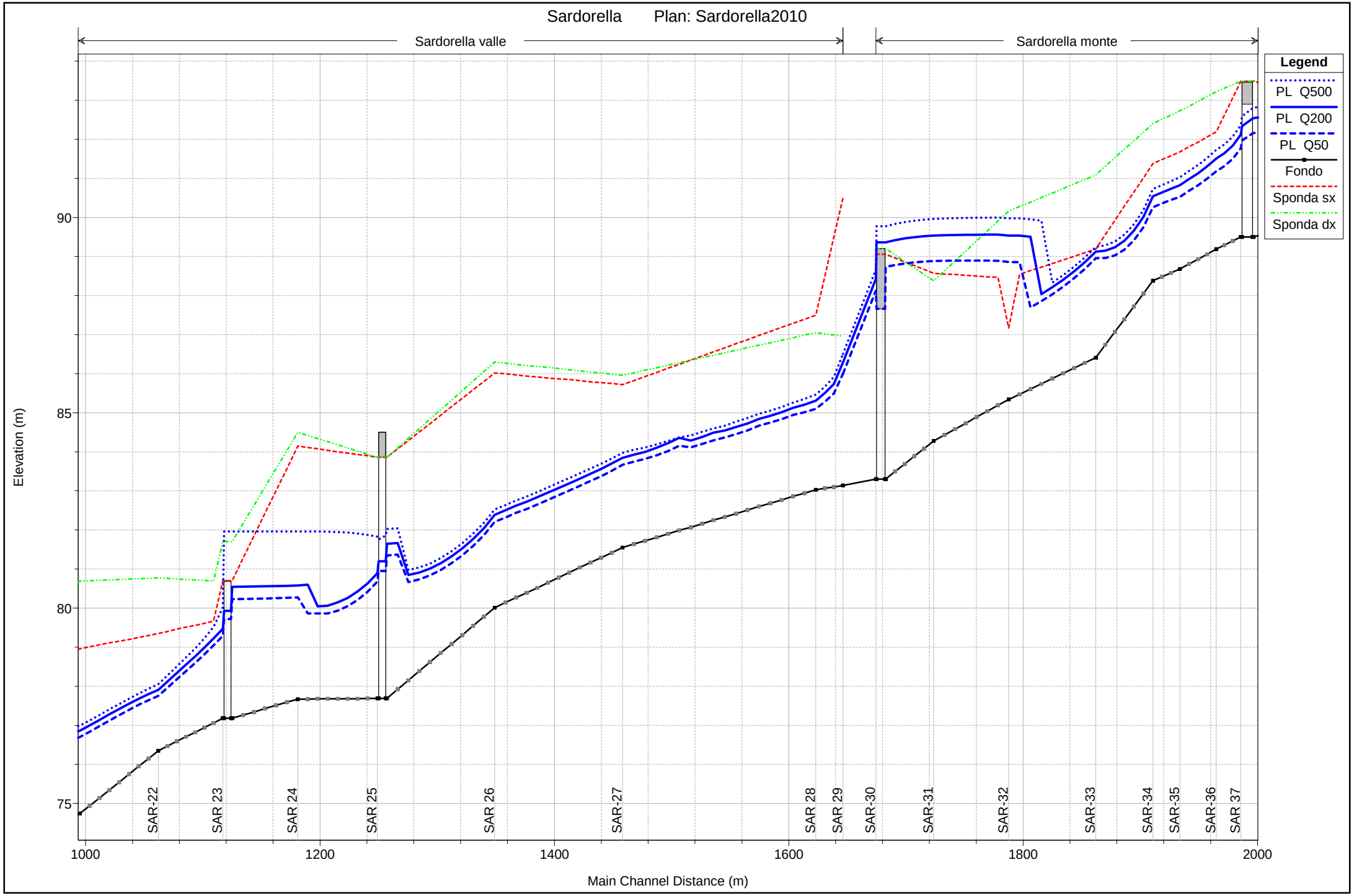
Nella tabella seguente sono riassunte le portate utilizzate per il calcolo in moto permanente dei profili di rigurgito; la sigla della sezione richiama la carta dei sottobacini e di ubicazione delle sezioni di chiusura. Le portate sul T. Sardorella a monte della confluenza sono la differenza tra la portata calcolata nella sezione a valle e quella a monte della confluenza.

TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
		T = 50 anni	**T = 200 anni**	**T = 500 anni**
T. Sardorella a monte del Rio Busso	differenza	161	181	200
T. Sardorella a valle del Rio Busso	SAR4	245	290	325
Rio Busso	BUS	84	109	125

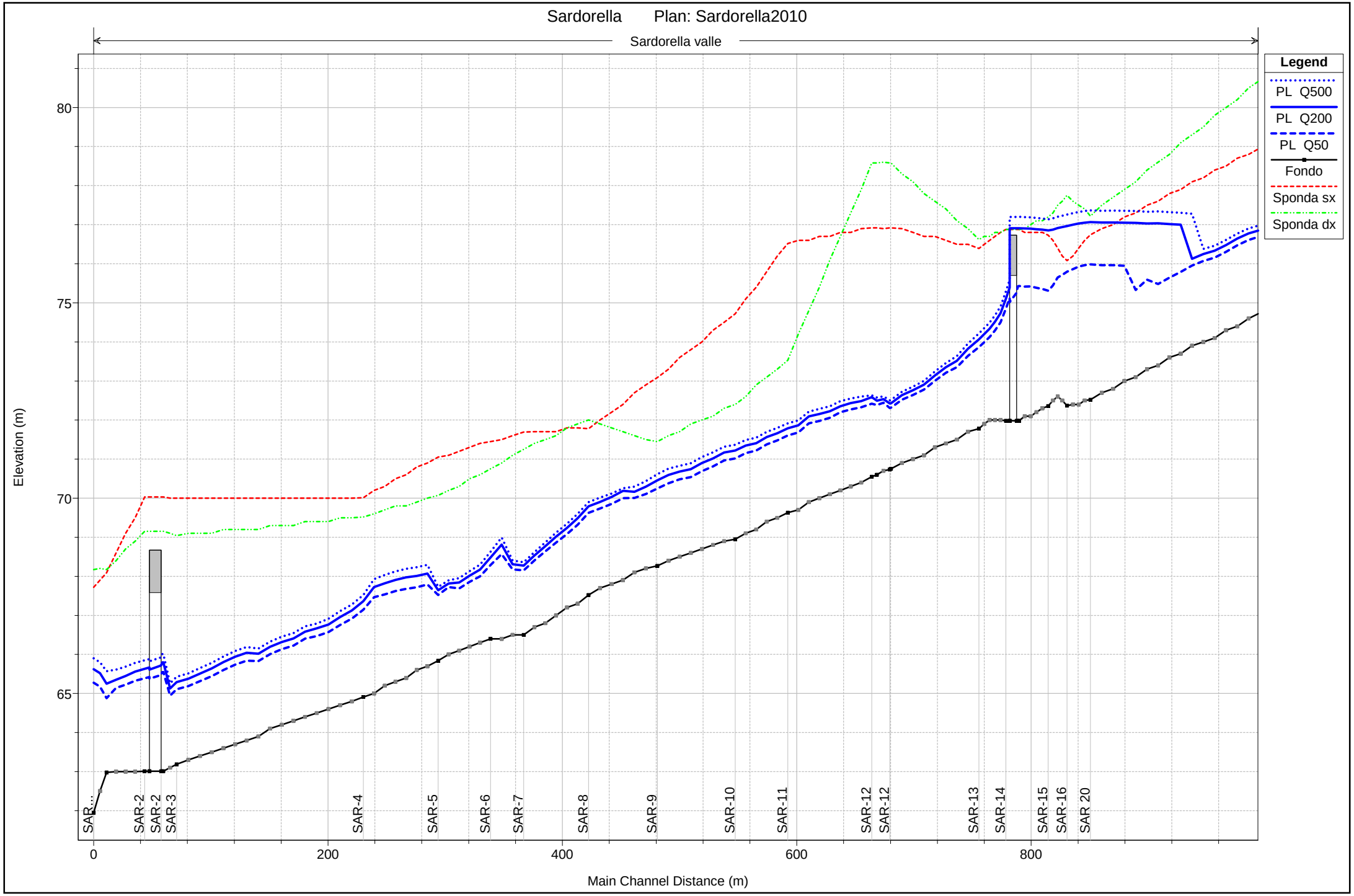
Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 35 $m^{1/3}s^{-1}$.
Come condizioni al contorno a monte è stata imposta la profondità critica in una sezione fittizia a monte della BUS-7 e a valle è stata simulata la confluenza nel torrente Secca.



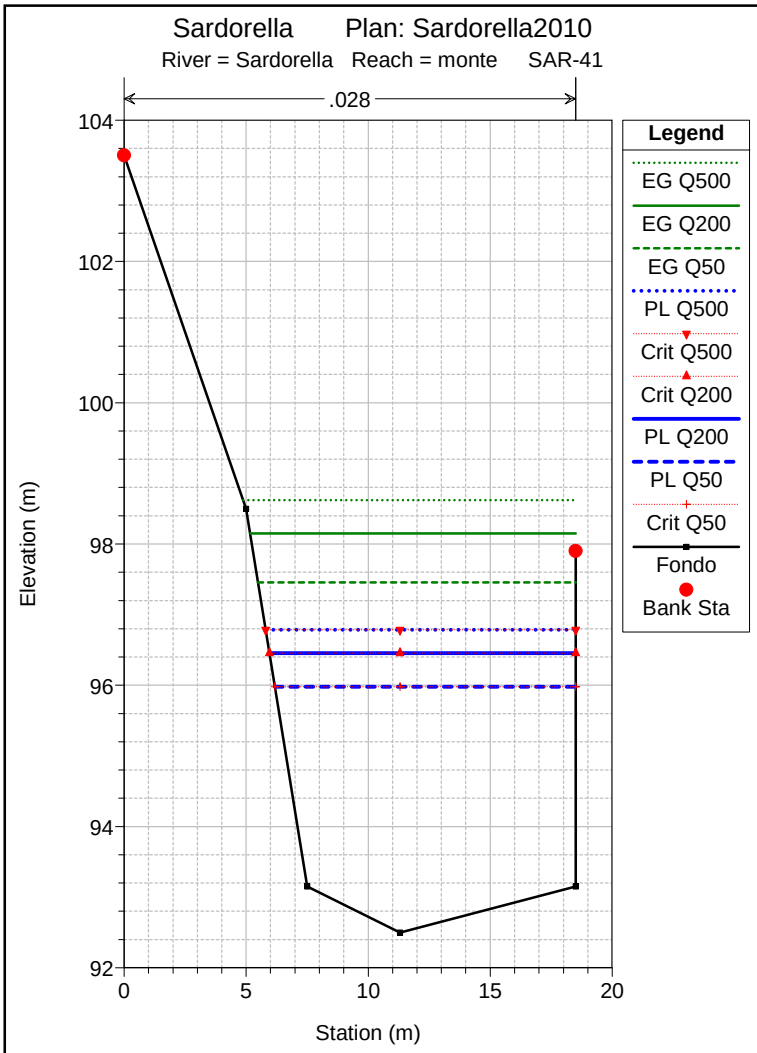
1 cm Horiz. = 40 m 1 cm Vert. = 1.2 m

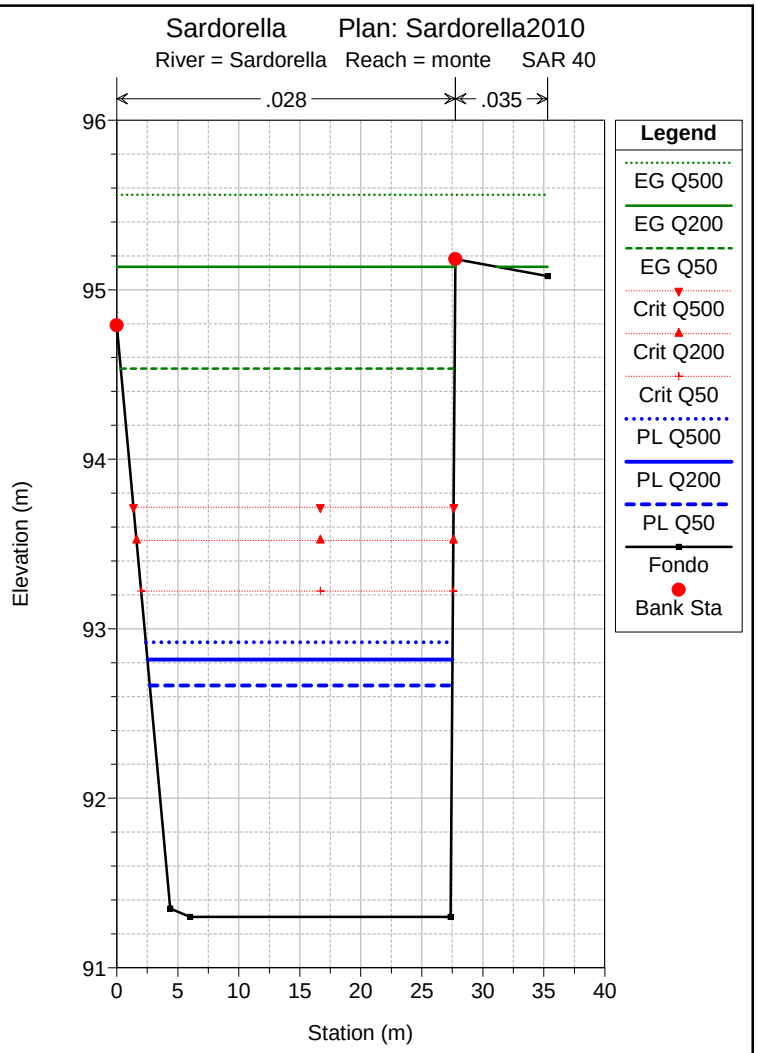


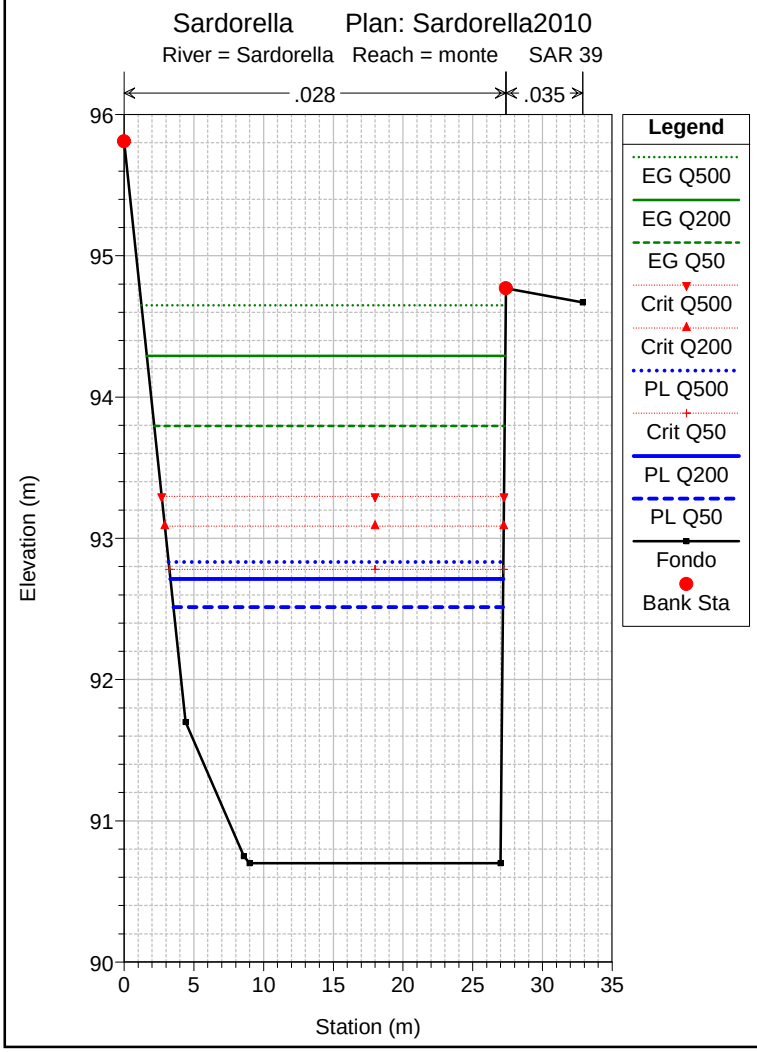
1 cm Horiz. = 40 m 1 cm Vert. = 1.2 m

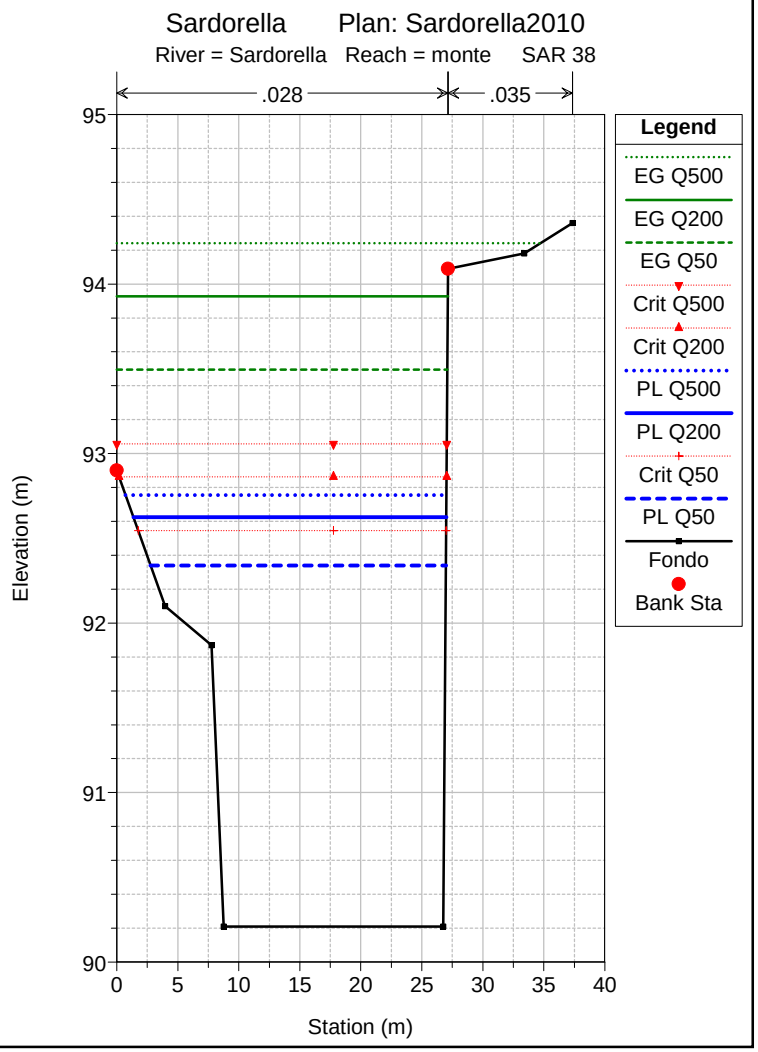


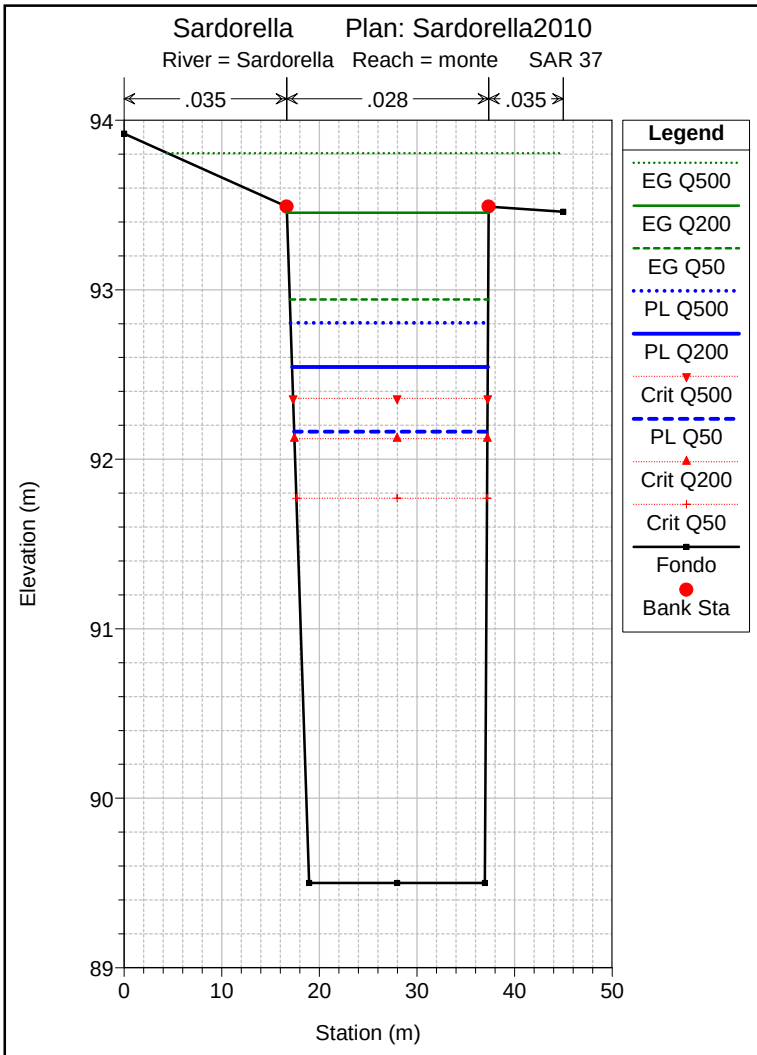
1 cm Horiz. = 40 m 1 cm Vert. = 1.2 m

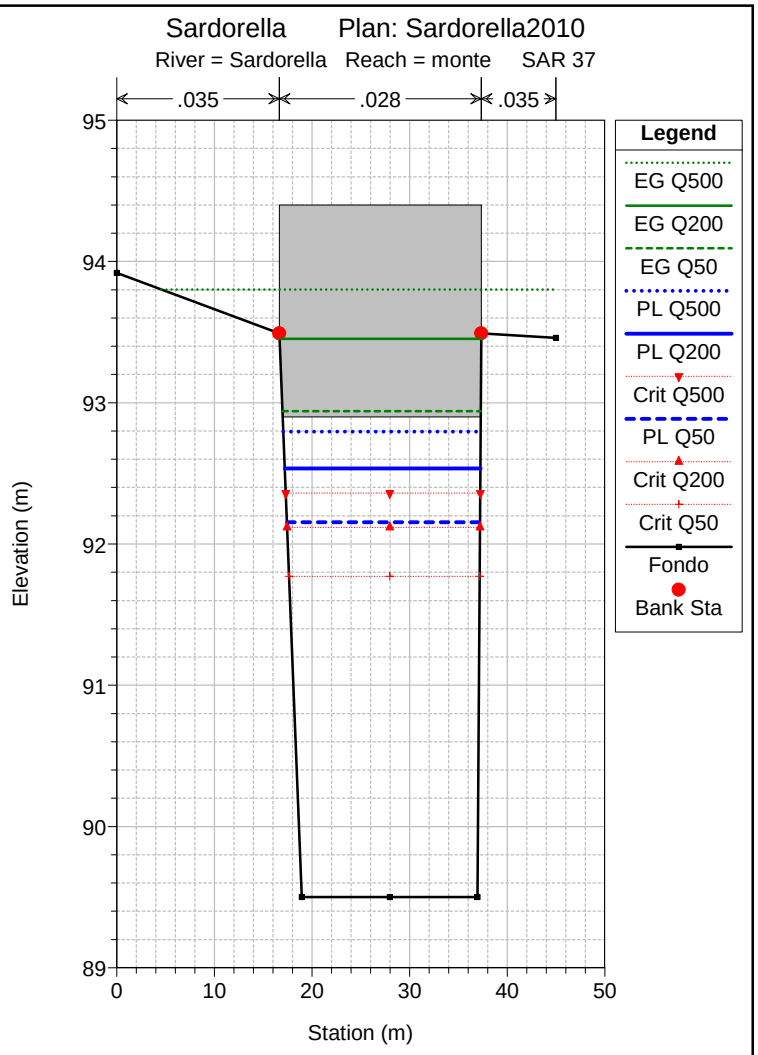

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR-41
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

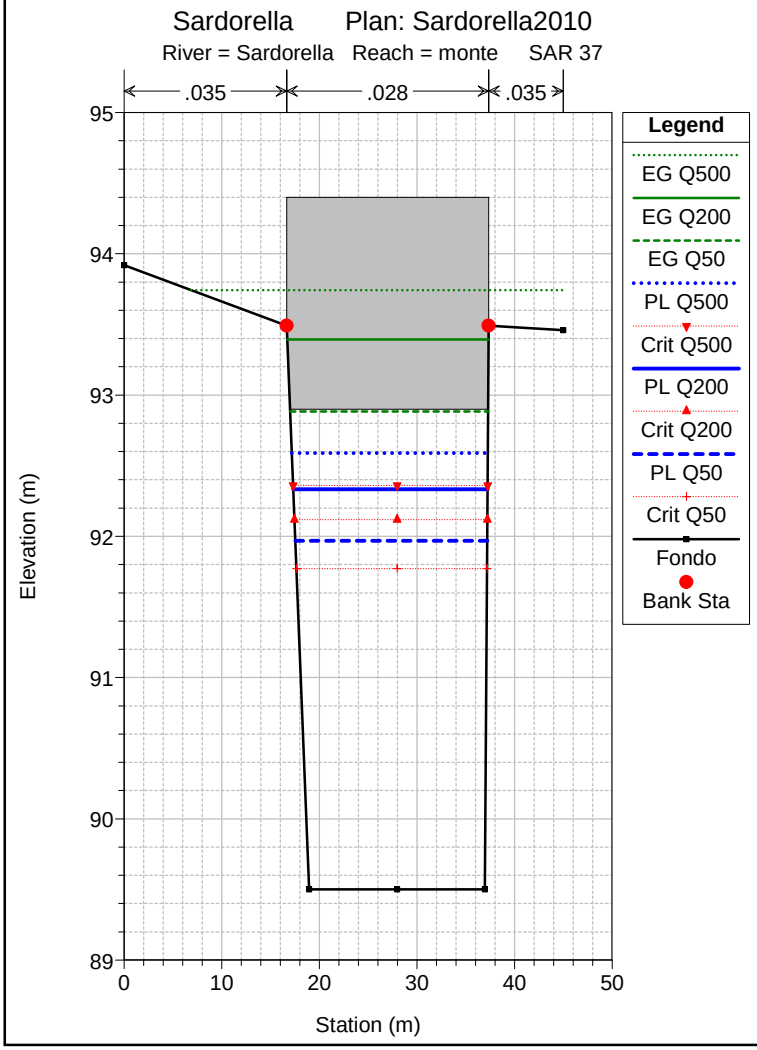

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR 40
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

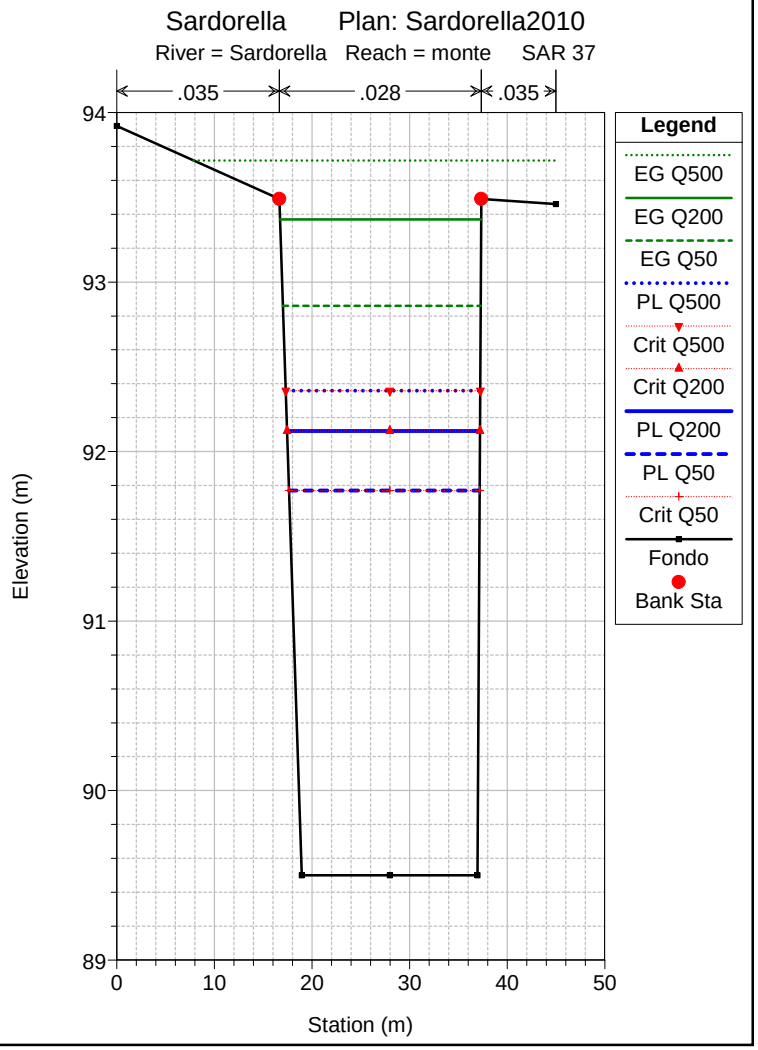

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR 39
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

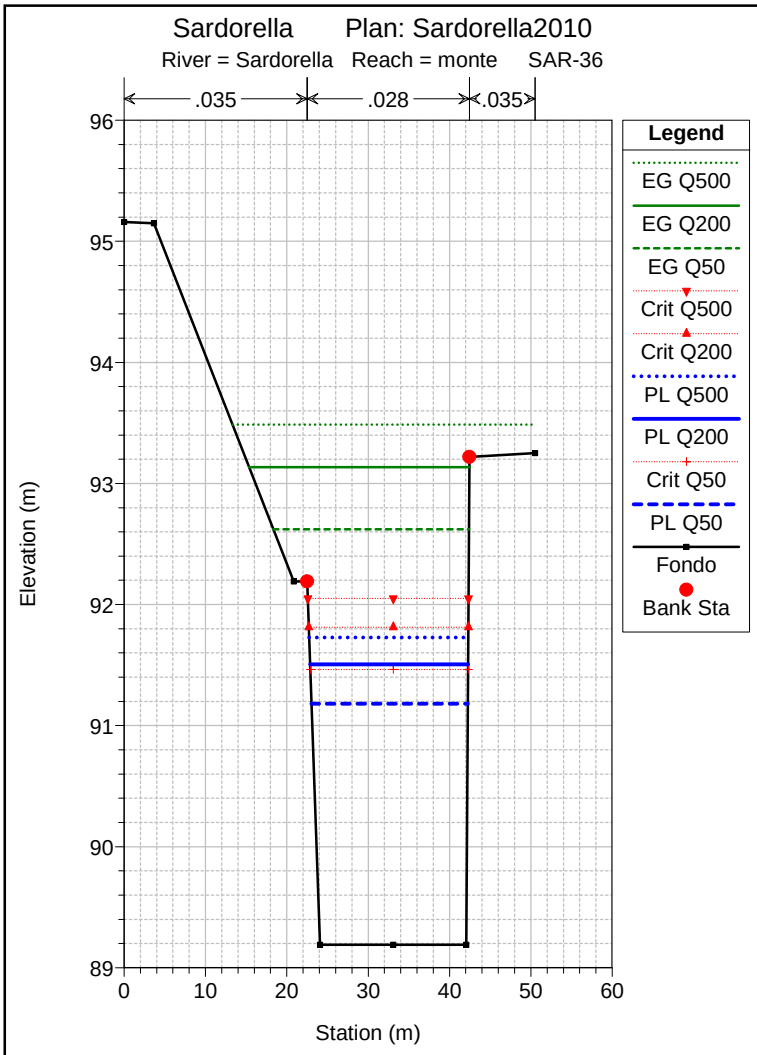

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR 38
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

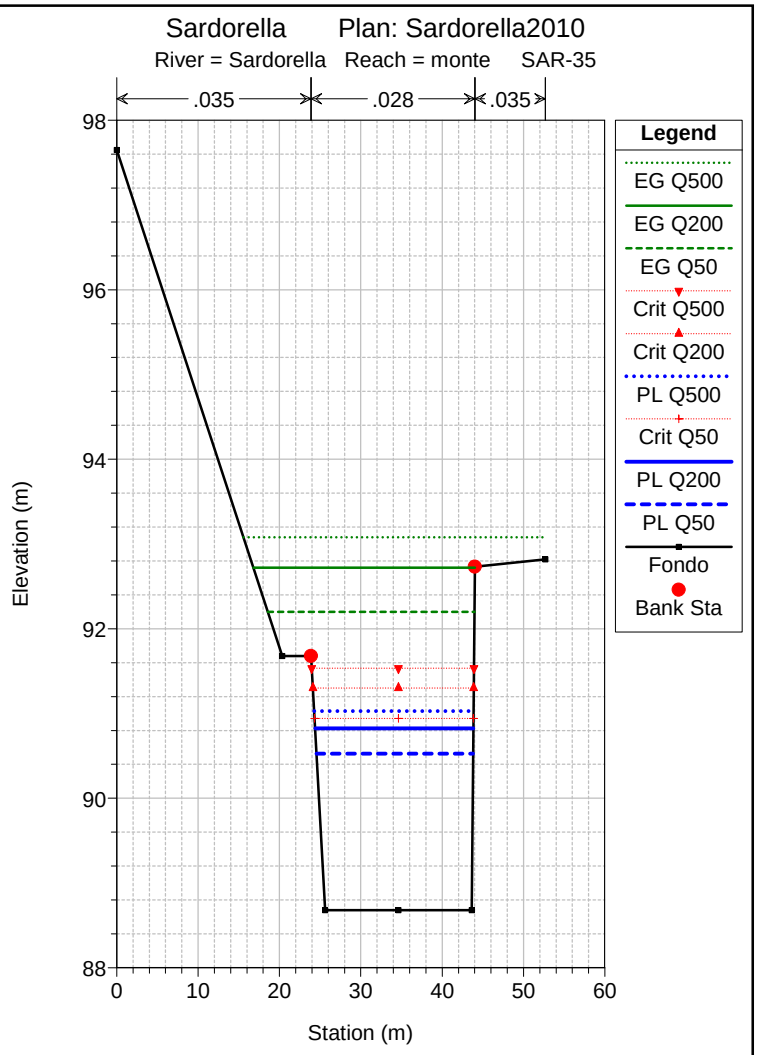

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR 37
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

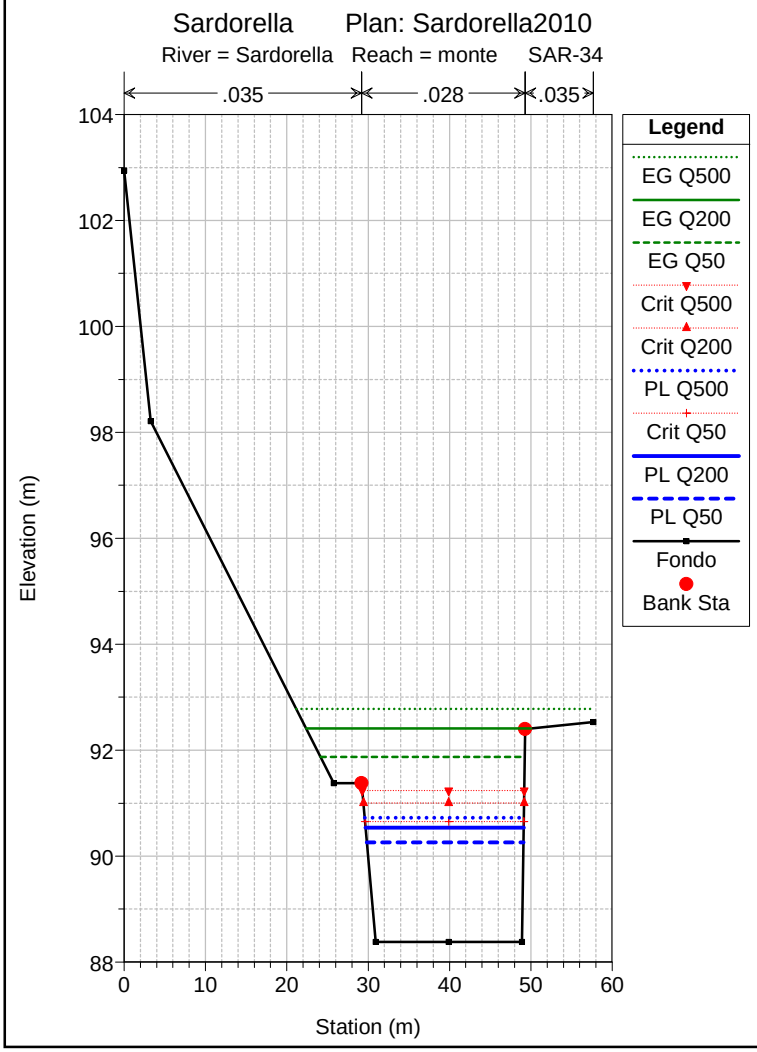

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR 37
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

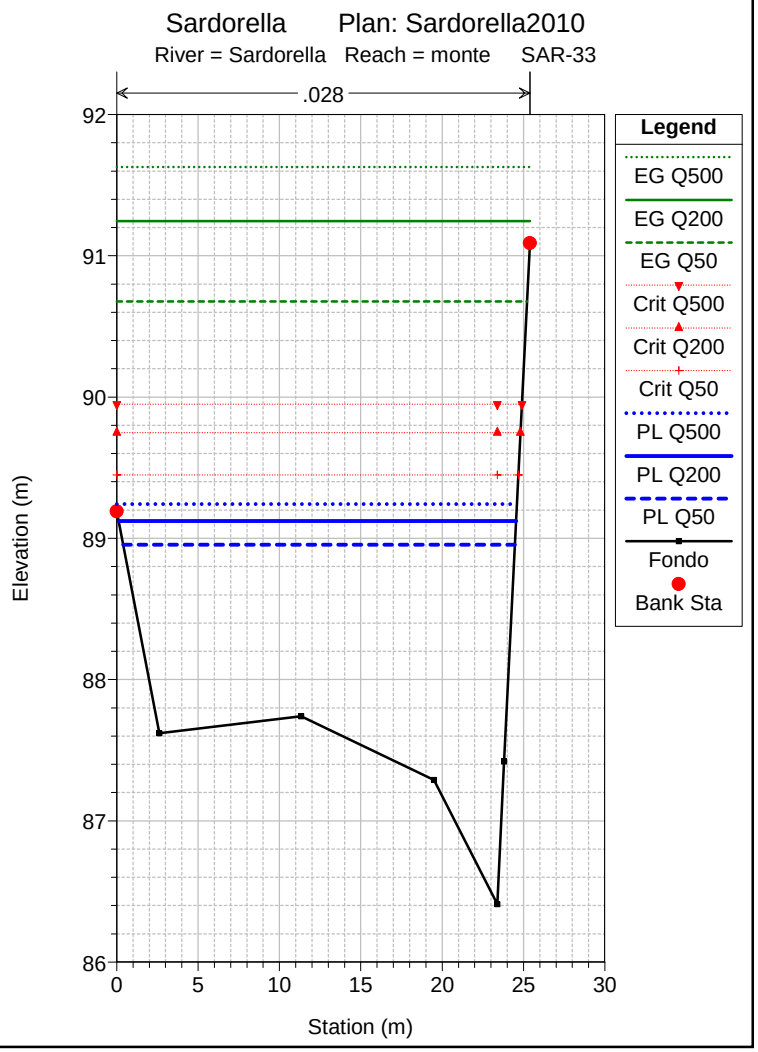

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR 37
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

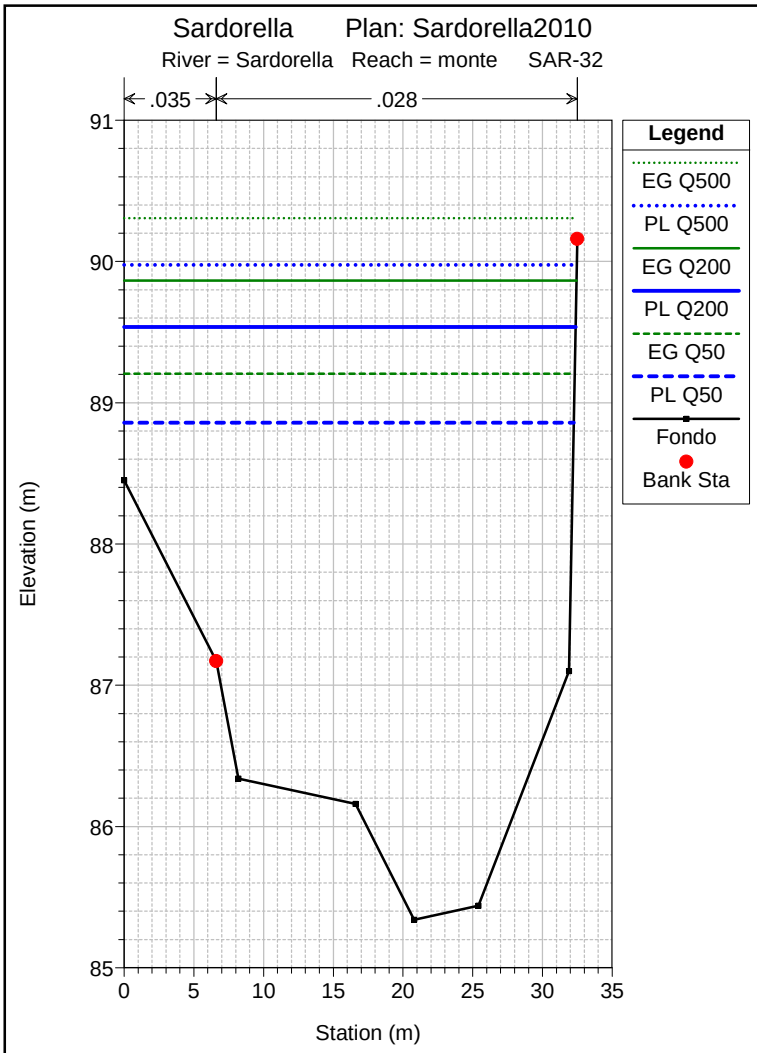

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR 37
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

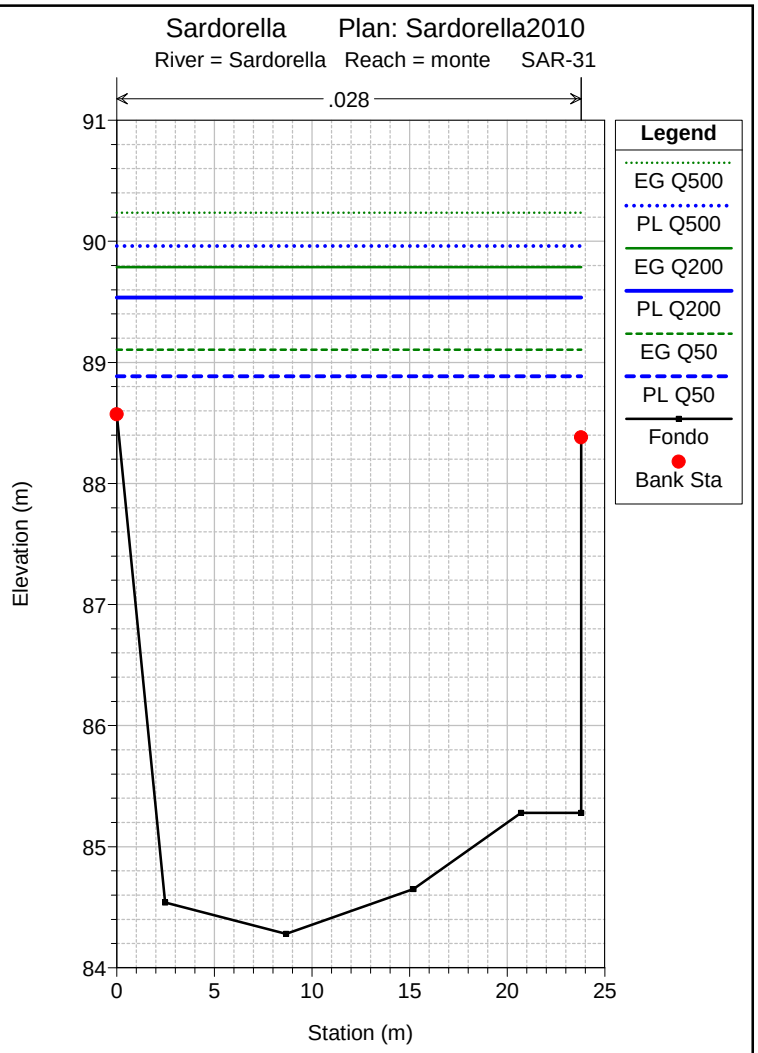

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR-36
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

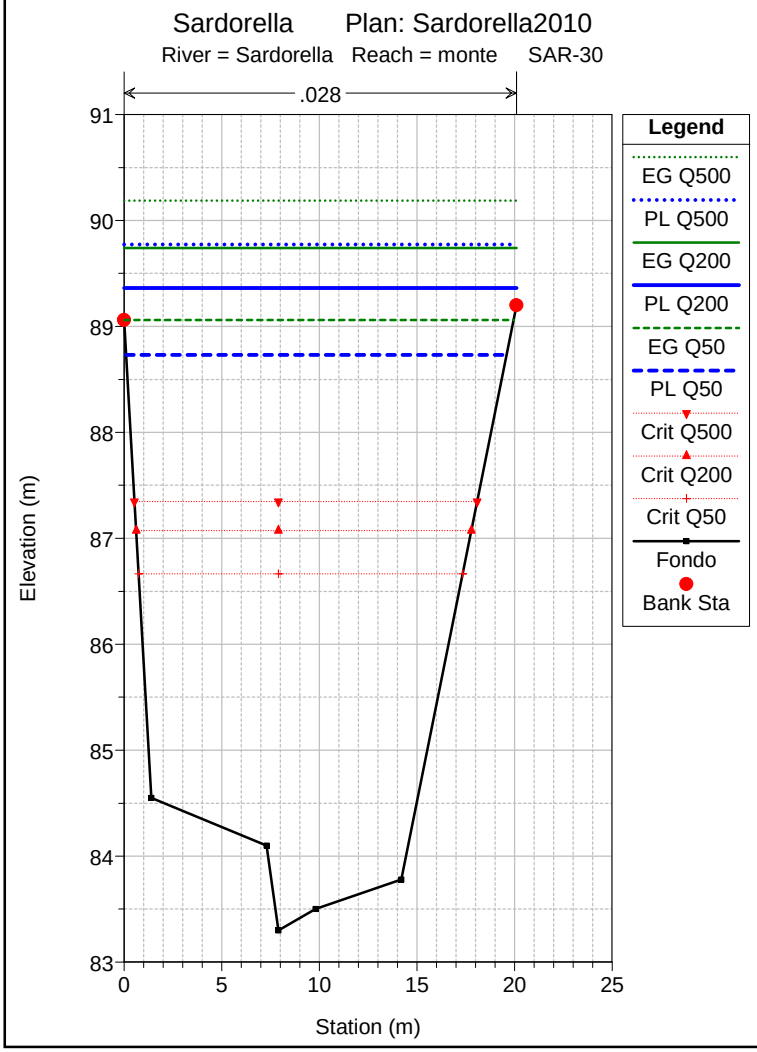

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR-35
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

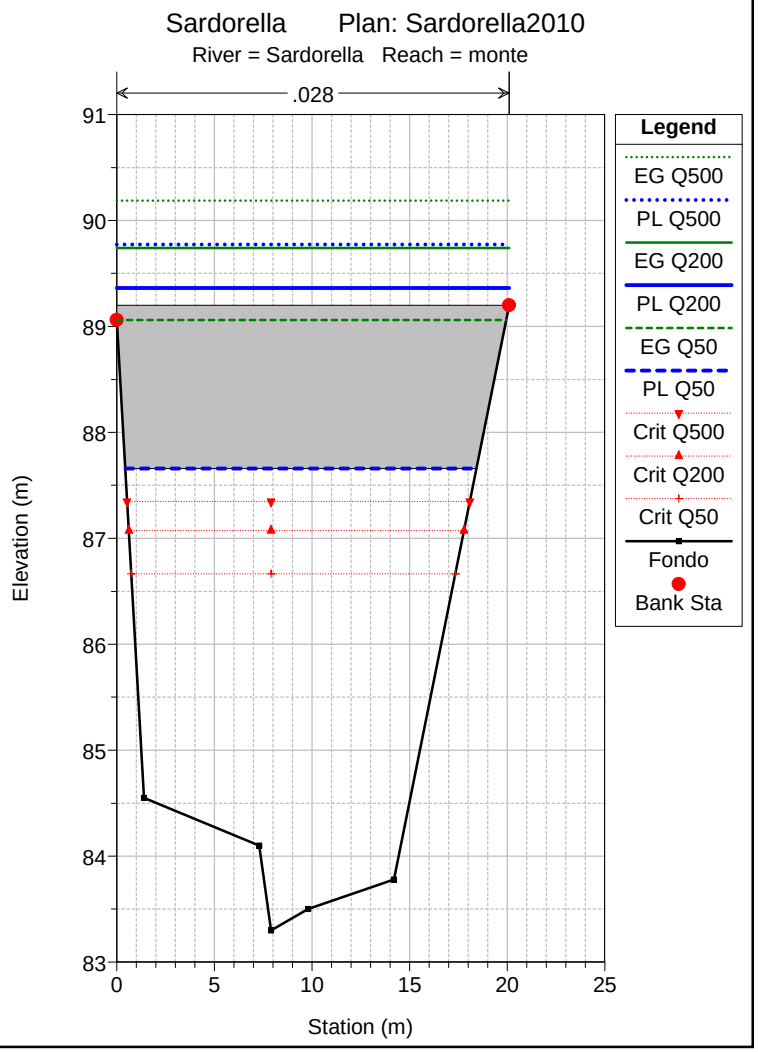

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR-34
.035
.028
.035
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

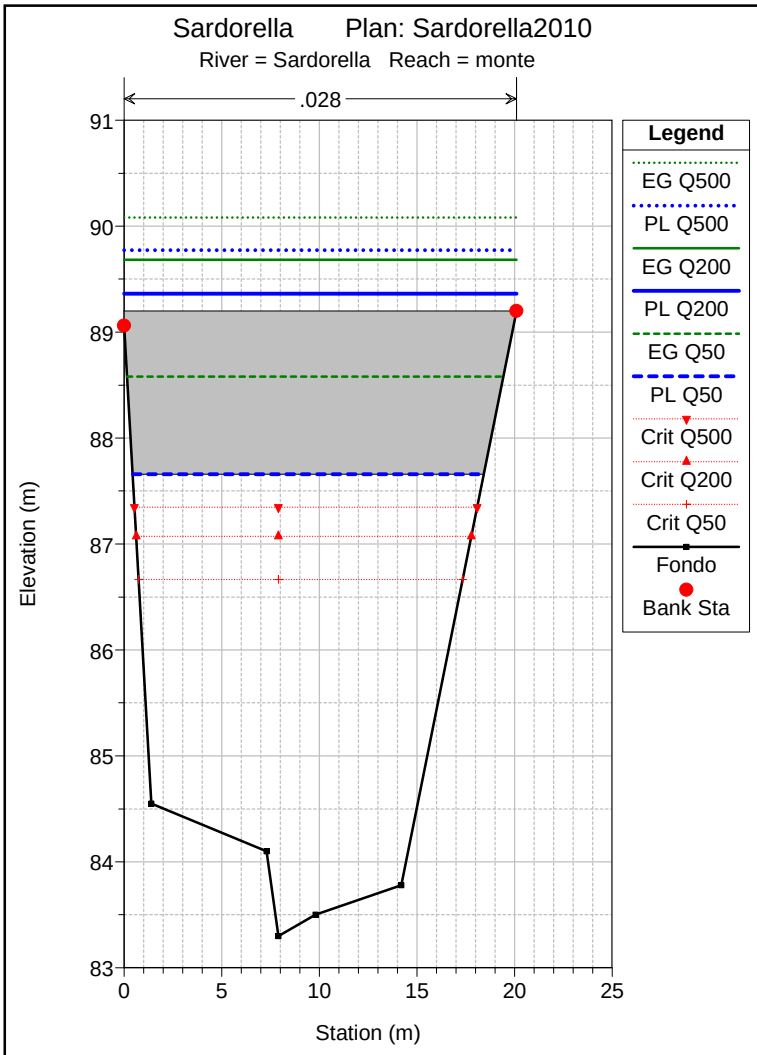

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR-33
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

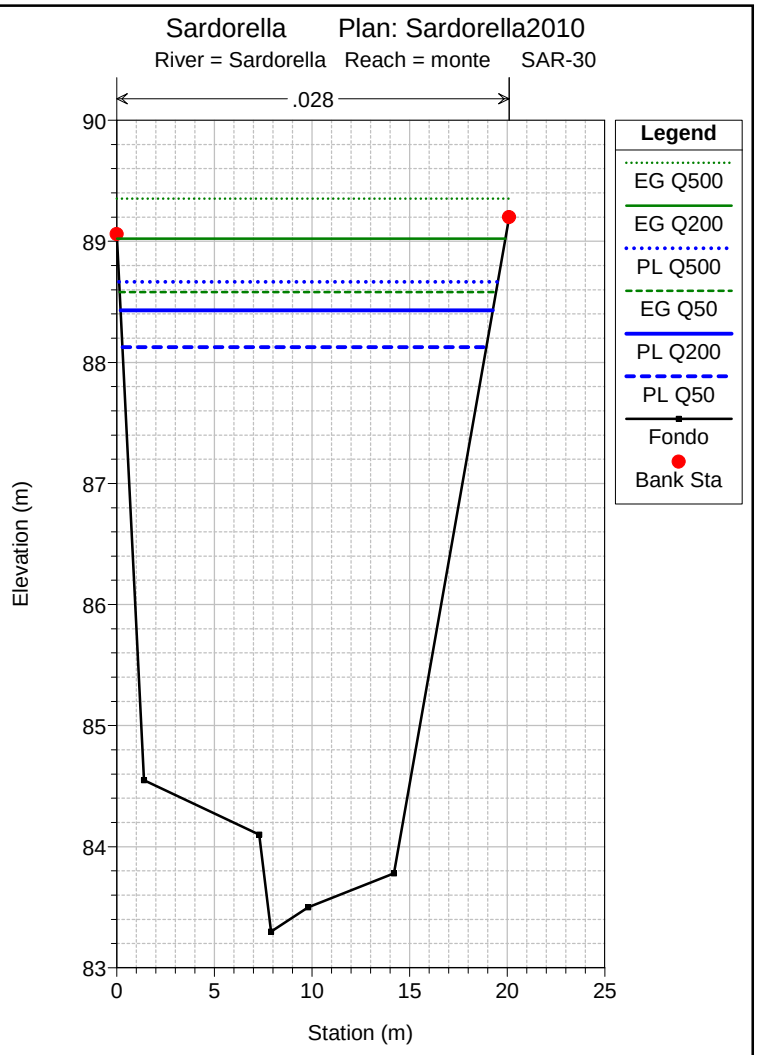

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR-32
.035
.028
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

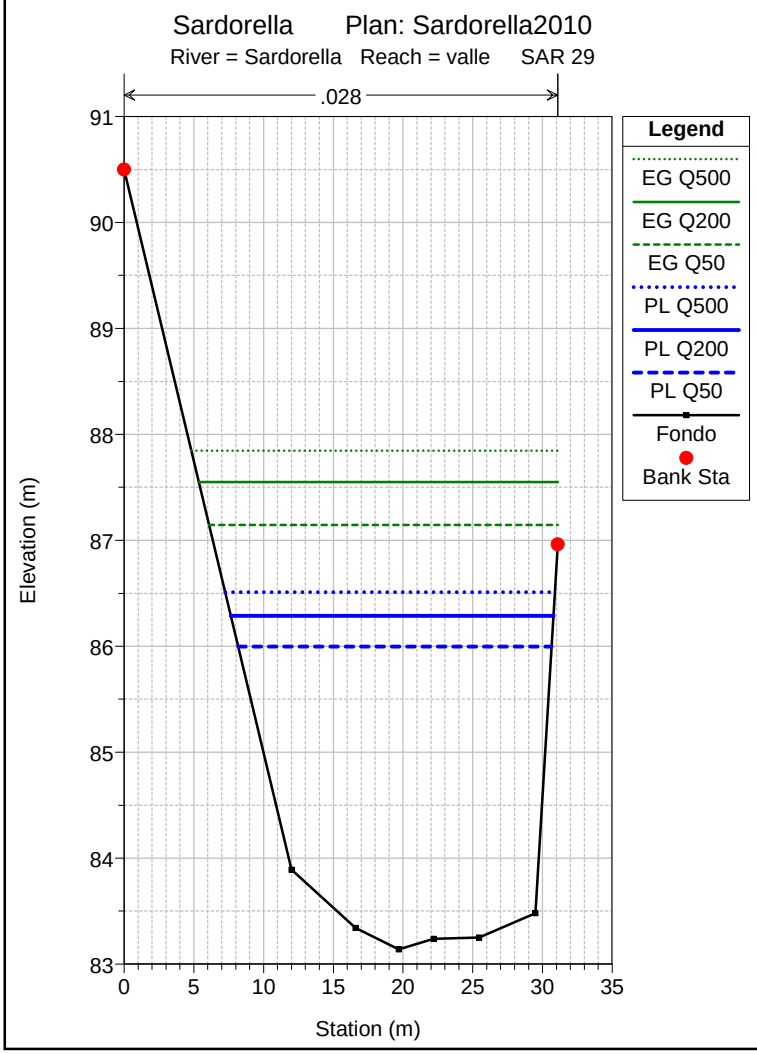

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR-31
.028
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

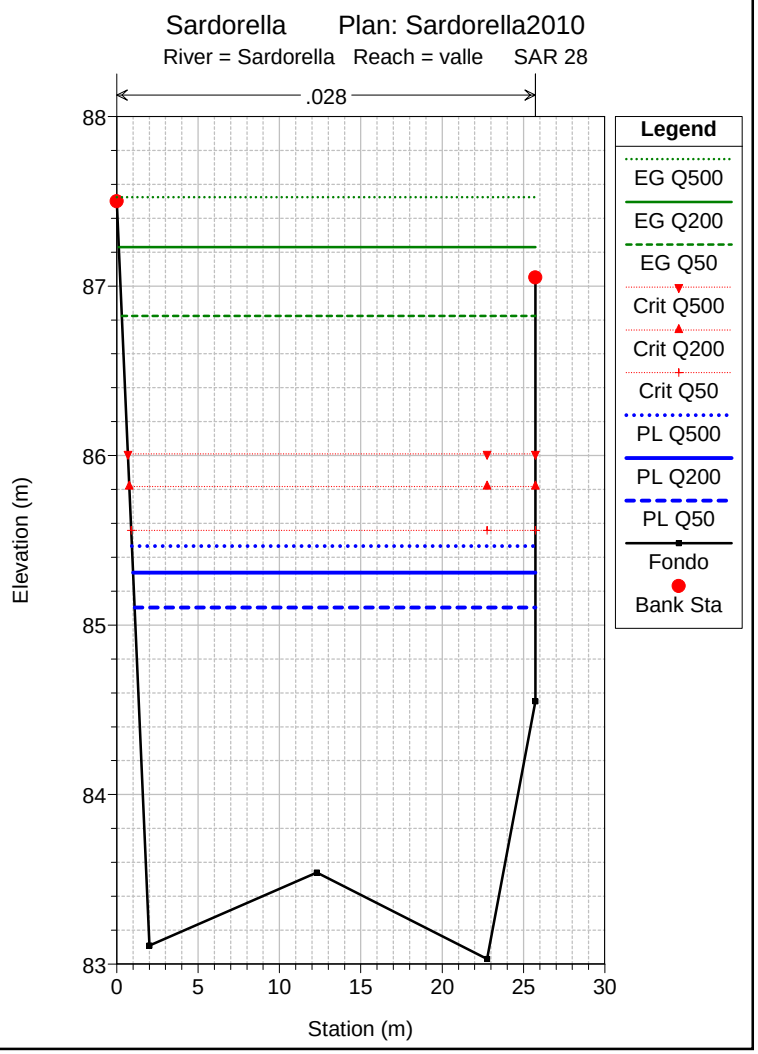

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR-30
.028
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)


Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte
.028
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)


Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte
.028
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

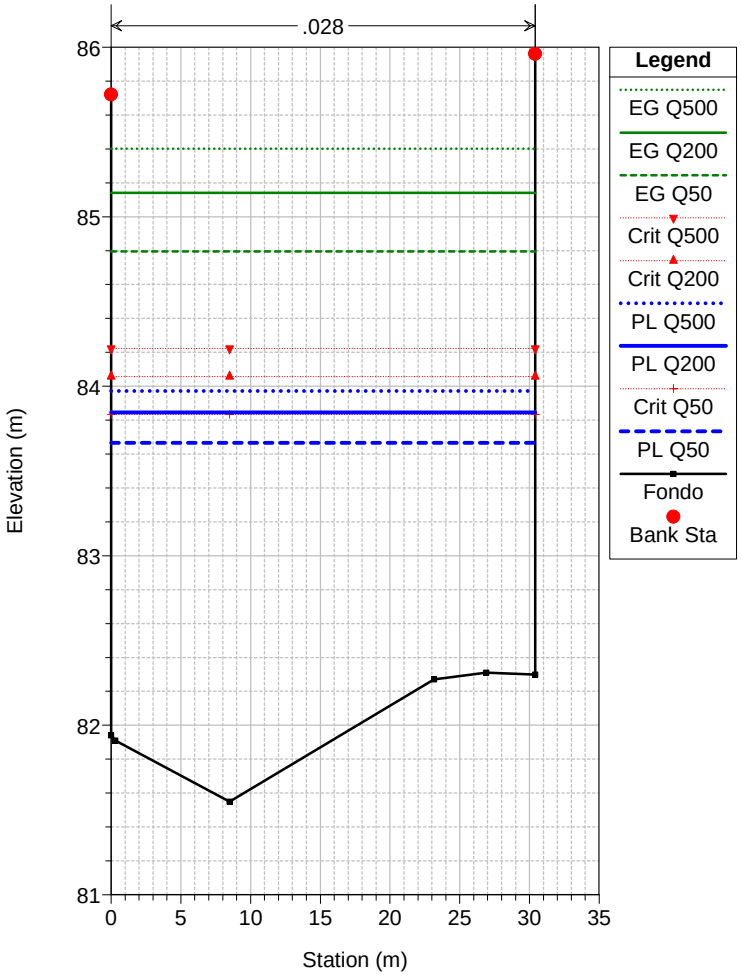

Sardorella Plan: Sardorella2010
River = Sardorella Reach = monte SAR-30
.028
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)


Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR 29
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)


Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR 28
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

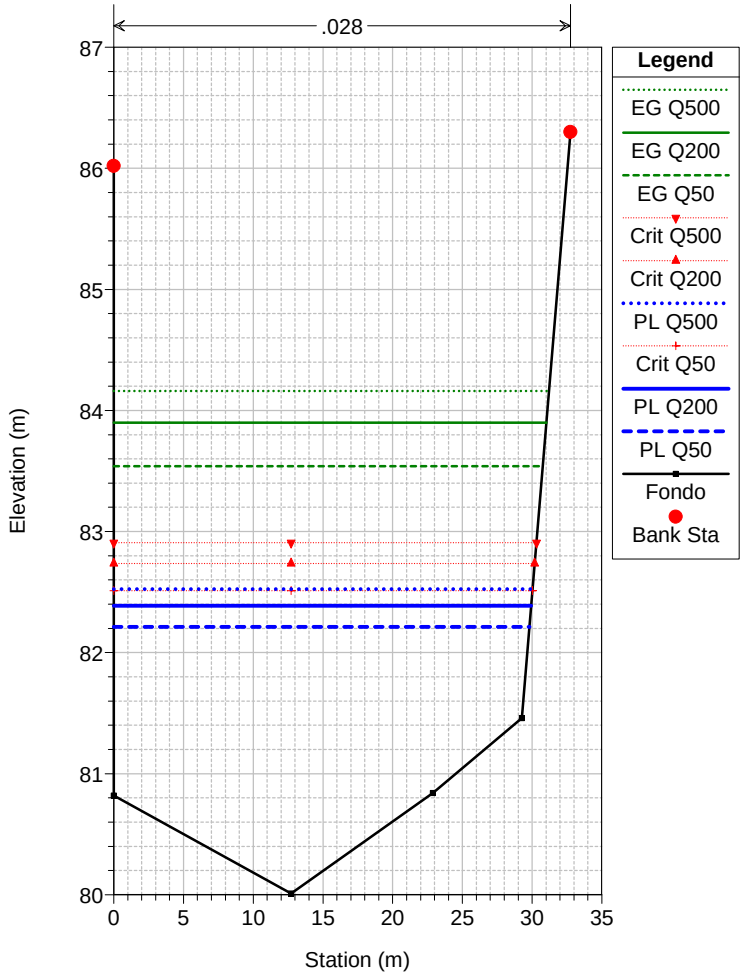
Sardorella Plan: Sardorella2010

River = Sardorella Reach = valle SAR-27



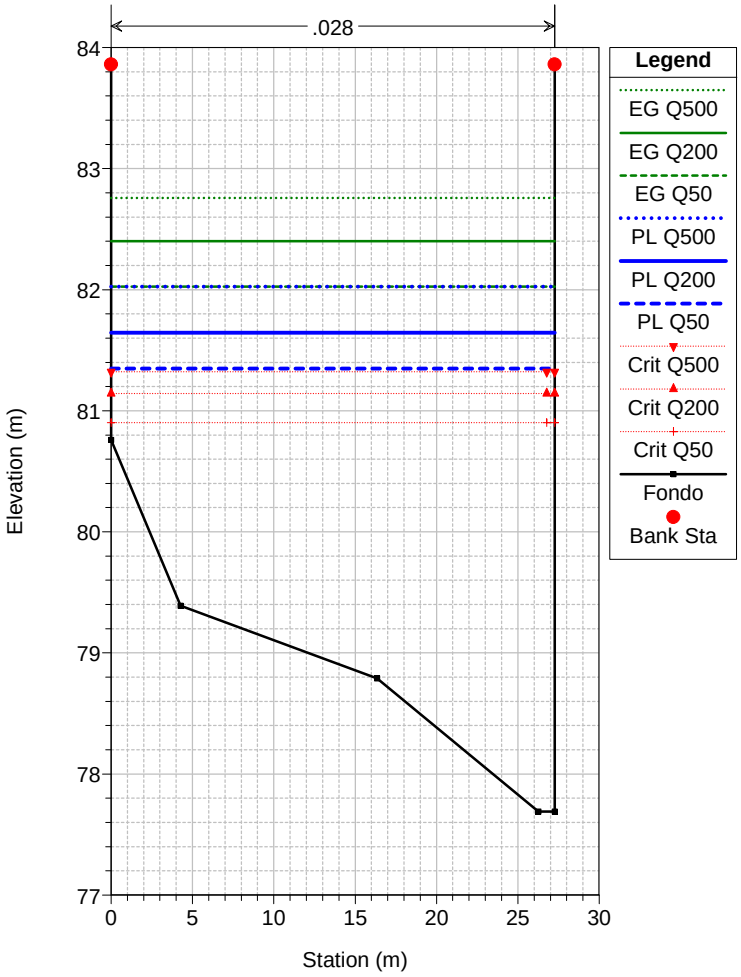
Sardorella Plan: Sardorella2010

River = Sardorella Reach = valle SAR 26



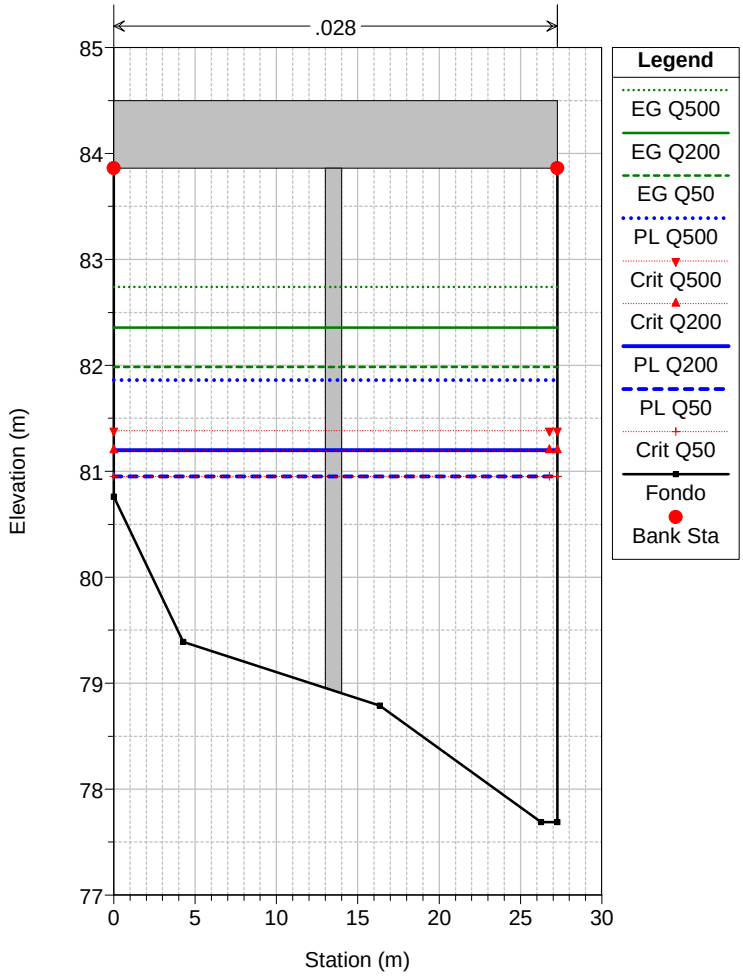
Sardorella Plan: Sardorella2010

River = Sardorella Reach = valle SAR 25



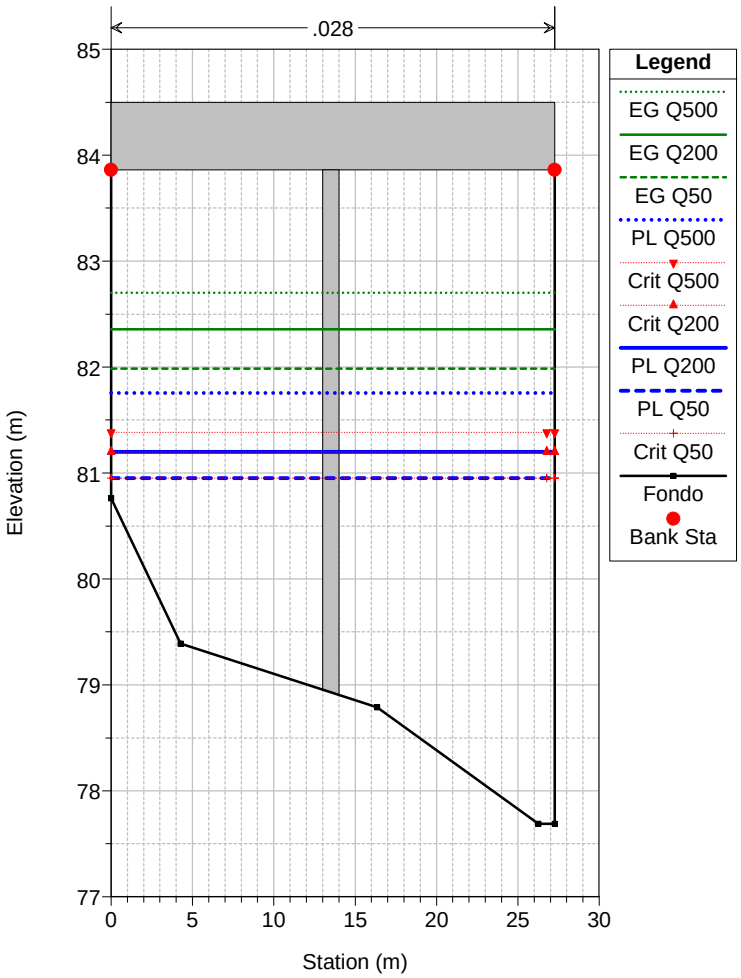
Sardorella Plan: Sardorella2010

River = Sardorella Reach = valle SAR 25



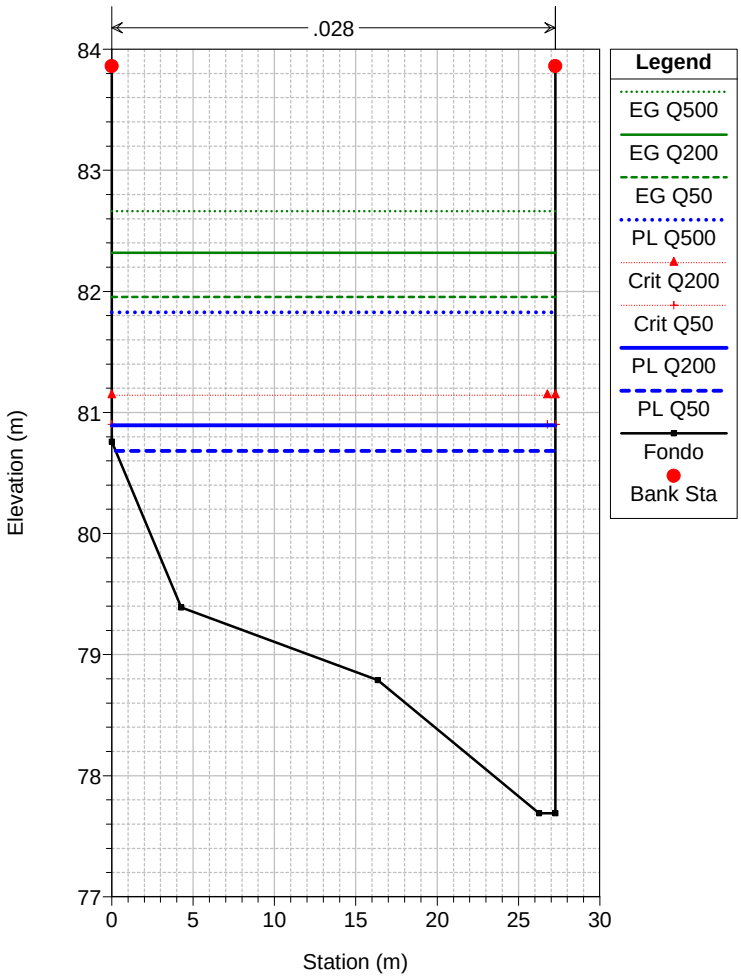
Sardorella Plan: Sardorella2010

River = Sardorella Reach = valle SAR 25



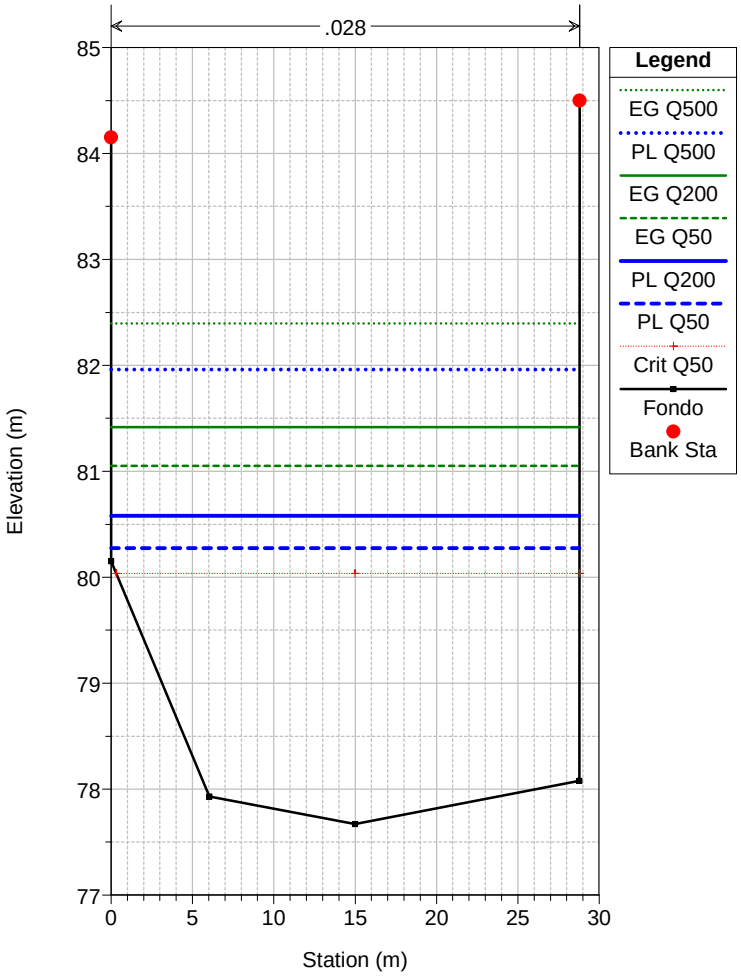
Sardorella Plan: Sardorella2010

River = Sardorella Reach = valle SAR 25



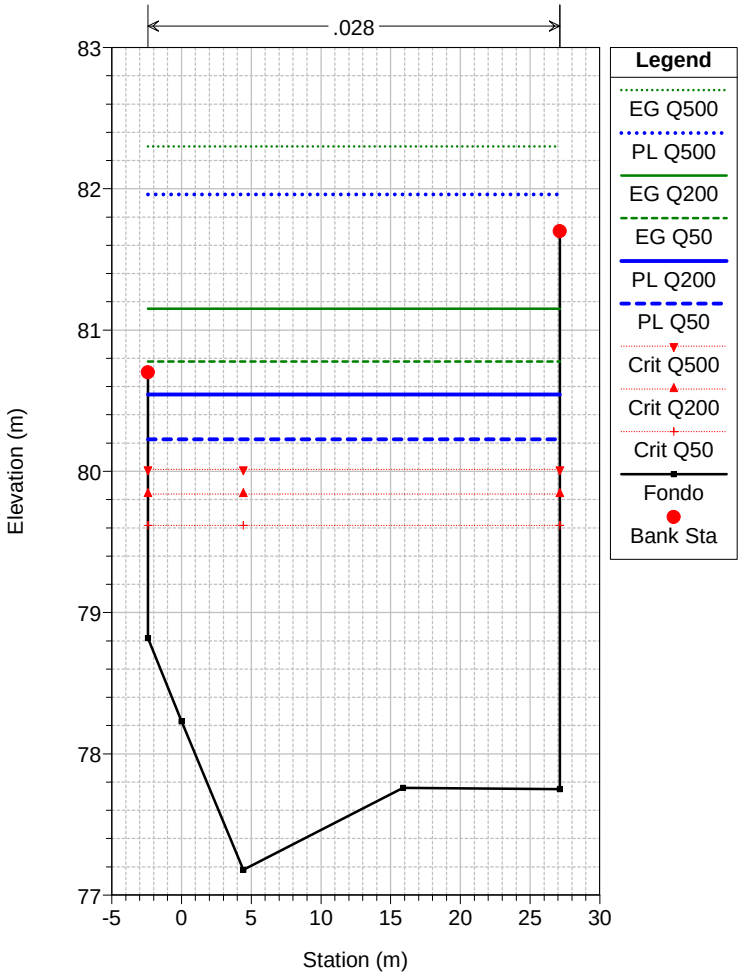
Sardorella Plan: Sardorella2010

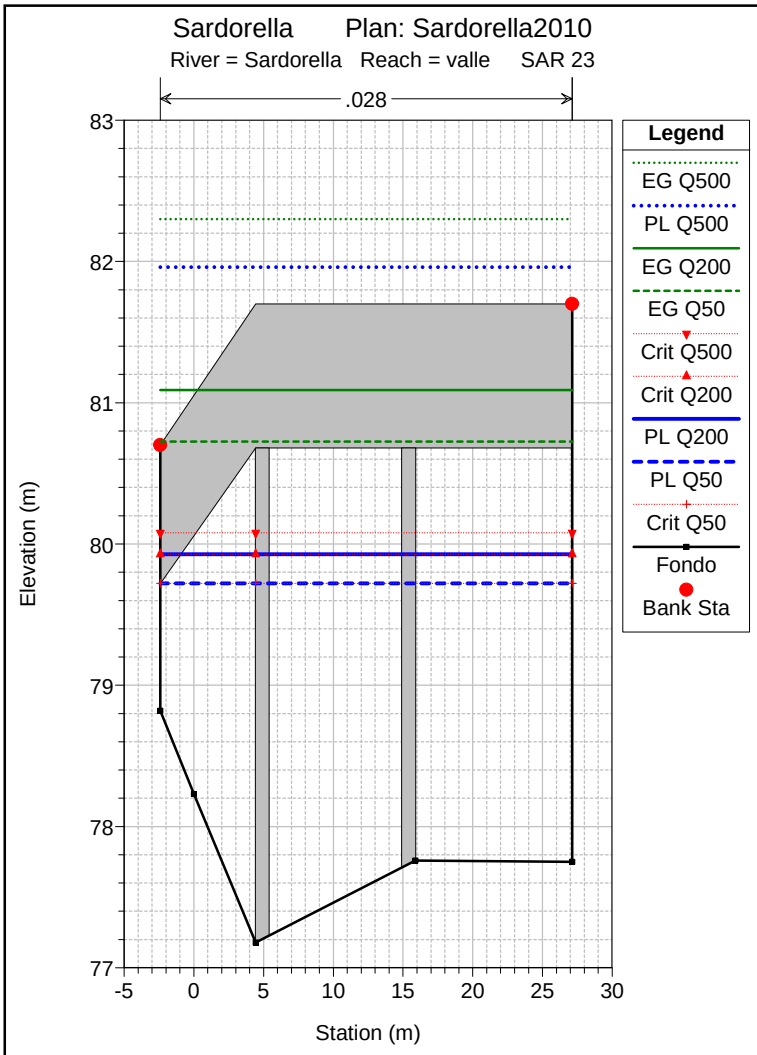
River = Sardorella Reach = valle SAR 24

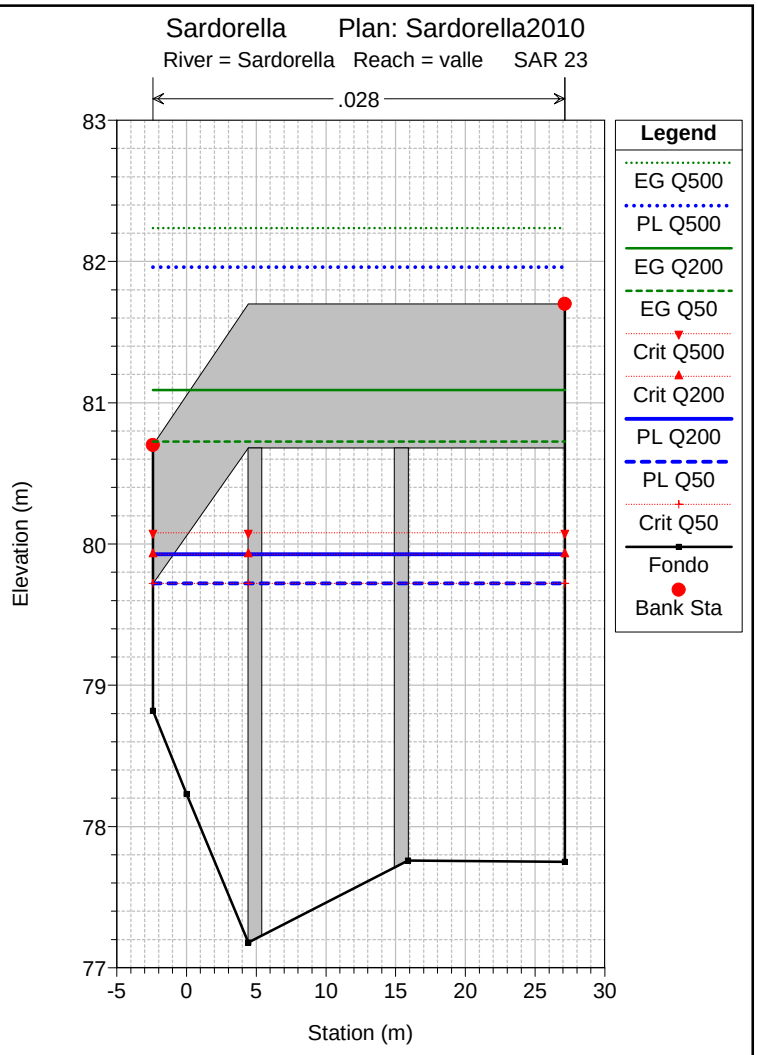


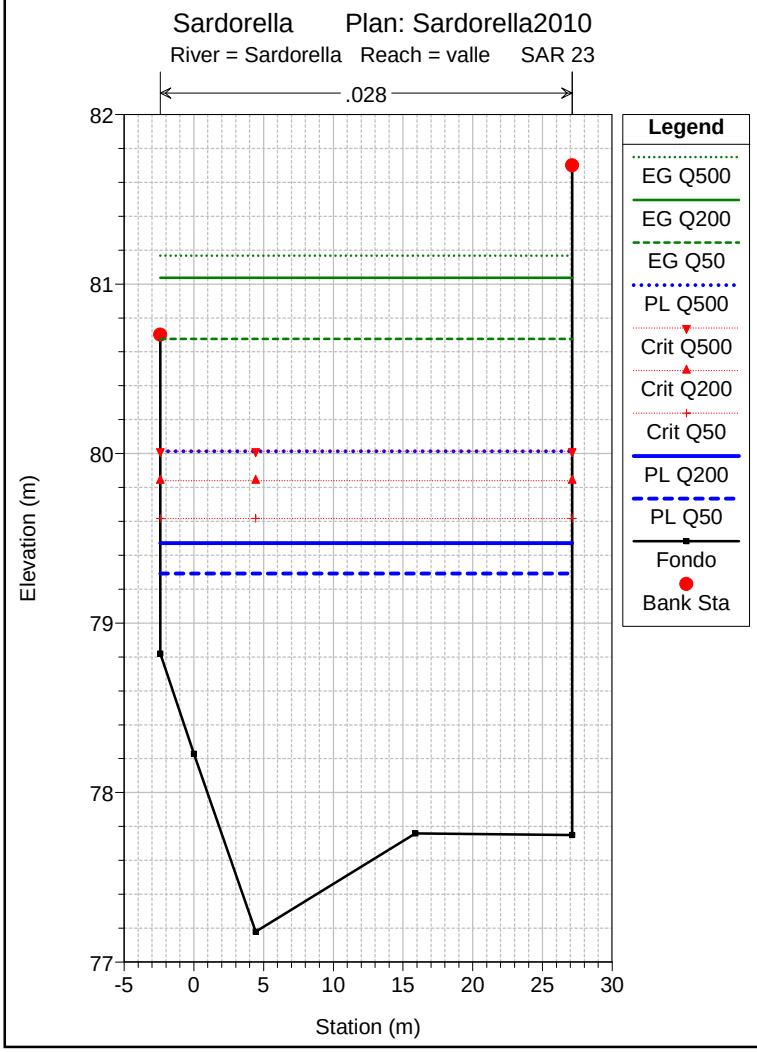
Sardorella Plan: Sardorella2010

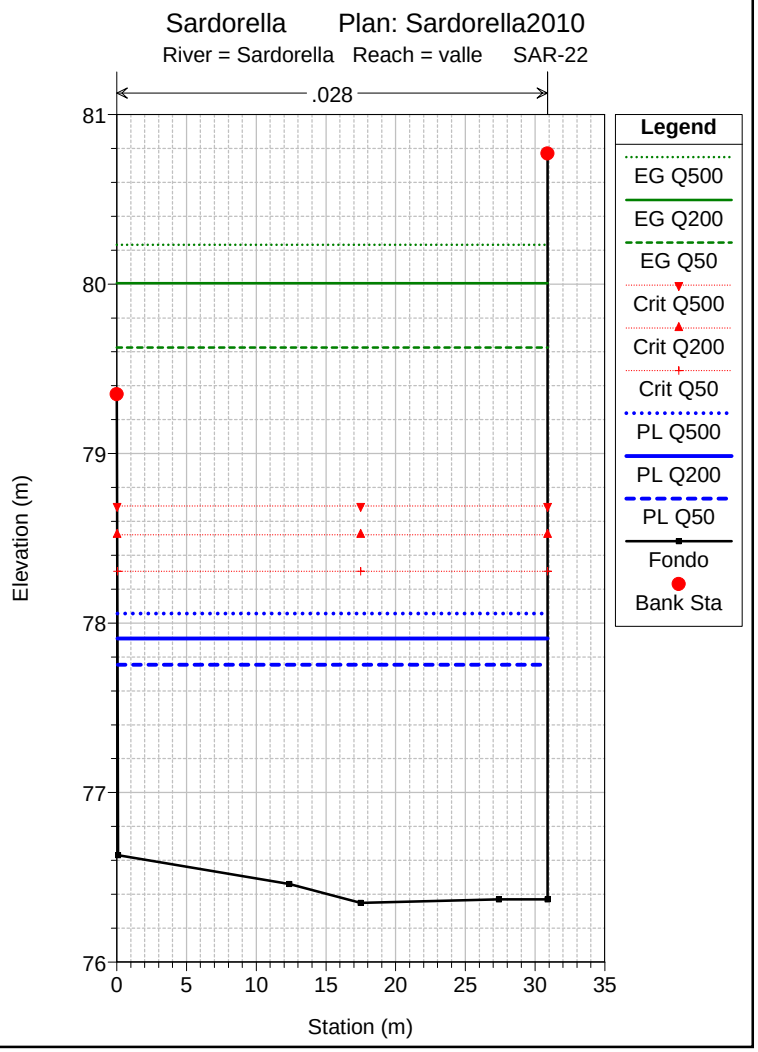
River = Sardorella Reach = valle SAR 23

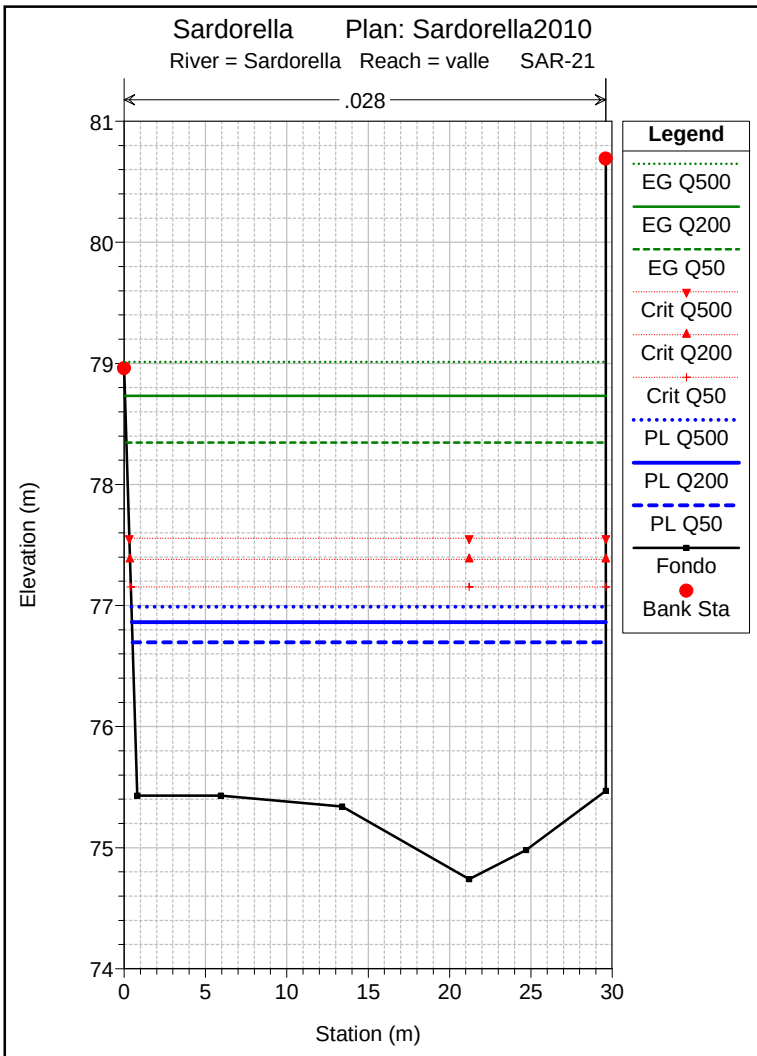


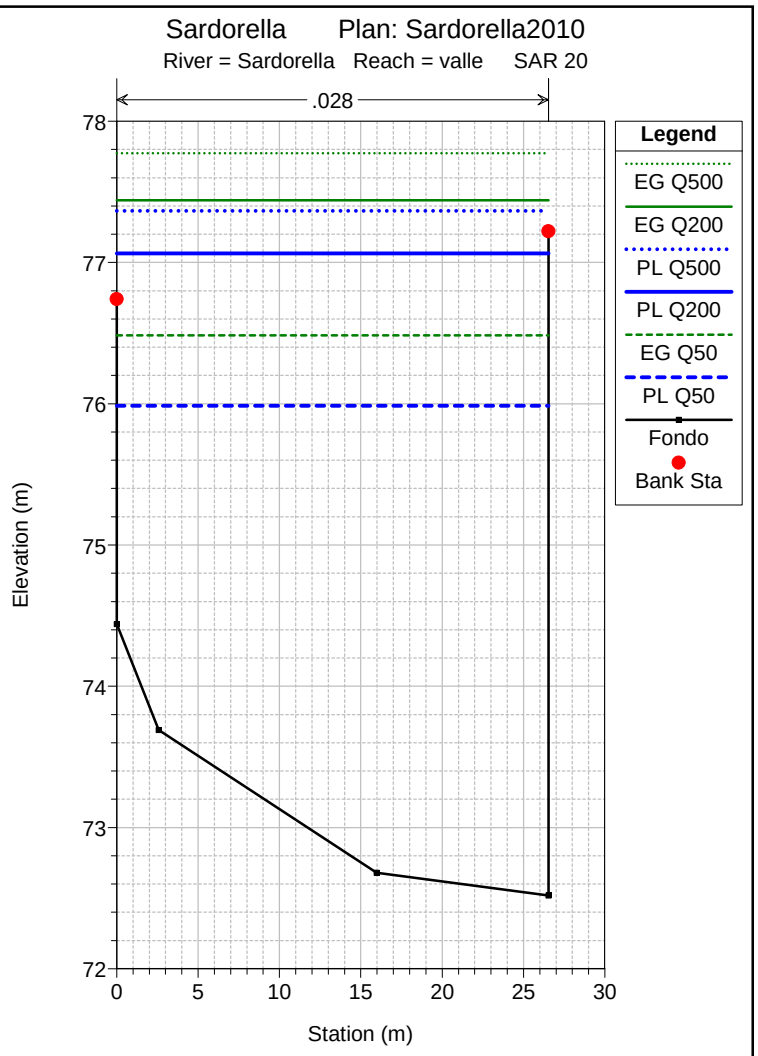

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR 23
.028
Legend
EG Q500
PL Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

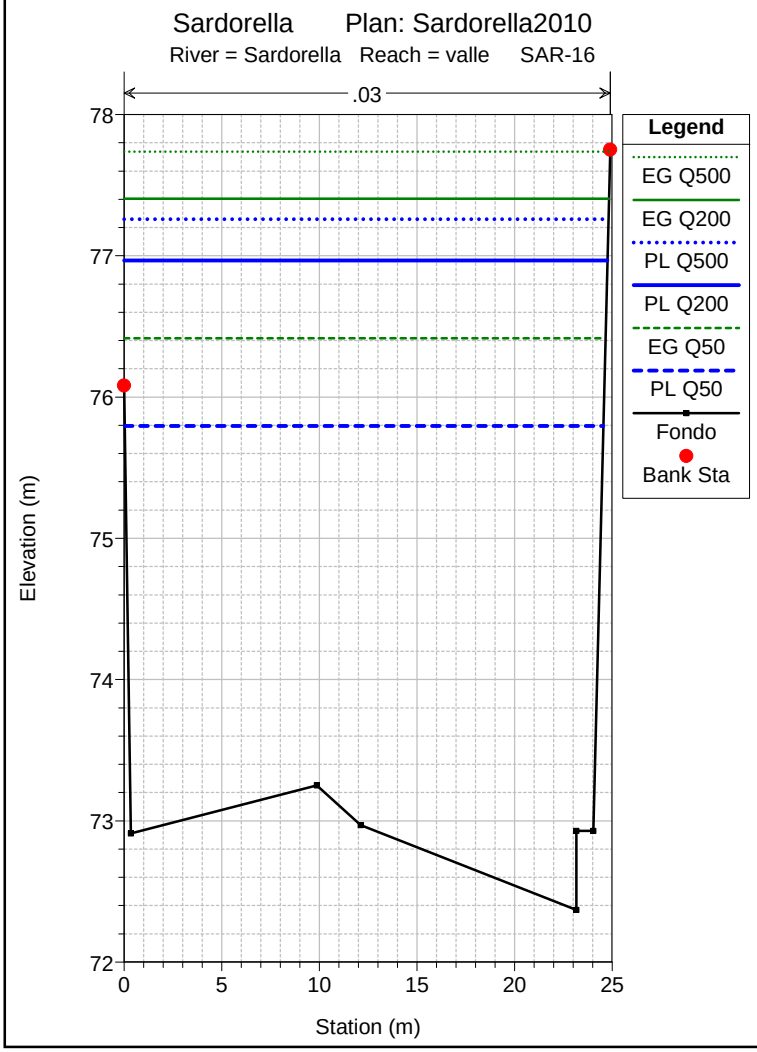

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR 23
.028
Legend
EG Q500
PL Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

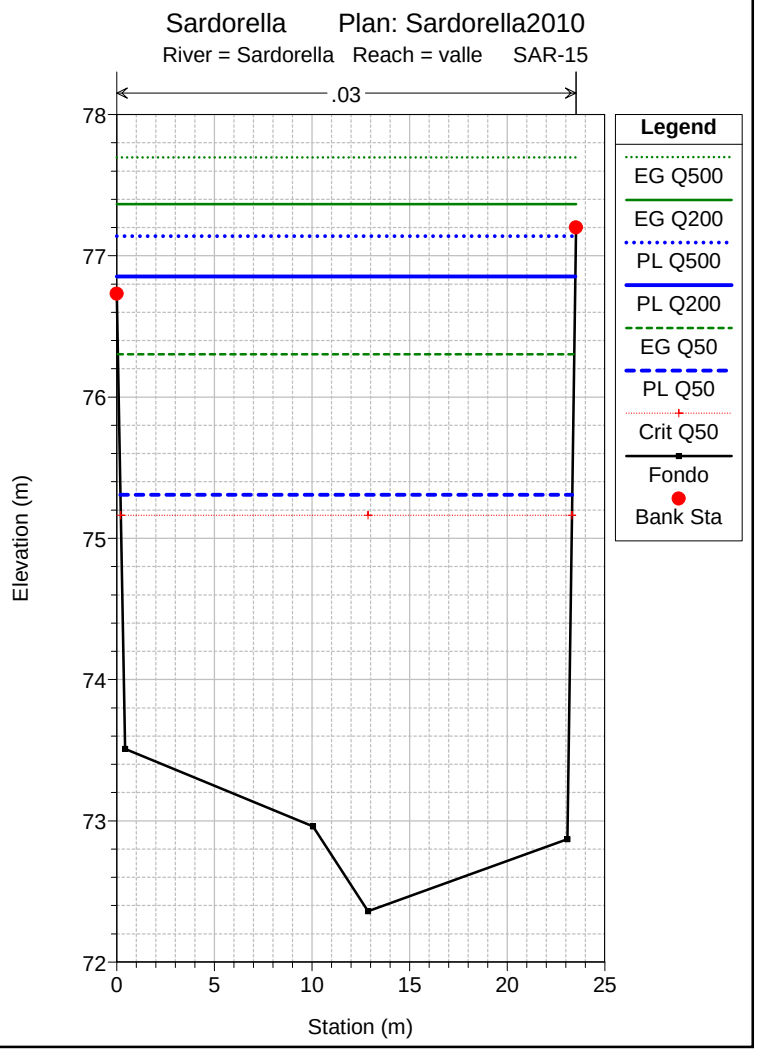

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR 23
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

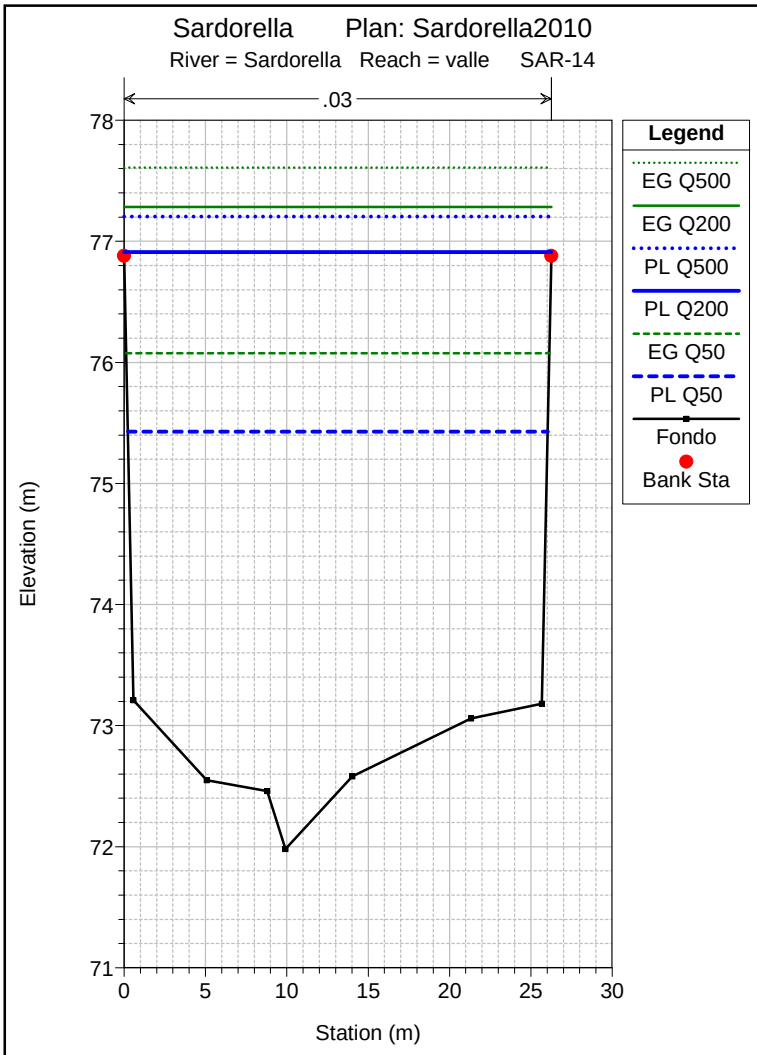

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-22
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

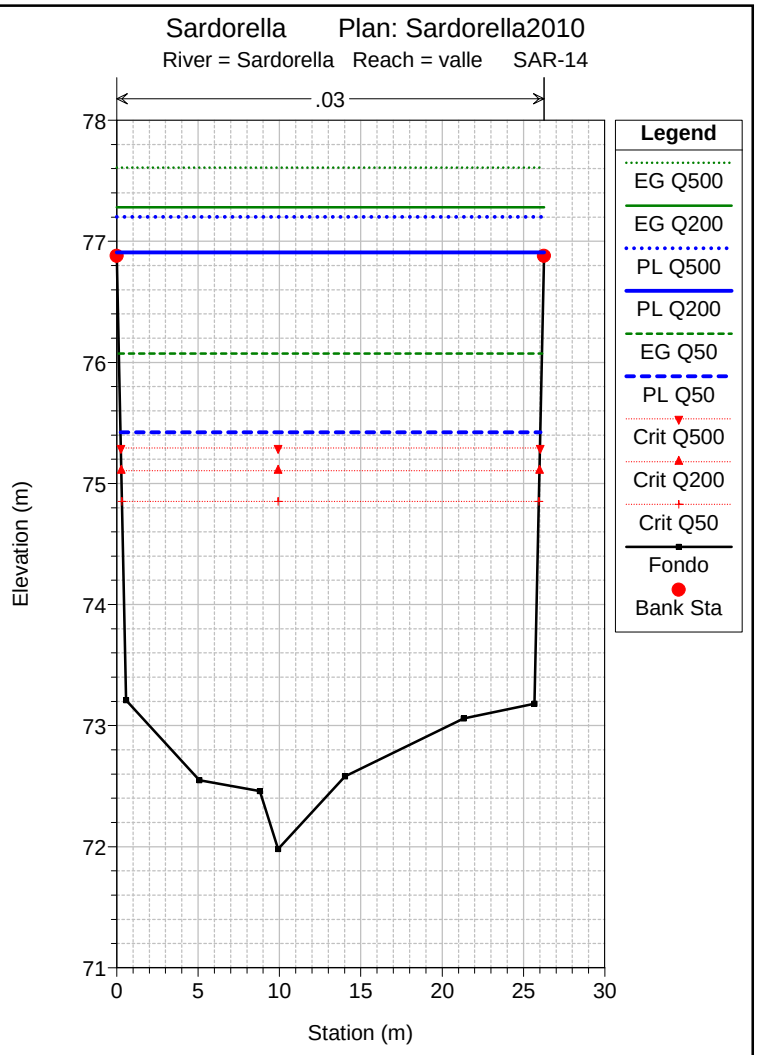

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-21
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

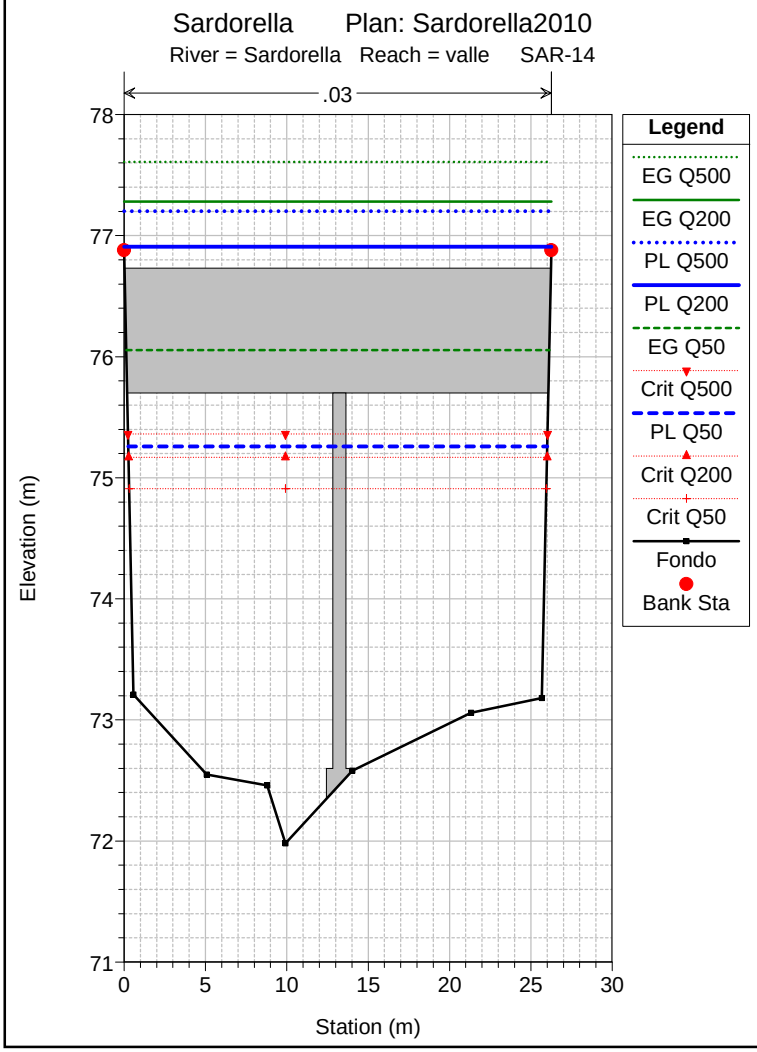

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR 20
.028
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

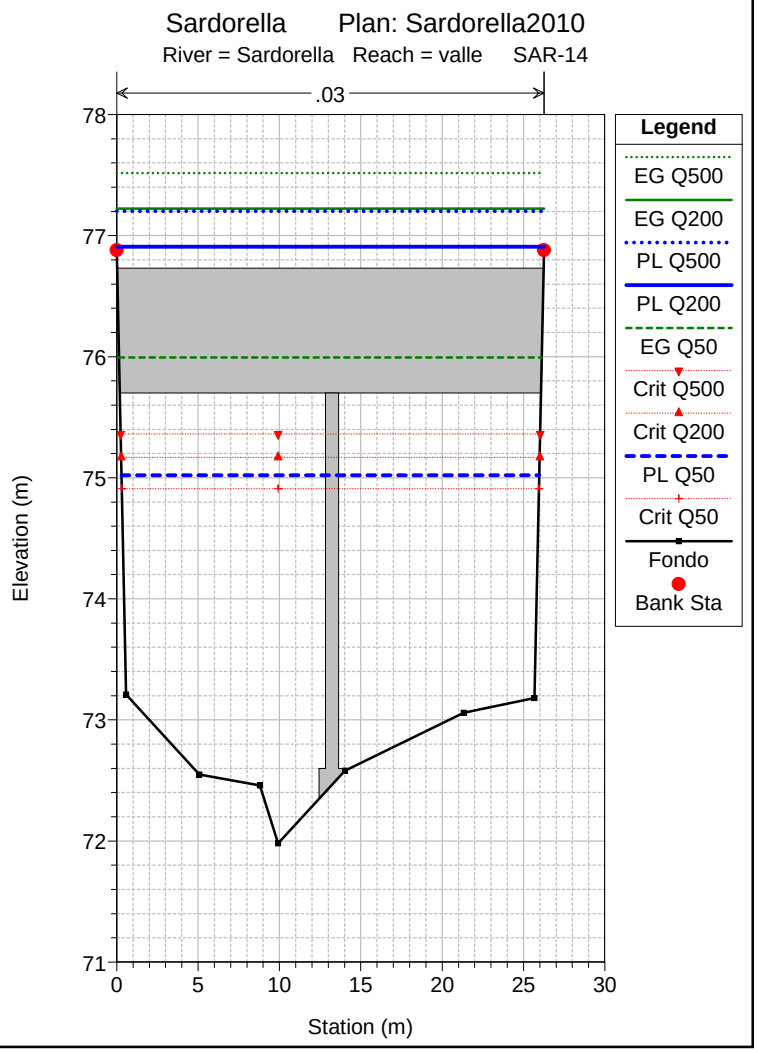

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-16
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

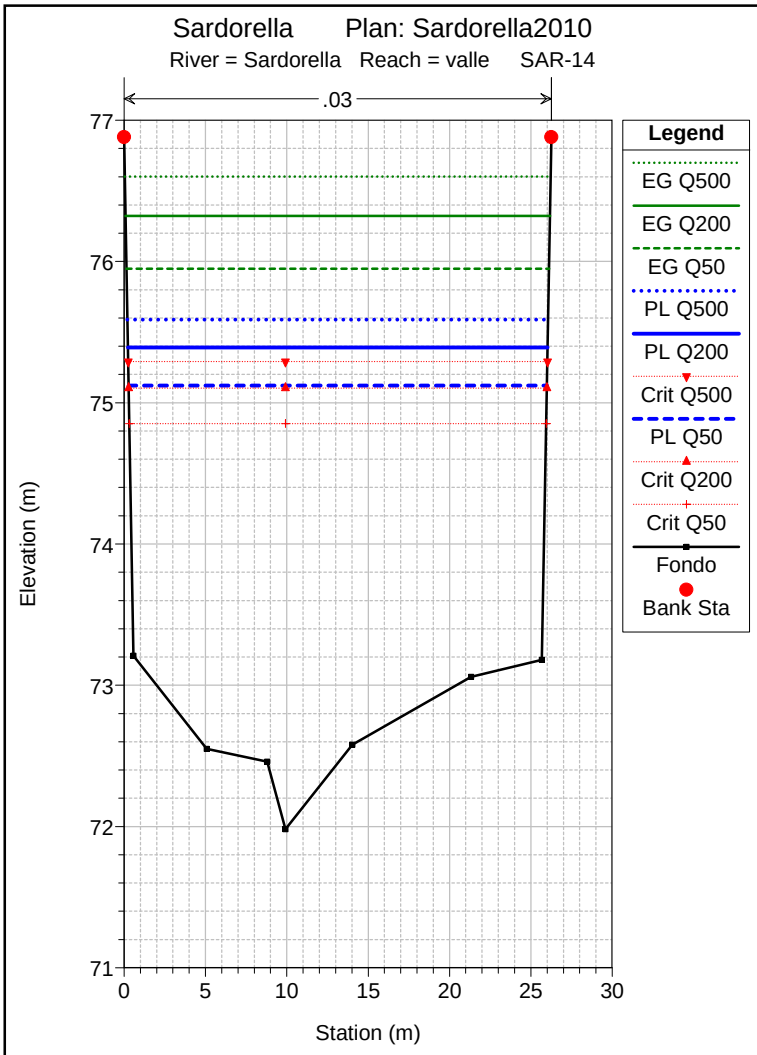

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-15
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

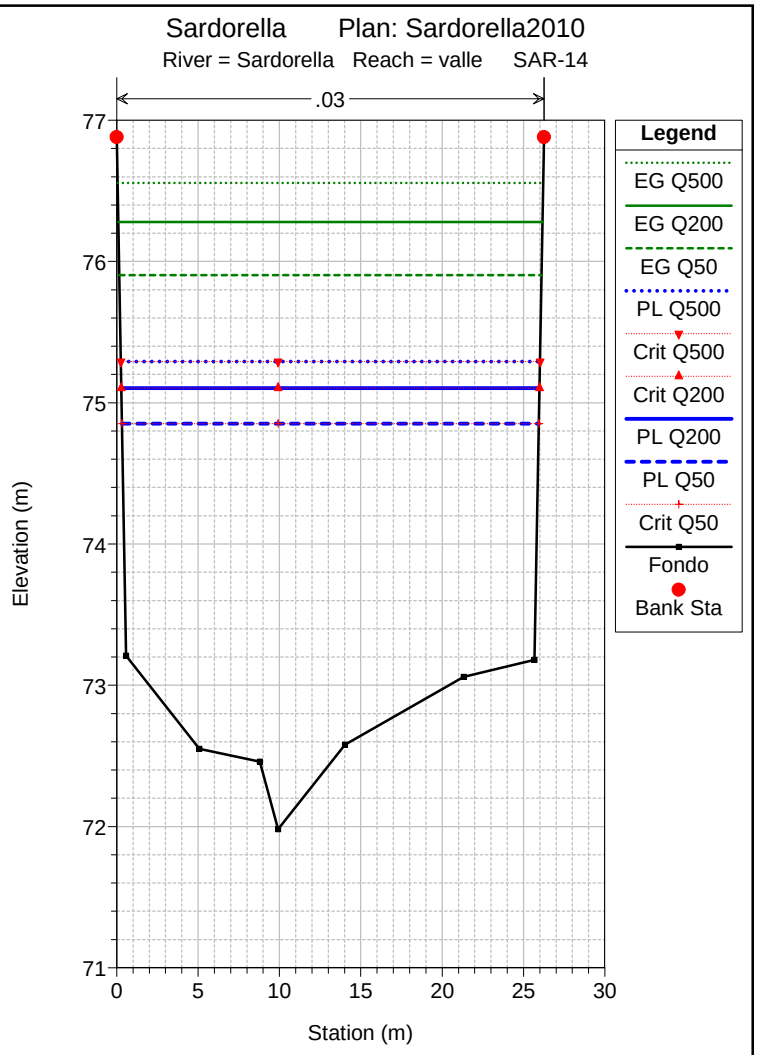

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-14
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)
78
77
76
75
74
73
72
71
0
5
10
15
20
25
30

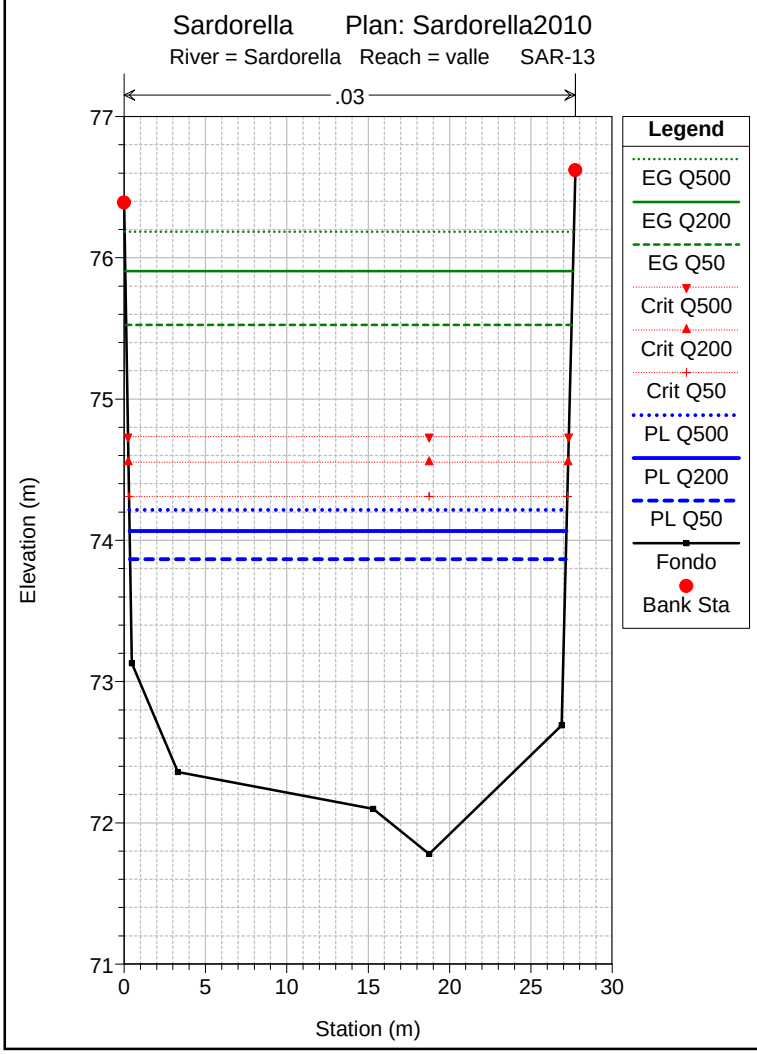

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-14
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)
78
77
76
75
74
73
72
71
0
5
10
15
20
25
30

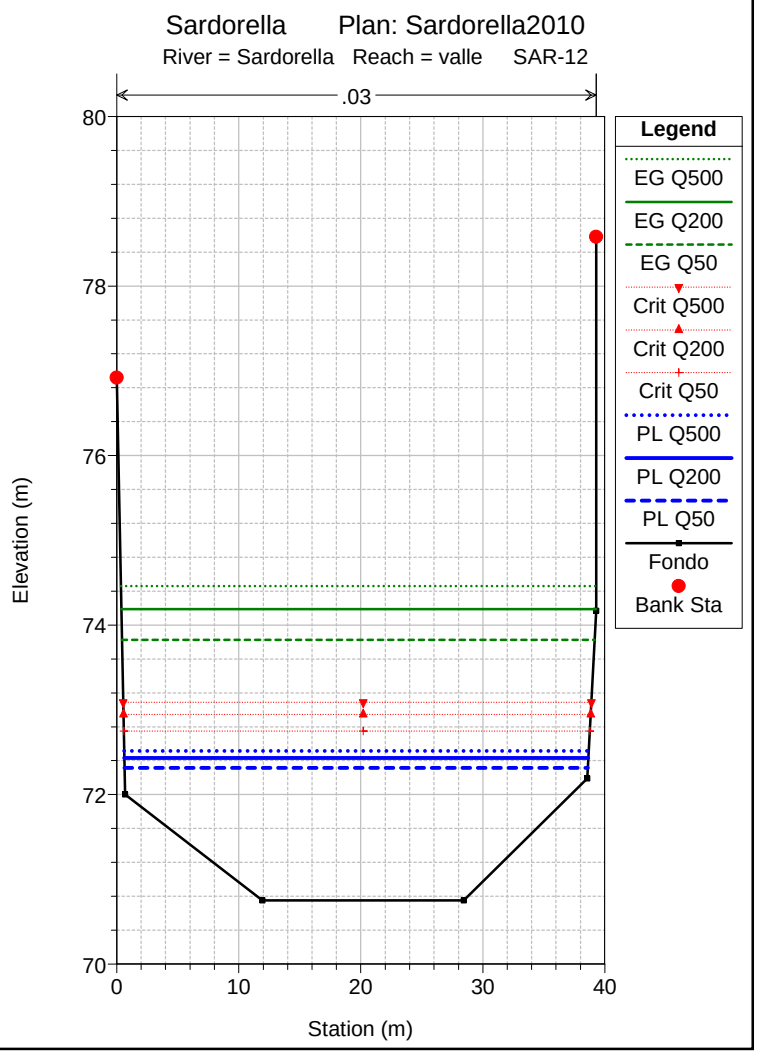

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-14
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)
78
77
76
75
74
73
72
71
0
5
10
15
20
25
30

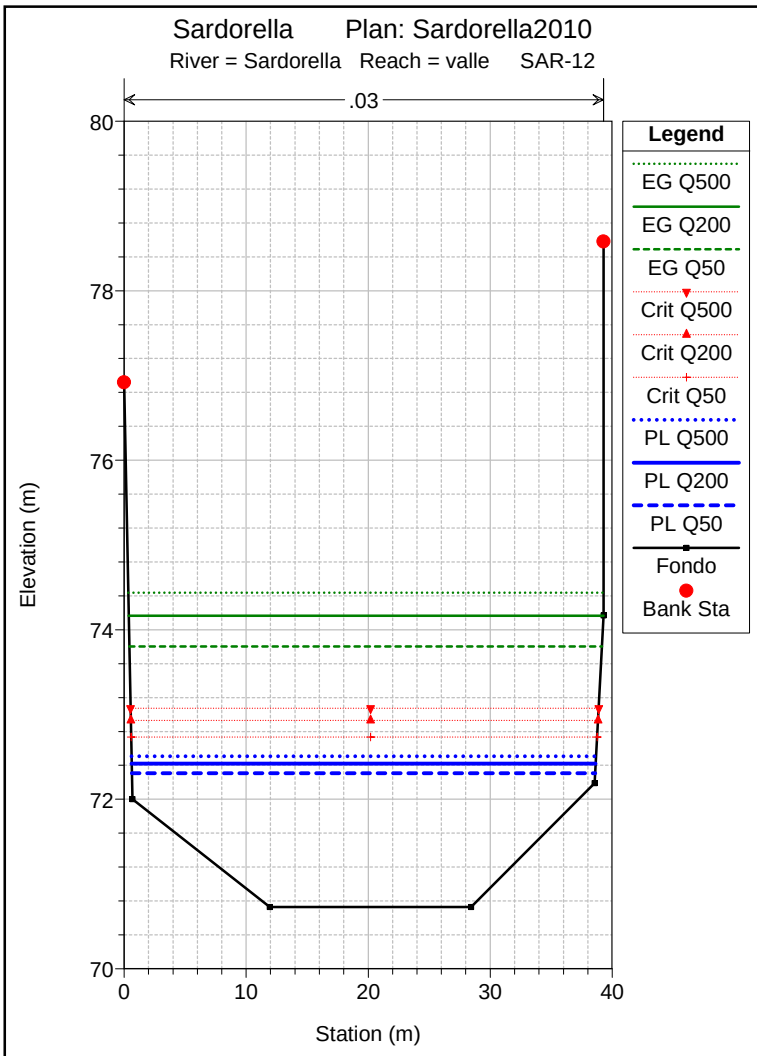

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-14
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)
78
77
76
75
74
73
72
71
0
5
10
15
20
25
30

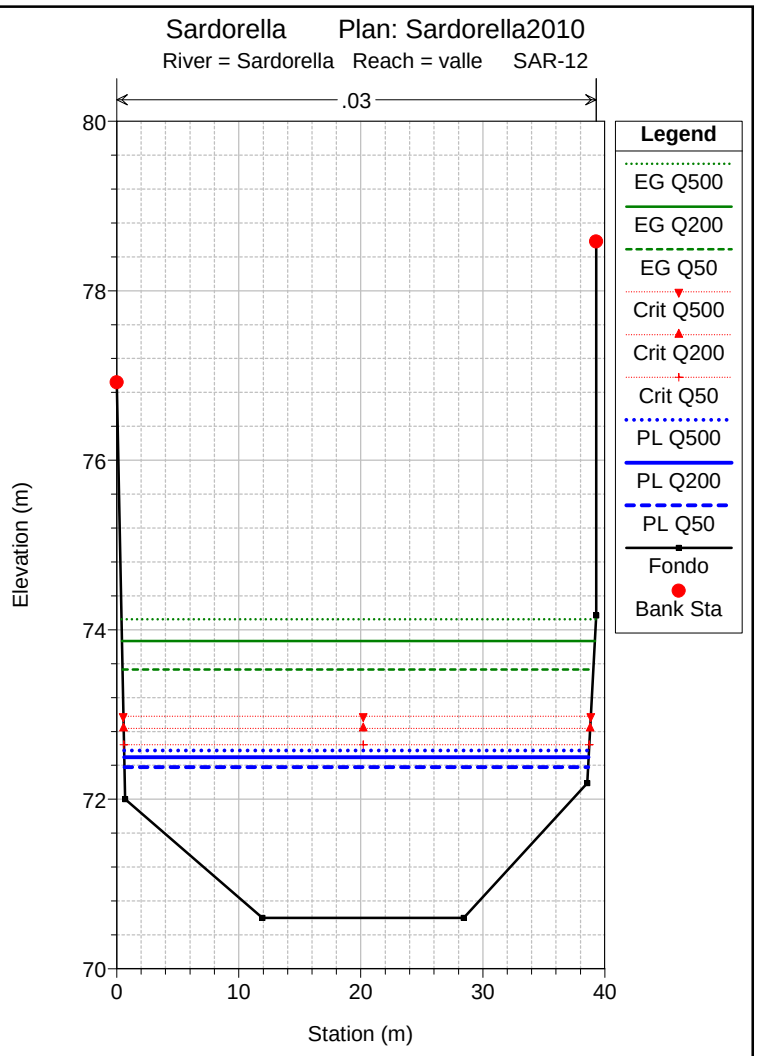

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-14
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

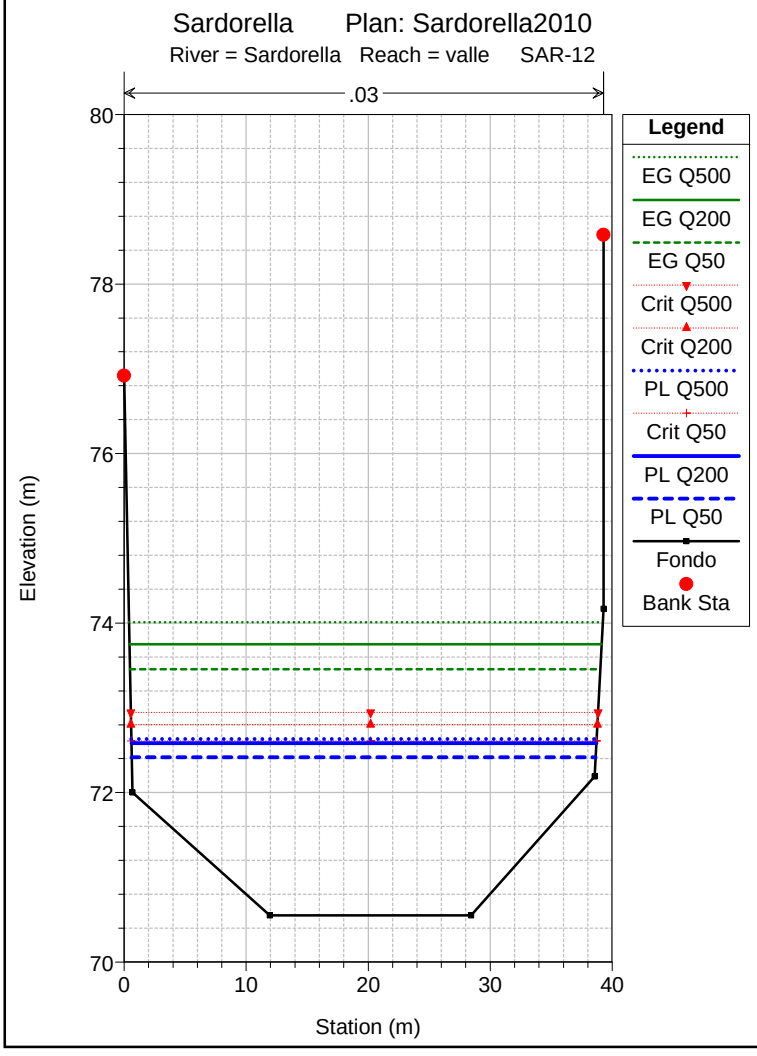

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-14
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

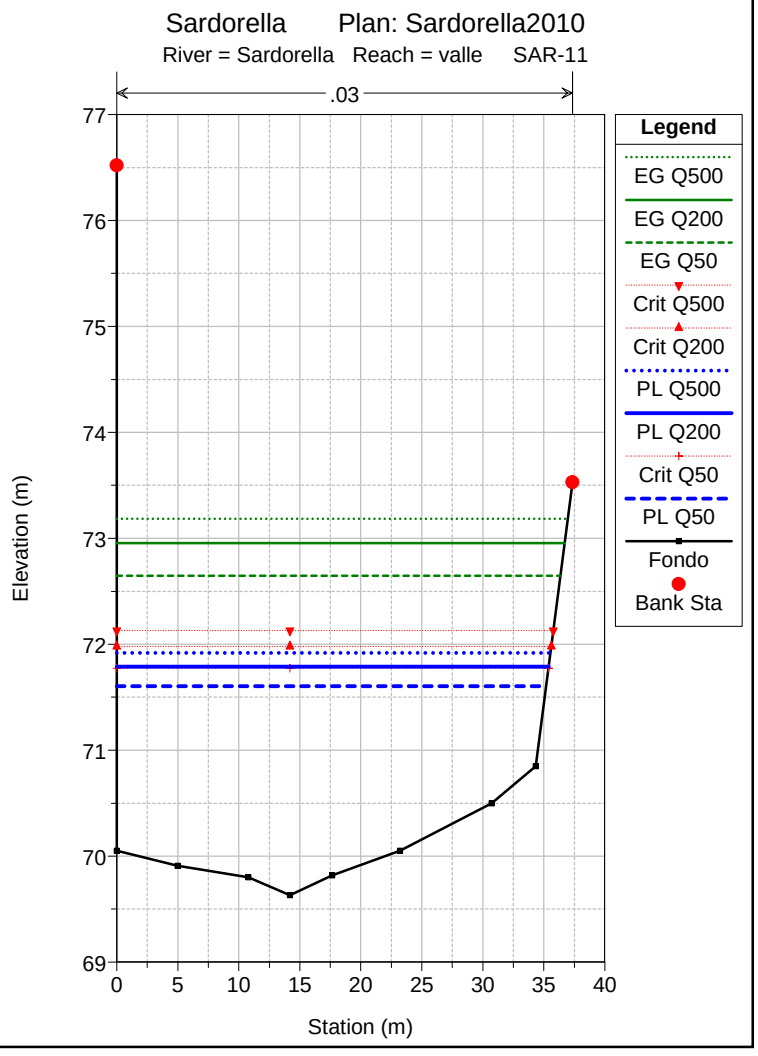

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-13
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

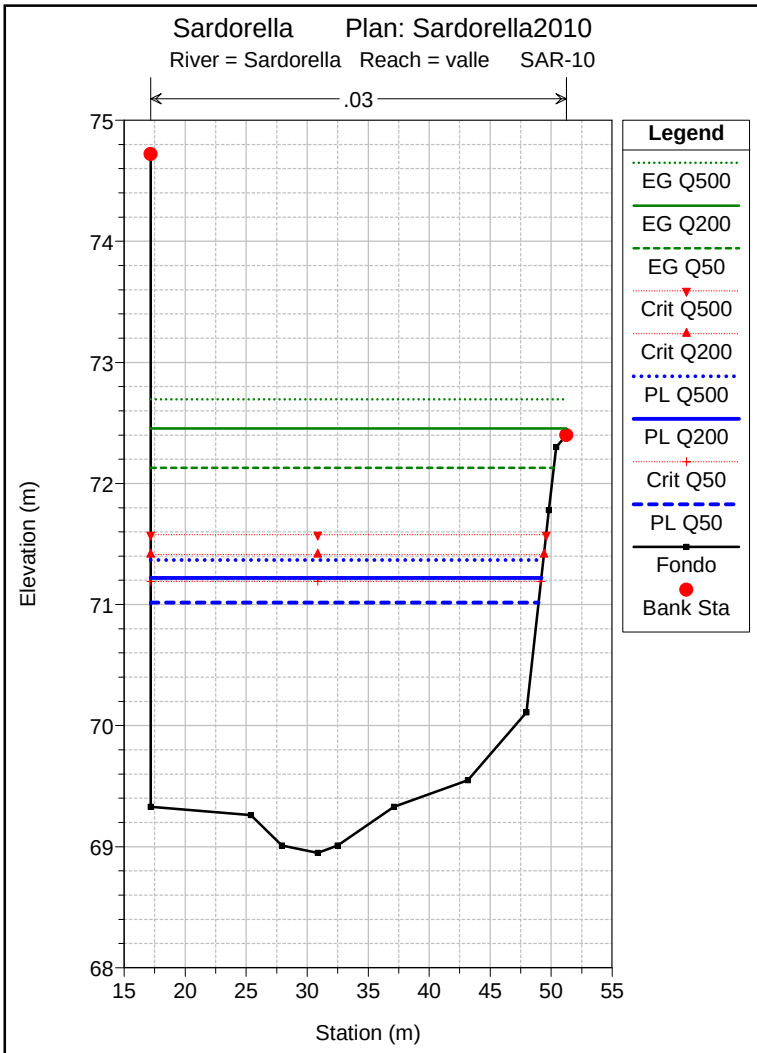

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-12
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

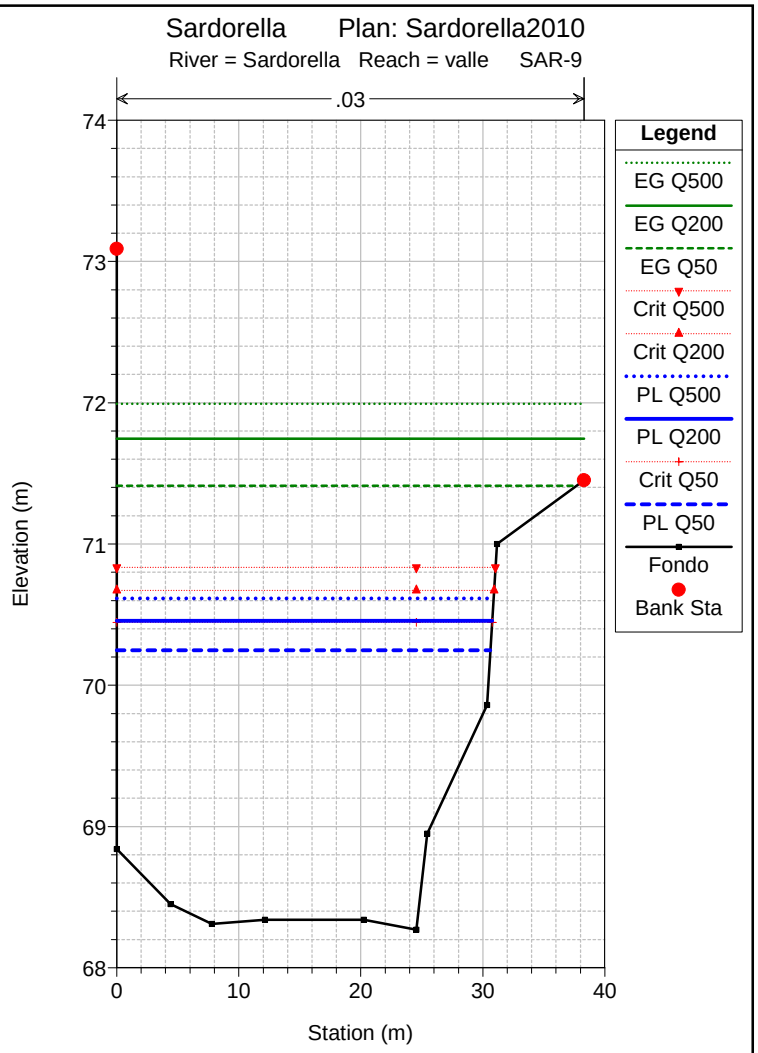

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-12
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)
80
78
76
74
72
70
0
10
20
30
40

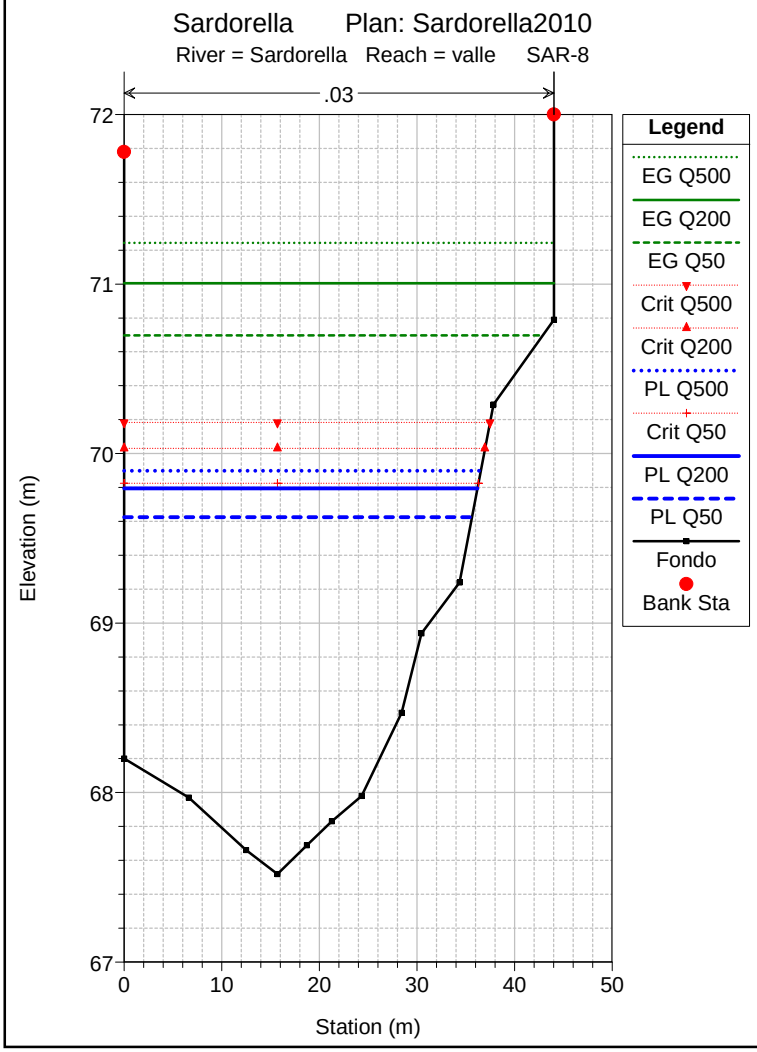

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-12
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)
80
78
76
74
72
70
0
10
20
30
40

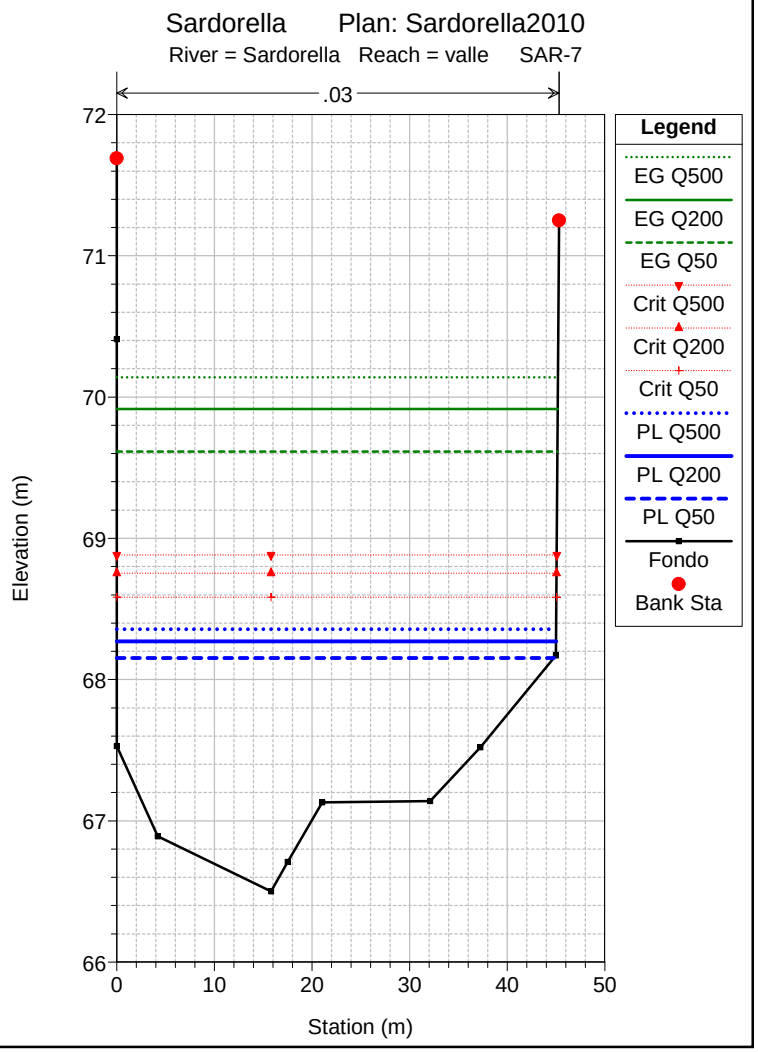

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-12
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)
80
78
76
74
72
70
0
10
20
30
40

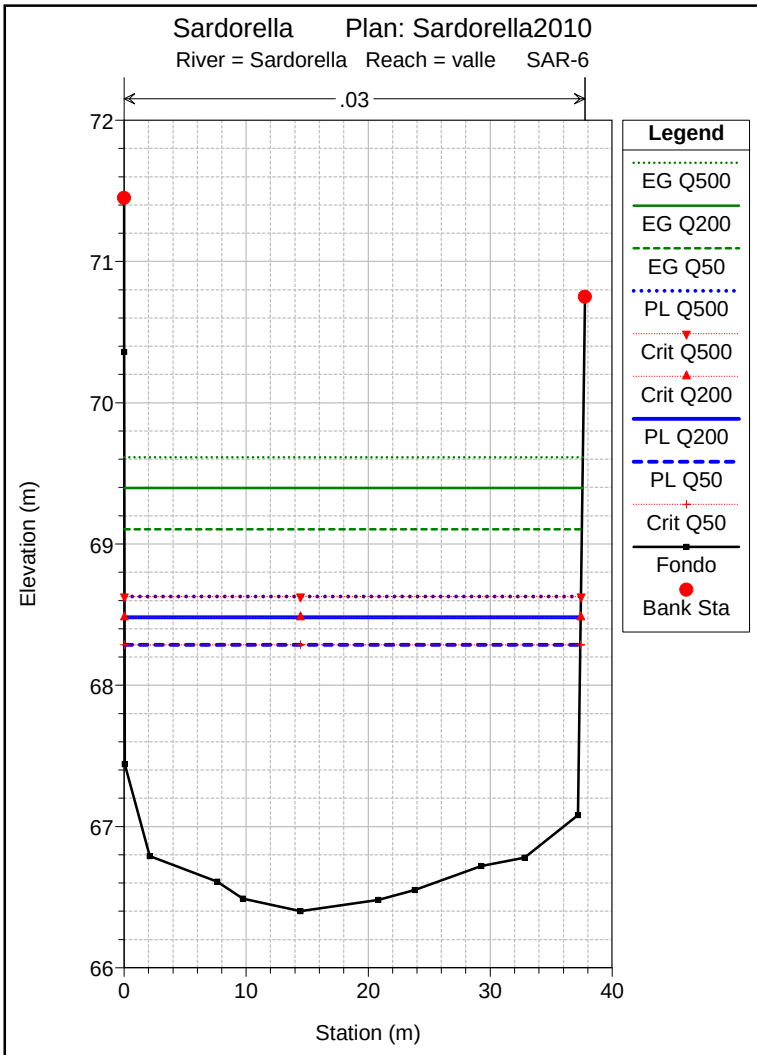

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-11
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)
77
76
75
74
73
72
71
70
69
0
5
10
15
20
25
30
35
40

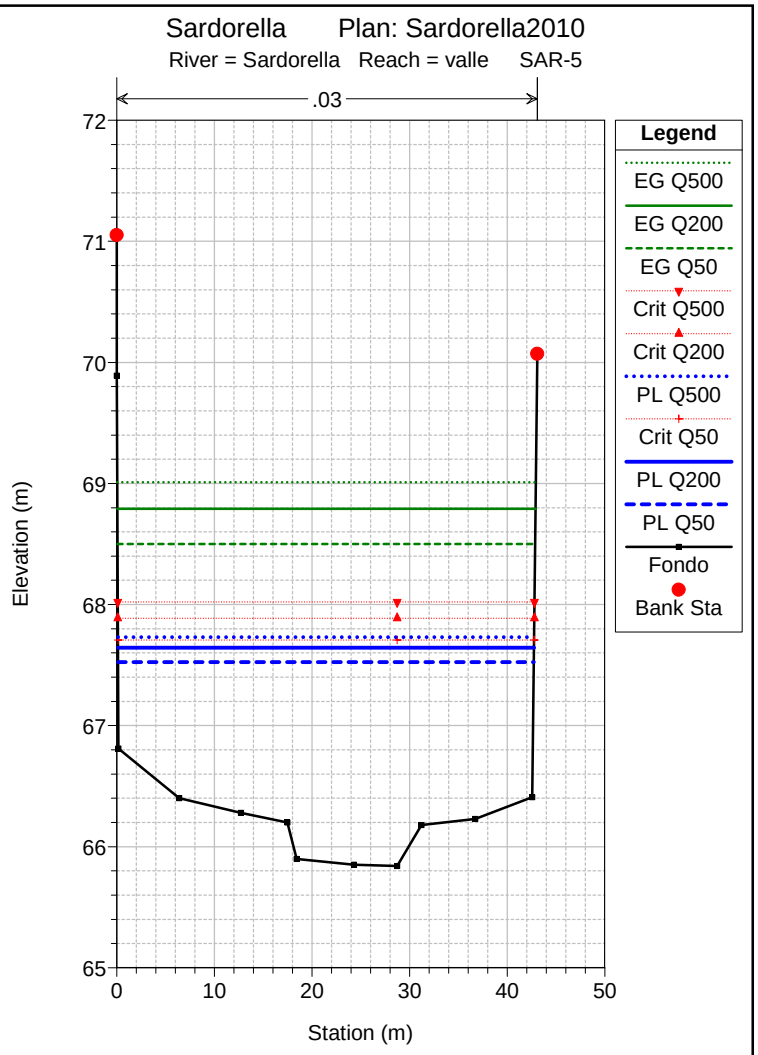

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-10
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

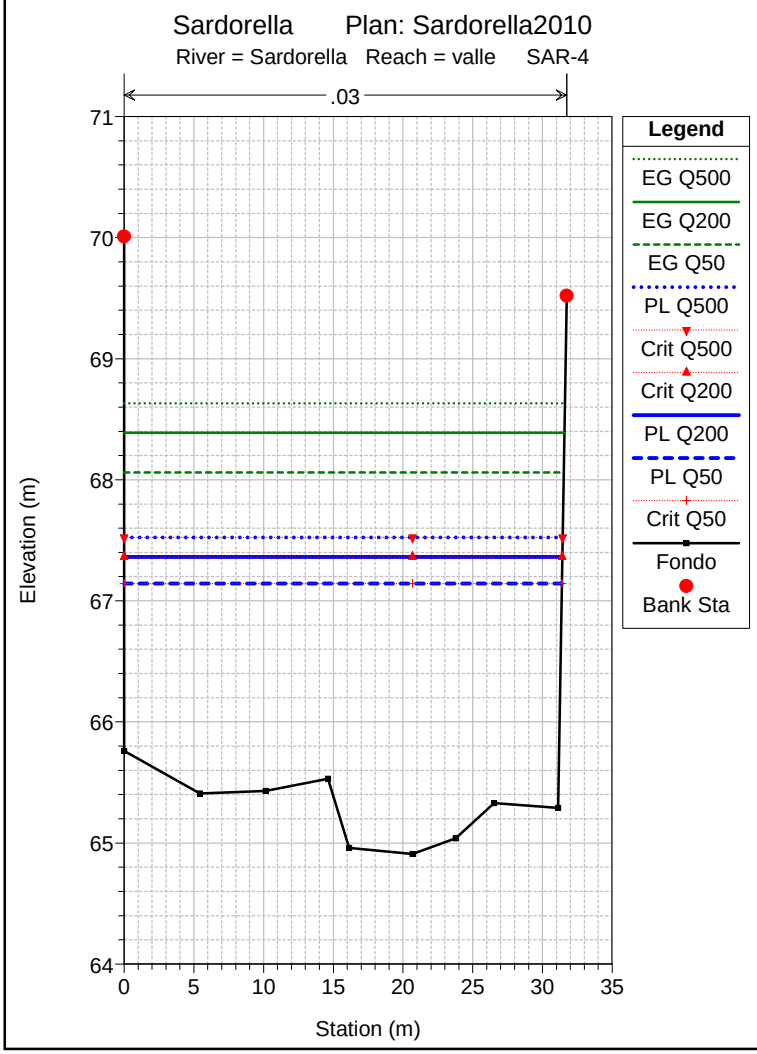

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-9
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

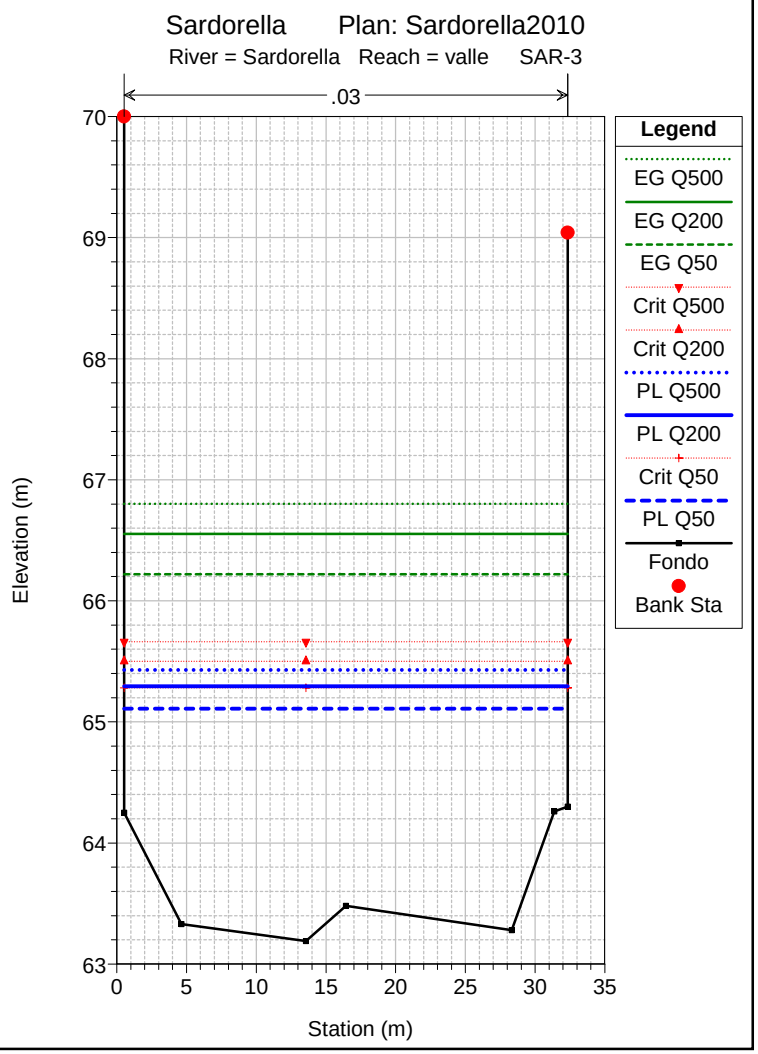

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-8
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)


Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-7
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)


Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-6
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

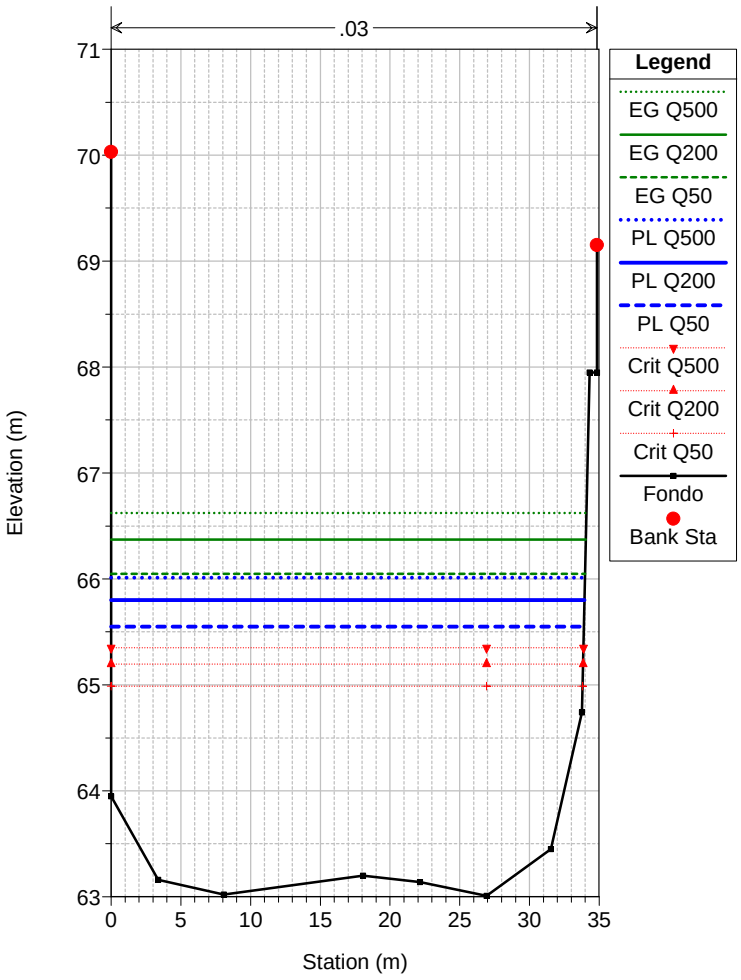

Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-5
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)


Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-4
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Bank Sta
Elevation (m)
Station (m)


Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-3
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

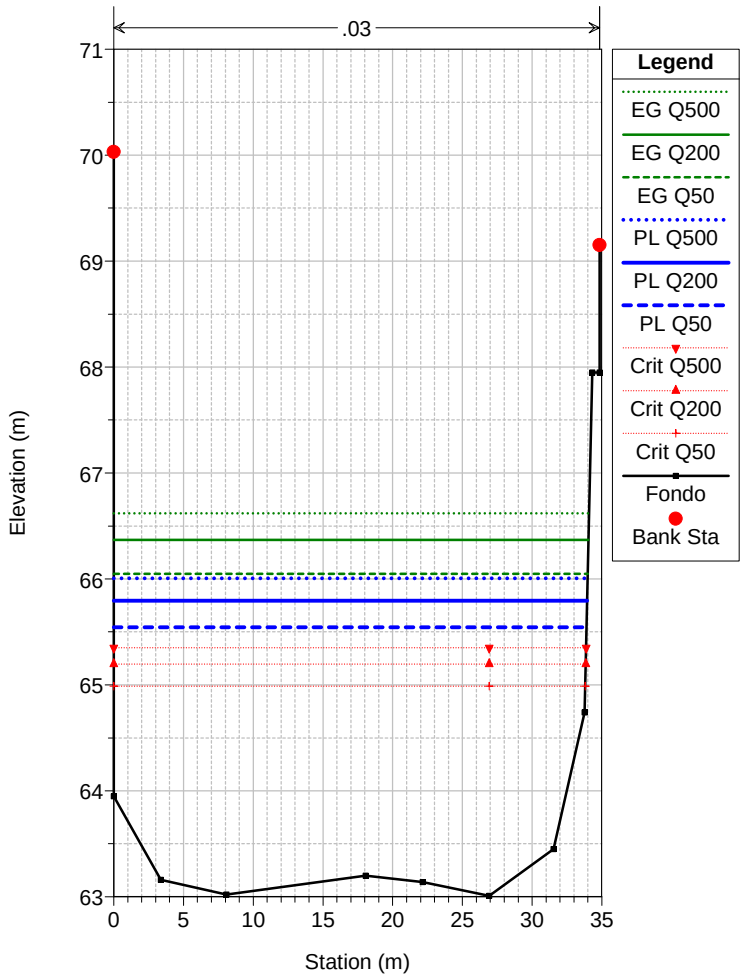
Sardorella Plan: Sardorella2010

River = Sardorella Reach = valle SAR-2



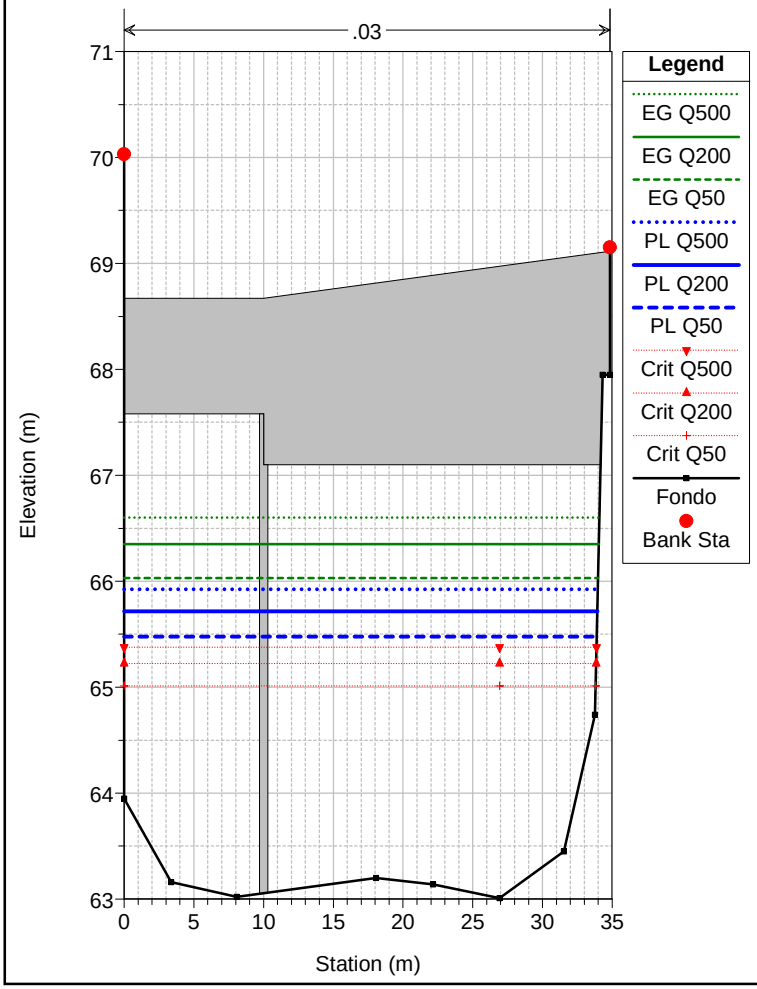
Sardorella Plan: Sardorella2010

River = Sardorella Reach = valle SAR-2



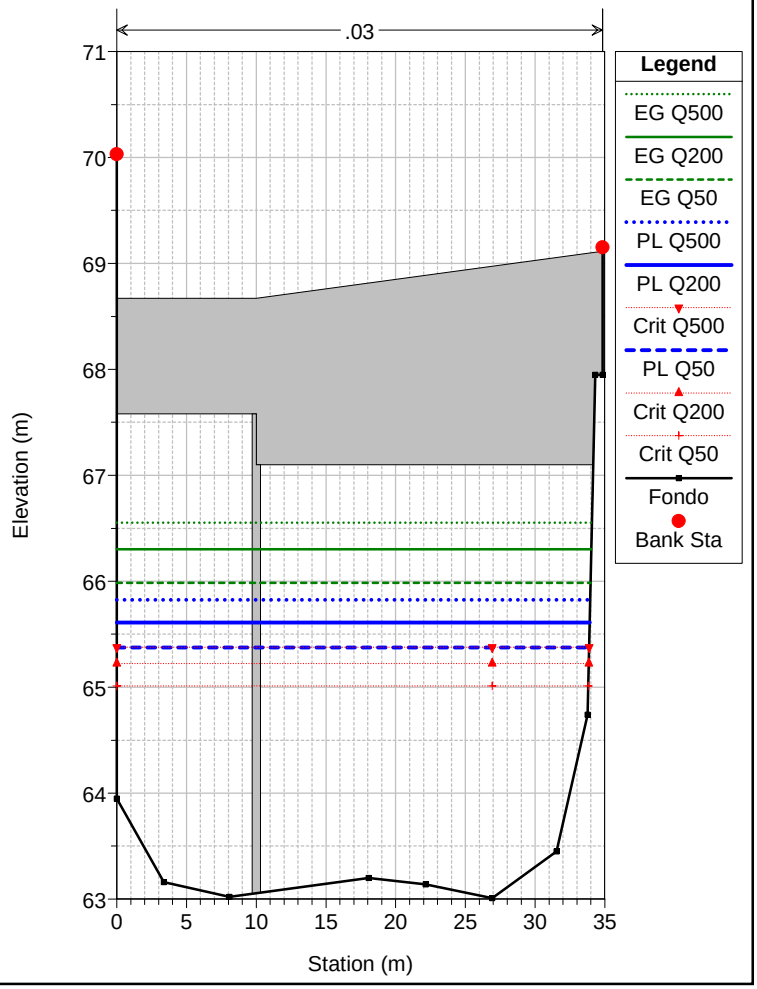
Sardorella Plan: Sardorella2010

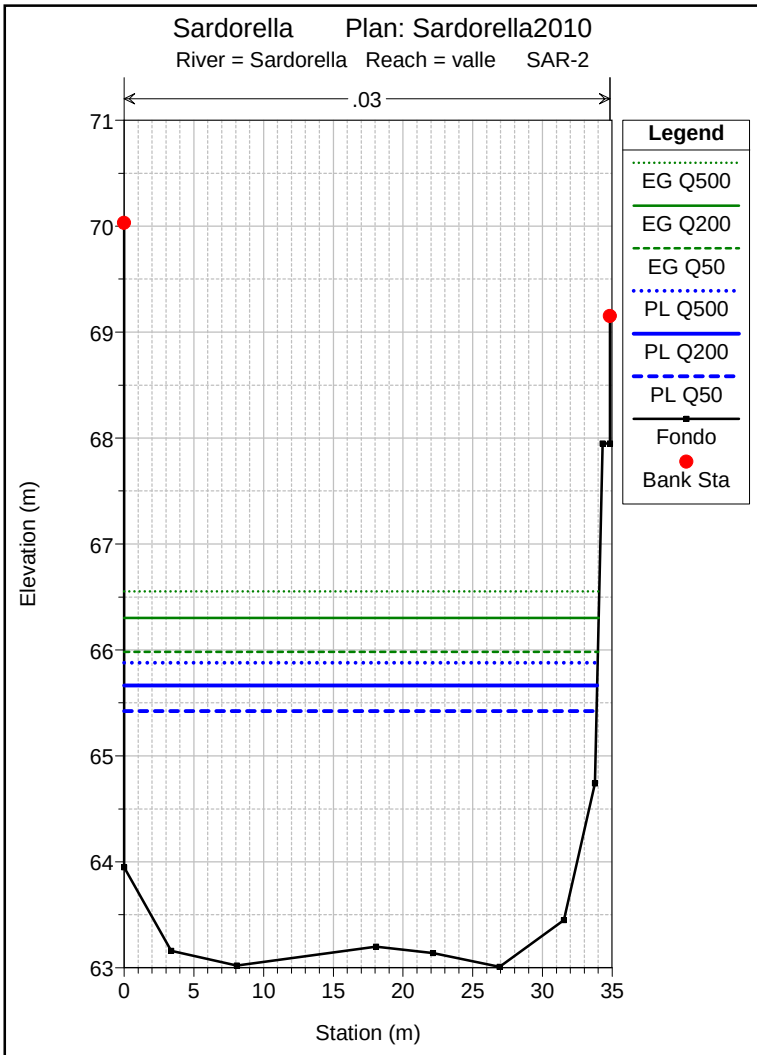
River = Sardorella Reach = valle SAR-2

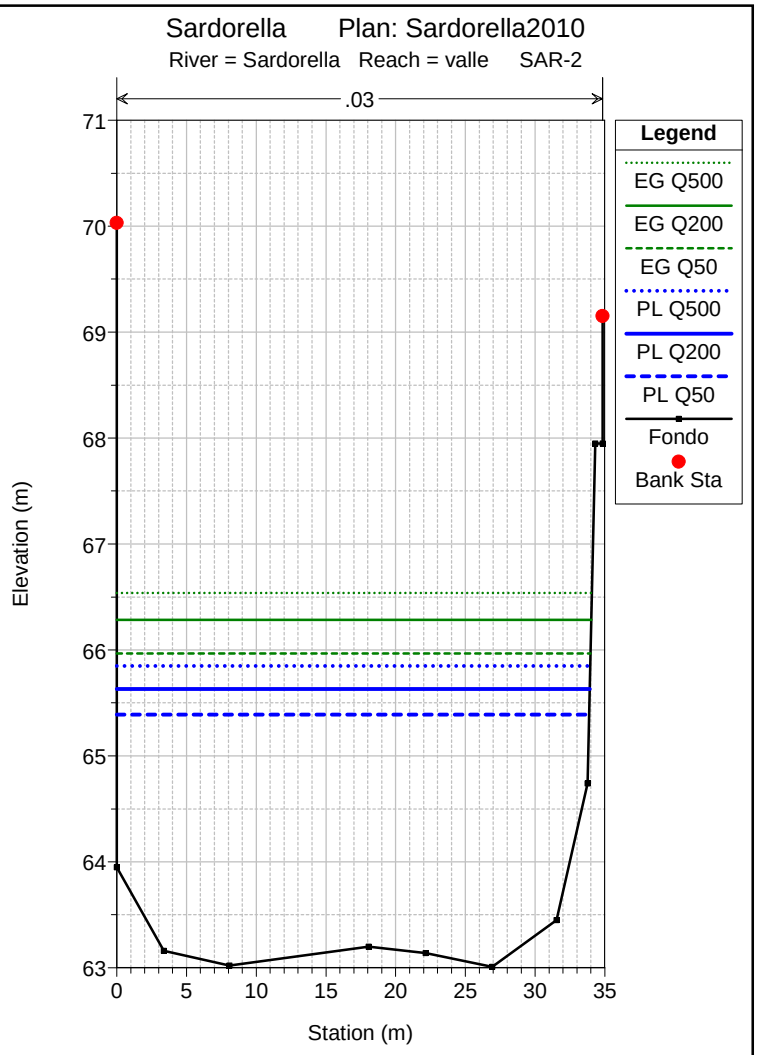


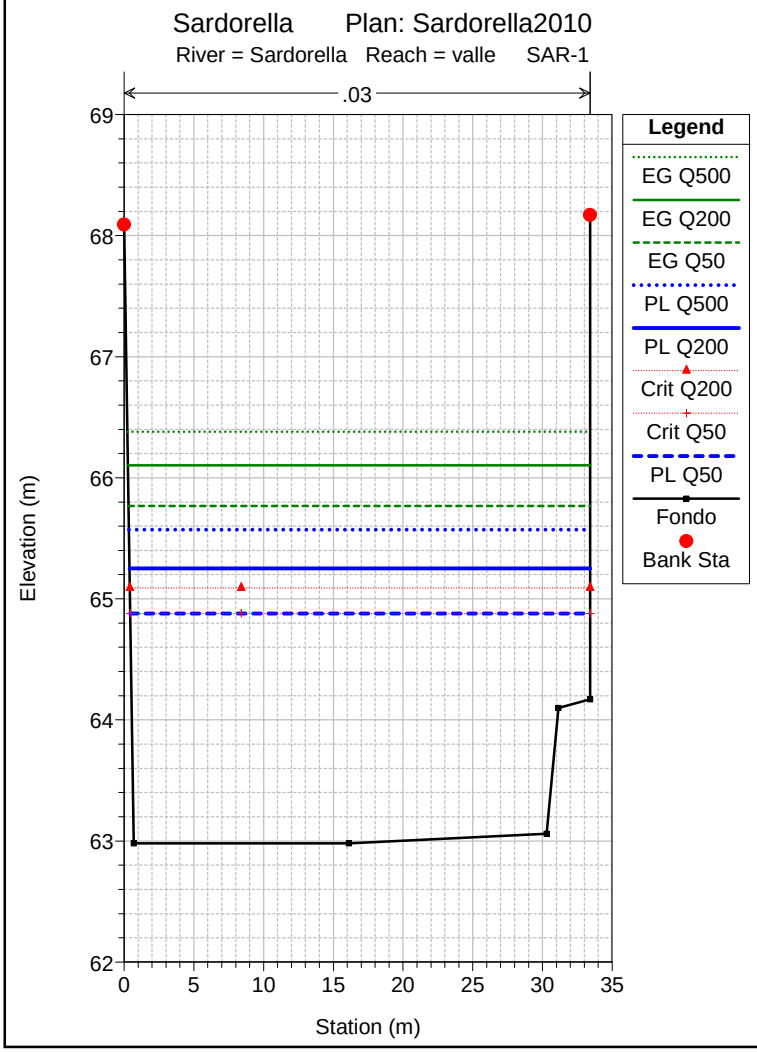
Sardorella Plan: Sardorella2010

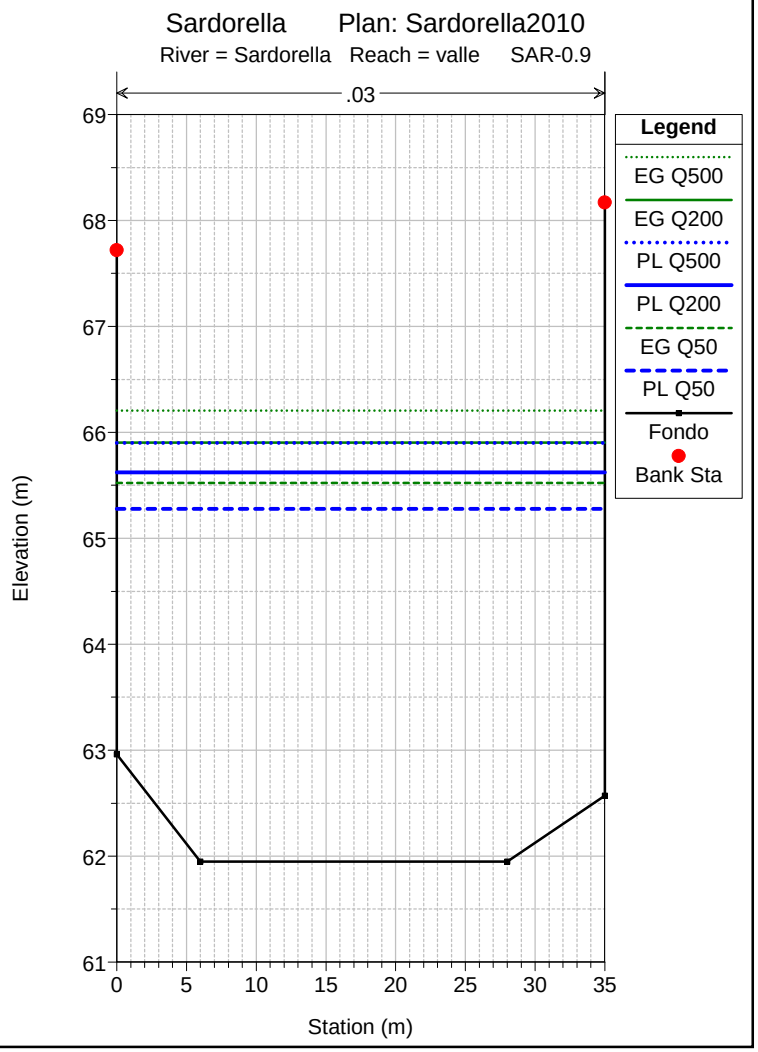
River = Sardorella Reach = valle SAR-2




Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-2
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)


Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-2
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)


Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-1
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q200
Crit Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)


Sardorella Plan: Sardorella2010
River = Sardorella Reach = valle SAR-0.9
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Fondo
Bank Sta
Elevation (m)
Station (m)

HEC-RAS Plan: Sardorella10

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte	67 SAR-41	Q50	197.00	92.50	95.98	103.50	7.52	97.90	1.92	95.98	97.46	0.008227	5.39	36.55	12.32	1.00
monte	67 SAR-41	Q200	245.00	92.50	96.46	103.50	7.04	97.90	1.44	96.46	98.15	0.008310	5.76	42.50	12.55	1.00
monte	67 SAR-41	Q500	280.00	92.50	96.78	103.50	6.72	97.90	1.11	96.78	98.62	0.008368	6.00	46.65	12.70	1.00
monte	66 SAR 40	Q50	197.00	91.30	92.67	94.79	2.13	95.18	2.51	93.22	94.53	0.021871	6.06	32.52	24.80	1.69
monte	66 SAR 40	Q200	245.00	91.30	92.82	94.79	1.97	95.18	2.36	93.52	95.14	0.023880	6.75	36.32	25.01	1.79
monte	66 SAR 40	Q500	280.00	91.30	92.92	94.79	1.87	95.18	2.26	93.72	95.56	0.025147	7.20	38.90	25.15	1.85
monte	65 SAR 39	Q50	197.00	90.70	92.51	95.81	3.30	94.77	2.26	92.78	93.80	0.011248	5.02	39.24	23.64	1.24
monte	65 SAR 39	Q200	245.00	90.70	92.71	95.81	3.10	94.77	2.06	93.09	94.29	0.012179	5.57	44.00	23.87	1.31
monte	65 SAR 39	Q500	280.00	90.70	92.83	95.81	2.98	94.77	1.94	93.30	94.65	0.013078	5.97	46.87	24.01	1.36
monte	64 SAR 38	Q50	197.00	90.21	92.34	92.90	0.56	94.09	1.75	92.55	93.50	0.010113	4.76	41.38	24.22	1.16
monte	64 SAR 38	Q200	245.00	90.21	92.62	92.90	0.28	94.09	1.47	92.86	93.93	0.010028	5.06	48.45	25.65	1.17
monte	64 SAR 38	Q500	280.00	90.21	92.76	92.90	0.14	94.09	1.33	93.06	94.24	0.010828	5.40	51.86	26.31	1.23
monte	63.1 SAR 37	Q50	197.00	89.50	92.16	93.49	1.33	93.49	1.33	91.77	92.94	0.004417	3.92	50.31	19.80	0.78
monte	63.1 SAR 37	Q200	245.00	89.50	92.54	93.49	0.95	93.49	0.95	92.12	93.46	0.004472	4.23	57.92	20.06	0.79
monte	63.1 SAR 37	Q500	280.00	89.50	92.81	93.49	0.68	93.49	0.68	92.36	93.81	0.004503	4.43	63.19	20.24	0.80
monte	63 SAR 37		Bridge													
monte	62.9 SAR 37	Q50	197.00	89.50	91.77	93.49	1.72	93.49	1.72	91.77	92.86	0.007319	4.62	42.62	19.54	1.00
monte	62.9 SAR 37	Q200	245.00	89.50	92.12	93.49	1.37	93.49	1.37	92.12	93.37	0.007174	4.95	49.51	19.77	1.00
monte	62.9 SAR 37	Q500	280.00	89.50	92.36	93.49	1.13	93.49	1.13	92.36	93.72	0.007115	5.16	54.24	19.93	1.00
monte	62 SAR-36	Q50	197.00	89.19	91.18	92.19	1.01	93.22	2.04	91.46	92.62	0.011235	5.32	37.04	19.23	1.22
monte	62 SAR-36	Q200	245.00	89.19	91.51	92.19	0.68	93.22	1.71	91.81	93.13	0.010725	5.65	43.34	19.43	1.21
monte	62 SAR-36	Q500	280.00	89.19	91.73	92.19	0.46	93.22	1.49	92.05	93.49	0.010481	5.87	47.67	19.57	1.20
monte	61 SAR-35	Q50	197.00	88.68	90.52	91.68	1.16	92.73	2.21	90.94	92.20	0.014214	5.73	34.36	19.25	1.37
monte	61 SAR-35	Q200	245.00	88.68	90.82	91.68	0.86	92.73	1.91	91.30	92.72	0.013591	6.10	40.15	19.45	1.36
monte	61 SAR-35	Q500	280.00	88.68	91.03	91.68	0.65	92.73	1.70	91.53	93.08	0.013305	6.35	44.12	19.59	1.35
monte	60 SAR-34	Q50	197.00	88.38	90.26	91.38	1.12	92.40	2.14	90.65	91.87	0.013360	5.62	35.05	19.26	1.33
monte	60 SAR-34	Q200	245.00	88.38	90.54	91.38	0.84	92.40	1.86	91.00	92.41	0.013314	6.06	40.42	19.45	1.34
monte	60 SAR-34	Q500	280.00	88.38	90.73	91.38	0.65	92.40	1.67	91.24	92.78	0.013312	6.35	44.10	19.57	1.35
monte	59.6 SAR-33	Q50	197.00	86.41	88.95	89.19	0.24	91.09	2.14	89.45	90.68	0.018887	5.82	33.87	24.07	1.57
monte	59.6 SAR-33	Q200	245.00	86.41	89.12	89.19	0.07	91.09	1.97	89.75	91.25	0.020510	6.46	37.95	24.43	1.65
monte	59.6 SAR-33	Q500	280.00	86.41	89.24	89.19	-0.05	91.09	1.85	89.95	91.63	0.021165	6.84	40.92	24.59	1.69
monte	59.5 SAR-32	Q50	197.00	85.34	88.86	87.17	-1.69	90.16	1.30		89.21	0.001549	2.65	78.37	32.24	0.51
monte	59.5 SAR-32	Q200	245.00	85.34	89.54	87.17	-2.37	90.16	0.62		89.86	0.001150	2.60	100.24	32.38	0.45
monte	59.5 SAR-32	Q500	280.00	85.34	89.98	87.17	-2.81	90.16	0.18		90.31	0.001007	2.61	114.52	32.46	0.42
monte	59.4 SAR-31	Q50	197.00	84.28	88.89	88.57	-0.32	88.38	-0.51		89.10	0.000724	2.07	95.05	23.78	0.33
monte	59.4 SAR-31	Q200	245.00	84.28	89.54	88.57	-0.97	88.38	-1.16		89.79	0.000717	2.22	110.52	23.78	0.33
monte	59.4 SAR-31	Q500	280.00	84.28	89.96	88.57	-1.39	88.38	-1.58		90.24	0.000725	2.32	120.62	23.78	0.33
monte	59.3 SAR-30	Q50	197.00	83.30	88.73	89.06	0.33	89.20	0.47	86.66	89.06	0.001112	2.54	77.60	19.49	0.41
monte	59.3 SAR-30	Q200	245.00	83.30	89.36	89.06	-0.30	89.20	-0.16	87.07	89.74	0.001127	2.72	90.18	20.10	0.41

HEC-RAS Plan: Sardorella10 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte	59.3 SAR-30	Q500	280.00	83.30	89.77	89.06	-0.71	89.20	-0.57	87.35	90.19	0.001145	2.84	98.44	20.10	0.41
monte	59.2		Bridge													
monte	59.1 SAR-30	Q50	197.00	83.30	88.13	89.06	0.93	89.20	1.07		88.58	0.001747	2.98	66.07	18.64	0.51
monte	59.1 SAR-30	Q200	245.00	83.30	88.43	89.06	0.63	89.20	0.77		89.02	0.002140	3.41	71.78	19.06	0.56
monte	59.1 SAR-30	Q500	280.00	83.30	88.67	89.06	0.39	89.20	0.53		89.35	0.002352	3.67	76.34	19.40	0.59
valle	59 SAR 29	Q50	245.00	83.14	86.00	90.50	4.50	86.96	0.96		87.14	0.006596	4.74	51.64	22.49	1.00
valle	59 SAR 29	Q200	290.00	83.14	86.29	90.50	4.21	86.96	0.67		87.55	0.006497	4.98	58.25	23.14	1.00
valle	59 SAR 29	Q500	325.00	83.14	86.51	90.50	3.99	86.96	0.45		87.85	0.006366	5.12	63.44	23.65	1.00
valle	58 SAR 28	Q50	245.00	83.03	85.10	87.50	2.40	87.05	1.95	85.56	86.82	0.014536	5.81	42.15	24.65	1.42
valle	58 SAR 28	Q200	290.00	83.03	85.31	87.50	2.19	87.05	1.74	85.82	87.23	0.014214	6.14	47.25	24.74	1.42
valle	58 SAR 28	Q500	325.00	83.03	85.47	87.50	2.03	87.05	1.58	86.01	87.52	0.013938	6.36	51.14	24.81	1.41
valle	57.1 SAR-27	Q50	245.00	81.55	83.67	85.72	2.05	85.96	2.29	83.83	84.79	0.009651	4.71	52.07	30.40	1.15
valle	57.1 SAR-27	Q200	290.00	81.55	83.85	85.72	1.87	85.96	2.11	84.06	85.14	0.009837	5.04	57.52	30.40	1.17
valle	57.1 SAR-27	Q500	325.00	81.55	83.97	85.72	1.75	85.96	1.99	84.22	85.40	0.010063	5.30	61.36	30.40	1.19
valle	57 SAR 26	Q50	245.00	80.01	82.21	86.02	3.81	86.30	4.09	82.51	83.54	0.011749	5.11	47.98	29.80	1.28
valle	57 SAR 26	Q200	290.00	80.01	82.39	86.02	3.63	86.30	3.91	82.74	83.90	0.011821	5.45	53.25	29.93	1.30
valle	57 SAR 26	Q500	325.00	80.01	82.53	86.02	3.49	86.30	3.77	82.91	84.16	0.011722	5.66	57.38	30.03	1.31
valle	56.1 SAR 25	Q50	245.00	77.69	81.35	83.86	2.51	83.86	2.51	80.90	82.03	0.003839	3.64	67.23	27.27	0.74
valle	56.1 SAR 25	Q200	290.00	77.69	81.65	83.86	2.21	83.86	2.21	81.14	82.40	0.003775	3.85	75.31	27.27	0.74
valle	56.1 SAR 25	Q500	325.00	77.69	82.02	83.86	1.84	83.86	1.84	81.32	82.76	0.003184	3.79	85.66	27.27	0.68
valle	56 SAR 25		Bridge													
valle	55.9 SAR 25	Q50	245.00	77.69	80.68	83.86	3.18	83.86	3.18	80.90	81.95	0.010289	4.99	49.05	27.03	1.18
valle	55.9 SAR 25	Q200	290.00	77.69	80.89	83.86	2.97	83.86	2.97	81.14	82.32	0.010199	5.29	54.85	27.27	1.19
valle	55.9 SAR 25	Q500	325.00	77.69	81.83	83.86	2.03	83.86	2.03		82.66	0.003889	4.05	80.28	27.27	0.75
valle	55 SAR 24	Q50	245.00	77.67	80.28	84.15	3.87	84.50	4.22	80.03	81.05	0.004770	3.90	62.75	28.79	0.84
valle	55 SAR 24	Q200	290.00	77.67	80.58	84.15	3.57	84.50	3.92		81.42	0.004434	4.06	71.51	28.79	0.82
valle	55 SAR 24	Q500	325.00	77.67	81.96	84.15	2.19	84.50	2.54		82.40	0.001424	2.92	111.27	28.79	0.47
valle	54.1 SAR 23	Q50	245.00	77.18	80.23	80.70	0.47	81.70	1.47	79.62	80.78	0.002920	3.28	74.61	29.52	0.66
valle	54.1 SAR 23	Q200	290.00	77.18	80.54	80.70	0.16	81.70	1.16	79.84	81.15	0.002831	3.45	83.94	29.52	0.65
valle	54.1 SAR 23	Q500	325.00	77.18	81.96	80.70	-1.26	81.70	-0.26	80.01	82.30	0.001027	2.58	125.76	29.52	0.40
valle	54 SAR 23		Bridge													
valle	53.9 SAR 23	Q50	245.00	77.18	79.29	80.70	1.41	81.70	2.41	79.62	80.68	0.012625	5.21	47.00	29.52	1.32
valle	53.9 SAR 23	Q200	290.00	77.18	79.47	80.70	1.23	81.70	2.23	79.84	81.04	0.012570	5.54	52.30	29.52	1.33
valle	53.9 SAR 23	Q500	325.00	77.18	80.01	80.70	0.69	81.70	1.69	80.01	81.17	0.006782	4.76	68.29	29.52	1.00
valle	53.2 SAR-22	Q50	245.00	76.35	77.75	79.35	1.60	80.77	3.02	78.31	79.63	0.022270	6.06	40.41	30.84	1.69
valle	53.2 SAR-22	Q200	290.00	76.35	77.91	79.35	1.44	80.77	2.86	78.52	80.00	0.021713	6.41	45.22	30.85	1.69
valle	53.2 SAR-22	Q500	325.00	76.35	78.06	79.35	1.29	80.77	2.71	78.69	80.23	0.020103	6.54	49.73	30.85	1.64

HEC-RAS Plan: Sardorella10 (Continued)

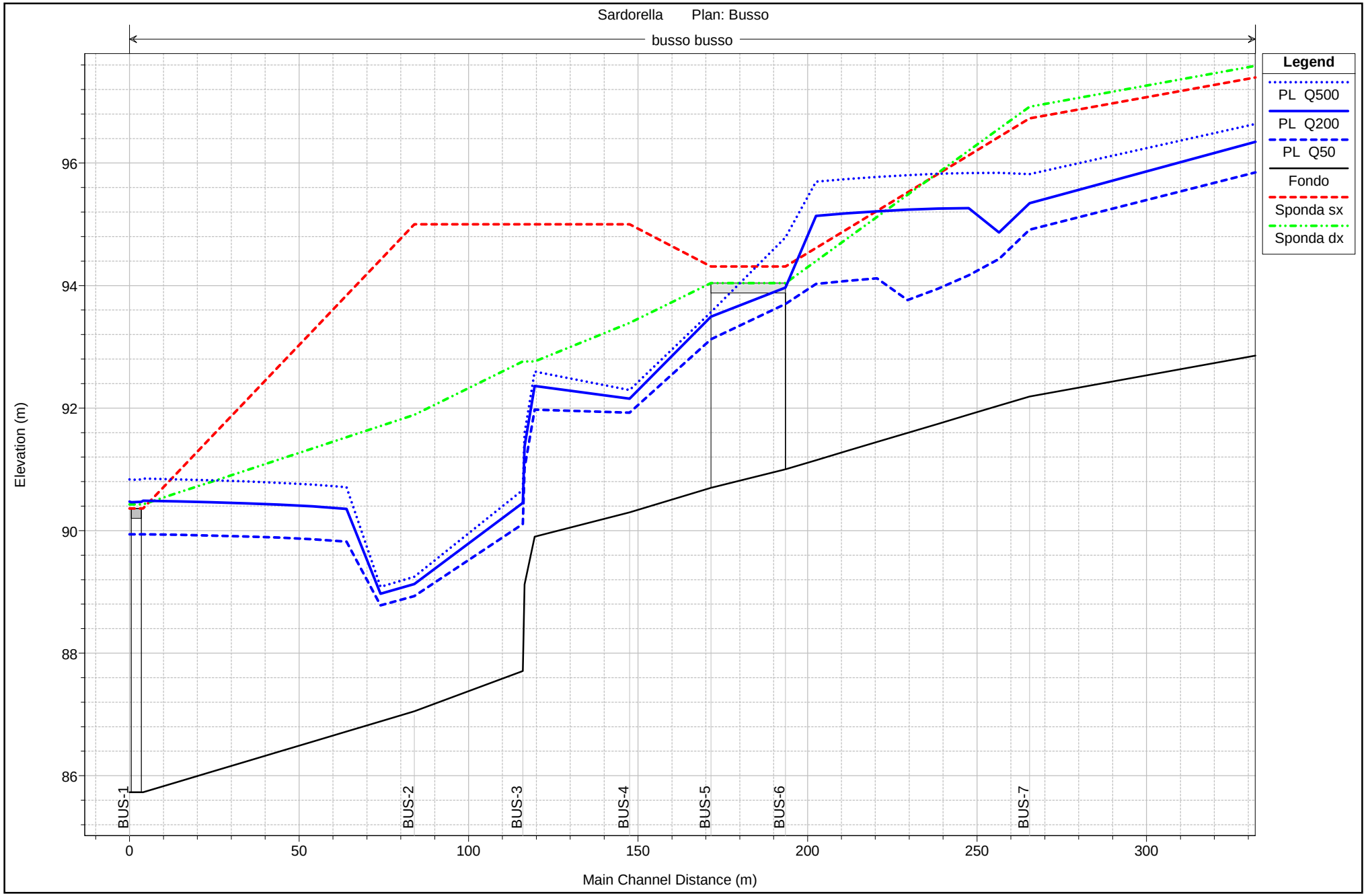
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	53.1 SAR-21	Q50	245.00	74.74	76.70	78.96	2.26	80.69	3.99	77.15	78.35	0.016642	5.69	43.06	29.09	1.49
valle	53.1 SAR-21	Q200	290.00	74.74	76.86	78.96	2.10	80.69	3.83	77.38	78.73	0.016638	6.06	47.85	29.12	1.51
valle	53.1 SAR-21	Q500	325.00	74.74	76.99	78.96	1.97	80.69	3.70	77.56	79.01	0.016440	6.30	51.59	29.15	1.51
valle	53 SAR 20	Q50	245.00	72.52	75.99	76.74	0.75	77.22	1.23		76.49	0.002304	3.13	78.25	26.54	0.58
valle	53 SAR 20	Q200	290.00	72.52	77.06	76.74	-0.32	77.22	0.16		77.44	0.001246	2.71	106.88	26.54	0.43
valle	53 SAR 20	Q500	325.00	72.52	77.37	76.74	-0.63	77.22	-0.15		77.77	0.001260	2.83	114.87	26.54	0.43
valle	16 SAR-16	Q50	245.00	72.37	75.79	76.08	0.29	77.75	1.96		76.42	0.003564	3.50	70.08	24.52	0.66
valle	16 SAR-16	Q200	290.00	72.37	76.97	76.08	-0.89	77.75	0.78		77.40	0.001748	2.93	98.98	24.76	0.47
valle	16 SAR-16	Q500	325.00	72.37	77.26	76.08	-1.18	77.75	0.49		77.74	0.001776	3.06	106.24	24.81	0.47
valle	15 SAR-15	Q50	245.00	72.36	75.31	76.73	1.42	77.20	1.89	75.16	76.30	0.006741	4.42	55.44	23.15	0.91
valle	15 SAR-15	Q200	290.00	72.36	76.85	76.73	-0.12	77.20	0.35		77.37	0.002055	3.17	91.52	23.49	0.51
valle	15 SAR-15	Q500	325.00	72.36	77.14	76.73	-0.41	77.20	0.06		77.70	0.002091	3.31	98.22	23.51	0.52
valle	14.4 SAR-14	Q50	245.00	71.98	75.43	76.88	1.45	76.88	1.45		76.08	0.003752	3.56	68.76	25.81	0.70
valle	14.4 SAR-14	Q200	290.00	71.98	76.91	76.88	-0.03	76.88	-0.03		77.28	0.001353	2.70	107.36	26.27	0.43
valle	14.4 SAR-14	Q500	325.00	71.98	77.20	76.88	-0.32	76.88	-0.32		77.61	0.001382	2.83	115.04	26.27	0.43
valle	14.3 SAR-14	Q50	245.00	71.98	75.42	76.88	1.46	76.88	1.46	74.85	76.07	0.003780	3.57	68.60	25.81	0.70
valle	14.3 SAR-14	Q200	290.00	71.98	76.91	76.88	-0.03	76.88	-0.03	75.10	77.28	0.001355	2.70	107.31	26.27	0.43
valle	14.3 SAR-14	Q500	325.00	71.98	77.20	76.88	-0.32	76.88	-0.32	75.29	77.61	0.001384	2.83	114.99	26.27	0.43
valle	14.21 SAR-14		Bridge													
valle	14.2 SAR-14	Q50	245.00	71.98	75.12	76.88	1.76	76.88	1.76	74.85	75.95	0.005486	4.03	60.84	25.71	0.84
valle	14.2 SAR-14	Q200	290.00	71.98	75.39	76.88	1.49	76.88	1.49	75.10	76.32	0.005500	4.28	67.77	25.80	0.84
valle	14.2 SAR-14	Q500	325.00	71.98	75.59	76.88	1.29	76.88	1.29	75.29	76.60	0.005512	4.46	72.91	25.86	0.85
valle	14.1 SAR-14	Q50	245.00	71.98	74.85	76.88	2.03	76.88	2.03	74.85	75.90	0.007995	4.54	53.93	25.63	1.00
valle	14.1 SAR-14	Q200	290.00	71.98	75.10	76.88	1.78	76.88	1.78	75.10	76.28	0.007863	4.80	60.40	25.71	1.00
valle	14.1 SAR-14	Q500	325.00	71.98	75.29	76.88	1.59	76.88	1.59	75.29	76.56	0.007771	4.98	65.24	25.77	1.00
valle	13 SAR-13	Q50	245.00	71.78	73.87	76.39	2.52	76.62	2.75	74.31	75.53	0.017004	5.71	42.93	26.78	1.44
valle	13 SAR-13	Q200	290.00	71.78	74.07	76.39	2.32	76.62	2.55	74.55	75.90	0.016416	6.01	48.28	26.85	1.43
valle	13 SAR-13	Q500	325.00	71.78	74.21	76.39	2.18	76.62	2.41	74.74	76.18	0.016054	6.22	52.26	26.90	1.42
valle	12.4 SAR-12	Q50	245.00	70.75	72.32	76.92	4.60	78.58	6.26	72.75	73.83	0.021692	5.45	44.99	37.98	1.60
valle	12.4 SAR-12	Q200	290.00	70.75	72.43	76.92	4.49	78.58	6.15	72.94	74.19	0.022513	5.88	49.35	38.04	1.65
valle	12.4 SAR-12	Q500	325.00	70.75	72.52	76.92	4.40	78.58	6.06	73.09	74.46	0.023027	6.18	52.58	38.08	1.68
valle	12.3 SAR-12	Q50	245.00	70.73	72.31	76.92	4.61	78.58	6.27	72.74	73.80	0.021301	5.42	45.23	37.98	1.58
valle	12.3 SAR-12	Q200	290.00	70.73	72.42	76.92	4.50	78.58	6.16	72.93	74.16	0.022140	5.85	49.59	38.03	1.63
valle	12.3 SAR-12	Q500	325.00	70.73	72.51	76.92	4.41	78.58	6.07	73.08	74.44	0.022669	6.15	52.82	38.08	1.67
valle	12.2 SAR-12	Q50	245.00	70.60	72.38	76.92	4.54	78.58	6.20	72.64	73.53	0.013858	4.75	51.56	38.01	1.30
valle	12.2 SAR-12	Q200	290.00	70.60	72.50	76.92	4.42	78.58	6.08	72.84	73.87	0.014923	5.18	55.93	38.07	1.37
valle	12.2 SAR-12	Q500	325.00	70.60	72.57	76.92	4.35	78.58	6.01	72.98	74.12	0.015844	5.52	58.92	38.11	1.42
valle	12.1 SAR-12	Q50	245.00	70.55	72.42	76.92	4.50	78.58	6.16	72.61	73.45	0.011688	4.51	54.31	38.03	1.20
valle	12.1 SAR-12	Q200	290.00	70.55	72.58	76.92	4.34	78.58	6.00	72.80	73.75	0.011460	4.78	60.66	38.12	1.21

HEC-RAS Plan: Sardorella10 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	12.1 SAR-12	Q500	325.00	70.55	72.63	76.92	4.29	78.58	5.95	72.95	74.01	0.013062	5.20	62.52	38.14	1.30
valle	11 SAR-11	Q50	245.00	69.63	71.60	76.52	4.92	73.53	1.93	71.77	72.65	0.011124	4.53	54.14	35.19	1.16
valle	11 SAR-11	Q200	290.00	69.63	71.79	76.52	4.73	73.53	1.74	71.98	72.95	0.010873	4.78	60.62	35.40	1.17
valle	11 SAR-11	Q500	325.00	69.63	71.92	76.52	4.60	73.53	1.61	72.13	73.18	0.010827	4.98	65.22	35.54	1.17
valle	10 SAR-10	Q50	245.00	68.95	71.02	74.72	3.70	72.40	1.38	71.19	72.13	0.010992	4.67	52.42	31.79	1.16
valle	10 SAR-10	Q200	290.00	68.95	71.22	74.72	3.50	72.40	1.18	71.41	72.45	0.010622	4.92	58.95	32.02	1.16
valle	10 SAR-10	Q500	325.00	68.95	71.37	74.72	3.35	72.40	1.03	71.58	72.70	0.010480	5.11	63.64	32.18	1.16
valle	9 SAR-9	Q50	245.00	68.27	70.25	73.09	2.84	71.45	1.20	70.45	71.41	0.011237	4.78	51.25	30.62	1.18
valle	9 SAR-9	Q200	290.00	68.27	70.46	73.09	2.63	71.45	0.99	70.67	71.75	0.010842	5.03	57.64	30.77	1.17
valle	9 SAR-9	Q500	325.00	68.27	70.62	73.09	2.47	71.45	0.83	70.84	71.99	0.010529	5.20	62.53	30.88	1.17
valle	8 SAR-8	Q50	245.00	67.52	69.62	71.78	2.16	72.00	2.38	69.82	70.70	0.011721	4.59	53.38	35.62	1.20
valle	8 SAR-8	Q200	290.00	67.52	69.79	71.78	1.99	72.00	2.21	70.03	71.01	0.011763	4.88	59.48	36.18	1.21
valle	8 SAR-8	Q500	325.00	67.52	69.90	71.78	1.88	72.00	2.10	70.18	71.24	0.012242	5.14	63.24	36.52	1.25
valle	7 SAR-7	Q50	245.00	66.50	68.15	71.69	3.54	71.25	3.10	68.58	69.61	0.025696	5.36	45.73	44.79	1.69
valle	7 SAR-7	Q200	290.00	66.50	68.27	71.69	3.42	71.25	2.98	68.75	69.91	0.025254	5.68	51.05	45.01	1.70
valle	7 SAR-7	Q500	325.00	66.50	68.36	71.69	3.33	71.25	2.89	68.88	70.14	0.024926	5.91	54.96	45.02	1.71
valle	6 SAR-6	Q50	245.00	66.40	68.29	71.45	3.16	70.75	2.46	68.29	69.10	0.008028	4.01	61.15	37.36	1.00
valle	6 SAR-6	Q200	290.00	66.40	68.48	71.45	2.97	70.75	2.27	68.48	69.40	0.007832	4.24	68.43	37.40	1.00
valle	6 SAR-6	Q500	325.00	66.40	68.63	71.45	2.82	70.75	2.12	68.63	69.61	0.007689	4.40	73.90	37.42	1.00
valle	5 SAR-5	Q50	245.00	65.84	67.52	71.05	3.53	70.07	2.55	67.71	68.50	0.012623	4.38	55.99	42.59	1.22
valle	5 SAR-5	Q200	290.00	65.84	67.64	71.05	3.41	70.07	2.43	67.89	68.79	0.013305	4.75	61.11	42.62	1.26
valle	5 SAR-5	Q500	325.00	65.84	67.73	71.05	3.32	70.07	2.34	68.02	69.01	0.013800	5.01	64.82	42.63	1.30
valle	4 SAR-4	Q50	245.00	64.91	67.14	70.01	2.87	69.52	2.38	67.14	68.06	0.008162	4.24	57.73	31.40	1.00
valle	4 SAR-4	Q200	290.00	64.91	67.36	70.01	2.65	69.52	2.16	67.36	68.39	0.007993	4.49	64.61	31.43	1.00
valle	4 SAR-4	Q500	325.00	64.91	67.52	70.01	2.49	69.52	2.00	67.52	68.63	0.007905	4.67	69.67	31.45	1.00
valle	3 SAR-3	Q50	245.00	63.19	65.11	70.00	4.89	69.04	3.93	65.28	66.22	0.010880	4.67	52.49	31.80	1.16
valle	3 SAR-3	Q200	290.00	63.19	65.29	70.00	4.71	69.04	3.75	65.50	66.55	0.010890	4.97	58.31	31.80	1.17
valle	3 SAR-3	Q500	325.00	63.19	65.43	70.00	4.57	69.04	3.61	65.66	66.80	0.010890	5.19	62.64	31.80	1.18
valle	2.4 SAR-2	Q50	245.00	63.01	65.55	70.03	4.48	69.15	3.60	64.99	66.05	0.003216	3.13	78.21	33.91	0.66
valle	2.4 SAR-2	Q200	290.00	63.01	65.80	70.03	4.23	69.15	3.35	65.20	66.37	0.003251	3.34	86.72	33.95	0.67
valle	2.4 SAR-2	Q500	325.00	63.01	66.01	70.03	4.02	69.15	3.14	65.35	66.62	0.003180	3.46	93.91	33.98	0.66
valle	2.3 SAR-2	Q50	245.00	63.01	65.54	70.03	4.49	69.15	3.61	64.99	66.05	0.003238	3.14	78.04	33.91	0.66
valle	2.3 SAR-2	Q200	290.00	63.01	65.80	70.03	4.23	69.15	3.35	65.20	66.37	0.003272	3.35	86.55	33.95	0.67
valle	2.3 SAR-2	Q500	325.00	63.01	66.01	70.03	4.02	69.15	3.14	65.35	66.62	0.003198	3.47	93.74	33.98	0.67
valle	2.21 SAR-2		Bridge													
valle	2.2 SAR-2	Q50	245.00	63.01	65.42	70.03	4.61	69.15	3.73		65.98	0.003840	3.31	73.95	33.89	0.72
valle	2.2 SAR-2	Q200	290.00	63.01	65.67	70.03	4.36	69.15	3.48		66.30	0.003856	3.53	82.15	33.93	0.72
valle	2.2 SAR-2	Q500	325.00	63.01	65.88	70.03	4.15	69.15	3.27		66.55	0.003707	3.63	89.43	33.96	0.71

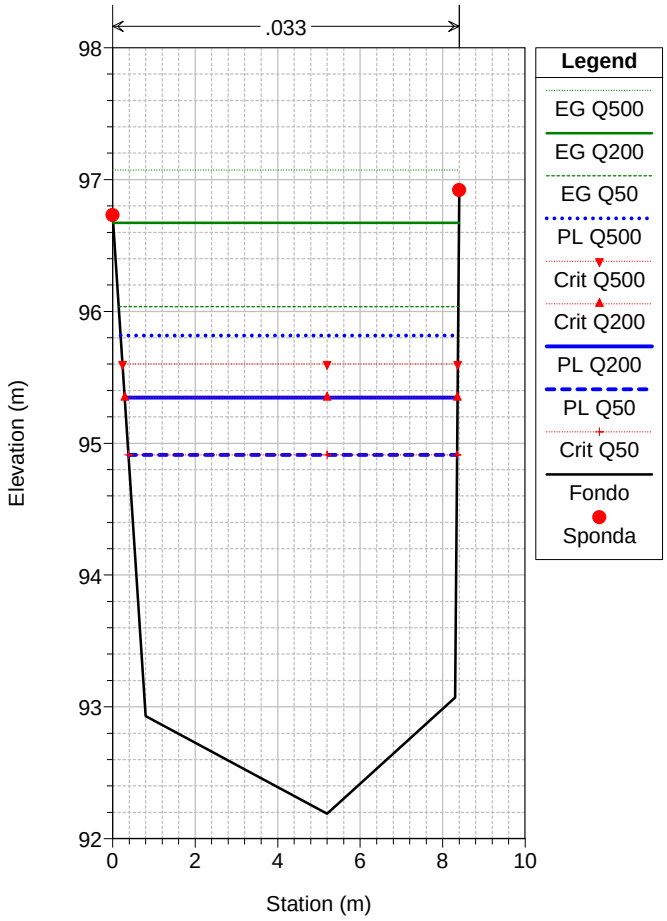
HEC-RAS Plan: Sardorella10 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	2.1 SAR-2	Q50	245.00	63.01	65.39	70.03	4.64	69.15	3.76		65.97	0.004040	3.37	72.77	33.88	0.73
valle	2.1 SAR-2	Q200	290.00	63.01	65.63	70.03	4.40	69.15	3.52		66.28	0.004040	3.58	80.95	33.92	0.74
valle	2.1 SAR-2	Q500	325.00	63.01	65.85	70.03	4.18	69.15	3.30		66.54	0.003851	3.68	88.35	33.96	0.73
valle	1 SAR-1	Q50	245.00	62.98	64.88	68.09	3.21	68.17	3.29	64.88	65.77	0.008151	4.18	58.63	32.97	1.00
valle	1 SAR-1	Q200	290.00	62.98	65.25	68.09	2.84	68.17	2.92	65.09	66.10	0.006219	4.09	70.94	33.02	0.89
valle	1 SAR-1	Q500	325.00	62.98	65.57	68.09	2.52	68.17	2.60		66.38	0.005020	3.98	81.57	33.07	0.81
valle	0.3 SAR-0.9	Q50	245.00	61.95	65.28	67.72	2.44	68.17	2.89		65.52	0.001122	2.20	111.23	35.00	0.39
valle	0.3 SAR-0.9	Q200	290.00	61.95	65.62	67.72	2.10	68.17	2.55		65.90	0.001141	2.35	123.29	35.00	0.40
valle	0.3 SAR-0.9	Q500	325.00	61.95	65.90	67.72	1.82	68.17	2.27		66.20	0.001131	2.44	133.06	35.00	0.40


Sardorella Plan: Busso
busso busso
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
96
94
92
90
88
86
BUS-1
BUS-2
BUS-3
BUS-4
BUS-5
BUS-6
BUS-7
0
50
100
150
200
250
300
Main Channel Distance (m)

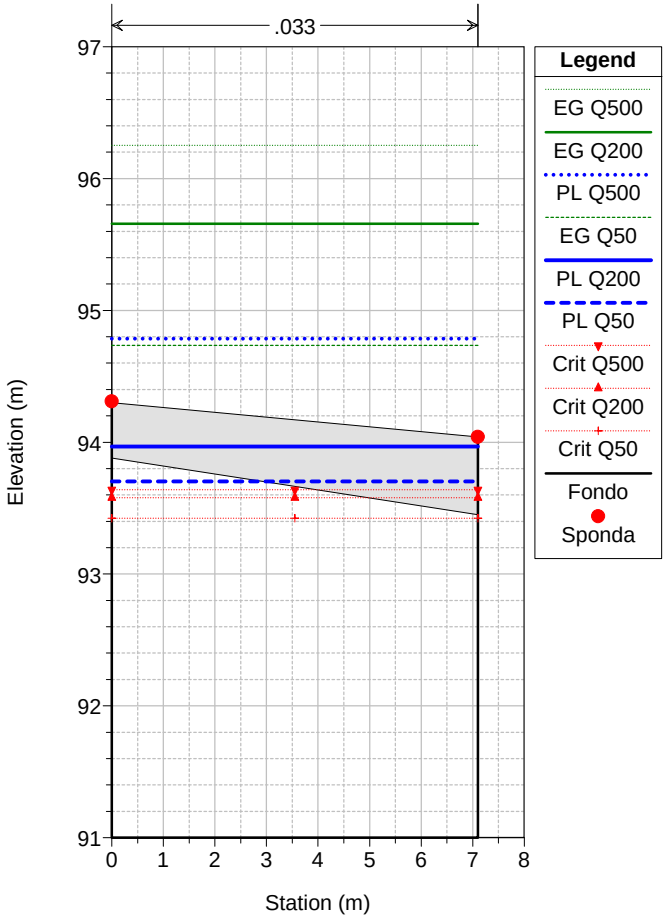
Sardorella Plan: Busso

River = busso Reach = busso BUS-7



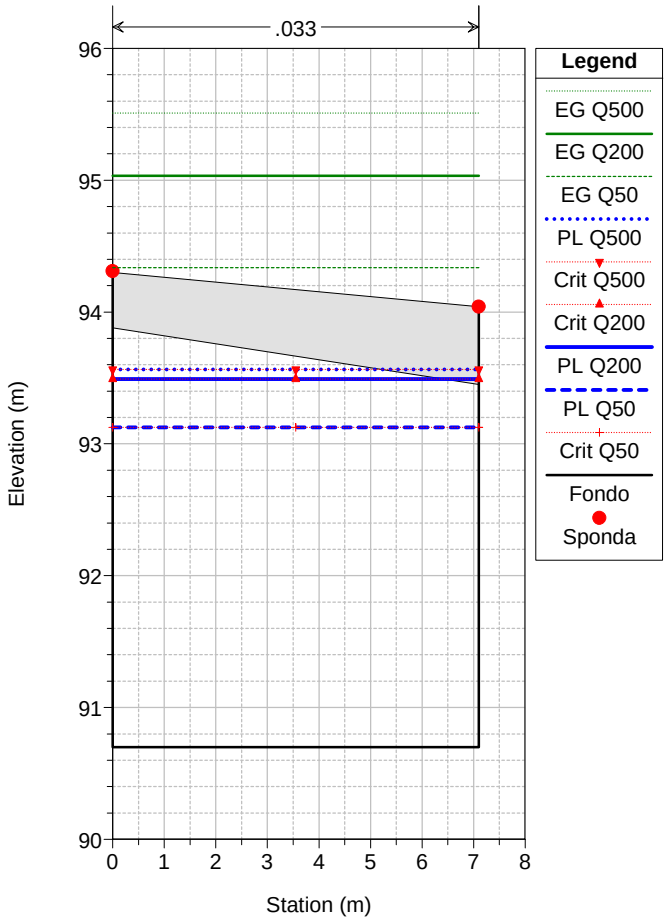
Sardorella Plan: Busso

River = busso Reach = busso BUS-6



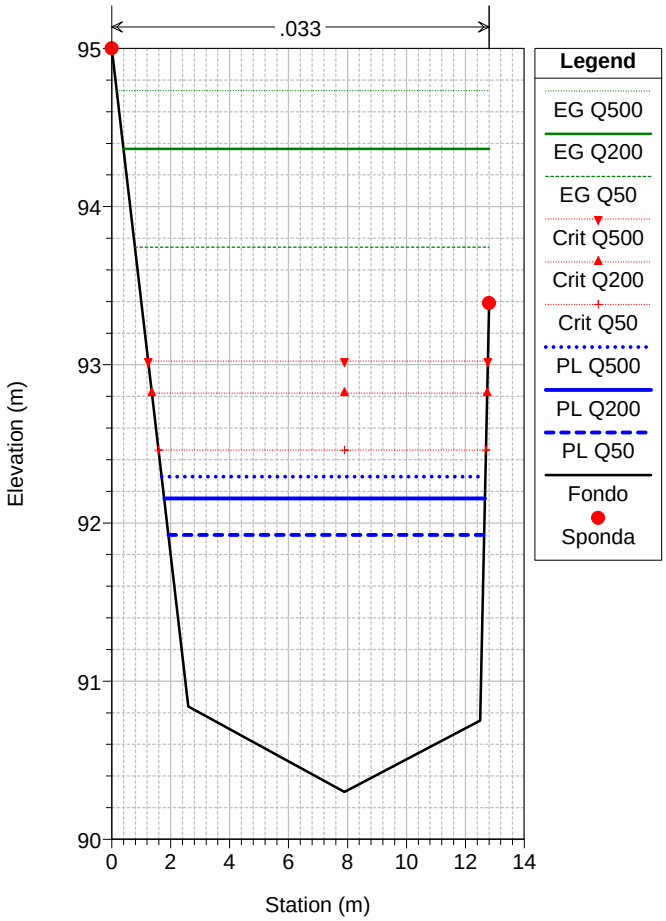
Sardorella Plan: Busso

River = busso Reach = busso BUS-5



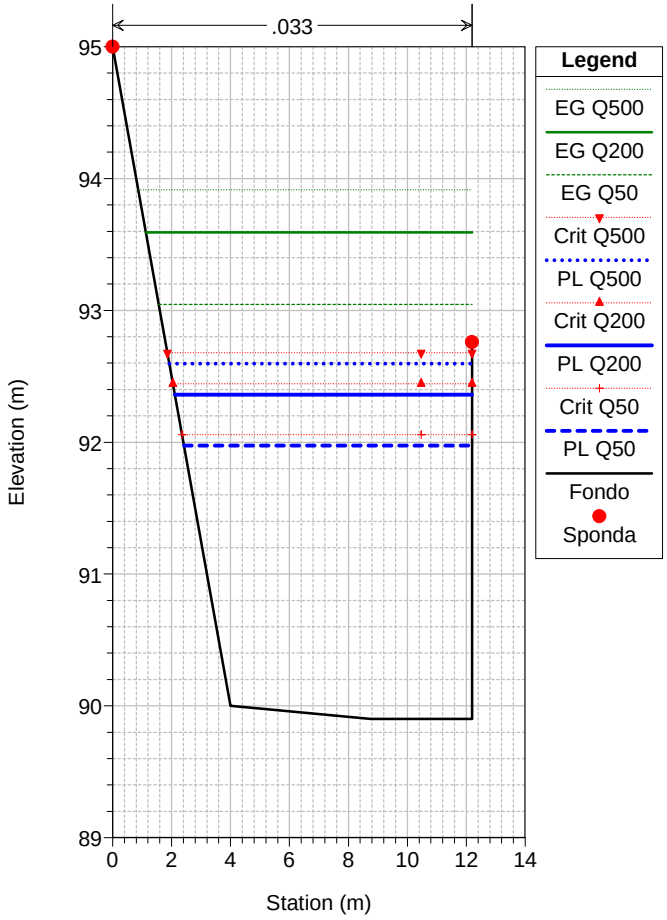
Sardorella Plan: Busso

River = busso Reach = busso BUS-4



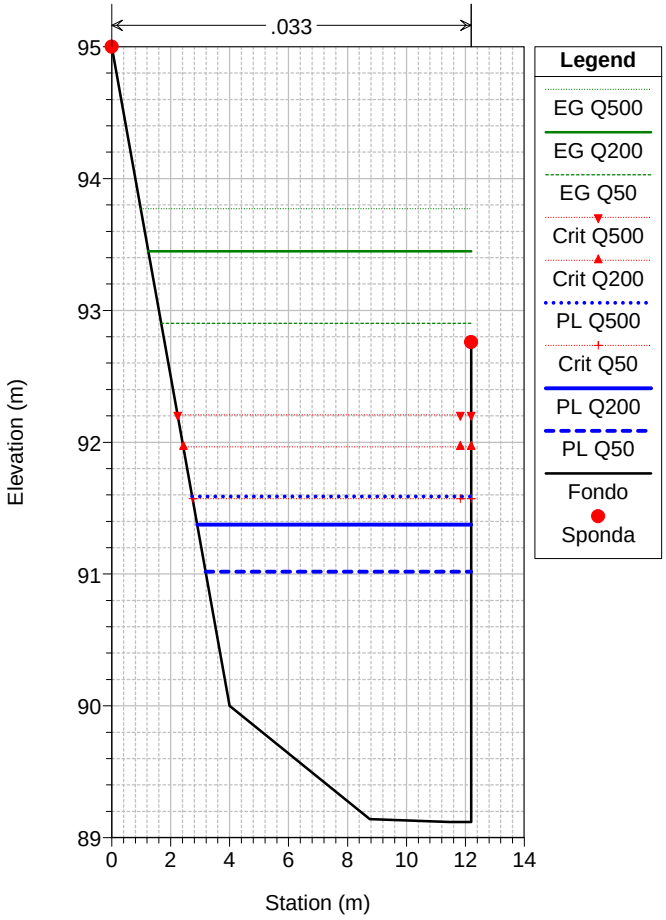
Sardorella Plan: Busso

River = busso Reach = busso BUS-3.2



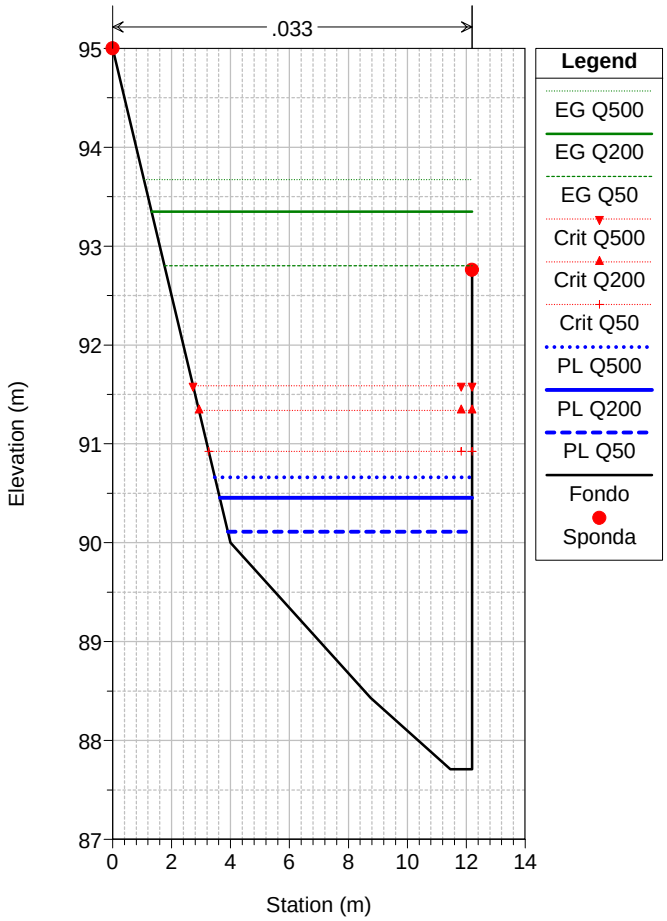
Sardorella Plan: Busso

River = busso Reach = busso BUS-3



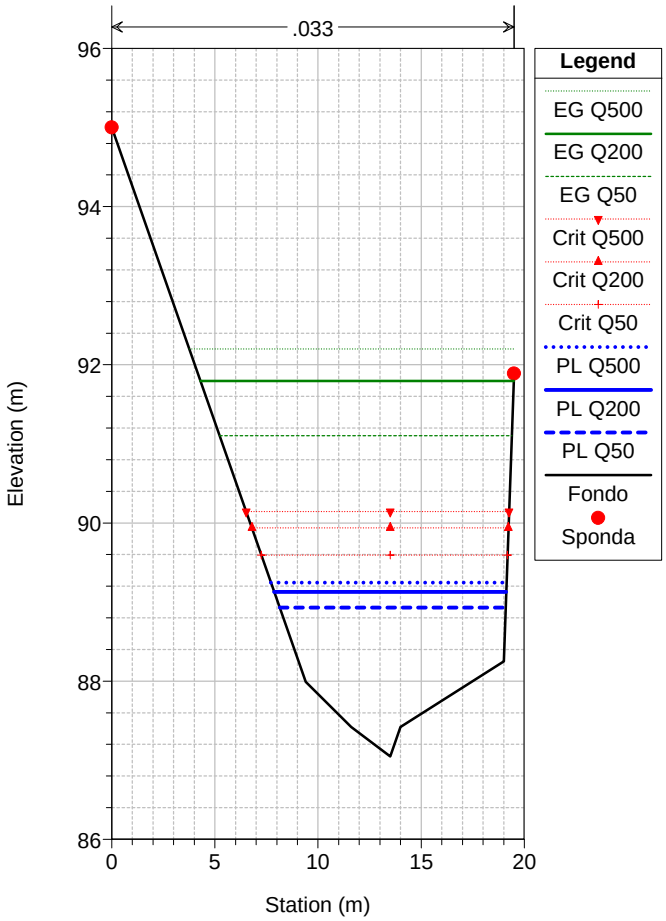
Sardorella Plan: Busso

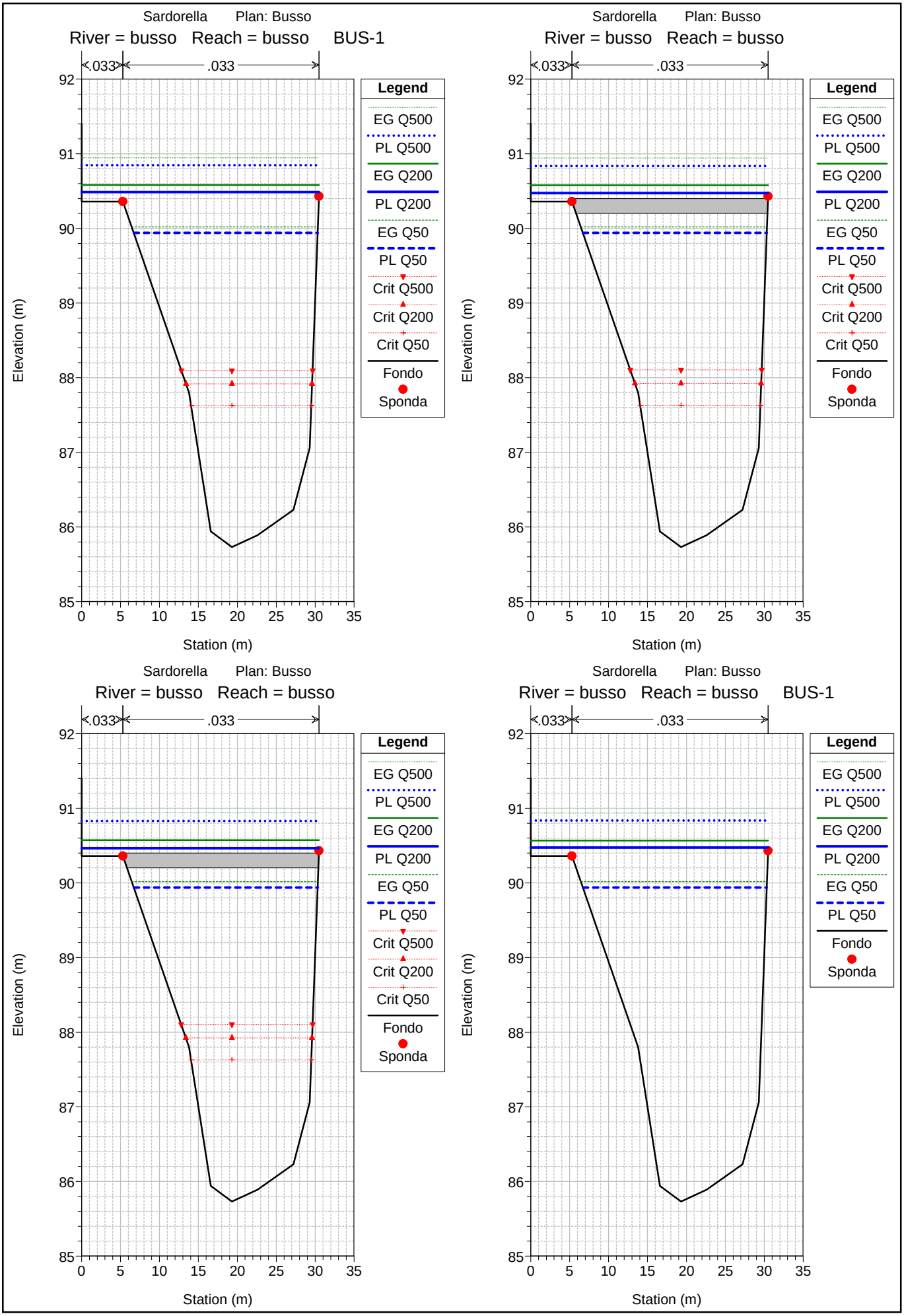
River = busso Reach = busso BUS-3



Sardorella Plan: Busso

River = busso Reach = busso BUS-2




Sardorella Plan: Busso
River = busso Reach = busso BUS-1
.033
.033
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Sardorella Plan: Busso
River = busso Reach = busso
Sardorella Plan: Busso
River = busso Reach = busso
Sardorella Plan: Busso
River = busso Reach = busso BUS-1

HEC-RAS Plan: Busso River: busso Reach: busso

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)	
busso	7	Q50	84.00	93.19	96.31	97.73	1.42	97.92	1.61	95.91	97.12	0.008473	3.98	21.09	8.06	0.79
busso	7	Q200	109.00	93.19	96.85	97.73	0.88	97.92	1.07	96.34	97.78	0.008555	4.29	25.43	8.19	0.78
busso	7	Q500	125.00	93.19	97.05	97.73	0.68	97.92	0.87	96.60	98.13	0.009494	4.62	27.07	8.23	0.81
busso	6	Q50	84.00	92.19	94.91	96.73	1.82	96.92	2.01	94.91	96.04	0.013429	4.70	17.88	7.97	1.00
busso	6	Q200	109.00	92.19	95.35	96.73	1.38	96.92	1.57	95.35	96.67	0.013787	5.10	21.35	8.07	1.00
busso	6	Q500	125.00	92.19	95.82	96.73	0.91	96.92	1.10	95.60	97.07	0.011538	4.96	25.19	8.18	0.90
busso	5.1	Q50	84.00	91.00	93.70	93.88	0.18	93.45	-0.25	93.42	94.73	0.018602	4.50	18.66	2.95	0.87
busso	5.1	Q200	109.00	91.00	93.97	93.88	-0.09	93.45	-0.52	93.58	95.66	0.037729	5.76	18.92		1.07
busso	5.1	Q500	125.00	91.00	94.79	93.88	-0.91	93.45	-1.34	93.64	96.25	0.037560	5.37	23.29	7.10	0.88
busso	5	Q50	84.00	90.70	93.12	93.88	0.76	93.45	0.33	93.12	94.34	0.015938	4.88	17.21	7.10	1.00
busso	5	Q200	109.00	90.70	93.49	93.88	0.39	93.45	-0.04	93.49	95.03	0.019446	5.50	19.80	6.42	1.05
busso	5	Q500	125.00	90.70	93.56	93.88	0.32	93.45	-0.11	93.56	95.51	0.026944	6.18	20.23	5.21	1.17
busso	4	Q50	84.00	90.30	91.92	95.00	3.08	93.39	1.47	92.46	93.74	0.032966	5.98	14.05	10.71	1.67
busso	4	Q200	109.00	90.30	92.16	95.00	2.84	93.39	1.23	92.82	94.36	0.033909	6.58	16.55	10.88	1.70
busso	4	Q500	125.00	90.30	92.29	95.00	2.71	93.39	1.10	93.02	94.73	0.034365	6.92	18.07	10.98	1.72
busso	3.2	Q50	84.00	89.90	91.97	95.00	3.03	92.76	0.79	92.06	93.04	0.014182	4.58	18.33	9.78	1.07
busso	3.2	Q200	109.00	89.90	92.36	95.00	2.64	92.76	0.40	92.44	93.59	0.013859	4.92	22.16	10.09	1.06
busso	3.2	Q500	125.00	89.90	92.60	95.00	2.40	92.76	0.16	92.68	93.92	0.013597	5.09	24.57	10.28	1.05
busso	3.1	Q50	84.00	89.12	91.02	95.00	3.98	92.76	1.74	91.57	92.90	0.031488	6.08	13.81	9.01	1.57
busso	3.1	Q200	109.00	89.12	91.38	95.00	3.62	92.76	1.38	91.96	93.45	0.028582	6.38	17.08	9.30	1.50
busso	3.1	Q500	125.00	89.12	91.59	95.00	3.41	92.76	1.17	92.21	93.77	0.027319	6.55	19.10	9.47	1.47
busso	3	Q50	84.00	87.71	90.11	95.00	4.89	92.76	2.65	90.92	92.80	0.054411	7.27	11.56	8.29	1.96
busso	3	Q200	109.00	87.71	90.45	95.00	4.55	92.76	2.31	91.34	93.35	0.047563	7.54	14.46	8.56	1.85
busso	3	Q500	125.00	87.71	90.66	95.00	4.34	92.76	2.10	91.59	93.67	0.044559	7.69	16.26	8.73	1.80
busso	2	Q50	84.00	87.05	88.93	95.00	6.07	91.89	2.96	89.59	91.10	0.043044	6.53	12.87	10.95	1.92
busso	2	Q200	109.00	87.05	89.13	95.00	5.87	91.89	2.76	89.94	91.79	0.045320	7.23	15.07	11.25	1.99
busso	2	Q500	125.00	87.05	89.25	95.00	5.75	91.89	2.64	90.14	92.20	0.046321	7.62	16.41	11.42	2.03
busso	1.5	Q50	84.00	85.73	89.94	90.36	0.42	90.43	0.49	87.63	90.02	0.000498	1.25	67.16	23.63	0.24
busso	1.5	Q200	109.00	85.73	90.49	90.36	-0.13	90.43	-0.06	87.92	90.58	0.000503	1.35	81.29	30.50	0.24
busso	1.5	Q500	125.00	85.73	90.85	90.36	-0.49	90.43	-0.42	88.10	90.94	0.000464	1.38	92.29	30.50	0.23
busso	1.2		Bridge													
busso	1	Q50	84.00	85.73	89.94	90.36	0.42	90.43	0.49		90.02	0.000499	1.25	67.11	23.62	0.24
busso	1	Q200	109.00	85.73	90.47	90.36	-0.11	90.43	-0.04		90.57	0.000510	1.36	80.85	30.50	0.24
busso	1	Q500	125.00	85.73	90.84	90.36	-0.48	90.43	-0.41		90.93	0.000469	1.39	91.93	30.50	0.24

8.5.3 Sardorella e affluenti in corrispondenza dell'abitato di Picarello

Il tratto comprende la confluenza con il rio Ciubeca che è stata studiata nella configurazione che prevede la portata al colmo con tempo di ritorno assegnato a valle della confluenza e sull' affluente.

A monte della confluenza ai fini della conservazione della massa è imposta la differenza delle portate tra il T.Sardorella ed il rio Ciubeca, poiché nella sezione di chiusura indicata nel Piano di Bacino, localizzata a monte rispetto alle sezioni analizzate, la portata indicata risulta inferiore a quella calcolata per differenza.

In particolare risulta:

TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
		T = 50 anni	T = 200 anni	T = 500 anni
Torrente Sardorella a valle confluenza	SAR2	115	140	160
Torrente Sardorella a monte confluenza	differenza	85.6	97.5	108.8
Rio Ciubeca	CIU2	29.4	42.5	51.2

L'area di indagine è delimitata da una briglia a monte per cui è stata imposta la profondità critica come condizione al contorno di monte, mentre a valle è stata imposta la profondità di moto uniforme associata alla pendenza media del tratto data la regolarità delle sezioni di deflusso.

Nelle simulazioni è stato assegnato un valore del coefficiente di scabrezza k_s di Strickler pari a $30 m^{1/3}/s$.

Inoltre è stato studiato il tratto del rio Ciubeca nei pressi della confluenza con il torrente Sardorella comprese le confluenze con due rii minori:fosso Gazu e rio Gazzo.

Per la definizione della portata sui tre rii è stato utilizzato il metodo CIMA per i bacini inferiori ai 2 km^2.

Per il rio Ciubeca sono state utilizzate 3 portate: la prima a monte delle confluenza con il Sardorella, la seconda a monte della confluenza con il rio Gazzo, la terza a monte della confluenza con il fosso Gazu. La portate alla confluenza con il Sardorella sono:

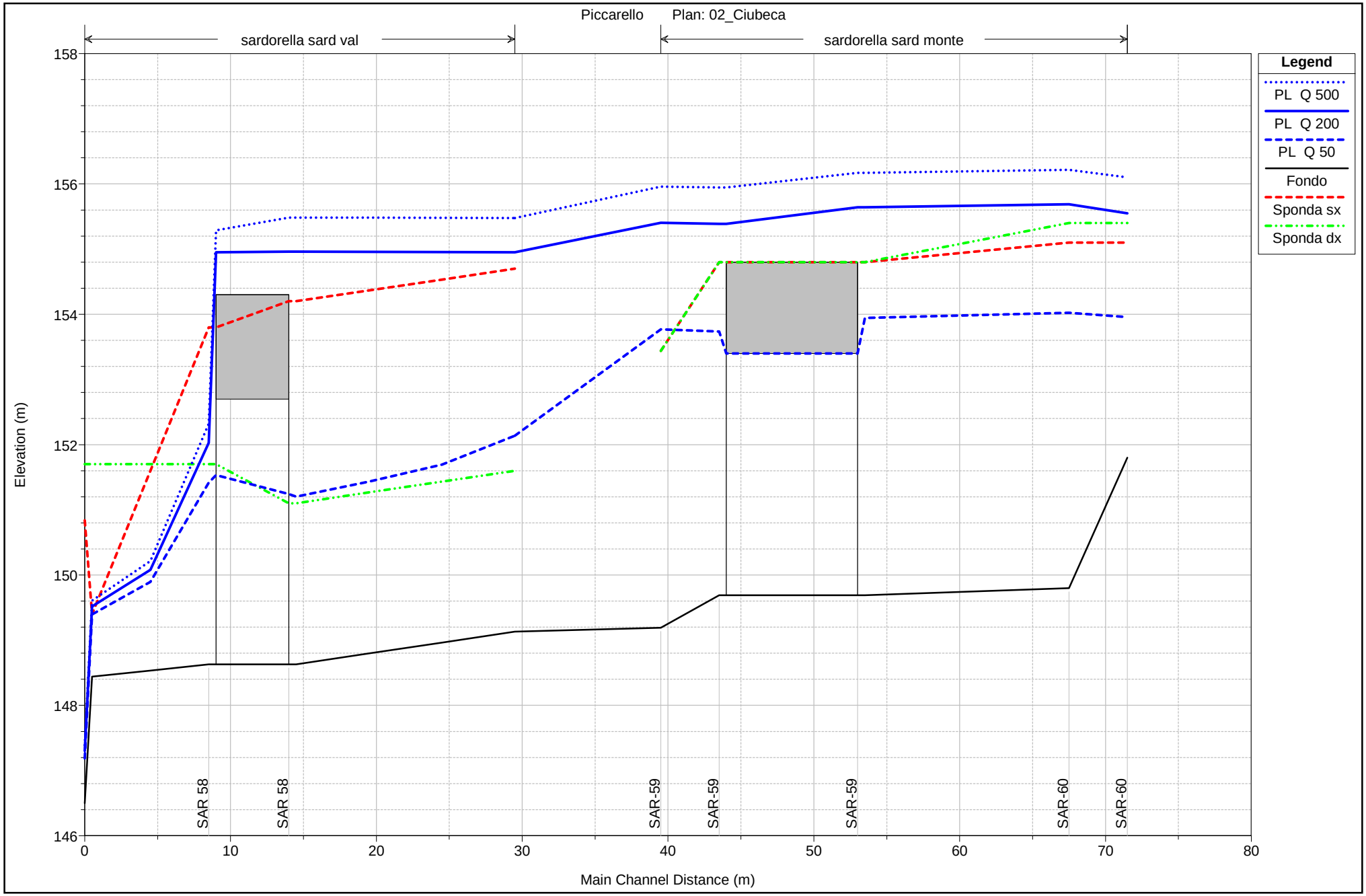
Per il torrente Sardorella sono state utilizzate le portate di massima piena per il tratto di valle e la differenza per il tratto di monte.

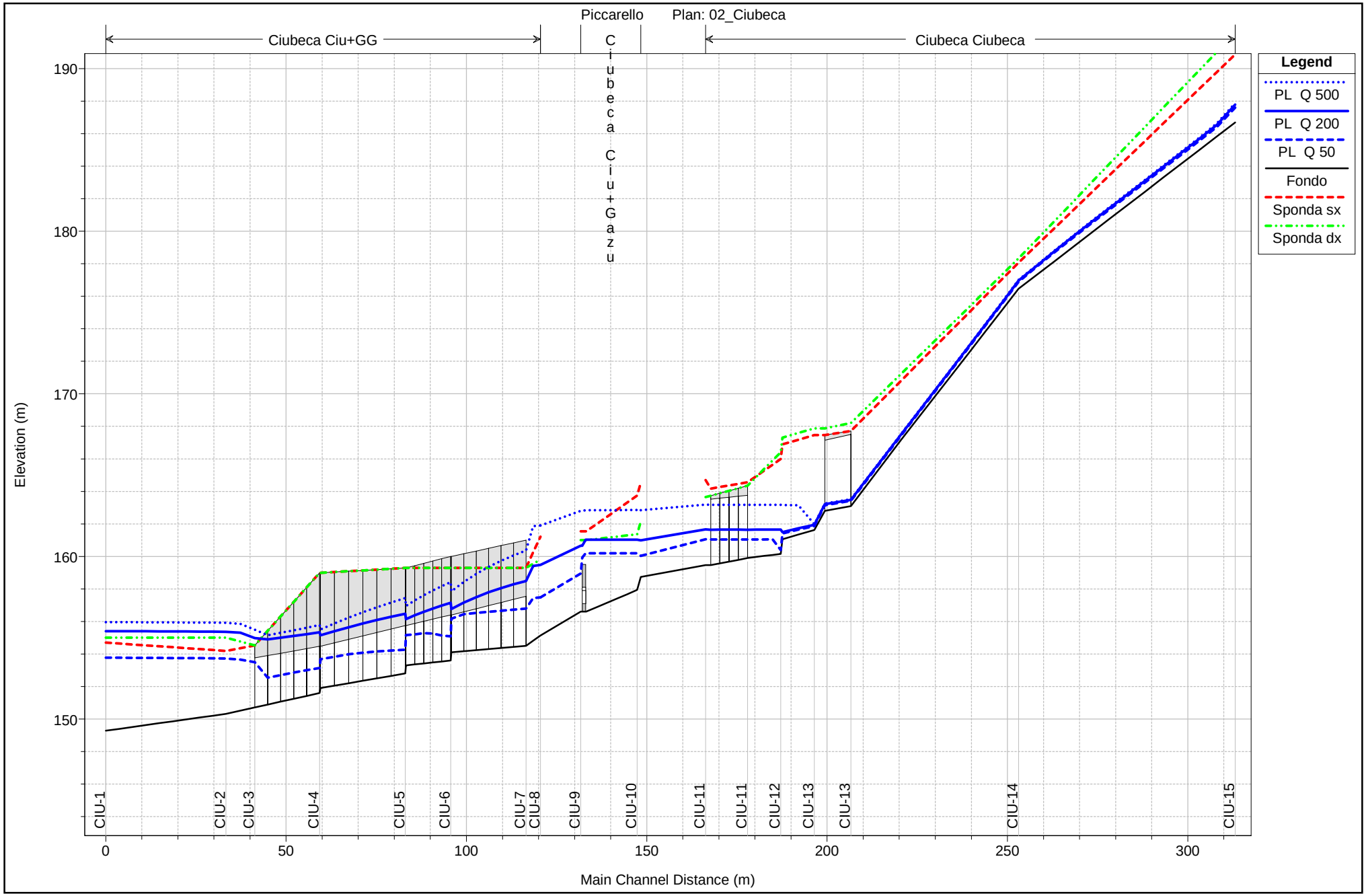
Le portate utilizzate sono le seguenti:

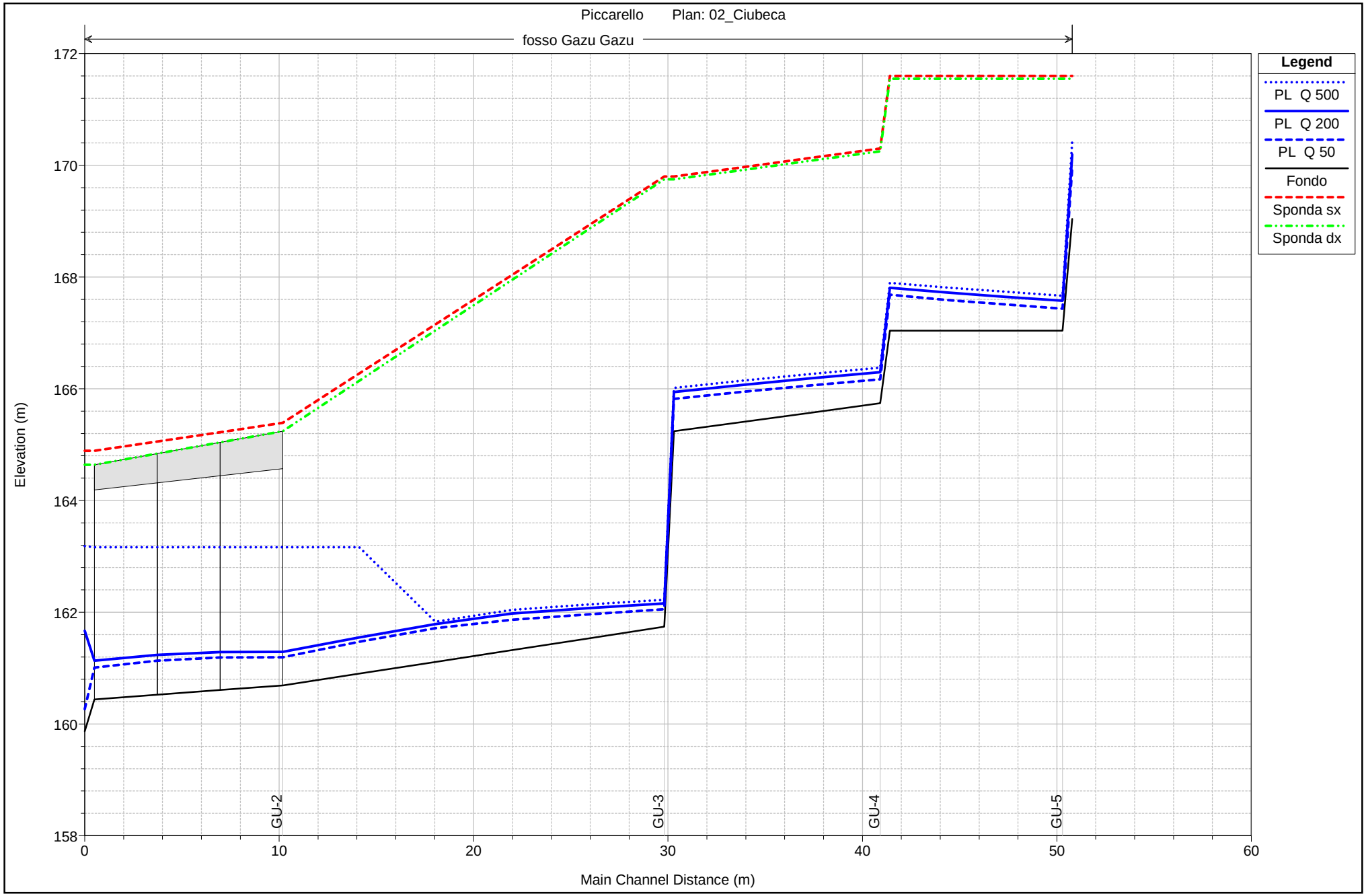
TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
		T = 50 anni	T = 200 anni	T = 500 anni
Torrente Sardorella a valle confluenza	SAR2	115	140	160
Torrente Sardorella a monte confluenza	differenza	85.6	97.5	108.8
Rio Ciubeca alla confluenza T. Secca	CIU2	29.4	42.5	51.2
Rio Ciubeca a monte confluenza F. Gazzo	differenza	19.7	28.5	34.3
Rio Ciubeca a monte confluenza F. Gazu	CIU1	5.8	8.4	10.2
Fosso Gazzo	Gazzo	9.7	14	16.9
Fosso Gazu	Gazu	13.9	20.1	24.1

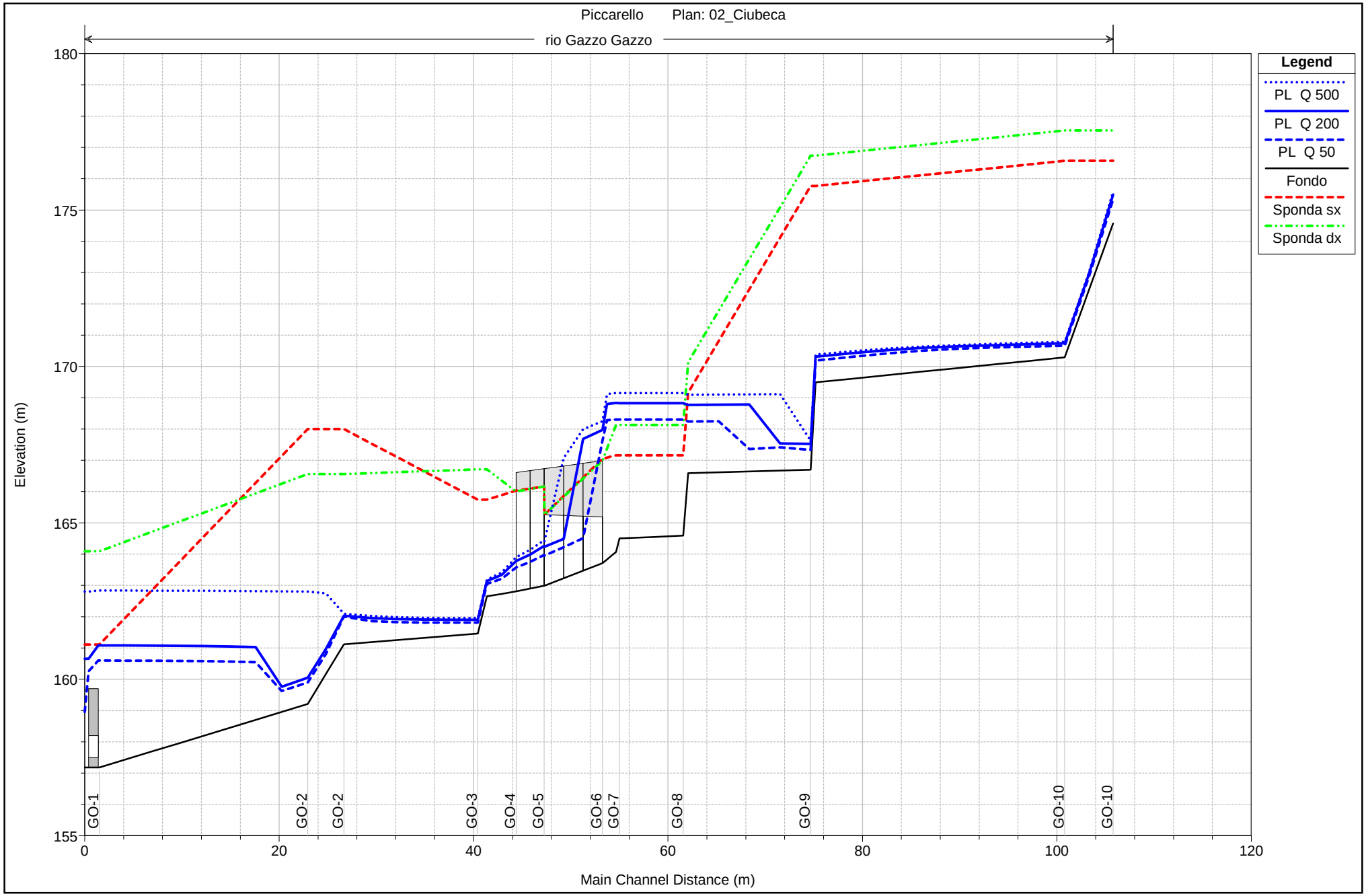
Per ciascuno di questi rii a monte è stata imposta la condizione critica , a valle è stata simulata la confluenza con il ricettore.

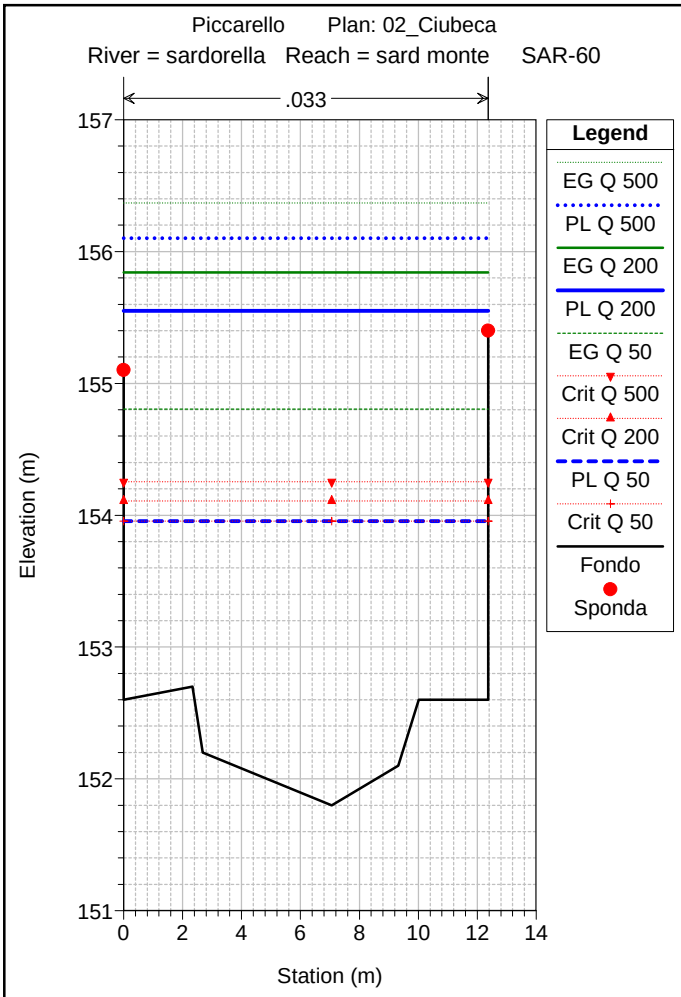
E' stato utilizzato un coefficiente di Strikler pari a 30 $m^{1/3}/s$.

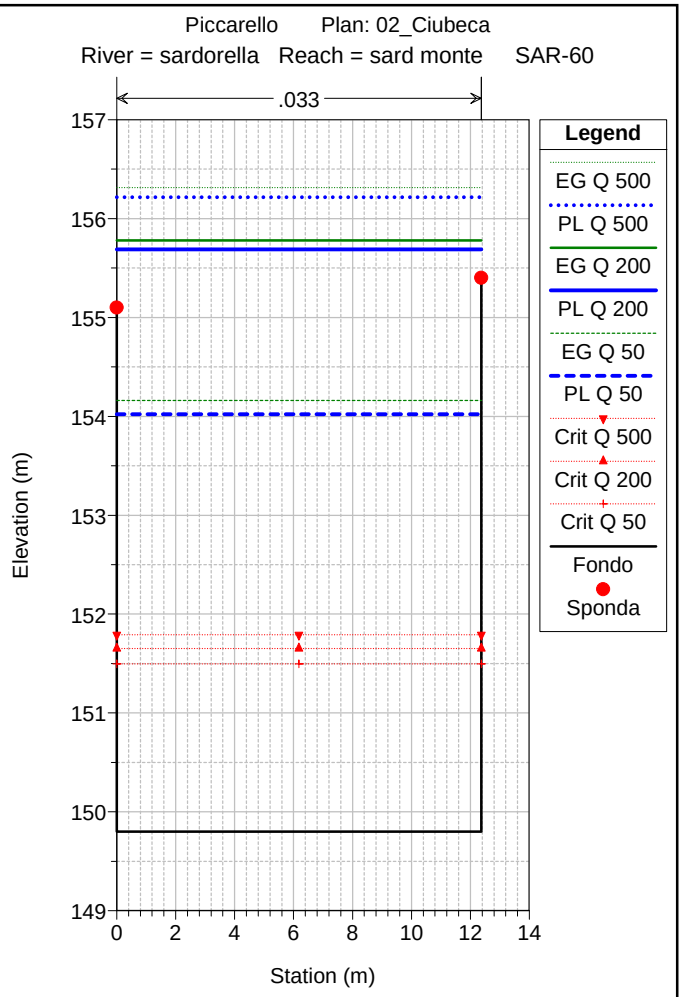

Piccarello
Plan: 02_Ciubeca
sardorella sard val
sardorella sard monte
Legend
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
158
156
154
152
150
148
146
0
10
20
30
40
50
60
70
80
SAR 58
SAR 58
SAR-59
SAR-59
SAR-59
SAR-60
SAR-60

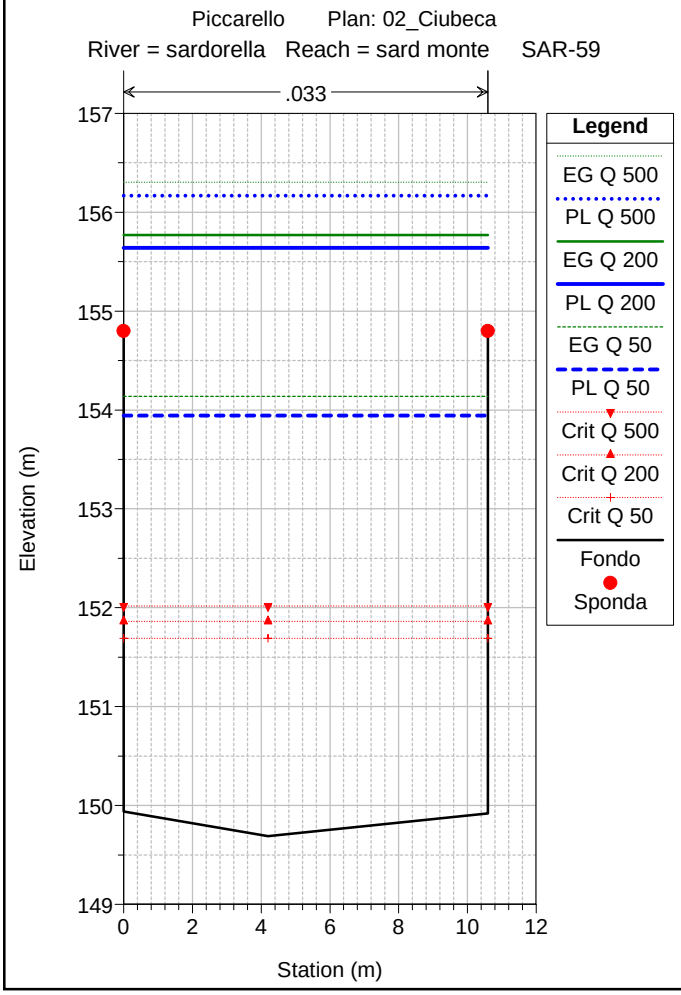

Piccarello
Plan: 02_Ciubeca
Ciubeca Ciu+GG
Ciubeca Ciubeca
Ciubeca Ciu+Gazu
Legend
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda sx
Sponda dx
Elevation (m)
190
180
170
160
150
0
50
100
150
200
250
300
Main Channel Distance (m)
CIU-1
CIU-2
CIU-3
CIU-4
CIU-5
CIU-6
CIU-7
CIU-8
CIU-9
CIU-10
CIU-11
CIU-11
CIU-12
CIU-13
CIU-13
CIU-14
CIU-15

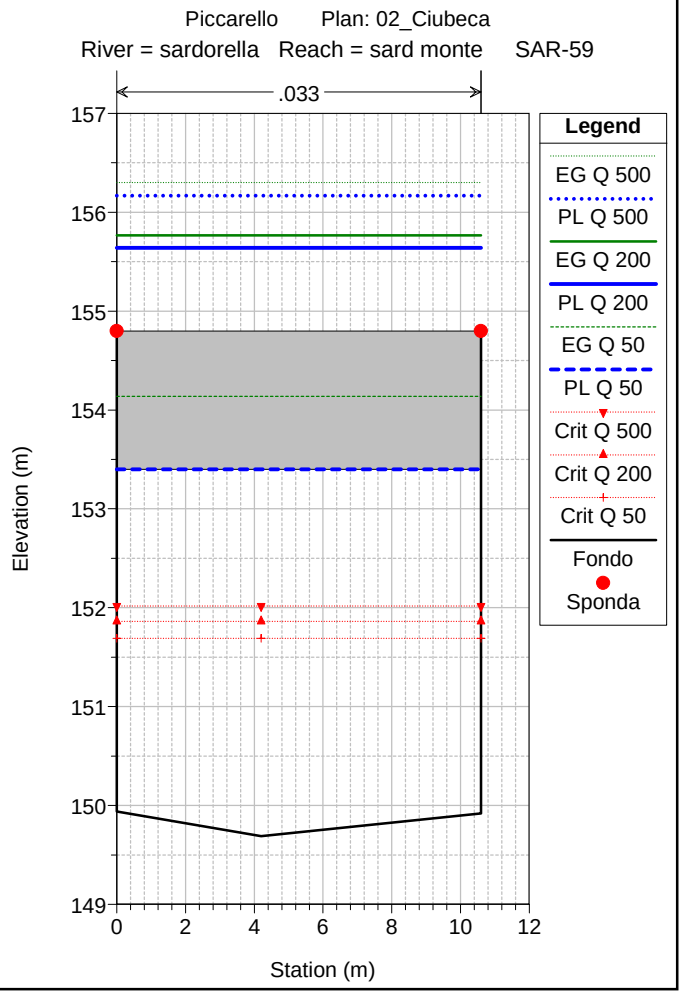

Piccarello Plan: 02_Ciubeca
fosso Gazu Gazu
Legend
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda sx
Sponda dx
Elevation (m)
172
170
168
166
164
162
160
158
0
10
20
30
40
50
60
Main Channel Distance (m)
GU-2
GU-3
GU-4
GU-5

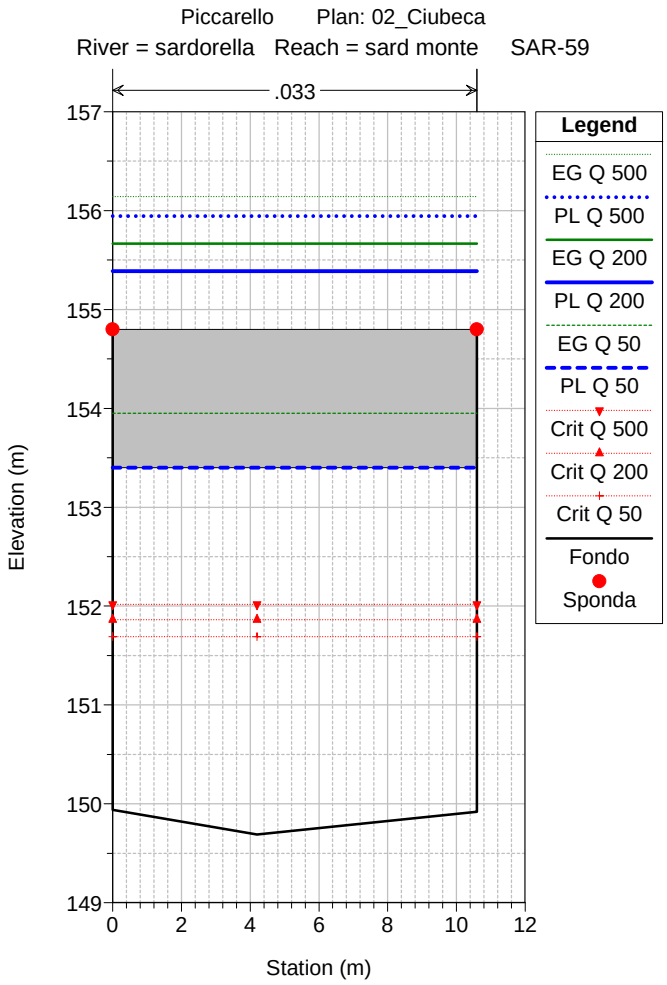

Piccarello
Plan: 02_Ciubeca
rio Gazzo Gazzo
Legend
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
180
175
170
165
160
155
0
20
40
60
80
100
120
GO-1
GO-2
GO-2
GO-3
GO-4
GO-5
GO-6
GO-7
GO-8
GO-9
GO-10
GO-10

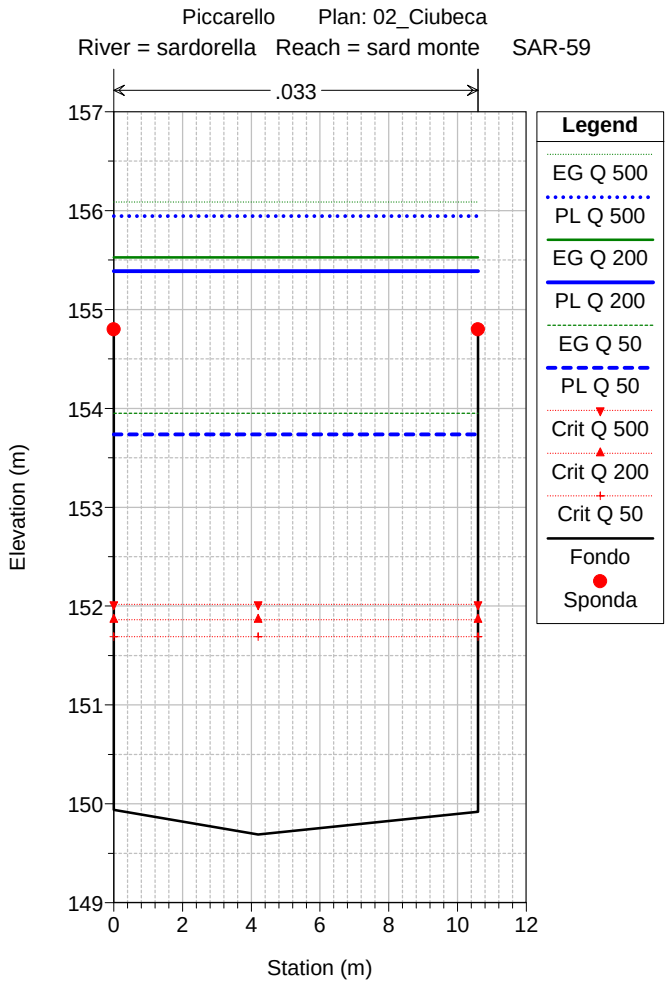

Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard monte SAR-60
.033
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
Crit Q 500
Crit Q 200
PL Q 50
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)

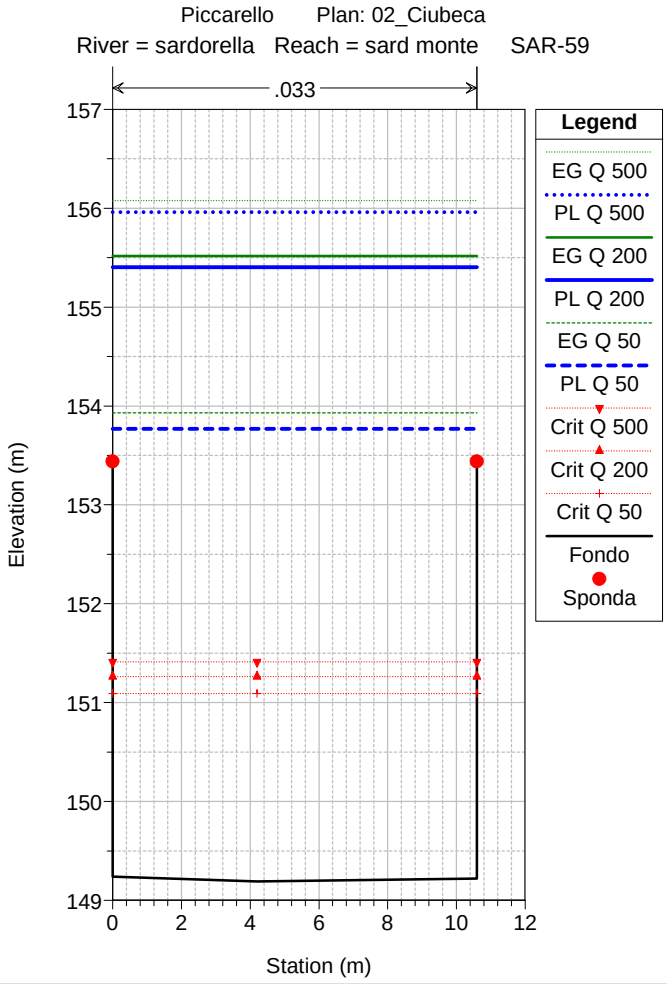

Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard monte SAR-60
.033
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)

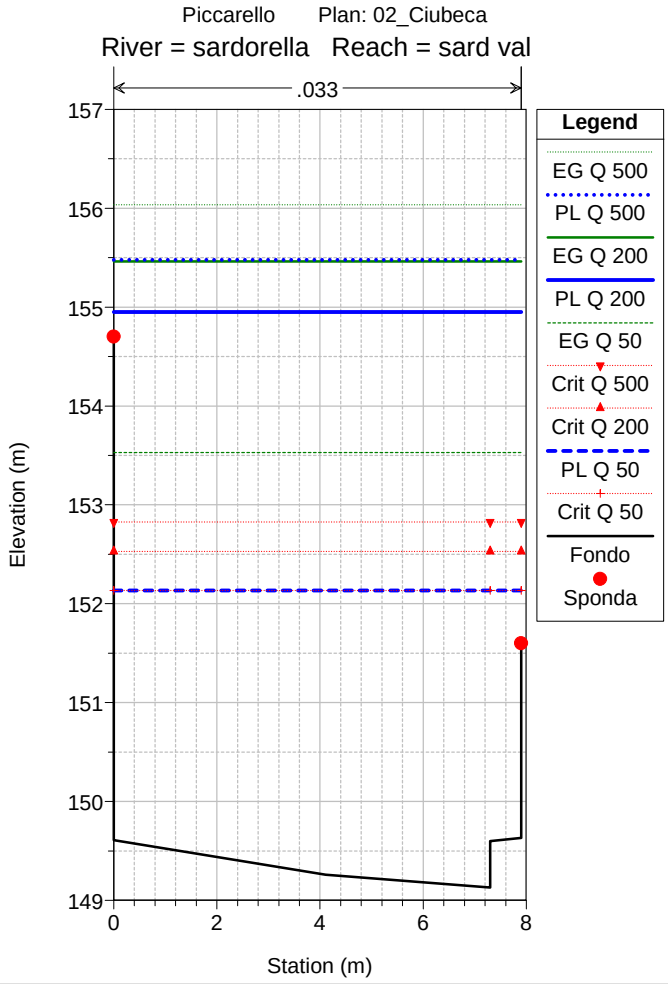

Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard monte SAR-59
.033
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard monte SAR-59
.033
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)

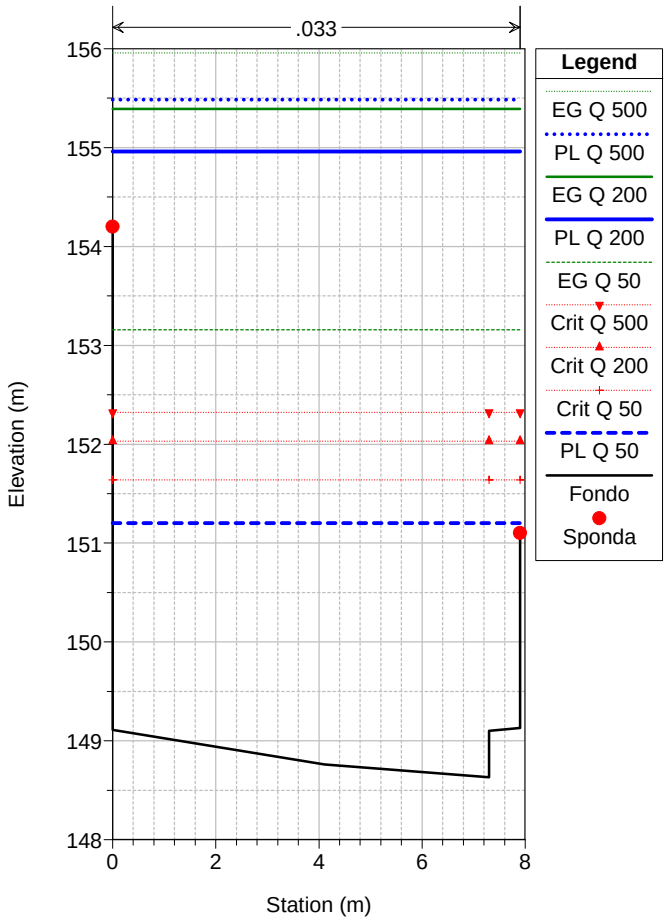

Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard monte SAR-59
.033
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard monte SAR-59
.033
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)

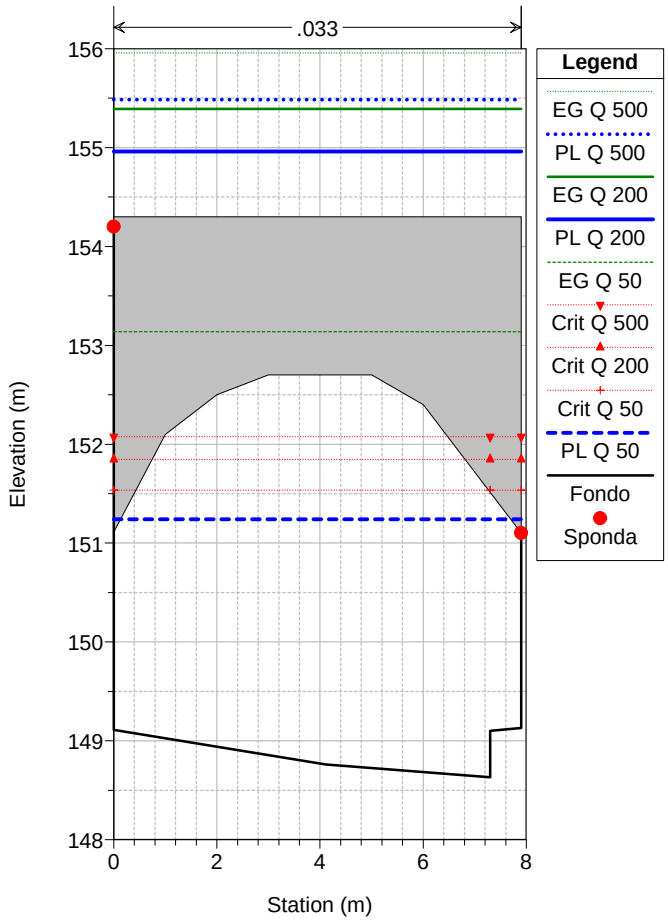

Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard monte SAR-59
.033
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard val
.033
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
Crit Q 500
Crit Q 200
PL Q 50
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)

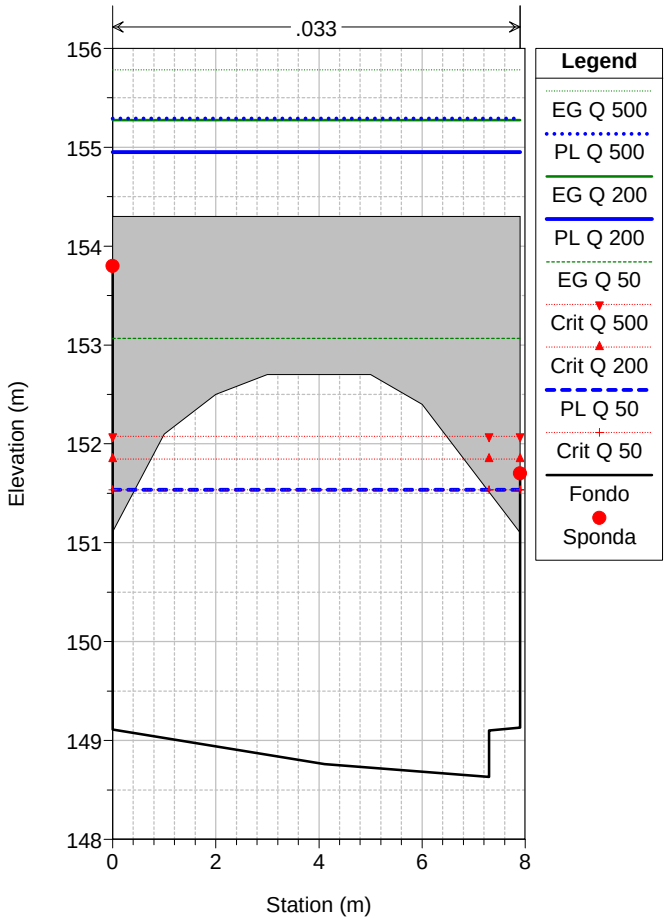
Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard val SAR 58



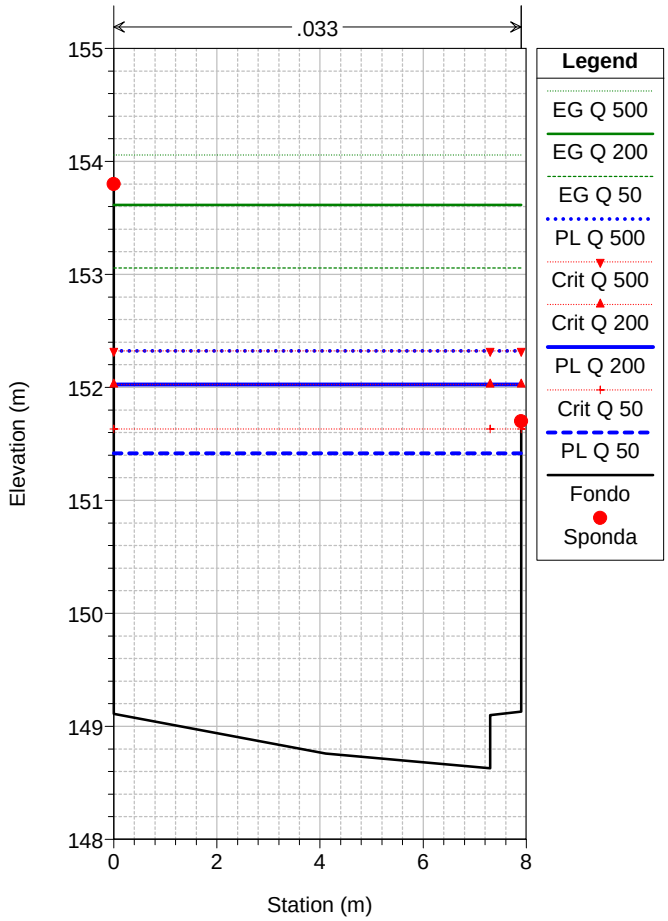
Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard val SAR 58

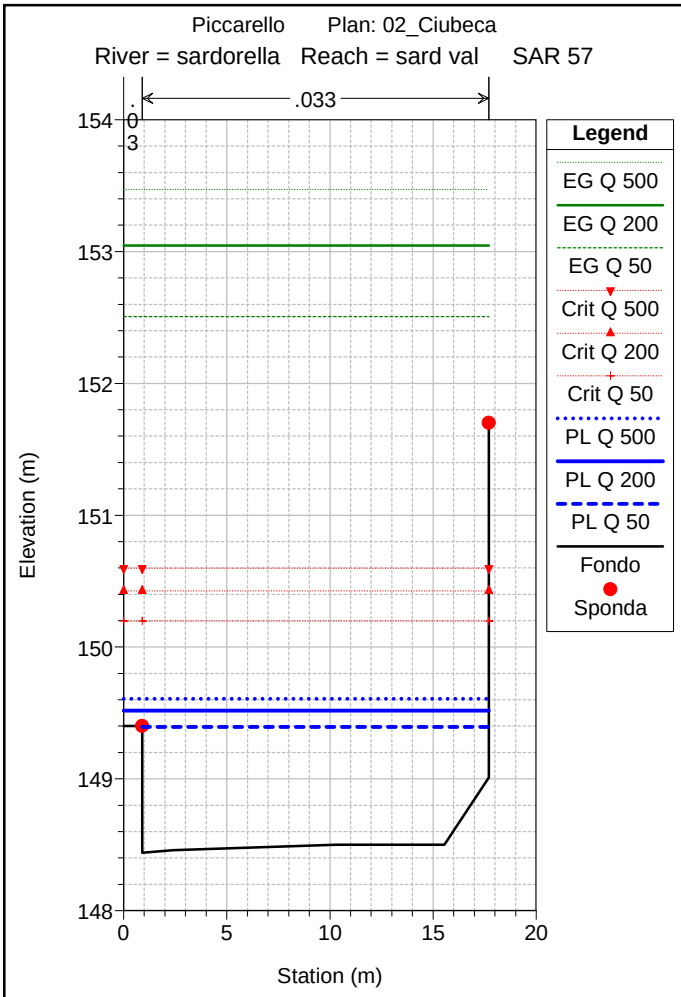


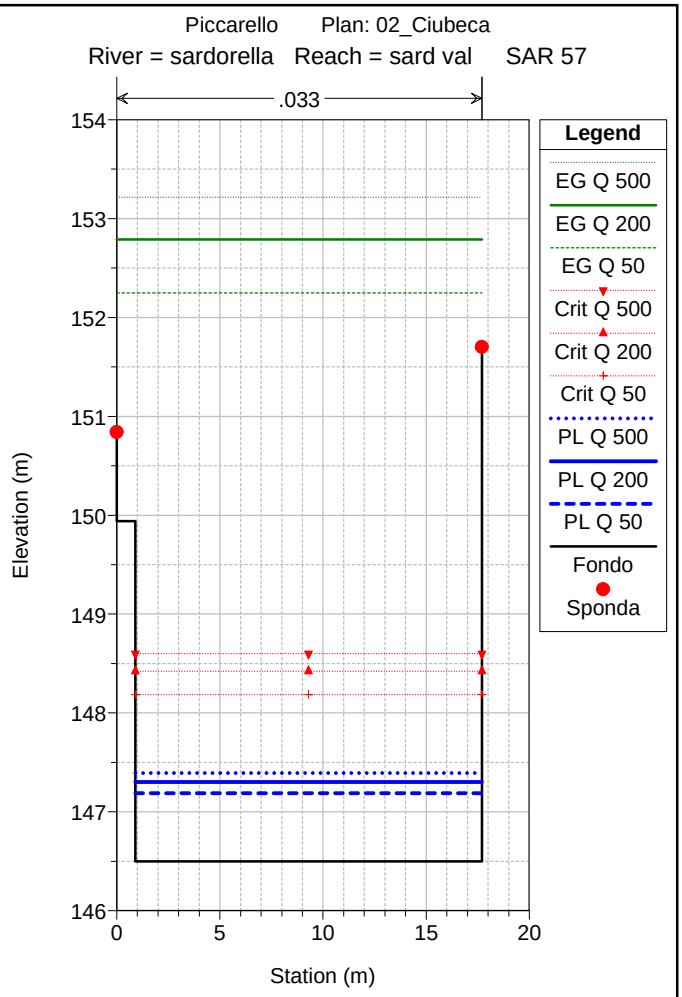
Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard val SAR 58

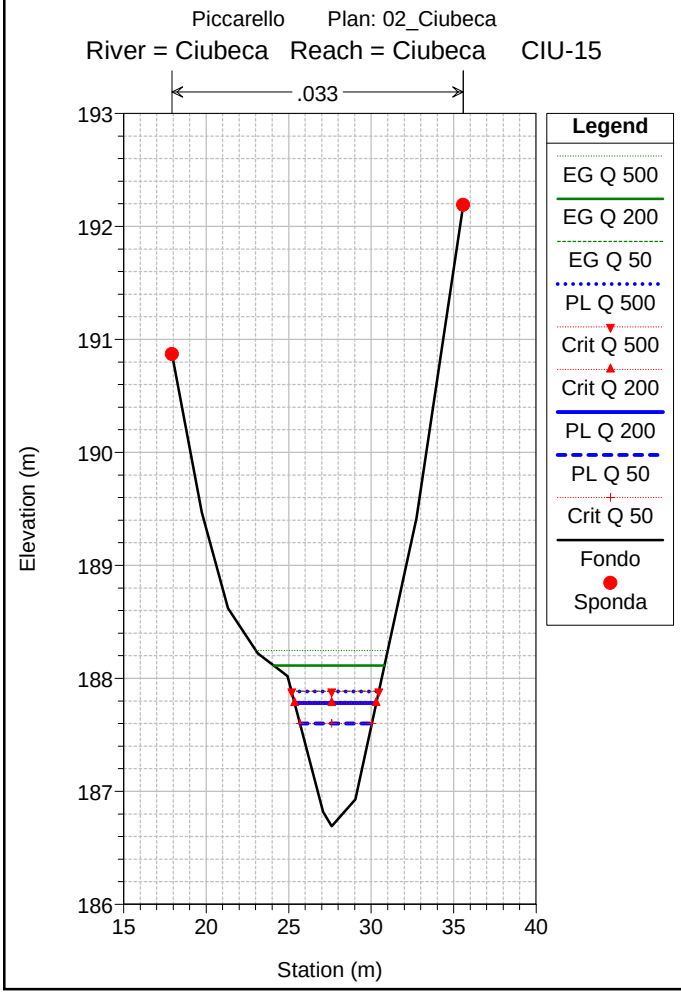


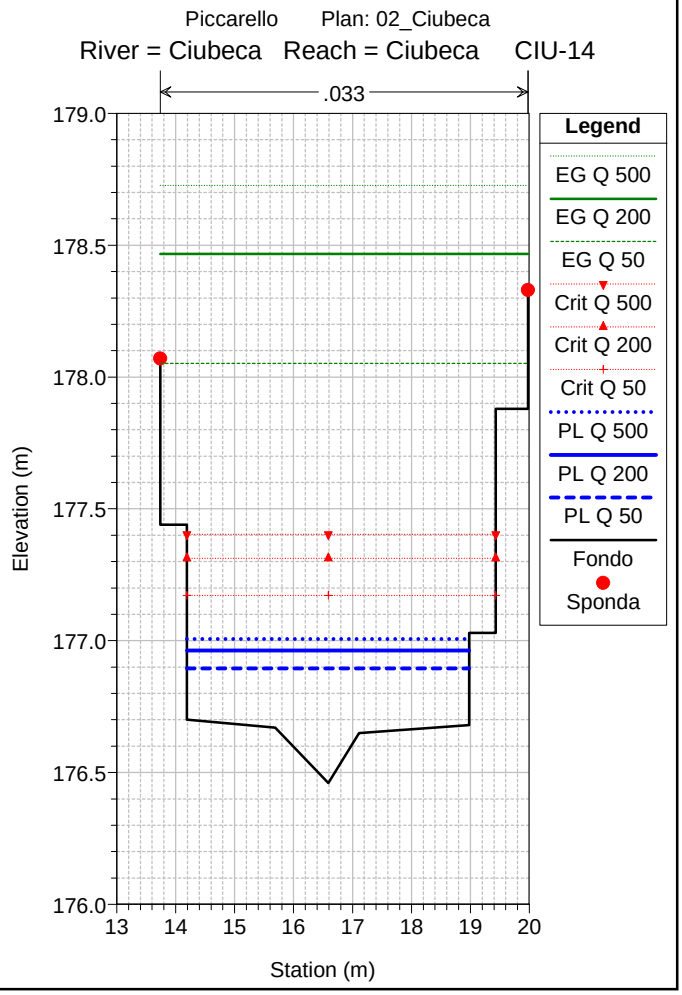
Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard val SAR 58

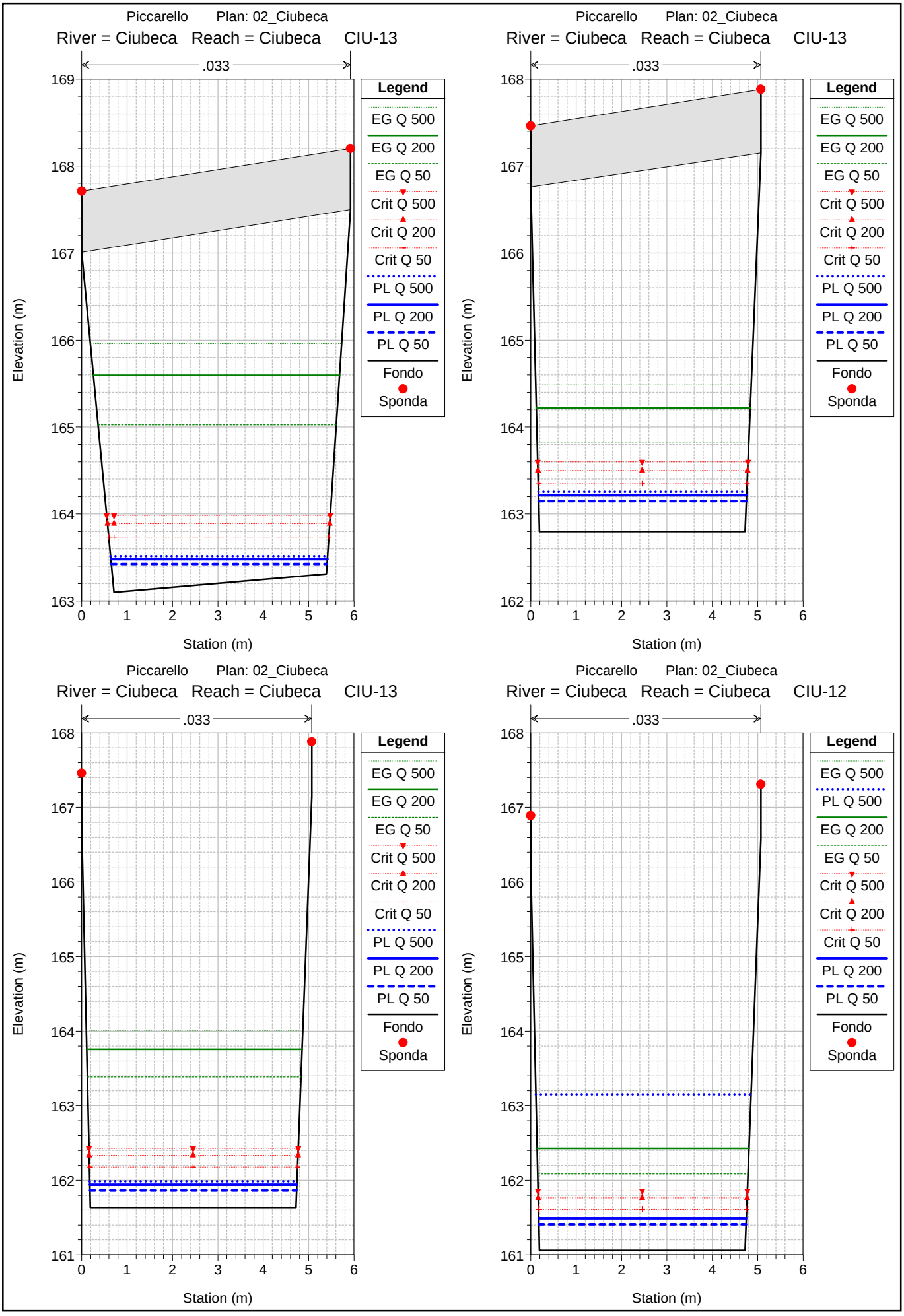



Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard val SAR 57
.033
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Piccarello Plan: 02_Ciubeca
River = sardorella Reach = sard val SAR 57
.033
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)

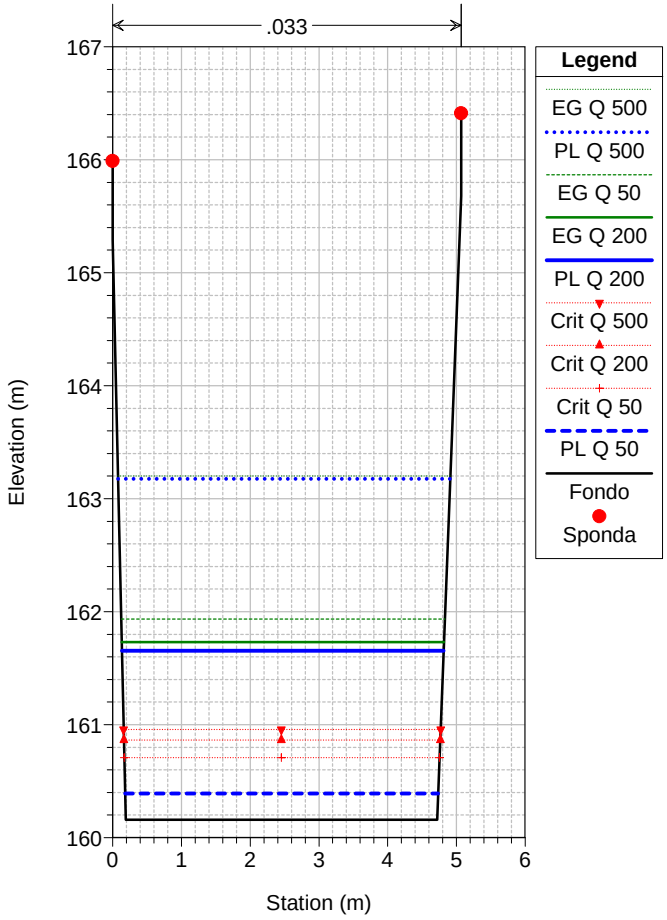

Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciubeca CIU-15
.033
Legend
EG Q 500
EG Q 200
EG Q 50
PL Q 500
Crit Q 500
Crit Q 200
PL Q 200
PL Q 50
Crit Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciubeca CIU-14
.033
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)


Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciubeca CIU-13
.033
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)
Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciubeca CIU-13
.033
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)
Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciubeca CIU-13
.033
Legend
EG Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 500
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)
Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciubeca CIU-12
.033
Legend
EG Q 500
PL Q 500
EG Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 200
PL Q 50
Fondo
Sponda
Elevation (m)
Station (m)

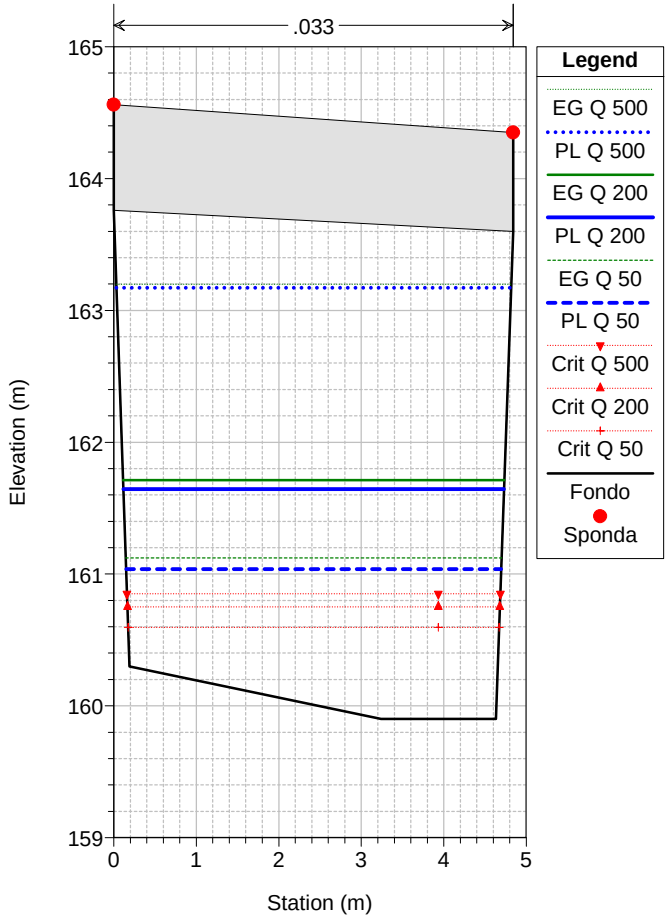
Piccarello Plan: 02_Ciubeca

River = Ciubeca Reach = Ciubeca CIU-12



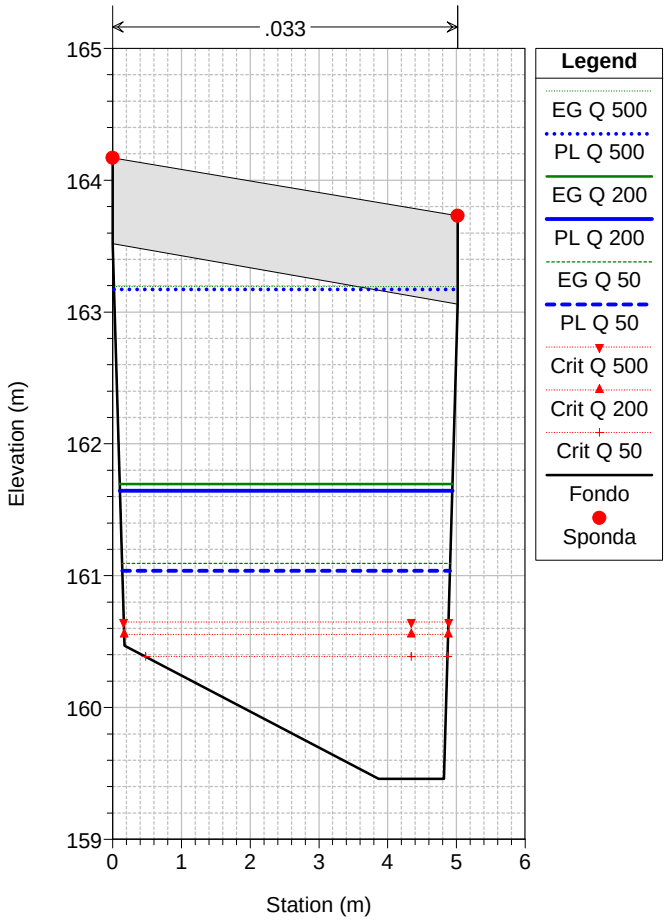
Piccarello Plan: 02_Ciubeca

River = Ciubeca Reach = Ciubeca CIU-11



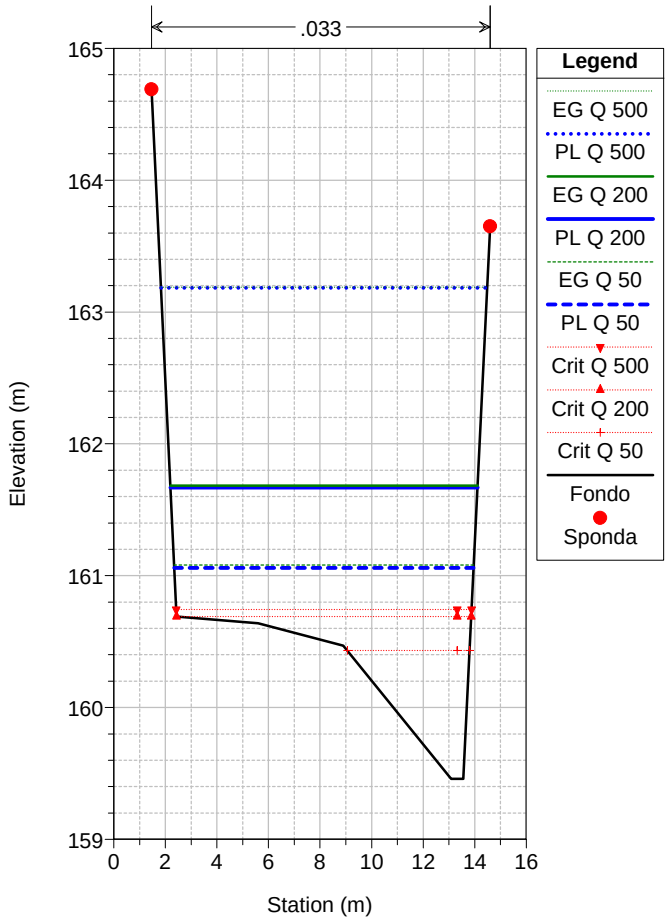
Piccarello Plan: 02_Ciubeca

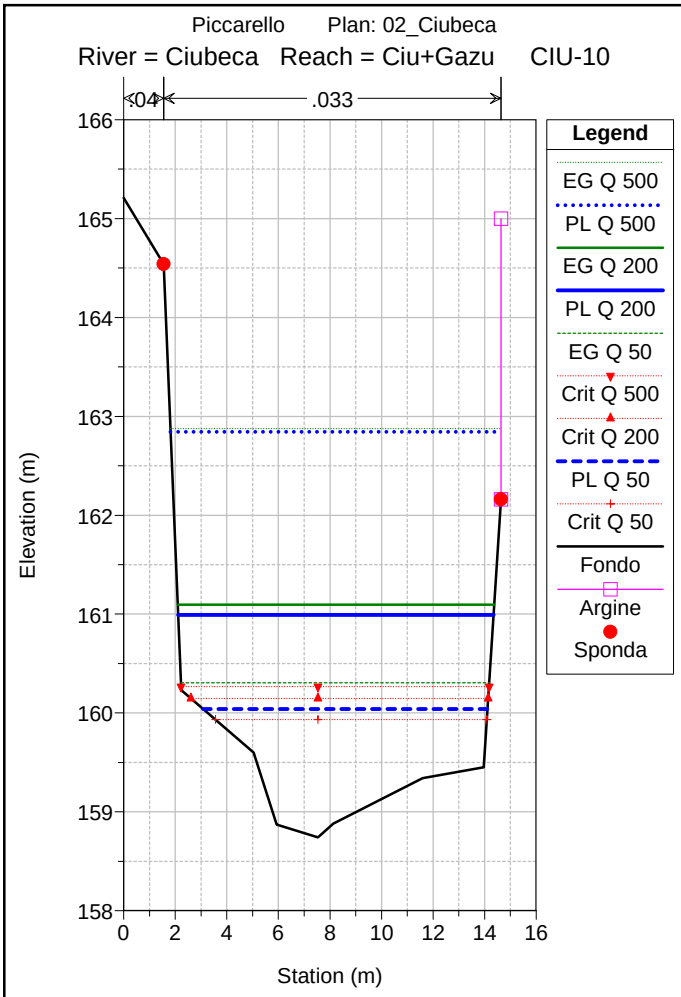
River = Ciubeca Reach = Ciubeca CIU-11

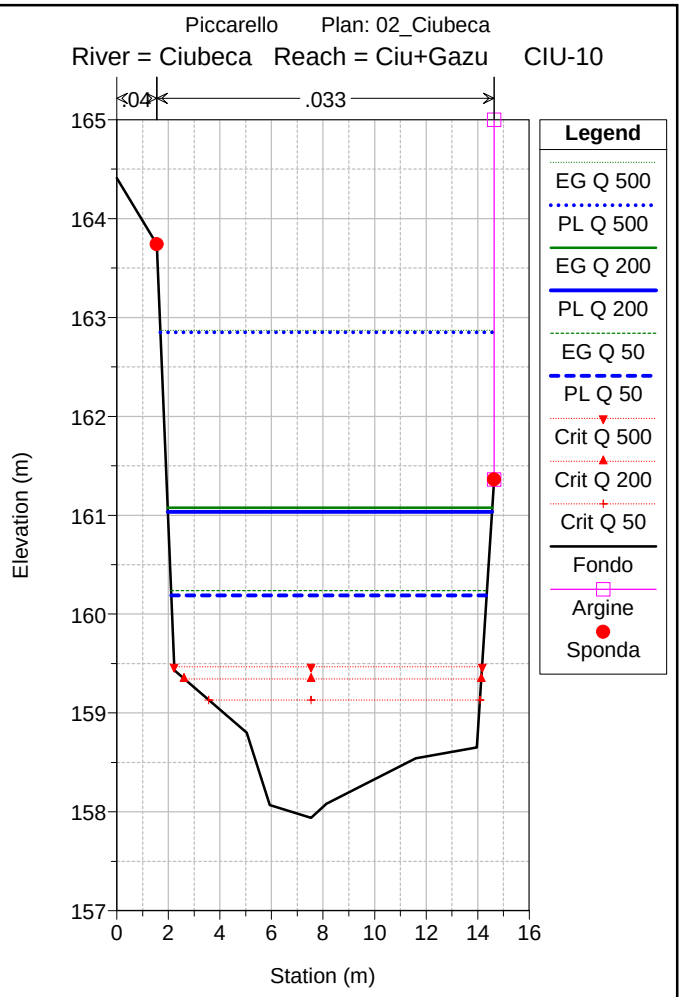


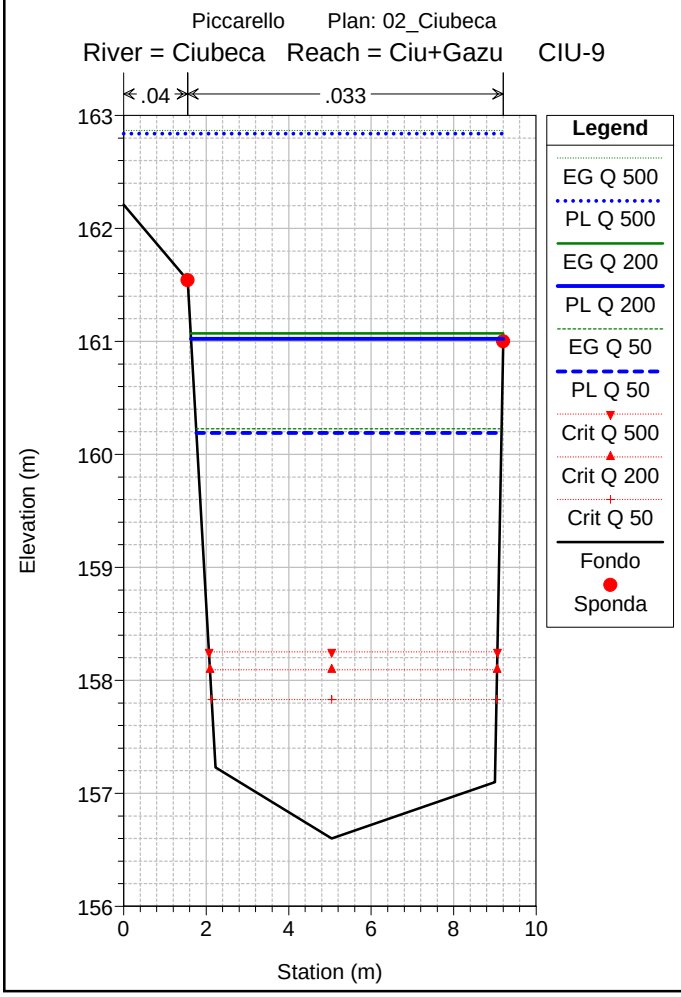
Piccarello Plan: 02_Ciubeca

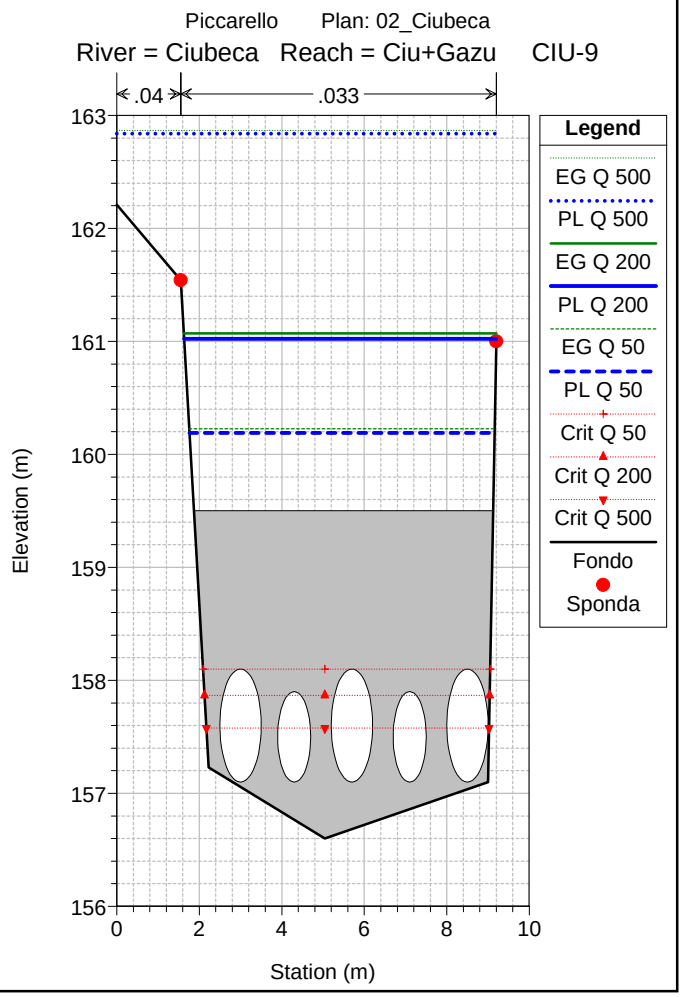
River = Ciubeca Reach = Ciubeca CIU-11

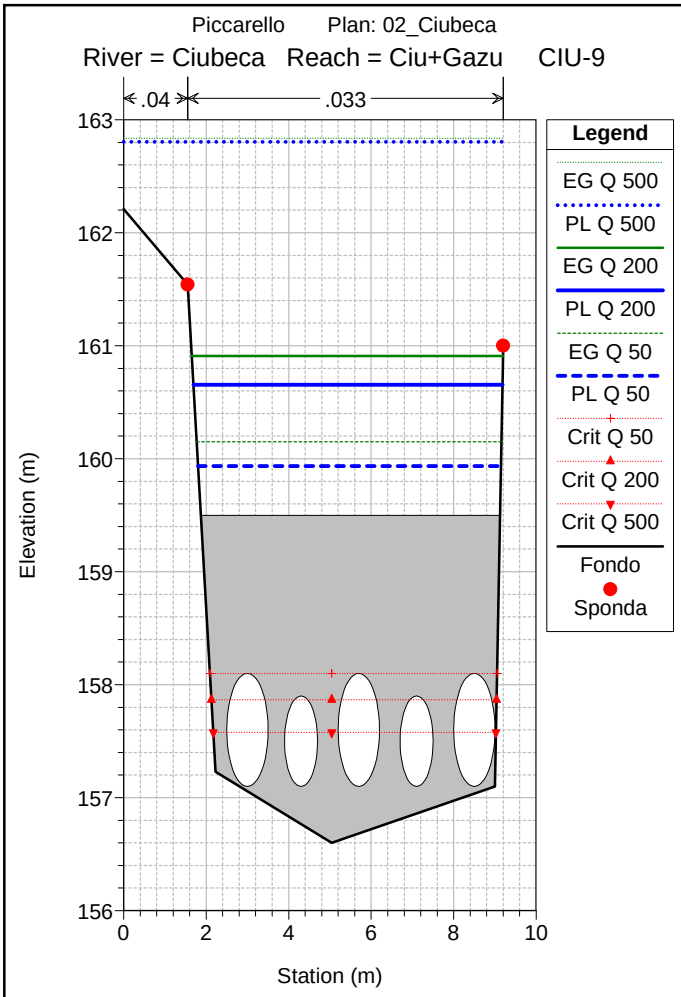


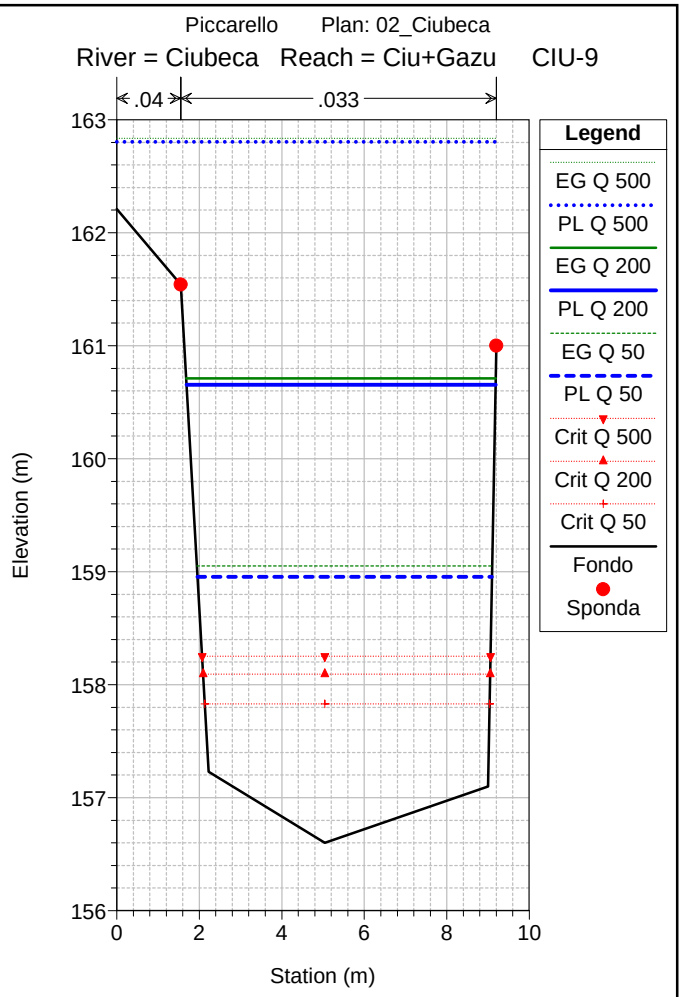

Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+Gazu CIU-10
.04
.033
Elevation (m)
Station (m)
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
Crit Q 500
Crit Q 200
PL Q 50
Crit Q 50
Fondo
Argine
Sponda

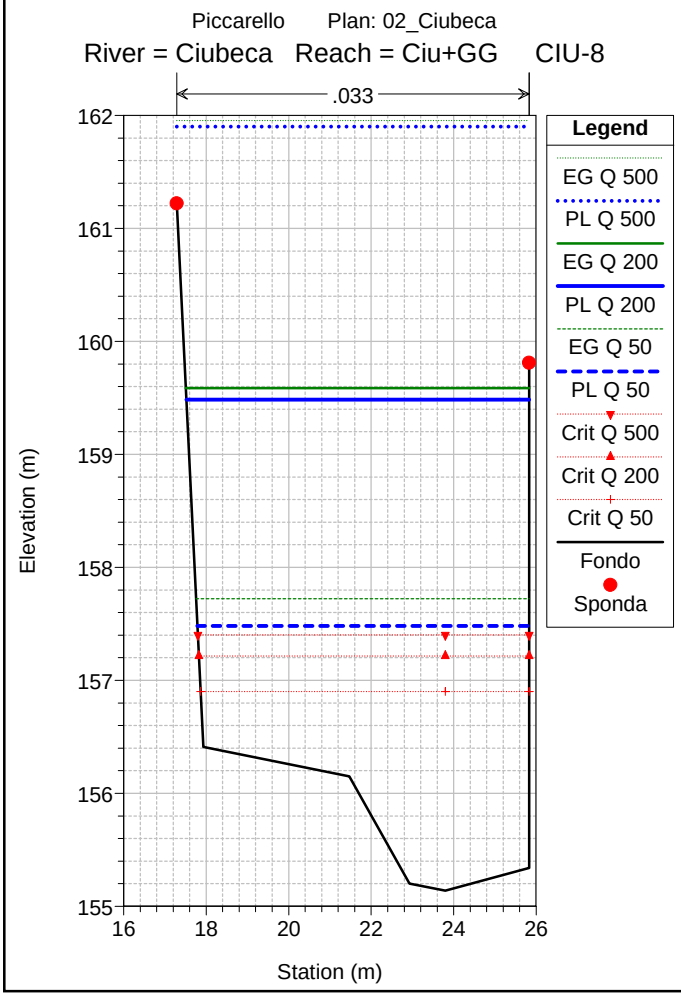

Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+Gazu CIU-10
.04
.033
Elevation (m)
Station (m)
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Argine
Sponda

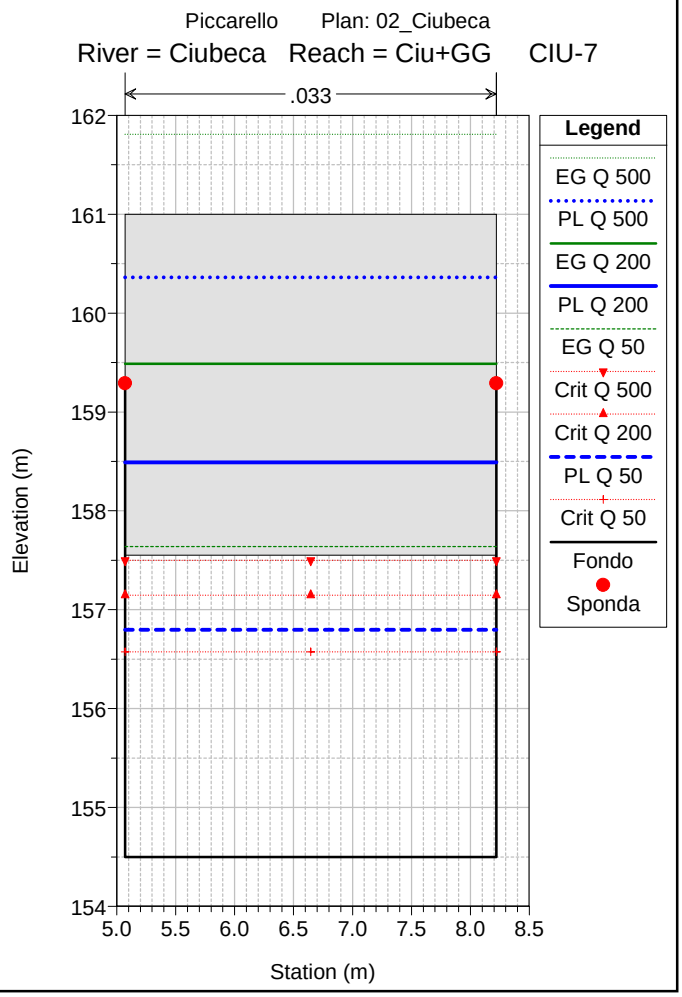

Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+Gazu CIU-9
.04
.033
Elevation (m)
Station (m)
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda


Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+Gazu CIU-9
.04
.033
Elevation (m)
Station (m)
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 50
Crit Q 200
Crit Q 500
Fondo
Sponda


Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+Gazu CIU-9
.04
.033
Elevation (m)
Station (m)
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 50
Crit Q 200
Crit Q 500
Fondo
Sponda

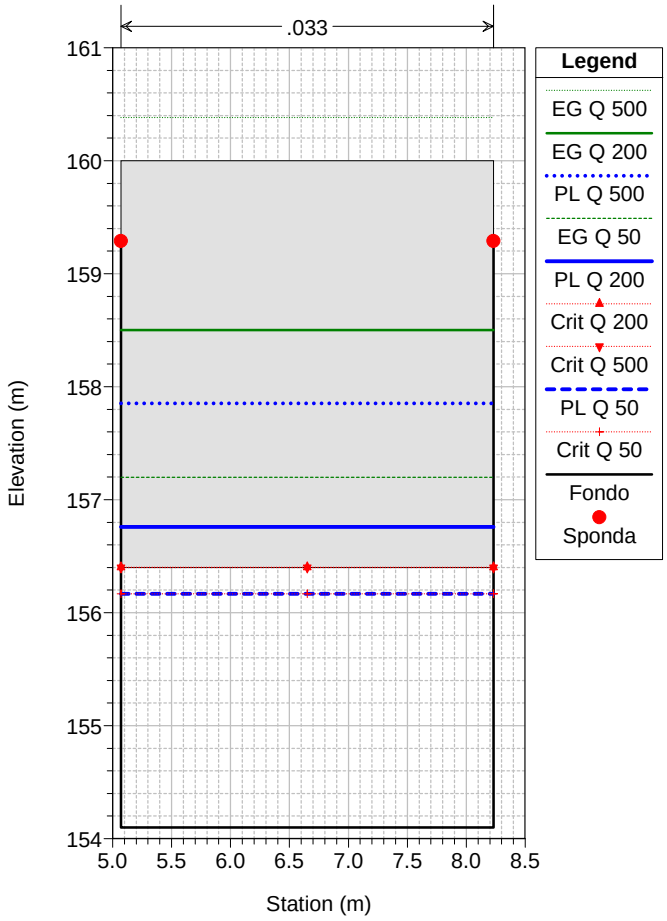

Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+Gazu CIU-9
.04
.033
Elevation (m)
Station (m)
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda


Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+GG CIU-8
.033
Elevation (m)
Station (m)
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda


Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+GG CIU-7
.033
Elevation (m)
Station (m)
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
Crit Q 500
Crit Q 200
PL Q 50
Crit Q 50
Fondo
Sponda

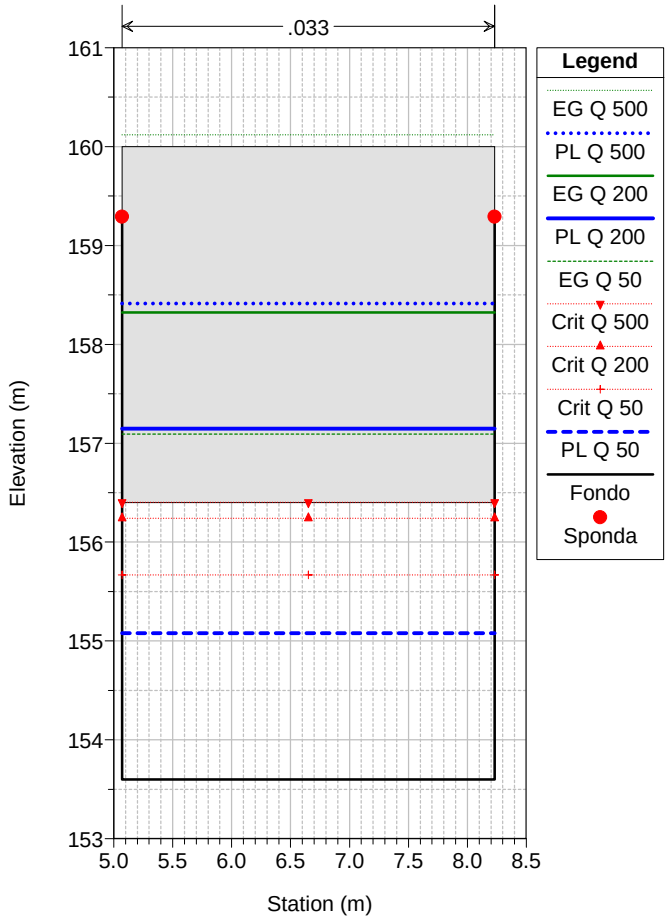
Piccarello Plan: 02_Ciubeca

River = Ciubeca Reach = Ciu+GG CIU-6



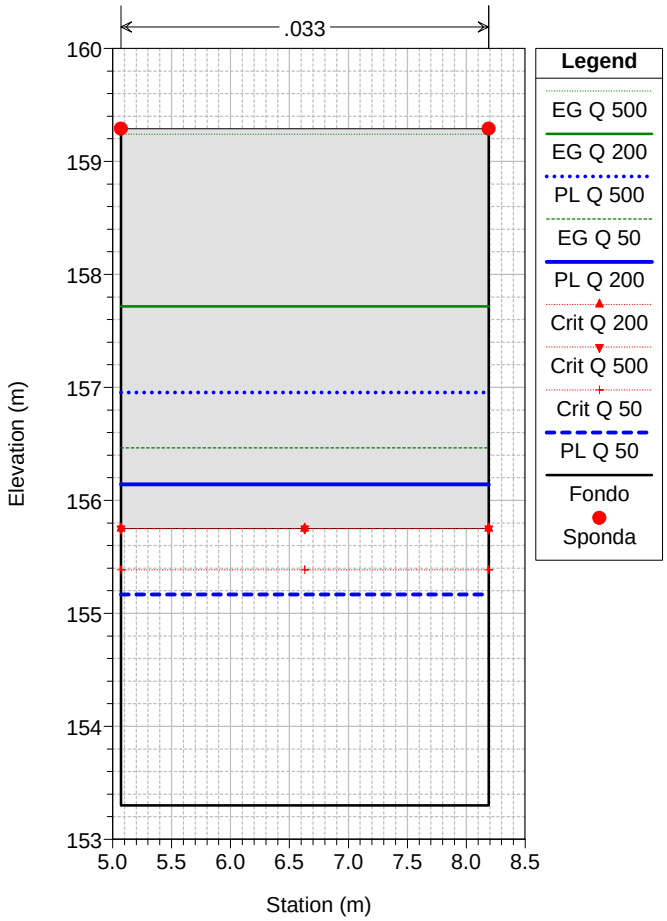
Piccarello Plan: 02_Ciubeca

River = Ciubeca Reach = Ciu+GG CIU-6



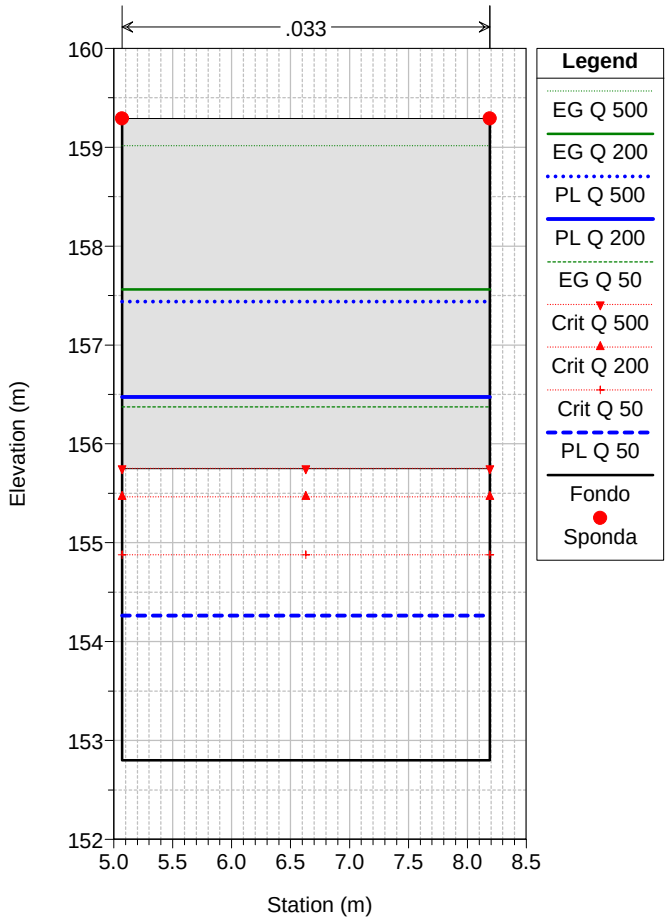
Piccarello Plan: 02_Ciubeca

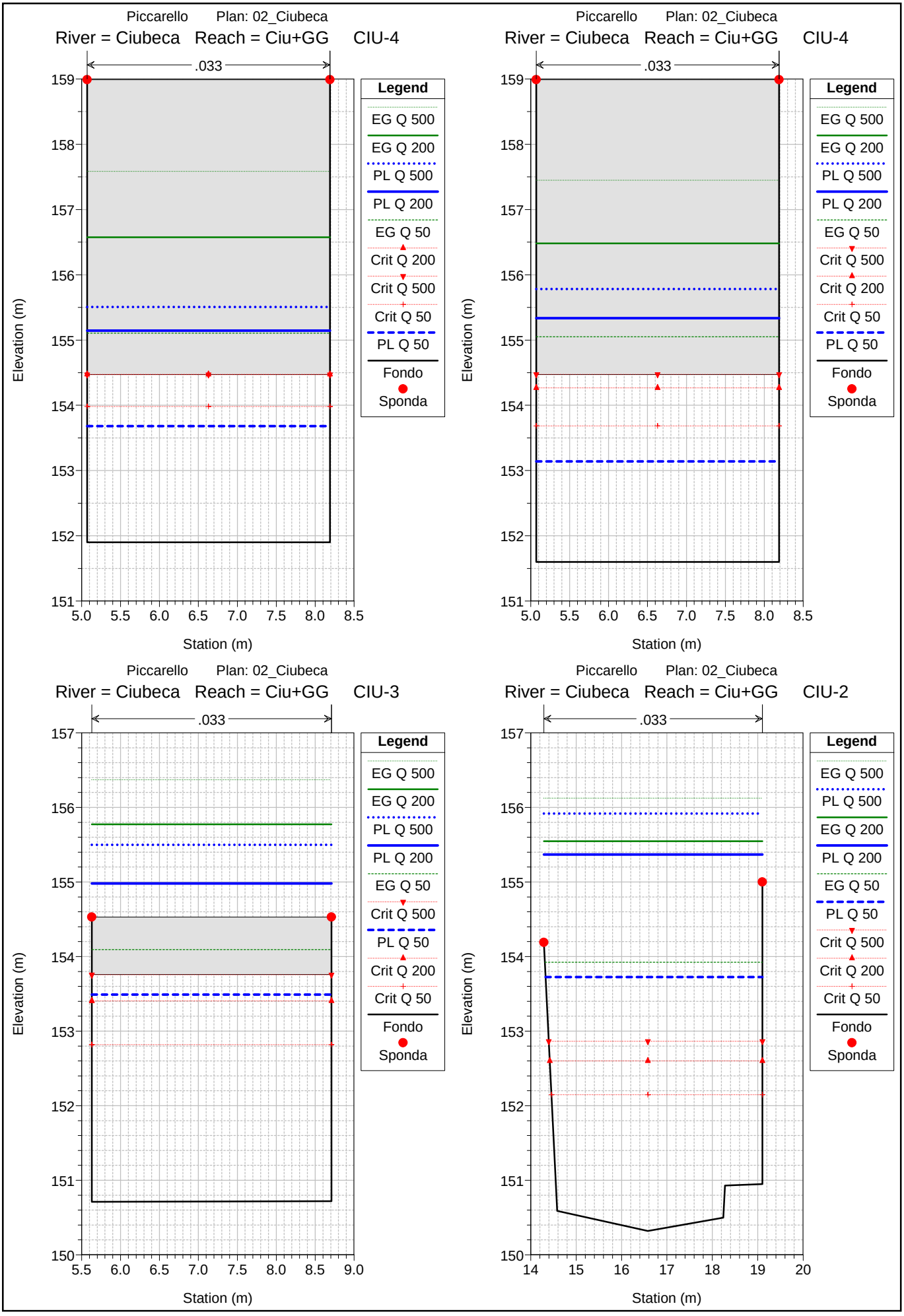
River = Ciubeca Reach = Ciu+GG CIU-5



Piccarello Plan: 02_Ciubeca

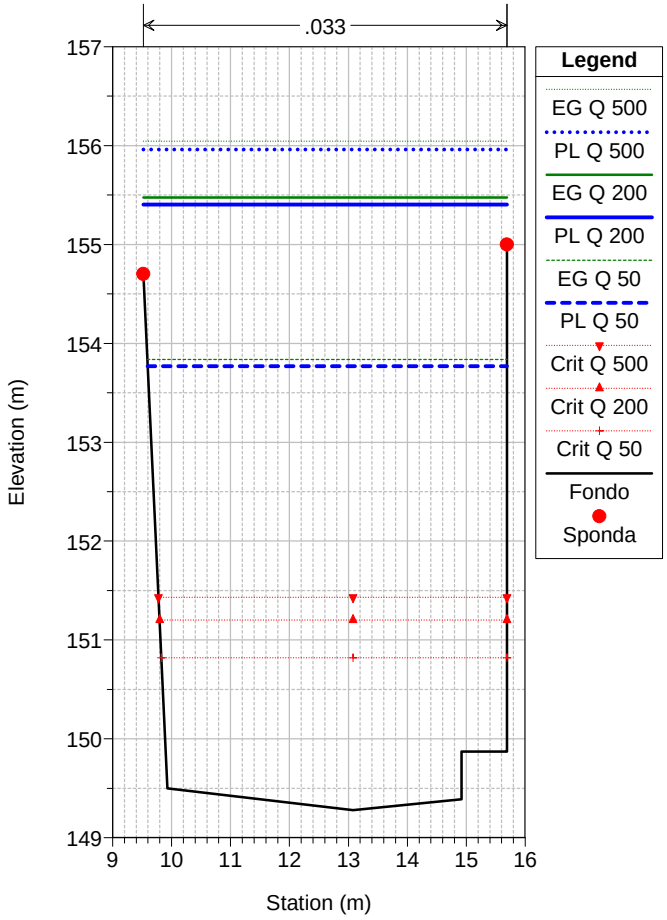
River = Ciubeca Reach = Ciu+GG CIU-5




Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+GG CIU-4
.033
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q 200
PL Q 500
PL Q 200
EG Q 50
Crit Q 200
Crit Q 500
Crit Q 50
PL Q 50
Fondo
Sponda
Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+GG CIU-4
.033
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q 200
PL Q 500
PL Q 200
EG Q 50
Crit Q 500
Crit Q 200
Crit Q 50
PL Q 50
Fondo
Sponda
Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+GG CIU-3
.033
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q 200
PL Q 500
PL Q 200
EG Q 50
Crit Q 500
PL Q 50
Crit Q 200
Crit Q 50
Fondo
Sponda
Piccarello Plan: 02_Ciubeca
River = Ciubeca Reach = Ciu+GG CIU-2
.033
Elevation (m)
Station (m)
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda

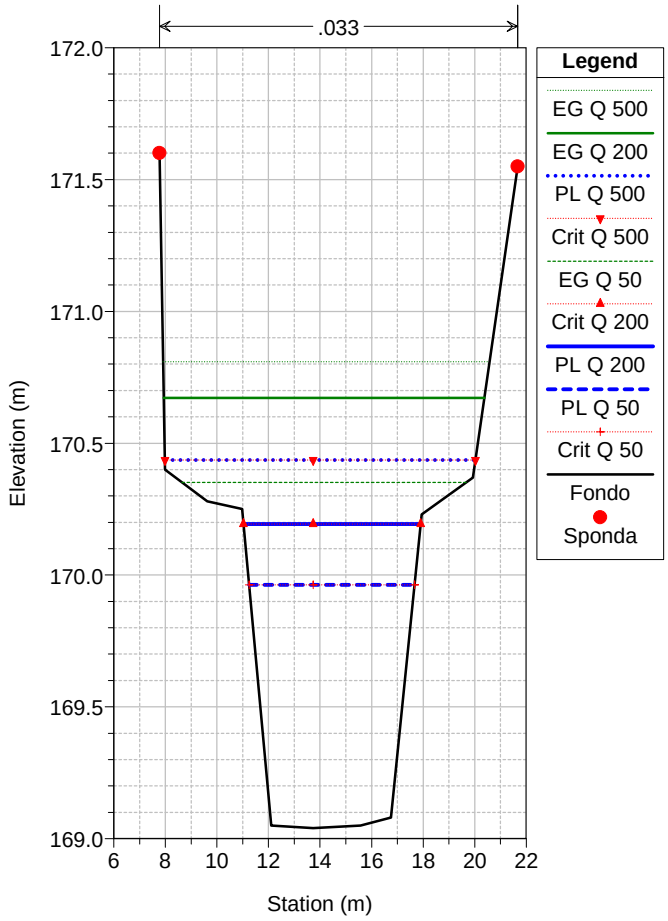
Piccarello Plan: 02_Ciubeca

River = Ciubeca Reach = Ciu+GG CIU-1



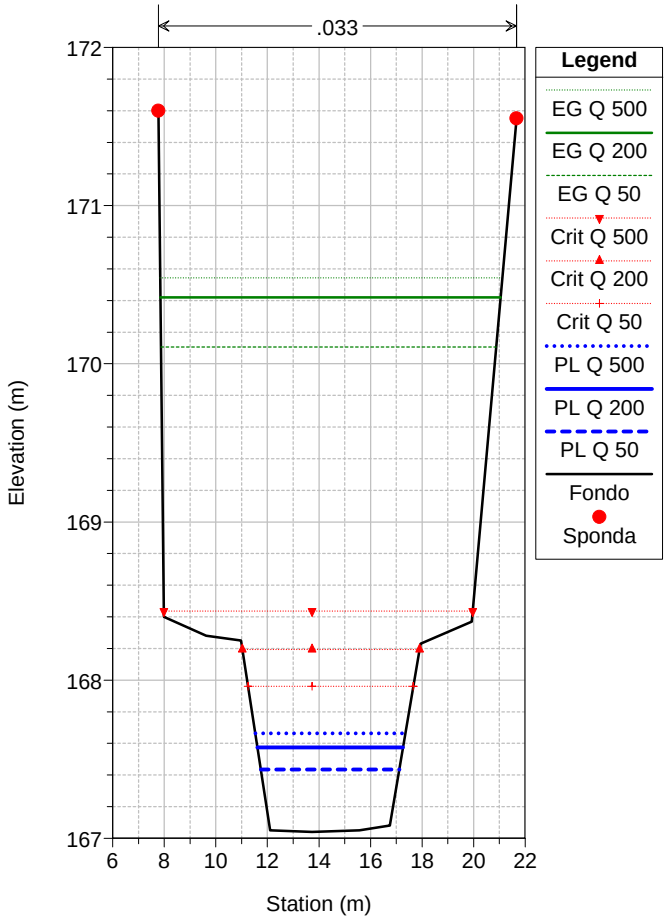
Piccarello Plan: 02_Ciubeca

River = fosso Gazu Reach = Gazu GU-5



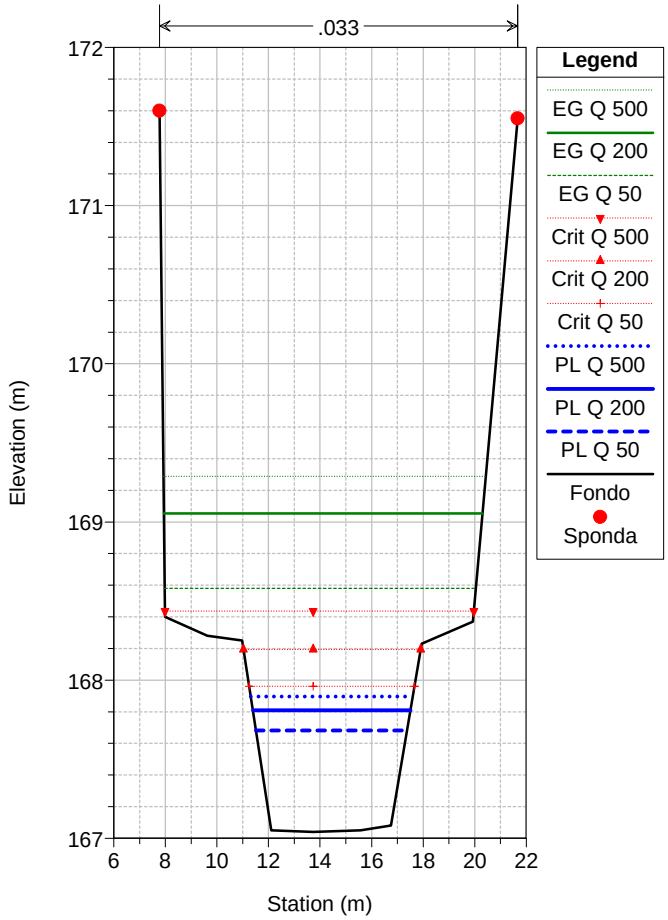
Piccarello Plan: 02_Ciubeca

River = fosso Gazu Reach = Gazu GU-5



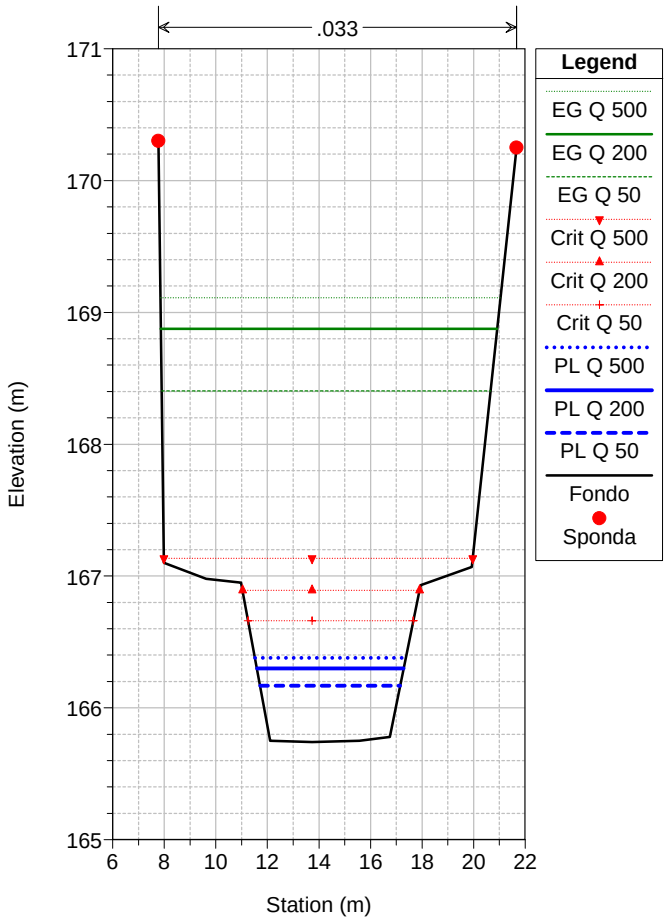
Piccarello Plan: 02_Ciubeca

River = fosso Gazu Reach = Gazu GU-4



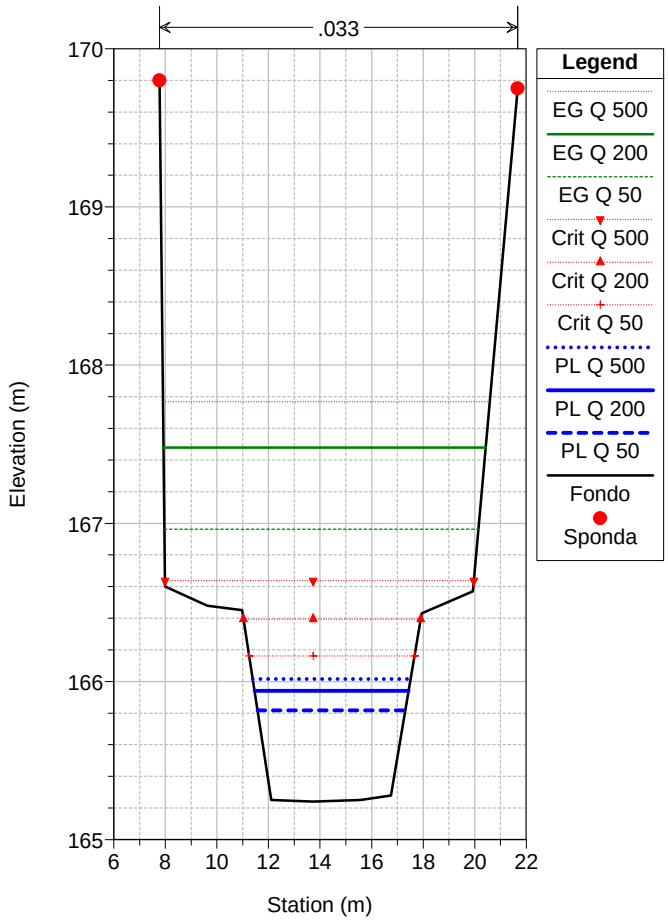
Piccarello Plan: 02_Ciubeca

River = fosso Gazu Reach = Gazu GU-4



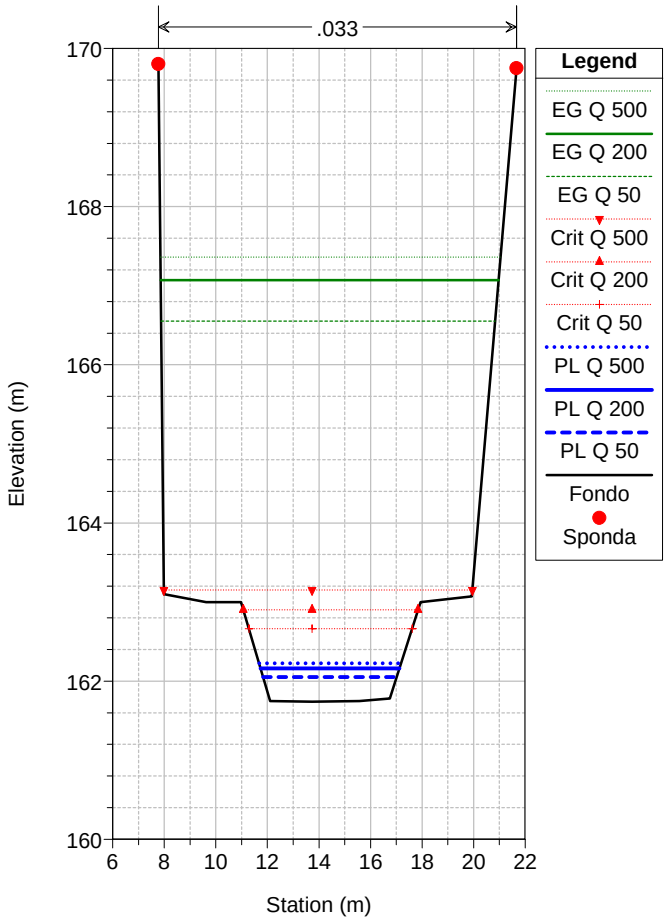
Piccarello Plan: 02_Ciubeca

River = fosso Gazu Reach = Gazu GU-3



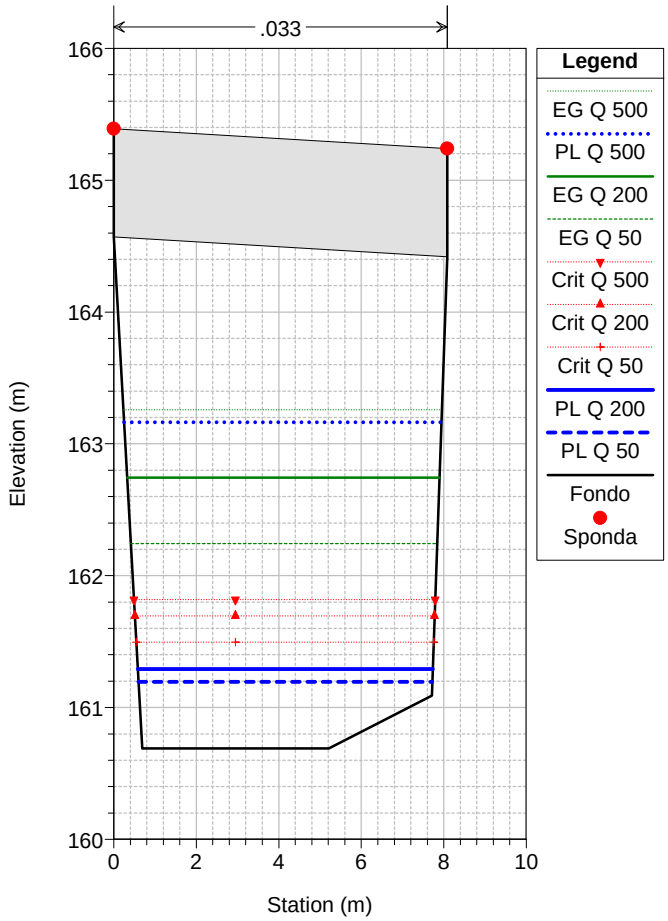
Piccarello Plan: 02_Ciubeca

River = fosso Gazu Reach = Gazu GU-3



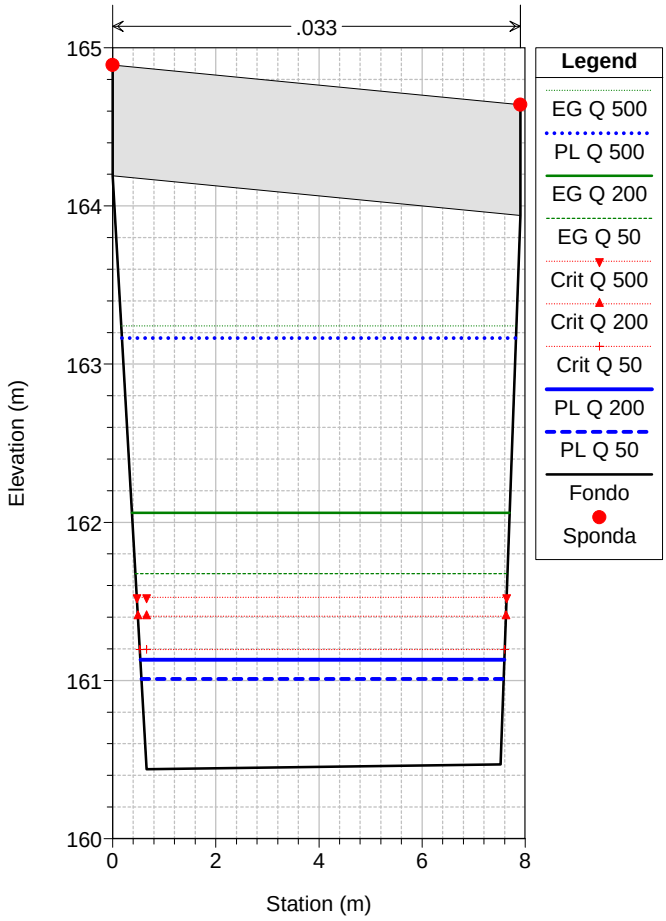
Piccarello Plan: 02_Ciubeca

River = fosso Gazu Reach = Gazu GU-2



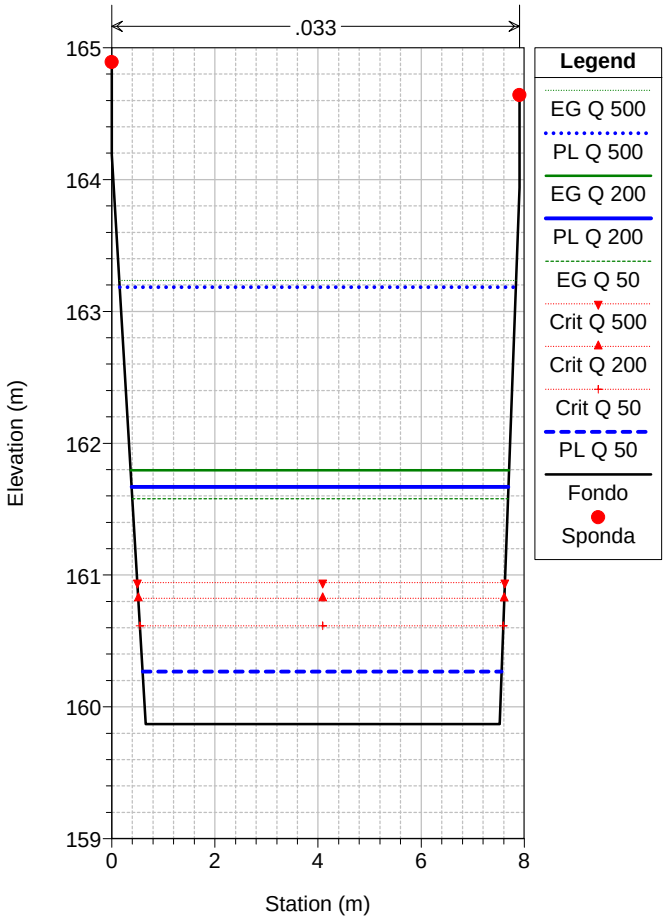
Piccarello Plan: 02_Ciubeca

River = fosso Gazu Reach = Gazu GU-1



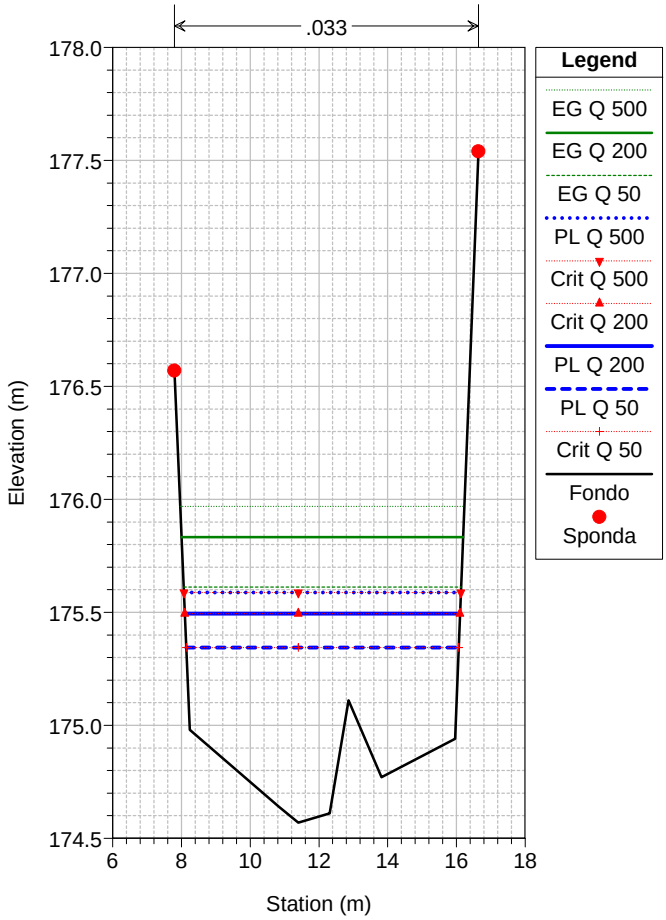
Piccarello Plan: 02_Ciubeca

River = fosso Gazu Reach = Gazu GU-1



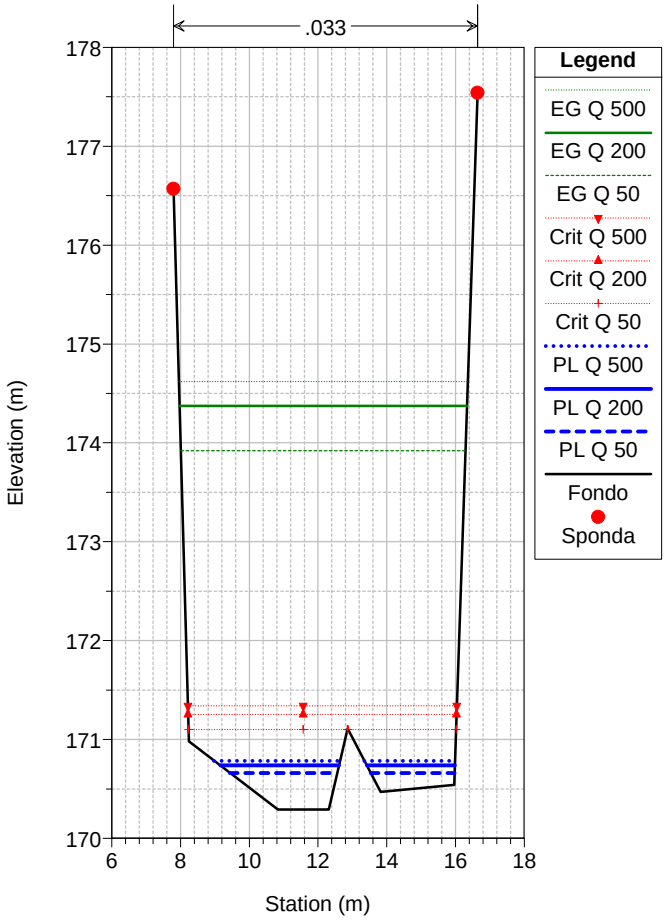
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-10



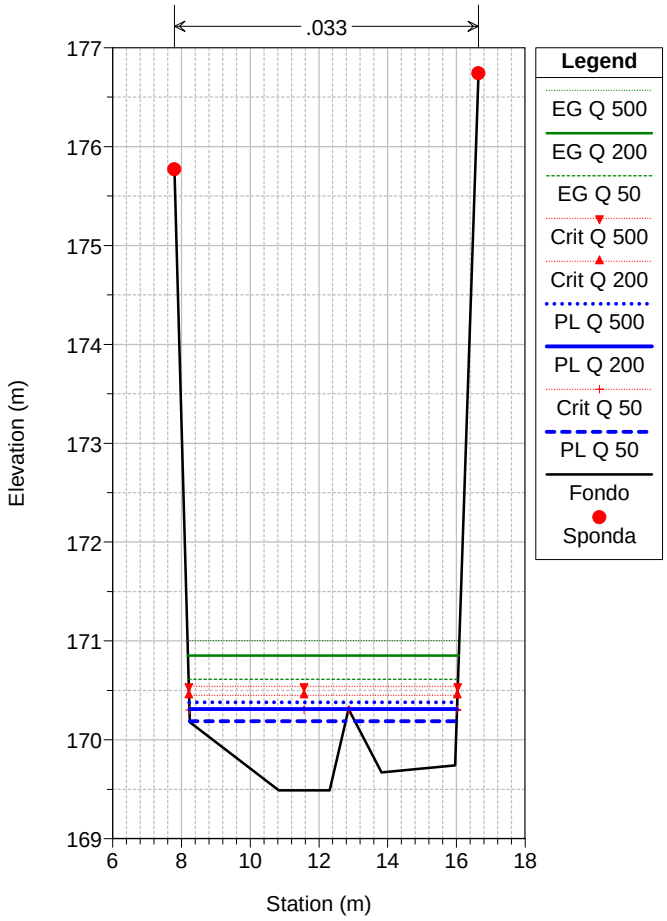
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-10



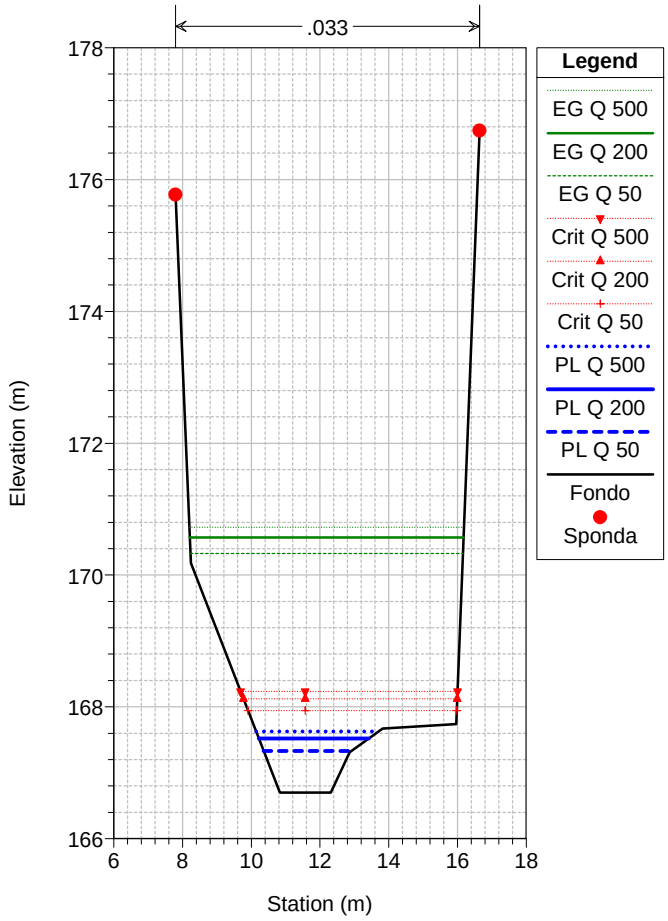
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-9



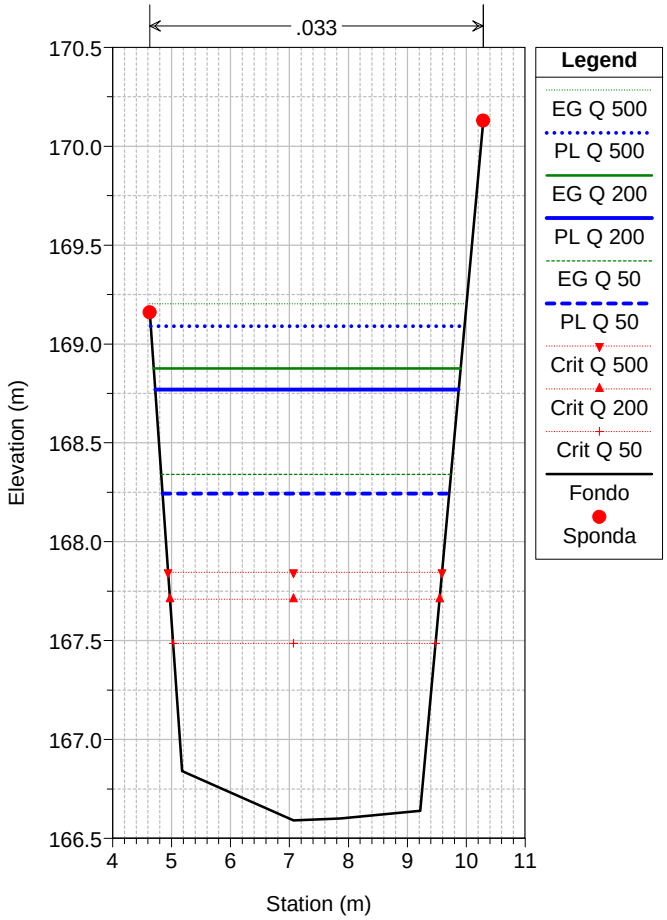
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-9



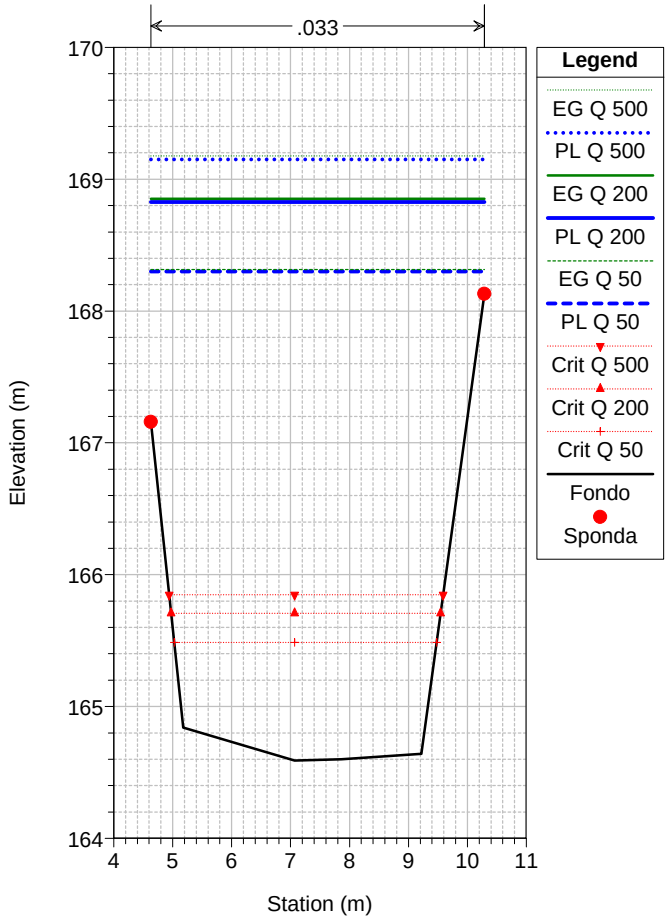
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-8



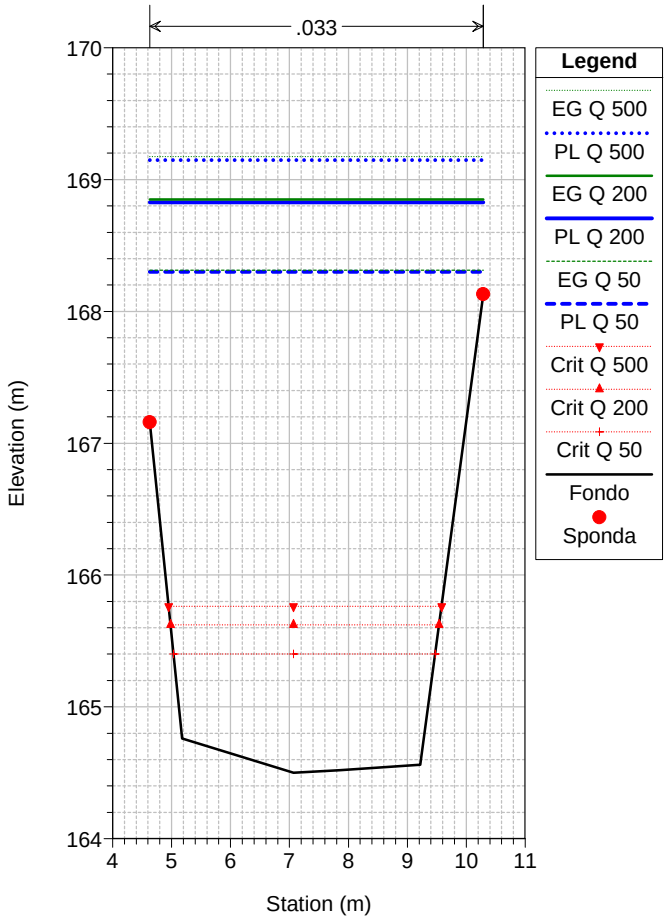
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-8



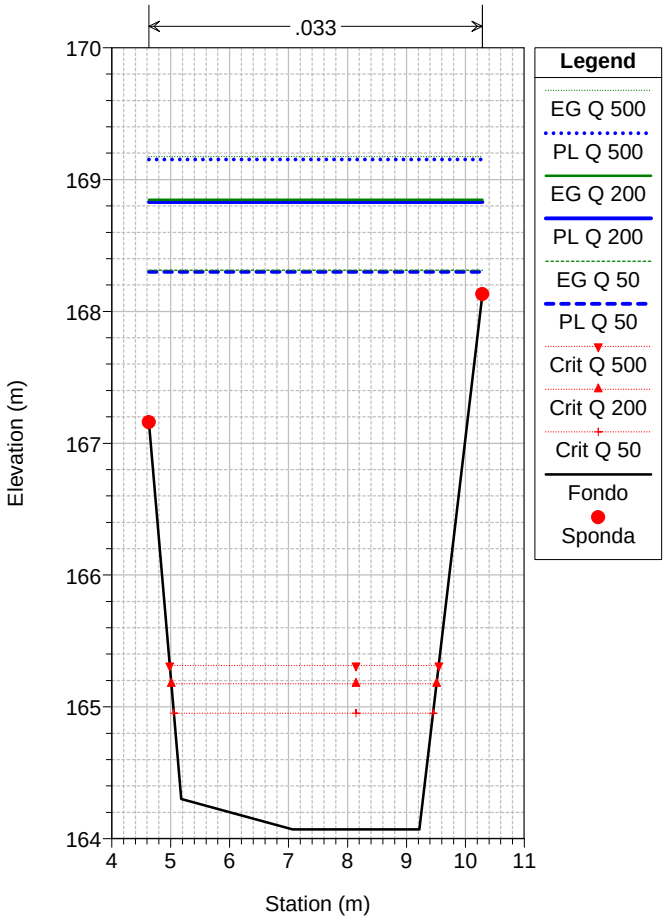
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-7



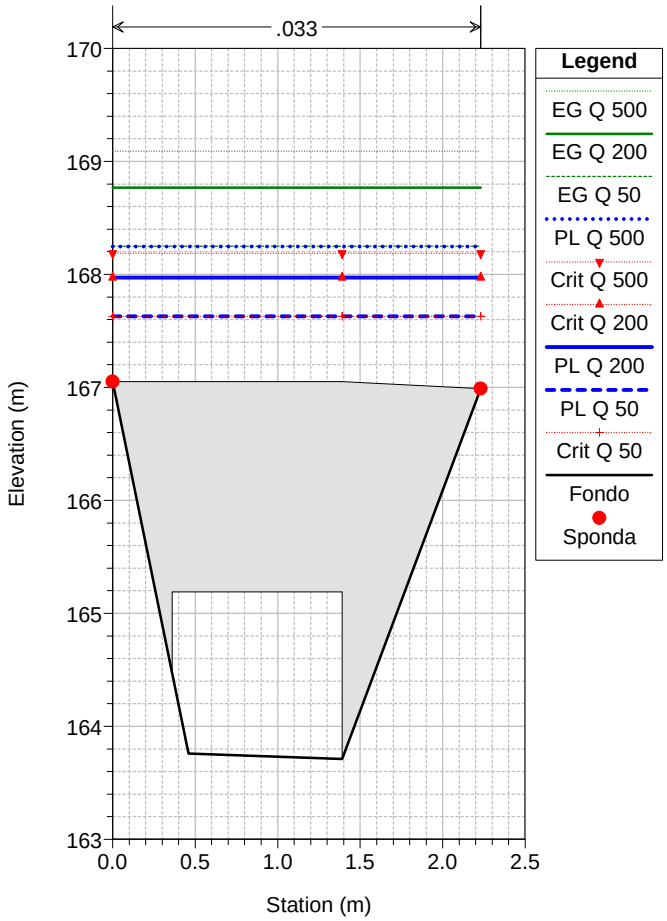
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-7



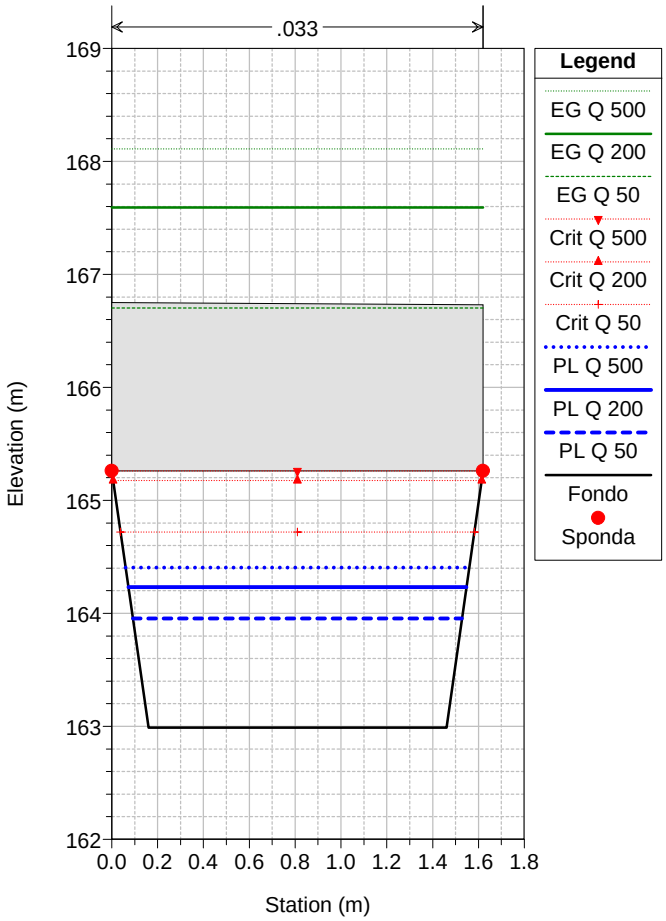
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-6



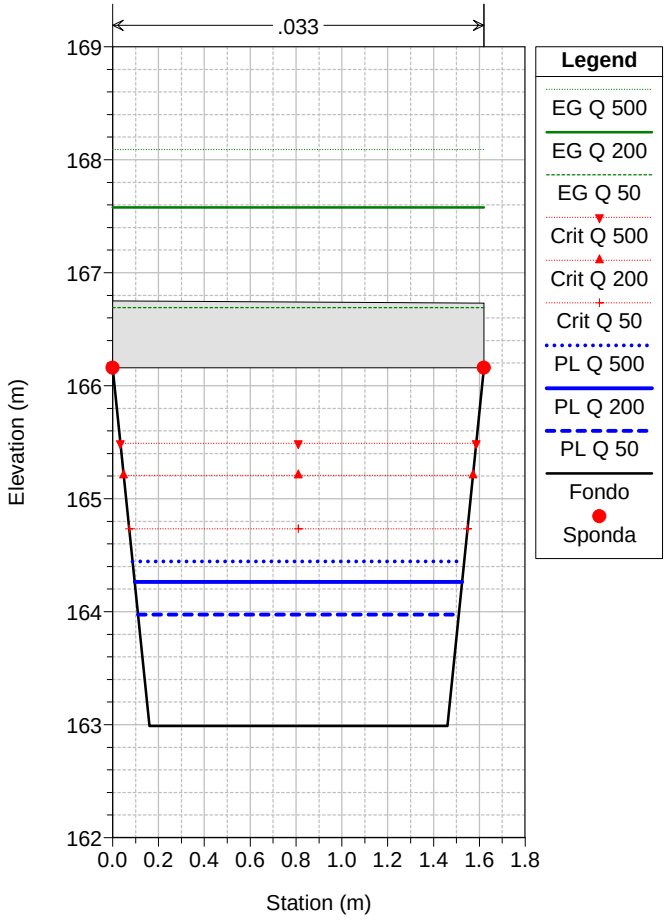
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-5



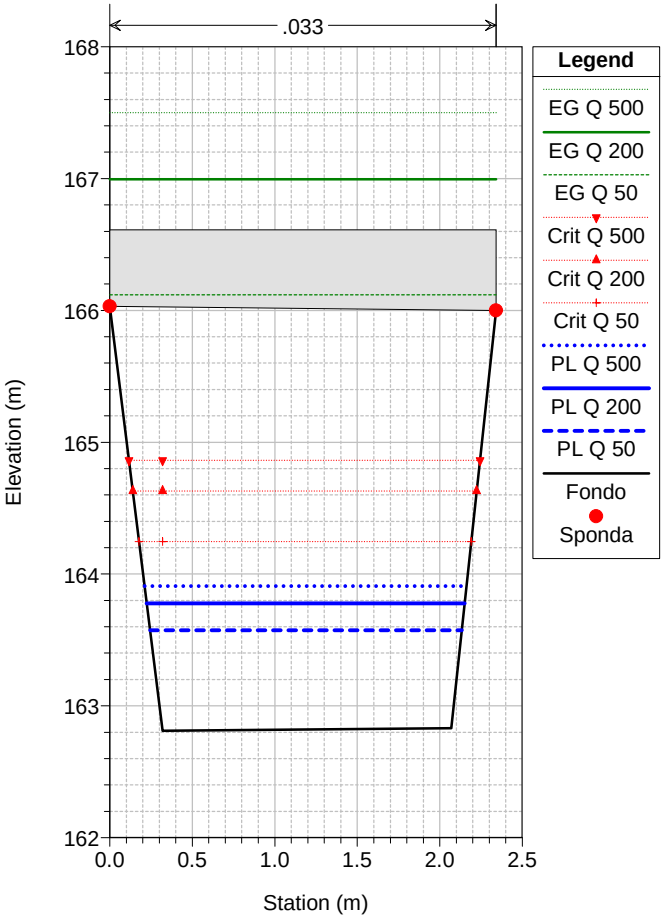
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-5



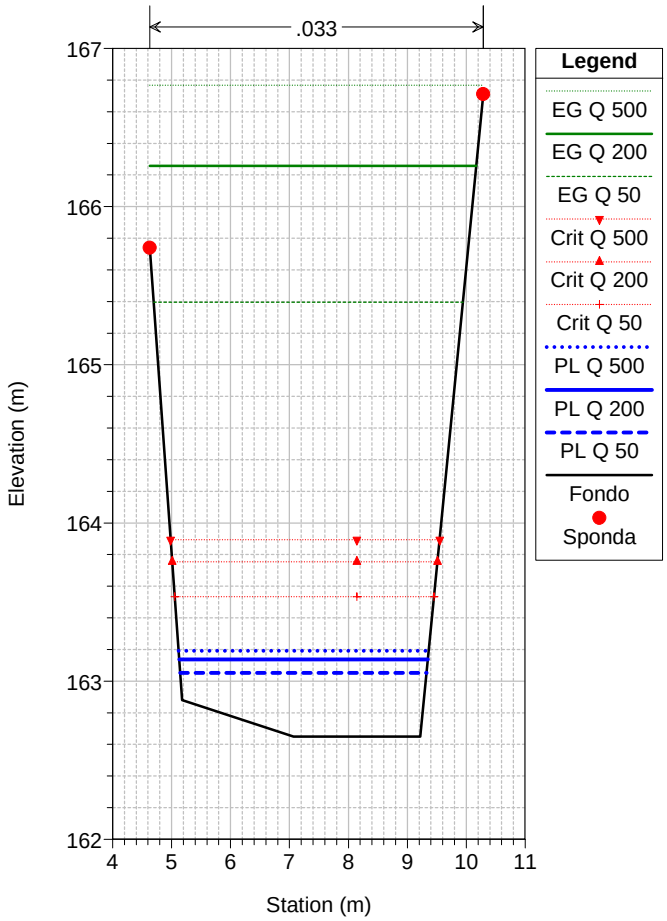
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-4



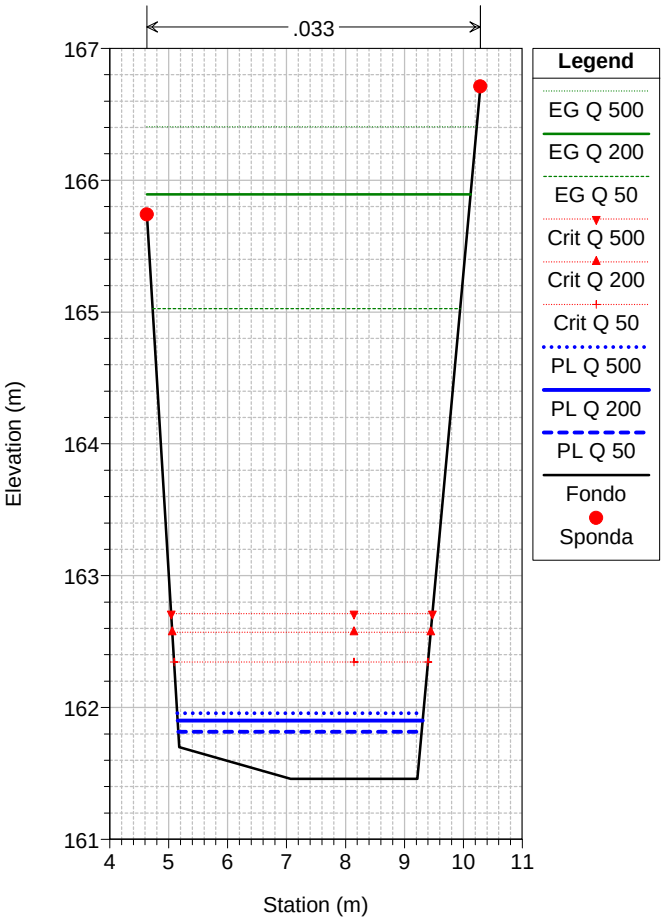
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-3



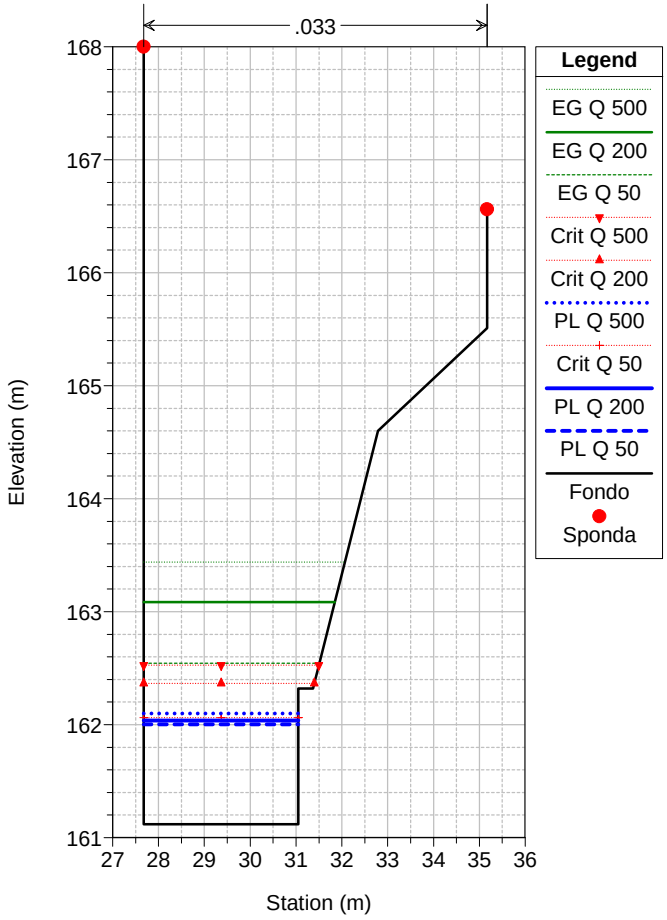
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-3



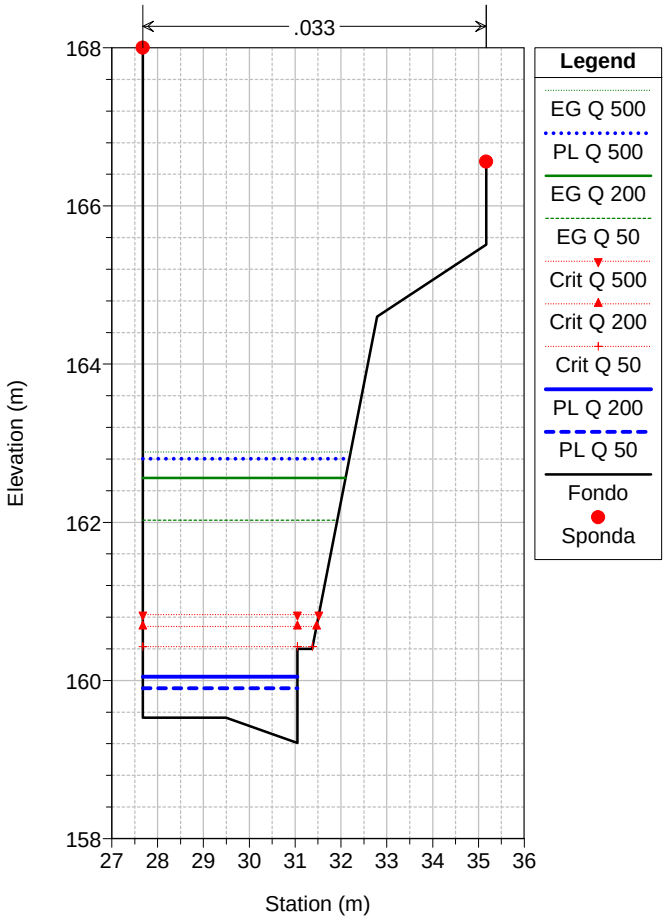
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-2



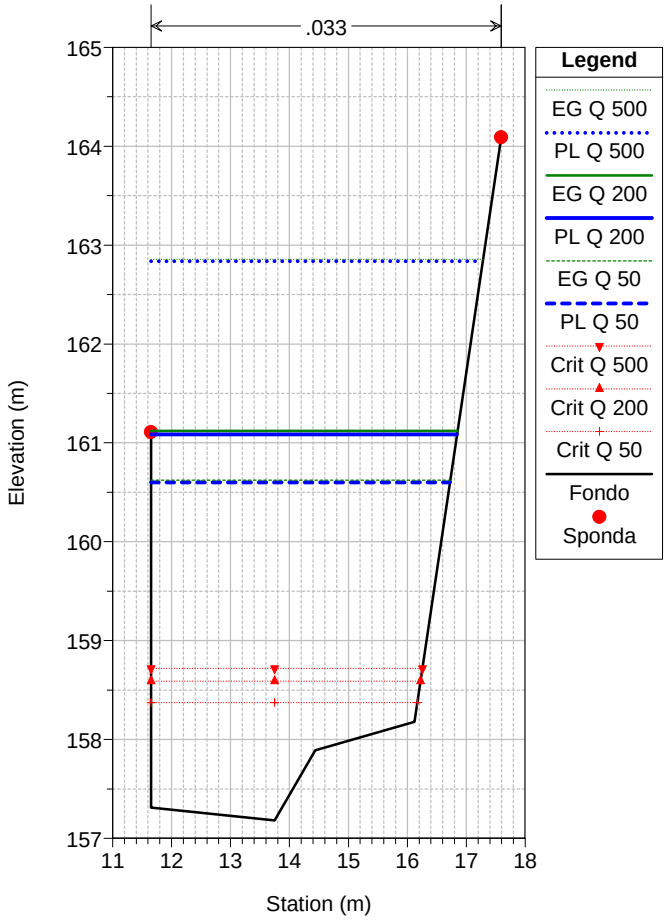
Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo GO-2



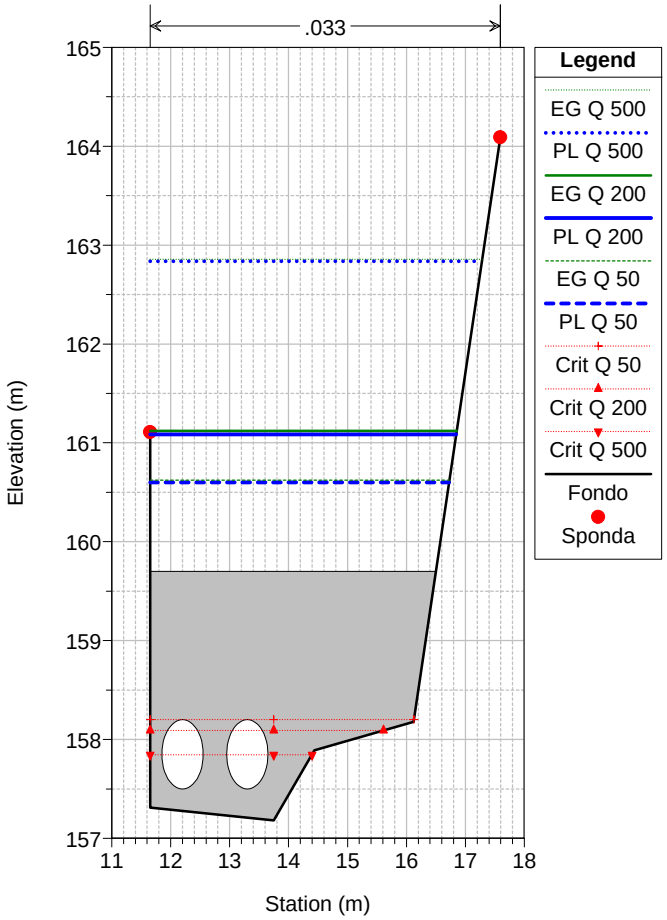
Piccarello Plan: 02_Ciubeca

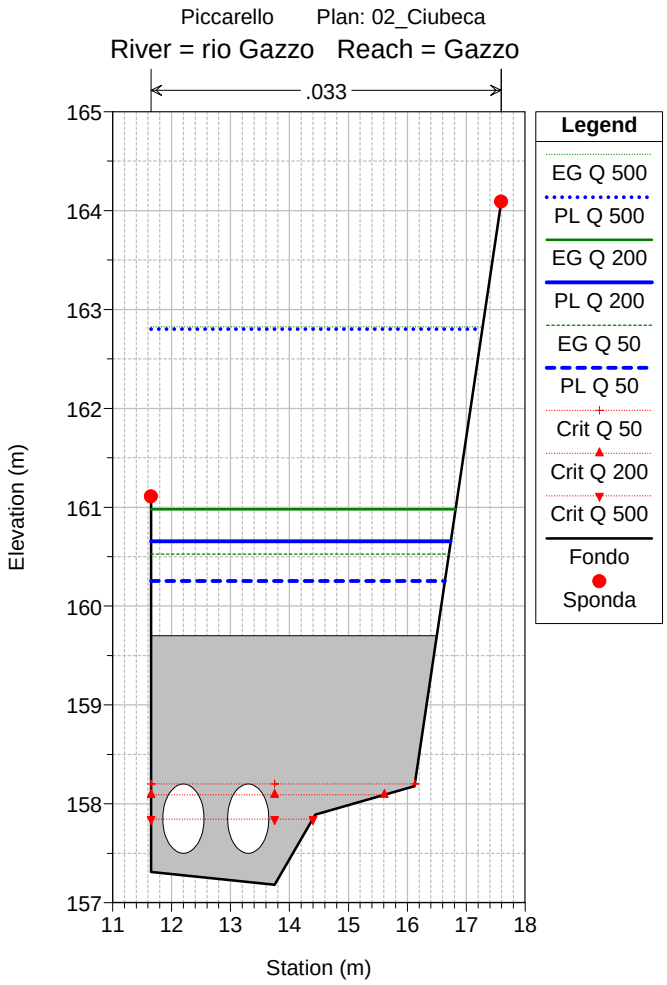
River = rio Gazzo Reach = Gazzo GO-1

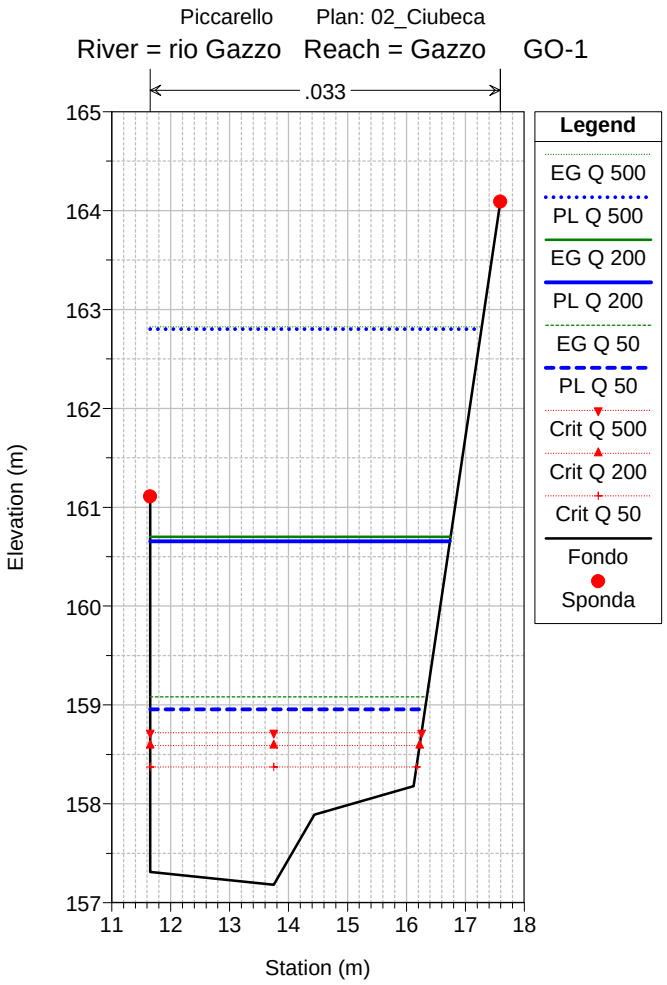


Piccarello Plan: 02_Ciubeca

River = rio Gazzo Reach = Gazzo




Piccarello Plan: 02_Ciubeca
River = rio Gazzo Reach = Gazzo
.033
Elevation (m)
Station (m)
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 50
Crit Q 200
Crit Q 500
Fondo
Sponda


Piccarello Plan: 02_Ciubeca
River = rio Gazzo Reach = Gazzo GO-1
.033
Elevation (m)
Station (m)
Legend
EG Q 500
PL Q 500
EG Q 200
PL Q 200
EG Q 50
PL Q 50
Crit Q 500
Crit Q 200
Crit Q 50
Fondo
Sponda

HEC-RAS Plan: 02_Ciubeca

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)	
sardorella	sard monte	9 SAR-60	Q 50	85.60	151.80	153.96	155.10	1.14	155.40	1.44	153.96	154.80	0.012163	4.08	20.98	12.37	1.00
sardorella	sard monte	9 SAR-60	Q 200	97.50	151.80	155.55	155.10	-0.45	155.40	-0.15	154.11	155.84	0.002221	2.40	40.70	12.37	0.42
sardorella	sard monte	9 SAR-60	Q 500	108.80	151.80	156.10	155.10	-1.00	155.40	-0.70	154.25	156.37	0.001783	2.29	47.51	12.37	0.37
sardorella	sard monte	8.9 SAR-60	Q 50	85.60	149.80	154.02	155.10	1.08	155.40	1.38	151.49	154.16	0.000858	1.64	52.23	12.37	0.25
sardorella	sard monte	8.9 SAR-60	Q 200	97.50	149.80	155.69	155.10	-0.59	155.40	-0.29	151.65	155.78	0.000448	1.34	72.83	12.37	0.18
sardorella	sard monte	8.9 SAR-60	Q 500	108.80	149.80	156.22	155.10	-1.12	155.40	-0.82	151.79	156.31	0.000443	1.37	79.38	12.37	0.17
sardorella	sard monte	7.5 SAR-59	Q 50	85.60	149.69	153.94	154.80	0.86	154.80	0.86	151.69	154.14	0.001331	1.95	43.79	10.59	0.31
sardorella	sard monte	7.5 SAR-59	Q 200	97.50	149.69	155.64	154.80	-0.84	154.80	-0.84	151.86	155.77	0.000686	1.58	61.76	10.59	0.21
sardorella	sard monte	7.5 SAR-59	Q 500	108.80	149.69	156.17	154.80	-1.37	154.80	-1.37	152.02	156.30	0.000681	1.62	67.35	10.59	0.20
sardorella	sard monte	7.2 SAR-59		Bridge													
sardorella	sard monte	7 SAR-59	Q 50	85.60	149.69	153.74	154.80	1.06	154.80	1.06	151.69	153.95	0.001535	2.06	41.58	10.59	0.33
sardorella	sard monte	7 SAR-59	Q 200	97.50	149.69	155.39	154.80	-0.59	154.80	-0.59	151.86	155.53	0.000771	1.65	59.08	10.59	0.22
sardorella	sard monte	7 SAR-59	Q 500	108.80	149.69	155.94	154.80	-1.14	154.80	-1.14	152.02	156.09	0.000748	1.67	64.98	10.59	0.22
sardorella	sard monte	6.9 SAR-59	Q 50	85.60	149.19	153.77	153.44	-0.33	153.44	-0.33	151.09	153.93	0.001033	1.77	48.30	10.59	0.26
sardorella	sard monte	6.9 SAR-59	Q 200	97.50	149.19	155.40	153.44	-1.96	153.44	-1.96	151.26	155.52	0.000593	1.49	65.60	10.59	0.19
sardorella	sard monte	6.9 SAR-59	Q 500	108.80	149.19	155.96	153.44	-2.52	153.44	-2.52	151.41	156.08	0.000590	1.52	71.49	10.59	0.19
sardorella	sard val	16.1	Q 50	115.00	149.13	152.14	154.70	2.56	151.60	-0.54	152.14	153.53	0.015411	5.23	21.99	7.90	1.00
sardorella	sard val	16.1	Q 200	140.00	149.13	154.95	154.70	-0.25	151.60	-3.35	152.53	155.46	0.003546	3.16	44.24	7.90	0.43
sardorella	sard val	16.1	Q 500	160.00	149.13	155.48	154.70	-0.78	151.60	-3.88	152.83	156.03	0.003691	3.31	48.39	7.90	0.43
sardorella	sard val	16. SAR 58	Q 50	115.00	148.63	151.20	154.20	3.00	151.10	-0.10	151.64	153.16	0.024805	6.20	18.56	7.90	1.29
sardorella	sard val	16. SAR 58	Q 200	140.00	148.63	154.96	154.20	-0.76	151.10	-3.86	152.03	155.39	0.002844	2.90	48.27	7.90	0.37
sardorella	sard val	16. SAR 58	Q 500	160.00	148.63	155.48	154.20	-1.28	151.10	-4.38	152.32	155.96	0.003023	3.05	52.39	7.90	0.38
sardorella	sard val	15.9 SAR 58		Bridge													
sardorella	sard val	15.8 SAR 58	Q 50	115.00	148.63	151.42	153.80	2.38	151.70	0.28	151.63	153.06	0.019370	5.68	20.26	7.90	1.13
sardorella	sard val	15.8 SAR 58	Q 200	140.00	148.63	152.03	153.80	1.77	151.70	-0.33	152.03	153.61	0.015892	5.58	25.08	7.90	1.00
sardorella	sard val	15.8 SAR 58	Q 500	160.00	148.63	152.32	153.80	1.48	151.70	-0.62	152.32	154.06	0.016297	5.84	27.41	7.90	1.00
sardorella	sard val	15. SAR 57	Q 50	115.00	148.44	149.39	149.40	0.01	151.70	2.31	150.20	152.51	0.088300	7.82	14.72	16.80	2.67
sardorella	sard val	15. SAR 57	Q 200	140.00	148.44	149.52	149.40	-0.12	151.70	2.18	150.43	153.04	0.084879	8.33	16.89	17.70	2.66
sardorella	sard val	15. SAR 57	Q 500	160.00	148.44	149.61	149.40	-0.21	151.70	2.09	150.60	153.47	0.083666	8.72	18.47	17.70	2.67
sardorella	sard val	14.9 SAR 57	Q 50	115.00	146.50	147.19	150.84	3.65	151.70	4.51	148.19	152.25	0.198212	9.97	11.54	16.80	3.84
sardorella	sard val	14.9 SAR 57	Q 200	140.00	146.50	147.30	150.84	3.54	151.70	4.40	148.42	152.79	0.177439	10.38	13.49	16.80	3.70
sardorella	sard val	14.9 SAR 57	Q 500	160.00	146.50	147.39	150.84	3.45	151.70	4.31	148.60	153.22	0.166272	10.69	14.96	16.80	3.62
rio Gazzo	Gazzo	4 GO-10	Q 50	9.70	174.57	175.34	176.57	1.23	177.54	2.20	175.34	175.61	0.015213	2.29	4.23	7.93	1.00
rio Gazzo	Gazzo	4 GO-10	Q 200	14.00	174.57	175.49	176.57	1.08	177.54	2.05	175.49	175.83	0.014488	2.58	5.42	8.01	1.00
rio Gazzo	Gazzo	4 GO-10	Q 500	16.90	174.57	175.59	176.57	0.98	177.54	1.95	175.59	175.97	0.014062	2.73	6.18	8.06	1.00
rio Gazzo	Gazzo	3.9 GO-10	Q 50	9.70	170.29	170.66	176.57	5.91	177.54	6.88	171.10	173.92	0.583853	8.00	1.21	5.56	5.47
rio Gazzo	Gazzo	3.9 GO-10	Q 200	14.00	170.29	170.74	176.57	5.83	177.54	6.80	171.25	174.38	0.488774	8.45	1.66	6.02	5.14
rio Gazzo	Gazzo	3.9 GO-10	Q 500	16.90	170.29	170.78	176.57	5.79	177.54	6.76	171.34	174.62	0.446856	8.68	1.95	6.30	4.98
rio Gazzo	Gazzo	3.8 GO-9	Q 50	9.70	169.49	170.19	175.77	5.58	176.74	6.55	170.30	170.61	0.031568	2.89	3.36	7.50	1.38
rio Gazzo	Gazzo	3.8 GO-9	Q 200	14.00	169.49	170.31	175.77	5.46	176.74	6.43	170.45	170.85	0.031740	3.26	4.29	7.79	1.40
rio Gazzo	Gazzo	3.8 GO-9	Q 500	16.90	169.49	170.38	175.77	5.39	176.74	6.36	170.54	171.00	0.031975	3.50	4.82	7.80	1.42

HEC-RAS Plan: 02_Ciubeca (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)	
rio Gazzo	Gazzo	3.7 GO-9	Q 50	9.70	166.70	167.33	175.77	8.44	176.74	9.41	167.94	170.33	0.216159	7.66	1.27	2.56	3.48
rio Gazzo	Gazzo	3.7 GO-9	Q 200	14.00	166.70	167.52	175.77	8.25	176.74	9.22	168.12	170.57	0.183202	7.74	1.81	3.20	3.29
rio Gazzo	Gazzo	3.7 GO-9	Q 500	16.90	166.70	167.63	175.77	8.14	176.74	9.11	168.23	170.73	0.168218	7.80	2.17	3.56	3.19
rio Gazzo	Gazzo	3.4 GO-8	Q 50	9.70	166.59	168.24	169.16	0.92	170.13	1.89	167.49	168.34	0.002138	1.38	7.02	4.86	0.37
rio Gazzo	Gazzo	3.4 GO-8	Q 200	14.00	166.59	168.77	169.16	0.39	170.13	1.36	167.71	168.88	0.001859	1.45	9.66	5.15	0.34
rio Gazzo	Gazzo	3.4 GO-8	Q 500	16.90	166.59	169.09	169.16	0.07	170.13	1.04	167.85	169.20	0.001760	1.49	11.34	5.32	0.33
rio Gazzo	Gazzo	3.3 GO-8	Q 50	9.70	164.59	168.30	167.16	-1.14	168.13	-0.17	165.49	168.31	0.000171	0.54	18.02	5.66	0.10
rio Gazzo	Gazzo	3.3 GO-8	Q 200	14.00	164.59	168.83	167.16	-1.67	168.13	-0.70	165.71	168.85	0.000241	0.67	21.01	5.66	0.11
rio Gazzo	Gazzo	3.3 GO-8	Q 500	16.90	164.59	169.15	167.16	-1.99	168.13	-1.02	165.85	169.18	0.000285	0.74	22.83	5.66	0.12
rio Gazzo	Gazzo	3.2 GO-7	Q 50	9.70	164.50	168.30	167.16	-1.14	168.13	-0.17	165.40	168.31	0.000162	0.53	18.42	5.66	0.09
rio Gazzo	Gazzo	3.2 GO-7	Q 200	14.00	164.50	168.83	167.16	-1.67	168.13	-0.70	165.62	168.85	0.000230	0.65	21.41	5.66	0.11
rio Gazzo	Gazzo	3.2 GO-7	Q 500	16.90	164.50	169.15	167.16	-1.99	168.13	-1.02	165.76	169.18	0.000273	0.73	23.22	5.66	0.11
rio Gazzo	Gazzo	3.1 GO-7	Q 50	9.70	164.07	168.30	167.16	-1.14	168.13	-0.17	164.95	168.31	0.000123	0.47	20.65	5.66	0.08
rio Gazzo	Gazzo	3.1 GO-7	Q 200	14.00	164.07	168.83	167.16	-1.67	168.13	-0.70	165.18	168.85	0.000182	0.59	23.64	5.66	0.09
rio Gazzo	Gazzo	3.1 GO-7	Q 500	16.90	164.07	169.15	167.16	-1.99	168.13	-1.02	165.31	169.17	0.000220	0.66	25.46	5.66	0.10
rio Gazzo	Gazzo	3.09 GO-6	Q 50	9.70	163.71	167.63	164.48	-3.15	163.71	-3.92	167.63	168.25	0.057403	3.49	2.78	2.23	0.57
rio Gazzo	Gazzo	3.09 GO-6	Q 200	14.00	163.71	167.97	164.48	-3.50	163.71	-4.26	167.97	168.77	0.059199	3.95	3.54	2.23	0.62
rio Gazzo	Gazzo	3.09 GO-6	Q 500	16.90	163.71	168.25	164.48	-3.77	163.71	-4.54	168.19	169.09	0.054700	4.07	4.16	2.23	0.61
rio Gazzo	Gazzo	3.08 GO-5	Q 50	9.70	162.99	163.96	165.26	1.30	165.26	1.30	164.72	166.70	0.193858	7.34	1.32	1.44	2.44
rio Gazzo	Gazzo	3.08 GO-5	Q 200	14.00	162.99	164.23	165.26	1.03	165.26	1.03	165.18	167.59	0.205408	8.12	1.72	1.48	2.40
rio Gazzo	Gazzo	3.08 GO-5	Q 500	16.90	162.99	164.41	165.26	0.85	165.26	0.85	165.26	168.11	0.211327	8.53	1.98	1.50	2.37
rio Gazzo	Gazzo	3.079 GO-5	Q 50	9.70	162.99	163.97	166.16	2.19	166.16	2.19	164.73	166.69	0.193171	7.30	1.33	1.40	2.39
rio Gazzo	Gazzo	3.079 GO-5	Q 200	14.00	162.99	164.26	166.16	1.90	166.16	1.90	165.21	167.58	0.204825	8.07	1.74	1.43	2.34
rio Gazzo	Gazzo	3.079 GO-5	Q 500	16.90	162.99	164.44	166.16	1.72	166.16	1.72	165.49	168.09	0.210824	8.46	2.00	1.45	2.30
rio Gazzo	Gazzo	3.07 GO-4	Q 50	9.70	162.81	163.57	166.03	2.46	166.00	2.43	164.25	166.12	0.172578	7.07	1.37	1.89	2.65
rio Gazzo	Gazzo	3.07 GO-4	Q 200	14.00	162.81	163.78	166.03	2.25	166.00	2.22	164.63	166.99	0.183128	7.94	1.76	1.93	2.65
rio Gazzo	Gazzo	3.07 GO-4	Q 500	16.90	162.81	163.91	166.03	2.12	166.00	2.09	164.86	167.50	0.187661	8.40	2.01	1.95	2.64
rio Gazzo	Gazzo	3.06 GO-3	Q 50	9.70	162.65	163.05	165.74	2.69	166.71	3.66	163.53	165.40	0.241048	6.78	1.43	4.18	3.70
rio Gazzo	Gazzo	3.06 GO-3	Q 200	14.00	162.65	163.14	165.74	2.60	166.71	3.57	163.75	166.26	0.250001	7.83	1.79	4.22	3.84
rio Gazzo	Gazzo	3.06 GO-3	Q 500	16.90	162.65	163.19	165.74	2.55	166.71	3.52	163.89	166.77	0.251748	8.38	2.02	4.24	3.88
rio Gazzo	Gazzo	3.05 GO-3	Q 50	9.70	161.46	161.82	165.74	3.92	166.71	4.89	162.35	165.03	0.394482	7.94	1.22	4.13	4.66
rio Gazzo	Gazzo	3.05 GO-3	Q 200	14.00	161.46	161.90	165.74	3.84	166.71	4.81	162.57	165.89	0.365293	8.85	1.58	4.16	4.58
rio Gazzo	Gazzo	3.05 GO-3	Q 500	16.90	161.46	161.96	165.74	3.78	166.71	4.75	162.71	166.41	0.351588	9.35	1.81	4.18	4.53
rio Gazzo	Gazzo	2.1 GO-2	Q 50	9.70	161.12	162.00	168.00	6.00	166.56	4.56	162.06	162.54	0.024047	3.26	2.97	3.37	1.11
rio Gazzo	Gazzo	2.1 GO-2	Q 200	14.00	161.12	162.04	168.00	5.96	166.56	4.52	162.37	163.08	0.044957	4.54	3.09	3.37	1.51
rio Gazzo	Gazzo	2.1 GO-2	Q 500	16.90	161.12	162.10	168.00	5.90	166.56	4.46	162.53	163.44	0.054339	5.13	3.29	3.37	1.66
rio Gazzo	Gazzo	2 GO-2	Q 50	9.70	159.21	159.90	168.00	8.10	166.56	6.66	160.43	162.03	0.194322	6.46	1.50	3.37	3.09
rio Gazzo	Gazzo	2 GO-2	Q 200	14.00	159.21	160.05	168.00	7.95	166.56	6.51	160.68	162.56	0.171154	7.02	1.99	3.37	2.91
rio Gazzo	Gazzo	2 GO-2	Q 500	16.90	159.21	162.80	168.00	5.20	166.56	3.76	160.83	162.89	0.001414	1.30	13.03	4.50	0.24
rio Gazzo	Gazzo	1 GO-1	Q 50	9.70	157.18	160.60	161.11	0.51	164.09	3.49	158.37	160.62	0.000344	0.68	14.20	5.07	0.13
rio Gazzo	Gazzo	1 GO-1	Q 200	14.00	157.18	161.09	161.11	0.02	164.09	3.00	158.59	161.12	0.000470	0.84	16.69	5.19	0.15
rio Gazzo	Gazzo	1 GO-1	Q 500	16.90	157.18	162.84	161.11	-1.73	164.09	1.25	158.72	162.86	0.000219	0.65	26.17	5.63	0.10

HEC-RAS Plan: 02_Ciubeca (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)	
rio Gazzo	Gazzo	0.95		Culvert													
rio Gazzo	Gazzo	0.9 GO-1	Q 50	9.70	157.18	158.96	161.11	2.15	164.09	5.13	158.37	159.08	0.003288	1.57	6.20	4.66	0.43
rio Gazzo	Gazzo	0.9 GO-1	Q 200	14.00	157.18	160.65	161.11	0.46	164.09	3.44	158.59	160.70	0.000680	0.97	14.47	5.09	0.18
rio Gazzo	Gazzo	0.9 GO-1	Q 500	16.90	157.18	162.80	161.11	-1.69	164.09	1.29	158.72	162.82	0.000223	0.65	25.98	5.62	0.10
fosso Gazu	Gazu	1 GU-5	Q 50	13.90	169.04	169.96	171.60	1.64	171.55	1.59	169.96	170.35	0.013327	2.76	5.03	6.41	1.00
fosso Gazu	Gazu	1 GU-5	Q 200	20.10	169.04	170.19	171.60	1.41	171.55	1.36	170.19	170.67	0.012885	3.06	6.56	6.87	1.00
fosso Gazu	Gazu	1 GU-5	Q 500	24.10	169.04	170.44	171.60	1.16	171.55	1.11	170.44	170.81	0.013291	2.70	8.91	12.04	1.00
fosso Gazu	Gazu	0.99 GU-5	Q 50	13.90	167.04	167.43	171.60	4.17	171.55	4.12	167.96	170.11	0.242424	7.24	1.92	5.37	3.86
fosso Gazu	Gazu	0.99 GU-5	Q 200	20.10	167.04	167.57	171.60	4.03	171.55	3.98	168.19	170.42	0.180036	7.47	2.69	5.65	3.46
fosso Gazu	Gazu	0.99 GU-5	Q 500	24.10	167.04	167.66	171.60	3.94	171.55	3.89	168.44	170.54	0.152220	7.52	3.21	5.82	3.23
fosso Gazu	Gazu	0.98 GU-4	Q 50	13.90	167.04	167.68	171.60	3.92	171.55	3.87	167.96	168.58	0.046012	4.20	3.31	5.86	1.78
fosso Gazu	Gazu	0.98 GU-4	Q 200	20.10	167.04	167.81	171.60	3.79	171.55	3.74	168.19	169.05	0.052093	4.94	4.07	6.11	1.93
fosso Gazu	Gazu	0.98 GU-4	Q 500	24.10	167.04	167.90	171.60	3.70	171.55	3.65	168.44	169.29	0.051713	5.23	4.61	6.28	1.95
fosso Gazu	Gazu	0.97 GU-4	Q 50	13.90	165.74	166.17	170.30	4.13	170.25	4.08	166.66	168.40	0.184253	6.63	2.10	5.43	3.40
fosso Gazu	Gazu	0.97 GU-4	Q 200	20.10	165.74	166.30	170.30	4.00	170.25	3.95	166.89	168.88	0.155072	7.11	2.83	5.69	3.22
fosso Gazu	Gazu	0.97 GU-4	Q 500	24.10	165.74	166.38	170.30	3.92	170.25	3.87	167.14	169.11	0.140834	7.32	3.29	5.85	3.12
fosso Gazu	Gazu	0.96 GU-3	Q 50	13.90	165.24	165.82	169.80	3.98	169.75	3.93	166.16	166.96	0.066316	4.74	2.93	5.73	2.12
fosso Gazu	Gazu	0.96 GU-3	Q 200	20.10	165.24	165.94	169.80	3.86	169.75	3.81	166.39	167.48	0.071258	5.49	3.66	5.98	2.24
fosso Gazu	Gazu	0.96 GU-3	Q 500	24.10	165.24	166.02	169.80	3.78	169.75	3.73	166.64	167.77	0.072646	5.87	4.11	6.12	2.29
fosso Gazu	Gazu	0.95 GU-3	Q 50	13.90	161.74	162.05	169.80	7.75	169.75	7.70	162.66	166.55	0.544816	9.40	1.48	5.18	5.61
fosso Gazu	Gazu	0.95 GU-3	Q 200	20.10	161.74	162.16	169.80	7.64	169.75	7.59	162.90	167.07	0.413234	9.82	2.05	5.38	5.08
fosso Gazu	Gazu	0.95 GU-3	Q 500	24.10	161.74	162.22	169.80	7.58	169.75	7.53	163.15	167.36	0.364318	10.04	2.40	5.50	4.85
fosso Gazu	Gazu	0.9 GU-2	Q 50	13.90	160.69	161.19	164.57	3.38	164.42	3.23	161.50	162.24	0.076257	4.54	3.06	7.12	2.21
fosso Gazu	Gazu	0.9 GU-2	Q 200	20.10	160.69	161.29	164.57	3.28	164.42	3.13	161.70	162.74	0.082836	5.34	3.77	7.15	2.35
fosso Gazu	Gazu	0.9 GU-2	Q 500	24.10	160.69	163.16	164.57	1.41	164.42	1.26	161.82	163.26	0.001169	1.37	17.64	7.69	0.29
fosso Gazu	Gazu	0.8 GU-1	Q 50	13.90	160.44	161.01	164.19	3.18	163.94	2.93	161.20	161.67	0.037682	3.62	3.84	7.02	1.56
fosso Gazu	Gazu	0.8 GU-1	Q 200	20.10	160.44	161.13	164.19	3.06	163.94	2.81	161.41	162.06	0.041785	4.27	4.71	7.06	1.67
fosso Gazu	Gazu	0.8 GU-1	Q 500	24.10	160.44	163.17	164.19	1.02	163.94	0.77	161.53	163.24	0.000880	1.23	19.66	7.64	0.24
fosso Gazu	Gazu	0.7 GU-1	Q 50	13.90	159.87	160.27	164.89	4.62	164.64	4.37	160.62	161.58	0.110507	5.08	2.74	6.96	2.58
fosso Gazu	Gazu	0.7 GU-1	Q 200	20.10	159.87	161.67	164.89	3.22	164.64	2.97	160.82	161.80	0.002092	1.58	12.74	7.31	0.38
fosso Gazu	Gazu	0.7 GU-1	Q 500	24.10	159.87	163.18	164.89	1.71	164.64	1.46	160.94	163.23	0.000505	1.00	24.09	7.68	0.18
Ciubeca	Ciubeca	10 CIU-15	Q 50	5.80	186.69	187.60	190.87	3.27	192.19	4.59	187.60	187.89	0.014964	2.37	2.45	4.35	1.01
Ciubeca	Ciubeca	10 CIU-15	Q 200	8.40	186.69	187.78	190.87	3.09	192.19	4.41	187.78	188.11	0.013957	2.55	3.30	4.95	1.00
Ciubeca	Ciubeca	10 CIU-15	Q 500	10.20	186.69	187.88	190.87	2.99	192.19	4.31	187.88	188.25	0.013892	2.68	3.81	5.28	1.00
Ciubeca	Ciubeca	8 CIU-14	Q 50	5.80	176.46	176.89	178.07	1.18	178.33	1.44	177.17	178.05	0.173921	4.76	1.22	4.79	3.02
Ciubeca	Ciubeca	8 CIU-14	Q 200	8.40	176.46	176.96	178.07	1.11	178.33	1.37	177.31	178.47	0.170207	5.43	1.55	4.79	3.05
Ciubeca	Ciubeca	8 CIU-14	Q 500	10.20	176.46	177.01	178.07	1.06	178.33	1.32	177.40	178.73	0.167807	5.81	1.76	4.79	3.06
Ciubeca	Ciubeca	7.9 CIU-13	Q 50	5.80	163.10	163.42	167.01	3.59	167.50	4.08	163.74	165.02	0.288999	5.60	1.03	4.75	3.83
Ciubeca	Ciubeca	7.9 CIU-13	Q 200	8.40	163.10	163.48	167.01	3.53	167.50	4.02	163.89	165.60	0.289205	6.44	1.30	4.77	3.93
Ciubeca	Ciubeca	7.9 CIU-13	Q 500	10.20	163.10	163.52	167.01	3.49	167.50	3.98	163.98	165.96	0.289061	6.93	1.47	4.78	3.98
Ciubeca	Ciubeca	7.8 CIU-13	Q 50	5.80	162.80	163.15	166.76	3.61	167.15	4.00	163.35	163.83	0.071012	3.65	1.59	4.58	1.98
Ciubeca	Ciubeca	7.8 CIU-13	Q 200	8.40	162.80	163.22	166.76	3.54	167.15	3.93	163.50	164.22	0.085991	4.44	1.89	4.58	2.20

HEC-RAS Plan: 02_Ciubeca (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)	
Ciubeca	Ciubeca	7.8 CIU-13	Q 500	10.20	162.80	163.26	166.76	3.50	167.15	3.89	163.60	164.48	0.094976	4.91	2.08	4.59	2.33
Ciubeca	Ciubeca	7.7 CIU-13	Q 50	5.80	161.63	161.86	167.46	5.60	167.88	6.02	162.18	163.39	0.257095	5.47	1.06	4.55	3.62
Ciubeca	Ciubeca	7.7 CIU-13	Q 200	8.40	161.63	161.94	167.46	5.52	167.88	5.94	162.33	163.76	0.219445	5.97	1.41	4.56	3.43
Ciubeca	Ciubeca	7.7 CIU-13	Q 500	10.20	161.63	161.99	167.46	5.47	167.88	5.89	162.43	164.01	0.207576	6.30	1.62	4.57	3.38
Ciubeca	Ciubeca	7.6 CIU-12	Q 50	5.80	161.06	161.41	166.89	5.48	167.31	5.90	161.61	162.09	0.070456	3.64	1.59	4.57	1.97
Ciubeca	Ciubeca	7.6 CIU-12	Q 200	8.40	161.06	161.49	166.89	5.40	167.31	5.82	161.76	162.43	0.077467	4.29	1.96	4.57	2.09
Ciubeca	Ciubeca	7.6 CIU-12	Q 500	10.20	161.06	163.15	166.89	3.74	167.31	4.16	161.86	163.21	0.001043	1.05	9.71	4.74	0.23
Ciubeca	Ciubeca	7.5 CIU-12	Q 50	5.80	160.16	160.39	165.99	5.60	166.41	6.02	160.71	161.93	0.262573	5.50	1.05	4.55	3.65
Ciubeca	Ciubeca	7.5 CIU-12	Q 200	8.40	160.16	161.65	165.99	4.34	166.41	4.76	160.86	161.73	0.001829	1.22	6.88	4.68	0.32
Ciubeca	Ciubeca	7.5 CIU-12	Q 500	10.20	160.16	163.17	165.99	2.82	166.41	3.24	160.96	163.20	0.000387	0.72	14.11	4.83	0.13
Ciubeca	Ciubeca	7.4 CIU-11	Q 50	5.80	159.90	161.04	163.76	2.72	163.60	2.56	160.60	161.12	0.002871	1.29	4.50	4.55	0.41
Ciubeca	Ciubeca	7.4 CIU-11	Q 200	8.40	159.90	161.64	163.76	2.12	163.60	1.96	160.75	161.71	0.001532	1.16	7.27	4.61	0.29
Ciubeca	Ciubeca	7.4 CIU-11	Q 500	10.20	159.90	163.17	163.76	0.59	163.60	0.43	160.85	163.20	0.000360	0.71	14.45	4.78	0.13
Ciubeca	Ciubeca	7.3 CIU-11	Q 50	5.80	159.46	161.04	163.52	2.48	163.06	2.02	160.39	161.09	0.001607	1.05	5.54	4.77	0.31
Ciubeca	Ciubeca	7.3 CIU-11	Q 200	8.40	159.46	161.64	163.52	1.88	163.06	1.42	160.55	161.69	0.001022	0.99	8.46	4.84	0.24
Ciubeca	Ciubeca	7.3 CIU-11	Q 500	10.20	159.46	163.17	163.52	0.35	163.06	-0.11	160.65	163.19	0.000318	0.64	15.91	3.78	0.11
Ciubeca	Ciubeca	7 CIU-11	Q 50	5.80	159.46	161.06	164.69	3.63	163.65	2.59	160.43	161.08	0.000892	0.68	8.58	11.62	0.25
Ciubeca	Ciubeca	7 CIU-11	Q 200	8.40	159.46	161.67	164.69	3.02	163.65	1.98	160.69	161.68	0.000278	0.53	15.75	11.91	0.15
Ciubeca	Ciubeca	7 CIU-11	Q 500	10.20	159.46	163.18	164.69	1.51	163.65	0.47	160.74	163.19	0.000039	0.30	34.36	12.65	0.06
Ciubeca	Ciu+Gazu	6 CIU-10	Q 50	19.70	158.74	160.04	164.54	4.50	162.16	2.12	159.93	160.30	0.008570	2.27	8.66	11.04	0.82
Ciubeca	Ciu+Gazu	6 CIU-10	Q 200	28.50	158.74	160.99	164.54	3.55	162.16	1.17	160.15	161.10	0.001423	1.42	20.06	12.24	0.35
Ciubeca	Ciu+Gazu	6 CIU-10	Q 500	34.30	158.74	162.84	164.54	1.70	162.16	-0.68	160.27	162.87	0.000215	0.79	43.34	12.82	0.14
Ciubeca	Ciu+Gazu	5.9 CIU-10	Q 50	19.70	157.94	160.19	163.74	3.55	161.36	1.17	159.13	160.24	0.000686	0.98	20.00	12.24	0.25
Ciubeca	Ciu+Gazu	5.9 CIU-10	Q 200	28.50	157.94	161.03	163.74	2.71	161.36	0.33	159.34	161.08	0.000409	0.93	30.49	12.58	0.19
Ciubeca	Ciu+Gazu	5.9 CIU-10	Q 500	34.30	157.94	162.85	163.74	0.89	161.36	-1.49	159.47	162.87	0.000118	0.64	53.75	12.95	0.10
Ciubeca	Ciu+Gazu	5.8 CIU-9	Q 50	19.70	156.60	160.19	161.54	1.35	161.00	0.81	157.83	160.23	0.000353	0.84	23.37	7.40	0.15
Ciubeca	Ciu+Gazu	5.8 CIU-9	Q 200	28.50	156.60	161.02	161.54	0.52	161.00	-0.02	158.09	161.07	0.000395	0.96	29.60	7.57	0.16
Ciubeca	Ciu+Gazu	5.8 CIU-9	Q 500	34.30	156.60	162.84	161.54	-1.30	161.00	-1.84	158.25	162.87	0.000189	0.78	44.95	9.20	0.10
Ciubeca	Ciu+Gazu	5.75 CIU-9		Culvert													
Ciubeca	Ciu+Gazu	5.7 CIU-9	Q 50	19.70	156.60	158.96	161.54	2.58	161.00	2.04	157.83	159.05	0.001334	1.37	14.40	7.14	0.31
Ciubeca	Ciu+Gazu	5.7 CIU-9	Q 200	28.50	156.60	160.65	161.54	0.89	161.00	0.35	158.09	160.71	0.000512	1.06	26.82	7.49	0.18
Ciubeca	Ciu+Gazu	5.7 CIU-9	Q 500	34.30	156.60	162.80	161.54	-1.26	161.00	-1.80	158.25	162.83	0.000193	0.79	44.63	9.20	0.11
Ciubeca	Ciu+GG	5 CIU-8	Q 50	29.40	155.14	157.48	161.22	3.74	159.81	2.33	156.90	157.72	0.004101	2.17	13.53	8.04	0.53
Ciubeca	Ciu+GG	5 CIU-8	Q 200	42.50	155.14	159.48	161.22	1.74	159.81	0.33	157.22	159.59	0.000912	1.42	29.90	8.31	0.24
Ciubeca	Ciu+GG	5 CIU-8	Q 500	51.20	155.14	161.90	161.22	-0.68	159.81	-2.09	157.40	161.95	0.000335	1.02	50.35	8.54	0.13
Ciubeca	Ciu+GG	4 CIU-7	Q 50	29.40	154.50	156.80	157.55	0.75	157.55	0.75	156.57	157.64	0.019693	4.06	7.23	3.15	0.86
Ciubeca	Ciu+GG	4 CIU-7	Q 200	42.50	154.50	158.49	157.55	-0.94	157.55	-0.94	157.15	159.49	0.029948	4.42	9.61		0.71
Ciubeca	Ciu+GG	4 CIU-7	Q 500	51.20	154.50	160.36	157.55	-2.81	157.55	-2.81	157.50	161.81	0.043463	5.33	9.61		0.70
Ciubeca	Ciu+GG	3.8 CIU-6	Q 50	29.40	154.10	156.17	156.40	0.23	156.40	0.23	156.17	157.20	0.025537	4.50	6.53	3.16	1.00
Ciubeca	Ciu+GG	3.8 CIU-6	Q 200	42.50	154.10	156.76	156.40	-0.36	156.40	-0.36	156.40	158.50	0.064085	5.85	7.27		1.14
Ciubeca	Ciu+GG	3.8 CIU-6	Q 500	51.20	154.10	157.85	156.40	-1.45	156.40	-1.45	156.40	160.38	0.093008	7.04	7.27		1.16

HEC-RAS Plan: 02_Ciubeca (Continued)

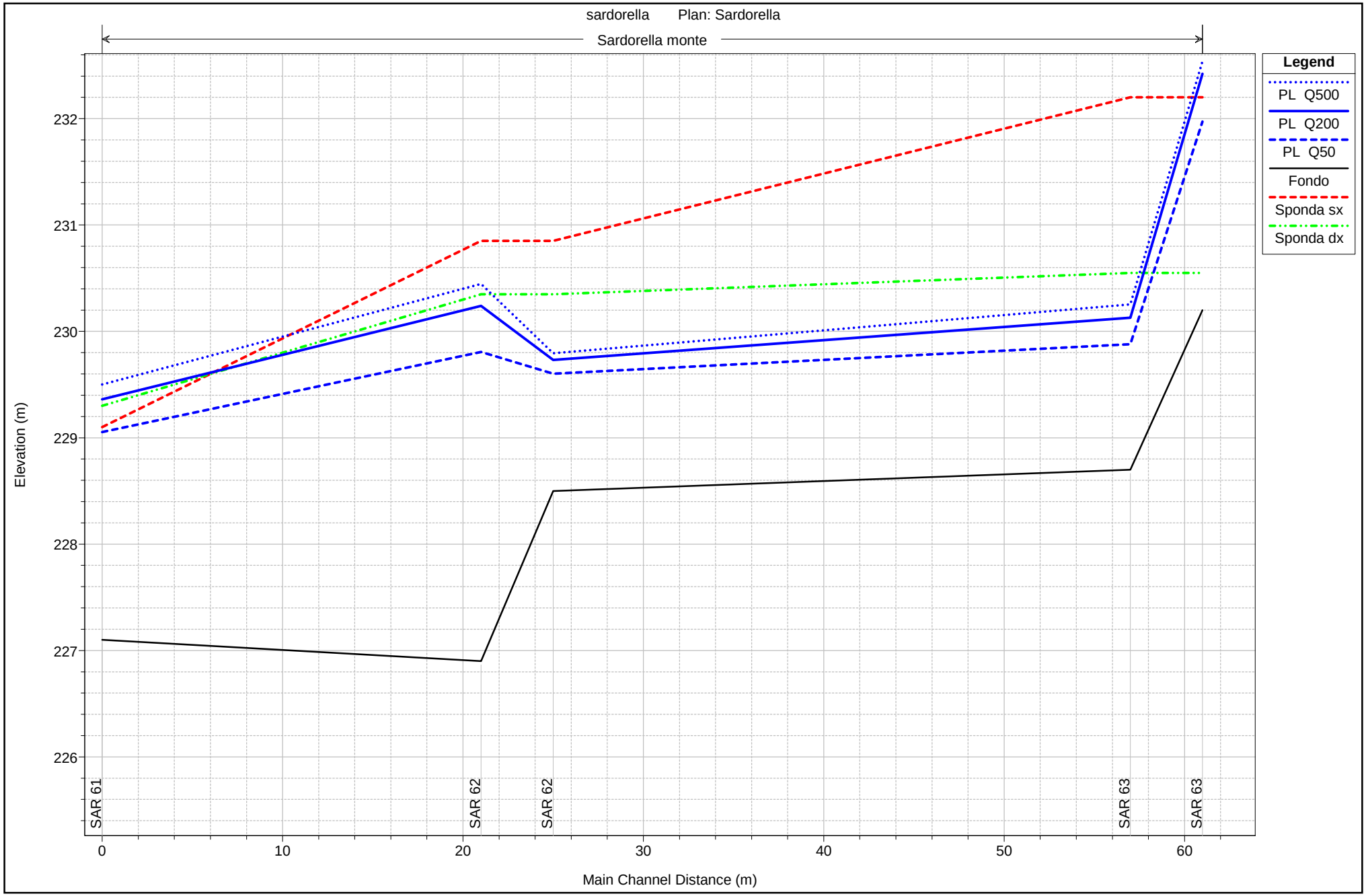
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Ciubeca	Ciu+GG	3.79 CIU-6	Q 50	29.40	153.60	155.08	156.40	1.32	156.40	1.32	155.67	157.09	0.061603	6.29	4.68	3.16	1.65
Ciubeca	Ciu+GG	3.79 CIU-6	Q 200	42.50	153.60	157.15	156.40	-0.75	156.40	-0.75	156.24	158.32	0.037393	4.80	8.85		0.81
Ciubeca	Ciu+GG	3.79 CIU-6	Q 500	51.20	153.60	158.41	156.40	-2.01	156.40	-2.01	156.40	160.12	0.054269	5.79	8.85		0.84
Ciubeca	Ciu+GG	3.7 CIU-5	Q 50	29.40	153.30	155.17	155.75	0.58	155.75	0.58	155.39	156.46	0.034408	5.04	5.83	3.12	1.18
Ciubeca	Ciu+GG	3.7 CIU-5	Q 200	42.50	153.30	156.14	155.75	-0.39	155.75	-0.39	155.75	157.72	0.055627	5.56	7.64		1.05
Ciubeca	Ciu+GG	3.7 CIU-5	Q 500	51.20	153.30	156.96	155.75	-1.21	155.75	-1.21	155.75	159.24	0.080732	6.70	7.64		1.12
Ciubeca	Ciu+GG	3.69 CIU-5	Q 50	29.40	152.80	154.26	155.75	1.49	155.75	1.49	154.88	156.37	0.065538	6.43	4.57	3.12	1.70
Ciubeca	Ciu+GG	3.69 CIU-5	Q 200	42.50	152.80	156.48	155.75	-0.73	155.75	-0.73	155.46	157.56	0.033584	4.62	9.20		0.77
Ciubeca	Ciu+GG	3.69 CIU-5	Q 500	51.20	152.80	157.44	155.75	-1.69	155.75	-1.69	155.75	159.02	0.048742	5.56	9.20		0.82
Ciubeca	Ciu+GG	3.6 CIU-4	Q 50	29.40	151.90	153.68	154.47	0.79	154.47	0.79	153.98	155.11	0.038920	5.29	5.56	3.12	1.26
Ciubeca	Ciu+GG	3.6 CIU-4	Q 200	42.50	151.90	155.14	154.47	-0.67	154.47	-0.67	154.47	156.58	0.048809	5.30	8.02		0.94
Ciubeca	Ciu+GG	3.6 CIU-4	Q 500	51.20	151.90	155.51	154.47	-1.04	154.47	-1.04	154.47	157.58	0.070837	6.39	8.02		1.07
Ciubeca	Ciu+GG	3.59 CIU-4	Q 50	29.40	151.60	153.14	154.47	1.33	154.47	1.33	153.68	155.05	0.057367	6.12	4.80	3.12	1.58
Ciubeca	Ciu+GG	3.59 CIU-4	Q 200	42.50	151.60	155.33	154.47	-0.86	154.47	-0.86	154.27	156.48	0.036168	4.75	8.95		0.78
Ciubeca	Ciu+GG	3.59 CIU-4	Q 500	51.20	151.60	155.78	154.47	-1.31	154.47	-1.31	154.47	157.45	0.052491	5.72	8.95		0.89
Ciubeca	Ciu+GG	3 CIU-3	Q 50	29.40	150.71	153.49	153.76	0.27	153.76	0.27	152.82	154.09	0.013052	3.44	8.55	3.08	0.66
Ciubeca	Ciu+GG	3 CIU-3	Q 200	42.50	150.71	154.98	153.76	-1.22	153.76	-1.22	153.40	155.77	0.027208	3.95	10.76	3.08	0.61
Ciubeca	Ciu+GG	3 CIU-3	Q 500	51.20	150.71	155.50	153.76	-1.74	153.76	-1.74	153.76	156.37	0.024899	4.14	12.36	3.08	0.60
Ciubeca	Ciu+GG	2 CIU-2	Q 50	29.40	150.32	153.72	154.19	0.47	155.00	1.28	152.15	153.92	0.002819	1.98	14.84	4.77	0.36
Ciubeca	Ciu+GG	2 CIU-2	Q 200	42.50	150.32	155.37	154.19	-1.18	155.00	-0.37	152.60	155.55	0.002022	1.87	22.73	4.81	0.27
Ciubeca	Ciu+GG	2 CIU-2	Q 500	51.20	150.32	155.92	154.19	-1.73	155.00	-0.92	152.86	156.13	0.002246	2.02	25.38	4.81	0.28
Ciubeca	Ciu+GG	1 CIU-1	Q 50	29.40	149.28	153.77	154.70	0.93	155.00	1.23	150.82	153.84	0.000662	1.15	25.68	6.10	0.18
Ciubeca	Ciu+GG	1 CIU-1	Q 200	42.50	149.28	155.40	154.70	-0.70	155.00	-0.40	151.20	155.48	0.000605	1.19	35.72	6.17	0.16
Ciubeca	Ciu+GG	1 CIU-1	Q 500	51.20	149.28	155.96	154.70	-1.26	155.00	-0.96	151.43	156.05	0.000701	1.31	39.15	6.17	0.17

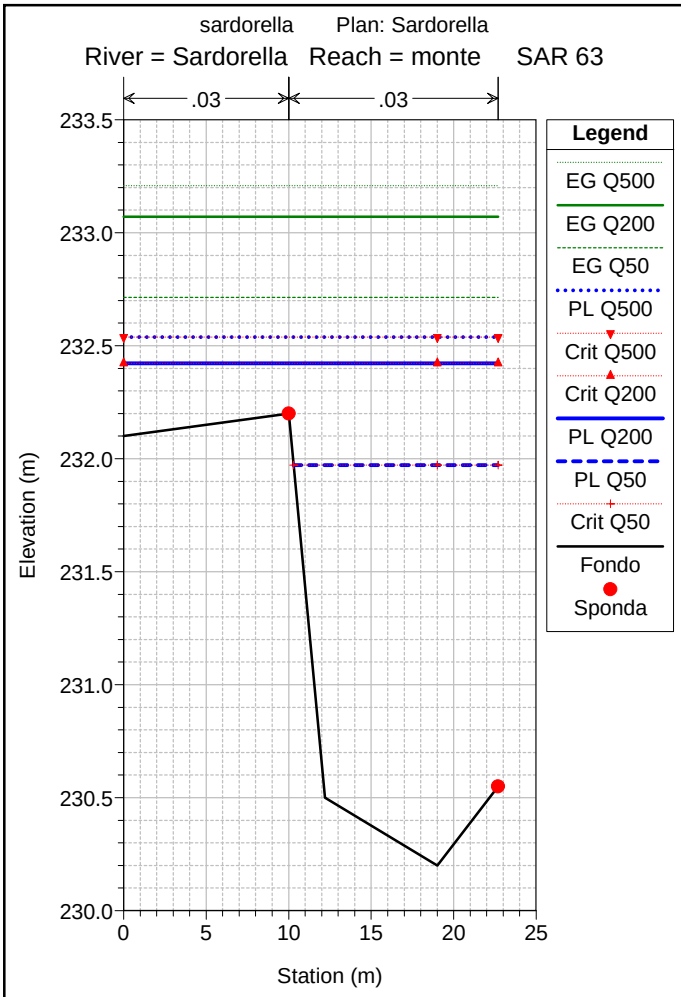
8.5.4 Sardorella – tratto di monte

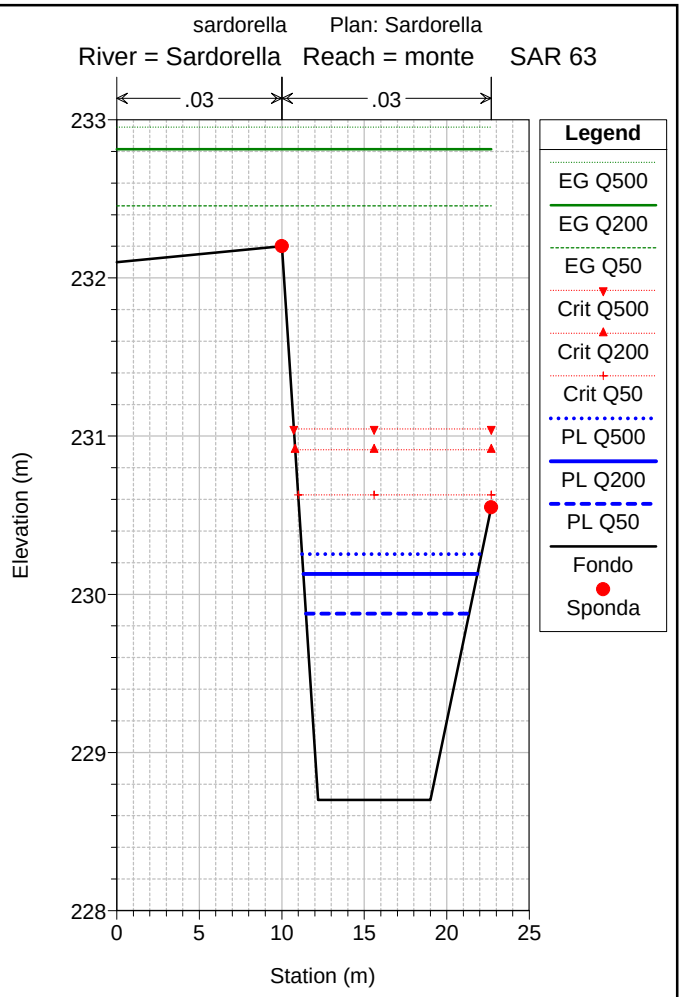
Il tratto indagato ha estensione piuttosto limitata, infatti comprende solamente 3 sezioni di rilievo.

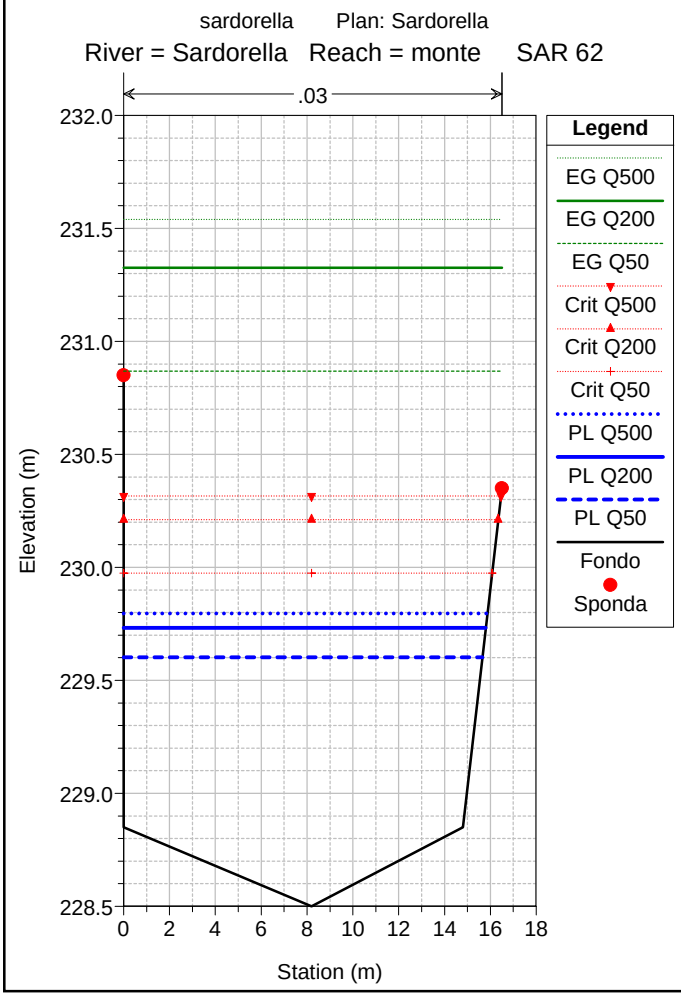
Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 33 $m^{1/3}s^{-1}$.
Come condizioni al contorno sia a monte che a valle del tratto è stata imposta la profondità critica a causa di presenza di due briglie che lo delimitano.
La portata utilizzata è la seguente:

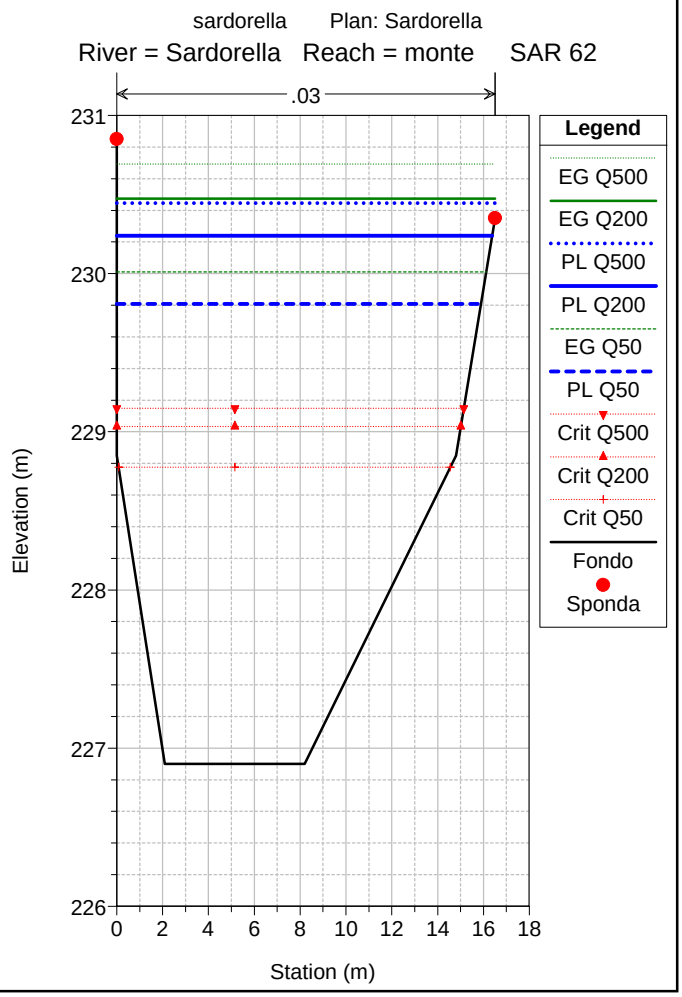
TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
		T = 50 anni	T = 200 anni	T = 500 anni
T. Sardorella	SAR1	70	90	100

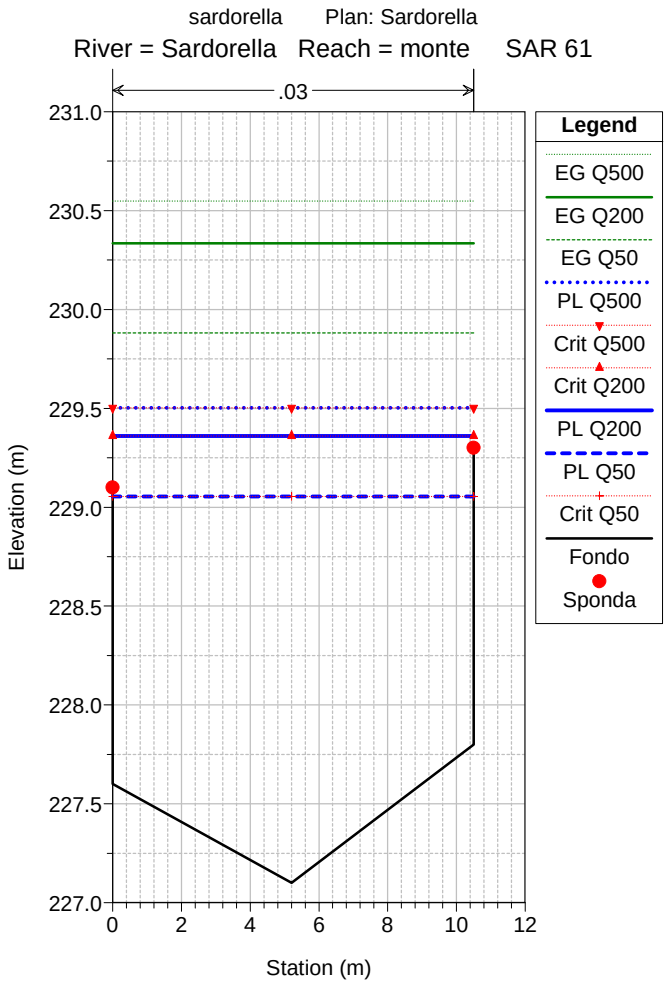

sardorella Plan: Sardorella
Sardorella monte
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
232
231
230
229
228
227
226
SAR 61
SAR 62
SAR 62
SAR 63
SAR 63
0
10
20
30
40
50
60
Main Channel Distance (m)


sardorella Plan: Sardorella
River = Sardorella Reach = monte SAR 63
.03
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda


sardorella Plan: Sardorella
River = Sardorella Reach = monte SAR 63
.03
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


sardorella Plan: Sardorella
River = Sardorella Reach = monte SAR 62
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


sardorella Plan: Sardorella
River = Sardorella Reach = monte SAR 62
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


sardorella Plan: Sardorella
River = Sardorella Reach = monte SAR 61
.03
231.0
230.5
230.0
229.5
229.0
228.5
228.0
227.5
227.0
Elevation (m)
0
2
4
6
8
10
12
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda

HEC-RAS Plan: Sard River: Sardorella Reach: monte

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte	3.1 SAR 63	Q50	70.00	230.20	231.97	232.20	0.23	230.55	-1.42	231.97	232.71	0.009457	3.82	18.34	12.40	1.00
monte	3.1 SAR 63	Q200	90.00	230.20	232.42	232.20	-0.22	230.55	-1.87	232.42	233.07	0.006396	3.62	26.75	22.70	0.84
monte	3.1 SAR 63	Q500	100.00	230.20	232.54	232.20	-0.34	230.55	-1.99	232.54	233.21	0.006271	3.71	29.39	22.70	0.84
monte	3 SAR 63	Q50	70.00	228.70	229.88	232.20	2.32	230.55	0.67	230.63	232.46	0.051730	7.11	9.84	9.90	2.28
monte	3 SAR 63	Q200	90.00	228.70	230.13	232.20	2.07	230.55	0.42	230.91	232.81	0.043819	7.26	12.40	10.56	2.14
monte	3 SAR 63	Q500	100.00	228.70	230.25	232.20	1.95	230.55	0.30	231.04	232.95	0.040331	7.28	13.73	10.88	2.07
monte	2.1 SAR 62	Q50	70.00	228.50	229.60	230.85	1.25	230.35	0.75	229.97	230.87	0.028210	4.99	14.04	15.65	1.68
monte	2.1 SAR 62	Q200	90.00	228.50	229.73	230.85	1.12	230.35	0.62	230.21	231.33	0.030357	5.59	16.09	15.80	1.77
monte	2.1 SAR 62	Q500	100.00	228.50	229.80	230.85	1.05	230.35	0.55	230.32	231.54	0.031063	5.85	17.09	15.87	1.80
monte	2 SAR 62	Q50	70.00	226.90	229.81	230.85	1.04	230.35	0.54	228.78	230.01	0.001502	2.00	35.07	15.89	0.43
monte	2 SAR 62	Q200	90.00	226.90	230.24	230.85	0.61	230.35	0.11	229.03	230.47	0.001464	2.14	42.05	16.38	0.43
monte	2 SAR 62	Q500	100.00	226.90	230.45	230.85	0.40	230.35	-0.10	229.15	230.69	0.001442	2.20	45.43	16.50	0.42
monte	1 SAR 61	Q50	70.00	227.10	229.05	229.10	0.05	229.30	0.25	229.05	229.88	0.010225	4.03	17.37	10.50	1.00
monte	1 SAR 61	Q200	90.00	227.10	229.36	229.10	-0.26	229.30	-0.06	229.36	230.33	0.010193	4.37	20.58	10.50	1.00
monte	1 SAR 61	Q500	100.00	227.10	229.50	229.10	-0.40	229.30	-0.20	229.50	230.55	0.010246	4.53	22.07	10.50	1.00

8.6 Rii Fondega, Cascinette e Valle

8.6.1 Rio Valle

Il rio Valle sfocia nel torrente Secca in sponda sinistra a valle della sezione SEC-57. La portata con il metodo CIMA per i bacini inferiori ai 2 km^2.

Le portate utilizzate sono le seguenti:

Q_{50} = 6,9 m^3/s
Q_{200} = 10,0 m^3/s
Q_{500} = 12,1 m^3/s

Come condizioni al contorno a monte è stata imposta la condizione critica, a valle è stata considerata la confluenza con il torente Secca.

E' stato assunto per il coefficiente di Strikler un valore pari a 33 $m^{1/3}/s$.

8.6.2 Rio Fondega

Il rio Fondega sfocia nel torrente Secca in sponda destra a valle della sezione SEC-65. La portata è stata calcolata con il metodo CIMA per i bacini inferiori ai 2 km^2.

Le portate utilizzate sono le seguenti:

Q_{50} = 9,7 m^3/s
Q_{200} = 14,0m^3/s
Q_{500} = 16,9 m^3/s

Come condizioni al contorno a monte è stata imposta la condizione critica, a valle è stata considerata la confluenza con il torente Secca.

E' stato assunto per il coefficiente di Strikler un valore pari a 33 $m^{1/3}/s$.

8.6.3 Rio Cascinette

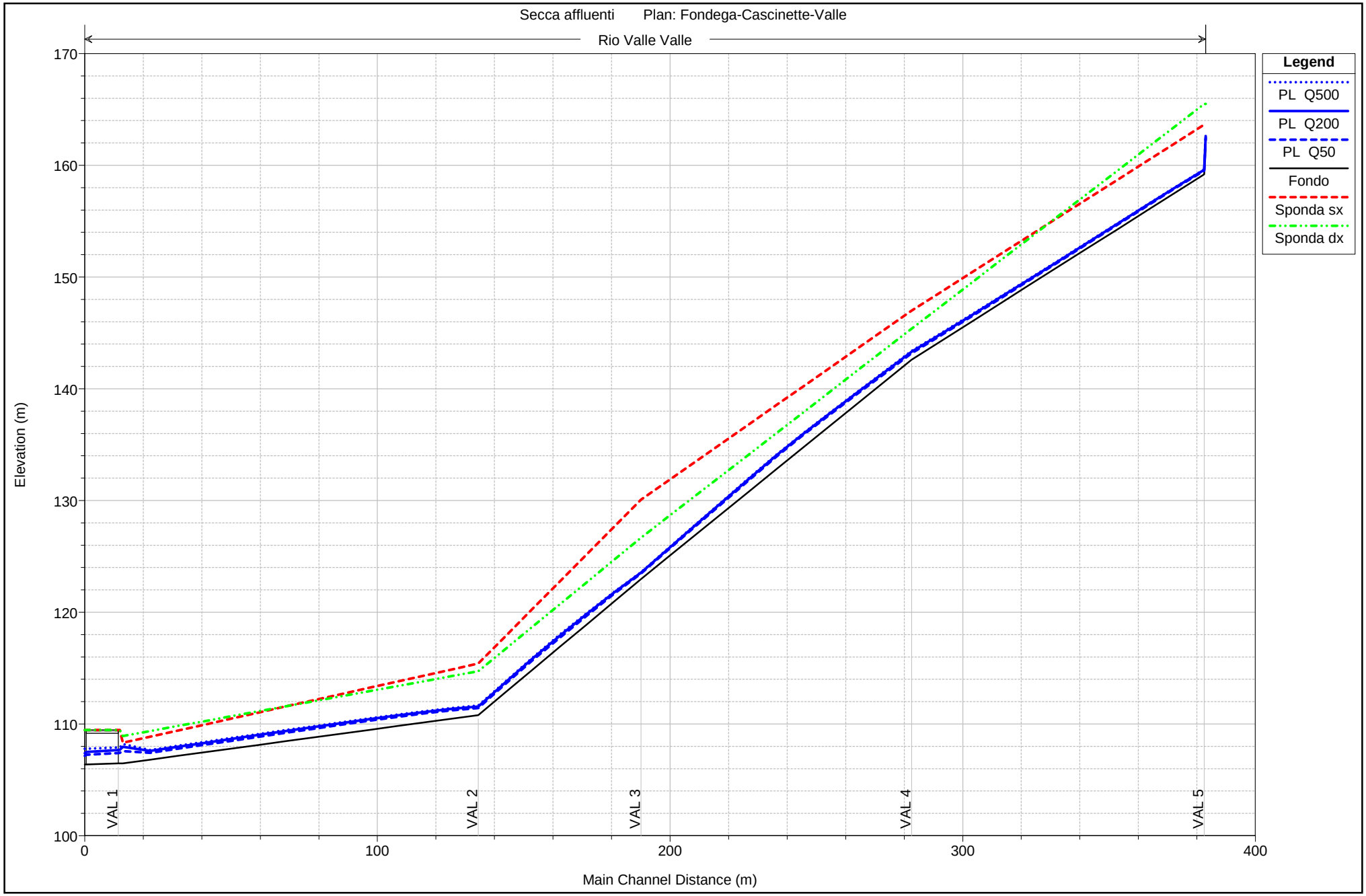
Il rio Cascinette sfocia nel torrente Secca in sponda destra a valle della sezione SEC-57. La portata è stata calcolata con il metodo CIMA per i bacini inferiori ai 2 km^2.

Le portate utilizzate sono le seguenti:

Q_{50} = 3,5 m^3/s
Q_{200} = 5,0 m^3/s
Q_{500} = 6,0 m^3/s

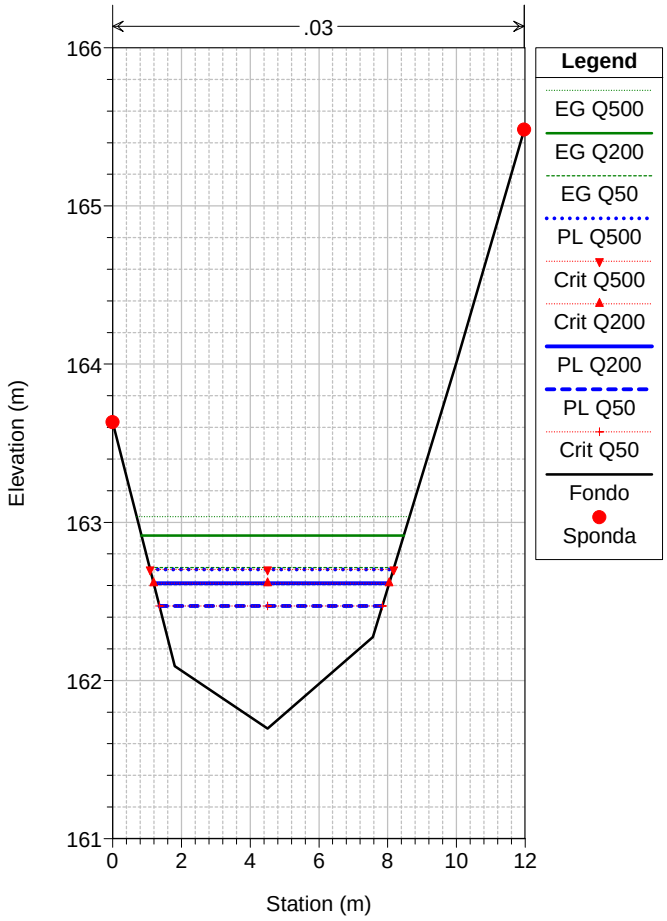
Come condizioni al contorno a monte è stata imposta la condizione critica, a valle è stata considerata la confluenza con il torente Secca.

E' stato assunto per il coefficiente di Strikler un valore pari a 33 $m^{1/3}/s$ per i tratti naturali e pari a 40 $m^{1/3}/s$ per i tratti plateati.


Secca affluenti
Plan: Fondega-Cascinette-Valle
Rio Valle Valle
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
VAL 1
VAL 2
VAL 3
VAL 4
VAL 5
170
160
150
140
130
120
110
100
0
100
200
300
400

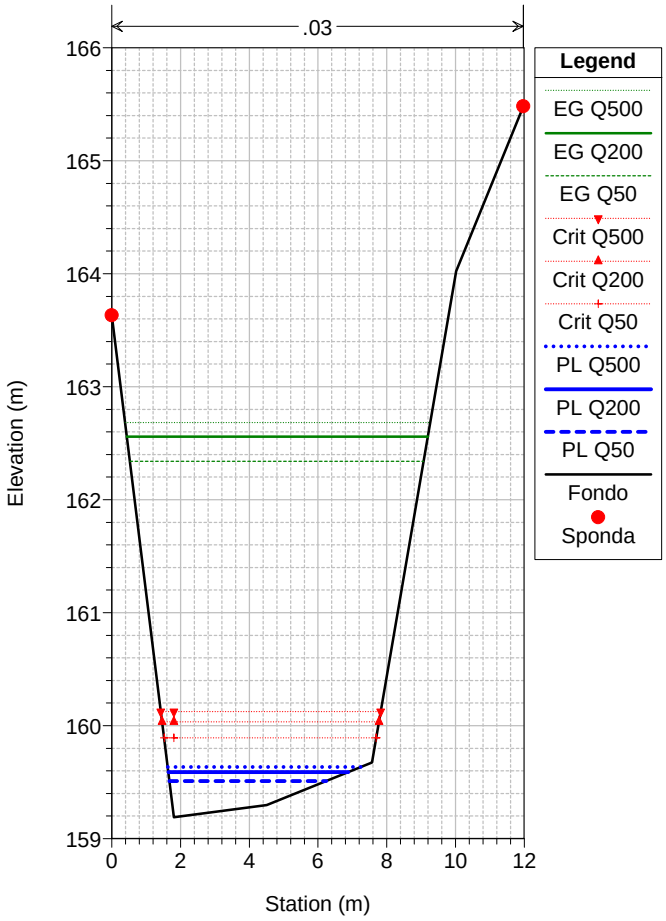
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Rio Valle Reach = Valle VAL 5



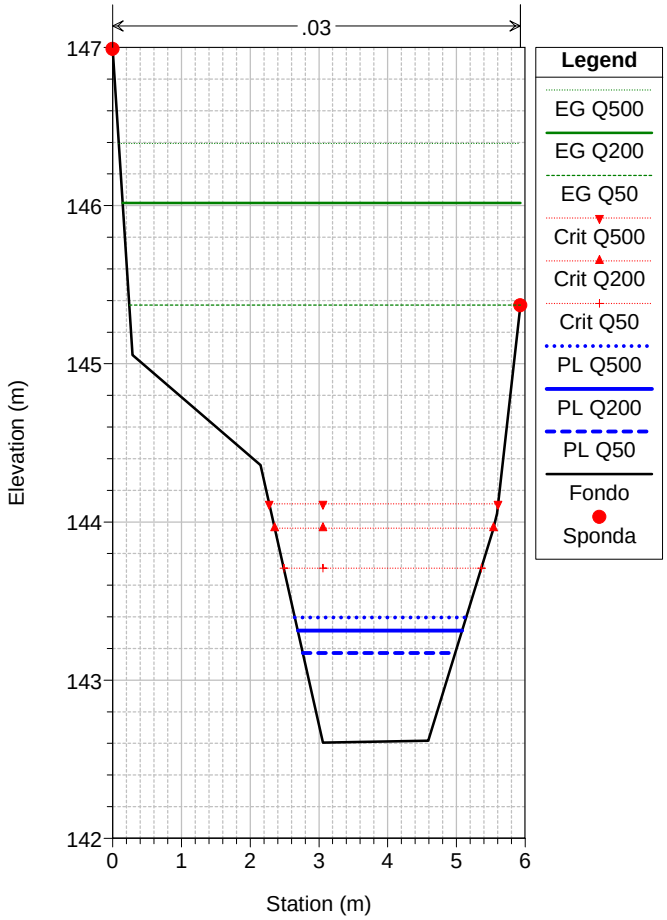
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Rio Valle Reach = Valle VAL 5



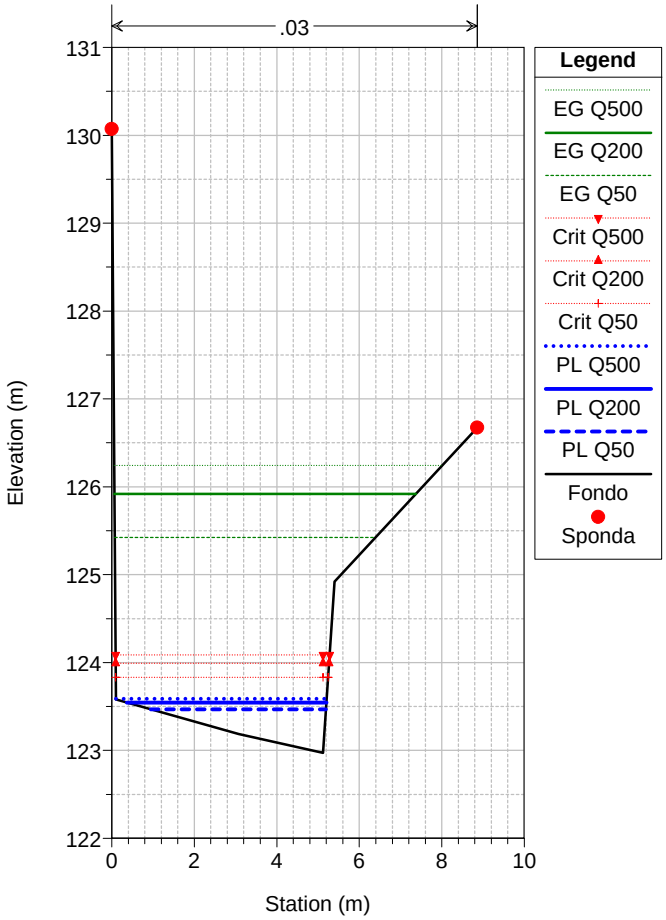
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Rio Valle Reach = Valle VAL 4



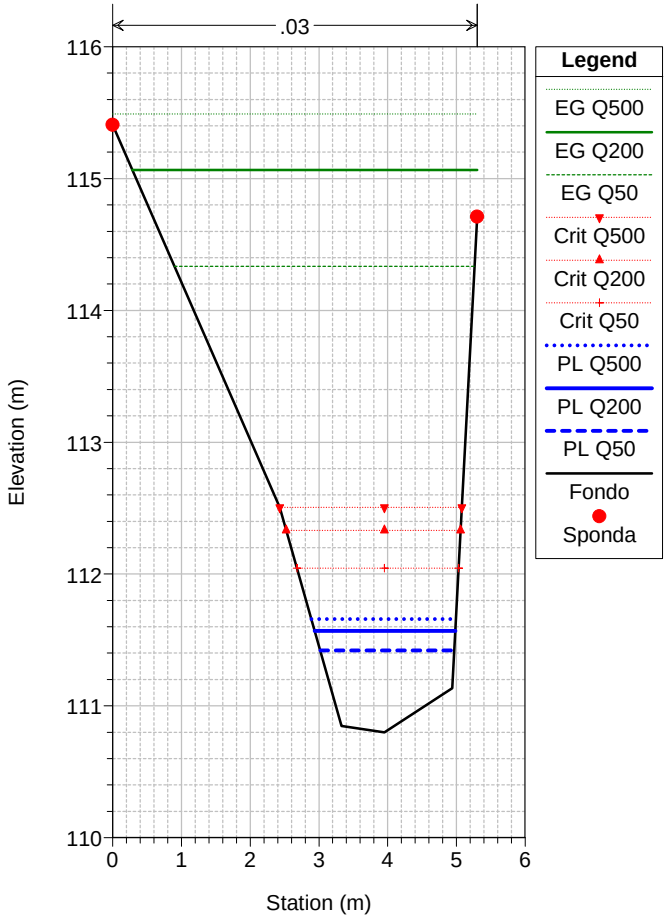
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Rio Valle Reach = Valle VAL 3



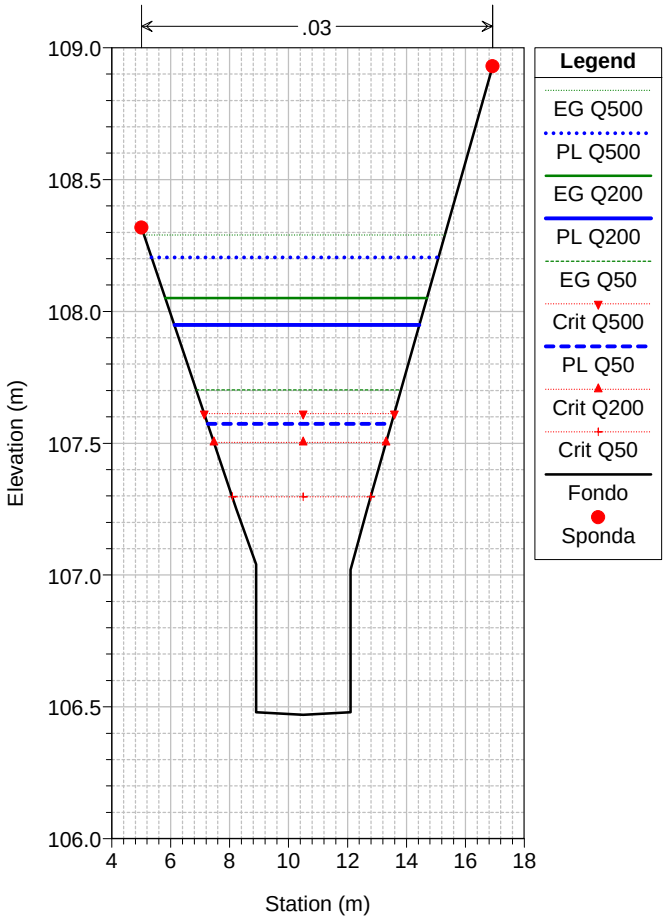
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Rio Valle Reach = Valle VAL 2



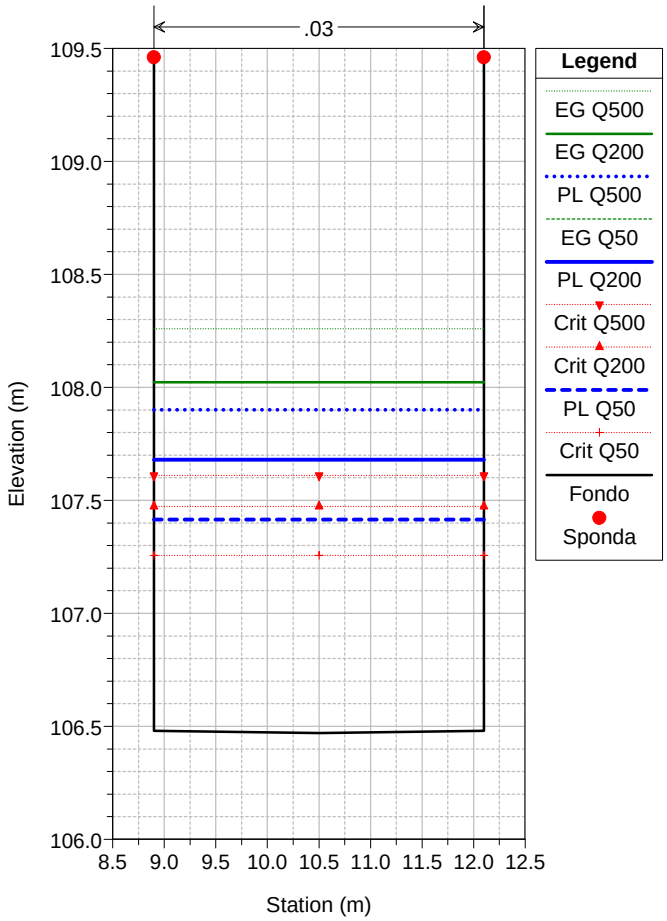
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Rio Valle Reach = Valle VAL 1.5



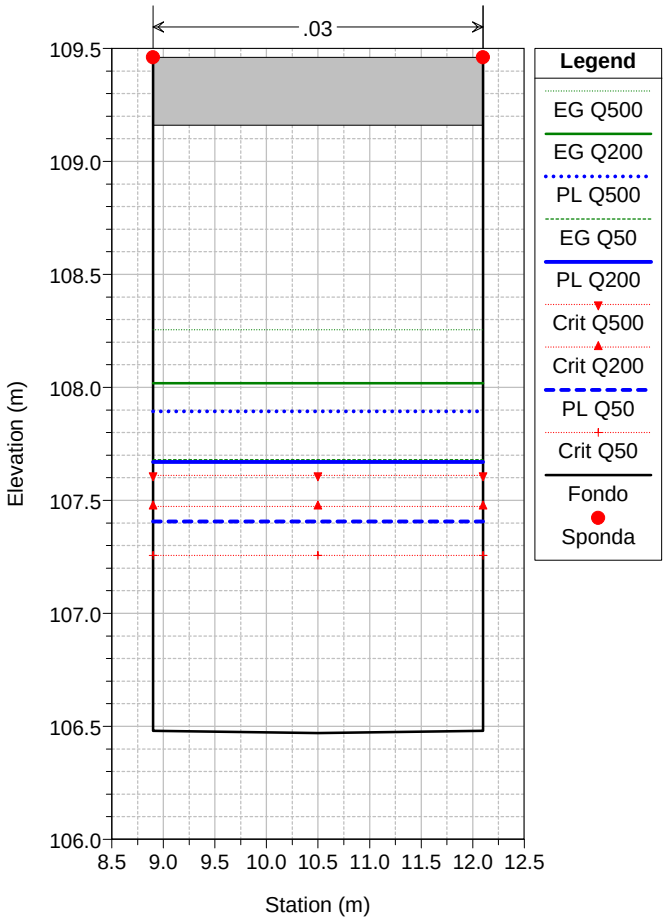
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Rio Valle Reach = Valle VAL 1



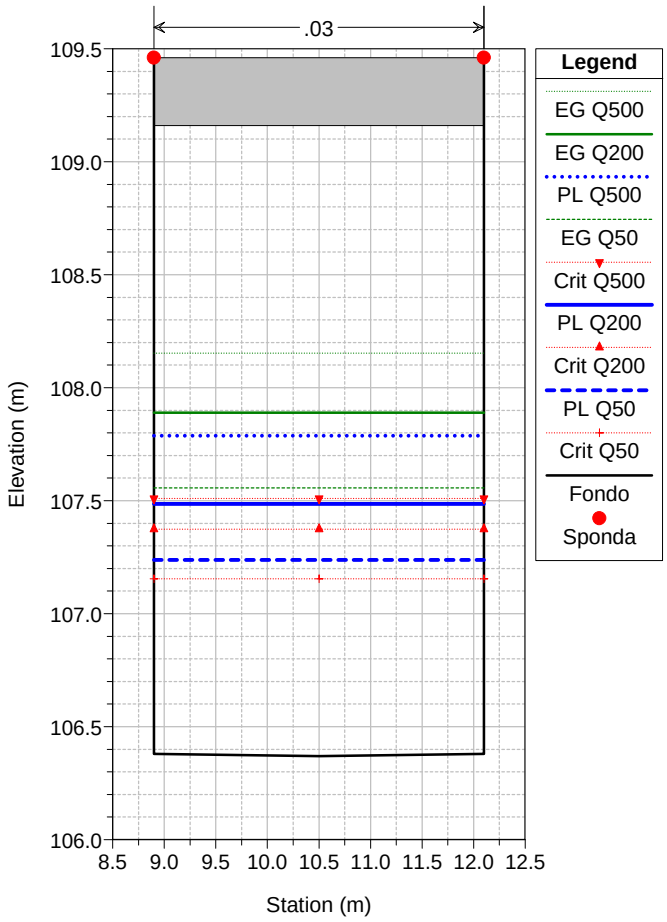
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Rio Valle Reach = Valle VAL 1



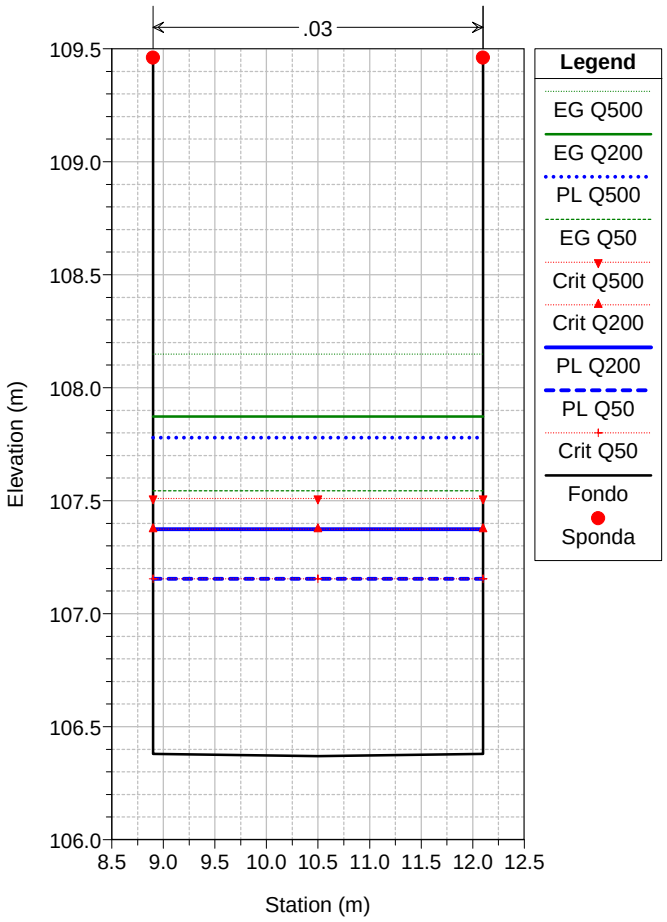
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Rio Valle Reach = Valle VAL 1



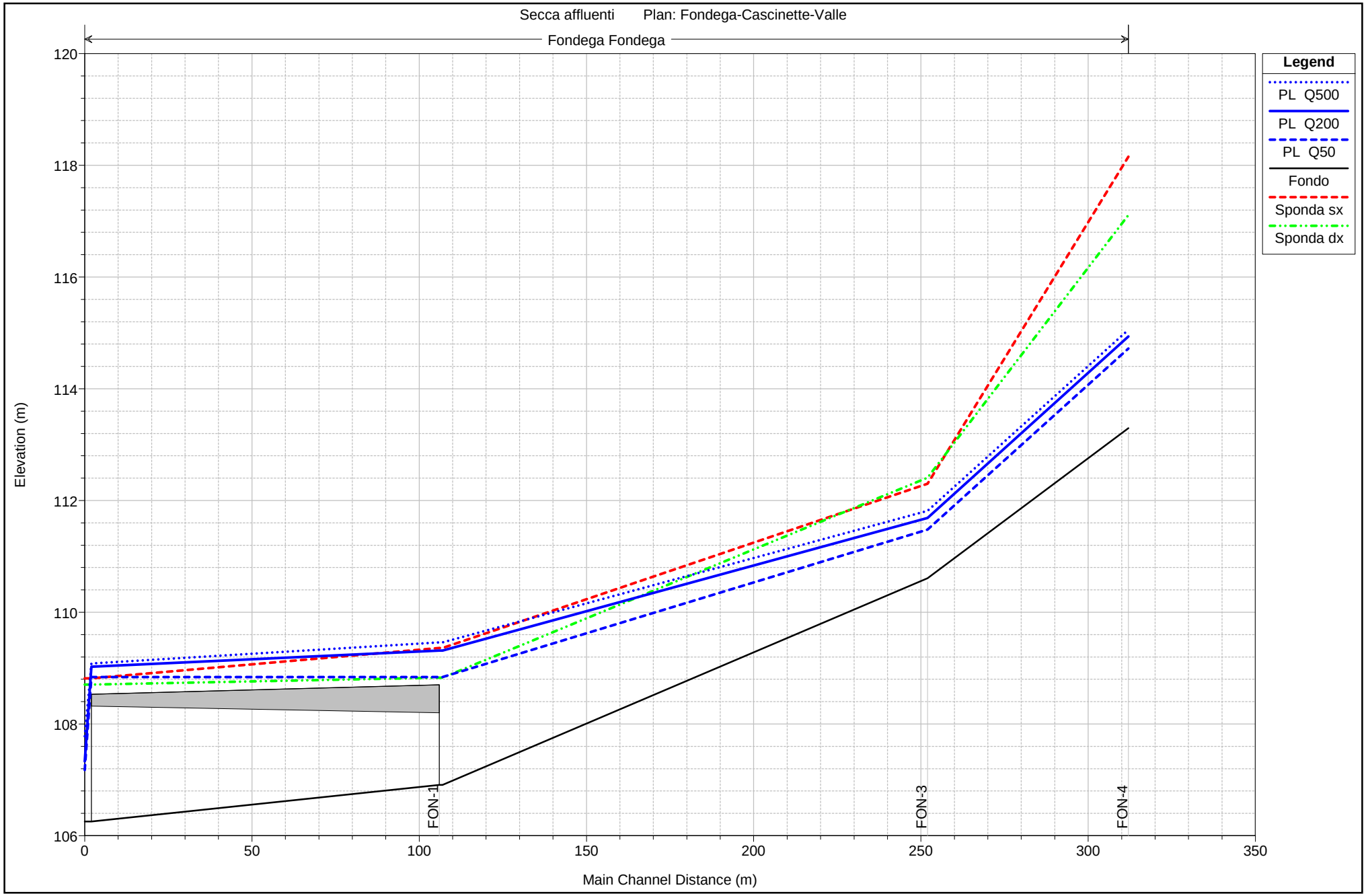
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Rio Valle Reach = Valle VAL 1



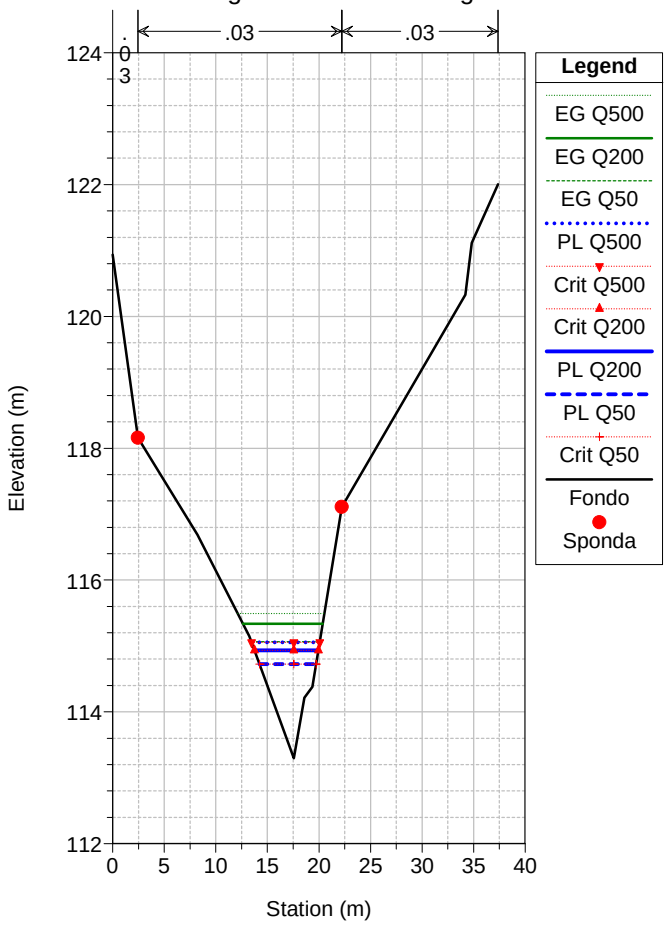
HEC-RAS Plan: Affl River: Rio Valle Reach: Valle

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Valle	5 VAL 5	Q50	6.90	161.70	162.47	163.63	1.16	165.48	3.01	162.47	162.71	0.011820	2.18	3.16	6.49	1.00
Valle	5 VAL 5	Q200	10.00	161.70	162.62	163.63	1.02	165.48	2.87	162.62	162.92	0.011256	2.43	4.12	6.85	1.00
Valle	5 VAL 5	Q500	12.10	161.70	162.70	163.63	0.93	165.48	2.78	162.70	163.04	0.010983	2.56	4.72	7.08	1.00
Valle	4.9 VAL 5	Q50	6.90	159.19	159.51	163.63	4.12	165.48	5.97	159.89	162.34	0.447768	7.45	0.93	4.56	5.28
Valle	4.9 VAL 5	Q200	10.00	159.19	159.59	163.63	4.04	165.48	5.89	160.04	162.56	0.357057	7.64	1.31	5.23	4.87
Valle	4.9 VAL 5	Q500	12.10	159.19	159.64	163.63	4.00	165.48	5.85	160.13	162.68	0.319677	7.73	1.56	5.63	4.68
Valle	4 VAL 4	Q50	6.90	142.61	143.17	146.99	3.82	145.37	2.20	143.71	145.37	0.146870	6.57	1.05	2.22	3.05
Valle	4 VAL 4	Q200	10.00	142.61	143.31	146.99	3.68	145.37	2.06	143.96	146.02	0.146233	7.28	1.37	2.39	3.07
Valle	4 VAL 4	Q500	12.10	142.61	143.40	146.99	3.59	145.37	1.97	144.11	146.39	0.145966	7.67	1.58	2.49	3.08
Valle	3 VAL 3	Q50	6.90	122.97	123.47	130.07	6.60	126.67	3.20	123.83	125.43	0.236323	6.20	1.11	4.24	3.86
Valle	3 VAL 3	Q200	10.00	122.97	123.55	130.07	6.53	126.67	3.13	123.99	125.92	0.237119	6.82	1.47	4.84	3.96
Valle	3 VAL 3	Q500	12.10	122.97	123.59	130.07	6.48	126.67	3.08	124.09	126.24	0.239101	7.22	1.68	5.11	4.02
Valle	2 VAL 2	Q50	6.90	110.80	111.42	115.41	3.99	114.71	3.29	112.04	114.33	0.208621	7.56	0.91	1.95	3.53
Valle	2 VAL 2	Q200	10.00	110.80	111.57	115.41	3.84	114.71	3.14	112.33	115.07	0.200942	8.29	1.21	2.04	3.44
Valle	2 VAL 2	Q500	12.10	110.80	111.66	115.41	3.75	114.71	3.05	112.51	115.49	0.197664	8.67	1.40	2.10	3.40
Valle	1.5 VAL 1.5	Q50	6.90	106.47	107.57	108.32	0.74	108.93	1.36	107.30	107.70	0.004730	1.59	4.34	6.24	0.61
Valle	1.5 VAL 1.5	Q200	10.00	106.47	107.95	108.32	0.37	108.93	0.98	107.50	108.05	0.002762	1.41	7.07	8.31	0.49
Valle	1.5 VAL 1.5	Q500	12.10	106.47	108.20	108.32	0.11	108.93	0.73	107.61	108.29	0.001906	1.29	9.38	9.74	0.42
Valle	1.4 VAL 1	Q50	6.90	106.47	107.41	109.46	2.05	109.46	2.05	107.26	107.68	0.009505	2.29	3.01	3.20	0.76
Valle	1.4 VAL 1	Q200	10.00	106.47	107.68	109.46	1.78	109.46	1.78	107.47	108.02	0.009971	2.59	3.85	3.20	0.75
Valle	1.4 VAL 1	Q500	12.10	106.47	107.90	109.46	1.56	109.46	1.56	107.61	108.26	0.009205	2.65	4.56	3.20	0.71
Valle	1.2 VAL 1		Bridge													
Valle	1 VAL 1	Q50	6.90	106.37	107.15	109.46	2.31	109.46	2.31	107.15	107.54	0.016267	2.77	2.49	3.20	1.00
Valle	1 VAL 1	Q200	10.00	106.37	107.37	109.46	2.09	109.46	2.09	107.37	107.87	0.016787	3.13	3.20	3.20	1.00
Valle	1 VAL 1	Q500	12.10	106.37	107.78	109.46	1.68	109.46	1.68	107.51	108.15	0.009590	2.69	4.49	3.20	0.73


Secca affluenti
Plan: Fondega-Cascinette-Valle
Fondega Fondega
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
120
118
116
114
112
110
108
106
0
50
100
150
200
250
300
350
Main Channel Distance (m)
FON-1
FON-3
FON-4

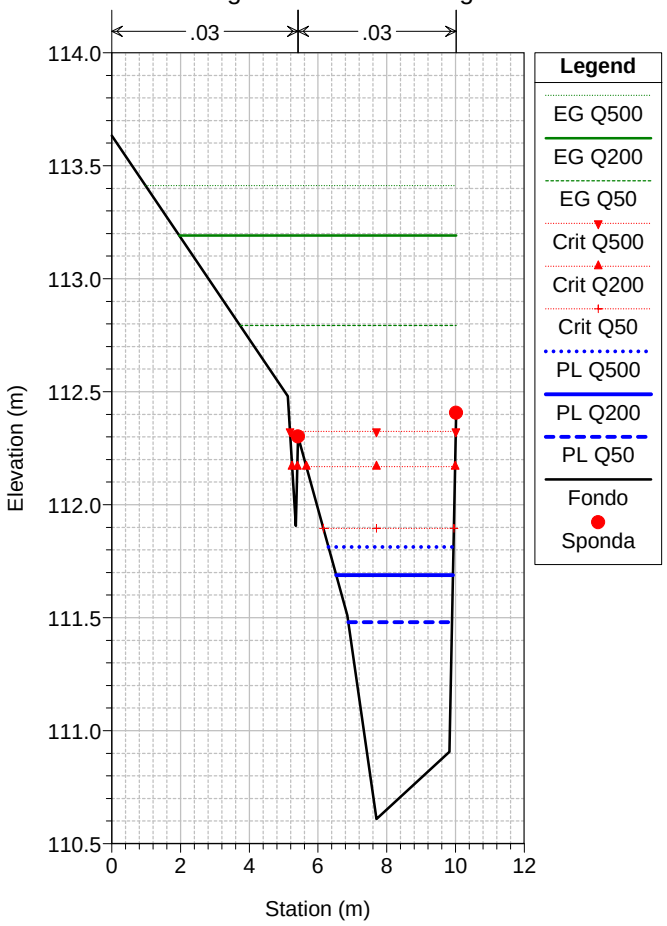
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Fondega Reach = Fondega FON-4



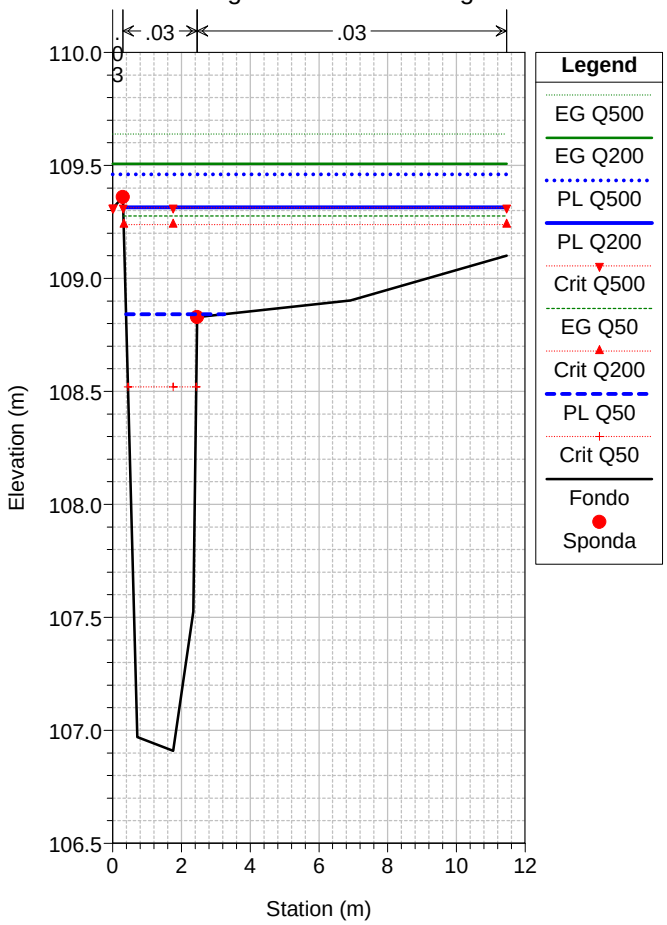
Secca affluenti Plan: Fondega-Cascinette-Valle

River = Fondega Reach = Fondega FON-3



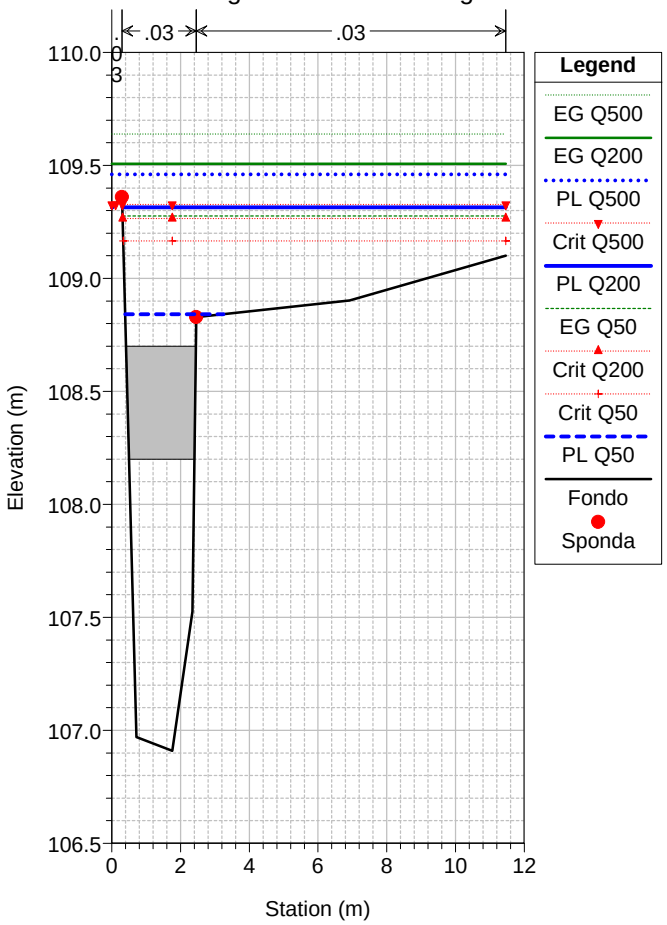
Secca affluenti Plan: Fondega-Cascinette-Valle

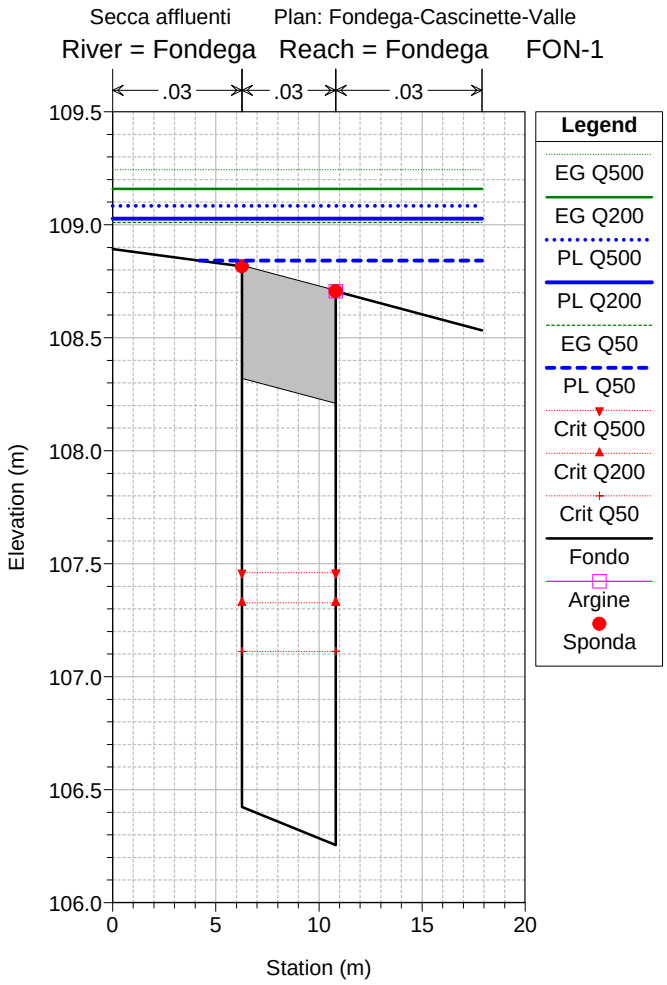
River = Fondega Reach = Fondega FON-2

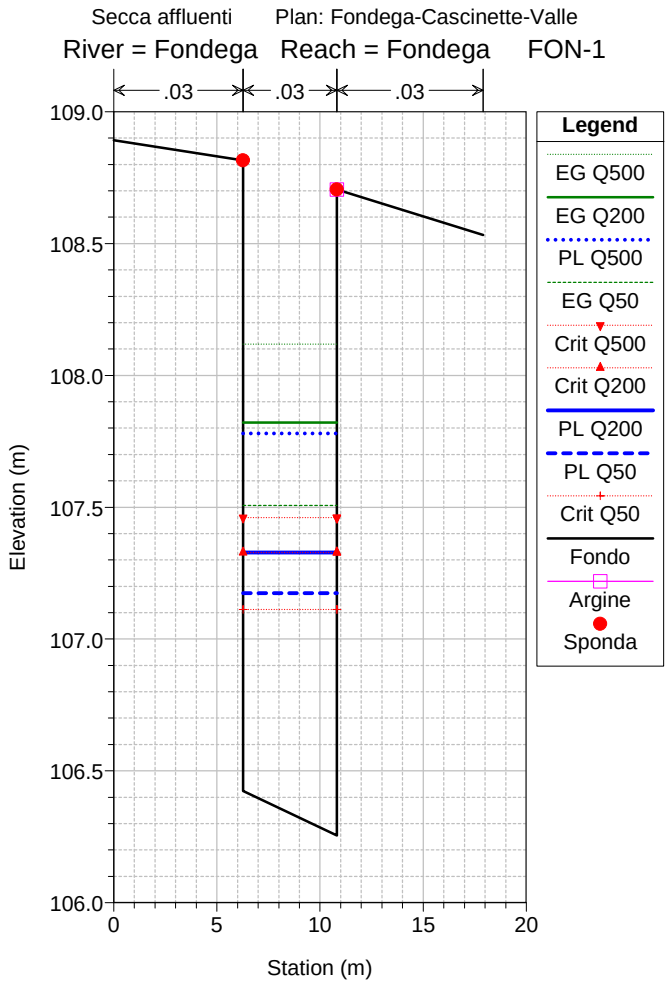


Secca affluenti Plan: Fondega-Cascinette-Valle

River = Fondega Reach = Fondega FON-1

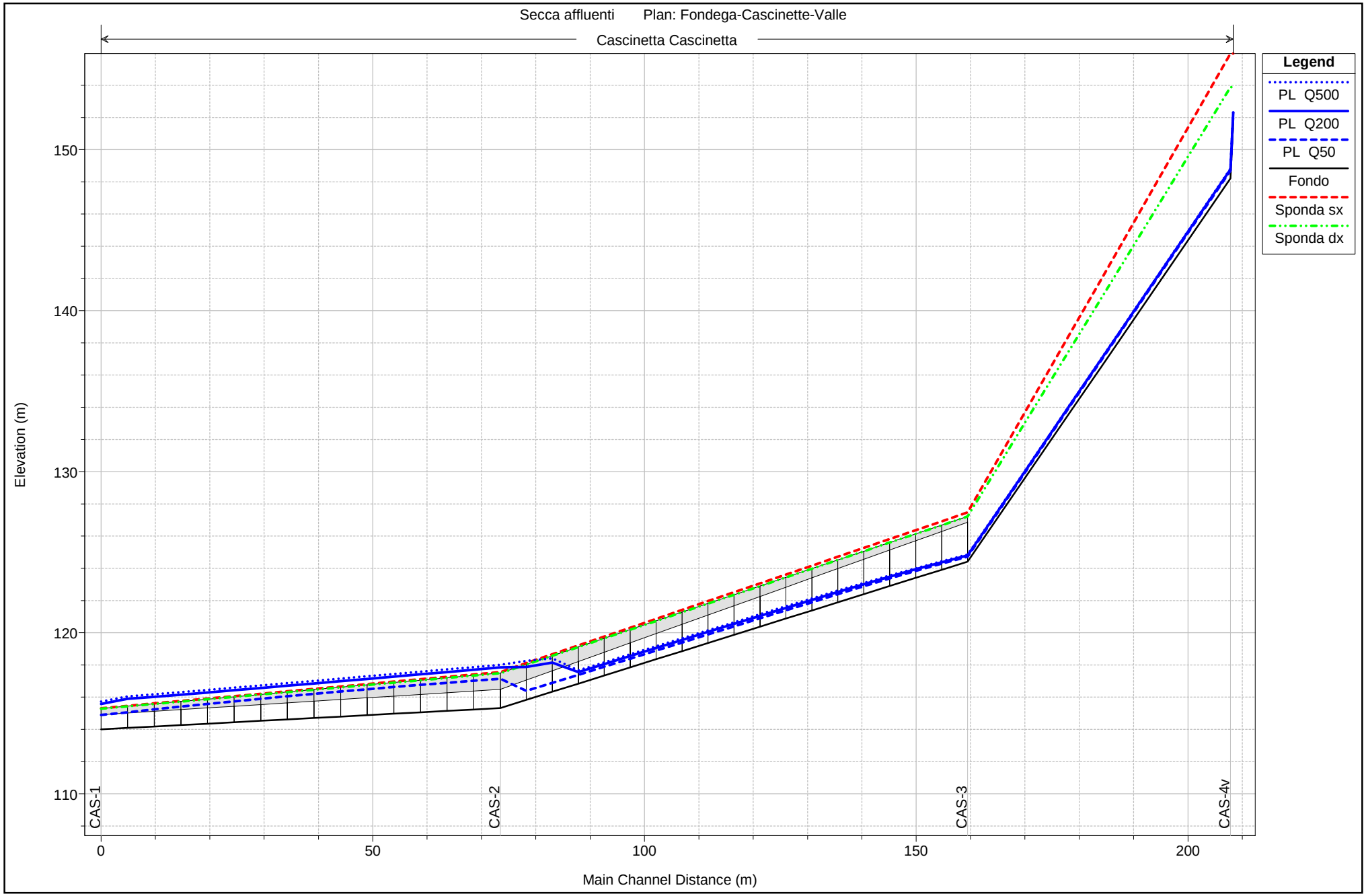


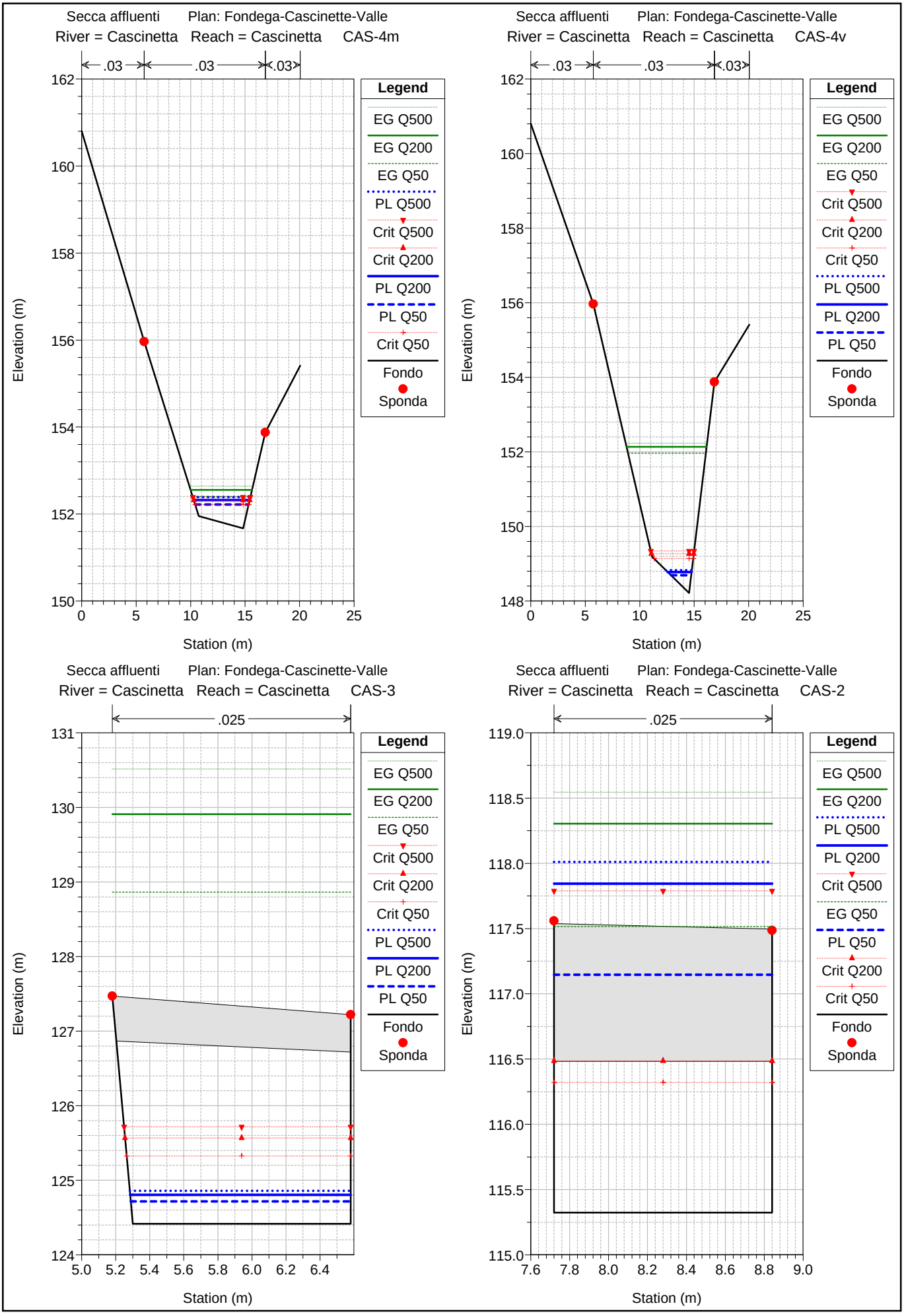

Secca affluenti
Plan: Fondega-Cascinette-Valle
River = Fondega
Reach = Fondega
FON-1
.03
.03
.03
109.5
109.0
108.5
108.0
107.5
107.0
106.5
106.0
Elevation (m)
0
5
10
15
20
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda


Secca affluenti
Plan: Fondega-Cascinette-Valle
River = Fondega
Reach = Fondega
FON-1
.03
.03
.03
109.0
108.5
108.0
107.5
107.0
106.5
106.0
Elevation (m)
0
5
10
15
20
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda

HEC-RAS Plan: Affl River: Fondega Reach: Fondega

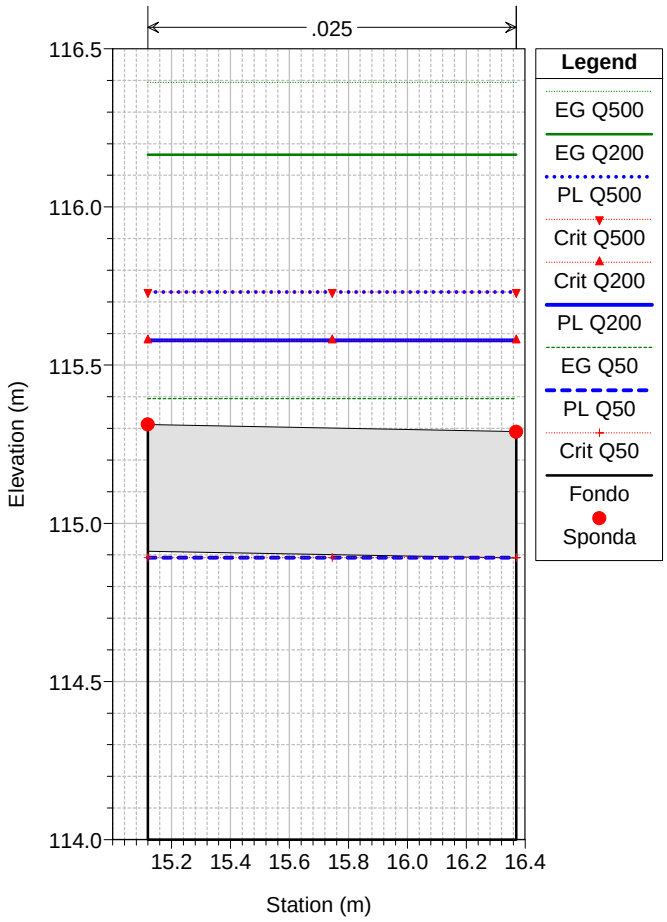
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Fondega	4 FON-4	Q50	9.70	113.30	114.72	118.16	3.43	117.11	2.39	114.72	115.06	0.011987	2.59	3.75	5.48	1.00
Fondega	4 FON-4	Q200	14.00	113.30	114.93	118.16	3.22	117.11	2.17	114.93	115.34	0.011388	2.80	4.99	6.20	1.00
Fondega	4 FON-4	Q500	16.90	113.30	115.06	118.16	3.10	117.11	2.05	115.06	115.49	0.011225	2.93	5.76	6.61	1.00
Fondega	3 FON-3	Q50	9.70	110.61	111.48	112.30	0.82	112.41	0.93	111.89	112.79	0.060425	5.08	1.91	3.02	2.04
Fondega	3 FON-3	Q200	14.00	110.61	111.69	112.30	0.61	112.41	0.72	112.17	113.19	0.056386	5.43	2.58	3.40	1.99
Fondega	3 FON-3	Q500	16.90	110.61	111.81	112.30	0.49	112.41	0.59	112.32	113.41	0.054258	5.60	3.02	3.64	1.96
Fondega	2 FON-2	Q50	9.70	106.91	108.84	109.36	0.52	108.83	-0.01	108.52	109.28	0.013666	2.92	3.32	2.86	0.74
Fondega	2 FON-2	Q200	14.00	106.91	109.31	109.36	0.05	108.83	-0.49	109.24	109.51	0.006030	2.18	7.74	11.18	0.49
Fondega	2 FON-2	Q500	16.90	106.91	109.46	109.36	-0.10	108.83	-0.63	109.31	109.64	0.005127	2.10	9.41	11.46	0.46
Fondega	1.5 FON-1		Bridge													
Fondega	1 FON-1	Q50	9.70	106.26	107.17	108.82	1.64	108.71	1.53	107.11	107.51	0.011335	2.55	3.80	4.55	0.89
Fondega	1 FON-1	Q200	14.00	106.26	107.33	108.82	1.49	108.71	1.38	107.33	107.82	0.014352	3.11	4.50	4.55	1.00
Fondega	1 FON-1	Q500	16.90	106.26	107.78	108.82	1.04	108.71	0.93	107.46	108.12	0.007087	2.58	6.55	4.55	0.69


Secca affluenti
Plan: Fondega-Cascinette-Valle
Cascinetta Cascinetta
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
150
140
130
120
110
CAS-1
CAS-2
CAS-3
CAS-4v
0
50
100
150
200
Main Channel Distance (m)


Secca affluenti Plan: Fondega-Cascinette-Valle
River = Cascinetta Reach = Cascinetta CAS-4m
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca affluenti Plan: Fondega-Cascinette-Valle
River = Cascinetta Reach = Cascinetta CAS-4v
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca affluenti Plan: Fondega-Cascinette-Valle
River = Cascinetta Reach = Cascinetta CAS-3
.025
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Secca affluenti Plan: Fondega-Cascinette-Valle
River = Cascinetta Reach = Cascinetta CAS-2
.025
Legend
EG Q500
EG Q200
PL Q500
PL Q200
Crit Q500
EG Q50
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

Secca affluenti Plan: Fondega-Cascinette-Valle

River = Cascinetta Reach = Cascinetta CAS-1



HEC-RAS Plan: Affl River: Cascinetta Reach: Cascinetta

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)	
Cascinetta	4.1 CAS-4m	Q50	3.50	151.67	152.22	155.97	3.75	153.87	1.66	152.22	152.41	0.013419	1.91	1.83	4.90	1.00
Cascinetta	4.1 CAS-4m	Q200	5.00	151.67	152.32	155.97	3.64	153.87	1.55	152.32	152.55	0.012860	2.13	2.35	5.12	1.00
Cascinetta	4.1 CAS-4m	Q500	6.00	151.67	152.39	155.97	3.58	153.87	1.49	152.39	152.64	0.012351	2.23	2.69	5.26	1.00
Cascinetta	4 CAS-4v	Q50	3.50	148.22	148.69	155.97	7.28	153.87	5.19	149.14	151.97	0.508865	8.02	0.44	1.84	5.26
Cascinetta	4 CAS-4v	Q200	5.00	148.22	148.78	155.97	7.19	153.87	5.10	149.27	152.14	0.414470	8.12	0.62	2.19	4.89
Cascinetta	4 CAS-4v	Q500	6.00	148.22	148.83	155.97	7.14	153.87	5.05	149.34	152.23	0.373205	8.17	0.73	2.39	4.71
Cascinetta	3 CAS-3	Q50	3.50	124.42	124.72	126.87	2.15	126.72	2.00	125.33	128.86	0.418367	9.02	0.39	1.29	5.26
Cascinetta	3 CAS-3	Q200	5.00	124.42	124.80	126.87	2.06	126.72	1.92	125.57	129.91	0.413390	10.01	0.50	1.30	5.15
Cascinetta	3 CAS-3	Q500	6.00	124.42	124.86	126.87	2.01	126.72	1.86	125.72	130.52	0.411671	10.54	0.57	1.30	5.08
Cascinetta	2 CAS-2	Q50	3.50	115.32	117.15	116.48	-0.66	116.48	-0.66	116.32	117.52	0.024183	2.69	1.30		0.64
Cascinetta	2 CAS-2	Q200	5.00	115.32	117.84	116.48	-1.36	116.48	-1.36	116.49	118.30	0.029053	3.00	1.67	1.12	0.60
Cascinetta	2 CAS-2	Q500	6.00	115.32	118.01	116.48	-1.53	116.48	-1.53	117.79	118.55	0.029319	3.24	1.85	1.12	0.63
Cascinetta	1 CAS-1	Q50	3.50	114.00	114.89	114.91	0.02	114.89	0.00	114.89	115.39	0.023437	3.14	1.11	1.25	1.06
Cascinetta	1 CAS-1	Q200	5.00	114.00	115.58	114.91	-0.67	114.89	-0.69	115.58	116.17	0.042276	3.40	1.47	1.25	0.86
Cascinetta	1 CAS-1	Q500	6.00	114.00	115.73	114.91	-0.82	114.89	-0.84	115.73	116.39	0.040560	3.61	1.66	1.25	0.88

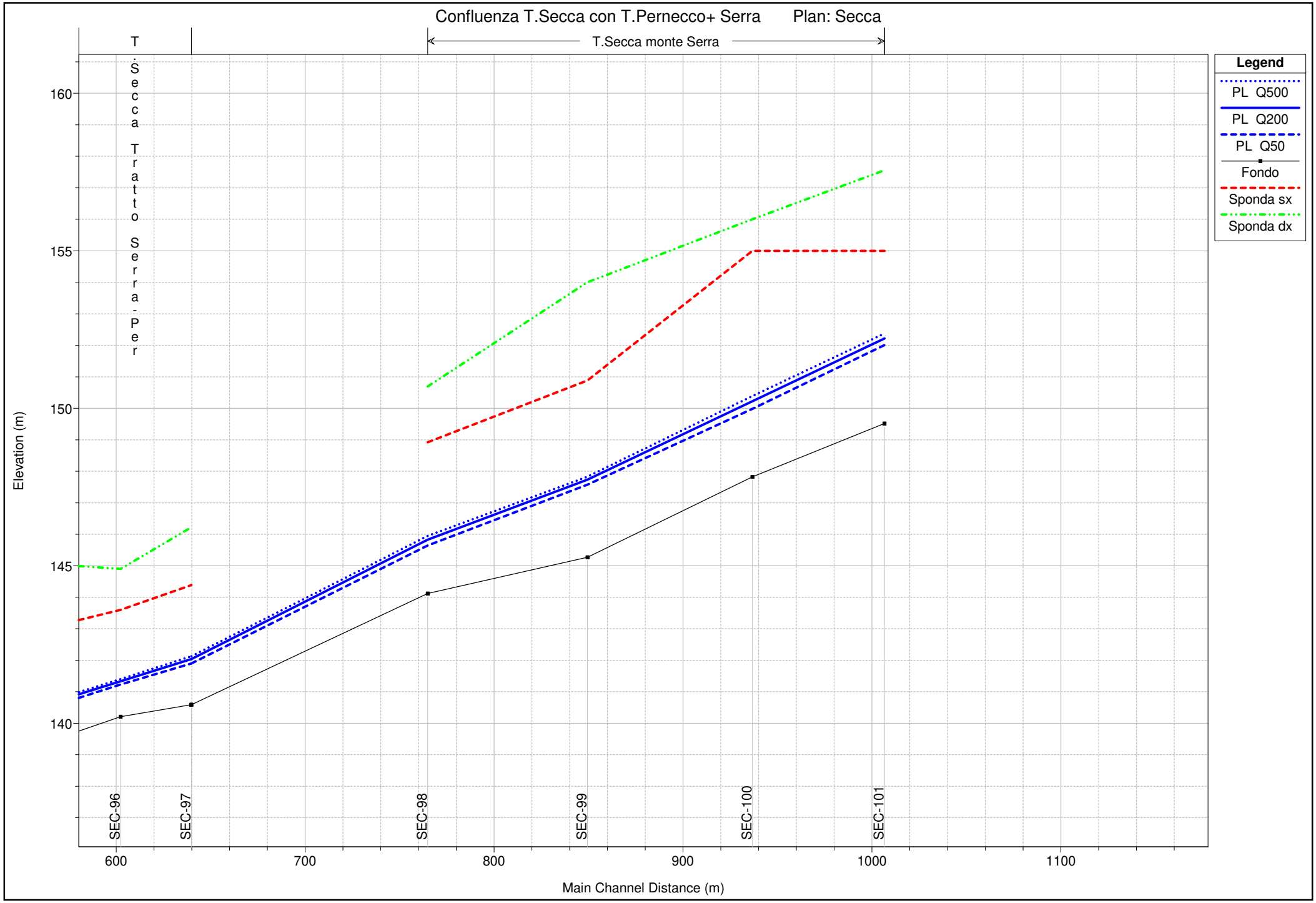
8.7 T. Secca in corrispondenza della confluenza con il t. Pernecco

L'analisi idraulica dell'asta principale del torrente Secca comprende lo studio della confluenza con i due affluenti Serra e Pernecco.

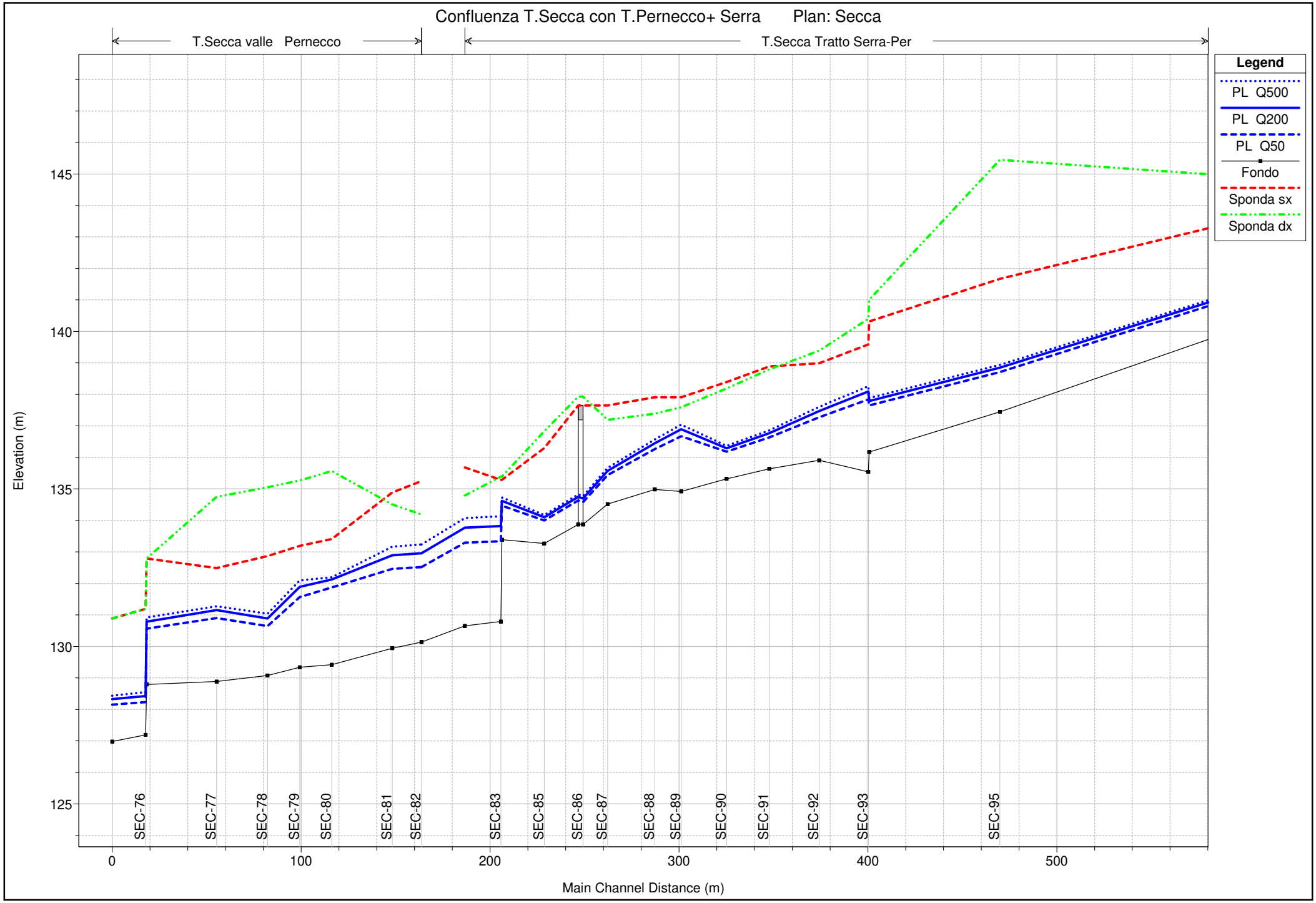
Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 35 $m^{1/3}s^{-1}$.
Come condizioni al contorno sia a monte che a valle del tratto è stata imposta la profondità di moto uniforme associata alla pendenza media di ciascun tratto.

Nella tabella seguente sono riassunte le portate utilizzate per il calcolo in moto permanente dei profili di rigurgito; la sigla della sezione richiama la carta dei sottobacini e di ubicazione delle sezioni di chiusura. Le portate sugli affluenti sono la differenza tra la portata calcolata nella sezione a valle e quella a monte della confluenza.

TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
		T = 50 anni	**T = 200 anni**	**T = 500 anni**
T. Secca a monte del T. Serra	SEC0	150	185	212
T. Secca dal T.Serra al T.Pernecco	SEC1	182	223	252
T. Secca a valle del T.Pernecco	SEC2	357	441	496
T. Serra	differenza	32	38	40
T. Pernecco	differenza	175	218	244

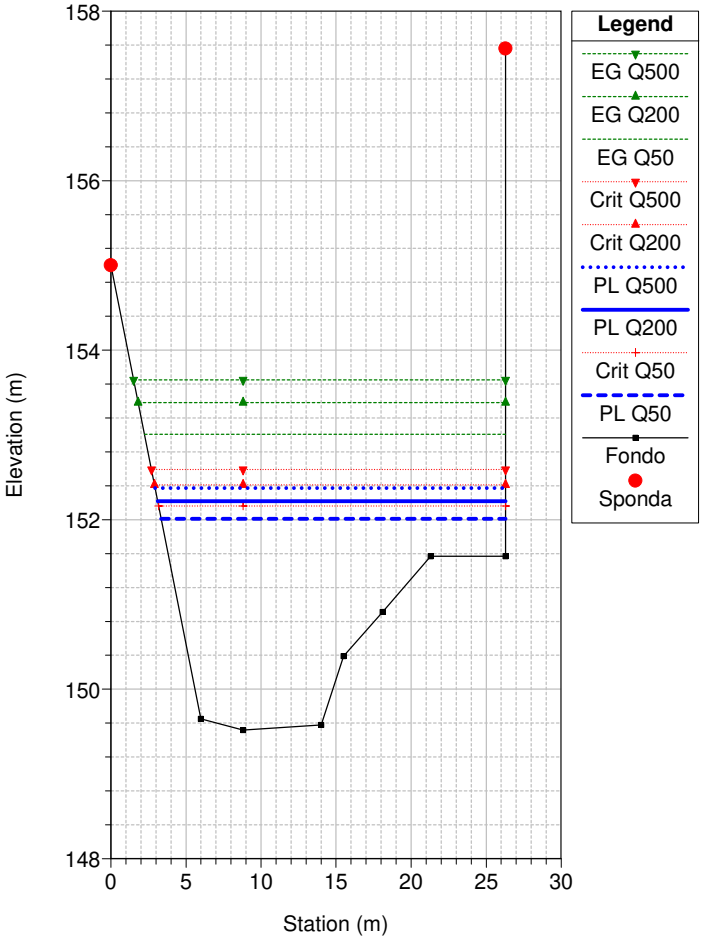


1 cm Horiz. = 25 m 1 cm Vert. = 1.5 m

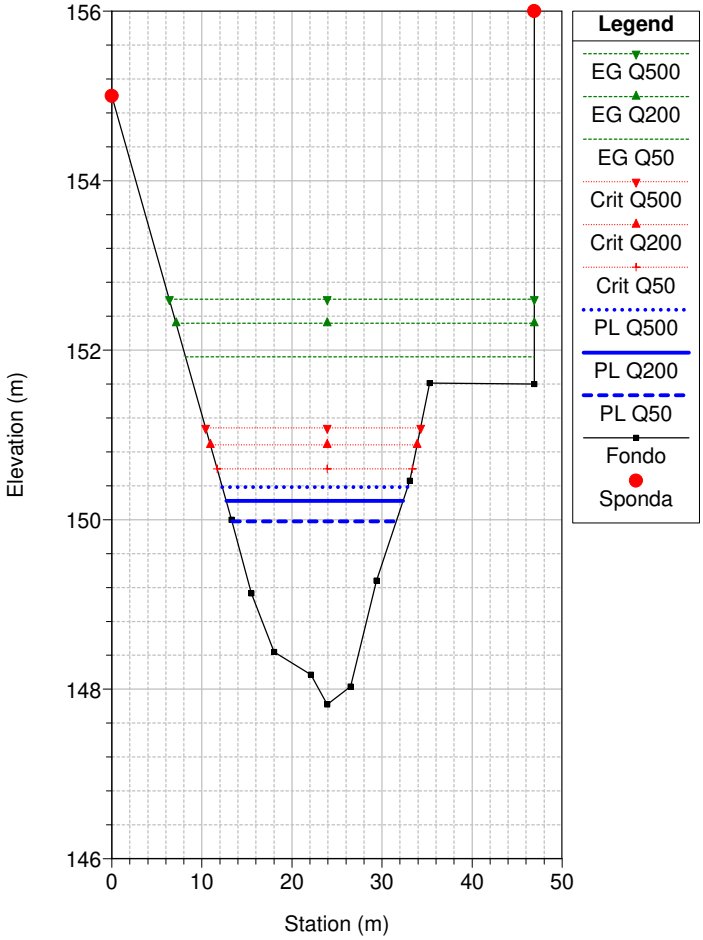


1 cm Horiz. = 25 m 1 cm Vert. = 1.5 m

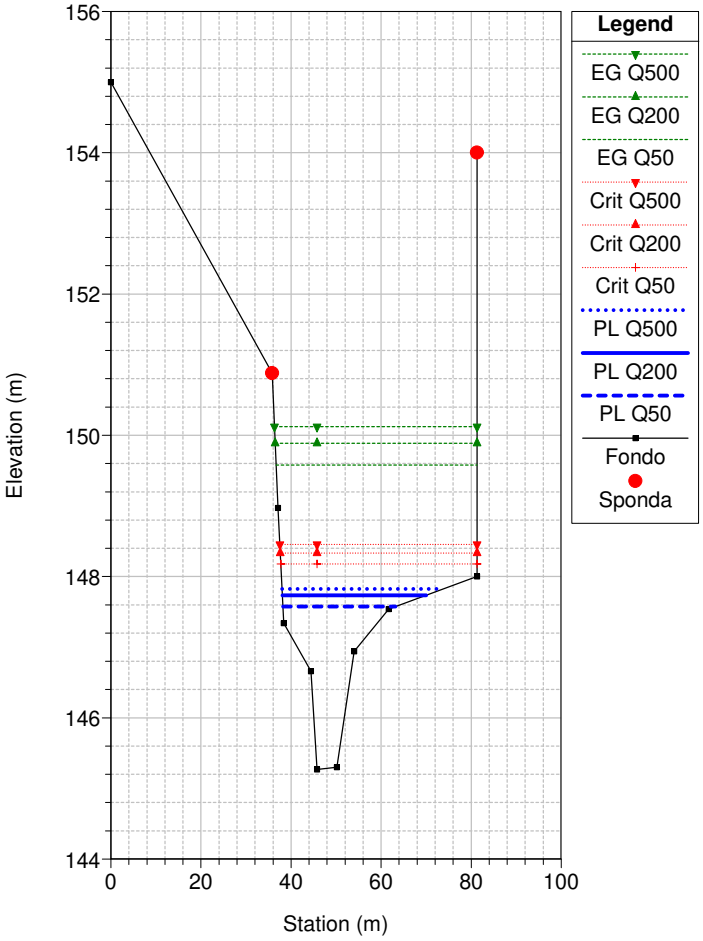
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca
River = T.Secca Reach = monte Serra SEC-101



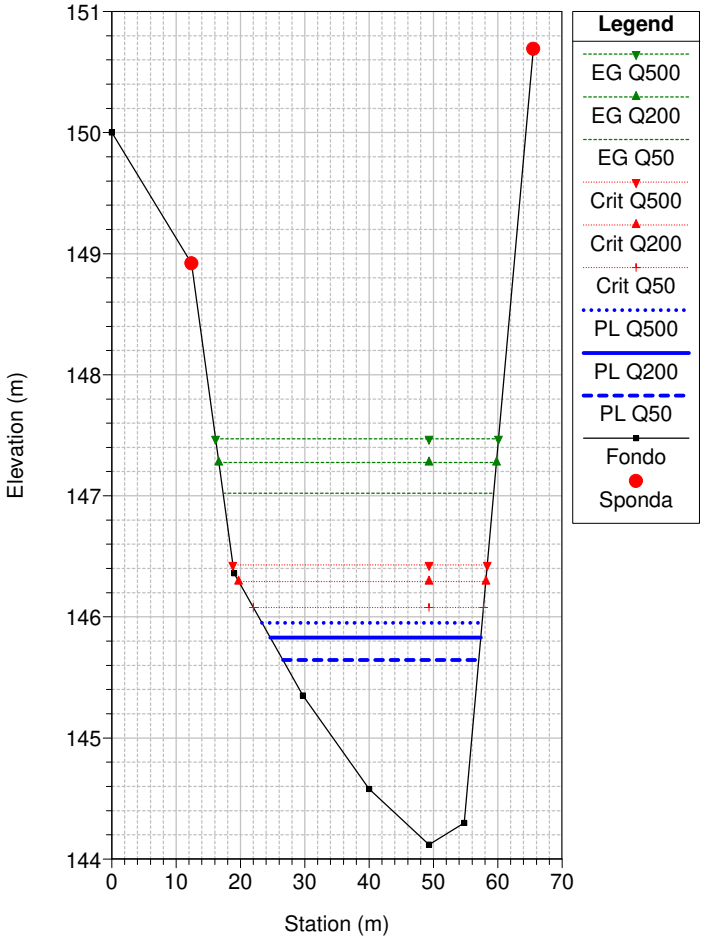
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca
River = T.Secca Reach = monte Serra SEC-100



Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca
River = T.Secca Reach = monte Serra SEC-99

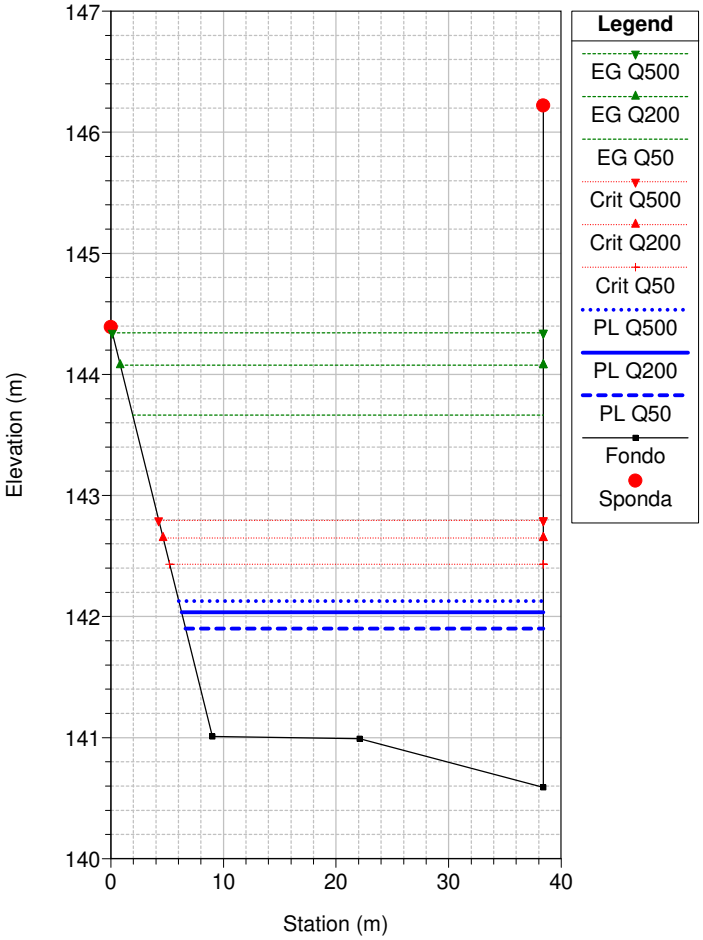


Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca
River = T.Secca Reach = monte Serra SEC-98



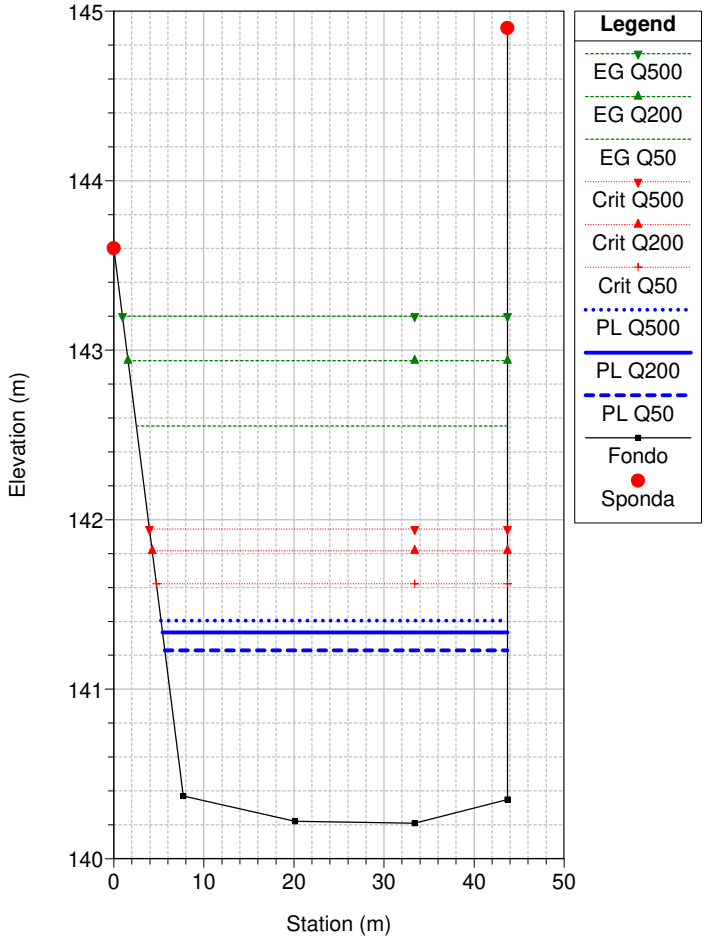
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-97



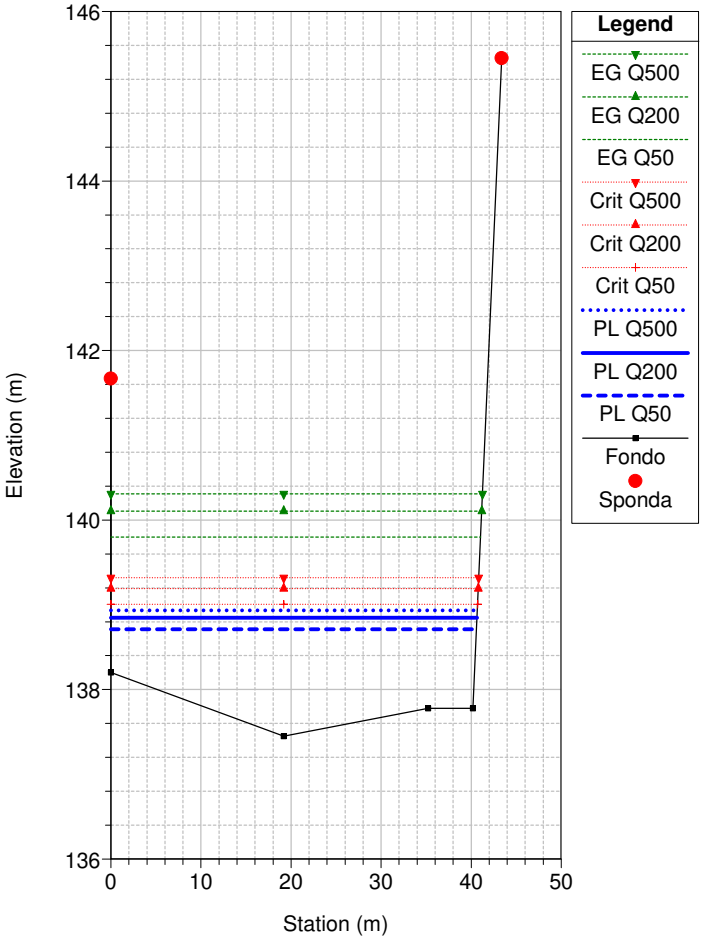
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-96



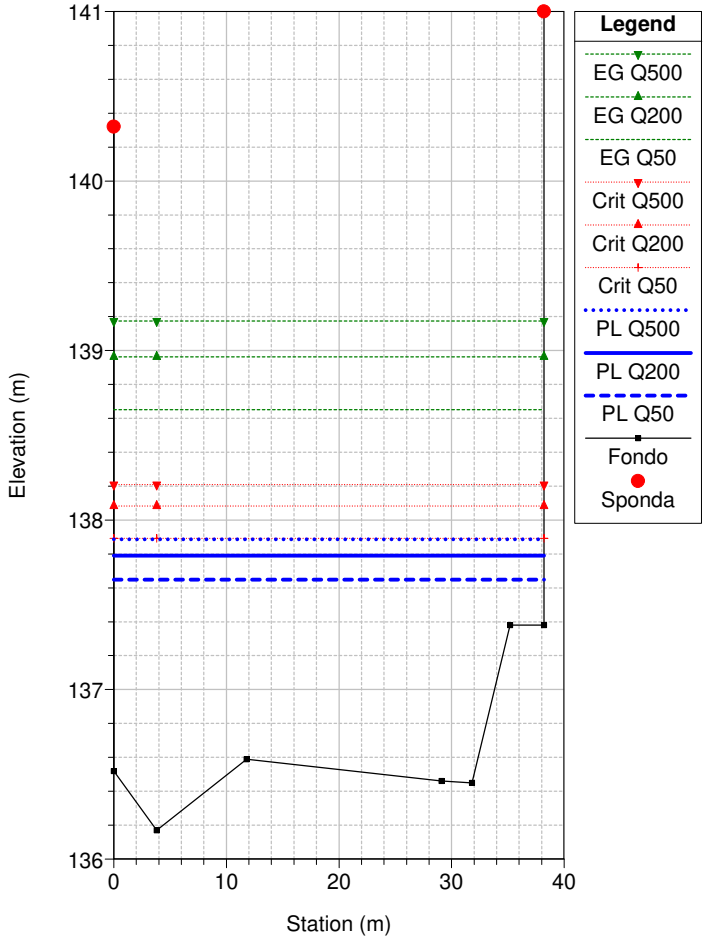
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-95



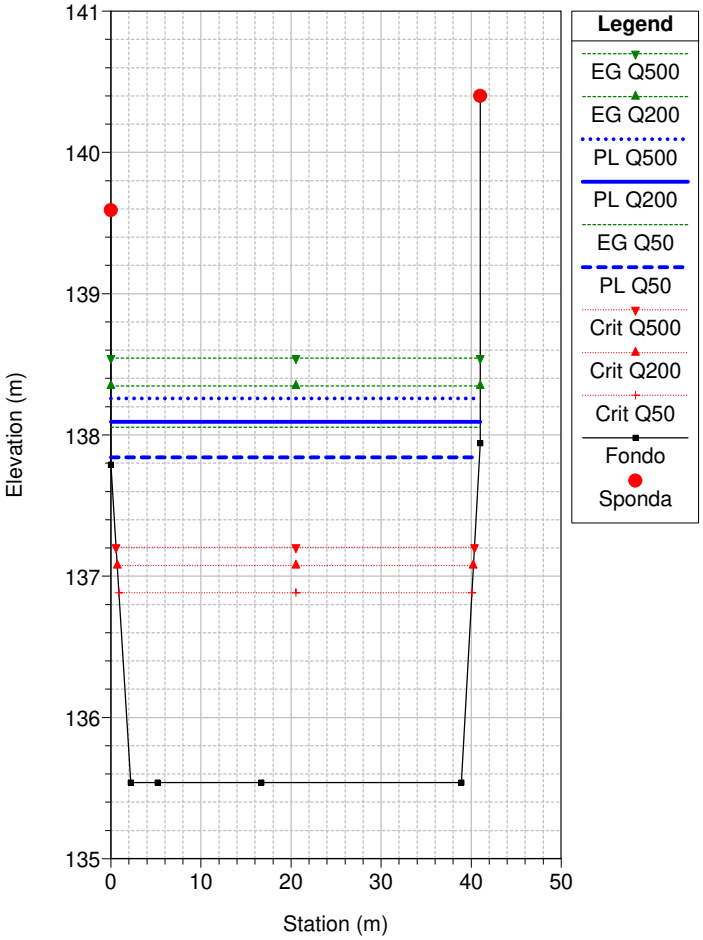
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-94



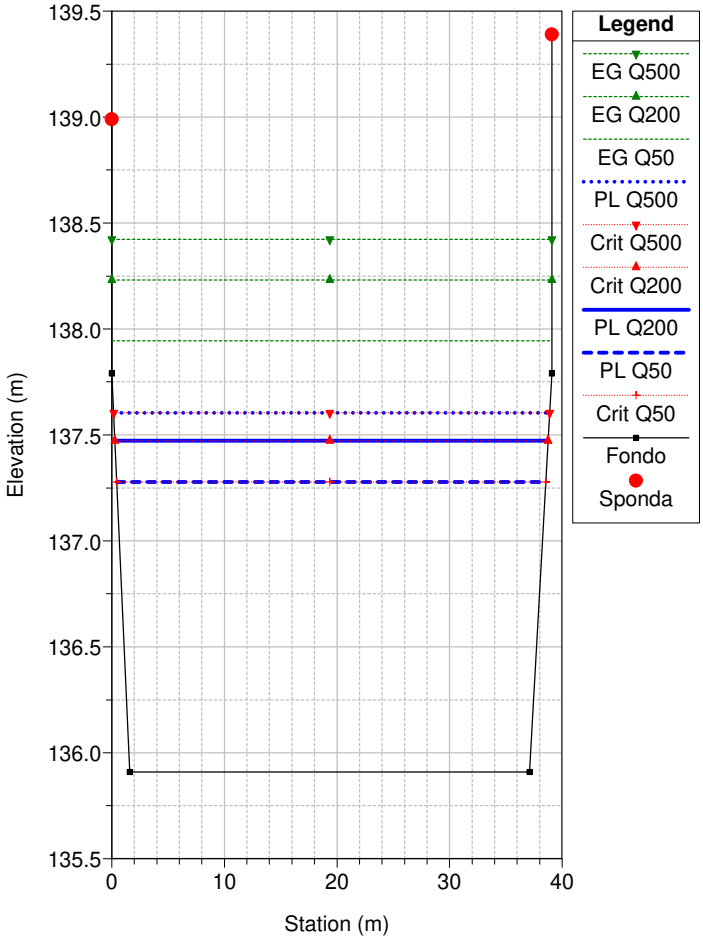
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-93



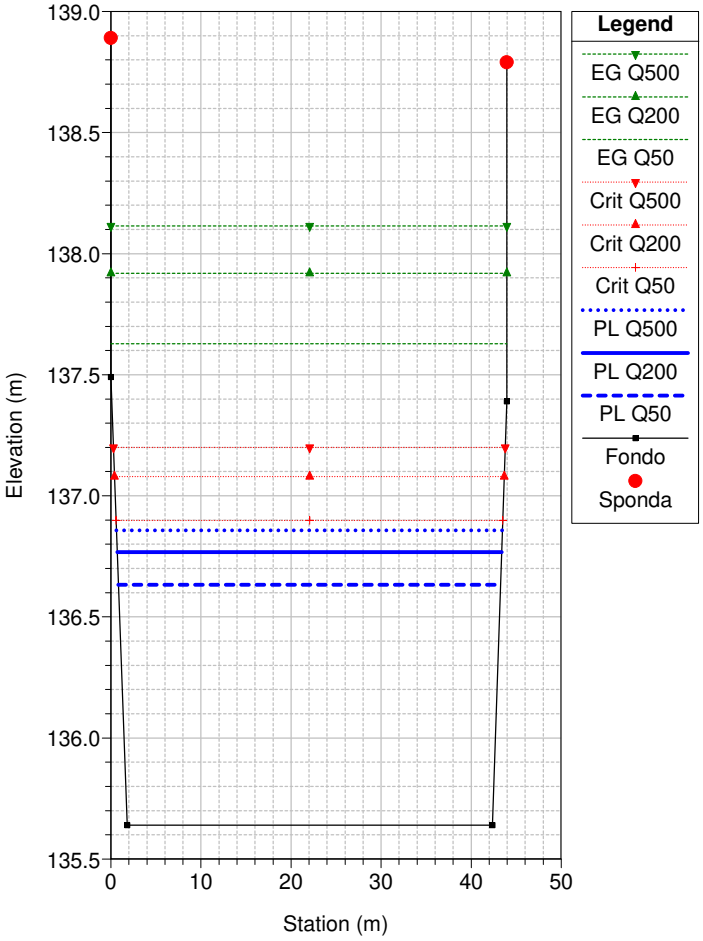
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-92



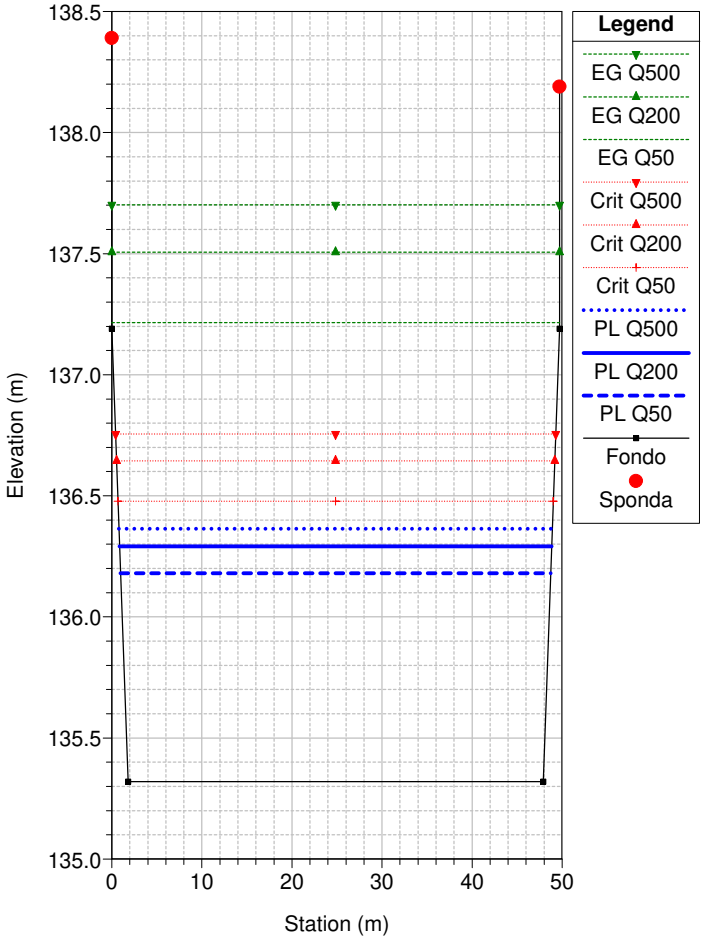
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-91



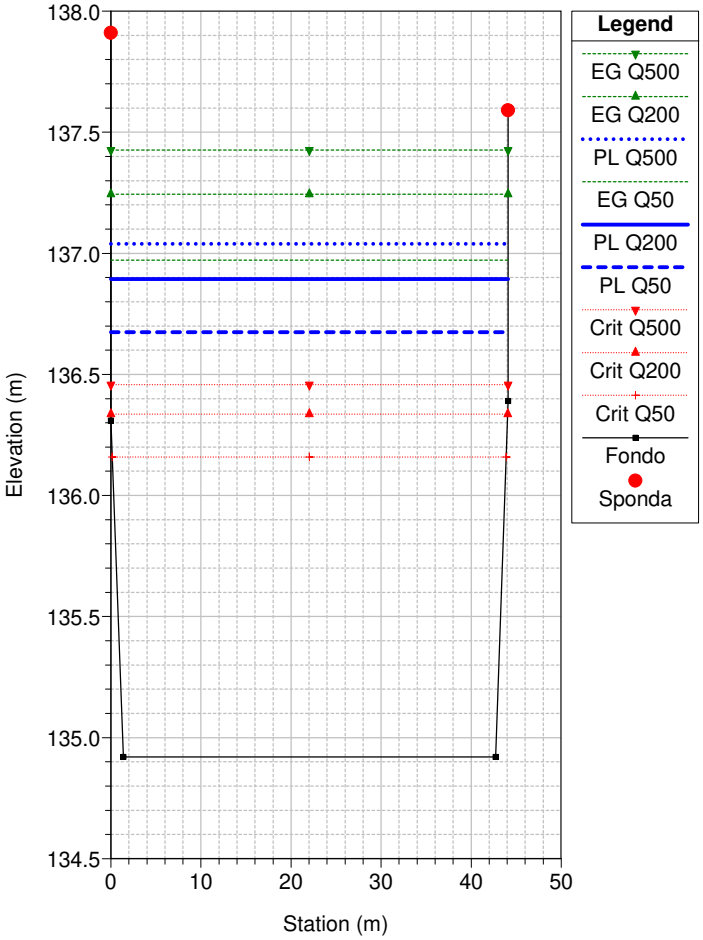
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-90



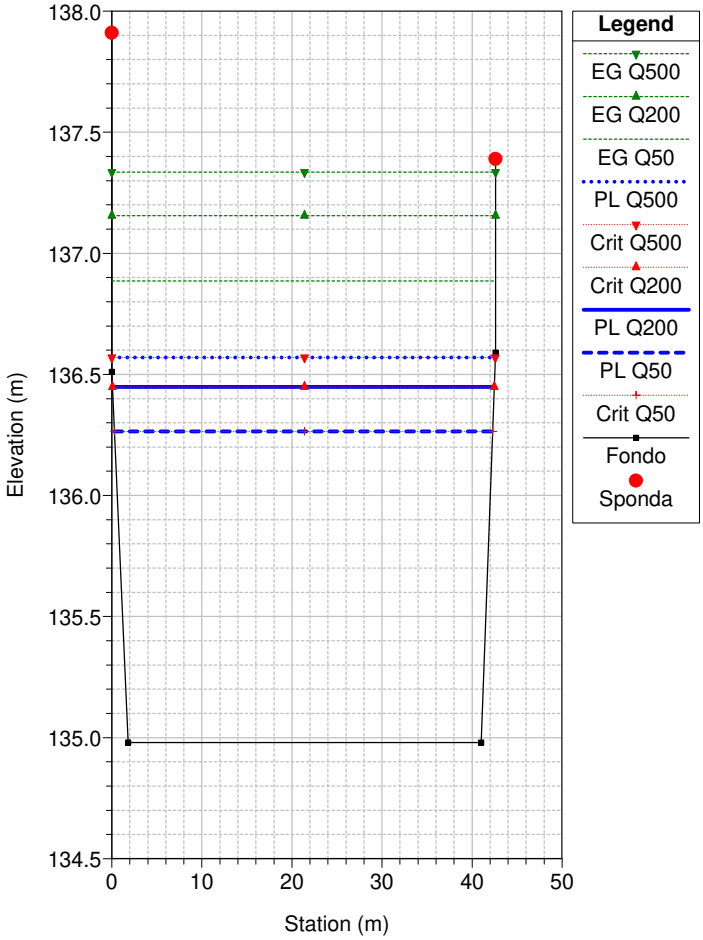
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-89



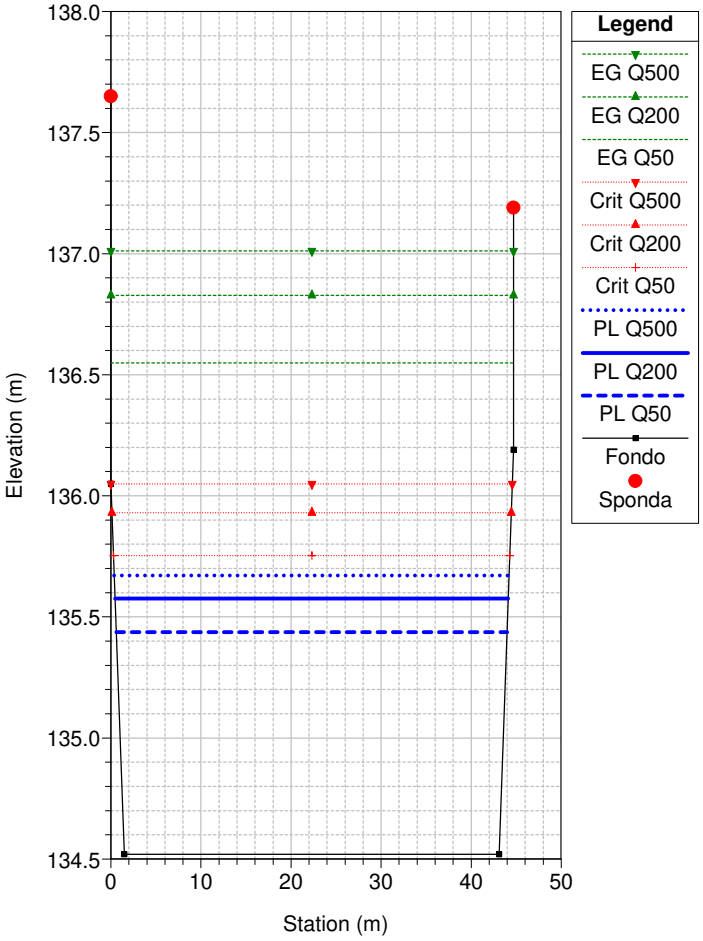
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-88



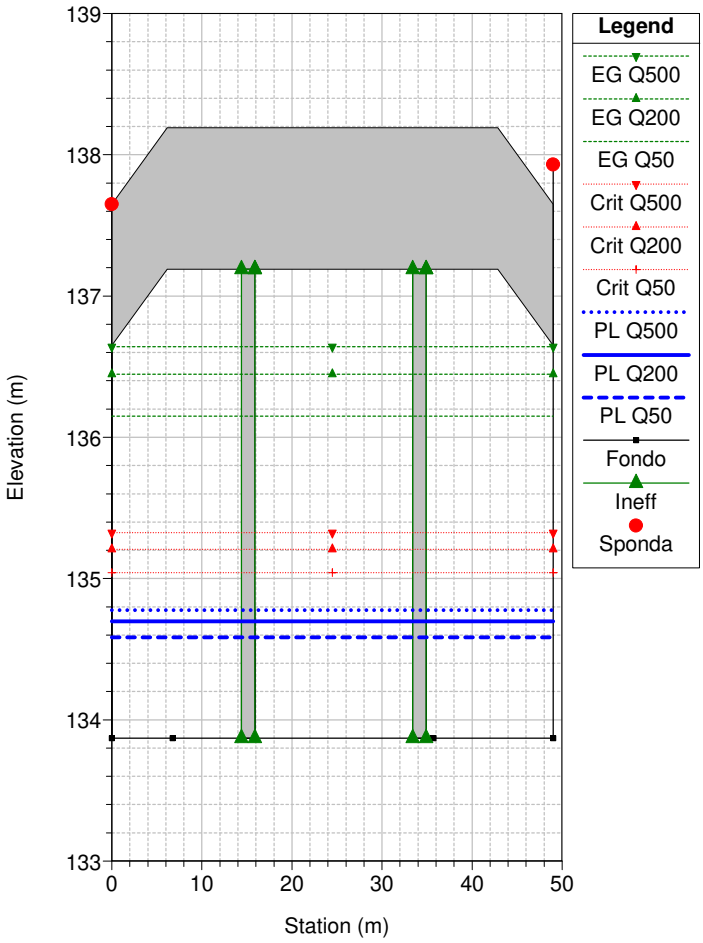
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-87



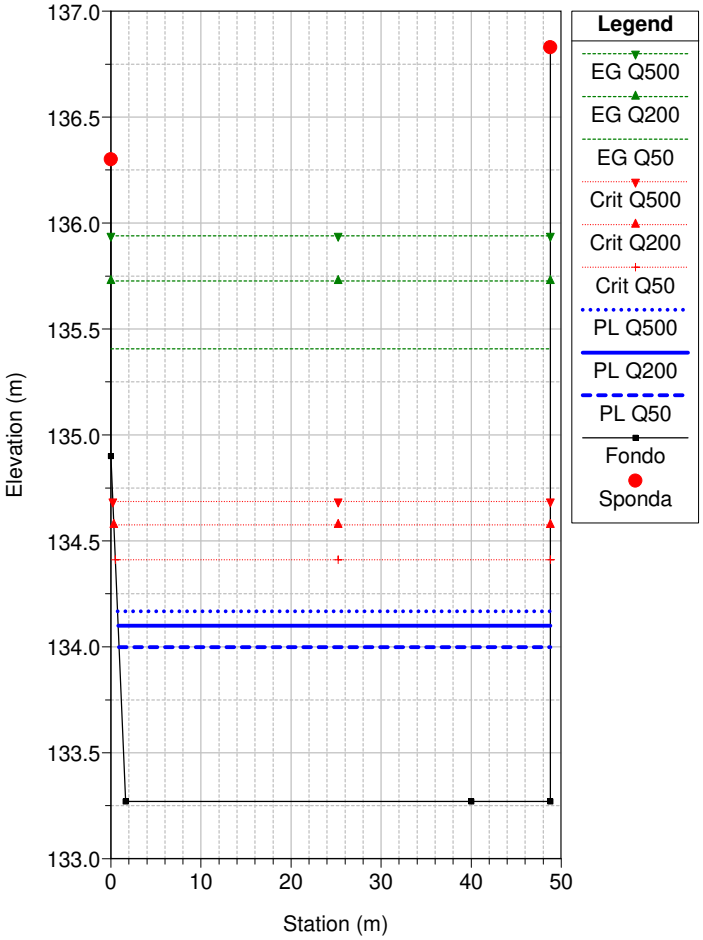
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-86



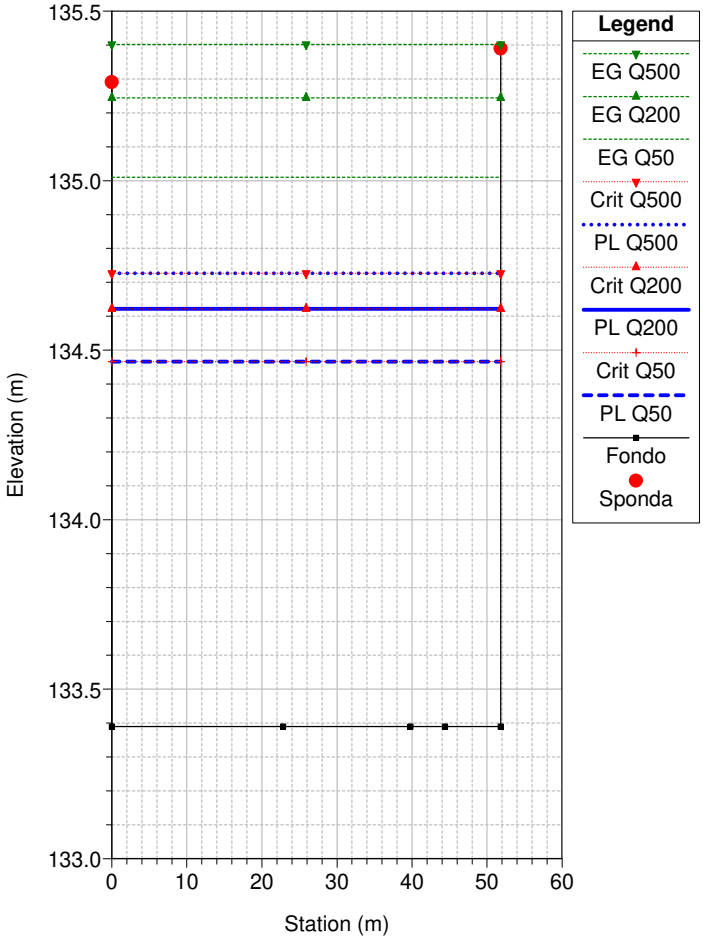
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-85



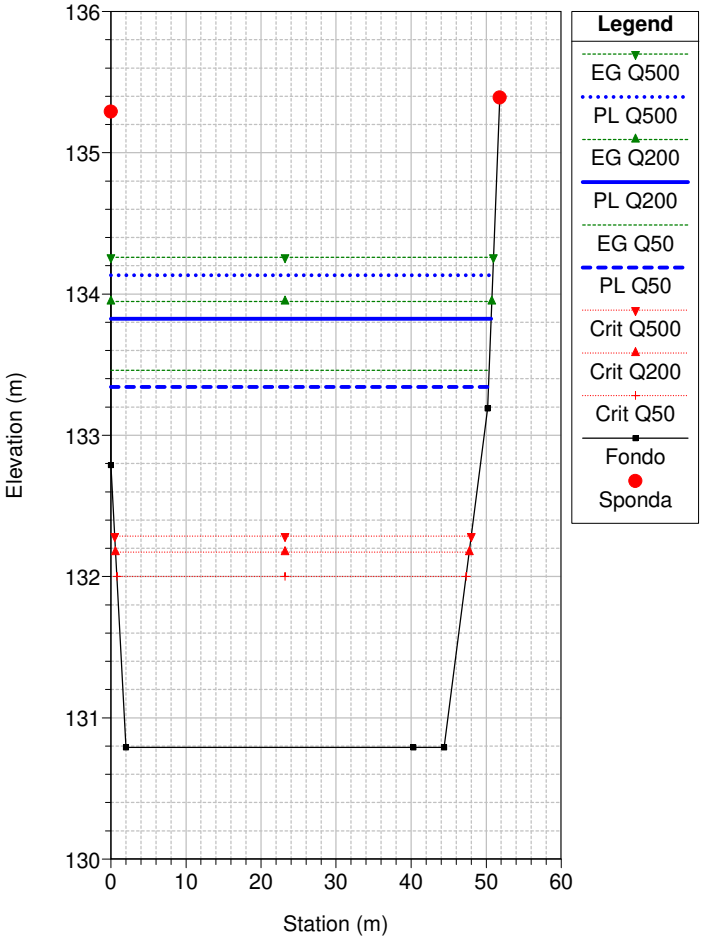
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-84



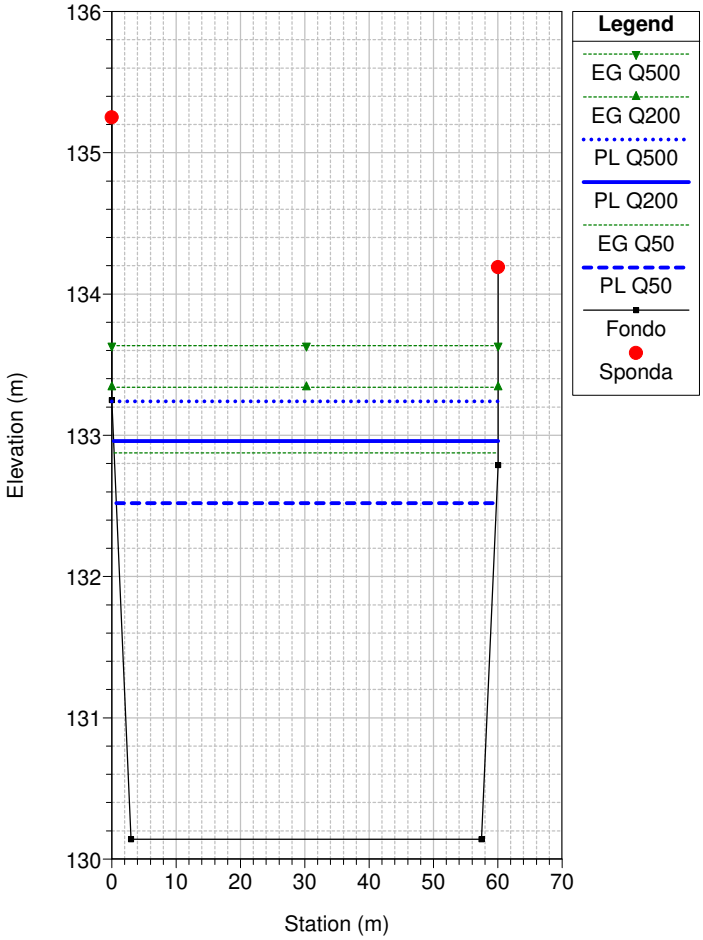
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = Tratto Serra-Per SEC-83



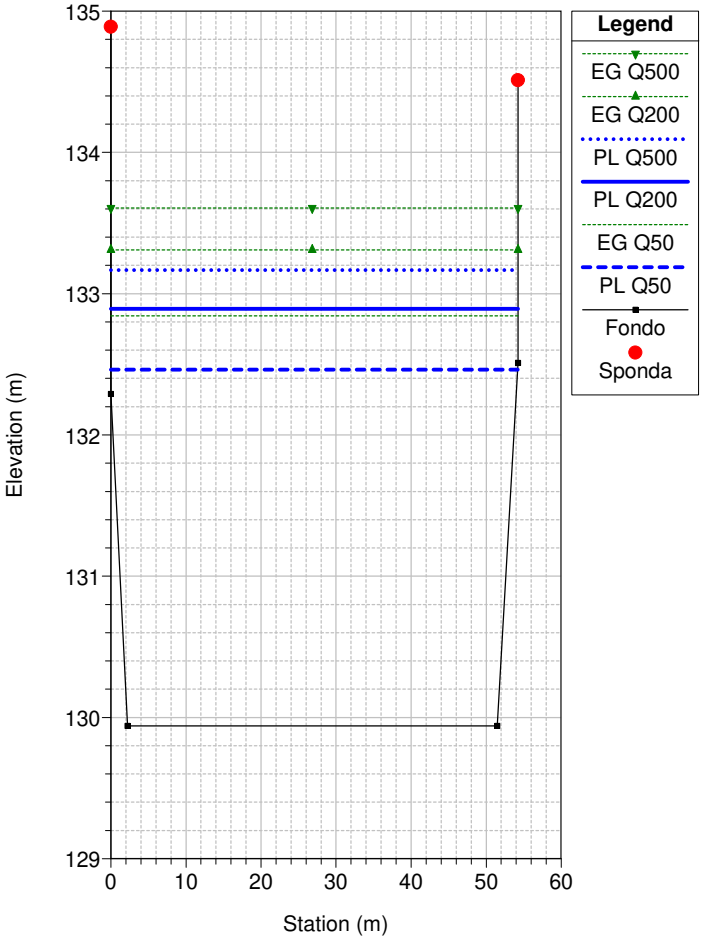
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = valle Pernecco SEC-82



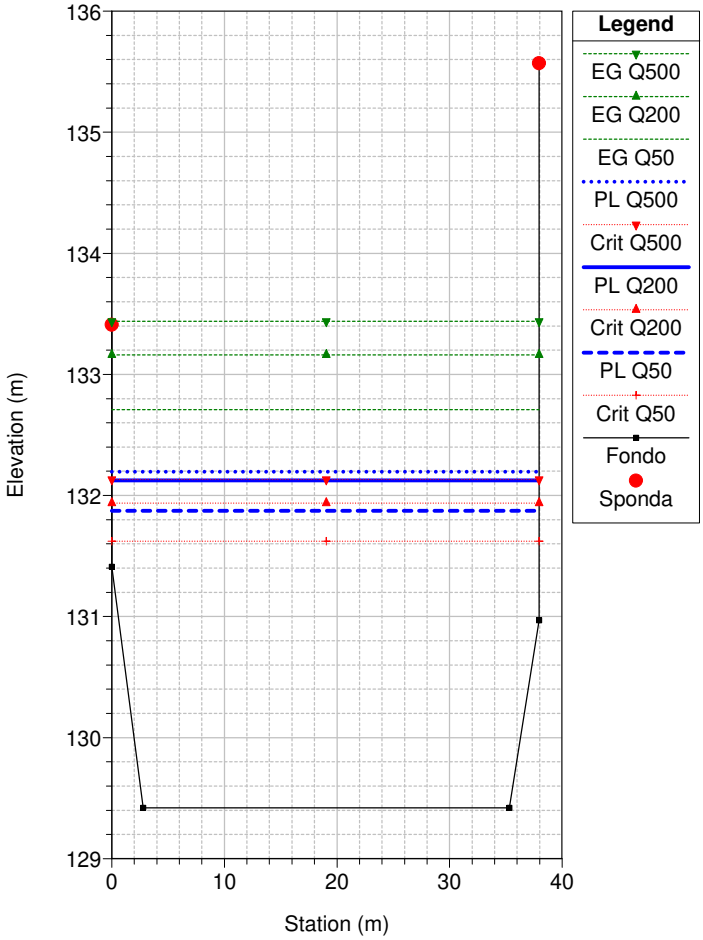
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = valle Pernecco SEC-81



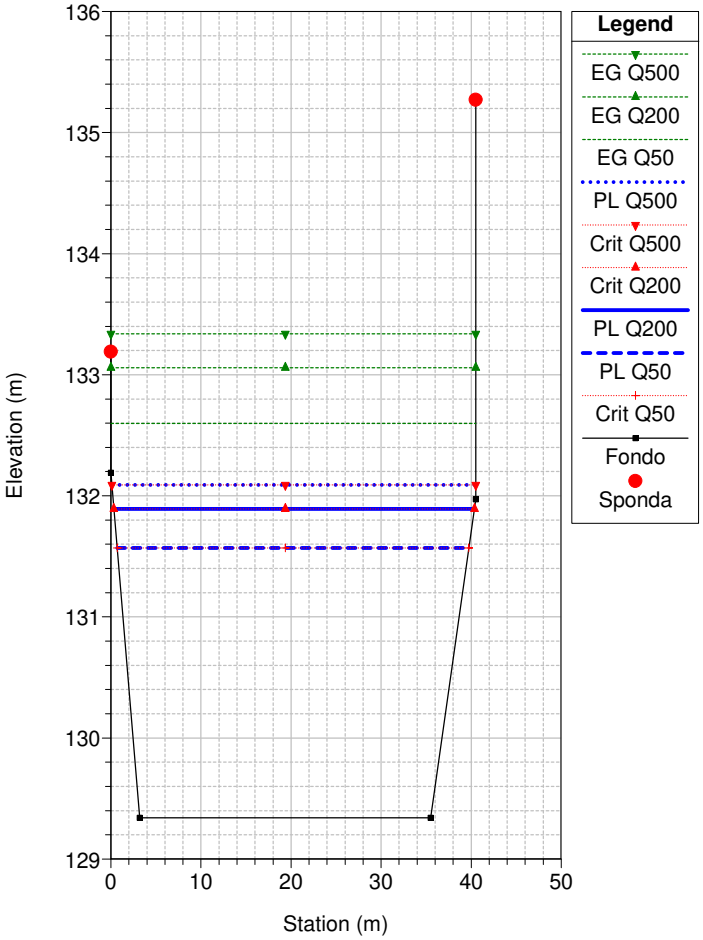
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = valle Pernecco SEC-80



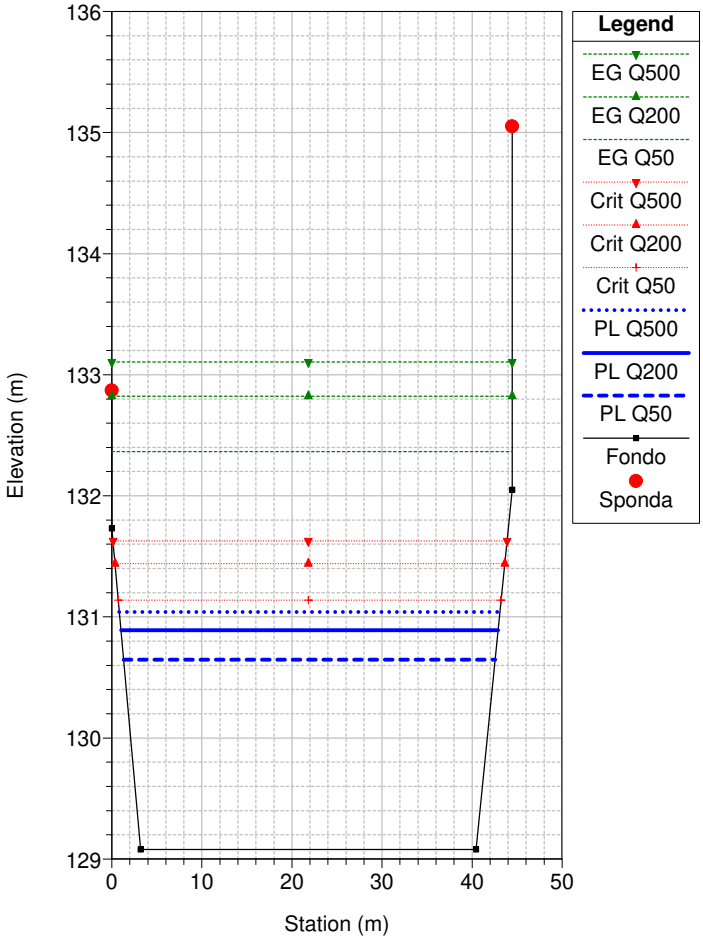
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = valle Pernecco SEC-79



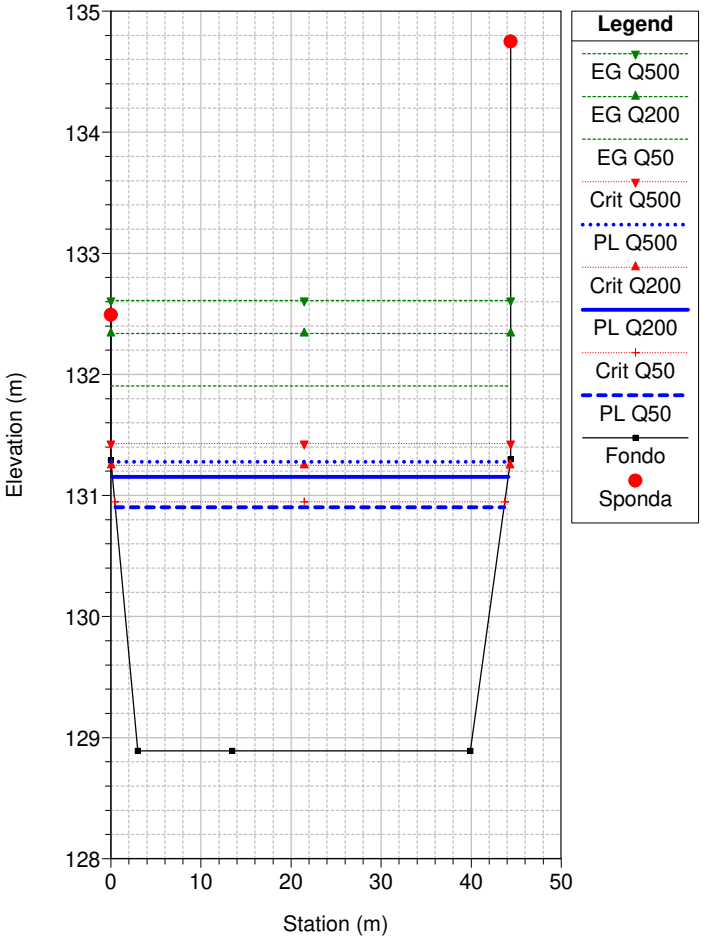
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = valle Pernecco SEC-78



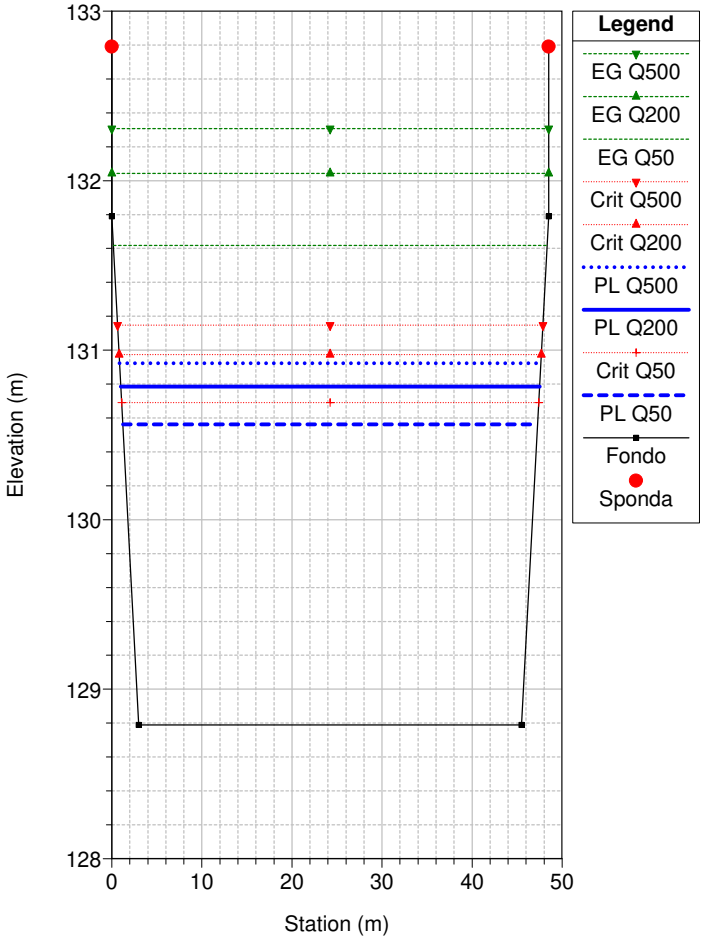
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = valle Pernecco SEC-77



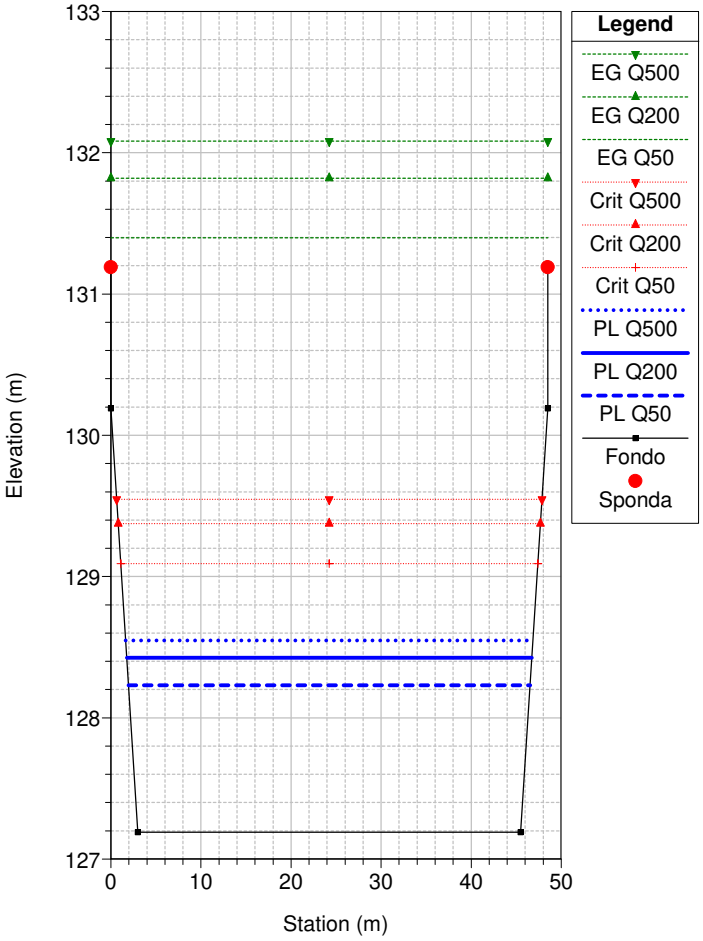
Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = valle Pernecco SEC-76



Confluenza T.Secca con T.Pernecco+ Serra Plan: Secca

River = T.Secca Reach = valle Pernecco SEC-76



HEC-RAS Plan: Secca

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte Serra	24 SEC-101	Q50	150.00	149.52	152.01	155.00	2.99	157.56	5.55	152.16	153.01	0.010001	4.42	33.91	22.95	1.16
monte Serra	24 SEC-101	Q200	185.00	149.52	152.22	155.00	2.78	157.56	5.34	152.41	153.38	0.010012	4.77	38.78	23.18	1.18
monte Serra	24 SEC-101	Q500	212.00	149.52	152.37	155.00	2.63	157.56	5.19	152.59	153.65	0.010012	5.01	42.33	23.35	1.19
monte Serra	23 SEC-100	Q50	150.00	147.82	149.98	155.00	5.02	156.00	6.02	150.60	151.92	0.021400	6.17	24.30	18.25	1.71
monte Serra	23 SEC-100	Q200	185.00	147.82	150.22	155.00	4.78	156.00	5.78	150.88	152.32	0.020288	6.41	28.85	19.64	1.69
monte Serra	23 SEC-100	Q500	212.00	147.82	150.39	155.00	4.61	156.00	5.61	151.08	152.60	0.019783	6.59	32.16	20.59	1.68
monte Serra	22 SEC-99	Q50	150.00	145.27	147.58	150.88	3.30	154.00	6.42	148.18	149.58	0.034486	6.26	23.94	24.99	2.04
monte Serra	22 SEC-99	Q200	185.00	145.27	147.74	150.88	3.14	154.00	6.26	148.33	149.89	0.040373	6.49	28.49	31.93	2.20
monte Serra	22 SEC-99	Q500	212.00	145.27	147.83	150.88	3.05	154.00	6.17	148.46	150.12	0.043766	6.71	31.59	35.90	2.28
monte Serra	21 SEC-98	Q50	150.00	144.12	145.64	148.92	3.28	150.69	5.05	146.08	147.02	0.023175	5.20	28.86	30.46	1.70
monte Serra	21 SEC-98	Q200	185.00	144.12	145.83	148.92	3.09	150.69	4.86	146.29	147.28	0.020985	5.33	34.72	32.73	1.65
monte Serra	21 SEC-98	Q500	212.00	144.12	145.95	148.92	2.97	150.69	4.74	146.43	147.47	0.020134	5.46	38.85	34.24	1.64
Tratto Serra-Per	20 SEC-97	Q50	182.00	140.59	141.90	144.39	2.49	146.22	4.32	142.43	143.67	0.029884	5.88	30.93	31.77	1.90
Tratto Serra-Per	20 SEC-97	Q200	223.00	140.59	142.04	144.39	2.35	146.22	4.18	142.65	144.08	0.029615	6.33	35.25	32.13	1.93
Tratto Serra-Per	20 SEC-97	Q500	252.00	140.59	142.13	144.39	2.26	146.22	4.09	142.79	144.34	0.029278	6.59	38.23	32.38	1.94
Tratto Serra-Per	19 SEC-96	Q50	182.00	140.21	141.23	143.60	2.37	144.90	3.67	141.62	142.55	0.023004	5.10	35.70	38.05	1.68
Tratto Serra-Per	19 SEC-96	Q200	223.00	140.21	141.33	143.60	2.27	144.90	3.57	141.82	142.94	0.024420	5.61	39.77	38.30	1.76
Tratto Serra-Per	19 SEC-96	Q500	252.00	140.21	141.41	143.60	2.19	144.90	3.49	141.95	143.20	0.025236	5.93	42.48	38.47	1.80
Tratto Serra-Per	18 SEC-95	Q50	182.00	137.45	138.71	141.67	2.96	145.45	6.74	139.01	139.80	0.017997	4.61	39.45	40.59	1.49
Tratto Serra-Per	18 SEC-95	Q200	223.00	137.45	138.85	141.67	2.82	145.45	6.60	139.19	140.10	0.017652	4.96	44.94	40.65	1.51
Tratto Serra-Per	18 SEC-95	Q500	252.00	137.45	138.94	141.67	2.73	145.45	6.51	139.32	140.31	0.017547	5.19	48.53	40.68	1.52
Tratto Serra-Per	17 SEC-94	Q50	182.00	136.17	137.65	140.32	2.67	141.00	3.35	137.89	138.65	0.014752	4.43	41.06	38.20	1.37
Tratto Serra-Per	17 SEC-94	Q200	223.00	136.17	137.79	140.32	2.53	141.00	3.21	138.08	138.96	0.014766	4.80	46.50	38.20	1.39
Tratto Serra-Per	17 SEC-94	Q500	252.00	136.17	137.89	140.32	2.43	141.00	3.11	138.21	139.17	0.014744	5.02	50.16	38.20	1.40
Tratto Serra-Per	16 SEC-93	Q50	182.00	135.54	137.84	139.59	1.75	140.40	2.56	136.88	138.05	0.001222	2.04	89.41	40.91	0.44
Tratto Serra-Per	16 SEC-93	Q200	223.00	135.54	138.09	139.59	1.50	140.40	2.31	137.08	138.35	0.001300	2.24	99.66	41.00	0.46
Tratto Serra-Per	16 SEC-93	Q500	252.00	135.54	138.26	139.59	1.33	140.40	2.14	137.20	138.54	0.001346	2.37	106.43	41.00	0.47
Tratto Serra-Per	15 SEC-92	Q50	182.00	135.91	137.28	138.99	1.71	139.39	2.11	137.28	137.94	0.007366	3.62	50.34	38.12	1.00
Tratto Serra-Per	15 SEC-92	Q200	223.00	135.91	137.47	138.99	1.52	139.39	1.92	137.47	138.23	0.007093	3.86	57.83	38.49	1.00
Tratto Serra-Per	15 SEC-92	Q500	252.00	135.91	137.60	138.99	1.39	139.39	1.79	137.60	138.42	0.006937	4.01	62.87	38.74	1.00
Tratto Serra-Per	14 SEC-91	Q50	182.00	135.64	136.63	138.89	2.26	138.79	2.16	136.90	137.63	0.016367	4.42	41.18	42.42	1.43
Tratto Serra-Per	14 SEC-91	Q200	223.00	135.64	136.77	138.89	2.12	138.79	2.02	137.08	137.92	0.016074	4.75	46.93	42.68	1.45
Tratto Serra-Per	14 SEC-91	Q500	252.00	135.64	136.86	138.89	2.03	138.79	1.93	137.20	138.11	0.015928	4.97	50.75	42.85	1.46
Tratto Serra-Per	13 SEC-90	Q50	182.00	135.32	136.18	138.39	2.21	138.19	2.01	136.48	137.22	0.020298	4.51	40.40	47.76	1.56
Tratto Serra-Per	13 SEC-90	Q200	223.00	135.32	136.29	138.39	2.10	138.19	1.90	136.64	137.51	0.020411	4.88	45.67	47.97	1.60
Tratto Serra-Per	13 SEC-90	Q500	252.00	135.32	136.36	138.39	2.03	138.19	1.83	136.76	137.70	0.020441	5.12	49.21	48.11	1.62
Tratto Serra-Per	12 SEC-89	Q50	182.00	134.92	136.67	137.91	1.24	137.59	0.92	136.16	136.97	0.002362	2.41	75.38	44.10	0.59
Tratto Serra-Per	12 SEC-89	Q200	223.00	134.92	136.89	137.91	1.02	137.59	0.70	136.34	137.24	0.002403	2.62	85.04	44.10	0.60
Tratto Serra-Per	12 SEC-89	Q500	252.00	134.92	137.04	137.91	0.87	137.59	0.55	136.46	137.43	0.002430	2.76	91.43	44.10	0.61
Tratto Serra-Per	11 SEC-88	Q50	182.00	134.98	136.26	137.91	1.65	137.39	1.13	136.26	136.89	0.007388	3.49	52.14	42.00	1.00

HEC-RAS Plan: Secca (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)	
Tratto Serra-Per	11 SEC-88	Q200	223.00	134.98	136.45	137.91	1.46	137.39	0.94	136.45	137.15	0.007105	3.72	59.89	42.40	1.00
Tratto Serra-Per	11 SEC-88	Q500	252.00	134.98	136.57	137.91	1.34	137.39	0.82	136.57	137.33	0.006950	3.87	65.08	42.59	1.00
Tratto Serra-Per	10.3 SEC-87	Q50	182.00	134.52	135.44	137.65	2.21	137.19	1.75	135.75	136.55	0.020195	4.67	38.97	43.38	1.57
Tratto Serra-Per	10.3 SEC-87	Q200	223.00	134.52	135.58	137.65	2.07	137.19	1.61	135.93	136.83	0.018951	4.95	45.03	43.65	1.56
Tratto Serra-Per	10.3 SEC-87	Q500	252.00	134.52	135.67	137.65	1.98	137.19	1.52	136.05	137.01	0.018220	5.13	49.15	43.83	1.55
Tratto Serra-Per	10.2	Q50	182.00	133.87	134.58	137.65	3.07	137.93	3.35	135.04	136.15	0.039250	5.54	32.85	49.00	2.09
Tratto Serra-Per	10.2	Q200	223.00	133.87	134.70	137.65	2.95	137.93	3.23	135.21	136.45	0.036237	5.86	38.09	49.00	2.05
Tratto Serra-Per	10.2	Q500	252.00	133.87	134.78	137.65	2.87	137.93	3.15	135.32	136.64	0.034470	6.05	41.66	49.00	2.03
Tratto Serra-Per	10.11 SEC-86		Bridge													
Tratto Serra-Per	10.1	Q50	182.00	133.87	134.63	137.65	3.02	137.93	3.30	135.04	136.00	0.031453	5.18	35.14	49.00	1.89
Tratto Serra-Per	10.1	Q200	223.00	133.87	134.75	137.65	2.90	137.93	3.18	135.21	136.31	0.030007	5.53	40.34	49.00	1.89
Tratto Serra-Per	10.1	Q500	252.00	133.87	134.82	137.65	2.83	137.93	3.11	135.32	136.50	0.029042	5.74	43.89	49.00	1.88
Tratto Serra-Per	9 SEC-85	Q50	182.00	133.27	134.00	136.30	2.30	136.83	2.83	134.41	135.41	0.034301	5.25	34.64	47.90	1.97
Tratto Serra-Per	9 SEC-85	Q200	223.00	133.27	134.10	136.30	2.20	136.83	2.73	134.58	135.73	0.033557	5.65	39.47	48.00	1.99
Tratto Serra-Per	9 SEC-85	Q500	252.00	133.27	134.17	136.30	2.13	136.83	2.66	134.69	135.94	0.032950	5.89	42.76	48.07	2.00
Tratto Serra-Per	8.2 SEC-84	Q50	182.00	133.39	134.47	135.29	0.82	135.39	0.92	134.47	135.01	0.008004	3.27	55.74	51.80	1.01
Tratto Serra-Per	8.2 SEC-84	Q200	223.00	133.39	134.62	135.29	0.67	135.39	0.77	134.62	135.24	0.007711	3.49	63.82	51.80	1.01
Tratto Serra-Per	8.2 SEC-84	Q500	252.00	133.39	134.73	135.29	0.56	135.39	0.66	134.73	135.40	0.007542	3.64	69.24	51.80	1.01
Tratto Serra-Per	8.1 SEC-83	Q50	182.00	130.79	133.34	135.29	1.95	135.39	2.05	132.00	133.46	0.000610	1.53	119.13	50.31	0.32
Tratto Serra-Per	8.1 SEC-83	Q200	223.00	130.79	133.82	135.29	1.47	135.39	1.57	132.17	133.95	0.000506	1.55	143.50	50.66	0.29
Tratto Serra-Per	8.1 SEC-83	Q500	252.00	130.79	134.13	135.29	1.16	135.39	1.26	132.29	134.26	0.000465	1.58	159.14	50.89	0.29
Tratto Serra-Per	8	Q50	182.00	130.65	133.29	135.68	2.39	134.79	1.50		133.44	0.000746	1.72	105.53	41.00	0.34
Tratto Serra-Per	8	Q200	223.00	130.65	133.77	135.68	1.91	134.79	1.02		133.93	0.000653	1.78	125.13	41.00	0.33
Tratto Serra-Per	8	Q500	252.00	130.65	134.07	135.68	1.61	134.79	0.72		134.25	0.000618	1.83	137.59	41.00	0.32
valle Pernecco	6 SEC-82	Q50	357.00	130.14	132.52	135.25	2.73	134.19	1.67		132.88	0.001904	2.64	135.02	59.08	0.56
valle Pernecco	6 SEC-82	Q200	441.00	130.14	132.96	135.25	2.29	134.19	1.23		133.34	0.001650	2.74	161.20	59.77	0.53
valle Pernecco	6 SEC-82	Q500	496.00	130.14	133.24	135.25	2.01	134.19	0.95		133.64	0.001522	2.79	177.98	60.04	0.52
valle Pernecco	5 SEC-81	Q50	357.00	129.94	132.46	134.89	2.43	134.51	2.05		132.84	0.001909	2.73	130.64	54.20	0.56
valle Pernecco	5 SEC-81	Q200	441.00	129.94	132.89	134.89	2.00	134.51	1.62		133.31	0.001720	2.86	153.98	54.25	0.54
valle Pernecco	5 SEC-81	Q500	496.00	129.94	133.17	134.89	1.72	134.51	1.34		133.61	0.001621	2.94	168.84	54.25	0.53
valle Pernecco	4 SEC-80	Q50	357.00	129.42	131.87	133.41	1.54	135.57	3.70	131.62	132.71	0.004516	4.04	88.29	37.95	0.85
valle Pernecco	4 SEC-80	Q200	441.00	129.42	132.13	133.41	1.28	135.57	3.44	131.94	133.16	0.004976	4.51	97.83	37.95	0.90
valle Pernecco	4 SEC-80	Q500	496.00	129.42	132.20	133.41	1.21	135.57	3.37	132.13	133.44	0.005774	4.93	100.54	37.95	0.97
valle Pernecco	3 SEC-79	Q50	357.00	129.34	131.57	133.19	1.62	135.27	3.70	131.57	132.60	0.006423	4.49	79.49	39.04	1.01
valle Pernecco	3 SEC-79	Q200	441.00	129.34	131.89	133.19	1.30	135.27	3.38	131.89	133.06	0.006184	4.78	92.32	40.02	1.00
valle Pernecco	3 SEC-79	Q500	496.00	129.34	132.09	133.19	1.10	135.27	3.18	132.09	133.34	0.006045	4.94	100.30	40.39	1.00
valle Pernecco	2 SEC-78	Q50	357.00	129.08	130.65	132.87	2.22	135.05	4.40	131.14	132.37	0.016059	5.81	61.50	41.25	1.52
valle Pernecco	2 SEC-78	Q200	441.00	129.08	130.89	132.87	1.98	135.05	4.16	131.44	132.82	0.015115	6.16	71.62	41.87	1.50
valle Pernecco	2 SEC-78	Q500	496.00	129.08	131.04	132.87	1.83	135.05	4.01	131.63	133.10	0.014620	6.36	77.97	42.26	1.50

HEC-RAS Plan: Secca (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle Pernecco	1 SEC-77	Q50	357.00	128.89	130.90	132.49	1.59	134.75	3.85	130.95	131.90	0.006951	4.43	80.57	43.17	1.04
valle Pernecco	1 SEC-77	Q200	441.00	128.89	131.15	132.49	1.34	134.75	3.60	131.25	132.34	0.007121	4.82	91.56	43.96	1.07
valle Pernecco	1 SEC-77	Q500	496.00	128.89	131.28	132.49	1.21	134.75	3.47	131.43	132.61	0.007538	5.11	96.98	44.34	1.10
valle Pernecco	0.5 SEC-76	Q50	357.00	128.79	130.56	132.79	2.23	132.79	2.23	130.69	131.62	0.008327	4.55	78.43	46.04	1.11
valle Pernecco	0.5 SEC-76	Q200	441.00	128.79	130.78	132.79	2.01	132.79	2.01	130.97	132.04	0.008558	4.97	88.77	46.49	1.15
valle Pernecco	0.5 SEC-76	Q500	496.00	128.79	130.92	132.79	1.87	132.79	1.87	131.15	132.31	0.008677	5.21	95.16	46.76	1.17
valle Pernecco	0.4 SEC-76	Q50	357.00	127.19	128.23	131.19	2.96	131.19	2.96	129.09	131.40	0.048925	7.88	45.29	44.58	2.50
valle Pernecco	0.4 SEC-76	Q200	441.00	127.19	128.43	131.19	2.76	131.19	2.76	129.37	131.82	0.042085	8.16	54.05	44.97	2.38
valle Pernecco	0.4 SEC-76	Q500	496.00	127.19	128.55	131.19	2.64	131.19	2.64	129.55	132.08	0.038855	8.32	59.59	45.22	2.32
valle Pernecco	0.3	Q50	357.00	126.98	128.15	130.89	2.74	130.89	2.74	128.83	130.47	0.030591	6.74	52.99	46.35	2.01
valle Pernecco	0.3	Q200	441.00	126.98	128.33	130.89	2.56	130.89	2.56	129.11	130.98	0.029377	7.21	61.15	46.70	2.01
valle Pernecco	0.3	Q500	496.00	126.98	128.44	130.89	2.45	130.89	2.45	129.27	131.29	0.028609	7.48	66.31	46.92	2.01

8.8 Torrente Serra

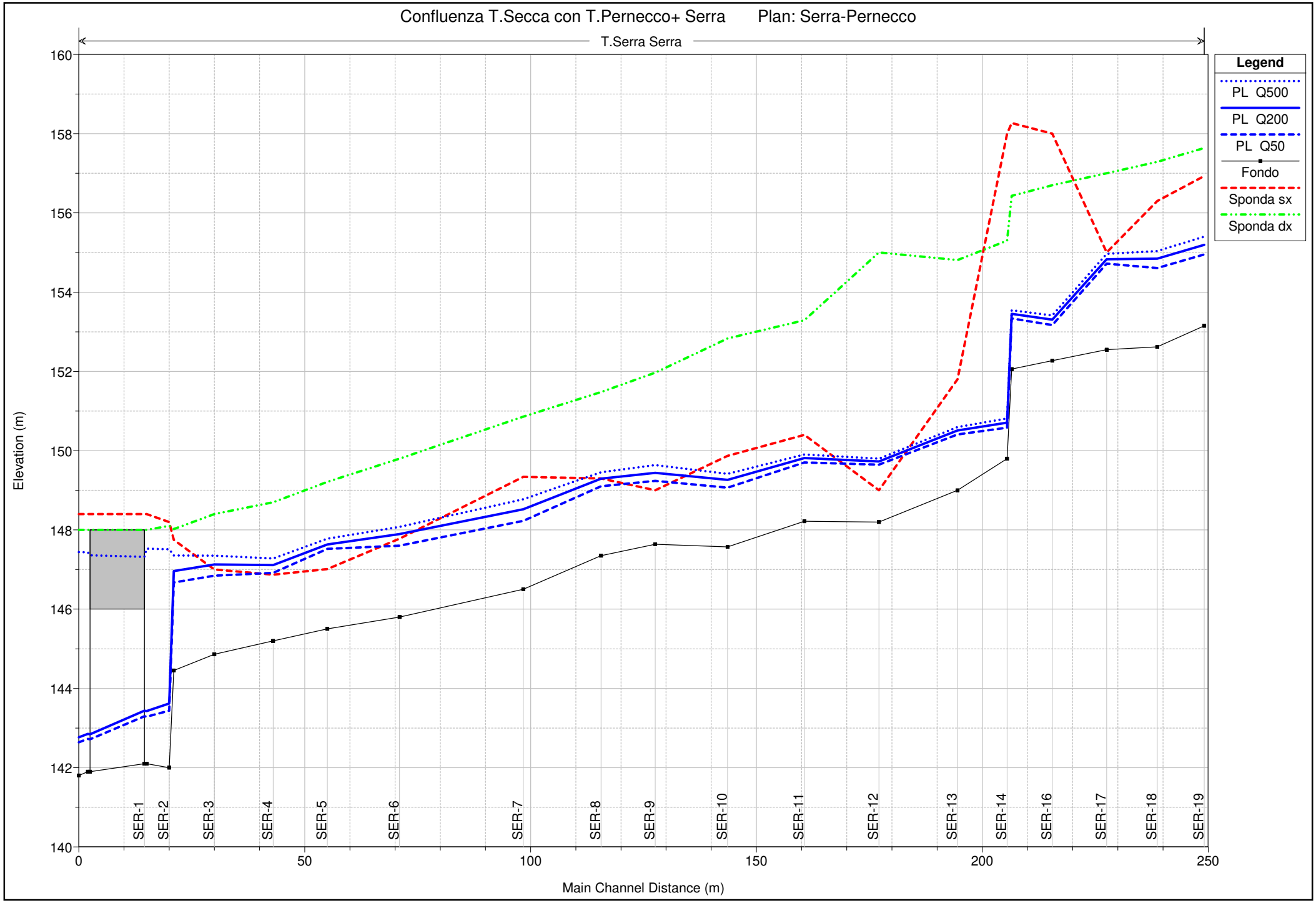
L'analisi idraulica dell'asta del torrente Serra comprende lo studio della confluenza con il torrente Secca.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 33 $m^{1/3}s^{-1}$.

Come condizioni al contorno a monte è stata imposta la profondità di moto uniforme associata alla pendenza media del tratto a valle è stata simulata la confluenza nel torrente Secca.

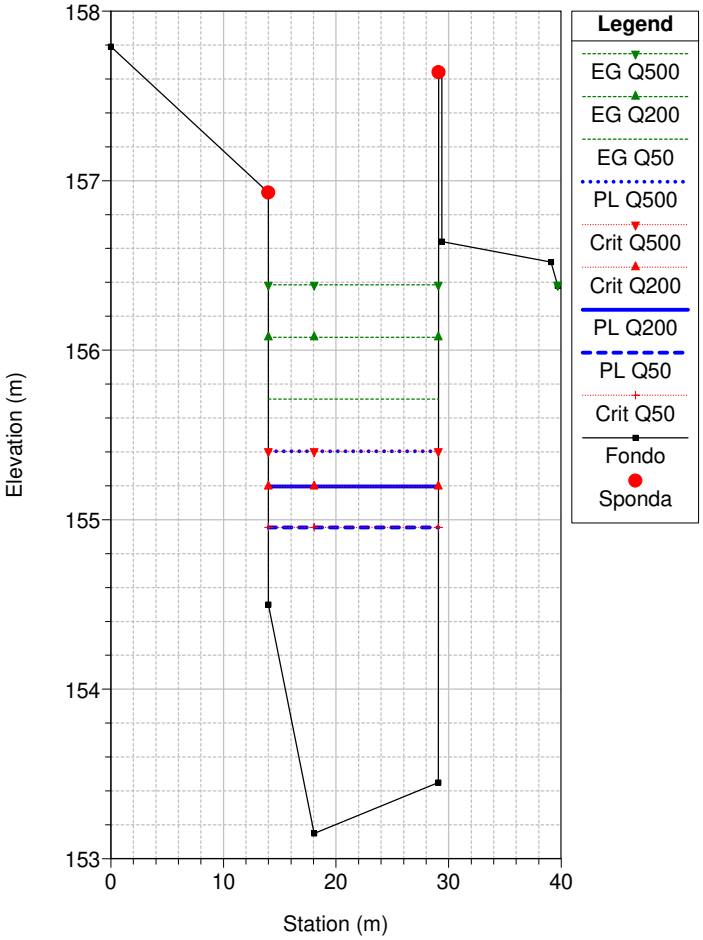
Nella tabella seguente sono riassunte le portate utilizzate per il calcolo in moto permanente dei profili di rigurgito; la sigla della sezione richiama la carta dei sottobacini e di ubicazione delle sezioni di chiusura. Le portate sugli affluenti sono la differenza tra la portata calcolata nella sezione a valle e quella a monte della confluenza.

TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
		T = 50 anni	**T = 200 anni**	**T = 500 anni**
T. Secca a monte del T. Serra	differenza	94	113	122
T. Secca a valle del T.Serra	SEC1	182	223	252
T. Serra	SER	88	110	130


Confluenza T.Secca con T.Pernecco+ Serra
Plan: Serra-Pernecco
T.Serra Serra
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
160
158
156
154
152
150
148
146
144
142
140
0
50
100
150
200
250
SER-1
SER-2
SER-3
SER-4
SER-5
SER-6
SER-7
SER-8
SER-9
SER-10
SER-11
SER-12
SER-13
SER-14
SER-16
SER-17
SER-18
SER-19

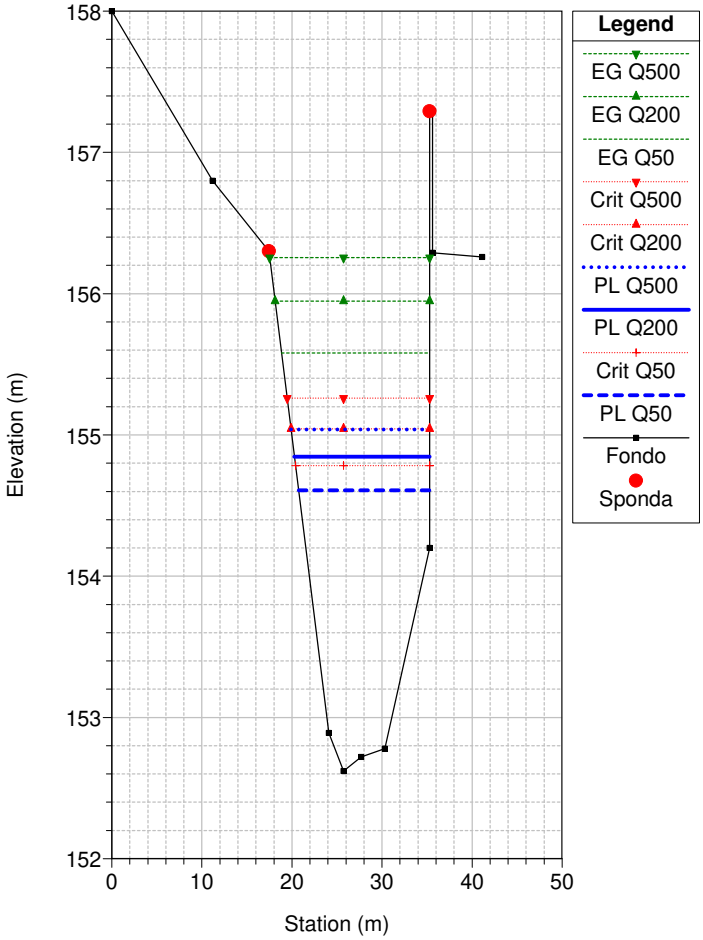
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-19



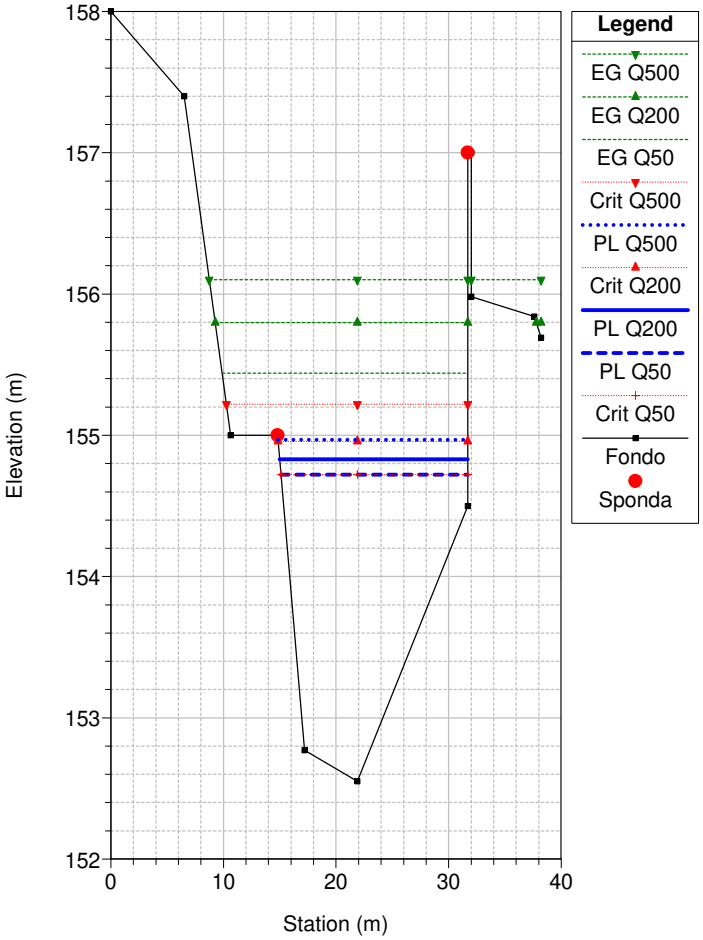
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-18



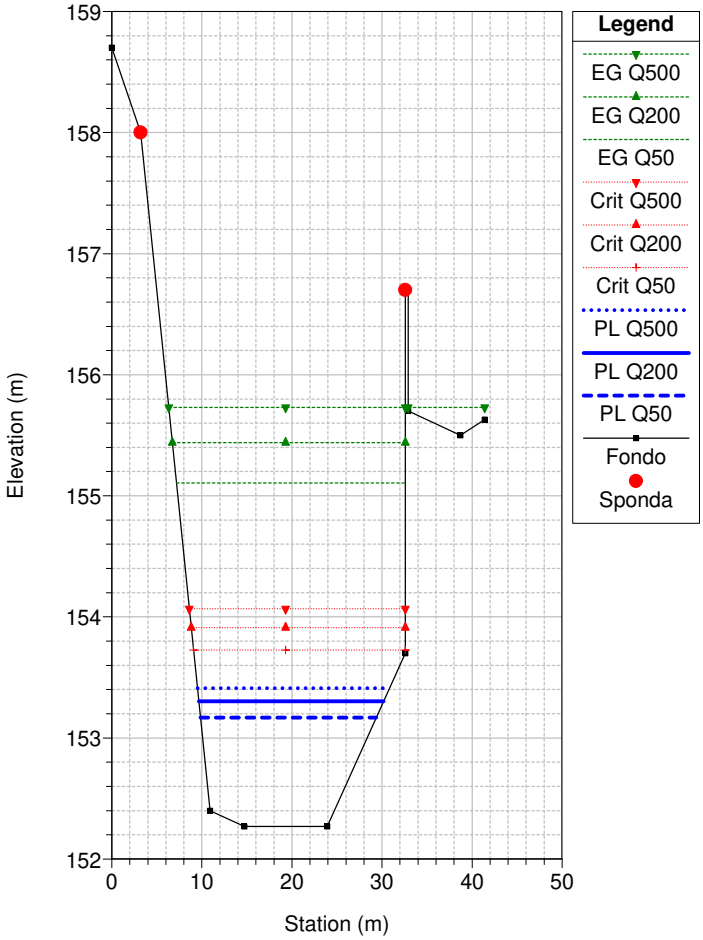
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-17



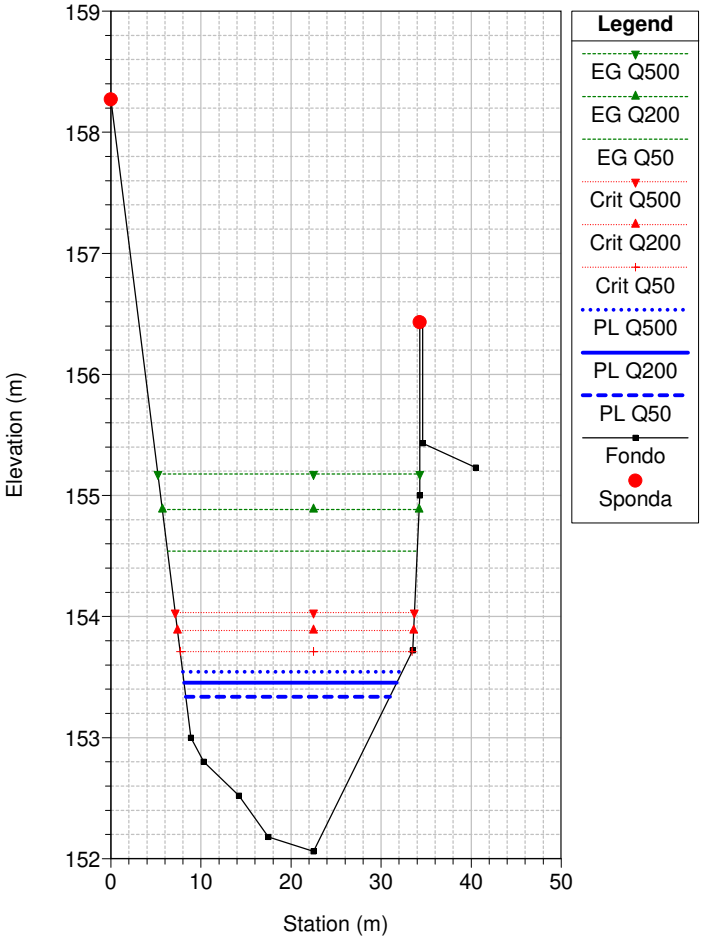
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-16



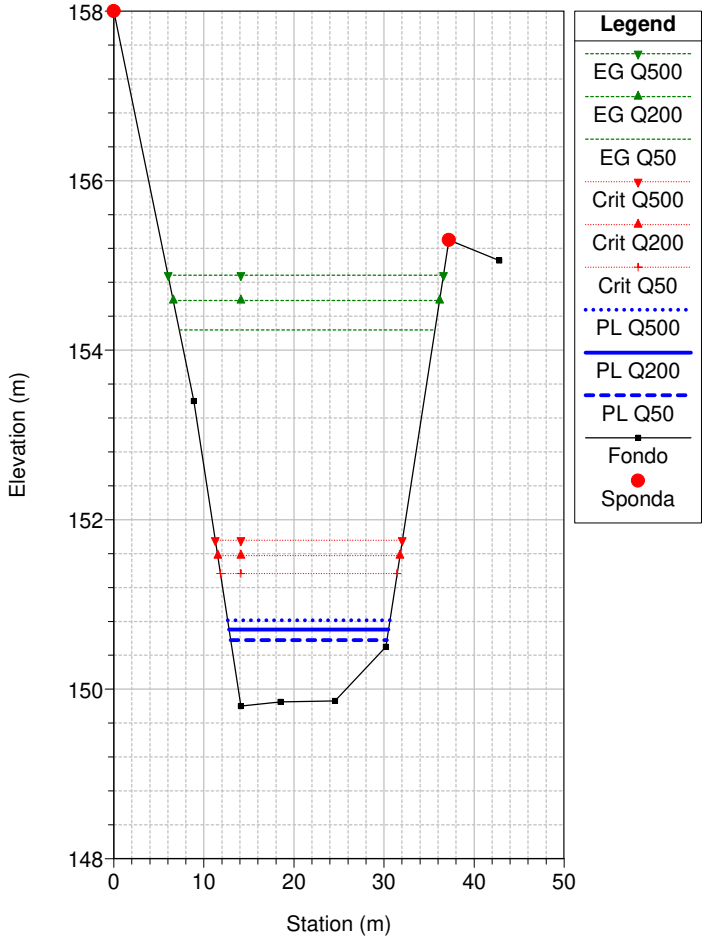
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-15



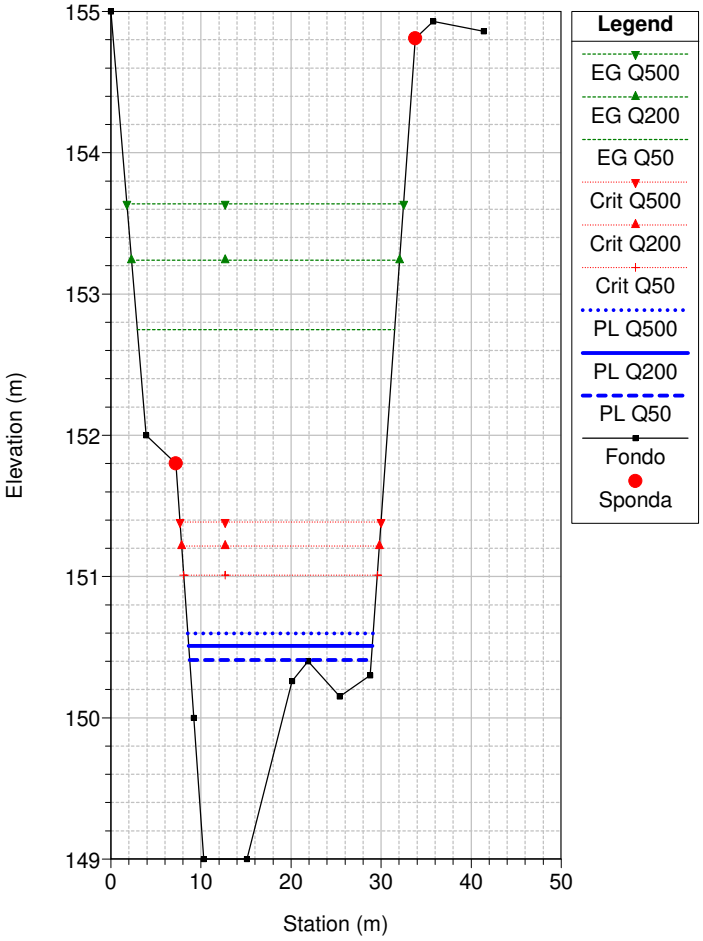
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-14



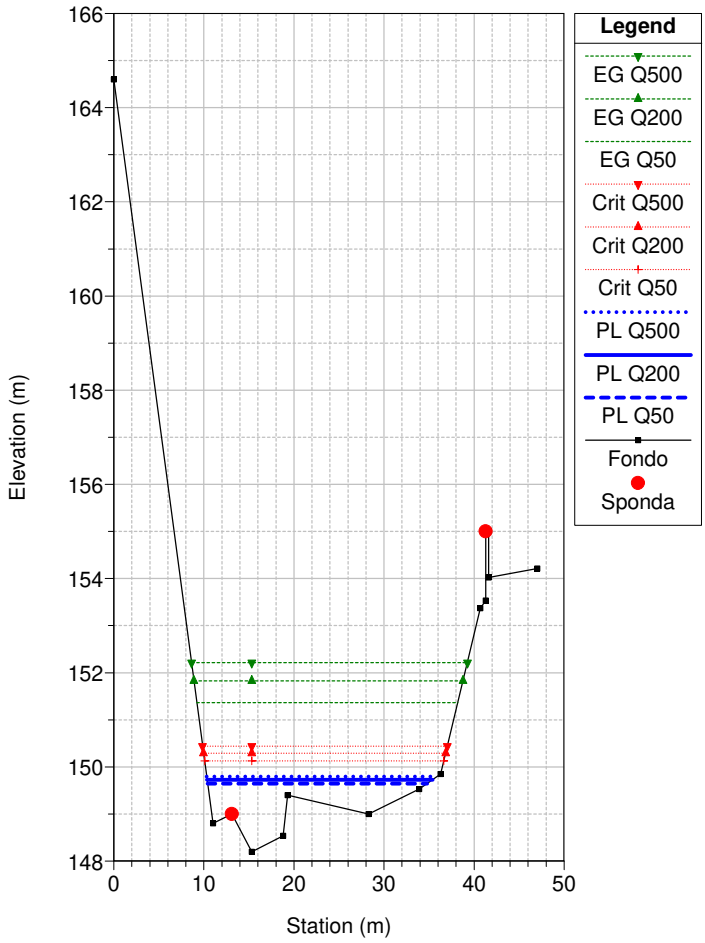
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-13



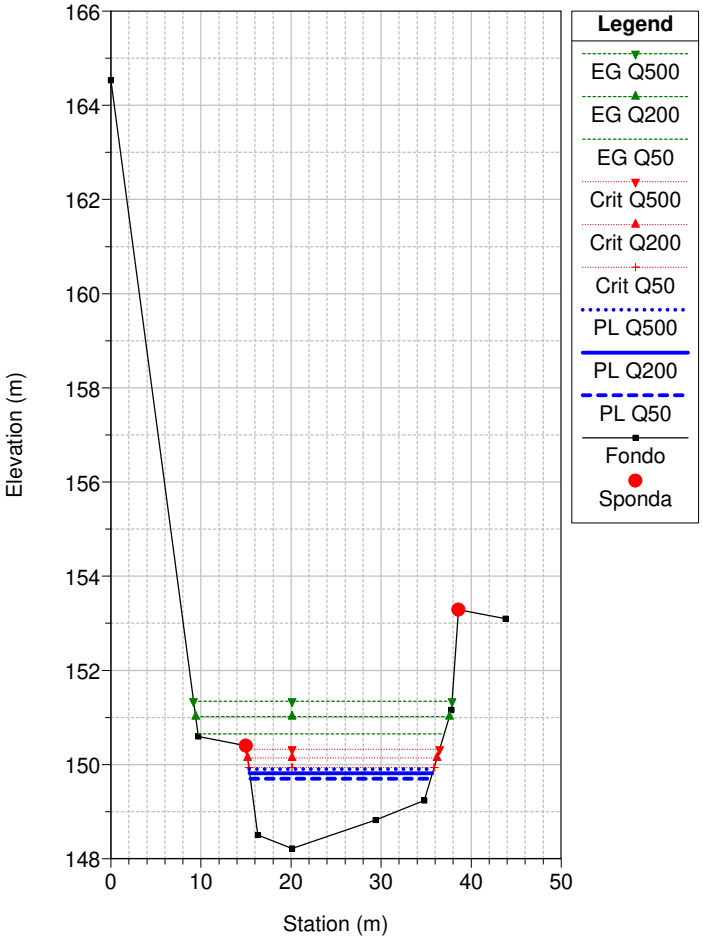
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-12



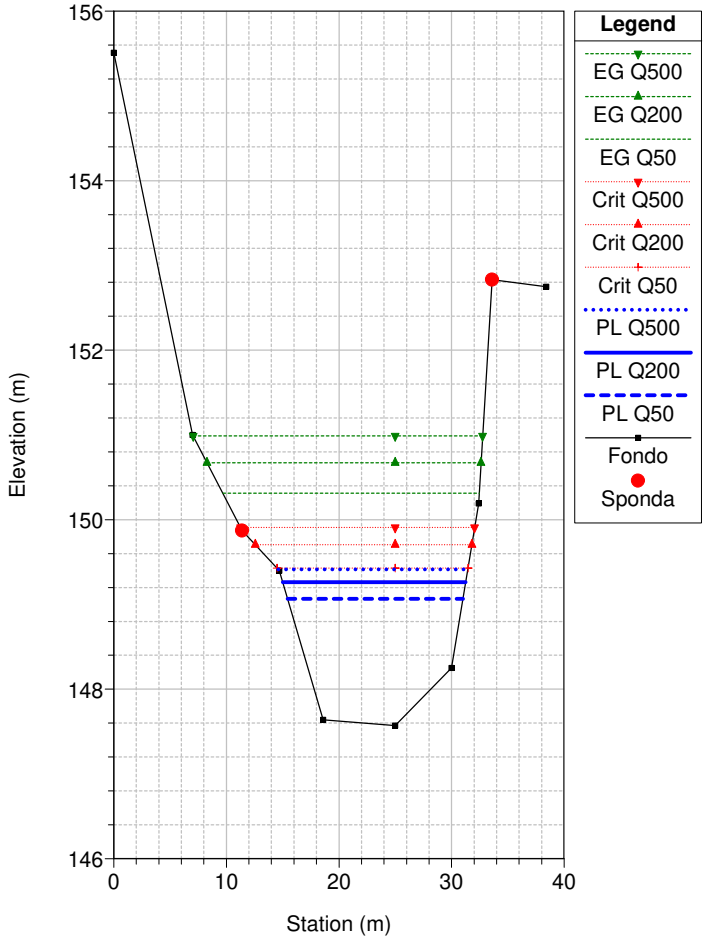
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-11



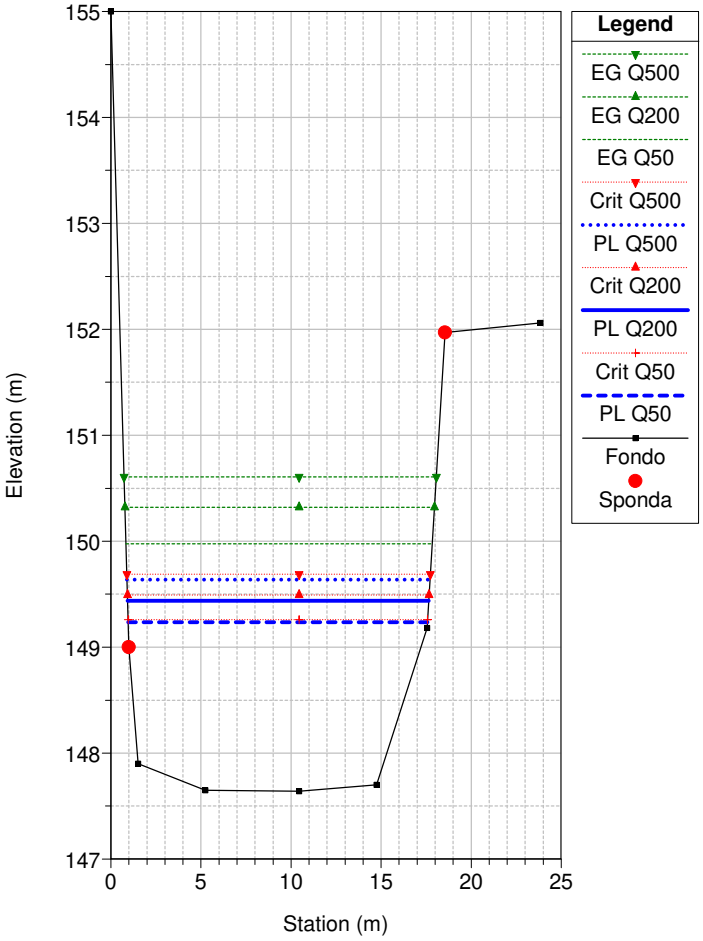
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-10



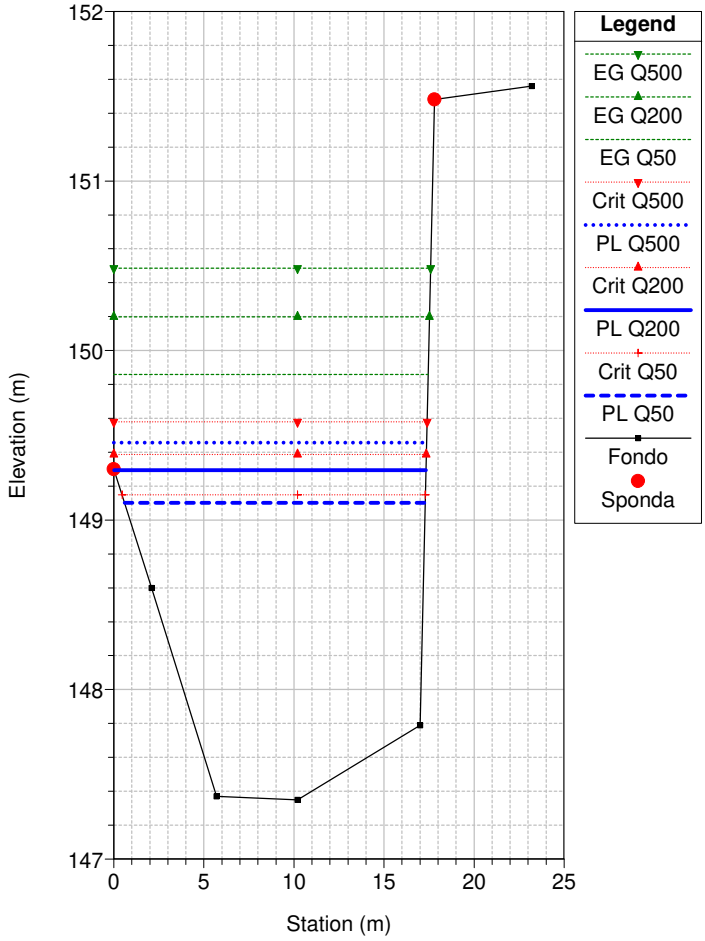
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-9



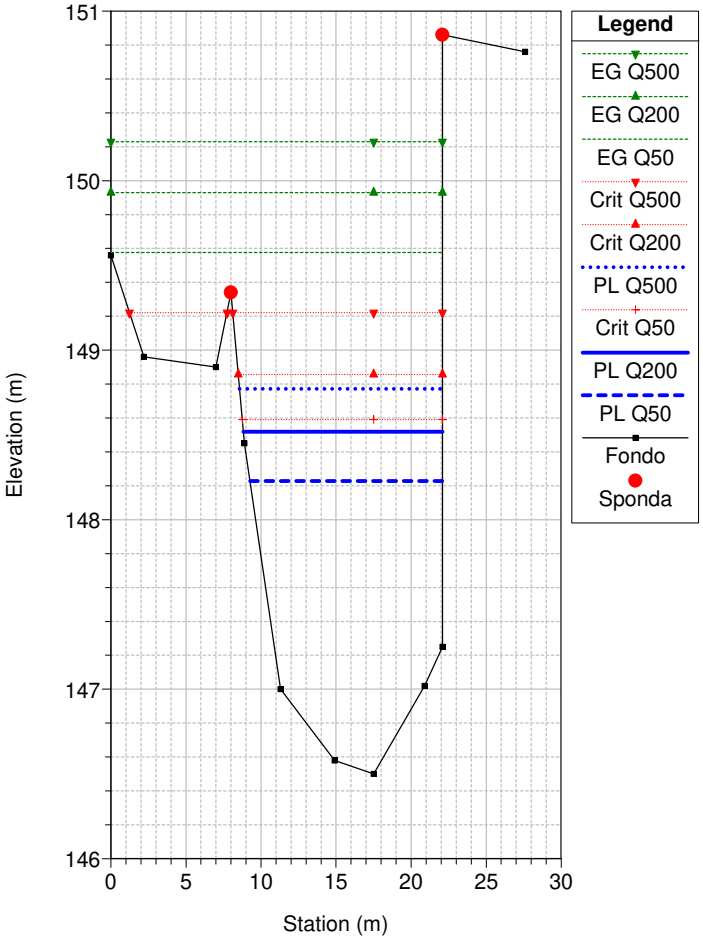
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-8



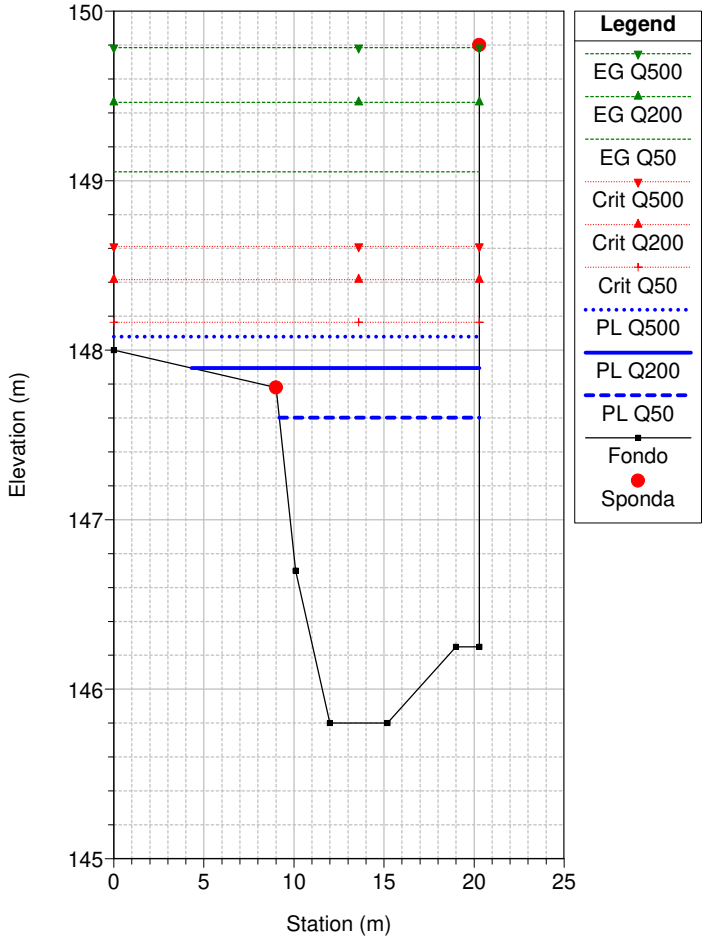
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-7



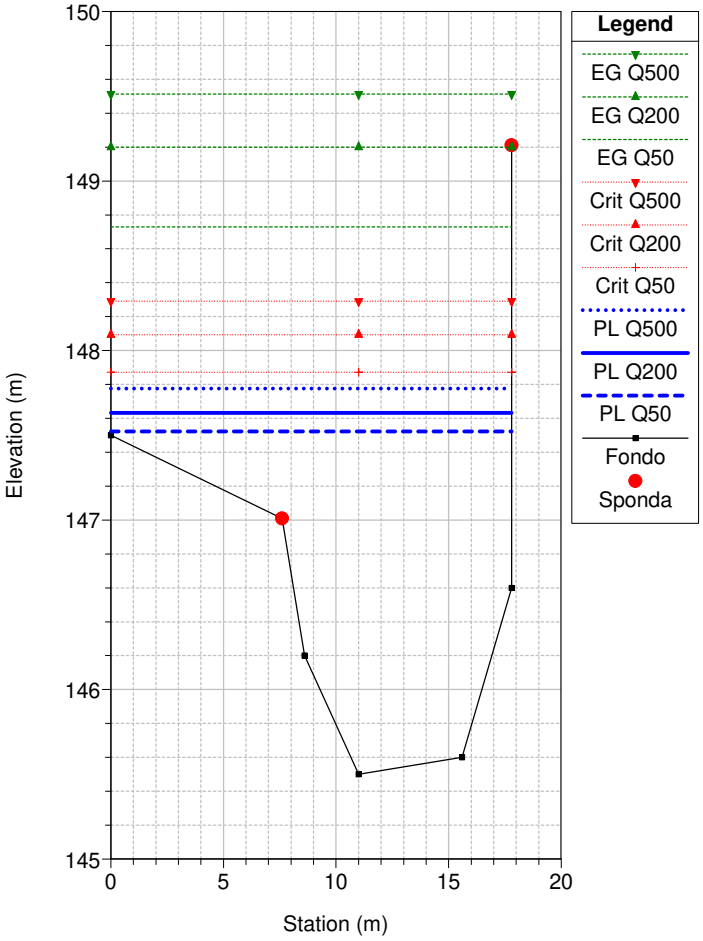
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-6



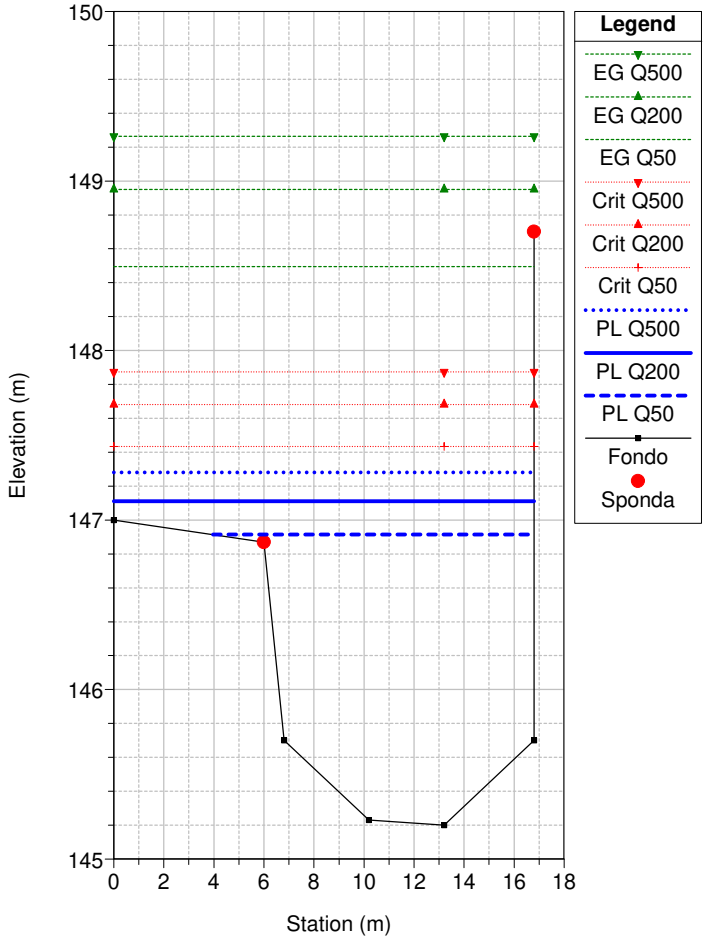
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-5



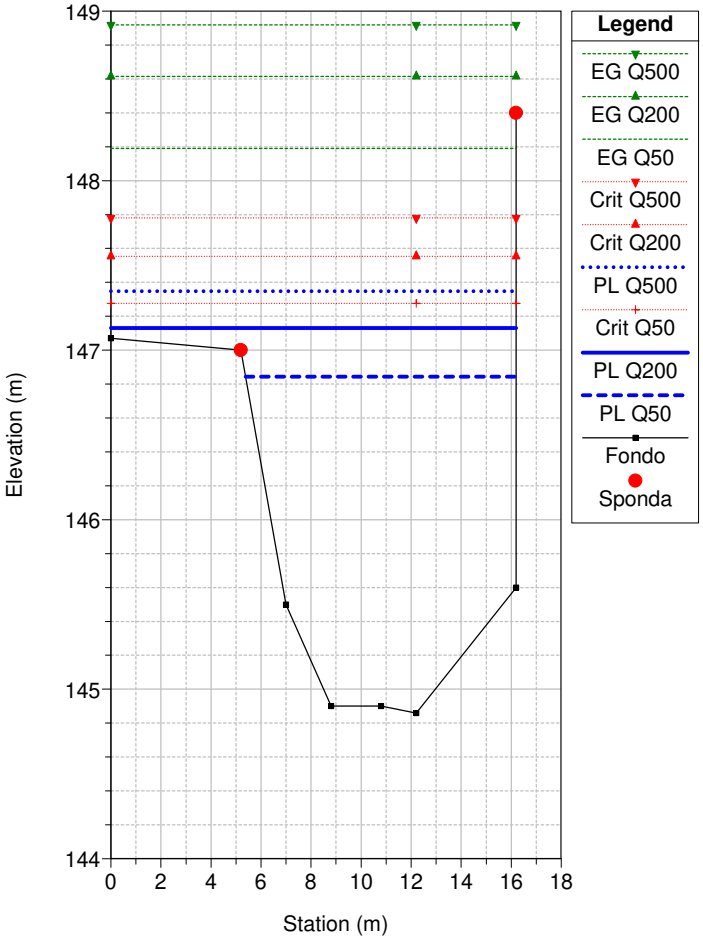
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-4



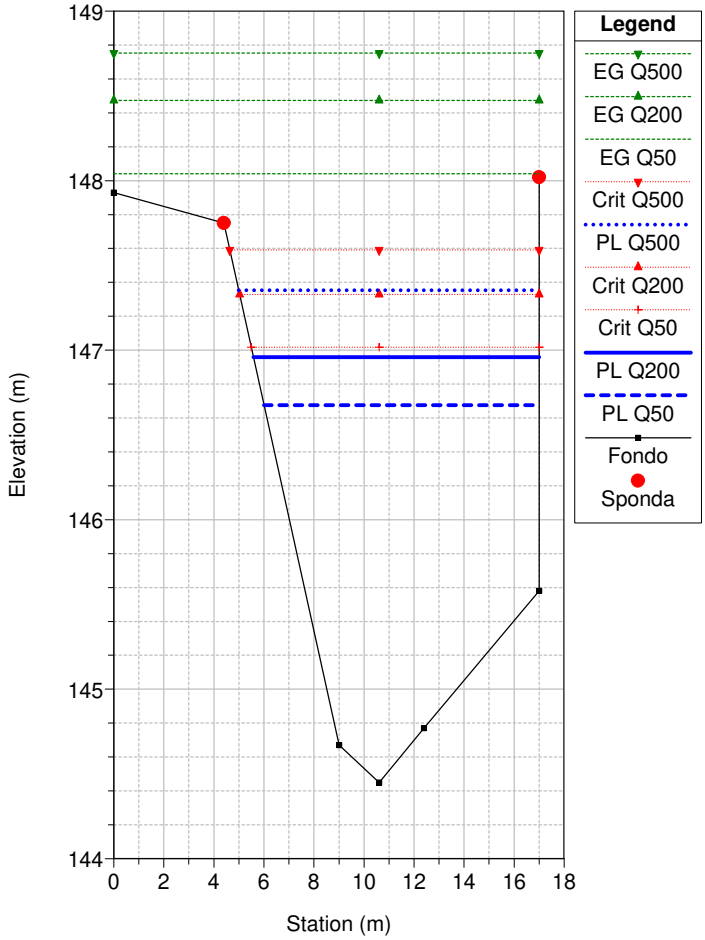
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-3



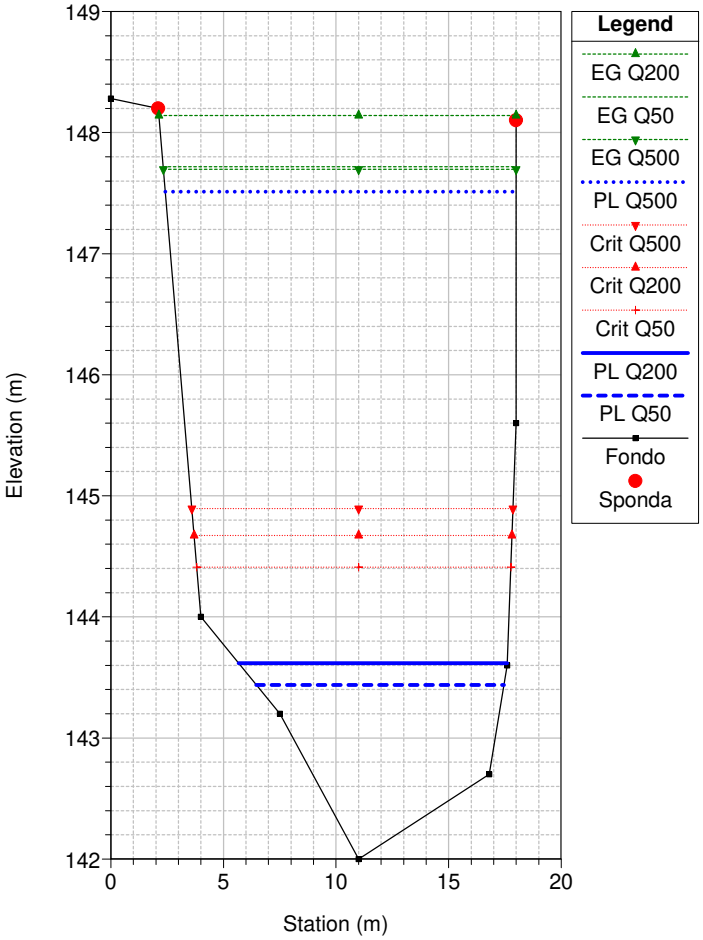
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-2



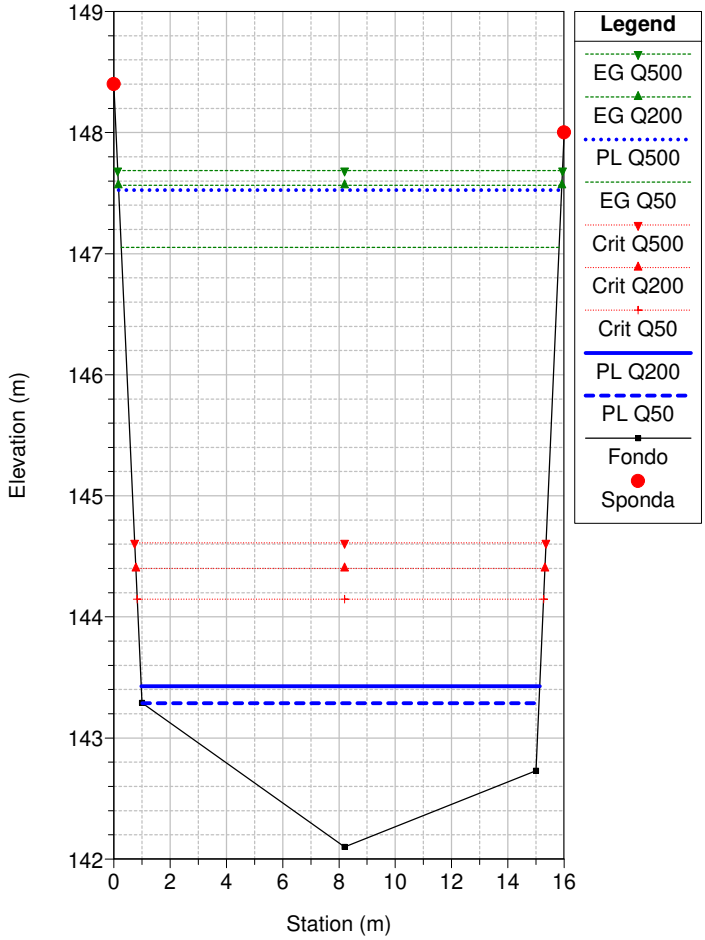
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-2



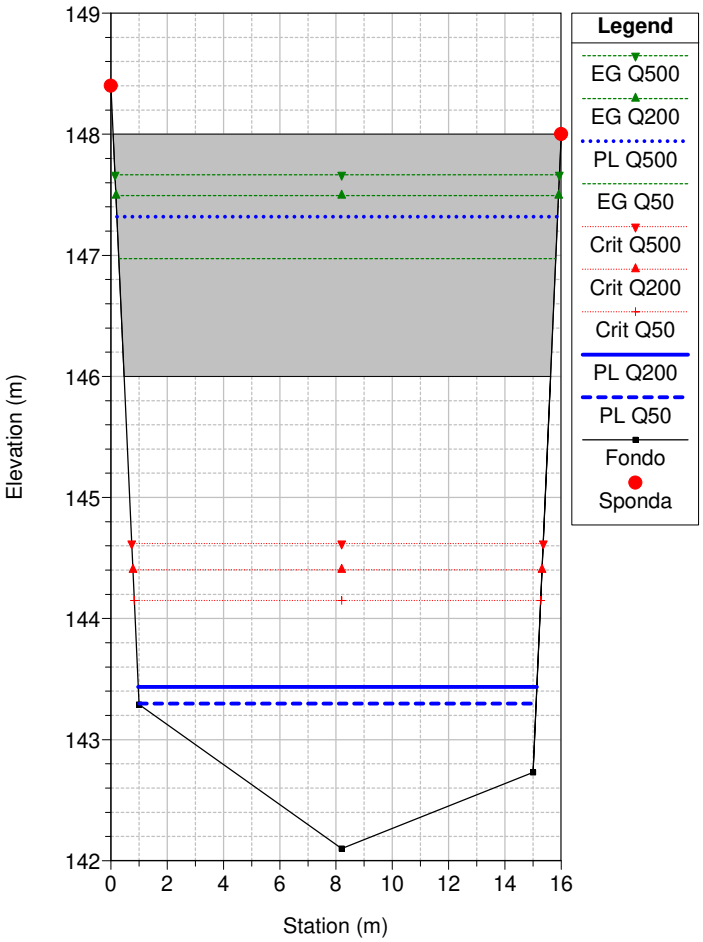
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-1



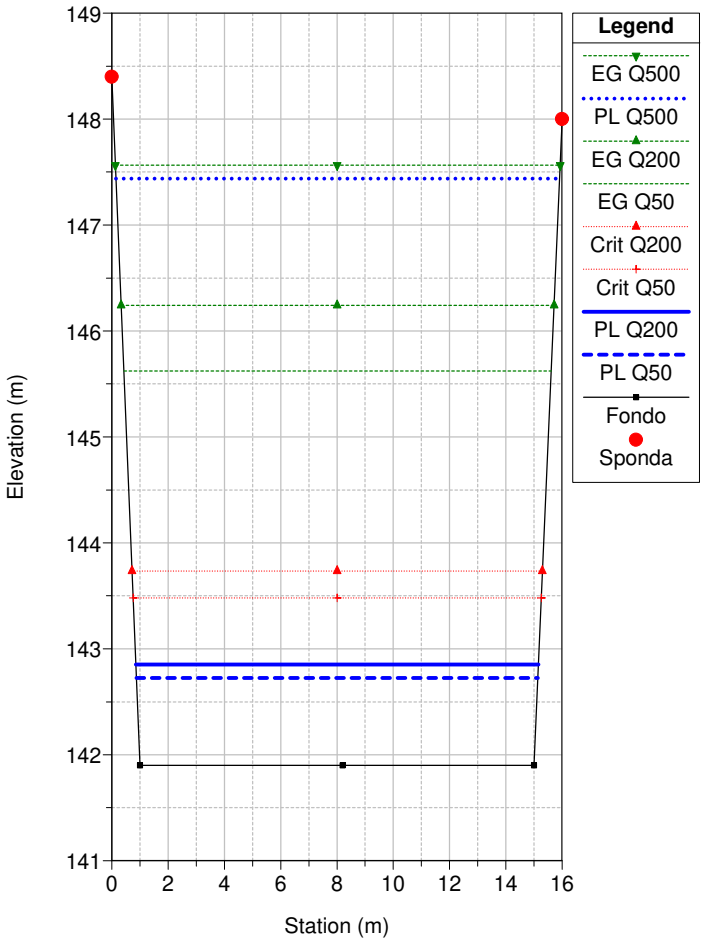
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-1



Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Serra Reach = Serra SER-1



HEC-RAS Plan: SERPER River: T.Serra Reach: Serra

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)	
Serra	19 SER-19	Q50	88.00	153.15	154.95	156.93	1.98	157.64	2.69	154.95	155.71	0.009209	3.85	22.84	15.09	1.00
Serra	19 SER-19	Q200	110.00	153.15	155.20	156.93	1.73	157.64	2.44	155.20	156.08	0.009096	4.15	26.50	15.09	1.00
Serra	19 SER-19	Q500	130.00	153.15	155.40	156.93	1.53	157.64	2.24	155.40	156.39	0.009039	4.39	29.62	15.09	1.00
Serra	18 SER-18	Q50	88.00	152.62	154.61	156.30	1.69	157.29	2.68	154.78	155.58	0.012212	4.37	20.14	14.55	1.19
Serra	18 SER-18	Q200	110.00	152.62	154.85	156.30	1.45	157.29	2.44	155.04	155.95	0.011846	4.64	23.69	15.02	1.18
Serra	18 SER-18	Q500	130.00	152.62	155.04	156.30	1.26	157.29	2.25	155.26	156.26	0.011785	4.88	26.62	15.40	1.19
Serra	17 SER-17	Q50	88.00	152.55	154.72	155.00	0.28	157.00	2.28	154.72	155.44	0.008778	3.76	23.43	16.59	1.01
Serra	17 SER-17	Q200	110.00	152.55	154.83	155.00	0.17	157.00	2.17	154.96	155.80	0.010883	4.35	25.27	16.71	1.13
Serra	17 SER-17	Q500	130.00	152.55	154.97	155.00	0.03	157.00	2.03	155.22	156.10	0.011622	4.71	27.60	16.86	1.18
Serra	16 SER-16	Q50	88.00	152.27	153.17	158.00	4.83	156.70	3.53	153.73	155.10	0.053010	6.16	14.28	19.51	2.30
Serra	16 SER-16	Q200	110.00	152.27	153.30	158.00	4.70	156.70	3.40	153.91	155.44	0.049619	6.47	17.00	20.53	2.27
Serra	16 SER-16	Q500	130.00	152.27	153.41	158.00	4.59	156.70	3.29	154.07	155.73	0.048082	6.74	19.28	21.34	2.26
Serra	15 SER-15	Q50	88.00	152.06	153.34	158.27	4.93	156.43	3.09	153.71	154.54	0.028946	4.86	18.12	22.64	1.73
Serra	15 SER-15	Q200	110.00	152.06	153.45	158.27	4.82	156.43	2.98	153.89	154.88	0.030381	5.30	20.77	23.59	1.80
Serra	15 SER-15	Q500	130.00	152.06	153.54	158.27	4.73	156.43	2.89	154.03	155.18	0.031699	5.66	22.97	24.36	1.86
Serra	14 SER-14	Q50	88.00	149.80	150.58	158.00	7.42	155.30	4.72	151.36	154.24	0.131007	8.47	10.39	17.34	3.50
Serra	14 SER-14	Q200	110.00	149.80	150.71	158.00	7.29	155.30	4.59	151.58	154.59	0.110846	8.72	12.61	17.71	3.30
Serra	14 SER-14	Q500	130.00	149.80	150.81	158.00	7.19	155.30	4.49	151.76	154.89	0.098817	8.94	14.55	18.02	3.18
Serra	13 SER-13	Q50	88.00	149.00	150.41	151.80	1.39	154.81	4.40	151.01	152.75	0.077972	6.77	12.99	20.18	2.69
Serra	13 SER-13	Q200	110.00	149.00	150.51	151.80	1.29	154.81	4.30	151.22	153.24	0.076346	7.32	15.03	20.40	2.72
Serra	13 SER-13	Q500	130.00	149.00	150.60	151.80	1.20	154.81	4.21	151.39	153.64	0.074330	7.72	16.84	20.59	2.73
Serra	12 SER-12	Q50	88.00	148.20	149.65	149.00	-0.65	155.00	5.35	150.13	151.37	0.060861	5.82	15.15	24.37	2.37
Serra	12 SER-12	Q200	110.00	148.20	149.73	149.00	-0.73	155.00	5.27	150.29	151.82	0.065090	6.43	17.16	25.04	2.49
Serra	12 SER-12	Q500	130.00	148.20	149.80	149.00	-0.80	155.00	5.20	150.44	152.21	0.068120	6.91	18.88	25.59	2.58
Serra	11 SER-11	Q50	88.00	148.22	149.70	150.40	0.70	153.29	3.59	149.94	150.65	0.017286	4.32	20.39	20.04	1.37
Serra	11 SER-11	Q200	110.00	148.22	149.81	150.40	0.59	153.29	3.48	150.14	151.02	0.019543	4.86	22.61	20.29	1.47
Serra	11 SER-11	Q500	130.00	148.22	149.90	150.40	0.50	153.29	3.39	150.32	151.34	0.021333	5.31	24.48	20.50	1.55
Serra	10 SER-10	Q50	88.00	147.57	149.07	149.87	0.80	152.83	3.76	149.43	150.31	0.019364	4.94	17.82	15.57	1.47
Serra	10 SER-10	Q200	110.00	147.57	149.26	149.87	0.61	152.83	3.57	149.71	150.67	0.018883	5.26	20.92	16.25	1.48
Serra	10 SER-10	Q500	130.00	147.57	149.41	149.87	0.46	152.83	3.42	149.91	150.99	0.019114	5.56	23.39	16.82	1.51
Serra	9 SER-9	Q50	88.00	147.64	149.24	149.00	-0.24	151.97	2.73	149.26	149.98	0.009127	3.81	23.12	16.61	1.03
Serra	9 SER-9	Q200	110.00	147.64	149.44	149.00	-0.44	151.97	2.53	149.49	150.32	0.009251	4.16	26.46	16.72	1.05
Serra	9 SER-9	Q500	130.00	147.64	149.64	149.00	-0.64	151.97	2.33	149.69	150.61	0.008855	4.37	29.79	16.82	1.05
Serra	8 SER-8	Q50	88.00	147.35	149.10	149.30	0.20	151.48	2.38	149.15	149.86	0.009779	3.86	22.82	16.69	1.05
Serra	8 SER-8	Q200	110.00	147.35	149.29	149.30	0.01	151.48	2.19	149.39	150.20	0.010359	4.21	26.10	17.31	1.10
Serra	8 SER-8	Q500	130.00	147.35	149.46	149.30	-0.16	151.48	2.02	149.58	150.49	0.010528	4.50	28.92	17.36	1.11
Serra	7 SER-7	Q50	88.00	146.50	148.23	149.34	1.11	150.86	2.63	148.59	149.58	0.018604	5.14	17.12	12.83	1.42
Serra	7 SER-7	Q200	110.00	146.50	148.52	149.34	0.82	150.86	2.34	148.86	149.93	0.016055	5.26	20.92	13.27	1.34
Serra	7 SER-7	Q500	130.00	146.50	148.77	149.34	0.57	150.86	2.09	149.22	150.23	0.014350	5.35	24.30	13.53	1.27

HEC-RAS Plan: SERPER River: T.Serra Reach: Serra (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)	
Serra	6 SER-6	Q50	88.00	145.80	147.60	147.78	0.18	149.80	2.20	148.17	149.05	0.018786	5.34	16.49	11.12	1.40
Serra	6 SER-6	Q200	110.00	145.80	147.89	147.78	-0.11	149.80	1.91	148.42	149.46	0.016835	5.55	20.06	15.98	1.34
Serra	6 SER-6	Q500	130.00	145.80	148.08	147.78	-0.30	149.80	1.72	148.61	149.78	0.016572	5.83	23.58	20.30	1.34
Serra	5 SER-5	Q50	88.00	145.50	147.52	147.01	-0.51	149.21	1.69	147.87	148.73	0.013270	4.95	19.18	17.80	1.22
Serra	5 SER-5	Q200	110.00	145.50	147.63	147.01	-0.62	149.21	1.58	148.09	149.20	0.016329	5.68	21.11	17.80	1.36
Serra	5 SER-5	Q500	130.00	145.50	147.78	147.01	-0.77	149.21	1.43	148.29	149.51	0.016889	6.04	23.69	17.80	1.39
Serra	4 SER-4	Q50	88.00	145.20	146.91	146.87	-0.04	148.70	1.79	147.43	148.50	0.020860	5.57	15.84	12.84	1.47
Serra	4 SER-4	Q200	110.00	145.20	147.11	146.87	-0.24	148.70	1.59	147.68	148.95	0.021202	6.05	18.99	16.80	1.50
Serra	4 SER-4	Q500	130.00	145.20	147.28	146.87	-0.41	148.70	1.42	147.87	149.26	0.020831	6.34	21.83	16.80	1.50
Serra	3 SER-3	Q50	88.00	144.86	146.84	147.00	0.16	148.40	1.56	147.28	148.19	0.015962	5.14	17.13	10.81	1.30
Serra	3 SER-3	Q200	110.00	144.86	147.13	147.00	-0.13	148.40	1.27	147.55	148.61	0.014911	5.41	20.76	16.20	1.27
Serra	3 SER-3	Q500	130.00	144.86	147.35	147.00	-0.35	148.40	1.05	147.78	148.92	0.014117	5.61	24.30	16.20	1.25
Serra	2 SER-2	Q50	88.00	144.45	146.67	147.75	1.08	148.02	1.35	147.02	148.04	0.016541	5.18	17.00	10.99	1.33
Serra	2 SER-2	Q200	110.00	144.45	146.96	147.75	0.79	148.02	1.06	147.33	148.47	0.015796	5.45	20.19	11.42	1.31
Serra	2 SER-2	Q500	130.00	144.45	147.35	147.75	0.40	148.02	0.67	147.59	148.75	0.012305	5.24	24.81	12.01	1.16
Serra	1.9 SER-2	Q50	88.00	142.00	143.44	148.20	4.76	148.10	4.66	144.41	147.72	0.097085	9.16	9.61	11.00	3.13
Serra	1.9 SER-2	Q200	110.00	142.00	143.62	148.20	4.58	148.10	4.48	144.67	148.14	0.088733	9.42	11.68	11.93	3.04
Serra	1.9 SER-2	Q500	130.00	142.00	147.51	148.20	0.69	148.10	0.59	144.89	147.70	0.000728	1.90	68.25	15.59	0.29
Serra	1.1 SER-1	Q50	88.00	142.10	143.29	148.40	5.11	148.00	4.71	144.15	147.05	0.107367	8.59	10.24	14.10	3.22
Serra	1.1 SER-1	Q200	110.00	142.10	143.43	148.40	4.97	148.00	4.57	144.40	147.56	0.095843	9.01	12.21	14.16	3.10
Serra	1.1 SER-1	Q500	130.00	142.10	147.53	148.40	0.87	148.00	0.47	144.61	147.68	0.000610	1.77	73.46	15.74	0.26
Serra	1 SER-1		Bridge													
Serra	0.9 SER-1	Q50	88.00	141.90	142.73	148.40	5.67	148.00	5.27	143.48	145.62	0.075741	7.54	11.67	14.26	2.66
Serra	0.9 SER-1	Q200	110.00	141.90	142.85	148.40	5.55	148.00	5.15	143.73	146.24	0.074633	8.15	13.49	14.30	2.68
Serra	0.9 SER-1	Q500	130.00	141.90	147.44	148.40	0.96	148.00	0.56		147.56	0.000462	1.58	82.40	15.76	0.22
Serra	0.8	Q50	88.00	141.80	142.64	148.40	5.76	148.00	5.36	143.38	145.45	0.072023	7.42	11.86	14.26	2.60
Serra	0.8	Q200	110.00	141.80	142.77	148.40	5.63	148.00	5.23	143.63	146.07	0.071642	8.05	13.67	14.30	2.63
Serra	0.8	Q500	130.00	141.80	147.44	148.40	0.96	148.00	0.56		147.56	0.000439	1.55	83.94	15.76	0.21

8.9 Torrente Pernecco

8.9.1 Tratto alla confluenza con il torrente Secca

Le sezioni di questo tratto derivano dal progetto " Razionalizzazione del nodo relativo alla confluenza dei torrenti Pernecco e Secca" che consiste nell'adeguamento della sezione d'alveo al regolare deflusso delle acque durante eventi di piena con tempi di ritorno duecentennale nel tratto di confluenza del torrente Secca con il torrente Pernecco.

L'intervento prevede l'adeguamento dell'angolo d'incidenza dei due corsi d'acqua che attualmente risulta di circa 90° e della larghezza dell'alveo alle esigenze di un corretto deflusso delle acque attraverso la modifica delle difese spondali in c.a. e la realizzazione di un deflettore che ottimizzi l'innesto dei filetti fluidi nel corso d'acqua principale.

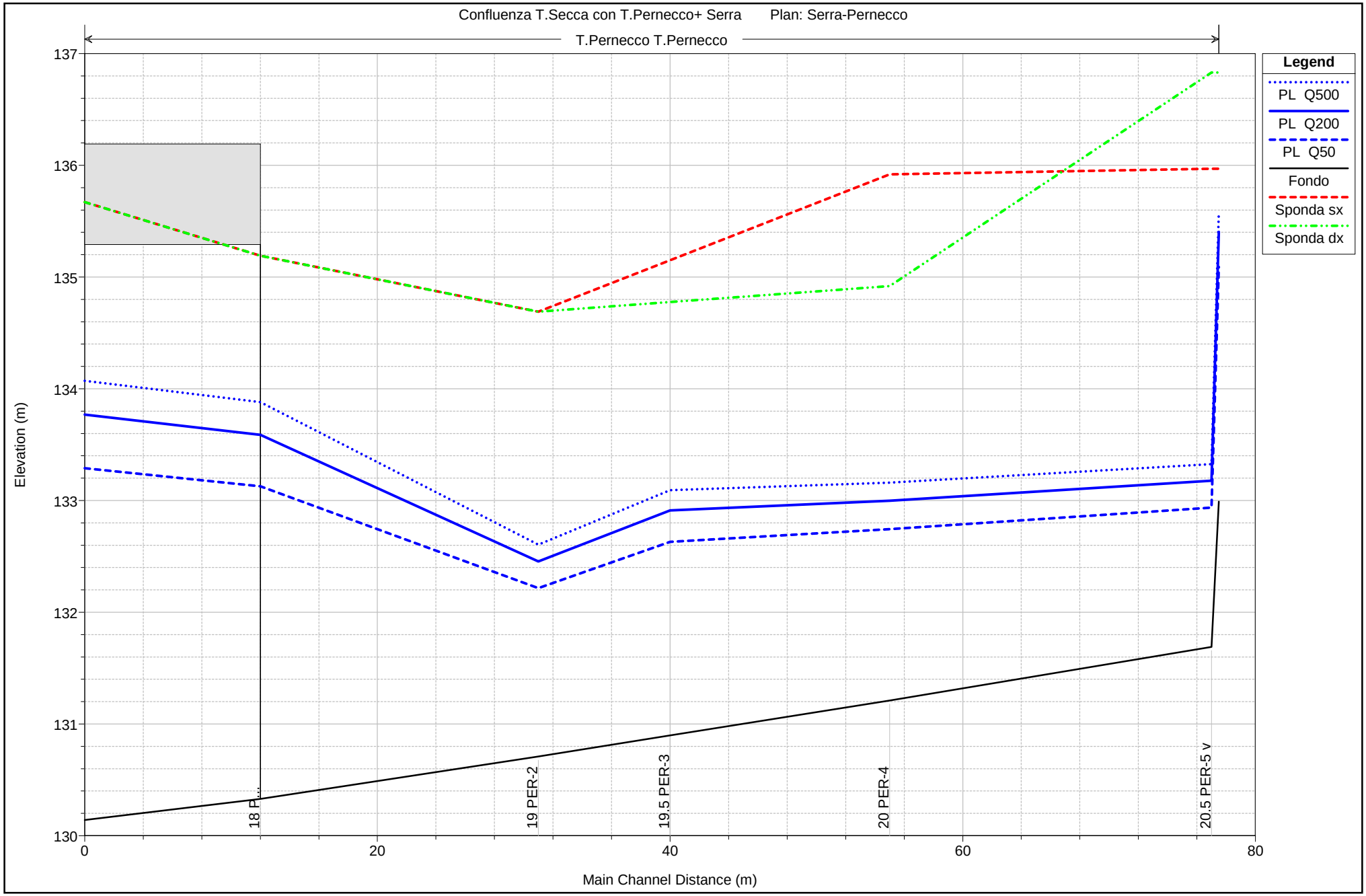
Le verifiche idrauliche sono state condotte allo stato attuale in cui il ponte in prossimità della confluenza non è stato ancora demolito, e le arginature su entrambe le sponde sono state ultimate

Per una migliore definizione dell'intervento sono state ricalcolate le portate del torrente Pernecco e del torrente Secca a monte e a valle della confluenza con il metodo afflussi-deflussi. Le portate di piano per il nodo della confluenza Secca-Pernecco sono:

	TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
			T = 50 anni	**T = 200 anni**	**T = 500 anni**
T. Pernecco in piena	Torrente Secca a valle confluenza	SEC4	357	441	496
	Torrente Secca a monte confluenza	SEC3	182	223	252
	Torrente Pernecco	PER	176	218	245

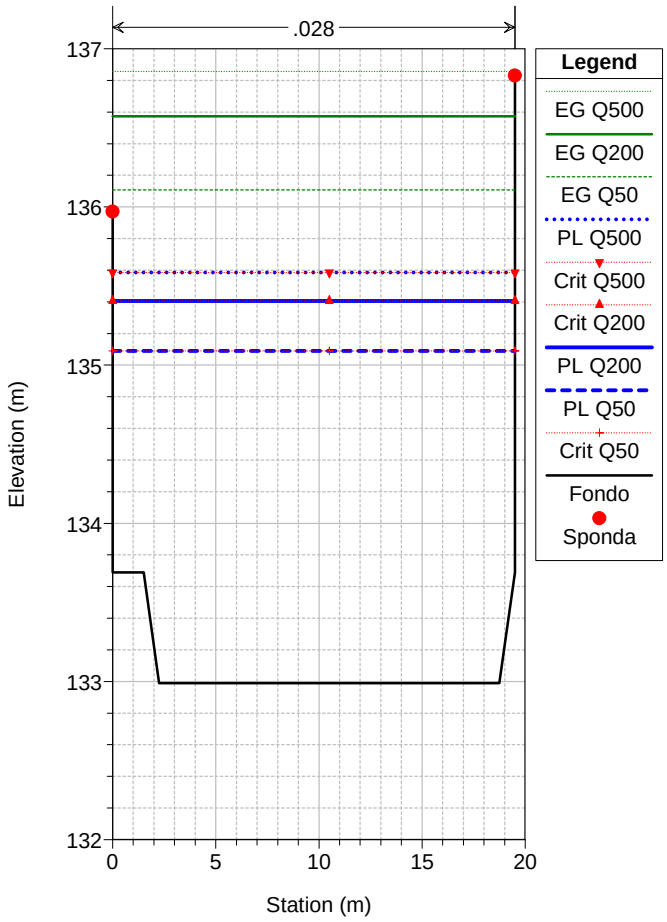
Come condizioni al contorno a monte è stata imposta la profondità critica in corrispondenza della briglia, a valle è stata simulata la confluenza nel torrente Secca.

Nelle simulazioni è stato assegnato un valore del coefficiente di scabrezza k_s di Strickler pari a $35 m^{1/3}/s$.


Confluenza T.Secca con T.Pernecco+ Serra
Plan: Serra-Pernecco
T.Pernecco T.Pernecco
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
137
136
135
134
133
132
131
130
0
20
40
60
80
18 P...
19 PER-2
19.5 PER-3
20 PER-4
20.5 PER-5 v

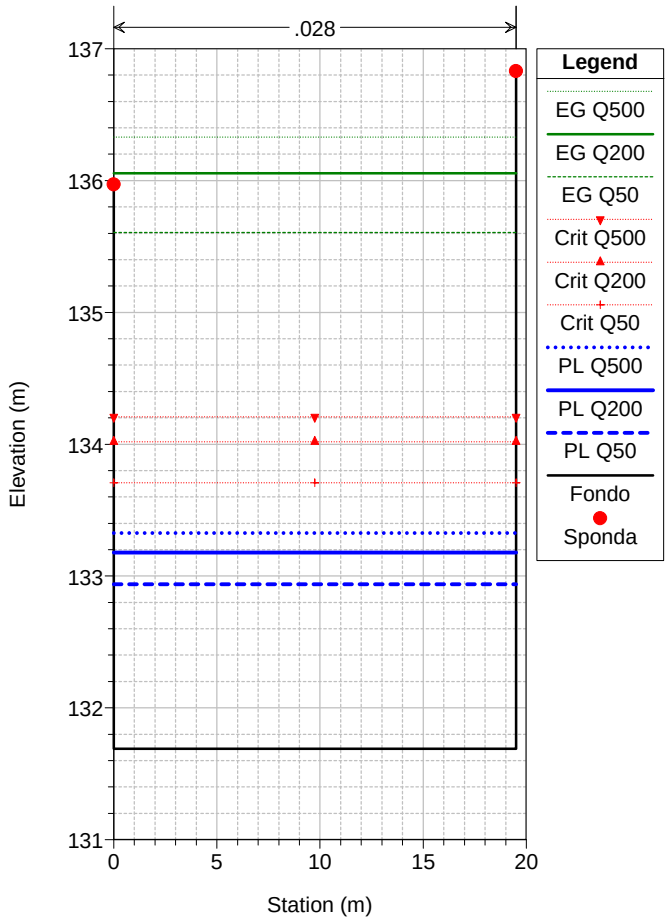
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Pernecco Reach = T.Pernecco PER-5 m



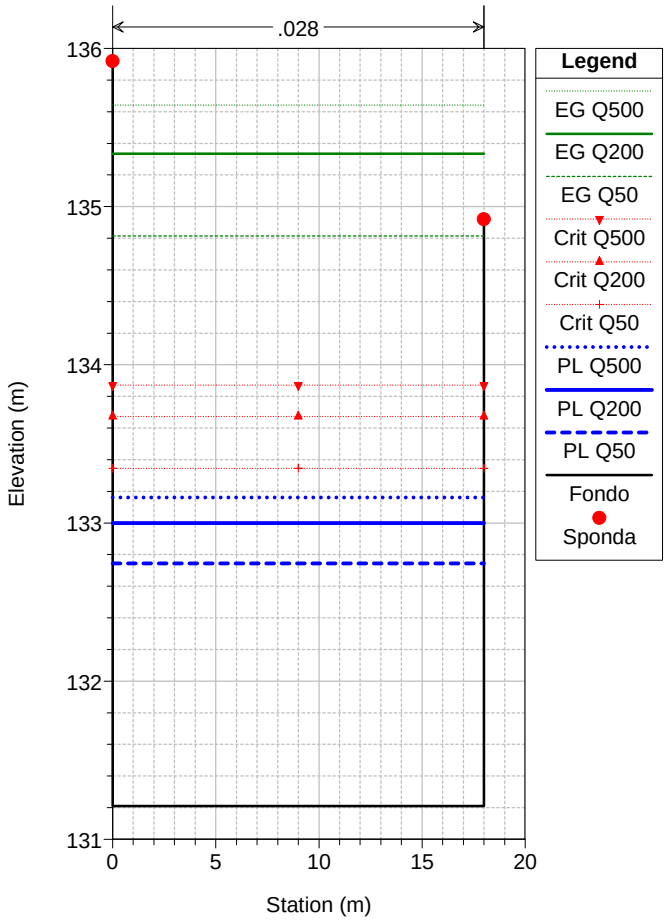
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Pernecco Reach = T.Pernecco PER-5 v



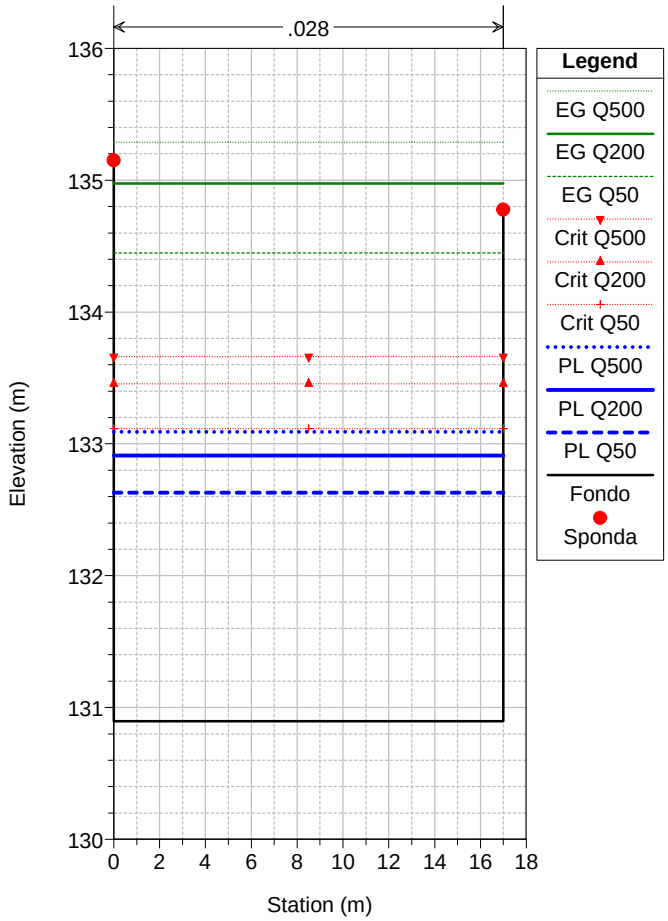
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Pernecco Reach = T.Pernecco PER-4



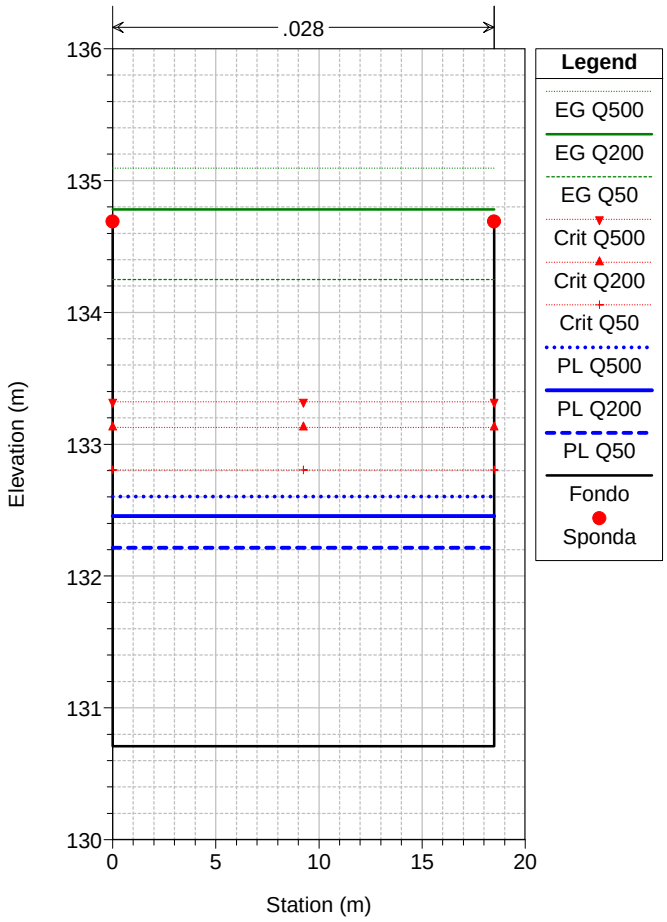
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Pernecco Reach = T.Pernecco PER-3



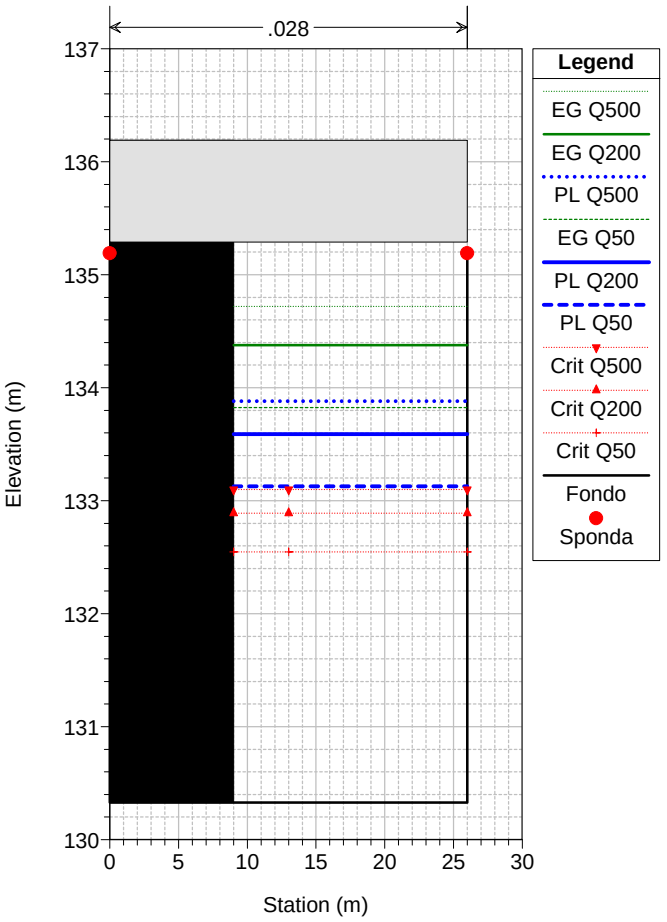
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Pernecco Reach = T.Pernecco PER-2



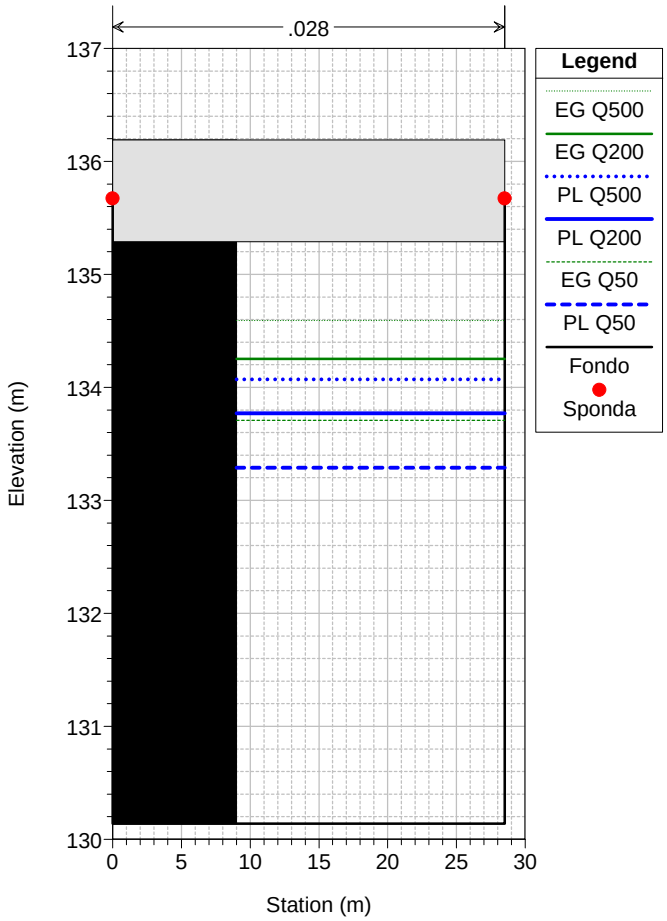
Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Pernecco Reach = T.Pernecco PER-1 m



Confluenza T.Secca con T.Pernecco+ Serra Plan: Serra-Pernecco

River = T.Pernecco Reach = T.Pernecco PER-1 v



HEC-RAS Plan: SERPER River: T.Pernecco Reach: T.Pernecco

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)	
T.Pernecco	21 PER-5 m	Q50	176.00	132.99	135.09	135.97	0.88	136.83	1.74	135.09	136.11	0.007584	4.47	39.37	19.50	1.00
T.Pernecco	21 PER-5 m	Q200	218.00	132.99	135.41	135.97	0.56	136.83	1.42	135.41	136.57	0.007439	4.79	45.52	19.50	1.00
T.Pernecco	21 PER-5 m	Q500	245.00	132.99	135.59	135.97	0.38	136.83	1.24	135.59	136.86	0.007473	4.99	49.06	19.50	1.01
T.Pernecco	20.5 PER-5 v	Q50	176.00	131.69	132.94	135.97	3.03	136.83	3.89	133.71	135.61	0.035919	7.24	24.32	19.50	2.07
T.Pernecco	20.5 PER-5 v	Q200	218.00	131.69	133.18	135.97	2.79	136.83	3.65	134.02	136.06	0.031522	7.52	29.00	19.50	1.97
T.Pernecco	20.5 PER-5 v	Q500	245.00	131.69	133.33	135.97	2.64	136.83	3.50	134.21	136.33	0.029498	7.68	31.90	19.50	1.92
T.Pernecco	20 PER-4	Q50	176.00	131.21	132.74	135.92	3.18	134.92	2.18	133.35	134.81	0.022207	6.37	27.61	18.00	1.64
T.Pernecco	20 PER-4	Q200	218.00	131.21	133.00	135.92	2.92	134.92	1.92	133.67	135.33	0.021068	6.77	32.20	18.00	1.62
T.Pernecco	20 PER-4	Q500	245.00	131.21	133.16	135.92	2.76	134.92	1.76	133.87	135.64	0.020362	6.98	35.10	18.00	1.60
T.Pernecco	19.5 PER-3	Q50	176.00	130.90	132.63	135.15	2.52	134.78	2.15	133.12	134.45	0.017209	5.97	29.46	17.00	1.45
T.Pernecco	19.5 PER-3	Q200	218.00	130.90	132.91	135.15	2.24	134.78	1.86	133.46	134.98	0.016573	6.36	34.25	17.00	1.43
T.Pernecco	19.5 PER-3	Q500	245.00	130.90	133.09	135.15	2.06	134.78	1.68	133.66	135.29	0.016097	6.57	37.31	17.00	1.41
T.Pernecco	19 PER-2	Q50	176.00	130.71	132.22	134.69	2.47	134.69	2.47	132.81	134.25	0.022182	6.32	27.85	18.50	1.64
T.Pernecco	19 PER-2	Q200	218.00	130.71	132.45	134.69	2.24	134.69	2.24	133.13	134.78	0.021476	6.76	32.26	18.50	1.63
T.Pernecco	19 PER-2	Q500	245.00	130.71	132.60	134.69	2.09	134.69	2.09	133.32	135.09	0.020968	6.99	35.04	18.50	1.62
T.Pernecco	18 PER-1 m	Q50	176.00	130.33	133.13	135.29	2.16	135.29	2.16	132.55	133.82	0.003986	3.70	47.54	17.00	0.71
T.Pernecco	18 PER-1 m	Q200	218.00	130.33	133.59	135.29	1.70	135.29	1.70	132.89	134.38	0.003874	3.94	55.40	17.00	0.70
T.Pernecco	18 PER-1 m	Q500	245.00	130.33	133.88	135.29	1.41	135.29	1.41	133.10	134.72	0.003799	4.06	60.35	17.00	0.69
T.Pernecco	17.2 PER-1 v	Q50	176.00	130.14	133.29	135.29	2.00	135.29	2.00		133.71	0.002027	2.87	61.40	19.50	0.52
T.Pernecco	17.2 PER-1 v	Q200	218.00	130.14	133.77	135.29	1.52	135.29	1.52		134.25	0.002034	3.08	70.77	19.50	0.52
T.Pernecco	17.2 PER-1 v	Q500	245.00	130.14	134.07	135.29	1.22	135.29	1.22		134.59	0.002028	3.20	76.65	19.50	0.51

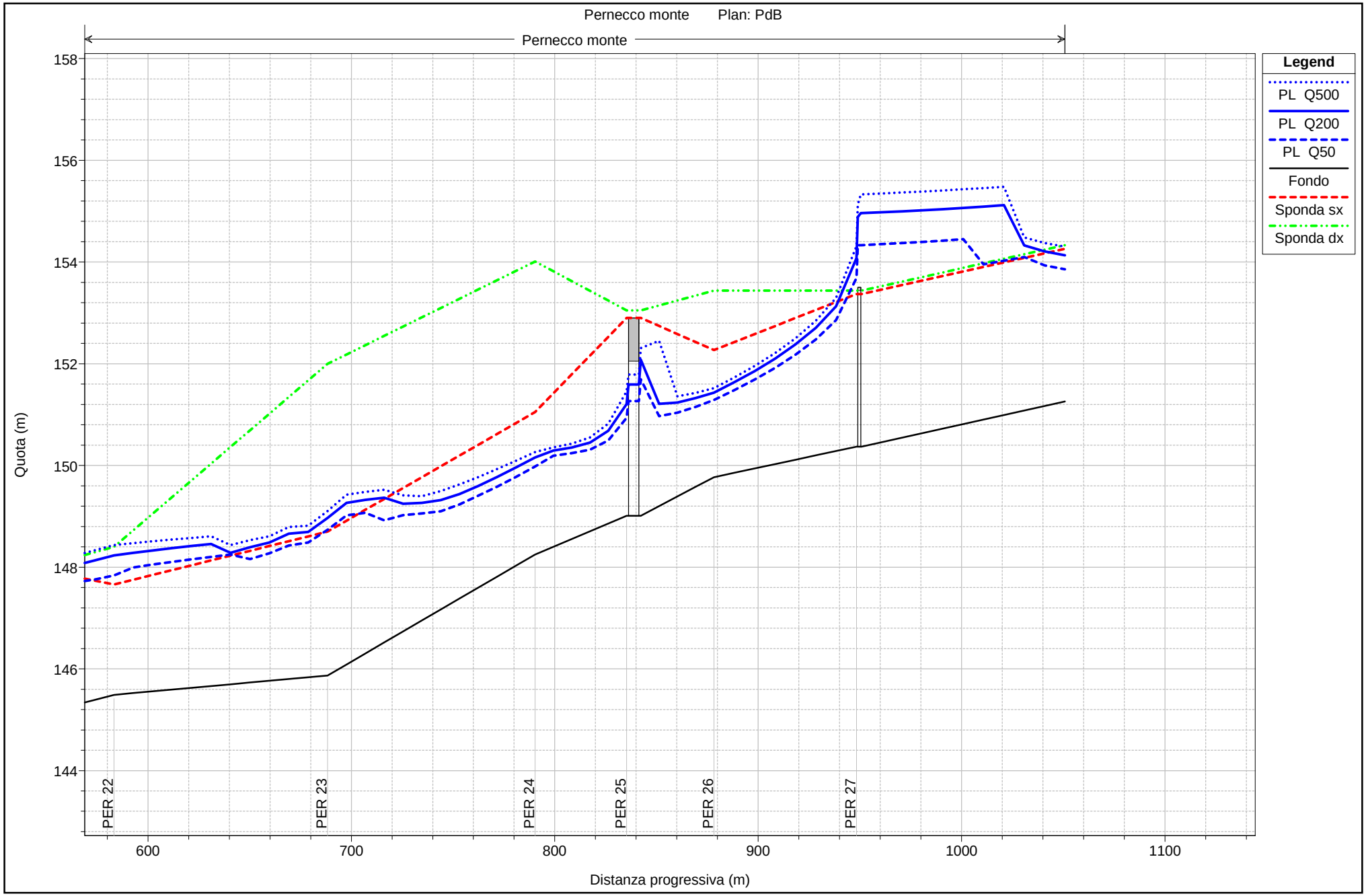
8.9.2 Tratto di monte

Il torrente Pernecco è stato indagato per un tratto di circa 1 km utilizzando le seguenti portate:

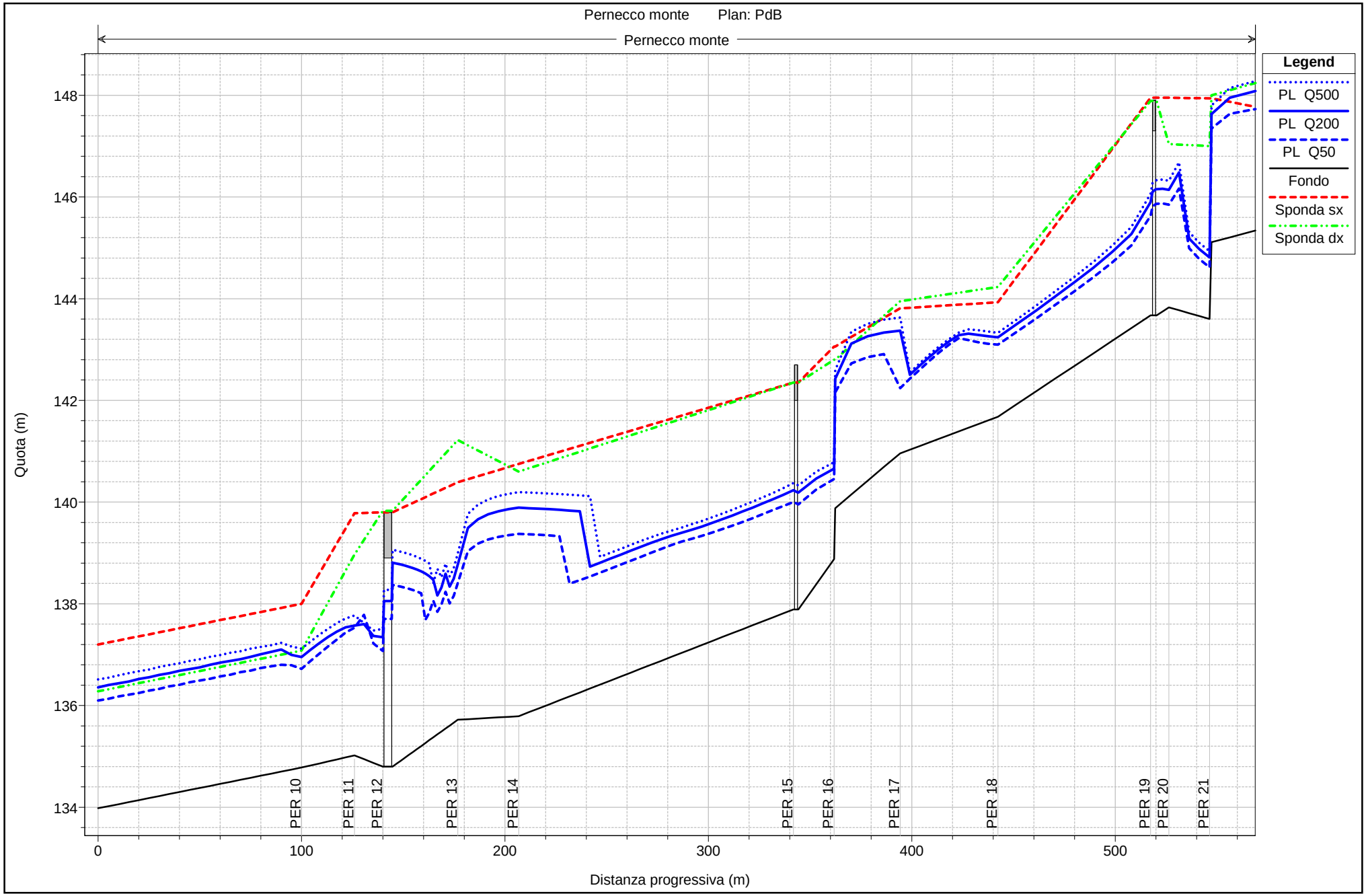
TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
		T = 50 anni	T = 200 anni	T = 500 anni
Torrente Pernecco	PER	176	218	245

Come condizioni al contorno a monte e a valle è stata imposta la profondità uniforme associata alla pendenza media del rispettivo tratto.

Nelle simulazioni è stato assegnato un valore del coefficiente di scabrezza k_s di Strickler pari a $35 m^{1/3}/s$.



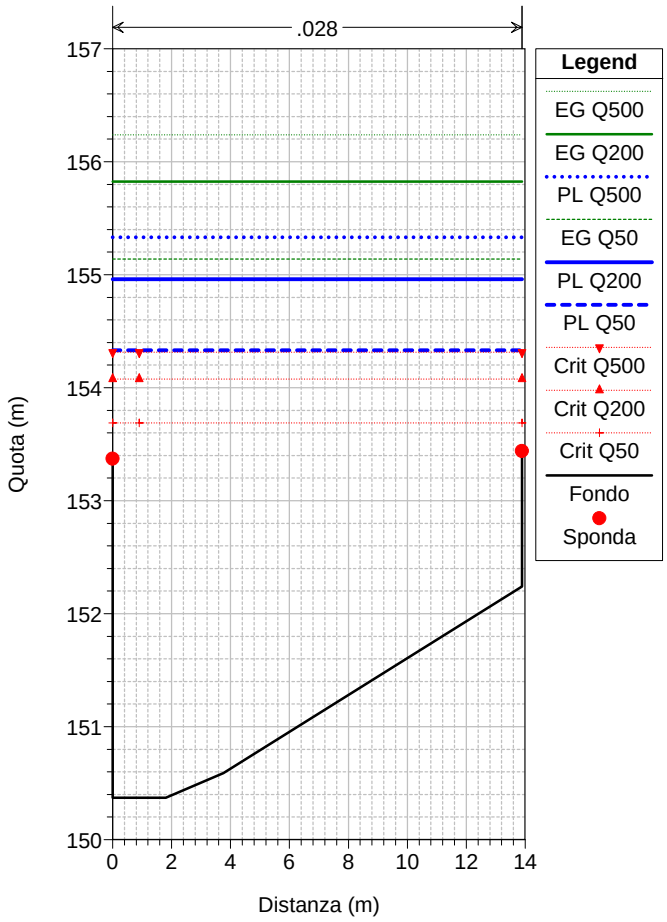
1 cm Horiz. = 25 m 1 cm Vert. = 1 m



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

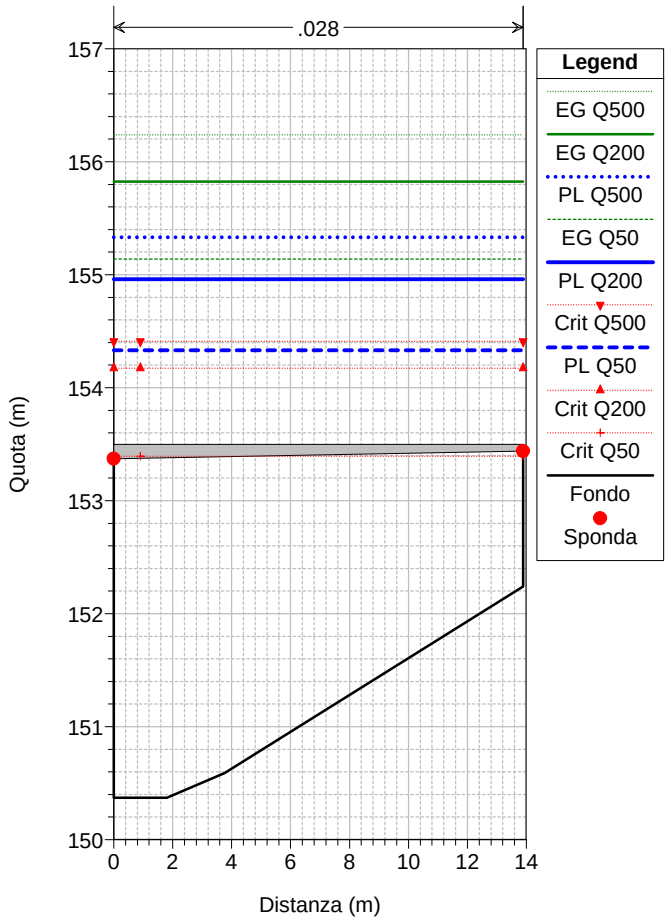
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 27



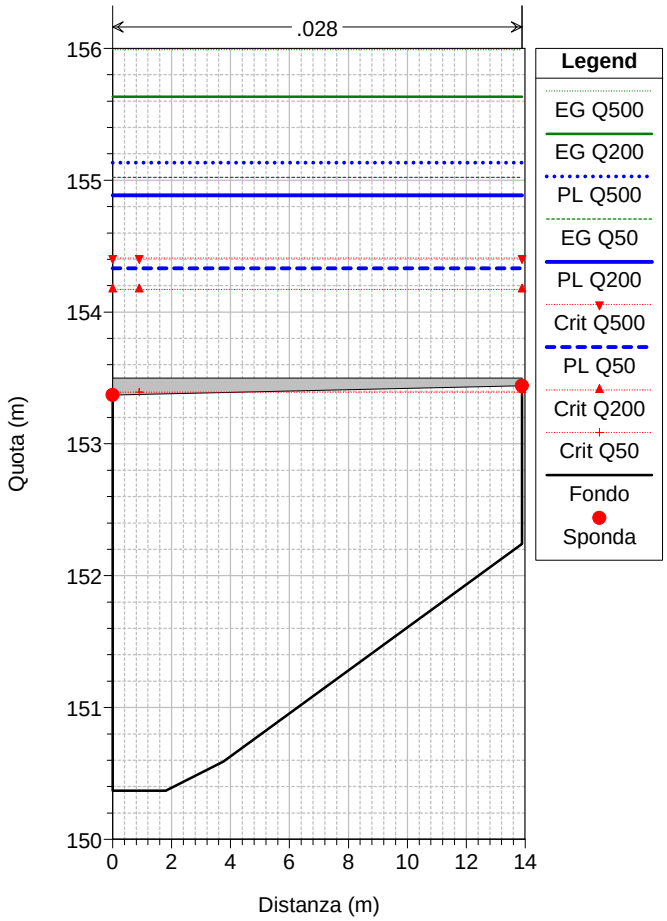
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 27



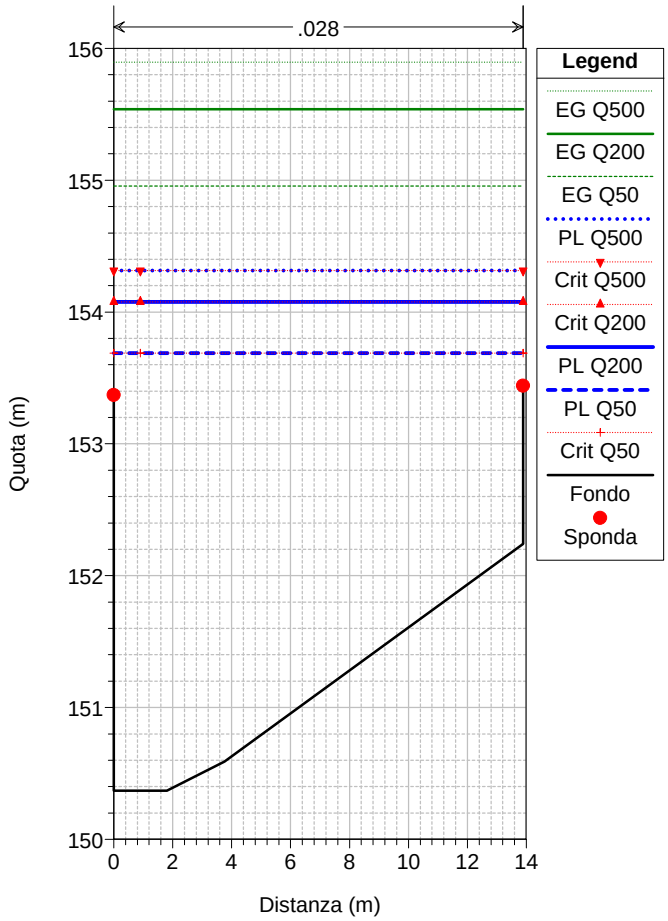
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 27



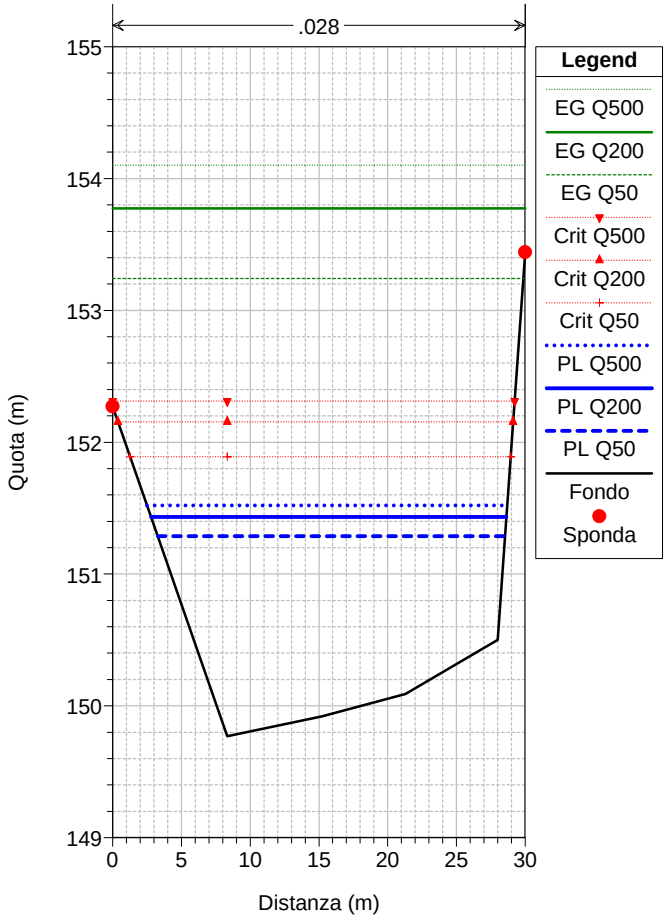
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 27



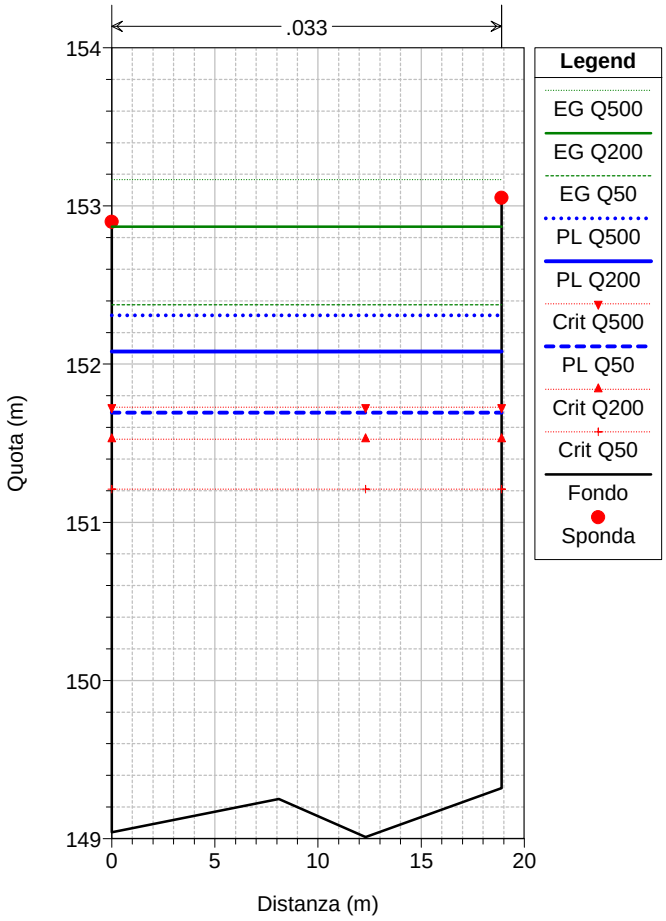
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 26



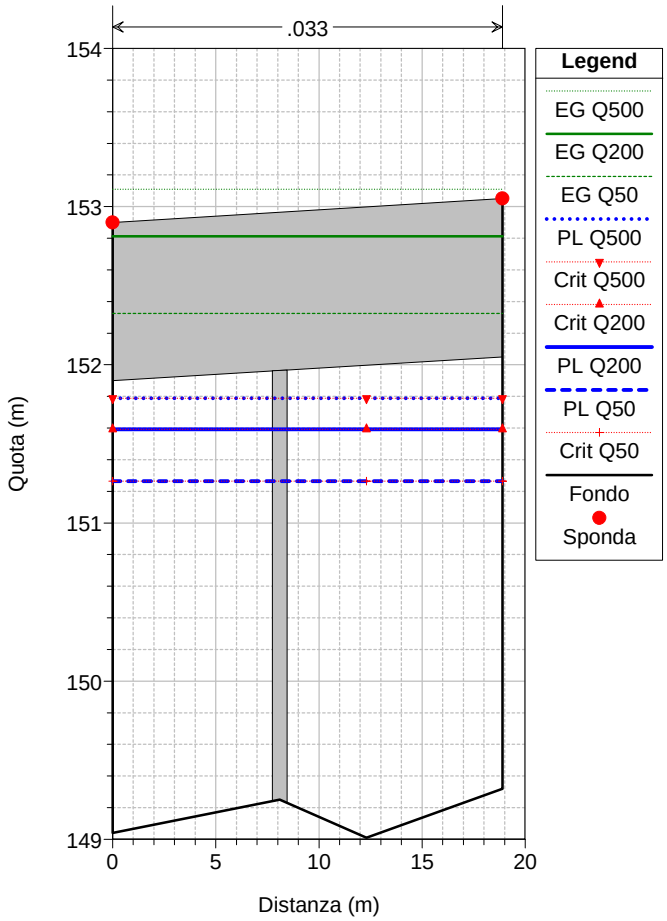
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 25



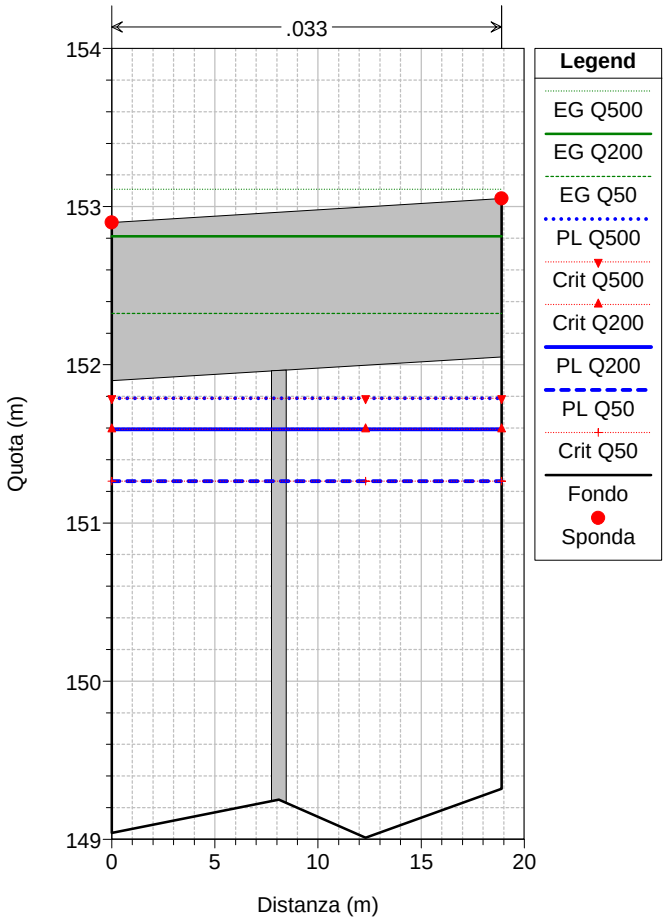
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 25



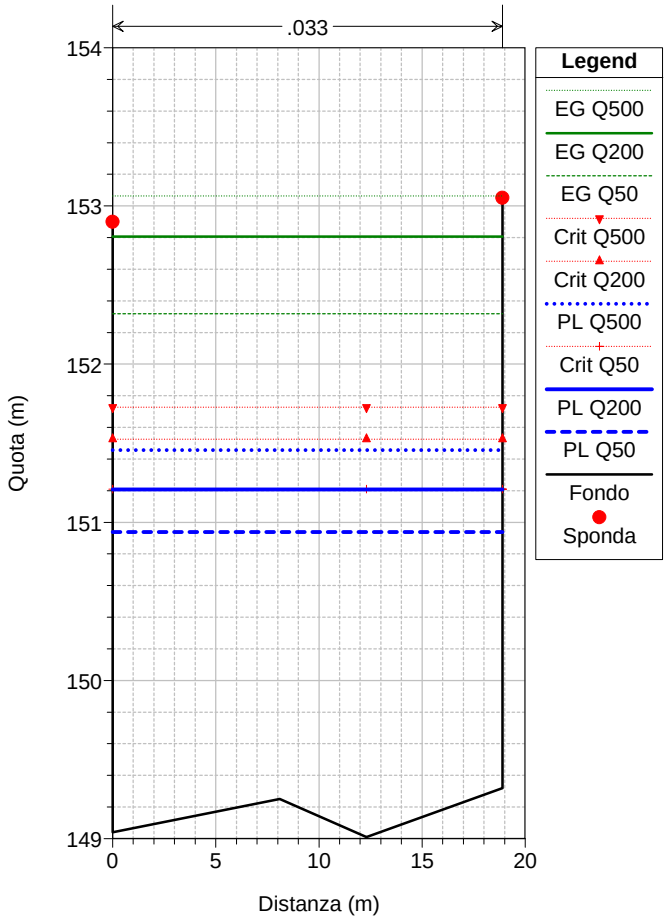
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 25



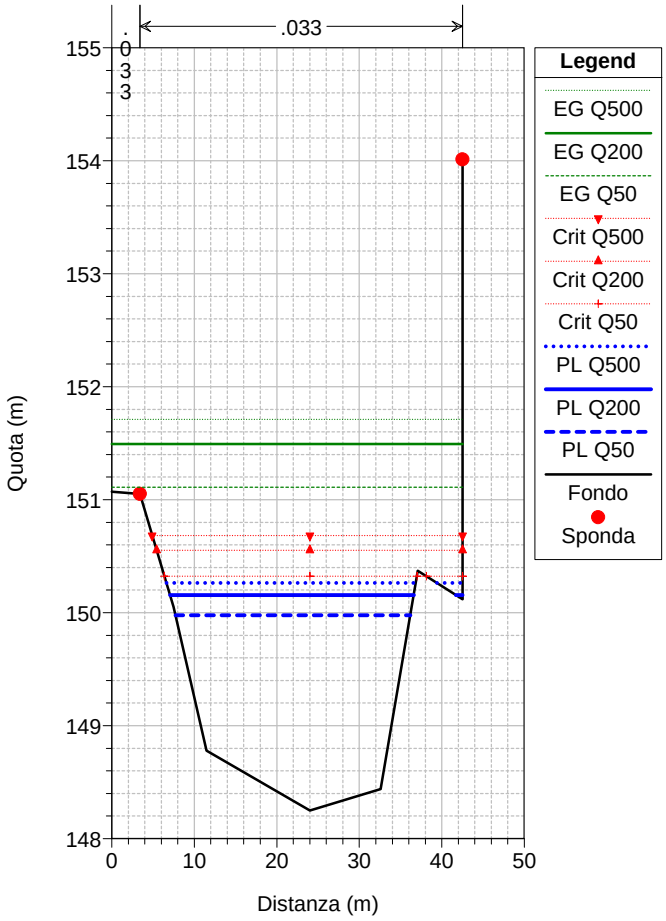
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 25



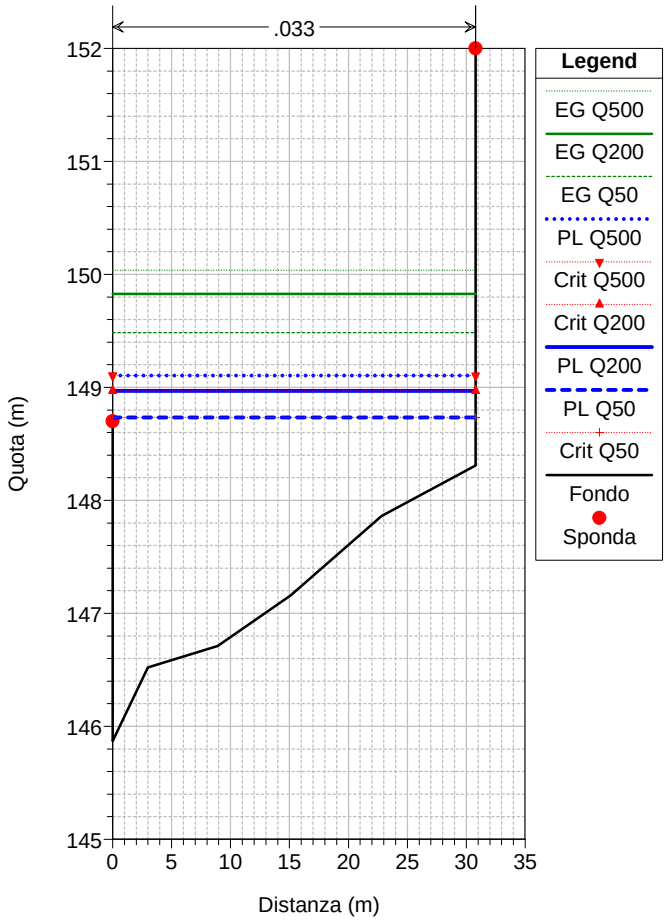
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 24



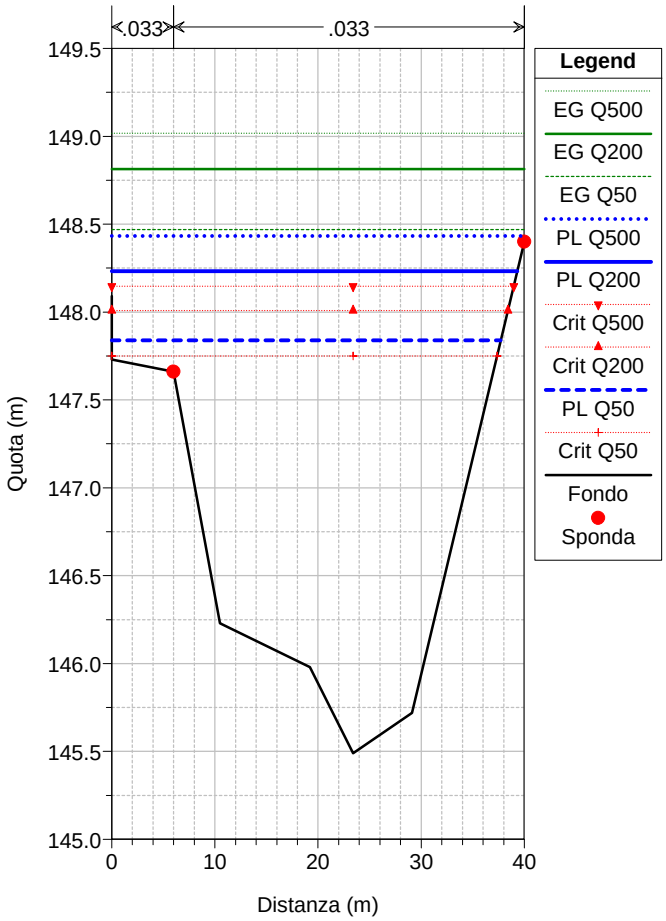
Pernecco monte Plan: PdB

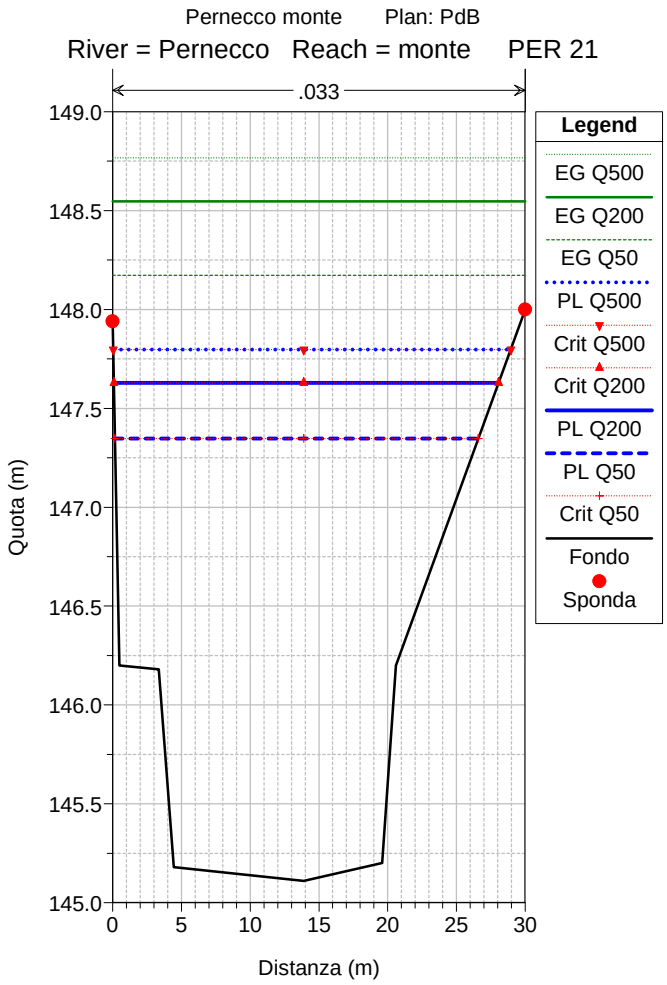
River = Pernecco Reach = monte PER 23

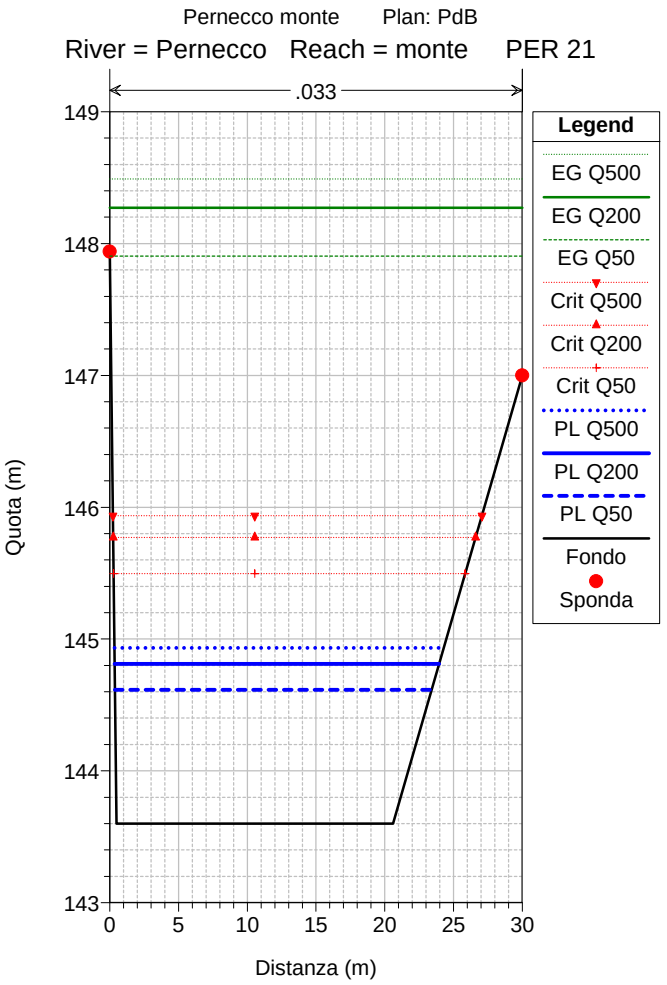


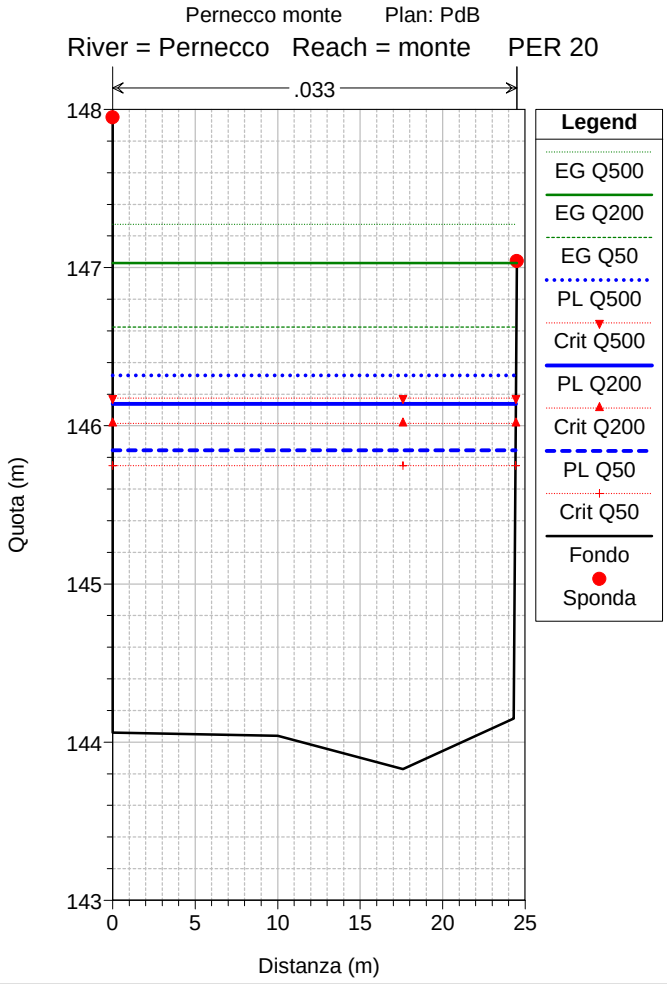
Pernecco monte Plan: PdB

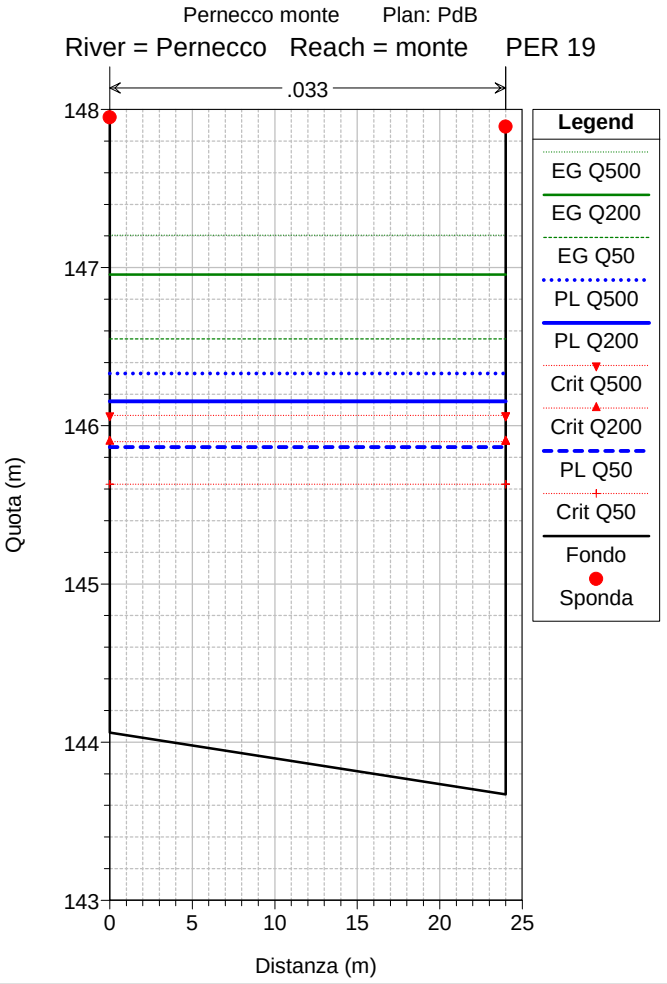
River = Pernecco Reach = monte PER 22

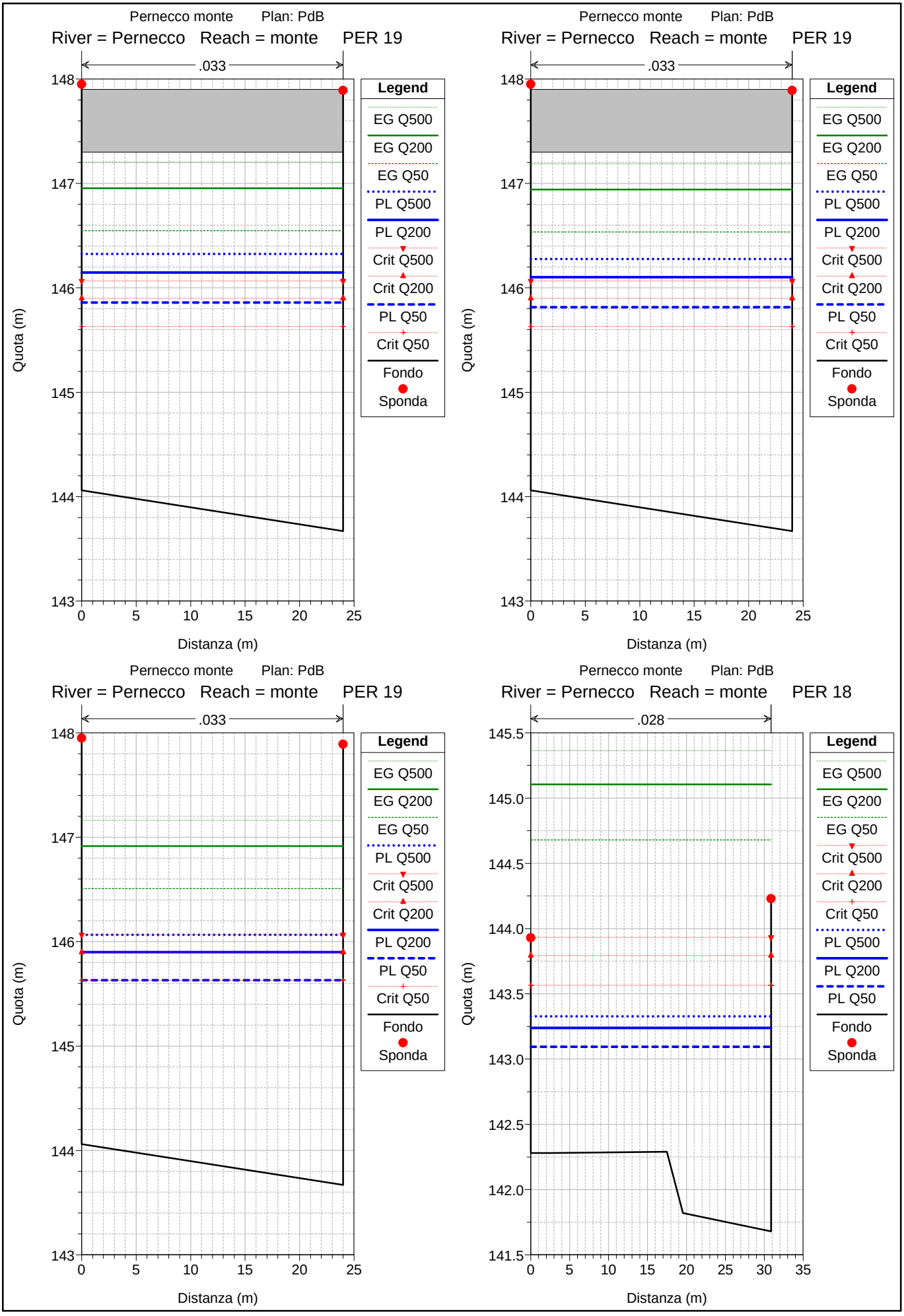



Pernecco monte Plan: PdB
River = Pernecco Reach = monte PER 21
.033
Quota (m)
Distanza (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda


Pernecco monte Plan: PdB
River = Pernecco Reach = monte PER 21
.033
Quota (m)
Distanza (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

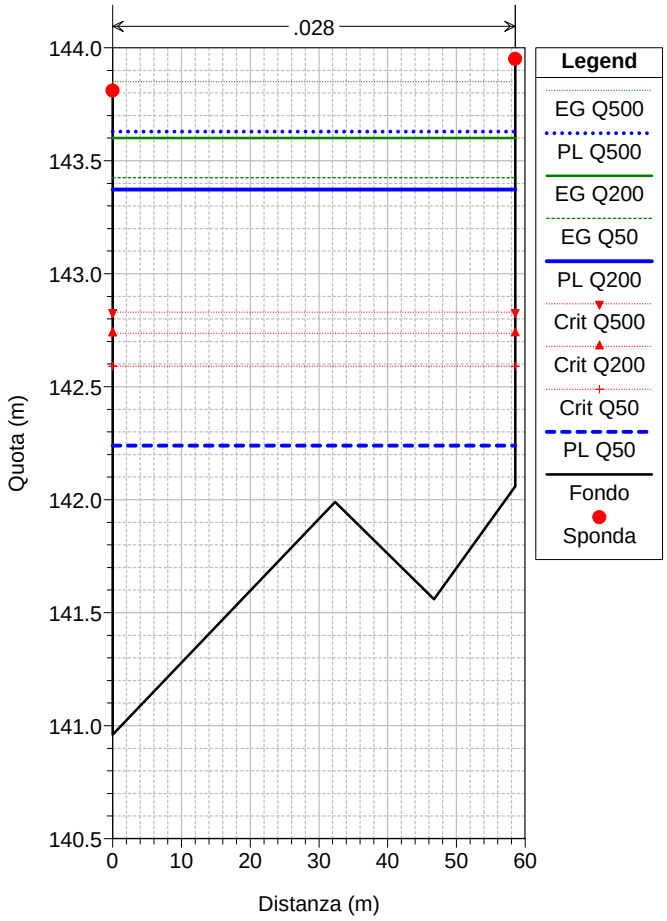

Pernecco monte Plan: PdB
River = Pernecco Reach = monte PER 20
.033
Quota (m)
Distanza (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda


Pernecco monte Plan: PdB
River = Pernecco Reach = monte PER 19
.033
Quota (m)
Distanza (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda


Pernecco monte Plan: PdB
River = Pernecco Reach = monte PER 19
.033
Quota (m)
Distanza (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Pernecco monte Plan: PdB
River = Pernecco Reach = monte PER 19
.033
Quota (m)
Distanza (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Pernecco monte Plan: PdB
River = Pernecco Reach = monte PER 19
.033
Quota (m)
Distanza (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Pernecco monte Plan: PdB
River = Pernecco Reach = monte PER 18
.028
Quota (m)
Distanza (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

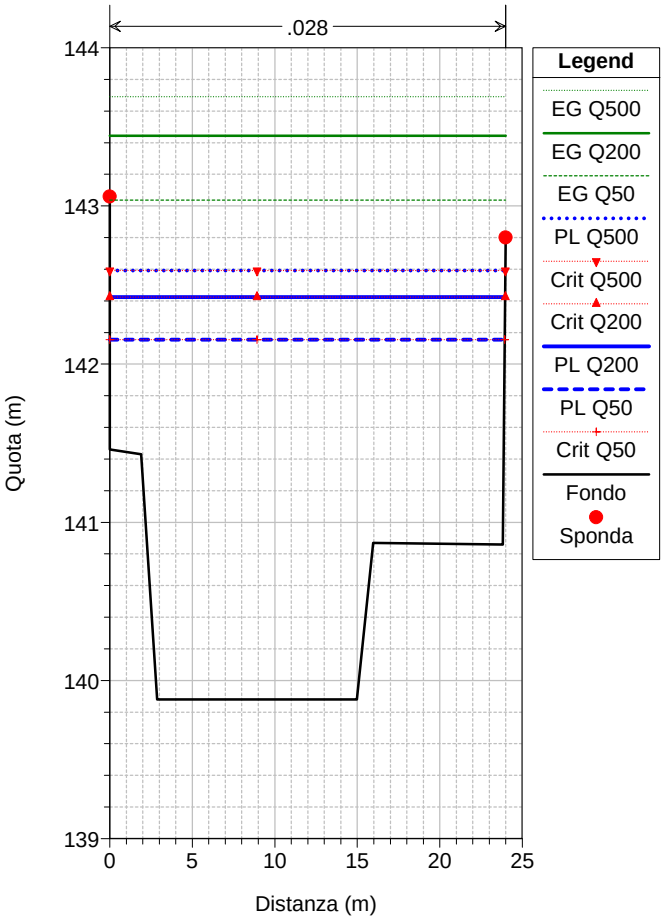
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 17



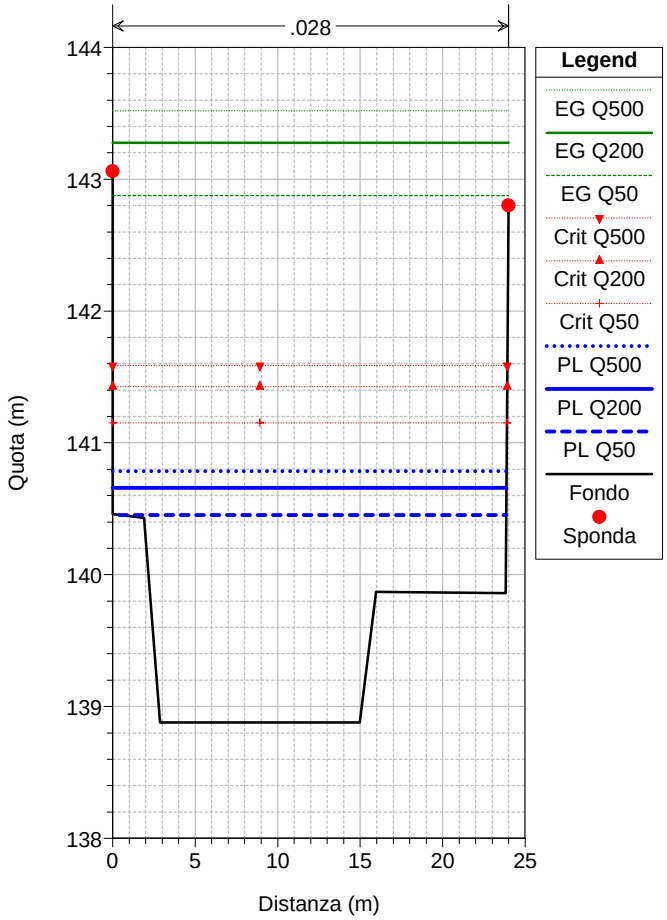
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 16



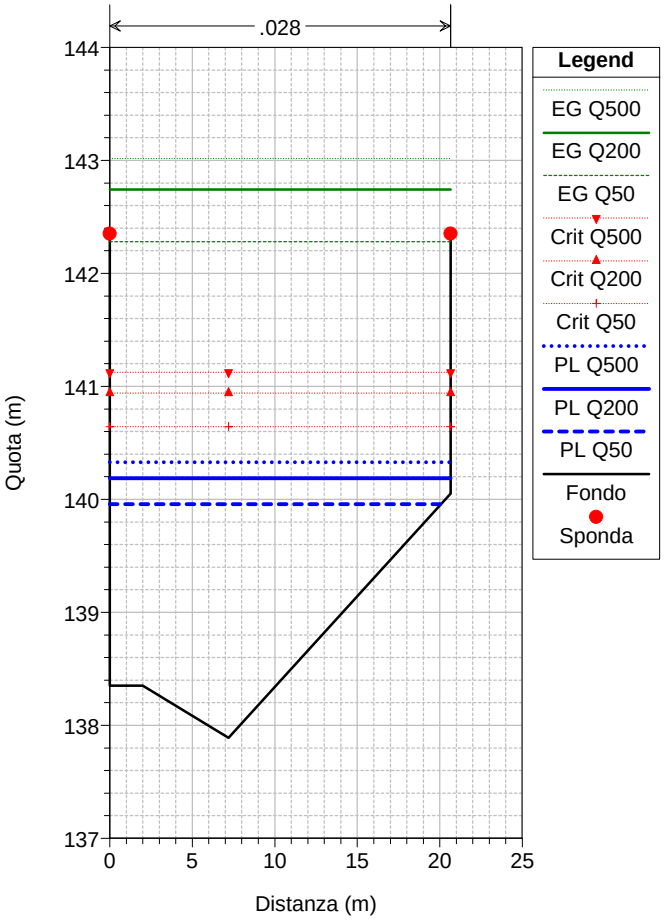
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 16



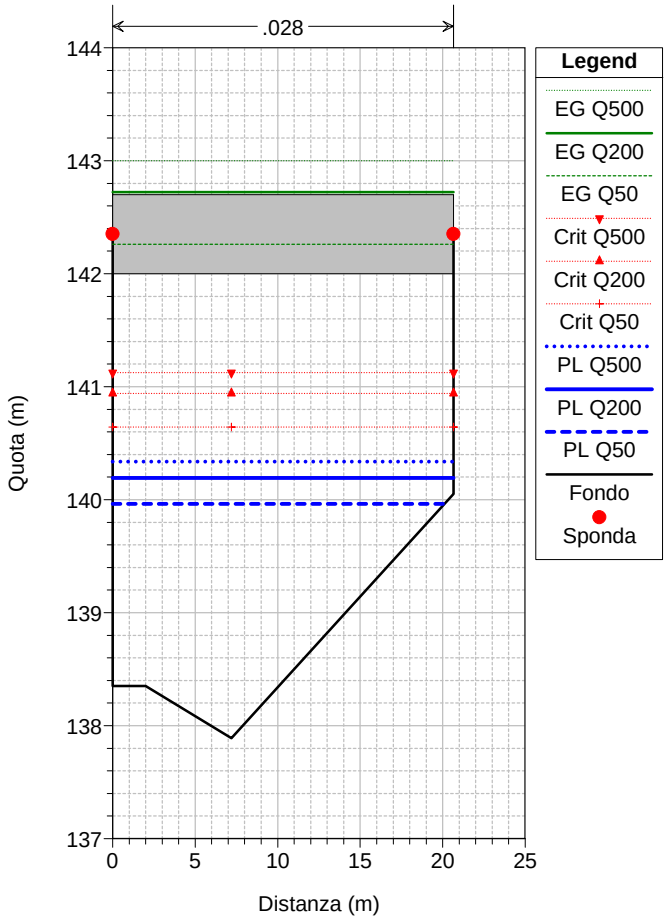
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 15



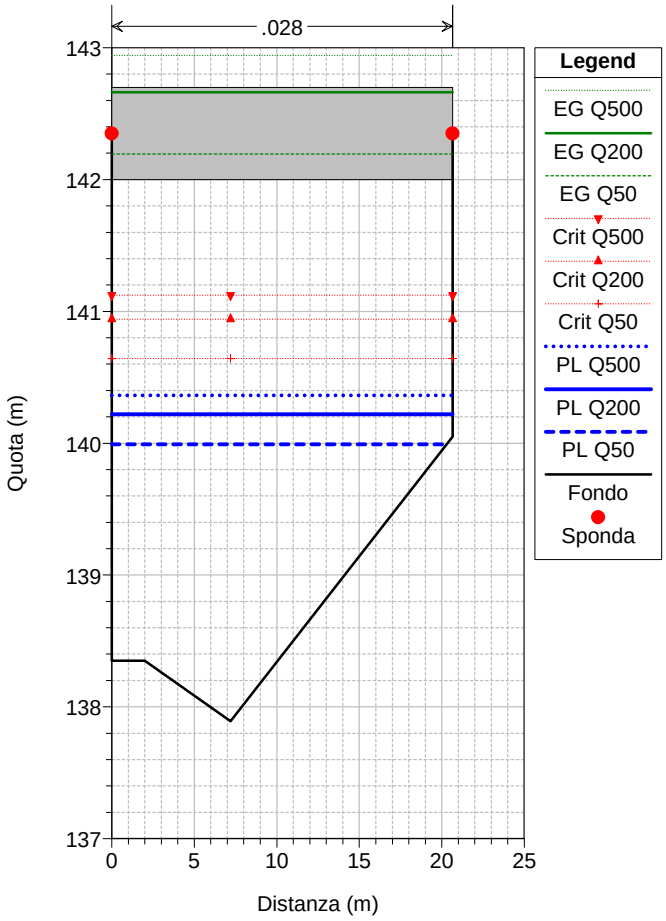
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 15



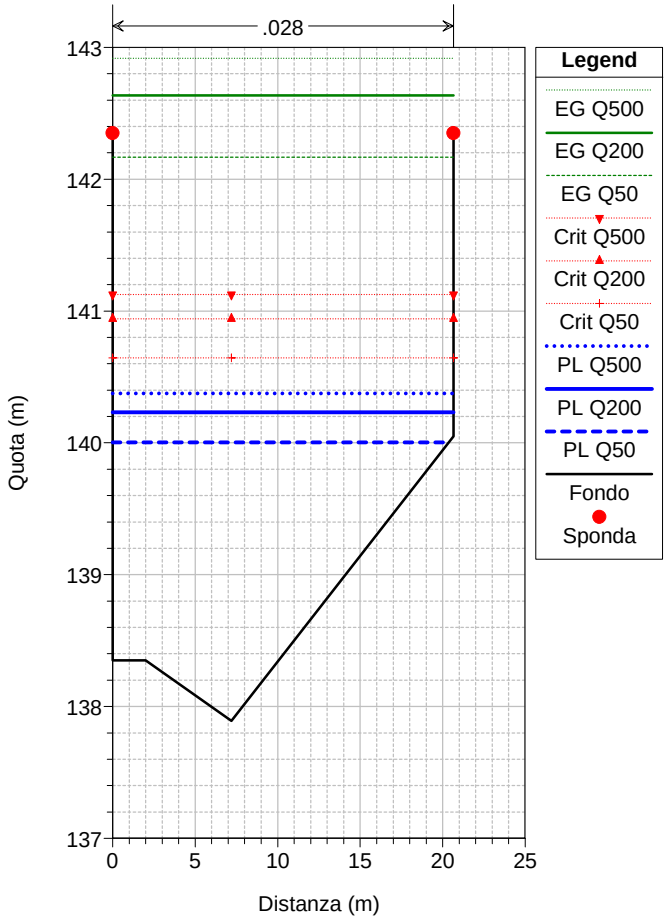
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 15



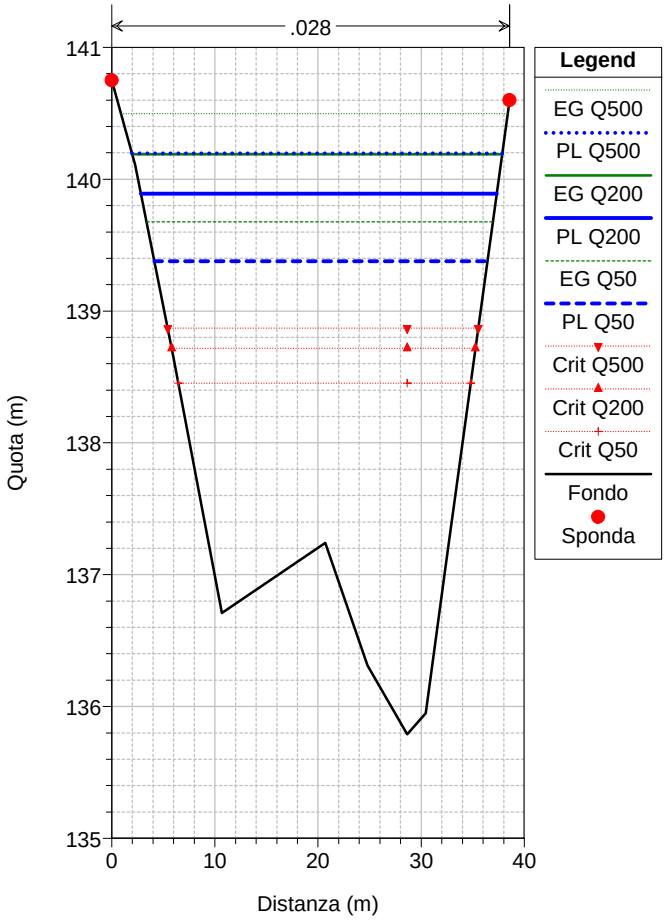
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 15



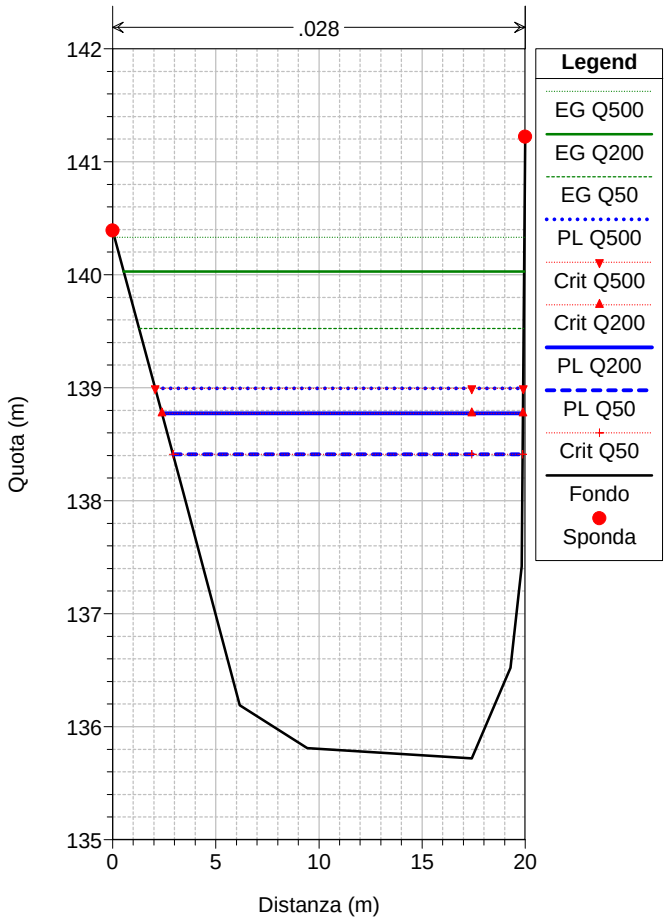
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 14



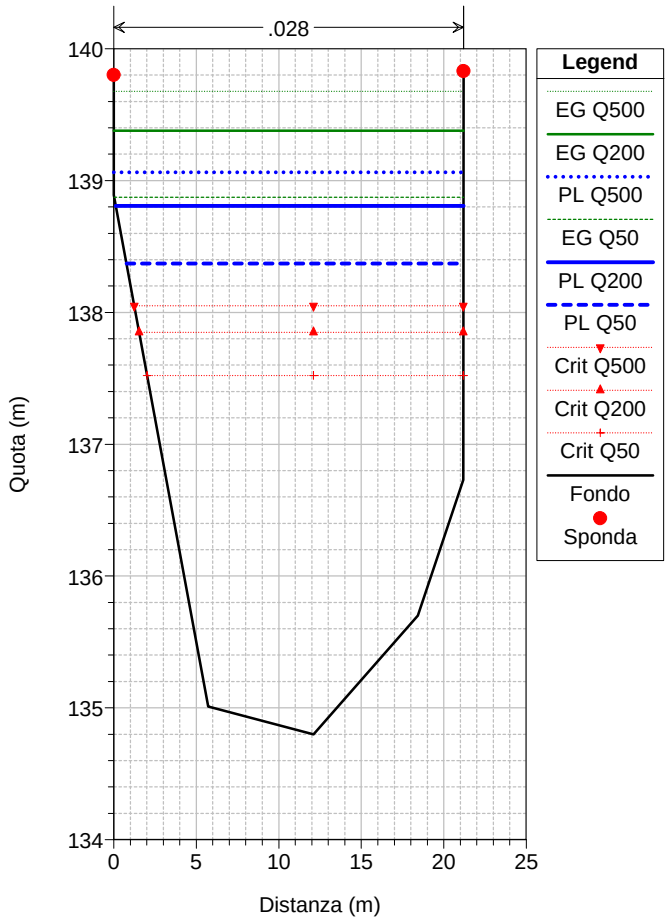
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 13



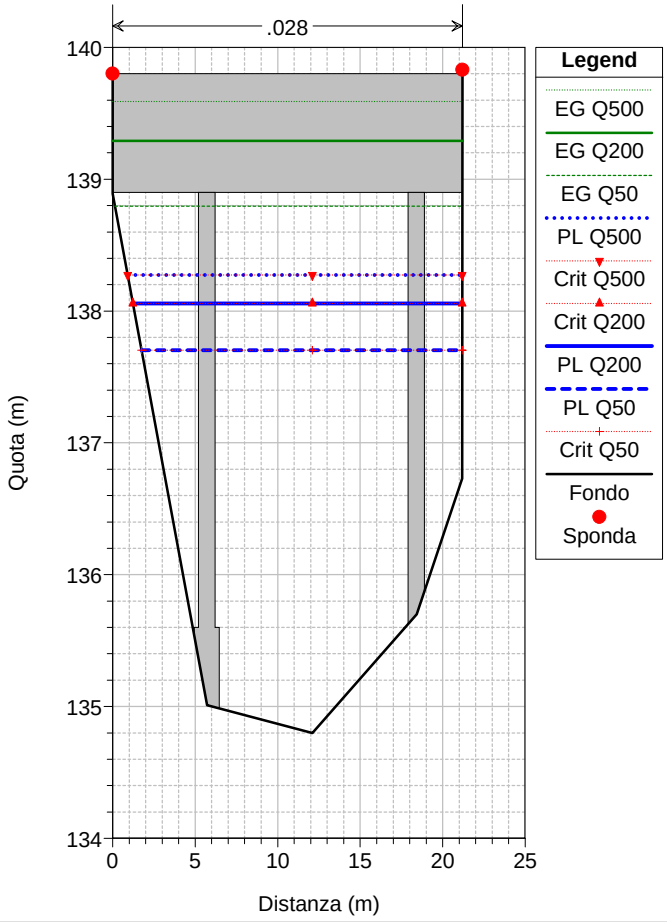
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 12



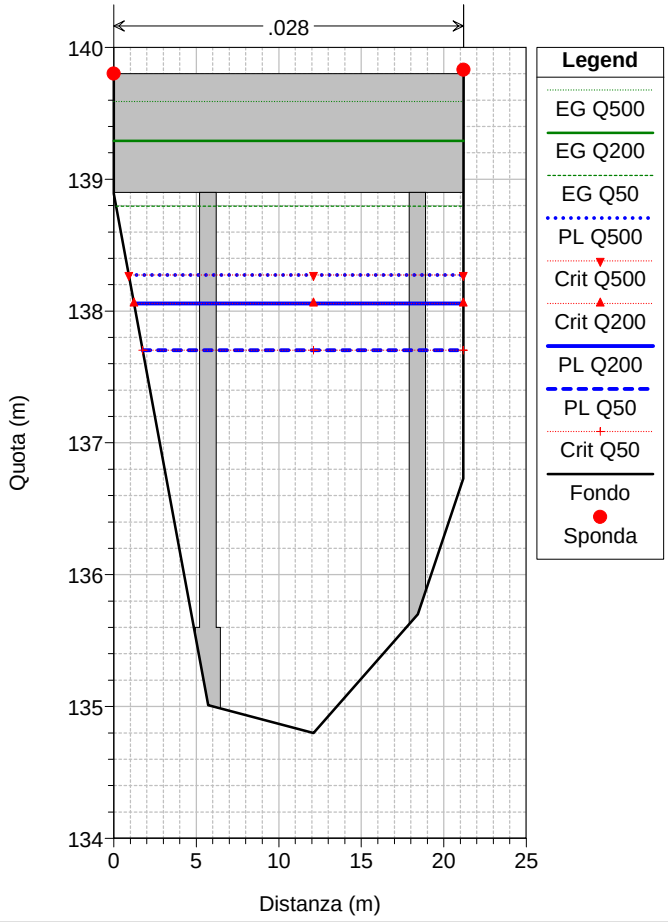
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 12



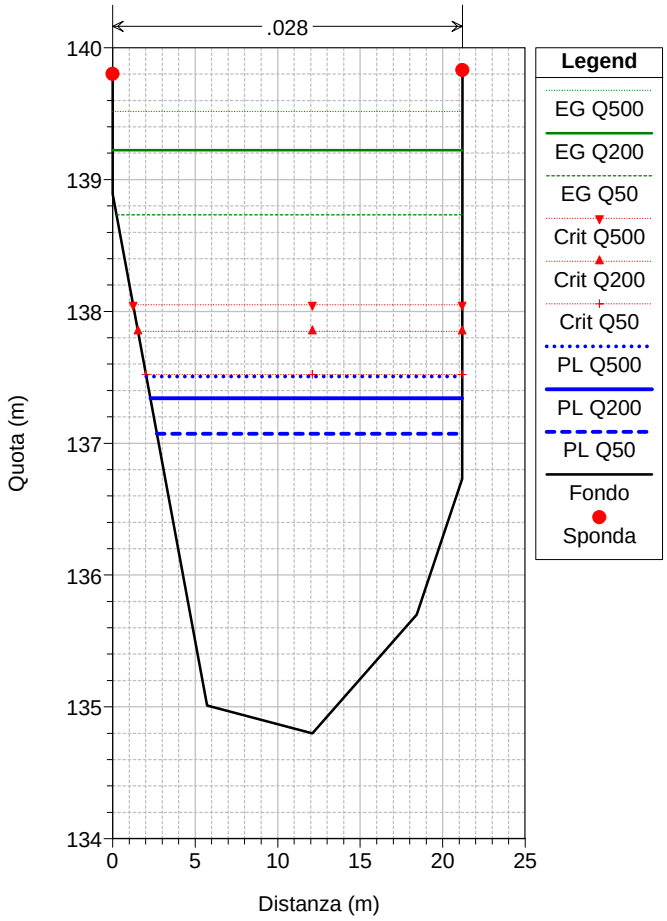
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 12



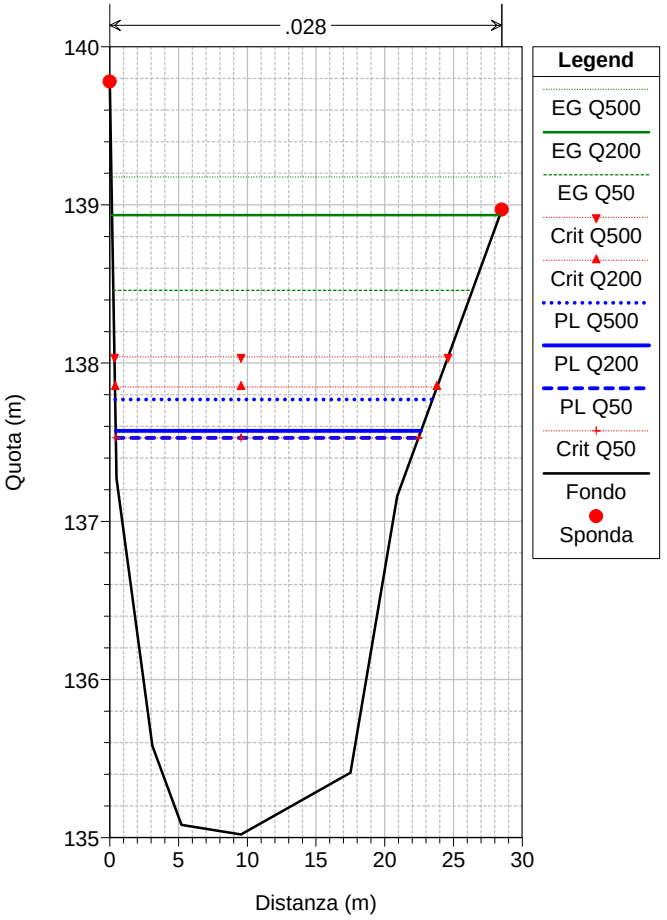
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 12



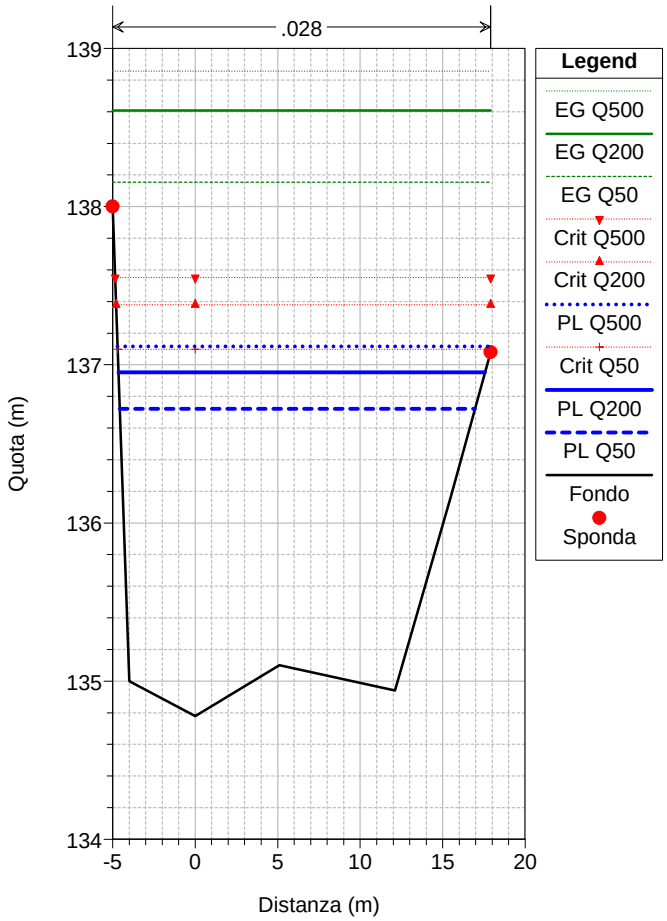
Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 11



Pernecco monte Plan: PdB

River = Pernecco Reach = monte PER 10



HEC-RAS Plan: Plan02 River: Pernecco Reach: monte

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte	1000	Q50	176.00	151.26	153.86	154.26	0.40	154.33	0.47	154.58	156.33	0.023024	6.96	25.28	13.89	1.65
monte	1000	Q200	218.00	151.26	154.13	154.26	0.13	154.33	0.20	154.97	156.99	0.023016	7.49	29.11	13.89	1.65
monte	1000	Q500	245.00	151.26	154.30	154.26	-0.04	154.33	0.03	155.21	157.39	0.023012	7.79	31.46	13.89	1.65
monte	141.1 PER 27	Q50	176.00	150.37	154.33	153.37	-0.96	153.44	-0.89	153.69	155.14	0.004336	3.98	44.23	13.89	0.71
monte	141.1 PER 27	Q200	218.00	150.37	154.96	153.37	-1.59	153.44	-1.52	154.08	155.82	0.003953	4.12	52.97	13.89	0.67
monte	141.1 PER 27	Q500	245.00	150.37	155.33	153.37	-1.96	153.44	-1.89	154.31	156.24	0.003835	4.22	58.12	13.89	0.66
monte	141. PER 27		Bridge													
monte	140.9 PER 27	Q50	176.00	150.37	153.69	153.37	-0.32	153.44	-0.25	153.69	154.96	0.008433	4.99	35.28	13.89	1.00
monte	140.9 PER 27	Q200	218.00	150.37	154.08	153.37	-0.71	153.44	-0.64	154.08	155.54	0.008497	5.36	40.67	13.89	1.00
monte	140.9 PER 27	Q500	245.00	150.37	154.31	153.37	-0.94	153.44	-0.87	154.31	155.89	0.008534	5.57	43.99	13.89	1.00
monte	140. PER 26	Q50	176.00	149.77	151.29	152.27	0.98	153.44	2.15	151.89	153.24	0.026624	6.20	28.41	25.26	1.86
monte	140. PER 26	Q200	218.00	149.77	151.43	152.27	0.84	153.44	2.01	152.16	153.77	0.027972	6.78	32.16	25.85	1.94
monte	140. PER 26	Q500	245.00	149.77	151.52	152.27	0.75	153.44	1.92	152.31	154.10	0.028743	7.12	34.42	26.19	1.98
monte	130 PER 25	Q50	176.00	149.01	151.69	152.90	1.21	153.05	1.36	151.21	152.38	0.005752	3.66	48.10	18.90	0.73
monte	130 PER 25	Q200	218.00	149.01	152.08	152.90	0.82	153.05	0.97	151.52	152.87	0.005755	3.94	55.38	18.90	0.73
monte	130 PER 25	Q500	245.00	149.01	152.31	152.90	0.59	153.05	0.74	151.73	153.17	0.005795	4.10	59.71	18.90	0.74
monte	125 PER 25		Bridge													
monte	120 PER 25	Q50	176.00	149.01	150.94	152.90	1.96	153.05	2.11	151.21	152.32	0.017064	5.20	33.82	18.90	1.24
monte	120 PER 25	Q200	218.00	149.01	151.21	152.90	1.69	153.05	1.84	151.52	152.81	0.016925	5.60	38.91	18.90	1.25
monte	120 PER 25	Q500	245.00	149.01	151.46	152.90	1.44	153.05	1.59	151.73	153.06	0.015043	5.62	43.61	18.90	1.18
monte	110 PER 24	Q50	176.00	148.25	149.98	151.05	1.07	154.01	4.03	150.32	151.11	0.017233	4.71	37.35	28.46	1.31
monte	110 PER 24	Q200	218.00	148.25	150.16	151.05	0.89	154.01	3.85	150.55	151.49	0.018698	5.12	42.56	30.34	1.38
monte	110 PER 24	Q500	245.00	148.25	150.26	151.05	0.79	154.01	3.75	150.68	151.71	0.020799	5.33	45.94	33.33	1.45
monte	100 PER 23	Q50	176.00	145.87	148.73	148.70	-0.03	152.00	3.27	148.73	149.48	0.010846	3.84	45.87	30.80	1.00
monte	100 PER 23	Q200	218.00	145.87	148.97	148.70	-0.27	152.00	3.03	148.97	149.83	0.010392	4.10	53.12	30.80	1.00
monte	100 PER 23	Q500	245.00	145.87	149.11	148.70	-0.41	152.00	2.89	149.11	150.04	0.010287	4.27	57.33	30.80	1.00
monte	80 PER 22	Q50	176.00	145.49	147.84	147.66	-0.18	148.40	0.56	147.75	148.47	0.007555	3.52	50.68	37.72	0.90
monte	80 PER 22	Q200	218.00	145.49	148.23	147.66	-0.57	148.40	0.17	148.01	148.81	0.005583	3.41	65.82	39.32	0.79
monte	80 PER 22	Q500	245.00	145.49	148.43	147.66	-0.77	148.40	-0.03	148.15	149.02	0.005059	3.43	73.82	40.00	0.77
monte	70 PER 21	Q50	176.00	145.11	147.35	147.94	0.59	148.00	0.65	147.35	148.17	0.009847	4.03	43.70	26.42	1.00
monte	70 PER 21	Q200	218.00	145.11	147.63	147.94	0.31	148.00	0.37	147.63	148.55	0.009561	4.24	51.38	27.97	1.00
monte	70 PER 21	Q500	245.00	145.11	147.80	147.94	0.14	148.00	0.20	147.80	148.77	0.009402	4.36	56.17	28.90	1.00
monte	69 PER 21	Q50	176.00	143.60	144.62	147.94	3.32	147.00	2.38	145.50	147.91	0.079909	8.04	21.90	23.03	2.63
monte	69 PER 21	Q200	218.00	143.60	144.81	147.94	3.13	147.00	2.19	145.77	148.27	0.068190	8.24	26.45	23.59	2.48
monte	69 PER 21	Q500	245.00	143.60	144.93	147.94	3.01	147.00	2.07	145.94	148.49	0.062664	8.36	29.32	23.94	2.41
monte	63 PER 20	Q50	176.00	143.83	145.85	147.95	2.10	147.04	1.19	145.75	146.62	0.008751	3.91	45.02	24.42	0.92

HEC-RAS Plan: Plan02 River: Pernecco Reach: monte (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte	63 PER 20	Q200	218.00	143.83	146.14	147.95	1.81	147.04	0.90	146.01	147.03	0.008438	4.18	52.18	24.44	0.91
monte	63 PER 20	Q500	245.00	143.83	146.32	147.95	1.63	147.04	0.72	146.17	147.27	0.008273	4.33	56.59	24.45	0.91
monte	61 PER 19	Q50	176.00	143.67	145.86	147.95	2.08	147.89	2.02	145.63	146.55	0.007138	3.67	48.00	24.00	0.83
monte	61 PER 19	Q200	218.00	143.67	146.15	147.95	1.80	147.89	1.74	145.90	146.96	0.007178	3.97	54.93	24.00	0.84
monte	61 PER 19	Q500	245.00	143.67	146.33	147.95	1.62	147.89	1.56	146.07	147.20	0.007190	4.14	59.18	24.00	0.84
monte	60 PER 19		Bridge													
monte	59 PER 19	Q50	176.00	143.67	145.63	147.95	2.32	147.89	2.26	145.63	146.51	0.010590	4.16	42.35	24.00	1.00
monte	59 PER 19	Q200	218.00	143.67	145.90	147.95	2.05	147.89	1.99	145.90	146.92	0.010391	4.47	48.81	24.00	1.00
monte	59 PER 19	Q500	245.00	143.67	146.07	147.95	1.88	147.89	1.82	146.07	147.16	0.010258	4.64	52.80	24.00	1.00
monte	4 PER 18	Q50	176.00	141.68	143.09	143.93	0.84	144.23	1.14	143.57	144.68	0.026045	5.58	31.56	30.88	1.76
monte	4 PER 18	Q200	218.00	141.68	143.24	143.93	0.69	144.23	0.99	143.79	145.11	0.026023	6.05	36.02	30.88	1.79
monte	4 PER 18	Q500	245.00	141.68	143.33	143.93	0.60	144.23	0.90	143.93	145.36	0.025940	6.32	38.75	30.88	1.80
monte	3 PER 17	Q50	176.00	140.96	142.24	143.81	1.57	143.95	1.71	142.59	143.43	0.035487	4.82	36.48	58.58	1.95
monte	3 PER 17	Q200	218.00	140.96	143.37	143.81	0.44	143.95	0.58	142.74	143.60	0.001807	2.12	102.84	58.58	0.51
monte	3 PER 17	Q500	245.00	140.96	143.63	143.81	0.18	143.95	0.32	142.83	143.85	0.001462	2.08	117.93	58.58	0.47
monte	2 PER 16	Q50	176.00	139.88	142.15	143.06	0.91	142.80	0.65	142.15	143.04	0.007499	4.16	42.28	23.94	1.00
monte	2 PER 16	Q200	218.00	139.88	142.42	143.06	0.64	142.80	0.38	142.42	143.44	0.007354	4.47	48.74	23.96	1.00
monte	2 PER 16	Q500	245.00	139.88	142.59	143.06	0.47	142.80	0.21	142.59	143.69	0.007260	4.65	52.73	23.98	1.00
monte	1.9 PER 16	Q50	176.00	138.88	140.45	143.06	2.61	142.80	2.35	141.15	142.88	0.036785	6.90	25.52	23.44	2.11
monte	1.9 PER 16	Q200	218.00	138.88	140.66	143.06	2.40	142.80	2.14	141.43	143.28	0.032822	7.17	30.41	23.86	2.03
monte	1.9 PER 16	Q500	245.00	138.88	140.79	143.06	2.27	142.80	2.01	141.59	143.52	0.030609	7.33	33.44	23.87	1.98
monte	1.2 PER 15	Q50	176.00	137.89	139.96	142.35	2.39	142.35	2.39	140.64	142.28	0.028283	6.75	26.07	20.08	1.89
monte	1.2 PER 15	Q200	218.00	137.89	140.19	142.35	2.16	142.35	2.16	140.94	142.74	0.026394	7.08	30.78	20.66	1.85
monte	1.2 PER 15	Q500	245.00	137.89	140.33	142.35	2.02	142.35	2.02	141.12	143.02	0.025011	7.27	33.72	20.66	1.82
monte	1.1 PER 15		Bridge													
monte	1 PER 15	Q50	176.00	137.89	140.00	142.35	2.35	142.35	2.35	140.64	142.17	0.025668	6.52	27.00	20.37	1.81
monte	1 PER 15	Q200	218.00	137.89	140.23	142.35	2.12	142.35	2.12	140.94	142.64	0.023958	6.87	31.74	20.66	1.77
monte	1 PER 15	Q500	245.00	137.89	140.38	142.35	1.97	142.35	1.97	141.12	142.92	0.022870	7.06	34.69	20.66	1.74
monte	0.9 PER 14	Q50	176.00	135.79	139.38	140.75	1.37	140.60	1.22	138.45	139.68	0.001659	2.42	72.72	32.29	0.51
monte	0.9 PER 14	Q200	218.00	135.79	139.89	140.75	0.86	140.60	0.71	138.72	140.19	0.001380	2.43	89.83	34.49	0.48
monte	0.9 PER 14	Q500	245.00	135.79	140.20	140.75	0.55	140.60	0.40	138.87	140.50	0.001263	2.44	100.59	35.89	0.46
monte	0.8 PER 13	Q50	176.00	135.72	138.41	140.39	1.98	141.22	2.81	138.41	139.52	0.007009	4.67	37.66	16.94	1.00
monte	0.8 PER 13	Q200	218.00	135.72	138.77	140.39	1.62	141.22	2.45	138.77	140.03	0.006902	4.97	43.91	17.50	1.00
monte	0.8 PER 13	Q500	245.00	135.72	138.99	140.39	1.40	141.22	2.23	138.99	140.33	0.006831	5.12	47.81	17.83	1.00
monte	0.71 PER 12	Q50	176.00	134.80	138.37	139.80	1.43	139.83	1.46	137.52	138.87	0.002395	3.14	56.10	20.42	0.60
monte	0.71 PER 12	Q200	218.00	134.80	138.81	139.80	0.99	139.83	1.02	137.85	139.38	0.002386	3.34	65.17	21.07	0.61

HEC-RAS Plan: Plan02 River: Pernecco Reach: monte (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte	0.71 PER 12	Q500	245.00	134.80	139.06	139.80	0.74	139.83	0.77	138.05	139.68	0.002385	3.47	70.56	21.19	0.61
monte	0.7 PER 12		Bridge													
monte	0.69 PER 12	Q50	176.00	134.80	137.07	139.80	2.73	139.83	2.76	137.52	138.73	0.014103	5.71	30.81	18.49	1.41
monte	0.69 PER 12	Q200	218.00	134.80	137.34	139.80	2.46	139.83	2.49	137.85	139.22	0.013695	6.08	35.88	18.89	1.41
monte	0.69 PER 12	Q500	245.00	134.80	137.51	139.80	2.29	139.83	2.32	138.05	139.52	0.013474	6.28	39.01	19.14	1.40
monte	0.6 PER 11	Q50	176.00	135.02	137.53	139.78	2.25	138.97	1.44	137.53	138.46	0.006694	4.28	41.15	22.00	1.00
monte	0.6 PER 11	Q200	218.00	135.02	137.57	139.78	2.21	138.97	1.40	137.85	138.94	0.009633	5.18	42.12	22.19	1.20
monte	0.6 PER 11	Q500	245.00	135.02	137.77	139.78	2.01	138.97	1.20	138.04	139.18	0.009191	5.25	46.64	23.07	1.18
monte	0.5 PER 10	Q50	176.00	134.78	136.72	138.00	1.28	137.08	0.36	137.10	138.15	0.013595	5.30	33.20	21.53	1.36
monte	0.5 PER 10	Q200	218.00	134.78	136.95	138.00	1.05	137.08	0.13	137.38	138.61	0.013687	5.70	38.24	22.22	1.39
monte	0.5 PER 10	Q500	245.00	134.78	137.12	138.00	0.88	137.08	-0.04	137.55	138.86	0.013126	5.84	41.93	22.61	1.37
monte	0.01	Q50	176.00	133.98	136.10	137.20	1.10	136.28	0.18	136.29	137.25	0.009811	4.75	37.04	22.05	1.17
monte	0.01	Q200	218.00	133.98	136.36	137.20	0.84	136.28	-0.08	136.58	137.68	0.009718	5.09	42.84	22.62	1.18
monte	0.01	Q500	245.00	133.98	136.51	137.20	0.69	136.28	-0.23	136.76	137.94	0.009608	5.29	46.34	22.67	1.18

9 TORRENTE RICCO'

9 TORRENTE RICCO'
9.1 Dalla confluenza con il torrente Verde fino alla briglia (a circa 400m)
9.2 Dalla briglia a monte confluenza con il torrente Verde fino a circa 400m a monte della confluenza con il rio Paveto
9.2.1 Affluente Senza Nome in località Ferriera
9.2.2 Affluente A
9.2.3 Affluente B
9.2.4 Affluente C
9.2.5 Rio Paveto
9.2.6 Rio Case'
9.3 Località Ponterosso: Riccò, Pallareto e Montanesi

9.1 Dalla confluenza con il torrente Verde fino alla briglia (a circa 400m)

È stata effettuata la simulazione idraulica della confluenza del torrente Riccò con il torrente Verde suddividendo il tratto in corrispondenza della briglia circa 400 m più a monte della confluenza. La simulazione della confluenza è stata effettuata nella configurazione che prevede la portata al colmo con tempo di ritorno assegnato a valle sul T.Polcevera e sul T. Riccò, mentre sul T. Verde a monte della confluenza è imposta, ai fini della conservazione della massa, la differenza delle portate.

	TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
			T = 50 anni	T = 200 anni	T = 500 anni
Riccò in piena	Torrente Verde	differenza	381	480	529
	Torrente Riccò	RIC4	299	380	431
	Torrente Polcevera	POL1t	680	860	960

Come condizioni al contorno è stata imposta la profondità critica a monte in corrispondenza della briglia ed è stata studiata la confluenza a valle.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza ks di Strickler pari a 30 $m^{1/3}/s$.

Per le verifiche si rimanda al fascicolo relativo all'asta principale del torrente Polcevera.

9.2 Dalla briglia a monte confluenza con il torrente Verde fino a circa 400m a monte della confluenza con il rio Paveto

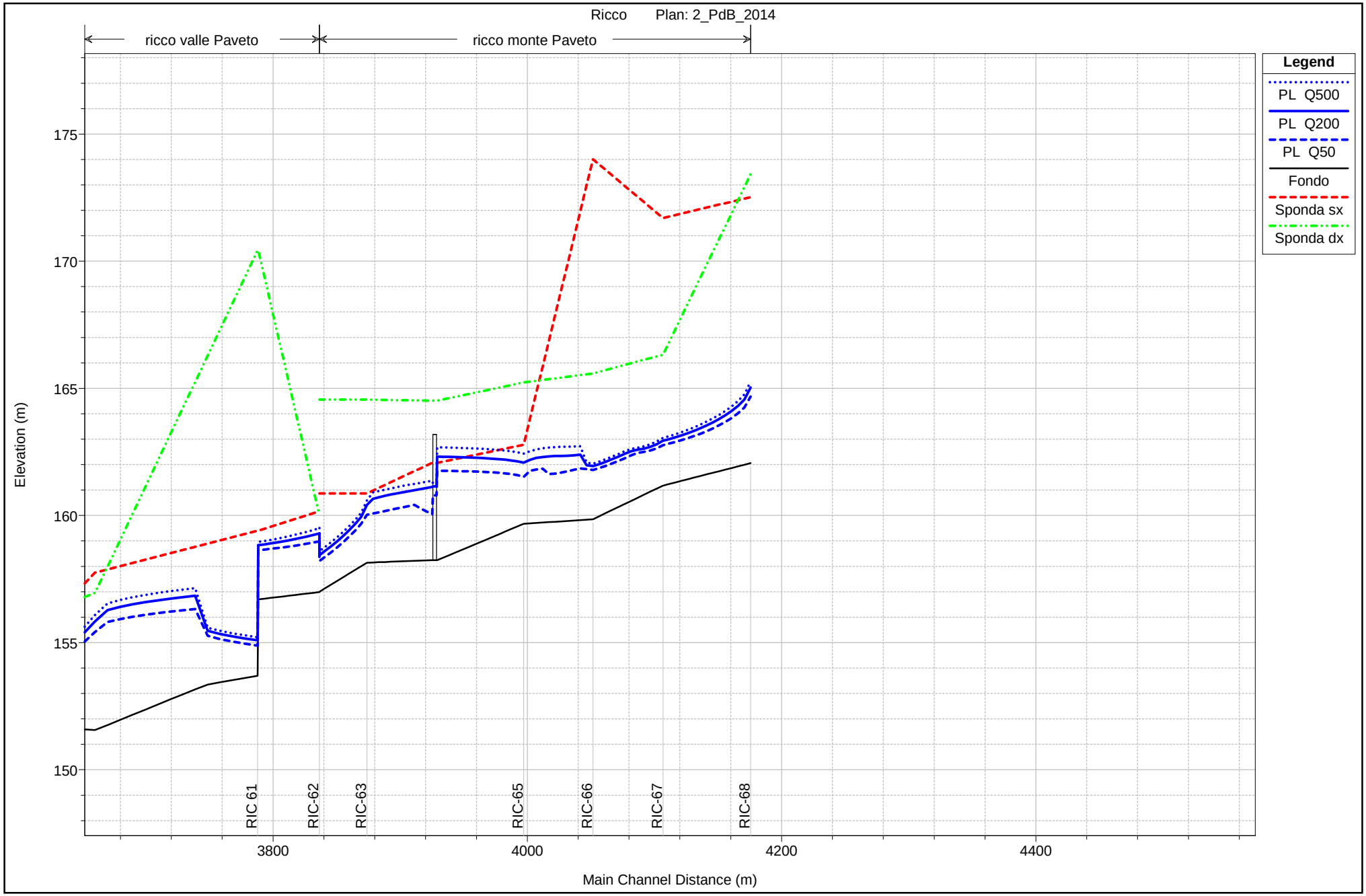
In questo tratto è compresa la confluenza con il rio Paveto che è stata analizzata nella configurazione che prevede la portata al colmo con tempo di ritorno assegnato a valle e a monte della confluenza e, sull'affluente è imposta, ai fini della conservazione della massa, la differenza delle portate.

Data l'estensione del tratto indagato è stata imposta una variazione di portata in corrispondenza della sez. RIC-36. in corrispondenza dell'immissione di due degli affluenti minori indagati. In particolare risulta:

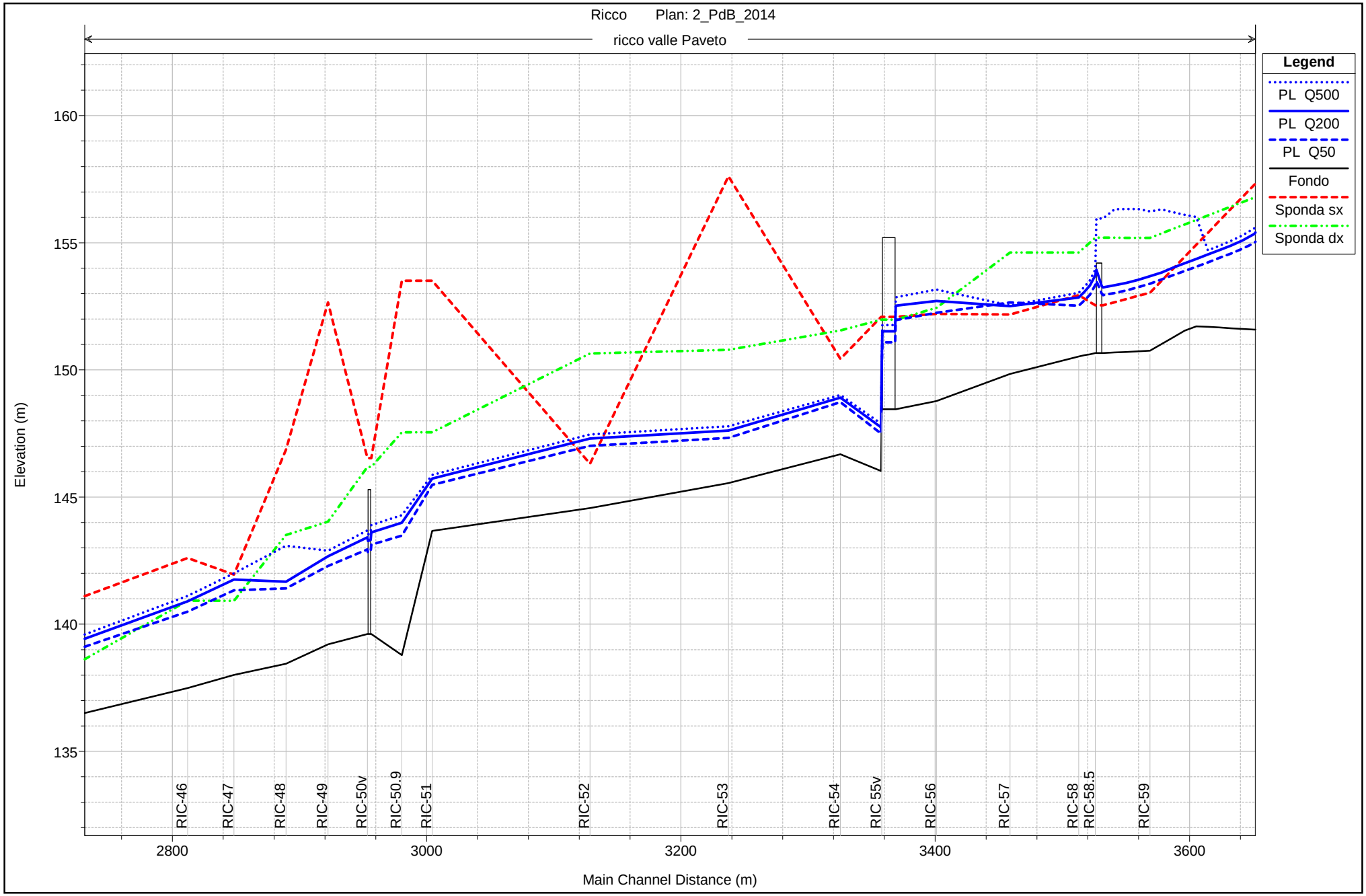
	TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
			T = 50 anni	T = 200 anni	T = 500 anni
Riccò in piena	Rio Paveto	differenza	133	169	188
	Torrente Riccò a monte Paveto	RIC2	134	171	197
	Torrente Riccò a valle Paveto	RIC3	267	340	385
	Torrente Riccò alla confluenza con il T.Polcevera	RIC4	299	380	431

Come condizioni al contorno è stata imposta la profondità critica sia a monte che a valle in corrispondenza della briglia.

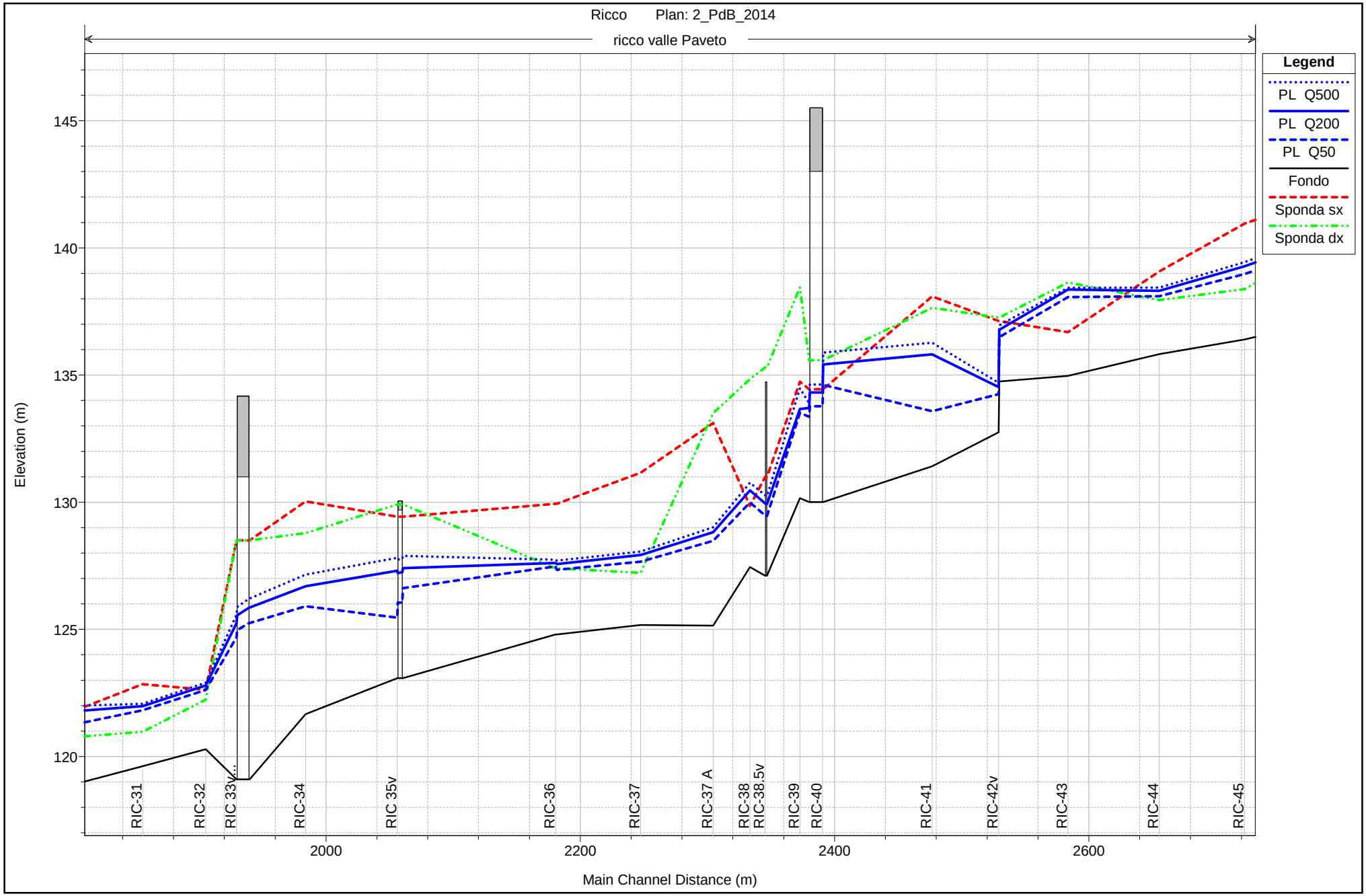
Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza ks di Strickler pari a 33 $m^{1/3}/s$.



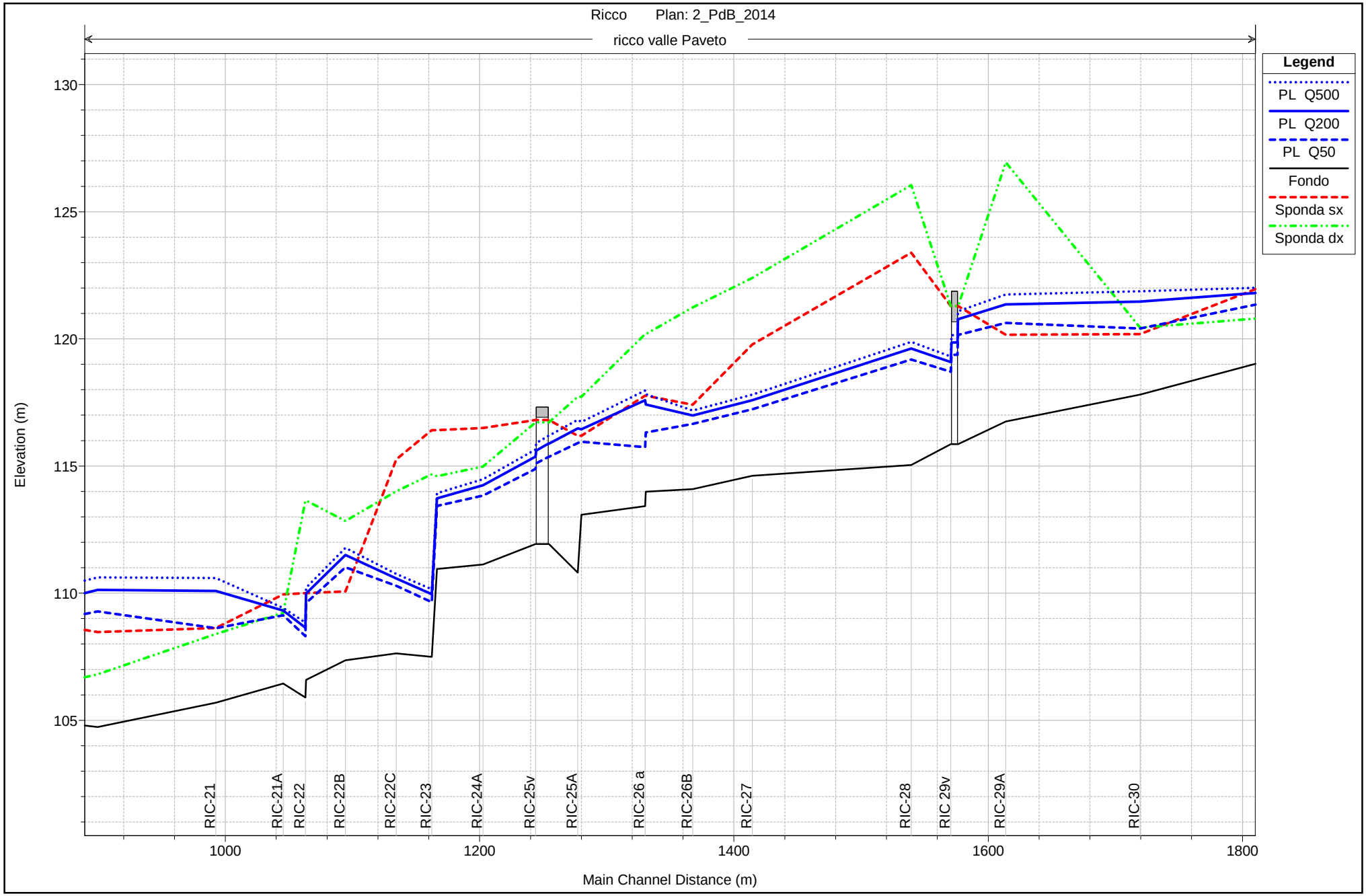
1 cm Horiz. = 40 m 1 cm Vert. = 2 m



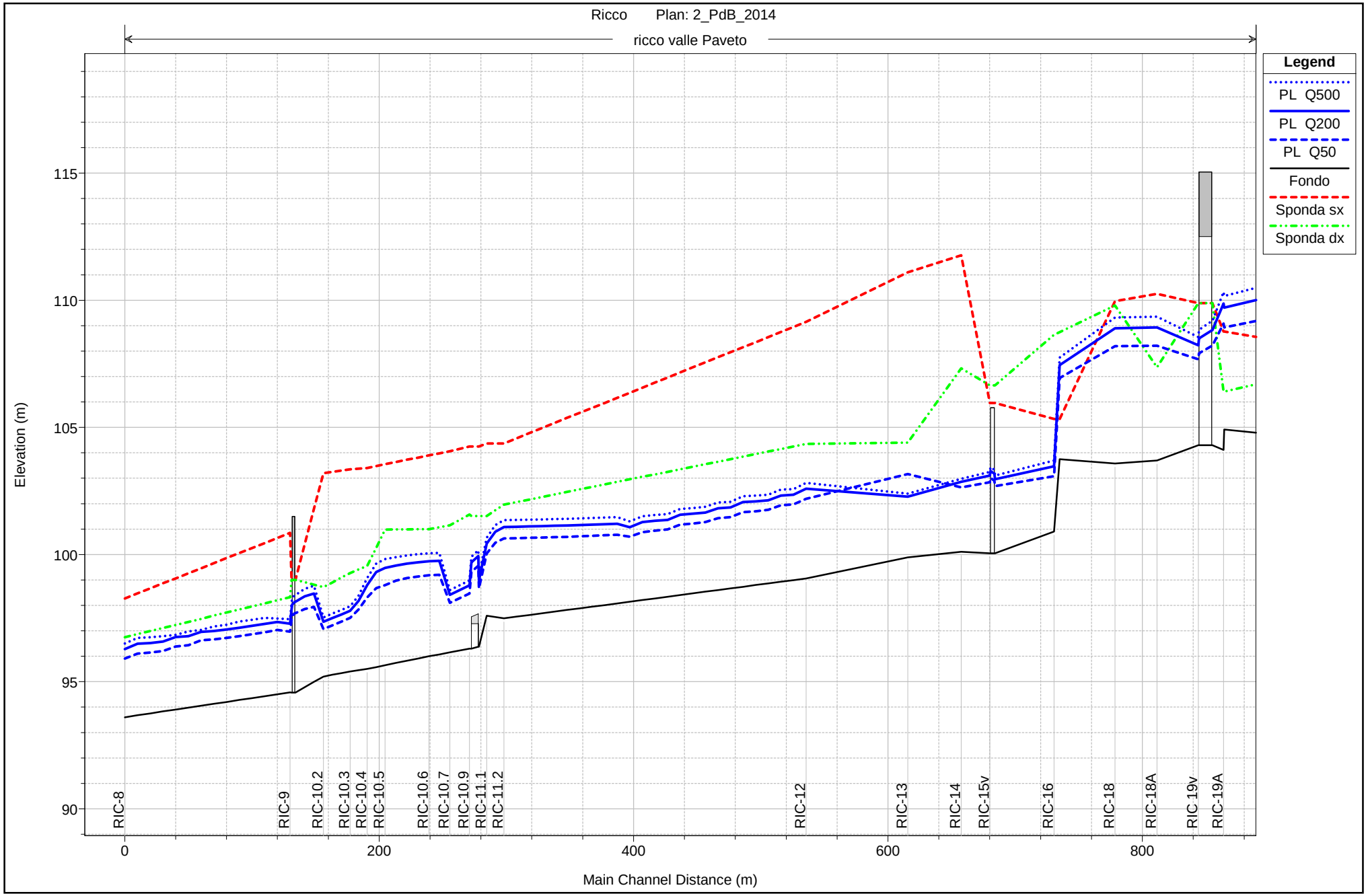
1 cm Horiz. = 40 m 1 cm Vert. = 2 m



1 cm Horiz. = 40 m 1 cm Vert. = 2 m



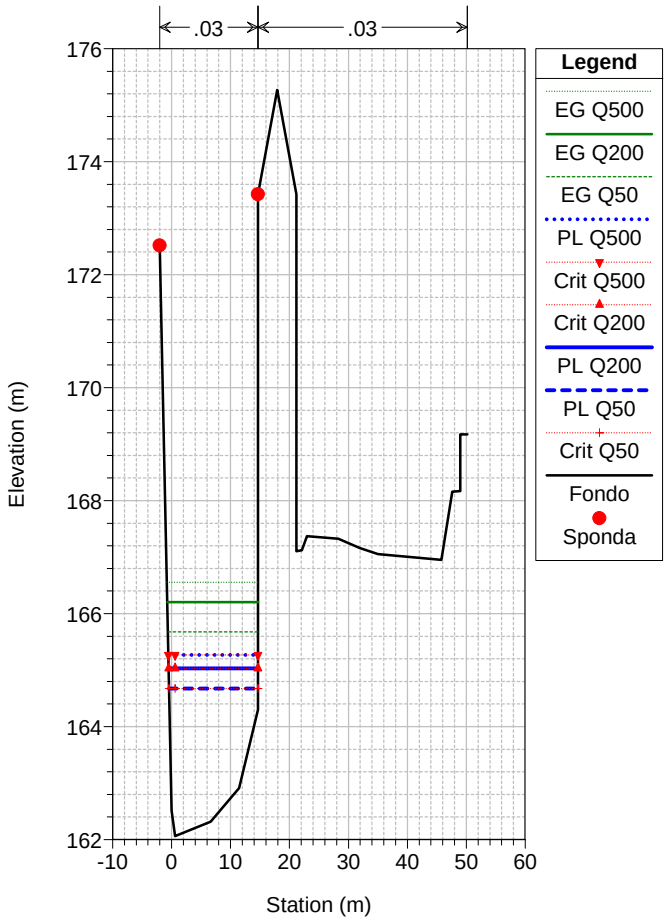
1 cm Horiz. = 40 m 1 cm Vert. = 2 m



1 cm Horiz. = 40 m 1 cm Vert. = 2 m

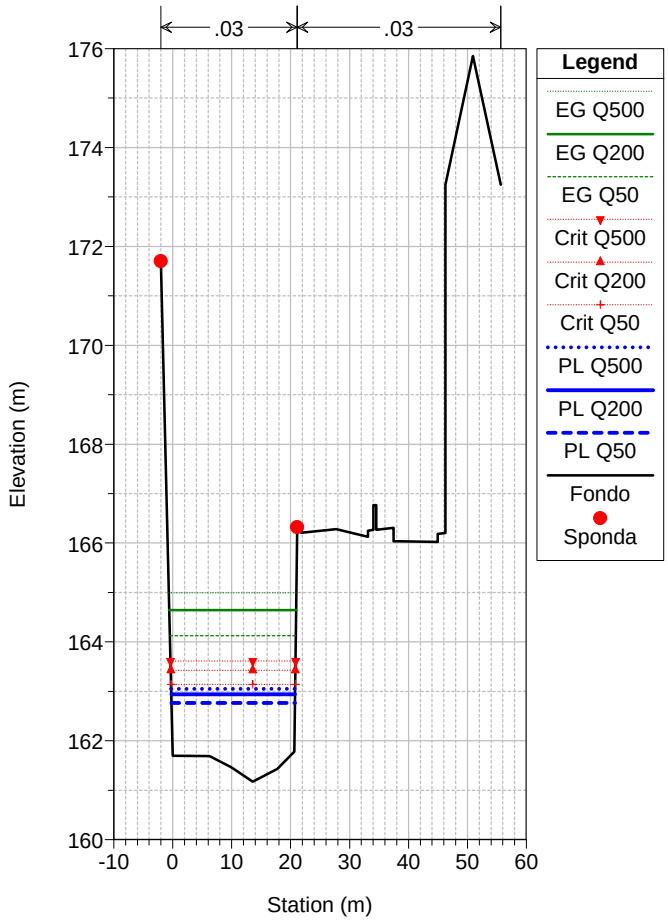
Ricco Plan: 2_PdB_2014

River = ricco Reach = monte Paveto RIC-68



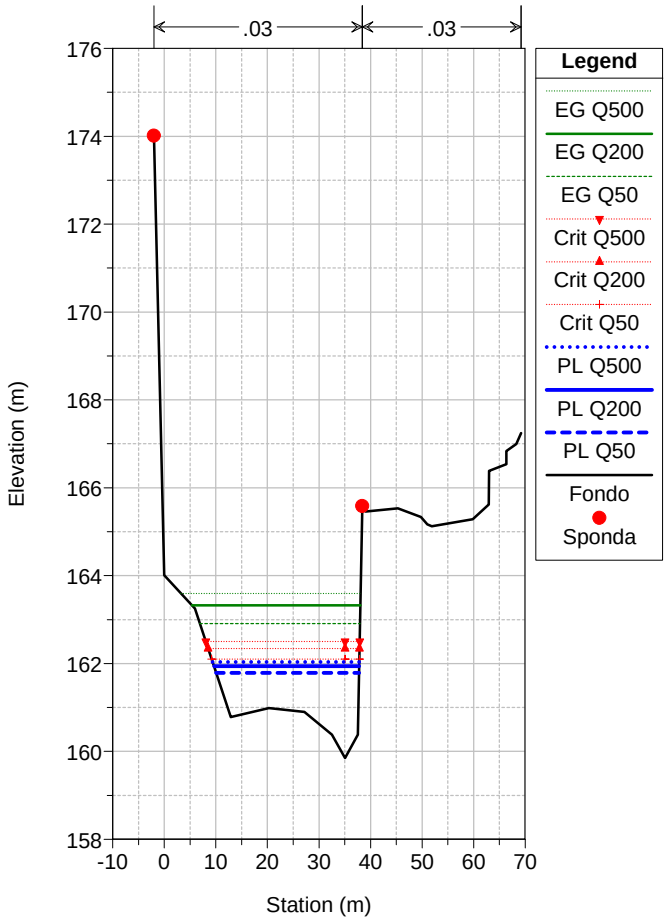
Ricco Plan: 2_PdB_2014

River = ricco Reach = monte Paveto RIC-67



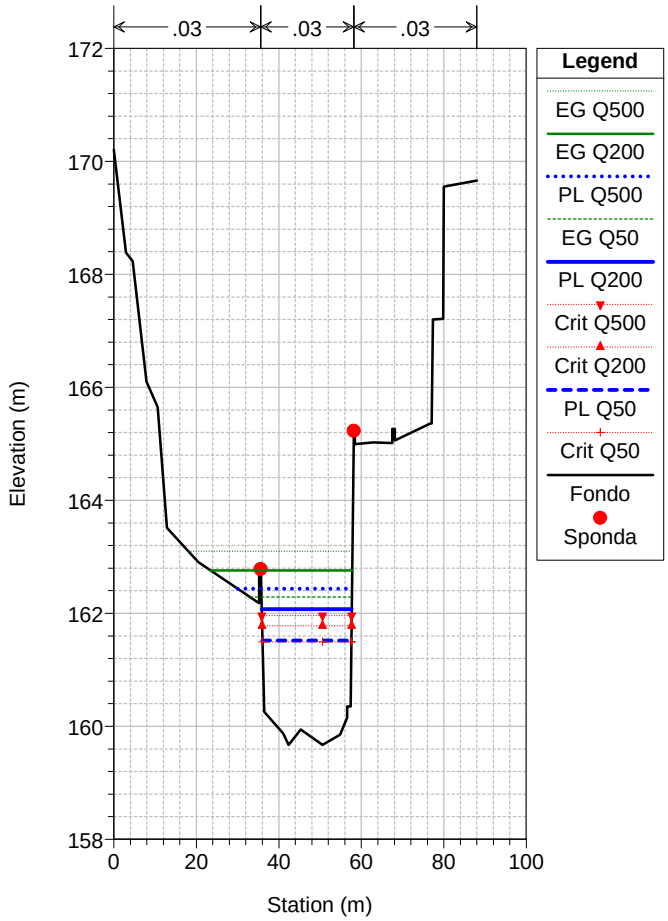
Ricco Plan: 2_PdB_2014

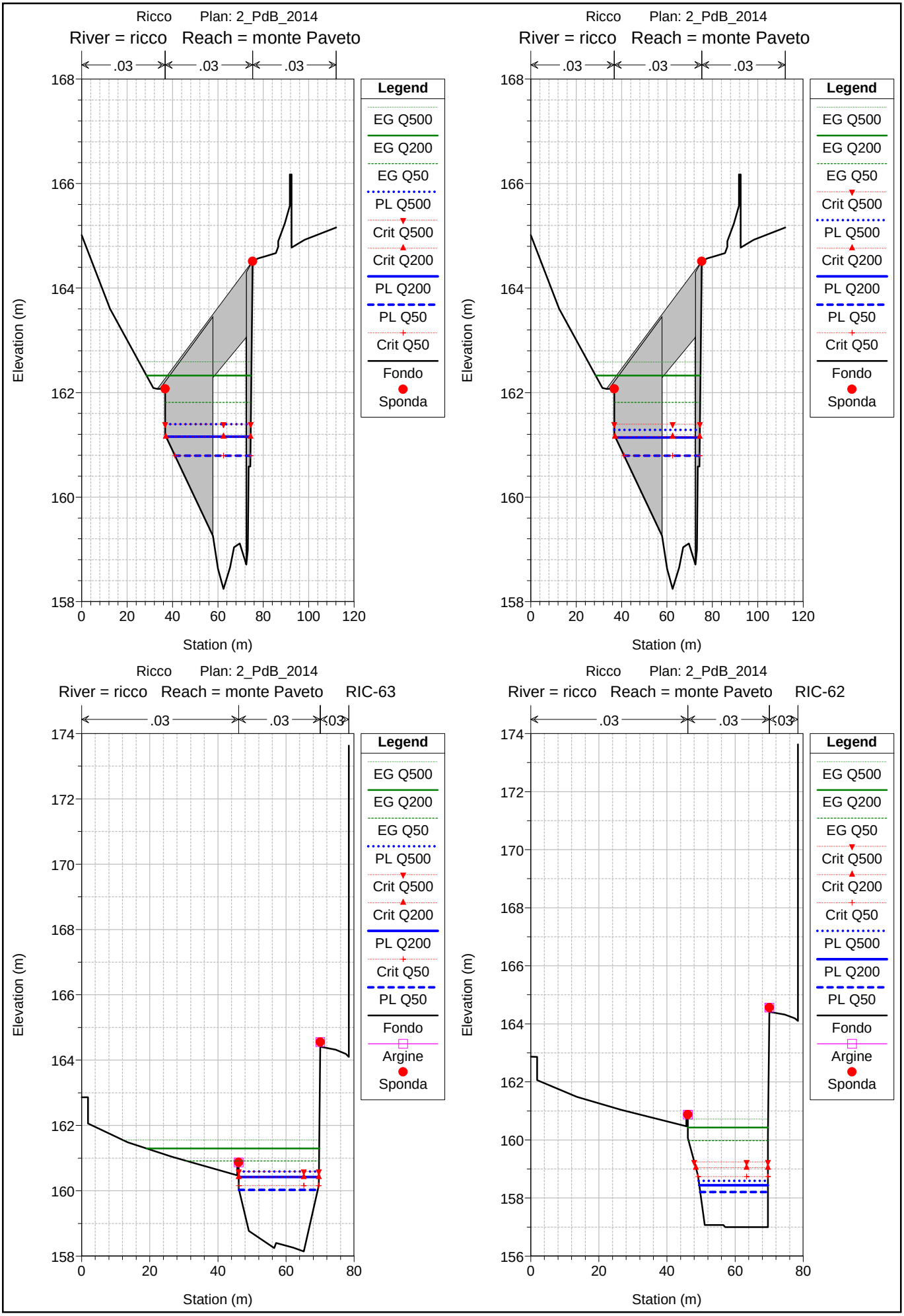
River = ricco Reach = monte Paveto RIC-66



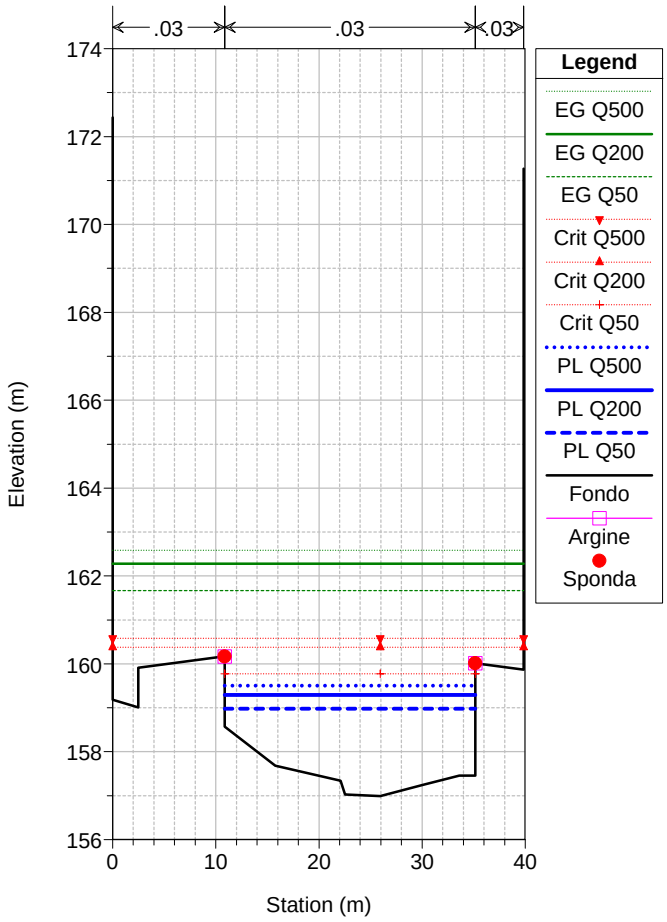
Ricco Plan: 2_PdB_2014

River = ricco Reach = monte Paveto RIC-65

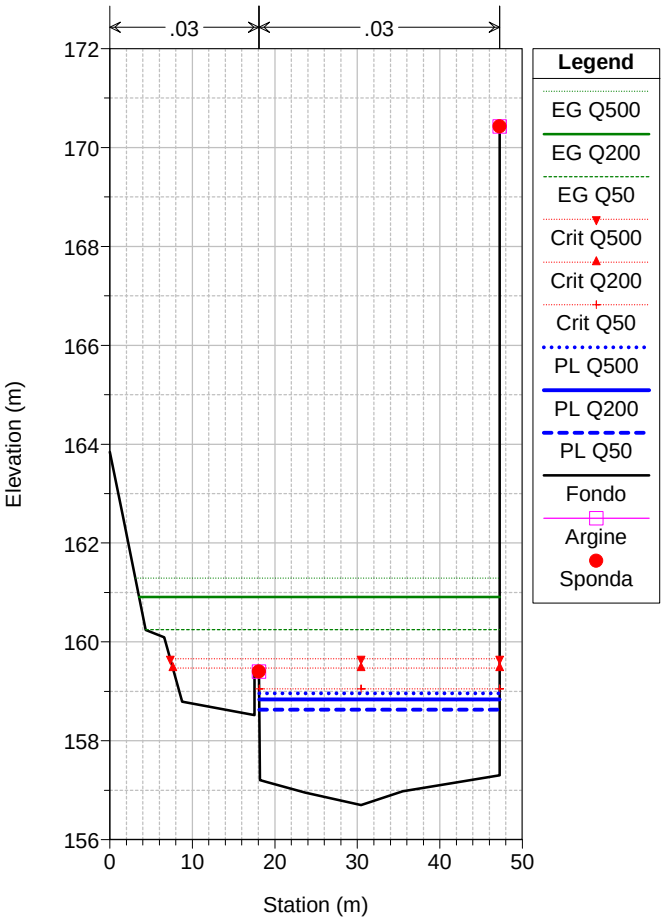



Ricco Plan: 2_PdB_2014
River = ricco Reach = monte Paveto
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = monte Paveto
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = monte Paveto RIC-63
.03
.03
03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = monte Paveto RIC-62
.03
.03
03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

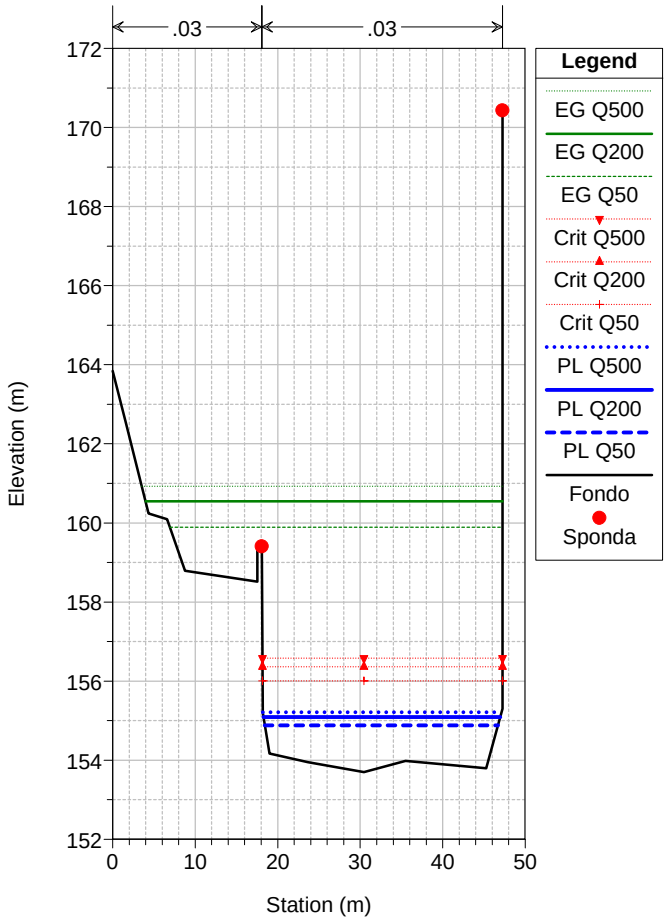
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-62



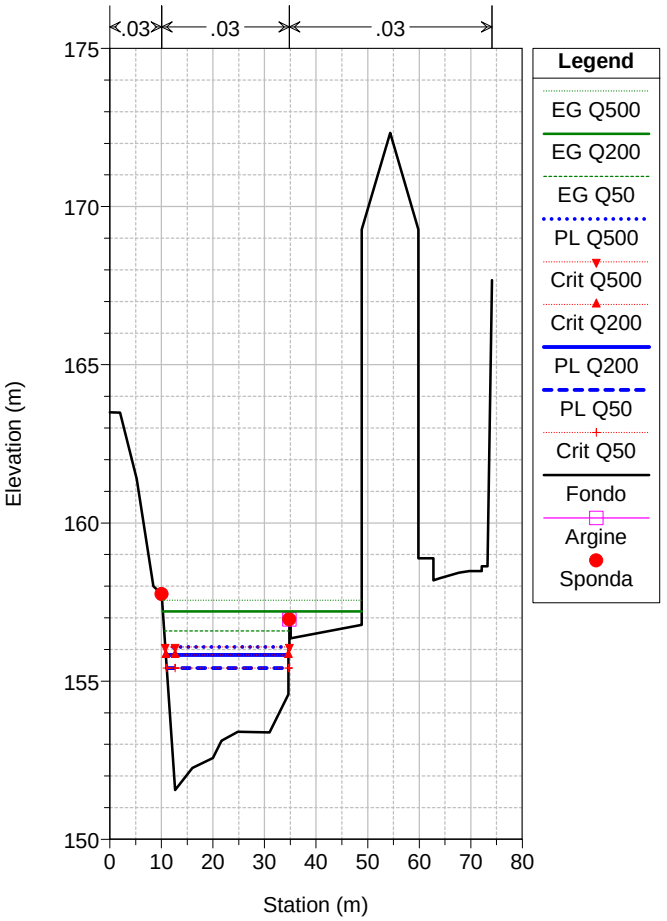
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 61

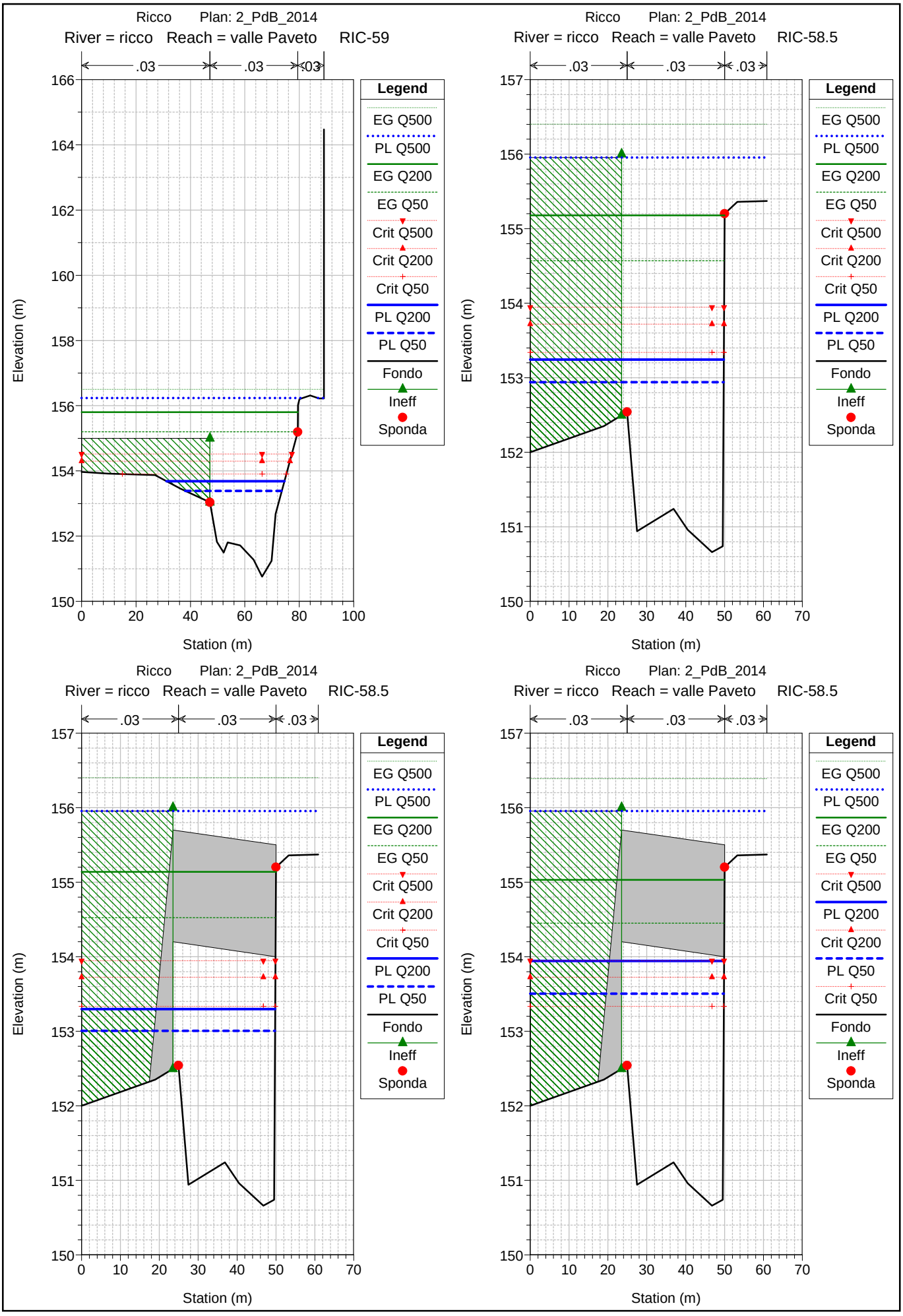


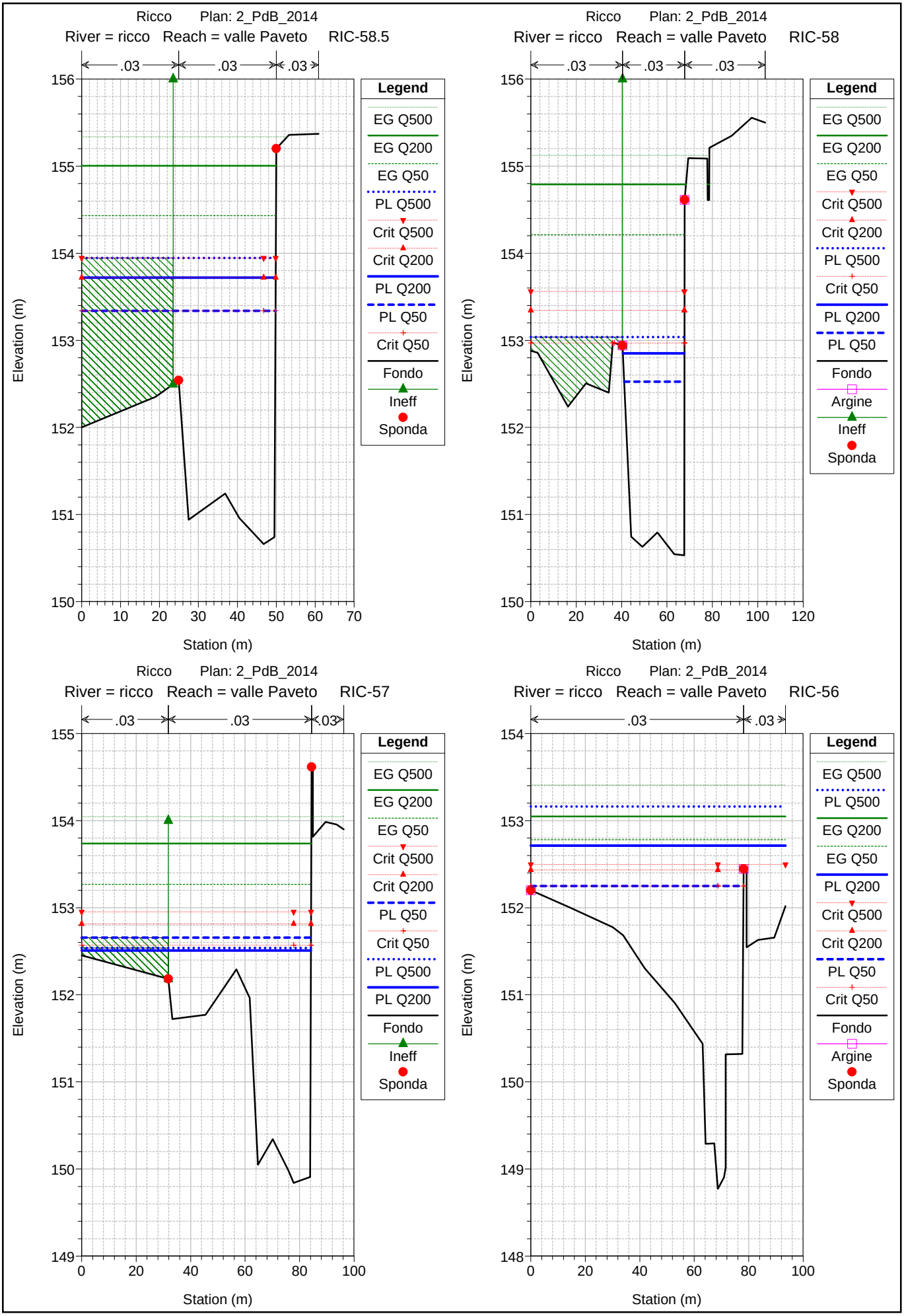
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 61

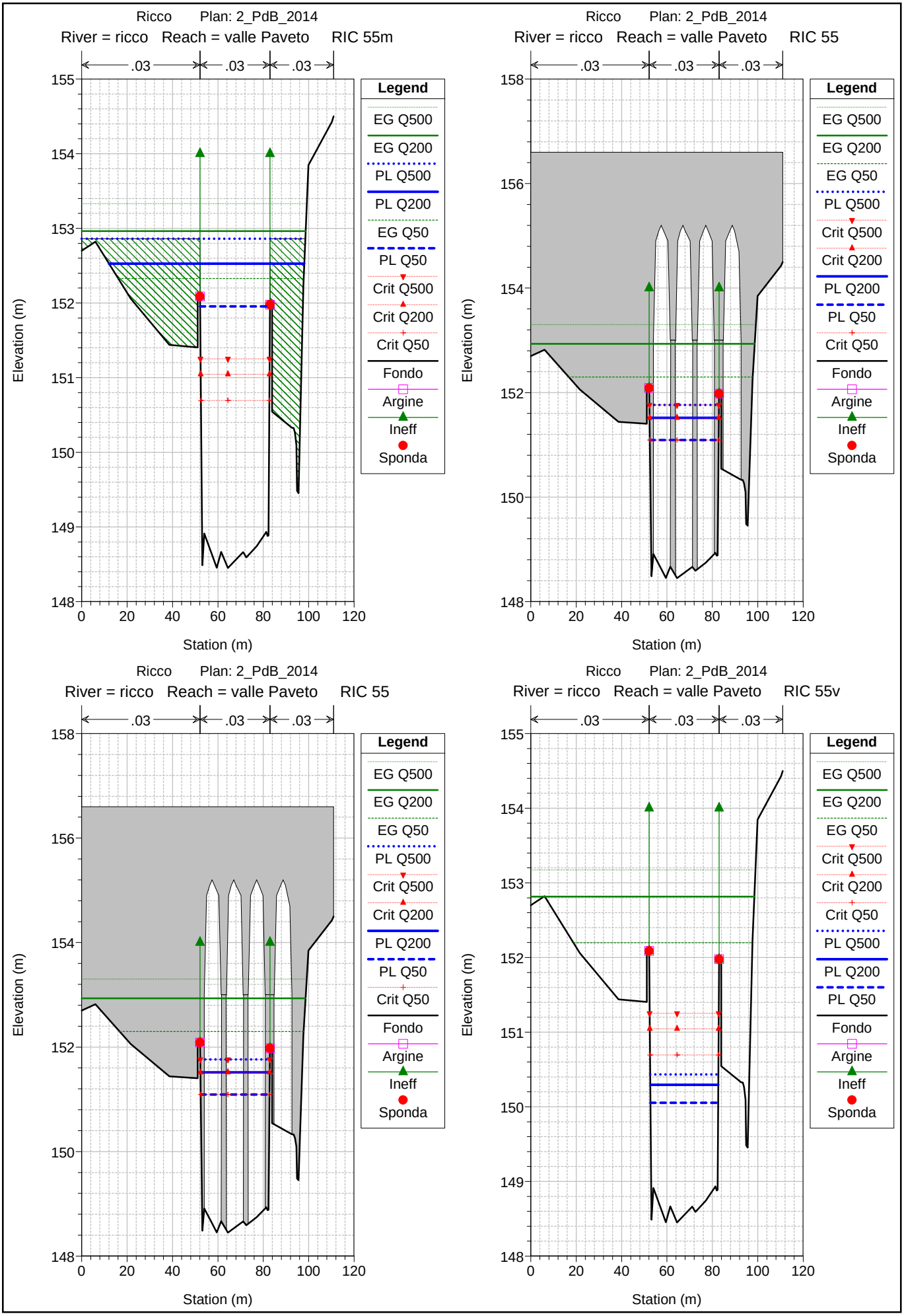


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-60



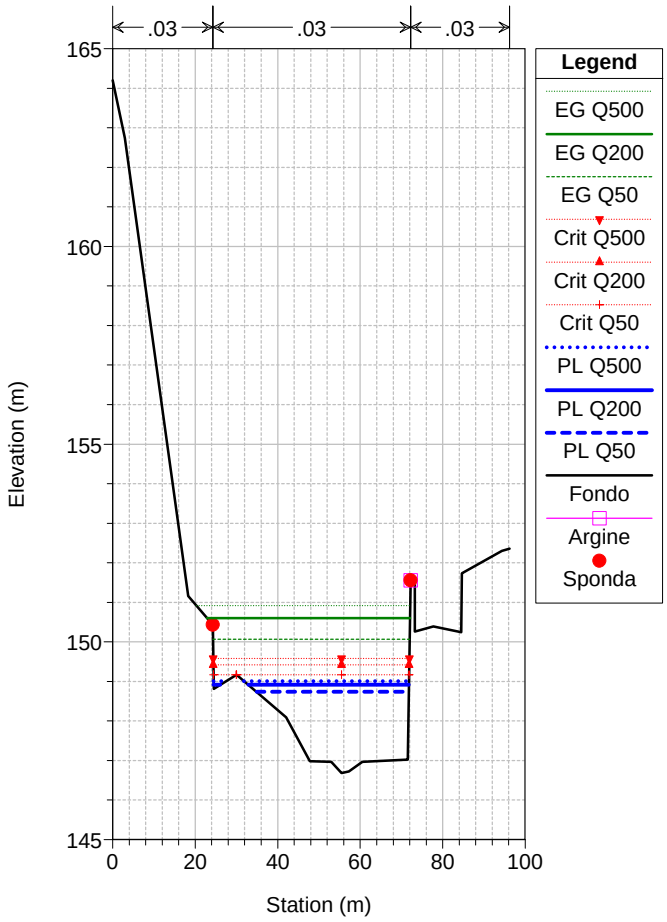

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-59
.03
.03
.03
Legend
EG Q500
PL Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Ineff
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-58.5
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-58.5
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-58.5


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-58.5
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Ineff
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-58
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Argine
Ineff
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-57
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
PL Q500
PL Q200
Fondo
Ineff
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-56
.03
.03
Legend
EG Q500
PL Q500
EG Q200
EG Q50
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 55m
.03 .03 .03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Ineff
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 55
.03 .03 .03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Argine
Ineff
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 55
.03 .03 .03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Argine
Ineff
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 55v
.03 .03 .03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Ineff
Sponda
Elevation (m)
Station (m)

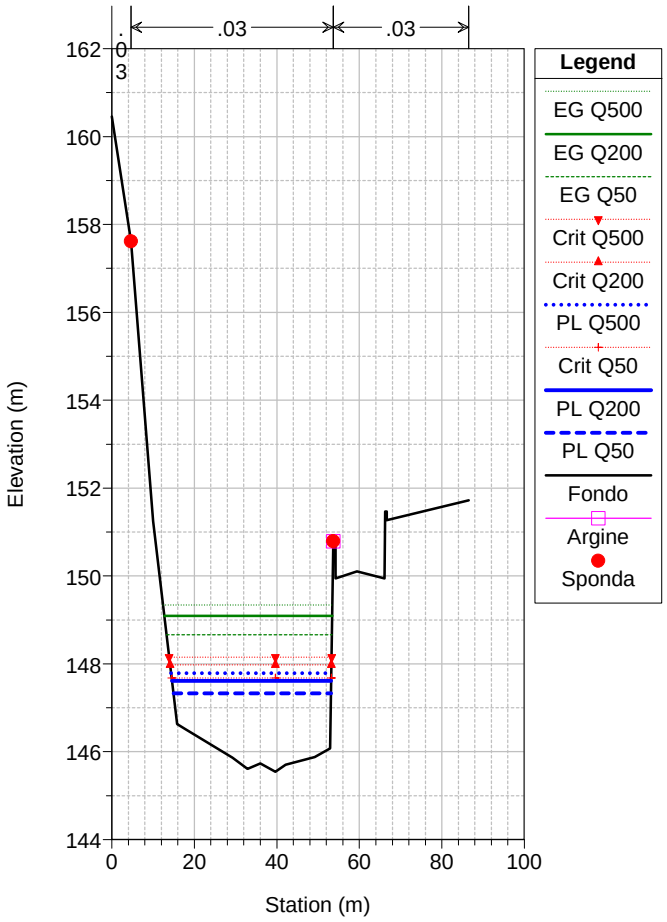
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-54



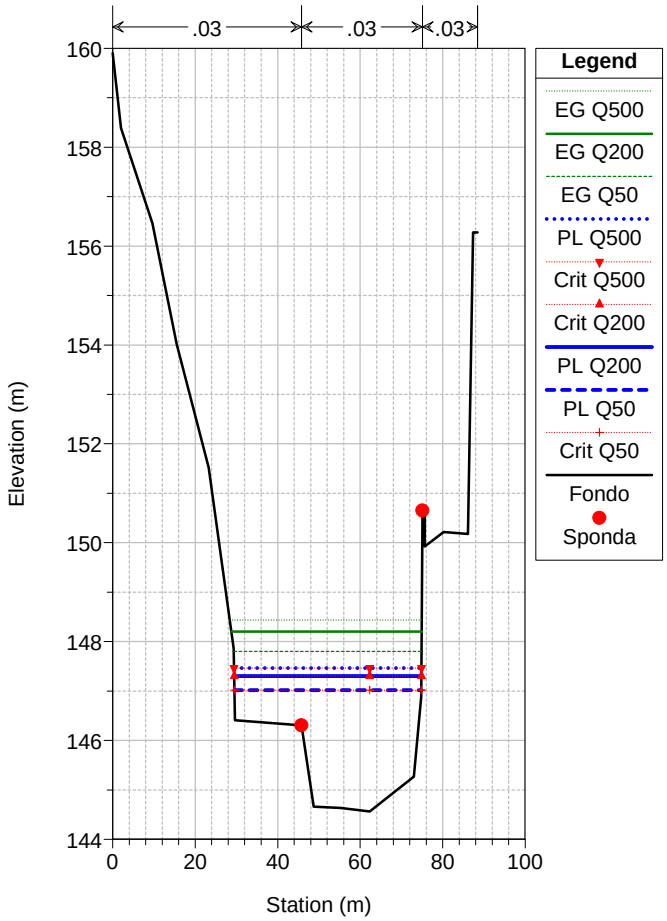
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-53



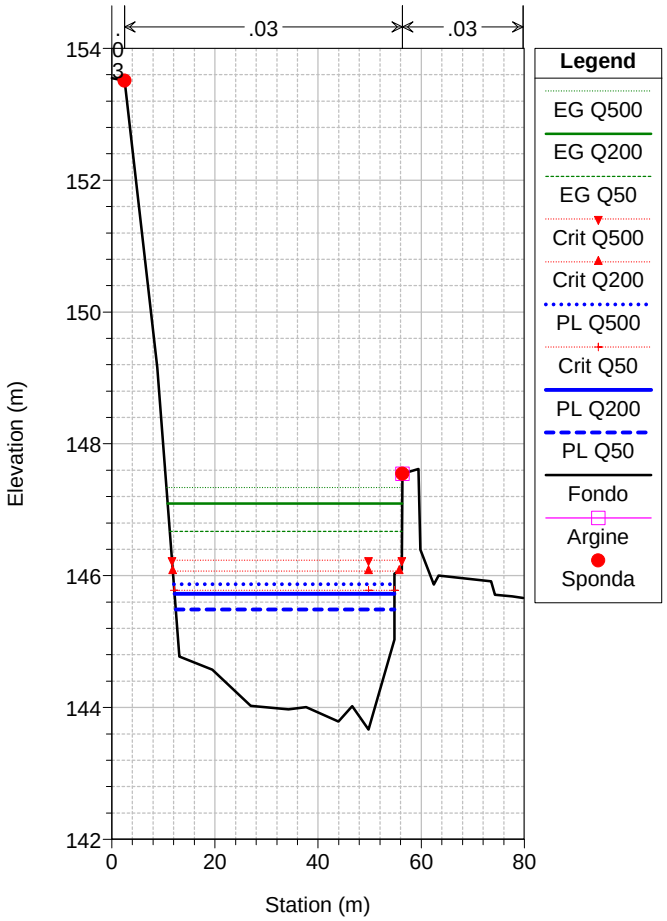
Ricco Plan: 2_PdB_2014

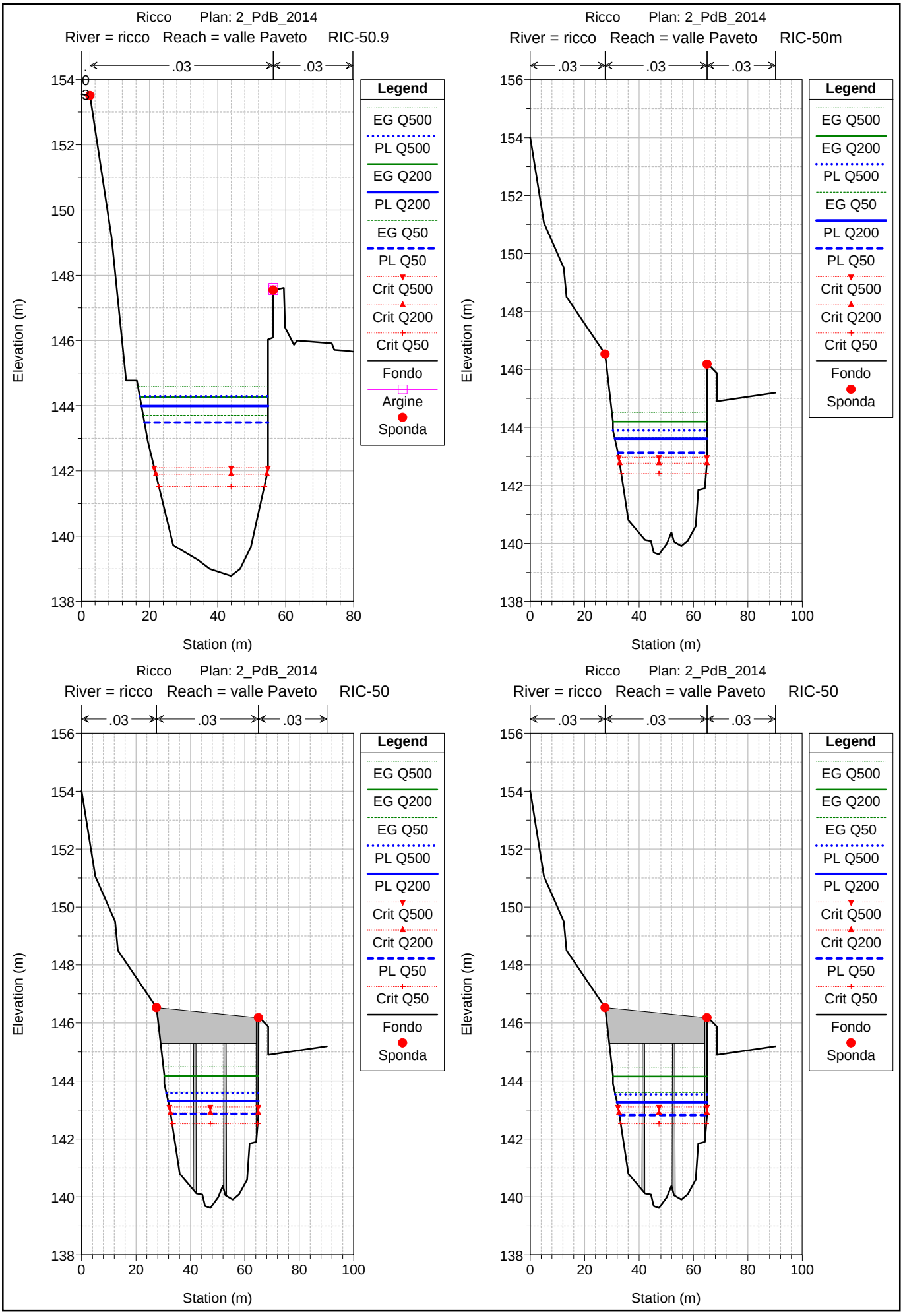
River = ricco Reach = valle Paveto RIC-52



Ricco Plan: 2_PdB_2014

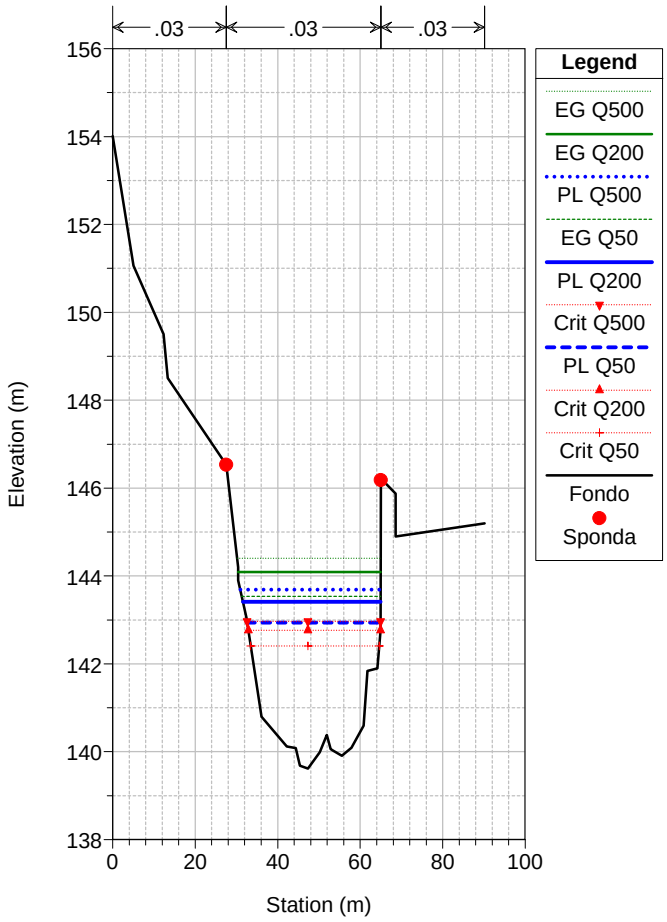
River = ricco Reach = valle Paveto RIC-51




Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-50.9
.03
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-50m
.03
.03
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-50
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-50
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

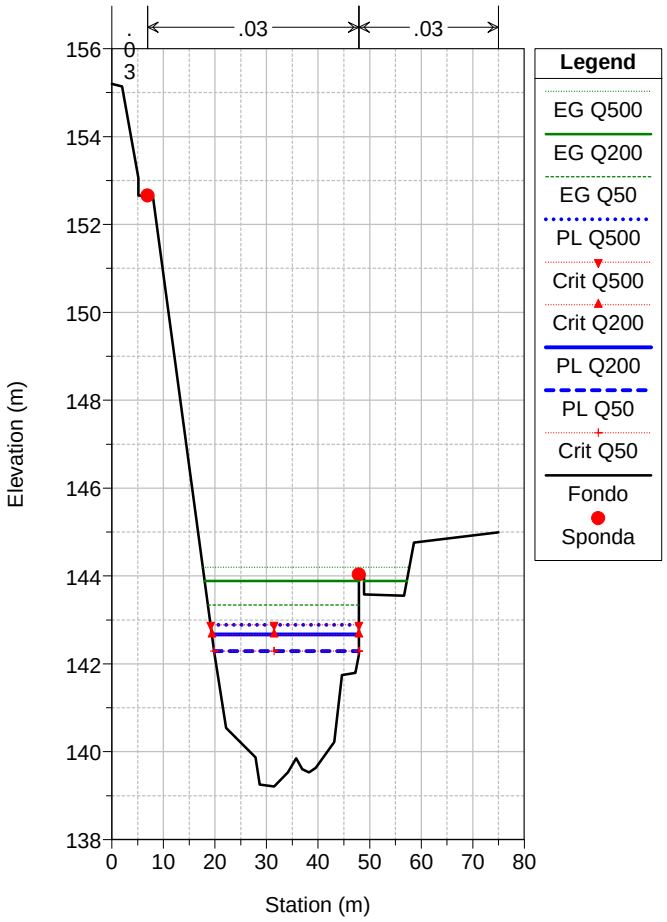
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-50v



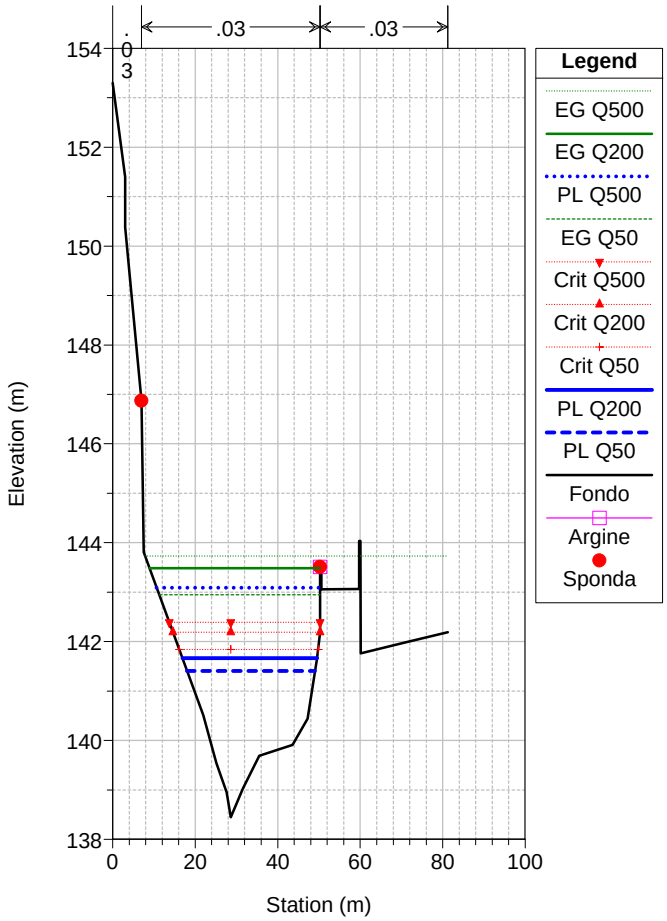
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-49



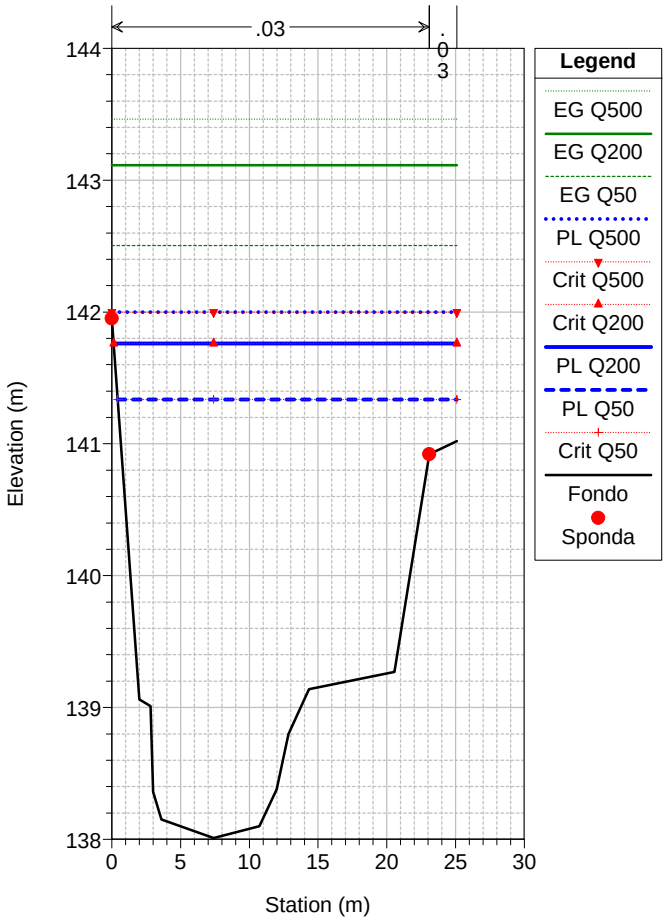
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-48



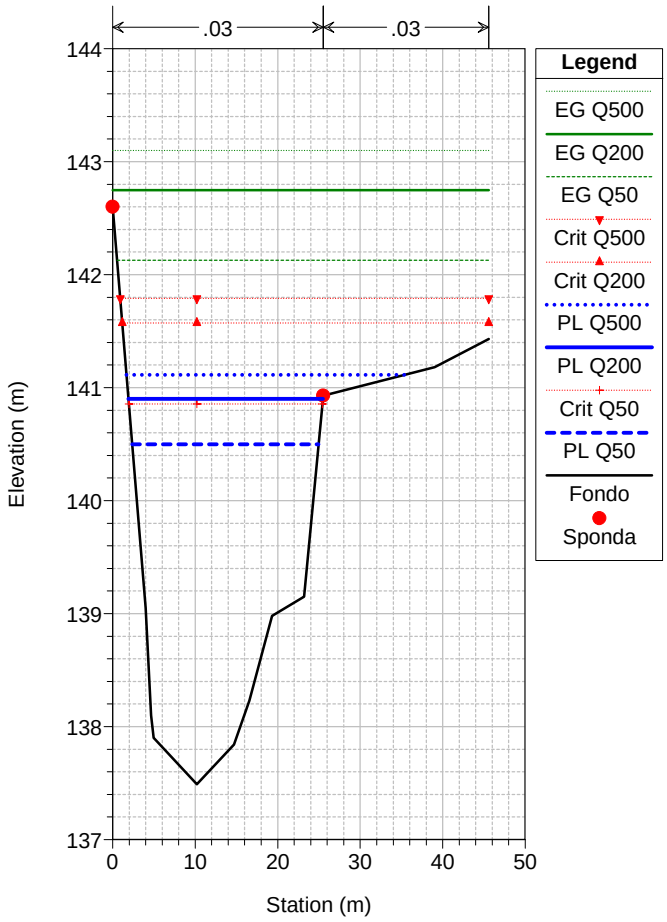
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-47



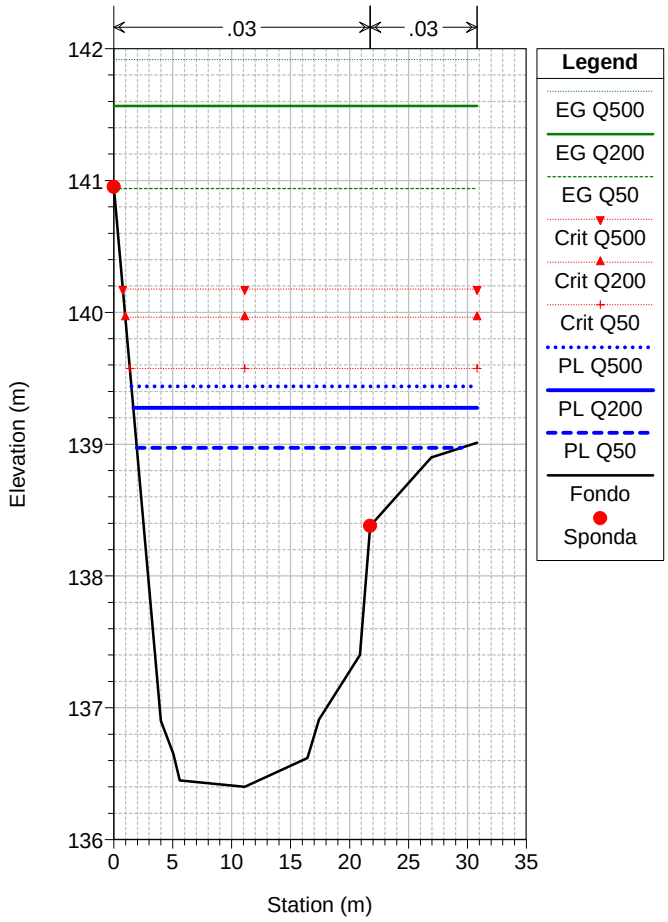
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-46



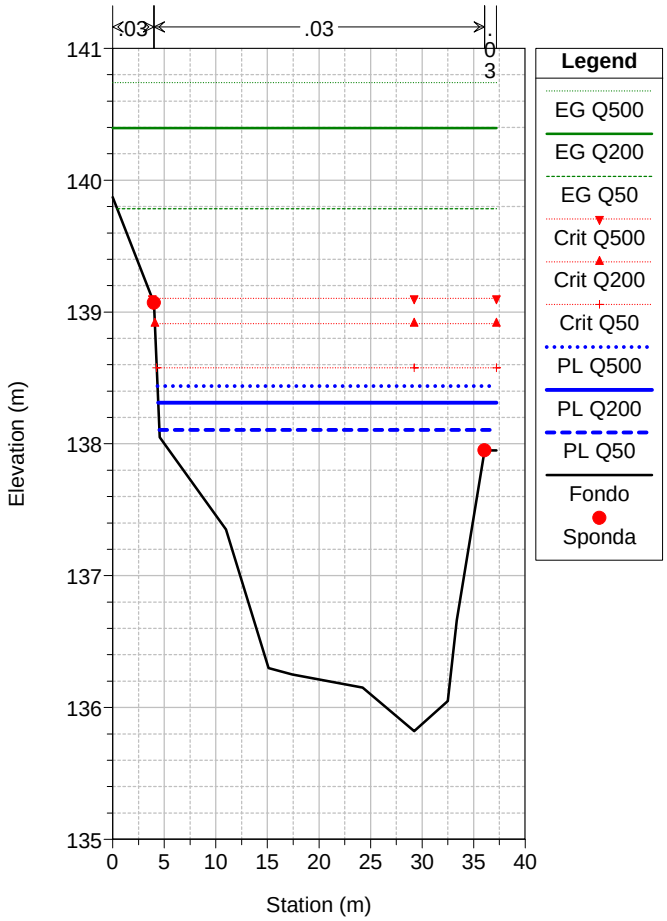
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-45



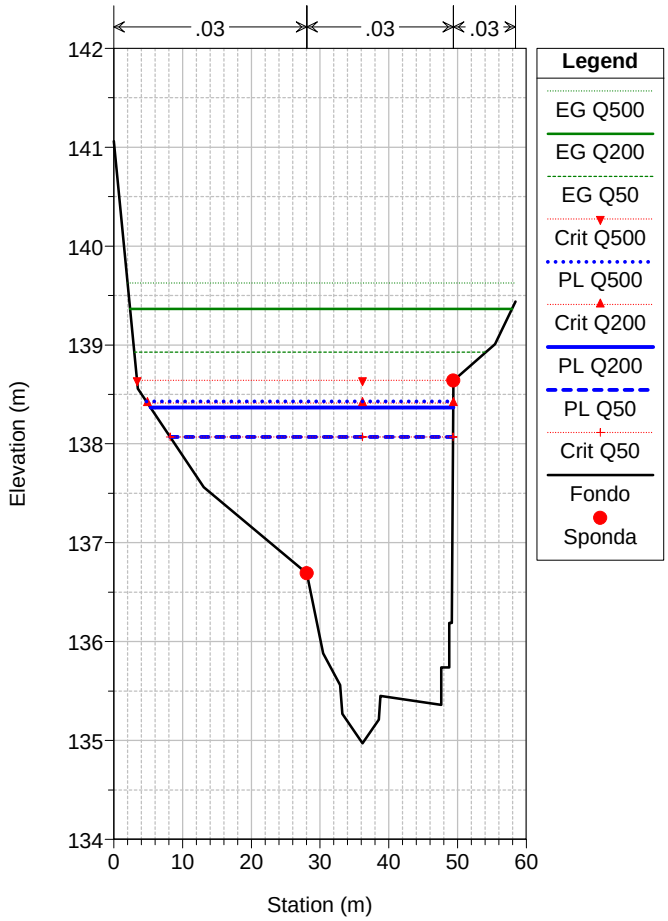
Ricco Plan: 2_PdB_2014

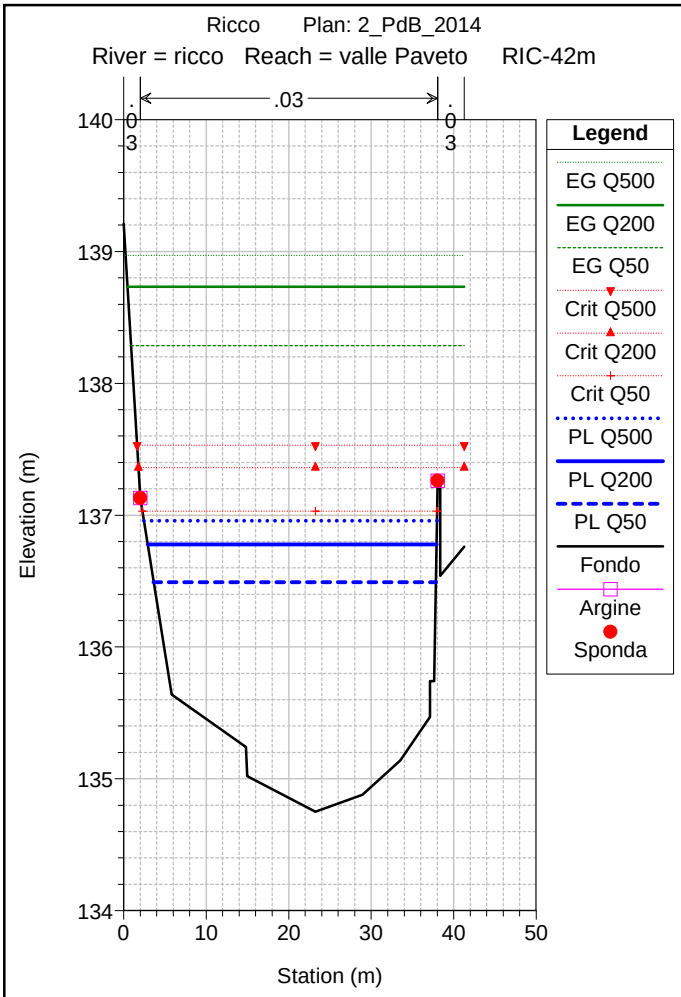
River = ricco Reach = valle Paveto RIC-44

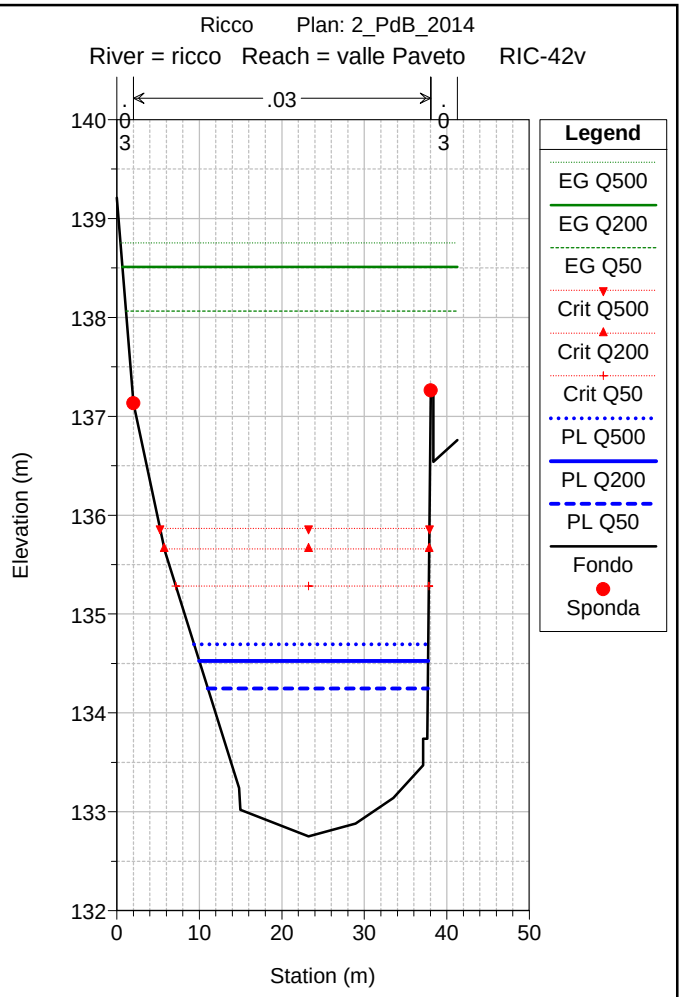


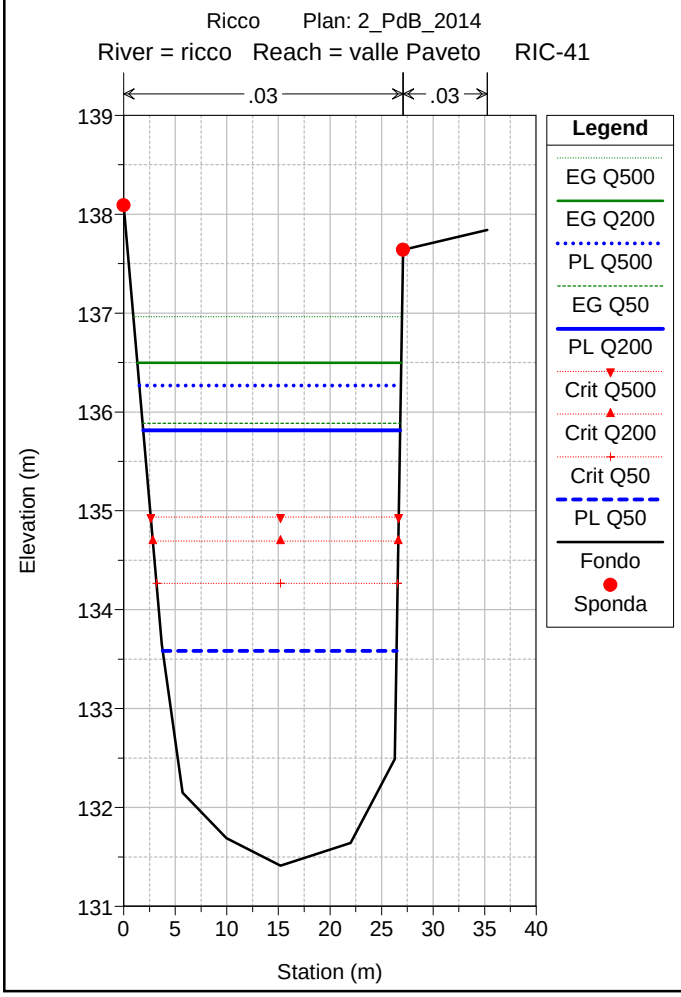
Ricco Plan: 2_PdB_2014

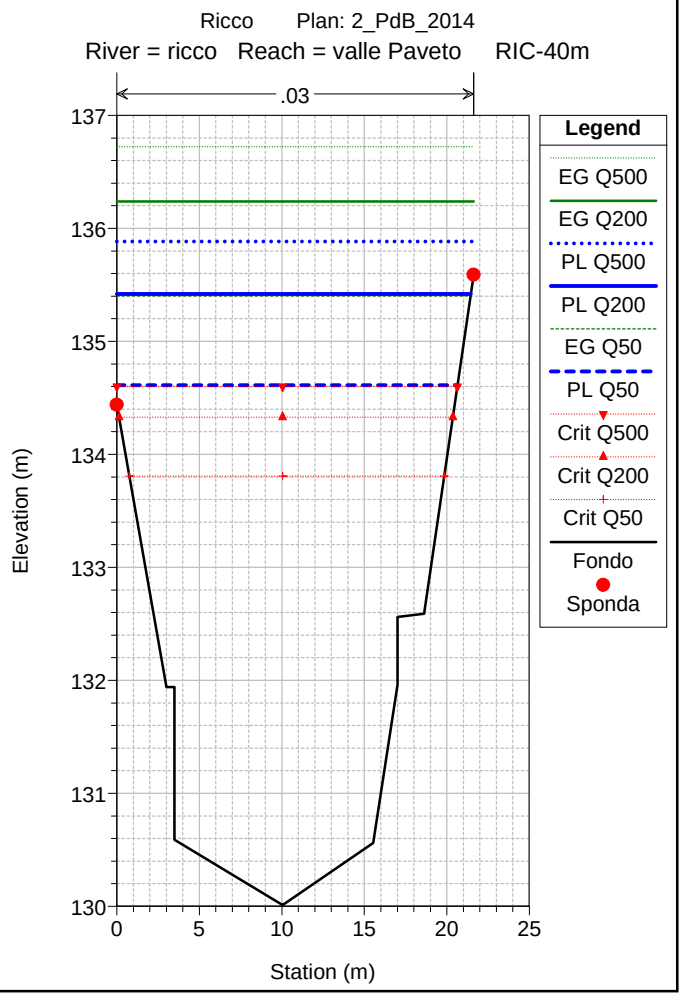
River = ricco Reach = valle Paveto RIC-43




Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-42m
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

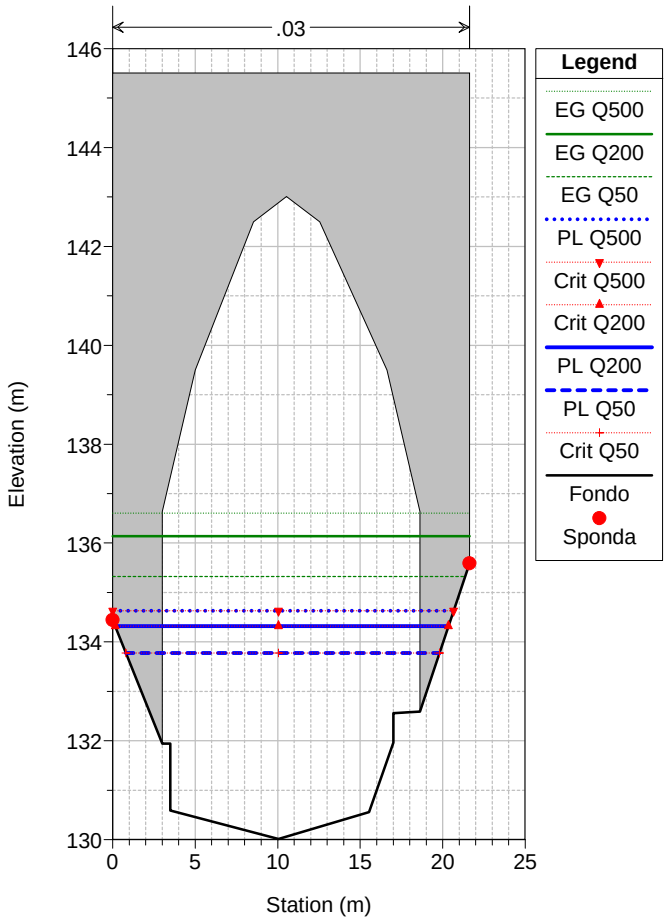

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-42v
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-41
.03
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-40m
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

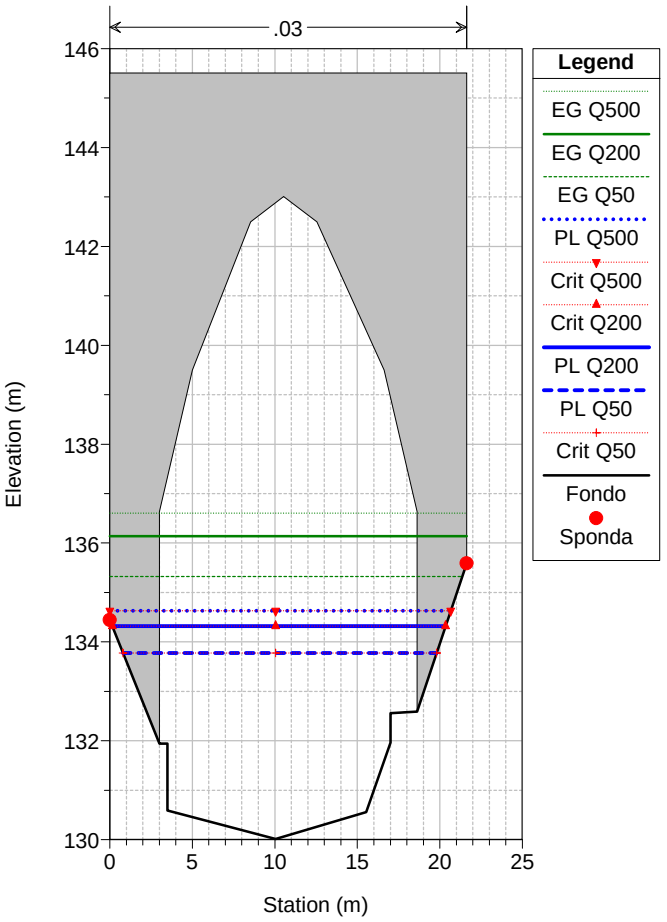
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-40



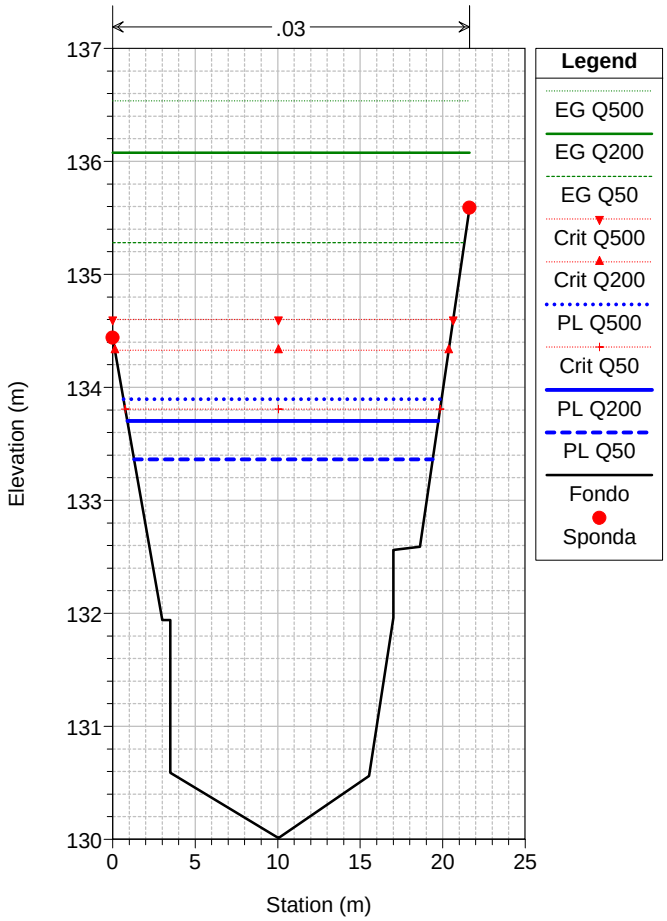
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-40



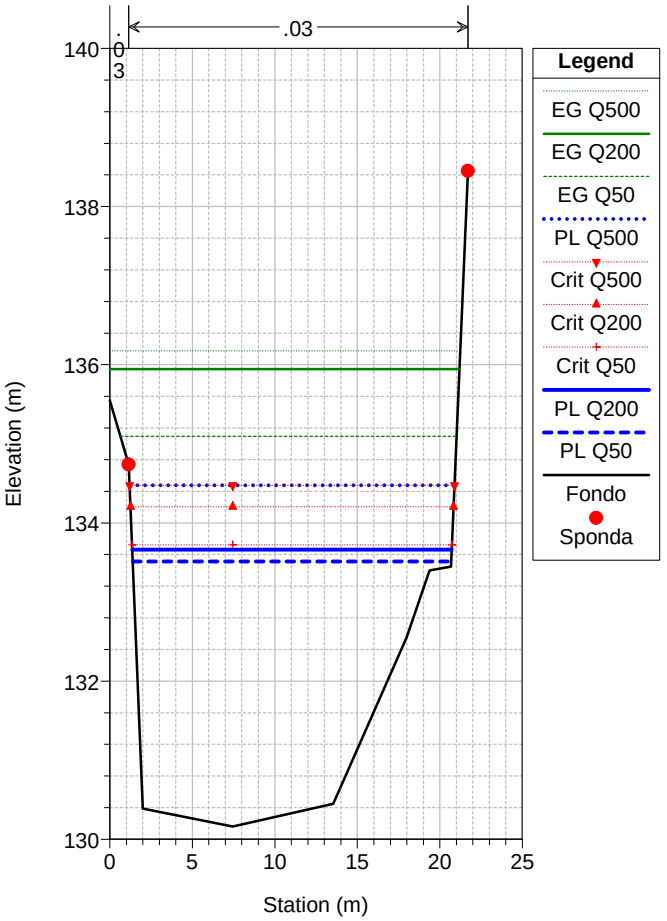
Ricco Plan: 2_PdB_2014

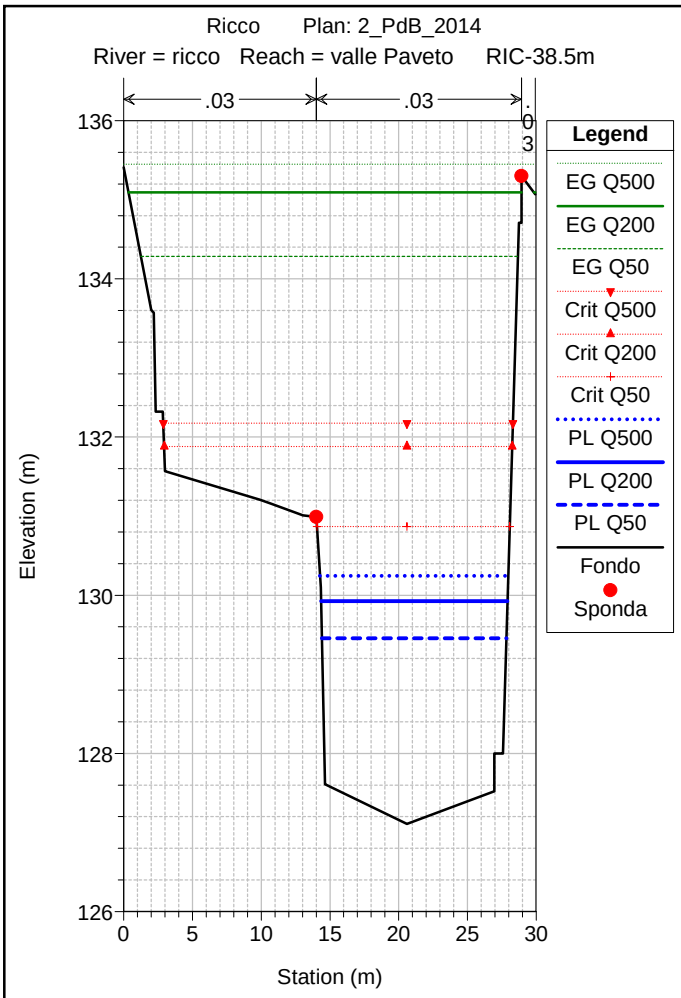
River = ricco Reach = valle Paveto RIC-40v

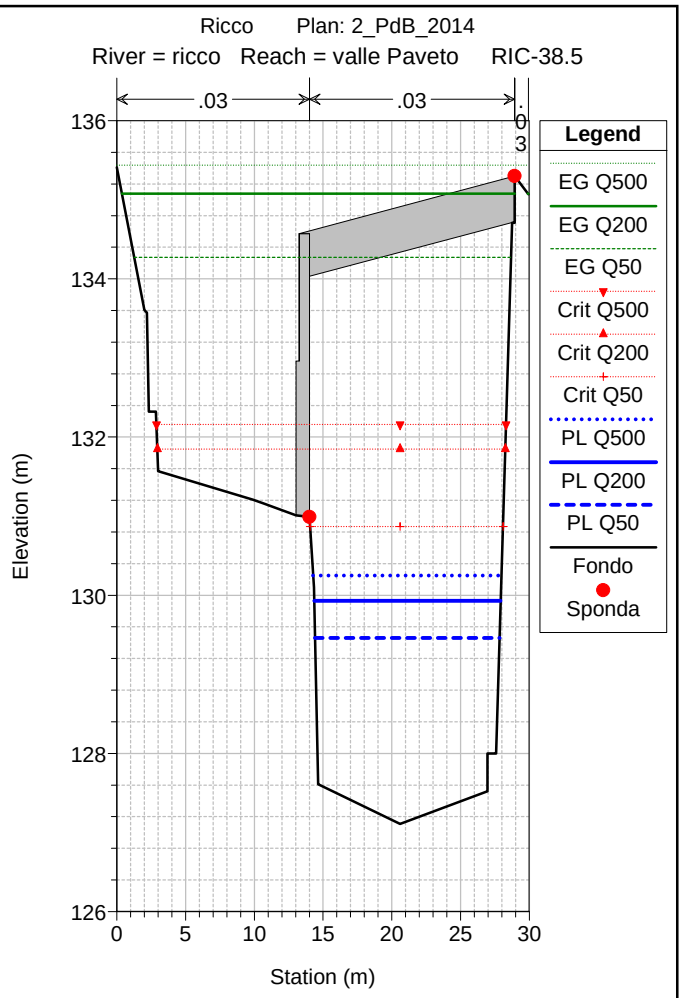


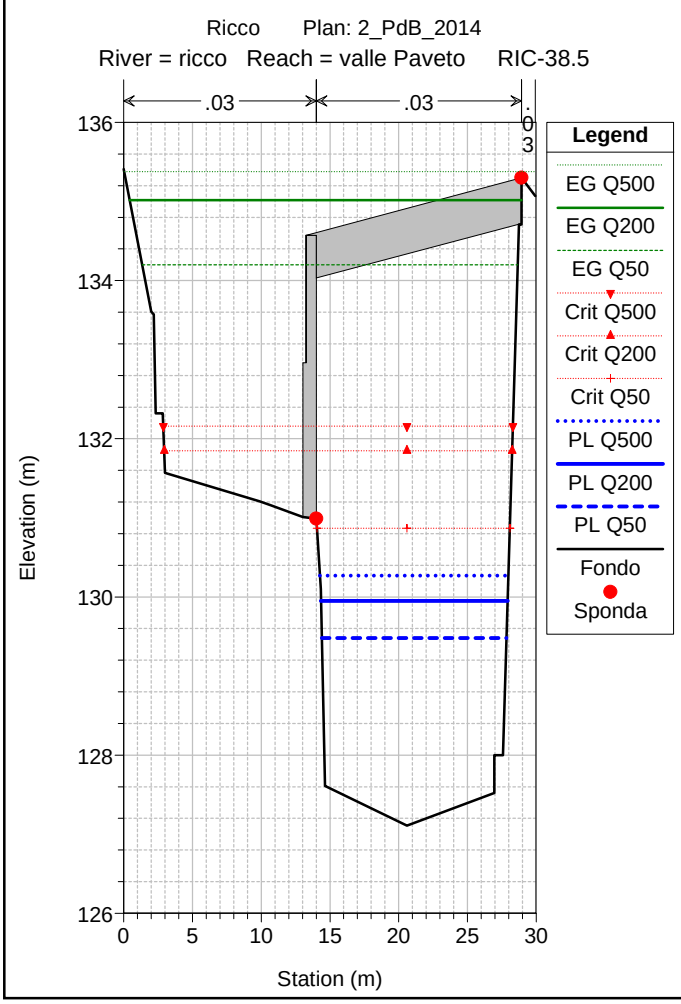
Ricco Plan: 2_PdB_2014

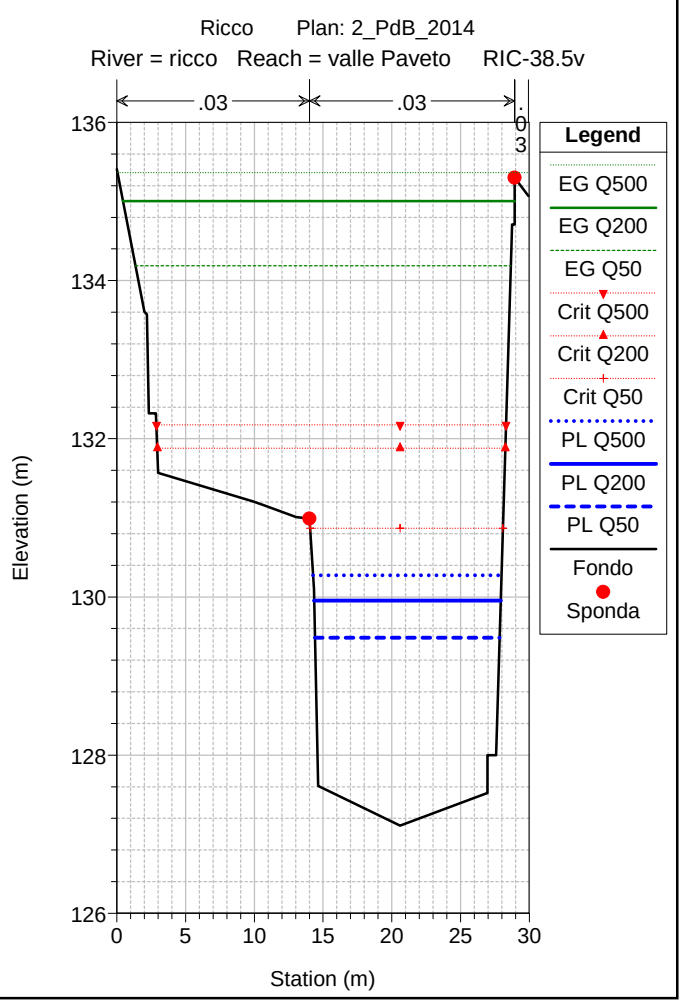
River = ricco Reach = valle Paveto RIC-39

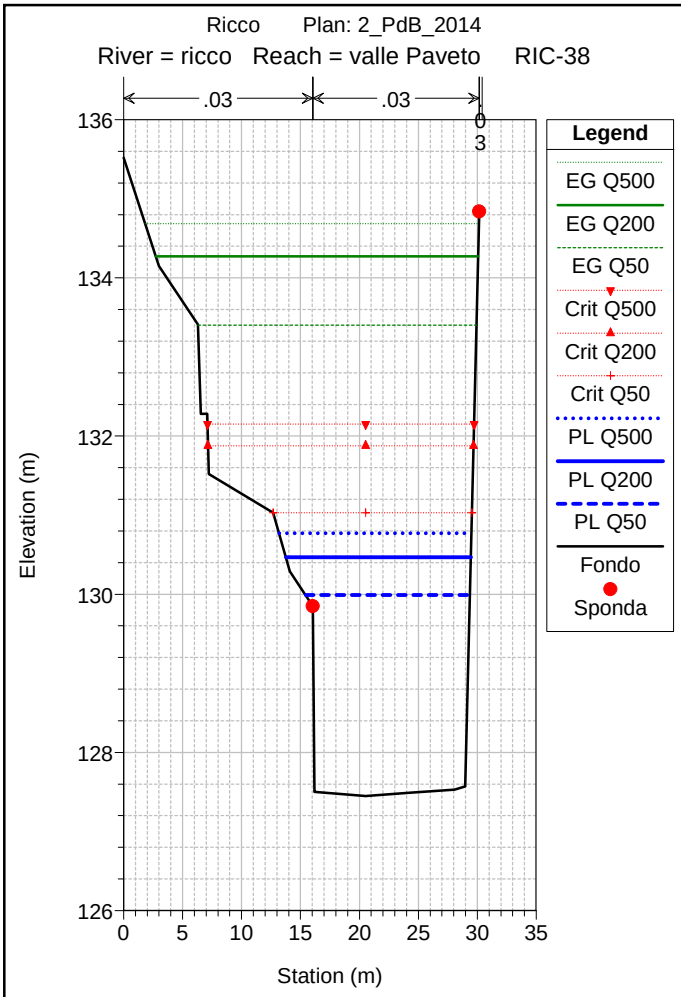


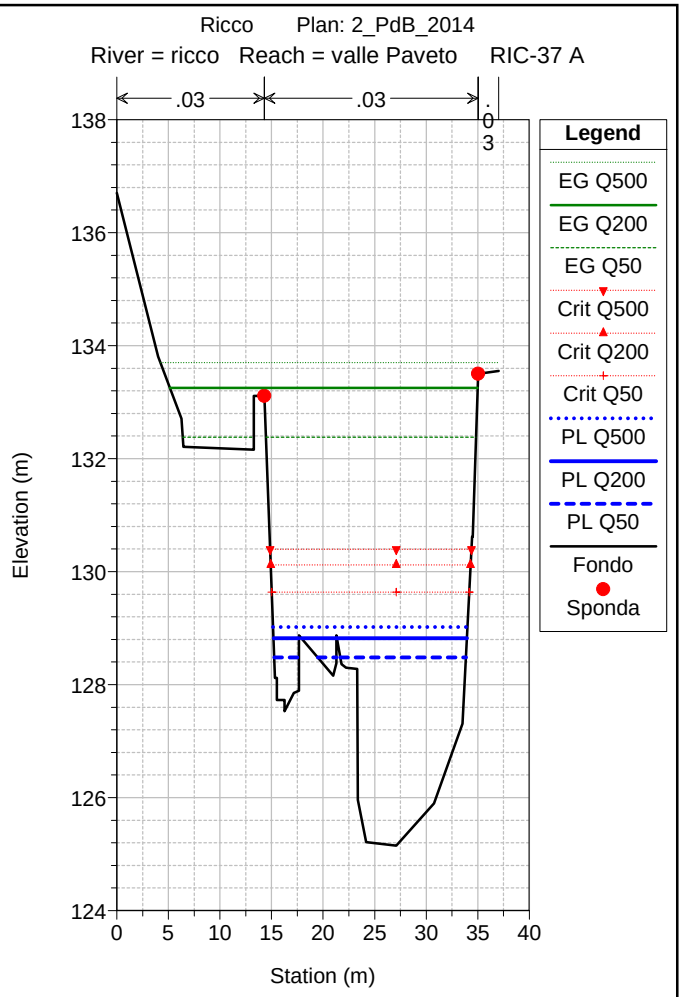

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-38.5m
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
136
134
132
130
128
126
0
5
10
15
20
25
30

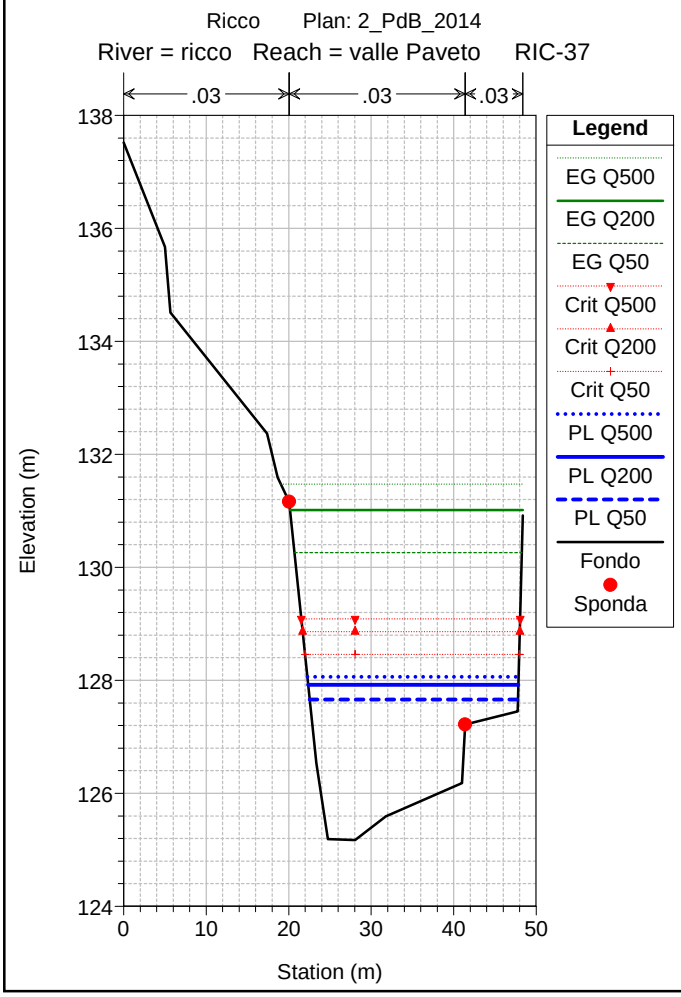

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-38.5
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
136
134
132
130
128
126
0
5
10
15
20
25
30

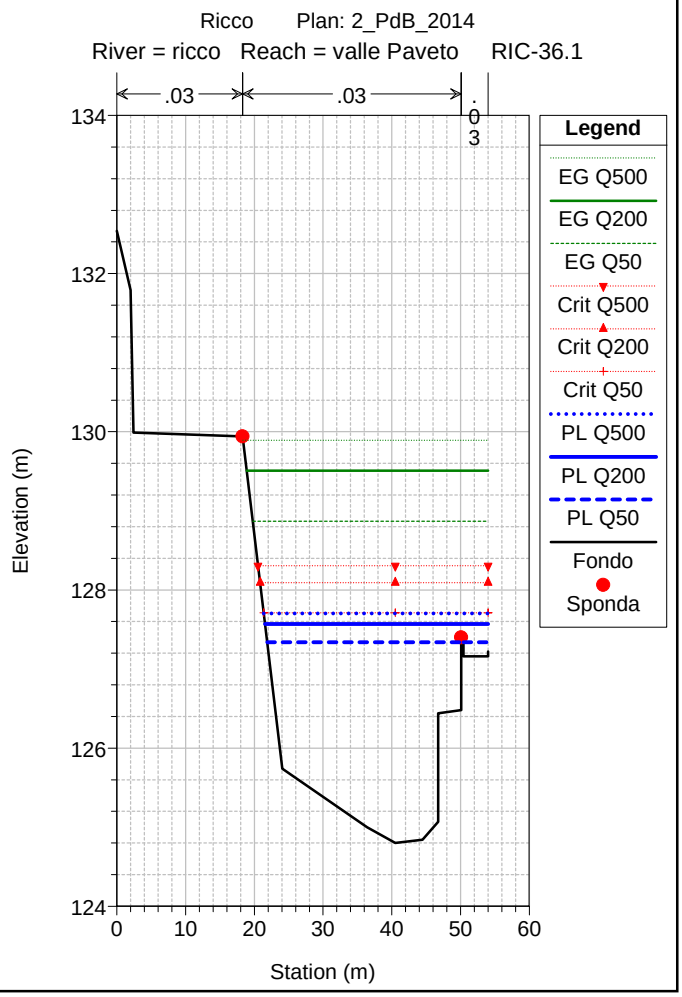

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-38.5
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
136
134
132
130
128
126
0
5
10
15
20
25
30

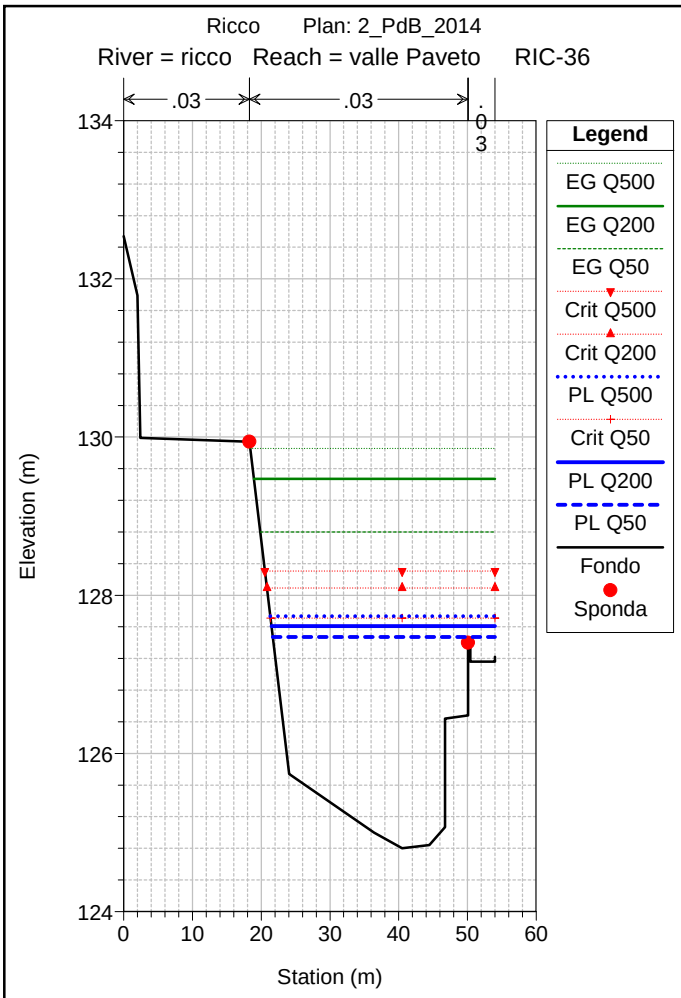

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-38.5v
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
136
134
132
130
128
126
0
5
10
15
20
25
30

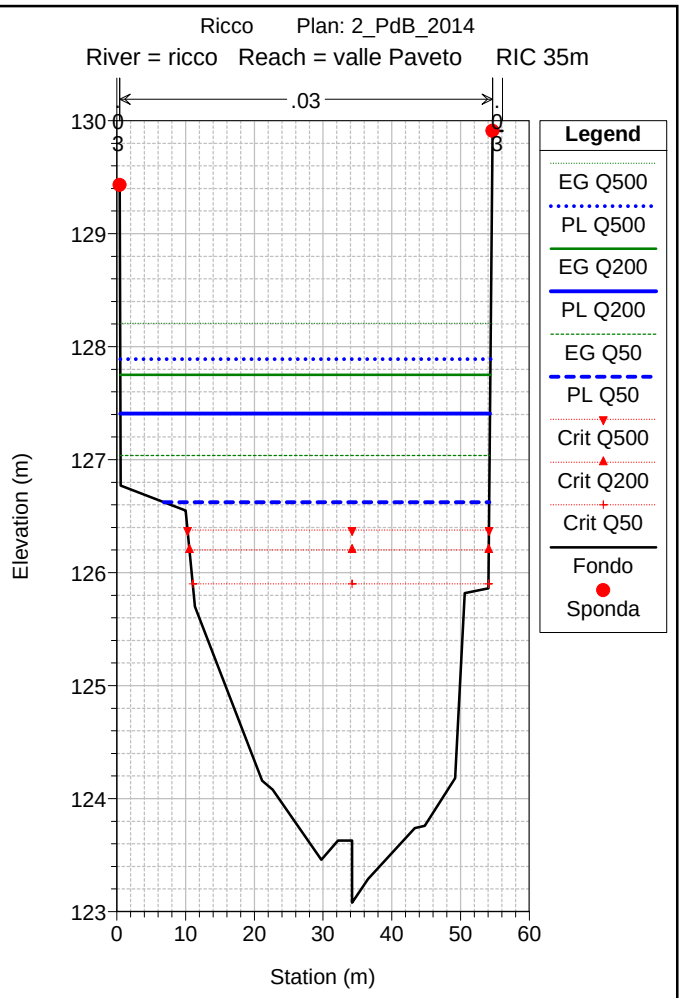

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-38
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

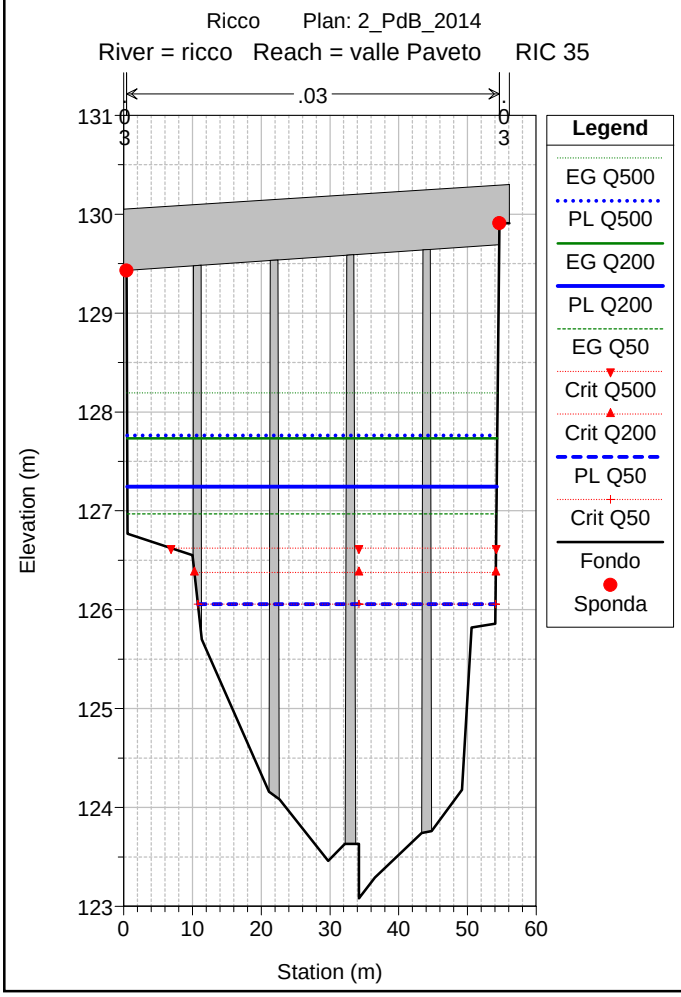

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-37 A
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

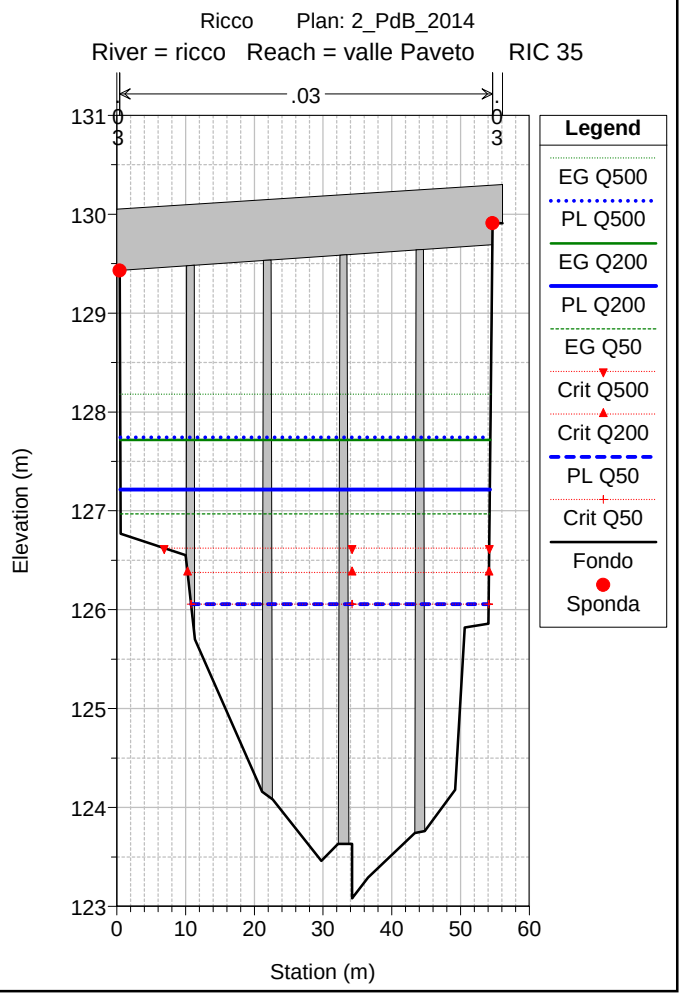

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-37
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-36.1
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-36
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

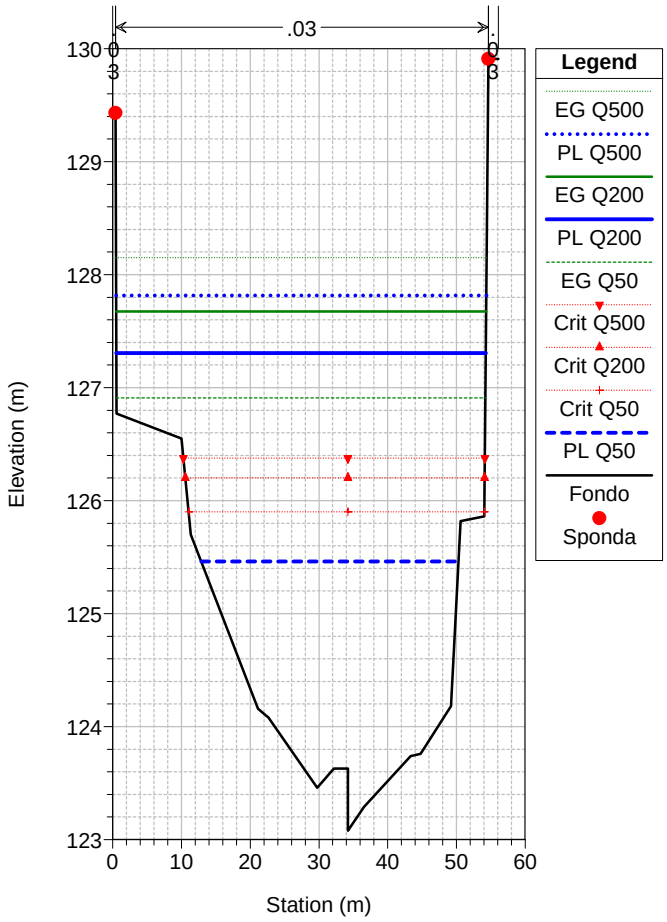

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 35m
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 35
.03
.03
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 35
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

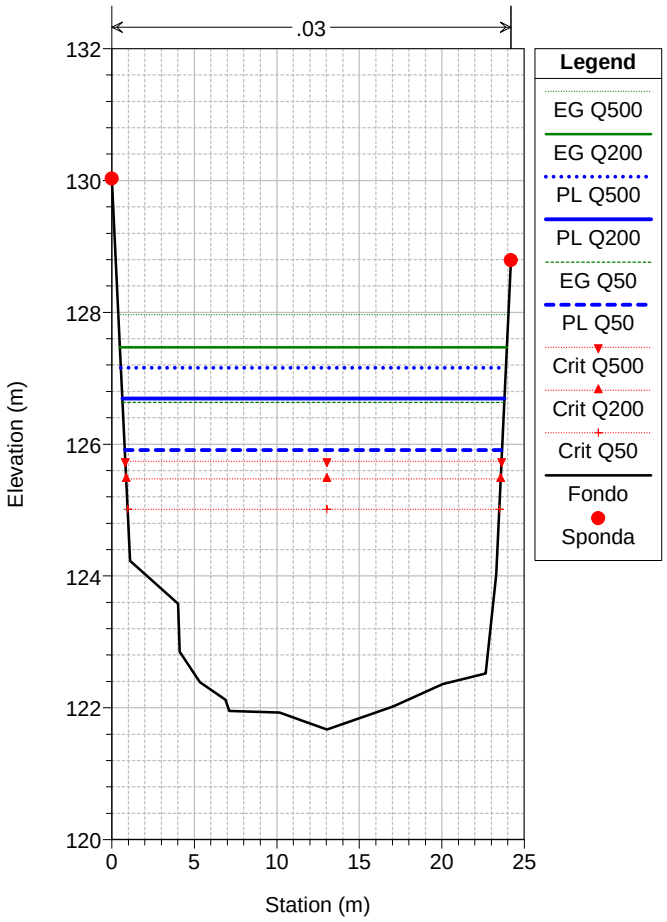
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC 35v



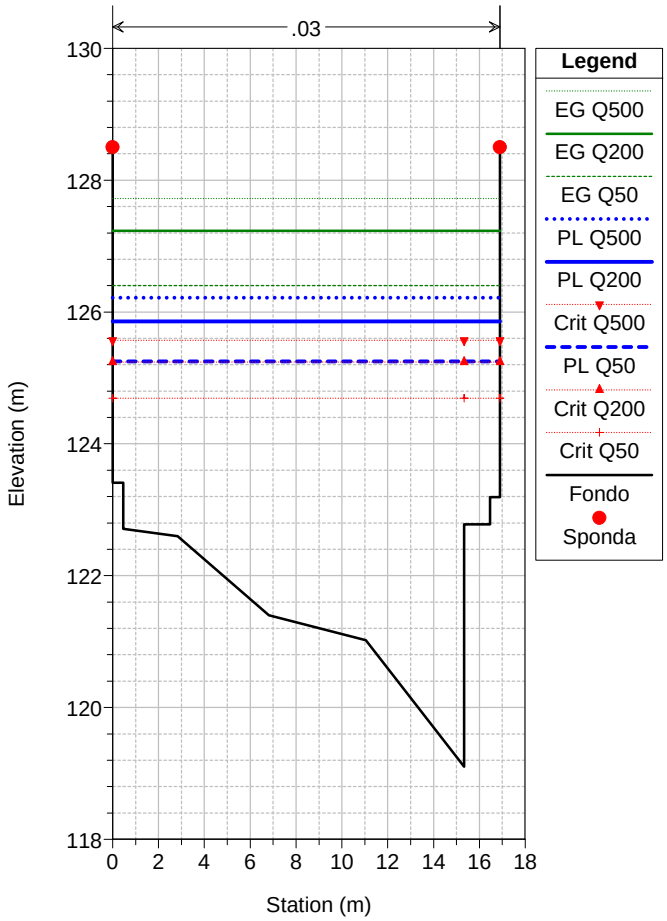
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-34



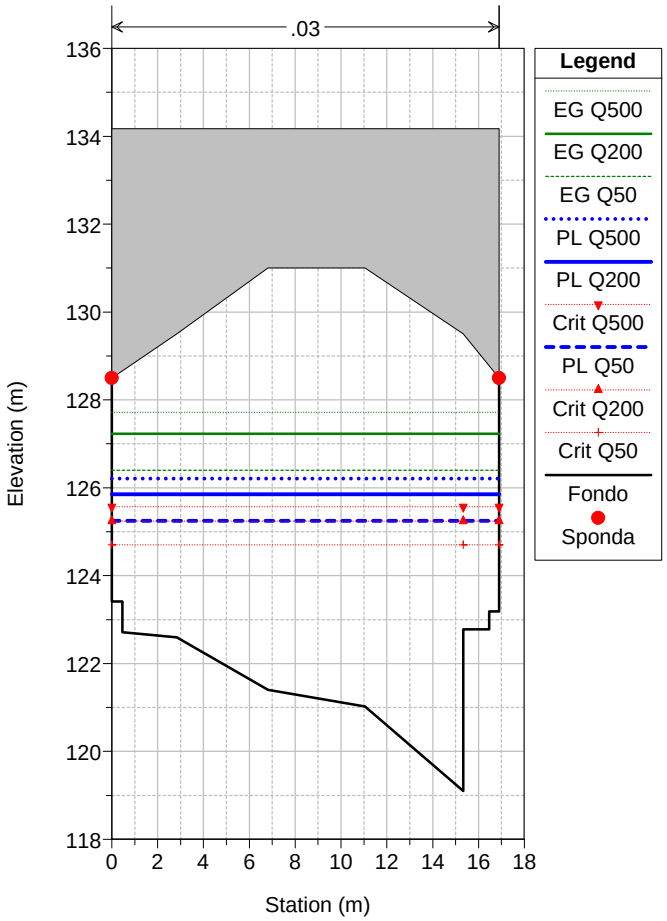
Ricco Plan: 2_PdB_2014

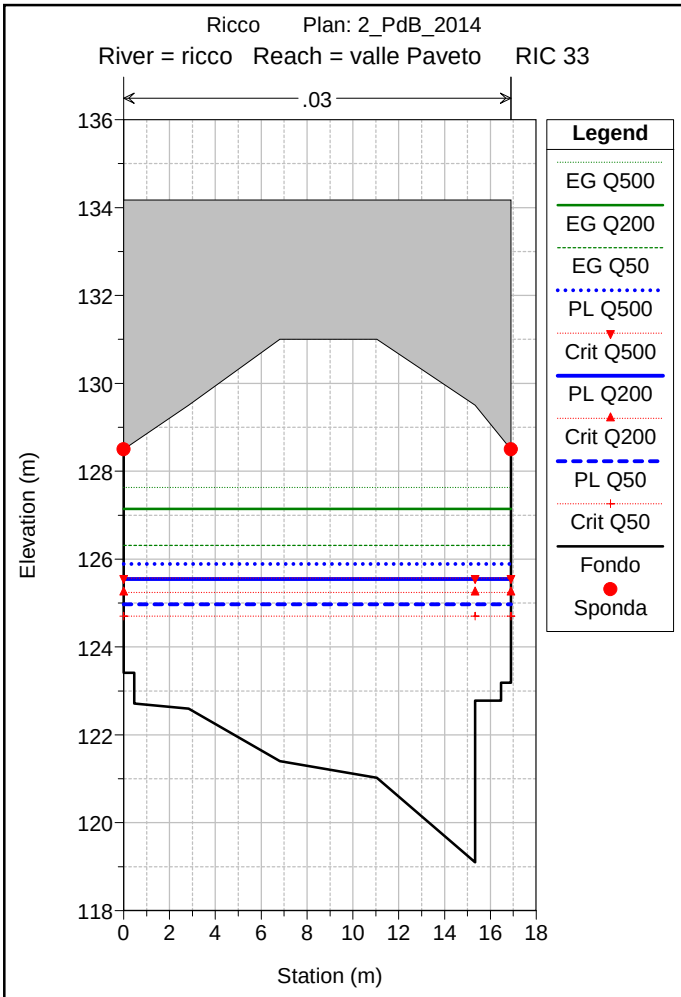
River = ricco Reach = valle Paveto RIC 33m

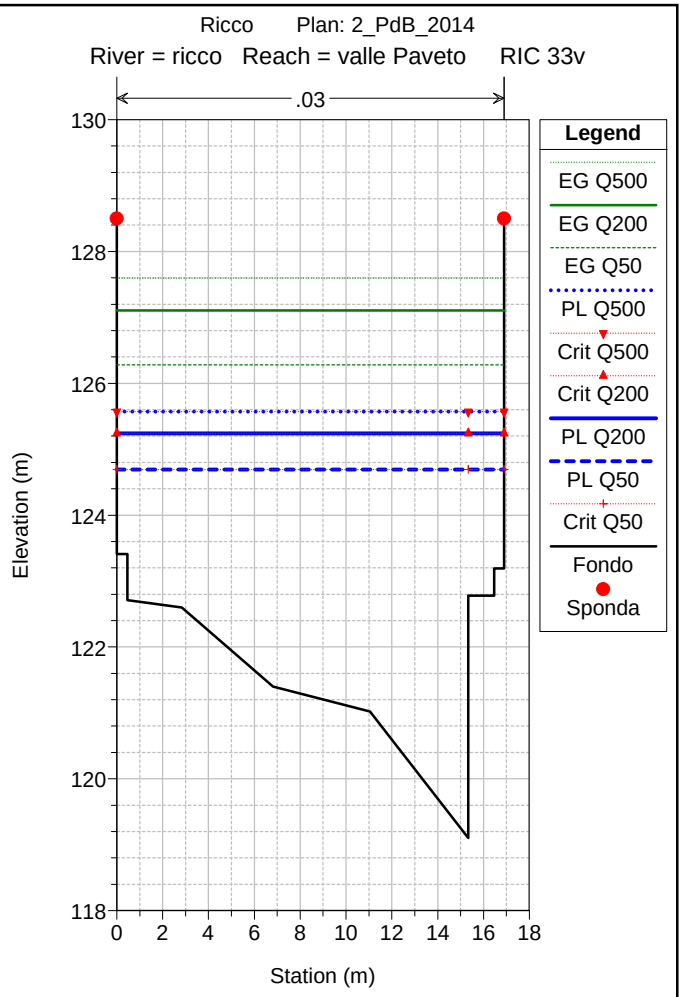


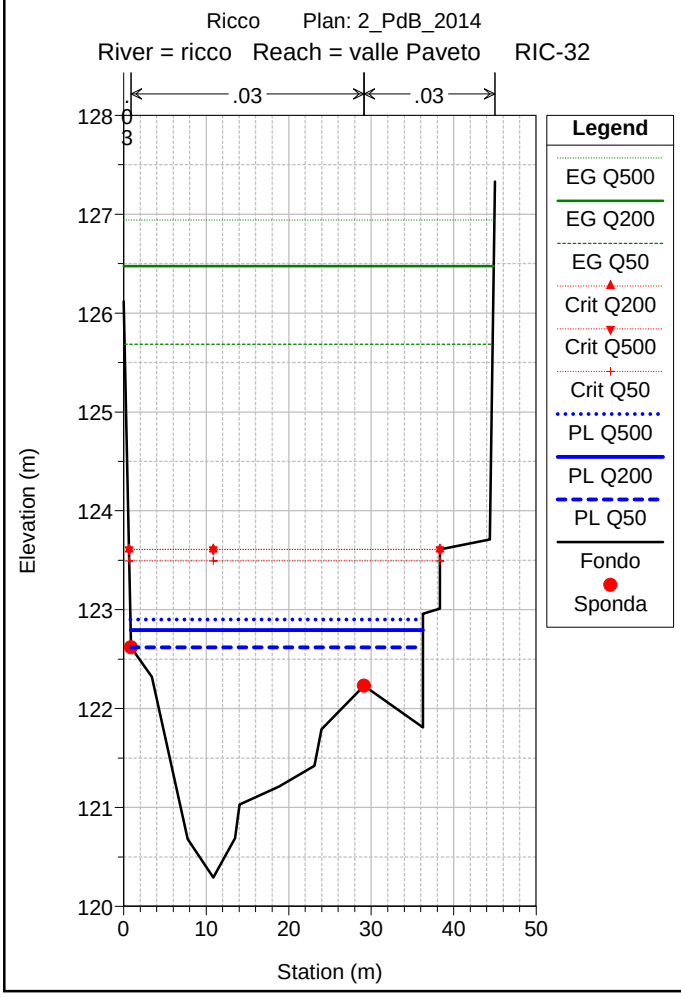
Ricco Plan: 2_PdB_2014

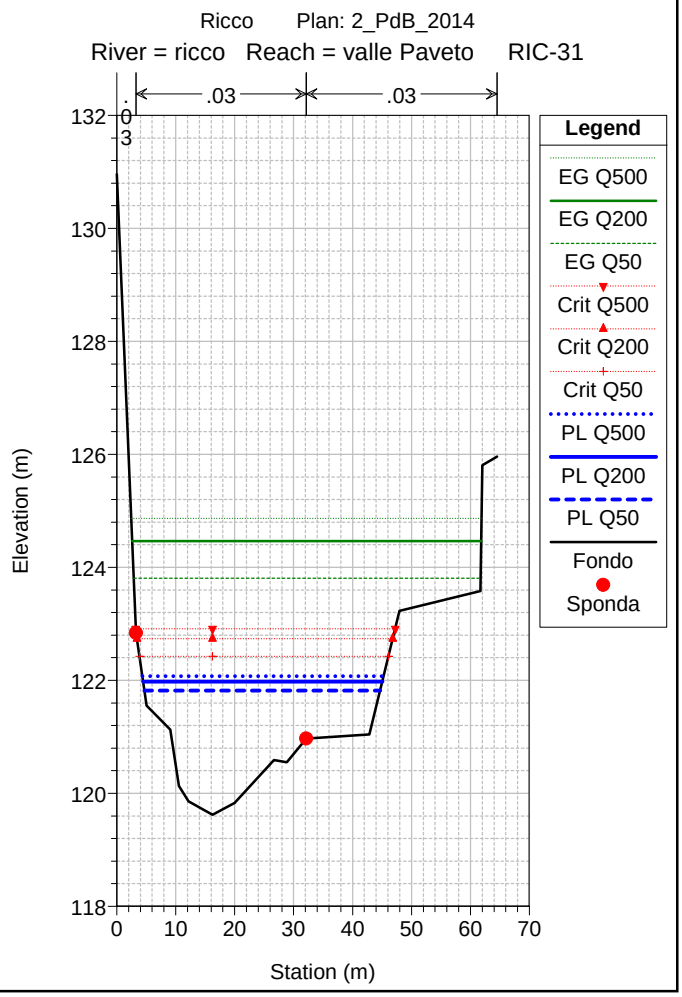
River = ricco Reach = valle Paveto RIC 33




Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 33
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

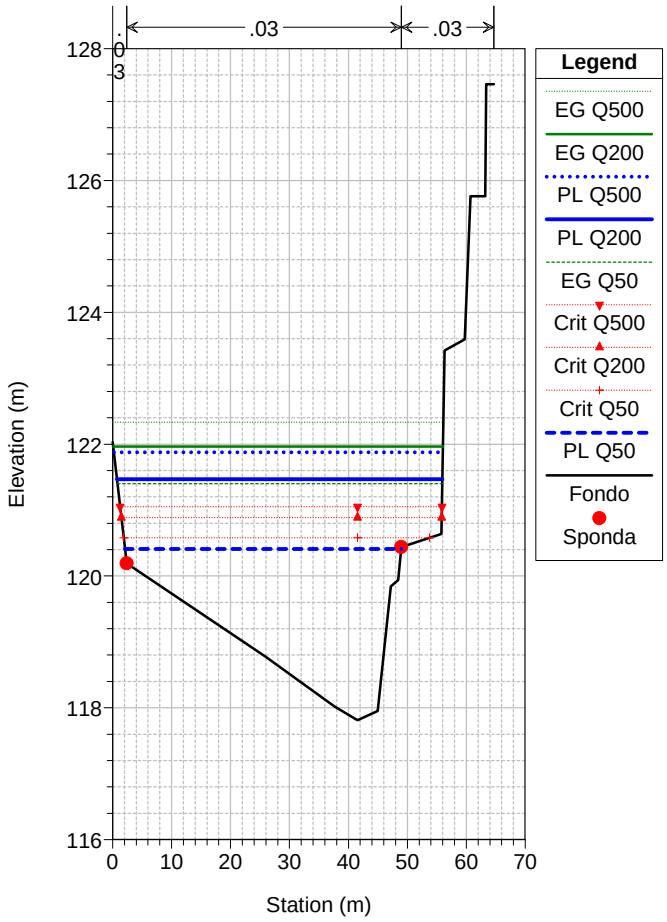

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 33v
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-32
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q200
Crit Q500
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-31
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

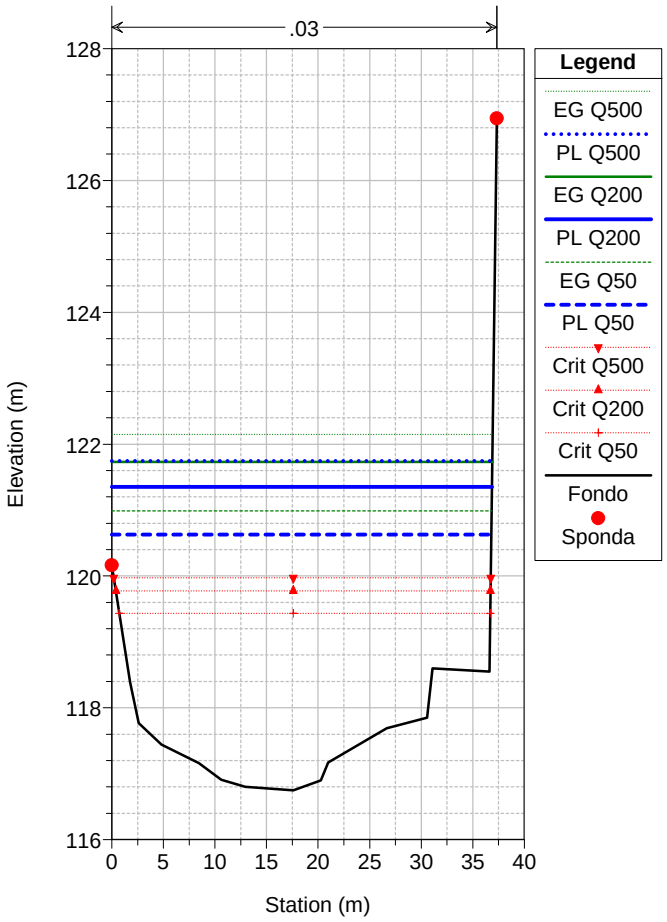
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-30



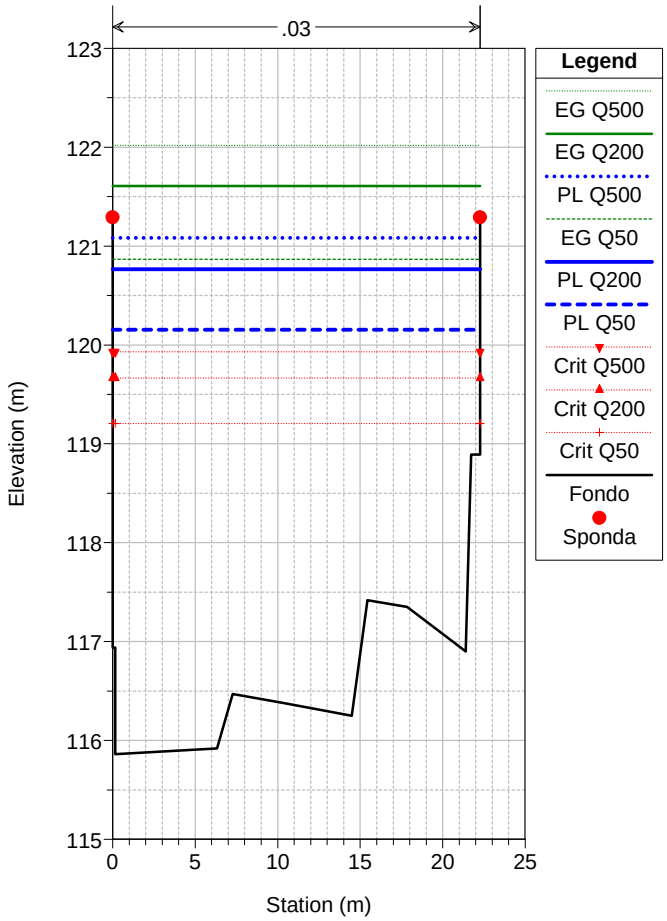
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-29A



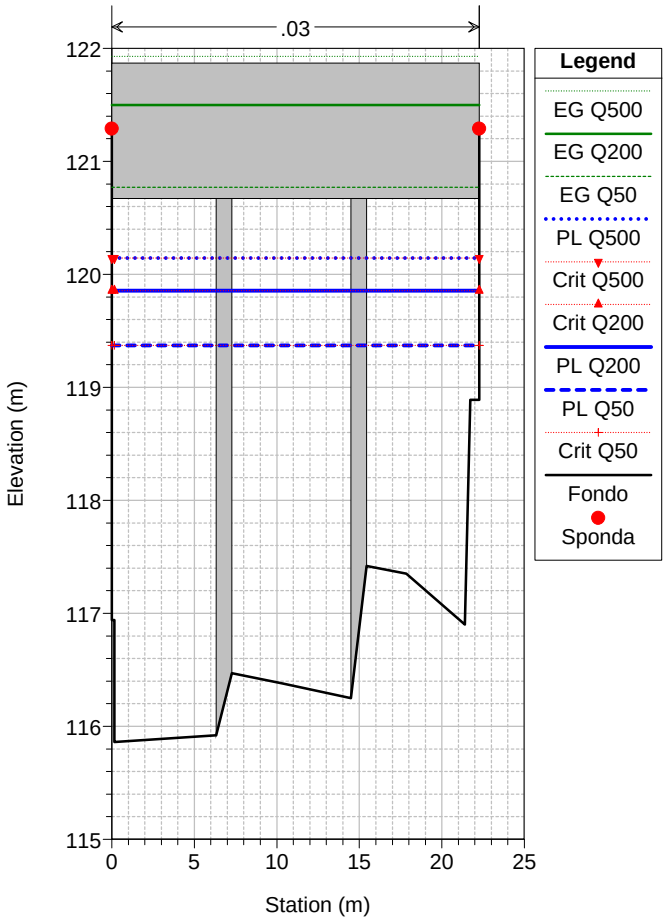
Ricco Plan: 2_PdB_2014

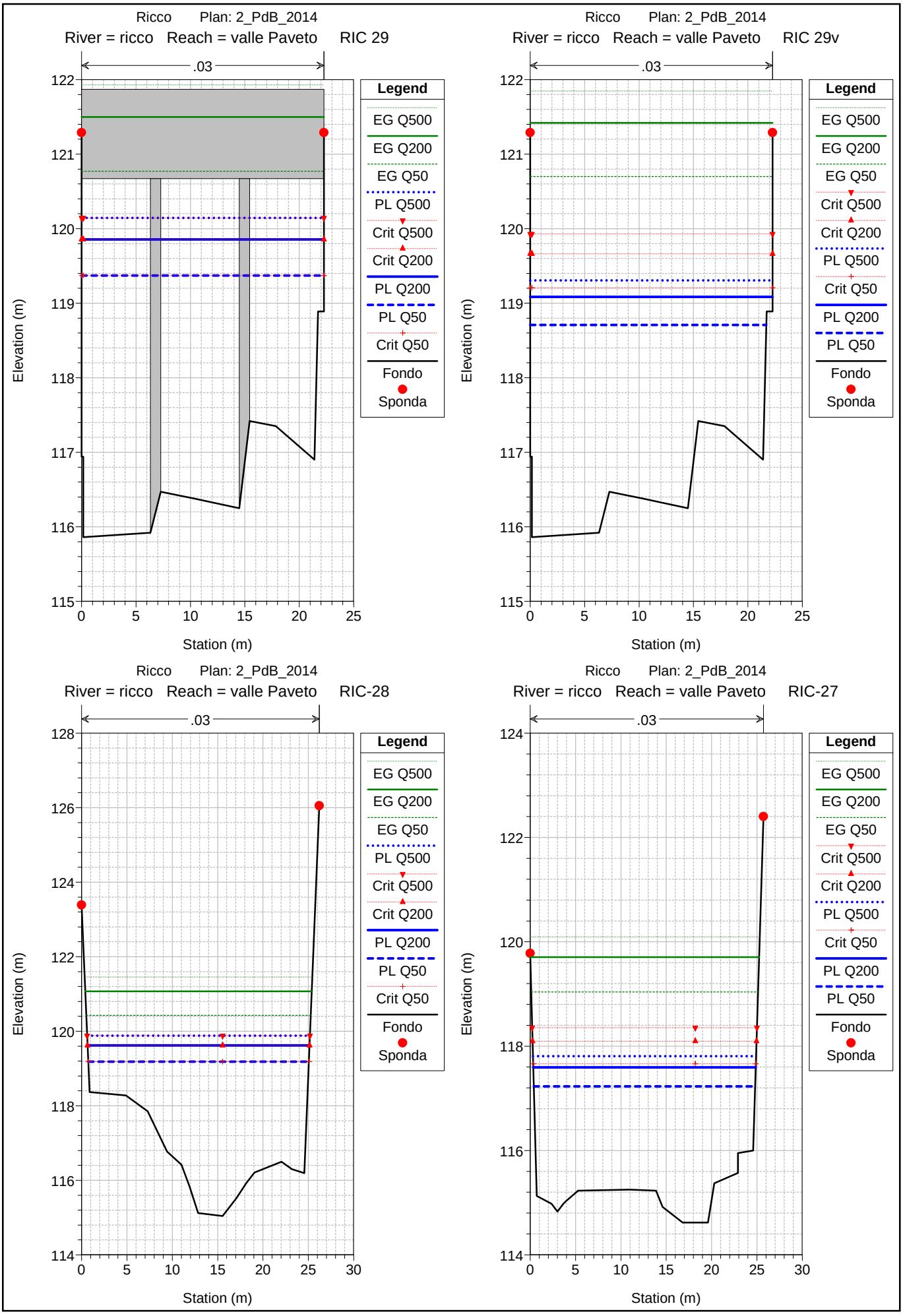
River = ricco Reach = valle Paveto RIC 29m

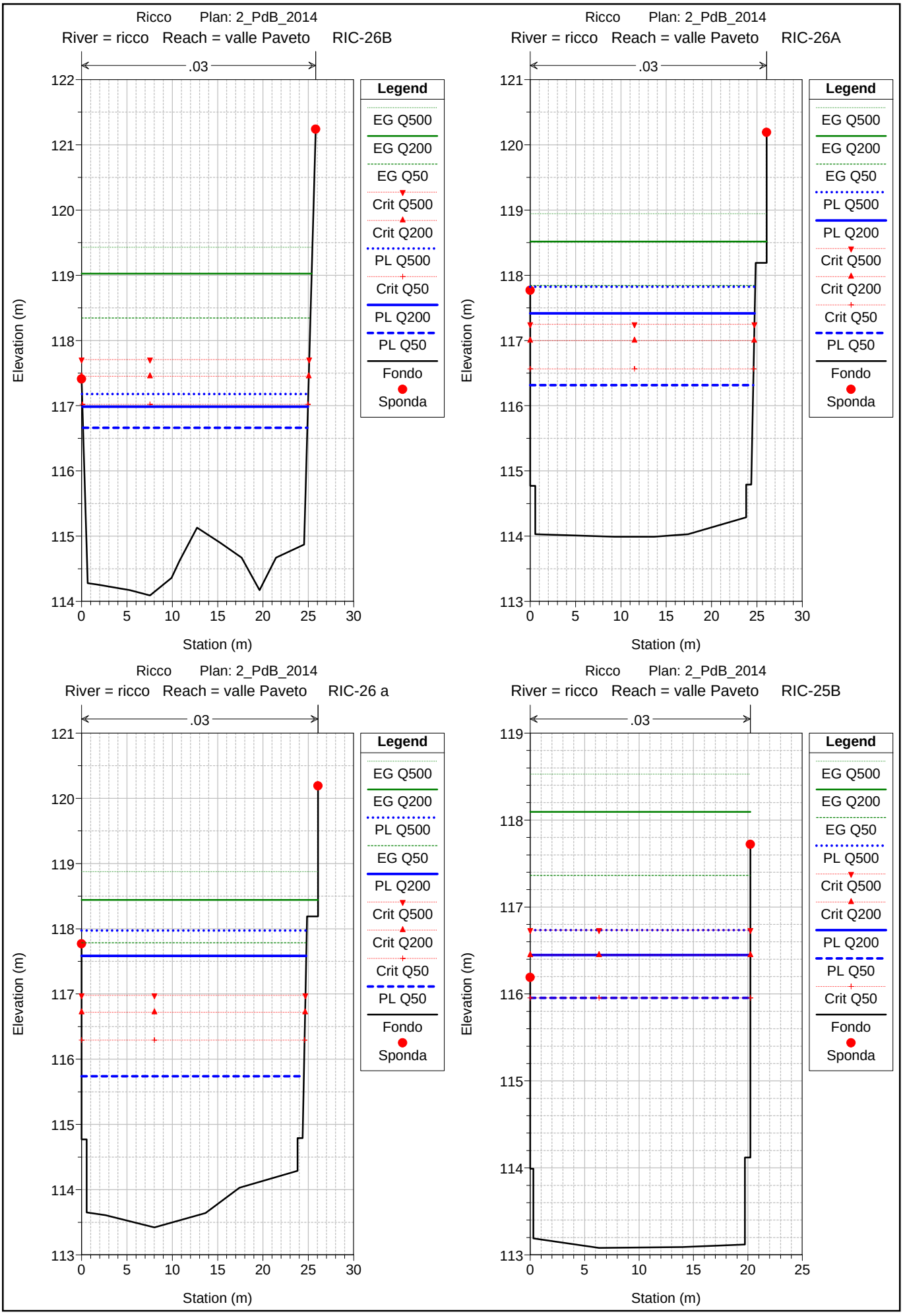


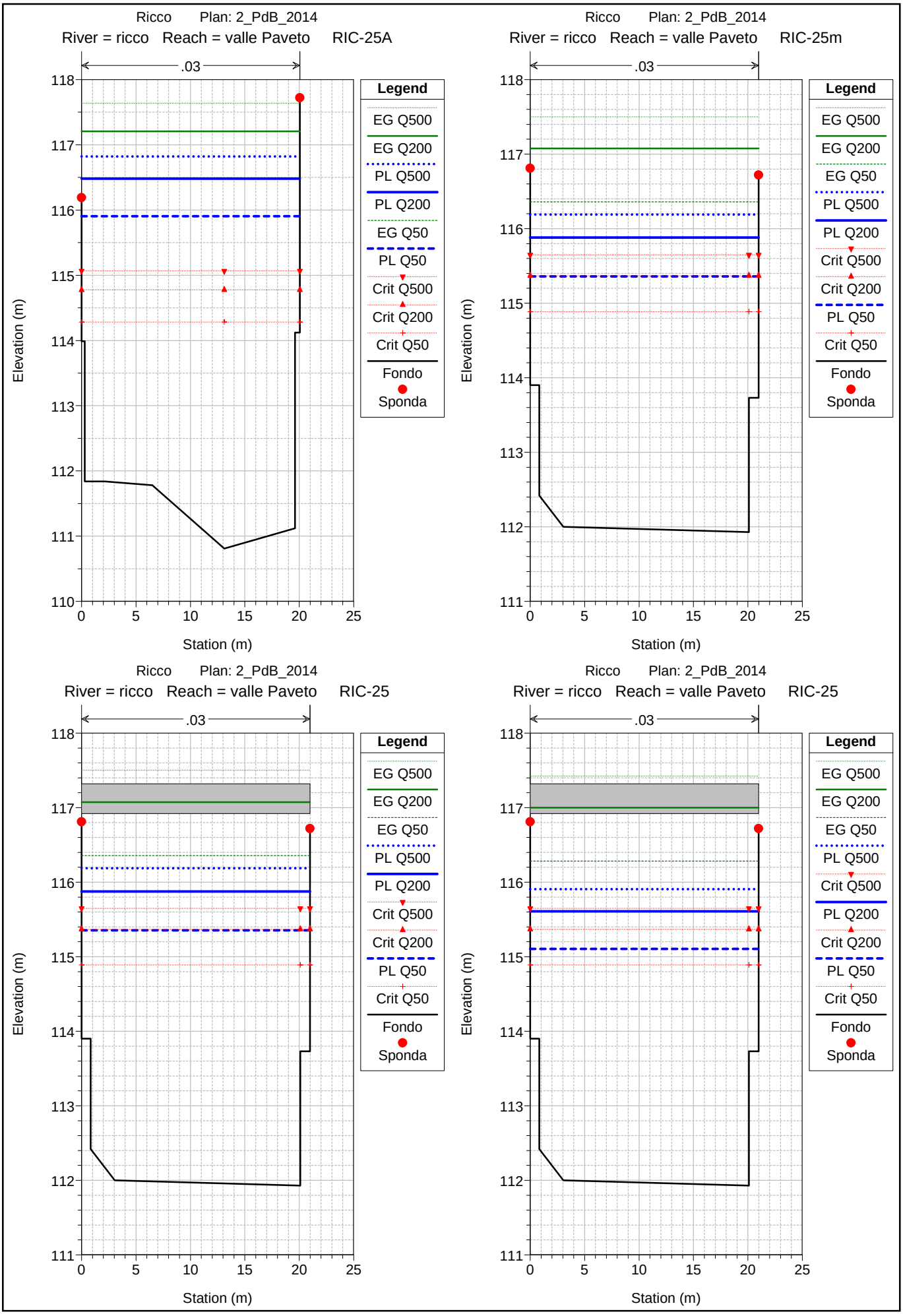
Ricco Plan: 2_PdB_2014

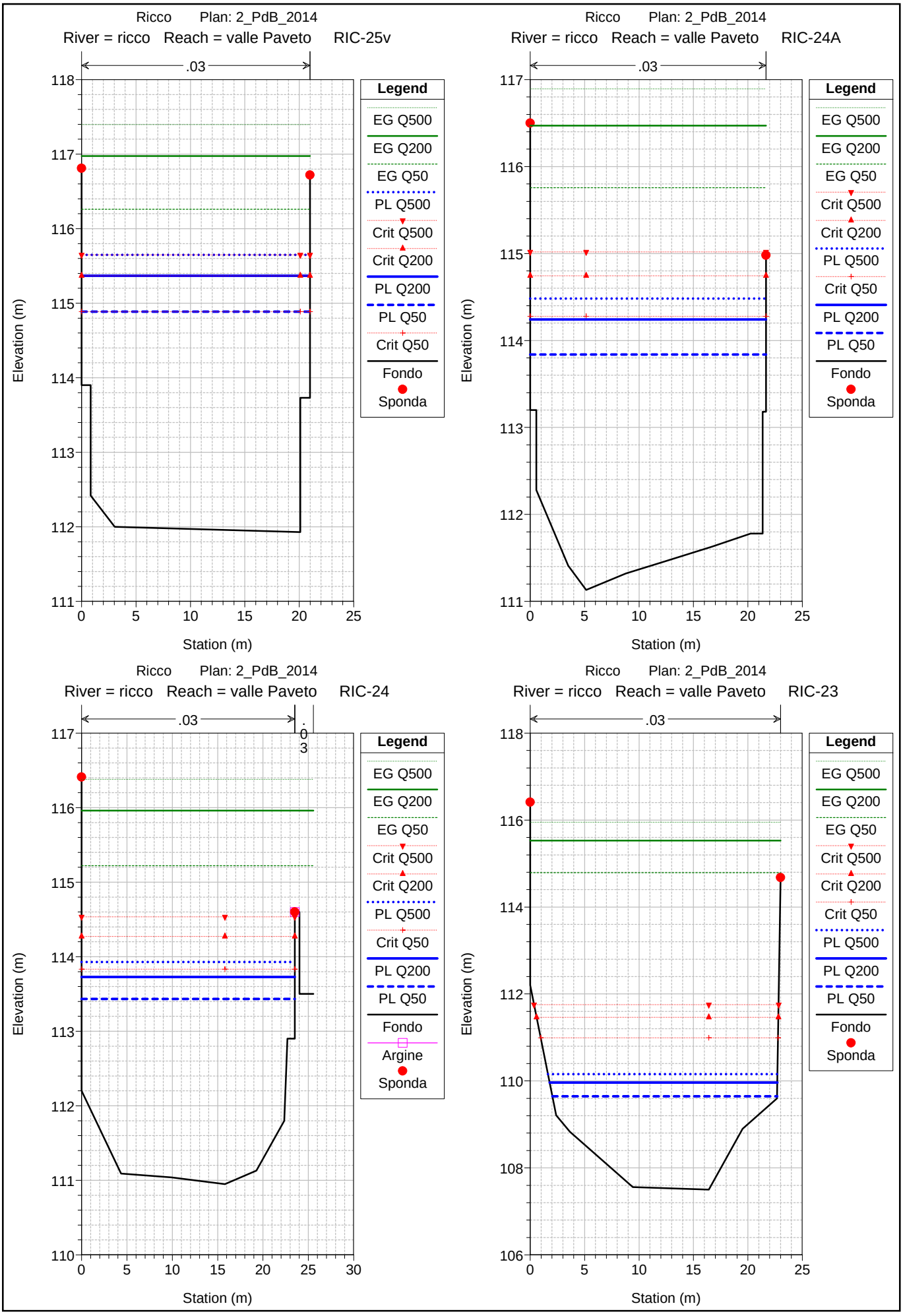
River = ricco Reach = valle Paveto RIC 29



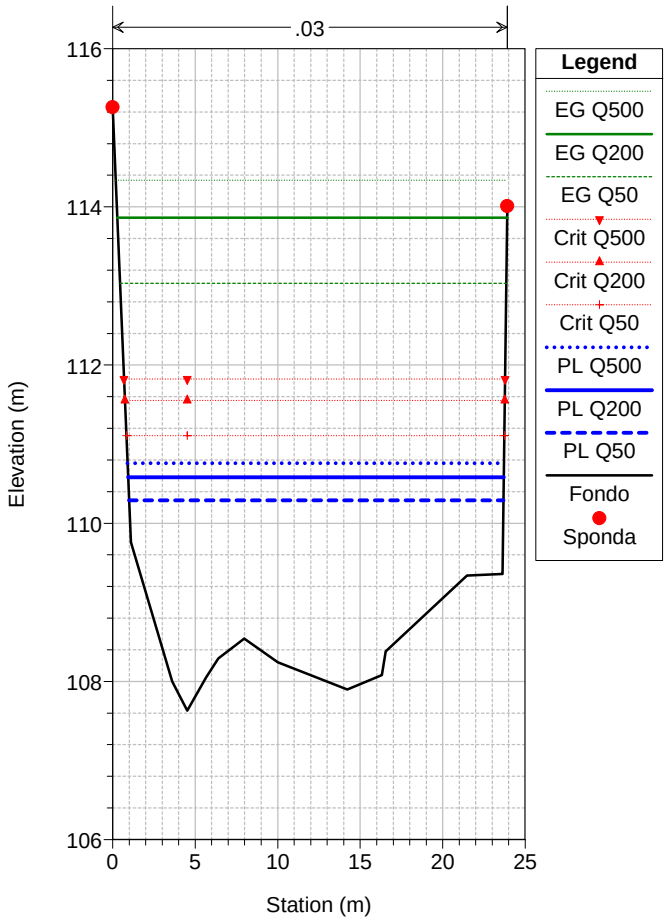

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 29
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 29v
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-28
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-27
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-26B
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-26A
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-26 a
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-25B
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

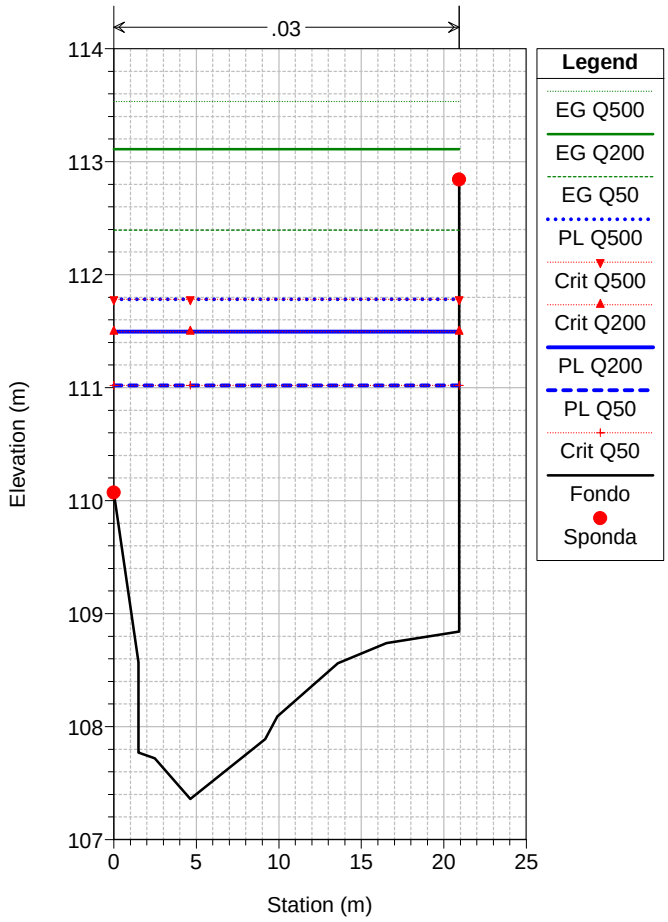

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-25A
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-25m
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-25
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-25
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-25v
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-24A
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-24
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-23
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

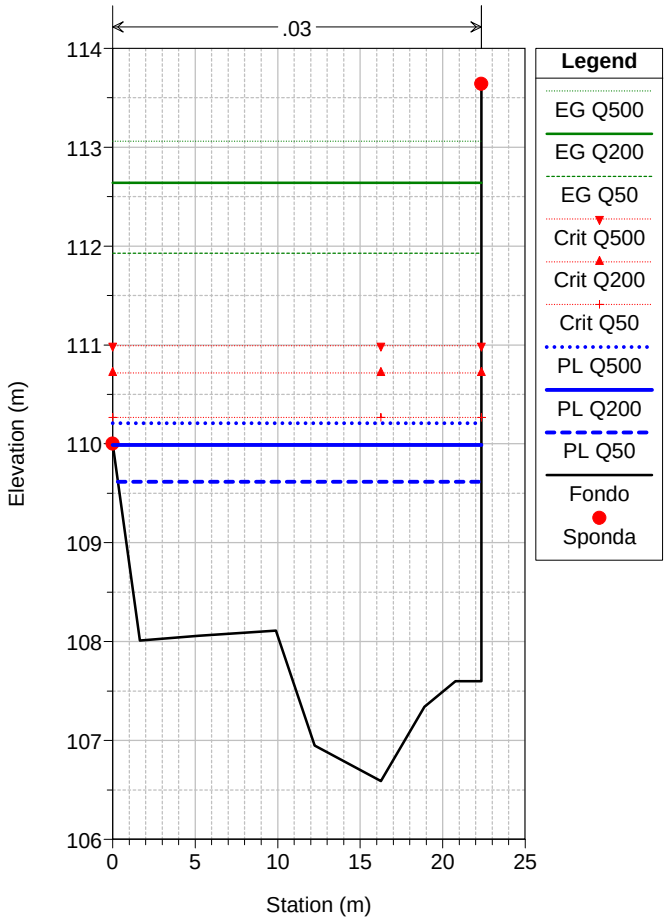
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-22C



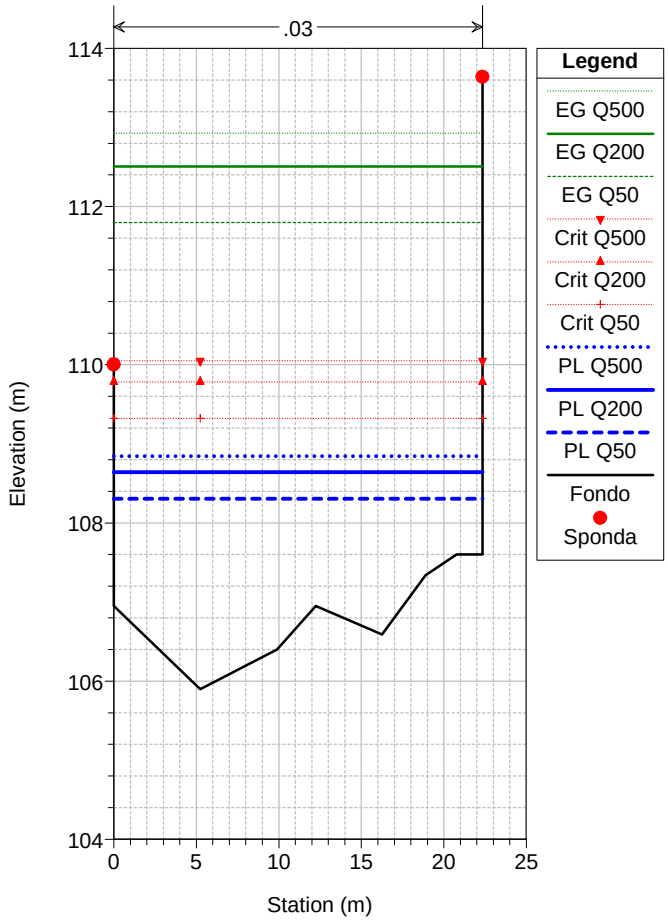
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-22B



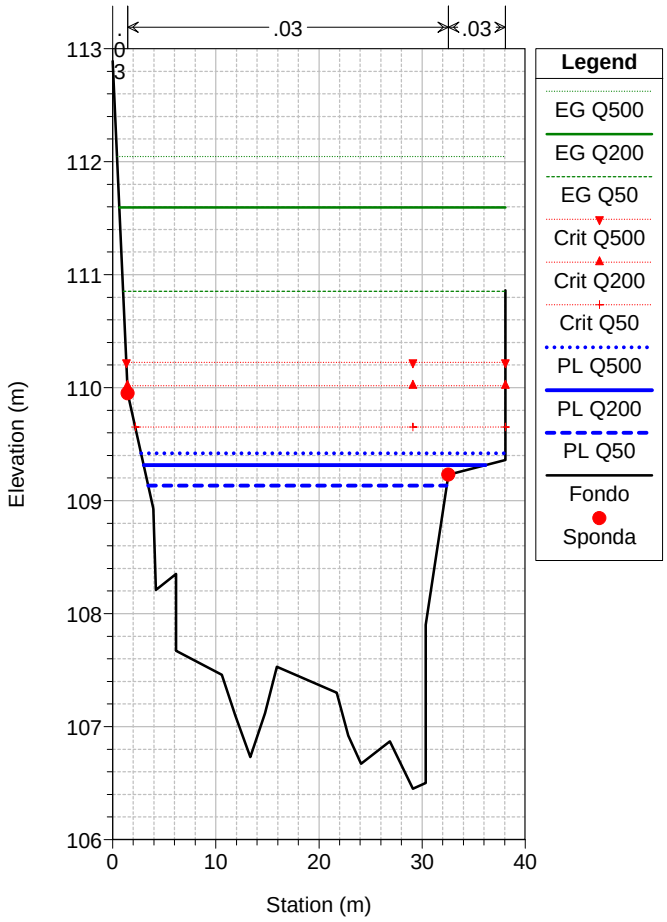
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-22A



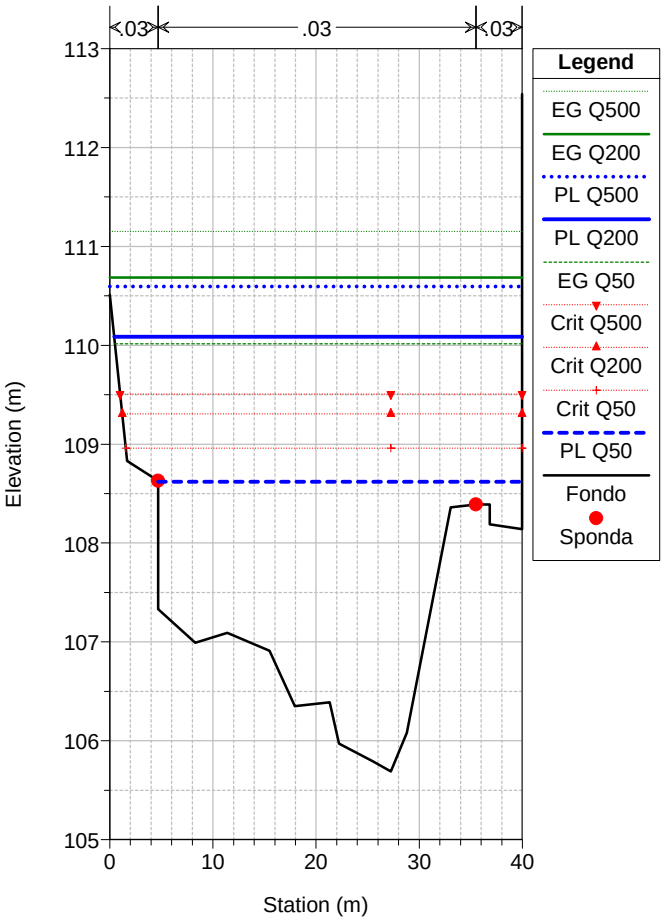
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-22



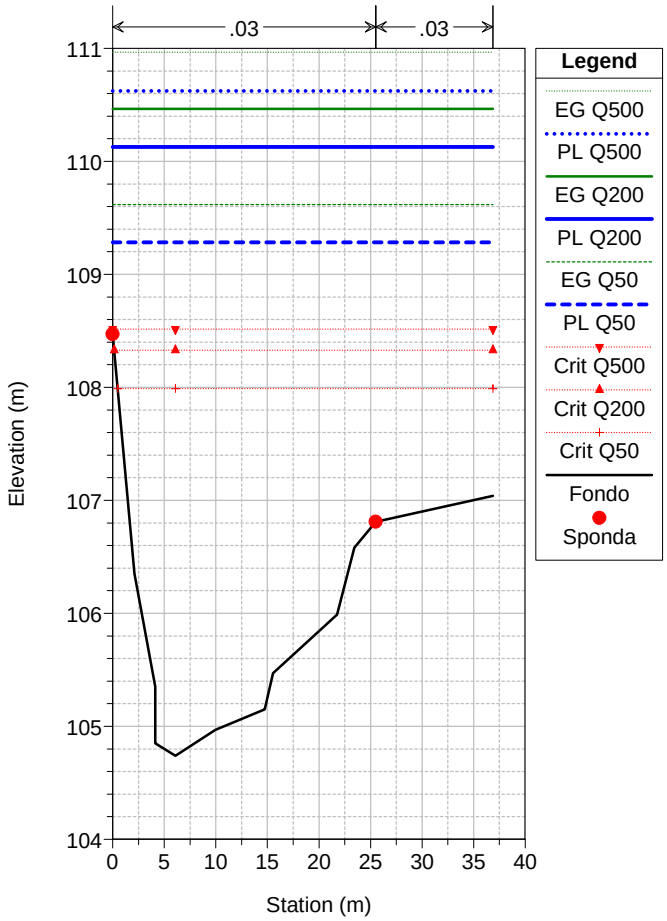
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-21A



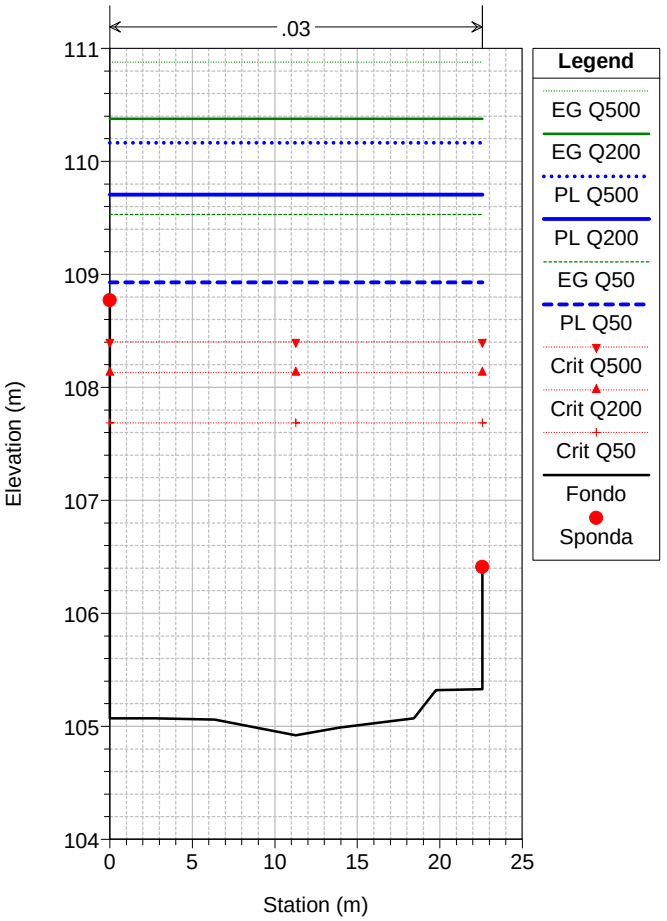
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-21



Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-20

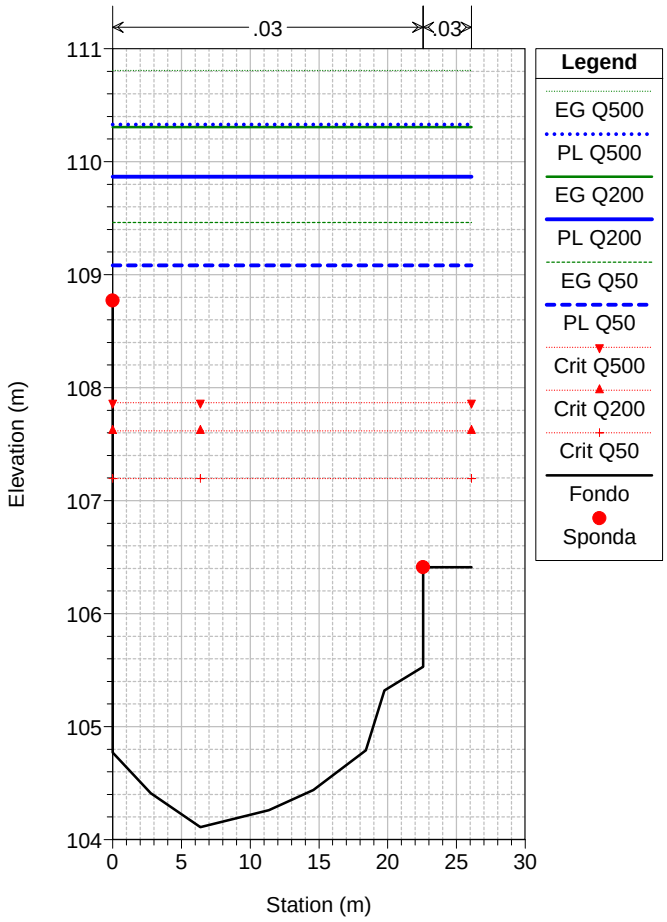


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-19B



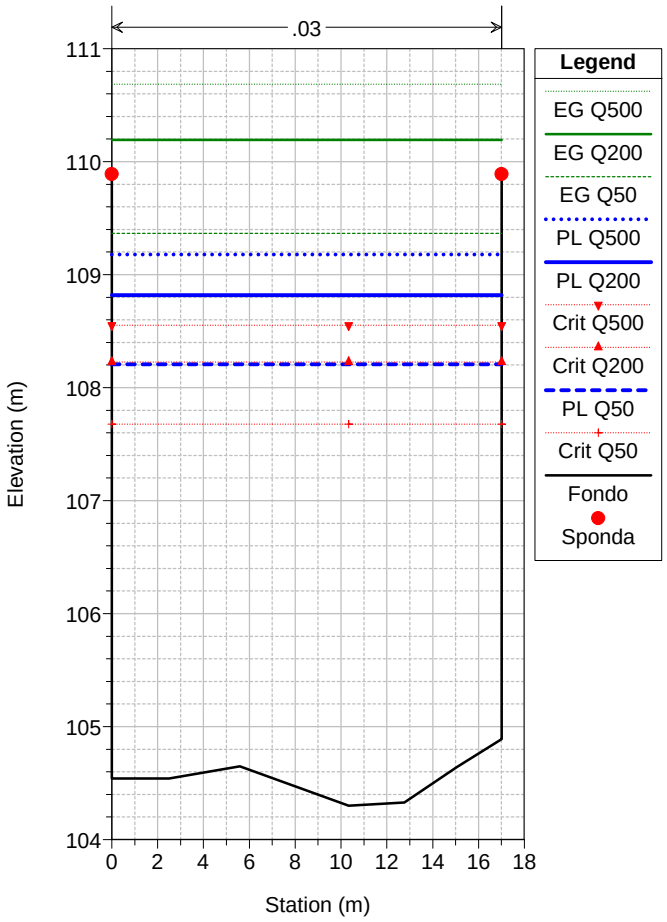
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-19A



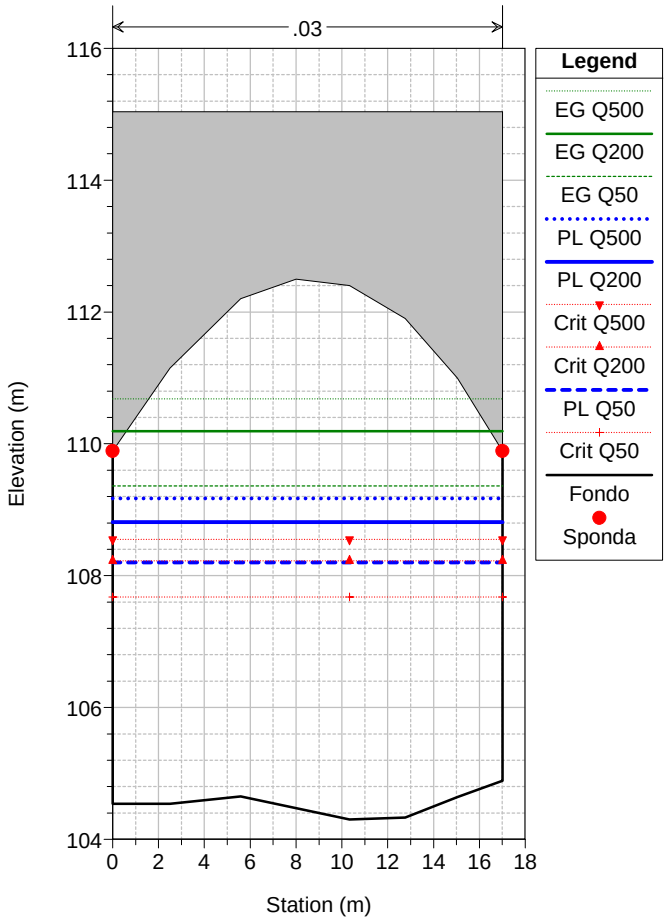
Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC 19m



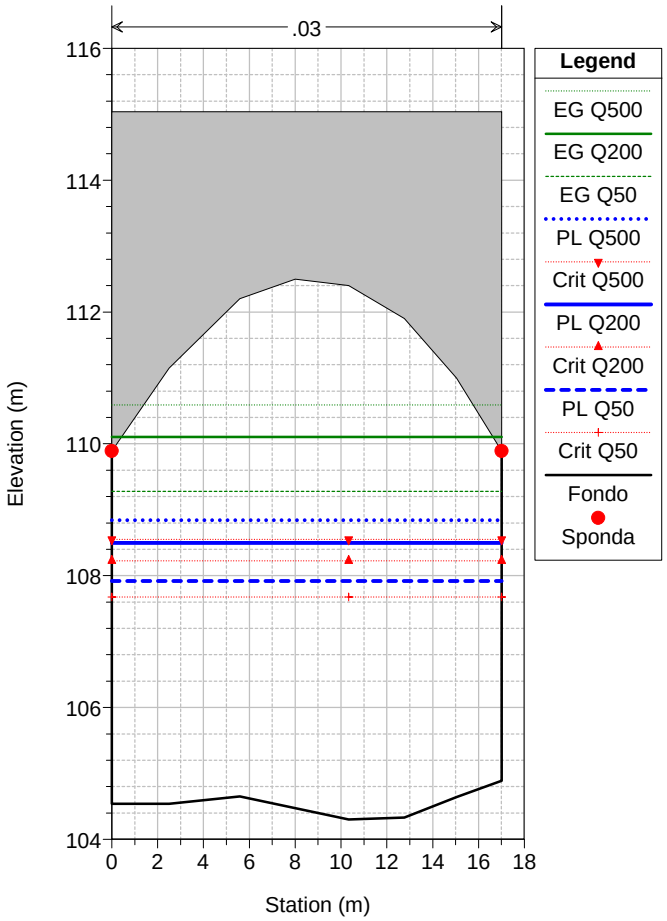
Ricco Plan: 2_PdB_2014

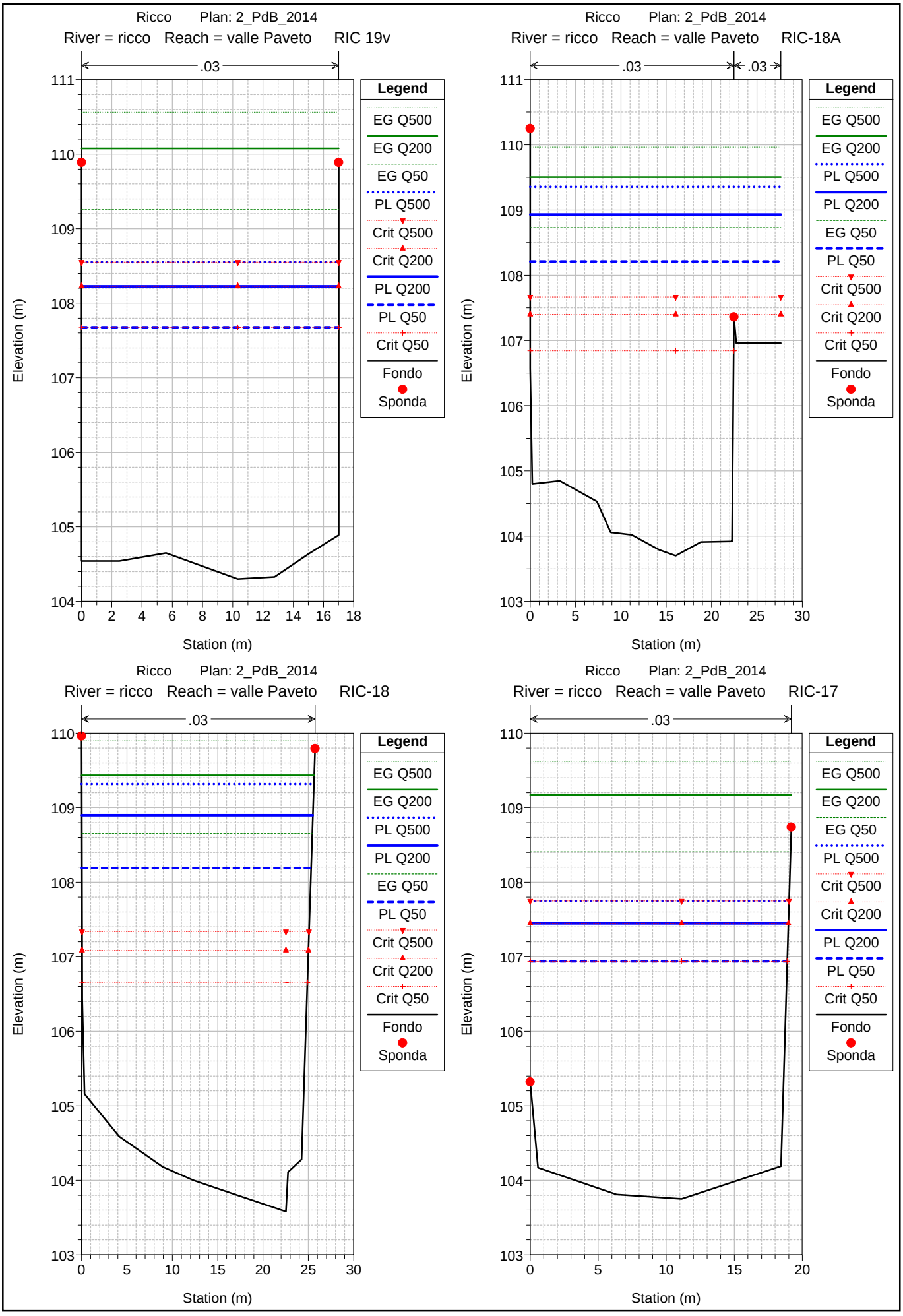
River = ricco Reach = valle Paveto RIC 19

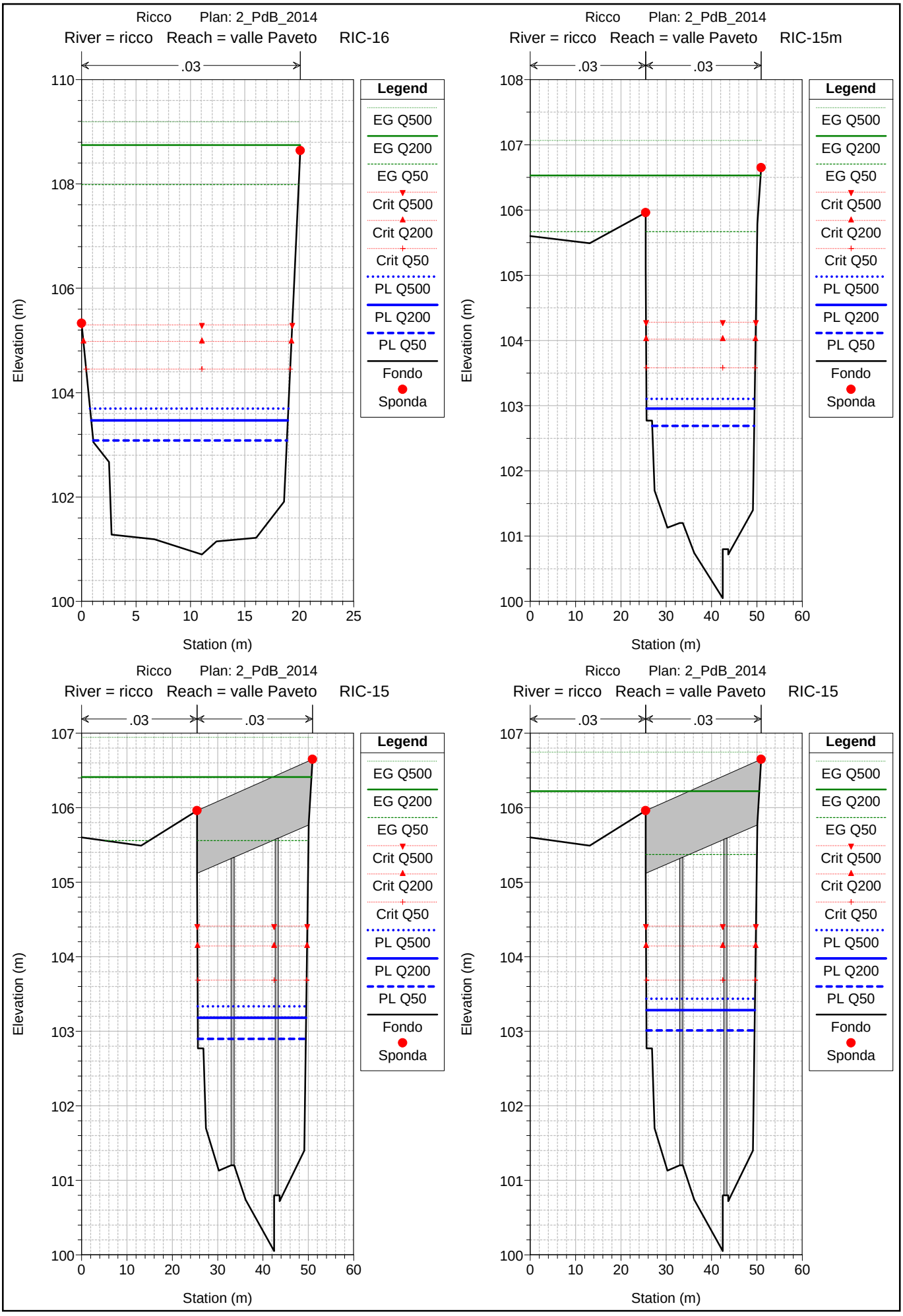


Ricco Plan: 2_PdB_2014

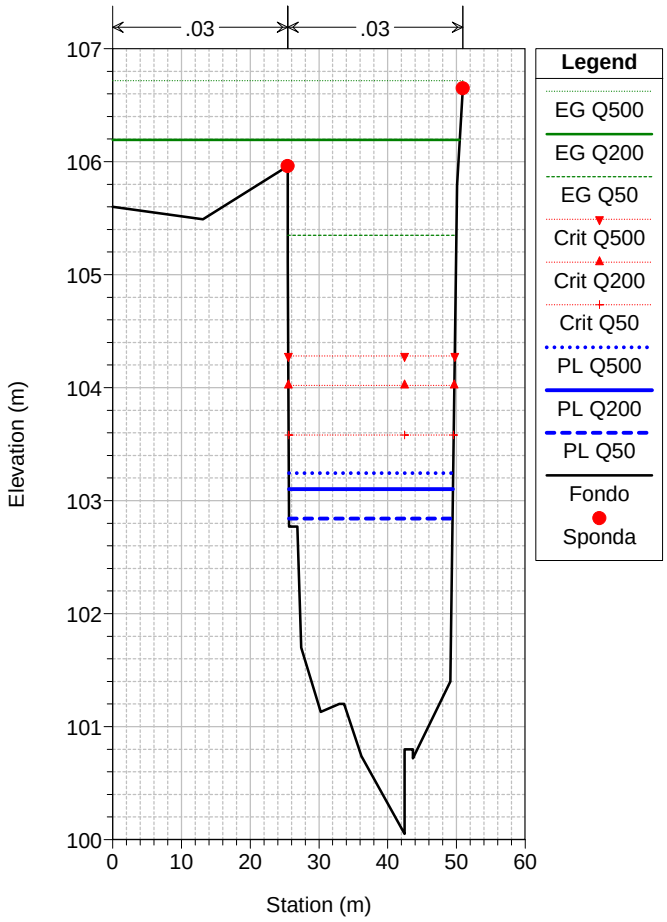
River = ricco Reach = valle Paveto RIC 19



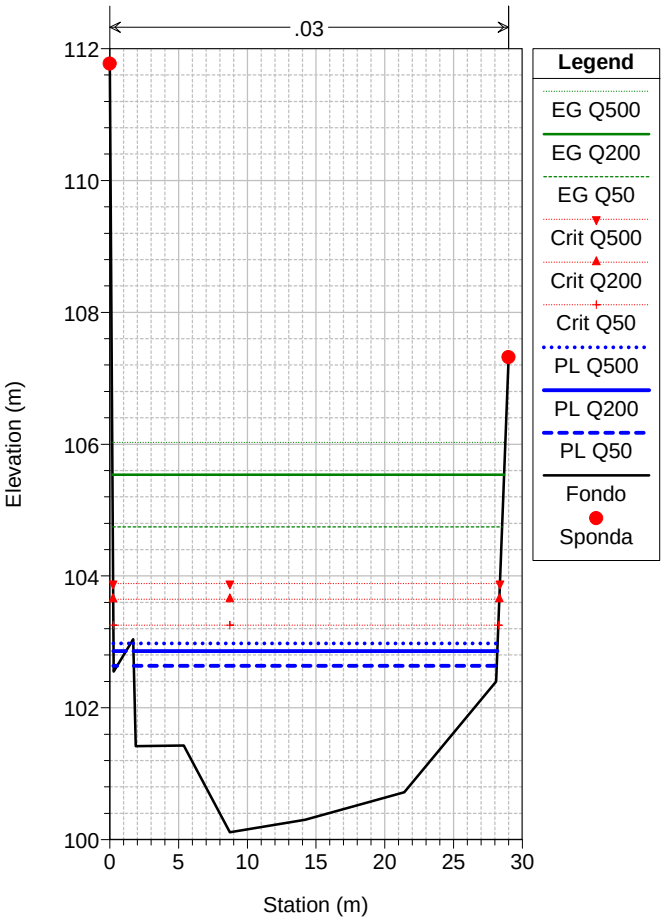

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC 19v
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-18A
.03
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-18
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-17
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-16
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-15m
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-15
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-15
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

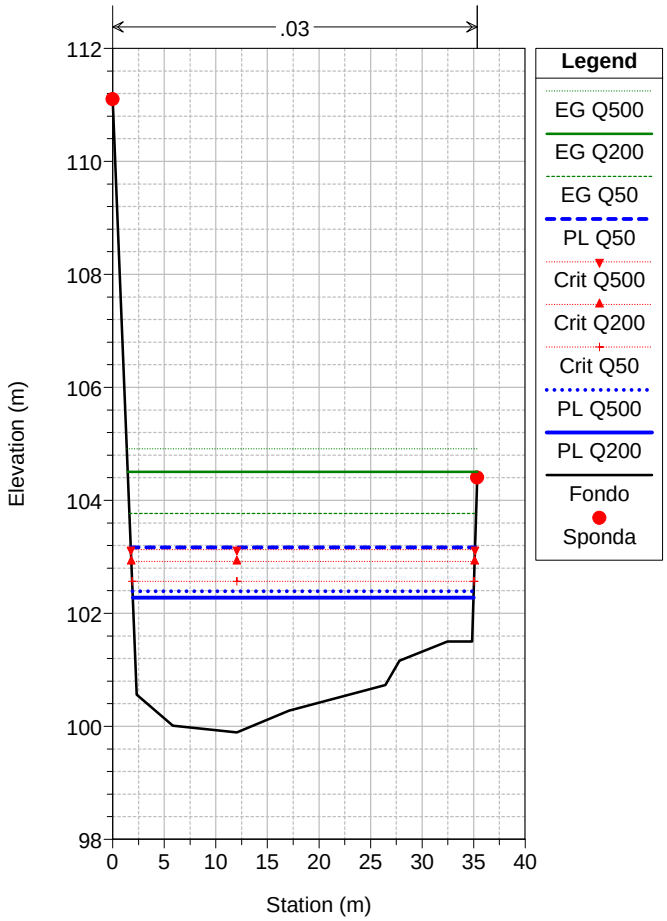
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-15v



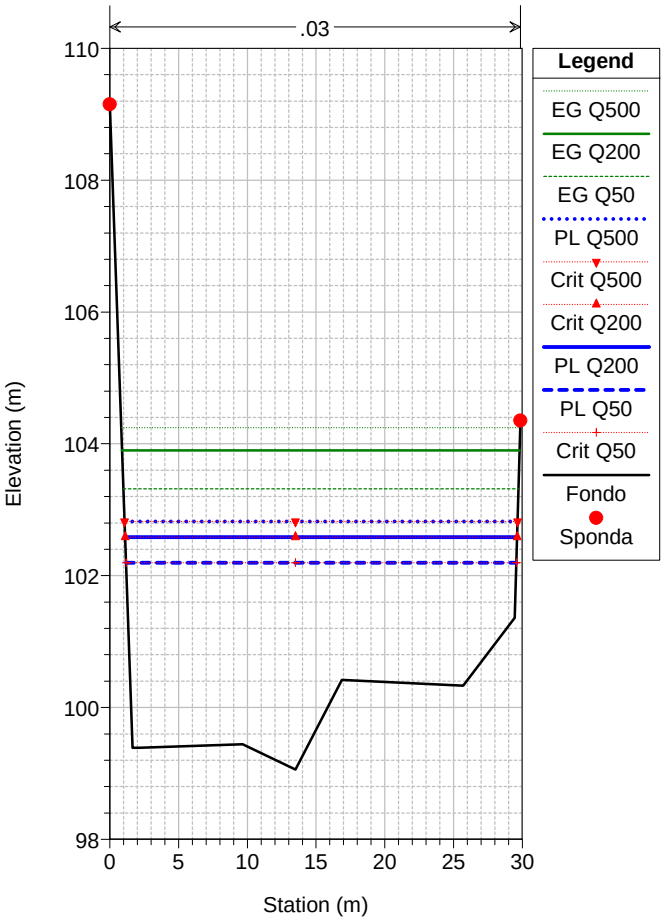
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-14

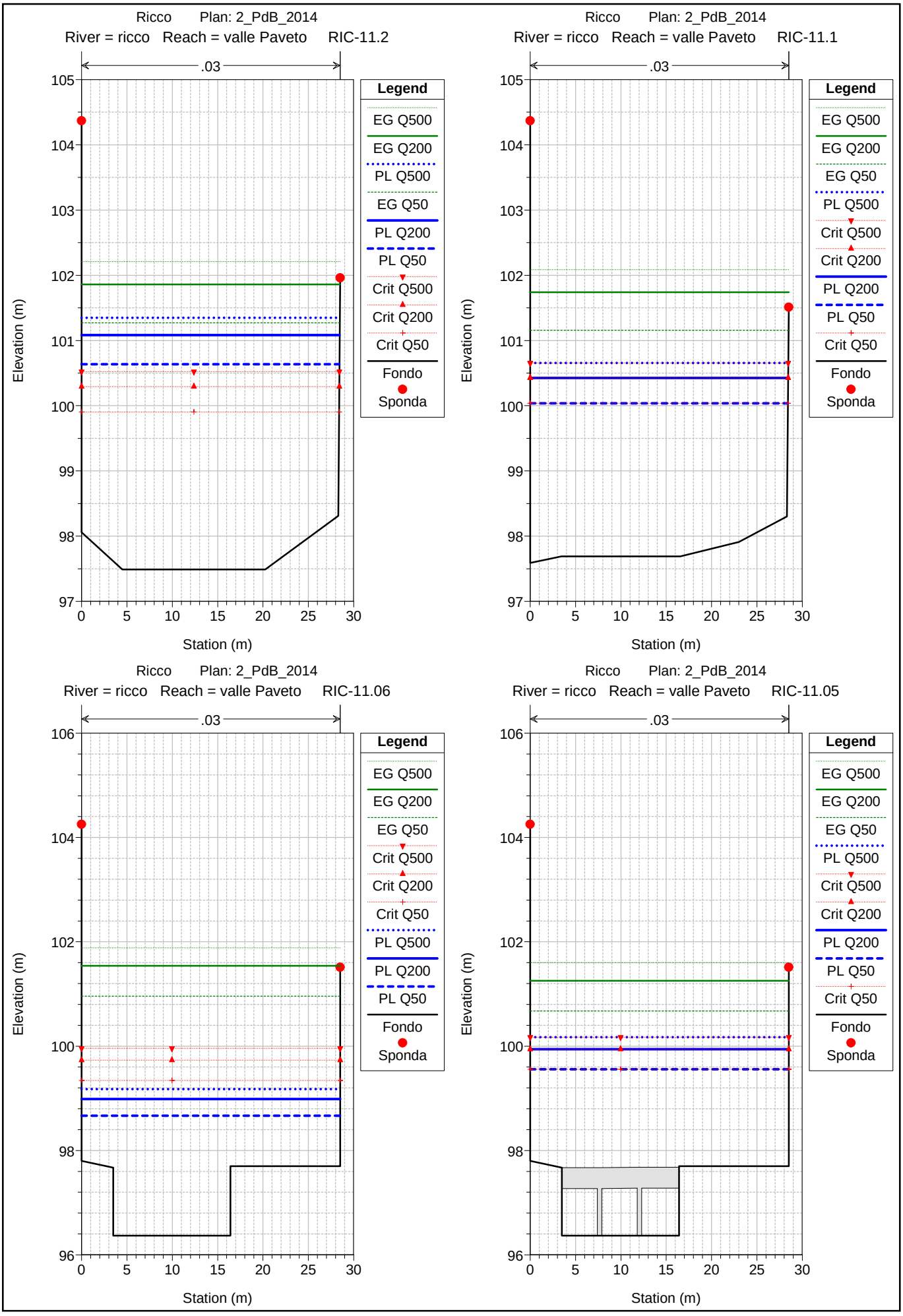


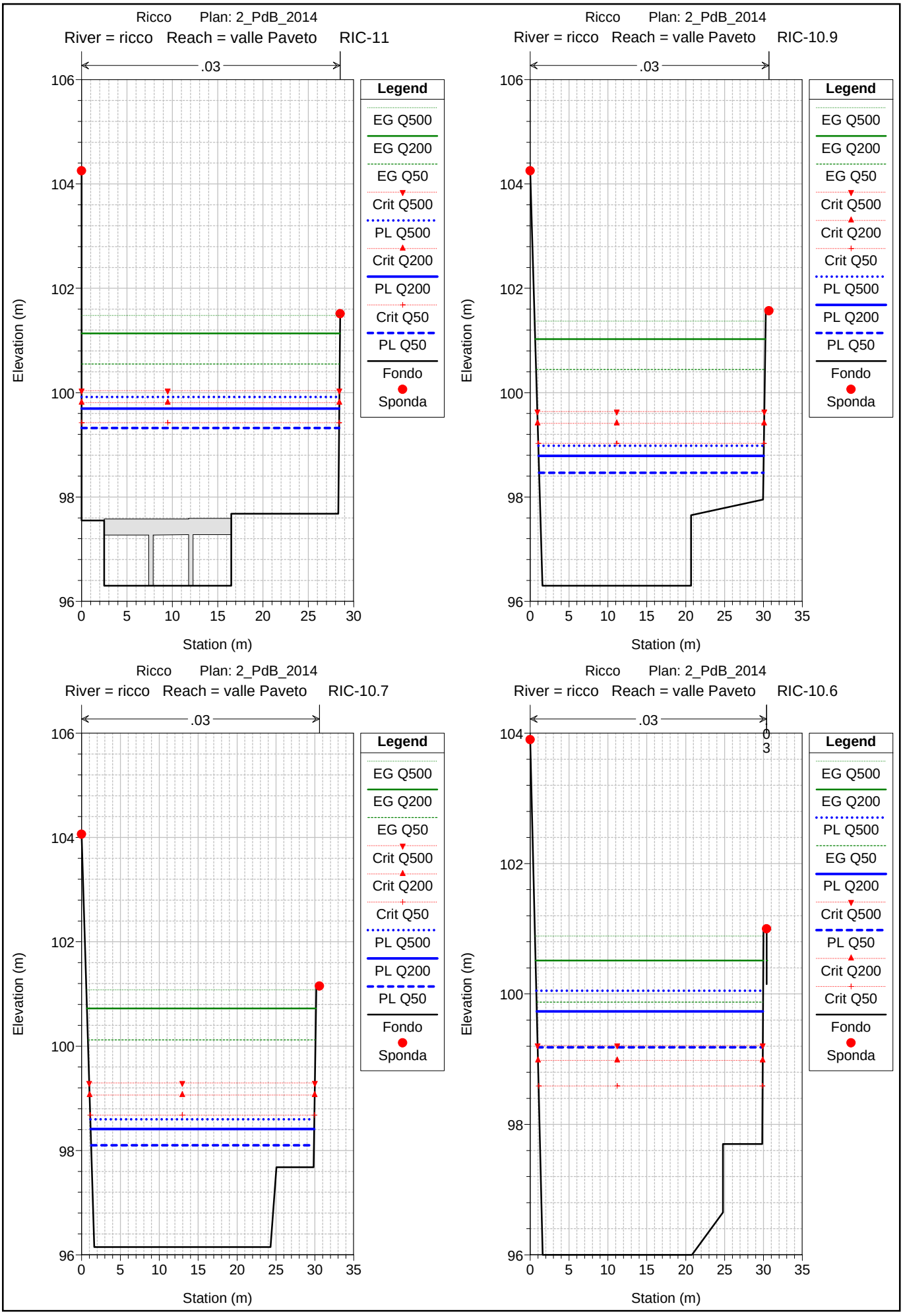
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-13

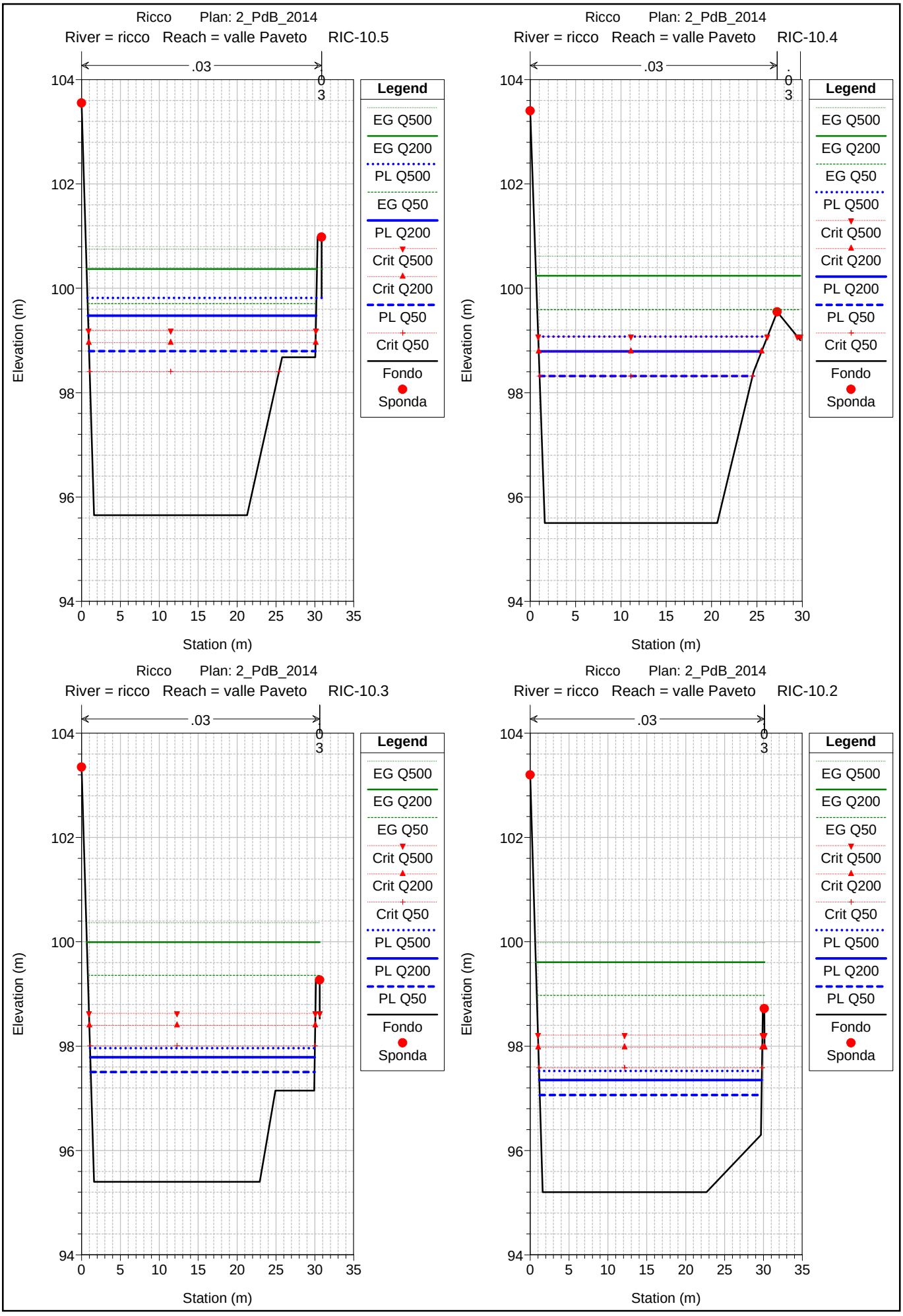


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-12

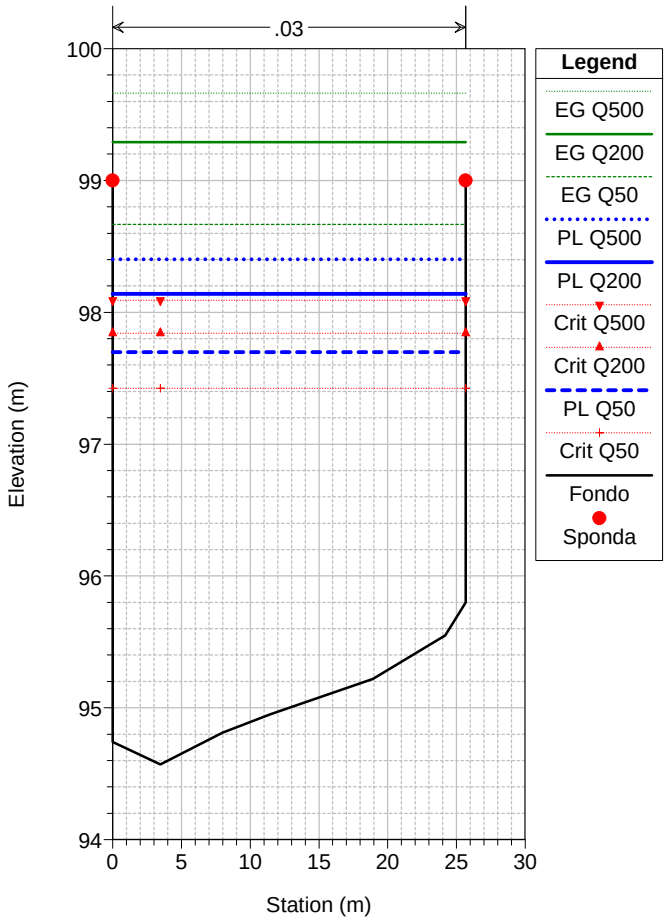



Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-11.2
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-11.1
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-11.06
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-11.05
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

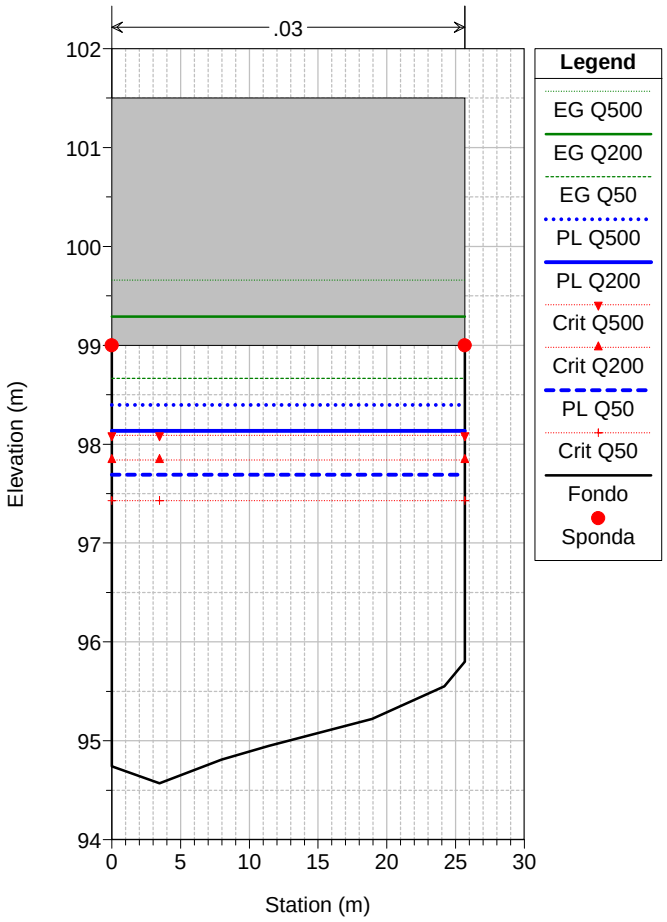

Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-11
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-10.9
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-10.7
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-10.6
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-10.5
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-10.4
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-10.3
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-10.2
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

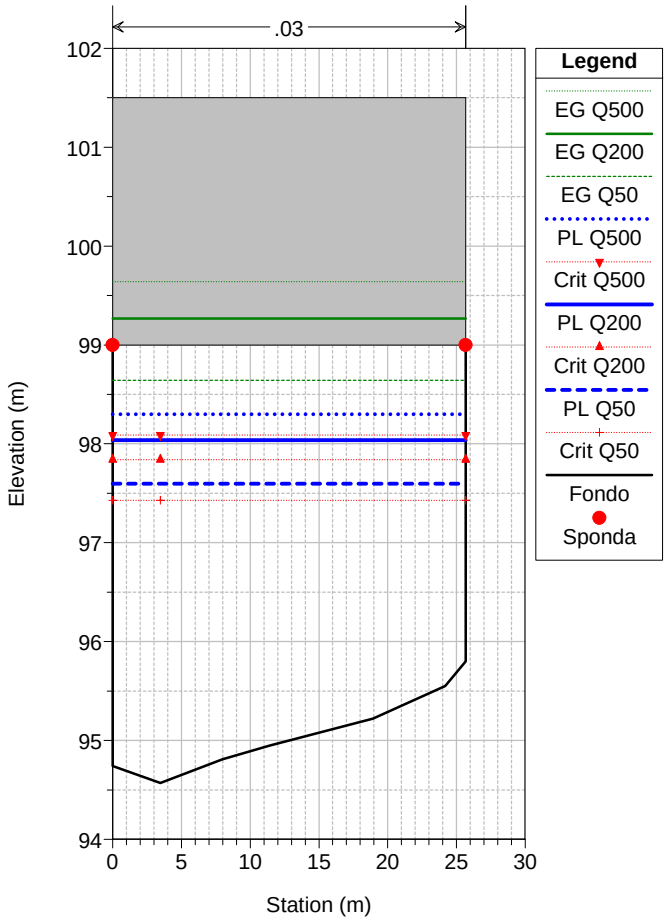
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-10.1



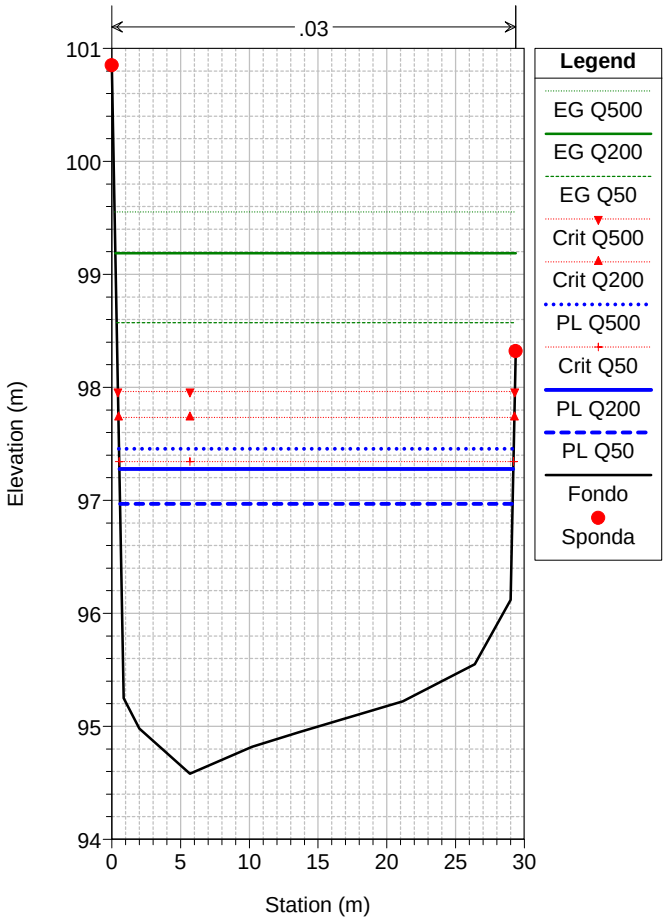
Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-10



Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-10

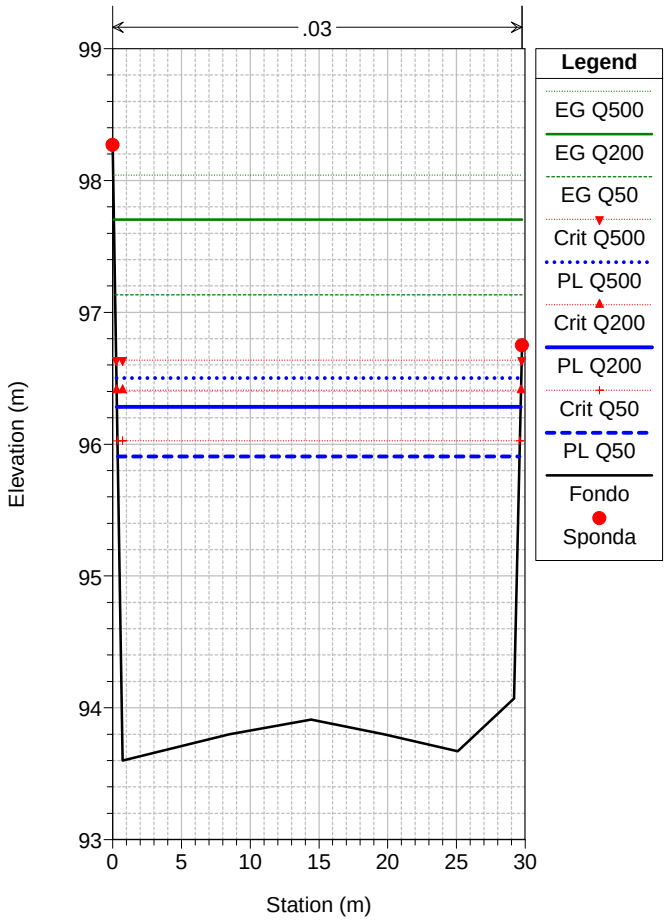


Ricco Plan: 2_PdB_2014
River = ricco Reach = valle Paveto RIC-9



Ricco Plan: 2_PdB_2014

River = ricco Reach = valle Paveto RIC-8



HEC-RAS Plan: PdB2014_rev2

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
monte Paveto	68 RIC-68	Q50	134.00	162.06	164.67	172.52	7.84	173.42	8.75	164.67	165.68	0.008692	4.43	30.21	15.10	1.00
monte Paveto	68 RIC-68	Q200	171.00	162.06	165.03	172.52	7.48	173.42	8.39	165.03	166.21	0.008617	4.80	35.63	15.17	1.00
monte Paveto	68 RIC-68	Q500	197.00	162.06	165.27	172.52	7.25	173.42	8.15	165.27	166.55	0.008599	5.02	39.21	15.21	1.00
monte Paveto	67 RIC-67	Q50	134.00	161.17	162.77	171.70	8.93	166.32	3.56	163.14	164.13	0.020155	5.17	25.94	20.94	1.48
monte Paveto	67 RIC-67	Q200	171.00	161.17	162.94	171.70	8.76	166.32	3.38	163.43	164.64	0.021655	5.78	29.56	20.99	1.56
monte Paveto	67 RIC-67	Q500	197.00	161.17	163.05	171.70	8.65	166.32	3.27	163.62	164.99	0.022609	6.18	31.89	21.03	1.60
monte Paveto	66 RIC-66	Q50	134.00	159.85	161.79	174.01	12.22	165.59	3.80	162.10	162.91	0.020458	4.70	28.54	27.70	1.48
monte Paveto	66 RIC-66	Q200	171.00	159.85	161.94	174.01	12.07	165.59	3.65	162.34	163.32	0.021552	5.21	32.79	28.16	1.54
monte Paveto	66 RIC-66	Q500	197.00	159.85	162.04	174.01	11.97	165.59	3.55	162.50	163.60	0.022111	5.53	35.61	28.45	1.58
monte Paveto	65 RIC-65	Q50	134.00	159.67	161.52	162.78	1.26	165.23	3.71	161.50	162.29	0.008256	3.88	34.50	21.58	0.98
monte Paveto	65 RIC-65	Q200	171.00	159.67	162.07	162.78	0.71	165.23	3.16	161.78	162.76	0.005278	3.67	46.55	21.85	0.80
monte Paveto	65 RIC-65	Q500	197.00	159.67	162.44	162.78	0.34	165.23	2.80	161.96	163.10	0.004297	3.61	55.14	27.19	0.73
monte Paveto	64.1	Q50	134.00	158.24	161.76	162.07	0.31	164.51	2.75	160.61	161.90	0.001027	1.67	80.11	37.79	0.37
monte Paveto	64.1	Q200	171.00	158.24	162.31	162.07	-0.24	164.51	2.20	160.85	162.46	0.000790	1.69	102.60	45.97	0.33
monte Paveto	64.1	Q500	197.00	158.24	162.68	162.07	-0.61	164.51	1.83	161.01	162.82	0.000675	1.69	120.35	50.69	0.31
monte Paveto	64	Bridge														
monte Paveto	63.9	Q50	134.00	158.24	160.05	162.07	2.02	164.51	4.46	160.61	161.74	0.033561	5.76	23.28	24.29	1.88
monte Paveto	63.9	Q200	171.00	158.24	161.12	162.07	0.95	164.51	3.39	160.85	161.60	0.005147	3.05	56.10	36.95	0.79
monte Paveto	63.9	Q500	197.00	158.24	161.36	162.07	0.71	164.51	3.15	161.01	161.83	0.004306	3.02	65.15	37.69	0.73
monte Paveto	63 RIC-63	Q50	134.00	158.14	160.03	160.87	0.84	164.56	4.53	160.15	160.92	0.010522	4.17	32.12	23.12	1.13
monte Paveto	63 RIC-63	Q200	171.00	158.14	160.42	160.87	0.45	164.56	4.14	160.42	161.29	0.007838	4.14	41.32	23.55	1.00
monte Paveto	63 RIC-63	Q500	197.00	158.14	160.59	160.87	0.28	164.56	3.96	160.59	161.55	0.007757	4.34	45.37	23.57	1.00
monte Paveto	62.9 RIC-62	Q50	134.00	157.00	158.21	160.87	2.66	164.56	6.35	158.74	159.98	0.029014	5.89	22.74	19.88	1.76
monte Paveto	62.9 RIC-62	Q200	171.00	157.00	158.44	160.87	2.43	164.56	6.12	159.05	160.43	0.026363	6.24	27.39	20.15	1.71
monte Paveto	62.9 RIC-62	Q500	197.00	157.00	158.60	160.87	2.28	164.56	5.96	159.24	160.72	0.024959	6.45	30.52	20.33	1.68
valle Paveto	62 RIC-62	Q50	267.00	156.99	158.98	160.17	1.19	160.02	1.04	159.77	161.67	0.030692	7.27	36.73	24.31	1.89
valle Paveto	62 RIC-62	Q200	340.00	156.99	159.29	160.17	0.87	160.02	0.72	160.38	162.28	0.027202	7.65	44.44	24.31	1.81
valle Paveto	62 RIC-62	Q500	385.00	156.99	159.50	160.17	0.67	160.02	0.51	160.58	162.59	0.024870	7.78	49.49	24.31	1.74
valle Paveto	61 RIC 61	Q50	267.00	156.70	158.63	159.40	0.77	170.43	11.80	159.05	160.25	0.016889	5.64	47.32	29.13	1.41
valle Paveto	61 RIC 61	Q200	340.00	156.70	158.84	159.40	0.57	170.43	11.59	159.47	160.90	0.018694	6.37	53.34	29.14	1.50
valle Paveto	61 RIC 61	Q500	385.00	156.70	158.96	159.40	0.44	170.43	11.47	159.66	161.29	0.019477	6.76	56.94	29.15	1.54
valle Paveto	60.9 RIC 61	Q50	267.00	153.70	154.88	159.40	4.52	170.43	15.55	156.01	159.89	0.097761	9.92	26.91	28.25	3.24
valle Paveto	60.9 RIC 61	Q200	340.00	153.70	155.09	159.40	4.31	170.43	15.34	156.36	160.55	0.083944	10.35	32.84	28.69	3.09
valle Paveto	60.9 RIC 61	Q500	385.00	153.70	155.21	159.40	4.19	170.43	15.22	156.58	160.93	0.078079	10.60	36.34	28.94	3.02
valle Paveto	60 RIC-60	Q50	267.00	151.56	155.41	157.75	2.33	156.95	1.54	155.41	156.59	0.008061	4.80	55.57	23.59	1.00
valle Paveto	60 RIC-60	Q200	340.00	151.56	155.83	157.75	1.92	156.95	1.12	155.83	157.21	0.007886	5.19	65.49	23.77	1.00
valle Paveto	60 RIC-60	Q500	385.00	151.56	156.08	157.75	1.66	156.95	0.87	156.08	157.56	0.007800	5.38	71.50	24.08	1.00

HEC-RAS Plan: PdB2014_rev2 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle Paveto	59 RIC-59	Q50	267.00	150.76	153.39	153.04	-0.35	155.19	1.81	153.90	155.20	0.016776	5.97	44.73	35.49	1.46
valle Paveto	59 RIC-59	Q200	340.00	150.76	153.68	153.04	-0.65	155.19	1.51	154.30	155.80	0.016502	6.45	52.72	43.37	1.48
valle Paveto	59 RIC-59	Q500	385.00	150.76	156.23	153.04	-3.20	155.19	-1.04	154.52	156.50	0.000876	2.45	189.60	83.29	0.39
valle Paveto	58.8 RIC-58.5	Q50	267.00	150.66	152.94	152.54	-0.40	155.20	2.26	153.34	154.57	0.014008	5.66	47.52	49.75	1.32
valle Paveto	58.8 RIC-58.5	Q200	340.00	150.66	153.24	152.54	-0.70	155.20	1.96	153.72	155.18	0.013908	6.18	55.48	49.78	1.33
valle Paveto	58.8 RIC-58.5	Q500	385.00	150.66	155.95	152.54	-3.41	155.20	-0.75	153.95	156.40	0.001220	3.00	133.81	60.90	0.43
valle Paveto	58.5 RIC-58.5		Bridge													
valle Paveto	58.2 RIC-58.5	Q50	267.00	150.66	153.34	152.54	-0.80	155.20	1.86	153.34	154.43	0.007467	4.65	57.95	49.79	0.98
valle Paveto	58.2 RIC-58.5	Q200	340.00	150.66	153.72	152.54	-1.18	155.20	1.48	153.72	155.01	0.007299	5.05	67.96	49.83	0.99
valle Paveto	58.2 RIC-58.5	Q500	385.00	150.66	153.95	152.54	-1.41	155.20	1.25	153.95	155.34	0.007165	5.25	73.92	49.86	0.99
valle Paveto	58 RIC-58	Q50	267.00	150.53	152.53	152.94	0.41	154.61	2.09	152.97	154.21	0.015849	5.76	46.39	26.50	1.39
valle Paveto	58 RIC-58	Q200	340.00	150.53	152.85	152.94	0.09	154.61	1.76	153.34	154.79	0.015136	6.17	55.10	27.08	1.38
valle Paveto	58 RIC-58	Q500	385.00	150.53	153.04	152.94	-0.10	154.61	1.58	153.56	155.12	0.014705	6.40	60.18	67.67	1.37
valle Paveto	57 RIC-57	Q50	267.00	149.84	152.66	152.18	-0.47	154.62	1.96	152.57	153.27	0.007002	3.47	76.95	84.16	0.91
valle Paveto	57 RIC-57	Q200	340.00	149.84	152.51	152.18	-0.33	154.62	2.11	152.81	153.74	0.016046	4.91	69.29	84.15	1.36
valle Paveto	57 RIC-57	Q500	385.00	149.84	152.54	152.18	-0.35	154.62	2.08	152.95	154.05	0.019217	5.44	70.74	84.15	1.49
valle Paveto	55.9 RIC-56	Q50	267.00	148.77	152.25	152.20	-0.05	152.45	0.20	152.25	152.78	0.009256	3.23	82.59	78.08	1.00
valle Paveto	55.9 RIC-56	Q200	340.00	148.77	152.71	152.20	-0.51	152.45	-0.27	152.43	153.05	0.003782	2.62	133.93	93.45	0.68
valle Paveto	55.9 RIC-56	Q500	385.00	148.77	153.16	152.20	-0.96	152.45	-0.72	152.50	153.41	0.001998	2.25	175.81	93.45	0.51
valle Paveto	55.1	Q50	267.00	148.45	151.95	152.09	0.13	151.98	0.02	150.69	152.33	0.001717	2.70	98.74	30.75	0.48
valle Paveto	55.1	Q200	340.00	148.45	152.53	152.09	-0.44	151.98	-0.55	151.05	152.96	0.001619	2.92	116.37	86.02	0.48
valle Paveto	55.1	Q500	385.00	148.45	152.86	152.09	-0.77	151.98	-0.88	151.25	153.33	0.001567	3.04	126.62	98.52	0.48
valle Paveto	55 RIC 55		Bridge													
valle Paveto	54.9	Q50	267.00	148.45	150.05	152.09	2.03	151.98	1.92	150.69	152.20	0.027222	6.49	41.15	29.83	1.76
valle Paveto	54.9	Q200	340.00	148.45	150.29	152.09	1.79	151.98	1.68	151.05	152.81	0.026349	7.03	48.34	29.94	1.77
valle Paveto	54.9	Q500	385.00	148.45	150.43	152.09	1.65	151.98	1.54	151.25	153.17	0.025940	7.33	52.51	30.01	1.77
valle Paveto	54.8	Q50	267.00	146.03	147.50	152.09	4.59	151.98	4.48	148.63	151.95	0.073912	9.34	28.58	26.00	2.84
valle Paveto	54.8	Q200	340.00	146.03	147.74	152.09	4.35	151.98	4.24	149.01	152.56	0.063251	9.73	34.94	26.40	2.70
valle Paveto	54.8	Q500	385.00	146.03	147.88	152.09	4.20	151.98	4.09	149.22	152.92	0.058687	9.95	38.71	26.64	2.63
valle Paveto	54 RIC-54	Q50	267.00	146.69	148.74	150.43	1.70	151.55	2.82	149.17	150.07	0.015712	5.12	52.19	36.89	1.37
valle Paveto	54 RIC-54	Q200	340.00	146.69	148.91	150.43	1.52	151.55	2.64	149.42	150.60	0.019186	5.76	59.02	40.48	1.52
valle Paveto	54 RIC-54	Q500	385.00	146.69	149.01	150.43	1.42	151.55	2.54	149.58	150.91	0.021540	6.11	62.97	43.03	1.61
valle Paveto	53 RIC-53	Q50	267.00	145.55	147.33	157.62	10.29	150.79	3.46	147.68	148.66	0.016238	5.11	52.21	38.17	1.40
valle Paveto	53 RIC-53	Q200	340.00	145.55	147.62	157.62	10.00	150.79	3.17	147.98	149.09	0.014296	5.38	63.18	38.58	1.34
valle Paveto	53 RIC-53	Q500	385.00	145.55	147.79	157.62	9.83	150.79	3.00	148.15	149.34	0.013336	5.51	69.82	38.83	1.31
valle Paveto	52 RIC-52	Q50	267.00	144.57	147.02	146.31	-0.71	150.65	3.63	147.02	147.80	0.005735	4.04	71.84	45.30	0.89
valle Paveto	52 RIC-52	Q200	340.00	144.57	147.31	146.31	-1.00	150.65	3.35	147.31	148.20	0.005734	4.37	84.88	45.38	0.90

HEC-RAS Plan: PdB2014_rev2 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle Paveto	52 RIC-52	Q500	385.00	144.57	147.47	146.31	-1.16	150.65	3.18	147.47	148.44	0.005764	4.56	92.15	45.42	0.91
valle Paveto	51 RIC-51	Q50	267.00	143.67	145.49	153.51	8.02	147.55	2.06	145.78	146.67	0.015127	4.82	55.38	42.42	1.35
valle Paveto	51 RIC-51	Q200	340.00	143.67	145.73	153.51	7.78	147.55	1.82	146.07	147.09	0.014194	5.18	65.60	42.66	1.33
valle Paveto	51 RIC-51	Q500	385.00	143.67	145.87	153.51	7.64	147.55	1.68	146.24	147.34	0.013641	5.37	71.75	42.80	1.32
valle Paveto	50.9 RIC-50.9	Q50	267.00	138.79	143.48	153.51	10.03	147.55	4.06	141.52	143.70	0.000811	2.09	127.92	36.34	0.36
valle Paveto	50.9 RIC-50.9	Q200	340.00	138.79	143.99	153.51	9.52	147.55	3.55	141.90	144.27	0.000877	2.32	146.67	37.20	0.37
valle Paveto	50.9 RIC-50.9	Q500	385.00	138.79	144.29	153.51	9.22	147.55	3.26	142.10	144.59	0.000909	2.44	157.63	37.70	0.38
valle Paveto	50.1	Q50	267.00	139.62	143.13	146.53	3.40	146.18	3.05	142.41	143.64	0.002834	3.18	83.95	32.66	0.63
valle Paveto	50.1	Q200	340.00	139.62	143.61	146.53	2.92	146.18	2.57	142.77	144.20	0.002726	3.40	100.11	33.83	0.63
valle Paveto	50.1	Q500	385.00	139.62	143.89	146.53	2.64	146.18	2.29	142.97	144.52	0.002668	3.51	109.75	34.50	0.63
valle Paveto	50		Bridge													
valle Paveto	49.9	Q50	267.00	139.62	142.94	146.53	3.59	146.18	3.24	142.41	143.54	0.003548	3.43	77.95	32.30	0.70
valle Paveto	49.9	Q200	340.00	139.62	143.41	146.53	3.12	146.18	2.77	142.77	144.09	0.003341	3.64	93.46	33.35	0.69
valle Paveto	49.9	Q500	385.00	139.62	143.69	146.53	2.84	146.18	2.49	142.97	144.41	0.003236	3.75	102.77	34.01	0.69
valle Paveto	49 RIC-49	Q50	267.00	139.21	142.29	152.65	10.36	144.03	1.74	142.29	143.34	0.007501	4.54	58.86	28.09	1.00
valle Paveto	49 RIC-49	Q200	340.00	139.21	142.67	152.65	9.98	144.03	1.36	142.67	143.89	0.007268	4.89	69.57	28.52	1.00
valle Paveto	49 RIC-49	Q500	385.00	139.21	142.89	152.65	9.77	144.03	1.15	142.89	144.20	0.007171	5.08	75.79	28.77	1.00
valle Paveto	48 RIC-48	Q50	267.00	138.45	141.41	146.87	5.46	143.51	2.10	141.84	142.95	0.015493	5.50	48.58	31.04	1.40
valle Paveto	48 RIC-48	Q200	340.00	138.45	141.67	146.87	5.20	143.51	1.84	142.19	143.49	0.015893	5.97	56.92	32.66	1.44
valle Paveto	48 RIC-48	Q500	385.00	138.45	143.09	146.87	3.78	143.51	0.42	142.39	143.73	0.003161	3.54	108.62	39.60	0.68
valle Paveto	47 RIC-47	Q50	267.00	138.01	141.34	141.95	0.61	140.92	-0.42	141.34	142.50	0.007162	4.80	56.21	24.66	0.98
valle Paveto	47 RIC-47	Q200	340.00	138.01	141.76	141.95	0.19	140.92	-0.84	141.76	143.11	0.006910	5.17	66.73	24.95	0.98
valle Paveto	47 RIC-47	Q500	385.00	138.01	142.00	141.95	-0.05	140.92	-1.08	142.00	143.46	0.006826	5.39	72.71	25.08	0.98
valle Paveto	46 RIC-46	Q50	267.00	137.49	140.50	142.60	2.10	140.93	0.43	140.85	142.13	0.011893	5.66	47.21	22.59	1.25
valle Paveto	46 RIC-46	Q200	340.00	137.49	140.90	142.60	1.70	140.93	0.03	141.57	142.75	0.011356	6.02	56.47	23.57	1.24
valle Paveto	46 RIC-46	Q500	385.00	137.49	141.11	142.60	1.49	140.93	-0.18	141.79	143.10	0.011133	6.25	62.39	33.67	1.24
valle Paveto	45 RIC-45	Q50	267.00	136.40	138.97	140.95	1.98	138.38	-0.59	139.58	140.94	0.014010	6.24	44.14	27.55	1.36
valle Paveto	45 RIC-45	Q200	340.00	136.40	139.27	140.95	1.68	138.38	-0.89	139.96	141.56	0.014293	6.80	52.88	29.18	1.40
valle Paveto	45 RIC-45	Q500	385.00	136.40	139.44	140.95	1.51	138.38	-1.06	140.18	141.92	0.014523	7.11	57.64	29.34	1.42
valle Paveto	44 RIC-44	Q50	267.00	135.82	138.10	139.07	0.97	137.95	-0.15	138.58	139.78	0.018251	5.74	46.63	32.69	1.51
valle Paveto	44 RIC-44	Q200	340.00	135.82	138.31	139.07	0.76	137.95	-0.36	138.91	140.39	0.019204	6.40	53.40	32.80	1.58
valle Paveto	44 RIC-44	Q500	385.00	135.82	138.44	139.07	0.63	137.95	-0.49	139.10	140.74	0.019405	6.73	57.54	32.87	1.60
valle Paveto	43 RIC-43	Q50	267.00	134.97	138.07	136.69	-1.38	138.64	0.57	138.07	138.93	0.005665	4.31	69.85	41.15	0.86
valle Paveto	43 RIC-43	Q200	340.00	134.97	138.37	136.69	-1.68	138.64	0.27	138.41	139.37	0.005936	4.70	82.51	44.03	0.89
valle Paveto	43 RIC-43	Q500	385.00	134.97	138.43	136.69	-1.74	138.64	0.21	138.64	139.63	0.006989	5.17	85.23	44.63	0.97
valle Paveto	42 RIC-42	Q50	267.00	134.75	136.49	137.13	0.64	137.26	0.77	137.03	138.29	0.022970	5.93	45.01	34.22	1.65
valle Paveto	42 RIC-42	Q200	340.00	134.75	136.78	137.13	0.35	137.26	0.48	137.36	138.73	0.020006	6.19	54.89	35.02	1.58

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Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle Paveto	42 RIC-42	Q500	385.00	134.75	136.96	137.13	0.17	137.26	0.30	137.53	138.97	0.018244	6.29	61.25	35.53	1.53
valle Paveto	41.9	Q50	267.00	132.75	134.25	137.13	2.88	137.26	3.01	135.28	138.06	0.058326	8.66	30.84	26.67	2.57
valle Paveto	41.9	Q200	340.00	132.75	134.53	137.13	2.60	137.26	2.73	135.66	138.51	0.048428	8.85	38.44	27.75	2.40
valle Paveto	41.9	Q500	385.00	132.75	134.69	137.13	2.44	137.26	2.57	135.87	138.75	0.043896	8.93	43.13	28.40	2.31
valle Paveto	41 RIC-41	Q50	267.00	131.41	133.58	138.09	4.51	137.64	4.06	134.27	135.89	0.021034	6.72	39.71	22.67	1.62
valle Paveto	41 RIC-41	Q200	340.00	131.41	135.81	138.09	2.28	137.64	1.83	134.69	136.50	0.002610	3.66	92.78	24.90	0.61
valle Paveto	41 RIC-41	Q500	385.00	131.41	136.27	138.09	1.82	137.64	1.37	134.94	136.96	0.002380	3.69	104.22	25.35	0.58
valle Paveto	40.1	Q50	267.00	130.01	134.61	134.44	-0.17	135.59	0.98	133.81	135.40	0.003707	3.94	67.84	20.64	0.69
valle Paveto	40.1	Q200	340.00	130.01	135.42	134.44	-0.98	135.59	0.17	134.33	136.24	0.003153	4.01	84.83	21.45	0.64
valle Paveto	40.1	Q500	385.00	130.01	135.88	134.44	-1.44	135.59	-0.29	134.60	136.72	0.002924	4.06	94.85	21.62	0.62
valle Paveto	40 RIC-40		Bridge													
valle Paveto	39.9	Q50	267.00	130.01	133.36	134.44	1.08	135.59	2.23	133.81	135.28	0.013238	6.14	43.51	18.10	1.26
valle Paveto	39.9	Q200	340.00	130.01	133.70	134.44	0.74	135.59	1.89	134.33	136.08	0.014547	6.83	49.81	18.85	1.34
valle Paveto	39.9	Q500	385.00	130.01	133.90	134.44	0.54	135.59	1.69	134.60	136.54	0.015217	7.20	53.48	19.27	1.38
valle Paveto	39 RIC-39	Q50	267.00	130.16	133.51	134.74	1.23	138.45	4.94	133.72	135.09	0.010289	5.57	47.91	19.29	1.13
valle Paveto	39 RIC-39	Q200	340.00	130.16	133.66	134.74	1.08	138.45	4.79	134.20	135.94	0.013972	6.69	50.80	19.35	1.32
valle Paveto	39 RIC-39	Q500	385.00	130.16	134.48	134.74	0.26	138.45	3.97	134.48	136.17	0.007933	5.77	66.70	19.68	1.00
valle Paveto	38.6	Q50	267.00	127.11	129.46	130.99	1.53	135.30	5.84	130.87	134.29	0.044389	9.74	27.43	13.43	2.17
valle Paveto	38.6	Q200	340.00	127.11	129.93	130.99	1.06	135.30	5.37	131.88	135.09	0.038722	10.07	33.77	13.57	2.04
valle Paveto	38.6	Q500	385.00	127.11	130.24	130.99	0.75	135.30	5.06	132.18	135.45	0.034850	10.11	38.09	13.69	1.93
valle Paveto	38.5		Bridge													
valle Paveto	38.4	Q50	267.00	127.11	129.48	130.99	1.51	135.30	5.82	130.87	134.19	0.042652	9.61	27.79	13.43	2.13
valle Paveto	38.4	Q200	340.00	127.11	129.96	130.99	1.03	135.30	5.34	131.88	135.00	0.037426	9.95	34.16	13.57	2.00
valle Paveto	38.4	Q500	385.00	127.11	130.27	130.99	0.72	135.30	5.03	132.18	135.37	0.033761	10.00	38.51	13.71	1.90
valle Paveto	38 RIC-38	Q50	267.00	127.45	129.99	129.85	-0.14	134.84	4.85	131.03	133.40	0.026494	8.19	32.65	13.93	1.67
valle Paveto	38 RIC-38	Q200	340.00	127.45	130.47	129.85	-0.62	134.84	4.37	131.88	134.27	0.024274	8.67	39.79	15.69	1.62
valle Paveto	38 RIC-38	Q500	385.00	127.45	130.77	129.85	-0.92	134.84	4.07	132.15	134.69	0.022496	8.82	44.67	16.32	1.57
valle Paveto	37.5 RIC-37 A	Q50	267.00	125.15	128.48	133.11	4.63	133.50	5.02	129.64	132.38	0.044542	8.75	30.53	16.37	2.04
valle Paveto	37.5 RIC-37 A	Q200	340.00	125.15	128.82	133.11	4.29	133.50	4.68	130.12	133.25	0.048594	9.32	36.47	18.47	2.12
valle Paveto	37.5 RIC-37 A	Q500	385.00	125.15	129.02	133.11	4.09	133.50	4.48	130.40	133.70	0.047035	9.58	40.17	18.84	2.10
valle Paveto	37 RIC-37	Q50	267.00	125.17	127.66	131.16	3.50	127.22	-0.44	128.46	130.26	0.021982	7.20	38.52	25.25	1.65
valle Paveto	37 RIC-37	Q200	340.00	125.17	127.92	131.16	3.24	127.22	-0.70	128.86	131.02	0.022904	7.91	45.11	25.48	1.71
valle Paveto	37 RIC-37	Q500	385.00	125.17	128.06	131.16	3.10	127.22	-0.84	129.09	131.47	0.023662	8.34	48.64	25.60	1.75
valle Paveto	36.1 RIC-36.1	Q50	299.00	124.80	127.34	129.94	2.60	127.40	0.06	127.71	128.87	0.012817	5.49	55.00	31.80	1.26
valle Paveto	36.1 RIC-36.1	Q200	380.00	124.80	127.57	129.94	2.37	127.40	-0.17	128.09	129.51	0.014299	6.19	62.42	32.44	1.35
valle Paveto	36.1 RIC-36.1	Q500	431.00	124.80	127.70	129.94	2.24	127.40	-0.30	128.31	129.89	0.015078	6.59	66.73	32.62	1.40

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Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle Paveto	36 RIC-36	Q50	299.00	124.80	127.47	129.94	2.47	127.40	-0.07	127.71	128.80	0.010314	5.12	59.28	32.31	1.14
valle Paveto	36 RIC-36	Q200	380.00	124.80	127.61	129.94	2.33	127.40	-0.21	128.09	129.47	0.013445	6.07	63.73	32.50	1.32
valle Paveto	36 RIC-36	Q500	431.00	124.80	127.73	129.94	2.21	127.40	-0.33	128.31	129.86	0.014374	6.49	67.81	32.67	1.37
valle Paveto	35.1	Q50	299.00	123.08	126.62	129.43	2.81	129.91	3.29	125.90	127.04	0.002698	2.85	104.96	47.32	0.61
valle Paveto	35.1	Q200	380.00	123.08	127.41	129.43	2.02	129.91	2.50	126.20	127.75	0.001734	2.59	146.63	53.77	0.50
valle Paveto	35.1	Q500	431.00	123.08	127.89	129.43	1.54	129.91	2.02	126.38	128.21	0.001327	2.50	172.49	53.86	0.45
valle Paveto	35 RIC 35		Bridge													
valle Paveto	34.9	Q50	299.00	123.08	125.46	129.43	3.97	129.91	4.45	125.90	126.91	0.015620	5.33	56.07	37.39	1.39
valle Paveto	34.9	Q200	380.00	123.08	127.31	129.43	2.12	129.91	2.60	126.20	127.68	0.001958	2.69	141.18	53.75	0.53
valle Paveto	34.9	Q500	431.00	123.08	127.82	129.43	1.61	129.91	2.09	126.38	128.15	0.001427	2.56	168.61	53.84	0.46
valle Paveto	34 RIC-34	Q50	299.00	121.67	125.91	130.03	4.12	128.79	2.88	125.01	126.63	0.003143	3.77	79.37	22.86	0.65
valle Paveto	34 RIC-34	Q200	380.00	121.67	126.69	130.03	3.34	128.79	2.10	125.47	127.47	0.002765	3.90	97.40	23.15	0.61
valle Paveto	34 RIC-34	Q500	431.00	121.67	127.16	130.03	2.87	128.79	1.63	125.74	127.97	0.002615	3.98	108.19	23.33	0.59
valle Paveto	33	Q50	299.00	119.10	125.25	128.50	3.25	128.50	3.25	124.69	126.40	0.006297	4.75	62.98	16.89	0.78
valle Paveto	33	Q200	380.00	119.10	125.86	128.50	2.64	128.50	2.64	125.24	127.23	0.006536	5.19	73.23	16.89	0.80
valle Paveto	33	Q500	431.00	119.10	126.21	128.50	2.29	128.50	2.29	125.57	127.72	0.006685	5.44	79.25	16.89	0.80
valle Paveto	32.9 RIC 33		Bridge													
valle Paveto	32.8	Q50	299.00	119.10	124.69	128.50	3.81	128.50	3.81	124.69	126.28	0.010216	5.59	53.52	16.89	1.00
valle Paveto	32.8	Q200	380.00	119.10	125.24	128.50	3.26	128.50	3.26	125.24	127.11	0.010245	6.05	62.82	16.89	1.00
valle Paveto	32.8	Q500	431.00	119.10	125.57	128.50	2.93	128.50	2.93	125.57	127.60	0.010254	6.30	68.42	16.89	1.00
valle Paveto	32 RIC-32	Q50	299.00	120.29	122.62	122.62	0.00	122.23	-0.39	123.49	125.69	0.043298	7.93	39.50	35.36	2.27
valle Paveto	32 RIC-32	Q200	380.00	120.29	122.80	122.62	-0.18	122.23	-0.57	123.61	126.47	0.043795	8.71	45.73	35.41	2.33
valle Paveto	32 RIC-32	Q500	431.00	120.29	122.90	122.62	-0.28	122.23	-0.67	123.61	126.94	0.043865	9.14	49.44	35.44	2.36
valle Paveto	31 RIC-31	Q50	299.00	119.62	121.82	122.84	1.02	120.97	-0.85	122.42	123.81	0.023749	6.51	49.27	39.97	1.72
valle Paveto	31 RIC-31	Q200	380.00	119.62	121.98	122.84	0.86	120.97	-1.01	122.74	124.46	0.026140	7.28	55.87	40.59	1.84
valle Paveto	31 RIC-31	Q500	431.00	119.62	122.07	122.84	0.77	120.97	-1.10	122.91	124.87	0.027516	7.73	59.66	40.93	1.90
valle Paveto	30 RIC-30	Q50	299.00	117.81	120.41	120.19	-0.22	120.44	0.03	120.58	121.40	0.010871	4.41	67.90	46.89	1.17
valle Paveto	30 RIC-30	Q200	380.00	117.81	121.47	120.19	-1.28	120.44	-1.03	120.89	121.96	0.002687	3.15	124.58	55.21	0.63
valle Paveto	30 RIC-30	Q500	431.00	117.81	121.88	120.19	-1.69	120.44	-1.44	121.05	122.33	0.002041	3.04	147.29	55.81	0.57
valle Paveto	29.1 RIC-29A	Q50	299.00	116.75	120.63	120.16	-0.47	126.94	6.31	119.43	120.99	0.001627	2.65	112.66	36.79	0.48
valle Paveto	29.1 RIC-29A	Q200	380.00	116.75	121.35	120.16	-1.19	126.94	5.59	119.77	121.73	0.001358	2.73	139.29	36.85	0.45
valle Paveto	29.1 RIC-29A	Q500	431.00	116.75	121.75	120.16	-1.59	126.94	5.19	119.97	122.15	0.001285	2.80	153.86	36.89	0.44
valle Paveto	29	Q50	299.00	115.86	120.15	121.29	1.14	121.29	1.14	119.21	120.87	0.003451	3.74	79.90	22.27	0.63
valle Paveto	29	Q200	380.00	115.86	120.77	121.29	0.52	121.29	0.52	119.66	121.61	0.003471	4.06	93.59	22.27	0.63
valle Paveto	29	Q500	431.00	115.86	121.08	121.29	0.21	121.29	0.21	119.93	122.02	0.003603	4.28	100.60	22.27	0.64
valle Paveto	28.9 RIC 29		Bridge													

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Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle Paveto	28.8	Q50	299.00	115.86	118.71	121.29	2.58	121.29	2.58	119.21	120.70	0.016267	6.25	47.82	21.69	1.34
valle Paveto	28.8	Q200	380.00	115.86	119.09	121.29	2.20	121.29	2.20	119.66	121.42	0.016409	6.77	56.13	22.27	1.36
valle Paveto	28.8	Q500	431.00	115.86	119.31	121.29	1.98	121.29	1.98	119.93	121.85	0.016294	7.06	61.04	22.27	1.36
valle Paveto	28 RIC-28	Q50	299.00	115.04	119.19	123.39	4.20	126.05	6.86	119.19	120.43	0.008026	4.93	60.59	24.32	1.00
valle Paveto	28 RIC-28	Q200	380.00	115.04	119.62	123.39	3.77	126.05	6.43	119.62	121.07	0.007878	5.34	71.22	24.47	1.00
valle Paveto	28 RIC-28	Q500	431.00	115.04	119.88	123.39	3.51	126.05	6.17	119.88	121.45	0.007823	5.56	77.51	24.56	1.00
valle Paveto	27 RIC-27	Q50	299.00	114.62	117.23	119.78	2.55	122.40	5.17	117.66	119.04	0.014757	5.96	50.17	24.40	1.33
valle Paveto	27 RIC-27	Q200	380.00	114.62	117.59	119.78	2.19	122.40	4.81	118.10	119.71	0.014366	6.44	59.00	24.52	1.33
valle Paveto	27 RIC-27	Q500	431.00	114.62	117.81	119.78	1.97	122.40	4.59	118.35	120.10	0.014135	6.70	64.33	24.59	1.32
valle Paveto	26.3 RIC-26B	Q50	299.00	114.09	116.66	117.41	0.75	121.24	4.58	117.02	118.35	0.013276	5.75	52.01	24.73	1.27
valle Paveto	26.3 RIC-26B	Q200	380.00	114.09	116.99	117.41	0.42	121.24	4.25	117.45	119.03	0.013683	6.33	60.07	24.86	1.30
valle Paveto	26.3 RIC-26B	Q500	431.00	114.09	117.18	117.41	0.23	121.24	4.06	117.71	119.43	0.013881	6.65	64.85	24.94	1.32
valle Paveto	26.2 RIC-26A	Q50	299.00	113.99	116.32	117.77	1.45	120.19	3.87	116.56	117.84	0.011429	5.47	54.63	24.58	1.17
valle Paveto	26.2 RIC-26A	Q200	380.00	113.99	117.42	117.77	0.35	120.19	2.77	117.00	118.52	0.005318	4.65	81.74	24.75	0.82
valle Paveto	26.2 RIC-26A	Q500	431.00	113.99	117.82	117.77	-0.05	120.19	2.37	117.25	118.95	0.004805	4.69	91.84	24.81	0.78
valle Paveto	26 RIC-26 a	Q50	299.00	113.42	115.74	117.77	2.03	120.19	4.45	116.29	117.78	0.017956	6.34	47.20	24.50	1.46
valle Paveto	26 RIC-26 a	Q200	380.00	113.42	117.58	117.77	0.19	120.19	2.61	116.72	118.44	0.003615	4.10	92.65	24.77	0.68
valle Paveto	26 RIC-26 a	Q500	431.00	113.42	117.97	117.77	-0.20	120.19	2.22	116.98	118.88	0.003453	4.21	102.31	24.83	0.66
valle Paveto	25.3 RIC-25B	Q50	299.00	113.08	115.96	116.19	0.23	117.72	1.76	115.96	117.36	0.008683	5.26	56.88	20.23	1.00
valle Paveto	25.3 RIC-25B	Q200	380.00	113.08	116.45	116.19	-0.26	117.72	1.27	116.45	118.10	0.008614	5.69	66.83	20.23	1.00
valle Paveto	25.3 RIC-25B	Q500	431.00	113.08	116.74	116.19	-0.55	117.72	0.98	116.74	118.53	0.008632	5.93	72.64	20.23	1.00
valle Paveto	25.2 RIC-25A	Q50	299.00	110.81	115.91	116.19	0.28	117.72	1.81	114.28	116.48	0.002252	3.35	89.28	20.05	0.51
valle Paveto	25.2 RIC-25A	Q200	380.00	110.81	116.48	116.19	-0.29	117.72	1.24	114.77	117.21	0.002552	3.77	100.85	20.05	0.54
valle Paveto	25.2 RIC-25A	Q500	431.00	110.81	116.82	116.19	-0.63	117.72	0.90	115.07	117.64	0.002723	4.00	107.63	20.05	0.55
valle Paveto	25	Q50	299.00	111.93	115.36	116.81	1.45	116.72	1.36	114.89	116.36	0.005311	4.43	67.48	20.98	0.79
valle Paveto	25	Q200	380.00	111.93	115.88	116.81	0.93	116.72	0.84	115.37	117.08	0.005459	4.84	78.44	20.98	0.80
valle Paveto	25	Q500	431.00	111.93	116.19	116.81	0.62	116.72	0.53	115.65	117.50	0.005543	5.07	84.94	20.98	0.81
valle Paveto	24.9 RIC-25		Bridge													
valle Paveto	24.8	Q50	299.00	111.93	114.89	116.81	1.92	116.72	1.83	114.89	116.26	0.008588	5.19	57.60	20.98	1.00
valle Paveto	24.8	Q200	380.00	111.93	115.37	116.81	1.44	116.72	1.35	115.37	116.97	0.008507	5.62	67.66	20.98	1.00
valle Paveto	24.8	Q500	431.00	111.93	115.65	116.81	1.16	116.72	1.07	115.65	117.40	0.008517	5.86	73.54	20.98	1.00
valle Paveto	24.1 RIC-24A	Q50	299.00	111.13	113.84	116.50	2.66	114.98	1.14	114.28	115.76	0.014256	6.14	48.73	21.67	1.31
valle Paveto	24.1 RIC-24A	Q200	380.00	111.13	114.24	116.50	2.26	114.98	0.74	114.74	116.47	0.013857	6.61	57.46	21.67	1.30
valle Paveto	24.1 RIC-24A	Q500	431.00	111.13	114.48	116.50	2.02	114.98	0.50	115.02	116.89	0.013675	6.88	62.67	21.67	1.29
valle Paveto	24 RIC-24	Q50	299.00	110.95	113.43	116.41	2.98	114.60	1.17	113.83	115.22	0.013221	5.92	50.50	23.51	1.29
valle Paveto	24 RIC-24	Q200	380.00	110.95	113.73	116.41	2.68	114.60	0.87	114.27	115.96	0.014330	6.62	57.43	23.51	1.35
valle Paveto	24 RIC-24	Q500	431.00	110.95	113.93	116.41	2.48	114.60	0.67	114.54	116.38	0.014444	6.93	62.16	23.51	1.36

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Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle Paveto	23 RIC-23	Q50	299.00	107.50	109.65	116.41	6.76	114.68	5.03	110.99	114.79	0.058812	10.05	29.76	20.65	2.67
valle Paveto	23 RIC-23	Q200	380.00	107.50	109.96	116.41	6.45	114.68	4.72	111.46	115.53	0.050911	10.45	36.36	20.92	2.53
valle Paveto	23 RIC-23	Q500	431.00	107.50	110.16	116.41	6.25	114.68	4.52	111.75	115.95	0.047243	10.66	40.42	21.09	2.46
valle Paveto	22.3 RIC-22C	Q50	299.00	107.63	110.29	115.26	4.97	114.01	3.72	111.11	113.03	0.025364	7.34	40.73	22.69	1.75
valle Paveto	22.3 RIC-22C	Q200	380.00	107.63	110.58	115.26	4.68	114.01	3.43	111.55	113.86	0.025619	8.03	47.33	22.77	1.78
valle Paveto	22.3 RIC-22C	Q500	431.00	107.63	110.76	115.26	4.50	114.01	3.25	111.82	114.34	0.025457	8.38	51.43	22.82	1.78
valle Paveto	22.2 RIC-22B	Q50	299.00	107.36	111.02	110.07	-0.95	112.84	1.82	111.02	112.39	0.008237	5.19	57.57	20.92	1.00
valle Paveto	22.2 RIC-22B	Q200	380.00	107.36	111.50	110.07	-1.43	112.84	1.34	111.50	113.11	0.008206	5.63	67.54	20.92	1.00
valle Paveto	22.2 RIC-22B	Q500	431.00	107.36	111.78	110.07	-1.71	112.84	1.06	111.78	113.53	0.008191	5.86	73.50	20.92	1.00
valle Paveto	22.1 RIC-22A	Q50	299.00	106.59	109.62	110.00	0.38	113.64	4.02	110.27	111.93	0.019210	6.74	44.38	22.02	1.51
valle Paveto	22.1 RIC-22A	Q200	380.00	106.59	109.99	110.00	0.01	113.64	3.65	110.72	112.64	0.018331	7.21	52.68	22.33	1.50
valle Paveto	22.1 RIC-22A	Q500	431.00	106.59	110.21	110.00	-0.21	113.64	3.43	110.99	113.06	0.017904	7.48	57.60	22.34	1.49
valle Paveto	22 RIC-22	Q50	299.00	105.90	108.31	110.00	1.69	113.64	5.33	109.32	111.80	0.037200	8.28	36.13	22.34	2.08
valle Paveto	22 RIC-22	Q200	380.00	105.90	108.64	110.00	1.36	113.64	5.00	109.78	112.51	0.033192	8.71	43.63	22.34	1.99
valle Paveto	22 RIC-22	Q500	431.00	105.90	108.85	110.00	1.15	113.64	4.79	110.05	112.93	0.031403	8.95	48.15	22.34	1.95
valle Paveto	21.1 RIC-21A	Q50	299.00	106.45	109.13	109.95	0.82	109.23	0.10	109.65	110.85	0.016329	5.81	51.44	28.93	1.39
valle Paveto	21.1 RIC-21A	Q200	380.00	106.45	109.31	109.95	0.64	109.23	-0.08	110.02	111.59	0.019479	6.69	56.95	33.15	1.54
valle Paveto	21.1 RIC-21A	Q500	431.00	106.45	109.42	109.95	0.53	109.23	-0.19	110.22	112.04	0.021182	7.19	60.55	35.34	1.62
valle Paveto	21 RIC-21	Q50	299.00	105.69	108.62	108.63	0.01	108.39	-0.23	108.96	110.01	0.012120	5.25	58.07	35.28	1.24
valle Paveto	21 RIC-21	Q200	380.00	105.69	110.09	108.63	-1.46	108.39	-1.70	109.30	110.68	0.002464	3.51	114.67	39.54	0.62
valle Paveto	21 RIC-21	Q500	431.00	105.69	110.59	108.63	-1.96	108.39	-2.20	109.51	111.15	0.001917	3.40	134.83	39.96	0.56
valle Paveto	20 RIC-20	Q50	299.00	104.74	109.28	108.47	-0.81	106.81	-2.47	107.99	109.62	0.001316	2.68	119.47	36.87	0.45
valle Paveto	20 RIC-20	Q200	380.00	104.74	110.13	108.47	-1.66	106.81	-3.32	108.33	110.46	0.001049	2.69	150.54	36.87	0.41
valle Paveto	20 RIC-20	Q500	431.00	104.74	110.62	108.47	-2.15	106.81	-3.81	108.52	110.97	0.000952	2.72	168.81	36.87	0.39
valle Paveto	19.2 RIC-19B	Q50	299.00	104.92	108.93	108.77	-0.16	106.41	-2.52	107.69	109.53	0.002564	3.43	87.14	22.58	0.56
valle Paveto	19.2 RIC-19B	Q200	380.00	104.92	109.71	108.77	-0.94	106.41	-3.30	108.13	110.38	0.002404	3.63	104.68	22.58	0.54
valle Paveto	19.2 RIC-19B	Q500	431.00	104.92	110.16	108.77	-1.39	106.41	-3.75	108.40	110.88	0.002346	3.75	115.03	22.58	0.53
valle Paveto	19.1 RIC-19A	Q50	299.00	104.11	109.08	108.77	-0.31	106.41	-2.67	107.20	109.46	0.001233	2.78	111.67	26.08	0.42
valle Paveto	19.1 RIC-19A	Q200	380.00	104.11	109.87	108.77	-1.10	106.41	-3.46	107.62	110.31	0.001201	3.00	132.14	26.08	0.41
valle Paveto	19.1 RIC-19A	Q500	431.00	104.11	110.33	108.77	-1.56	106.41	-3.92	107.87	110.81	0.001189	3.12	144.24	26.08	0.41
valle Paveto	19.05	Q50	299.00	104.30	108.21	109.89	1.68	109.89	1.68	107.68	109.36	0.005684	4.76	62.76	17.01	0.79
valle Paveto	19.05	Q200	380.00	104.30	108.82	109.89	1.07	109.89	1.07	108.23	110.19	0.005886	5.19	73.15	17.01	0.80
valle Paveto	19.05	Q500	431.00	104.30	109.18	109.89	0.71	109.89	0.71	108.55	110.68	0.006019	5.44	79.25	17.01	0.80
valle Paveto	19 RIC 19		Bridge													
valle Paveto	18.95	Q50	299.00	104.30	107.68	109.89	2.21	109.89	2.21	107.68	109.25	0.008977	5.56	53.74	17.01	1.00
valle Paveto	18.95	Q200	380.00	104.30	108.23	109.89	1.66	109.89	1.66	108.23	110.08	0.009048	6.02	63.08	17.01	1.00
valle Paveto	18.95	Q500	431.00	104.30	108.55	109.89	1.34	109.89	1.34	108.55	110.56	0.009119	6.28	68.60	17.01	1.00

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Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle Paveto	18.1 RIC-18A	Q50	299.00	103.70	108.21	110.25	2.04	107.36	-0.85	106.84	108.73	0.002084	3.23	96.04	27.62	0.52
valle Paveto	18.1 RIC-18A	Q200	380.00	103.70	108.93	110.25	1.32	107.36	-1.57	107.40	109.51	0.001937	3.42	115.85	27.62	0.50
valle Paveto	18.1 RIC-18A	Q500	431.00	103.70	109.35	110.25	0.90	107.36	-1.99	107.67	109.96	0.001875	3.53	127.57	27.62	0.50
valle Paveto	18 RIC-18	Q50	299.00	103.58	108.19	109.96	1.77	109.79	1.60	106.66	108.65	0.001759	3.01	99.37	25.27	0.48
valle Paveto	18 RIC-18	Q200	380.00	103.58	108.90	109.96	1.06	109.79	0.89	107.09	109.43	0.001732	3.24	117.36	25.47	0.48
valle Paveto	18 RIC-18	Q500	431.00	103.58	109.32	109.96	0.64	109.79	0.47	107.34	109.90	0.001723	3.37	128.08	25.59	0.48
valle Paveto	17 RIC-17	Q50	299.00	103.75	106.94	105.32	-1.62	108.74	1.80	106.94	108.41	0.008250	5.37	55.68	18.89	1.00
valle Paveto	17 RIC-17	Q200	380.00	103.75	107.45	105.32	-2.13	108.74	1.29	107.45	109.17	0.008284	5.82	65.32	18.97	1.00
valle Paveto	17 RIC-17	Q500	431.00	103.75	107.75	105.32	-2.43	108.74	0.99	107.75	109.62	0.008326	6.07	71.02	19.02	1.00
valle Paveto	16 RIC-16	Q50	299.00	100.90	103.08	105.33	2.25	108.64	5.56	104.45	107.99	0.049838	9.81	30.47	17.80	2.39
valle Paveto	16 RIC-16	Q200	380.00	100.90	103.47	105.33	1.86	108.64	5.17	104.98	108.74	0.043127	10.18	37.33	18.06	2.26
valle Paveto	16 RIC-16	Q500	431.00	100.90	103.70	105.33	1.63	108.64	4.94	105.30	109.19	0.040202	10.38	41.50	18.22	2.20
valle Paveto	15.1	Q50	299.00	100.05	102.69	105.96	3.27	106.65	3.96	103.58	105.67	0.029216	7.65	39.10	22.48	1.85
valle Paveto	15.1	Q200	380.00	100.05	102.96	105.96	3.00	106.65	3.69	104.02	106.53	0.031437	8.38	45.37	23.80	1.94
valle Paveto	15.1	Q500	431.00	100.05	103.10	105.96	2.86	106.65	3.55	104.28	107.07	0.032057	8.82	48.86	23.84	1.97
valle Paveto	15 RIC-15		Bridge													
valle Paveto	14.9	Q50	299.00	100.05	102.84	105.96	3.12	106.65	3.81	103.58	105.35	0.023660	7.01	42.64	23.76	1.67
valle Paveto	14.9	Q200	380.00	100.05	103.10	105.96	2.86	106.65	3.55	104.02	106.19	0.025039	7.79	48.78	23.84	1.74
valle Paveto	14.9	Q500	431.00	100.05	103.24	105.96	2.72	106.65	3.41	104.28	106.72	0.026043	8.25	52.22	23.89	1.78
valle Paveto	14 RIC-14	Q50	299.00	100.11	102.64	111.77	9.13	107.32	4.68	103.25	104.75	0.019392	6.43	46.49	26.65	1.55
valle Paveto	14 RIC-14	Q200	380.00	100.11	102.86	111.77	8.91	107.32	4.46	103.64	105.53	0.022306	7.25	52.43	27.36	1.67
valle Paveto	14 RIC-14	Q500	431.00	100.11	102.98	111.77	8.79	107.32	4.34	103.88	106.03	0.024203	7.74	55.71	27.75	1.74
valle Paveto	13 RIC-13	Q50	299.00	99.89	103.17	111.10	7.93	104.40	1.23	102.57	103.77	0.003398	3.43	87.05	33.39	0.68
valle Paveto	13 RIC-13	Q200	380.00	99.89	102.28	111.10	8.82	104.40	2.12	102.92	104.50	0.020480	6.61	57.47	33.04	1.60
valle Paveto	13 RIC-13	Q500	431.00	99.89	102.39	111.10	8.71	104.40	2.01	103.13	104.91	0.021483	7.04	61.26	33.09	1.65
valle Paveto	12 RIC-12	Q50	299.00	99.06	102.19	109.15	6.96	104.35	2.16	102.19	103.32	0.007898	4.70	63.68	28.39	1.00
valle Paveto	12 RIC-12	Q200	380.00	99.06	102.59	109.15	6.56	104.35	1.76	102.59	103.90	0.007704	5.08	74.81	28.51	1.00
valle Paveto	12 RIC-12	Q500	431.00	99.06	102.82	109.15	6.33	104.35	1.53	102.82	104.24	0.007590	5.29	81.51	28.58	1.00
valle Paveto	11.2 RIC-11.2	Q50	299.00	97.49	100.63	104.37	3.74	101.96	1.33	99.90	101.27	0.003246	3.54	84.56	28.43	0.65
valle Paveto	11.2 RIC-11.2	Q200	380.00	97.49	101.08	104.37	3.29	101.96	0.88	100.29	101.86	0.003403	3.91	97.29	28.45	0.67
valle Paveto	11.2 RIC-11.2	Q500	431.00	97.49	101.35	104.37	3.02	101.96	0.61	100.52	102.21	0.003481	4.11	104.86	28.47	0.68
valle Paveto	11.1 RIC-11.1	Q50	299.00	97.59	100.04	104.37	4.33	101.51	1.47	100.04	101.16	0.008048	4.69	63.79	28.41	1.00
valle Paveto	11.1 RIC-11.1	Q200	380.00	97.59	100.43	104.37	3.94	101.51	1.08	100.43	101.74	0.007874	5.08	74.85	28.43	1.00
valle Paveto	11.1 RIC-11.1	Q500	431.00	97.59	100.66	104.37	3.71	101.51	0.85	100.66	102.09	0.007805	5.30	81.39	28.45	1.00
valle Paveto	11.06 RIC-11.06	Q50	299.00	96.37	98.67	104.25	5.58	101.51	2.84	99.34	100.96	0.027070	6.71	44.58	28.50	1.71
valle Paveto	11.06 RIC-11.06	Q200	380.00	96.37	98.99	104.25	5.26	101.51	2.52	99.73	101.54	0.024147	7.08	53.68	28.50	1.65
valle Paveto	11.06 RIC-11.06	Q500	431.00	96.37	99.18	104.25	5.07	101.51	2.33	99.96	101.88	0.022818	7.29	59.16	28.50	1.61

HEC-RAS Plan: PdB2014_rev2 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle Paveto	11.05 RIC-11.05	Q50	299.00	96.37	99.56	97.27	-2.29	97.28	-2.28	99.56	100.67	0.018716	4.68	63.85	28.50	0.84
valle Paveto	11.05 RIC-11.05	Q200	380.00	96.37	99.94	97.27	-2.67	97.28	-2.66	99.94	101.25	0.018133	5.08	74.80	28.50	0.86
valle Paveto	11.05 RIC-11.05	Q500	431.00	96.37	100.17	97.27	-2.90	97.28	-2.89	100.17	101.60	0.017778	5.30	81.40	28.50	0.87
valle Paveto	11 RIC-11	Q50	299.00	96.30	99.32	97.27	-2.05	97.28	-2.04	99.42	100.55	0.023038	4.91	60.90	28.39	0.90
valle Paveto	11 RIC-11	Q200	380.00	96.30	99.69	97.27	-2.43	97.28	-2.41	99.81	101.13	0.022153	5.32	71.48	28.41	0.92
valle Paveto	11 RIC-11	Q500	431.00	96.30	99.92	97.27	-2.65	97.28	-2.64	100.04	101.48	0.021695	5.54	77.79	28.42	0.93
valle Paveto	10.9 RIC-10.9	Q50	299.00	96.30	98.47	104.25	5.78	101.57	3.10	99.03	100.44	0.020704	6.23	48.01	28.84	1.54
valle Paveto	10.9 RIC-10.9	Q200	380.00	96.30	98.79	104.25	5.46	101.57	2.78	99.41	101.02	0.018953	6.62	57.38	28.94	1.50
valle Paveto	10.9 RIC-10.9	Q500	431.00	96.30	98.98	104.25	5.27	101.57	2.59	99.64	101.37	0.018172	6.85	62.96	29.00	1.48
valle Paveto	10.7 RIC-10.7	Q50	299.00	96.15	98.10	104.06	5.96	101.15	3.05	98.68	100.12	0.020724	6.30	47.47	28.65	1.56
valle Paveto	10.7 RIC-10.7	Q200	380.00	96.15	98.41	104.06	5.65	101.15	2.74	99.07	100.72	0.019316	6.73	56.42	28.74	1.53
valle Paveto	10.7 RIC-10.7	Q500	431.00	96.15	98.60	104.06	5.46	101.15	2.55	99.30	101.08	0.018657	6.98	61.78	28.80	1.52
valle Paveto	10.6 RIC-10.6	Q50	299.00	96.00	99.18	103.90	4.72	101.00	1.82	98.59	99.88	0.003849	3.69	81.10	28.95	0.70
valle Paveto	10.6 RIC-10.6	Q200	380.00	96.00	99.73	103.90	4.17	101.00	1.27	98.98	100.51	0.003570	3.92	97.01	29.09	0.68
valle Paveto	10.6 RIC-10.6	Q500	431.00	96.00	100.05	103.90	3.85	101.00	0.95	99.21	100.89	0.003475	4.06	106.25	29.17	0.68
valle Paveto	10.5 RIC-10.5	Q50	299.00	95.65	98.79	103.55	4.76	100.98	2.19	98.40	99.70	0.005749	4.23	70.75	29.12	0.87
valle Paveto	10.5 RIC-10.5	Q200	380.00	95.65	99.48	103.55	4.07	100.98	1.50	98.96	100.37	0.004288	4.19	90.69	29.35	0.76
valle Paveto	10.5 RIC-10.5	Q500	431.00	95.65	99.82	103.55	3.73	100.98	1.16	99.19	100.75	0.003999	4.28	100.68	29.46	0.74
valle Paveto	10.4 RIC-10.4	Q50	299.00	95.50	98.32	103.40	5.08	99.55	1.23	98.32	99.59	0.007653	5.00	59.85	23.48	1.00
valle Paveto	10.4 RIC-10.4	Q200	380.00	95.50	98.79	103.40	4.61	99.55	0.76	98.79	100.24	0.007466	5.33	71.26	24.57	1.00
valle Paveto	10.4 RIC-10.4	Q500	431.00	95.50	99.07	103.40	4.33	99.55	0.48	99.07	100.62	0.007345	5.50	78.31	25.62	1.00
valle Paveto	10.3 RIC-10.3	Q50	299.00	95.40	97.50	103.35	5.85	99.27	1.77	98.00	99.36	0.017894	6.03	49.56	28.79	1.47
valle Paveto	10.3 RIC-10.3	Q200	380.00	95.40	97.79	103.35	5.56	99.27	1.48	98.40	100.00	0.017798	6.58	57.74	28.87	1.49
valle Paveto	10.3 RIC-10.3	Q500	431.00	95.40	97.96	103.35	5.39	99.27	1.31	98.63	100.37	0.017603	6.87	62.75	28.92	1.49
valle Paveto	10.2 RIC-10.2	Q50	299.00	95.20	97.06	103.20	6.14	98.72	1.66	97.59	98.97	0.018225	6.12	48.87	28.52	1.49
valle Paveto	10.2 RIC-10.2	Q200	380.00	95.20	97.35	103.20	5.85	98.72	1.37	97.98	99.61	0.017985	6.66	57.08	28.61	1.50
valle Paveto	10.2 RIC-10.2	Q500	431.00	95.20	97.52	103.20	5.68	98.72	1.20	98.21	99.99	0.017819	6.95	62.01	28.66	1.51
valle Paveto	10.1 RIC-10.1	Q50	299.00	94.57	97.70	99.00	1.30	99.00	1.30	97.42	98.67	0.005825	4.36	68.59	25.67	0.85
valle Paveto	10.1 RIC-10.1	Q200	380.00	94.57	98.14	99.00	0.86	99.00	0.86	97.84	99.29	0.005859	4.75	79.97	25.67	0.86
valle Paveto	10.1 RIC-10.1	Q500	431.00	94.57	98.40	99.00	0.60	99.00	0.60	98.09	99.66	0.005884	4.97	86.70	25.67	0.86
valle Paveto	10 RIC-10		Bridge													
valle Paveto	9.9	Q50	299.00	94.57	97.42	99.00	1.58	99.00	1.58	97.42	98.63	0.008147	4.86	61.57	25.67	1.00
valle Paveto	9.9	Q200	380.00	94.57	97.84	99.00	1.16	99.00	1.16	97.84	99.25	0.008000	5.26	72.28	25.67	1.00
valle Paveto	9.9	Q500	431.00	94.57	98.09	99.00	0.91	99.00	0.91	98.09	99.62	0.007923	5.48	78.68	25.67	1.00
valle Paveto	9 RIC-9	Q50	299.00	94.58	96.97	100.85	3.88	98.32	1.35	97.34	98.57	0.013689	5.61	53.28	28.54	1.31
valle Paveto	9 RIC-9	Q200	380.00	94.58	97.28	100.85	3.57	98.32	1.04	97.73	99.19	0.013655	6.12	62.06	28.64	1.33
valle Paveto	9 RIC-9	Q500	431.00	94.58	97.46	100.85	3.40	98.32	0.86	97.96	99.55	0.013694	6.42	67.18	28.70	1.34

HEC-RAS Plan: PdB2014_rev2 (Continued)

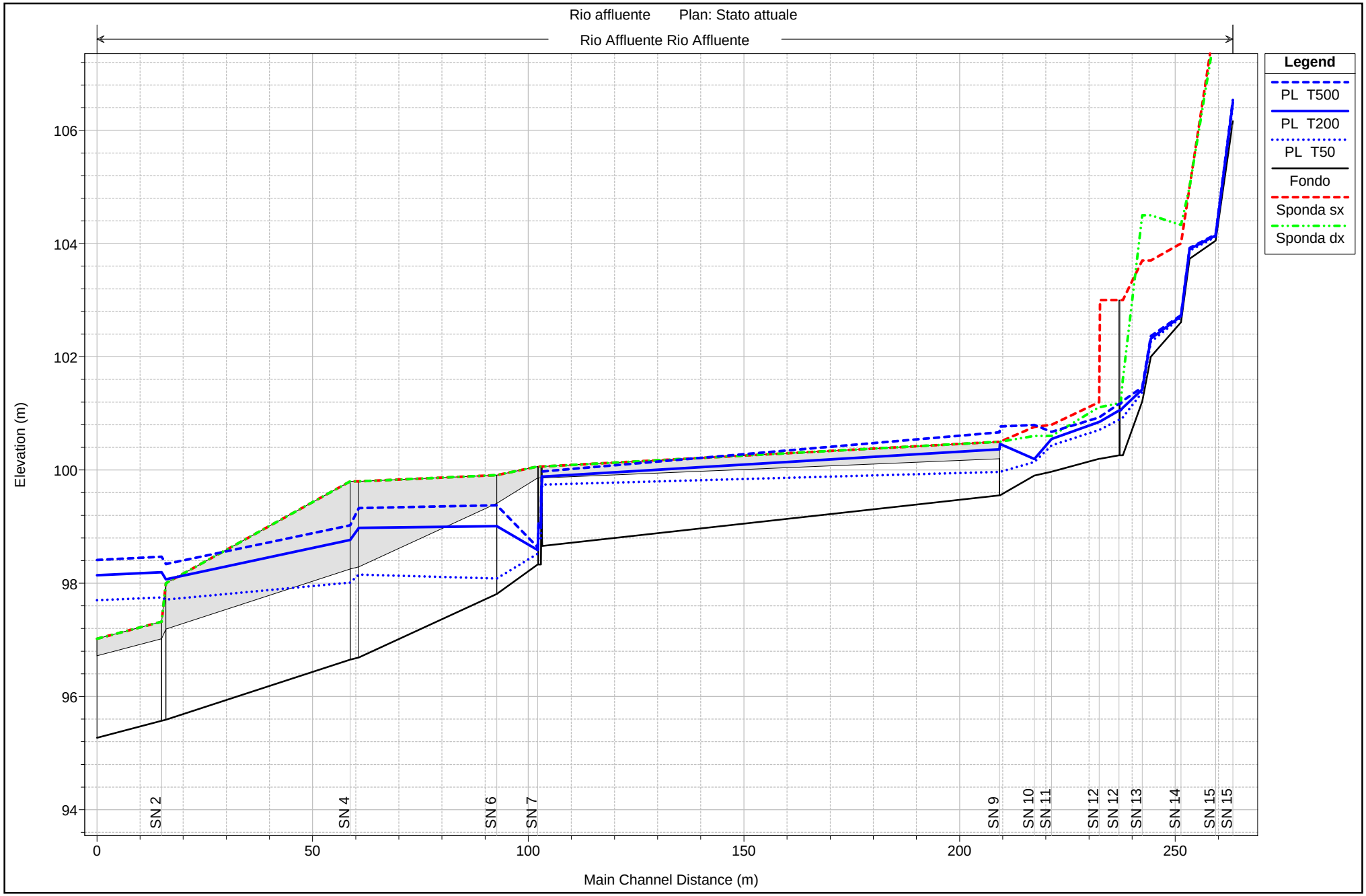
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle Paveto	8 RIC-8	Q50	299.00	93.60	95.91	98.27	2.36	96.75	0.84	96.03	97.13	0.009436	4.90	60.96	29.22	1.08
valle Paveto	8 RIC-8	Q200	380.00	93.60	96.28	98.27	1.99	96.75	0.47	96.41	97.70	0.009045	5.28	71.96	29.36	1.08
valle Paveto	8 RIC-8	Q500	431.00	93.60	96.50	98.27	1.77	96.75	0.25	96.64	98.04	0.008910	5.50	78.36	29.44	1.08

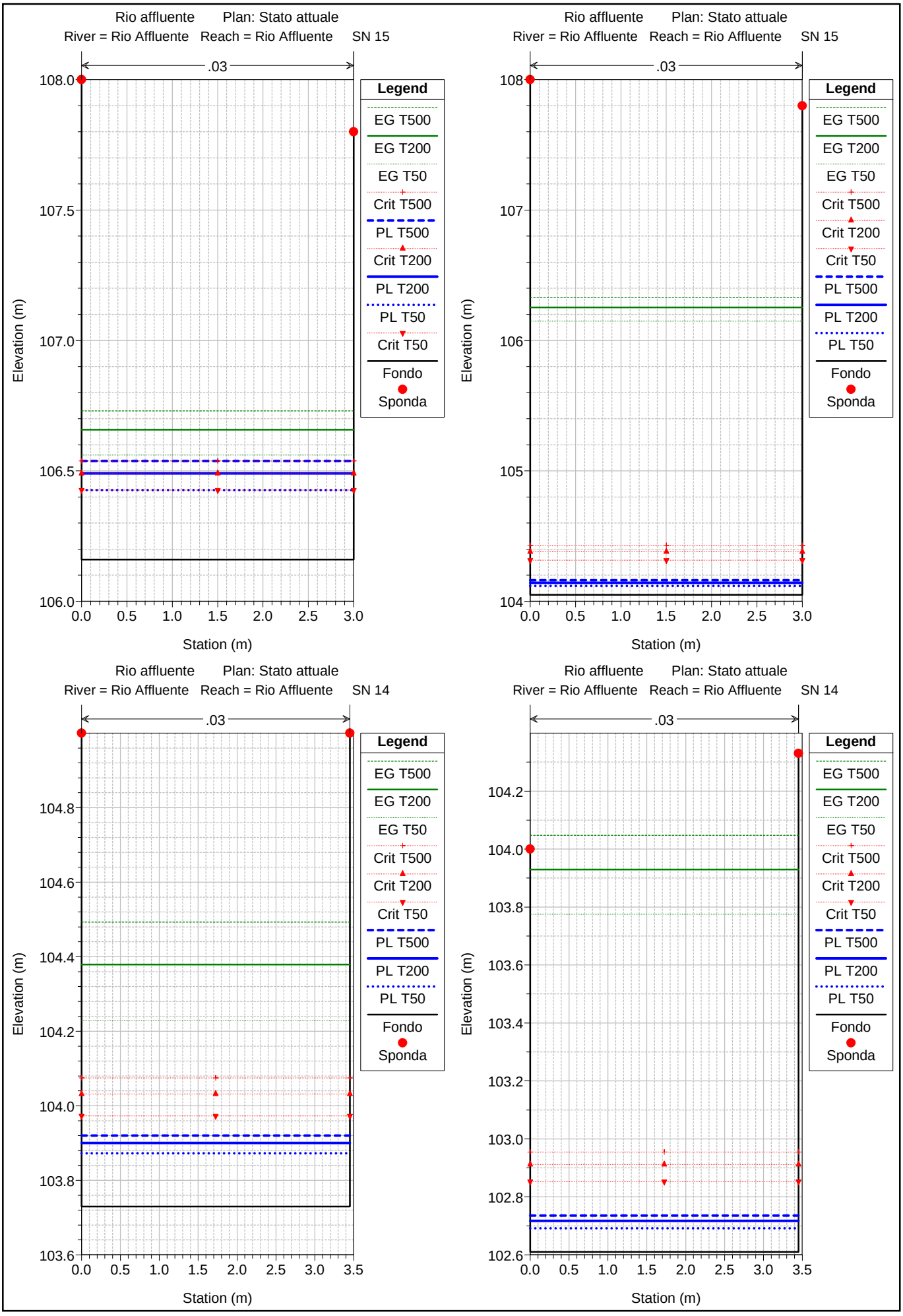
9.2.1 Affluente Senza Nome in località Ferriera

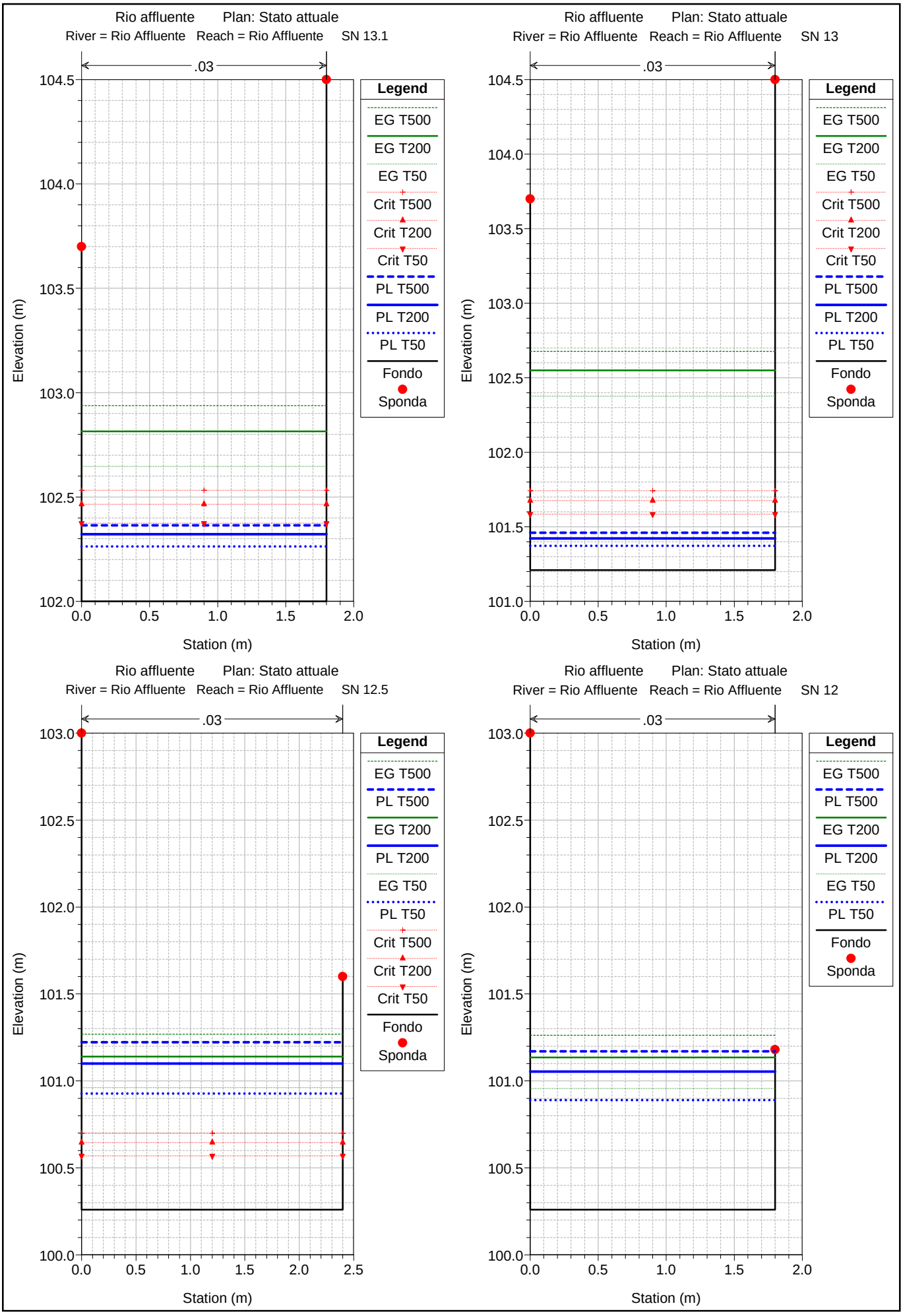
La simulazione idraulica dell'Affluente in sponda sinistra in prossimità del guado in località Ferriera è stata effettuata con le seguenti portate:

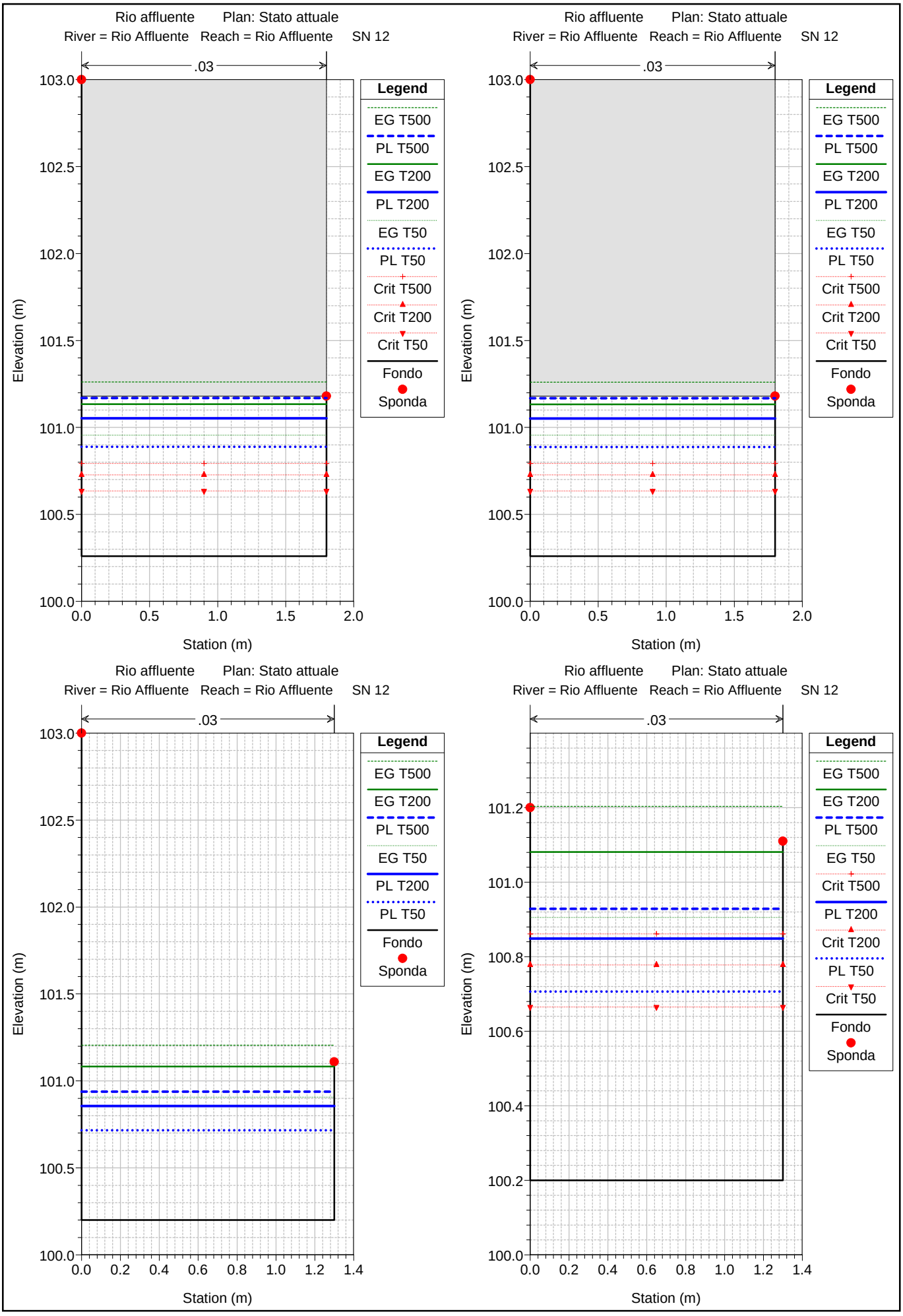
Corso d'acqua	SEZ.	T500	T200	T50
Rio Senza nome	15	2.2	1.8	1.3
	4	5.9	4.9	3.4
	3	7.7	6.4	4.5

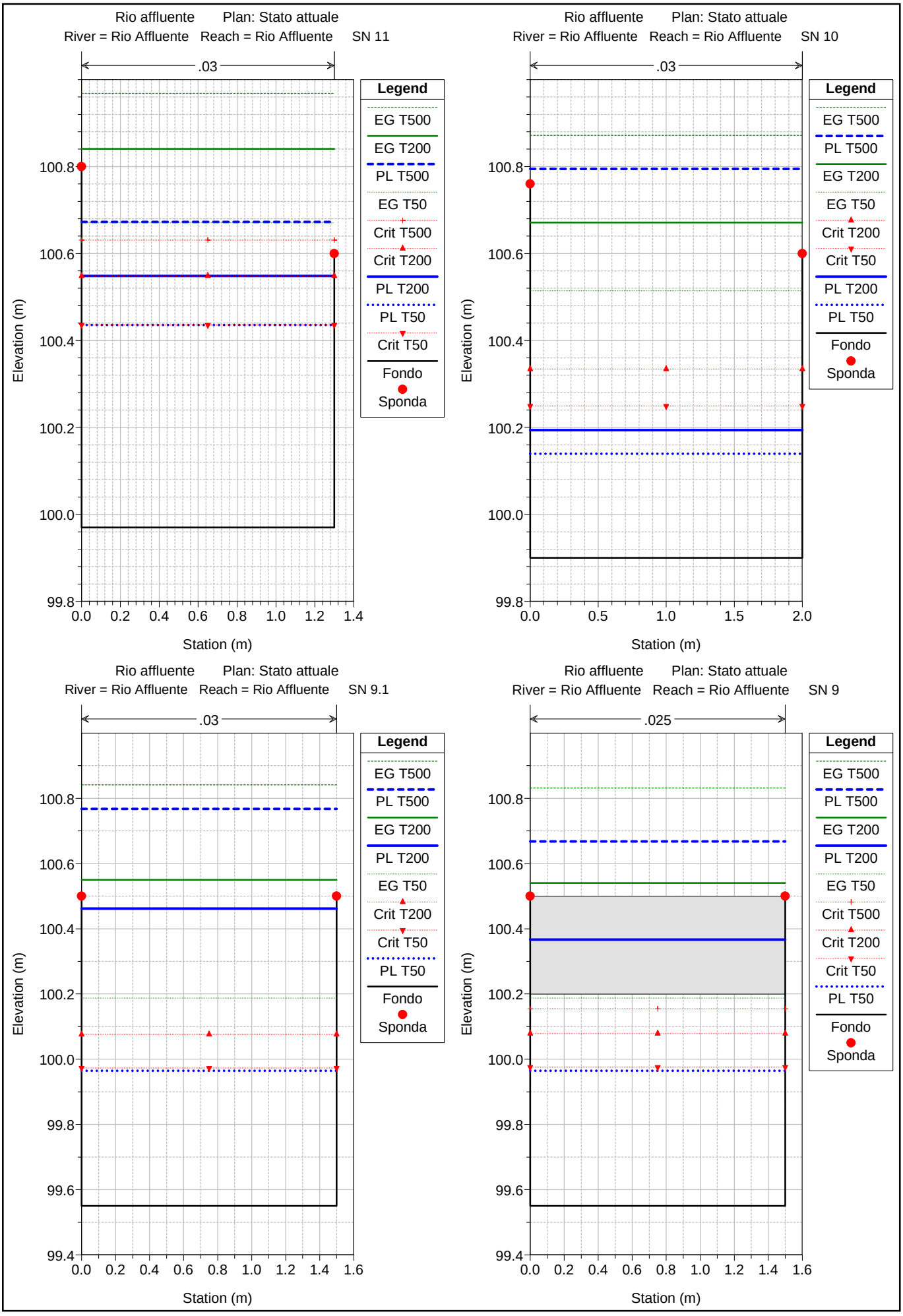
Il coefficiente di Strickler adottato è stato 33 $m^{1/3}$ s^{-1} per i tratti naturali e pari a 40 $m^{1/3}$ s^{-1} per i tratti plateati.
Come condizioni al contorno di monte è stata assunta la profondità critica mentre a valle è stata imposta la quota del t. Riccò in piena.

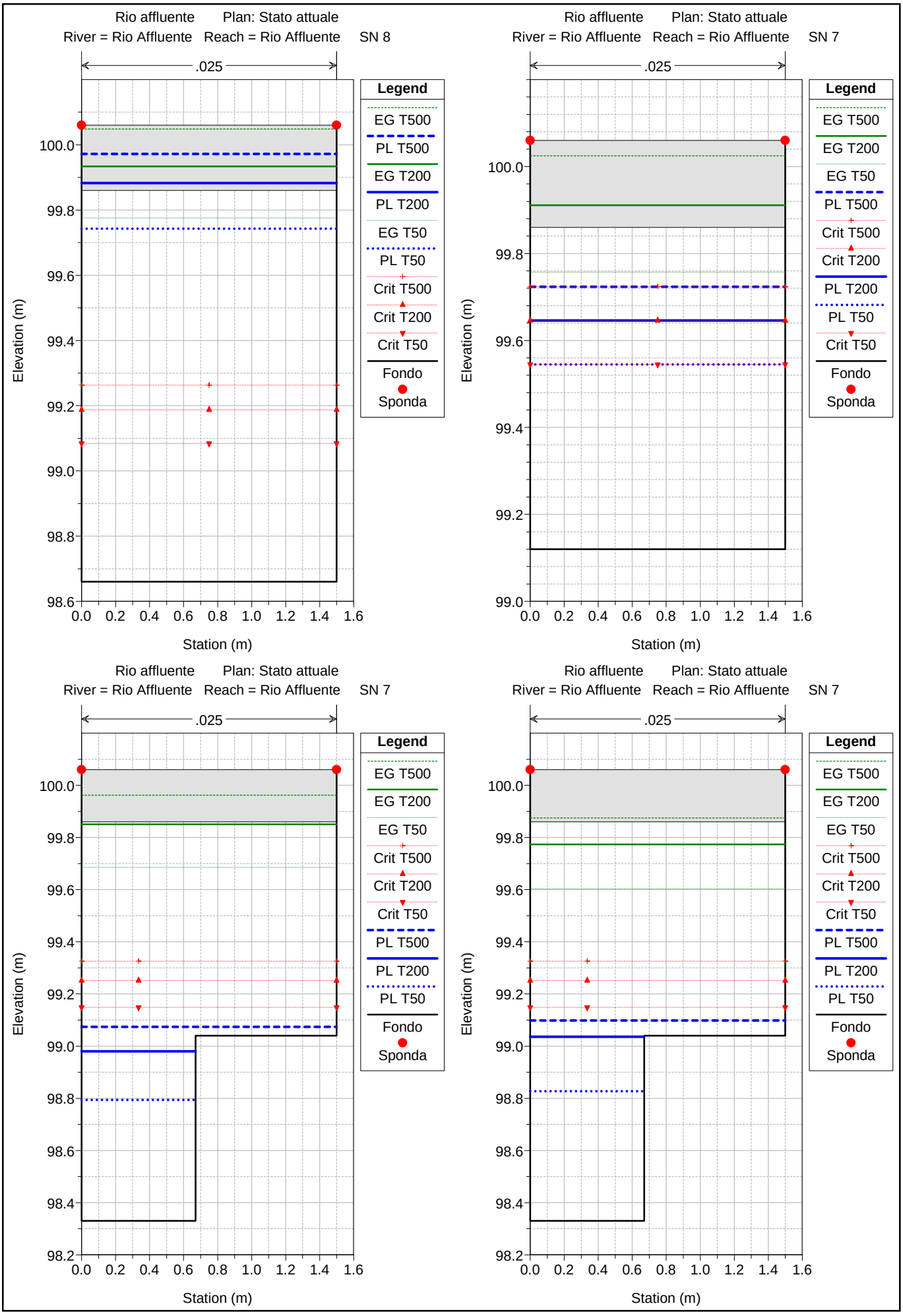

Rio affluente
Plan: Stato attuale
Rio Affluente Rio Affluente
Legend
PL T500
PL T200
PL T50
Fondo
Sponda sx
Sponda dx
Elevation (m)
106
104
102
100
98
96
94
SN 2
SN 4
SN 6
SN 7
SN 9
SN 10
SN 11
SN 12
SN 12
SN 13
SN 14
SN 15
SN 15
0
50
100
150
200
250
Main Channel Distance (m)

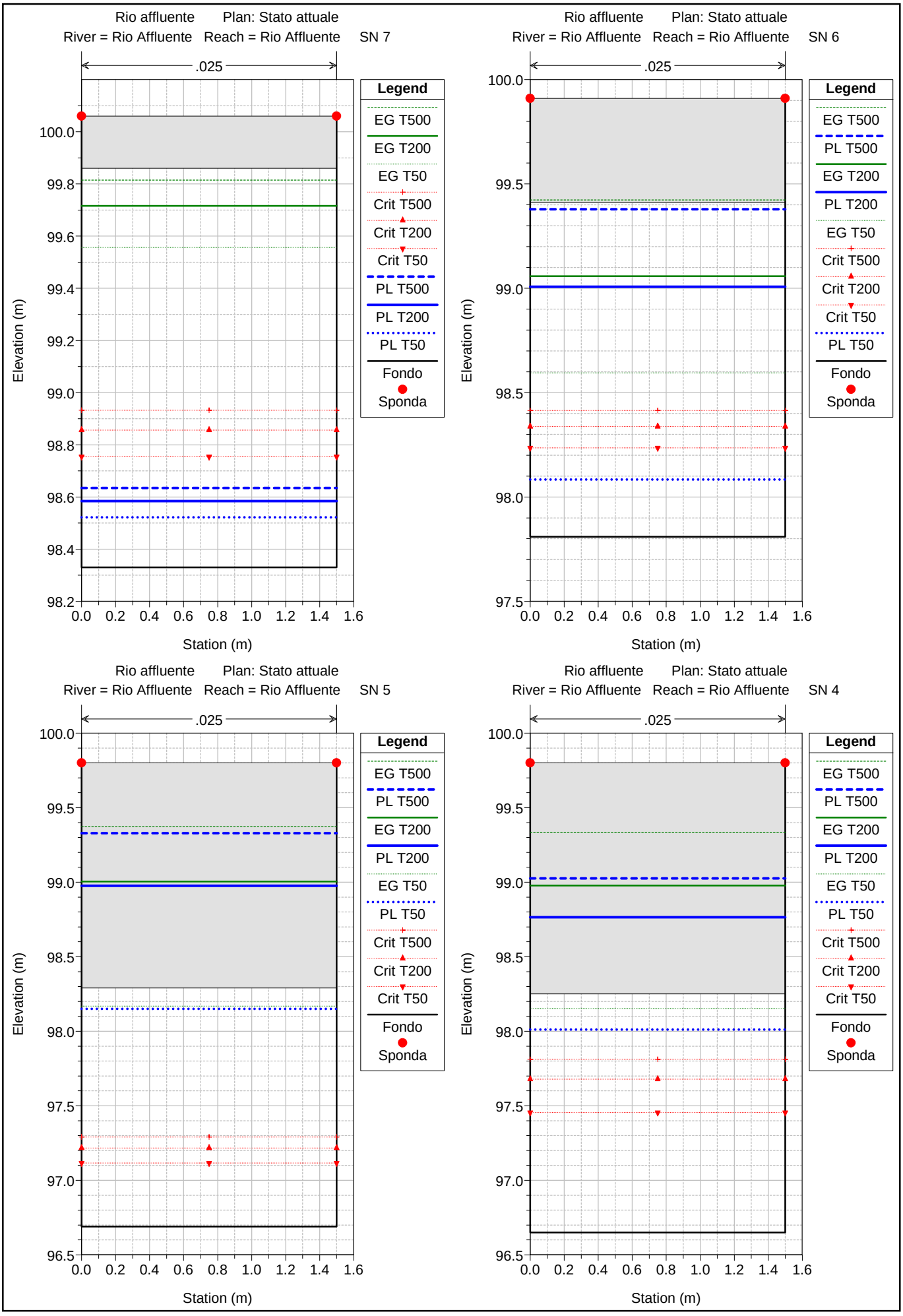

Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 15
.03
Legend
EG T500
EG T200
EG T50
Crit T500
PL T500
Crit T200
PL T200
PL T50
Crit T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 15
.03
Legend
EG T500
EG T200
EG T50
Crit T500
Crit T200
Crit T50
PL T500
PL T200
PL T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 14
.03
Legend
EG T500
EG T200
EG T50
Crit T500
Crit T200
Crit T50
PL T500
PL T200
PL T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 14
.03
Legend
EG T500
EG T200
EG T50
Crit T500
Crit T200
Crit T50
PL T500
PL T200
PL T50
Fondo
Sponda
Elevation (m)
Station (m)


Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 13.1
.03
Elevation (m)
Station (m)
Legend
EG T500
EG T200
EG T50
Crit T500
Crit T200
Crit T50
PL T500
PL T200
PL T50
Fondo
Sponda
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 13
.03
Elevation (m)
Station (m)
Legend
EG T500
EG T200
EG T50
Crit T500
Crit T200
Crit T50
PL T500
PL T200
PL T50
Fondo
Sponda
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 12.5
.03
Elevation (m)
Station (m)
Legend
EG T500
PL T500
EG T200
PL T200
EG T50
PL T50
Crit T500
Crit T200
Crit T50
Fondo
Sponda
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 12
.03
Elevation (m)
Station (m)
Legend
EG T500
PL T500
EG T200
PL T200
EG T50
PL T50
Fondo
Sponda

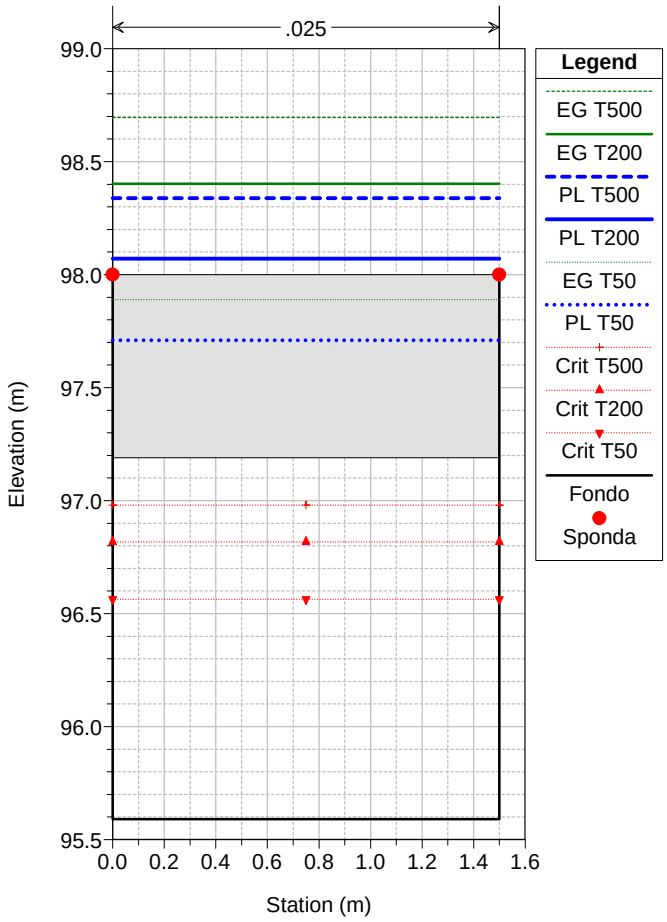

Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 12
.03
Legend
EG T500
PL T500
EG T200
PL T200
EG T50
PL T50
Crit T500
Crit T200
Crit T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 12
.03
Legend
EG T500
PL T500
EG T200
PL T200
EG T50
PL T50
Crit T500
Crit T200
Crit T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 12
.03
Legend
EG T500
EG T200
PL T500
EG T50
PL T200
PL T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 12
.03
Legend
EG T500
EG T200
PL T500
EG T50
Crit T500
PL T200
Crit T200
PL T50
Crit T50
Fondo
Sponda
Elevation (m)
Station (m)


Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 11
.03
Legend
EG T500
EG T200
PL T500
EG T50
Crit T500
Crit T200
PL T200
PL T50
Crit T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 10
.03
Legend
EG T500
PL T500
EG T200
EG T50
Crit T200
Crit T50
PL T200
PL T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 9.1
.03
Legend
EG T500
PL T500
EG T200
PL T200
EG T50
Crit T200
Crit T50
PL T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 9
.025
Legend
EG T500
PL T500
EG T200
PL T200
EG T50
Crit T500
Crit T200
Crit T50
PL T50
Fondo
Sponda
Elevation (m)
Station (m)

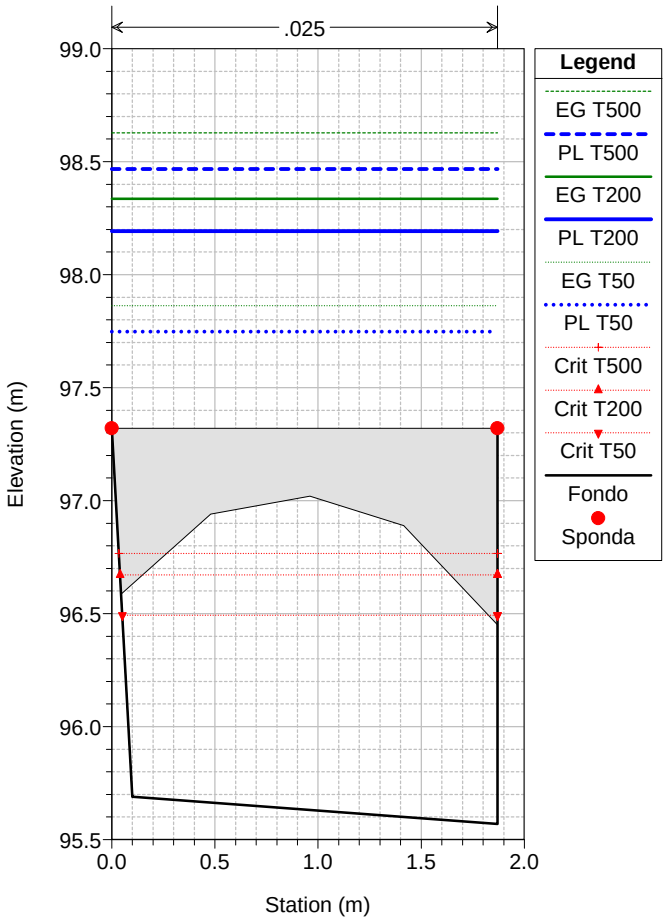

Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 8
.025
Legend
EG T500
PL T500
EG T200
PL T200
EG T50
PL T50
Crit T500
Crit T200
Crit T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 7
.025
Legend
EG T500
EG T200
EG T50
PL T500
Crit T500
Crit T200
PL T200
PL T50
Crit T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 7
.025
Legend
EG T500
EG T200
EG T50
Crit T500
Crit T200
Crit T50
PL T500
PL T200
PL T50
Fondo
Sponda
Elevation (m)
Station (m)
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 7
.025
Legend
EG T500
EG T200
EG T50
Crit T500
Crit T200
Crit T50
PL T500
PL T200
PL T50
Fondo
Sponda
Elevation (m)
Station (m)


Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 7
.025
Elevation (m)
Station (m)
Legend
EG T500
EG T200
EG T50
Crit T500
Crit T200
Crit T50
PL T500
PL T200
PL T50
Fondo
Sponda
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 6
.025
Elevation (m)
Station (m)
Legend
EG T500
PL T500
EG T200
PL T200
EG T50
Crit T500
Crit T200
Crit T50
PL T50
Fondo
Sponda
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 5
.025
Elevation (m)
Station (m)
Legend
EG T500
PL T500
EG T200
PL T200
EG T50
PL T50
Crit T500
Crit T200
Crit T50
Fondo
Sponda
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 4
.025
Elevation (m)
Station (m)
Legend
EG T500
PL T500
EG T200
PL T200
EG T50
PL T50
Crit T500
Crit T200
Crit T50
Fondo
Sponda

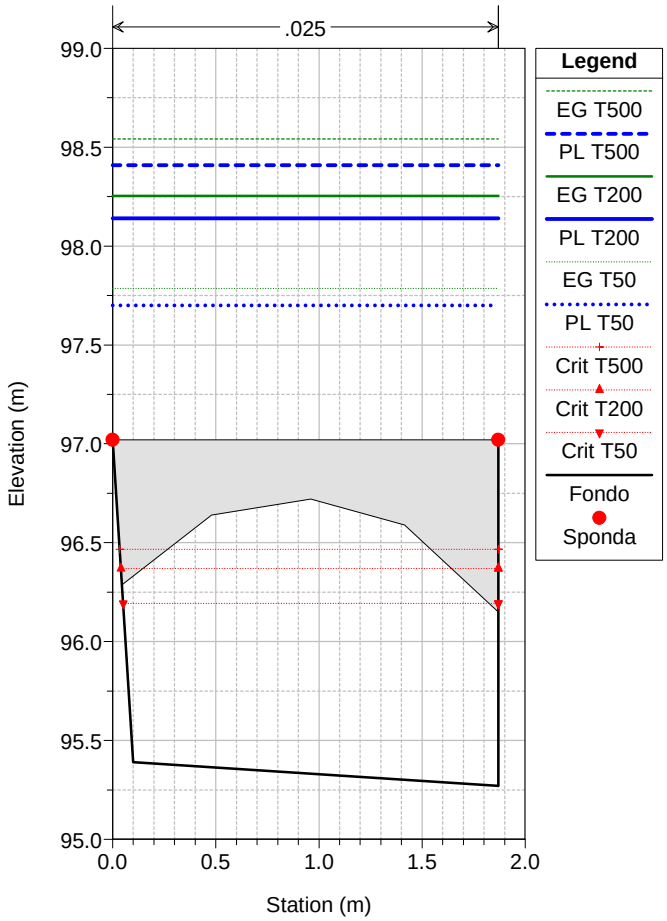
Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 3



Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 2



Rio affluente Plan: Stato attuale
River = Rio Affluente Reach = Rio Affluente SN 1



HEC-RAS Plan: att River: Rio Affluente Reach: Rio Affluente

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)	
Rio Affluente	15 SN 15	T500	2.20	106.16	106.54	108.00	1.46	107.80	1.26	106.54	106.73	0.016709	1.94	1.13	3.00	1.01
Rio Affluente	15 SN 15	T200	1.80	106.16	106.49	108.00	1.51	107.80	1.31	106.49	106.66	0.016894	1.81	0.99	3.00	1.01
Rio Affluente	15 SN 15	T50	1.30	106.16	106.43	108.00	1.57	107.80	1.37	106.43	106.56	0.017251	1.63	0.80	3.00	1.01
Rio Affluente	14.9 SN 15	T500	2.20	104.05	104.16	108.00	3.84	107.80	3.64	104.43	106.33	0.776704	6.52	0.34	3.00	6.21
Rio Affluente	14.9 SN 15	T200	1.80	104.05	104.14	108.00	3.86	107.80	3.66	104.38	106.25	0.956060	6.44	0.28	3.00	6.73
Rio Affluente	14.9 SN 15	T50	1.30	104.05	104.12	108.00	3.88	107.80	3.68	104.32	106.15	1.354198	6.31	0.21	3.00	7.69
Rio Affluente	14.1 SN 14	T500	2.20	103.73	103.92	105.00	1.08	105.00	1.08	104.07	104.49	0.106321	3.35	0.66	3.45	2.45
Rio Affluente	14.1 SN 14	T200	1.80	103.73	103.90	105.00	1.10	105.00	1.10	104.03	104.38	0.101532	3.06	0.59	3.45	2.37
Rio Affluente	14.1 SN 14	T50	1.30	103.73	103.87	105.00	1.13	105.00	1.13	103.97	104.23	0.094357	2.65	0.49	3.45	2.24
Rio Affluente	14 SN 14	T500	2.20	102.61	102.74	104.00	1.26	104.33	1.59	102.95	104.05	0.404251	5.07	0.43	3.45	4.57
Rio Affluente	14 SN 14	T200	1.80	102.61	102.72	104.00	1.28	104.33	1.61	102.91	103.93	0.457229	4.88	0.37	3.45	4.76
Rio Affluente	14 SN 14	T50	1.30	102.61	102.69	104.00	1.31	104.33	1.64	102.85	103.77	0.573806	4.61	0.28	3.45	5.15
Rio Affluente	13.1 SN 13.1	T500	2.20	102.00	102.36	103.70	1.34	104.50	2.14	102.53	102.94	0.061201	3.35	0.66	1.80	1.77
Rio Affluente	13.1 SN 13.1	T200	1.80	102.00	102.32	103.70	1.38	104.50	2.18	102.47	102.81	0.059433	3.11	0.58	1.80	1.75
Rio Affluente	13.1 SN 13.1	T50	1.30	102.00	102.26	103.70	1.44	104.50	2.24	102.37	102.65	0.056596	2.74	0.47	1.80	1.71
Rio Affluente	13 SN 13	T500	2.20	101.21	101.46	103.70	2.24	104.50	3.04	101.74	102.68	0.189171	4.89	0.45	1.80	3.12
Rio Affluente	13 SN 13	T200	1.80	101.21	101.42	103.70	2.28	104.50	3.08	101.68	102.55	0.208190	4.70	0.38	1.80	3.26
Rio Affluente	13 SN 13	T50	1.30	101.21	101.37	103.70	2.33	104.50	3.13	101.58	102.38	0.249418	4.44	0.29	1.80	3.51
Rio Affluente	12.5 SN 12.5	T500	2.20	100.26	101.22	103.00	1.78	101.60	0.38	100.70	101.27	0.001885	0.95	2.31	2.40	0.31
Rio Affluente	12.5 SN 12.5	T200	1.80	100.26	101.10	103.00	1.90	101.60	0.50	100.65	101.14	0.001838	0.89	2.02	2.40	0.31
Rio Affluente	12.5 SN 12.5	T50	1.30	100.26	100.93	103.00	2.07	101.60	0.67	100.57	100.96	0.001828	0.81	1.60	2.40	0.32
Rio Affluente	12.3 SN 12	T500	2.20	100.26	101.17	103.00	1.83	101.18	0.01		101.26	0.004661	1.34	1.64	1.80	0.45
Rio Affluente	12.3 SN 12	T200	1.80	100.26	101.05	103.00	1.95	101.18	0.13		101.14	0.004507	1.26	1.43	1.80	0.45
Rio Affluente	12.3 SN 12	T50	1.30	100.26	100.89	103.00	2.11	101.18	0.29		100.96	0.004446	1.15	1.13	1.80	0.46
Rio Affluente	12.2 SN 12	T500	2.20	100.26	101.17	101.18	0.01	101.18	0.01	100.79	101.26	0.004677	1.34	1.64	1.80	0.45
Rio Affluente	12.2 SN 12	T200	1.80	100.26	101.05	101.18	0.13	101.18	0.13	100.73	101.13	0.004524	1.26	1.43	1.80	0.45
Rio Affluente	12.2 SN 12	T50	1.30	100.26	100.89	101.18	0.29	101.18	0.29	100.64	100.96	0.004467	1.15	1.13	1.80	0.46
Rio Affluente	12.19 SN 12	T500	2.20	100.26	101.17	101.18	0.01	101.18	0.01	100.79	101.26	0.004695	1.35	1.64	1.80	0.45
Rio Affluente	12.19 SN 12	T200	1.80	100.26	101.05	101.18	0.13	101.18	0.13	100.73	101.13	0.004543	1.26	1.43	1.80	0.45
Rio Affluente	12.19 SN 12	T50	1.30	100.26	100.89	101.18	0.29	101.18	0.29	100.64	100.96	0.004493	1.15	1.13	1.80	0.46
Rio Affluente	12.1 SN 12	T500	2.20	100.20	100.94	103.00	2.06	101.11	0.17		101.21	0.019514	2.29	0.96	1.30	0.85
Rio Affluente	12.1 SN 12	T200	1.80	100.20	100.86	103.00	2.14	101.11	0.25		101.08	0.017854	2.11	0.85	1.30	0.83
Rio Affluente	12.1 SN 12	T50	1.30	100.20	100.72	103.00	2.28	101.11	0.39		100.91	0.017814	1.94	0.67	1.30	0.86
Rio Affluente	12 SN 12	T500	2.20	100.20	100.93	101.20	0.27	101.11	0.18	100.86	101.20	0.020177	2.32	0.95	1.30	0.87
Rio Affluente	12 SN 12	T200	1.80	100.20	100.85	101.20	0.35	101.11	0.26	100.78	101.08	0.018369	2.13	0.84	1.30	0.85
Rio Affluente	12 SN 12	T50	1.30	100.20	100.71	101.20	0.49	101.11	0.40	100.67	100.91	0.018700	1.97	0.66	1.30	0.88
Rio Affluente	11 SN 11	T500	2.20	99.97	100.67	100.80	0.13	100.60	-0.07	100.63	100.97	0.022232	2.41	0.91	1.30	0.92
Rio Affluente	11 SN 11	T200	1.80	99.97	100.55	100.80	0.25	100.60	0.05	100.55	100.84	0.025012	2.39	0.75	1.30	1.00
Rio Affluente	11 SN 11	T50	1.30	99.97	100.44	100.80	0.36	100.60	0.16	100.44	100.67	0.023631	2.15	0.61	1.30	1.00

HEC-RAS Plan: att River: Rio Affluente Reach: Rio Affluente (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)	
Rio Affluente	10 SN 10	T500	2.20	99.90	100.79	100.76	-0.03	100.60	-0.19		100.87	0.003700	1.23	1.79	2.00	0.41
Rio Affluente	10 SN 10	T200	1.80	99.90	100.19	100.76	0.57	100.60	0.41	100.33	100.67	0.060838	3.06	0.59	2.00	1.80
Rio Affluente	10 SN 10	T50	1.30	99.90	100.14	100.76	0.62	100.60	0.46	100.25	100.51	0.059280	2.71	0.48	2.00	1.77
Rio Affluente	9.1 SN 9.1	T500	2.20	99.55	100.77	100.50	-0.27	100.50	-0.27		100.84	0.003636	1.20	1.83	1.50	0.35
Rio Affluente	9.1 SN 9.1	T200	1.80	99.55	100.46	100.50	0.04	100.50	0.04	100.08	100.55	0.005097	1.32	1.37	1.50	0.44
Rio Affluente	9.1 SN 9.1	T50	1.30	99.55	99.96	100.50	0.54	100.50	0.54	99.97	100.19	0.022905	2.09	0.62	1.50	1.04
Rio Affluente	9 SN 9	T500	2.20	99.55	100.67	100.20	-0.47	100.20	-0.47	100.15	100.83	0.015959	1.79	1.23	1.50	0.54
Rio Affluente	9 SN 9	T200	1.80	99.55	100.37	100.20	-0.17	100.20	-0.17	100.08	100.54	0.015420	1.85	0.97		0.65
Rio Affluente	9 SN 9	T50	1.30	99.55	99.96	100.20	0.24	100.20	0.24	99.98	100.19	0.015906	2.09	0.62	1.50	1.04
Rio Affluente	8 SN 8	T500	2.20	98.66	99.97	99.86	-0.11	99.86	-0.11	99.26	100.05	0.004040	1.22	1.80		0.34
Rio Affluente	8 SN 8	T200	1.80	98.66	99.88	99.86	-0.02	99.86	-0.02	99.19	99.93	0.002705	1.00	1.80		0.29
Rio Affluente	8 SN 8	T50	1.30	98.66	99.74	99.86	0.12	99.86	0.12	99.08	99.78	0.001185	0.80	1.62	1.50	0.25
Rio Affluente	7.3 SN 7	T500	2.20	99.12	99.72	99.86	0.14	99.86	0.14	99.72	100.02	0.015899	2.43	0.91	1.50	1.00
Rio Affluente	7.3 SN 7	T200	1.80	99.12	99.65	99.86	0.21	99.86	0.21	99.65	99.91	0.015555	2.28	0.79	1.50	1.00
Rio Affluente	7.3 SN 7	T50	1.30	99.12	99.54	99.86	0.32	99.86	0.32	99.54	99.76	0.014833	2.04	0.64	1.50	1.00
Rio Affluente	7.2 SN 7	T500	2.20	98.33	99.07	99.86	0.79	99.86	0.79	99.33	99.96	0.110188	4.18	0.53	1.50	2.25
Rio Affluente	7.2 SN 7	T200	1.80	98.33	98.98	99.86	0.88	99.86	0.88	99.25	99.85	0.079848	4.13	0.44	0.67	1.64
Rio Affluente	7.2 SN 7	T50	1.30	98.33	98.79	99.86	1.07	99.86	1.07	99.15	99.69	0.096977	4.18	0.31	0.67	1.96
Rio Affluente	7.1 SN 7	T500	2.20	98.33	99.10	99.86	0.76	99.86	0.76	99.33	99.87	0.089993	3.90	0.56	1.50	2.03
Rio Affluente	7.1 SN 7	T200	1.80	98.33	99.04	99.86	0.82	99.86	0.82	99.25	99.77	0.065233	3.80	0.47	0.67	1.44
Rio Affluente	7.1 SN 7	T50	1.30	98.33	98.83	99.86	1.03	99.86	1.03	99.15	99.60	0.081360	3.90	0.33	0.67	1.77
Rio Affluente	7 SN 7	T500	2.20	98.33	98.63	99.86	1.23	99.86	1.23	98.93	99.81	0.111189	4.81	0.46	1.50	2.78
Rio Affluente	7 SN 7	T200	1.80	98.33	98.58	99.86	1.28	99.86	1.28	98.86	99.72	0.127034	4.71	0.38	1.50	2.98
Rio Affluente	7 SN 7	T50	1.30	98.33	98.52	99.86	1.34	99.86	1.34	98.75	99.56	0.154995	4.51	0.29	1.50	3.28
Rio Affluente	6 SN 6	T500	2.20	97.81	99.38	99.41	0.03	99.41	0.03	98.41	99.42	0.001351	0.94	2.35	1.50	0.24
Rio Affluente	6 SN 6	T200	1.80	97.81	99.01	99.41	0.40	99.41	0.40	98.34	99.06	0.001763	1.00	1.80	1.50	0.29
Rio Affluente	6 SN 6	T50	1.30	97.81	98.08	99.41	1.33	99.41	1.33	98.24	98.59	0.053375	3.17	0.41	1.50	1.93
Rio Affluente	5 SN 5	T500	2.20	96.69	99.33	98.29	-1.04	98.29	-1.04	97.29	99.37	0.001861	0.92	2.40		0.18
Rio Affluente	5 SN 5	T200	1.80	96.69	98.98	98.29	-0.69	98.29	-0.69	97.22	99.00	0.001246	0.75	2.40		0.16
Rio Affluente	5 SN 5	T50	1.30	96.69	98.15	98.29	0.14	98.29	0.14	97.12	98.17	0.000561	0.59	2.19	1.50	0.16
Rio Affluente	4 SN 4	T500	5.90	96.65	99.02	98.25	-0.77	98.25	-0.77	97.81	99.33	0.013386	2.46	2.40		0.51
Rio Affluente	4 SN 4	T200	4.90	96.65	98.77	98.25	-0.52	98.25	-0.52	97.68	98.98	0.009233	2.04	2.40		0.45
Rio Affluente	4 SN 4	T50	3.40	96.65	98.01	98.25	0.24	98.25	0.24	97.45	98.15	0.004568	1.67	2.04	1.50	0.46
Rio Affluente	3 SN 3	T500	7.70	95.59	98.34	97.19	-1.15	97.19	-1.15	96.98	98.70	0.016038	2.65	2.91	1.50	0.51
Rio Affluente	3 SN 3	T200	6.40	95.59	98.07	97.19	-0.88	97.19	-0.88	96.82	98.40	0.018207	2.55	2.51	1.50	0.52
Rio Affluente	3 SN 3	T50	4.50	95.59	97.71	97.19	-0.52	97.19	-0.52	96.56	97.89	0.007787	1.87	2.40		0.41
Rio Affluente	2 SN 2	T500	7.70	95.57	98.47	96.59	-1.88	96.45	-2.02	96.77	98.63	0.005912	1.78	4.33	1.87	0.34
Rio Affluente	2 SN 2	T200	6.40	95.57	98.19	96.59	-1.61	96.45	-1.74	96.67	98.34	0.005754	1.67	3.82	1.87	0.33
Rio Affluente	2 SN 2	T50	4.50	95.57	97.75	96.59	-1.16	96.45	-1.30	96.49	97.86	0.005646	1.51	2.99	1.87	0.33

HEC-RAS Plan: att River: Rio Affluente Reach: Rio Affluente (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)	
Rio Affluente	1 SN 1	T500	7.70	95.27	98.41	96.29	-2.12	96.15	-2.26	96.47	98.54	0.004521	1.61	4.79	1.87	0.32
Rio Affluente	1 SN 1	T200	6.40	95.27	98.14	96.29	-1.85	96.15	-1.99	96.37	98.25	0.004215	1.49	4.28	1.87	0.32
Rio Affluente	1 SN 1	T50	4.50	95.27	97.70	96.29	-1.41	96.15	-1.55	96.19	97.79	0.003744	1.30	3.46	1.87	0.31

.

9.2.2 Affluente A

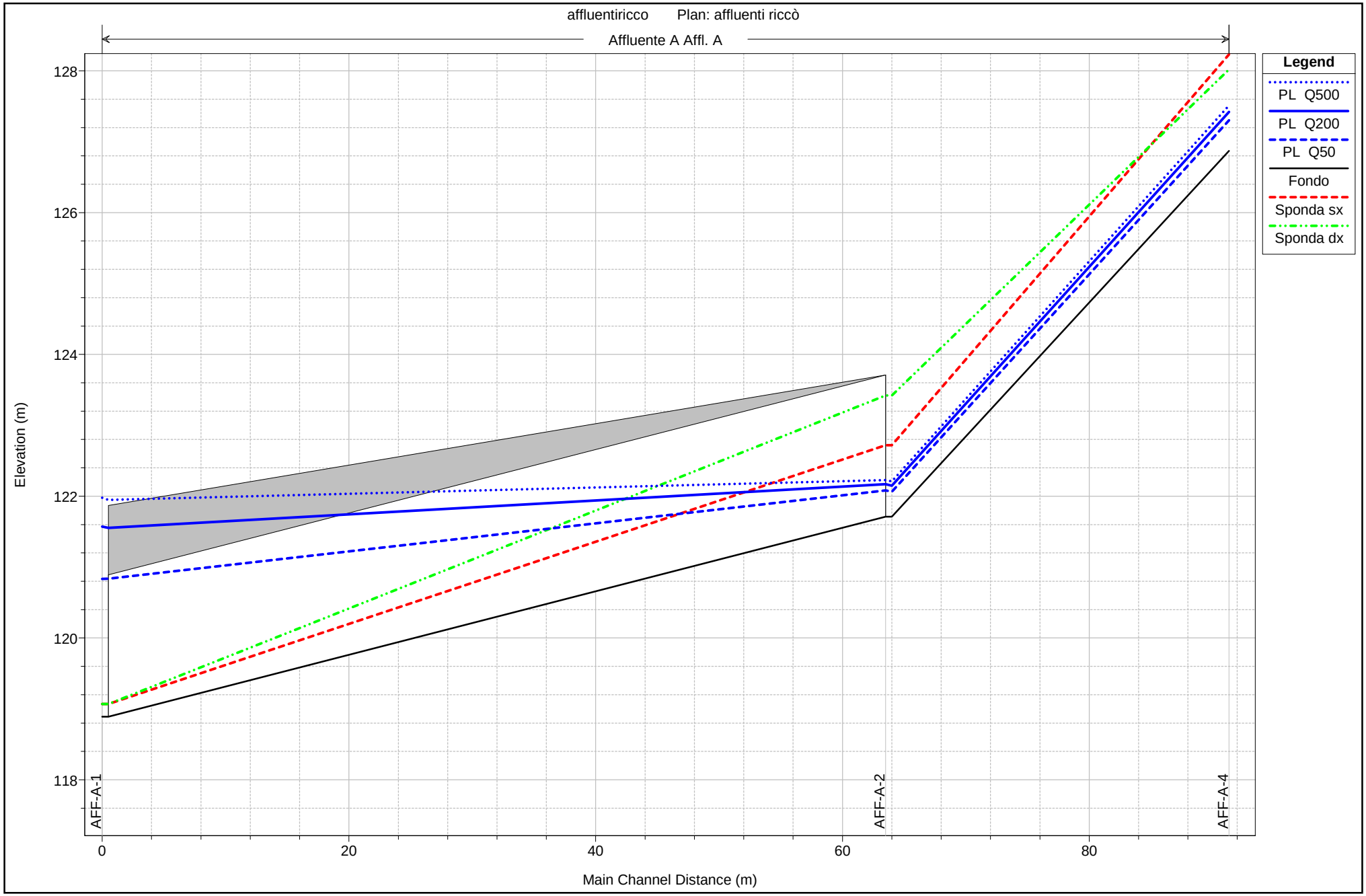
La simulazione idraulica dell'Affluente A è stata effettuata con le portate:
Q_{50}= 3 m^3/s
Q_{200}= 4.4 m^3/s
Q_{500}= 5.3 m^3/s
ottenute utilizzando il metodo CIMA per i bacini inferiori ai 2 km^2.
Il coefficiente di Strickler adottato è stato 30 $m^{1/3}$ s^{-1}.
Come condizioni al contorno è stata assunta la profondità critica a monte e la confluenza con il torrente Riccò a valle.

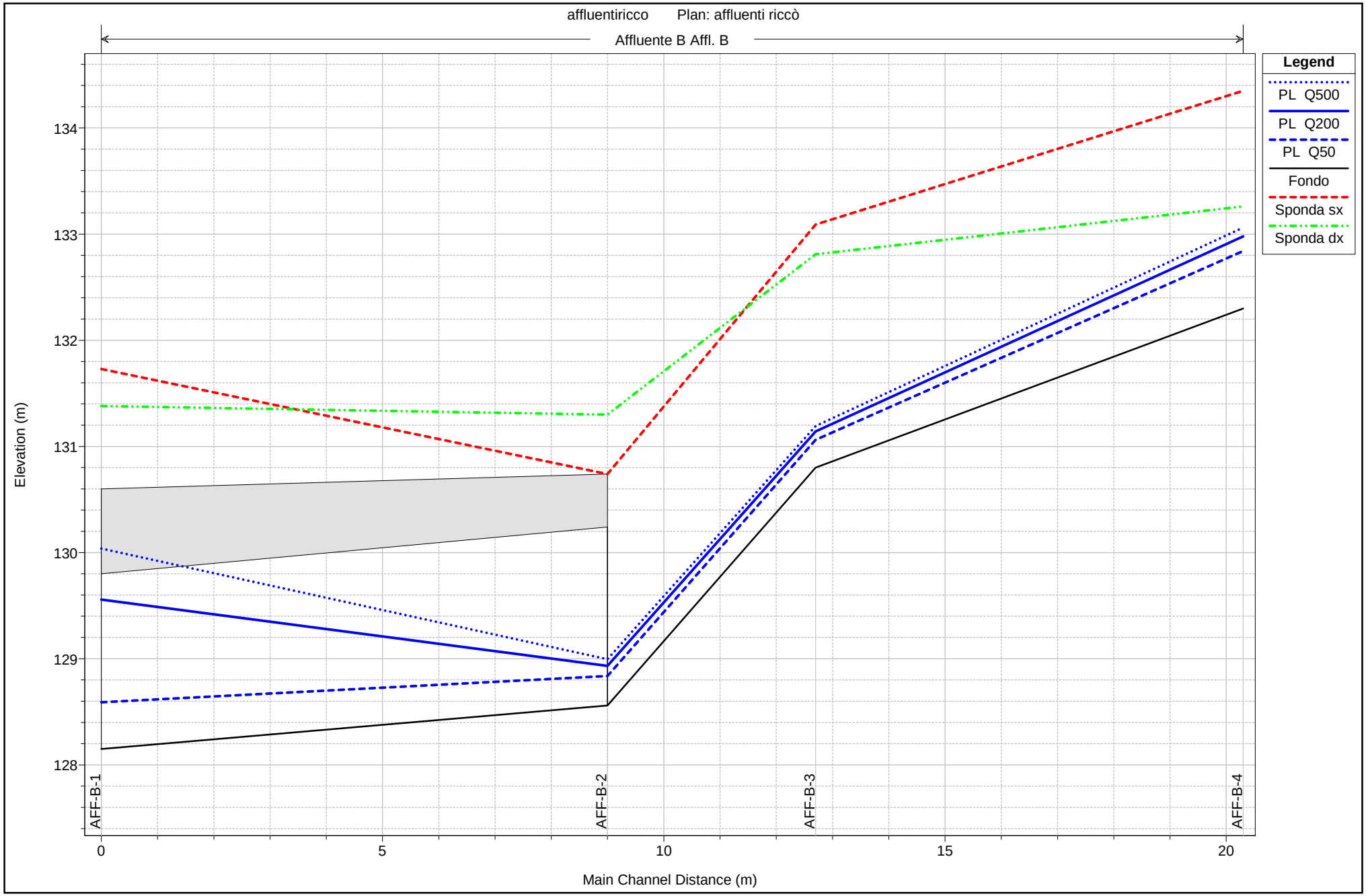
9.2.3 Affluente B

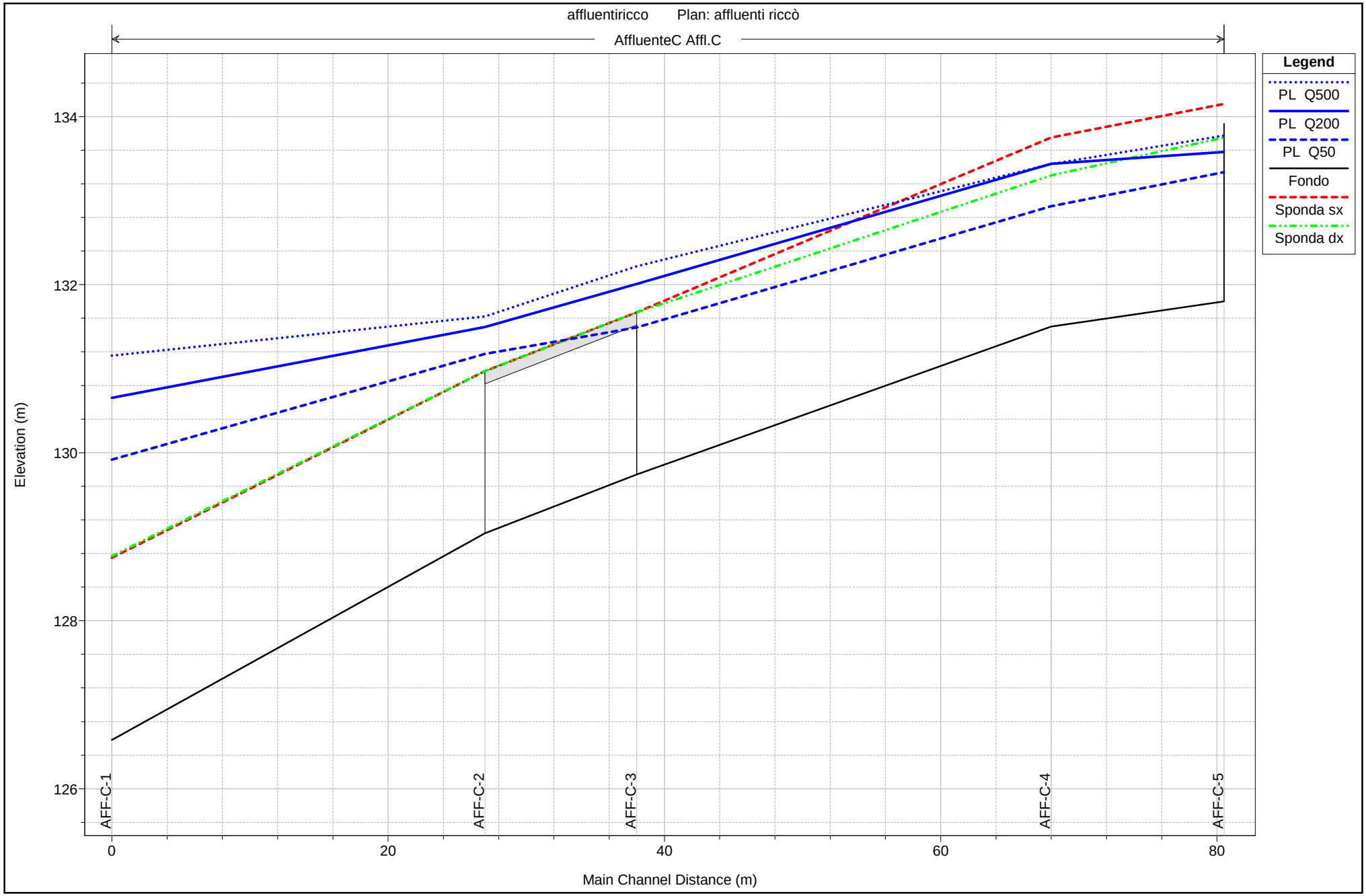
La simulazione idraulica dell'Affluente B è stata effettuata con le portate:
Q_{50}= 4.7 m^3/s
Q_{200}= 6.8 m^3/s
Q_{500}= 8.2 m^3/s
ottenute utilizzando il metodo CIMA per i bacini inferiori ai 2 km^2:
Il coefficiente di Strickler adottato è stato 30 $m^{1/3}$ s^{-1}.
Come condizioni al contorno è stata assunta la profondità critica a monte e la confluenza con il torrente Riccò a valle.

9.2.4 Affluente C

La simulazione idraulica dell'Affluente C è stata effettuata con le portate:
Q_{50}= 16.1 m^3/s
Q_{200}= 23.3 m^3/s
Q_{500}= 28 m^3/s
ottenute utilizzando il metodo CIMA per i bacini inferiori ai 2 km^2:
Il coefficiente di Strickler adottato è stato 30 $m^{1/3}$ s^{-1}.
Come condizione al contorno di monte è stata imposta la profondità critica, mentre quella di valle è costituita dalla confluenza con il torrente Riccò.

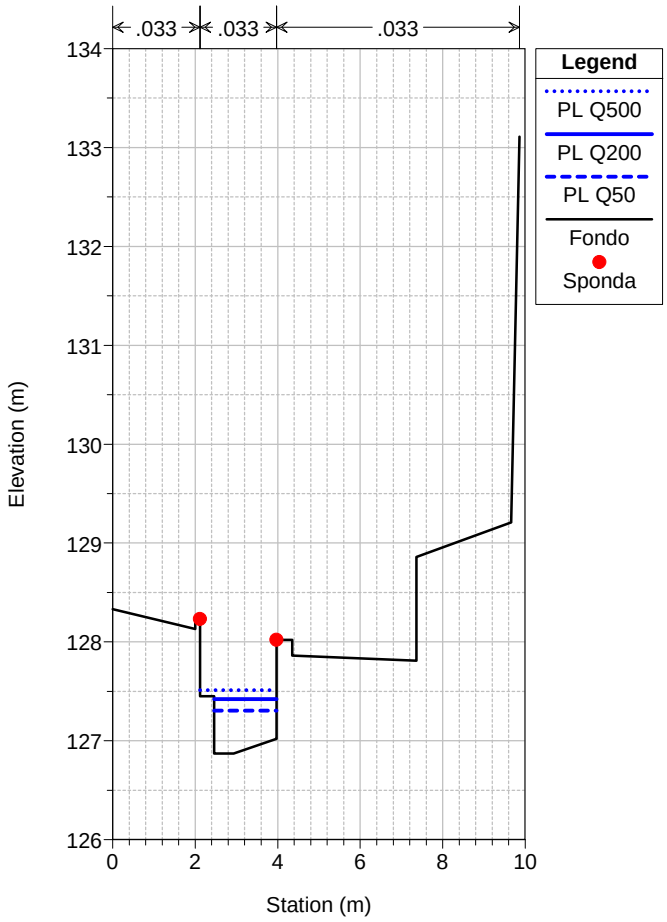

affluentiricco Plan: affluenti riccò
Affluente A Affl. A
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
128
126
124
122
120
118
AFF-A-1
AFF-A-2
AFF-A-4
0
20
40
60
80
Main Channel Distance (m)


affluentiricco Plan: affluenti riccò
Affluente B Affl. B
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
134
133
132
131
130
129
128
AFF-B-1
AFF-B-2
AFF-B-3
AFF-B-4
0
5
10
15
20
Main Channel Distance (m)


affluentiricco Plan: affluenti riccò
AffluenteC Affl.C
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
134
132
130
128
126
AFF-C-1
AFF-C-2
AFF-C-3
AFF-C-4
AFF-C-5
0
20
40
60
80
Main Channel Distance (m)

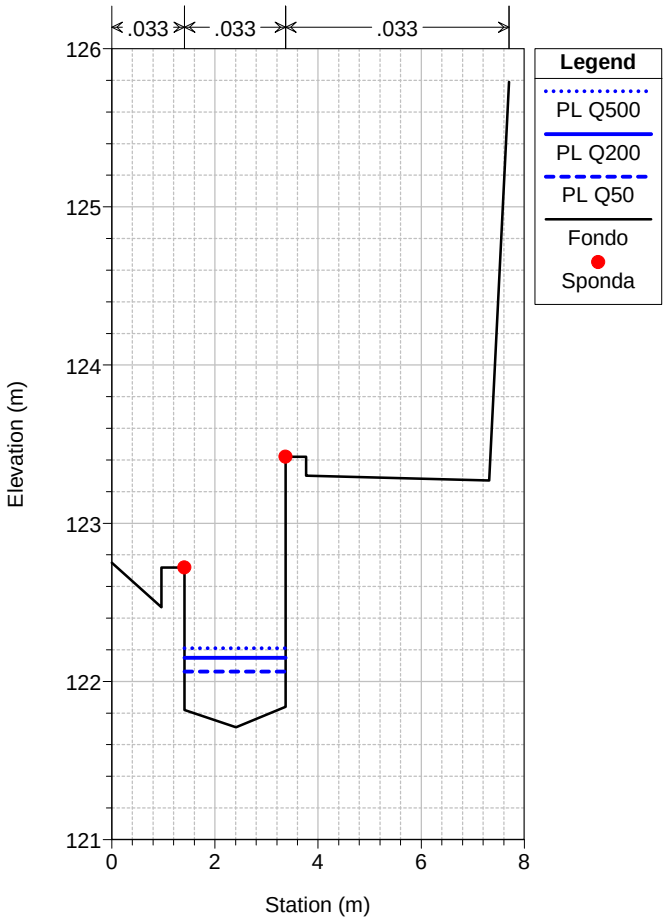
affluentiricco Plan: affluenti riccò

River = Affluente A Reach = Affl. A AFF-A-4



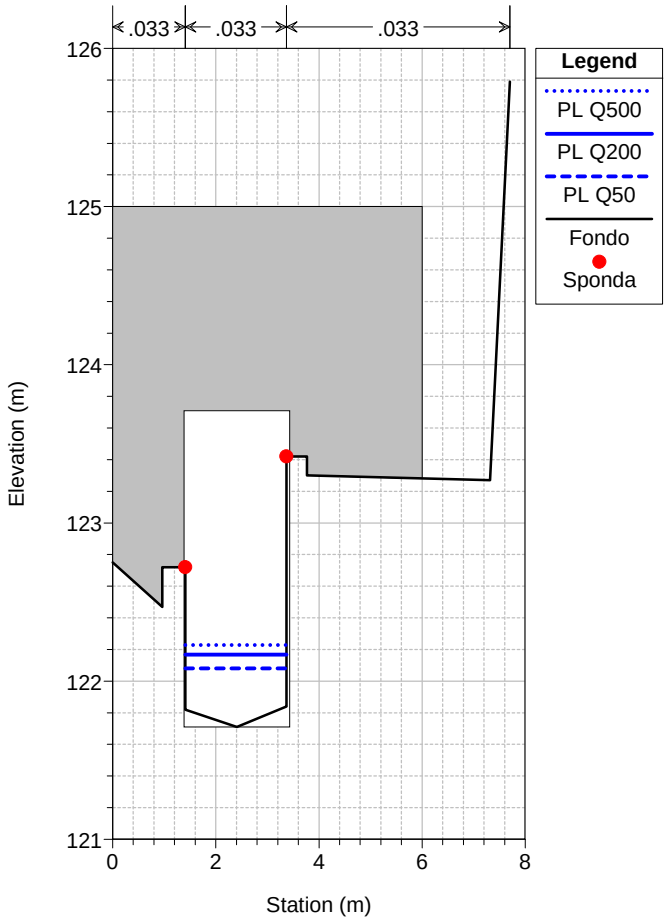
affluentiricco Plan: affluenti riccò

River = Affluente A Reach = Affl. A AFF-A-3



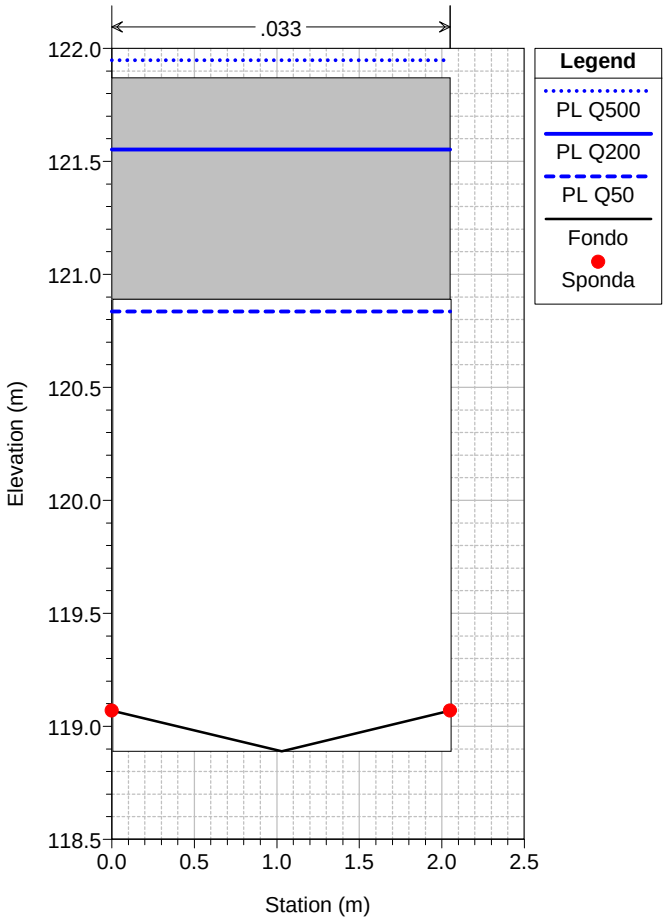
affluentiricco Plan: affluenti riccò

River = Affluente A Reach = Affl. A AFF-A-2



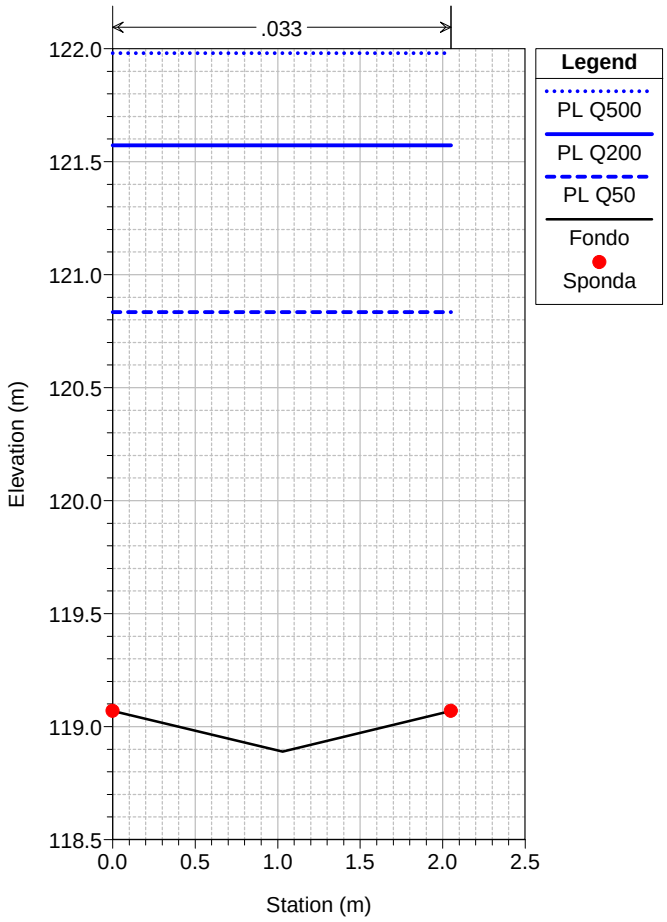
affluentiricco Plan: affluenti riccò

River = Affluente A Reach = Affl. A AFF-A-2



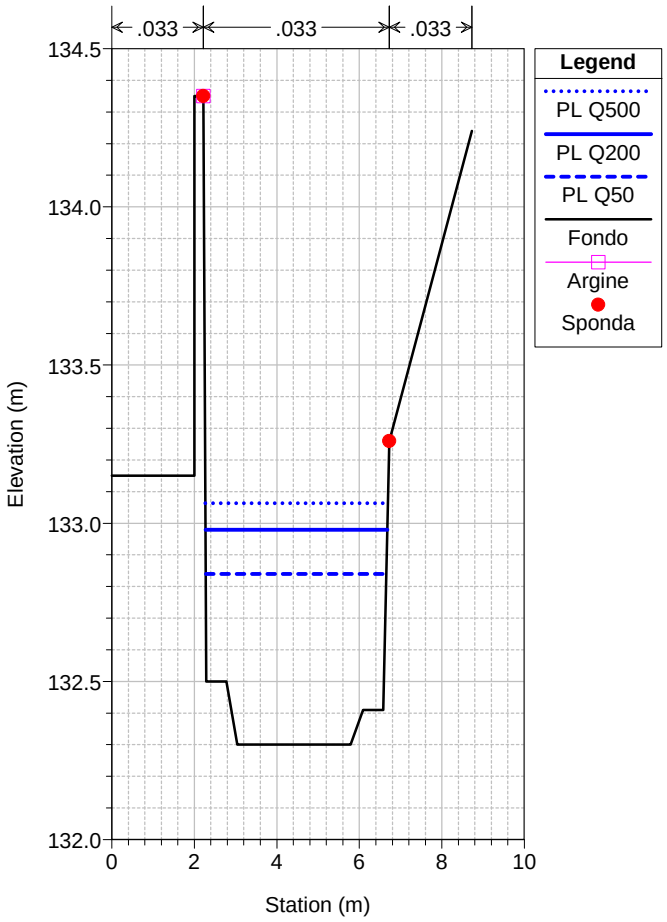
affluentiricco Plan: affluenti riccò

River = Affluente A Reach = Affl. A AFF-A-1



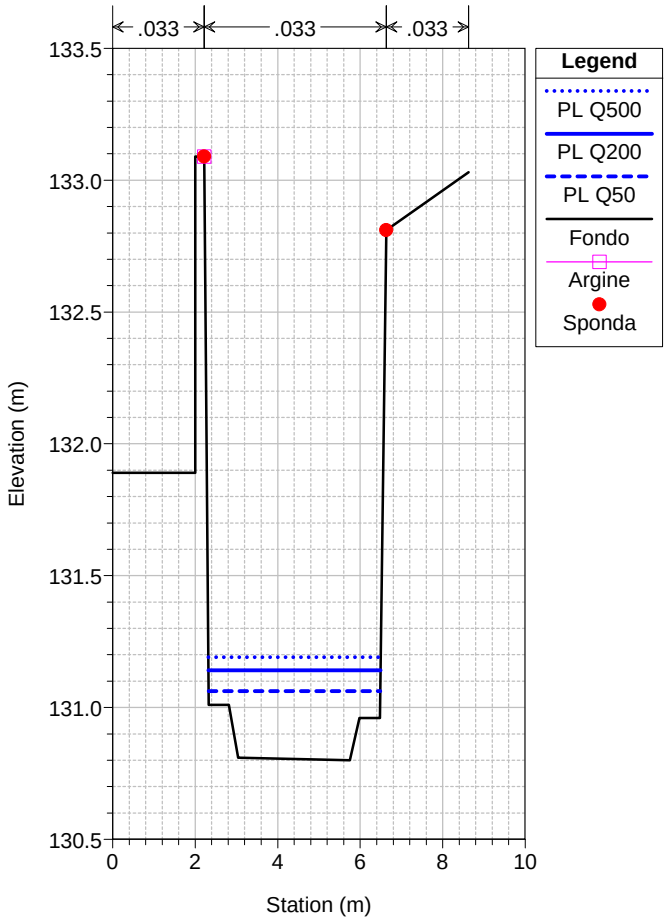
affluentiricco Plan: affluenti riccò

River = Affluente B Reach = Affl. B AFF-B-4



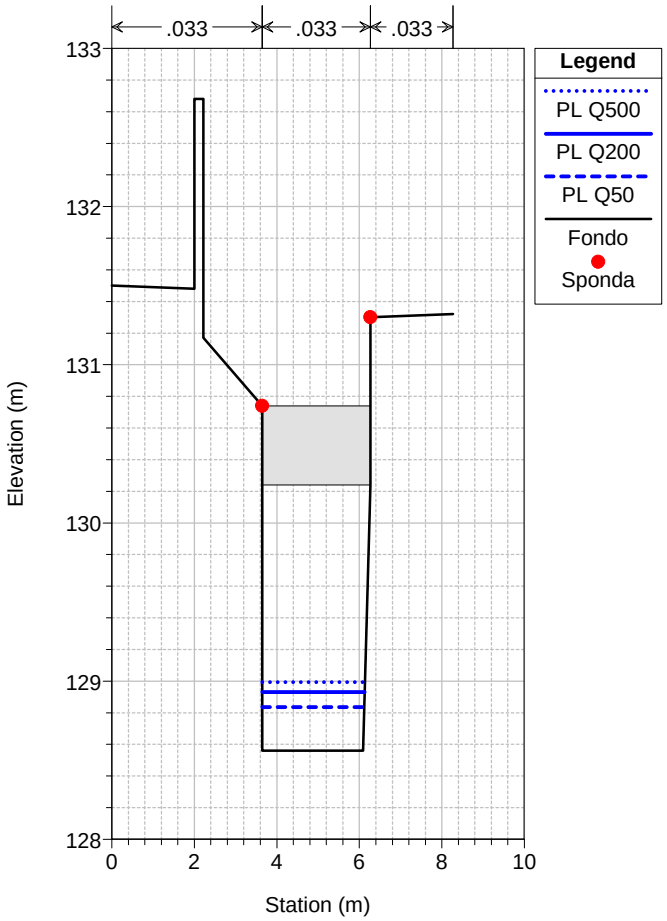
affluentiricco Plan: affluenti riccò

River = Affluente B Reach = Affl. B AFF-B-3



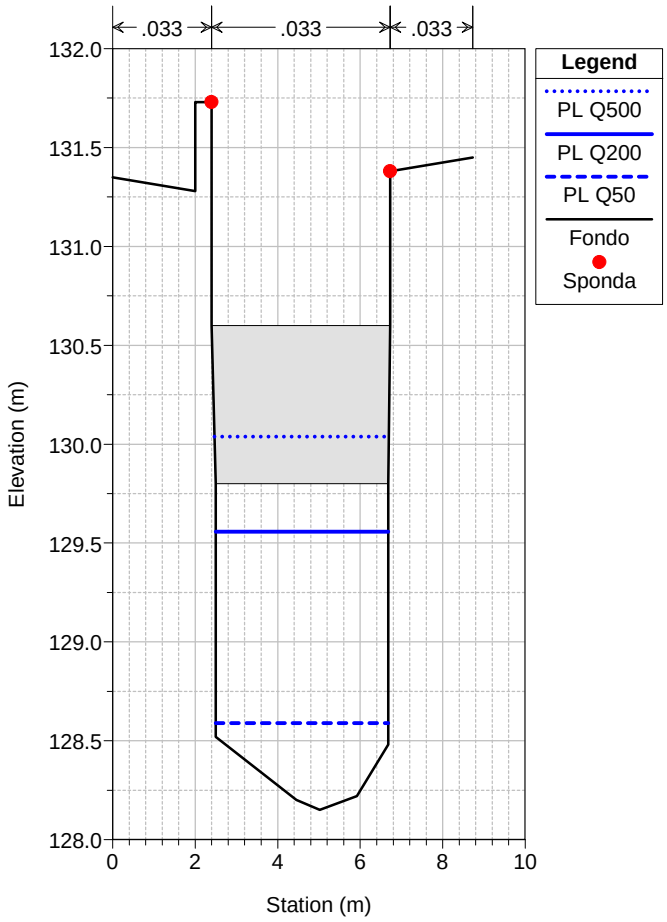
affluentiricco Plan: affluenti riccò

River = Affluente B Reach = Affl. B AFF-B-2



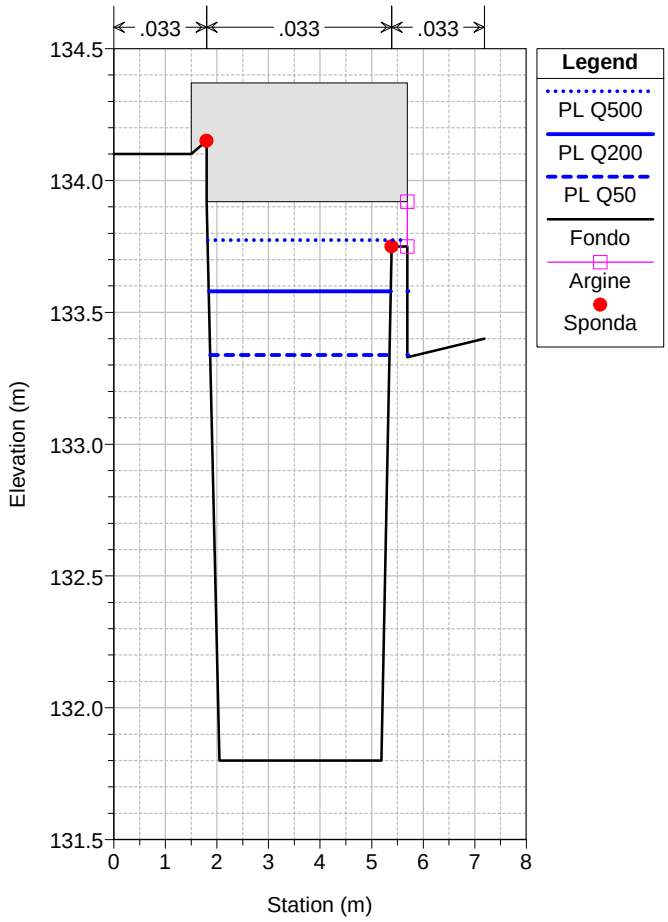
affluentiricco Plan: affluenti riccò

River = Affluente B Reach = Affl. B AFF-B-1



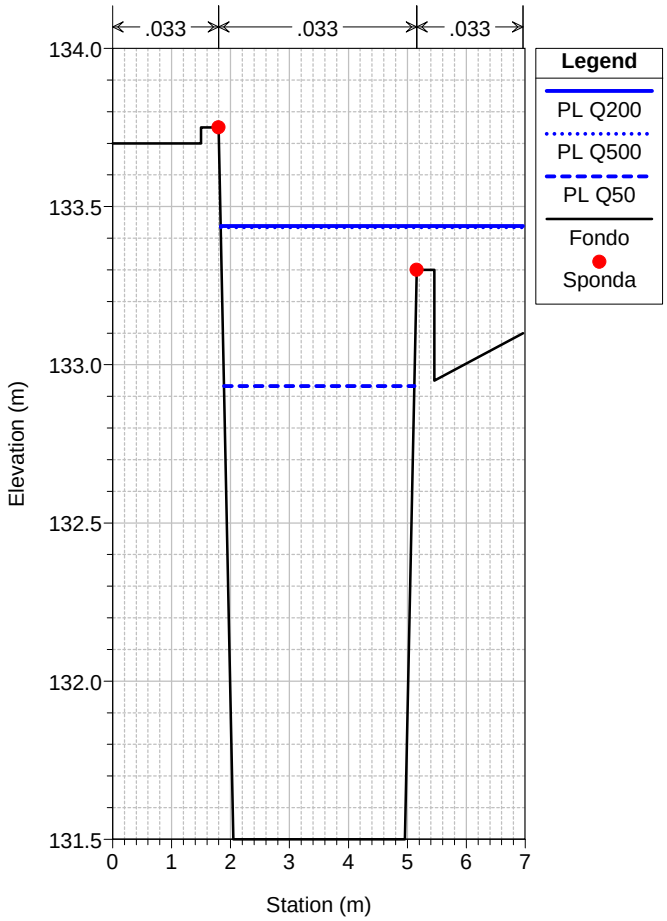
affluentiricco Plan: affluenti riccò

River = AffluenteC Reach = Affl.C AFF-C-5



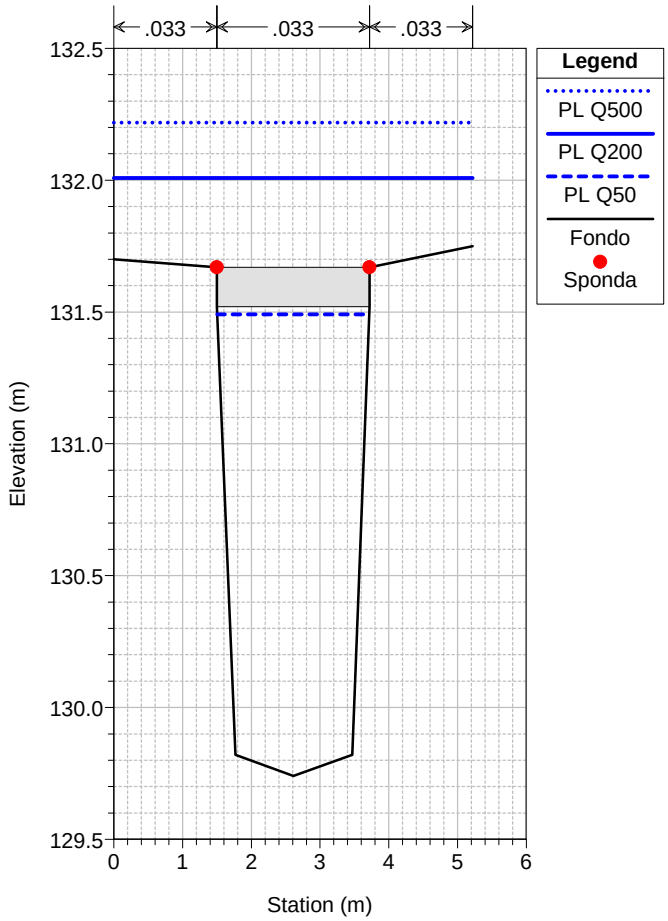
affluentiricco Plan: affluenti riccò

River = AffluenteC Reach = Affl.C AFF-C-4



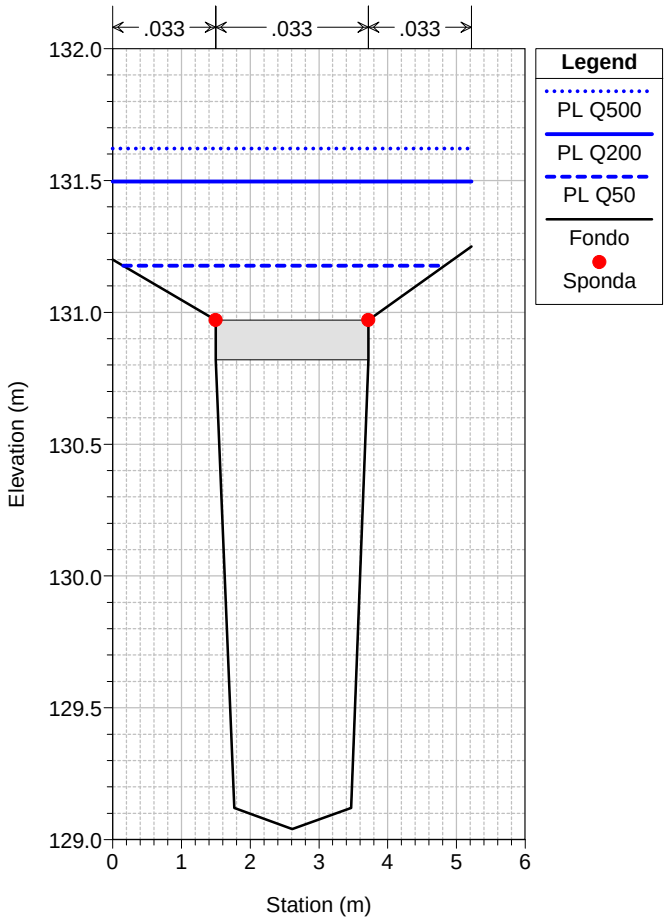
affluentiricco Plan: affluenti riccò

River = AffluenteC Reach = Affl.C AFF-C-3



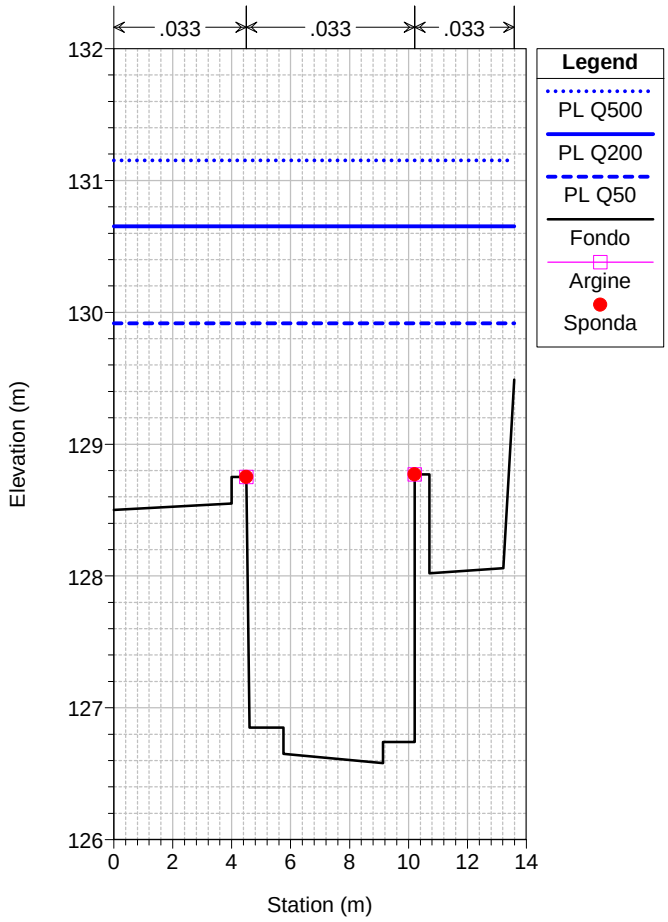
affluentiricco Plan: affluenti riccò

River = AffluenteC Reach = Affl.C AFF-C-2



affluentiricco Plan: affluenti riccò

River = AffluenteC Reach = Affl.C AFF-C-1



HEC-RAS Plan: afflric

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)	
AffluenteC	Affl.C	4	Q50	16.10	131.80	133.34	133.92	0.58	133.75	0.41	133.17	133.85	0.014290	3.16	5.09	3.48	0.84
AffluenteC	Affl.C	4	Q200	23.30	131.80	133.58	133.92	0.34	133.75	0.17	133.54	134.36	0.019803	3.93	5.94	3.53	0.97
AffluenteC	Affl.C	4	Q500	28.00	131.80	133.77	133.92	0.15	133.75	-0.02	133.77	134.68	0.021238	4.22	6.64	3.87	0.99
AffluenteC	Affl.C	3	Q50	16.10	131.50	132.93	133.75	0.82	133.30	0.37	132.93	133.62	0.021097	3.66	4.40	3.23	1.00
AffluenteC	Affl.C	3	Q200	23.30	131.50	133.44	133.75	0.31	133.30	-0.14	133.44	134.10	0.016683	3.67	6.72	5.13	0.87
AffluenteC	Affl.C	3	Q500	28.00	131.50	133.43	133.75	0.32	133.30	-0.13	133.63	134.39	0.024285	4.42	6.70	5.12	1.05
AffluenteC	Affl.C	2	Q50	16.10	129.74	131.49	131.52	0.03	131.52	0.03	132.06	132.68	0.044539	4.83	3.34	2.21	1.25
AffluenteC	Affl.C	2	Q200	23.30	129.74	132.01	131.52	-0.49	131.52	-0.49	132.31	133.12	0.077911	4.84	5.08	5.22	1.03
AffluenteC	Affl.C	2	Q500	28.00	129.74	132.22	131.52	-0.70	131.52	-0.70	132.47	133.27	0.063260	4.68	6.18	5.22	0.97
AffluenteC	Affl.C	1.5	Q50	16.10	129.04	131.18	130.82	-0.36	130.82	-0.36	131.42	132.00	0.060597	4.07	4.11	4.67	0.91
AffluenteC	Affl.C	1.5	Q200	23.30	129.04	131.50	130.82	-0.68	130.82	-0.68	131.68	132.35	0.052334	4.23	5.76	5.22	0.87
AffluenteC	Affl.C	1.5	Q500	28.00	129.04	131.62	130.82	-0.80	130.82	-0.80	131.83	132.60	0.054939	4.51	6.42	5.22	0.91
AffluenteC	Affl.C	1	Q50	16.10	126.58	129.92	128.75	-1.17	128.77	-1.15	127.63	129.93	0.000227	0.61	30.19	13.59	0.11
AffluenteC	Affl.C	1	Q200	23.30	126.58	130.65	128.75	-1.90	128.77	-1.88	127.89	130.67	0.000202	0.66	40.17	13.59	0.11
AffluenteC	Affl.C	1	Q500	28.00	126.58	131.15	128.75	-2.40	128.77	-2.38	128.05	131.17	0.000182	0.68	46.99	13.59	0.10
Affluente B	Affl. B	4	Q50	4.70	132.30	132.84	134.35	1.51	133.26	0.42	132.84	133.09	0.016953	2.20	2.14	4.38	1.00
Affluente B	Affl. B	4	Q200	6.80	132.30	132.98	134.35	1.37	133.26	0.28	132.98	133.29	0.016436	2.47	2.75	4.41	1.00
Affluente B	Affl. B	4	Q500	8.20	132.30	133.06	134.35	1.29	133.26	0.20	133.06	133.41	0.016388	2.63	3.12	4.43	1.00
Affluente B	Affl. B	3	Q50	4.70	130.80	131.06	133.09	2.03	132.81	1.75	131.37	132.62	0.300437	5.53	0.85	4.16	3.90
Affluente B	Affl. B	3	Q200	6.80	130.80	131.14	133.09	1.95	132.81	1.67	131.50	132.84	0.223504	5.78	1.18	4.17	3.47
Affluente B	Affl. B	3	Q500	8.20	130.80	131.19	133.09	1.90	132.81	1.62	131.59	132.97	0.193717	5.92	1.39	4.18	3.28
Affluente B	Affl. B	2	Q50	4.70	128.56	128.84	130.24	1.40	130.24	1.40	129.28	131.28	0.379058	6.93	0.68	2.47	4.22
Affluente B	Affl. B	2	Q200	6.80	128.56	128.93	130.24	1.31	130.24	1.31	129.48	131.75	0.318547	7.44	0.91	2.48	3.91
Affluente B	Affl. B	2	Q500	8.20	128.56	128.99	130.24	1.25	130.24	1.25	129.60	131.99	0.288325	7.66	1.07	2.49	3.73
Affluente B	Affl. B	1	Q50	4.70	128.15	128.59	129.80	1.21	129.80	1.21	128.80	129.33	0.087893	3.82	1.23	4.18	2.25
Affluente B	Affl. B	1	Q200	6.80	128.15	129.56	129.80	0.24	129.80	0.24	128.94	129.64	0.002325	1.29	5.28	4.18	0.37
Affluente B	Affl. B	1	Q500	8.20	128.15	130.04	129.80	-0.24	129.80	-0.24	129.03	130.13	0.003917	1.30	6.29		0.00
Affluente A	Affl. A	3	Q50	3.00	126.87	127.30	128.23	0.93	128.02	0.72	127.66	128.68	0.180152	5.21	0.58	1.51	2.69
Affluente A	Affl. A	3	Q200	4.40	126.87	127.42	128.23	0.81	128.02	0.60	127.99	129.15	0.180013	5.83	0.76	1.51	2.63
Affluente A	Affl. A	3	Q500	5.30	126.87	127.51	128.23	0.72	128.02	0.51	128.07	129.24	0.180164	5.82	0.91	1.85	2.65
Affluente A	Affl. A	1.9	Q50	3.00	121.71	122.06	122.72	0.66	123.42	1.36	122.39	123.45	0.204121	5.22	0.57	1.96	3.08
Affluente A	Affl. A	1.9	Q200	4.40	121.71	122.15	122.72	0.57	123.42	1.27	122.59	123.93	0.203012	5.91	0.74	1.96	3.06
Affluente A	Affl. A	1.9	Q500	5.30	121.71	122.21	122.72	0.51	123.42	1.21	122.77	124.14	0.192032	6.15	0.86	1.96	2.96
Affluente A	Affl. A	1.5		Bridge													
Affluente A	Affl. A	1	Q50	3.00	118.89	120.83	119.07	-1.76	119.07	-1.76	119.58	120.87	0.001139	0.79	3.80	2.05	0.18
Affluente A	Affl. A	1	Q200	4.40	118.89	121.57	119.07	-2.50	119.07	-2.50	119.76	121.61	0.001095	0.83	5.31	2.05	0.16
Affluente A	Affl. A	1	Q500	5.30	118.89	121.98	119.07	-2.91	119.07	-2.91	119.86	122.02	0.001130	0.86	6.15	2.05	0.16

9.2.5 Rio Paveto

Il rio Paveto è stato studiato in un unico tratto dalla confluenza con il torrente Riccò fino a monte di un affluente minore (rio Casè).

La simulazione delle confluenze è stata effettuata nella configurazione che prevede la portata al colmo con tempo di ritorno assegnato a valle della confluenza e nel tratto studiato , mentre sul tratto a monte della confluenza è imposta, ai fini della conservazione della massa, la differenza delle portate.

E' stata imposta una variazione di portata a valle del rio Riasso, affluente che non è stato studiato, ma è stato considerato il suo apporto in termini di portata.

	TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
			T = 50 anni	T = 200 anni	T = 500 anni
Paveto In piena	Torrente Riccò a valle Paveto	RIC3	267	340	385
	Torrente Riccò a monte Paveto	differenza	72	106	117
	Rio Paveto a valle Riasso	PAV2	195	234	268
	Rio Paveto a monte Riasso	PAV1	96	119	133
	Rio Paveto a monte Rio Case'	PAV0	77	83	95
	Rio Case'	differenza	19	36	38

Come condizioni al contorno è stata imposta la profondità critica a monte in corrispondenza della briglia ed è stata studiata la confluenza a valle.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza ks di Strickler pari a 33 $m^{1/3}/s$.

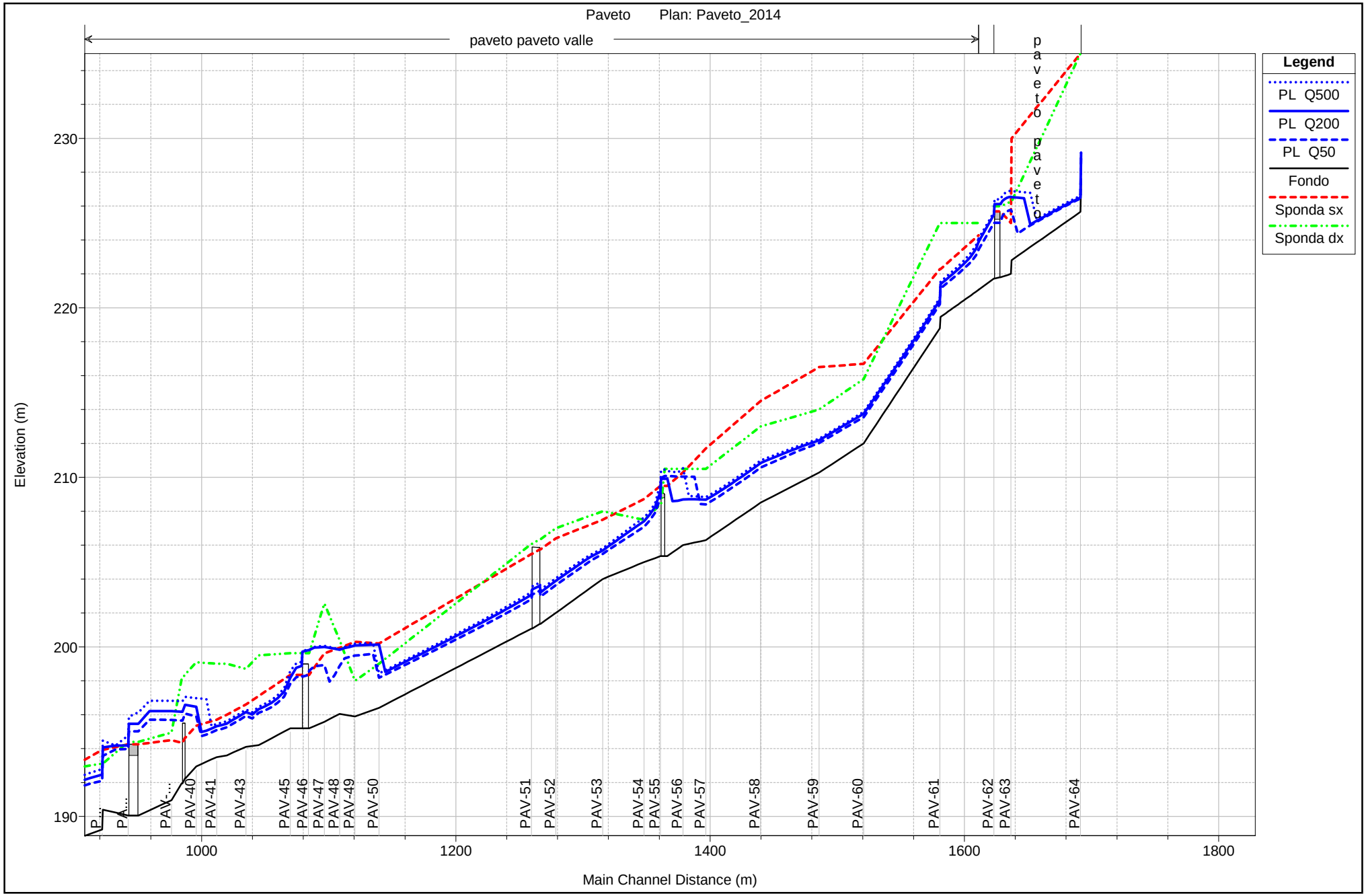
9.2.6 Rio Case'

E' stato indagato questo rio per un breve tratto in prossimità della confluenza con il rio Paveto. La simulazione della confluenza è stata fatta utilizzando le seguenti portate:

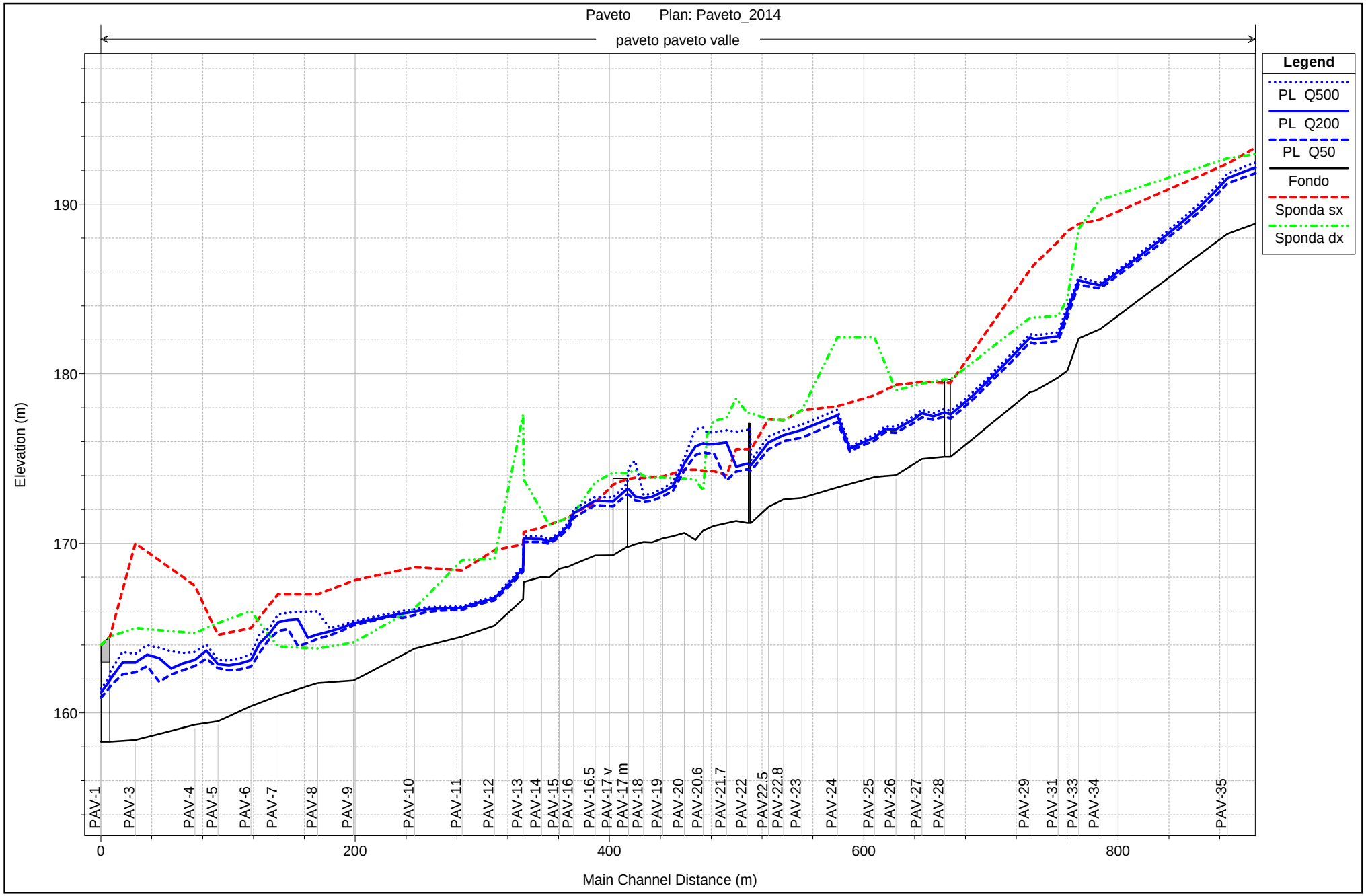
	TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
			T = 50 anni	T = 200 anni	T = 500 anni
Case' in piena	Rio Paveto a monte	differenza	68	79	85
	Rio Paveto a valle	PAV1	96	119	133
	Rio Case'	Case'	28	40	48

Come condizioni al contorno è stata imposta la profondità critica in una sezione fittiziana monte ed è stata studiata la confluenza a valle.

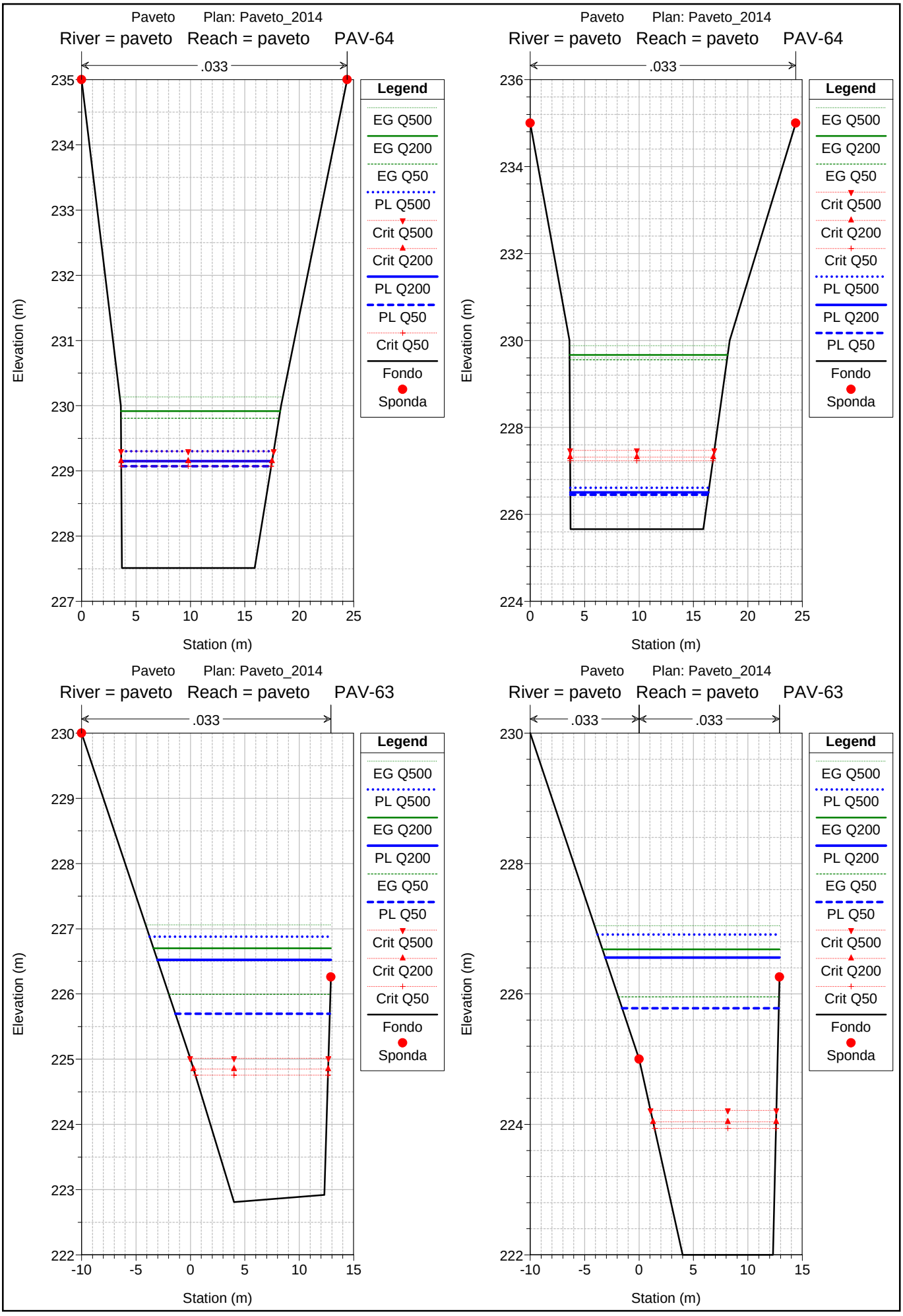
Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza ks di Strickler pari a 30 $m^{1/3}/s$.

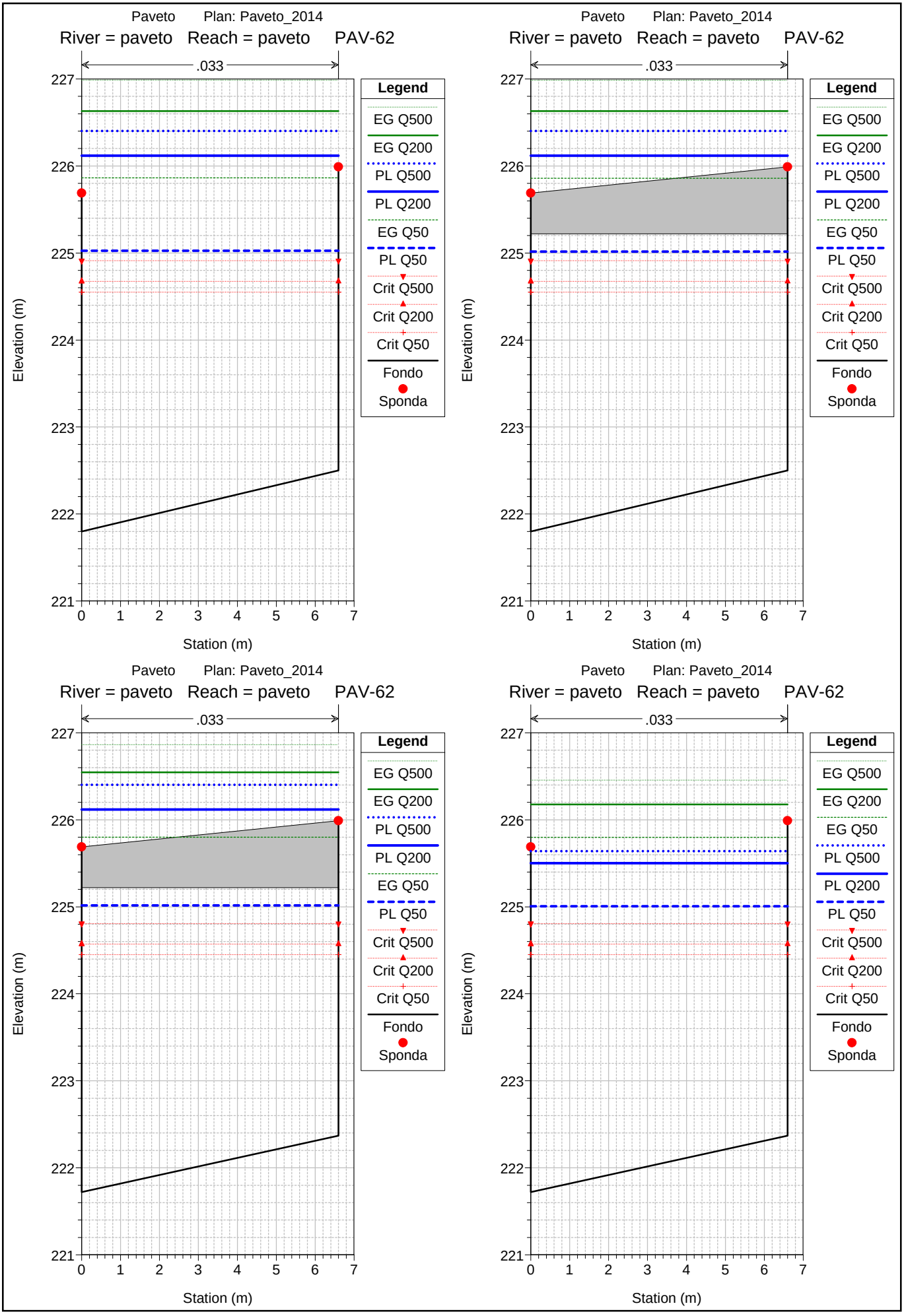


1 cm Horiz. = 40 m 1 cm Vert. = 3 m



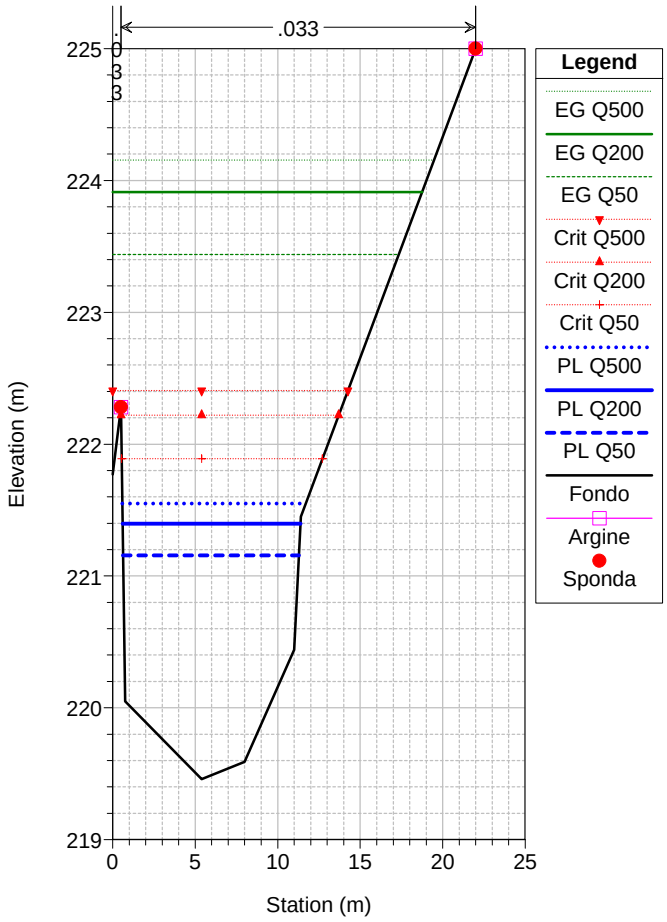
1 cm Horiz. = 40 m 1 cm Vert. = 3 m


Paveto Plan: Paveto_2014
River = paveto Reach = paveto PAV-64
.033
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto PAV-64
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto PAV-63
.033
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto PAV-63
.033
.033
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Paveto Plan: Paveto_2014
River = paveto Reach = paveto PAV-62
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto PAV-62
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto PAV-62
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto PAV-62
.033
Elevation (m)
Station (m)
Legend
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PL Q50
Crit Q500
Crit Q200
Crit Q50
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Sponda

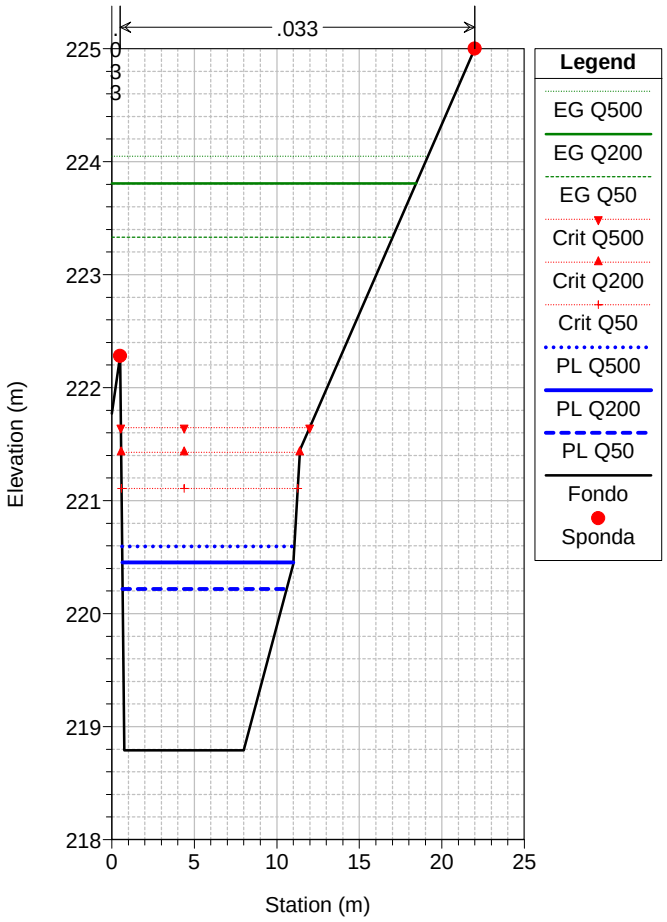
Paveto Plan: Paveto_2014

River = paveto Reach = paveto valle PAV-61



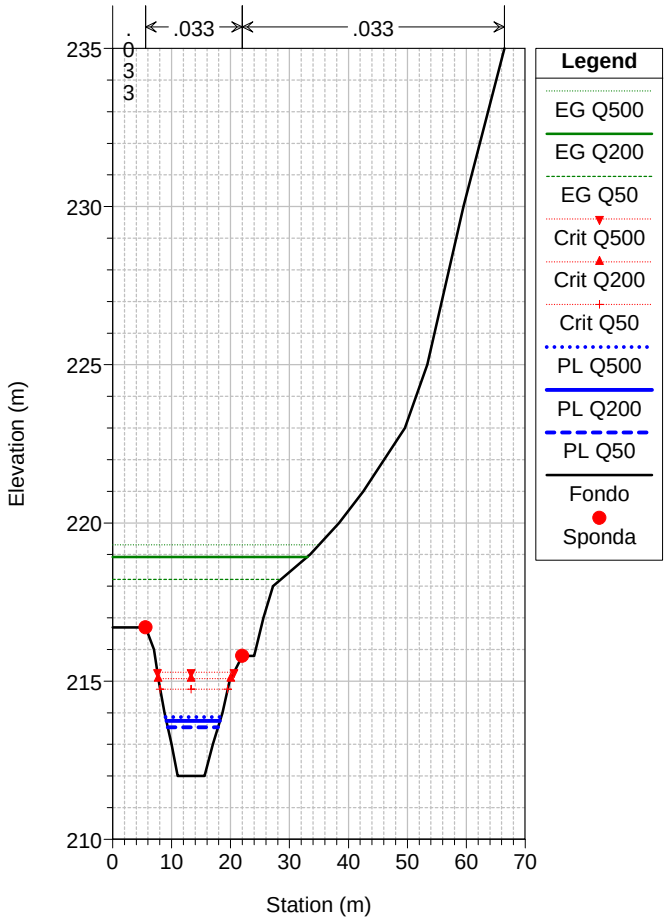
Paveto Plan: Paveto_2014

River = paveto Reach = paveto valle PAV-61



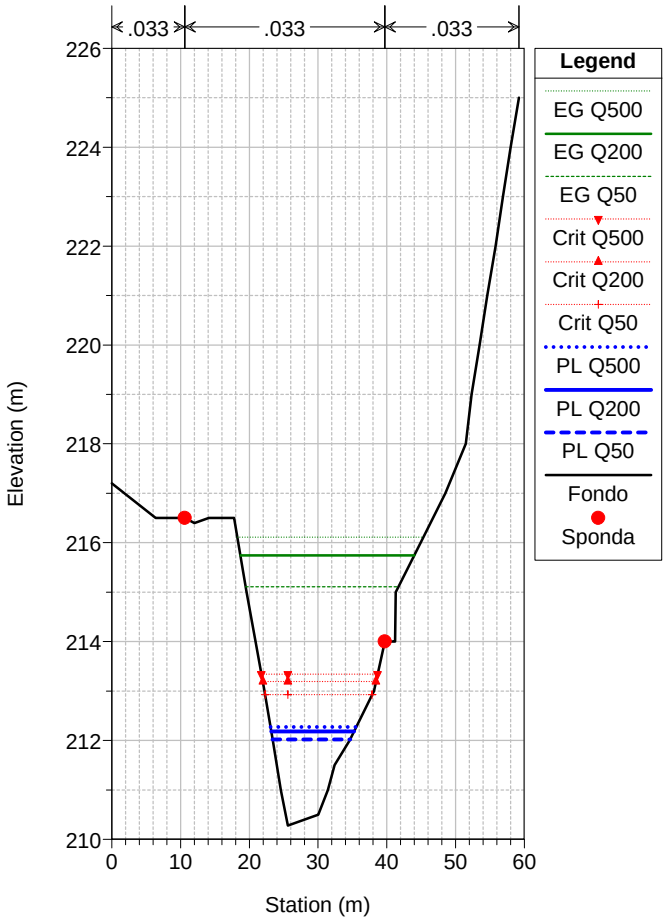
Paveto Plan: Paveto_2014

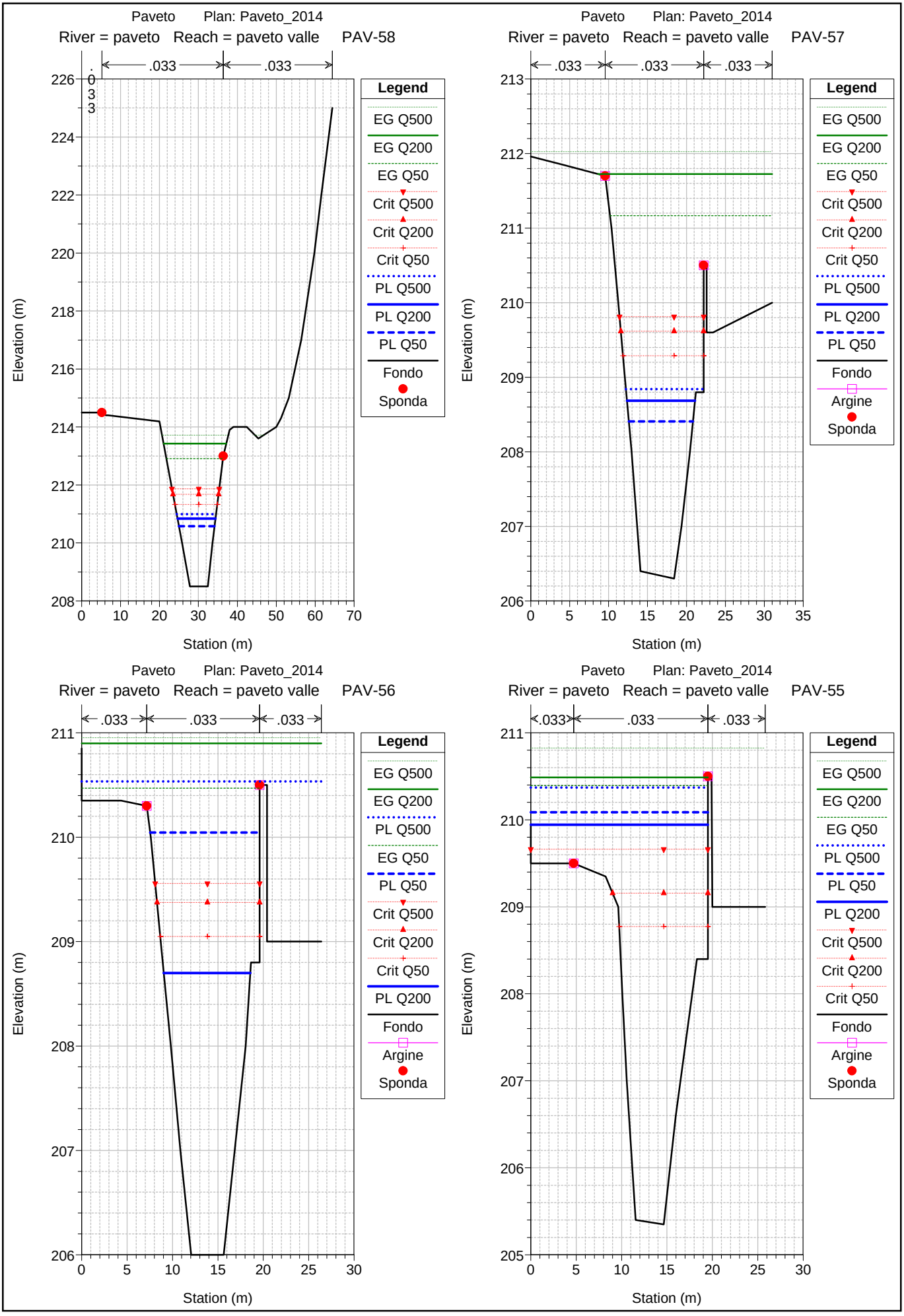
River = paveto Reach = paveto valle PAV-60

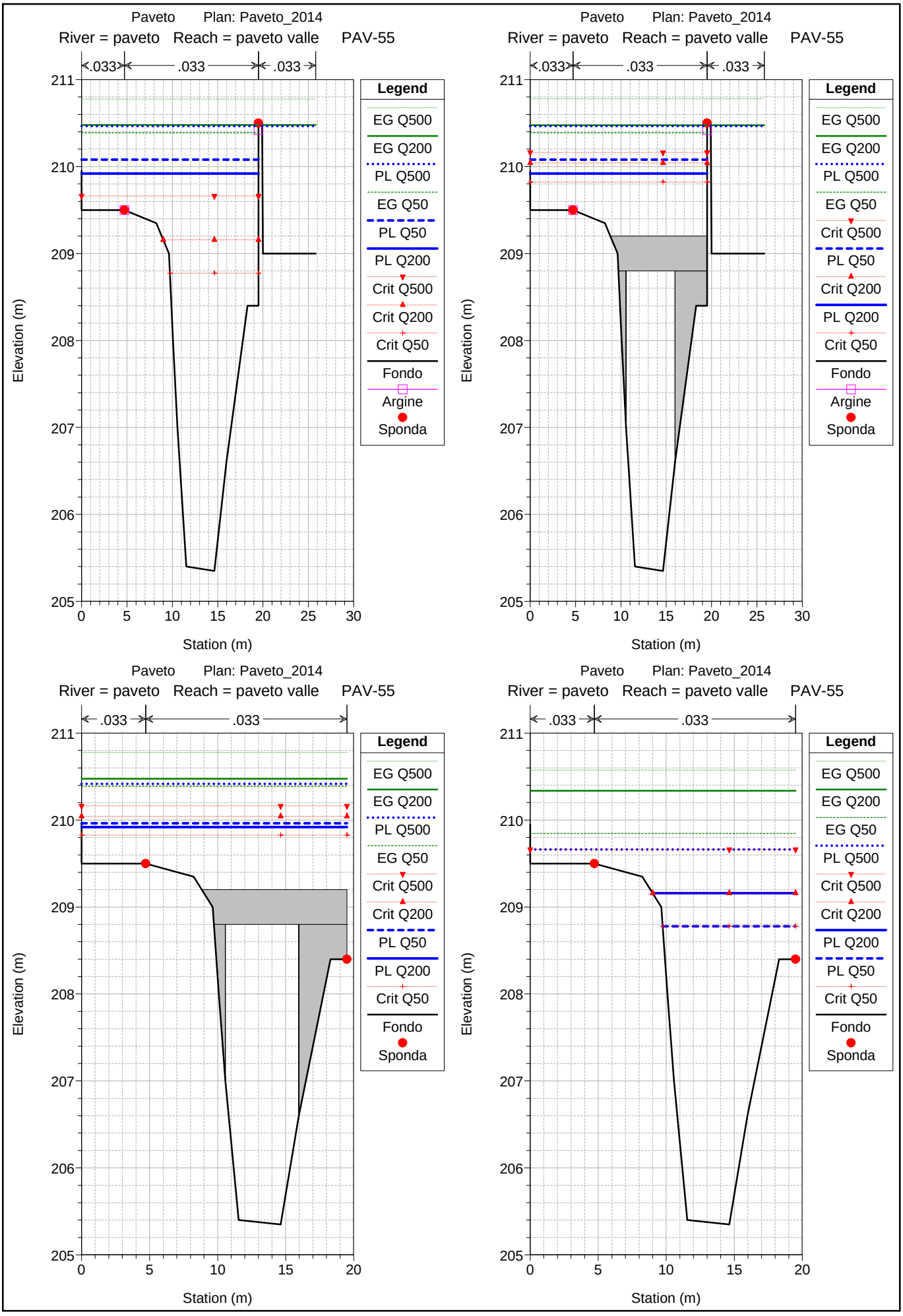


Paveto Plan: Paveto_2014

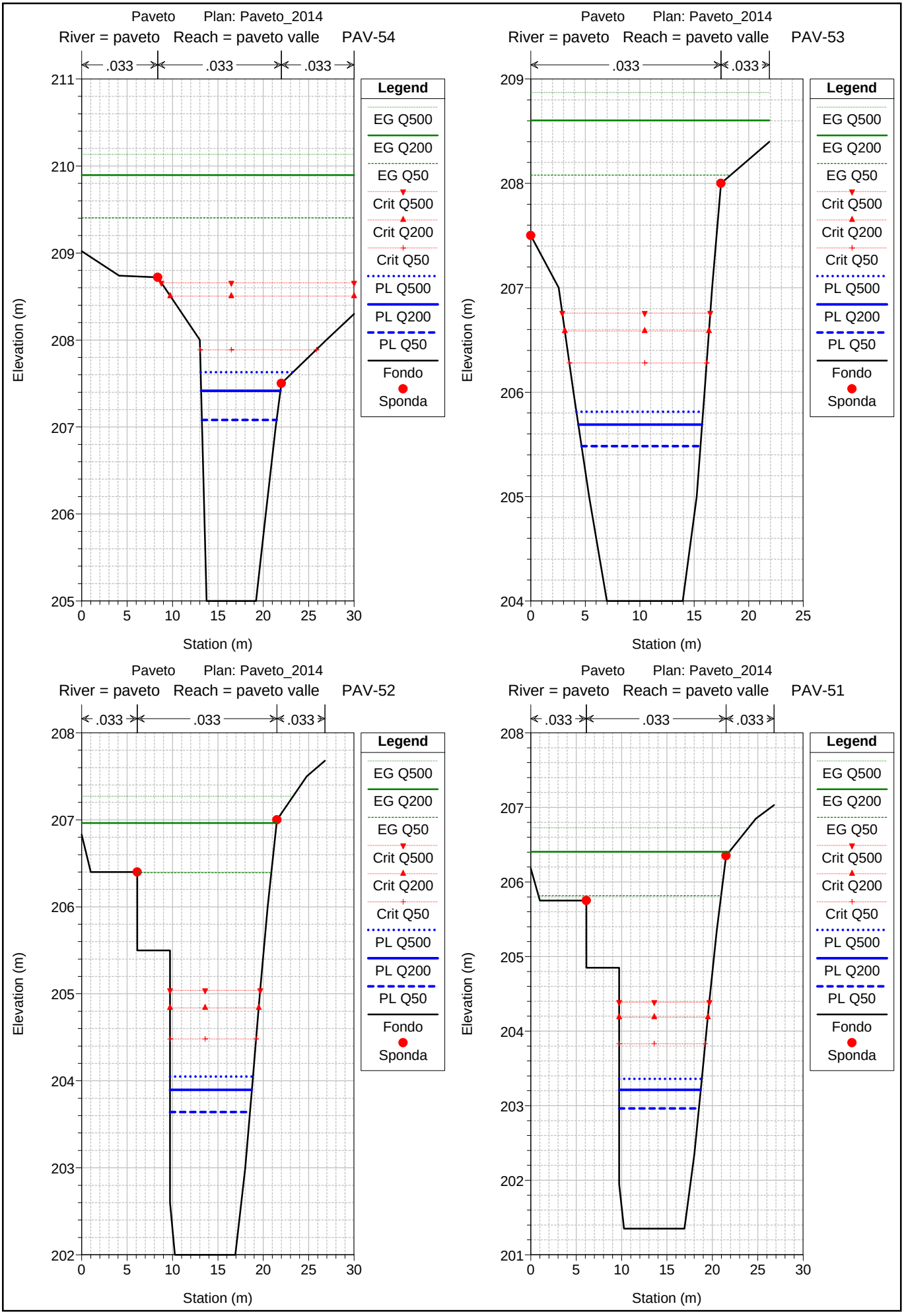
River = paveto Reach = paveto valle PAV-59

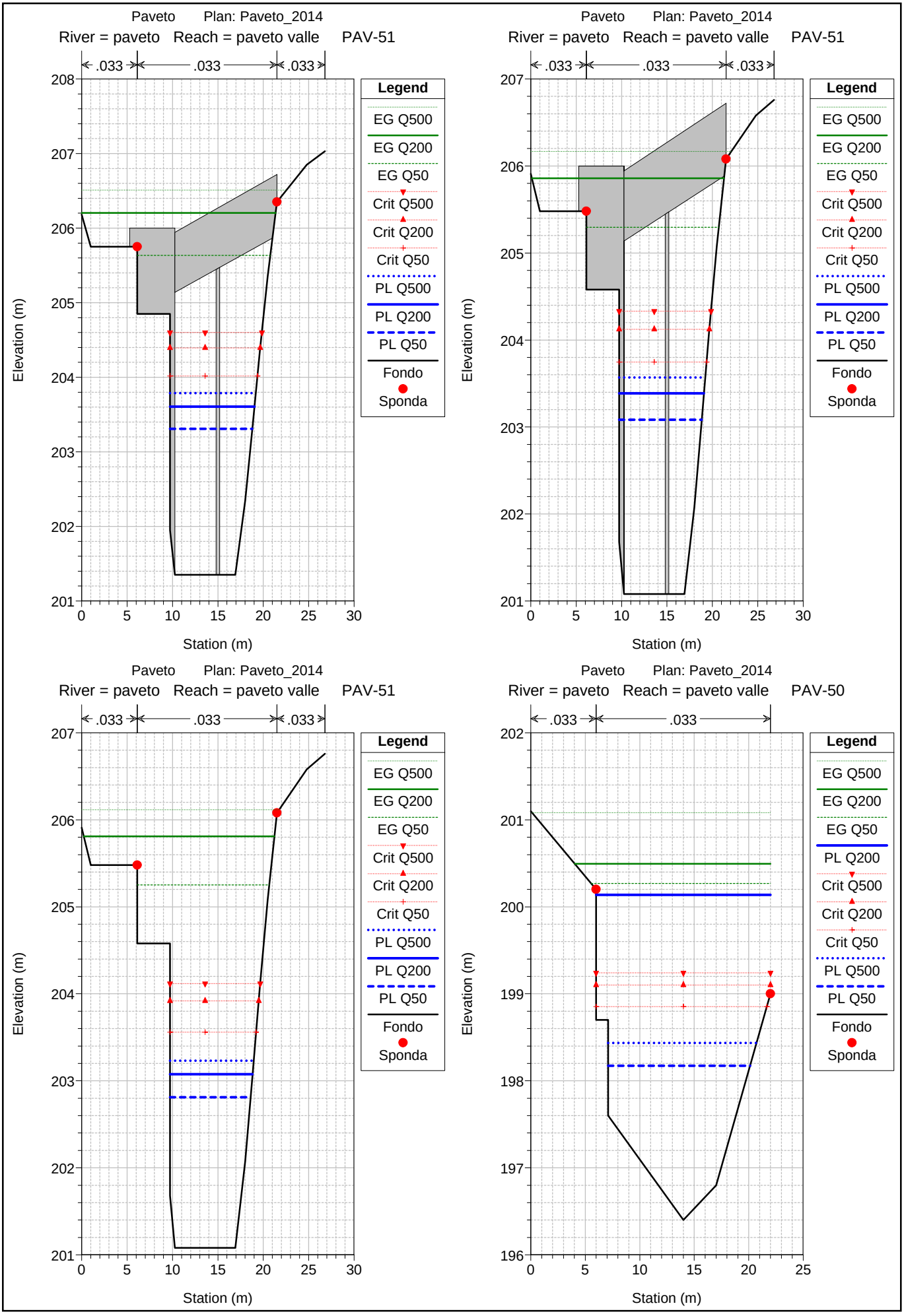


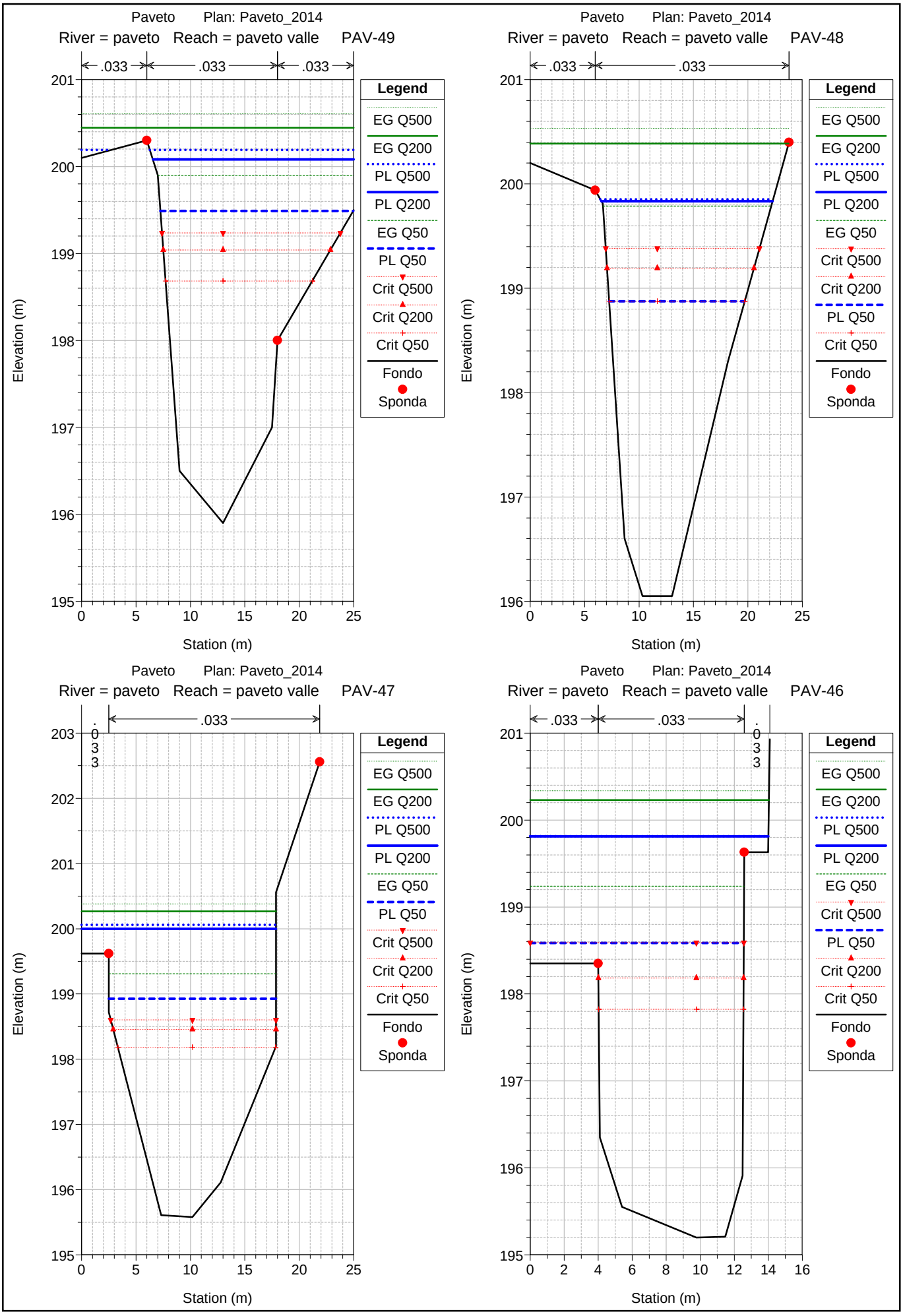

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-58
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-57
.033
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-56
.033
.033
.033
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
PL Q200
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-55
.033
.033
.033
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q50
PL Q200
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

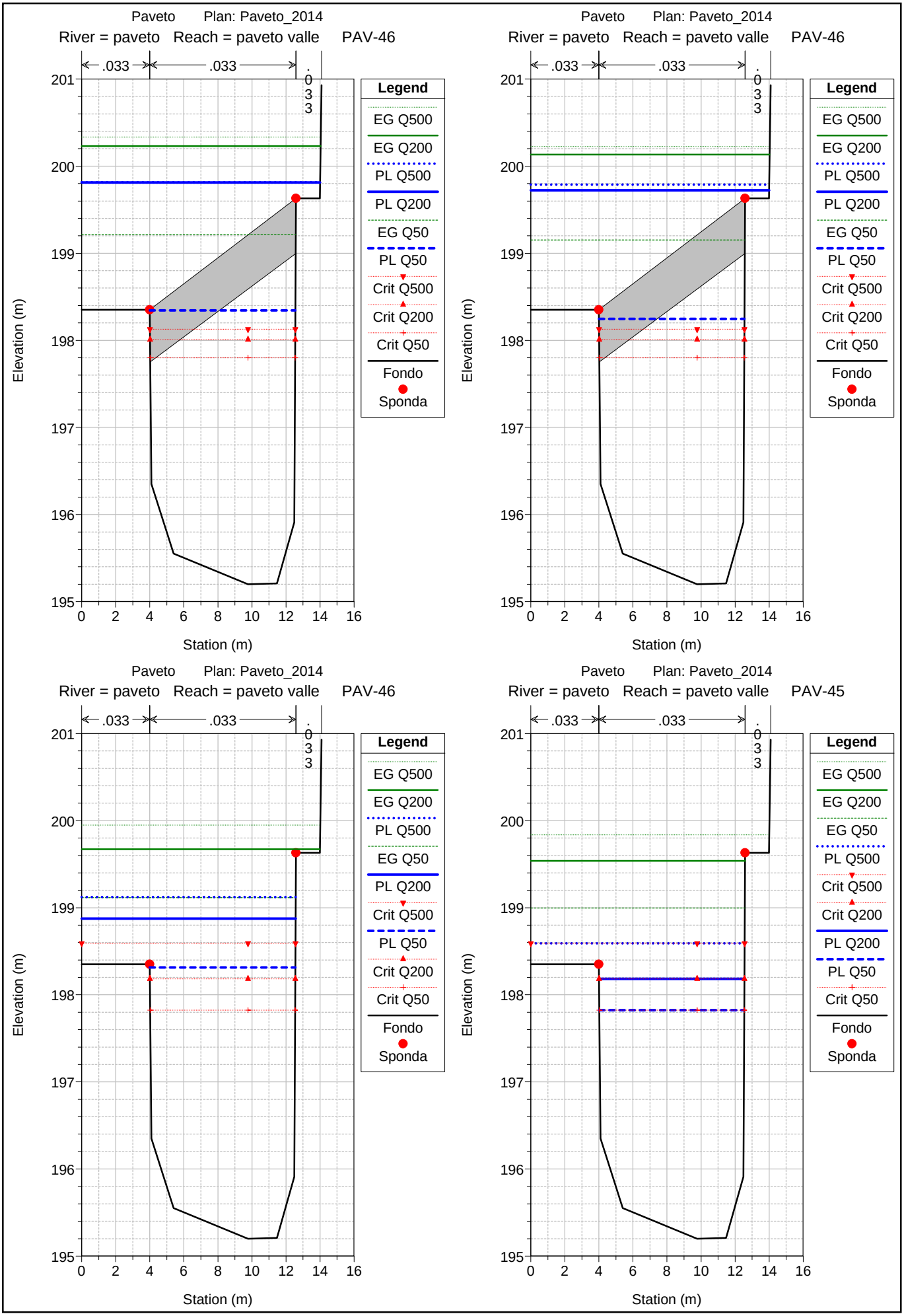

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-55
.033
.033
.033
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q50
PL Q200
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
211
210
209
208
207
206
205
0
5
10
15
20
25
30

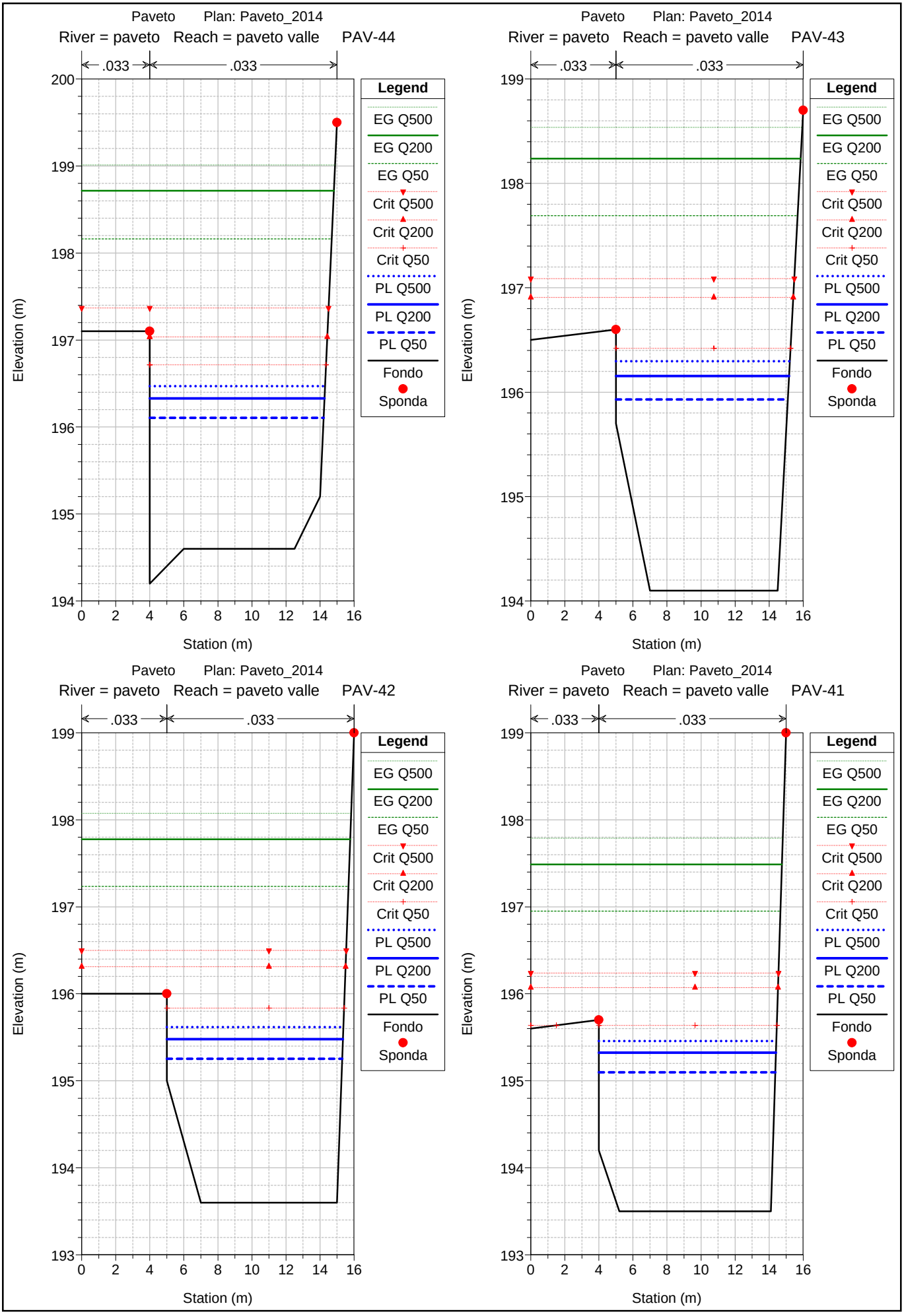
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-55
.033
.033
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q50
PL Q200
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
211
210
209
208
207
206
205
0
5
10
15
20

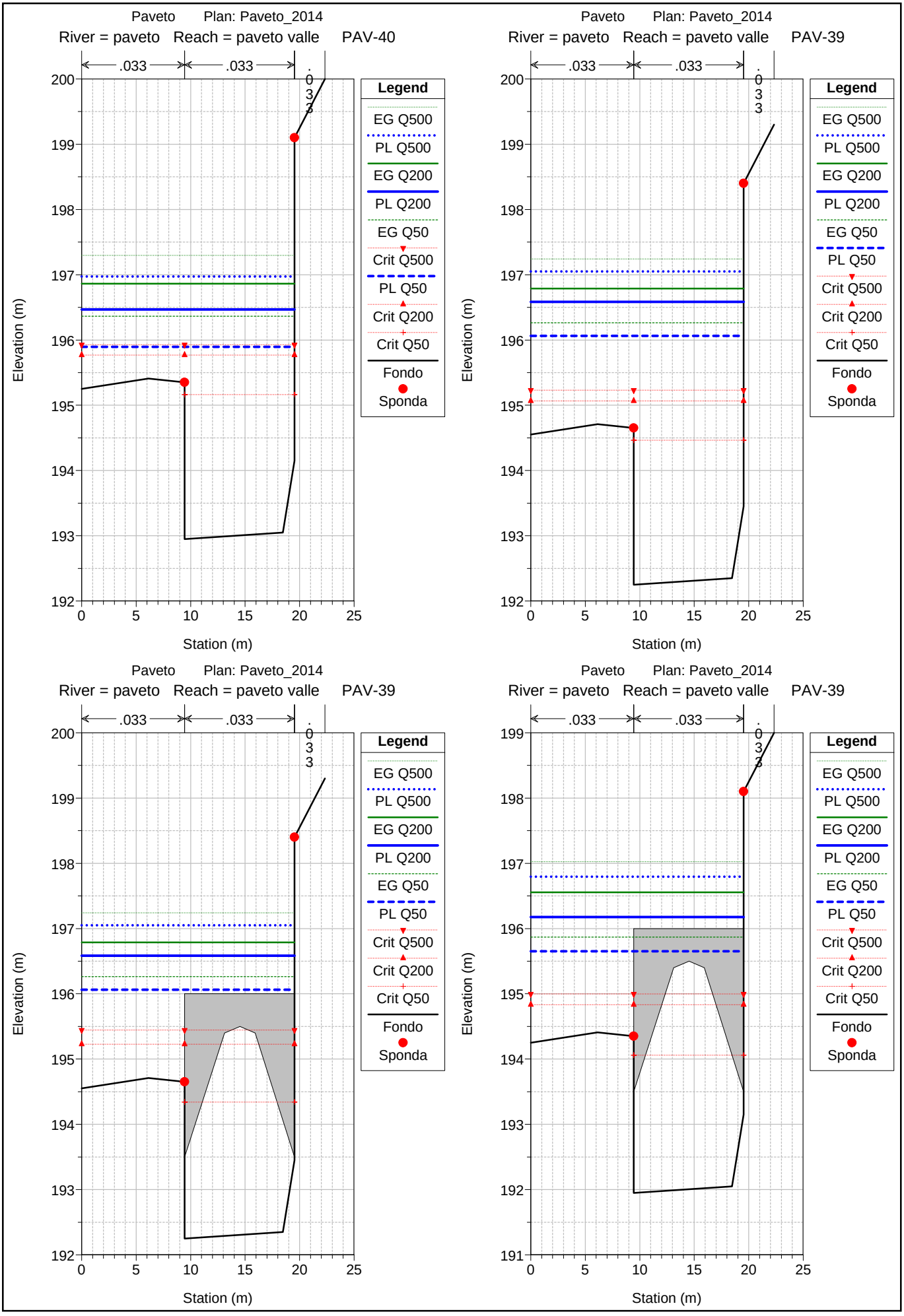

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-54
.033
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-53
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-52
.033
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-51
.033
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

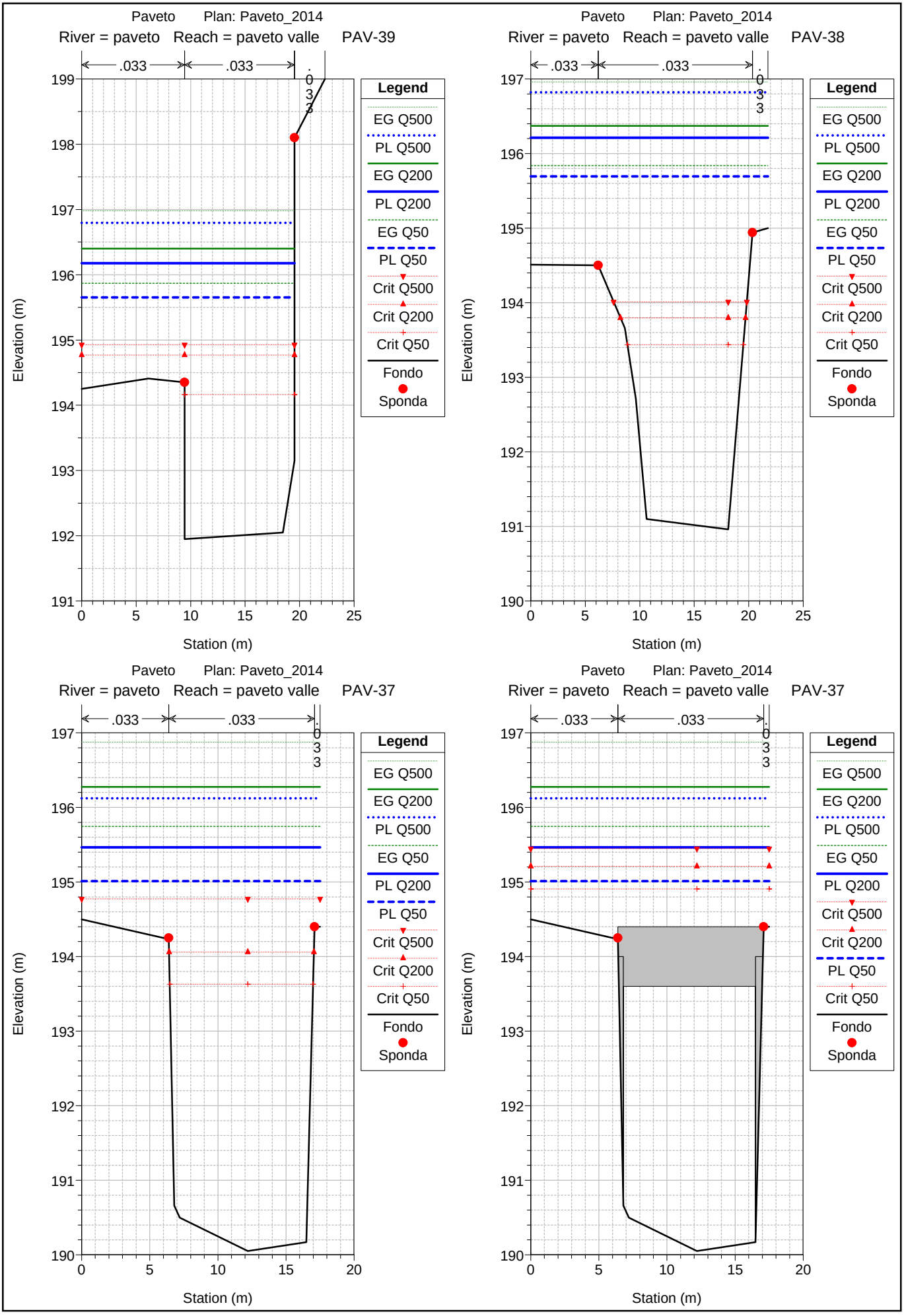

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-51
.033
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-51
.033
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-51
.033
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-50
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q200
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q50
Fondo
Sponda

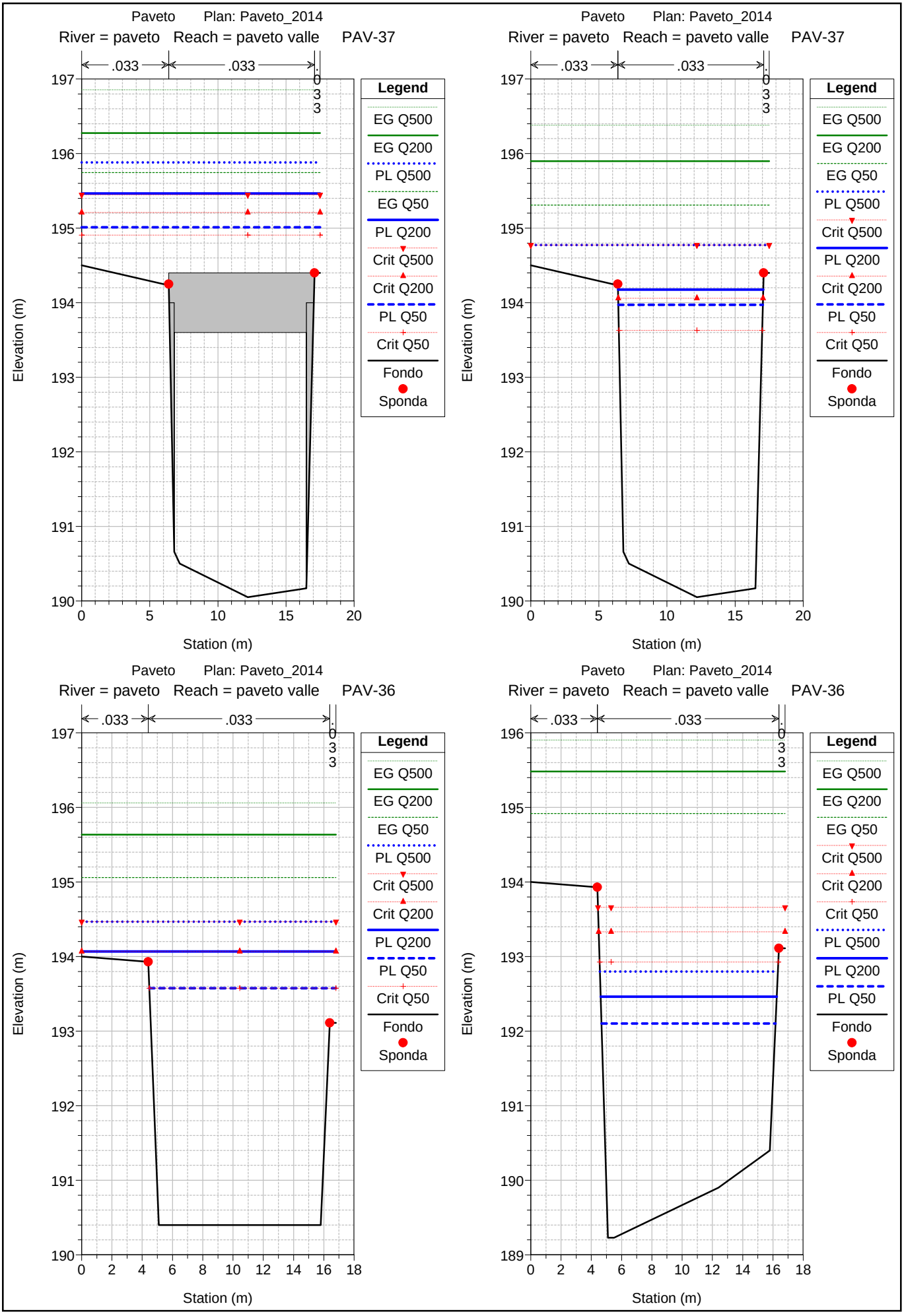

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-49
.033
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-48
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-47
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-46
.033
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda

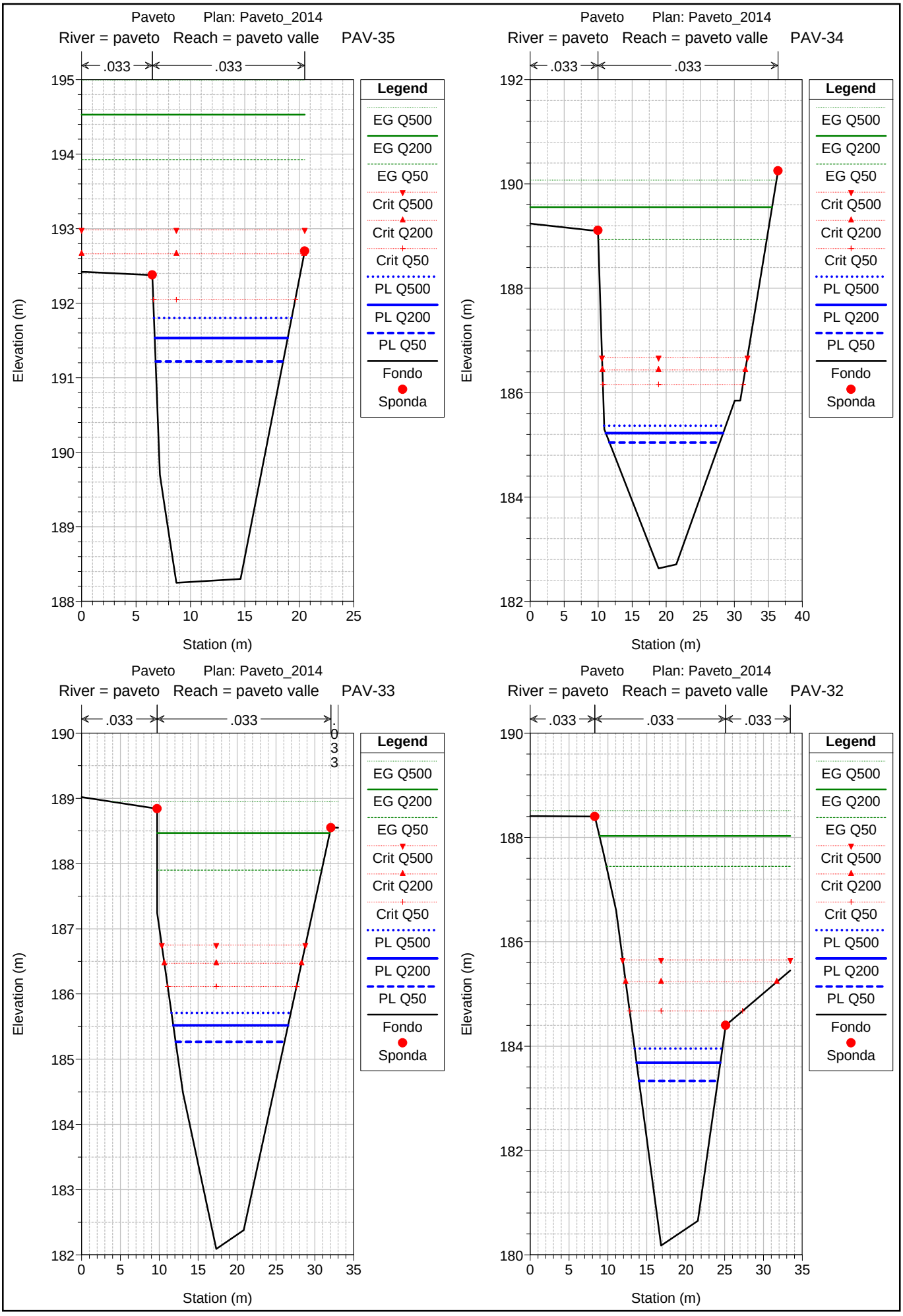

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-46
.033
.033
.033
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-46
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-46
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-45

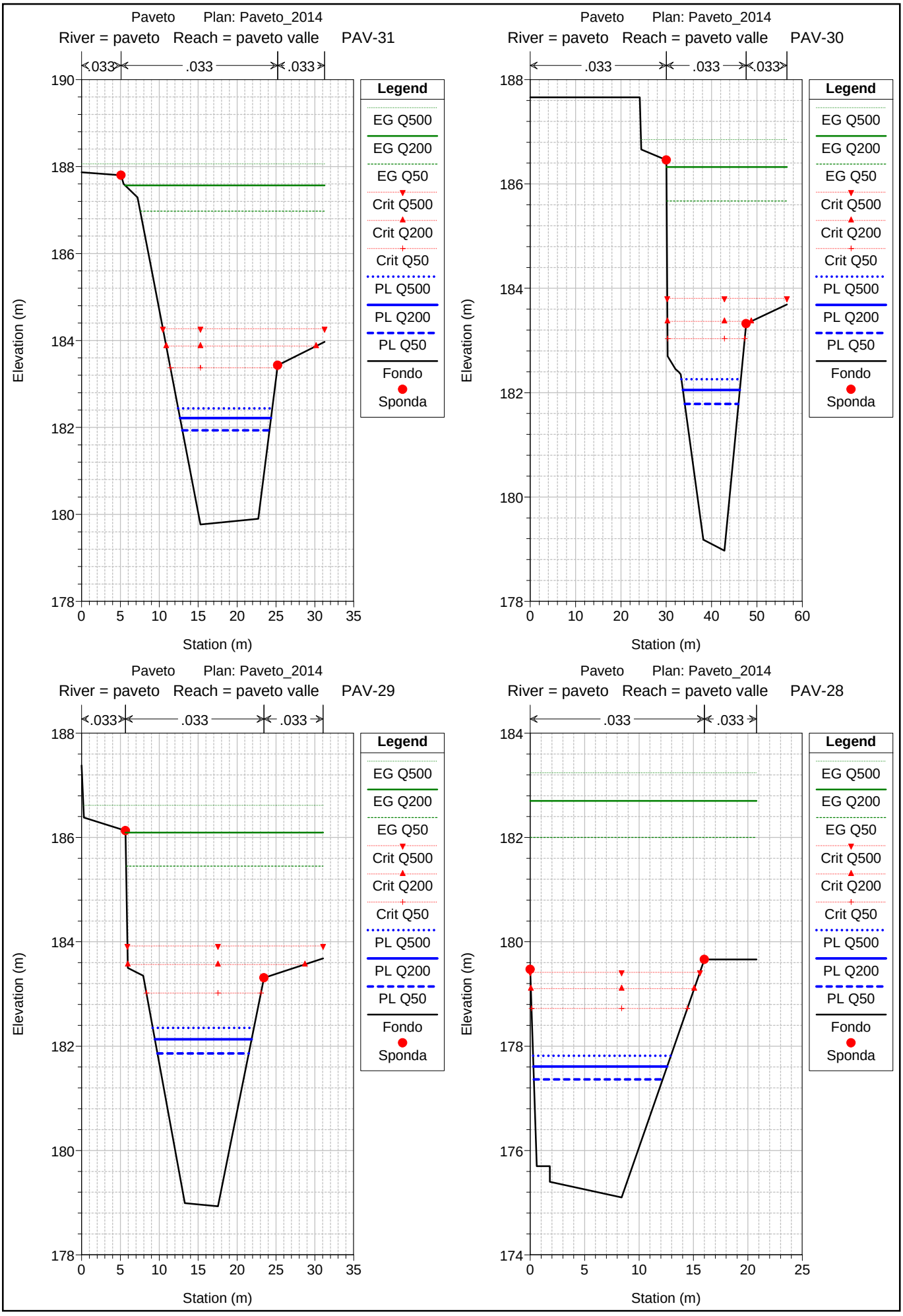

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-44
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-43
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-42
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-41

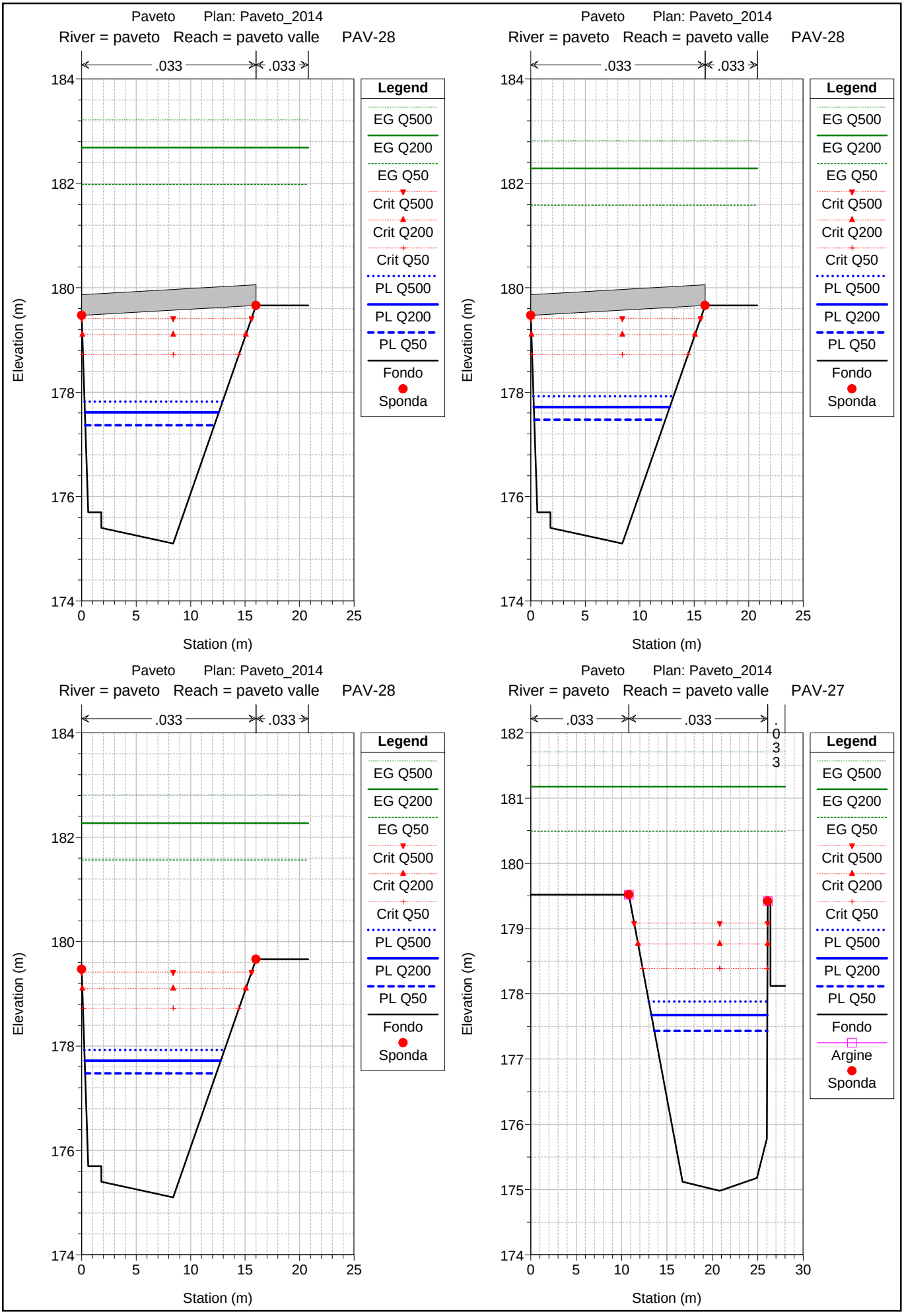

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-40
.033
.033
.033
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-39
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-39
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-39


Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-39
.033
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-38
.033
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-37
.033
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-37
.033
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda


Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-37
.033
.033
.033
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-37
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-36
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-36
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

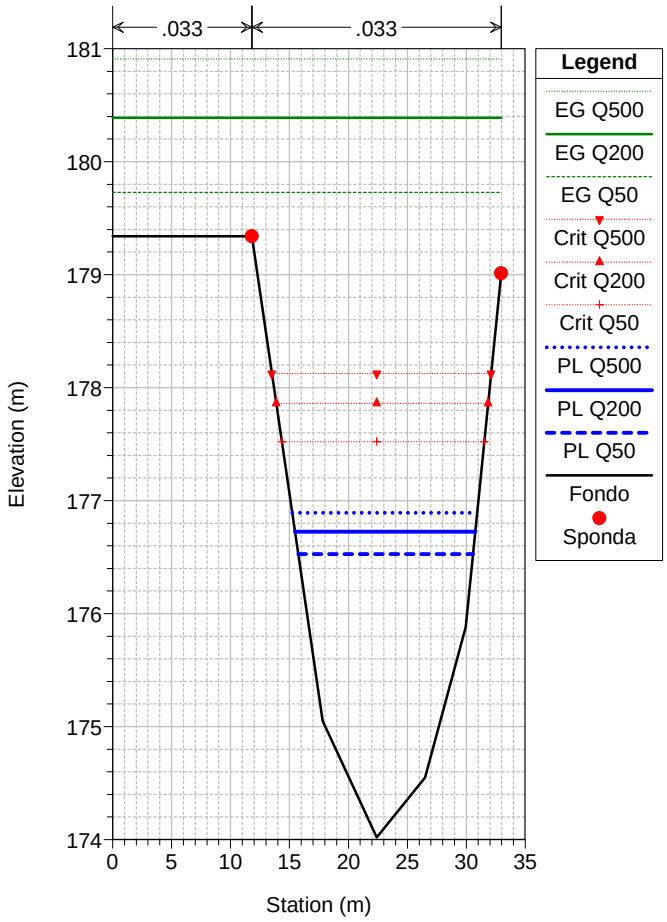

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-35
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-34
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-33
.033
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-32
.033
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-31
.033
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-30
.033
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-29
.033
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-28
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-28
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-28
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-28
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-27
.033
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda

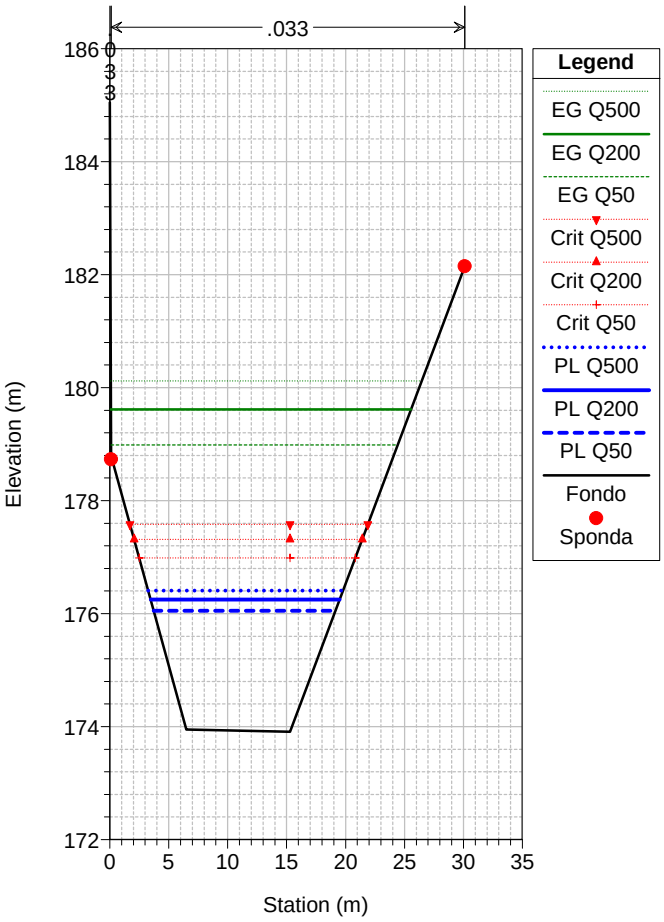
Paveto Plan: Paveto_2014

River = paveto Reach = paveto valle PAV-26



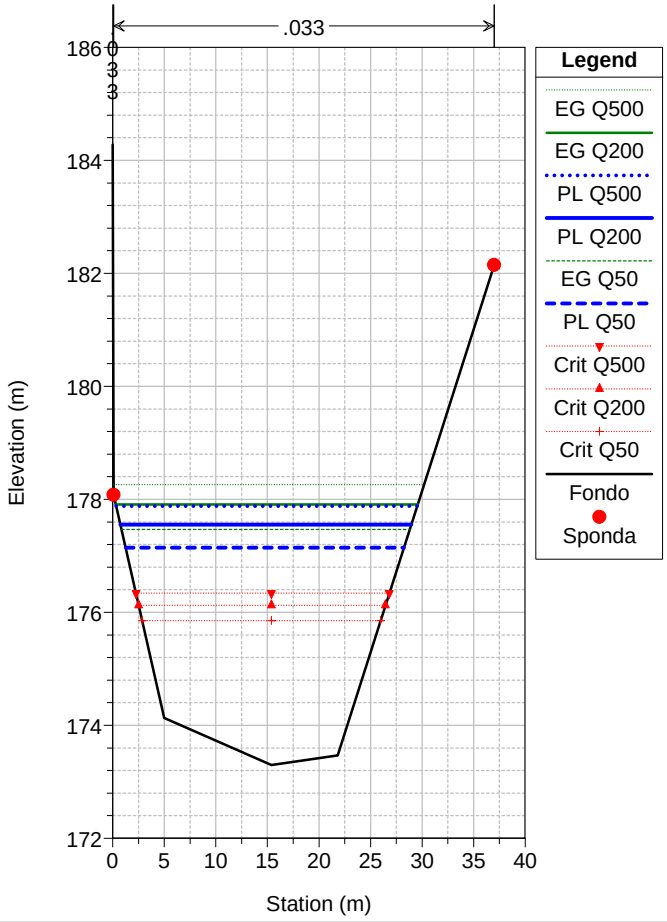
Paveto Plan: Paveto_2014

River = paveto Reach = paveto valle PAV-25



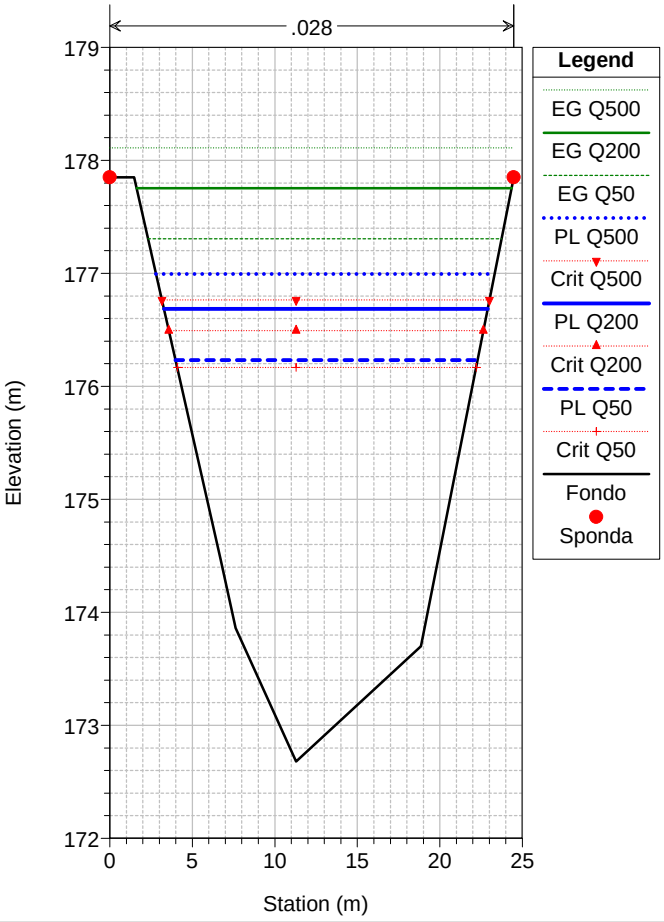
Paveto Plan: Paveto_2014

River = paveto Reach = paveto valle PAV-24

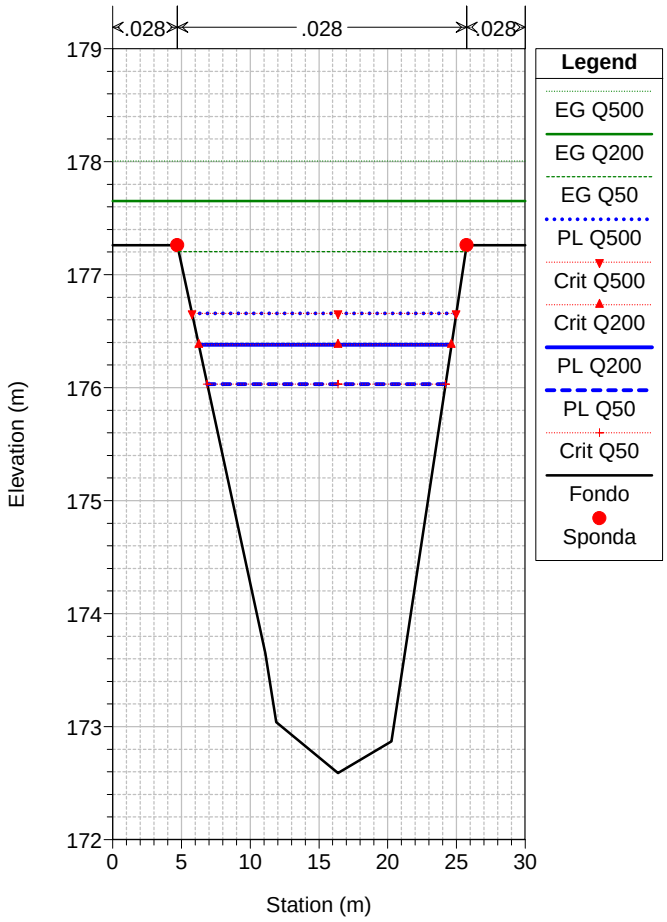


Paveto Plan: Paveto_2014

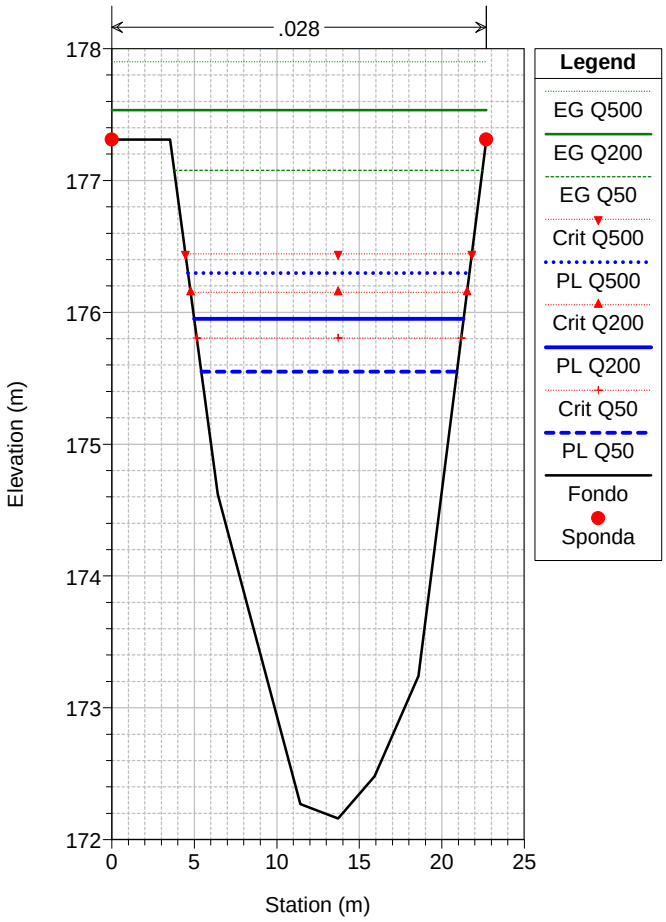
River = paveto Reach = paveto valle PAV-23



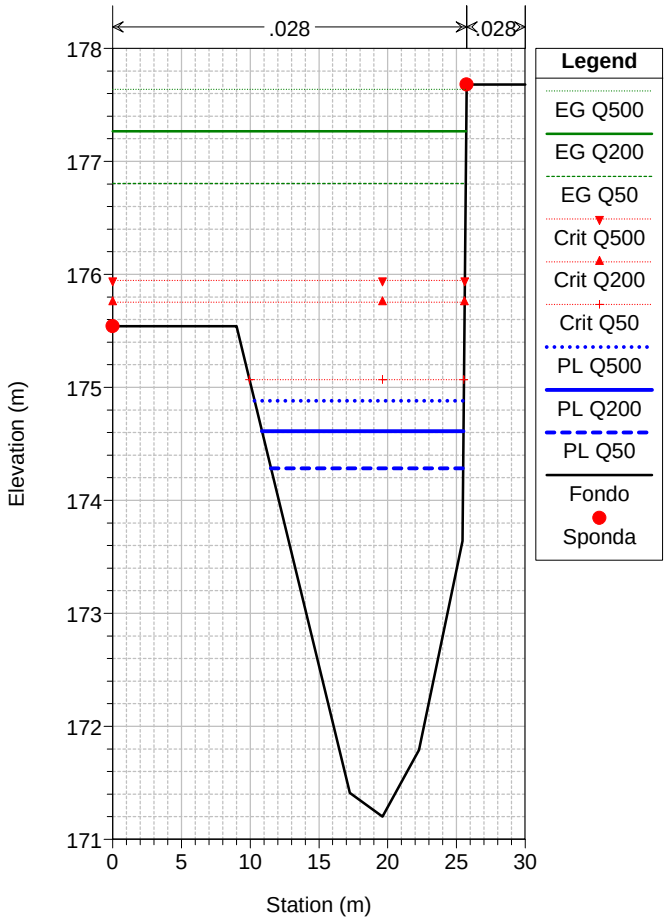
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-22.8



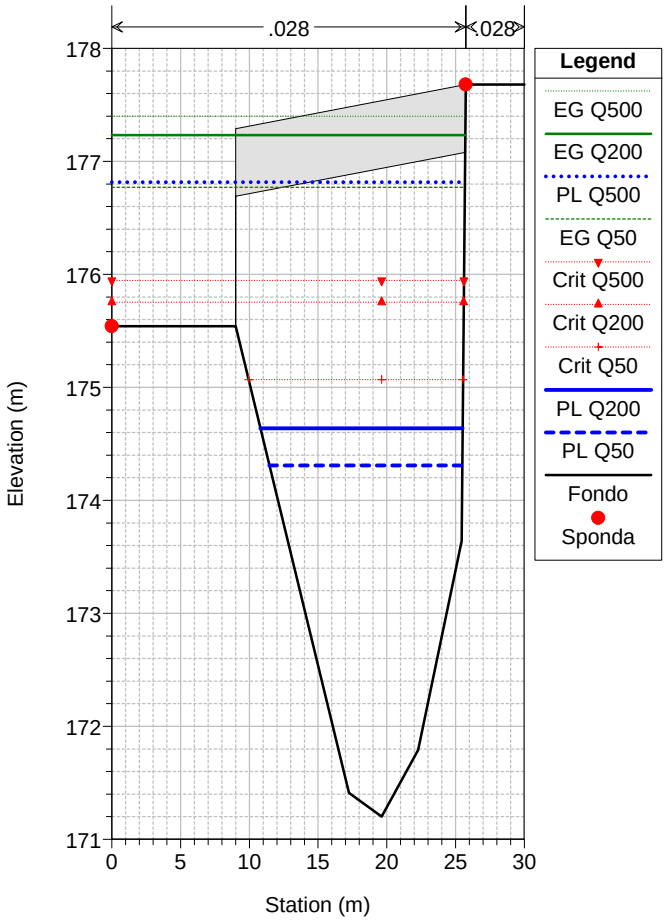
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV22.5



Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-22.3

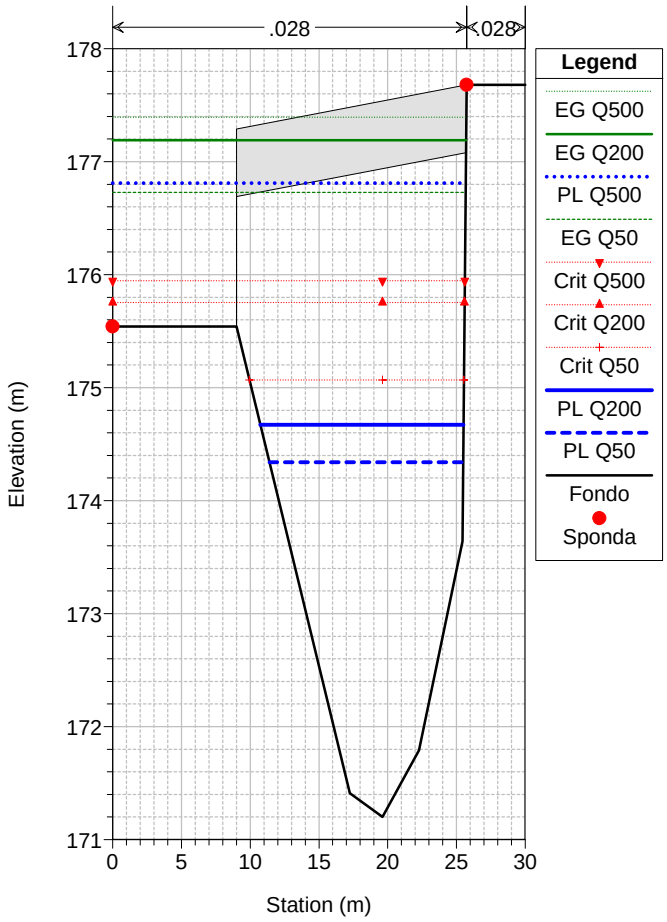


Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-22.2



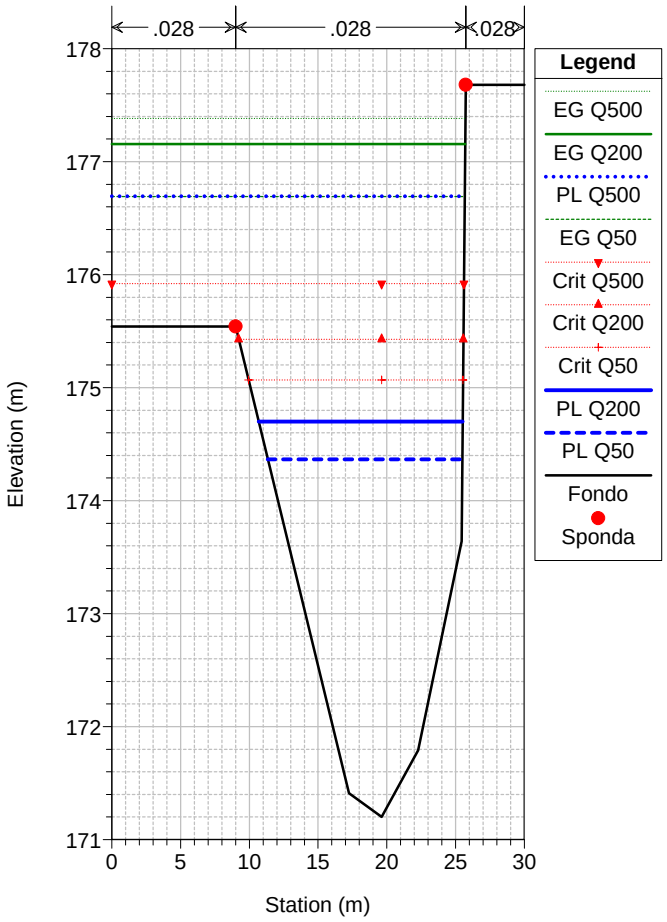
Paveto Plan: Paveto_2014

River = paveto Reach = paveto valle PAV-22.1



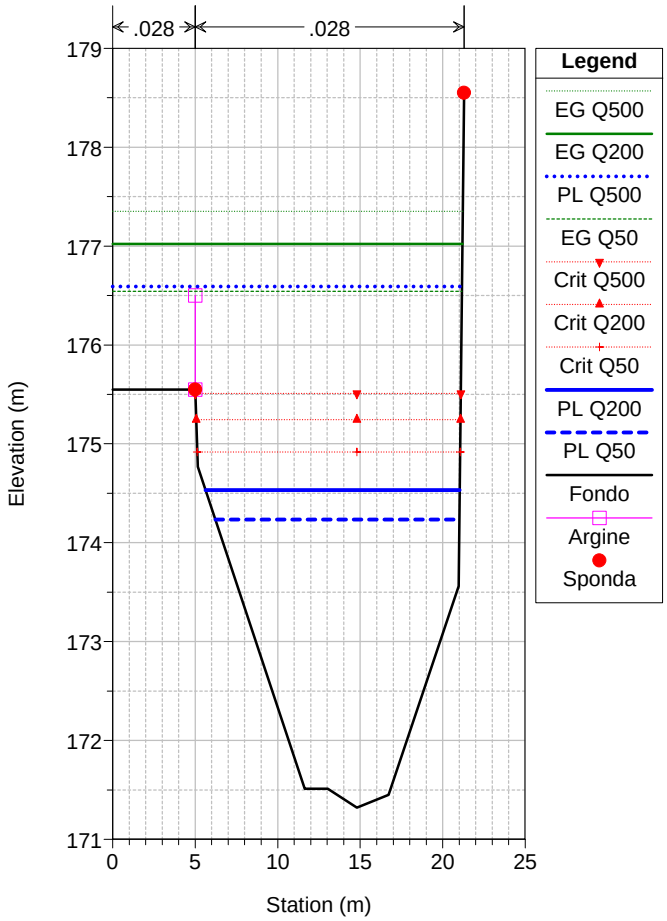
Paveto Plan: Paveto_2014

River = paveto Reach = paveto valle PAV-22



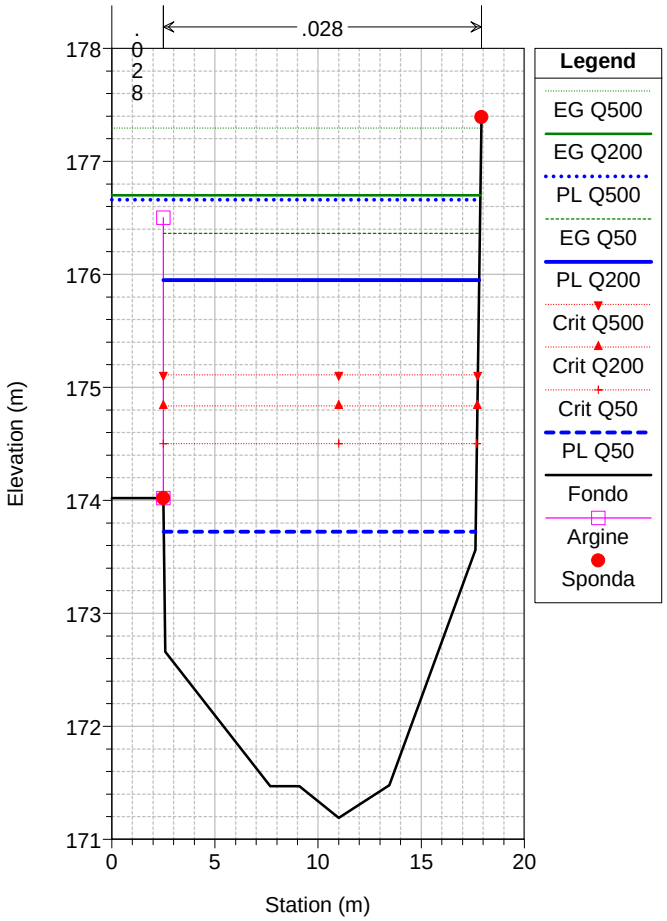
Paveto Plan: Paveto_2014

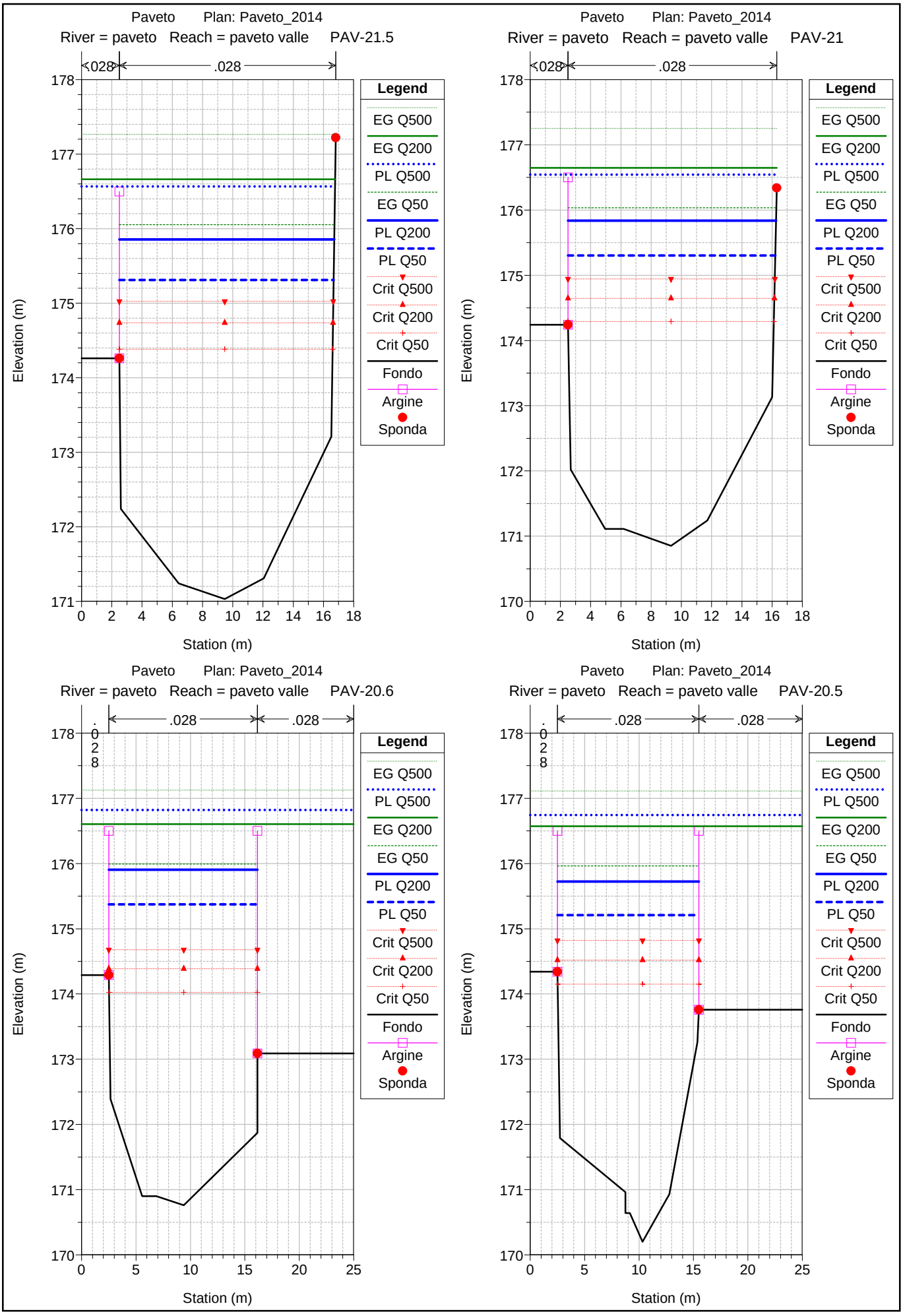
River = paveto Reach = paveto valle PAV-21.9

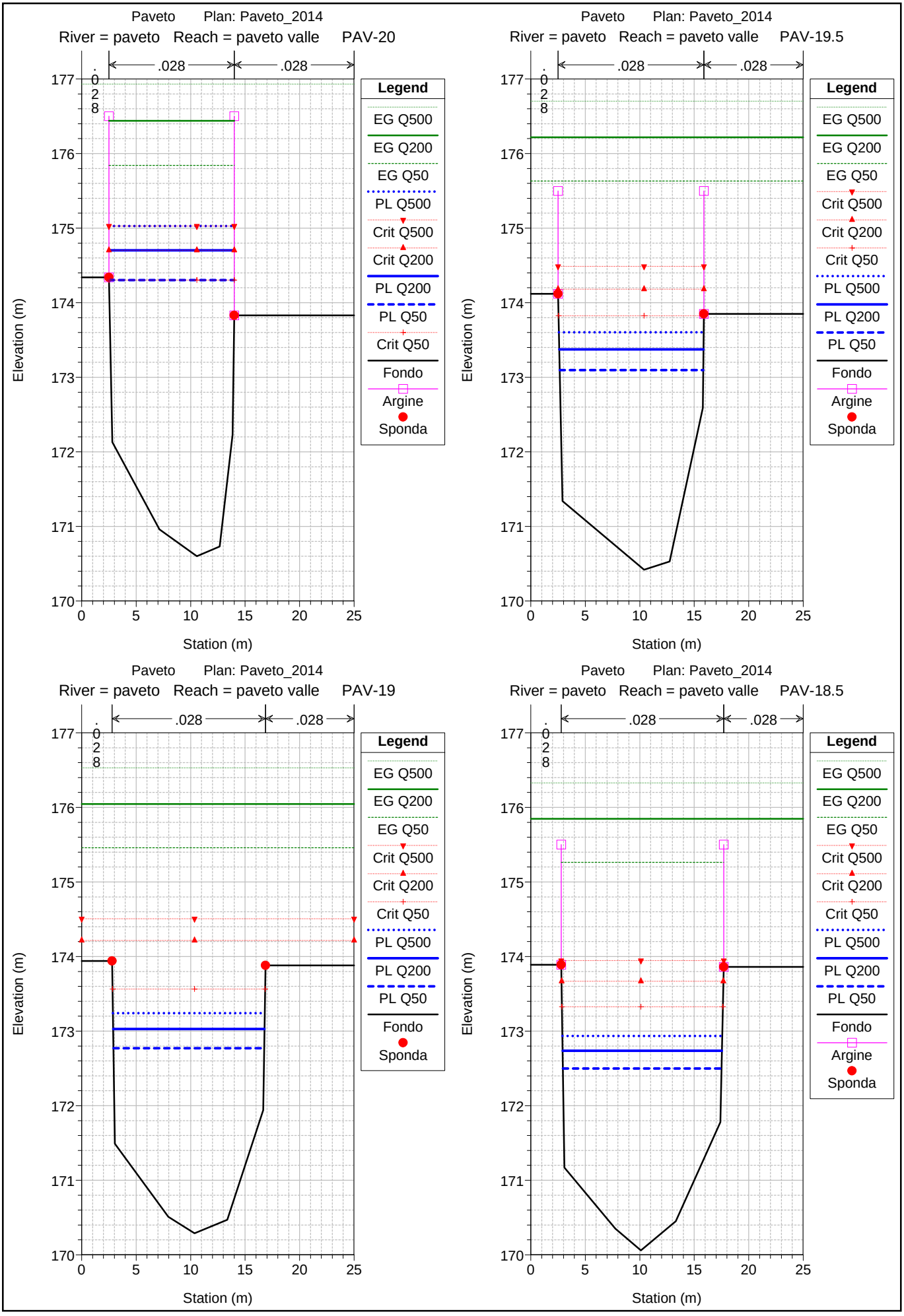


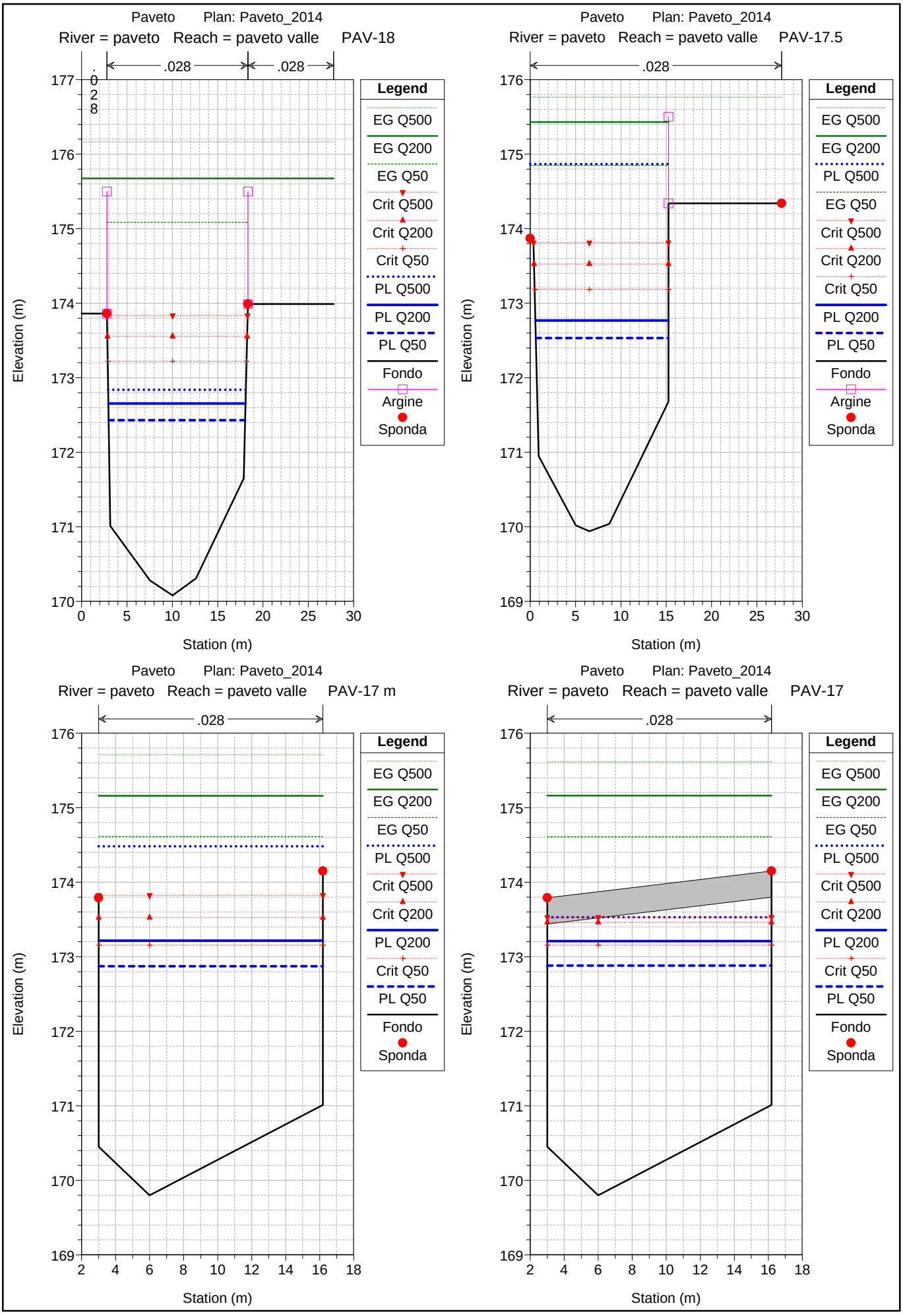
Paveto Plan: Paveto_2014

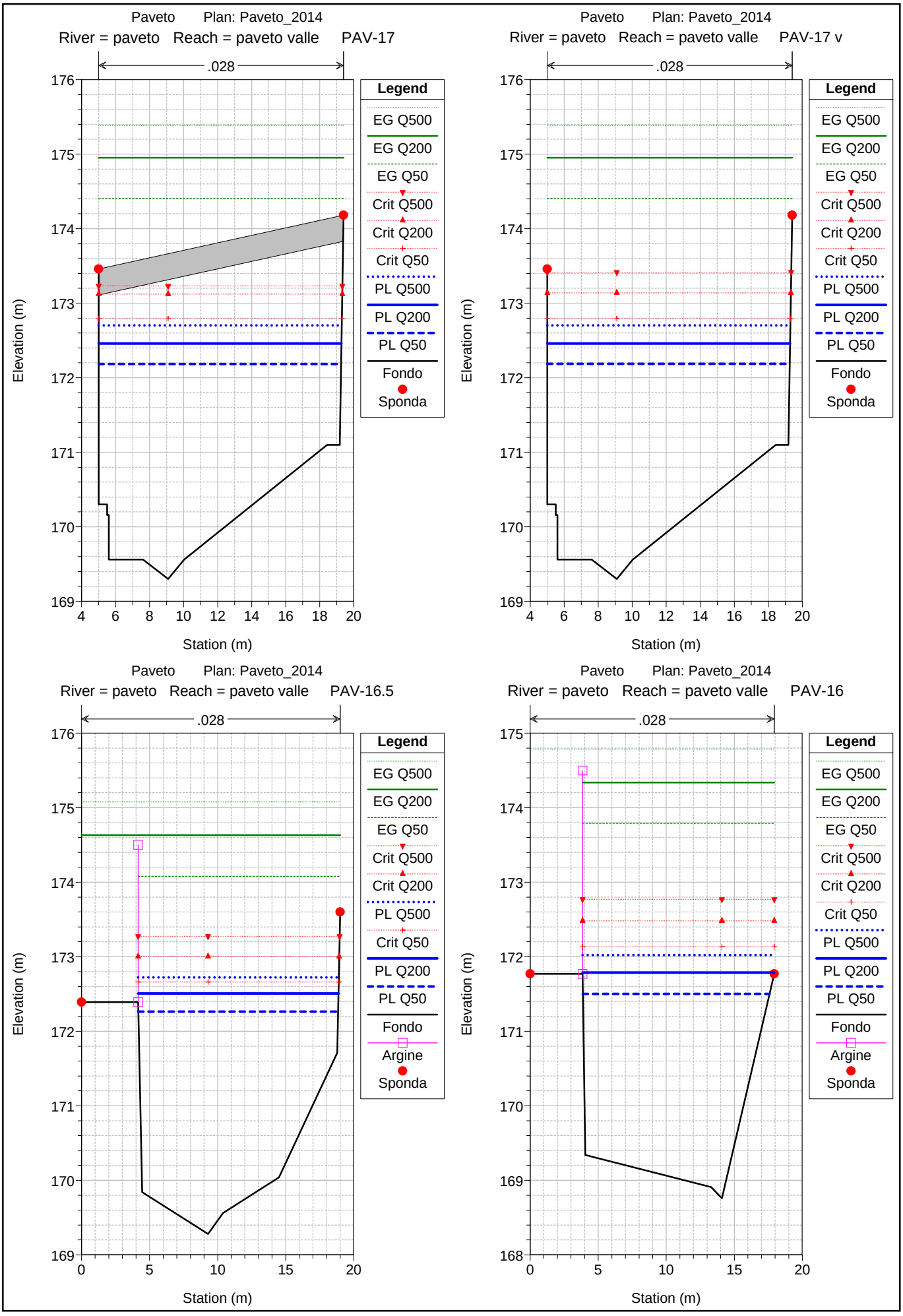
River = paveto Reach = paveto valle PAV-21.7

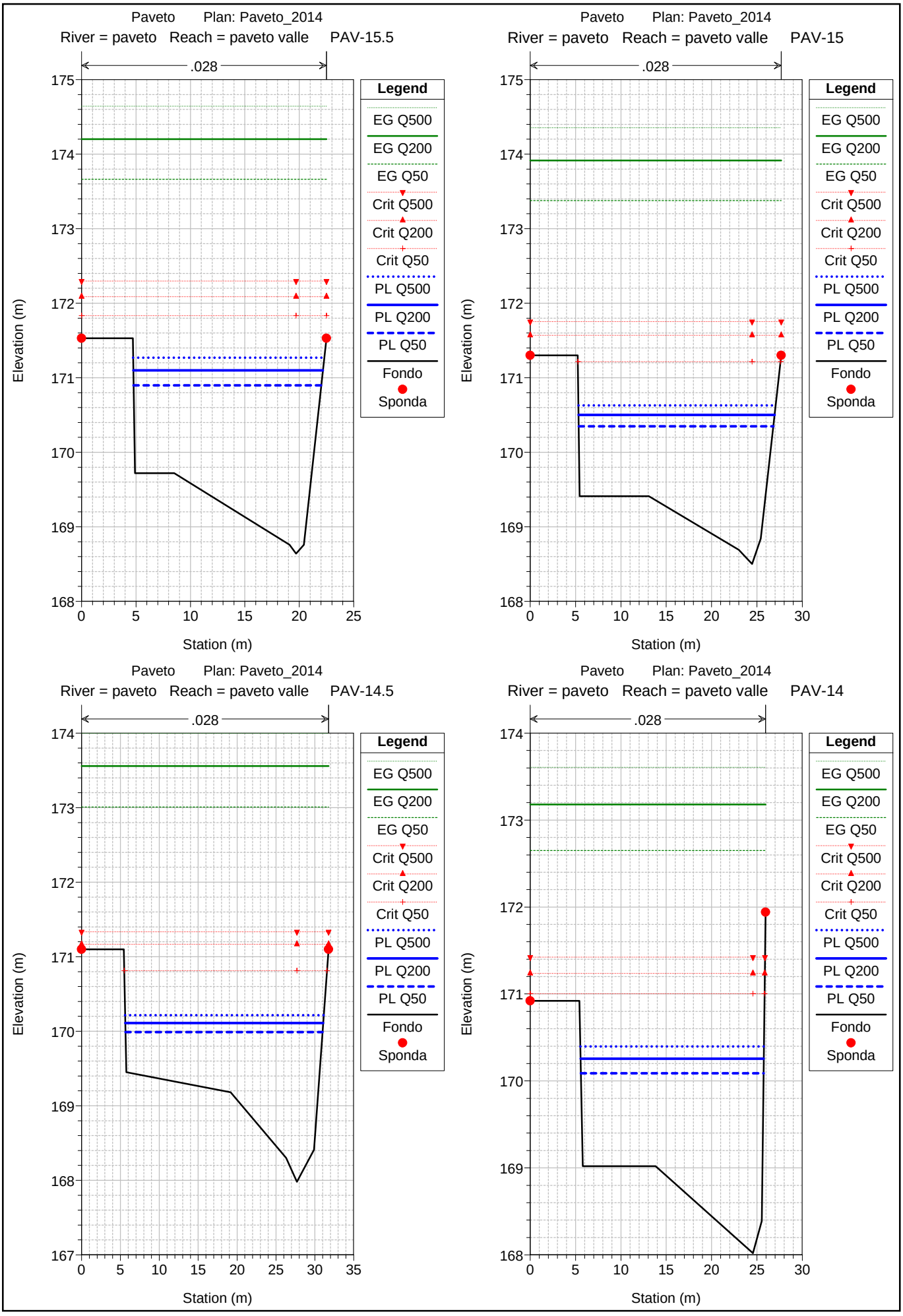


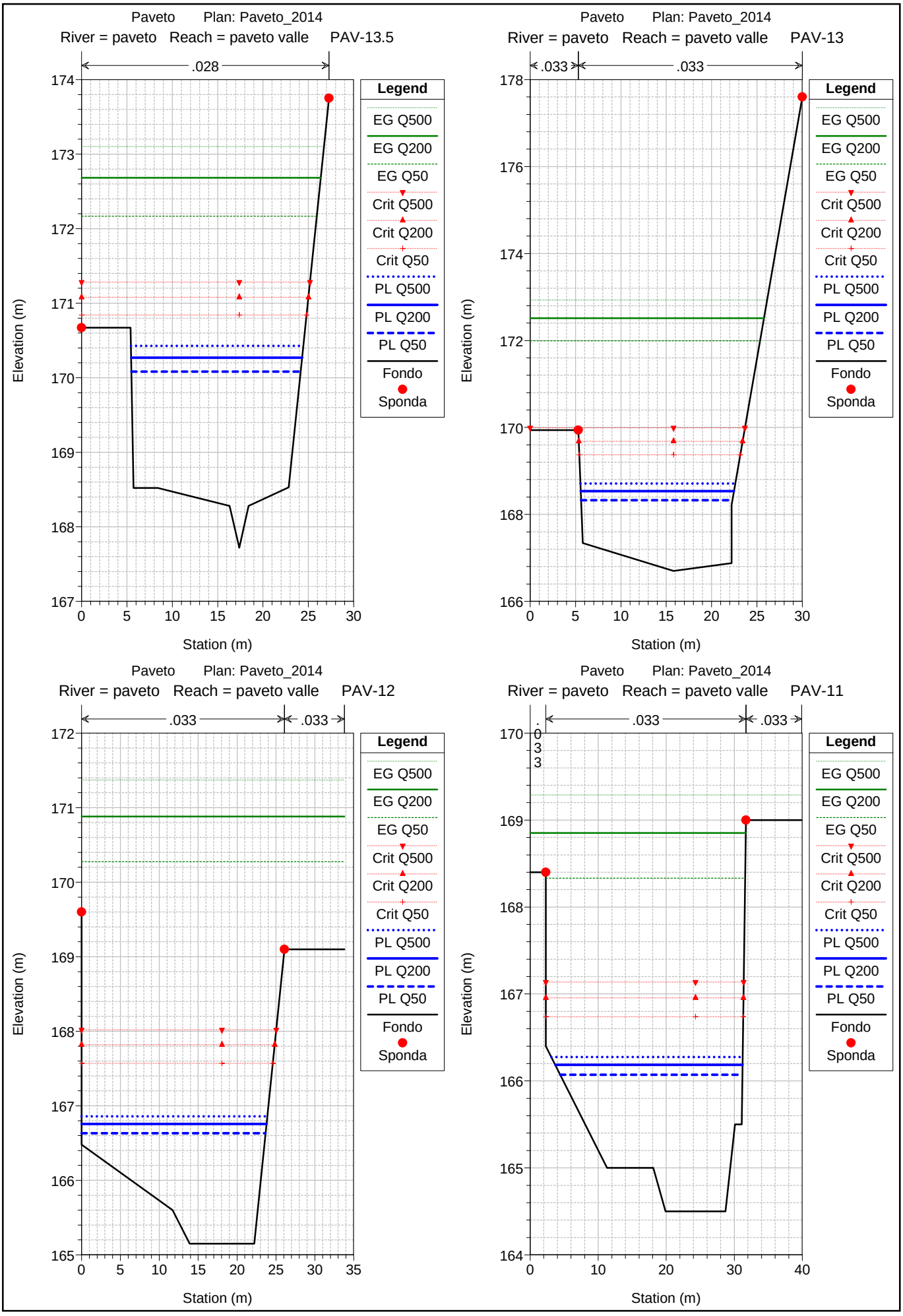

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-21.5
.028
.028
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-21
.028
.028
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-20.6
.028
.028
Legend
EG Q500
PL Q500
EG Q200
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-20.5
.028
.028
Legend
EG Q500
PL Q500
EG Q200
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

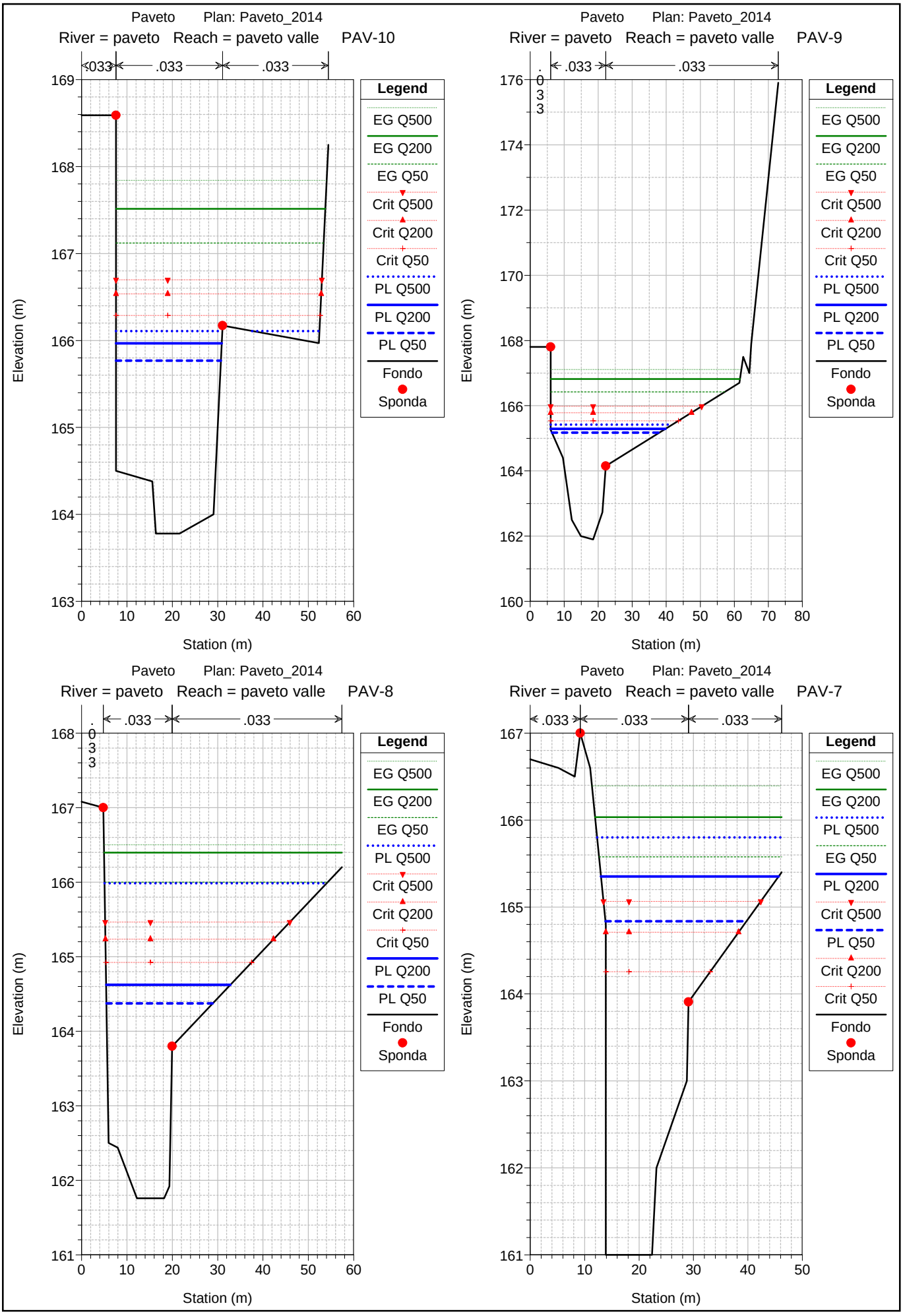

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-20
.028
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-19.5
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-19
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-18.5

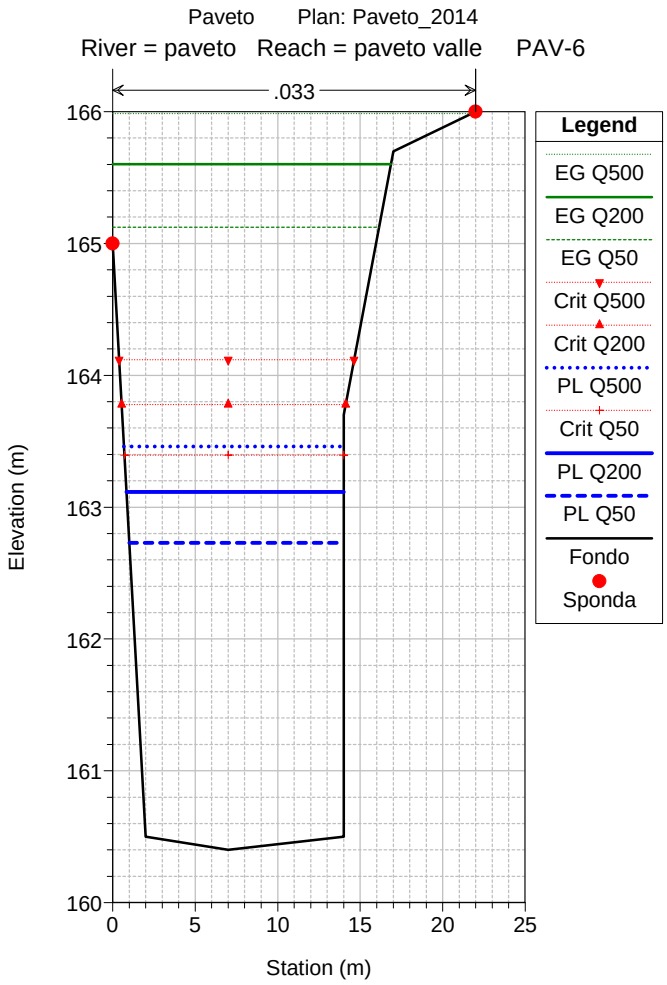

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-18
.028
.028
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-17.5
.028
Legend
EG Q500
EG Q200
PL Q500
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-17 m
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-17
.028
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

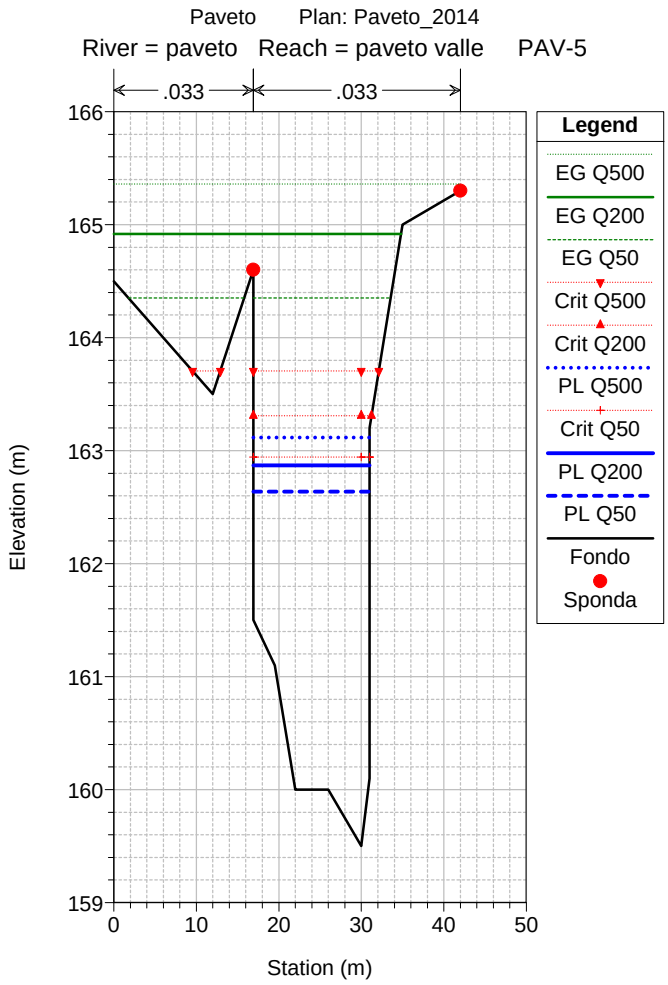

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-17
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-17 v
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-16.5
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-16
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

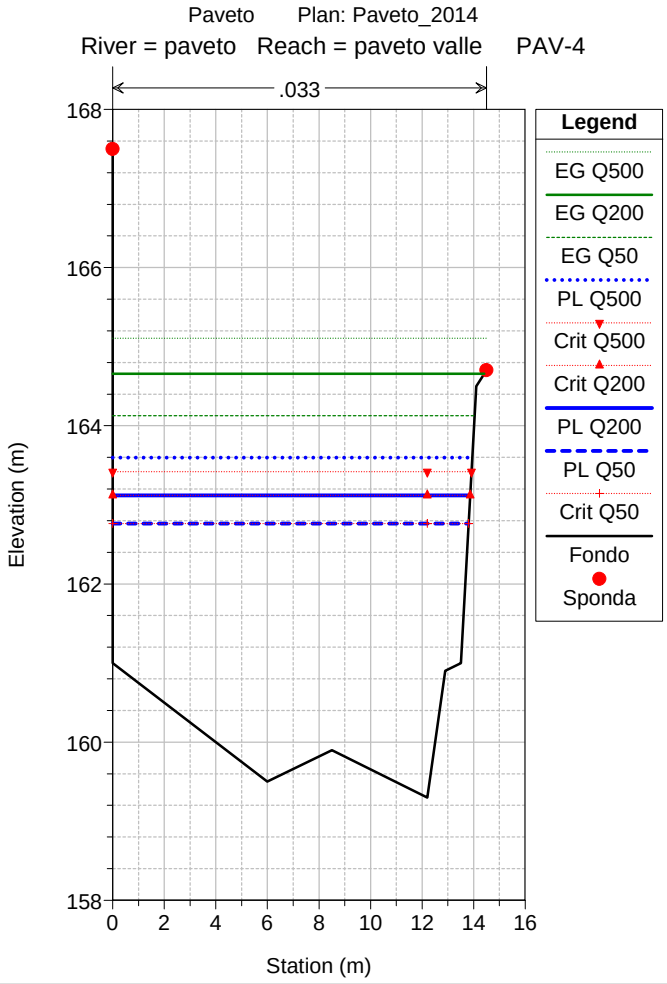

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-15.5
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-15
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-14.5
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-14
.028
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

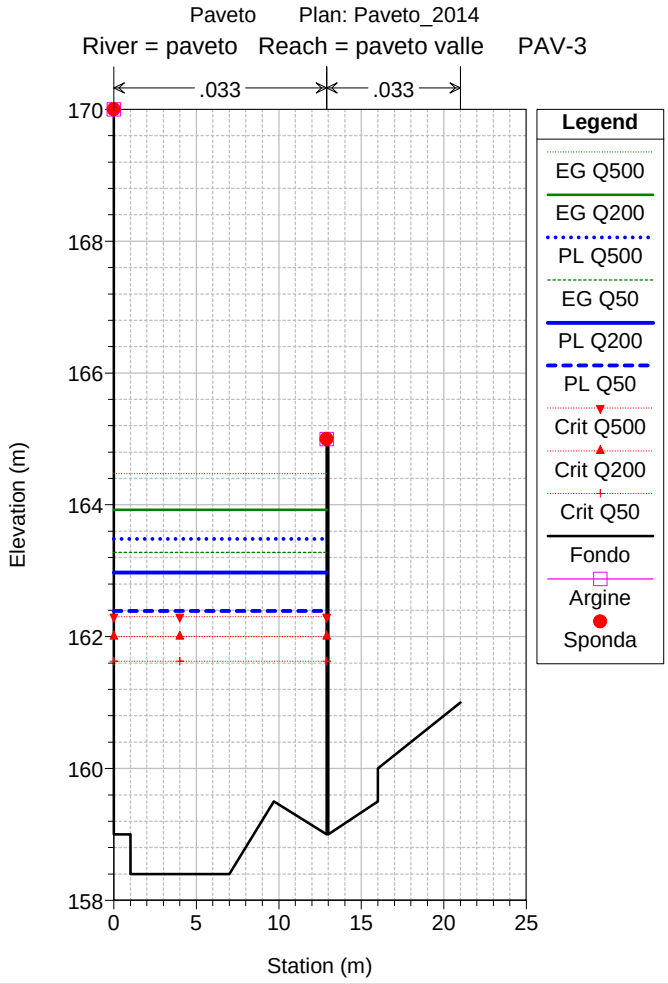

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-13.5
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-13
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-12
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-11
.033
.033
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

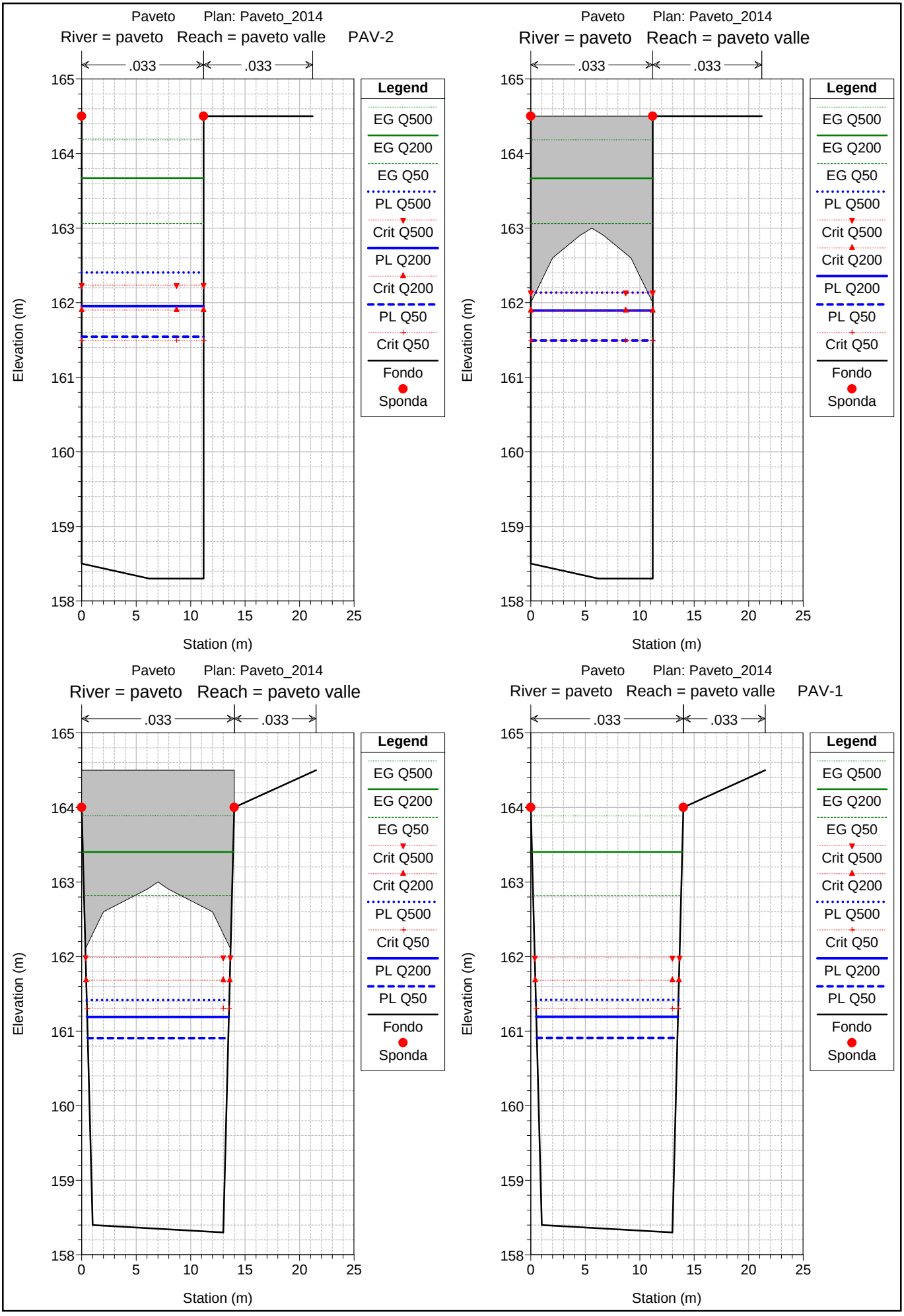

Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-10
.033
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-9
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-8
.033
.033
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-7
.033
.033
.033
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-6
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-5
.033
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-4
.033
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-3
.033
.033
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)


Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-2
.033
.033
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle
Paveto Plan: Paveto_2014
River = paveto Reach = paveto valle PAV-1

HEC-RAS Plan: PAveto_2014

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)	
paveto	64 PAV-64	Q50	77.00	227.51	229.07	235.00	5.93	235.00	5.93	229.07	229.81	0.011350	3.79	20.30	13.78	1.00
paveto	64 PAV-64	Q200	83.00	227.51	229.15	235.00	5.85	235.00	5.85	229.15	229.92	0.011264	3.88	21.39	13.86	1.00
paveto	64 PAV-64	Q500	95.00	227.51	229.30	235.00	5.70	235.00	5.70	229.30	230.14	0.011119	4.04	23.49	14.01	1.00
paveto	63.9 PAV-64	Q50	77.00	225.66	226.45	235.00	8.55	235.00	8.55	227.23	229.56	0.104738	7.80	9.87	12.66	2.82
paveto	63.9 PAV-64	Q200	83.00	225.66	226.51	235.00	8.49	235.00	8.49	227.32	229.67	0.098795	7.88	10.54	12.69	2.76
paveto	63.9 PAV-64	Q500	95.00	225.66	226.61	235.00	8.39	235.00	8.39	227.47	229.88	0.089170	8.01	11.86	12.75	2.65
paveto	63 PAV-63	Q50	77.00	222.81	225.70	230.00	4.30	226.26	0.56	224.76	225.99	0.002811	2.42	31.84	14.19	0.52
paveto	63 PAV-63	Q200	83.00	222.81	226.52	230.00	3.48	226.26	-0.26	224.85	226.70	0.001318	1.87	44.28	15.94	0.36
paveto	63 PAV-63	Q500	95.00	222.81	226.88	230.00	3.12	226.26	-0.62	225.01	227.06	0.001234	1.90	50.09	16.66	0.35
paveto	62.9 PAV-63	Q50	77.00	222.00	225.78	225.00	-0.78	226.26	0.48	223.94	225.96	0.001139	1.85	42.15	14.40	0.33
paveto	62.9 PAV-63	Q200	83.00	222.00	226.56	225.00	-1.56	226.26	-0.30	224.04	226.68	0.000666	1.58	53.95	16.02	0.25
paveto	62.9 PAV-63	Q500	95.00	222.00	226.91	225.00	-1.91	226.26	-0.65	224.22	227.05	0.000663	1.65	59.72	16.72	0.25
paveto	62.1 PAV-62	Q50	77.00	221.80	225.03	225.69	0.66	225.99	0.96	224.55	225.86	0.010151	4.06	18.98	6.60	0.76
paveto	62.1 PAV-62	Q200	83.00	221.80	226.12	225.69	-0.43	225.99	-0.13	224.67	226.63	0.005002	3.17	26.20	6.60	0.51
paveto	62.1 PAV-62	Q500	95.00	221.80	226.40	225.69	-0.71	225.99	-0.41	224.91	226.99	0.005477	3.38	28.07	6.60	0.52
paveto	62 PAV-62		Bridge													
paveto	61.9 PAV-62	Q50	77.00	221.72	225.01	225.69	0.68	225.99	0.98	224.45	225.80	0.009364	3.94	19.55	6.60	0.73
paveto	61.9 PAV-62	Q200	83.00	221.72	225.50	225.69	0.19	225.99	0.49	224.57	226.18	0.007190	3.64	22.82	6.60	0.62
paveto	61.9 PAV-62	Q500	95.00	221.72	225.64	225.69	0.05	225.99	0.35	224.81	226.46	0.008496	4.00	23.72	6.60	0.67
paveto valle	61.2	Q50	96.00	221.06	223.44	224.28	0.84	225.00	1.56	223.44	224.44	0.011593	4.43	21.65	10.82	1.00
paveto valle	61.2	Q200	119.00	221.06	223.89	224.28	0.39	225.00	1.11	223.89	224.87	0.011296	4.37	27.21	13.90	1.00
paveto valle	61.2	Q500	133.00	221.06	224.09	224.28	0.19	225.00	0.91	224.09	225.09	0.011292	4.41	30.13	15.29	1.00
paveto valle	61.1 PAV-61	Q50	96.00	219.46	221.16	222.28	1.12	225.00	3.84	221.89	223.44	0.039745	6.70	14.34	10.66	1.84
paveto valle	61.1 PAV-61	Q200	119.00	219.46	221.40	222.28	0.88	225.00	3.60	222.22	223.91	0.037013	7.03	16.93	10.78	1.79
paveto valle	61.1 PAV-61	Q500	133.00	219.46	221.55	222.28	0.73	225.00	3.45	222.41	224.15	0.035661	7.15	18.60	11.12	1.76
paveto valle	61 PAV-61	Q50	96.00	218.79	220.22	222.28	2.06	225.00	4.78	221.11	223.33	0.061997	7.82	12.28	9.95	2.25
paveto valle	61 PAV-61	Q200	119.00	218.79	220.45	222.28	1.83	225.00	4.55	221.43	223.81	0.057037	8.11	14.67	10.37	2.18
paveto valle	61 PAV-61	Q500	133.00	218.79	220.60	222.28	1.68	225.00	4.40	221.64	224.05	0.053253	8.23	16.16	10.44	2.11
paveto valle	60. PAV-60	Q50	96.00	212.00	213.54	216.70	3.16	215.80	2.26	214.74	218.22	0.094489	9.58	10.02	8.52	2.82
paveto valle	60. PAV-60	Q200	119.00	212.00	213.75	216.70	2.95	215.80	2.05	215.08	218.93	0.092501	10.09	11.80	9.09	2.83
paveto valle	60. PAV-60	Q500	133.00	212.00	213.86	216.70	2.84	215.80	1.94	215.28	219.31	0.091096	10.34	12.86	9.41	2.82
paveto valle	59. PAV-59	Q50	96.00	210.28	212.02	216.50	4.48	214.00	1.98	212.93	215.11	0.064783	7.78	12.34	11.30	2.38
paveto valle	59. PAV-59	Q200	119.00	210.28	212.18	216.50	4.32	214.00	1.82	213.19	215.74	0.067490	8.36	14.24	12.07	2.46
paveto valle	59. PAV-59	Q500	133.00	210.28	212.27	216.50	4.23	214.00	1.73	213.34	216.11	0.069162	8.68	15.32	12.48	2.50
paveto valle	58. PAV-58	Q50	96.00	208.50	210.58	214.50	3.92	213.00	2.42	211.33	212.91	0.034635	6.77	14.19	9.14	1.73
paveto valle	58. PAV-58	Q200	119.00	208.50	210.84	214.50	3.66	213.00	2.16	211.68	213.43	0.034018	7.12	16.71	9.76	1.74
paveto valle	58. PAV-58	Q500	133.00	208.50	210.99	214.50	3.51	213.00	2.01	211.87	213.72	0.033800	7.32	18.17	10.10	1.74
paveto valle	57. PAV-57	Q50	96.00	206.30	208.41	211.70	3.29	210.50	2.09	209.29	211.17	0.041544	7.36	13.05	8.23	1.87
paveto valle	57. PAV-57	Q200	119.00	206.30	208.69	211.70	3.01	210.50	1.81	209.62	211.73	0.040367	7.72	15.41	8.73	1.86

HEC-RAS Plan: PAveto_2014 (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)	
paveto valle	57. PAV-57	Q500	133.00	206.30	208.84	211.70	2.86	210.50	1.66	209.81	212.03	0.044312	7.91	16.82	9.97	1.94
paveto valle	56. PAV-56	Q50	96.00	206.00	210.04	210.30	0.26	210.50	0.46	209.05	210.47	0.003432	2.89	33.20	12.06	0.56
paveto valle	56. PAV-56	Q200	119.00	206.00	208.70	210.30	1.60	210.50	1.80	209.37	210.90	0.026068	6.57	18.11	9.54	1.52
paveto valle	56. PAV-56	Q500	133.00	206.00	210.54	210.30	-0.24	210.50	-0.04	209.56	210.95	0.003609	3.00	49.90	26.40	0.54
paveto valle	55.3 PAV-55	Q50	96.00	205.35	210.09	209.50	-0.59	210.50	0.41	208.77	210.39	0.002872	2.49	40.23	19.50	0.50
paveto valle	55.3 PAV-55	Q200	119.00	205.35	209.94	209.50	-0.44	210.50	0.56	209.16	210.49	0.005395	3.29	37.45	19.50	0.68
paveto valle	55.3 PAV-55	Q500	133.00	205.35	210.37	209.50	-0.87	210.50	0.13	209.66	210.83	0.003803	3.04	45.79	19.50	0.58
paveto valle	55.1 PAV-55	Q50	96.00	205.35	210.08	209.50	-0.58	210.50	0.42	208.77	210.39	0.002897	2.49	40.10	19.50	0.50
paveto valle	55.1 PAV-55	Q200	119.00	205.35	209.92	209.50	-0.42	210.50	0.58	209.16	210.48	0.005602	3.33	36.95	19.50	0.69
paveto valle	55.1 PAV-55	Q500	133.00	205.35	210.47	209.50	-0.97	210.50	0.03	209.66	210.78	0.003054	2.61	56.20	25.40	0.49
paveto valle	55 PAV-55		Bridge													
paveto valle	54.9 PAV-55	Q50	96.00	205.35	208.78	209.50	0.72	208.40	-0.38	208.78	209.85	0.012426	4.58	20.96	9.77	1.00
paveto valle	54.9 PAV-55	Q200	119.00	205.35	209.16	209.50	0.34	208.40	-0.76	209.16	210.34	0.012379	4.80	24.77	10.51	1.00
paveto valle	54.9 PAV-55	Q500	133.00	205.35	209.66	209.50	-0.16	208.40	-1.26	209.66	210.57	0.010394	4.24	31.94	19.50	0.93
paveto valle	54. PAV-54	Q50	96.00	205.00	207.08	208.72	1.64	207.50	0.42	207.89	209.40	0.033852	6.75	14.22	8.24	1.64
paveto valle	54. PAV-54	Q200	119.00	205.00	207.42	208.72	1.30	207.50	0.08	208.50	209.90	0.031552	6.98	17.05	8.74	1.60
paveto valle	54. PAV-54	Q500	133.00	205.00	207.63	208.72	1.09	207.50	-0.13	208.66	210.13	0.028806	7.01	19.04	10.20	1.53
paveto valle	53. PAV-53	Q50	96.00	204.00	205.48	207.50	2.02	208.00	2.52	206.28	208.08	0.047358	7.14	13.45	10.91	2.05
paveto valle	53. PAV-53	Q200	119.00	204.00	205.69	207.50	1.81	208.00	2.31	206.59	208.60	0.046073	7.56	15.74	11.35	2.05
paveto valle	53. PAV-53	Q500	133.00	204.00	205.81	207.50	1.69	208.00	2.19	206.76	208.87	0.044753	7.75	17.17	11.62	2.03
paveto valle	52. PAV-52	Q50	96.00	202.00	203.64	206.40	2.76	207.00	3.36	204.48	206.39	0.045680	7.35	13.07	8.81	1.93
paveto valle	52. PAV-52	Q200	119.00	202.00	203.90	206.40	2.50	207.00	3.10	204.84	206.96	0.044094	7.76	15.34	9.02	1.90
paveto valle	52. PAV-52	Q500	133.00	202.00	204.05	206.40	2.35	207.00	2.95	205.04	207.27	0.043018	7.95	16.72	9.14	1.88
paveto valle	51.1 PAV-51	Q50	96.00	201.35	202.96	205.75	2.79	206.35	3.39	203.83	205.82	0.048159	7.48	12.83	8.79	1.98
paveto valle	51.1 PAV-51	Q200	119.00	201.35	203.21	205.75	2.54	206.35	3.14	204.19	206.41	0.046774	7.92	15.03	8.99	1.95
paveto valle	51.1 PAV-51	Q500	133.00	201.35	203.36	205.75	2.39	206.35	2.99	204.39	206.73	0.045810	8.13	16.36	9.11	1.94
paveto valle	51. PAV-51		Bridge													
paveto valle	50.9 PAV-51	Q50	96.00	201.08	202.81	205.48	2.67	206.08	3.27	203.56	205.25	0.038345	6.92	13.88	8.88	1.77
paveto valle	50.9 PAV-51	Q200	119.00	201.08	203.08	205.48	2.40	206.08	3.00	203.92	205.81	0.037414	7.33	16.24	9.10	1.75
paveto valle	50.9 PAV-51	Q500	133.00	201.08	203.23	205.48	2.25	206.08	2.85	204.12	206.12	0.036729	7.53	17.67	9.22	1.74
paveto valle	50. PAV-50	Q50	96.00	196.40	198.17	200.20	2.03	199.00	0.83	198.85	200.27	0.041023	6.41	14.97	13.02	1.91
paveto valle	50. PAV-50	Q200	119.00	196.40	200.14	200.20	0.06	199.00	-1.14	199.10	200.49	0.002620	2.64	45.05	16.00	0.50
paveto valle	50. PAV-50	Q500	133.00	196.40	198.44	200.20	1.76	199.00	0.56	199.24	201.08	0.042672	7.21	18.45	13.62	1.98
paveto valle	49. PAV-49	Q50	96.00	195.90	199.49	200.30	0.81	198.00	-1.49	198.68	199.90	0.003065	2.92	35.64	17.71	0.55
paveto valle	49. PAV-49	Q200	119.00	195.90	200.08	200.30	0.22	198.00	-2.08	199.04	200.45	0.002386	2.80	46.28	18.45	0.50
paveto valle	49. PAV-49	Q500	133.00	195.90	200.19	200.30	0.11	198.00	-2.19	199.24	200.61	0.002677	2.99	48.45	21.46	0.53
paveto valle	48 PAV-48	Q50	96.00	196.05	198.88	199.94	1.06	200.40	1.52	198.88	199.79	0.010639	4.23	22.68	12.46	1.00
paveto valle	48 PAV-48	Q200	119.00	196.05	199.83	199.94	0.11	200.40	0.57	199.19	200.39	0.004783	3.29	36.14	15.73	0.69

HEC-RAS Plan: PAveto_2014 (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)	
paveto valle	48 PAV-48	Q500	133.00	196.05	199.85	199.94	0.09	200.40	0.55	199.38	200.53	0.005884	3.65	36.42	15.87	0.77
paveto valle	47 PAV-47	Q50	96.00	195.58	198.93	199.62	0.69	202.56	3.63	198.18	199.31	0.003269	2.74	35.10	15.37	0.58
paveto valle	47 PAV-47	Q200	119.00	195.58	200.00	199.62	-0.38	202.56	2.56	198.46	200.27	0.001569	2.30	52.49	17.87	0.40
paveto valle	47 PAV-47	Q500	133.00	195.58	200.06	199.62	-0.44	202.56	2.50	198.60	200.38	0.001848	2.52	53.59	17.87	0.44
paveto valle	46.1 PAV-46	Q50	96.00	195.20	198.59	198.35	-0.24	199.63	1.04	197.82	199.24	0.005715	3.59	27.48	12.56	0.65
paveto valle	46.1 PAV-46	Q200	119.00	195.20	199.81	198.35	-1.46	199.63	-0.18	198.18	200.23	0.002732	2.95	43.13	14.00	0.45
paveto valle	46.1 PAV-46	Q500	133.00	195.20	199.81	198.35	-1.46	199.63	-0.18	198.59	200.34	0.003403	3.29	43.17	14.00	0.51
paveto valle	46 PAV-46		Bridge													
paveto valle	45.9 PAV-46	Q50	96.00	195.20	198.31	198.35	0.04	199.63	1.32	197.82	199.12	0.007671	3.97	24.18	8.55	0.75
paveto valle	45.9 PAV-46	Q200	119.00	195.20	198.88	198.35	-0.53	199.63	0.75	198.18	199.67	0.006482	4.00	31.09	12.57	0.69
paveto valle	45.9 PAV-46	Q500	133.00	195.20	199.12	198.35	-0.77	199.63	0.51	198.59	199.95	0.006328	4.09	34.22	12.58	0.69
paveto valle	45 PAV-45	Q50	96.00	195.20	197.82	198.35	0.53	199.63	1.81	197.82	199.00	0.013014	4.80	20.01	8.52	1.00
paveto valle	45 PAV-45	Q200	119.00	195.20	198.18	198.35	0.17	199.63	1.45	198.18	199.54	0.013416	5.16	23.08	8.54	1.00
paveto valle	45 PAV-45	Q500	133.00	195.20	198.59	198.35	-0.24	199.63	1.04	198.59	199.84	0.010936	4.97	27.51	12.56	0.90
paveto valle	44 PAV-44	Q50	96.00	194.20	196.11	197.10	0.99	199.50	3.39	196.72	198.16	0.035938	6.35	15.11	10.21	1.67
paveto valle	44 PAV-44	Q200	119.00	194.20	196.33	197.10	0.77	199.50	3.17	197.04	198.71	0.036173	6.84	17.39	10.26	1.68
paveto valle	44 PAV-44	Q500	133.00	194.20	196.47	197.10	0.63	199.50	3.03	197.37	199.01	0.035649	7.06	18.83	10.30	1.67
paveto valle	43 PAV-43	Q50	96.00	194.10	195.93	196.60	0.67	198.70	2.77	196.42	197.69	0.025552	5.88	16.33	10.10	1.48
paveto valle	43 PAV-43	Q200	119.00	194.10	196.15	196.60	0.45	198.70	2.55	196.91	198.24	0.026690	6.39	18.61	10.17	1.51
paveto valle	43 PAV-43	Q500	133.00	194.10	196.30	196.60	0.30	198.70	2.40	197.09	198.54	0.026790	6.63	20.05	10.22	1.51
paveto valle	42 PAV-42	Q50	96.00	193.60	195.25	196.00	0.75	199.00	3.75	195.84	197.24	0.031666	6.24	15.39	10.31	1.63
paveto valle	42 PAV-42	Q200	119.00	193.60	195.48	196.00	0.52	199.00	3.52	196.31	197.78	0.031889	6.71	17.73	10.35	1.64
paveto valle	42 PAV-42	Q500	133.00	193.60	195.62	196.00	0.38	199.00	3.38	196.50	198.08	0.031715	6.95	19.15	10.37	1.63
paveto valle	41 PAV-41	Q50	96.00	193.50	195.10	195.70	0.60	199.00	3.90	195.64	196.95	0.029641	6.03	15.92	10.36	1.55
paveto valle	41 PAV-41	Q200	119.00	193.50	195.32	195.70	0.38	199.00	3.68	196.07	197.49	0.030184	6.52	18.26	10.40	1.57
paveto valle	41 PAV-41	Q500	133.00	193.50	195.46	195.70	0.24	199.00	3.54	196.24	197.79	0.030254	6.76	19.67	10.42	1.57
paveto valle	40. PAV-40	Q50	96.00	192.95	195.89	195.35	-0.54	199.10	3.21	195.16	196.36	0.004402	3.13	33.71	19.54	0.59
paveto valle	40. PAV-40	Q200	119.00	192.95	196.47	195.35	-1.12	199.10	2.63	195.77	196.86	0.003194	2.94	44.93	19.54	0.51
paveto valle	40. PAV-40	Q500	133.00	192.95	196.97	195.35	-1.62	199.10	2.13	195.93	197.30	0.002294	2.67	54.80	19.54	0.43
paveto valle	39.1 PAV-39	Q50	96.00	192.25	196.06	194.65	-1.41	198.40	2.34	194.46	196.26	0.001487	2.09	50.71	19.54	0.35
paveto valle	39.1 PAV-39	Q200	119.00	192.25	196.58	194.65	-1.93	198.40	1.82	195.07	196.79	0.001362	2.14	60.87	19.54	0.33
paveto valle	39.1 PAV-39	Q500	133.00	192.25	197.05	194.65	-2.40	198.40	1.35	195.23	197.24	0.001139	2.06	70.01	19.54	0.30
paveto valle	39. PAV-39		Bridge													
paveto valle	38.9 PAV-39	Q50	96.00	191.95	195.65	194.35	-1.30	198.10	2.45	194.16	195.87	0.001681	2.19	48.53	19.54	0.37
paveto valle	38.9 PAV-39	Q200	119.00	191.95	196.18	194.35	-1.83	198.10	1.92	194.77	196.40	0.001504	2.22	58.78	19.54	0.35
paveto valle	38.9 PAV-39	Q500	133.00	191.95	196.79	194.35	-2.44	198.10	1.31	194.93	196.98	0.001100	2.03	70.85	19.54	0.30
paveto valle	38.1 PAV-38	Q50	96.00	190.96	195.69	194.50	-1.19	194.94	-0.75	193.44	195.84	0.000808	1.74	59.67	21.76	0.29
paveto valle	38.1 PAV-38	Q200	119.00	190.96	196.21	194.50	-1.71	194.94	-1.27	193.80	196.37	0.000749	1.83	70.97	21.76	0.29

HEC-RAS Plan: PAveto_2014 (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)	
paveto valle	38.1 PAV-38	Q500	133.00	190.96	196.82	194.50	-2.32	194.94	-1.88	194.01	196.96	0.000563	1.74	84.18	21.76	0.25
paveto valle	37.1 PAV-37	Q50	195.00	190.05	195.01	194.25	-0.76	194.40	-0.61	193.63	195.75	0.004100	3.84	53.57	17.50	0.57
paveto valle	37.1 PAV-37	Q200	234.00	190.05	195.47	194.25	-1.22	194.40	-1.07	194.06	196.28	0.004071	4.08	61.50	17.50	0.58
paveto valle	37.1 PAV-37	Q500	268.00	190.05	196.12	194.25	-1.87	194.40	-1.72	194.77	196.88	0.003289	3.98	73.01	17.50	0.53
paveto valle	37. PAV-37		Bridge													
paveto valle	36.9 PAV-37	Q50	195.00	190.05	193.97	194.25	0.28	194.40	0.43	193.63	195.31	0.009687	5.12	38.08	10.61	0.86
paveto valle	36.9 PAV-37	Q200	234.00	190.05	194.18	194.25	0.07	194.40	0.22	194.06	195.90	0.011977	5.81	40.24	10.66	0.96
paveto valle	36.9 PAV-37	Q500	268.00	190.05	194.77	194.25	-0.52	194.40	-0.37	194.77	196.38	0.009513	5.65	49.41	17.50	0.86
paveto valle	36.1 PAV-36	Q50	195.00	190.40	193.57	193.93	0.36	193.11	-0.46	193.57	195.06	0.011405	5.40	36.24	12.33	0.99
paveto valle	36.1 PAV-36	Q200	234.00	190.40	194.07	193.93	-0.14	193.11	-0.96	194.07	195.64	0.010135	5.56	42.81	16.80	0.95
paveto valle	36.1 PAV-36	Q500	268.00	190.40	194.47	193.93	-0.54	193.11	-1.36	194.47	196.06	0.009021	5.63	49.53	16.80	0.91
paveto valle	36. PAV-36	Q50	195.00	189.23	192.10	193.93	1.83	193.11	1.01	192.93	194.92	0.029629	7.43	26.23	11.50	1.57
paveto valle	36. PAV-36	Q200	234.00	189.23	192.46	193.93	1.47	193.11	0.65	193.33	195.48	0.027791	7.70	30.39	11.64	1.52
paveto valle	36. PAV-36	Q500	268.00	189.23	192.80	193.93	1.13	193.11	0.31	193.66	195.90	0.025643	7.80	34.34	11.76	1.46
paveto valle	35. PAV-35	Q50	195.00	188.25	191.22	192.38	1.16	192.70	1.48	192.05	193.93	0.025425	7.29	26.75	11.71	1.54
paveto valle	35. PAV-35	Q200	234.00	188.25	191.53	192.38	0.85	192.70	1.17	192.66	194.53	0.025504	7.67	30.51	12.21	1.55
paveto valle	35. PAV-35	Q500	268.00	188.25	191.80	192.38	0.58	192.70	0.90	192.98	194.99	0.025160	7.92	33.85	12.64	1.54
paveto valle	34. PAV-34	Q50	195.00	182.63	185.04	189.11	4.07	190.25	5.21	186.16	188.94	0.058015	8.74	22.30	16.21	2.38
paveto valle	34. PAV-34	Q200	234.00	182.63	185.23	189.11	3.88	190.25	5.02	186.44	189.55	0.059080	9.22	25.39	17.27	2.43
paveto valle	34. PAV-34	Q500	268.00	182.63	185.37	189.11	3.74	190.25	4.88	186.67	190.08	0.059708	9.61	27.88	17.89	2.46
paveto valle	33. PAV-33	Q50	195.00	182.09	185.27	188.84	3.57	188.55	3.28	186.12	187.90	0.027019	7.19	27.14	14.00	1.65
paveto valle	33. PAV-33	Q200	234.00	182.09	185.52	188.84	3.32	188.55	3.03	186.47	188.47	0.027662	7.61	30.75	14.76	1.68
paveto valle	33. PAV-33	Q500	268.00	182.09	185.71	188.84	3.13	188.55	2.84	186.75	188.95	0.028473	7.97	33.62	15.34	1.72
paveto valle	32. PAV-32	Q50	195.00	180.18	183.34	188.40	5.06	184.40	1.06	184.67	187.45	0.043024	8.98	21.70	10.12	1.96
paveto valle	32. PAV-32	Q200	234.00	180.18	183.68	188.40	4.72	184.40	0.72	185.23	188.03	0.040742	9.24	25.33	10.77	1.92
paveto valle	32. PAV-32	Q500	268.00	180.18	183.95	188.40	4.45	184.40	0.45	185.65	188.51	0.039520	9.46	28.32	11.27	1.91
paveto valle	31. PAV-31	Q50	195.00	179.77	181.93	187.80	5.87	183.43	1.50	183.37	186.97	0.063042	9.95	19.60	11.21	2.40
paveto valle	31. PAV-31	Q200	234.00	179.77	182.21	187.80	5.59	183.43	1.22	183.87	187.57	0.058901	10.25	22.83	11.71	2.34
paveto valle	31. PAV-31	Q500	268.00	179.77	182.44	187.80	5.36	183.43	0.99	184.27	188.06	0.056420	10.50	25.52	12.11	2.31
paveto valle	30. PAV-30	Q50	195.00	178.97	181.78	186.46	4.68	183.32	1.54	183.03	185.68	0.043370	8.74	22.31	11.83	2.03
paveto valle	30. PAV-30	Q200	234.00	178.97	182.05	186.46	4.41	183.32	1.27	183.37	186.32	0.043241	9.16	25.55	12.54	2.05
paveto valle	30. PAV-30	Q500	268.00	178.97	182.26	186.46	4.20	183.32	1.06	183.81	186.85	0.043270	9.49	28.23	13.10	2.06
paveto valle	29. PAV-29	Q50	195.00	178.93	181.86	186.13	4.27	183.31	1.45	183.02	185.45	0.038081	8.39	23.23	11.76	1.91
paveto valle	29. PAV-29	Q200	234.00	178.93	182.13	186.13	4.00	183.31	1.18	183.57	186.09	0.038282	8.82	26.54	12.46	1.93
paveto valle	29. PAV-29	Q500	268.00	178.93	182.35	186.13	3.78	183.31	0.96	183.92	186.62	0.038529	9.15	29.28	13.02	1.95
paveto valle	28.1 PAV-28	Q50	195.00	175.10	177.36	179.47	2.11	179.66	2.30	178.72	182.00	0.060941	9.54	20.44	11.84	2.32
paveto valle	28.1 PAV-28	Q200	234.00	175.10	177.61	179.47	1.86	179.66	2.05	179.10	182.70	0.059726	10.00	23.40	12.29	2.31
paveto valle	28.1 PAV-28	Q500	268.00	175.10	177.82	179.47	1.65	179.66	1.84	179.42	183.24	0.058363	10.32	25.98	12.66	2.30

HEC-RAS Plan: PAveto_2014 (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)	
paveto valle	28. PAV-28		Bridge													
paveto valle	27.9 PAV-28	Q50	195.00	175.10	177.48	179.47	1.99	179.66	2.18	178.72	181.56	0.050922	8.96	21.77	12.04	2.13
paveto valle	27.9 PAV-28	Q200	234.00	175.10	177.72	179.47	1.75	179.66	1.94	179.10	182.27	0.050932	9.45	24.76	12.49	2.14
paveto valle	27.9 PAV-28	Q500	268.00	175.10	177.92	179.47	1.55	179.66	1.74	179.42	182.81	0.050433	9.79	27.36	12.86	2.14
paveto valle	27. PAV-27	Q50	195.00	174.98	177.43	179.52	2.09	179.42	1.99	178.39	180.49	0.032688	7.74	25.18	12.45	1.74
paveto valle	27. PAV-27	Q200	234.00	174.98	177.67	179.52	1.85	179.42	1.75	178.77	181.17	0.033988	8.29	28.24	12.78	1.78
paveto valle	27. PAV-27	Q500	268.00	174.98	177.88	179.52	1.64	179.42	1.54	179.08	181.71	0.034506	8.67	30.92	13.06	1.80
paveto valle	26. PAV-26	Q50	195.00	174.02	176.53	179.34	2.81	179.01	2.48	177.52	179.73	0.038537	7.93	24.59	14.83	1.97
paveto valle	26. PAV-26	Q200	234.00	174.02	176.73	179.34	2.61	179.01	2.28	177.86	180.39	0.039739	8.48	27.60	15.30	2.02
paveto valle	26. PAV-26	Q500	268.00	174.02	176.89	179.34	2.45	179.01	2.12	178.12	180.91	0.040294	8.88	30.18	15.70	2.04
paveto valle	25. PAV-25	Q50	195.00	173.91	176.05	178.73	2.68	182.15	6.10	176.98	178.98	0.035198	7.59	25.71	15.42	1.88
paveto valle	25. PAV-25	Q200	234.00	173.91	176.25	178.73	2.48	182.15	5.90	177.32	179.61	0.036780	8.13	28.79	16.03	1.94
paveto valle	25. PAV-25	Q500	268.00	173.91	176.41	178.73	2.32	182.15	5.74	177.58	180.12	0.037768	8.53	31.41	16.53	1.98
paveto valle	24. PAV-24	Q50	195.00	173.30	177.14	178.08	0.94	182.15	5.01	175.85	177.47	0.001894	2.53	77.11	26.97	0.48
paveto valle	24. PAV-24	Q200	234.00	173.30	177.55	178.08	0.53	182.15	4.60	176.12	177.91	0.001850	2.65	88.37	28.19	0.48
paveto valle	24. PAV-24	Q500	268.00	173.30	177.88	178.08	0.20	182.15	4.27	176.34	178.26	0.001819	2.74	97.83	29.17	0.48
paveto valle	23	Q50	195.00	172.68	176.23	177.85	1.62	177.85	1.62	176.17	177.31	0.006089	4.59	42.48	18.30	0.96
paveto valle	23	Q200	234.00	172.68	176.68	177.85	1.17	177.85	1.17	176.49	177.75	0.005257	4.58	51.07	19.62	0.91
paveto valle	23	Q500	268.00	172.68	176.99	177.85	0.86	177.85	0.86	176.76	178.11	0.005023	4.68	57.27	20.52	0.89
paveto valle	22.8	Q50	195.00	172.59	176.03	177.26	1.23	177.26	1.23	176.03	177.20	0.006691	4.80	40.63	17.32	1.00
paveto valle	22.8	Q200	234.00	172.59	176.38	177.26	0.88	177.26	0.88	176.38	177.65	0.006524	4.99	46.85	18.37	1.00
paveto valle	22.8	Q500	268.00	172.59	176.66	177.26	0.60	177.26	0.60	176.66	178.01	0.006414	5.15	52.07	19.21	1.00
paveto valle	22.5	Q50	195.00	172.16	175.55	177.31	1.76	177.31	1.76	175.81	177.08	0.009093	5.48	35.61	15.50	1.15
paveto valle	22.5	Q200	234.00	172.16	175.95	177.31	1.36	177.31	1.36	176.15	177.53	0.008245	5.57	41.97	16.33	1.11
paveto valle	22.5	Q500	268.00	172.16	176.30	177.31	1.01	177.31	1.01	176.44	177.90	0.007535	5.61	47.77	17.05	1.07
paveto valle	22.3	Q50	195.00	171.20	174.28	175.54	1.26	177.68	3.40	175.07	176.81	0.018378	7.03	27.72	13.97	1.59
paveto valle	22.3	Q200	234.00	171.20	174.61	175.54	0.93	177.68	3.07	175.75	177.27	0.017137	7.22	32.41	14.65	1.55
paveto valle	22.3	Q500	268.00	171.20	174.88	175.54	0.66	177.68	2.80	175.95	177.64	0.016287	7.36	36.42	15.21	1.52
paveto valle	22.2	Q50	195.00	171.20	174.31	175.54	1.23	177.08	2.77	175.07	176.77	0.017772	6.95	28.06	14.02	1.57
paveto valle	22.2	Q200	234.00	171.20	174.64	175.54	0.90	177.08	2.44	175.75	177.23	0.016599	7.14	32.79	14.71	1.53
paveto valle	22.2	Q500	268.00	171.20	176.82	175.54	-1.28	177.08	0.26	175.95	177.40	0.003516	3.38	79.24	20.28	0.46
paveto valle	22.1	Q50	195.00	171.20	174.34	175.54	1.20	177.08	2.74	175.07	176.73	0.017044	6.85	28.48	14.09	1.54
paveto valle	22.1	Q200	234.00	171.20	174.67	175.54	0.87	177.08	2.41	175.75	177.19	0.015950	7.03	33.26	14.77	1.50
paveto valle	22.1	Q500	268.00	171.20	176.81	175.54	-1.27	177.08	0.27	175.95	177.39	0.003502	3.39	79.13	20.51	0.46
paveto valle	22	Q50	195.00	171.20	174.37	175.54	1.18	177.68	3.32	175.07	176.69	0.016435	6.76	28.86	14.14	1.51
paveto valle	22	Q200	234.00	171.20	174.70	175.54	0.84	177.68	2.98	175.43	177.16	0.015399	6.95	33.69	14.83	1.47
paveto valle	22	Q500	268.00	171.20	176.69	175.54	-1.15	177.68	0.99	175.92	177.38	0.002429	3.77	76.48	25.66	0.60
paveto valle	21.9	Q50	195.00	171.32	174.23	175.55	1.32	178.55	4.32	174.92	176.54	0.016868	6.73	28.97	14.79	1.53
paveto valle	21.9	Q200	234.00	171.32	174.53	175.55	1.02	178.55	4.02	175.25	177.02	0.016170	6.99	33.49	15.41	1.51

HEC-RAS Plan: PAveto_2014 (Continued)

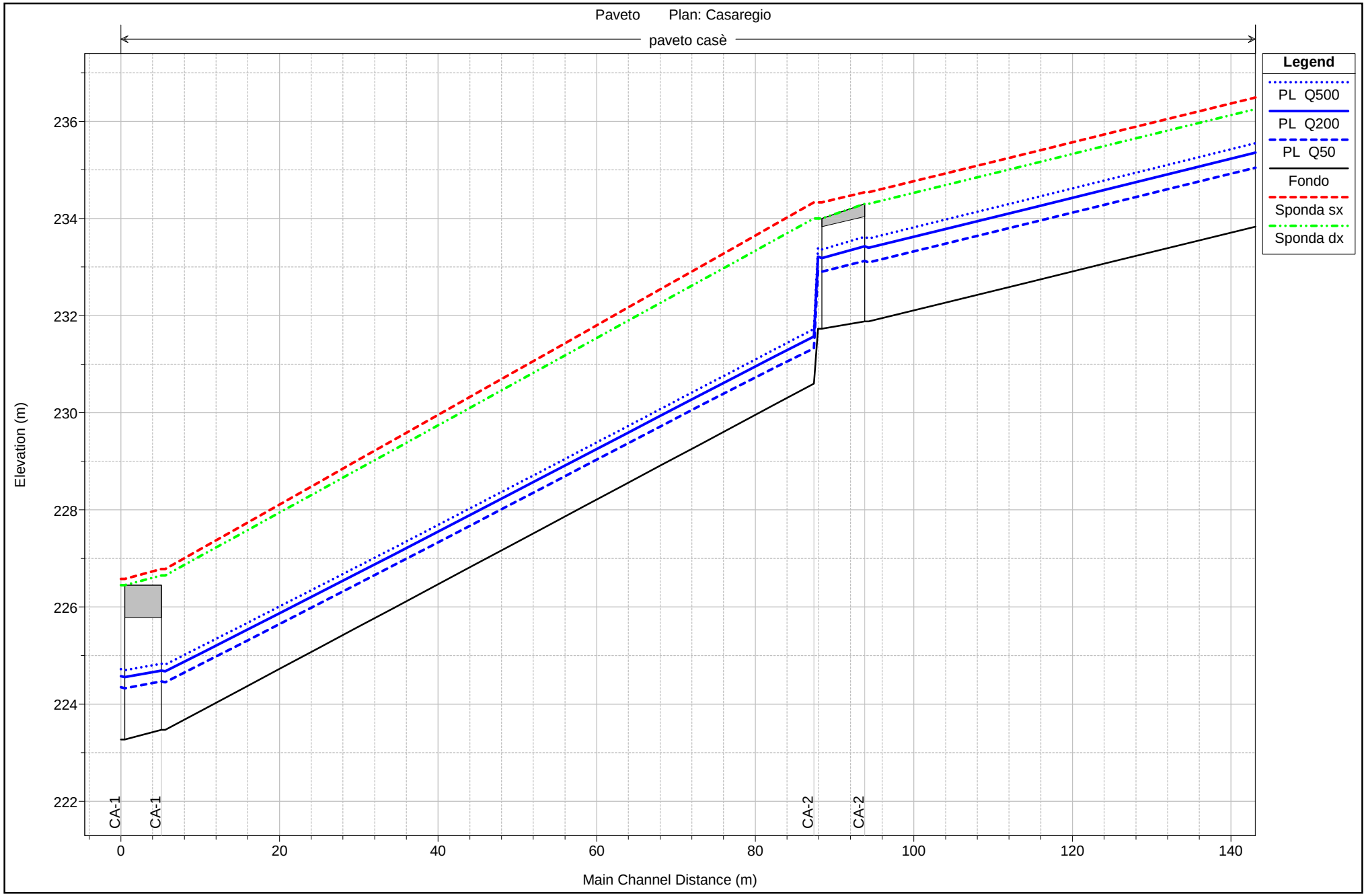
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
paveto valle	21.9	Q500	268.00	171.32	176.59	175.55	-1.04	178.55	1.96	175.51	177.35	0.002725	3.91	71.69	21.17	0.62
paveto valle	21.7	Q50	195.00	171.19	173.72	174.02	0.30	177.39	3.67	174.50	176.36	0.021711	7.20	27.08	15.11	1.72
paveto valle	21.7	Q200	234.00	171.19	175.95	174.02	-1.93	177.39	1.44	174.84	176.70	0.002858	3.84	60.96	15.31	0.61
paveto valle	21.7	Q500	268.00	171.19	176.66	174.02	-2.64	177.39	0.73	175.11	177.30	0.002168	3.59	78.47	17.86	0.53
paveto valle	21.5	Q50	195.00	171.03	175.31	174.26	-1.05	177.22	1.91	174.38	176.06	0.003192	3.82	51.09	14.17	0.64
paveto valle	21.5	Q200	234.00	171.03	175.86	174.26	-1.60	177.22	1.36	174.74	176.66	0.003092	3.98	58.80	14.21	0.62
paveto valle	21.5	Q500	268.00	171.03	176.57	174.26	-2.31	177.22	0.65	175.03	177.27	0.002432	3.76	74.66	16.76	0.55
paveto valle	21	Q50	195.00	170.85	175.30	174.24	-1.06	176.34	1.04	174.29	176.04	0.003081	3.79	51.40	13.71	0.63
paveto valle	21	Q200	234.00	170.85	175.84	174.24	-1.60	176.34	0.50	174.65	176.65	0.003054	3.98	58.74	13.76	0.62
paveto valle	21	Q500	268.00	170.85	176.54	174.24	-2.30	176.34	-0.20	174.94	177.25	0.002449	3.78	74.22	16.31	0.54
paveto valle	20.6	Q50	195.00	170.76	175.37	174.29	-1.08	173.09	-2.28	174.02	175.99	0.002495	3.49	55.90	13.66	0.55
paveto valle	20.6	Q200	234.00	170.76	175.91	174.29	-1.61	173.09	-2.81	174.39	176.60	0.002559	3.71	63.15	13.66	0.55
paveto valle	20.6	Q500	268.00	170.76	176.82	174.29	-2.53	173.09	-3.73	174.68	177.13	0.001166	2.63	114.99	25.00	0.36
paveto valle	20.5	Q50	195.00	170.20	175.21	174.34	-0.87	173.76	-1.45	174.15	175.96	0.003241	3.85	50.70	13.00	0.62
paveto valle	20.5	Q200	234.00	170.20	175.73	174.34	-1.39	173.76	-1.97	174.52	176.57	0.003303	4.08	57.41	13.00	0.62
paveto valle	20.5	Q500	268.00	170.20	176.74	174.34	-2.40	173.76	-2.98	174.82	177.11	0.001384	2.89	104.98	25.00	0.40
paveto valle	20	Q50	195.00	170.60	174.30	174.34	0.04	173.83	-0.47	174.30	175.84	0.008325	5.49	35.49	11.49	1.00
paveto valle	20	Q200	234.00	170.60	174.70	174.34	-0.36	173.83	-0.87	174.70	176.44	0.008523	5.84	40.08	11.50	1.00
paveto valle	20	Q500	268.00	170.60	175.03	174.34	-0.69	173.83	-1.20	175.03	176.93	0.008718	6.11	43.84	11.50	1.00
paveto valle	19.5	Q50	195.00	170.42	173.10	174.12	1.02	173.85	0.75	173.82	175.63	0.018582	7.05	27.64	13.18	1.55
paveto valle	19.5	Q200	234.00	170.42	173.37	174.12	0.75	173.85	0.48	174.18	176.22	0.018497	7.47	31.31	13.24	1.55
paveto valle	19.5	Q500	268.00	170.42	173.60	174.12	0.52	173.85	0.25	174.49	176.70	0.018478	7.80	34.36	13.29	1.55
paveto valle	19	Q50	195.00	170.29	172.77	173.94	1.17	173.88	1.11	173.56	175.46	0.021024	7.26	26.85	13.83	1.66
paveto valle	19	Q200	234.00	170.29	173.03	173.94	0.91	173.88	0.85	174.22	176.05	0.020854	7.70	30.40	13.89	1.66
paveto valle	19	Q500	268.00	170.29	173.24	173.94	0.70	173.88	0.64	174.51	176.53	0.020768	8.03	33.36	13.93	1.66
paveto valle	18.5	Q50	195.00	170.06	172.50	173.89	1.39	173.86	1.36	173.33	175.26	0.022976	7.36	26.48	14.55	1.74
paveto valle	18.5	Q200	234.00	170.06	172.74	173.89	1.15	173.86	1.12	173.67	175.85	0.022807	7.81	29.95	14.61	1.74
paveto valle	18.5	Q500	268.00	170.06	172.93	173.89	0.96	173.86	0.93	173.95	176.33	0.022708	8.16	32.83	14.66	1.74
paveto valle	18	Q50	195.00	170.08	172.43	173.86	1.43	173.99	1.56	173.22	175.08	0.022313	7.22	27.02	15.04	1.72
paveto valle	18	Q200	234.00	170.08	172.65	173.86	1.21	173.99	1.34	173.56	175.68	0.022492	7.70	30.39	15.11	1.73
paveto valle	18	Q500	268.00	170.08	172.84	173.86	1.02	173.99	1.15	173.84	176.16	0.022655	8.08	33.17	15.17	1.74
paveto valle	17.5	Q50	195.00	169.94	172.53	173.87	1.34	174.34	1.81	173.19	174.85	0.017674	6.74	28.91	14.62	1.53
paveto valle	17.5	Q200	234.00	169.94	172.77	173.87	1.10	174.34	1.57	173.53	175.43	0.018144	7.23	32.35	14.66	1.55
paveto valle	17.5	Q500	268.00	169.94	174.87	173.87	-1.00	174.34	-0.53	173.81	175.76	0.003364	4.20	63.83	15.24	0.65
paveto valle	17.1	Q50	195.00	169.80	172.87	173.79	0.92	174.15	1.28	173.16	174.61	0.011429	5.85	33.36	13.18	1.17
paveto valle	17.1	Q200	234.00	169.80	173.22	173.79	0.57	174.15	0.93	173.52	175.16	0.011332	6.18	37.88	13.18	1.16
paveto valle	17.1	Q500	268.00	169.80	174.48	173.79	-0.69	174.15	-0.33	173.82	175.71	0.005235	4.91	54.57	13.18	0.77
paveto valle	17		Bridge													

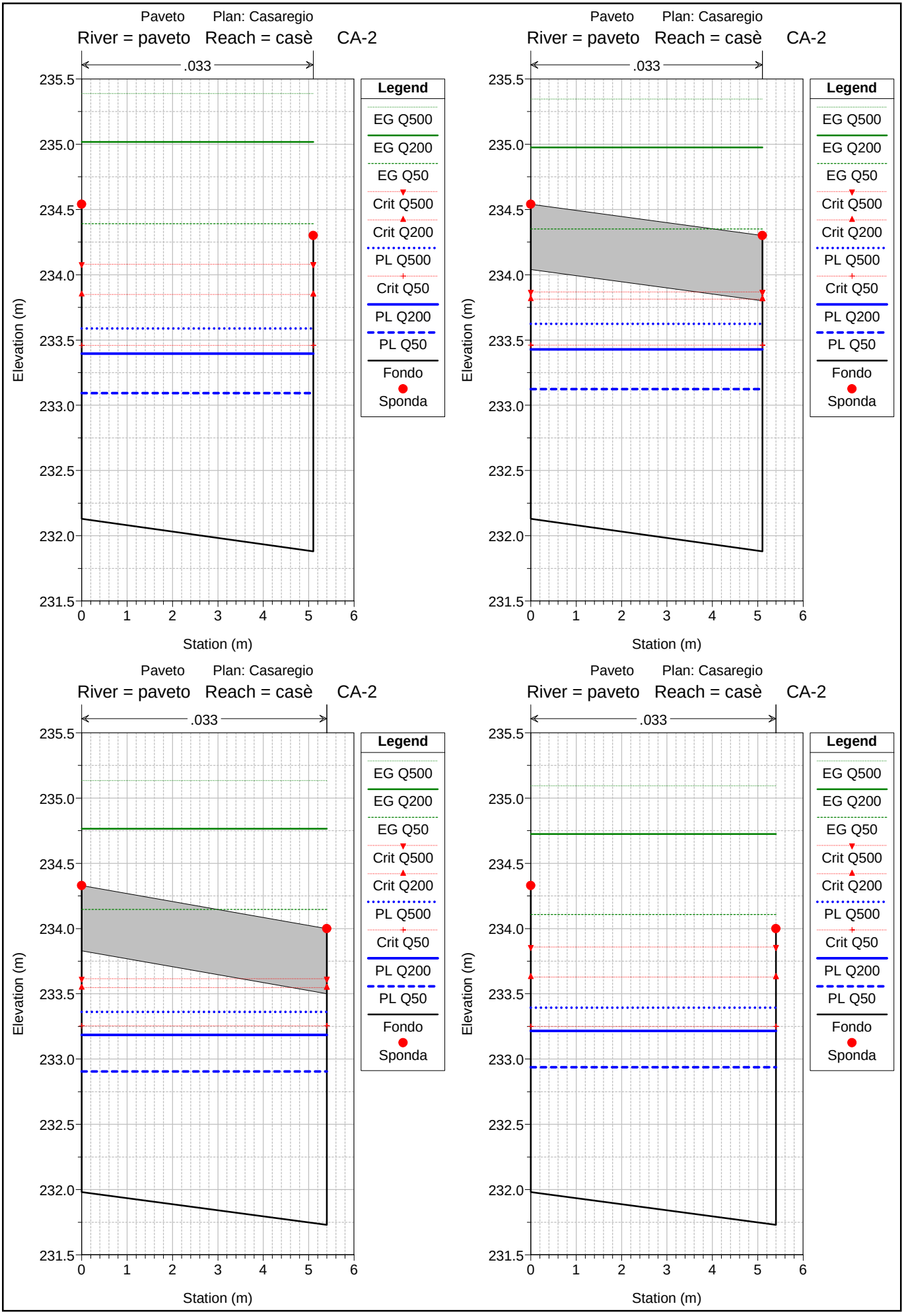
HEC-RAS Plan: PAveto_2014 (Continued)

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)	
paveto valle	16.9	Q50	195.00	169.30	172.19	173.46	1.27	174.18	1.99	172.79	174.40	0.017757	6.60	29.55	14.26	1.46
paveto valle	16.9	Q200	234.00	169.30	172.46	173.46	1.00	174.18	1.72	173.14	174.95	0.017588	6.99	33.46	14.28	1.46
paveto valle	16.9	Q500	268.00	169.30	172.70	173.46	0.76	174.18	1.48	173.42	175.39	0.017175	7.26	36.93	14.30	1.44
paveto valle	16.5	Q50	195.00	169.28	172.26	172.39	0.13	173.60	1.34	172.66	174.08	0.012412	5.97	32.65	14.68	1.28
paveto valle	16.5	Q200	234.00	169.28	172.51	172.39	-0.12	173.60	1.09	173.00	174.63	0.013083	6.46	36.24	14.72	1.31
paveto valle	16.5	Q500	268.00	169.28	172.72	172.39	-0.33	173.60	0.88	173.28	175.08	0.013379	6.80	39.42	14.74	1.33
paveto valle	16	Q50	195.00	168.76	171.50	171.77	0.27	171.77	0.27	172.13	173.79	0.016773	6.70	29.10	13.73	1.47
paveto valle	16	Q200	234.00	168.76	171.79	171.77	-0.02	171.77	-0.02	172.48	174.34	0.016696	7.07	33.08	14.10	1.47
paveto valle	16	Q500	268.00	168.76	172.02	171.77	-0.25	171.77	-0.25	172.77	174.78	0.016483	7.36	36.41	14.10	1.46
paveto valle	15.5	Q50	195.00	168.64	170.90	171.53	0.63	171.53	0.63	171.83	173.66	0.028173	7.37	26.47	17.25	1.90
paveto valle	15.5	Q200	234.00	168.64	171.10	171.53	0.43	171.53	0.43	172.09	174.20	0.027600	7.80	29.99	17.42	1.90
paveto valle	15.5	Q500	268.00	168.64	171.27	171.53	0.26	171.53	0.26	172.30	174.64	0.027187	8.14	32.93	17.57	1.90
paveto valle	15	Q50	195.00	168.50	170.35	171.30	0.95	171.30	0.95	171.22	173.38	0.041171	7.71	25.30	21.45	2.27
paveto valle	15	Q200	234.00	168.50	170.50	171.30	0.80	171.30	0.80	171.57	173.91	0.040269	8.19	28.59	21.61	2.27
paveto valle	15	Q500	268.00	168.50	170.63	171.30	0.67	171.30	0.67	171.75	174.35	0.039553	8.55	31.34	21.74	2.27
paveto valle	14.5	Q50	195.00	167.98	169.99	171.10	1.11	171.10	1.11	170.81	173.01	0.050058	7.70	25.32	25.34	2.46
paveto valle	14.5	Q200	234.00	167.98	170.11	171.10	0.99	171.10	0.99	171.17	173.56	0.049540	8.23	28.45	25.45	2.48
paveto valle	14.5	Q500	268.00	167.98	170.21	171.10	0.89	171.10	0.89	171.33	174.00	0.048840	8.62	31.10	25.55	2.49
paveto valle	14	Q50	195.00	168.02	170.09	170.92	0.83	171.94	1.85	171.00	172.65	0.030434	7.09	27.49	20.14	1.94
paveto valle	14	Q200	234.00	168.02	170.26	170.92	0.66	171.94	1.68	171.24	173.18	0.030329	7.58	30.89	20.19	1.95
paveto valle	14	Q500	268.00	168.02	170.40	170.92	0.52	171.94	1.54	171.42	173.61	0.030079	7.94	33.76	20.24	1.96
paveto valle	13.5	Q50	195.00	167.72	170.08	170.67	0.59	173.75	3.67	170.84	172.17	0.019573	6.40	30.47	18.67	1.60
paveto valle	13.5	Q200	234.00	167.72	170.27	170.67	0.40	173.75	3.48	171.08	172.68	0.020094	6.88	34.00	18.85	1.64
paveto valle	13.5	Q500	268.00	167.72	170.43	170.67	0.24	173.75	3.32	171.28	173.10	0.020380	7.25	36.98	19.01	1.66
paveto valle	13. PAV-13	Q50	195.00	166.70	168.33	169.94	1.61	177.60	9.27	169.37	171.99	0.060441	8.49	22.98	16.68	2.31
paveto valle	13. PAV-13	Q200	234.00	166.70	168.53	169.94	1.41	177.60	9.07	169.68	172.51	0.056058	8.83	26.49	16.89	2.25
paveto valle	13. PAV-13	Q500	268.00	166.70	168.71	169.94	1.23	177.60	8.89	169.99	172.93	0.053187	9.11	29.43	17.07	2.21
paveto valle	12. PAV-12	Q50	195.00	165.15	166.63	169.60	2.97	169.10	2.47	167.57	170.28	0.084554	8.46	23.05	23.66	2.74
paveto valle	12. PAV-12	Q200	234.00	165.15	166.76	169.60	2.84	169.10	2.34	167.82	170.88	0.082829	9.00	26.00	23.79	2.75
paveto valle	12. PAV-12	Q500	268.00	165.15	166.86	169.60	2.74	169.10	2.24	168.02	171.37	0.081290	9.41	28.48	23.89	2.75
paveto valle	11. PAV-11	Q50	195.00	164.50	166.07	168.40	2.33	169.00	2.93	166.74	168.33	0.044967	6.66	29.27	26.78	2.03
paveto valle	11. PAV-11	Q200	234.00	164.50	166.18	168.40	2.22	169.00	2.82	166.95	168.85	0.048333	7.23	32.35	27.53	2.13
paveto valle	11. PAV-11	Q500	268.00	164.50	166.27	168.40	2.13	169.00	2.73	167.14	169.29	0.051047	7.69	34.84	28.12	2.21
paveto valle	10. PAV-10	Q50	195.00	163.78	165.77	168.59	2.82	166.17	0.40	166.29	167.12	0.016992	5.15	37.83	23.13	1.29
paveto valle	10. PAV-10	Q200	234.00	163.78	165.97	168.59	2.62	166.17	0.20	166.53	167.52	0.017087	5.51	42.44	23.31	1.30
paveto valle	10. PAV-10	Q500	268.00	163.78	166.11	168.59	2.48	166.17	0.06	166.70	167.84	0.017645	5.84	46.79	38.24	1.33
paveto valle	9. PAV-9	Q50	195.00	161.90	165.17	167.80	2.63	164.15	-1.02	165.54	166.42	0.011512	5.14	42.76	31.61	1.11
paveto valle	9. PAV-9	Q200	234.00	161.90	165.29	167.80	2.51	164.15	-1.14	165.78	166.82	0.013755	5.73	46.59	33.78	1.22
paveto valle	9. PAV-9	Q500	268.00	161.90	165.42	167.80	2.38	164.15	-1.27	165.98	167.11	0.014526	6.08	50.99	35.73	1.26

HEC-RAS Plan: PAveto_2014 (Continued)

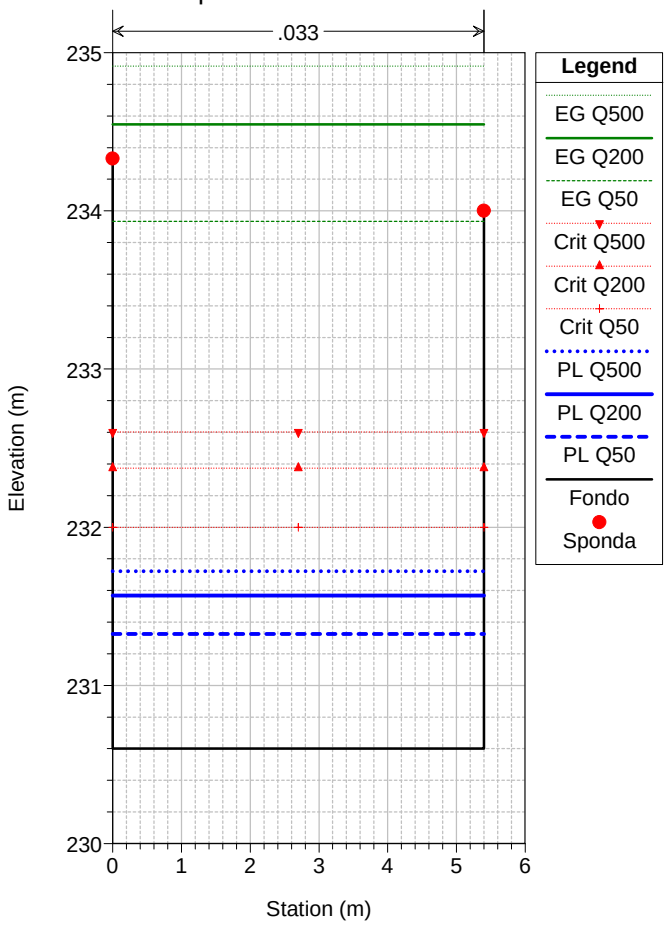
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
paveto valle	8. PAV-8	Q50	195.00	161.76	164.37	167.00	2.63	163.80	-0.57	164.92	166.00	0.014807	5.71	36.02	23.44	1.20
paveto valle	8. PAV-8	Q200	234.00	161.76	164.62	167.00	2.38	163.80	-0.82	165.23	166.40	0.014662	6.02	42.36	27.39	1.20
paveto valle	8. PAV-8	Q500	268.00	161.76	165.99	167.00	1.01	163.80	-2.19	165.46	166.50	0.003118	3.52	94.40	48.98	0.57
paveto valle	7. PAV-7	Q50	195.00	161.00	164.84	167.00	2.16	163.91	-0.93	164.26	165.58	0.005065	3.87	53.68	25.88	0.69
paveto valle	7. PAV-7	Q200	234.00	161.00	165.35	167.00	1.65	163.91	-1.44	164.71	166.03	0.004208	3.79	68.78	32.63	0.64
paveto valle	7. PAV-7	Q500	268.00	161.00	165.80	167.00	1.20	163.91	-1.89	165.06	166.39	0.003391	3.59	83.86	33.91	0.59
paveto valle	6. PAV-6	Q50	195.00	160.40	162.73	165.00	2.27	166.00	3.27	163.39	165.12	0.025086	6.85	28.45	12.99	1.48
paveto valle	6. PAV-6	Q200	234.00	160.40	163.12	165.00	1.89	166.00	2.88	163.78	165.60	0.022320	6.99	33.50	13.16	1.40
paveto valle	6. PAV-6	Q500	268.00	160.40	163.46	165.00	1.54	166.00	2.54	164.12	165.99	0.020189	7.04	38.06	13.32	1.33
paveto valle	5. PAV-5	Q50	195.00	159.50	162.64	164.60	1.96	165.30	2.66	162.94	164.35	0.016201	5.80	33.62	14.10	1.20
paveto valle	5. PAV-5	Q200	234.00	159.50	162.87	164.60	1.73	165.30	2.43	163.31	164.92	0.017672	6.34	36.91	14.10	1.25
paveto valle	5. PAV-5	Q500	268.00	159.50	163.12	164.60	1.48	165.30	2.18	163.70	165.36	0.017775	6.63	40.39	14.10	1.25
paveto valle	4. PAV-4	Q50	195.00	159.30	162.76	167.50	4.74	164.70	1.94	162.76	164.13	0.011200	5.18	37.67	13.80	1.00
paveto valle	4. PAV-4	Q200	234.00	159.30	163.12	167.50	4.38	164.70	1.58	163.12	164.66	0.011269	5.49	42.60	13.86	1.00
paveto valle	4. PAV-4	Q500	268.00	159.30	163.60	167.50	3.90	164.70	1.10	163.42	165.11	0.009749	5.44	49.22	13.95	0.93
paveto valle	3. PAV-3	Q50	195.00	158.40	162.39	170.00	7.61	165.00	2.61	161.63	163.28	0.006370	4.18	46.65	12.90	0.70
paveto valle	3. PAV-3	Q200	234.00	158.40	162.97	170.00	7.03	165.00	2.03	162.00	163.92	0.005995	4.32	54.19	12.90	0.67
paveto valle	3. PAV-3	Q500	268.00	158.40	163.48	170.00	6.52	165.00	1.52	162.30	164.47	0.005700	4.41	60.79	12.90	0.65
paveto valle	2. PAV-2	Q50	195.00	158.30	161.54	164.50	2.96	164.50	2.96	161.49	163.06	0.012525	5.46	35.72	11.20	0.98
paveto valle	2. PAV-2	Q200	234.00	158.30	161.95	164.50	2.55	164.50	2.55	161.90	163.67	0.012811	5.80	40.31	11.20	0.98
paveto valle	2. PAV-2	Q500	268.00	158.30	162.40	164.50	2.10	164.50	2.10	162.23	164.18	0.012102	5.91	45.35	11.20	0.94
paveto valle	1.5	Bridge														
paveto valle	1. PAV-1	Q50	195.00	158.30	160.91	164.00	3.09	164.00	3.09	161.30	162.82	0.017932	6.12	31.86	12.91	1.24
paveto valle	1. PAV-1	Q200	234.00	158.30	161.19	164.00	2.81	164.00	2.81	161.68	163.40	0.018737	6.58	35.54	13.01	1.27
paveto valle	1. PAV-1	Q500	268.00	158.30	161.42	164.00	2.58	164.00	2.58	161.98	163.89	0.019472	6.96	38.51	13.09	1.30


Paveto Plan: Casaregio
paveto casè
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
236
234
232
230
228
226
224
222
CA-1
CA-1
CA-2
CA-2
0
20
40
60
80
100
120
140
Main Channel Distance (m)


Paveto Plan: Casaregio
River = paveto Reach = casè CA-2
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
235.5
235.0
234.5
234.0
233.5
233.0
232.5
232.0
231.5
0
1
2
3
4
5
6

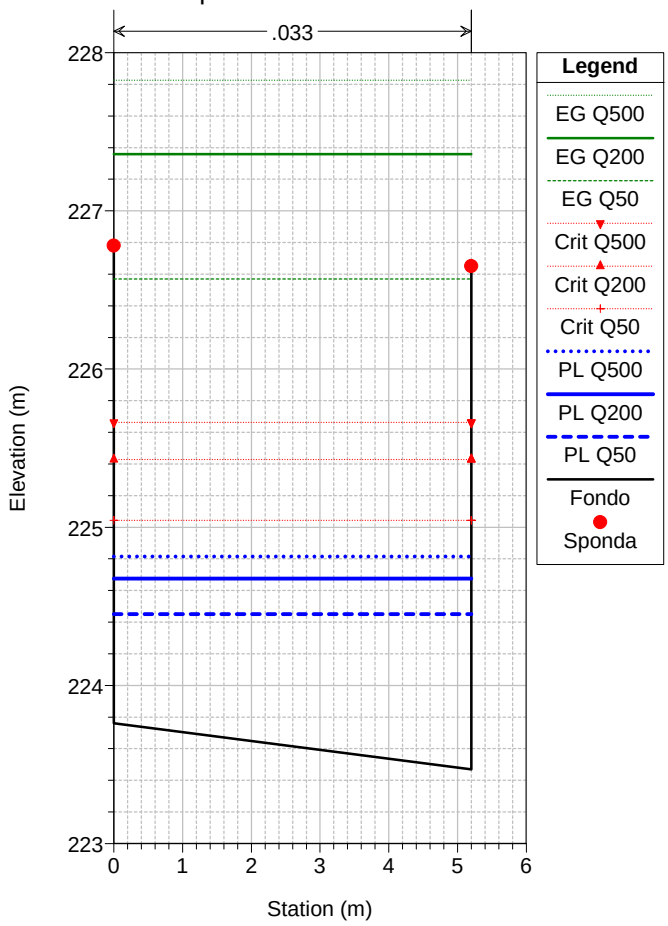
Paveto Plan: Casaregio

River = paveto Reach = casè CA-2



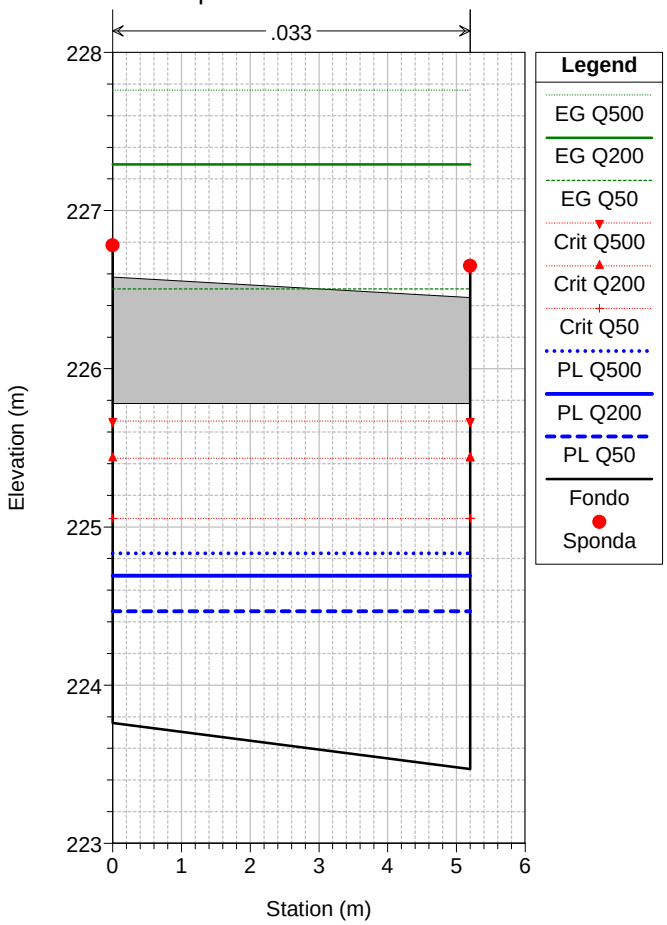
Paveto Plan: Casaregio

River = paveto Reach = casè CA-1



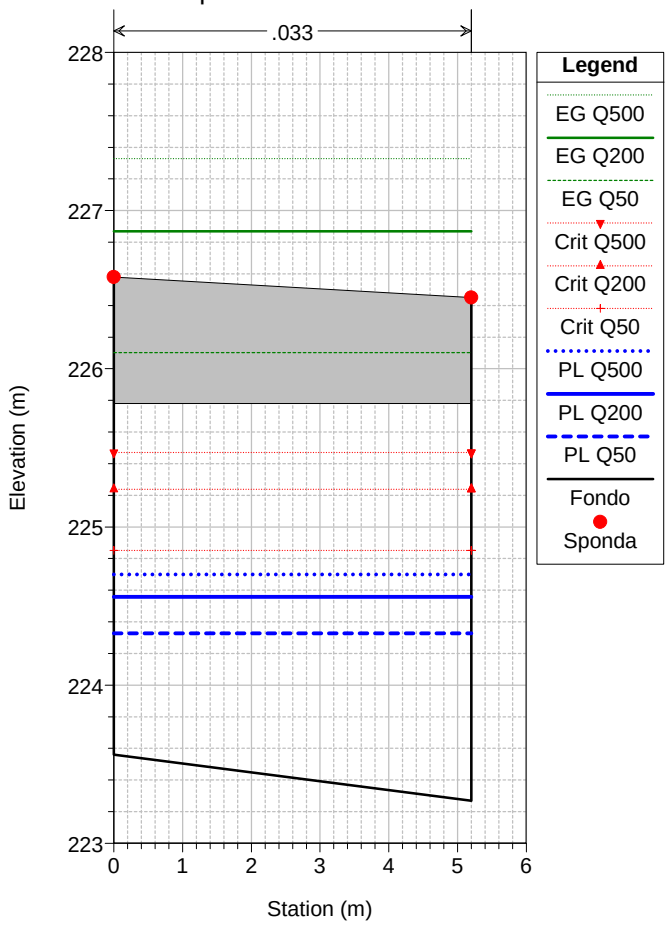
Paveto Plan: Casaregio

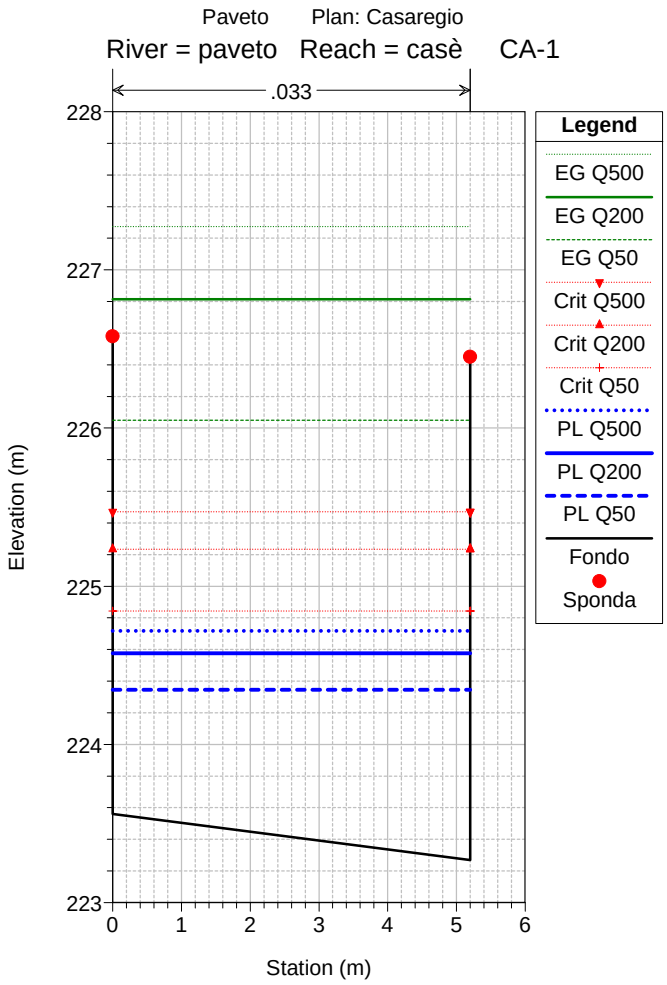
River = paveto Reach = casè CA-1



Paveto Plan: Casaregio

River = paveto Reach = casè CA-1




Paveto Plan: Casaregio
River = paveto Reach = casè CA-1
.033
228
227
226
225
224
223
Elevation (m)
0
1
2
3
4
5
6
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

HEC-RAS Plan: Casa River: paveto Reach: casè

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)	
casè	100	Q50	28.00	235.88	237.46	238.54	1.08	238.30	0.84	237.46	238.19	0.017220	3.78	7.42	5.10	1.00
casè	100	Q200	40.00	235.88	237.85	238.54	0.69	238.30	0.45	237.85	238.77	0.018038	4.26	9.40	5.10	1.00
casè	100	Q500	48.00	235.88	238.08	238.54	0.46	238.30	0.22	238.08	239.13	0.018746	4.54	10.58	5.10	1.01
casè	4 CA-2	Q50	28.00	231.88	233.09	234.54	1.45	234.30	1.21	233.46	234.39	0.039891	5.05	5.55	5.10	1.55
casè	4 CA-2	Q200	40.00	231.88	233.39	234.54	1.15	234.30	0.91	233.85	235.02	0.039971	5.64	7.09	5.10	1.53
casè	4 CA-2	Q500	48.00	231.88	233.59	234.54	0.95	234.30	0.71	234.08	235.39	0.039732	5.94	8.08	5.10	1.51
casè	3.5 CA-2		Bridge													
casè	3.1 CA-2	Q50	28.00	231.73	232.94	234.33	1.39	234.00	1.06	233.25	234.11	0.035348	4.79	5.84	5.40	1.47
casè	3.1 CA-2	Q200	40.00	231.73	233.22	234.33	1.11	234.00	0.78	233.63	234.73	0.036895	5.44	7.35	5.40	1.49
casè	3.1 CA-2	Q500	48.00	231.73	233.39	234.33	0.94	234.00	0.61	233.86	235.09	0.037329	5.78	8.31	5.40	1.49
casè	3 CA-2	Q50	28.00	230.60	231.32	234.33	3.01	234.00	2.68	232.00	233.93	0.117648	7.16	3.91	5.40	2.68
casè	3 CA-2	Q200	40.00	230.60	231.57	234.33	2.76	234.00	2.43	232.37	234.55	0.099959	7.65	5.23	5.40	2.48
casè	3 CA-2	Q500	48.00	230.60	231.72	234.33	2.61	234.00	2.28	232.60	234.92	0.092974	7.92	6.06	5.40	2.38
casè	2 CA-1	Q50	28.00	223.47	224.45	226.78	2.33	226.65	2.20	225.04	226.57	0.083671	6.45	4.34	5.20	2.25
casè	2 CA-1	Q200	40.00	223.47	224.67	226.78	2.11	226.65	1.97	225.43	227.36	0.083859	7.26	5.51	5.20	2.25
casè	2 CA-1	Q500	48.00	223.47	224.82	226.78	1.96	226.65	1.83	225.66	227.83	0.083783	7.69	6.24	5.20	2.24
casè	1.5 CA-1		Bridge													
casè	1 CA-1	Q50	28.00	223.27	224.35	226.58	2.23	226.45	2.10	224.84	226.05	0.060251	5.78	4.84	5.20	1.91
casè	1 CA-1	Q200	40.00	223.27	224.58	226.58	2.00	226.45	1.87	225.23	226.81	0.064238	6.63	6.04	5.20	1.96
casè	1 CA-1	Q500	48.00	223.27	224.72	226.58	1.86	226.45	1.73	225.47	227.27	0.066008	7.08	6.78	5.20	1.98

9.3 Località Ponterosso: Riccò, Pallareto e Montanesi

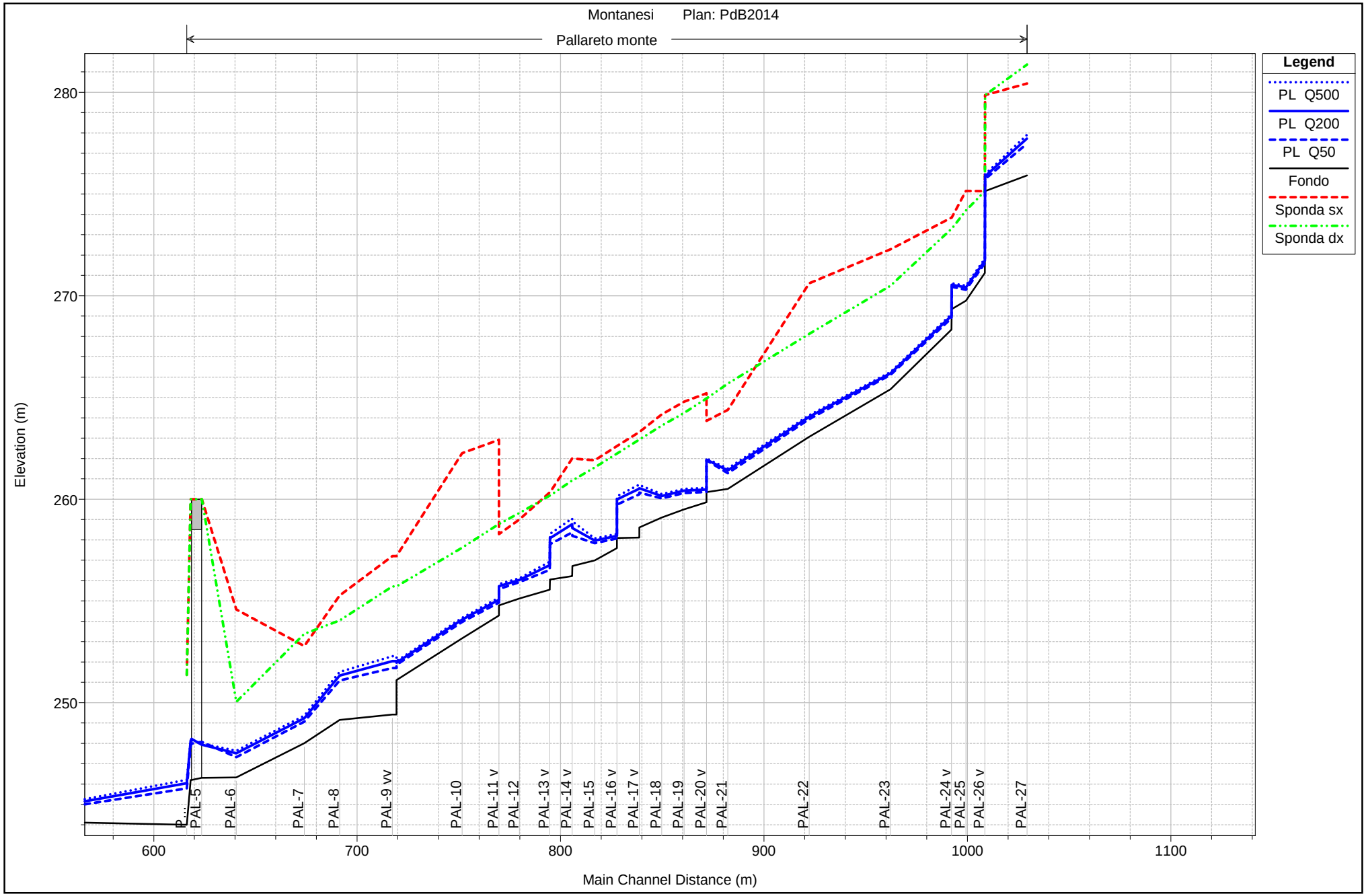
Nelle verifiche idrauliche del nodo di Ponterosso, sono stati analizzati il torrente Pallareto, per un tratto di circa 1 km a monte della confluenza con il rio Rico, un breve tratto di quest'ultimo per modellare la confluenza, nonché una tratto del torrente Montanesi, affluente in sinistra del t. Pallareto per circa 250 m.

Nella tabella successiva si riportano le portate utilizzate nei diversi scenari simulati:

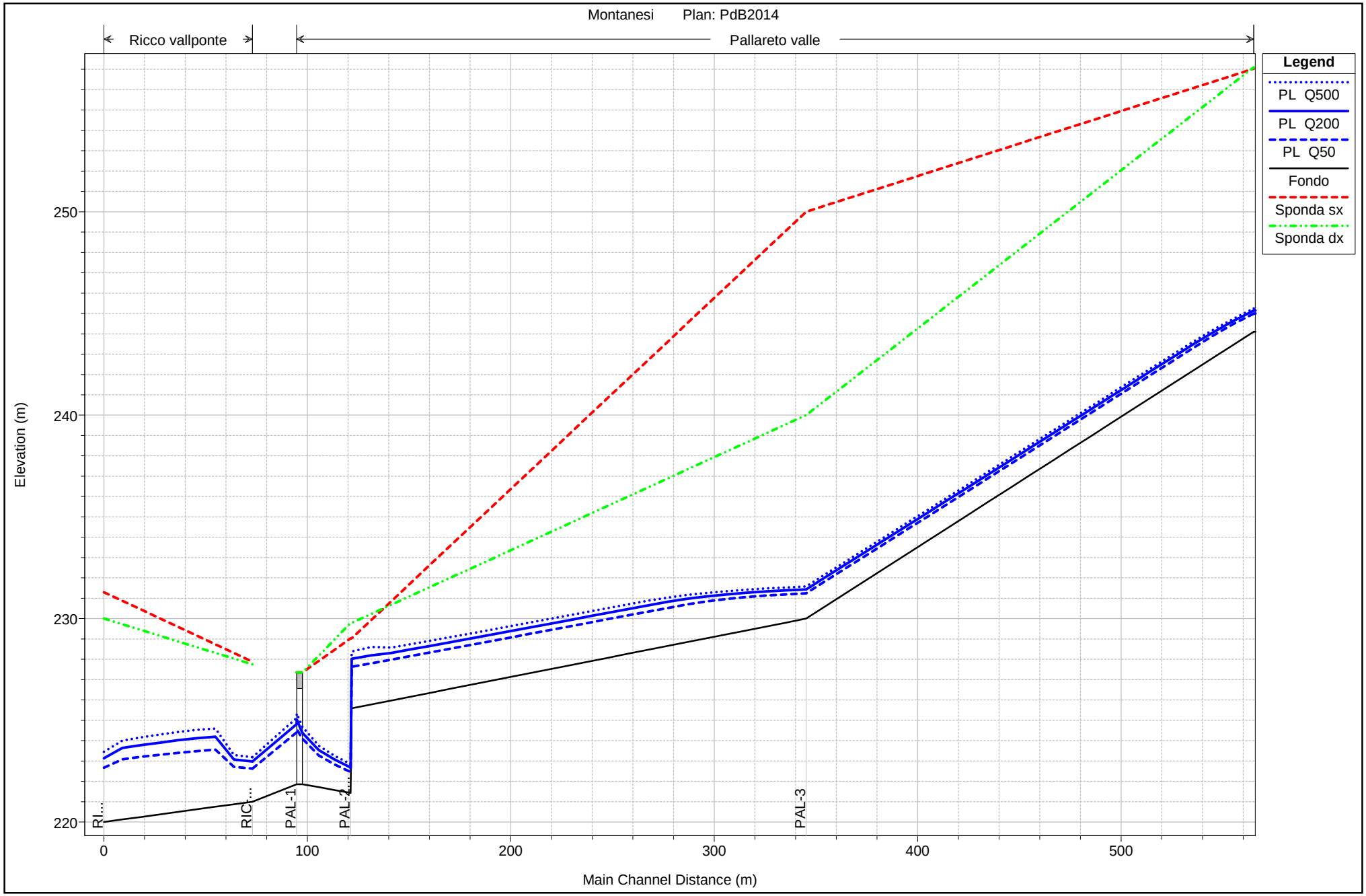
	TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
			T = 50 anni	T = 200 anni	T = 500 anni
Pallareto in piena	Rio Rico	differenza	41	55	63
	Torrente Montanesi	differenza	61	74	84
	Torrente Pallareto a monte Montanesi	PAL0	32	42	50
	Torrente Pallareto tra Montanesi e Rico	PAL1	93	116	134
	Torrente Riccò a valle Rico	RIC2	134	171	197
Rico In piena	Rio Rico	RIC	53	67	77
	Torrente Pallareto tra Montanesi e Rico	differenza	81	104	120
	Torrente Riccò a valle Rico	RIC2	134	171	197
Montanesi In piena	Torrente Montanesi	MON	63	76	86
	Torrente Pallareto tra Montanesi e Rico	RIC1	93	116	134
	Torrente Pallareto a monte Montanesi	differenza	30	40	48

Come condizioni al contorno è stata imposta la profondità critica sia a monte che a valle.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza ks di Strickler pari a 35 $m^{1/3}/s$ sul Montanesi e a 30 a $m^{1/3}/s$ sugli atri corsi d'acqua.



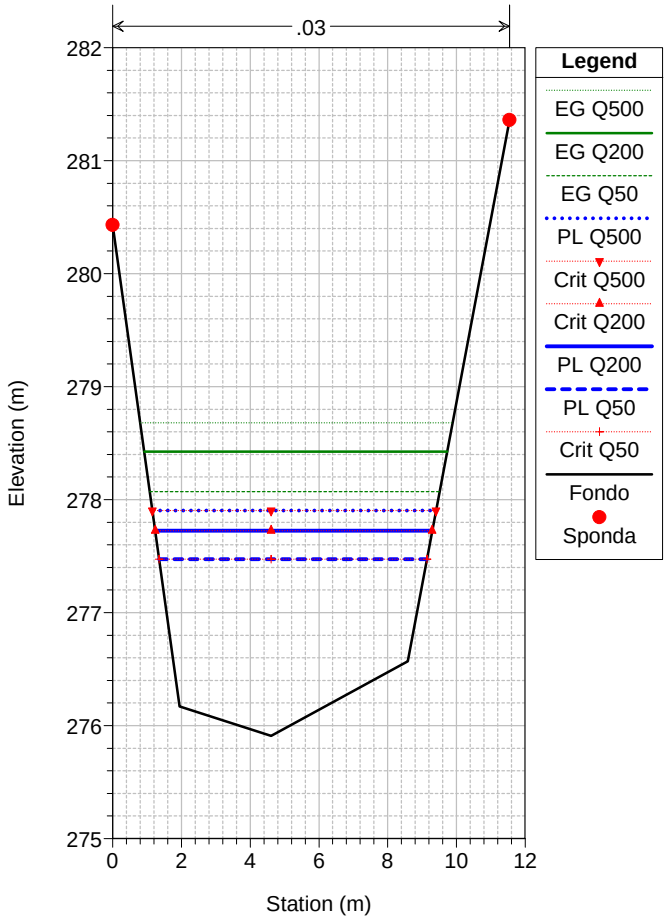
1 cm Horiz. = 25 m 1 cm Vert. = 2.5 m



1 cm Horiz. = 25 m 1 cm Vert. = 2.5 m

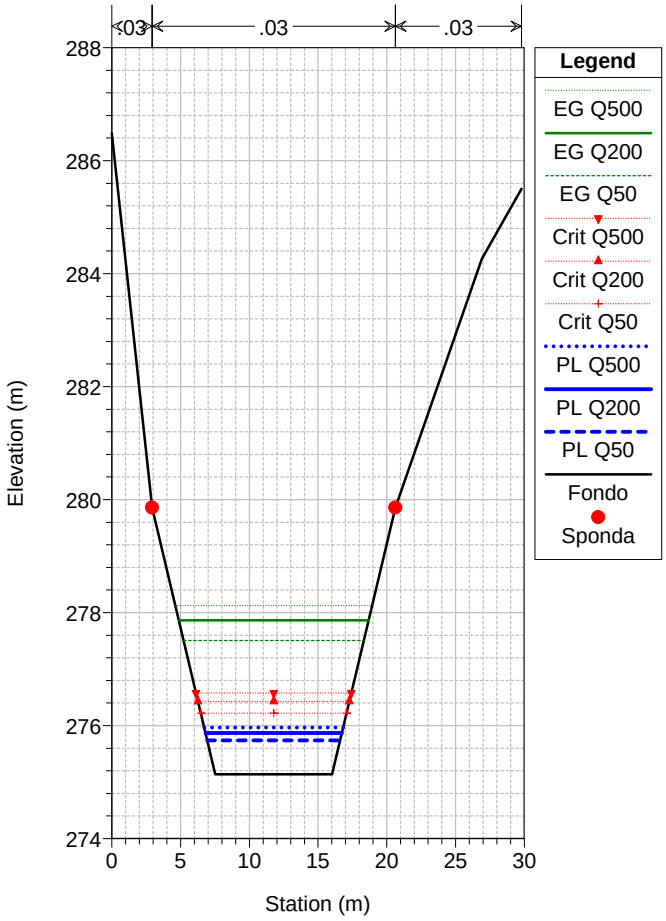
Montanesi Plan: PdB2014

River = Pallareto Reach = monte PAL-27



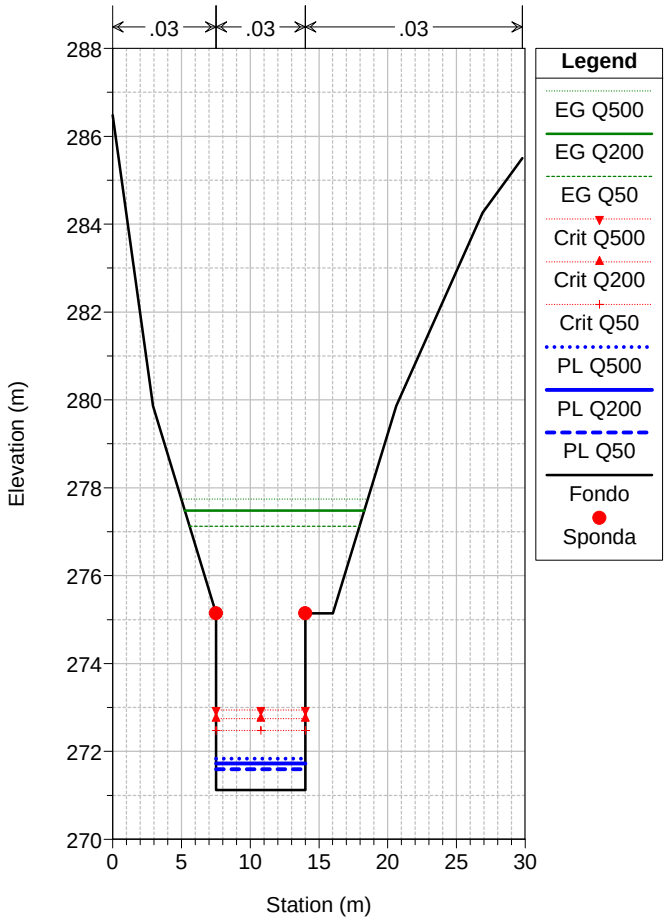
Montanesi Plan: PdB2014

River = Pallareto Reach = monte PAL-26 m



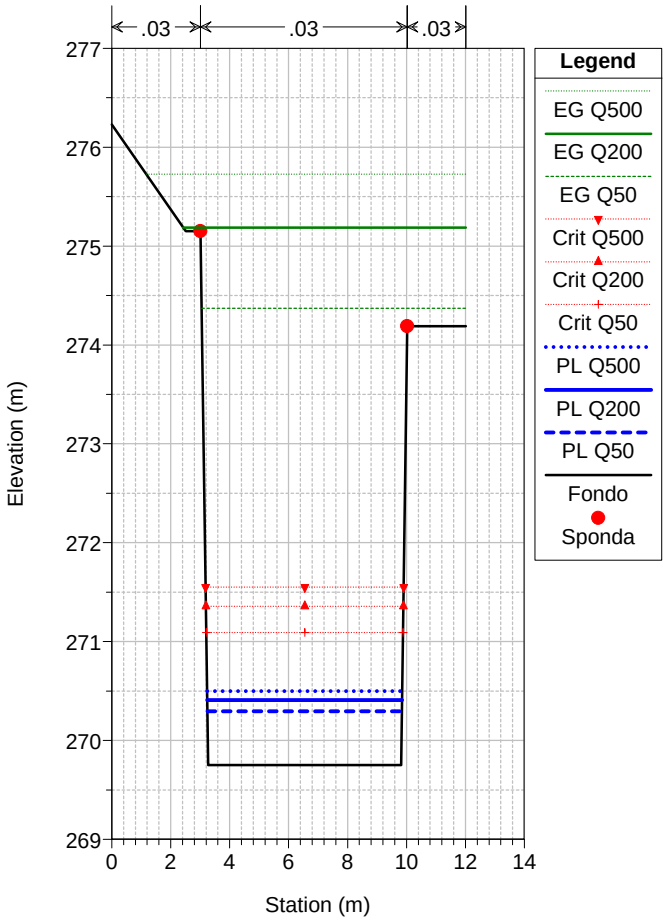
Montanesi Plan: PdB2014

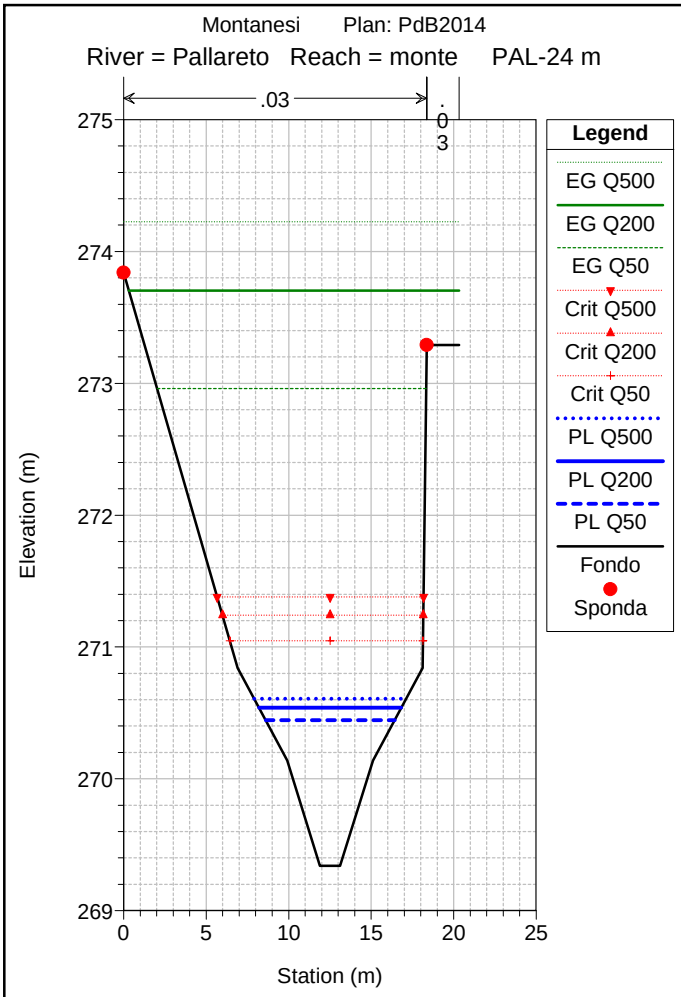
River = Pallareto Reach = monte PAL-26 v

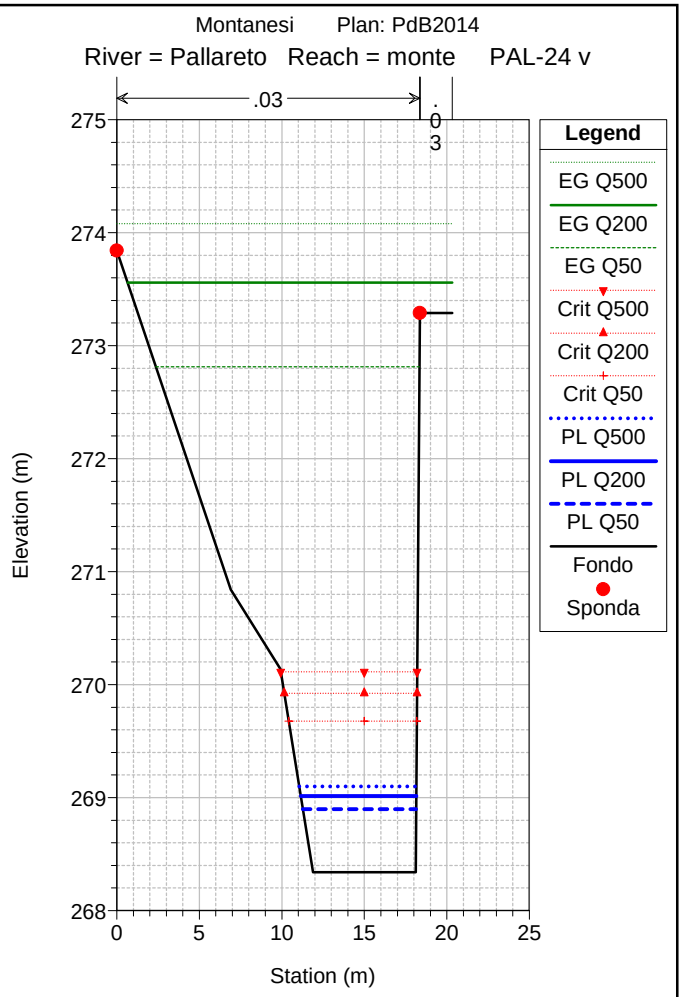


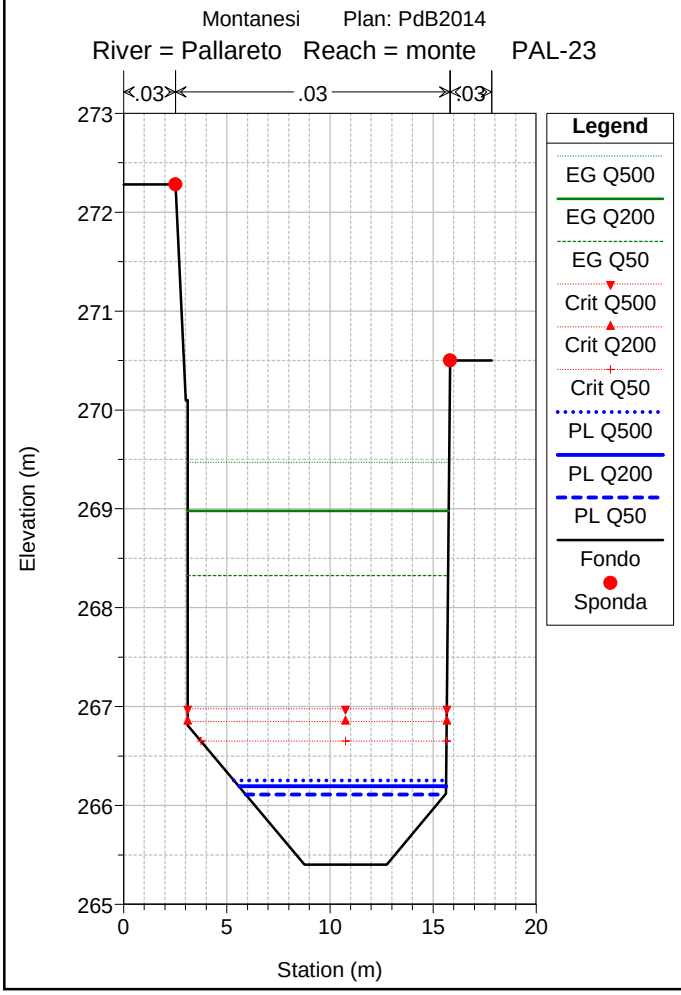
Montanesi Plan: PdB2014

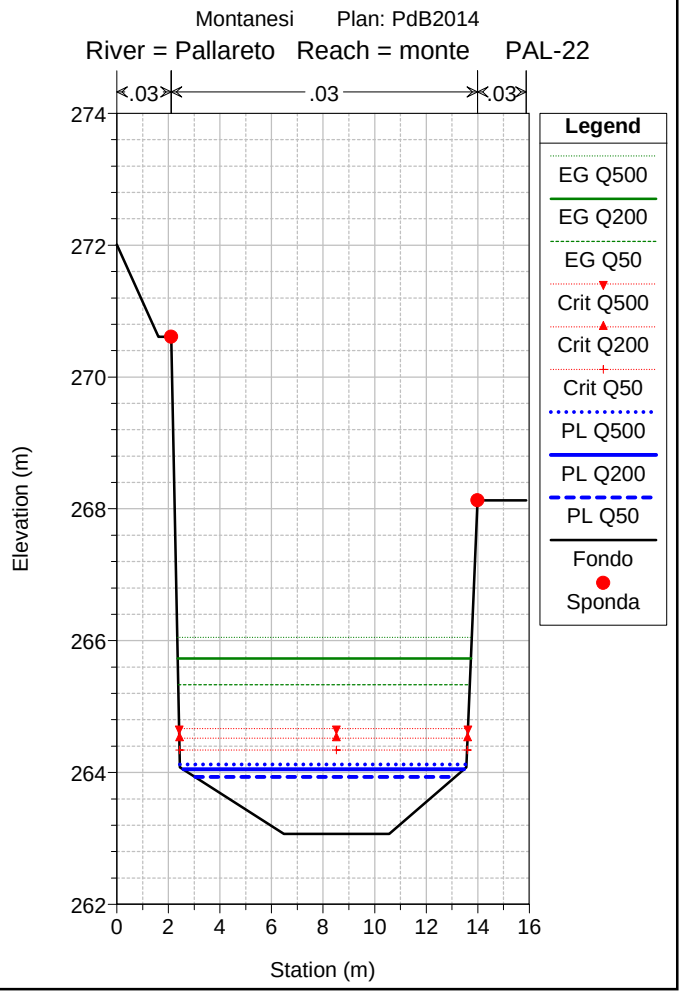
River = Pallareto Reach = monte PAL-25

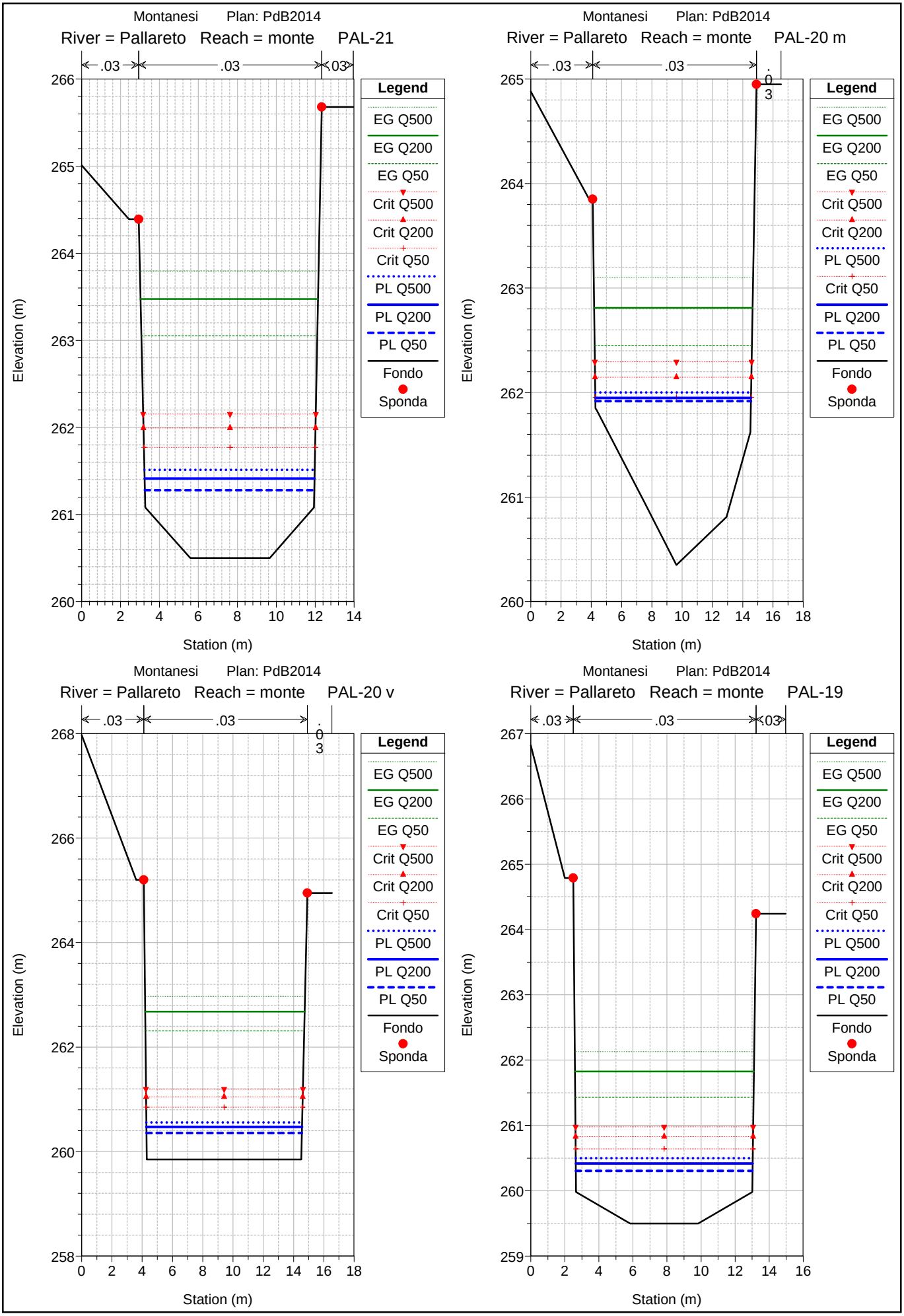


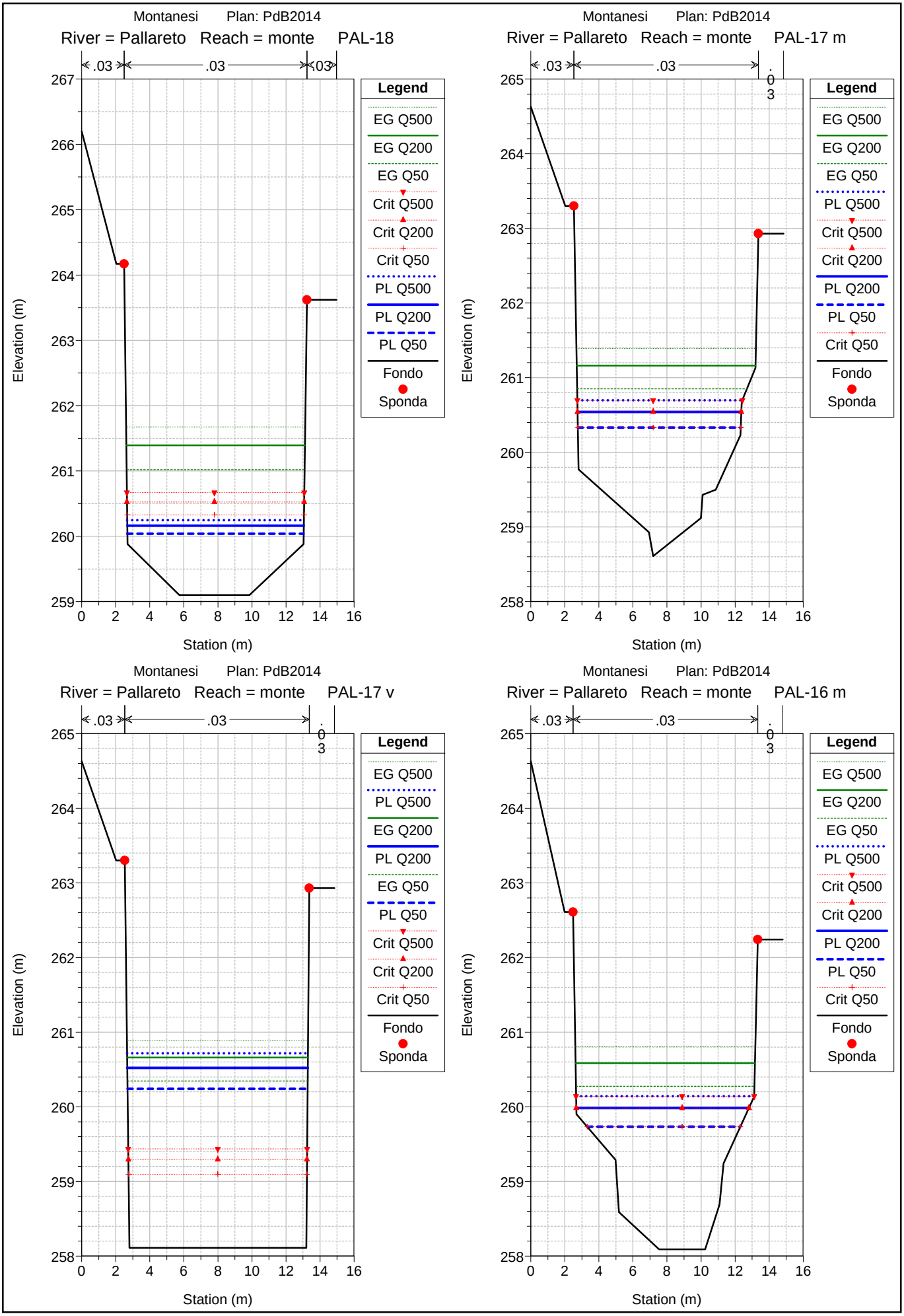

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-24 m
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

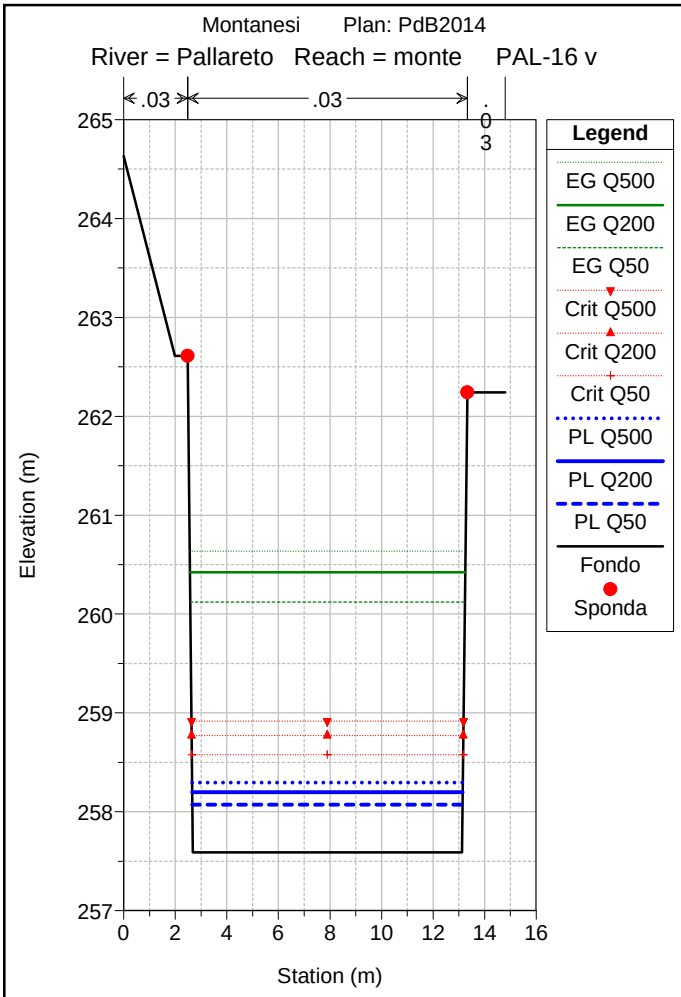

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-24 v
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

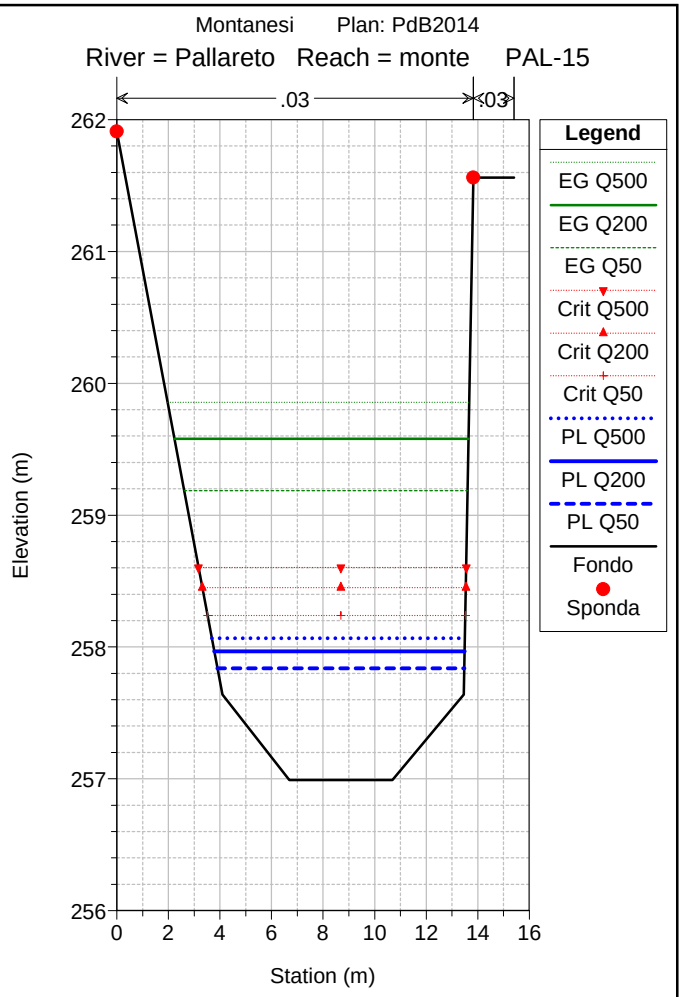

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-23
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

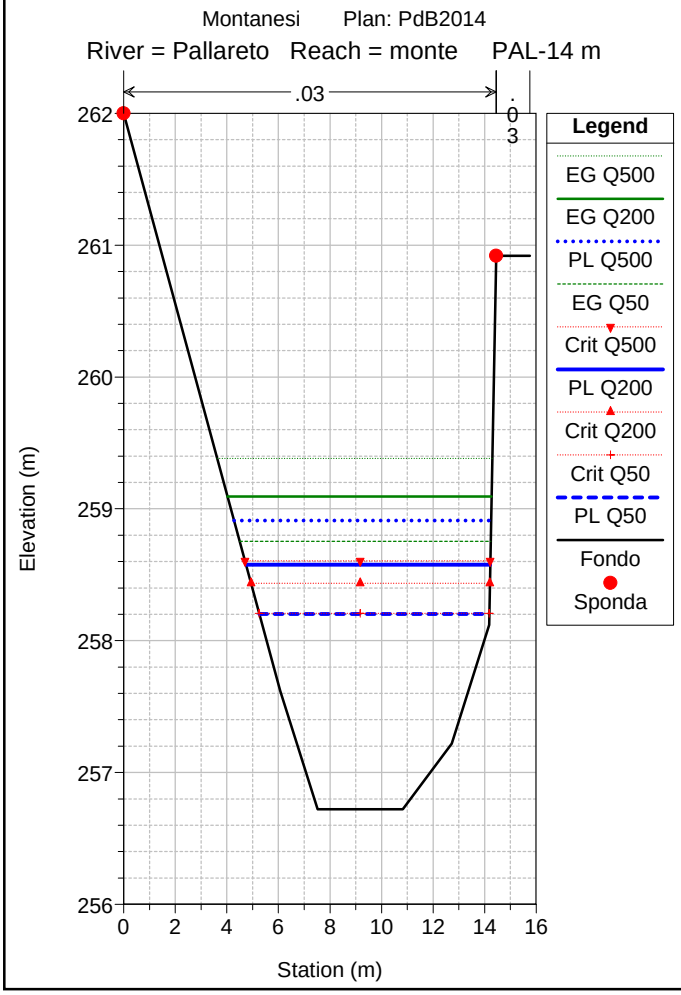

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-22
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

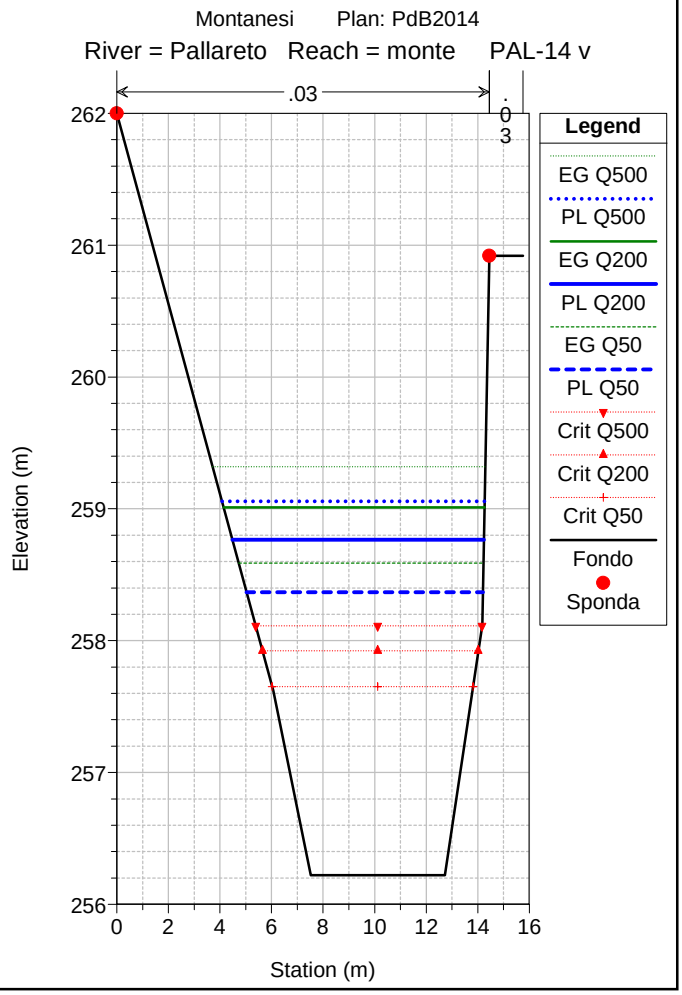

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-21
.03 .03 .03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-20 m
.03 .03 .03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-20 v
.03 .03 .03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-19
.03 .03 .03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

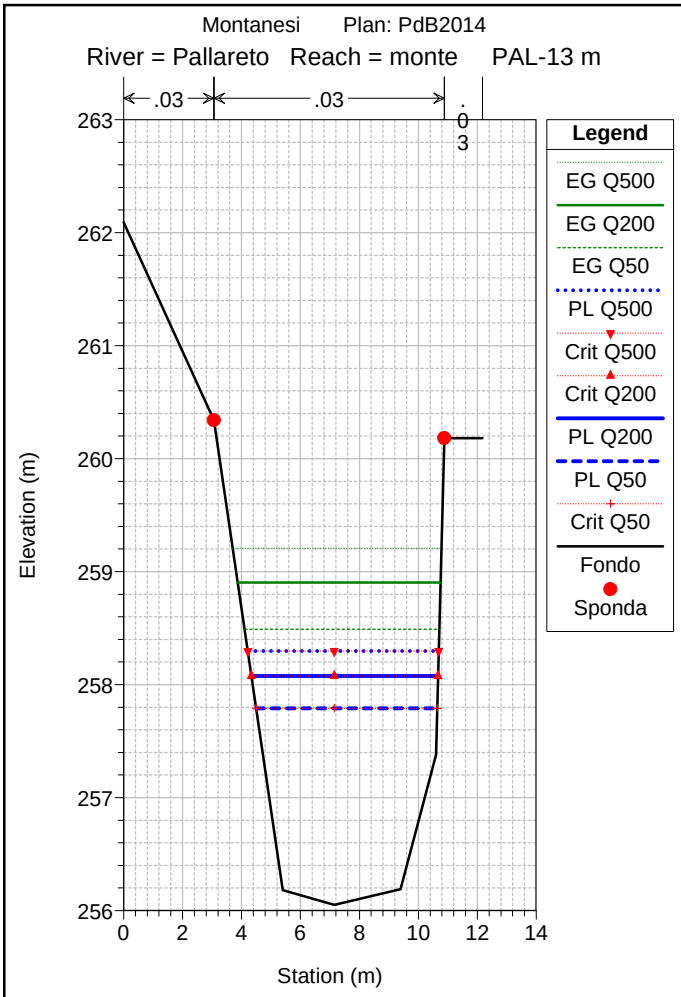

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-18
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-17 m
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-17 v
.03
.03
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-16 m
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

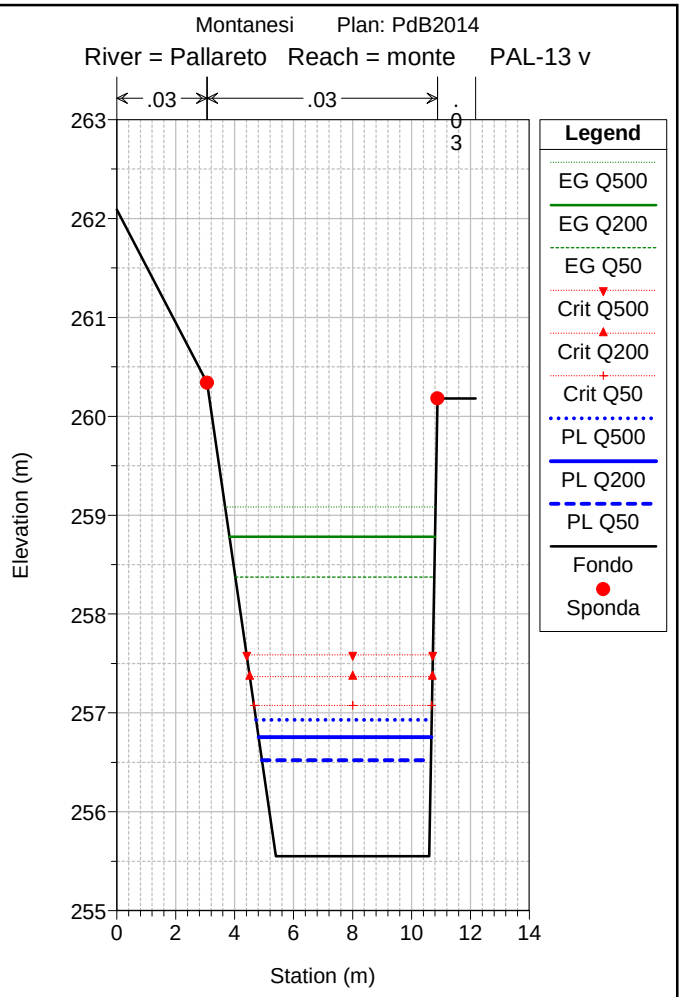

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-16 v
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

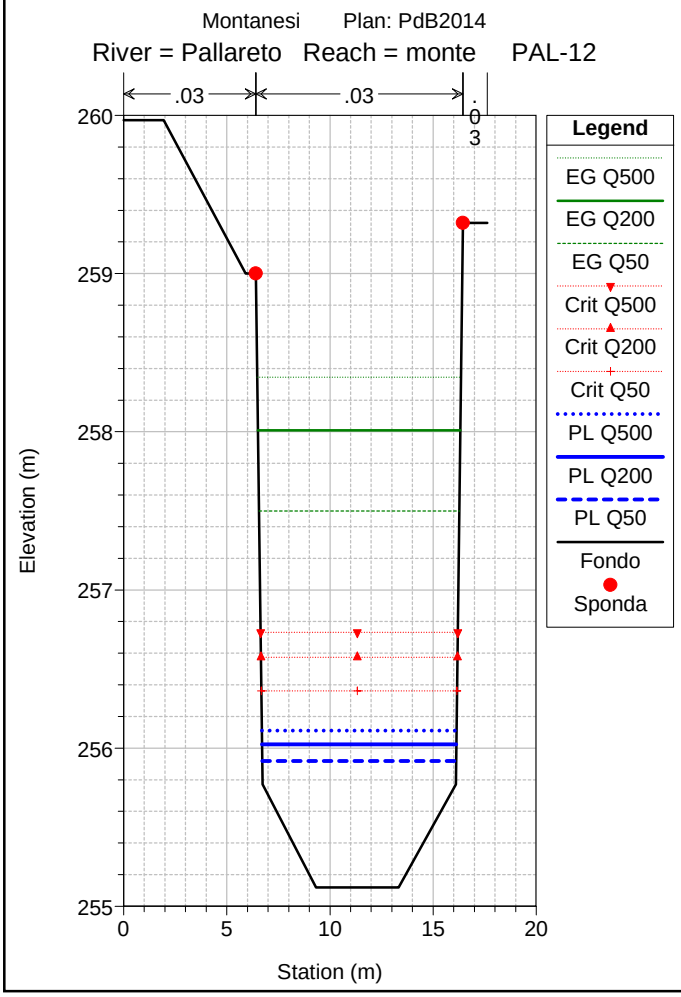

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-15
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

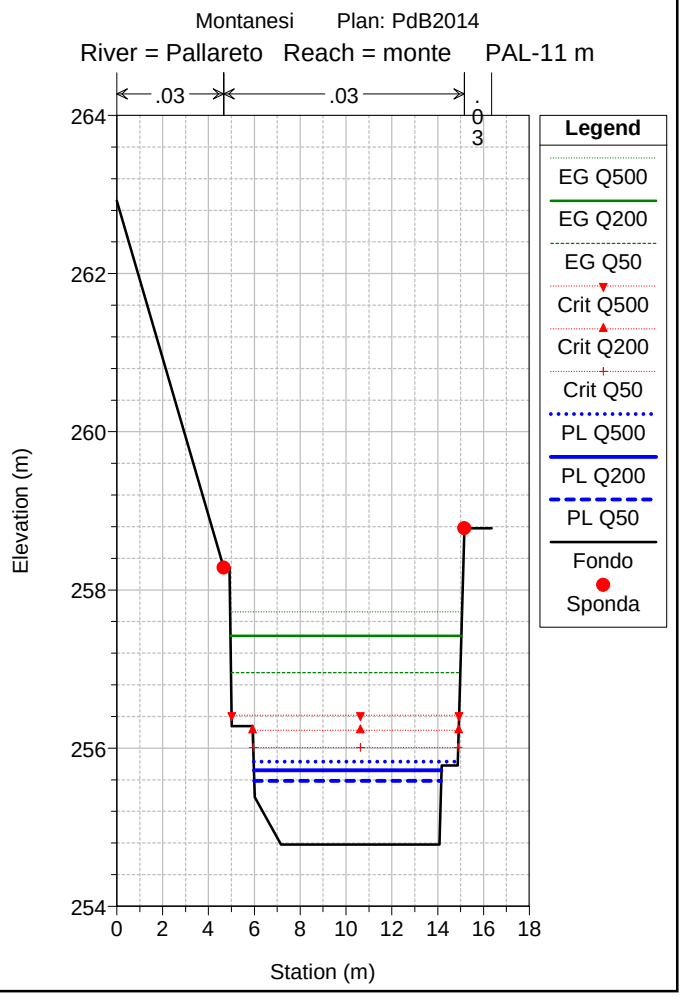

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-14 m
.03
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
Crit Q500
PL Q200
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

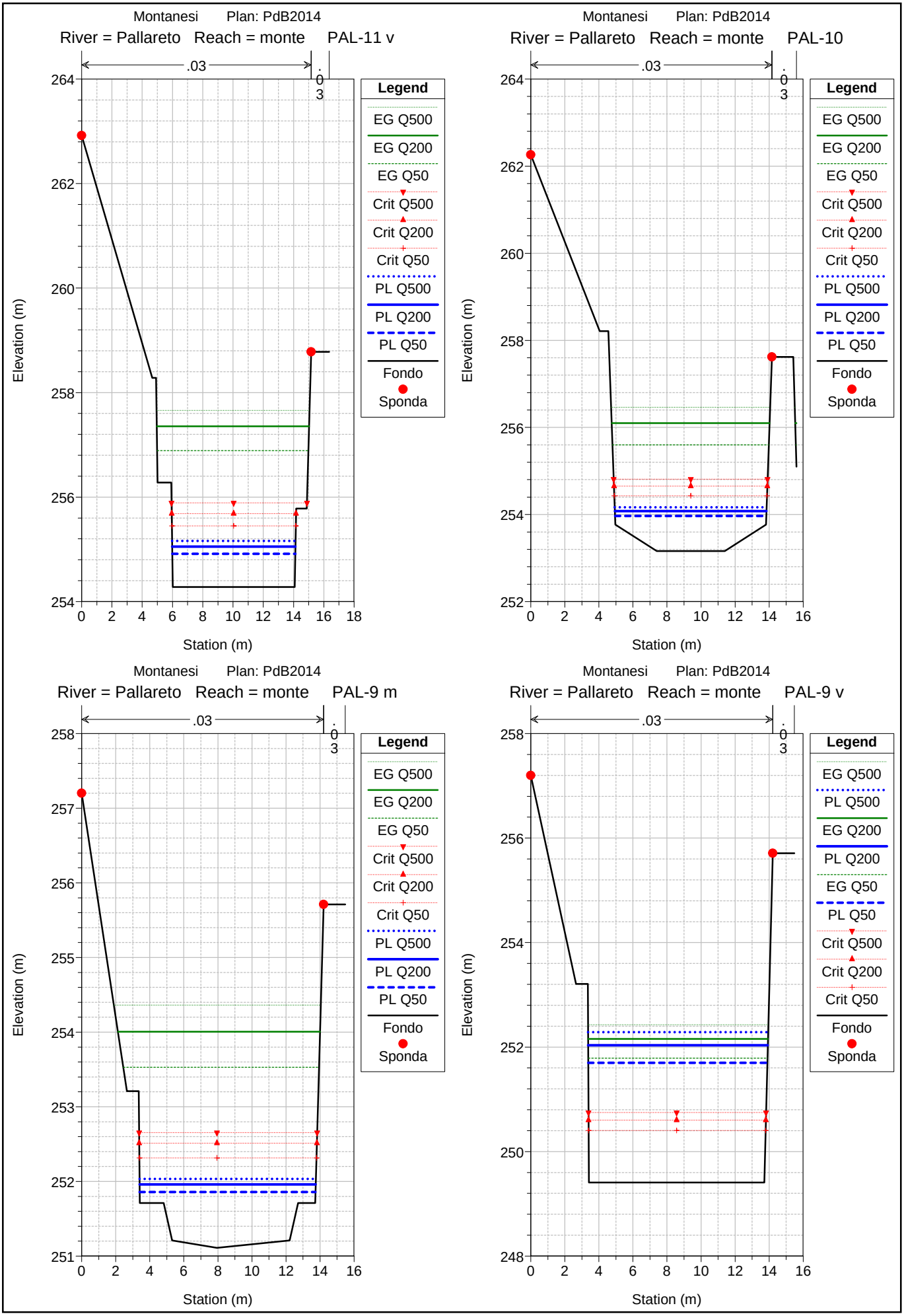

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-14 v
.03
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

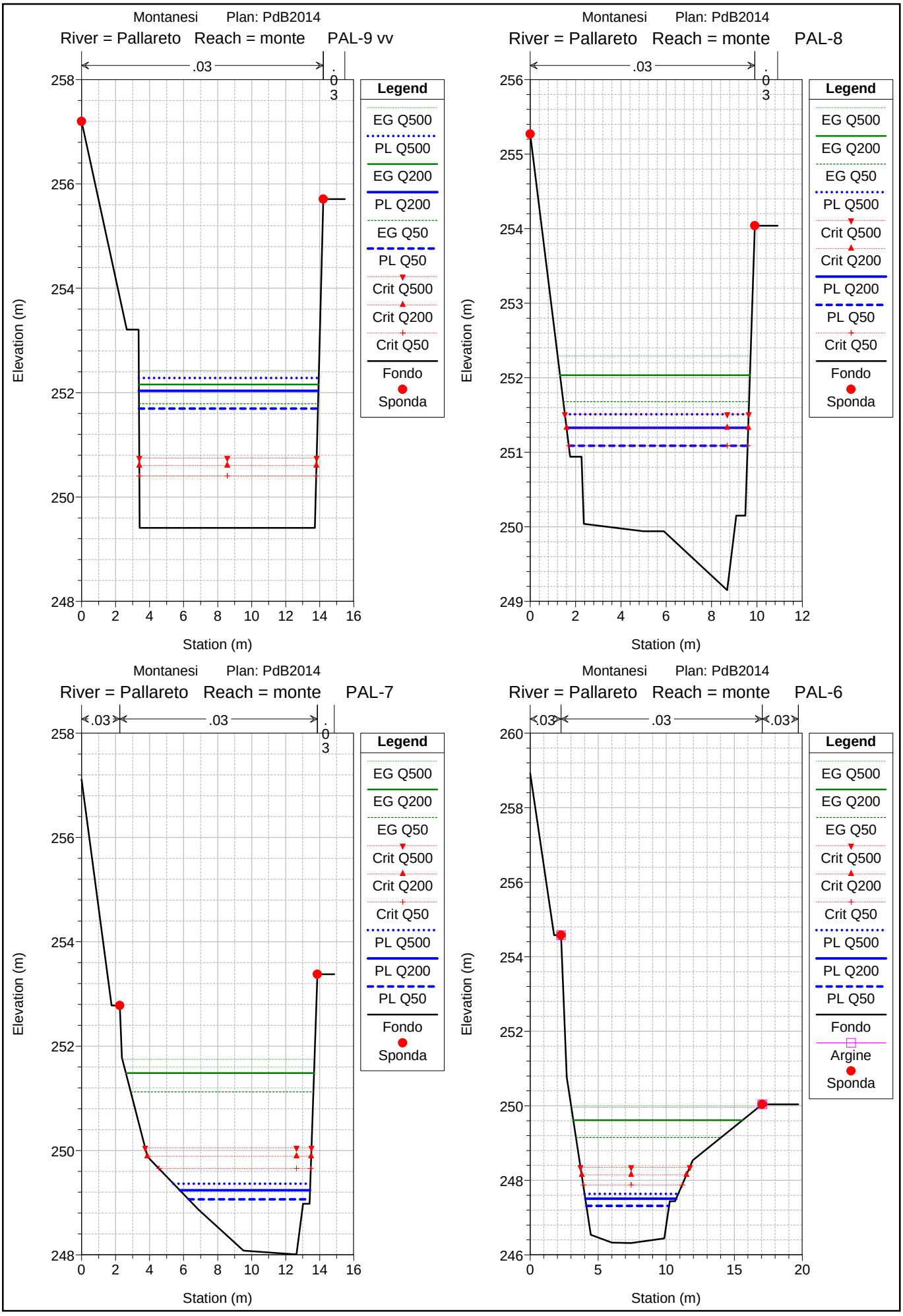

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-13 m
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-13 v
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-12
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

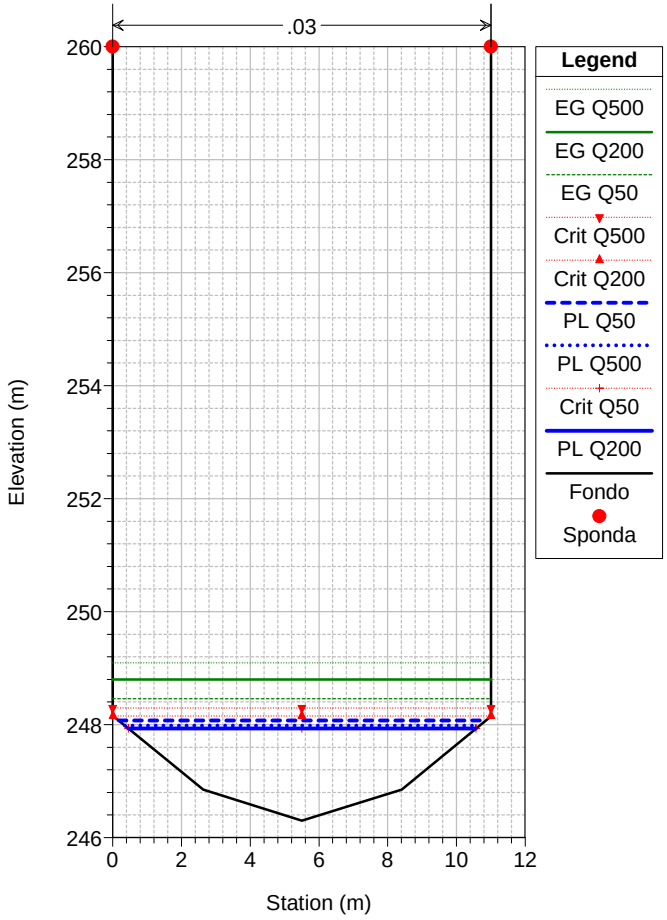

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-11 m
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-11 v
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-10
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-9 m
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-9 v


Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-9 vv
.03
.03
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-8
.03
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-7
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-6
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda
Elevation (m)
Station (m)

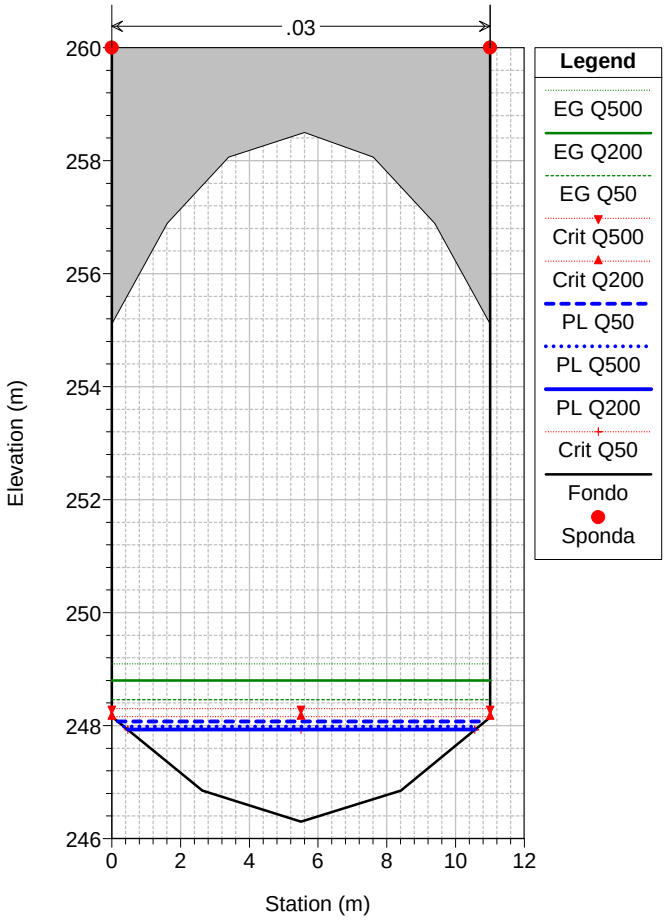
Montanesi Plan: PdB2014

River = Pallareto Reach = monte PAL-5 m



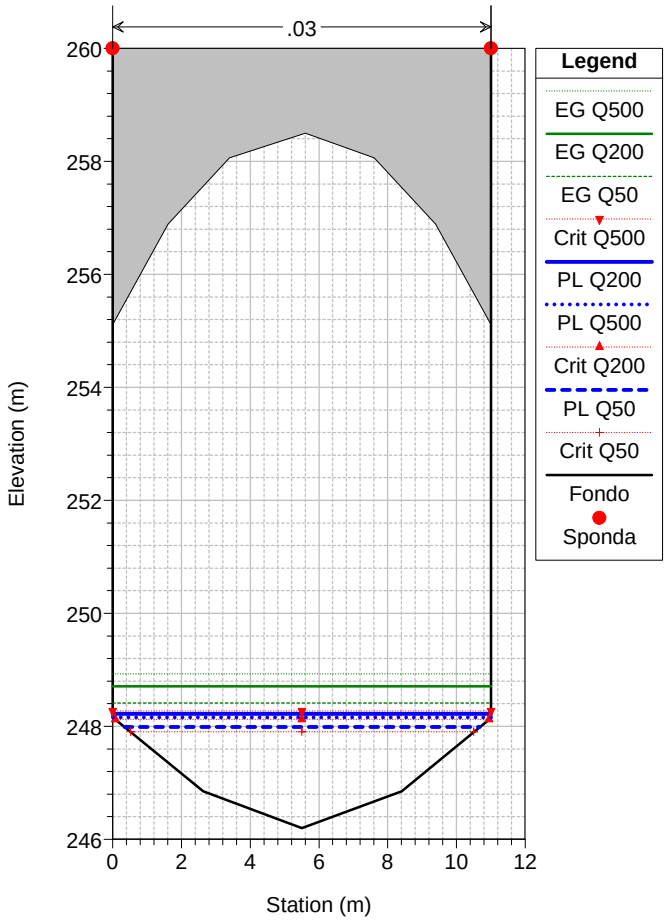
Montanesi Plan: PdB2014

River = Pallareto Reach = monte PAL-5



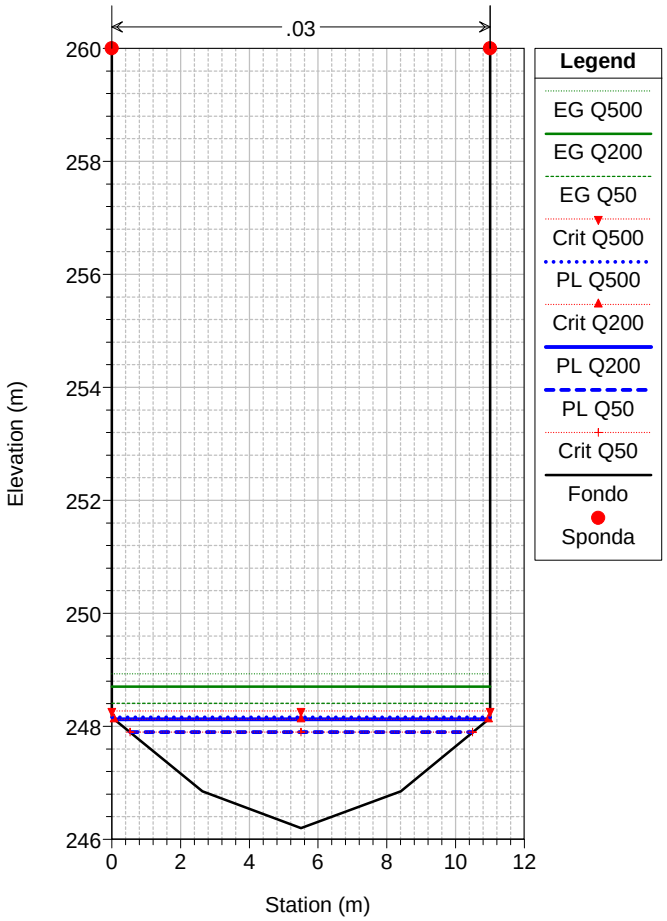
Montanesi Plan: PdB2014

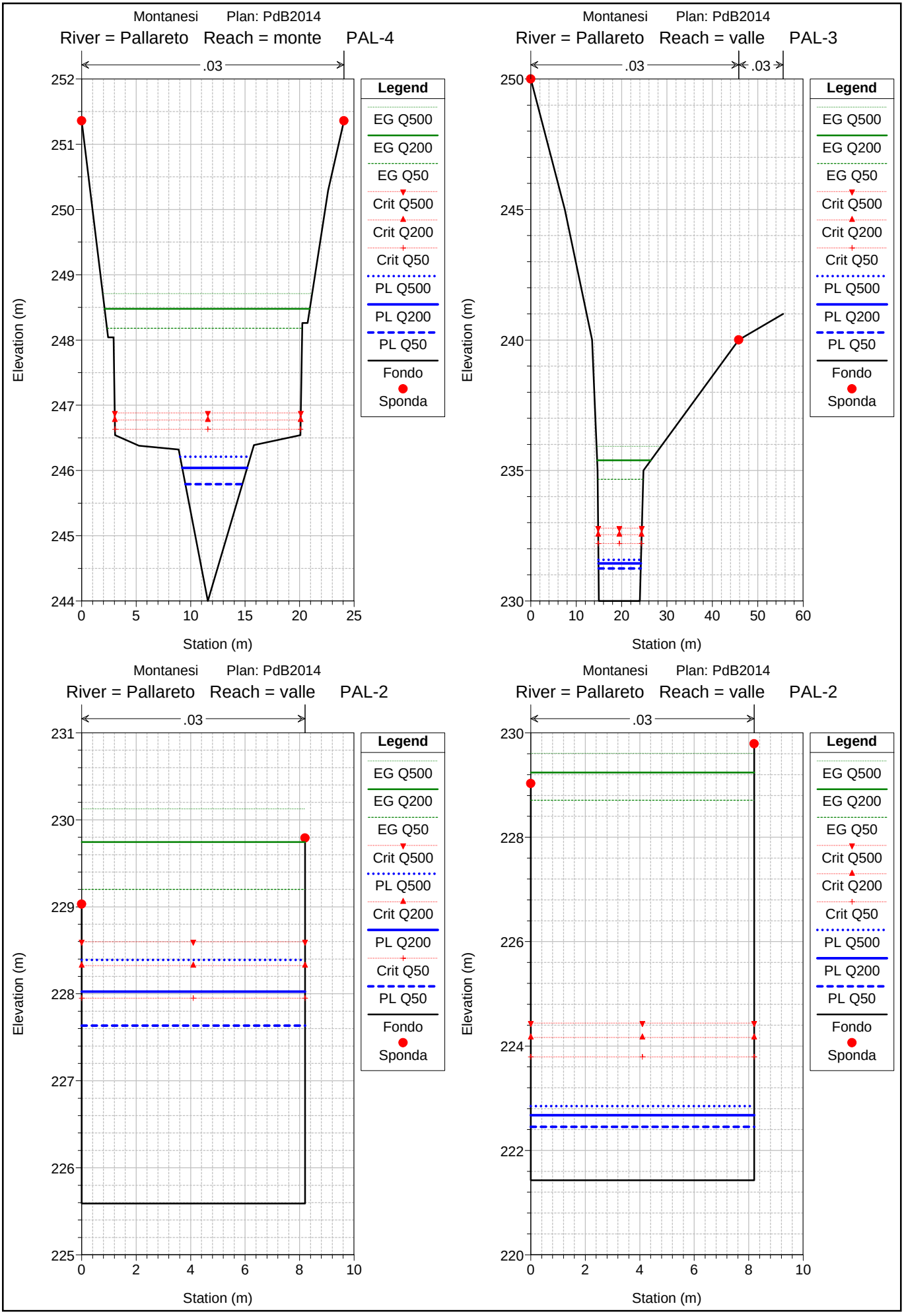
River = Pallareto Reach = monte PAL-5

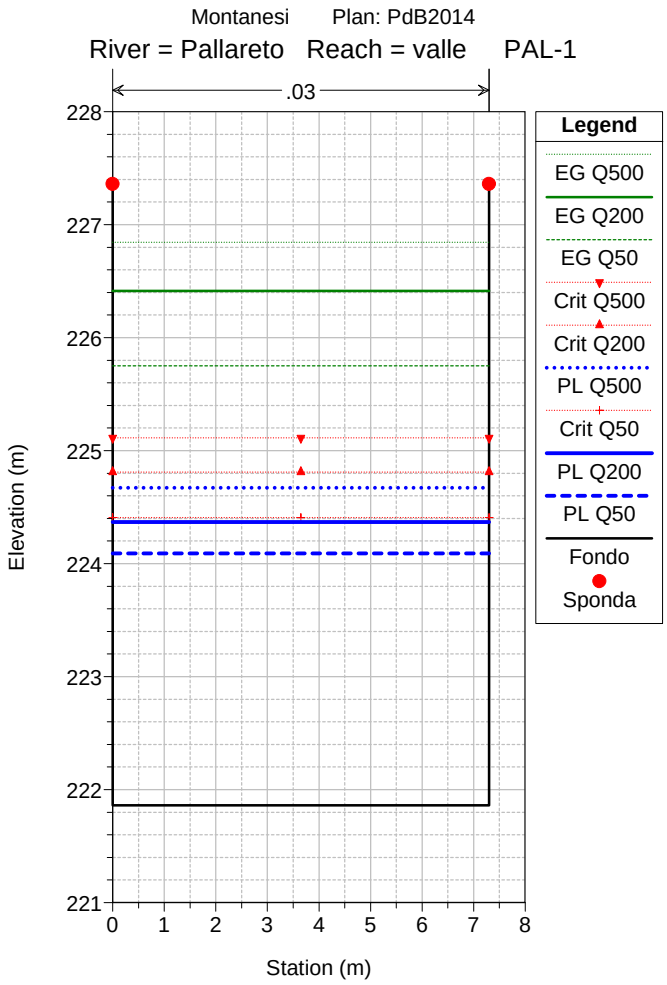


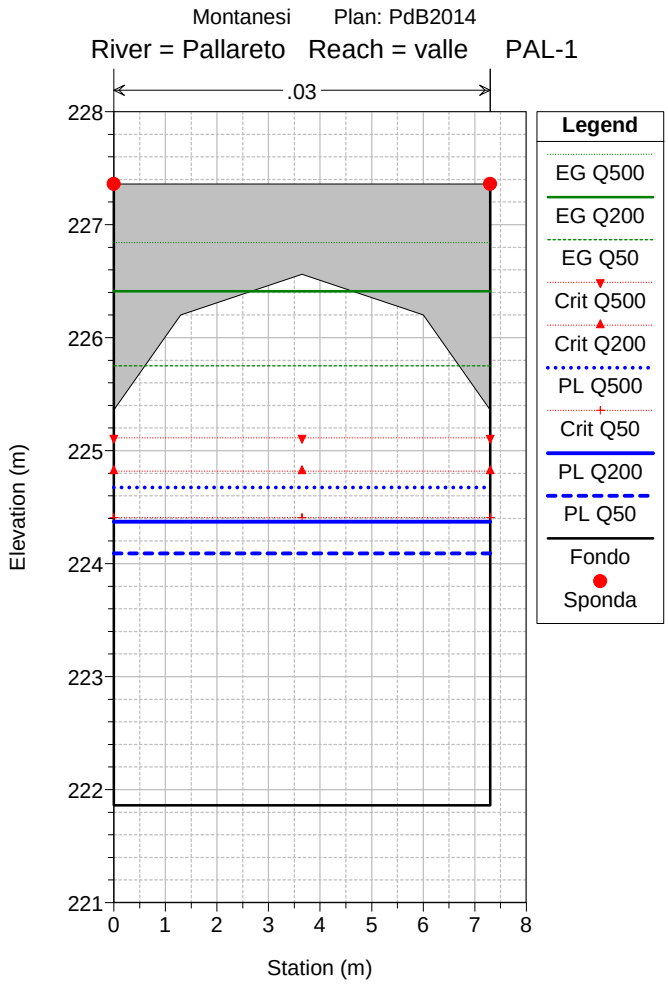
Montanesi Plan: PdB2014

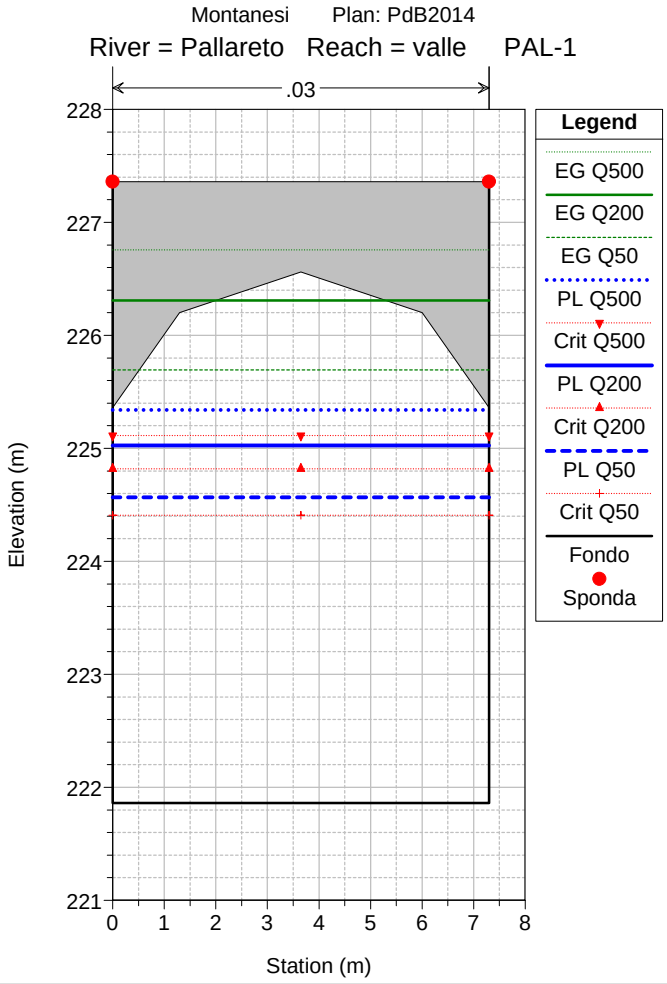
River = Pallareto Reach = monte PAL-5 v

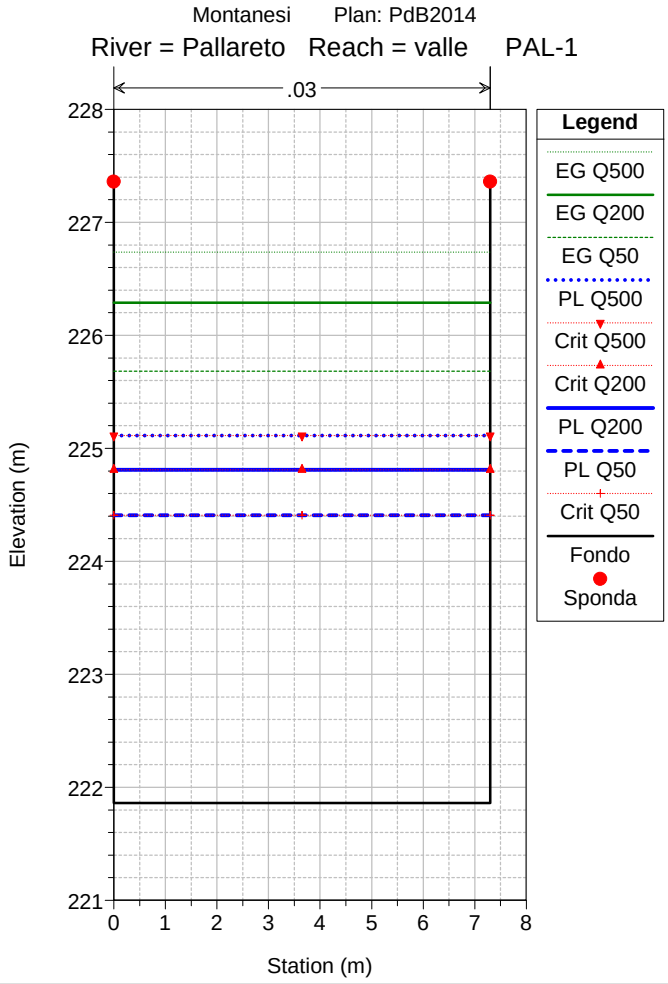


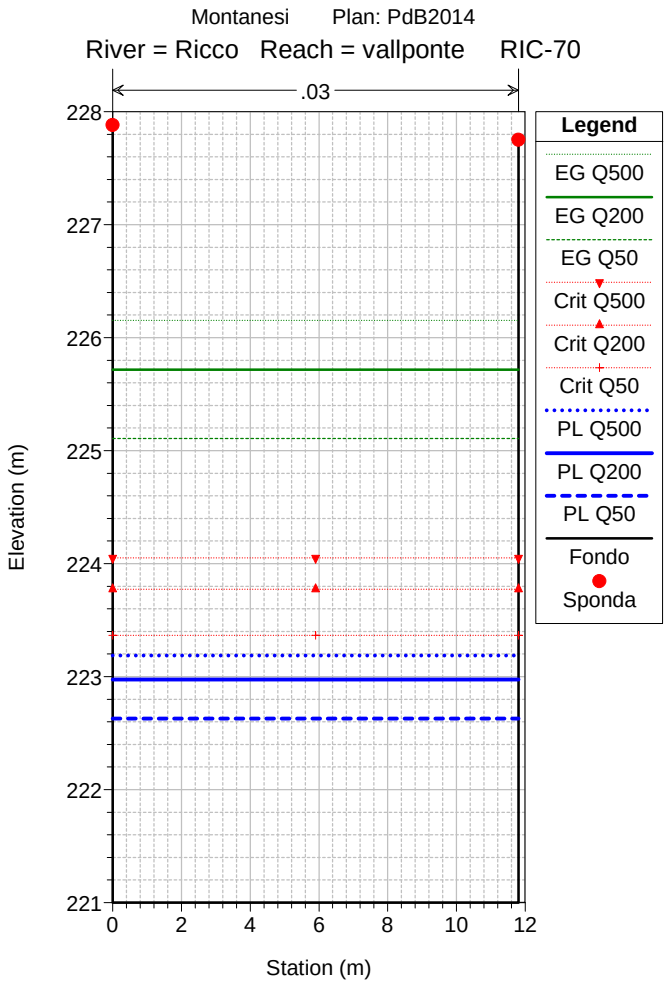

Montanesi Plan: PdB2014
River = Pallareto Reach = monte PAL-4
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Montanesi Plan: PdB2014
River = Pallareto Reach = valle PAL-3
.03
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Montanesi Plan: PdB2014
River = Pallareto Reach = valle PAL-2
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
Montanesi Plan: PdB2014
River = Pallareto Reach = valle PAL-2
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

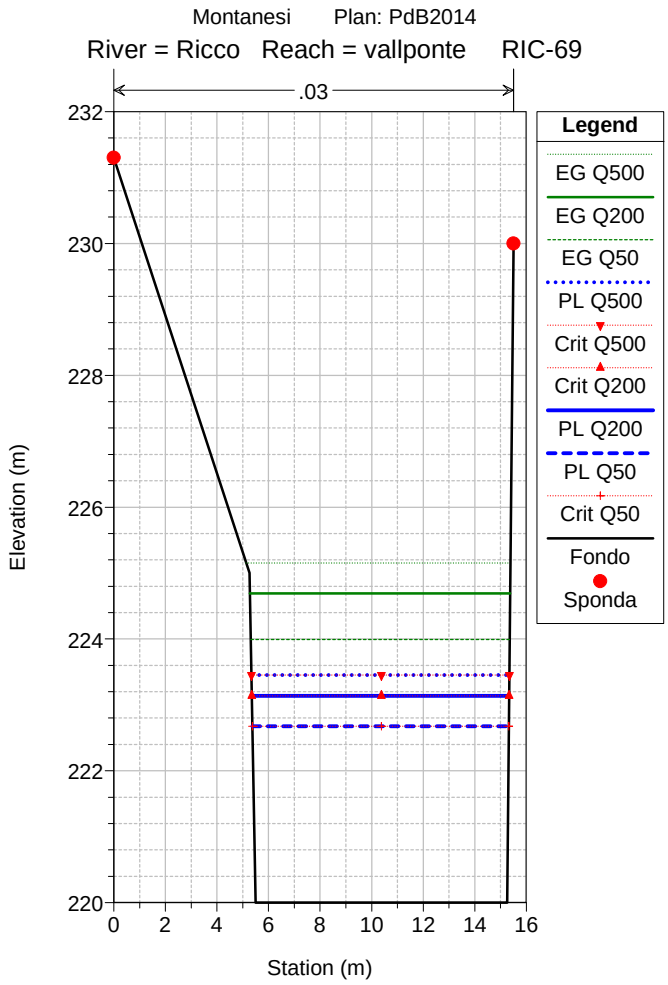

Montanesi Plan: PdB2014
River = Pallareto Reach = valle PAL-1
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda


Montanesi Plan: PdB2014
River = Pallareto Reach = valle PAL-1
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda


Montanesi Plan: PdB2014
River = Pallareto Reach = valle PAL-1
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda


Montanesi Plan: PdB2014
River = Pallareto Reach = valle PAL-1
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda


Montanesi Plan: PdB2014
River = Ricco Reach = vallponte RIC-70
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


Montanesi Plan: PdB2014
River = Ricco Reach = vallponte RIC-69
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda

HEC-RAS Plan: 1_Pdb2014

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)	
Ricco	vallponte	6 RIC-70	Q50	134.00	221.00	222.63	227.88	5.25	227.75	5.12	223.36	225.11	0.031635	6.97	19.21	11.80	1.74
Ricco	vallponte	6 RIC-70	Q200	171.00	221.00	222.98	227.88	4.90	227.75	4.77	223.77	225.72	0.028721	7.34	23.31	11.80	1.67
Ricco	vallponte	6 RIC-70	Q500	197.00	221.00	223.19	227.88	4.69	227.75	4.56	224.05	226.15	0.028095	7.63	25.82	11.80	1.65
Ricco	vallponte	5 RIC-69	Q50	134.00	220.00	222.67	231.30	8.63	230.00	7.33	222.67	223.99	0.011108	5.09	26.33	9.95	1.00
Ricco	vallponte	5 RIC-69	Q200	171.00	220.00	223.14	231.30	8.16	230.00	6.86	223.14	224.69	0.011433	5.53	30.94	9.98	1.00
Ricco	vallponte	5 RIC-69	Q500	197.00	220.00	223.45	231.30	7.85	230.00	6.55	223.45	225.15	0.011544	5.77	34.12	10.00	1.00
Pallareto	monte	25 PAL-27	Q50	32.00	275.91	277.47	280.43	2.96	281.36	3.89	277.47	278.07	0.010321	3.42	9.35	7.78	1.00
Pallareto	monte	25 PAL-27	Q200	42.00	275.91	277.72	280.43	2.71	281.36	3.64	277.72	278.42	0.010115	3.70	11.34	8.06	1.00
Pallareto	monte	25 PAL-27	Q500	50.00	275.91	277.90	280.43	2.53	281.36	3.46	277.90	278.68	0.010113	3.91	12.80	8.25	1.00
Pallareto	monte	24 PAL-26 m	Q50	32.00	275.14	275.74	279.86	4.12	279.86	4.12	276.22	277.51	0.072026	5.89	5.43	9.66	2.51
Pallareto	monte	24 PAL-26 m	Q200	42.00	275.14	275.87	279.86	3.99	279.86	3.99	276.43	277.87	0.064411	6.26	6.71	9.92	2.43
Pallareto	monte	24 PAL-26 m	Q500	50.00	275.14	275.97	279.86	3.89	279.86	3.89	276.58	278.12	0.060076	6.51	7.68	10.11	2.38
Pallareto	monte	23.9 PAL-26 v	Q50	32.00	271.12	271.59	275.14	3.55	275.14	3.55	272.47	277.12	0.318112	10.42	3.07	6.50	4.84
Pallareto	monte	23.9 PAL-26 v	Q200	42.00	271.12	271.73	275.14	3.41	275.14	3.41	272.74	277.48	0.248229	10.63	3.95	6.50	4.35
Pallareto	monte	23.9 PAL-26 v	Q500	50.00	271.12	271.83	275.14	3.31	275.14	3.31	272.94	277.74	0.213086	10.77	4.64	6.50	4.07
Pallareto	monte	23 PAL-25	Q50	32.00	269.75	270.29	275.15	4.86	274.19	3.90	271.09	274.37	0.198173	8.95	3.58	6.60	3.88
Pallareto	monte	23 PAL-25	Q200	42.00	269.75	270.41	275.15	4.74	274.19	3.78	271.36	275.19	0.186836	9.68	4.34	6.61	3.82
Pallareto	monte	23 PAL-25	Q500	50.00	269.75	270.50	275.15	4.65	274.19	3.69	271.55	275.73	0.177288	10.13	4.94	6.62	3.74
Pallareto	monte	22 PAL-24 m	Q50	32.00	269.34	270.45	273.84	3.39	273.29	2.84	271.05	272.96	0.097197	7.02	4.56	7.82	2.94
Pallareto	monte	22 PAL-24 m	Q200	42.00	269.34	270.54	273.84	3.30	273.29	2.75	271.24	273.70	0.112771	7.88	5.33	8.62	3.20
Pallareto	monte	22 PAL-24 m	Q500	50.00	269.34	270.61	273.84	3.23	273.29	2.68	271.38	274.22	0.121726	8.43	5.93	9.20	3.35
Pallareto	monte	21.9 PAL-24 v	Q50	32.00	268.34	268.90	273.84	4.94	273.29	4.39	269.68	272.81	0.184079	8.77	3.65	6.86	3.84
Pallareto	monte	21.9 PAL-24 v	Q200	42.00	268.34	269.01	273.84	4.83	273.29	4.28	269.92	273.56	0.172543	9.44	4.45	6.99	3.78
Pallareto	monte	21.9 PAL-24 v	Q500	50.00	268.34	269.10	273.84	4.74	273.29	4.19	270.11	274.08	0.165058	9.89	5.06	7.09	3.74
Pallareto	monte	21 PAL-23	Q50	32.00	265.40	266.11	272.28	6.17	270.50	4.39	266.65	268.32	0.100475	6.59	4.85	9.68	2.97
Pallareto	monte	21 PAL-23	Q200	42.00	265.40	266.19	272.28	6.09	270.50	4.31	266.85	268.98	0.108967	7.39	5.68	10.05	3.14
Pallareto	monte	21 PAL-23	Q500	50.00	265.40	266.25	272.28	6.03	270.50	4.25	266.98	269.47	0.114286	7.95	6.29	10.30	3.25
Pallareto	monte	20 PAL-22	Q50	32.00	263.07	263.93	270.61	6.68	268.13	4.20	264.34	265.33	0.049951	5.25	6.10	10.08	2.15
Pallareto	monte	20 PAL-22	Q200	42.00	263.07	264.05	270.61	6.56	268.13	4.08	264.52	265.73	0.052258	5.75	7.31	10.88	2.24
Pallareto	monte	20 PAL-22	Q500	50.00	263.07	264.12	270.61	6.49	268.13	4.01	264.67	266.05	0.054097	6.16	8.12	11.12	2.30
Pallareto	monte	19 PAL-21	Q50	32.00	260.50	261.28	264.39	3.11	265.68	4.40	261.77	263.05	0.063477	5.90	5.42	8.71	2.39
Pallareto	monte	19 PAL-21	Q200	42.00	260.50	261.41	264.39	2.98	265.68	4.27	261.99	263.47	0.058951	6.36	6.61	8.73	2.33
Pallareto	monte	19 PAL-21	Q500	50.00	260.50	261.51	264.39	2.88	265.68	4.17	262.15	263.79	0.056983	6.69	7.47	8.75	2.31
Pallareto	monte	18 PAL-20 m	Q50	32.00	260.35	261.92	263.85	1.93	264.95	3.03	261.95	262.45	0.010903	3.24	9.89	10.27	1.05
Pallareto	monte	18 PAL-20 m	Q200	42.00	260.35	261.95	263.85	1.90	264.95	3.00	262.15	262.81	0.017037	4.12	10.21	10.28	1.32
Pallareto	monte	18 PAL-20 m	Q500	50.00	260.35	262.00	263.85	1.85	264.95	2.95	262.29	263.10	0.020574	4.65	10.75	10.29	1.45
Pallareto	monte	17.9 PAL-20 v	Q50	32.00	259.85	260.35	265.20	4.85	264.95	4.60	260.85	262.31	0.097249	6.20	5.16	10.27	2.79
Pallareto	monte	17.9 PAL-20 v	Q200	42.00	259.85	260.47	265.20	4.73	264.95	4.48	261.05	262.68	0.084858	6.58	6.39	10.28	2.66
Pallareto	monte	17.9 PAL-20 v	Q500	50.00	259.85	260.56	265.20	4.64	264.95	4.39	261.20	262.97	0.079763	6.88	7.27	10.29	2.61
Pallareto	monte	17 PAL-19	Q50	32.00	259.50	260.30	264.79	4.49	264.24	3.94	260.64	261.43	0.038169	4.71	6.80	10.38	1.86
Pallareto	monte	17 PAL-19	Q200	42.00	259.50	260.42	264.79	4.37	264.24	3.82	260.83	261.83	0.039533	5.26	7.99	10.39	1.91

HEC-RAS Plan: 1_Pdb2014 (Continued)

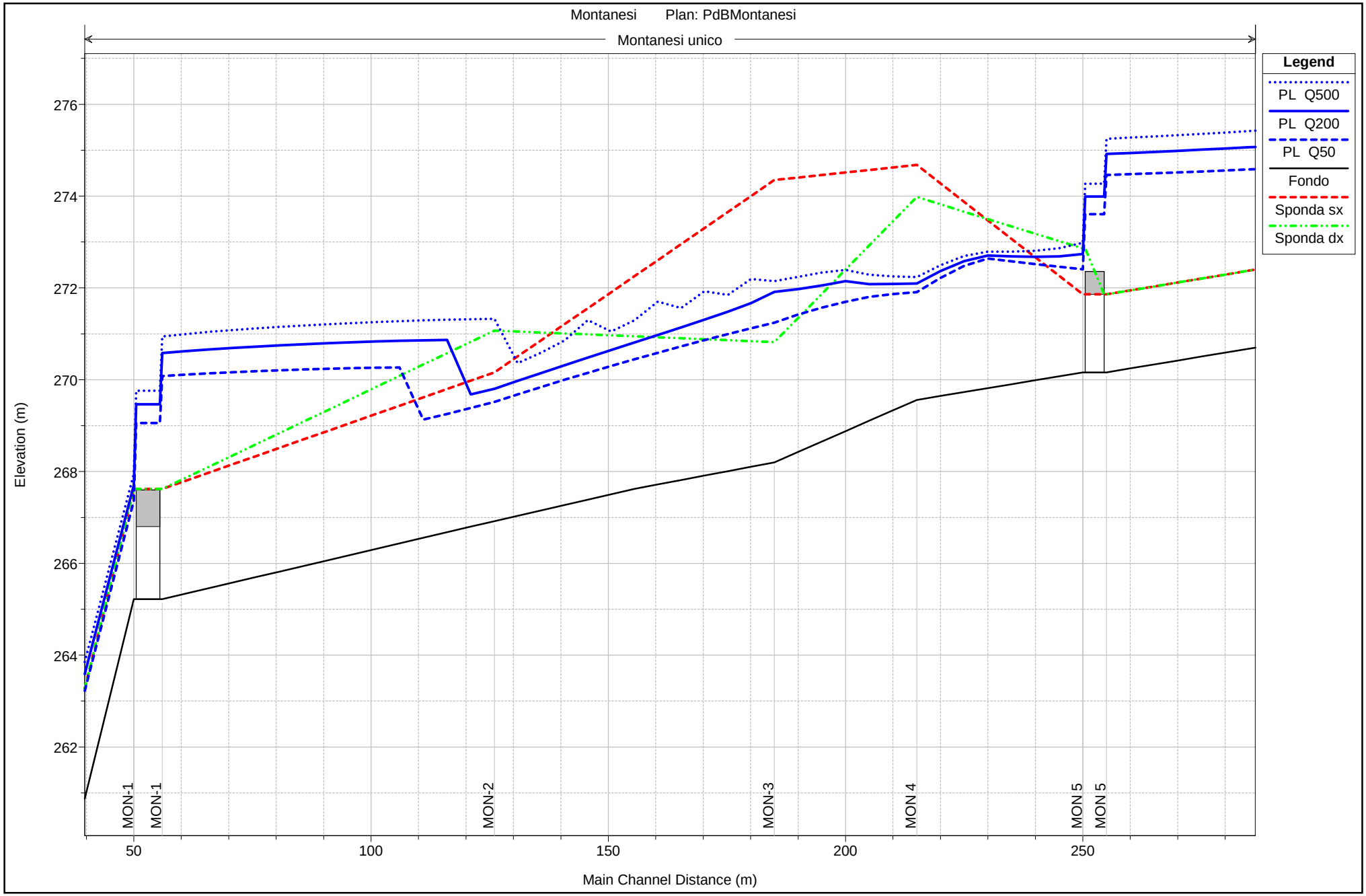
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Pallareto	monte	17 PAL-19	Q500	50.00	259.50	260.50	264.79	4.29	264.24	3.74	260.98	262.13	0.040688	5.65	8.84	10.39	1.96
Pallareto	monte	16 PAL-18	Q50	32.00	259.10	260.04	264.17	4.13	263.62	3.58	260.33	261.02	0.029448	4.39	7.29	10.36	1.67
Pallareto	monte	16 PAL-18	Q200	42.00	259.10	260.16	264.17	4.01	263.62	3.46	260.53	261.39	0.030796	4.92	8.55	10.37	1.73
Pallareto	monte	16 PAL-18	Q500	50.00	259.10	260.25	264.17	3.92	263.62	3.37	260.67	261.67	0.031866	5.29	9.45	10.38	1.77
Pallareto	monte	15 PAL-17 m	Q50	32.00	258.61	260.33	263.30	2.97	262.93	2.60	260.33	260.85	0.010257	3.20	10.01	9.57	1.00
Pallareto	monte	15 PAL-17 m	Q200	42.00	258.61	260.54	263.30	2.76	262.93	2.39	260.54	261.16	0.010076	3.49	12.03	9.62	1.00
Pallareto	monte	15 PAL-17 m	Q500	50.00	258.61	260.70	263.30	2.60	262.93	2.23	260.70	261.39	0.010022	3.69	13.53	9.69	1.00
Pallareto	monte	14.9 PAL-17 v	Q50	32.00	258.11	260.24	263.30	3.06	262.93	2.69	259.10	260.35	0.001052	1.43	22.34	10.58	0.31
Pallareto	monte	14.9 PAL-17 v	Q200	42.00	258.11	260.52	263.30	2.78	262.93	2.41	259.29	260.66	0.001259	1.66	25.30	10.61	0.34
Pallareto	monte	14.9 PAL-17 v	Q500	50.00	258.11	260.72	263.30	2.58	262.93	2.21	259.44	260.89	0.001418	1.83	27.39	10.62	0.36
Pallareto	monte	14 PAL-16 m	Q50	32.00	258.09	259.73	262.61	2.88	262.24	2.51	259.73	260.28	0.010245	3.26	9.80	8.99	1.00
Pallareto	monte	14 PAL-16 m	Q200	42.00	258.09	259.98	262.61	2.63	262.24	2.26	259.98	260.58	0.009891	3.43	12.23	10.13	1.00
Pallareto	monte	14 PAL-16 m	Q500	50.00	258.09	260.14	262.61	2.47	262.24	2.10	260.14	260.80	0.009764	3.61	13.87	10.46	1.00
Pallareto	monte	13.9 PAL-16 v	Q50	32.00	257.59	258.07	262.61	4.54	262.24	4.17	258.58	260.12	0.107446	6.34	5.04	10.48	2.92
Pallareto	monte	13.9 PAL-16 v	Q200	42.00	257.59	258.20	262.61	4.41	262.24	4.04	258.77	260.42	0.088130	6.61	6.36	10.49	2.71
Pallareto	monte	13.9 PAL-16 v	Q500	50.00	257.59	258.29	262.61	4.32	262.24	3.95	258.92	260.64	0.077817	6.78	7.38	10.50	2.58
Pallareto	monte	13 PAL-15	Q50	32.00	256.99	257.84	261.91	4.07	261.56	3.72	258.24	259.19	0.044804	5.14	6.22	9.58	2.04
Pallareto	monte	13 PAL-15	Q200	42.00	256.99	257.97	261.91	3.94	261.56	3.59	258.45	259.58	0.043721	5.62	7.47	9.71	2.05
Pallareto	monte	13 PAL-15	Q500	50.00	256.99	258.07	261.91	3.84	261.56	3.49	258.60	259.85	0.042504	5.92	8.44	9.82	2.04
Pallareto	monte	12 PAL-14 m	Q50	32.00	256.72	258.20	262.00	3.80	260.92	2.72	258.21	258.75	0.009730	3.28	9.74	8.92	1.00
Pallareto	monte	12 PAL-14 m	Q200	42.00	256.72	258.58	262.00	3.42	260.92	2.34	258.44	259.09	0.007005	3.19	13.17	9.47	0.86
Pallareto	monte	12 PAL-14 m	Q500	50.00	256.72	258.91	262.00	3.09	260.92	2.01	258.60	259.38	0.005285	3.04	16.43	9.97	0.76
Pallareto	monte	11.9 PAL-14 v	Q50	32.00	256.22	258.37	262.00	3.63	260.92	2.55	257.65	258.59	0.002522	2.08	15.40	9.16	0.51
Pallareto	monte	11.9 PAL-14 v	Q200	42.00	256.22	258.77	262.00	3.23	260.92	2.15	257.92	259.01	0.002370	2.19	19.17	9.75	0.50
Pallareto	monte	11.9 PAL-14 v	Q500	50.00	256.22	259.06	262.00	2.94	260.92	1.86	258.11	259.32	0.002284	2.27	22.06	10.19	0.49
Pallareto	monte	11 PAL-13 m	Q50	32.00	256.05	257.79	260.34	2.55	260.18	2.39	257.79	258.49	0.011115	3.71	8.63	6.15	1.00
Pallareto	monte	11 PAL-13 m	Q200	42.00	256.05	258.08	260.34	2.26	260.18	2.10	258.08	258.90	0.011271	4.03	10.42	6.34	1.00
Pallareto	monte	11 PAL-13 m	Q500	50.00	256.05	258.30	260.34	2.04	260.18	1.88	258.30	259.21	0.011245	4.23	11.83	6.48	1.00
Pallareto	monte	10.9 PAL-13 v	Q50	32.00	255.55	256.52	260.34	3.82	260.18	3.66	257.07	258.37	0.049578	6.03	5.31	5.73	2.00
Pallareto	monte	10.9 PAL-13 v	Q200	42.00	255.55	256.75	260.34	3.59	260.18	3.43	257.37	258.78	0.043818	6.31	6.66	5.86	1.89
Pallareto	monte	10.9 PAL-13 v	Q500	50.00	255.55	256.93	260.34	3.41	260.18	3.25	257.59	259.08	0.040853	6.50	7.69	5.96	1.83
Pallareto	monte	10 PAL-12	Q50	32.00	255.12	255.92	259.00	3.08	259.32	3.40	256.36	257.50	0.057014	5.57	5.75	9.40	2.27
Pallareto	monte	10 PAL-12	Q200	42.00	255.12	256.02	259.00	2.98	259.32	3.30	256.57	258.01	0.059737	6.24	6.73	9.42	2.36
Pallareto	monte	10 PAL-12	Q500	50.00	255.12	256.11	259.00	2.89	259.32	3.21	256.73	258.35	0.059045	6.62	7.55	9.44	2.36
Pallareto	monte	9 PAL-11 m	Q50	32.00	254.78	255.59	258.28	2.69	258.78	3.19	256.01	256.95	0.041251	5.18	6.17	8.15	1.90
Pallareto	monte	9 PAL-11 m	Q200	42.00	254.78	255.72	258.28	2.56	258.78	3.06	256.23	257.42	0.042809	5.78	7.27	8.18	1.96
Pallareto	monte	9 PAL-11 m	Q500	50.00	254.78	255.83	258.28	2.45	258.78	2.95	256.42	257.72	0.046037	6.10	8.20	8.90	2.03
Pallareto	monte	8.9 PAL-11 v	Q50	32.00	254.28	254.92	262.92	8.00	258.78	3.86	255.45	256.89	0.077188	6.23	5.14	8.12	2.50
Pallareto	monte	8.9 PAL-11 v	Q200	42.00	254.28	255.05	262.92	7.87	258.78	3.73	255.68	257.36	0.072139	6.72	6.25	8.14	2.45
Pallareto	monte	8.9 PAL-11 v	Q500	50.00	254.28	255.16	262.92	7.76	258.78	3.62	255.89	257.66	0.067496	7.00	7.14	8.15	2.39

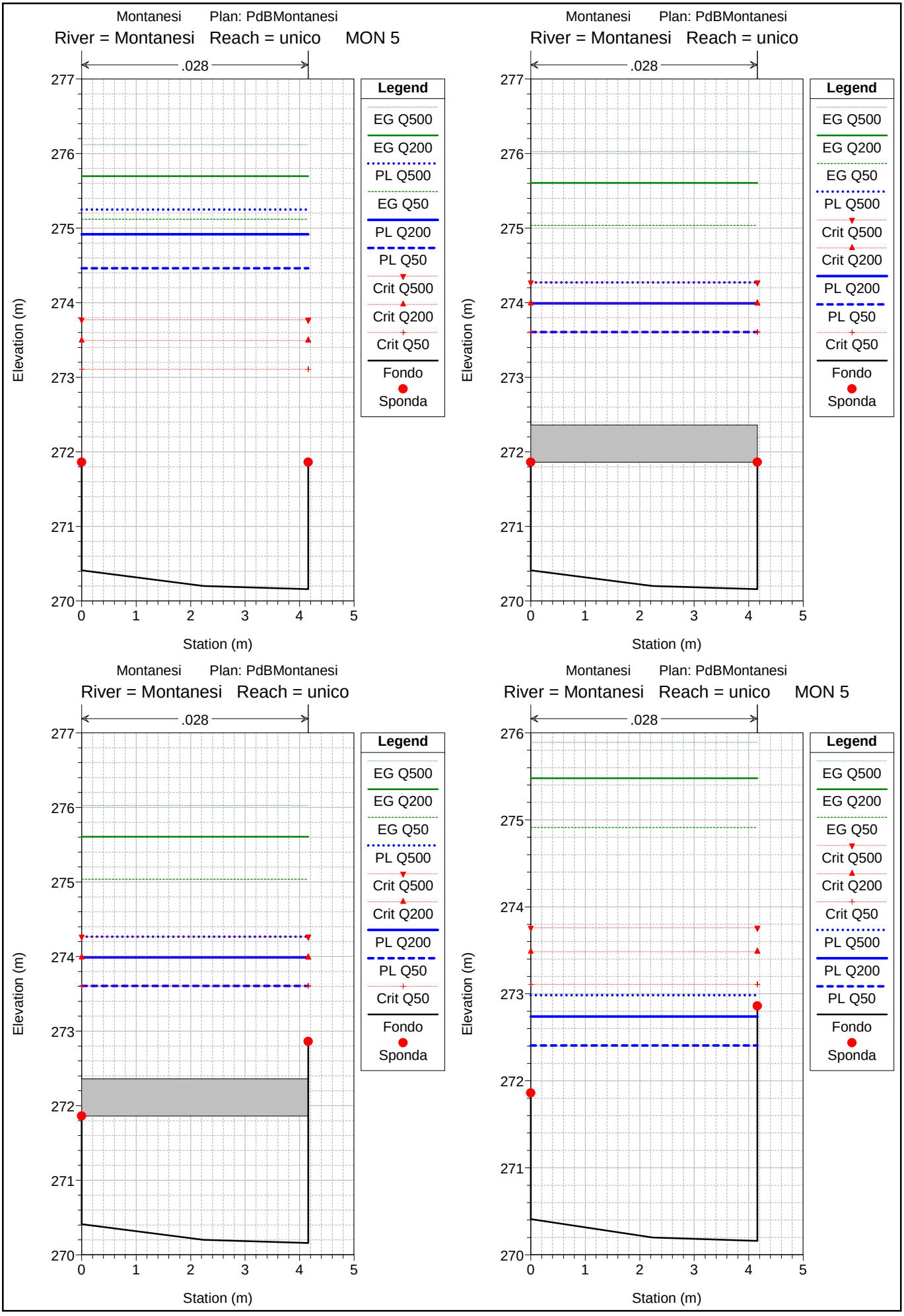
HEC-RAS Plan: 1_Pdb2014 (Continued)

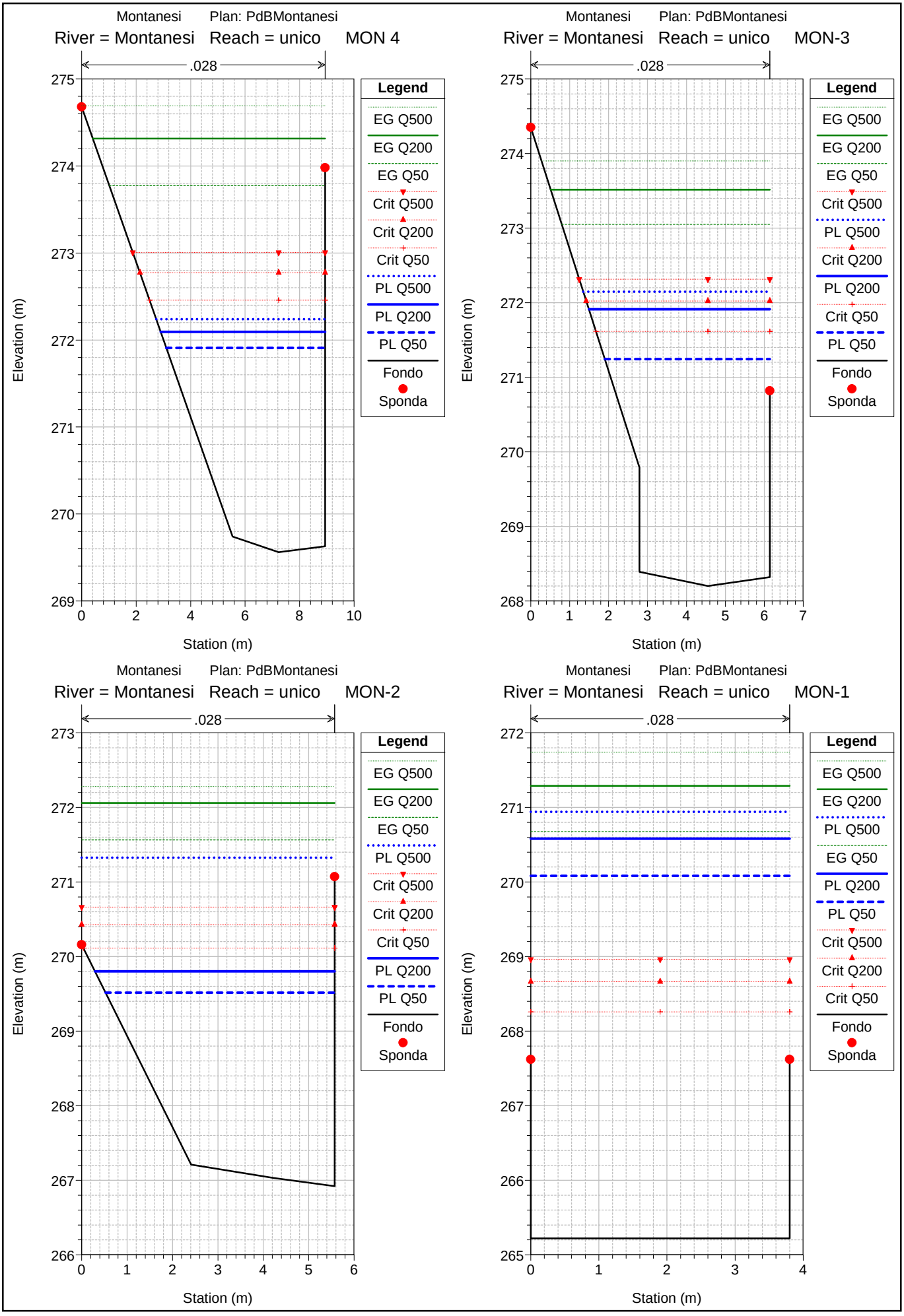
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Pallareto	monte	8 PAL-10	Q50	32.00	253.16	253.97	262.26	8.29	257.62	3.65	254.43	255.60	0.056623	5.66	5.66	8.88	2.26
Pallareto	monte	8 PAL-10	Q200	42.00	253.16	254.08	262.26	8.18	257.62	3.54	254.65	256.10	0.058137	6.30	6.67	8.90	2.32
Pallareto	monte	8 PAL-10	Q500	50.00	253.16	254.17	262.26	8.09	257.62	3.45	254.81	256.46	0.058401	6.71	7.45	8.91	2.34
Pallareto	monte	7 PAL-9 m	Q50	32.00	251.11	251.86	257.20	5.34	255.71	3.85	252.31	253.53	0.072957	5.73	5.59	10.32	2.48
Pallareto	monte	7 PAL-9 m	Q200	42.00	251.11	251.96	257.20	5.24	255.71	3.75	252.51	254.01	0.072914	6.34	6.63	10.34	2.53
Pallareto	monte	7 PAL-9 m	Q500	50.00	251.11	252.03	257.20	5.17	255.71	3.68	252.65	254.36	0.072974	6.76	7.40	10.35	2.55
Pallareto	monte	6.9 PAL-9 v	Q50	32.00	249.41	251.70	257.20	5.50	255.71	4.01	250.40	251.79	0.000869	1.34	23.81	10.52	0.29
Pallareto	monte	6.9 PAL-9 v	Q200	42.00	249.41	252.04	257.20	5.16	255.71	3.67	250.60	252.16	0.000996	1.53	27.39	10.55	0.30
Pallareto	monte	6.9 PAL-9 v	Q500	50.00	249.41	252.28	257.20	4.92	255.71	3.43	250.75	252.43	0.001086	1.67	30.00	10.57	0.32
Pallareto	monte	6.8 PAL-9 vv	Q50	32.00	249.41	251.70	257.20	5.50	255.71	4.01	250.40	251.79	0.000871	1.35	23.79	10.52	0.29
Pallareto	monte	6.8 PAL-9 vv	Q200	42.00	249.41	252.03	257.20	5.17	255.71	3.68	250.60	252.15	0.000999	1.54	27.36	10.55	0.30
Pallareto	monte	6.8 PAL-9 vv	Q500	50.00	249.41	252.28	257.20	4.92	255.71	3.43	250.75	252.42	0.001089	1.67	29.97	10.57	0.32
Pallareto	monte	6 PAL-8	Q50	32.00	249.15	251.09	255.27	4.18	254.04	2.95	251.09	251.68	0.012067	3.41	9.38	7.89	1.00
Pallareto	monte	6 PAL-8	Q200	42.00	249.15	251.33	255.27	3.94	254.04	2.71	251.33	252.03	0.011941	3.72	11.29	8.01	1.00
Pallareto	monte	6 PAL-8	Q500	50.00	249.15	251.51	255.27	3.76	254.04	2.53	251.51	252.29	0.011806	3.92	12.74	8.11	1.00
Pallareto	monte	5 PAL-7	Q50	32.00	248.01	249.06	252.78	3.72	253.38	4.32	249.65	251.12	0.067421	6.36	5.03	7.11	2.41
Pallareto	monte	5 PAL-7	Q200	42.00	248.01	249.24	252.78	3.54	253.38	4.14	249.89	251.48	0.060860	6.64	6.32	7.65	2.33
Pallareto	monte	5 PAL-7	Q500	50.00	248.01	249.36	252.78	3.42	253.38	4.02	250.05	251.75	0.057479	6.84	7.31	8.04	2.29
Pallareto	monte	4 PAL-6	Q50	32.00	246.32	247.32	254.58	7.26	250.04	2.72	247.88	249.15	0.048424	6.00	5.33	6.07	2.04
Pallareto	monte	4 PAL-6	Q200	42.00	246.32	247.51	254.58	7.07	250.04	2.53	248.15	249.62	0.049197	6.43	6.53	6.68	2.08
Pallareto	monte	4 PAL-6	Q500	50.00	246.32	247.64	254.58	6.94	250.04	2.40	248.35	249.96	0.048585	6.76	7.40	6.89	2.08
Pallareto	monte	3 PAL-5 m	Q50	32.00	246.30	248.07	260.00	11.93	260.00	11.93	247.93	248.46	0.006561	2.75	11.65	10.67	0.84
Pallareto	monte	3 PAL-5 m	Q200	42.00	246.30	247.93	260.00	12.07	260.00	12.07	248.15	248.80	0.016436	4.13	10.17	10.10	1.31
Pallareto	monte	3 PAL-5 m	Q500	50.00	246.30	247.98	260.00	12.02	260.00	12.02	248.30	249.09	0.020224	4.67	10.71	10.31	1.46
Pallareto	monte	2.5 PAL-5		Bridge													
Pallareto	monte	2 PAL-5 v	Q50	32.00	246.20	247.90	260.00	12.10	260.00	12.10	247.90	248.41	0.009580	3.16	10.12	9.97	1.00
Pallareto	monte	2 PAL-5 v	Q200	42.00	246.20	248.13	260.00	11.87	260.00	11.87	248.13	248.70	0.009196	3.36	12.51	10.89	1.00
Pallareto	monte	2 PAL-5 v	Q500	50.00	246.20	248.16	260.00	11.84	260.00	11.84	248.27	248.93	0.012097	3.89	12.85	10.99	1.15
Pallareto	monte	1 PAL-4	Q50	32.00	244.00	245.79	251.36	5.57	251.36	5.57	246.63	248.18	0.063718	6.85	4.67	5.22	2.31
Pallareto	monte	1 PAL-4	Q200	42.00	244.00	246.04	251.36	5.32	251.36	5.32	246.77	248.48	0.054604	6.92	6.07	5.96	2.19
Pallareto	monte	1 PAL-4	Q500	50.00	244.00	246.21	251.36	5.15	251.36	5.15	246.88	248.71	0.050265	7.01	7.14	6.46	2.13
Pallareto	valle	9.5	Q50	93.00	244.10	244.99	257.03	12.04	257.10	12.11	245.85	248.45	0.088034	8.24	11.29	14.32	2.96
Pallareto	valle	9.5	Q200	116.00	244.10	245.13	257.03	11.90	257.10	11.97	246.10	248.97	0.082442	8.68	13.36	14.84	2.92
Pallareto	valle	9.5	Q500	134.00	244.10	245.24	257.03	11.79	257.10	11.86	246.27	249.33	0.078625	8.96	14.95	15.24	2.89
Pallareto	valle	9. PAL-3	Q50	93.00	230.00	231.24	250.00	18.76	240.00	8.76	232.20	234.66	0.061361	8.19	11.36	9.27	2.36
Pallareto	valle	9. PAL-3	Q200	116.00	230.00	231.44	250.00	18.56	240.00	8.56	232.54	235.39	0.061041	8.81	13.16	9.32	2.37
Pallareto	valle	9. PAL-3	Q500	134.00	230.00	231.58	250.00	18.42	240.00	8.42	232.79	235.93	0.060798	9.23	14.51	9.35	2.37
Pallareto	valle	8 PAL-2	Q50	93.00	225.59	227.64	229.03	1.39	229.79	2.15	227.95	229.20	0.018277	5.54	16.77	8.20	1.24
Pallareto	valle	8 PAL-2	Q200	116.00	225.59	228.03	229.03	1.00	229.79	1.76	228.32	229.74	0.017236	5.81	19.98	8.20	1.19
Pallareto	valle	8 PAL-2	Q500	134.00	225.59	228.39	229.03	0.64	229.79	1.40	228.60	230.13	0.015569	5.84	22.95	8.20	1.11

HEC-RAS Plan: 1_Pdb2014 (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)	
Pallareto	valle	7.9 PAL-2	Q50	93.00	221.43	222.45	229.03	6.58	229.79	7.34	223.79	228.71	0.144294	11.08	8.39	8.20	3.50
Pallareto	valle	7.9 PAL-2	Q200	116.00	221.43	222.68	229.03	6.35	229.79	7.11	224.17	229.24	0.123205	11.35	10.22	8.20	3.25
Pallareto	valle	7.9 PAL-2	Q500	134.00	221.43	222.85	229.03	6.18	229.79	6.94	224.44	229.61	0.111301	11.52	11.63	8.20	3.09
Pallareto	valle	7.1 PAL-1	Q50	93.00	221.86	224.09	227.36	3.27	227.36	3.27	224.41	225.75	0.018993	5.71	16.29	7.30	1.22
Pallareto	valle	7.1 PAL-1	Q200	116.00	221.86	224.37	227.36	2.99	227.36	2.99	224.81	226.41	0.021282	6.33	18.31	7.30	1.28
Pallareto	valle	7.1 PAL-1	Q500	134.00	221.86	224.67	227.36	2.69	227.36	2.69	225.11	226.84	0.020725	6.53	20.52	7.30	1.24
Pallareto	valle	7 PAL-1		Bridge													
Pallareto	valle	6.9 PAL-1	Q50	93.00	221.86	224.41	227.36	2.95	227.36	2.95	224.41	225.68	0.013116	5.00	18.59	7.30	1.00
Pallareto	valle	6.9 PAL-1	Q200	116.00	221.86	224.81	227.36	2.55	227.36	2.55	224.81	226.29	0.013580	5.38	21.54	7.30	1.00
Pallareto	valle	6.9 PAL-1	Q500	134.00	221.86	225.11	227.36	2.25	227.36	2.25	225.11	226.74	0.013896	5.64	23.75	7.30	1.00

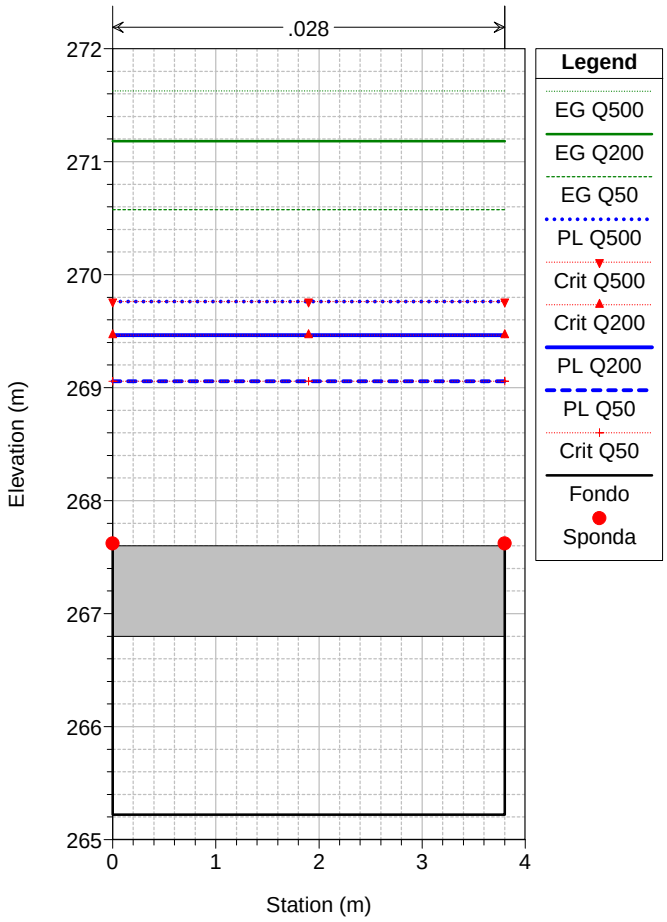

Montanesi Plan: PdBMontanesi
Montanesi unico
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
276
274
272
270
268
266
264
262
MON-1
MON-1
MON-2
MON-3
MON 4
MON 5
MON 5
50
100
150
200
250
Main Channel Distance (m)


Montanesi Plan: PdBMontanesi
River = Montanesi Reach = unico MON 5
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Montanesi Plan: PdBMontanesi
River = Montanesi Reach = unico
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Montanesi Plan: PdBMontanesi
River = Montanesi Reach = unico
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Montanesi Plan: PdBMontanesi
River = Montanesi Reach = unico MON 5
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


Montanesi Plan: PdBMontanesi
River = Montanesi Reach = unico MON 4
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Montanesi Plan: PdBMontanesi
River = Montanesi Reach = unico MON-3
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
Montanesi Plan: PdBMontanesi
River = Montanesi Reach = unico MON-2
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Montanesi Plan: PdBMontanesi
River = Montanesi Reach = unico MON-1
.028
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

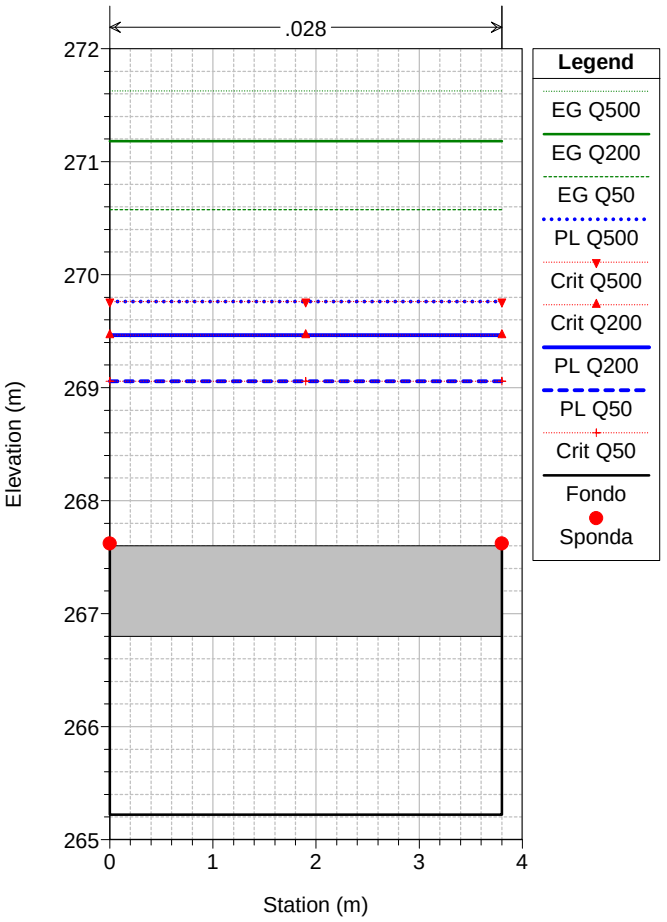
Montanesi Plan: PdBMontanesi

River = Montanesi Reach = unico



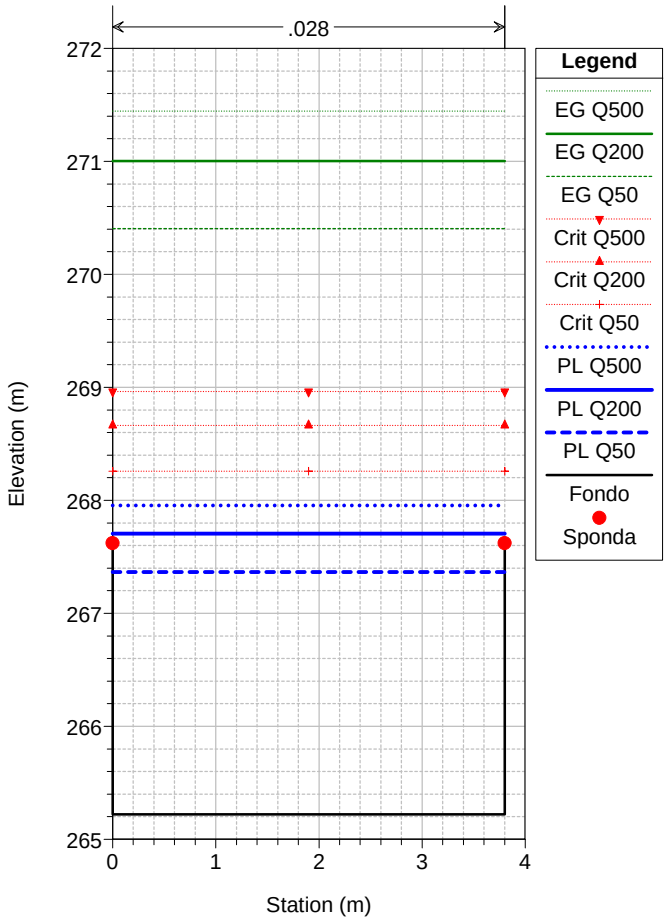
Montanesi Plan: PdBMontanesi

River = Montanesi Reach = unico



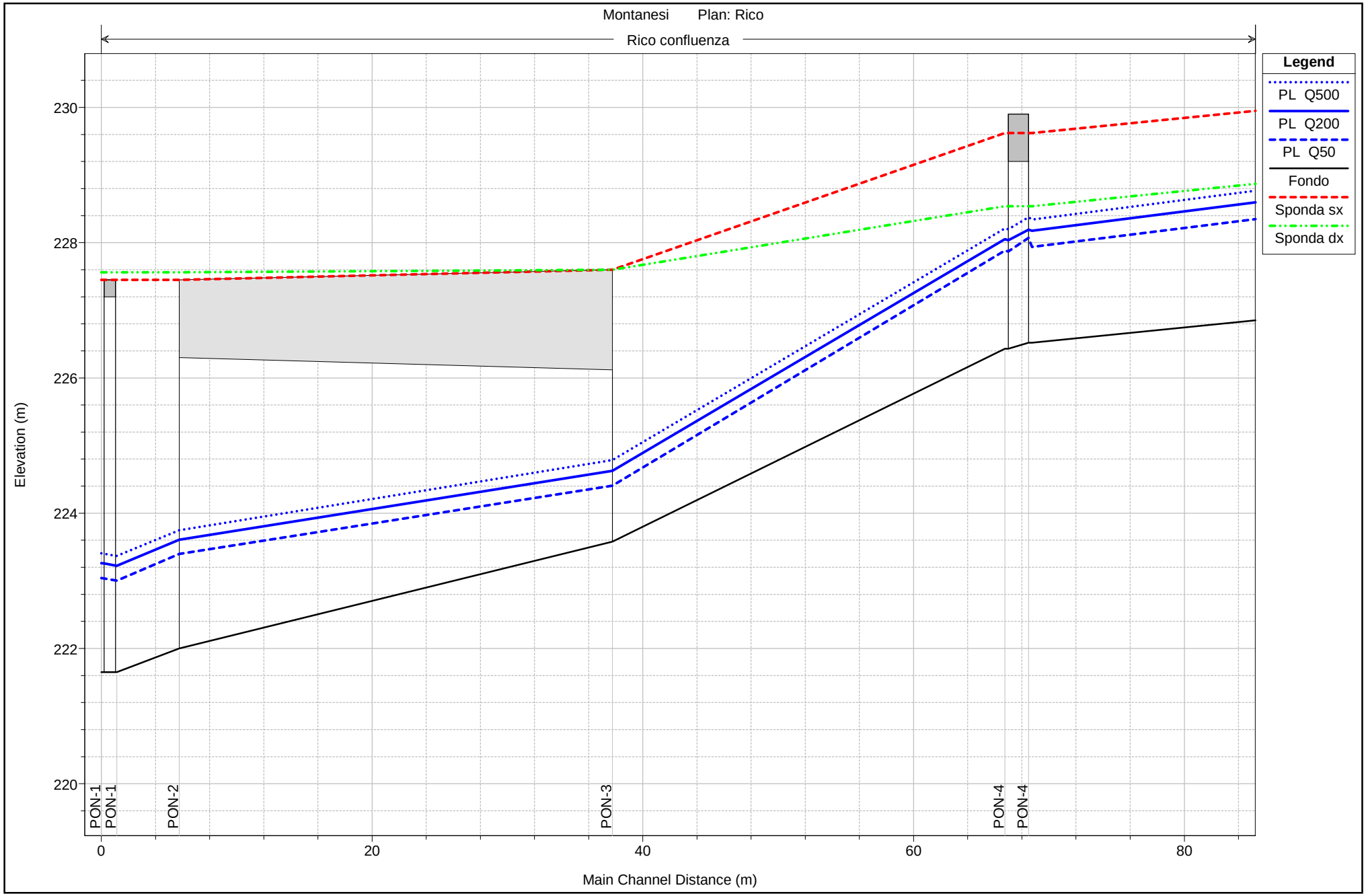
Montanesi Plan: PdBMontanesi

River = Montanesi Reach = unico MON-1



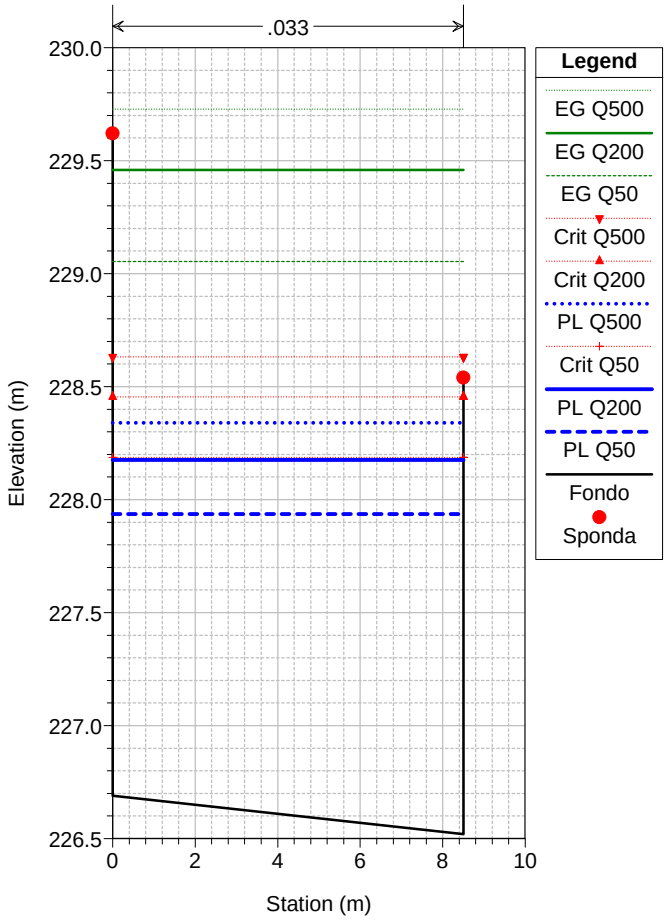
HEC-RAS Plan: Montanesi River: Montanesi Reach: unico

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)	
unico	100	Q50	63.00	271.02	274.68	272.72	-1.96	272.72	-1.96	273.97	275.60	0.009706	4.24	14.86	4.16	0.72
unico	100	Q200	76.00	271.02	275.18	272.72	-2.46	272.72	-2.46	274.34	276.21	0.010213	4.48	16.95	4.16	0.71
unico	100	Q500	86.00	271.02	275.55	272.72	-2.83	272.72	-2.83	274.63	276.65	0.010607	4.65	18.48	4.16	0.71
unico	5.1 MON 5	Q50	63.00	270.16	274.46	271.86	-2.60	271.86	-2.60	273.11	275.12	0.006468	3.59	17.53	4.16	0.56
unico	5.1 MON 5	Q200	76.00	270.16	274.92	271.86	-3.06	271.86	-3.06	273.49	275.70	0.007336	3.91	19.43	4.16	0.58
unico	5.1 MON 5	Q500	86.00	270.16	275.25	271.86	-3.39	271.86	-3.39	273.77	276.12	0.007967	4.13	20.81	4.16	0.59
unico	5		Bridge													
unico	4.9 MON 5	Q50	63.00	270.16	272.41	271.86	-0.55	272.86	0.45	273.11	274.91	0.035351	7.01	8.98	4.16	1.52
unico	4.9 MON 5	Q200	76.00	270.16	272.74	271.86	-0.88	272.86	0.12	273.48	275.48	0.035318	7.33	10.37	4.16	1.48
unico	4.9 MON 5	Q500	86.00	270.16	272.98	271.86	-1.12	272.86	-0.12	273.76	275.89	0.035487	7.55	11.38	4.16	1.46
unico	4 MON 4	Q50	63.00	269.56	271.91	274.68	2.77	273.98	2.07	272.46	273.77	0.023425	6.05	10.42	5.83	1.44
unico	4 MON 4	Q200	76.00	269.56	272.09	274.68	2.59	273.98	1.89	272.77	274.31	0.026114	6.60	11.51	6.04	1.53
unico	4 MON 4	Q500	86.00	269.56	272.24	274.68	2.44	273.98	1.74	273.01	274.69	0.027481	6.94	12.40	6.20	1.57
unico	3 MON-3	Q50	63.00	268.20	271.24	274.35	3.11	270.82	-0.42	271.62	273.05	0.023757	5.96	10.57	4.24	1.20
unico	3 MON-3	Q200	76.00	268.20	271.91	274.35	2.44	270.82	-1.09	272.02	273.51	0.018318	5.61	13.55	4.65	1.05
unico	3 MON-3	Q500	86.00	268.20	272.15	274.35	2.20	270.82	-1.33	272.32	273.90	0.019207	5.87	14.66	4.79	1.07
unico	2 MON-2	Q50	63.00	266.92	269.52	270.16	0.64	271.07	1.55	270.11	271.56	0.026559	6.34	9.94	5.04	1.44
unico	2 MON-2	Q200	76.00	266.92	269.80	270.16	0.36	271.07	1.27	270.43	272.06	0.026828	6.66	11.42	5.28	1.44
unico	2 MON-2	Q500	86.00	266.92	271.32	270.16	-1.16	271.07	-0.25	270.66	272.28	0.007996	4.33	19.84	5.57	0.73
unico	1.2 MON-1	Q50	63.00	265.22	270.08	267.62	-2.46	267.62	-2.46	268.26	270.67	0.006017	3.41	18.47	3.80	0.49
unico	1.2 MON-1	Q200	76.00	265.22	270.58	267.62	-2.96	267.62	-2.96	268.66	271.29	0.006951	3.73	20.37	3.80	0.51
unico	1.2 MON-1	Q500	86.00	265.22	270.94	267.62	-3.32	267.62	-3.32	268.96	271.74	0.007639	3.96	21.74	3.80	0.53
unico	1.1		Bridge													
unico	1 MON-1	Q50	63.00	265.22	267.37	267.62	0.25	267.62	0.25	268.26	270.41	0.046281	7.72	8.16	3.80	1.68
unico	1 MON-1	Q200	76.00	265.22	267.71	267.62	-0.09	267.62	-0.09	268.66	271.00	0.045997	8.05	9.44	3.80	1.63
unico	1 MON-1	Q500	86.00	265.22	267.95	267.62	-0.33	267.62	-0.33	268.96	271.44	0.046124	8.28	10.39	3.80	1.60
unico	0.1	Q50	63.00	244.22	247.35	246.62	-0.73	246.62	-0.73	247.35	248.75	0.014121	5.26	12.26	4.85	0.95
unico	0.1	Q200	76.00	244.22	247.81	246.62	-1.19	246.62	-1.19	247.81	249.29	0.012601	5.45	14.65	5.52	0.92
unico	0.1	Q500	86.00	244.22	248.11	246.62	-1.49	246.62	-1.49	248.11	249.66	0.011937	5.60	16.41	5.80	0.91


Montanesi Plan: Rico
Rico confluenza
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
230
228
226
224
222
220
PON-1
PON-1
PON-2
PON-3
PON-4
PON-4
0
20
40
60
80
Main Channel Distance (m)

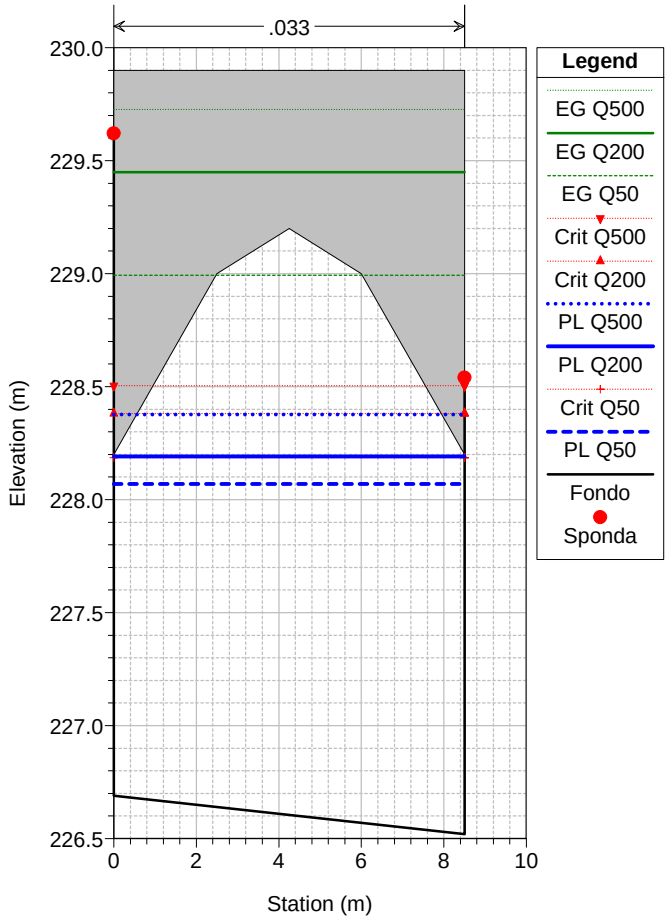
Montanesi Plan: Rico

River = Rico Reach = confluenza PON-4



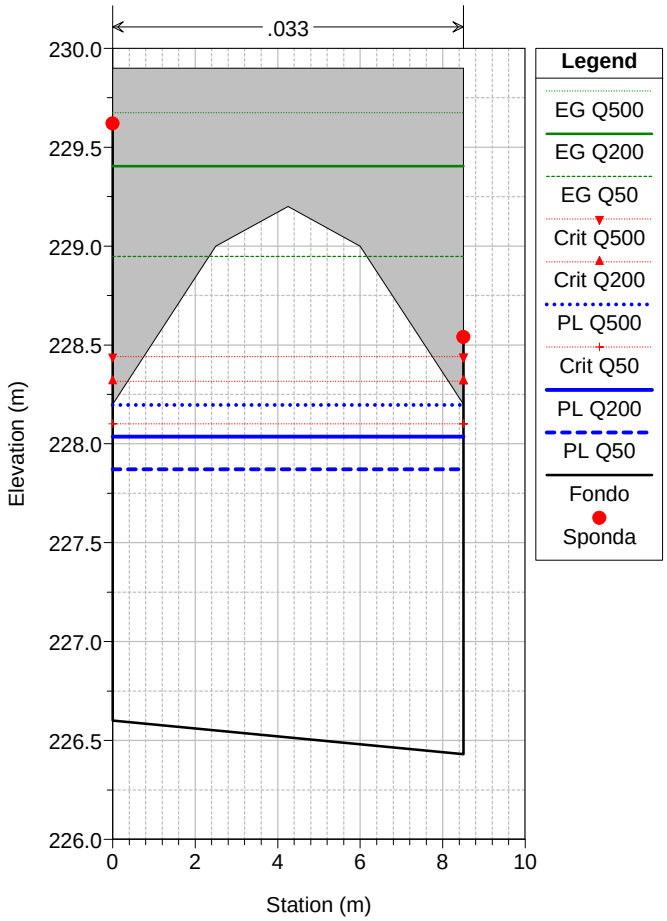
Montanesi Plan: Rico

River = Rico Reach = confluenza PON-4



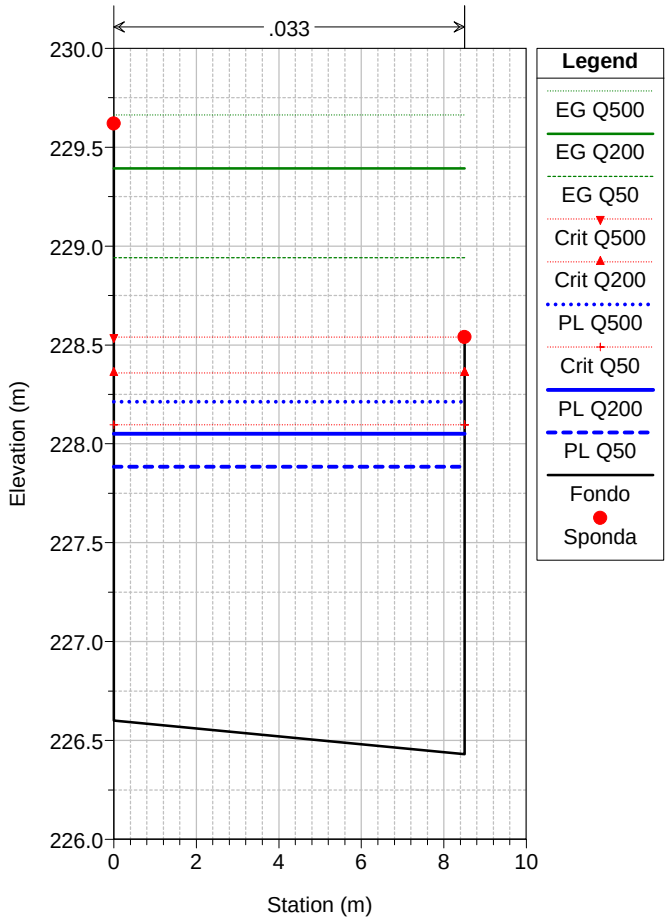
Montanesi Plan: Rico

River = Rico Reach = confluenza PON-4



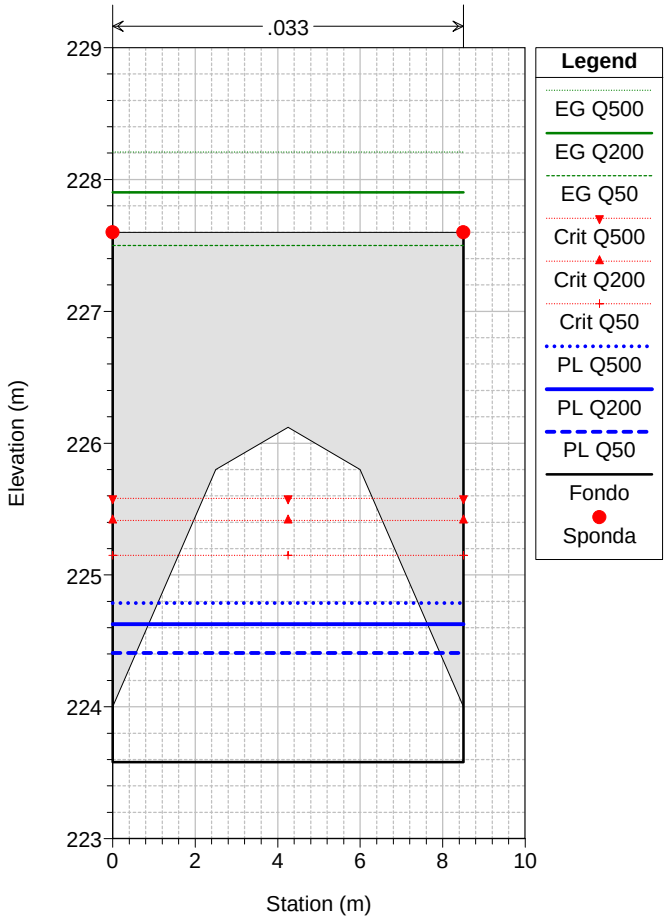
Montanesi Plan: Rico

River = Rico Reach = confluenza PON-4



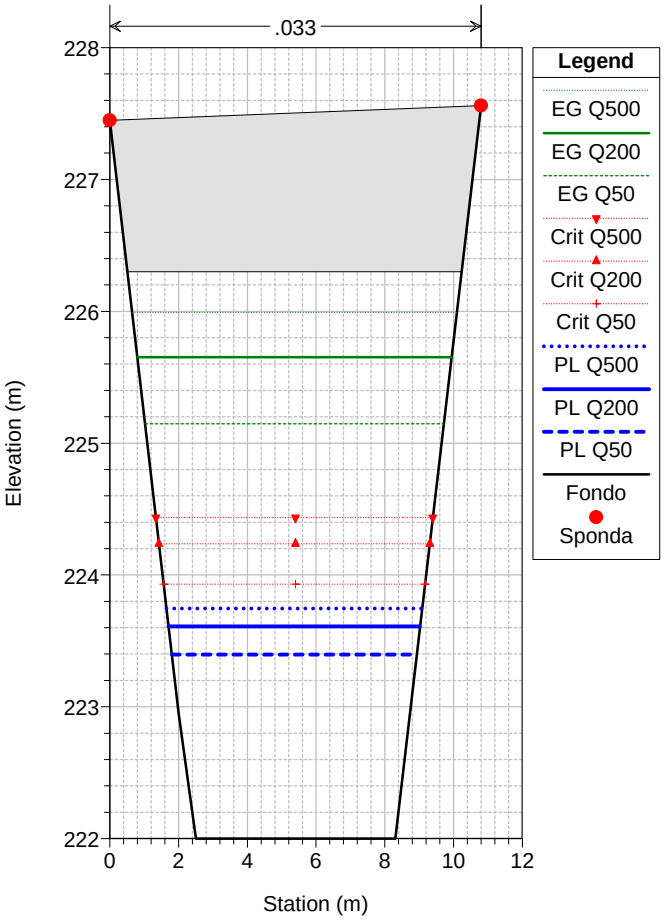
Montanesi Plan: Rico

River = Rico Reach = confluenza PON-3



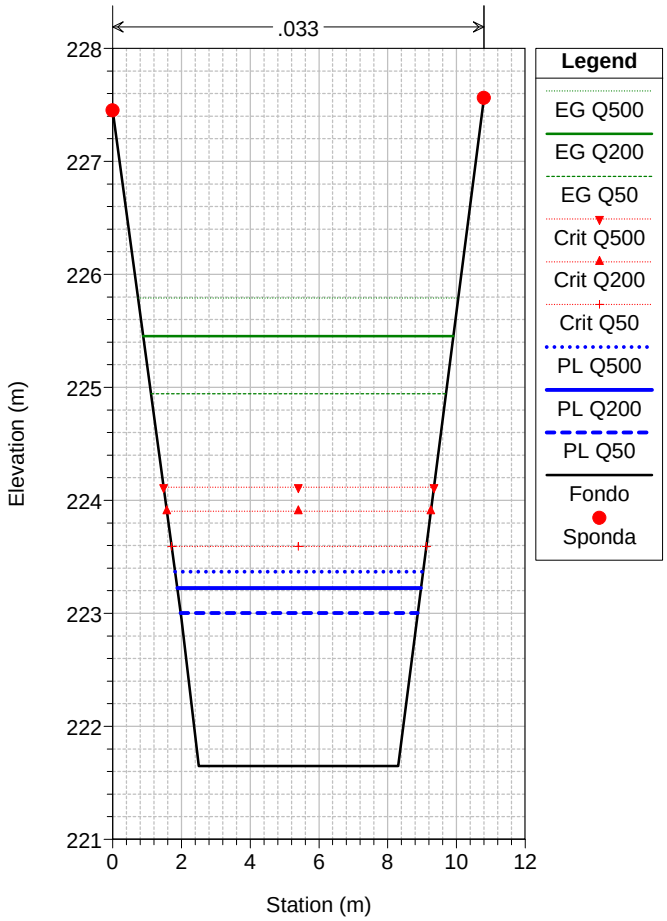
Montanesi Plan: Rico

River = Rico Reach = confluenza PON-2



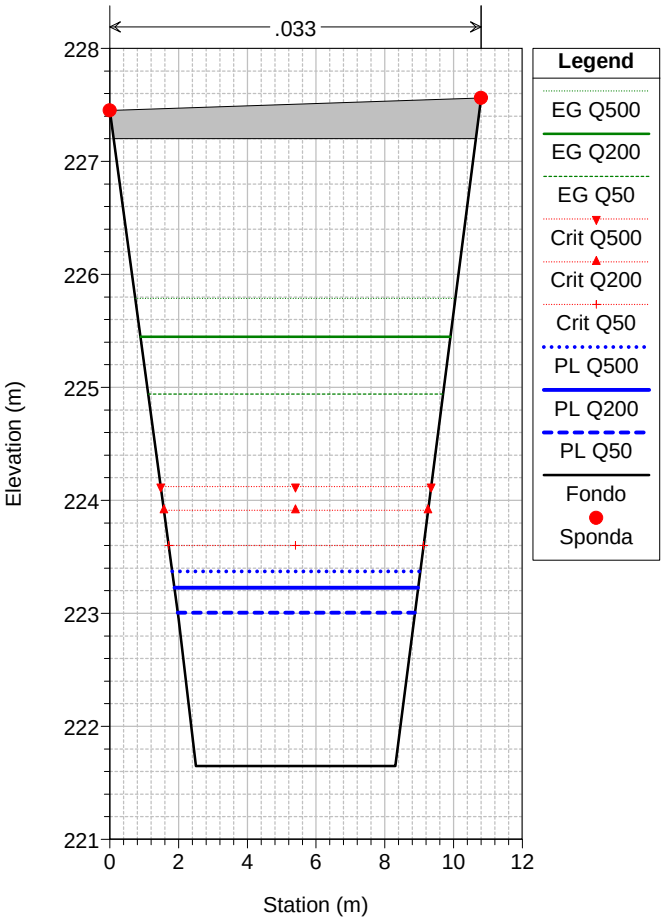
Montanesi Plan: Rico

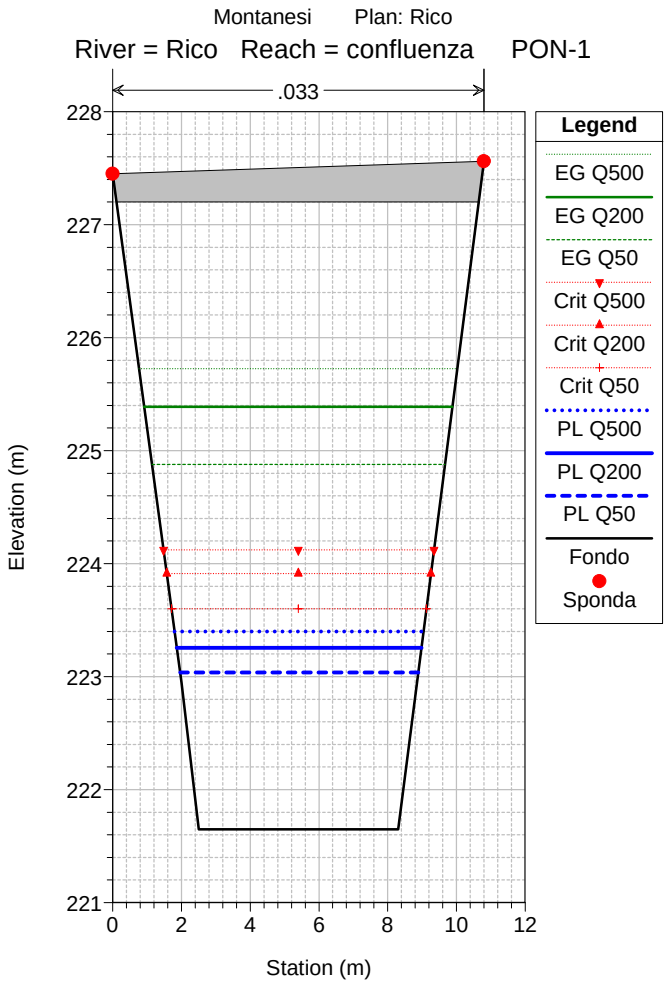
River = Rico Reach = confluenza PON-1

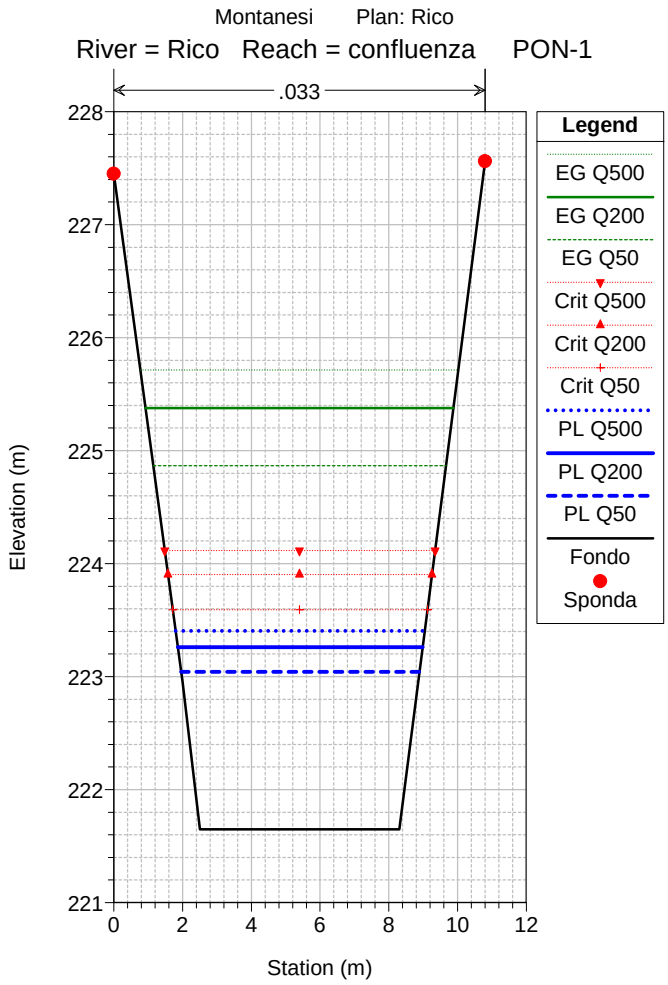


Montanesi Plan: Rico

River = Rico Reach = confluenza PON-1




Montanesi Plan: Rico
River = Rico Reach = confluenza PON-1
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


Montanesi Plan: Rico
River = Rico Reach = confluenza PON-1
.033
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

HEC-RAS Plan: Rico River: Rico Reach: confluenza

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)	
confluenza	100	Q50	53.00	227.52	229.19	230.62	1.43	229.54	0.35	229.19	229.98	0.014006	3.94	13.44	8.50	1.00
confluenza	100	Q200	67.00	227.52	229.45	230.62	1.17	229.54	0.09	229.45	230.38	0.014110	4.26	15.72	8.50	1.00
confluenza	100	Q500	77.00	227.52	229.63	230.62	0.99	229.54	-0.09	229.63	230.65	0.014268	4.47	17.23	8.50	1.00
confluenza	4.1 PON-4	Q50	53.00	226.52	227.94	229.62	1.68	228.54	0.60	228.19	229.05	0.023496	4.69	11.31	8.50	1.30
confluenza	4.1 PON-4	Q200	67.00	226.52	228.18	229.62	1.44	228.54	0.36	228.45	229.46	0.022853	5.02	13.35	8.50	1.28
confluenza	4.1 PON-4	Q500	77.00	226.52	228.34	229.62	1.28	228.54	0.20	228.63	229.73	0.022463	5.22	14.75	8.50	1.26
confluenza	4 PON-4		Bridge													
confluenza	3.9 PON-4	Q50	53.00	226.43	227.88	229.62	1.74	228.54	0.66	228.10	228.94	0.021556	4.55	11.64	8.50	1.24
confluenza	3.9 PON-4	Q200	67.00	226.43	228.05	229.62	1.57	228.54	0.49	228.36	229.39	0.024443	5.13	13.05	8.50	1.32
confluenza	3.9 PON-4	Q500	77.00	226.43	228.21	229.62	1.41	228.54	0.33	228.54	229.66	0.023980	5.34	14.43	8.50	1.31
confluenza	3 PON-3	Q50	53.00	223.58	224.41	224.00	-0.41	224.00	-0.41	225.15	227.50	0.121414	7.79	6.80	7.37	2.73
confluenza	3 PON-3	Q200	67.00	223.58	224.63	224.00	-0.63	224.00	-0.63	225.41	227.90	0.106996	8.02	8.36	6.76	2.50
confluenza	3 PON-3	Q500	77.00	223.58	224.79	224.00	-0.79	224.00	-0.79	225.58	228.21	0.101703	8.20	9.40	6.32	2.38
confluenza	2 PON-2	Q50	53.00	222.00	223.40	226.30	2.90	226.30	2.90	223.93	225.15	0.036561	5.86	9.04	7.13	1.66
confluenza	2 PON-2	Q200	67.00	222.00	223.61	226.30	2.69	226.30	2.69	224.24	225.65	0.037091	6.33	10.58	7.32	1.68
confluenza	2 PON-2	Q500	77.00	222.00	223.75	226.30	2.55	226.30	2.55	224.44	225.99	0.037636	6.64	11.60	7.44	1.70
confluenza	1.2 PON-1	Q50	53.00	221.65	223.00	227.45	4.45	227.56	4.56	223.59	224.94	0.042381	6.17	8.58	6.90	1.77
confluenza	1.2 PON-1	Q200	67.00	221.65	223.22	227.45	4.23	227.56	4.34	223.90	225.45	0.041911	6.61	10.13	7.09	1.77
confluenza	1.2 PON-1	Q500	77.00	221.65	223.37	227.45	4.08	227.56	4.19	224.12	225.79	0.041860	6.90	11.17	7.21	1.77
confluenza	1.1 PON-1		Bridge													
confluenza	1 PON-1	Q50	53.00	221.65	223.04	227.45	4.41	227.56	4.52	223.59	224.87	0.038742	5.99	8.85	6.93	1.69
confluenza	1 PON-1	Q200	67.00	221.65	223.26	227.45	4.19	227.56	4.30	223.90	225.38	0.038830	6.44	10.40	7.12	1.70
confluenza	1 PON-1	Q500	77.00	221.65	223.41	227.45	4.04	227.56	4.15	224.12	225.71	0.039055	6.73	11.44	7.25	1.71

10 TORRENTE VERDE

10 TORRENTE VERDE
10.1 Dalla confluenza con il torrente Riccò fino alla briglia (a circa 30m)
10.2 Dalla briglia alla confluenza con il torrente Riccò fino allo stabilimento Parodi olii
10.3 Rio San Martino
10.4 Rio Maggiore
10.5 Da località Bessega fino al Rio D'Iso in Località Isoverde
10.5.1 Rio Corneo
10.6 Rio Rizzolo
10.7 Rio Lago Scuro

10.1 Dalla confluenza con il torrente Riccò fino alla briglia (a circa 30m)

È stata effettuata la simulazione idraulica della confluenza del torrente Verde con il torrente Riccò suddividendo il tratto in corrispondenza della briglia circa 30 m più a monte della confluenza. La simulazione della confluenza è stata effettuata nella configurazione che prevede la portata al colmo con tempo di ritorno assegnato a valle sul T.Polcevera e sul T. Verde, mentre sul T. Riccò a monte della confluenza è imposta, ai fini della conservazione della massa, la differenza delle portate.

	TRATTO	**SEZIONE**	**PORTATE DI PIENA AL COLMO (m^3/s)**		
			T = 50 anni	**T = 200 anni**	**T = 500 anni**
Verde in piena	Torrente Verde		464	580	657
	Torrente Riccò	differenza	216	280	303
	Torrente Polcevera	POL1t	680	860	960

Come condizioni al contorno è stata imposta la profondità critica a monte in corrispondenza della briglia ed è stata studiata la confluenza a valle.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza ks di Strickler pari a 33 $m^{1/3}/s$.

Per i risultati delle verifiche si rimanda al fascicolo relativo all'asta principale del torrente Polcevera.

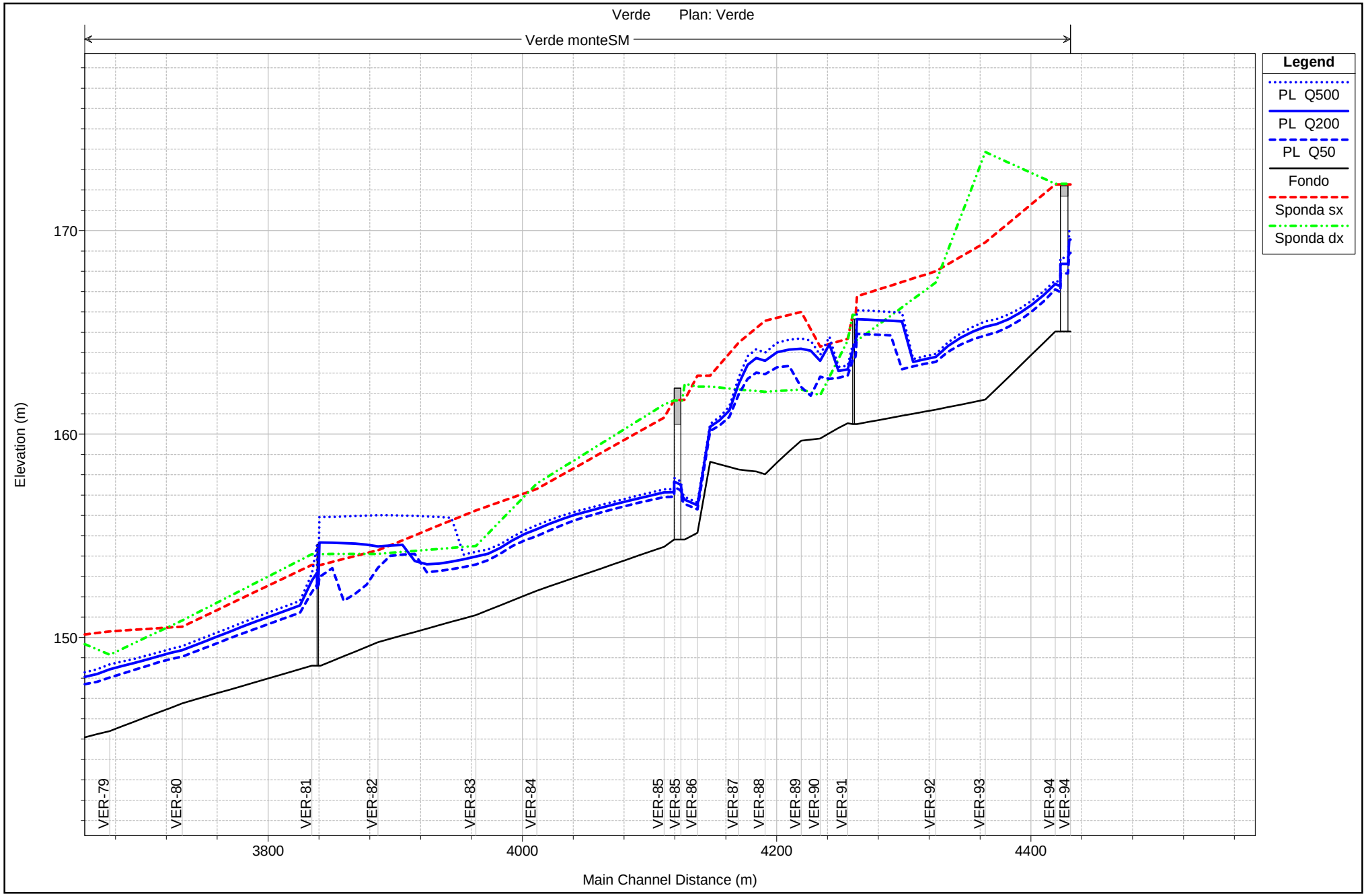
10.2 Dalla briglia alla confluenza con il torrente Riccò fino allo stabilimento Parodi olii

Il tratto indagato comprende la confluenza con il rio San Martino per lo studio della quale è stata utilizzata la configurazione che prevede la portata al colmo con tempo di ritorno assegnato sul T.Verde sia a valle che a monte della confluenza mentre sul rio San Martino è imposta, ai fini della conservazione della massa, la differenza delle portate.
In corrispondenza dell'afflusso del rio Gioventina, la cui confluenza non è stata simulata perché si è ritenuto che i suoi effetti sul deflusso del T.Verde siano limitati, è stata imposta una variazione di portata per tener conto dell'incremento che si verifica a seguito dell'immissione.

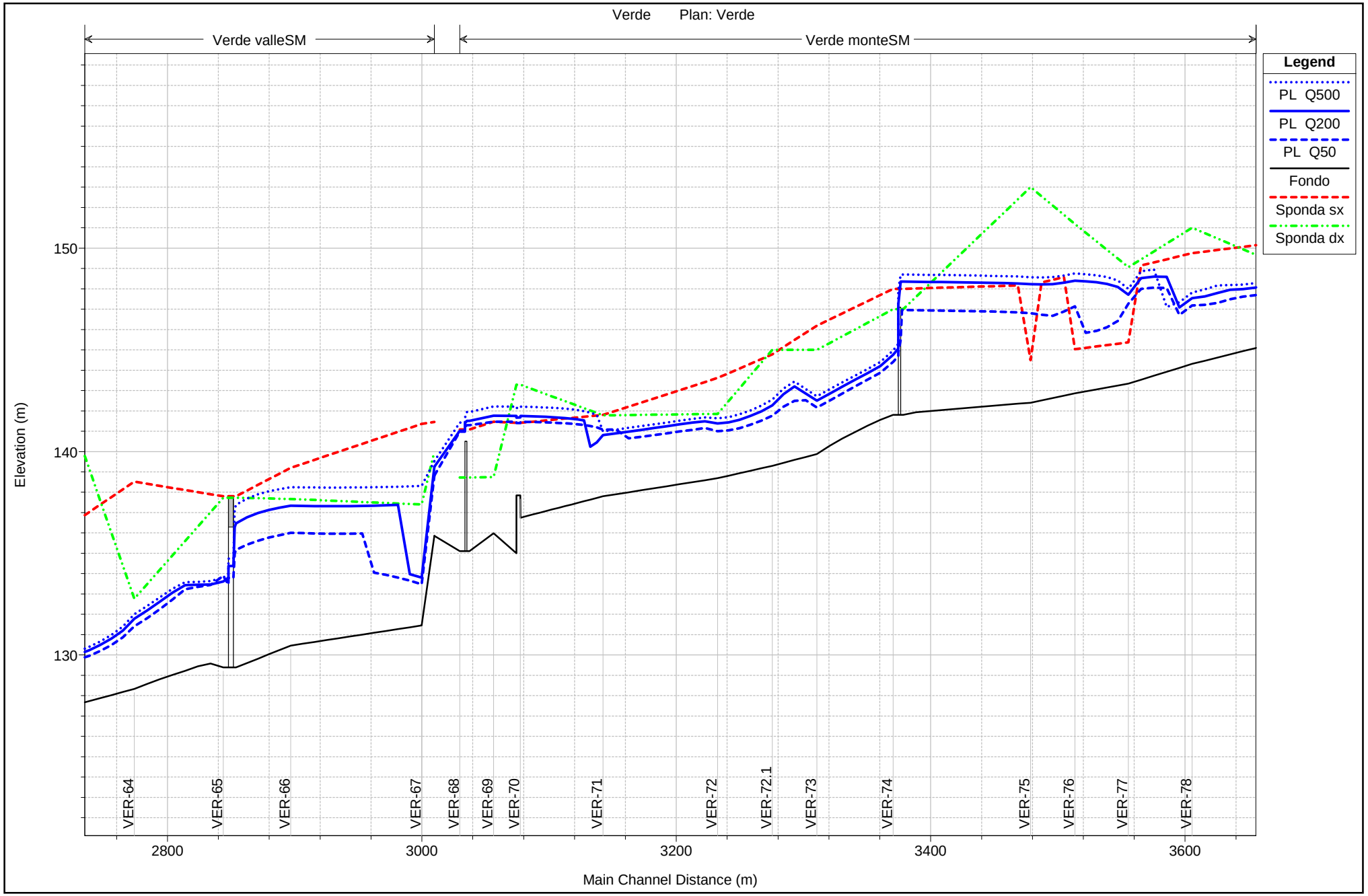
	TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m3/s)		
			T = 50 anni	T = 200 anni	T = 500 anni
Verde in piena	Torrente Verde a monte Polcevera	V0	464	580	657
	Torrente Verde a valle Gioventina	V1	455	571	647
	Torrente Verde a monte Gioventina	V11	439	551	624
	Torrente Verde a valle San Martino	V3	425	535	608
	Torrente Verde a monte San Martino	V4	272	341	387
	Rio San Martino	differenza	153	194	221

Come condizioni al contorno è stata imposta la profondità critica a monte e a valle in corrispondenza della briglia.

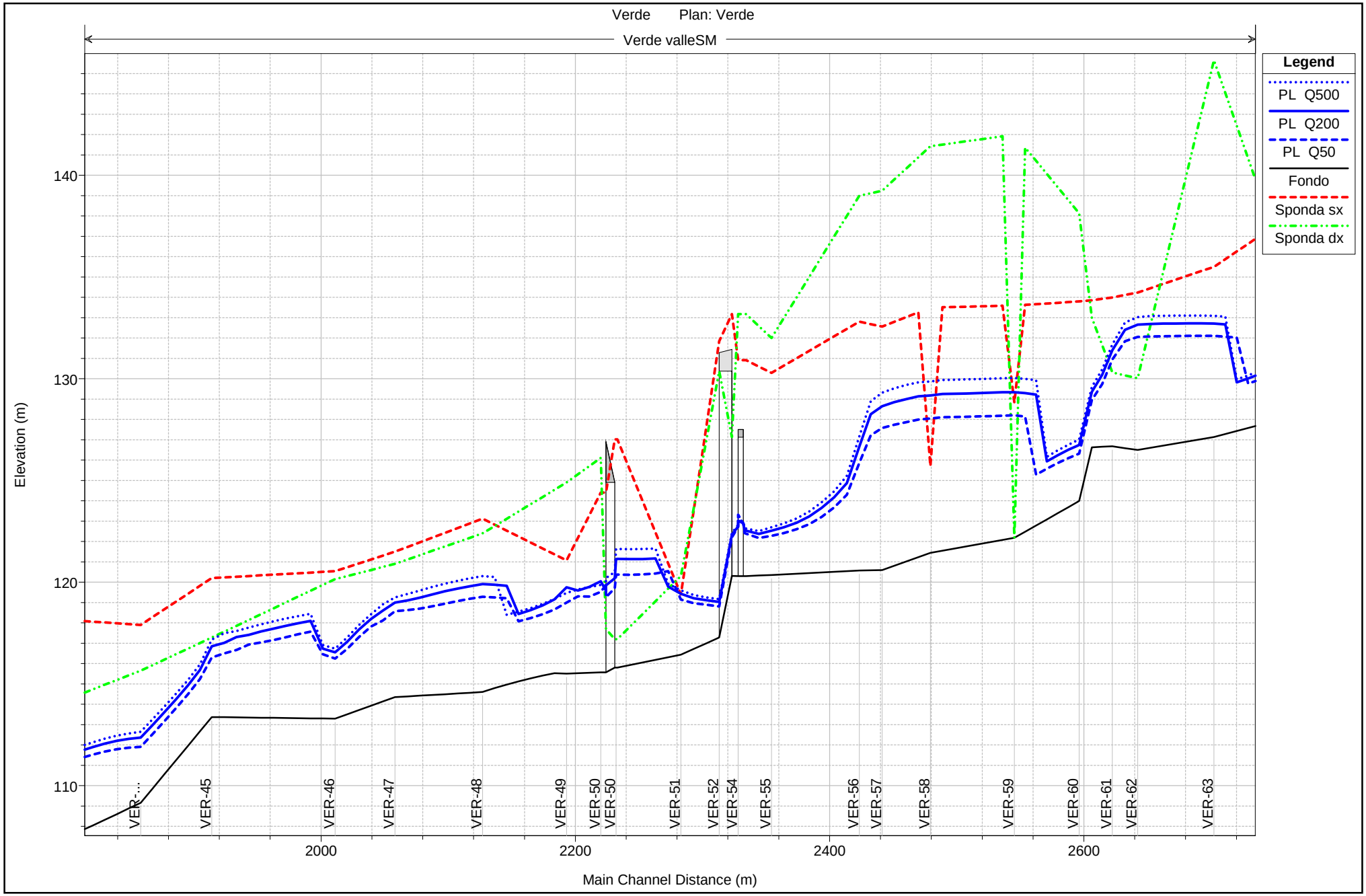
Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 33 $m^{1/3}/s$.



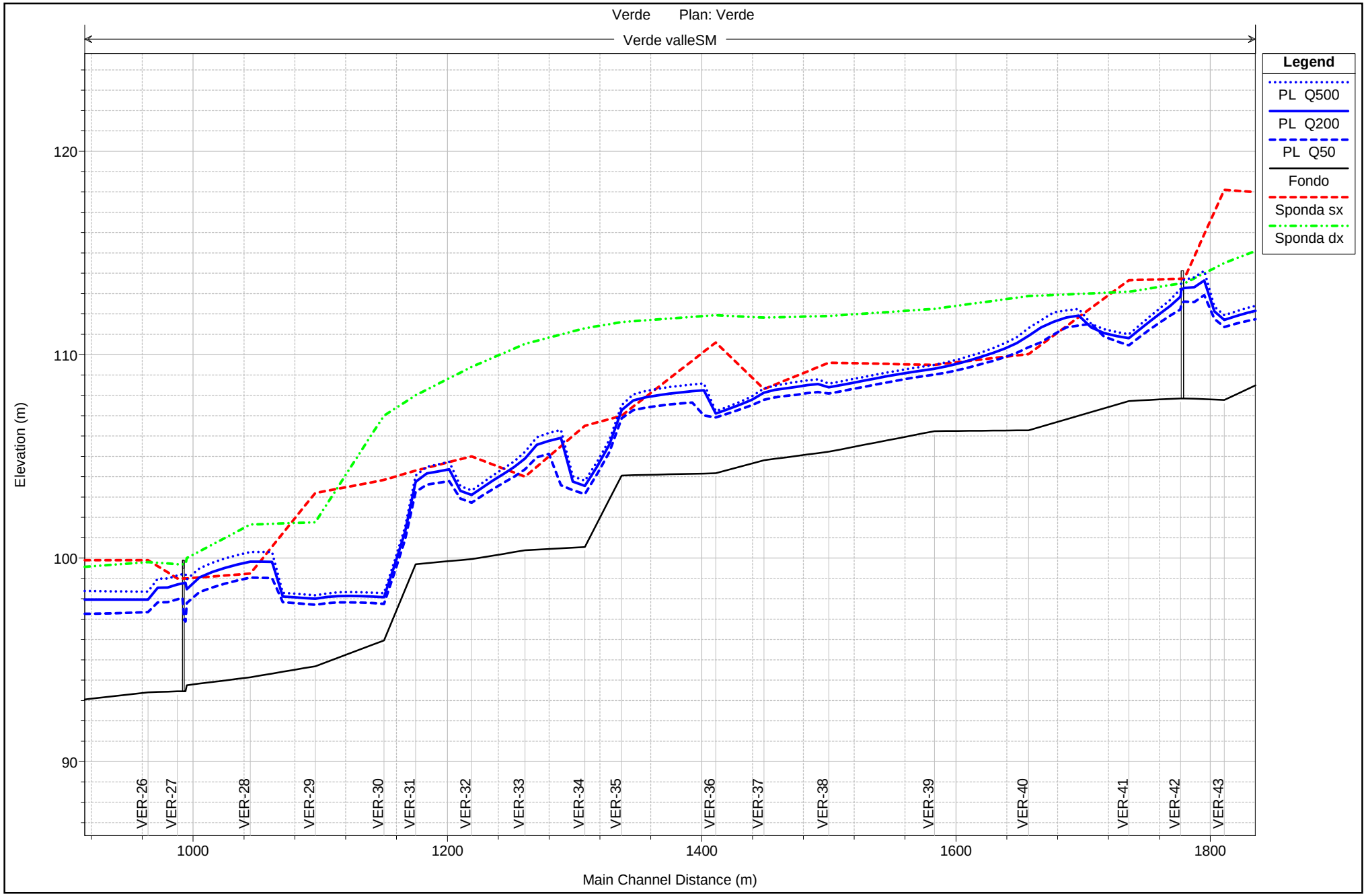
1 cm Horiz. = 40 m 1 cm Vert. = 2.5 m



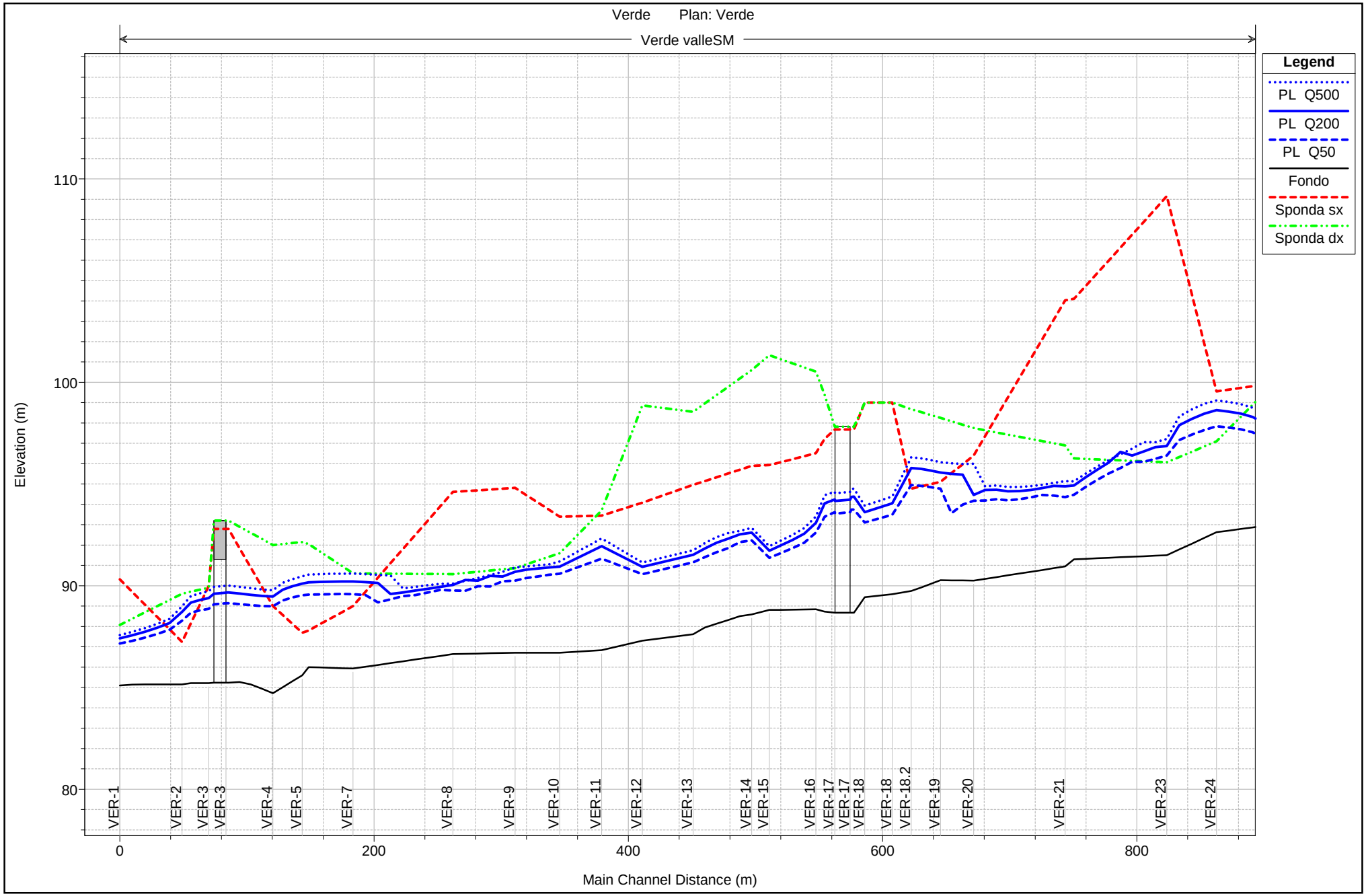
1 cm Horiz. = 40 m 1 cm Vert. = 2.5 m



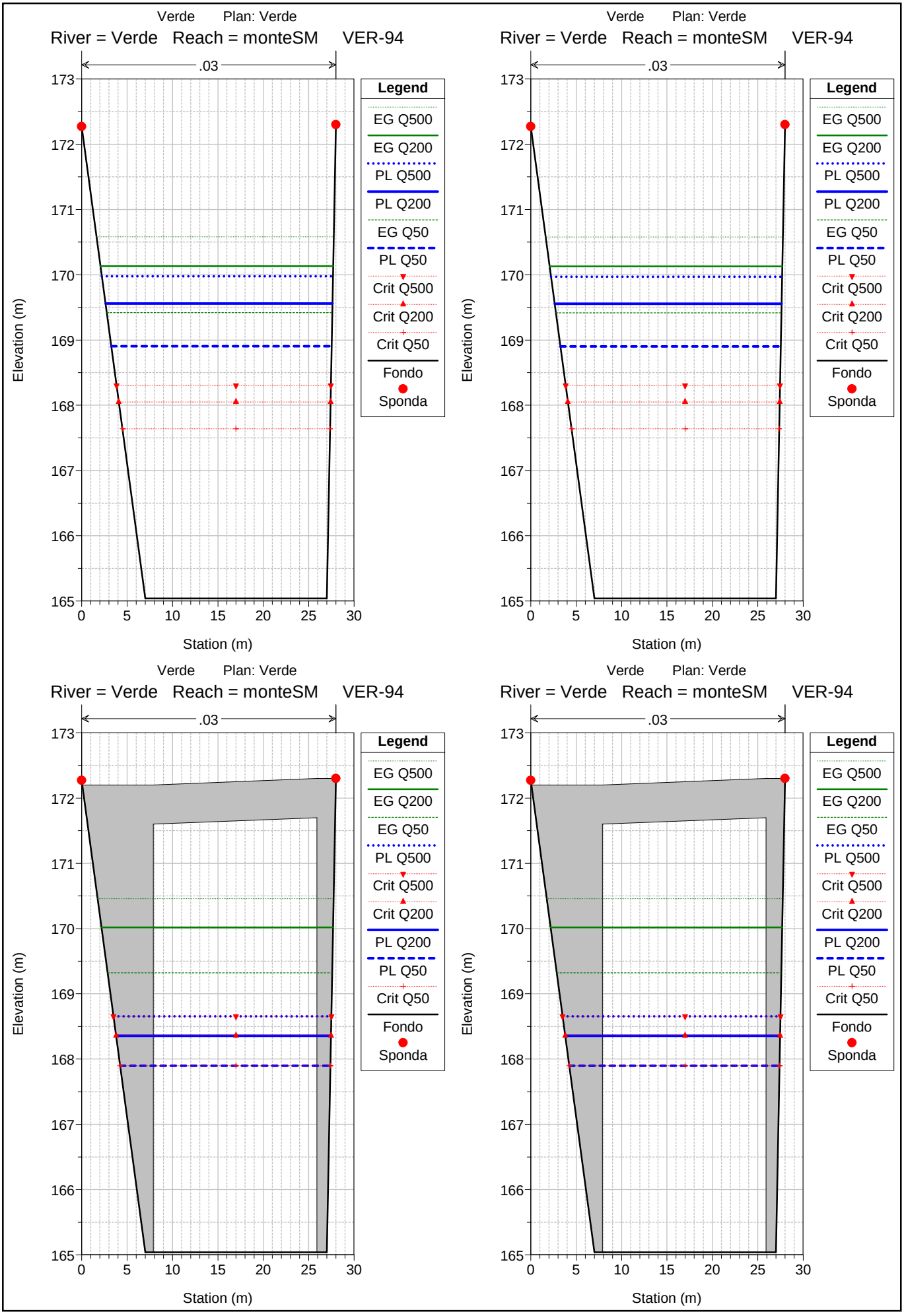
1 cm Horiz. = 40 m 1 cm Vert. = 2.5 m

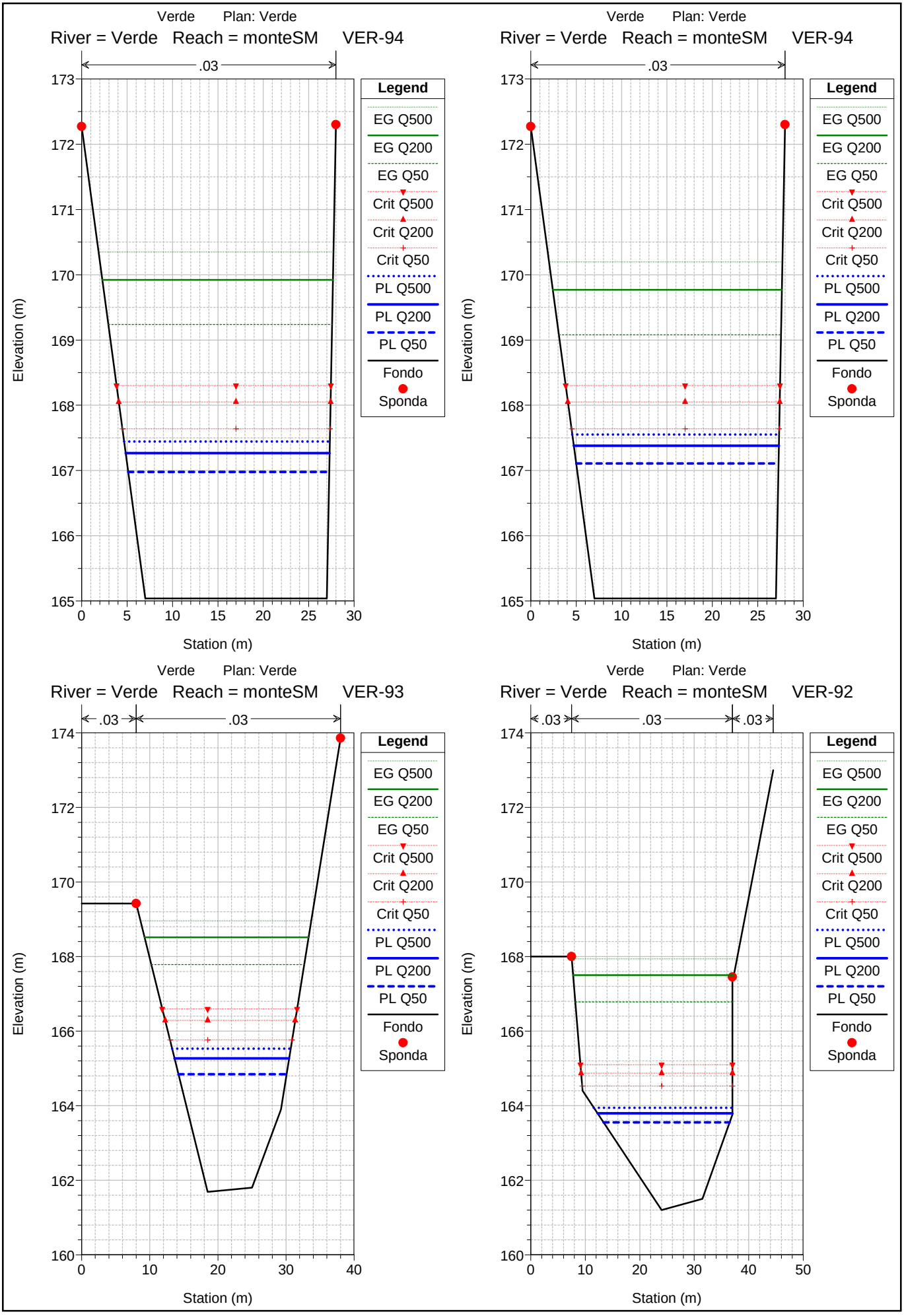


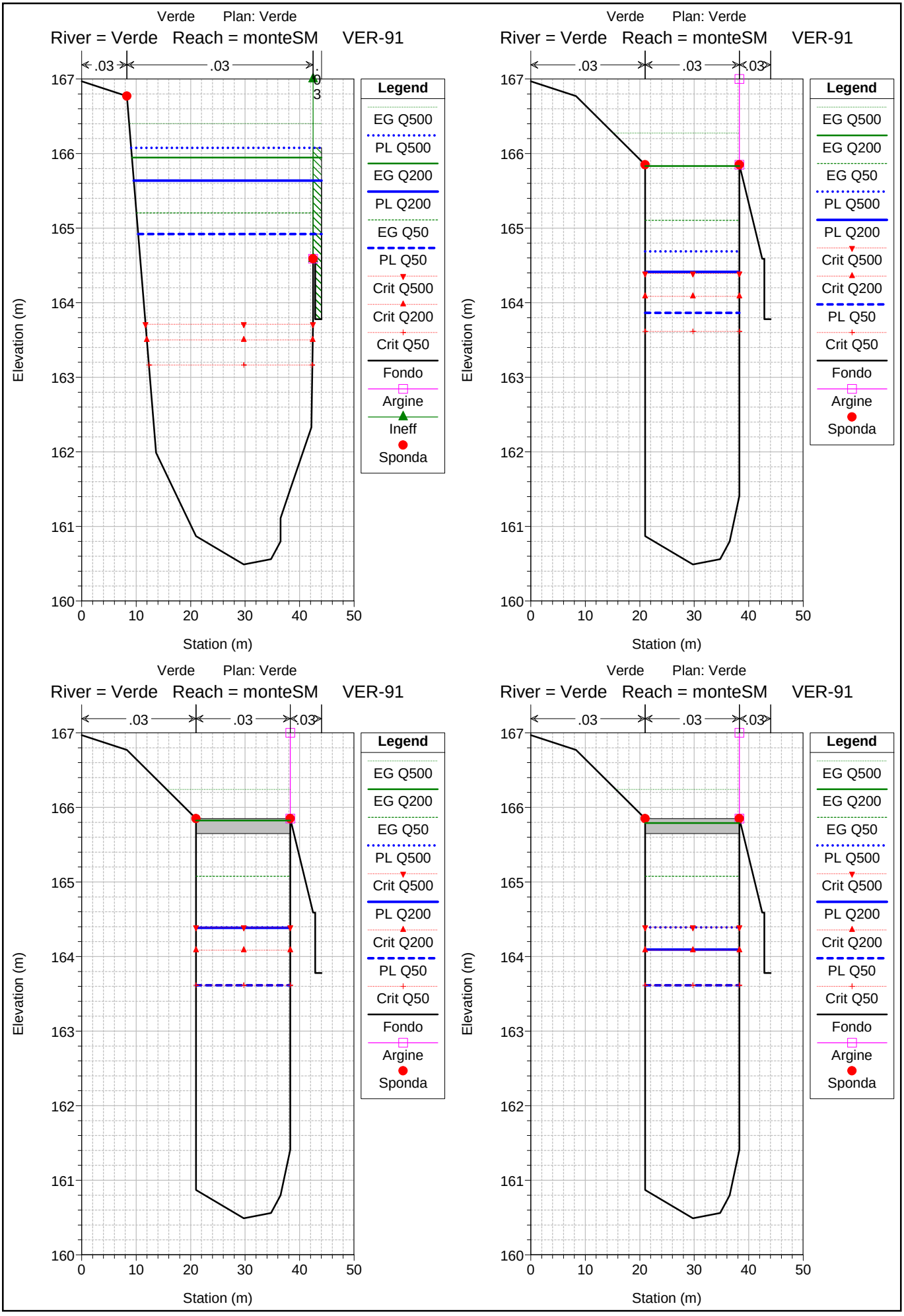
1 cm Horiz. = 40 m 1 cm Vert. = 2.5 m



1 cm Horiz. = 40 m 1 cm Vert. = 2.5 m

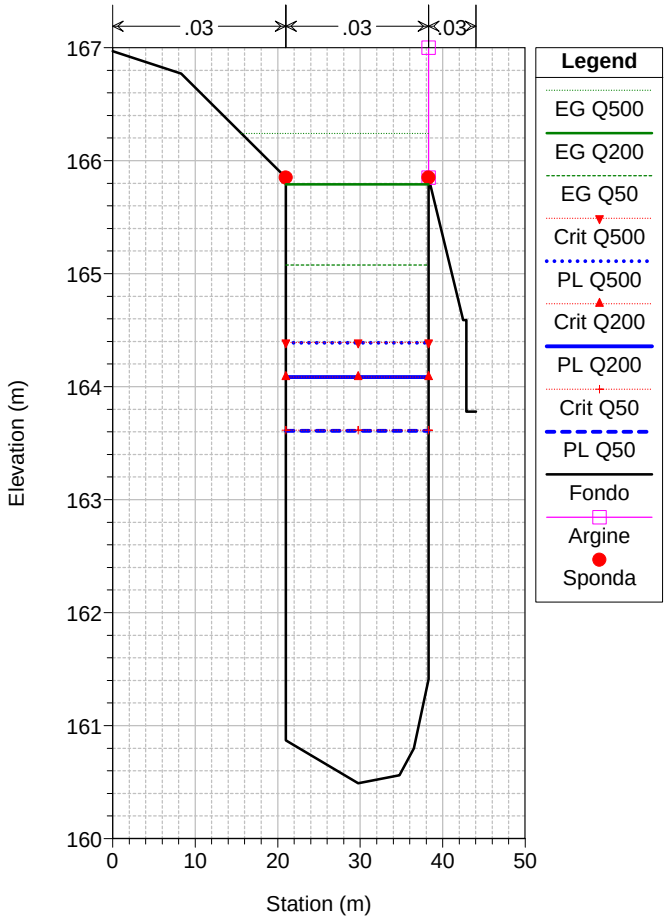

Verde Plan: Verde
River = Verde Reach = monteSM VER-94
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = monteSM VER-94
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = monteSM VER-94
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = monteSM VER-94
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


Verde Plan: Verde
River = Verde Reach = monteSM VER-94
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = monteSM VER-94
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = monteSM VER-93
.03
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = monteSM VER-92
.03
.03
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


Verde Plan: Verde
River = Verde Reach = monteSM VER-91
.03
.03
.03
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Argine
Ineff
Sponda

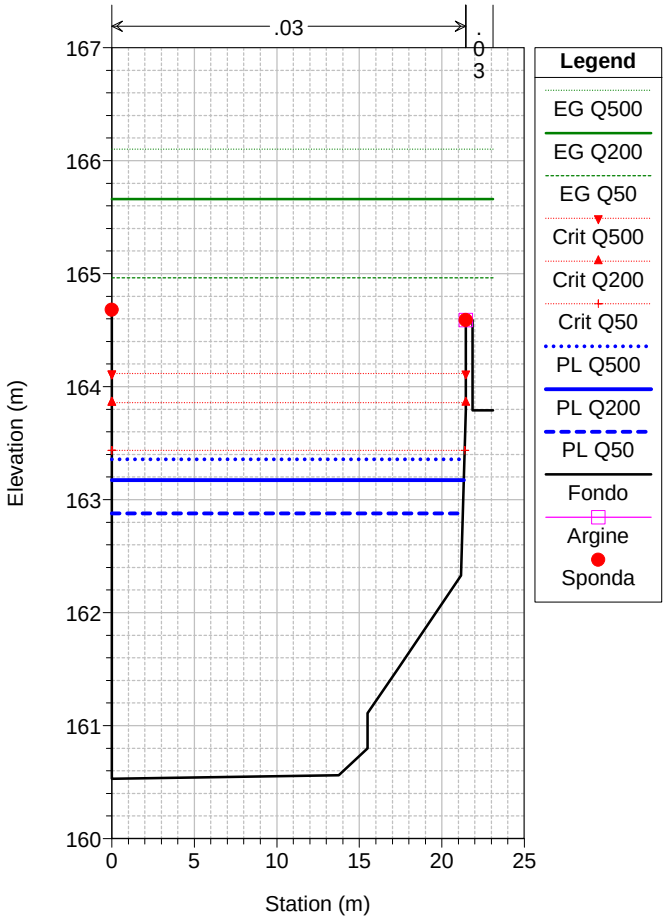
Verde Plan: Verde

River = Verde Reach = monteSM VER-91



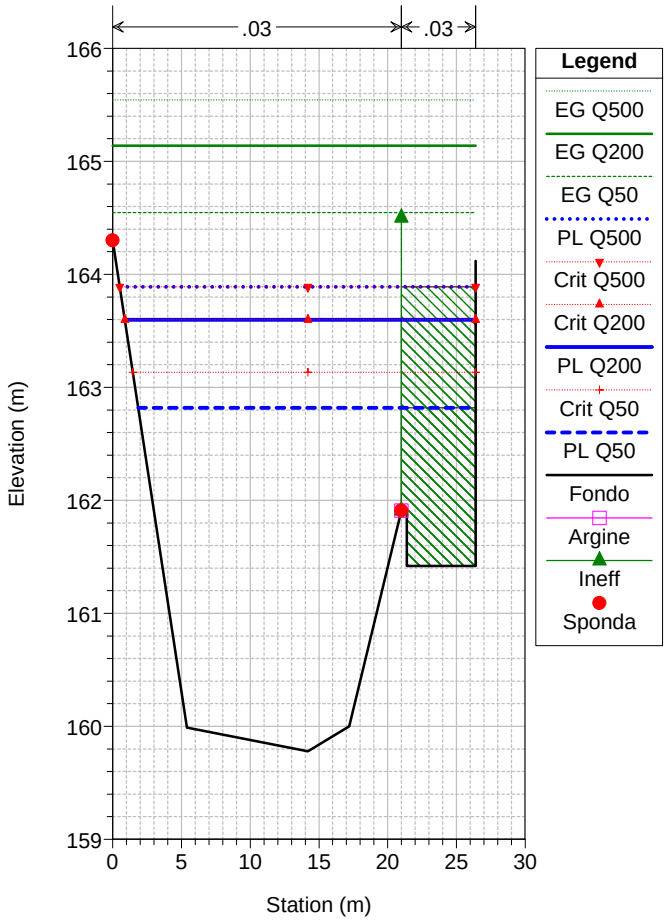
Verde Plan: Verde

River = Verde Reach = monteSM VER-91



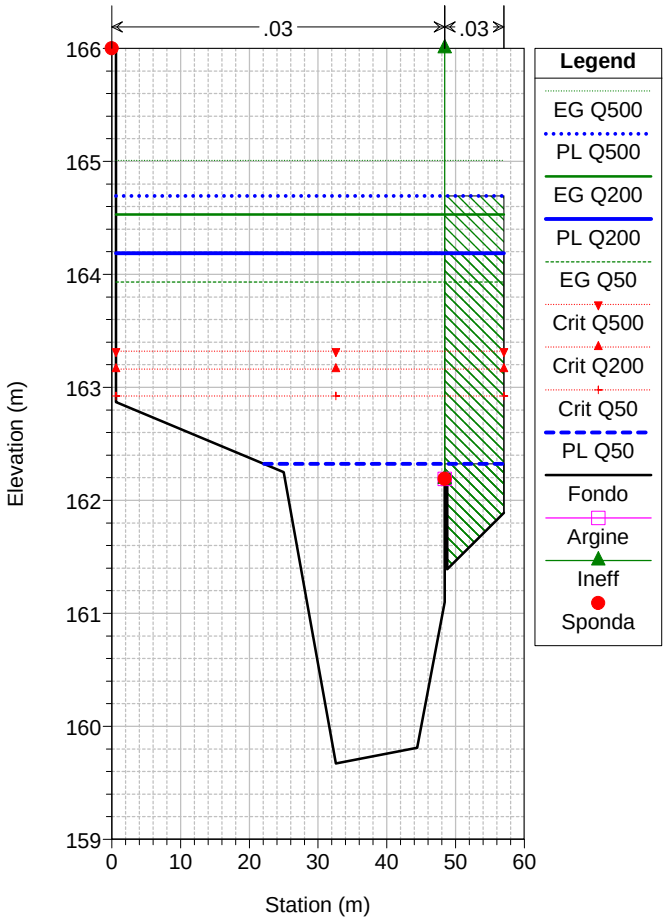
Verde Plan: Verde

River = Verde Reach = monteSM VER-90



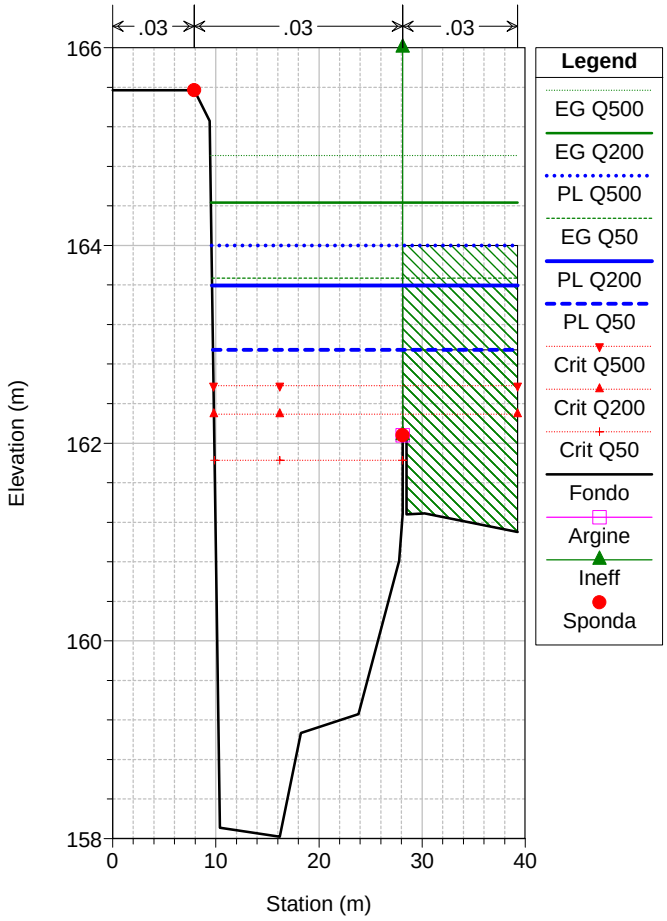
Verde Plan: Verde

River = Verde Reach = monteSM VER-89



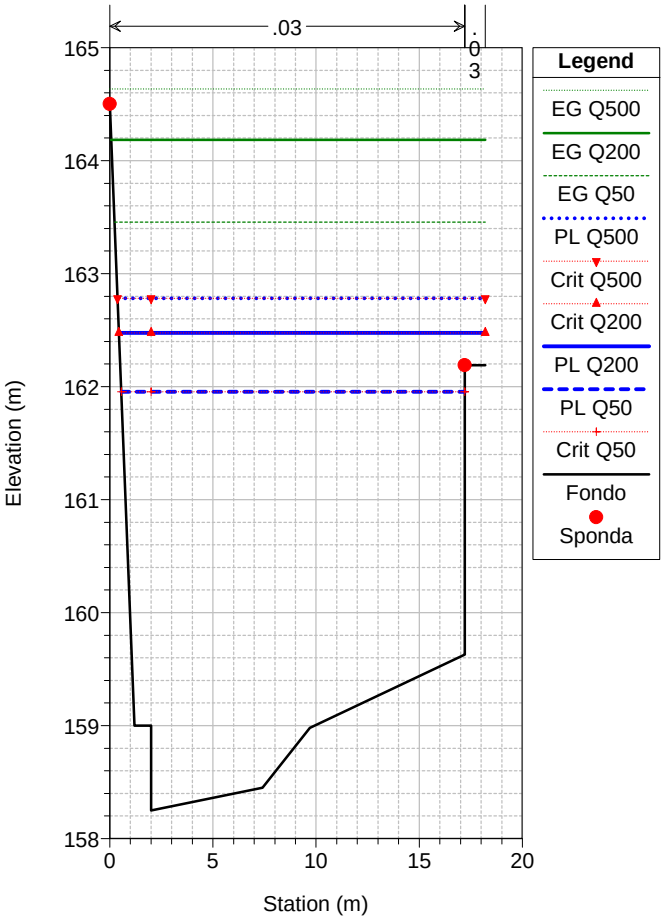
Verde Plan: Verde

River = Verde Reach = monteSM VER-88



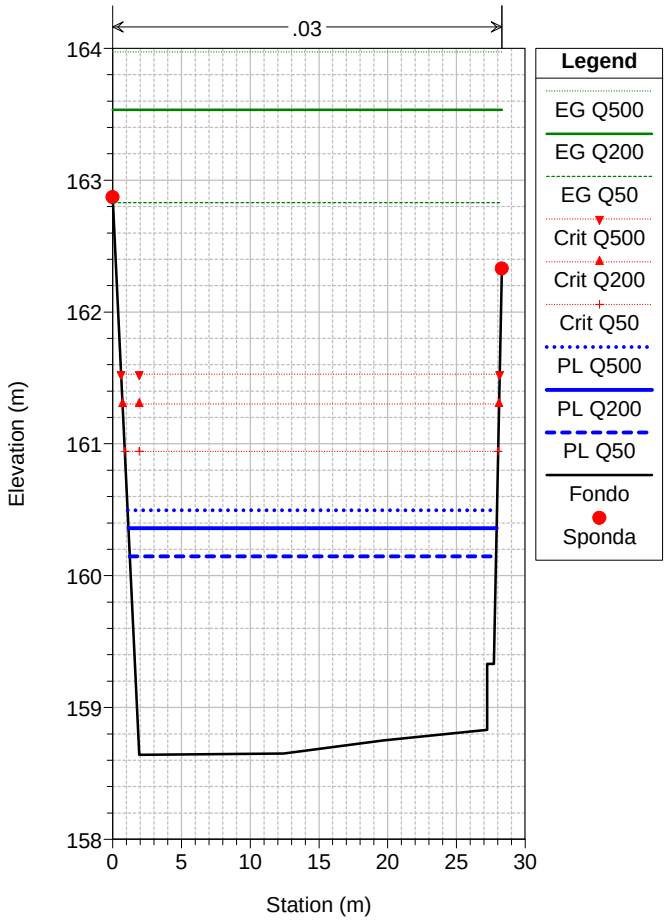
Verde Plan: Verde

River = Verde Reach = monteSM VER-87



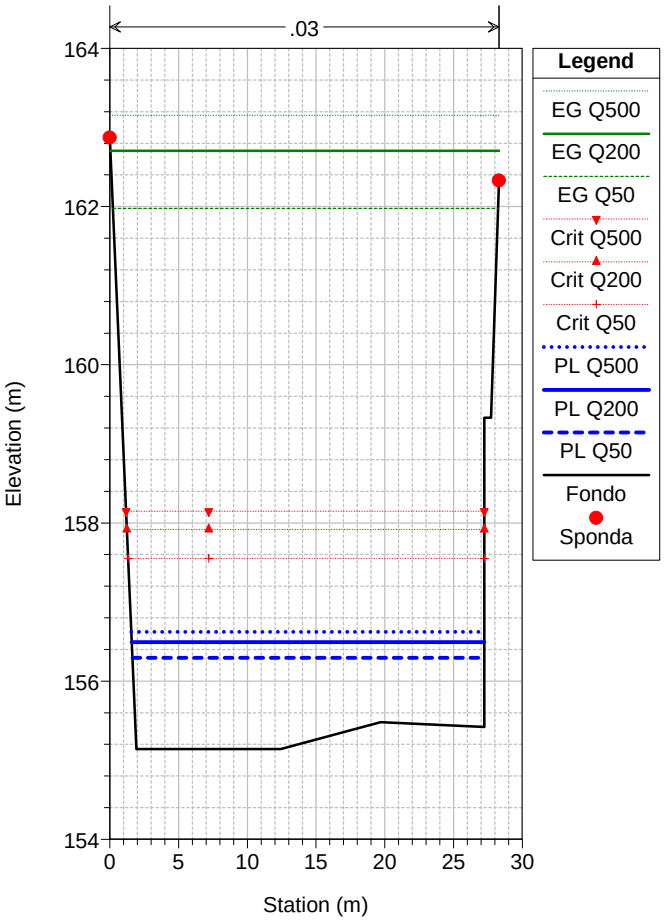
Verde Plan: Verde

River = Verde Reach = monteSM VER-86



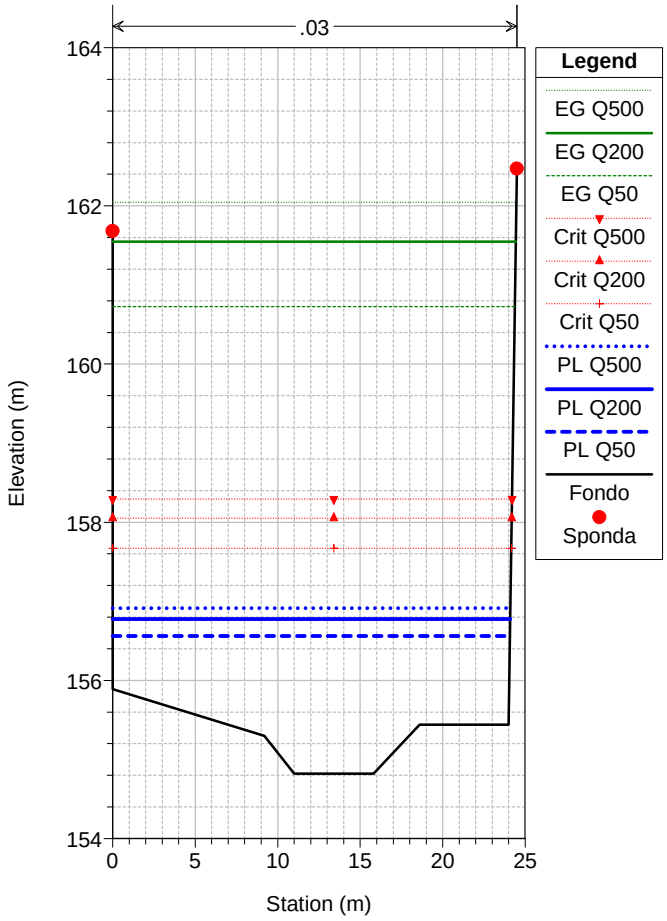
Verde Plan: Verde

River = Verde Reach = monteSM VER-86



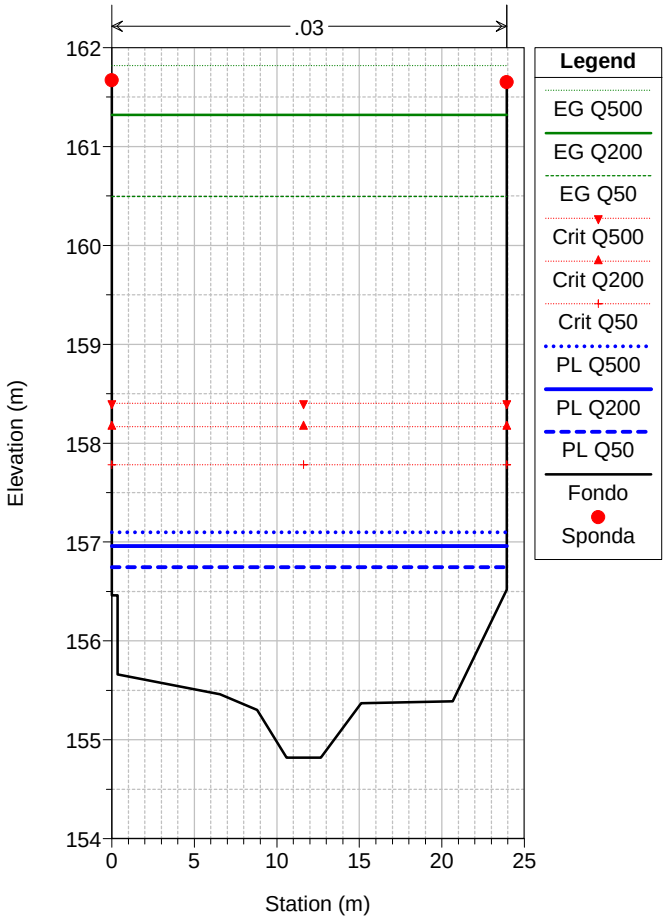
Verde Plan: Verde

River = Verde Reach = monteSM VER-85



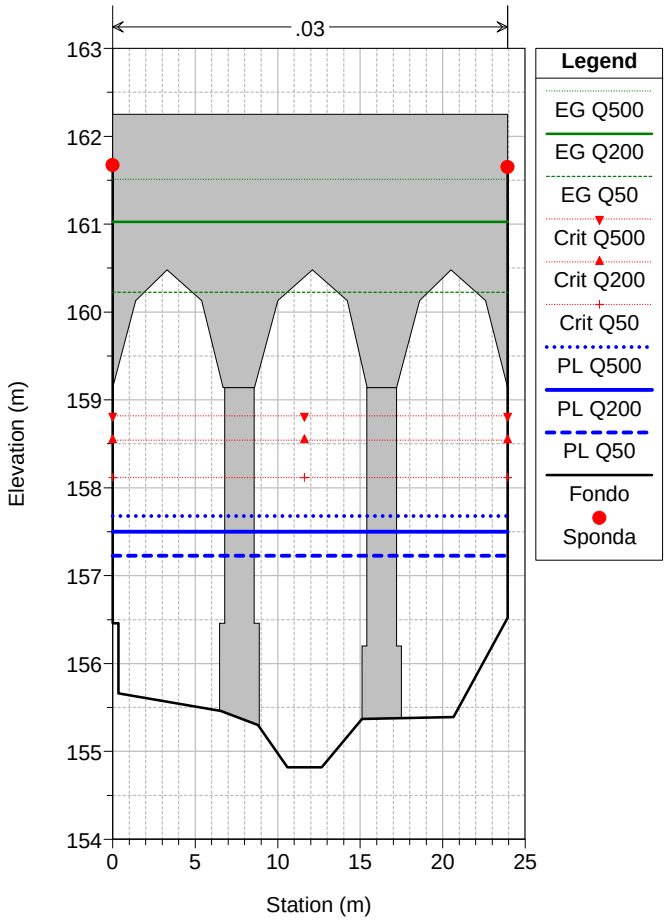
Verde Plan: Verde

River = Verde Reach = monteSM VER-85



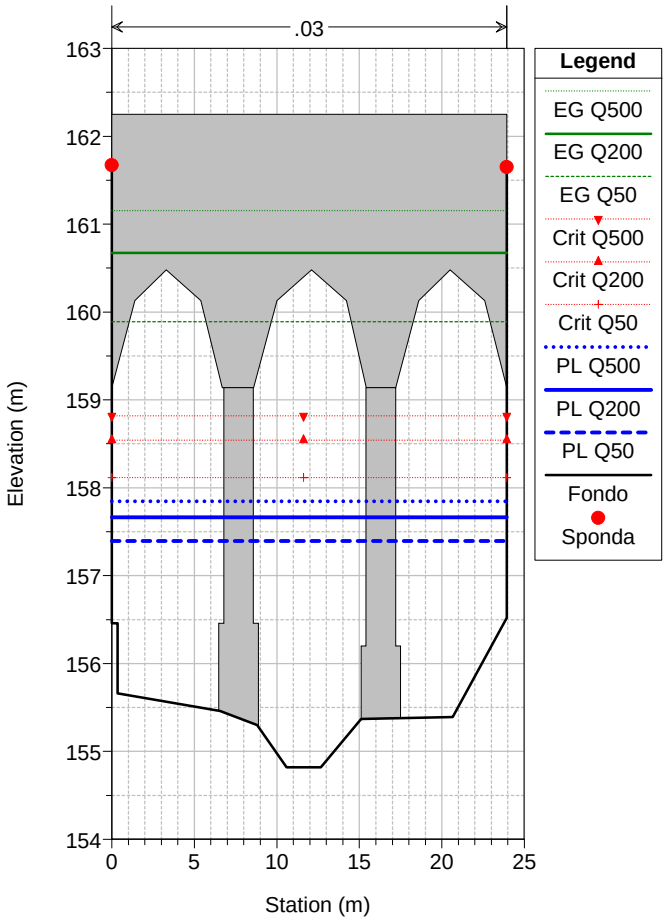
Verde Plan: Verde

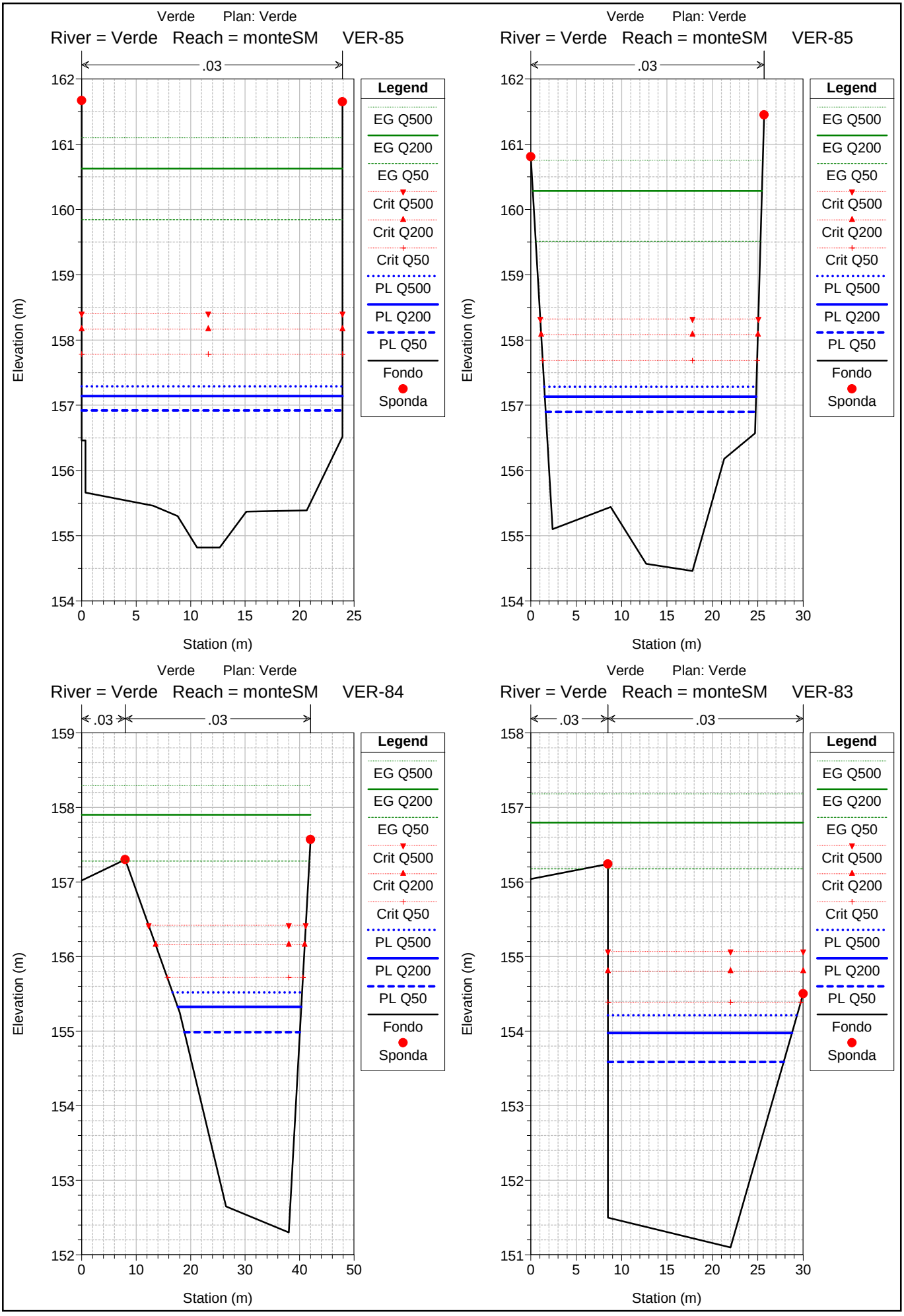
River = Verde Reach = monteSM VER-85



Verde Plan: Verde

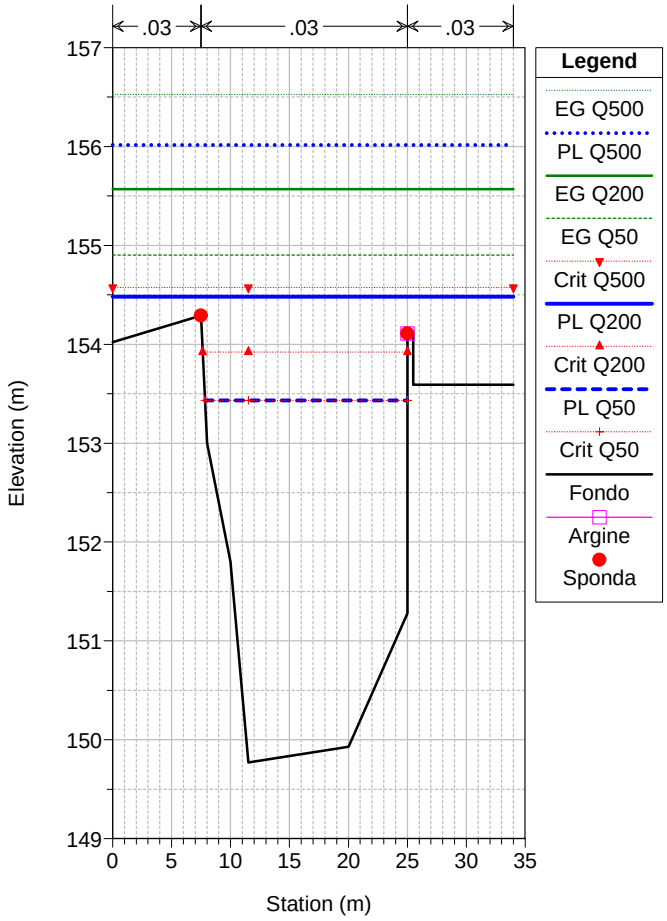
River = Verde Reach = monteSM VER-85




Verde Plan: Verde
River = Verde Reach = monteSM VER-85
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Verde Plan: Verde
River = Verde Reach = monteSM VER-85
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Verde Plan: Verde
River = Verde Reach = monteSM VER-84
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Verde Plan: Verde
River = Verde Reach = monteSM VER-83
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

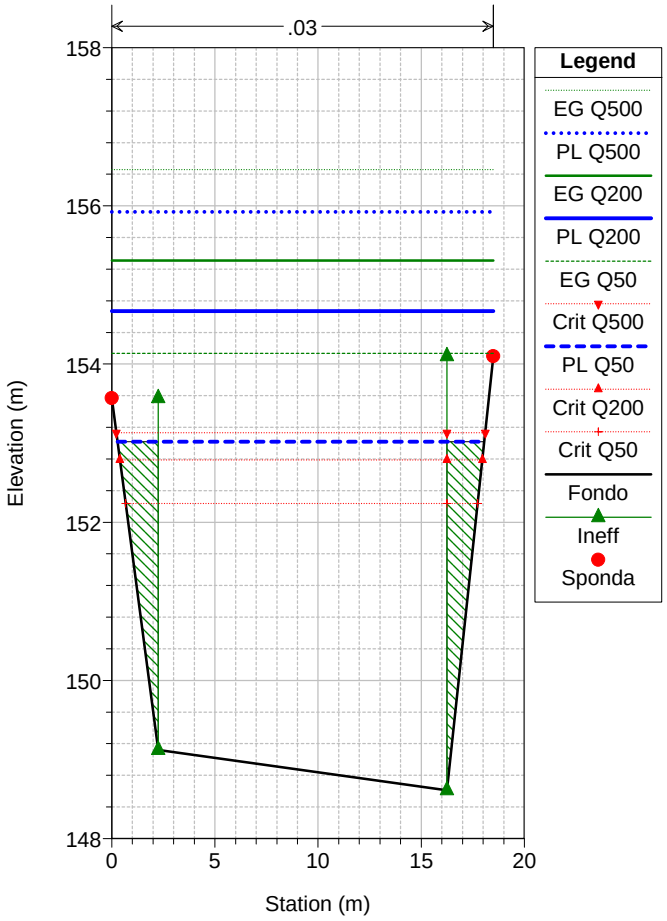
Verde Plan: Verde

River = Verde Reach = monteSM VER-82



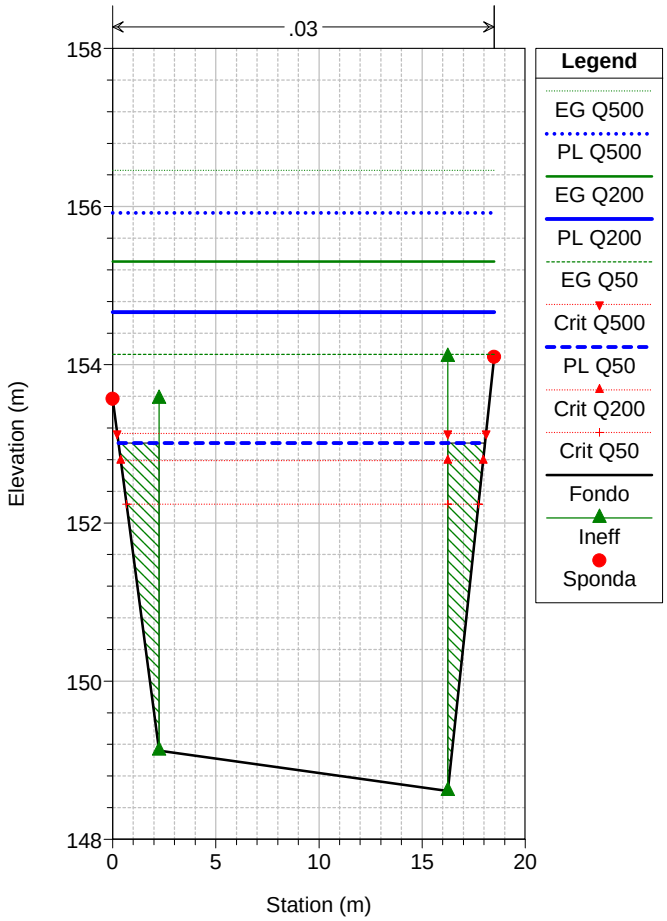
Verde Plan: Verde

River = Verde Reach = monteSM VER-81



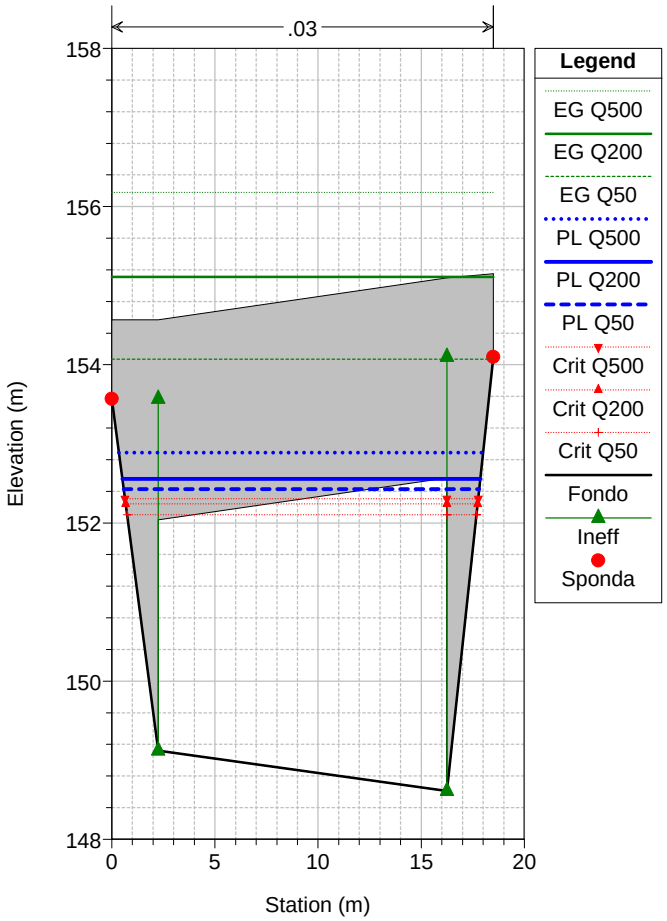
Verde Plan: Verde

River = Verde Reach = monteSM VER-81



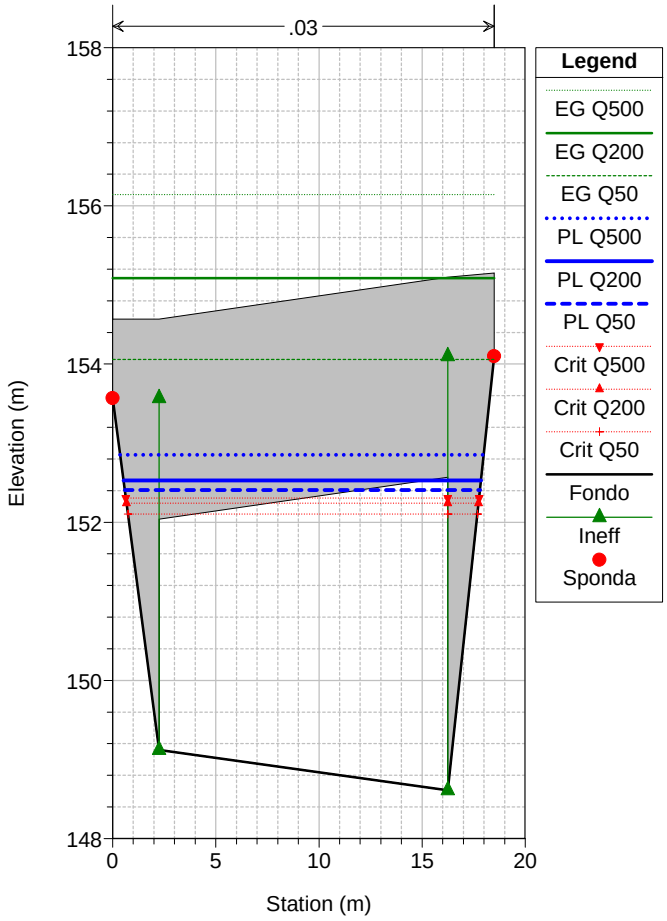
Verde Plan: Verde

River = Verde Reach = monteSM VER-81



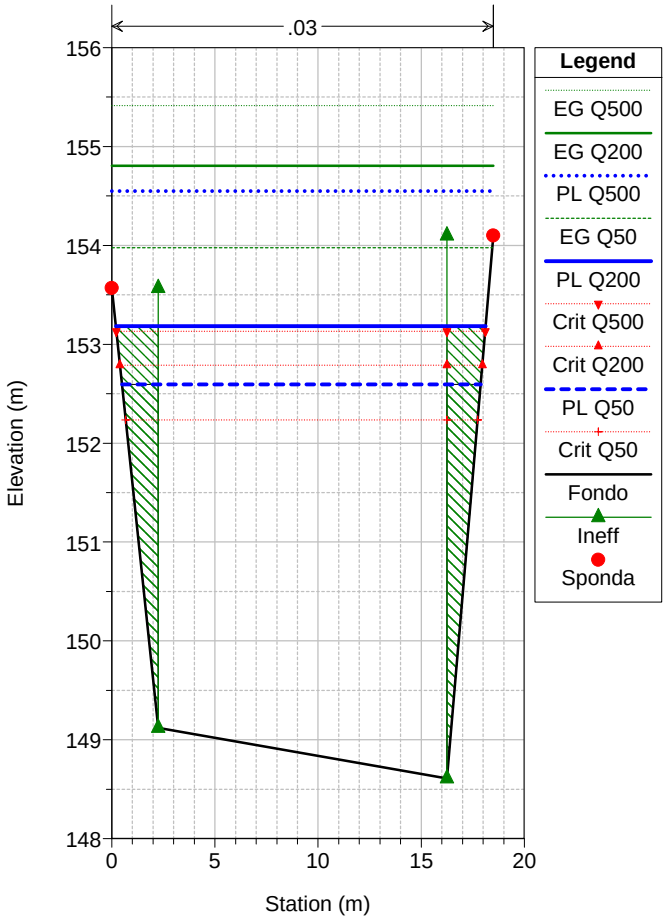
Verde Plan: Verde

River = Verde Reach = monteSM VER-81



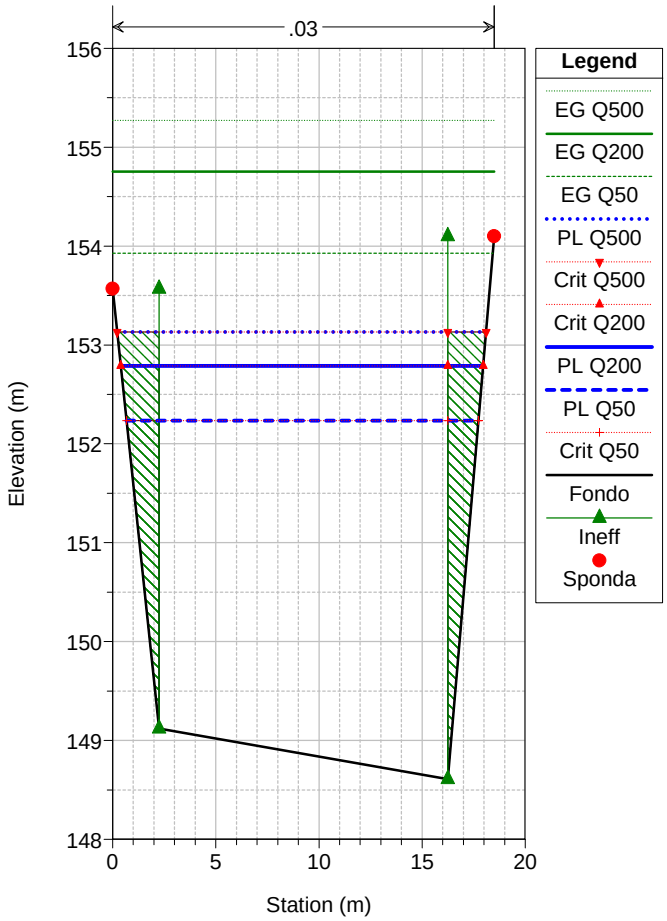
Verde Plan: Verde

River = Verde Reach = monteSM VER-81



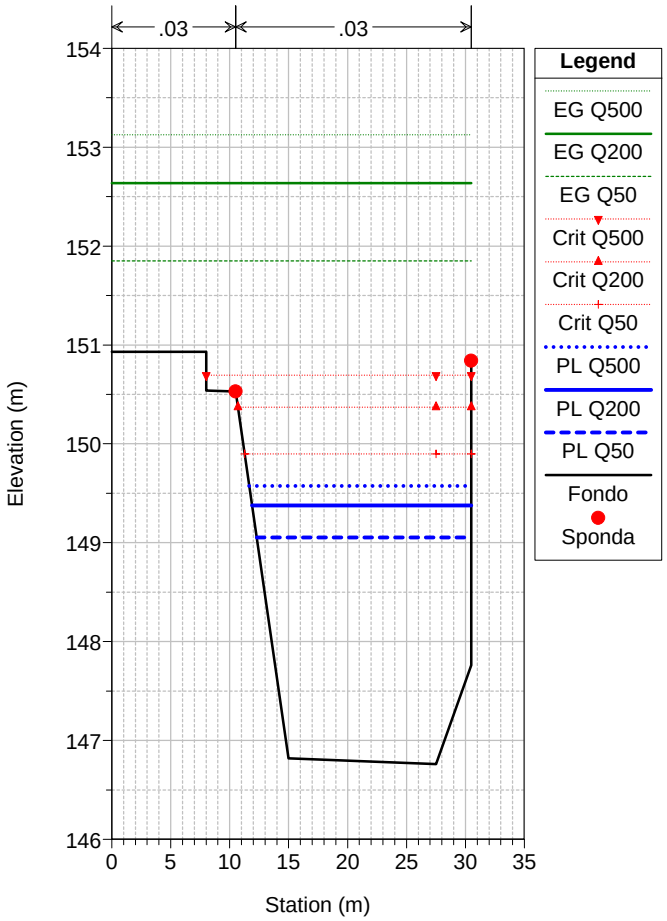
Verde Plan: Verde

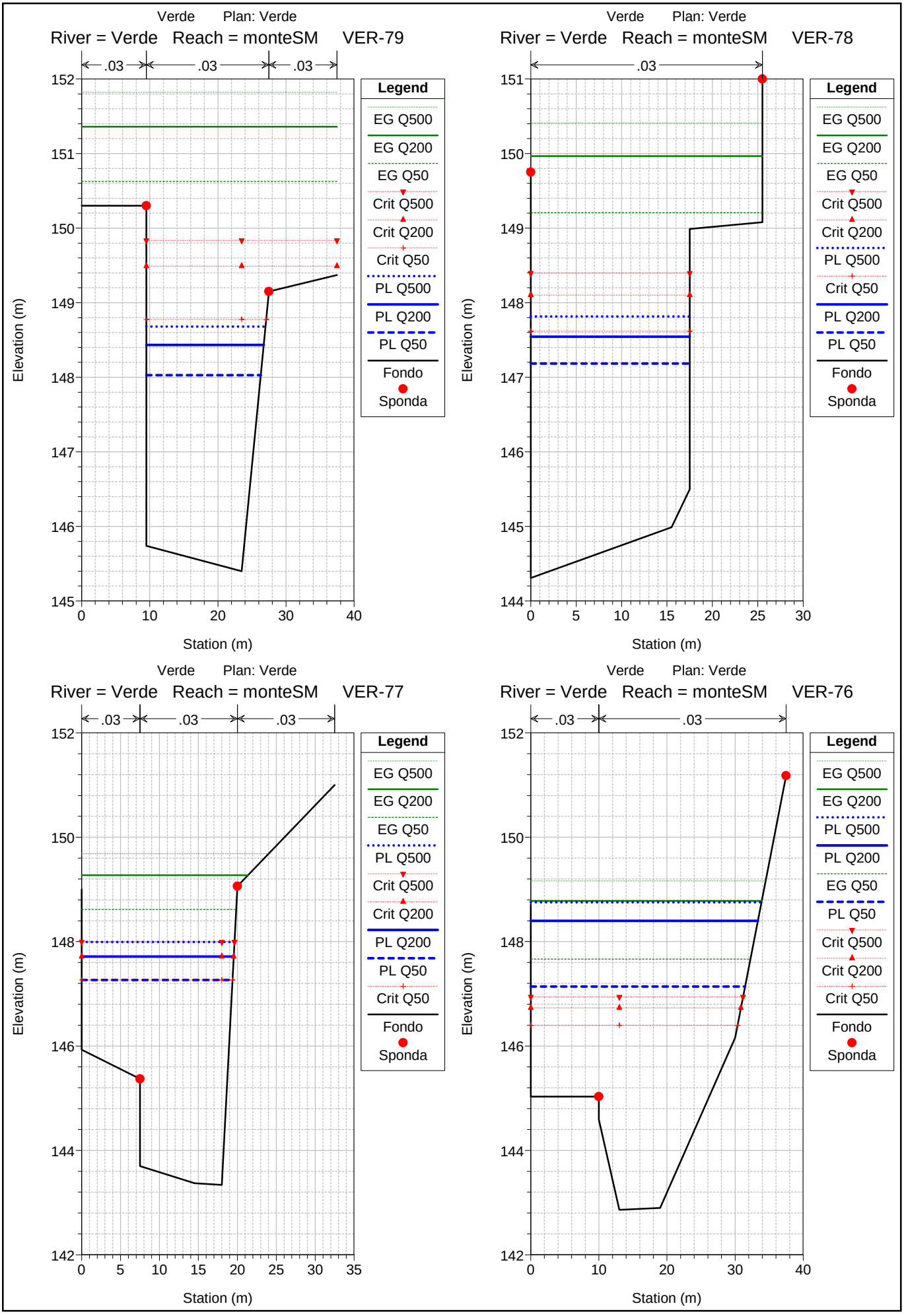
River = Verde Reach = monteSM VER-81



Verde Plan: Verde

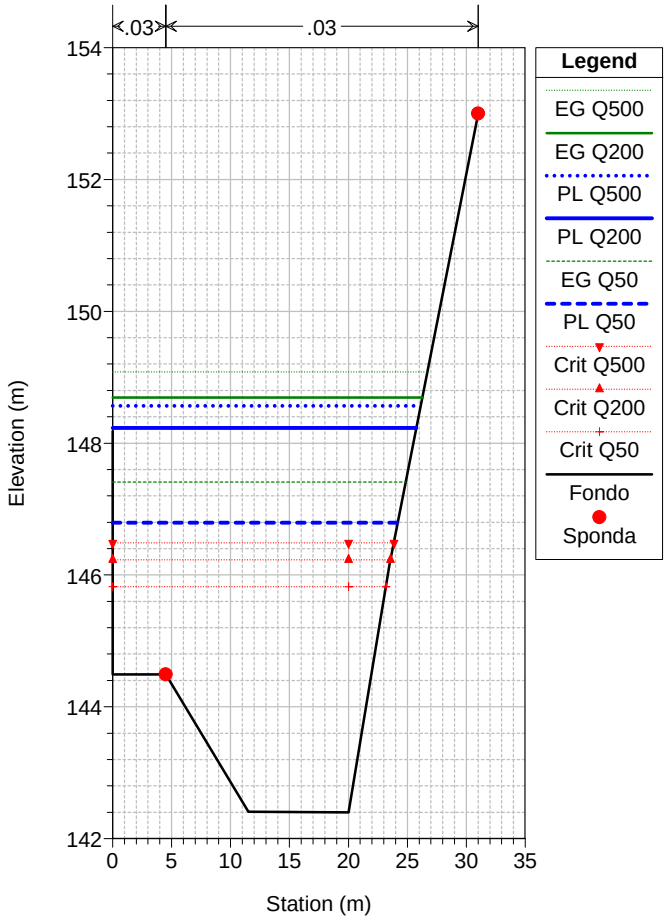
River = Verde Reach = monteSM VER-80




Verde Plan: Verde
River = Verde Reach = monteSM VER-79
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Verde Plan: Verde
River = Verde Reach = monteSM VER-78
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Verde Plan: Verde
River = Verde Reach = monteSM VER-77
.03
.03
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Verde Plan: Verde
River = Verde Reach = monteSM VER-76
.03
.03
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

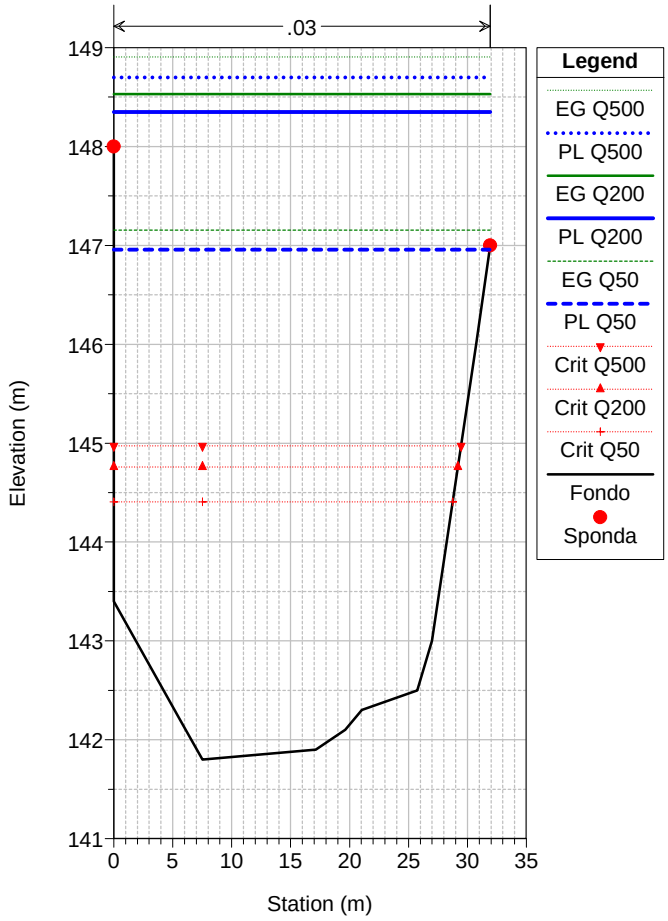
Verde Plan: Verde

River = Verde Reach = monteSM VER-75



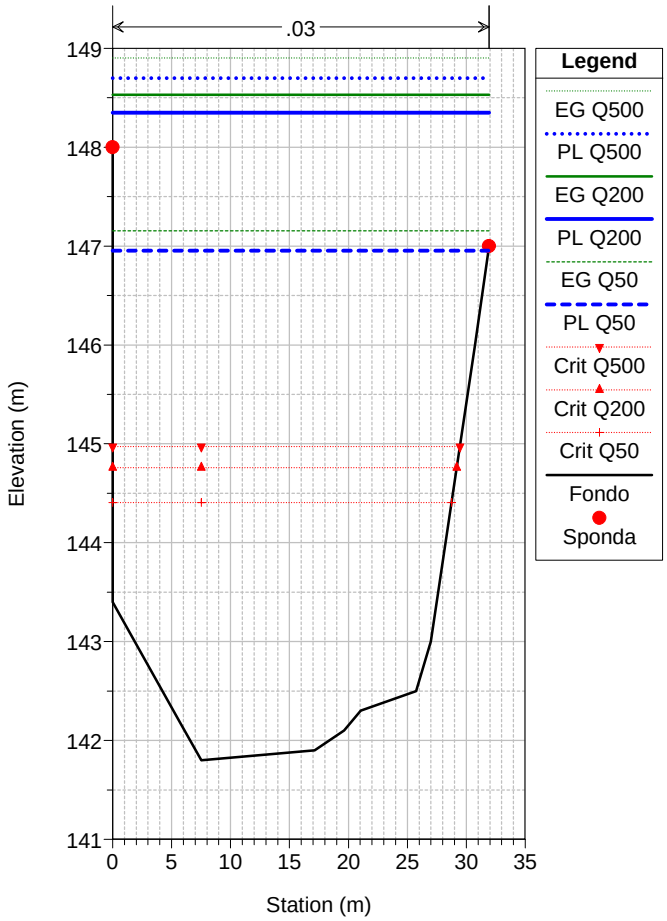
Verde Plan: Verde

River = Verde Reach = monteSM VER-74



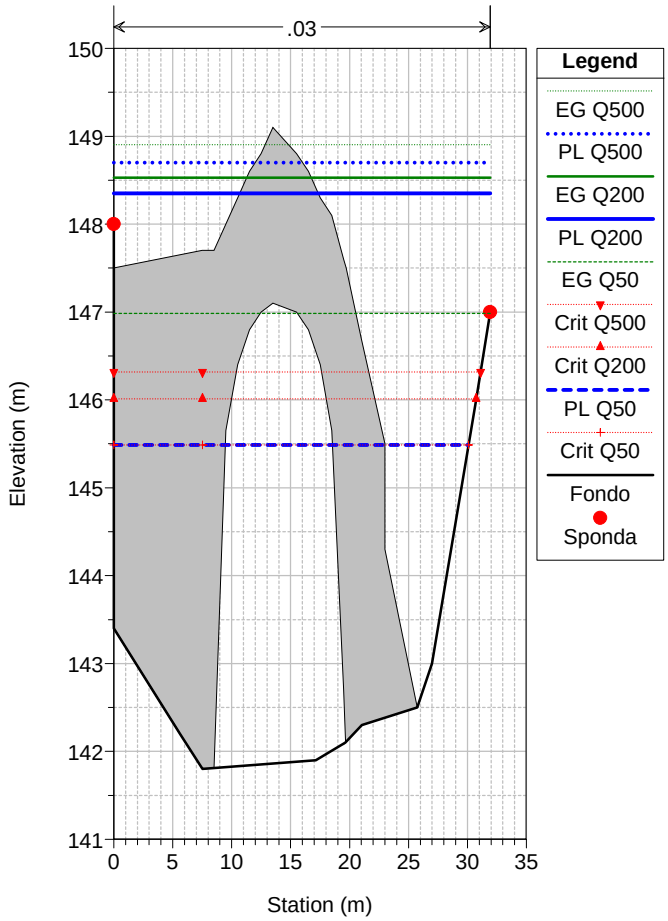
Verde Plan: Verde

River = Verde Reach = monteSM VER-74



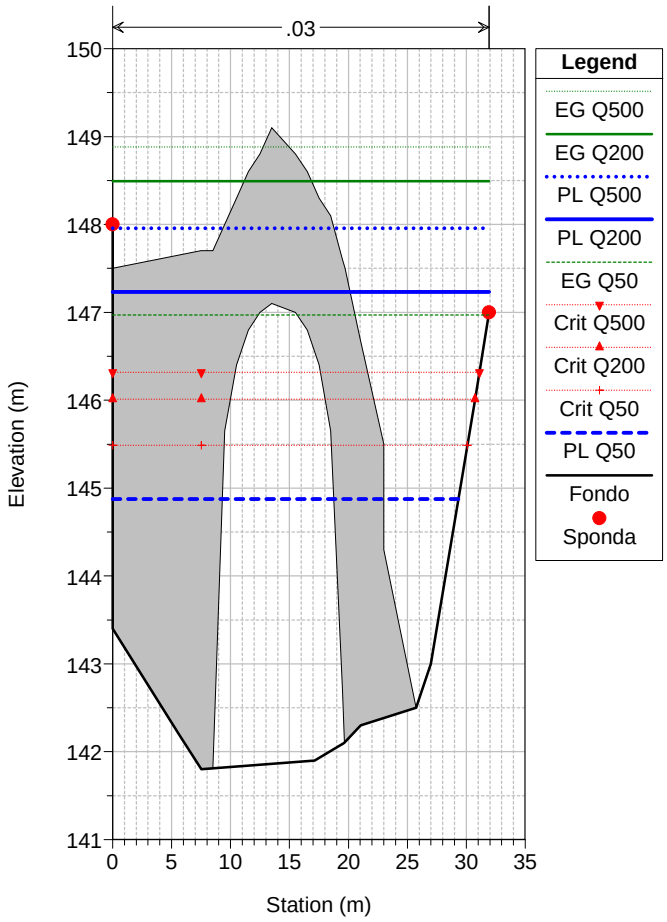
Verde Plan: Verde

River = Verde Reach = monteSM VER-74



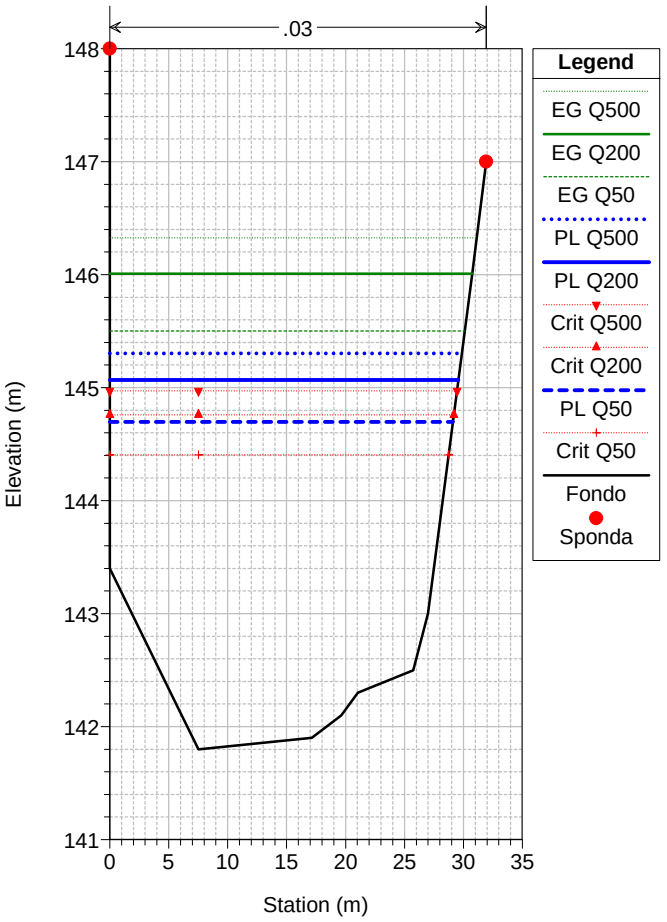
Verde Plan: Verde

River = Verde Reach = monteSM VER-74



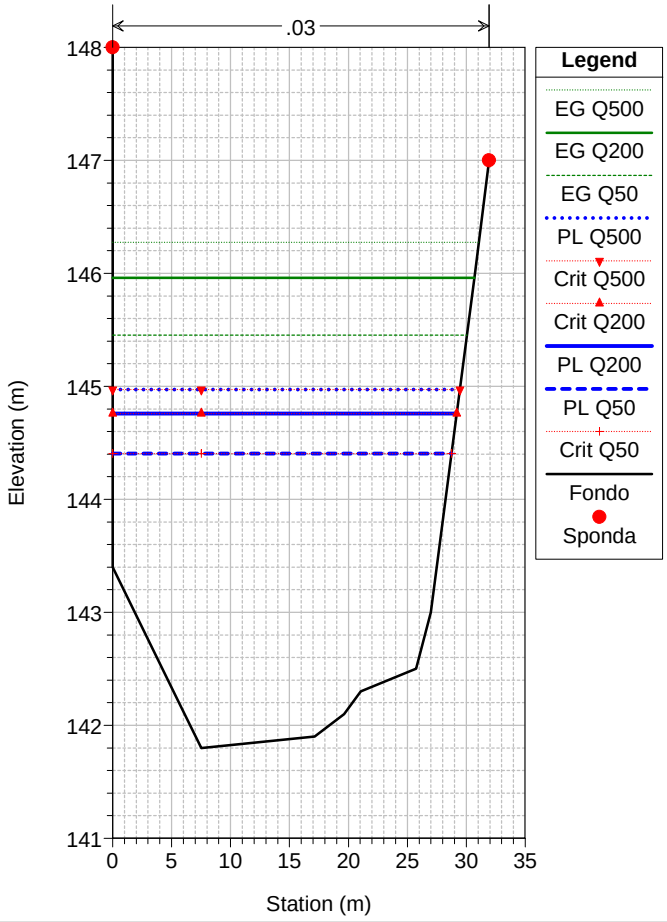
Verde Plan: Verde

River = Verde Reach = monteSM VER-74



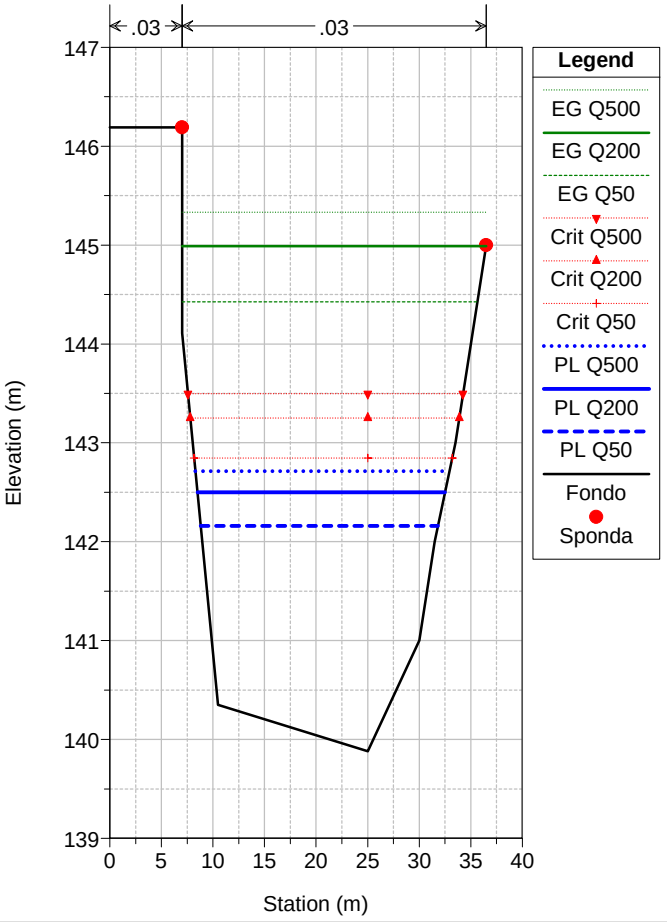
Verde Plan: Verde

River = Verde Reach = monteSM VER-74



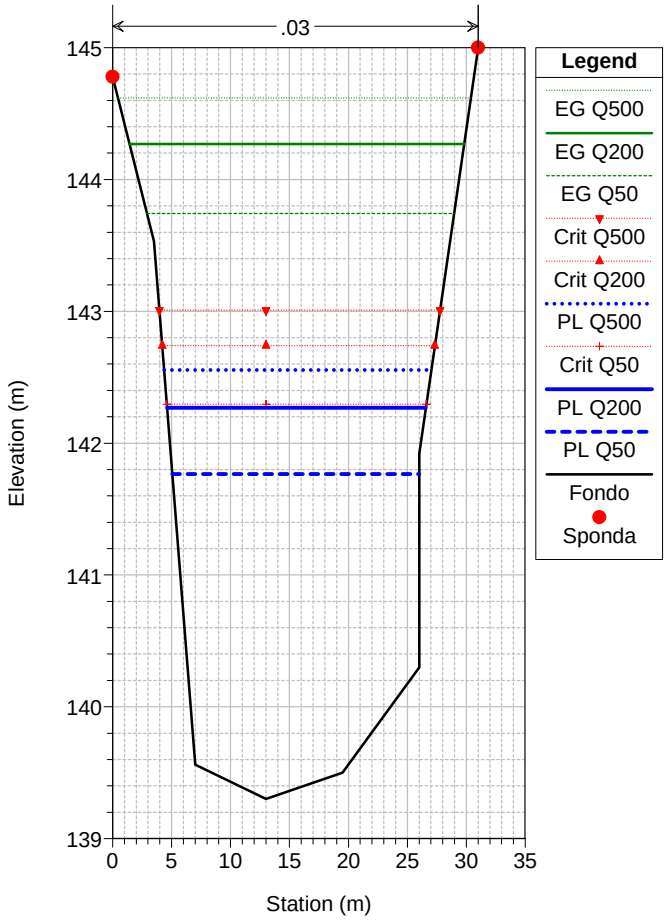
Verde Plan: Verde

River = Verde Reach = monteSM VER-73



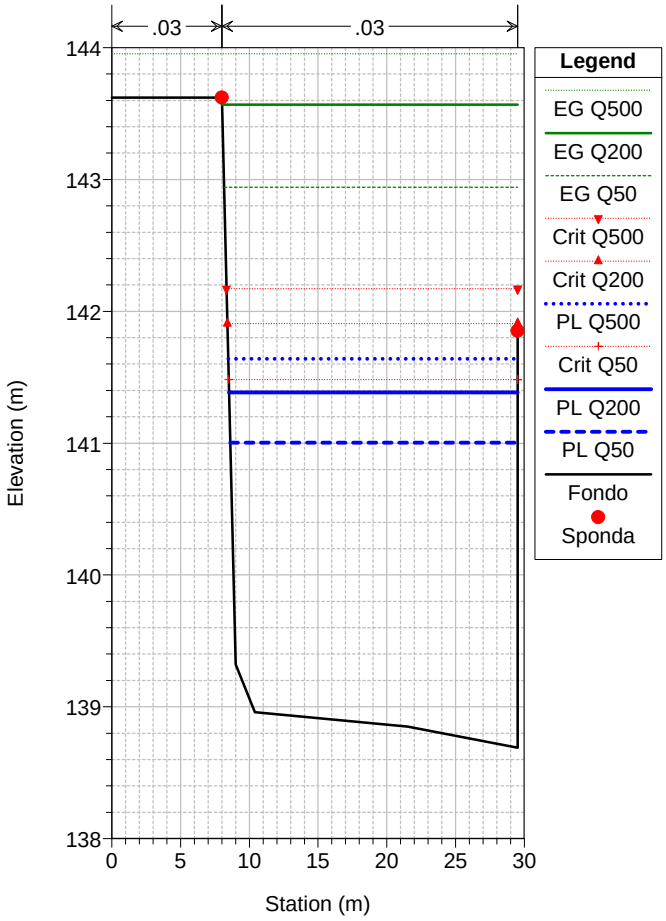
Verde Plan: Verde

River = Verde Reach = monteSM VER-72.1



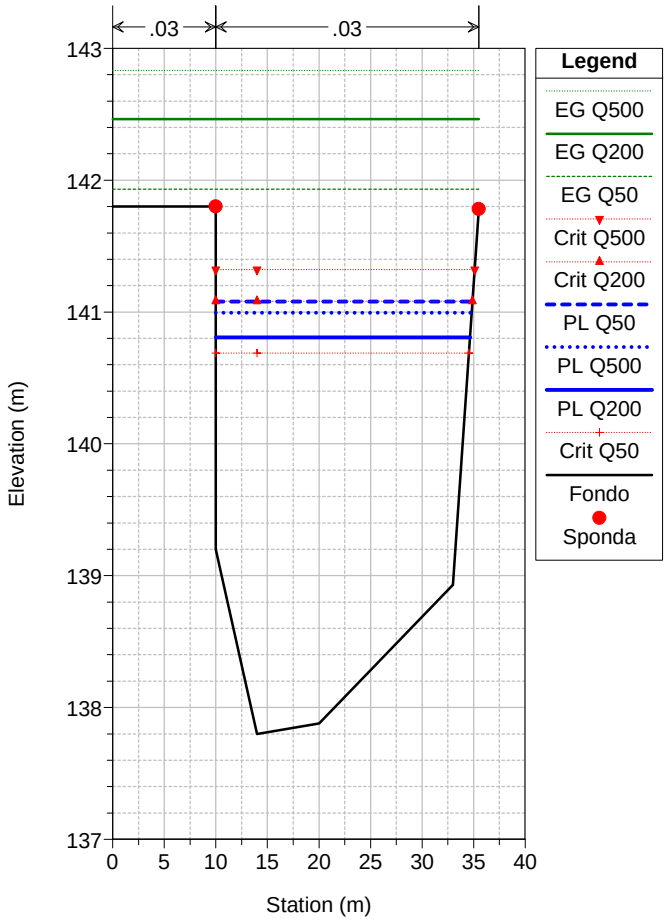
Verde Plan: Verde

River = Verde Reach = monteSM VER-72



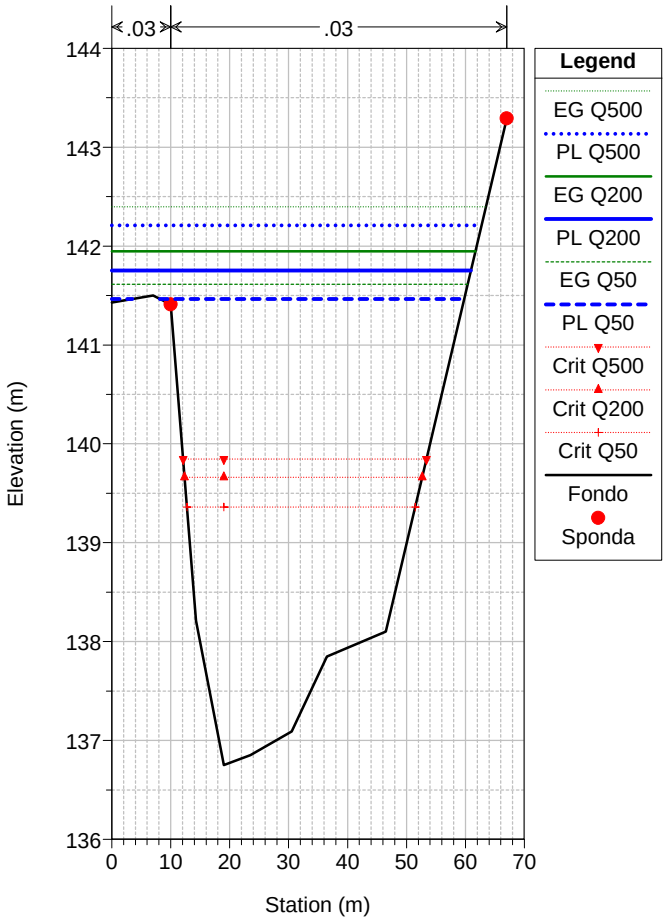
Verde Plan: Verde

River = Verde Reach = monteSM VER-71



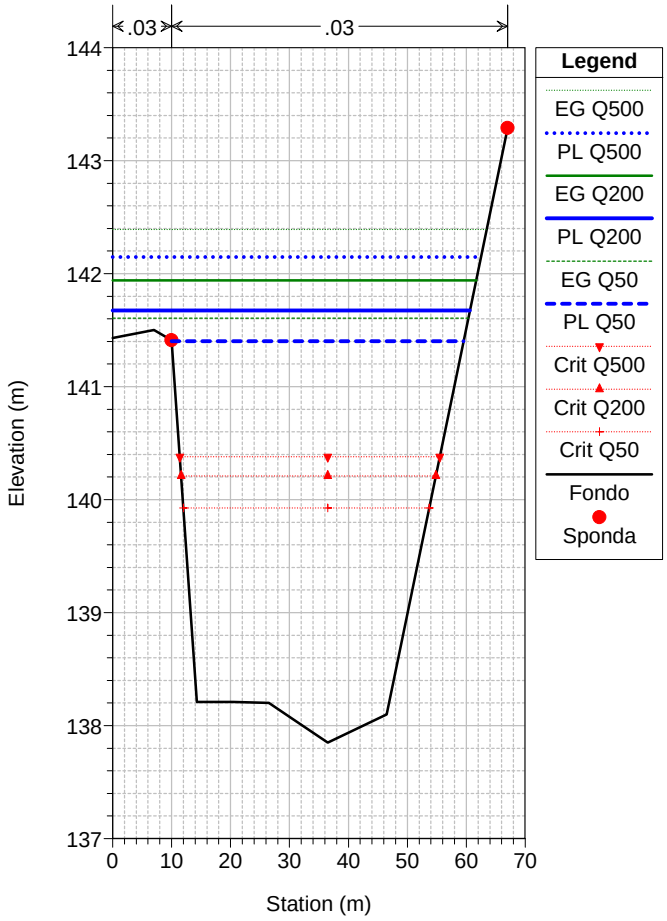
Verde Plan: Verde

River = Verde Reach = monteSM



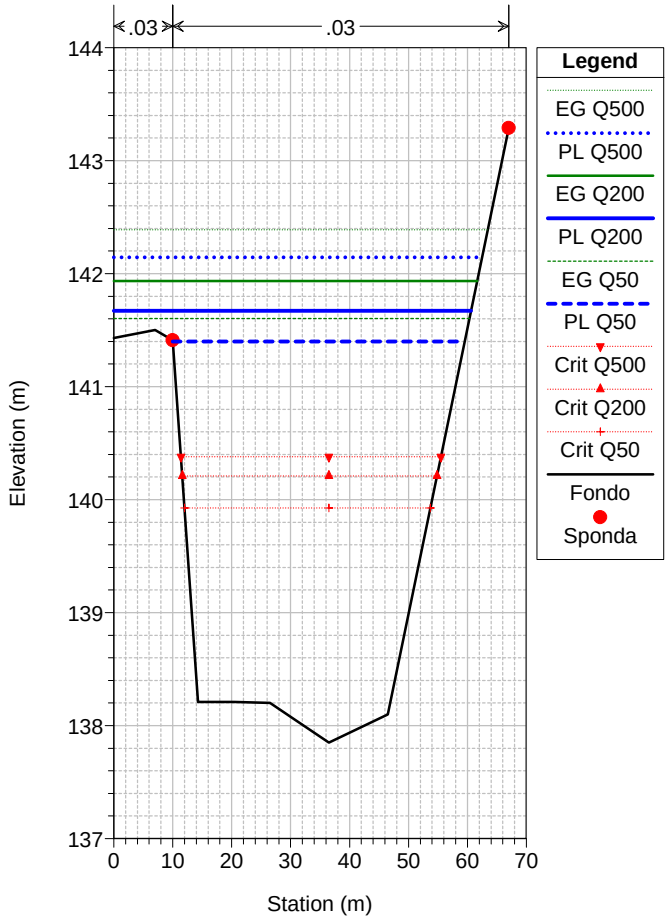
Verde Plan: Verde

River = Verde Reach = monteSM VER-70



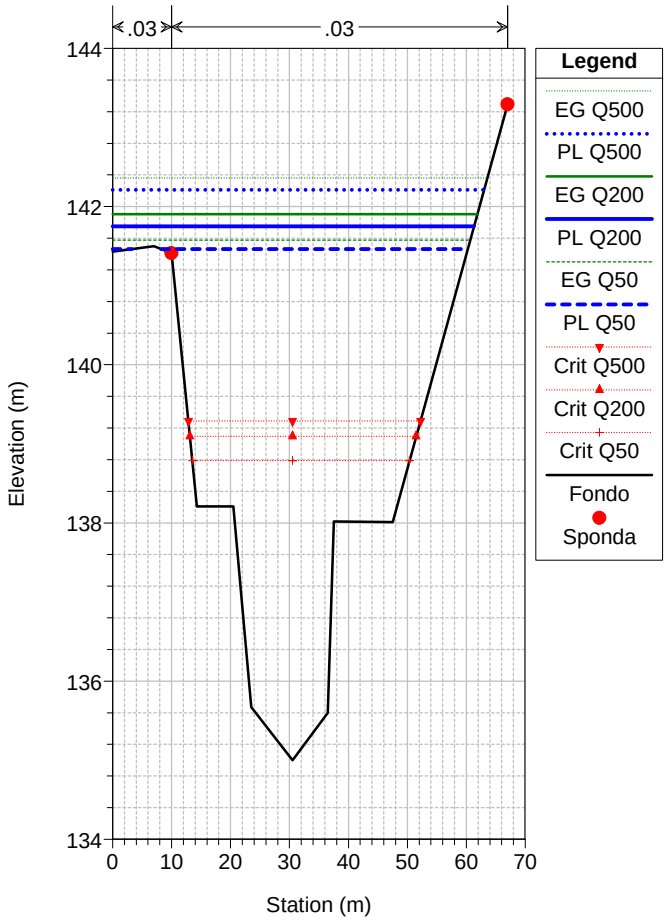
Verde Plan: Verde

River = Verde Reach = monteSM



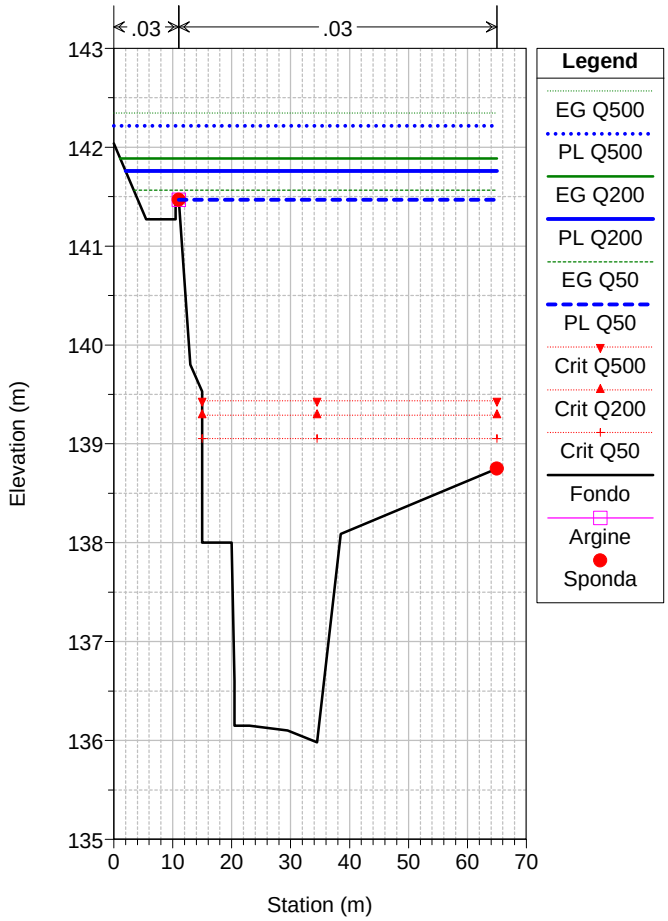
Verde Plan: Verde

River = Verde Reach = monteSM



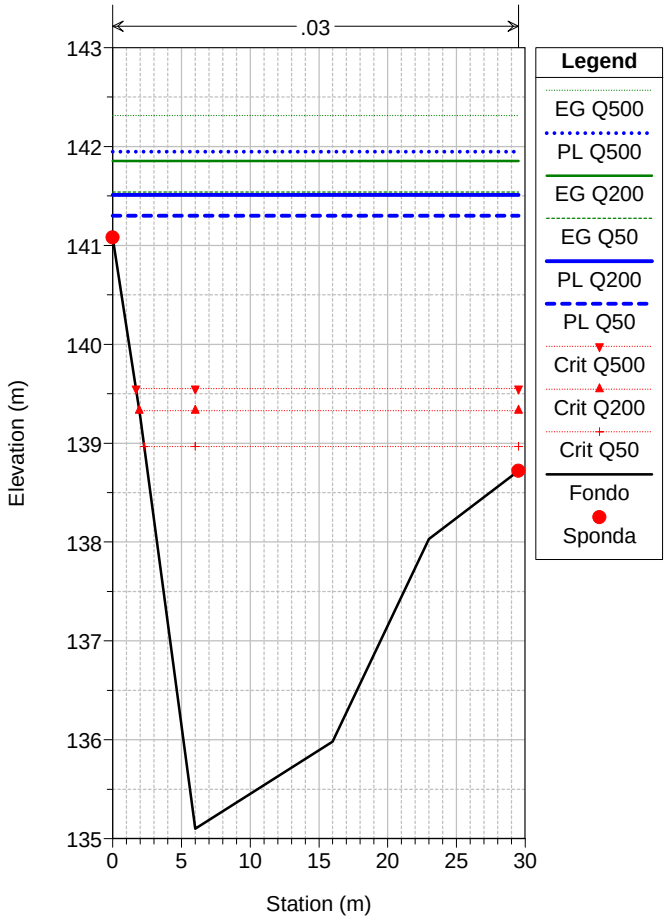
Verde Plan: Verde

River = Verde Reach = monteSM VER-69



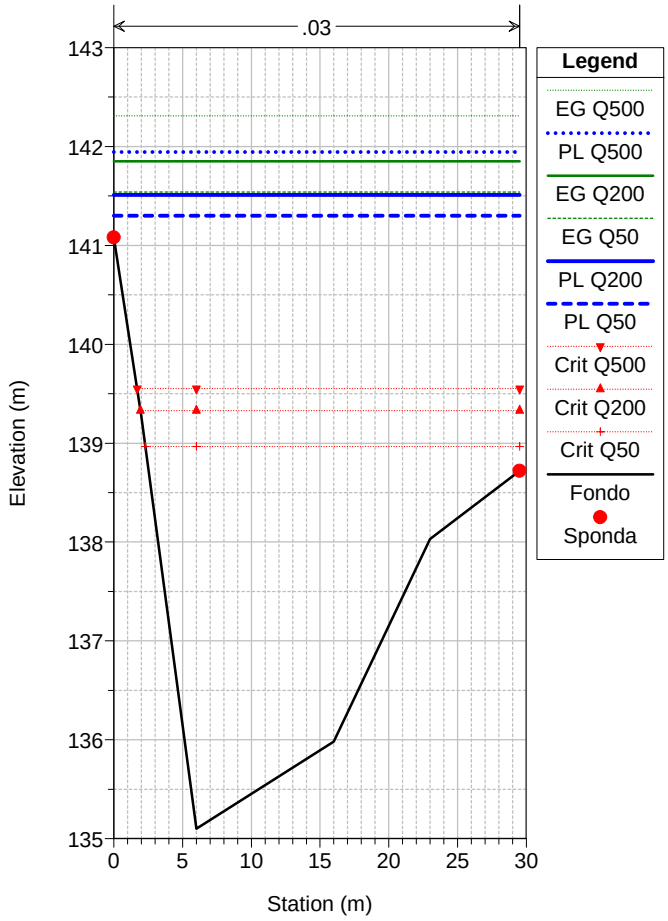
Verde Plan: Verde

River = Verde Reach = monteSM VER-68



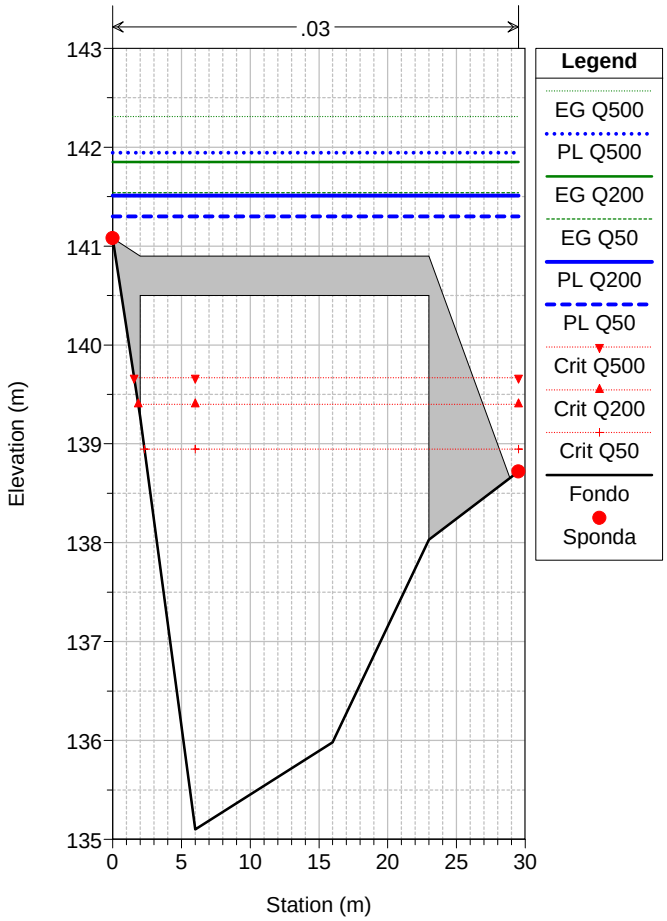
Verde Plan: Verde

River = Verde Reach = monteSM VER-68



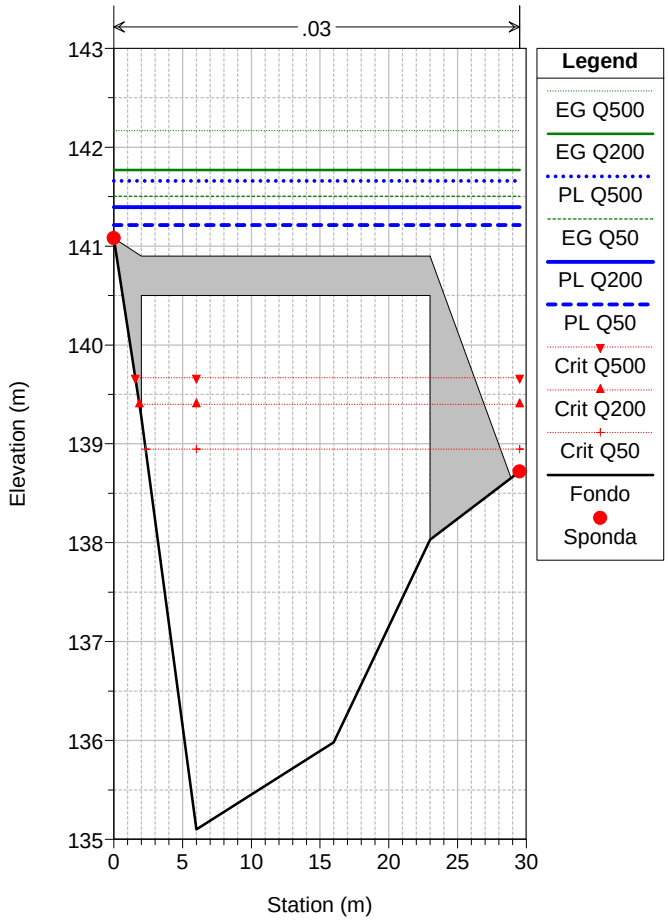
Verde Plan: Verde

River = Verde Reach = monteSM VER-68



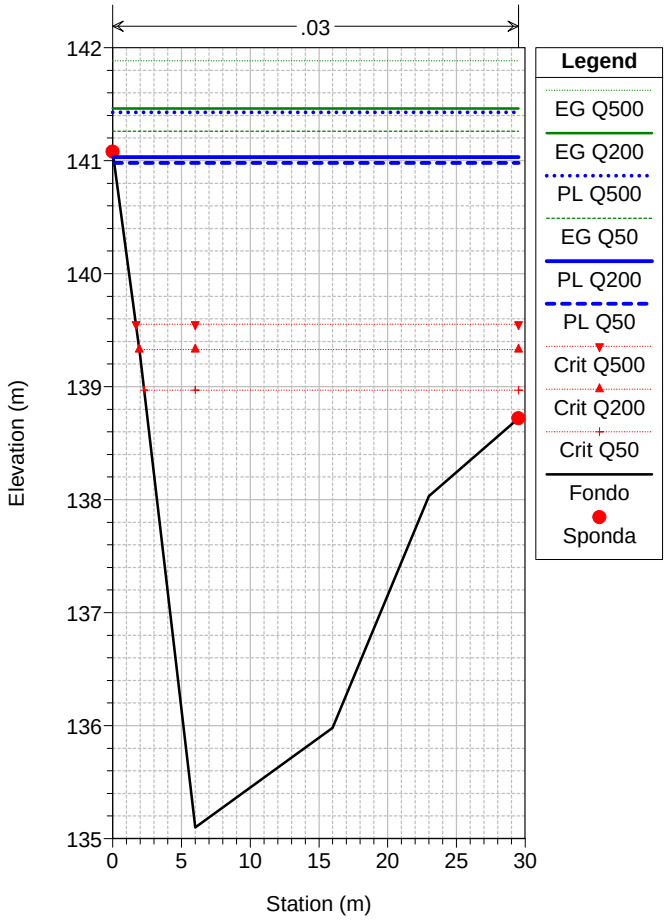
Verde Plan: Verde

River = Verde Reach = monteSM VER-68



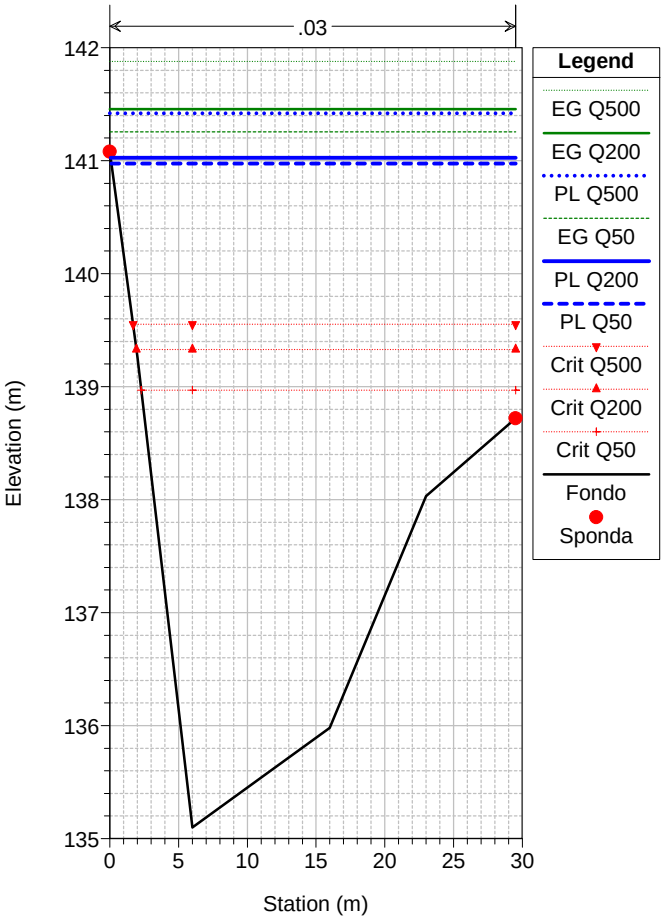
Verde Plan: Verde

River = Verde Reach = monteSM VER-68



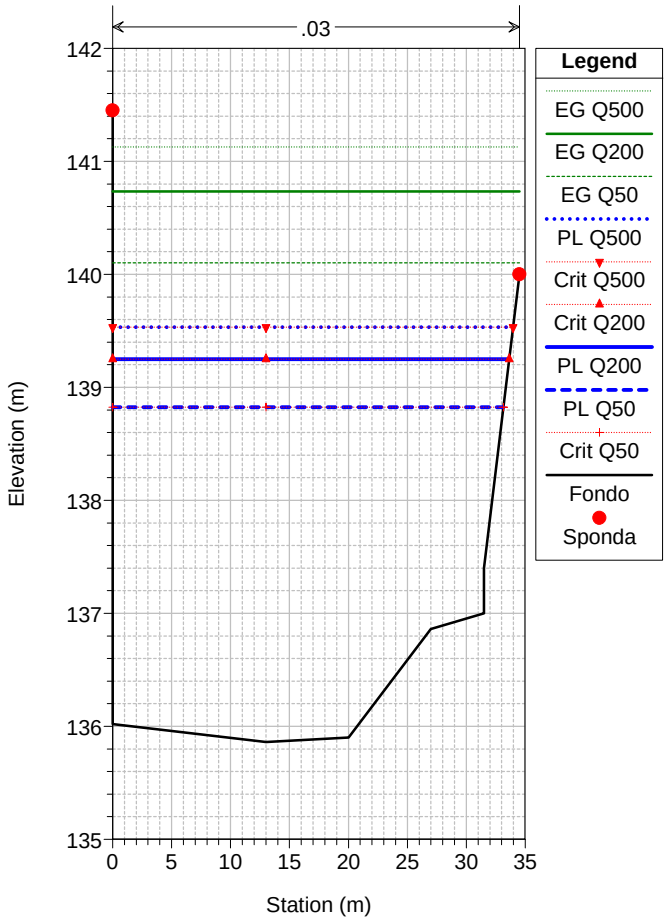
Verde Plan: Verde

River = Verde Reach = monteSM VER-68



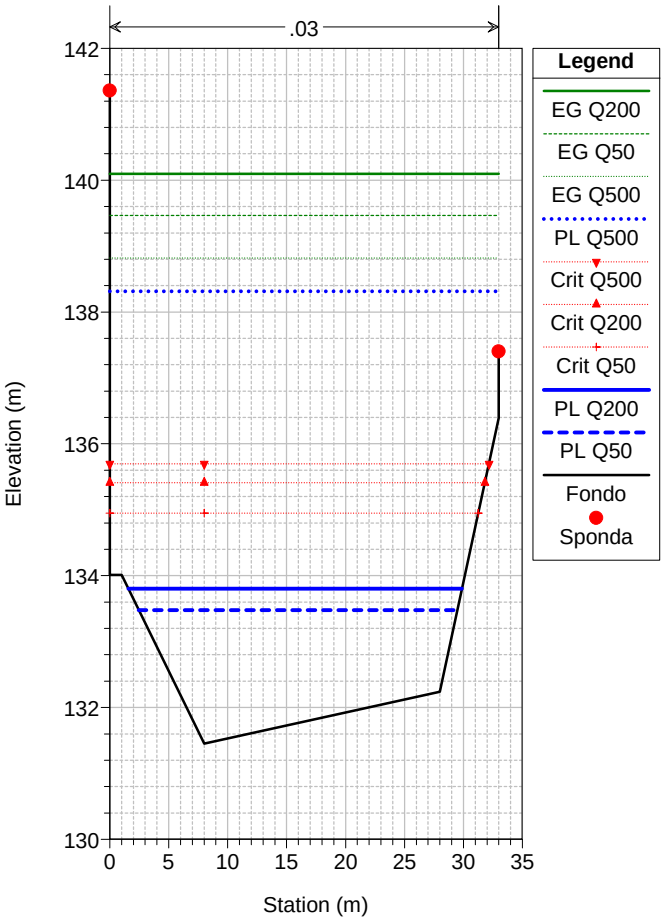
Verde Plan: Verde

River = Verde Reach = valleSM VER-67



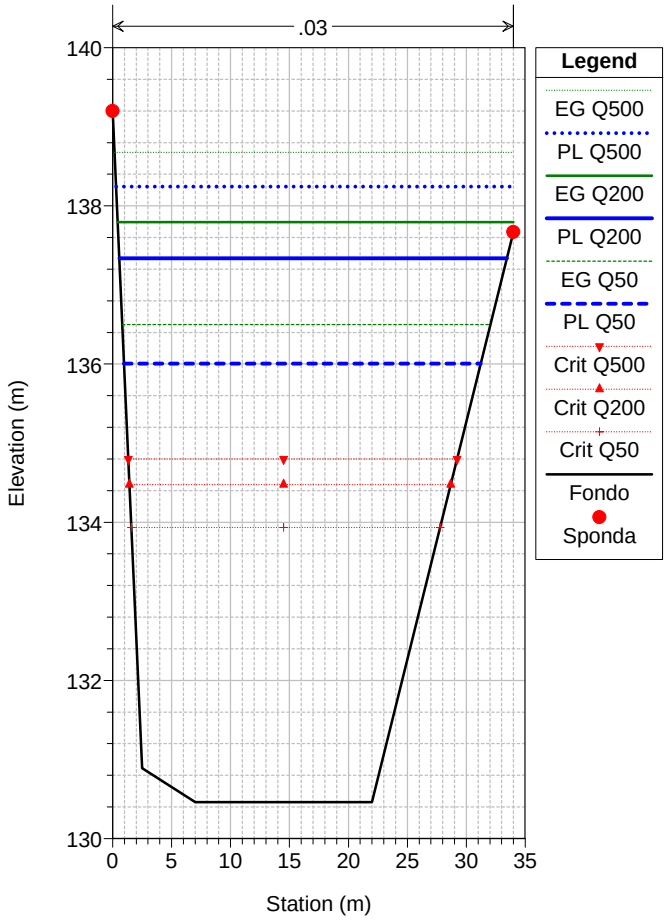
Verde Plan: Verde

River = Verde Reach = valleSM VER-67



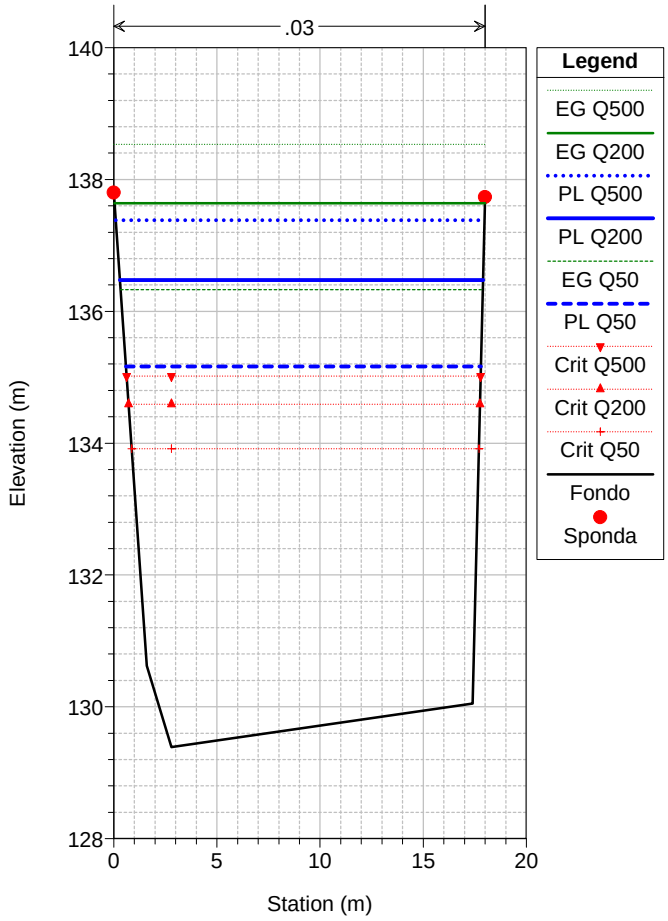
Verde Plan: Verde

River = Verde Reach = valleSM VER-66



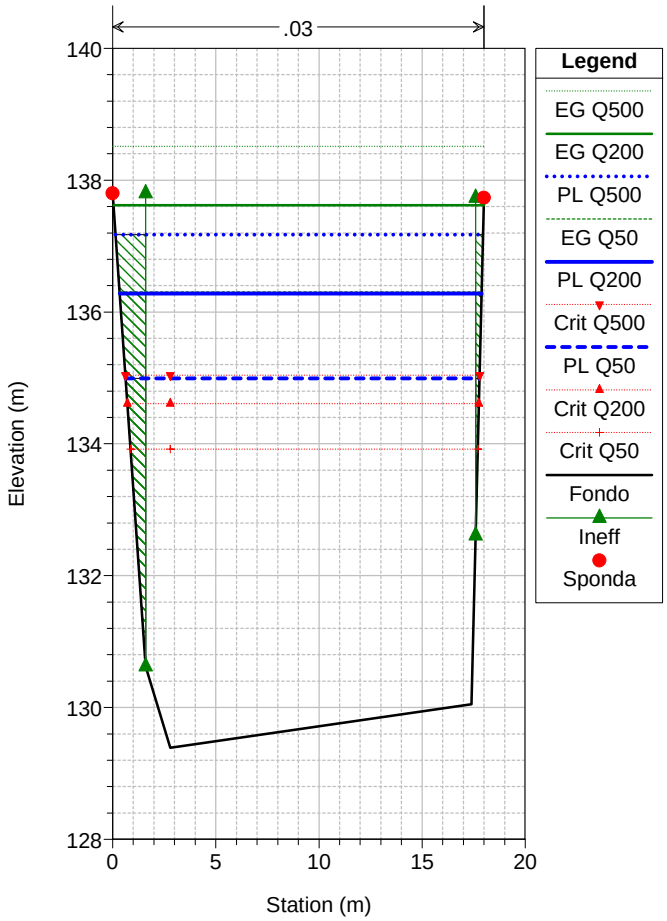
Verde Plan: Verde

River = Verde Reach = valleSM VER-65



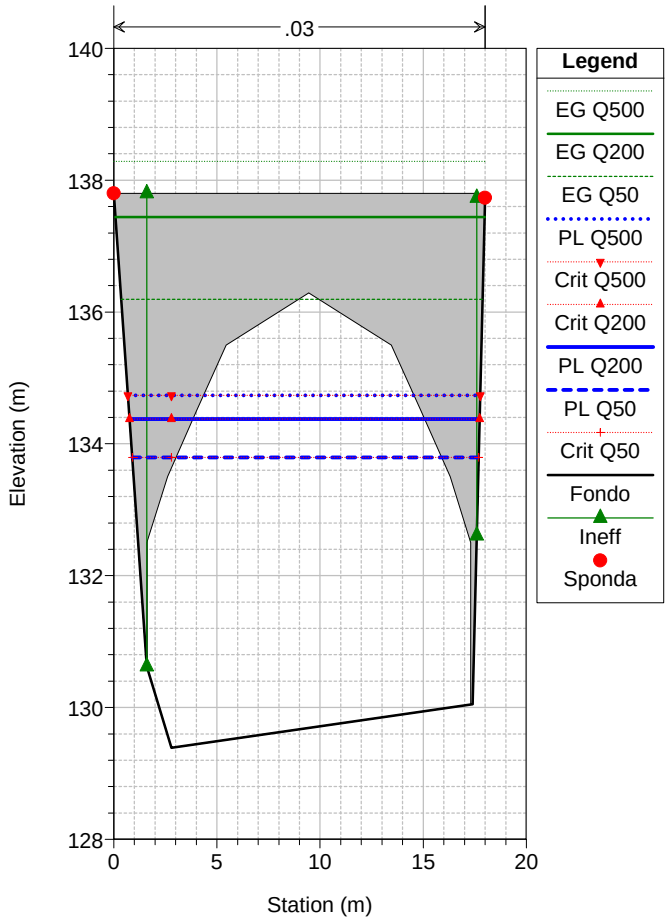
Verde Plan: Verde

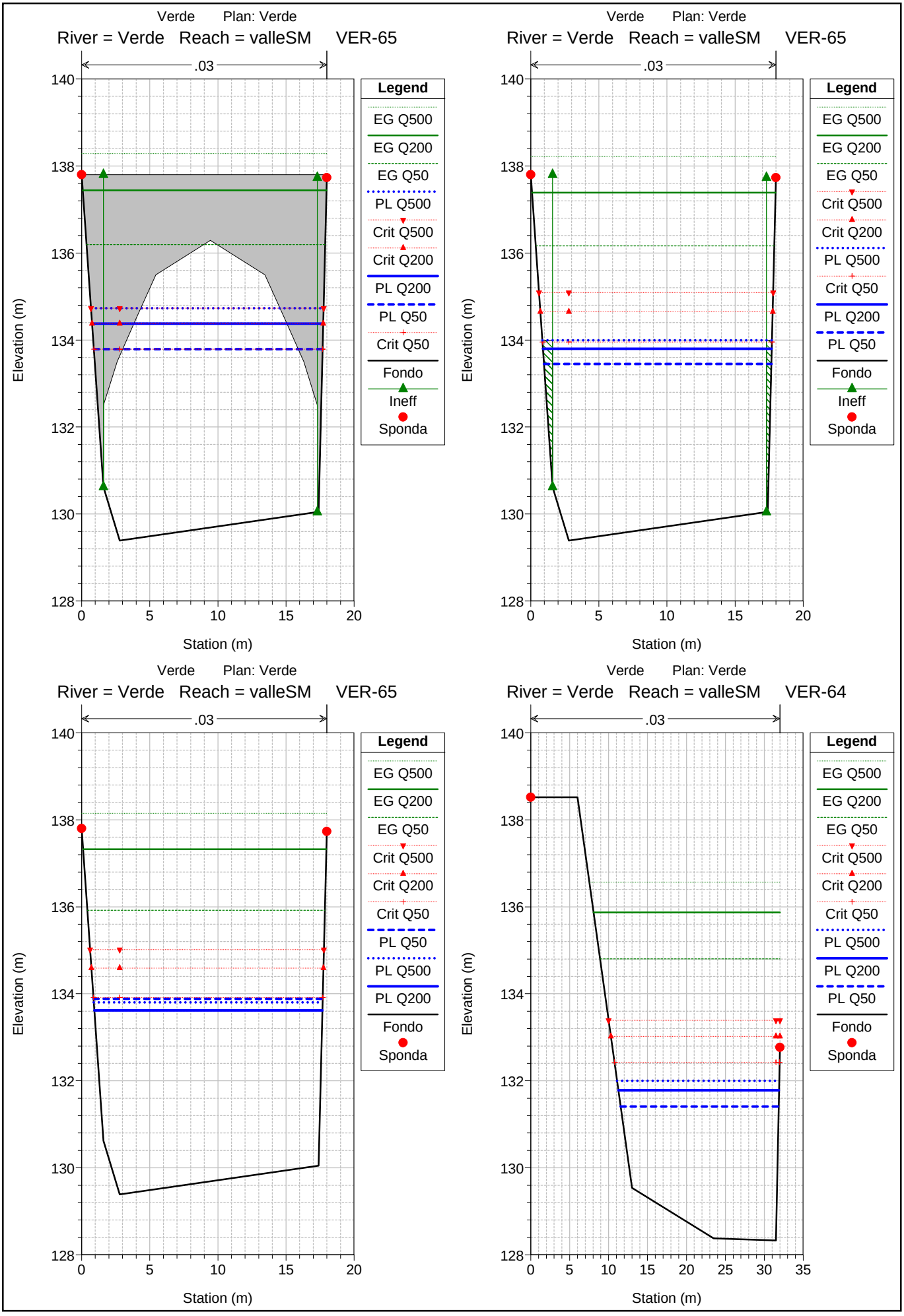
River = Verde Reach = valleSM VER-65

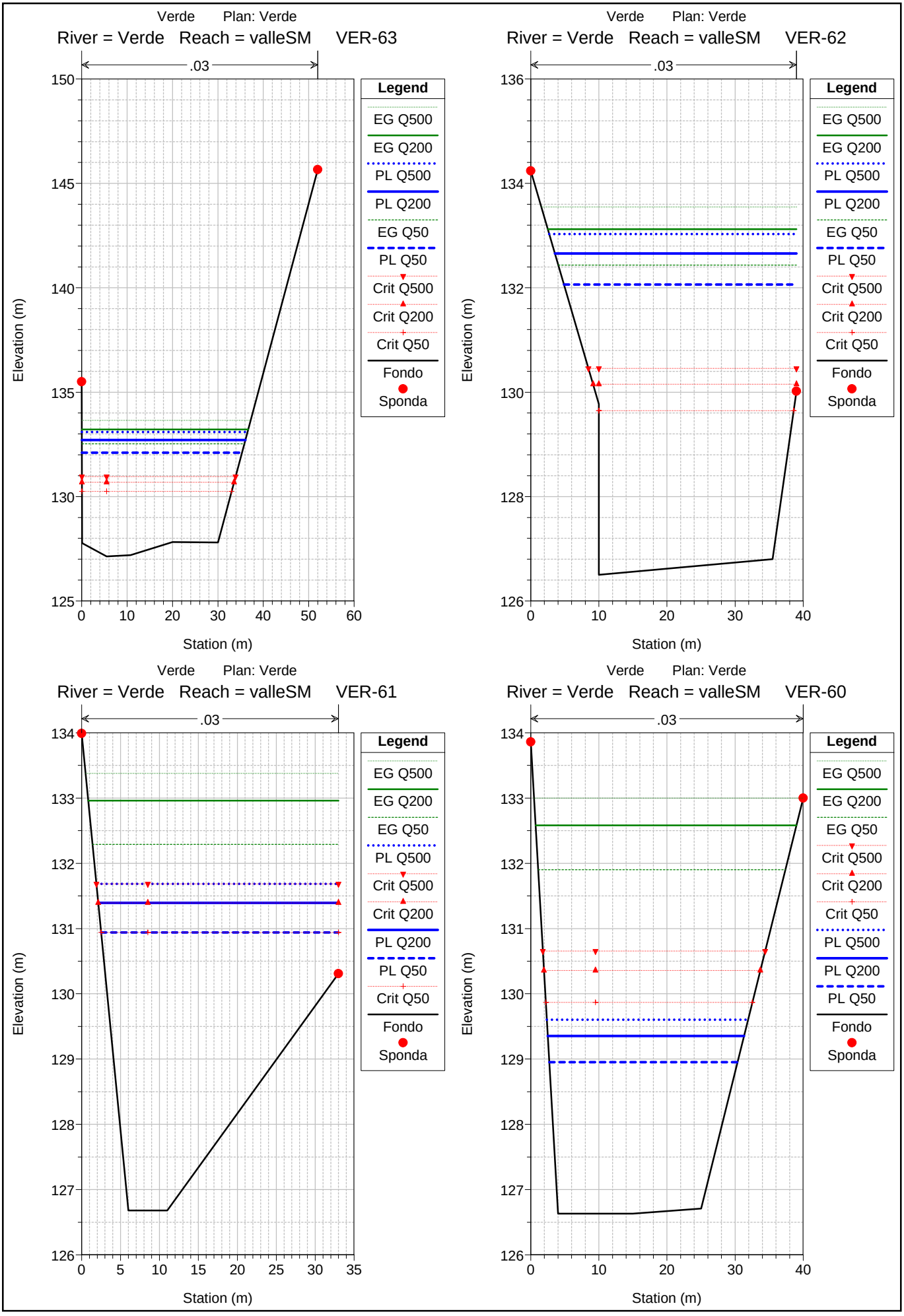


Verde Plan: Verde

River = Verde Reach = valleSM VER-65

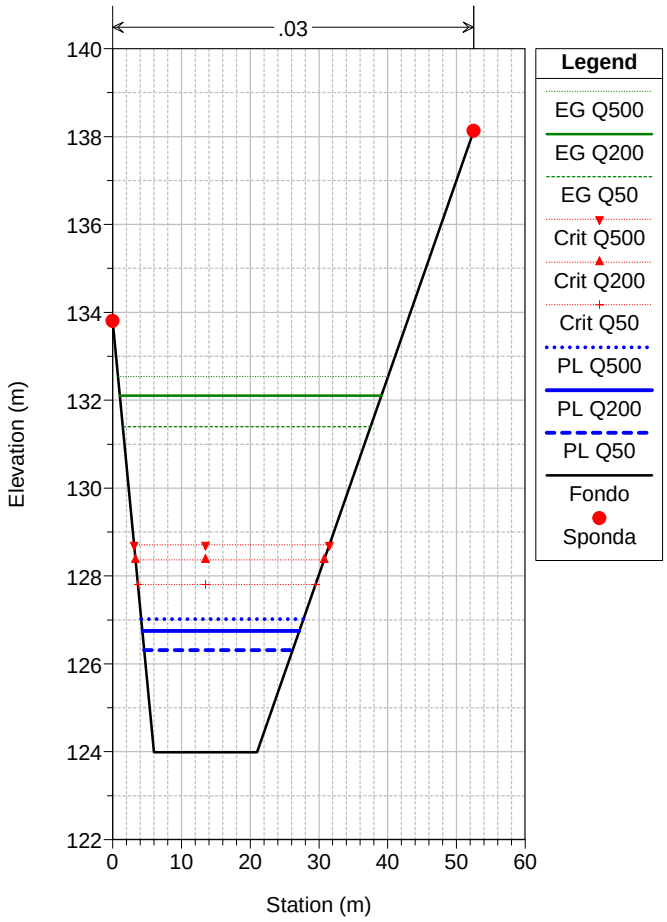



Verde Plan: Verde
River = Verde Reach = valleSM VER-65
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Ineff
Sponda
Verde Plan: Verde
River = Verde Reach = valleSM VER-65
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Ineff
Sponda
Verde Plan: Verde
River = Verde Reach = valleSM VER-65
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
PL Q500
PL Q200
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = valleSM VER-64
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


Verde Plan: Verde
River = Verde Reach = valleSM VER-63
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = valleSM VER-62
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = valleSM VER-61
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = valleSM VER-60
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

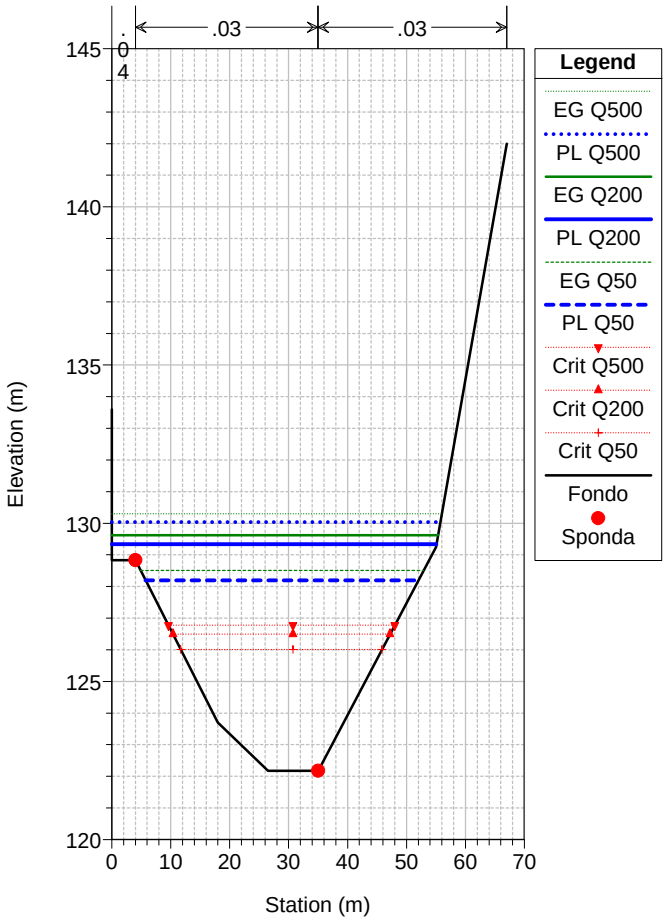
Verde Plan: Verde

River = Verde Reach = valleSM VER-60



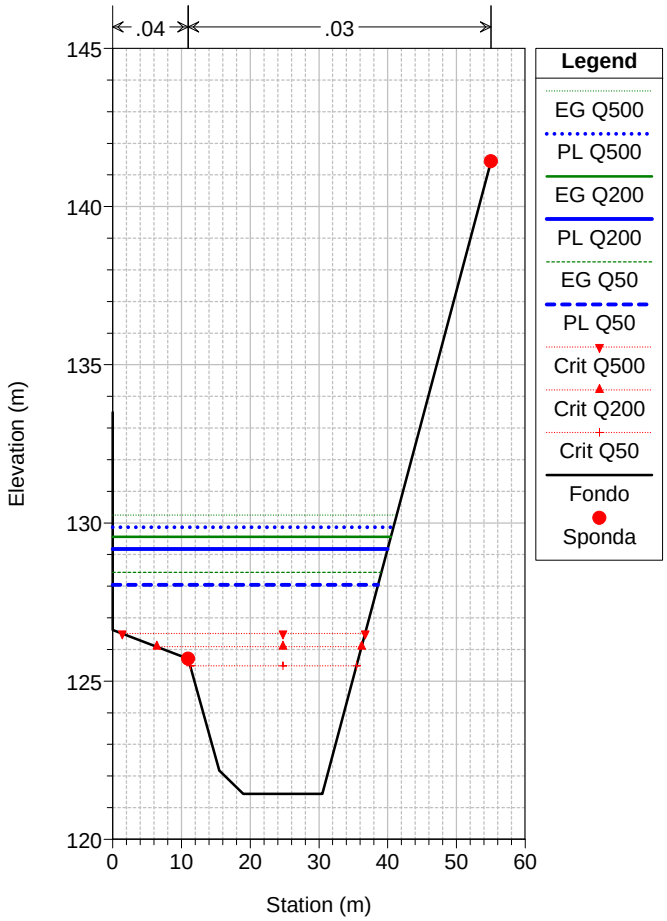
Verde Plan: Verde

River = Verde Reach = valleSM VER-59



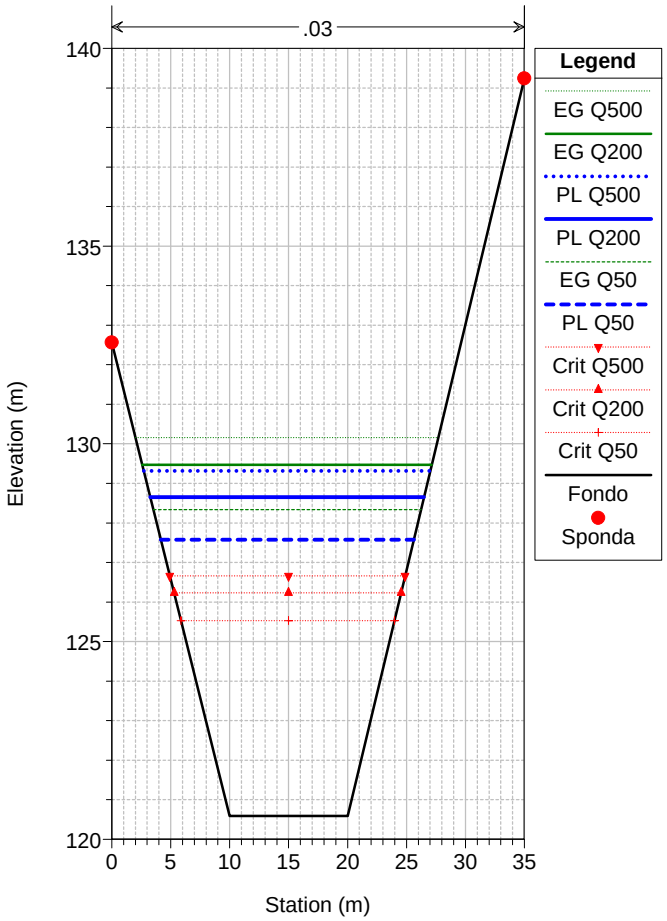
Verde Plan: Verde

River = Verde Reach = valleSM VER-58



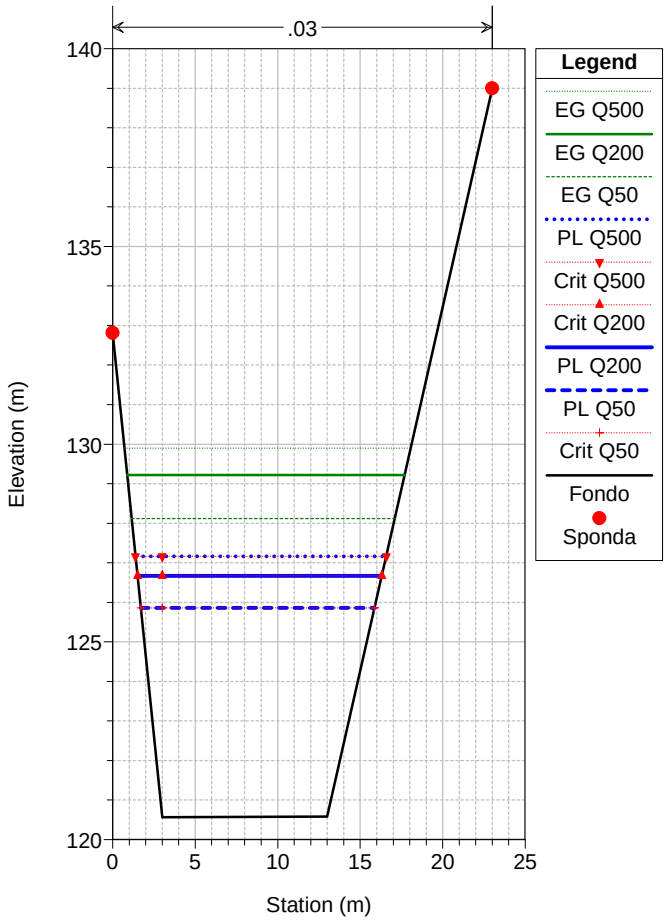
Verde Plan: Verde

River = Verde Reach = valleSM VER-57



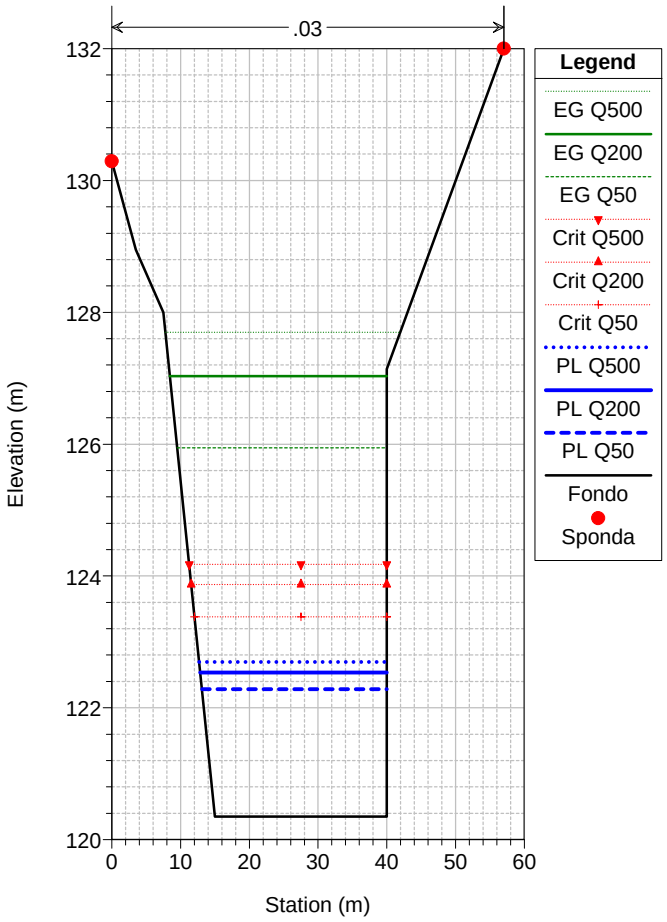
Verde Plan: Verde

River = Verde Reach = valleSM VER-56



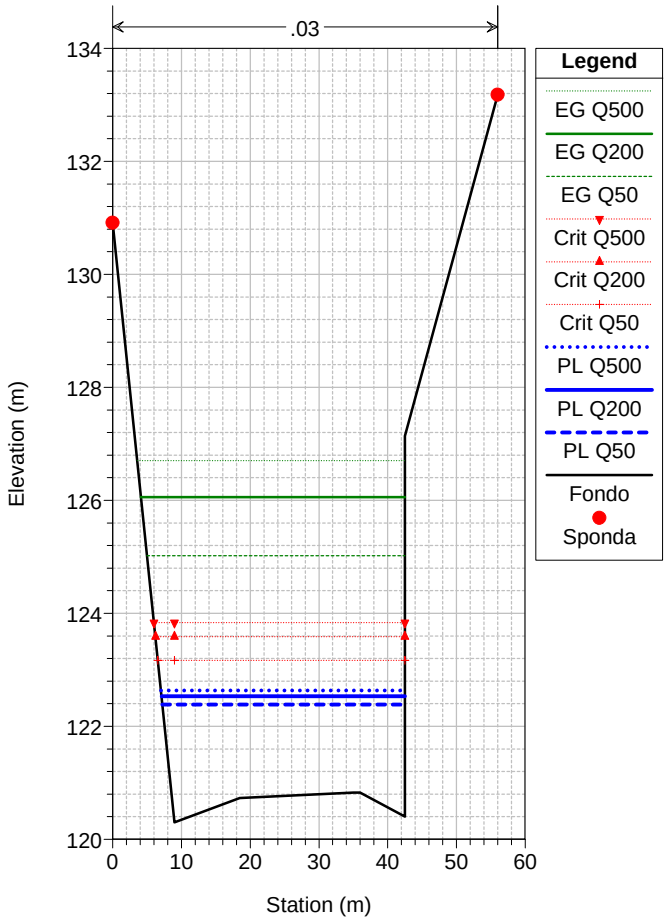
Verde Plan: Verde

River = Verde Reach = valleSM VER-55



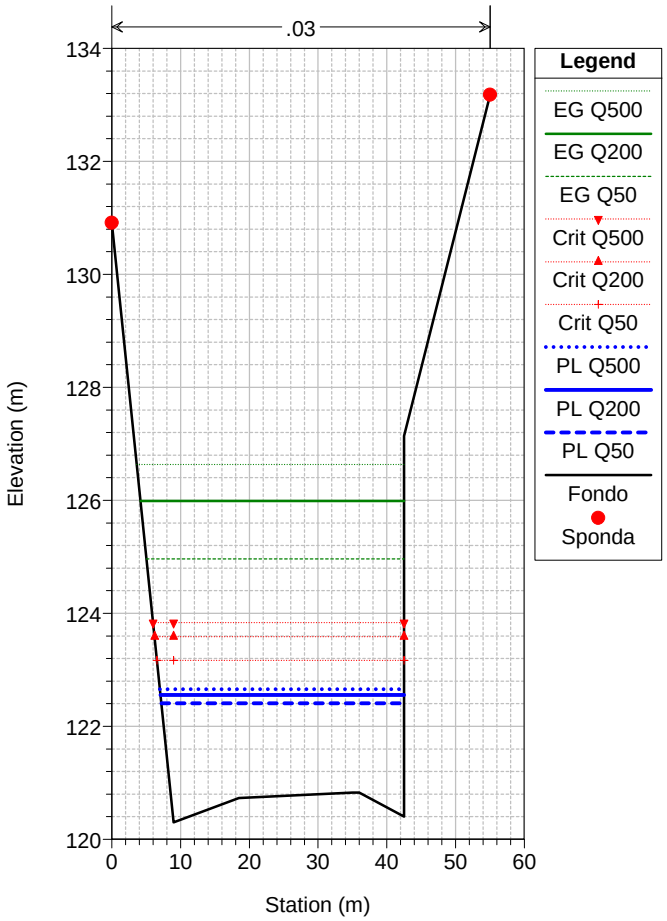
Verde Plan: Verde

River = Verde Reach = valleSM VER-54



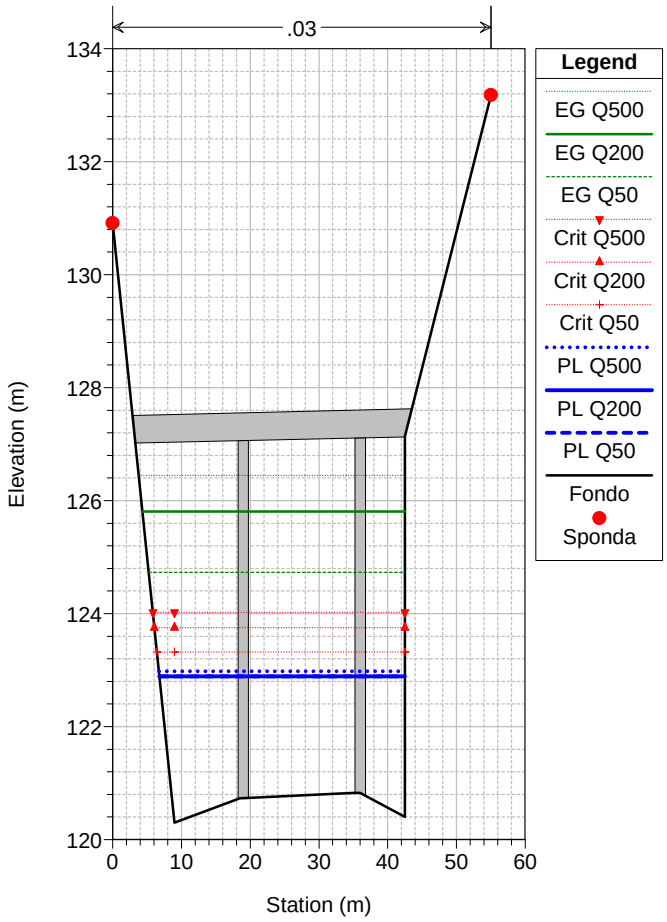
Verde Plan: Verde

River = Verde Reach = valleSM VER-54



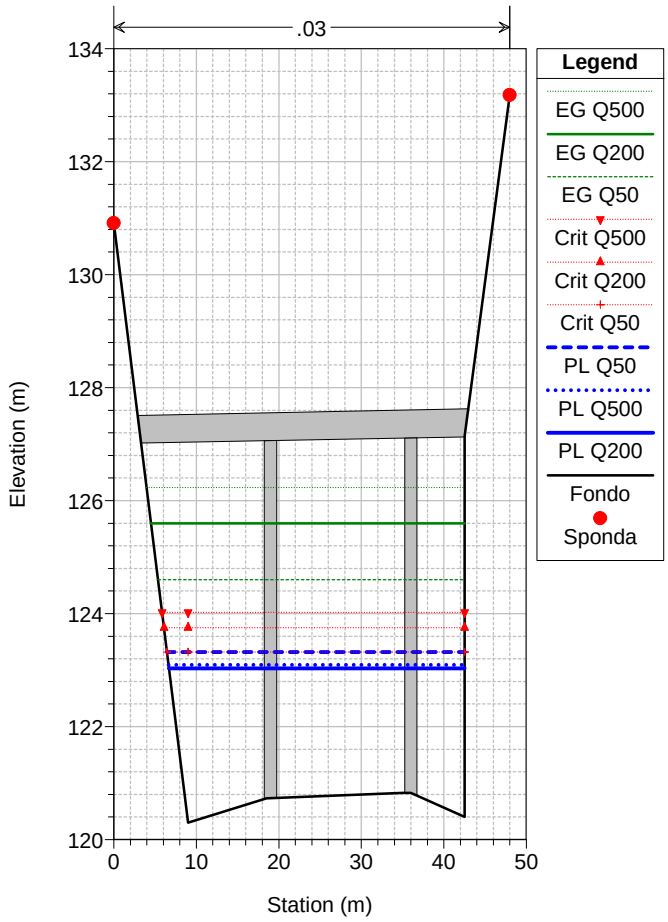
Verde Plan: Verde

River = Verde Reach = valleSM VER-54



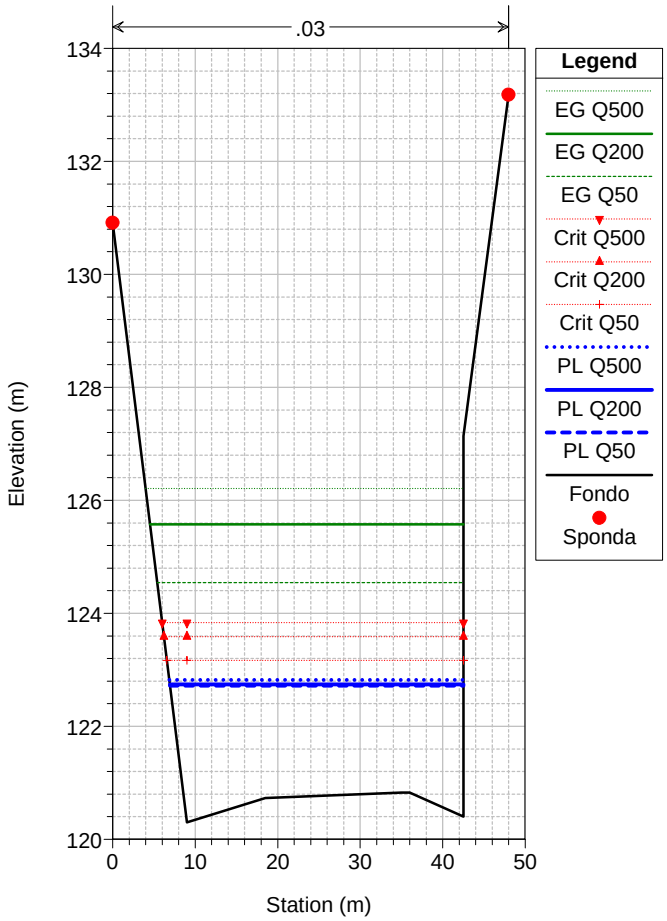
Verde Plan: Verde

River = Verde Reach = valleSM VER-54



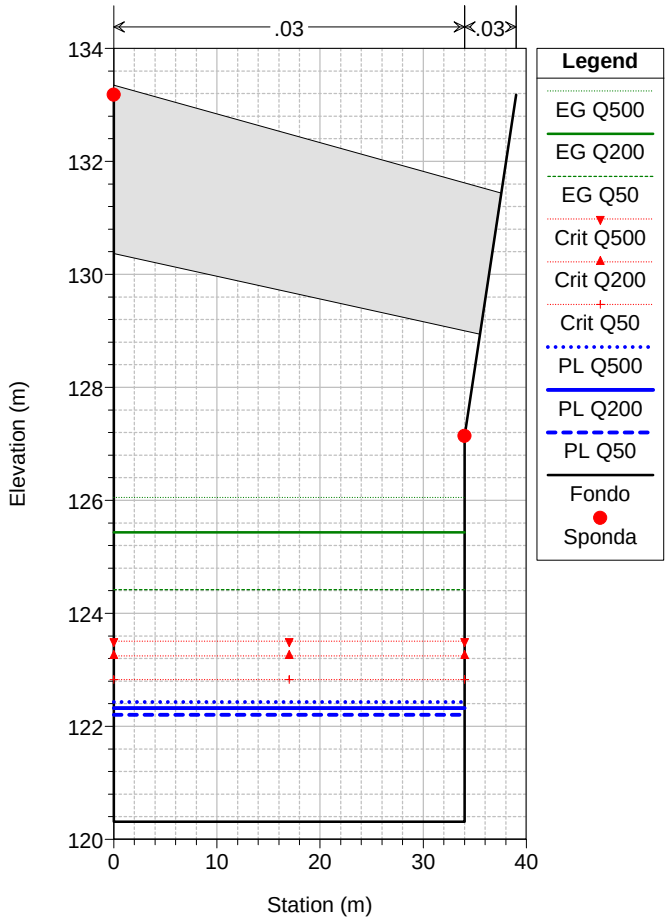
Verde Plan: Verde

River = Verde Reach = valleSM VER-54



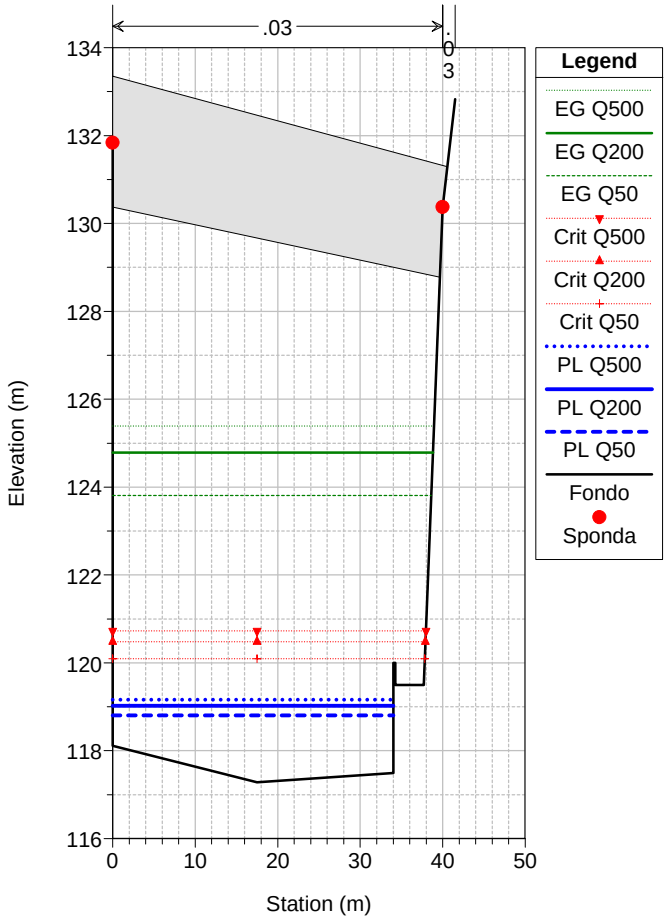
Verde Plan: Verde

River = Verde Reach = valleSM VER-53



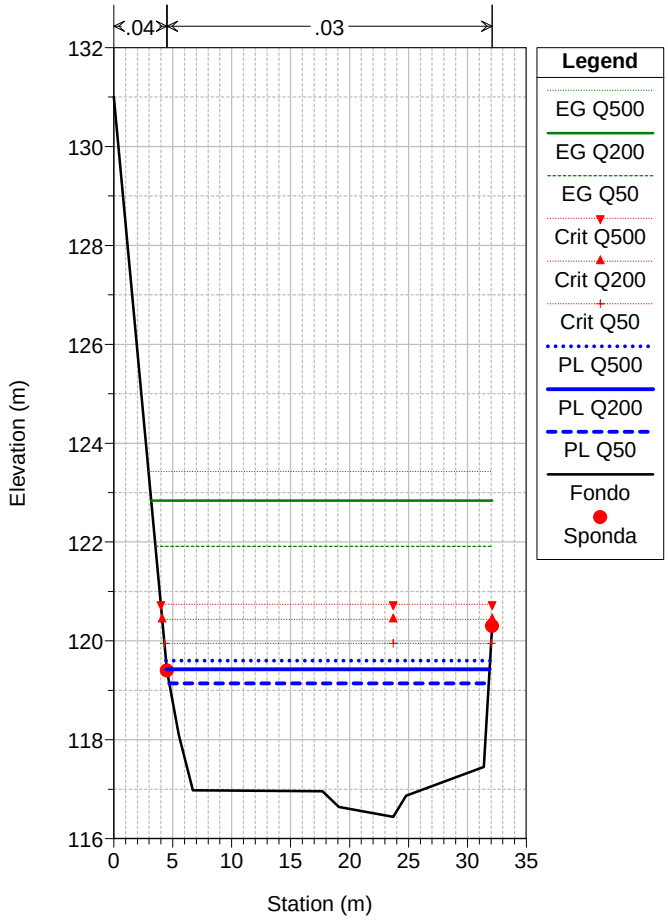
Verde Plan: Verde

River = Verde Reach = valleSM VER-52



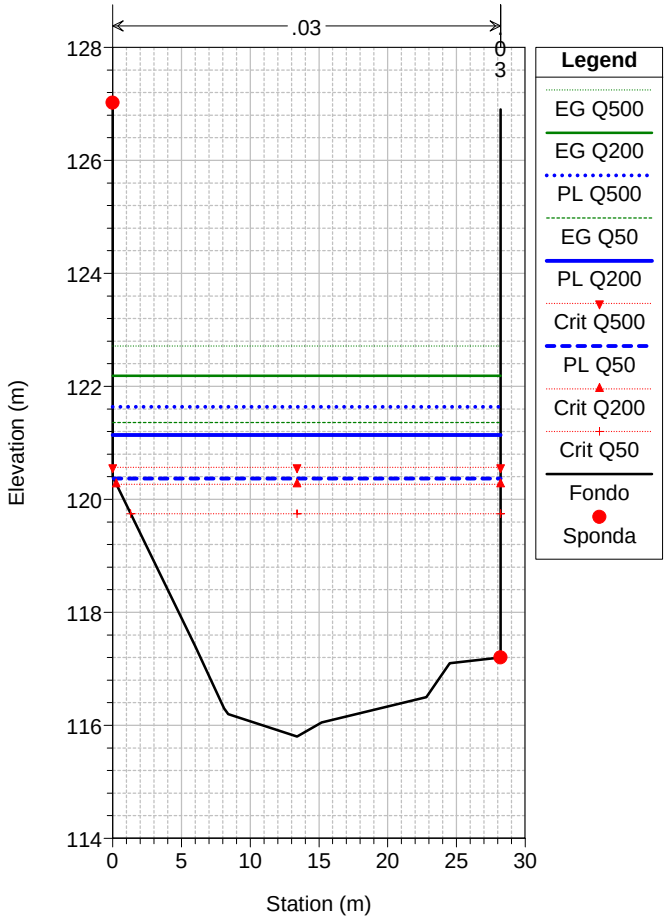
Verde Plan: Verde

River = Verde Reach = valleSM VER-51



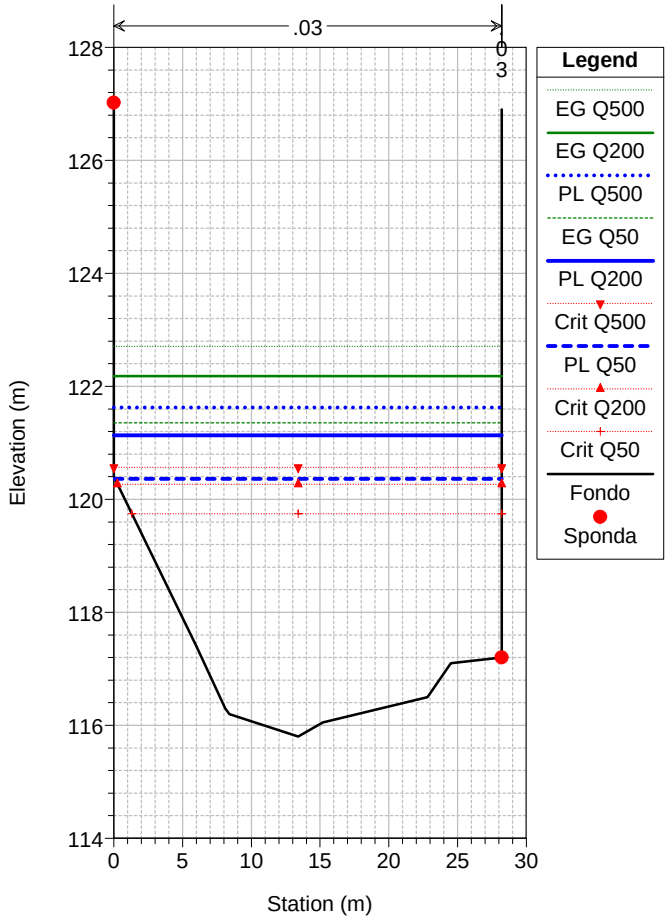
Verde Plan: Verde

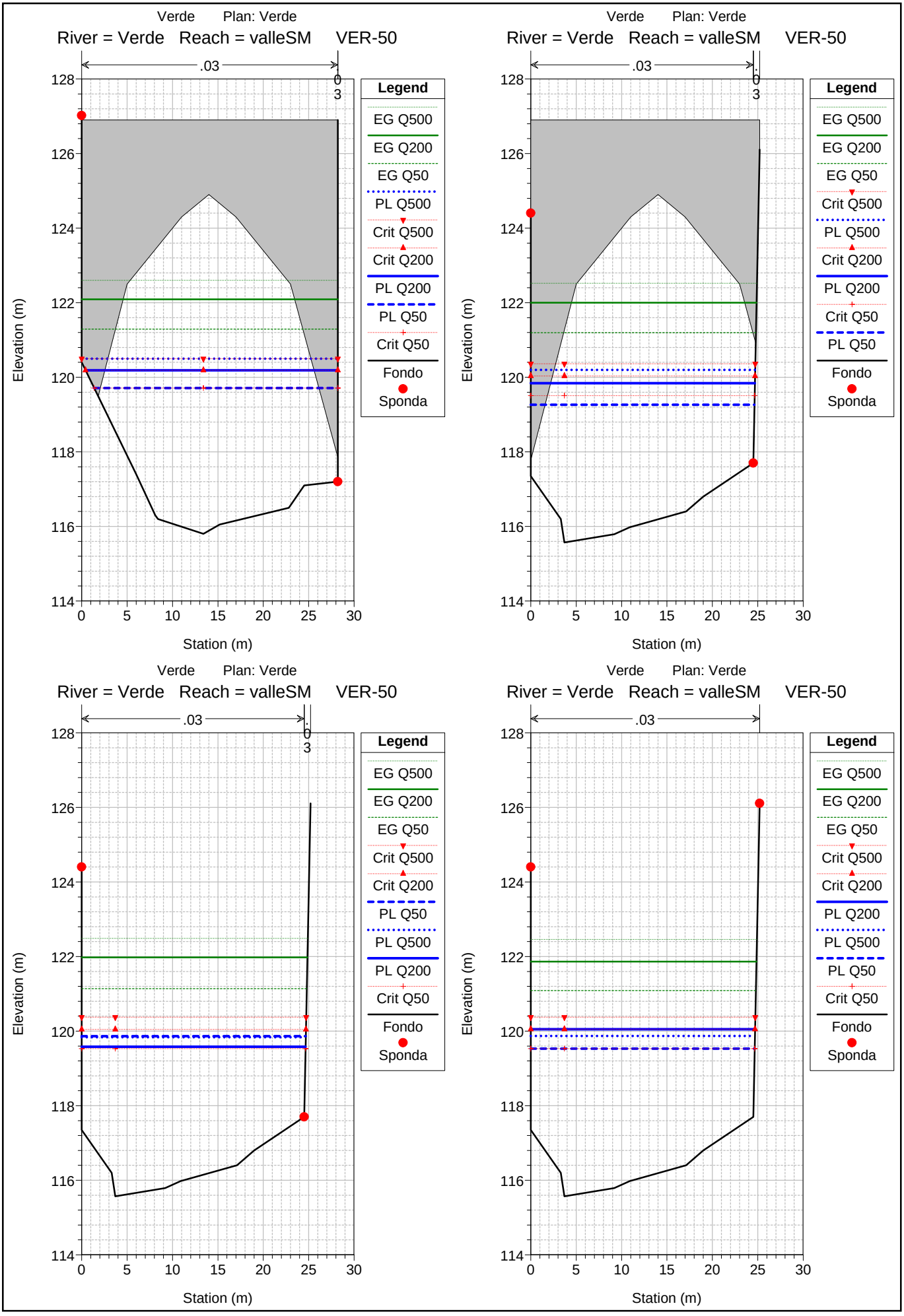
River = Verde Reach = valleSM VER-50



Verde Plan: Verde

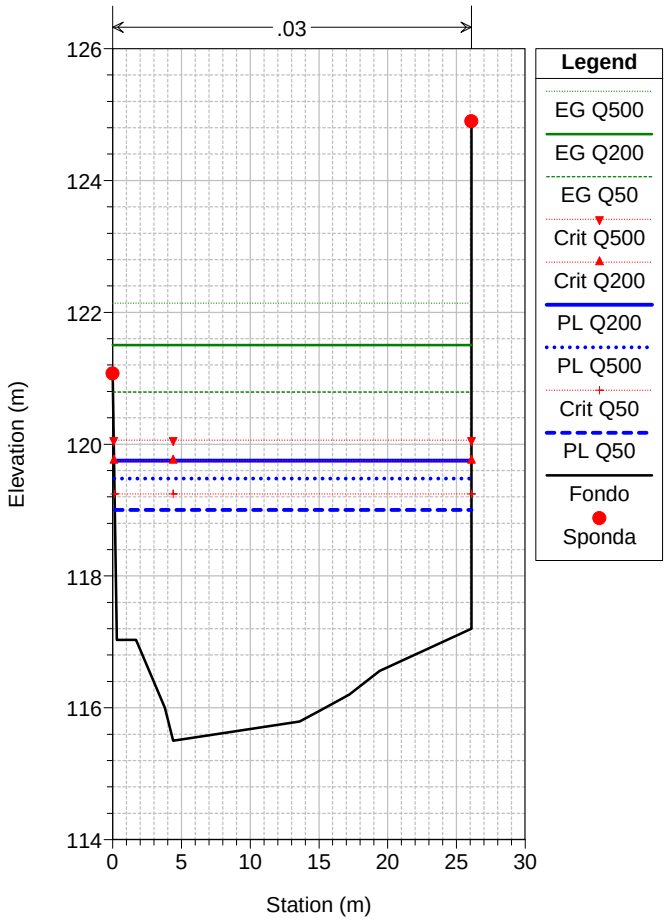
River = Verde Reach = valleSM VER-50




Verde Plan: Verde
River = Verde Reach = valleSM VER-50
.03
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
128
126
124
122
120
118
116
114
0
5
10
15
20
25
30

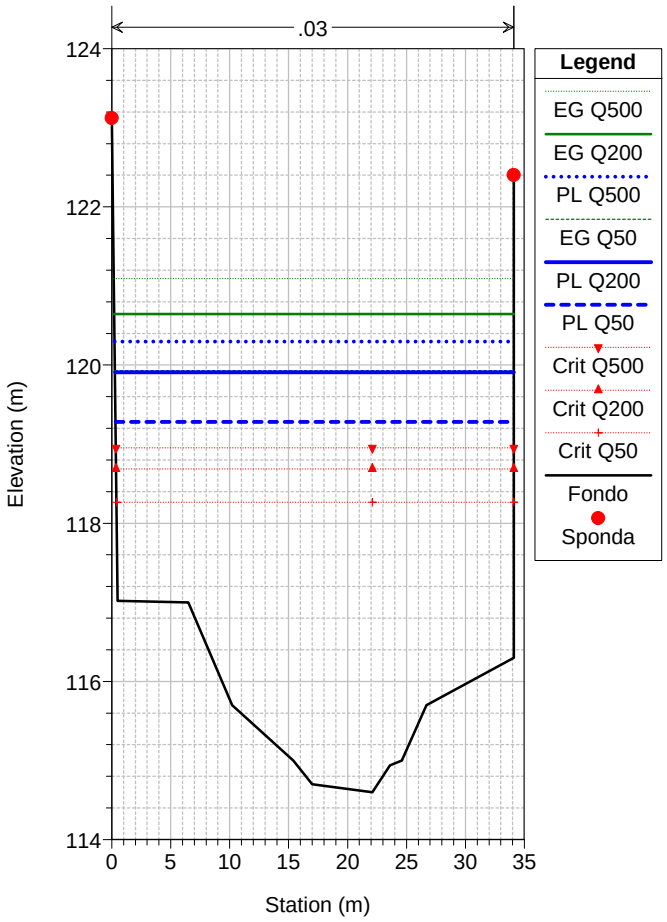
Verde Plan: Verde

River = Verde Reach = valleSM VER-49



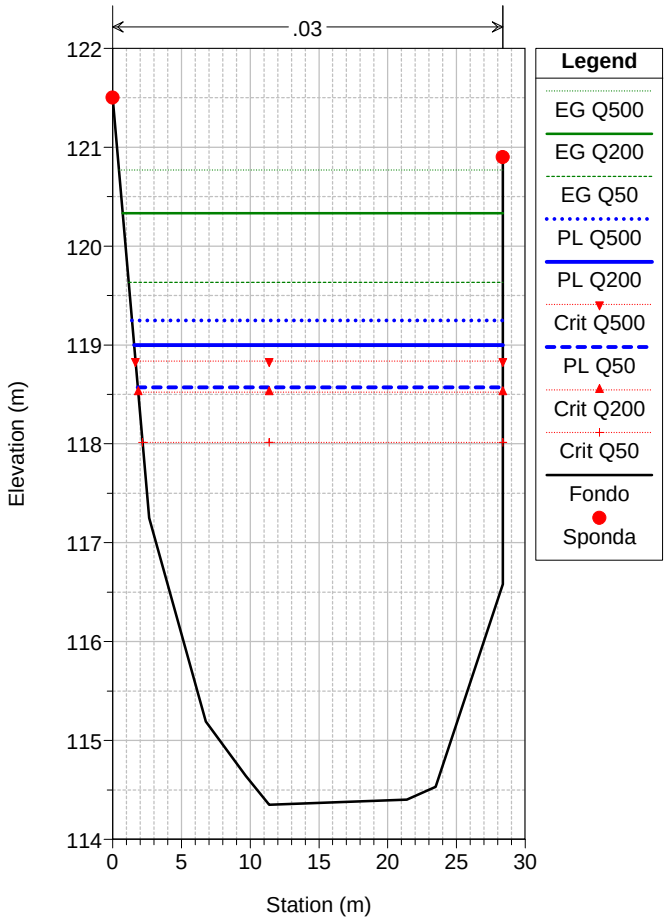
Verde Plan: Verde

River = Verde Reach = valleSM VER-48



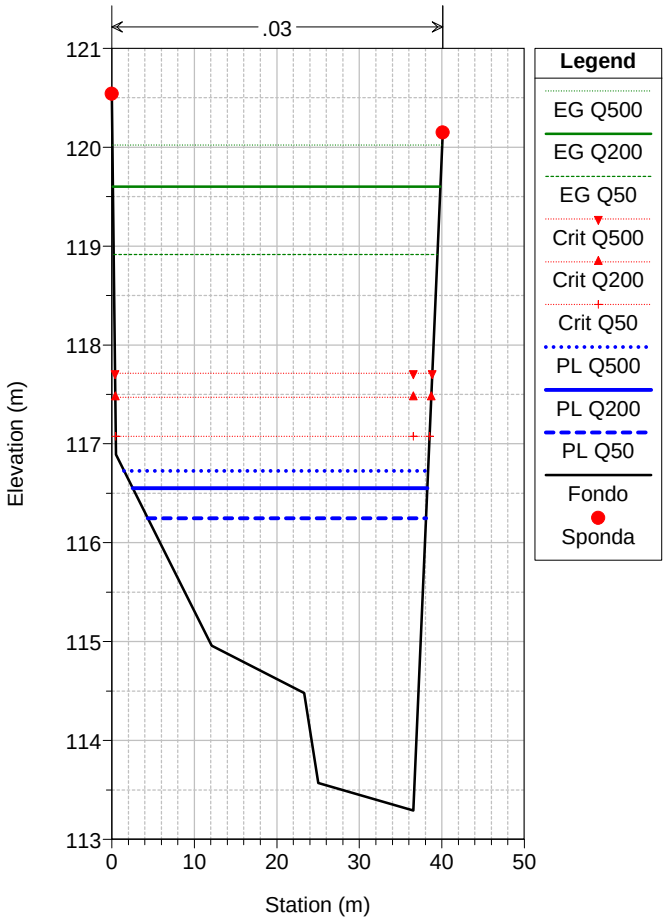
Verde Plan: Verde

River = Verde Reach = valleSM VER-47



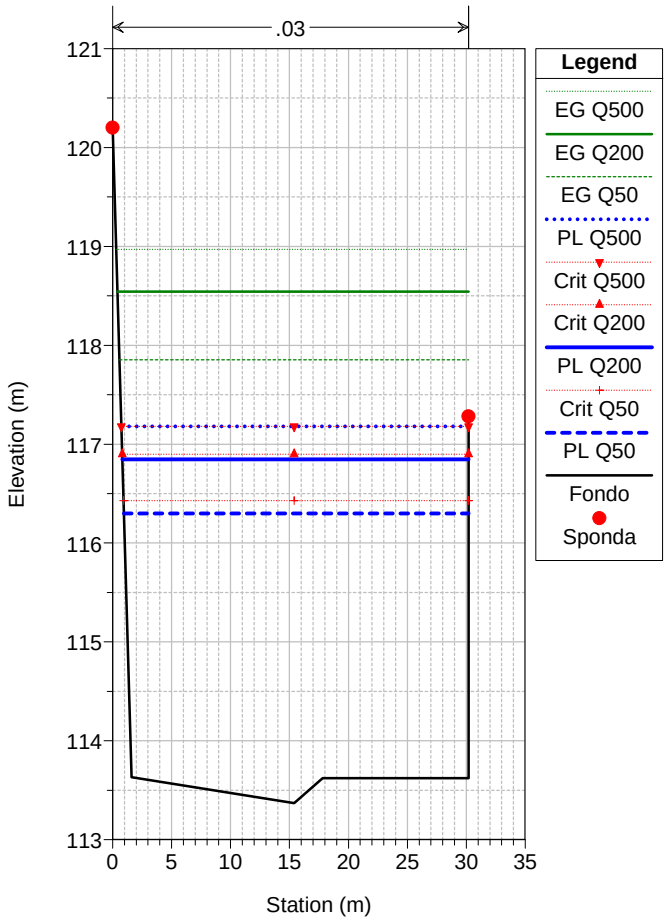
Verde Plan: Verde

River = Verde Reach = valleSM VER-46



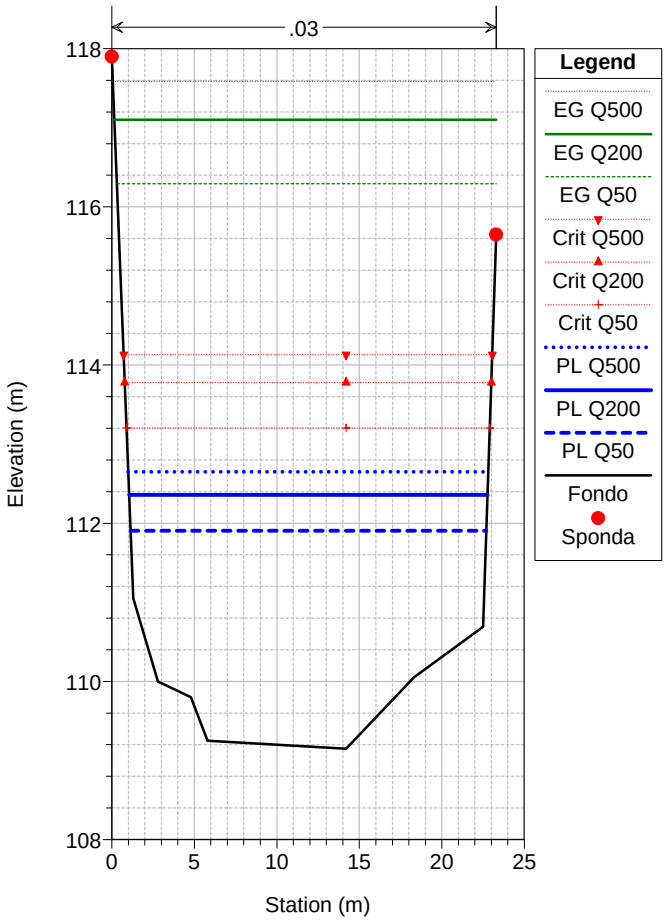
Verde Plan: Verde

River = Verde Reach = valleSM VER-45



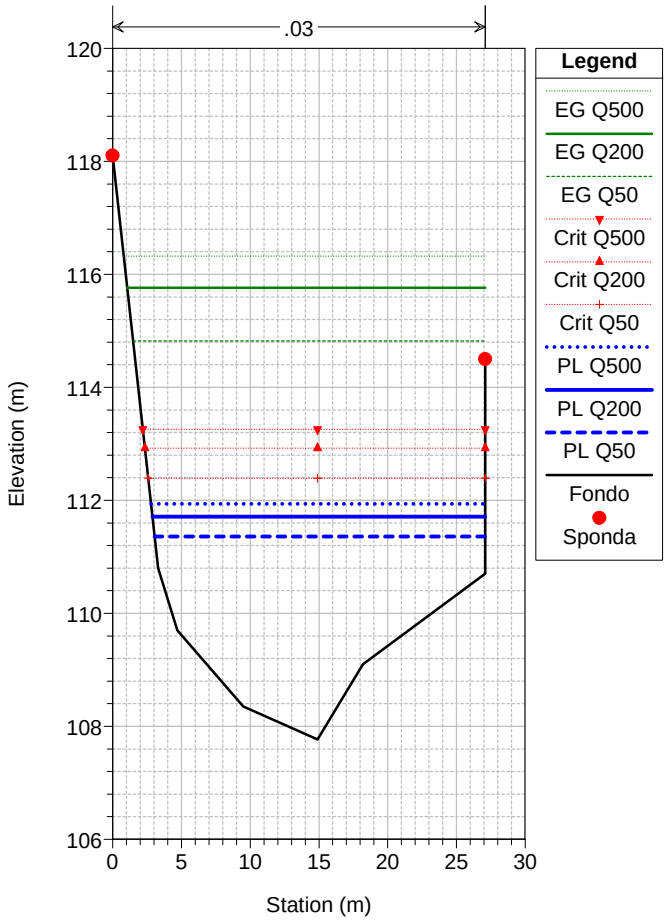
Verde Plan: Verde

River = Verde Reach = valleSM VER-44



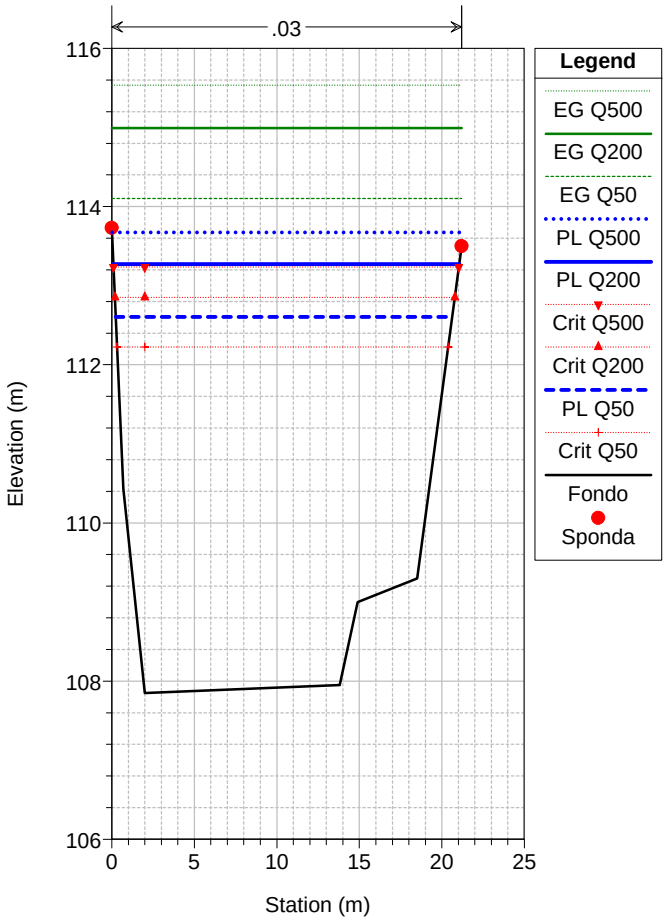
Verde Plan: Verde

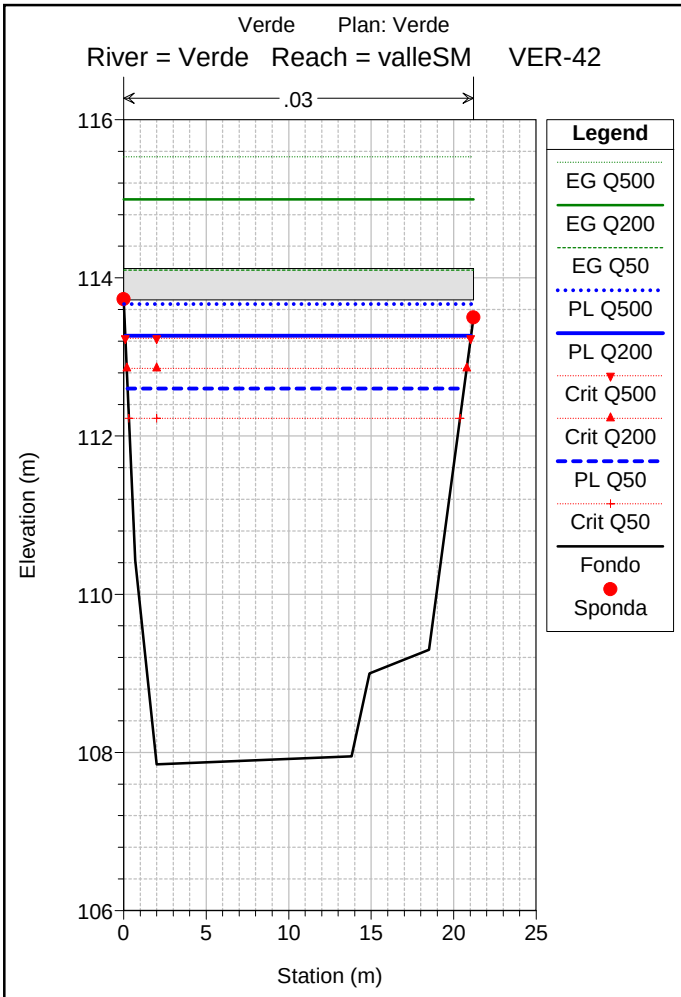
River = Verde Reach = valleSM VER-43

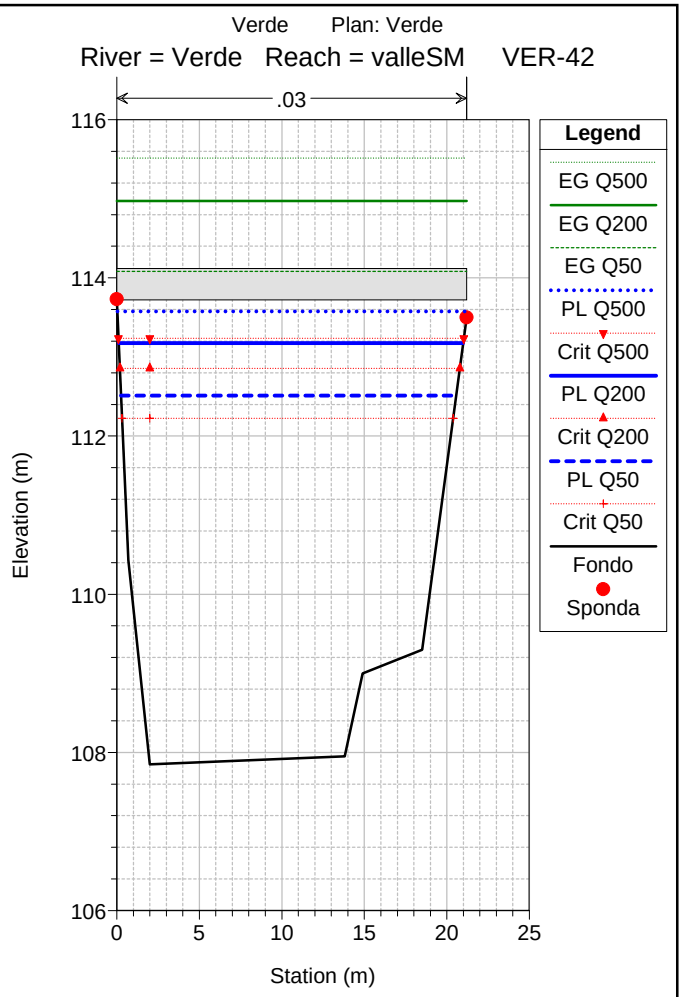


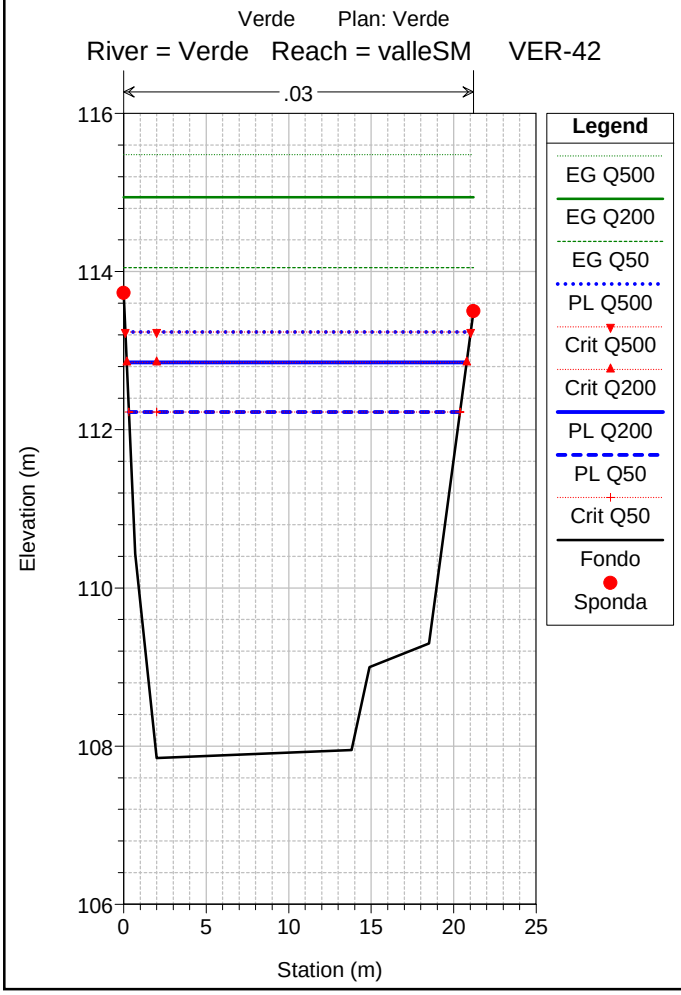
Verde Plan: Verde

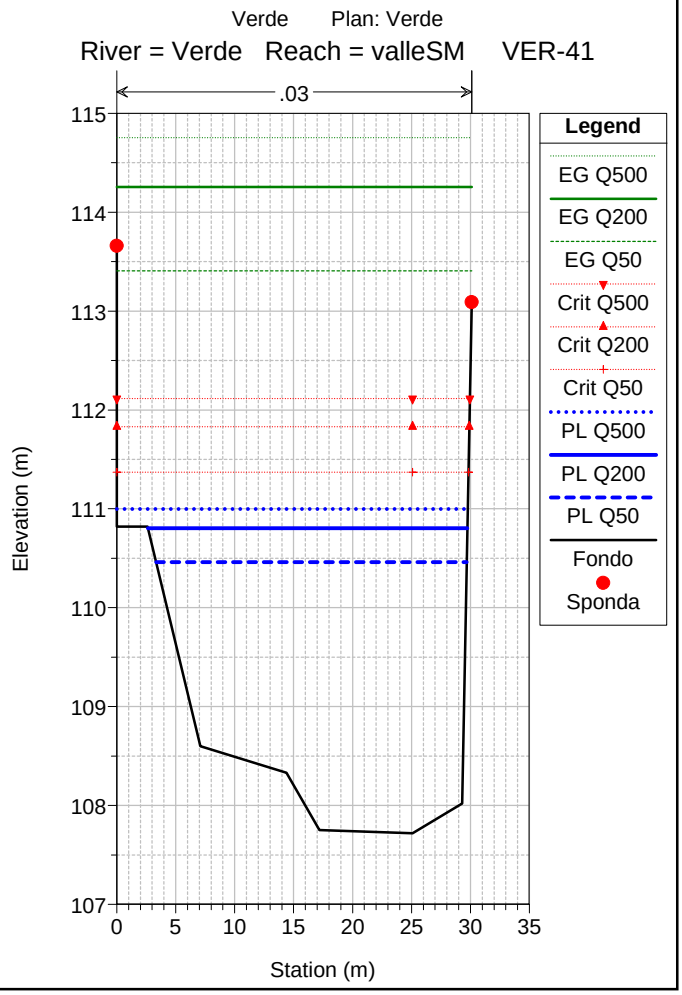
River = Verde Reach = valleSM VER-42

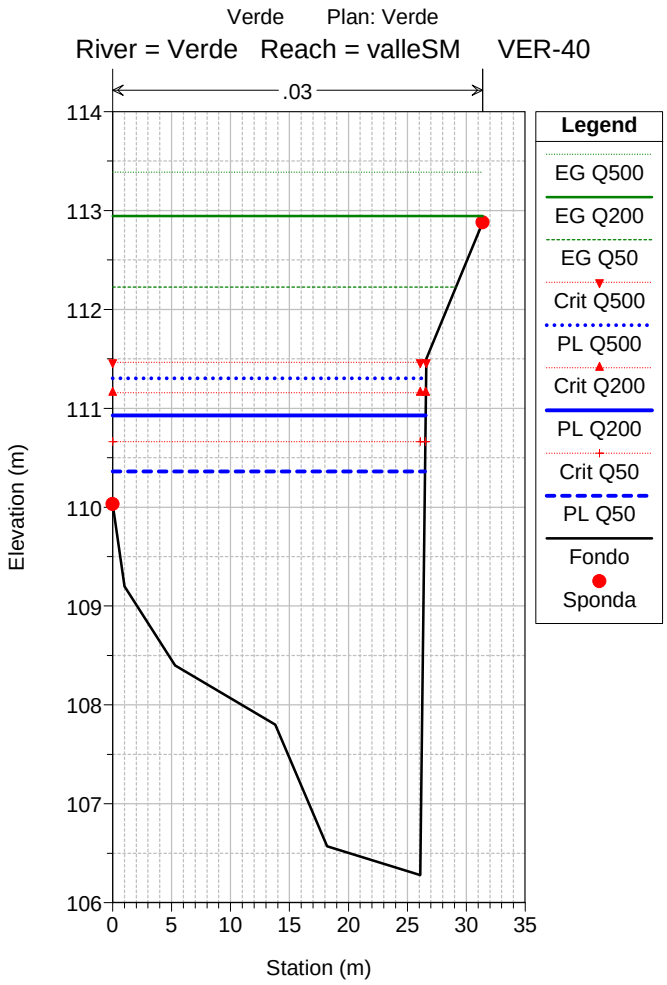


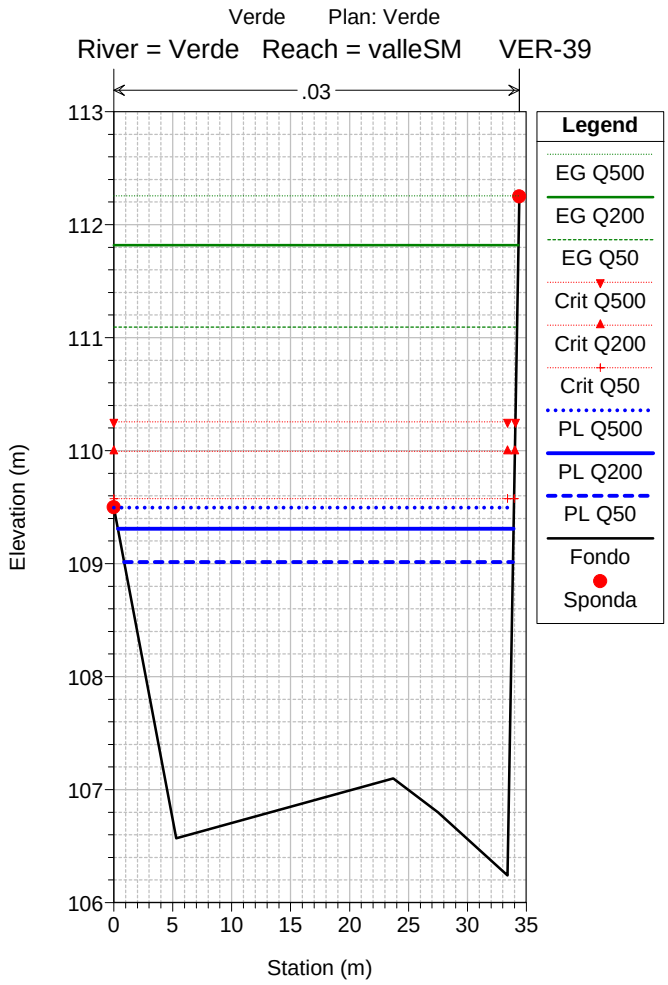

Verde Plan: Verde
River = Verde Reach = valleSM VER-42
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda

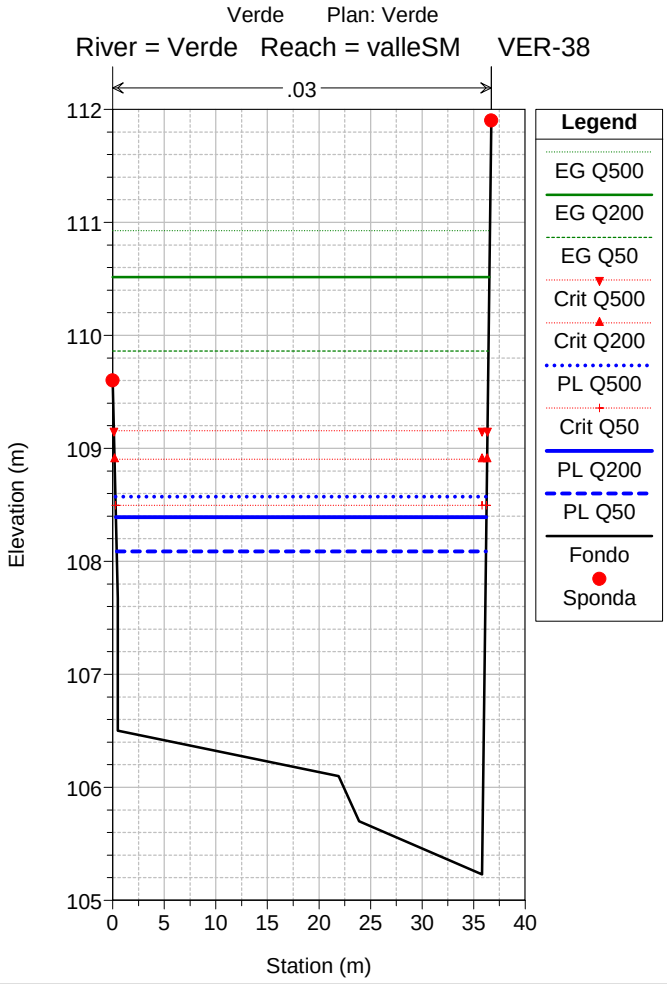

Verde Plan: Verde
River = Verde Reach = valleSM VER-42
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda

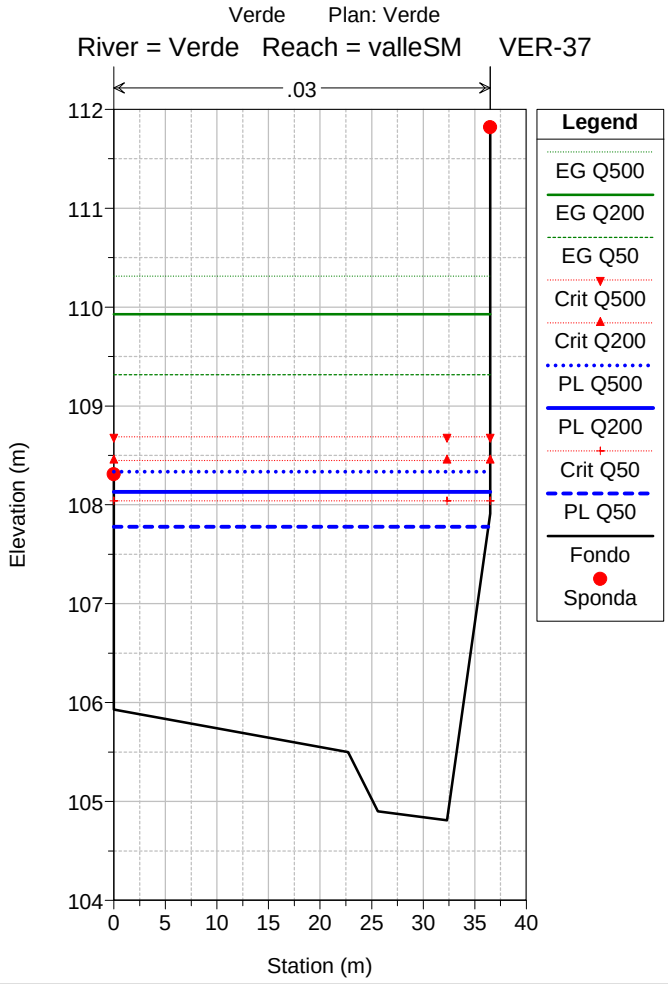

Verde Plan: Verde
River = Verde Reach = valleSM VER-42
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda


Verde Plan: Verde
River = Verde Reach = valleSM VER-41
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


Verde Plan: Verde
River = Verde Reach = valleSM VER-40
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
PL Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Sponda

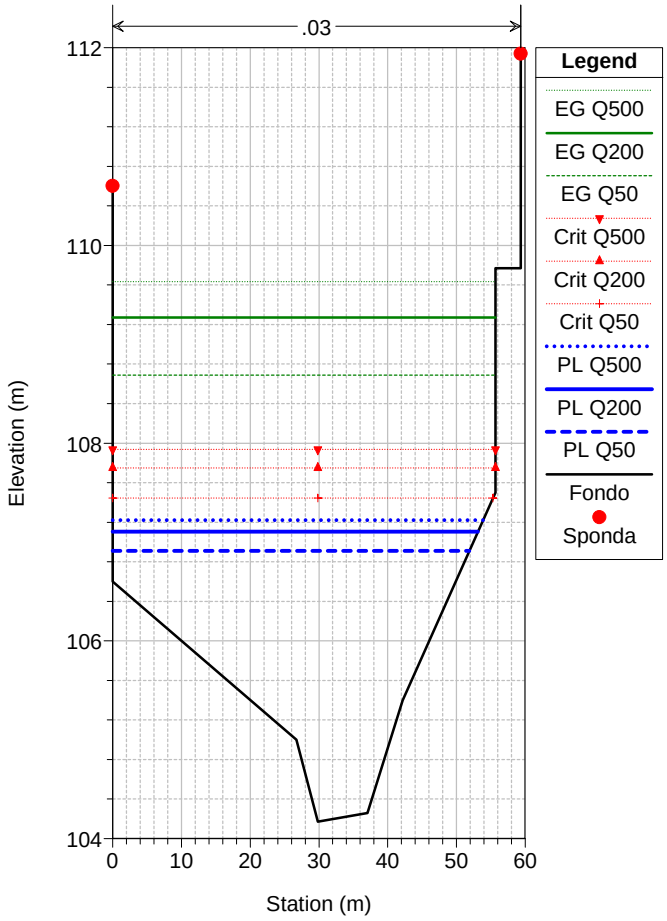

Verde Plan: Verde
River = Verde Reach = valleSM VER-39
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


Verde Plan: Verde
River = Verde Reach = valleSM VER-38
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda


Verde Plan: Verde
River = Verde Reach = valleSM VER-37
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Sponda

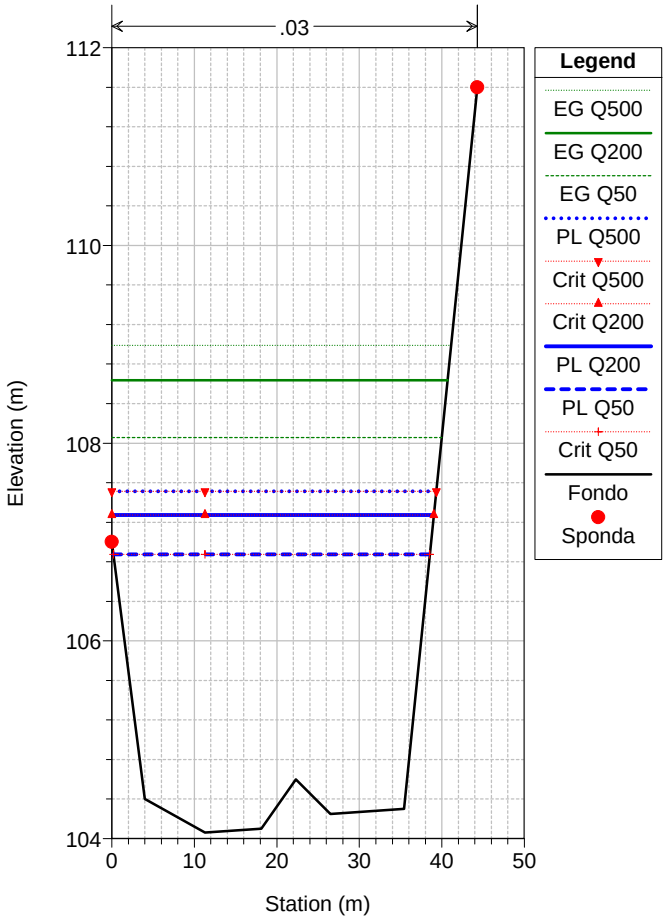
Verde Plan: Verde

River = Verde Reach = valleSM VER-36



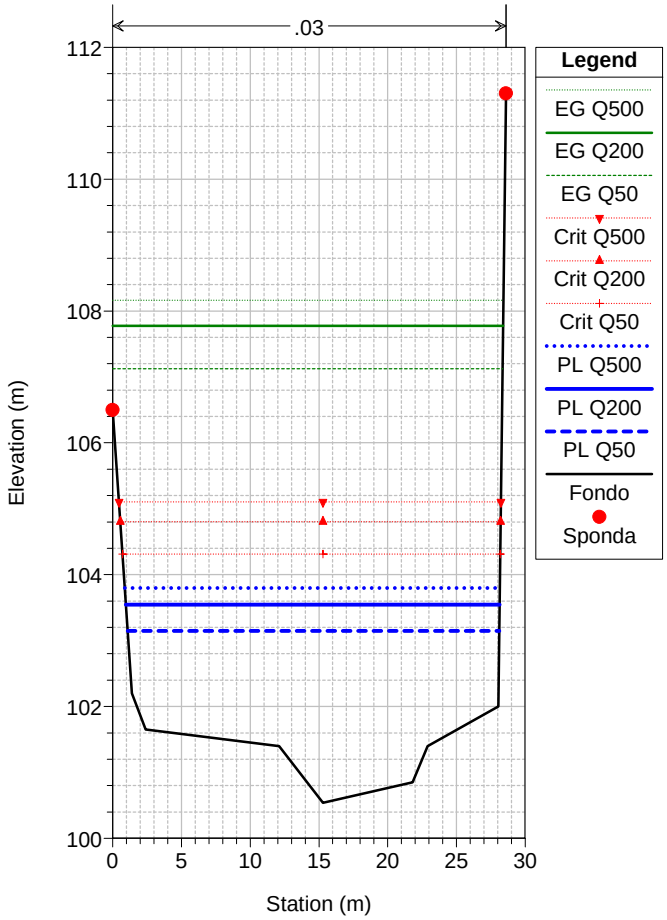
Verde Plan: Verde

River = Verde Reach = valleSM VER-35



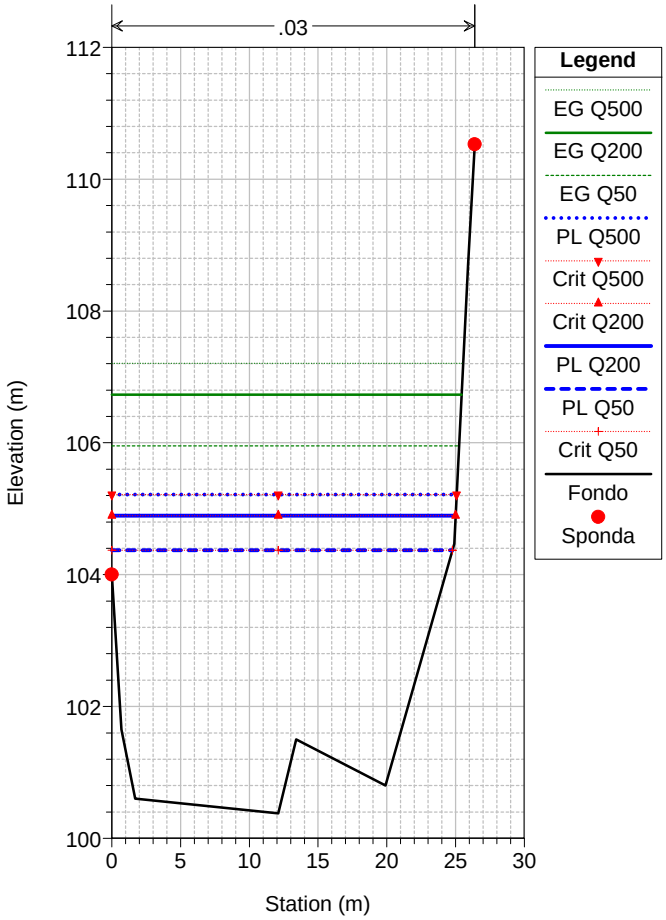
Verde Plan: Verde

River = Verde Reach = valleSM VER-34



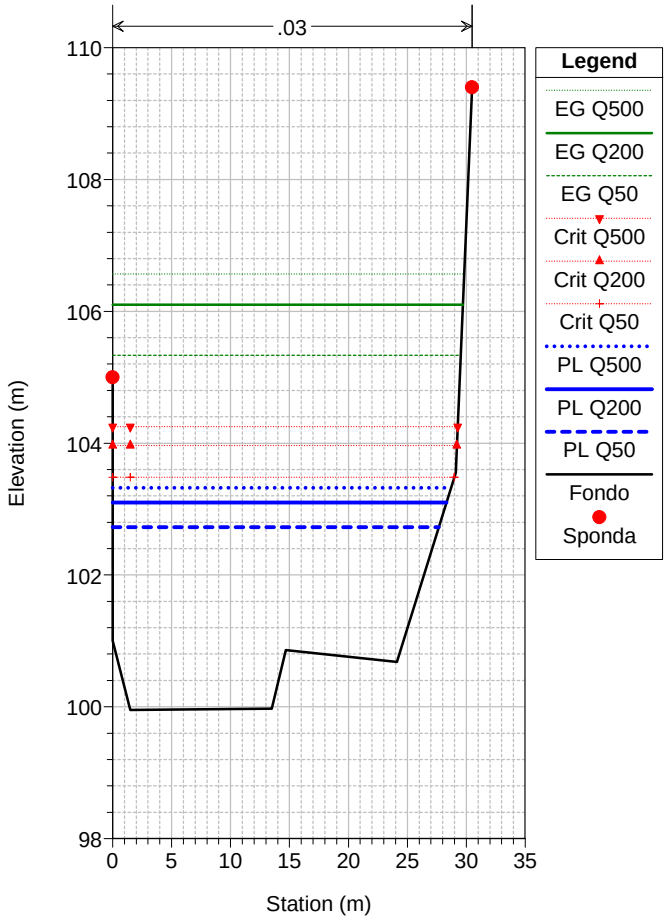
Verde Plan: Verde

River = Verde Reach = valleSM VER-33



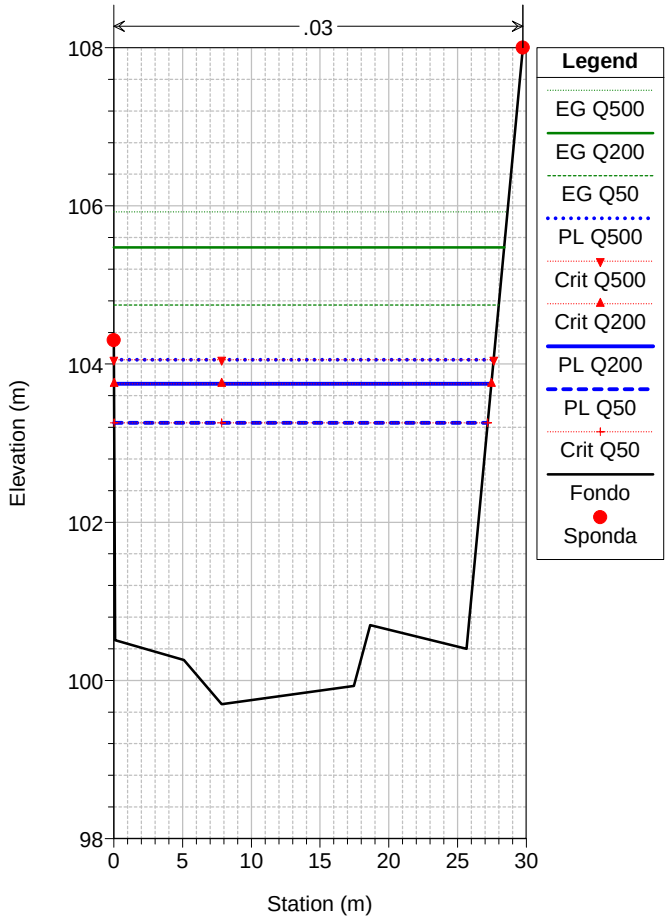
Verde Plan: Verde

River = Verde Reach = valleSM VER-32



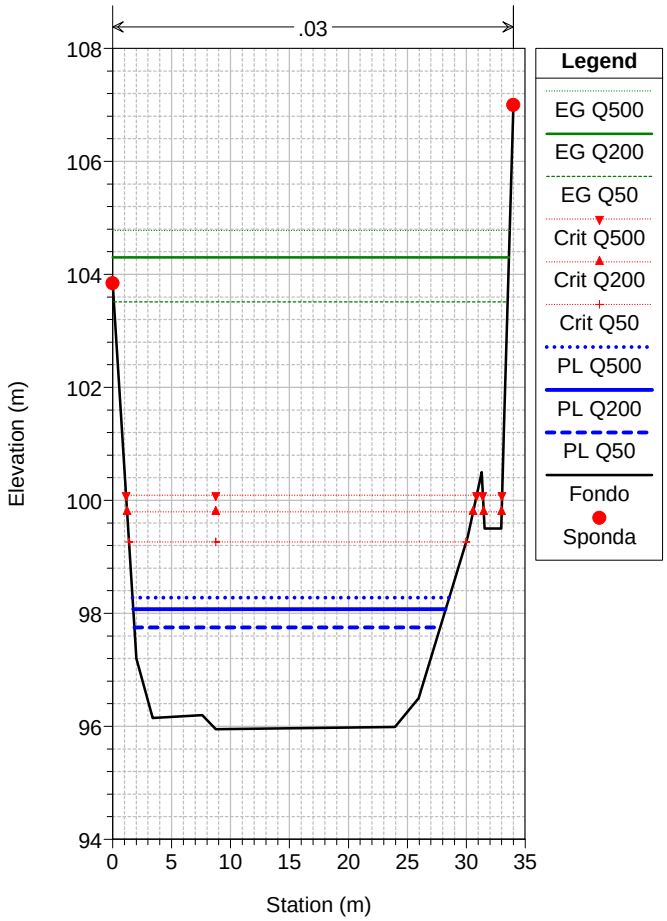
Verde Plan: Verde

River = Verde Reach = valleSM VER-31



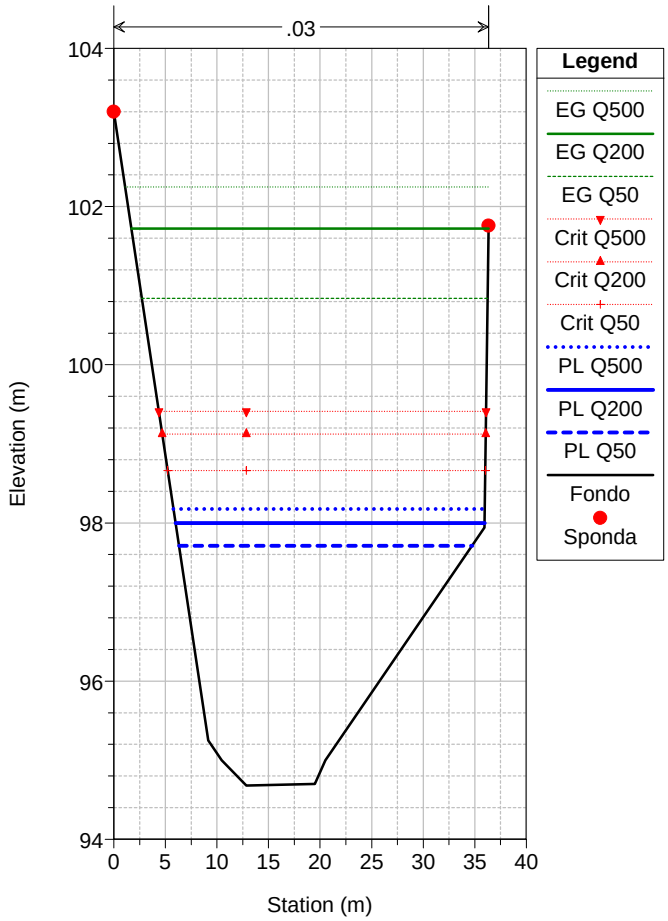
Verde Plan: Verde

River = Verde Reach = valleSM VER-30



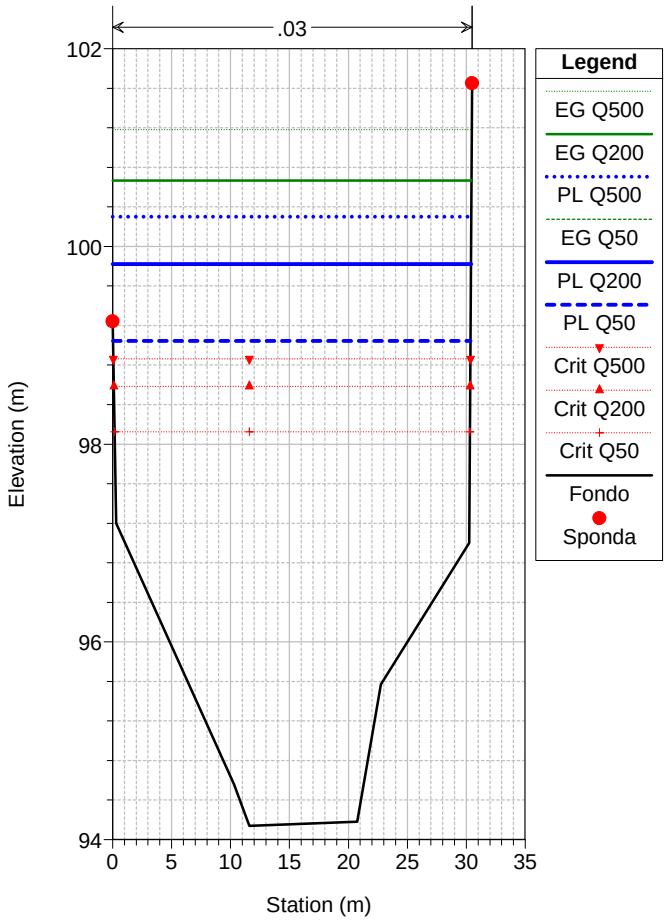
Verde Plan: Verde

River = Verde Reach = valleSM VER-29



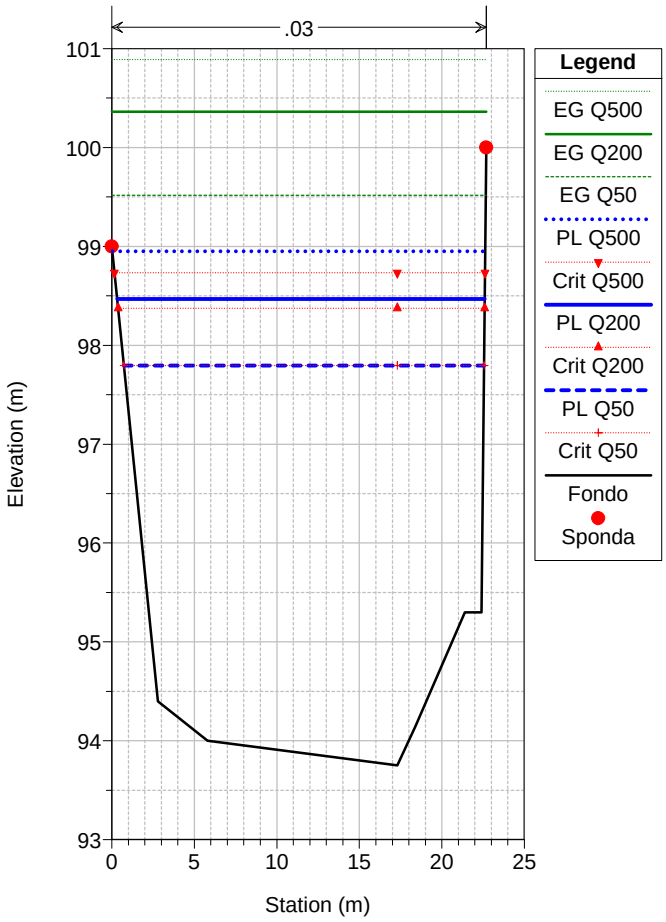
Verde Plan: Verde

River = Verde Reach = valleSM VER-28



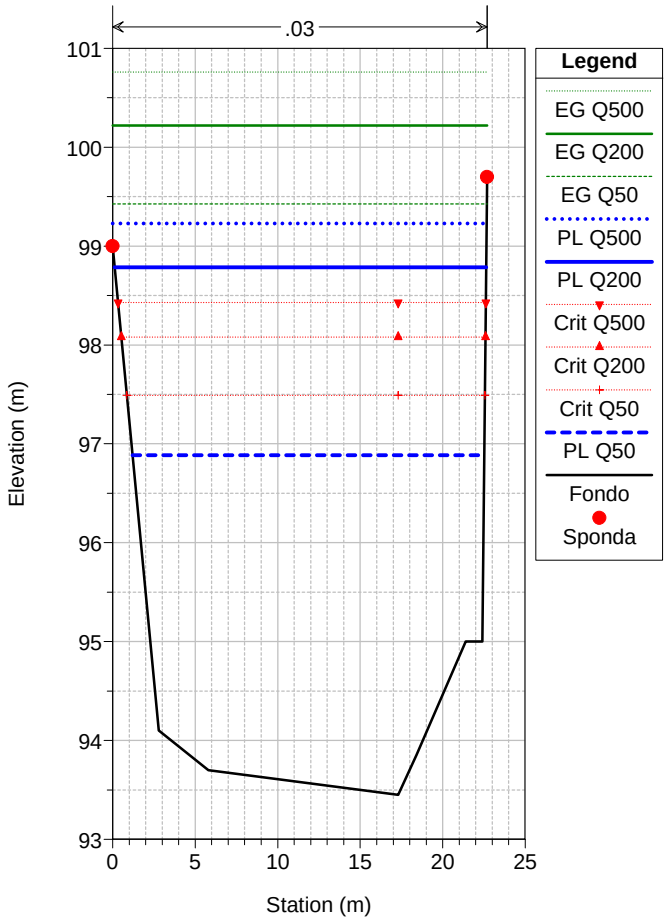
Verde Plan: Verde

River = Verde Reach = valleSM VER-27



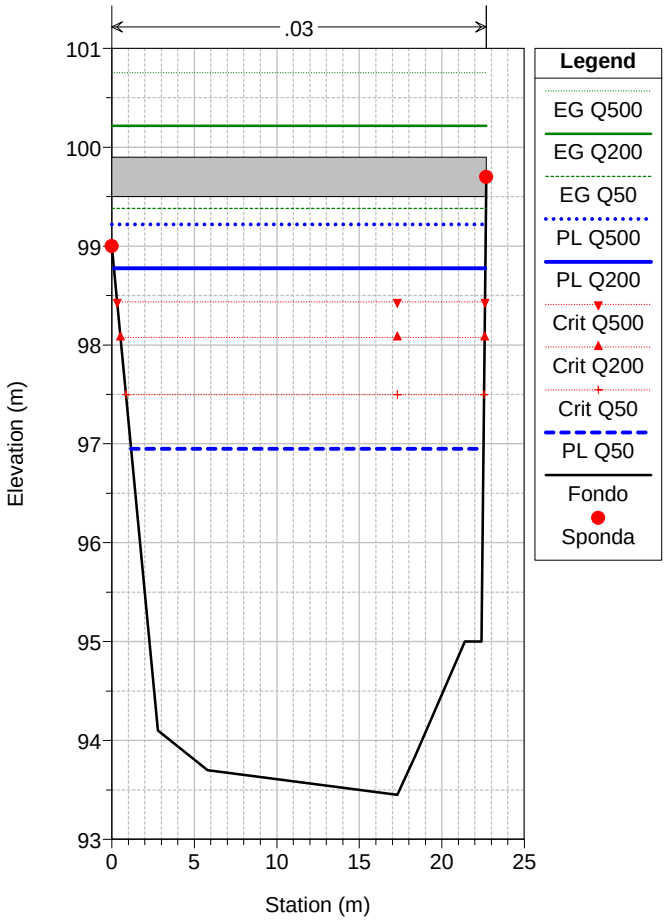
Verde Plan: Verde

River = Verde Reach = valleSM VER-27



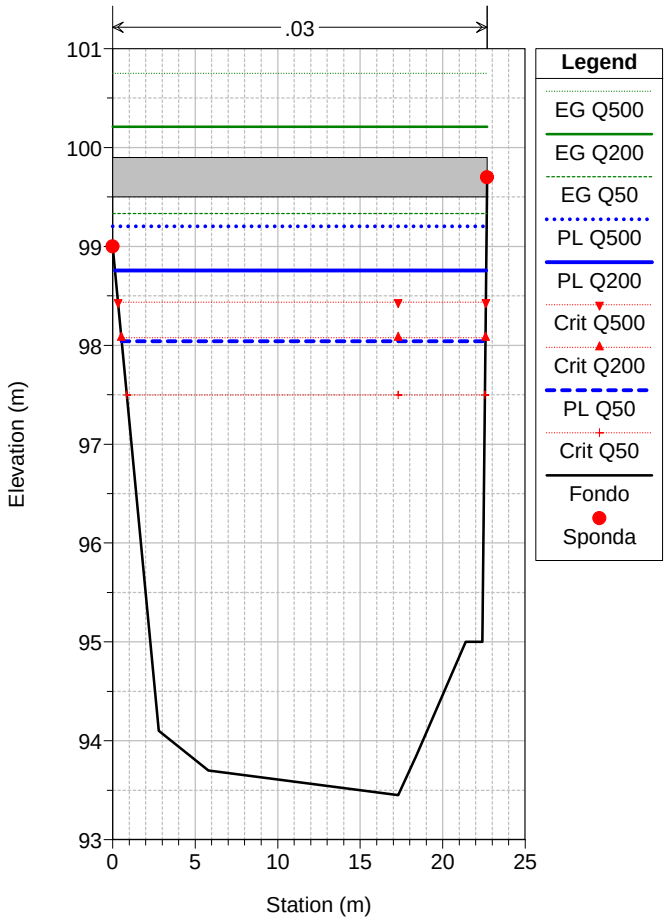
Verde Plan: Verde

River = Verde Reach = valleSM VER-27



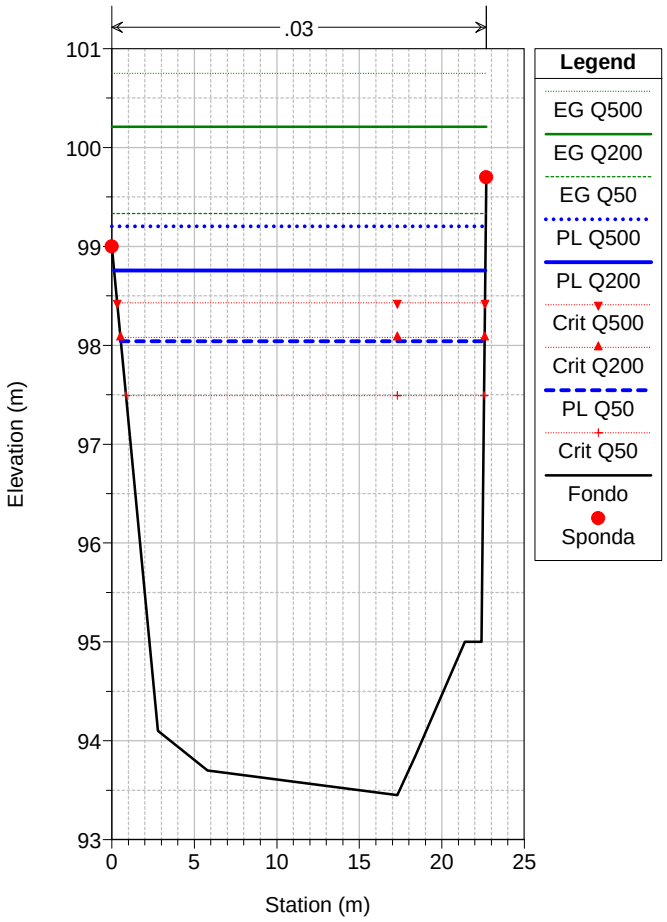
Verde Plan: Verde

River = Verde Reach = valleSM VER-27



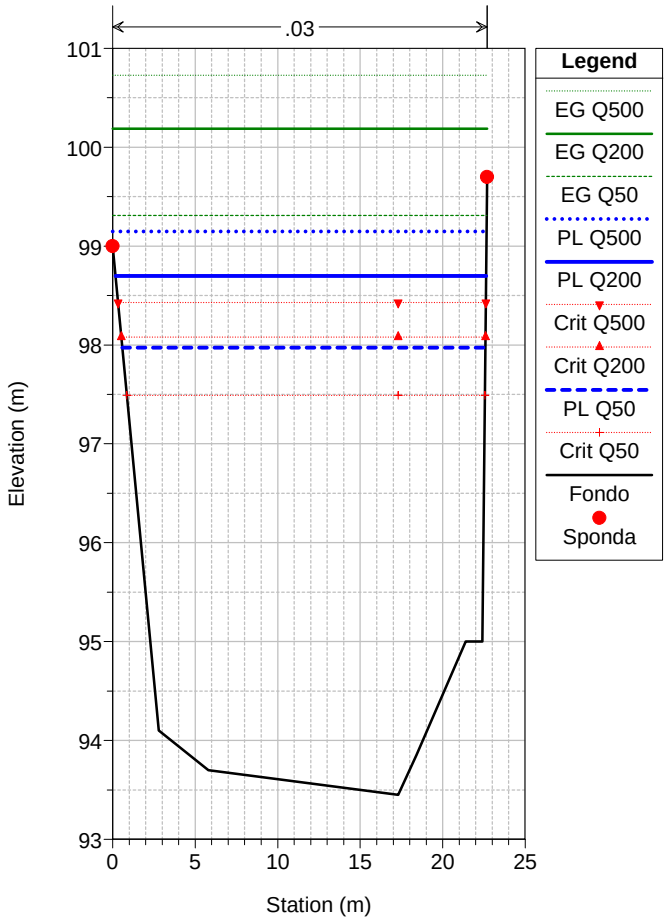
Verde Plan: Verde

River = Verde Reach = valleSM VER-27



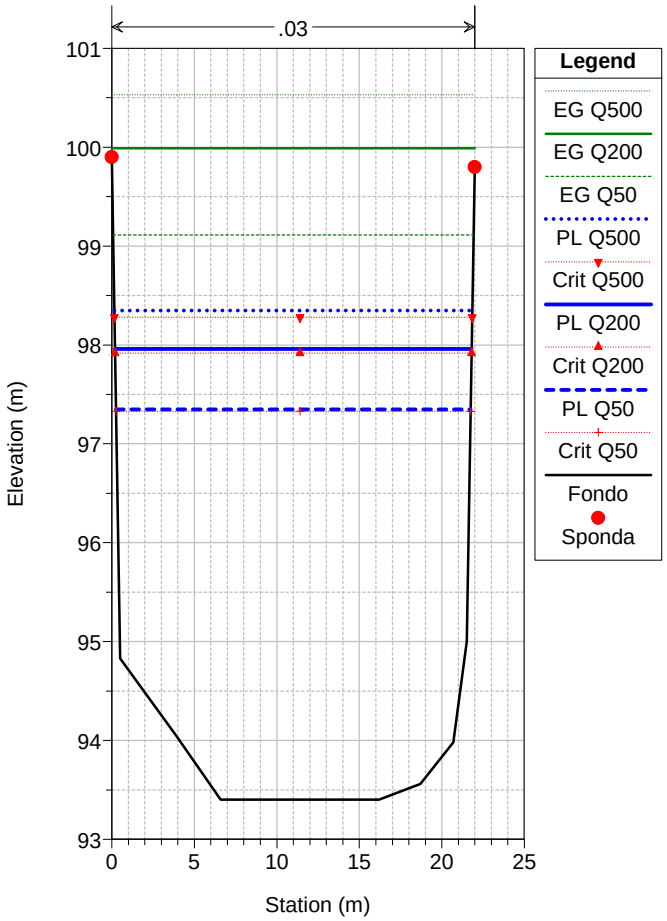
Verde Plan: Verde

River = Verde Reach = valleSM VER-27



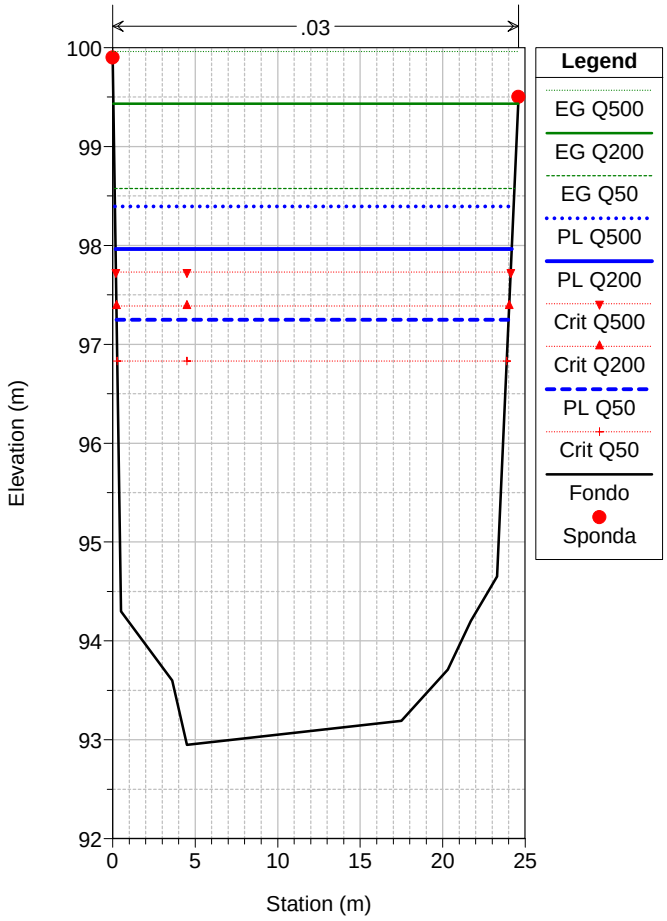
Verde Plan: Verde

River = Verde Reach = valleSM VER-26



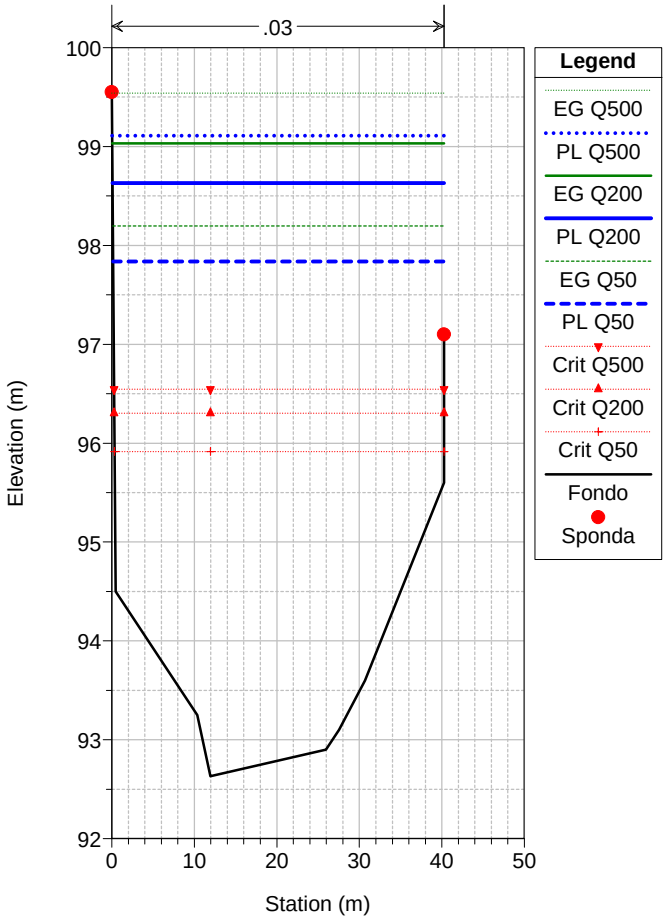
Verde Plan: Verde

River = Verde Reach = valleSM VER-25



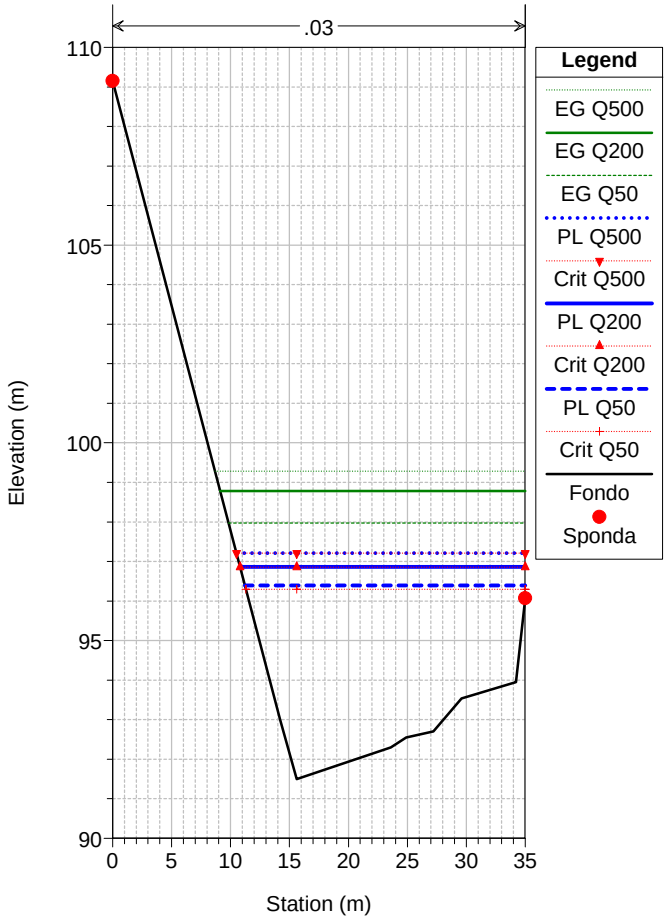
Verde Plan: Verde

River = Verde Reach = valleSM VER-24



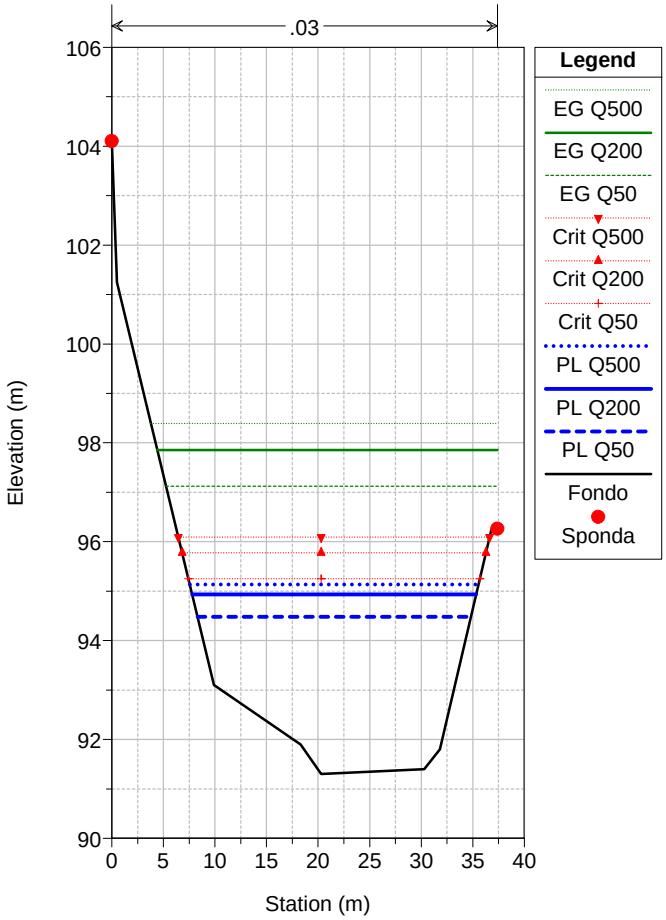
Verde Plan: Verde

River = Verde Reach = valleSM VER-23



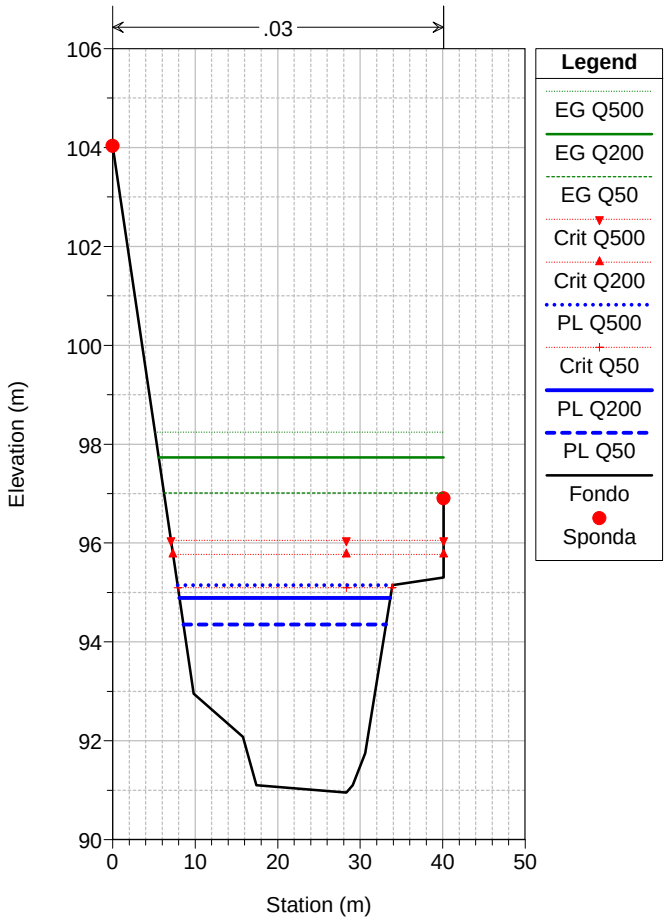
Verde Plan: Verde

River = Verde Reach = valleSM VER-22



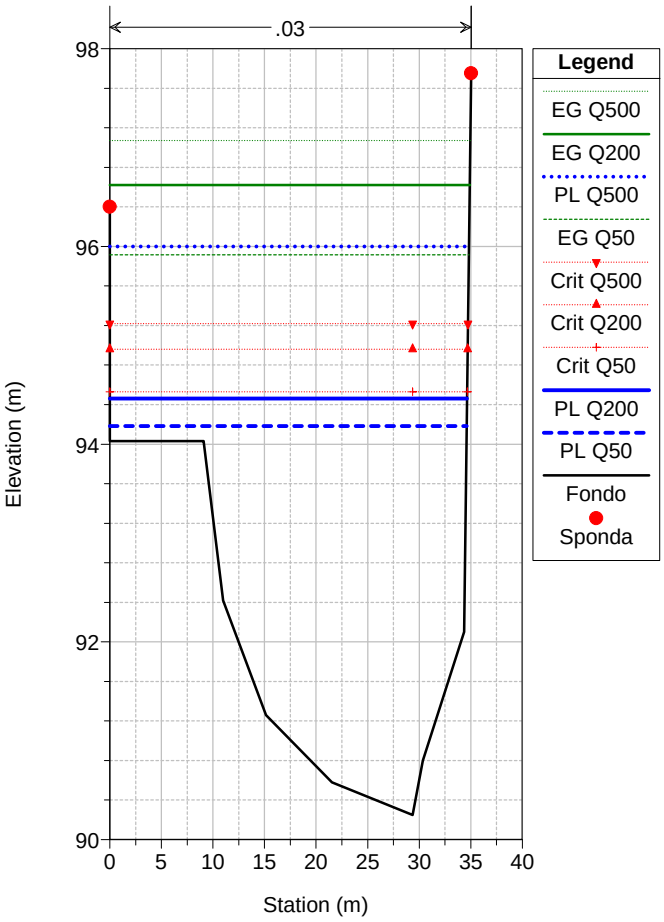
Verde Plan: Verde

River = Verde Reach = valleSM VER-21



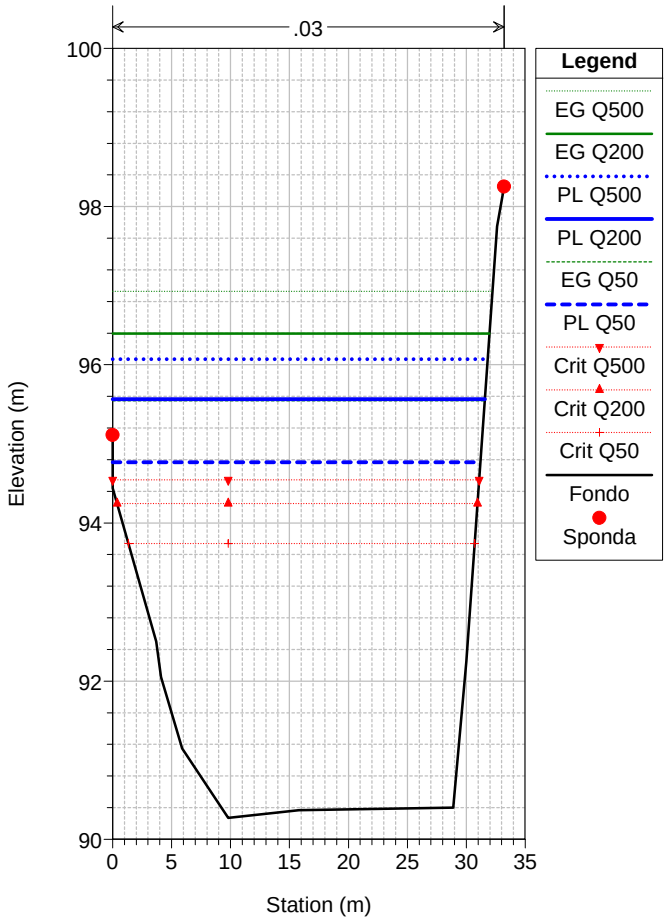
Verde Plan: Verde

River = Verde Reach = valleSM VER-20



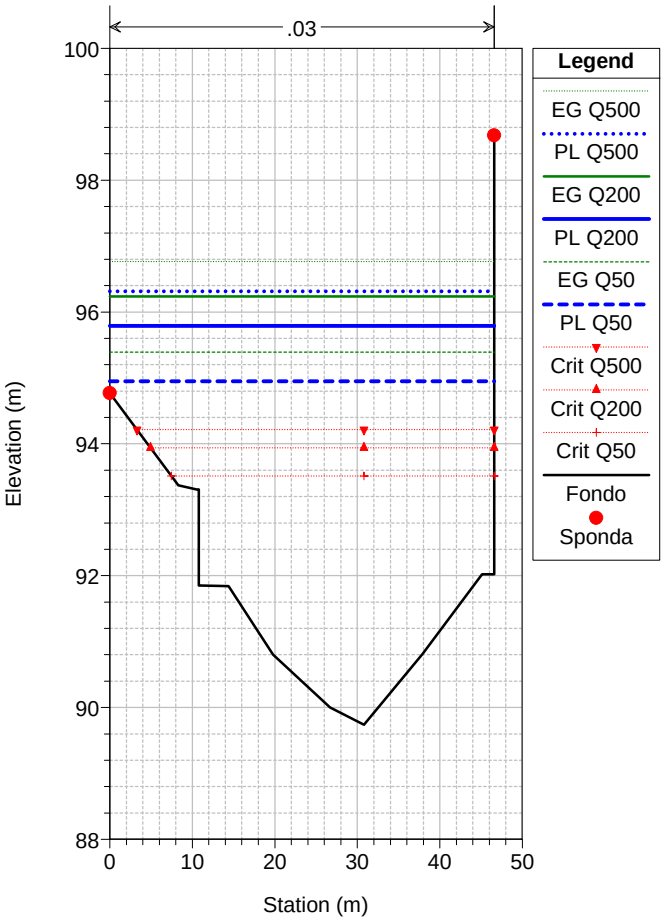
Verde Plan: Verde

River = Verde Reach = valleSM VER-19



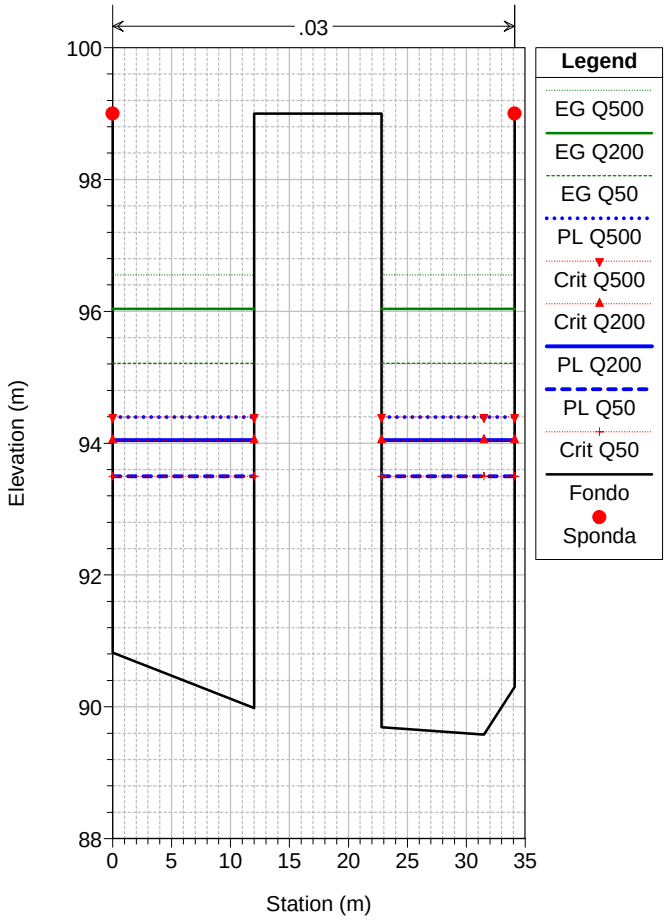
Verde Plan: Verde

River = Verde Reach = valleSM VER-18.2



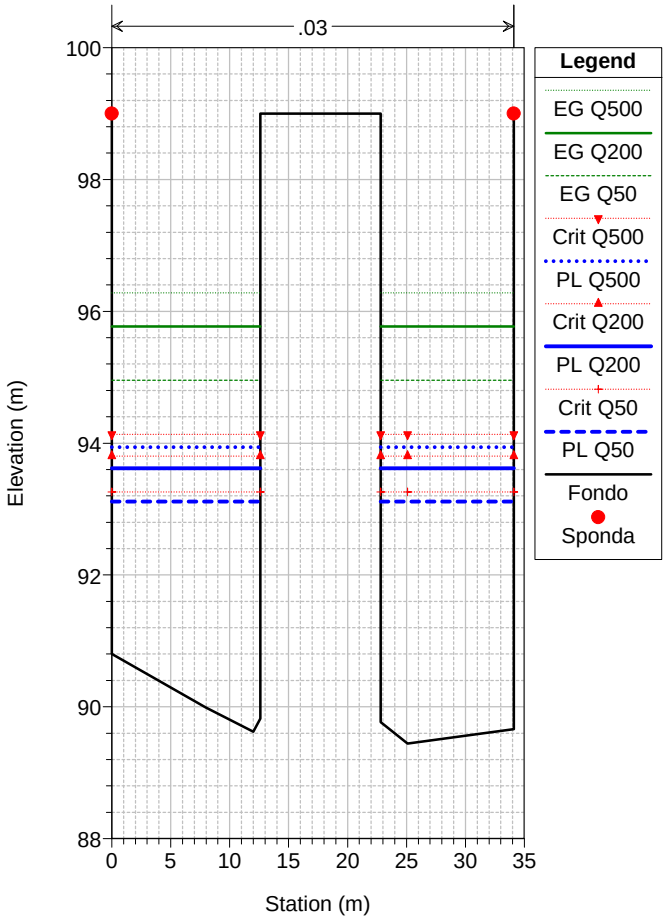
Verde Plan: Verde

River = Verde Reach = valleSM VER-18



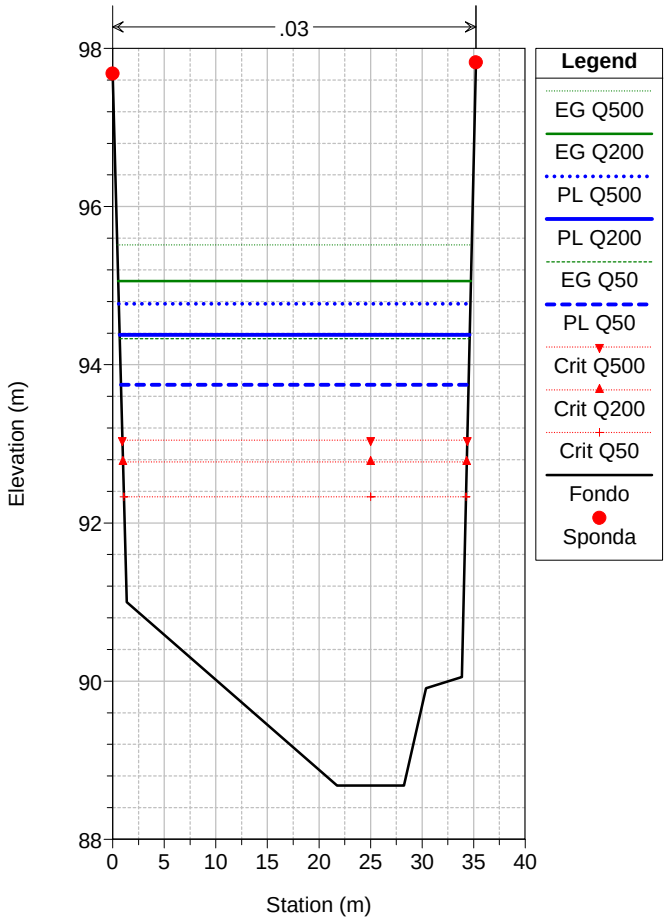
Verde Plan: Verde

River = Verde Reach = valleSM VER-18



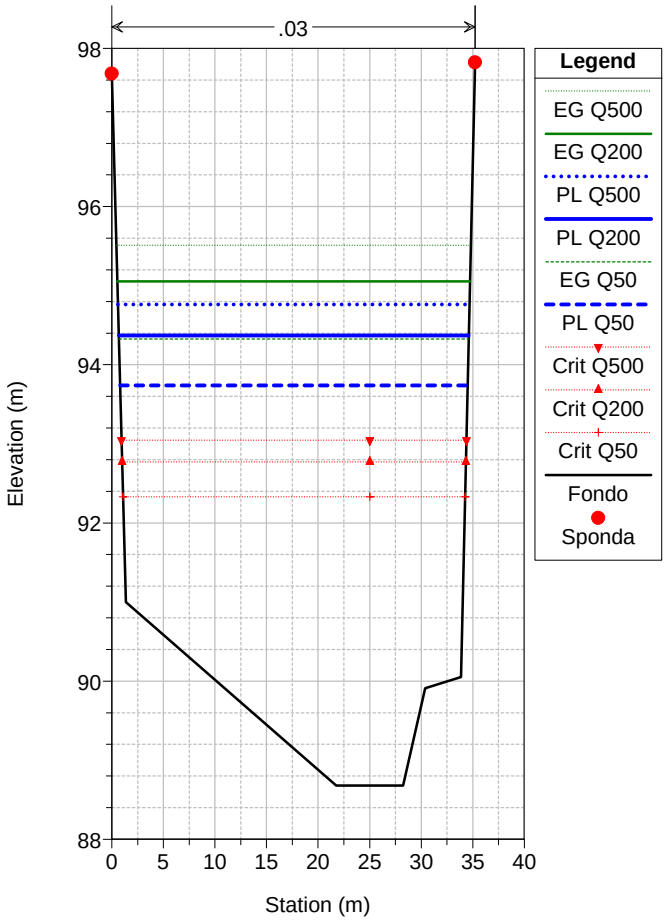
Verde Plan: Verde

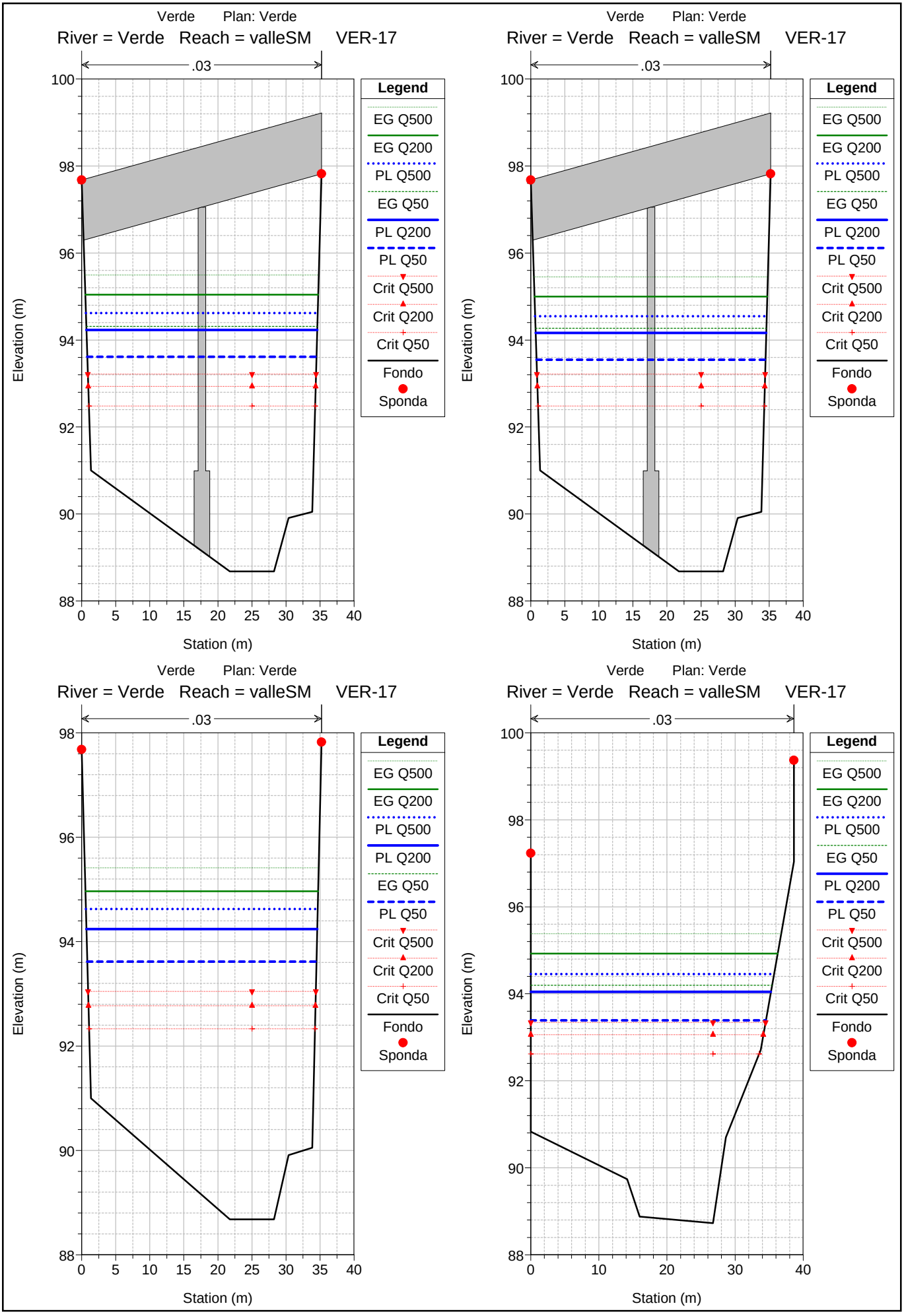
River = Verde Reach = valleSM VER-17



Verde Plan: Verde

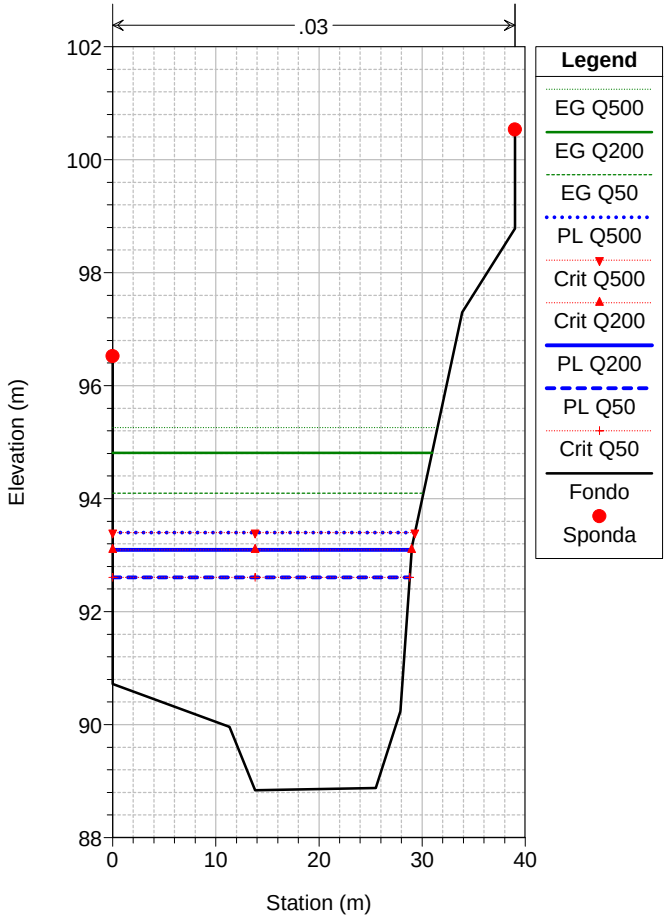
River = Verde Reach = valleSM VER-17




Verde Plan: Verde
River = Verde Reach = valleSM VER-17
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = valleSM VER-17
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = valleSM VER-17
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Verde Plan: Verde
River = Verde Reach = valleSM VER-17
.03
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

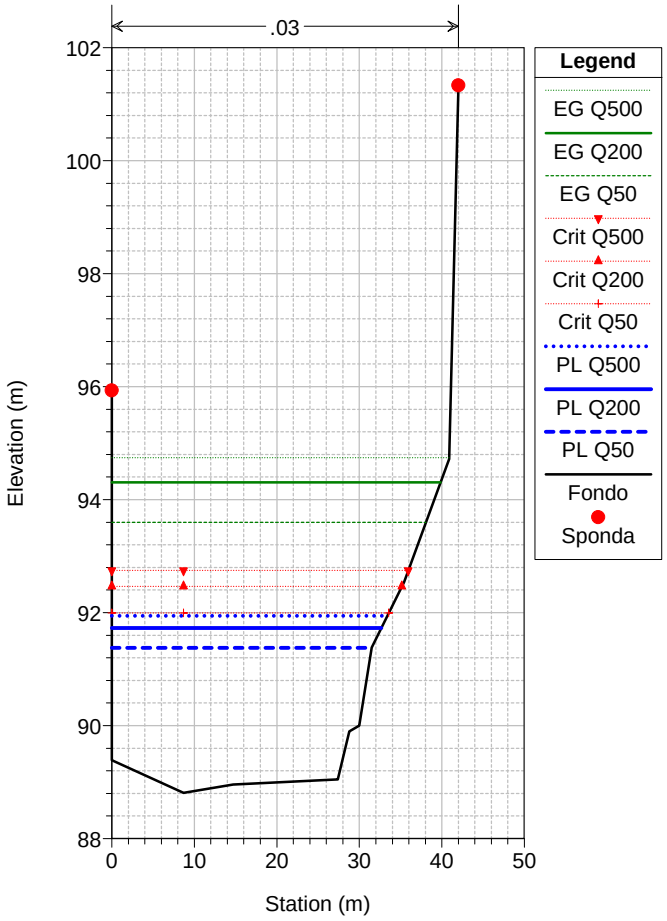
Verde Plan: Verde

River = Verde Reach = valleSM VER-16



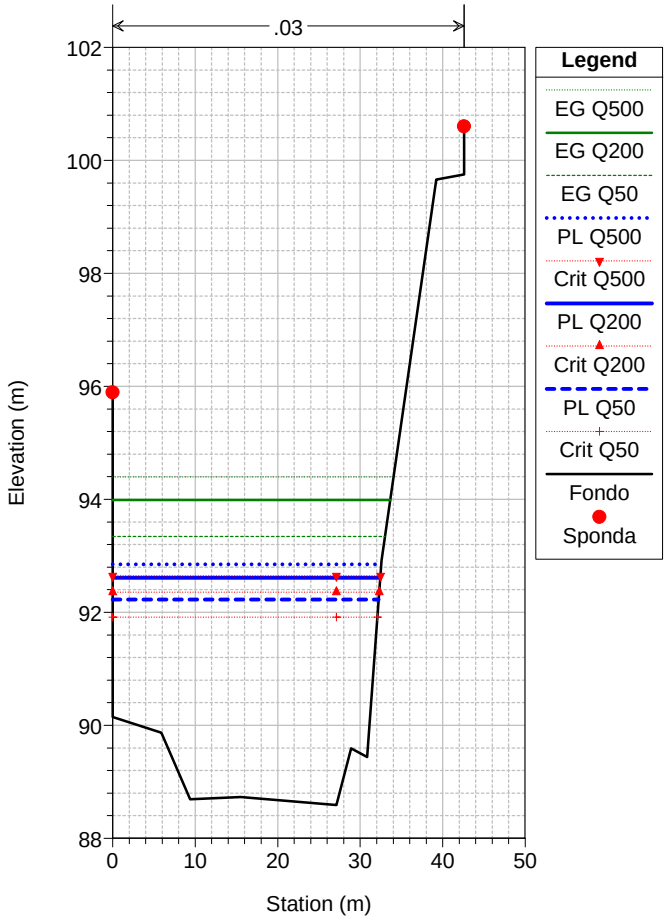
Verde Plan: Verde

River = Verde Reach = valleSM VER-15



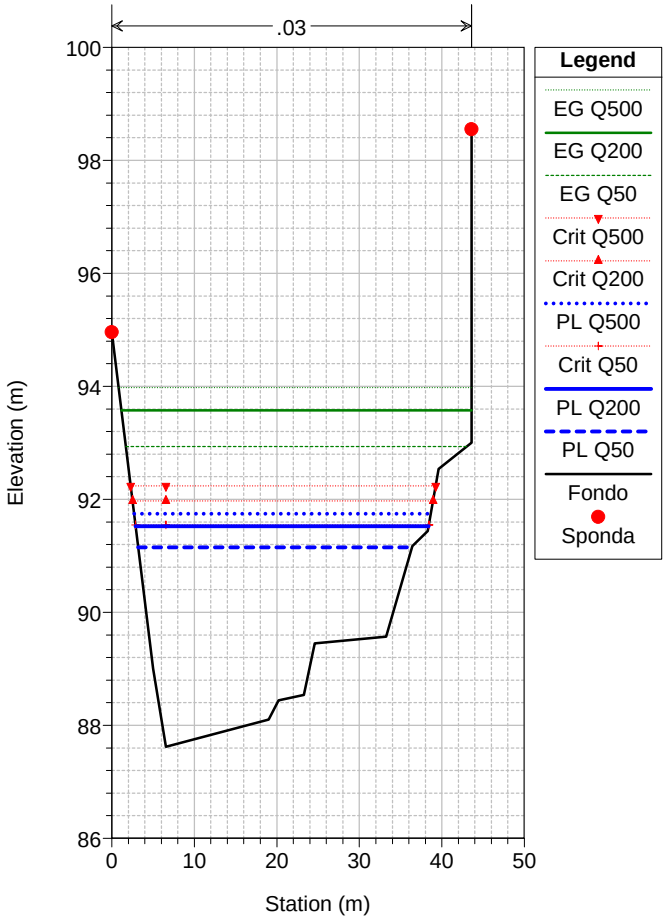
Verde Plan: Verde

River = Verde Reach = valleSM VER-14



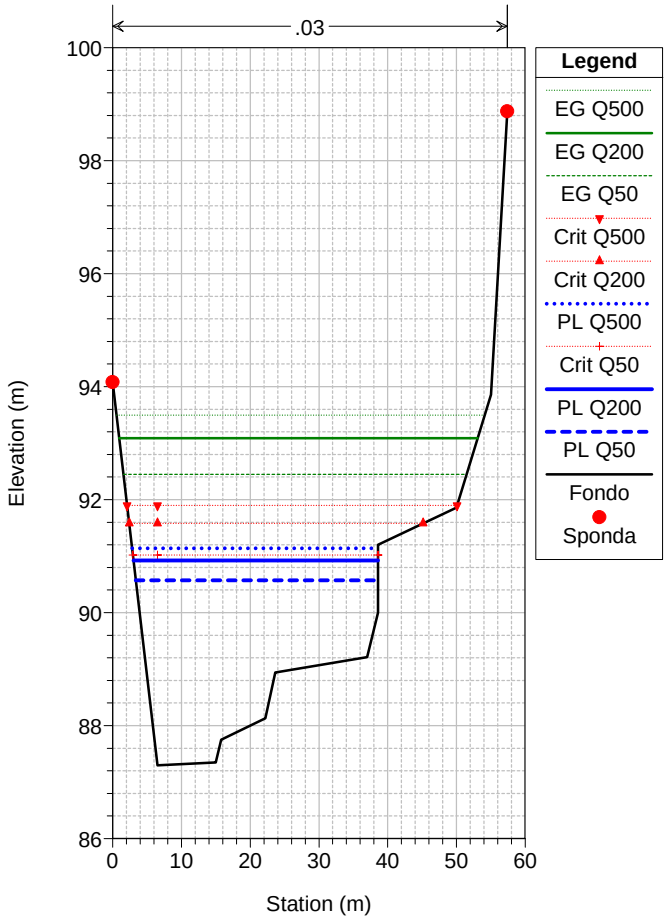
Verde Plan: Verde

River = Verde Reach = valleSM VER-13



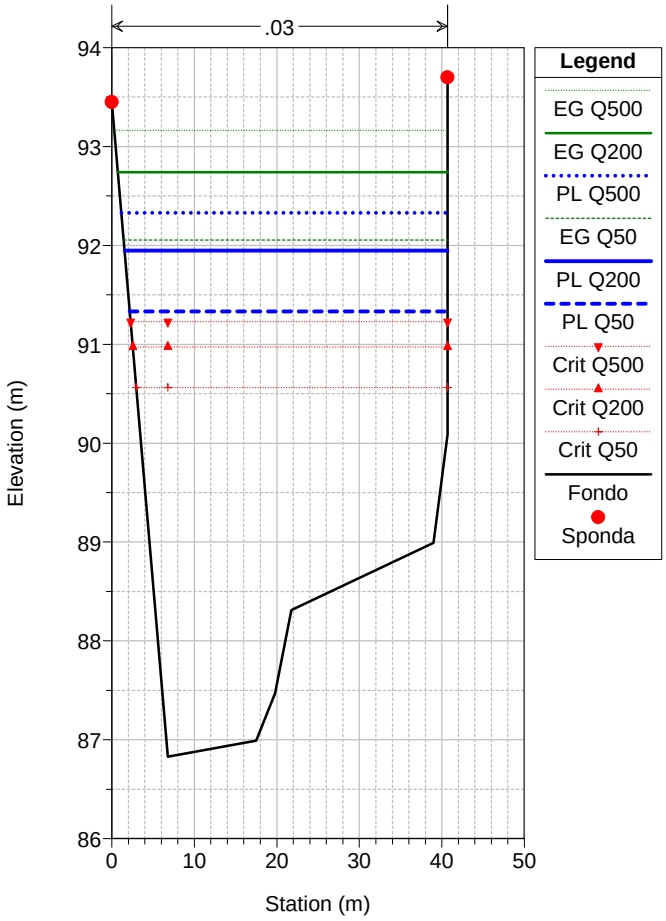
Verde Plan: Verde

River = Verde Reach = valleSM VER-12



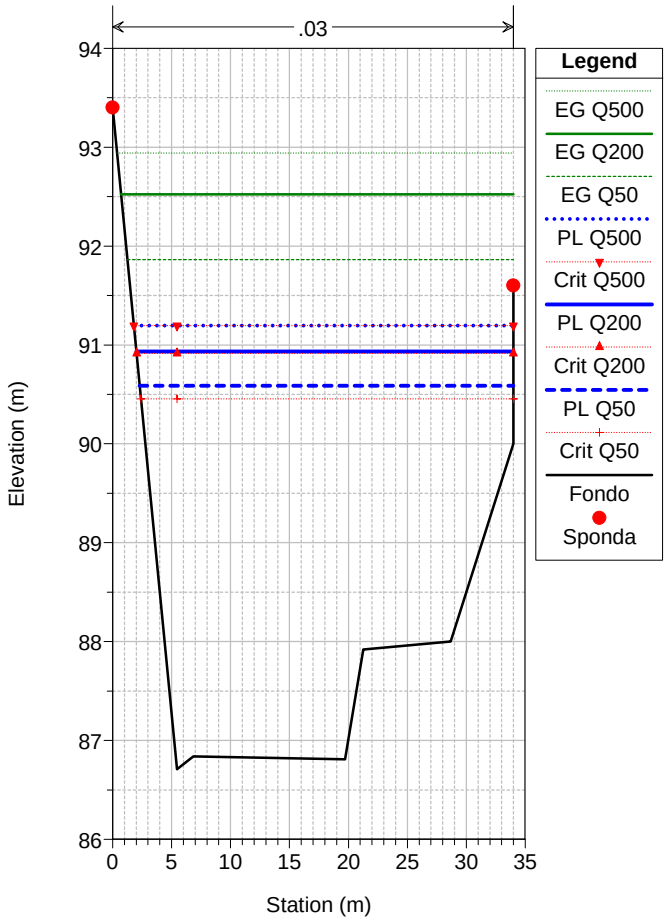
Verde Plan: Verde

River = Verde Reach = valleSM VER-11



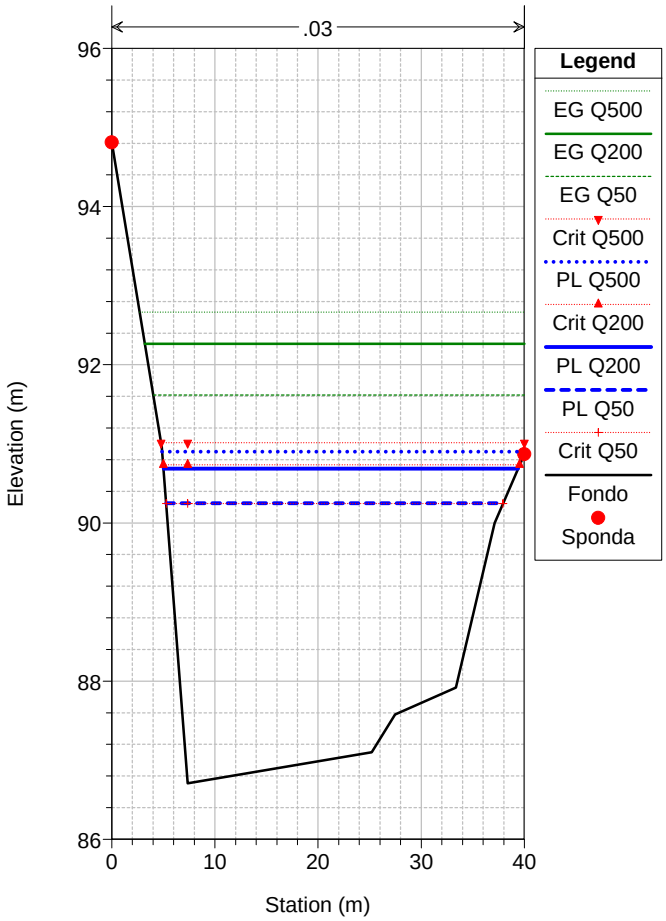
Verde Plan: Verde

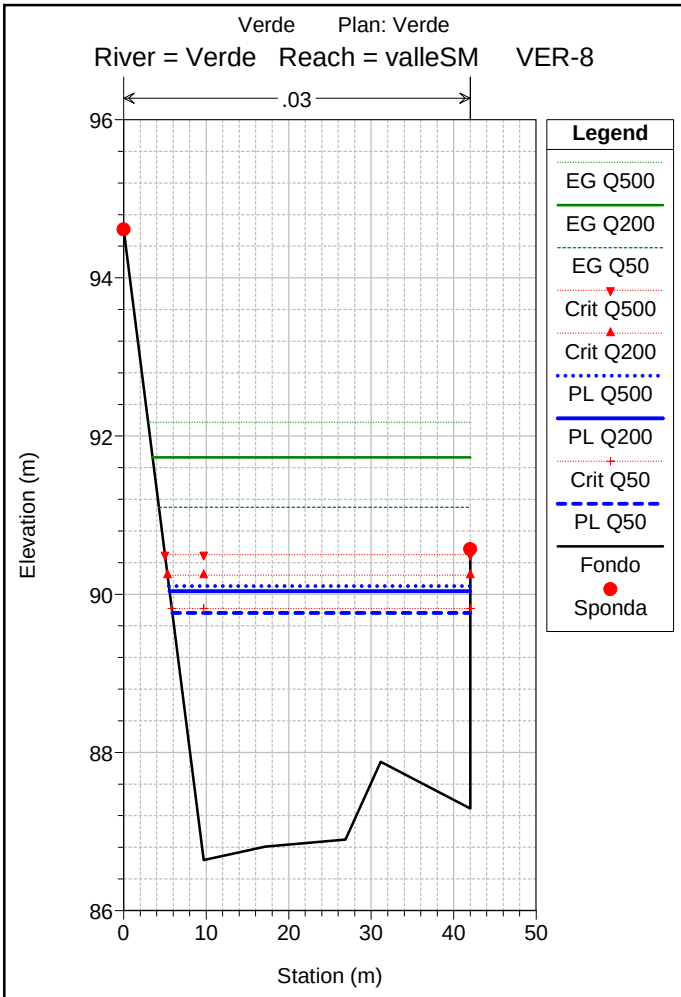
River = Verde Reach = valleSM VER-10

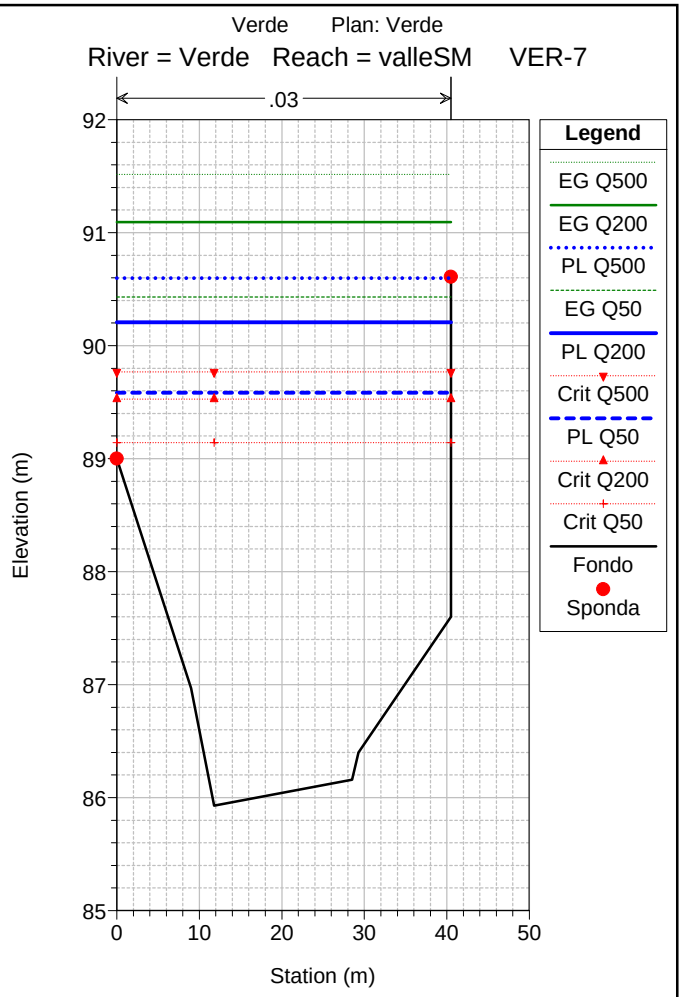


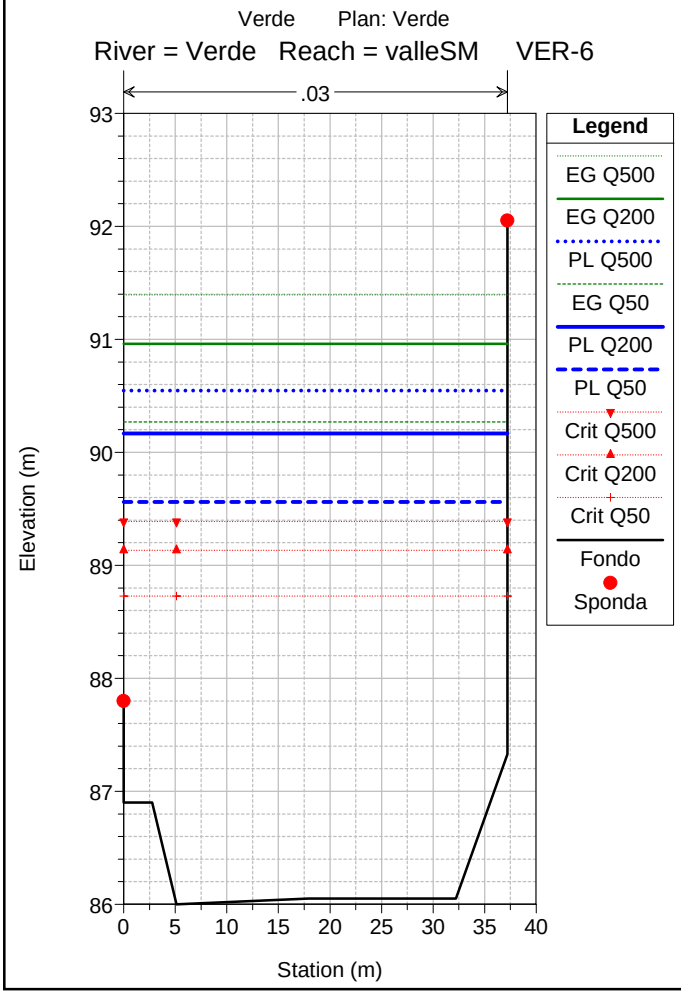
Verde Plan: Verde

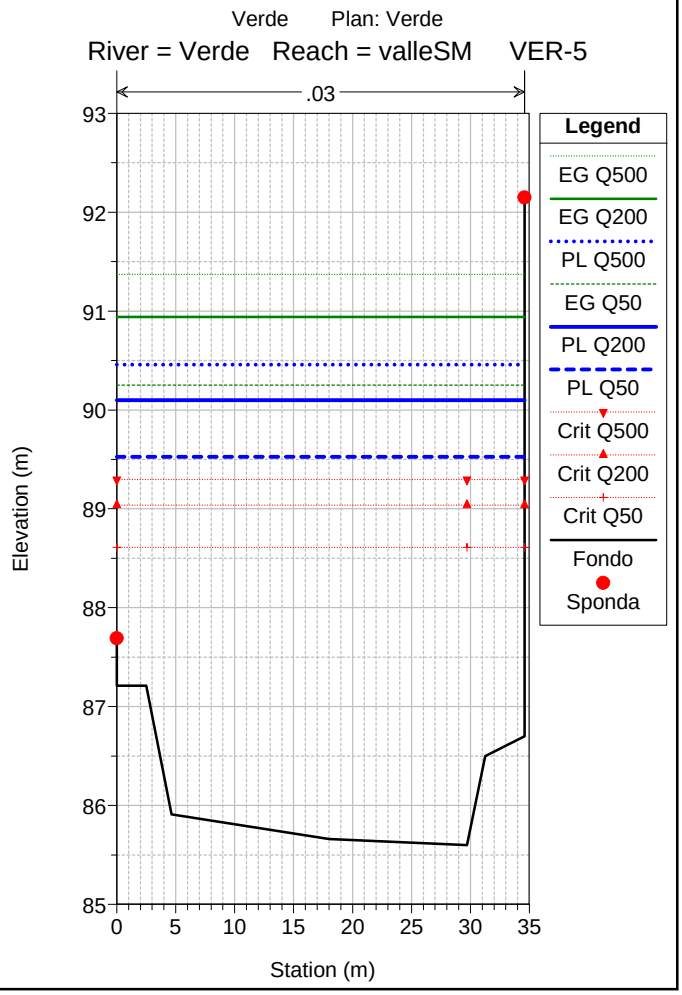
River = Verde Reach = valleSM VER-9




Verde Plan: Verde
River = Verde Reach = valleSM VER-8
.03
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

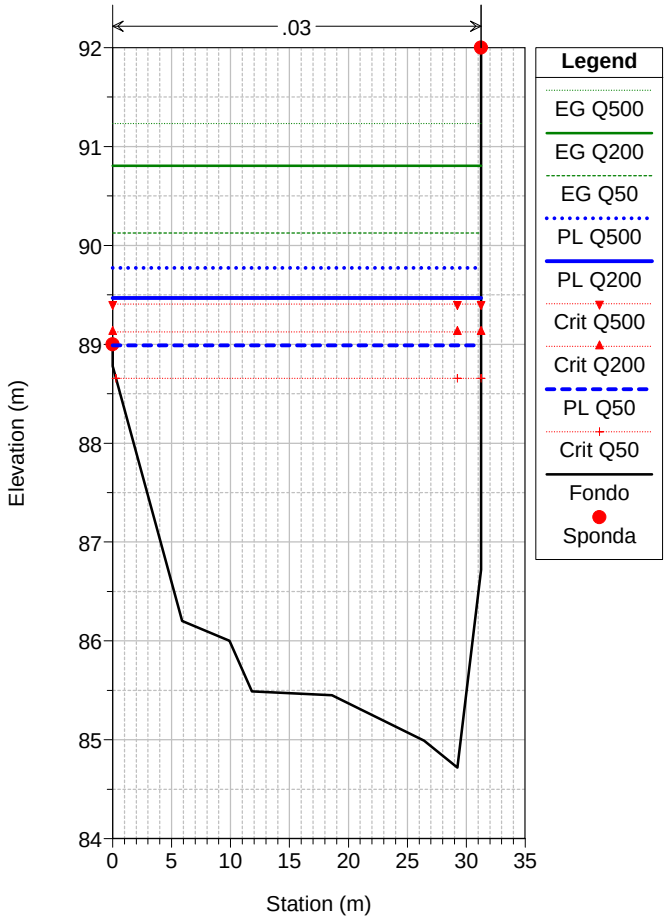

Verde Plan: Verde
River = Verde Reach = valleSM VER-7
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Verde Plan: Verde
River = Verde Reach = valleSM VER-6
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Verde Plan: Verde
River = Verde Reach = valleSM VER-5
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

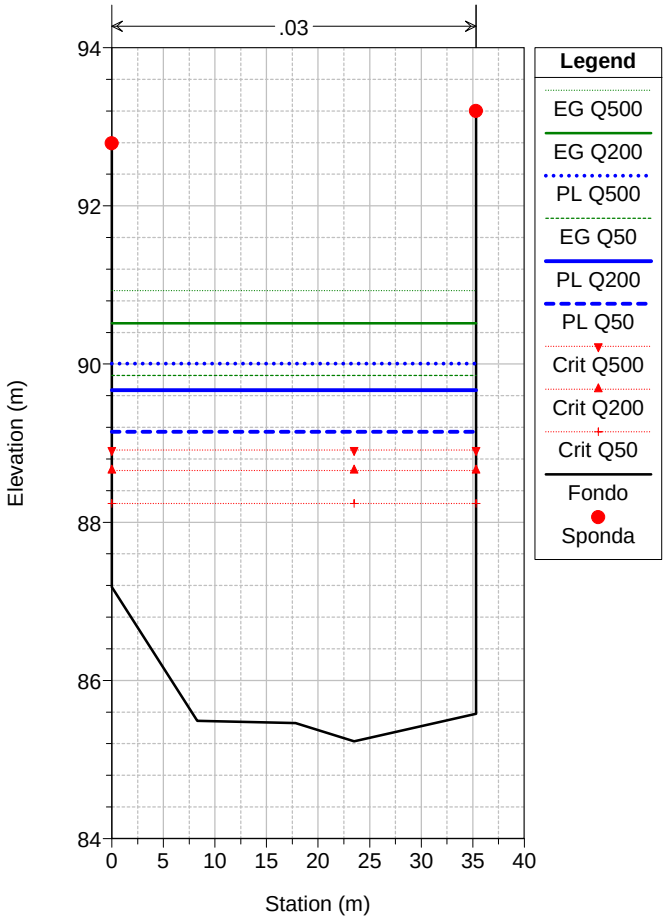
Verde Plan: Verde

River = Verde Reach = valleSM VER-4



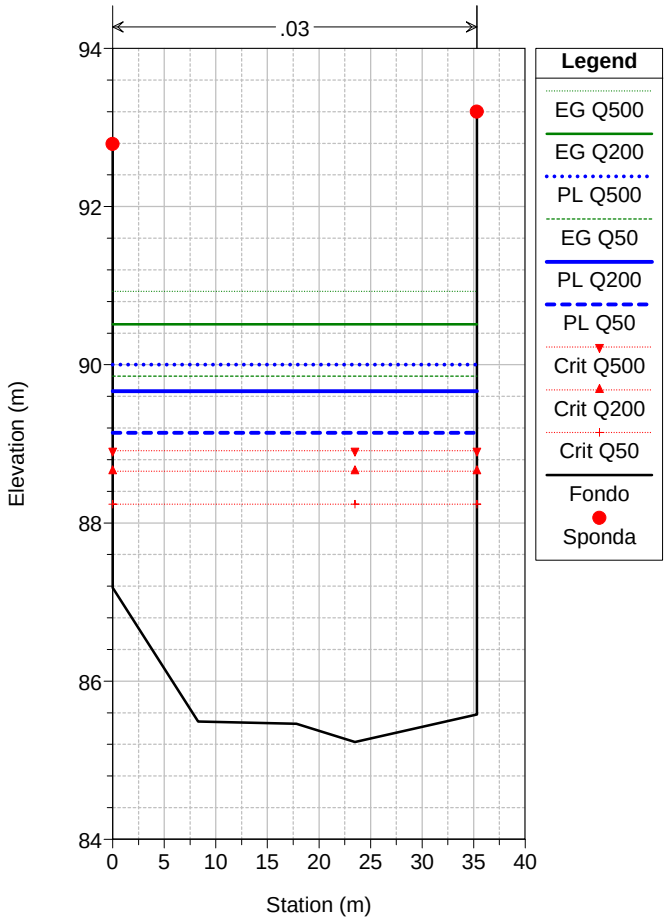
Verde Plan: Verde

River = Verde Reach = valleSM VER-3



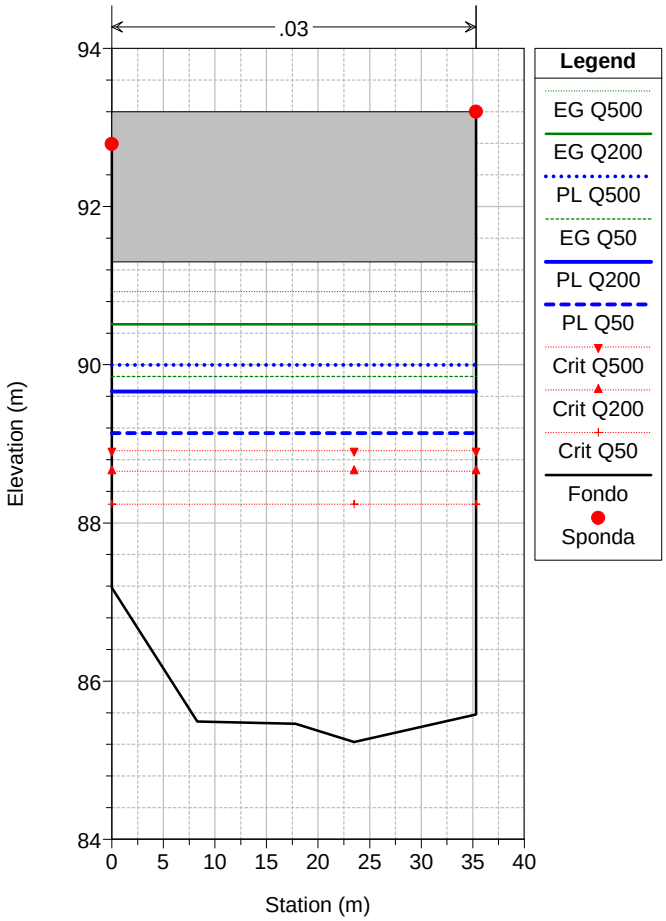
Verde Plan: Verde

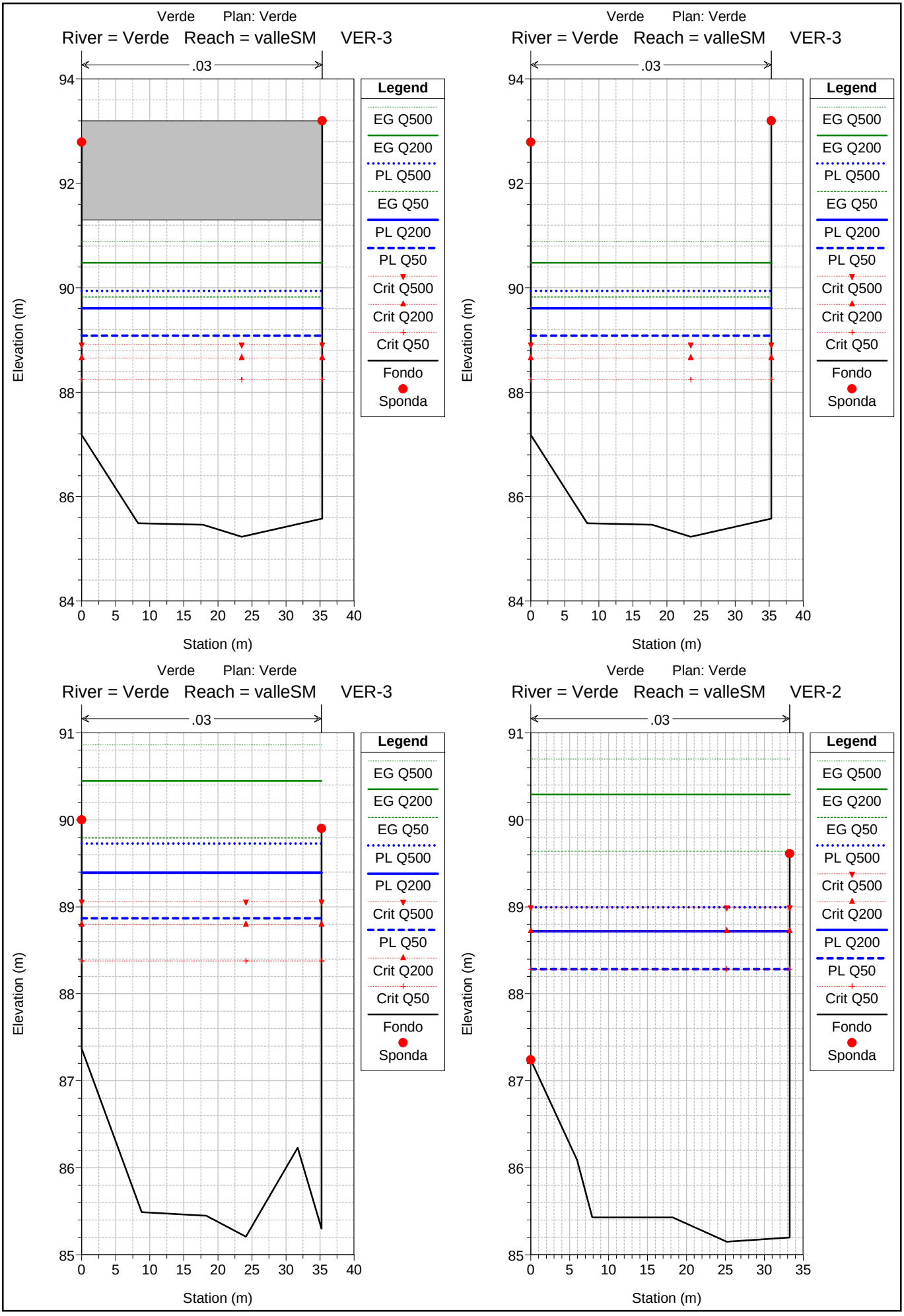
River = Verde Reach = valleSM VER-3

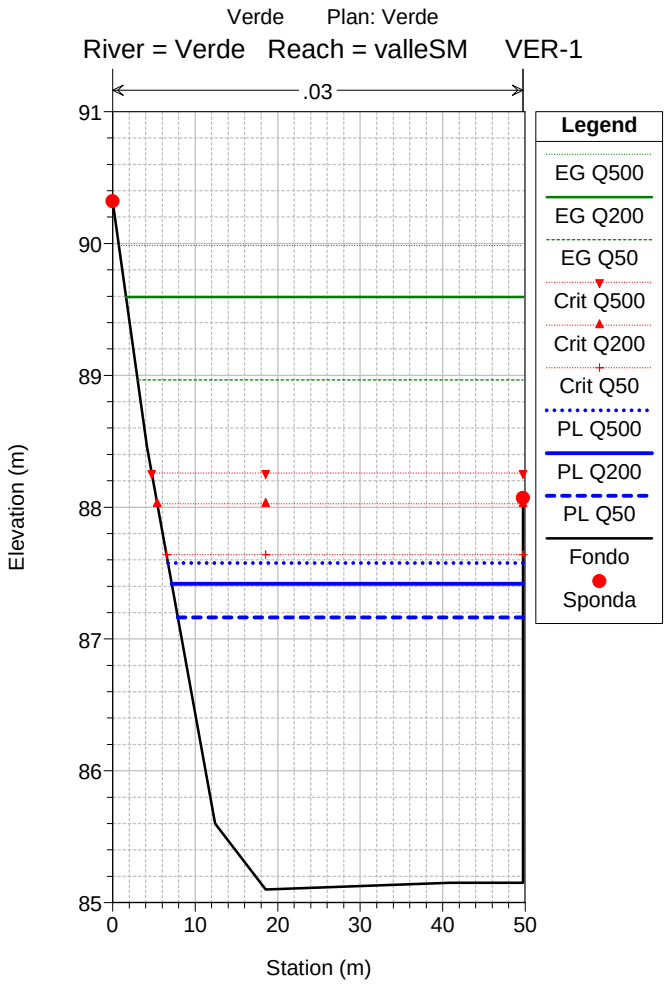


Verde Plan: Verde

River = Verde Reach = valleSM VER-3




Verde Plan: Verde
River = Verde Reach = valleSM VER-3
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Verde Plan: Verde
River = Verde Reach = valleSM VER-3
.03
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Verde Plan: Verde
River = Verde Reach = valleSM VER-3
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Verde Plan: Verde
River = Verde Reach = valleSM VER-2
.03
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)


Verde Plan: Verde
River = Verde Reach = valleSM VER-1
.03
91
90
89
88
87
86
85
0
10
20
30
40
50
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

HEC-RAS Plan: Verde

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)	
monteSM	94.3 VER-94	Q50	272.00	165.04	168.90	172.27	3.37	172.30	3.40	167.64	169.42	0.002179	3.18	85.53	24.27	0.54
monteSM	94.3 VER-94	Q200	341.00	165.04	169.56	172.27	2.71	172.30	2.74	168.05	170.13	0.002064	3.35	101.68	25.00	0.53
monteSM	94.3 VER-94	Q500	387.00	165.04	169.97	172.27	2.30	172.30	2.33	168.30	170.58	0.002000	3.45	112.16	25.46	0.52
monteSM	94.2 VER-94	Q50	272.00	165.04	168.90	172.27	3.37	172.30	3.40	167.64	169.42	0.002186	3.18	85.44	24.27	0.54
monteSM	94.2 VER-94	Q200	341.00	165.04	169.56	172.27	2.71	172.30	2.74	168.05	170.13	0.002069	3.36	101.59	24.99	0.53
monteSM	94.2 VER-94	Q500	387.00	165.04	169.97	172.27	2.30	172.30	2.33	168.30	170.58	0.002005	3.45	112.07	25.45	0.53
monteSM	94.11 VER-94		Bridge													
monteSM	94.1 VER-94	Q50	272.00	165.04	166.98	172.27	5.29	172.30	5.32	167.64	169.24	0.020380	6.66	40.83	22.14	1.57
monteSM	94.1 VER-94	Q200	341.00	165.04	167.27	172.27	5.00	172.30	5.03	168.05	169.92	0.020440	7.22	47.24	22.46	1.59
monteSM	94.1 VER-94	Q500	387.00	165.04	167.44	172.27	4.83	172.30	4.86	168.30	170.35	0.020503	7.55	51.26	22.66	1.60
monteSM	94.0 VER-94	Q50	272.00	165.04	167.11	172.27	5.16	172.30	5.19	167.64	169.08	0.016472	6.22	43.75	22.29	1.42
monteSM	94.0 VER-94	Q200	341.00	165.04	167.38	172.27	4.89	172.30	4.92	168.05	169.77	0.017393	6.85	49.80	22.59	1.47
monteSM	94.0 VER-94	Q500	387.00	165.04	167.55	172.27	4.72	172.30	4.75	168.30	170.19	0.017764	7.20	53.73	22.78	1.50
monteSM	93 VER-93	Q50	272.00	161.69	164.85	169.42	4.57	173.86	9.01	165.76	167.79	0.020494	7.60	35.80	15.87	1.61
monteSM	93 VER-93	Q200	341.00	161.69	165.27	169.42	4.15	173.86	8.59	166.29	168.51	0.019586	7.98	42.74	16.82	1.60
monteSM	93 VER-93	Q500	387.00	161.69	165.53	169.42	3.89	173.86	8.33	166.60	168.96	0.019131	8.20	47.19	17.40	1.59
monteSM	92 VER-92	Q50	272.00	161.20	163.55	168.00	4.45	167.45	3.90	164.53	166.78	0.035293	7.96	34.15	23.15	2.09
monteSM	92 VER-92	Q200	341.00	161.20	163.79	168.00	4.21	167.45	3.66	164.87	167.50	0.036044	8.53	39.96	24.75	2.14
monteSM	92 VER-92	Q500	387.00	161.20	163.94	168.00	4.06	167.45	3.51	165.10	167.94	0.035982	8.86	43.70	25.43	2.16
monteSM	91.3 VER-91	Q50	272.00	160.49	164.92	166.77	1.85	164.59	-0.33	163.16	165.20	0.001071	2.35	115.68	33.65	0.40
monteSM	91.3 VER-91	Q200	341.00	160.49	165.64	166.77	1.13	164.59	-1.05	163.50	165.95	0.000949	2.45	138.99	34.45	0.38
monteSM	91.3 VER-91	Q500	387.00	160.49	166.08	166.77	0.69	164.59	-1.49	163.71	166.40	0.000897	2.52	153.55	34.95	0.38
monteSM	91.2 VER-91	Q50	272.00	160.49	163.87	165.85	1.98	165.85	1.98	163.61	165.11	0.006780	4.93	55.14	17.31	0.88
monteSM	91.2 VER-91	Q200	341.00	160.49	164.41	165.85	1.44	165.85	1.44	164.09	165.83	0.006674	5.27	64.65	17.31	0.87
monteSM	91.2 VER-91	Q500	387.00	160.49	164.69	165.85	1.16	165.85	1.16	164.39	166.27	0.006994	5.58	69.41	17.31	0.89
monteSM	91.11 VER-91		Bridge													
monteSM	91.1 VER-91	Q50	272.00	160.49	163.61	165.85	2.24	165.85	2.24	163.61	165.08	0.008692	5.36	50.72	17.31	1.00
monteSM	91.1 VER-91	Q200	341.00	160.49	164.09	165.85	1.76	165.85	1.76	164.09	165.79	0.008750	5.78	58.95	17.31	1.00
monteSM	91.1 VER-91	Q500	387.00	160.49	164.39	165.85	1.46	165.85	1.46	164.39	166.24	0.008777	6.03	64.19	17.31	1.00
monteSM	91.0 VER-91	Q50	272.00	160.53	162.88	164.68	1.80	164.59	1.71	163.44	164.96	0.017688	6.40	42.52	21.27	1.44
monteSM	91.0 VER-91	Q200	341.00	160.53	163.17	164.68	1.51	164.59	1.42	163.86	165.66	0.018122	6.99	48.81	21.33	1.47
monteSM	91.0 VER-91	Q500	387.00	160.53	163.36	164.68	1.32	164.59	1.23	164.12	166.10	0.018393	7.34	52.73	21.37	1.49
monteSM	90 VER-90	Q50	272.00	159.78	162.82	164.30	1.48	161.91	-0.91	163.13	164.55	0.010271	5.83	46.67	24.54	1.19
monteSM	90 VER-90	Q200	341.00	159.78	163.60	164.30	0.70	161.91	-1.69	163.60	165.14	0.006774	5.50	62.01	25.52	1.00
monteSM	90 VER-90	Q500	387.00	159.78	163.89	164.30	0.41	161.91	-1.98	163.89	165.54	0.006622	5.70	67.93	25.89	1.00
monteSM	89 VER-89	Q50	272.00	159.67	162.32	166.00	3.68	162.19	-0.13	162.92	163.93	0.014400	5.62	48.41	34.87	1.32

HEC-RAS Plan: Verde (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)	
monteSM	89 VER-89	Q200	341.00	159.67	164.19	166.00	1.81	162.19	-2.00	163.16	164.53	0.001746	2.59	131.66	56.39	0.50
monteSM	89 VER-89	Q500	387.00	159.67	164.70	166.00	1.30	162.19	-2.51	163.32	165.01	0.001297	2.48	155.91	56.40	0.44
monteSM	88 VER-88	Q50	272.00	158.02	162.94	165.57	2.63	162.08	-0.86	161.83	163.67	0.003113	3.77	72.12	29.52	0.61
monteSM	88 VER-88	Q200	341.00	158.02	163.60	165.57	1.97	162.08	-1.52	162.29	164.43	0.003032	4.05	84.13	29.61	0.61
monteSM	88 VER-88	Q500	387.00	158.02	164.00	165.57	1.57	162.08	-1.92	162.58	164.91	0.003007	4.23	91.56	29.66	0.61
monteSM	87 VER-87	Q50	272.00	158.25	161.96	164.50	2.54	162.19	0.23	161.96	163.46	0.008946	5.43	50.12	16.64	1.00
monteSM	87 VER-87	Q200	341.00	158.25	162.48	164.50	2.02	162.19	-0.29	162.48	164.18	0.008608	5.79	59.12	17.76	0.99
monteSM	87 VER-87	Q500	387.00	158.25	162.78	164.50	1.72	162.19	-0.59	162.78	164.63	0.008514	6.04	64.56	17.83	0.99
monteSM	86.2 VER-86	Q50	272.00	158.64	160.15	162.87	2.72	162.33	2.18	160.94	162.83	0.033328	7.26	37.48	26.64	1.95
monteSM	86.2 VER-86	Q200	341.00	158.64	160.36	162.87	2.51	162.33	1.97	161.30	163.53	0.033300	7.89	43.21	26.77	1.98
monteSM	86.2 VER-86	Q500	387.00	158.64	160.50	162.87	2.37	162.33	1.83	161.53	163.97	0.033167	8.26	46.85	26.86	2.00
monteSM	86.1 VER-86	Q50	272.00	155.14	156.29	162.87	6.58	162.33	6.04	157.55	161.98	0.108884	10.56	25.75	25.58	3.36
monteSM	86.1 VER-86	Q200	341.00	155.14	156.49	162.87	6.38	162.33	5.84	157.92	162.70	0.095212	11.04	30.88	25.63	3.21
monteSM	86.1 VER-86	Q500	387.00	155.14	156.62	162.87	6.25	162.33	5.71	158.15	163.16	0.088621	11.33	34.17	25.66	3.13
monteSM	85.3 VER-85	Q50	272.00	154.82	156.56	161.68	5.12	162.47	5.91	157.67	160.73	0.060427	9.04	30.08	24.08	2.58
monteSM	85.3 VER-85	Q200	341.00	154.82	156.78	161.68	4.90	162.47	5.69	158.05	161.55	0.057274	9.68	35.24	24.10	2.55
monteSM	85.3 VER-85	Q500	387.00	154.82	156.91	161.68	4.77	162.47	5.56	158.29	162.04	0.055371	10.03	38.57	24.10	2.53
monteSM	85.2 VER-85	Q50	272.00	154.82	156.74	161.67	4.93	161.65	4.91	157.78	160.49	0.049744	8.58	31.70	23.94	2.38
monteSM	85.2 VER-85	Q200	341.00	154.82	156.96	161.67	4.71	161.65	4.69	158.17	161.32	0.048349	9.25	36.86	23.94	2.38
monteSM	85.2 VER-85	Q500	387.00	154.82	157.10	161.67	4.57	161.65	4.55	158.40	161.82	0.047308	9.63	40.20	23.94	2.37
monteSM	85.11 VER-85		Bridge													
monteSM	85.1 VER-85	Q50	272.00	154.82	156.92	161.67	4.75	161.65	4.73	157.78	159.84	0.033476	7.58	35.90	23.94	1.98
monteSM	85.1 VER-85	Q200	341.00	154.82	157.14	161.67	4.53	161.65	4.51	158.17	160.63	0.033918	8.27	41.23	23.94	2.01
monteSM	85.1 VER-85	Q500	387.00	154.82	157.29	161.67	4.38	161.65	4.36	158.40	161.10	0.033780	8.65	44.73	23.94	2.02
monteSM	85.0 VER-85	Q50	272.00	154.46	156.90	160.81	3.91	161.45	4.55	157.68	159.51	0.026618	7.16	37.97	23.12	1.78
monteSM	85.0 VER-85	Q200	341.00	154.46	157.13	160.81	3.68	161.45	4.32	158.08	160.28	0.027597	7.87	43.35	23.27	1.84
monteSM	85.0 VER-85	Q500	387.00	154.46	157.28	160.81	3.53	161.45	4.17	158.32	160.75	0.027843	8.26	46.88	23.36	1.86
monteSM	84 VER-84	Q50	272.00	152.30	154.98	157.30	2.32	157.57	2.59	155.72	157.28	0.018924	6.72	40.51	21.17	1.55
monteSM	84 VER-84	Q200	341.00	152.30	155.32	157.30	1.98	157.57	2.25	156.16	157.90	0.018669	7.11	47.94	22.66	1.56
monteSM	84 VER-84	Q500	387.00	152.30	155.52	157.30	1.78	157.57	2.05	156.42	158.29	0.018987	7.38	52.46	23.76	1.58
monteSM	83 VER-83	Q50	272.00	151.10	153.59	156.24	2.65	154.50	0.91	154.39	156.18	0.021881	7.13	38.16	19.35	1.62
monteSM	83 VER-83	Q200	341.00	151.10	153.97	156.24	2.27	154.50	0.53	154.80	156.80	0.020268	7.44	45.82	20.26	1.58
monteSM	83 VER-83	Q500	387.00	151.10	154.21	156.24	2.03	154.50	0.29	155.07	157.18	0.019531	7.63	50.70	20.82	1.56
monteSM	82 VER-82	Q50	272.00	149.77	153.43	154.29	0.86	154.11	0.68	153.43	154.90	0.008106	5.37	50.64	17.17	1.00
monteSM	82 VER-82	Q200	341.00	149.77	154.48	154.29	-0.19	154.11	-0.37	153.92	155.57	0.005355	4.72	79.06	34.00	0.76
monteSM	82 VER-82	Q500	387.00	149.77	156.02	154.29	-1.73	154.11	-1.91	154.57	156.53	0.001763	3.37	131.25	34.00	0.46

HEC-RAS Plan: Verde (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)	
monteSM	81.3 VER-81	Q50	272.00	148.61	153.02	153.57	0.55	154.10	1.08	152.24	154.13	0.002953	4.68	58.15	17.78	0.73
monteSM	81.3 VER-81	Q200	341.00	148.61	154.67	153.57	-1.10	154.10	-0.57	152.79	155.31	0.002038	3.55	96.17	18.50	0.50
monteSM	81.3 VER-81	Q500	387.00	148.61	155.92	153.57	-2.35	154.10	-1.82	153.13	156.46	0.001440	3.24	119.40	18.50	0.41
monteSM	81.2 VER-81	Q50	272.00	148.61	153.01	153.57	0.56	154.10	1.09	152.24	154.13	0.002967	4.68	58.06	17.77	0.73
monteSM	81.2 VER-81	Q200	341.00	148.61	154.66	153.57	-1.09	154.10	-0.56	152.79	155.31	0.002042	3.55	96.11	18.50	0.50
monteSM	81.2 VER-81	Q500	387.00	148.61	155.92	153.57	-2.35	154.10	-1.82	153.13	156.46	0.001441	3.24	119.37	18.50	0.41
monteSM	81.11 VER-81		Bridge													
monteSM	81.1 VER-81	Q50	272.00	148.61	152.60	153.57	0.97	154.10	1.50	152.24	153.98	0.004224	5.21	52.22	17.39	0.86
monteSM	81.1 VER-81	Q200	341.00	148.61	153.18	153.57	0.39	154.10	0.92	152.79	154.80	0.004073	5.64	60.47	17.93	0.87
monteSM	81.1 VER-81	Q500	387.00	148.61	154.55	153.57	-0.98	154.10	-0.45	153.13	155.41	0.002803	4.12	93.96	18.50	0.58
monteSM	81.0 VER-81	Q50	272.00	148.61	152.24	153.57	1.33	154.10	1.86	152.24	153.93	0.005922	5.76	47.19	17.06	1.00
monteSM	81.0 VER-81	Q200	341.00	148.61	152.79	153.57	0.78	154.10	1.31	152.79	154.75	0.005608	6.21	54.93	17.57	1.00
monteSM	81.0 VER-81	Q500	387.00	148.61	153.13	153.57	0.44	154.10	0.97	153.13	155.27	0.005459	6.48	59.75	17.88	1.00
monteSM	80 VER-80	Q50	272.00	146.76	149.05	150.53	1.48	150.84	1.79	149.90	151.85	0.022672	7.41	36.71	18.21	1.67
monteSM	80 VER-80	Q200	341.00	146.76	149.38	150.53	1.15	150.84	1.46	150.37	152.64	0.022827	8.00	42.63	18.60	1.69
monteSM	80 VER-80	Q500	387.00	146.76	149.57	150.53	0.96	150.84	1.27	150.69	153.13	0.022955	8.35	46.35	18.84	1.70
monteSM	79 VER-79	Q50	272.00	145.40	148.03	150.30	2.27	149.15	1.12	148.78	150.63	0.019633	7.14	38.08	16.80	1.51
monteSM	79 VER-79	Q200	341.00	145.40	148.43	150.30	1.87	149.15	0.72	149.49	151.36	0.018868	7.58	45.00	17.24	1.50
monteSM	79 VER-79	Q500	387.00	145.40	148.68	150.30	1.62	149.15	0.47	149.84	151.82	0.018647	7.85	49.27	17.50	1.49
monteSM	78 VER-78	Q50	272.00	144.31	147.18	149.75	2.57	151.00	3.82	147.62	149.21	0.014689	6.30	43.15	17.50	1.28
monteSM	78 VER-78	Q200	341.00	144.31	147.54	149.75	2.21	151.00	3.46	148.10	149.97	0.015292	6.90	49.45	17.50	1.31
monteSM	78 VER-78	Q500	387.00	144.31	147.82	149.75	1.93	151.00	3.18	148.40	150.41	0.014941	7.14	54.24	17.50	1.29
monteSM	77 VER-77	Q50	272.00	143.34	147.27	145.37	-1.90	149.06	1.79	147.27	148.62	0.007332	5.40	54.61	19.37	0.91
monteSM	77 VER-77	Q200	341.00	143.34	147.71	145.37	-2.34	149.06	1.35	147.71	149.27	0.007543	5.81	63.31	19.53	0.93
monteSM	77 VER-77	Q500	387.00	143.34	147.99	145.37	-2.62	149.06	1.07	147.99	149.68	0.007646	6.06	68.81	19.63	0.94
monteSM	76 VER-76	Q50	272.00	142.86	147.14	145.03	-2.11	151.18	4.04	146.39	147.67	0.002583	3.38	86.27	31.46	0.62
monteSM	76 VER-76	Q200	341.00	142.86	148.40	145.03	-3.37	151.18	2.78	146.73	148.78	0.001287	2.85	127.15	33.35	0.45
monteSM	76 VER-76	Q500	387.00	142.86	148.76	145.03	-3.73	151.18	2.42	146.94	149.16	0.001273	2.95	139.13	33.88	0.46
monteSM	75 VER-75	Q50	272.00	142.40	146.80	144.49	-2.30	153.00	6.21	145.82	147.41	0.002451	3.57	80.13	24.20	0.61
monteSM	75 VER-75	Q200	341.00	142.40	148.23	144.49	-3.74	153.00	4.77	146.23	148.69	0.001313	3.11	115.99	25.77	0.46
monteSM	75 VER-75	Q500	387.00	142.40	148.56	144.49	-4.07	153.00	4.44	146.49	149.08	0.001374	3.29	124.66	26.14	0.47
monteSM	74.3 VER-74	Q50	272.00	141.80	146.96	148.00	1.04	147.00	0.04	144.40	147.16	0.000617	1.98	137.36	31.89	0.30
monteSM	74.3 VER-74	Q200	341.00	141.80	148.35	148.00	-0.35	147.00	-1.35	144.76	148.53	0.000419	1.87	181.91	31.94	0.25
monteSM	74.3 VER-74	Q500	387.00	141.80	148.70	148.00	-0.70	147.00	-1.70	144.97	148.90	0.000453	2.00	193.07	31.94	0.26
monteSM	74.2 VER-74	Q50	272.00	141.80	146.96	148.00	1.04	147.00	0.04	144.40	147.15	0.000617	1.98	137.33	31.89	0.30
monteSM	74.2 VER-74	Q200	341.00	141.80	148.35	148.00	-0.35	147.00	-1.35	144.76	148.53	0.000419	1.87	181.90	31.94	0.25
monteSM	74.2 VER-74	Q500	387.00	141.80	148.70	148.00	-0.70	147.00	-1.70	144.97	148.90	0.000453	2.00	193.05	31.94	0.26

HEC-RAS Plan: Verde (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)	
monteSM	74.11 VER-74		Bridge													
monteSM	74.1 VER-74	Q50	272.00	141.80	144.70	148.00	3.30	147.00	2.30	144.40	145.50	0.005003	3.97	68.46	29.11	0.83
monteSM	74.1 VER-74	Q200	341.00	141.80	145.07	148.00	2.93	147.00	1.93	144.76	146.01	0.005008	4.30	79.34	29.57	0.84
monteSM	74.1 VER-74	Q500	387.00	141.80	145.30	148.00	2.70	147.00	1.70	144.97	146.33	0.004998	4.48	86.29	29.86	0.84
monteSM	74.0 VER-74	Q50	272.00	141.80	144.40	148.00	3.59	147.00	2.59	144.40	145.45	0.007516	4.53	60.00	28.75	1.00
monteSM	74.0 VER-74	Q200	341.00	141.80	144.76	148.00	3.24	147.00	2.24	144.76	145.96	0.007264	4.85	70.25	29.19	1.00
monteSM	74.0 VER-74	Q500	387.00	141.80	144.97	148.00	3.03	147.00	2.03	144.97	146.28	0.007205	5.06	76.51	29.46	1.00
monteSM	73 VER-73	Q50	272.00	139.88	142.16	146.19	4.03	145.00	2.84	142.85	144.43	0.020018	6.67	40.79	23.00	1.60
monteSM	73 VER-73	Q200	341.00	139.88	142.50	146.19	3.69	145.00	2.50	143.25	144.99	0.018505	6.99	48.79	24.00	1.56
monteSM	73 VER-73	Q500	387.00	139.88	142.71	146.19	3.48	145.00	2.29	143.50	145.33	0.017698	7.17	53.98	24.63	1.55
monteSM	72.1 VER-72.1	Q50	272.00	139.30	141.77	144.78	3.02	145.00	3.24	142.30	143.74	0.015276	6.23	43.65	20.94	1.38
monteSM	72.1 VER-72.1	Q200	341.00	139.30	142.27	144.78	2.51	145.00	2.73	142.74	144.27	0.012506	6.27	54.41	21.95	1.27
monteSM	72.1 VER-72.1	Q500	387.00	139.30	142.56	144.78	2.22	145.00	2.44	143.01	144.62	0.011677	6.37	60.80	22.67	1.24
monteSM	72 VER-72	Q50	272.00	138.69	141.00	143.62	2.62	141.85	0.85	141.48	142.94	0.015730	6.17	44.08	20.89	1.36
monteSM	72 VER-72	Q200	341.00	138.69	141.39	143.62	2.23	141.85	0.46	141.91	143.57	0.014774	6.55	52.09	20.98	1.33
monteSM	72 VER-72	Q500	387.00	138.69	141.64	143.62	1.98	141.85	0.21	142.17	143.95	0.014117	6.74	57.43	21.04	1.30
monteSM	71 VER-71	Q50	272.00	137.80	141.08	141.80	0.72	141.78	0.70	140.69	141.93	0.004744	4.09	66.55	24.89	0.80
monteSM	71 VER-71	Q200	341.00	137.80	140.81	141.80	0.99	141.78	0.97	141.08	142.46	0.010312	5.70	59.83	24.65	1.17
monteSM	71 VER-71	Q500	387.00	137.80	140.99	141.80	0.81	141.78	0.79	141.32	142.83	0.010600	6.01	64.42	24.81	1.19
monteSM	70.21	Q50	272.00	136.75	141.46	141.41	-0.05	143.29	1.83	139.36	141.61	0.000580	1.71	159.64	55.10	0.30
monteSM	70.21	Q200	341.00	136.75	141.75	141.41	-0.34	143.29	1.54	139.66	141.95	0.000698	1.95	176.94	60.93	0.34
monteSM	70.21	Q500	387.00	136.75	142.21	141.41	-0.80	143.29	1.08	139.85	142.40	0.000605	1.93	205.17	62.73	0.32
monteSM	70.2 VER-70	Q50	272.00	137.85	141.40	141.41	0.01	143.29	1.89	139.93	141.61	0.000989	2.01	135.36	49.53	0.39
monteSM	70.2 VER-70	Q200	341.00	137.85	141.67	141.41	-0.26	143.29	1.62	140.21	141.94	0.001155	2.28	151.17	60.62	0.42
monteSM	70.2 VER-70	Q500	387.00	137.85	142.15	141.41	-0.74	143.29	1.14	140.38	142.39	0.000922	2.20	180.31	62.49	0.39
monteSM	70.1	Q50	272.00	137.85	141.40	141.41	0.01	143.29	1.89	139.93	141.60	0.000993	2.01	135.19	49.51	0.39
monteSM	70.1	Q200	341.00	137.85	141.67	141.41	-0.26	143.29	1.62	140.21	141.94	0.001160	2.29	150.93	60.60	0.43
monteSM	70.1	Q500	387.00	137.85	142.15	141.41	-0.73	143.29	1.15	140.38	142.39	0.000925	2.20	180.12	62.48	0.39
monteSM	70.09	Q50	272.00	135.00	141.46	141.41	-0.05	143.29	1.83	138.79	141.58	0.000403	1.50	181.94	55.26	0.25
monteSM	70.09	Q200	341.00	135.00	141.75	141.41	-0.34	143.29	1.54	139.09	141.90	0.000500	1.73	199.31	61.31	0.28
monteSM	70.09	Q500	387.00	135.00	142.21	141.41	-0.80	143.29	1.08	139.29	142.36	0.000450	1.74	227.88	63.01	0.27
monteSM	69 VER-69	Q50	272.00	135.98	141.47	141.47	0.00	138.75	-2.72	139.05	141.56	0.000350	1.37	198.40	54.00	0.23
monteSM	69 VER-69	Q200	341.00	135.98	141.76	141.47	-0.29	138.75	-3.01	139.29	141.89	0.000426	1.59	217.50	62.99	0.25
monteSM	69 VER-69	Q500	387.00	135.98	142.22	141.47	-0.75	138.75	-3.47	139.44	142.35	0.000379	1.60	247.08	65.00	0.24
monteSM	68.3 VER-68	Q50	272.00	135.10	141.30	141.08	-0.22	138.72	-2.58	138.97	141.54	0.000777	2.17	125.41	29.50	0.34
monteSM	68.3 VER-68	Q200	341.00	135.10	141.51	141.08	-0.43	138.72	-2.79	139.33	141.85	0.001056	2.59	131.61	29.50	0.39

HEC-RAS Plan: Verde (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)	
monteSM	68.3 VER-68	Q500	387.00	135.10	141.95	141.08	-0.87	138.72	-3.23	139.55	142.31	0.001029	2.68	144.48	29.50	0.39
monteSM	68.2 VER-68	Q50	272.00	135.10	141.30	141.08	-0.22	138.72	-2.58	138.97	141.54	0.000777	2.17	125.38	29.50	0.34
monteSM	68.2 VER-68	Q200	341.00	135.10	141.51	141.08	-0.43	138.72	-2.79	139.33	141.85	0.001057	2.59	131.57	29.50	0.39
monteSM	68.2 VER-68	Q500	387.00	135.10	141.95	141.08	-0.87	138.72	-3.23	139.55	142.31	0.001030	2.68	144.44	29.50	0.39
monteSM	68.11 VER-68		Bridge													
monteSM	68.1 VER-68	Q50	272.00	135.10	140.98	141.08	0.10	138.72	-2.26	138.97	141.26	0.000983	2.35	115.93	29.39	0.38
monteSM	68.1 VER-68	Q200	341.00	135.10	141.03	141.08	0.05	138.72	-2.31	139.33	141.46	0.001485	2.90	117.48	29.45	0.46
monteSM	68.1 VER-68	Q500	387.00	135.10	141.43	141.08	-0.35	138.72	-2.71	139.55	141.88	0.001439	3.00	129.13	29.50	0.46
monteSM	68.0 VER-68	Q50	272.00	135.10	140.97	141.08	0.11	138.72	-2.25	138.97	141.26	0.000986	2.35	115.80	29.38	0.38
monteSM	68.0 VER-68	Q200	341.00	135.10	141.02	141.08	0.06	138.72	-2.30	139.33	141.46	0.001493	2.91	117.26	29.44	0.47
monteSM	68.0 VER-68	Q500	387.00	135.10	141.42	141.08	-0.34	138.72	-2.70	139.55	141.88	0.001446	3.00	128.92	29.50	0.46
valleSM	67.2 VER-67	Q50	425.00	135.86	138.82	141.45	2.63	140.00	1.18	138.82	140.10	0.007440	5.01	84.89	33.14	1.00
valleSM	67.2 VER-67	Q200	535.00	135.86	139.25	141.45	2.20	140.00	0.75	139.25	140.73	0.007306	5.40	99.13	33.63	1.00
valleSM	67.2 VER-67	Q500	608.00	135.86	139.53	141.45	1.92	140.00	0.47	139.53	141.13	0.007118	5.59	108.69	33.96	1.00
valleSM	67.1 VER-67	Q50	425.00	131.45	133.48	141.36	7.88	137.40	3.92	134.95	139.46	0.067032	10.84	39.21	27.04	2.87
valleSM	67.1 VER-67	Q200	535.00	131.45	133.80	141.36	7.56	137.40	3.60	135.41	140.10	0.057391	11.12	48.13	28.31	2.72
valleSM	67.1 VER-67	Q500	608.00	131.45	138.31	141.36	3.05	137.40	-0.91	135.70	138.82	0.001144	3.15	192.78	33.00	0.42
valleSM	66 VER-66	Q50	425.00	130.46	136.01	139.20	3.19	137.67	1.66	133.94	136.50	0.001447	3.11	136.75	30.27	0.47
valleSM	66 VER-66	Q200	535.00	130.46	137.34	139.20	1.86	137.67	0.33	134.48	137.79	0.001081	2.99	178.72	32.88	0.41
valleSM	66 VER-66	Q500	608.00	130.46	138.24	139.20	0.96	137.67	-0.57	134.80	138.68	0.000888	2.91	209.14	33.71	0.37
valleSM	65.3 VER-65	Q50	425.00	129.39	135.16	137.80	2.64	137.73	2.57	133.91	136.33	0.004001	4.77	89.01	17.21	0.67
valleSM	65.3 VER-65	Q200	535.00	129.39	136.47	137.80	1.33	137.73	1.26	134.59	137.64	0.003373	4.78	111.82	17.61	0.61
valleSM	65.3 VER-65	Q500	608.00	129.39	137.38	137.80	0.42	137.73	0.35	135.02	138.53	0.003019	4.75	127.95	17.88	0.57
valleSM	65.2 VER-65	Q50	425.00	129.39	134.99	137.80	2.81	137.73	2.74	133.92	136.31	0.003191	5.08	83.70	17.16	0.71
valleSM	65.2 VER-65	Q200	535.00	129.39	136.28	137.80	1.52	137.73	1.45	134.61	137.62	0.002430	5.13	104.28	17.55	0.64
valleSM	65.2 VER-65	Q500	608.00	129.39	137.17	137.80	0.63	137.73	0.56	135.04	138.51	0.002044	5.13	118.59	17.82	0.60
valleSM	65.11 VER-65		Bridge													
valleSM	65.1 VER-65	Q50	425.00	129.39	133.45	137.80	4.35	137.73	4.28	133.95	136.16	0.008716	7.29	58.26	16.70	1.21
valleSM	65.1 VER-65	Q200	535.00	129.39	133.80	137.80	4.00	137.73	3.93	134.65	137.39	0.010244	8.40	63.73	16.80	1.33
valleSM	65.1 VER-65	Q500	608.00	129.39	133.99	137.80	3.81	137.73	3.74	135.09	138.22	0.011335	9.11	66.75	16.86	1.41
valleSM	65.0 VER-65	Q50	425.00	129.39	133.89	137.80	3.91	137.73	3.84	133.91	135.92	0.008858	6.32	67.26	16.83	1.01
valleSM	65.0 VER-65	Q200	535.00	129.39	133.62	137.80	4.18	137.73	4.11	134.59	137.32	0.017168	8.53	62.72	16.75	1.41
valleSM	65.0 VER-65	Q500	608.00	129.39	133.80	137.80	4.00	137.73	3.93	135.02	138.15	0.019286	9.24	65.83	16.80	1.49
valleSM	64 VER-64	Q50	425.00	128.33	131.41	138.52	7.11	132.77	1.36	132.42	134.80	0.021382	8.16	52.08	20.31	1.63
valleSM	64 VER-64	Q200	535.00	128.33	131.79	138.52	6.73	132.77	0.98	133.02	135.87	0.022452	8.95	59.75	20.64	1.68
valleSM	64 VER-64	Q500	608.00	128.33	132.00	138.52	6.52	132.77	0.77	133.39	136.57	0.023408	9.47	64.21	20.83	1.72

HEC-RAS Plan: Verde (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)	
valleSM	63 VER-63	Q50	425.00	127.13	132.10	135.50	3.40	145.66	13.56	130.25	132.52	0.001344	2.87	148.04	35.26	0.45
valleSM	63 VER-63	Q200	535.00	127.13	132.71	135.50	2.79	145.66	12.95	130.69	133.22	0.001420	3.15	169.75	36.02	0.46
valleSM	63 VER-63	Q500	608.00	127.13	133.09	135.50	2.41	145.66	12.57	130.96	133.65	0.001459	3.31	183.45	36.49	0.47
valleSM	62 VER-62	Q50	425.00	126.50	132.06	134.24	2.18	130.02	-2.04	129.65	132.44	0.001116	2.71	156.65	34.13	0.40
valleSM	62 VER-62	Q200	535.00	126.50	132.66	134.24	1.58	130.02	-2.64	130.15	133.12	0.001246	3.02	177.42	35.46	0.43
valleSM	62 VER-62	Q500	608.00	126.50	133.03	134.24	1.21	130.02	-3.01	130.46	133.55	0.001315	3.19	190.70	36.29	0.44
valleSM	61 VER-61	Q50	425.00	126.68	130.94	133.99	3.05	130.31	-0.63	130.94	132.29	0.007148	5.15	82.56	30.50	1.00
valleSM	61 VER-61	Q200	535.00	126.68	131.40	133.99	2.60	130.31	-1.09	131.40	132.96	0.007014	5.54	96.50	30.87	1.00
valleSM	61 VER-61	Q500	608.00	126.68	131.69	133.99	2.30	130.31	-1.38	131.69	133.38	0.006903	5.76	105.51	31.11	1.00
valleSM	60.2 VER-60	Q50	425.00	126.63	128.95	133.86	4.91	133.00	4.05	129.87	131.90	0.022224	7.61	55.83	27.63	1.71
valleSM	60.2 VER-60	Q200	535.00	126.63	129.36	133.86	4.50	133.00	3.65	130.36	132.58	0.020271	7.96	67.22	28.82	1.66
valleSM	60.2 VER-60	Q500	608.00	126.63	129.60	133.86	4.26	133.00	3.40	130.66	133.00	0.019367	8.17	74.46	29.54	1.64
valleSM	60.1 VER-60	Q50	425.00	123.99	126.32	133.80	7.48	138.13	11.81	127.81	131.40	0.040442	9.99	42.56	21.60	2.27
valleSM	60.1 VER-60	Q200	535.00	123.99	126.75	133.80	7.05	138.13	11.38	128.37	132.11	0.035437	10.26	52.17	22.83	2.17
valleSM	60.1 VER-60	Q500	608.00	123.99	127.02	133.80	6.78	138.13	11.11	128.71	132.54	0.033064	10.41	58.40	23.59	2.11
valleSM	59 VER-59	Q50	425.00	122.18	128.20	128.83	0.63	122.18	-6.02	126.01	128.51	0.000929	2.60	174.73	46.31	0.40
valleSM	59 VER-59	Q200	535.00	122.18	129.34	128.83	-0.51	122.18	-7.16	126.49	129.62	0.000663	2.49	232.70	55.08	0.35
valleSM	59 VER-59	Q500	608.00	122.18	130.03	128.83	-1.20	122.18	-7.85	126.78	130.30	0.000540	2.44	271.19	55.74	0.32
valleSM	58 VER-58	Q50	425.00	121.44	128.05	125.71	-2.34	141.43	13.38	125.48	128.43	0.000939	2.82	163.77	38.60	0.39
valleSM	58 VER-58	Q200	535.00	121.44	129.18	125.71	-3.47	141.43	12.25	126.09	129.56	0.000773	2.82	208.24	39.99	0.37
valleSM	58 VER-58	Q500	608.00	121.44	129.87	125.71	-4.16	141.43	11.56	126.50	130.25	0.000707	2.83	236.00	40.83	0.35
valleSM	57 VER-57	Q50	425.00	120.59	127.58	132.56	4.98	139.24	11.66	125.53	128.34	0.002182	3.87	109.88	21.46	0.55
valleSM	57 VER-57	Q200	535.00	120.59	128.65	132.56	3.91	139.24	10.59	126.23	129.47	0.002028	3.99	133.94	23.22	0.53
valleSM	57 VER-57	Q500	608.00	120.59	129.31	132.56	3.25	139.24	9.93	126.66	130.16	0.001944	4.06	149.66	24.31	0.52
valleSM	56 VER-56	Q50	425.00	120.57	125.86	132.81	6.95	139.00	13.14	125.86	128.12	0.009298	6.65	63.89	14.17	1.00
valleSM	56 VER-56	Q200	535.00	120.57	126.67	132.81	6.14	139.00	12.33	126.67	129.22	0.009349	7.08	75.56	14.80	1.00
valleSM	56 VER-56	Q500	608.00	120.57	127.16	132.81	5.65	139.00	11.84	127.16	129.90	0.009383	7.33	82.99	15.19	1.00
valleSM	55 VER-55	Q50	425.00	120.35	122.28	130.29	8.01	132.00	9.72	123.38	125.95	0.032124	8.48	50.12	26.89	1.98
valleSM	55 VER-55	Q200	535.00	120.35	122.53	130.29	7.76	132.00	9.47	123.87	127.03	0.034200	9.40	56.93	27.14	2.07
valleSM	55 VER-55	Q500	608.00	120.35	122.70	130.29	7.59	132.00	9.30	124.17	127.70	0.035012	9.91	61.35	27.30	2.11
valleSM	54.3 VER-54	Q50	425.00	120.30	122.38	130.91	8.53	133.18	10.80	123.17	125.02	0.026091	7.19	59.07	35.27	1.77
valleSM	54.3 VER-54	Q200	535.00	120.30	122.53	130.91	8.38	133.18	10.65	123.58	126.05	0.031466	8.32	64.34	35.39	1.97
valleSM	54.3 VER-54	Q500	608.00	120.30	122.64	130.91	8.27	133.18	10.54	123.83	126.70	0.033977	8.93	68.06	35.48	2.06
valleSM	54.2 VER-54	Q50	425.00	120.30	122.41	130.91	8.50	133.18	10.77	123.17	124.96	0.024770	7.08	60.04	35.29	1.73
valleSM	54.2 VER-54	Q200	535.00	120.30	122.56	130.91	8.36	133.18	10.62	123.58	125.99	0.030224	8.21	65.16	35.41	1.93
valleSM	54.2 VER-54	Q500	608.00	120.30	122.66	130.91	8.25	133.18	10.52	123.83	126.63	0.032783	8.83	68.83	35.50	2.02

HEC-RAS Plan: Verde (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)	
valleSM	54.11 VER-54		Bridge													
valleSM	54.1 VER-54	Q50	425.00	120.30	122.72	130.91	8.19	133.18	10.46	123.17	124.54	0.014476	5.98	71.06	35.55	1.35
valleSM	54.1 VER-54	Q200	535.00	120.30	122.74	130.91	8.17	133.18	10.44	123.58	125.58	0.022290	7.46	71.71	35.57	1.68
valleSM	54.1 VER-54	Q500	608.00	120.30	122.82	130.91	8.09	133.18	10.36	123.83	126.21	0.025455	8.16	74.54	35.64	1.80
valleSM	53 VER-53	Q50	425.00	120.31	122.21	130.37	8.16	127.14	4.93	122.83	124.42	0.019199	6.59	64.46	34.00	1.53
valleSM	53 VER-53	Q200	535.00	120.31	122.33	130.37	8.04	127.14	4.81	123.24	125.43	0.025017	7.81	68.53	34.00	1.76
valleSM	53 VER-53	Q500	608.00	120.31	122.43	130.37	7.94	127.14	4.71	123.51	126.05	0.027474	8.43	72.10	34.00	1.85
valleSM	52 VER-52	Q50	425.00	117.28	118.81	130.37	11.56	128.77	9.97	120.09	123.81	0.070113	9.91	42.88	34.00	2.82
valleSM	52 VER-52	Q200	535.00	117.28	119.02	130.37	11.35	128.77	9.75	120.48	124.78	0.066197	10.63	50.33	34.00	2.79
valleSM	52 VER-52	Q500	608.00	117.28	119.16	130.37	11.21	128.77	9.61	120.72	125.39	0.064290	11.06	54.99	34.00	2.78
valleSM	51 VER-51	Q50	425.00	116.44	119.14	119.40	0.26	120.30	1.16	119.95	121.91	0.020037	7.37	57.67	27.12	1.61
valleSM	51 VER-51	Q200	535.00	116.44	119.43	119.40	-0.03	120.30	0.87	120.44	122.84	0.021473	8.18	65.39	27.40	1.69
valleSM	51 VER-51	Q500	608.00	116.44	119.60	119.40	-0.20	120.30	0.70	120.74	123.43	0.022102	8.67	70.17	27.51	1.73
valleSM	50.3 VER-50	Q50	425.00	115.80	120.37	127.02	6.65	117.20	-3.17	119.74	121.36	0.003573	4.41	96.39	28.14	0.76
valleSM	50.3 VER-50	Q200	535.00	115.80	121.14	127.02	5.88	117.20	-3.94	120.27	122.19	0.002978	4.53	118.17	28.20	0.71
valleSM	50.3 VER-50	Q500	608.00	115.80	121.64	127.02	5.38	117.20	-4.44	120.57	122.72	0.002710	4.60	132.12	28.20	0.68
valleSM	50.2 VER-50	Q50	425.00	115.80	120.36	127.02	6.66	117.20	-3.16	119.74	121.36	0.003601	4.42	96.14	28.12	0.76
valleSM	50.2 VER-50	Q200	535.00	115.80	121.13	127.02	5.89	117.20	-3.93	120.27	122.18	0.002997	4.54	117.93	28.20	0.71
valleSM	50.2 VER-50	Q500	608.00	115.80	121.63	127.02	5.39	117.20	-4.43	120.57	122.71	0.002724	4.61	131.90	28.20	0.68
valleSM	50.11 VER-50		Bridge													
valleSM	50.1 VER-50	Q50	425.00	115.57	119.86	124.40	4.54	117.70	-2.16	119.53	121.14	0.005057	5.00	85.13	24.68	0.86
valleSM	50.1 VER-50	Q200	535.00	115.57	119.58	124.40	4.82	117.70	-1.88	120.04	121.98	0.010511	6.86	78.12	24.66	1.23
valleSM	50.1 VER-50	Q500	608.00	115.57	119.84	124.40	4.56	117.70	-2.14	120.37	122.49	0.010608	7.21	84.46	24.68	1.24
valleSM	50.0 VER-50	Q50	425.00	115.57	119.53	124.40	4.87	126.11	6.58	119.53	121.09	0.007564	5.53	76.89	24.65	1.00
valleSM	50.0 VER-50	Q200	535.00	115.57	120.05	124.40	4.35	126.11	6.06	120.05	121.86	0.007516	5.97	89.69	24.70	1.00
valleSM	50.0 VER-50	Q500	608.00	115.57	119.87	124.40	4.53	126.11	6.24	120.37	122.46	0.011317	7.13	85.24	24.68	1.23
valleSM	49 VER-49	Q50	425.00	115.50	119.00	121.07	2.07	124.90	5.90	119.24	120.79	0.009906	5.92	71.76	25.95	1.14
valleSM	49 VER-49	Q200	535.00	115.50	119.75	121.07	1.32	124.90	5.15	119.75	121.50	0.007517	5.86	91.26	26.00	1.00
valleSM	49 VER-49	Q500	608.00	115.50	119.48	121.07	1.59	124.90	5.42	120.06	122.14	0.012456	7.23	84.09	25.98	1.28
valleSM	48 VER-48	Q50	425.00	114.60	119.28	123.12	3.84	122.40	3.12	118.27	119.93	0.002586	3.56	119.50	33.79	0.60
valleSM	48 VER-48	Q200	535.00	114.60	119.91	123.12	3.21	122.40	2.49	118.69	120.65	0.002483	3.80	140.64	33.84	0.60
valleSM	48 VER-48	Q500	608.00	114.60	120.30	123.12	2.82	122.40	2.10	118.95	121.09	0.002442	3.95	153.78	33.87	0.59
valleSM	47 VER-47	Q50	425.00	114.35	118.57	121.50	2.93	120.90	2.33	118.01	119.63	0.004180	4.56	93.17	26.55	0.78
valleSM	47 VER-47	Q200	535.00	114.35	119.00	121.50	2.50	120.90	1.90	118.52	120.33	0.004691	5.12	104.59	26.82	0.83
valleSM	47 VER-47	Q500	608.00	114.35	119.25	121.50	2.25	120.90	1.65	118.84	120.77	0.005041	5.46	111.29	26.98	0.86
valleSM	46 VER-46	Q50	439.00	113.29	116.25	120.54	4.29	120.15	3.90	117.08	118.91	0.023366	7.23	60.68	33.72	1.72

HEC-RAS Plan: Verde (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)	
valleSM	46 VER-46	Q200	551.00	113.29	116.55	120.54	3.99	120.15	3.60	117.47	119.60	0.023348	7.73	71.24	35.71	1.75
valleSM	46 VER-46	Q500	624.00	113.29	116.73	120.54	3.81	120.15	3.42	117.72	120.02	0.023523	8.04	77.60	36.86	1.77
valleSM	45 VER-45	Q50	439.00	113.37	116.30	120.20	3.90	117.28	0.98	116.43	117.85	0.008878	5.53	79.44	29.25	1.07
valleSM	45 VER-45	Q200	551.00	113.37	116.85	120.20	3.35	117.28	0.43	116.90	118.54	0.007907	5.77	95.49	29.38	1.02
valleSM	45 VER-45	Q500	624.00	113.37	117.18	120.20	3.02	117.28	0.10	117.18	118.97	0.007510	5.93	105.29	29.46	1.00
valleSM	44 VER-44	Q50	439.00	109.15	111.91	117.90	5.99	115.65	3.74	113.21	116.29	0.031244	9.28	47.31	21.56	2.00
valleSM	44 VER-44	Q200	551.00	109.15	112.36	117.90	5.54	115.65	3.29	113.78	117.10	0.027612	9.65	57.12	21.72	1.90
valleSM	44 VER-44	Q500	624.00	109.15	112.65	117.90	5.25	115.65	3.00	114.13	117.59	0.025821	9.84	63.39	21.82	1.84
valleSM	43 VER-43	Q50	439.00	107.77	111.36	118.10	6.74	114.50	3.14	112.39	114.82	0.023626	8.25	53.23	24.05	1.77
valleSM	43 VER-43	Q200	551.00	107.77	111.71	118.10	6.39	114.50	2.79	112.92	115.76	0.023467	8.91	61.83	24.21	1.78
valleSM	43 VER-43	Q500	624.00	107.77	111.94	118.10	6.16	114.50	2.56	113.26	116.32	0.023286	9.28	67.24	24.31	1.78
valleSM	42.1 VER-42	Q50	439.00	107.85	112.61	113.73	1.12	113.50	0.89	112.22	114.10	0.005792	5.42	81.05	20.39	0.87
valleSM	42.1 VER-42	Q200	551.00	107.85	113.27	113.73	0.46	113.50	0.23	112.85	114.99	0.005820	5.81	94.83	20.96	0.87
valleSM	42.1 VER-42	Q500	624.00	107.85	113.67	113.73	0.06	113.50	-0.17	113.24	115.53	0.005845	6.04	103.30	21.19	0.87
valleSM	42 VER-42	Q50	439.00	107.85	112.60	113.72	1.12	113.72	1.12	112.22	114.10	0.005815	5.42	80.94	20.38	0.87
valleSM	42 VER-42	Q200	551.00	107.85	113.27	113.72	0.45	113.72	0.45	112.86	114.99	0.005840	5.82	94.71	20.95	0.87
valleSM	42 VER-42	Q500	624.00	107.85	113.67	113.72	0.05	113.72	0.05	113.24	115.53	0.005864	6.05	103.19	21.19	0.87
valleSM	41.9 VER-42	Q50	439.00	107.85	112.51	113.72	1.21	113.72	1.21	112.22	114.08	0.006219	5.55	79.07	20.30	0.90
valleSM	41.9 VER-42	Q200	551.00	107.85	113.17	113.72	0.55	113.72	0.55	112.86	114.97	0.006195	5.94	92.77	20.87	0.90
valleSM	41.9 VER-42	Q500	624.00	107.85	113.58	113.72	0.14	113.72	0.14	113.24	115.51	0.006199	6.17	101.21	21.17	0.90
valleSM	41.8 VER-42	Q50	439.00	107.85	112.22	113.73	1.51	113.50	1.28	112.22	114.05	0.007743	5.99	73.31	20.06	1.00
valleSM	41.8 VER-42	Q200	551.00	107.85	112.85	113.73	0.88	113.50	0.65	112.85	114.94	0.007684	6.40	86.04	20.60	1.00
valleSM	41.8 VER-42	Q500	624.00	107.85	113.24	113.73	0.49	113.50	0.26	113.24	115.48	0.007644	6.64	94.03	20.92	1.00
valleSM	41 VER-41	Q50	439.00	107.72	110.46	113.66	3.20	113.09	2.63	111.37	113.41	0.020730	7.60	57.73	26.36	1.64
valleSM	41 VER-41	Q200	551.00	107.72	110.80	113.66	2.86	113.09	2.29	111.83	114.26	0.020989	8.23	66.94	27.11	1.67
valleSM	41 VER-41	Q500	624.00	107.72	111.00	113.66	2.66	113.09	2.09	112.12	114.75	0.023223	8.58	72.69	29.77	1.75
valleSM	40 VER-40	Q50	439.00	106.28	110.36	110.03	-0.33	112.88	2.52	110.66	112.23	0.010661	6.05	72.53	26.49	1.17
valleSM	40 VER-40	Q200	551.00	106.28	110.93	110.03	-0.90	112.88	1.95	111.16	112.95	0.009414	6.30	87.53	26.54	1.11
valleSM	40 VER-40	Q500	624.00	106.28	111.30	110.03	-1.27	112.88	1.58	111.47	113.39	0.008688	6.40	97.50	26.58	1.07
valleSM	39 VER-39	Q50	439.00	106.24	109.01	109.50	0.49	112.25	3.24	109.57	111.09	0.015515	6.39	68.72	32.98	1.41
valleSM	39 VER-39	Q200	551.00	106.24	109.31	109.50	0.19	112.25	2.94	110.00	111.82	0.016236	7.02	78.47	33.56	1.47
valleSM	39 VER-39	Q500	624.00	106.24	109.50	109.50	0.00	112.25	2.75	110.25	112.25	0.016421	7.36	84.79	33.93	1.49
valleSM	38 VER-38	Q50	439.00	105.23	108.09	109.60	1.51	111.90	3.81	108.50	109.86	0.013612	5.90	74.42	35.79	1.31
valleSM	38 VER-38	Q200	551.00	105.23	108.39	109.60	1.21	111.90	3.51	108.90	110.52	0.013885	6.46	85.31	35.91	1.34
valleSM	38 VER-38	Q500	624.00	105.23	108.57	109.60	1.03	111.90	3.33	109.16	110.93	0.014127	6.80	91.78	35.98	1.36
valleSM	37 VER-37	Q50	439.00	104.81	107.78	108.31	0.53	111.82	4.04	108.04	109.32	0.010533	5.50	79.87	36.32	1.18
valleSM	37 VER-37	Q200	551.00	104.81	108.13	108.31	0.18	111.82	3.69	108.45	109.93	0.010342	5.94	92.78	36.50	1.19

HEC-RAS Plan: Verde River: Verde Reach: valleSM

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)	
valleSM	37 VER-37	Q500	624.00	104.81	108.34	108.31	-0.03	111.82	3.48	108.69	110.31	0.010359	6.22	100.33	36.50	1.20
valleSM	36 VER-36	Q50	439.00	104.17	106.91	110.60	3.69	111.94	5.03	107.44	108.69	0.019847	5.91	74.25	51.85	1.58
valleSM	36 VER-36	Q200	551.00	104.17	107.10	110.60	3.50	111.94	4.84	107.75	109.27	0.021061	6.52	84.52	53.11	1.65
valleSM	36 VER-36	Q500	624.00	104.17	107.22	110.60	3.38	111.94	4.72	107.94	109.63	0.021803	6.88	90.71	53.85	1.69
valleSM	35 VER-35	Q50	439.00	104.06	106.87	107.00	0.13	111.60	4.73	106.87	108.06	0.007001	4.82	91.04	38.34	1.00
valleSM	35 VER-35	Q200	551.00	104.06	107.27	107.00	-0.27	111.60	4.33	107.27	108.64	0.006779	5.17	106.54	39.02	1.00
valleSM	35 VER-35	Q500	624.00	104.06	107.51	107.00	-0.51	111.60	4.09	107.51	108.99	0.006694	5.38	115.92	39.32	1.00
valleSM	34 VER-34	Q50	439.00	100.54	103.15	106.50	3.35	111.30	8.15	104.31	107.12	0.034638	8.84	49.68	27.03	2.08
valleSM	34 VER-34	Q200	551.00	100.54	103.54	106.50	2.96	111.30	7.76	104.80	107.77	0.029389	9.11	60.48	27.18	1.95
valleSM	34 VER-34	Q500	624.00	100.54	103.80	106.50	2.70	111.30	7.50	105.10	108.16	0.026864	9.26	67.41	27.28	1.88
valleSM	33 VER-33	Q50	439.00	100.38	104.37	104.00	-0.37	110.53	6.16	104.37	105.95	0.007380	5.58	78.71	24.76	1.00
valleSM	33 VER-33	Q200	551.00	100.38	104.90	104.00	-0.90	110.53	5.63	104.90	106.73	0.007318	6.00	91.84	25.00	1.00
valleSM	33 VER-33	Q500	624.00	100.38	105.22	104.00	-1.22	110.53	5.31	105.22	107.20	0.007293	6.25	99.91	25.08	1.00
valleSM	32 VER-32	Q50	439.00	99.95	102.73	105.00	2.27	109.40	6.67	103.48	105.33	0.018195	7.16	61.35	27.66	1.53
valleSM	32 VER-32	Q200	551.00	99.95	103.10	105.00	1.90	109.40	6.30	103.96	106.10	0.017802	7.67	71.81	28.31	1.54
valleSM	32 VER-32	Q500	624.00	99.95	103.32	105.00	1.68	109.40	6.08	104.25	106.57	0.017678	7.98	78.19	28.70	1.54
valleSM	31 VER-31	Q50	439.00	99.70	103.26	104.30	1.04	108.00	4.74	103.26	104.75	0.007559	5.41	81.17	27.16	1.00
valleSM	31 VER-31	Q200	551.00	99.70	103.75	104.30	0.55	108.00	4.25	103.75	105.48	0.007457	5.82	94.63	27.44	1.00
valleSM	31 VER-31	Q500	624.00	99.70	104.05	104.30	0.25	108.00	3.95	104.05	105.92	0.007394	6.06	103.03	27.61	1.00
valleSM	30 VER-30	Q50	439.00	95.95	97.75	103.84	6.09	107.00	9.25	99.26	103.51	0.058281	10.63	41.28	25.93	2.69
valleSM	30 VER-30	Q200	551.00	95.95	98.08	103.84	5.76	107.00	8.92	99.80	104.30	0.051211	11.06	49.84	26.51	2.57
valleSM	30 VER-30	Q500	624.00	95.95	98.28	103.84	5.56	107.00	8.72	100.09	104.78	0.047829	11.29	55.26	26.87	2.51
valleSM	29 VER-29	Q50	439.00	94.68	97.71	103.20	5.49	101.76	4.05	98.66	100.84	0.023730	7.84	56.01	28.43	1.78
valleSM	29 VER-29	Q200	551.00	94.68	98.00	103.20	5.20	101.76	3.76	99.12	101.72	0.025218	8.55	64.47	29.97	1.86
valleSM	29 VER-29	Q500	624.00	94.68	98.18	103.20	5.02	101.76	3.58	99.41	102.25	0.025297	8.94	69.79	30.19	1.88
valleSM	28 VER-28	Q50	439.00	94.14	99.04	99.24	0.20	101.65	2.61	98.12	99.83	0.002932	3.93	111.79	30.33	0.65
valleSM	28 VER-28	Q200	551.00	94.14	99.82	99.24	-0.58	101.65	1.83	98.58	100.66	0.002583	4.07	135.45	30.40	0.62
valleSM	28 VER-28	Q500	624.00	94.14	100.30	99.24	-1.06	101.65	1.35	98.86	101.18	0.002441	4.16	149.99	30.43	0.60
valleSM	27.3 VER-27	Q50	439.00	93.75	97.79	99.00	1.21	100.00	2.21	97.79	99.52	0.007500	5.82	75.47	21.82	1.00
valleSM	27.3 VER-27	Q200	551.00	93.75	98.47	99.00	0.53	100.00	1.53	98.37	100.36	0.006964	6.10	90.38	22.28	0.97
valleSM	27.3 VER-27	Q500	624.00	93.75	98.95	99.00	0.05	100.00	1.05	98.73	100.89	0.006440	6.17	101.17	22.60	0.93
valleSM	27.2 VER-27	Q50	439.00	93.45	96.88	99.00	2.12	99.70	2.82	97.49	99.43	0.013337	7.06	62.15	21.31	1.32
valleSM	27.2 VER-27	Q200	551.00	93.45	98.78	99.00	0.22	99.70	0.92	98.08	100.22	0.004654	5.31	103.79	22.52	0.79
valleSM	27.2 VER-27	Q500	624.00	93.45	99.23	99.00	-0.23	99.70	0.47	98.43	100.76	0.004572	5.48	113.85	22.67	0.78
valleSM	27.11 VER-27		Bridge													
valleSM	27.1 VER-27	Q50	439.00	93.45	98.04	99.00	0.96	99.70	1.66	97.49	99.33	0.004888	5.03	87.25	22.05	0.81

HEC-RAS Plan: Verde (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)	
valleSM	27.1 VER-27	Q200	551.00	93.45	97.21	99.00	1.79	99.70	2.49	98.08	100.44	0.015248	7.96	69.20	21.52	1.42
valleSM	27.1 VER-27	Q500	624.00	93.45	97.51	99.00	1.49	99.70	2.19	98.43	100.98	0.015093	8.26	75.51	21.71	1.41
valleSM	27.0 VER-27	Q50	439.00	93.45	96.93	99.00	2.07	99.70	2.77	97.49	99.39	0.012756	6.96	63.08	21.34	1.29
valleSM	27.0 VER-27	Q200	551.00	93.45	97.40	99.00	1.60	99.70	2.30	98.08	100.28	0.012898	7.53	73.21	21.64	1.31
valleSM	27.0 VER-27	Q500	624.00	93.45	97.69	99.00	1.31	99.70	2.01	98.43	100.83	0.012956	7.85	79.53	21.82	1.31
valleSM	26 VER-26	Q50	455.00	93.40	97.36	99.90	2.54	99.80	2.44	97.33	99.11	0.007463	5.87	77.50	21.49	0.99
valleSM	26 VER-26	Q200	571.00	93.40	97.98	99.90	1.92	99.80	1.82	97.92	99.99	0.007352	6.28	90.86	21.62	0.98
valleSM	26 VER-26	Q500	647.00	93.40	98.35	99.90	1.55	99.80	1.45	98.28	100.53	0.007355	6.54	98.97	21.70	0.98
valleSM	25 VER-25	Q50	455.00	92.95	97.25	99.90	2.65	99.50	2.25	96.83	98.57	0.005230	5.10	89.14	23.76	0.84
valleSM	25 VER-25	Q200	571.00	92.95	97.96	99.90	1.94	99.50	1.54	97.39	99.43	0.004895	5.37	106.28	24.02	0.82
valleSM	25 VER-25	Q500	647.00	92.95	98.39	99.90	1.51	99.50	1.11	97.73	99.96	0.004789	5.55	116.62	24.17	0.81
valleSM	24 VER-24	Q50	455.00	92.63	97.84	99.55	1.71	97.10	-0.74	95.91	98.20	0.001095	2.66	171.30	40.10	0.41
valleSM	24 VER-24	Q200	571.00	92.63	98.63	99.55	0.92	97.10	-1.53	96.30	99.03	0.001022	2.81	203.14	40.17	0.40
valleSM	24 VER-24	Q500	647.00	92.63	99.11	99.55	0.44	97.10	-2.01	96.55	99.54	0.000997	2.91	222.42	40.21	0.39
valleSM	23 VER-23	Q50	455.00	91.50	96.40	109.15	12.75	96.07	-0.33	96.29	97.97	0.006645	5.56	81.88	23.79	0.96
valleSM	23 VER-23	Q200	571.00	91.50	96.86	109.15	12.29	96.07	-0.79	96.86	98.78	0.007189	6.14	93.05	24.20	1.00
valleSM	23 VER-23	Q500	647.00	91.50	97.21	109.15	11.94	96.07	-1.14	97.21	99.28	0.007157	6.37	101.54	24.50	1.00
valleSM	22 VER-22	Q50	455.00	91.30	94.48	104.10	9.62	96.26	1.78	95.25	97.13	0.016007	7.21	63.14	26.50	1.49
valleSM	22 VER-22	Q200	571.00	91.30	94.93	104.10	9.17	96.26	1.33	95.77	97.86	0.014896	7.58	75.34	27.53	1.46
valleSM	22 VER-22	Q500	647.00	91.30	95.13	104.10	8.97	96.26	1.13	96.09	98.39	0.015495	8.00	80.91	27.99	1.50
valleSM	21 VER-21	Q50	455.00	90.95	94.35	104.03	9.68	96.90	2.55	95.10	97.01	0.015050	7.23	62.95	24.57	1.44
valleSM	21 VER-21	Q200	571.00	90.95	94.89	104.03	9.14	96.90	2.01	95.77	97.73	0.013322	7.47	76.44	25.57	1.38
valleSM	21 VER-21	Q500	647.00	90.95	95.15	104.03	8.88	96.90	1.75	96.05	98.24	0.013429	7.80	83.00	26.04	1.39
valleSM	20 VER-20	Q50	455.00	90.25	94.18	96.40	2.22	97.75	3.57	94.53	95.91	0.011618	5.83	78.03	34.61	1.24
valleSM	20 VER-20	Q200	571.00	90.25	94.46	96.40	1.94	97.75	3.29	94.96	96.62	0.012638	6.51	87.71	34.64	1.31
valleSM	20 VER-20	Q500	647.00	90.25	96.00	96.40	0.40	97.75	1.75	95.22	97.07	0.003689	4.59	141.09	34.83	0.73
valleSM	19 VER-19	Q50	455.00	90.27	94.77	95.11	0.34	98.25	3.48	93.74	95.54	0.002759	3.90	116.76	31.19	0.64
valleSM	19 VER-19	Q200	571.00	90.27	95.57	95.11	-0.46	98.25	2.68	94.24	96.39	0.002422	4.03	141.75	31.57	0.61
valleSM	19 VER-19	Q500	647.00	90.27	96.07	95.11	-0.96	98.25	2.18	94.54	96.93	0.002264	4.10	157.70	31.81	0.59
valleSM	18.2 VER-18.2	Q50	464.00	89.74	94.95	94.77	-0.18	98.68	3.73	93.51	95.39	0.001773	2.95	157.28	46.60	0.51
valleSM	18.2 VER-18.2	Q200	580.00	89.74	95.79	94.77	-1.02	98.68	2.89	93.94	96.23	0.001375	2.95	196.59	46.60	0.46
valleSM	18.2 VER-18.2	Q500	657.00	89.74	96.32	94.77	-1.55	98.68	2.36	94.22	96.77	0.001226	2.97	221.01	46.60	0.44
valleSM	18.1 VER-18	Q50	464.00	89.58	93.50	99.00	5.50	99.00	5.50	93.50	95.21	0.010694	5.80	79.97	23.30	1.00
valleSM	18.1 VER-18	Q200	580.00	89.58	94.05	99.00	4.95	99.00	4.95	94.05	96.04	0.010985	6.25	92.84	23.30	1.00
valleSM	18.1 VER-18	Q500	657.00	89.58	94.39	99.00	4.61	99.00	4.61	94.39	96.55	0.011189	6.51	100.91	23.30	1.00
valleSM	18 VER-18	Q50	464.00	89.44	93.11	99.00	5.89	99.00	5.89	93.26	94.95	0.011966	6.01	77.14	23.90	1.07
valleSM	18 VER-18	Q200	580.00	89.44	93.62	99.00	5.38	99.00	5.38	93.80	95.77	0.012352	6.50	89.28	23.90	1.07

HEC-RAS Plan: Verde (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)	
valleSM	18 VER-18	Q500	657.00	89.44	93.94	99.00	5.06	99.00	5.06	94.13	96.28	0.012599	6.78	96.90	23.90	1.07
valleSM	17.3 VER-17	Q50	464.00	88.68	93.75	97.68	3.93	97.82	4.07	92.33	94.33	0.001963	3.38	137.12	33.71	0.54
valleSM	17.3 VER-17	Q200	580.00	88.68	94.38	97.68	3.30	97.82	3.44	92.77	95.06	0.001976	3.66	158.46	33.94	0.54
valleSM	17.3 VER-17	Q500	657.00	88.68	94.77	97.68	2.91	97.82	3.05	93.05	95.51	0.001986	3.82	171.82	34.09	0.54
valleSM	17.2 VER-17	Q50	464.00	88.68	93.74	97.68	3.94	97.82	4.08	92.33	94.33	0.001971	3.39	136.93	33.70	0.54
valleSM	17.2 VER-17	Q200	580.00	88.68	94.37	97.68	3.31	97.82	3.45	92.77	95.06	0.001983	3.66	158.27	33.94	0.54
valleSM	17.2 VER-17	Q500	657.00	88.68	94.76	97.68	2.92	97.82	3.06	93.05	95.51	0.001993	3.83	171.63	34.09	0.54
valleSM	17.15 VER-17		Bridge													
valleSM	17.1 VER-17	Q50	464.00	88.68	93.62	97.68	4.06	97.82	4.20	92.33	94.24	0.002168	3.50	132.73	33.66	0.56
valleSM	17.1 VER-17	Q200	580.00	88.68	94.24	97.68	3.44	97.82	3.58	92.77	94.96	0.002164	3.77	153.78	33.89	0.57
valleSM	17.1 VER-17	Q500	657.00	88.68	94.63	97.68	3.05	97.82	3.19	93.05	95.42	0.002166	3.94	166.94	34.04	0.57
valleSM	17 VER-17	Q50	464.00	88.73	93.39	97.23	3.84	99.37	5.98	92.62	94.20	0.003274	3.97	116.73	34.52	0.69
valleSM	17 VER-17	Q200	580.00	88.73	94.05	97.23	3.18	99.37	5.32	93.06	94.93	0.002981	4.16	139.56	35.26	0.67
valleSM	17 VER-17	Q500	657.00	88.73	94.45	97.23	2.78	99.37	4.92	93.34	95.38	0.002848	4.27	153.99	35.72	0.66
valleSM	16 VER-16	Q50	464.00	88.84	92.61	96.52	3.91	100.53	7.92	92.61	94.10	0.007336	5.41	85.83	28.79	1.00
valleSM	16 VER-16	Q200	580.00	88.84	93.09	96.52	3.43	100.53	7.44	93.09	94.81	0.007217	5.81	99.80	28.98	1.00
valleSM	16 VER-16	Q500	657.00	88.84	93.40	96.52	3.12	100.53	7.13	93.40	95.26	0.007150	6.04	108.81	29.30	1.00
valleSM	15 VER-15	Q50	464.00	88.81	91.38	95.93	4.55	101.33	9.95	92.00	93.60	0.015061	6.60	70.28	31.50	1.41
valleSM	15 VER-15	Q200	580.00	88.81	91.73	95.93	4.20	101.33	9.60	92.46	94.31	0.015226	7.11	81.55	32.67	1.44
valleSM	15 VER-15	Q500	657.00	88.81	91.94	95.93	3.99	101.33	9.39	92.75	94.74	0.015363	7.42	88.57	33.38	1.45
valleSM	14 VER-14	Q50	464.00	88.59	92.23	95.89	3.66	100.60	8.37	91.91	93.34	0.005207	4.68	99.13	32.25	0.85
valleSM	14 VER-14	Q200	580.00	88.59	92.61	95.89	3.28	100.60	7.99	92.36	93.99	0.005663	5.20	111.48	32.44	0.90
valleSM	14 VER-14	Q500	657.00	88.59	92.85	95.89	3.04	100.60	7.75	92.65	94.39	0.005907	5.51	119.27	32.56	0.92
valleSM	13 VER-13	Q50	464.00	87.62	91.15	94.96	3.81	98.55	7.40	91.54	92.93	0.010915	5.92	78.44	33.18	1.23
valleSM	13 VER-13	Q200	580.00	87.62	91.53	94.96	3.44	98.55	7.02	91.97	93.58	0.011247	6.35	91.39	35.52	1.26
valleSM	13 VER-13	Q500	657.00	87.62	91.75	94.96	3.21	98.55	6.80	92.24	93.98	0.011186	6.62	99.30	35.97	1.27
valleSM	12 VER-12	Q50	464.00	87.30	90.57	94.08	3.51	98.87	8.30	91.02	92.45	0.012936	6.07	76.42	35.24	1.32
valleSM	12 VER-12	Q200	580.00	87.30	90.93	94.08	3.15	98.87	7.94	91.58	93.09	0.012525	6.52	89.01	35.58	1.32
valleSM	12 VER-12	Q500	657.00	87.30	91.14	94.08	2.94	98.87	7.73	91.90	93.49	0.012412	6.79	96.69	35.78	1.32
valleSM	11 VER-11	Q50	464.00	86.83	91.33	93.45	2.12	93.70	2.37	90.56	92.05	0.003056	3.77	123.20	38.52	0.67
valleSM	11 VER-11	Q200	580.00	86.83	91.95	93.45	1.50	93.70	1.75	90.97	92.74	0.002769	3.94	147.12	39.16	0.65
valleSM	11 VER-11	Q500	657.00	86.83	92.33	93.45	1.12	93.70	1.37	91.23	93.17	0.002644	4.05	162.11	39.55	0.64
valleSM	10 VER-10	Q50	464.00	86.71	90.59	93.40	2.81	91.60	1.01	90.45	91.86	0.006112	5.00	92.75	31.71	0.93
valleSM	10 VER-10	Q200	580.00	86.71	90.93	93.40	2.47	91.60	0.67	90.91	92.52	0.006755	5.59	103.83	31.99	0.99
valleSM	10 VER-10	Q500	657.00	86.71	91.20	93.40	2.20	91.60	0.40	91.20	92.94	0.006840	5.85	112.22	32.20	1.00
valleSM	9 VER-9	Q50	464.00	86.71	90.25	94.81	4.56	90.87	0.62	90.25	91.62	0.006979	5.18	89.59	32.66	1.00

HEC-RAS Plan: Verde (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)	
valleSM	9 VER-9	Q200	580.00	86.71	90.69	94.81	4.12	90.87	0.18	90.73	92.26	0.007092	5.56	104.23	34.38	1.02
valleSM	9 VER-9	Q500	657.00	86.71	90.90	94.81	3.91	90.87	-0.03	91.02	92.66	0.007473	5.88	111.65	35.11	1.05
valleSM	8 VER-8	Q50	464.00	86.64	89.76	94.61	4.85	90.57	0.81	89.82	91.10	0.007865	5.12	90.68	36.10	1.03
valleSM	8 VER-8	Q200	580.00	86.64	90.04	94.61	4.57	90.57	0.53	90.24	91.73	0.008907	5.77	100.58	36.43	1.11
valleSM	8 VER-8	Q500	657.00	86.64	90.10	94.61	4.51	90.57	0.47	90.50	92.18	0.010626	6.38	102.97	36.51	1.21
valleSM	7 VER-7	Q50	464.00	85.93	89.58	89.00	-0.58	90.61	1.03	89.14	90.43	0.004152	4.07	113.88	40.50	0.78
valleSM	7 VER-7	Q200	580.00	85.93	90.21	89.00	-1.21	90.61	0.40	89.53	91.09	0.003457	4.17	139.11	40.50	0.72
valleSM	7 VER-7	Q500	657.00	85.93	90.60	89.00	-1.60	90.61	0.01	89.77	91.51	0.003168	4.24	154.95	40.50	0.69
valleSM	6 VER-6	Q50	464.00	86.00	89.56	87.80	-1.76	92.05	2.49	88.73	90.27	0.002977	3.73	124.47	37.20	0.65
valleSM	6 VER-6	Q200	580.00	86.00	90.17	87.80	-2.37	92.05	1.88	89.13	90.96	0.002777	3.95	146.94	37.20	0.63
valleSM	6 VER-6	Q500	657.00	86.00	90.55	87.80	-2.75	92.05	1.50	89.39	91.39	0.002685	4.08	161.07	37.20	0.63
valleSM	5 VER-5	Q50	464.00	85.60	89.53	87.69	-1.84	92.15	2.62	88.61	90.25	0.002905	3.78	122.91	34.60	0.64
valleSM	5 VER-5	Q200	580.00	85.60	90.10	87.69	-2.41	92.15	2.05	89.04	90.94	0.002864	4.06	142.71	34.60	0.64
valleSM	5 VER-5	Q500	657.00	85.60	90.46	87.69	-2.77	92.15	1.69	89.30	91.37	0.002844	4.23	155.19	34.60	0.64
valleSM	4 VER-4	Q50	464.00	84.72	88.99	89.00	0.01	92.00	3.01	88.66	90.13	0.005118	4.73	98.19	31.25	0.85
valleSM	4 VER-4	Q200	580.00	84.72	89.47	89.00	-0.47	92.00	2.53	89.12	90.81	0.005169	5.13	113.13	31.25	0.86
valleSM	4 VER-4	Q500	657.00	84.72	89.77	89.00	-0.77	92.00	2.23	89.41	91.23	0.005181	5.36	122.64	31.25	0.86
valleSM	3.3 VER-3	Q50	464.00	85.23	89.14	92.79	3.65	93.20	4.06	88.24	89.86	0.002887	3.74	123.93	35.30	0.64
valleSM	3.3 VER-3	Q200	580.00	85.23	89.67	92.79	3.12	93.20	3.53	88.65	90.51	0.002926	4.07	142.56	35.30	0.65
valleSM	3.3 VER-3	Q500	657.00	85.23	90.01	92.79	2.78	93.20	3.19	88.92	90.93	0.002941	4.26	154.38	35.30	0.65
valleSM	3.2 VER-3	Q50	464.00	85.23	89.14	92.79	3.65	93.20	4.06	88.24	89.86	0.002898	3.75	123.78	35.30	0.64
valleSM	3.2 VER-3	Q200	580.00	85.23	89.67	92.79	3.12	93.20	3.53	88.65	90.51	0.002936	4.07	142.41	35.30	0.65
valleSM	3.2 VER-3	Q500	657.00	85.23	90.00	92.79	2.79	93.20	3.20	88.92	90.93	0.002950	4.26	154.22	35.30	0.65
valleSM	3.15 VER-3		Bridge													
valleSM	3.1 VER-3	Q50	464.00	85.23	89.08	92.79	3.71	93.20	4.12	88.24	89.82	0.003049	3.81	121.78	35.30	0.65
valleSM	3.1 VER-3	Q200	580.00	85.23	89.61	92.79	3.18	93.20	3.59	88.65	90.48	0.003071	4.13	140.35	35.30	0.66
valleSM	3.1 VER-3	Q500	657.00	85.23	89.94	92.79	2.85	93.20	3.26	88.92	90.89	0.003075	4.32	152.14	35.30	0.66
valleSM	3 VER-3	Q50	464.00	85.21	88.87	90.00	1.13	89.90	1.03	88.38	89.79	0.004376	4.26	109.04	35.21	0.77
valleSM	3 VER-3	Q200	580.00	85.21	89.39	90.00	0.61	89.90	0.51	88.80	90.45	0.004194	4.55	127.55	35.21	0.76
valleSM	3 VER-3	Q500	657.00	85.21	89.73	90.00	0.27	89.90	0.17	89.06	90.86	0.004092	4.71	139.36	35.21	0.76
valleSM	2 VER-2	Q50	464.00	85.15	88.28	87.24	-1.04	89.61	1.33	88.28	89.64	0.007485	5.16	89.96	33.26	1.00
valleSM	2 VER-2	Q200	580.00	85.15	88.72	87.24	-1.48	89.61	0.89	88.72	90.29	0.007325	5.55	104.47	33.26	1.00
valleSM	2 VER-2	Q500	657.00	85.15	88.99	87.24	-1.75	89.61	0.62	88.99	90.70	0.007251	5.78	113.57	33.26	1.00
valleSM	1 VER-1	Q50	464.00	85.10	87.16	90.32	3.16	88.07	0.91	87.64	88.97	0.014916	5.95	77.98	41.84	1.39
valleSM	1 VER-1	Q200	580.00	85.10	87.42	90.32	2.90	88.07	0.65	88.02	89.59	0.015616	6.53	88.76	42.57	1.44
valleSM	1 VER-1	Q500	657.00	85.10	87.58	90.32	2.74	88.07	0.49	88.26	89.98	0.015952	6.87	95.58	43.03	1.47

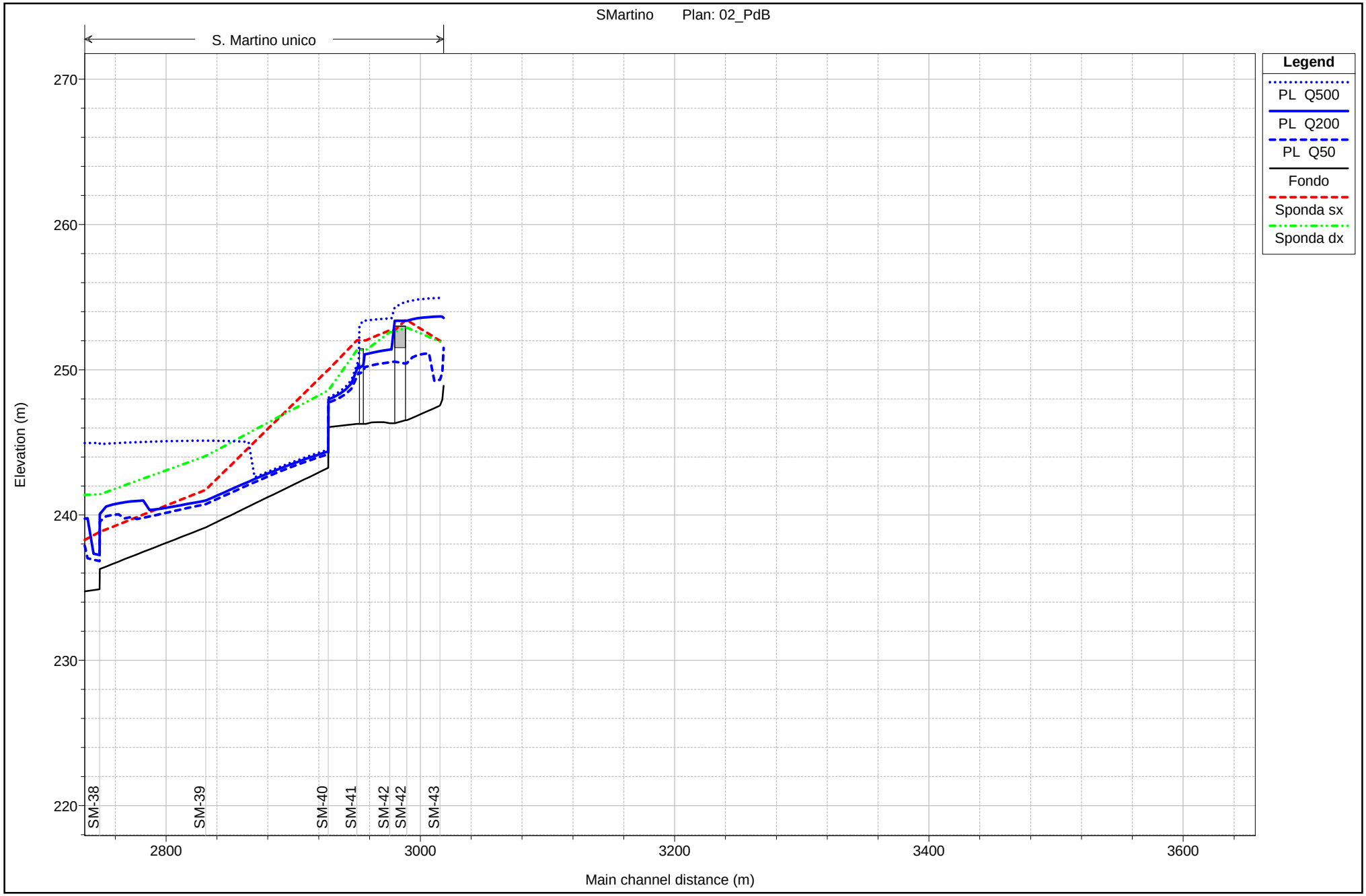
10.3 Rio San Martino

E' stato indagato un tratto di circa 3 km del rio San Martino che va da località Pontasso fino a San Martino di Paravanico.
L'unico affluente significativo presente nel tratto è il rio dei Torbi che non è stato indagato idraulicamente, ma è stata imposta una variazione di portata a valle della confluenza.
Le portate utilizzate sono riportate in tabella:

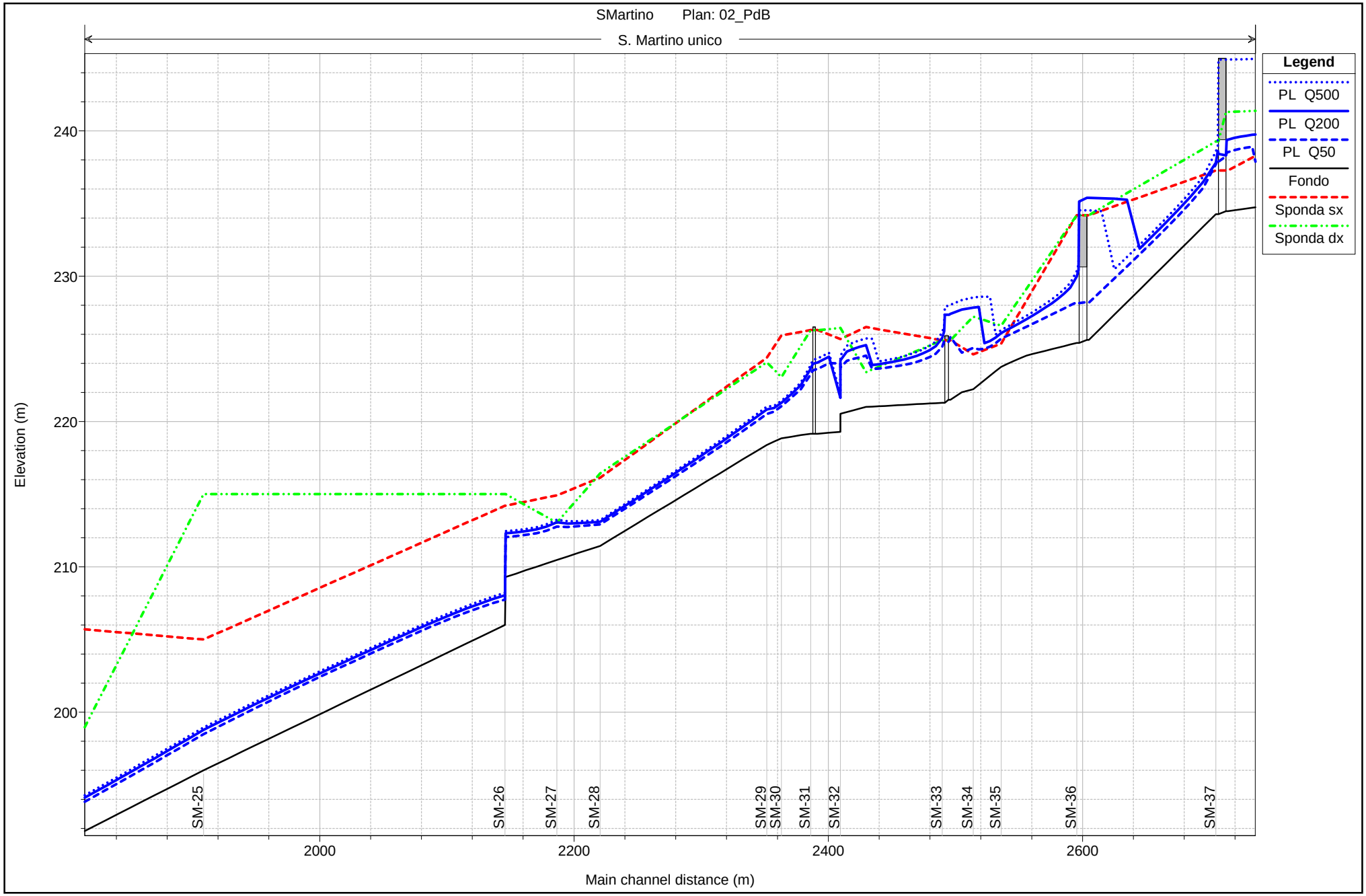
TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
		T = 50 anni	T = 200 anni	T = 500 anni
Rio San Martino monte	SM11	155.4	196.1	223.1
Rio San Martino a valle rio dei Torbi	SM1	208	263	300

Come condizioni al contorno è stata imposta la profondità critica a valle in corrispondenza della briglia e la profondità di moto uniforme associata alla pendenza media del tratto a monte.

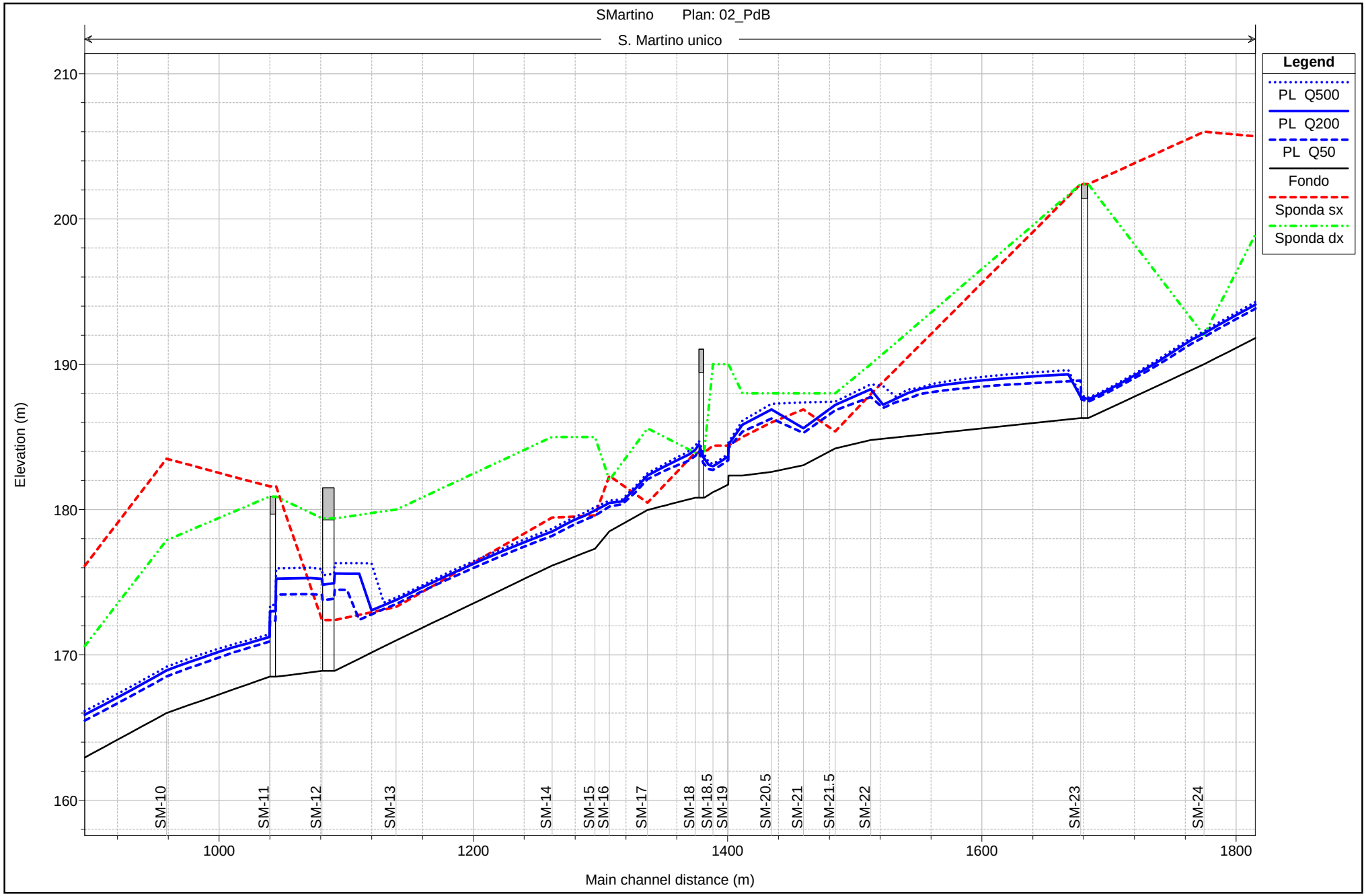
Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza ks di Strickler pari a 33 $m^{1/3}/s$.



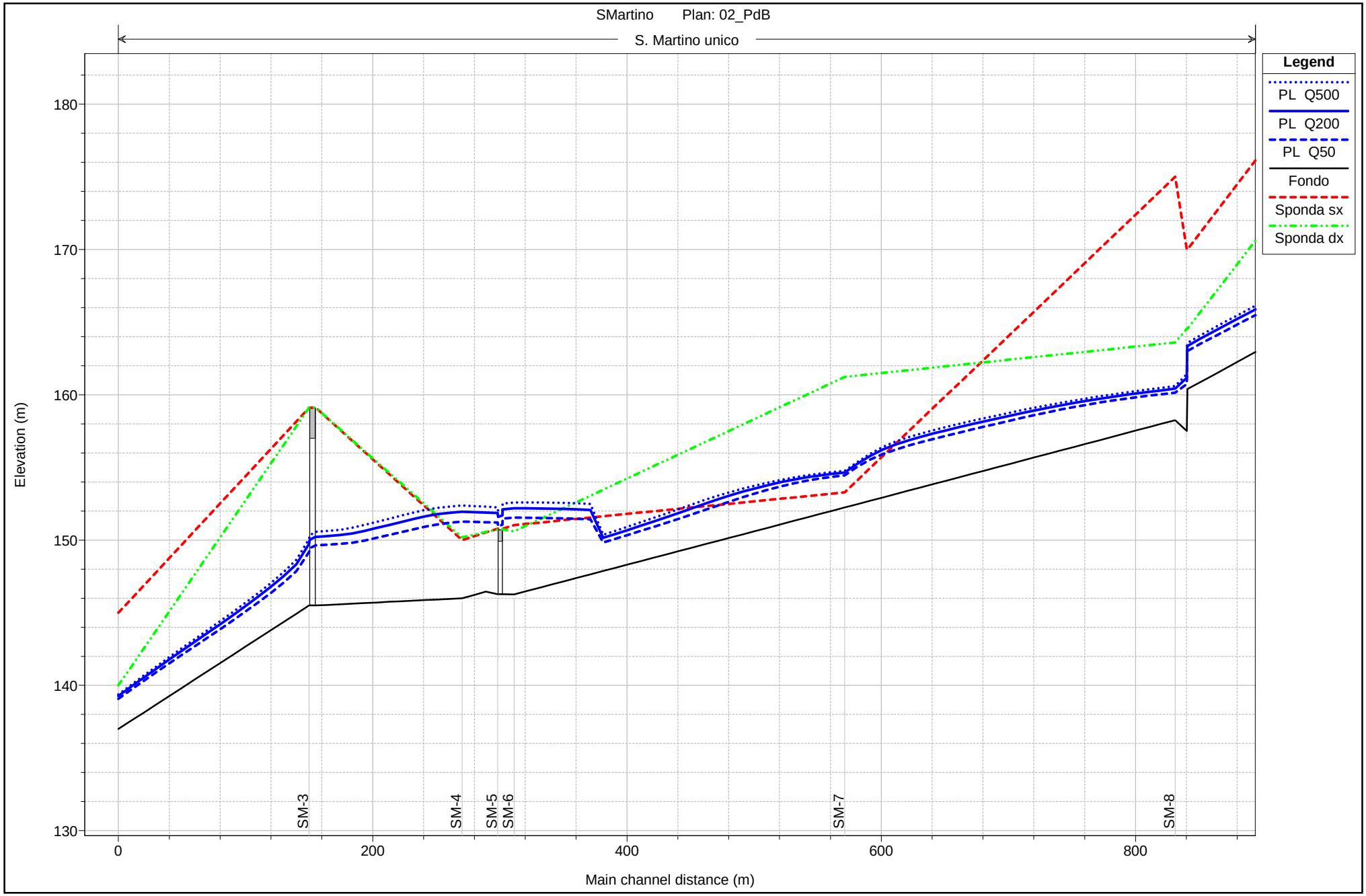
1 cm Horiz. = 40 m 1 cm Vert. = 3.5 m



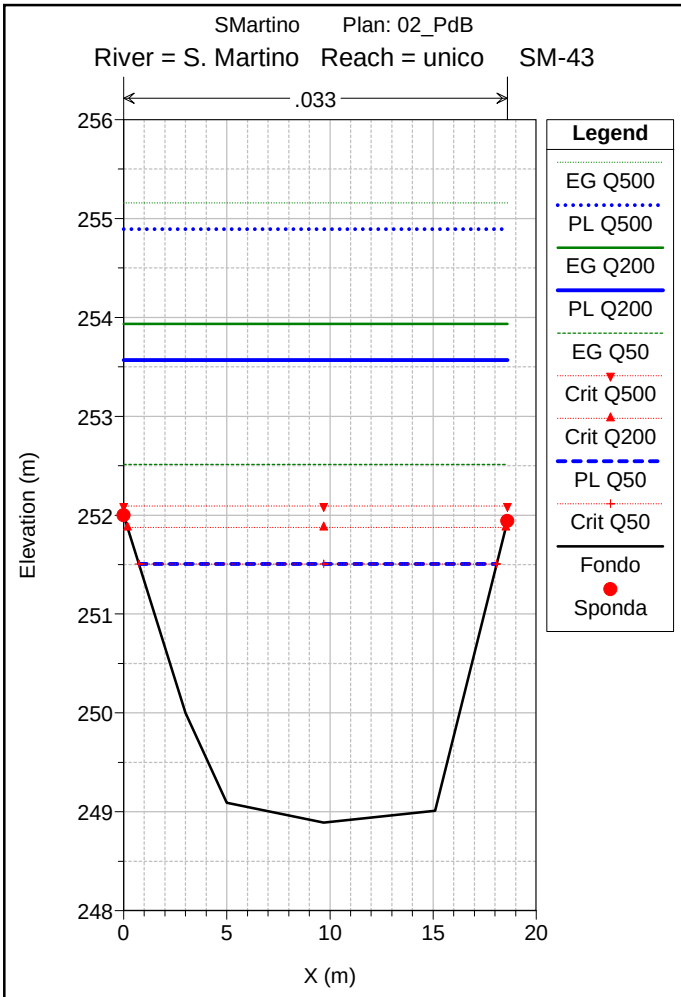
1 cm Horiz. = 40 m 1 cm Vert. = 3.5 m

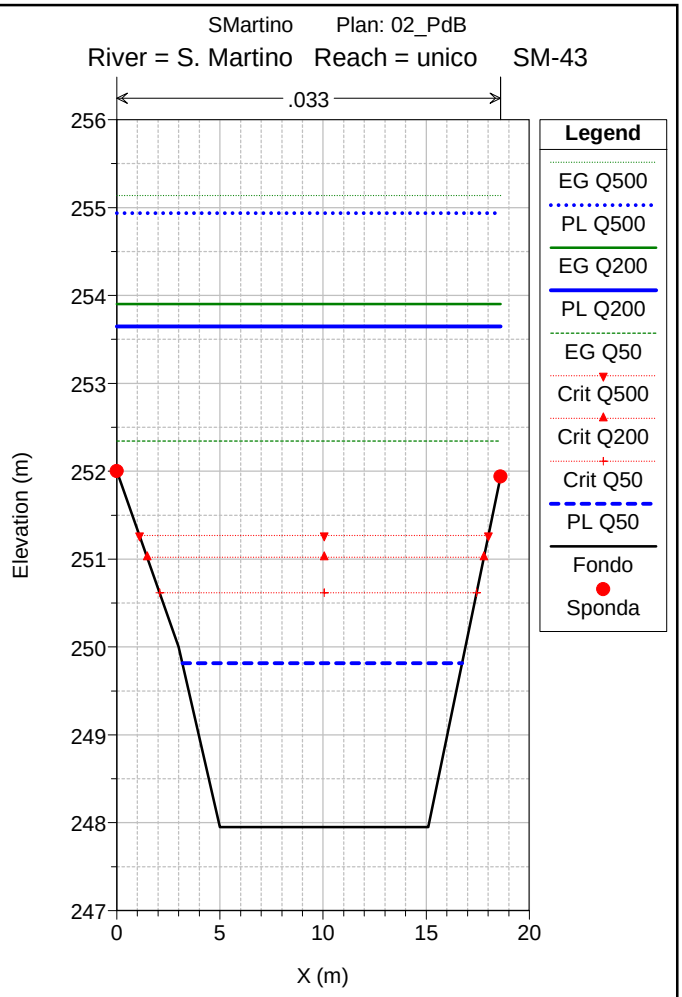


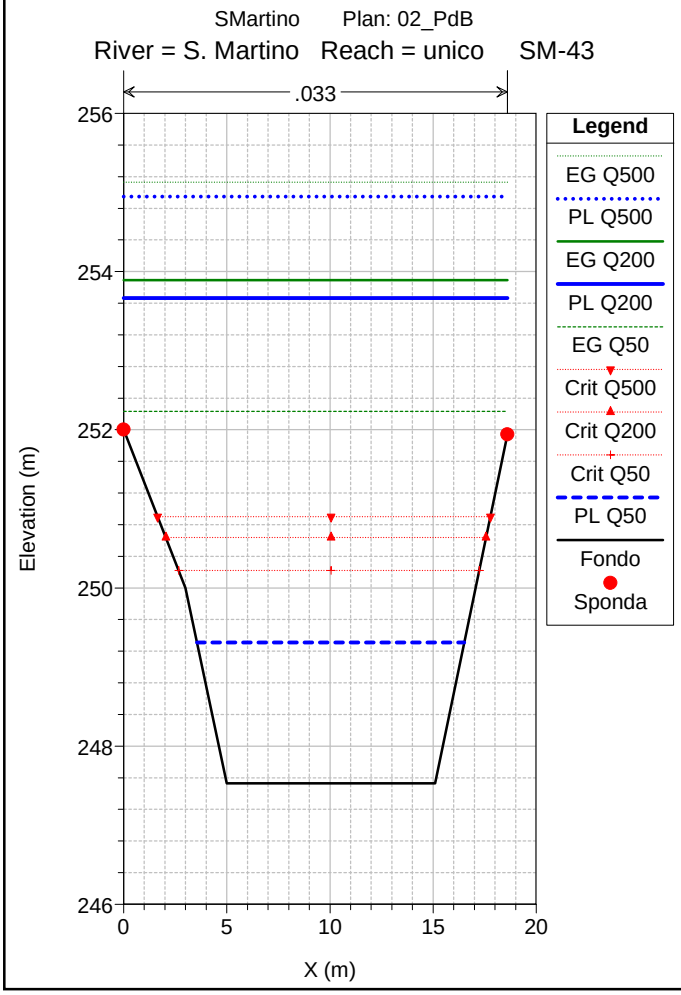
1 cm Horiz. = 40 m 1 cm Vert. = 3.5 m

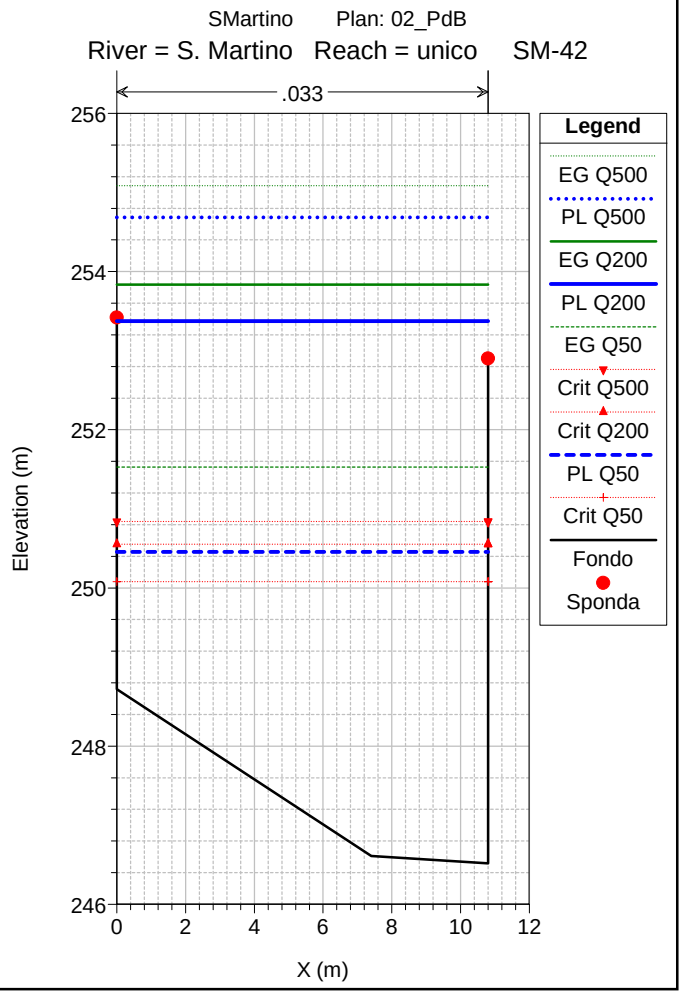


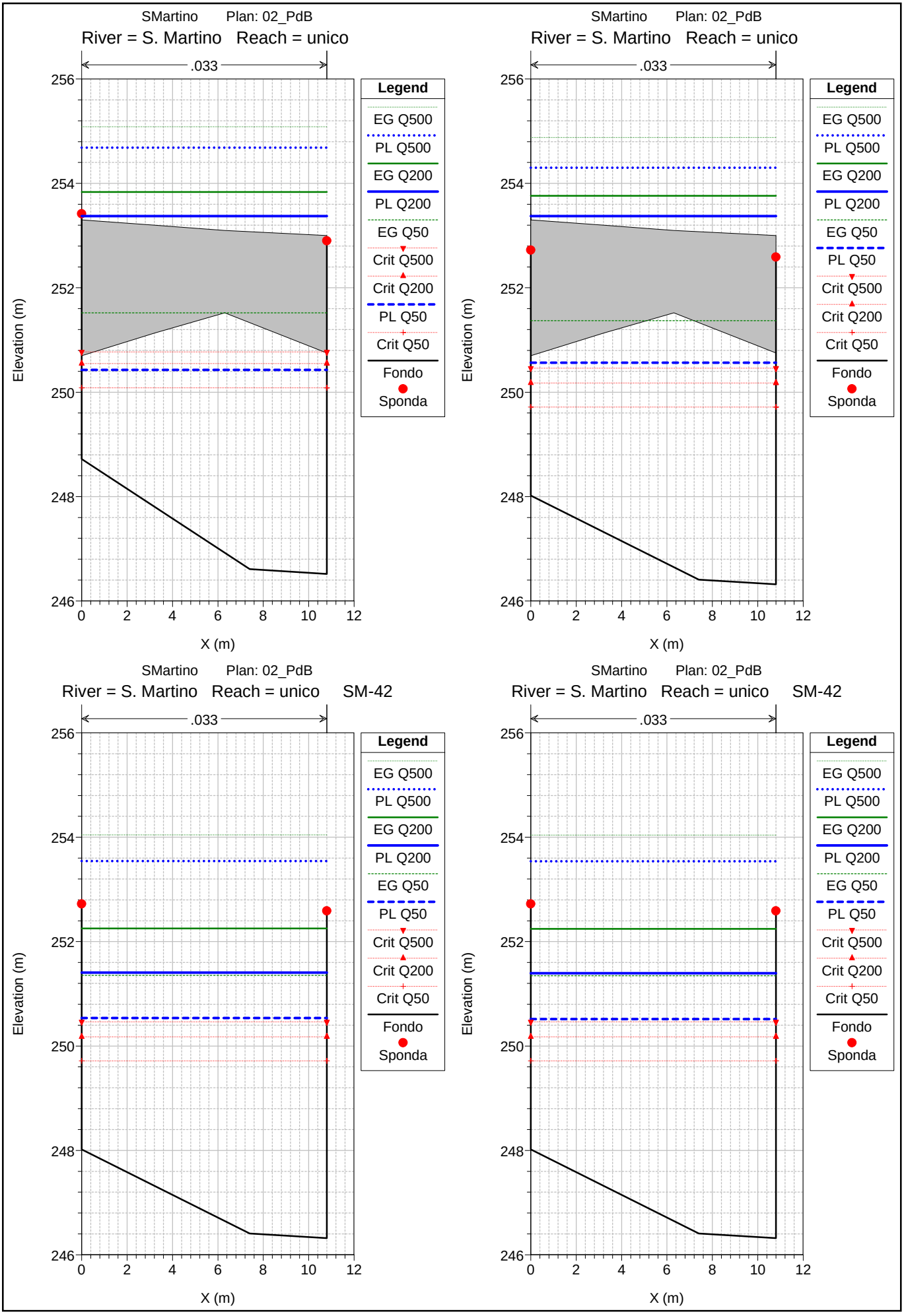
1 cm Horiz. = 40 m 1 cm Vert. = 3.5 m

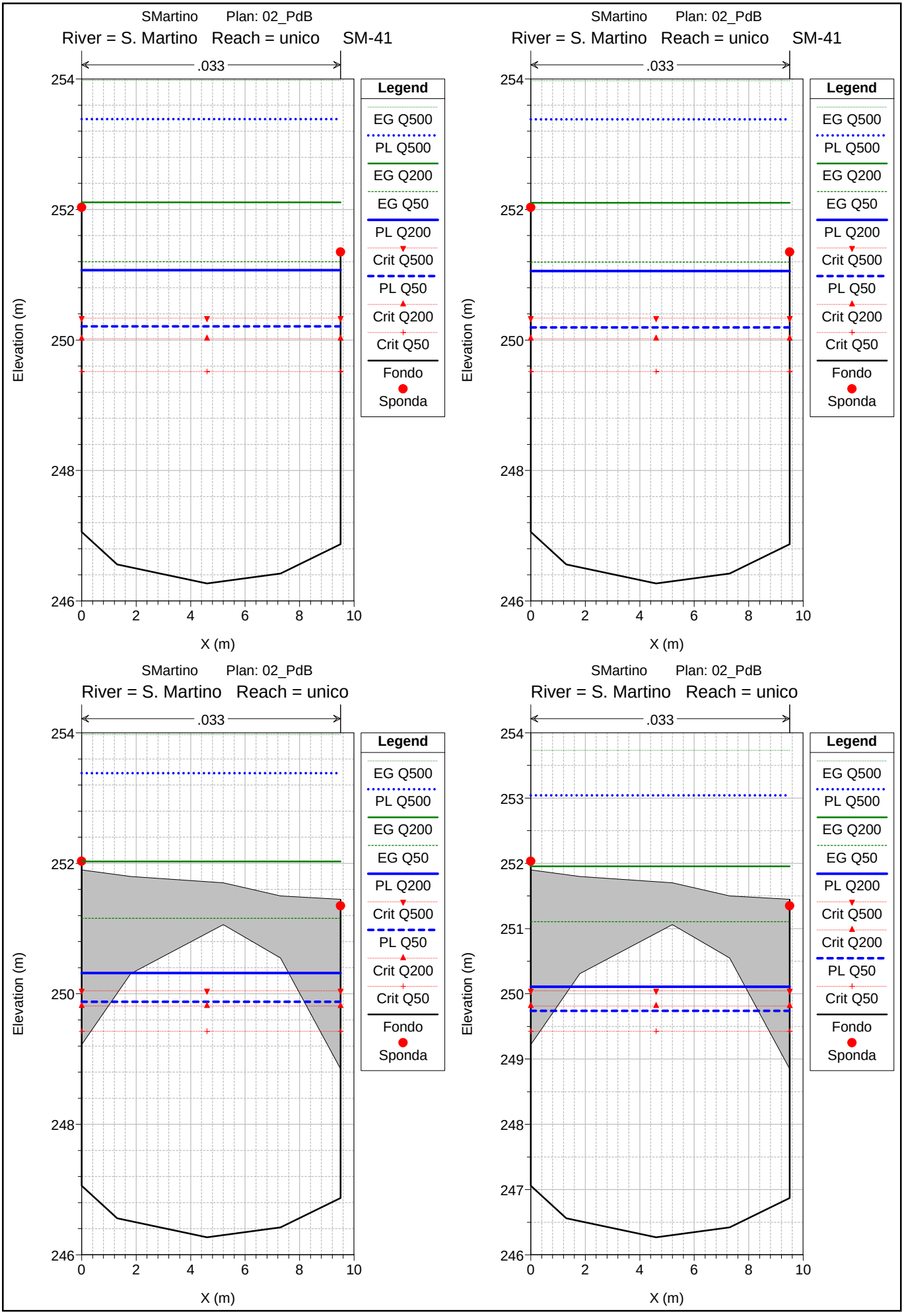

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-43
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-43
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-43
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda

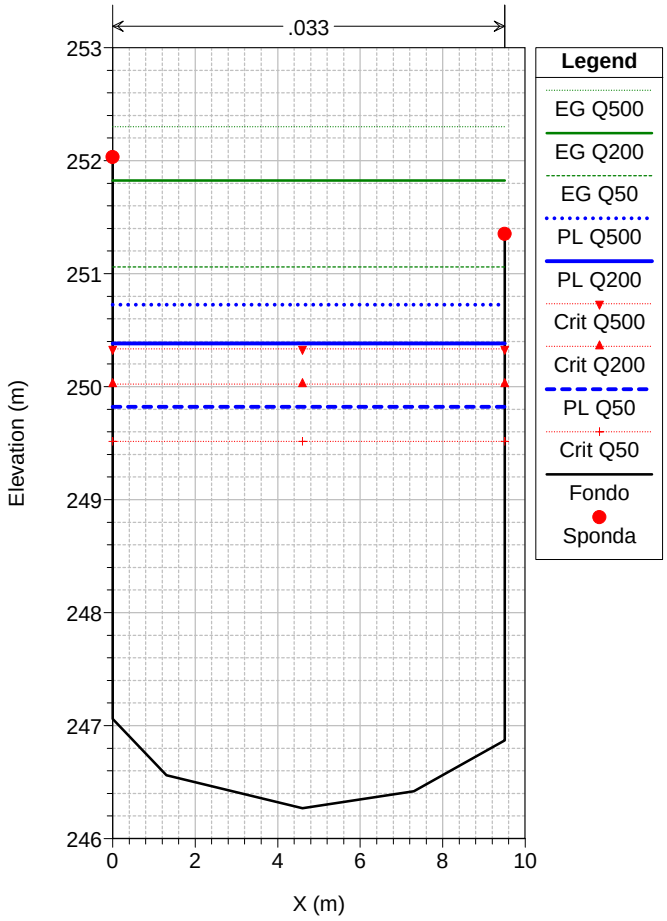

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-42
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-42
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-42
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-41
.033
Legend
EG Q500
PL Q500
EG Q200
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
X (m)
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-41
.033
Legend
EG Q500
PL Q500
EG Q200
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
X (m)
SMartino Plan: 02_PdB
River = S. Martino Reach = unico
.033
Legend
EG Q500
PL Q500
EG Q200
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
X (m)
SMartino Plan: 02_PdB
River = S. Martino Reach = unico
.033
Legend
EG Q500
PL Q500
EG Q200
EG Q50
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
X (m)

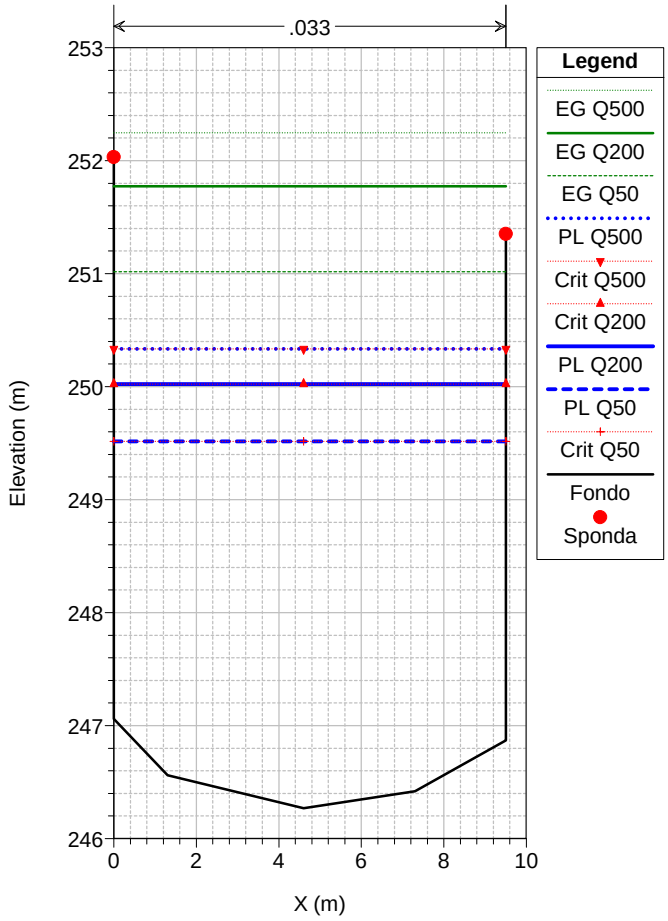
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-41



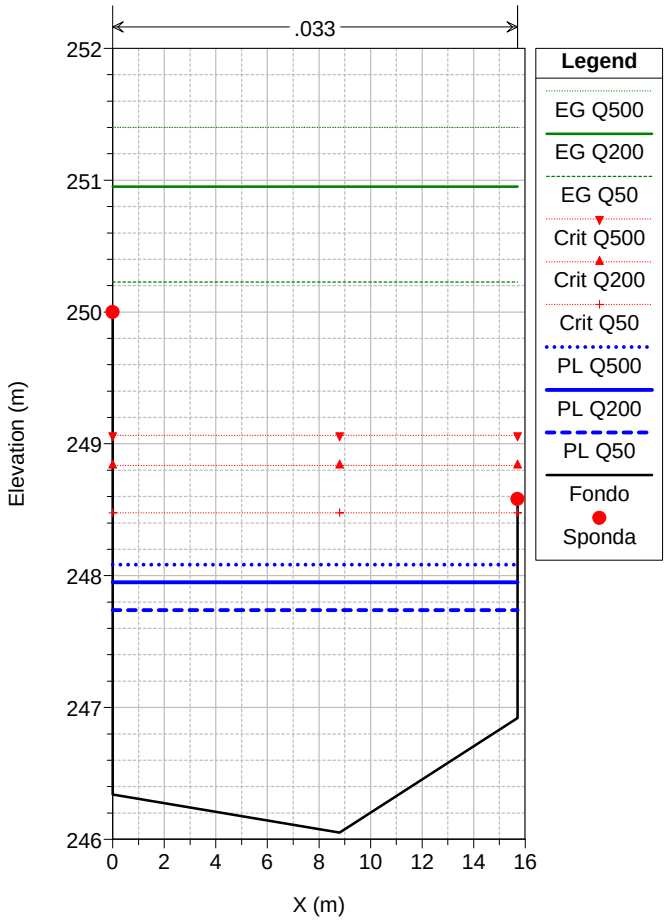
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-41



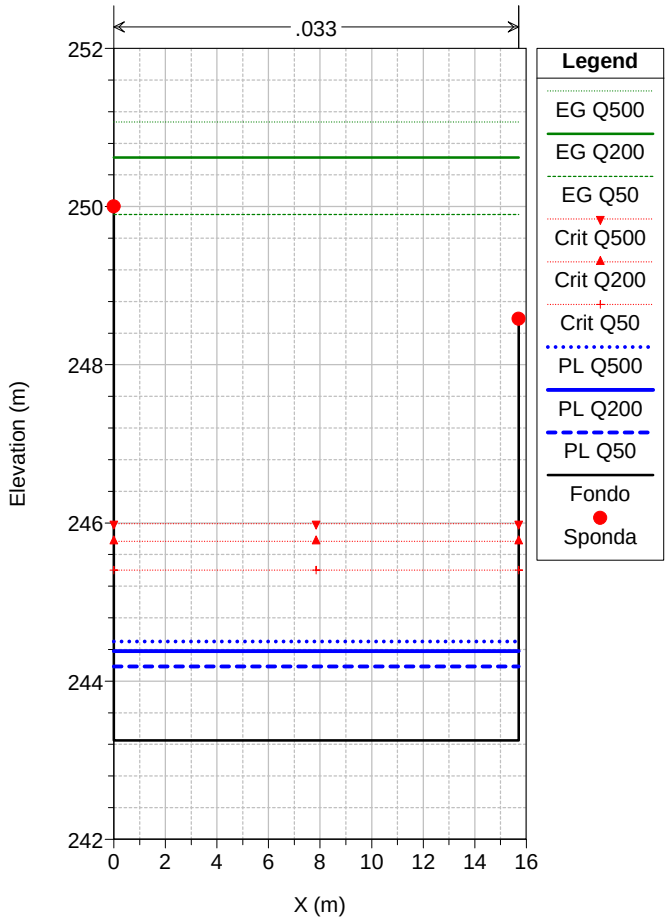
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-40



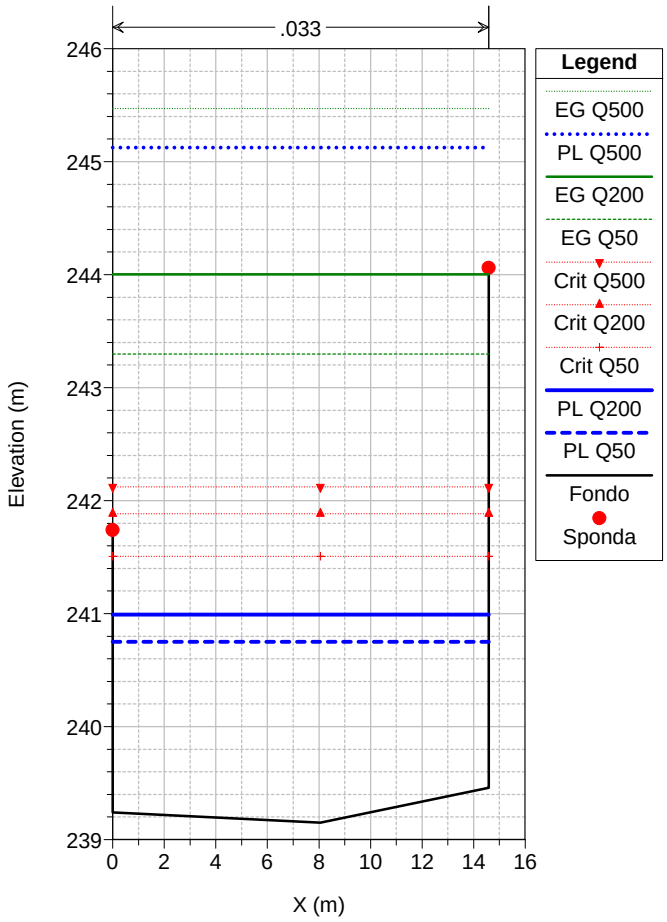
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-40



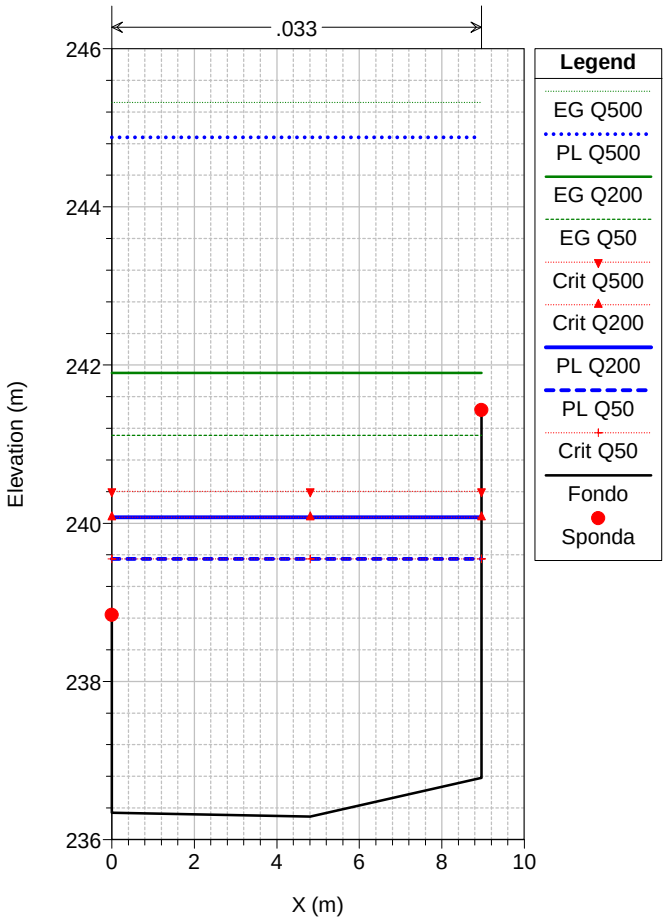
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-39



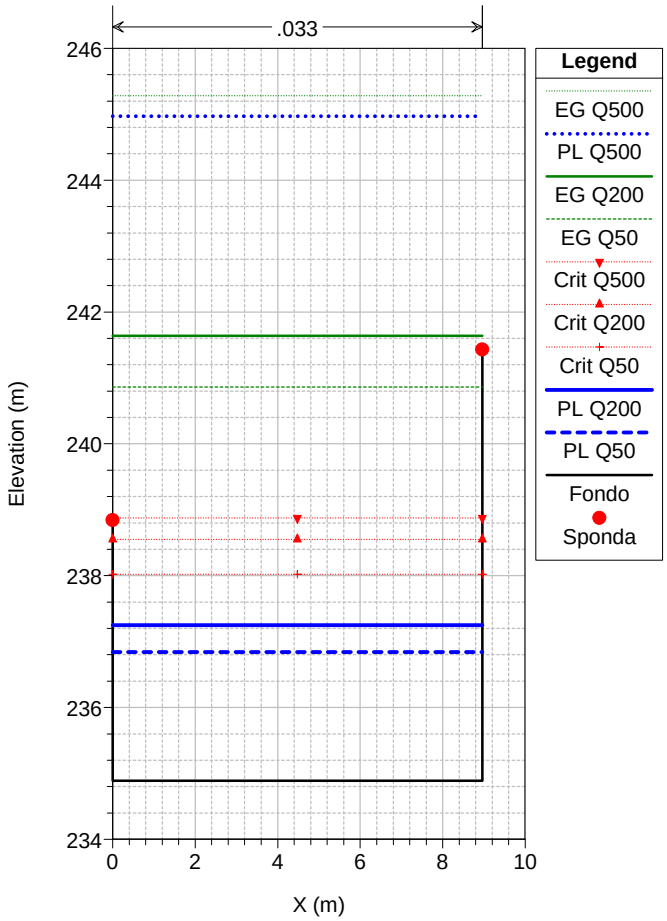
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-38



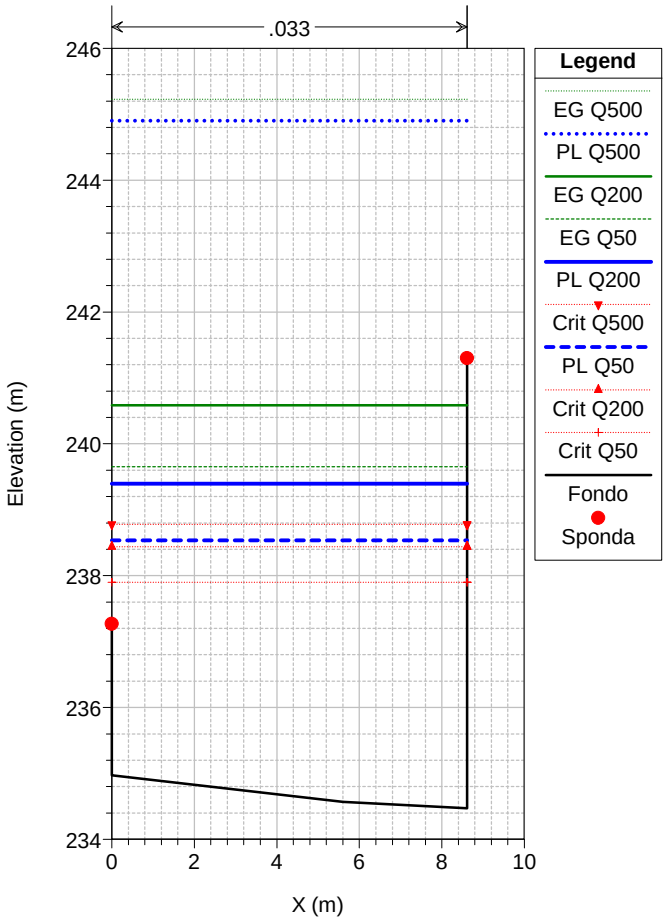
SMartino Plan: 02_PdB

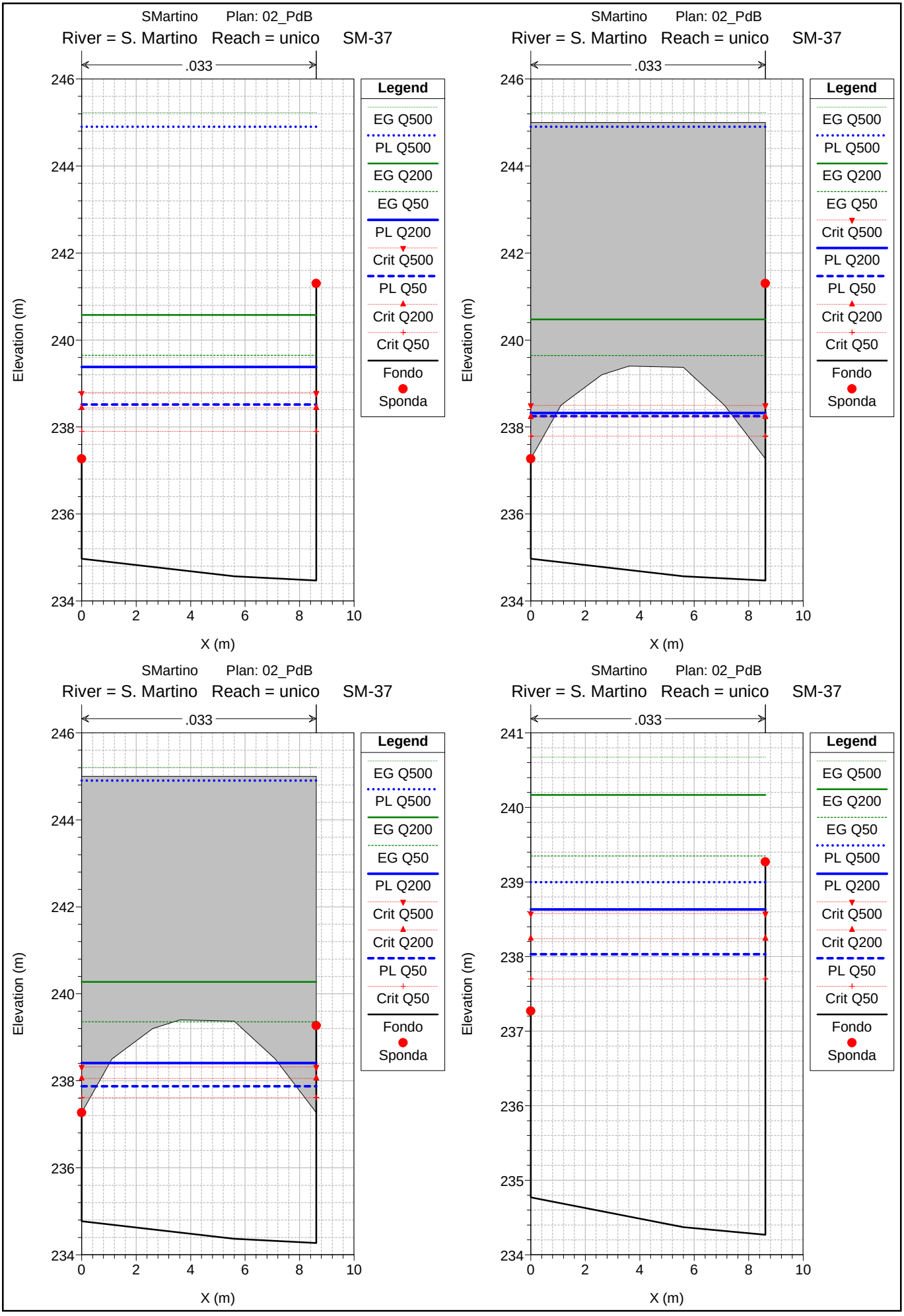
River = S. Martino Reach = unico SM-38

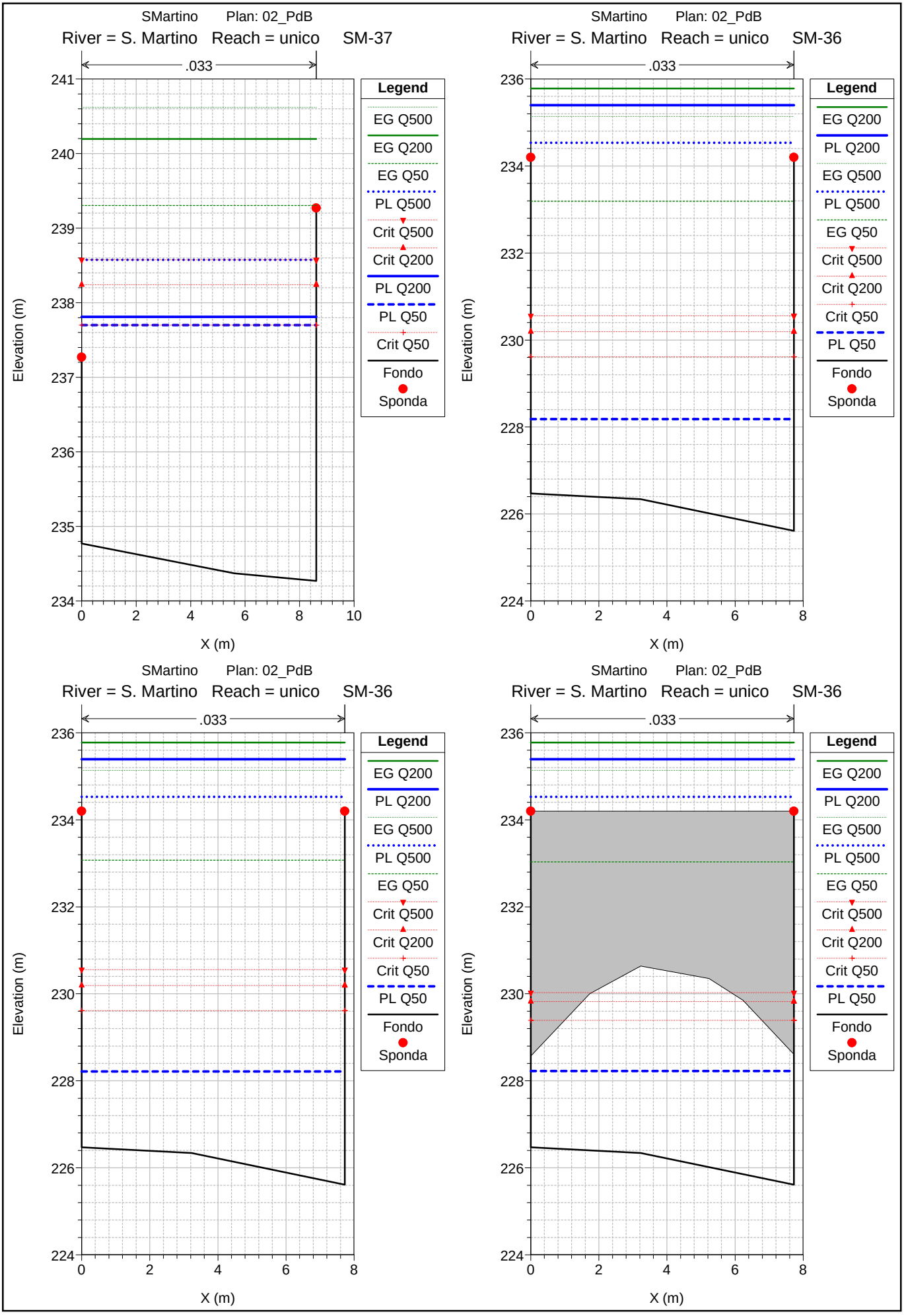


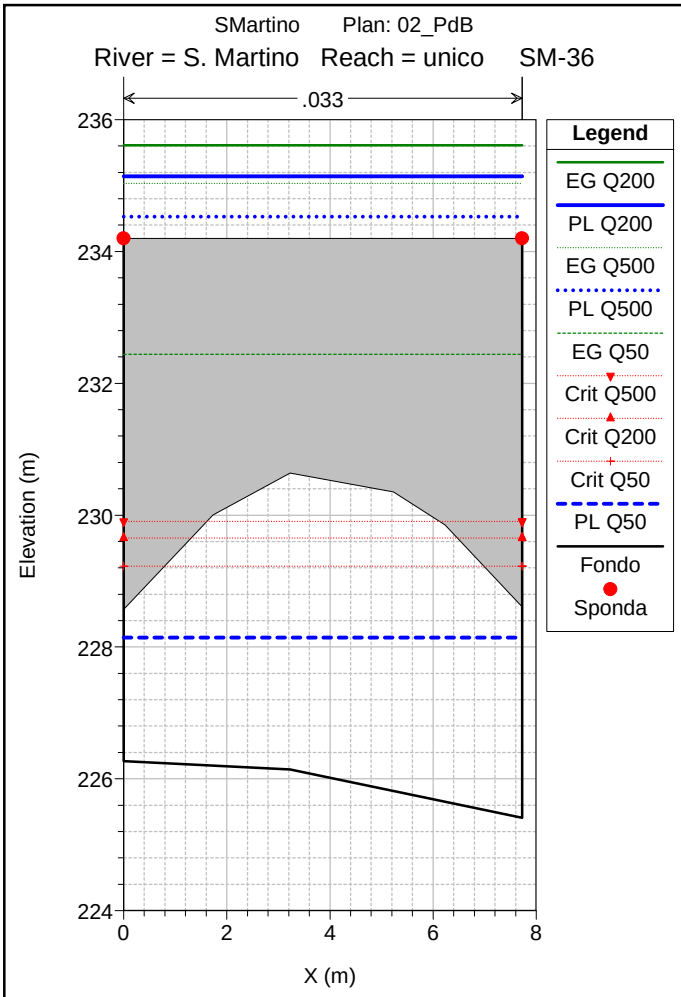
SMartino Plan: 02_PdB

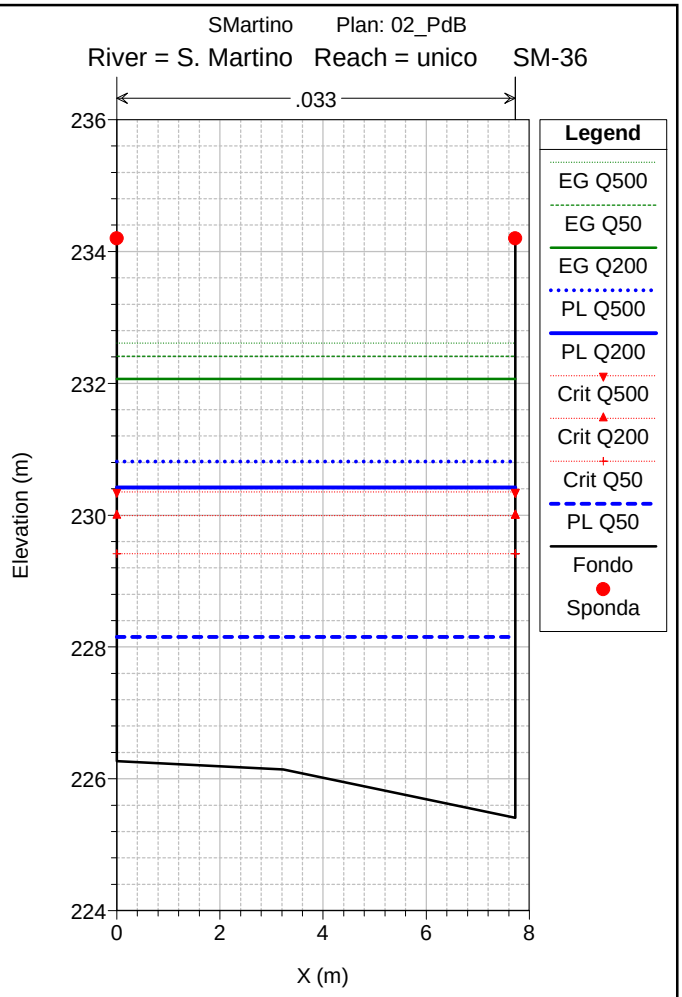
River = S. Martino Reach = unico SM-37

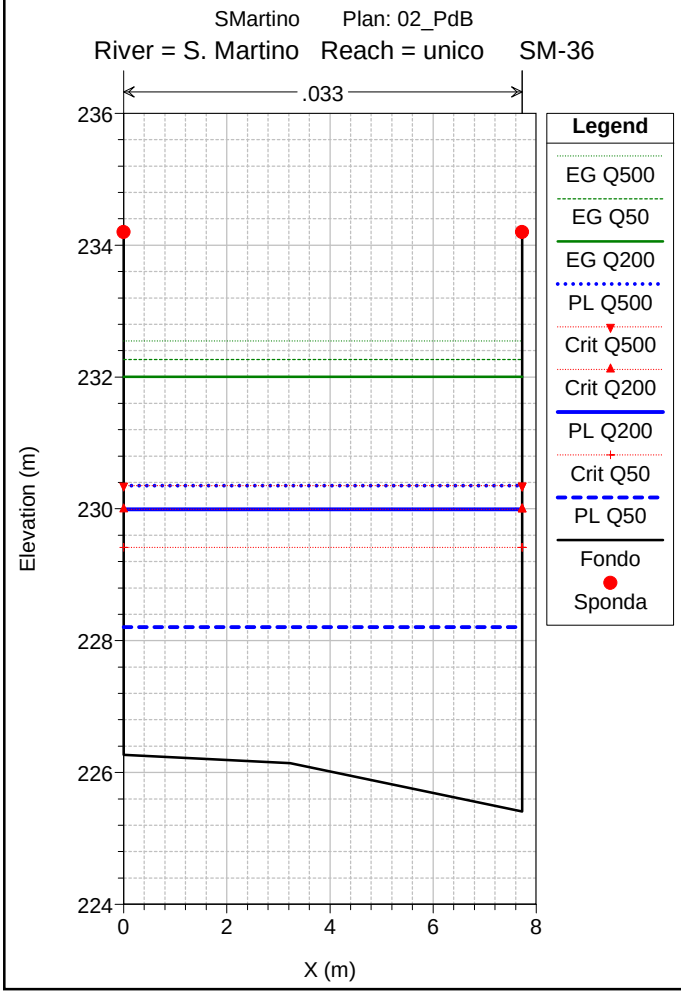


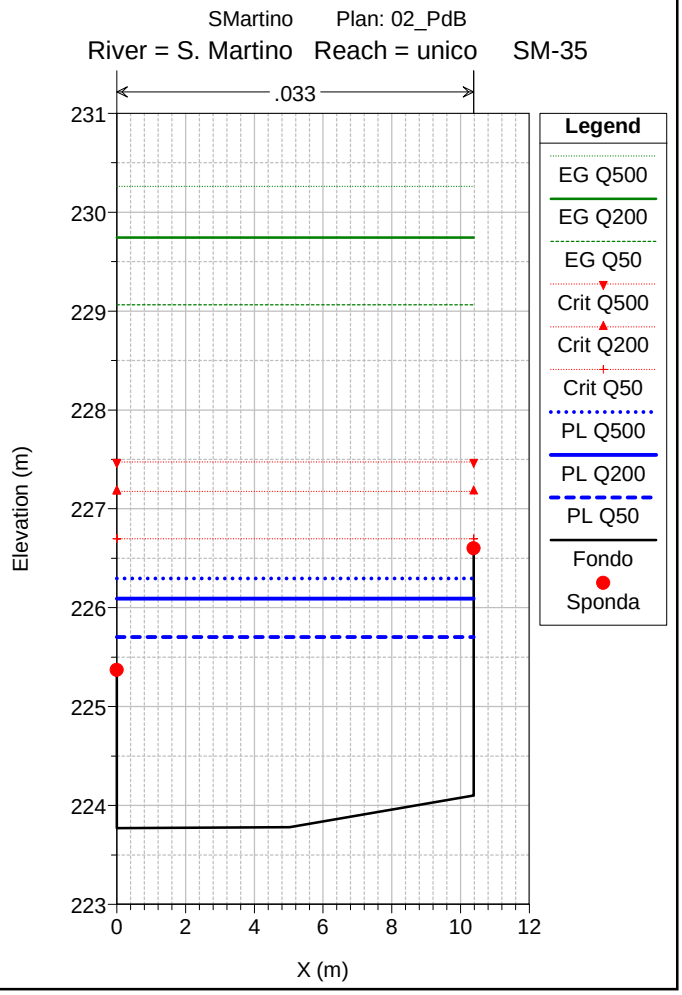

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-37
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-37
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-36
.033
Elevation (m)
X (m)
Legend
EG Q200
PL Q200
EG Q500
PL Q500
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-36
.033
Elevation (m)
X (m)
Legend
EG Q200
PL Q200
EG Q500
PL Q500
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-36
.033
Elevation (m)
X (m)
Legend
EG Q200
PL Q200
EG Q500
PL Q500
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-36
.033
Elevation (m)
X (m)
Legend
EG Q200
PL Q200
EG Q500
PL Q500
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda

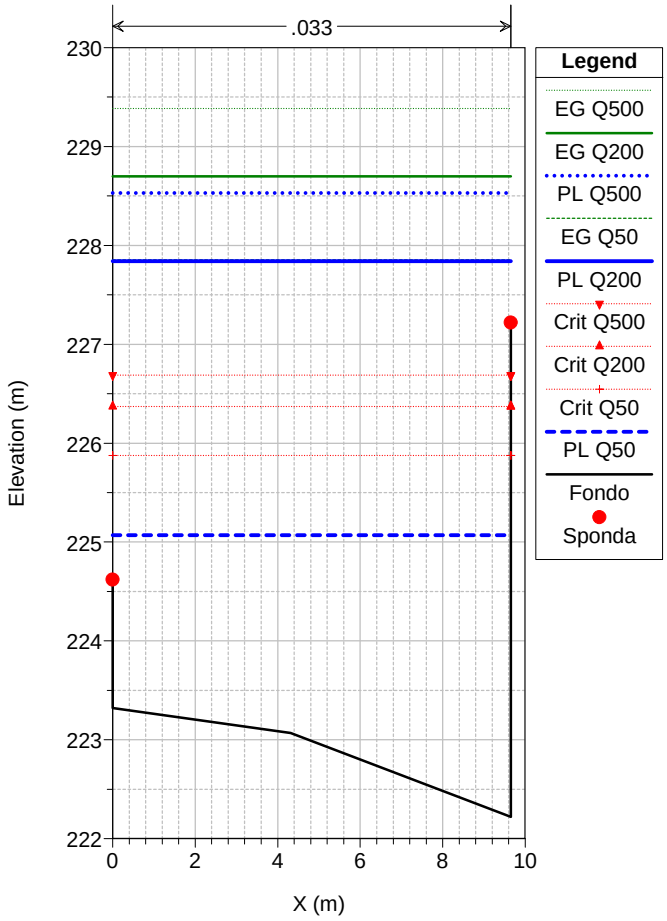

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-36
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q50
EG Q200
PL Q500
PL Q200
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-36
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q50
EG Q200
PL Q500
Crit Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-35
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

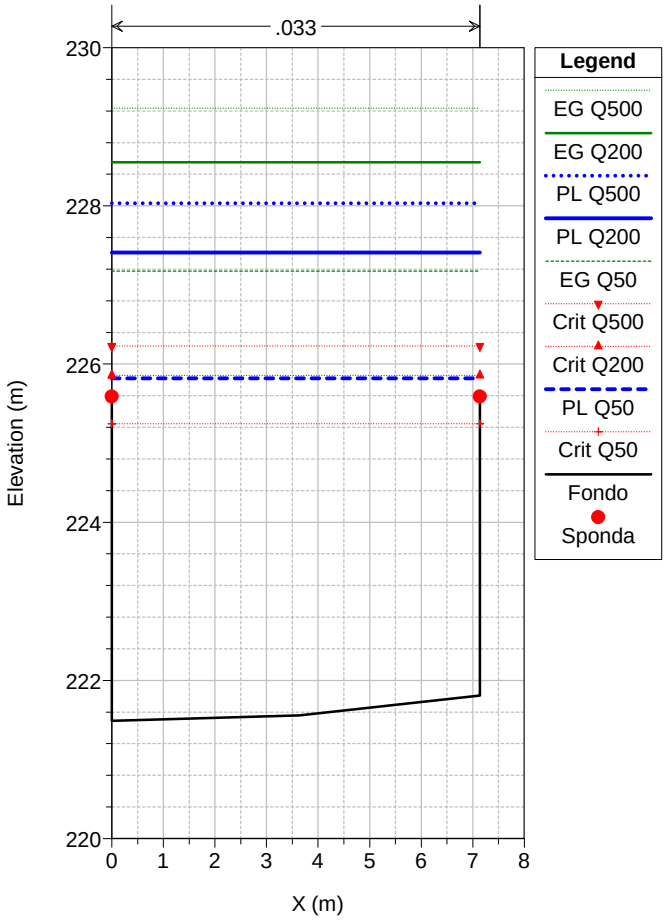
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-34



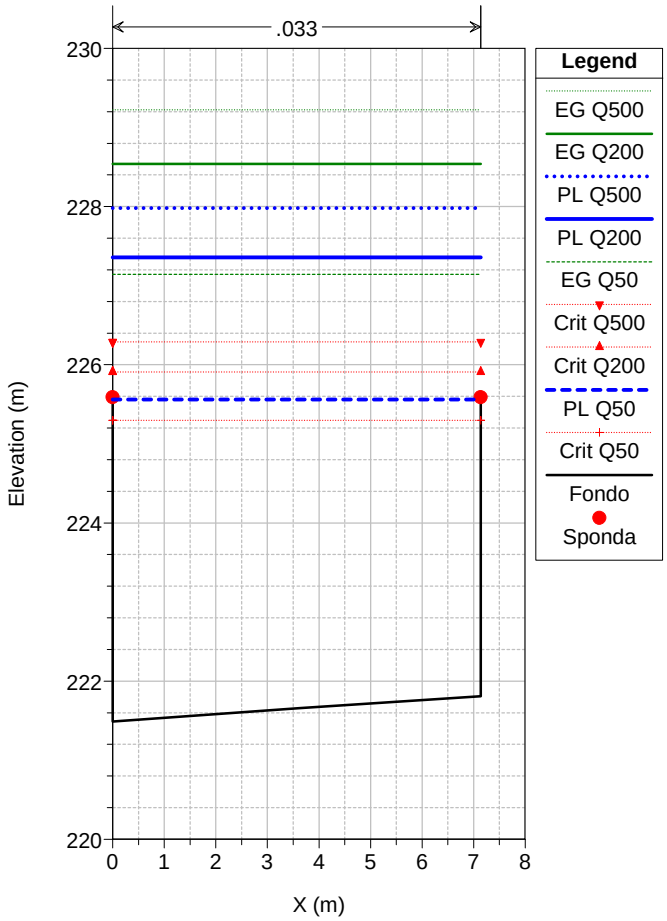
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-33



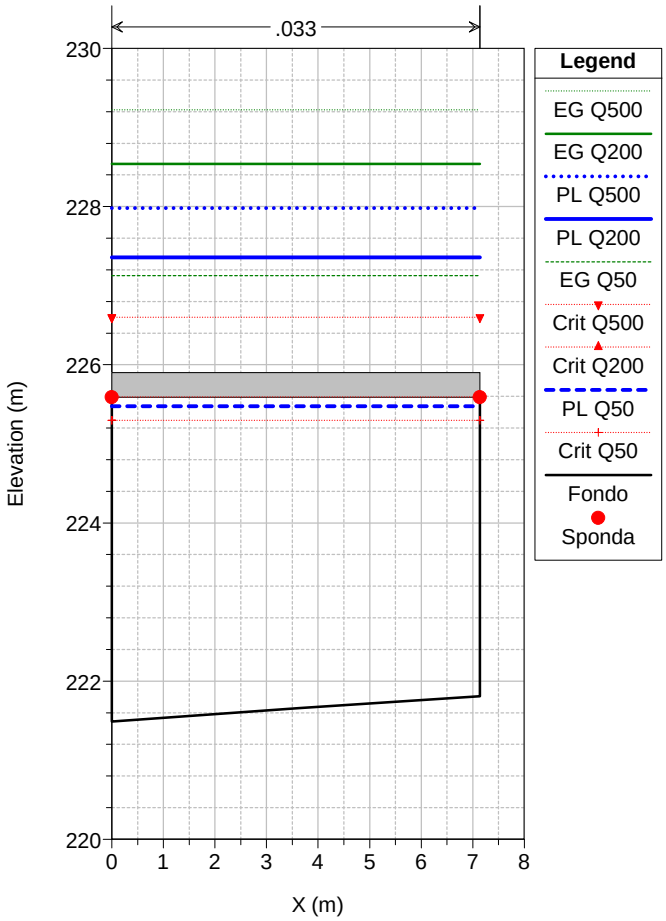
SMartino Plan: 02_PdB

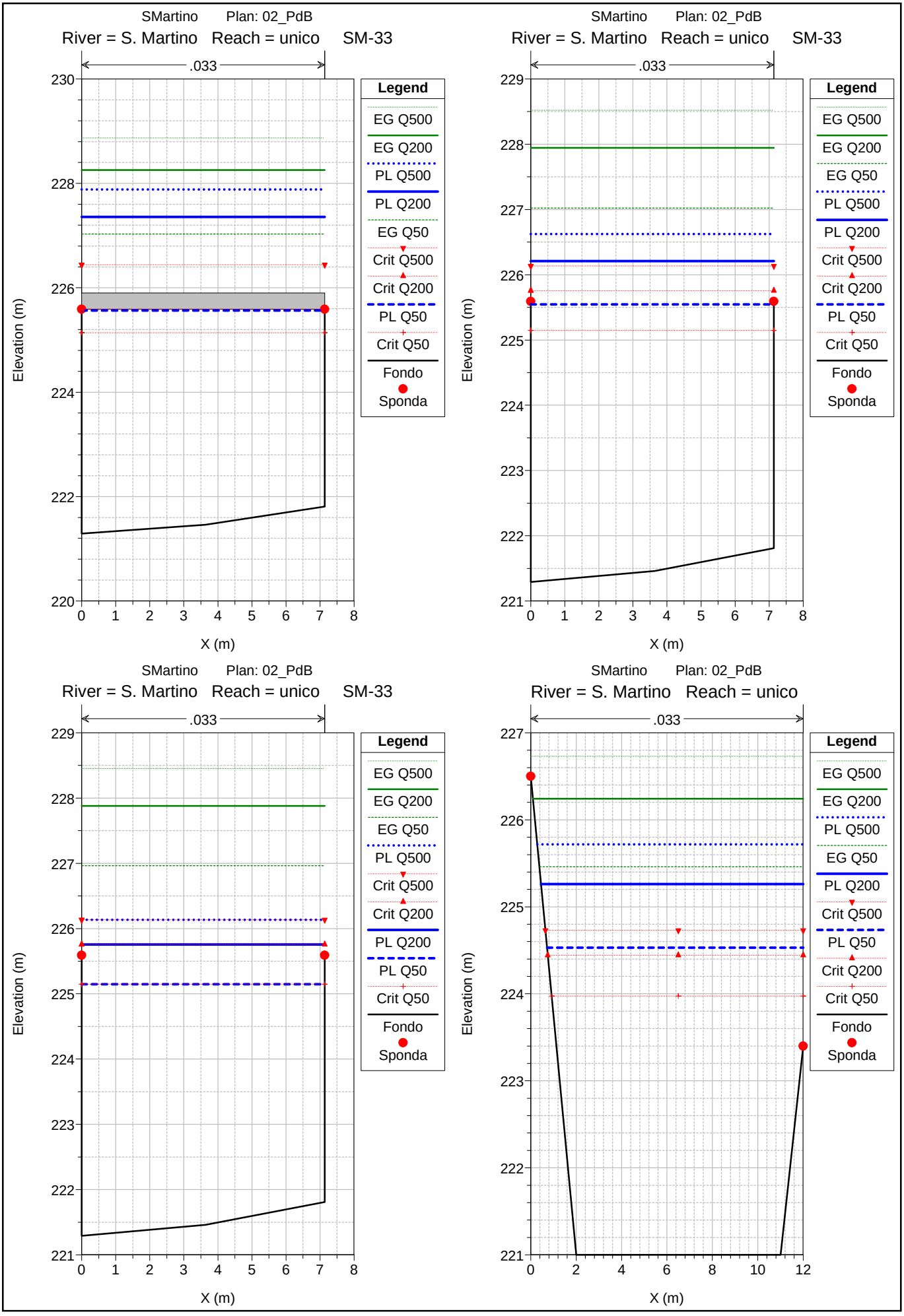
River = S. Martino Reach = unico SM-33



SMartino Plan: 02_PdB

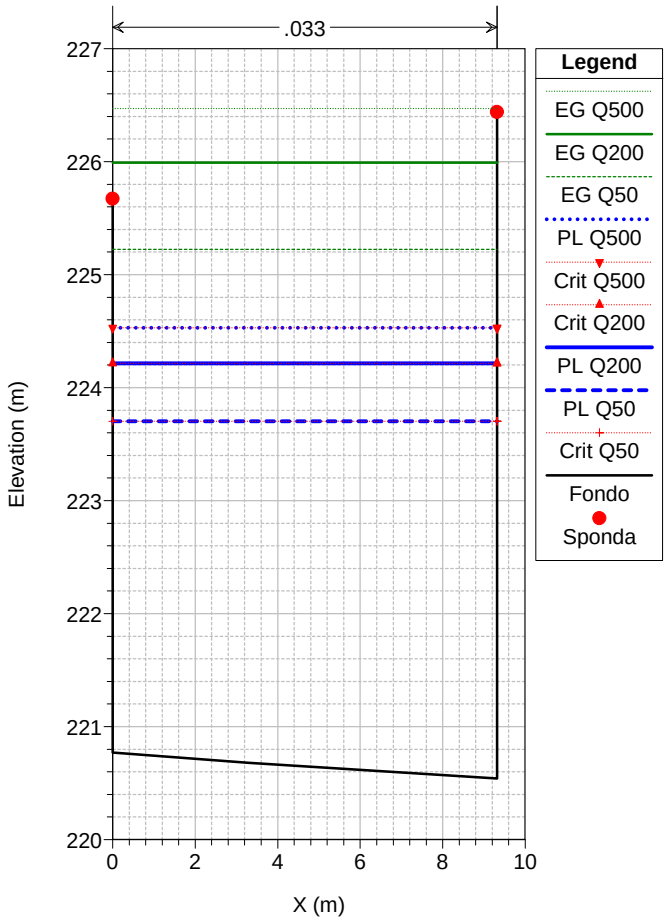
River = S. Martino Reach = unico SM-33




SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-33
.033
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
X (m)
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-33
.033
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
X (m)
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-33
.033
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
X (m)
SMartino Plan: 02_PdB
River = S. Martino Reach = unico
.033
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Sponda
Elevation (m)
X (m)

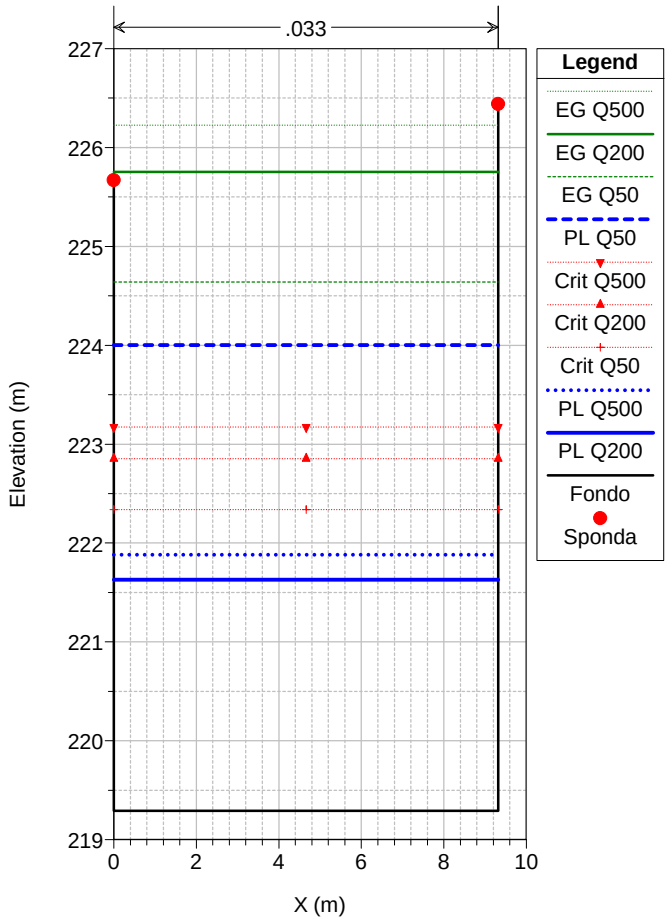
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-32



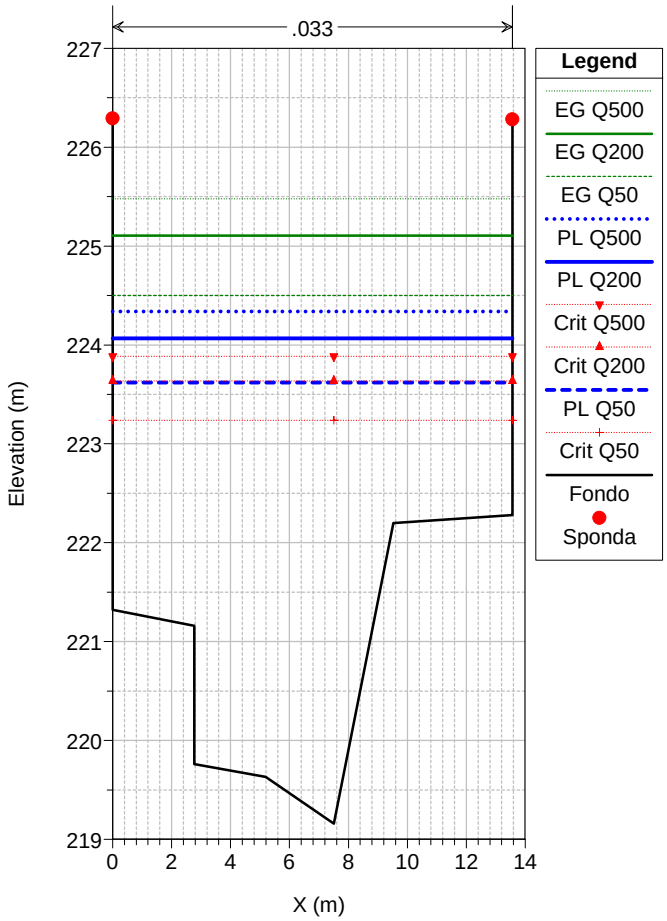
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-32



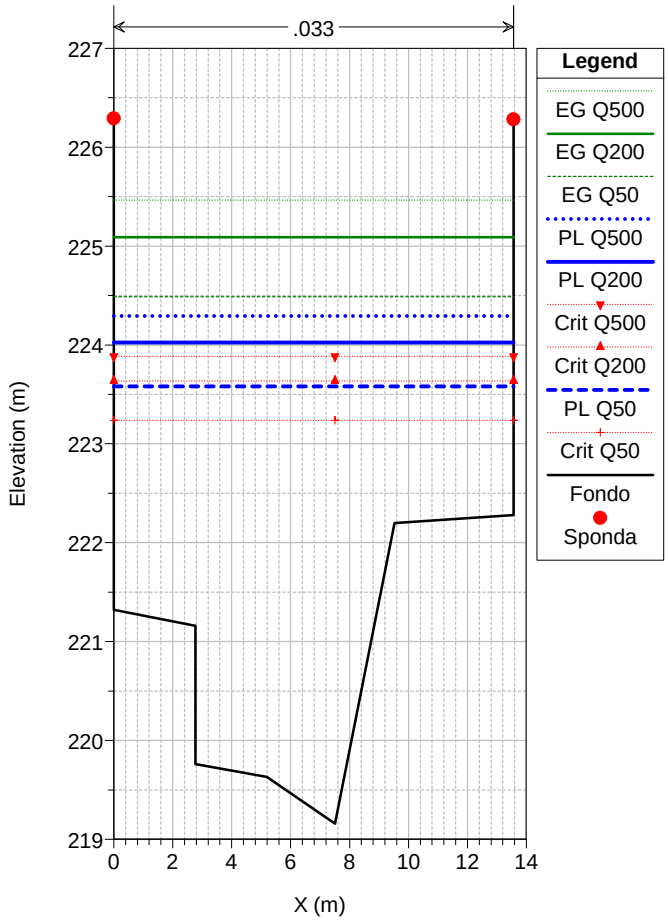
SMartino Plan: 02_PdB

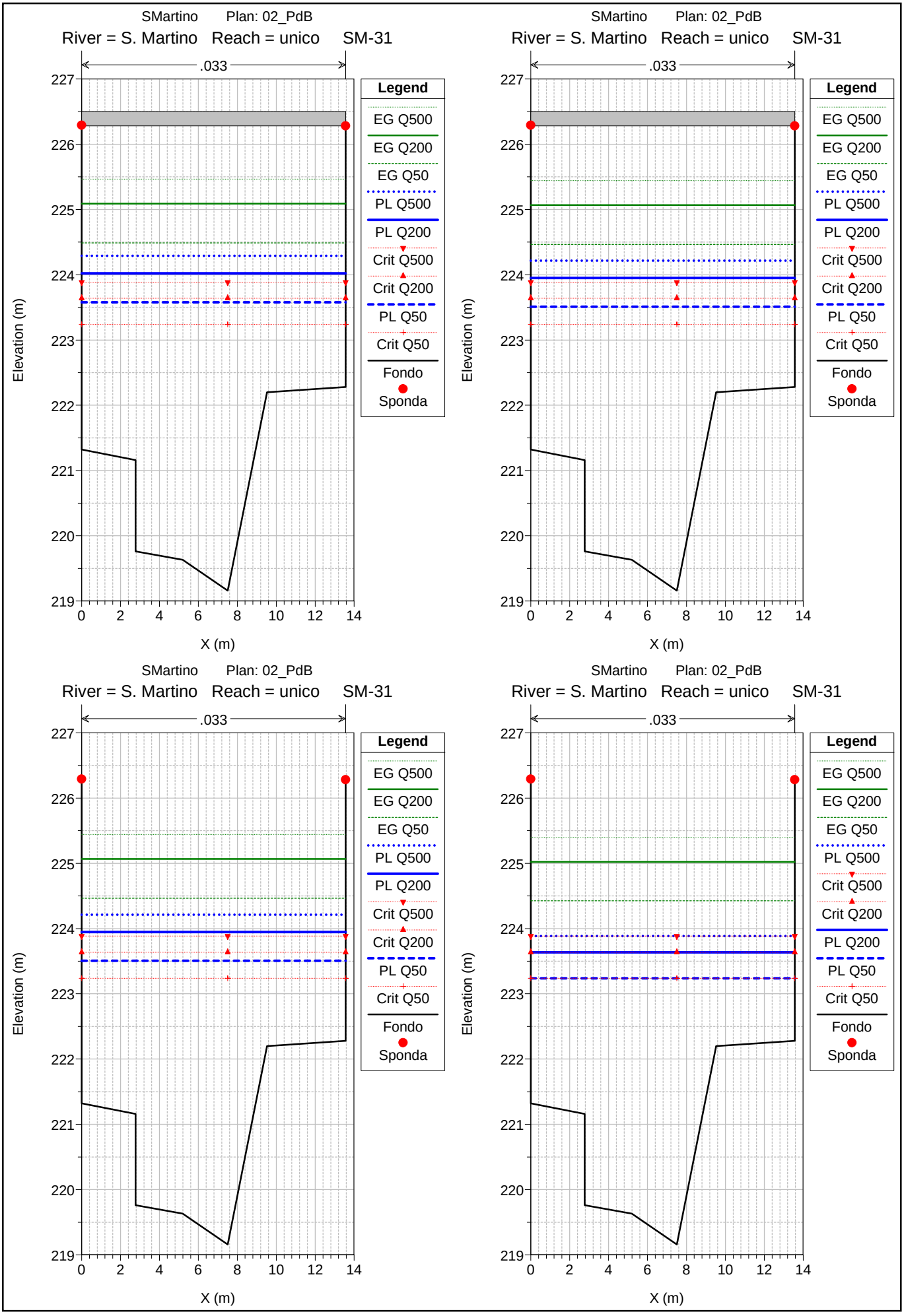
River = S. Martino Reach = unico SM-31



SMartino Plan: 02_PdB

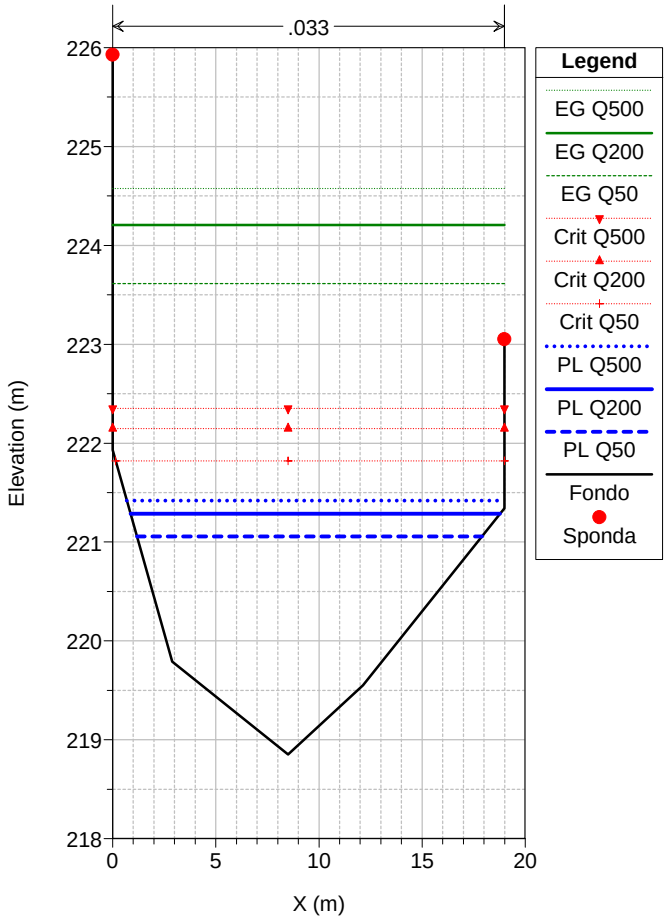
River = S. Martino Reach = unico SM-31




SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-31
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda

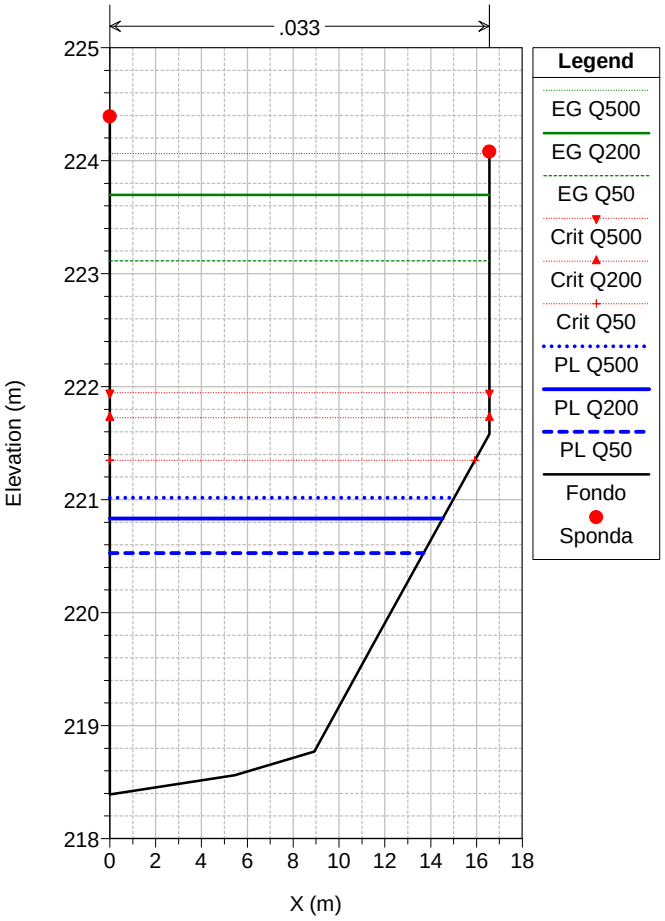
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-30



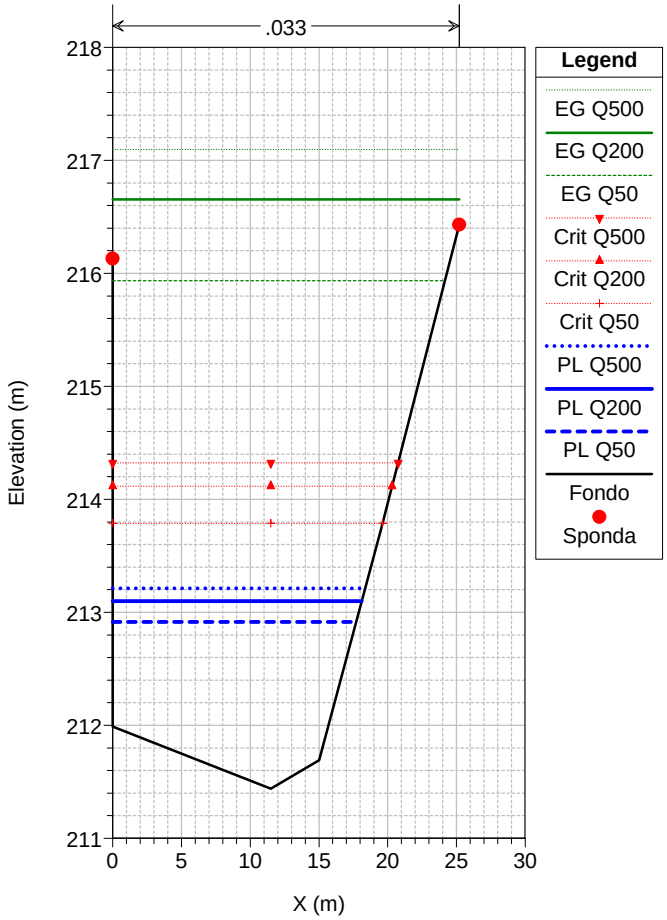
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-29



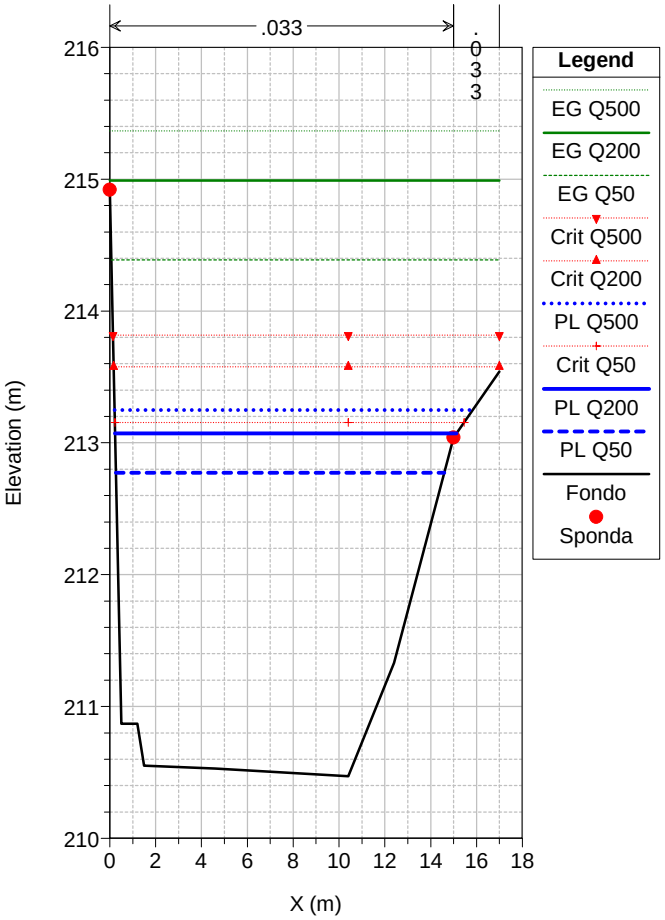
SMartino Plan: 02_PdB

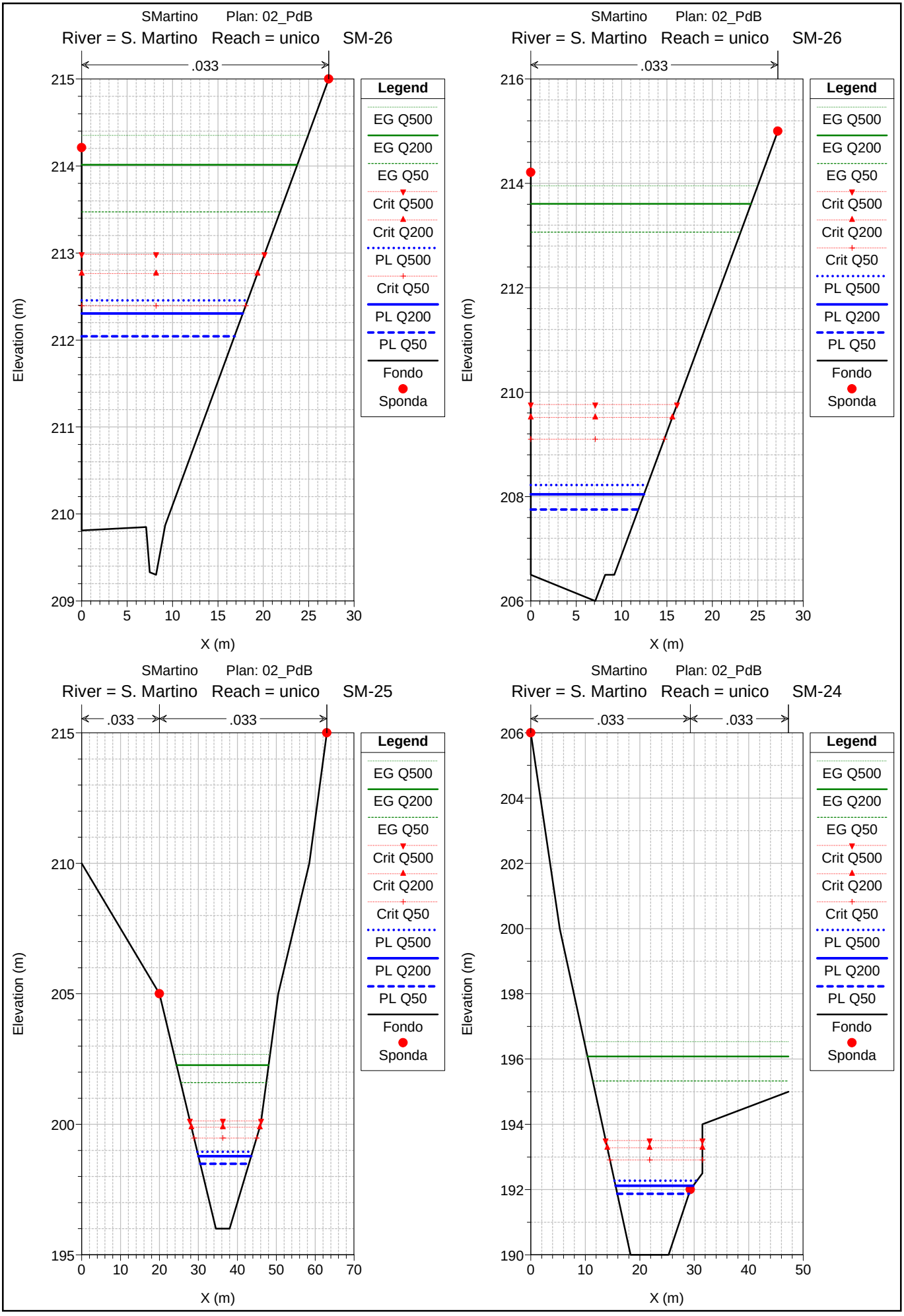
River = S. Martino Reach = unico SM-28

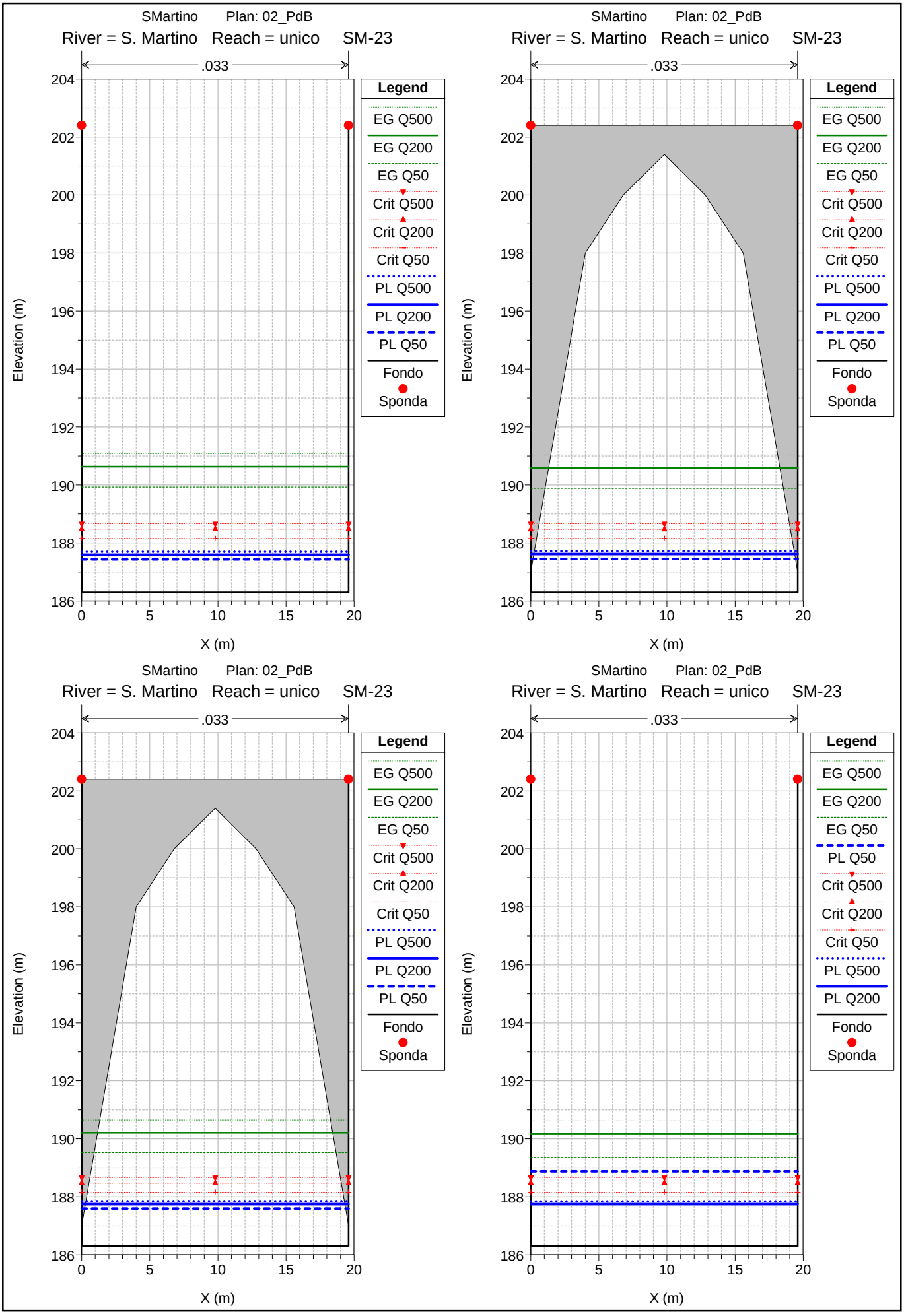


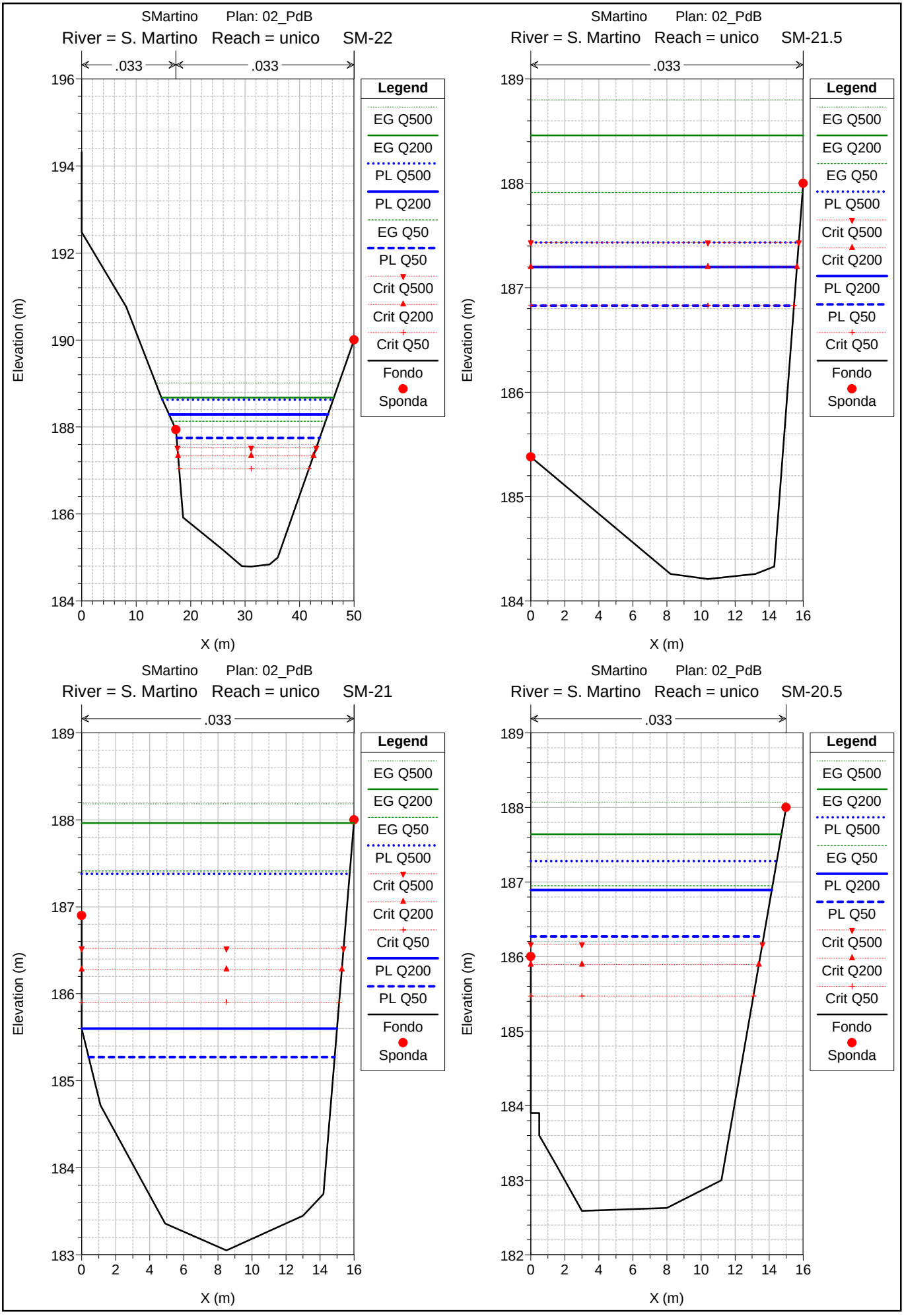
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-27



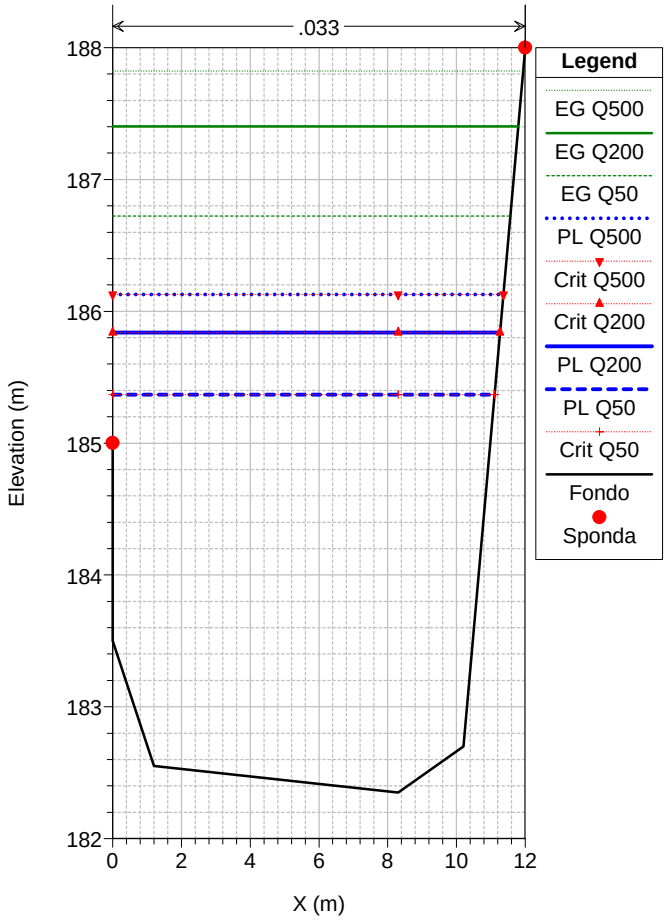

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-26
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-26
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-25
.033
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-24
.033
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-23
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-22
.033
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-21.5
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-21
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-20.5
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

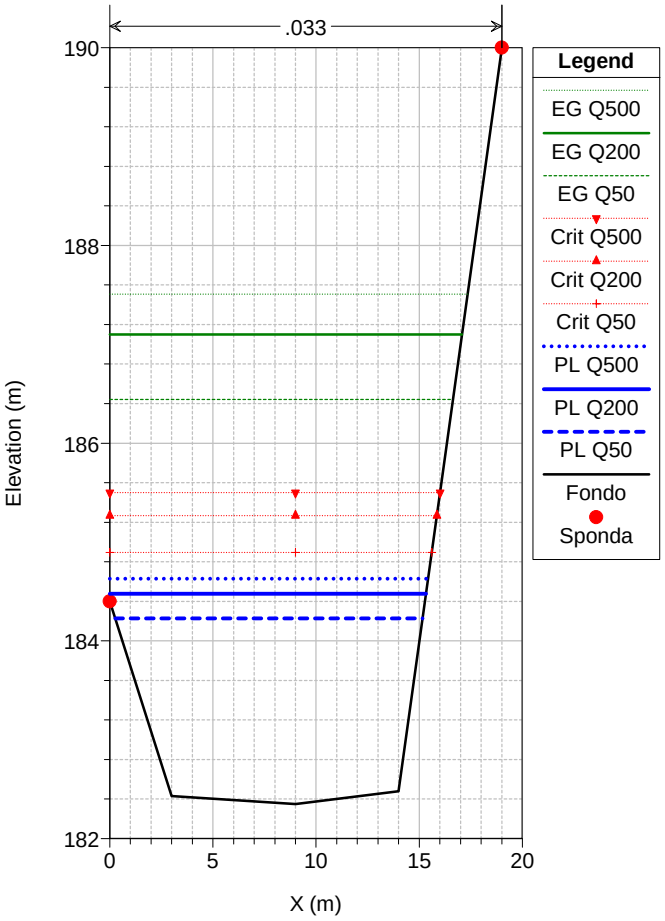
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-20



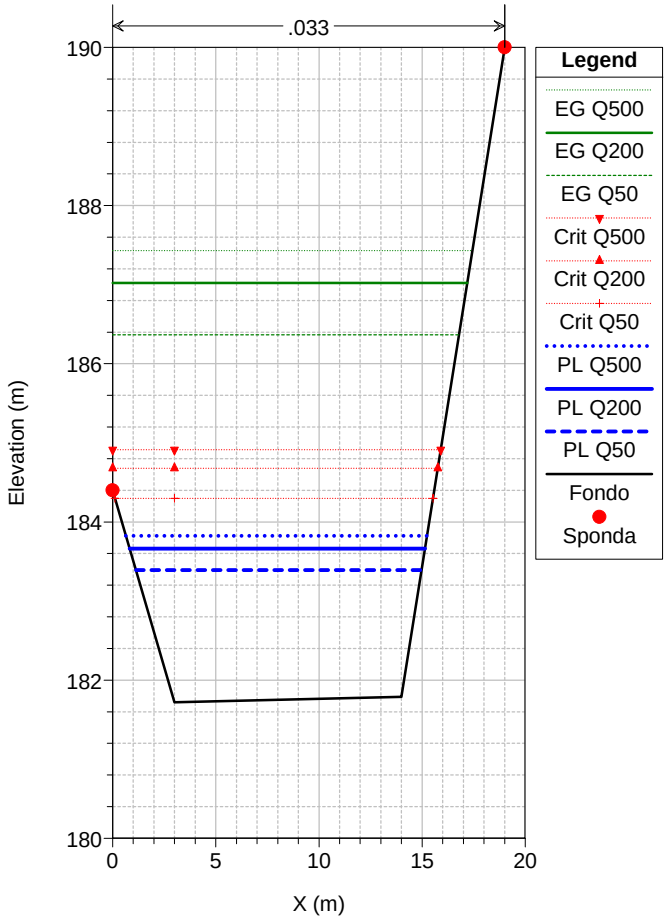
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-19



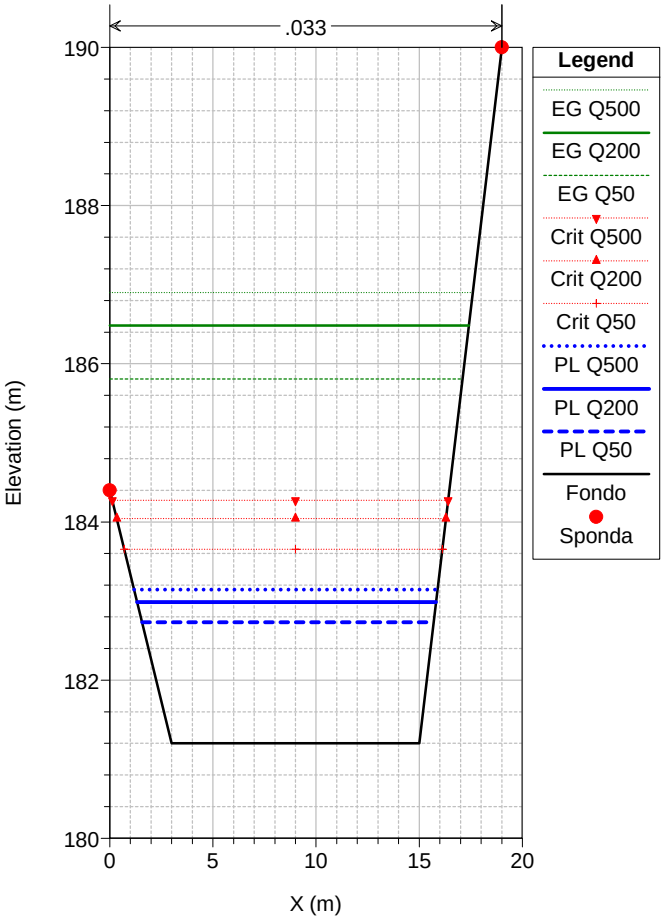
SMartino Plan: 02_PdB

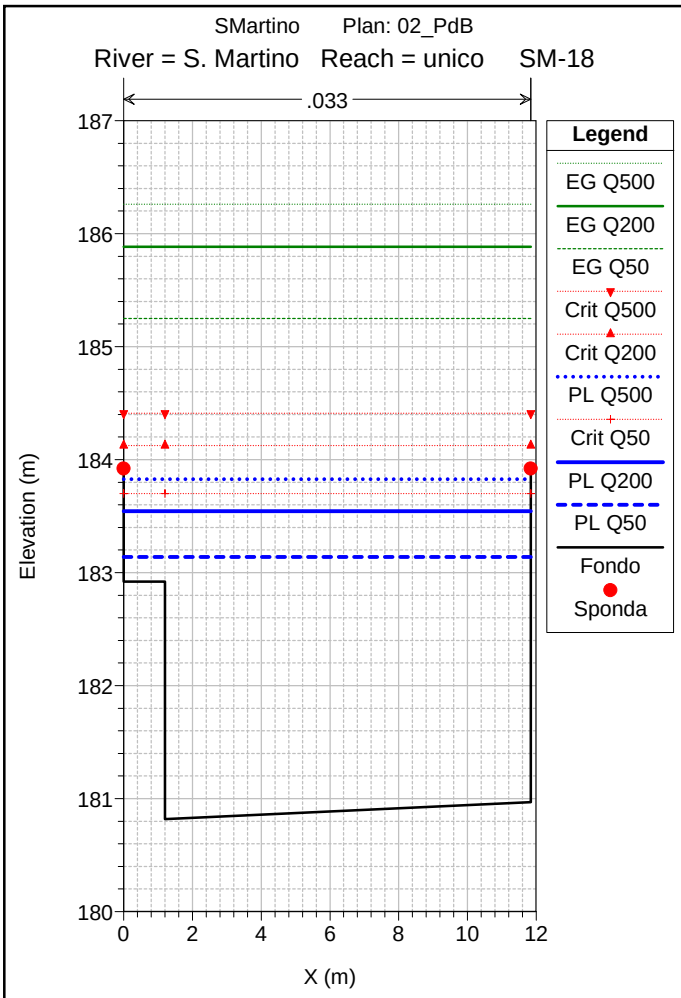
River = S. Martino Reach = unico SM-19

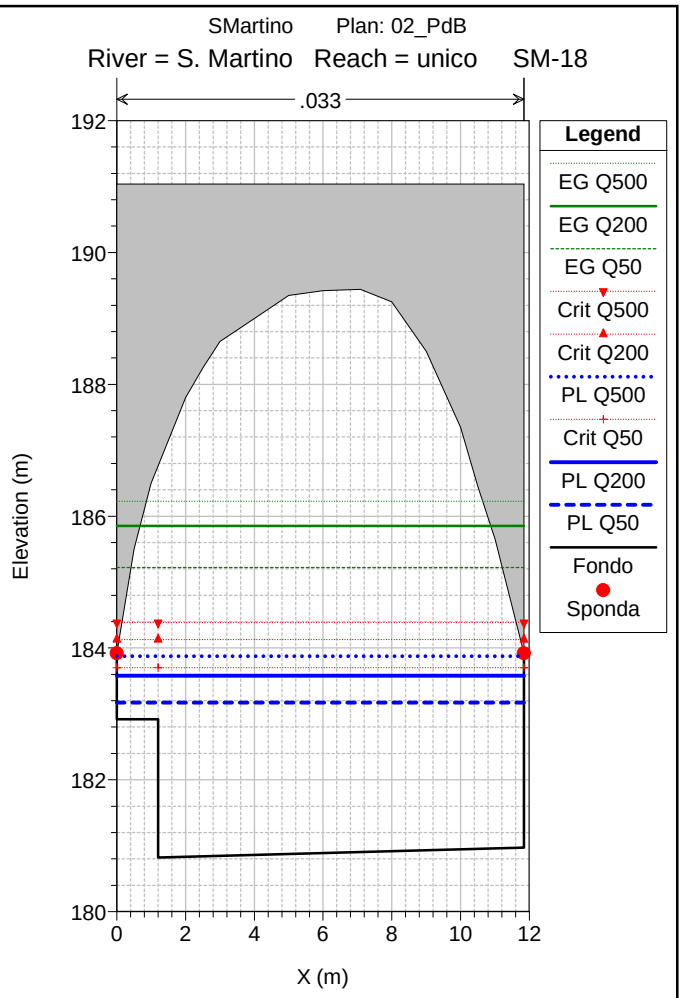


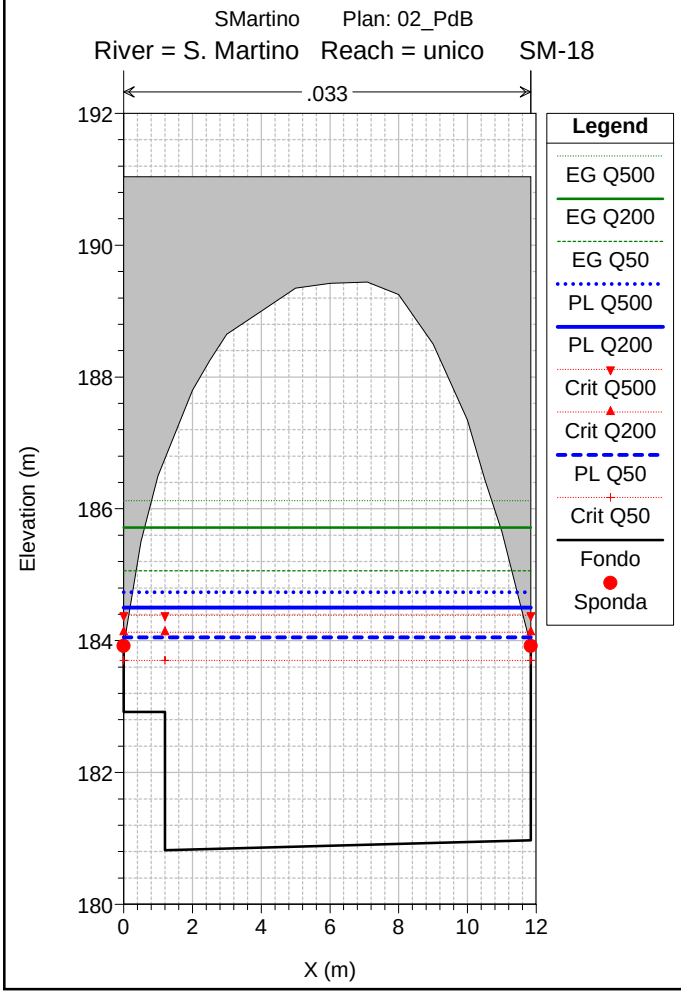
SMartino Plan: 02_PdB

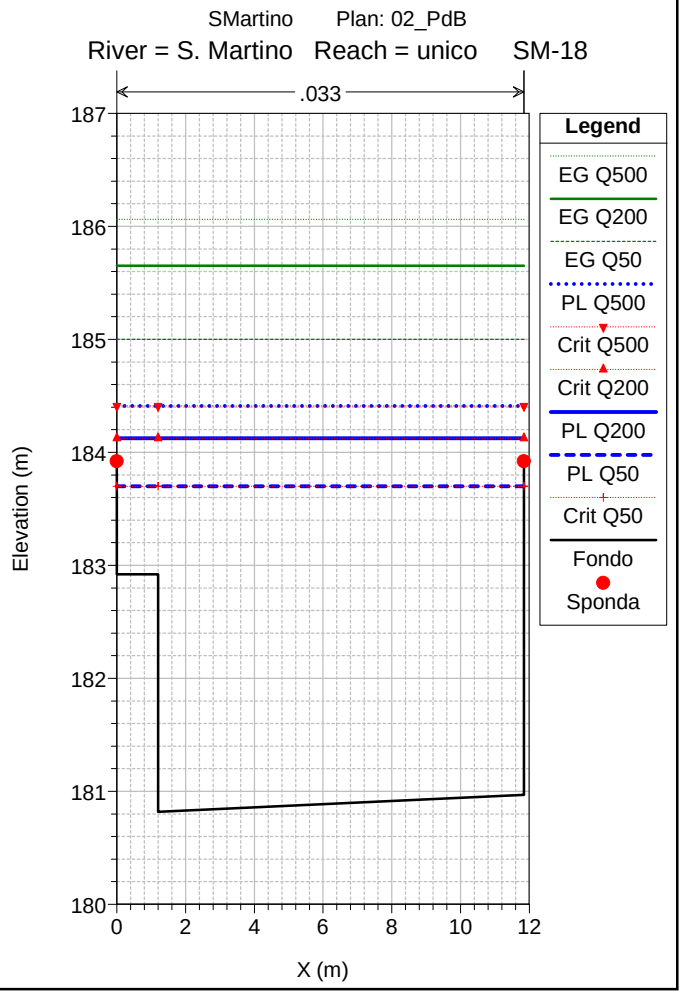
River = S. Martino Reach = unico SM-18.5

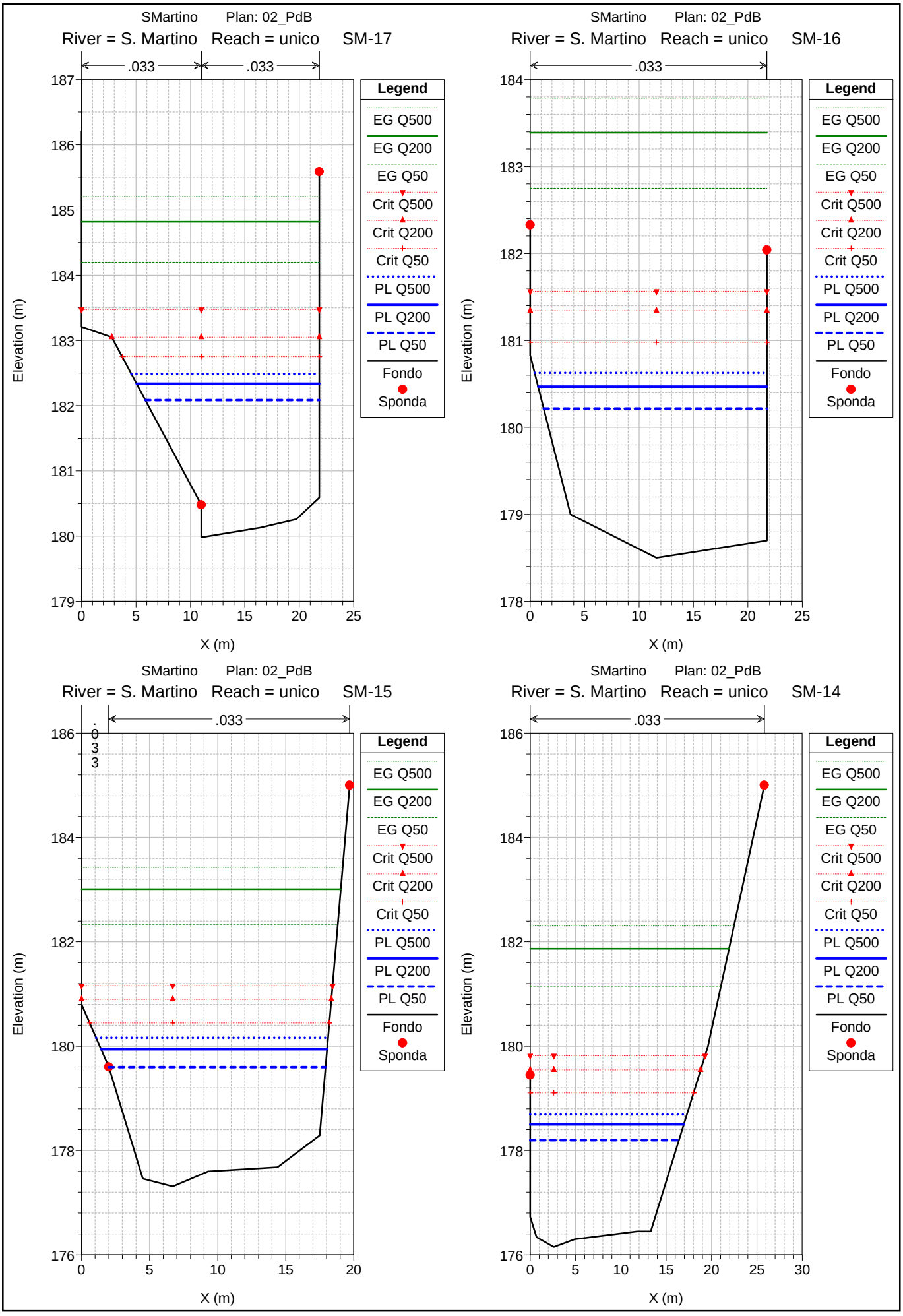


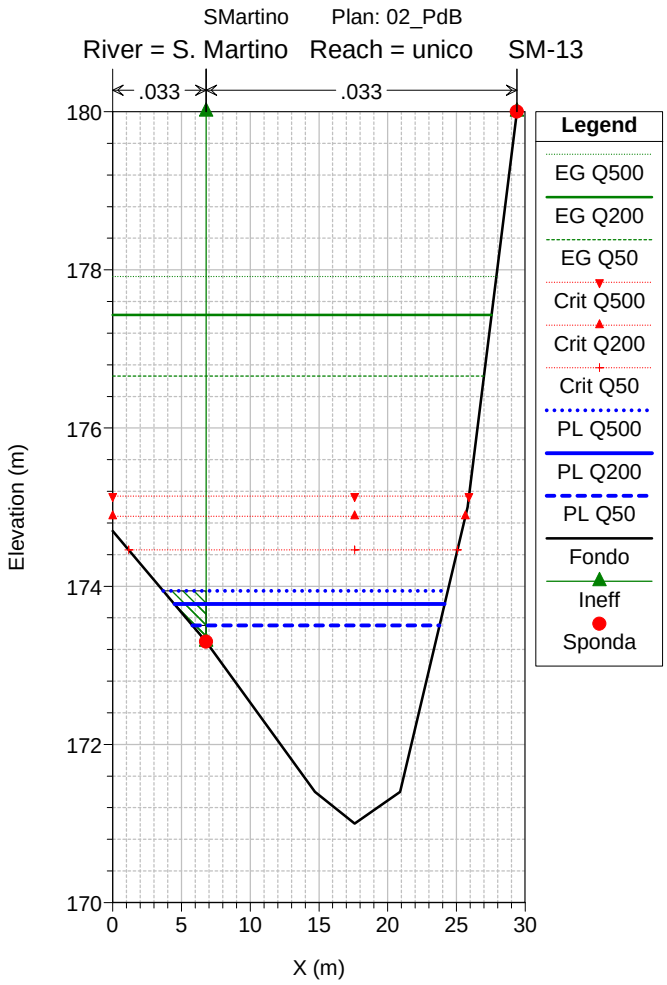

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-18
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
X (m)

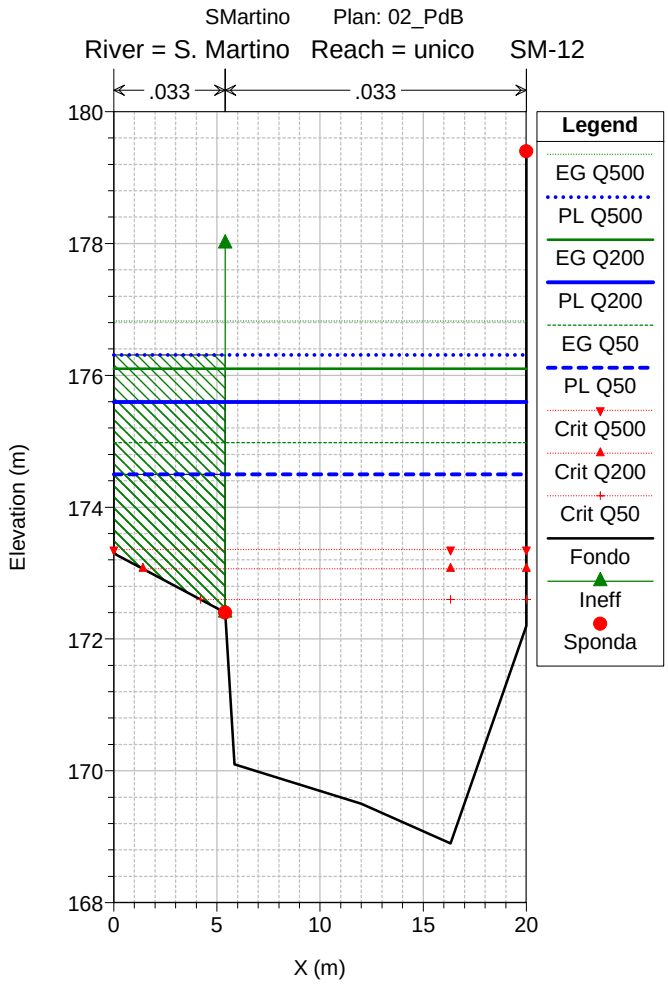

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-18
.033
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
X (m)

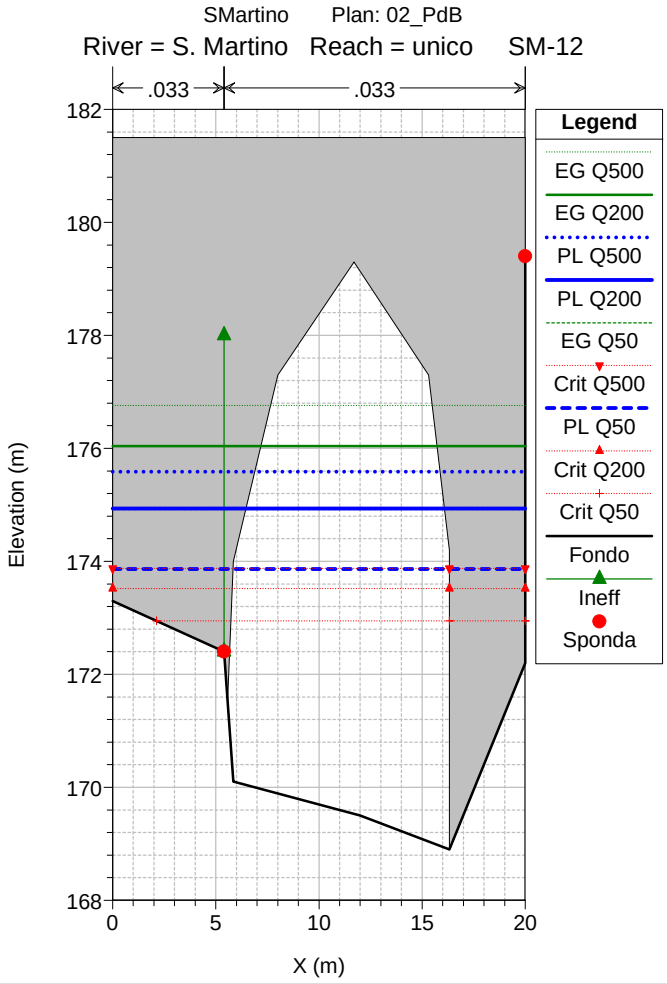

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-18
.033
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
X (m)

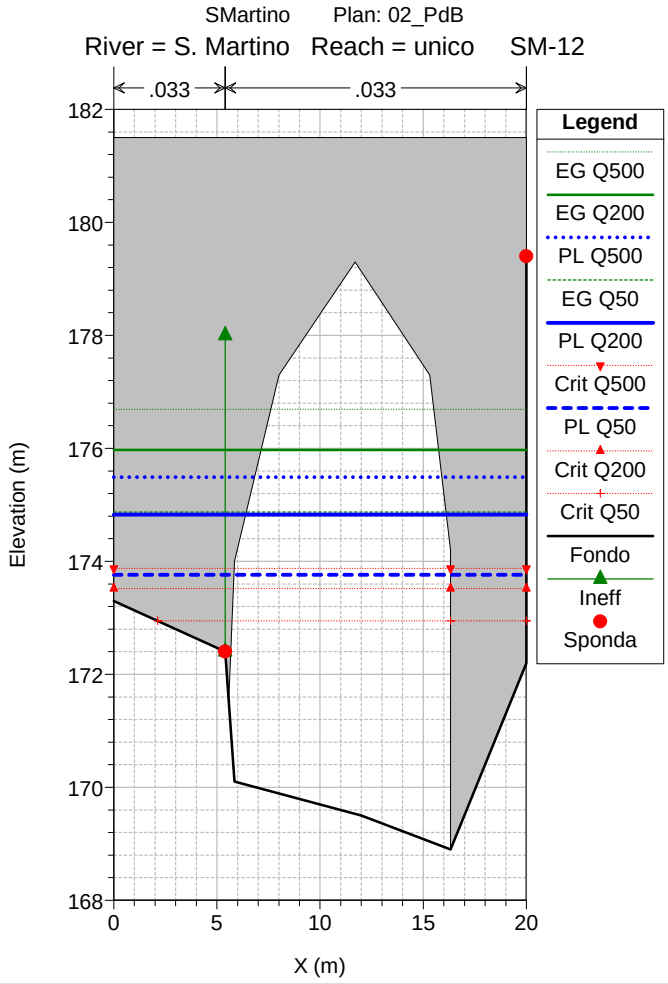

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-18
.033
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
X (m)

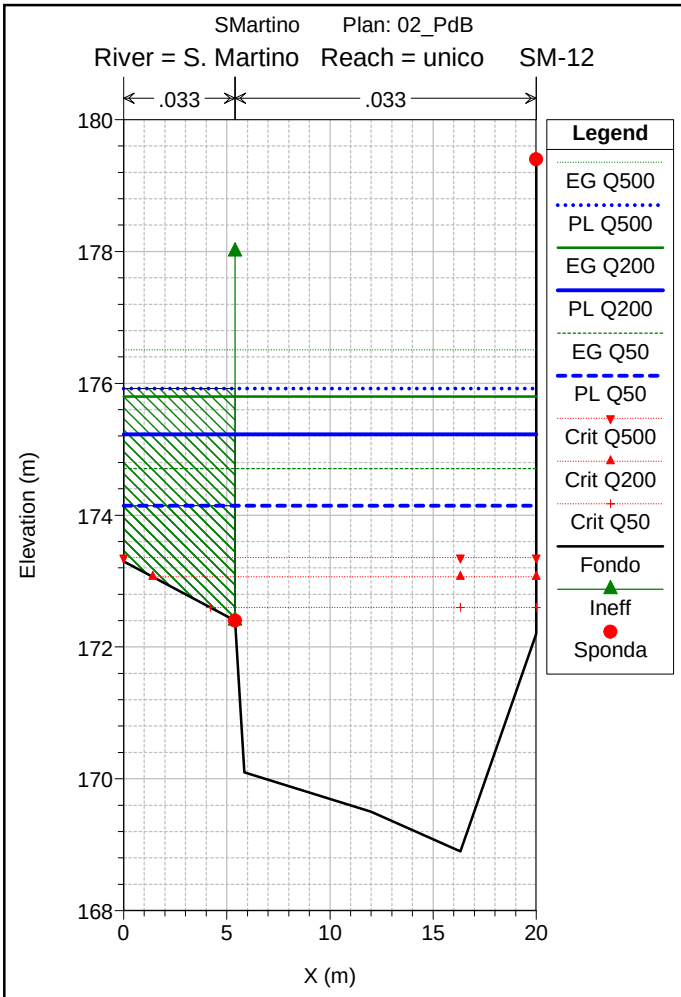

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-17
.033
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-16
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-15
.033
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-14
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda

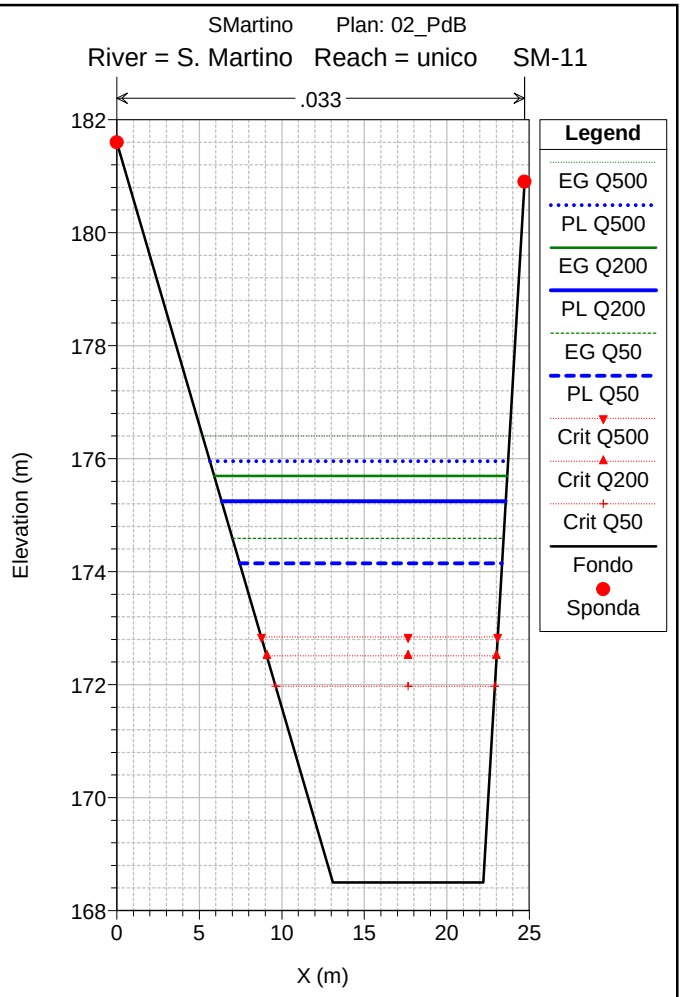

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-13
.033
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Ineff
Sponda

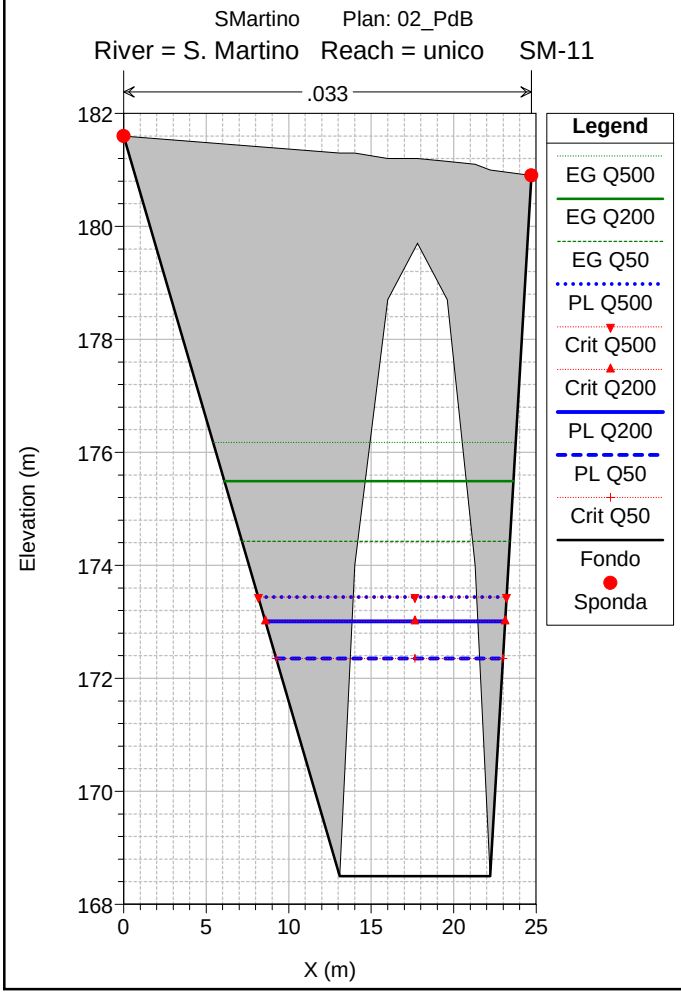

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-12
.033
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Ineff
Sponda

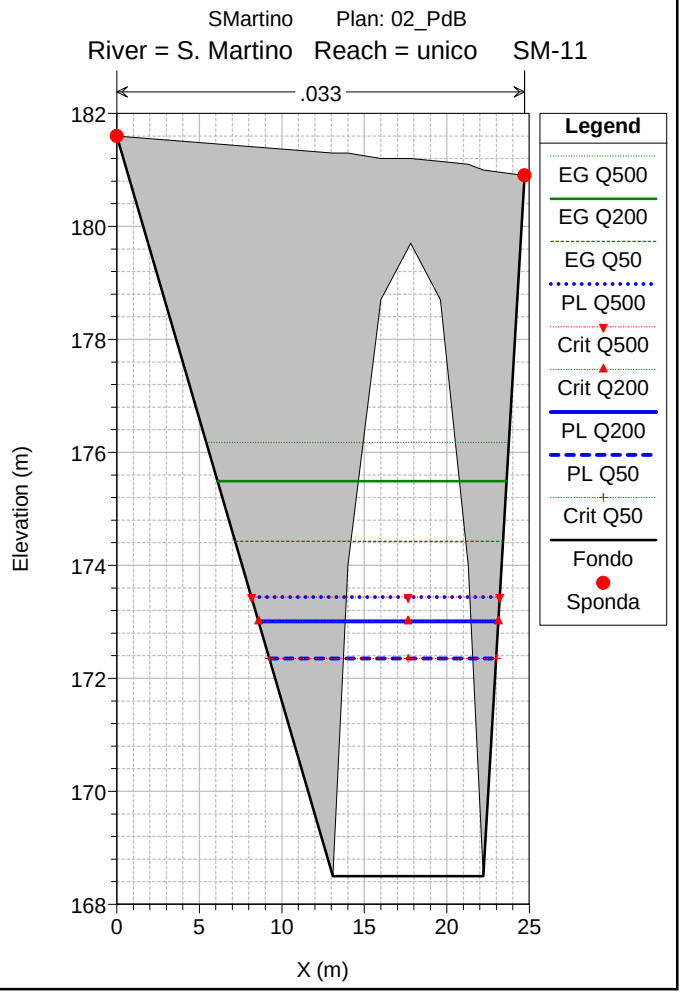

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-12
.033
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Ineff
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-12
.033
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
PL Q50
Crit Q200
Crit Q50
Fondo
Ineff
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-12
.033
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Ineff
Sponda

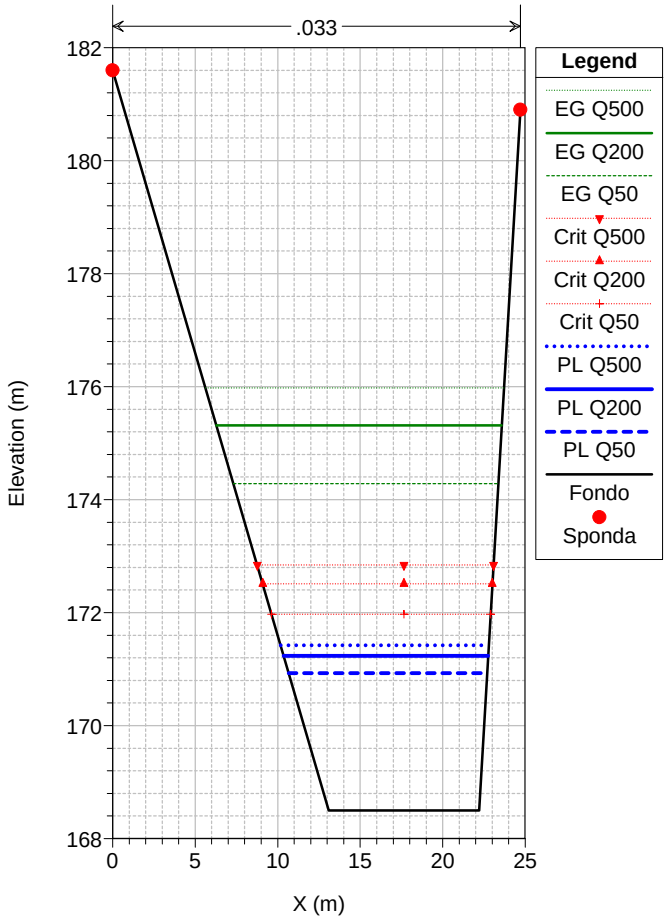

SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-11
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-11
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda


SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-11
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda

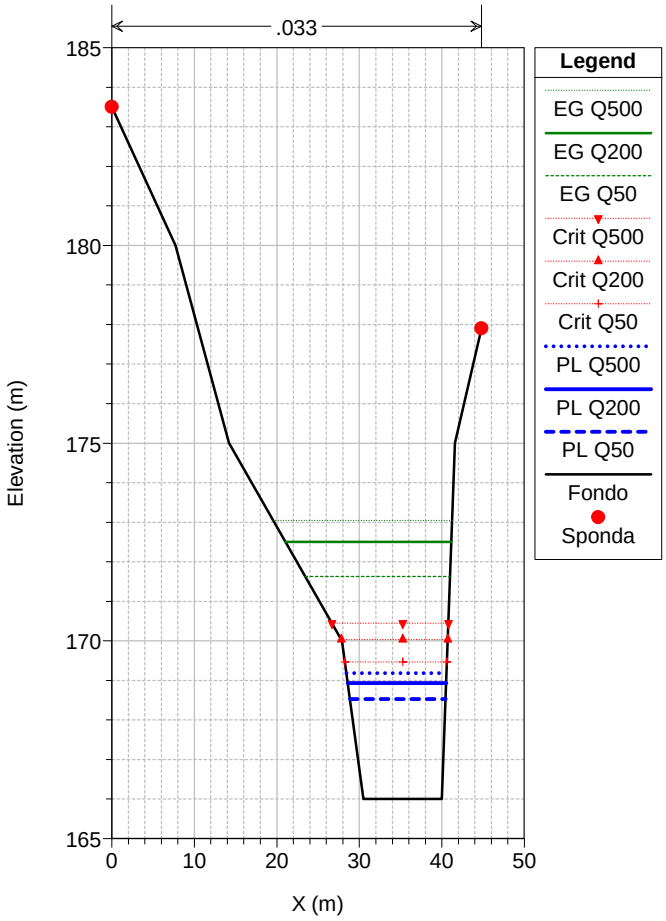
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-11



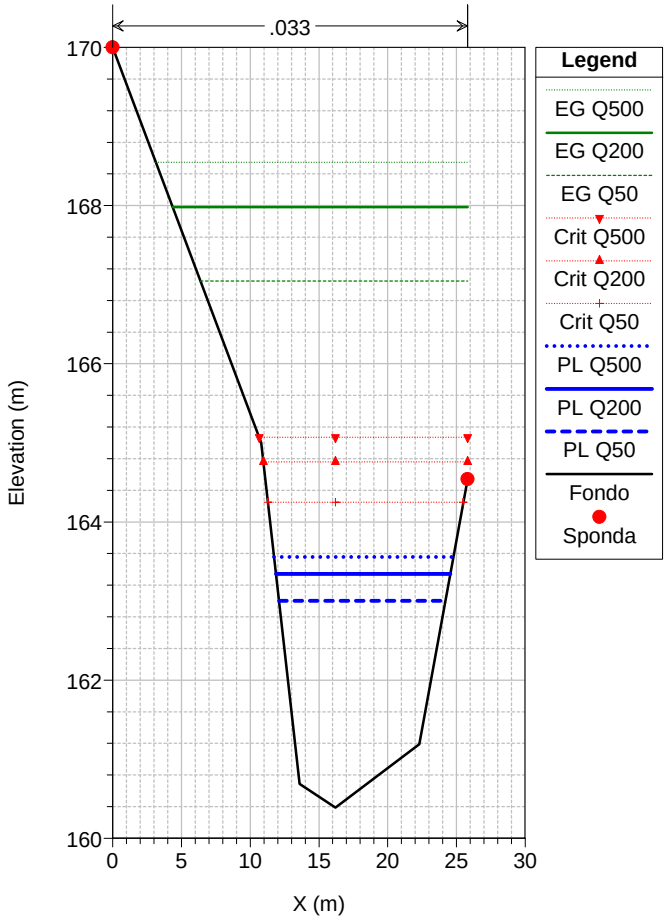
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-10



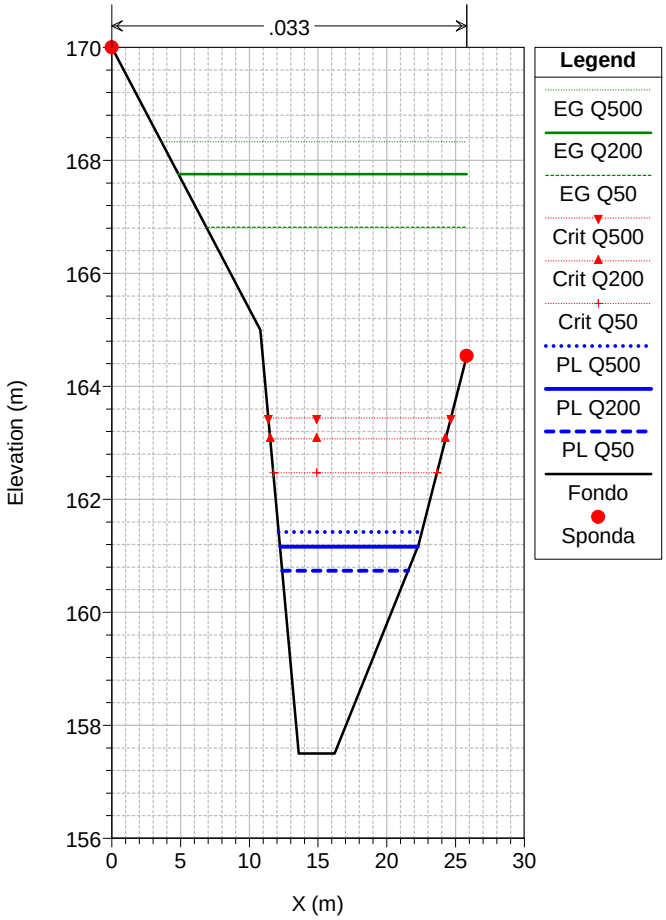
SMartino Plan: 02_PdB

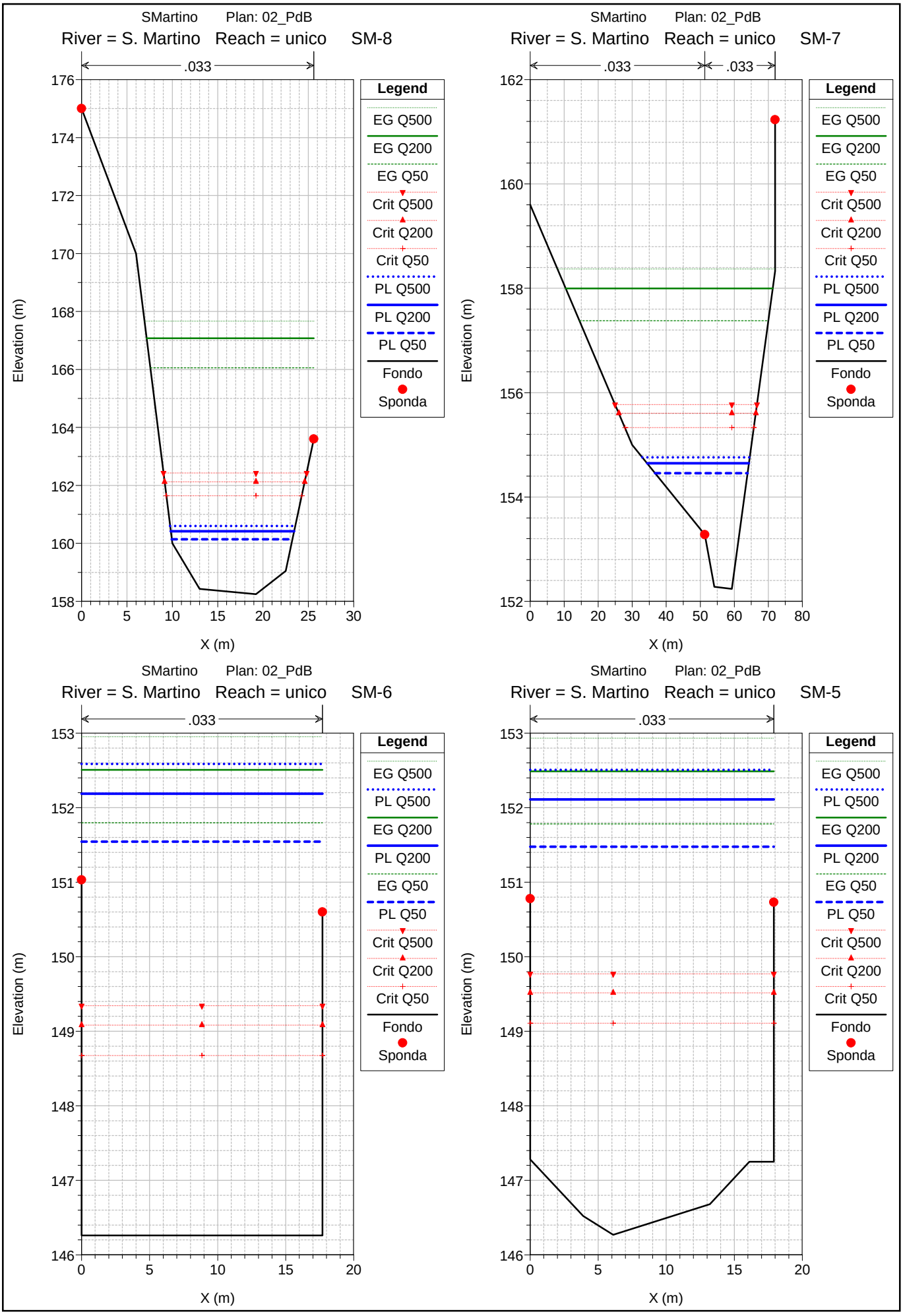
River = S. Martino Reach = unico SM-9



SMartino Plan: 02_PdB

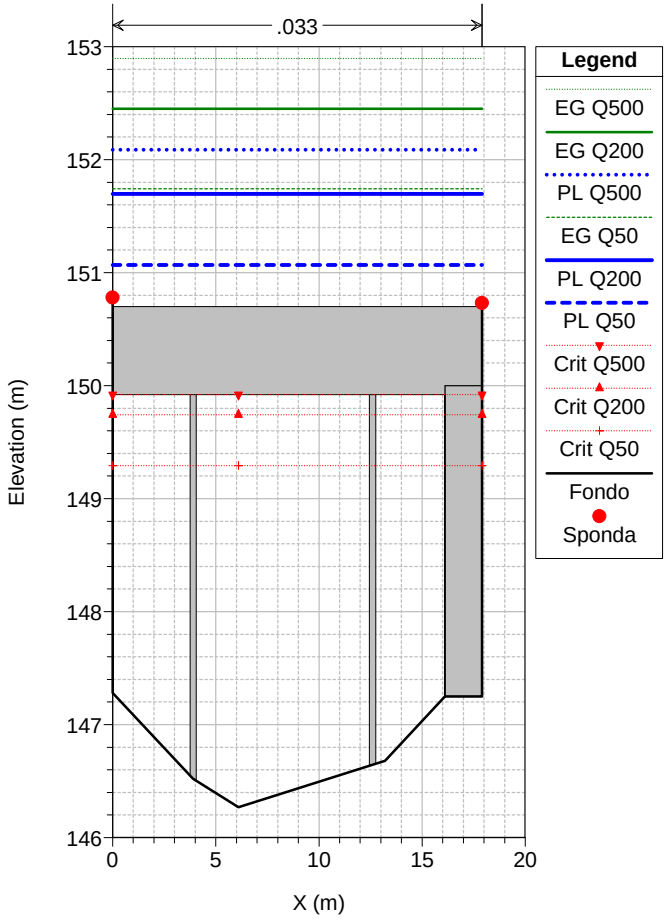
River = S. Martino Reach = unico SM-9




SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-8
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-7
.033
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-6
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-5
.033
Elevation (m)
X (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda

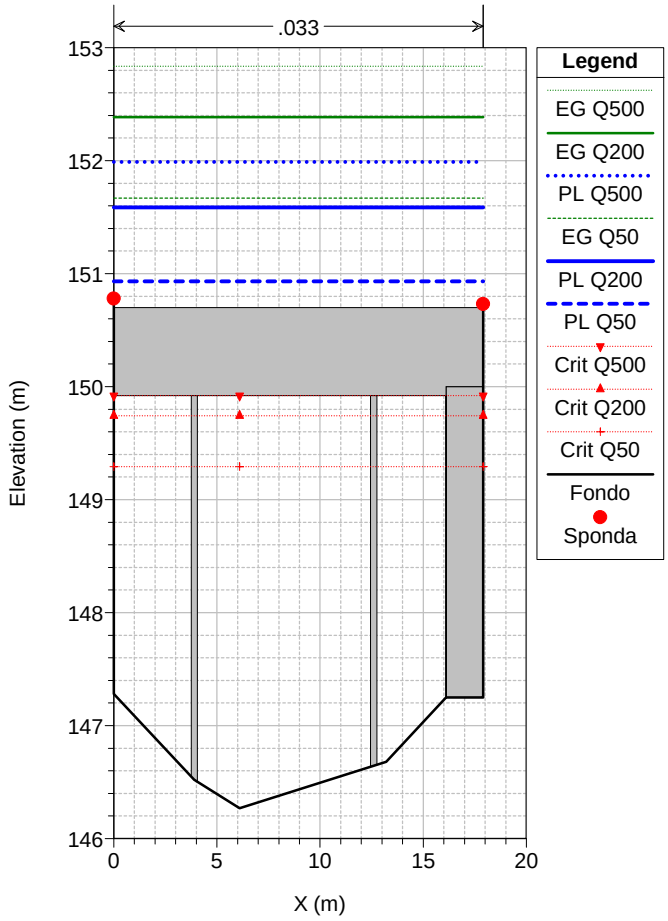
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-5



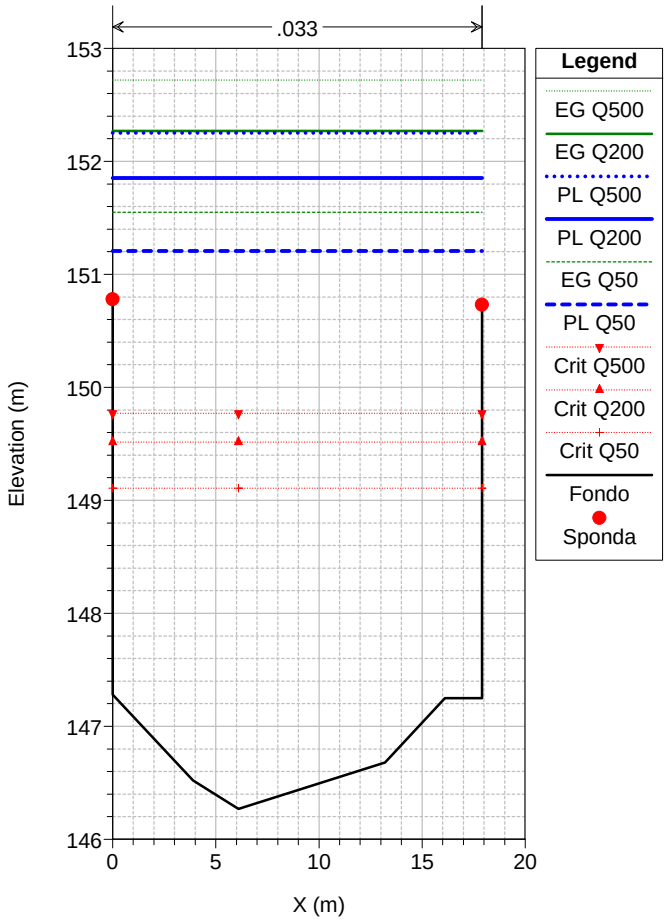
SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-5



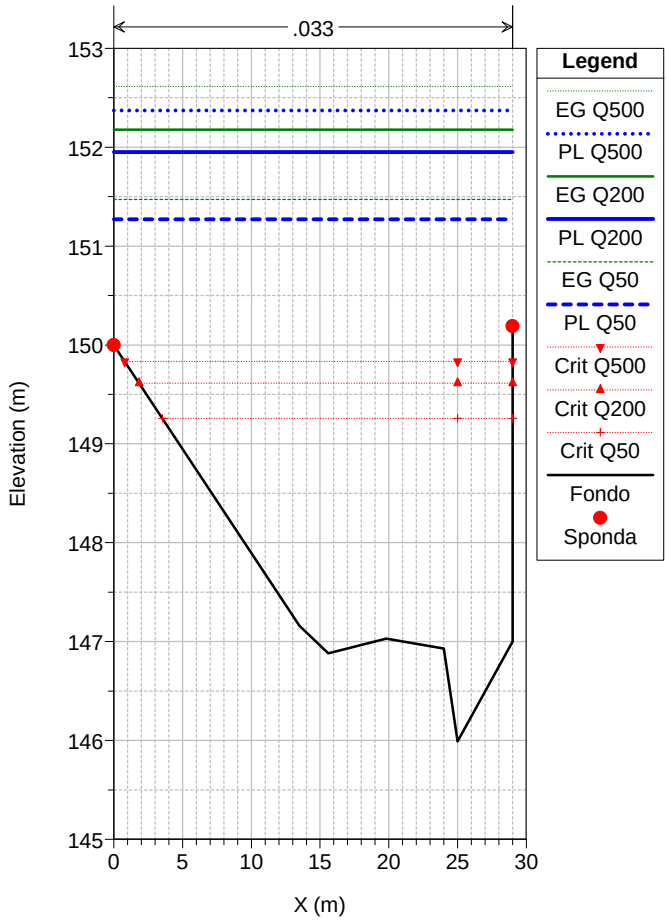
SMartino Plan: 02_PdB

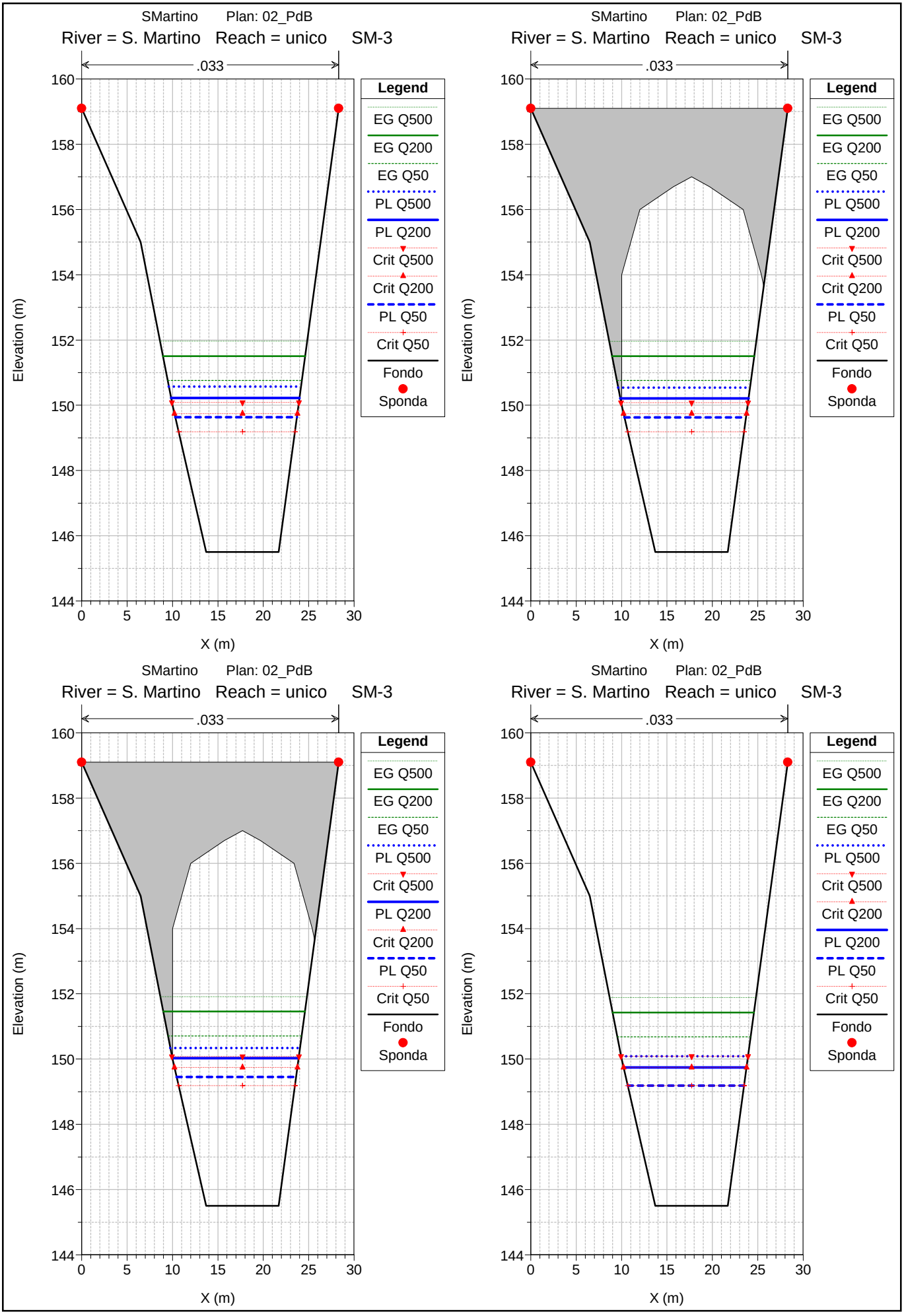
River = S. Martino Reach = unico SM-5



SMartino Plan: 02_PdB

River = S. Martino Reach = unico SM-4




SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-3
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-3
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-3
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
SMartino Plan: 02_PdB
River = S. Martino Reach = unico SM-3
.033
Elevation (m)
X (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda

HEC-RAS Plan: 02_PdB River: S. Martino Reach: unico

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)	
unico	39.2 SM-43	Q50	155.40	248.89	251.51	252.00	0.49	251.94	0.43	251.51	252.51	0.009458	4.44	34.99	17.34	1.00
unico	39.2 SM-43	Q200	196.10	248.89	253.57	252.00	-1.57	251.94	-1.63	251.88	253.94	0.001747	2.68	73.04	18.60	0.43
unico	39.2 SM-43	Q500	223.10	248.89	254.89	252.00	-2.89	251.94	-2.95	252.09	255.16	0.000989	2.28	97.66	18.60	0.32
unico	39.1 SM-43	Q50	155.40	247.95	249.81	252.00	2.19	251.94	2.13	250.62	252.34	0.032865	7.05	22.06	13.56	1.76
unico	39.1 SM-43	Q200	196.10	247.95	253.65	252.00	-1.65	251.94	-1.71	251.02	253.90	0.001031	2.23	87.77	18.60	0.33
unico	39.1 SM-43	Q500	223.10	247.95	254.94	252.00	-2.94	251.94	-3.00	251.27	255.14	0.000679	2.00	111.74	18.60	0.26
unico	39 SM-43	Q50	155.40	247.53	249.31	252.00	2.69	251.94	2.63	250.22	252.23	0.039896	7.57	20.52	12.95	1.92
unico	39 SM-43	Q200	196.10	247.53	253.67	252.00	-1.67	251.94	-1.73	250.64	253.89	0.000864	2.10	93.53	18.60	0.30
unico	39 SM-43	Q500	223.10	247.53	254.95	252.00	-2.95	251.94	-3.01	250.90	255.13	0.000595	1.90	117.36	18.60	0.24
unico	38.2 SM-42	Q50	155.40	246.52	250.46	253.42	2.96	252.90	2.44	250.08	251.53	0.008972	4.59	33.88	10.80	0.83
unico	38.2 SM-42	Q200	196.10	246.52	253.38	253.42	0.04	252.90	-0.48	250.55	253.83	0.002374	3.00	65.41	10.80	0.39
unico	38.2 SM-42	Q500	223.10	246.52	254.68	253.42	-1.26	252.90	-1.78	250.84	255.08	0.001852	2.80	79.55	10.80	0.33
unico	38.15		Bridge													
unico	38.1 SM-42	Q50	155.40	246.32	250.53	252.72	2.19	252.59	2.06	249.71	251.35	0.006167	4.01	38.74	10.80	0.68
unico	38.1 SM-42	Q200	196.10	246.32	251.41	252.72	1.31	252.59	1.18	250.18	252.25	0.005393	4.07	48.15	10.80	0.62
unico	38.1 SM-42	Q500	223.10	246.32	253.54	252.72	-0.82	252.59	-0.95	250.47	254.04	0.002465	3.13	71.24	10.80	0.39
unico	38. SM-42	Q50	155.40	246.32	250.52	252.72	2.20	252.59	2.07	249.71	251.35	0.006249	4.03	38.56	10.80	0.68
unico	38. SM-42	Q200	196.10	246.32	251.39	252.72	1.33	252.59	1.20	250.18	252.24	0.005435	4.08	48.01	10.80	0.62
unico	38. SM-42	Q500	223.10	246.32	253.54	252.72	-0.82	252.59	-0.95	250.47	254.04	0.002469	3.13	71.19	10.80	0.39
unico	37.3 SM-41	Q50	155.40	246.27	250.21	252.03	1.82	251.35	1.14	249.52	251.20	0.007503	4.41	35.20	9.50	0.73
unico	37.3 SM-41	Q200	196.10	246.27	251.07	252.03	0.96	251.35	0.28	250.02	252.11	0.006810	4.52	43.40	9.50	0.67
unico	37.3 SM-41	Q500	223.10	246.27	253.39	252.03	-1.36	251.35	-2.04	250.34	253.98	0.003055	3.41	65.40	9.50	0.42
unico	37.2 SM-41	Q50	155.40	246.27	250.19	252.03	1.84	251.35	1.16	249.52	251.19	0.007586	4.43	35.06	9.50	0.74
unico	37.2 SM-41	Q200	196.10	246.27	251.06	252.03	0.97	251.35	0.29	250.02	252.10	0.006859	4.53	43.28	9.50	0.68
unico	37.2 SM-41	Q500	223.10	246.27	253.38	252.03	-1.35	251.35	-2.03	250.34	253.98	0.003060	3.41	65.36	9.50	0.42
unico	37.15		Bridge													
unico	37.1 SM-41	Q50	155.40	246.27	249.82	252.03	2.21	251.35	1.53	249.52	251.06	0.010143	4.93	31.54	9.50	0.86
unico	37.1 SM-41	Q200	196.10	246.27	250.38	252.03	1.65	251.35	0.97	250.02	251.82	0.010541	5.32	36.87	9.50	0.86
unico	37.1 SM-41	Q500	223.10	246.27	250.72	252.03	1.31	251.35	0.63	250.34	252.30	0.010876	5.56	40.11	9.50	0.86
unico	37. SM-41	Q50	155.40	246.27	249.52	252.03	2.51	251.35	1.83	249.52	251.02	0.013273	5.43	28.62	9.50	1.00
unico	37. SM-41	Q200	196.10	246.27	250.02	252.03	2.01	251.35	1.33	250.02	251.77	0.013754	5.87	33.43	9.50	1.00
unico	37. SM-41	Q500	223.10	246.27	250.34	252.03	1.69	251.35	1.01	250.34	252.25	0.014107	6.13	36.41	9.50	1.00
unico	36.1 SM-40	Q50	155.40	246.05	247.74	250.00	2.26	248.58	0.84	248.48	250.23	0.040083	6.99	22.23	15.70	1.88
unico	36.1 SM-40	Q200	196.10	246.05	247.95	250.00	2.05	248.58	0.63	248.84	250.95	0.041404	7.67	25.55	15.70	1.92
unico	36.1 SM-40	Q500	223.10	246.05	248.08	250.00	1.92	248.58	0.50	249.07	251.40	0.041996	8.07	27.65	15.70	1.94
unico	36. SM-40	Q50	155.40	243.25	244.18	250.00	5.82	248.58	4.40	245.40	249.90	0.155283	10.59	14.67	15.70	3.50

HEC-RAS Plan: 02_PdB River: S. Martino Reach: unico (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)	
unico	36. SM-40	Q200	196.10	243.25	244.38	250.00	5.62	248.58	4.20	245.77	250.62	0.135830	11.07	17.72	15.70	3.33
unico	36. SM-40	Q500	223.10	243.25	244.50	250.00	5.50	248.58	4.08	245.99	251.07	0.126766	11.35	19.65	15.70	3.24
unico	35. SM-39	Q50	155.40	239.15	240.75	241.74	0.99	244.06	3.31	241.51	243.30	0.039859	7.07	21.98	14.59	1.84
unico	35. SM-39	Q200	196.10	239.15	240.99	241.74	0.75	244.06	3.07	241.88	244.00	0.040071	7.69	25.51	14.59	1.86
unico	35. SM-39	Q500	223.10	239.15	245.13	241.74	-3.39	244.06	-1.07	242.12	245.47	0.001510	2.60	85.80	14.59	0.34
unico	34.1 SM-38	Q50	155.40	236.29	239.55	238.84	-0.71	241.43	1.88	239.55	241.11	0.014428	5.54	28.07	8.96	1.00
unico	34.1 SM-38	Q200	196.10	236.29	240.07	238.84	-1.23	241.43	1.36	240.07	241.90	0.015024	5.99	32.76	8.96	1.00
unico	34.1 SM-38	Q500	223.10	236.29	244.88	238.84	-6.04	241.43	-3.45	240.41	245.32	0.002220	2.94	75.83	8.96	0.32
unico	34. SM-38	Q50	155.40	234.89	236.84	238.84	2.00	241.43	4.59	238.02	240.86	0.057053	8.88	17.49	8.96	2.03
unico	34. SM-38	Q200	196.10	234.89	237.25	238.84	1.59	241.43	4.18	238.55	241.64	0.052598	9.29	21.12	8.96	1.93
unico	34. SM-38	Q500	223.10	234.89	244.97	238.84	-6.13	241.43	-3.54	238.88	245.28	0.001469	2.47	90.32	8.96	0.25
unico	33.3 SM-37	Q50	155.40	234.47	238.54	237.27	-1.27	241.30	2.76	237.90	239.65	0.009220	4.68	33.19	8.61	0.76
unico	33.3 SM-37	Q200	196.10	234.47	239.40	237.27	-2.13	241.30	1.90	238.44	240.59	0.008588	4.83	40.58	8.61	0.71
unico	33.3 SM-37	Q500	223.10	234.47	244.90	237.27	-7.63	241.30	-3.60	238.78	245.23	0.001593	2.54	87.99	8.61	0.25
unico	33.2 SM-37	Q50	155.40	234.47	238.52	237.27	-1.25	241.30	2.78	237.90	239.65	0.009358	4.71	33.01	8.61	0.77
unico	33.2 SM-37	Q200	196.10	234.47	239.38	237.27	-2.11	241.30	1.92	238.44	240.58	0.008665	4.85	40.44	8.61	0.71
unico	33.2 SM-37	Q500	223.10	234.47	244.90	237.27	-7.63	241.30	-3.60	238.78	245.23	0.001594	2.54	87.97	8.61	0.25
unico	33.11 SM-37		Bridge													
unico	33.1 SM-37	Q50	155.40	234.27	238.03	237.27	-0.76	239.27	1.24	237.70	239.35	0.011547	5.09	30.55	8.61	0.86
unico	33.1 SM-37	Q200	196.10	234.27	238.63	237.27	-1.36	239.27	0.64	238.24	240.17	0.012051	5.49	35.72	8.61	0.86
unico	33.1 SM-37	Q500	223.10	234.27	239.00	237.27	-1.73	239.27	0.27	238.58	240.68	0.012462	5.74	38.86	8.61	0.86
unico	33. SM-37	Q50	155.40	234.27	237.70	237.27	-0.43	239.27	1.57	237.70	239.30	0.015092	5.61	27.71	8.61	1.00
unico	33. SM-37	Q200	196.10	234.27	237.81	237.27	-0.54	239.27	1.46	238.24	240.20	0.021897	6.84	28.66	8.61	1.20
unico	33. SM-37	Q500	223.10	234.27	238.58	237.27	-1.31	239.27	0.69	238.58	240.62	0.016165	6.33	35.25	8.61	1.00
unico	32.3 SM-36	Q50	155.40	225.61	228.18	234.20	6.02	234.20	6.02	229.61	233.19	0.075554	9.91	15.68	7.73	2.22
unico	32.3 SM-36	Q200	196.10	225.61	235.40	234.20	-1.20	234.20	-1.20	230.19	235.78	0.002188	2.75	71.43	7.73	0.29
unico	32.3 SM-36	Q500	223.10	225.61	234.53	234.20	-0.33	234.20	-0.33	230.55	235.14	0.003587	3.44	64.78	7.73	0.38
unico	32.2 SM-36	Q50	155.40	225.61	228.21	234.20	5.99	234.20	5.99	229.61	233.07	0.072321	9.76	15.92	7.73	2.17
unico	32.2 SM-36	Q200	196.10	225.61	235.39	234.20	-1.19	234.20	-1.19	230.19	235.78	0.002189	2.75	71.41	7.73	0.29
unico	32.2 SM-36	Q500	223.10	225.61	234.53	234.20	-0.33	234.20	-0.33	230.55	235.14	0.003592	3.45	64.74	7.73	0.38
unico	32.11 SM-36		Bridge													
unico	32.1 SM-36	Q50	155.40	225.41	228.15	234.20	6.05	234.20	6.05	229.41	232.41	0.059835	9.14	17.00	7.73	1.97
unico	32.1 SM-36	Q200	196.10	225.41	230.42	234.20	3.78	234.20	3.78	229.99	232.06	0.013624	5.68	34.51	7.73	0.86
unico	32.1 SM-36	Q500	223.10	225.41	230.81	234.20	3.39	234.20	3.39	230.35	232.61	0.014144	5.94	37.55	7.73	0.86
unico	32. SM-36	Q50	155.40	225.41	228.21	234.20	5.99	234.20	5.99	229.41	232.26	0.055872	8.92	17.42	7.73	1.90
unico	32. SM-36	Q200	196.10	225.41	229.99	234.20	4.21	234.20	4.21	229.99	232.00	0.017777	6.28	31.21	7.73	1.00

HEC-RAS Plan: 02_PdB River: S. Martino Reach: unico (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)	
unico	32. SM-36	Q500	223.10	225.41	230.35	234.20	3.85	234.20	3.85	230.35	232.55	0.018345	6.56	34.00	7.73	1.00
unico	31. SM-35	Q50	155.40	223.77	225.70	225.37	-0.33	226.60	0.90	226.70	229.06	0.047016	8.12	19.14	10.38	1.91
unico	31. SM-35	Q200	196.10	223.77	226.09	225.37	-0.72	226.60	0.51	227.18	229.74	0.042598	8.47	23.16	10.38	1.81
unico	31. SM-35	Q500	223.10	223.77	226.30	225.37	-0.93	226.60	0.30	227.48	230.26	0.042693	8.82	25.28	10.38	1.80
unico	30. SM-34	Q50	155.40	222.22	225.07	224.62	-0.45	227.22	2.15	225.87	227.86	0.035743	7.40	21.01	9.65	1.60
unico	30. SM-34	Q200	196.10	222.22	227.84	224.62	-3.22	227.22	-0.62	226.37	228.70	0.005702	4.11	47.75	9.65	0.59
unico	30. SM-34	Q500	223.10	222.22	228.53	224.62	-3.91	227.22	-1.31	226.69	229.39	0.005222	4.10	54.42	9.65	0.55
unico	29.3 SM-33	Q50	155.40	221.49	225.82	225.59	-0.23	225.59	-0.23	225.25	227.18	0.011974	5.16	30.09	7.14	0.80
unico	29.3 SM-33	Q200	196.10	221.49	227.41	225.59	-1.82	225.59	-1.82	225.86	228.55	0.008405	4.73	41.47	7.14	0.63
unico	29.3 SM-33	Q500	223.10	221.49	228.03	225.59	-2.44	225.59	-2.44	226.23	229.24	0.008445	4.86	45.91	7.14	0.61
unico	29.2 SM-33	Q50	155.40	221.49	225.56	225.59	0.03	225.59	0.03	225.30	227.14	0.014724	5.57	27.90	7.14	0.90
unico	29.2 SM-33	Q200	196.10	221.49	227.36	225.59	-1.77	225.59	-1.77	225.91	228.54	0.008862	4.82	40.71	7.14	0.64
unico	29.2 SM-33	Q500	223.10	221.49	227.98	225.59	-2.39	225.59	-2.39	226.29	229.22	0.008841	4.94	45.19	7.14	0.63
unico	29.11 SM-33		Bridge													
unico	29.1 SM-33	Q50	155.40	221.29	225.54	225.59	0.05	225.59	0.05	225.15	227.02	0.013372	5.38	28.86	7.14	0.85
unico	29.1 SM-33	Q200	196.10	221.29	226.21	225.59	-0.62	225.59	-0.62	225.76	227.94	0.014352	5.84	33.59	7.14	0.86
unico	29.1 SM-33	Q500	223.10	221.29	226.62	225.59	-1.03	225.59	-1.03	226.14	228.52	0.014969	6.10	36.55	7.14	0.86
unico	29. SM-33	Q50	155.40	221.29	225.15	225.59	0.44	225.59	0.44	225.15	226.96	0.017572	5.97	26.02	7.14	1.00
unico	29. SM-33	Q200	196.10	221.29	225.76	225.59	-0.16	225.59	-0.16	225.76	227.88	0.018648	6.46	30.36	7.14	1.00
unico	29. SM-33	Q500	223.10	221.29	226.14	225.59	-0.55	225.59	-0.55	226.14	228.45	0.019330	6.74	33.08	7.14	1.00
unico	28.5	Q50	155.40	221.00	224.53	226.50	1.97	223.40	-1.13	223.97	225.46	0.006923	4.27	36.37	11.28	0.76
unico	28.5	Q200	196.10	221.00	225.26	226.50	1.24	223.40	-1.86	224.44	226.24	0.006224	4.39	44.71	11.55	0.71
unico	28.5	Q500	223.10	221.00	225.72	226.50	0.78	223.40	-2.32	224.73	226.73	0.005933	4.46	50.02	11.72	0.69
unico	28.1 SM-32	Q50	155.40	220.54	223.70	225.67	1.97	226.44	2.74	223.70	225.22	0.014358	5.46	28.45	9.32	1.00
unico	28.1 SM-32	Q200	196.10	220.54	224.21	225.67	1.46	226.44	2.23	224.21	225.99	0.014866	5.90	33.21	9.32	1.00
unico	28.1 SM-32	Q500	223.10	220.54	224.53	225.67	1.14	226.44	1.91	224.53	226.47	0.015244	6.17	36.16	9.32	1.00
unico	28. SM-32	Q50	155.40	219.29	224.00	225.67	1.67	226.44	2.44	222.34	224.64	0.004380	3.54	43.92	9.32	0.52
unico	28. SM-32	Q200	196.10	219.29	221.63	225.67	4.04	226.44	4.81	222.85	225.75	0.048896	9.00	21.79	9.32	1.88
unico	28. SM-32	Q500	223.10	219.29	221.88	225.67	3.79	226.44	4.56	223.17	226.23	0.047043	9.24	24.16	9.32	1.83
unico	27.3 SM-31	Q50	155.40	219.16	223.62	226.29	2.67	226.28	2.66	223.24	224.50	0.008338	4.16	37.38	13.57	0.80
unico	27.3 SM-31	Q200	196.10	219.16	224.07	226.29	2.22	226.28	2.21	223.63	225.11	0.008520	4.51	43.44	13.57	0.81
unico	27.3 SM-31	Q500	223.10	219.16	224.34	226.29	1.95	226.28	1.94	223.89	225.48	0.008700	4.73	47.12	13.57	0.81
unico	27.2 SM-31	Q50	155.40	219.16	223.58	226.29	2.71	226.28	2.70	223.24	224.49	0.008689	4.22	36.86	13.57	0.82
unico	27.2 SM-31	Q200	196.10	219.16	224.03	226.29	2.26	226.28	2.25	223.63	225.09	0.008849	4.57	42.88	13.57	0.82
unico	27.2 SM-31	Q500	223.10	219.16	224.29	226.29	1.99	226.28	1.98	223.89	225.47	0.009020	4.79	46.54	13.57	0.83
unico	27.11 SM-31		Bridge													

HEC-RAS Plan: 02_PdB River: S. Martino Reach: unico (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)	
unico	27.1 SM-31	Q50	155.40	219.16	223.51	226.29	2.78	226.28	2.77	223.24	224.46	0.009458	4.34	35.83	13.57	0.85
unico	27.1 SM-31	Q200	196.10	219.16	223.95	226.29	2.34	226.28	2.33	223.63	225.07	0.009525	4.69	41.82	13.57	0.85
unico	27.1 SM-31	Q500	223.10	219.16	224.21	226.29	2.08	226.28	2.07	223.89	225.44	0.009675	4.91	45.43	13.57	0.86
unico	27. SM-31	Q50	155.40	219.16	223.24	226.29	3.05	226.28	3.04	223.24	224.43	0.013022	4.83	32.20	13.57	1.00
unico	27. SM-31	Q200	196.10	219.16	223.63	226.29	2.65	226.28	2.64	223.63	225.02	0.013067	5.22	37.58	13.57	1.00
unico	27. SM-31	Q500	223.10	219.16	223.89	226.29	2.40	226.28	2.39	223.89	225.40	0.013084	5.44	40.99	13.57	1.00
unico	26. SM-30	Q50	155.40	218.85	221.06	225.93	4.87	223.05	1.99	221.82	223.61	0.040426	7.09	21.93	16.73	1.98
unico	26. SM-30	Q200	196.10	218.85	221.29	225.93	4.64	223.05	1.76	222.15	224.21	0.040642	7.57	25.90	17.91	2.01
unico	26. SM-30	Q500	223.10	218.85	221.42	225.93	4.51	223.05	1.63	222.35	224.57	0.040380	7.87	28.35	18.30	2.02
unico	25. SM-29	Q50	155.40	218.39	220.53	224.39	3.86	224.08	3.55	221.35	223.11	0.037049	7.13	21.80	13.68	1.80
unico	25. SM-29	Q200	196.10	218.39	220.83	224.39	3.56	224.08	3.25	221.72	223.70	0.035404	7.50	26.16	14.53	1.78
unico	25. SM-29	Q500	223.10	218.39	221.02	224.39	3.37	224.08	3.06	221.95	224.06	0.034834	7.73	28.86	15.03	1.78
unico	24. SM-28	Q50	155.40	211.44	212.92	216.13	3.21	216.43	3.51	213.79	215.93	0.059146	7.70	20.19	17.70	2.30
unico	24. SM-28	Q200	196.10	211.44	213.10	216.13	3.03	216.43	3.33	214.12	216.65	0.059526	8.35	23.47	18.11	2.34
unico	24. SM-28	Q500	223.10	211.44	213.21	216.13	2.92	216.43	3.22	214.32	217.10	0.059621	8.73	25.55	18.36	2.36
unico	23. SM-27	Q50	155.40	210.47	212.77	214.92	2.15	213.04	0.27	213.15	214.39	0.017748	5.63	27.60	14.33	1.29
unico	23. SM-27	Q200	196.10	210.47	213.07	214.92	1.85	213.04	-0.03	213.58	214.99	0.018425	6.14	31.97	14.90	1.33
unico	23. SM-27	Q500	223.10	210.47	213.25	214.92	1.67	213.04	-0.21	213.82	215.37	0.018576	6.45	34.67	15.63	1.35
unico	22. SM-26	Q50	155.40	209.30	212.04	214.21	2.17	215.00	2.96	212.39	213.47	0.018044	5.30	29.34	16.82	1.28
unico	22. SM-26	Q200	196.10	209.30	212.30	214.21	1.91	215.00	2.70	212.76	214.01	0.019301	5.79	33.86	17.74	1.34
unico	22. SM-26	Q500	223.10	209.30	212.45	214.21	1.76	215.00	2.55	212.99	214.35	0.020195	6.10	36.57	18.27	1.38
unico	21.9 SM-26	Q50	155.40	206.00	207.75	214.21	6.46	215.00	7.25	209.10	213.06	0.096890	10.21	15.22	11.85	2.88
unico	21.9 SM-26	Q200	196.10	206.00	208.04	214.21	6.17	215.00	6.96	209.52	213.61	0.084283	10.45	18.76	12.47	2.72
unico	21.9 SM-26	Q500	223.10	206.00	208.22	214.21	5.99	215.00	6.78	209.76	213.95	0.078580	10.60	21.04	12.85	2.65
unico	21. SM-25	Q50	155.40	196.00	198.48	205.00	6.52	215.00	16.52	199.48	201.60	0.040868	7.82	19.88	12.51	1.98
unico	21. SM-25	Q200	196.10	196.00	198.78	205.00	6.22	215.00	16.22	199.89	202.27	0.040627	8.28	23.68	13.56	2.00
unico	21. SM-25	Q500	223.10	196.00	198.95	205.00	6.05	215.00	16.05	200.13	202.68	0.040612	8.56	26.07	14.19	2.01
unico	20. SM-24	Q50	155.40	190.00	191.87	206.00	14.13	192.00	0.13	192.91	195.33	0.050835	8.24	18.87	13.17	2.20
unico	20. SM-24	Q200	196.10	190.00	192.12	206.00	13.88	192.00	-0.12	193.28	196.08	0.049846	8.82	22.27	14.28	2.21
unico	20. SM-24	Q500	223.10	190.00	192.27	206.00	13.73	192.00	-0.27	193.50	196.53	0.048646	9.15	24.51	15.15	2.21
unico	19.1 SM-23	Q50	155.40	186.30	187.43	202.40	14.97	202.40	14.97	188.16	189.93	0.052187	7.00	22.21	19.60	2.10
unico	19.1 SM-23	Q200	196.10	186.30	187.60	202.40	14.80	202.40	14.80	188.47	190.63	0.054231	7.72	25.40	19.60	2.17
unico	19.1 SM-23	Q500	223.10	186.30	187.70	202.40	14.70	202.40	14.70	188.66	191.08	0.055428	8.15	27.36	19.60	2.20
unico	19. SM-23	Bridge														
unico	18.9 SM-23	Q50	155.40	186.30	188.88	202.40	13.52	202.40	13.52	188.16	189.36	0.003976	3.07	50.54	19.60	0.61
unico	18.9 SM-23	Q200	196.10	186.30	187.75	202.40	14.65	202.40	14.65	188.47	190.18	0.038216	6.91	28.36	19.60	1.83

HEC-RAS Plan: 02_PdB River: S. Martino Reach: unico (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)	
unico	18.9 SM-23	Q500	223.10	186.30	187.84	202.40	14.56	202.40	14.56	188.66	190.62	0.040521	7.38	30.21	19.60	1.90
unico	18. SM-22	Q50	155.40	184.79	187.75	187.94	0.19	190.00	2.25	187.04	188.13	0.003189	2.75	56.57	26.27	0.60
unico	18. SM-22	Q200	196.10	184.79	188.29	187.94	-0.35	190.00	1.71	187.34	188.67	0.002558	2.75	71.49	29.17	0.55
unico	18. SM-22	Q500	223.10	184.79	188.63	187.94	-0.69	190.00	1.37	187.52	189.01	0.002258	2.75	81.76	31.34	0.52
unico	17.5 SM-21.5	Q50	155.40	184.21	186.83	185.38	-1.45	188.00	1.17	186.83	187.91	0.010484	4.61	33.69	15.46	1.00
unico	17.5 SM-21.5	Q200	196.10	184.21	187.20	185.38	-1.82	188.00	0.80	187.20	188.46	0.010436	4.97	39.43	15.63	1.00
unico	17.5 SM-21.5	Q500	223.10	184.21	187.43	185.38	-2.05	188.00	0.57	187.43	188.80	0.010373	5.18	43.11	15.74	1.00
unico	17. SM-21	Q50	155.40	183.05	185.27	186.90	1.63	188.00	2.73	185.90	187.41	0.026587	6.48	23.99	14.45	1.60
unico	17. SM-21	Q200	196.10	183.05	185.60	186.90	1.30	188.00	2.40	186.28	187.96	0.024762	6.81	28.79	14.99	1.57
unico	17. SM-21	Q500	223.10	183.05	187.38	186.90	-0.48	188.00	0.62	186.52	188.18	0.004510	3.97	56.14	15.74	0.67
unico	16. SM-20.5	Q50	155.40	182.59	186.27	186.00	-0.27	188.00	1.73	185.47	186.95	0.004683	3.65	42.54	13.69	0.66
unico	16. SM-20.5	Q200	196.10	182.59	186.89	186.00	-0.89	188.00	1.11	185.89	187.64	0.004438	3.83	51.21	14.16	0.64
unico	16. SM-20.5	Q500	223.10	182.59	187.28	186.00	-1.28	188.00	0.72	186.16	188.07	0.004319	3.93	56.77	14.45	0.63
unico	15. SM-20	Q50	155.40	182.35	185.37	185.00	-0.37	188.00	2.63	185.37	186.72	0.011681	5.16	30.13	11.11	1.00
unico	15. SM-20	Q200	196.10	182.35	185.84	185.00	-0.84	188.00	2.16	185.84	187.40	0.011801	5.54	35.40	11.27	1.00
unico	15. SM-20	Q500	223.10	182.35	186.13	185.00	-1.13	188.00	1.87	186.13	187.82	0.011924	5.77	38.69	11.36	1.00
unico	14.6 SM-19	Q50	155.40	182.35	184.23	184.40	0.17	190.00	5.77	184.89	186.44	0.029158	6.60	23.56	14.90	1.67
unico	14.6 SM-19	Q200	196.10	182.35	184.48	184.40	-0.08	190.00	5.52	185.27	187.10	0.029914	7.17	27.33	15.33	1.72
unico	14.6 SM-19	Q500	223.10	182.35	184.63	184.40	-0.23	190.00	5.37	185.50	187.51	0.030160	7.51	29.69	15.43	1.73
unico	14.5 SM-19	Q50	155.40	181.72	183.39	184.40	1.01	190.00	6.61	184.30	186.36	0.043782	7.64	20.34	13.85	2.01
unico	14.5 SM-19	Q200	196.10	181.72	183.66	184.40	0.74	190.00	6.34	184.68	187.02	0.041849	8.12	24.15	14.31	2.00
unico	14.5 SM-19	Q500	223.10	181.72	183.83	184.40	0.57	190.00	6.17	184.91	187.43	0.041046	8.41	26.53	14.60	1.99
unico	14.3 SM-18.5	Q50	155.40	181.20	182.73	184.40	1.67	190.00	7.27	183.65	185.81	0.047908	7.77	20.00	14.13	2.08
unico	14.3 SM-18.5	Q200	196.10	181.20	182.99	184.40	1.41	190.00	7.01	184.04	186.48	0.045879	8.29	23.67	14.49	2.07
unico	14.3 SM-18.5	Q500	223.10	181.20	183.15	184.40	1.25	190.00	6.85	184.28	186.90	0.044849	8.58	25.99	14.71	2.06
unico	14.2 SM-18	Q50	155.40	180.82	183.14	183.92	0.78	183.92	0.78	183.70	185.25	0.026805	6.44	24.14	11.84	1.44
unico	14.2 SM-18	Q200	196.10	180.82	183.54	183.92	0.38	183.92	0.38	184.13	185.89	0.024909	6.78	28.92	11.84	1.38
unico	14.2 SM-18	Q500	223.10	180.82	183.83	183.92	0.09	183.92	0.09	184.41	186.26	0.023373	6.91	32.27	11.84	1.34
unico	14.11 SM-18		Bridge													
unico	14.1 SM-18	Q50	155.40	180.82	183.70	183.92	0.22	183.92	0.22	183.70	185.00	0.013040	5.05	30.77	11.84	1.00
unico	14.1 SM-18	Q200	196.10	180.82	184.13	183.92	-0.20	183.92	-0.20	184.13	185.65	0.013342	5.48	35.81	11.84	1.01
unico	14.1 SM-18	Q500	223.10	180.82	184.41	183.92	-0.49	183.92	-0.49	184.41	186.06	0.013329	5.69	39.18	11.84	1.00
unico	13. SM-17	Q50	155.40	179.98	182.09	180.48	-1.61	185.59	3.50	182.75	184.20	0.025556	6.67	24.92	15.98	1.54
unico	13. SM-17	Q200	196.10	179.98	182.34	180.48	-1.86	185.59	3.25	183.05	184.82	0.026469	7.27	29.03	16.78	1.58
unico	13. SM-17	Q500	223.10	179.98	182.49	180.48	-2.01	185.59	3.10	183.48	185.21	0.027083	7.63	31.58	17.26	1.60
unico	12. SM-16	Q50	208.00	178.50	180.22	182.33	2.11	182.04	1.82	180.98	182.75	0.037350	7.05	29.50	20.51	1.88

HEC-RAS Plan: 02_PdB River: S. Martino Reach: unico (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)	
unico	12. SM-16	Q200	263.00	178.50	180.47	182.33	1.86	182.04	1.57	181.34	183.39	0.036399	7.58	34.72	21.02	1.88
unico	12. SM-16	Q500	300.00	178.50	180.63	182.33	1.70	182.04	1.41	181.57	183.79	0.035793	7.87	38.10	21.34	1.88
unico	11.9 SM-15	Q50	208.00	177.31	179.60	179.60	0.00	185.00	5.40	180.44	182.34	0.031387	7.34	28.35	15.92	1.76
unico	11.9 SM-15	Q200	263.00	177.31	179.94	179.60	-0.34	185.00	5.06	180.90	183.01	0.028512	7.76	33.95	16.61	1.71
unico	11.9 SM-15	Q500	300.00	177.31	180.16	179.60	-0.56	185.00	4.84	181.16	183.42	0.027038	8.01	37.65	17.05	1.68
unico	11.8 SM-14	Q50	208.00	176.15	178.20	179.45	1.25	185.00	6.80	179.10	181.15	0.037436	7.62	27.31	16.40	1.88
unico	11.8 SM-14	Q200	263.00	176.15	178.50	179.45	0.95	185.00	6.50	179.55	181.87	0.036317	8.13	32.35	16.94	1.88
unico	11.8 SM-14	Q500	300.00	176.15	178.69	179.45	0.76	185.00	6.31	179.81	182.30	0.035643	8.42	35.62	17.28	1.87
unico	11.7 SM-13	Q50	208.00	171.00	173.51	173.30	-0.21	180.00	6.49	174.46	176.66	0.040125	7.86	26.45	17.97	2.01
unico	11.7 SM-13	Q200	263.00	171.00	173.77	173.30	-0.47	180.00	6.23	174.88	177.43	0.038884	8.47	31.04	19.63	2.02
unico	11.7 SM-13	Q500	300.00	171.00	173.94	173.30	-0.64	180.00	6.06	175.14	177.91	0.038219	8.83	33.98	20.68	2.03
unico	11.6 SM-12	Q50	208.00	168.90	174.50	172.40	-2.10	179.40	4.90	172.60	174.98	0.002031	3.07	67.79	20.00	0.45
unico	11.6 SM-12	Q200	263.00	168.90	175.60	172.40	-3.20	179.40	3.80	173.06	176.10	0.001718	3.14	83.81	20.00	0.42
unico	11.6 SM-12	Q500	300.00	168.90	176.31	172.40	-3.91	179.40	3.09	173.36	176.82	0.001583	3.18	94.19	20.00	0.40
unico	11.55 SM-12		Bridge													
unico	11.5 SM-12	Q50	208.00	168.90	174.14	172.40	-1.74	179.40	5.26	172.60	174.70	0.002590	3.32	62.57	20.00	0.51
unico	11.5 SM-12	Q200	263.00	168.90	175.23	172.40	-2.83	179.40	4.17	173.06	175.80	0.002097	3.35	78.39	20.00	0.46
unico	11.5 SM-12	Q500	300.00	168.90	175.92	172.40	-3.52	179.40	3.48	173.36	176.51	0.001899	3.39	88.56	20.00	0.44
unico	11.4 SM-11	Q50	208.00	168.50	174.14	181.60	7.46	180.90	6.76	171.97	174.59	0.002109	2.95	70.51	15.88	0.45
unico	11.4 SM-11	Q200	263.00	168.50	175.25	181.60	6.35	180.90	5.65	172.51	175.69	0.001817	2.96	88.72	17.21	0.42
unico	11.4 SM-11	Q500	300.00	168.50	175.96	181.60	5.64	180.90	4.94	172.84	176.40	0.001661	2.96	101.26	18.06	0.40
unico	11.35 SM-11		Bridge													
unico	11.3 SM-11	Q50	208.00	168.50	170.93	181.60	10.67	180.90	9.97	171.97	174.28	0.035124	8.11	25.63	12.02	1.77
unico	11.3 SM-11	Q200	263.00	168.50	171.24	181.60	10.36	180.90	9.66	172.51	175.31	0.037968	8.95	29.40	12.39	1.85
unico	11.3 SM-11	Q500	300.00	168.50	171.42	181.60	10.18	180.90	9.48	172.84	175.98	0.039758	9.45	31.73	12.61	1.90
unico	10. SM-10	Q50	208.00	166.00	168.53	183.50	14.97	177.90	9.37	169.47	171.63	0.031021	7.80	26.66	11.59	1.64
unico	10. SM-10	Q200	263.00	166.00	168.93	183.50	14.57	177.90	8.97	170.03	172.50	0.030936	8.37	31.43	11.93	1.65
unico	10. SM-10	Q500	300.00	166.00	169.19	183.50	14.31	177.90	8.71	170.45	173.04	0.030959	8.70	34.48	12.14	1.65
unico	9.1 SM-9	Q50	208.00	160.39	163.00	170.00	7.00	164.54	1.54	164.25	167.05	0.044335	8.91	23.34	12.10	2.05
unico	9.1 SM-9	Q200	263.00	160.39	163.34	170.00	6.66	164.54	1.20	164.76	167.98	0.044209	9.54	27.57	12.67	2.06
unico	9.1 SM-9	Q500	300.00	160.39	163.56	170.00	6.44	164.54	0.98	165.07	168.55	0.044037	9.90	30.31	13.03	2.07
unico	9. SM-9	Q50	208.00	157.50	160.74	170.00	9.26	164.54	3.80	162.47	166.81	0.072618	10.92	19.04	9.16	2.42
unico	9. SM-9	Q200	263.00	157.50	161.16	170.00	8.84	164.54	3.38	163.07	167.76	0.069426	11.38	23.11	10.02	2.39
unico	9. SM-9	Q500	300.00	157.50	161.42	170.00	8.58	164.54	3.12	163.44	168.33	0.067028	11.64	25.77	10.41	2.36
unico	8. SM-8	Q50	208.00	158.25	160.14	175.00	14.86	163.60	3.46	161.64	166.05	0.085933	10.77	19.31	13.30	2.85
unico	8. SM-8	Q200	263.00	158.25	160.42	175.00	14.58	163.60	3.18	162.13	167.08	0.081144	11.43	23.00	13.60	2.81

HEC-RAS Plan: 02_PdB River: S. Martino Reach: unico (Continued)

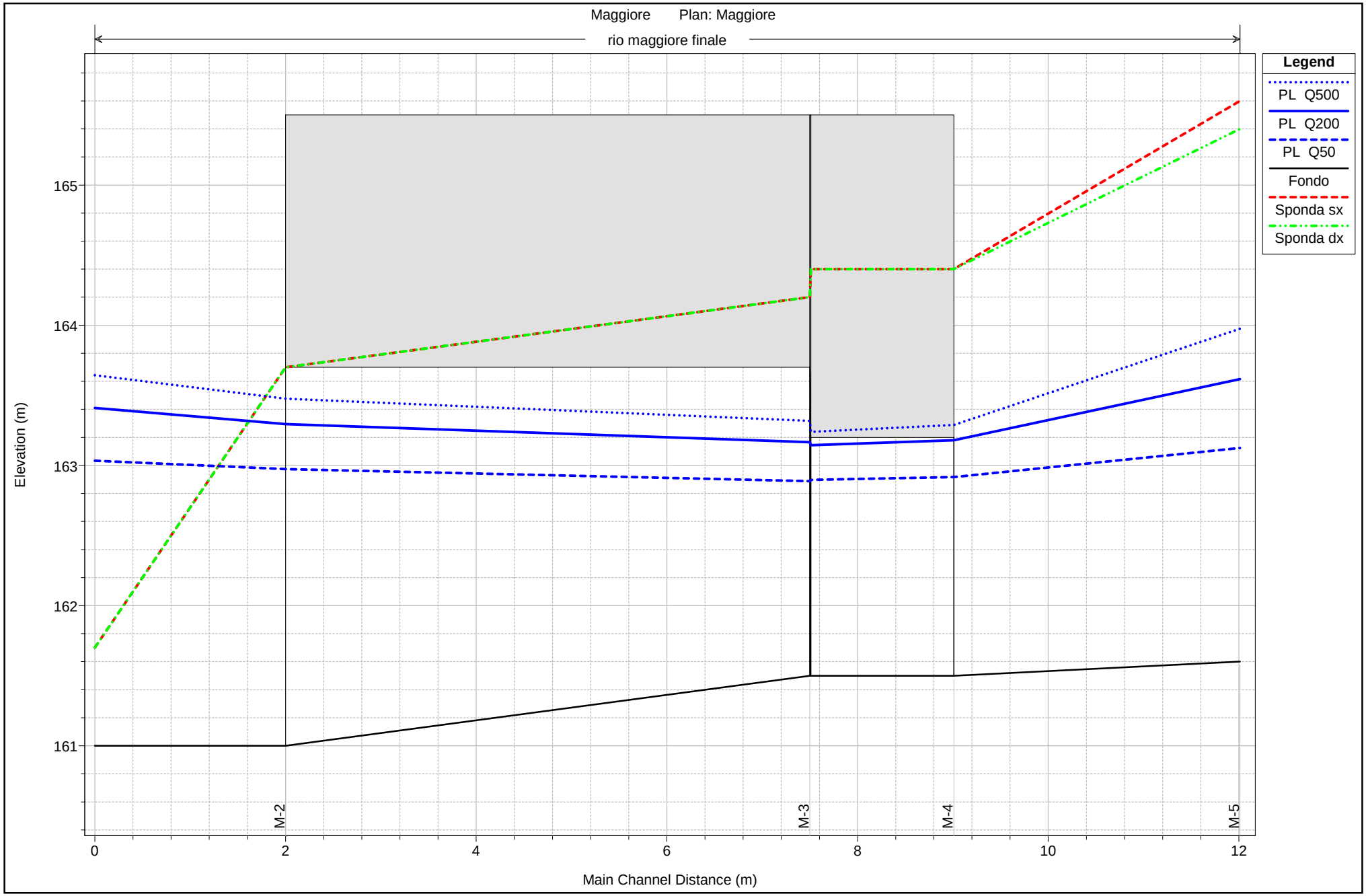
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
unico	8. SM-8	Q500	300.00	158.25	160.60	175.00	14.40	163.60	3.00	162.43	167.66	0.077875	11.78	25.48	13.79	2.77
unico	7. SM-7	Q50	208.00	152.24	154.46	153.28	-1.18	161.23	6.77	155.33	157.38	0.038270	8.10	29.86	27.22	1.99
unico	7. SM-7	Q200	263.00	152.24	154.65	153.28	-1.37	161.23	6.58	155.61	158.00	0.040653	8.79	35.28	29.96	2.08
unico	7. SM-7	Q500	300.00	152.24	154.76	153.28	-1.48	161.23	6.47	155.77	158.37	0.041991	9.18	38.75	31.59	2.13
unico	6. SM-6	Q50	208.00	146.26	151.54	151.03	-0.51	150.60	-0.94	148.67	151.80	0.001092	2.22	93.54	17.70	0.31
unico	6. SM-6	Q200	263.00	146.26	152.19	151.03	-1.16	150.60	-1.59	149.08	152.51	0.001265	2.51	104.89	17.70	0.33
unico	6. SM-6	Q500	300.00	146.26	152.59	151.03	-1.56	150.60	-1.99	149.34	152.95	0.001371	2.68	111.99	17.70	0.34
unico	5.1 SM-5	Q50	208.00	146.27	151.48	150.78	-0.70	150.73	-0.75	149.11	151.78	0.001364	2.44	85.24	17.90	0.36
unico	5.1 SM-5	Q200	263.00	146.27	152.11	150.78	-1.33	150.73	-1.38	149.52	152.49	0.001531	2.72	96.57	17.90	0.37
unico	5.1 SM-5	Q500	300.00	146.27	152.51	150.78	-1.73	150.73	-1.78	149.77	152.93	0.001633	2.89	103.67	17.90	0.38
unico	5. SM-5		Bridge													
unico	4.9 SM-5	Q50	208.00	146.27	151.21	150.78	-0.43	150.73	-0.48	149.11	151.55	0.001611	2.59	80.42	17.90	0.39
unico	4.9 SM-5	Q200	263.00	146.27	151.85	150.78	-1.07	150.73	-1.12	149.52	152.27	0.001757	2.86	91.98	17.90	0.40
unico	4.9 SM-5	Q500	300.00	146.27	152.25	150.78	-1.47	150.73	-1.52	149.77	152.72	0.001851	3.03	99.13	17.90	0.41
unico	4. SM-4	Q50	208.00	145.99	151.27	150.00	-1.27	150.19	-1.08	149.26	151.47	0.000990	1.97	105.35	29.00	0.33
unico	4. SM-4	Q200	263.00	145.99	151.95	150.00	-1.95	150.19	-1.76	149.61	152.18	0.000940	2.10	125.05	29.00	0.32
unico	4. SM-4	Q500	300.00	145.99	152.37	150.00	-2.37	150.19	-2.18	149.83	152.62	0.000924	2.19	137.27	29.00	0.32
unico	3.1 SM-3	Q50	208.00	145.50	149.63	159.10	9.47	159.10	9.47	149.18	150.76	0.007243	4.70	44.21	13.40	0.83
unico	3.1 SM-3	Q200	263.00	145.50	150.22	159.10	8.88	159.10	8.88	149.75	151.51	0.007292	5.02	52.34	14.15	0.83
unico	3.1 SM-3	Q500	300.00	145.50	150.57	159.10	8.53	159.10	8.53	150.09	151.97	0.007381	5.23	57.38	14.56	0.84
unico	3. SM-3		Bridge													
unico	2.9 SM-3	Q50	208.00	145.50	149.18	159.10	9.92	159.10	9.92	149.18	150.68	0.010719	5.42	38.34	12.82	1.00
unico	2.9 SM-3	Q200	263.00	145.50	149.75	159.10	9.35	159.10	9.35	149.75	151.43	0.010540	5.75	45.75	13.55	1.00
unico	2.9 SM-3	Q500	300.00	145.50	150.09	159.10	9.01	159.10	9.01	150.09	151.89	0.010497	5.95	50.45	13.99	1.00
unico	2	Q50	208.00	137.00	139.07	145.00	5.93	140.00	0.93	140.12	142.92	0.073950	8.69	23.93	20.34	2.56
unico	2	Q200	263.00	137.00	139.26	145.00	5.74	140.00	0.74	140.45	143.79	0.075848	9.43	27.90	21.40	2.63
unico	2	Q500	300.00	137.00	139.38	145.00	5.62	140.00	0.62	140.66	144.32	0.076776	9.85	30.45	22.05	2.68

10.4 Rio Maggiore

Il bacino sotteso alla confluenza del Rio Maggiore con il Verde è pari a circa 0.5 km^2. Il calcolo delle portate è stato effettuato con il metodo CIMA per i piccoli bacini< 2 km^2.

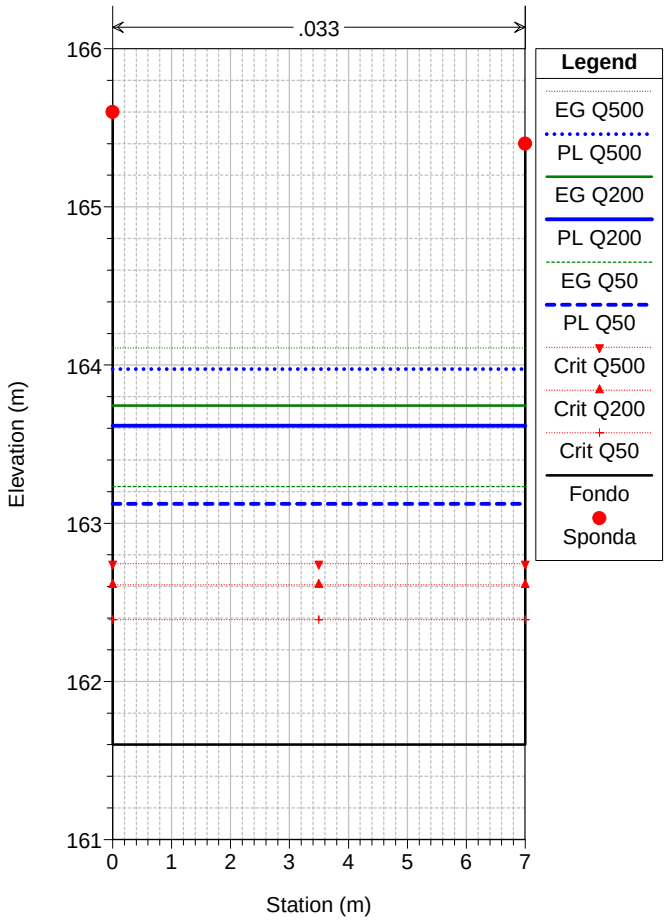
TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
		T = 50 anni	T = 200 anni	T = 500 anni
T.Verde a valle Maggiore	V4	272	341	386.7
T.Verde a monte Maggiore	differenza	256.5	318.6	359.7
Rio Maggiore	MAG0	15.5	22.4	27

Per le verifiche idrauliche si sono utilizzate 5 sezioni localizzate nel tratto terminale del Rio.
Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza k_s di Strickler pari a 30 $m^{1/3}/s$.
Come condizioni al contorno è stata imposta la profondità critica a monte e valle è stata simulata la confluenza con il torrente Verde.


Maggiore Plan: Maggiore
rio maggiore finale
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
165
164
163
162
161
M-2
M-3
M-4
M-5
0
2
4
6
8
10
12
Main Channel Distance (m)

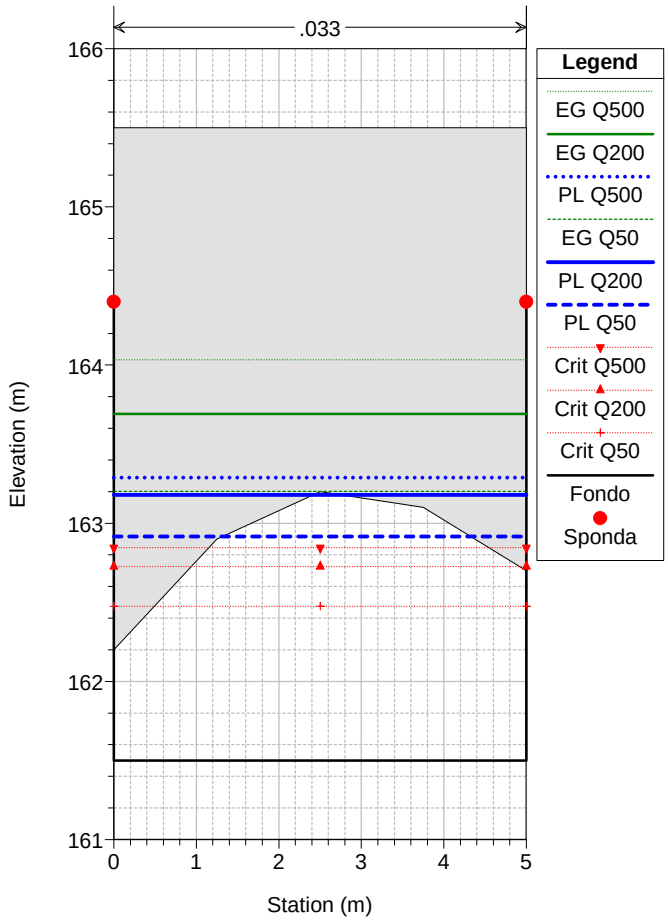
Maggiore Plan: Maggiore

River = rio maggiore Reach = finale M-5



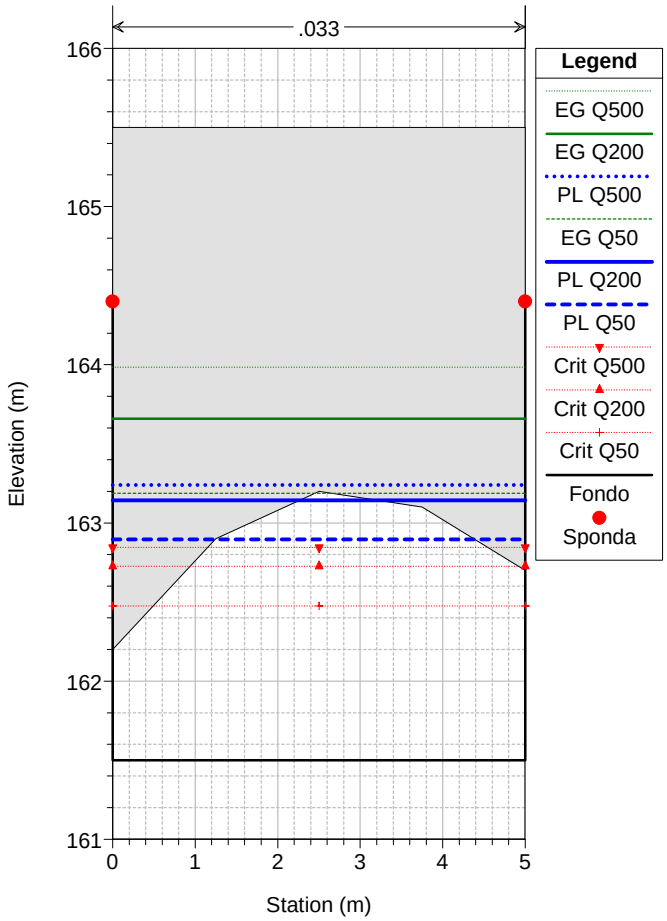
Maggiore Plan: Maggiore

River = rio maggiore Reach = finale M-4



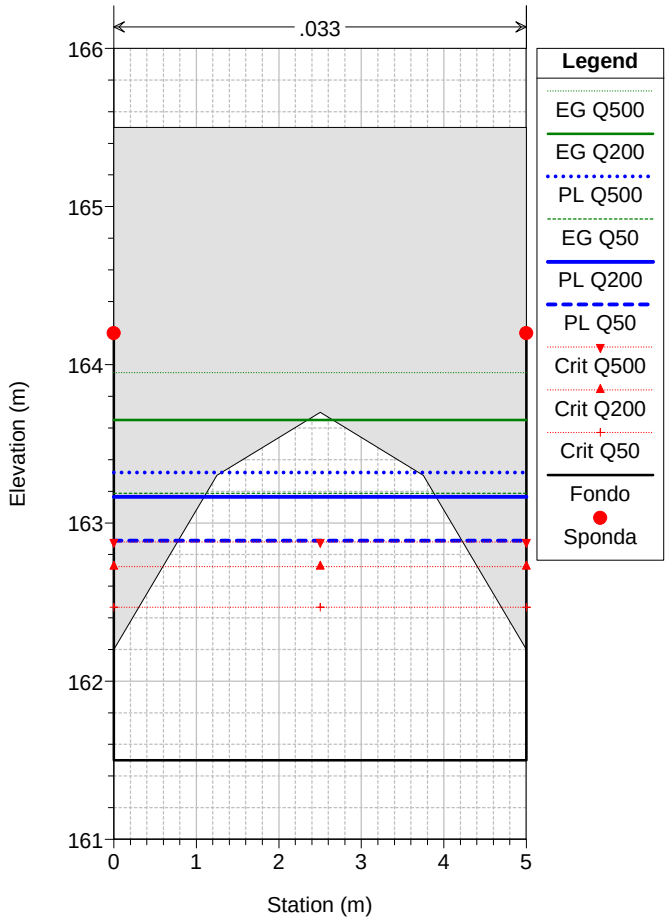
Maggiore Plan: Maggiore

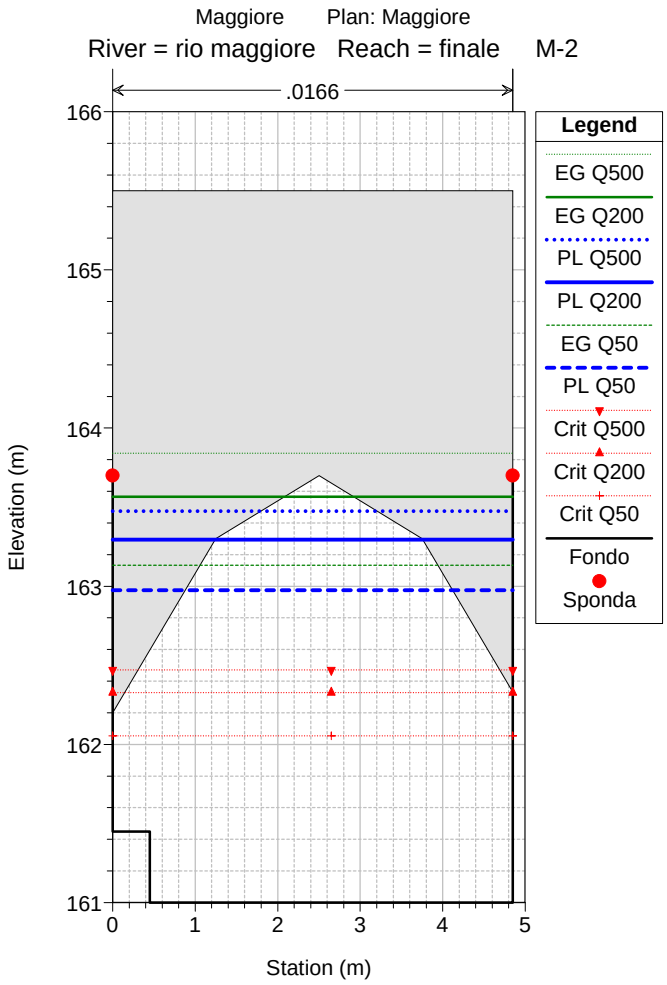
River = rio maggiore Reach = finale M-3

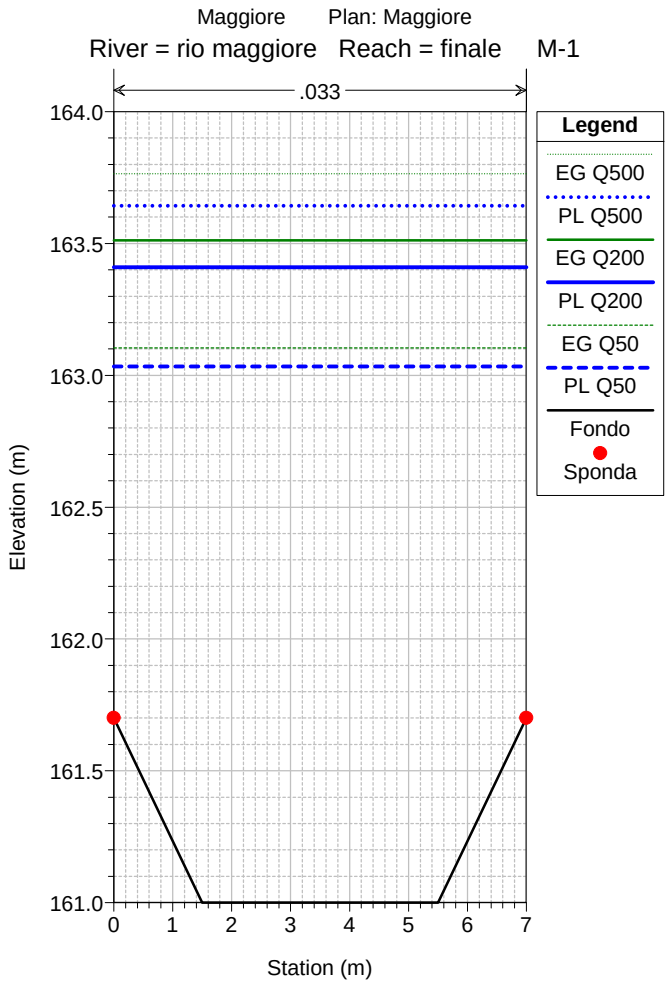


Maggiore Plan: Maggiore

River = rio maggiore Reach = finale M-3




Maggiore Plan: Maggiore
River = rio maggiore Reach = finale M-2
.0166
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda


Maggiore Plan: Maggiore
River = rio maggiore Reach = finale M-1
.033
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Fondo
Sponda

HEC-RAS Plan: Maggiore River: rio maggiore Reach: finale

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)	
finale	5	Q50	15.50	161.60	163.12	165.60	2.48	165.40	2.28	162.39	163.23	0.002124	1.45	10.66	7.00	0.38
finale	5	Q200	22.40	161.60	163.62	165.60	1.98	165.40	1.78	162.61	163.74	0.001976	1.59	14.11	7.00	0.36
finale	5	Q500	27.00	161.60	163.97	165.60	1.63	165.40	1.43	162.74	164.11	0.001810	1.62	16.62	7.00	0.34
finale	4.1	Q50	15.50	161.50	162.92	162.20	-0.72	162.70	-0.22	162.48	163.20	0.009473	2.37	6.55	3.01	0.63
finale	4.1	Q200	22.40	161.50	163.18	162.20	-0.98	162.70	-0.48	162.73	163.69	0.021835	3.17	7.06	0.35	0.78
finale	4.1	Q500	27.00	161.50	163.29	162.20	-1.09	162.70	-0.59	162.84	164.03	0.032942	3.82	7.06		0.91
finale	3.9	Q50	15.50	161.50	162.90	162.20	-0.70	162.70	-0.20	162.48	163.19	0.009568	2.39	6.49	3.14	0.65
finale	3.9	Q200	22.40	161.50	163.14	162.20	-0.94	162.70	-0.44	162.73	163.66	0.020600	3.18	7.04	0.94	0.79
finale	3.9	Q500	27.00	161.50	163.24	162.20	-1.04	162.70	-0.54	162.84	163.98	0.032942	3.82	7.06		0.93
finale	3.1	Q50	15.50	161.50	162.89	162.20	-0.69	162.20	-0.69	162.47	163.19	0.009291	2.42	6.40	3.44	0.66
finale	3.1	Q200	22.40	161.50	163.17	162.20	-0.97	162.20	-0.97	162.72	163.65	0.014414	3.08	7.27	2.80	0.76
finale	3.1	Q500	27.00	161.50	163.32	162.20	-1.12	162.20	-1.12	162.88	163.95	0.018847	3.52	7.67	2.38	0.83
finale	2	Q50	15.50	161.00	162.97	162.20	-0.77	162.33	-0.64	162.05	163.13	0.000951	1.76	8.80	3.24	0.40
finale	2	Q200	22.40	161.00	163.29	162.20	-1.09	162.33	-0.96	162.33	163.57	0.001622	2.30	9.72	2.51	0.49
finale	2	Q500	27.00	161.00	163.48	162.20	-1.28	162.33	-1.14	162.47	163.84	0.002406	2.68	10.08	1.40	0.55
finale	1	Q50	15.50	161.00	163.03	161.70	-1.33	161.70	-1.33		163.10	0.001038	1.18	13.19	7.00	0.27
finale	1	Q200	22.40	161.00	163.41	161.70	-1.71	161.70	-1.71		163.51	0.001302	1.42	15.82	7.00	0.30
finale	1	Q500	27.00	161.00	163.64	161.70	-1.94	161.70	-1.94		163.76	0.001443	1.55	17.45	7.00	0.31

10.5 Da località Bessega fino al Rio D'Iso in Località Isoverde

In questo tratto sono presenti due affluenti di rilievo: il rio Rizzolo ed il rio Corneo; il primo sfocia nel Verde attraverso una briglia a quota sopraelevata rispetto al fondo alveo, per cui si ritiene che la dinamica del flusso dei corsi d'acqua si mantenga separata e si è ritenuto pertanto sufficiente imporre una variazione di portata, il secondo è stato indagato con la simulazione della confluenza con le due configurazioni di portata di piena rispettivamente sul rio D'Iso e sul rio Corneo.
Le portate utilizzate per lo studio del rio D'Iso sono le seguenti:

	TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
			T = 50 anni	T = 200 anni	T = 500 anni
Verde in piena	Torrente Verde a valle Rizzolo	V5	264	332	376
	Torrente Verde tra Rizzolo e Corneo	differenza	232	291	329
	Rio D'Iso	I0	155	193	219
	Rio Corneo	differenza	77	98	110

Come condizioni al contorno è stata imposta la profondità critica a monte e a valle in due sezioni fittizie appositamente create.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza ks di Strickler pari a 33 $m^{1/3}/s$.

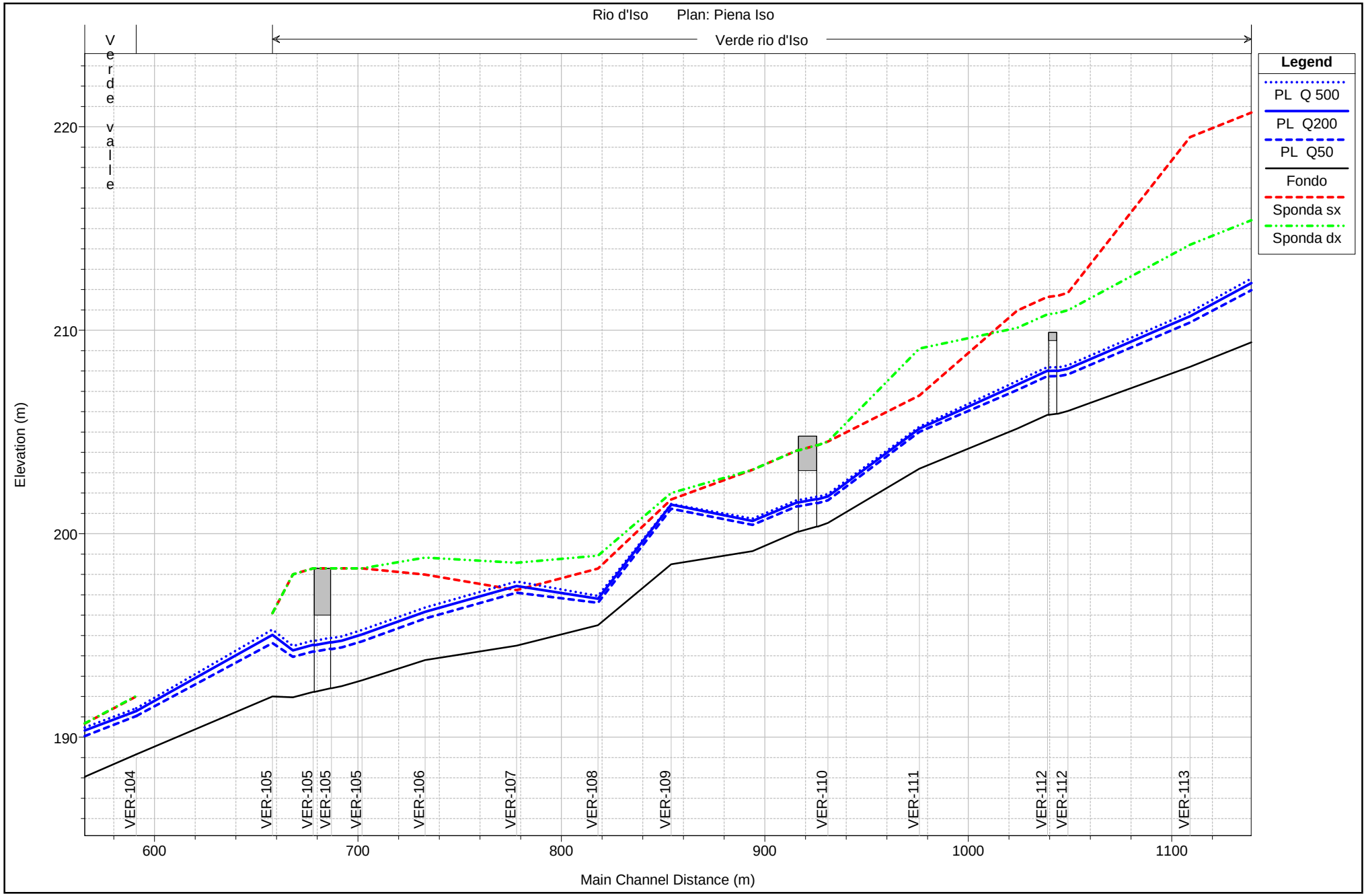
10.5.1 Rio Corneo

Le portate utilizzate per lo studio del rio Corneo sono le seguenti:

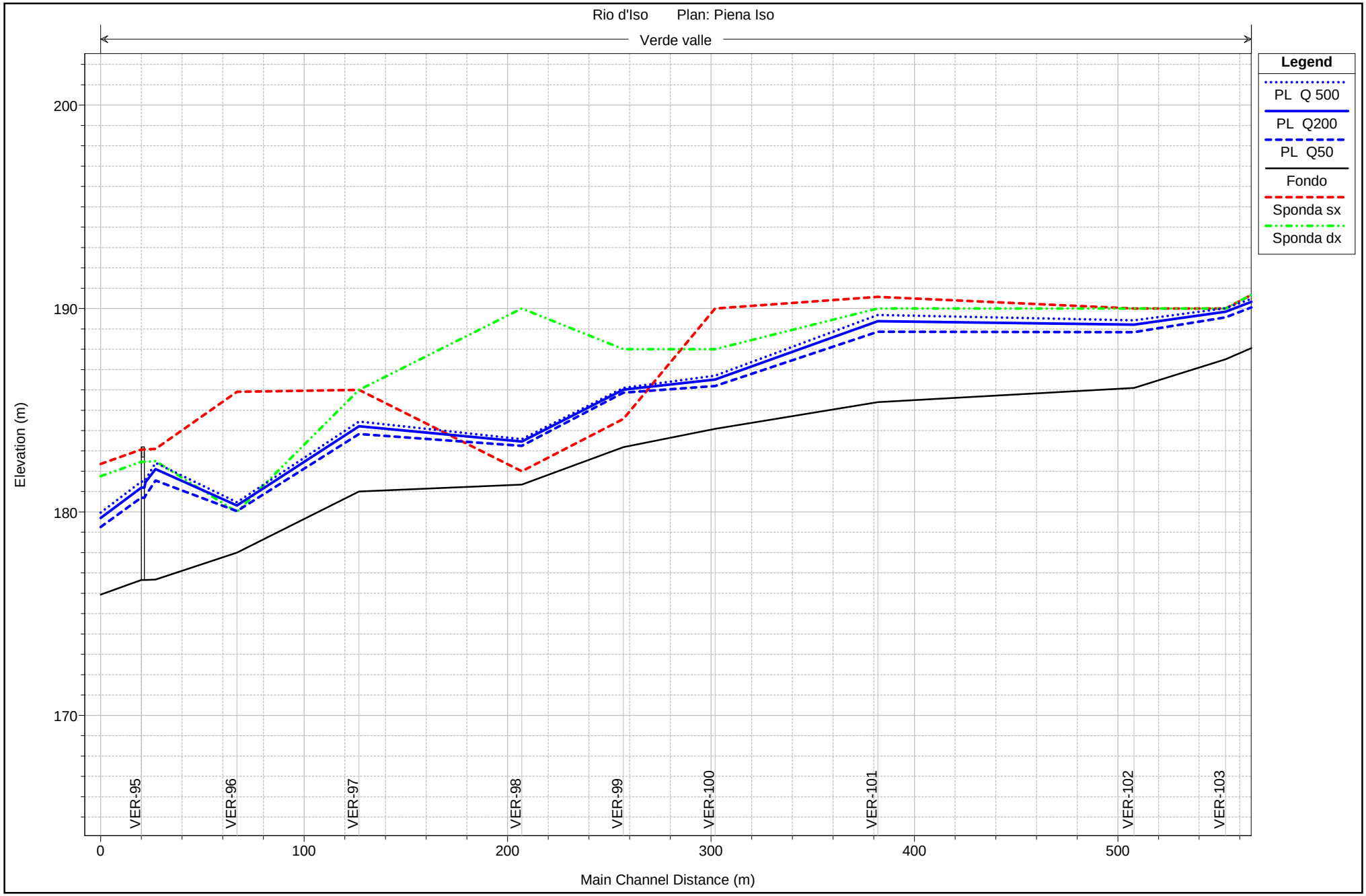
	TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
			T = 50 anni	T = 200 anni	T = 500 anni
Verde in piena	Torrente Verde a valle Rizzolo	V5	264	332	376
	Torrente Verde tra Rizzolo e Corneo	differenza	232	291	329
	Rio D'Iso	I0	130	163	183
	Rio Corneo	differenza	102	128	146

Come condizioni al contorno è stata imposta la profondità critica a monte in una sezione fittizia appositamente creata e a valle è stato effettuato lo studio della confluenza.

Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza ks di Strickler pari a 30 $m^{1/3}/s$.



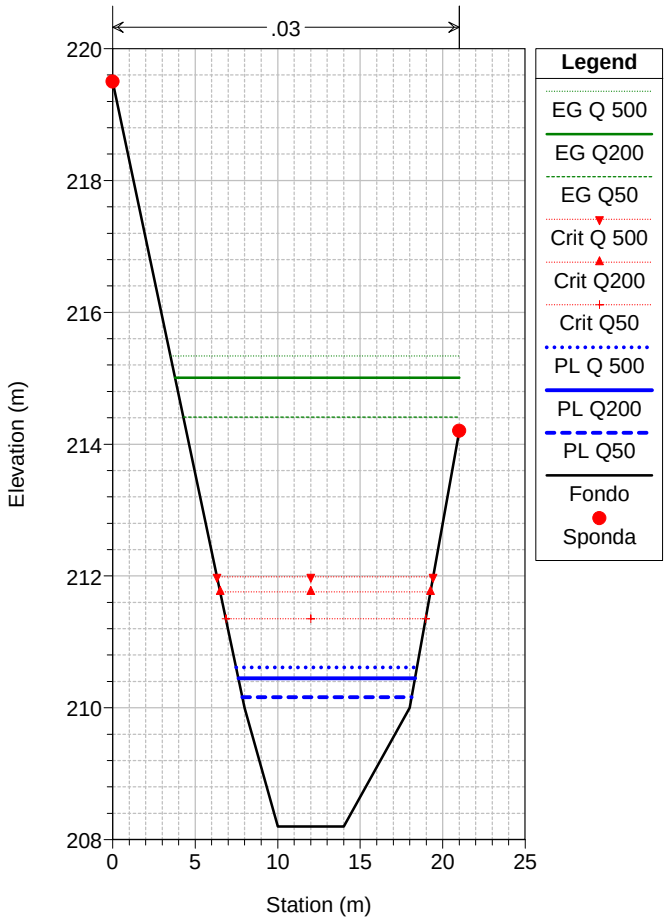
1 cm Horiz. = 25 m 1 cm Vert. = 2.5 m



1 cm Horiz. = 25 m 1 cm Vert. = 2.5 m

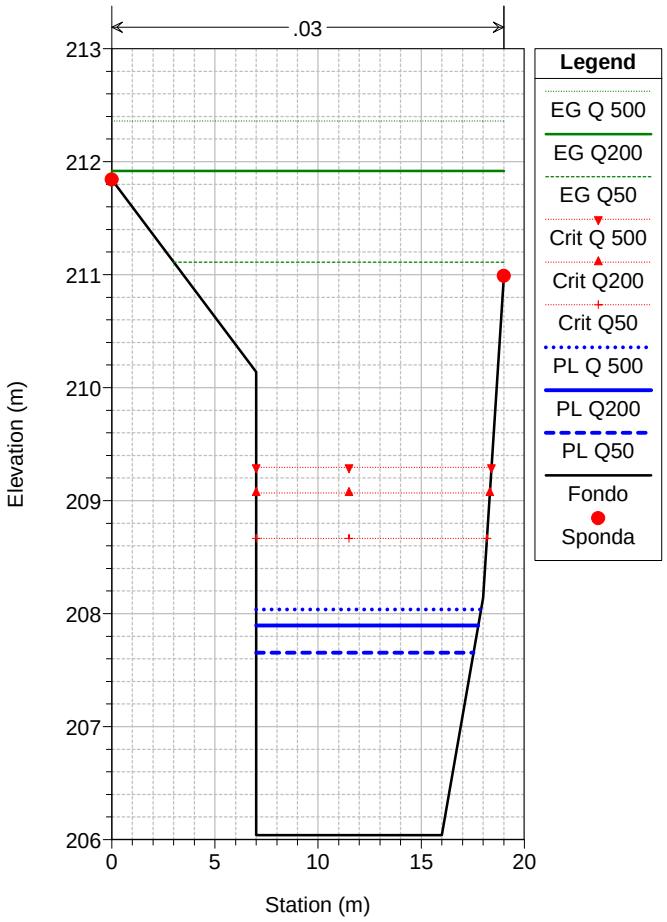
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso VER-113



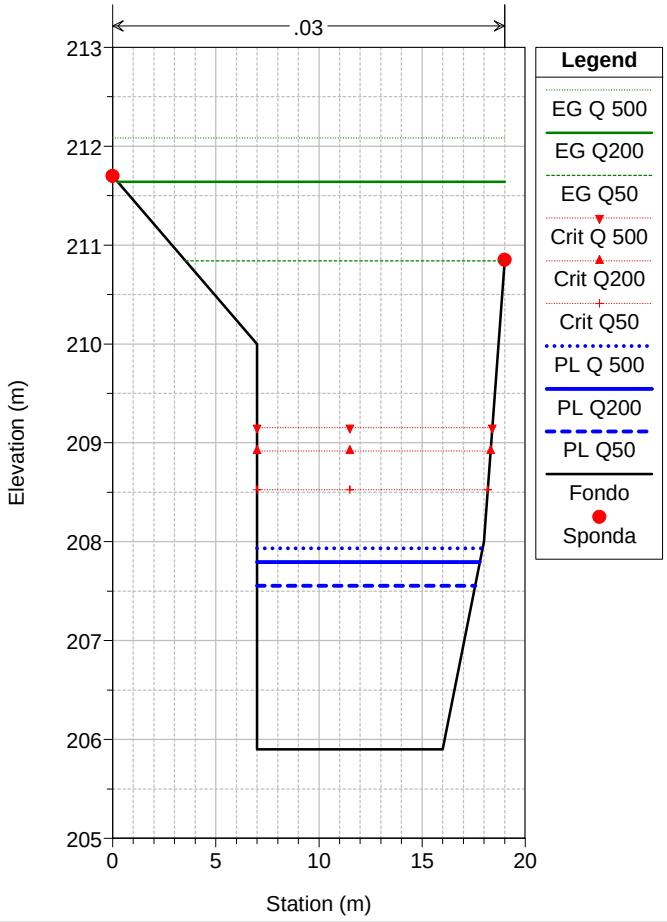
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso VER-112



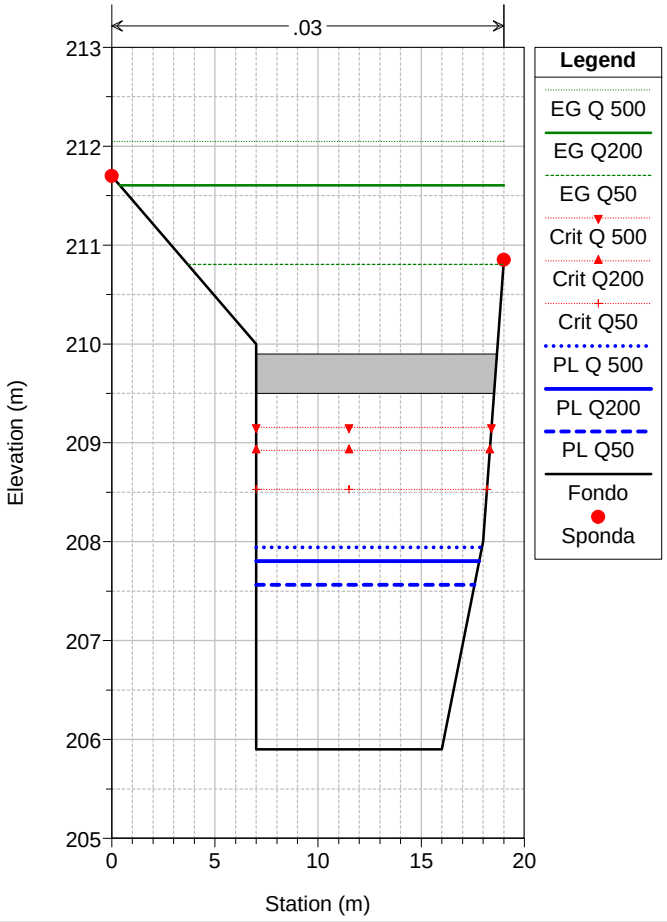
Rio d'Iso Plan: Piena Iso

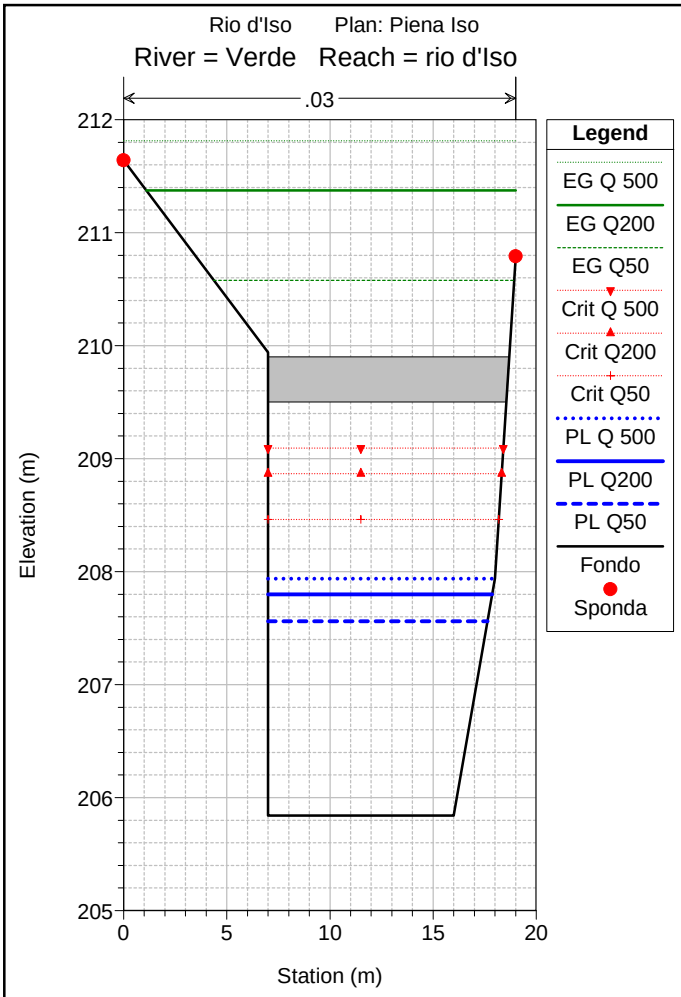
River = Verde Reach = rio d'Iso VER-112

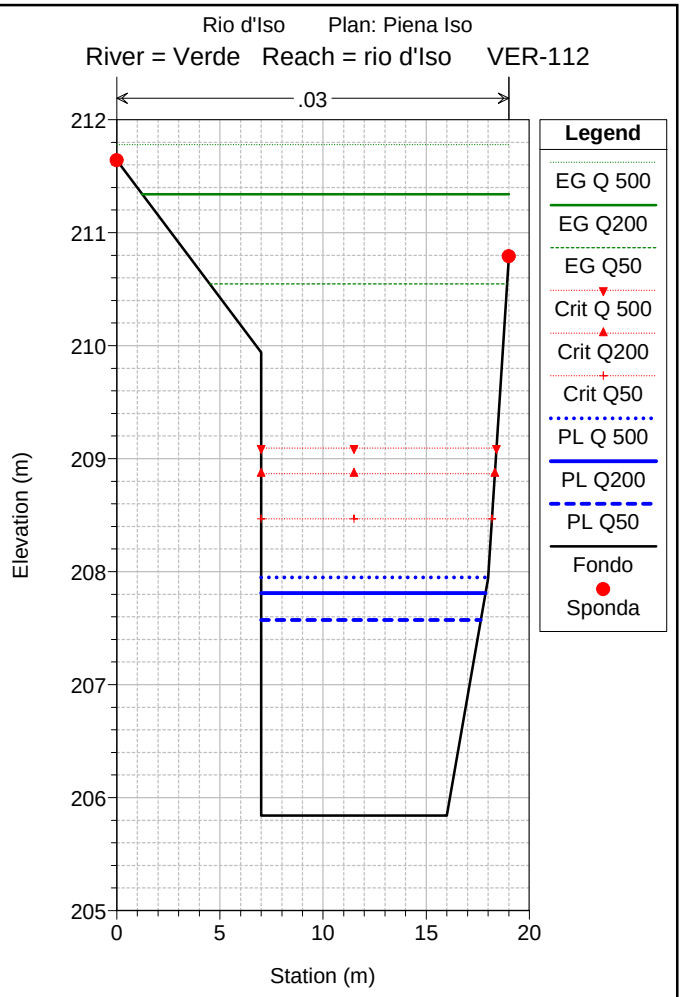


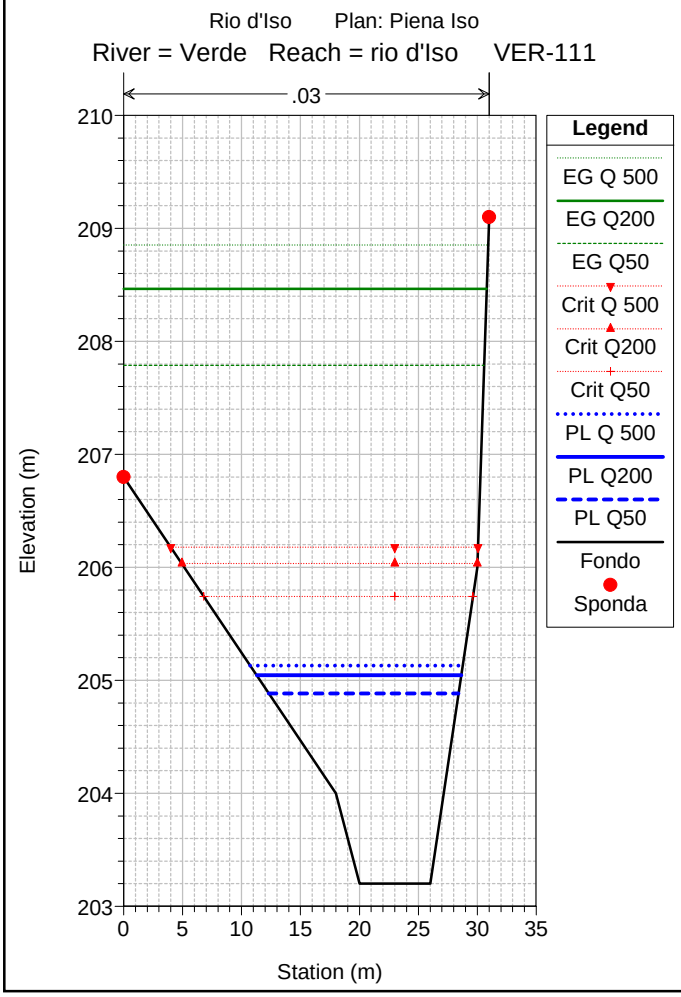
Rio d'Iso Plan: Piena Iso

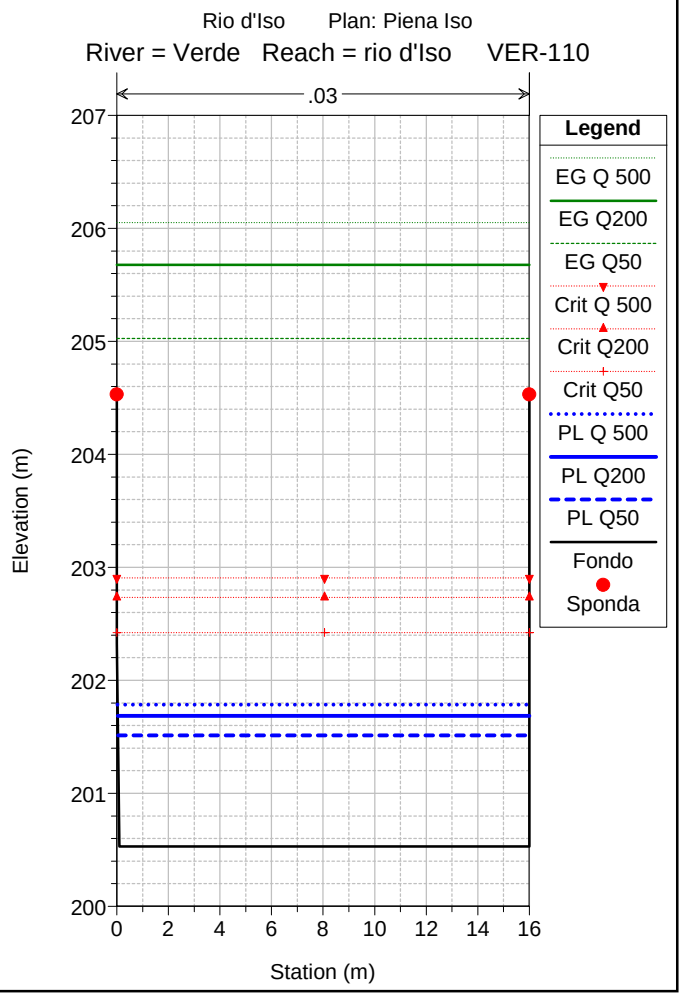
River = Verde Reach = rio d'Iso

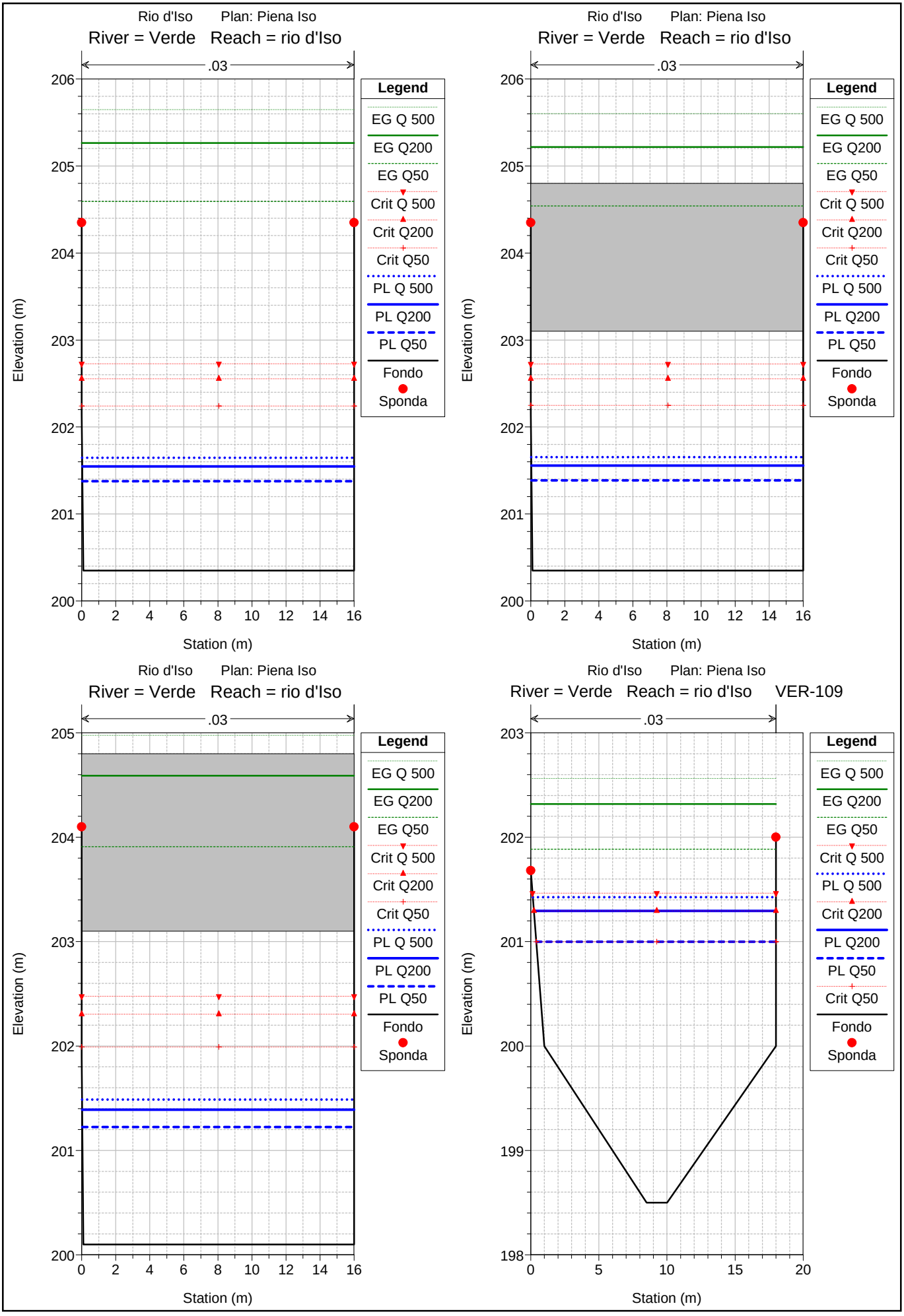



Rio d'Iso Plan: Piena Iso
River = Verde Reach = rio d'Iso
.03
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Rio d'Iso Plan: Piena Iso
River = Verde Reach = rio d'Iso VER-112
.03
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

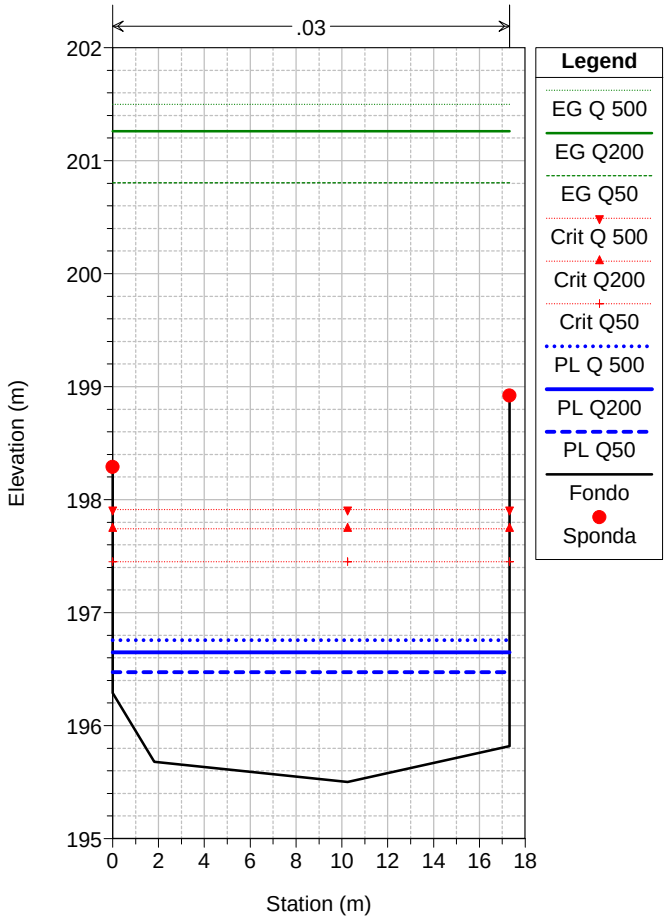

Rio d'Iso Plan: Piena Iso
River = Verde Reach = rio d'Iso VER-111
.03
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Rio d'Iso Plan: Piena Iso
River = Verde Reach = rio d'Iso VER-110
.03
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Rio d'Iso Plan: Piena Iso
River = Verde Reach = rio d'Iso
.03
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Rio d'Iso Plan: Piena Iso
River = Verde Reach = rio d'Iso
.03
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Rio d'Iso Plan: Piena Iso
River = Verde Reach = rio d'Iso
.03
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Rio d'Iso Plan: Piena Iso
River = Verde Reach = rio d'Iso VER-109
.03
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
PL Q 500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)

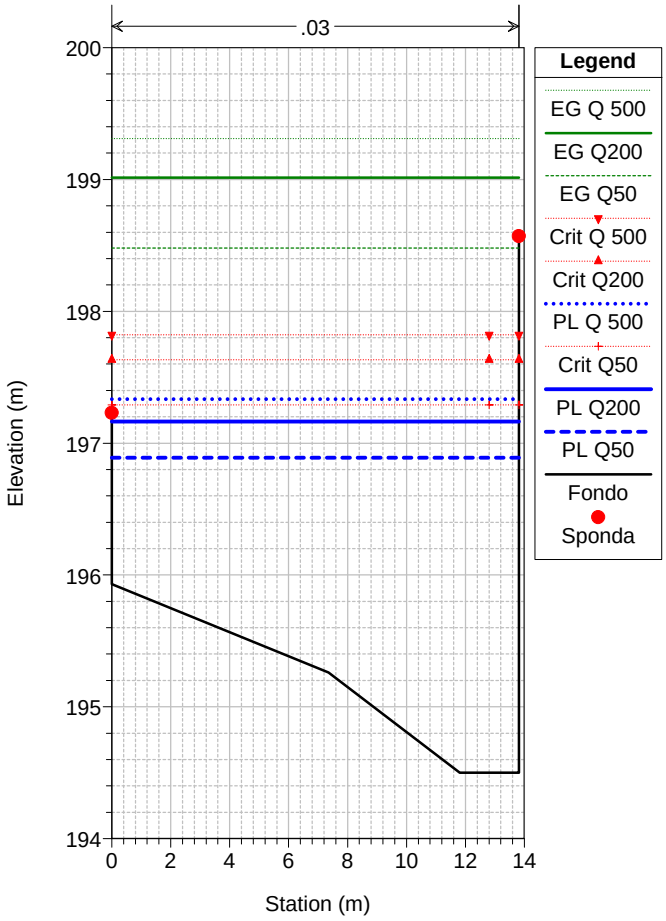
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso VER-108



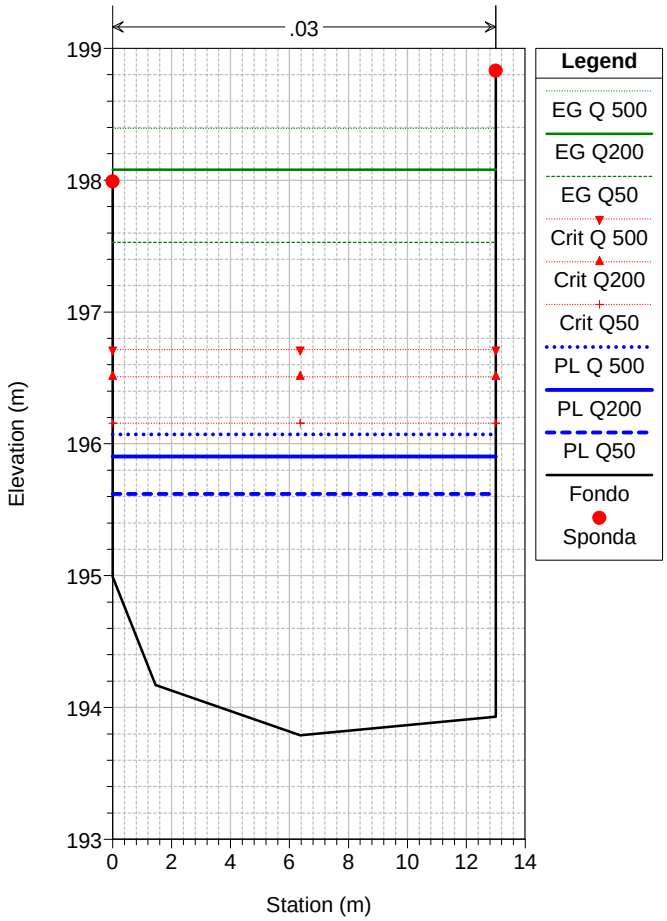
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso VER-107



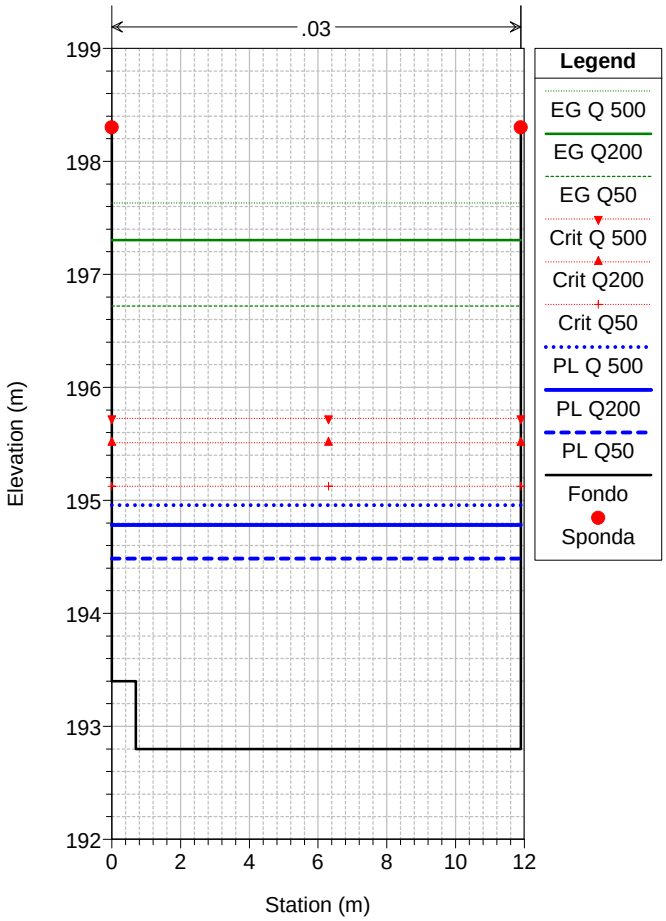
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso VER-106



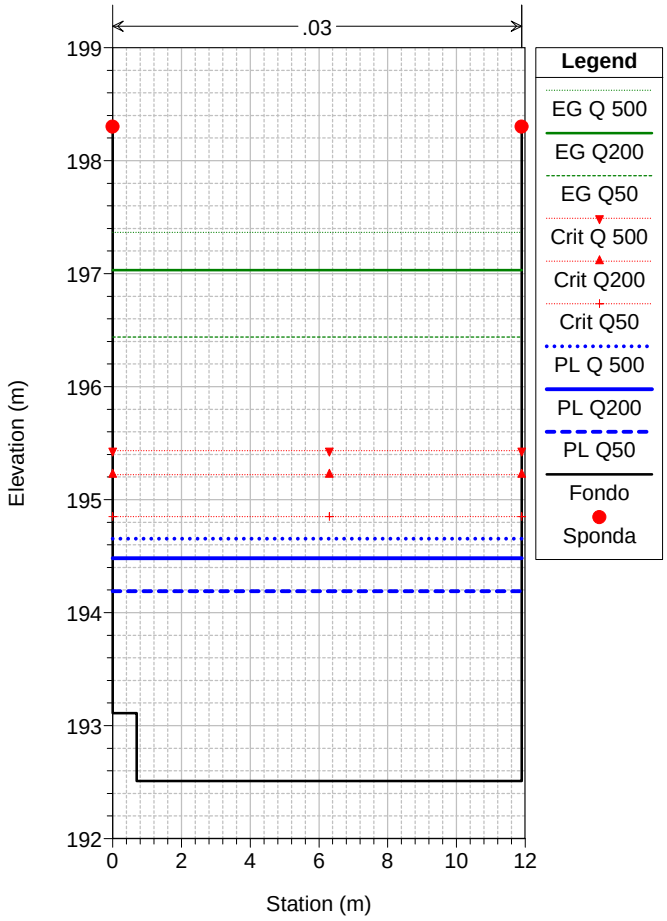
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso VER-105



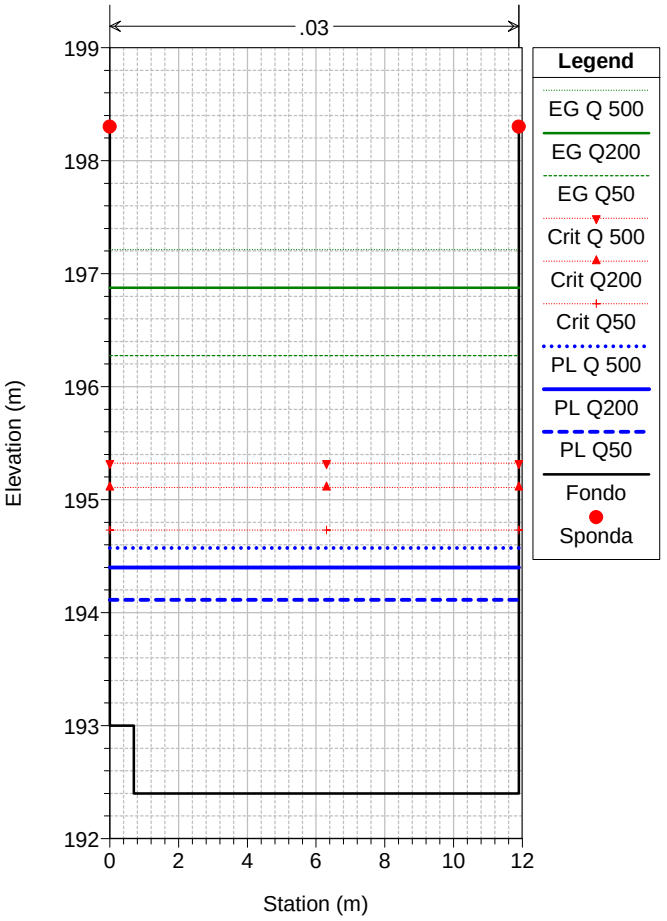
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso VER-105



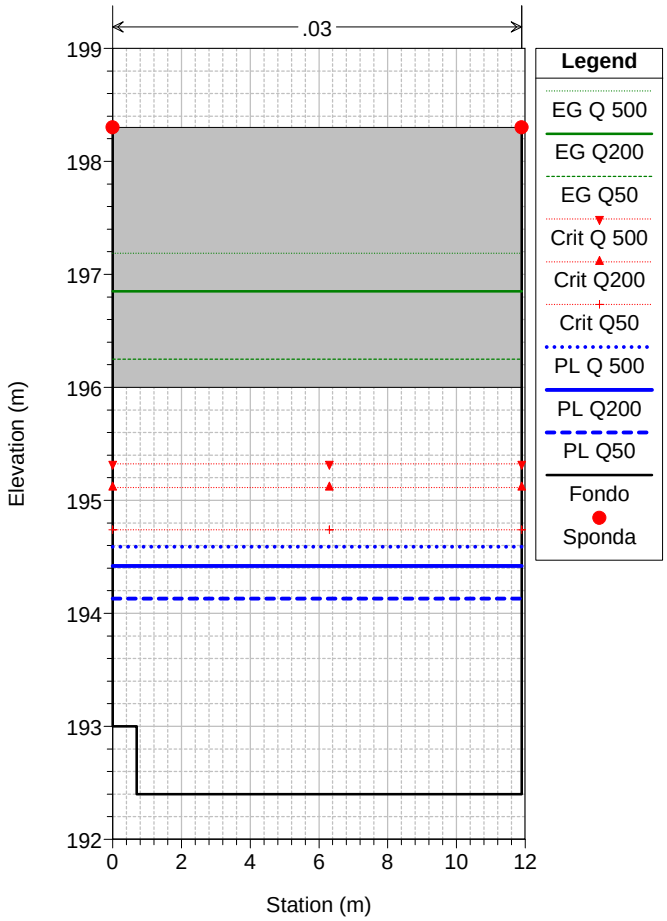
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso VER-105



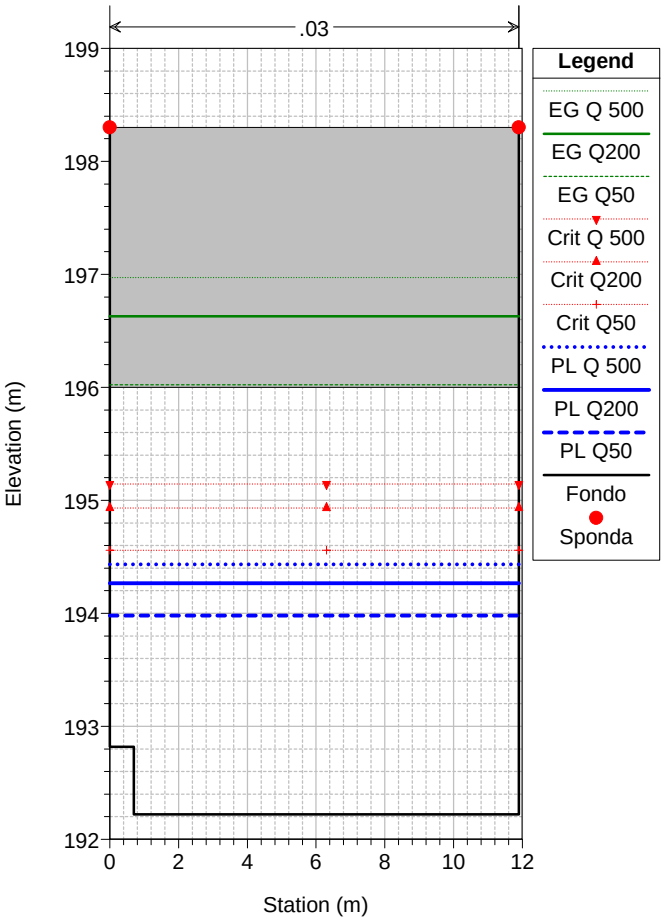
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso



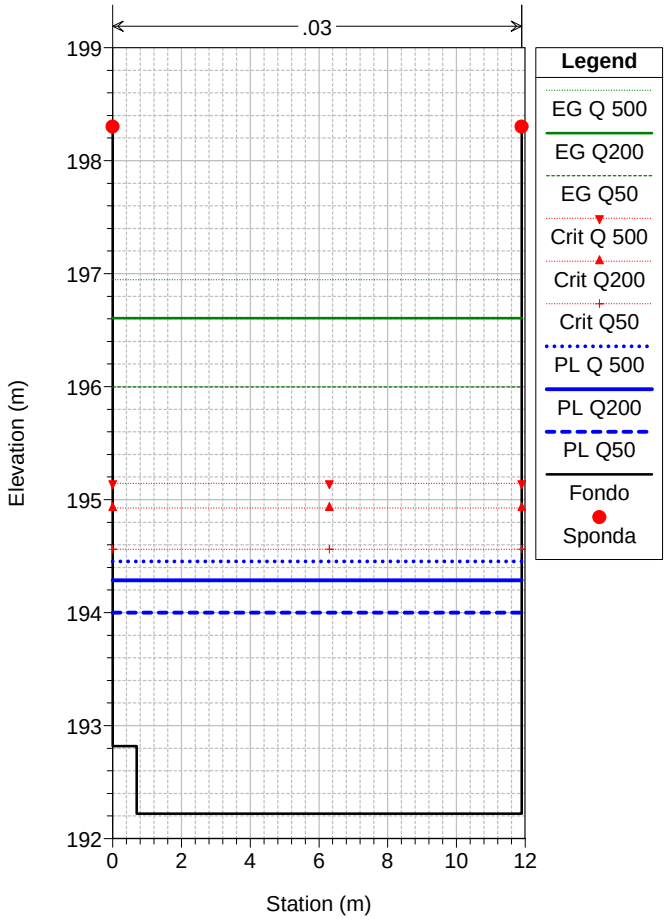
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso



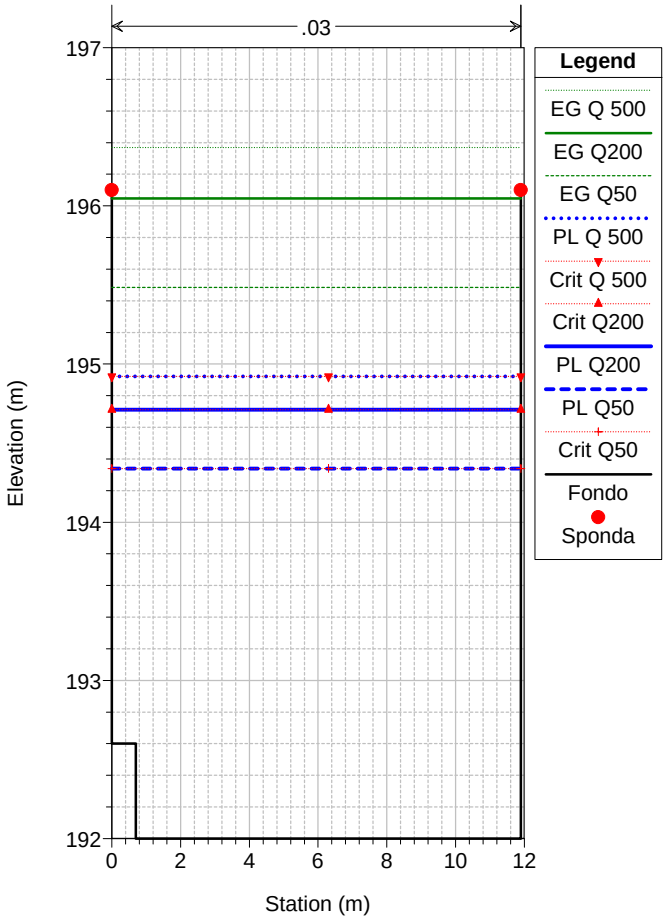
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso VER-105



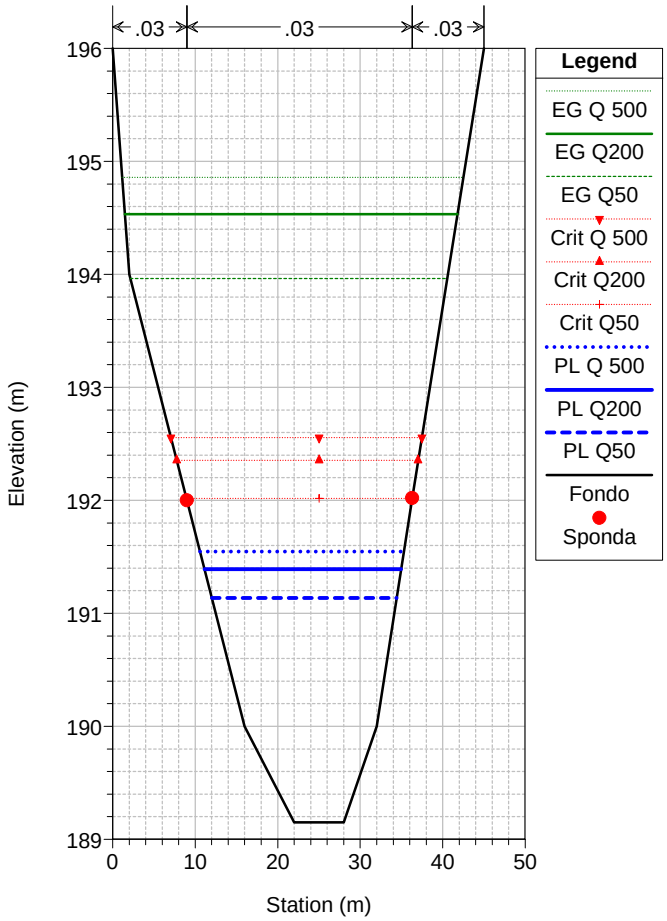
Rio d'Iso Plan: Piena Iso

River = Verde Reach = rio d'Iso VER-105



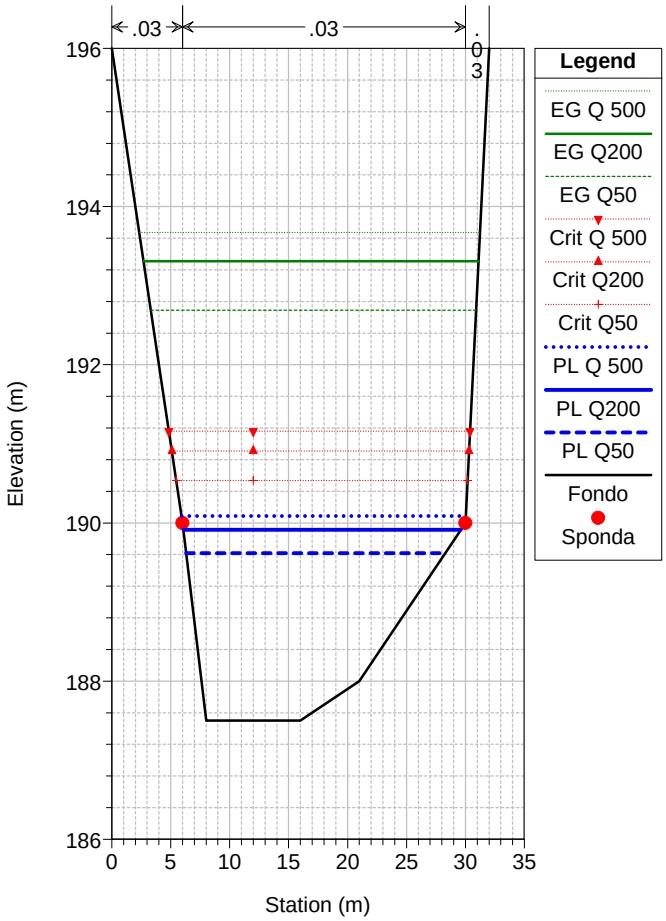
Rio d'Iso Plan: Piena Iso

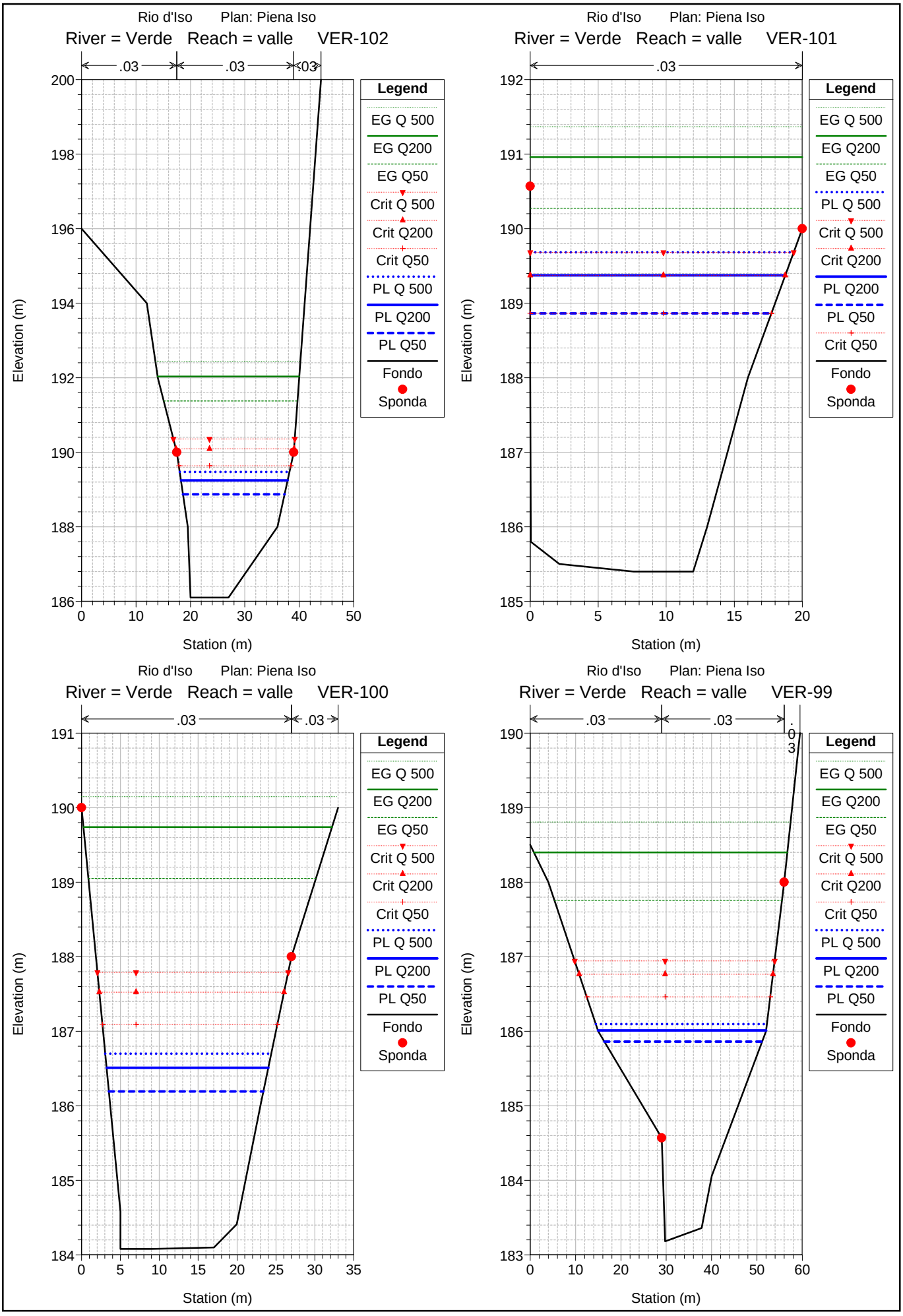
River = Verde Reach = valle VER-104

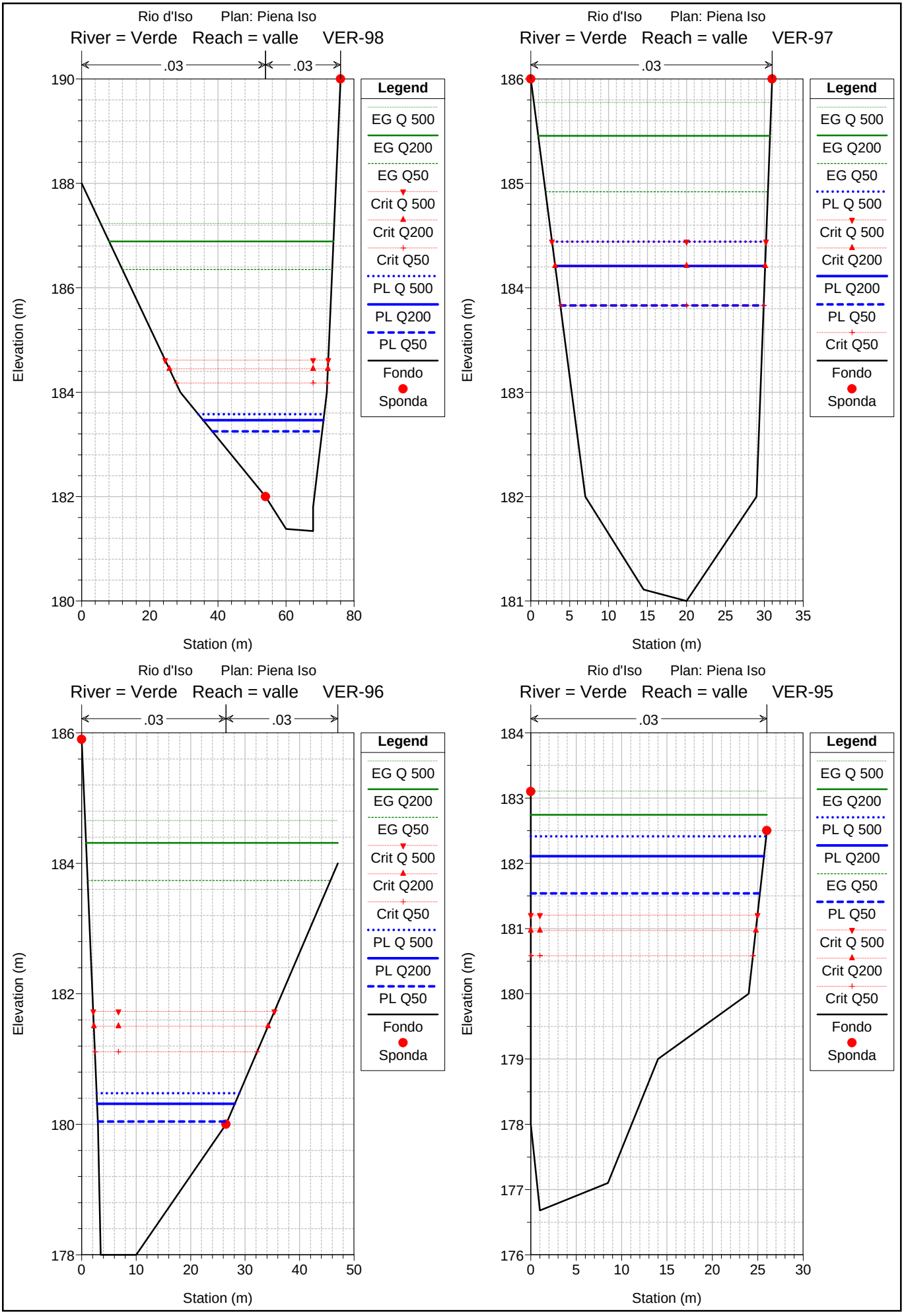


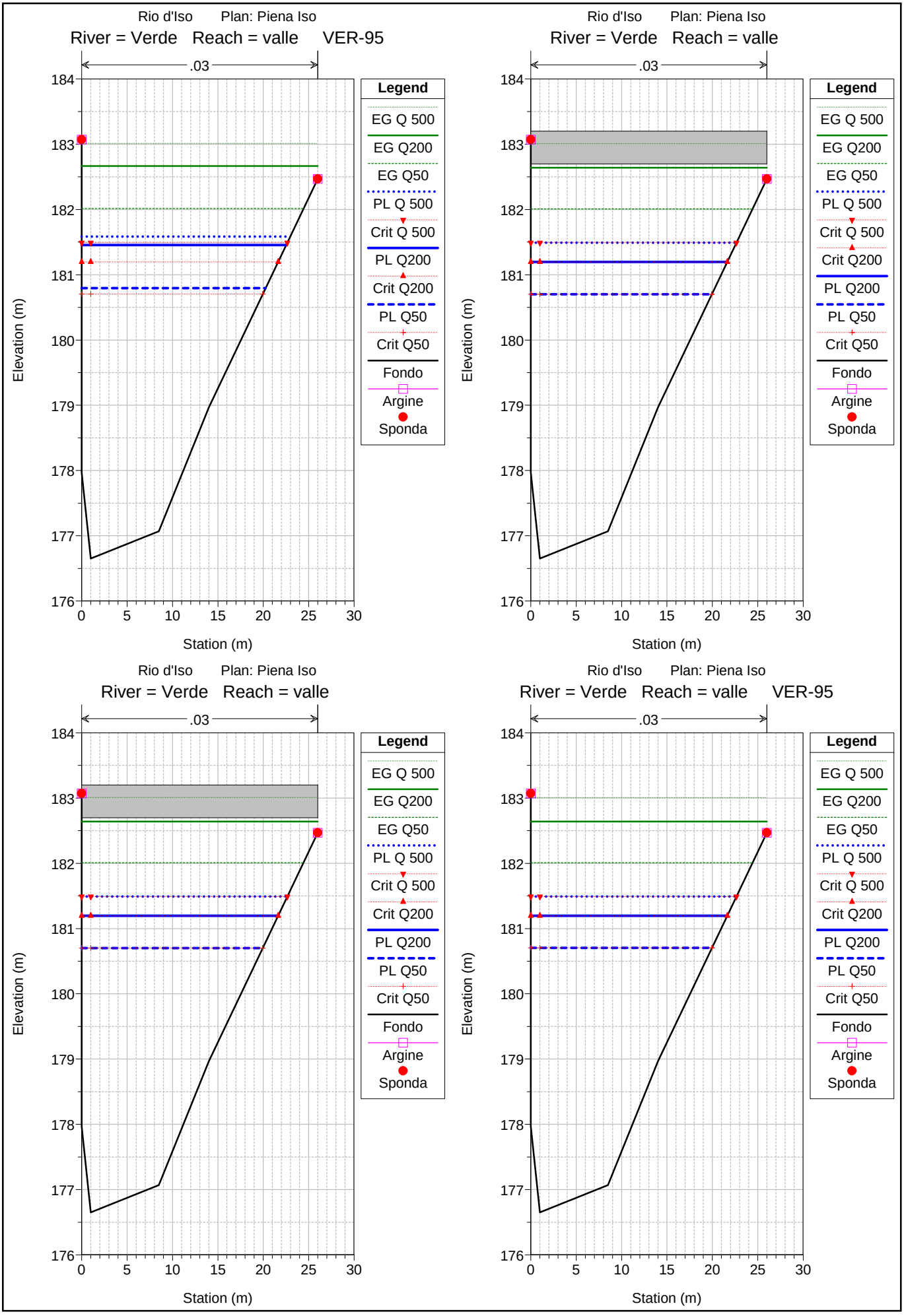
Rio d'Iso Plan: Piena Iso

River = Verde Reach = valle VER-103




Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle VER-102
.03
.03
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda
Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle VER-101
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
EG Q50
PL Q 500
Crit Q 500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle VER-100
.03
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda
Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle VER-99
.03
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda


Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle VER-98
.03
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda
Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle VER-97
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
EG Q50
PL Q 500
Crit Q 500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda
Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle VER-96
.03
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
EG Q50
Crit Q 500
Crit Q200
Crit Q50
PL Q 500
PL Q200
PL Q50
Fondo
Sponda
Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle VER-95
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
PL Q 500
PL Q200
EG Q50
PL Q50
Crit Q 500
Crit Q200
Crit Q50
Fondo
Sponda


Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle VER-95
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
EG Q50
PL Q 500
Crit Q 500
PL Q200
Crit Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda
Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
EG Q50
PL Q 500
Crit Q 500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda
Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
EG Q50
PL Q 500
Crit Q 500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda
Rio d'Iso Plan: Piena Iso
River = Verde Reach = valle VER-95
.03
Elevation (m)
Station (m)
Legend
EG Q 500
EG Q200
EG Q50
PL Q 500
Crit Q 500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Argine
Sponda

HEC-RAS Plan: Iso

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)	
rio d'Iso	121	Q50	155.00	212.20	215.66	223.50	7.84	218.20	2.54	215.66	216.91	0.008421	4.94	31.38	12.59	1.00
rio d'Iso	121	Q200	193.00	212.20	216.09	223.50	7.41	218.20	2.11	216.09	217.48	0.008354	5.23	36.87	13.25	1.00
rio d'Iso	121	Q 500	219.00	212.20	216.37	223.50	7.13	218.20	1.83	216.37	217.85	0.008221	5.39	40.65	13.69	1.00
rio d'Iso	113 VER-113	Q50	155.00	208.20	210.38	219.50	9.12	214.20	3.82	211.66	214.87	0.052034	9.39	16.51	10.59	2.40
rio d'Iso	113 VER-113	Q200	193.00	208.20	210.69	219.50	8.81	214.20	3.51	212.09	215.49	0.047242	9.70	19.89	11.08	2.31
rio d'Iso	113 VER-113	Q 500	219.00	208.20	210.89	219.50	8.61	214.20	3.31	212.37	215.89	0.044945	9.90	22.12	11.39	2.27
rio d'Iso	112.2 VER-112	Q50	155.00	206.04	207.84	211.84	4.00	210.99	3.15	208.97	211.73	0.046777	8.74	17.73	10.71	2.17
rio d'Iso	112.2 VER-112	Q200	193.00	206.04	208.10	211.84	3.74	210.99	2.88	209.41	212.57	0.046712	9.36	20.62	10.97	2.18
rio d'Iso	112.2 VER-112	Q 500	219.00	206.04	208.28	211.84	3.56	210.99	2.71	209.68	213.09	0.046317	9.72	22.53	11.05	2.17
rio d'Iso	112.1 VER-112	Q50	155.00	205.90	207.74	211.70	3.96	210.85	3.11	208.83	211.46	0.043739	8.54	18.14	10.75	2.10
rio d'Iso	112.1 VER-112	Q200	193.00	205.90	208.00	211.70	3.70	210.85	2.85	209.27	212.29	0.044092	9.18	21.03	11.00	2.12
rio d'Iso	112.1 VER-112	Q 500	219.00	205.90	208.18	211.70	3.52	210.85	2.67	209.54	212.82	0.043907	9.54	22.94	11.06	2.12
rio d'Iso	112	Bridge														
rio d'Iso	111.9 VER-112	Q50	155.00	205.84	207.75	211.64	3.89	210.79	3.04	208.77	211.16	0.038436	8.17	18.96	10.82	1.97
rio d'Iso	111.9 VER-112	Q200	193.00	205.84	208.02	211.64	3.62	210.79	2.77	209.21	211.99	0.039332	8.83	21.86	11.03	2.00
rio d'Iso	111.9 VER-112	Q 500	219.00	205.84	208.19	211.64	3.45	210.79	2.60	209.48	212.51	0.039570	9.21	23.77	11.09	2.01
rio d'Iso	111.8	Q50	155.00	205.17	207.06	210.97	3.91	210.12	3.06	208.10	210.56	0.040029	8.29	18.70	10.80	2.01
rio d'Iso	111.8	Q200	193.00	205.17	207.33	210.97	3.64	210.12	2.79	208.54	211.38	0.040550	8.92	21.63	11.02	2.03
rio d'Iso	111.8	Q 500	219.00	205.17	207.50	210.97	3.47	210.12	2.62	208.81	211.90	0.040645	9.30	23.56	11.08	2.04
rio d'Iso	111.1 VER-111	Q50	155.00	203.20	205.01	206.80	1.79	209.10	4.09	205.97	208.31	0.052682	8.05	19.27	17.06	2.42
rio d'Iso	111.1 VER-111	Q200	193.00	203.20	205.17	206.80	1.63	209.10	3.93	206.25	209.04	0.056637	8.72	22.13	18.34	2.53
rio d'Iso	111.1 VER-111	Q 500	219.00	203.20	205.27	206.80	1.53	209.10	3.83	206.43	209.53	0.059231	9.15	23.94	19.10	2.61
rio d'Iso	110.5 VER-110	Q50	155.00	200.53	201.65	204.53	2.88	204.53	2.88	202.66	205.52	0.070421	8.73	17.76	15.96	2.64
rio d'Iso	110.5 VER-110	Q200	193.00	200.53	201.83	204.53	2.70	204.53	2.70	203.00	206.23	0.066635	9.29	20.77	15.97	2.60
rio d'Iso	110.5 VER-110	Q 500	219.00	200.53	201.95	204.53	2.58	204.53	2.58	203.21	206.69	0.064861	9.64	22.71	15.98	2.58
rio d'Iso	110.4	Q50	155.00	200.35	201.51	204.35	2.84	204.35	2.84	202.48	205.11	0.062522	8.40	18.44	15.96	2.50
rio d'Iso	110.4	Q200	193.00	200.35	201.69	204.35	2.66	204.35	2.66	202.82	205.84	0.060661	9.02	21.40	15.97	2.49
rio d'Iso	110.4	Q 500	219.00	200.35	201.81	204.35	2.54	204.35	2.54	203.03	206.31	0.059739	9.39	23.31	15.98	2.48
rio d'Iso	110	Bridge														
rio d'Iso	109.9	Q50	155.00	200.10	201.36	204.10	2.74	204.10	2.74	202.23	204.39	0.047626	7.71	20.10	15.97	2.19
rio d'Iso	109.9	Q200	193.00	200.10	201.54	204.10	2.56	204.10	2.56	202.56	205.13	0.048271	8.38	23.02	15.98	2.23
rio d'Iso	109.9	Q 500	219.00	200.10	201.66	204.10	2.44	204.10	2.44	202.78	205.60	0.048606	8.79	24.90	15.99	2.25
rio d'Iso	109.8	Q50	155.00	199.15	200.44	203.15	2.71	203.15	2.71	201.28	203.34	0.044505	7.55	20.54	15.97	2.12
rio d'Iso	109.8	Q200	193.00	199.15	200.63	203.15	2.52	203.15	2.52	201.62	204.05	0.045096	8.20	23.52	15.98	2.16
rio d'Iso	109.8	Q 500	219.00	199.15	200.75	203.15	2.40	203.15	2.40	201.83	204.52	0.045454	8.61	25.45	15.99	2.18
rio d'Iso	109 VER-109	Q50	155.00	198.50	201.23	201.68	0.45	202.00	0.77	201.23	202.22	0.008203	4.41	35.17	17.73	1.00

HEC-RAS Plan: Iso (Continued)

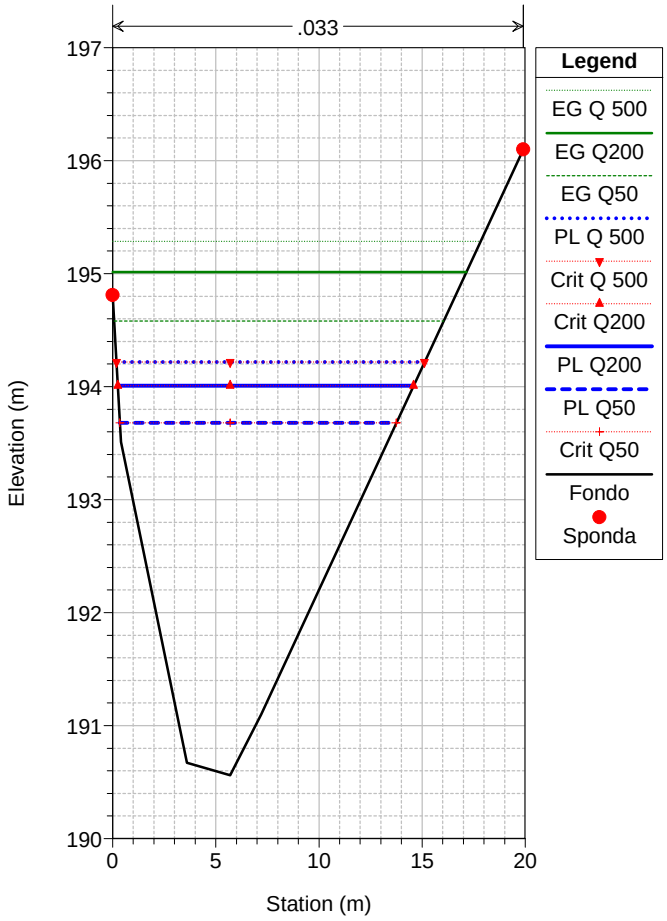
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
rio d'Iso	109 VER-109	Q200	193.00	198.50	201.43	201.68	0.25	202.00	0.57	201.54	202.69	0.009493	4.98	38.73	17.85	1.08
rio d'Iso	109 VER-109	Q 500	219.00	198.50	201.46	201.68	0.22	202.00	0.54	201.75	203.04	0.011601	5.56	39.40	17.87	1.19
rio d'Iso	108 VER-108	Q50	155.00	195.50	196.61	198.29	1.68	198.92	2.31	197.67	201.16	0.094534	9.45	16.40	17.32	3.10
rio d'Iso	108 VER-108	Q200	193.00	195.50	196.81	198.29	1.48	198.92	2.11	197.99	201.59	0.078830	9.68	19.93	17.32	2.88
rio d'Iso	108 VER-108	Q 500	219.00	195.50	196.95	198.29	1.34	198.92	1.97	198.20	201.86	0.071070	9.82	22.31	17.32	2.76
rio d'Iso	107 VER-107	Q50	155.00	194.50	197.10	197.23	0.13	198.57	1.47	197.54	198.89	0.018792	5.93	26.13	13.81	1.38
rio d'Iso	107 VER-107	Q200	193.00	194.50	197.43	197.23	-0.20	198.57	1.14	197.91	199.44	0.017939	6.29	30.67	13.81	1.35
rio d'Iso	107 VER-107	Q 500	219.00	194.50	197.66	197.23	-0.43	198.57	0.91	198.15	199.79	0.017167	6.47	33.86	13.81	1.32
rio d'Iso	106 VER-106	Q50	155.00	193.79	195.84	197.99	2.15	198.83	2.99	196.42	197.95	0.021658	6.44	24.06	13.00	1.51
rio d'Iso	106 VER-106	Q200	193.00	193.79	196.16	197.99	1.83	198.83	2.67	196.81	198.54	0.020788	6.84	28.22	13.00	1.48
rio d'Iso	106 VER-106	Q 500	219.00	193.79	196.37	197.99	1.62	198.83	2.46	197.06	198.91	0.020195	7.06	31.03	13.00	1.46
rio d'Iso	105 VER-105	Q50	155.00	192.80	194.71	198.30	3.59	198.30	3.59	195.42	197.17	0.027205	6.94	22.32	11.90	1.62
rio d'Iso	105 VER-105	Q200	193.00	192.80	195.05	198.30	3.25	198.30	3.25	195.83	197.79	0.025802	7.34	26.30	11.90	1.58
rio d'Iso	105 VER-105	Q 500	219.00	192.80	195.27	198.30	3.03	198.30	3.03	196.09	198.18	0.024933	7.56	28.98	11.90	1.55
rio d'Iso	104.9 VER-105	Q50	155.00	192.51	194.41	198.30	3.89	198.30	3.89	195.13	196.89	0.027640	6.98	22.20	11.90	1.63
rio d'Iso	104.9 VER-105	Q200	193.00	192.51	194.74	198.30	3.56	198.30	3.56	195.54	197.52	0.026387	7.39	26.10	11.90	1.59
rio d'Iso	104.9 VER-105	Q 500	219.00	192.51	194.96	198.30	3.34	198.30	3.34	195.80	197.92	0.025623	7.63	28.71	11.90	1.57
rio d'Iso	104.8 VER-105	Q50	155.00	192.40	194.33	198.30	3.97	198.30	3.97	195.02	196.74	0.026323	6.87	22.56	11.90	1.59
rio d'Iso	104.8 VER-105	Q200	193.00	192.40	194.66	198.30	3.64	198.30	3.64	195.43	197.37	0.025463	7.31	26.42	11.90	1.57
rio d'Iso	104.8 VER-105	Q 500	219.00	192.40	194.87	198.30	3.43	198.30	3.43	195.70	197.78	0.024895	7.55	28.99	11.90	1.54
rio d'Iso	104.7		Bridge													
rio d'Iso	104.6 VER-105	Q50	155.00	192.22	194.22	198.30	4.08	198.30	4.08	194.84	196.46	0.023770	6.64	23.34	11.90	1.51
rio d'Iso	104.6 VER-105	Q200	193.00	192.22	194.54	198.30	3.76	198.30	3.76	195.25	197.11	0.023471	7.11	27.15	11.90	1.50
rio d'Iso	104.6 VER-105	Q 500	219.00	192.22	194.75	198.30	3.55	198.30	3.55	195.51	197.52	0.023200	7.38	29.69	11.90	1.49
rio d'Iso	104.5	Q50	155.00	191.96	193.94	198.00	4.06	198.00	4.06	194.58	196.22	0.024237	6.68	23.19	11.90	1.53
rio d'Iso	104.5	Q200	193.00	191.96	194.26	198.00	3.74	198.00	3.74	194.99	196.87	0.023931	7.15	26.97	11.90	1.52
rio d'Iso	104.5	Q 500	219.00	191.96	194.47	198.00	3.53	198.00	3.53	195.25	197.28	0.023670	7.43	29.49	11.90	1.51
rio d'Iso	104.4 VER-105	Q50	155.00	192.00	194.62	196.10	1.48	196.10	1.48	194.62	195.91	0.010444	5.03	30.79	11.90	1.00
rio d'Iso	104.4 VER-105	Q200	193.00	192.00	195.03	196.10	1.07	196.10	1.07	195.03	196.52	0.010574	5.41	35.65	11.90	1.00
rio d'Iso	104.4 VER-105	Q 500	219.00	192.00	195.30	196.10	0.80	196.10	0.80	195.30	196.92	0.010674	5.64	38.80	11.90	1.00
valle	104 VER-104	Q50	232.00	189.15	191.04	192.00	0.96	192.02	0.98	192.02	194.30	0.040836	8.01	28.98	21.83	2.22
valle	104 VER-104	Q200	291.00	189.15	191.28	192.00	0.72	192.02	0.74	192.35	194.91	0.039161	8.44	34.48	23.21	2.21
valle	104 VER-104	Q 500	329.00	189.15	191.42	192.00	0.58	192.02	0.60	192.55	195.29	0.038815	8.72	37.72	23.98	2.22
valle	103 VER-103	Q50	264.00	187.50	189.57	190.00	0.43	190.00	0.43	190.54	192.85	0.035864	8.03	32.87	21.71	2.08
valle	103 VER-103	Q200	332.00	187.50	189.85	190.00	0.15	190.00	0.15	190.91	193.51	0.034747	8.48	39.14	23.19	2.08
valle	103 VER-103	Q 500	376.00	187.50	190.01	190.00	-0.01	190.00	-0.01	191.16	193.91	0.034310	8.75	42.95	24.01	2.09

HEC-RAS Plan: Iso (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
valle	102 VER-102	Q50	264.00	186.10	188.84	190.00	1.16	190.00	1.16	189.64	191.42	0.021208	7.12	37.07	18.60	1.61
valle	102 VER-102	Q200	332.00	186.10	189.20	190.00	0.80	190.00	0.80	190.09	192.11	0.020413	7.55	43.97	19.51	1.61
valle	102 VER-102	Q 500	376.00	186.10	189.42	190.00	0.58	190.00	0.58	190.36	192.51	0.020006	7.79	48.27	20.05	1.60
valle	101 VER-101	Q50	264.00	185.40	188.86	190.57	1.71	190.00	1.14	188.86	190.27	0.008169	5.26	50.17	17.73	1.00
valle	101 VER-101	Q200	332.00	185.40	189.37	190.57	1.20	190.00	0.63	189.37	190.96	0.008068	5.58	59.50	18.75	1.00
valle	101 VER-101	Q 500	376.00	185.40	189.68	190.57	0.89	190.00	0.32	189.68	191.37	0.007997	5.75	65.37	19.36	1.00
valle	100 VER-100	Q50	264.00	184.08	186.19	190.00	3.81	188.00	1.81	187.09	189.05	0.026185	7.49	35.24	19.87	1.80
valle	100 VER-100	Q200	332.00	184.08	186.51	190.00	3.49	188.00	1.49	187.53	189.74	0.025337	7.96	41.69	20.80	1.80
valle	100 VER-100	Q 500	376.00	184.08	186.70	190.00	3.30	188.00	1.30	187.79	190.15	0.024896	8.23	45.70	21.35	1.80
valle	99 VER-99	Q50	264.00	183.18	185.86	184.57	-1.29	188.00	2.14	186.46	187.76	0.019310	6.34	45.37	34.79	1.56
valle	99 VER-99	Q200	332.00	183.18	186.01	184.57	-1.44	188.00	1.99	186.76	188.40	0.023005	7.16	50.80	37.10	1.72
valle	99 VER-99	Q 500	376.00	183.18	186.10	184.57	-1.53	188.00	1.90	186.94	188.81	0.024929	7.64	53.94	37.72	1.80
valle	98 VER-98	Q50	264.00	181.34	183.25	182.00	-1.25	190.00	6.75	184.18	186.35	0.035891	8.30	36.15	32.27	2.10
valle	98 VER-98	Q200	332.00	181.34	183.46	182.00	-1.46	190.00	6.54	184.45	186.89	0.035398	8.82	43.30	35.30	2.12
valle	98 VER-98	Q 500	376.00	181.34	183.58	182.00	-1.58	190.00	6.42	184.62	187.23	0.035709	9.17	47.47	36.96	2.15
valle	97 VER-97	Q50	264.00	181.00	183.83	186.00	2.17	186.00	2.17	183.83	184.92	0.007383	4.62	57.11	26.12	1.00
valle	97 VER-97	Q200	332.00	181.00	184.21	186.00	1.79	186.00	1.79	184.21	185.46	0.007192	4.94	67.15	26.97	1.00
valle	97 VER-97	Q 500	376.00	181.00	184.44	186.00	1.56	186.00	1.56	184.44	185.78	0.007065	5.12	73.47	27.49	1.00
valle	96 VER-96	Q50	264.00	178.00	180.04	185.90	5.86	180.00	-0.04	181.11	183.74	0.049599	8.52	31.00	23.74	2.37
valle	96 VER-96	Q200	332.00	178.00	180.31	185.90	5.59	180.00	-0.31	181.50	184.31	0.042565	8.87	37.64	25.26	2.25
valle	96 VER-96	Q 500	376.00	178.00	180.48	185.90	5.42	180.00	-0.48	181.73	184.66	0.039419	9.07	41.87	26.19	2.20
valle	95.2 VER-95	Q50	264.00	176.68	181.54	183.10	1.56	182.50	0.96	180.59	182.10	0.002759	3.32	79.62	25.23	0.60
valle	95.2 VER-95	Q200	332.00	176.68	182.11	183.10	0.99	182.50	0.39	180.97	182.74	0.002641	3.53	94.12	25.69	0.59
valle	95.2 VER-95	Q 500	376.00	176.68	182.41	183.10	0.69	182.50	0.09	181.21	183.11	0.002671	3.69	101.94	25.93	0.59
valle	95.1 VER-95	Q50	264.00	176.65	180.79	183.07	2.28	182.47	1.68	180.71	182.01	0.007452	4.89	53.95	20.25	0.96
valle	95.1 VER-95	Q200	332.00	176.65	181.45	183.07	1.62	182.47	1.02	181.20	182.67	0.006343	4.88	68.08	22.52	0.90
valle	95.1 VER-95	Q 500	376.00	176.65	181.58	183.07	1.49	182.47	0.89	181.49	183.01	0.007272	5.29	71.02	22.96	0.96
valle	95		Bridge													
valle	93 VER-95	Q50	264.00	176.65	180.71	183.07	2.36	182.47	1.76	180.71	182.01	0.008150	5.06	52.17	19.95	1.00
valle	93 VER-95	Q200	332.00	176.65	181.20	183.07	1.87	182.47	1.27	181.20	182.64	0.008004	5.32	62.38	21.63	1.00
valle	93 VER-95	Q 500	376.00	176.65	181.49	183.07	1.58	182.47	0.98	181.49	183.01	0.007873	5.46	68.93	22.65	1.00
valle	1	Q50	264.00	175.94	179.26	182.36	3.10	181.76	2.50	180.00	181.66	0.018436	6.87	38.44	17.43	1.48
valle	1	Q200	332.00	175.94	179.71	182.36	2.65	181.76	2.05	180.49	182.30	0.017451	7.13	46.57	18.96	1.45
valle	1	Q 500	376.00	175.94	179.97	182.36	2.39	181.76	1.79	180.77	182.67	0.016946	7.27	51.68	19.87	1.44

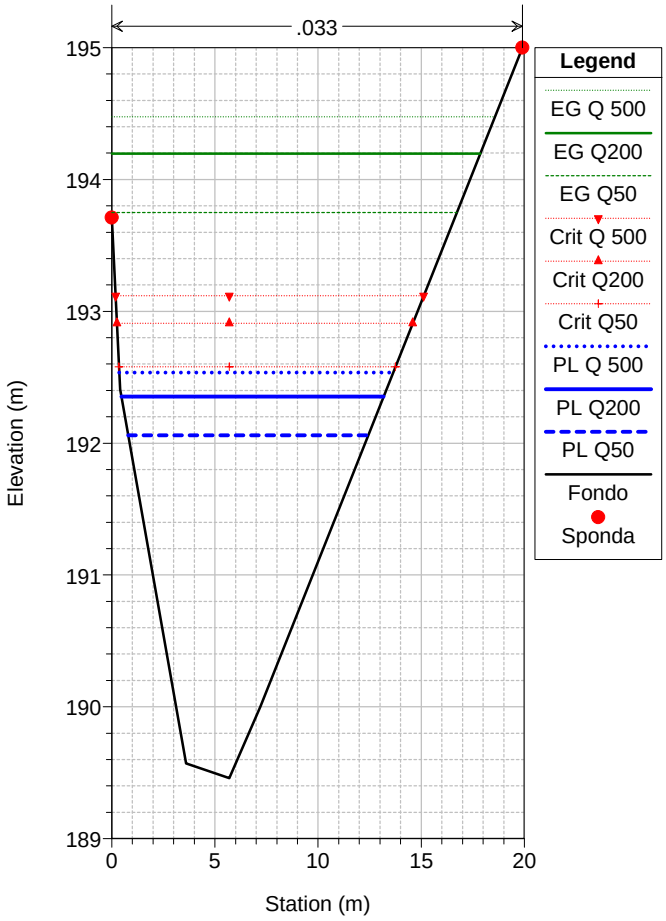
Rio d'Iso Plan: Piena Corneo

River = Corneo Reach = Corneo COR-3



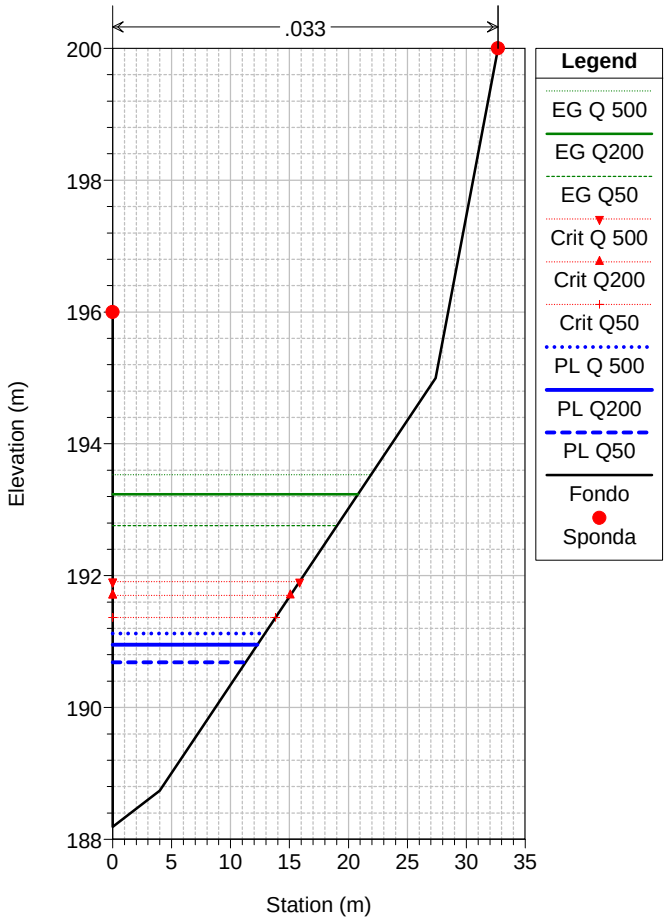
Rio d'Iso Plan: Piena Corneo

River = Corneo Reach = Corneo COR-2



Rio d'Iso Plan: Piena Corneo

River = Corneo Reach = Corneo COR-1



HEC-RAS Plan: Corneo River: Corneo Reach: Corneo

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)	
Corneo	3 COR-3	Q50	102.00	190.56	193.68	194.81	1.13	196.10	2.42	193.68	194.58	0.010330	4.21	24.25	13.40	1.00
Corneo	3 COR-3	Q200	128.00	190.56	194.01	194.81	0.80	196.10	2.09	194.01	195.01	0.010171	4.44	28.81	14.34	1.00
Corneo	3 COR-3	Q 500	146.00	190.56	194.22	194.81	0.59	196.10	1.88	194.22	195.29	0.010054	4.58	31.88	14.94	1.00
Corneo	2 COR-2	Q50	102.00	189.46	192.06	193.71	1.65	195.00	2.94	192.58	193.75	0.024103	5.76	17.71	11.63	1.49
Corneo	2 COR-2	Q200	128.00	189.46	192.35	193.71	1.36	195.00	2.65	192.91	194.20	0.023202	6.01	21.28	12.71	1.48
Corneo	2 COR-2	Q 500	146.00	189.46	192.53	193.71	1.18	195.00	2.47	193.12	194.48	0.022666	6.17	23.65	13.28	1.48
Corneo	1 COR-1	Q50	102.00	188.19	190.69	196.00	5.31	200.00	9.31	191.37	192.76	0.037432	6.38	15.98	11.28	1.71
Corneo	1 COR-1	Q200	128.00	188.19	190.95	196.00	5.05	200.00	9.05	191.70	193.23	0.036393	6.69	19.14	12.28	1.71
Corneo	1 COR-1	Q 500	146.00	188.19	191.12	196.00	4.88	200.00	8.88	191.91	193.53	0.035849	6.88	21.24	12.91	1.71

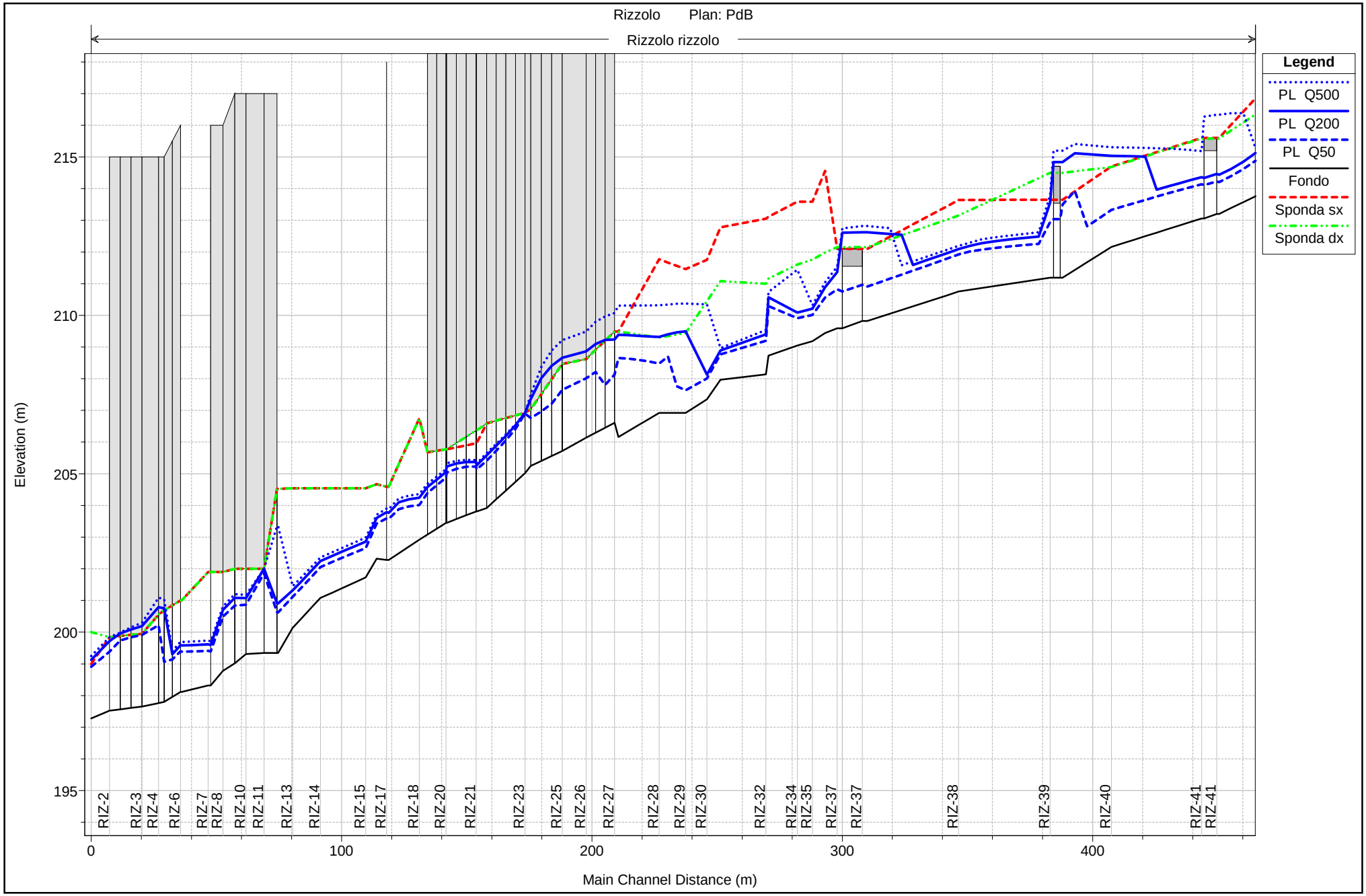
10.6 Rio Rizzolo

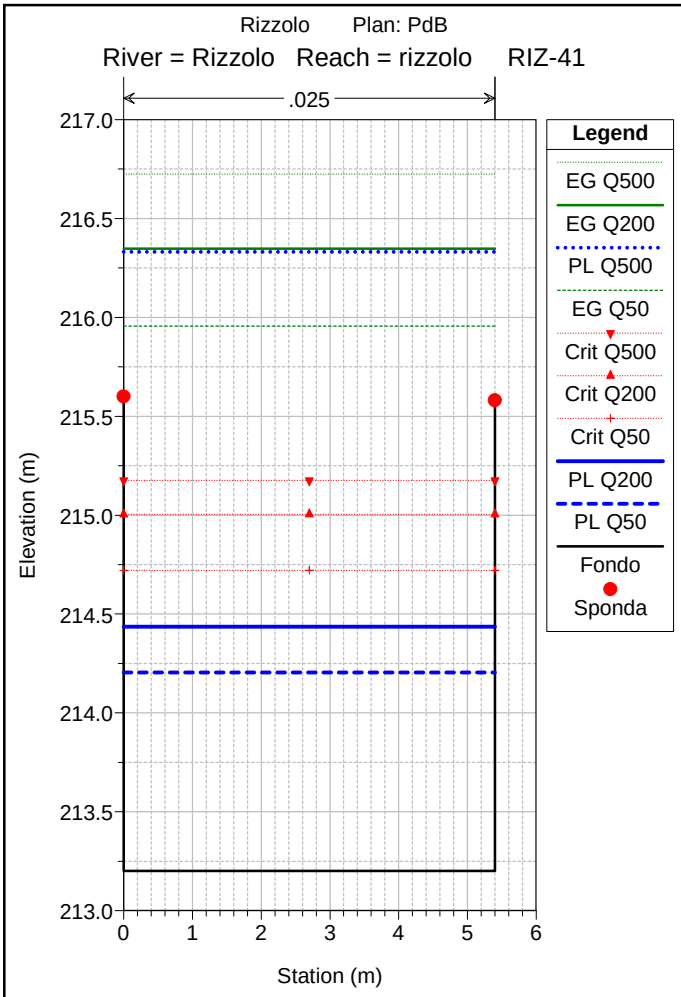
Il Rizzolo è un affluente in sponda sinistra del torrente Verde in cui confluisce mediante una briglia di altezza superiore ai 2 m. Per questa ragione si è ritenuto ininfluente l'effetto della confluenza e si è imposta come condizione al contorno di valle la profondità critica.
Le portate utilizzate sono di conseguenza:

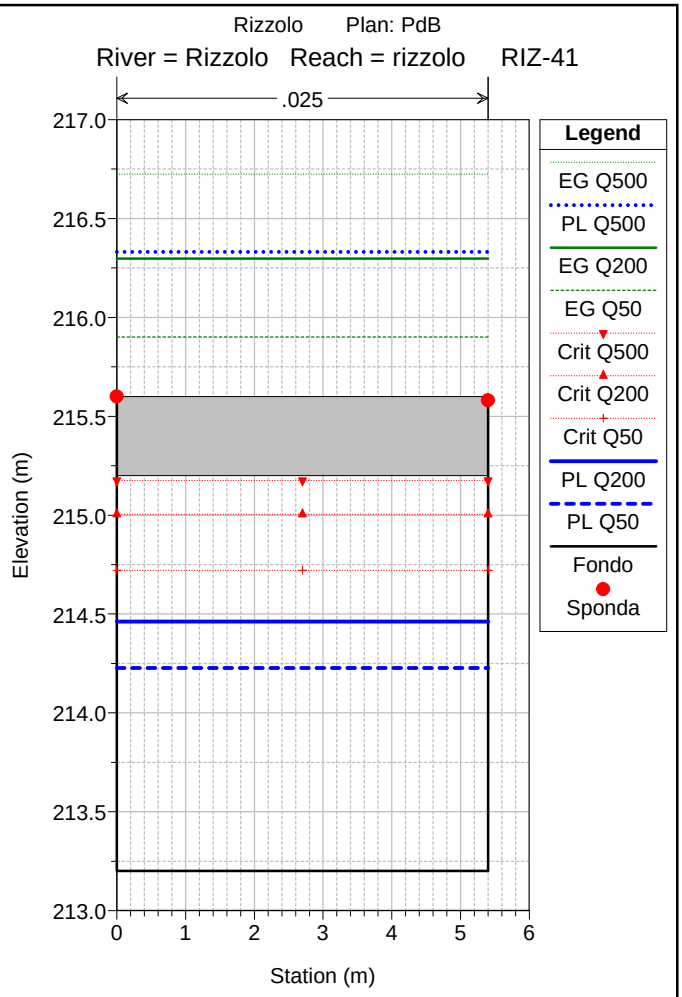
TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
		T = 50 anni	**T = 200 anni**	**T = 500 anni**
Rio Rizzolo	R0	31.8	40.9	47

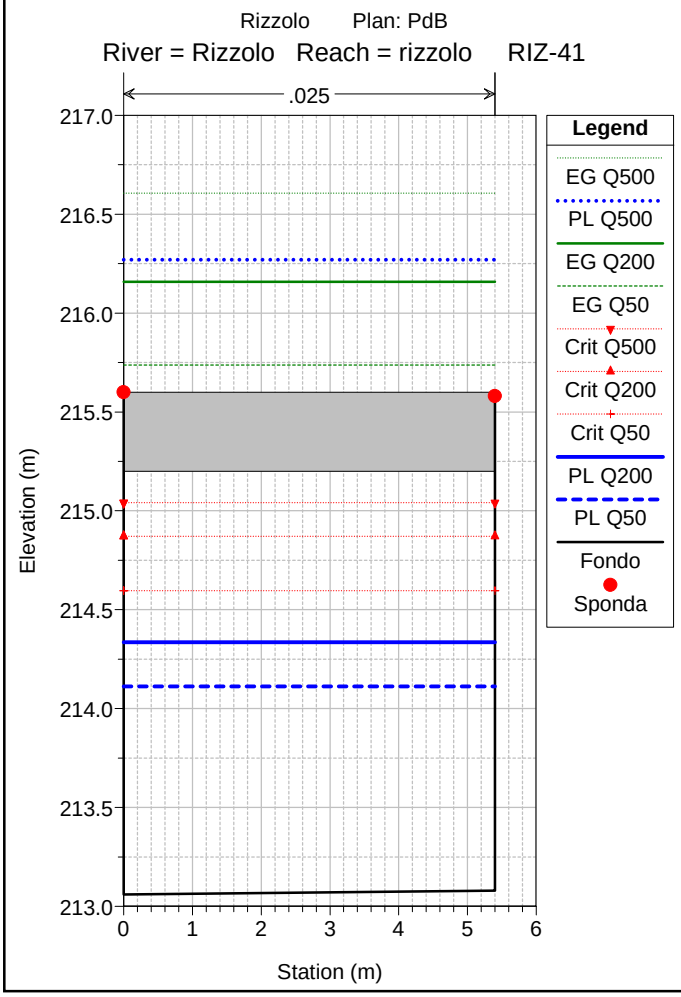
Come condizioni al contorno è stata imposta la profondità critica a valle e a monte in una sezione fittizia.

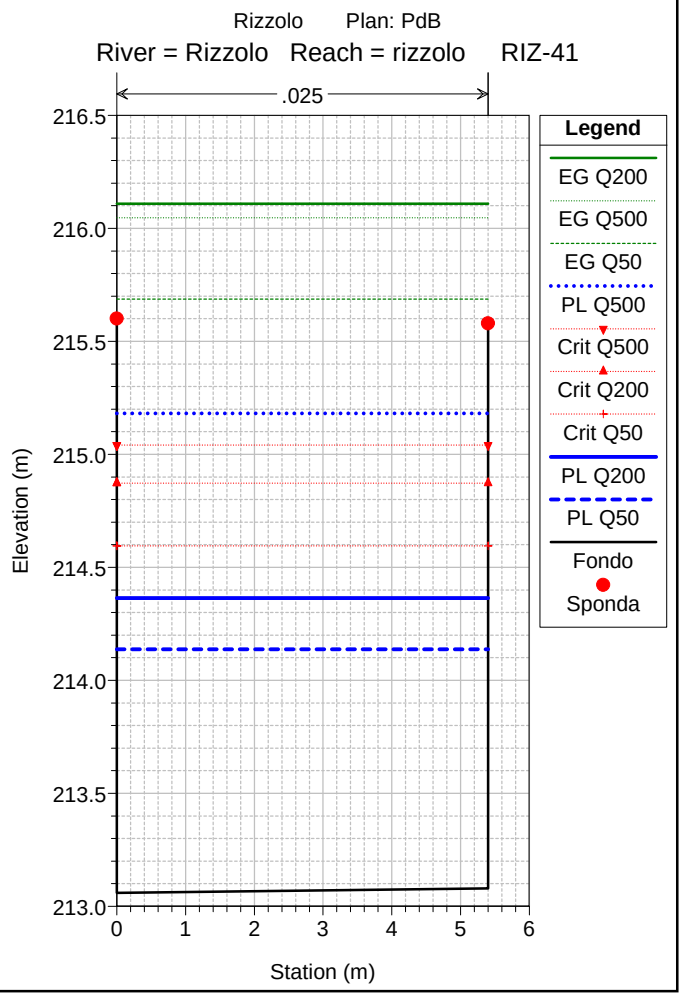
Nelle simulazioni è stato assegnato un valore medio del coefficiente di scabrezza ks di Strickler pari a 35 $m^{1/3}/s$ nel tratto di monte e. 30 $m^{1/3}/s$ nel tratto di valle.

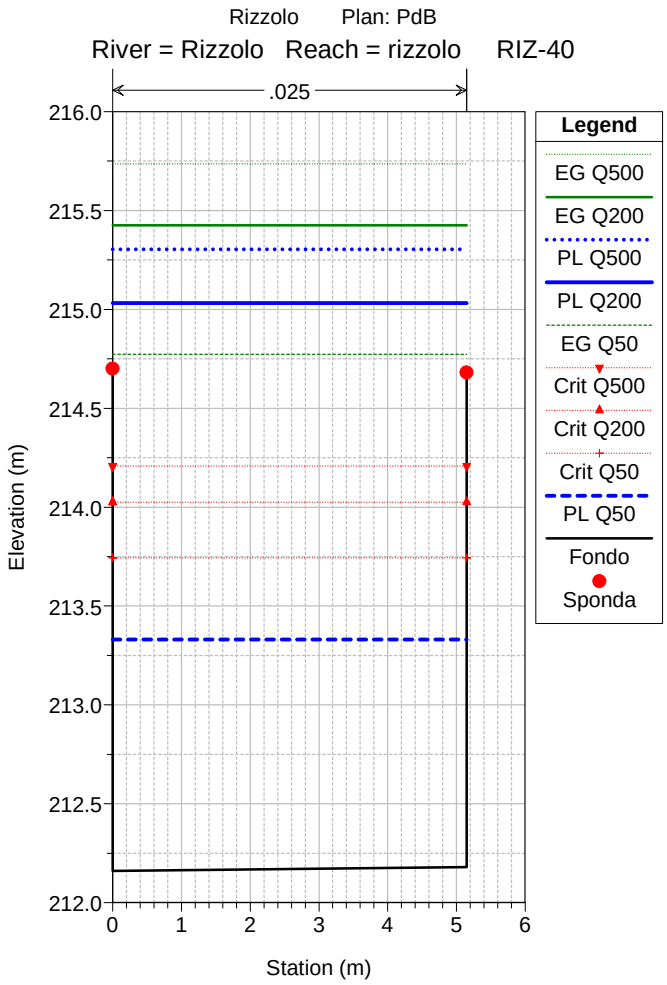

Rizzolo Plan: PdB
Rizzolo rizzolo
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
215
210
205
200
195
RIZ-2
RIZ-3
RIZ-4
RIZ-6
RIZ-7
RIZ-8
RIZ-10
RIZ-11
RIZ-13
RIZ-14
RIZ-15
RIZ-17
RIZ-18
RIZ-20
RIZ-21
RIZ-23
RIZ-25
RIZ-26
RIZ-27
RIZ-28
RIZ-29
RIZ-30
RIZ-32
RIZ-34
RIZ-35
RIZ-37
RIZ-37
RIZ-38
RIZ-39
RIZ-40
RIZ-41
RIZ-41
0
100
200
300
400
Main Channel Distance (m)

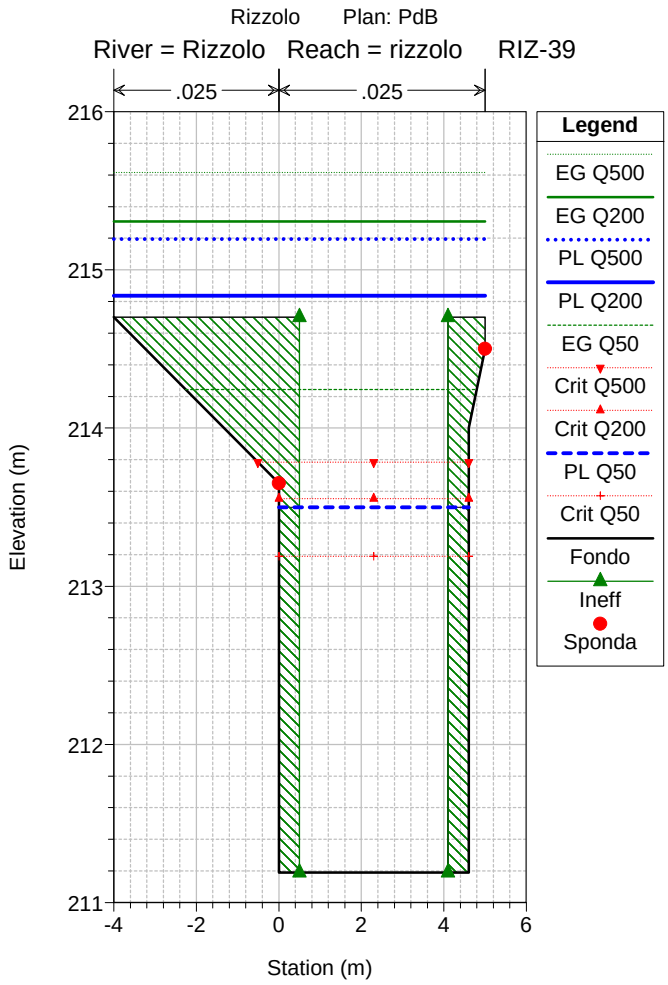

Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-41
.025
Legend
EG Q500
EG Q200
PL Q500
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

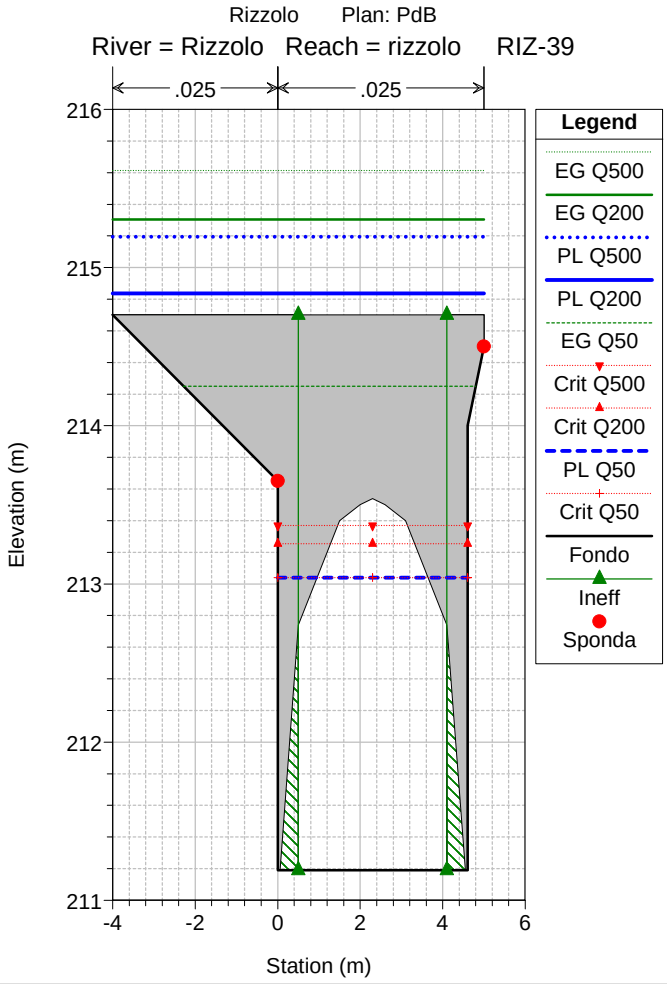

Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-41
.025
Legend
EG Q500
PL Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

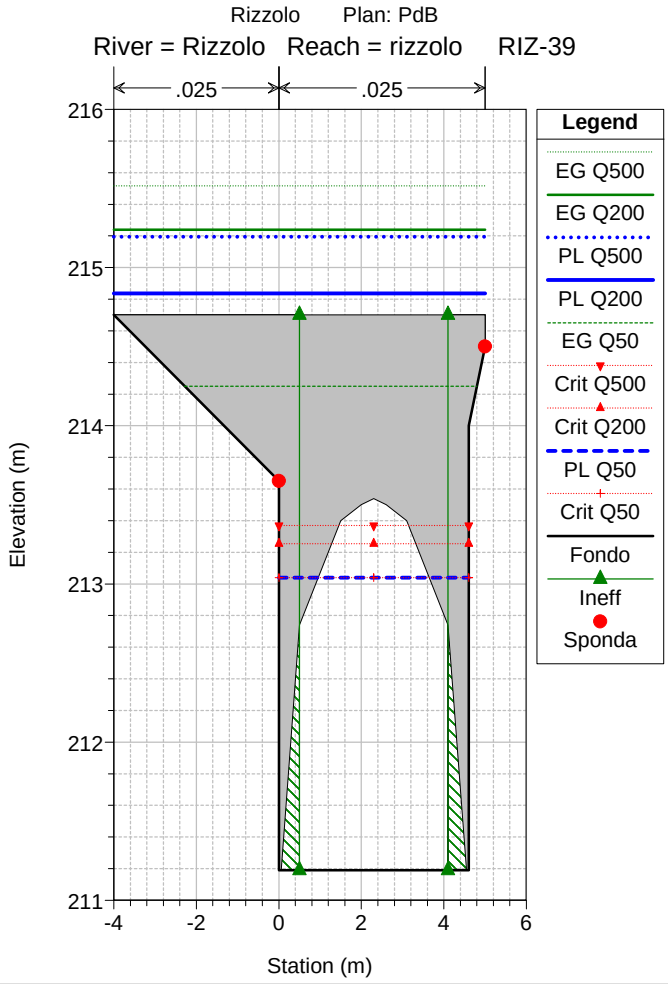

Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-41
.025
Legend
EG Q500
PL Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

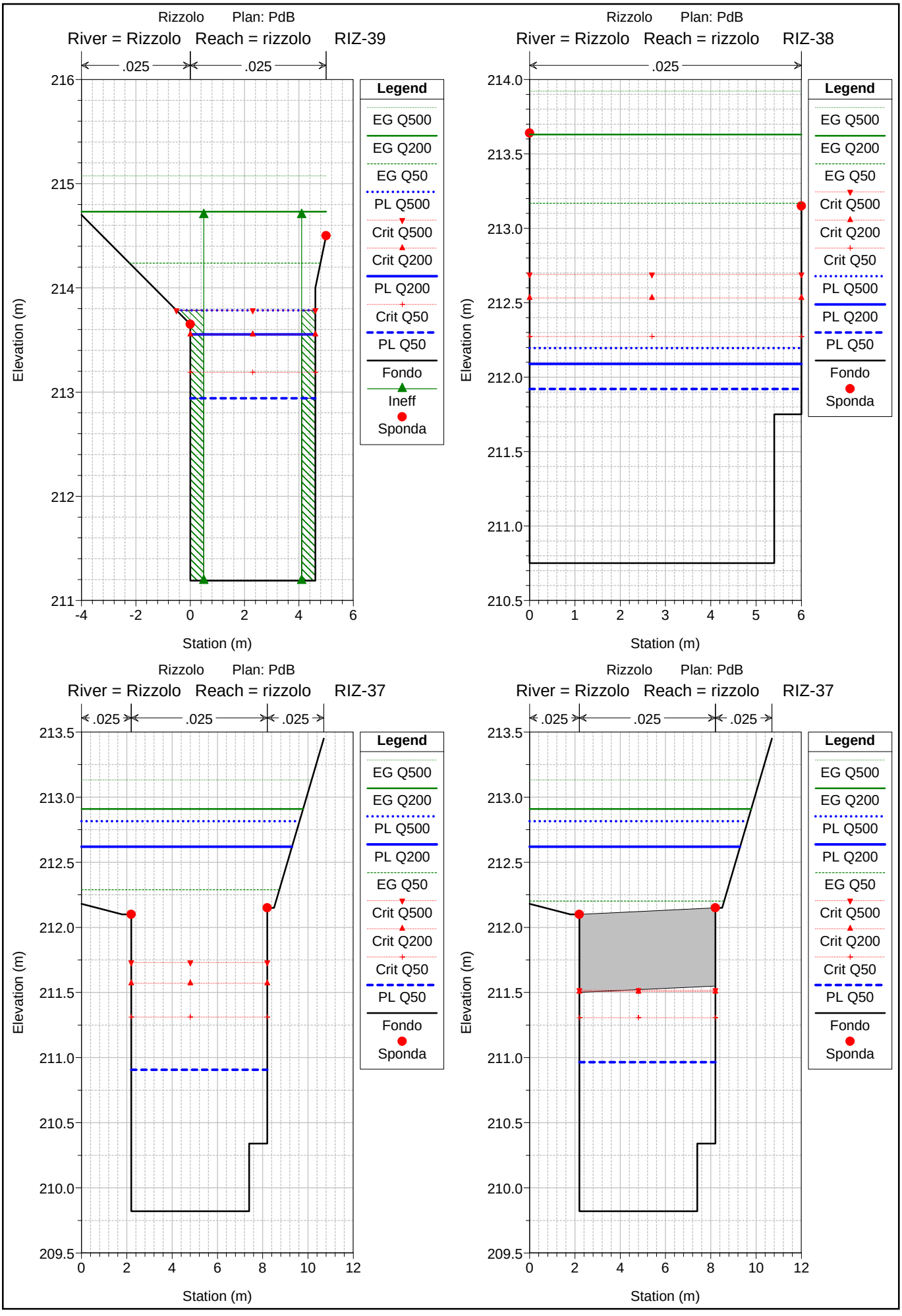

Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-41
.025
Legend
EG Q200
EG Q500
EG Q50
PL Q500
Crit Q500
Crit Q200
Crit Q50
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

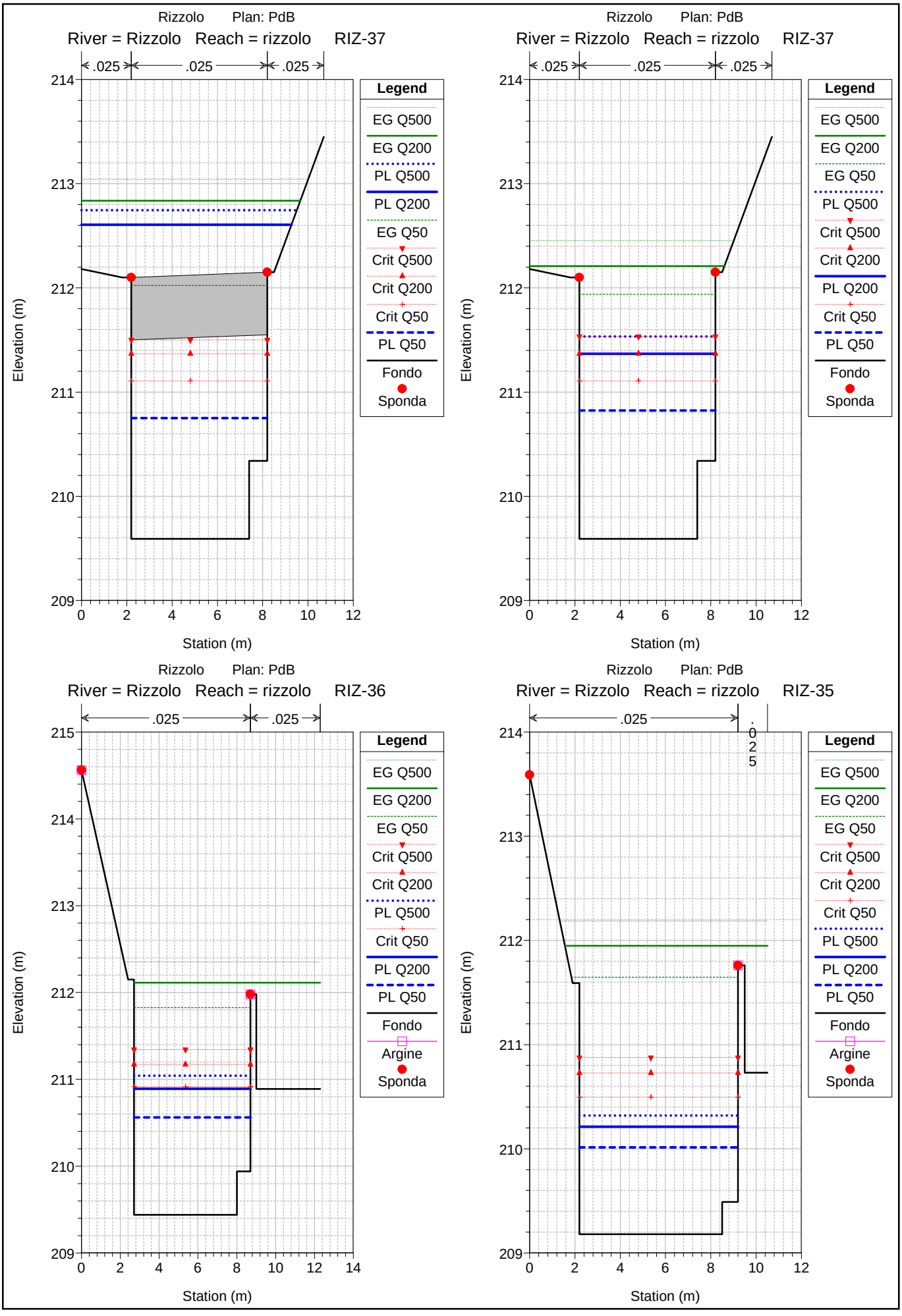

Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-40
.025
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-39
.025
.025
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Ineff
Sponda
Elevation (m)
Station (m)


Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-39
.025
.025
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Ineff
Sponda
Elevation (m)
Station (m)

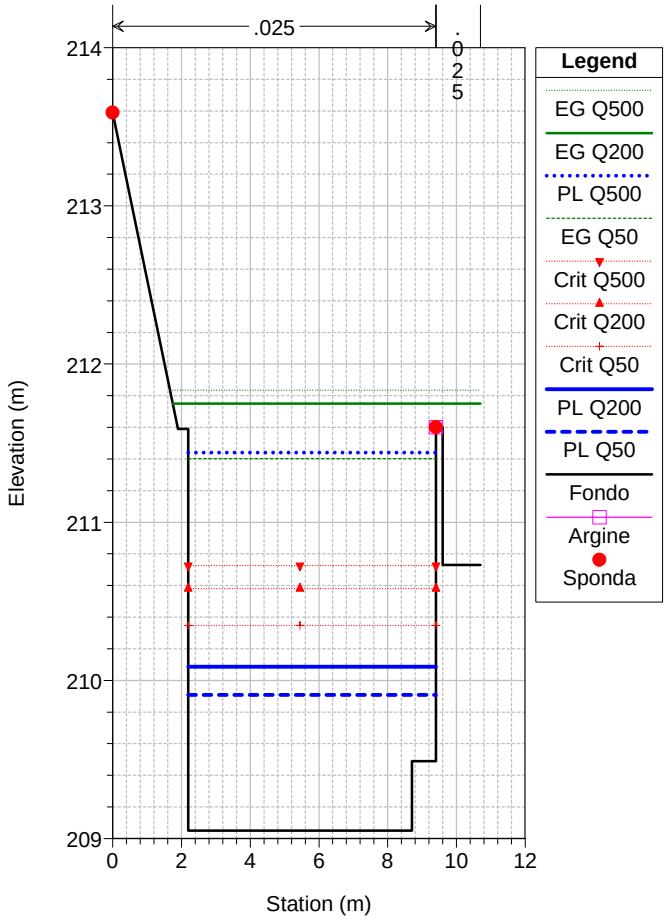

Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-39
.025
.025
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Ineff
Sponda
Elevation (m)
Station (m)


Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-39
.025
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Ineff
Sponda
Elevation (m)
Station (m)
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-38
.025
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-37
.025
.025
.025
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-37
.025
.025
.025
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-37
.025
.025
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-37
.025
.025
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
Crit Q50
PL Q50
Fondo
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-36
.025
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Argine
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-35
.025
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Argine
Sponda

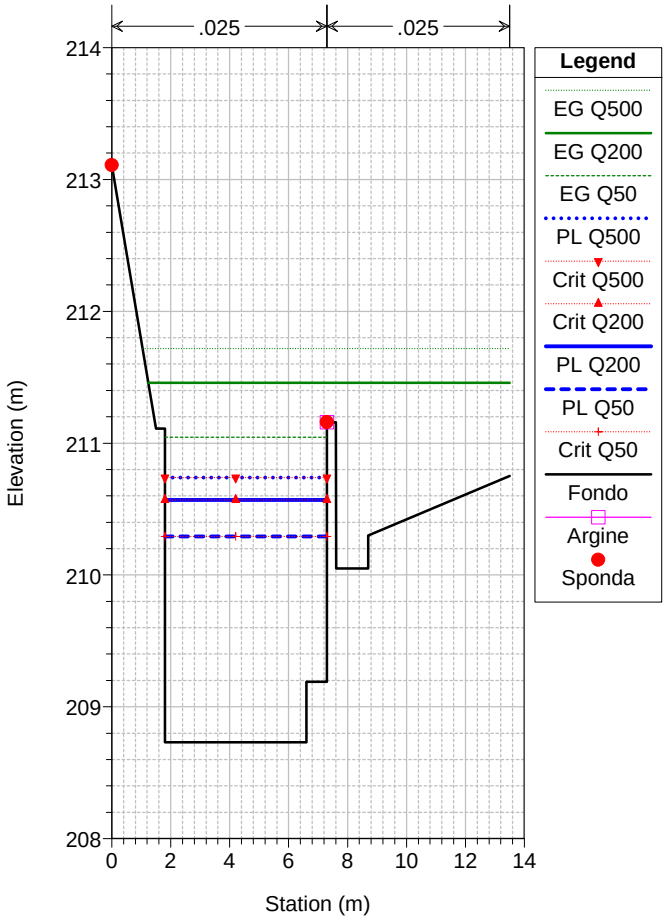
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-34



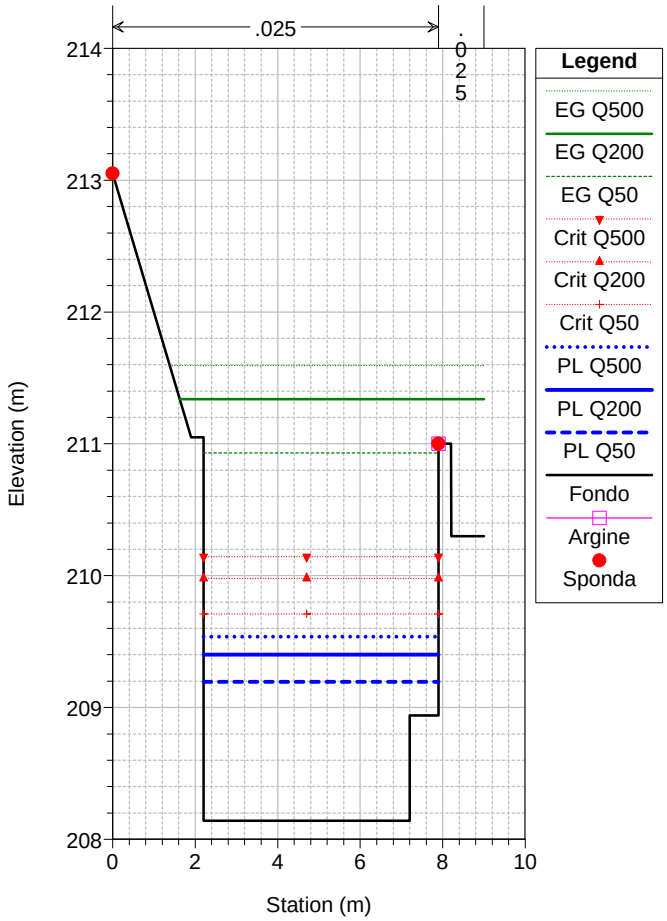
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-33



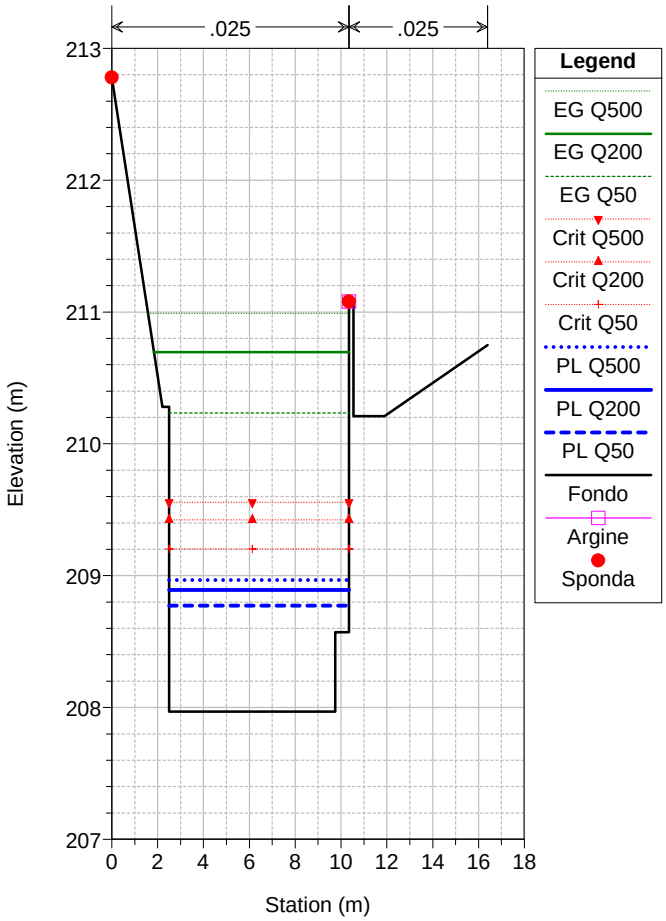
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-32



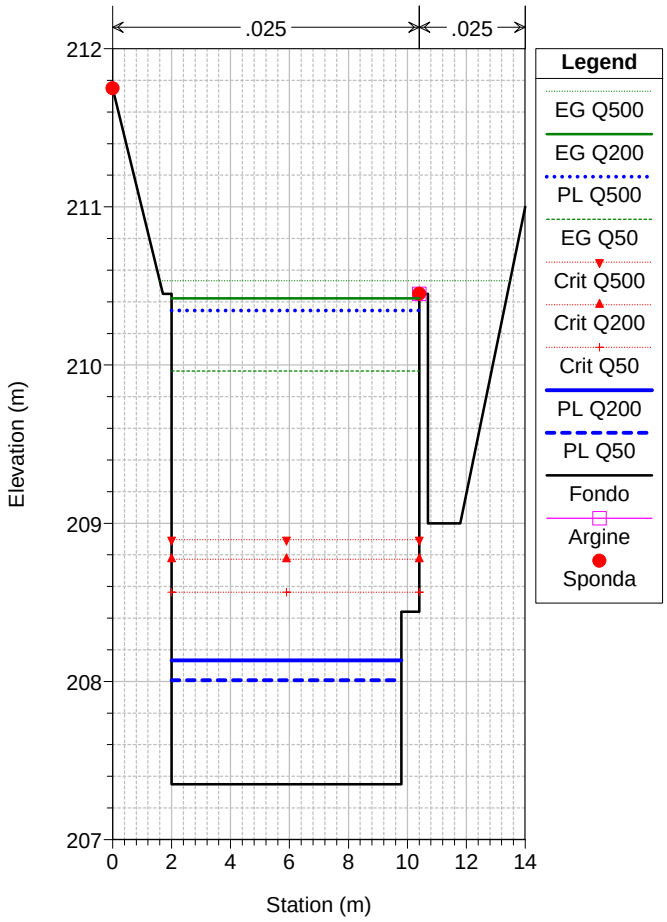
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-31



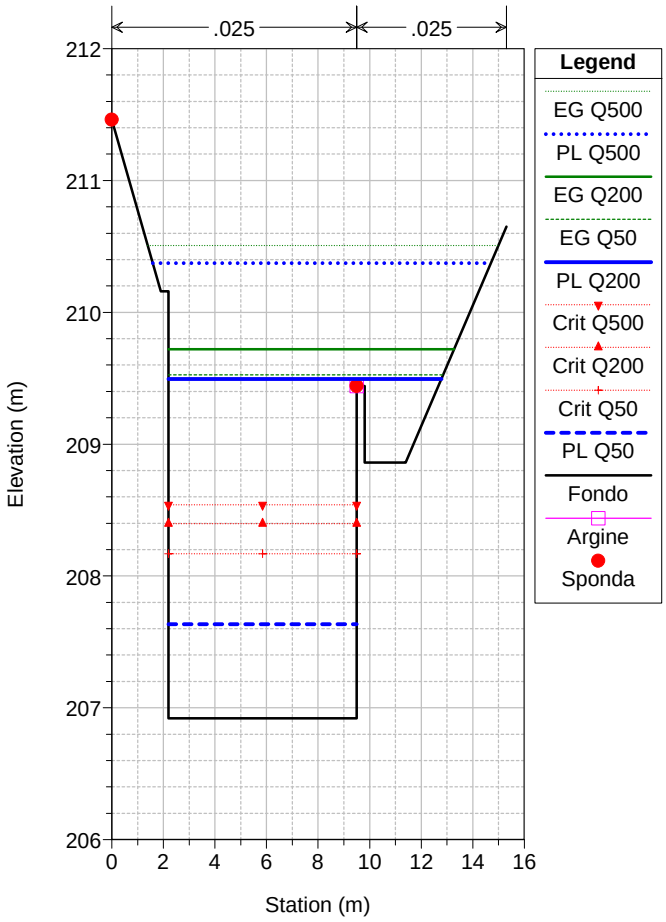
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-30



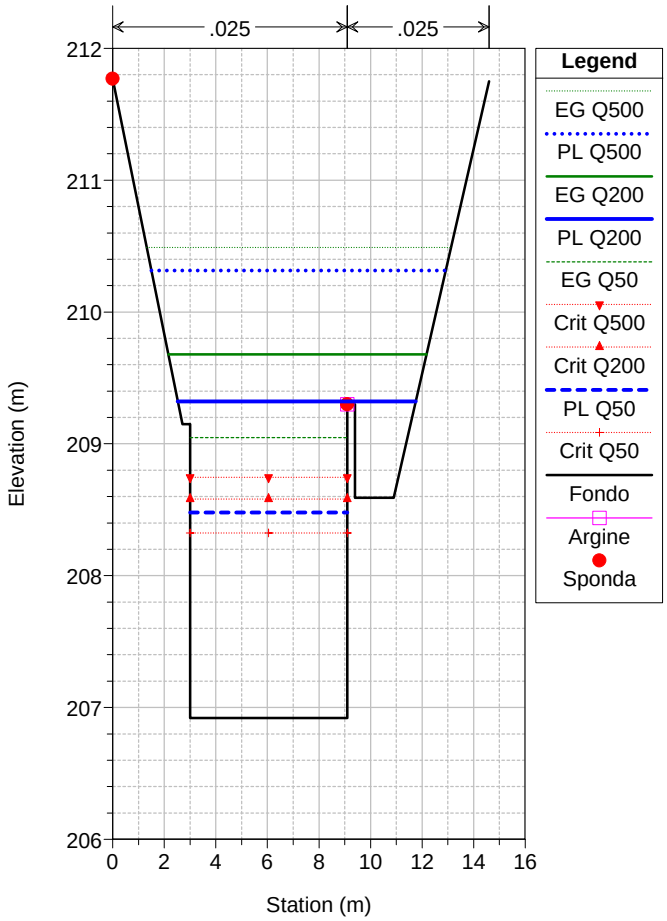
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-29



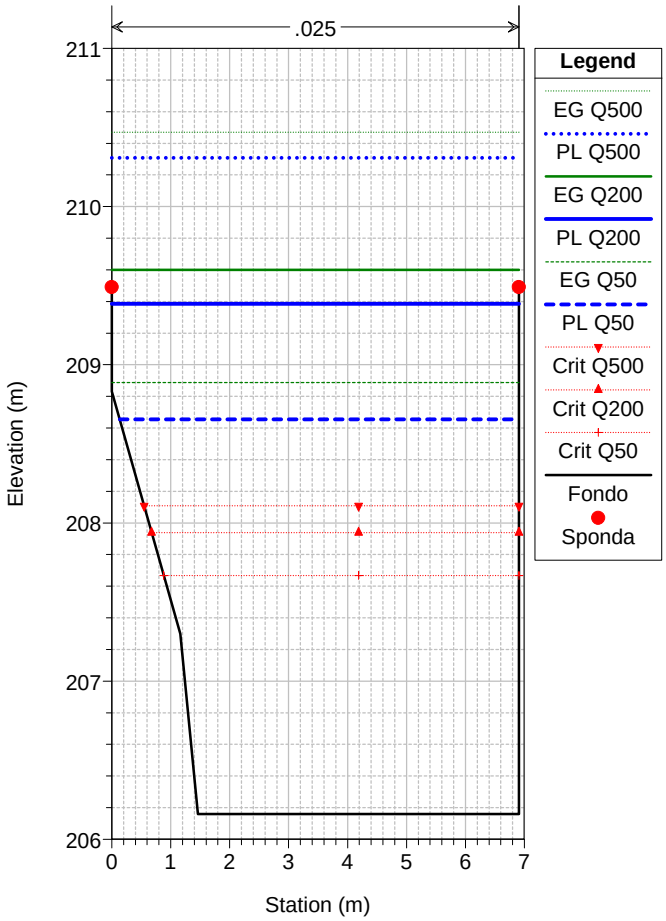
Rizzolo Plan: PdB

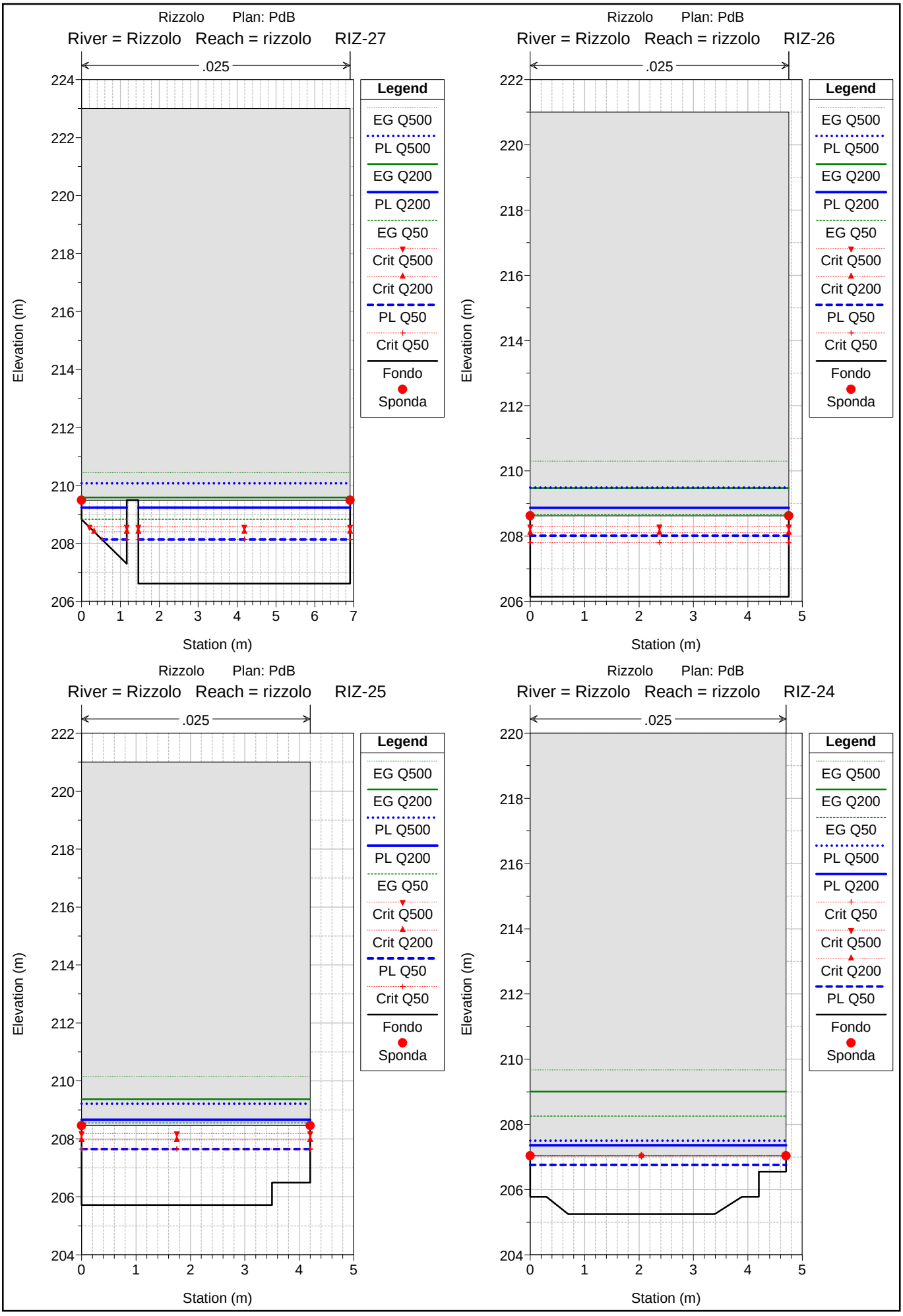
River = Rizzolo Reach = rizzolo RIZ-28



Rizzolo Plan: PdB

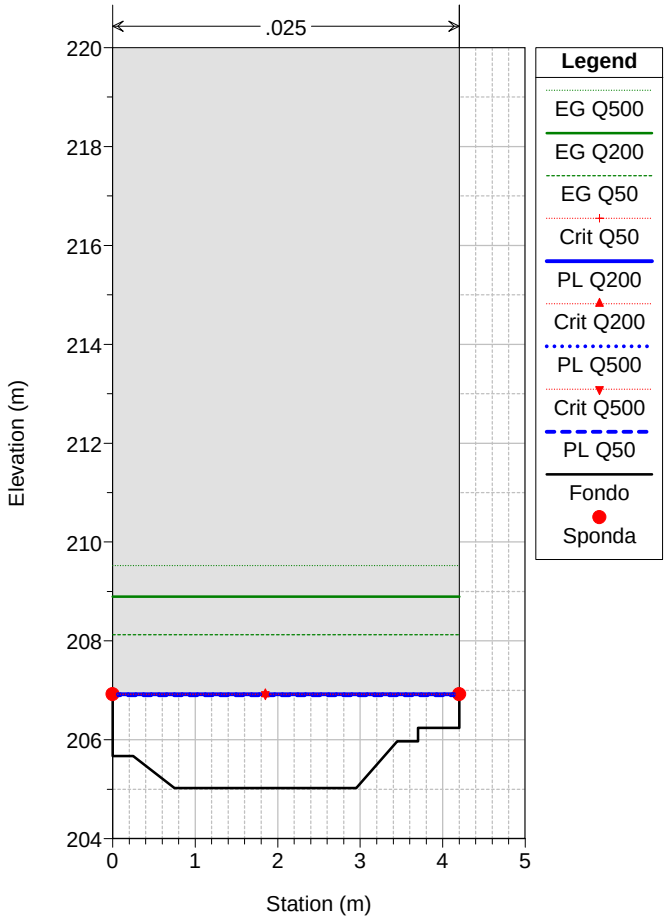
River = Rizzolo Reach = rizzolo RIZ-27




Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-27
.025
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-26
.025
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-25
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
PL Q200
EG Q50
Crit Q500
Crit Q200
PL Q50
Crit Q50
Fondo
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-24
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
Crit Q50
Crit Q500
Crit Q200
PL Q50
Fondo
Sponda

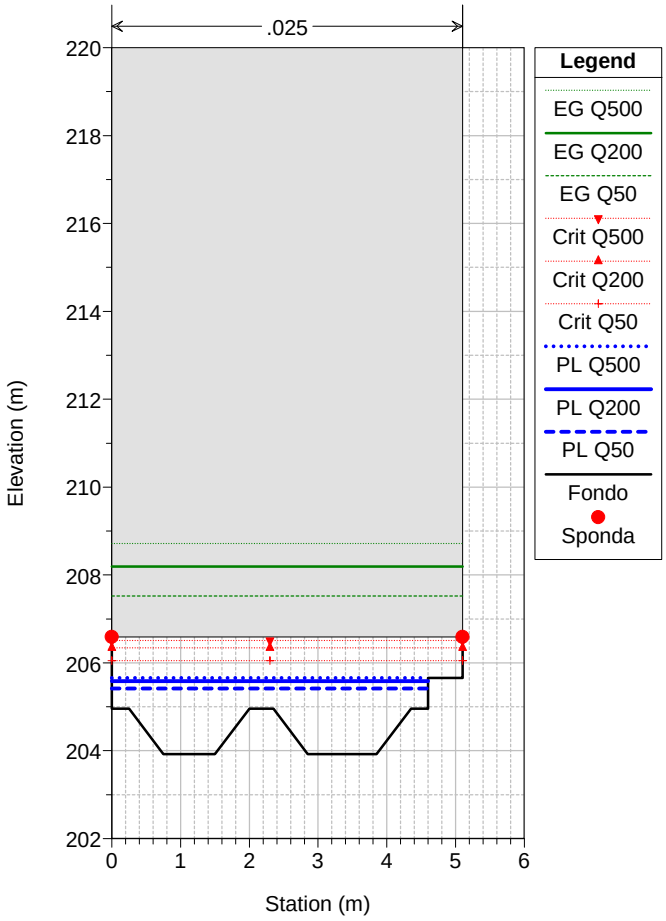
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-23



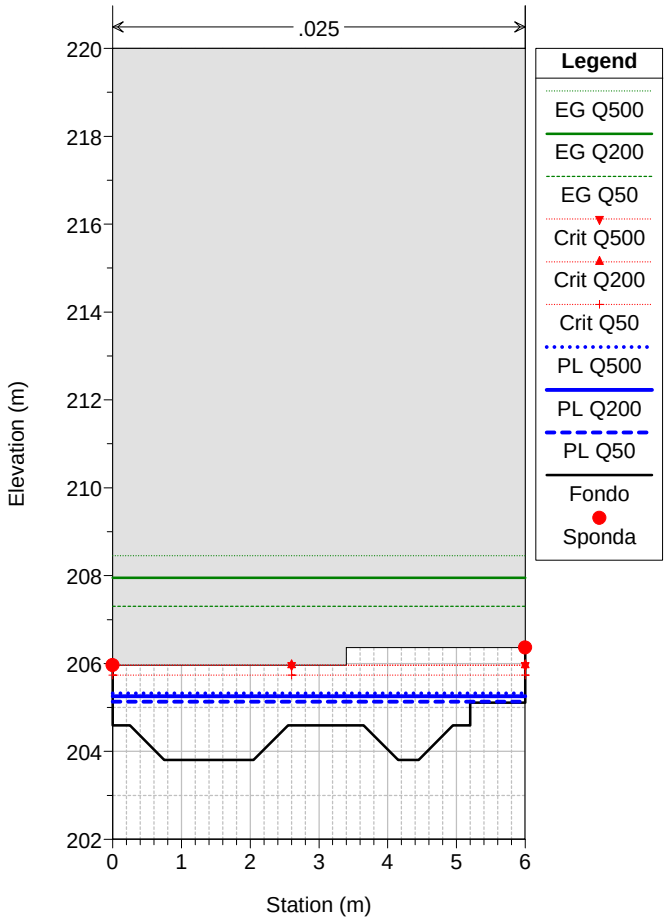
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-22



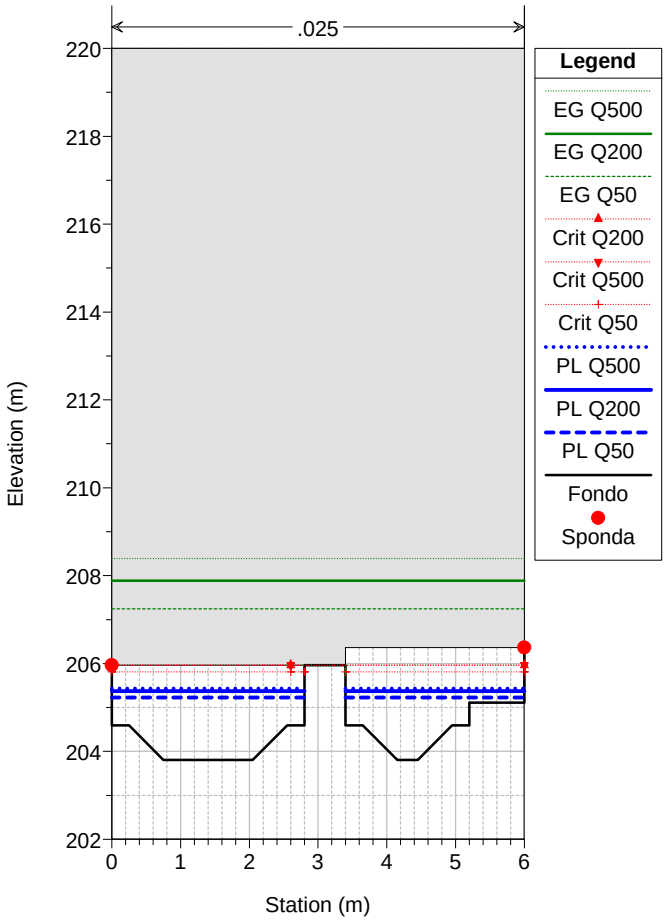
Rizzolo Plan: PdB

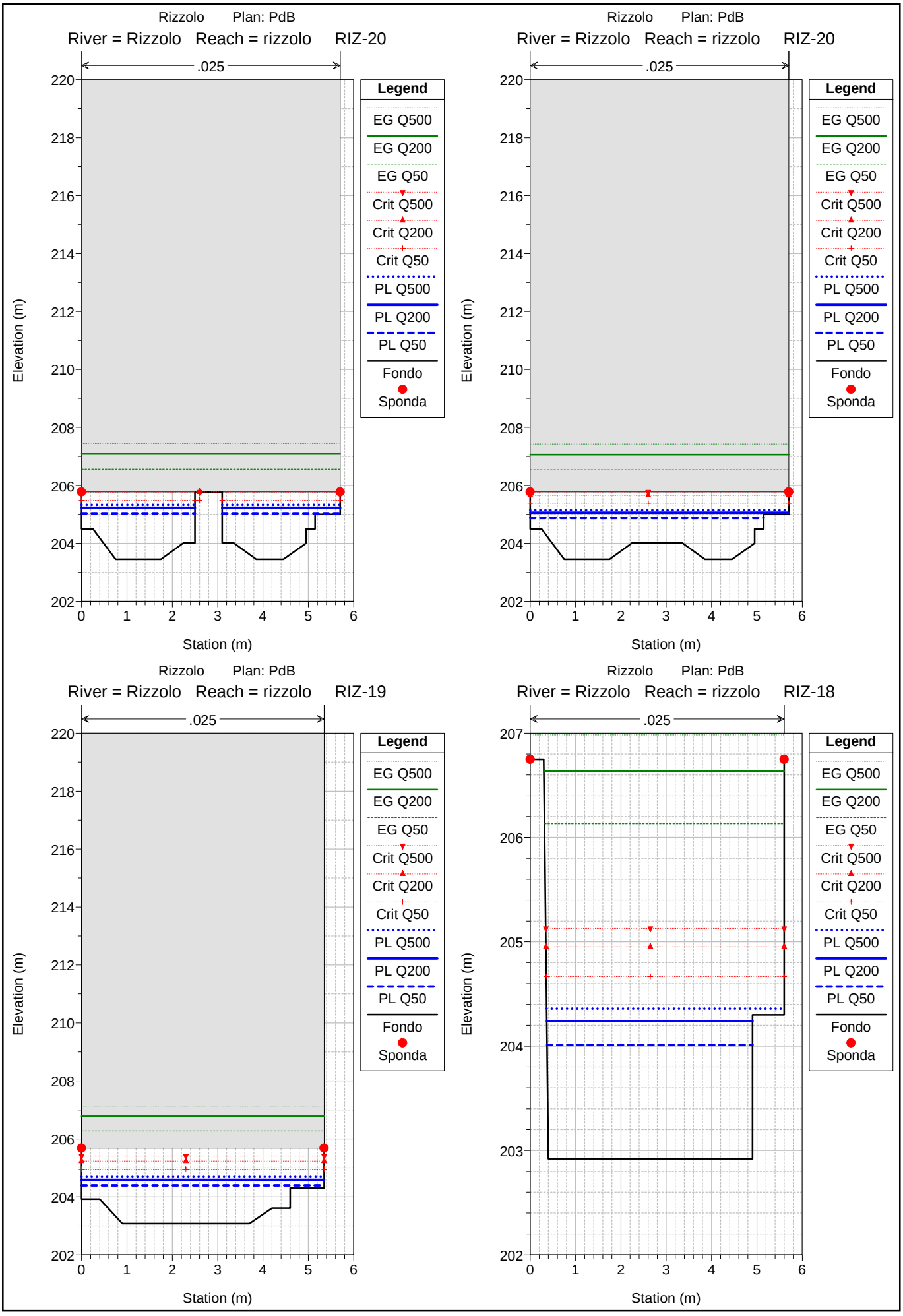
River = Rizzolo Reach = rizzolo RIZ-21

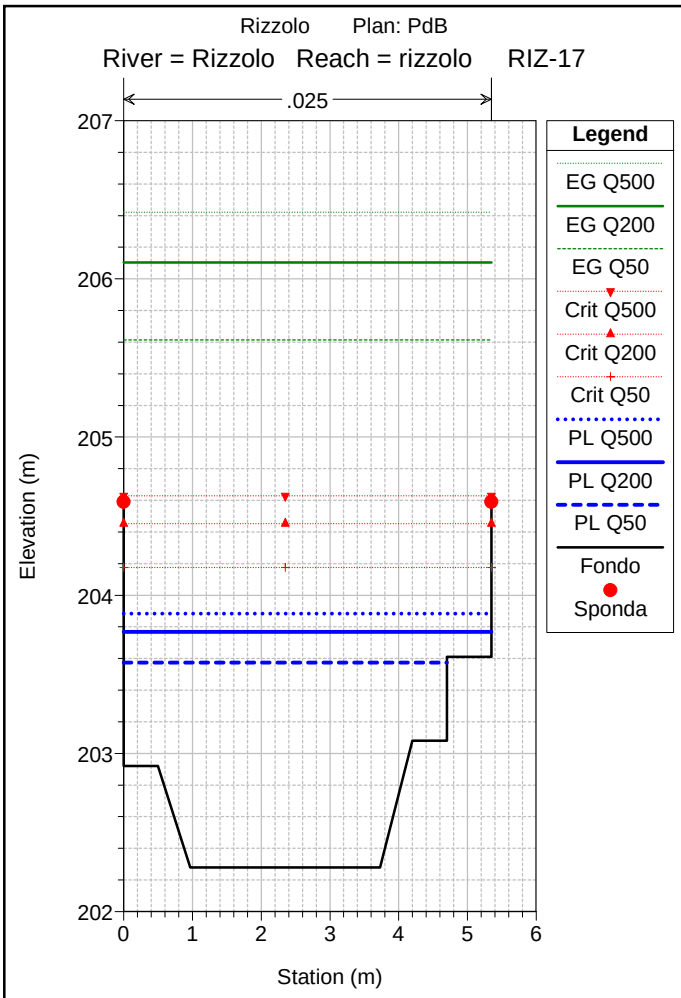


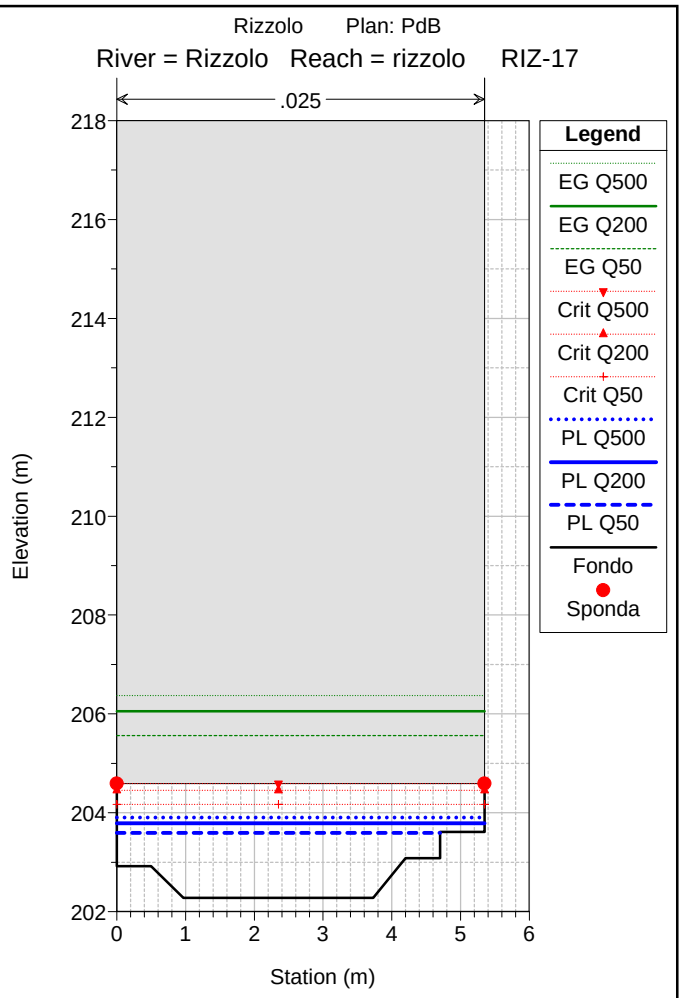
Rizzolo Plan: PdB

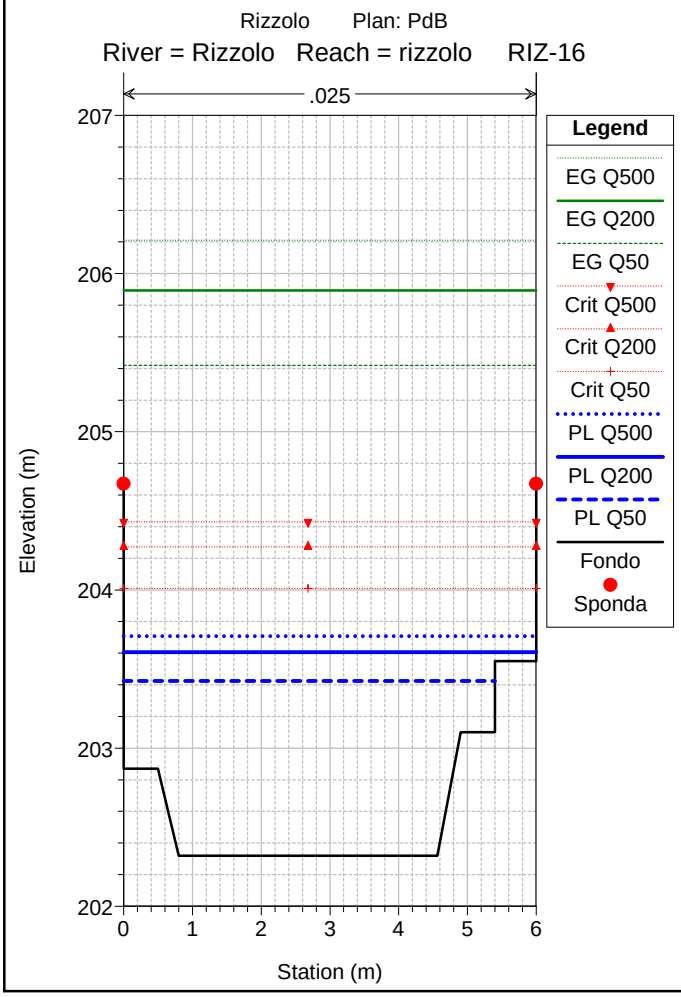
River = Rizzolo Reach = rizzolo RIZ-21

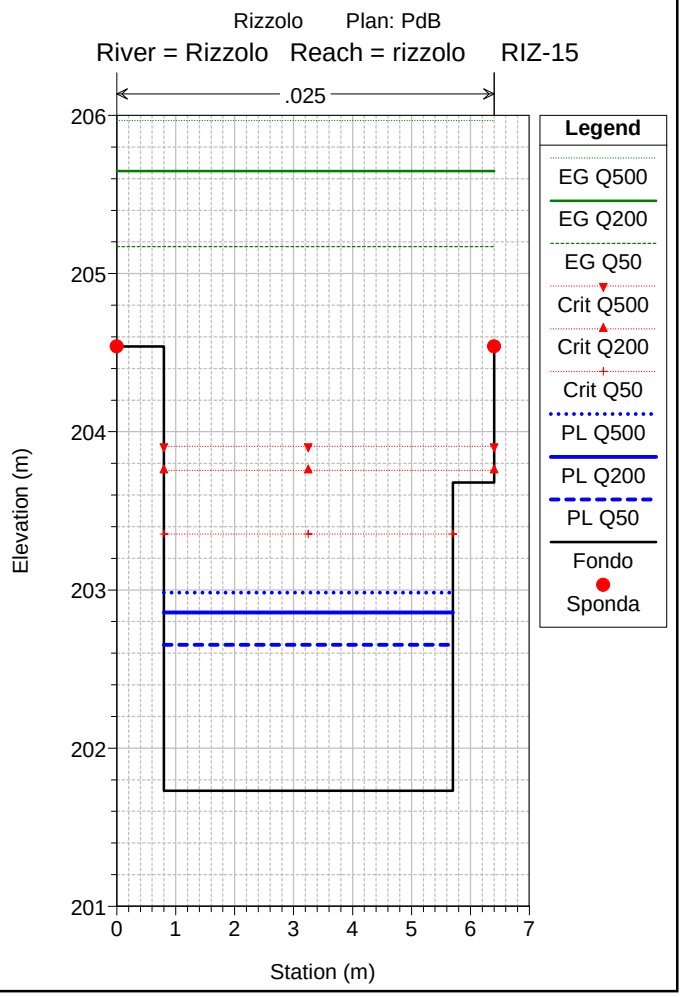



Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-20
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-20
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-19
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-18
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda


Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-17
.025
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

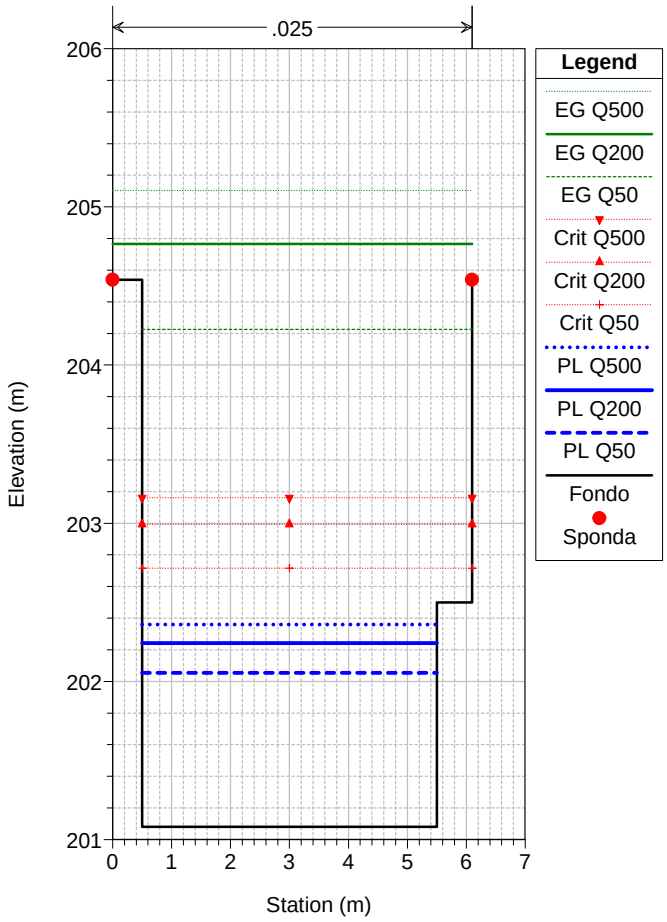

Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-17
.025
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-16
.025
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)


Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-15
.025
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

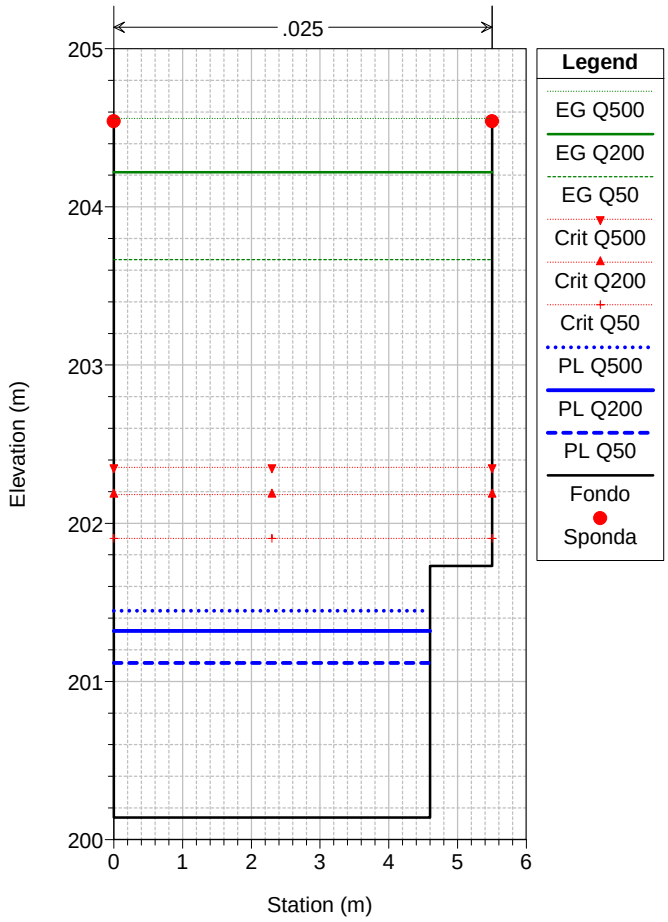
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-14



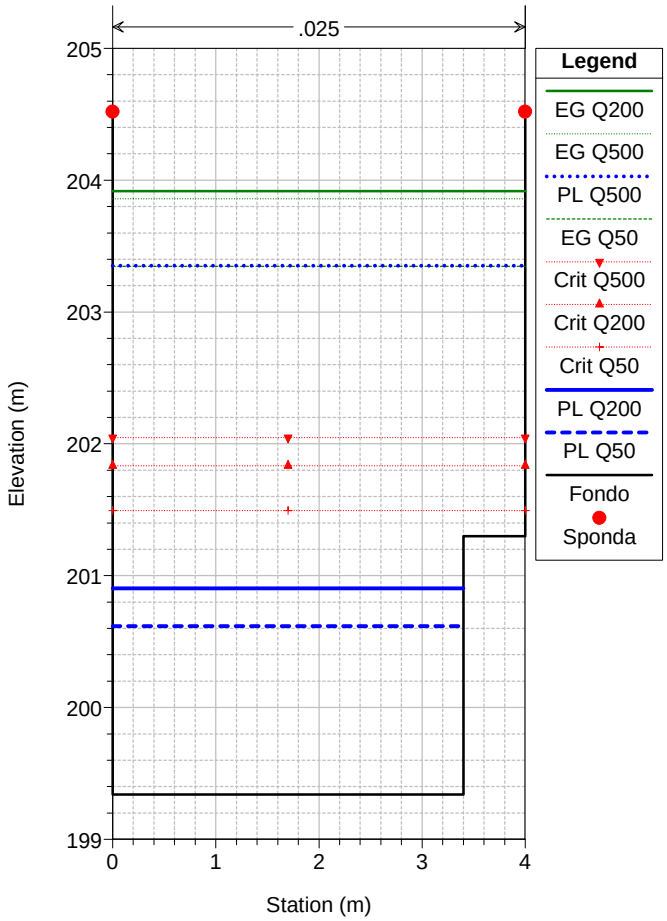
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-13



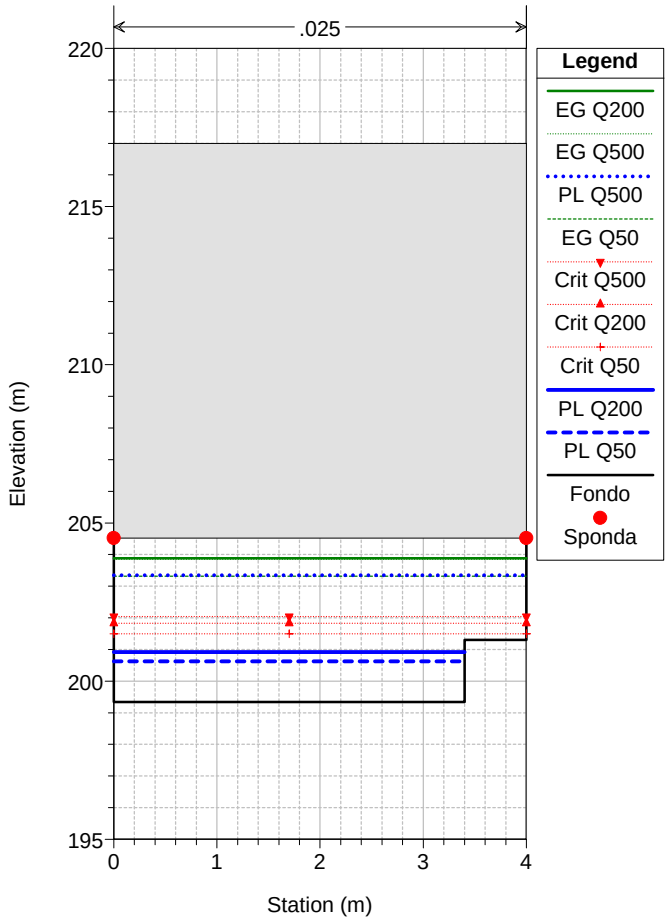
Rizzolo Plan: PdB

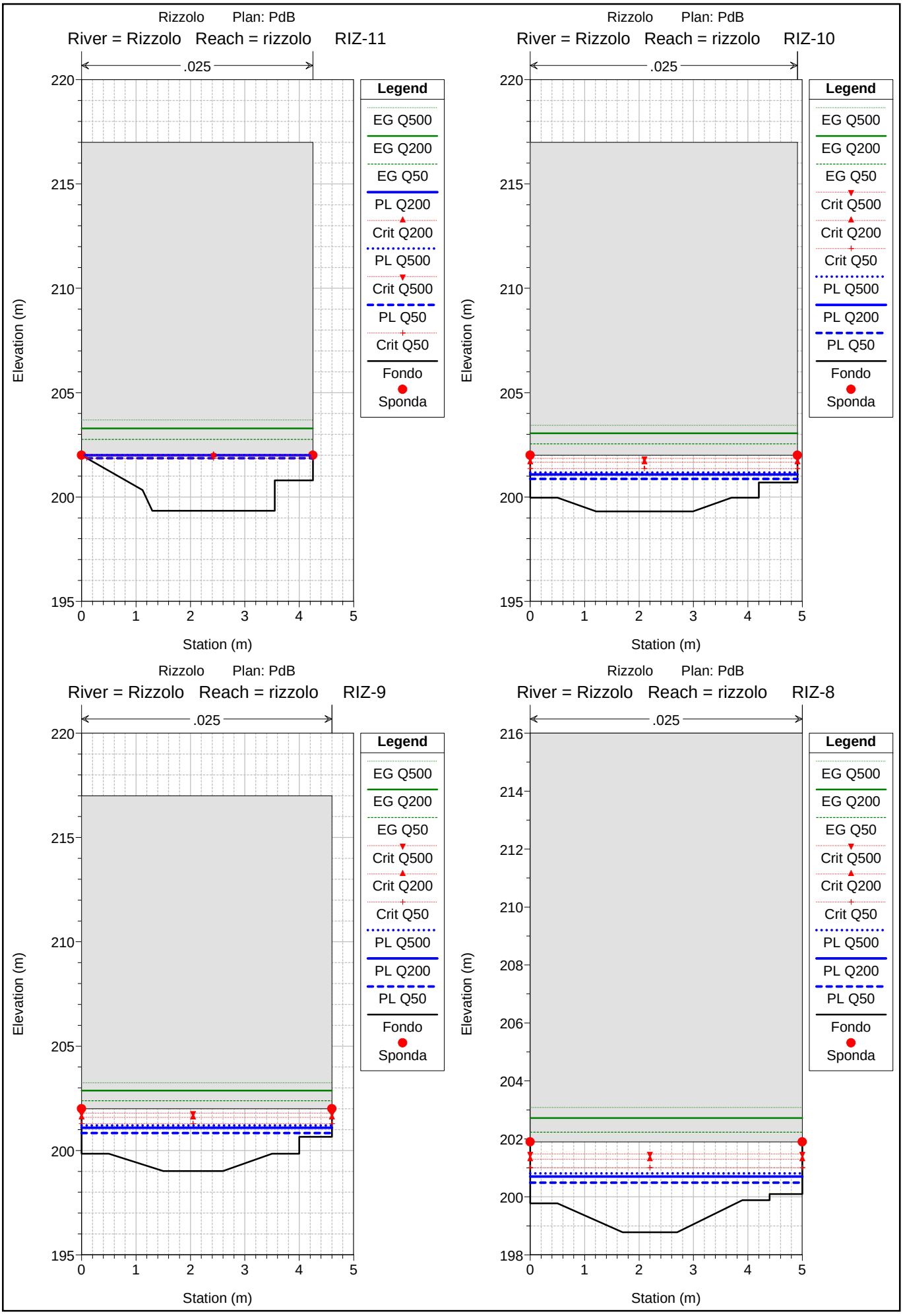
River = Rizzolo Reach = rizzolo RIZ-12



Rizzolo Plan: PdB

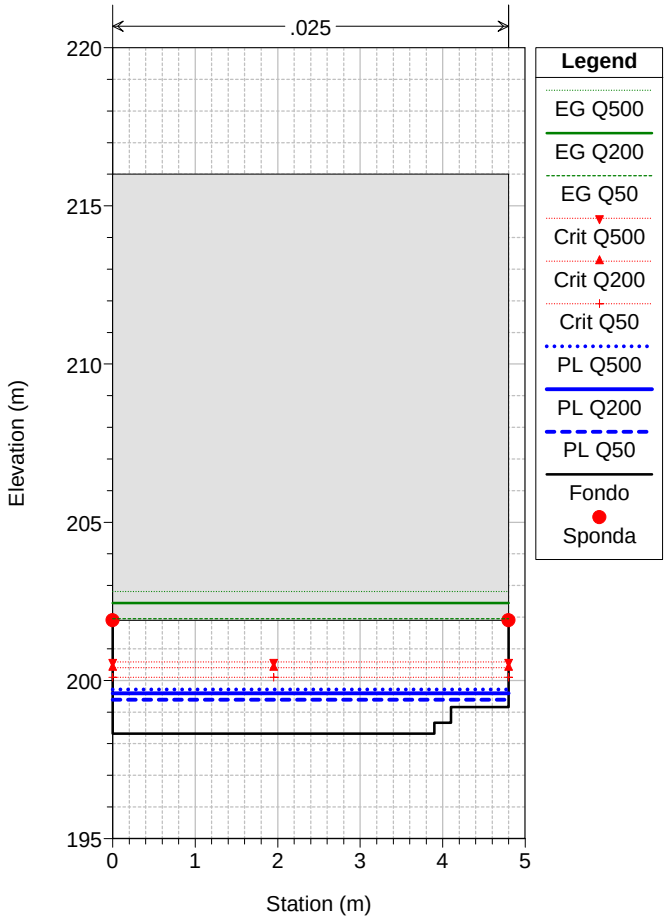
River = Rizzolo Reach = rizzolo RIZ-12




Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-11
.025
Legend
EG Q500
EG Q200
EG Q50
PL Q200
Crit Q200
PL Q500
Crit Q500
PL Q50
Crit Q50
Fondo
Sponda
Elevation (m)
Station (m)
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-10
.025
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-9
.025
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-8
.025
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
Crit Q50
PL Q500
PL Q200
PL Q50
Fondo
Sponda
Elevation (m)
Station (m)

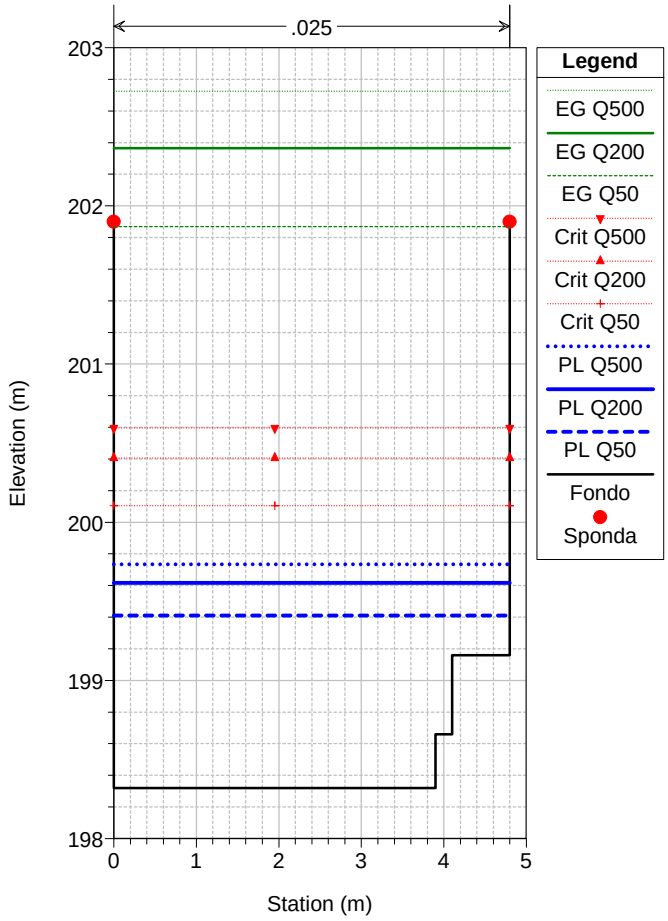
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-7



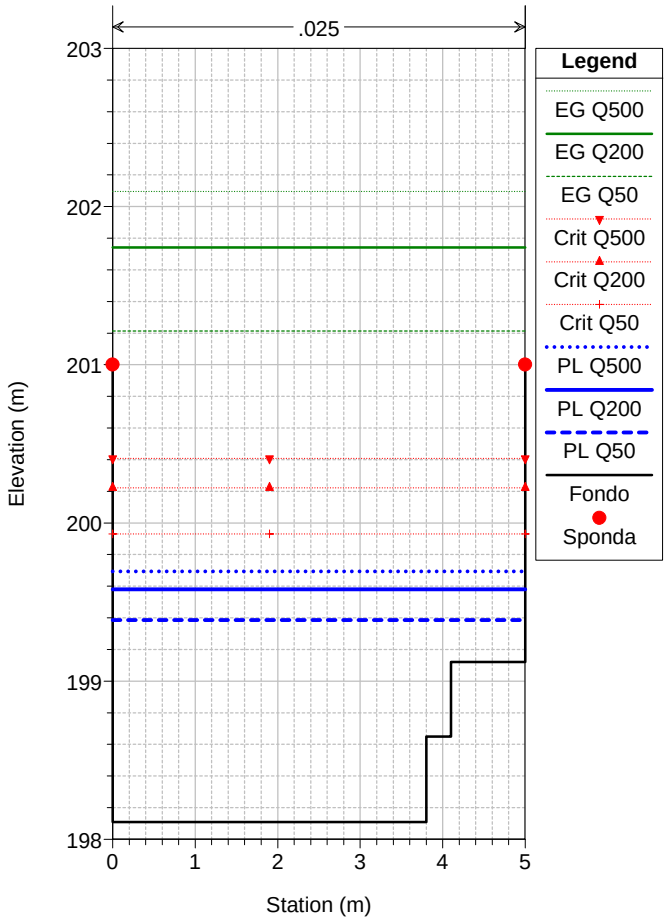
Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-7



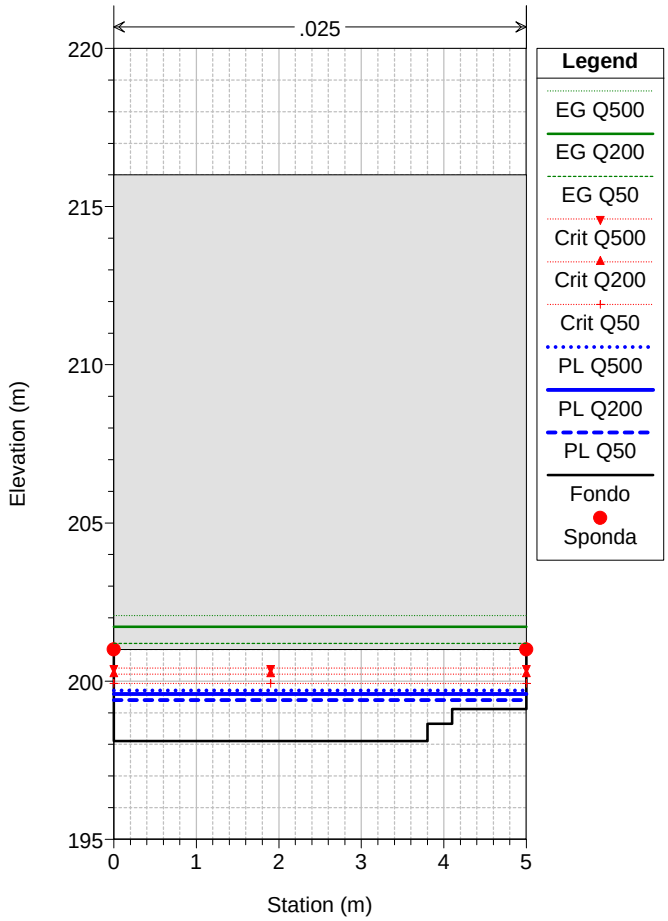
Rizzolo Plan: PdB

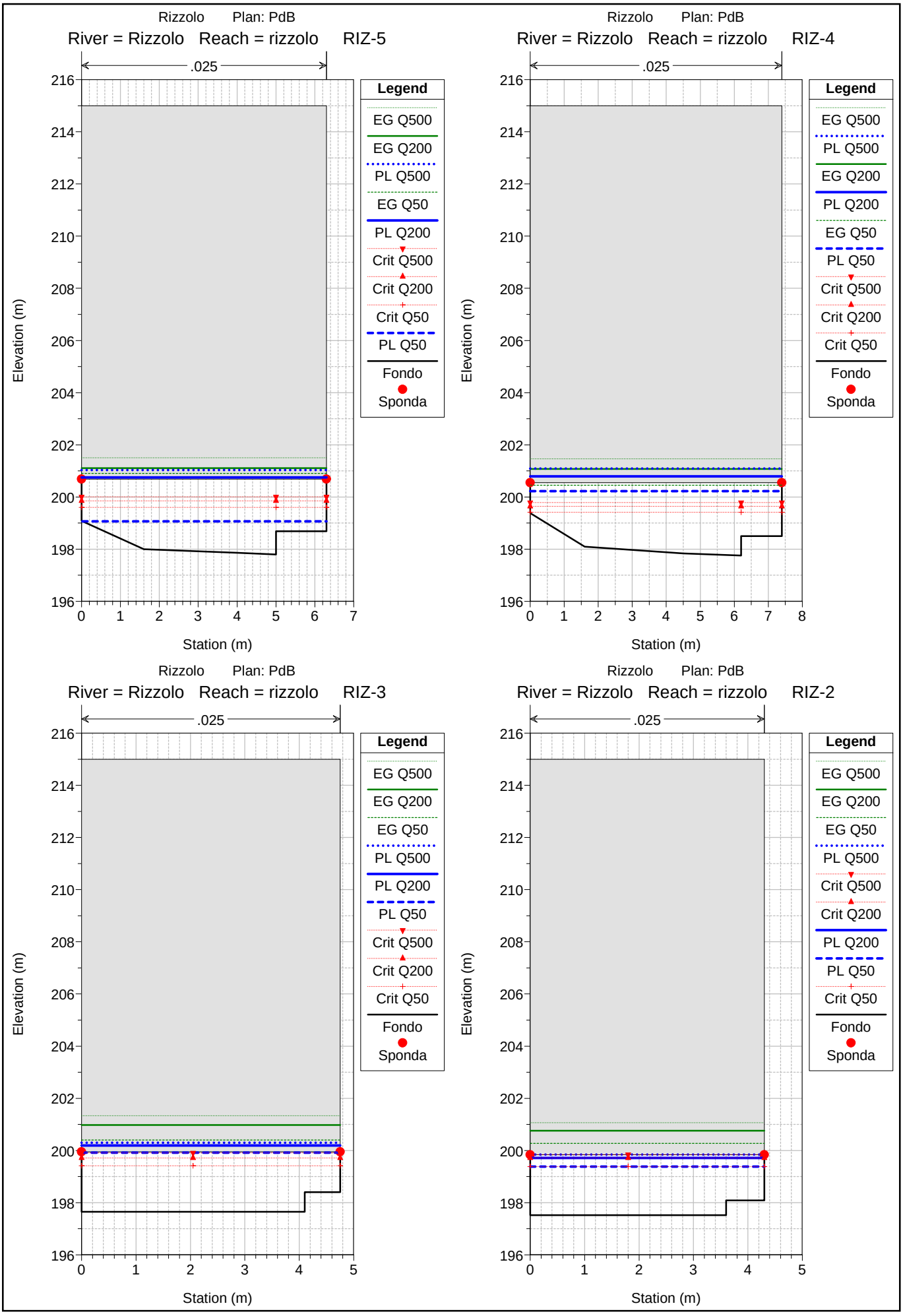
River = Rizzolo Reach = rizzolo RIZ-6

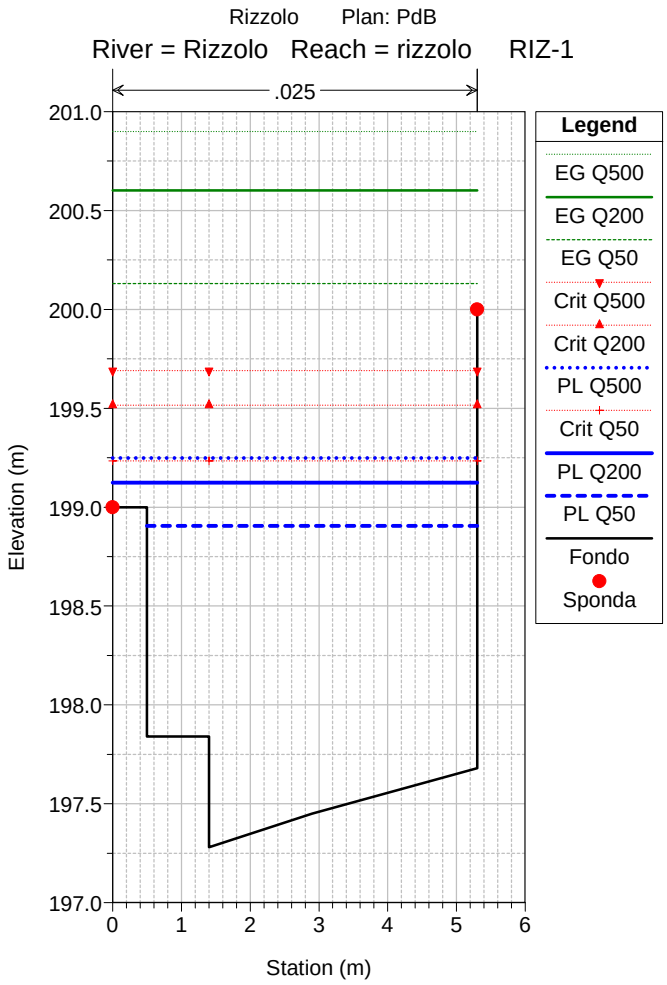


Rizzolo Plan: PdB

River = Rizzolo Reach = rizzolo RIZ-6




Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-5
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
PL Q500
EG Q50
PL Q200
Crit Q500
Crit Q200
Crit Q50
PL Q50
Fondo
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-4
.025
Elevation (m)
Station (m)
Legend
EG Q500
PL Q500
EG Q200
PL Q200
EG Q50
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-3
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
PL Q200
PL Q50
Crit Q500
Crit Q200
Crit Q50
Fondo
Sponda
Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-2
.025
Elevation (m)
Station (m)
Legend
EG Q500
EG Q200
EG Q50
PL Q500
Crit Q500
Crit Q200
PL Q200
PL Q50
Crit Q50
Fondo
Sponda


Rizzolo Plan: PdB
River = Rizzolo Reach = rizzolo RIZ-1
.025
201.0
200.5
200.0
199.5
199.0
198.5
198.0
197.5
197.0
Elevation (m)
0
1
2
3
4
5
6
Station (m)
Legend
EG Q500
EG Q200
EG Q50
Crit Q500
Crit Q200
PL Q500
Crit Q50
PL Q200
PL Q50
Fondo
Sponda

HEC-RAS Plan: PdB River: Rizzolo Reach: rizzolo

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)	
rizzolo	80	Q50	31.80	214.32	216.10	218.10	2.00	217.10	1.00	216.15	216.78	0.010010	3.67	8.65	6.94	1.05
rizzolo	80	Q200	40.90	214.32	216.36	218.10	1.74	217.10	0.74	216.45	217.11	0.010001	3.86	10.61	8.21	1.08
rizzolo	80	Q500	47.00	214.32	216.50	218.10	1.60	217.10	0.60	216.61	217.30	0.010001	3.97	11.84	8.91	1.10
rizzolo	41.1 RIZ-41	Q50	31.80	213.20	214.20	215.60	1.40	215.58	1.38	214.72	215.96	0.032577	5.86	5.42	5.40	1.87
rizzolo	41.1 RIZ-41	Q200	40.90	213.20	214.44	215.60	1.16	215.58	1.14	215.00	216.35	0.029228	6.13	6.68	5.40	1.76
rizzolo	41.1 RIZ-41	Q500	47.00	213.20	216.33	215.60	-0.73	215.58	-0.75	215.18	216.73	0.002941	2.78	16.91	5.40	0.50
rizzolo	41 RIZ-41		Bridge													
rizzolo	40.9 RIZ-41	Q50	31.80	213.06	214.14	215.60	1.46	215.58	1.44	214.60	215.69	0.027165	5.52	5.77	5.40	1.70
rizzolo	40.9 RIZ-41	Q200	40.90	213.06	214.36	215.60	1.24	215.58	1.22	214.87	216.11	0.025605	5.85	6.99	5.40	1.64
rizzolo	40.9 RIZ-41	Q500	47.00	213.06	215.18	215.60	0.42	215.58	0.40	215.04	216.05	0.008466	4.12	11.40	5.40	0.91
rizzolo	40 RIZ-40	Q50	31.80	212.16	213.33	214.70	1.37	214.68	1.35	213.74	214.77	0.023822	5.32	5.98	5.15	1.58
rizzolo	40 RIZ-40	Q200	40.90	212.16	215.03	214.70	-0.33	214.68	-0.35	214.03	215.42	0.003207	2.77	14.74	5.15	0.52
rizzolo	40 RIZ-40	Q500	47.00	212.16	215.30	214.70	-0.60	214.68	-0.62	214.21	215.74	0.003342	2.91	16.14	5.15	0.53
rizzolo	39.1 RIZ-39	Q50	31.80	211.19	213.50	213.65	0.15	214.50	1.00	213.19	214.24	0.002999	3.83	8.31	4.60	0.80
rizzolo	39.1 RIZ-39	Q200	40.90	211.19	214.84	213.65	-1.19	214.50	-0.34	213.55	215.31	0.004405	3.04	13.86	9.00	0.60
rizzolo	39.1 RIZ-39	Q500	47.00	211.19	215.20	213.65	-1.55	214.50	-0.70	213.78	215.62	0.003605	2.93	17.09	9.00	0.54
rizzolo	39 RIZ-39		Bridge													
rizzolo	38.9 RIZ-39	Q50	31.80	211.19	212.94	213.65	0.71	214.50	1.56	213.19	214.24	0.007555	5.05	6.30	4.60	1.22
rizzolo	38.9 RIZ-39	Q200	40.90	211.19	213.55	213.65	0.10	214.50	0.95	213.55	214.73	0.004587	4.81	8.51	4.60	1.00
rizzolo	38.9 RIZ-39	Q500	47.00	211.19	213.78	213.65	-0.13	214.50	0.72	213.78	215.07	0.004446	5.03	9.34	5.11	1.00
rizzolo	38 RIZ-38	Q50	31.80	210.75	211.92	213.64	1.72	213.15	1.23	212.27	213.17	0.021693	4.95	6.42	6.00	1.53
rizzolo	38 RIZ-38	Q200	40.90	210.75	212.09	213.64	1.55	213.15	1.06	212.53	213.63	0.023212	5.50	7.44	6.00	1.58
rizzolo	38 RIZ-38	Q500	47.00	210.75	212.20	213.64	1.44	213.15	0.95	212.69	213.92	0.024108	5.82	8.07	6.00	1.60
rizzolo	37.2 RIZ-37	Q50	31.80	209.82	210.91	212.10	1.19	212.15	1.24	211.31	212.29	0.025044	5.21	6.10	6.00	1.65
rizzolo	37.2 RIZ-37	Q200	40.90	209.82	212.62	212.10	-0.52	212.15	-0.47	211.57	212.91	0.002047	2.42	17.78	9.29	0.47
rizzolo	37.2 RIZ-37	Q500	47.00	209.82	212.82	212.10	-0.72	212.15	-0.67	211.73	213.13	0.002067	2.54	19.64	9.63	0.47
rizzolo	37.015 RIZ-37		Bridge													
rizzolo	37 RIZ-37	Q50	31.80	209.59	210.82	212.10	1.28	212.15	1.33	211.11	211.94	0.018312	4.68	6.80	6.00	1.40
rizzolo	37 RIZ-37	Q200	40.90	209.59	211.37	212.10	0.73	212.15	0.78	211.37	212.21	0.009623	4.06	10.07	6.00	1.00
rizzolo	37 RIZ-37	Q500	47.00	209.59	211.53	212.10	0.57	212.15	0.62	211.53	212.45	0.009703	4.25	11.07	6.00	1.00
rizzolo	36 RIZ-36	Q50	31.80	209.44	210.56	214.56	4.00	211.98	1.42	210.92	211.83	0.021829	4.98	6.38	6.00	1.54
rizzolo	36 RIZ-36	Q200	40.90	209.44	210.89	214.56	3.67	211.98	1.09	211.17	212.11	0.016305	4.90	8.35	6.00	1.32
rizzolo	36 RIZ-36	Q500	47.00	209.44	211.04	214.56	3.52	211.98	0.94	211.34	212.35	0.015930	5.07	9.27	6.00	1.30
rizzolo	35 RIZ-35	Q50	31.80	209.18	210.01	213.59	3.58	211.76	1.75	210.49	211.65	0.035743	5.66	5.62	7.00	2.02
rizzolo	35 RIZ-35	Q200	40.90	209.18	210.21	213.59	3.38	211.76	1.55	210.73	211.95	0.030022	5.84	7.01	7.00	1.86
rizzolo	35 RIZ-35	Q500	47.00	209.18	210.32	213.59	3.27	211.76	1.44	210.88	212.19	0.029085	6.06	7.76	7.00	1.84

HEC-RAS Plan: PdB River: Rizzolo Reach: rizzolo (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)	
rizzolo	34 RIZ-34	Q50	31.80	209.05	209.91	213.59	3.68	211.60	1.69	210.35	211.40	0.031988	5.42	5.87	7.20	1.91
rizzolo	34 RIZ-34	Q200	40.90	209.05	210.09	213.59	3.50	211.60	1.51	210.58	211.75	0.028794	5.71	7.16	7.20	1.83
rizzolo	34 RIZ-34	Q500	47.00	209.05	211.44	213.59	2.15	211.60	0.16	210.73	211.83	0.003054	2.78	16.90	7.20	0.58
rizzolo	33 RIZ-33	Q50	31.80	208.73	210.29	213.11	2.82	211.16	0.87	210.29	211.05	0.009770	3.84	8.27	5.50	1.00
rizzolo	33 RIZ-33	Q200	40.90	208.73	210.57	213.11	2.54	211.16	0.59	210.57	211.46	0.010005	4.18	9.79	5.50	1.00
rizzolo	33 RIZ-33	Q500	47.00	208.73	210.74	213.11	2.37	211.16	0.42	210.74	211.72	0.010214	4.38	10.73	5.50	1.00
rizzolo	32 RIZ-32	Q50	31.80	208.14	209.19	213.05	3.86	211.00	1.81	209.71	210.93	0.034437	5.84	5.45	5.70	1.91
rizzolo	32 RIZ-32	Q200	40.90	208.14	209.40	213.05	3.65	211.00	1.60	209.98	211.34	0.031629	6.16	6.63	5.70	1.82
rizzolo	32 RIZ-32	Q500	47.00	208.14	209.54	213.05	3.51	211.00	1.46	210.14	211.59	0.030334	6.35	7.40	5.70	1.78
rizzolo	31 RIZ-31	Q50	31.80	207.97	208.77	212.78	4.01	211.08	2.31	209.20	210.23	0.033367	5.36	5.94	7.85	1.97
rizzolo	31 RIZ-31	Q200	40.90	207.97	208.89	212.78	3.89	211.08	2.19	209.42	210.70	0.035058	5.95	6.87	7.85	2.03
rizzolo	31 RIZ-31	Q500	47.00	207.97	208.97	212.78	3.81	211.08	2.11	209.56	210.99	0.035921	6.30	7.46	7.85	2.06
rizzolo	30 RIZ-30	Q50	31.80	207.35	208.01	211.75	3.74	210.45	2.44	208.56	209.96	0.051492	6.19	5.14	7.80	2.44
rizzolo	30 RIZ-30	Q200	40.90	207.35	208.13	211.75	3.62	210.45	2.32	208.77	210.42	0.049703	6.70	6.10	7.80	2.42
rizzolo	30 RIZ-30	Q500	47.00	207.35	210.34	211.75	1.41	210.45	0.11	208.90	210.53	0.001131	1.92	24.50	8.40	0.36
rizzolo	29 RIZ-29	Q50	31.80	206.92	207.63	211.46	3.83	209.44	1.81	208.17	209.53	0.046104	6.09	5.22	7.30	2.30
rizzolo	29 RIZ-29	Q200	40.90	206.92	209.50	211.46	1.96	209.44	-0.06	208.40	209.72	0.002069	2.12	20.27	10.58	0.42
rizzolo	29 RIZ-29	Q500	47.00	206.92	210.37	211.46	1.09	209.44	-0.93	208.54	210.51	0.000971	1.67	30.51	13.11	0.30
rizzolo	28 RIZ-28	Q50	31.80	206.92	208.48	211.77	3.29	209.30	0.82	208.32	209.05	0.006704	3.34	9.51	6.10	0.85
rizzolo	28 RIZ-28	Q200	40.90	206.92	209.32	211.77	2.45	209.30	-0.02	208.58	209.68	0.004071	2.69	16.13	9.23	0.57
rizzolo	28 RIZ-28	Q500	47.00	206.92	210.32	211.77	1.46	209.30	-1.01	208.75	210.49	0.001423	1.93	26.39	11.42	0.36
rizzolo	27.01 RIZ-27	Q50	31.80	206.16	208.65	209.49	0.84	209.49	0.84	207.67	208.89	0.001872	2.14	14.87	6.78	0.46
rizzolo	27.01 RIZ-27	Q200	40.90	206.16	209.38	209.49	0.11	209.49	0.11	207.94	209.60	0.001394	2.06	19.90	6.91	0.39
rizzolo	27.01 RIZ-27	Q500	47.00	206.16	210.31	209.49	-0.82	209.49	-0.82	208.11	210.47	0.000878	1.79	26.28	6.91	0.29
rizzolo	27 RIZ-27	Q50	31.80	206.61	208.13	209.49	1.36	209.49	1.36	208.13	208.84	0.011148	3.72	8.56	6.08	1.00
rizzolo	27 RIZ-27	Q200	40.90	206.61	209.24	209.49	0.25	209.49	0.25	208.40	209.58	0.004002	2.61	15.67	6.61	0.54
rizzolo	27 RIZ-27	Q500	47.00	206.61	210.07	209.49	-0.58	209.49	-0.58	208.57	210.45	0.006753	2.71	17.35		0.48
rizzolo	26 RIZ-26	Q50	31.80	206.14	208.02	208.62	0.60	208.62	0.60	207.80	208.66	0.007472	3.57	8.91	4.75	0.83
rizzolo	26 RIZ-26	Q200	40.90	206.14	208.87	208.62	-0.25	208.62	-0.25	208.10	209.48	0.009901	3.47	11.78		0.67
rizzolo	26 RIZ-26	Q500	47.00	206.14	209.49	208.62	-0.87	208.62	-0.87	208.29	210.30	0.013074	3.99	11.78		0.70
rizzolo	25 RIZ-25	Q50	31.80	205.72	207.65	208.46	0.81	208.46	0.81	207.65	208.55	0.012024	4.20	7.56	4.20	1.00
rizzolo	25 RIZ-25	Q200	40.90	205.72	208.66	208.46	-0.20	208.46	-0.20	207.97	209.37	0.011891	3.73	10.97		0.71
rizzolo	25 RIZ-25	Q500	47.00	205.72	209.22	208.46	-0.76	208.46	-0.76	208.19	210.15	0.015702	4.28	10.97		0.75
rizzolo	24 RIZ-24	Q50	31.80	205.25	206.76	207.04	0.28	207.04	0.28	207.04	208.25	0.023821	5.42	5.87	4.70	1.55
rizzolo	24 RIZ-24	Q200	40.90	205.25	207.36	207.04	-0.32	207.04	-0.32	207.04	209.00	0.041659	5.68	7.20		1.33
rizzolo	24 RIZ-24	Q500	47.00	205.25	207.50	207.04	-0.46	207.04	-0.46	207.04	209.67	0.055012	6.53	7.20		1.48

HEC-RAS Plan: PdB River: Rizzolo Reach: rizzolo (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)	
rizzolo	23 RIZ-23	Q50	31.80	205.02	206.90	206.92	0.02	206.92	0.02	206.92	208.12	0.017393	4.90	6.49	4.20	1.26
rizzolo	23 RIZ-23	Q200	40.90	205.02	206.92	206.92	0.00	206.92	0.00	206.92	208.89	0.027754	6.22	6.58	4.20	1.59
rizzolo	23 RIZ-23	Q500	47.00	205.02	206.92	206.92	0.00	206.92	0.00	206.92	209.53	0.036724	7.15	6.57	4.20	1.82
rizzolo	22 RIZ-22	Q50	31.80	203.92	205.41	206.59	1.18	206.59	1.18	206.05	207.52	0.050109	6.43	4.94	4.60	1.98
rizzolo	22 RIZ-22	Q200	40.90	203.92	205.58	206.59	1.01	206.59	1.01	206.34	208.19	0.053921	7.15	5.72	4.60	2.05
rizzolo	22 RIZ-22	Q500	47.00	203.92	205.66	206.59	0.93	206.59	0.93	206.51	208.72	0.059993	7.75	6.06	4.60	2.16
rizzolo	21.01 RIZ-21	Q50	31.80	203.81	205.13	205.96	0.83	206.36	1.23	205.74	207.30	0.058297	6.52	4.88	6.00	2.31
rizzolo	21.01 RIZ-21	Q200	40.90	203.81	205.26	205.96	0.70	206.36	1.10	205.96	207.95	0.062083	7.27	5.63	6.00	2.39
rizzolo	21.01 RIZ-21	Q500	47.00	203.81	205.32	205.96	0.64	206.36	1.04	205.96	208.46	0.067843	7.85	5.99	6.00	2.51
rizzolo	21 RIZ-21	Q50	31.80	203.81	205.23	205.96	0.73	206.36	1.13	205.81	207.25	0.058737	6.30	5.05	5.40	2.08
rizzolo	21 RIZ-21	Q200	40.90	203.81	205.37	205.96	0.59	206.36	0.99	205.96	207.88	0.065368	7.03	5.82	5.40	2.16
rizzolo	21 RIZ-21	Q500	47.00	203.81	205.43	205.96	0.53	206.36	0.93	205.96	208.39	0.073441	7.61	6.17	5.40	2.27
rizzolo	20.01 RIZ-20	Q50	31.80	203.45	205.04	205.77	0.73	205.77	0.73	205.48	206.56	0.039165	5.46	5.82	5.10	1.63
rizzolo	20.01 RIZ-20	Q200	40.90	203.45	205.23	205.77	0.54	205.77	0.54	205.77	207.08	0.042821	6.03	6.78	5.10	1.67
rizzolo	20.01 RIZ-20	Q500	47.00	203.45	205.33	205.77	0.44	205.77	0.44	205.77	207.45	0.046769	6.46	7.28	5.10	1.72
rizzolo	20 RIZ-20	Q50	31.80	203.45	204.88	205.77	0.89	205.77	0.89	205.39	206.54	0.032175	5.72	5.56	5.15	1.76
rizzolo	20 RIZ-20	Q200	40.90	203.45	205.06	205.77	0.71	205.77	0.71	205.65	207.06	0.036280	6.27	6.52	5.70	1.87
rizzolo	20 RIZ-20	Q500	47.00	203.45	205.14	205.77	0.63	205.77	0.63	205.77	207.43	0.038467	6.69	7.02	5.70	1.92
rizzolo	19.01 RIZ-19	Q50	31.80	203.08	204.40	205.68	1.28	205.68	1.28	204.95	206.28	0.036075	6.08	5.23	5.35	1.96
rizzolo	19.01 RIZ-19	Q200	40.90	203.08	204.58	205.68	1.10	205.68	1.10	205.23	206.78	0.035607	6.56	6.23	5.35	1.94
rizzolo	19.01 RIZ-19	Q500	47.00	203.08	204.69	205.68	0.99	205.68	0.99	205.41	207.13	0.036778	6.93	6.78	5.35	1.97
rizzolo	18 RIZ-18	Q50	31.80	202.92	204.01	206.75	2.74	206.75	2.74	204.67	206.13	0.039013	6.45	4.93	4.53	1.97
rizzolo	18 RIZ-18	Q200	40.90	202.92	204.24	206.75	2.51	206.75	2.51	204.95	206.64	0.037359	6.86	5.96	4.53	1.91
rizzolo	18 RIZ-18	Q500	47.00	202.92	204.36	206.75	2.39	206.75	2.39	205.13	206.98	0.042612	7.18	6.55	5.24	2.05
rizzolo	17.01 RIZ-17	Q50	31.80	202.28	203.57	204.59	1.02	204.59	1.02	204.18	205.61	0.036218	6.33	5.03	4.70	1.95
rizzolo	17.01 RIZ-17	Q200	40.90	202.28	203.77	204.59	0.82	204.59	0.82	204.45	206.10	0.039402	6.77	6.04	5.35	2.03
rizzolo	17.01 RIZ-17	Q500	47.00	202.28	203.88	204.59	0.71	204.59	0.71	204.63	206.42	0.039104	7.06	6.66	5.35	2.02
rizzolo	17 RIZ-17	Q50	31.80	202.28	203.59	204.59	1.00	204.59	1.00	204.17	205.56	0.034447	6.22	5.11	4.70	1.90
rizzolo	17 RIZ-17	Q200	40.90	202.28	203.79	204.59	0.80	204.59	0.80	204.45	206.05	0.037629	6.67	6.14	5.35	1.99
rizzolo	17 RIZ-17	Q500	47.00	202.28	203.90	204.59	0.69	204.59	0.69	204.59	206.37	0.037497	6.96	6.76	5.35	1.98
rizzolo	16 RIZ-16	Q50	31.80	202.32	203.42	204.67	1.25	204.67	1.25	204.01	205.42	0.038323	6.26	5.08	5.40	2.06
rizzolo	16 RIZ-16	Q200	40.90	202.32	203.61	204.67	1.06	204.67	1.06	204.27	205.89	0.040759	6.70	6.11	6.00	2.12
rizzolo	16 RIZ-16	Q500	47.00	202.32	203.71	204.67	0.96	204.67	0.96	204.43	206.21	0.040685	7.01	6.71	6.00	2.12
rizzolo	15 RIZ-15	Q50	31.80	201.73	202.65	204.54	1.89	204.54	1.89	203.35	205.17	0.052575	7.03	4.53	4.90	2.33
rizzolo	15 RIZ-15	Q200	40.90	201.73	202.86	204.54	1.68	204.54	1.68	203.76	205.65	0.048303	7.40	5.53	4.90	2.22
rizzolo	15 RIZ-15	Q500	47.00	201.73	202.98	204.54	1.56	204.54	1.56	203.91	205.97	0.047005	7.65	6.14	4.90	2.18
rizzolo	14 RIZ-14	Q50	31.80	201.08	202.05	204.54	2.49	204.54	2.49	202.72	204.23	0.042780	6.53	4.87	5.00	2.11

HEC-RAS Plan: PdB River: Rizzolo Reach: rizzolo (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)	
rizzolo	14 RIZ-14	Q200	40.90	201.08	202.24	204.54	2.30	204.54	2.30	202.99	204.77	0.042131	7.04	5.81	5.00	2.08
rizzolo	14 RIZ-14	Q500	47.00	201.08	202.36	204.54	2.18	204.54	2.18	203.16	205.10	0.042002	7.34	6.40	5.00	2.07
rizzolo	13 RIZ-13	Q50	31.80	200.14	201.12	204.54	3.42	204.54	3.42	201.90	203.67	0.051675	7.07	4.50	4.60	2.28
rizzolo	13 RIZ-13	Q200	40.90	200.14	201.32	204.54	3.22	204.54	3.22	202.18	204.22	0.049617	7.54	5.42	4.60	2.22
rizzolo	13 RIZ-13	Q500	47.00	200.14	201.45	204.54	3.09	204.54	3.09	202.35	204.56	0.048649	7.81	6.01	4.60	2.18
rizzolo	12.01 RIZ-12	Q50	31.80	199.34	200.62	204.52	3.90	204.52	3.90	201.49	203.35	0.050961	7.32	4.35	3.40	2.07
rizzolo	12.01 RIZ-12	Q200	40.90	199.34	200.90	204.52	3.62	204.52	3.62	201.83	203.92	0.048580	7.69	5.32	3.40	1.96
rizzolo	12.01 RIZ-12	Q500	47.00	199.34	203.35	204.52	1.17	204.52	1.17	202.05	203.86	0.004707	3.16	14.86	4.00	0.52
rizzolo	12 RIZ-12	Q50	31.80	199.34	200.63	204.52	3.89	204.52	3.89	201.50	203.31	0.049844	7.26	4.38	3.40	2.04
rizzolo	12 RIZ-12	Q200	40.90	199.34	200.92	204.52	3.60	204.52	3.60	201.83	203.88	0.047629	7.63	5.36	3.40	1.94
rizzolo	12 RIZ-12	Q500	47.00	199.34	203.35	204.52	1.17	204.52	1.17	202.04	203.86	0.004717	3.16	14.85	4.00	0.52
rizzolo	11 RIZ-11	Q50	31.80	199.34	201.86	202.00	0.14	202.00	0.14	201.86	202.76	0.012640	4.22	7.54	4.15	1.00
rizzolo	11 RIZ-11	Q200	40.90	199.34	202.00	202.00	0.00	202.00	0.00	202.00	203.28	0.016933	5.01	8.16	4.25	1.16
rizzolo	11 RIZ-11	Q500	47.00	199.34	202.00	202.00	0.00	202.00	0.00	202.00	203.69	0.022378	5.76	8.15	4.25	1.33
rizzolo	10 RIZ-10	Q50	31.80	199.31	200.87	202.00	1.13	202.00	1.13	201.37	202.55	0.029417	5.74	5.54	4.91	1.73
rizzolo	10 RIZ-10	Q200	40.90	199.31	201.08	202.00	0.92	202.00	0.92	201.66	203.05	0.029691	6.23	6.57	4.91	1.72
rizzolo	10 RIZ-10	Q500	47.00	199.31	201.18	202.00	0.82	202.00	0.82	201.85	203.44	0.032053	6.67	7.05	4.91	1.78
rizzolo	9 RIZ-9	Q50	31.80	199.02	200.84	202.00	1.16	202.00	1.16	201.28	202.39	0.025500	5.51	5.77	4.60	1.57
rizzolo	9 RIZ-9	Q200	40.90	199.02	201.09	202.00	0.91	202.00	0.91	201.59	202.88	0.025377	5.93	6.90	4.60	1.54
rizzolo	9 RIZ-9	Q500	47.00	199.02	201.20	202.00	0.80	202.00	0.80	201.79	203.24	0.027371	6.34	7.42	4.60	1.59
rizzolo	8 RIZ-8	Q50	31.80	198.78	200.49	201.90	1.41	201.90	1.41	201.01	202.24	0.030663	5.86	5.43	5.00	1.79
rizzolo	8 RIZ-8	Q200	40.90	198.78	200.70	201.90	1.20	201.90	1.20	201.30	202.72	0.030196	6.30	6.49	5.00	1.76
rizzolo	8 RIZ-8	Q500	47.00	198.78	200.81	201.90	1.09	201.90	1.09	201.48	203.08	0.031699	6.68	7.04	5.00	1.80
rizzolo	7.01 RIZ-7	Q50	31.80	198.32	199.39	201.90	2.51	201.90	2.51	200.10	201.95	0.056337	7.09	4.48	4.80	2.34
rizzolo	7.01 RIZ-7	Q200	40.90	198.32	199.60	201.90	2.30	201.90	2.30	200.40	202.45	0.051882	7.48	5.47	4.80	2.24
rizzolo	7.01 RIZ-7	Q500	47.00	198.32	199.71	201.90	2.19	201.90	2.19	200.59	202.81	0.051498	7.79	6.03	4.80	2.22
rizzolo	7 RIZ-7	Q50	31.80	198.32	199.41	201.90	2.49	201.90	2.49	200.10	201.87	0.052908	6.95	4.58	4.80	2.27
rizzolo	7 RIZ-7	Q200	40.90	198.32	199.62	201.90	2.28	201.90	2.28	200.41	202.37	0.049203	7.34	5.57	4.80	2.18
rizzolo	7 RIZ-7	Q500	47.00	198.32	199.73	201.90	2.17	201.90	2.17	200.60	202.73	0.049066	7.66	6.13	4.80	2.16
rizzolo	6.01 RIZ-6	Q50	31.80	198.11	199.39	201.00	1.61	201.00	1.61	199.93	201.21	0.035866	5.99	5.31	5.00	1.86
rizzolo	6.01 RIZ-6	Q200	40.90	198.11	199.58	201.00	1.42	201.00	1.42	200.22	201.74	0.036256	6.51	6.28	5.00	1.86
rizzolo	6.01 RIZ-6	Q500	47.00	198.11	199.69	201.00	1.31	201.00	1.31	200.41	202.10	0.037292	6.87	6.84	5.00	1.87
rizzolo	6 RIZ-6	Q50	31.80	198.11	199.40	201.00	1.60	201.00	1.60	199.93	201.19	0.034862	5.93	5.36	5.00	1.83
rizzolo	6 RIZ-6	Q200	40.90	198.11	199.59	201.00	1.41	201.00	1.41	200.22	201.72	0.035399	6.46	6.33	5.00	1.83
rizzolo	6 RIZ-6	Q500	47.00	198.11	199.70	201.00	1.30	201.00	1.30	200.41	202.07	0.036493	6.82	6.90	5.00	1.85
rizzolo	5 RIZ-5	Q50	31.80	197.80	199.07	200.69	1.62	200.69	1.62	199.60	200.91	0.038341	6.01	5.29	6.28	2.09
rizzolo	5 RIZ-5	Q200	40.90	197.80	200.75	200.69	-0.06	200.69	-0.06	199.85	201.10	0.005065	2.63	15.52		0.53

HEC-RAS Plan: PdB River: Rizzolo Reach: rizzolo (Continued)

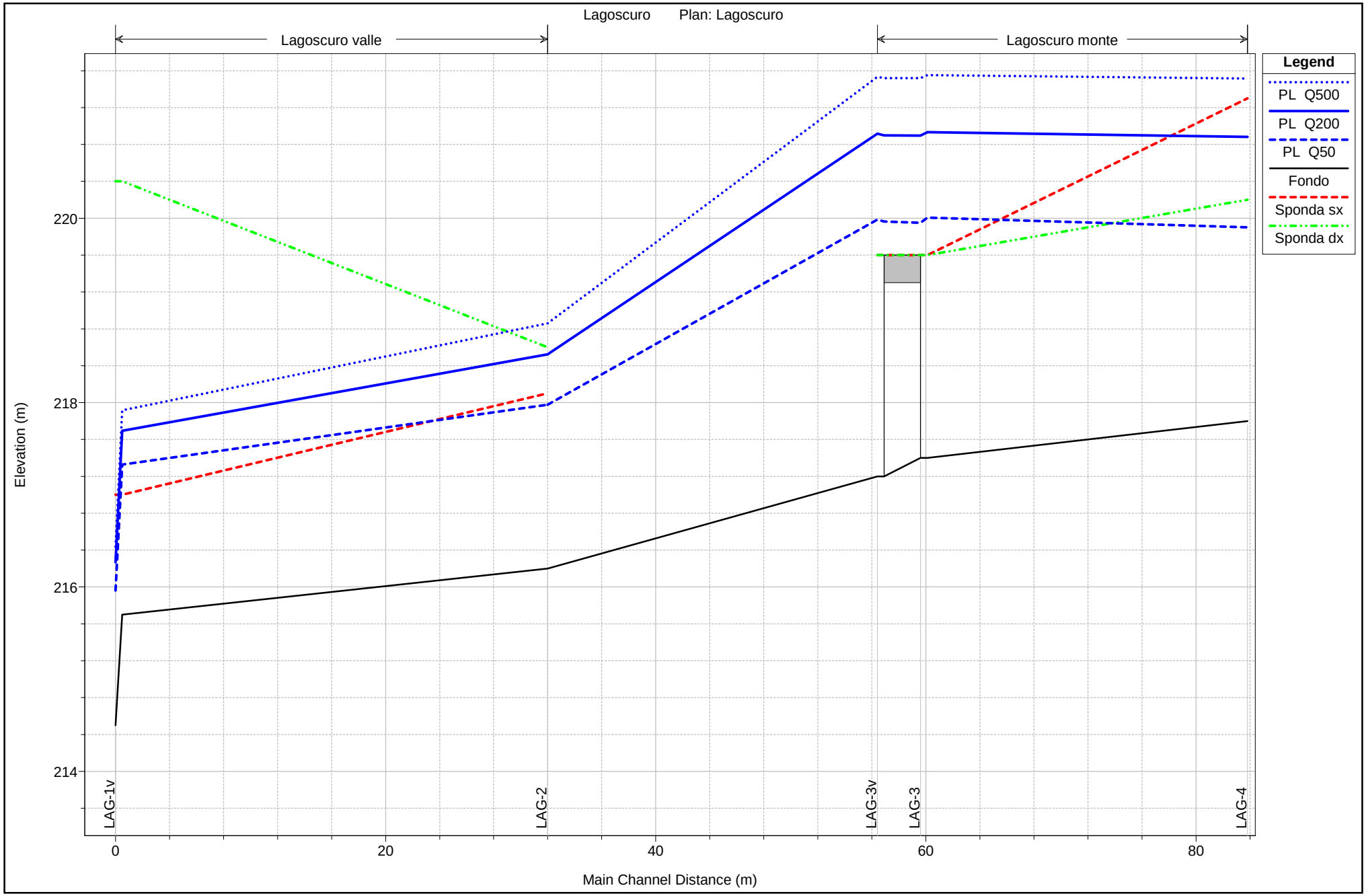
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
rizzolo	5 RIZ-5	Q500	47.00	197.80	201.04	200.69	-0.35	200.69	-0.35	200.00	201.50	0.006688	3.03	15.52		0.58
rizzolo	4 RIZ-4	Q50	31.80	197.76	200.22	200.55	0.33	200.55	0.33	199.42	200.45	0.001858	2.11	15.09	7.40	0.47
rizzolo	4 RIZ-4	Q200	40.90	197.76	200.79	200.55	-0.24	200.55	-0.24	199.64	201.07	0.003860	2.34	17.51		0.46
rizzolo	4 RIZ-4	Q500	47.00	197.76	201.09	200.55	-0.54	200.55	-0.54	199.79	201.46	0.005097	2.68	17.51		0.50
rizzolo	3 RIZ-3	Q50	31.80	197.65	199.92	199.95	0.04	199.95	0.04	199.41	200.40	0.005233	3.10	10.27	4.75	0.67
rizzolo	3 RIZ-3	Q200	40.90	197.65	200.20	199.95	-0.24	199.95	-0.24	199.72	200.98	0.014332	3.92	10.44		0.80
rizzolo	3 RIZ-3	Q500	47.00	197.65	200.30	199.95	-0.35	199.95	-0.35	199.91	201.33	0.018926	4.50	10.44		0.90
rizzolo	2 RIZ-2	Q50	31.80	197.52	199.39	199.84	0.45	199.84	0.45	199.39	200.27	0.011653	4.17	7.62	4.30	1.00
rizzolo	2 RIZ-2	Q200	40.90	197.52	199.71	199.84	0.13	199.84	0.13	199.71	200.76	0.012150	4.53	9.04	4.30	1.00
rizzolo	2 RIZ-2	Q500	47.00	197.52	199.84	199.84	0.00	199.84	0.00	199.84	201.07	0.013688	4.90	9.59	4.30	1.05
rizzolo	1 RIZ-1	Q50	31.80	197.28	198.91	199.00	0.09	200.00	1.09	199.23	200.13	0.018795	4.90	6.49	4.80	1.35
rizzolo	1 RIZ-1	Q200	40.90	197.28	199.12	199.00	-0.12	200.00	0.88	199.52	200.60	0.021429	5.39	7.59	5.30	1.44
rizzolo	1 RIZ-1	Q500	47.00	197.28	199.25	199.00	-0.25	200.00	0.75	199.69	200.90	0.022253	5.69	8.25	5.30	1.46

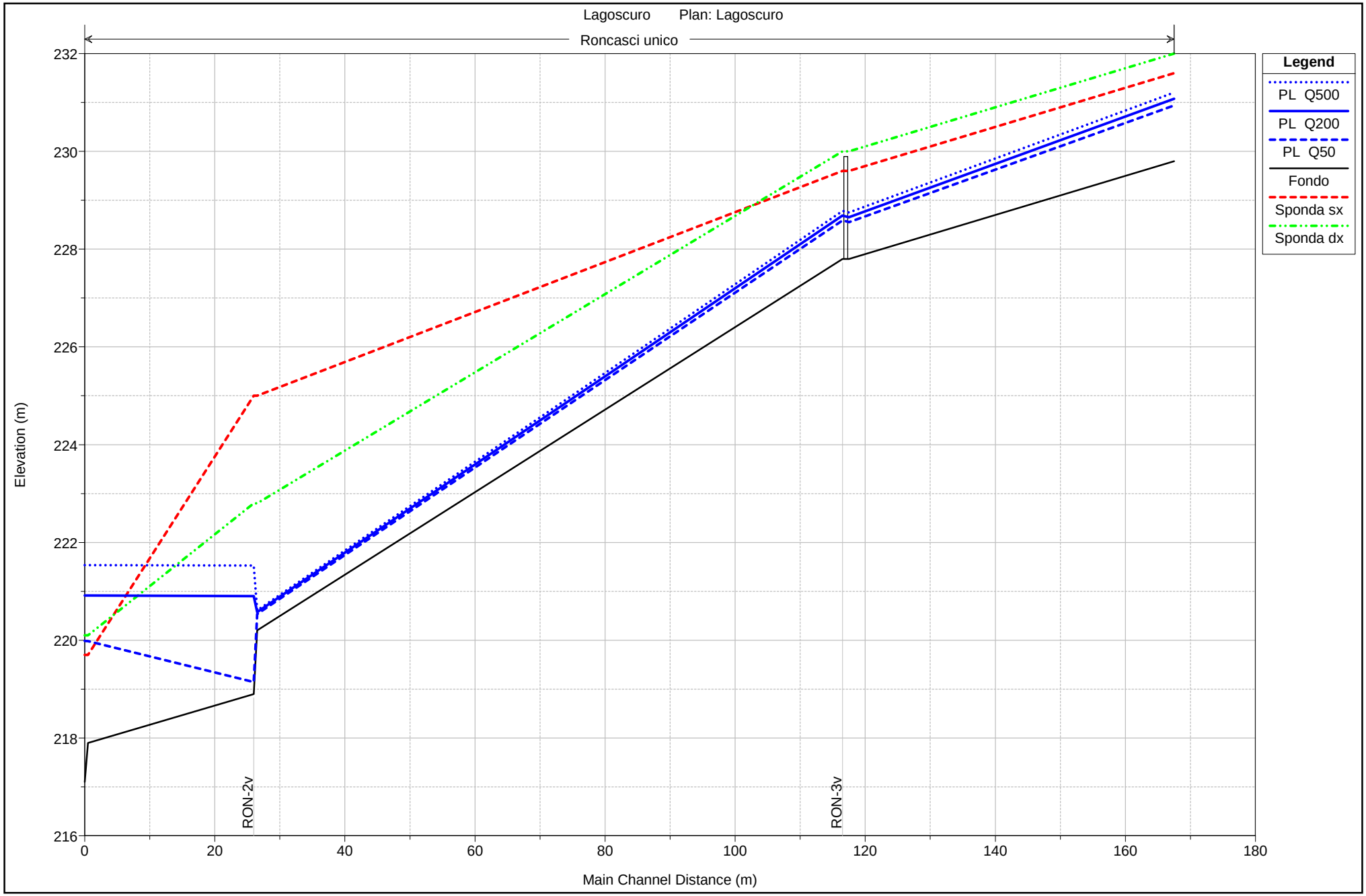
10.7 Rio Lago Scuro

E' stato indagato un tratto di circa 100 m del rio Lago Scuro in loc. Campasso ed un tratto del suo affluente in sponda sinistra rio Roncasci di circa 200 m.
Praticamente di fronte al rio Roncasci sbocca un altro affluente non indagato dal punto di vista idraulico, ma che fornisce un apporto dal punto di vista idrologico.
La confluenza tra i due rii è stata studiata quindi nella configurazione di portata al colmo con tempo di ritorno assegnato sul rio Lagoscuro e sull' affluente; in quanto questa condizione risulta sicuramente a favore di sicurezza e non è in contrasto con il principio di conservazione della massa in quanto rimane indefinito l'apporto dell'affluente in sponda destra.

In particolare risulta:

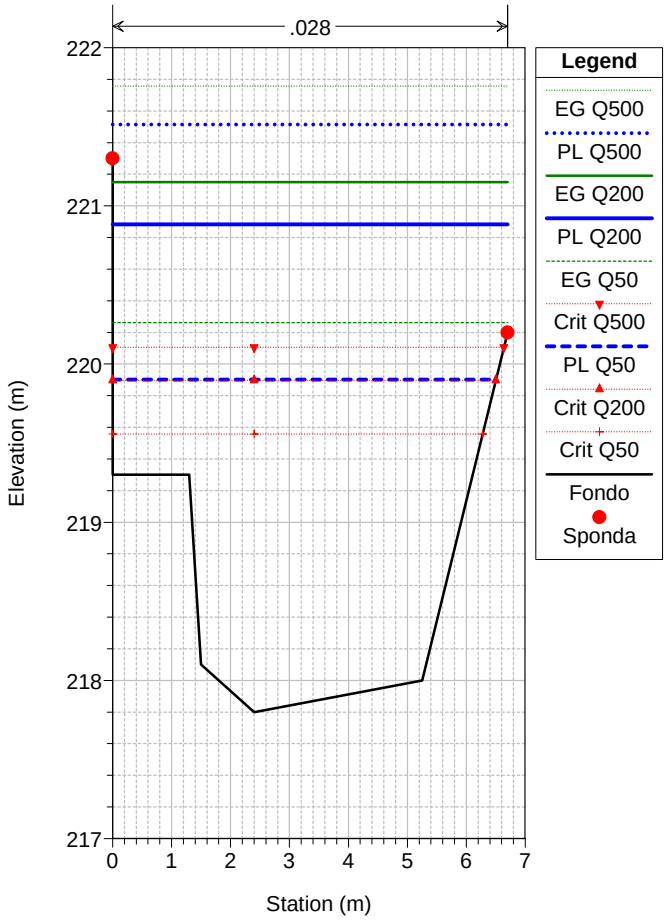
	TRATTO	SEZIONE	PORTATE DI PIENA AL COLMO (m^3/s)		
			T = 50 anni	T = 200 anni	T = 500 anni
Lagoscuro in piena	Rio Lagoscuro monte	L0	25.7	37.1	44.7
	Rio Lagoscuro valle	L1	45.9	66.5	80
	Rio Roncasci	Ro1	12.8	15.7	18.6


Lagoscuro Plan: Lagoscuro
Lagoscuro valle
Lagoscuro monte
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
220
218
216
214
LAG-1v
LAG-2
LAG-3v
LAG-3
LAG-4
0
20
40
60
80
Main Channel Distance (m)


Lagoscuro
Plan: Lagoscuro
Roncasci unico
Legend
PL Q500
PL Q200
PL Q50
Fondo
Sponda sx
Sponda dx
Elevation (m)
Main Channel Distance (m)
RON-2v
RON-3v
232
230
228
226
224
222
220
218
216
0
20
40
60
80
100
120
140
160
180

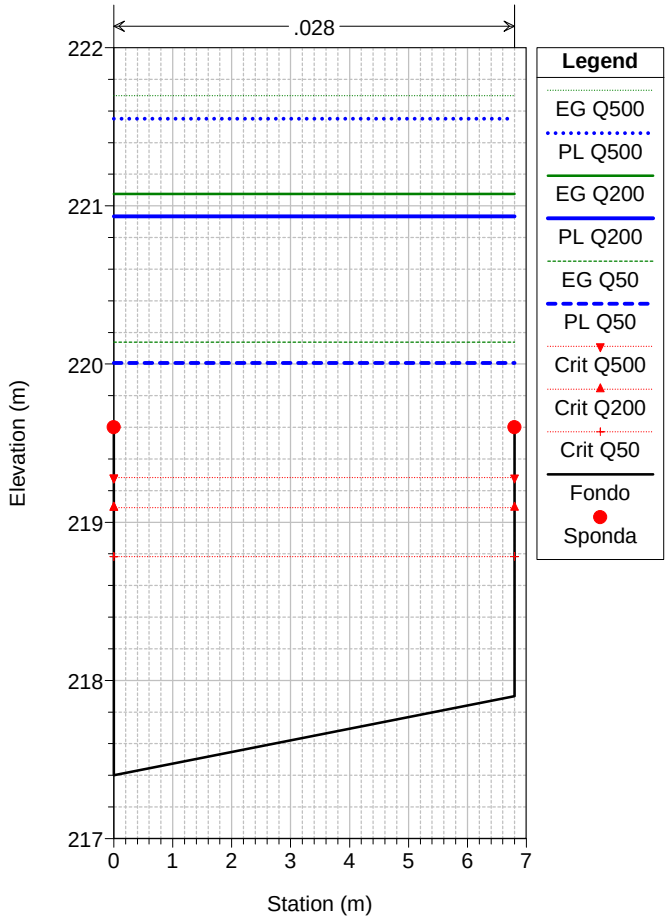
Lagoscuro Plan: Lagoscuro

River = Lagoscuro Reach = monte LAG-4



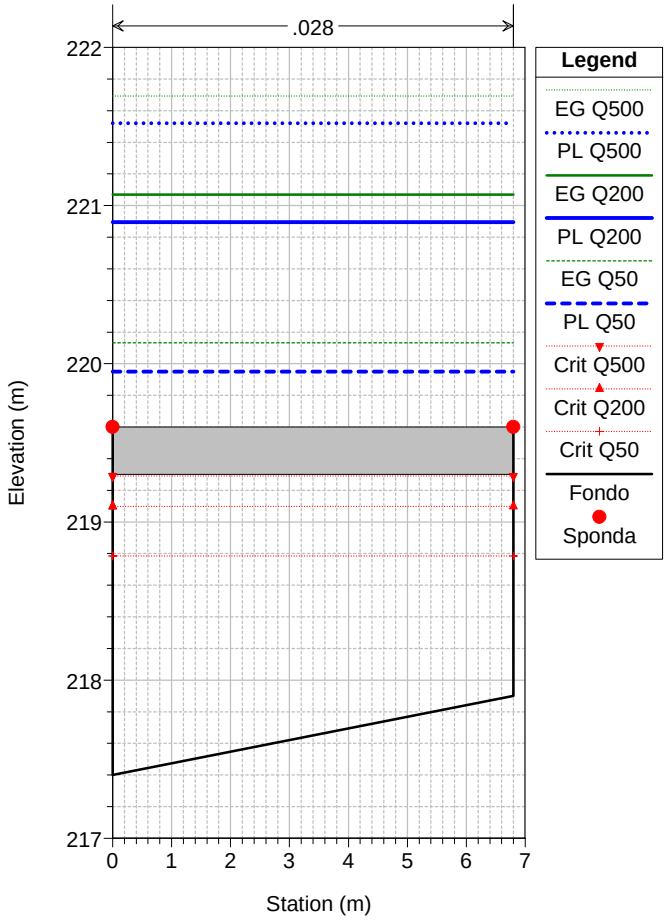
Lagoscuro Plan: Lagoscuro

River = Lagoscuro Reach = monte LAG-3m



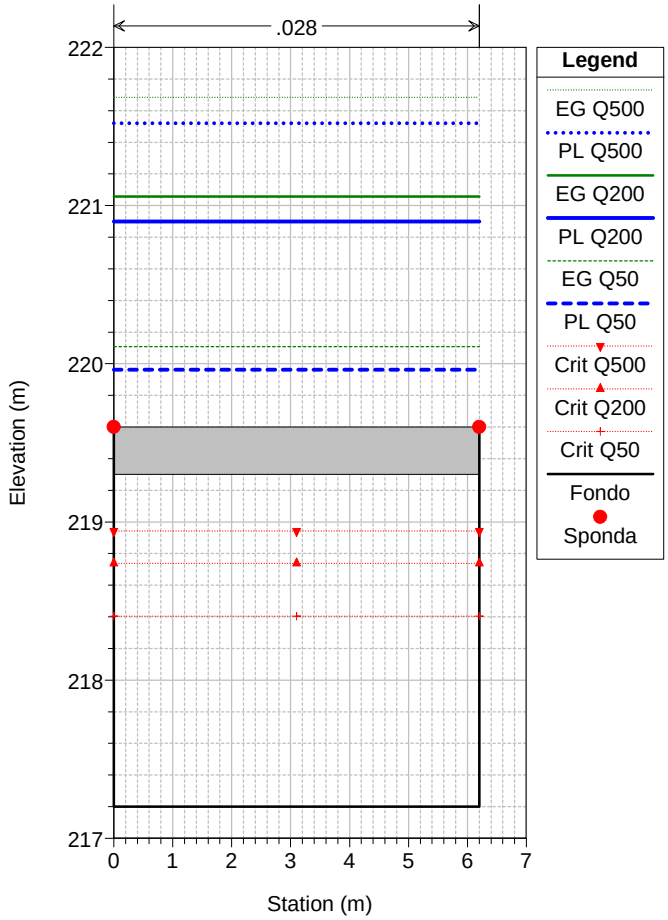
Lagoscuro Plan: Lagoscuro

River = Lagoscuro Reach = monte LAG-3



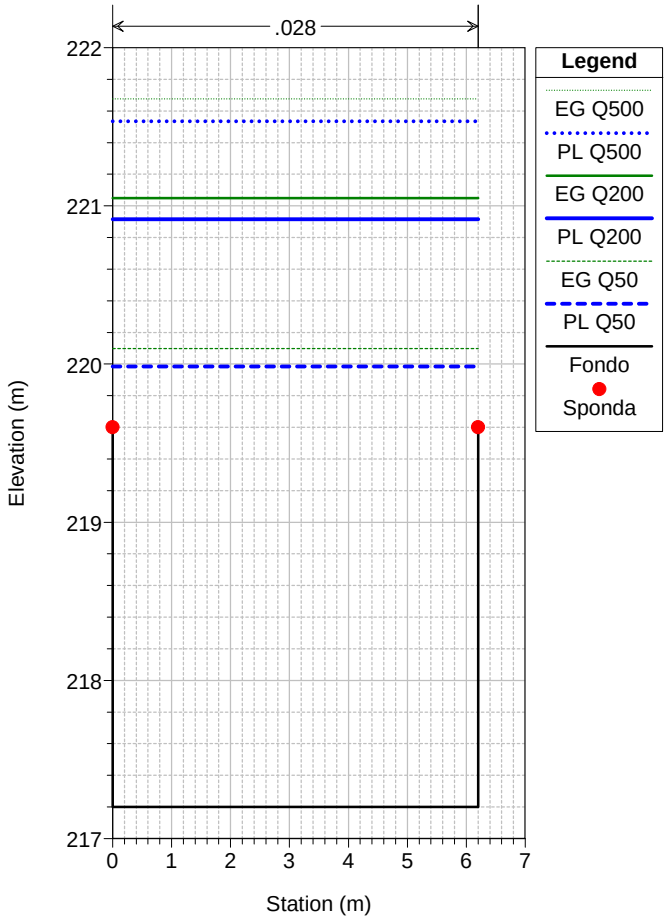
Lagoscuro Plan: Lagoscuro

River = Lagoscuro Reach = monte LAG-3



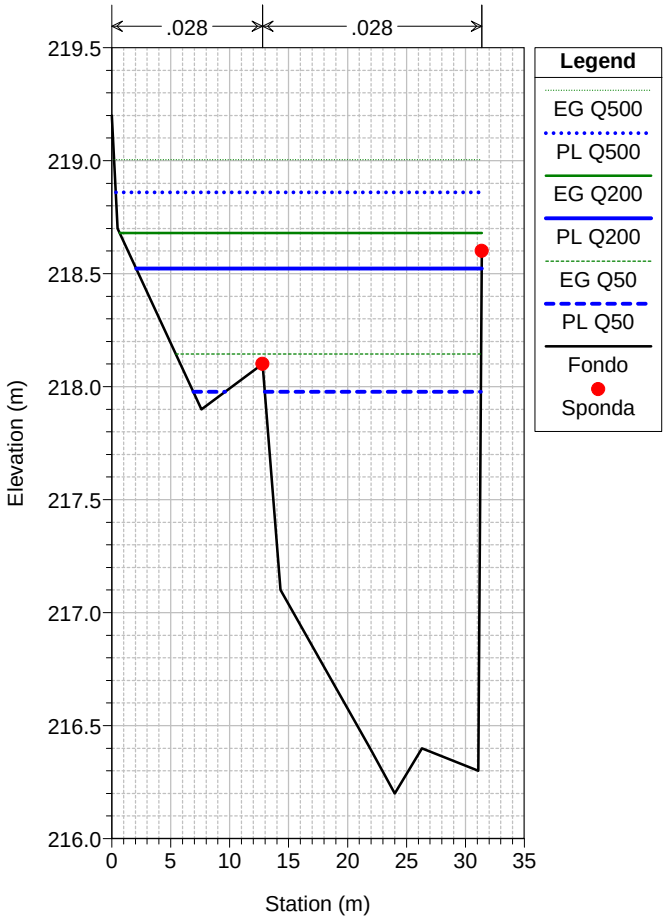
Lagoscuro Plan: Lagoscuro

River = Lagoscuro Reach = monte LAG-3v



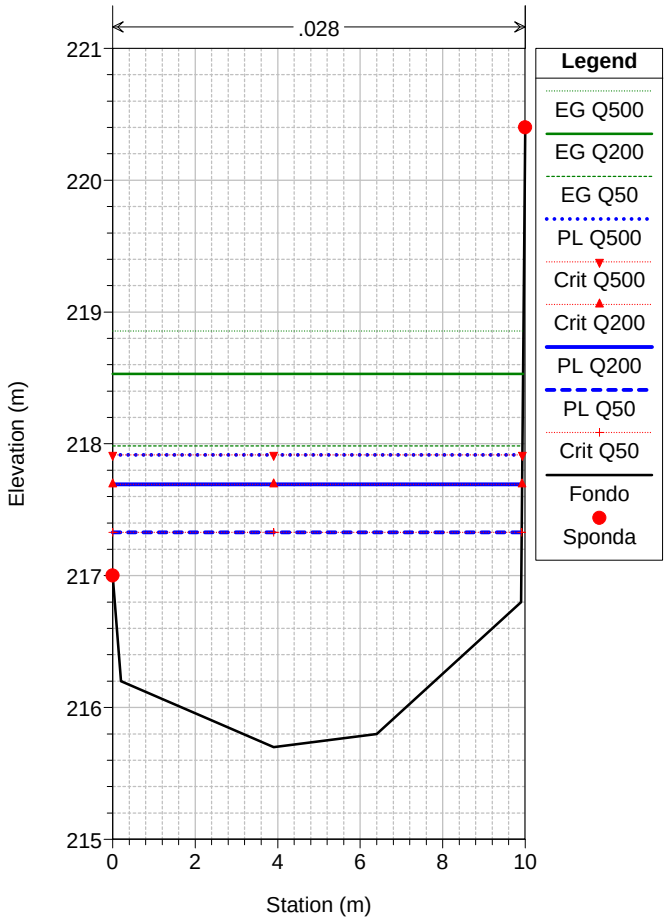
Lagoscuro Plan: Lagoscuro

River = Lagoscuro Reach = valle LAG-2



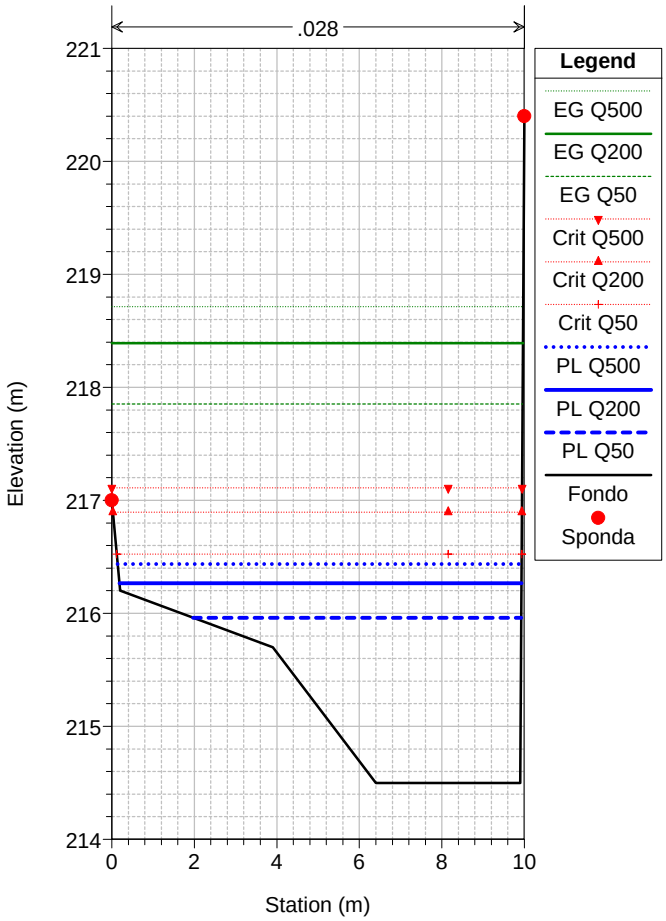
Lagoscuro Plan: Lagoscuro

River = Lagoscuro Reach = valle LAG-1m



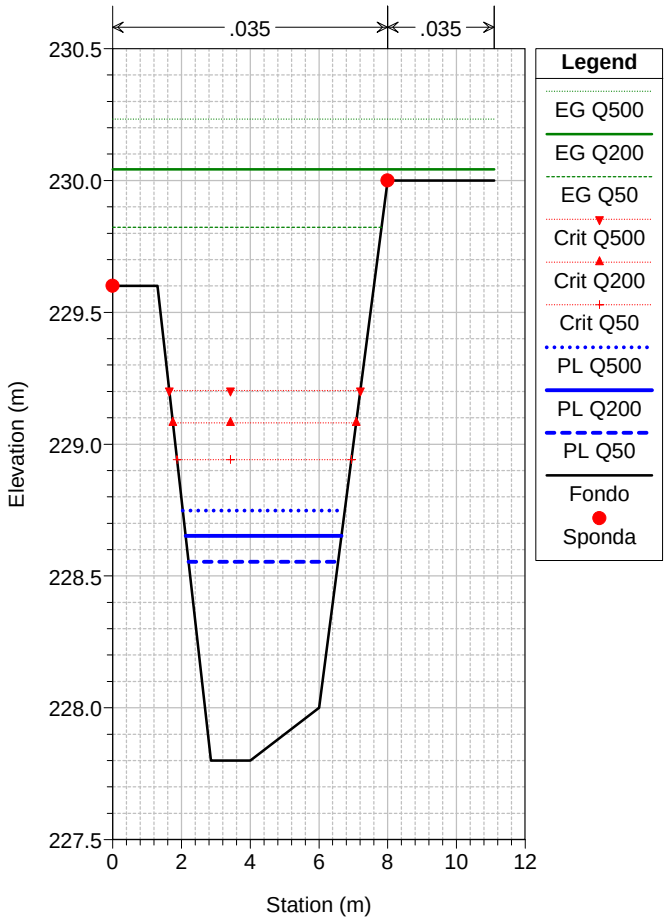
Lagoscuro Plan: Lagoscuro

River = Lagoscuro Reach = valle LAG-1v



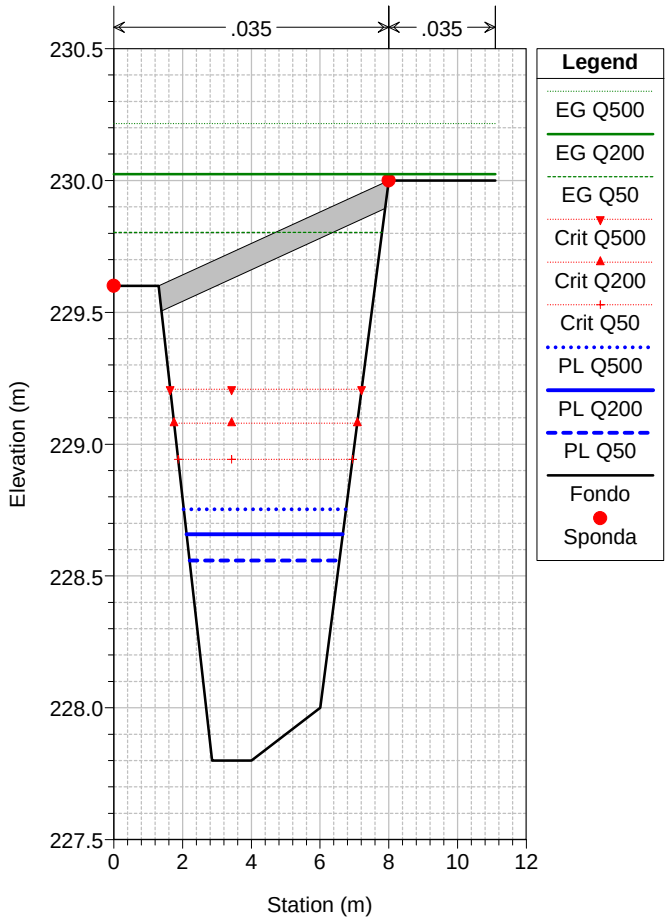
Lagoscuro Plan: Lagoscuro

River = Roncasci Reach = unico RON-3m



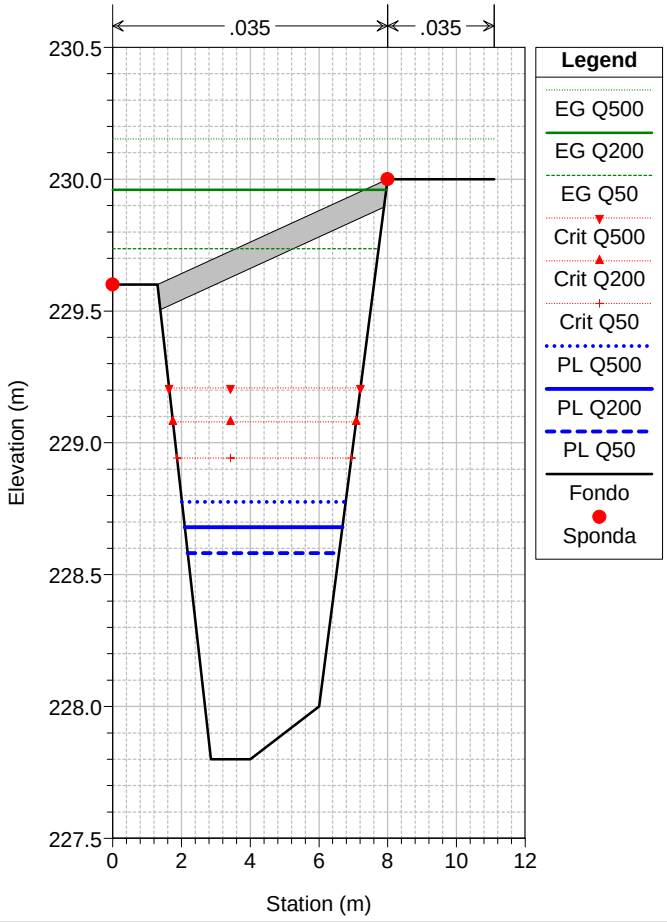
Lagoscuro Plan: Lagoscuro

River = Roncasci Reach = unico RON-3



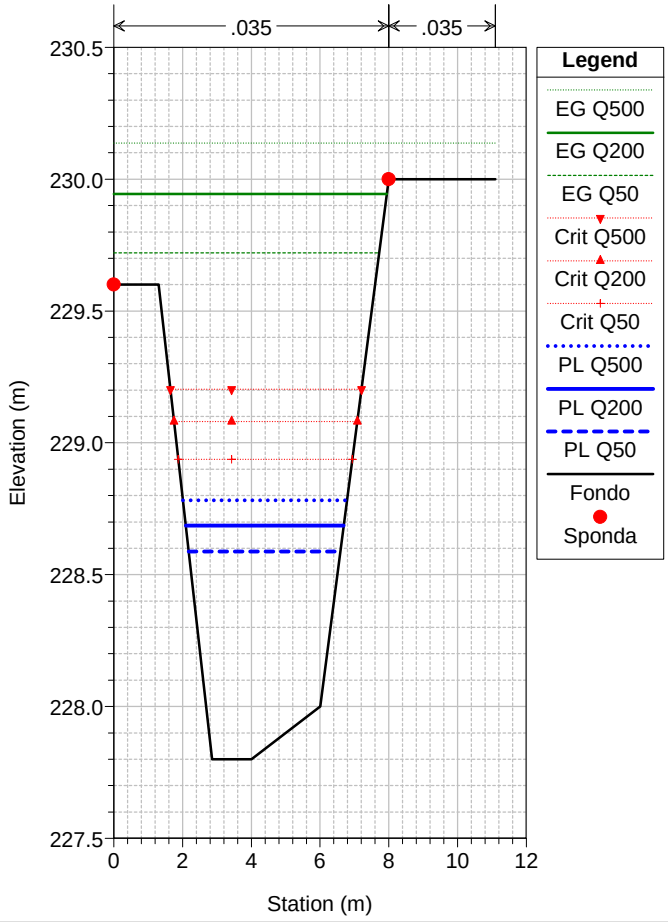
Lagoscuro Plan: Lagoscuro

River = Roncasci Reach = unico RON-3



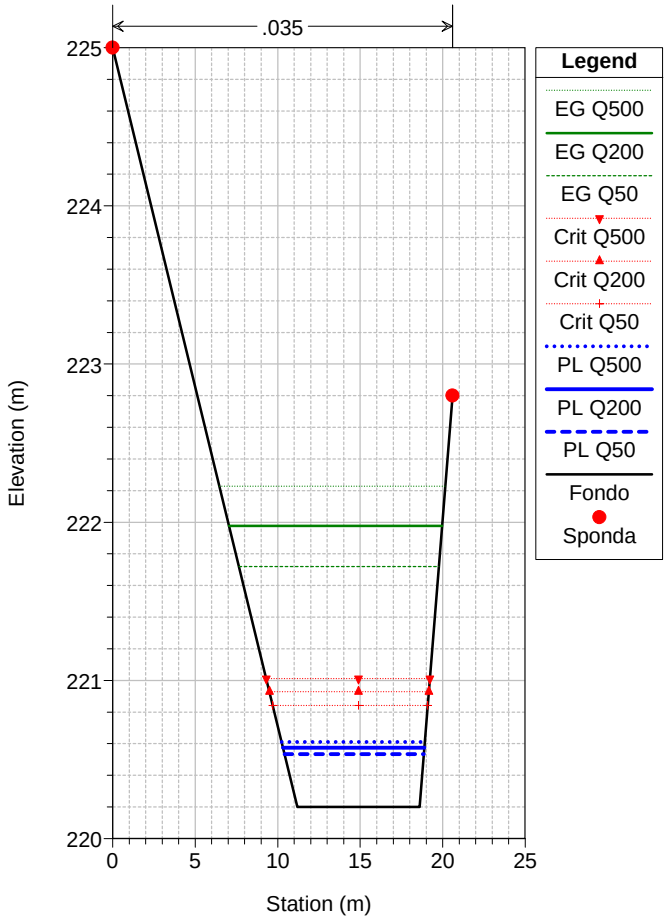
Lagoscuro Plan: Lagoscuro

River = Roncasci Reach = unico RON-3v



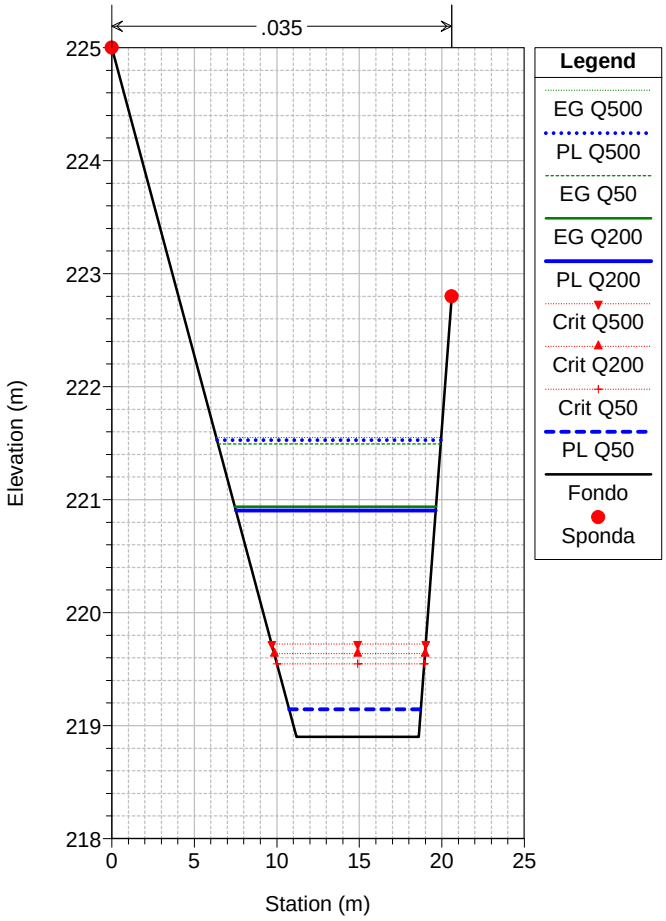
Lagoscuro Plan: Lagoscuro

River = Roncasci Reach = unico RON-2m



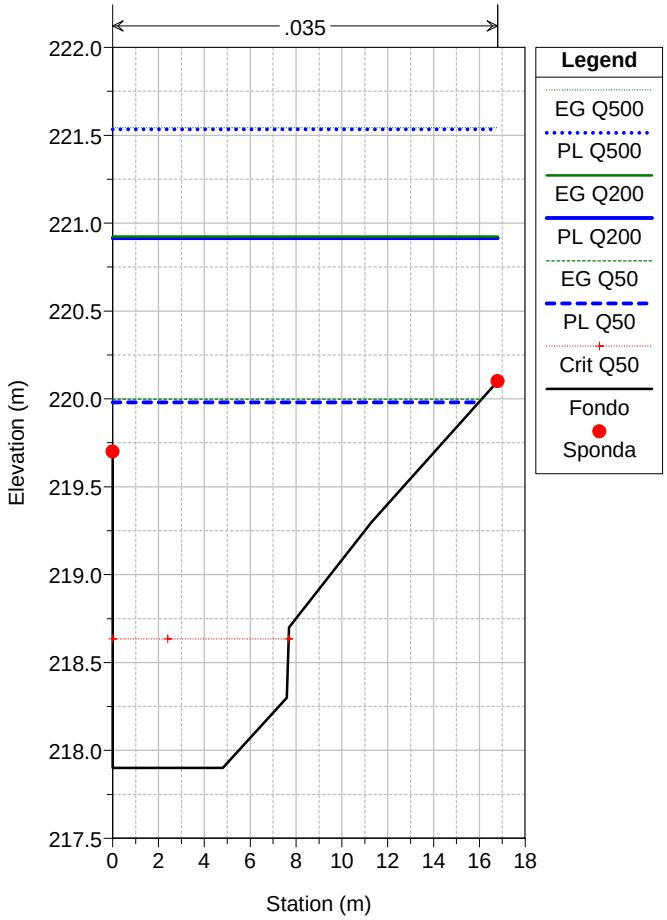
Lagoscuro Plan: Lagoscuro

River = Roncasci Reach = unico RON-2v



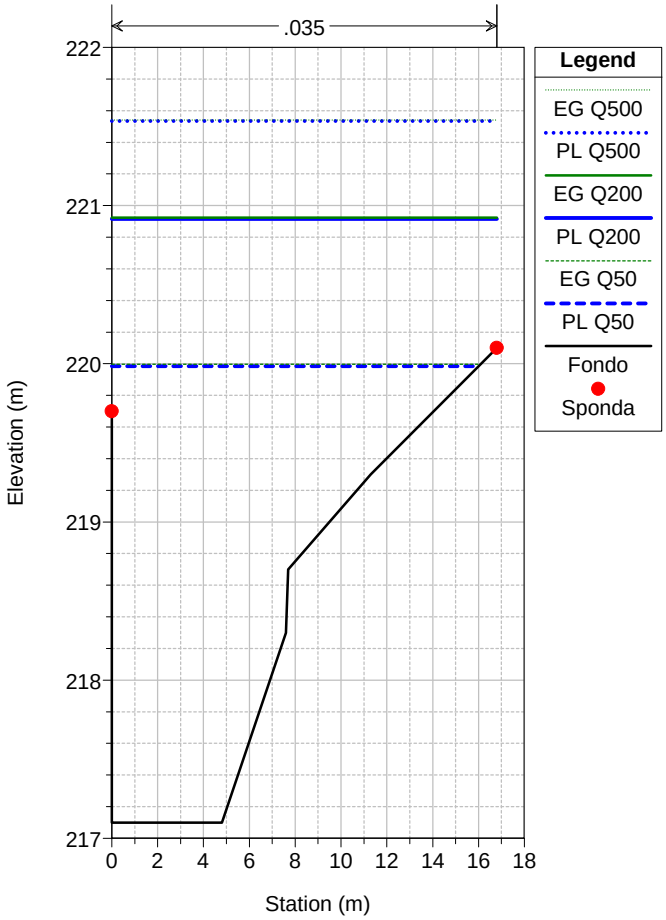
Lagoscuro Plan: Lagoscuro

River = Roncasci Reach = unico RON-1m



Lagoscuro Plan: Lagoscuro

River = Roncasci Reach = unico RON-1v



HEC-RAS Plan: lago

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)	
Roncasci	unico	3.1 RON-3m	Q50	12.80	227.80	228.55	229.60	1.05	230.00	1.45	228.94	229.82	0.072932	4.99	2.56	4.35	2.07
Roncasci	unico	3.1 RON-3m	Q200	15.70	227.80	228.65	229.60	0.95	230.00	1.35	229.08	230.04	0.069409	5.22	3.01	4.53	2.05
Roncasci	unico	3.1 RON-3m	Q500	18.60	227.80	228.75	229.60	0.85	230.00	1.25	229.20	230.23	0.066019	5.40	3.44	4.71	2.02
Roncasci	unico	3 RON-3		Bridge													
Roncasci	unico	2.9 RON-3v	Q50	12.80	227.80	228.59	229.60	1.01	230.00	1.41	228.94	229.72	0.061872	4.72	2.71	4.41	1.92
Roncasci	unico	2.9 RON-3v	Q200	15.70	227.80	228.69	229.60	0.91	230.00	1.31	229.08	229.94	0.060110	4.97	3.16	4.60	1.91
Roncasci	unico	2.9 RON-3v	Q500	18.60	227.80	228.78	229.60	0.82	230.00	1.22	229.20	230.14	0.058011	5.16	3.61	4.77	1.89
Roncasci	unico	2 RON-2m	Q50	12.80	220.20	220.54	225.00	4.46	222.80	2.26	220.84	221.72	0.138211	4.82	2.65	8.44	2.75
Roncasci	unico	2 RON-2m	Q200	15.70	220.20	220.58	225.00	4.42	222.80	2.22	220.93	221.98	0.142474	5.25	2.99	8.56	2.83
Roncasci	unico	2 RON-2m	Q500	18.60	220.20	220.61	225.00	4.39	222.80	2.19	221.01	222.23	0.147280	5.63	3.30	8.67	2.92
Roncasci	unico	1.9 RON-2v	Q50	12.80	218.90	219.15	225.00	5.85	222.80	3.65	219.55	221.49	0.399682	6.79	1.89	7.98	4.46
Roncasci	unico	1.9 RON-2v	Q200	15.70	218.90	220.90	225.00	4.10	222.80	1.90	219.64	220.94	0.000499	0.80	19.54	12.11	0.20
Roncasci	unico	1.9 RON-2v	Q500	18.60	218.90	221.53	225.00	3.47	222.80	1.27	219.72	221.55	0.000267	0.68	27.54	13.57	0.15
Roncasci	unico	1 RON-1m	Q50	12.80	217.90	219.98	219.70	-0.28	220.10	0.12	218.63	220.00	0.000416	0.62	20.51	15.97	0.18
Roncasci	unico	1 RON-1m	Q200	15.70	217.90	220.91	219.70	-1.21	220.10	-0.81		220.92	0.000112	0.43	36.17	16.80	0.09
Roncasci	unico	1 RON-1m	Q500	18.60	217.90	221.53	219.70	-1.83	220.10	-1.43		221.54	0.000073	0.40	46.57	16.80	0.08
Roncasci	unico	0.9 RON-1v	Q50	12.80	217.10	219.98	219.70	-0.28	220.10	0.12		220.00	0.000215	0.50	25.54	16.00	0.13
Roncasci	unico	0.9 RON-1v	Q200	15.70	217.10	220.92	219.70	-1.22	220.10	-0.82		220.92	0.000078	0.38	41.16	16.80	0.08
Roncasci	unico	0.9 RON-1v	Q500	18.60	217.10	221.54	219.70	-1.83	220.10	-1.43		221.54	0.000055	0.36	51.55	16.80	0.07
Lagoscuro	monte	4.1 LAG-4	Q50	25.70	217.80	219.90	221.30	1.40	220.20	0.30	219.56	220.26	0.005167	2.66	9.68	6.50	0.69
Lagoscuro	monte	4.1 LAG-4	Q200	37.10	217.80	220.88	221.30	0.42	220.20	-0.68	219.90	221.15	0.002508	2.29	16.22	6.70	0.47
Lagoscuro	monte	4.1 LAG-4	Q500	44.70	217.80	221.51	221.30	-0.21	220.20	-1.31	220.11	221.76	0.001939	2.19	20.46	6.70	0.40
Lagoscuro	monte	3.1 LAG-3m	Q50	25.70	217.40	220.01	219.60	-0.41	219.60	-0.41	218.78	220.14	0.001300	1.60	16.03	6.80	0.33
Lagoscuro	monte	3.1 LAG-3m	Q200	37.10	217.40	220.93	219.60	-1.33	219.60	-1.33	219.09	221.07	0.001094	1.66	22.33	6.80	0.29
Lagoscuro	monte	3.1 LAG-3m	Q500	44.70	217.40	221.55	219.60	-1.95	219.60	-1.95	219.28	221.70	0.001006	1.68	26.53	6.80	0.27
Lagoscuro	monte	3 LAG-3		Bridge													
Lagoscuro	monte	2.9 LAG-3v	Q50	25.70	217.20	219.98	219.60	-0.38	219.60	-0.38		220.10	0.001043	1.49	17.26	6.20	0.28
Lagoscuro	monte	2.9 LAG-3v	Q200	37.10	217.20	220.92	219.60	-1.32	219.60	-1.32		221.05	0.001009	1.61	23.04	6.20	0.27
Lagoscuro	monte	2.9 LAG-3v	Q500	44.70	217.20	221.54	219.60	-1.94	219.60	-1.94		221.68	0.000985	1.66	26.88	6.20	0.25
Lagoscuro	valle	2 LAG-2	Q50	45.90	216.20	217.98	218.10	0.12	218.60	0.62		218.14	0.001907	1.82	25.37	21.02	0.49
Lagoscuro	valle	2 LAG-2	Q200	66.50	216.20	218.52	218.10	-0.42	218.60	0.08		218.68	0.001246	1.79	39.84	29.32	0.41
Lagoscuro	valle	2 LAG-2	Q500	80.00	216.20	218.86	218.10	-0.76	218.60	-0.26		219.00	0.000975	1.75	50.10	31.06	0.37
Lagoscuro	valle	1.1 LAG-1m	Q50	45.90	215.70	217.33	217.00	-0.33	220.40	3.07	217.33	217.98	0.008801	3.59	12.80	9.91	1.01
Lagoscuro	valle	1.1 LAG-1m	Q200	66.50	215.70	217.69	217.00	-0.69	220.40	2.71	217.69	218.53	0.008743	4.05	16.42	9.92	1.01
Lagoscuro	valle	1.1 LAG-1m	Q500	80.00	215.70	217.92	217.00	-0.92	220.40	2.48	217.92	218.86	0.008713	4.30	18.62	9.93	1.00
Lagoscuro	valle	1 LAG-1v	Q50	45.90	214.50	215.96	217.00	1.04	220.40	4.44	216.52	217.85	0.040661	6.09	7.53	7.95	2.00
Lagoscuro	valle	1 LAG-1v	Q200	66.50	214.50	216.27	217.00	0.73	220.40	4.13	216.89	218.39	0.039418	6.46	10.30	9.75	2.01
Lagoscuro	valle	1 LAG-1v	Q500	80.00	214.50	216.44	217.00	0.56	220.40	3.96	217.11	218.71	0.035913	6.69	11.97	9.79	1.93