COMUNE DI GENOVA
AREA TECNICA
DIREZIONE OPERE IDRAULICHE E SANITARIE
Via di Francia 3 - 16149 GENOVA

ADEGUAMENTO IDRAULICO DEI TRATTI TOMBINATI DEI RIVI VEILINO E SANT' ANTONINO

PROGETTO PRELIMINARE

RELAZIONE IDRAULICA	R.02
Prima emissione:	luglio 2017

Il Responsabile Unico del Procedimento

Dott. Ing. Stefano Pinasco

Il Progettista

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ALLEGATO 1 – Descrizione codice di calcolo HEC-RAS 1

ALLEGATI .....

- Modello 1 dei corsi d'acqua interessati (Bisagno, Veilino, Sant'Antonino, Briscata) nello stato di RILIEVO, in condizioni di flusso misto (profilo longitudinale, sezioni trasversali, tabulato di calcolo)
- Modello 2 dei corsi d'acqua interessati (Bisagno, Veilino, Sant'Antonino, Briscata) nello stato di PROGETTO, in condizioni di flusso misto (profilo longitudinale, sezioni trasversali, tabulato di calcolo)

COMUNE DI GENOVA

AREA TECNICA

DIREZIONE OPERE IDRAULICHE E SANITARIE

VIA DI FRANCIA 3 - 16149 GENOVA

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Adeguamento idraulico dei tratti tombinati dei rivi Veilino e S. Antonino

PROGETTO PRELIMINARE

RELAZIONE IDROLOGICO - IDRAULICA

1. PREMESSE

Richiedente: Comune di Genova - Area Tecnica - Direzione Opere Idrauliche e Sanitarie - Via di Francia - 16149 Genova

Localizzazione dello studio: cimitero di Staglieno – Genova.

Descrizione sintetica dello studio:

- Oggetto della presente relazione è l'analisi idrologico-idraulica dei rivi Veilino e S. Antonino nel tratto immediatamente a monte della confluenza nel t. Bisagno, in corrispondenza dei tratti terminali tombinati al di sotto del Cimitero Monumentale di Staglieno. A seguito di indagine di mercato informale con richiesta di preventivo per l'affidamento della progettazione preliminare, l'Amministrazione Comunale ha affidato al sottoscritto Dott. Ing. Gianpaolo Careddu (di seguito denominato progettista) l'incarico di predisporre la progettazione preliminare delle opere di "*Adeguamento idraulico dei tratti tombinati dei rivi Veilino e S. Antonino"* , al cui interno rientra il presente studio finalizzato alla verifica puntuale delle condizioni di deflusso della corrente lungo i corsi d'acqua interessati, sia nelle condizioni attuale che nelle condizioni di progetto.

Figura 1 – Ortofoto dell'area in esame con individuazione dell'ambito di intervento

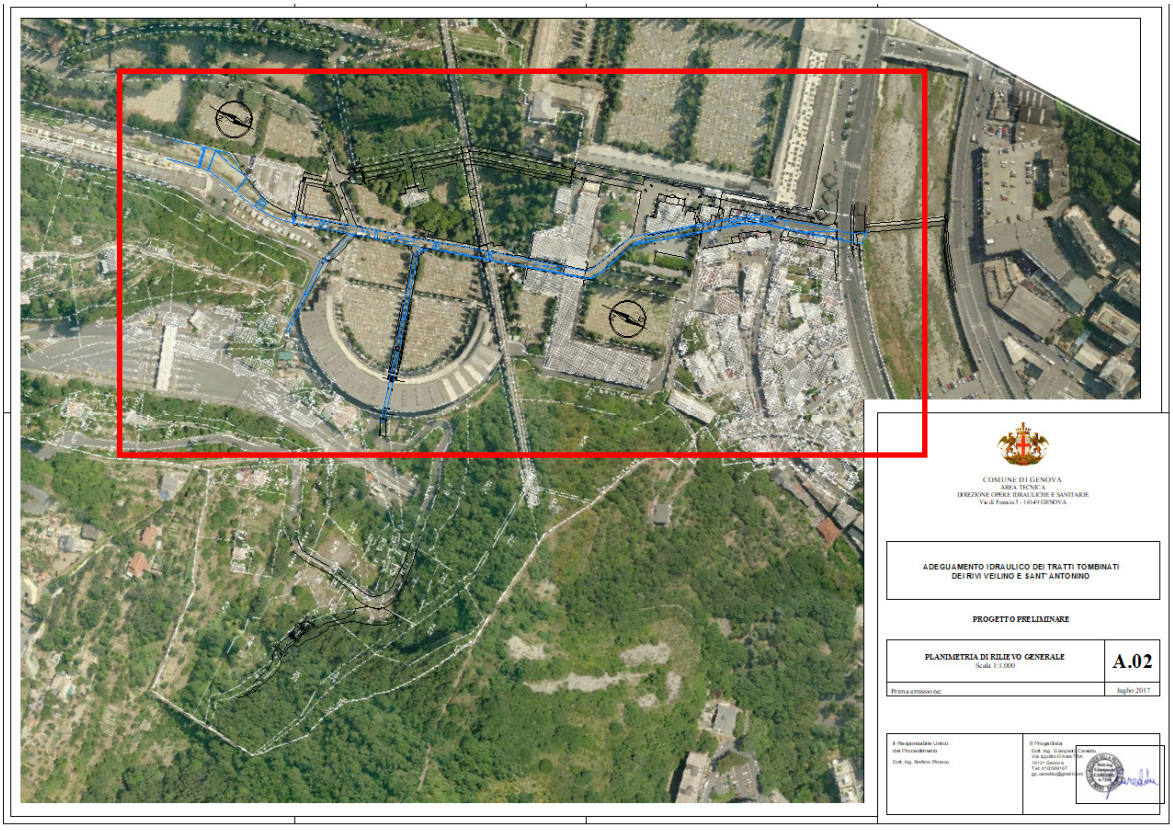


Figura 2 – Dettaglio dell'area in esame con individuazione dell'ambito di intervento

L'area di studio si trova all'inizio della val Bisagno, nel quartiere di Staglieno, presso lo svincolo autostradale di Genova Est al piede del versante che in sponda destra dei corsi d'acqua conduce al parco delle Mura e del Righi, nonché agli abitati di San Pantaleo e sant'Antonino.

Tra i corsi d'acqua appenninici del versante ligure tirrenico, il torrente Bisagno presenta un bacino di dimensioni medio-piccole, con superficie complessiva di circa 95 kmq. Il torrente Bisagno ha inizio al colle della Scoffera (675 m sul l.m.m.) e ha la sua foce all'estremità orientale del bacino portuale di Genova in prossimità del quartiere fieristico.

Il tratto medio inizia approssimativamente in corrispondenza dell'abitato di Prato, ed è caratterizzato da un particolare assetto: lungo la sponda sinistra del torrente i versanti costituiscono una sorta di striscia di larghezza costante, corrispondenti al prato di S. Eusebio, drenati da brevi incisioni perpendicolari all'asta principale, mentre per quanto riguarda il versante destro in località Doria confluisce il rio Torbido e, dopo le pendici di S. Siro, il torrente Geirato in loc. Molassana. A valle della confluenza del T. Geirato, si presentano in sponda sinistra alcune aree drenate da brevi incisioni e quindi il rio Montesignano, mentre in destra confluiscono a S. Gottardo il rio Trensasco e, dopo poche centinaia di metri, il rio Cicala. In prossimità del cimitero di Staglieno confluisce in destra il rio Veilino, che raccoglie le acque dei rii Rovena, Briscata e S. Antonino e, quindi, a Marassi il rio Fereggiano, nel basso corso hanno anche recapito le fognature bianche dell'area urbanizzata.

Dal punto di vista cartografico l'area ricade nel foglio CTR 1:10.000 N.213160 della Carta Tecnica Regione Liguria.

Il tronco d'alveo del rio Veilino oggetto di verifica è compreso tra la confluenza del rio Rovena, a monte del Cimitero di Staglieno, e la confluenza del Veilino nel Bisagno, per una lunghezza complessiva di circa 970 m. Le sezioni sono di forma regolare assimilabile alla rettangolare con larghezze al fondo variabili tra 6 e 16 m circa.

L'alveo risulta interamente plateato ma a valle delle briglie di maggiore altezza si possono notare elementi del fondo scalzati dalla corrente che ostacolano il regolare deflusso e in alcuni punti la presenza ai lati di depositi alluvionali e vegetazione. Entrambe le sponde sono arginate con muri in c.a.: mentre in sponda destra l'argine degrada lentamente verso valle, in sponda sinistra presenta un andamento discontinuo.

Lungo il tratto sono presenti, da monte verso valle, i seguenti manufatti: due briglie, una passerella pedonale a campata unica, sei briglie, una tombinatura.

Di conseguenza, il presente studio ha l'obiettivo di illustrare le condizioni di deflusso della corrente con i tempi di ritorno fissati dal Piano di Bacino Stralcio per la tutela del rischio idrogeologico del t. Bisagno (in particolare 50 anni e 200 anni), in vista della successiva progettazione definitiva ed esecutiva e successiva realizzazione della sistemazione idraulica, al fine di valutare eventuali problematiche e reciproche interferenze nonché di verificare il rispetto dei franchi idraulici di sicurezza stabiliti dal Piano di Bacino Stralcio.

2. RIFERIMENTI NORMATIVI

2.1. Inquadramento normativo.

Le interferenze idrografiche devono essere valutate secondo i seguenti strumenti normativi:

1 – ambito di competenza del **Piano di Bacino Stralcio** per la tutela del rischio idrogeologico del **t. Bisagno** redatto dalla Provincia di Genova, approvato con D.C.P. n. 62 del 04/12/2001, ultima variante approvata: DDG n. 141 del 12/06/2017 entrata in vigore il 28/06/2017.

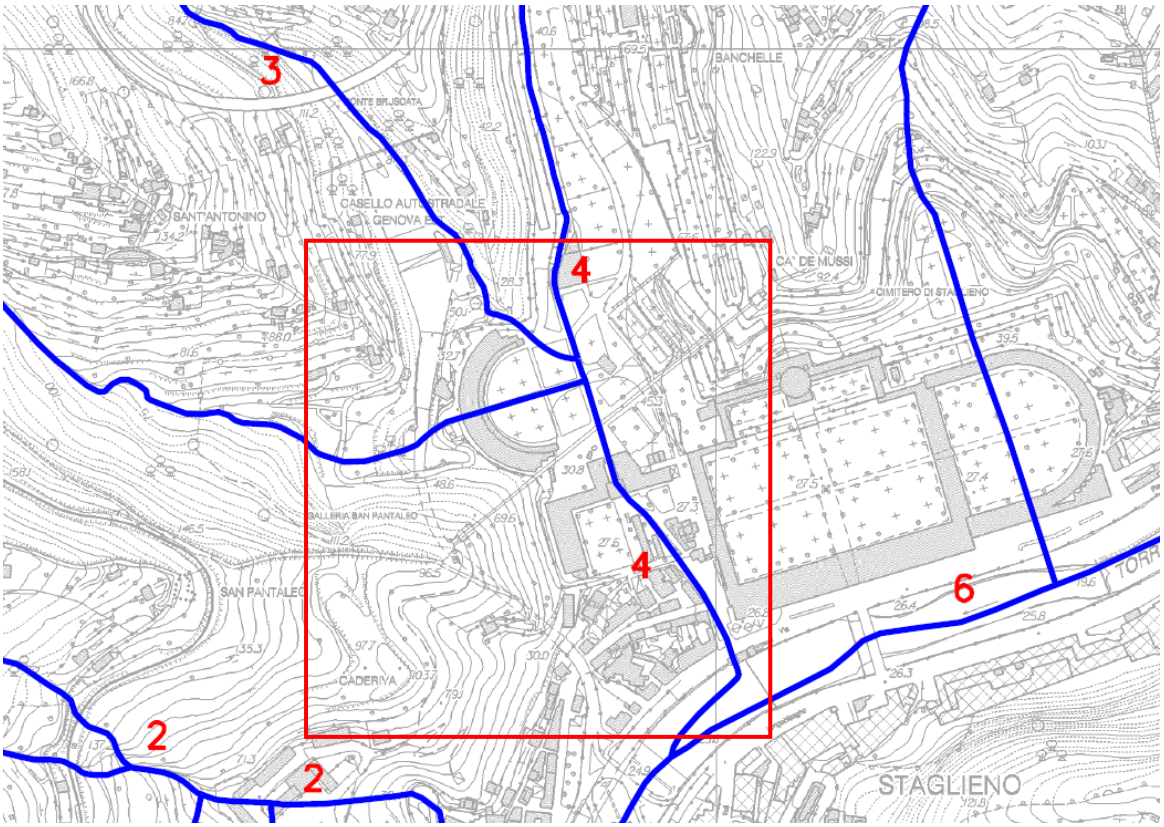


Figura 3 – Stralcio Carta delle **rete idrografica** - Piano di Bacino Stralcio t. Bisagno

In particolare, l'esame della carta delle fasce di inondabilità e degli ambiti normativi evidenzia che lungo i tratti di corsi d'acqua in oggetto:

- la parte centrale del Cimitero, in corrispondenza dell'inizio del tratto tombinato del rio Veilino, ricade in **fascia A rossa** (area a pericolosità idraulica molto elevata (Pi3) cioè aree perifluviali inondabili al verificarsi dell'evento di piena con portata al colmo di piena corrispondente a periodo di ritorno T=50 anni);
- la via Superiore del Veilino, che corre lungo il perimetro lato Ovest del Cimitero fino al piazzale Resasco antistante l'ingresso al Cimitero stesso, ricade interamente in **fascia A rossa** (area a pericolosità idraulica molto elevata (Pi3) cioè aree perifluviali inondabili al verificarsi dell'evento di piena con portata al colmo di piena corrispondente a periodo di ritorno T=50 anni);
- vista la sostanziale complanarità della zona (in leggero declivio verso il t. Bisagno), le aree comprese tra le suddette aree ricadenti in fascia A risentono inevitabilmente della relativa inondabilità , pertanto ricadono in **fascia B gialla** (pericolosità idraulica media (Pi2) cioè aree perifluviali, esterne alle

precedenti, inondabili al verificarsi dell'evento di piena con portata al colmo di piena corrispondente a periodo di ritorno T=200 anni) e **fascia C verde storicamente inondate nei tratti indagati** (aree perifluviali, esterne alle precedenti, inondabili al verificarsi dell'evento di piena con portata al colmo di piena corrispondente a periodo di ritorno T=500 anni, o aree storicamente inondate ove più ampie, laddove non si siano verificate modifiche definitive del territorio tali da escludere il ripetersi dell'evento);

- il tratto lungo la sponda destra del t. Bisagno, sia a monte che a valle della confluenza con il t. Veilino, ricade in **fascia A* viola** (aree storicamente inondate, per le quali non siano avvenute modifiche definitive del territorio tali da escludere il ripetersi dell'evento, ovvero aree individuate come a rischio di inondazione sulla base di considerazioni geomorfologiche o di altra evidenze di criticità, in corrispondenza delle quali non siano state effettuate nell'ambito del Piano le adeguate verifiche idrauliche finalizzate all'individuazione delle fasce di inondabilità).

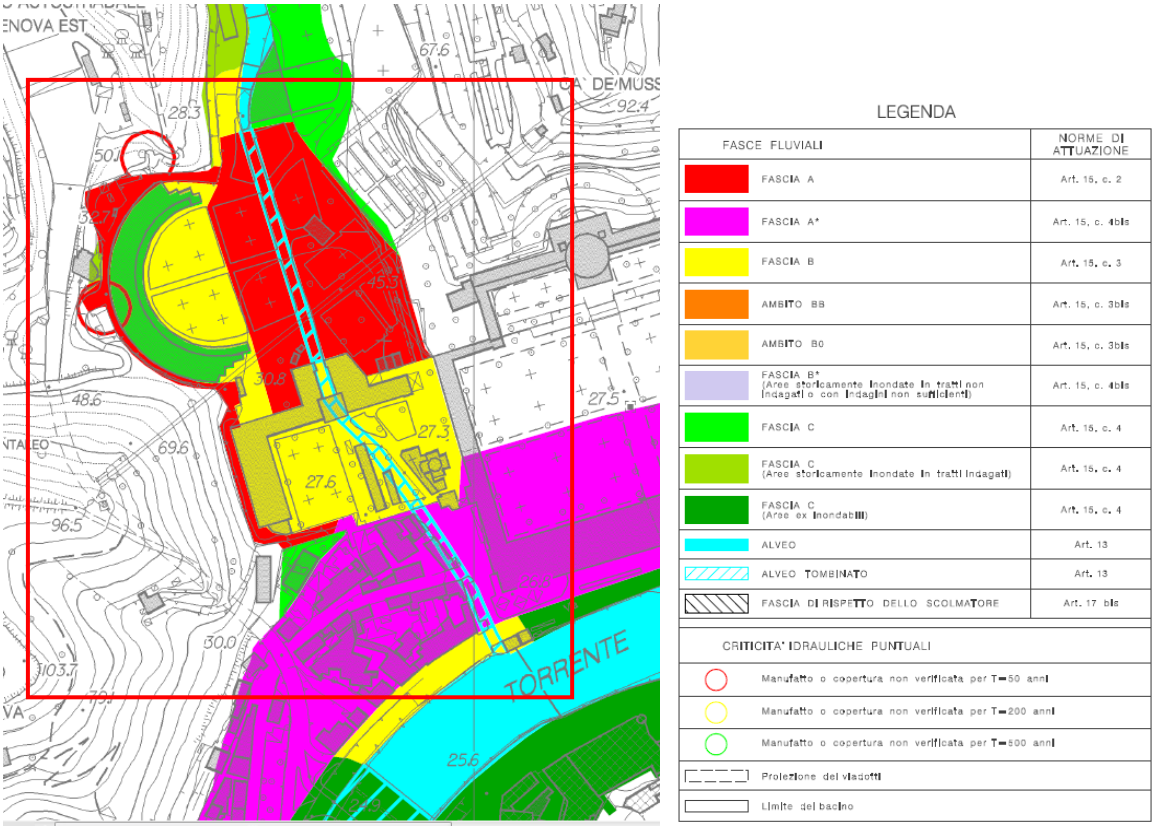


Figura 4 – Estratto carta e legenda **fasce fluviali** Piano di Bacino Stralcio t. Bisagno

La carta delle aree inondabili e delle aree storicamente inondate conferma detta impostazione.

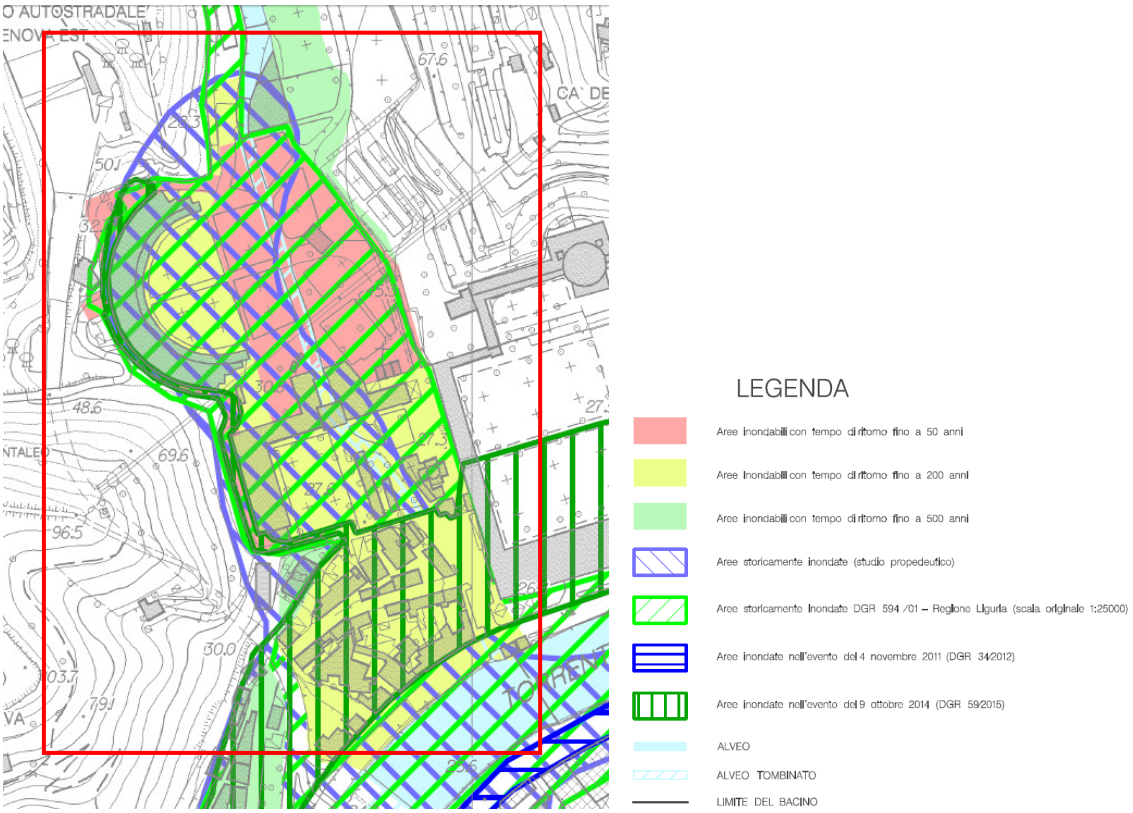


Figura 5 – Estratto carta e legenda **aree inondabili** Piano di Bacino Stralcio t. Bisagno

- la carte delle aree soggette a rischio idraulico, in relazione agli elementi nelle stesse presenti,

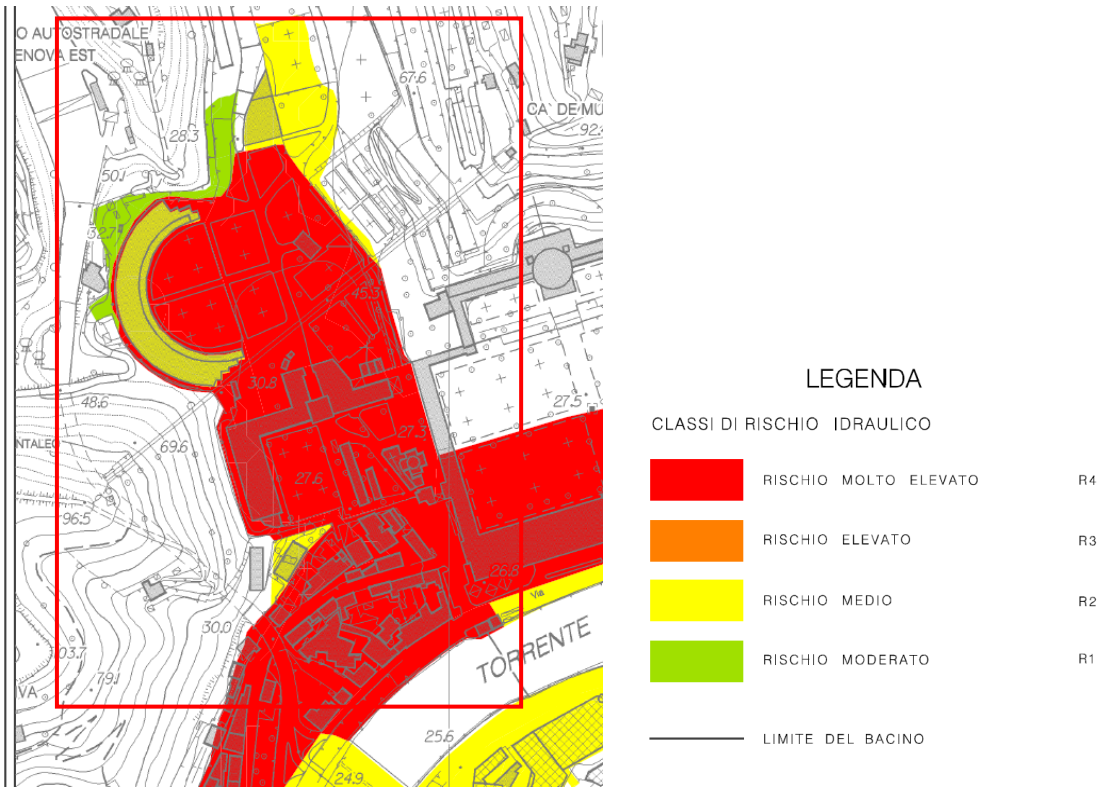


Figura 6 – Estratto carta e legenda **rischio idraulico** Piano di Bacino Stralcio t. Bisagno

classifica la sponda destra del t. Bisagno e l'intera area cimiteriale interessata dal tratto tombinato del rio Veilino, compresa la perimetrale Via Superiore del Veilino, in area a **rischio molto elevato R4**

(sponda destra), mentre l'area occupata dalla galleria semi circolare di S. Antonino si trova in area a **rischio medio R2**:

- la carta della suscettività al dissesto fa ricadere la zona di intervento pressoché interamente in area caratterizzata da suscettività al dissesto **molto bassa (area Pg0)** (aree, in cui i processi geomorfologici e le caratteristiche fisiche dei terreni non costituiscono, se non occasionalmente, fattori predisponenti al verificarsi di movimenti di massa).
  Solo il tratto iniziale della tombinatura del rio Sant'Antonino al di sotto della galleria semi circolare ricade in area caratterizzata da suscettività al dissesto **bassa (area Pg1)** (aree, in cui sono presenti elementi geomorfologici e di uso del suolo caratterizzati da una bassa incidenza sulla instabilità, dalla cui valutazione risulta una propensione al dissesto di grado inferiore a quella Pg2).

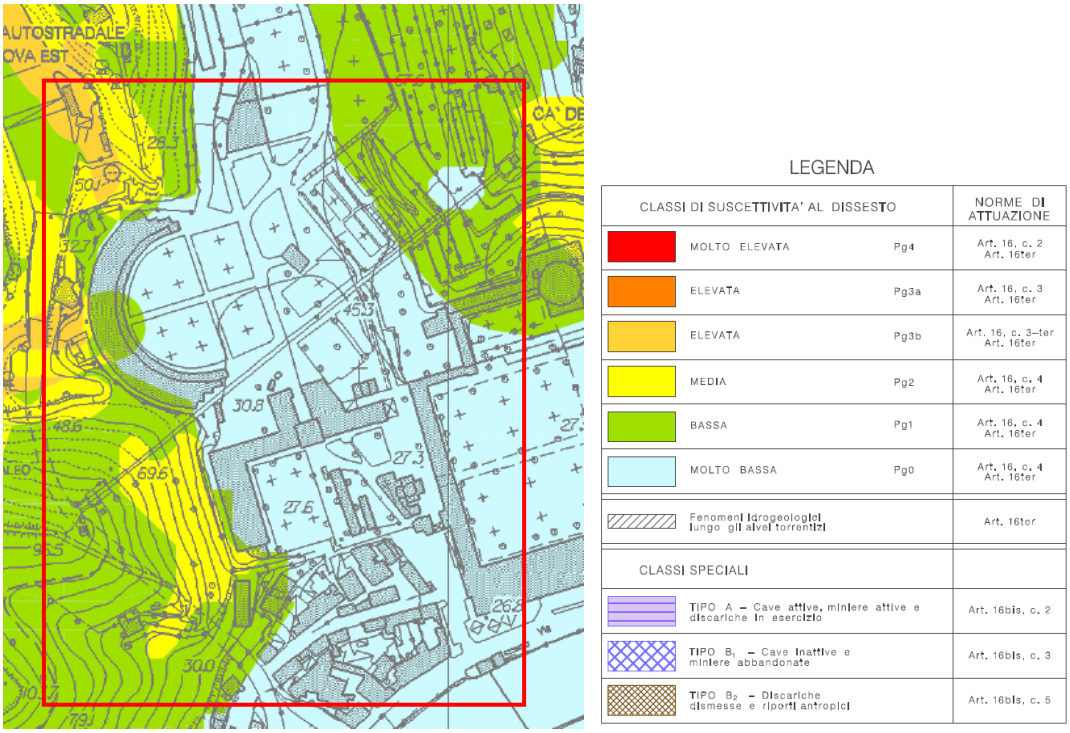


Figura 7 – Estratto carta e legenda **suscettività al dissesto** PdB Stralcio t. Bisagno

- nella carta degli interventi sono segnalati tre interventi lungo ciascuno dei corsi d'acqua interessati dallo studio idraulico (rivi Veilino, Sant'Antonino e Briscata), caratterizzati da tratti tombinati per i quali si prevede la realizzazione di interventi di tipo idraulico con opere di adeguamento dell'alveo e di rifacimento di ponti e tombinature;
- intervento 5: "*Adeguamento delle sezioni idrauliche del rio Veilino ai fini del deflusso della portata 200-ennale*";
- intervento 6: "*Adeguamento delle sezioni idrauliche del rio S. Antonino ai fini del deflusso della portata 200-ennale*";
- intervento 7: "*Adeguamento delle sezioni idrauliche del rio Briscata ai fini del deflusso della portata 200-ennale*".

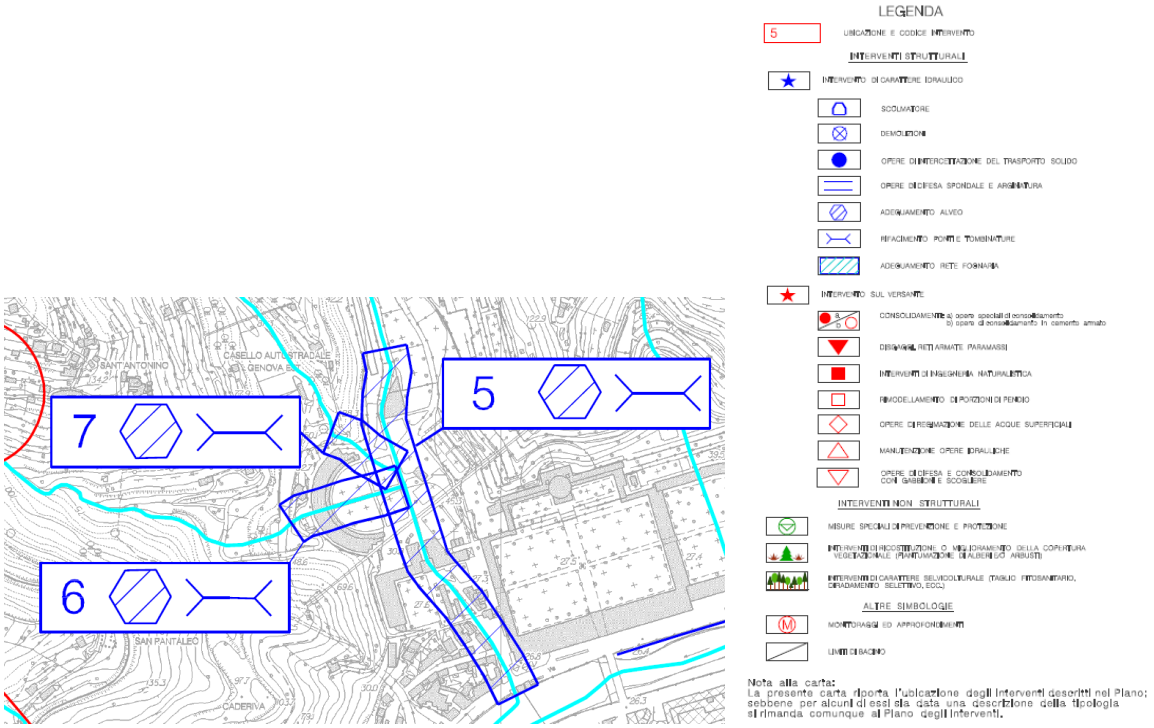


Figura 8 – Estratto carta **degli interventi** PdB Stralcio t. Bisagno

Le opere in progetto sul reticolo idrografico sono inoltre disciplinate dal Regolamento Regionale N.3 del 14 luglio 2011 redatto a cura della Regione Liguria e ss. mm. ii.: secondo la gerarchizzazione idrografica ivi contenuta, nel tratto in esame:

- il rio Veilino appartiene al **reticolo di 1° livello**;
- il rio Sant'Antonino ed il rio Briscata appartengono al **reticolo di 2° livello**.

2 - ambito di competenza del **D.Lgs. 42 del 22/01/2004 Codice per i Beni Culturali e del Paesaggio, e ss. mm. ii.** (tutela del "Patrimonio culturale" nazionale costituito dai "beni culturali" e dai "beni paesaggistici").

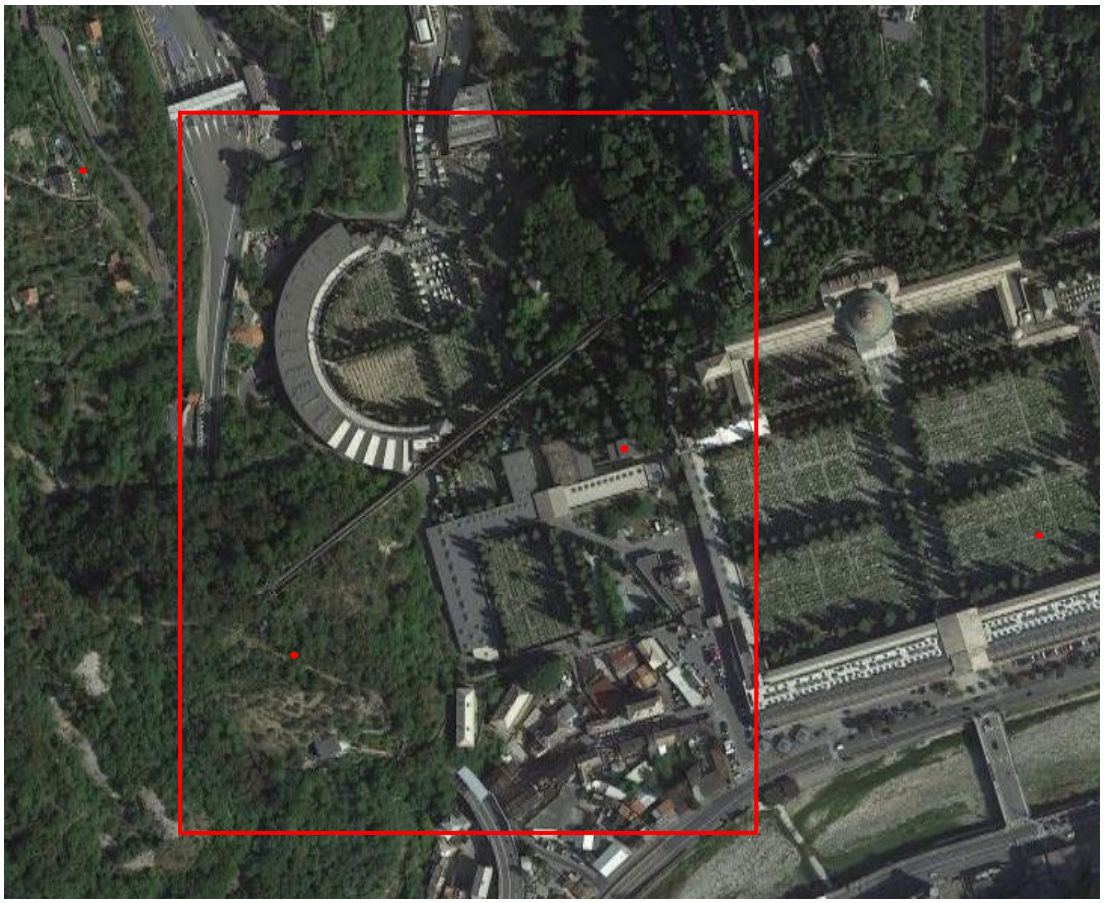


Figura 9 – sito www.liguriavincoli.it – Vincolo Architettonico puntuale

con presenza dei seguenti Vincoli Architettonici Puntuali :

- Cimitero Monumentale di Staglieno

Provincia	GE
Data di Aggiornamento	10/04/2013
Comune	GENOVA
Zona di Genova	STAGLIENO
Codice Monumentale	2
Codice NCTN	07/00110217
Descrizione	Cimitero Monumentale di Staglieno
Anno di vincolo	2008
Note	Piazzale Resasco
Decreto	00110217
Stralcio cartografico	00110217_sc
Foto	0700110217.pdf

- Acquedotto Romano

Provincia	GE
Data di Aggiornamento	30/09/2000
Comune	GENOVA
Zona di Genova	STAGLIENO
Codice Monumentale	4

Codice NCTN	07/00109458
Descrizione	Acquedotto romano
Anno di vincolo	1913
Note	vedi Mon.4 - anche circ. Molassana Stru
Decreto	00109458
Stralcio cartografico	00109458_sc
Foto	0700109458_fta43727.jpg

- Cimitero Israelitico

Provincia	GE
Data di Aggiornamento	25/09/2014
Comune	GENOVA
Zona di Genova	STAGLIENO
Codice Monumentale	2
Codice NCTN	07/00110217A
Descrizione	Edificio per i riti funebri del Cimitero Israelitico nel Cimitero Monumentale di Staglieno
Anno di vincolo	2013
Decreto	00110217A
Stralcio cartografico	00110217A_sc
Foto	0700110217A.jpg

4 – Catasto Terreni

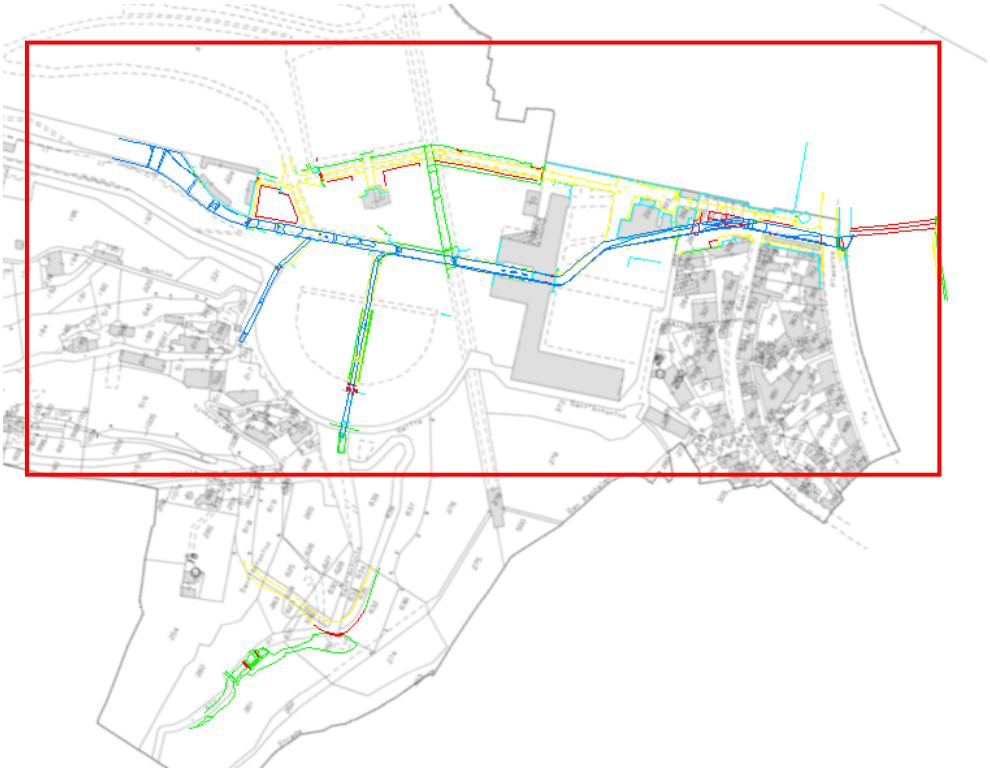


Figura 10 – Stralcio planimetria catastale sovrapposta al rilievo

Il tratto oggetto di intervento ricade interamente all'interno della sezione GEA foglio 8 del Catasto Terreni del Comune di Genova;

Con riferimento alle prescrizioni contenute nella Pianificazione Vigente sopra descritta, nel seguito vengono illustrate le ipotesi generali di calcolo adottate nello studio idrologico e nelle verifiche idrauliche dell'intervento in progetto.

2.2. Determinazione delle portate di piena di progetto e criteri di dimensionamento delle opere.

In base alle indicazioni riportate nell'elaborato "Sottobacini e parametri caratteristici" e nell'""Allegato 2 – Portate di piena" alle Norme di Attuazione del Piano di Bacino Stralcio, per il torrente Bisagno e per gli affluenti in sponda destra dal Veilino al Ruinà sono stati utilizzati i valori di portata al colmo di piena per tempi di ritorno duecentennali ed altri tempi di ritorno rilevanti nei bacini (T=50 e 500 anni) sinteticamente riportati a pag.184 dell'elaborato "Idrologia", di seguito riassunti con riferimento alla seguente configurazione schematica del nodo Bisagno-Veilino:

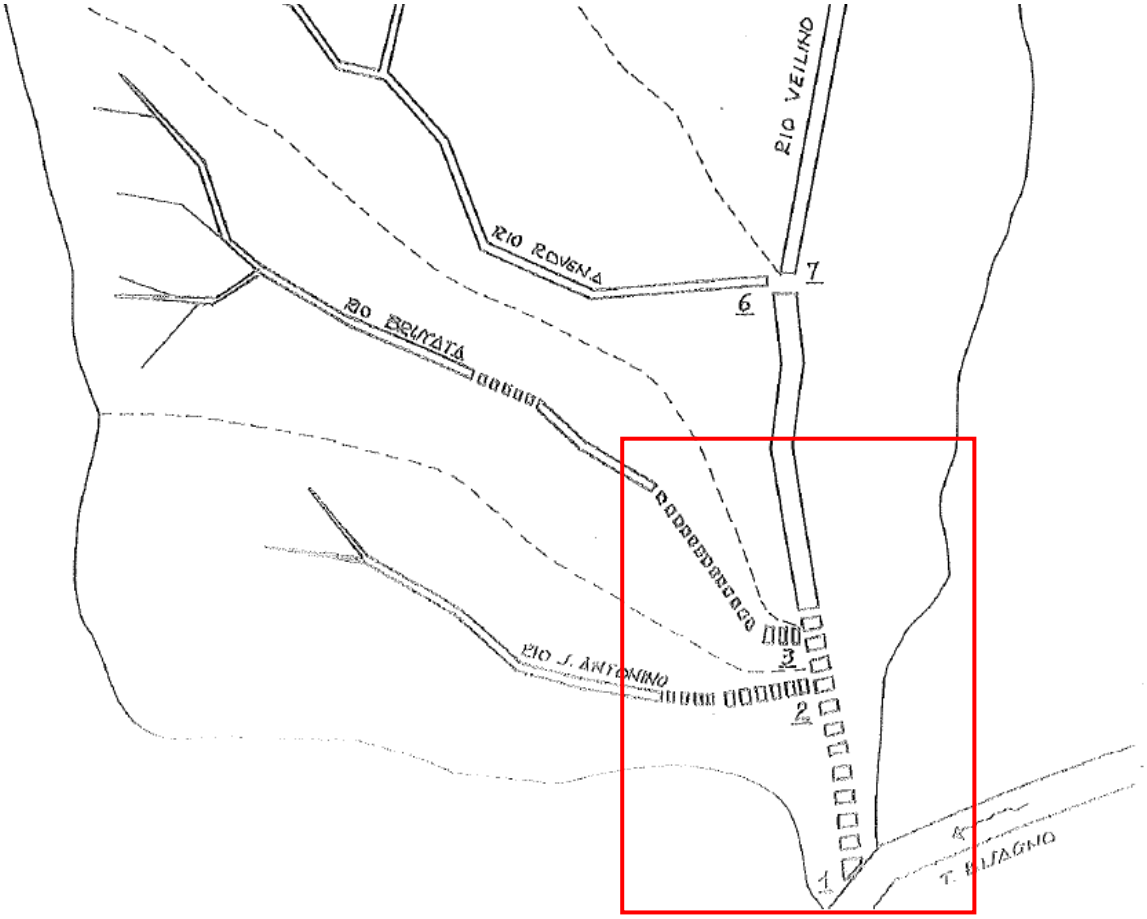


Figura 9.1 – Estratto carta **dei sottobacini e delle sezioni di chiusura** PdB Stralcio t. Bisagno

- RIO VEILINO:

- <u>SEZ. 1</u> : **sezione di chiusura dell'asta principale alla confluenza con il t. Bisagno**

A = superficie del bacino sotteso = 3,30 kmq

$Q_{TR=50\ anni}$ = 51 m^3/s;

$Q_{TR=200\ anni}$ = 85 m^3/s;

$Q_{TR=500\ anni}$ = 116 m^3/s.

- RIO SANT'ANTONINO:

- <u>SEZ. 2</u> : **sezione di chiusura dell'asta principale alla confluenza con il rio Veilino**

A = superficie del bacino sotteso = 0,50 kmq

$Q_{TR=50\ anni}$ = 10 m^3/s;

$Q_{TR=200\ anni}$ = 16 m^3/s;

$Q_{TR=500\ anni}$ = 22 m^3/s.

- RIO BRISCATA:

- <u>SEZ. 3</u> : **sezione di chiusura dell'asta principale alla confluenza con il rio Veilino**

A = superficie del bacino sotteso = 0,60 kmq

$Q_{TR=50\ anni}$ = 12 m^3/s;

$Q_{TR=200\ anni}$ = 19 m^3/s;

$Q_{TR=500\ anni}$ = 26 m^3/s.

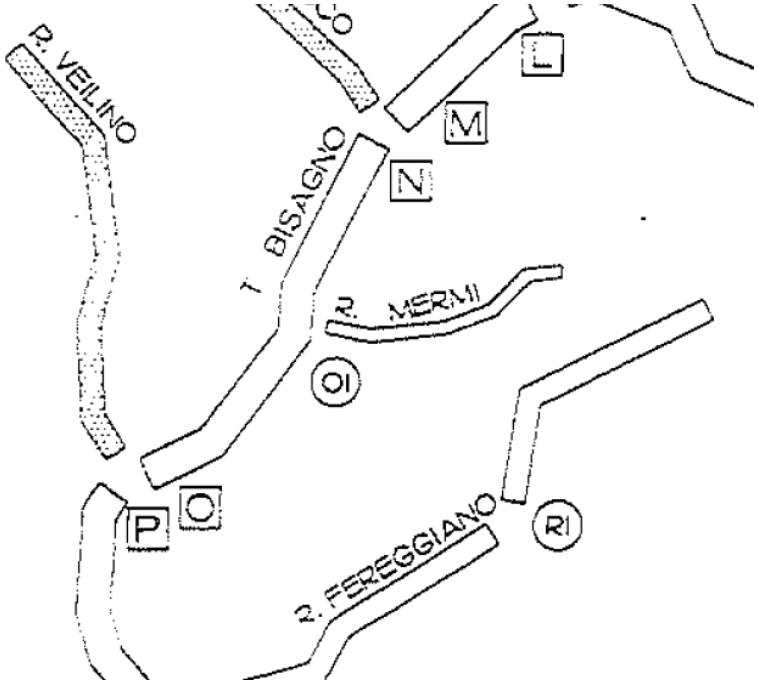


Figura 9.2 – Estratto carta **dei sottobacini e delle sezioni di chiusura** PdB Stralcio t. Bisagno

- TORRENTE BISAGNO:

- <u>NODO O</u> : **sezione dell'asta principale a monte della confluenza con il rio Veilino**

A = superficie del bacino sotteso = 78,80 kmq

$Q_{TR=50\ anni}$ = 696 m^3/s;

$Q_{TR=200\ anni}$ = 1147 m^3/s;

$Q_{TR=500\ anni}$ = 1573 m^3/s.

- TORRENTE BISAGNO:

- NODO P : **sezione dell'asta principale a valle della confluenza con il rio Veilino**

A = superficie del bacino sotteso = 82,50 kmq

$Q_{TR=50\ anni}$ = 730 m^3/s;

$Q_{TR=200\ anni}$ = 1201 m^3/s;

$Q_{TR=500\ anni}$ = 1649 m^3/s.

Come stabilito all'articolo 7 comma 1 delle Norme di attuazione, si è assunta quale portata di piena di verifica nel tratto in oggetto quella con tempo di ritorno 200 anni, sebbene per completezza di informazione vengano comunque riportati in allegato i risultati di calcolo anche per le portate di piena con tempo di ricorrenza 50 anni e 500 anni.

2.3. Schema di calcolo idraulico.

L'analisi idraulica del t. Bisagno e dei rivi Veilino, Sant'Antonino e Briscata è stata condotta applicando schemi di calcolo in moto permanente, mediante la messa a punto ed applicazione di modelli idraulici monodimensionali basati sul codice di calcolo HEC RAS (vedi descrizione in allegato 1).

Nel caso specifico, l'analisi idraulica è stata eseguita partendo dalla modellazione idraulica monodimensionale che ha condotto alle verifiche idrauliche riportate all'interno del Piano di Bacino Stralcio negli elaborati "Verifiche idrauliche – Asta principale" e "Verifiche idrauliche – Affuenti".

2.4. Parametri di scabrezza.

Nella scelta dei parametri di scabrezza utilizzati nelle verifiche idrauliche si è fatto riferimento in generale ai valori relativi alla formulazione di Strickler indicati nella Tabella 1, così come riportati all'interno delle Norme di Attuazione del Piano di Bacino Stralcio (Allegato 3 – Indirizzi tecnici per la redazione di studi idraulici).

Descrizione corso d'acqua	**Coefficienti di scabrezza di Gauckler-Strickler Ks (m1/3s-1)**
Tratti di corsi d'acqua naturali con salti, rocce o vegetazione anche arbustiva-arborea in alveo	25-30
Corsi d'acqua naturali con vegetazione e movimento di materiale sul fondo	30-35
Tratti urbanizzati di corsi d'acqua naturali con argini cementati (e/o platee in buono stato)	35-40
Corsi d'acqua con fondo e argini totalmente cementati in ottimo stato ed assenza di manufatti (tubi, cavi, ecc..) o discontinuità interferenti con le acque	40-45

Tabella 1 – Coefficienti di scabrezza prescritti all'interno del PdB Stralcio t. Bisagno

2.5. Franchi di sicurezza.

Per la valutazione dell'adeguatezza idraulica delle opere in progetto si è fatto riferimento alle prescrizioni contenute all'interno della normativa di Piano di Bacino Stralcio (Allegato 3 – Indirizzi tecnici per la redazione di studi idraulici) che stabilisce i seguenti franchi idraulici:

Franco idraulico: valore maggiore tra (a) e (b)			
		Reticolo principale e secondario	Reticolo minore
(a)		$U^2/2g$	$0,5\ U^2/2g$
(b)	I) argini e difese spondali	cm. 50/100	cm 50
	II) ponti e strutture di attraversamento fino a estensioni longitudinali di m. 12	cm. 100/150	cm 75
	III) coperture o tombinature (ove ammesse), ponti e strutture di attraversamento di estensione oltre m. 12	cm. 150/200	cm 100

Tabella 2 – Franchi di sicurezza prescritti all'interno del PdB Stralcio t. Bisagno

dove:

- il termine $U^2/2g$ rappresenta il carico cinetico della corrente con U velocità media della corrente (m/s) e g accelerazione di gravità (m/s^2),
- i due valori estremi per il reticolo principale e secondario corrispondono rispettivamente a bacini poco dissestati con previsione di modesto trasporto solido ed a bacini molto dissestati con previsione di forte trasporto solido in caso di piena, e/o a bacini di maggiore o minore estensione. Per le opere di cui al punto III, nel caso di modesta rilevanza dell'opera stessa e di bacini ben sistemati, il valore minimo del franco come sopra indicato può essere derogato dall'amministrazione competente fino a 100 cm, sulla base di adeguate valutazioni come riportato nel seguito.

Per estensione longitudinale si intende l'estensione dell'opera misurata parallelamente alla direzione della corrente. Per opere non ortogonali alla direzione della corrente si valuta come estensione la distanza, sempre misurata in senso parallelo alla corrente, tra il lembo più a monte e quello più a valle dell'opera stessa.

Nel caso di ponti ad arco o comunque con intradosso non rettilineo, il valore del franco deve essere assicurato per almeno 2/3 della luce e comunque per almeno 40 m, nel caso di luci superiori a tale valore.

3. DESCRIZIONE DELL'AREA

3.1. Stato attuale.

Il tronco d'alveo del rio Veilino oggetto di verifica è compreso tra la confluenza del rio Rovena, a monte del Cimitero di Staglieno, e la confluenza del Veilino nel Bisagno, per una lunghezza complessiva di circa 970 m. Le sezioni sono di forma regolare assimilabile alla rettangolare con larghezze al fondo variabili tra 6 e 16 m circa, altezza del tratto tombinato variabile da 2,70 a 3,50 m.

L'alveo risulta interamente plateato ma a valle delle briglie di maggiore altezza si possono notare elementi del fondo scalzati dalla corrente che ostacolano il regolare deflusso e in alcuni punti la presenza ai lati di depositi alluvionali e vegetazione. Entrambe le sponde sono arginate con muri in c.a.: mentre in sponda destra l'argine degrada lentamente verso valle, in sponda sinistra presenta un andamento discontinuo.

Lungo il tratto sono presenti, da monte verso valle, i seguenti manufatti: due briglie, una passerella pedonale a campata unica, sei briglie, una tombinatura.

Si segnala che, in prossimità della sezione di Piano di bacino VEI 45, la strada Via Superiore del Veilino attraversa l'alveo, per poi percorrerlo sul lato sinistro fino a VEI 51.

Il tratto tombinato del rio San'Antonino presenta sezione rettangolare con larghezza pressoché costante pari a 2,60 m ed altezza variabile, partendo da 1,40 m al di sotto della Galleria Sant'Antonino e raggiungendo addirittura 0,80 m al di sotto dell'area cimiteriale, in corrispondenza di un salto di quota nell'intradosso delle travi di copertura.

Le ridotte dimensioni della sezione idraulica, unite al trasporto solido di materiale litoide proveniente da monte, sono le cause principali dell'insufficienza idraulica della tombinatura evidenziatasi durante i fenomeni alluvionali degli ultimi anni.

Il tratto tombinato del rio Briscata presenta sezione rettangolare di larghezza costante pari a 2,50 m, con copertura a volta circolare di altezza variabile sulle spalle da 2,00 m a 2,50 m ed in chiave da 2,50 m a 3,00 m.

Per completezza di studio e di relazione, sebbene non rientri nella progettazione in oggetto, nel modello idraulico è stato inserito anche il tratto terminale tombinato del rio Briscata.

3.2. Stato di progetto.

L'intervento in progetto è pertanto relativo al dimensionamento ed alla verifica delle opere di sistemazione idraulica necessarie per l'adeguamento idraulico e la messa in sicurezza dei tratti tombinati dei rivi Veilino e sant'Antonino, oltre al raggiungimento dei franchi idraulici di sicurezza previsti nel Piano di Bacino Stralcio.

Gli interventi previsti si possono così riassumere:

- <u>tombinatura del rio Veilino in area cimiteriale</u>:

(a) sottoescavazione dell'attuale tombinatura con demolizione e ricostruzione della copertura;

(b) consolidamento dei piedritti della tombinatura ed adeguamento dello spessore della copertura, rimpiazzando l'esistente soletta nervata con soletta a piastra (a fondo liscio);

(c) regolarizzazione del tratto d'alveo con sezione rettangolare e livelletta di fondo a pendenza costante;

- tombinatura del rio Veilino nell'area esterna (piazzale Resasco e via Piacenza):

(d) sottoescavazione dell'attuale tombinatura;

(e) consolidamento dei piedritti della tombinatura e mantenimento dell'esistente soletta nervata;

(f) regolarizzazione del tratto d'alveo con sezione rettangolare e livelletta di fondo a pendenza costante;

- tombinatura del rio Sant'Antonino (sotto Via Superiore del Veilino e Galleria S. Antonino):

(g) sistemazione vasca di imbocco con ribassamento del fondo e riquadratura, compreso nuovo impalcato stradale;

(h) sottoescavazione dell'attuale tombinatura;

(i) consolidamento dei piedritti della tombinatura operando in sottomurazione e mantenimento dell'esistente soletta nervata con intasamento dell'interasse tra le travi (estradosso liscio);

(j) regolarizzazione del tratto d'alveo con sezione rettangolare e livelletta di fondo a pendenza costante;

- tombinatura del rio Sant'Antonino in area cimiteriale:

(k) sottoescavazione dell'attuale tombinatura con demolizione e ricostruzione della copertura;

(l) consolidamento dei piedritti della tombinatura ed adeguamento dello spessore della copertura, rimpiazzando l'esistente soletta nervata con soletta a piastra (a fondo liscio);

(m) regolarizzazione del tratto d'alveo con sezione rettangolare e livelletta di fondo a pendenza costante;

- imbocco di monte della tombinatura del rio Sant'Antonino (escluso dal modello idraulico):

(n) briglia di tipo selettivo (pettine) per il materiale solido e per il materiale galleggiante durante gli eventi di piena;

(o) sopraelevazione muro d'argine con parapetto in c.a.;

(p) sistemazione rampa di accesso dal piazzale in fregio alla viabilità comunale mediante scavi e riporti.

Nel seguito vengono illustrati i risultati delle verifiche condotte sulla soluzione progettuale prevista e poc'anzi descritta.

4. VERIFICA IDRAULICA DELL'ALVEO.

4.1. Premesse.

La verifica è stata condotta secondo modelli idraulici rappresentativi della situazione attuale e della situazione di progetto dei corsi d'acqua in oggetto, così come risulta dagli elaborati grafici allegati al progetto e dal Piano di Bacino Stralcio.

Come anticipato nel capitolo 1, il deflusso della corrente è schematizzato in condizioni di moto permanente.

Il programma di calcolo utilizzato (Hec-Ras v. 4.1.0, gennaio 2010, sviluppato dal Hydrologic Engineering Center per il U.S. Army Corps of Engineers) segue una procedura che permette di

determinare il profilo del pelo libero di correnti monodimensionali in moto permanente, basandosi sulla risoluzione dell'equazione del moto delle correnti a pelo libero (equazione dell'energia), in cui le perdite di energia si determinano per attrito (equazione di Manning) e per contrazione/espansione della corrente (coefficiente moltiplicato per la variazione del carico cinetico).

Per ulteriori dettagli si rimanda alla descrizione del codice di calcolo Hec-Ras riportata in allegato 1 alla presente relazione.

4.2. Geometria e portate di piena.

Il modello è definito geometricamente attraverso una serie di sezioni idrauliche rappresentative della geometria dei corsi d'acqua sia nei tratti a cielo aperto che nei tratti tombinati, interpolate tra loro in modo da ottenere longitudinalmente un andamento lineare dell'alveo del corso d'acqua.

Ai fini delle verifiche idrauliche, sono state assunte le seguenti ipotesi:

- per quanto riguarda il t. Bisagno, sono state mantenute inalterate le sezioni trasversali contenute nel Piano di Bacino, appartenenti a due rami distinti del corso d'acqua, rispettivamente "*Trens Veilino*" a monte della confluenza e "*Veil Fereggiano*" a valle della confluenza;
- per quanto riguarda i rivi Veilino, Sant'Antonino e Briscata, sono state schematizzate ed inserite nel modello idraulico le sezioni ricavate dal rilievo topografico di dettaglio nei tratti tombinati terminali, integrandole con le sezioni del rio Veilino a cielo aperto disponibili nel Piano di Bacino, andando così ad esaminare un tratto significativo di corso d'acqua (rio Veilino) di lunghezza complessiva pari ad oltre 1.100 m, nonché i tratti tombinati dei due affluenti in sponda destra rio Briscata e rio Sant'Antonino.

Le grandezze significative di ogni sezione (quota di fondo e larghezza dell'alveo principale, altezza ed inclinazione delle sponde) sono desunte dagli elaborati grafici (planimetria e sezioni trasversali).

Per ciascun tratto di ogni sezione vengono definiti i coefficienti di scabrezza idraulica correlati alle caratteristiche del corso d'acqua.

In accordo con i criteri stabiliti dal Piano di Bacino Stralcio ed in analogia con le verifiche idrauliche ivi contenute, date le condizioni attuali dei corsi d'acqua, si sono assunti i seguenti valori (espressi sotto forma del coefficiente di Manning n):

- **torrente Bisagno**: assimilabile a *Corsi d'acqua naturali con vegetazione e movimento di materiale sul fondo* **n = 0,03** corrispondenti ad un coefficiente di scabrezza di Gauckler-Strickler Ks = 33 (m1/3s-1)
- **rio Veilino**: assimilabile a *Tratti urbanizzati di corsi d'acqua naturali con argini cementati (e/o platee) in buono stato* **n = 0,025** corrispondenti ad un coefficiente di scabrezza di Gauckler-Strickler Ks = 40 (m1/3s-1)
- **rio Sant'Antonino**: assimilabile a *Corsi d'acqua naturali con vegetazione e movimento di materiale sul fondo* **n = 0,03** corrispondenti ad un coefficiente di scabrezza di Gauckler-Strickler Ks = 33 (m1/3s-1)
- **rio Briscata**: assimilabile a *Tratti urbanizzati di corsi d'acqua naturali con argini cementati (e/o platee) in buono stato* **n = 0,025** corrispondenti ad un coefficiente di scabrezza di Gauckler-Strickler Ks = 40 (m1/3s-1)

Il tracciato del rio Veilino, a seguito dell'aggiunta nel modello idraulico degli affluenti in sponda destra rio Sant'Antonino e rio Briscata, è stato suddiviso in tre rami e precisamente (partendo da monte): Monte , Staglieno_1, Staglieno_2.

A tal proposito, le portate massime di deflusso nei nuovi rami così determinati sono state calcolate secondo la metodologia indicata nell'elaborato "Idrologia" del Piano di Bacino Stralcio del t. Bisagno per gli affluenti in sponda destra dal Veilino al Ruinà:

- calcolo della portata indice $Q_i = \alpha A^{\beta}$ - $\alpha = 5.196$ $\beta = 0.876$

- calcolo della portata al colmo con periodo di ritorno T mediante la relazione:

$$Q_T = K_T Q_i$$

$$K_T = 0.619 - [(0.369/0.319)(1 - e^{0.319y})]$$

con:

$$y = y_T = -\ln\{\ln[T/(T-1)]\}$$

Di seguito si riportano i calcoli risultanti per i rami del Veilino

VEILINO - MONTE - A=2,60 kmq

Superficie bacino =	2.6							
alfa =	5.196							
beta =	0.879							
tempo di ritorno	50	anni	100	anni	200	anni	500	anni
yT	3.901939		4.600149		5.295812		6.213607	
KT =	3.478411		4.480369		5.727204		7.858183	
Q indice =	12.03		12.03		12.03		12.03	
Q =	**41.9**		**53.9**		**68.9**		**94.6**	

VEILINO - STAGLIENO_1 - A=3,00 kmq

Superficie bacino =	3							
alfa =	5.196							
beta =	0.879							
tempo di ritorno	50	anni	100	anni	200	anni	500	anni
yT	3.901939		4.600149		5.295812		6.213607	
KT =	3.478411		4.480369		5.727204		7.858183	
Q indice =	13.65		13.65		13.65		13.65	
Q =	**47.5**		**61.1**		**78.2**		**107.2**	

VEILINO - STAGLIENO _2 - A=3,30 kmq

Superficie bacino =	3.3
alfa =	5.196

beta =	0.879							
tempo di ritorno	50	anni	100	anni	200	anni	500	anni
yT	3.901939		4.600149		5.295812		6.213607	
KT =	3.478411		4.480369		5.727204		7.858183	
Q indice =	14.84		14.84		14.84		14.84	
Q =	**51.6**		**66.5**		**85.0**		**116.6**	

4.3. Condizioni al contorno.

Le condizioni al contorno sono necessarie per stabilire il livello del pelo libero dell'acqua all'estremità del modello:

- a monte nel caso di un regime di corrente veloce (che non risente di ciò che accade a valle);
- a valle nel caso di un regime di corrente lenta (che non risente di ciò che accade a monte);
- a monte e a valle nel caso di un regime in flusso misto.

Questo dato è necessario al sistema per poter effettuare i calcoli, in particolare per la determinazione dell'integrale particolare dell'equazione differenziale che regola il moto permanente.

Il calcolo del profilo del pelo libero parte da una sezione trasversale in cui si verifichino condizioni note o assunte, procedendo verso monte nel caso di corrente lenta oppure verso valle nel caso di corrente veloce.

Il tipo di corrente (lenta, veloce, regime di flusso misto) viene assegnato nella fase di inserimento dati.

I profili in corrente lenta determinati dal programma di calcolo sono quelli che presentano la linea del pelo libero al di sopra dell'altezza critica, mentre i profili in corrente veloce presentano il pelo libero al di sotto all'altezza critica.

Nel caso in cui il regime di moto passi da corrente lenta a veloce (o viceversa), nei casi cioè in cui si verifichino risalti idraulici, il programma viene indirizzato verso un calcolo con approccio di flusso "misto".

Nel caso specifico, vista la presenza di confluenze tra corsi d'acqua e date le caratteristiche dell'alveo, si assume un deflusso della corrente in condizioni di regime misto, stabilendo le seguenti condizioni al contorno:

- sul lato di monte dei corsi d'acqua indagati, si fissa l'altezza della corrente pari all'altezza critica;
- sul lato di valle dei corsi d'acqua indagati, si indica la presenza della confluenza con il corso d'acqua ricevente.

Si segnala che nel modello idraulico tutte le confluenze sono state modellate con l'equazione della quantità di moto , che considera l'angolo dell'affluente in entrata e la conseguente perdita di energia.

4.4. Risultati.

I risultati delle elaborazioni sono riportati sotto forma di allegati alla presente verifica, contenenti il profilo longitudinale e le sezioni trasversali con:

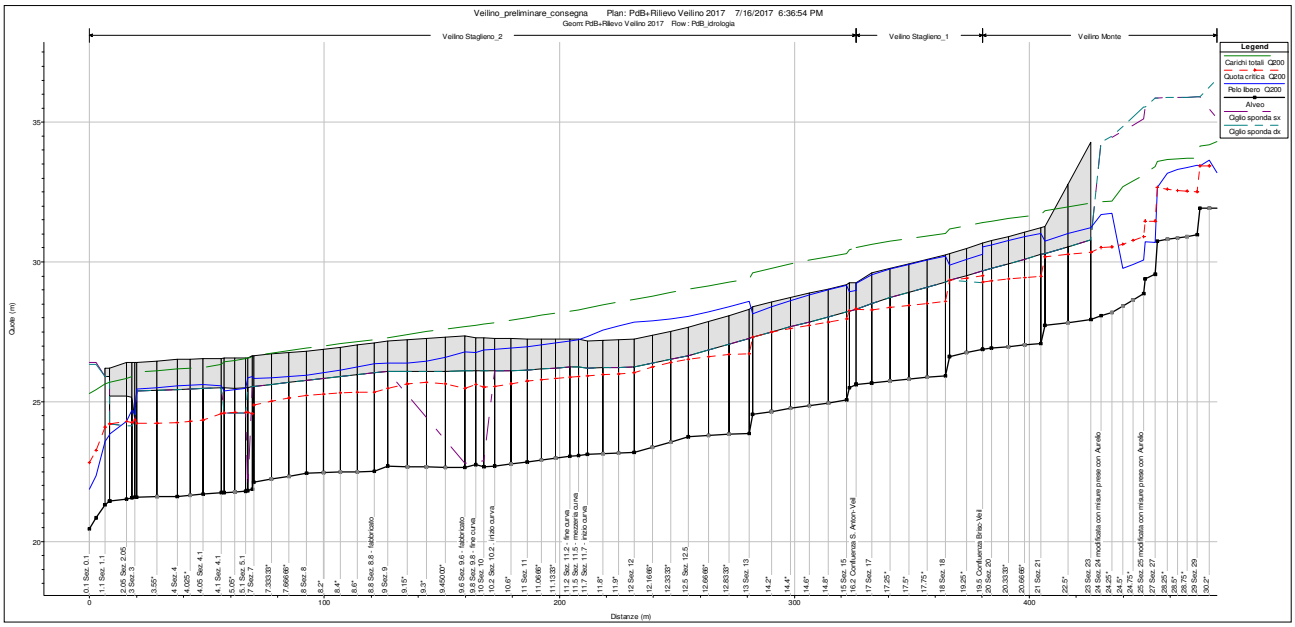
- linea dei carichi totali;
- linea dell'altezza critica;
- linea del pelo libero;

riferiti alle portate con tempo di ritorno di 50, 200 e 500 anni.

4.4.1 MODELLO 1 - Rilievo 2017:

Come descritto in precedenza, il modello utilizzato per le verifiche idrauliche di Piano di Bacino è stato implementato con il rilievo topografico di dettaglio delle aree cimiteriali e delle tombinature che scorrono al di sotto di essa.

Viene riportato di seguito il profilo longitudinale della corrente duecentennale del modello idraulico:ottenuto con le seguenti ipotesi:



P. RESASCO VIALE CIMITERIALE

S. ANTONINO BRISCATA

Figura 10 – Profilo longitudinale modello idraulico di **rilievo** - RIO VEILINO TRATTO TOMBINATO

L'andamento della corrente di piena duecentennale ricalca quello riportato nel Piano di Bacino, evidenziando l'insufficienza dell'intero tratto tombinato, con deflusso in pressione

L'esame del profilo della corrente (vedere allegati 2 ed elaborati grafici) evidenzia la correttezza delle ipotesi fatte sul regime di moto della corrente (flusso misto) e quindi sulle condizioni al contorno del modello idraulico: si ha un andamento decrescente della linea dell'energia e si verificano passaggi da corrente veloce a lenta a monte della tombinatura in corrispondenza dei salti di fondo.

Per quanto riguarda il rio Sant'Antonino, il modello idraulico conferma le problematiche emerse in occasione dei recenti eventi alluvionali, evidenziando l'assoluta insufficienza della tombinatura a permettere il deflusso della corrente di piena duecentennale.

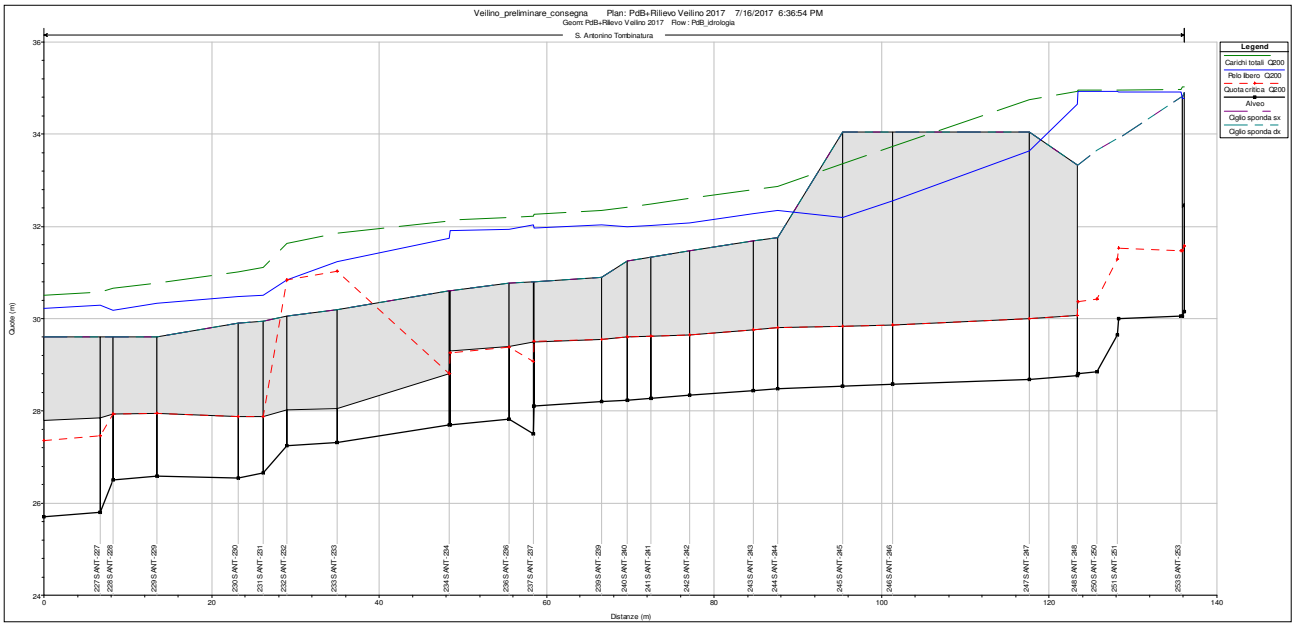
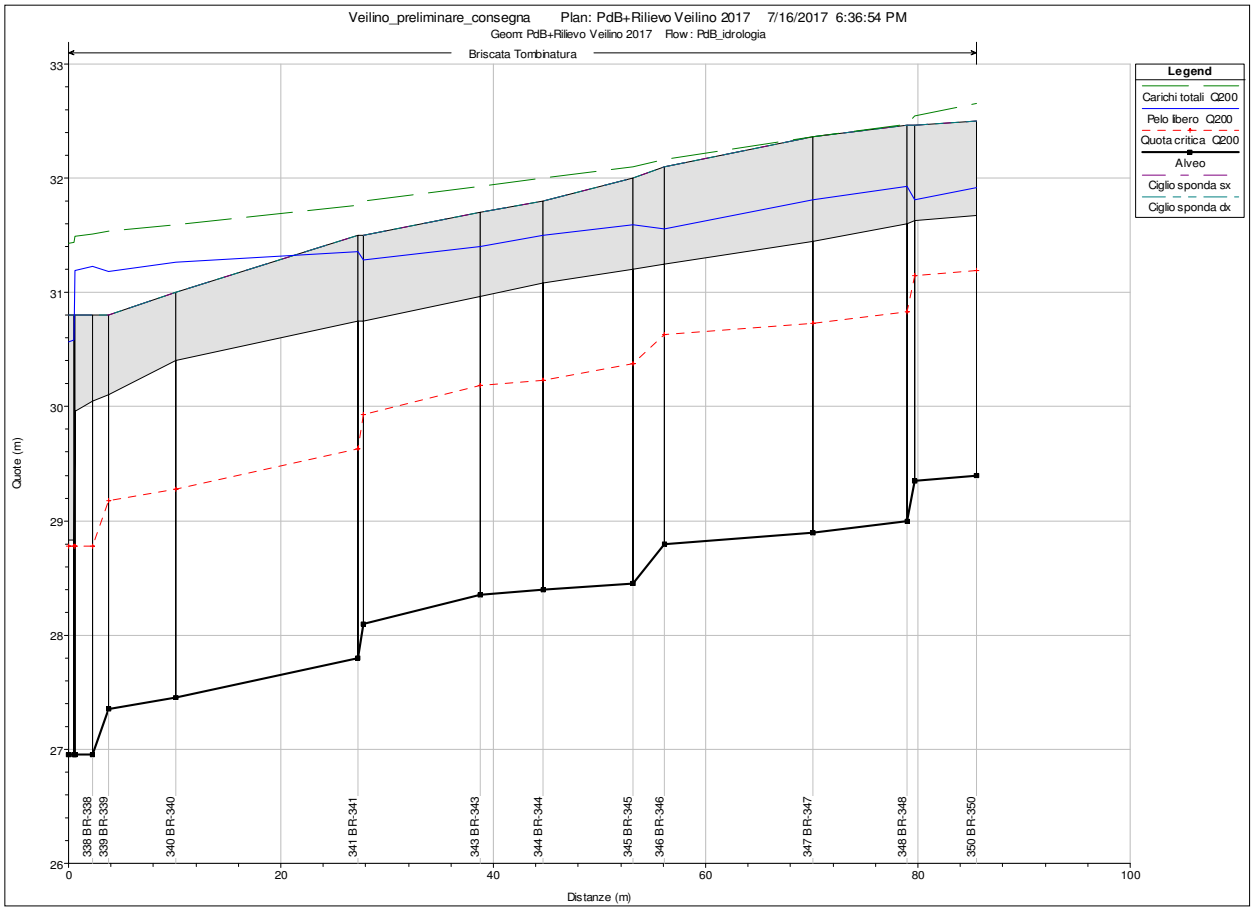


Figura 11 – Profilo longitudinale modello idraulico di **rilievo** - RIO S. ANTONINO TRATTO TOMBINATO

A titolo informativo, pur non essendo oggetto della presente progettazione, si riporta il profilo longitudinale del rio Briscata, che presenta le medesime problematiche del rio Sant'Antonino con deflusso in pressione a causa dell'insufficienza della sezione idraulica.



VEILINO VIALE CIMITERIALE VIA SUP. DEL VEILINO

Figura 12 – Profilo longitudinale modello idraulico di **rilievo** - RIO BRISCATA TRATTO TOMBINATO

4.4.2 MODELLO 2 - PdB+Prog Veilino 2017+S. Antonino - (*progetto preliminare*):

Alla luce delle considerazioni riportate in sede di Piano di Bacino e nei paragrafi precedenti, più dettagliati nella relazione tecnico-illustrativa allegata al progetto, al fine di valutare correttamente le condizioni di deflusso delle correnti di piena, in particolar modo gli effetti della sistemazione idraulica proposta, è stato valutato lo scenario riferito allo stato di progetto, composto più precisamente dai seguenti interventi:

- tombinatura del rio Veilino in area cimiteriale - ramo Staglieno 1:

(a) sottoescavazione dell'attuale tombinatura con demolizione e ricostruzione della copertura per spessore complessivo pari a 60 cm, mantenendo inalterate le quote di estradosso (piano viabile delle corsie interne al cimitero);

(b) regolarizzazione del tratto d'alveo con sezione rettangolare e livelletta di fondo a pendenza costante pari a 1,46%, inserendo immediatamente a monte delle confluenze con gli affluenti Briscata e Sant'Antonino uno scivolo di fondo per limitare gli effetti idraulici delle predette confluenze;

- tombinatura del rio Veilino nell'area esterna (piazzale Resasco e via Piacenza) - ramo Staglieno 2:

(c) sottoescavazione dell'attuale tombinatura con regolarizzazione del tratto d'alveo con sezione rettangolare e livelletta di fondo a pendenza costante pari a 1,46%;

(d) mantenimento dell'esistente soletta nervata, senza modificare quindi la quota di intradosso delle travi ribassate;

- <u>tombinatura del rio Sant'Antonino (sotto Via Superiore del Veilino e Galleria S. Antonino) - ramo Tombinatura:</u>

(e) sistemazione vasca di imbocco con ribassamento del fondo e riquadratura, compreso nuovo impalcato stradale;

(f) sottoescavazione dell'attuale tombinatura con regolarizzazione del tratto d'alveo con sezione rettangolare e livelletta di fondo a pendenza costante pari a 2,04 %;

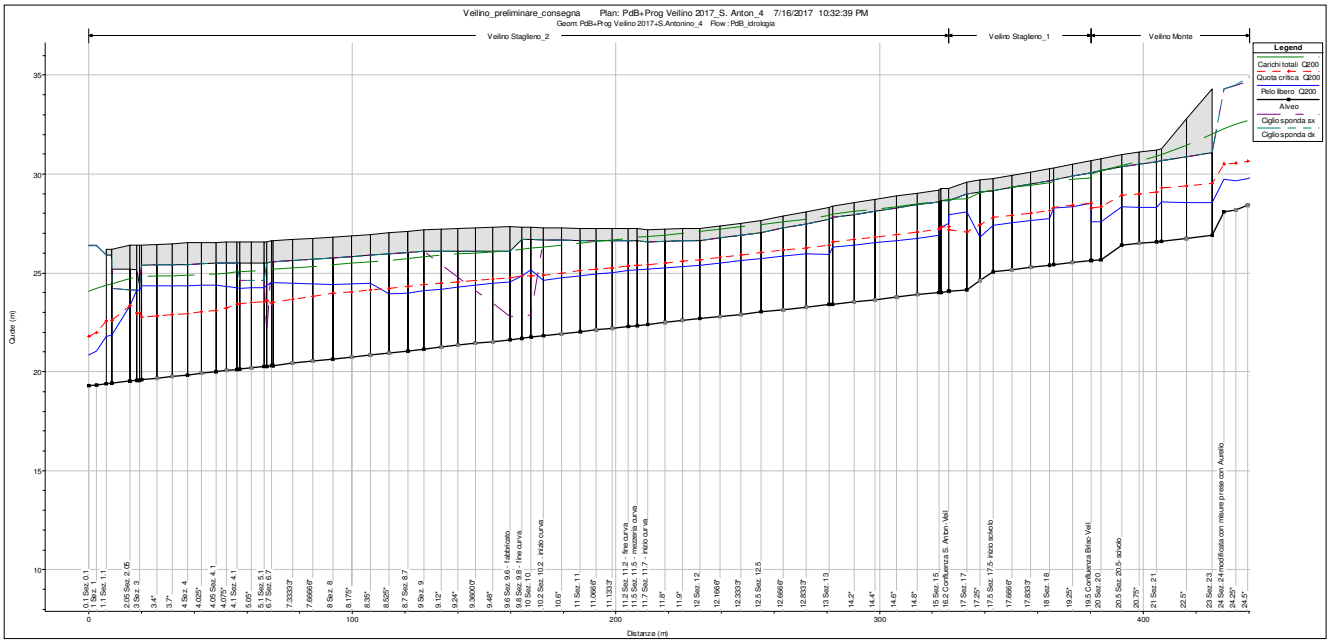
(g) mantenimento dell'esistente soletta nervata con intasamento dell'interasse tra le travi (estradosso liscio), senza modificare quindi la quota di intradosso;

- <u>tombinatura del rio Sant'Antonino in area cimiteriale:</u>

(h) sottoescavazione dell'attuale tombinatura con demolizione e ricostruzione della copertura per spessore complessivo pari a 40 cm, mantenendo inalterate le quote di estradosso (piano viabile delle corsie interne al cimitero);

(i) regolarizzazione del tratto d'alveo con sezione rettangolare e livelletta di fondo a pendenza costante pari a 2,04%.

Viene riportato di seguito il profilo longitudinale della corrente duecentennale del modello idraulico:ottenuto con le seguenti ipotesi:



P. RESASCO VIALE CIMITERIALE

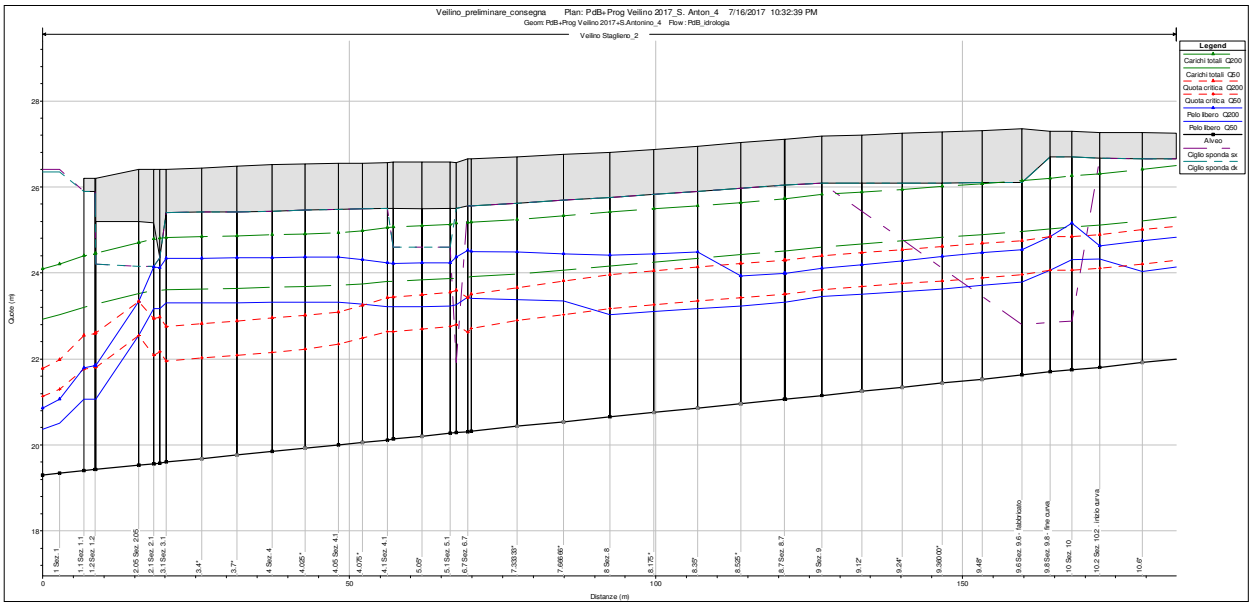
S. ANTONINO BRISCATA

Figura 13 – Profilo longitudinale modello idraulico di **progetto** - RIO VEILINO TRATTO TOMBINATO

L'esame del profilo della corrente (vedere allegati 2 ed elaborati grafici) evidenzia la correttezza delle ipotesi fatte sul regime di moto della corrente (flusso misto) e quindi sulle condizioni al contorno del modello idraulico: si ha un andamento decrescente della linea dell'energia e si verificano passaggi da corrente veloce a lenta.

Soprattutto si evidenzia il deflusso in sicurezza lungo l'intero tratto tombinato, con i seguenti dati:

1 - RIO VEILINO - nel tratto ove viene mantenuta la copertura esistente (indicativamente dallo sbocco sino all'edificio destinato ad uffici limitrofo all'ingresso principale), il minimo franco idraulico ammonta a 1,03 m



BISAGNO P. RESASCO EDIFICIO UFFICI

Figura 14 – Profilo longitudinale modello idraulico di **progetto** - RIO VEILINO TRATTO TOMBINATO

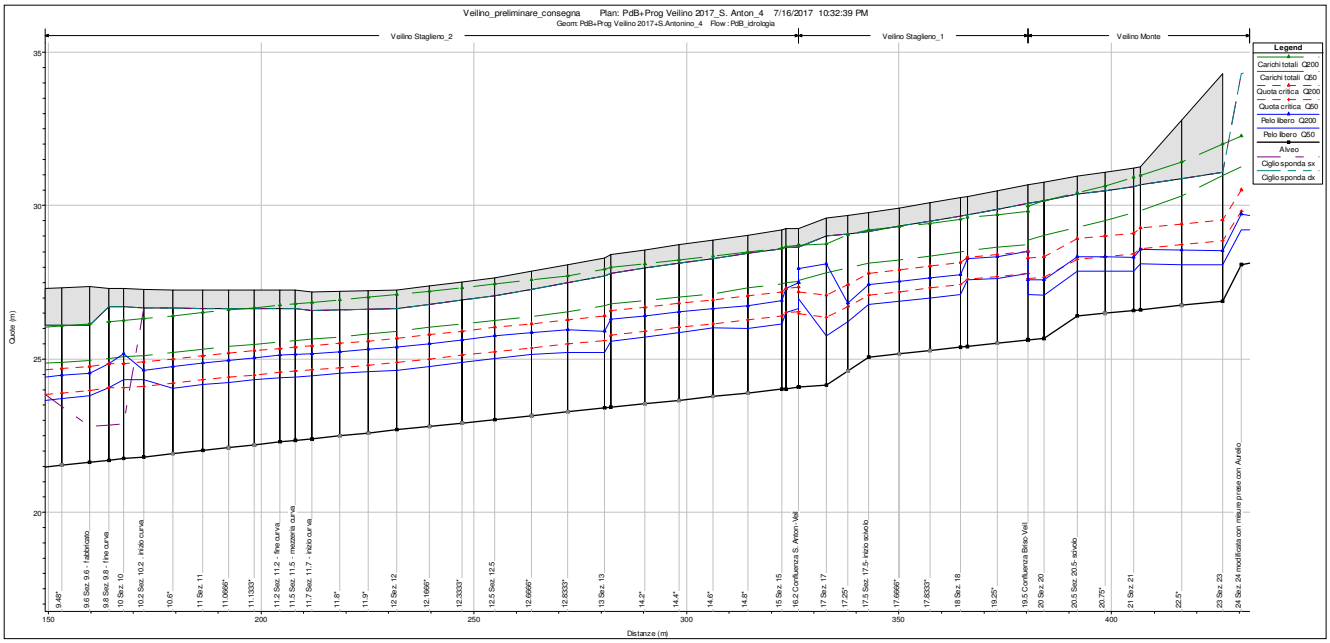
Il punto singolare immediatamente prima dello sbocco nel t. Bisagno è rappresentato da una doppia condotta di gas (diam. 600 mm e 650 mm) che l'ente gestore ha già informato di voler rimuovere e posizionare in altra sede: il relativo dettaglio dovrà essere verificato in sede esecutiva.

In ogni caso, l'intradosso della copertura risulta superiore alla linea dell'energia, pertanto il franco idraulico risulta altresì superiore al carico cinetico $v^2/2g$.

Relativamente alle fasce di inondabilità, la linea dei carichi totali della portata 50-ennale è ampiamente contenuta al di sotto della copertura.

2 - RIO VEILINO - nel tratto dove invece viene demolita e ricostruita la copertura con spessore complessivo pari a 60 cm, il minimo franco idraulico ammonta a 1,27 m, con un unico punto singolare rappresentato dalla confluenza con il rio Sant'Antonino in cui il risalto idraulico riduce il franco di sicurezza a 0,71 m.

L'intradosso della copertura risulta sostanzialmente coincidente con la linea dei carichi totali ed anche in questo tratto, in particolar modo alla sezione di imbocco, la linea dei carichi totali della portata 50-ennale è ampiamente contenuta al di sotto della copertura.

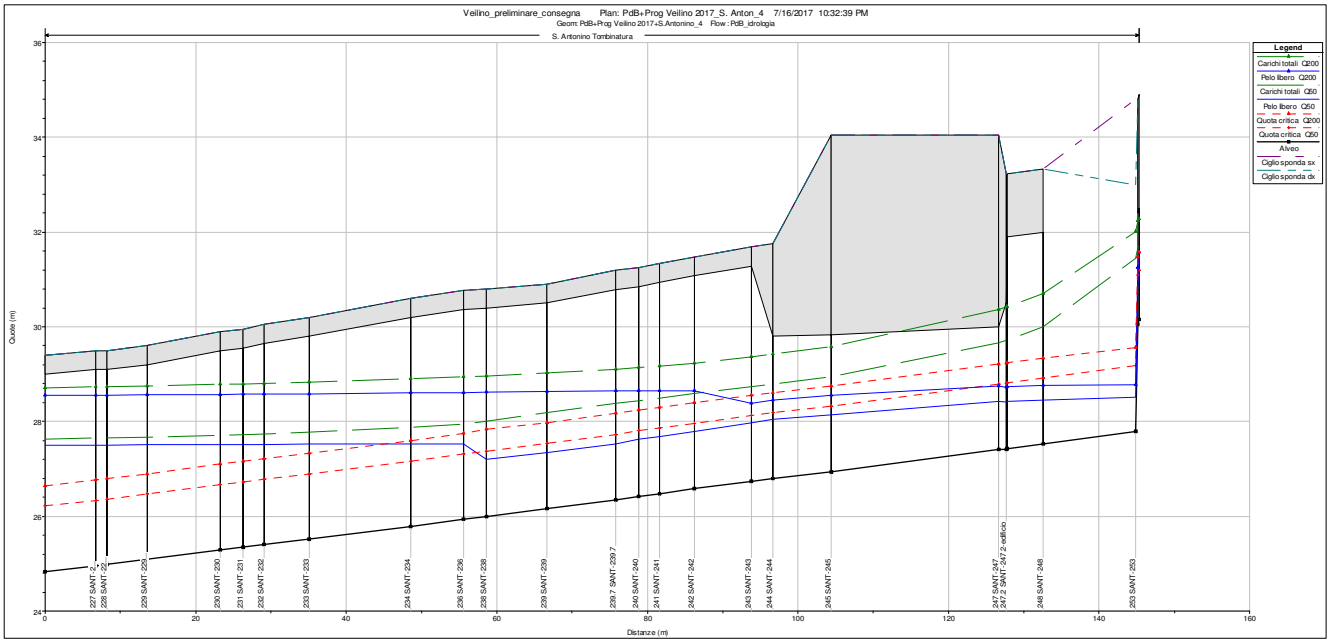


VIALE CIMITERIALE IMBOCCO
S. ANTONINO BRISCATA

Figura 15 – Profilo longitudinale modello idraulico di **progetto** - RIO VEILINO TRATTO TOMBINATO

3 - RIO SANT'ANTONINO - nel tratto sotto l'area cimiteriale dove viene demolita e ricostruita la copertura con spessore di 40 cm, il deflusso lungo la tombinatura è pressoché stabile alla quota di pelo libero di 28,55 m, risentendo della confluenza con il rio Veilino: il minimo franco idraulico ammonta a 0,45 m.

La situazione risulta decisamente migliorata all'imbocco situato sotto la Galleria Sant'Antonino, vero punto critico del deflusso della corrente, in cui la sistemazione prevista conduce ad un franco minimo di sicurezza pari a 1,26 m.



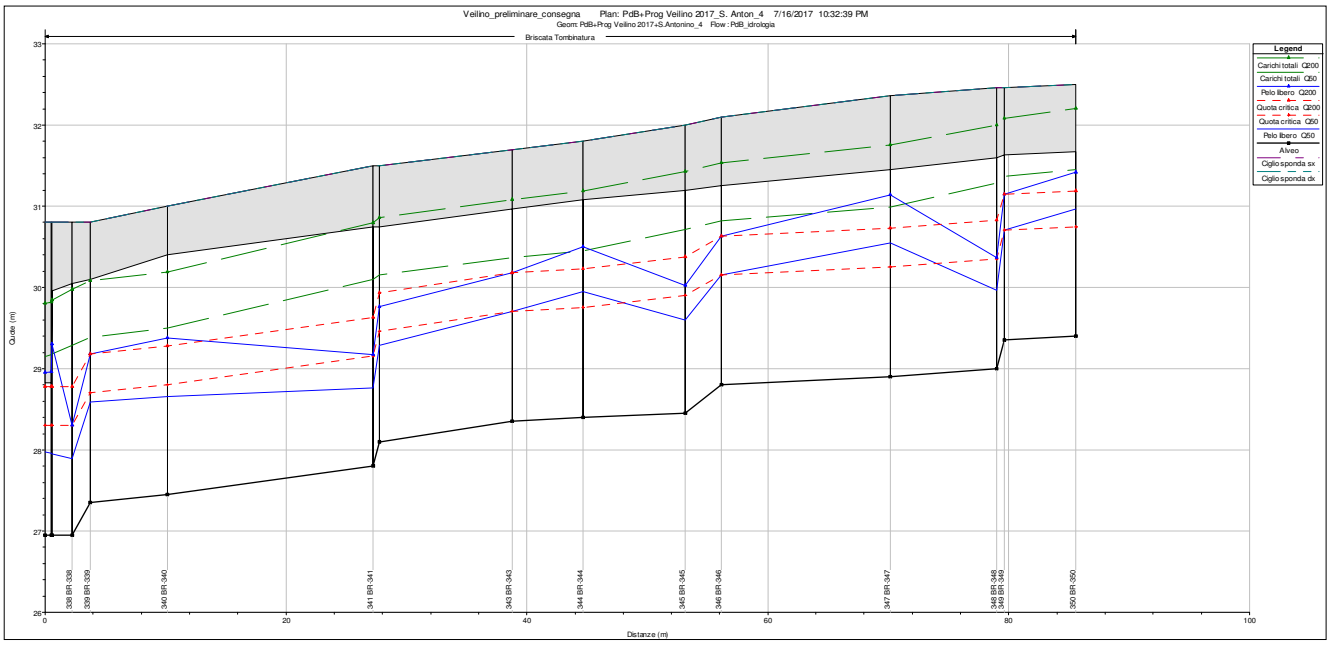
VEILINO VIALE CIMITERIALE GALLERIA S. ANTONINO VIA SUP. DEL VEILINO

Figura 16 – Profilo longitudinale modello idraulico di **progetto** - RIO S. ANTONINO TRATTO TOMBINATO

Relativamente alle fasce di inondabilità, la linea dei carichi totali della portata 50-ennale è ampiamente contenuta al di sotto della copertura e non interessa l'intradosso delle travi esistenti sotto la Galleria Sant'Antonino.

4 - RIO BRISCATA: la sistemazione proposta, pur non contenendo interventi diretti sulla tombinatura produce effetti benefici sul deflusso delle correnti di piena:

- la duecentennale è contenuta all'interno della sezione, non più in pressione;
- la cinquantennale presenta linea dei carichi totali al di sotto dell'intradosso della copertura



VEILINO VIALE CIMITERIALE VIA SUP. DEL VEILINO

Figura 17 – Profilo longitudinale modello idraulico di **progetto** - RIO BRISCATA TRATTO TOMBINATO

5. CONCLUSIONI

Il modello idraulico dello stato attuale ha confermato ciò che il Piano di Bacino e gli ultimi eventi alluvionali avevano reso evidente, e cioè l'insufficienza dei rivi tombinati Veilino, Sant'Antonino e Briscata nell'intorno del Cimitero Monumentale di Staglieno.

La progettazione ha risentito fortemente dei vincoli dovuti alla specificità dell'intervento, quali tra gli altri:

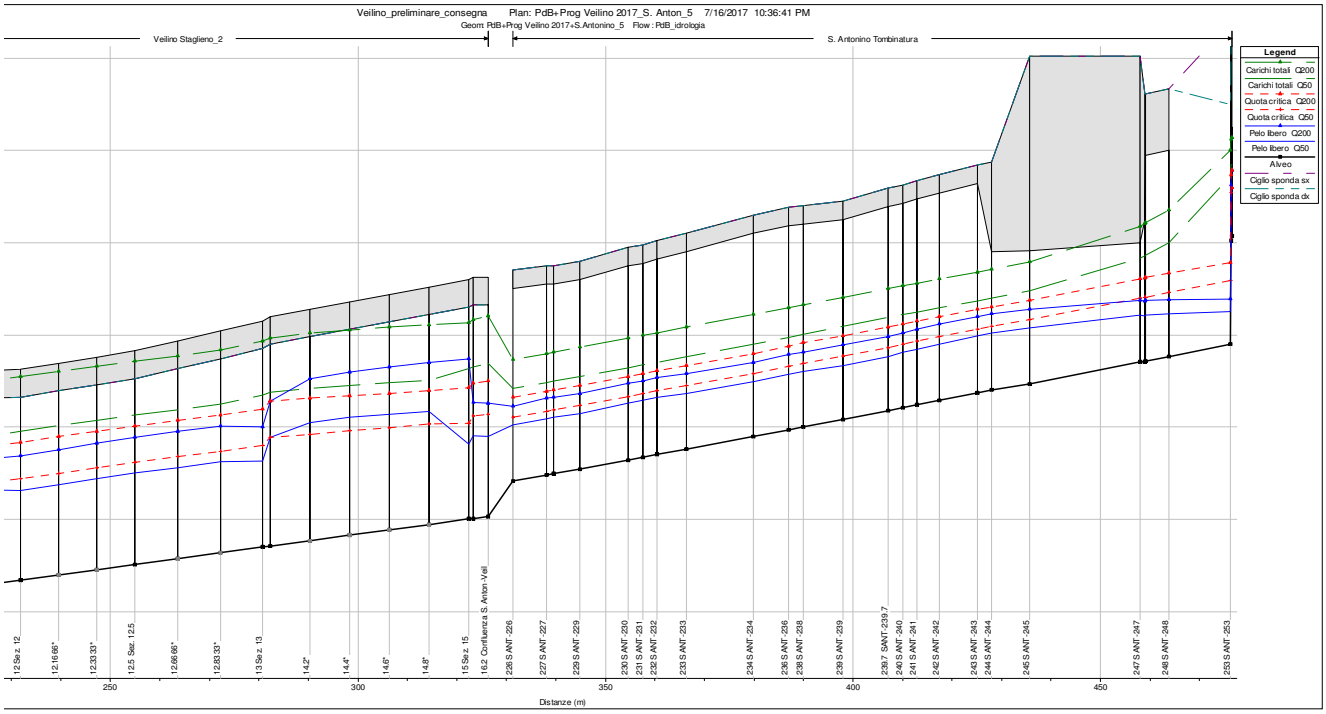
- vincolo architettonico in area cimiteriale;
- impossibilità di ampliare in alcuni punti la sezione trasversale a causa della presenza di edifici monumentali all'interno dell'area cimiteriale;
- elevata densità di sottoservizi nel piazzale antistante l'ingresso al Cimitero.

Di conseguenza si è optato per un intervento "in sede", sfruttando il dislivello di fondo già presente rispetto al corso d'acqua principale torrente Bisagno, andando a regolarizzare le livellette di fondo con pendenza costante.

I risultati del modello idraulico rappresentativo della soluzione progettuale evidenziano che le sezioni trasversali di progetto consentono di far defluire la corrente di piena duecentennale senza esondazione o funzionamento in pressione dei tratti tombinati.

Il nodo da definire con precisione in fase esecutiva è indubbiamente costituito dalla confluenza Veilino-Sant'Antonino, cercando di facilitare il più possibile l'inserimento in parallelo della corrente dell'affluente nel corso d'acqua principale, in maniera tale da aumentare il franco idraulico di sicurezza.

Si riporta di seguito a titolo esemplificativo il risultato di una simulazione idraulica conseguente all'allargamento di 1 m delle prime sezioni del rio Veilino immediatamente a valle della confluenza (per ml 5 circa), in maniera tale da simulare per la portata del Sant'Antonino una migliore capacità di ingresso nella corrente principale.



VIALE CIMITERIALE

S. ANTONINO

GALLERIA S. ANTONINO

Figura 18 – Profilo longitudinale modello idraulico di **progetto** - NODO VEILINO E S. ANTONINO

Lungo il Sant'Antonino si ha un cospicuo franco di sicurezza (oltre 2,50 m), mentre il risalto idraulico sul Veilino causato dall'allargamento e successivo raccordo alla sezione esistente porta ad un minimo innalzamento della corrente con un franco idraulico risultante comunque pari o superiore a 1,00 m.

ELENCO ALLEGATI

1. Descrizione del codice di calcolo HEC-RAS
2. Modello 1 dei corsi d'acqua interessati (Bisagno, Veilino, Sant'Antonino, Briscata) nello stato di RILIEVO, in condizioni di flusso misto (profilo longitudinale, sezioni trasversali, tabulato di calcolo)
3. Modello 2 dei corsi d'acqua interessati (Bisagno, Veilino, Sant'Antonino, Briscata) nello stato di PROGETTO, in condizioni di flusso misto (profilo longitudinale, sezioni trasversali, tabulato di calcolo)

ALLEGATO 1 – Descrizione codice di calcolo HEC-RAS

Il codice di calcolo HEC-RAS dell' U.S. Army Corps of Engineers consente di determinare il profilo idraulico lungo un determinato tratto fluviale o canale artificiale in condizioni di moto stazionario e vario.

Possono essere analizzate condizioni di moto in corrente lenta, condizioni di moto critiche e condizioni di regime misto.

Il codice di calcolo permette di descrivere in maniera dettagliata la geometria delle singole sezioni idrauliche, tenendo conto di scabrezze differenti non solo in diversi tratti del corso d'acqua ma anche all'interno della stessa sezione ad esempio per differenziare le zone golenali e il canale principale. Esso consente inoltre di modellizzare l'andamento meandriforme di un corso d'acqua sia in ambito monodimensionale che quasi-2D indicando differenti lunghezze del tratto che separa due sezioni adiacenti per la golena in sponda sinistra la golena in sponda destra ed il canale principale.

Le ipotesi di base che caratterizzano il codice di calcolo sono:

• il moto della corrente è permanente e gradualmente variato;

• il deflusso della corrente è monodimensionale: le componenti della velocità nelle direzioni diverse da quella principale della corrente non vengono considerate; le equazioni utilizzate assumono che il carico totale è lo stesso per tutti i punti appartenenti ad una generica sezione;

• la pendenza del fondo alveo è limitata (inferiore a 1:10);

• la cadente è assunta costante tra due sezioni adiacenti;

• la geometria delle sezioni idrauliche è fissa.

Il programma di calcolo opera integrando le equazioni generali del moto secondo il metodo denominato nella letteratura anglosassone "Standard Step Method". Il processo di calcolo si sviluppa, a seconda delle caratteristiche della corrente, lenta o veloce, dalla sezione estrema di valle o dalla sezione estrema di monte dove vengono assegnate dall'utente le condizioni al contorno e procede verso l'altro estremo.

In corrispondenza dei ponti o di eventuali canali a sezione chiusa, dove i meccanismi caratterizzanti il fenomeno sono più complessi, vengono utilizzati metodi di calcolo specifici.

L'equazione differenziale fondamentale del moto permanente viene risolta nella seguente forma:

$$Y_2 + Z_2 + \frac{\alpha_2 V_2^{\,2}}{2g} = Y_1 + Z_1 + \frac{\alpha_1 V_1^{\,2}}{2g} + h_e \qquad (1)$$

dove:

Y_1 - Y_2 = altezza d'acqua nelle sezioni trasversali iniziale e finale del tratto in esame;

Z_1 - Z_2 = quota minima di fondo alveo nelle sezioni trasversali iniziale e finale del tratto in esame;

V_1 - V_2 = velocità medie (portata/sezione bagnata);

α_1 - α_2 = coefficienti di ragguaglio dell'energia cinetica (coefficienti di Coriolis);

he = perdita di carico energetico tra le sezioni trasversali iniziale e finale del tratto in esame.

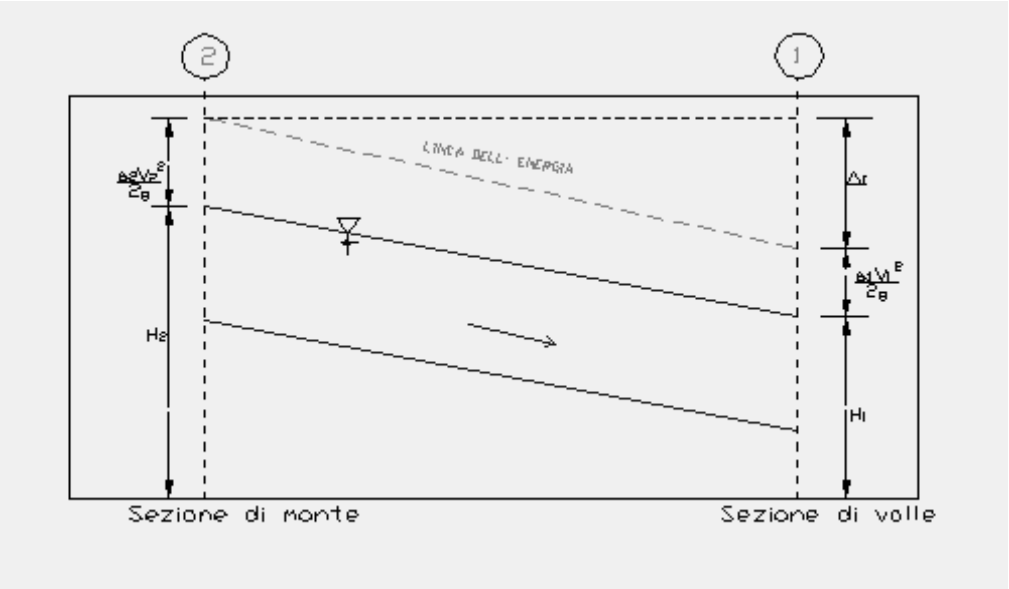


Figura 1: Grandezze presenti nell'equazione dell'energia.

La perdita di carico tra due sezioni è data dalla somma delle perdite distribuite lungo il tratto d'alveo compreso tra le due sezioni e le eventuali perdite dovute alla contrazione o alla espansione della corrente. L'espressione che permette il calcolo della perdita di carico risulta:

$$\Delta E = LxJ + C\left|\frac{\alpha_2 V_2^{\,2}}{2g} - \frac{\alpha_1 V_1^{\,2}}{2g}\right| \qquad (2)$$

dove:

• L = lunghezza del tratto d'alveo in esame;

• J = cadente piezometrica;

• C = coefficiente che tiene conto dei fenomeni di contrazione ed espansione della corrente.

La distanza L tra due successive sezioni viene valutata con la seguente espressione:

$$L = \frac{\left(LgsQqs + LcQc + LgdQqd\right)}{\left(Qqs + Qc + Qqd\right)} \qquad (3)$$

dove:

• Lgs. Lgd. Lc: distanza percorsa dalla corrente rispettivamente in golena sinistra, destra e nel canale principale;

• Qgs. Qgd. Qc: portate rispettivamente defluite alla sezione terminale in golena sinistra, destra e nel canale principale.

La cadente piezometrica può essere ricavata attraverso la seguente espressione:

$$J = \left(\frac{Q_1 + Q_2}{k_1 + k_2}\right)^2 \qquad (4)$$

essendo:

• Q1. Q2 : portata transitata rispettivamente alla sezione 1 e alla sezione 2;

• k1. k2 : capacità di deflusso (conveyance) totale rispettivamente associata alla sezione 1 e alla sezione 2.

La capacità di deflusso è calcolabile attraverso la seguente espressione:

$$k = \frac{1}{n} A R^{2/3} \qquad (5)$$

essendo:

• n : coefficiente di Manning;

• A : area bagnata;

• R : raggio idraulico.

La capacità di deflusso complessiva di una determinata sezione è data dalla somma delle capacità di deflusso delle due golene e del canale principale. Ciascuna parte con cui si è idealmente suddivisa la sezione idraulica è infatti caratterizzata, una volta noto o ipotizzato il tirante idrico, da una determinata area bagnata e raggio idraulico; da qui la possibilità di applicare la (5) per calcolare la capacità di deflusso per la golena in sponda destra, sinistra e per il canale principale.

Il coefficiente di ragguaglio della potenza cinetica (coefficiente di Coriolis) viene calcolato attraverso la seguente espressione:

$$\alpha = \left(\frac{k^3{}_{gs}}{A^2{}_{gs}} + \frac{k^3 c}{A^2 c} + \frac{k^3{}_{gd}}{A^2{}_{gd}} \right) \frac{A^2{}_t}{k^3{}_t} \qquad (6)$$

dove:

• At. Ags. Agd. Ac : rispettivamente area totale bagnata della sezione, area bagnata in golena destra, in golena sinistra e nel canale principale;

• kt. kgs. kgd. kc : rispettivamente capacità di deflusso della sezione nel suo complesso, per la golena sinistra, la golena destra e per il canale principale.

Il coefficiente C viene introdotto per tenere in conto delle perdite energetiche dovute ai fenomeni di espansione o di contrazione della corrente. Esso viene definito dall'utente, sezione per sezione, in funzione delle caratteristiche del fenomeno di transizione. I valori tipici di tale coefficiente vengono indicati nella tabella 1.

Descrizione	Coefficiente di contrazione	Coefficiente di espansione
Nessuna perdita per contrazione o espansione	0.0	0.0
Transizione graduale	0.1	0.3
Ponti	0.3	0.5
Transizioni molto brusche	0.6	0.8

Tabella 1 - Valori tipici del coefficiente C.

La risoluzione delle equazioni (1) e (2) attraverso un procedimento iterativo permette di determinare l'andamento del profilo idrico in moto permanente una volta assegnate le caratteristiche geometriche e fisiche dell'alveo e le condizioni ai limiti del problema.

Il processo di risoluzione è volto essenzialmente ad individuare quel tirante idrico (nella sezione in cui esso non risulta già noto o calcolato in precedenza) che permette di verificare il bilancio energetico, espresso dalla (1), a meno di una tolleranza prefissata e ritenuta soddisfacente dall'utente. Per i dettagli di calcolo si rinvia alla documentazione del codice di calcolo.

Nei casi in cui si verifica il passaggio attraverso lo stato critico, l'equazione dell'energia (1) non può essere applicata in quanto la transizione tra moto in corrente lenta e moto in corrente veloce e viceversa non rispetta le ipotesi di moto gradualmente variato. Ciò può, ad esempio, verificarsi in seguito a elevati cambi di pendenza o alla presenza di forti restringimenti della sezione idraulica. In questi casi il codice di calcolo permette di risolvere il problema utilizzando o delle formule empiriche oppure l'equazione del momento.

In particolare l'equazione del momento può essere applicata, nel codice di calcolo HEC-RAS in tre differenti situazioni:

• presenza di un risalto idraulico;
• condizioni di deflusso attraverso un ponte senza che si generi un processo di moto in pressione;
• immissione di una corrente in un'altra corrente.

Senza entrare nei particolari, per i quali si rimanda alla letteratura specializzata ed al manuale scientifico del codice di calcolo, è qui il caso solo di riportare l'equazione del momento applicata ad una determinata massa d'acqua compresa tra due sezioni distinte 1 e 2:

$$P_1 - P_2 + W_X - F_f = Q \cdot \rho \cdot \Delta V_X \qquad (7)$$

dove (vedi figura 2):

• Pi : forza legata alla pressione idrostatica agente sulle sezioni 1 e 2;
• Wx : forza peso proiettata nella direzione del moto;
• Ff : forza legata agli attriti;
• Q : portata;
• ρ : densità dell'acqua;
• ΔVx : variazione di velocità nella direzione del moto.

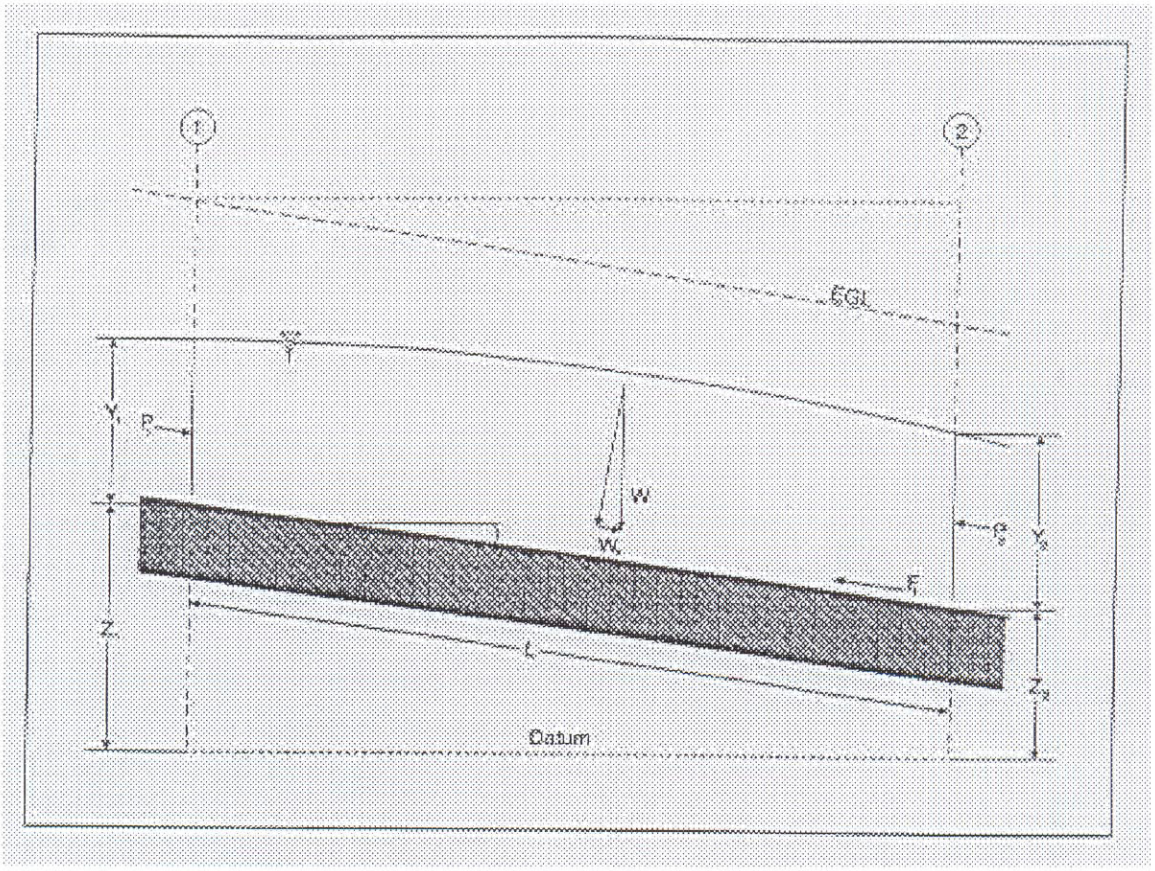


Figura 2 - Elementi caratteristici dell'equazione del momento.

In corrispondenza dei ponti, dove i meccanismi caratterizzanti il fenomeno sono più complessi, vengono utilizzati metodi di calcolo specifici. Il codice di calcolo permette di considerare l'intera gamma di condizioni che possono generarsi in un processo di deflusso attraverso un ponte. Tali condizioni sono di seguito riportate:

• la corrente non viene in contatto con l'intradosso del ponte (Low flow);

• la corrente viene in contatto con l'intradosso del ponte (Pressure/Weir flow).

La prima condizione a sua volta prevede i seguenti casi:

• la corrente si mantiene lenta durante l'attraversamento del ponte (Class A low flow);

• la corrente transita attraverso la profondità critica (Class B low flow);

• la corrente si mantiene veloce durante l'attraversamento del ponte (Class C low flow).

La seconda condizione prevede a sua volta i seguenti casi:

• il ponte risulta in pressione (Pressure flow);

• il ponte viene sormontato (Pressure and Weir flow).

Le perdite energetiche caratteristiche del deflusso attraverso la struttura comprendono:

• le perdite che si sviluppano nei tratti immediatamente a monte e a valle del manufatto; tali perdite sono dovute essenzialmente ai processi di contrazione ed espansione della corrente;

• le perdite che si generano proprio nel processo di deflusso attraverso la struttura.

In funzione delle condizione di deflusso che vengono a crearsi, si applicano metodi di calcolo differenti per valutare le perdite di carico e quindi l'andamento del profilo idraulico nell'intorno della struttura.

Il codice di calcolo permette di risolvere i problemi relativi al deflusso di portata anche attraverso i tombini. La risoluzione di tali problemi si fonda sull'approccio teorico proposto nella letteratura specializzata (cfr. "Open Channel Hydraulics". V.T.Chow).

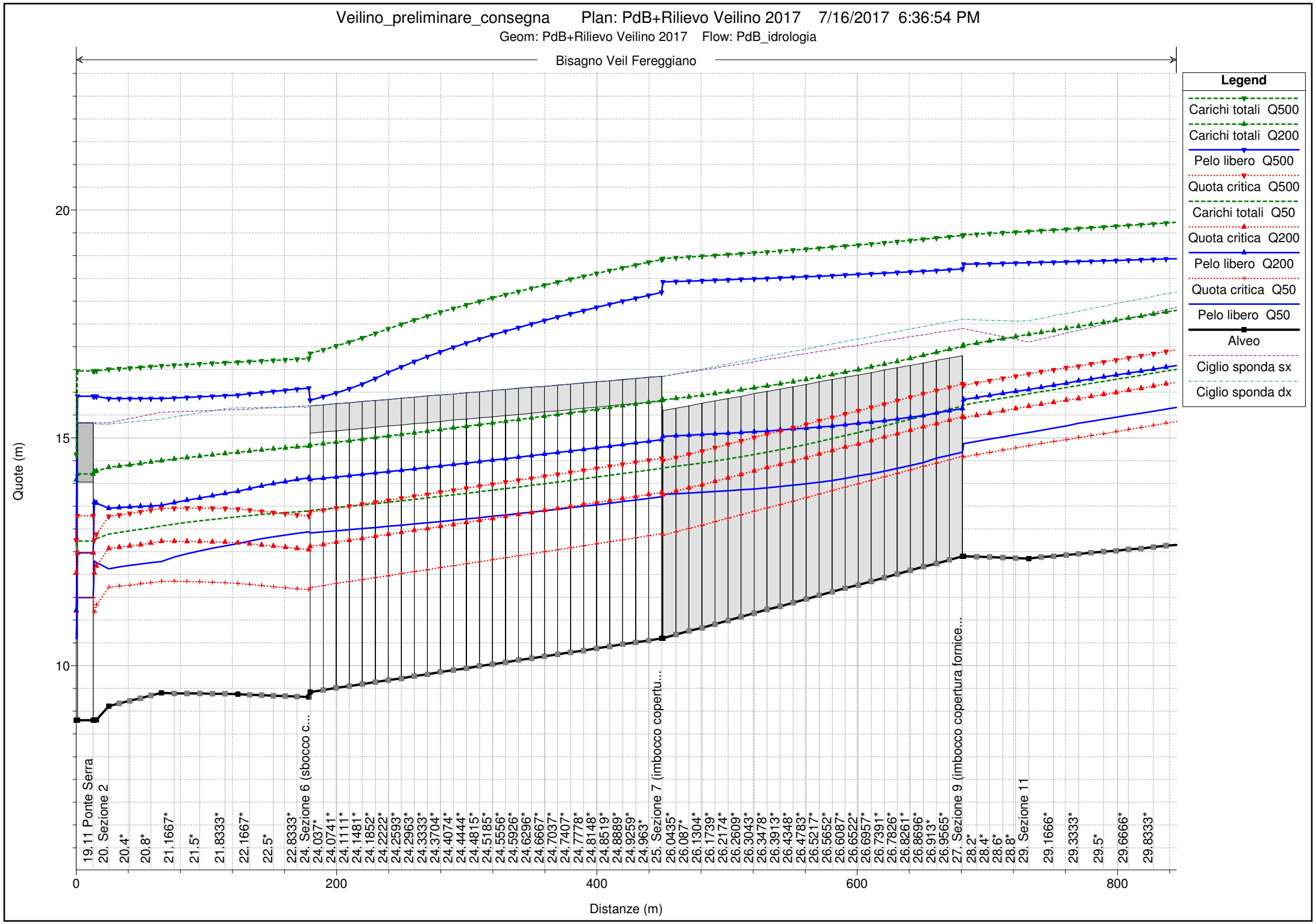
Il tipo di deflusso attraverso un tombino può essere catalogato come deflusso con sezione di controllo presso l'imbocco (in seguito "inlet control") o con sezione di controllo presso l'uscita ("outlet control").

Nel caso di "inlet control" la capacità del tombino dipende dal carico idraulico alla sezione di approccio, dalla geometria della sezione di ingresso, dal tipo di imbocco. La scabrezza del tombino, la sua lunghezza e pendenza, le condizioni idrauliche del ricettore di valle non sono elementi determinanti in grado di influenzare la capacità di deflusso.

Nel caso di "outlet control" gli elementi determinanti per fissare la capacità idraulica del tombino sono, oltre a quelli caratteristici del caso precedente, la lunghezza, la pendenza e la scabrezza del tombino e le caratteristiche idrauliche del ricettore di valle.

Il codice di calcolo risolve generalmente il problema calcolando, per la portata fissata dall'utente, il tirante idrico nella sezione di approccio al tombino utilizzando sia le equazioni adatte ai casi di "inlet control" sia quelle per i casi di "outlet control". Si assume quindi che la soluzione sia quella cui è associato il massimo tirante idrico.

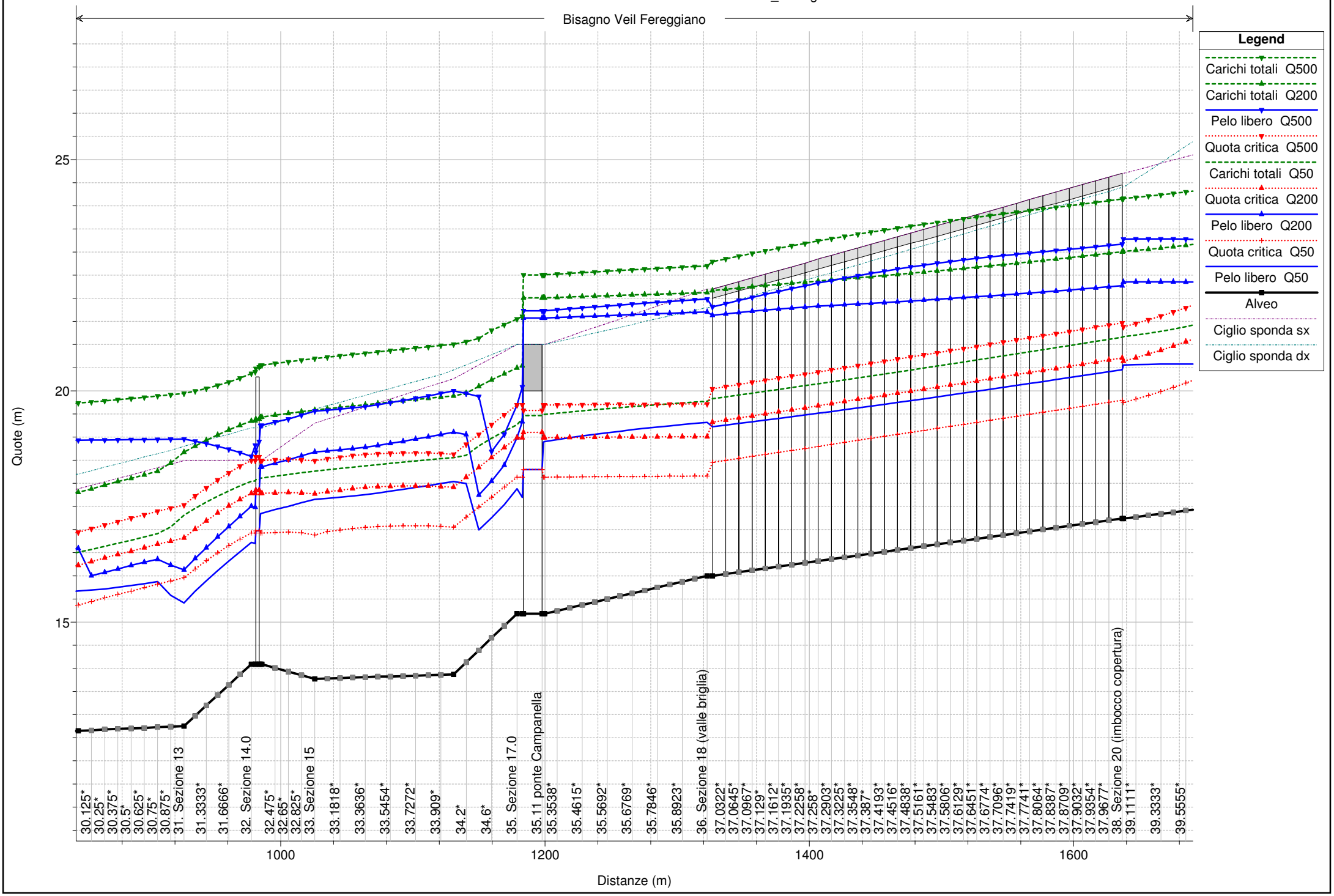
Nei casi di "inlet control" il tirante idrico a monte del tombino viene calcolato schematizzando il moto della corrente come quello che si genera sotto una paratoia a battente. Nei casi di "outlet control" il tirante idrico a monte del tombino viene calcolato a partire dal tirante idrico alla sezione di sbocco del tombino e considerando le perdite energetiche concentrate e distribuite che si determinano nel processo di deflusso.



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

Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia



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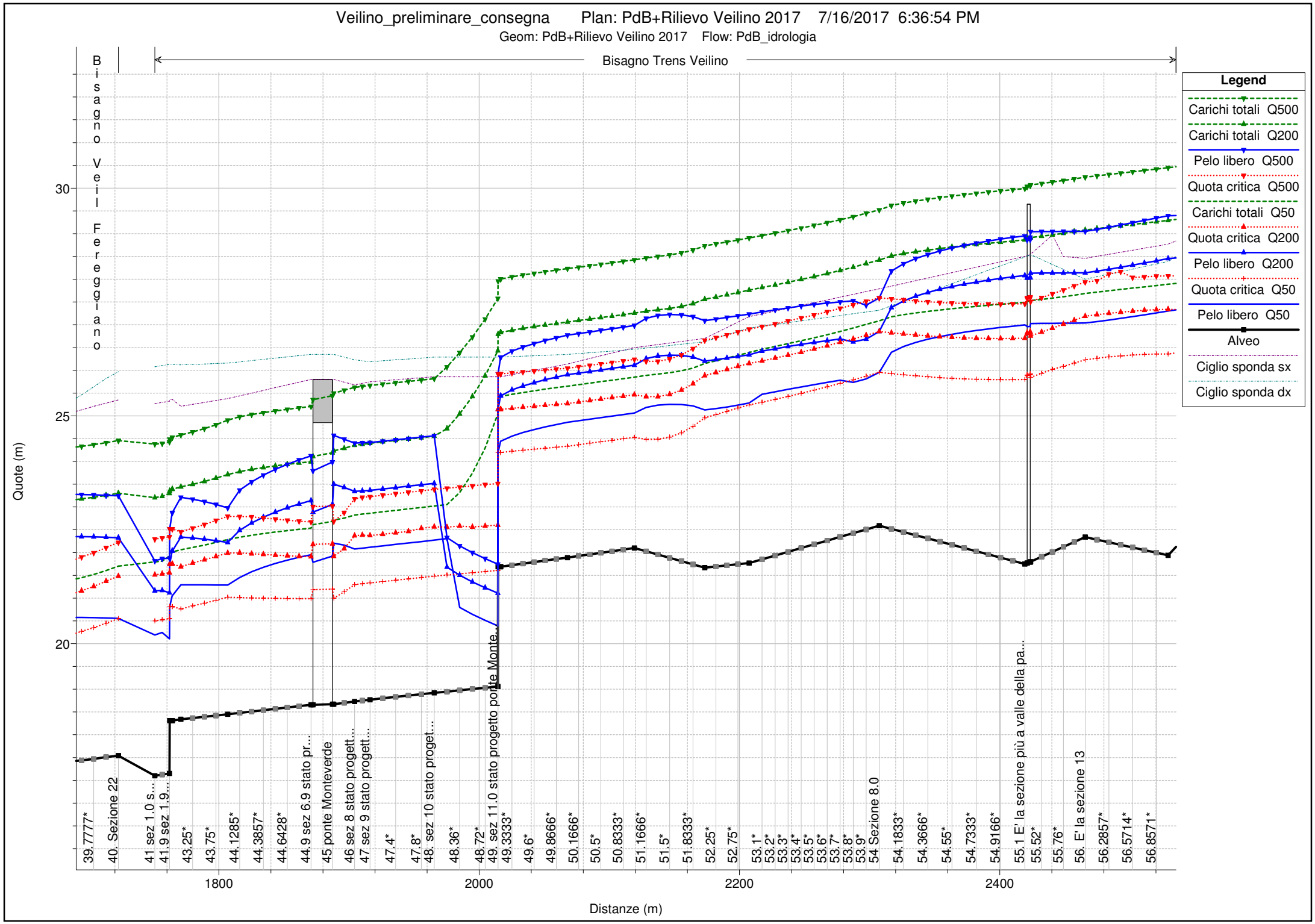

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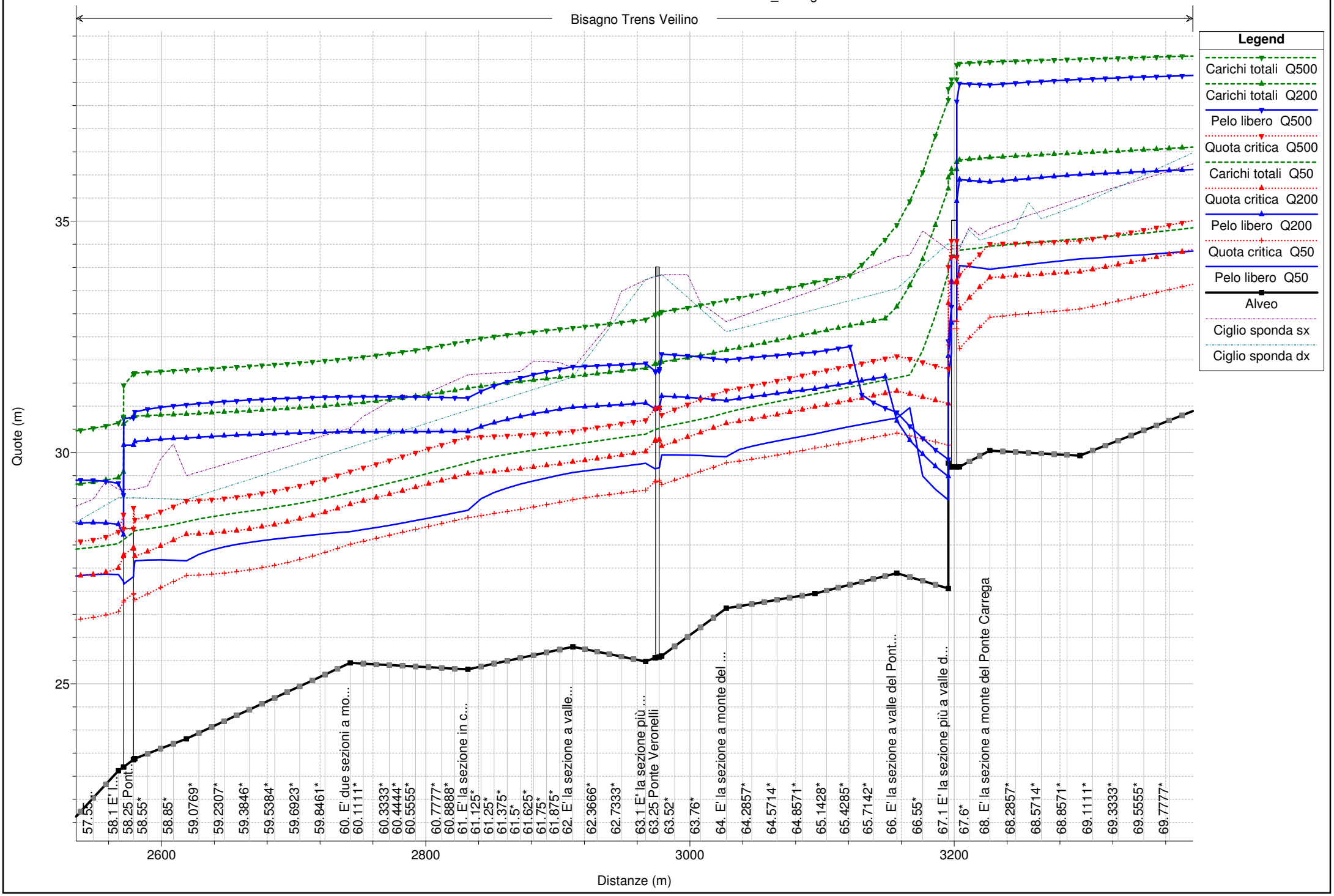

1 cm Horiz. = 35 m 1 cm Vert. = 1 m

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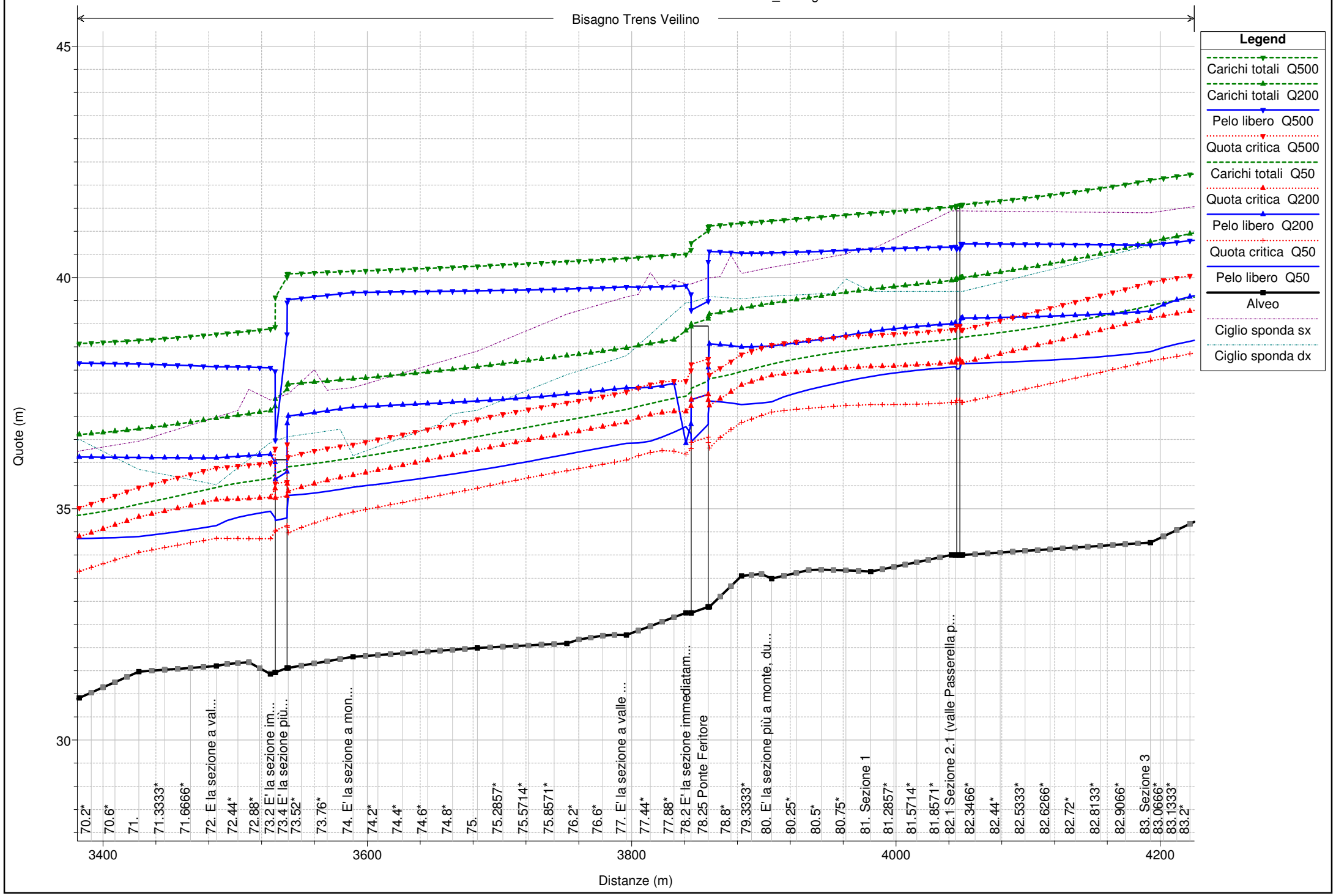
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia



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

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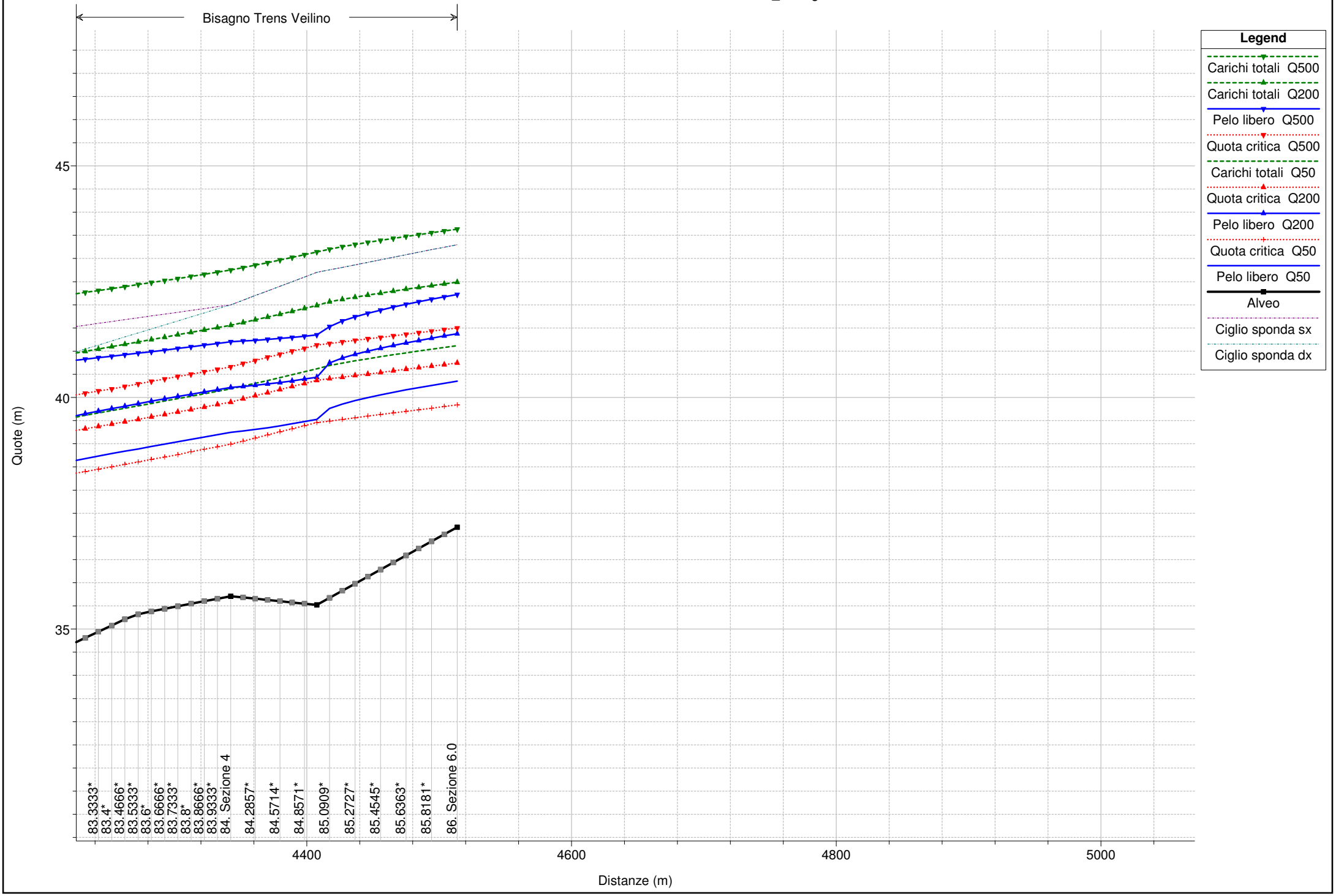
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

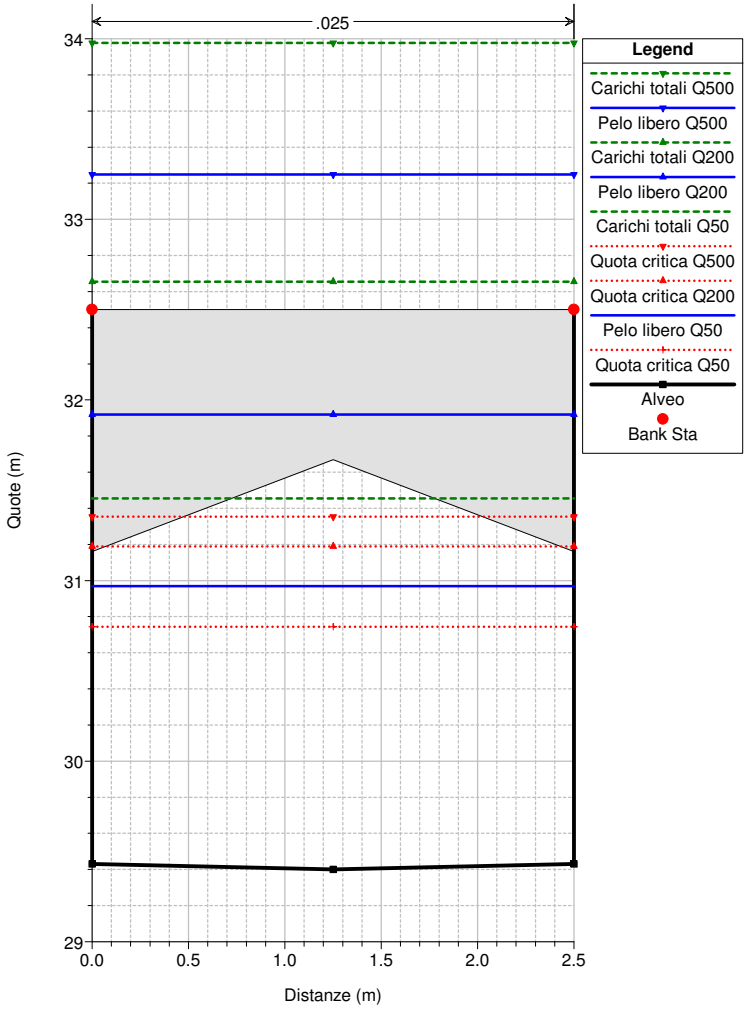


1 cm Horiz. = 35 m 1 cm Vert. = 1 m

Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Briscata Reach = Tombinatura RS = 350 BR-350



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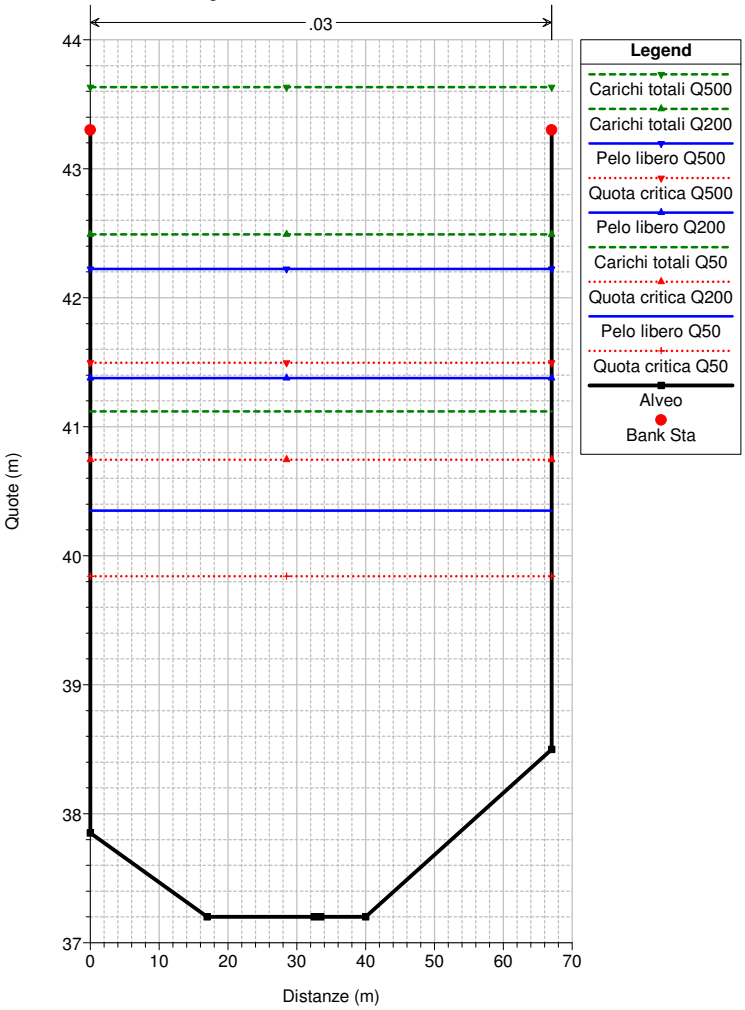
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Bisagno Reach = Trens Veilino RS = 86. Sezione 6.0



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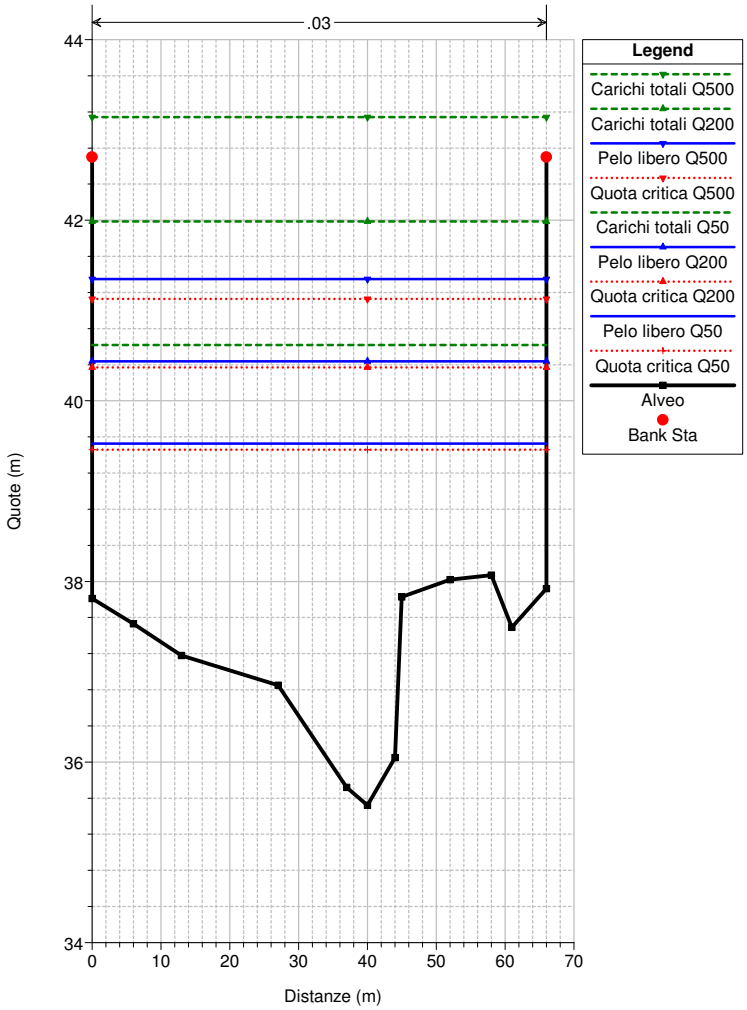
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

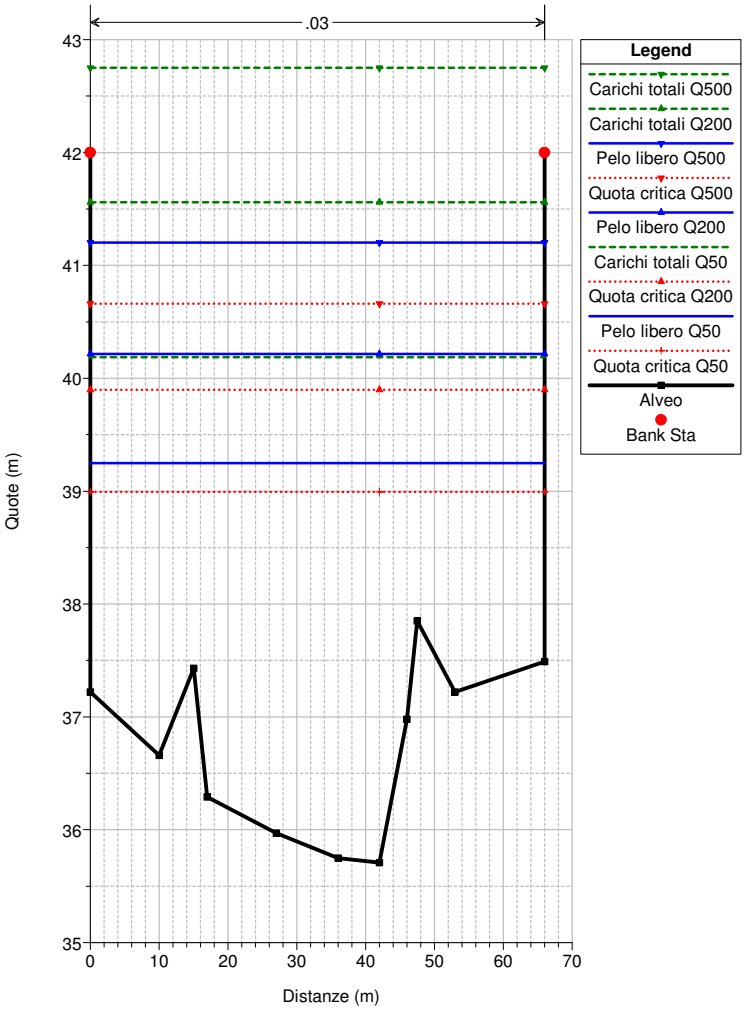
River = Bisagno Reach = Trens Veilino RS = 85. Sezione 5



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

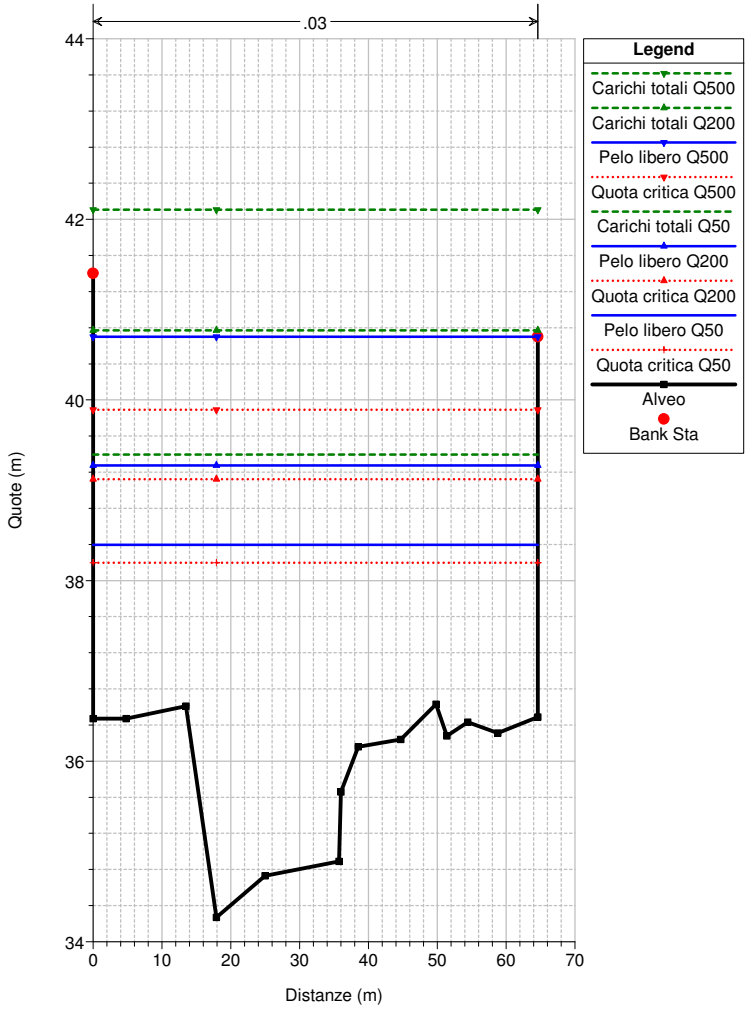
River = Bisagno Reach = Trens Veilino RS = 84. Sezione 4



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

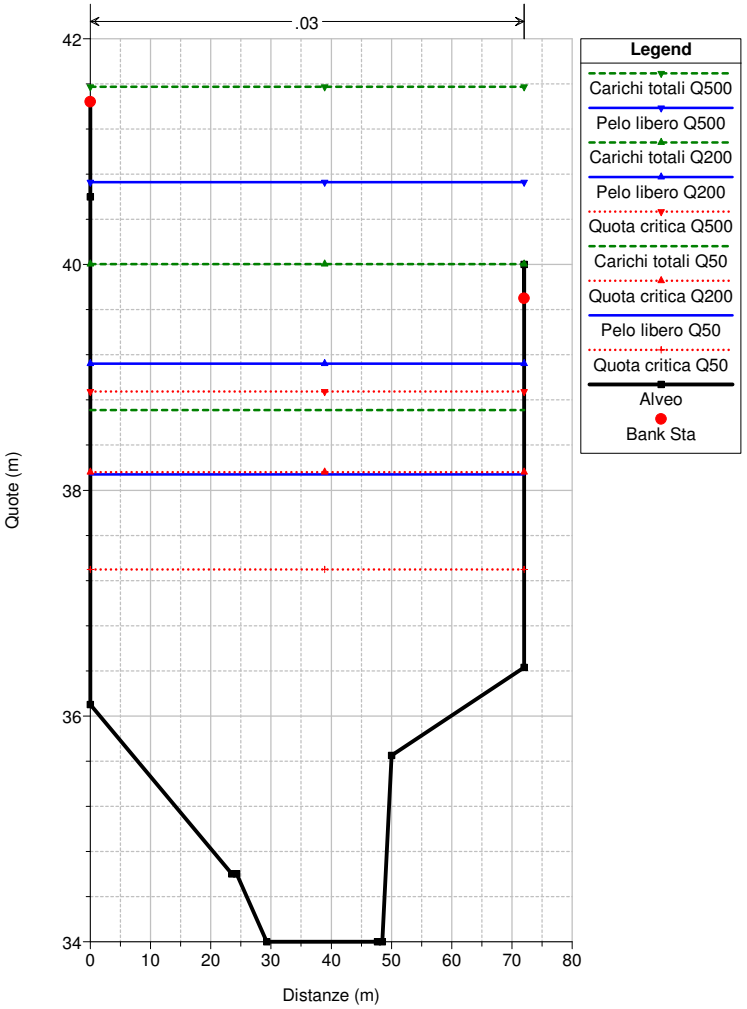
River = Bisagno Reach = Trens Veilino RS = 83. Sezione 3



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

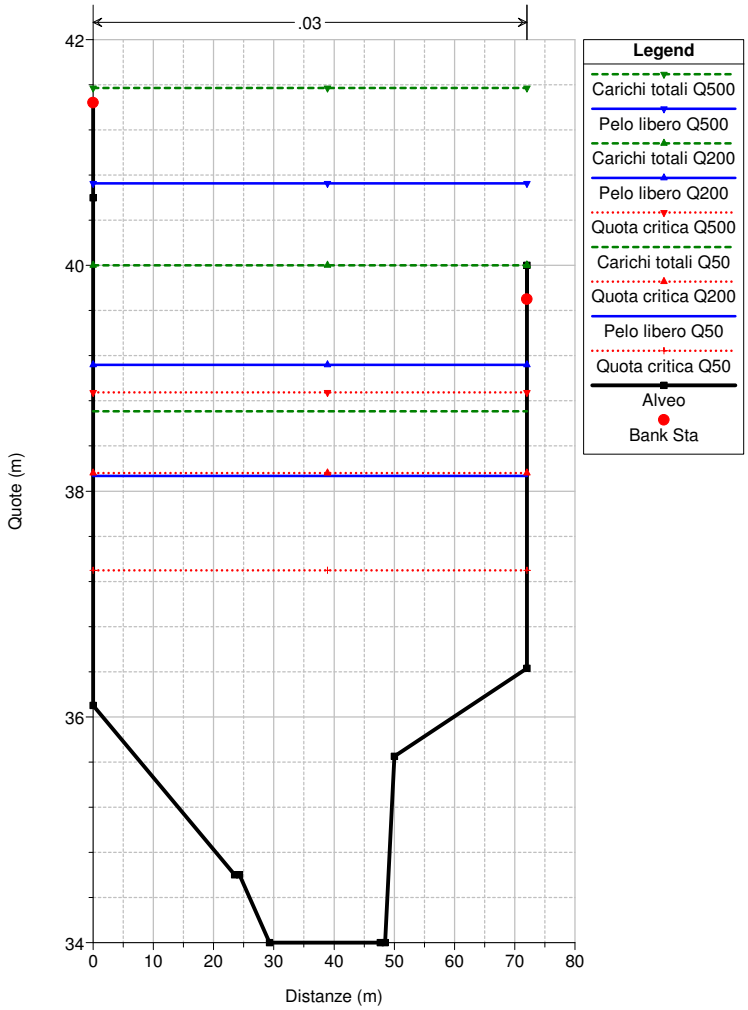
River = Bisagno Reach = Trens Veilino RS = 82.3 Sezione 2.3



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

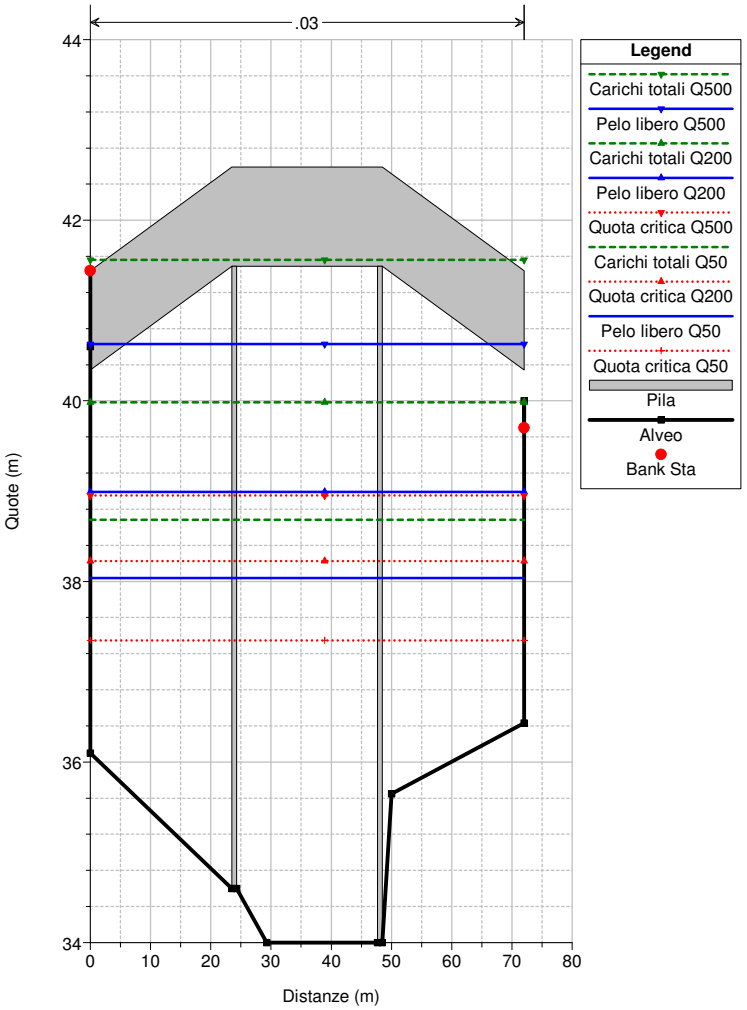
River = Bisagno Reach = Trens Veilino RS = 82.2 Sezione 2.2 (monte Passerella pedonale)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

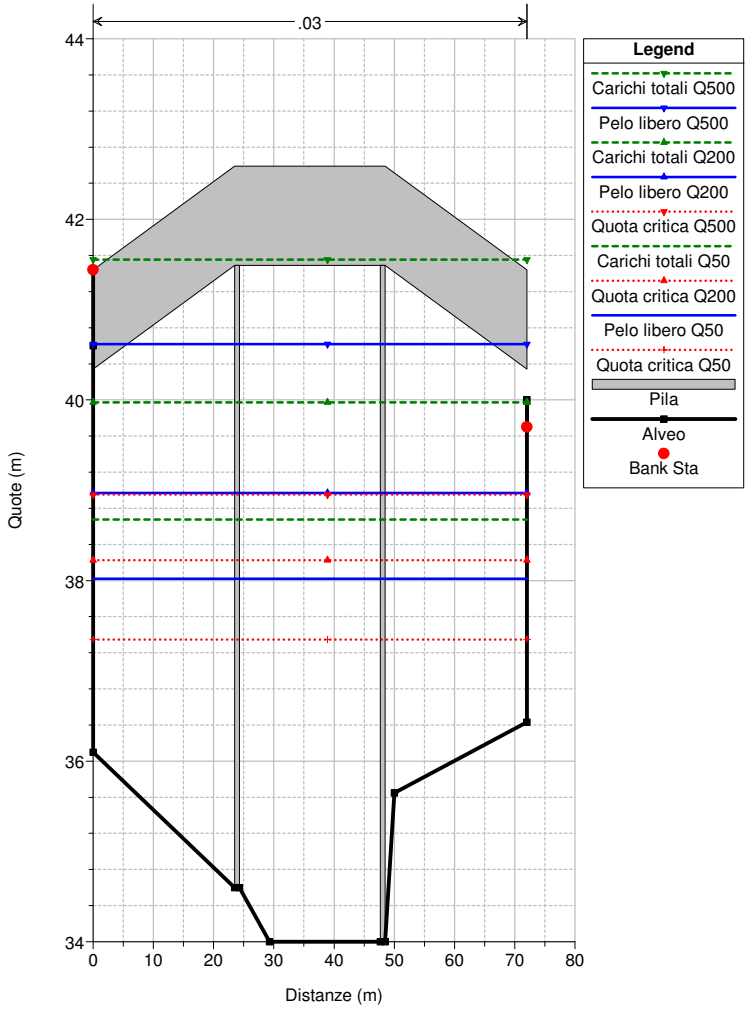
River = Bisagno Reach = Trens Veilino RS = 82.11 BR BIS 82 Passerella pedonale



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

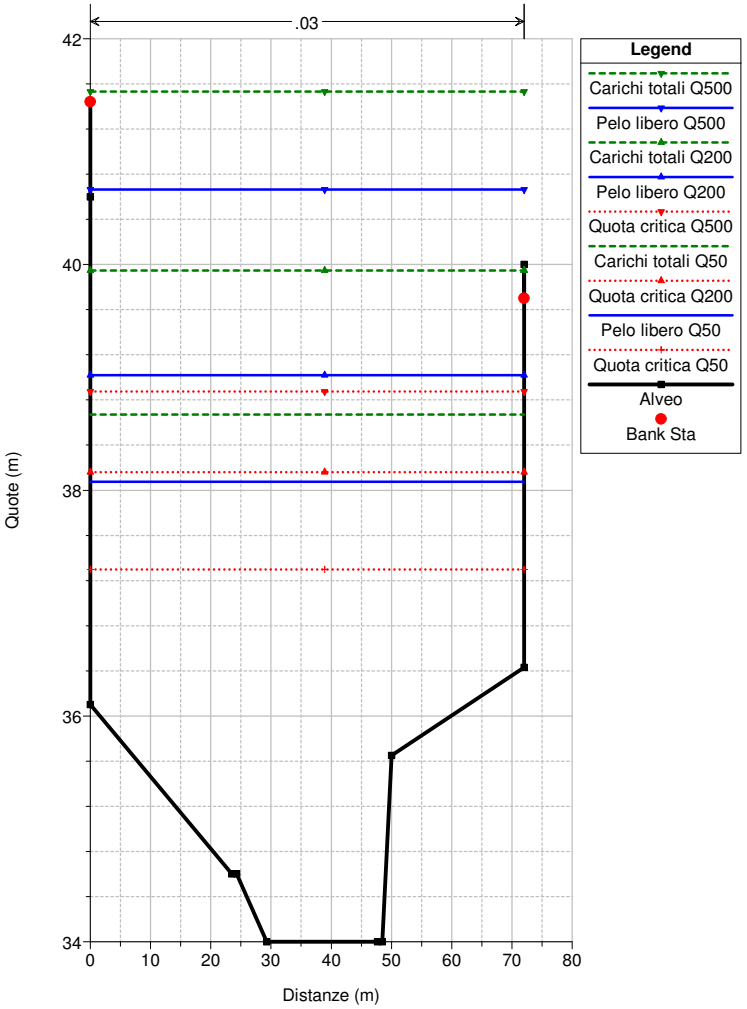
River = Bisagno Reach = Trens Veilino RS = 82.11 BR BIS 82 Passerella pedonale



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

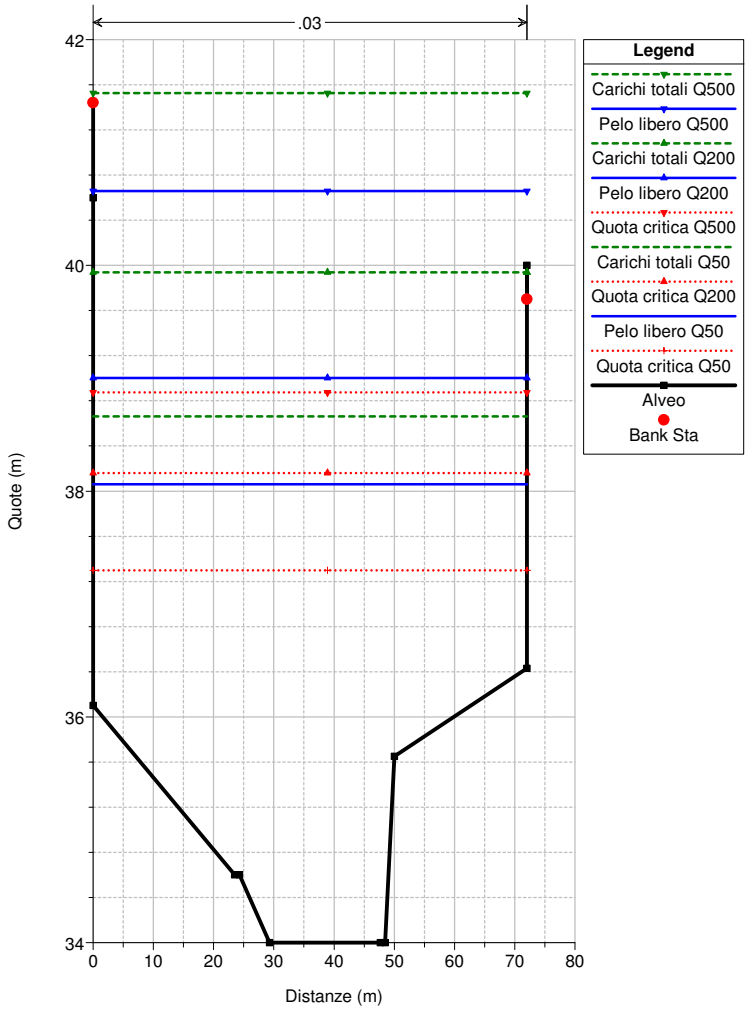
River = Bisagno Reach = Trens Veilino RS = 82.1 Sezione 2.1 (valle Passerella pedonale)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

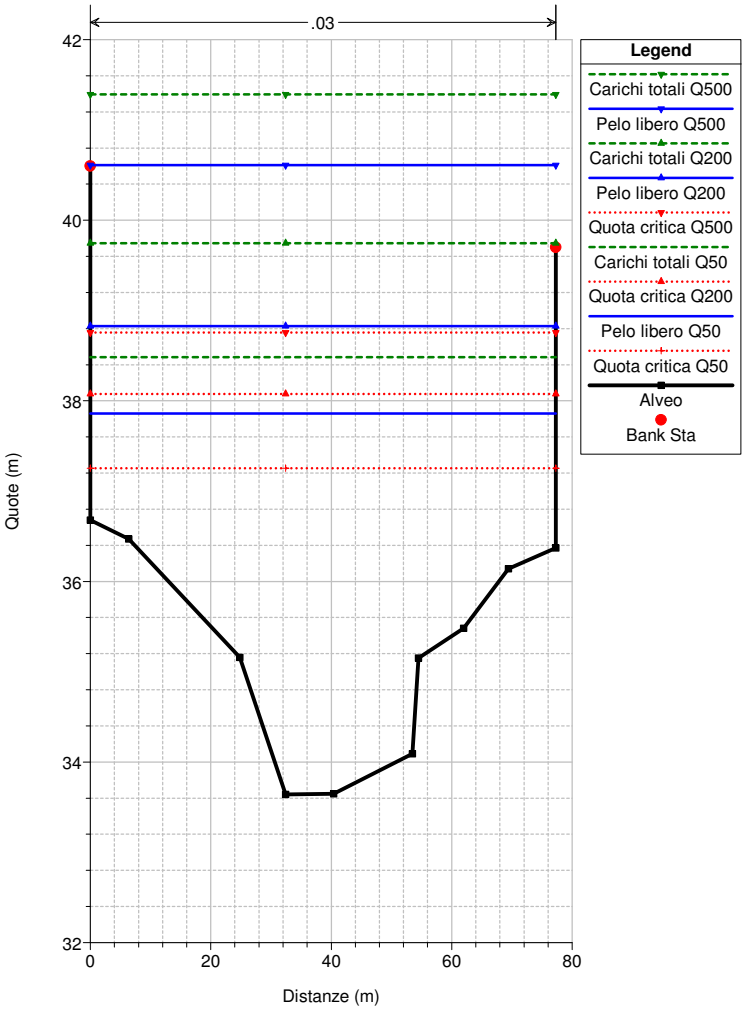
River = Bisagno Reach = Trens Veilino RS = 82. Sezione 2.0



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

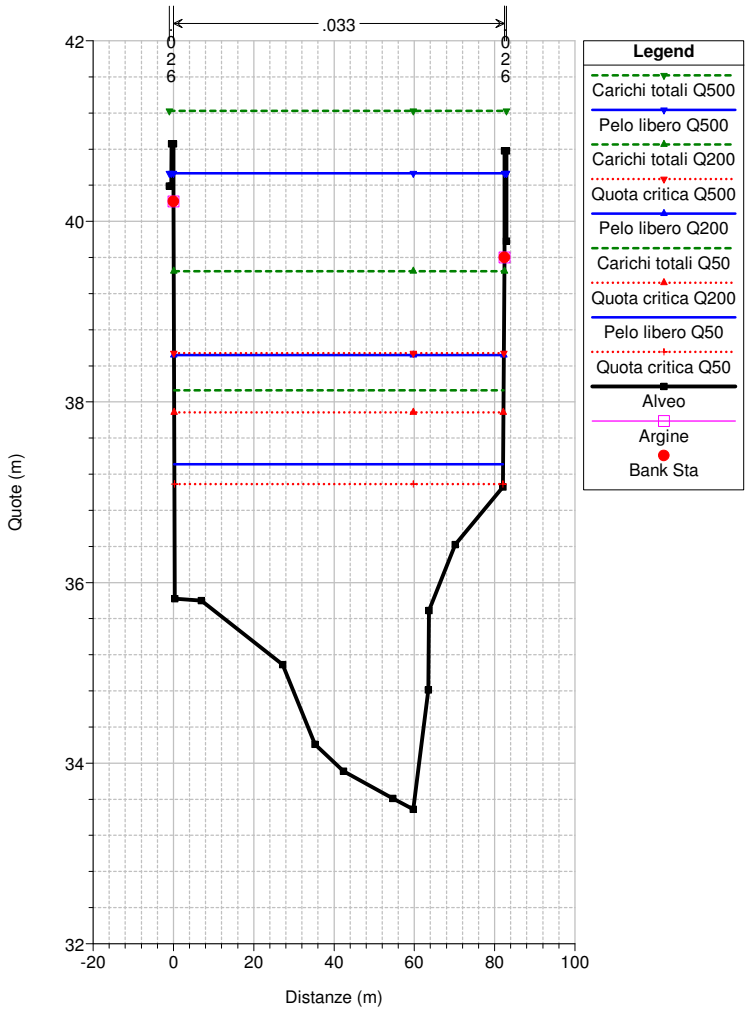
River = Bisagno Reach = Trens Veilino RS = 81. Sezione 1



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

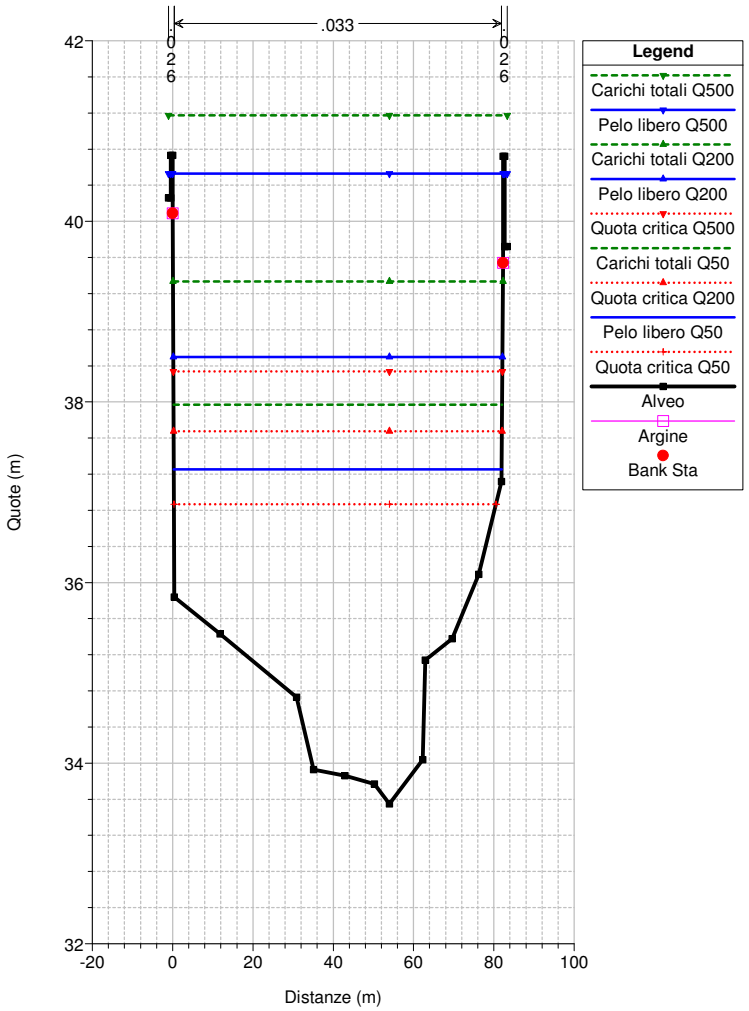
River = Bisagno Reach = Trens Veilino RS = 80. E' la sezione più a monte, due a monte del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

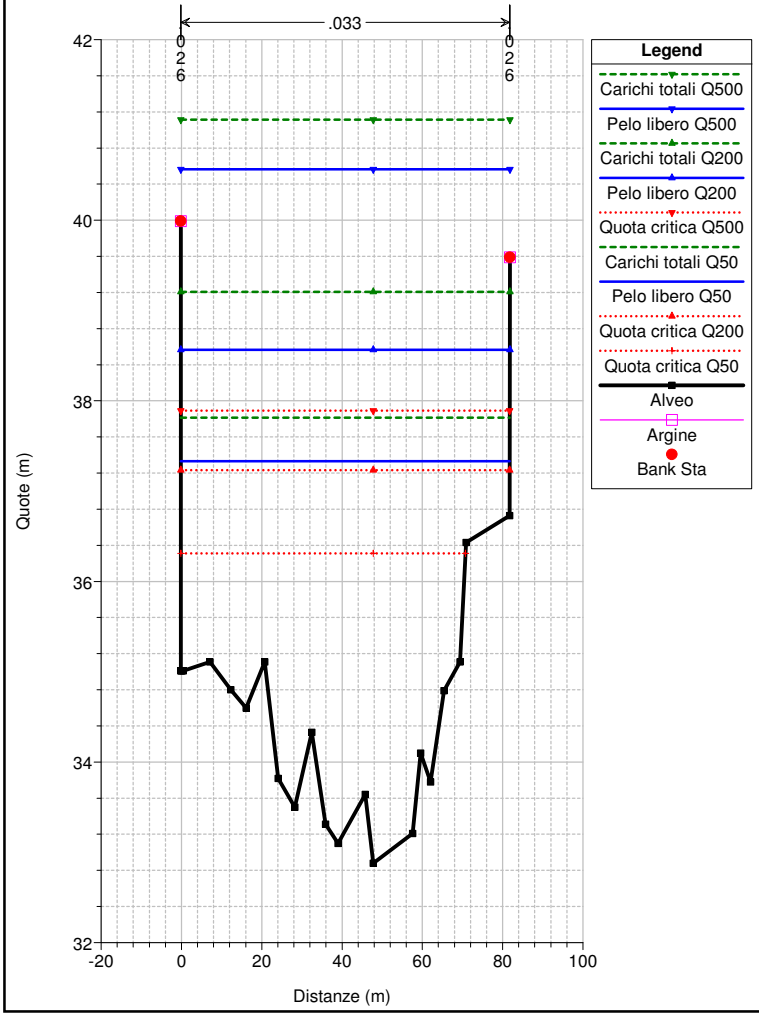
River = Bisagno Reach = Trens Veilino RS = 79. E' la sezione a monte del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

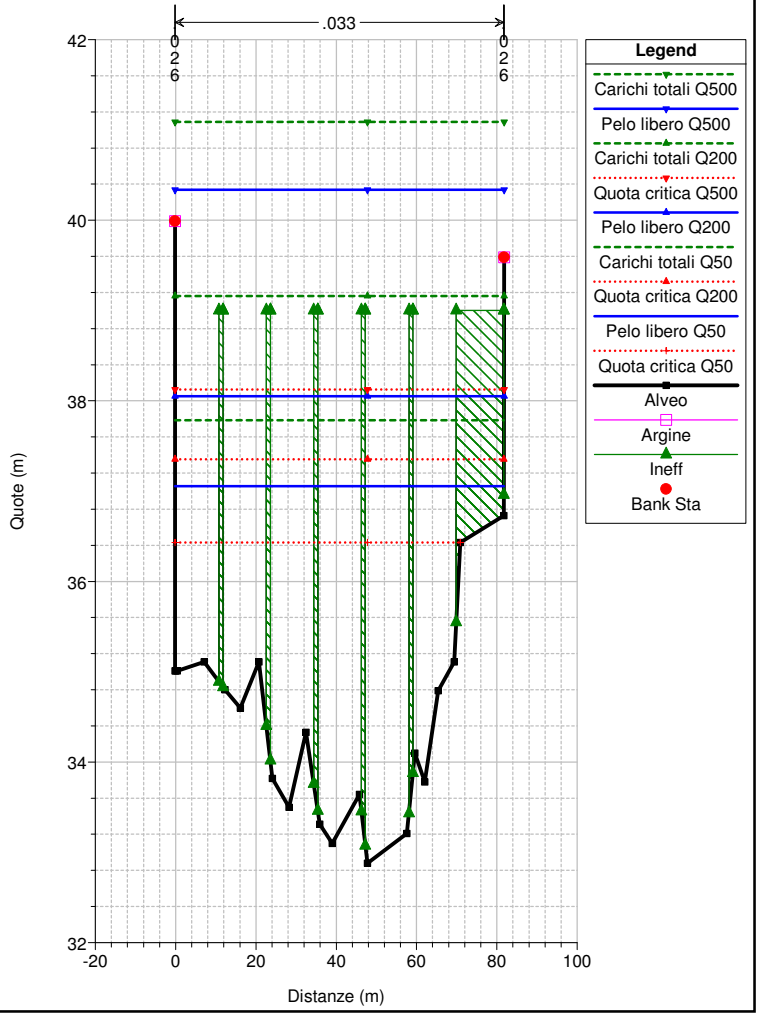
River = Bisagno Reach = Trens Veilino RS = 78.4 E' la sezione più a monte del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

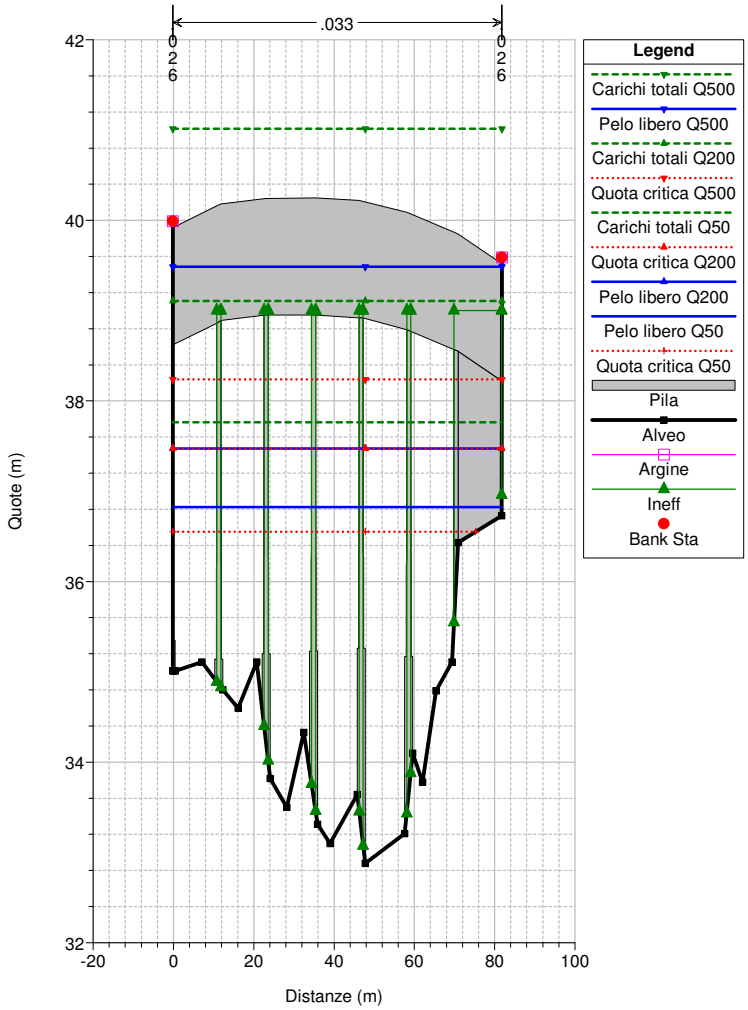
River = Bisagno Reach = Trens Veilino RS = 78.3 E' la sezione immediatamente a monte del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

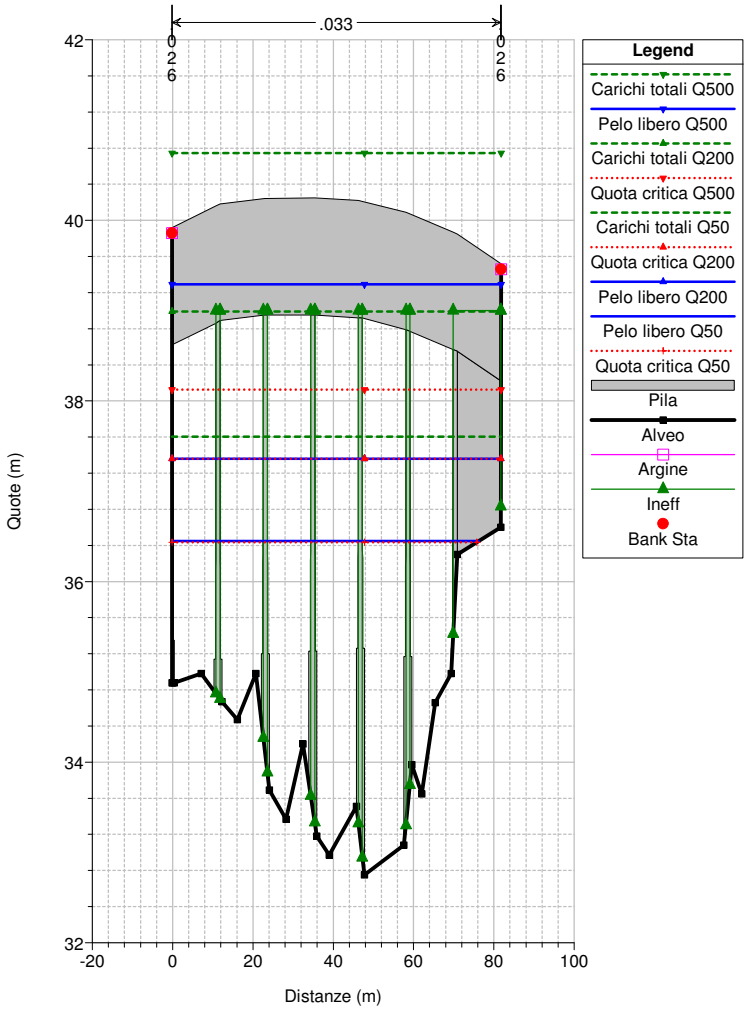
River = Bisagno Reach = Trens Veilino RS = 78.25 BR BIS 78 Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

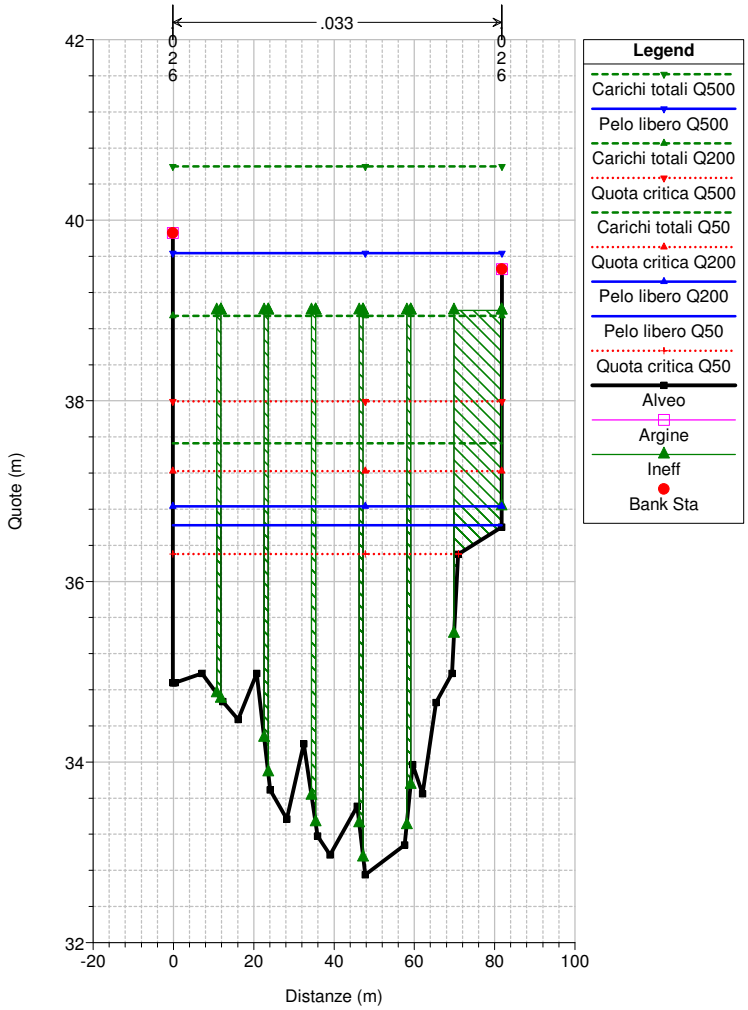
River = Bisagno Reach = Trens Veilino RS = 78.25 BR BIS 78 Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

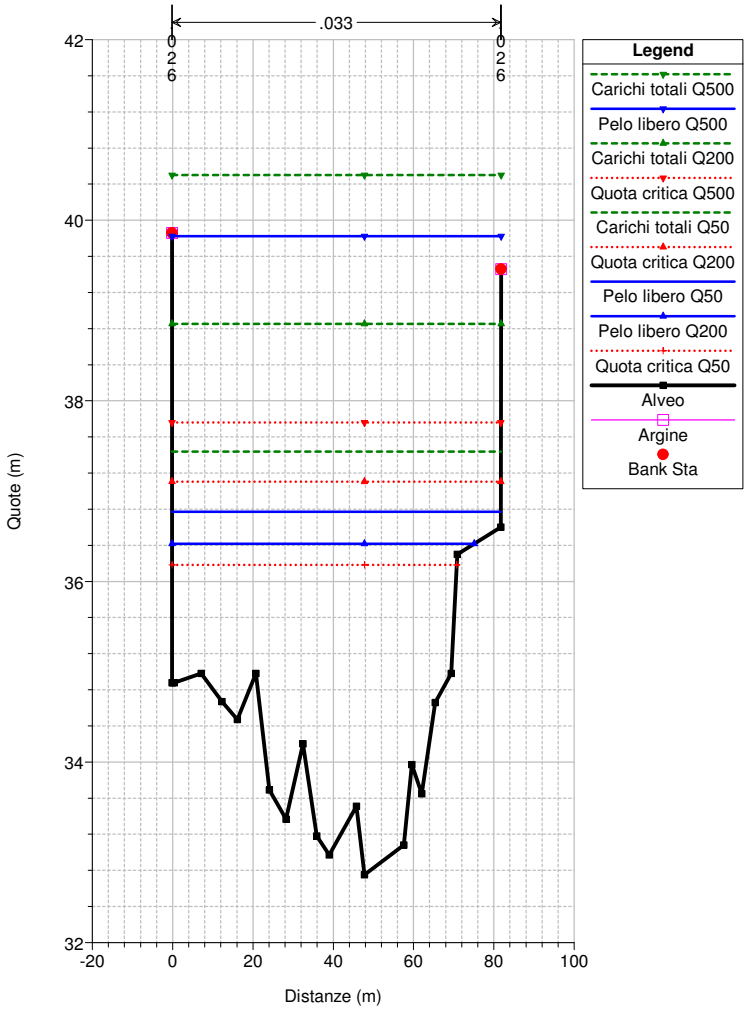
River = Bisagno Reach = Trens Veilino RS = 78.2 E' la sezione immediatamente a valle del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

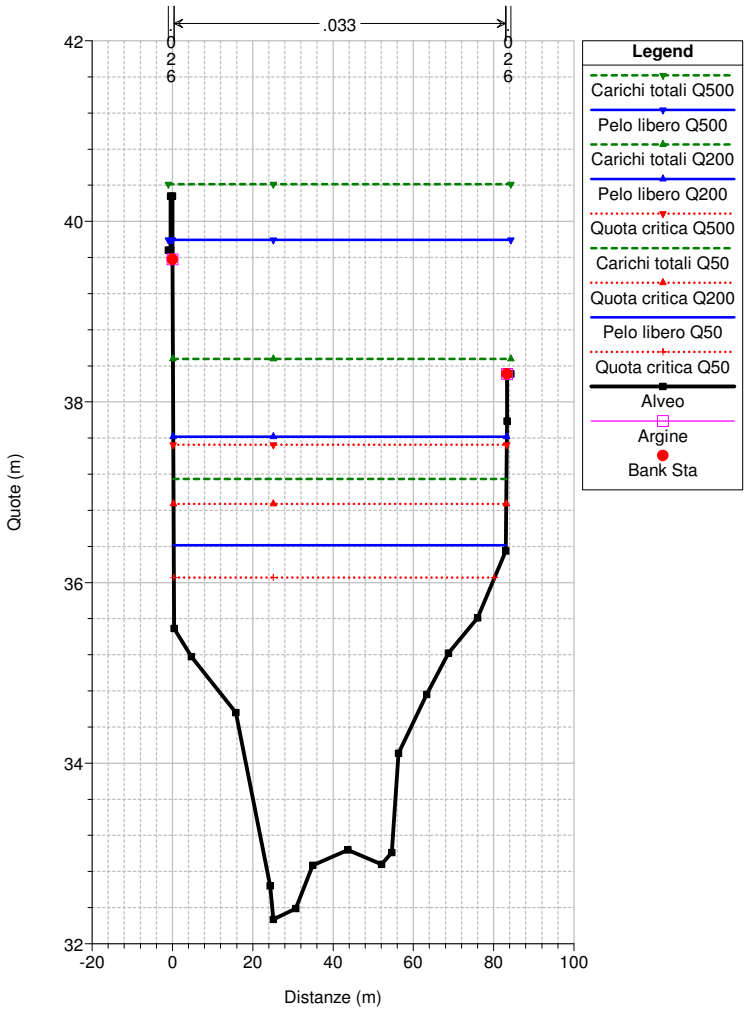
River = Bisagno Reach = Trens Veilino RS = 78.1 E' la sezione più a valle del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

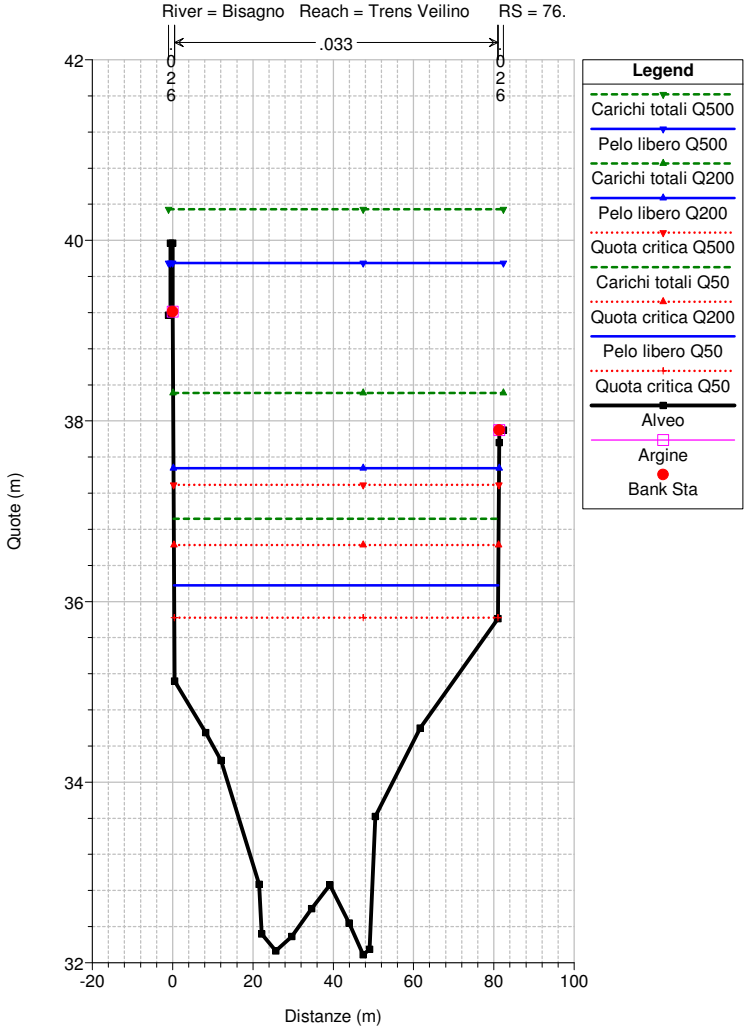
River = Bisagno Reach = Trens Veilino RS = 77. E' la sezione a valle del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

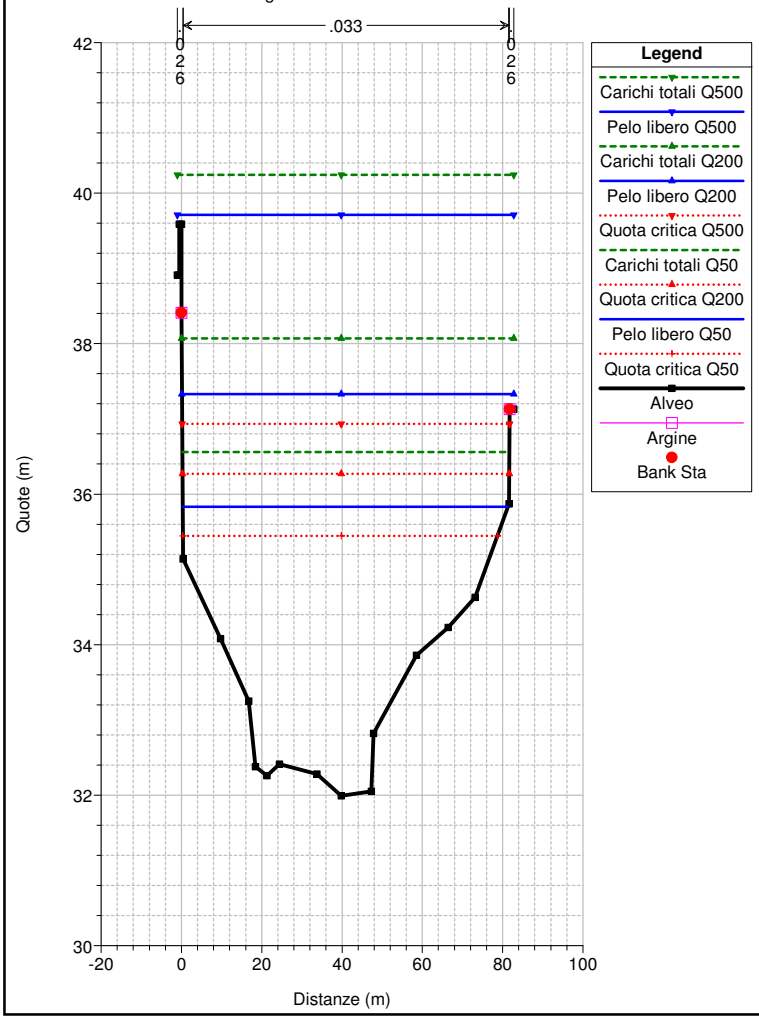
River = Bisagno Reach = Trens Veilino RS = 76.



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

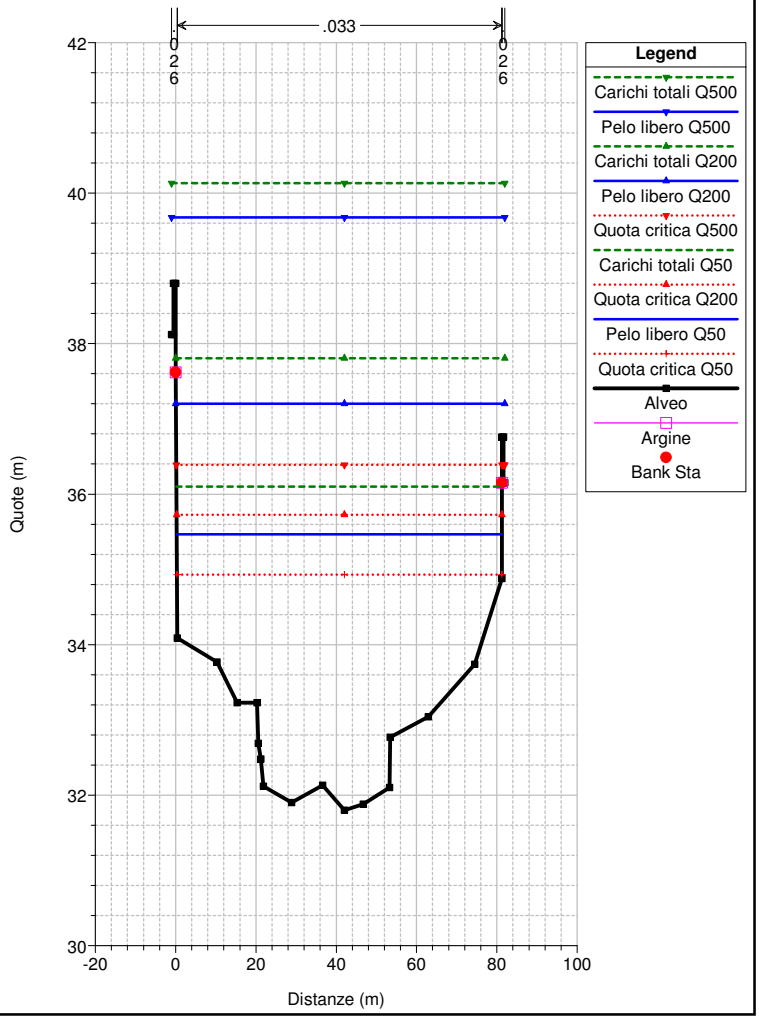
River = Bisagno Reach = Trens Veilino RS = 75.



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

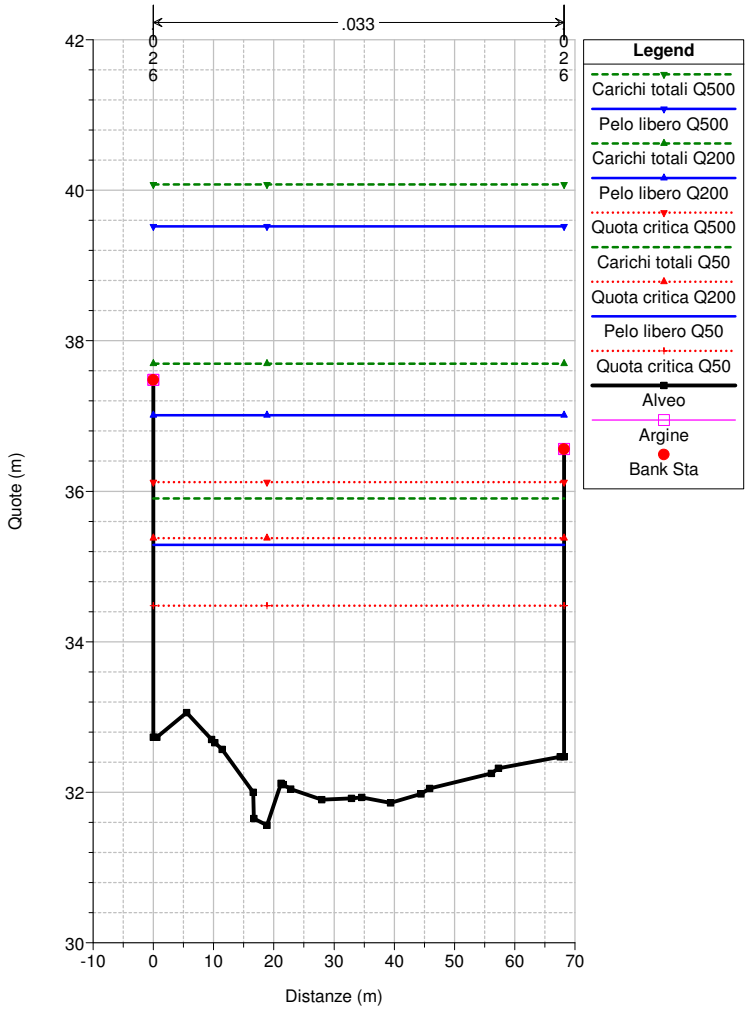
River = Bisagno Reach = Trens Veilino RS = 74. E' la sezione a monte del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

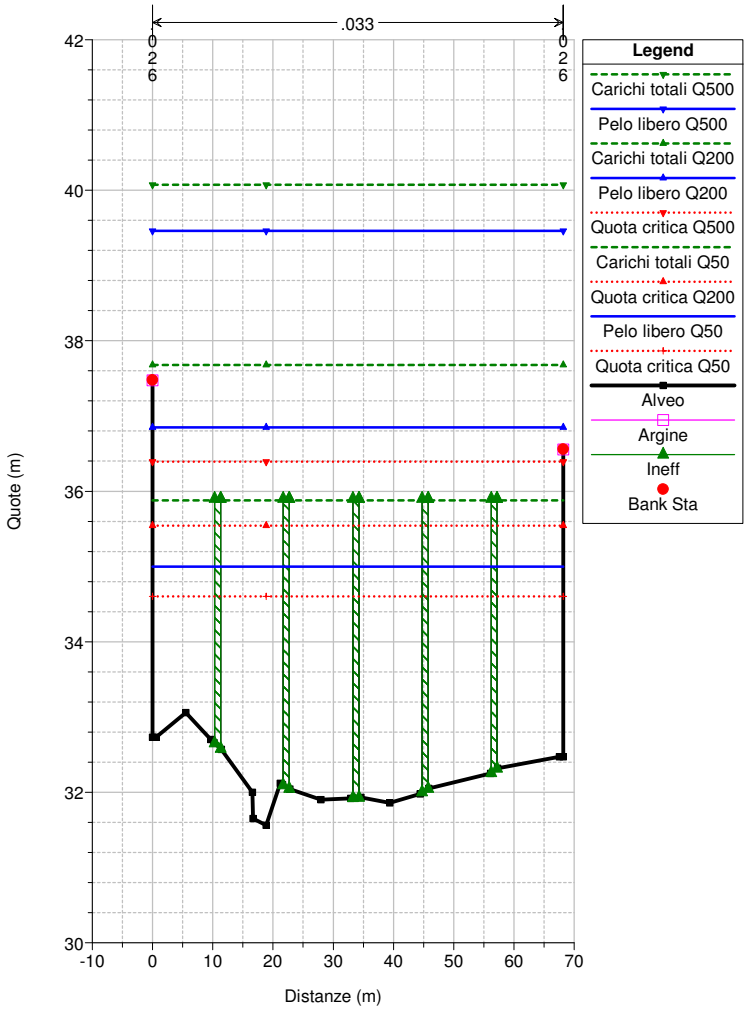
River = Bisagno Reach = Trens Veilino RS = 73.4 E' la sezione più a monte del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

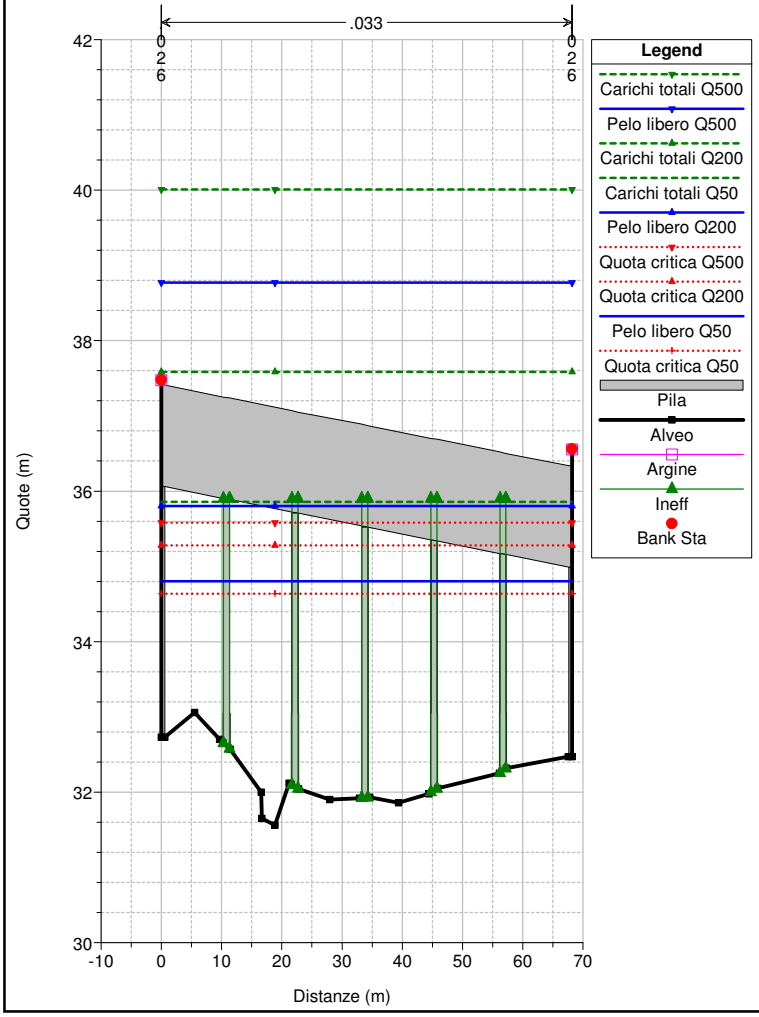
River = Bisagno Reach = Trens Veilino RS = 73.3 E' la sezione immediatamente a monte del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

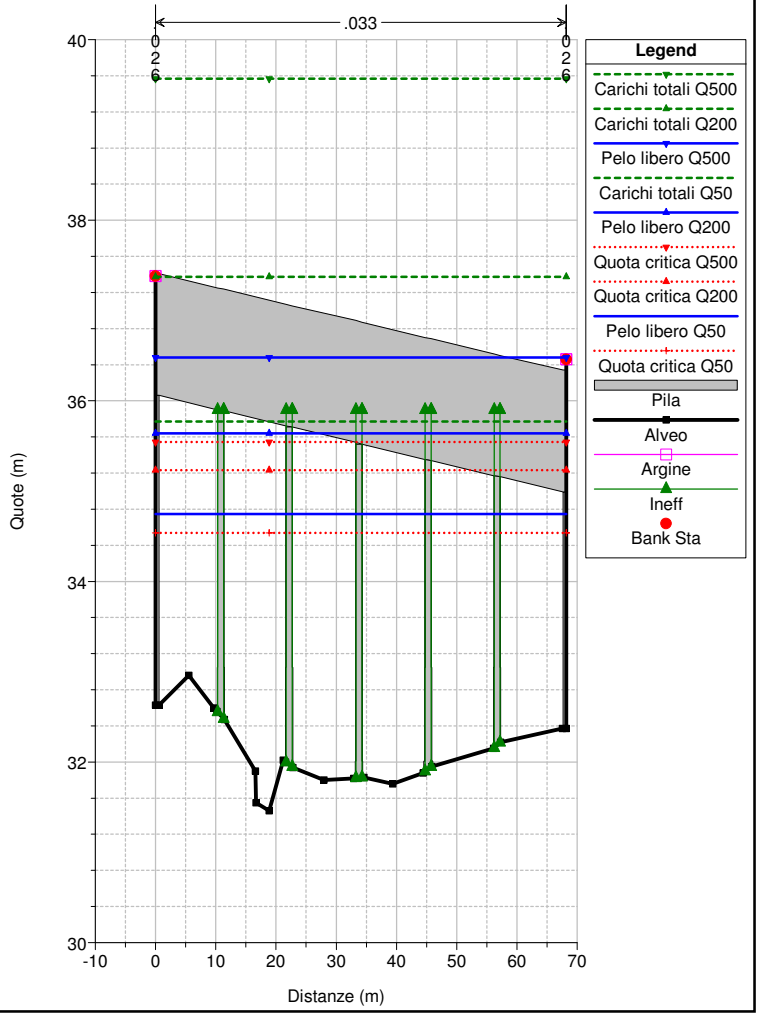
River = Bisagno Reach = Trens Veilino RS = 73.25 BR BIS 73 Ponte Gugliemetti



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

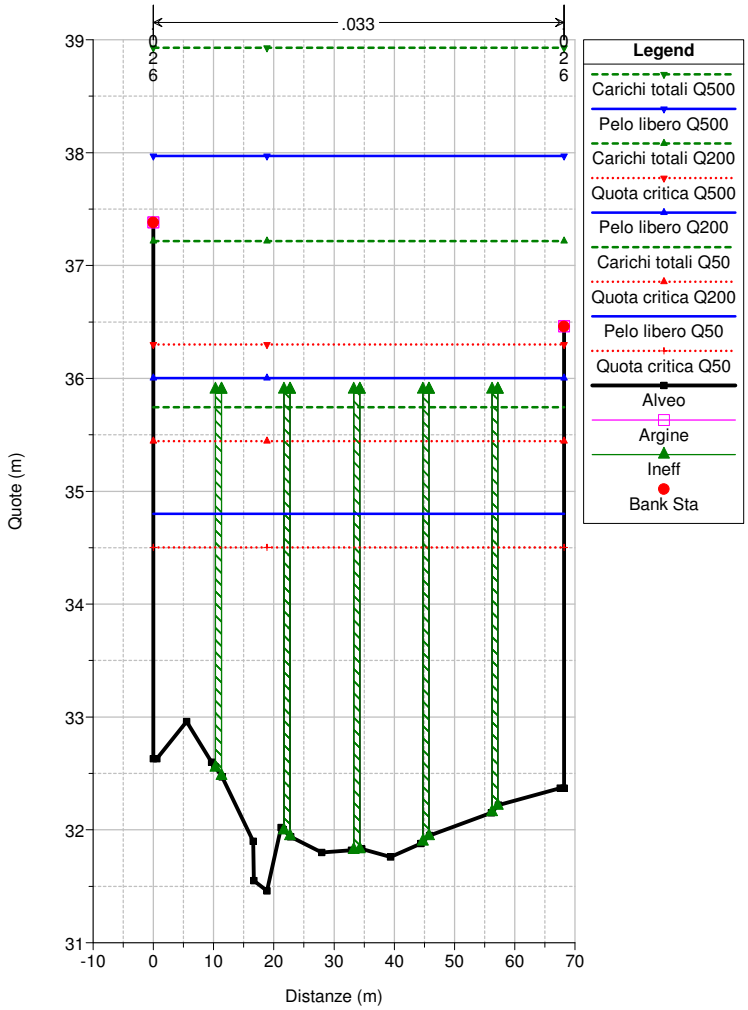
River = Bisagno Reach = Trens Veilino RS = 73.25 BR BIS 73 Ponte Gugliemetti



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

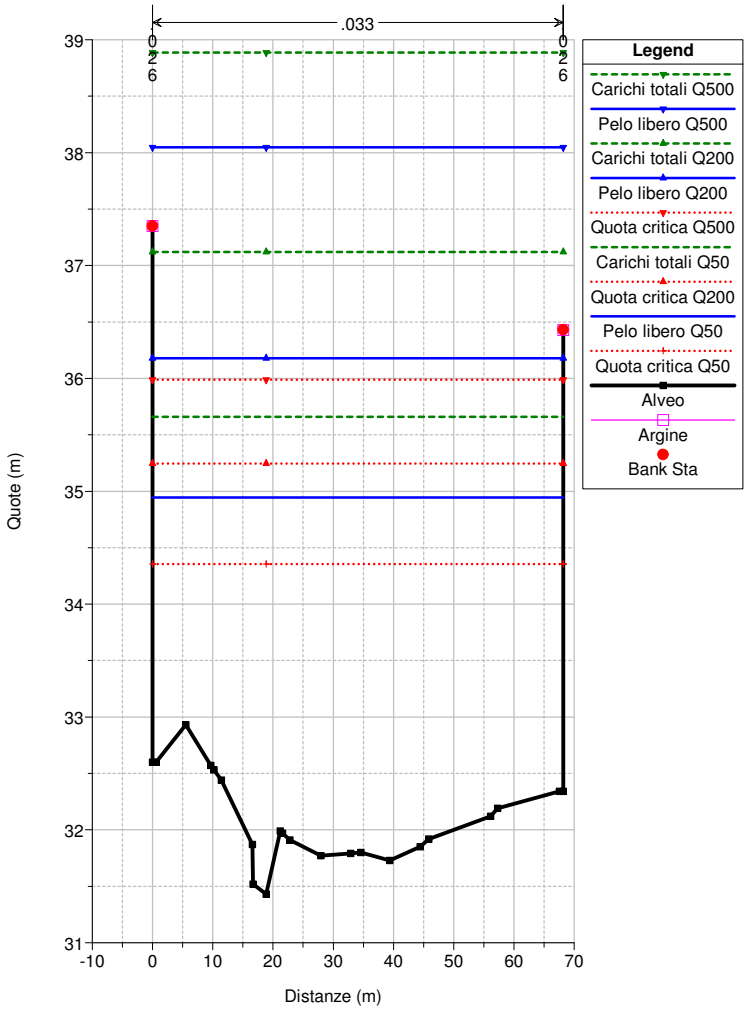
River = Bisagno Reach = Trens Veilino RS = 73.2 E' la sezione immediatamente a valle del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

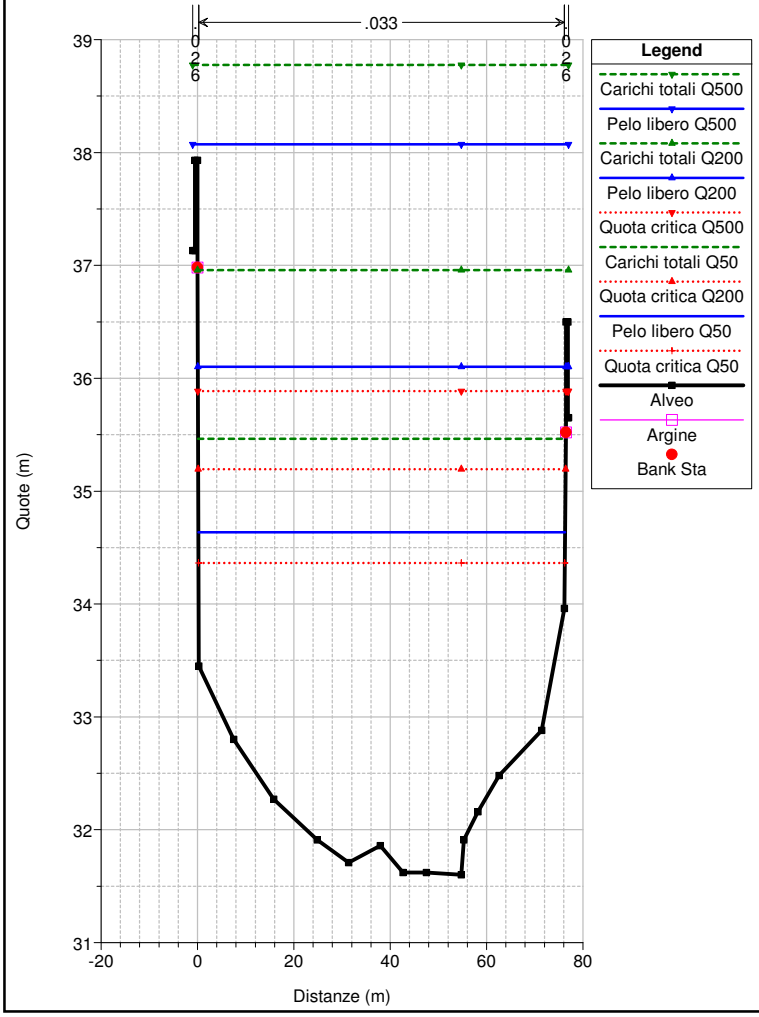
River = Bisagno Reach = Trens Veilino RS = 73.1 E' la sezione più a valle del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

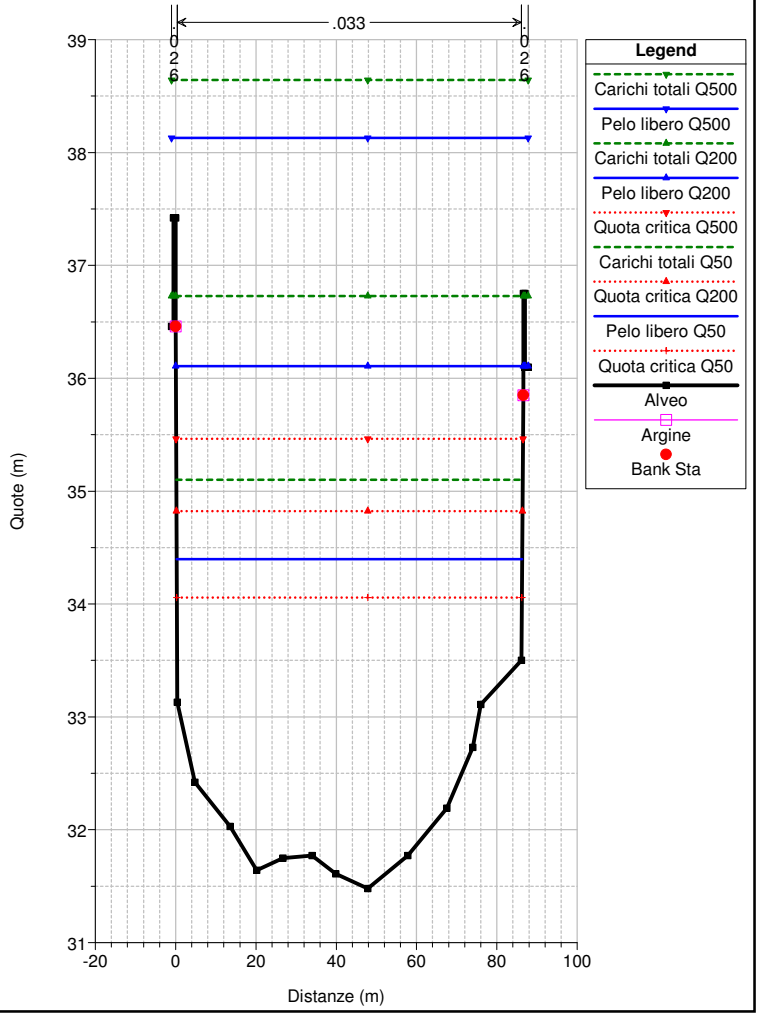
River = Bisagno Reach = Trens Veilino RS = 72. E la sezione a valle del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

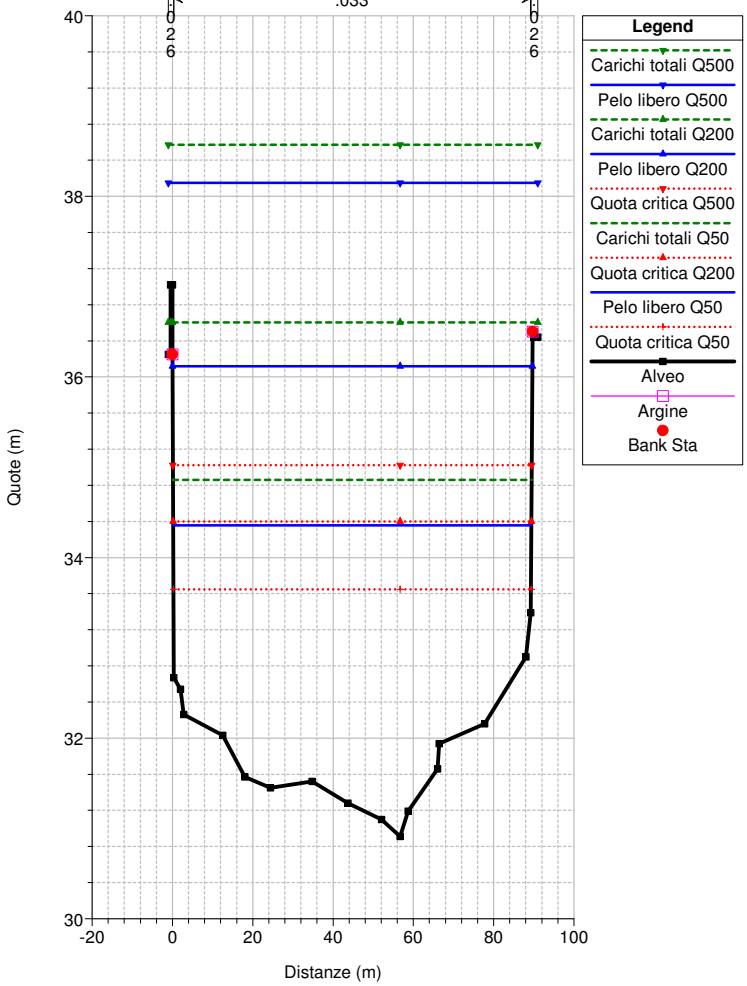
River = Bisagno Reach = Trens Veilino RS = 71.



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

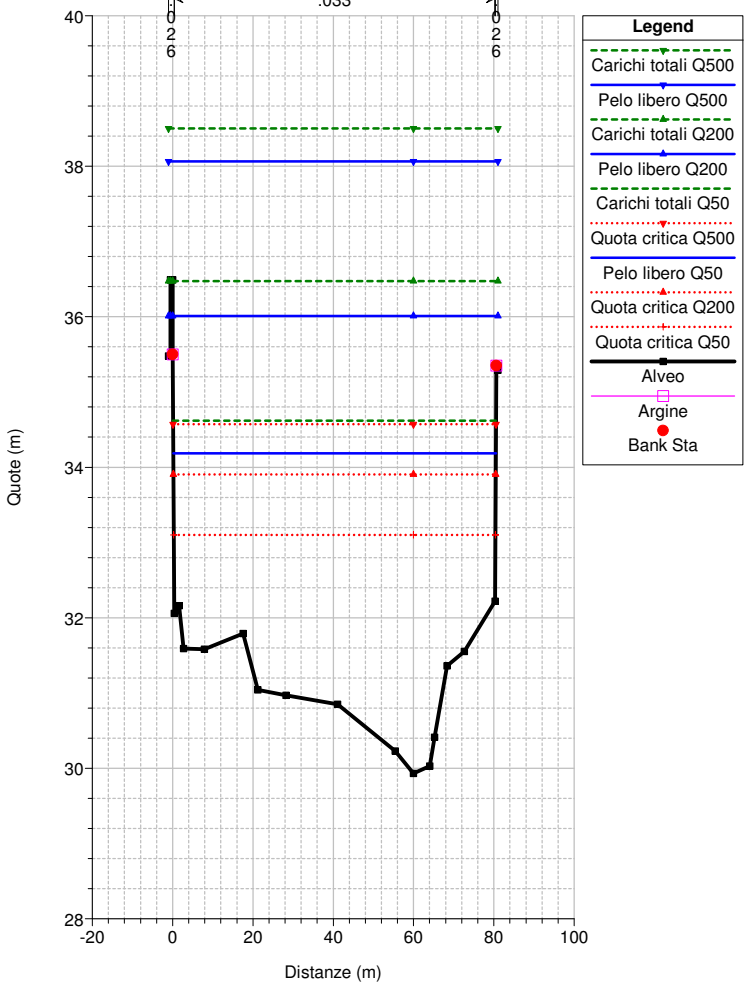
River = Bisagno Reach = Trens Veilino RS = 70.



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

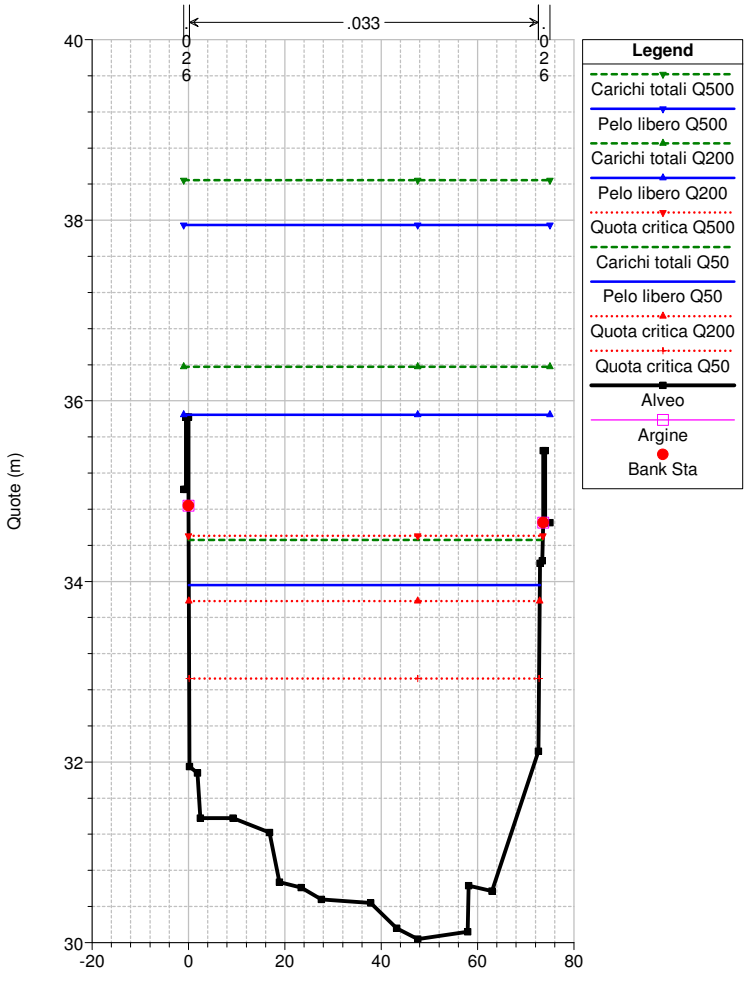
River = Bisagno Reach = Trens Veilino RS = 69. E' due sezioni a monte del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

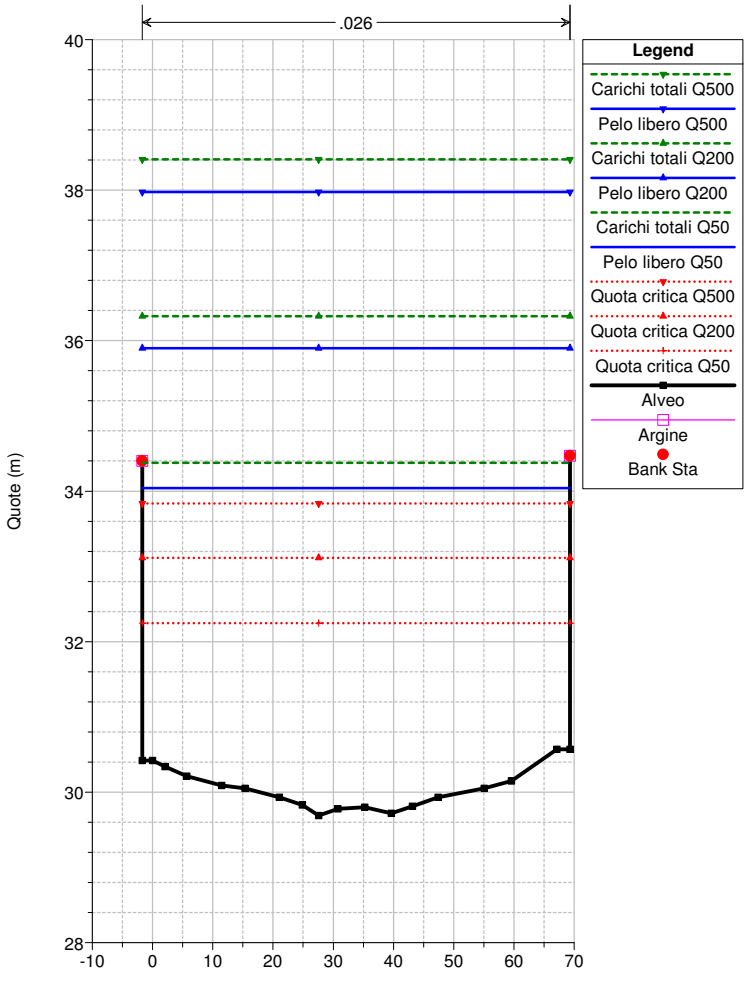
River = Bisagno Reach = Trens Veilino RS = 68. E' la sezione a monte del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

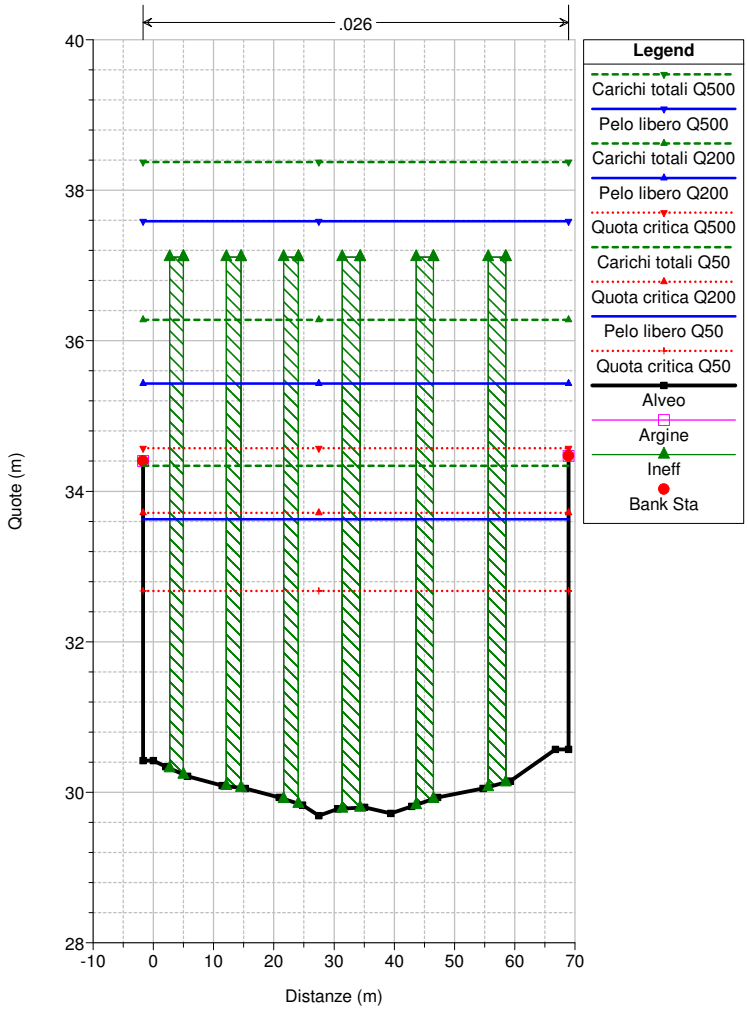
River = Bisagno Reach = Trens Veilino RS = 67.4 E' la sezione più a monte del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

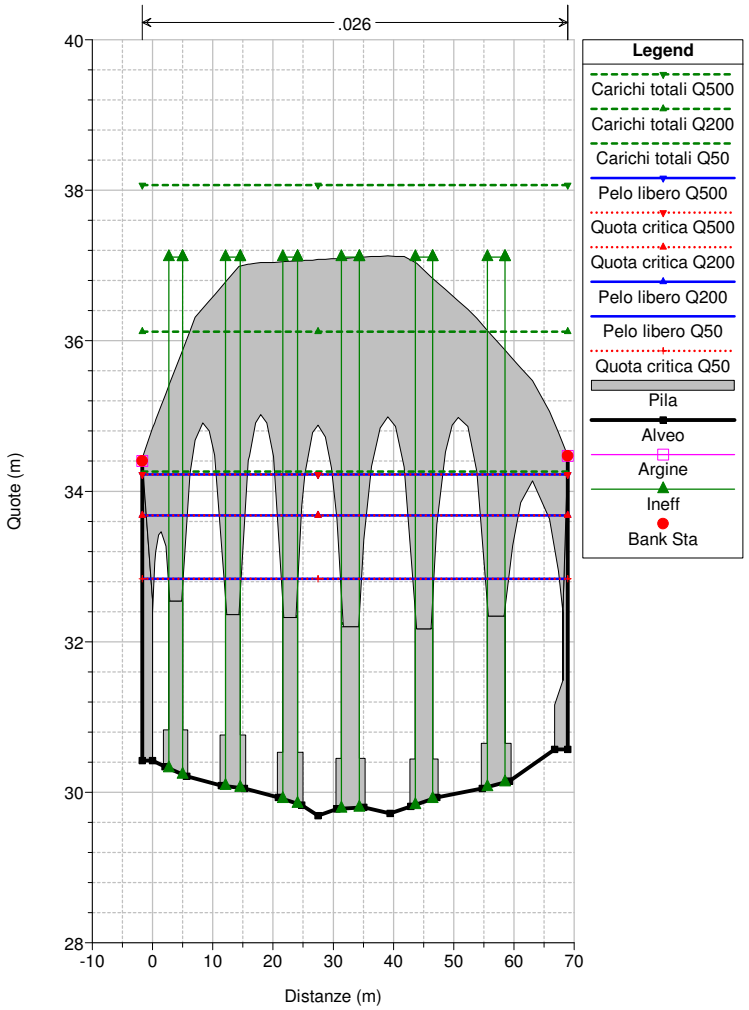
River = Bisagno Reach = Trens Veilino RS = 67.3 E' la sezione immediatamente a monte del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

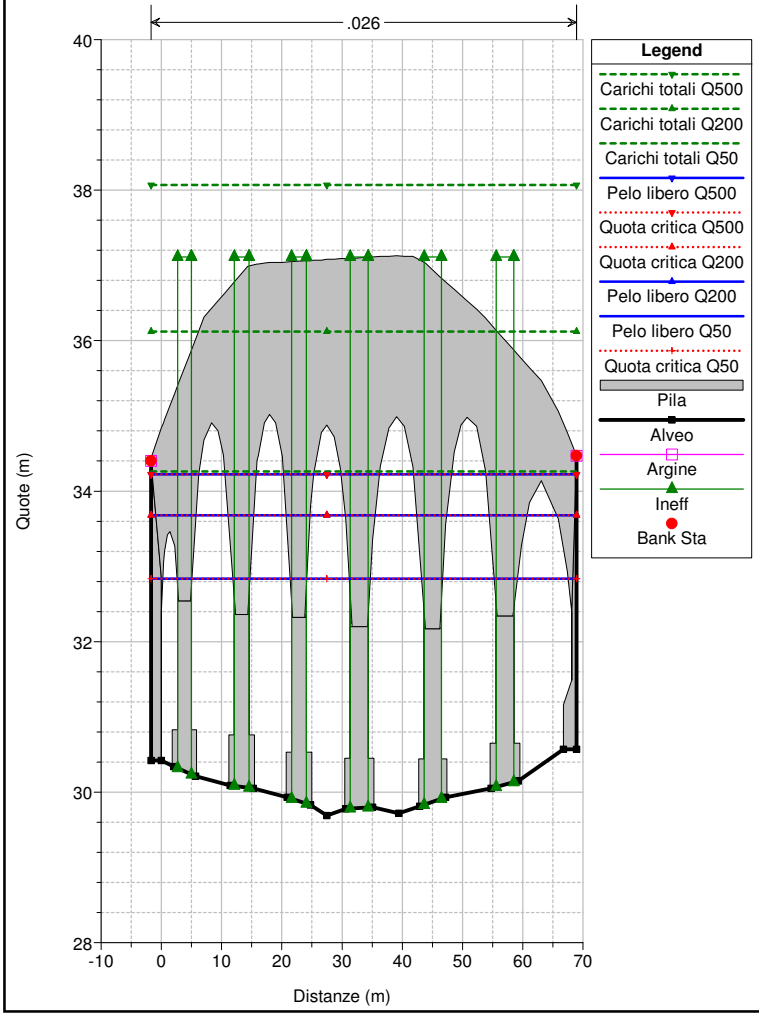
River = Bisagno Reach = Trens Veilino RS = 67.25 BR BIS 67 Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

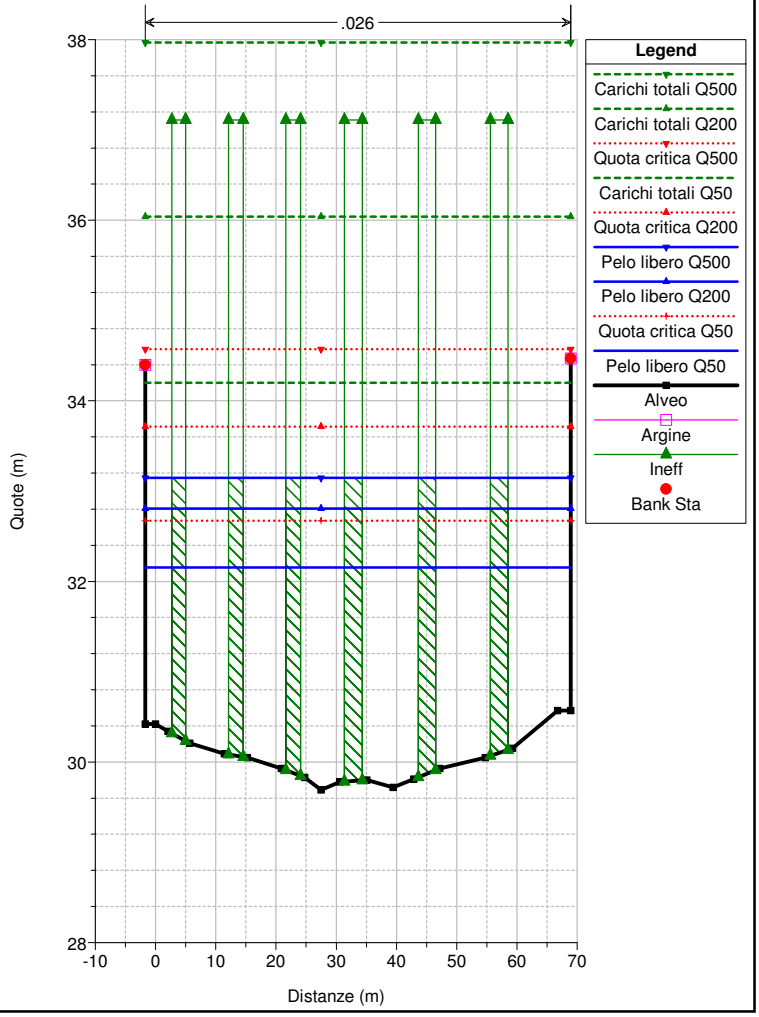
River = Bisagno Reach = Trens Veilino RS = 67.25 BR BIS 67 Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

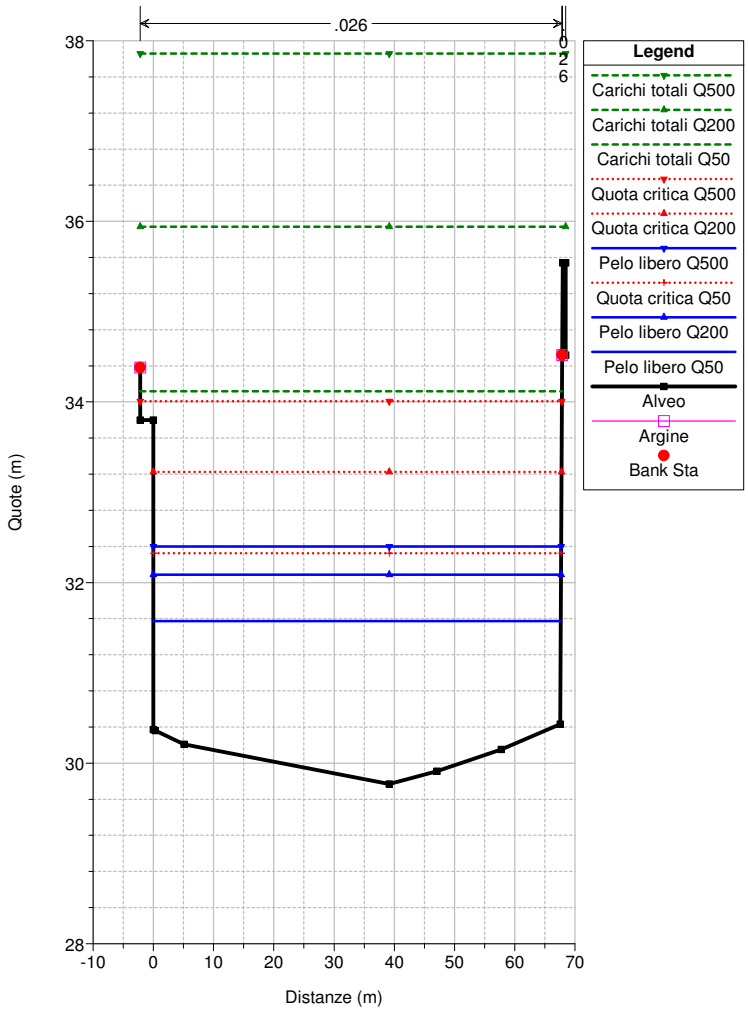
River = Bisagno Reach = Trens Veilino RS = 67.2 E' la sezione immediatamente a valle del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

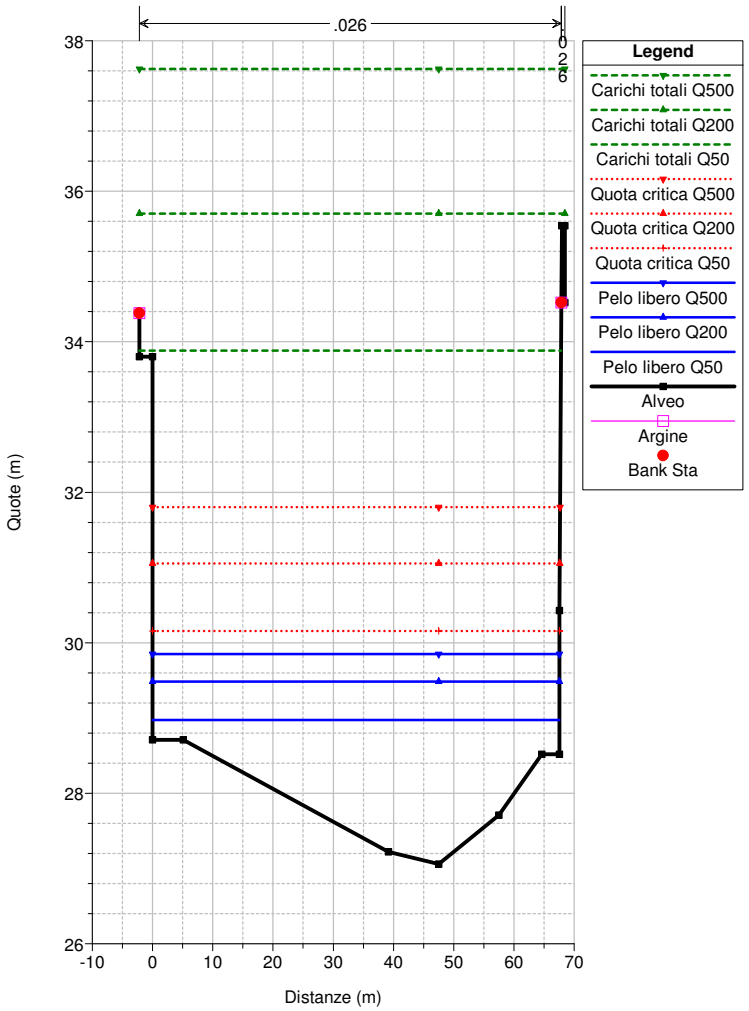
River = Bisagno Reach = Trens Veilino RS = 67.11 E' la sezione più a valle del Ponte Carrega, in corrispondenza d



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

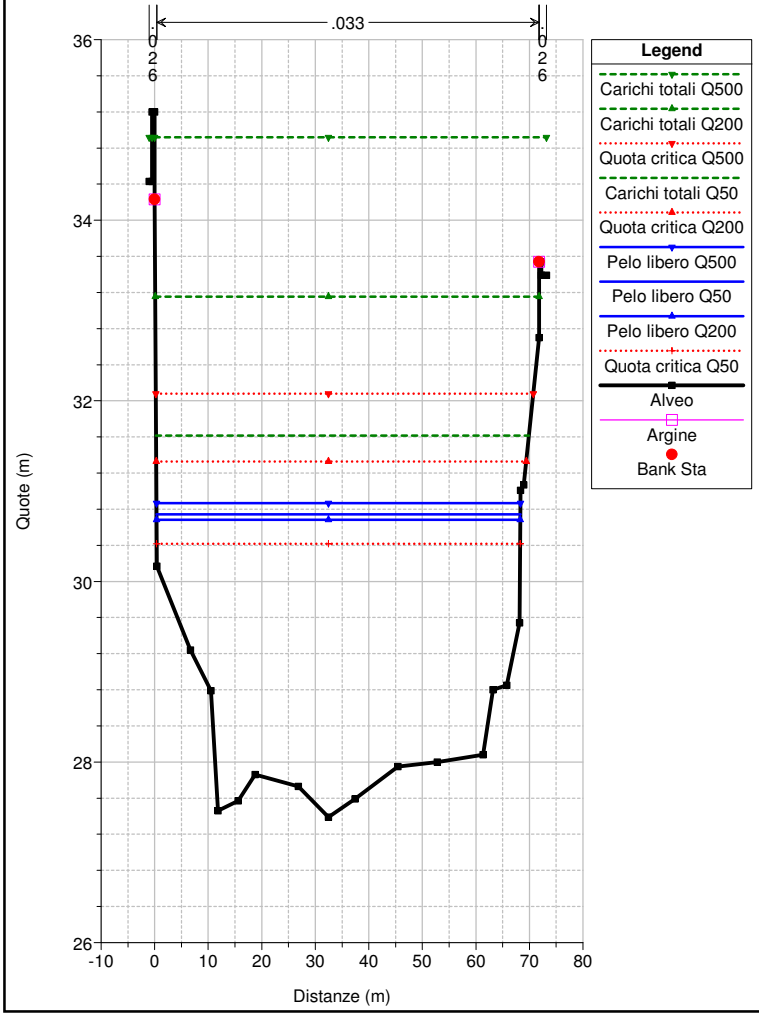
River = Bisagno Reach = Trens Veilino RS = 67.1 E' la sezione più a valle della brigl



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

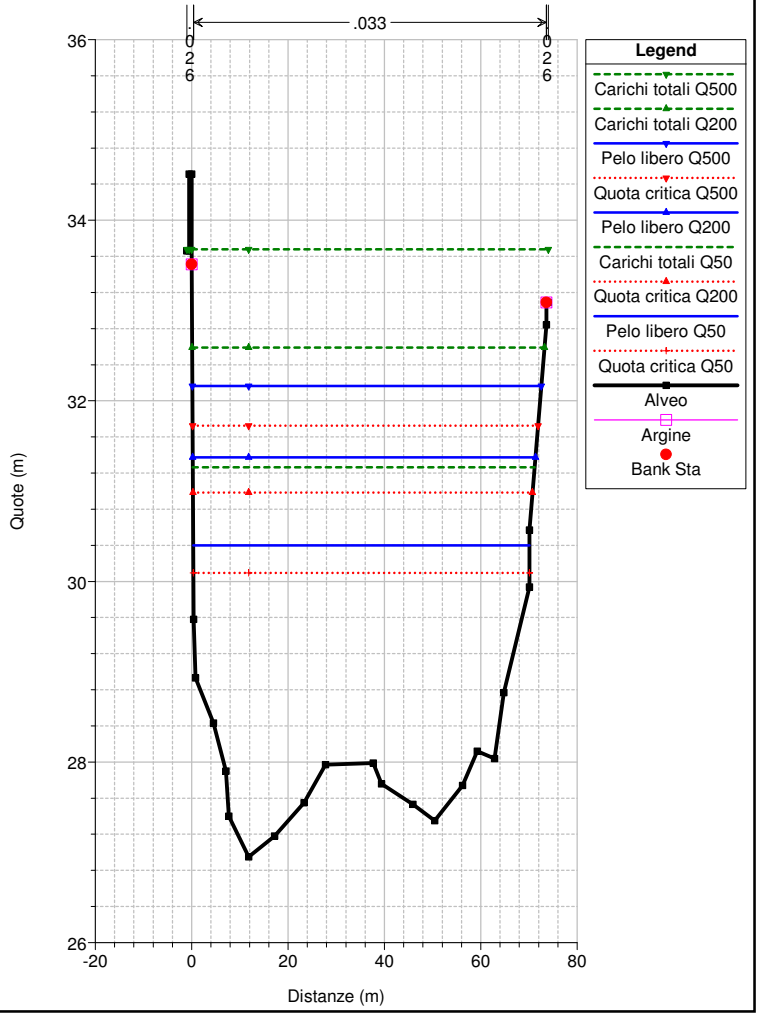
River = Bisagno Reach = Trens Veilino RS = 66. E' la sezione a valle del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

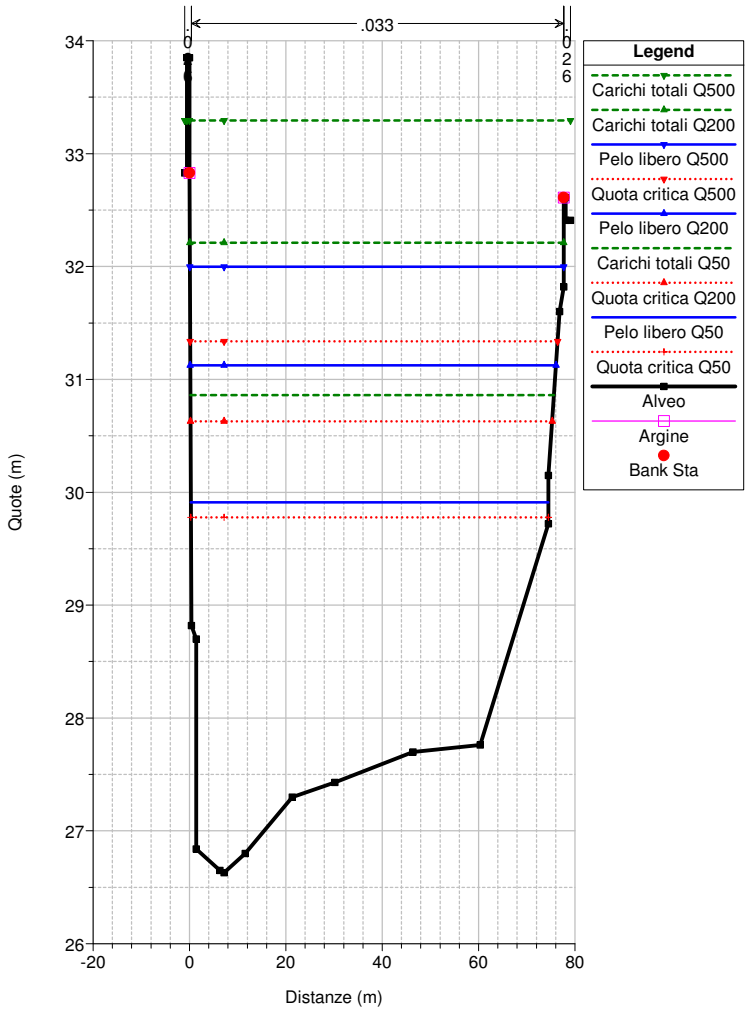
River = Bisagno Reach = Trens Veilino RS = 65.



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

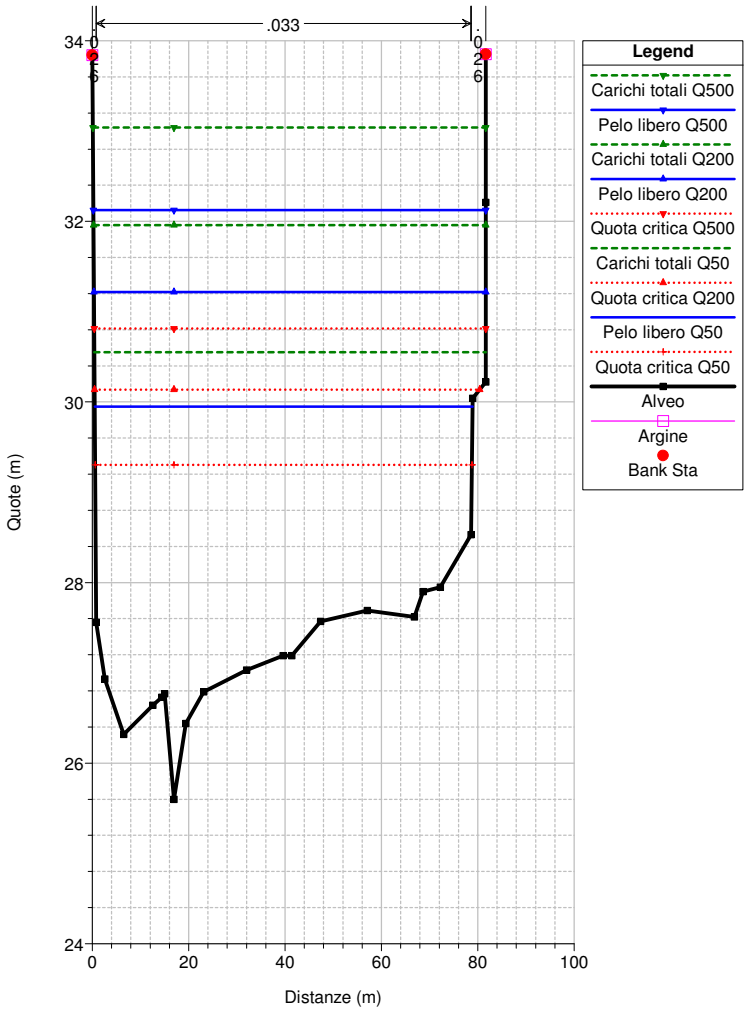
River = Bisagno Reach = Trens Veilino RS = 64. E' la sezione a monte del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

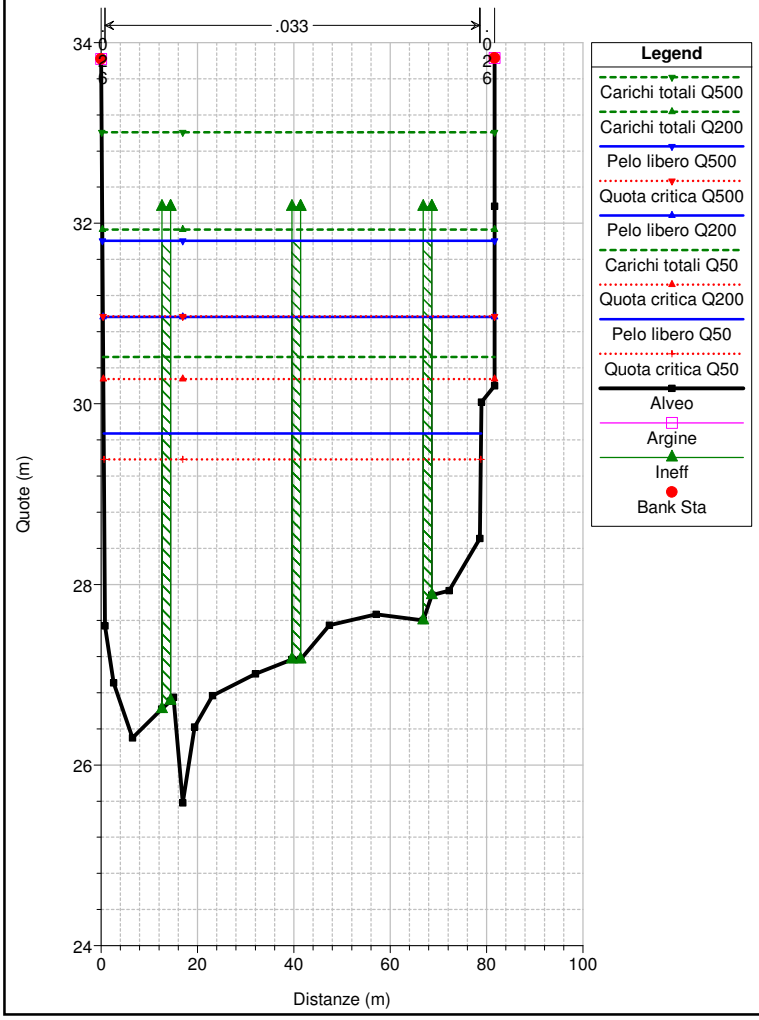
River = Bisagno Reach = Trens Veilino RS = 63.4 E' la sezione più a monte del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

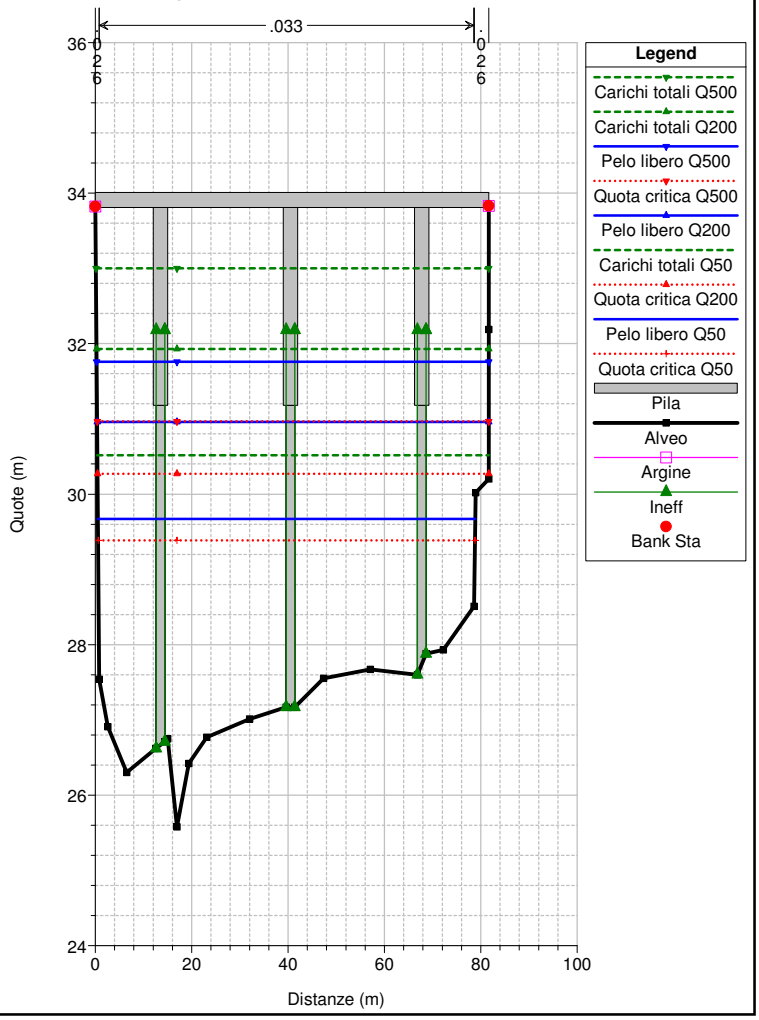
River = Bisagno Reach = Trens Veilino RS = 63.3 E' la sezione subito a monte del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

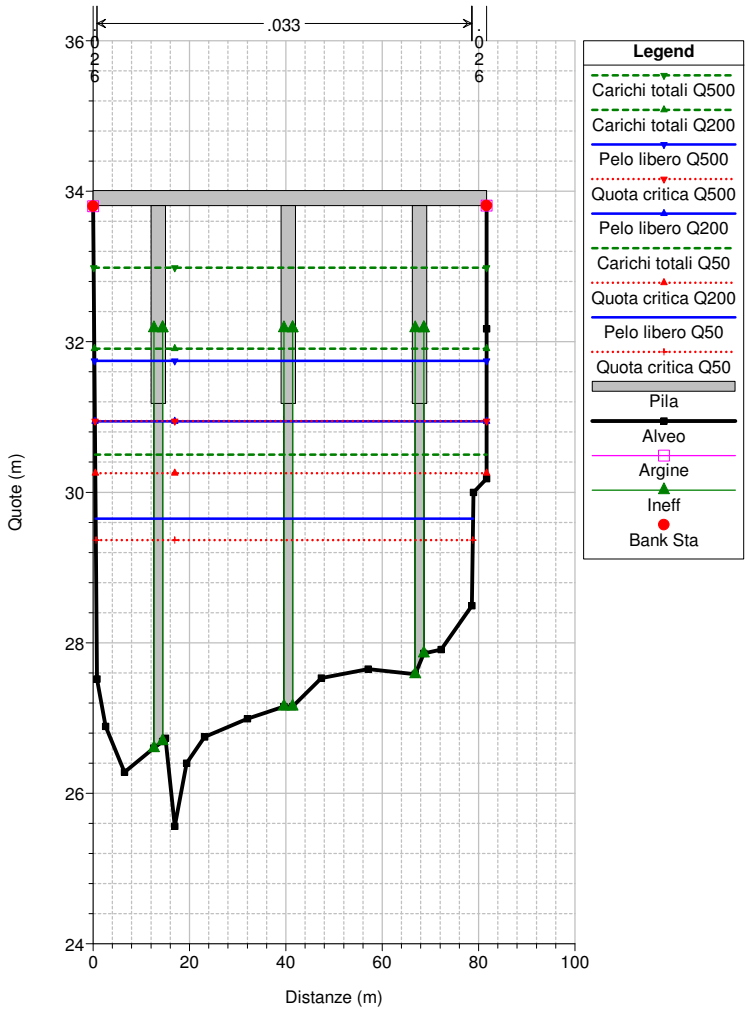
River = Bisagno Reach = Trens Veilino RS = 63.25 BR BIS 63 Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

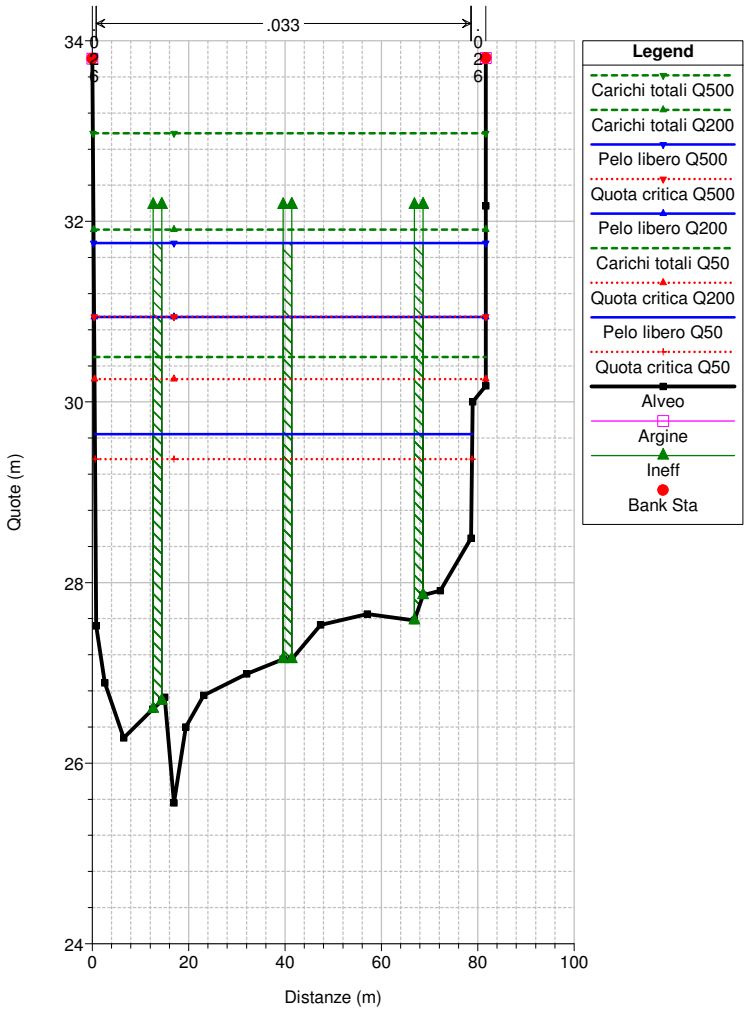
River = Bisagno Reach = Trens Veilino RS = 63.25 BR BIS 63 Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

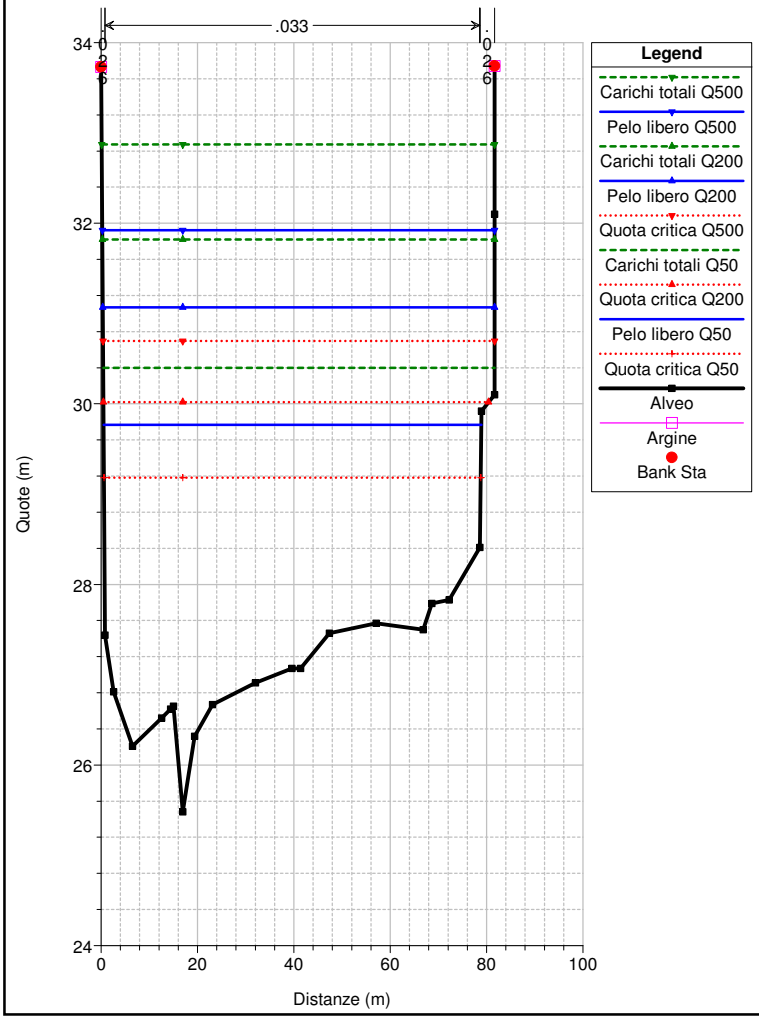
River = Bisagno Reach = Trens Veilino RS = 63.2 E' la sezione subito a valle del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

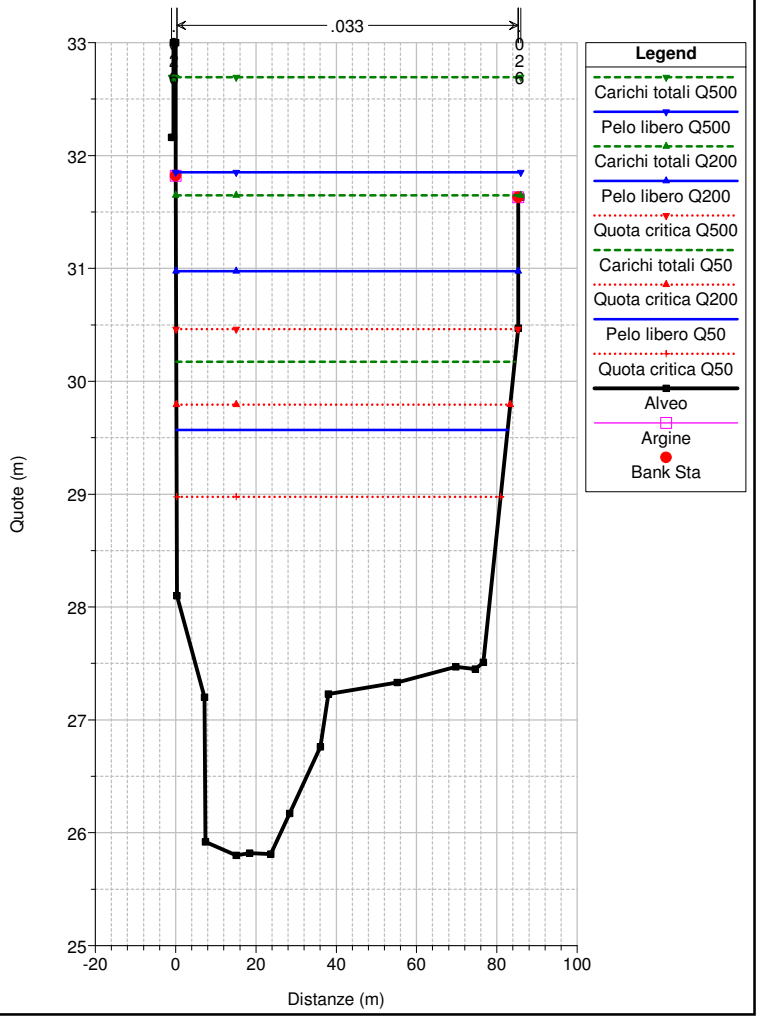
River = Bisagno Reach = Trens Veilino RS = 63.1 E' la sezione più a valle del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

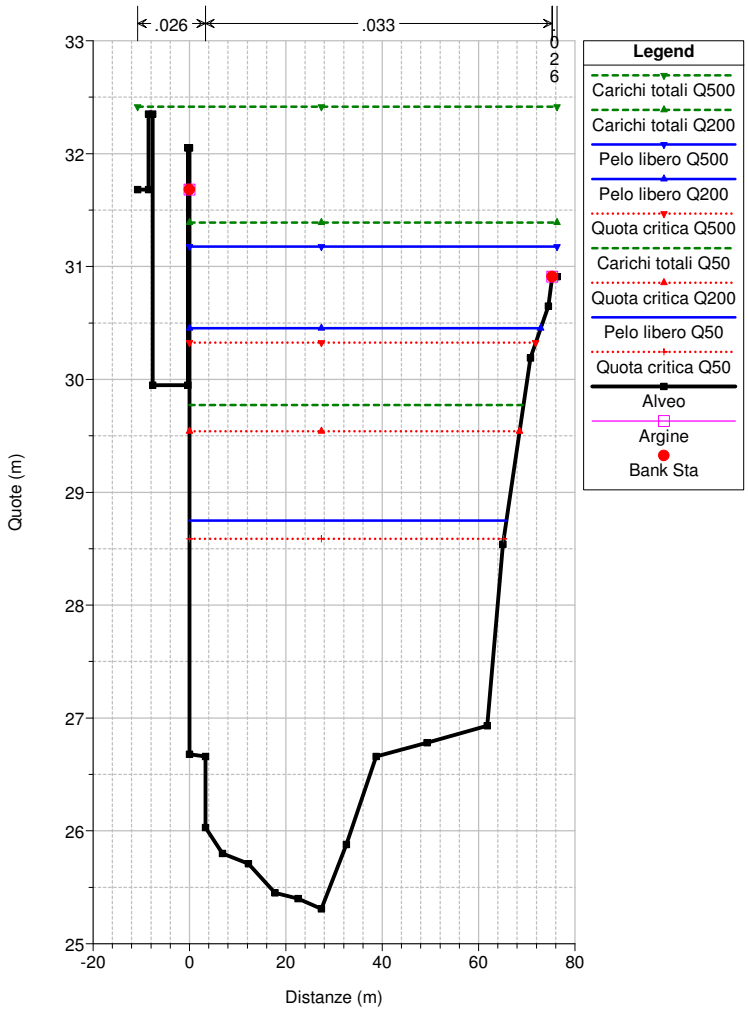
River = Bisagno Reach = Trens Veilino RS = 62. E' la sezione a valle del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

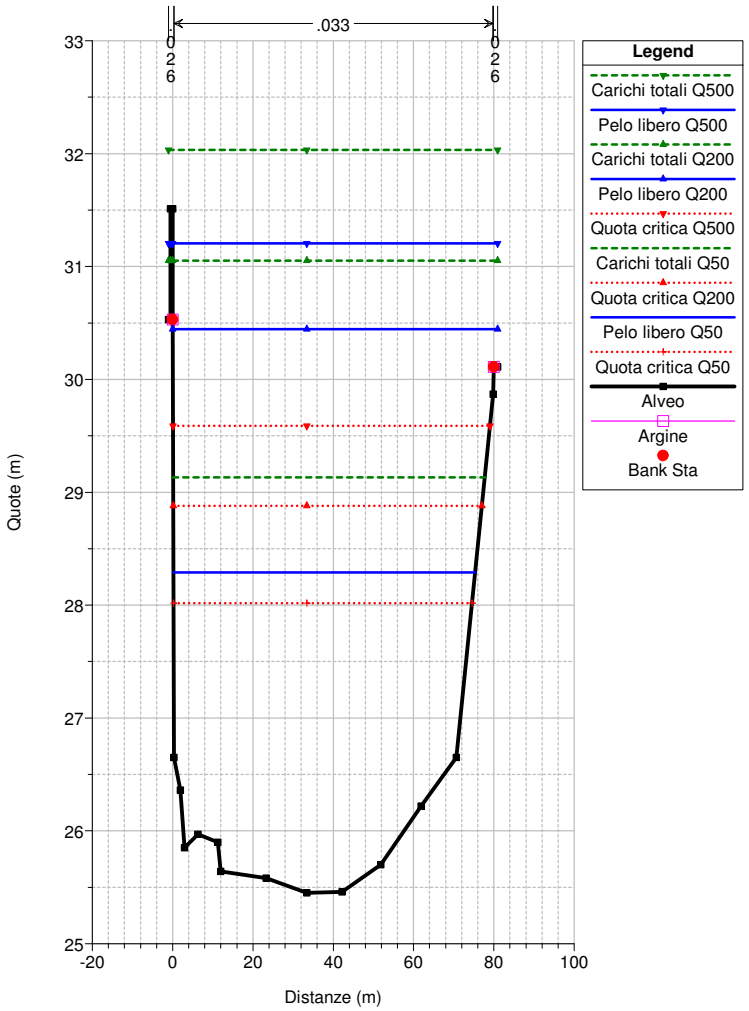
River = Bisagno Reach = Trens Veilino RS = 61. E' la sezione in corrispondenza del viadotto autostradale



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

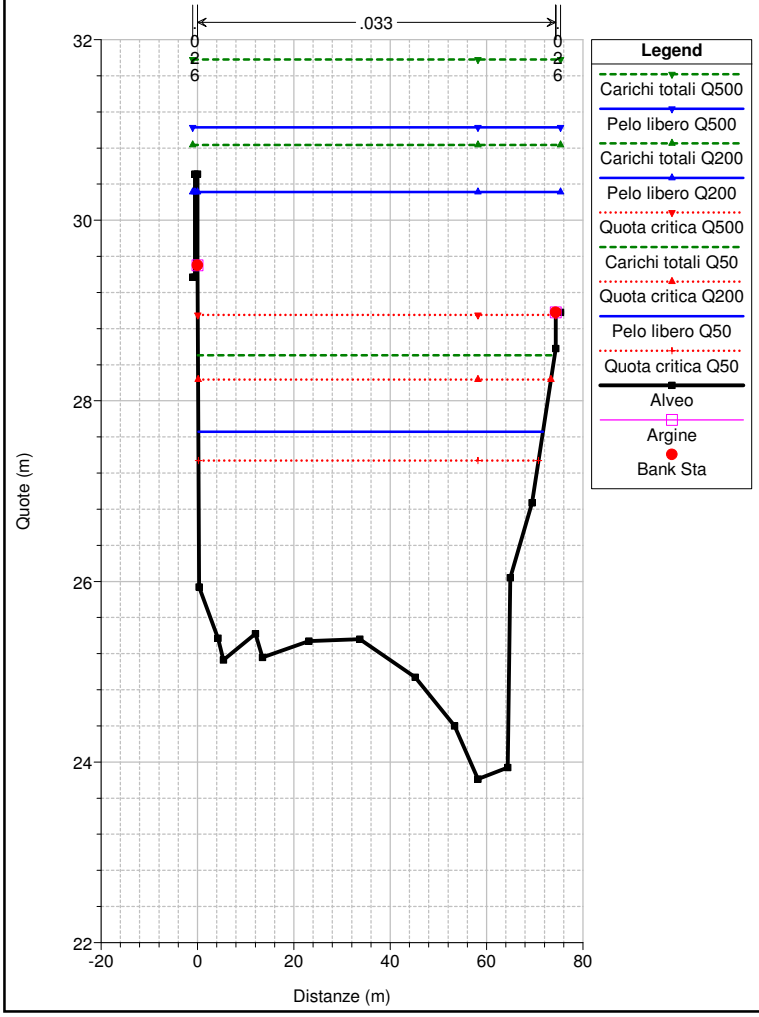
River = Bisagno Reach = Trens Veilino RS = 60. E' due sezioni a monte del Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

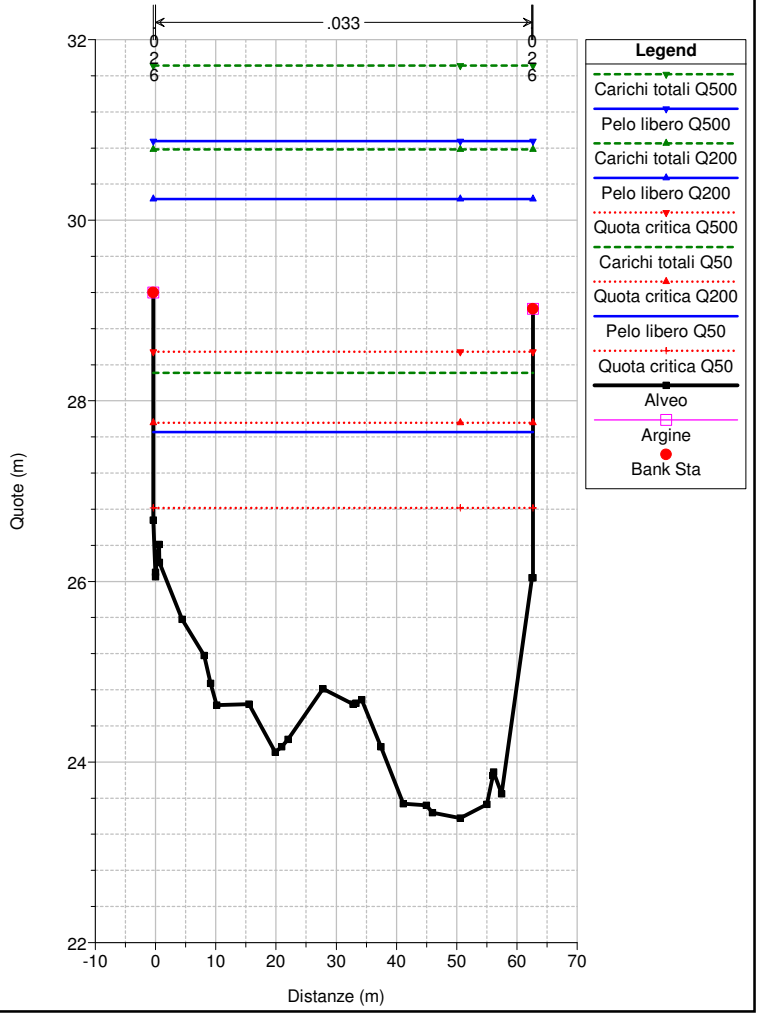
River = Bisagno Reach = Trens Veilino RS = 59. E' la sezione subito a monte del Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

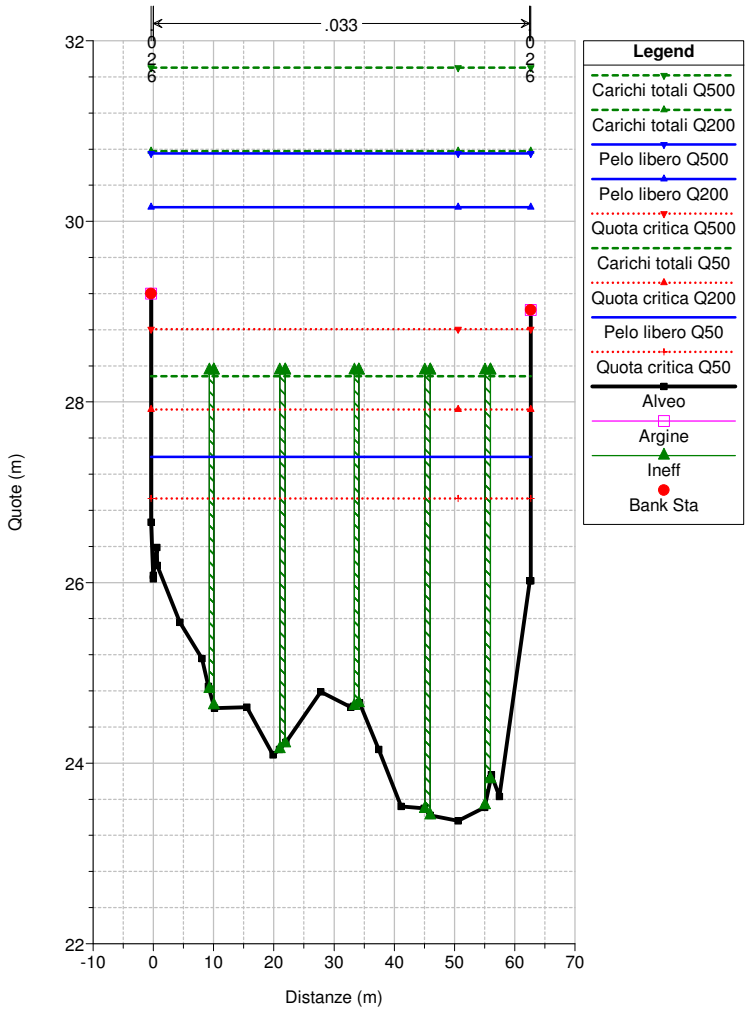
River = Bisagno Reach = Trens Veilino RS = 58.4 E' la sezione più a monte del Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

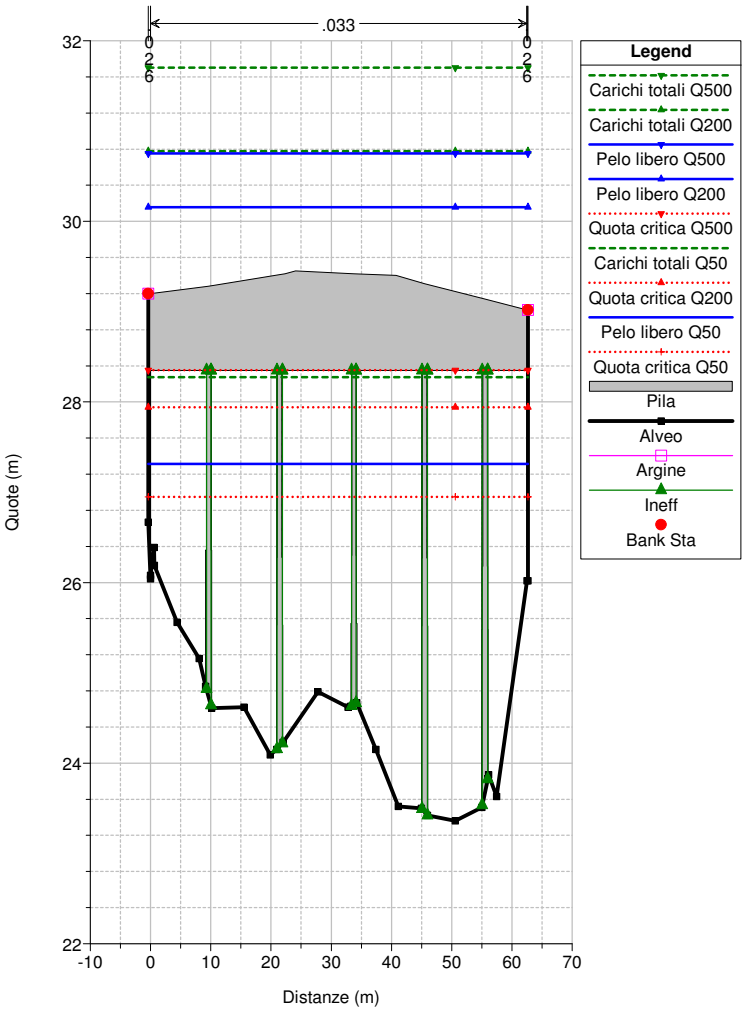
River = Bisagno Reach = Trens Veilino RS = 58.3 E' la sezione immediatamente a monte del Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

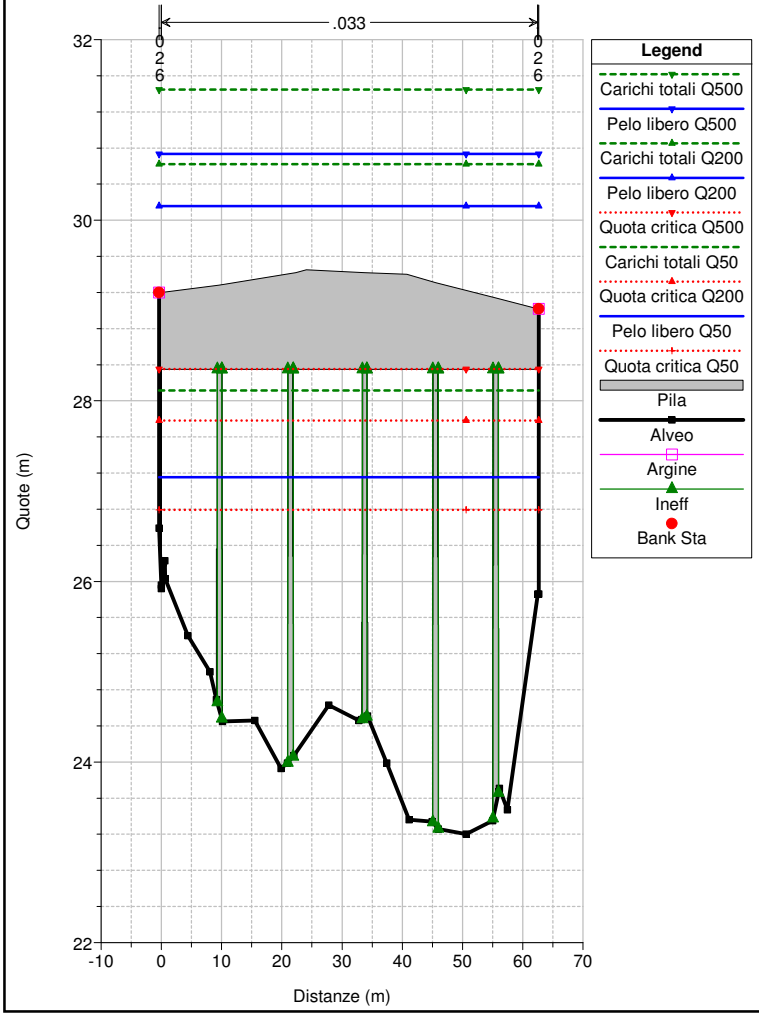
River = Bisagno Reach = Trens Veilino RS = 58.25 BR BIS 58 Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

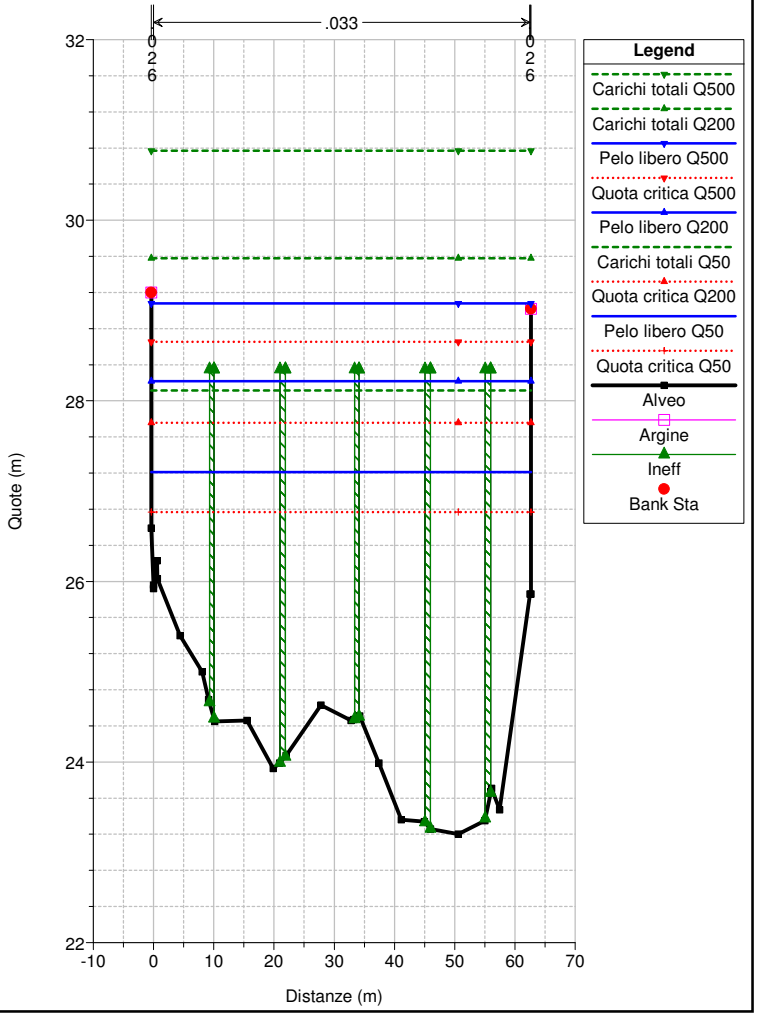
River = Bisagno Reach = Trens Veilino RS = 58.25 BR BIS 58 Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

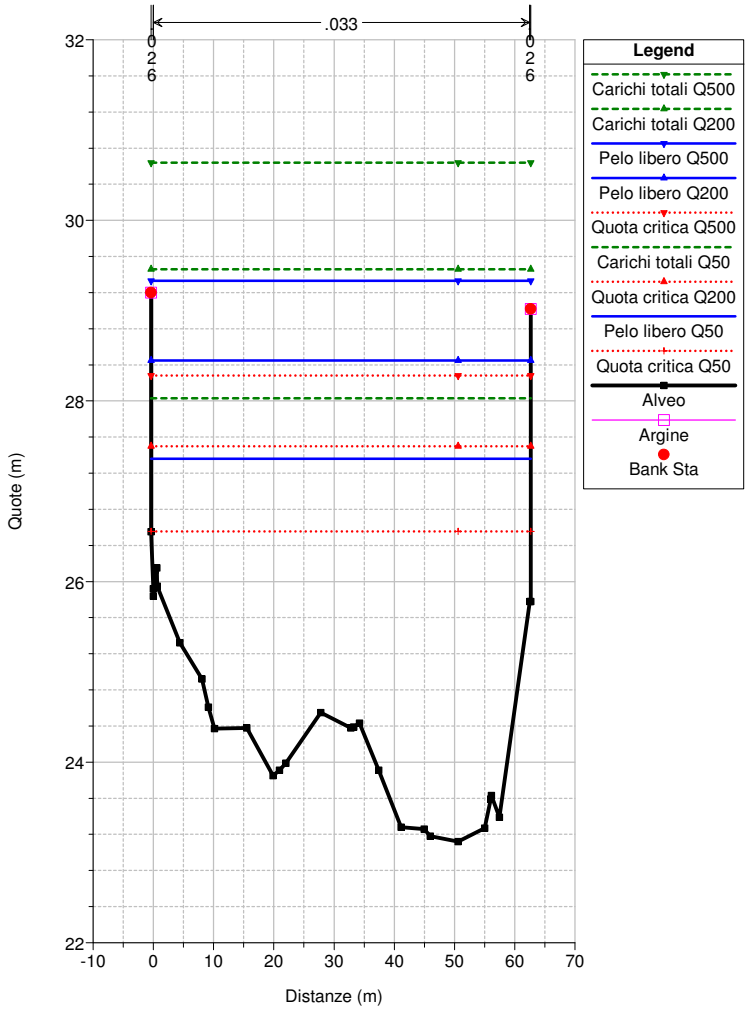
River = Bisagno Reach = Trens Veilino RS = 58.2 E' la sezione immediatamente a valle del Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

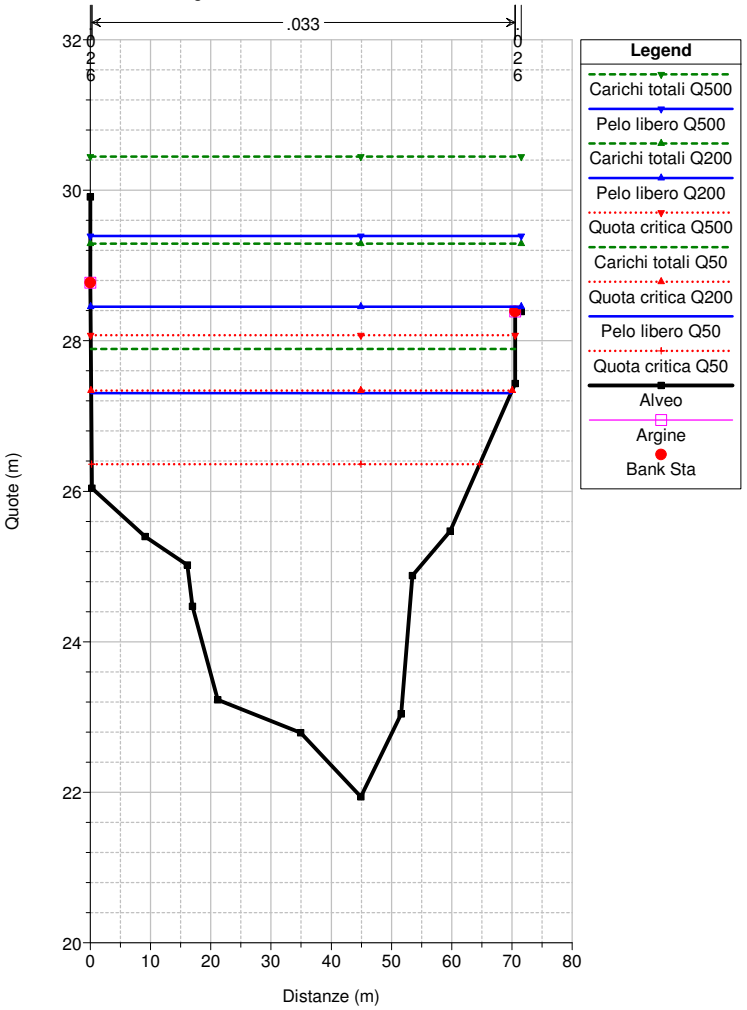
River = Bisagno Reach = Trens Veilino RS = 58.1 E' la sezione più a valle del Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

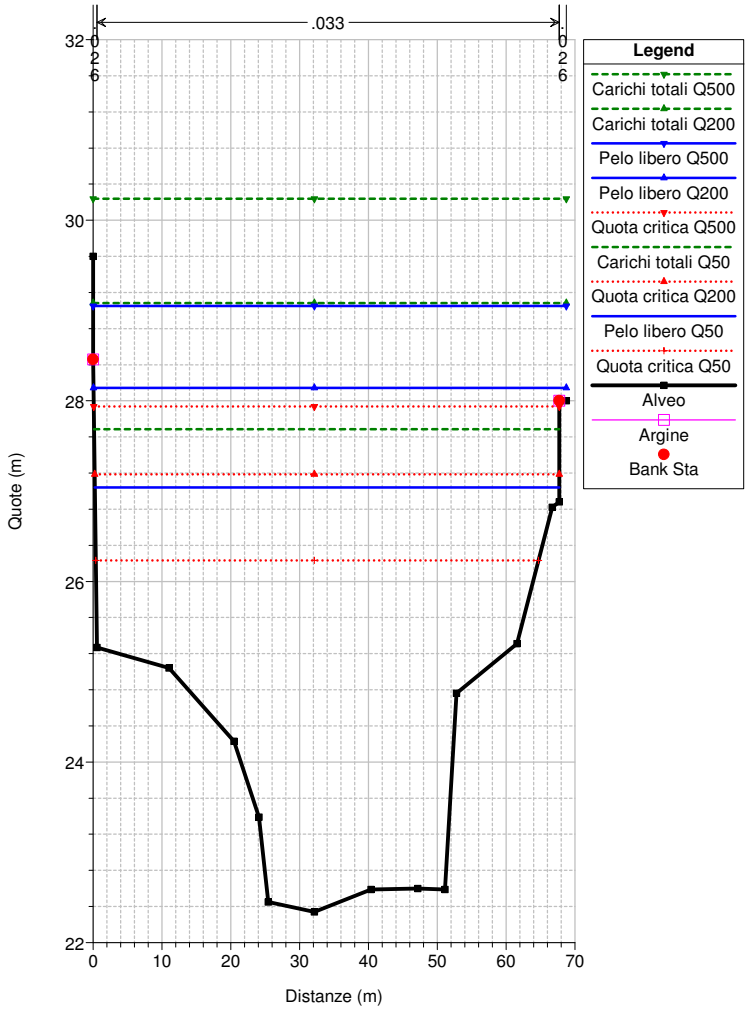
River = Bisagno Reach = Trens Veilino RS = 57. E' la sezione 14



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

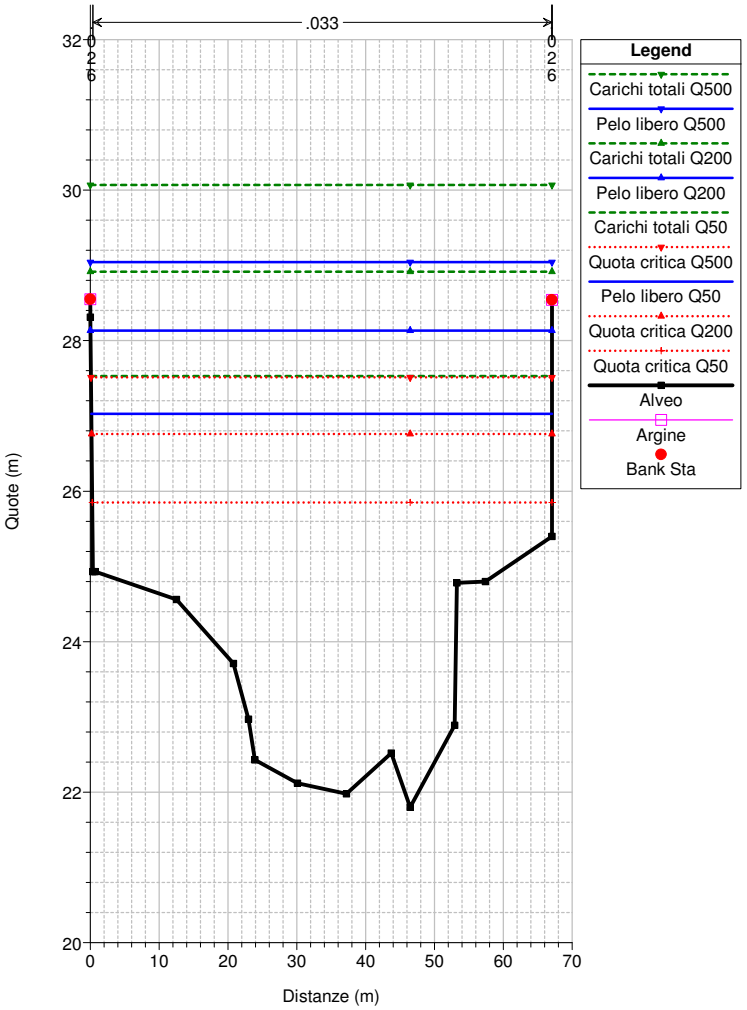
River = Bisagno Reach = Trens Veilino RS = 56. E' la sezione 13



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

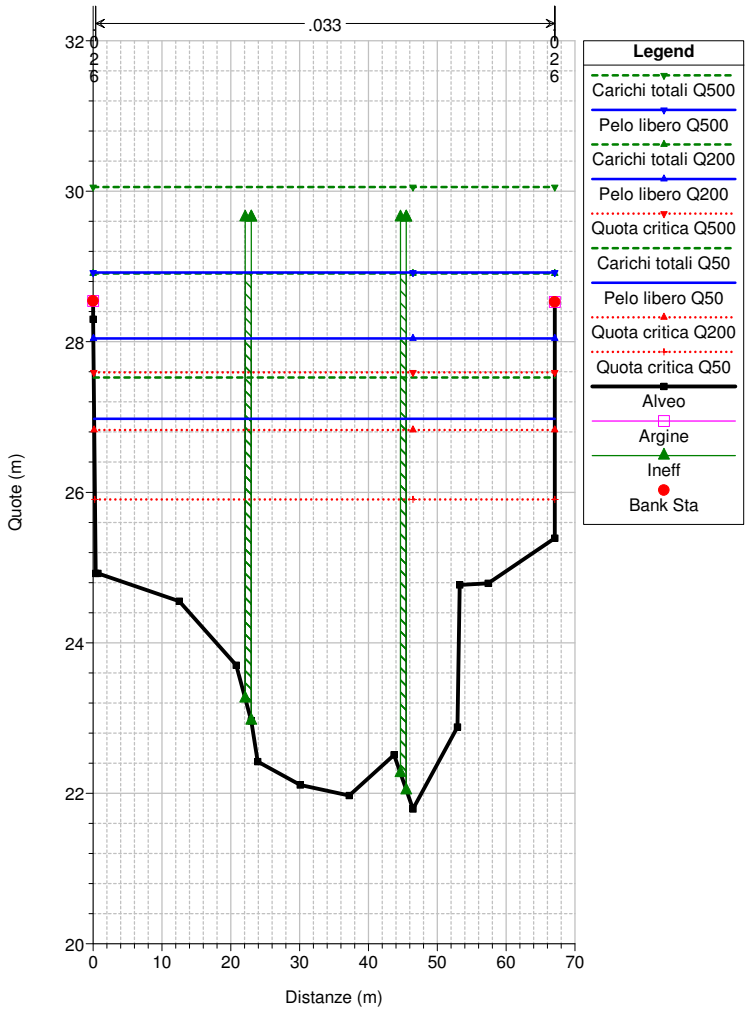
River = Bisagno Reach = Trens Veilino RS = 55.4 E' la sezione più a monte della passerella



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

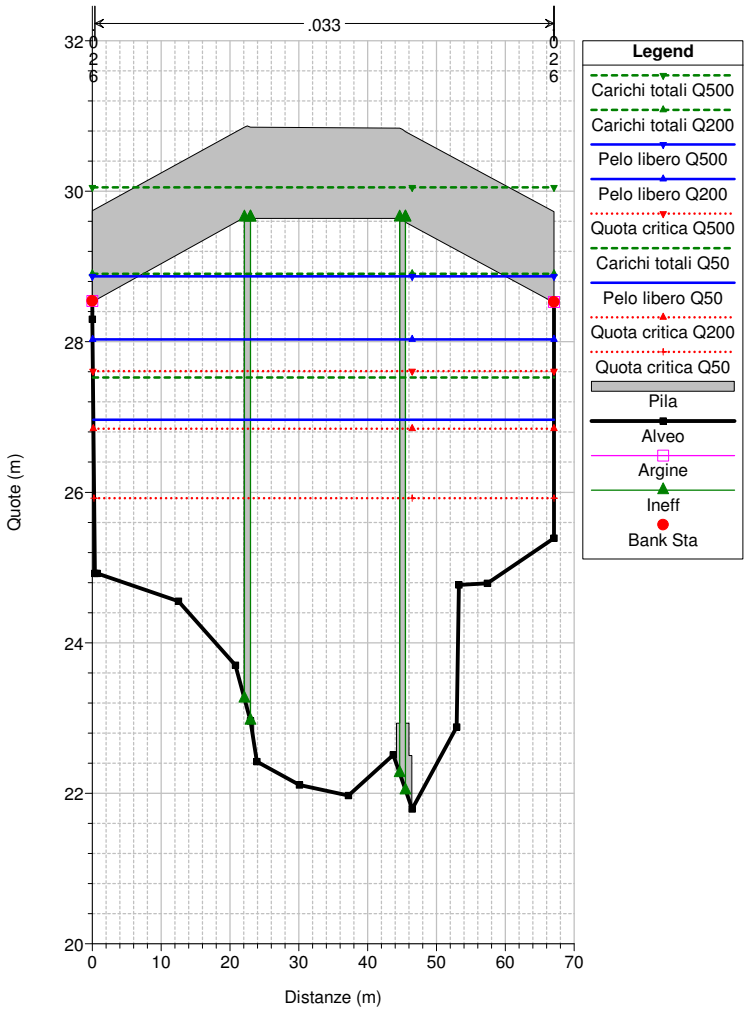
River = Bisagno Reach = Trens Veilino RS = 55.3 E' la sezione immediatamente a monte della passerella



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

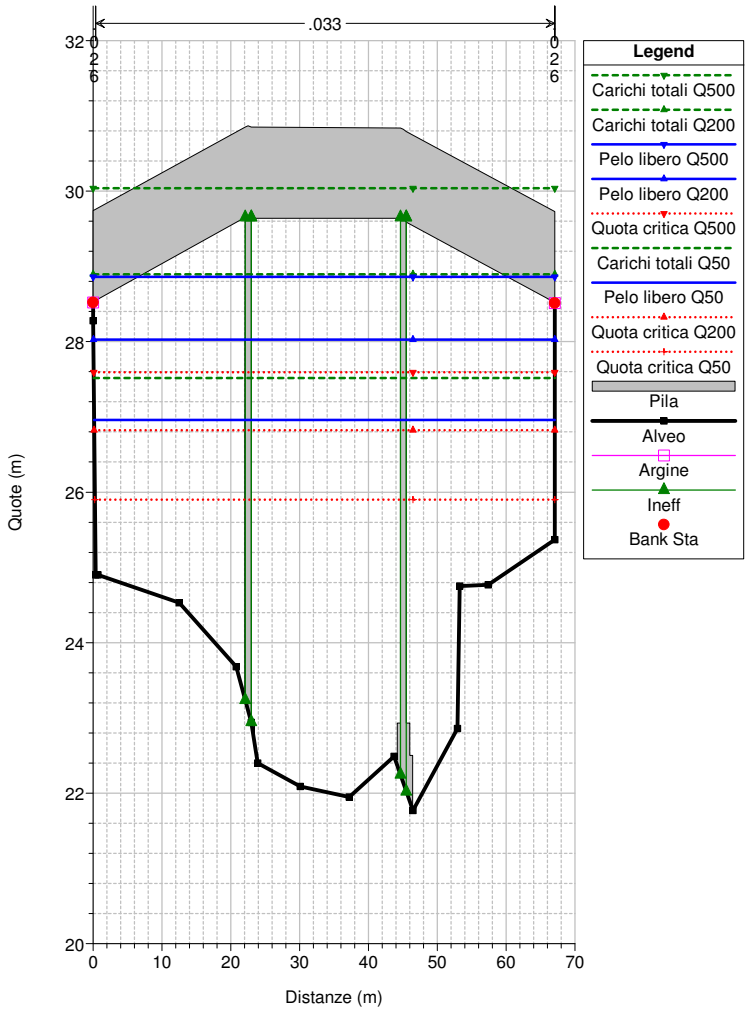
River = Bisagno Reach = Trens Veilino RS = 55.25 BR BIS 55 Passerella Pedonale



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

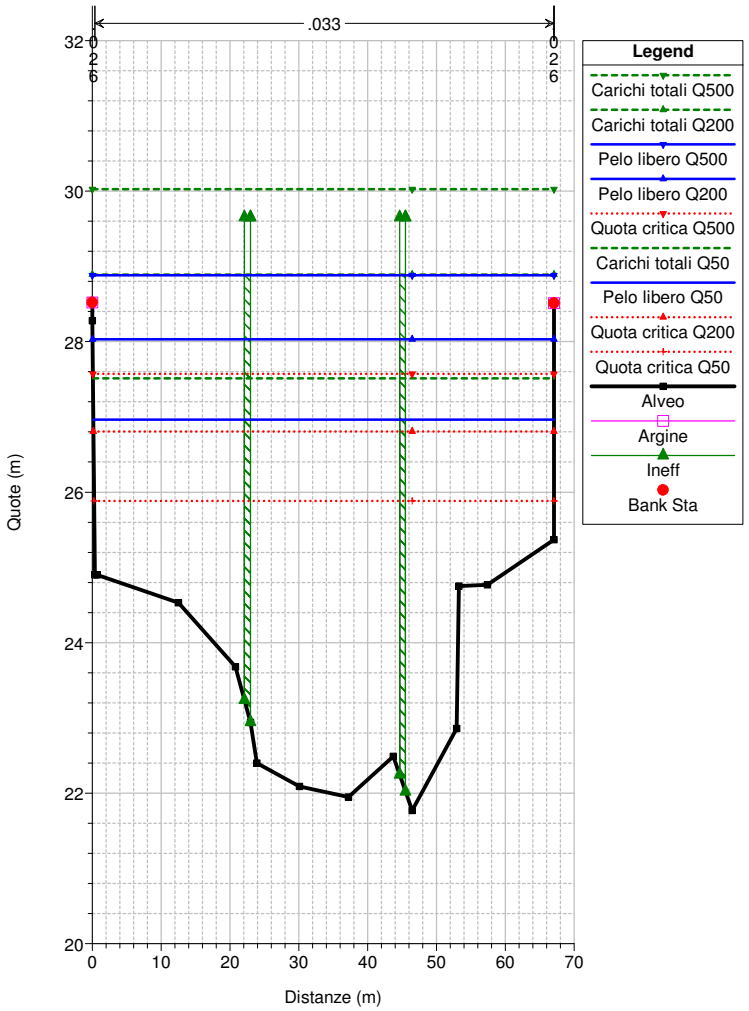
River = Bisagno Reach = Trens Veilino RS = 55.25 BR BIS 55 Passerella Pedonale



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

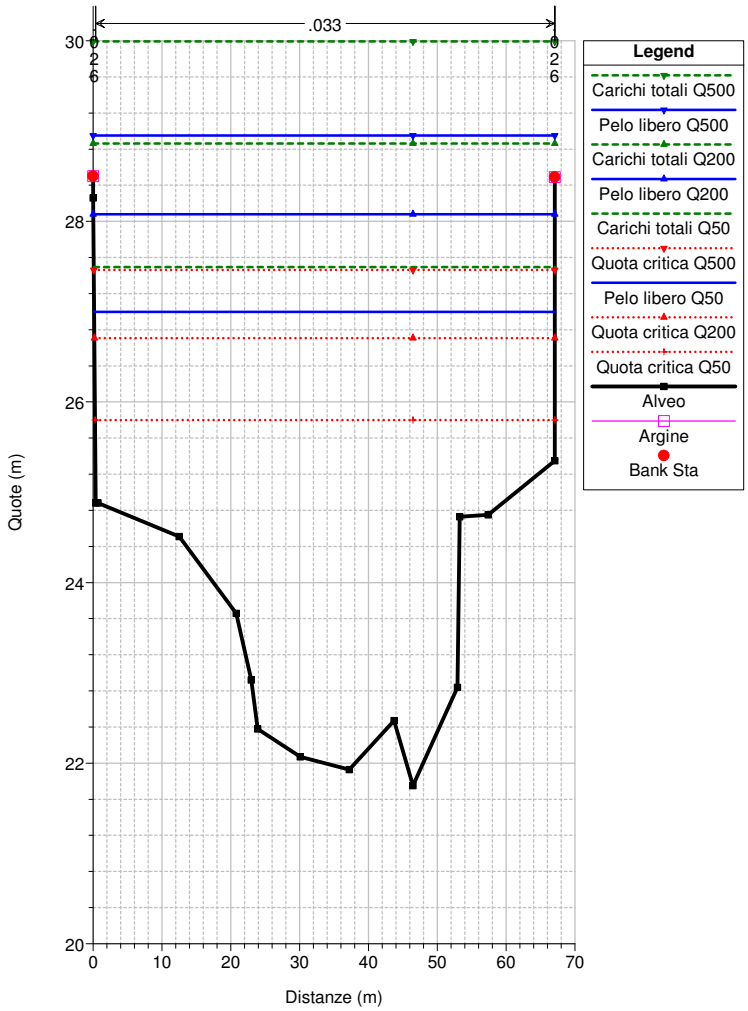
River = Bisagno Reach = Trens Veilino RS = 55.2 E' la sezione immediatamente a valle della passerella



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

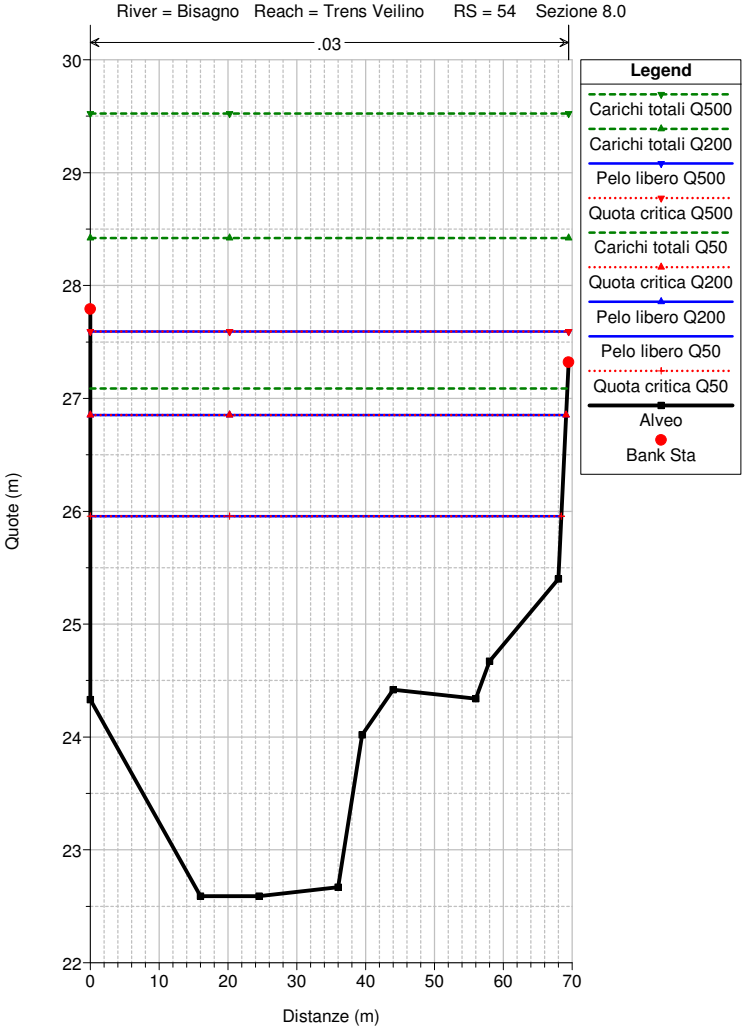
River = Bisagno Reach = Trens Veilino RS = 55.1 E' la sezione più a valle della passerella



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

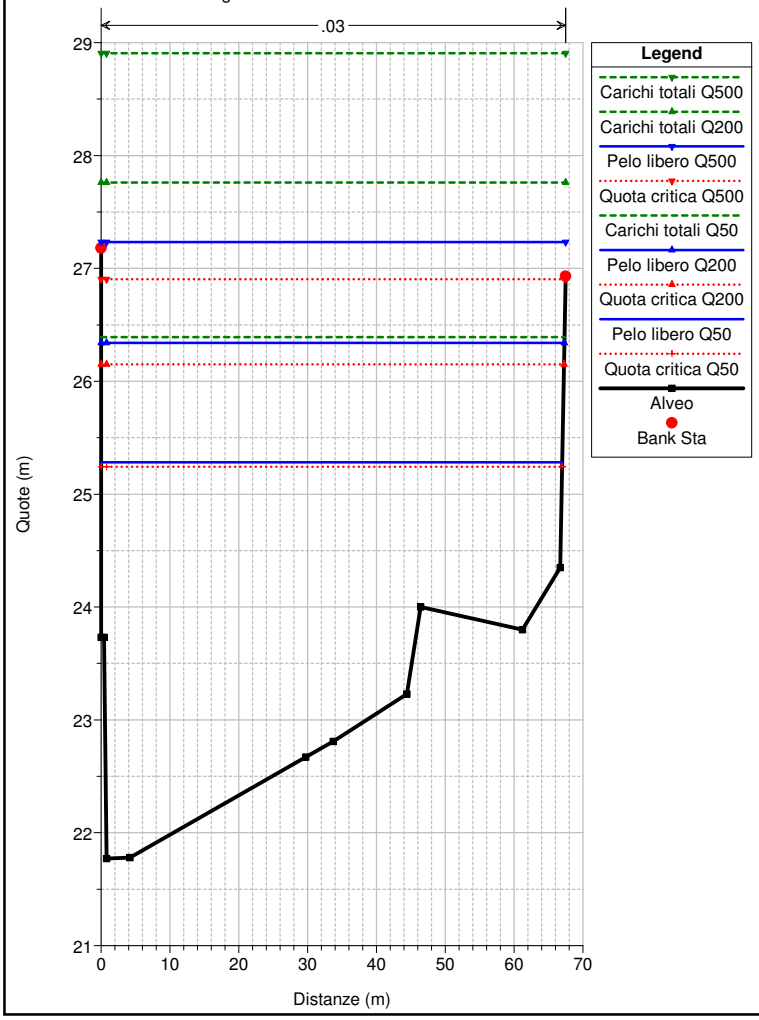
River = Bisagno Reach = Trens Veilino RS = 54 Sezione 8.0



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

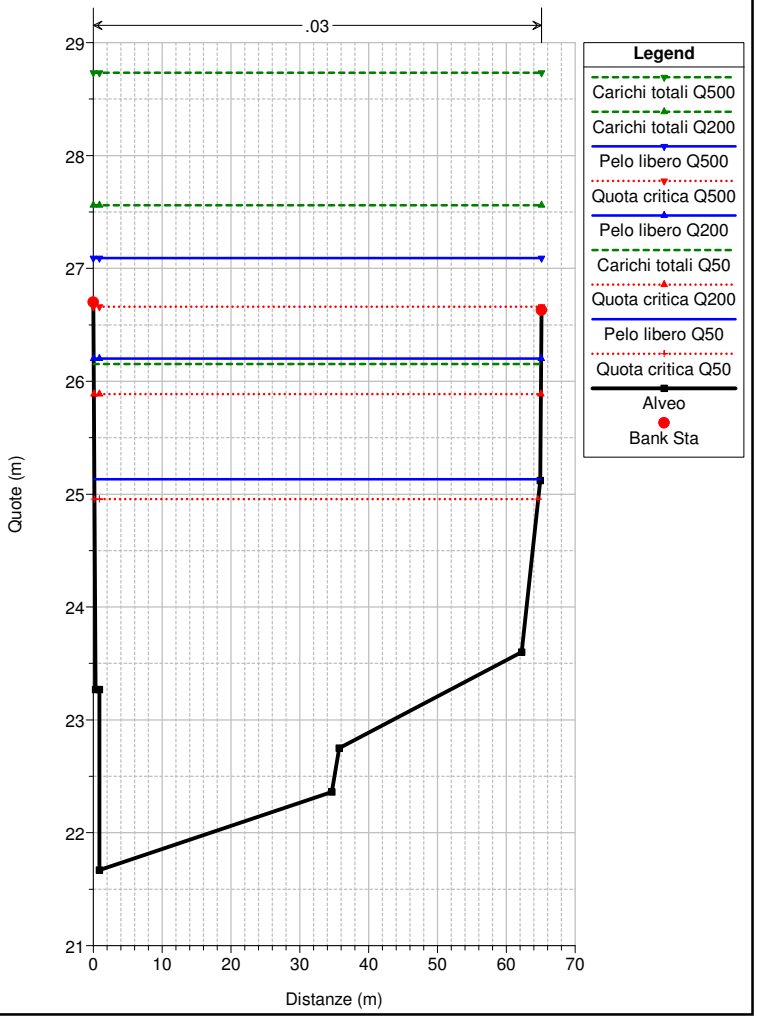
River = Bisagno Reach = Trens Veilino RS = 53 Sezione 7.0



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

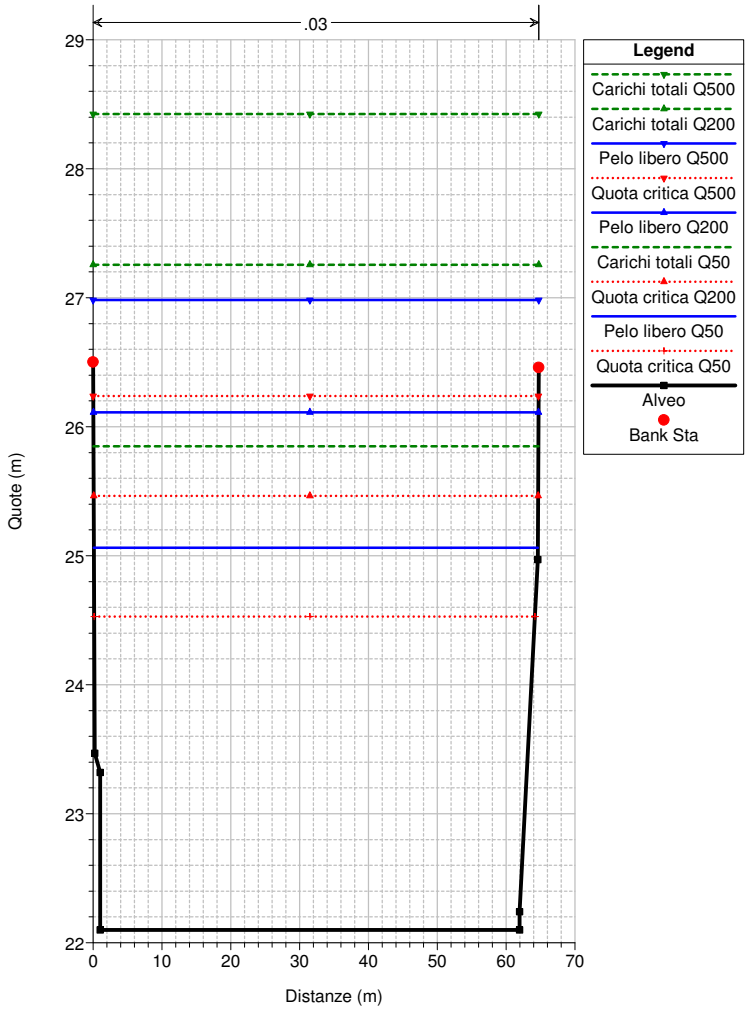
River = Bisagno Reach = Trens Veilino RS = 52. sez 15 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

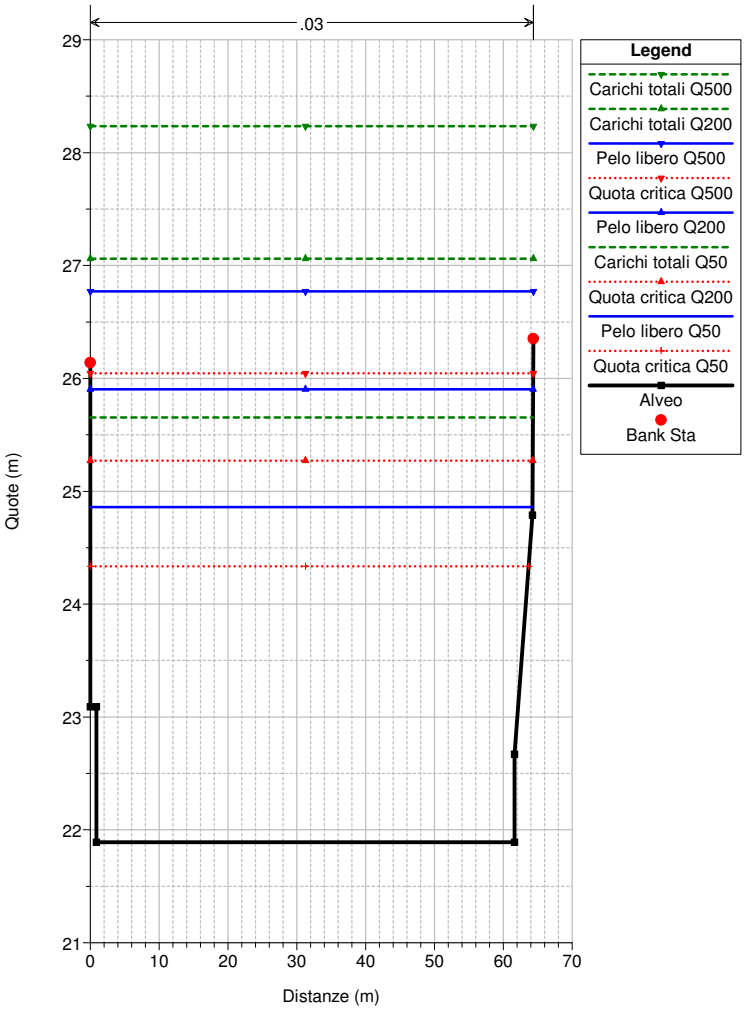
River = Bisagno Reach = Trens Veilino RS = 51. sez 14 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

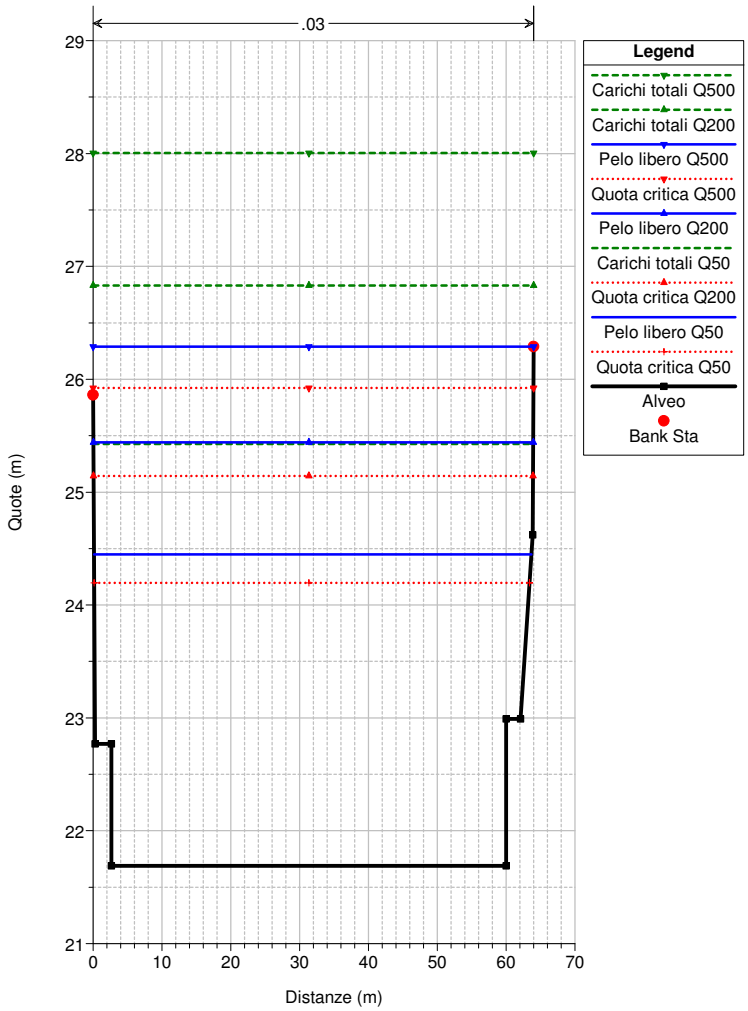
River = Bisagno Reach = Trens Veilino RS = 50. sez 12 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

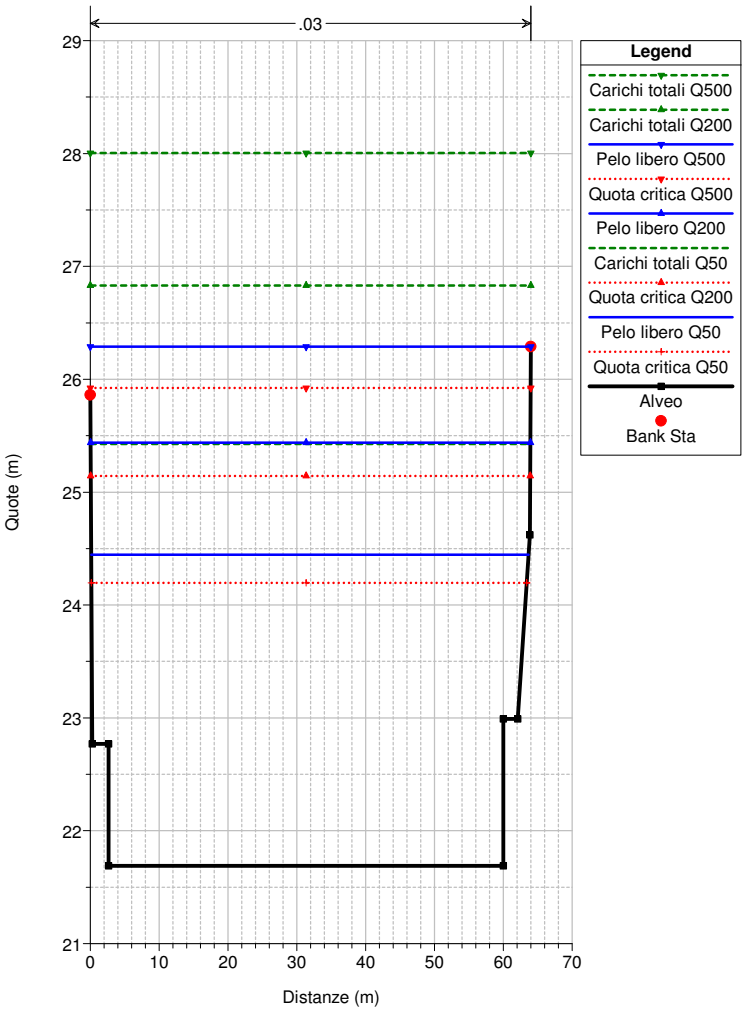
River = Bisagno Reach = Trens Veilino RS = 49.2 sez 11.2 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

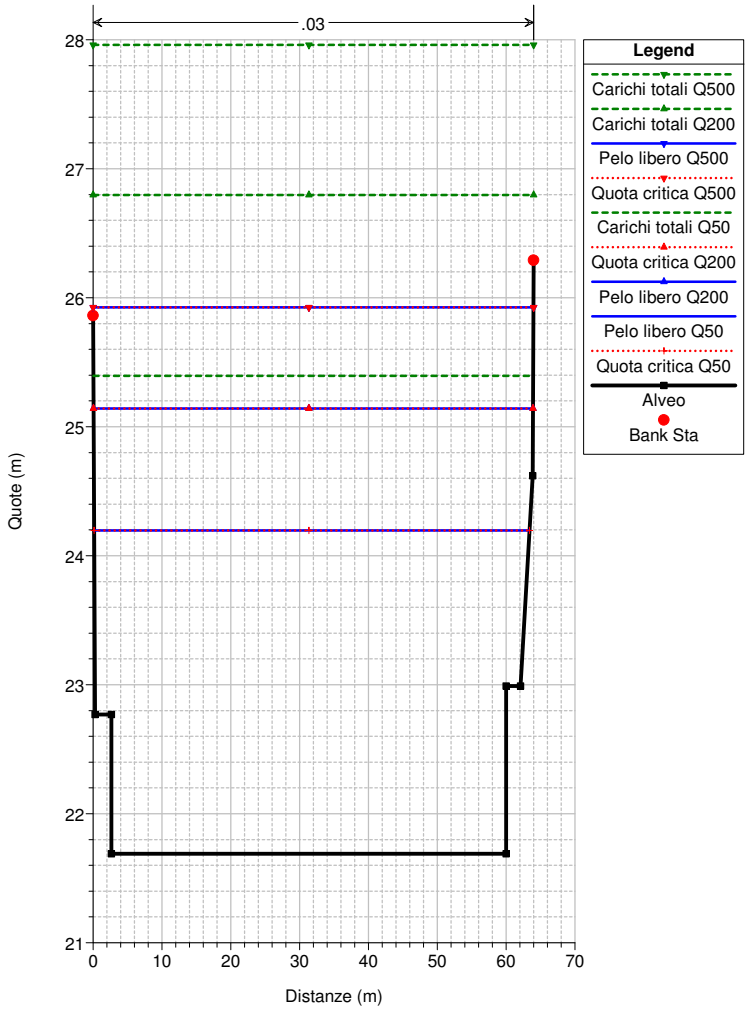
River = Bisagno Reach = Trens Veilino RS = 49.1 sez 11.1 stato progetto ponte Monteverde - coronamento briglia m



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

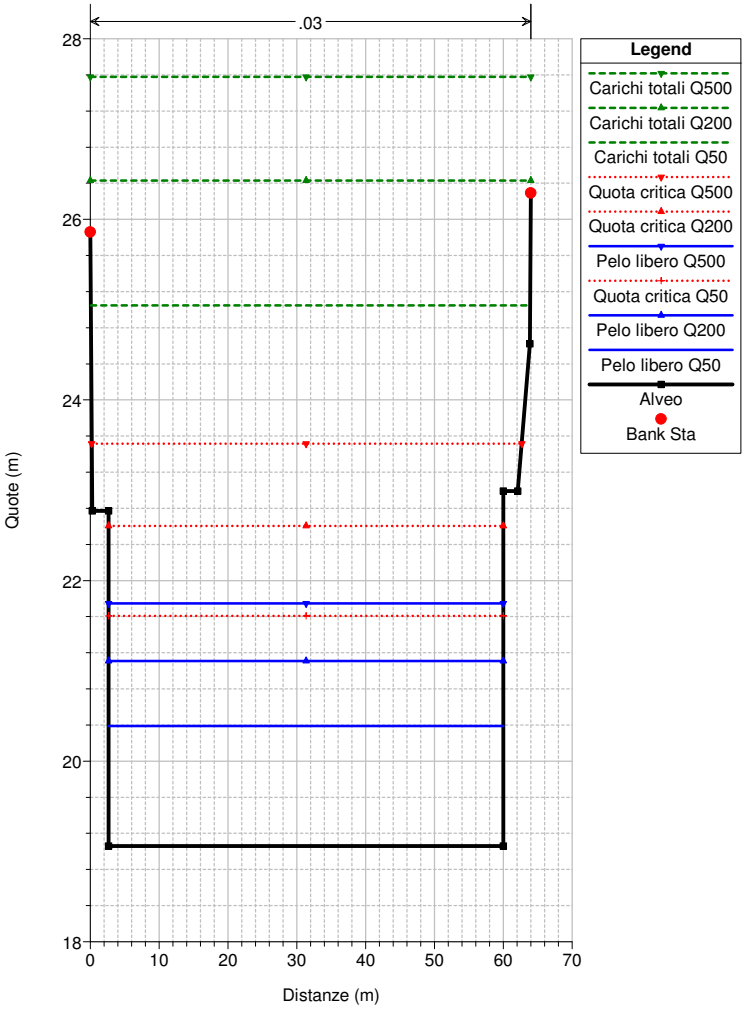
River = Bisagno Reach = Trens Veilino RS = 49. sez 11.0 stato progetto ponte Monteverde - coronamento briglia v



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Bisagno Reach = Trens Veilino RS = 48.9 sez 10.9 stato progetto ponte Monteverde - valle briglia



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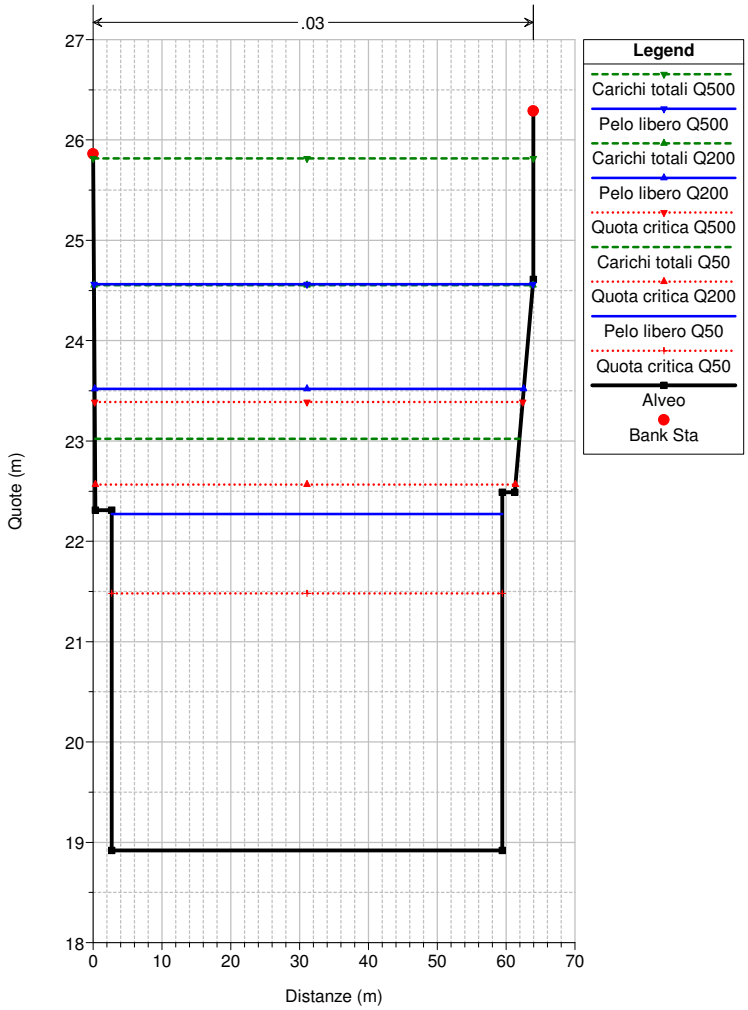
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Bisagno Reach = Trens Veilino RS = 48. sez 10 stato progetto ponte Monteverde



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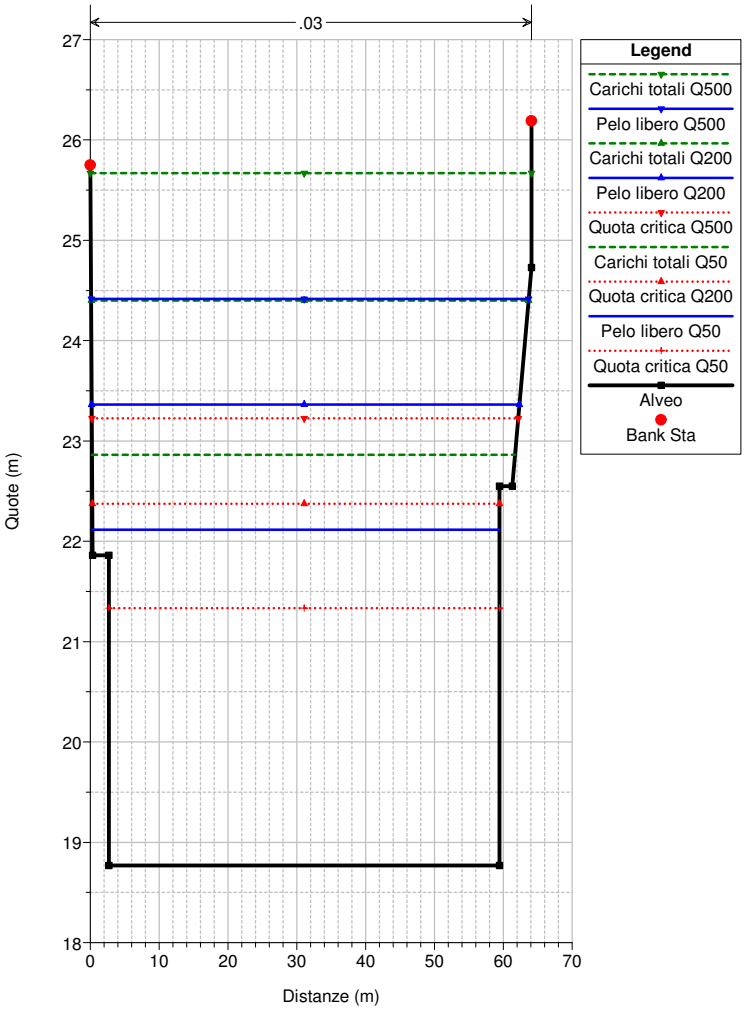
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

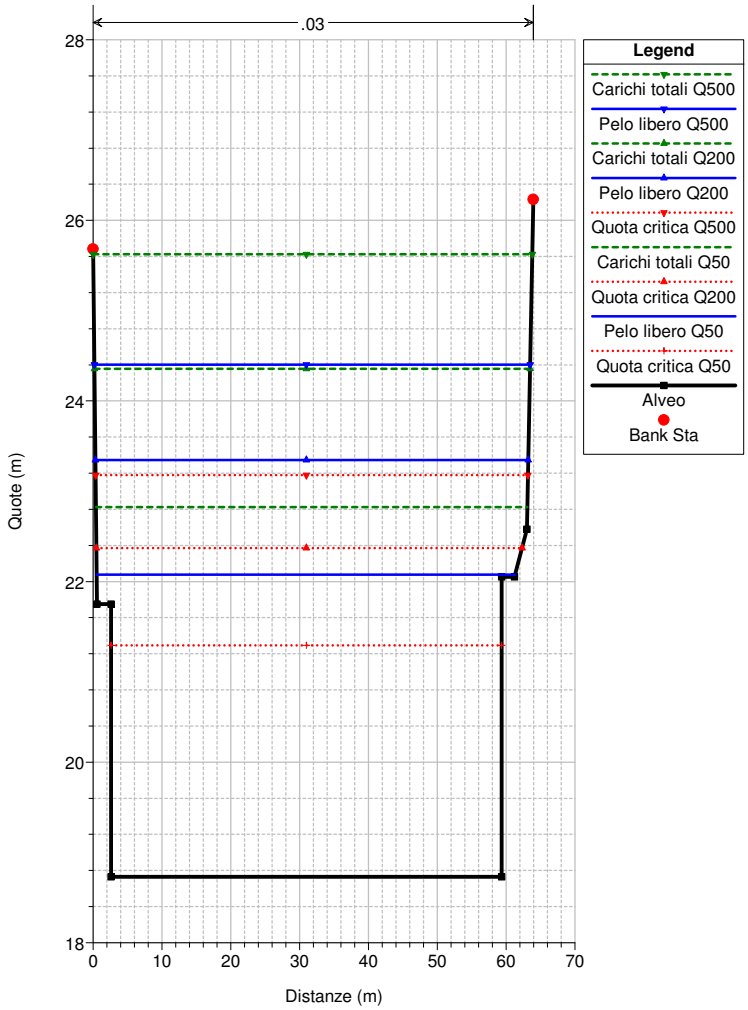
River = Bisagno Reach = Trens Veilino RS = 47 sez 9 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

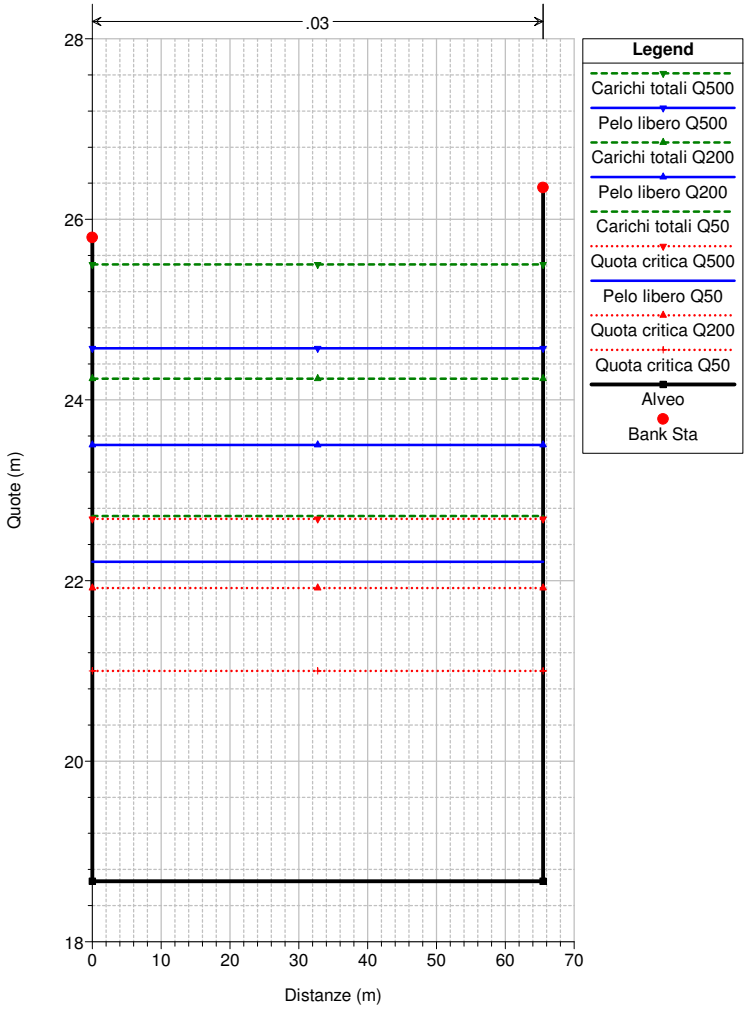
River = Bisagno Reach = Trens Veilino RS = 46 sez 8 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

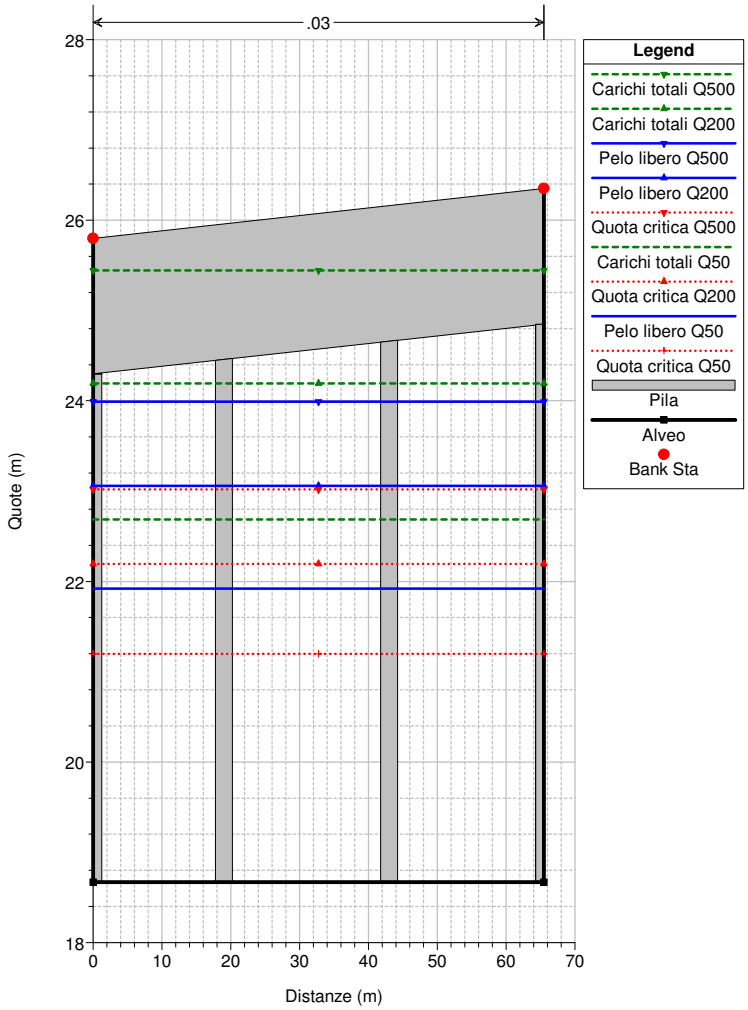
River = Bisagno Reach = Trens Veilino RS = 45.1 sez 7.1 stato progetto ponte Monteverde - monte ponte



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

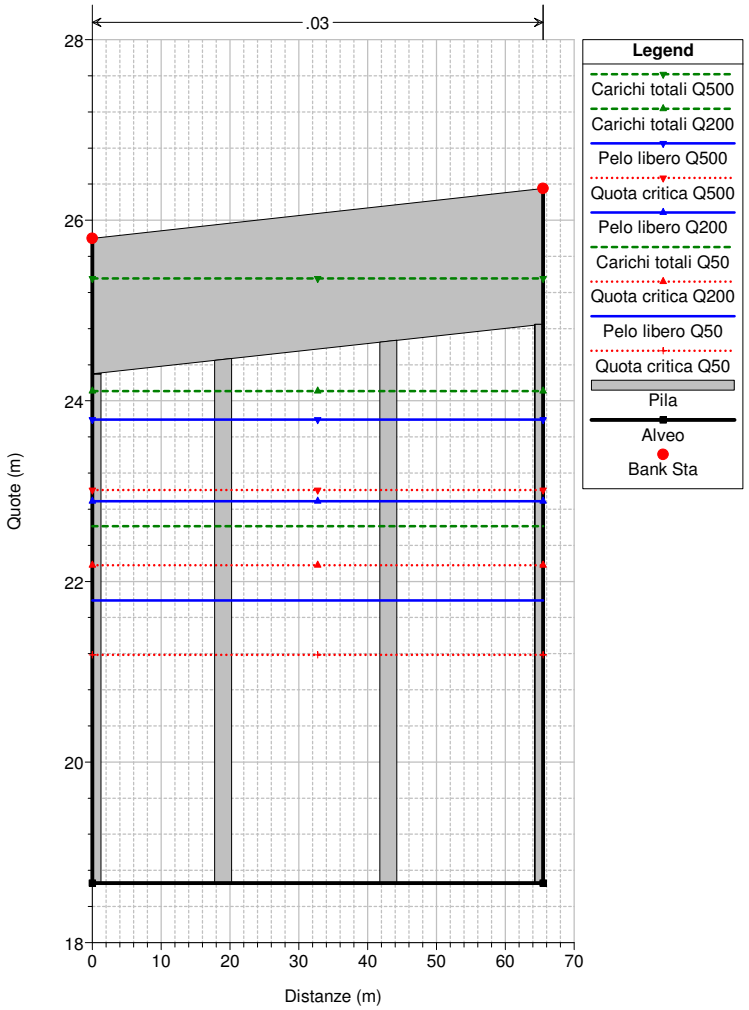
River = Bisagno Reach = Trens Veilino RS = 45 BR ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

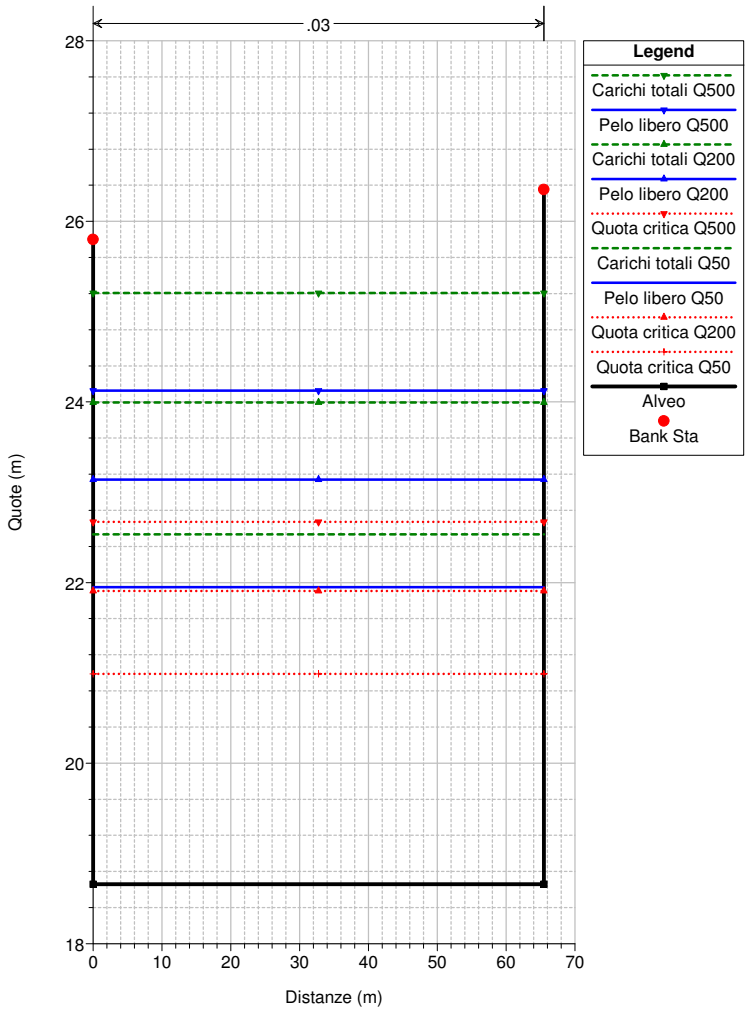
River = Bisagno Reach = Trens Veilino RS = 45 BR ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

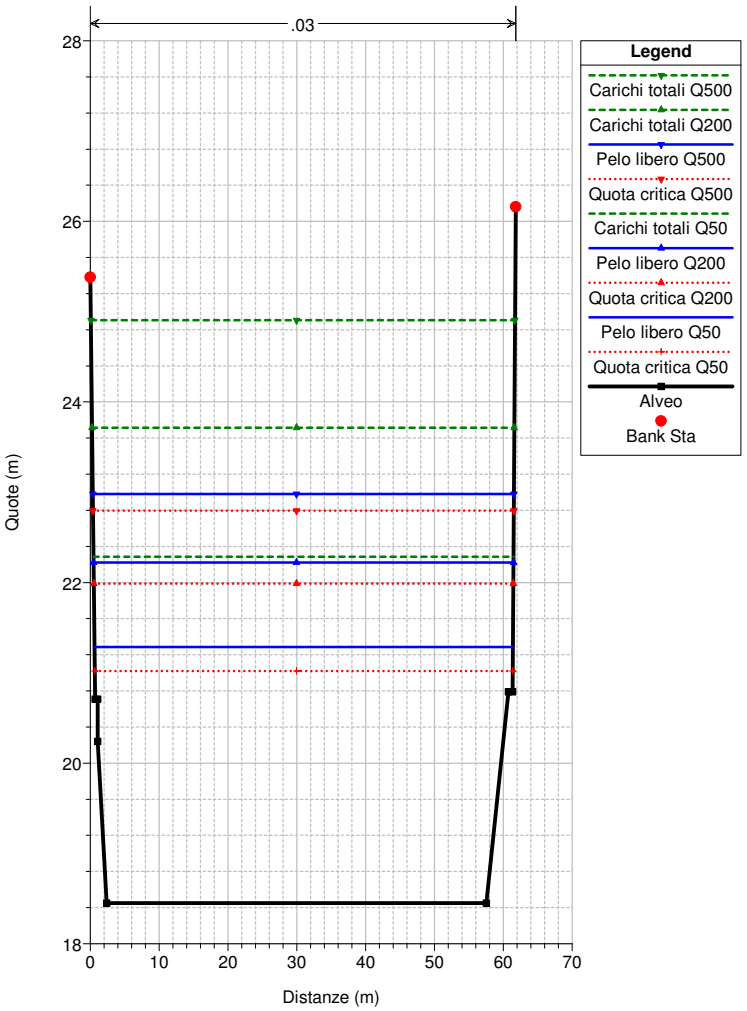
River = Bisagno Reach = Trens Veilino RS = 44.9 sez 6.9 stato progetto ponte Monteverde - valle ponte



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

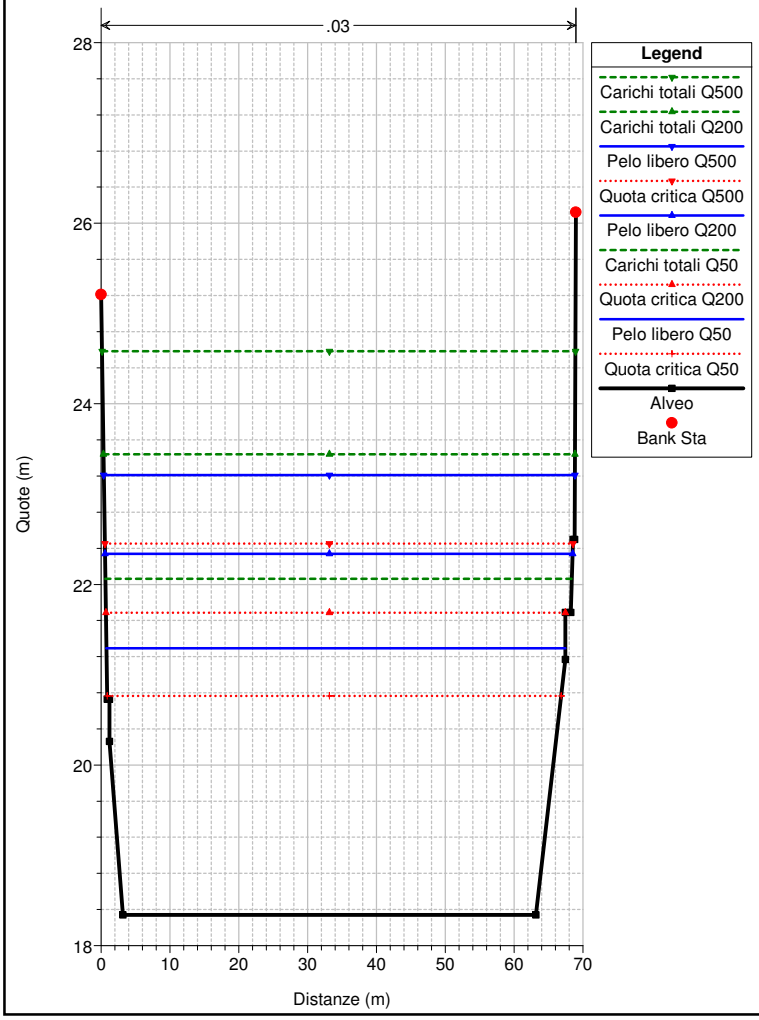
River = Bisagno Reach = Trens Veilino RS = 44 sez 4 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

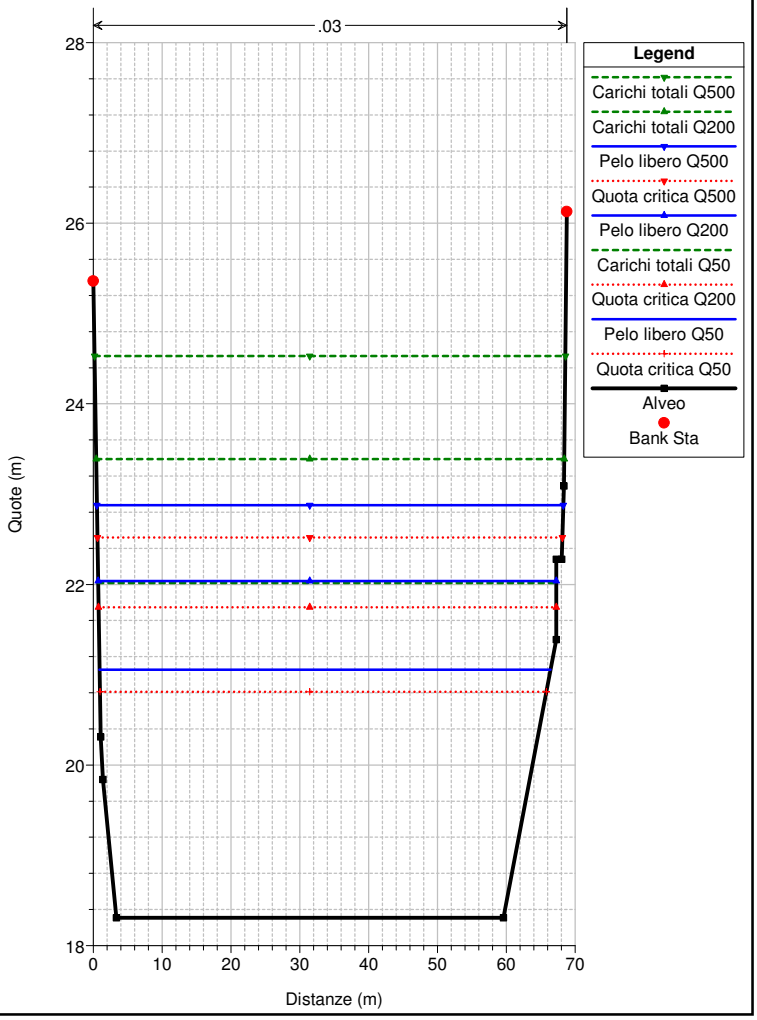
River = Bisagno Reach = Trens Veilino RS = 43 sez 3 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

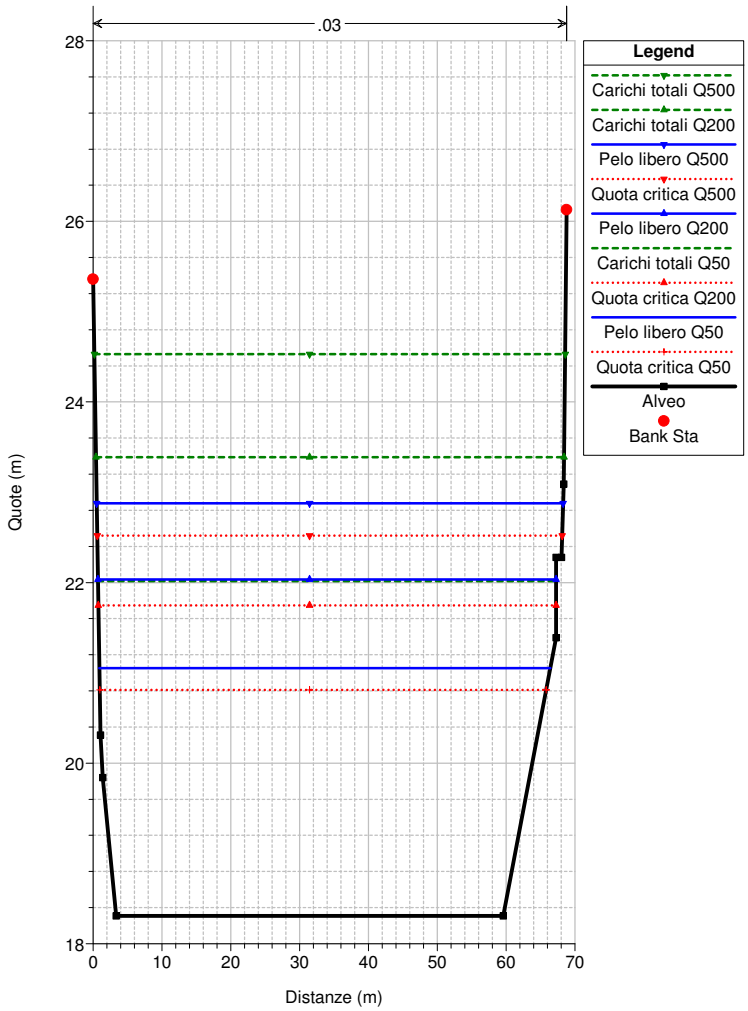
River = Bisagno Reach = Trens Veilino RS = 42.2 sez 2.2 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

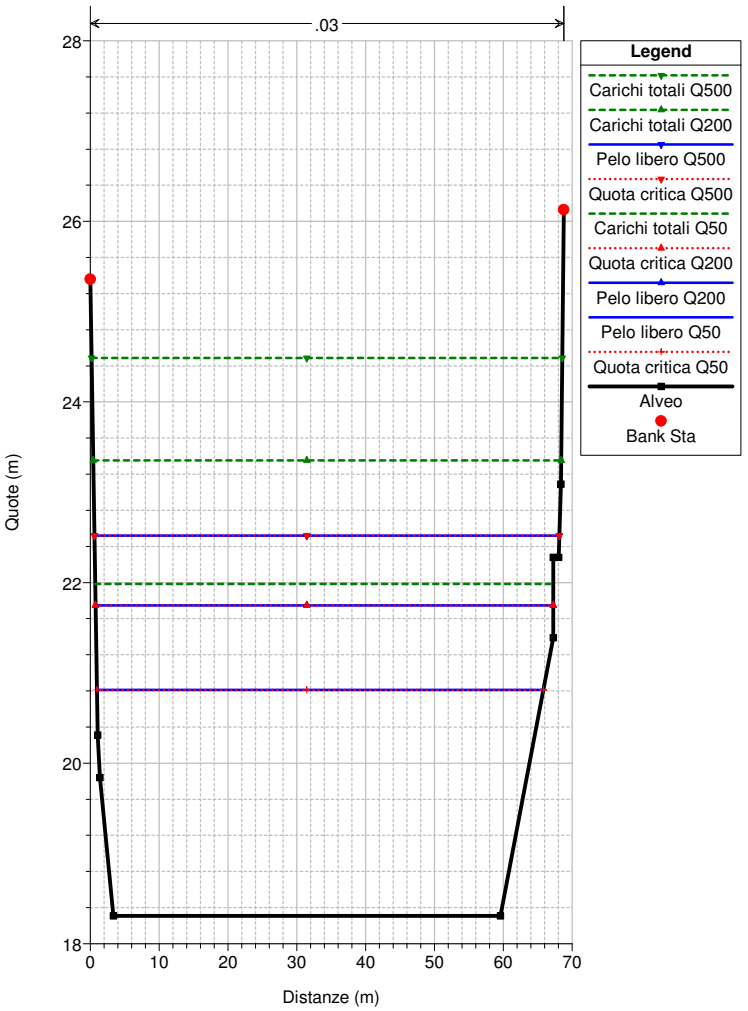
River = Bisagno Reach = Trens Veilino RS = 42.1 sez 2.1 stato progetto ponte Monteverde-coronamento briglia lato



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

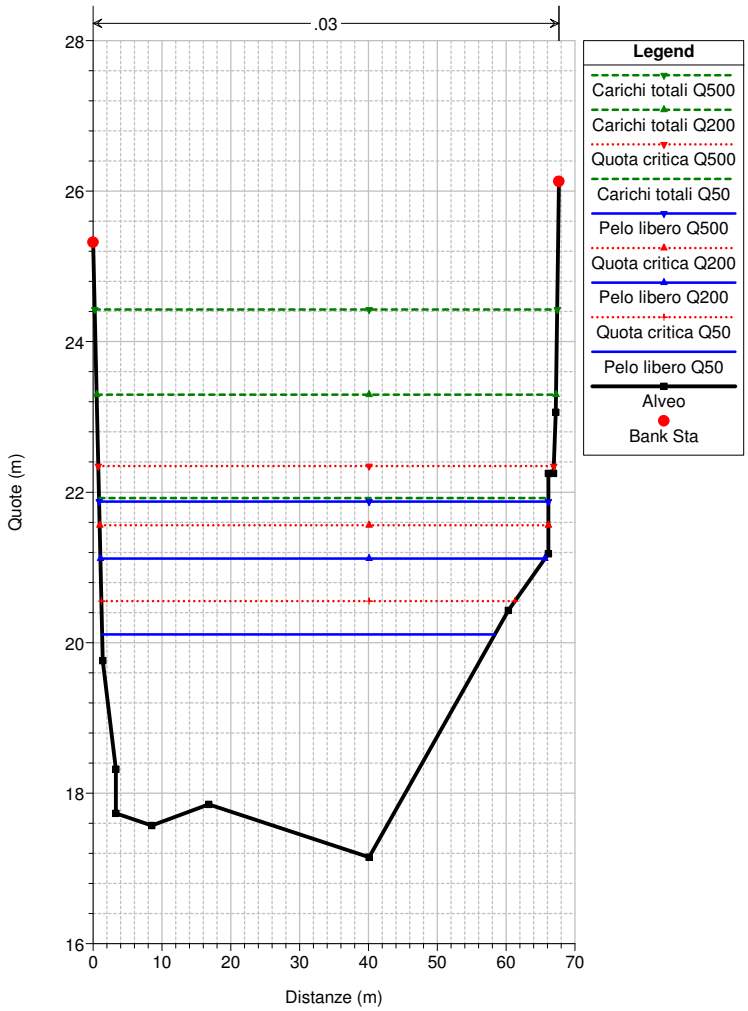
River = Bisagno Reach = Trens Veilino RS = 42 sez 2.0 stato progetto ponte Monteverde-coronamento briglia lato



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

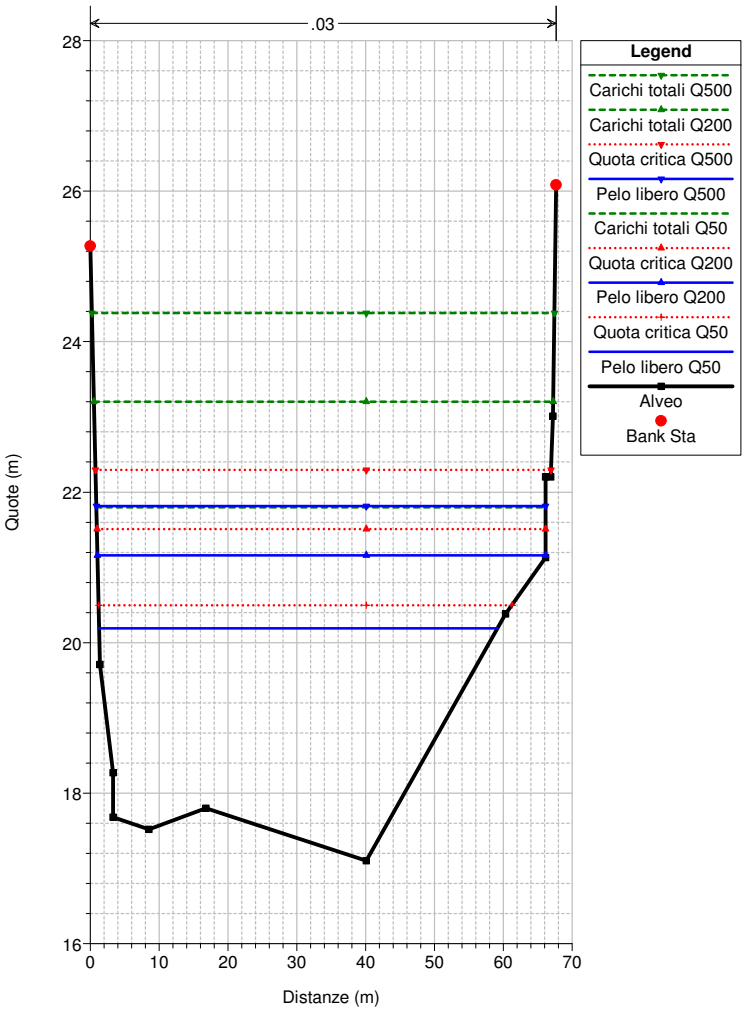
River = Bisagno Reach = Trens Veilino RS = 41.9 sez 1.9 stato progetto ponte Monteverde valle briglia



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

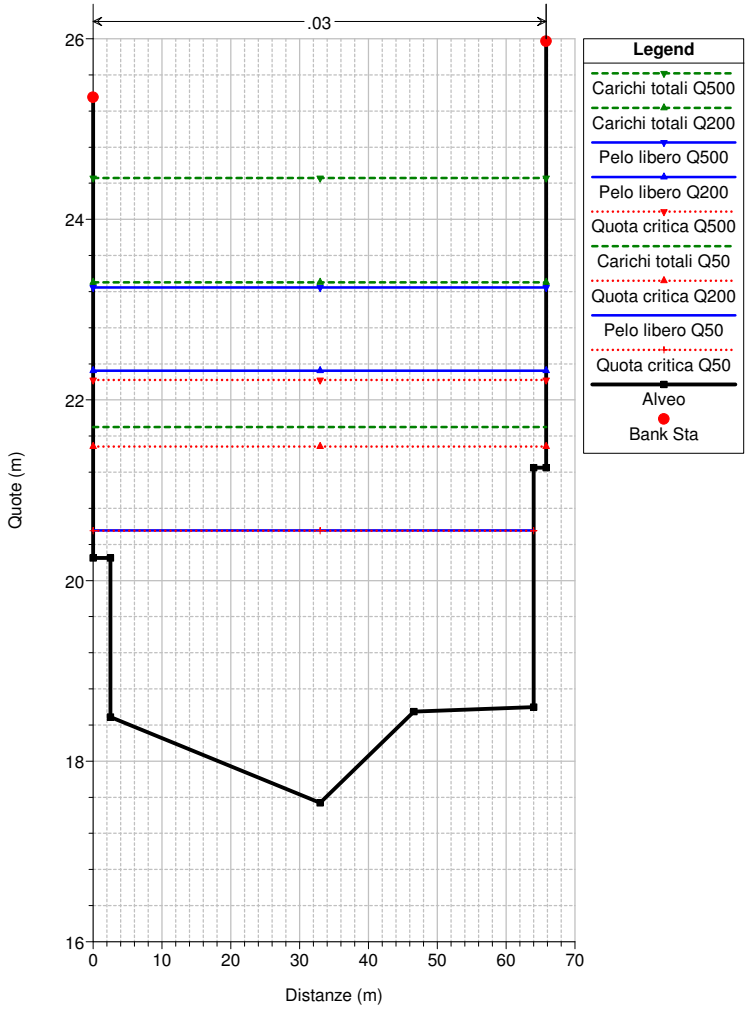
River = Bisagno Reach = Trens Veilino RS = 41 sez 1.0 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

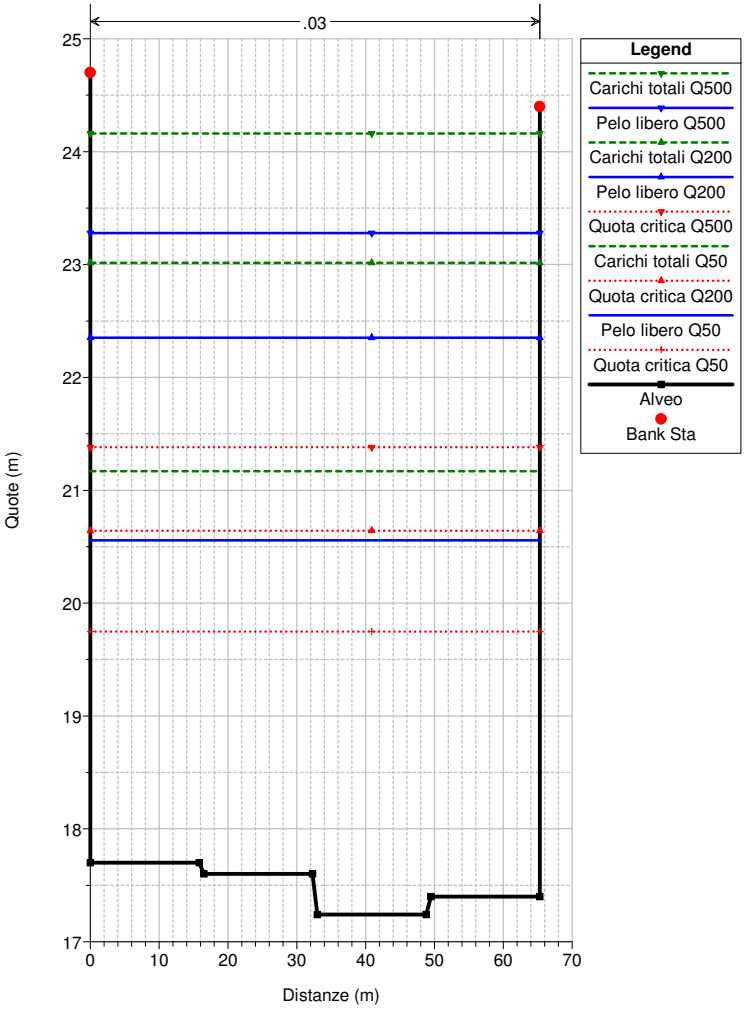
River = Bisagno Reach = Veil Fereggiano RS = 40. Sezione 22



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

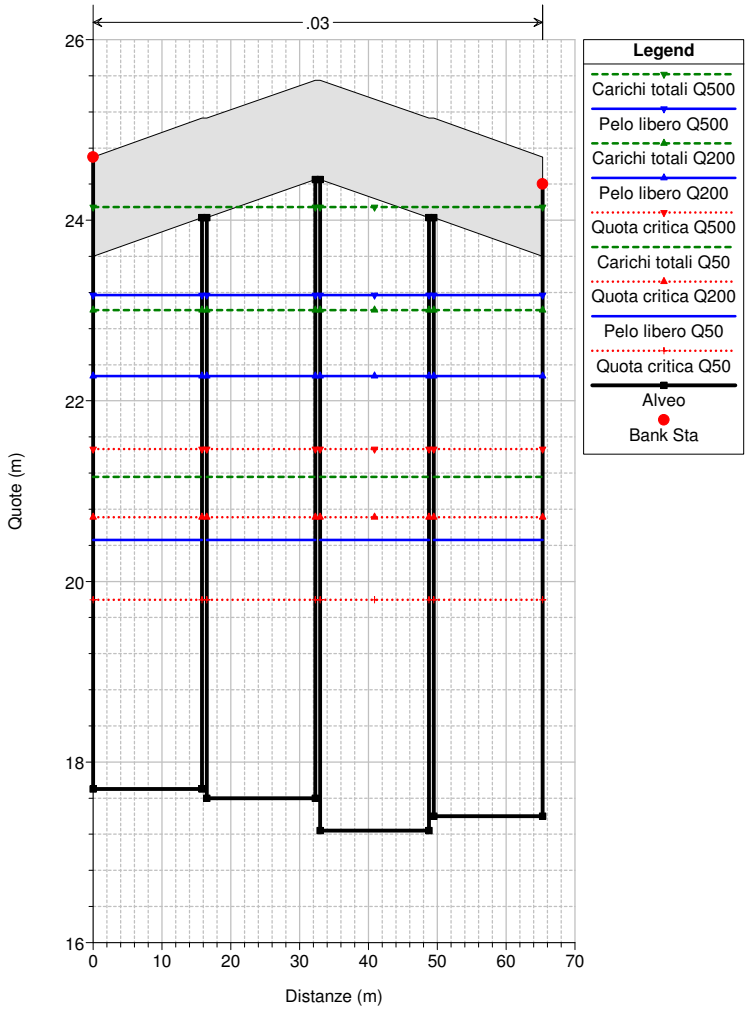
River = Bisagno Reach = Veil Fereggiano RS = 39. Sezione 21



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

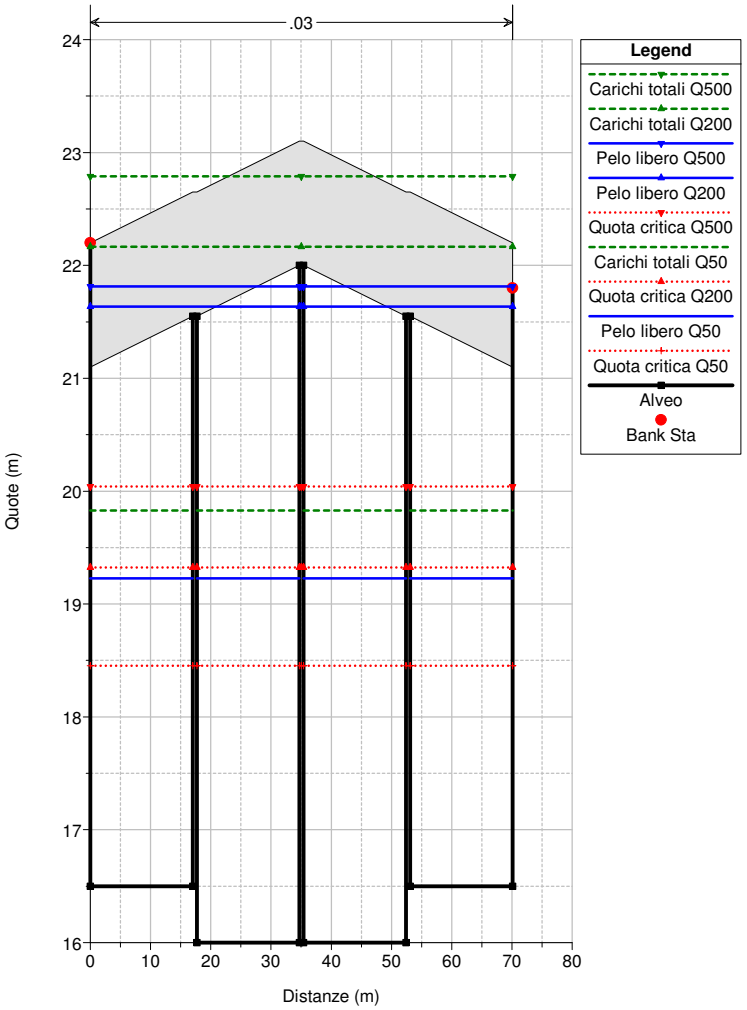
River = Bisagno Reach = Veil Fereggiano RS = 38. Sezione 20 (imbocco copertura)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

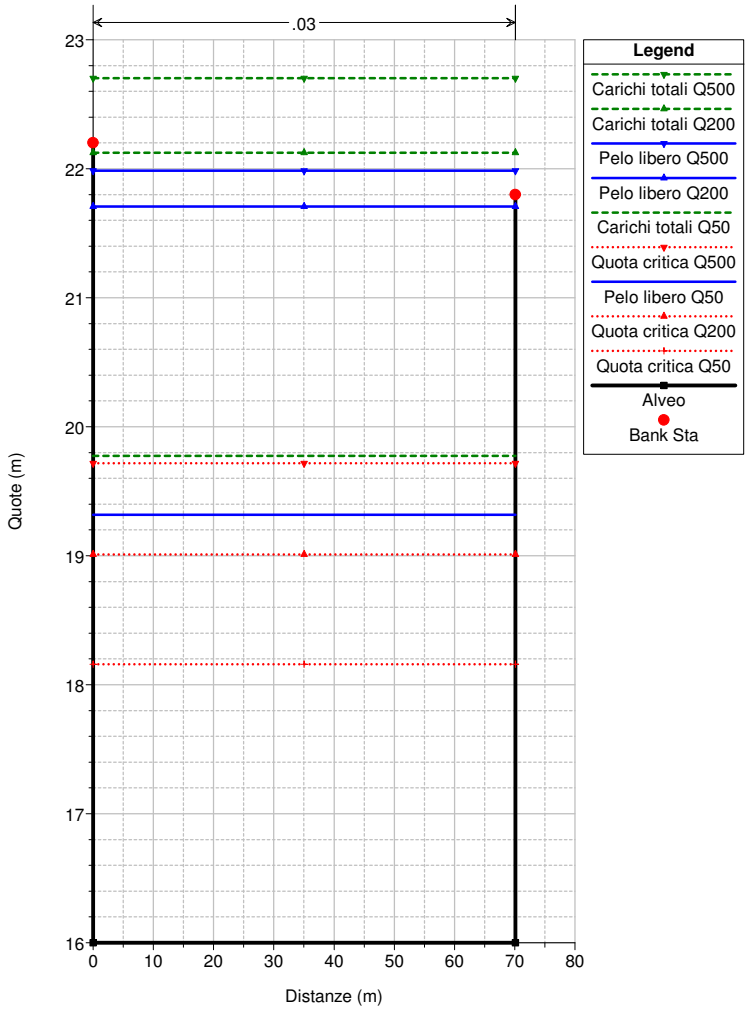
River = Bisagno Reach = Veil Fereggiano RS = 37. Sezione 19 (sbocco copertura)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

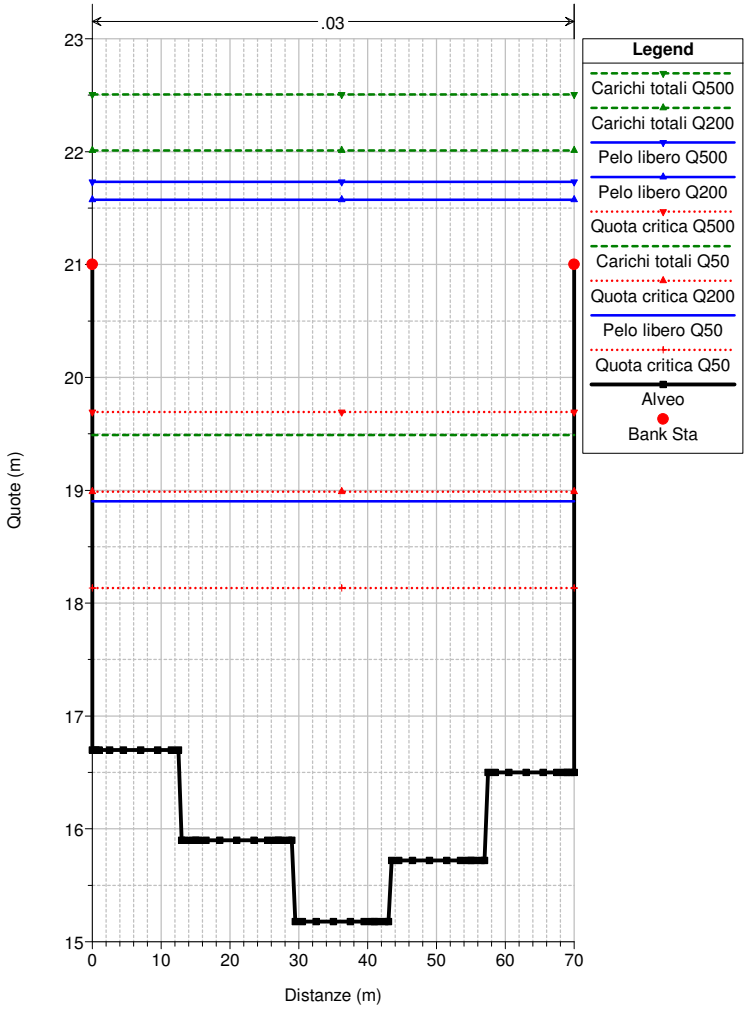
River = Bisagno Reach = Veil Fereggiano RS = 36. Sezione 18 (valle briglia)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

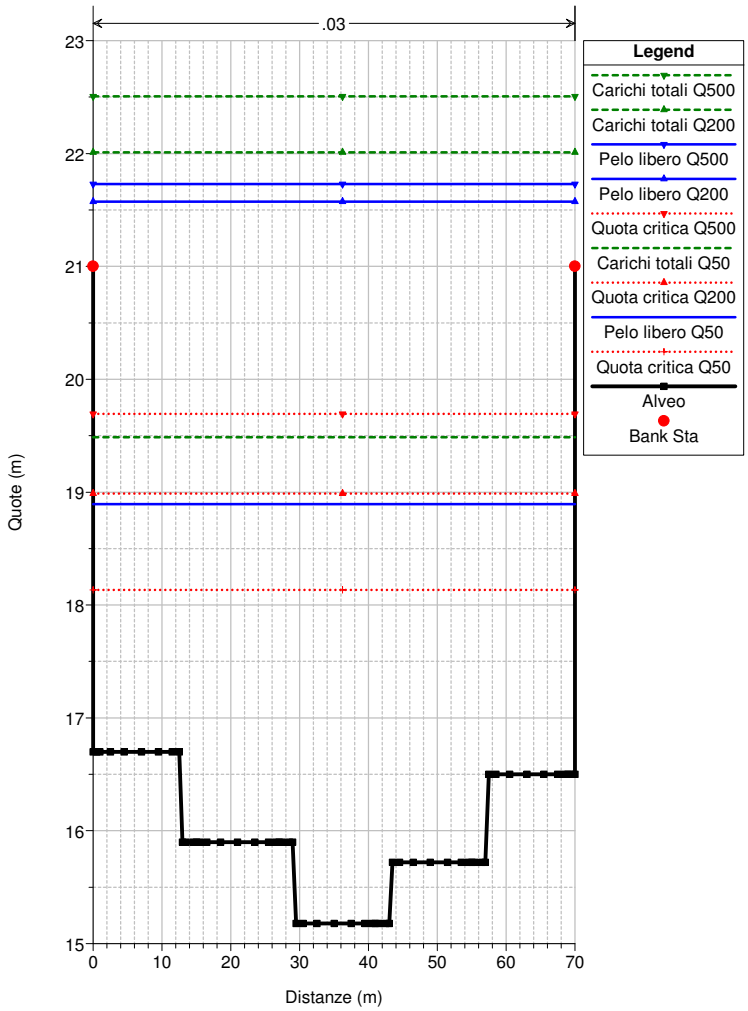
River = Bisagno Reach = Veil Fereggiano RS = 35.3 Sezione 17.3



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

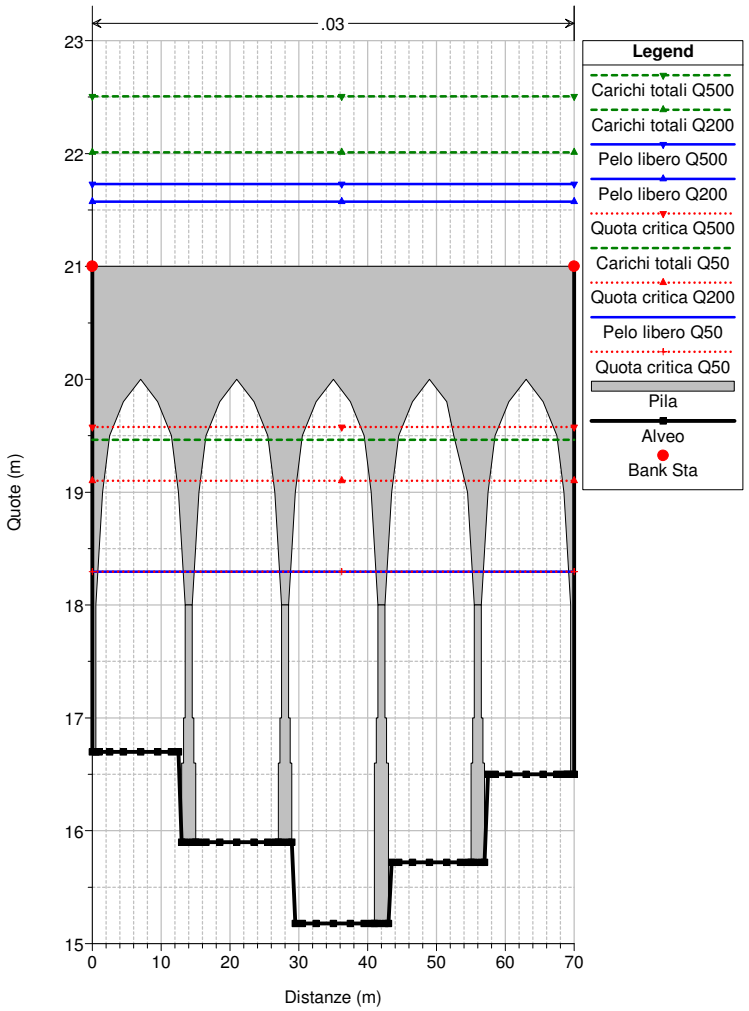
River = Bisagno Reach = Veil Fereggiano RS = 35.2 Sezione 17.2 (monte ponte Campanella)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

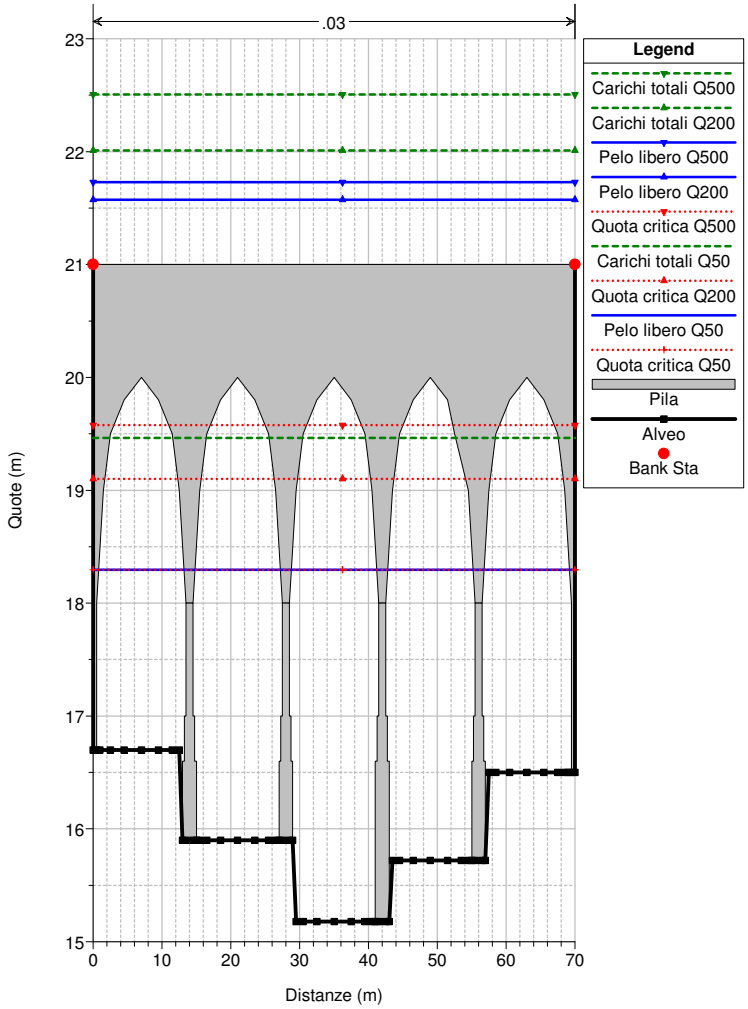
River = Bisagno Reach = Veil Fereggiano RS = 35.11 BR BIS 35 ponte Campanella



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

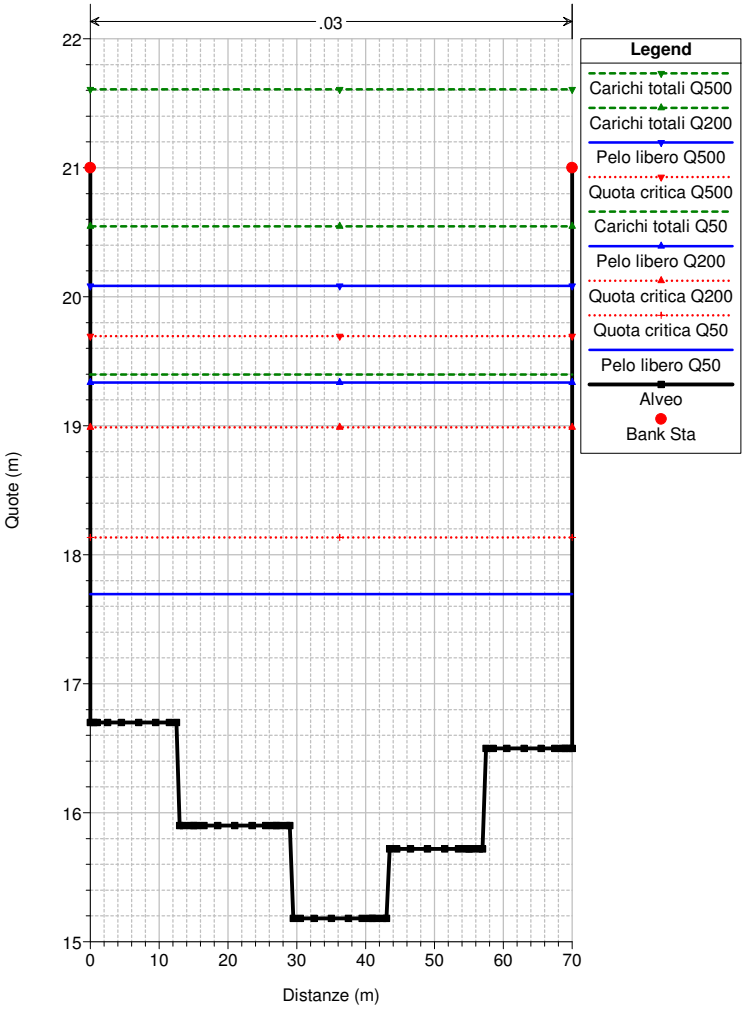
River = Bisagno Reach = Veil Fereggiano RS = 35.11 BR BIS 35 ponte Campanella



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

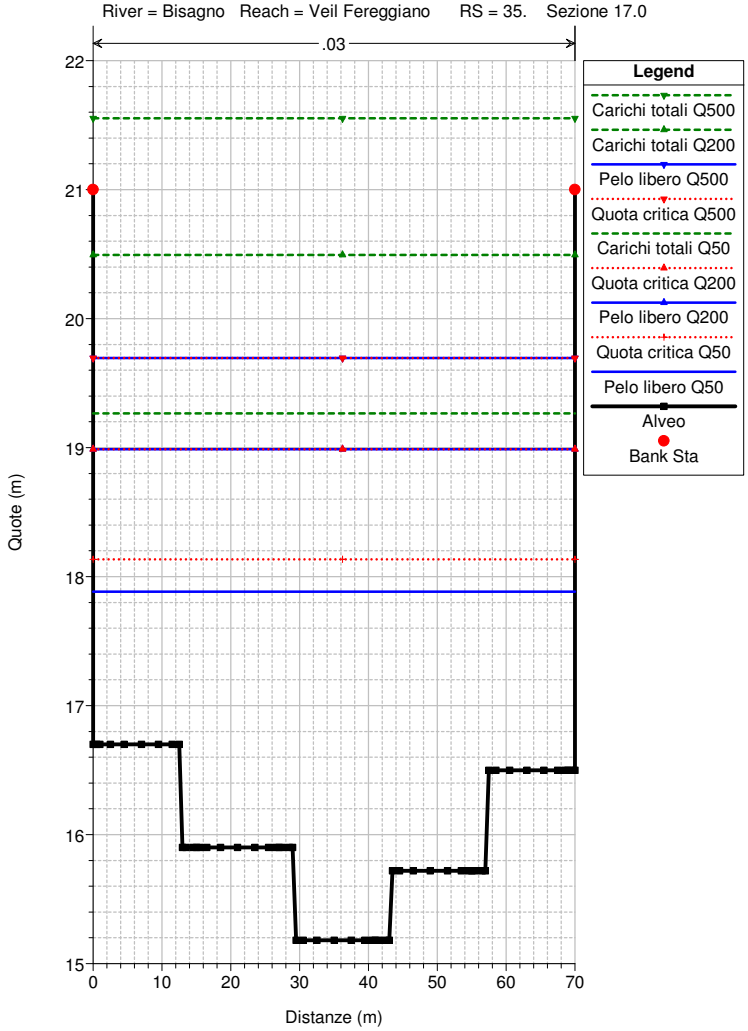
River = Bisagno Reach = Veil Fereggiano RS = 35.1 Sezione 17.1 (valle ponte Campanella)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

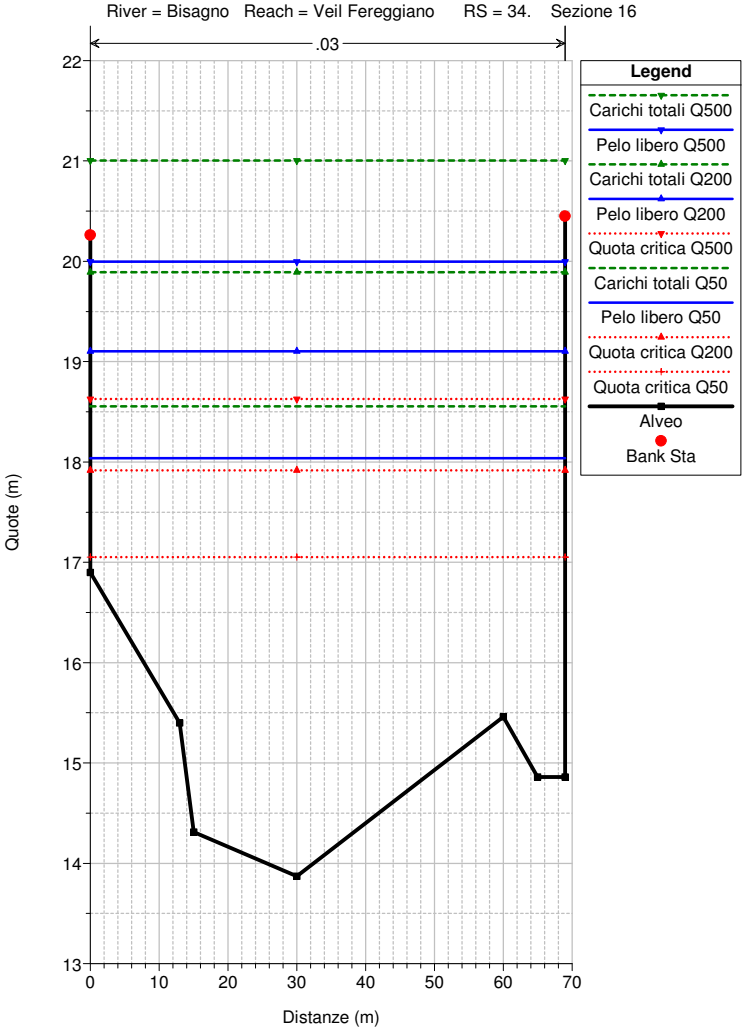
River = Bisagno Reach = Veil Fereggiano RS = 35. Sezione 17.0



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

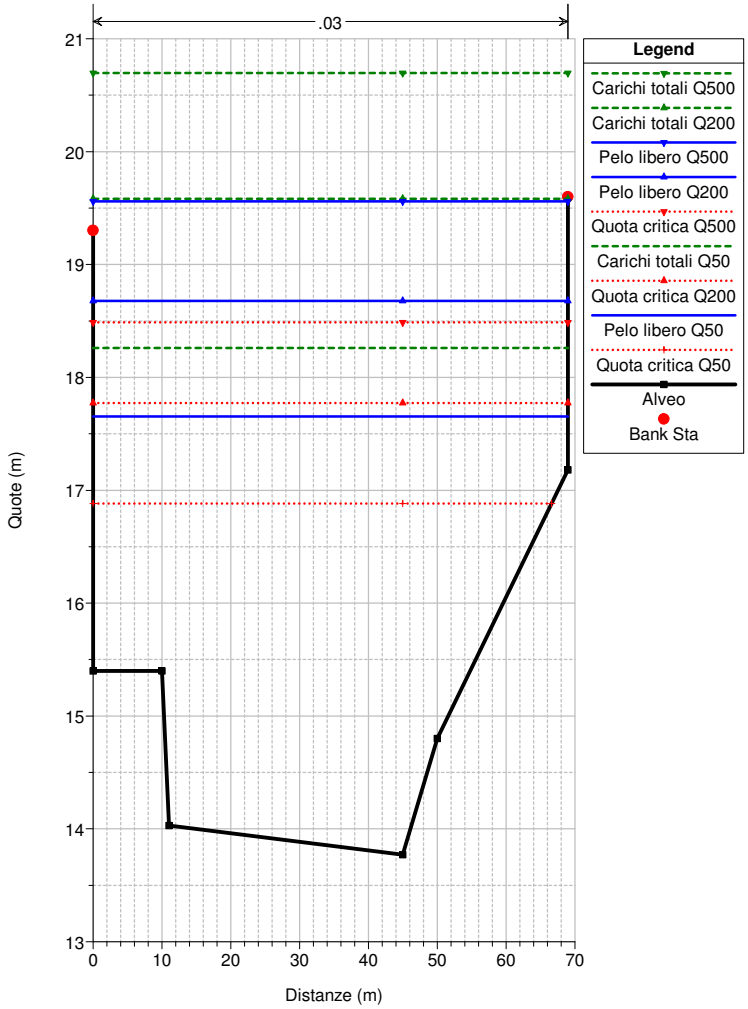
River = Bisagno Reach = Veil Fereggiano RS = 34. Sezione 16



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

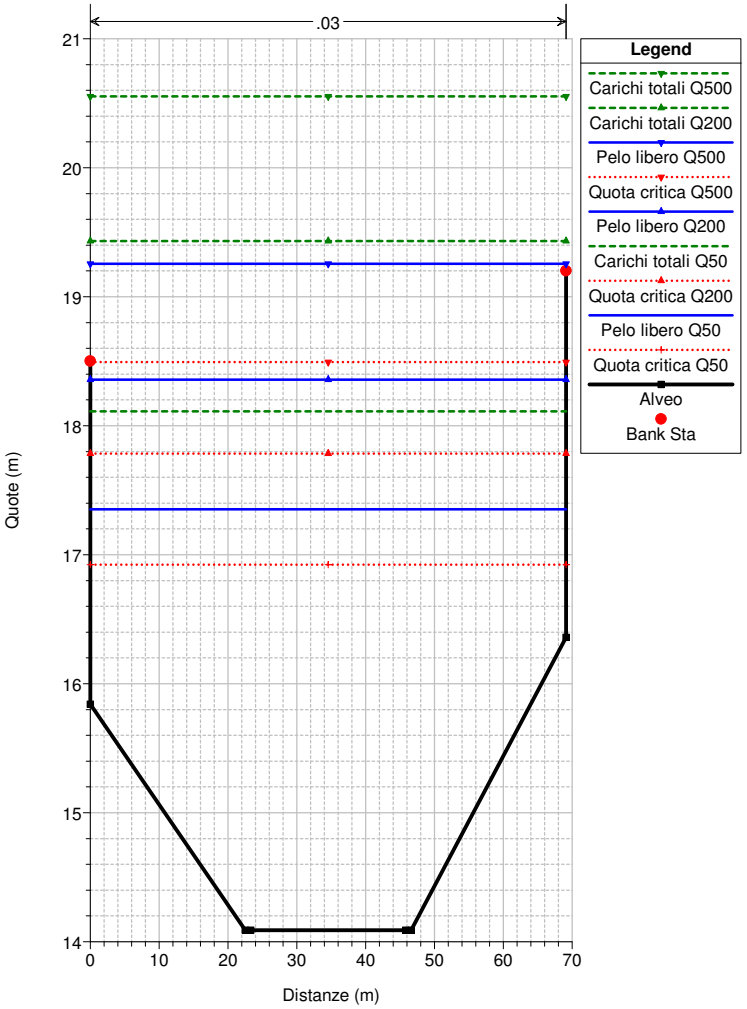
River = Bisagno Reach = Veil Fereggiano RS = 33. Sezione 15



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

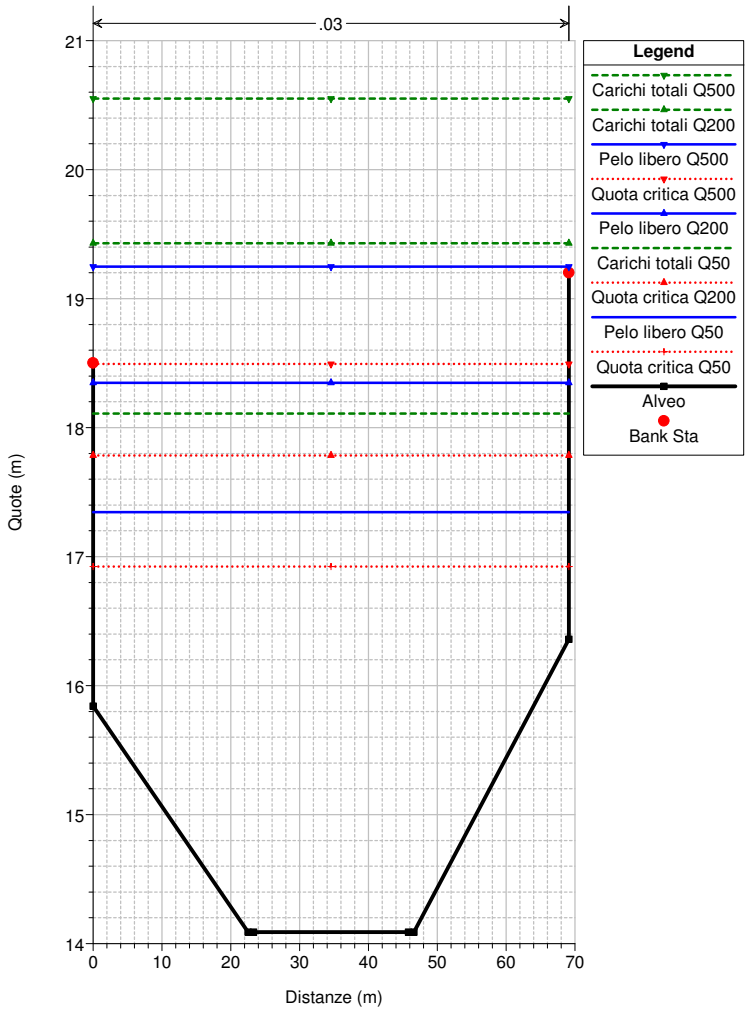
River = Bisagno Reach = Veil Fereggiano RS = 32.3 Sezione 14.3



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

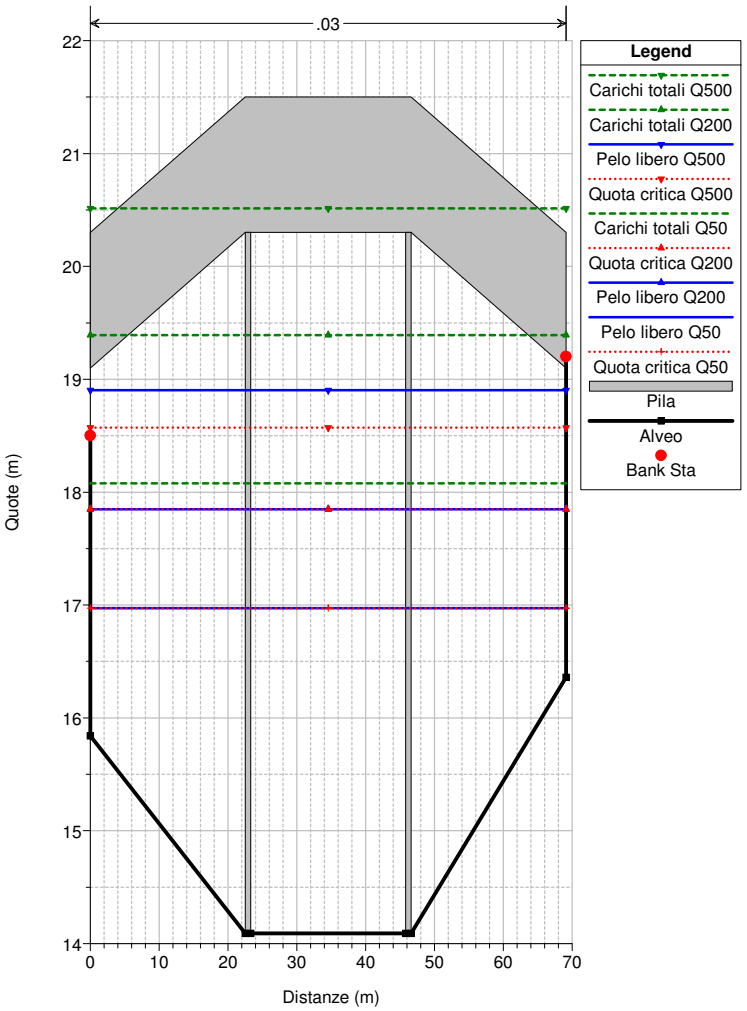
River = Bisagno Reach = Veil Fereggiano RS = 32.2 Sezione 14.2 (monte Passerella pedonale)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

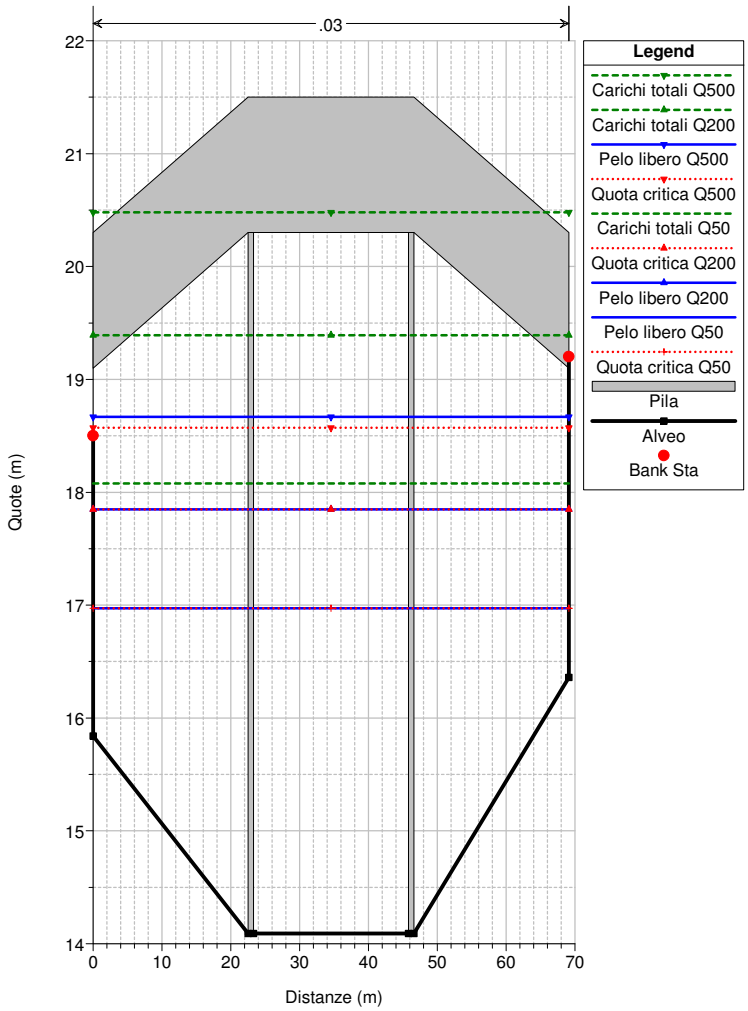
River = Bisagno Reach = Veil Fereggiano RS = 32.11 BR BIS 32 Passerella pedonale



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

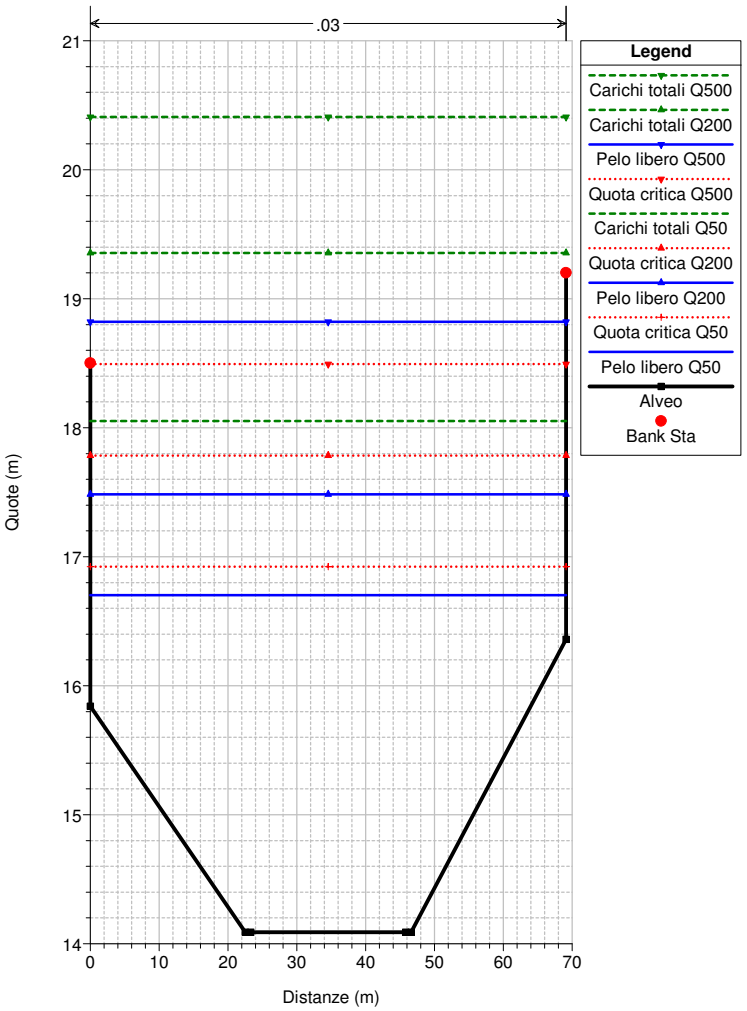
River = Bisagno Reach = Veil Fereggiano RS = 32.11 BR BIS 32 Passerella pedonale



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

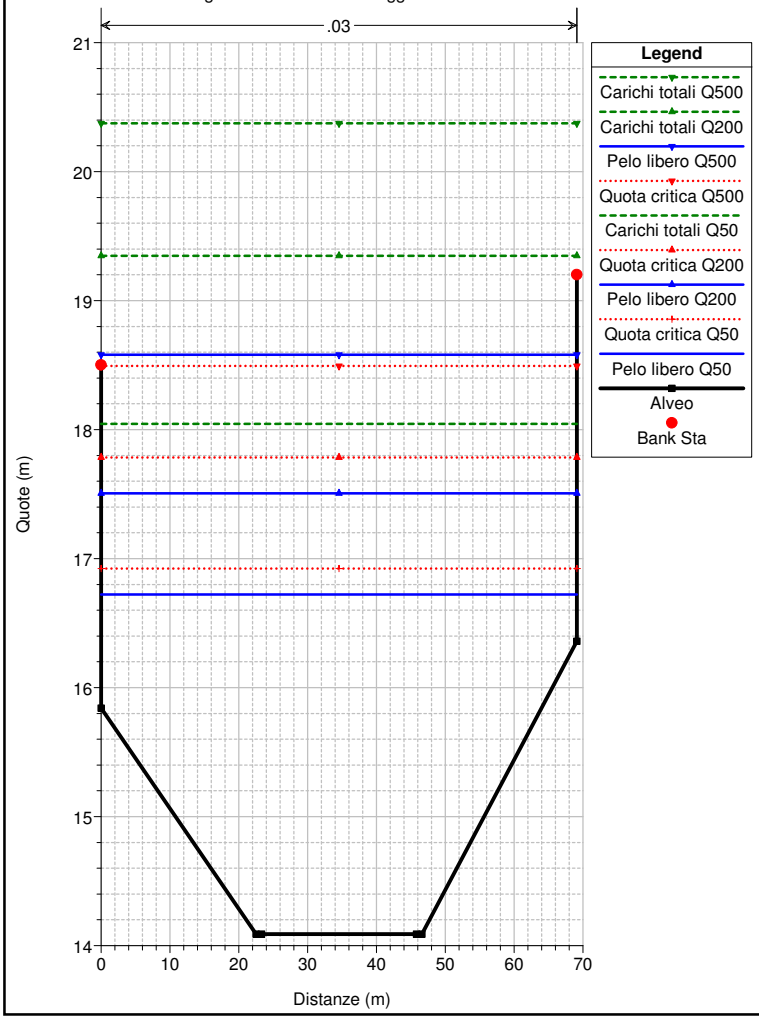
River = Bisagno Reach = Veil Fereggiano RS = 32.1 Sezione 14.1 (valle Passerella pedonale)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

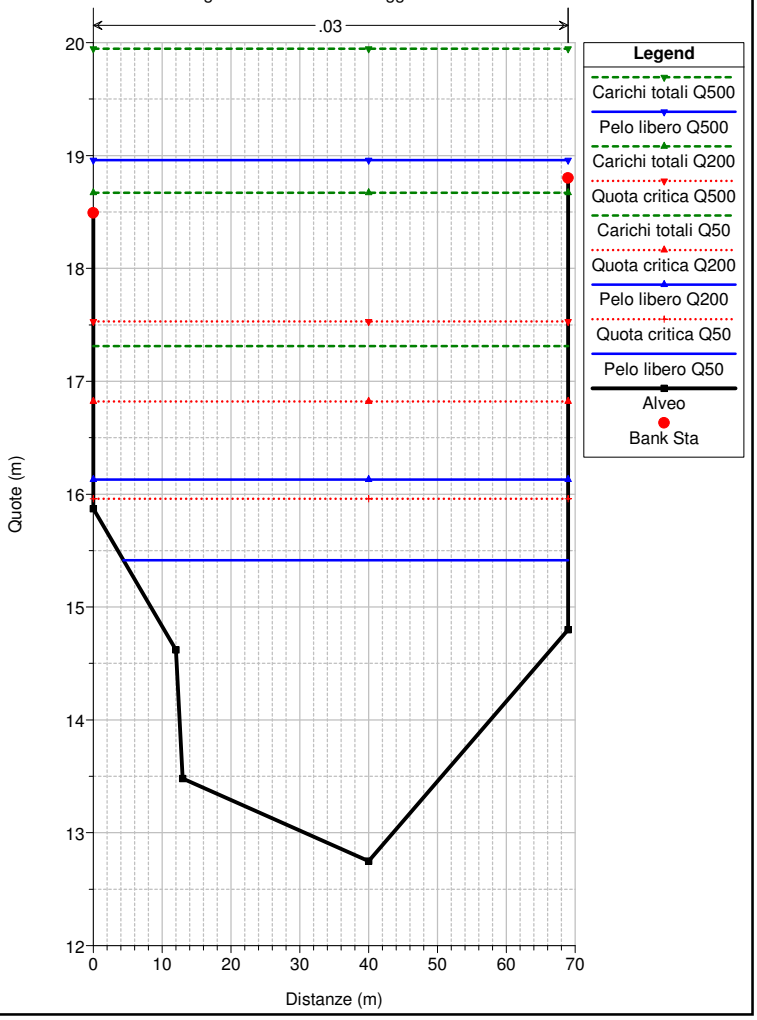
River = Bisagno Reach = Veil Fereggiano RS = 32. Sezione 14.0



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

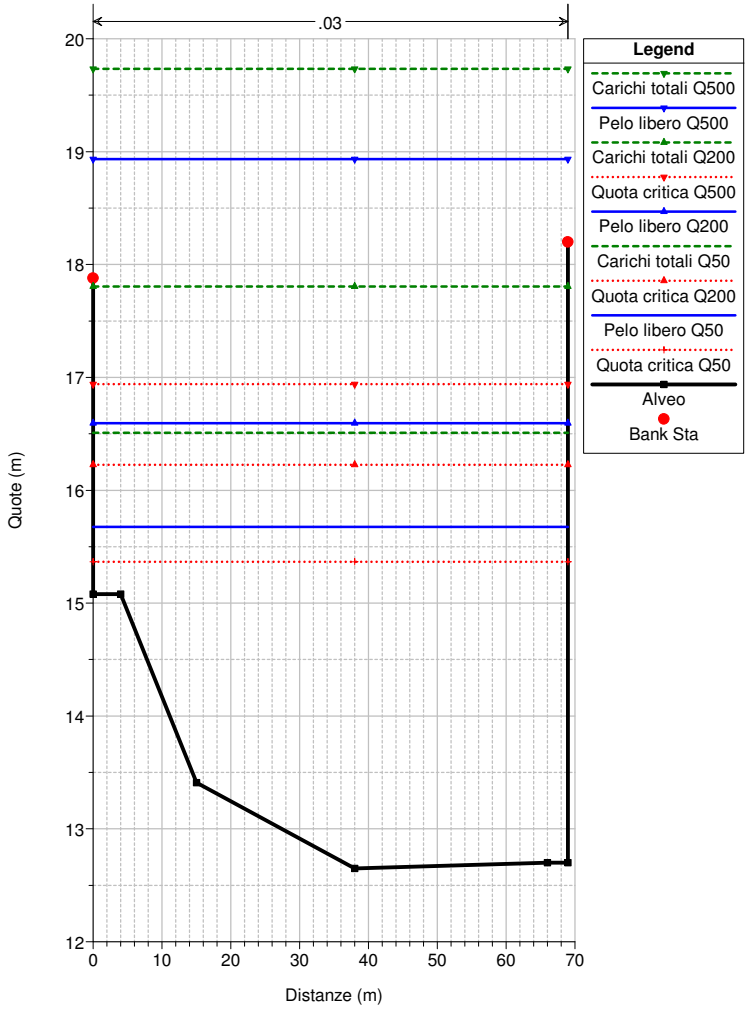
River = Bisagno Reach = Veil Fereggiano RS = 31. Sezione 13



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

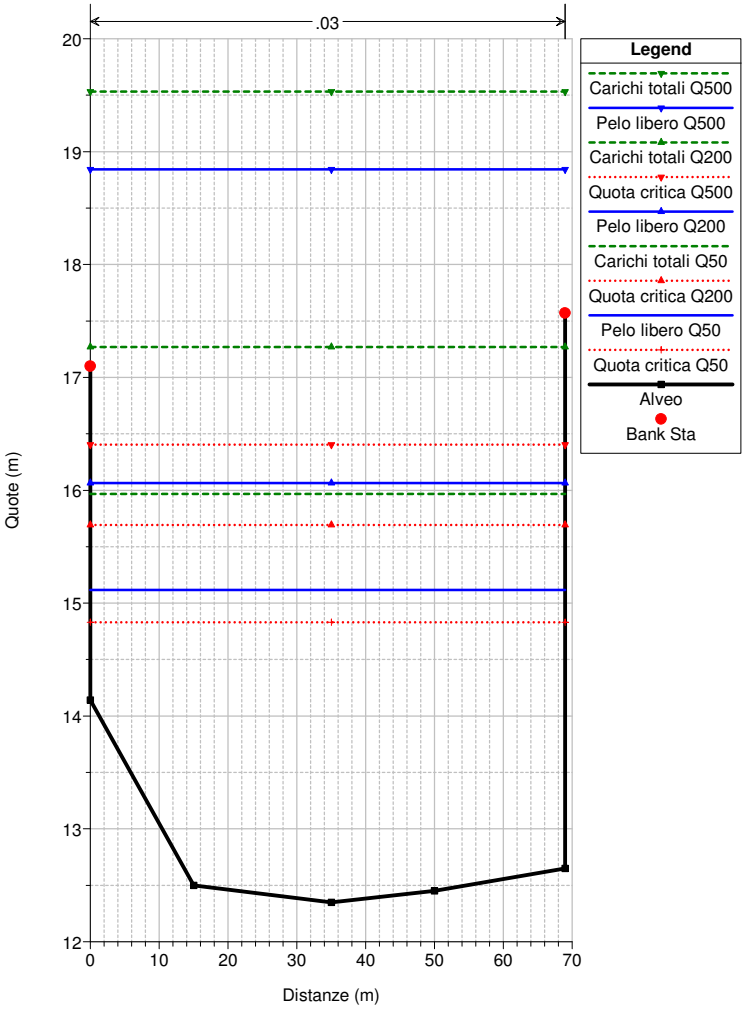
River = Bisagno Reach = Veil Fereggiano RS = 30. Sezione 12



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

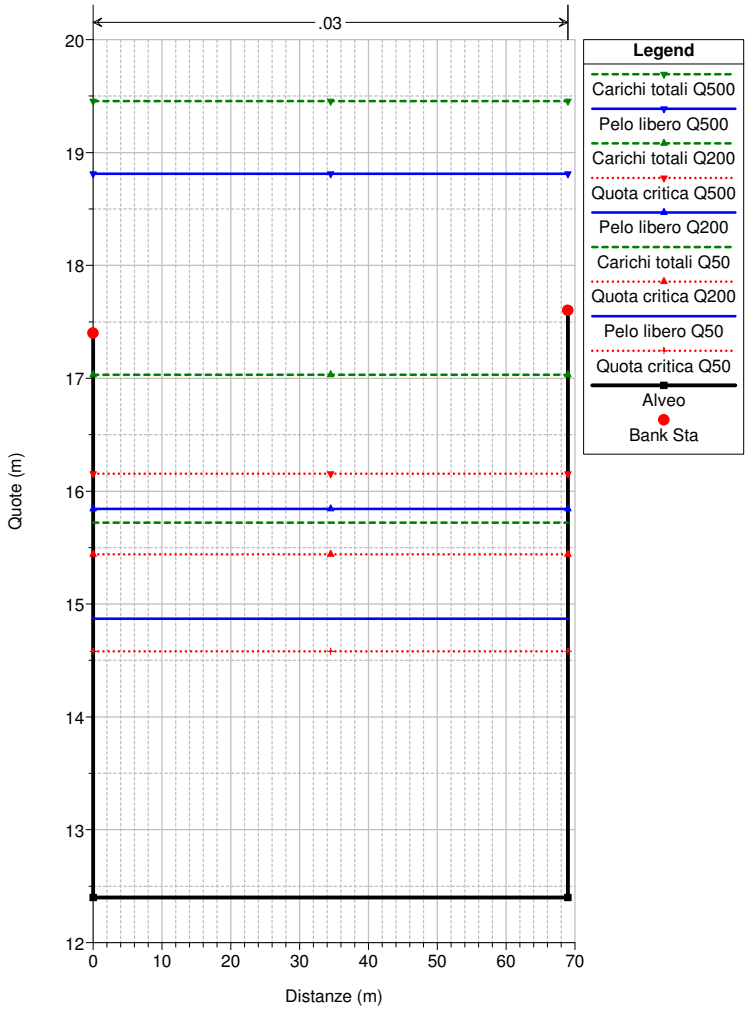
River = Bisagno Reach = Veil Fereggiano RS = 29. Sezione 11



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

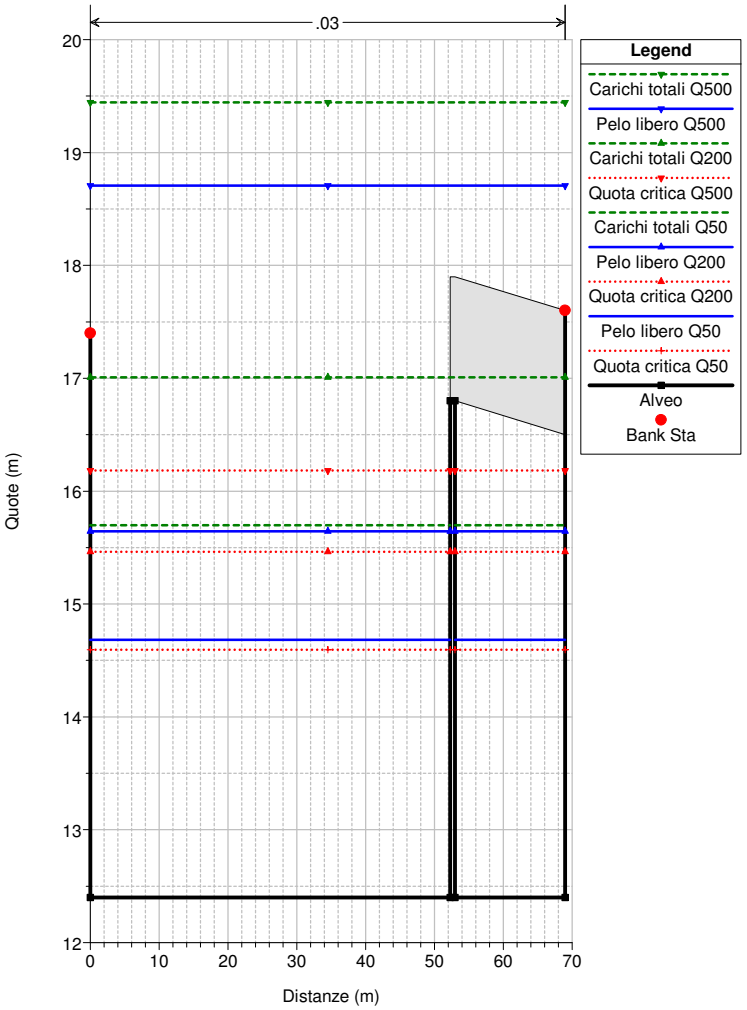
River = Bisagno Reach = Veil Fereggiano RS = 28. Sezione 10



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

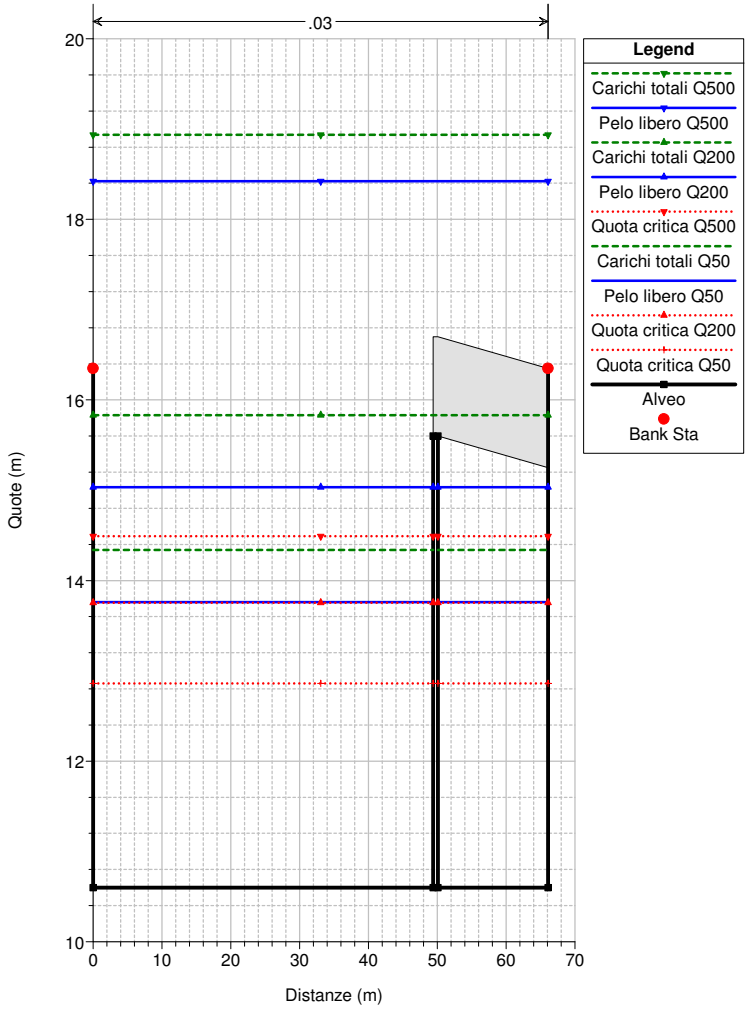
River = Bisagno Reach = Veil Fereggiano RS = 27. Sezione 9 (imbocco copertura fornice unico)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

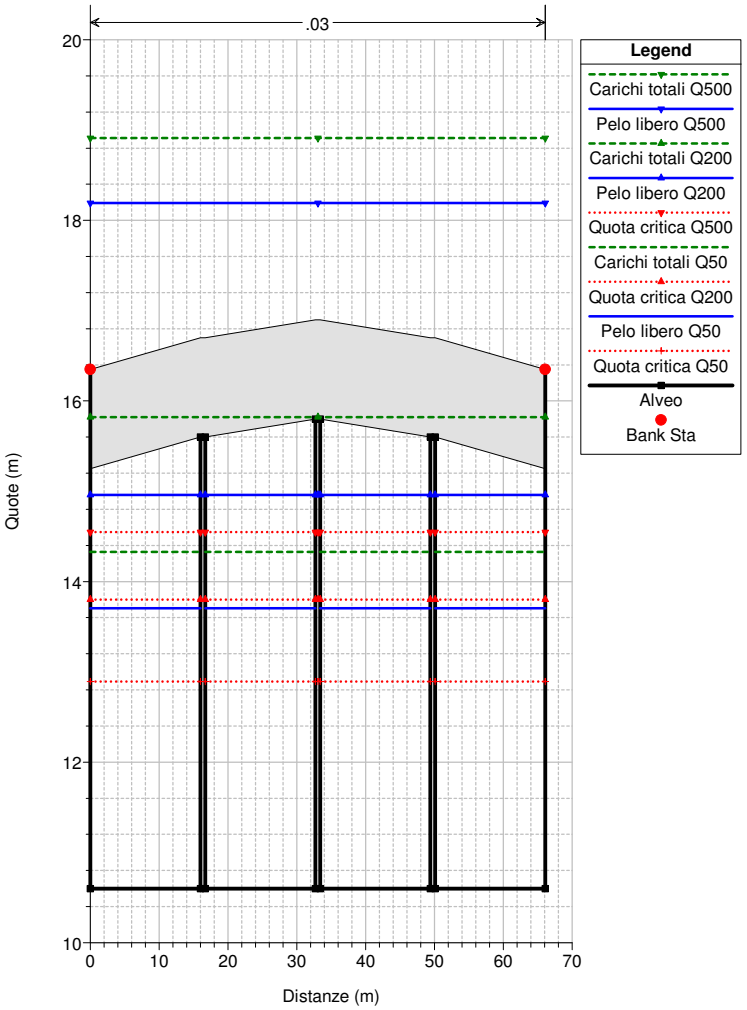
River = Bisagno Reach = Veil Fereggiano RS = 26. Sezione 8 (sbocco copertura fornice unico)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

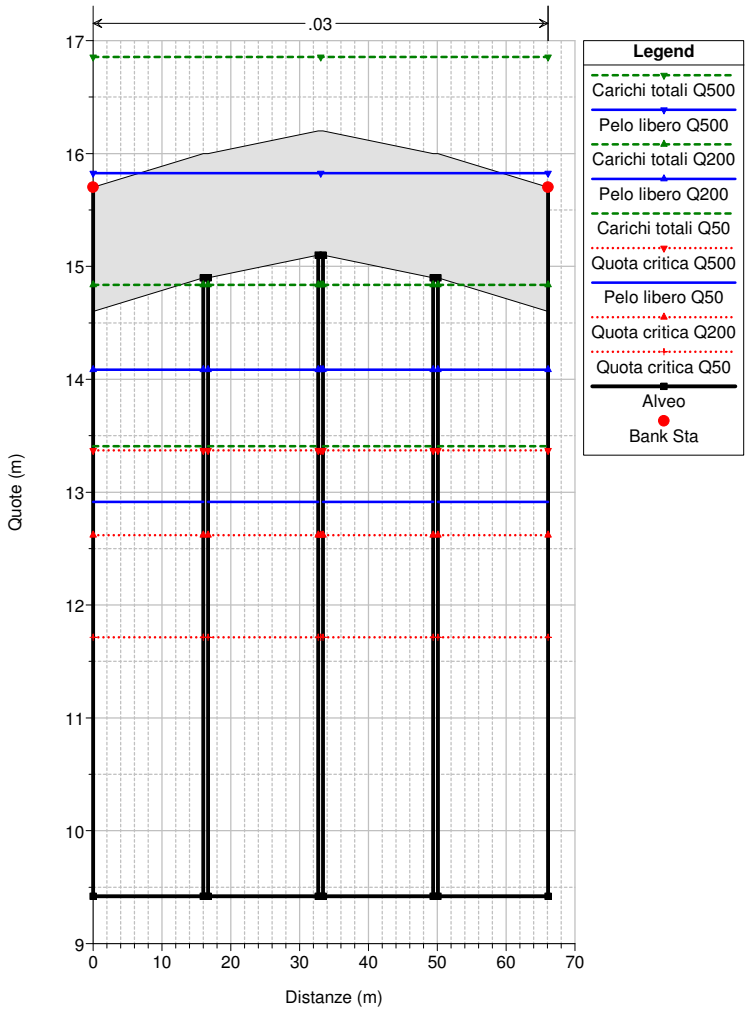
River = Bisagno Reach = Veil Fereggiano RS = 25. Sezione 7 (imbocco copertura stadio)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

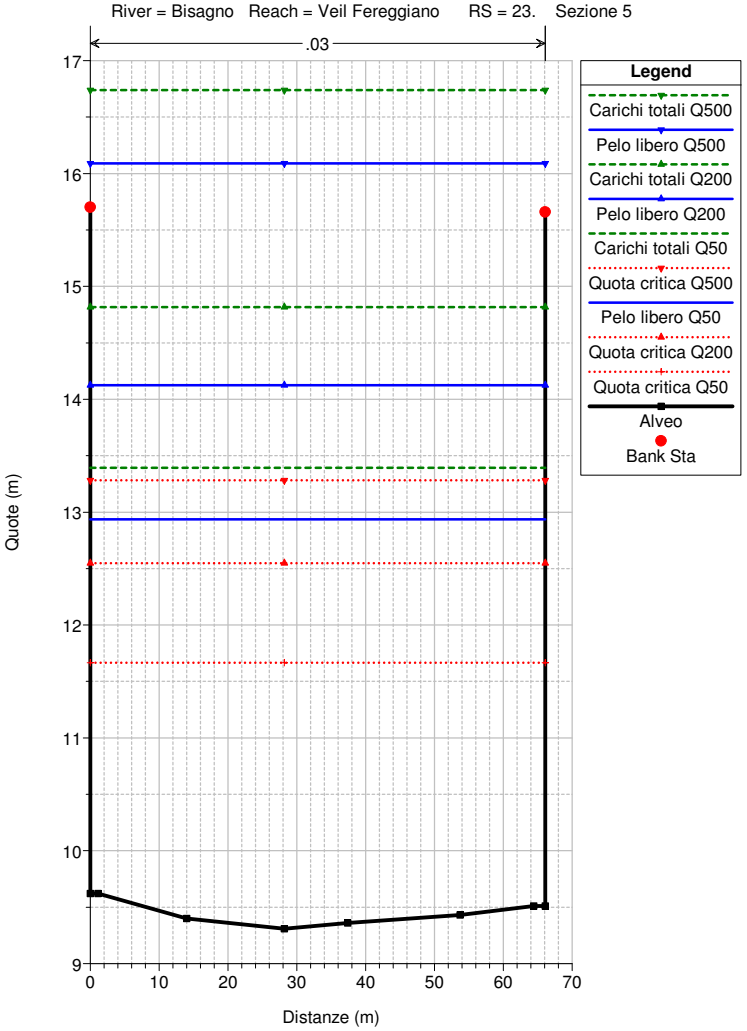
River = Bisagno Reach = Veil Fereggiano RS = 24. Sezione 6 (sbocco copertura stadio)



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

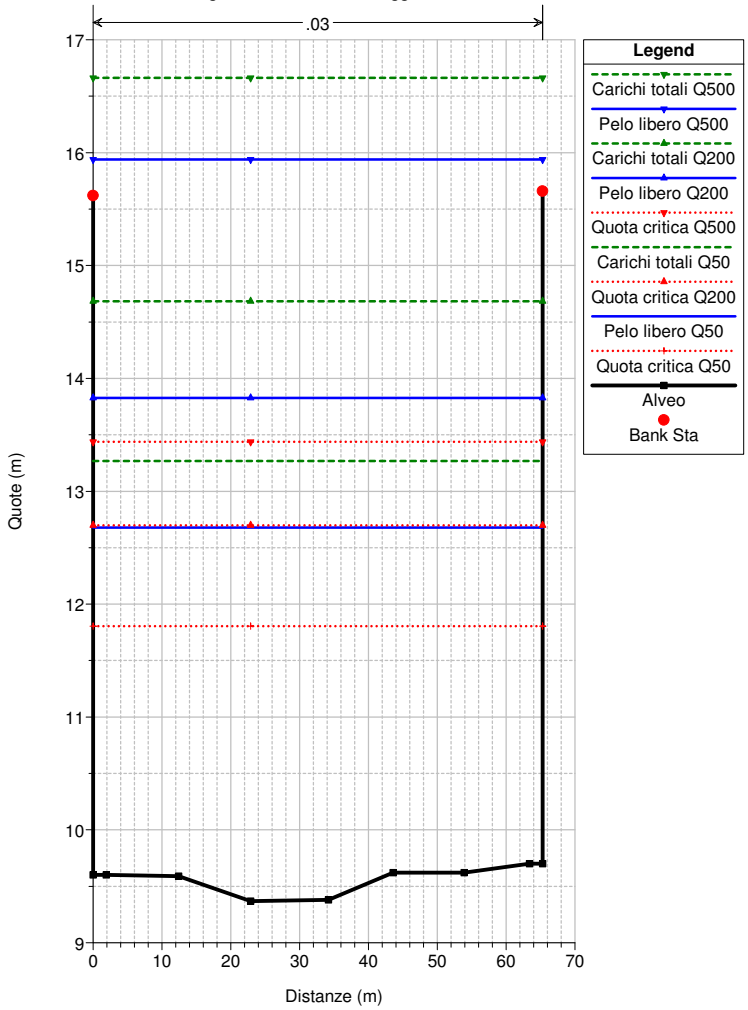
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 23. Sezione 5



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

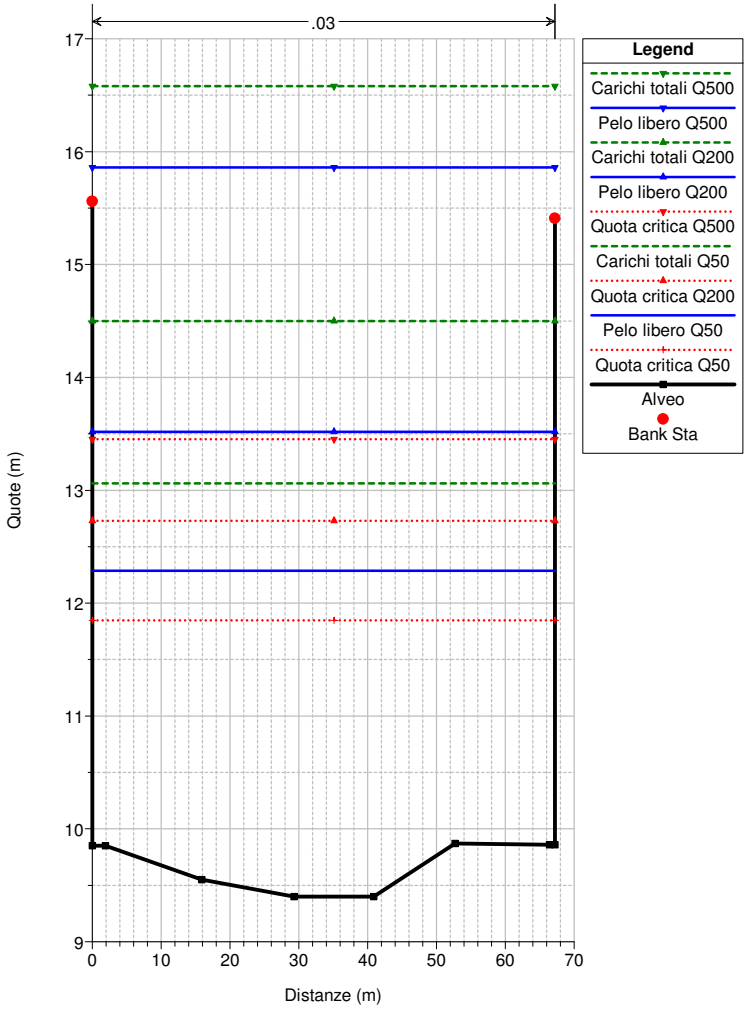
River = Bisagno Reach = Veil Fereggiano RS = 22. Sezione 4



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

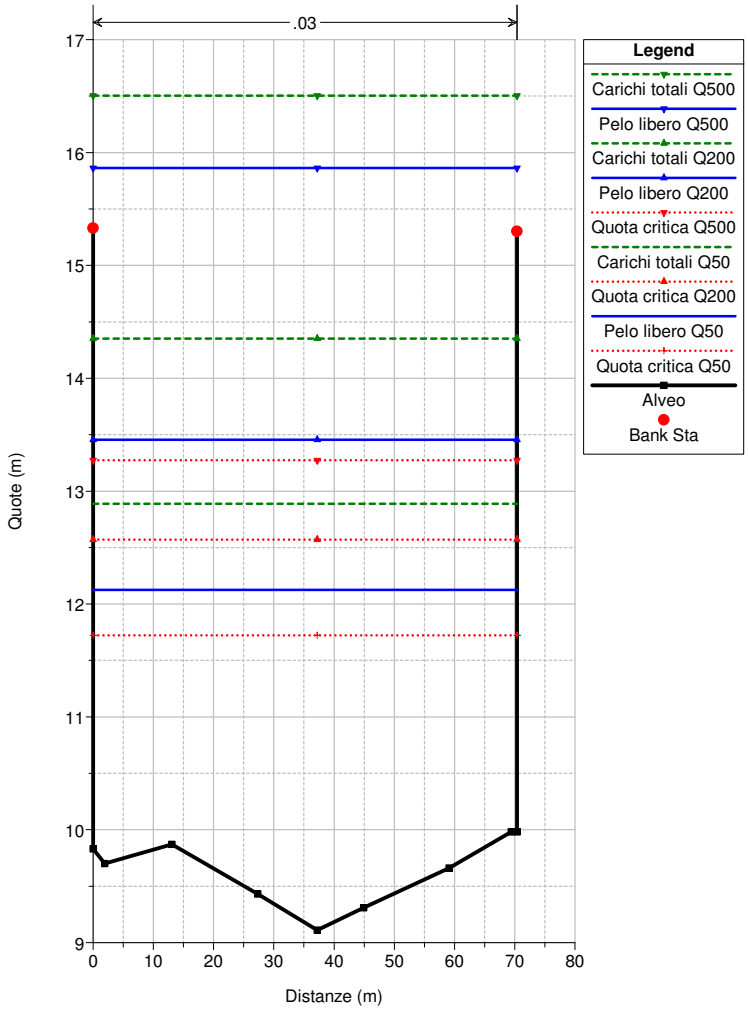
River = Bisagno Reach = Veil Fereggiano RS = 21. Sezione 3



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

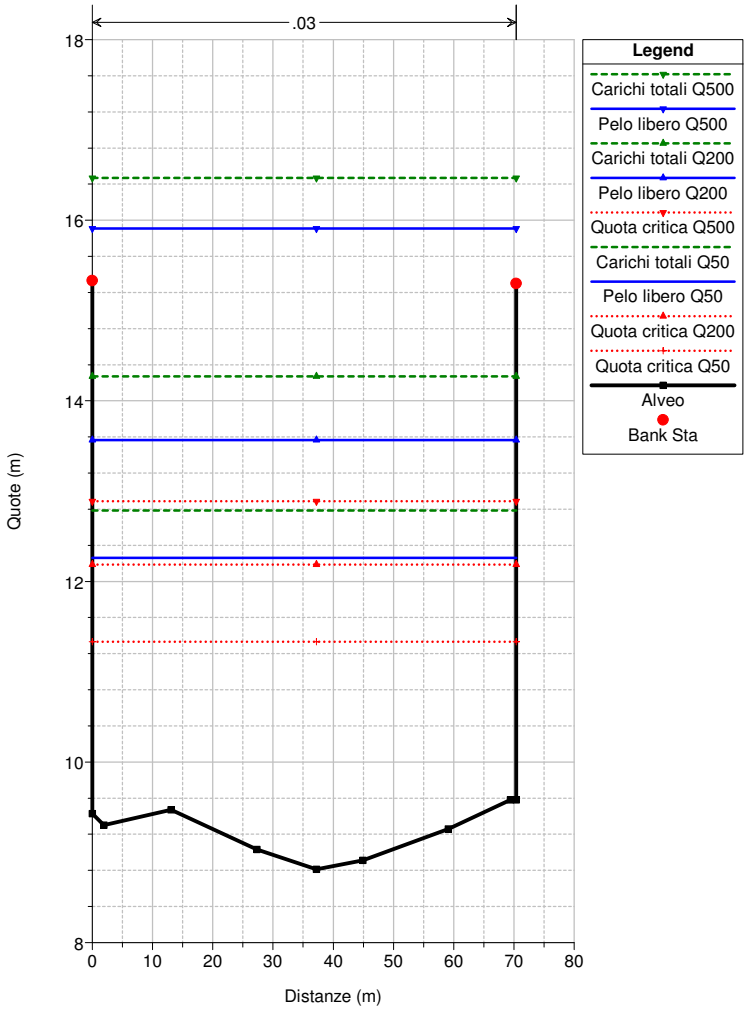
River = Bisagno Reach = Veil Fereggiano RS = 20. Sezione 2



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

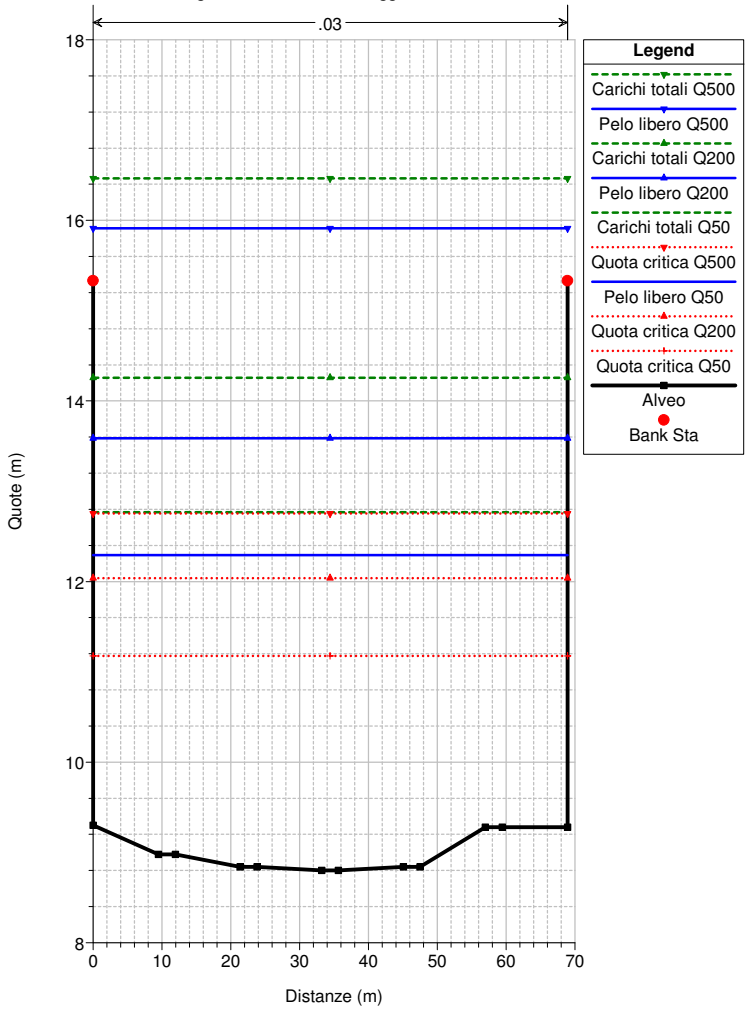
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 19.3 Sezione 1.3



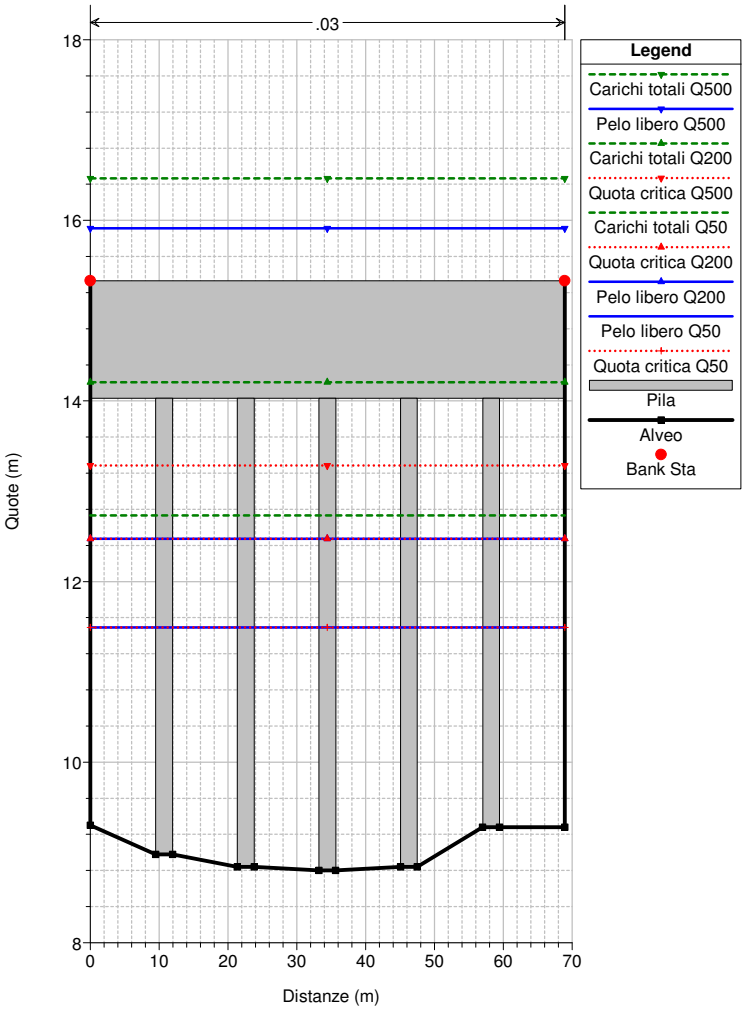
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 19.2 Sezione 1.2



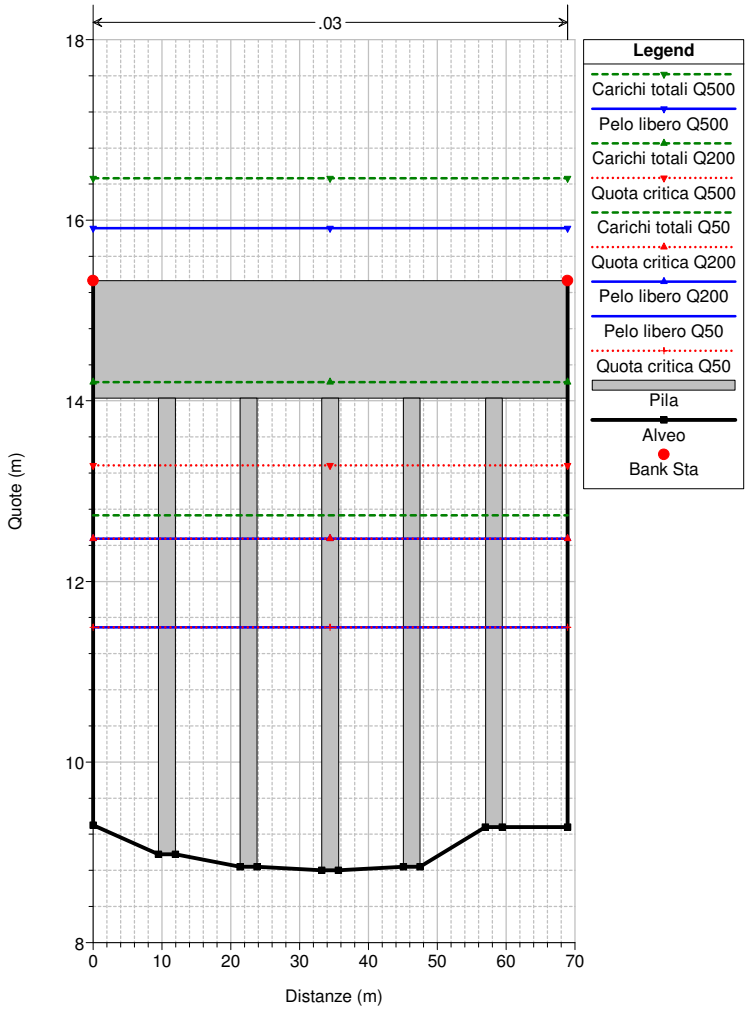
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 19.11 BR BIS 19 Ponte Serra



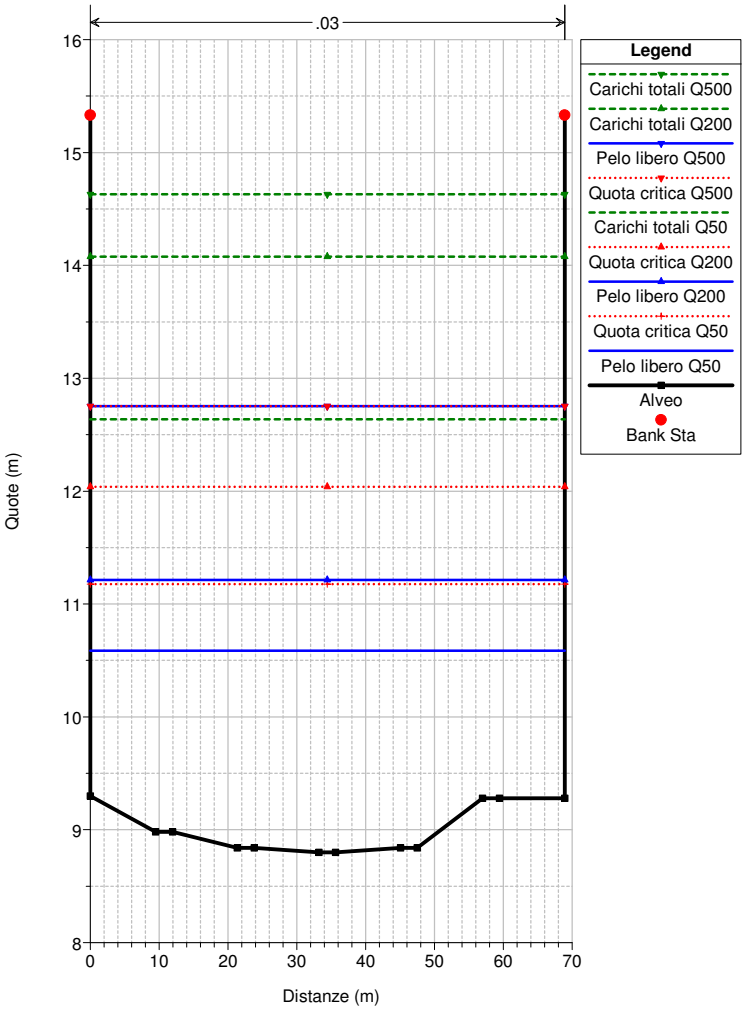
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

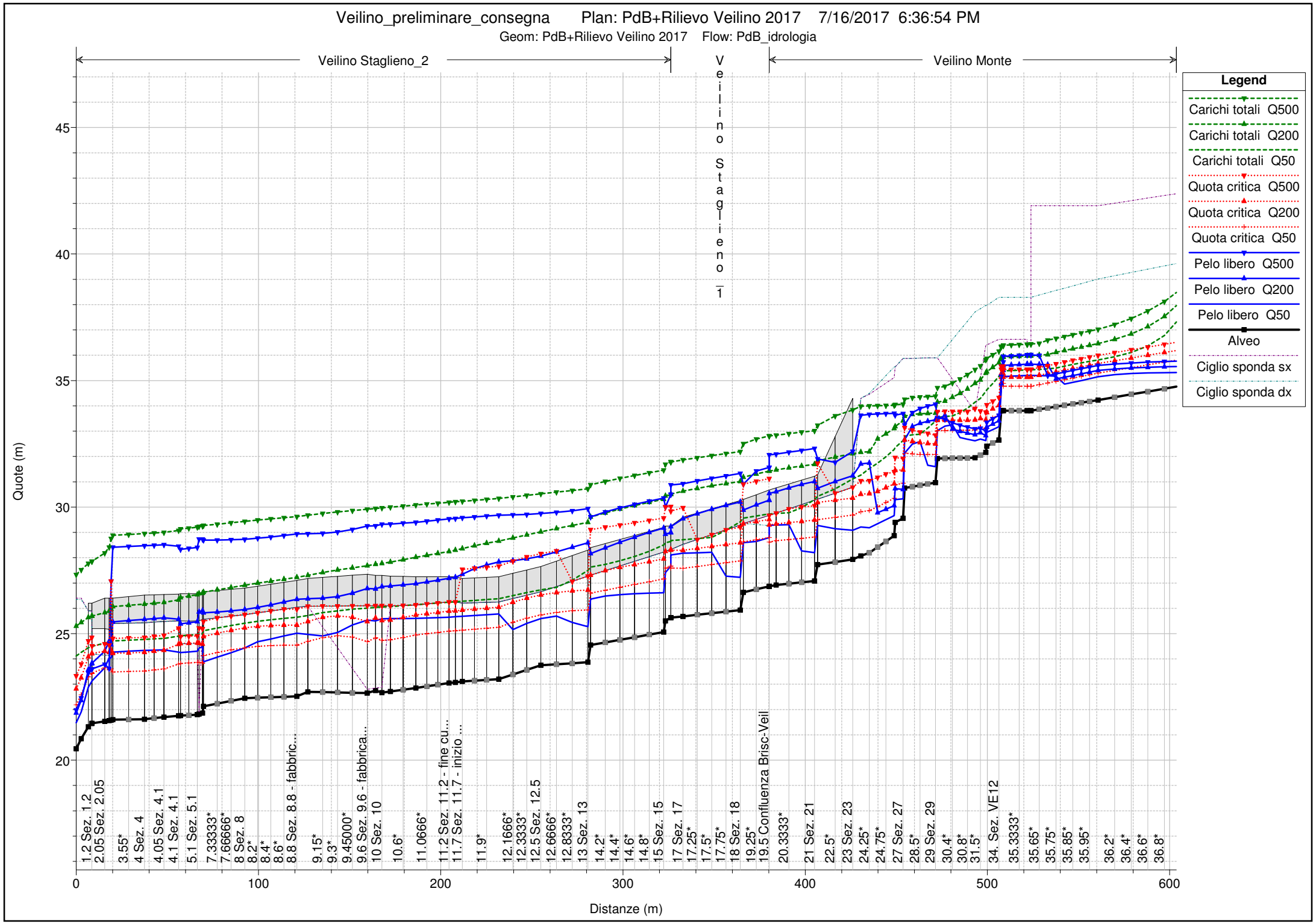
River = Bisagno Reach = Veil Fereggiano RS = 19.11 BR BIS 19 Ponte Serra



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 19.1 Sezione 1.1 valle ponte su briglia monte Feregg

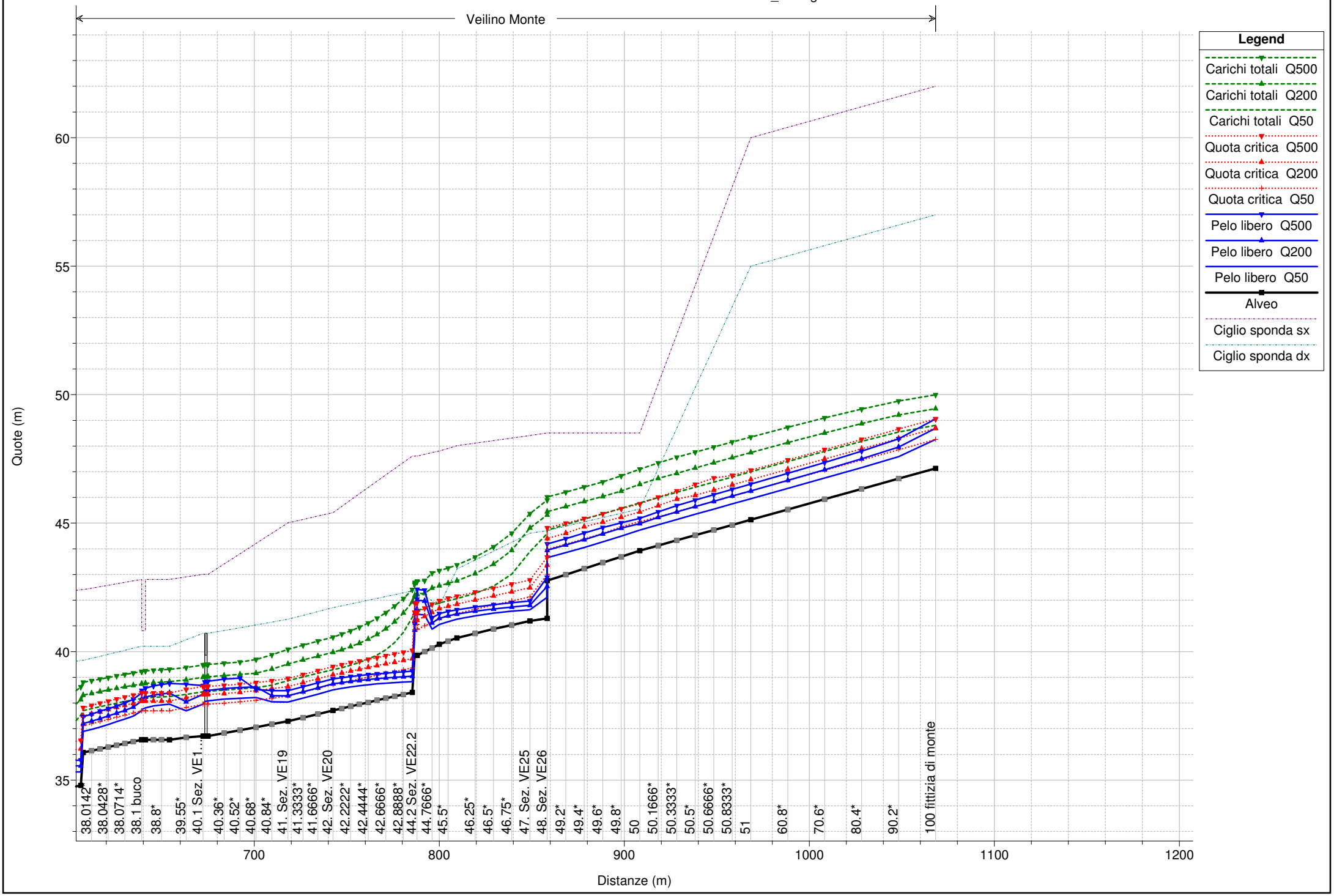




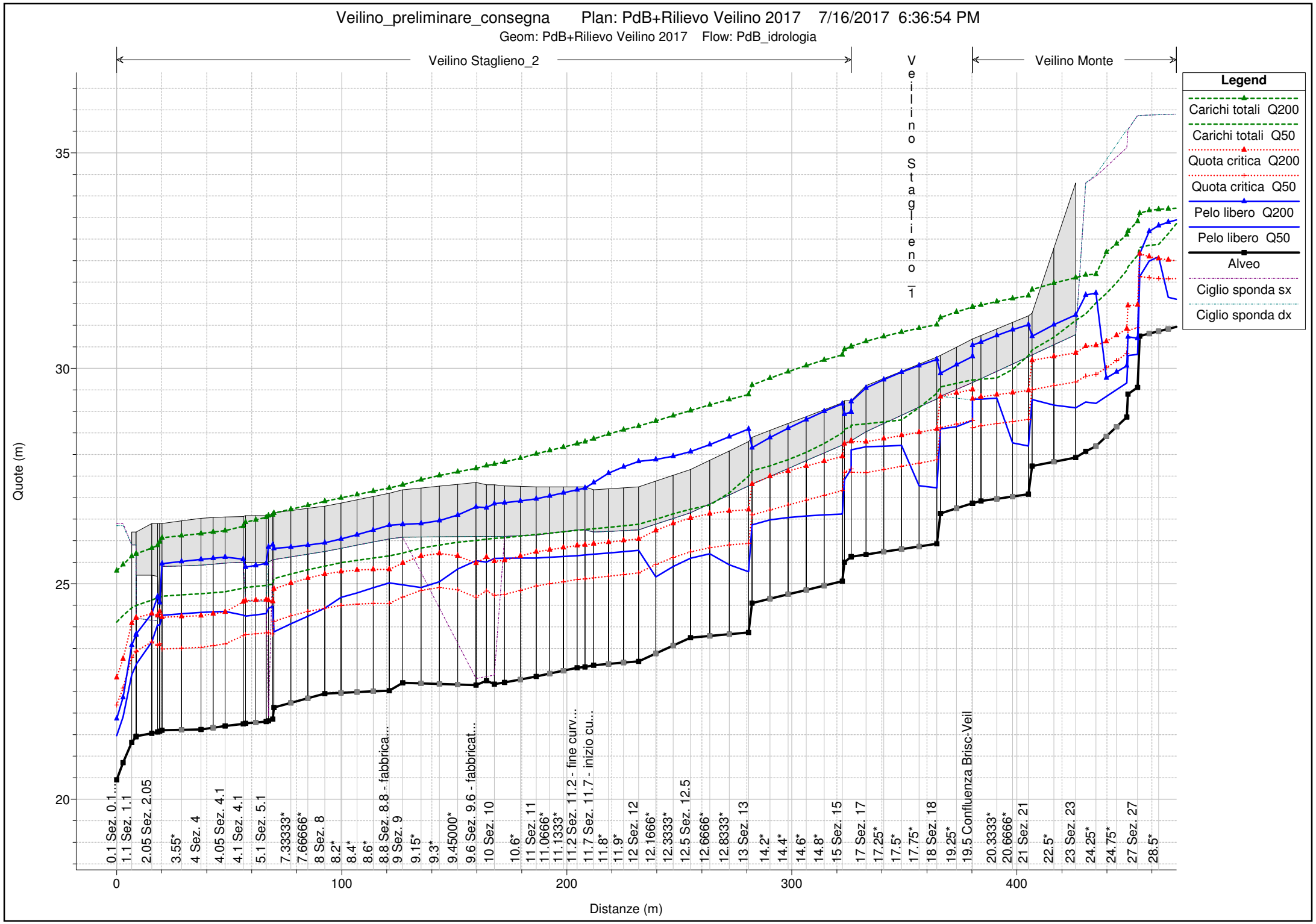
1 cm Horiz. = 25 m 1 cm Vert. = 1.8 m

Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

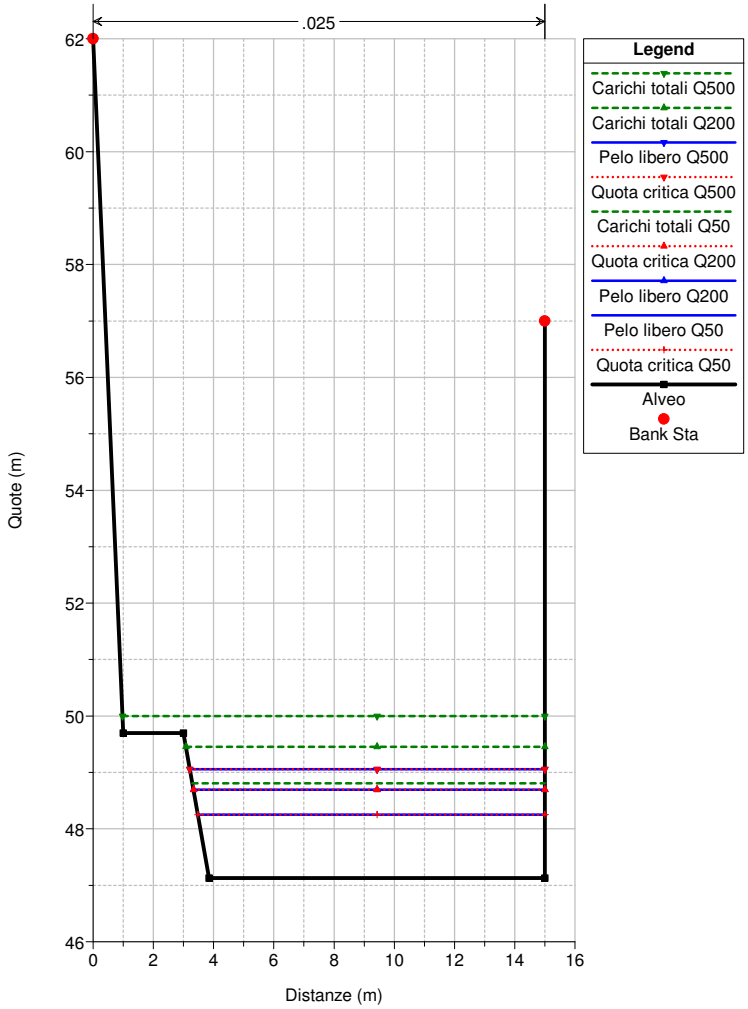
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia



1 cm Horiz. = 25 m 1 cm Vert. = 1.8 m

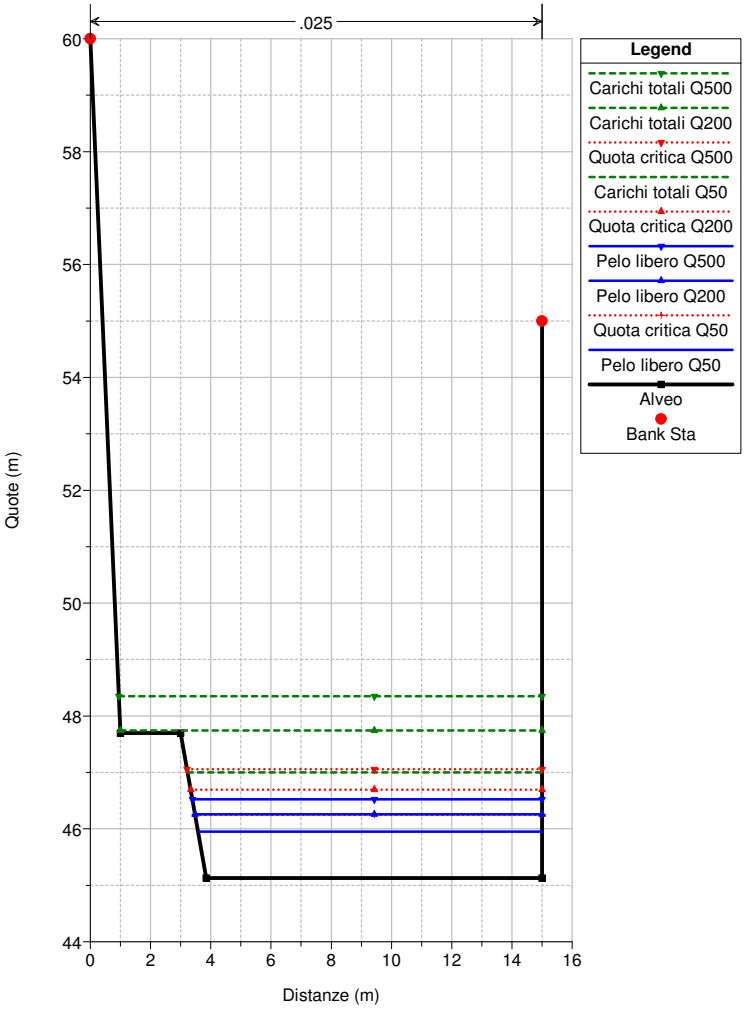

Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
Veilino Staglieno_2
Veilino Staglieno_1
Veilino Monte
Legend
Carichi totali Q200
Carichi totali Q50
Quota critica Q200
Quota critica Q50
Pelo libero Q200
Pelo libero Q50
Alveo
Ciglio sponda sx
Ciglio sponda dx
Quote (m)
Distanze (m)
35
30
25
20
0
100
200
300
400
0.1 Sez. 0.1...
1.1 Sez. 1.1
2.05 Sez. 2.05
3.55*
4 Sez. 4
4.05 Sez. 4.1
4.1 Sez. 4.1
5.1 Sez. 5.1
7.33333*
7.66666*
8 Sez. 8
8.2*
8.4*
8.6*
8.8 Sez. 8.8 - fabbrica...
9 Sez. 9
9.15*
9.3*
9.45000*
9.6 Sez. 9.6 - fabbricat...
10 Sez. 10
10.6*
11 Sez. 11
11.0666*
11.1333*
11.2 Sez. 11.2 - fine curv...
11.7 Sez. 11.7 - inizio cu...
11.8*
11.9*
12 Sez. 12
12.1666*
12.3333*
12.5 Sez. 12.5
12.6666*
12.8333*
13 Sez. 13
14.2*
14.4*
14.6*
14.8*
15 Sez. 15
17 Sez. 17
17.25*
17.5*
17.75*
18 Sez. 18
19.25*
19.5 Confluenza Brisc-Veil
20.3333*
20.6666*
21 Sez. 21
22.5*
23 Sez. 23
24.25*
24.75*
27 Sez. 27
28.5*

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 100 fittizia di monte



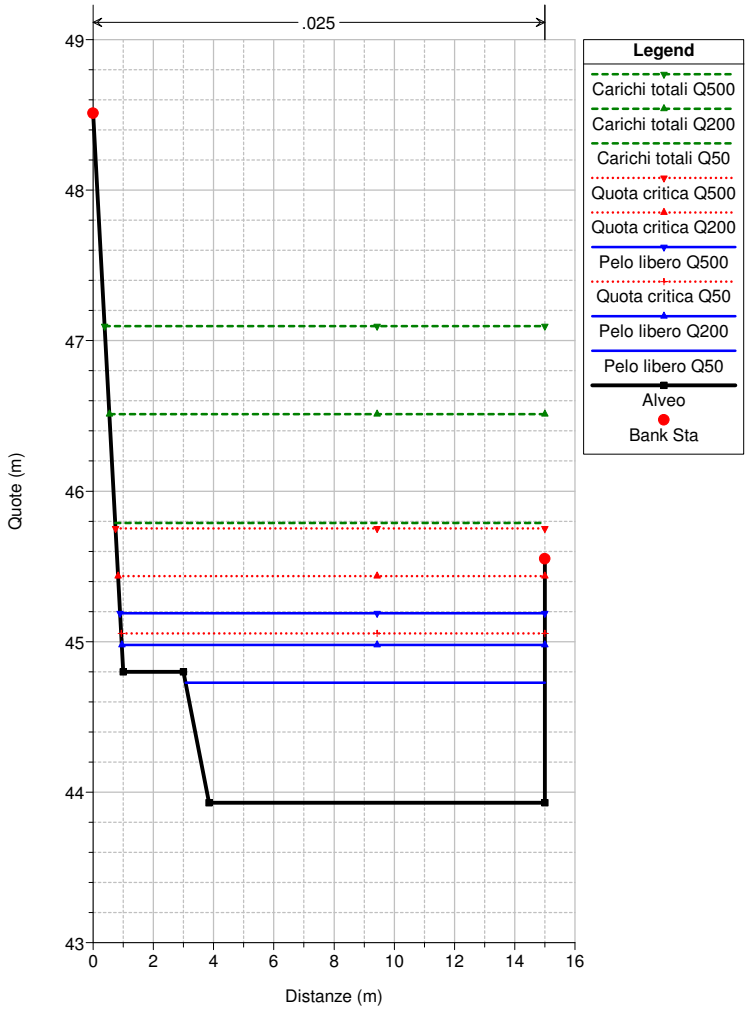
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 51 VEI 51



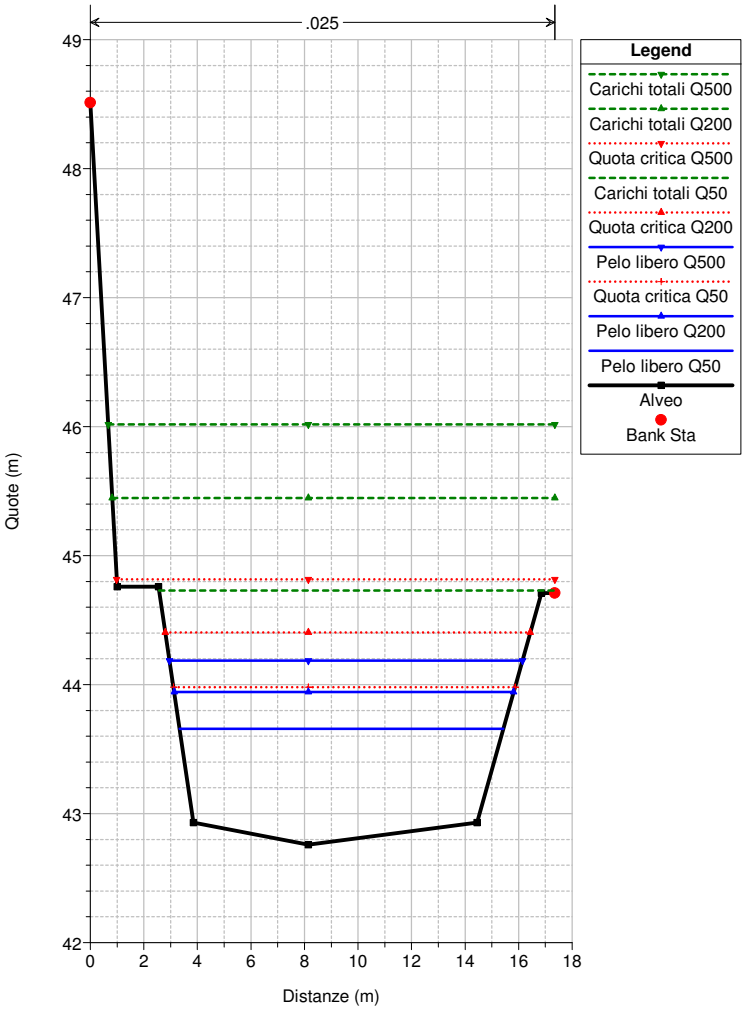
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 50 VEI 50

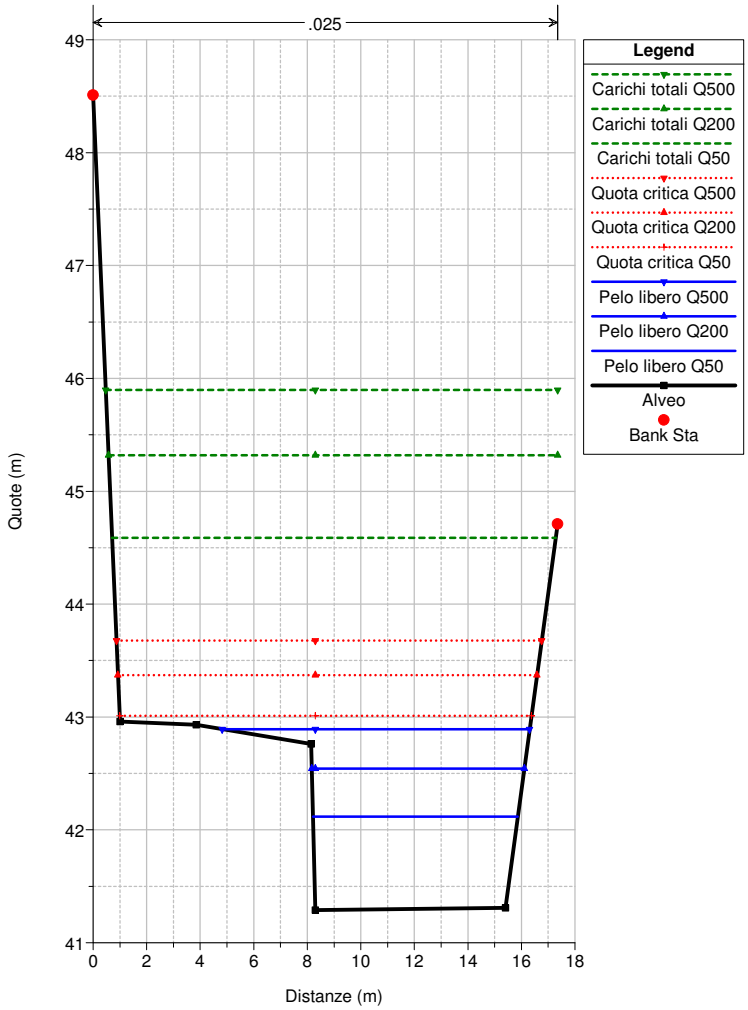


Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 49. VEI 49 Sez. VE27

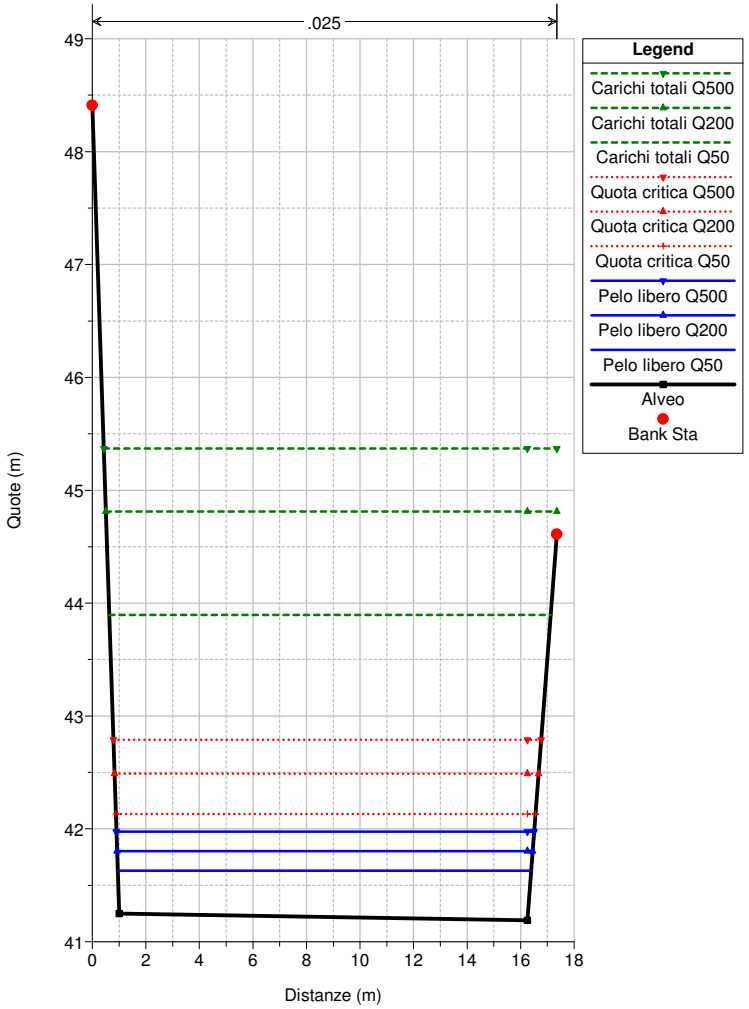


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 48. VEI 48 Sez. VE26



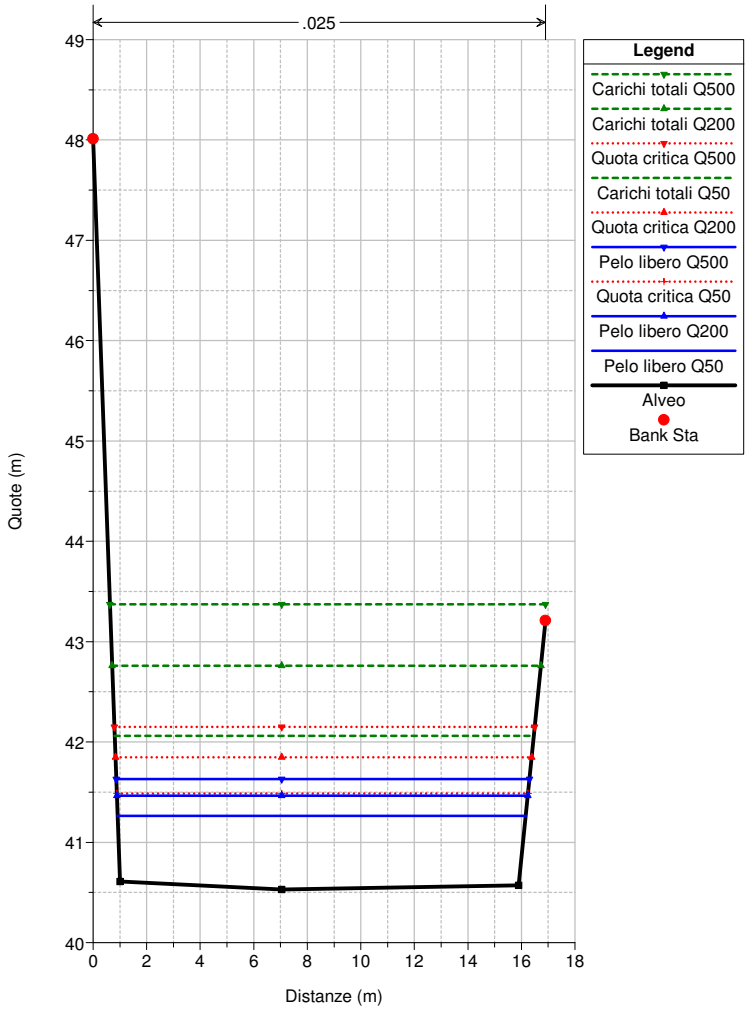
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 47. VEI 47 Sez. VE25



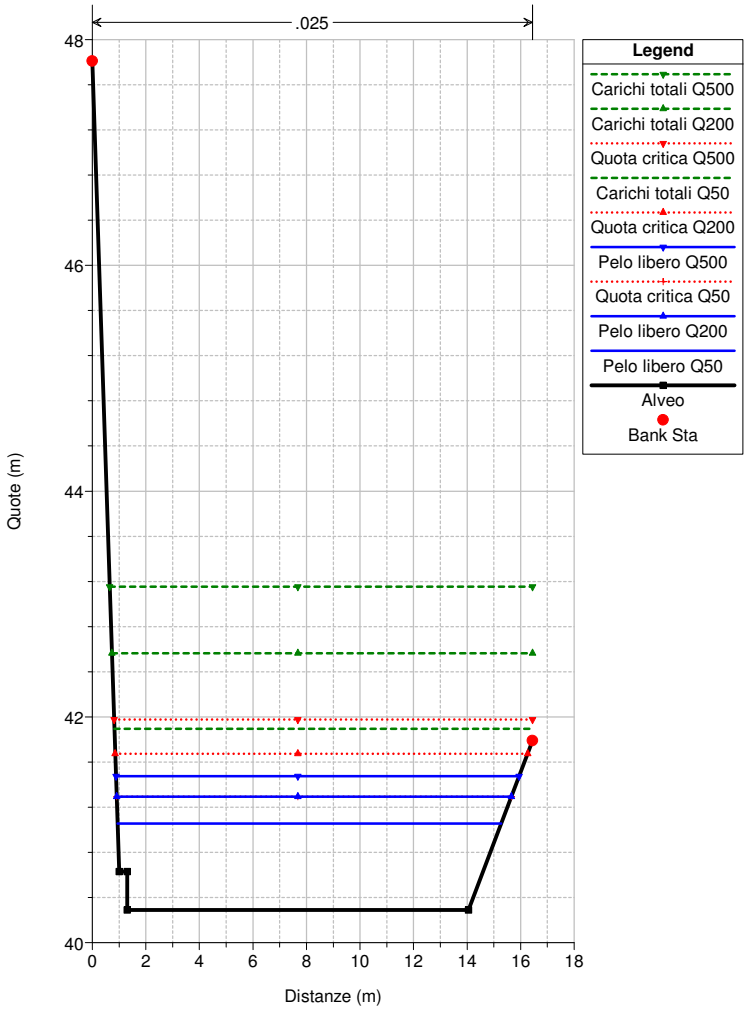
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 46. VEI 46 Sez. VE24



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

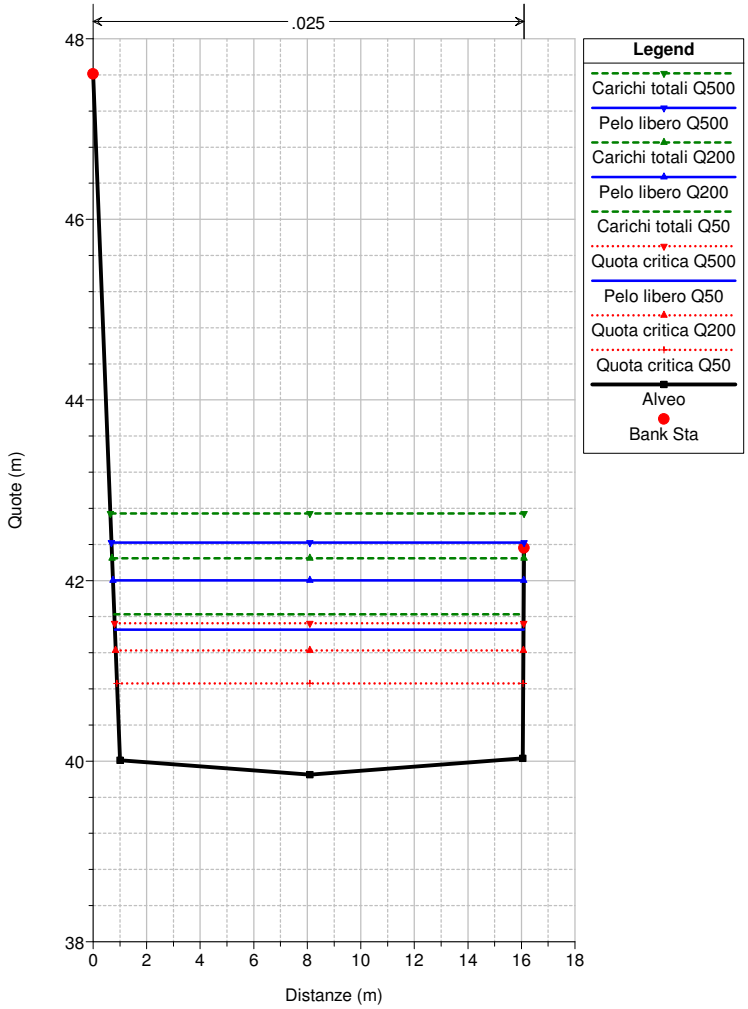
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 45. VEI 45 Sez. VE23



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

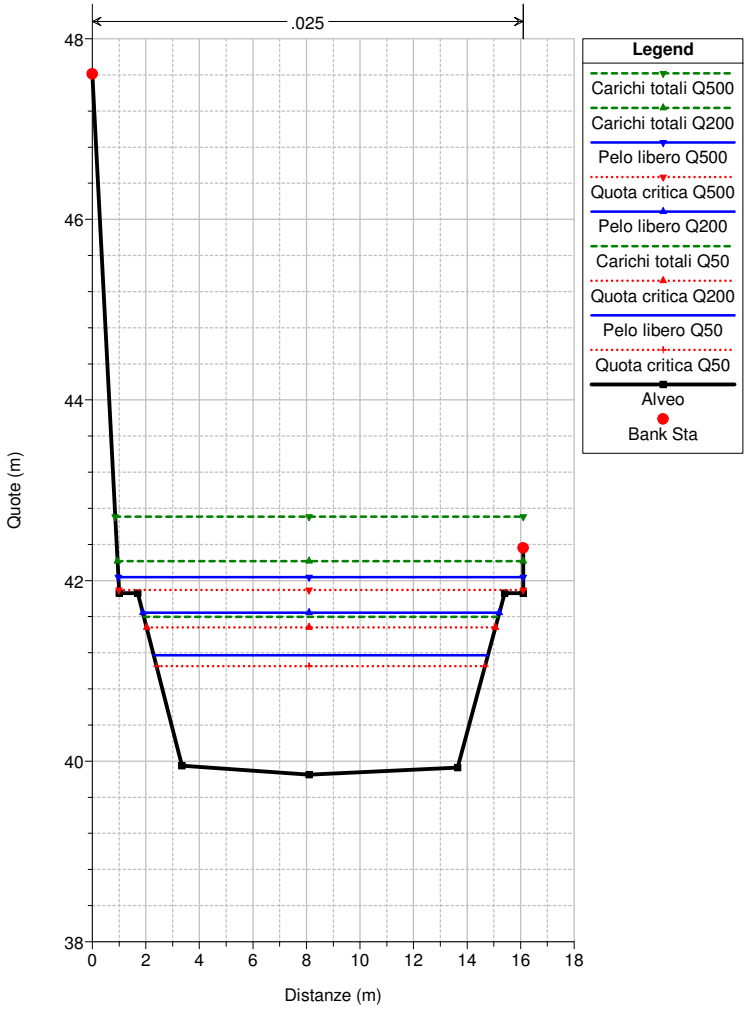
River = Veilino Reach = Monte RS = 44.3 VEI 44.3 Sez. VE22.3



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

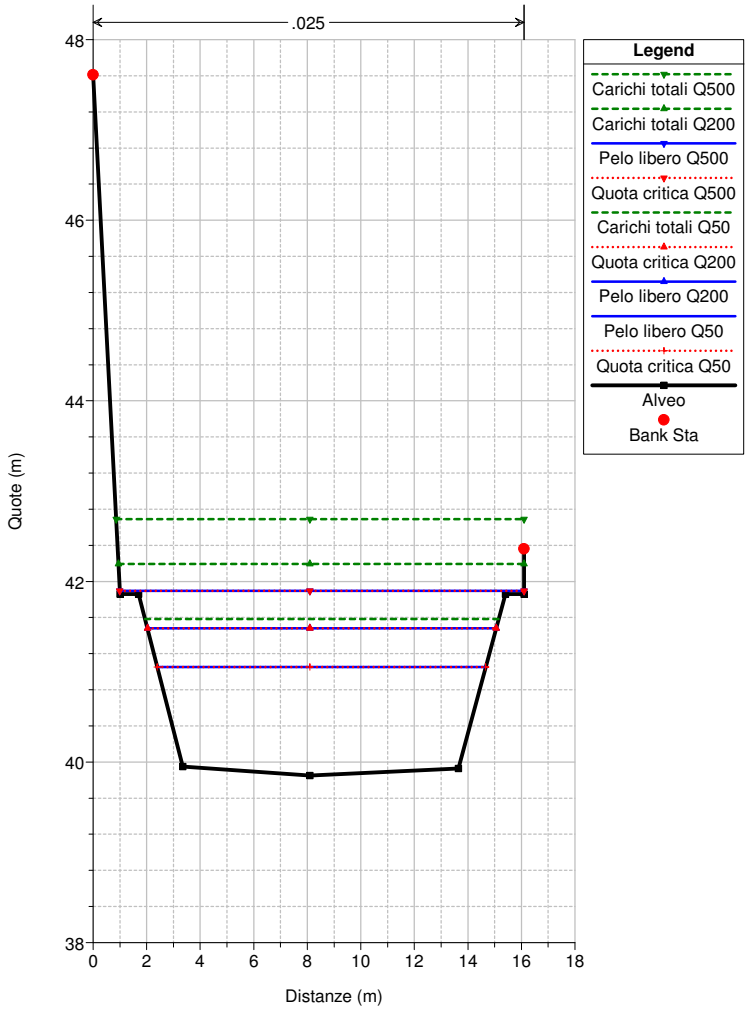
River = Veilino Reach = Monte RS = 44.2 VEI 44.2 Sez. VE22.2



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

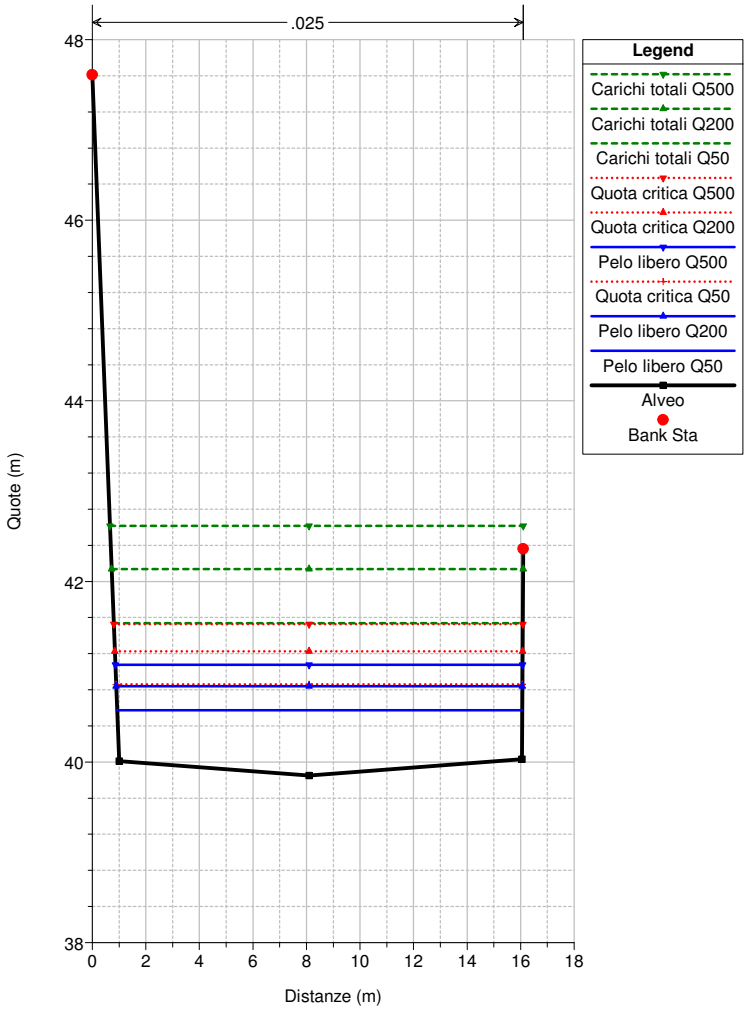
River = Veilino Reach = Monte RS = 44.1 VEI 44.1 Sez. VE22.1



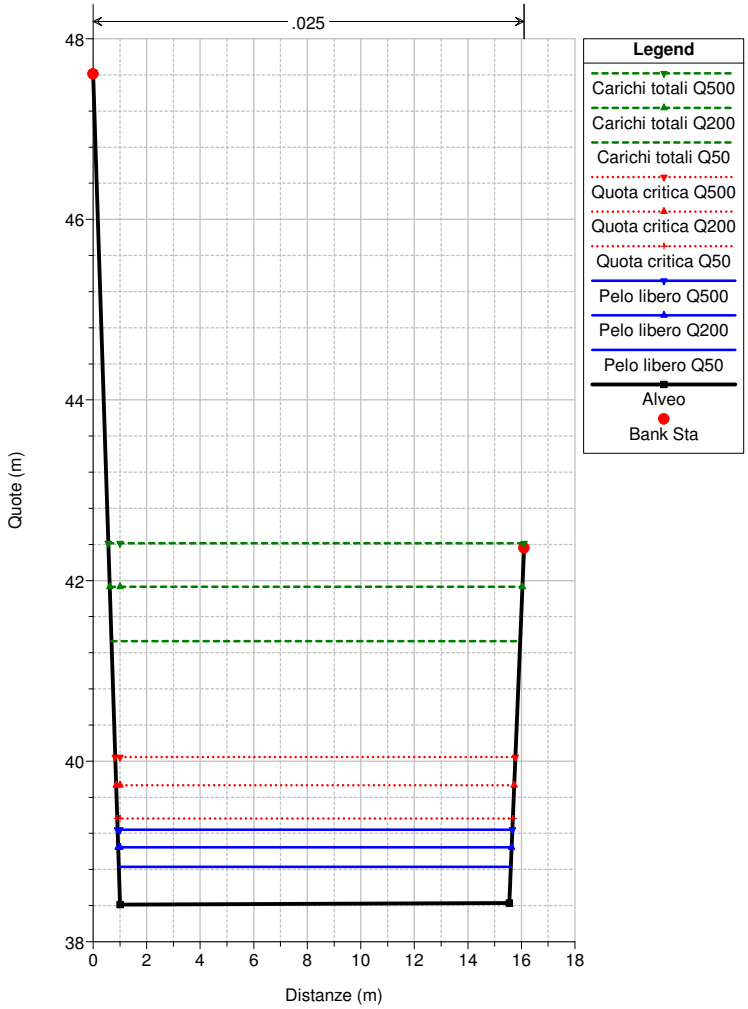
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Monte RS = 44. VEI 44 Sez. VE22.0

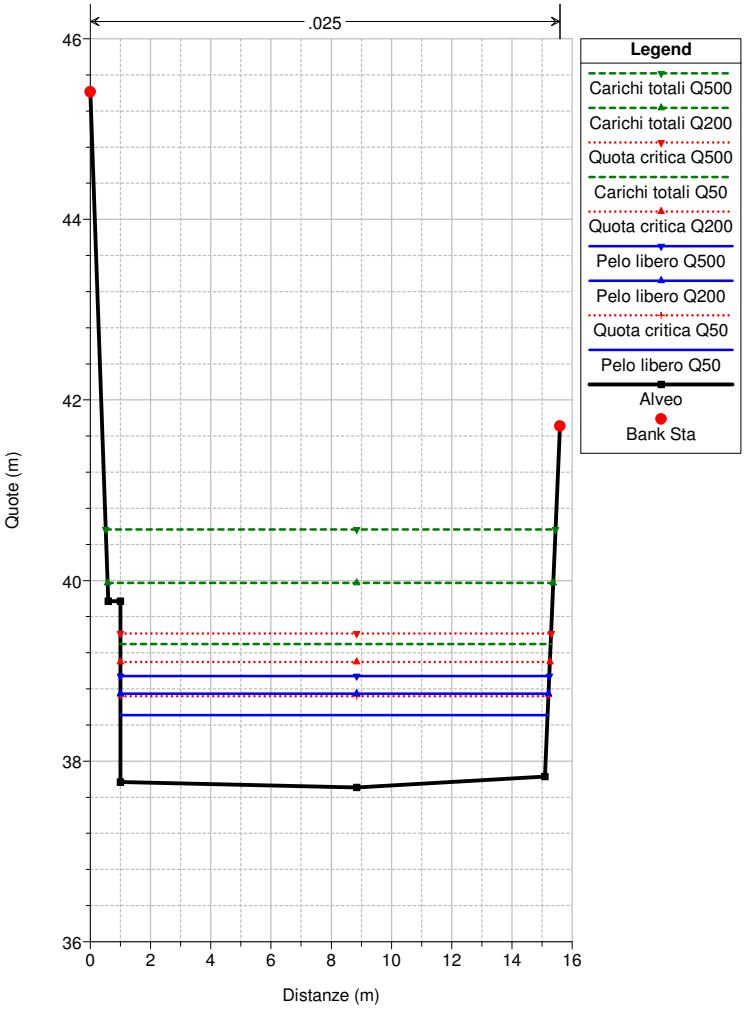


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 43. VEI 43 Sez. VE21



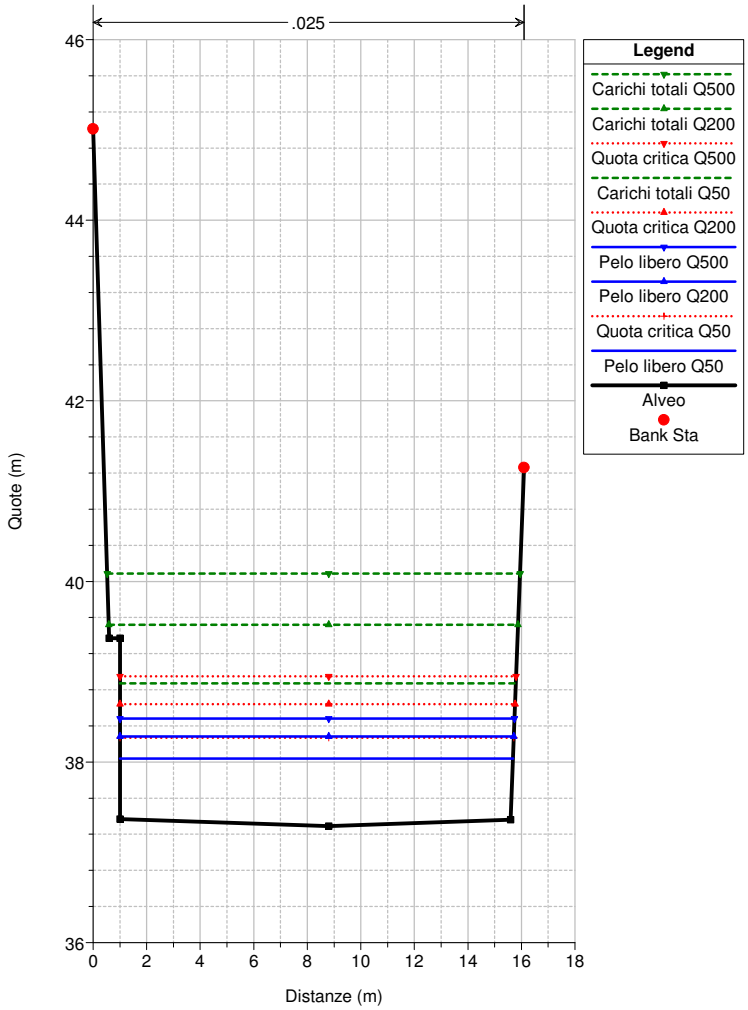
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 42. VEI 42 Sez. VE20



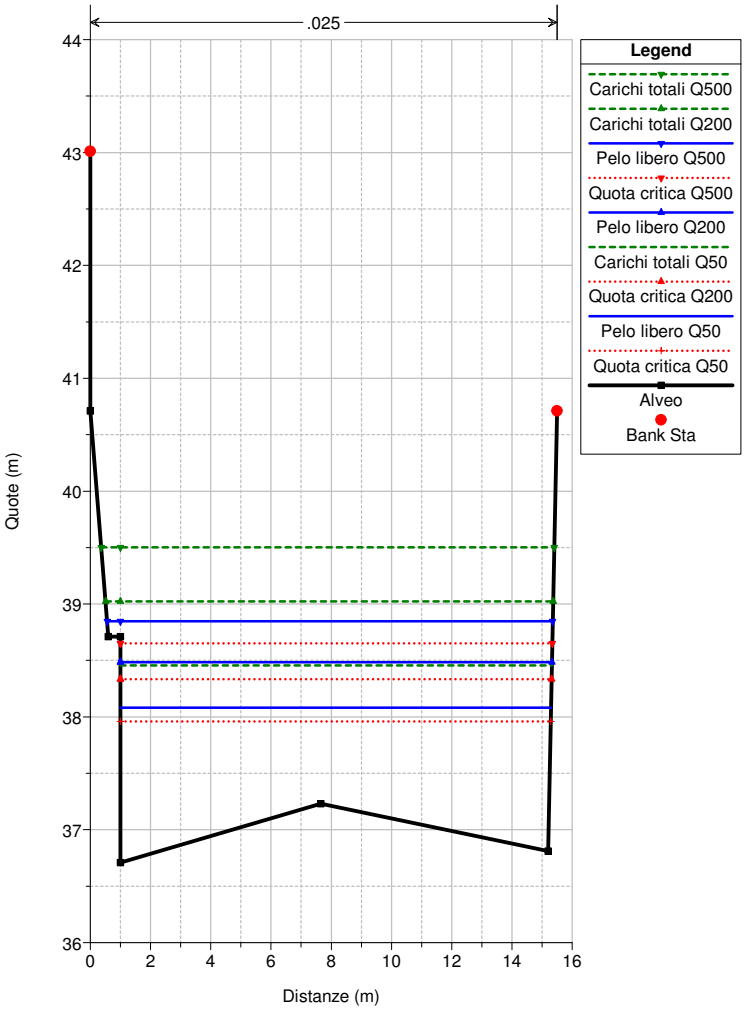
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 41. VEI 41 Sez. VE19



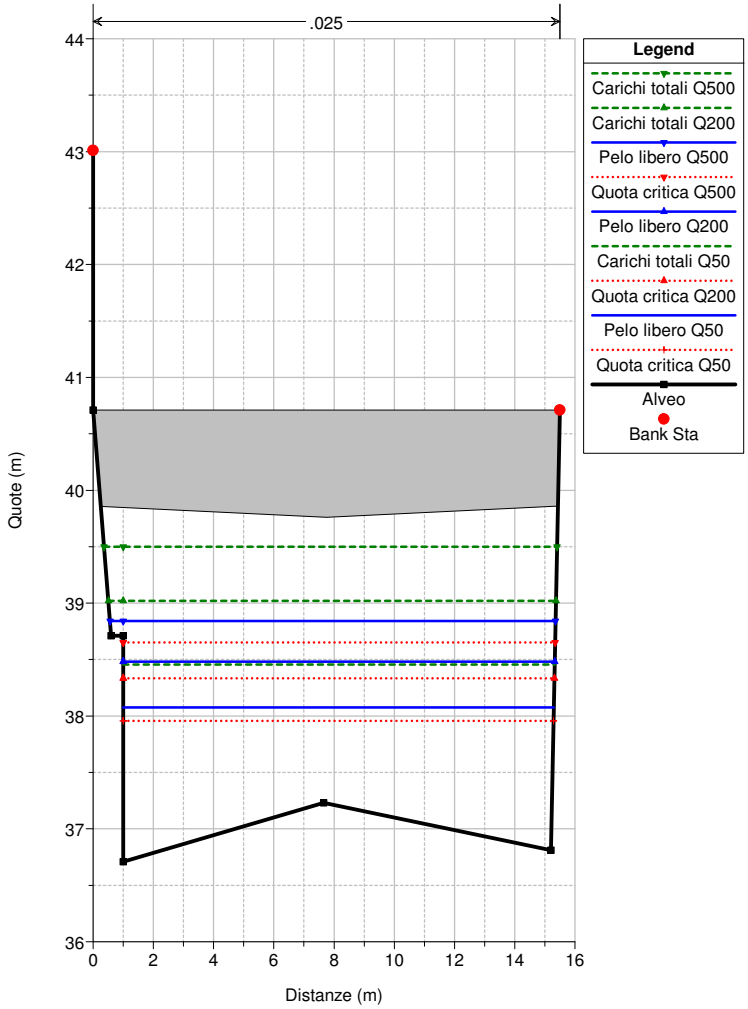
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 40.2 VEI 40 Sez. VE18.2



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

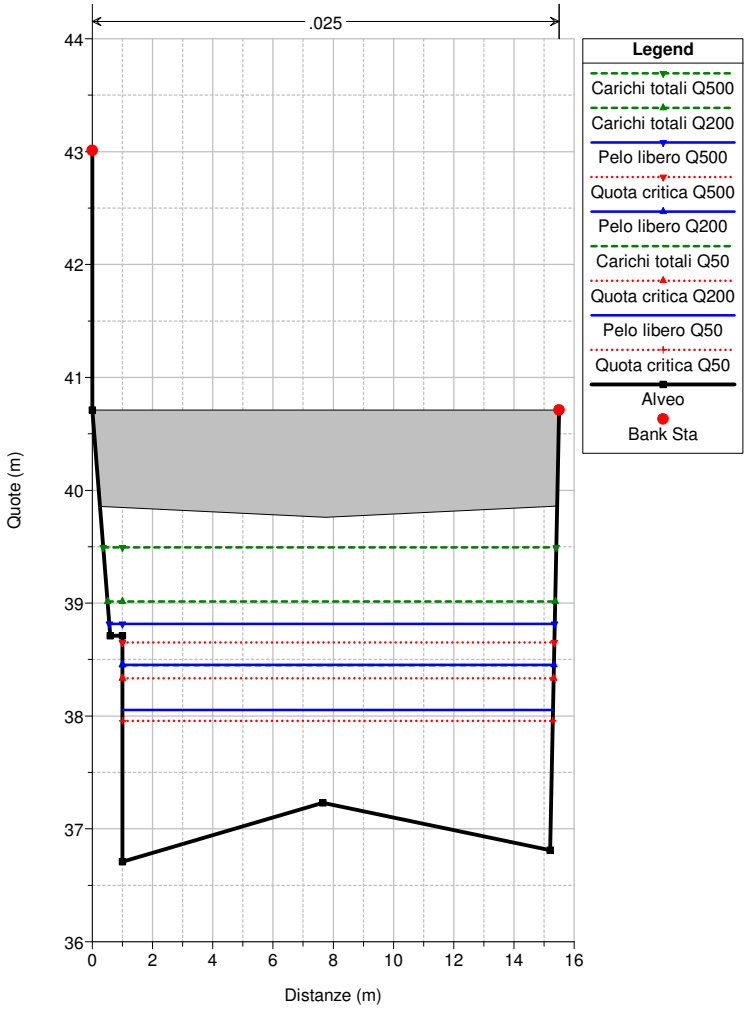
River = Veilino Reach = Monte RS = 40.11 BR VEI 40 Sez. VE18.11



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

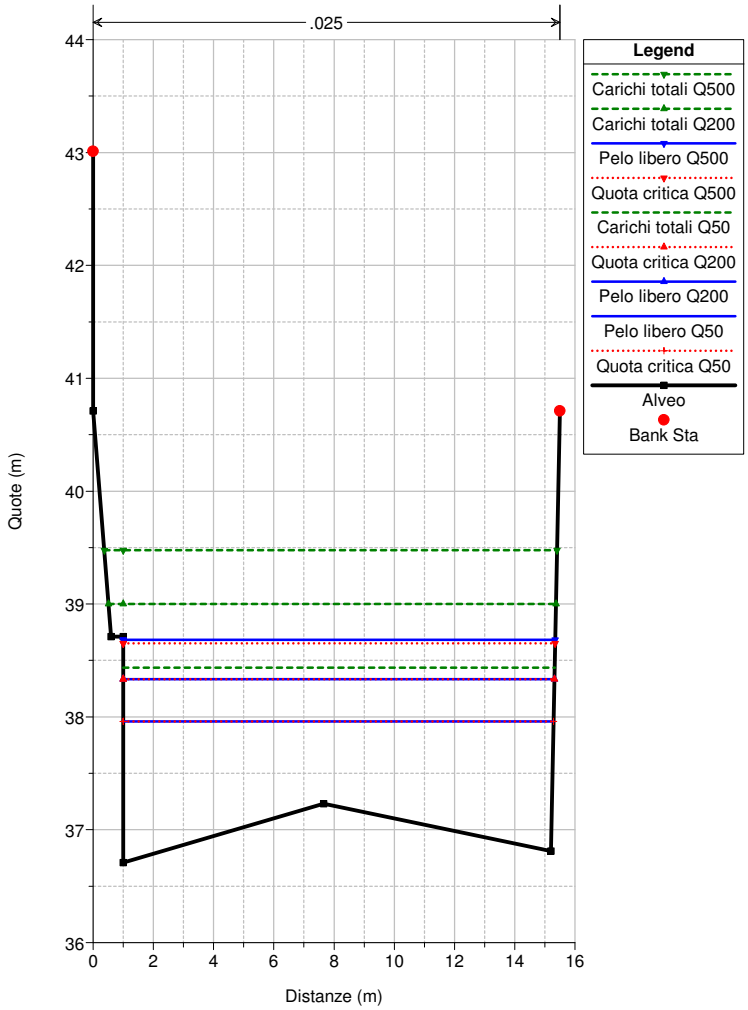
River = Veilino Reach = Monte RS = 40.11 BR VEI 40 Sez. VE18.11



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

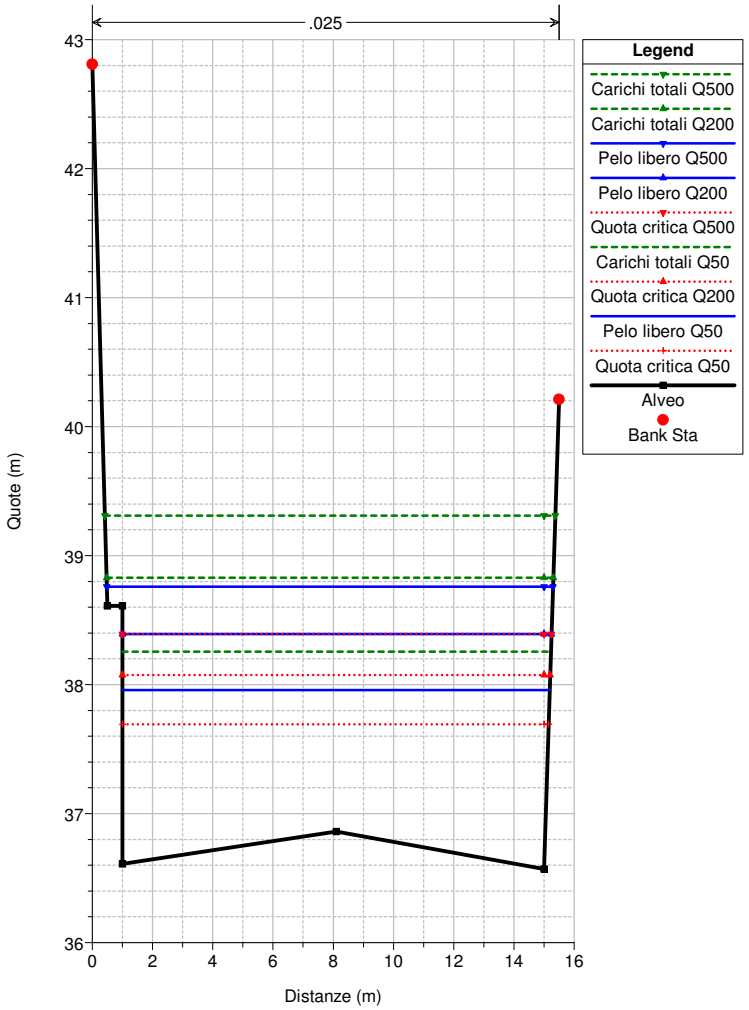
River = Veilino Reach = Monte RS = 40.1 VEI 40 Sez. VE18.1



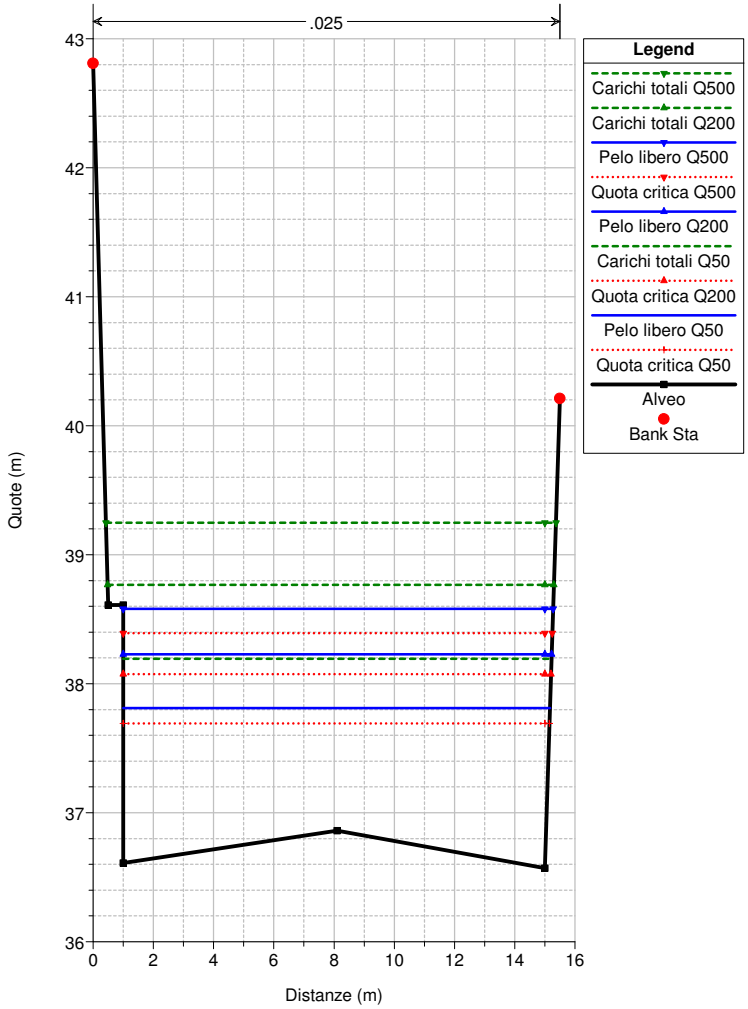
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Monte RS = 39. VEI 39 Sez. VE17

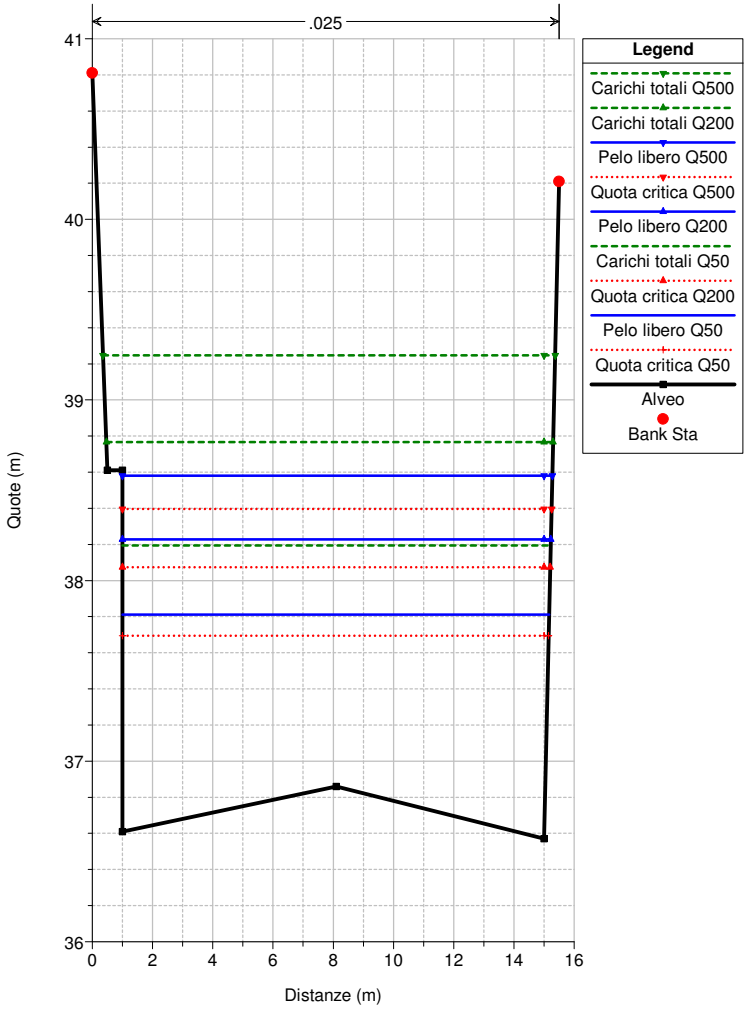


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 38.4 buco



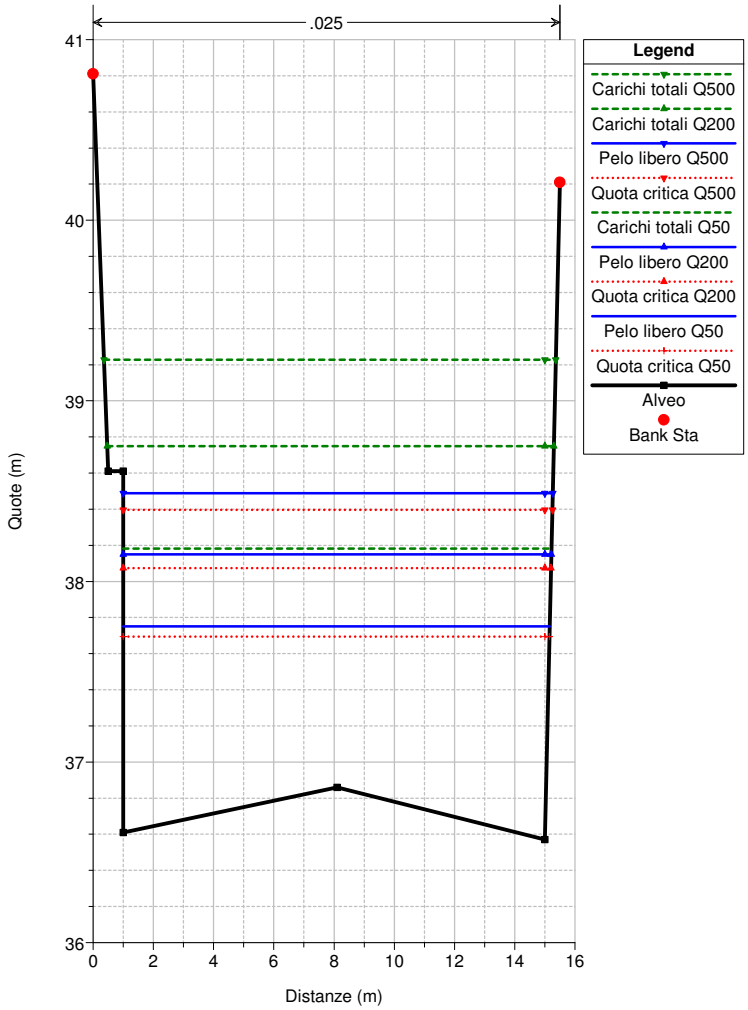
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 38.3 buco



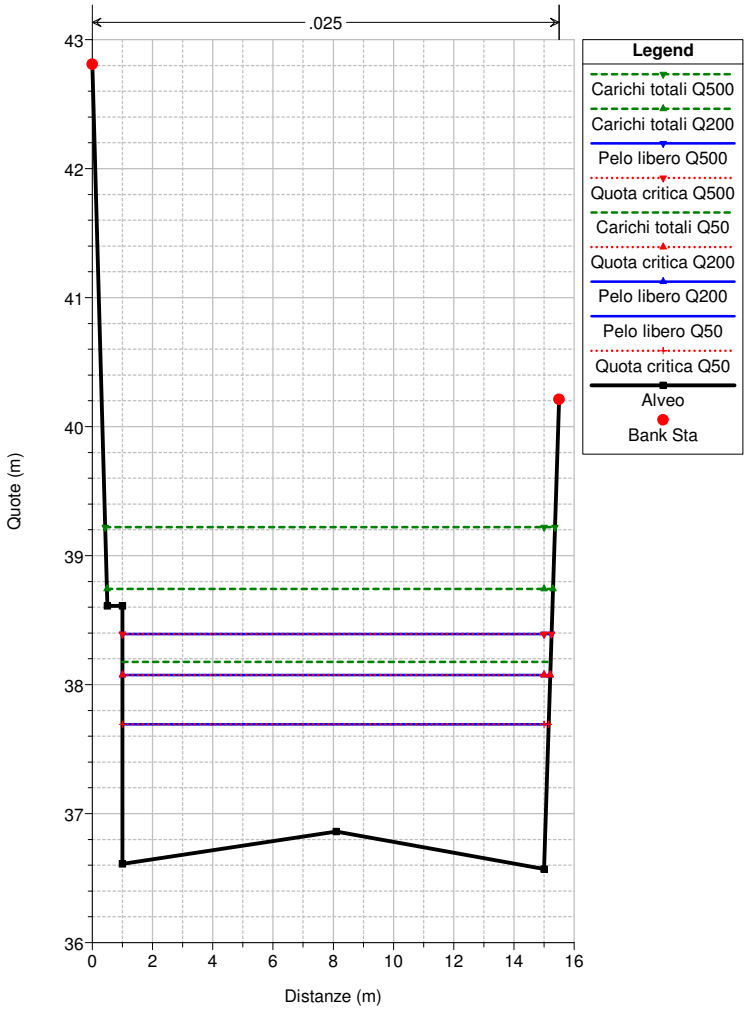
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 38.2 buco

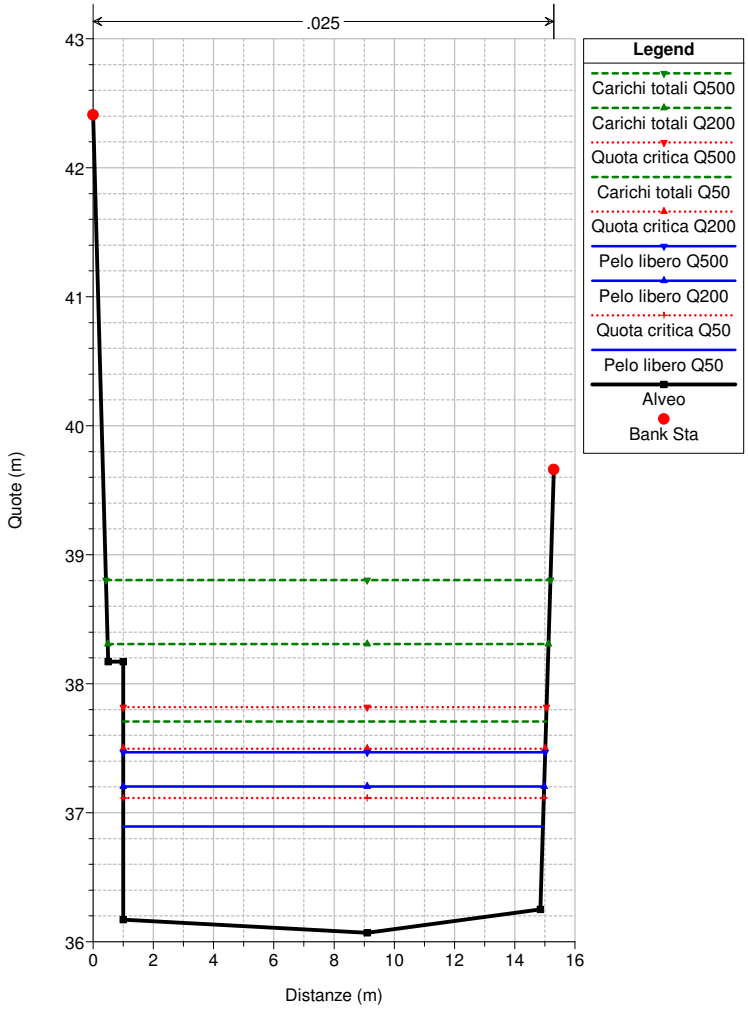


Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 38.1 buco

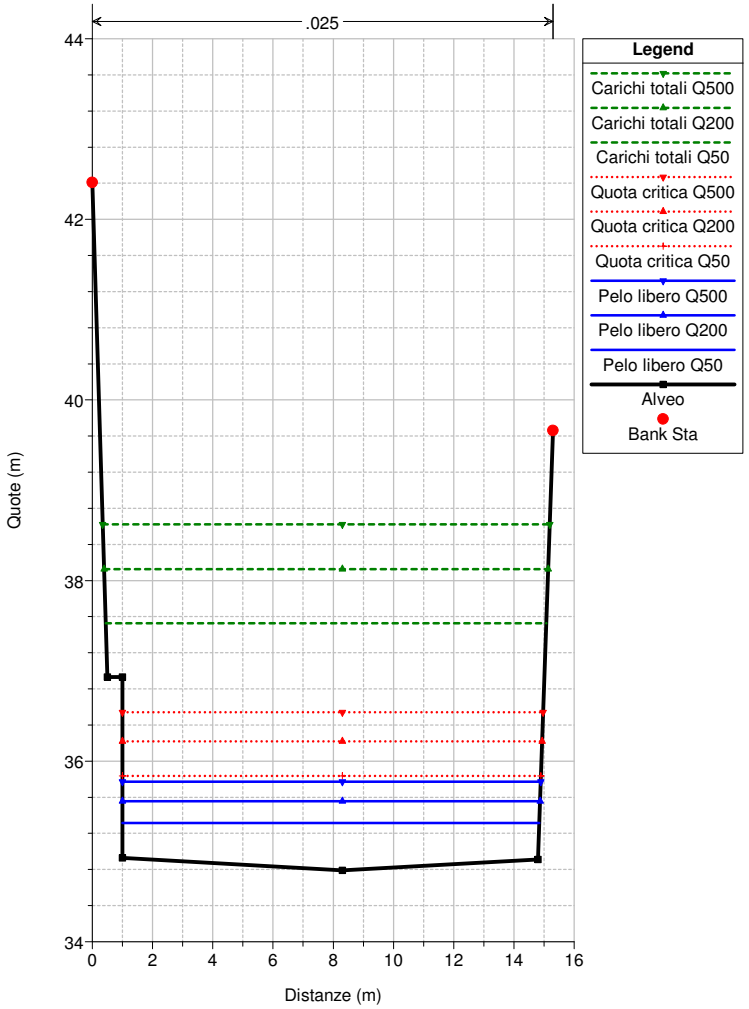


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 38. VEI 38 Sez. VE16



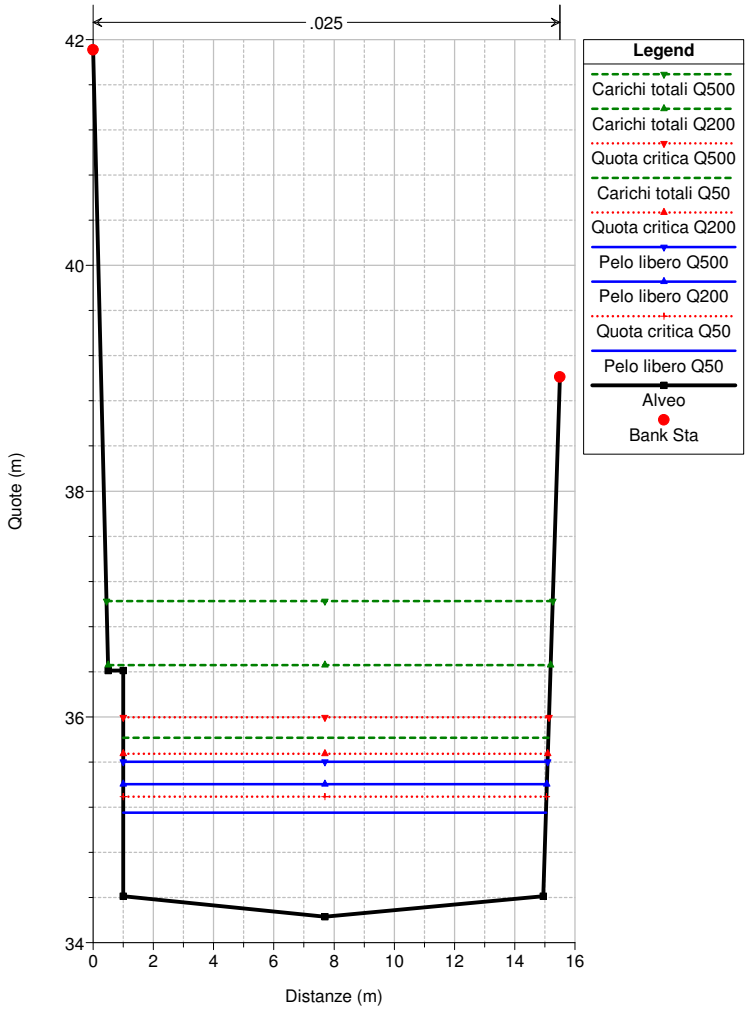
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 37. VEI 37 Sez. VE15



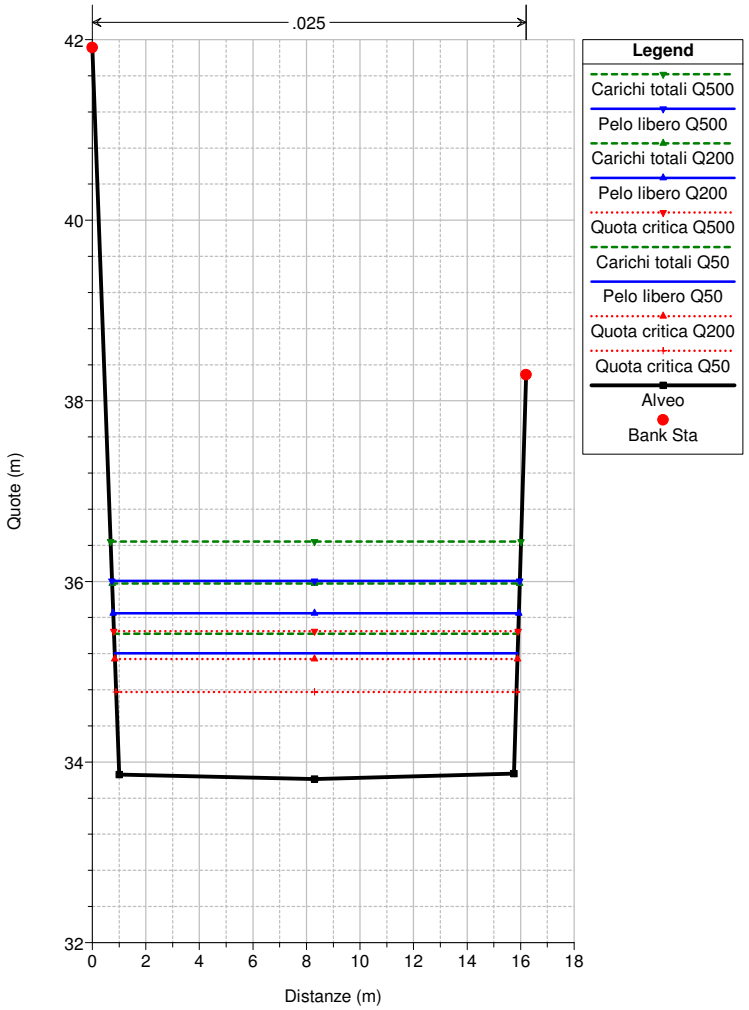
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 36. VEI 36 Sez. VE14

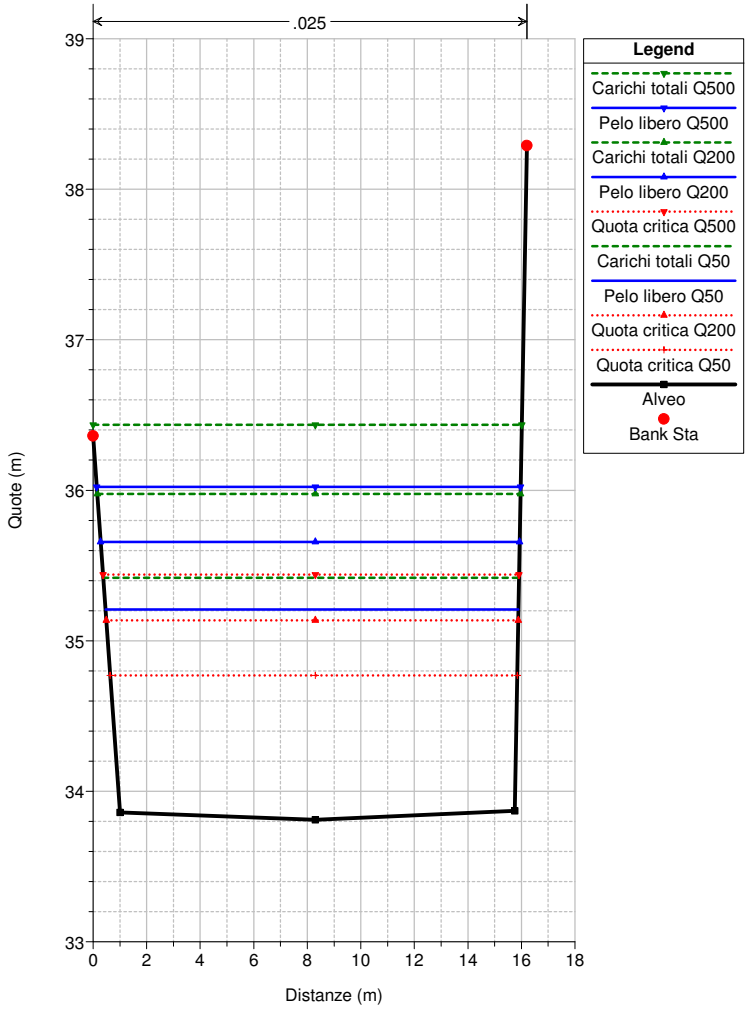


Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.6 buco

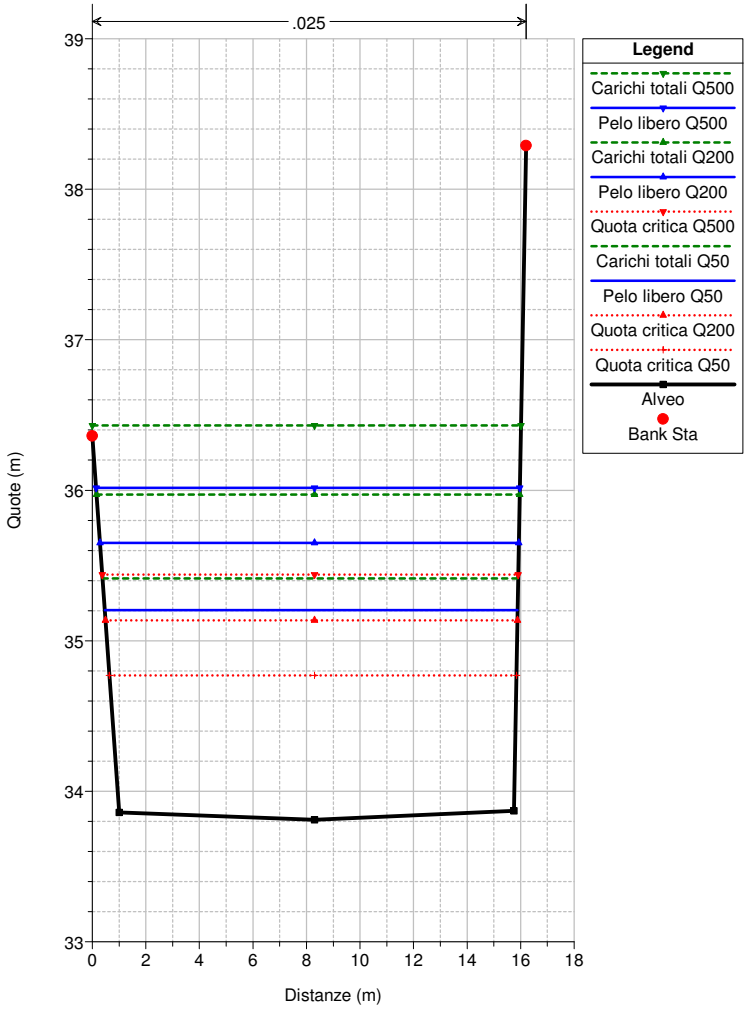


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.5 buco



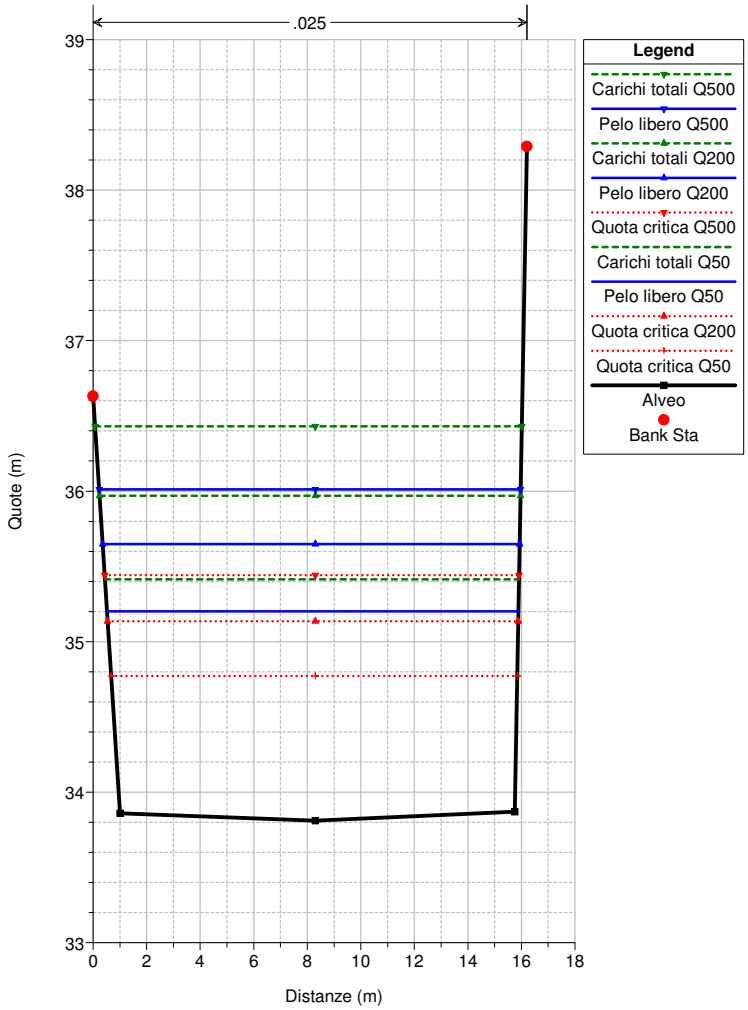
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.4 buco



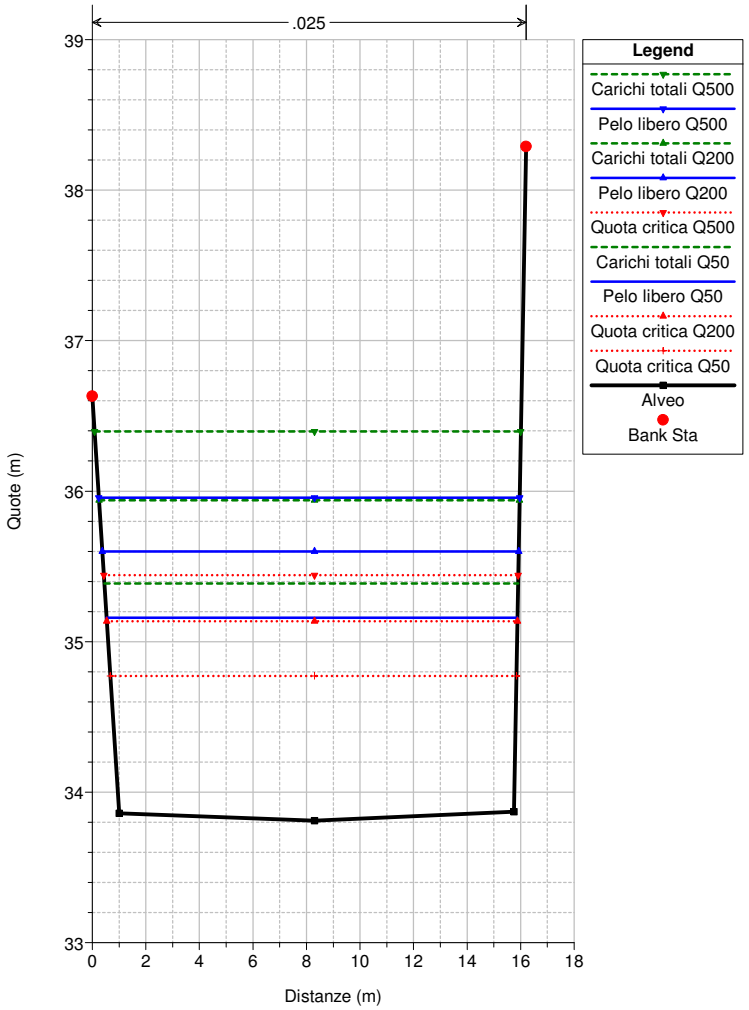
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.35 Sez. VE13.3



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

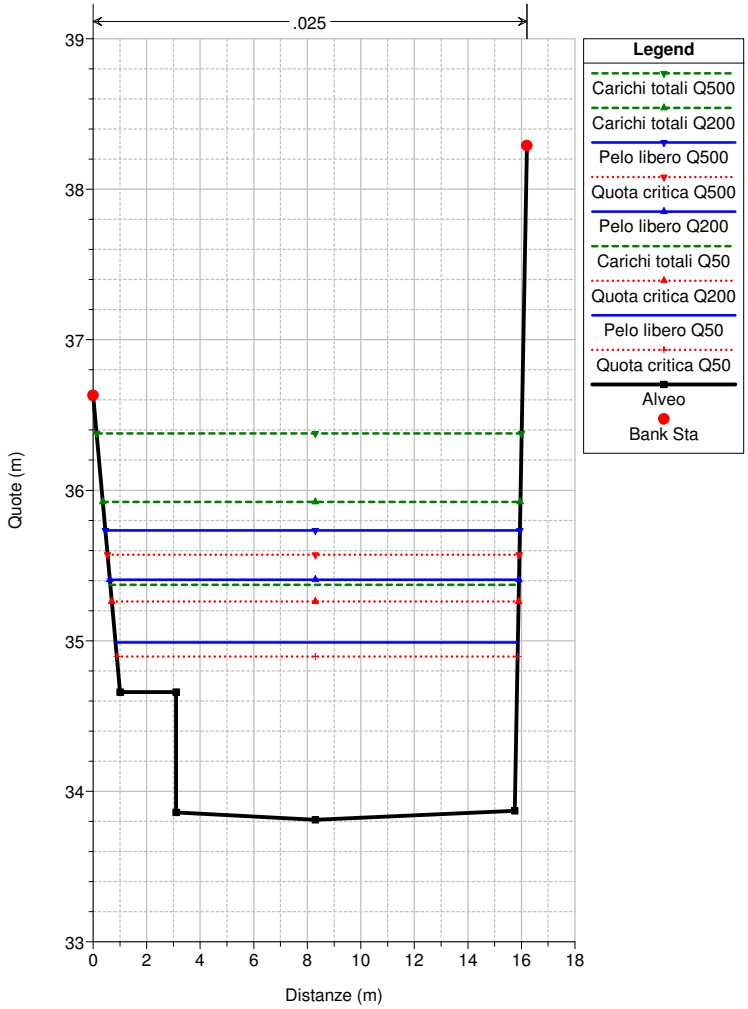
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.3 VEI 35.3 Sez. VE13.3



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

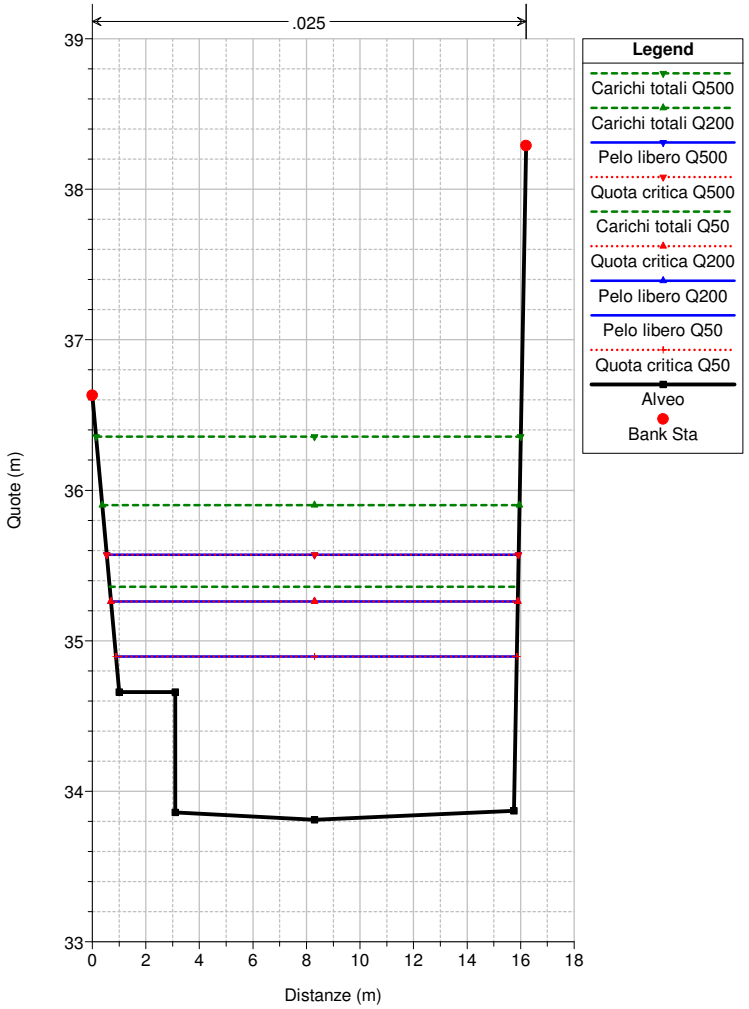
River = Veilino Reach = Monte RS = 35.2 VEI 35.2 Sez. VE13.2



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

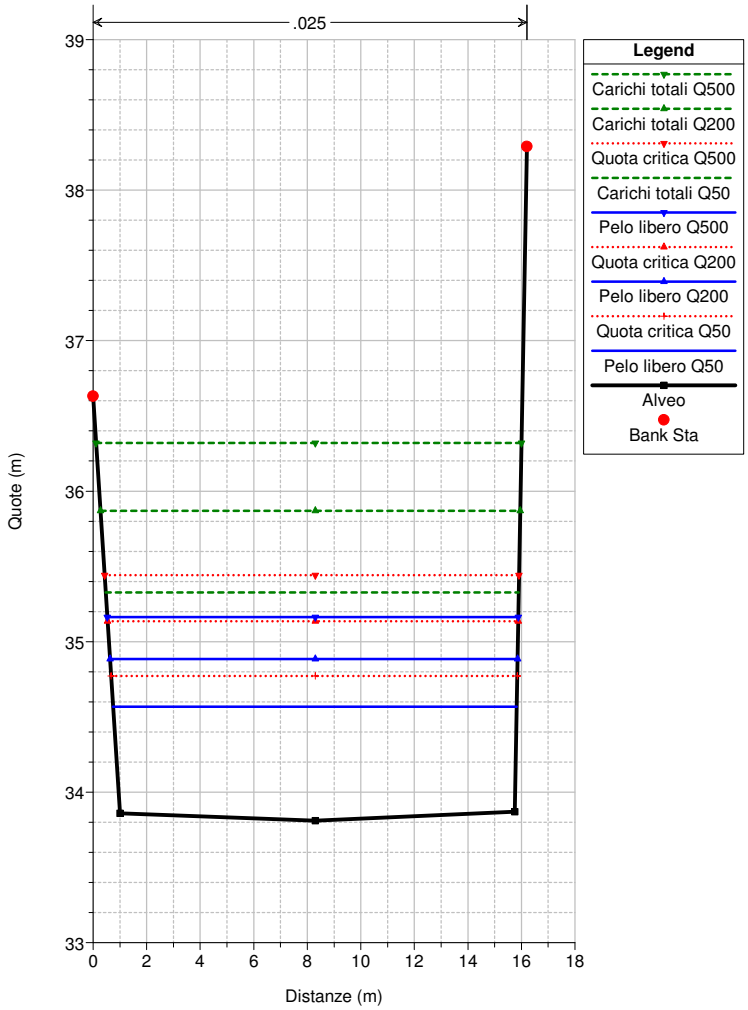
River = Veilino Reach = Monte RS = 35.1 VEI 35.1 Sez. VE13.1



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

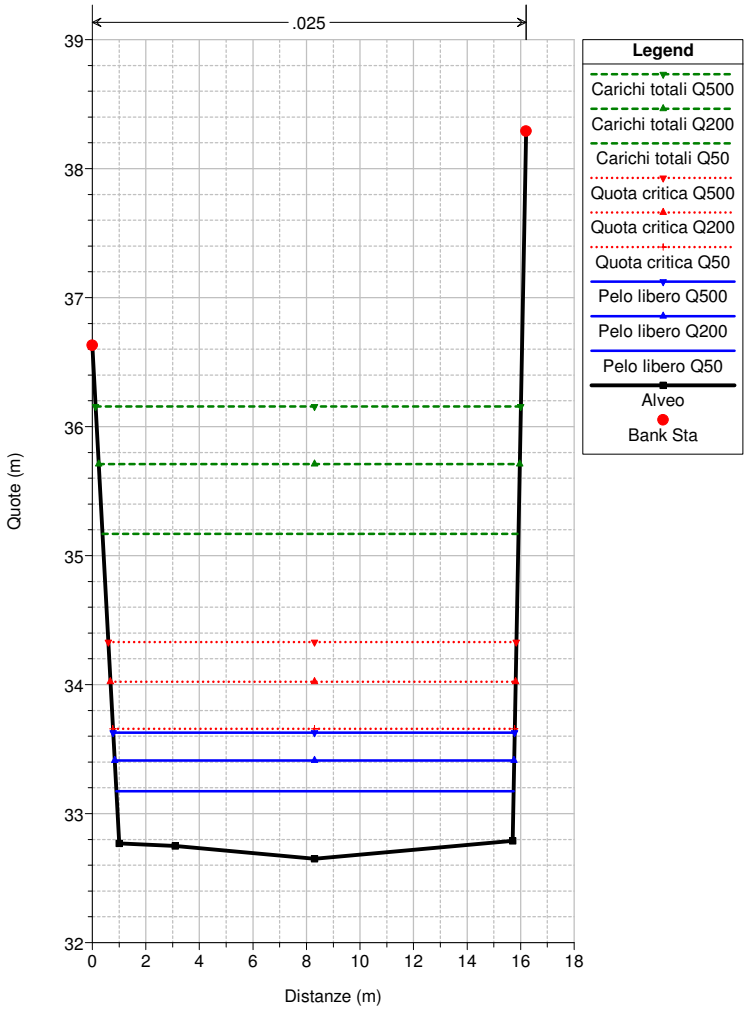
River = Veilino Reach = Monte RS = 35. VEI 35 Sez. VE13.0



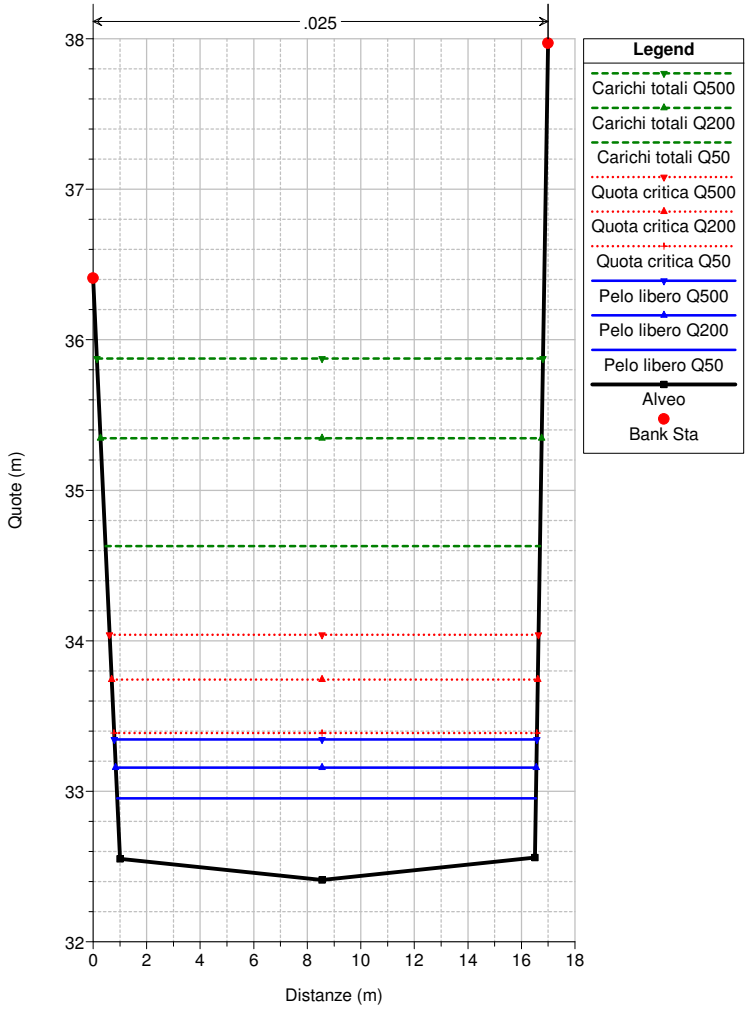
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Monte RS = 34. VEI 34 Sez. VE12

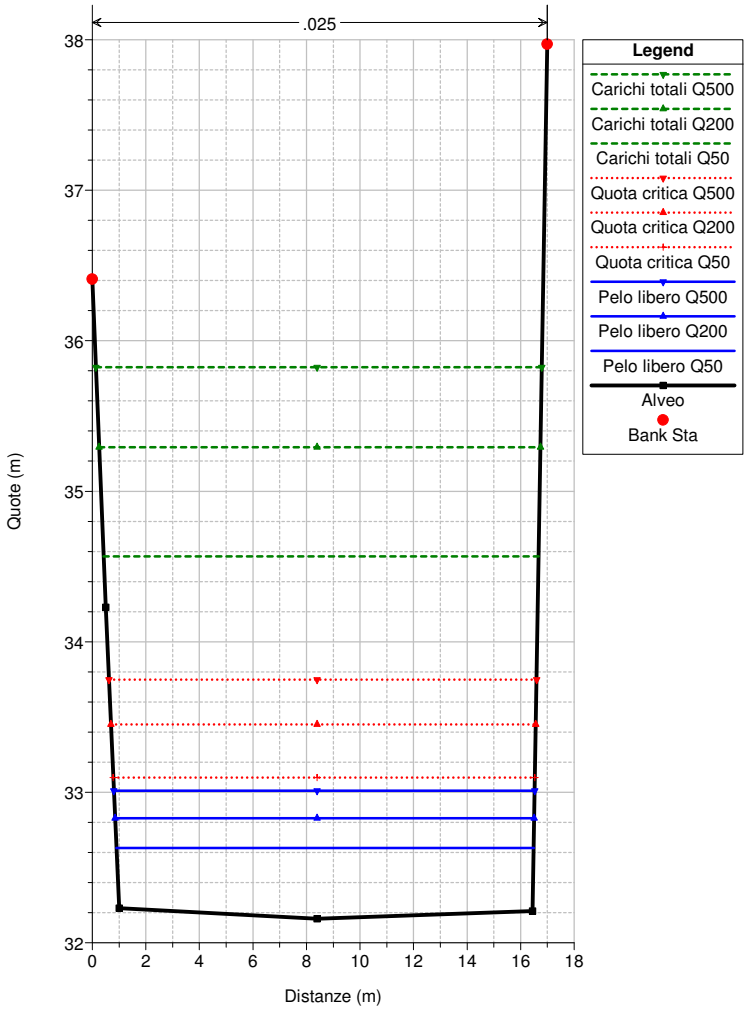


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 33. VEI 33 Sez. VE11



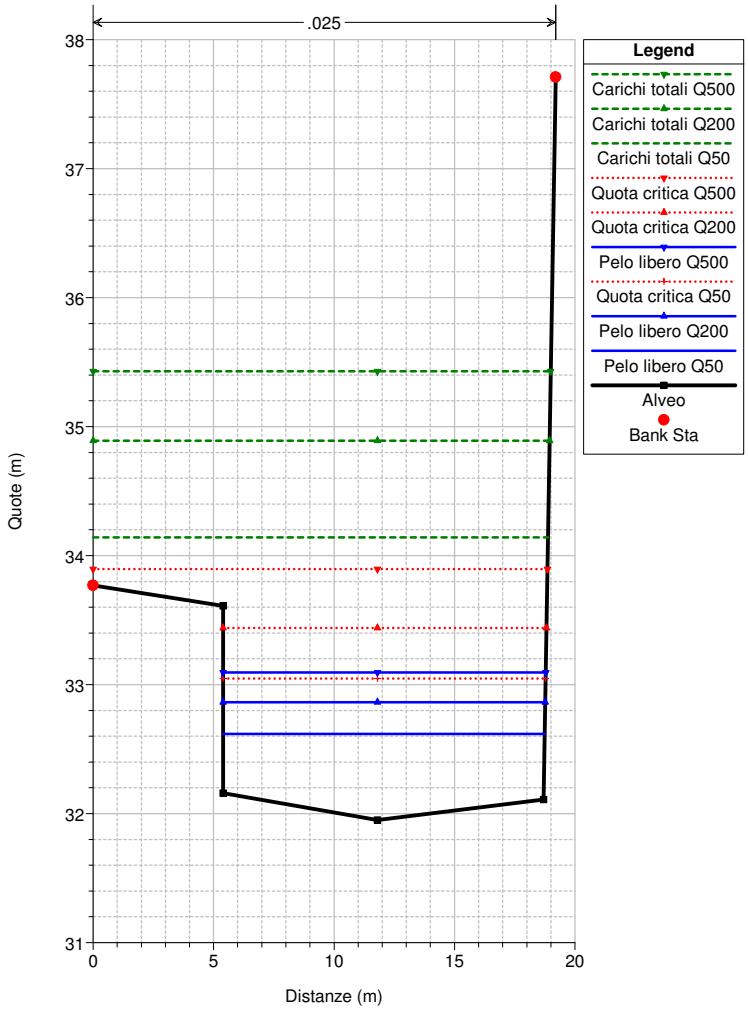
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 32. VEI 32 Sez. VE10



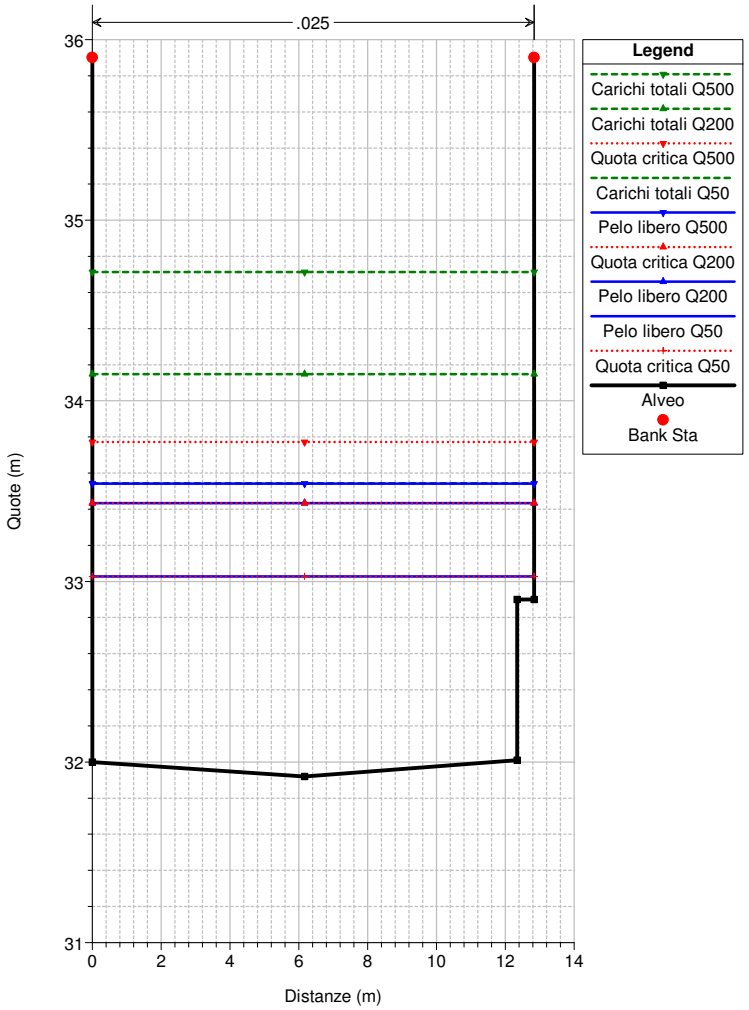
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 31. VEI 31 Sez. VE09

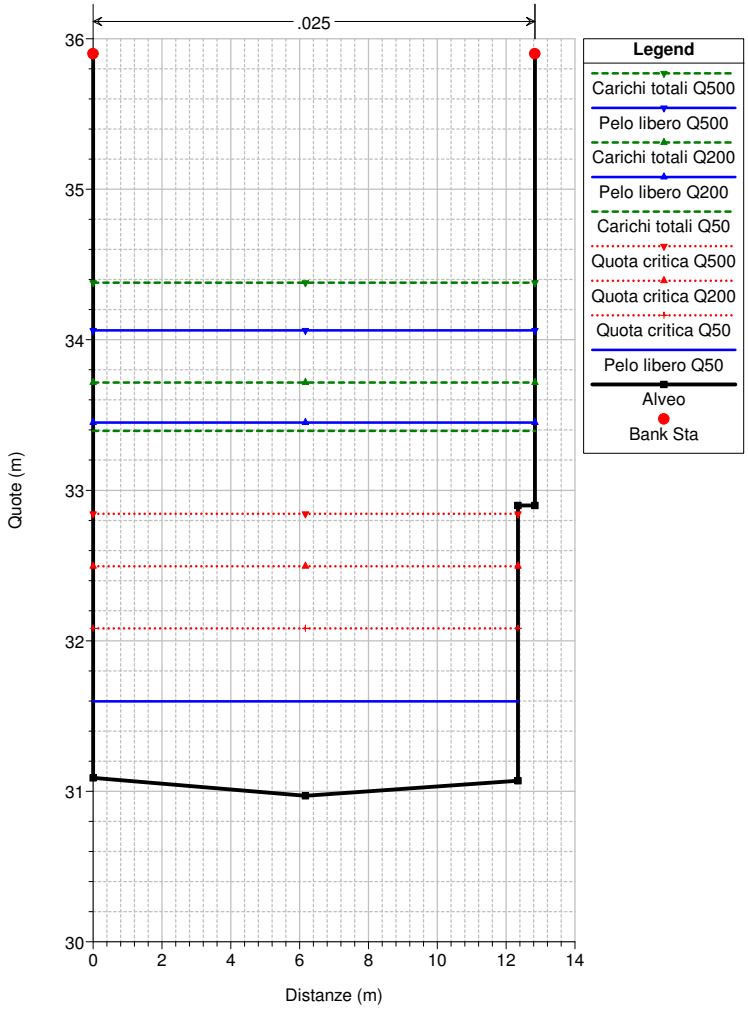


Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

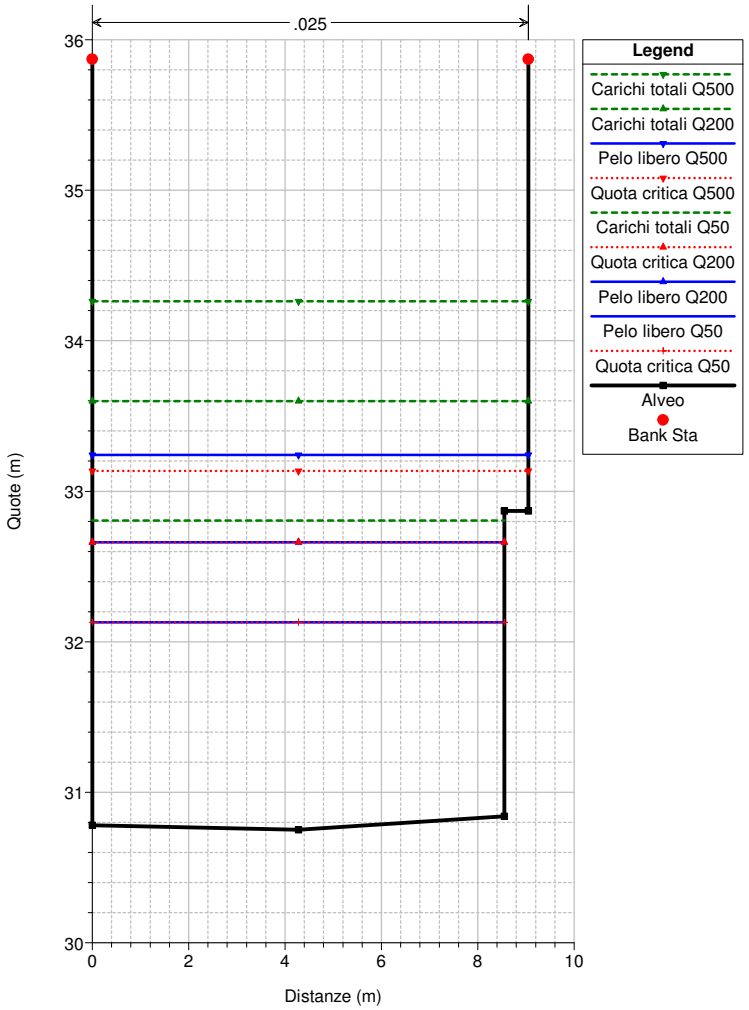
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 30 VEI 30 Sez. 30



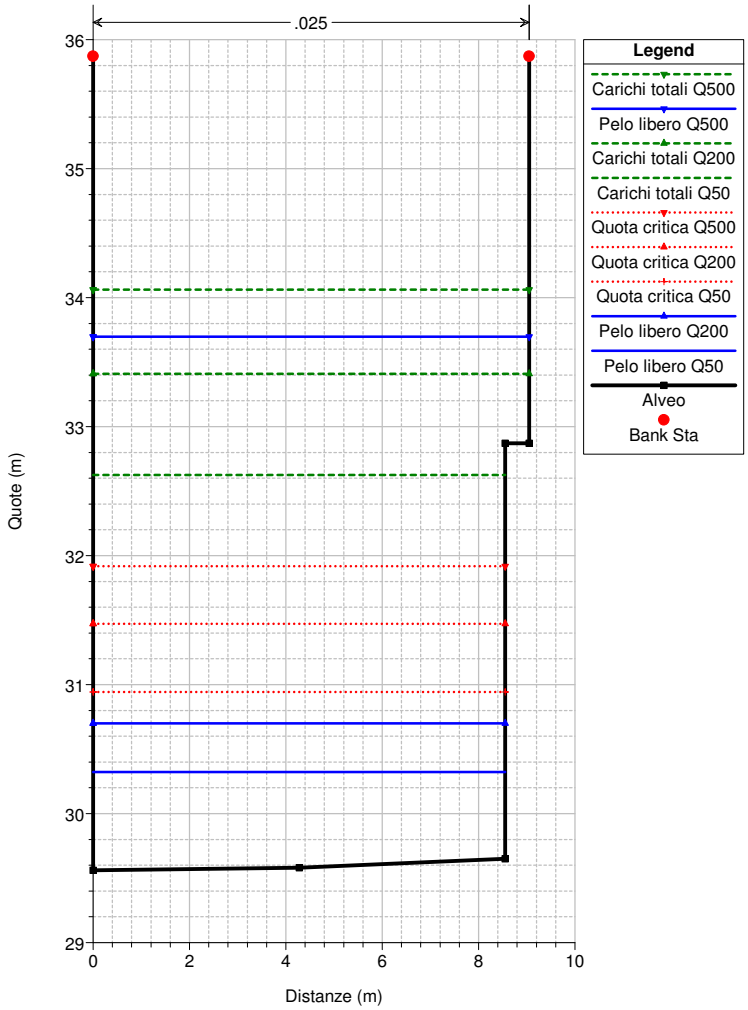
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 29 VEI 29 Sez. 29



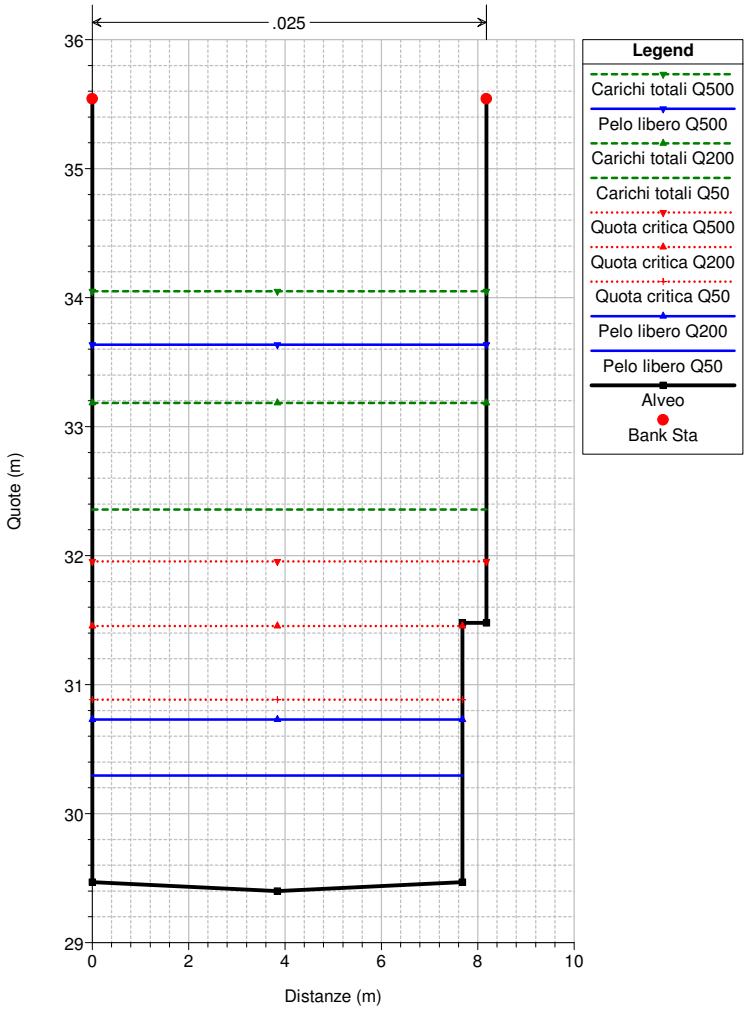
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 28 VEI 28 Sez. 28



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 27 VEI 27 Sez. 27



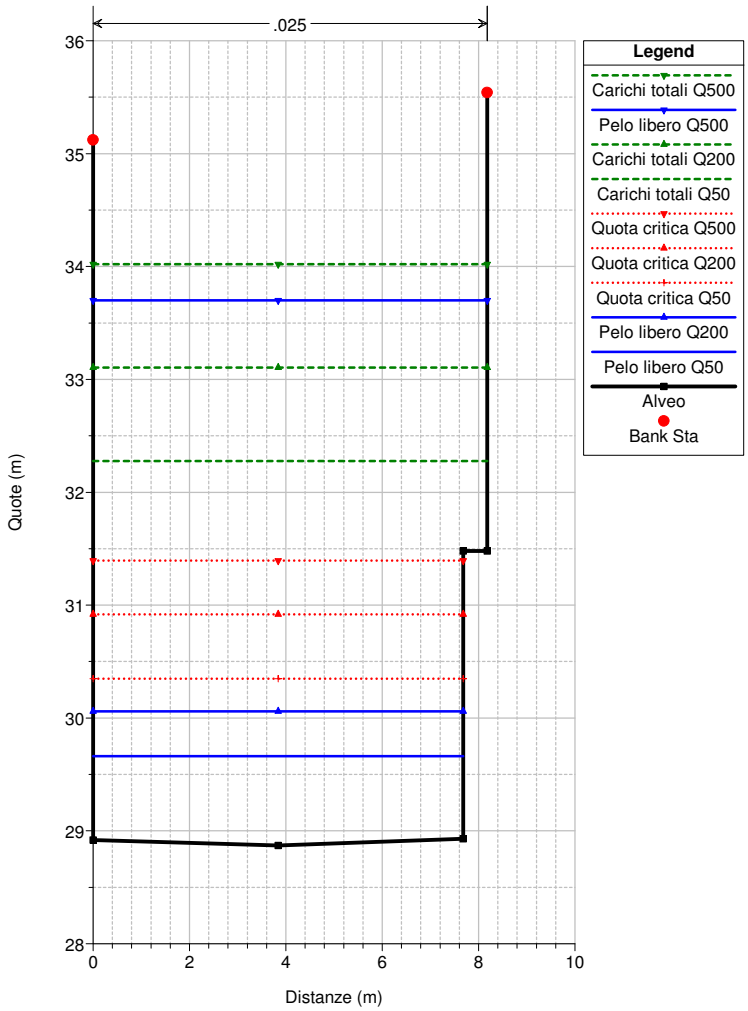
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 26 VEI 26 Sez. 26



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

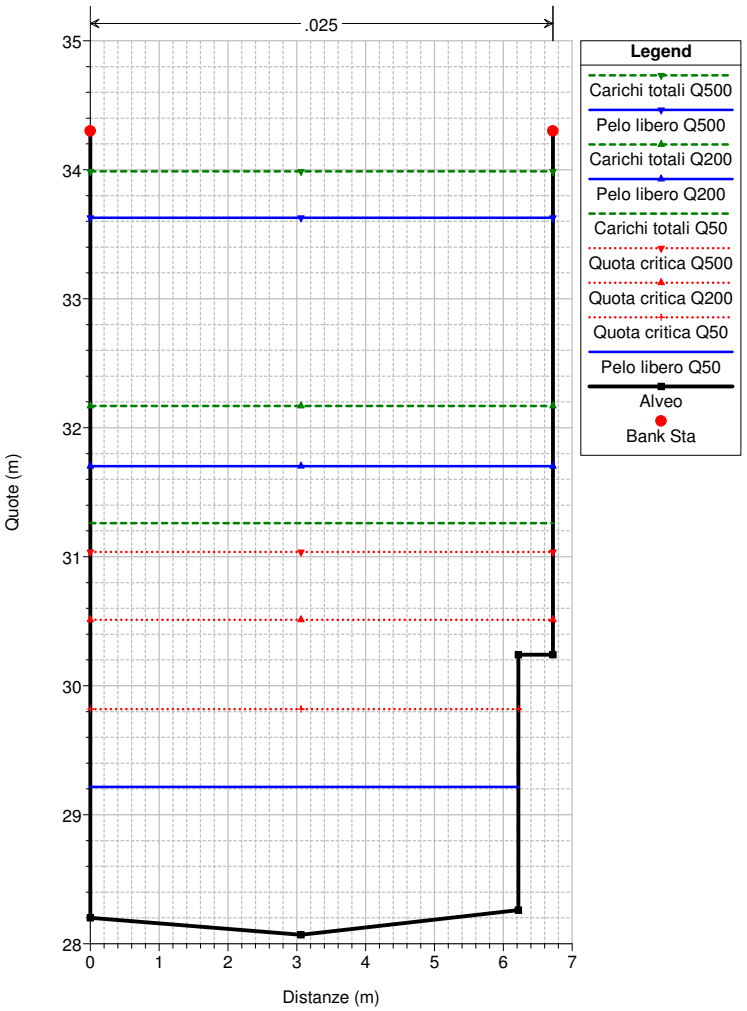
River = Veilino Reach = Monte RS = 25 VEI 25 Sez. 25 modificata con misure prese con Aurelio



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

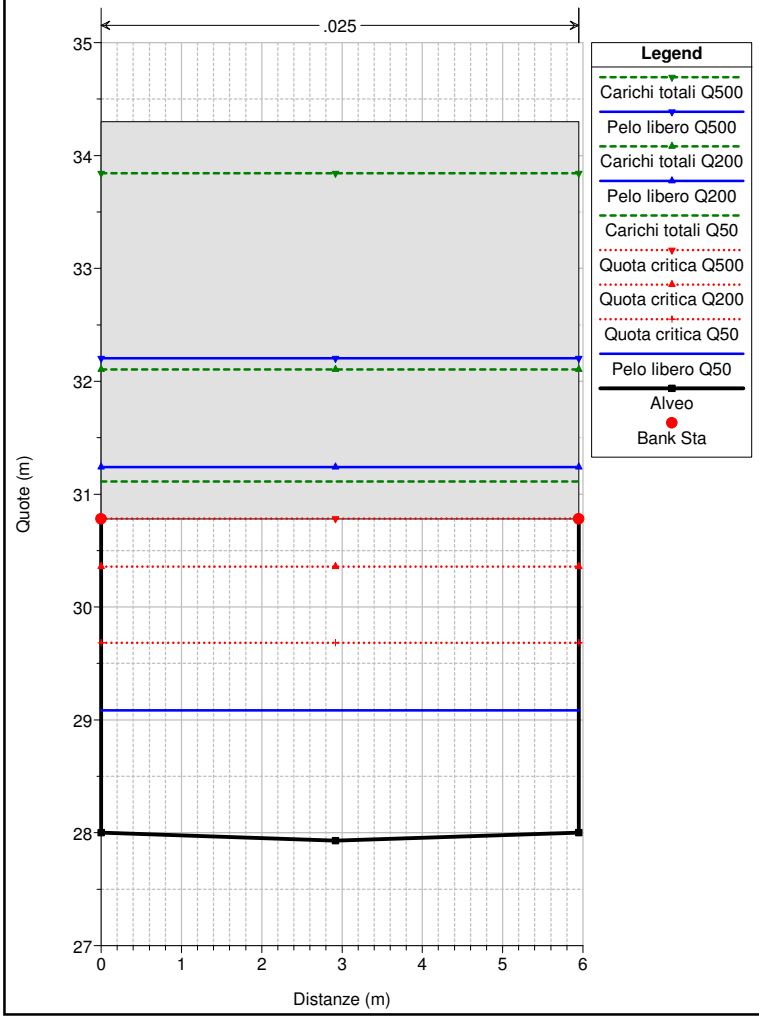
River = Veilino Reach = Monte RS = 24 VEI 24 Sez. 24 modificata con misure prese con Aurelio



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

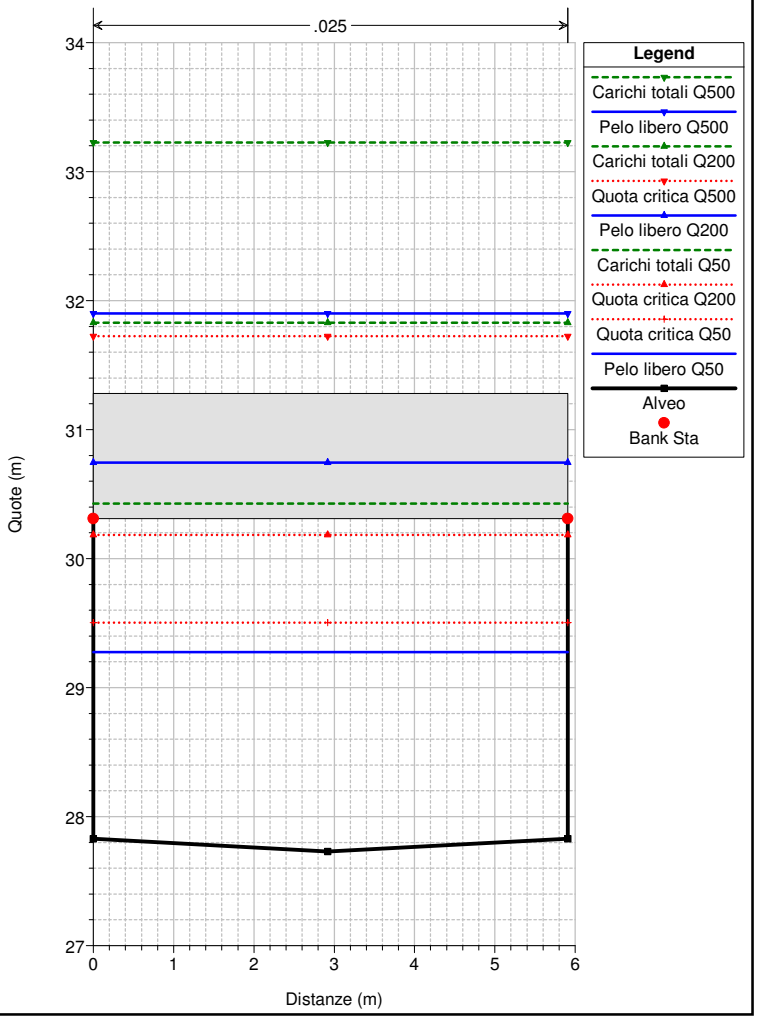
River = Veilino Reach = Monte RS = 23 VEI 23 Sez. 23



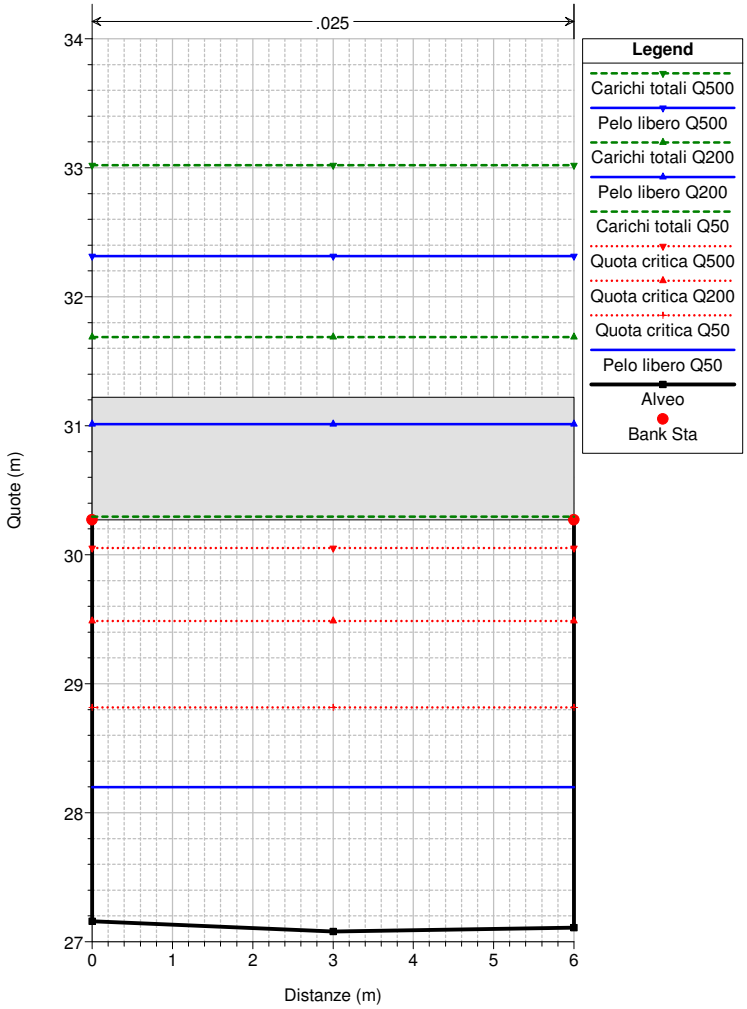
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Monte RS = 22 VEI 22 Sez. 22

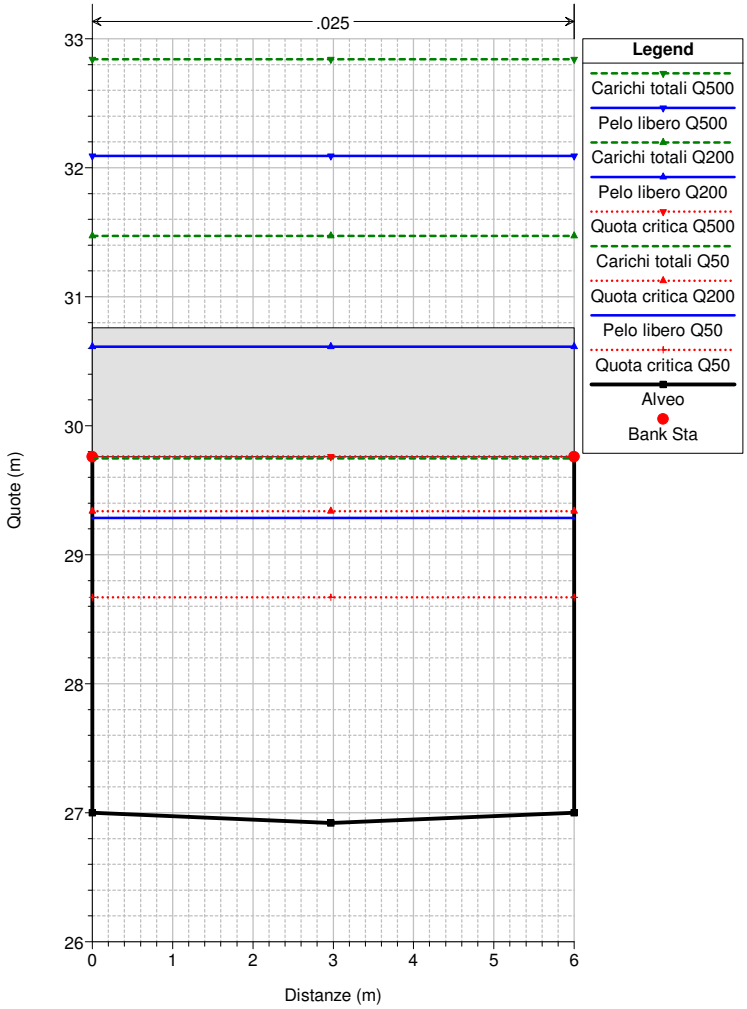


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 21 VEI 21 Sez. 21



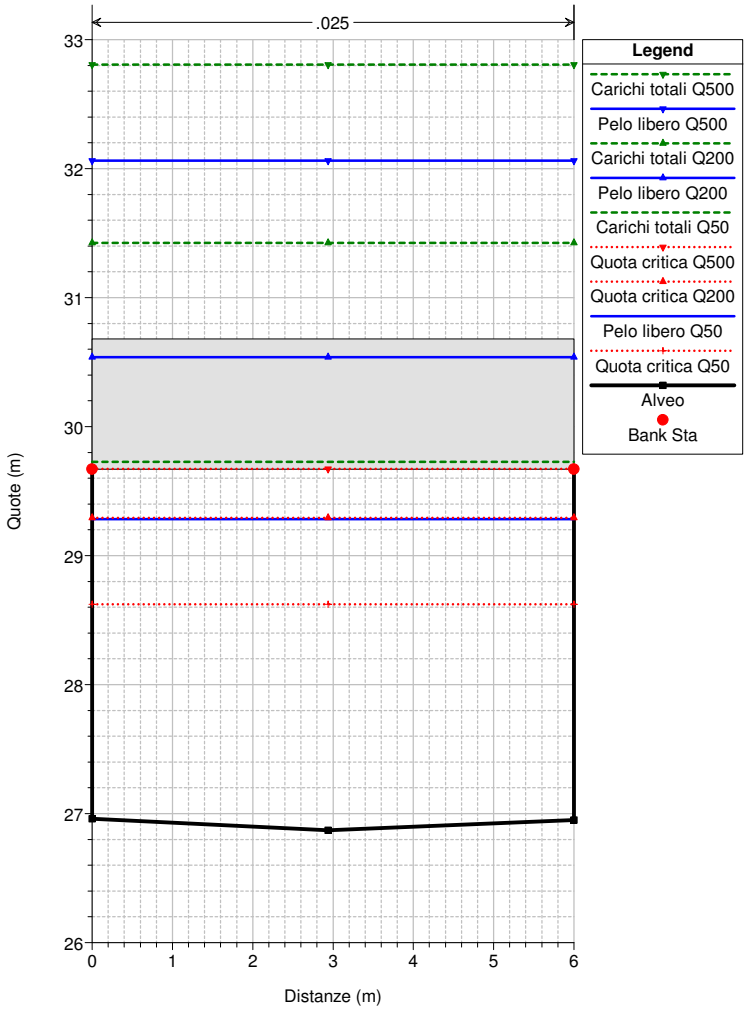
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 20 VEI 20 Sez. 20



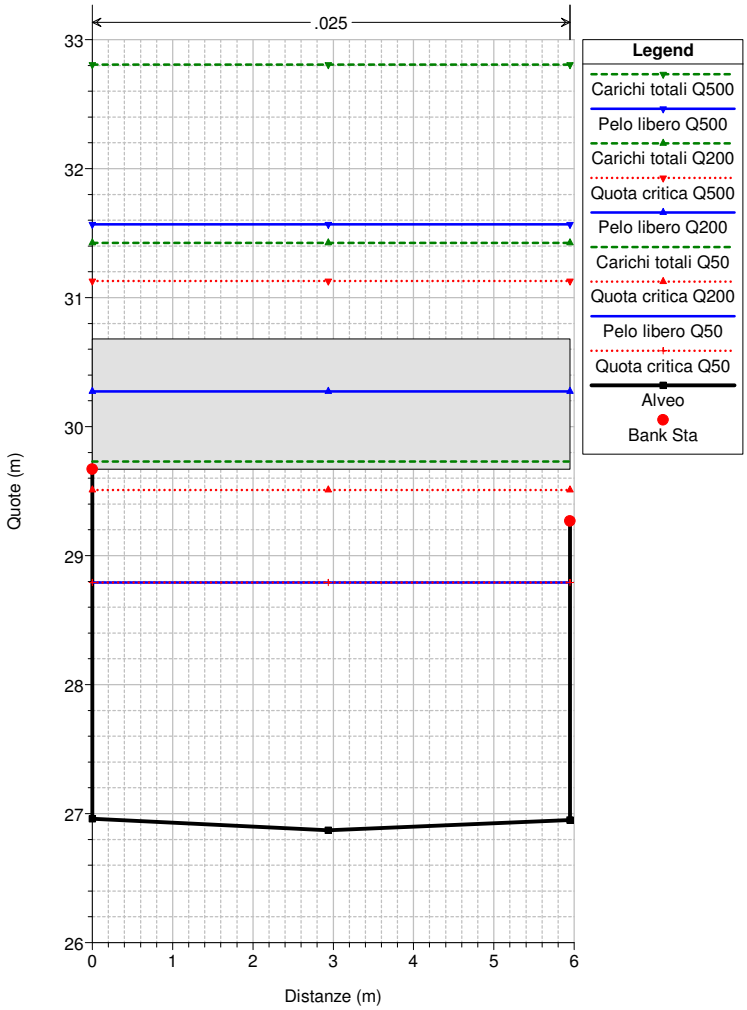
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 19.7 Confluenza Brisc-Veil



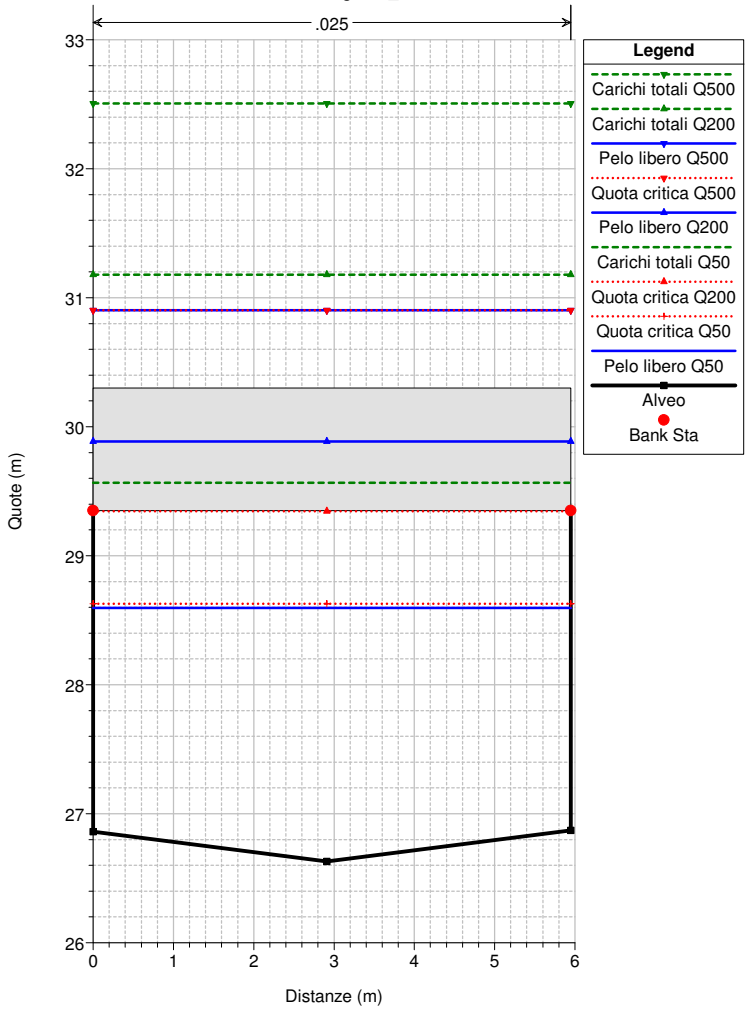
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_1 RS = 19.5 Confluenza Brisc-Veil



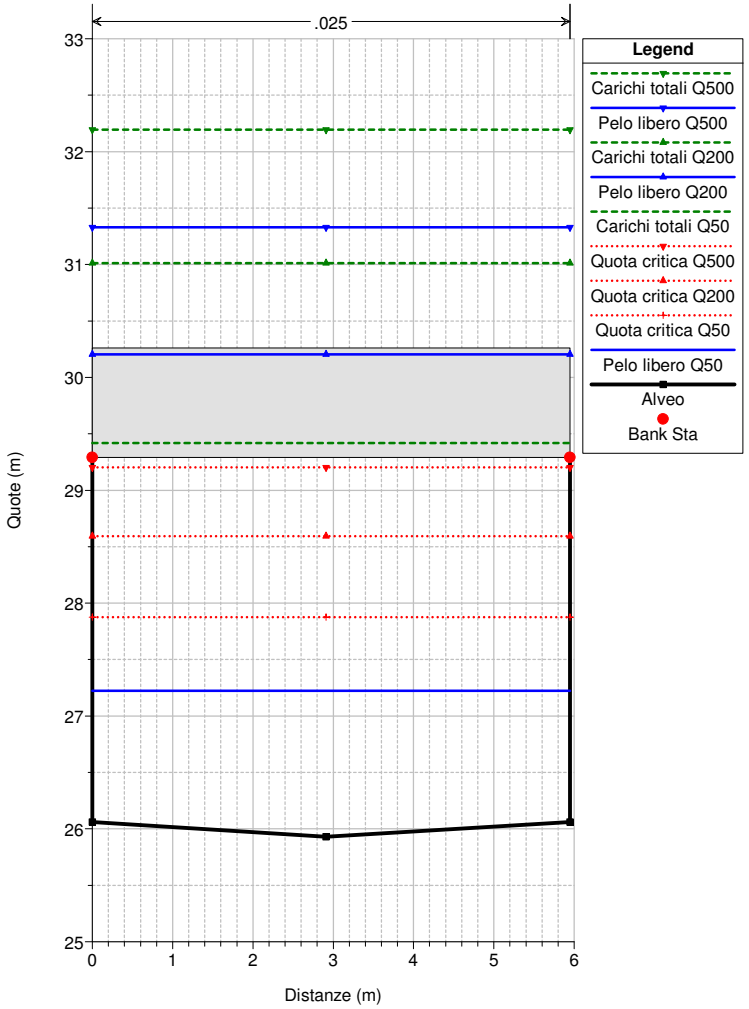
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_1 RS = 19 VEI 19 Sez. 19



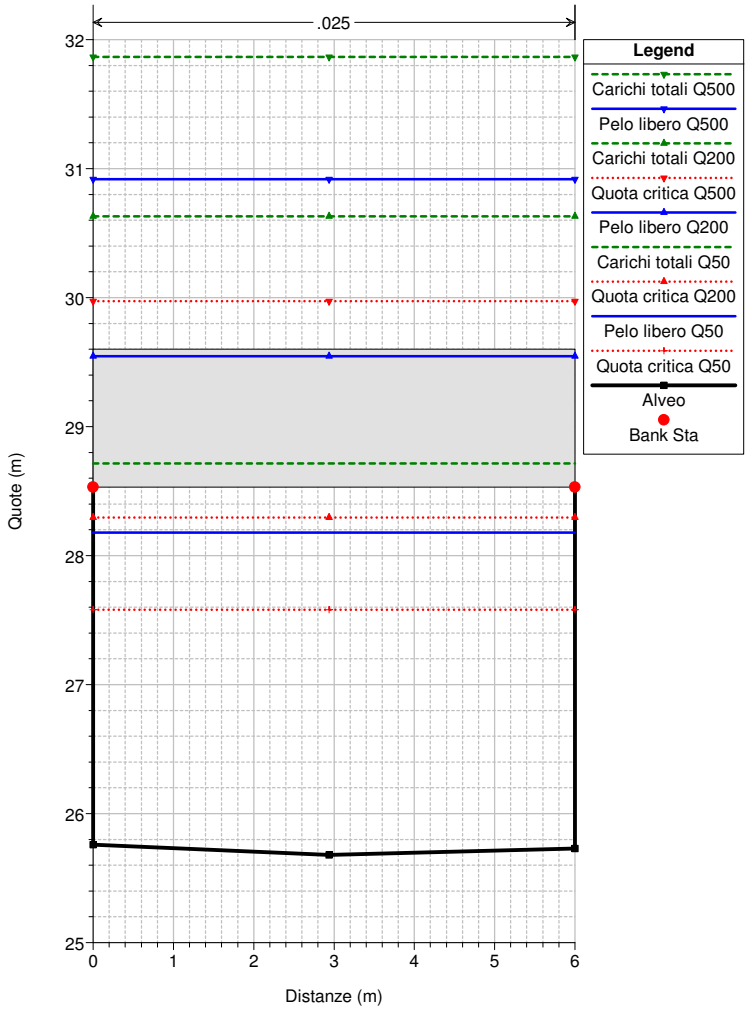
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_1 RS = 18 VEI 18 Sez. 18



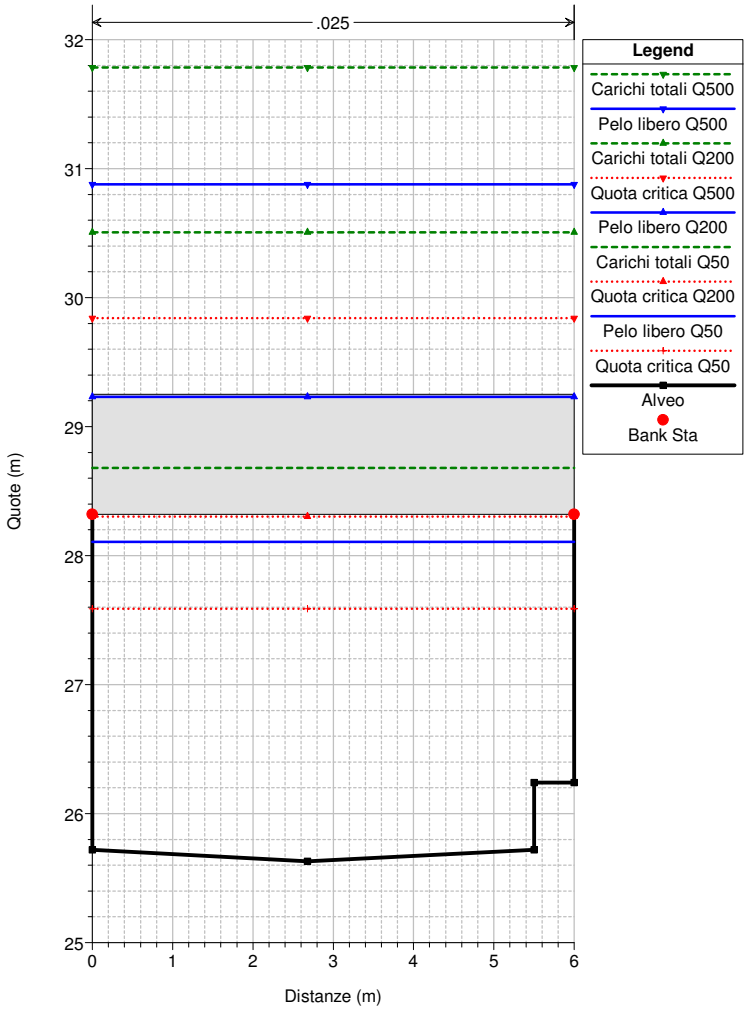
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_1 RS = 17 VEI 17 Sez. 17



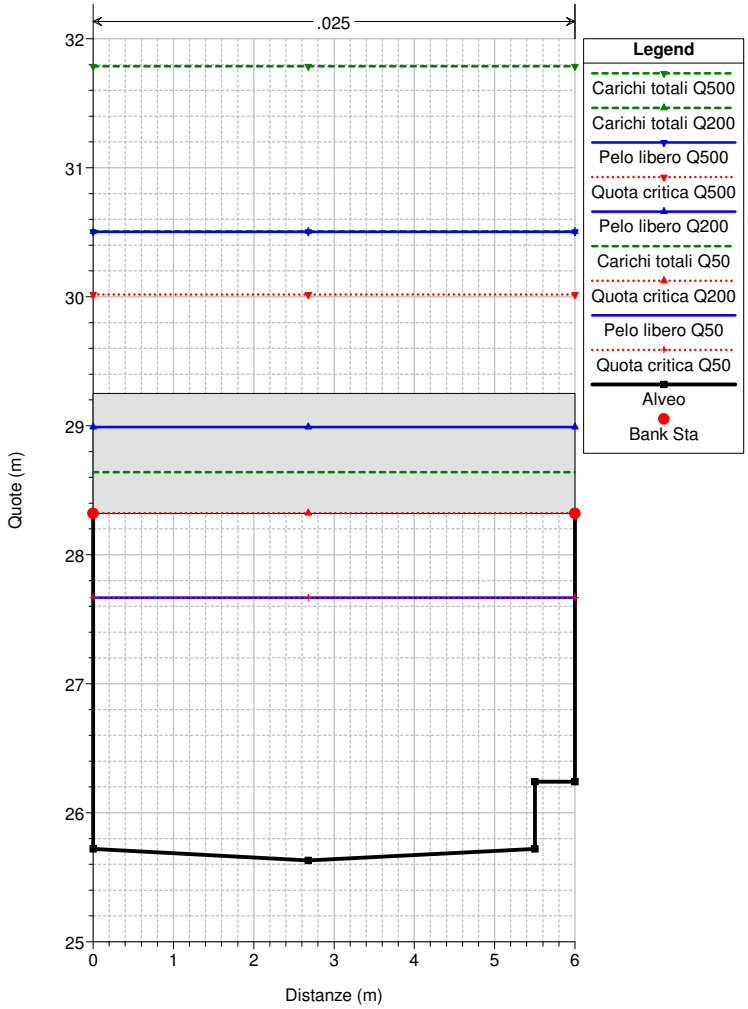
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_1 RS = 16.5 Confluenza S. Anton-Veil



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

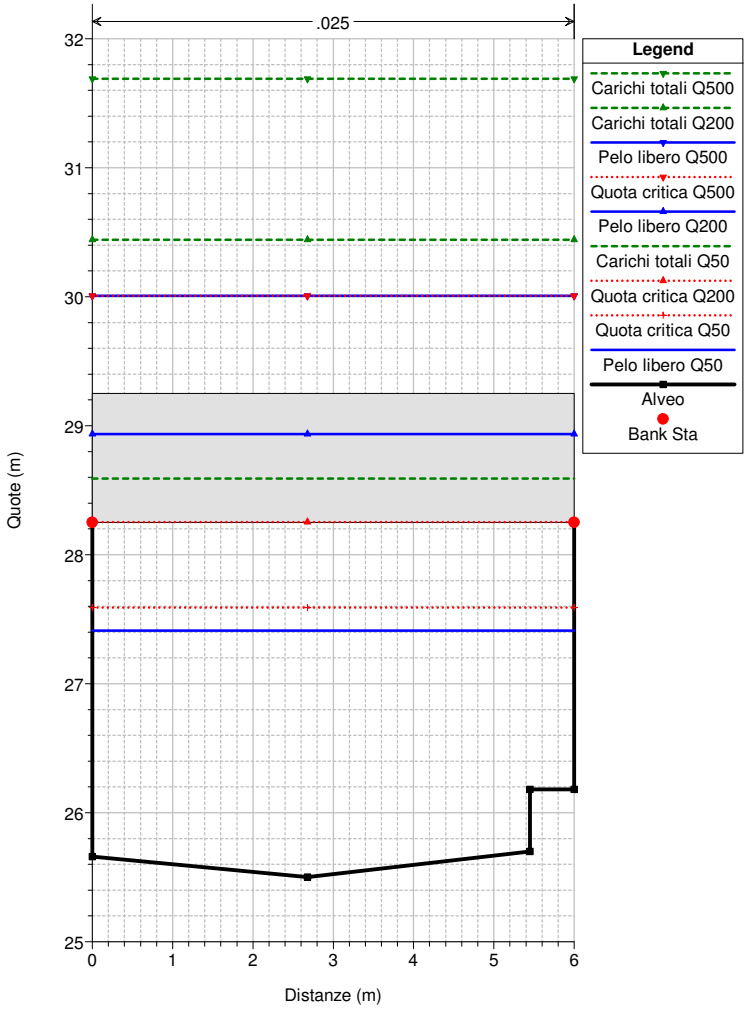
River = Veilino Reach = Staglieno_2 RS = 16.2 Confluenza S. Anton-Veil



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

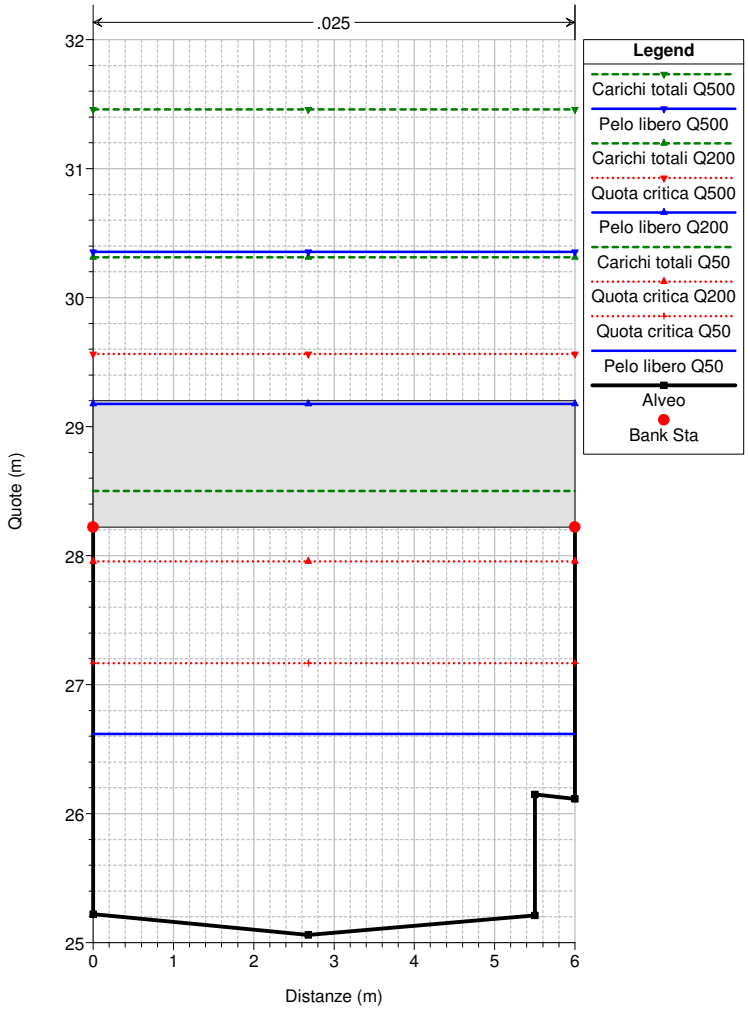
River = Veilino Reach = Staglieno_2 RS = 16 VEI 16 Sez. 16



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

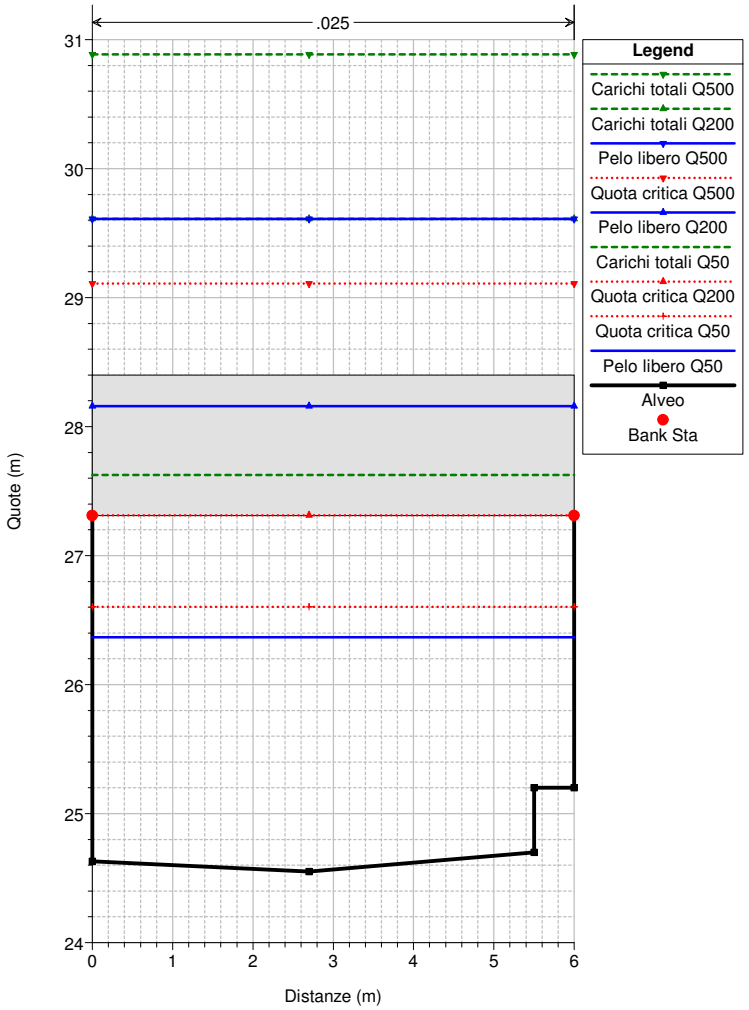
River = Veilino Reach = Staglieno_2 RS = 15 VEI 15 Sez. 15



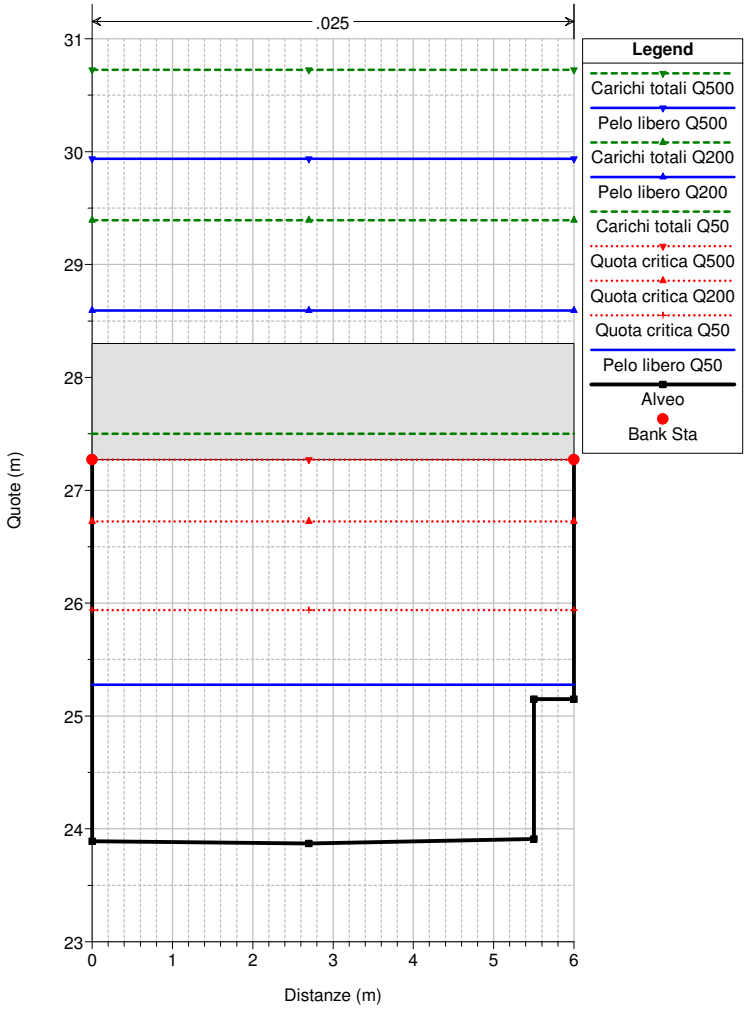
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 14 VEI 14 Sez. 14

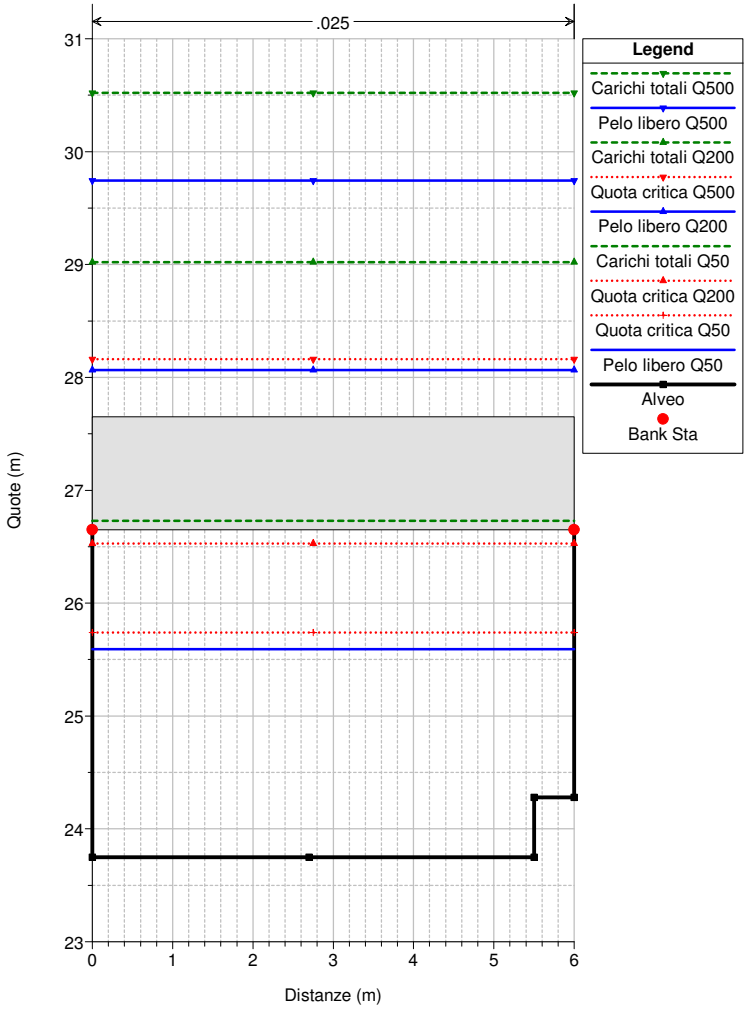


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 13 VEI 13 Sez. 13



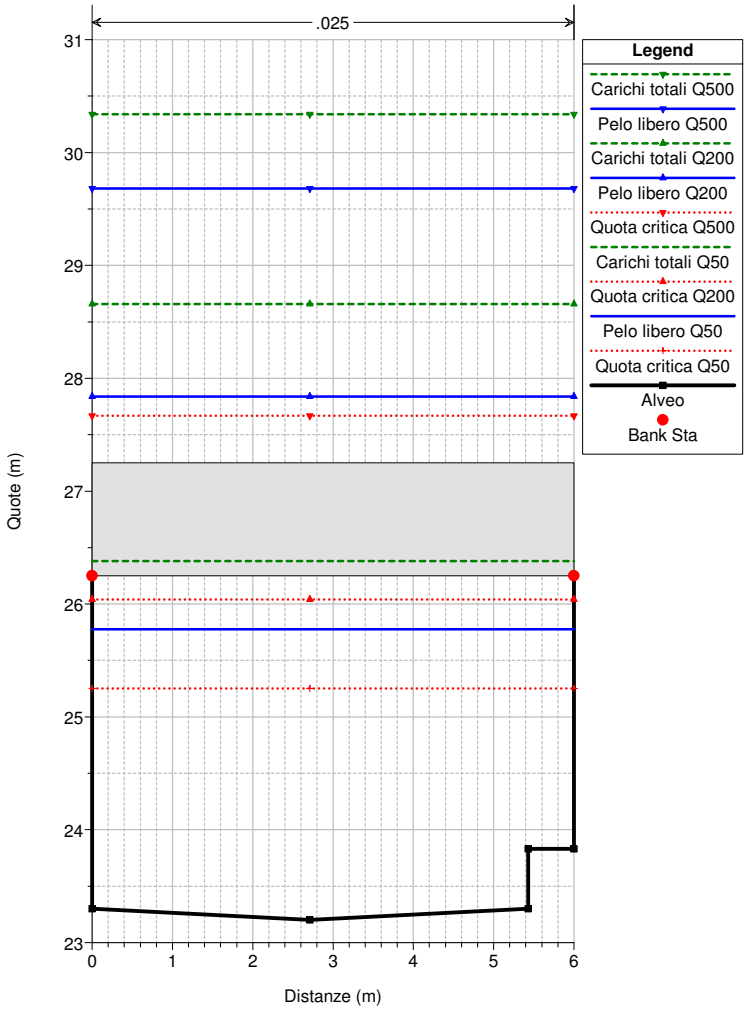
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 12.5 Sez. 12.5



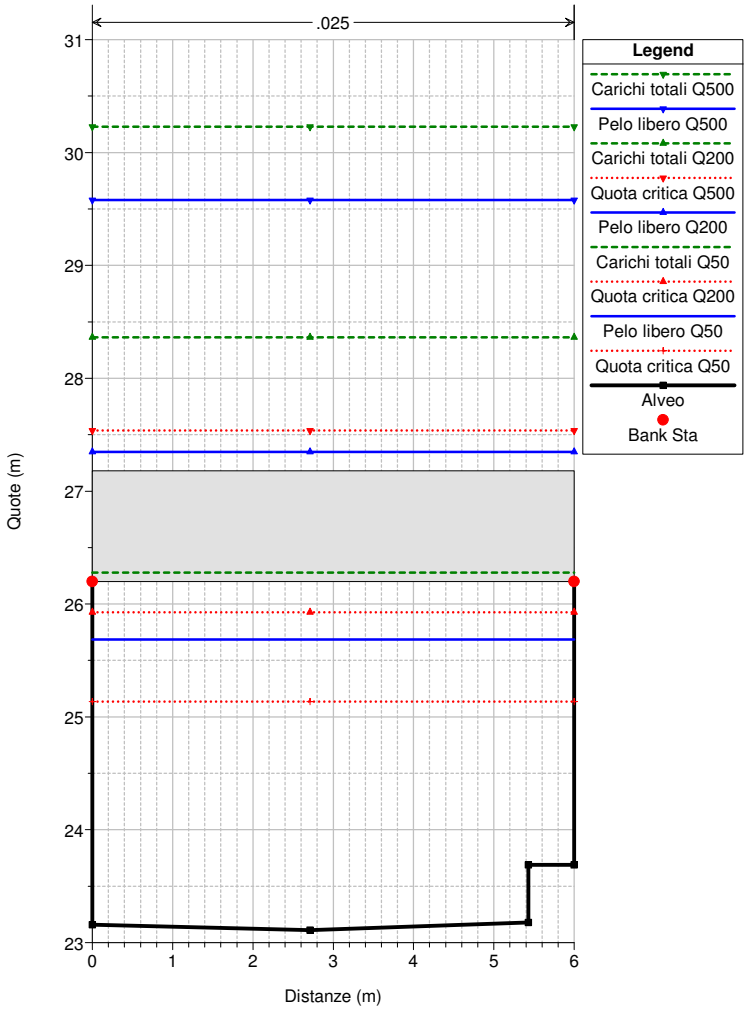
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 12 VEI 12 Sez. 12



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

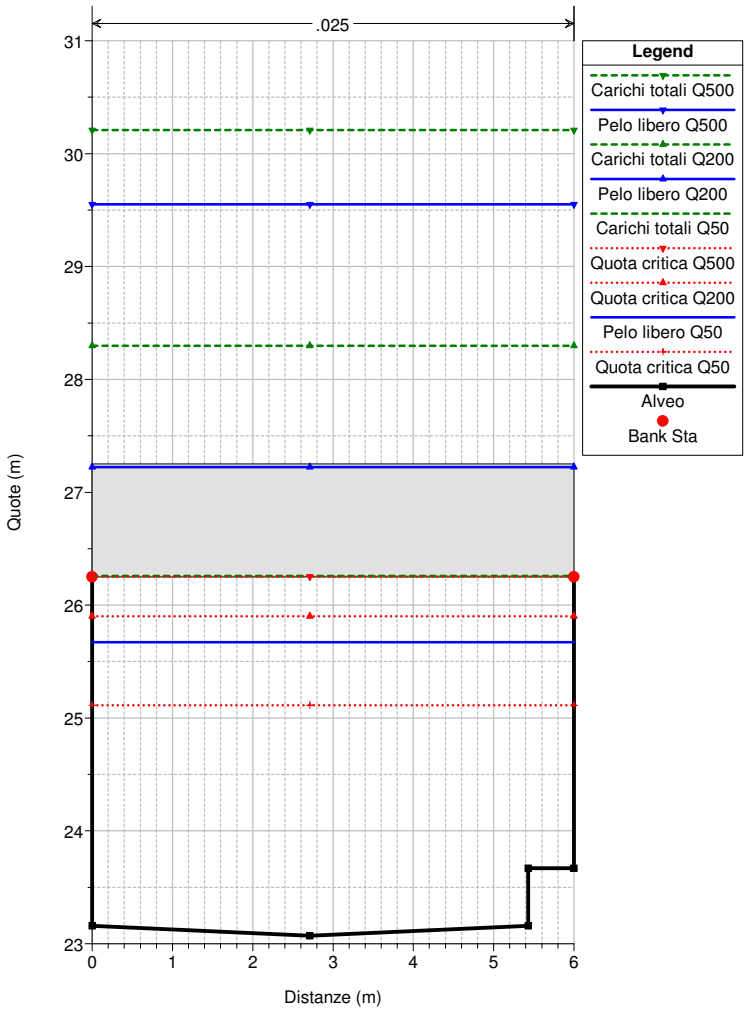
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 11.7 Sez. 11.7 - inizio curva



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

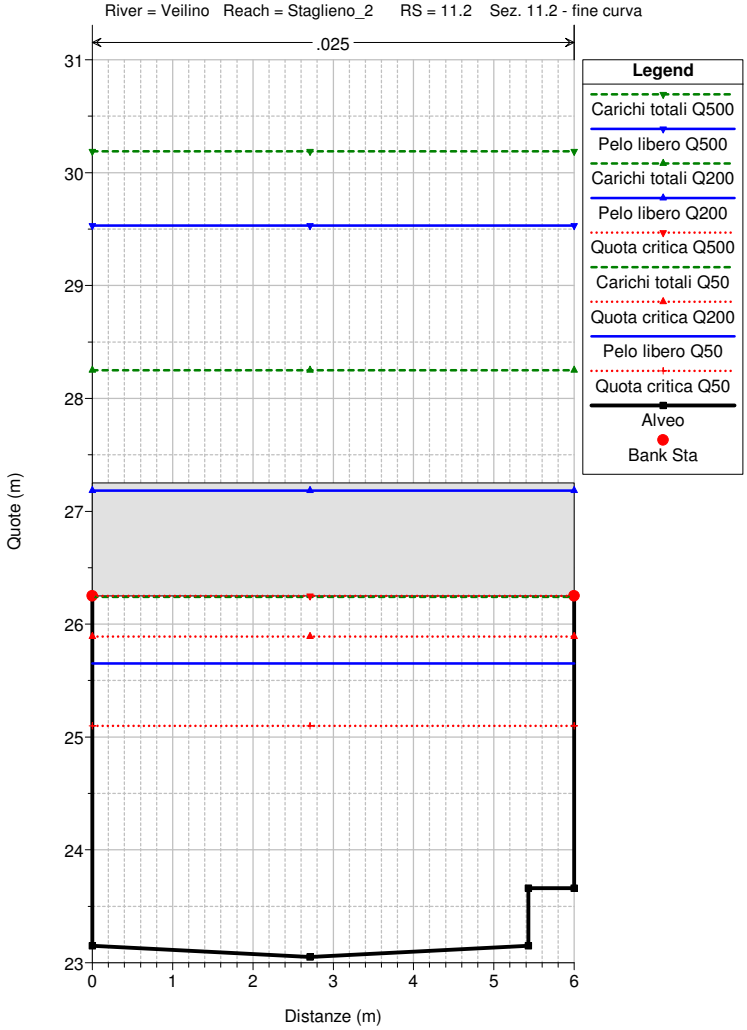
River = Veilino Reach = Staglieno_2 RS = 11.5 Sez. 11.5 - mezzeria curva



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

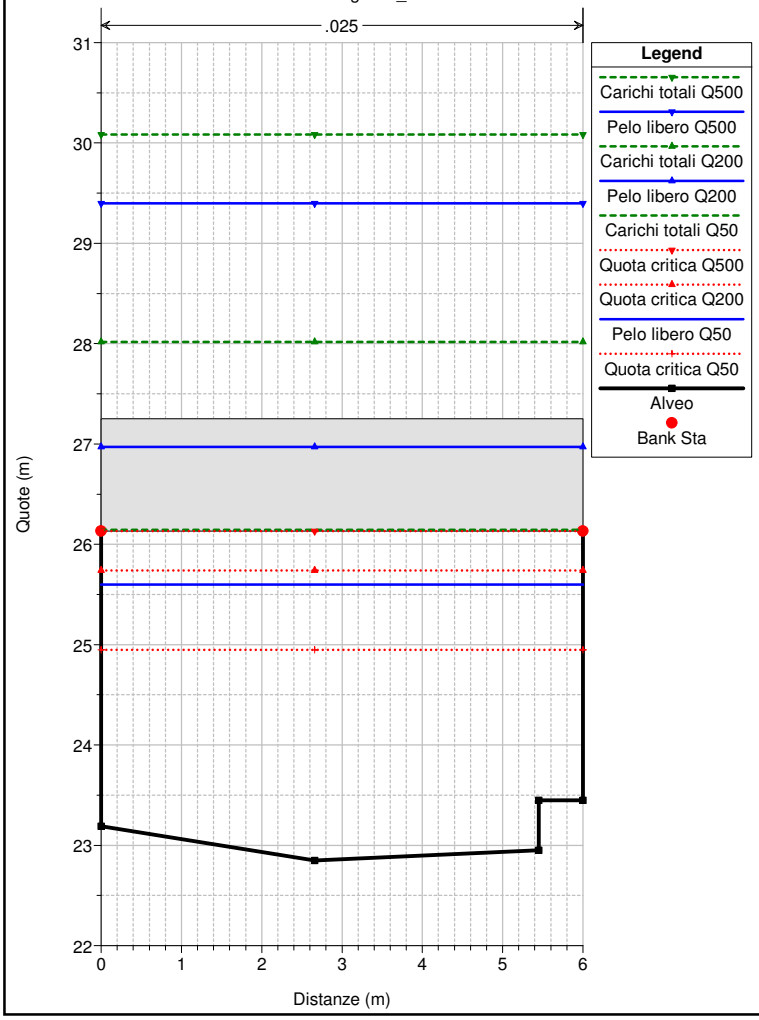
River = Veilino Reach = Staglieno_2 RS = 11.2 Sez. 11.2 - fine curva



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

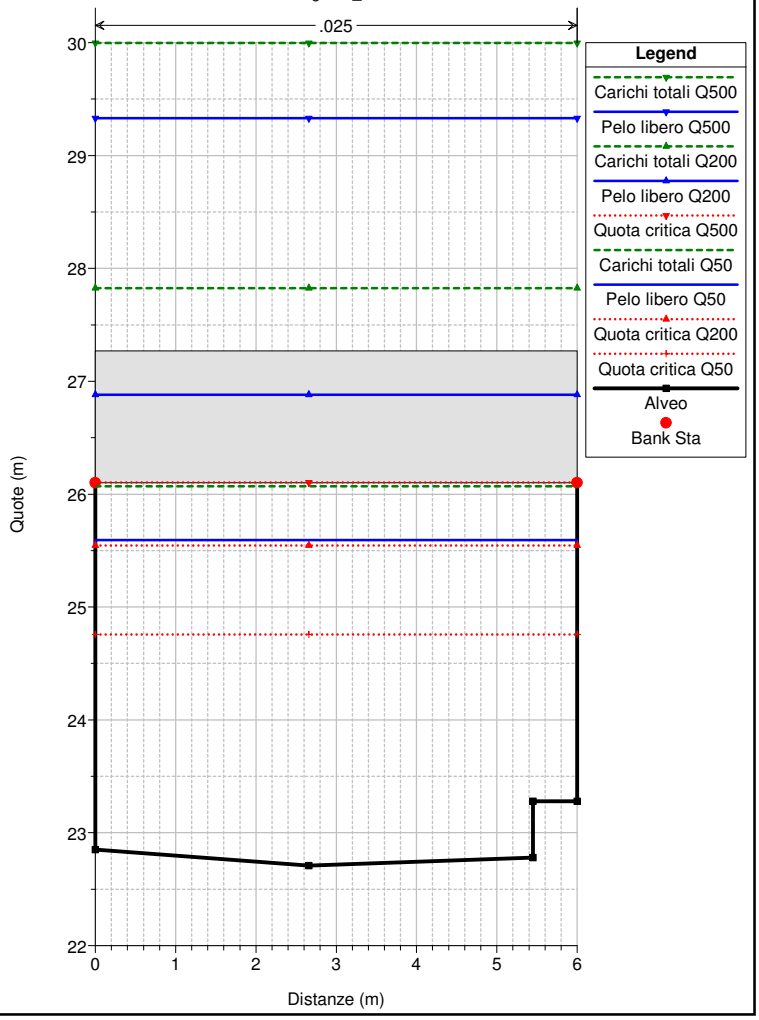
River = Veilino Reach = Staglieno_2 RS = 11 VEI 11 Sez. 11



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

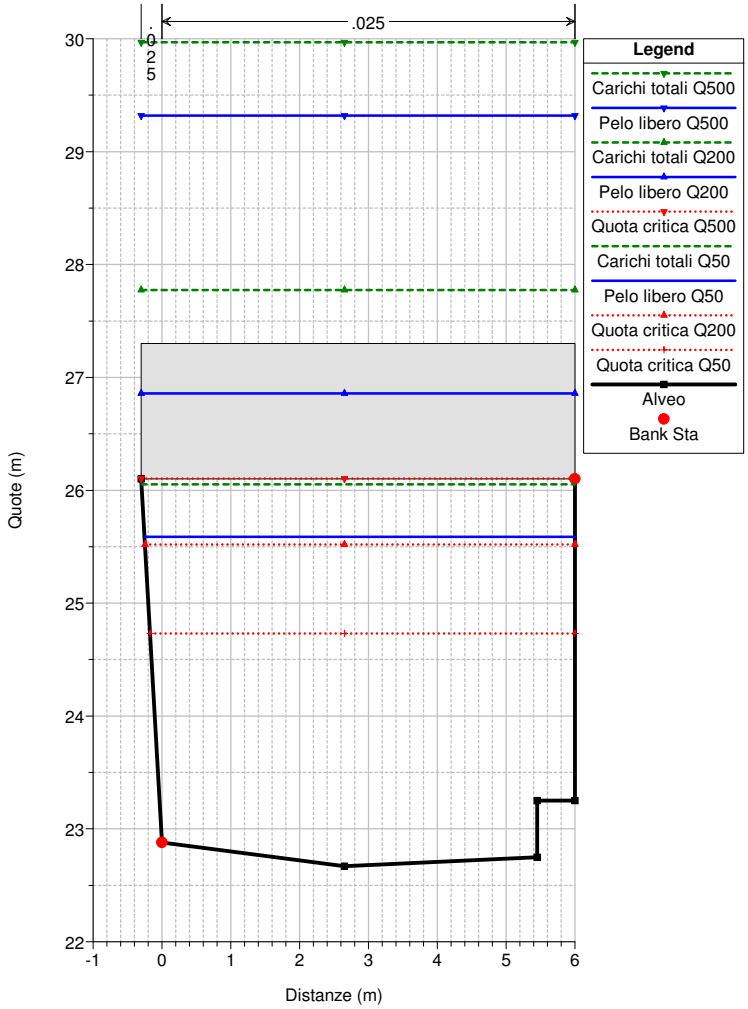
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 10.2 Sez. 10.2 . inizio curva



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

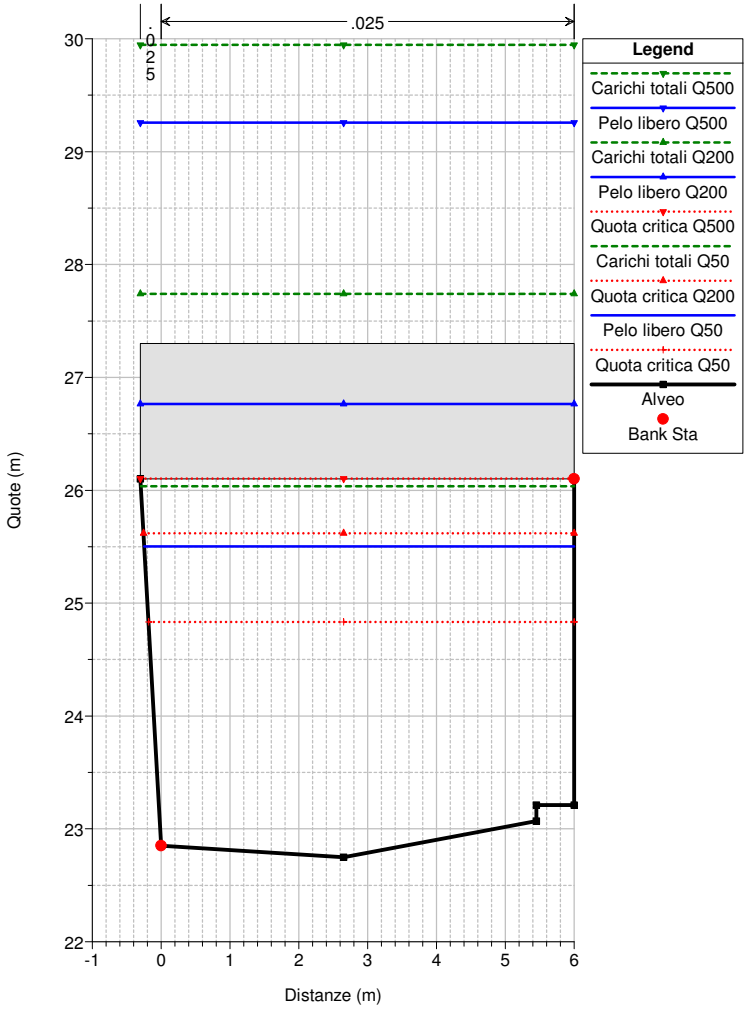
River = Veilino Reach = Staglieno_2 RS = 10 VEI 10 Sez. 10



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

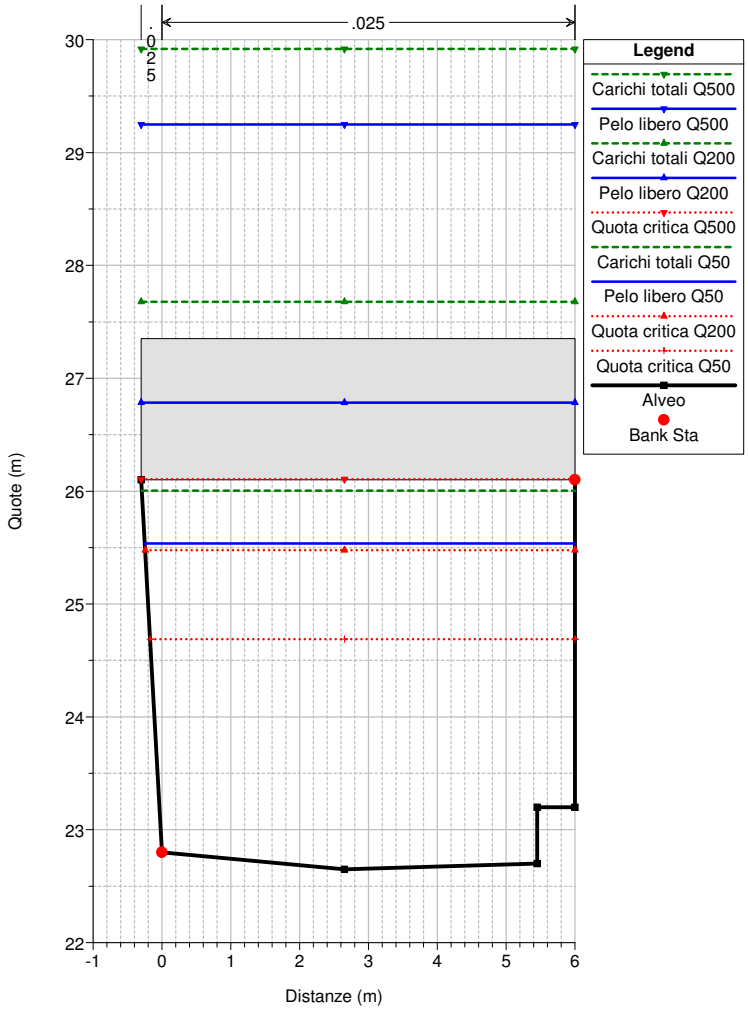
River = Veilino Reach = Staglieno_2 RS = 9.8 Sez. 9.8 - fine curva



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

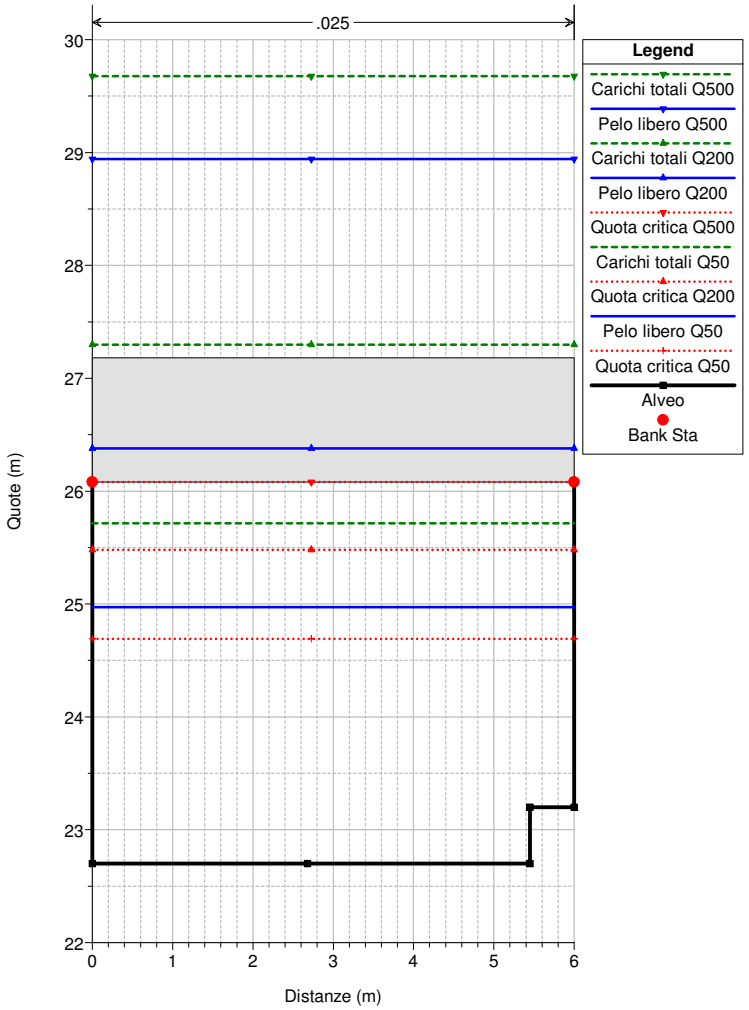
River = Veilino Reach = Staglieno_2 RS = 9.6 Sez. 9.6 - fabbricato



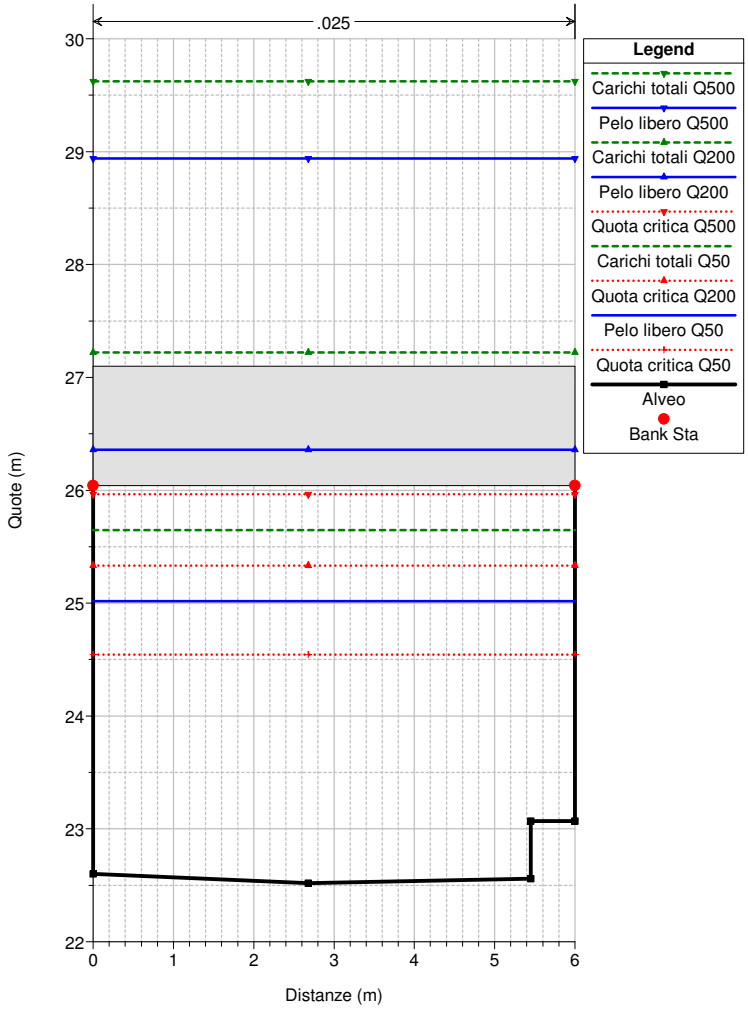
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 9 VEI 9 Sez. 9

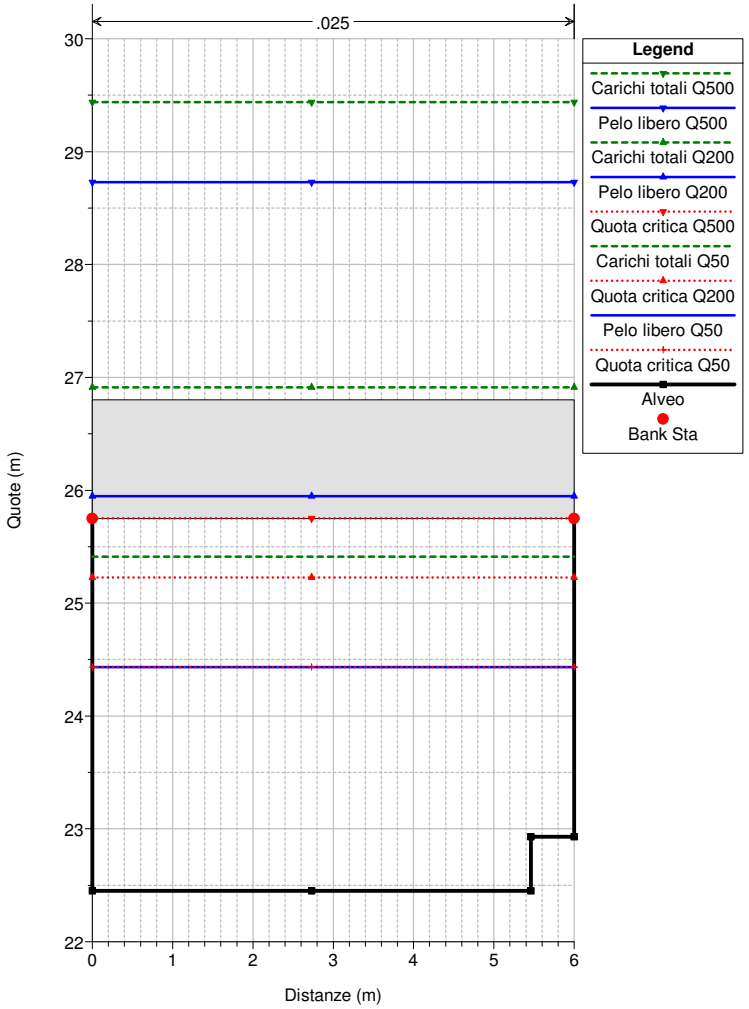


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 8.8 Sez. 8.8 - fabbricato



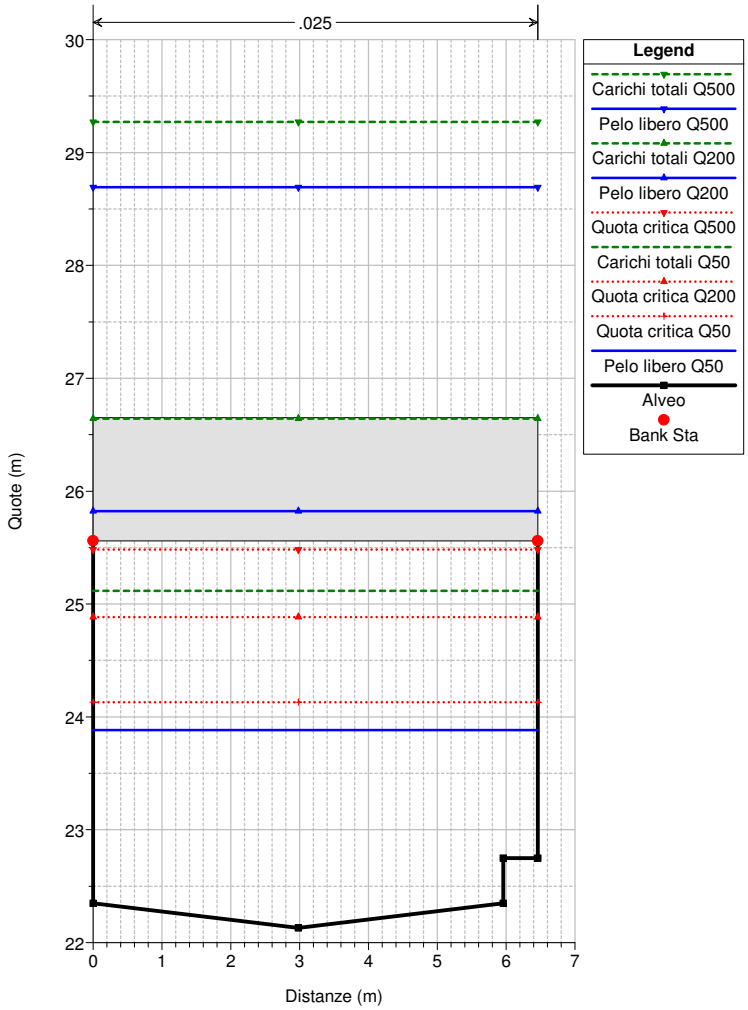
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 8 VEI 8 Sez. 8



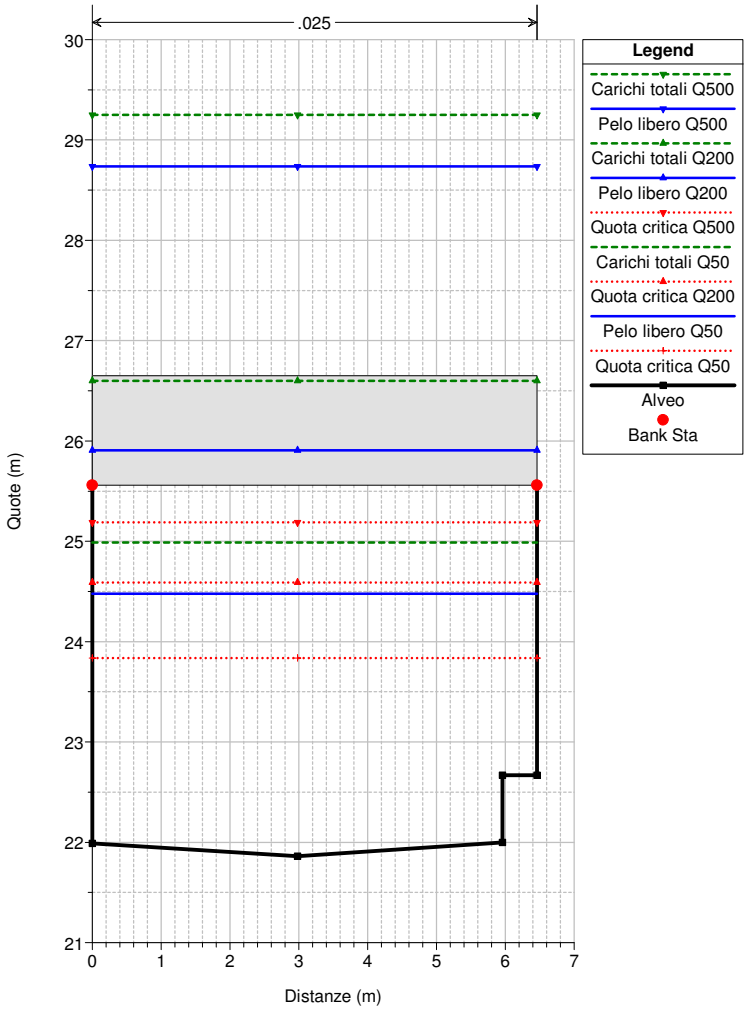
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 7 VEI 7 Sez. 7

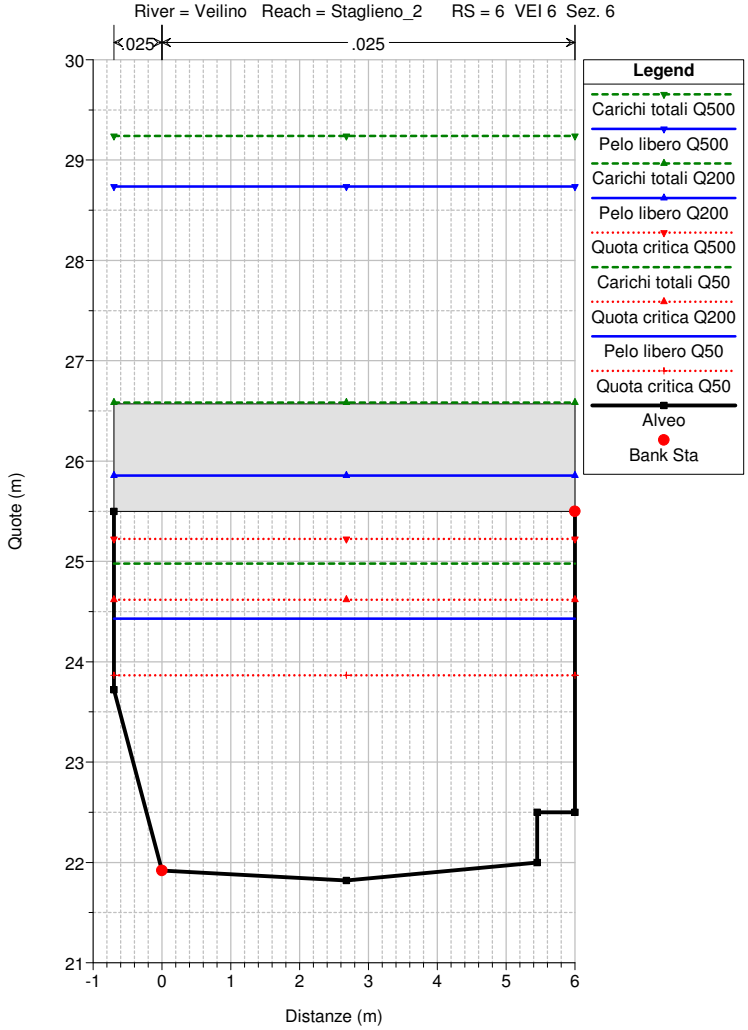


Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 6.7 Sez. 6.7

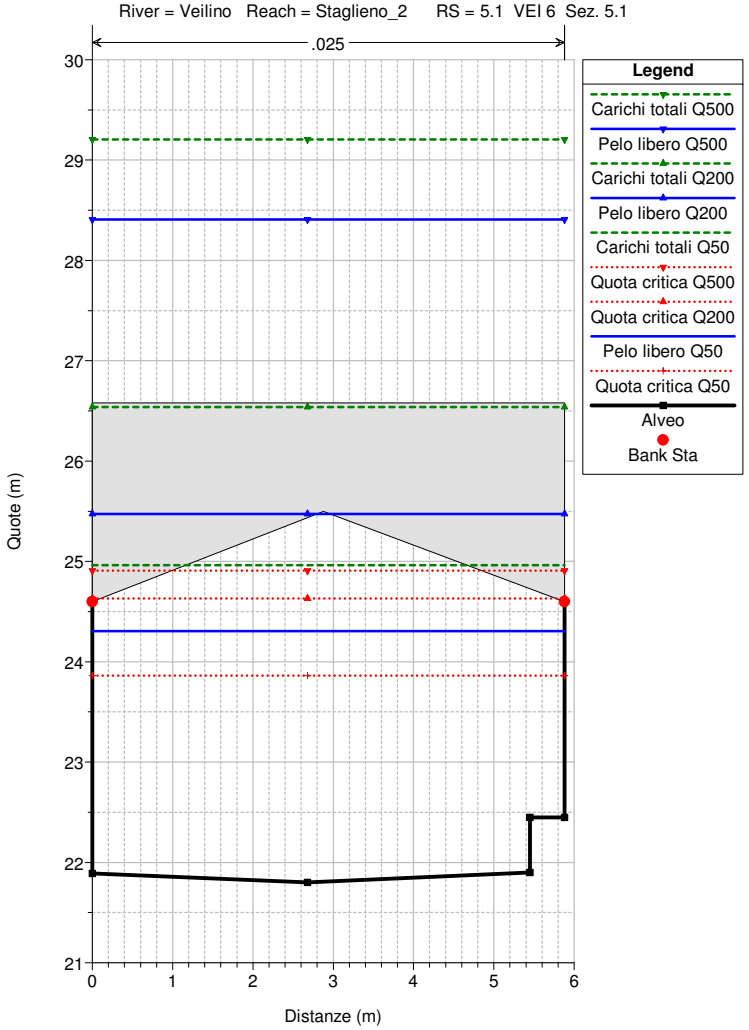


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 6 VEI 6 Sez. 6



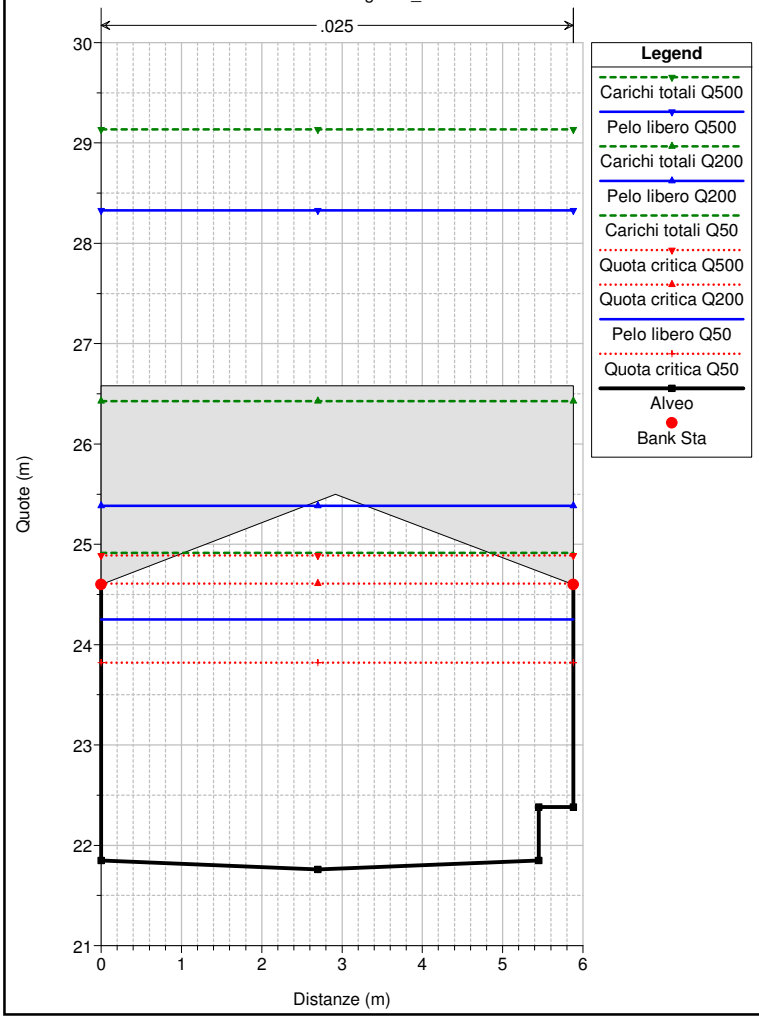
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 5.1 VEI 6 Sez. 5.1



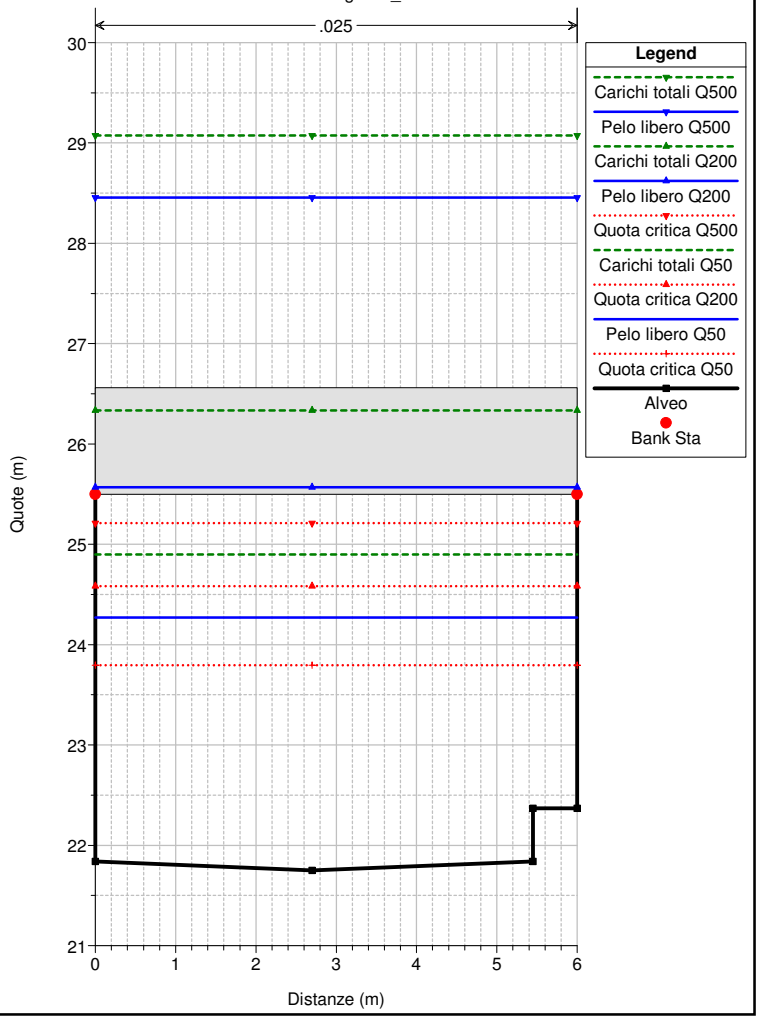
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 5 VEI 5 Sez. 5

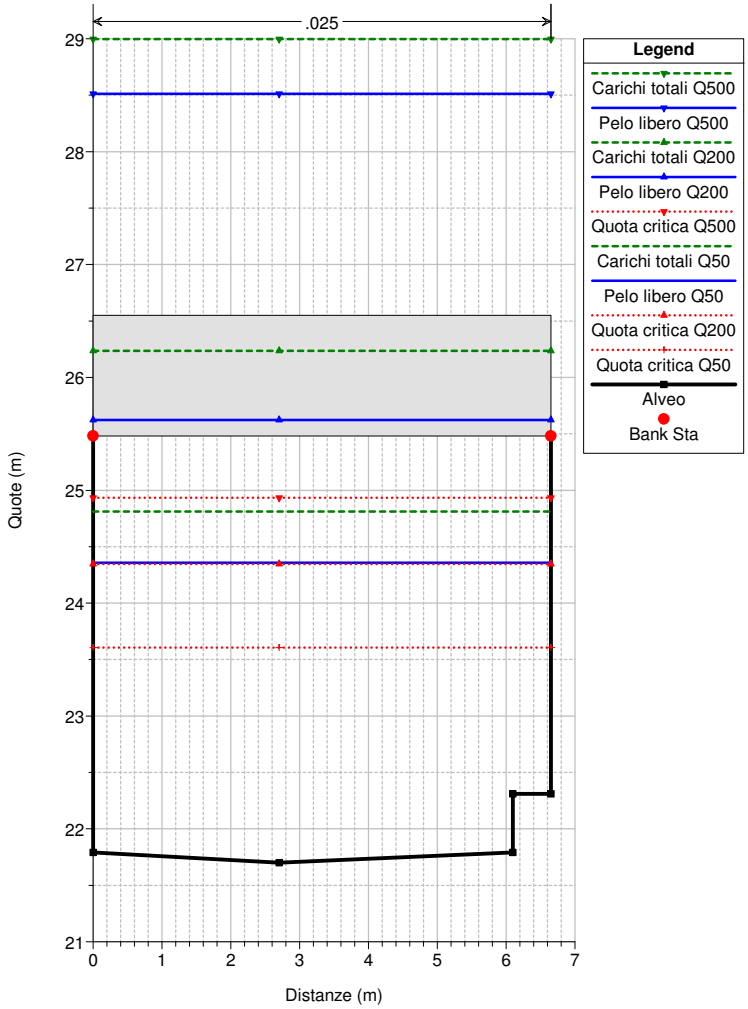


Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 4.1 VEI 5 Sez. 4.1

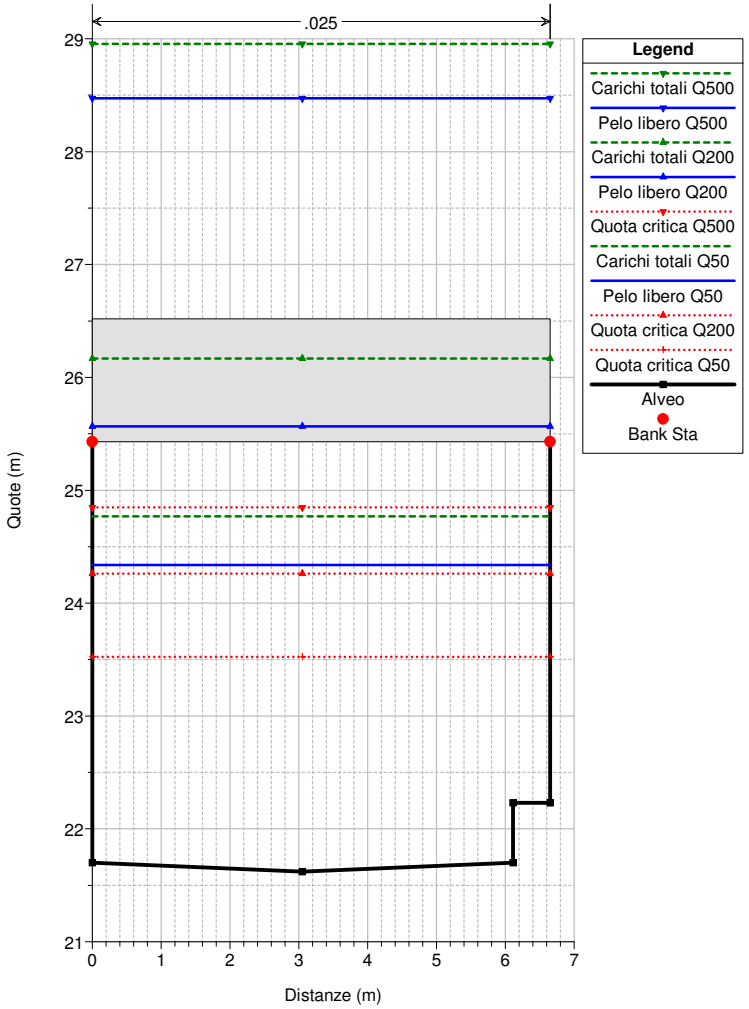


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 4.05 Sez. 4.1



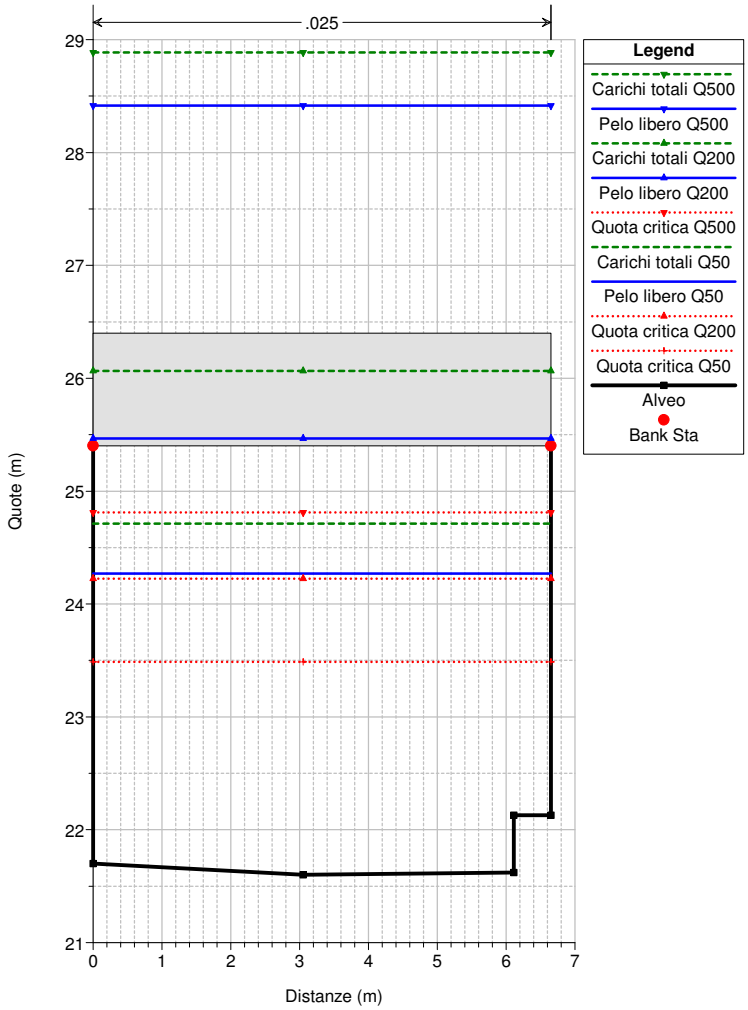
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 4 VEI 4 Sez. 4



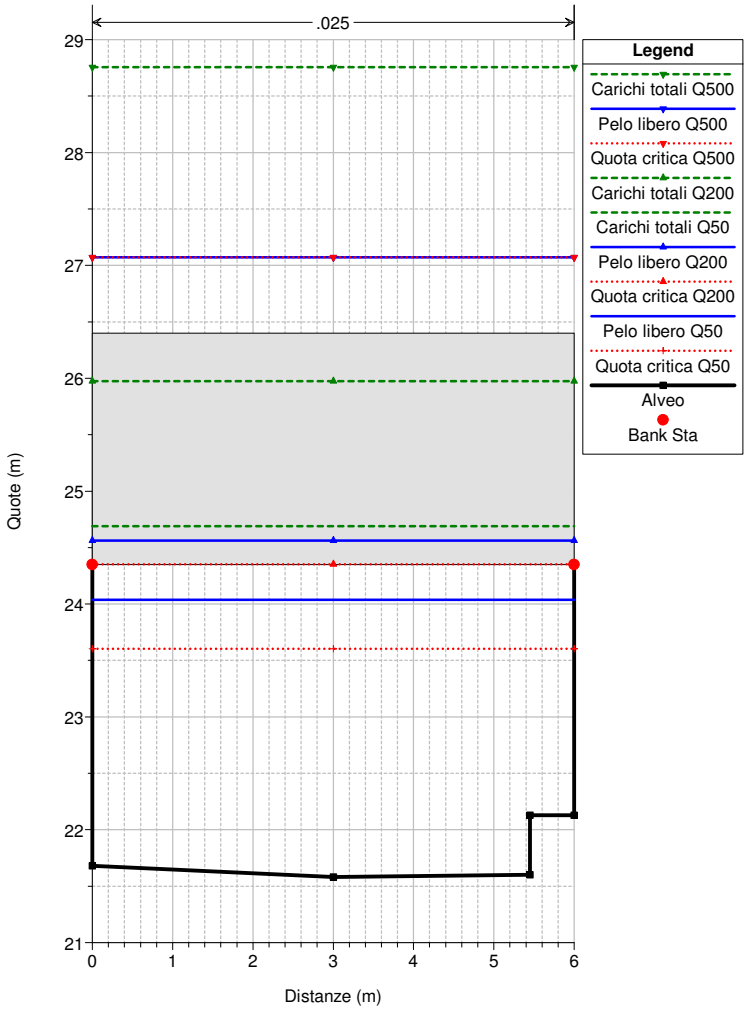
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 3.1 VEI 3 Sez. 3.1

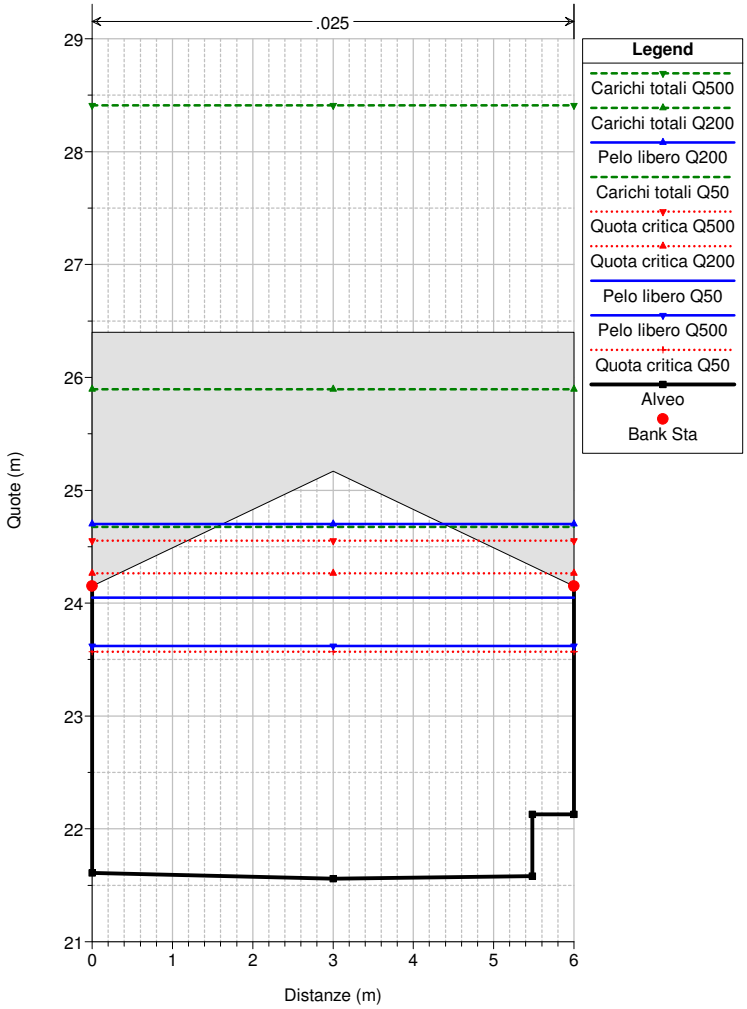


Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 3 VEI 3 Sez. 3

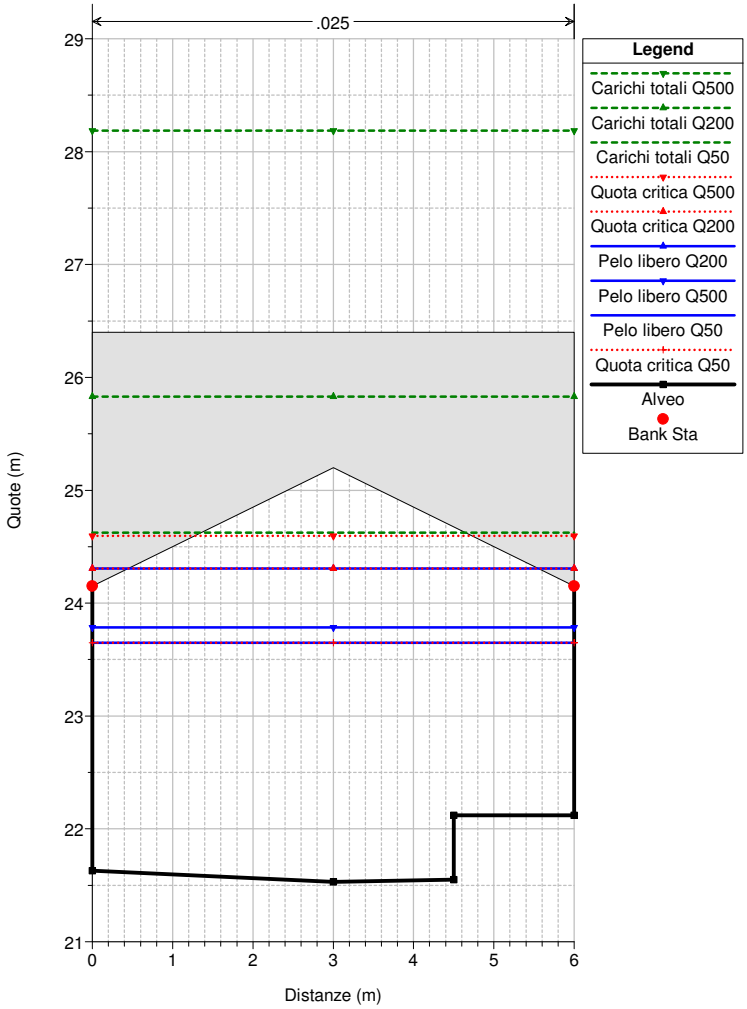


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 2.1 VEI 3 Sez. 2.1



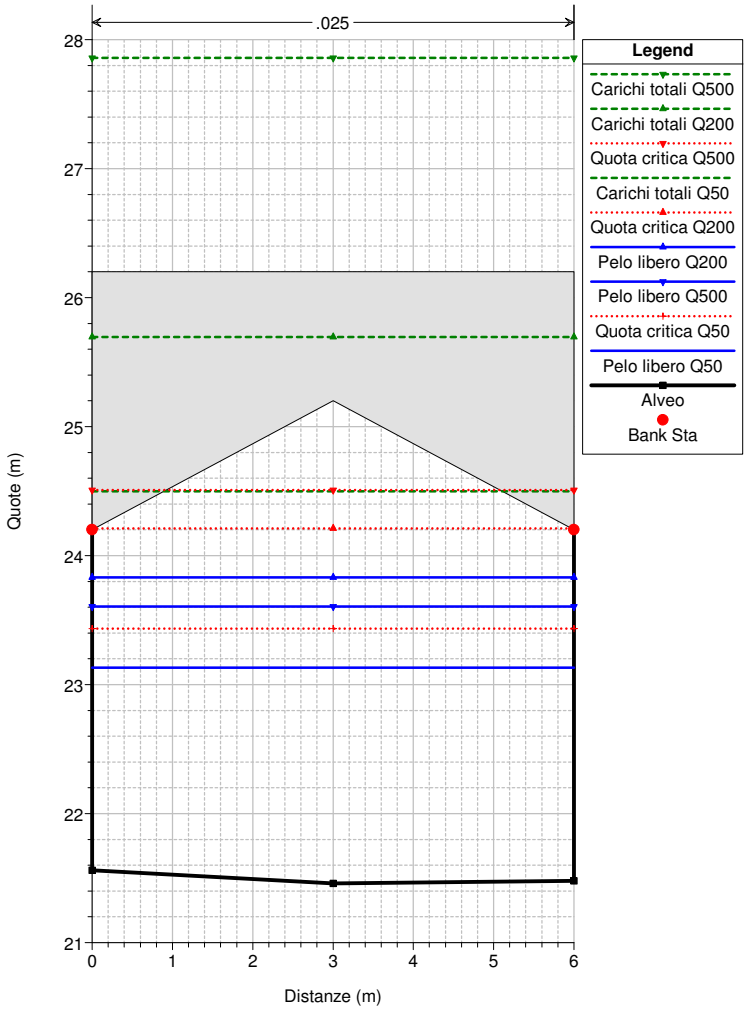
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 2.05 Sez. 2.05



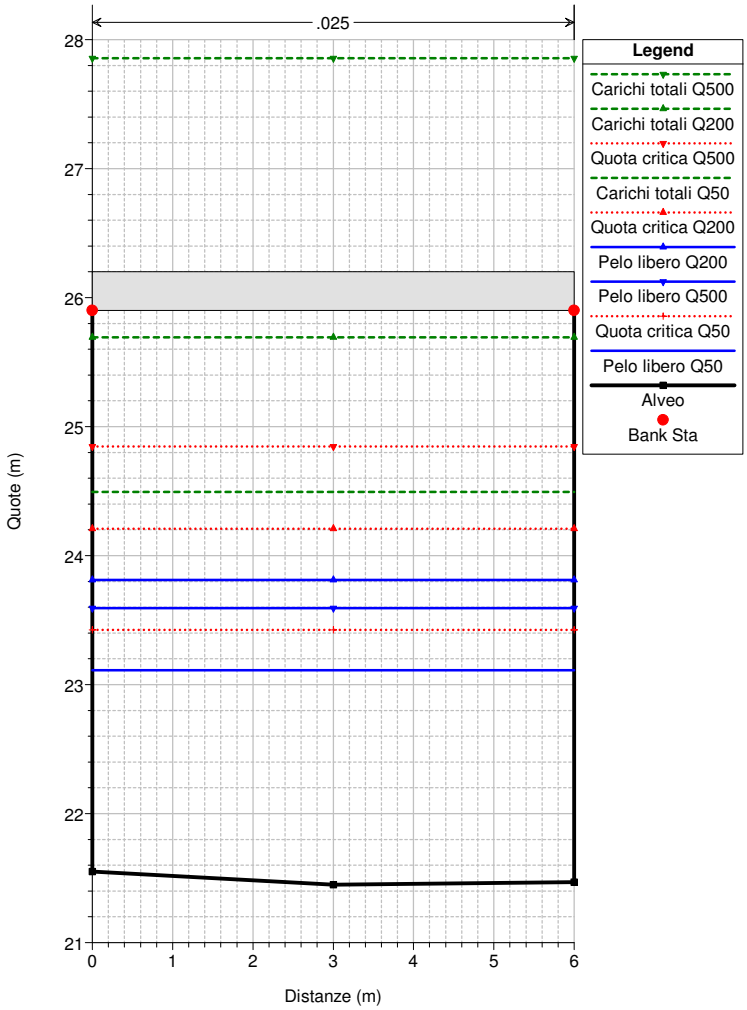
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 2 VEI 2 Sez. 2



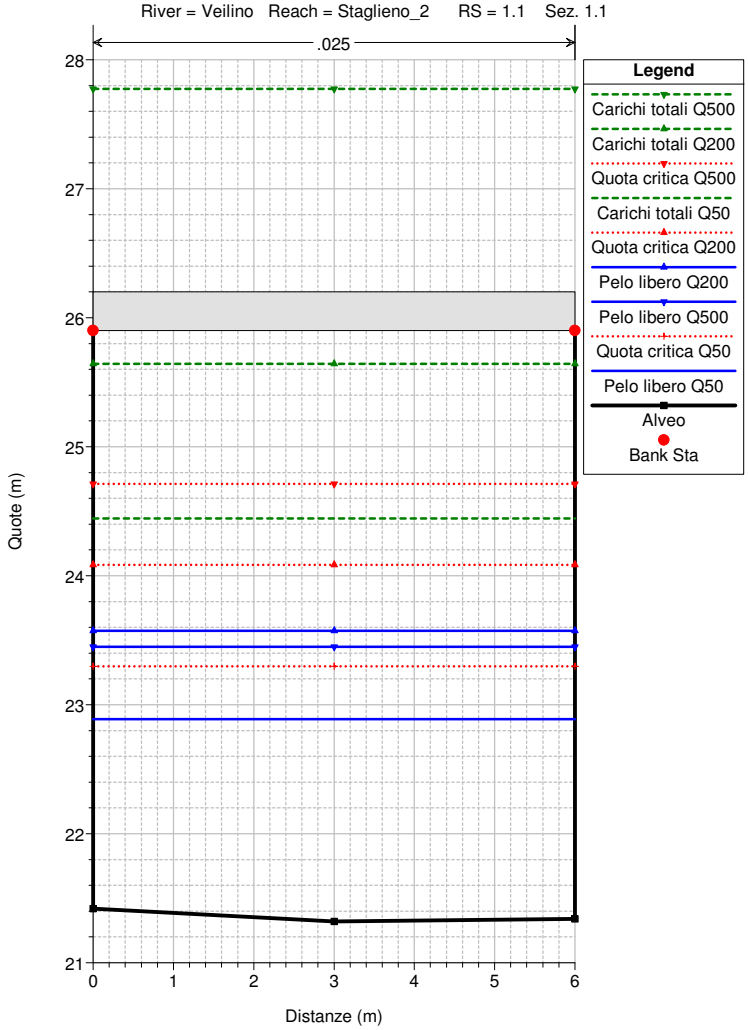
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 1.2 Sez. 1.2



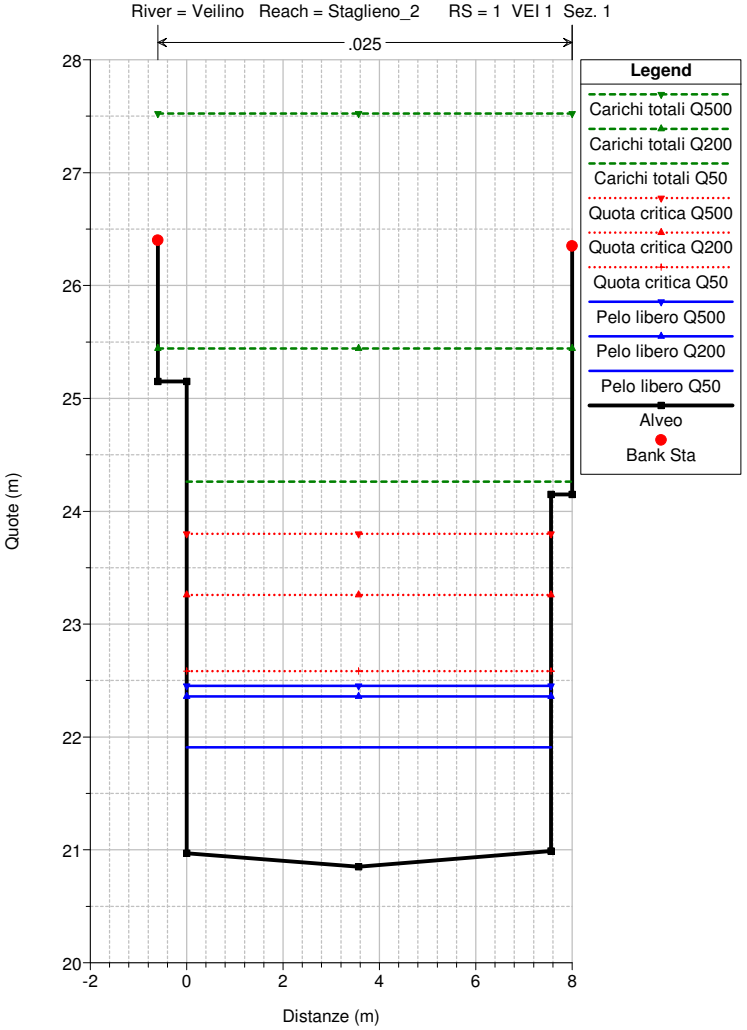
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 1.1 Sez. 1.1



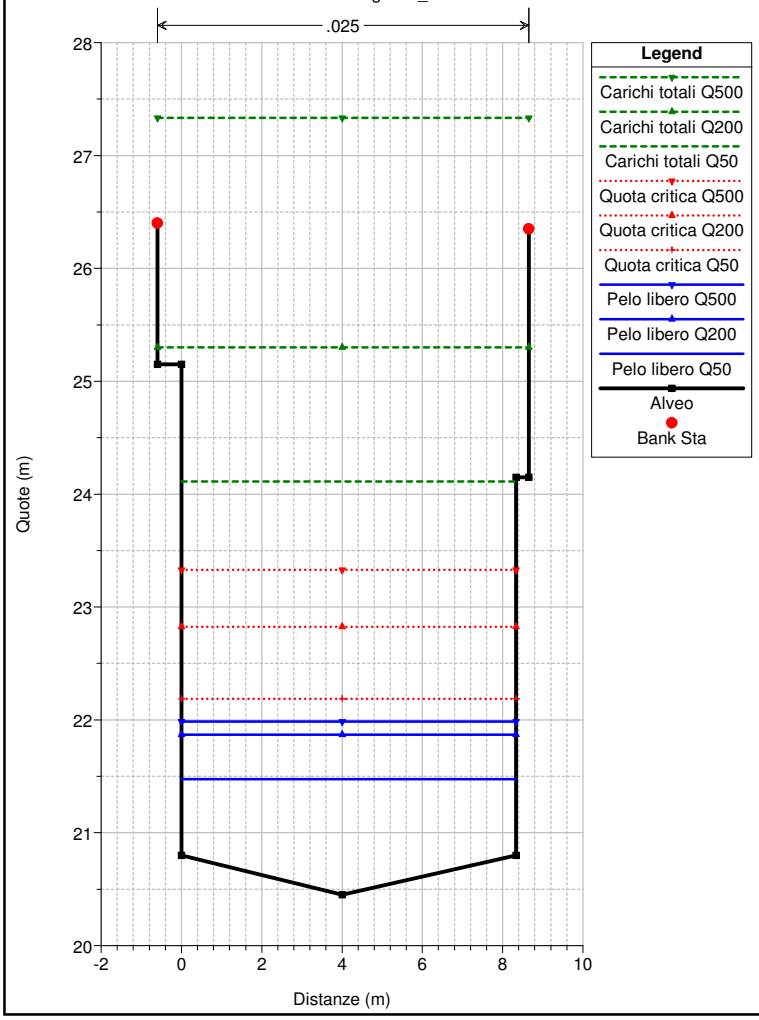
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 1 VEI 1 Sez. 1



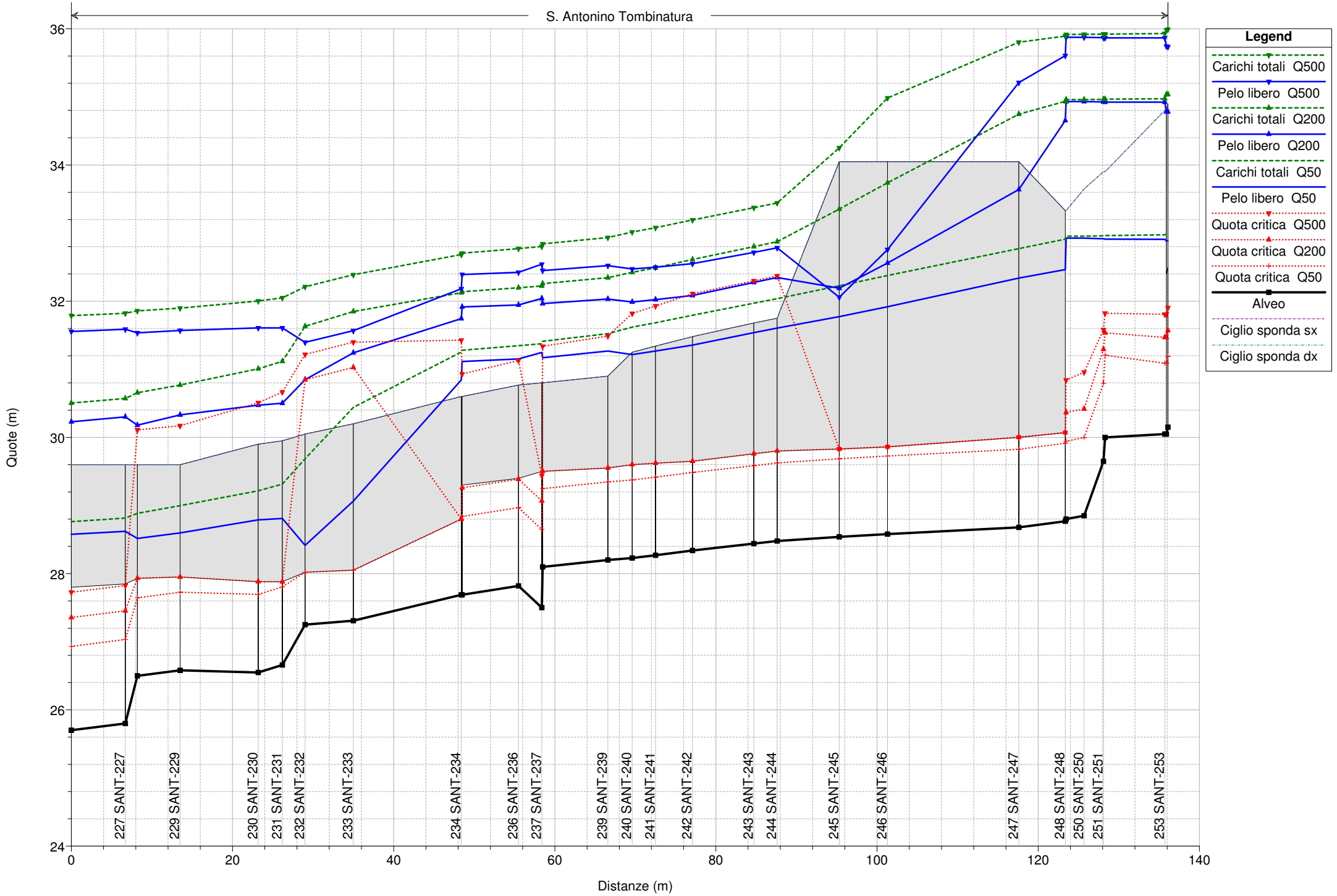
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 0.1 Sez. 0.1



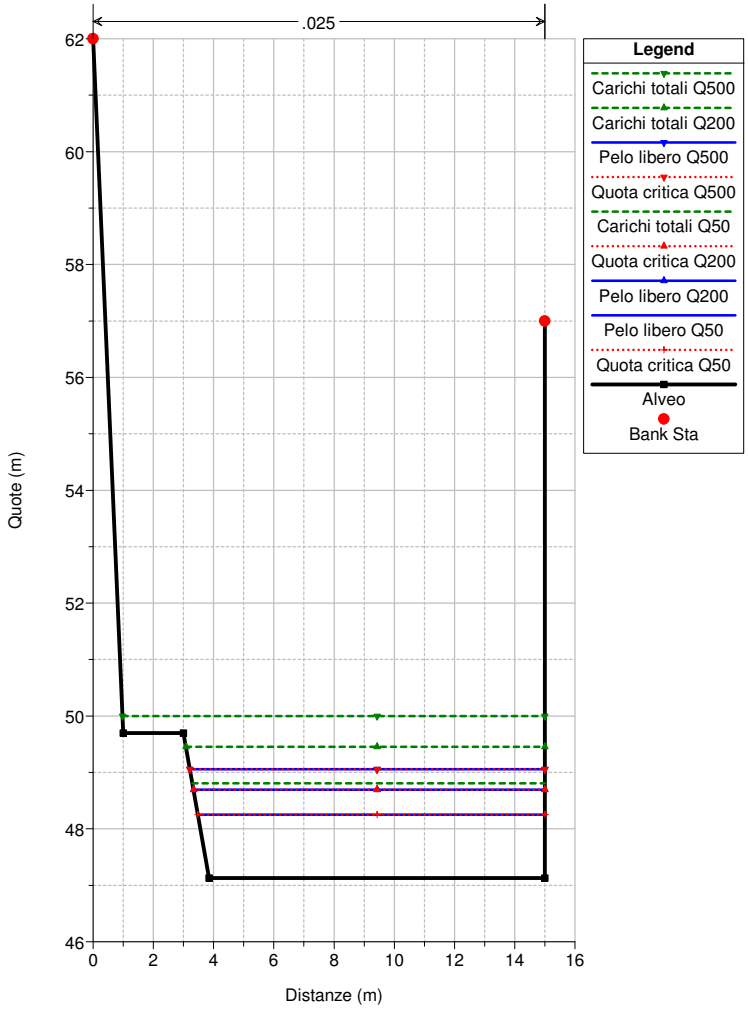
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

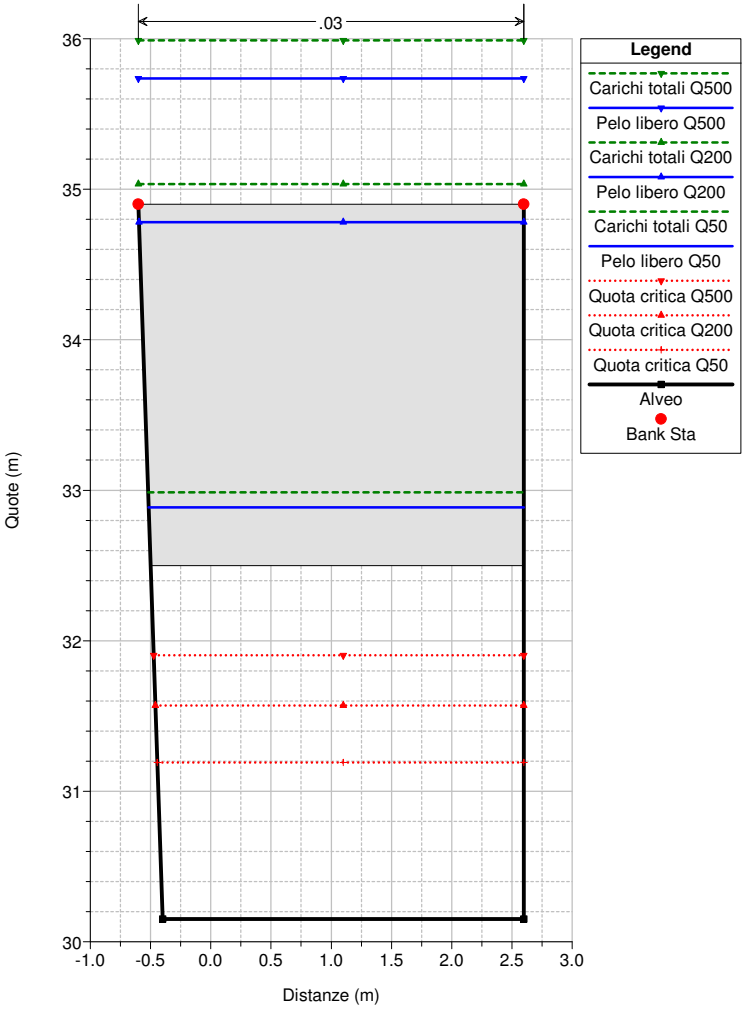
River = Veilino Reach = Monte RS = 100 fittizia di monte



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

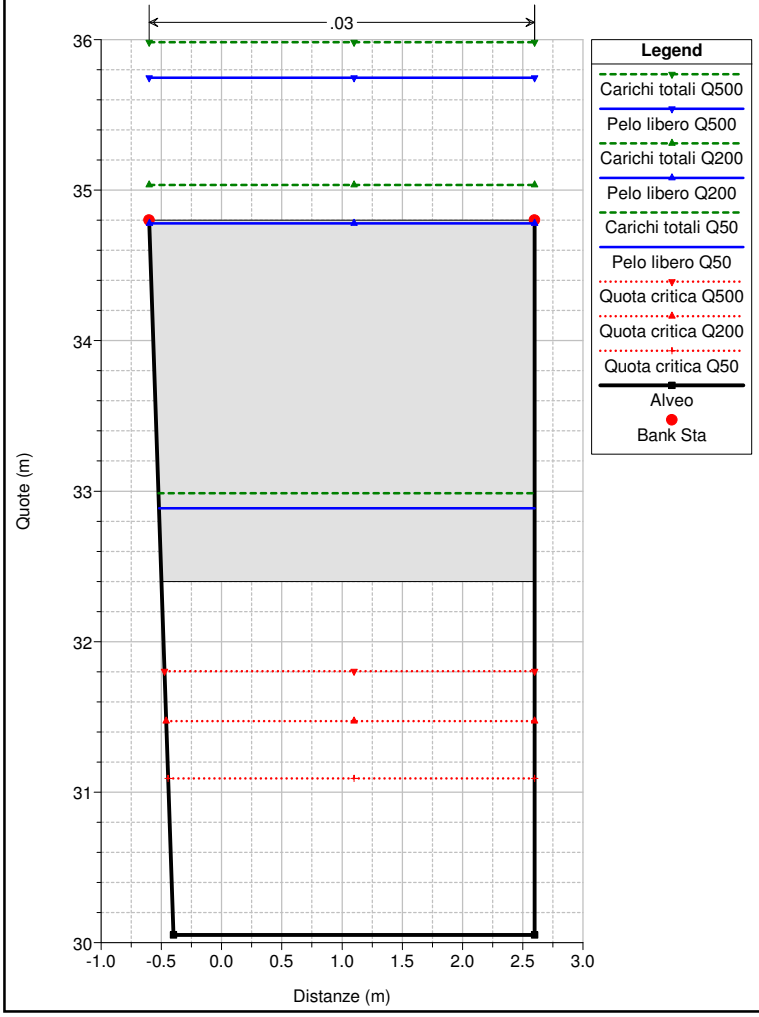
River = S. Antonino Reach = Tombinatura RS = 255 SANT-255



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

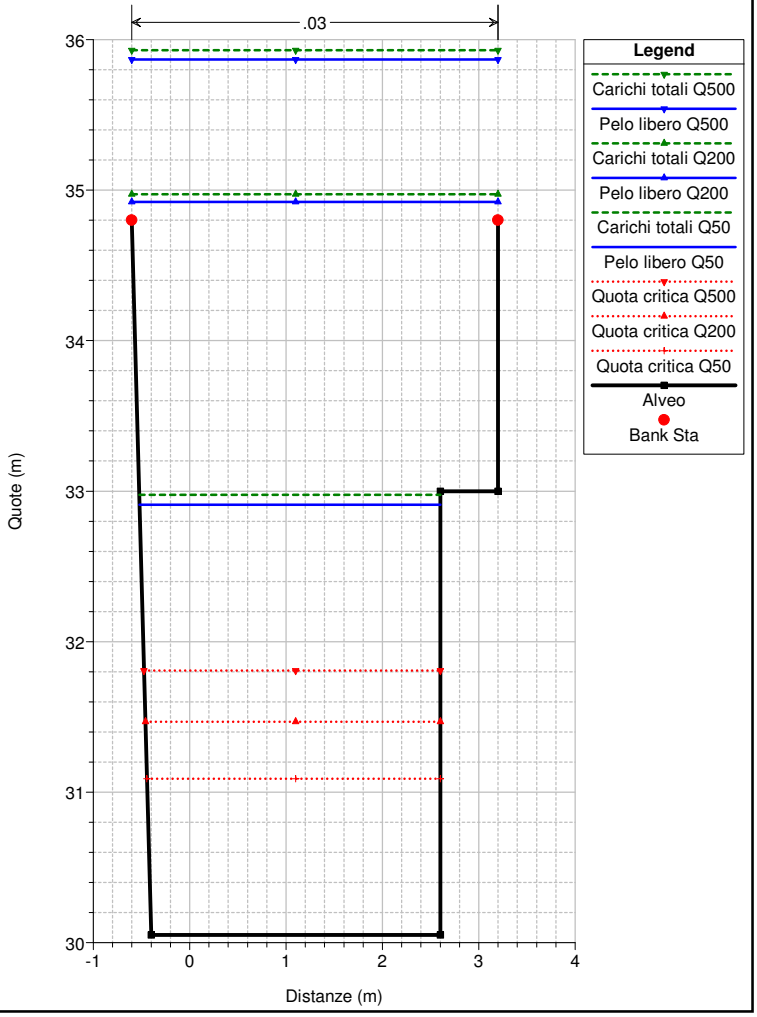
River = S. Antonino Reach = Tombinatura RS = 254 SANT-254



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 253 SANT-253



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

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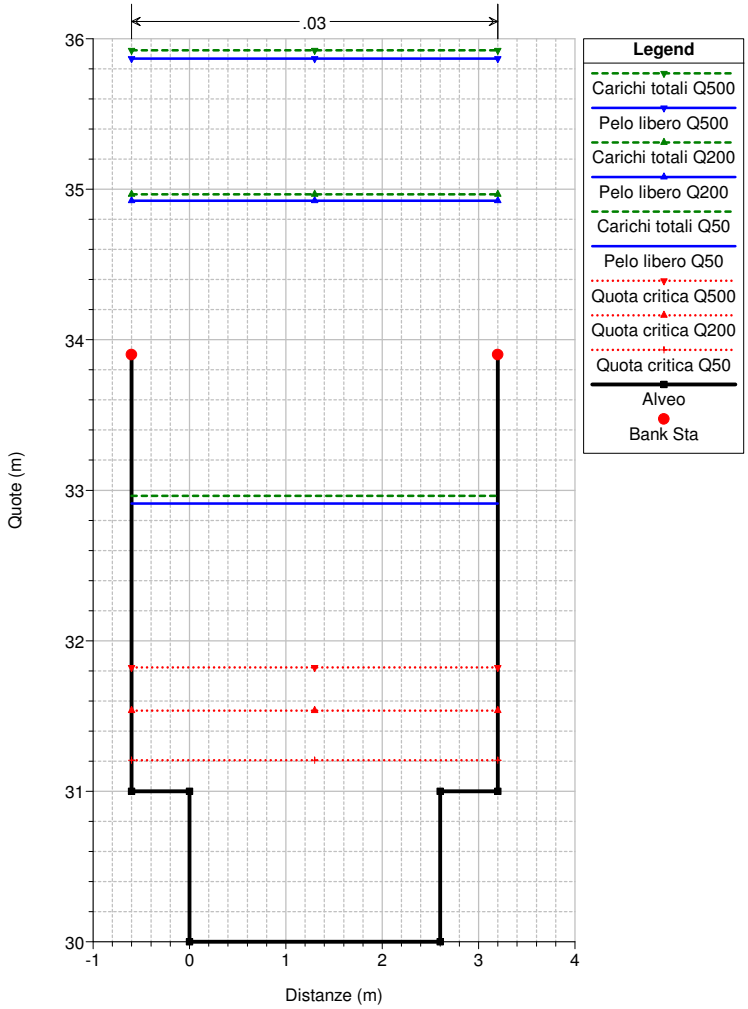
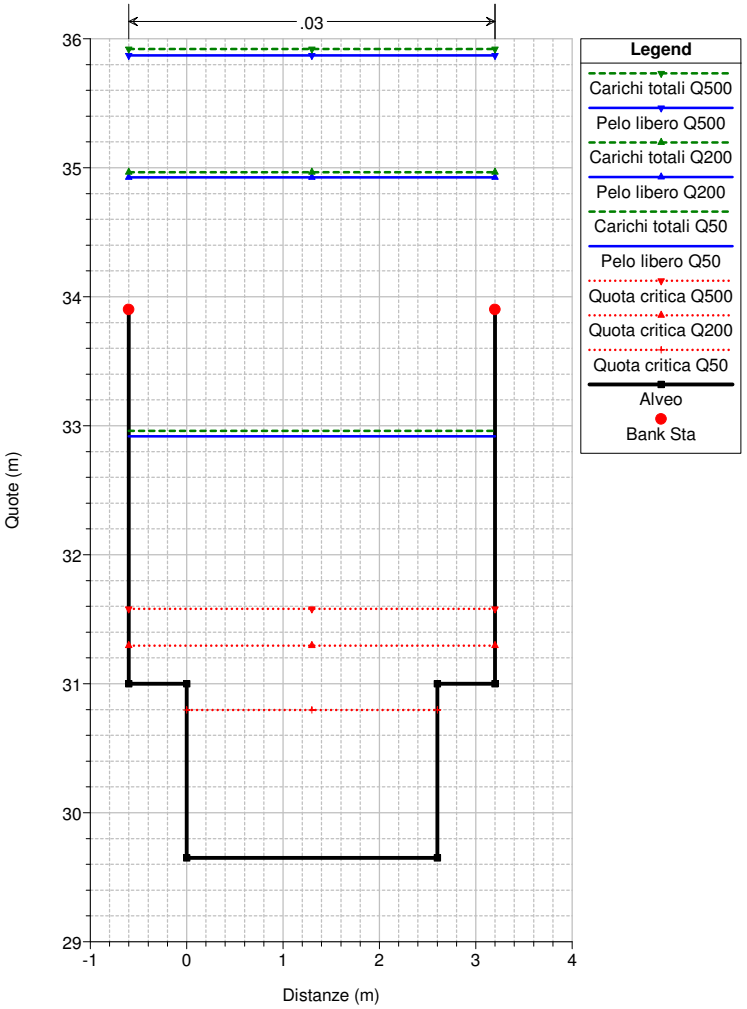


Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

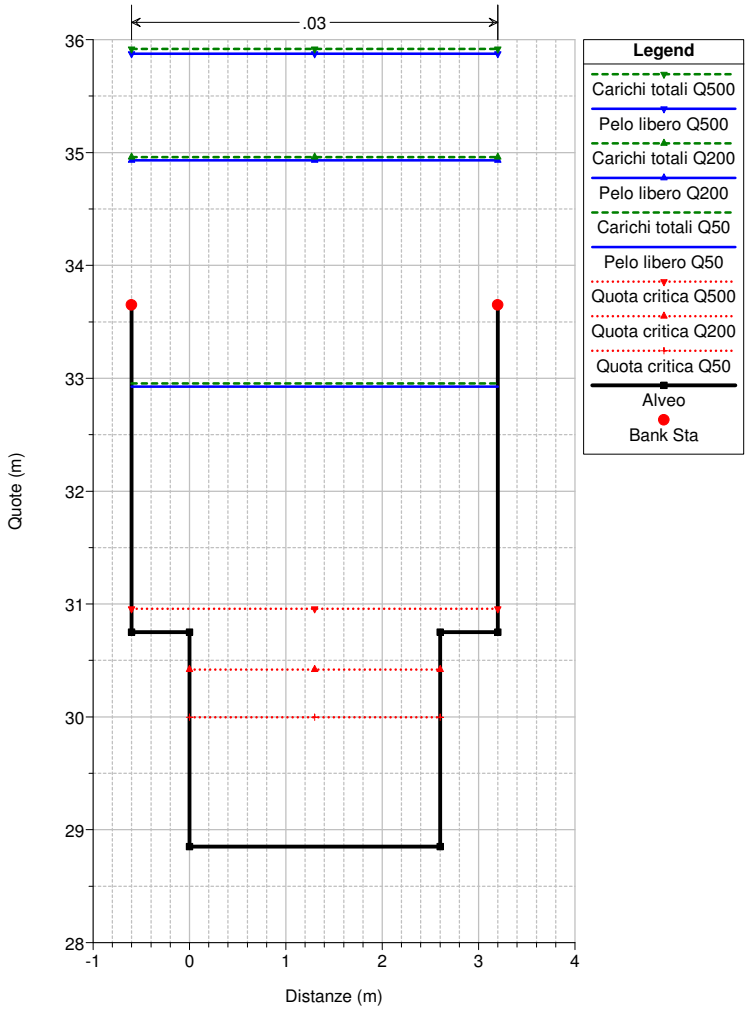
River = S. Antonino Reach = Tombinatura RS = 251 SANT-251



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

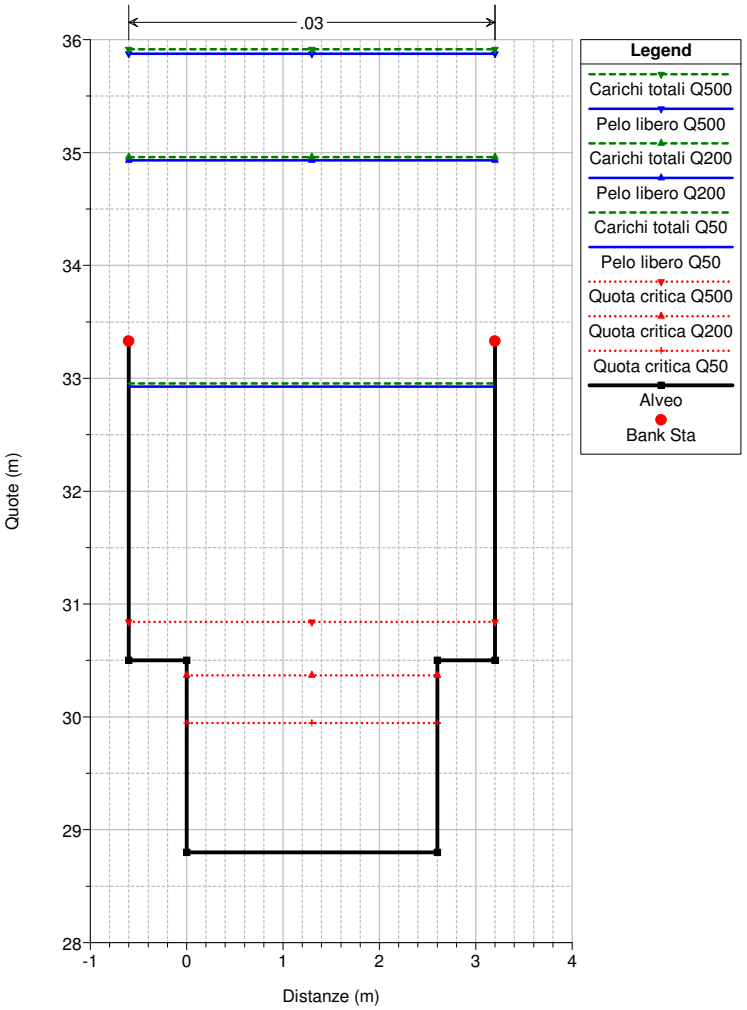
River = S. Antonino Reach = Tombinatura RS = 250 SANT-250



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

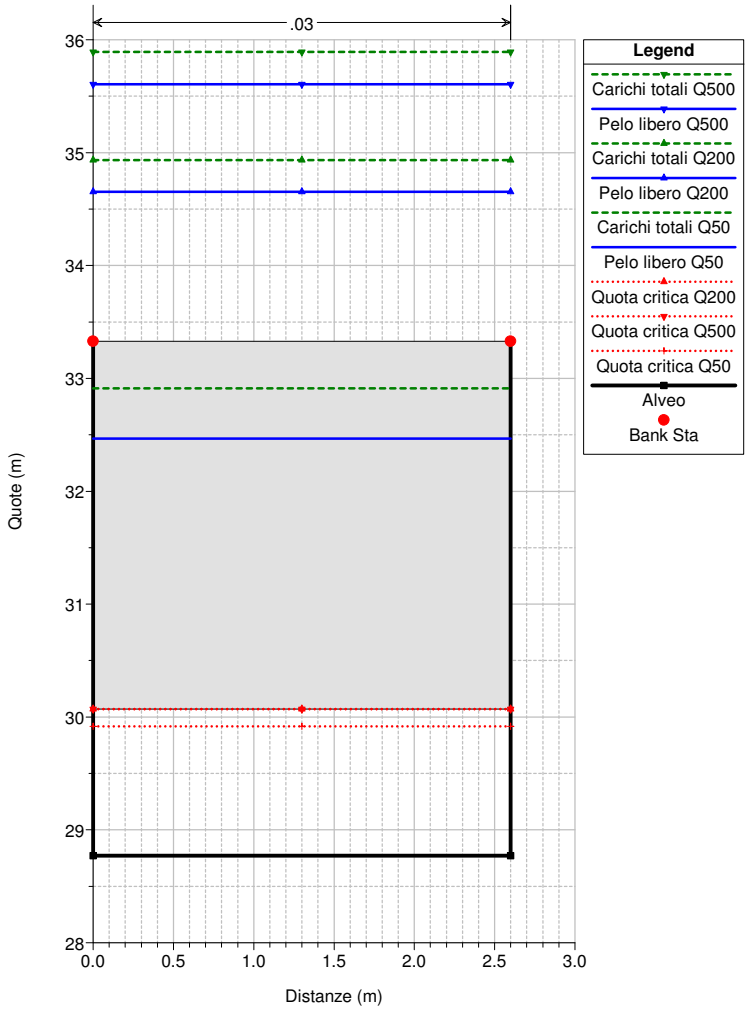
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 249 SANT-249



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

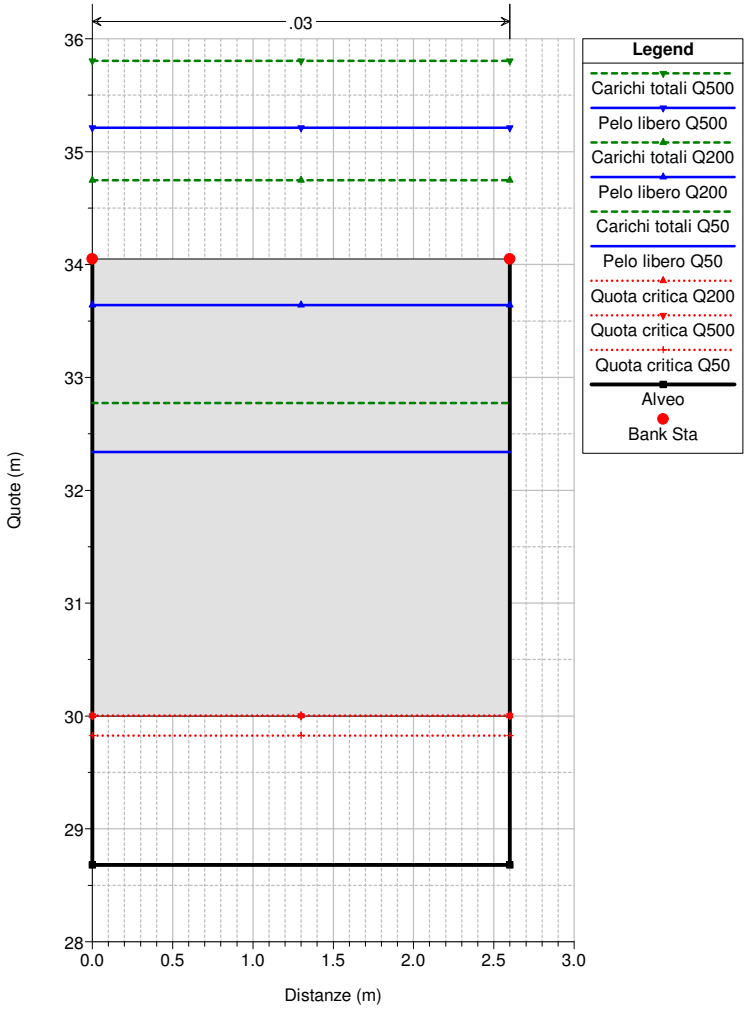
River = S. Antonino Reach = Tombinatura RS = 248 SANT-248



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

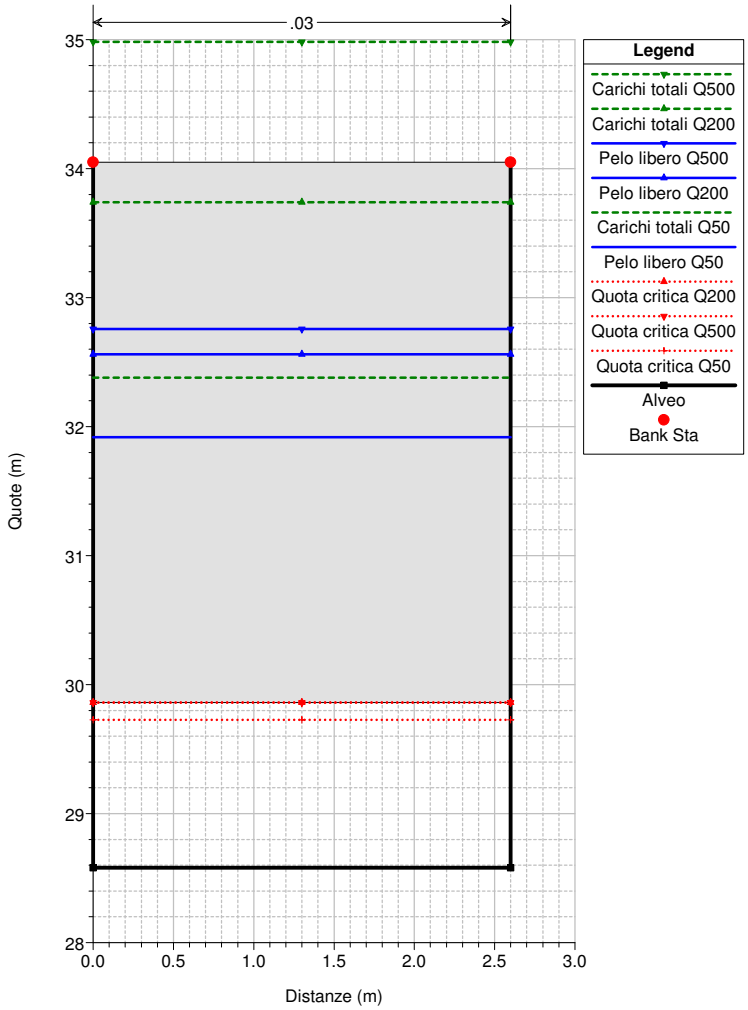
River = S. Antonino Reach = Tombinatura RS = 247 SANT-247



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

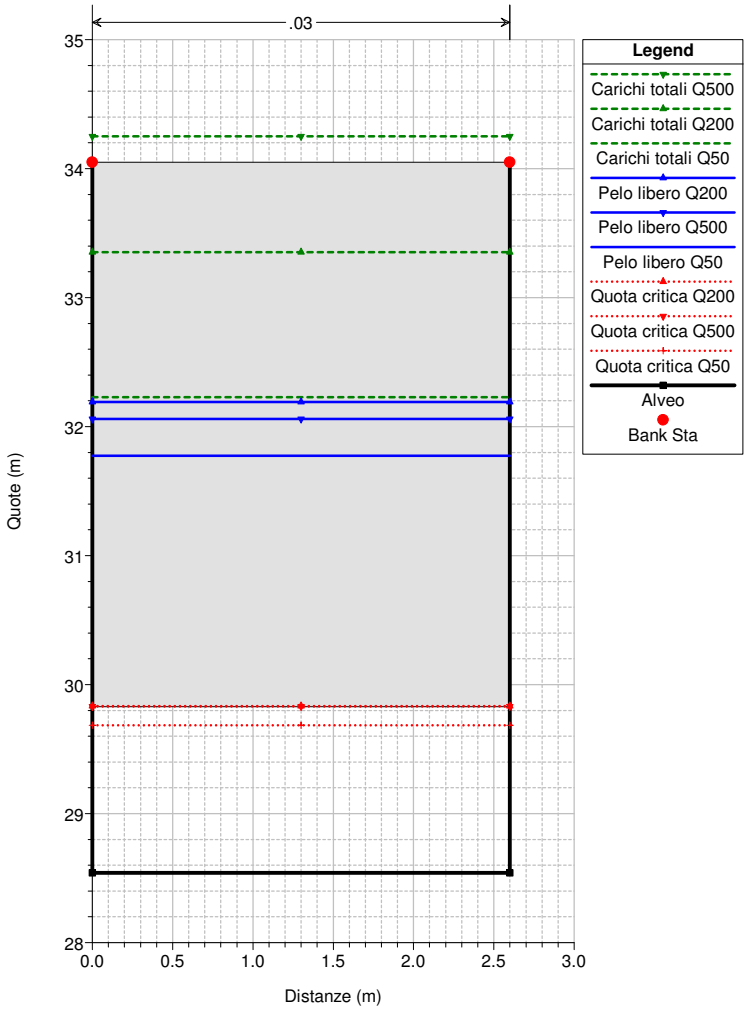
River = S. Antonino Reach = Tombinatura RS = 246 SANT-246



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

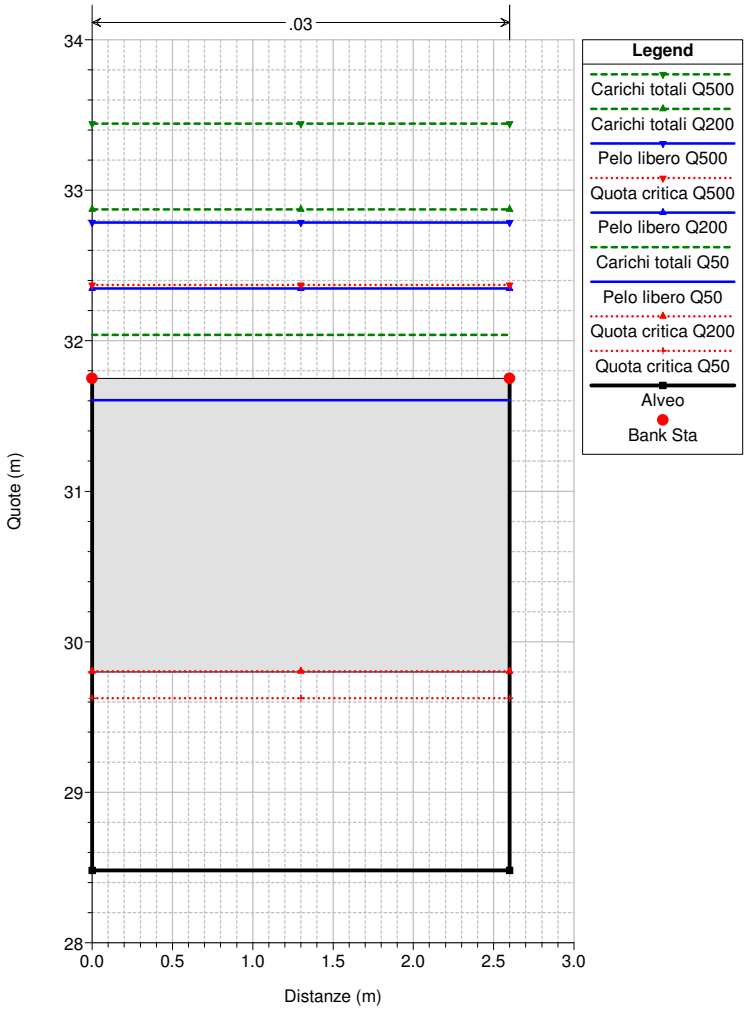
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 245 SANT-245



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

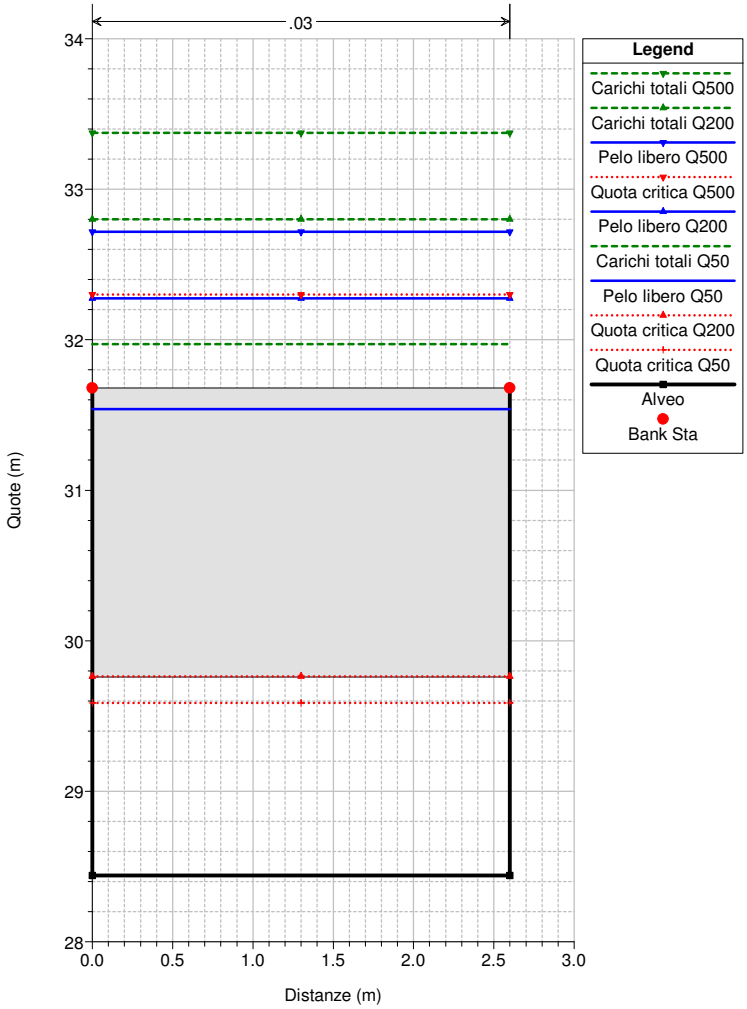
River = S. Antonino Reach = Tombinatura RS = 244 SANT-244



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

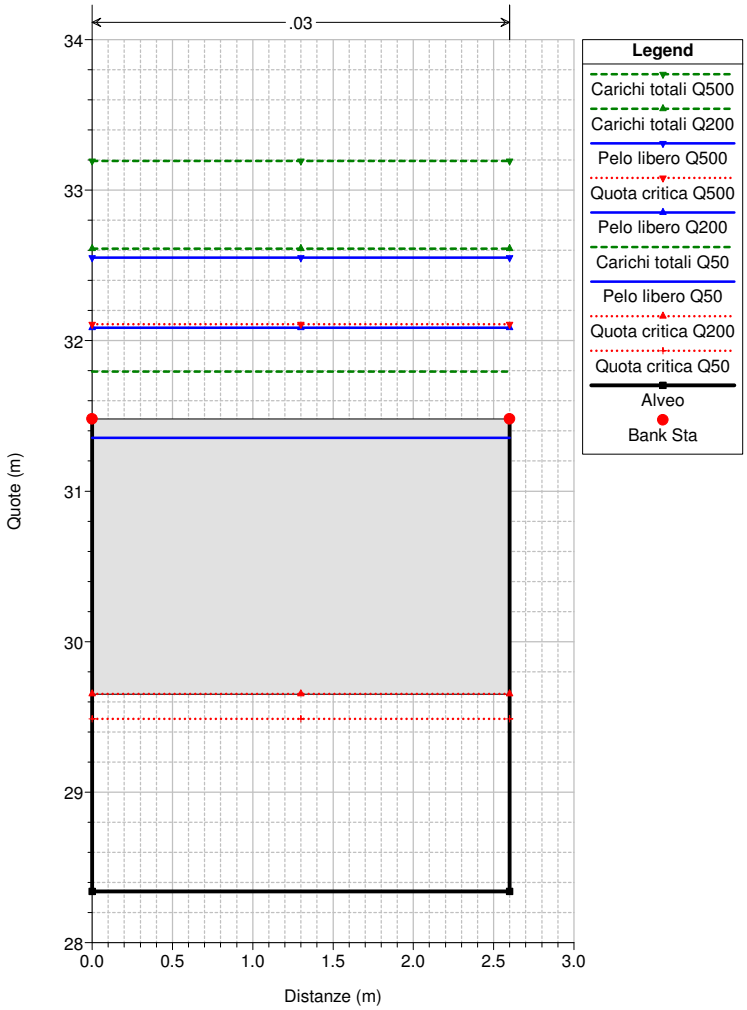
River = S. Antonino Reach = Tombinatura RS = 243 SANT-243



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

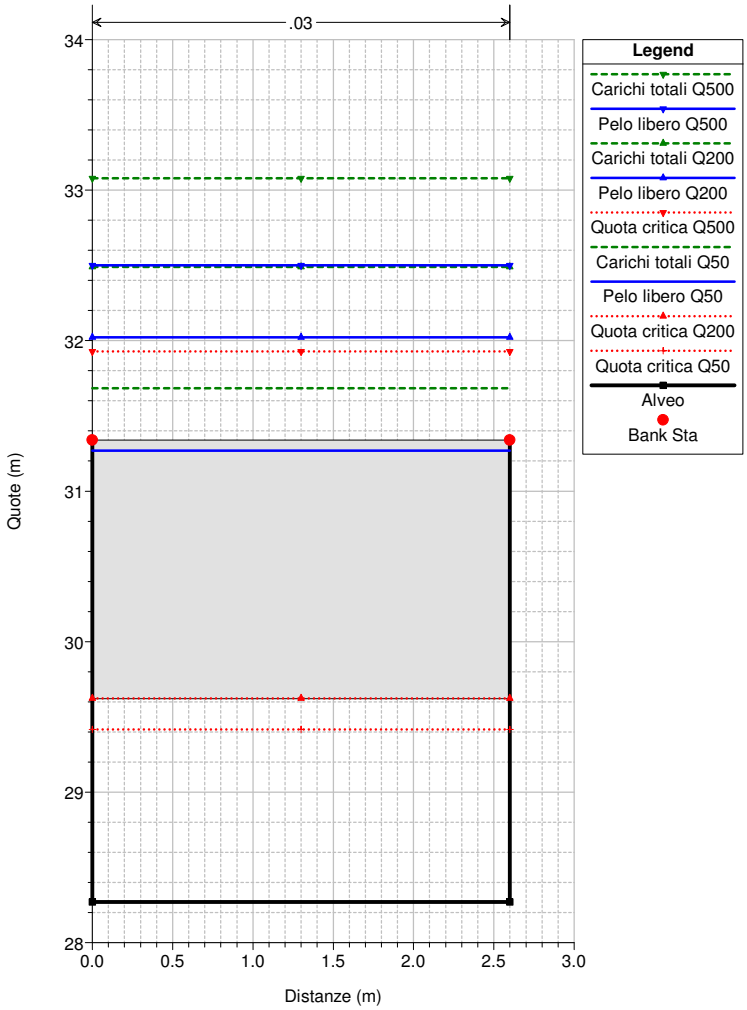
River = S. Antonino Reach = Tombinatura RS = 242 SANT-242



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

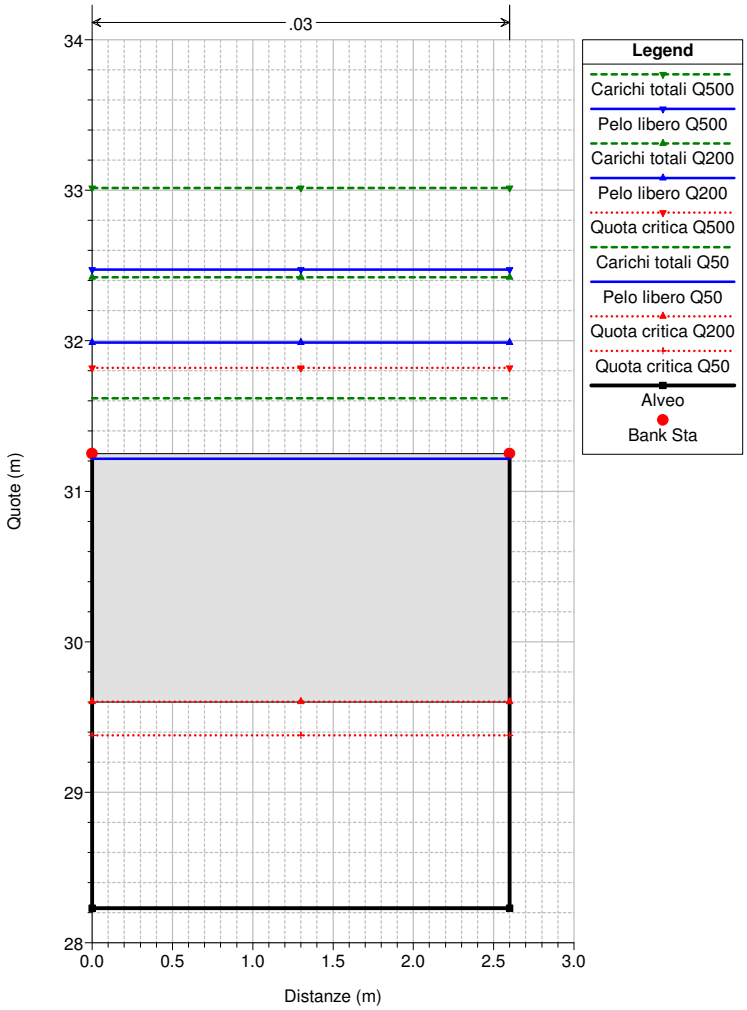
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 241 SANT-241



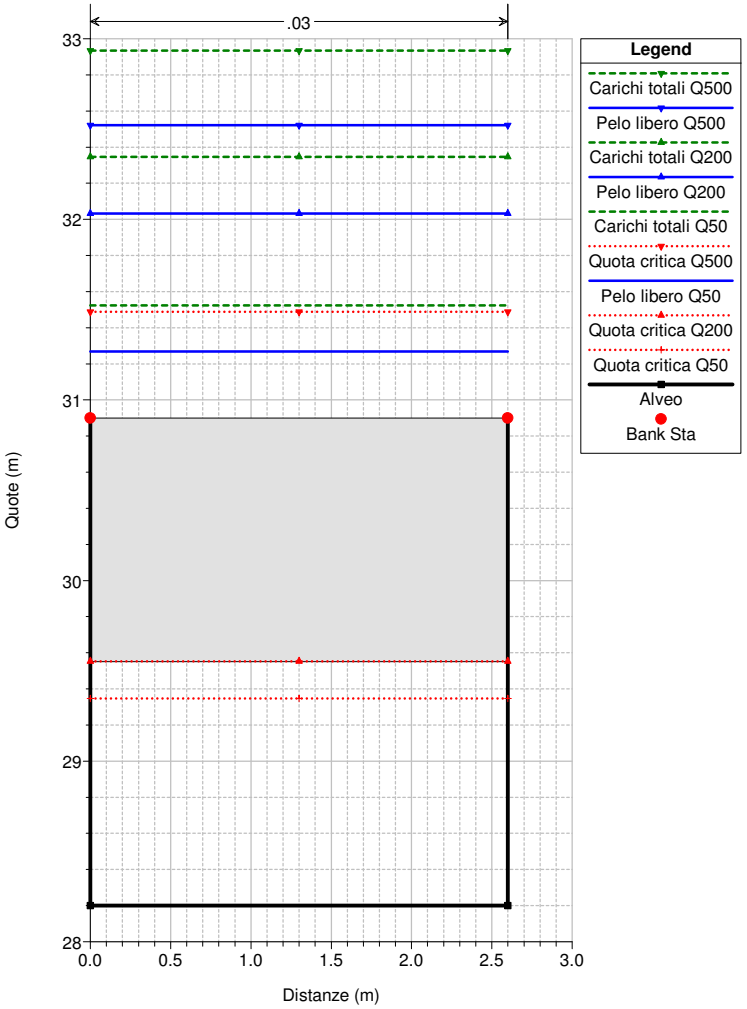
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 240 SANT-240



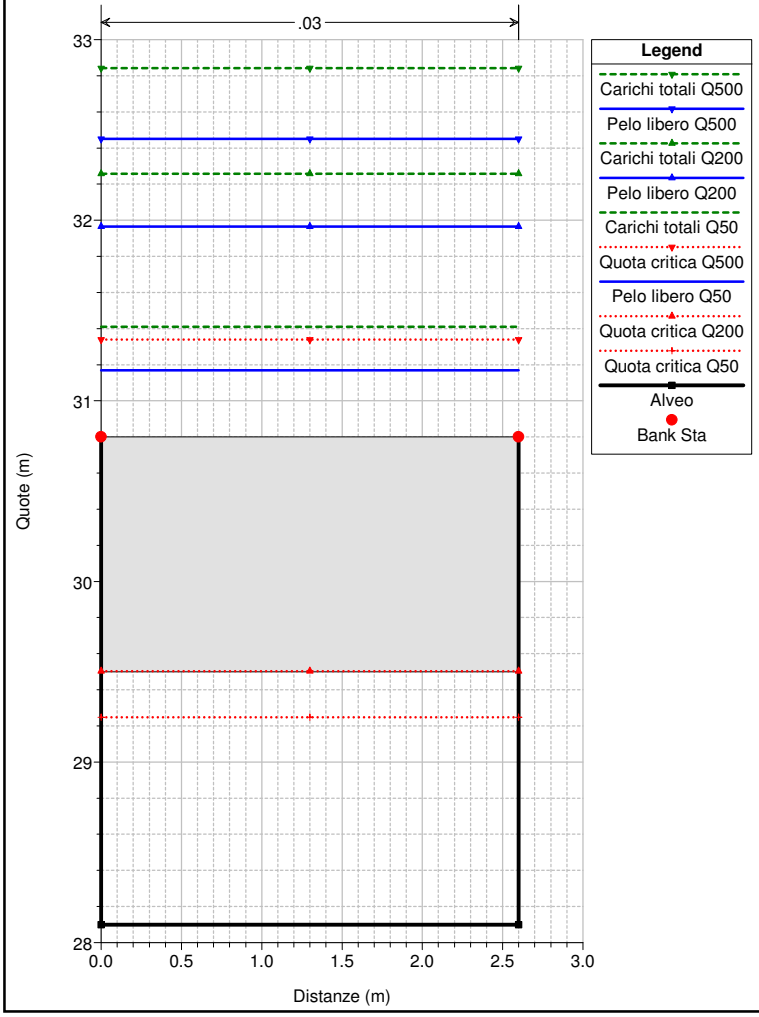
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 239 SANT-239



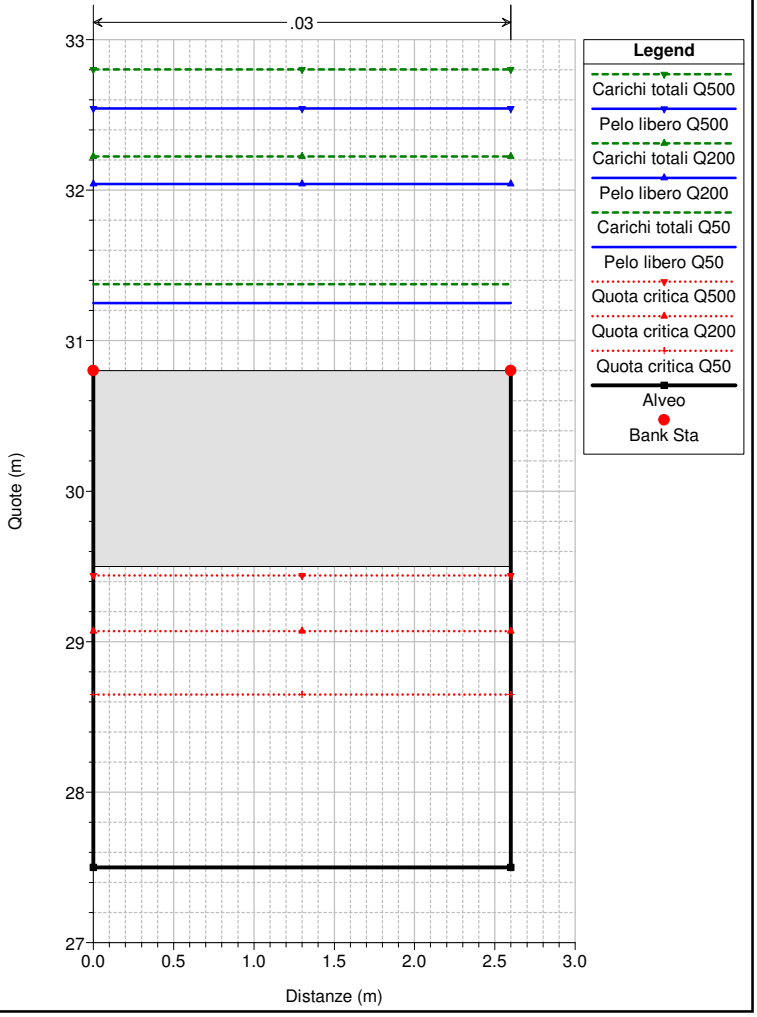
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 238 SANT-238



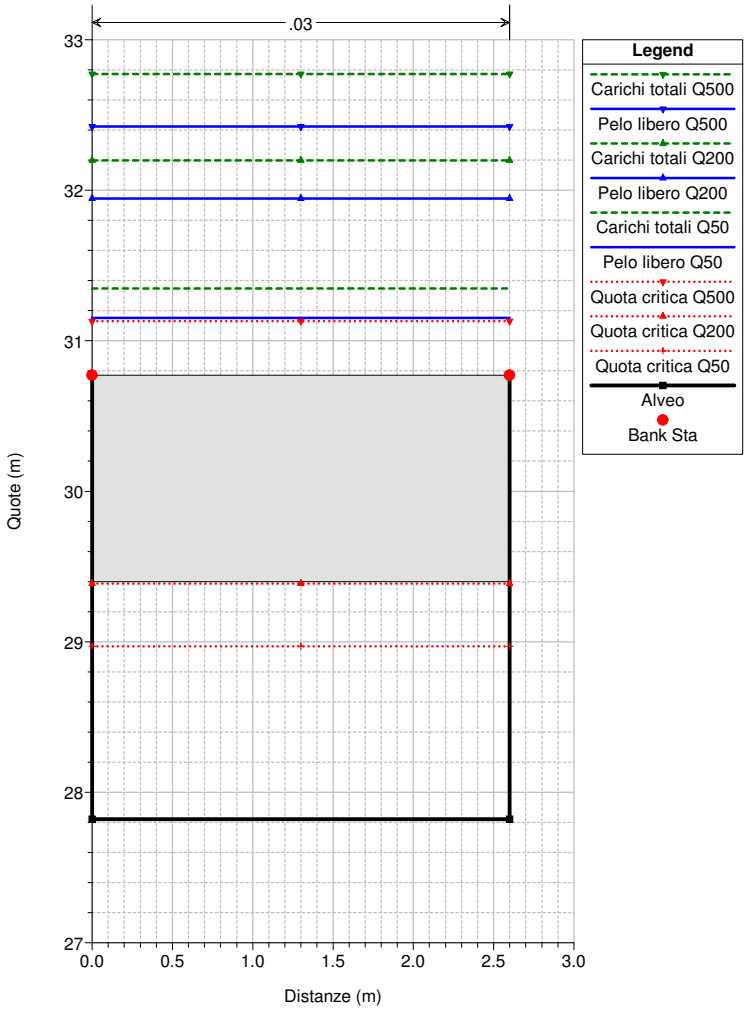
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 237 SANT-237



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

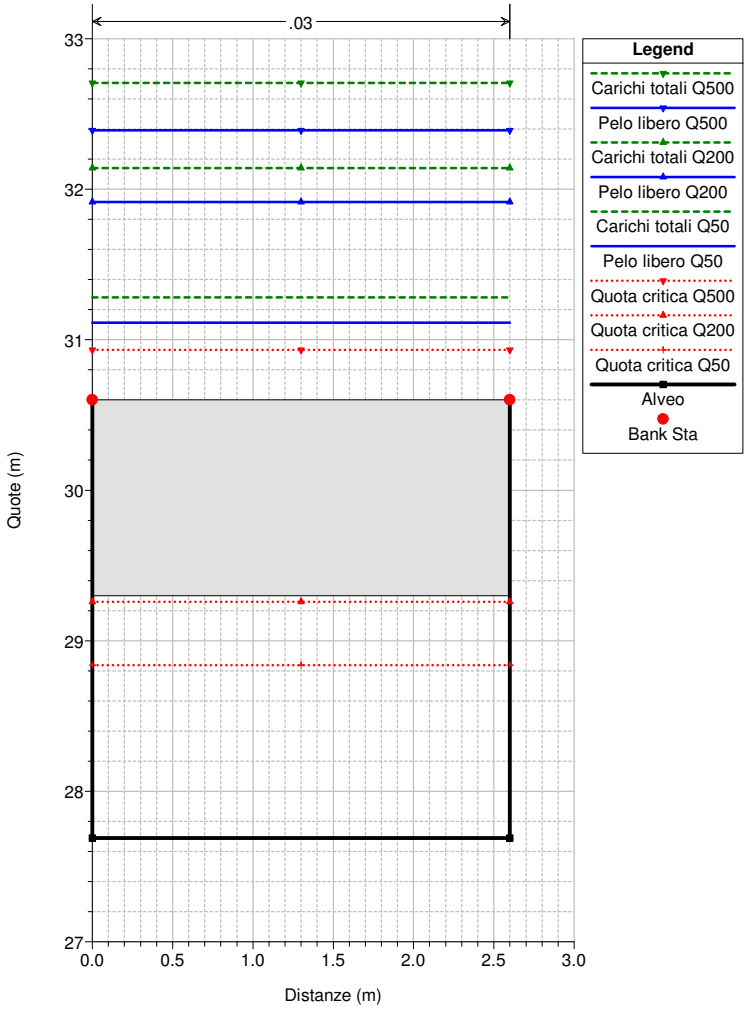
River = S. Antonino Reach = Tombinatura RS = 236 SANT-236



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

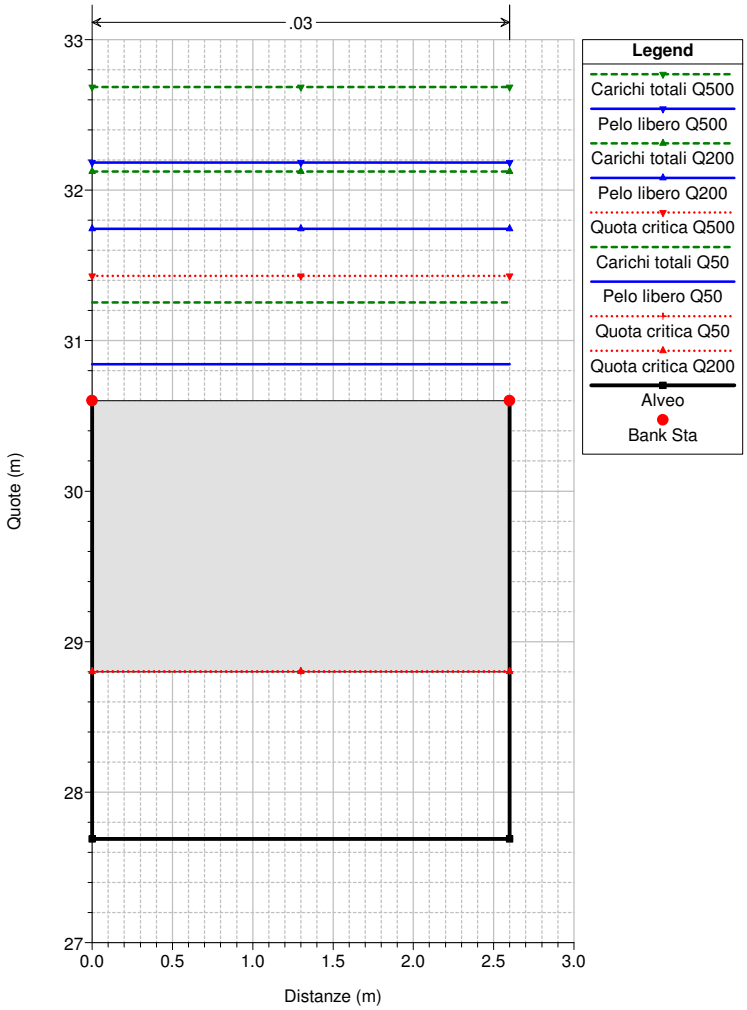
River = S. Antonino Reach = Tombinatura RS = 235 SANT-235



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

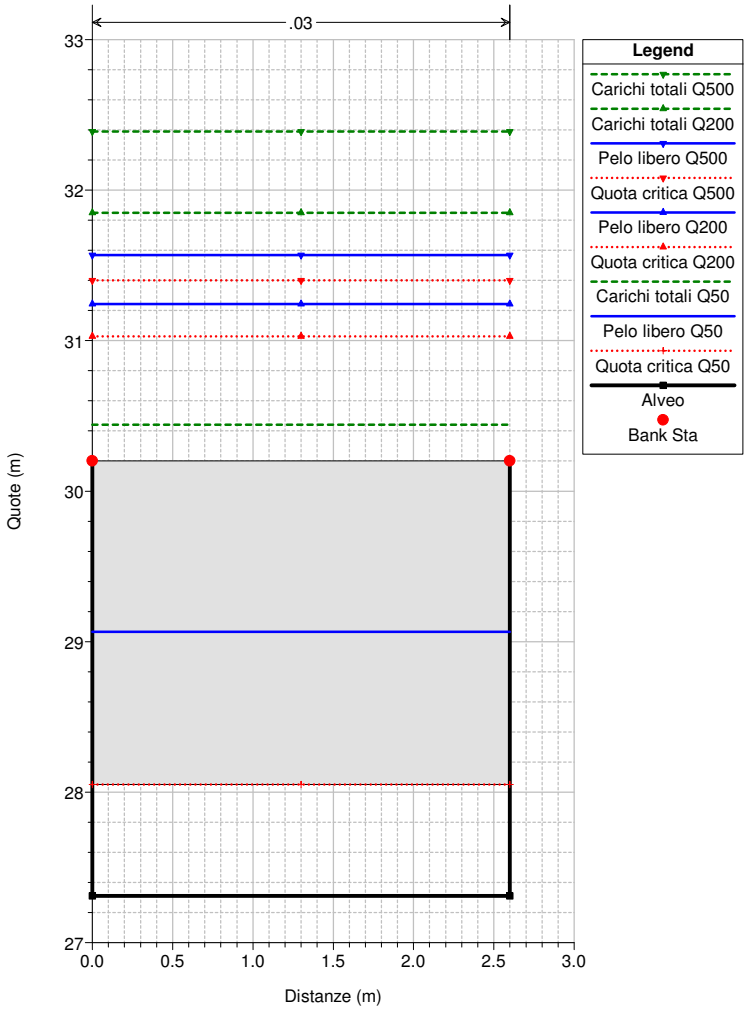
River = S. Antonino Reach = Tombinatura RS = 234 SANT-234



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

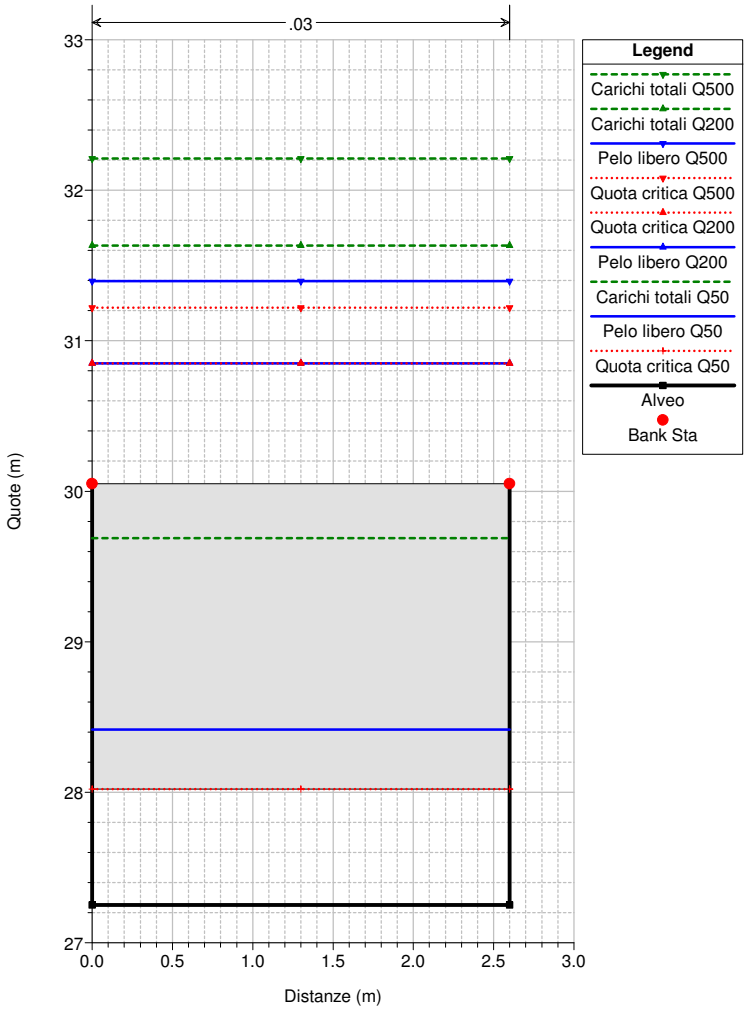
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 233 SANT-233



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

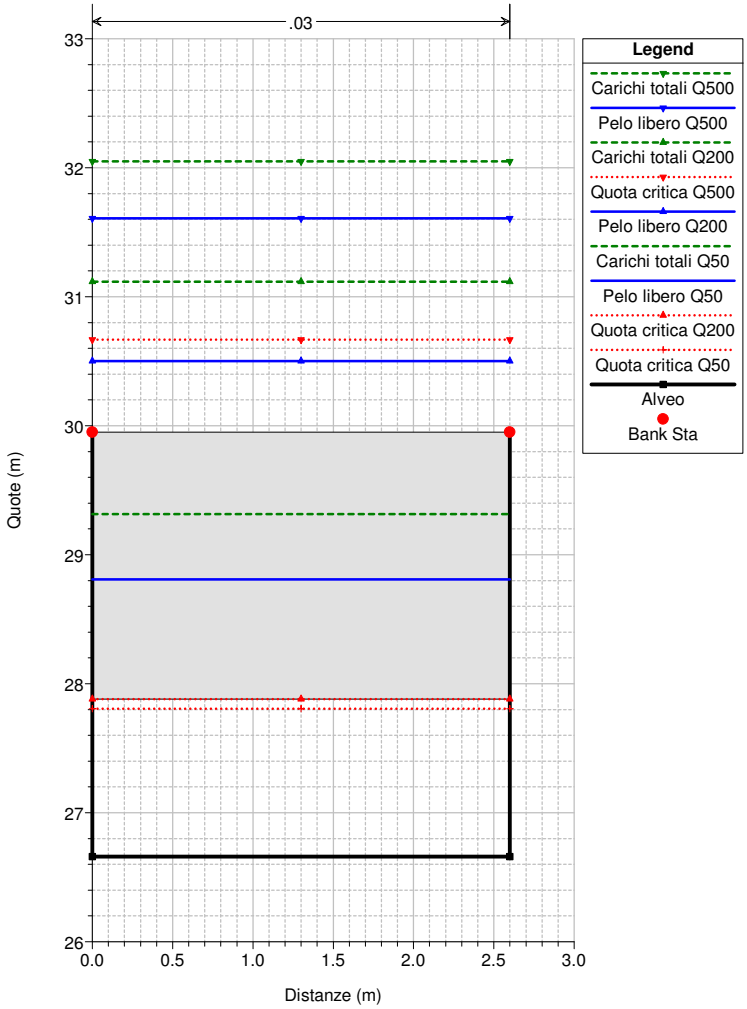
River = S. Antonino Reach = Tombinatura RS = 232 SANT-232



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

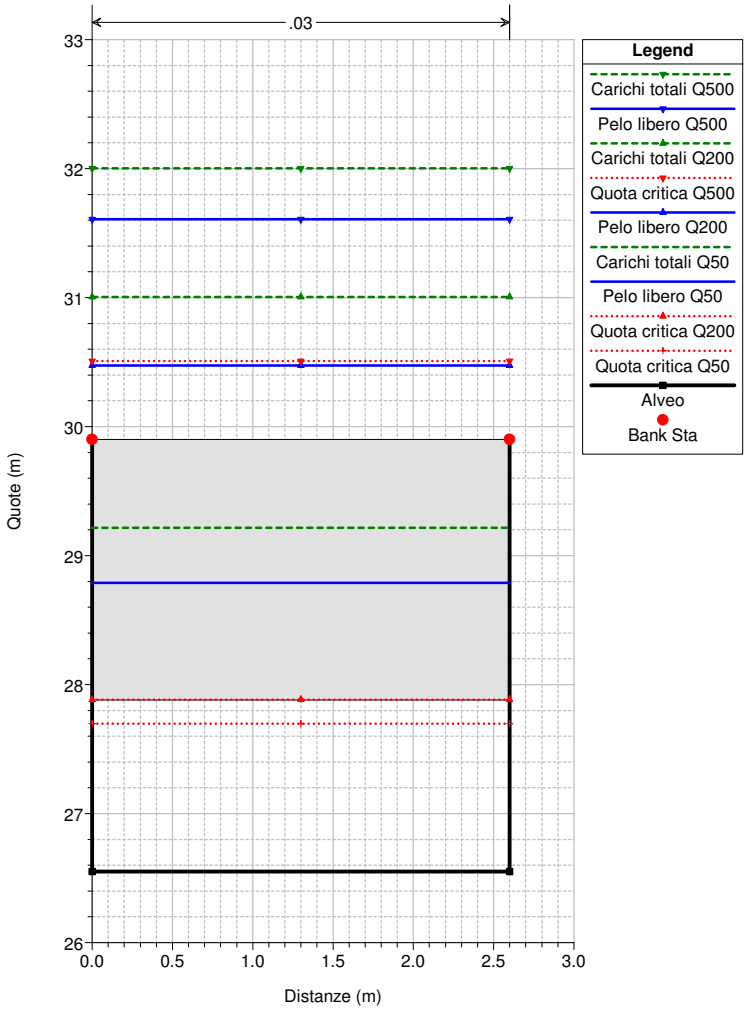
River = S. Antonino Reach = Tombinatura RS = 231 SANT-231



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

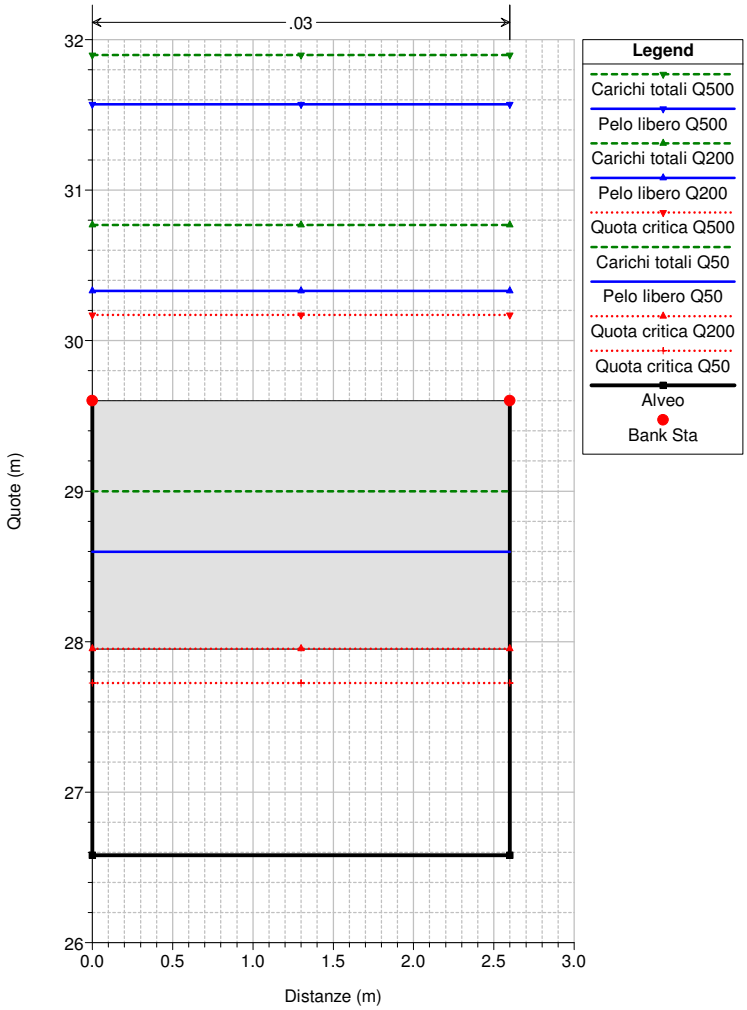
River = S. Antonino Reach = Tombinatura RS = 230 SANT-230



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

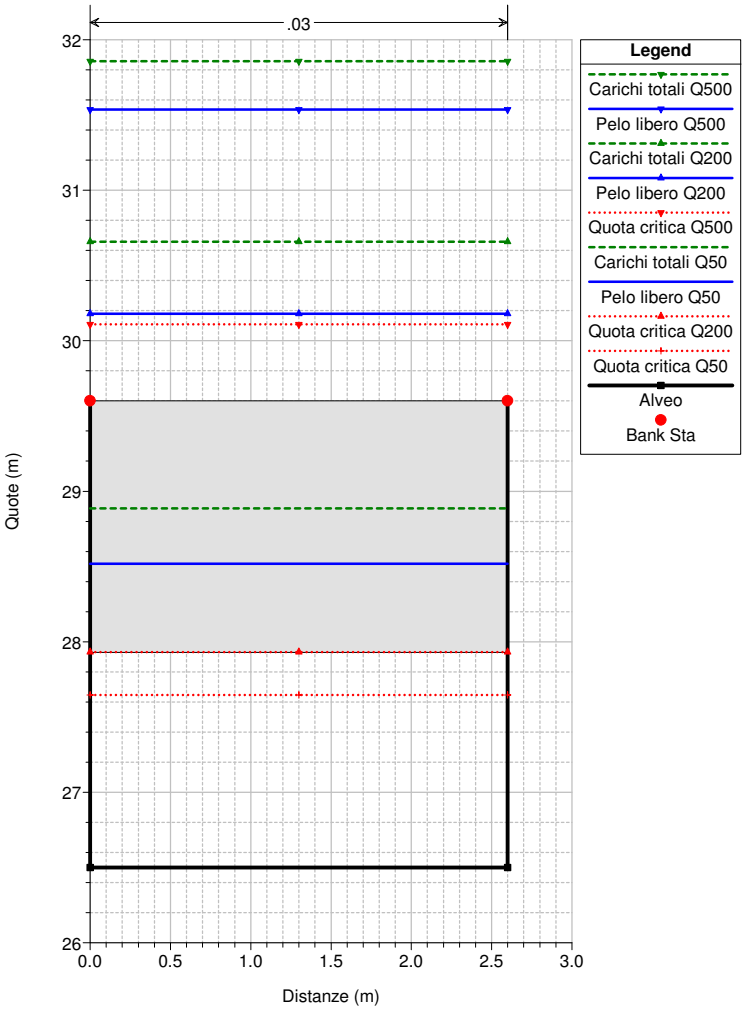
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 229 SANT-229



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

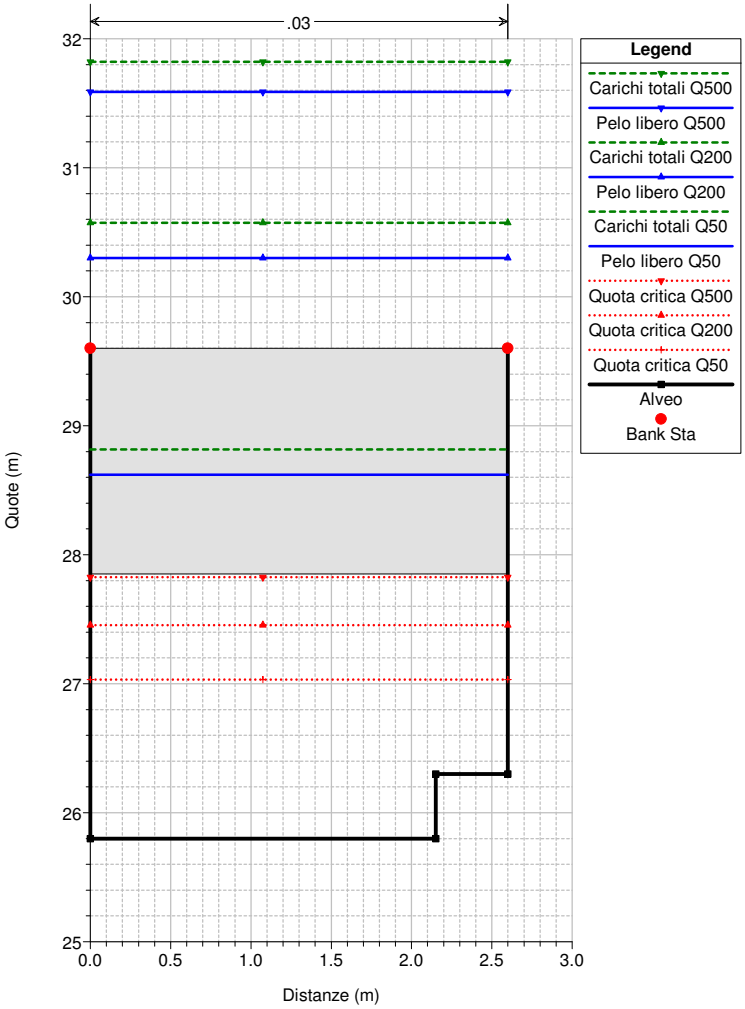
River = S. Antonino Reach = Tombinatura RS = 228 SANT-228



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

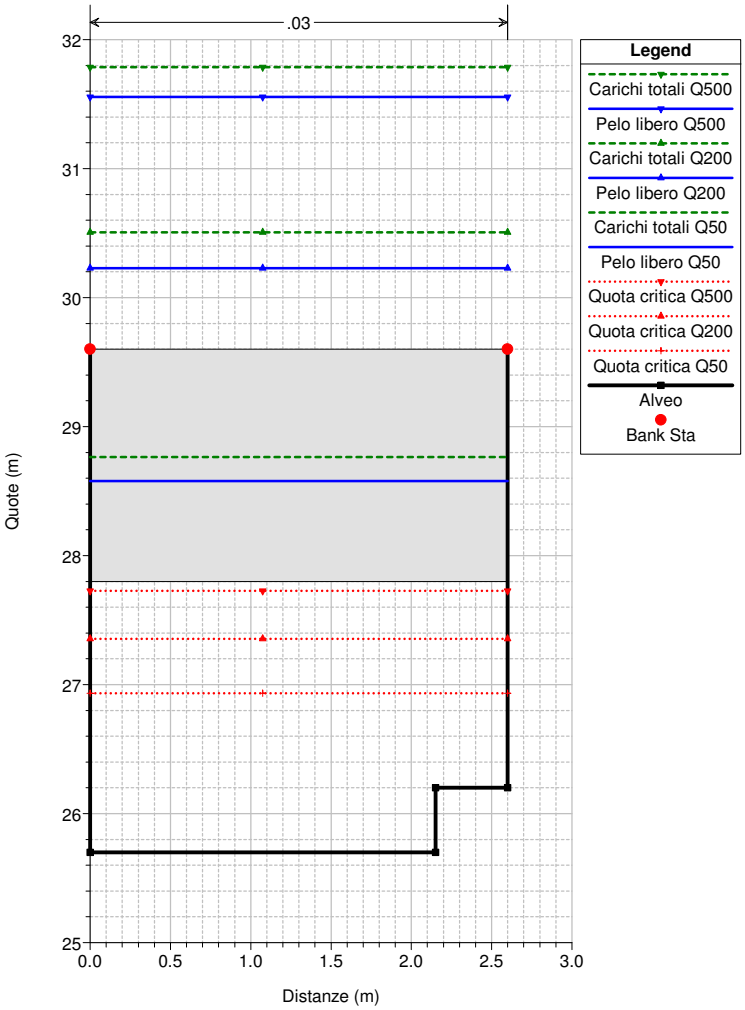
River = S. Antonino Reach = Tombinatura RS = 227 SANT-227



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

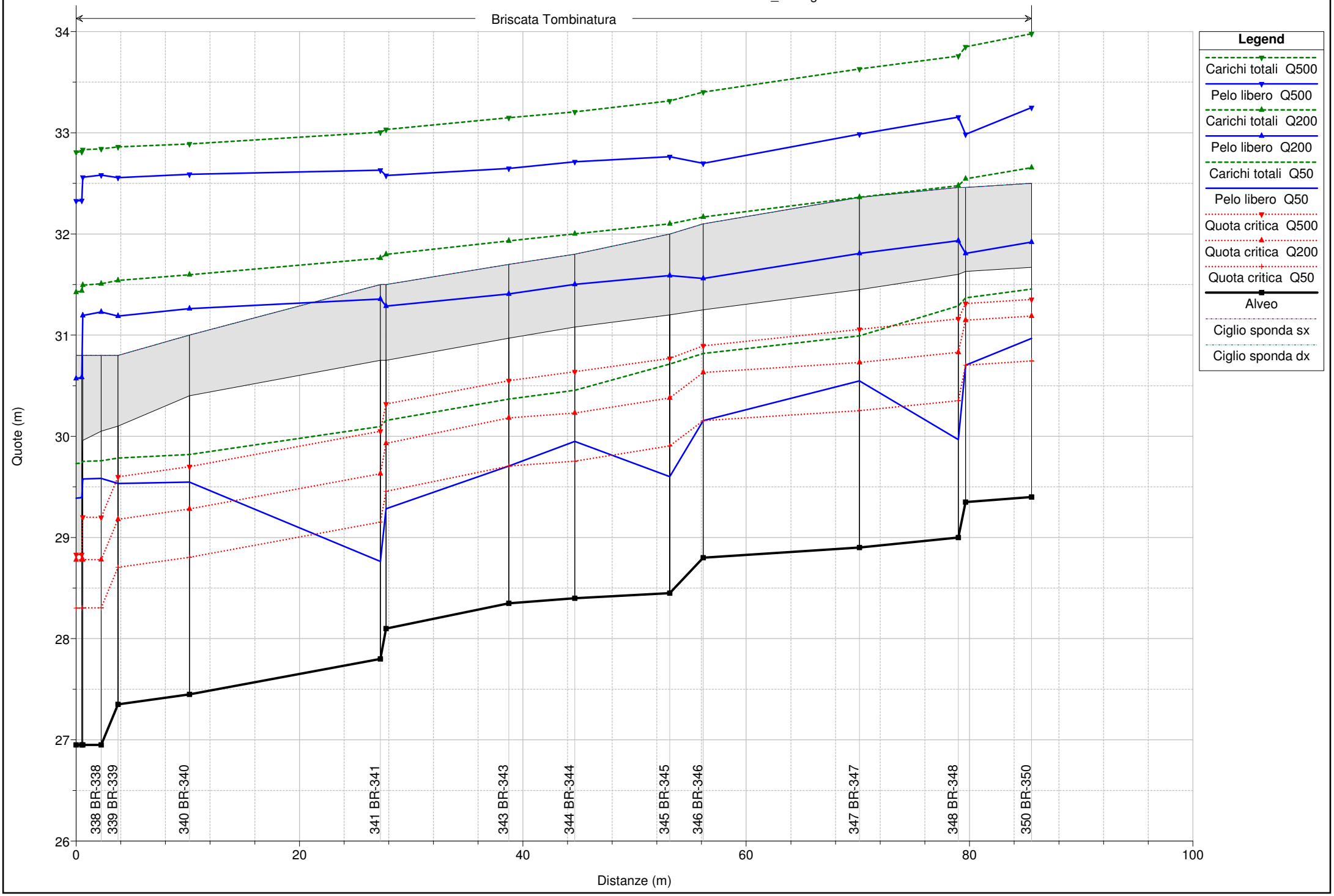
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 226 SANT-226

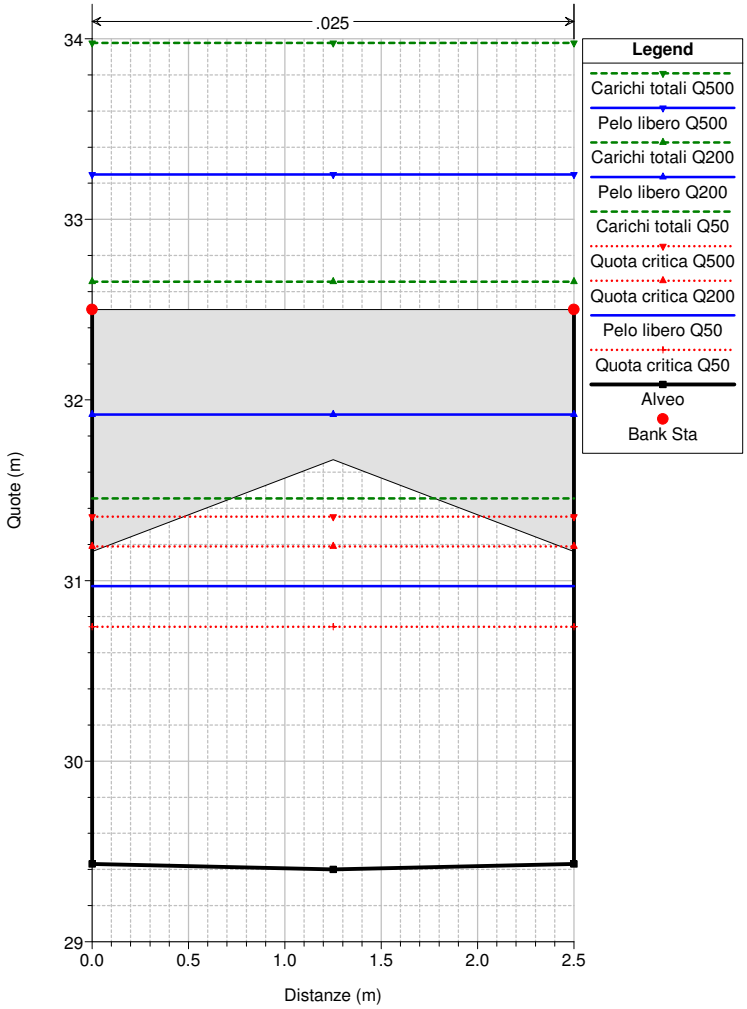


Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

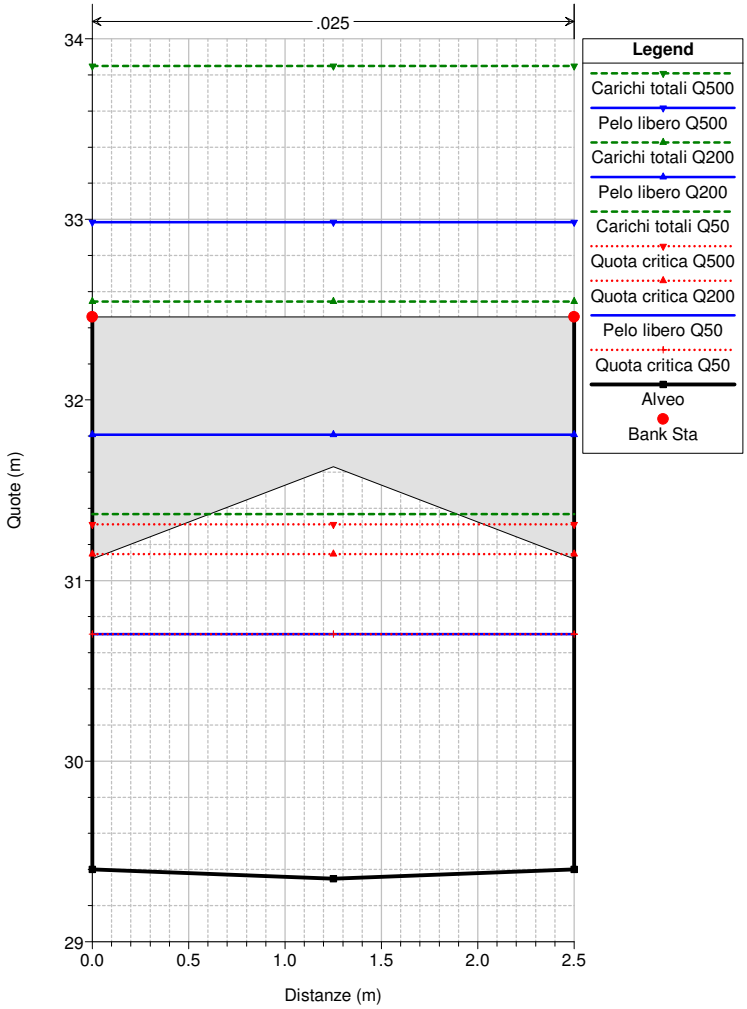


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 350 BR-350



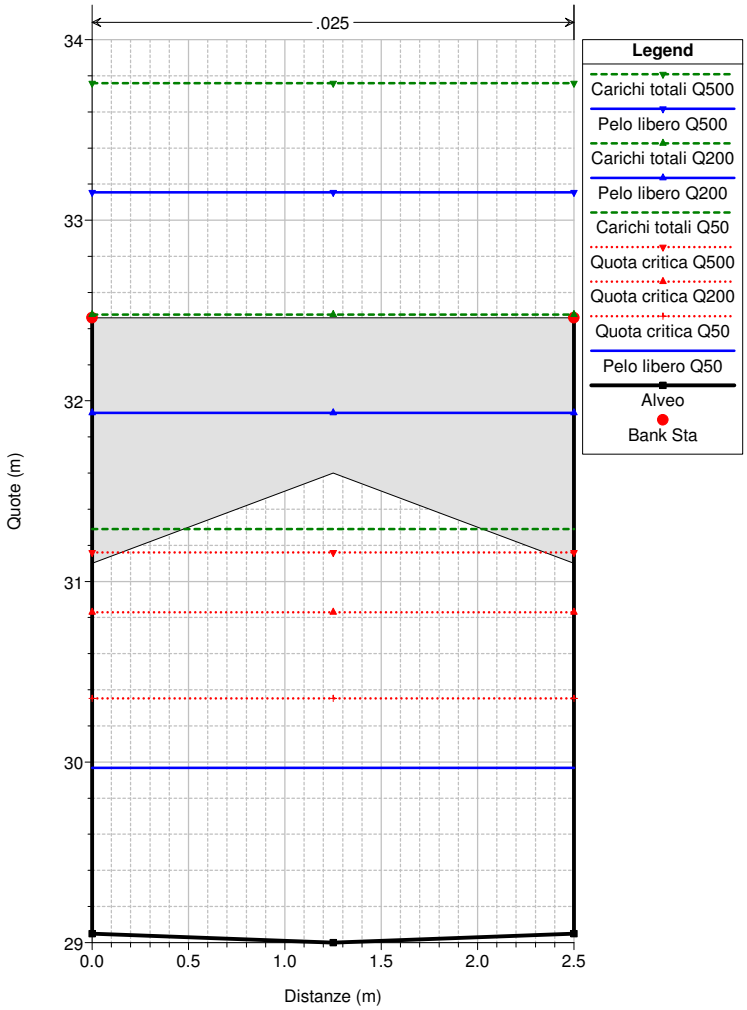
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 349 BR-349



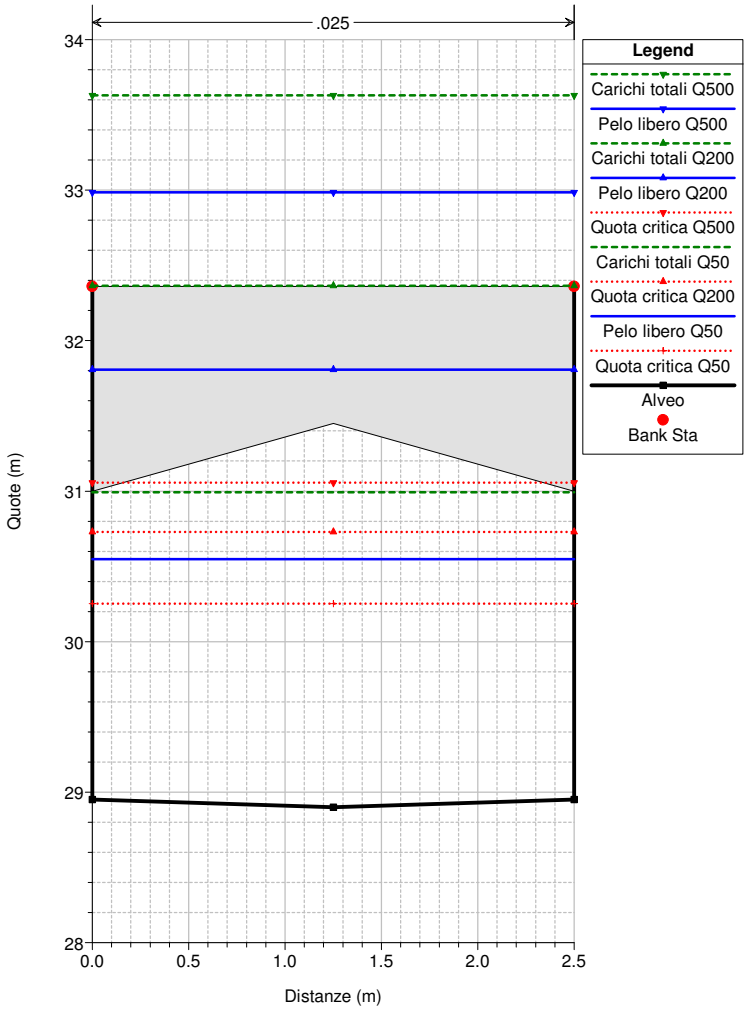
Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 348 BR-348

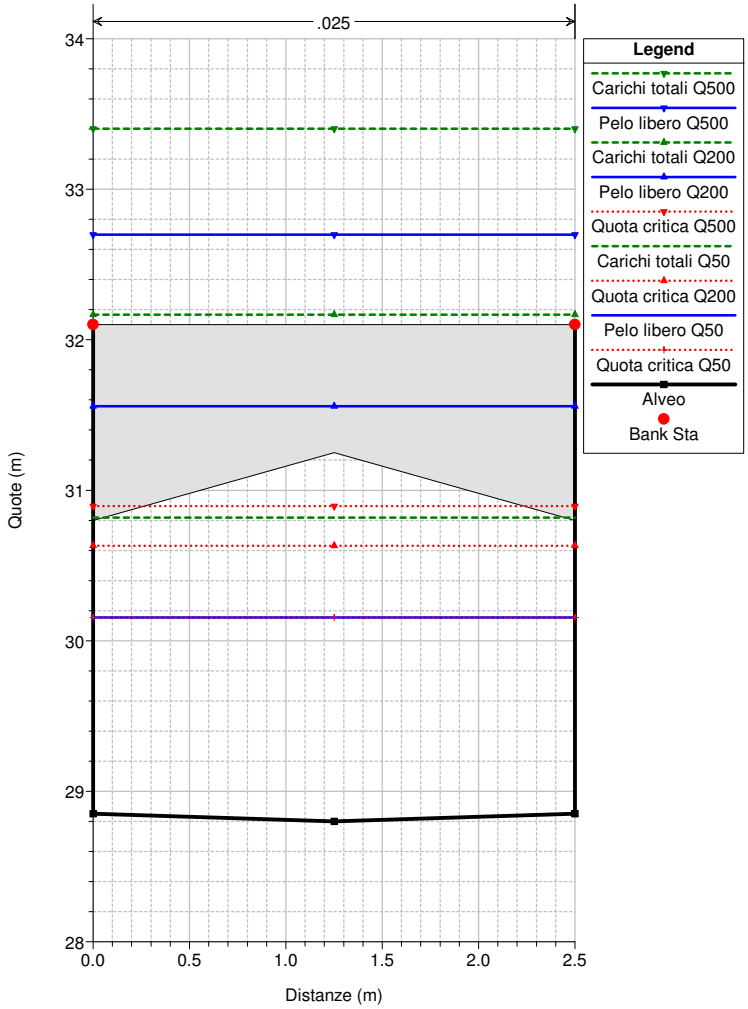


Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

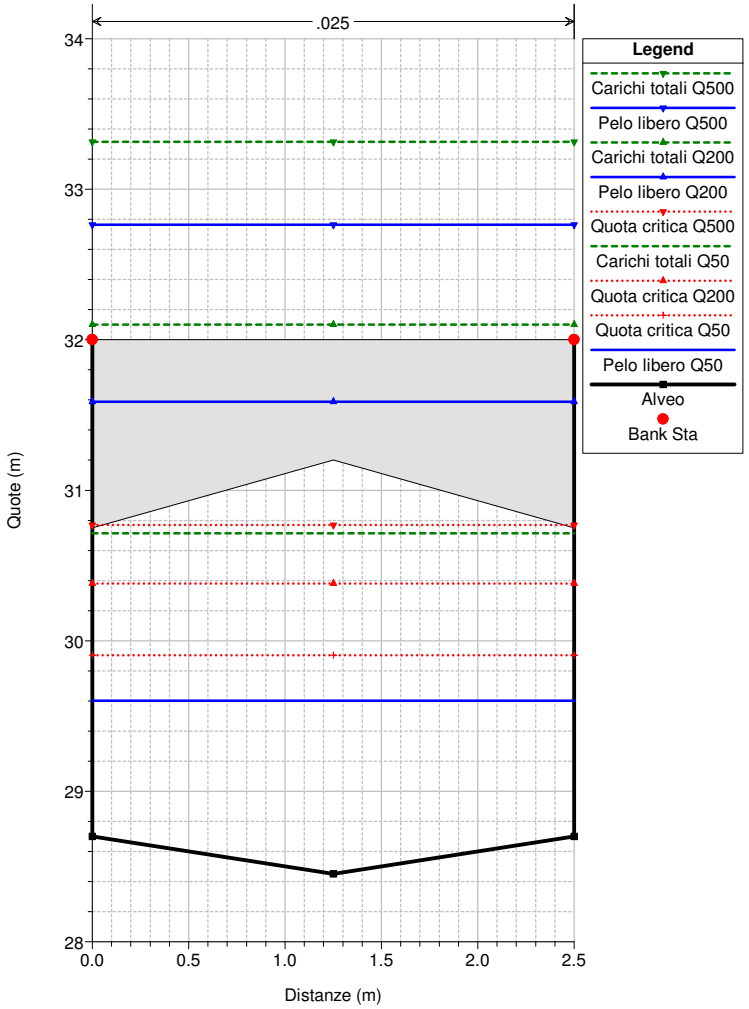
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 347 BR-347



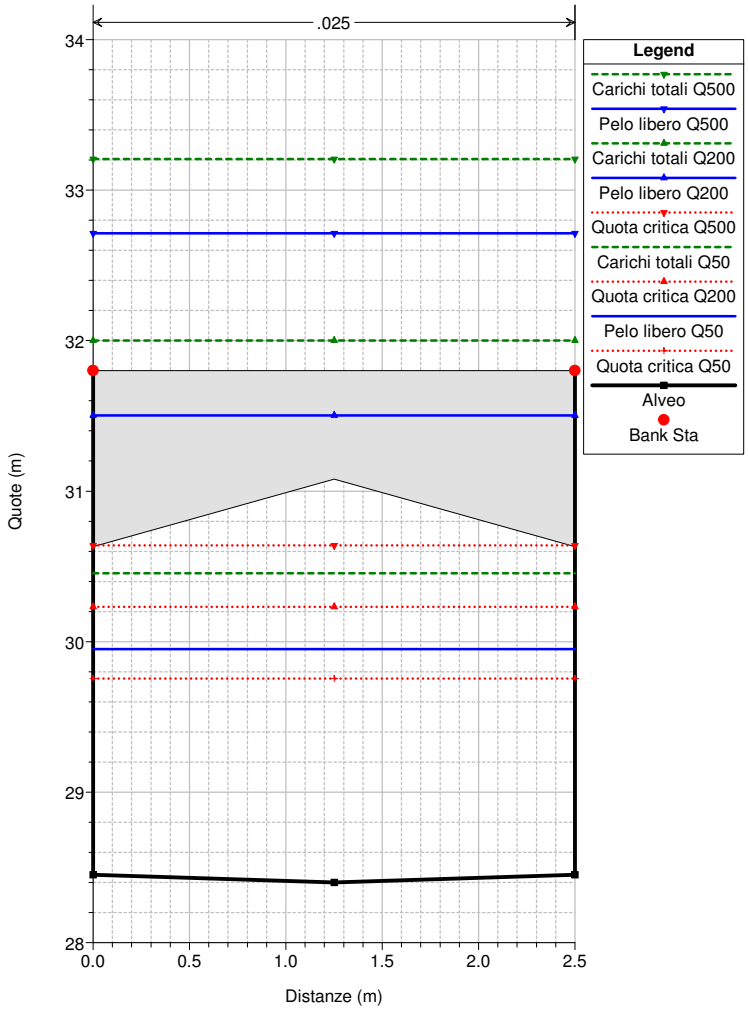
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 346 BR-346



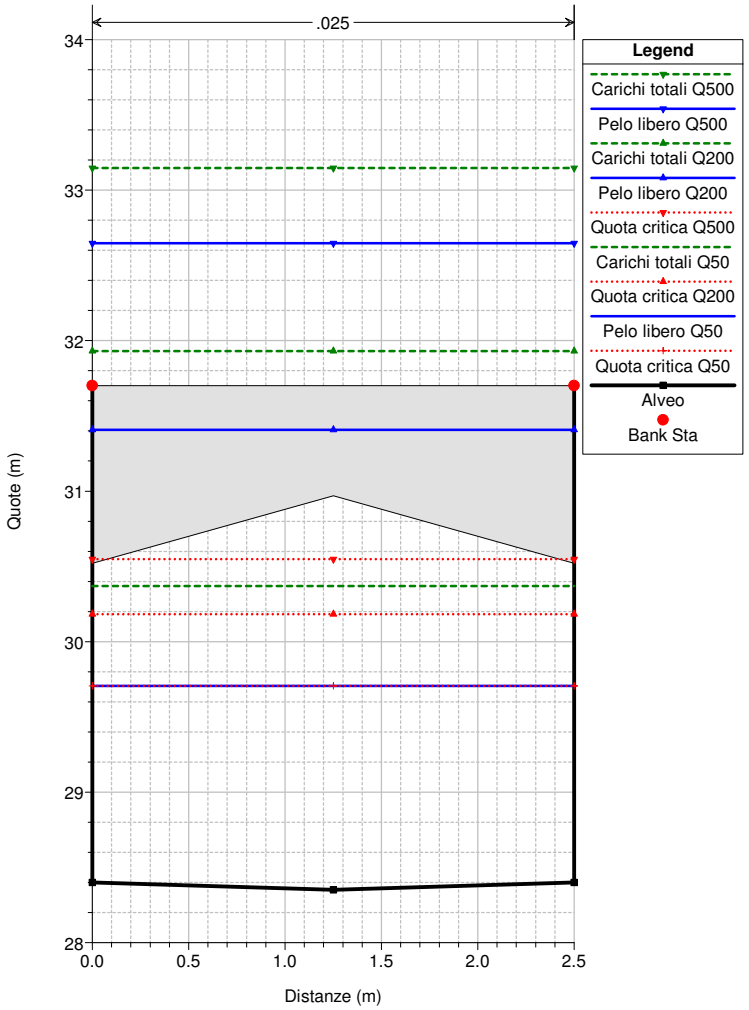
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 345 BR-345



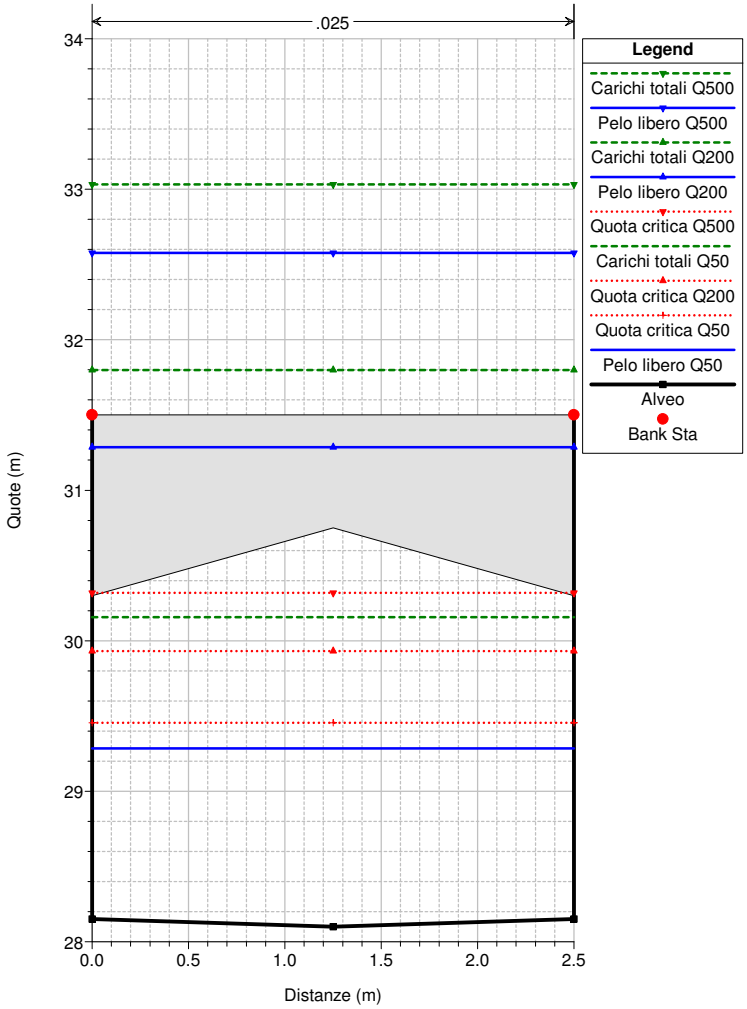
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 344 BR-344



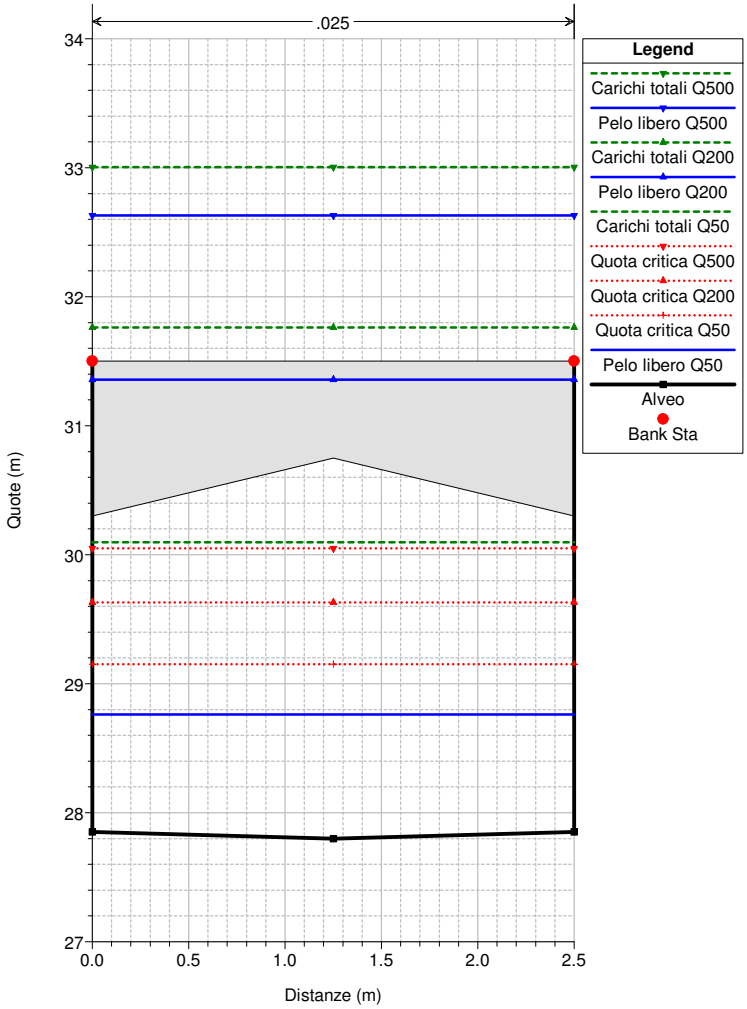
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 343 BR-343



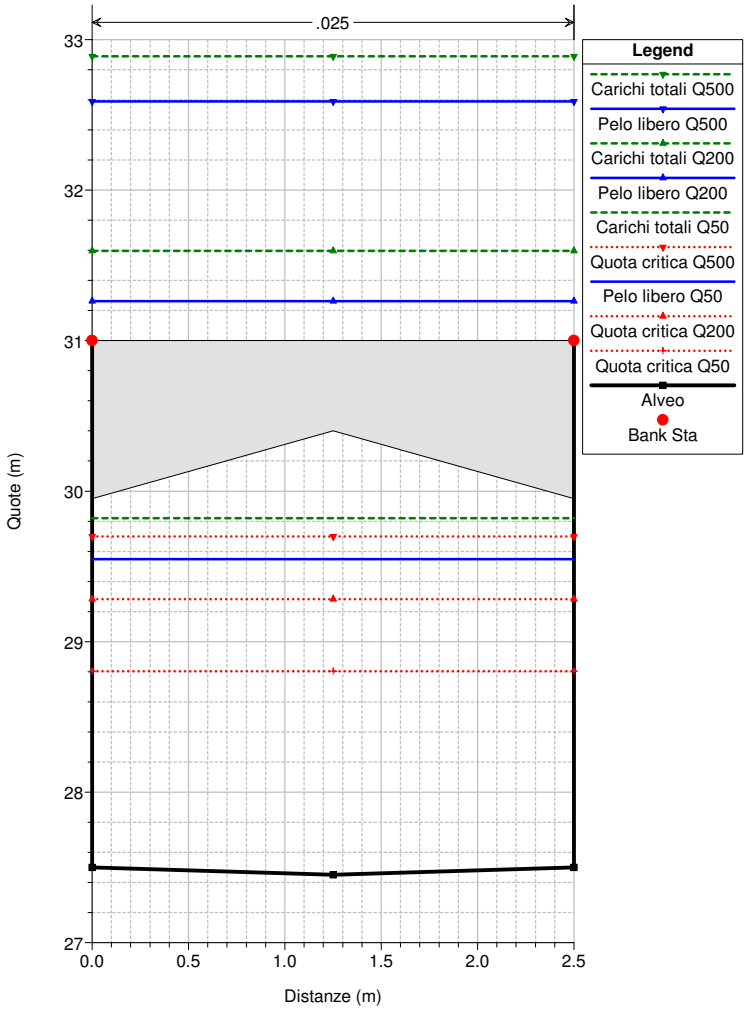
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 342 BR-342



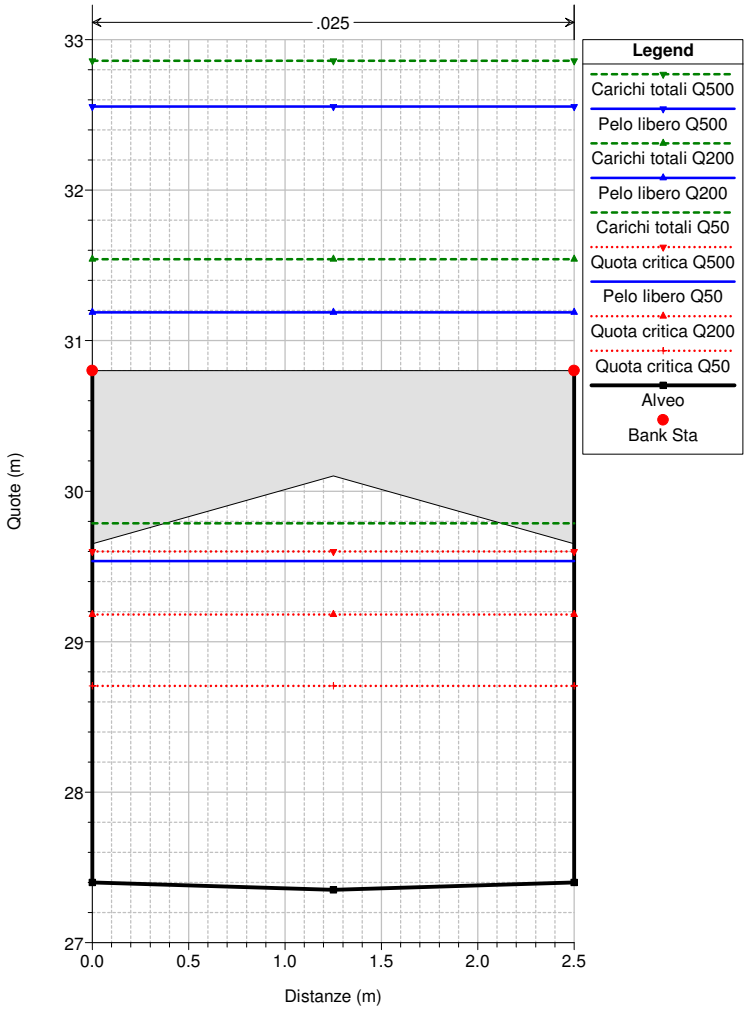
Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 341 BR-341



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 340 BR-340

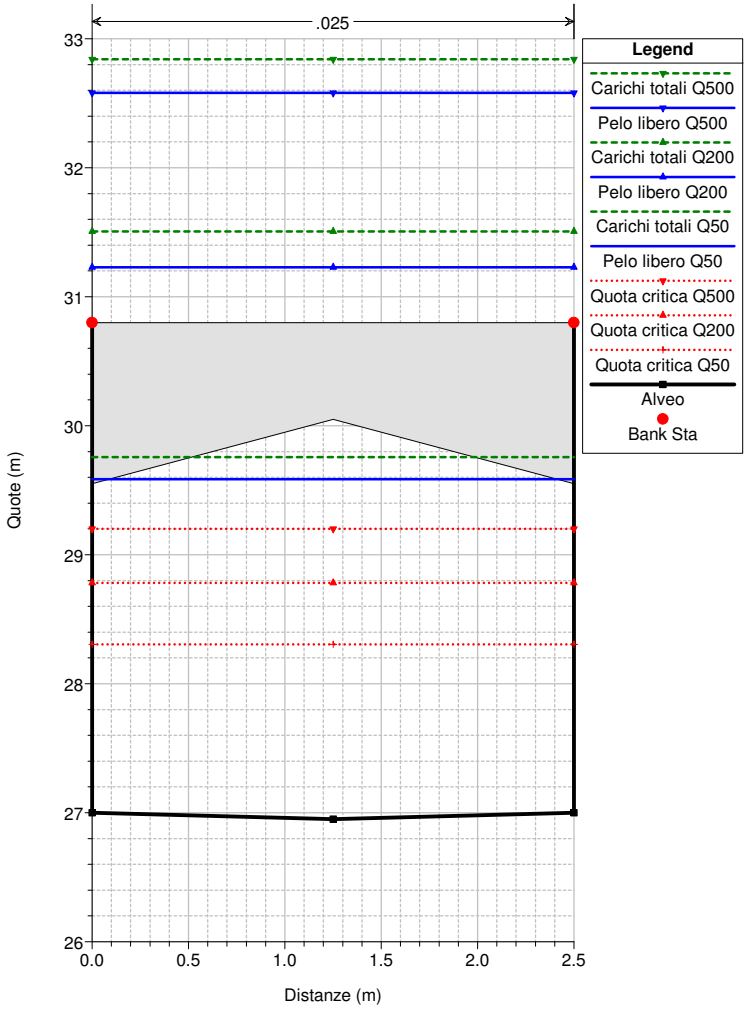


Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 339 BR-339



Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

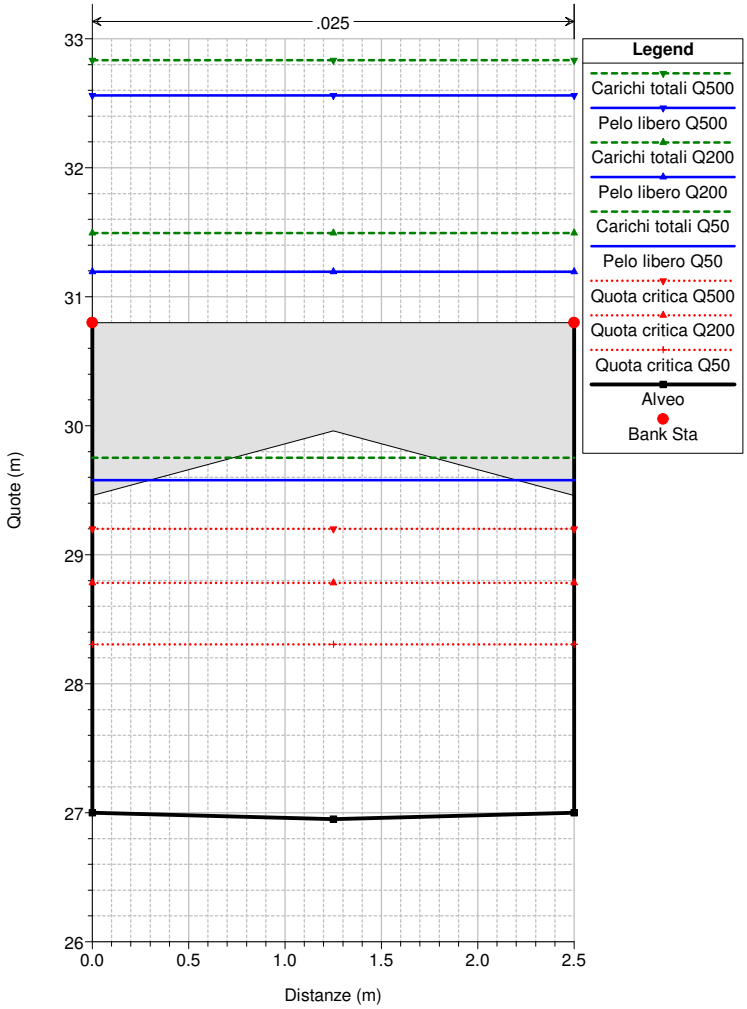
River = Briscata Reach = Tombinatura RS = 338 BR-338



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

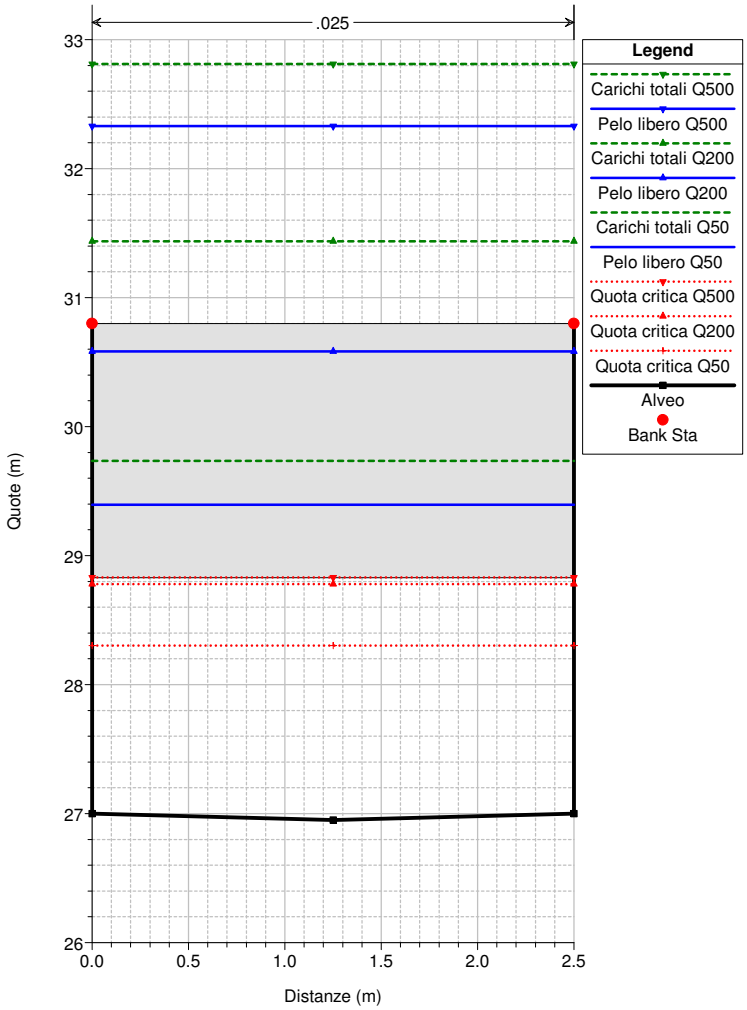
River = Briscata Reach = Tombinatura RS = 337 BR-337



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

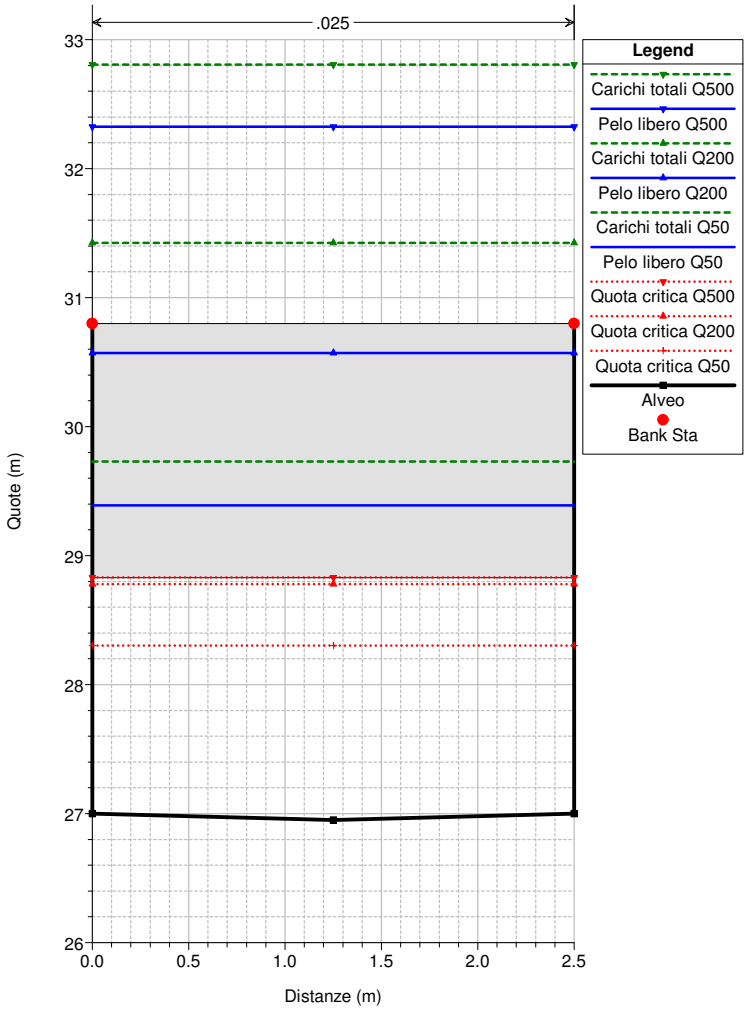
River = Briscata Reach = Tombinatura RS = 336 BR-336



Veilino_preliminare_consegna Plan: PdB+Rilievo Veilino 2017 7/16/2017 6:36:54 PM

Geom: PdB+Rilievo Veilino 2017 Flow: PdB_idrologia

River = Briscata Reach = Tombinatura RS = 335 BR-335



HEC-RAS Plan: Prelim2017

River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Monte	100	Q50	42.00	47.13	48.25	62.00	13.75	57.00	8.75	48.25	0.55	48.81	0.007312	3.30	12.74	11.52	1.00
Veilino	Monte	100	Q200	69.00	47.13	48.69	62.00	13.31	57.00	8.31	48.69	0.76	49.46	0.007008	3.87	17.83	11.67	1.00
Veilino	Monte	100	Q500	95.00	47.13	49.06	62.00	12.94	57.00	7.94	49.06	0.94	50.00	0.006945	4.30	22.11	11.79	1.00
Veilino	Monte	51 VEI 51	Q50	42.00	45.13	45.95	60.00	14.05	55.00	9.05	46.25	1.05	47.00	0.020029	4.55	9.24	11.42	1.61
Veilino	Monte	51 VEI 51	Q200	69.00	45.13	46.26	60.00	13.74	55.00	8.74	46.69	1.49	47.74	0.019553	5.40	12.78	11.52	1.64
Veilino	Monte	51 VEI 51	Q500	95.00	45.13	46.52	60.00	13.48	55.00	8.48	47.06	1.83	48.35	0.019012	5.99	15.86	11.61	1.64
Veilino	Monte	50 VEI 50	Q50	42.00	43.93	44.73	48.51	3.78	45.55	0.82	45.05	1.06	45.79	0.020764	4.56	9.20	11.93	1.66
Veilino	Monte	50 VEI 50	Q200	69.00	43.93	44.98	48.51	3.53	45.55	0.57	45.44	1.53	46.51	0.025042	5.48	12.58	14.05	1.85
Veilino	Monte	50 VEI 50	Q500	95.00	43.93	45.19	48.51	3.32	45.55	0.36	45.75	1.91	47.10	0.024431	6.12	15.52	14.10	1.86
Veilino	Monte	49. VEI 49	Q50	42.00	42.76	43.66	48.51	4.85	44.71	1.05	43.98	1.07	44.73	0.020418	4.59	9.15	12.10	1.68
Veilino	Monte	49. VEI 49	Q200	69.00	42.76	43.94	48.51	4.57	44.71	0.77	44.40	1.50	45.45	0.020098	5.43	12.70	12.69	1.73
Veilino	Monte	49. VEI 49	Q500	95.00	42.76	44.19	48.51	4.32	44.71	0.52	44.82	1.83	46.02	0.019480	5.99	15.85	13.19	1.74
Veilino	Monte	48. VEI 48	Q50	42.00	41.29	42.12	48.51	6.39	44.71	2.59	43.01	2.47	44.59	0.050642	6.96	6.03	7.65	2.50
Veilino	Monte	48. VEI 48	Q200	69.00	41.29	42.54	48.51	5.97	44.71	2.17	43.37	2.77	45.32	0.036149	7.38	9.35	7.94	2.17
Veilino	Monte	48. VEI 48	Q500	95.00	41.29	42.89	48.51	5.62	44.71	1.82	43.68	3.01	45.90	0.042415	7.68	12.37	11.49	2.36
Veilino	Monte	47. VEI 47	Q50	42.00	41.19	41.63	48.41	6.78	44.61	2.98	42.13	2.26	43.89	0.096989	6.67	6.30	15.44	3.33
Veilino	Monte	47. VEI 47	Q200	69.00	41.19	41.80	48.41	6.61	44.61	2.81	42.49	3.01	44.81	0.082679	7.68	8.98	15.52	3.22
Veilino	Monte	47. VEI 47	Q500	95.00	41.19	41.97	48.41	6.44	44.61	2.64	42.79	3.39	45.37	0.067969	8.16	11.64	15.60	3.02
Veilino	Monte	46. VEI 46	Q50	42.00	40.53	41.26	48.01	6.75	43.21	1.95	41.49	0.80	42.06	0.017301	3.95	10.62	15.25	1.51
Veilino	Monte	46. VEI 46	Q200	69.00	40.53	41.46	48.01	6.55	43.21	1.75	41.85	1.30	42.76	0.020769	5.04	13.68	15.35	1.71
Veilino	Monte	46. VEI 46	Q500	95.00	40.53	41.63	48.01	6.38	43.21	1.58	42.15	1.74	43.37	0.022847	5.85	16.24	15.44	1.82
Veilino	Monte	45. VEI 45	Q50	42.00	40.29	41.05	47.81	6.76	41.79	0.74	41.29	0.84	41.89	0.017293	4.06	10.35	14.33	1.53
Veilino	Monte	45. VEI 45	Q200	69.00	40.29	41.29	47.81	6.52	41.79	0.50	41.67	1.27	42.56	0.018872	4.99	13.82	14.75	1.65
Veilino	Monte	45. VEI 45	Q500	95.00	40.29	41.48	47.81	6.33	41.79	0.31	41.98	1.68	43.15	0.020475	5.74	16.55	15.07	1.75
Veilino	Monte	44.3 VEI 44.3	Q50	42.00	39.85	41.46	47.61	6.15	42.36	0.90	40.86	0.17	41.63	0.001486	1.82	23.05	15.27	0.47
Veilino	Monte	44.3 VEI 44.3	Q200	69.00	39.85	42.00	47.61	5.61	42.36	0.36	41.22	0.25	42.25	0.001545	2.20	31.42	15.35	0.49
Veilino	Monte	44.3 VEI 44.3	Q500	95.00	39.85	42.42	47.61	5.19	42.36	-0.06	41.53	0.32	42.74	0.001666	2.51	37.86	15.42	0.51
Veilino	Monte	44.2 VEI 44.2	Q50	42.00	39.85	41.17	47.61	6.44	42.36	1.19	41.05	0.43	41.60	0.004804	2.90	14.51	12.48	0.86
Veilino	Monte	44.2 VEI 44.2	Q200	69.00	39.85	41.64	47.61	5.97	42.36	0.72	41.48	0.57	42.22	0.004544	3.35	20.59	13.32	0.86
Veilino	Monte	44.2 VEI 44.2	Q500	95.00	39.85	42.04	47.61	5.57	42.36	0.32	41.89	0.67	42.71	0.004700	3.63	26.17	15.13	0.88
Veilino	Monte	44.1 VEI 44.1	Q50	42.00	39.85	41.05	47.61	6.56	42.36	1.31	41.05	0.53	41.58	0.006656	3.22	13.03	12.27	1.00
Veilino	Monte	44.1 VEI 44.1	Q200	69.00	39.85	41.48	47.61	6.13	42.36	0.88	41.48	0.71	42.19	0.006319	3.75	18.42	13.03	1.01
Veilino	Monte	44.1 VEI 44.1	Q500	95.00	39.85	41.89	47.61	5.72	42.36	0.47	41.89	0.80	42.69	0.006114	3.95	24.02	15.11	1.00
Veilino	Monte	44. VEI 44	Q50	42.00	39.85	40.58	47.61	7.03	42.36	1.78	40.86	0.96	41.54	0.023500	4.35	9.66	15.14	1.74
Veilino	Monte	44. VEI 44	Q200	69.00	39.85	40.84	47.61	6.77	42.36	1.52	41.22	1.30	42.14	0.020722	5.04	13.69	15.18	1.69
Veilino	Monte	44. VEI 44	Q500	95.00	39.85	41.08	47.61	6.53	42.36	1.28	41.53	1.54	42.62	0.018728	5.50	17.28	15.21	1.65
Veilino	Monte	43. VEI 43	Q50	42.00	38.41	38.83	47.61	8.78	42.36	3.53	39.36	2.50	41.33	0.107608	7.00	6.00	14.65	3.49
Veilino	Monte	43. VEI 43	Q200	69.00	38.41	39.05	47.61	8.56	42.36	3.31	39.73	2.89	41.93	0.073242	7.53	9.17	14.71	3.04
Veilino	Monte	43. VEI 43	Q500	95.00	38.41	39.24	47.61	8.37	42.36	3.12	40.05	3.17	42.42	0.057882	7.89	12.04	14.75	2.79
Veilino	Monte	42. VEI 42	Q50	42.00	37.71	38.51	45.41	6.90	41.71	3.20	38.72	0.79	39.30	0.015940	3.93	10.67	14.19	1.45
Veilino	Monte	42. VEI 42	Q200	69.00	37.71	38.75	45.41	6.66	41.71	2.96	39.10	1.22	39.97	0.017840	4.90	14.07	14.22	1.57
Veilino	Monte	42. VEI 42	Q500	95.00	37.71	38.94	45.41	6.47	41.71	2.77	39.41	1.62	40.56	0.019227	5.64	16.83	14.24	1.66
Veilino	Monte	41. VEI 41	Q50	42.00	37.29	38.04	45.01	6.97	41.26	3.22	38.27	0.83	38.87	0.018158	4.05	10.38	14.69	1.54
Veilino	Monte	41. VEI 41	Q200	69.00	37.29	38.28	45.01	6.73	41.26	2.98	38.64	1.24	39.52	0.018769	4.92	14.01	14.72	1.61
Veilino	Monte	41. VEI 41	Q500	95.00	37.29	38.48	45.01	6.53	41.26	2.78	38.95	1.61	40.09	0.019613	5.62	16.91	14.74	1.67

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Monte	40.2 VEI 40	Q50	42.00	36.71	38.08	43.01	4.93	40.71	2.63	37.96	0.38	38.46	0.005177	2.72	15.47	14.30	0.83
Veilino	Monte	40.2 VEI 40	Q200	69.00	36.71	38.49	43.01	4.52	40.71	2.22	38.33	0.54	39.02	0.005160	3.25	21.25	14.33	0.85
Veilino	Monte	40.2 VEI 40	Q500	95.00	36.71	38.85	43.01	4.16	40.71	1.86	38.65	0.66	39.50	0.005100	3.59	26.48	14.80	0.86
Veilino	Monte	40.11 VEI 40		Bridge														
Veilino	Monte	40.1 VEI 40	Q50	42.00	36.71	37.96	43.01	5.05	40.71	2.75	37.96	0.48	38.44	0.007589	3.06	13.71	14.29	1.00
Veilino	Monte	40.1 VEI 40	Q200	69.00	36.71	38.33	43.01	4.68	40.71	2.38	38.33	0.67	39.00	0.007215	3.62	19.08	14.32	1.00
Veilino	Monte	40.1 VEI 40	Q500	95.00	36.71	38.68	43.01	4.33	40.71	2.03	38.65	0.79	39.48	0.006656	3.95	24.06	14.34	0.97
Veilino	Monte	39. VEI 39	Q50	42.00	36.57	37.96	42.81	4.85	40.21	2.25	37.69	0.30	38.25	0.003471	2.42	17.39	14.19	0.70
Veilino	Monte	39. VEI 39	Q200	69.00	36.57	38.39	42.81	4.42	40.21	1.82	38.07	0.44	38.83	0.003640	2.93	23.57	14.25	0.73
Veilino	Monte	39. VEI 39	Q500	95.00	36.57	38.76	42.81	4.05	40.21	1.45	38.39	0.55	39.31	0.003832	3.29	28.89	14.82	0.75
Veilino	Monte	38.4	Q50	42.00	36.57	37.81	42.81	5.00	40.21	2.40	37.69	0.38	38.19	0.005175	2.74	15.32	14.17	0.84
Veilino	Monte	38.4	Q200	69.00	36.57	38.23	42.81	4.58	40.21	1.98	38.07	0.54	38.77	0.005035	3.25	21.22	14.23	0.85
Veilino	Monte	38.4	Q500	95.00	36.57	38.58	42.81	4.23	40.21	1.63	38.39	0.67	39.25	0.004947	3.62	26.26	14.28	0.85
Veilino	Monte	38.3	Q50	42.00	36.57	37.81	40.81	3.00	40.21	2.40	37.69	0.38	38.19	0.005177	2.74	15.32	14.17	0.84
Veilino	Monte	38.3	Q200	69.00	36.57	38.23	40.81	2.58	40.21	1.98	38.07	0.54	38.77	0.005036	3.25	21.22	14.23	0.85
Veilino	Monte	38.3	Q500	95.00	36.57	38.58	40.81	2.23	40.21	1.63	38.40	0.67	39.25	0.004948	3.62	26.26	14.28	0.85
Veilino	Monte	38.2	Q50	42.00	36.57	37.75	40.81	3.06	40.21	2.46	37.69	0.43	38.18	0.006205	2.90	14.46	14.16	0.92
Veilino	Monte	38.2	Q200	69.00	36.57	38.15	40.81	2.66	40.21	2.06	38.07	0.60	38.75	0.005945	3.43	20.11	14.22	0.92
Veilino	Monte	38.2	Q500	95.00	36.57	38.49	40.81	2.32	40.21	1.72	38.40	0.74	39.23	0.005799	3.81	24.93	14.26	0.92
Veilino	Monte	38.1	Q50	42.00	36.57	37.69	42.81	5.12	40.21	2.52	37.69	0.48	38.18	0.007465	3.08	13.64	14.15	1.00
Veilino	Monte	38.1	Q200	69.00	36.57	38.07	42.81	4.74	40.21	2.14	38.07	0.67	38.74	0.007051	3.62	19.04	14.21	1.00
Veilino	Monte	38.1	Q500	95.00	36.57	38.39	42.81	4.42	40.21	1.82	38.39	0.83	39.22	0.006904	4.03	23.56	14.25	1.00
Veilino	Monte	38. VEI 38	Q50	42.00	36.07	36.89	42.41	5.52	39.66	2.77	37.11	0.81	37.71	0.016348	4.00	10.51	13.93	1.47
Veilino	Monte	38. VEI 38	Q200	69.00	36.07	37.20	42.41	5.21	39.66	2.46	37.50	1.10	38.31	0.014809	4.66	14.82	13.98	1.44
Veilino	Monte	38. VEI 38	Q500	95.00	36.07	37.47	42.41	4.94	39.66	2.19	37.82	1.34	38.80	0.013883	5.12	18.55	14.01	1.42
Veilino	Monte	37. VEI 37	Q50	42.00	34.79	35.32	42.41	7.09	39.66	4.34	35.84	2.21	37.53	0.081875	6.59	6.38	13.84	3.10
Veilino	Monte	37. VEI 37	Q200	69.00	34.79	35.56	42.41	6.85	39.66	4.10	36.22	2.57	38.13	0.056669	7.10	9.71	13.87	2.71
Veilino	Monte	37. VEI 37	Q500	95.00	34.79	35.77	42.41	6.64	39.66	3.89	36.54	2.85	38.62	0.045687	7.48	12.70	13.89	2.50
Veilino	Monte	36. VEI 36	Q50	42.00	34.23	35.15	41.91	6.76	39.01	3.86	35.29	0.66	35.82	0.011883	3.61	11.63	14.04	1.27
Veilino	Monte	36. VEI 36	Q200	69.00	34.23	35.40	41.91	6.51	39.01	3.61	35.67	1.06	36.46	0.013858	4.55	15.16	14.07	1.40
Veilino	Monte	36. VEI 36	Q500	95.00	34.23	35.60	41.91	6.31	39.01	3.41	36.00	1.42	37.03	0.015397	5.29	17.97	14.09	1.49
Veilino	Monte	35.6	Q50	42.00	33.81	35.20	41.91	6.71	38.29	3.09	34.77	0.22	35.42	0.002163	2.06	20.37	15.05	0.57
Veilino	Monte	35.6	Q200	69.00	33.81	35.65	41.91	6.26	38.29	2.64	35.14	0.33	35.98	0.002420	2.55	27.06	15.15	0.61
Veilino	Monte	35.6	Q500	95.00	33.81	36.01	41.91	5.90	38.29	2.28	35.45	0.43	36.44	0.002617	2.92	32.52	15.23	0.64
Veilino	Monte	35.5	Q50	42.00	33.81	35.21	36.36	1.15	38.29	3.08	34.77	0.21	35.42	0.002071	2.03	20.68	15.43	0.56
Veilino	Monte	35.5	Q200	69.00	33.81	35.66	36.36	0.70	38.29	2.63	35.13	0.32	35.97	0.002274	2.50	27.65	15.65	0.60
Veilino	Monte	35.5	Q500	95.00	33.81	36.02	36.36	0.34	38.29	2.27	35.44	0.41	36.43	0.002422	2.84	33.41	15.83	0.62
Veilino	Monte	35.4	Q50	42.00	33.81	35.20	36.36	1.16	38.29	3.09	34.77	0.21	35.41	0.002099	2.04	20.59	15.42	0.56
Veilino	Monte	35.4	Q200	69.00	33.81	35.65	36.36	0.71	38.29	2.64	35.13	0.32	35.97	0.002300	2.50	27.55	15.65	0.60
Veilino	Monte	35.4	Q500	95.00	33.81	36.02	36.36	0.34	38.29	2.27	35.44	0.41	36.43	0.002447	2.85	33.30	15.83	0.63
Veilino	Monte	35.35	Q50	42.00	33.81	35.20	36.63	1.43	38.29	3.09	34.77	0.21	35.41	0.002115	2.05	20.53	15.37	0.56
Veilino	Monte	35.35	Q200	69.00	33.81	35.65	36.63	0.98	38.29	2.64	35.13	0.32	35.97	0.002324	2.51	27.45	15.58	0.60
Veilino	Monte	35.35	Q500	95.00	33.81	36.01	36.63	0.62	38.29	2.28	35.44	0.42	36.43	0.002480	2.87	33.14	15.74	0.63
Veilino	Monte	35.3 VEI 35.3	Q50	42.00	33.81	35.16	36.63	1.47	38.29	3.13	34.77	0.23	35.39	0.002344	2.11	19.87	15.35	0.59
Veilino	Monte	35.3 VEI 35.3	Q200	69.00	33.81	35.60	36.63	1.03	38.29	2.69	35.13	0.34	35.94	0.002536	2.59	26.68	15.55	0.63

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Monte	35.3 VEI 35.3	Q500	95.00	33.81	35.96	36.63	0.67	38.29	2.33	35.44	0.44	36.40	0.002692	2.95	32.25	15.72	0.66
Veilino	Monte	35.2 VEI 35.2	Q50	42.00	33.81	34.99	36.63	1.64	38.29	3.30	34.89	0.38	35.37	0.005385	2.74	15.35	15.03	0.86
Veilino	Monte	35.2 VEI 35.2	Q200	69.00	33.81	35.41	36.63	1.22	38.29	2.88	35.26	0.52	35.92	0.004936	3.19	21.65	15.28	0.85
Veilino	Monte	35.2 VEI 35.2	Q500	95.00	33.81	35.73	36.63	0.90	38.29	2.56	35.57	0.65	36.38	0.004904	3.56	26.68	15.48	0.87
Veilino	Monte	35.1 VEI 35.1	Q50	42.00	33.81	34.89	36.63	1.74	38.29	3.40	34.89	0.46	35.36	0.007336	3.02	13.92	14.97	1.00
Veilino	Monte	35.1 VEI 35.1	Q200	69.00	33.81	35.26	36.63	1.37	38.29	3.03	35.26	0.64	35.90	0.006877	3.54	19.47	15.20	1.00
Veilino	Monte	35.1 VEI 35.1	Q500	95.00	33.81	35.57	36.63	1.06	38.29	2.72	35.57	0.79	36.36	0.006638	3.93	24.19	15.39	1.00
Veilino	Monte	35. VEI 35	Q50	42.00	33.81	34.57	36.63	2.06	38.29	3.72	34.77	0.76	35.33	0.015883	3.86	10.87	15.08	1.45
Veilino	Monte	35. VEI 35	Q200	69.00	33.81	34.89	36.63	1.74	38.29	3.40	35.13	0.98	35.87	0.013286	4.40	15.70	15.22	1.38
Veilino	Monte	35. VEI 35	Q500	95.00	33.81	35.16	36.63	1.47	38.29	3.13	35.44	1.16	36.32	0.011871	4.77	19.93	15.35	1.33
Veilino	Monte	34. VEI 34	Q50	42.00	32.65	33.17	36.63	3.46	38.29	5.12	33.66	1.99	35.17	0.074697	6.26	6.71	14.84	2.97
Veilino	Monte	34. VEI 34	Q200	69.00	32.65	33.41	36.63	3.22	38.29	4.88	34.02	2.30	35.71	0.050794	6.71	10.28	14.92	2.58
Veilino	Monte	34. VEI 34	Q500	95.00	32.65	33.63	36.63	3.00	38.29	4.66	34.33	2.53	36.16	0.040386	7.05	13.48	15.00	2.37
Veilino	Monte	33. VEI 33	Q50	42.00	32.41	32.95	36.41	3.46	37.97	5.02	33.39	1.68	34.63	0.059810	5.74	7.32	15.64	2.68
Veilino	Monte	33. VEI 33	Q200	69.00	32.41	33.16	36.41	3.25	37.97	4.81	33.74	2.19	35.35	0.049816	6.56	10.53	15.71	2.56
Veilino	Monte	33. VEI 33	Q500	95.00	32.41	33.35	36.41	3.06	37.97	4.62	34.04	2.53	35.87	0.042650	7.05	13.48	15.78	2.43
Veilino	Monte	32. VEI 32	Q50	42.00	32.16	32.63	36.41	3.78	37.97	5.34	33.10	1.94	34.57	0.076067	6.17	6.81	15.59	2.98
Veilino	Monte	32. VEI 32	Q200	69.00	32.16	32.83	36.41	3.58	37.97	5.14	33.45	2.47	35.29	0.060530	6.96	9.92	15.66	2.79
Veilino	Monte	32. VEI 32	Q500	95.00	32.16	33.01	36.41	3.40	37.97	4.96	33.75	2.81	35.82	0.050692	7.43	12.78	15.72	2.63
Veilino	Monte	31. VEI 31	Q50	42.00	31.95	32.62	33.77	1.15	37.71	5.09	33.05	1.52	34.14	0.042722	5.47	7.68	13.35	2.30
Veilino	Monte	31. VEI 31	Q200	69.00	31.95	32.86	33.77	0.91	37.71	4.85	33.44	2.03	34.89	0.037112	6.31	10.94	13.37	2.23
Veilino	Monte	31. VEI 31	Q500	95.00	31.95	33.09	33.77	0.68	37.71	4.62	33.90	2.34	35.43	0.031966	6.77	14.03	13.39	2.11
Veilino	Monte	30 VEI 30	Q50	42.00	31.92	33.03	35.90	2.87	35.90	2.87	33.03	0.52	33.54	0.007422	3.18	13.20	12.84	1.00
Veilino	Monte	30 VEI 30	Q200	69.00	31.92	33.43	35.90	2.47	35.90	2.47	33.43	0.72	34.15	0.007096	3.75	18.41	12.84	1.00
Veilino	Monte	30 VEI 30	Q500	95.00	31.92	33.54	35.90	2.36	35.90	2.36	33.77	1.17	34.71	0.010747	4.80	19.80	12.84	1.23
Veilino	Monte	29 VEI 29	Q50	42.00	30.97	31.60	35.90	4.30	35.90	4.30	32.08	1.80	33.40	0.051594	5.94	7.07	12.34	2.50
Veilino	Monte	29 VEI 29	Q200	69.00	30.97	33.45	35.90	2.45	35.90	2.45	32.50	0.27	33.72	0.001588	2.29	30.19	12.84	0.48
Veilino	Monte	29 VEI 29	Q500	95.00	30.97	34.06	35.90	1.84	35.90	1.84	32.84	0.32	34.38	0.001521	2.50	38.06	12.84	0.46
Veilino	Monte	28 VEI 28	Q50	42.00	30.75	32.13	35.87	3.74	35.87	3.74	32.13	0.67	32.80	0.007947	3.64	11.54	8.55	1.00
Veilino	Monte	28 VEI 28	Q200	69.00	30.75	32.66	35.87	3.21	35.87	3.21	32.66	0.94	33.60	0.008020	4.29	16.07	8.55	1.00
Veilino	Monte	28 VEI 28	Q500	95.00	30.75	33.24	35.87	2.63	35.87	2.63	33.13	1.02	34.26	0.007121	4.47	21.23	9.05	0.93
Veilino	Monte	27 VEI 27	Q50	42.00	29.56	30.32	35.87	5.55	35.87	5.55	30.94	2.30	32.63	0.052787	6.72	6.25	8.55	2.51
Veilino	Monte	27 VEI 27	Q200	69.00	29.56	30.70	35.87	5.17	35.87	5.17	31.47	2.71	33.41	0.039392	7.30	9.46	8.55	2.21
Veilino	Monte	27 VEI 27	Q500	95.00	29.56	33.70	35.87	2.17	35.87	2.17	31.92	0.36	34.06	0.001706	2.68	35.51	9.05	0.43
Veilino	Monte	26 VEI 26	Q50	42.00	29.40	30.29	35.54	5.25	35.54	5.25	30.88	2.06	32.36	0.040123	6.36	6.60	7.68	2.19
Veilino	Monte	26 VEI 26	Q200	69.00	29.40	30.73	35.54	4.81	35.54	4.81	31.45	2.45	33.18	0.031165	6.94	9.94	7.68	1.95
Veilino	Monte	26 VEI 26	Q500	95.00	29.40	33.64	35.54	1.90	35.54	1.90	31.96	0.41	34.05	0.001989	2.85	33.34	8.18	0.45
Veilino	Monte	25 VEI 25	Q50	42.00	28.87	29.66	35.12	5.46	35.54	5.88	30.35	2.61	32.28	0.058092	7.16	5.86	7.68	2.62
Veilino	Monte	25 VEI 25	Q200	69.00	28.87	30.06	35.12	5.06	35.54	5.48	30.92	3.04	33.10	0.043160	7.73	8.93	7.68	2.29
Veilino	Monte	25 VEI 25	Q500	95.00	28.87	33.70	35.12	1.42	35.54	1.84	31.39	0.32	34.02	0.001414	2.50	38.00	8.18	0.37
Veilino	Monte	24 VEI 24	Q50	42.00	28.07	29.22	34.30	5.08	34.30	5.08	29.82	2.05	31.26	0.033327	6.34	6.63	6.22	1.96
Veilino	Monte	24 VEI 24	Q200	69.00	28.07	31.70	34.30	2.60	34.30	2.60	30.51	0.47	32.17	0.002884	3.02	22.83	6.72	0.52
Veilino	Monte	24 VEI 24	Q500	95.00	28.07	33.63	34.30	0.67	34.30	0.67	31.04	0.36	33.99	0.001703	2.66	35.77	6.72	0.37
Veilino	Monte	23 VEI 23	Q50	42.00	27.93	29.08	30.78	1.70	30.78	1.70	29.68	2.03	31.11	0.032459	6.31	6.65	5.95	1.91
Veilino	Monte	23 VEI 23	Q200	69.00	27.93	31.24	30.78	-0.46	30.78	-0.46	30.36	0.86	32.11	0.011215	4.12	16.75		0.72

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Monte	23 VEI 23	Q500	95.00	27.93	32.20	30.78	-1.42	30.78	-1.42	30.78	1.64	33.84	0.021258	5.67	16.75		0.88
Veilino	Monte	22 VEI 22	Q50	42.00	27.73	29.28	30.31	1.03	30.31	1.03	29.50	1.15	30.43	0.014053	4.75	8.84	5.91	1.24
Veilino	Monte	22 VEI 22	Q200	69.00	27.73	30.74	30.31	-0.43	30.31	-0.43	30.18	1.08	31.83	0.015528	4.61	14.95		0.85
Veilino	Monte	22 VEI 22	Q500	95.00	27.73	31.90	30.31	-1.59	30.31	-1.59	31.72	1.33	33.23	0.021181	5.10	18.62	5.91	0.80
Veilino	Monte	21 VEI 21	Q50	42.00	27.08	28.20	30.27	2.07	30.27	2.07	28.82	2.10	30.30	0.034318	6.41	6.55	6.00	1.96
Veilino	Monte	21 VEI 21	Q200	69.00	27.08	31.01	30.27	-0.74	30.27	-0.74	29.49	0.67	31.69	0.007859	3.64	18.97		0.59
Veilino	Monte	21 VEI 21	Q500	95.00	27.08	32.31	30.27	-2.04	30.27	-2.04	30.05	0.70	33.02	0.008079	3.72	25.54	6.00	0.52
Veilino	Monte	20 VEI 20	Q50	42.00	26.92	29.29	29.76	0.47	29.76	0.47	28.67	0.46	29.75	0.003909	3.01	13.96	6.00	0.63
Veilino	Monte	20 VEI 20	Q200	69.00	26.92	30.61	29.76	-0.85	29.76	-0.85	29.34	0.86	31.47	0.011151	4.11	16.80		0.68
Veilino	Monte	20 VEI 20	Q500	95.00	26.92	32.09	29.76	-2.33	29.76	-2.33	29.76	0.75	32.84	0.008557	3.83	24.79	6.00	0.54
Veilino	Monte	19.7	Q50	42.00	26.87	29.28	29.67	0.39	29.67	0.39	28.62	0.44	29.73	0.003705	2.95	14.23	6.00	0.61
Veilino	Monte	19.7	Q200	69.00	26.87	30.54	29.67	-0.87	29.67	-0.87	29.29	0.89	31.43	0.011652	4.17	16.55		0.69
Veilino	Monte	19.7	Q500	95.00	26.87	32.06	29.67	-2.39	29.67	-2.39	29.67	0.75	32.81	0.008460	3.82	24.84	6.00	0.54
Veilino	Staglieno_1	19.5	Q50	48.00	26.87	28.79	29.67	0.88	29.67	0.88	28.79	0.94	29.73	0.009445	4.29	11.18	5.95	1.00
Veilino	Staglieno_1	19.5	Q200	78.00	26.87	30.27	29.67	-0.60	29.67	-0.60	29.51	1.15	31.43	0.015194	4.75	16.41		0.82
Veilino	Staglieno_1	19.5	Q500	107.00	26.87	31.57	29.67	-1.90	29.67	-1.90	31.13	1.24	32.81	0.016707	4.93	21.69	5.95	0.73
Veilino	Staglieno_1	19 VEI 19	Q50	48.00	26.63	28.60	29.35	0.75	29.35	0.75	28.63	0.97	29.57	0.009709	4.37	10.99	5.95	1.03
Veilino	Staglieno_1	19 VEI 19	Q200	78.00	26.63	29.89	29.35	-0.53	29.35	-0.53	29.34	1.29	31.18	0.017802	5.04	15.49		0.89
Veilino	Staglieno_1	19 VEI 19	Q500	107.00	26.63	30.90	29.35	-1.55	29.35	-1.55	30.90	1.60	32.51	0.025019	5.61	19.07	5.95	0.87
Veilino	Staglieno_1	18 VEI 18	Q50	48.00	25.93	27.22	29.29	2.07	29.29	2.07	27.87	2.19	29.42	0.031764	6.56	7.32	5.95	1.89
Veilino	Staglieno_1	18 VEI 18	Q200	78.00	25.93	30.21	29.29	-0.92	29.29	-0.92	28.59	0.81	31.01	0.009067	3.98	19.61		0.61
Veilino	Staglieno_1	18 VEI 18	Q500	107.00	25.93	31.33	29.29	-2.04	29.29	-2.04	29.20	0.86	32.19	0.009712	4.12	25.98	5.95	0.57
Veilino	Staglieno_1	17 VEI 17	Q50	48.00	25.68	28.18	28.53	0.35	28.53	0.35	27.58	0.54	28.71	0.004364	3.25	14.79	6.00	0.66
Veilino	Staglieno_1	17 VEI 17	Q200	78.00	25.68	29.54	28.53	-1.01	28.53	-1.01	28.29	1.08	30.63	0.014009	4.61	16.91		0.75
Veilino	Staglieno_1	17 VEI 17	Q500	107.00	25.68	30.92	28.53	-2.39	28.53	-2.39	29.97	0.95	31.87	0.010844	4.31	24.82	6.00	0.60
Veilino	Staglieno_1	16.5	Q50	48.00	25.63	28.11	28.32	0.21	28.32	0.21	27.59	0.57	28.68	0.004824	3.36	14.30	6.00	0.69
Veilino	Staglieno_1	16.5	Q200	78.00	25.63	29.23	28.32	-0.91	28.32	-0.91	28.30	1.28	30.51	0.017851	5.00	15.59		0.84
Veilino	Staglieno_1	16.5	Q500	107.00	25.63	30.88	28.32	-2.56	28.32	-2.56	29.84	0.91	31.79	0.009891	4.22	25.35	6.00	0.59
Veilino	Staglieno_2	16.2	Q50	51.00	25.63	27.67	28.32	0.65	28.32	0.65	27.67	0.97	28.64	0.009581	4.37	11.67	6.00	1.00
Veilino	Staglieno_2	16.2	Q200	85.00	25.63	28.99	28.32	-0.67	28.32	-0.67	28.32	1.52	30.51	0.021199	5.45	15.59		0.95
Veilino	Staglieno_2	16.2	Q500	116.00	25.63	30.50	28.32	-2.18	28.32	-2.18	30.02	1.28	31.79	0.015823	5.02	23.11	6.00	0.73
Veilino	Staglieno_2	16 VEI 16	Q50	51.00	25.50	27.41	28.25	0.84	28.25	0.84	27.59	1.18	28.59	0.012416	4.81	10.61	6.00	1.15
Veilino	Staglieno_2	16 VEI 16	Q200	85.00	25.50	28.93	28.25	-0.68	28.25	-0.68	28.25	1.51	30.44	0.020898	5.44	15.64		0.94
Veilino	Staglieno_2	16 VEI 16	Q500	116.00	25.50	30.01	28.25	-1.76	28.25	-1.76	30.01	1.68	31.69	0.024812	5.75	20.18	6.00	0.86
Veilino	Staglieno_2	15 VEI 15	Q50	51.00	25.06	26.62	28.22	1.60	28.22	1.60	27.17	1.88	28.50	0.024832	6.08	8.39	6.00	1.64
Veilino	Staglieno_2	15 VEI 15	Q200	85.00	25.06	29.18	28.22	-0.96	28.22	-0.96	27.95	1.14	30.31	0.014001	4.72	18.00		0.74
Veilino	Staglieno_2	15 VEI 15	Q500	116.00	25.06	30.35	28.22	-2.13	28.22	-2.13	29.56	1.10	31.46	0.012915	4.65	24.92	6.00	0.65
Veilino	Staglieno_2	14 VEI 14	Q50	51.00	24.55	26.37	27.31	0.94	27.31	0.94	26.60	1.26	27.63	0.013780	4.97	10.25	6.00	1.21
Veilino	Staglieno_2	14 VEI 14	Q200	85.00	24.55	28.16	27.31	-0.85	27.31	-0.85	27.31	1.45	29.61	0.019910	5.34	15.92		0.90
Veilino	Staglieno_2	14 VEI 14	Q500	116.00	24.55	29.61	27.31	-2.30	27.31	-2.30	29.11	1.28	30.89	0.015762	5.00	23.18	6.00	0.71
Veilino	Staglieno_2	13 VEI 13	Q50	51.00	23.87	25.28	27.27	1.99	27.27	1.99	25.94	2.22	27.50	0.032229	6.60	7.72	6.00	1.86
Veilino	Staglieno_2	13 VEI 13	Q200	85.00	23.87	28.59	27.27	-1.32	27.27	-1.32	26.72	0.80	29.39	0.011917	3.97	21.43	6.00	0.58
Veilino	Staglieno_2	13 VEI 13	Q500	116.00	23.87	29.94	27.27	-2.67	27.27	-2.67	27.27	0.79	30.72	0.007651	3.93	29.49	6.00	0.51
Veilino	Staglieno_2	12.5	Q50	51.00	23.75	25.59	26.65	1.06	26.65	1.06	25.74	1.14	26.73	0.012082	4.73	10.79	6.00	1.12
Veilino	Staglieno_2	12.5	Q200	85.00	23.75	28.07	26.65	-1.42	26.65	-1.42	26.53	0.96	29.02	0.015148	4.33	19.63	6.00	0.67

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Staglieno_2	12.5	Q500	116.00	23.75	29.74	26.65	-3.09	26.65	-3.09	28.16	0.78	30.52	0.007095	3.91	29.70	6.00	0.51
Veilino	Staglieno_2	12 VEI 12	Q50	51.00	23.20	25.78	26.25	0.47	26.25	0.47	25.25	0.60	26.38	0.004937	3.44	14.83	6.00	0.70
Veilino	Staglieno_2	12 VEI 12	Q200	85.00	23.20	27.84	26.25	-1.59	26.25	-1.59	26.04	0.82	28.66	0.011799	4.01	21.20	6.00	0.59
Veilino	Staglieno_2	12 VEI 12	Q500	116.00	23.20	29.68	26.25	-3.43	26.25	-3.43	27.67	0.66	30.34	0.005420	3.60	32.26	6.00	0.45
Veilino	Staglieno_2	11.7	Q50	51.00	23.11	25.68	26.20	0.52	26.20	0.52	25.14	0.59	26.28	0.004844	3.41	14.95	6.00	0.69
Veilino	Staglieno_2	11.7	Q200	85.00	23.11	27.35	26.20	-1.15	26.20	-1.15	25.93	1.01	28.36	0.016971	4.46	19.06	6.00	0.69
Veilino	Staglieno_2	11.7	Q500	116.00	23.11	29.58	26.20	-3.38	26.20	-3.38	27.54	0.65	30.23	0.005368	3.58	32.44	6.00	0.45
Veilino	Staglieno_2	11.5	Q50	51.00	23.07	25.67	26.25	0.58	26.25	0.58	25.11	0.59	26.26	0.004776	3.40	15.01	6.00	0.69
Veilino	Staglieno_2	11.5	Q200	85.00	23.07	27.22	26.25	-0.97	26.25	-0.97	25.90	1.08	28.30	0.012908	4.60	18.49		0.72
Veilino	Staglieno_2	11.5	Q500	116.00	23.07	29.55	26.25	-3.30	26.25	-3.30	26.25	0.66	30.21	0.005480	3.59	32.30	6.00	0.45
Veilino	Staglieno_2	11.2	Q50	51.00	23.05	25.65	26.25	0.60	26.25	0.60	25.10	0.59	26.24	0.004798	3.40	14.98	6.00	0.69
Veilino	Staglieno_2	11.2	Q200	85.00	23.05	27.18	26.25	-0.93	26.25	-0.93	25.89	1.07	28.25	0.012726	4.57	18.58		0.72
Veilino	Staglieno_2	11.2	Q500	116.00	23.05	29.53	26.25	-3.28	26.25	-3.28	26.25	0.66	30.19	0.005508	3.60	32.26	6.00	0.45
Veilino	Staglieno_2	11 VEI 11	Q50	51.00	22.85	25.60	26.13	0.53	26.13	0.53	24.95	0.55	26.15	0.004260	3.28	15.57	6.00	0.65
Veilino	Staglieno_2	11 VEI 11	Q200	85.00	22.85	26.97	26.13	-0.84	26.13	-0.84	25.74	1.05	28.02	0.012276	4.53	18.76		0.71
Veilino	Staglieno_2	11 VEI 11	Q500	116.00	22.85	29.40	26.13	-3.27	26.13	-3.27	26.13	0.68	30.08	0.005851	3.67	31.65	6.00	0.46
Veilino	Staglieno_2	10.2	Q50	51.00	22.71	25.59	26.10	0.51	26.10	0.51	24.76	0.47	26.07	0.003564	3.05	16.71	6.00	0.58
Veilino	Staglieno_2	10.2	Q200	85.00	22.71	26.88	26.10	-0.78	26.10	-0.78	25.54	0.94	27.83	0.010681	4.31	19.74		0.67
Veilino	Staglieno_2	10.2	Q500	116.00	22.71	29.33	26.10	-3.23	26.10	-3.23	26.10	0.66	30.00	0.005710	3.61	32.11	6.00	0.45
Veilino	Staglieno_2	10 VEI 10	Q50	51.00	22.67	25.59	22.88	-2.71	26.10	0.51	24.73	0.47	26.05	0.002435	3.03	17.14	6.25	0.58
Veilino	Staglieno_2	10 VEI 10	Q200	85.00	22.67	26.86	22.88	-3.98	26.10	-0.76	25.52	0.92	27.77	0.008026	4.25	20.35		0.66
Veilino	Staglieno_2	10 VEI 10	Q500	116.00	22.67	29.32	22.88	-6.44	26.10	-3.22	26.10	0.65	29.97	0.004693	3.59	33.07	6.30	0.44
Veilino	Staglieno_2	9.8	Q50	51.00	22.75	25.50	22.85	-2.65	26.10	0.60	24.83	0.53	26.04	0.002877	3.24	16.01	6.24	0.64
Veilino	Staglieno_2	9.8	Q200	85.00	22.75	26.77	22.85	-3.92	26.10	-0.67	25.62	0.98	27.74	0.008652	4.39	19.75		0.70
Veilino	Staglieno_2	9.8	Q500	116.00	22.75	29.26	22.85	-6.41	26.10	-3.16	26.10	0.69	29.95	0.005103	3.70	32.08	6.30	0.46
Veilino	Staglieno_2	9.6	Q50	51.00	22.65	25.54	22.80	-2.74	26.10	0.56	24.69	0.47	26.00	0.002456	3.03	17.09	6.25	0.58
Veilino	Staglieno_2	9.6	Q200	85.00	22.65	26.78	22.80	-3.98	26.10	-0.68	25.48	0.89	27.68	0.007717	4.20	20.62		0.66
Veilino	Staglieno_2	9.6	Q500	116.00	22.65	29.25	22.80	-6.45	26.10	-3.15	26.11	0.67	29.92	0.004943	3.64	32.58	6.30	0.45
Veilino	Staglieno_2	9 VEI 9	Q50	51.00	22.70	24.97	26.08	1.11	26.08	1.11	24.69	0.74	25.72	0.006639	3.82	13.36	6.00	0.82
Veilino	Staglieno_2	9 VEI 9	Q200	85.00	22.70	26.38	26.08	-0.30	26.08	-0.30	25.48	0.92	27.30	0.010357	4.25	20.00		0.71
Veilino	Staglieno_2	9 VEI 9	Q500	116.00	22.70	28.94	26.08	-2.86	26.08	-2.86	26.08	0.73	29.68	0.006783	3.79	30.59	6.00	0.48
Veilino	Staglieno_2	8.8	Q50	51.00	22.52	25.02	26.04	1.02	26.04	1.02	24.54	0.63	25.65	0.005241	3.51	14.52	6.00	0.72
Veilino	Staglieno_2	8.8	Q200	85.00	22.52	26.36	26.04	-0.32	26.04	-0.32	25.33	0.86	27.22	0.009418	4.12	20.65		0.67
Veilino	Staglieno_2	8.8	Q500	116.00	22.52	28.94	26.04	-2.90	26.04	-2.90	25.96	0.68	29.62	0.006076	3.66	31.69	6.00	0.46
Veilino	Staglieno_2	8 VEI 8	Q50	51.00	22.45	24.43	25.75	1.32	25.75	1.32	24.43	0.98	25.41	0.009749	4.38	11.64	6.00	1.00
Veilino	Staglieno_2	8 VEI 8	Q200	85.00	22.45	25.95	25.75	-0.20	25.75	-0.20	25.23	0.96	26.91	0.011072	4.35	19.54		0.74
Veilino	Staglieno_2	8 VEI 8	Q500	116.00	22.45	28.73	25.75	-2.98	25.75	-2.98	25.75	0.71	29.44	0.006349	3.73	31.12	6.00	0.47
Veilino	Staglieno_2	7 VEI 7	Q50	51.00	22.13	23.88	25.56	1.68	25.56	1.68	24.13	1.23	25.12	0.013558	4.92	10.36	6.46	1.24
Veilino	Staglieno_2	7 VEI 7	Q200	85.00	22.13	25.82	25.56	-0.26	25.56	-0.26	24.88	0.82	26.64	0.008911	4.01	21.19		0.67
Veilino	Staglieno_2	7 VEI 7	Q500	116.00	22.13	28.69	25.56	-3.13	25.56	-3.13	25.48	0.58	29.27	0.004855	3.37	34.38	6.46	0.42
Veilino	Staglieno_2	6.7	Q50	51.00	21.86	24.48	25.56	1.08	25.56	1.08	23.84	0.51	24.99	0.003965	3.17	16.11	6.46	0.64
Veilino	Staglieno_2	6.7	Q200	85.00	21.86	25.91	25.56	-0.35	25.56	-0.35	24.59	0.69	26.60	0.007015	3.68	23.09		0.58
Veilino	Staglieno_2	6.7	Q500	116.00	21.86	28.74	25.56	-3.18	25.56	-3.18	25.19	0.51	29.25	0.004095	3.17	36.57	6.46	0.39
Veilino	Staglieno_2	6 VEI 6	Q50	51.00	21.82	24.43	21.92	-2.51	25.50	1.07	23.87	0.55	24.98	0.003233	3.32	16.03	6.70	0.67
Veilino	Staglieno_2	6 VEI 6	Q200	85.00	21.82	25.86	21.92	-3.94	25.50	-0.36	24.62	0.73	26.58	0.006004	3.83	23.20		0.60

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Staglieno_2	6 VEI 6	Q500	116.00	21.82	28.74	21.92	-6.82	25.50	-3.24	25.22	0.50	29.24	0.003442	3.20	37.70	6.70	0.38
Veilino	Staglieno_2	5.1 VEI 6	Q50	51.00	21.80	24.31	24.60	0.29	24.60	0.29	23.86	0.66	24.96	0.005535	3.59	14.20	5.88	0.74
Veilino	Staglieno_2	5.1 VEI 6	Q200	85.00	21.80	25.47	24.60	-0.87	24.60	-0.87	24.63	1.07	26.54	0.011876	4.58	18.57	0.18	0.76
Veilino	Staglieno_2	5.1 VEI 6	Q500	116.00	21.80	28.41	24.60	-3.81	24.60	-3.81	24.91	0.80	29.20	0.007216	3.96	29.31	5.88	0.49
Veilino	Staglieno_2	5 VEI 5	Q50	51.00	21.76	24.25	24.60	0.35	24.60	0.35	23.82	0.66	24.91	0.005600	3.61	14.14	5.88	0.74
Veilino	Staglieno_2	5 VEI 5	Q200	85.00	21.76	25.39	24.60	-0.78	24.60	-0.78	24.61	1.04	26.43	0.010970	4.52	18.79	0.75	0.76
Veilino	Staglieno_2	5 VEI 5	Q500	116.00	21.76	28.33	24.60	-3.73	24.60	-3.73	24.89	0.81	29.14	0.007422	3.98	29.11	5.88	0.50
Veilino	Staglieno_2	4.1 VEI 5	Q50	51.00	21.75	24.27	25.50	1.23	25.50	1.23	23.79	0.63	24.90	0.005212	3.51	14.54	6.00	0.72
Veilino	Staglieno_2	4.1 VEI 5	Q200	85.00	21.75	25.57	25.50	-0.07	25.50	-0.07	24.58	0.77	26.34	0.007952	3.88	21.91		0.63
Veilino	Staglieno_2	4.1 VEI 5	Q500	116.00	21.75	28.45	25.50	-2.95	25.50	-2.95	25.21	0.62	29.07	0.005274	3.49	33.28	6.00	0.43
Veilino	Staglieno_2	4.05	Q50	51.00	21.70	24.36	25.48	1.12	25.48	1.12	23.61	0.46	24.81	0.003412	2.99	17.06	6.65	0.60
Veilino	Staglieno_2	4.05	Q200	85.00	21.70	25.62	25.48	-0.14	25.48	-0.14	24.35	0.61	26.23	0.005980	3.47	24.53		0.56
Veilino	Staglieno_2	4.05	Q500	116.00	21.70	28.51	25.48	-3.03	25.48	-3.03	24.93	0.49	29.00	0.003897	3.09	37.57	6.65	0.38
Veilino	Staglieno_2	4 VEI 4	Q50	51.00	21.62	24.34	25.43	1.09	25.43	1.09	23.52	0.43	24.77	0.003186	2.91	17.50	6.65	0.57
Veilino	Staglieno_2	4 VEI 4	Q200	85.00	21.62	25.57	25.43	-0.14	25.43	-0.14	24.26	0.60	26.17	0.005822	3.43	24.76		0.55
Veilino	Staglieno_2	4 VEI 4	Q500	116.00	21.62	28.47	25.43	-3.04	25.43	-3.04	24.85	0.48	28.95	0.003851	3.07	37.75	6.65	0.37
Veilino	Staglieno_2	3.1 VEI 3	Q50	51.00	21.60	24.27	25.40	1.13	25.40	1.13	23.49	0.44	24.71	0.003297	2.95	17.29	6.65	0.58
Veilino	Staglieno_2	3.1 VEI 3	Q200	85.00	21.60	25.47	25.40	-0.07	25.40	-0.07	24.22	0.60	26.07	0.005800	3.43	24.80		0.56
Veilino	Staglieno_2	3.1 VEI 3	Q500	116.00	21.60	28.42	25.40	-3.02	25.40	-3.02	24.81	0.47	28.89	0.003704	3.04	38.21	6.65	0.37
Veilino	Staglieno_2	3 VEI 3	Q50	51.00	21.58	24.04	24.35	0.31	24.35	0.31	23.60	0.65	24.69	0.005506	3.57	14.27	6.00	0.74
Veilino	Staglieno_2	3 VEI 3	Q200	85.00	21.58	24.56	24.35	-0.21	24.35	-0.21	24.35	1.41	25.97	0.019187	5.27	16.14		0.97
Veilino	Staglieno_2	3 VEI 3	Q500	116.00	21.58	27.07	24.35	-2.72	24.35	-2.72	27.07	1.68	28.76	0.025197	5.75	20.18	6.00	0.78
Veilino	Staglieno_2	2.1 VEI 3	Q50	51.00	21.56	24.05	24.15	0.10	24.15	0.10	23.57	0.63	24.68	0.005246	3.51	14.54	6.00	0.72
Veilino	Staglieno_2	2.1 VEI 3	Q200	85.00	21.56	24.70	24.15	-0.55	24.15	-0.55	24.26	1.19	25.89	0.011387	4.84	17.55	2.76	0.87
Veilino	Staglieno_2	2.1 VEI 3	Q500	116.00	21.56	23.62	24.15	0.53	24.15	0.53	24.55	4.79	28.41	0.046606	9.70	11.96	6.00	2.19
Veilino	Staglieno_2	2.05	Q50	51.00	21.53	23.65	24.15	0.50	24.15	0.50	23.65	0.97	24.62	0.009886	4.37	11.66	6.00	1.00
Veilino	Staglieno_2	2.05	Q200	85.00	21.53	24.31	24.15	-0.16	24.15	-0.16	24.31	1.52	25.83	0.013352	5.47	15.54	5.11	1.05
Veilino	Staglieno_2	2.05	Q500	116.00	21.53	23.79	24.15	0.36	24.15	0.36	24.60	4.40	28.19	0.042290	9.29	12.48	6.00	2.06
Veilino	Staglieno_2	2 VEI 2	Q50	51.00	21.46	23.13	24.20	1.07	24.20	1.07	23.44	1.37	24.50	0.015364	5.18	9.85	6.00	1.29
Veilino	Staglieno_2	2 VEI 2	Q200	85.00	21.46	23.83	24.20	0.37	24.20	0.37	24.21	1.86	25.70	0.015753	6.05	14.05	6.00	1.26
Veilino	Staglieno_2	2 VEI 2	Q500	116.00	21.46	23.61	24.20	0.59	24.20	0.59	24.51	4.25	27.86	0.038846	9.14	12.69	6.00	2.01
Veilino	Staglieno_2	1.2	Q50	51.00	21.45	23.11	25.90	2.79	25.90	2.79	23.42	1.38	24.49	0.015638	5.21	9.79	6.00	1.30
Veilino	Staglieno_2	1.2	Q200	85.00	21.45	23.81	25.90	2.09	25.90	2.09	24.21	1.88	25.69	0.015974	6.08	13.98	6.00	1.27
Veilino	Staglieno_2	1.2	Q500	116.00	21.45	23.59	25.90	2.31	25.90	2.31	24.85	4.26	27.85	0.038936	9.15	12.68	6.00	2.01
Veilino	Staglieno_2	1.1	Q50	51.00	21.32	22.89	25.90	3.01	25.90	3.01	23.30	1.56	24.44	0.018516	5.53	9.23	6.00	1.42
Veilino	Staglieno_2	1.1	Q200	85.00	21.32	23.57	25.90	2.33	25.90	2.33	24.08	2.07	25.64	0.018186	6.37	13.34	6.00	1.36
Veilino	Staglieno_2	1.1	Q500	116.00	21.32	23.45	25.90	2.45	25.90	2.45	24.71	4.33	27.77	0.039758	9.21	12.59	6.00	2.03
Veilino	Staglieno_2	1 VEI 1	Q50	51.00	20.85	21.91	26.40	4.49	26.35	4.44	22.58	2.35	24.26	0.039126	6.80	7.50	7.56	2.18
Veilino	Staglieno_2	1 VEI 1	Q200	85.00	20.85	22.36	26.40	4.04	26.35	3.99	23.26	3.08	25.44	0.035065	7.78	10.93	7.56	2.07
Veilino	Staglieno_2	1 VEI 1	Q500	116.00	20.85	22.45	26.40	3.95	26.35	3.90	23.80	5.07	27.52	0.054355	9.98	11.63	7.56	2.57
Veilino	Staglieno_2	0.1	Q50	51.00	20.45	21.48	26.40	4.92	26.35	4.87	22.19	2.64	24.11	0.049209	7.19	7.09	8.33	2.49
Veilino	Staglieno_2	0.1	Q200	85.00	20.45	21.87	26.40	4.53	26.35	4.48	22.82	3.43	25.30	0.042857	8.21	10.36	8.33	2.35
Veilino	Staglieno_2	0.1	Q500	116.00	20.45	21.98	26.40	4.42	26.35	4.37	23.33	5.35	27.33	0.061089	10.25	11.32	8.33	2.81
S. Antonino	Tombinatura	255	Q50	10.00	30.15	32.89	32.50	-0.39	32.50	-0.39	31.19	0.10	32.99	0.003029	1.40	7.17		0.27
S. Antonino	Tombinatura	255	Q200	16.00	30.15	34.78	32.50	-2.28	32.50	-2.28	31.57	0.25	35.04	0.007753	2.23	7.17		0.33

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
S. Antonino	Tombinatura	255	Q500	22.00	30.15	35.74	32.50	-3.24	32.50	-3.24	31.90	0.25	35.99	0.008369	2.24	9.84	3.20	0.30
S. Antonino	Tombinatura	254	Q50	10.00	30.05	32.89	32.40	-0.49	32.40	-0.49	31.09	0.10	32.99	0.003029	1.40	7.17		0.26
S. Antonino	Tombinatura	254	Q200	16.00	30.05	34.78	32.40	-2.38	32.40	-2.38	31.47	0.25	35.03	0.007753	2.23	7.17		0.33
S. Antonino	Tombinatura	254	Q500	22.00	30.05	35.75	32.40	-3.35	32.40	-3.35	31.80	0.24	35.98	0.007580	2.16	10.19	3.20	0.29
S. Antonino	Tombinatura	253	Q50	10.00	30.05	32.91	34.80	1.89	34.80	1.89	31.09	0.07	32.98	0.001171	1.14	8.75	3.12	0.22
S. Antonino	Tombinatura	253	Q200	16.00	30.05	34.92	34.80	-0.12	34.80	-0.12	31.47	0.05	34.97	0.000668	0.98	16.27	3.80	0.15
S. Antonino	Tombinatura	253	Q500	22.00	30.05	35.87	34.80	-1.07	34.80	-1.07	31.81	0.06	35.93	0.000775	1.11	19.86	3.80	0.15
S. Antonino	Tombinatura	252	Q50	10.00	30.00	32.91	33.90	0.99	33.90	0.99	31.21	0.05	32.96	0.000895	1.01	9.86	3.80	0.20
S. Antonino	Tombinatura	252	Q200	16.00	30.00	34.92	33.90	-1.02	33.90	-1.02	31.54	0.04	34.97	0.000539	0.91	17.51	3.80	0.14
S. Antonino	Tombinatura	252	Q500	22.00	30.00	35.87	33.90	-1.97	33.90	-1.97	31.82	0.06	35.92	0.000651	1.04	21.10	3.80	0.14
S. Antonino	Tombinatura	251	Q50	10.00	29.65	32.92	33.90	0.98	33.90	0.98	30.80	0.04	32.96	0.000728	0.93	10.80	3.80	0.18
S. Antonino	Tombinatura	251	Q200	16.00	29.65	34.93	33.90	-1.03	33.90	-1.03	31.29	0.04	34.96	0.000486	0.87	18.43	3.80	0.13
S. Antonino	Tombinatura	251	Q500	22.00	29.65	35.87	33.90	-1.97	33.90	-1.97	31.58	0.05	35.92	0.000599	1.00	22.02	3.80	0.13
S. Antonino	Tombinatura	250	Q50	10.00	28.85	32.93	33.65	0.72	33.65	0.72	30.00	0.03	32.96	0.000451	0.76	13.21	3.80	0.13
S. Antonino	Tombinatura	250	Q200	16.00	28.85	34.93	33.65	-1.28	33.65	-1.28	30.42	0.03	34.96	0.000373	0.77	20.83	3.80	0.10
S. Antonino	Tombinatura	250	Q500	22.00	28.85	35.88	33.65	-2.23	33.65	-2.23	30.96	0.04	35.92	0.000481	0.90	24.42	3.80	0.11
S. Antonino	Tombinatura	249	Q50	10.00	28.80	32.93	33.33	0.40	33.33	0.40	29.95	0.03	32.95	0.000410	0.73	13.64	3.80	0.12
S. Antonino	Tombinatura	249	Q200	16.00	28.80	34.93	33.33	-1.60	33.33	-1.60	30.37	0.03	34.96	0.000351	0.75	21.26	3.80	0.10
S. Antonino	Tombinatura	249	Q500	22.00	28.80	35.88	33.33	-2.55	33.33	-2.55	30.84	0.04	35.92	0.000457	0.89	24.85	3.80	0.11
S. Antonino	Tombinatura	248	Q50	10.00	28.77	32.47	30.07	-2.40	30.07	-2.40	29.92	0.45	32.91	0.024027	2.96	3.38		0.49
S. Antonino	Tombinatura	248	Q200	16.00	28.77	34.65	30.07	-4.58	30.07	-4.58	30.07	0.28	34.93	0.008684	2.35	6.82	2.60	0.31
S. Antonino	Tombinatura	248	Q500	22.00	28.77	35.61	30.07	-5.54	30.07	-5.54	30.07	0.29	35.89	0.005851	2.37	9.30	2.60	0.29
S. Antonino	Tombinatura	247	Q50	10.00	28.68	32.34	30.00	-2.34	30.00	-2.34	29.83	0.43	32.77	0.022985	2.91	3.43		0.49
S. Antonino	Tombinatura	247	Q200	16.00	28.68	33.64	30.00	-3.64	30.00	-3.64	30.00	1.11	34.75	0.058842	4.66	3.43		0.67
S. Antonino	Tombinatura	247	Q500	22.00	28.68	35.21	30.00	-5.21	30.00	-5.21	30.00	0.59	35.80	0.019883	3.41	6.45	2.60	0.43
S. Antonino	Tombinatura	246	Q50	10.00	28.58	31.92	29.86	-2.06	29.86	-2.06	29.73	0.46	32.38	0.025118	3.00	3.33		0.52
S. Antonino	Tombinatura	246	Q200	16.00	28.58	32.56	29.86	-2.70	29.86	-2.70	29.86	1.18	33.74	0.064301	4.81	3.33		0.77
S. Antonino	Tombinatura	246	Q500	22.00	28.58	32.76	29.86	-2.90	29.86	-2.90	29.86	2.23	34.98	0.121569	6.61	3.33		1.03
S. Antonino	Tombinatura	245	Q50	10.00	28.54	31.77	29.83	-1.94	29.83	-1.94	29.69	0.45	32.23	0.024572	2.98	3.35		0.53
S. Antonino	Tombinatura	245	Q200	16.00	28.54	32.19	29.83	-2.36	29.83	-2.36	29.83	1.16	33.35	0.062905	4.77	3.35		0.80
S. Antonino	Tombinatura	245	Q500	22.00	28.54	32.06	29.83	-2.23	29.83	-2.23	29.83	2.19	34.25	0.118930	6.56	3.35		1.12
S. Antonino	Tombinatura	244	Q50	10.00	28.48	31.61	29.80	-1.81	29.80	-1.81	29.63	0.43	32.04	0.022985	2.91	3.43		0.53
S. Antonino	Tombinatura	244	Q200	16.00	28.48	32.35	29.80	-2.55	29.80	-2.55	29.80	0.52	32.87	0.024818	3.21	4.99	2.60	0.52
S. Antonino	Tombinatura	244	Q500	22.00	28.48	32.78	29.80	-2.98	29.80	-2.98	32.37	0.66	33.44	0.023681	3.59	6.12	2.60	0.55
S. Antonino	Tombinatura	243	Q50	10.00	28.44	31.54	29.76	-1.78	29.76	-1.78	29.59	0.43	31.97	0.022985	2.91	3.43		0.53
S. Antonino	Tombinatura	243	Q200	16.00	28.44	32.27	29.76	-2.51	29.76	-2.51	29.76	0.53	32.80	0.024969	3.21	4.98	2.60	0.52
S. Antonino	Tombinatura	243	Q500	22.00	28.44	32.72	29.76	-2.96	29.76	-2.96	32.30	0.66	33.37	0.023591	3.59	6.13	2.60	0.55
S. Antonino	Tombinatura	242	Q50	10.00	28.34	31.36	29.65	-1.71	29.65	-1.71	29.49	0.44	31.79	0.023498	2.94	3.41		0.54
S. Antonino	Tombinatura	242	Q200	16.00	28.34	32.09	29.65	-2.44	29.65	-2.44	29.65	0.53	32.61	0.024869	3.21	4.98	2.60	0.53
S. Antonino	Tombinatura	242	Q500	22.00	28.34	32.55	29.65	-2.90	29.65	-2.90	32.11	0.64	33.19	0.022759	3.55	6.19	2.60	0.55
S. Antonino	Tombinatura	241	Q50	10.00	28.27	31.27	29.62	-1.65	29.62	-1.65	29.42	0.41	31.68	0.021550	2.85	3.51		0.53
S. Antonino	Tombinatura	241	Q200	16.00	28.27	32.02	29.62	-2.40	29.62	-2.40	29.62	0.47	32.49	0.020615	3.03	5.28	2.60	0.50
S. Antonino	Tombinatura	241	Q500	22.00	28.27	32.50	29.62	-2.88	29.62	-2.88	31.93	0.58	33.08	0.019297	3.37	6.52	2.60	0.52
S. Antonino	Tombinatura	240	Q50	10.00	28.23	31.22	29.60	-1.62	29.60	-1.62	29.38	0.40	31.62	0.020653	2.81	3.56		0.52
S. Antonino	Tombinatura	240	Q200	16.00	28.23	31.99	29.60	-2.39	29.60	-2.39	29.60	0.43	32.42	0.018315	2.92	5.48	2.60	0.48

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
S. Antonino	Tombinatura	240	Q500	22.00	28.23	32.47	29.60	-2.87	29.60	-2.87	31.82	0.54	33.01	0.017409	3.26	6.74	2.60	0.51
S. Antonino	Tombinatura	239	Q50	10.00	28.20	31.27	29.55	-1.72	29.55	-1.72	29.35	0.26	31.52	0.014085	2.24	4.47	2.60	0.41
S. Antonino	Tombinatura	239	Q200	16.00	28.20	32.03	29.55	-2.48	29.55	-2.48	29.55	0.31	32.35	0.010587	2.48	6.45	2.60	0.40
S. Antonino	Tombinatura	239	Q500	22.00	28.20	32.52	29.55	-2.97	29.55	-2.97	31.49	0.41	32.93	0.010983	2.85	7.73	2.60	0.44
S. Antonino	Tombinatura	238	Q50	10.00	28.10	31.17	29.50	-1.67	29.50	-1.67	29.25	0.24	31.41	0.012949	2.17	4.60	2.60	0.40
S. Antonino	Tombinatura	238	Q200	16.00	28.10	31.96	29.50	-2.46	29.50	-2.46	29.50	0.29	32.26	0.009620	2.40	6.67	2.60	0.39
S. Antonino	Tombinatura	238	Q500	22.00	28.10	32.45	29.50	-2.95	29.50	-2.95	31.34	0.39	32.84	0.010190	2.77	7.93	2.60	0.42
S. Antonino	Tombinatura	237	Q50	10.00	27.50	31.25	29.50	-1.75	29.50	-1.75	28.65	0.13	31.37	0.005053	1.57	6.37	2.60	0.26
S. Antonino	Tombinatura	237	Q200	16.00	27.50	32.04	29.50	-2.54	29.50	-2.54	29.07	0.18	32.22	0.005087	1.90	8.42	2.60	0.28
S. Antonino	Tombinatura	237	Q500	22.00	27.50	32.54	29.50	-3.04	29.50	-3.04	29.44	0.26	32.80	0.005952	2.26	9.73	2.60	0.32
S. Antonino	Tombinatura	236	Q50	10.00	27.82	31.15	29.40	-1.75	29.40	-1.75	28.97	0.20	31.35	0.009582	1.96	5.10	2.60	0.34
S. Antonino	Tombinatura	236	Q200	16.00	27.82	31.94	29.40	-2.54	29.40	-2.54	29.39	0.25	32.20	0.007920	2.23	7.16	2.60	0.35
S. Antonino	Tombinatura	236	Q500	22.00	27.82	32.42	29.40	-3.02	29.40	-3.02	31.13	0.35	32.77	0.008768	2.62	8.41	2.60	0.39
S. Antonino	Tombinatura	235	Q50	10.00	27.69	31.11	29.30	-1.81	29.30	-1.81	28.84	0.17	31.28	0.007420	1.81	5.52	2.60	0.31
S. Antonino	Tombinatura	235	Q200	16.00	27.69	31.91	29.30	-2.61	29.30	-2.61	29.26	0.23	32.14	0.006536	2.10	7.60	2.60	0.33
S. Antonino	Tombinatura	235	Q500	22.00	27.69	32.39	29.30	-3.09	29.30	-3.09	30.93	0.32	32.71	0.007470	2.49	8.84	2.60	0.37
S. Antonino	Tombinatura	234	Q50	10.00	27.69	30.84	28.80	-2.04	28.80	-2.04	28.80	0.41	31.25	0.029348	2.84	3.52	2.60	0.51
S. Antonino	Tombinatura	234	Q200	16.00	27.69	31.74	28.80	-2.94	28.80	-2.94	28.80	0.38	32.12	0.013728	2.73	5.86	2.60	0.43
S. Antonino	Tombinatura	234	Q500	22.00	27.69	32.18	28.80	-3.38	28.80	-3.38	31.43	0.50	32.69	0.014322	3.14	7.00	2.60	0.47
S. Antonino	Tombinatura	233	Q50	10.00	27.31	29.06	28.05	-1.01	28.05	-1.01	28.05	1.38	30.44	0.127796	5.20	1.92		1.25
S. Antonino	Tombinatura	233	Q200	16.00	27.31	31.24	28.05	-3.19	28.05	-3.19	31.03	0.61	31.85	0.027023	3.45	4.64	2.60	0.56
S. Antonino	Tombinatura	233	Q500	22.00	27.31	31.57	28.05	-3.52	28.05	-3.52	31.40	0.82	32.39	0.029276	4.01	5.48	2.60	0.62
S. Antonino	Tombinatura	232	Q50	10.00	27.25	28.42	28.02	-0.40	28.02	-0.40	28.02	1.27	29.69	0.113342	5.00	2.00		1.48
S. Antonino	Tombinatura	232	Q200	16.00	27.25	30.85	28.02	-2.83	28.02	-2.83	30.85	0.78	31.63	0.041790	3.92	4.08	2.60	0.66
S. Antonino	Tombinatura	232	Q500	22.00	27.25	31.40	28.02	-3.38	28.02	-3.38	31.22	0.81	32.21	0.029120	4.00	5.50	2.60	0.63
S. Antonino	Tombinatura	231	Q50	10.00	26.66	28.81	27.88	-0.93	27.88	-0.93	27.81	0.51	29.32	0.028873	3.15	3.17		0.69
S. Antonino	Tombinatura	231	Q200	16.00	26.66	30.50	27.88	-2.62	27.88	-2.62	27.88	0.61	31.12	0.031511	3.47	4.61	2.60	0.57
S. Antonino	Tombinatura	231	Q500	22.00	26.66	31.61	27.88	-3.73	27.88	-3.73	30.67	0.44	32.05	0.011805	2.94	7.49	2.60	0.42
S. Antonino	Tombinatura	230	Q50	10.00	26.55	28.79	27.88	-0.91	27.88	-0.91	27.70	0.43	29.21	0.022487	2.89	3.46		0.62
S. Antonino	Tombinatura	230	Q200	16.00	26.55	30.47	27.88	-2.59	27.88	-2.59	27.88	0.53	31.01	0.025487	3.23	4.95	2.60	0.52
S. Antonino	Tombinatura	230	Q500	22.00	26.55	31.61	27.88	-3.73	27.88	-3.73	30.51	0.40	32.00	0.010159	2.79	7.90	2.60	0.40
S. Antonino	Tombinatura	229	Q50	10.00	26.58	28.60	27.95	-0.65	27.95	-0.65	27.73	0.40	29.00	0.020666	2.81	3.56		0.63
S. Antonino	Tombinatura	229	Q200	16.00	26.58	30.33	27.95	-2.38	27.95	-2.38	27.95	0.44	30.77	0.018569	2.93	5.46	2.60	0.48
S. Antonino	Tombinatura	229	Q500	22.00	26.58	31.57	27.95	-3.62	27.95	-3.62	30.17	0.33	31.90	0.007470	2.53	8.69	2.60	0.36
S. Antonino	Tombinatura	228	Q50	10.00	26.50	28.52	27.93	-0.59	27.93	-0.59	27.65	0.37	28.89	0.018263	2.69	3.72		0.60
S. Antonino	Tombinatura	228	Q200	16.00	26.50	30.18	27.93	-2.25	27.93	-2.25	27.93	0.48	30.66	0.021867	3.06	5.22	2.60	0.51
S. Antonino	Tombinatura	228	Q500	22.00	26.50	31.54	27.93	-3.61	27.93	-3.61	30.11	0.32	31.86	0.007403	2.51	8.75	2.60	0.36
S. Antonino	Tombinatura	227	Q50	10.00	25.80	28.62	27.85	-0.77	27.85	-0.77	27.03	0.20	28.82	0.007686	1.96	5.10		0.37
S. Antonino	Tombinatura	227	Q200	16.00	25.80	30.30	27.85	-2.45	27.85	-2.45	27.46	0.27	30.57	0.009875	2.31	6.93	2.60	0.35
S. Antonino	Tombinatura	227	Q500	22.00	25.80	31.59	27.85	-3.74	27.85	-3.74	27.83	0.23	31.82	0.005020	2.14	10.27	2.60	0.28
S. Antonino	Tombinatura	226	Q50	10.00	25.70	28.58	27.80	-0.78	27.80	-0.78	26.93	0.19	28.76	0.007170	1.91	5.23		0.36
S. Antonino	Tombinatura	226	Q200	16.00	25.70	30.23	27.80	-2.43	27.80	-2.43	27.35	0.28	30.51	0.010273	2.33	6.87	2.60	0.35
S. Antonino	Tombinatura	226	Q500	22.00	25.70	31.56	27.80	-3.76	27.80	-3.76	27.73	0.23	31.79	0.005000	2.13	10.32	2.60	0.28
Briscata	Tombinatura	350	Q50	12.00	29.40	30.97	31.16	0.19	31.16	0.19	30.74	0.49	31.45	0.009669	3.09	3.88	2.50	0.79
Briscata	Tombinatura	350	Q200	19.00	29.40	31.92	31.16	-0.76	31.16	-0.76	31.19	0.74	32.65	0.018777	3.80	5.00		0.76

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Briscata	Tombinatura	350	Q500	26.00	29.40	33.25	31.16	-2.09	31.16	-2.09	31.35	0.73	33.98	0.017092	3.78	6.87	2.50	0.62
Briscata	Tombinatura	349	Q50	12.00	29.35	30.70	31.12	0.42	31.12	0.42	30.70	0.67	31.37	0.014501	3.61	3.32	2.50	1.00
Briscata	Tombinatura	349	Q200	19.00	29.35	31.81	31.12	-0.69	31.12	-0.69	31.15	0.74	32.54	0.018722	3.80	5.00		0.77
Briscata	Tombinatura	349	Q500	26.00	29.35	32.98	31.12	-1.86	31.12	-1.86	31.31	0.86	33.85	0.022644	4.12	6.31	2.50	0.69
Briscata	Tombinatura	348	Q50	12.00	29.00	29.97	31.10	1.13	31.10	1.13	30.35	1.32	31.29	0.036590	5.09	2.36	2.50	1.68
Briscata	Tombinatura	348	Q200	19.00	29.00	31.93	31.10	-0.83	31.10	-0.83	30.83	0.54	32.48	0.012486	3.27	5.81		0.61
Briscata	Tombinatura	348	Q500	26.00	29.00	33.15	31.10	-2.05	31.10	-2.05	31.16	0.60	33.76	0.013443	3.44	7.55	2.50	0.54
Briscata	Tombinatura	347	Q50	12.00	28.90	30.55	31.00	0.45	31.00	0.45	30.25	0.45	30.99	0.008598	2.96	4.06	2.50	0.74
Briscata	Tombinatura	347	Q200	19.00	28.90	31.81	31.00	-0.81	31.00	-0.81	30.73	0.56	32.36	0.012880	3.30	5.75		0.62
Briscata	Tombinatura	347	Q500	26.00	28.90	32.99	31.00	-1.99	31.00	-1.99	31.06	0.64	33.63	0.014866	3.55	7.32	2.50	0.56
Briscata	Tombinatura	346	Q50	12.00	28.80	30.16	30.80	0.64	30.80	0.64	30.16	0.66	30.82	0.014433	3.61	3.33	2.50	1.00
Briscata	Tombinatura	346	Q200	19.00	28.80	31.56	30.80	-0.76	30.80	-0.76	30.63	0.61	32.17	0.014508	3.45	5.50		0.66
Briscata	Tombinatura	346	Q500	26.00	28.80	32.70	30.80	-1.90	30.80	-1.90	30.89	0.70	33.40	0.016872	3.72	6.99	2.50	0.60
Briscata	Tombinatura	345	Q50	12.00	28.45	29.60	30.75	1.15	30.75	1.15	29.90	1.11	30.71	0.027599	4.67	2.57	2.50	1.47
Briscata	Tombinatura	345	Q200	19.00	28.45	31.59	30.75	-0.84	30.75	-0.84	30.38	0.51	32.10	0.011254	3.17	6.00		0.57
Briscata	Tombinatura	345	Q500	26.00	28.45	32.76	30.75	-2.01	30.75	-2.01	30.77	0.55	33.31	0.011523	3.29	7.91	2.50	0.51
Briscata	Tombinatura	344	Q50	12.00	28.40	29.95	30.63	0.68	30.63	0.68	29.76	0.50	30.45	0.010104	3.15	3.81	2.50	0.81
Briscata	Tombinatura	344	Q200	19.00	28.40	31.50	30.63	-0.87	30.63	-0.87	30.23	0.50	32.00	0.011127	3.13	6.07		0.57
Briscata	Tombinatura	344	Q500	26.00	28.40	32.71	30.63	-2.08	30.63	-2.08	30.64	0.49	33.21	0.009812	3.11	8.36	2.50	0.48
Briscata	Tombinatura	343	Q50	12.00	28.35	29.71	30.52	0.81	30.52	0.81	29.71	0.66	30.37	0.014439	3.61	3.33	2.50	1.00
Briscata	Tombinatura	343	Q200	19.00	28.35	31.41	30.52	-0.89	30.52	-0.89	30.18	0.52	31.93	0.011891	3.21	5.92		0.59
Briscata	Tombinatura	343	Q500	26.00	28.35	32.65	30.52	-2.13	30.52	-2.13	30.55	0.50	33.15	0.009950	3.14	8.29	2.50	0.48
Briscata	Tombinatura	342	Q50	12.00	28.10	29.28	30.30	1.02	30.30	1.02	29.46	0.87	30.16	0.020812	4.14	2.90	2.50	1.23
Briscata	Tombinatura	342	Q200	19.00	28.10	31.29	30.30	-0.99	30.30	-0.99	29.93	0.51	31.80	0.011502	3.17	6.00		0.57
Briscata	Tombinatura	342	Q500	26.00	28.10	32.58	30.30	-2.28	30.30	-2.28	30.32	0.46	33.03	0.008557	2.99	8.69	2.50	0.45
Briscata	Tombinatura	341	Q50	12.00	27.80	28.76	30.30	1.54	30.30	1.54	29.15	1.33	30.10	0.037062	5.12	2.34	2.50	1.69
Briscata	Tombinatura	341	Q200	19.00	27.80	31.36	30.30	-1.06	30.30	-1.06	29.63	0.40	31.76	0.008429	2.81	6.75		0.48
Briscata	Tombinatura	341	Q500	26.00	27.80	32.63	30.30	-2.33	30.30	-2.33	30.05	0.38	33.00	0.006620	2.72	9.57	2.50	0.39
Briscata	Tombinatura	340	Q50	12.00	27.45	29.55	29.95	0.40	29.95	0.40	28.80	0.27	29.82	0.004627	2.32	5.18	2.50	0.51
Briscata	Tombinatura	340	Q200	19.00	27.45	31.26	29.95	-1.31	29.95	-1.31	29.28	0.34	31.60	0.008325	2.57	7.40	2.50	0.42
Briscata	Tombinatura	340	Q500	26.00	27.45	32.59	29.95	-2.64	29.95	-2.64	29.70	0.30	32.89	0.004535	2.42	10.72	2.50	0.34
Briscata	Tombinatura	339	Q50	12.00	27.35	29.53	29.65	0.12	29.65	0.12	28.70	0.25	29.79	0.004178	2.22	5.40	2.50	0.48
Briscata	Tombinatura	339	Q200	19.00	27.35	31.19	29.65	-1.54	29.65	-1.54	29.18	0.35	31.54	0.008670	2.63	7.22	2.50	0.43
Briscata	Tombinatura	339	Q500	26.00	27.35	32.56	29.65	-2.91	29.65	-2.91	29.60	0.30	32.86	0.004461	2.44	10.64	2.50	0.34
Briscata	Tombinatura	338	Q50	12.00	26.95	29.58	29.55	-0.03	29.55	-0.03	28.31	0.17	29.76	0.002682	1.84	6.52	2.33	0.36
Briscata	Tombinatura	338	Q200	19.00	26.95	31.23	29.55	-1.68	29.55	-1.68	28.78	0.28	31.51	0.006234	2.34	8.14	2.50	0.36
Briscata	Tombinatura	338	Q500	26.00	26.95	32.58	29.55	-3.03	29.55	-3.03	29.20	0.26	32.84	0.003669	2.26	11.51	2.50	0.30
Briscata	Tombinatura	337	Q50	12.00	26.95	29.58	29.46	-0.12	29.46	-0.12	28.30	0.18	29.75	0.002877	1.85	6.47	1.91	0.37
Briscata	Tombinatura	337	Q200	19.00	26.95	31.19	29.46	-1.73	29.46	-1.73	28.78	0.30	31.49	0.006977	2.43	7.82	2.50	0.38
Briscata	Tombinatura	337	Q500	26.00	26.95	32.56	29.46	-3.10	29.46	-3.10	29.20	0.27	32.83	0.003903	2.31	11.24	2.50	0.31
Briscata	Tombinatura	336	Q50	12.00	26.95	29.39	28.83	-0.56	28.83	-0.56	28.30	0.34	29.74	0.009626	2.59	4.64		0.53
Briscata	Tombinatura	336	Q200	19.00	26.95	30.58	28.83	-1.75	28.83	-1.75	28.78	0.86	31.44	0.024133	4.10	4.64		0.69
Briscata	Tombinatura	336	Q500	26.00	26.95	32.33	28.83	-3.50	28.83	-3.50	28.83	0.48	32.81	0.008529	3.07	8.46	2.50	0.42
Briscata	Tombinatura	335	Q50	12.00	26.95	29.39	28.83	-0.56	28.83	-0.56	28.30	0.34	29.73	0.009626	2.59	4.64		0.53
Briscata	Tombinatura	335	Q200	19.00	26.95	30.57	28.83	-1.74	28.83	-1.74	28.78	0.86	31.43	0.024133	4.10	4.64		0.69

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Briscata	Tombinatura	335	Q500	26.00	26.95	32.33	28.83	-3.49	28.83	-3.49	28.83	0.48	32.81	0.008576	3.08	8.45	2.50	0.42
Bisagno	Trens Veilino	86.	Q50	730.00	37.20	40.35	43.30	2.95	43.30	2.95	39.84	0.77	41.12	0.003731	3.88	188.02	67.00	0.74
Bisagno	Trens Veilino	86.	Q200	1201.00	37.20	41.38	43.30	1.92	43.30	1.92	40.74	1.11	42.49	0.003711	4.68	256.76	67.00	0.76
Bisagno	Trens Veilino	86.	Q500	1649.00	37.20	42.22	43.30	1.08	43.30	1.08	41.50	1.41	43.63	0.003710	5.26	313.43	67.00	0.78
Bisagno	Trens Veilino	85.	Q50	730.00	35.52	39.53	42.70	3.17	42.70	3.17	39.46	1.09	40.62	0.006601	4.63	157.70	66.00	0.96
Bisagno	Trens Veilino	85.	Q200	1201.00	35.52	40.44	42.70	2.26	42.70	2.26	40.37	1.55	41.99	0.006304	5.52	217.76	66.00	0.97
Bisagno	Trens Veilino	85.	Q500	1649.00	35.52	41.35	42.70	1.35	42.70	1.35	41.13	1.79	43.14	0.005445	5.93	277.96	66.00	0.92
Bisagno	Trens Veilino	84.	Q50	730.00	35.71	39.25	42.00	2.75	42.00	2.75	38.99	0.94	40.19	0.005148	4.29	169.98	66.00	0.85
Bisagno	Trens Veilino	84.	Q200	1201.00	35.71	40.22	42.00	1.78	42.00	1.78	39.90	1.34	41.56	0.004985	5.13	233.90	66.00	0.87
Bisagno	Trens Veilino	84.	Q500	1649.00	35.71	41.20	42.00	0.80	42.00	0.80	40.66	1.55	42.75	0.004292	5.51	299.07	66.00	0.83
Bisagno	Trens Veilino	83.	Q50	730.00	34.27	38.40	41.40	3.00	40.70	2.30	38.20	1.00	39.39	0.005595	4.43	164.87	64.60	0.88
Bisagno	Trens Veilino	83.	Q200	1201.00	34.27	39.28	41.40	2.12	40.70	1.42	39.12	1.49	40.77	0.005826	5.42	221.79	64.60	0.93
Bisagno	Trens Veilino	83.	Q500	1649.00	34.27	40.70	41.40	0.70	40.70	0.00	39.89	1.41	42.11	0.003638	5.25	313.84	64.60	0.76
Bisagno	Trens Veilino	82.3	Q50	730.00	34.00	38.14	41.44	3.30	39.70	1.56	37.30	0.57	38.71	0.002493	3.35	218.21	71.99	0.61
Bisagno	Trens Veilino	82.3	Q200	1201.00	34.00	39.12	41.44	2.32	39.70	0.58	38.16	0.88	40.00	0.002738	4.16	288.93	71.99	0.66
Bisagno	Trens Veilino	82.3	Q500	1649.00	34.00	40.73	41.44	0.71	39.70	-1.03	38.88	0.85	41.57	0.001790	4.08	404.56	72.00	0.55
Bisagno	Trens Veilino	82.2	Q50	730.00	34.00	38.14	41.44	3.30	39.70	1.56	37.30	0.57	38.71	0.002503	3.35	217.94	71.99	0.61
Bisagno	Trens Veilino	82.2	Q200	1201.00	34.00	39.12	41.44	2.32	39.70	0.58	38.16	0.88	40.00	0.002748	4.16	288.61	71.99	0.66
Bisagno	Trens Veilino	82.2	Q500	1649.00	34.00	40.73	41.44	0.71	39.70	-1.03	38.88	0.85	41.57	0.001793	4.08	404.37	72.00	0.55
Bisagno	Trens Veilino	82.11 BIS 82		Bridge														
Bisagno	Trens Veilino	82.1	Q50	730.00	34.00	38.07	41.44	3.37	39.70	1.63	37.30	0.60	38.67	0.002674	3.42	213.52	71.99	0.63
Bisagno	Trens Veilino	82.1	Q200	1201.00	34.00	39.02	41.44	2.42	39.70	0.68	38.16	0.93	39.95	0.002974	4.27	281.55	71.99	0.69
Bisagno	Trens Veilino	82.1	Q500	1649.00	34.00	40.66	41.44	0.78	39.70	-0.96	38.88	0.87	41.53	0.001855	4.12	400.00	72.00	0.56
Bisagno	Trens Veilino	82.	Q50	730.00	34.00	38.06	41.44	3.38	39.70	1.64	37.30	0.60	38.66	0.002712	3.43	212.60	71.99	0.64
Bisagno	Trens Veilino	82.	Q200	1201.00	34.00	39.00	41.44	2.44	39.70	0.70	38.16	0.93	39.94	0.003015	4.28	280.36	71.99	0.69
Bisagno	Trens Veilino	82.	Q500	1649.00	34.00	40.66	41.44	0.78	39.70	-0.96	38.88	0.87	41.53	0.001863	4.13	399.46	72.00	0.56
Bisagno	Trens Veilino	81.	Q50	730.00	33.64	37.86	40.60	2.74	39.70	1.84	37.25	0.63	38.48	0.003127	3.51	208.18	77.30	0.68
Bisagno	Trens Veilino	81.	Q200	1201.00	33.64	38.83	40.60	1.77	39.70	0.87	38.08	0.92	39.75	0.003130	4.24	283.23	77.30	0.71
Bisagno	Trens Veilino	81.	Q500	1649.00	33.64	40.61	40.60	-0.01	39.70	-0.91	38.76	0.78	41.39	0.001665	3.92	421.04	77.30	0.54
Bisagno	Trens Veilino	80.	Q50	730.00	33.49	37.31	40.22	2.91	39.60	2.29	37.09	0.82	38.13	0.006269	4.00	182.31	81.86	0.86
Bisagno	Trens Veilino	80.	Q200	1201.00	33.49	38.52	40.22	1.70	39.60	1.08	37.88	0.93	39.45	0.004149	4.27	281.36	82.15	0.74
Bisagno	Trens Veilino	80.	Q500	1649.00	33.49	40.53	40.22	-0.31	39.60	-0.93	38.54	0.69	41.22	0.001742	3.69	447.23	82.95	0.51
Bisagno	Trens Veilino	79.	Q50	730.00	33.55	37.25	40.09	2.84	39.54	2.29	36.87	0.72	37.97	0.004946	3.75	194.72	81.67	0.77
Bisagno	Trens Veilino	79.	Q200	1201.00	33.55	38.50	40.09	1.59	39.54	1.04	37.68	0.84	39.33	0.003389	4.05	296.49	82.00	0.68
Bisagno	Trens Veilino	79.	Q500	1649.00	33.55	40.53	40.09	-0.44	39.54	-0.99	38.34	0.64	41.17	0.001482	3.56	464.12	83.40	0.48
Bisagno	Trens Veilino	78.4	Q50	730.00	32.88	37.33	39.99	2.66	39.59	2.26	36.31	0.48	37.81	0.002673	3.08	237.23	81.89	0.58
Bisagno	Trens Veilino	78.4	Q200	1201.00	32.88	38.57	39.99	1.42	39.59	1.02	37.23	0.64	39.21	0.002284	3.55	338.51	81.94	0.56
Bisagno	Trens Veilino	78.4	Q500	1649.00	32.88	40.56	39.99	-0.57	39.59	-0.97	37.89	0.55	41.11	0.001216	3.28	502.18	81.99	0.42
Bisagno	Trens Veilino	78.3	Q50	730.00	32.88	37.05	39.99	2.94	39.59	2.54	36.43	0.73	37.79	0.003854	3.79	192.72	81.88	0.70
Bisagno	Trens Veilino	78.3	Q200	1201.00	32.88	38.05	39.99	1.94	39.59	1.54	37.35	1.11	39.16	0.004075	4.66	257.61	81.92	0.75
Bisagno	Trens Veilino	78.3	Q500	1649.00	32.88	40.34	39.99	-0.35	39.59	-0.75	38.13	0.75	41.09	0.001980	3.84	428.97	81.99	0.54
Bisagno	Trens Veilino	78.25 BIS 78		Bridge														
Bisagno	Trens Veilino	78.2	Q50	730.00	32.75	36.62	39.86	3.24	39.46	2.84	36.30	0.91	37.53	0.005479	4.22	173.13	81.87	0.82
Bisagno	Trens Veilino	78.2	Q200	1201.00	32.75	36.83	39.86	3.03	39.46	2.63	37.22	2.11	38.94	0.011571	6.43	186.68	81.87	1.21

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Trens Veilino	78.2	Q500	1649.00	32.75	39.64	39.86	0.22	39.46	-0.18	37.99	0.96	40.60	0.002938	4.34	379.86	81.99	0.64
Bisagno	Trens Veilino	78.1	Q50	730.00	32.75	36.77	39.86	3.09	39.46	2.69	36.18	0.66	37.44	0.004501	3.61	202.21	81.87	0.73
Bisagno	Trens Veilino	78.1	Q200	1201.00	32.75	36.42	39.86	3.44	39.46	3.04	37.10	2.43	38.85	0.017993	6.91	173.79	75.29	1.45
Bisagno	Trens Veilino	78.1	Q500	1649.00	32.75	39.82	39.86	0.04	39.46	-0.36	37.76	0.68	40.50	0.001698	3.65	452.26	81.99	0.50
Bisagno	Trens Veilino	77.	Q50	730.00	32.27	36.41	39.58	3.17	38.31	1.90	36.05	0.73	37.15	0.005197	3.79	192.46	82.74	0.79
Bisagno	Trens Veilino	77.	Q200	1201.00	32.27	37.61	39.58	1.97	38.31	0.70	36.87	0.86	38.48	0.003599	4.11	292.02	83.10	0.70
Bisagno	Trens Veilino	77.	Q500	1649.00	32.27	39.80	39.58	-0.22	38.31	-1.49	37.53	0.62	40.41	0.001392	3.48	475.06	84.83	0.47
Bisagno	Trens Veilino	76.	Q50	730.00	32.09	36.18	39.21	3.03	37.90	1.72	35.82	0.74	36.92	0.005104	3.80	192.10	80.71	0.79
Bisagno	Trens Veilino	76.	Q200	1201.00	32.09	37.48	39.21	1.73	37.90	0.42	36.63	0.83	38.31	0.003323	4.04	297.18	81.10	0.67
Bisagno	Trens Veilino	76.	Q500	1649.00	32.09	39.75	39.21	-0.54	37.90	-1.85	37.29	0.59	40.34	0.001279	3.42	483.88	82.85	0.45
Bisagno	Trens Veilino	75.	Q50	730.00	31.99	35.83	38.41	2.58	37.13	1.30	35.44	0.73	36.56	0.004984	3.78	193.22	81.05	0.78
Bisagno	Trens Veilino	75.	Q200	1201.00	31.99	37.33	38.41	1.08	37.13	-0.20	36.27	0.74	38.07	0.002733	3.81	315.41	82.61	0.62
Bisagno	Trens Veilino	75.	Q500	1649.00	31.99	39.71	38.41	-1.30	37.13	-2.58	36.93	0.53	40.24	0.001047	3.23	512.87	83.74	0.41
Bisagno	Trens Veilino	74.	Q50	730.00	31.80	35.47	37.62	2.15	36.15	0.68	34.93	0.63	36.10	0.004013	3.52	207.31	81.03	0.70
Bisagno	Trens Veilino	74.	Q200	1201.00	31.80	37.20	37.62	0.42	36.15	-1.05	35.72	0.61	37.81	0.001984	3.45	348.48	81.95	0.53
Bisagno	Trens Veilino	74.	Q500	1649.00	31.80	39.68	37.62	-2.06	36.15	-3.53	36.39	0.46	40.13	0.000820	3.00	552.66	83.00	0.37
Bisagno	Trens Veilino	73.4	Q50	730.00	31.56	35.29	37.48	2.19	36.56	1.27	34.48	0.62	35.91	0.003200	3.48	209.55	68.17	0.63
Bisagno	Trens Veilino	73.4	Q200	1201.00	31.56	37.01	37.48	0.47	36.56	-0.45	35.38	0.69	37.70	0.002056	3.67	326.84	68.17	0.54
Bisagno	Trens Veilino	73.4	Q500	1649.00	31.56	39.52	37.48	-2.04	36.56	-2.96	36.12	0.56	40.08	0.001011	3.31	498.13	68.17	0.39
Bisagno	Trens Veilino	73.3	Q50	730.00	31.56	35.00	37.48	2.48	36.56	1.56	34.60	0.88	35.88	0.005187	4.15	175.72	68.17	0.80
Bisagno	Trens Veilino	73.3	Q200	1201.00	31.56	36.85	37.48	0.63	36.56	-0.29	35.54	0.83	37.68	0.002797	4.04	297.36	68.17	0.62
Bisagno	Trens Veilino	73.3	Q500	1649.00	31.56	39.46	37.48	-1.98	36.56	-2.90	36.39	0.61	40.07	0.001175	3.47	475.39	68.17	0.42
Bisagno	Trens Veilino	73.25 BIS 73		Bridge														
Bisagno	Trens Veilino	73.2	Q50	730.00	31.46	34.80	37.38	2.58	36.46	1.66	34.50	0.94	35.74	0.005829	4.31	169.54	68.17	0.84
Bisagno	Trens Veilino	73.2	Q200	1201.00	31.46	36.00	37.38	1.38	36.46	0.46	35.44	1.21	37.22	0.005168	4.88	245.99	68.17	0.82
Bisagno	Trens Veilino	73.2	Q500	1649.00	31.46	37.97	37.38	-0.59	36.46	-1.51	36.30	0.96	38.93	0.002394	4.34	380.22	68.17	0.59
Bisagno	Trens Veilino	73.1	Q50	730.00	31.43	34.94	37.35	2.41	36.43	1.49	34.35	0.71	35.66	0.004043	3.74	195.02	68.17	0.71
Bisagno	Trens Veilino	73.1	Q200	1201.00	31.43	36.18	37.35	1.17	36.43	0.25	35.25	0.94	37.12	0.003422	4.30	279.03	68.17	0.68
Bisagno	Trens Veilino	73.1	Q500	1649.00	31.43	38.05	37.35	-0.70	36.43	-1.62	35.99	0.84	38.89	0.001927	4.06	406.57	68.17	0.53
Bisagno	Trens Veilino	72.	Q50	730.00	31.60	34.63	36.98	2.35	35.52	0.89	34.36	0.83	35.46	0.005709	4.03	181.07	76.10	0.83
Bisagno	Trens Veilino	72.	Q200	1201.00	31.60	36.10	36.98	0.88	35.52	-0.58	35.19	0.86	36.96	0.003197	4.10	293.01	76.51	0.67
Bisagno	Trens Veilino	72.	Q500	1649.00	31.60	38.07	36.98	-1.09	35.52	-2.55	35.89	0.70	38.77	0.001526	3.72	445.05	78.00	0.49
Bisagno	Trens Veilino	71.	Q50	730.00	31.48	34.40	36.46	2.06	35.85	1.45	34.06	0.70	35.10	0.005096	3.71	196.59	86.04	0.78
Bisagno	Trens Veilino	71.	Q200	1201.00	31.48	36.11	36.46	0.35	35.85	-0.26	34.82	0.62	36.73	0.002206	3.49	344.15	87.36	0.56
Bisagno	Trens Veilino	71.	Q500	1649.00	31.48	38.13	36.46	-1.67	35.85	-2.28	35.46	0.51	38.64	0.001057	3.17	522.57	88.80	0.41
Bisagno	Trens Veilino	70.	Q50	730.00	30.91	34.36	36.25	1.89	36.50	2.14	33.65	0.50	34.86	0.003092	3.14	232.22	89.24	0.62
Bisagno	Trens Veilino	70.	Q200	1201.00	30.91	36.12	36.25	0.13	36.50	0.38	34.40	0.48	36.60	0.001542	3.08	389.89	89.66	0.47
Bisagno	Trens Veilino	70.	Q500	1649.00	30.91	38.15	36.25	-1.90	36.50	-1.65	35.02	0.42	38.57	0.000811	2.88	575.77	92.00	0.36
Bisagno	Trens Veilino	69.	Q50	730.00	29.93	34.18	35.50	1.32	35.35	1.17	33.10	0.43	34.62	0.002141	2.92	250.10	80.37	0.53
Bisagno	Trens Veilino	69.	Q200	1201.00	29.93	36.01	35.50	-0.51	35.35	-0.66	33.90	0.47	36.48	0.001275	3.02	397.64	81.52	0.43
Bisagno	Trens Veilino	69.	Q500	1649.00	29.93	38.07	35.50	-2.57	35.35	-2.72	34.57	0.44	38.50	0.000750	2.93	566.10	82.04	0.35
Bisagno	Trens Veilino	68.	Q50	730.00	30.04	33.96	34.84	0.88	34.65	0.69	32.92	0.50	34.46	0.002388	3.13	233.19	72.88	0.56
Bisagno	Trens Veilino	68.	Q200	1201.00	30.04	35.85	34.84	-1.01	34.65	-1.20	33.78	0.53	36.38	0.001395	3.23	373.75	76.00	0.46
Bisagno	Trens Veilino	68.	Q500	1649.00	30.04	37.95	34.84	-3.11	34.65	-3.30	34.51	0.49	38.44	0.000821	3.12	533.37	76.00	0.37

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Trens Veilino	67.4	Q50	730.00	29.69	34.04	34.40	0.36	34.47	0.43	32.24	0.34	34.38	0.000795	2.57	284.45	71.05	0.41
Bisagno	Trens Veilino	67.4	Q200	1201.00	29.69	35.90	34.40	-1.50	34.47	-1.43	33.11	0.42	36.32	0.000642	2.88	416.53	71.05	0.38
Bisagno	Trens Veilino	67.4	Q500	1649.00	29.69	37.97	34.40	-3.57	34.47	-3.50	33.84	0.44	38.41	0.000471	2.92	563.99	71.05	0.33
Bisagno	Trens Veilino	67.3	Q50	730.00	29.69	33.63	34.40	0.77	34.47	0.84	32.67	0.71	34.34	0.001987	3.73	195.76	70.66	0.63
Bisagno	Trens Veilino	67.3	Q200	1201.00	29.69	35.43	34.40	-1.03	34.47	-0.96	33.71	0.85	36.28	0.001489	4.08	294.45	70.66	0.56
Bisagno	Trens Veilino	67.3	Q500	1649.00	29.69	37.59	34.40	-3.19	34.47	-3.12	34.57	0.78	38.37	0.001234	3.92	420.21	70.66	0.51
Bisagno	Trens Veilino	67.25 BIS 67		Bridge														
Bisagno	Trens Veilino	67.2	Q50	730.00	29.69	32.16	34.40	2.24	34.47	2.31	32.67	2.04	34.20	0.010882	6.34	115.23	70.66	1.39
Bisagno	Trens Veilino	67.2	Q200	1201.00	29.69	32.81	34.40	1.59	34.47	1.66	33.71	3.23	36.04	0.012383	7.97	150.77	70.66	1.53
Bisagno	Trens Veilino	67.2	Q500	1649.00	29.69	33.15	34.40	1.25	34.47	1.32	34.57	4.82	37.97	0.016029	9.73	169.54	70.66	1.76
Bisagno	Trens Veilino	67.11	Q50	730.00	29.77	31.57	34.38	2.81	34.52	2.95	32.33	2.55	34.12	0.020084	7.07	103.28	67.66	1.83
Bisagno	Trens Veilino	67.11	Q200	1201.00	29.77	32.09	34.38	2.29	34.52	2.43	33.23	3.85	35.94	0.021045	8.70	138.10	67.70	1.94
Bisagno	Trens Veilino	67.11	Q500	1649.00	29.77	32.40	34.38	1.98	34.52	2.12	34.01	5.46	37.86	0.024936	10.35	159.31	67.72	2.15
Bisagno	Trens Veilino	67.1	Q50	730.00	27.06	28.97	34.38	5.41	34.52	5.55	30.16	4.91	33.88	0.058218	9.81	74.39	67.58	2.99
Bisagno	Trens Veilino	67.1	Q200	1201.00	27.06	29.48	34.38	4.90	34.52	5.04	31.05	6.22	35.70	0.045394	11.05	108.69	67.58	2.78
Bisagno	Trens Veilino	67.1	Q500	1649.00	27.06	29.85	34.38	4.53	34.52	4.67	31.80	7.78	37.63	0.043779	12.36	133.46	67.58	2.81
Bisagno	Trens Veilino	66.	Q50	730.00	27.39	30.74	34.23	3.49	33.54	2.80	30.42	0.87	31.61	0.005448	4.13	176.64	67.97	0.82
Bisagno	Trens Veilino	66.	Q200	1201.00	27.39	30.68	34.23	3.55	33.54	2.86	31.33	2.47	33.15	0.015927	6.96	172.50	67.96	1.39
Bisagno	Trens Veilino	66.	Q500	1649.00	27.39	30.87	34.23	3.36	33.54	2.67	32.08	4.05	34.92	0.023969	8.92	184.88	68.00	1.73
Bisagno	Trens Veilino	65.	Q50	730.00	26.95	30.40	33.51	3.11	33.09	2.69	30.09	0.87	31.26	0.005542	4.12	177.12	69.77	0.83
Bisagno	Trens Veilino	65.	Q200	1201.00	26.95	31.37	33.51	2.14	33.09	1.72	30.98	1.22	32.59	0.005261	4.89	245.68	71.13	0.84
Bisagno	Trens Veilino	65.	Q500	1649.00	26.95	32.17	33.51	1.34	33.09	0.92	31.73	1.51	33.68	0.005136	5.45	302.56	72.45	0.85
Bisagno	Trens Veilino	64.	Q50	730.00	26.63	29.91	32.83	2.92	32.61	2.70	29.78	0.95	30.86	0.007133	4.32	169.04	74.24	0.91
Bisagno	Trens Veilino	64.	Q200	1201.00	26.63	31.12	32.83	1.71	32.61	1.49	30.63	1.09	32.21	0.004826	4.62	260.07	75.90	0.80
Bisagno	Trens Veilino	64.	Q500	1649.00	26.63	32.00	32.83	0.83	32.61	0.61	31.34	1.29	33.29	0.004413	5.04	327.18	77.62	0.78
Bisagno	Trens Veilino	63.4	Q50	730.00	25.60	29.95	33.84	3.89	33.85	3.90	29.30	0.60	30.55	0.003560	3.43	212.56	78.42	0.67
Bisagno	Trens Veilino	63.4	Q200	1201.00	25.60	31.22	33.84	2.62	33.85	2.63	30.14	0.74	31.96	0.002747	3.81	315.10	81.31	0.62
Bisagno	Trens Veilino	63.4	Q500	1649.00	25.60	32.12	33.84	1.72	33.85	1.73	30.81	0.92	33.04	0.002621	4.24	388.82	81.43	0.62
Bisagno	Trens Veilino	63.3	Q50	730.00	25.58	29.67	33.82	4.15	33.83	4.16	29.39	0.85	30.52	0.005729	4.08	178.91	78.33	0.83
Bisagno	Trens Veilino	63.3	Q200	1201.00	25.58	30.96	33.82	2.86	33.83	2.87	30.27	0.97	31.93	0.003909	4.36	275.59	81.28	0.73
Bisagno	Trens Veilino	63.3	Q500	1649.00	25.58	31.80	33.82	2.02	33.83	2.03	30.97	1.20	33.01	0.003746	4.86	339.63	81.39	0.73
Bisagno	Trens Veilino	63.25 BIS 63		Bridge														
Bisagno	Trens Veilino	63.2	Q50	730.00	25.56	29.64	33.80	4.16	33.81	4.17	29.37	0.85	30.50	0.005775	4.09	178.48	78.32	0.83
Bisagno	Trens Veilino	63.2	Q200	1201.00	25.56	30.94	33.80	2.86	33.81	2.87	30.25	0.97	31.91	0.003908	4.36	275.61	81.28	0.73
Bisagno	Trens Veilino	63.2	Q500	1649.00	25.56	31.76	33.80	2.04	33.81	2.05	30.95	1.22	32.97	0.003817	4.88	337.65	81.38	0.74
Bisagno	Trens Veilino	63.1	Q50	730.00	25.48	29.77	33.73	3.96	33.74	3.97	29.18	0.63	30.40	0.003854	3.52	207.47	78.40	0.69
Bisagno	Trens Veilino	63.1	Q200	1201.00	25.48	31.07	33.73	2.66	33.74	2.67	30.02	0.75	31.82	0.002820	3.84	312.55	81.30	0.63
Bisagno	Trens Veilino	63.1	Q500	1649.00	25.48	31.92	33.73	1.81	33.74	1.82	30.70	0.95	32.87	0.002774	4.32	382.04	81.42	0.64
Bisagno	Trens Veilino	62.	Q50	730.00	25.80	29.57	31.82	2.25	31.63	2.06	28.98	0.60	30.17	0.003822	3.45	211.88	82.47	0.69
Bisagno	Trens Veilino	62.	Q200	1201.00	25.80	30.98	31.82	0.84	31.63	0.65	29.79	0.67	31.65	0.002500	3.63	330.64	85.23	0.59
Bisagno	Trens Veilino	62.	Q500	1649.00	25.80	31.85	31.82	-0.03	31.63	-0.22	30.46	0.84	32.69	0.002430	4.07	405.39	86.00	0.60
Bisagno	Trens Veilino	61.	Q50	730.00	25.31	28.75	31.68	2.93	30.91	2.16	28.59	1.02	29.77	0.006735	4.48	162.87	65.74	0.91
Bisagno	Trens Veilino	61.	Q200	1201.00	25.31	30.45	31.68	1.23	30.91	0.46	29.54	0.94	31.39	0.003501	4.28	280.30	72.89	0.70
Bisagno	Trens Veilino	61.	Q500	1649.00	25.31	31.18	31.68	0.50	30.91	-0.27	30.33	1.24	32.42	0.003860	4.93	334.58	76.31	0.75

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Trens Veilino	60.	Q50	730.00	25.45	28.29	30.53	2.24	30.11	1.82	28.02	0.84	29.13	0.005785	4.07	179.57	75.15	0.84
Bisagno	Trens Veilino	60.	Q200	1201.00	25.45	30.45	30.53	0.08	30.11	-0.34	28.88	0.61	31.05	0.001922	3.45	348.34	80.96	0.53
Bisagno	Trens Veilino	60.	Q500	1649.00	25.45	31.21	30.53	-0.68	30.11	-1.10	29.59	0.83	32.03	0.002118	4.03	410.20	81.46	0.57
Bisagno	Trens Veilino	59.	Q50	730.00	23.81	27.66	29.50	1.84	28.98	1.32	27.34	0.85	28.50	0.005669	4.07	179.18	71.52	0.82
Bisagno	Trens Veilino	59.	Q200	1201.00	23.81	30.31	29.50	-0.81	28.98	-1.33	28.23	0.52	30.83	0.001420	3.20	376.90	75.86	0.45
Bisagno	Trens Veilino	59.	Q500	1649.00	23.81	31.03	29.50	-1.53	28.98	-2.05	28.95	0.75	31.78	0.001715	3.84	431.64	76.37	0.51
Bisagno	Trens Veilino	58.4	Q50	730.00	23.38	27.66	29.20	1.54	29.02	1.36	26.82	0.65	28.31	0.003126	3.59	203.60	63.04	0.64
Bisagno	Trens Veilino	58.4	Q200	1201.00	23.38	30.24	29.20	-1.04	29.02	-1.22	27.76	0.55	30.78	0.001283	3.28	366.27	63.04	0.43
Bisagno	Trens Veilino	58.4	Q500	1649.00	23.38	30.88	29.20	-1.68	29.02	-1.86	28.54	0.84	31.71	0.001736	4.06	406.64	63.04	0.51
Bisagno	Trens Veilino	58.3	Q50	730.00	23.36	27.39	29.20	1.81	29.02	1.63	26.93	0.89	28.28	0.004755	4.19	174.39	63.04	0.78
Bisagno	Trens Veilino	58.3	Q200	1201.00	23.36	30.16	29.20	-0.96	29.02	-1.14	27.92	0.62	30.78	0.001561	3.48	344.76	63.04	0.48
Bisagno	Trens Veilino	58.3	Q500	1649.00	23.36	30.75	29.20	-1.55	29.02	-1.73	28.80	0.95	31.70	0.002117	4.31	382.38	63.04	0.56
Bisagno	Trens Veilino	58.25 BIS 58		Bridge														
Bisagno	Trens Veilino	58.2	Q50	730.00	23.20	27.21	29.20	1.99	29.02	1.81	26.77	0.90	28.12	0.004855	4.21	173.21	63.04	0.78
Bisagno	Trens Veilino	58.2	Q200	1201.00	23.20	28.22	29.20	0.98	29.02	0.80	27.76	1.36	29.58	0.005074	5.16	232.54	63.04	0.83
Bisagno	Trens Veilino	58.2	Q500	1649.00	23.20	29.08	29.20	0.12	29.02	-0.06	28.65	1.69	30.77	0.005332	5.76	286.29	63.04	0.86
Bisagno	Trens Veilino	58.1	Q50	730.00	23.12	27.36	29.20	1.84	29.02	1.66	26.56	0.67	28.03	0.003237	3.63	201.34	63.04	0.65
Bisagno	Trens Veilino	58.1	Q200	1201.00	23.12	28.45	29.20	0.75	29.02	0.57	27.50	1.01	29.46	0.003399	4.45	269.93	63.04	0.69
Bisagno	Trens Veilino	58.1	Q500	1649.00	23.12	29.33	29.20	-0.13	29.02	-0.31	28.28	1.31	30.64	0.003512	5.06	325.65	63.04	0.71
Bisagno	Trens Veilino	57.	Q50	730.00	21.94	27.30	28.77	1.47	28.39	1.09	26.36	0.59	27.89	0.002914	3.39	215.05	69.72	0.62
Bisagno	Trens Veilino	57.	Q200	1201.00	21.94	28.45	28.77	0.32	28.39	-0.06	27.34	0.84	29.29	0.002894	4.06	296.04	71.52	0.63
Bisagno	Trens Veilino	57.	Q500	1649.00	21.94	29.39	28.77	-0.62	28.39	-1.00	28.07	1.05	30.45	0.002788	4.55	363.34	71.55	0.64
Bisagno	Trens Veilino	56.	Q50	730.00	22.34	27.04	28.46	1.42	28.00	0.96	26.23	0.65	27.69	0.003318	3.56	204.92	67.49	0.65
Bisagno	Trens Veilino	56.	Q200	1201.00	22.34	28.14	28.46	0.32	28.00	-0.14	27.19	0.94	29.08	0.003283	4.30	279.57	68.69	0.68
Bisagno	Trens Veilino	56.	Q500	1649.00	22.34	29.05	28.46	-0.59	28.00	-1.05	27.94	1.19	30.24	0.003193	4.83	342.11	68.74	0.69
Bisagno	Trens Veilino	55.4	Q50	730.00	21.80	27.03	28.55	1.52	28.54	1.51	25.85	0.50	27.53	0.002227	3.14	232.48	66.92	0.54
Bisagno	Trens Veilino	55.4	Q200	1201.00	21.80	28.13	28.55	0.42	28.54	0.41	26.76	0.78	28.92	0.002470	3.92	306.46	67.04	0.59
Bisagno	Trens Veilino	55.4	Q500	1649.00	21.80	29.04	28.55	-0.49	28.54	-0.50	27.51	1.03	30.07	0.002598	4.49	367.60	67.06	0.61
Bisagno	Trens Veilino	55.3	Q50	730.00	21.79	26.97	28.54	1.57	28.53	1.56	25.90	0.55	27.53	0.002505	3.29	222.07	66.92	0.57
Bisagno	Trens Veilino	55.3	Q200	1201.00	21.79	28.04	28.54	0.50	28.53	0.49	26.83	0.86	28.91	0.002807	4.12	291.81	67.03	0.62
Bisagno	Trens Veilino	55.3	Q500	1649.00	21.79	28.92	28.54	-0.38	28.53	-0.39	27.59	1.14	30.06	0.002976	4.72	349.16	67.06	0.65
Bisagno	Trens Veilino	55.25 BIS 55		Bridge														
Bisagno	Trens Veilino	55.2	Q50	730.00	21.77	26.96	28.52	1.56	28.51	1.55	25.88	0.55	27.51	0.002480	3.28	222.76	66.92	0.57
Bisagno	Trens Veilino	55.2	Q200	1201.00	21.77	28.03	28.52	0.49	28.51	0.48	26.81	0.86	28.89	0.002791	4.11	292.31	67.03	0.62
Bisagno	Trens Veilino	55.2	Q500	1649.00	21.77	28.88	28.52	-0.36	28.51	-0.37	27.57	1.14	30.03	0.003007	4.74	348.06	67.06	0.66
Bisagno	Trens Veilino	55.1	Q50	730.00	21.75	27.00	28.50	1.50	28.49	1.49	25.80	0.50	27.49	0.002191	3.12	233.66	66.93	0.53
Bisagno	Trens Veilino	55.1	Q200	1201.00	21.75	28.08	28.50	0.42	28.49	0.41	26.71	0.78	28.86	0.002474	3.92	306.28	67.05	0.59
Bisagno	Trens Veilino	55.1	Q500	1649.00	21.75	28.95	28.50	-0.45	28.49	-0.46	27.46	1.04	29.99	0.002666	4.52	364.66	67.07	0.62
Bisagno	Trens Veilino	54	Q50	730.00	22.59	25.96	27.79	1.83	27.32	1.36	25.96	1.13	27.09	0.007027	4.71	154.93	68.43	1.00
Bisagno	Trens Veilino	54	Q200	1201.00	22.59	26.85	27.79	0.94	27.32	0.47	26.85	1.57	28.42	0.006463	5.54	216.61	69.14	1.00
Bisagno	Trens Veilino	54	Q500	1649.00	22.59	27.59	27.79	0.20	27.32	-0.27	27.59	1.93	29.52	0.006182	6.16	267.84	69.50	1.00
Bisagno	Trens Veilino	53	Q50	730.00	21.77	25.28	27.18	1.90	26.93	1.65	25.24	1.11	26.39	0.006845	4.67	156.39	66.99	0.98
Bisagno	Trens Veilino	53	Q200	1201.00	21.77	26.34	27.18	0.84	26.93	0.59	26.15	1.42	27.76	0.005526	5.28	227.54	67.32	0.92
Bisagno	Trens Veilino	53	Q500	1649.00	21.77	27.23	27.18	-0.05	26.93	-0.30	26.90	1.67	28.91	0.004920	5.73	287.77	67.50	0.89

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Trens Veilino	52.	Q50	730.00	21.67	25.13	26.70	1.57	26.63	1.50	24.96	1.02	26.15	0.005677	4.48	163.11	64.77	0.90
Bisagno	Trens Veilino	52.	Q200	1201.00	21.67	26.20	26.70	0.50	26.63	0.43	25.89	1.36	27.56	0.004906	5.16	232.60	65.02	0.87
Bisagno	Trens Veilino	52.	Q500	1649.00	21.67	27.09	26.70	-0.39	26.63	-0.46	26.66	1.64	28.73	0.004560	5.68	290.44	65.13	0.86
Bisagno	Trens Veilino	51.	Q50	730.00	22.10	25.06	26.50	1.44	26.46	1.40	24.53	0.79	25.85	0.003679	3.93	185.82	64.50	0.74
Bisagno	Trens Veilino	51.	Q200	1201.00	22.10	26.11	26.50	0.39	26.46	0.35	25.46	1.14	27.25	0.003676	4.74	253.62	64.67	0.76
Bisagno	Trens Veilino	51.	Q500	1649.00	22.10	26.98	26.50	-0.48	26.46	-0.52	26.24	1.44	28.42	0.003668	5.32	309.96	64.73	0.78
Bisagno	Trens Veilino	50.	Q50	730.00	21.89	24.86	26.14	1.28	26.35	1.49	24.33	0.79	25.65	0.003759	3.95	184.83	64.25	0.74
Bisagno	Trens Veilino	50.	Q200	1201.00	21.89	25.90	26.14	0.24	26.35	0.45	25.27	1.16	27.06	0.003765	4.76	252.07	64.34	0.77
Bisagno	Trens Veilino	50.	Q500	1649.00	21.89	26.77	26.14	-0.63	26.35	-0.42	26.05	1.46	28.23	0.003764	5.36	307.88	64.38	0.78
Bisagno	Trens Veilino	49.2	Q50	730.00	21.69	24.45	25.86	1.41	26.29	1.84	24.20	0.98	25.43	0.005247	4.38	166.50	63.56	0.86
Bisagno	Trens Veilino	49.2	Q200	1201.00	21.69	25.44	25.86	0.42	26.29	0.85	25.14	1.39	26.83	0.005044	5.22	229.88	63.91	0.88
Bisagno	Trens Veilino	49.2	Q500	1649.00	21.69	26.29	25.86	-0.43	26.29	0.00	25.92	1.72	28.00	0.004845	5.80	284.14	64.02	0.88
Bisagno	Trens Veilino	49.1	Q50	730.00	21.69	24.45	25.86	1.41	26.29	1.84	24.20	0.98	25.43	0.005253	4.39	166.44	63.56	0.87
Bisagno	Trens Veilino	49.1	Q200	1201.00	21.69	25.44	25.86	0.42	26.29	0.85	25.14	1.39	26.83	0.005049	5.23	229.82	63.91	0.88
Bisagno	Trens Veilino	49.1	Q500	1649.00	21.69	26.29	25.86	-0.43	26.29	0.00	25.92	1.72	28.00	0.004848	5.80	284.08	64.02	0.88
Bisagno	Trens Veilino	49.	Q50	730.00	21.69	24.20	25.86	1.66	26.29	2.09	24.20	1.20	25.39	0.007244	4.85	150.59	63.27	1.00
Bisagno	Trens Veilino	49.	Q200	1201.00	21.69	25.14	25.86	0.72	26.29	1.15	25.14	1.65	26.80	0.006656	5.70	210.81	63.85	1.00
Bisagno	Trens Veilino	49.	Q500	1649.00	21.69	25.92	25.86	-0.06	26.29	0.37	25.92	2.04	27.96	0.006358	6.32	260.82	63.99	1.00
Bisagno	Trens Veilino	48.9	Q50	730.00	19.06	20.39	25.86	5.47	26.29	5.90	21.61	4.66	25.05	0.059676	9.56	76.37	57.38	2.64
Bisagno	Trens Veilino	48.9	Q200	1201.00	19.06	21.11	25.86	4.75	26.29	5.18	22.60	5.32	26.43	0.039626	10.22	117.51	57.38	2.28
Bisagno	Trens Veilino	48.9	Q500	1649.00	19.06	21.75	25.86	4.11	26.29	4.54	23.51	5.83	27.58	0.031111	10.70	154.09	57.38	2.08
Bisagno	Trens Veilino	48.	Q50	730.00	18.92	22.27	25.86	3.59	26.29	4.02	21.48	0.75	23.02	0.003061	3.84	190.34	56.77	0.67
Bisagno	Trens Veilino	48.	Q200	1201.00	18.92	23.52	25.86	2.34	26.29	2.77	22.57	1.03	24.55	0.003118	4.51	266.54	62.35	0.70
Bisagno	Trens Veilino	48.	Q500	1649.00	18.92	24.56	25.86	1.30	26.29	1.73	23.39	1.25	25.82	0.002962	4.96	332.39	63.78	0.69
Bisagno	Trens Veilino	47	Q50	730.00	18.77	22.12	25.75	3.63	26.19	4.07	21.33	0.75	22.86	0.003203	3.83	190.51	59.14	0.68
Bisagno	Trens Veilino	47	Q200	1201.00	18.77	23.36	25.75	2.39	26.19	2.83	22.37	1.04	24.40	0.003119	4.51	266.36	62.14	0.70
Bisagno	Trens Veilino	47	Q500	1649.00	18.77	24.42	25.75	1.33	26.19	1.77	23.23	1.25	25.67	0.002955	4.96	332.49	63.56	0.69
Bisagno	Trens Veilino	46	Q50	730.00	18.73	22.08	25.68	3.60	26.23	4.15	21.29	0.75	22.82	0.003298	3.83	190.70	60.81	0.69
Bisagno	Trens Veilino	46	Q200	1201.00	18.73	23.35	25.68	2.33	26.23	2.88	22.37	1.01	24.36	0.003028	4.45	269.70	62.90	0.69
Bisagno	Trens Veilino	46	Q500	1649.00	18.73	24.40	25.68	1.28	26.23	1.83	23.18	1.22	25.63	0.002842	4.90	336.44	63.32	0.68
Bisagno	Trens Veilino	45.1	Q50	730.00	18.67	22.21	25.80	3.59	26.35	4.14	21.00	0.51	22.71	0.001899	3.15	231.75	65.51	0.53
Bisagno	Trens Veilino	45.1	Q200	1201.00	18.67	23.50	25.80	2.30	26.35	2.85	21.92	0.73	24.23	0.001907	3.80	316.45	65.51	0.55
Bisagno	Trens Veilino	45.1	Q500	1649.00	18.67	24.57	25.80	1.23	26.35	1.78	22.68	0.93	25.50	0.001913	4.26	386.72	65.51	0.56
Bisagno	Trens Veilino	45		Bridge														
Bisagno	Trens Veilino	44.9	Q50	730.00	18.66	21.95	25.80	3.85	26.35	4.40	20.99	0.58	22.53	0.002396	3.39	215.57	65.51	0.60
Bisagno	Trens Veilino	44.9	Q200	1201.00	18.66	23.14	25.80	2.66	26.35	3.21	21.91	0.85	23.99	0.002421	4.09	293.50	65.51	0.62
Bisagno	Trens Veilino	44.9	Q500	1649.00	18.66	24.12	25.80	1.68	26.35	2.23	22.67	1.08	25.21	0.002438	4.61	357.95	65.51	0.63
Bisagno	Trens Veilino	44	Q50	730.00	18.45	21.29	25.38	4.09	26.16	4.87	21.02	1.00	22.28	0.004973	4.43	164.96	60.78	0.86
Bisagno	Trens Veilino	44	Q200	1201.00	18.45	22.22	25.38	3.16	26.16	3.94	21.99	1.49	23.71	0.005212	5.41	221.86	61.00	0.91
Bisagno	Trens Veilino	44	Q500	1649.00	18.45	22.98	25.38	2.40	26.16	3.18	22.80	1.93	24.91	0.005384	6.15	268.18	61.17	0.94
Bisagno	Trens Veilino	43	Q50	730.00	18.34	21.29	25.21	3.92	26.12	4.83	20.76	0.77	22.06	0.003602	3.89	187.86	66.69	0.74
Bisagno	Trens Veilino	43	Q200	1201.00	18.34	22.34	25.21	2.87	26.12	3.78	21.69	1.10	23.44	0.003560	4.65	258.39	67.93	0.76
Bisagno	Trens Veilino	43	Q500	1649.00	18.34	23.21	25.21	2.00	26.12	2.91	22.45	1.37	24.58	0.003490	5.19	317.86	68.46	0.77
Bisagno	Trens Veilino	42.2	Q50	730.00	18.31	21.05	25.36	4.31	26.13	5.08	20.81	0.96	22.02	0.005036	4.35	167.95	65.53	0.87
Bisagno	Trens Veilino	42.2	Q200	1201.00	18.31	22.04	25.36	3.32	26.13	4.09	21.75	1.35	23.39	0.004805	5.15	233.07	66.57	0.88

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Trens Veilino	42.2	Q500	1649.00	18.31	22.88	25.36	2.48	26.13	3.25	22.52	1.65	24.53	0.004601	5.69	289.65	67.77	0.88
Bisagno	Trens Veilino	42.1	Q50	730.00	18.31	21.05	25.36	4.31	26.13	5.08	20.81	0.96	22.02	0.005042	4.35	167.88	65.52	0.87
Bisagno	Trens Veilino	42.1	Q200	1201.00	18.31	22.04	25.36	3.32	26.13	4.09	21.75	1.35	23.39	0.004809	5.15	233.01	66.57	0.88
Bisagno	Trens Veilino	42.1	Q500	1649.00	18.31	22.88	25.36	2.48	26.13	3.25	22.52	1.65	24.53	0.004604	5.69	289.59	67.77	0.88
Bisagno	Trens Veilino	42	Q50	730.00	18.31	20.81	25.36	4.55	26.13	5.32	20.81	1.17	21.99	0.006879	4.80	152.13	64.87	1.00
Bisagno	Trens Veilino	42	Q200	1201.00	18.31	21.75	25.36	3.61	26.13	4.38	21.75	1.61	23.35	0.006335	5.62	213.80	66.51	1.00
Bisagno	Trens Veilino	42	Q500	1649.00	18.31	22.52	25.36	2.84	26.13	3.61	22.52	1.97	24.49	0.006073	6.21	265.38	67.54	1.00
Bisagno	Trens Veilino	41.9	Q50	730.00	17.15	20.11	25.32	5.21	26.13	6.02	20.55	1.81	21.92	0.011995	5.96	122.40	57.02	1.30
Bisagno	Trens Veilino	41.9	Q200	1201.00	17.15	21.12	25.32	4.20	26.13	5.01	21.56	2.18	23.30	0.010034	6.54	183.69	64.58	1.24
Bisagno	Trens Veilino	41.9	Q500	1649.00	17.15	21.87	25.32	3.45	26.13	4.26	22.35	2.55	24.43	0.008912	7.08	232.87	65.25	1.20
Bisagno	Trens Veilino	41	Q50	730.00	17.10	20.19	25.27	5.08	26.08	5.89	20.50	1.61	21.80	0.010041	5.62	129.94	57.86	1.20
Bisagno	Trens Veilino	41	Q200	1201.00	17.10	21.16	25.27	4.11	26.08	4.92	21.51	2.04	23.20	0.009133	6.33	189.63	65.08	1.18
Bisagno	Trens Veilino	41	Q500	1649.00	17.10	21.82	25.27	3.45	26.08	4.26	22.30	2.57	24.38	0.008976	7.10	232.35	65.24	1.20
Bisagno	Veil Fereggiano	40.	Q50	696.00	17.54	20.56	25.35	4.79	25.97	5.41	20.55	1.14	21.70	0.007254	4.74	146.85	64.00	1.00
Bisagno	Veil Fereggiano	40.	Q200	1147.00	17.54	22.32	25.35	3.03	25.97	3.65	21.48	0.98	23.30	0.003164	4.38	261.96	65.80	0.70
Bisagno	Veil Fereggiano	40.	Q500	1573.00	17.54	23.25	25.35	2.10	25.97	2.72	22.22	1.21	24.46	0.003074	4.88	322.57	65.80	0.70
Bisagno	Veil Fereggiano	39.	Q50	696.00	17.24	20.56	24.70	4.14	24.40	3.84	19.75	0.61	21.17	0.002735	3.47	200.59	65.30	0.63
Bisagno	Veil Fereggiano	39.	Q200	1147.00	17.24	22.35	24.70	2.35	24.40	2.05	20.64	0.66	23.01	0.001710	3.61	317.78	65.30	0.52
Bisagno	Veil Fereggiano	39.	Q500	1573.00	17.24	23.28	24.70	1.42	24.40	1.12	21.38	0.88	24.16	0.001858	4.16	378.37	65.30	0.55
Bisagno	Veil Fereggiano	38.	Q50	696.00	17.24	20.46	23.60	3.14	23.60	3.14	19.80	0.70	21.16	0.004424	3.70	187.87	63.20	0.69
Bisagno	Veil Fereggiano	38.	Q200	1147.00	17.24	22.27	23.60	1.33	23.60	1.33	20.71	0.73	23.01	0.003013	3.79	302.64	63.20	0.55
Bisagno	Veil Fereggiano	38.	Q500	1573.00	17.24	23.17	23.60	0.43	23.60	0.43	21.47	0.98	24.15	0.003502	4.38	359.33	63.20	0.59
Bisagno	Veil Fereggiano	37.	Q50	696.00	16.00	19.23	21.10	1.87	21.10	1.87	18.45	0.60	19.83	0.003711	3.44	202.37	68.00	0.64
Bisagno	Veil Fereggiano	37.	Q200	1147.00	16.00	21.63	21.10	-0.53	21.10	-0.53	19.32	0.53	22.16	0.002970	3.23	355.33	27.67	0.43
Bisagno	Veil Fereggiano	37.	Q500	1573.00	16.00	21.81	21.10	-0.71	21.10	-0.71	20.04	0.98	22.79	0.006070	4.38	359.08	14.14	0.58
Bisagno	Veil Fereggiano	36.	Q50	696.00	16.00	19.32	22.20	2.88	21.80	2.48	18.16	0.46	19.77	0.001837	2.99	232.62	70.10	0.52
Bisagno	Veil Fereggiano	36.	Q200	1147.00	16.00	21.71	22.20	0.49	21.80	0.09	19.01	0.42	22.13	0.000887	2.87	400.01	70.10	0.38
Bisagno	Veil Fereggiano	36.	Q500	1573.00	16.00	21.99	22.20	0.21	21.80	-0.19	19.72	0.72	22.70	0.001436	3.75	419.59	70.10	0.49
Bisagno	Veil Fereggiano	35.3	Q50	696.00	15.18	18.90	21.00	2.10	21.00	2.10	18.13	0.59	19.49	0.002774	3.40	204.84	70.00	0.63
Bisagno	Veil Fereggiano	35.3	Q200	1147.00	15.18	21.57	21.00	-0.57	21.00	-0.57	18.99	0.44	22.01	0.000948	2.93	391.97	70.00	0.39
Bisagno	Veil Fereggiano	35.3	Q500	1573.00	15.18	21.73	21.00	-0.73	21.00	-0.73	19.69	0.78	22.51	0.001635	3.90	402.94	70.00	0.52
Bisagno	Veil Fereggiano	35.2	Q50	696.00	15.18	18.89	21.00	2.11	21.00	2.11	18.13	0.59	19.49	0.002796	3.41	204.34	70.00	0.64
Bisagno	Veil Fereggiano	35.2	Q200	1147.00	15.18	21.57	21.00	-0.57	21.00	-0.57	18.99	0.44	22.01	0.000949	2.93	391.89	70.00	0.39
Bisagno	Veil Fereggiano	35.2	Q500	1573.00	15.18	21.73	21.00	-0.73	21.00	-0.73	19.69	0.78	22.51	0.001637	3.91	402.77	70.00	0.52
Bisagno	Veil Fereggiano	35.11 BIS 35		Bridge														
Bisagno	Veil Fereggiano	35.1	Q50	696.00	15.18	17.69	21.00	3.31	21.00	3.31	18.13	1.70	19.40	0.015644	5.78	120.35	70.00	1.41
Bisagno	Veil Fereggiano	35.1	Q200	1147.00	15.18	19.33	21.00	1.67	21.00	1.67	18.99	1.21	20.55	0.004827	4.88	235.17	70.00	0.85
Bisagno	Veil Fereggiano	35.1	Q500	1573.00	15.18	20.08	21.00	0.92	21.00	0.92	19.69	1.52	21.61	0.004761	5.47	287.63	70.00	0.86
Bisagno	Veil Fereggiano	35.	Q50	696.00	15.18	17.88	21.00	3.12	21.00	3.12	18.13	1.38	19.27	0.011122	5.21	133.60	70.00	1.20
Bisagno	Veil Fereggiano	35.	Q200	1147.00	15.18	18.99	21.00	2.01	21.00	2.01	18.99	1.51	20.49	0.006856	5.44	210.91	70.00	1.00
Bisagno	Veil Fereggiano	35.	Q500	1573.00	15.18	19.69	21.00	1.31	21.00	1.31	19.69	1.86	21.55	0.006553	6.04	260.30	70.00	1.00
Bisagno	Veil Fereggiano	34.	Q50	696.00	13.87	18.04	20.26	2.22	20.45	2.41	17.05	0.52	18.56	0.002148	3.19	218.47	69.00	0.57
Bisagno	Veil Fereggiano	34.	Q200	1147.00	13.87	19.10	20.26	1.16	20.45	1.35	17.92	0.79	19.89	0.002303	3.93	292.00	69.00	0.61
Bisagno	Veil Fereggiano	34.	Q500	1573.00	13.87	20.00	20.26	0.26	20.45	0.45	18.63	1.01	21.00	0.002362	4.45	353.55	69.00	0.63

HEC-RAS Plan: Prelim2017 (Continued)

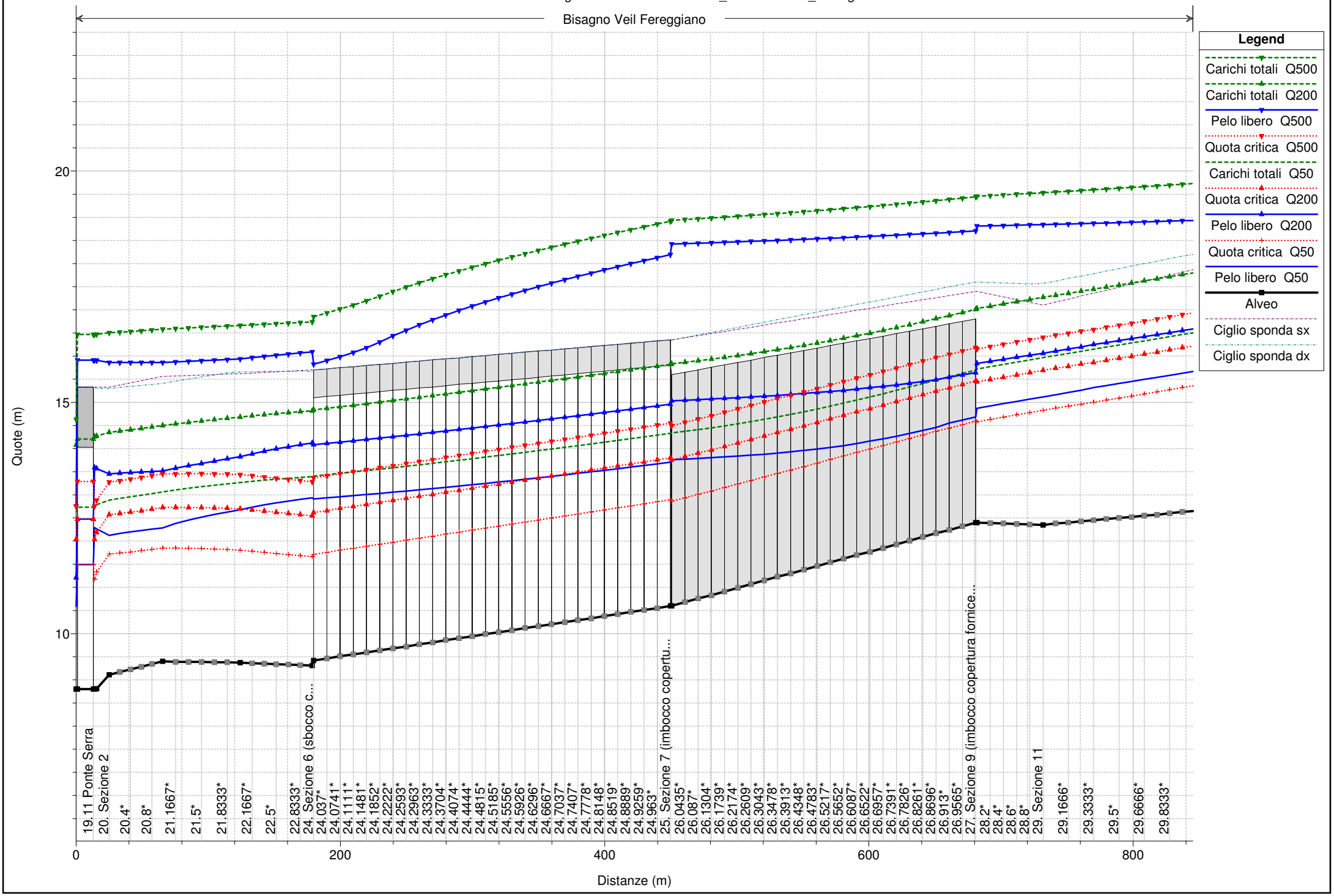
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	Vel Head	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Bisagno	Veil Fereggiano	33.	Q50	696.00	13.77	17.66	19.30	1.64	19.60	1.94	16.88	0.61	18.26	0.002750	3.45	201.65	69.00	0.64
Bisagno	Veil Fereggiano	33.	Q200	1147.00	13.77	18.68	19.30	0.62	19.60	0.92	17.77	0.90	19.58	0.002848	4.21	272.28	69.00	0.68
Bisagno	Veil Fereggiano	33.	Q500	1573.00	13.77	19.56	19.30	-0.26	19.60	0.04	18.49	1.14	20.70	0.002822	4.72	333.12	69.00	0.69
Bisagno	Veil Fereggiano	32.3	Q50	696.00	14.09	17.35	18.50	1.15	19.20	1.85	16.92	0.76	18.11	0.003930	3.86	180.28	69.10	0.76
Bisagno	Veil Fereggiano	32.3	Q200	1147.00	14.09	18.36	18.50	0.14	19.20	0.84	17.78	1.08	19.43	0.003744	4.60	249.59	69.10	0.77
Bisagno	Veil Fereggiano	32.3	Q500	1573.00	14.09	19.26	18.50	-0.76	19.20	-0.06	18.49	1.30	20.55	0.003466	5.05	311.71	69.10	0.76
Bisagno	Veil Fereggiano	32.2	Q50	696.00	14.09	17.34	18.50	1.16	19.20	1.86	16.92	0.77	18.11	0.003978	3.88	179.60	69.10	0.77
Bisagno	Veil Fereggiano	32.2	Q200	1147.00	14.09	18.35	18.50	0.15	19.20	0.85	17.78	1.08	19.43	0.003775	4.61	248.95	69.10	0.77
Bisagno	Veil Fereggiano	32.2	Q500	1573.00	14.09	19.25	18.50	-0.75	19.20	-0.05	18.49	1.30	20.55	0.003481	5.05	311.28	69.10	0.76
Bisagno	Veil Fereggiano	32.11 BIS 32		Bridge														
Bisagno	Veil Fereggiano	32.1	Q50	696.00	14.09	16.70	18.50	1.80	19.20	2.50	16.92	1.35	18.05	0.010002	5.15	135.22	69.10	1.17
Bisagno	Veil Fereggiano	32.1	Q200	1147.00	14.09	17.48	18.50	1.02	19.20	1.72	17.78	1.87	19.35	0.009114	6.06	189.30	69.10	1.17
Bisagno	Veil Fereggiano	32.1	Q500	1573.00	14.09	18.82	18.50	-0.32	19.20	0.38	18.49	1.59	20.41	0.004785	5.58	281.66	69.10	0.88
Bisagno	Veil Fereggiano	32.	Q50	696.00	14.09	16.72	18.50	1.78	19.20	2.48	16.92	1.32	18.04	0.009670	5.09	136.63	69.10	1.16
Bisagno	Veil Fereggiano	32.	Q200	1147.00	14.09	17.51	18.50	0.99	19.20	1.69	17.78	1.84	19.35	0.008891	6.01	190.76	69.10	1.16
Bisagno	Veil Fereggiano	32.	Q500	1573.00	14.09	18.58	18.50	-0.08	19.20	0.62	18.49	1.79	20.37	0.005805	5.93	265.12	69.10	0.97
Bisagno	Veil Fereggiano	31.	Q50	696.00	12.75	15.42	18.49	3.07	18.80	3.38	15.96	1.90	17.31	0.016110	6.10	114.09	64.64	1.47
Bisagno	Veil Fereggiano	31.	Q200	1147.00	12.75	16.13	18.49	2.36	18.80	2.67	16.82	2.54	18.67	0.014969	7.06	162.40	69.00	1.47
Bisagno	Veil Fereggiano	31.	Q500	1573.00	12.75	18.96	18.49	-0.47	18.80	-0.16	17.53	0.99	19.94	0.002244	4.40	357.62	69.00	0.62
Bisagno	Veil Fereggiano	30.	Q50	696.00	12.65	15.67	17.88	2.21	18.20	2.53	15.37	0.84	16.51	0.004694	4.05	171.79	69.00	0.82
Bisagno	Veil Fereggiano	30.	Q200	1147.00	12.65	16.59	17.88	1.29	18.20	1.61	16.23	1.21	17.80	0.004620	4.88	235.28	69.00	0.84
Bisagno	Veil Fereggiano	30.	Q500	1573.00	12.65	18.93	17.88	-1.05	18.20	-0.73	16.94	0.80	19.73	0.001652	3.97	396.70	69.00	0.53
Bisagno	Veil Fereggiano	29.	Q50	696.00	12.35	15.12	17.10	1.98	17.57	2.45	14.83	0.85	15.97	0.004824	4.09	170.23	69.00	0.83
Bisagno	Veil Fereggiano	29.	Q200	1147.00	12.35	16.06	17.10	1.04	17.57	1.51	15.69	1.21	17.27	0.004591	4.87	235.58	69.00	0.84
Bisagno	Veil Fereggiano	29.	Q500	1573.00	12.35	18.84	17.10	-1.74	17.57	-1.27	16.40	0.69	19.53	0.001305	3.68	427.37	69.00	0.47
Bisagno	Veil Fereggiano	28.	Q50	696.00	12.40	14.87	17.40	2.53	17.60	2.73	14.58	0.85	15.72	0.004930	4.08	170.43	69.00	0.83
Bisagno	Veil Fereggiano	28.	Q200	1147.00	12.40	15.84	17.40	1.56	17.60	1.76	15.44	1.19	17.03	0.004583	4.83	237.54	69.00	0.83
Bisagno	Veil Fereggiano	28.	Q500	1573.00	12.40	18.81	17.40	-1.41	17.60	-1.21	16.15	0.64	19.45	0.001200	3.56	442.33	69.00	0.45
Bisagno	Veil Fereggiano	27.	Q50	696.00	12.40	14.68	12.40	-2.28	16.50	1.82	14.59	1.02	15.70	0.007052	4.46	155.92	68.30	0.94
Bisagno	Veil Fereggiano	27.	Q200	1147.00	12.40	15.64	12.40	-3.24	16.50	0.86	15.46	1.37	17.01	0.006339	5.18	221.51	68.30	0.92
Bisagno	Veil Fereggiano	27.	Q500	1573.00	12.40	18.71	12.40	-6.31	16.50	-2.21	16.18	0.74	19.44	0.002564	3.80	413.78	69.00	0.48
Bisagno	Veil Fereggiano	26.	Q50	696.00	10.60	13.76	10.60	-3.16	15.25	1.49	12.86	0.58	14.34	0.002785	3.37	206.69	65.40	0.60
Bisagno	Veil Fereggiano	26.	Q200	1147.00	10.60	15.03	10.60	-4.43	15.25	0.22	13.75	0.80	15.83	0.002664	3.96	289.90	65.40	0.60
Bisagno	Veil Fereggiano	26.	Q500	1573.00	10.60	18.42	10.60	-7.82	15.25	-3.17	14.49	0.51	18.94	0.001430	3.18	495.11	66.10	0.36
Bisagno	Veil Fereggiano	25.	Q50	696.00	10.60	13.71	15.25	1.54	15.25	1.54	12.89	0.62	14.33	0.003774	3.50	198.73	64.00	0.63
Bisagno	Veil Fereggiano	25.	Q200	1147.00	10.60	14.96	15.25	0.29	15.25	0.29	13.80	0.86	15.82	0.003814	4.11	279.02	64.00	0.63
Bisagno	Veil Fereggiano	25.	Q500	1573.00	10.60	18.19	15.25	-2.94	15.25	-2.94	14.55	0.72	18.91	0.005850	3.76	418.51	66.10	0.44
Bisagno	Veil Fereggiano	24.	Q50	696.00	9.42	12.91	14.60	1.69	14.60	1.69	11.71	0.49	13.41	0.002669	3.11	223.53	64.00	0.53
Bisagno	Veil Fereggiano	24.	Q200	1147.00	9.42	14.08	14.60	0.52	14.60	0.52	12.62	0.75	14.84	0.003146	3.84	298.52	64.00	0.57
Bisagno	Veil Fereggiano	24.	Q500	1573.00	9.42	15.83	14.60	-1.23	14.60	-1.23	13.37	1.03	16.85	0.007773	4.49	349.95	13.35	0.57
Bisagno	Veil Fereggiano	23.	Q50	696.00	9.31	12.94	15.70	2.76	15.66	2.72	11.66	0.46	13.39	0.001716	2.99	232.50	66.10	0.51
Bisagno	Veil Fereggiano	23.	Q200	1147.00	9.31	14.12	15.70	1.58	15.66	1.54	12.55	0.69	14.82	0.001846	3.69	310.92	66.10	0.54
Bisagno	Veil Fereggiano	23.	Q500	1573.00	9.31	16.09	15.70	-0.39	15.66	-0.43	13.28	0.65	16.74	0.001160	3.57	440.87	66.10	0.44
Bisagno	Veil Fereggiano	22.	Q50	696.00	9.37	12.68	15.62	2.94	15.66	2.98	11.80	0.59	13.27	0.002544	3.40	204.91	65.30	0.61
Bisagno	Veil Fereggiano	22.	Q200	1147.00	9.37	13.83	15.62	1.79	15.66	1.83	12.70	0.86	14.68	0.002552	4.10	279.81	65.30	0.63

HEC-RAS Plan: Prelim2017 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Veil Fereggiano	22.	Q500	1573.00	9.37	15.94	15.62	-0.32	15.66	-0.28	13.44	0.72	16.66	0.001358	3.76	417.82	65.30	0.48
Bisagno	Veil Fereggiano	21.	Q50	696.00	9.40	12.29	15.56	3.27	15.41	3.12	11.85	0.78	13.06	0.004096	3.90	178.34	67.20	0.76
Bisagno	Veil Fereggiano	21.	Q200	1147.00	9.40	13.52	15.56	2.04	15.41	1.89	12.73	0.98	14.50	0.003267	4.39	261.05	67.20	0.71
Bisagno	Veil Fereggiano	21.	Q500	1573.00	9.40	15.86	15.56	-0.30	15.41	-0.45	13.45	0.72	16.58	0.001382	3.76	418.54	67.20	0.48
Bisagno	Veil Fereggiano	20.	Q50	696.00	9.11	12.12	15.33	3.21	15.30	3.18	11.72	0.76	12.89	0.004187	3.87	179.89	70.40	0.77
Bisagno	Veil Fereggiano	20.	Q200	1147.00	9.11	13.45	15.33	1.88	15.30	1.85	12.57	0.90	14.35	0.002947	4.19	273.50	70.40	0.68
Bisagno	Veil Fereggiano	20.	Q500	1573.00	9.11	15.86	15.33	-0.53	15.30	-0.56	13.27	0.64	16.50	0.001204	3.55	443.00	70.40	0.45
Bisagno	Veil Fereggiano	19.3	Q50	696.00	8.81	12.26	15.33	3.07	15.30	3.04	11.33	0.52	12.79	0.002289	3.21	216.83	70.40	0.58
Bisagno	Veil Fereggiano	19.3	Q200	1147.00	8.81	13.57	15.33	1.76	15.30	1.73	12.19	0.70	14.27	0.002004	3.72	308.65	70.40	0.57
Bisagno	Veil Fereggiano	19.3	Q500	1573.00	8.81	15.91	15.33	-0.58	15.30	-0.61	12.89	0.56	16.47	0.000978	3.32	473.49	70.40	0.41
Bisagno	Veil Fereggiano	19.2	Q50	696.00	8.80	12.29	15.33	3.04	15.33	3.04	11.18	0.48	12.77	0.001924	3.06	227.26	68.95	0.54
Bisagno	Veil Fereggiano	19.2	Q200	1147.00	8.80	13.59	15.33	1.74	15.33	1.74	12.04	0.67	14.26	0.001810	3.62	316.63	68.95	0.54
Bisagno	Veil Fereggiano	19.2	Q500	1573.00	8.80	15.91	15.33	-0.58	15.33	-0.58	12.75	0.55	16.47	0.000940	3.30	476.86	68.95	0.40
Bisagno	Veil Fereggiano	19.11 BIS 19		Bridge														
Bisagno	Veil Fereggiano	19.1	Q50	696.00	8.80	10.59	15.33	4.74	15.33	4.74	11.18	2.05	12.64	0.020504	6.35	109.69	68.95	1.61
Bisagno	Veil Fereggiano	19.1	Q200	1147.00	8.80	11.21	15.33	4.12	15.33	4.12	12.04	2.86	14.08	0.018801	7.50	152.98	68.95	1.61
Bisagno	Veil Fereggiano	19.1	Q500	1573.00	8.80	12.75	15.33	2.58	15.33	2.58	12.75	1.88	14.63	0.006449	6.07	259.15	68.95	1.00

Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

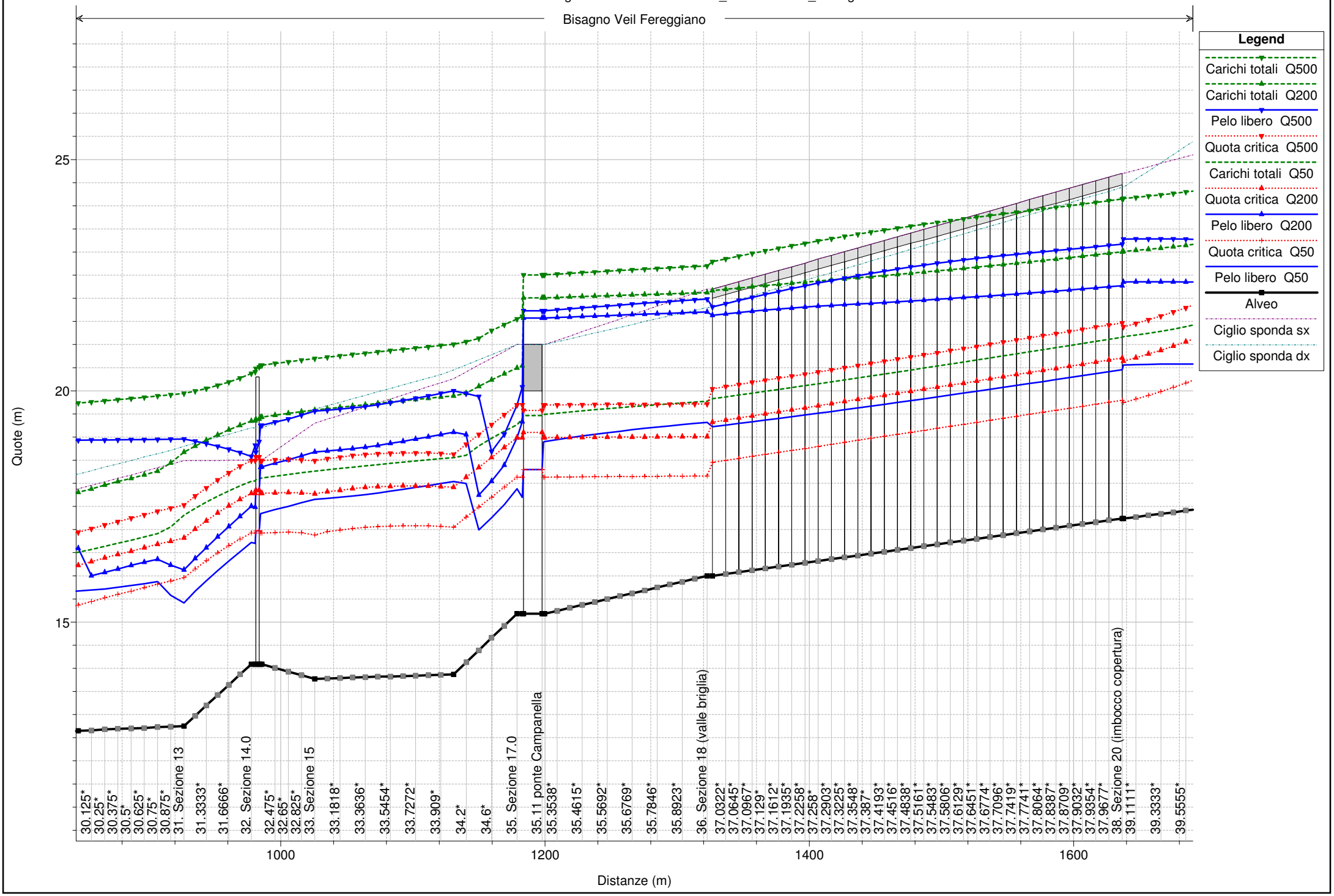
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia



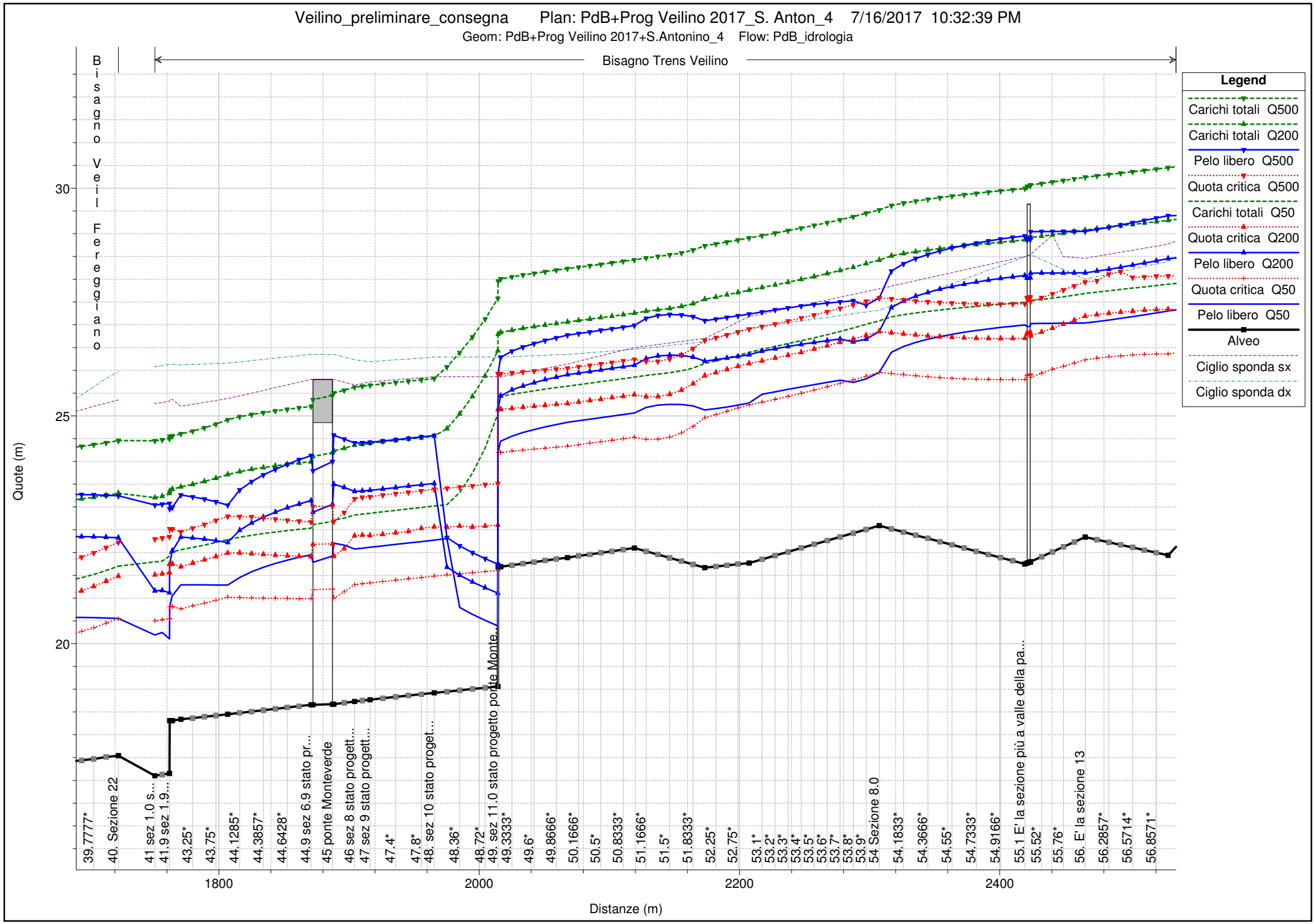
1 cm Horiz. = 35 m 1 cm Vert. = 1 m

Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia



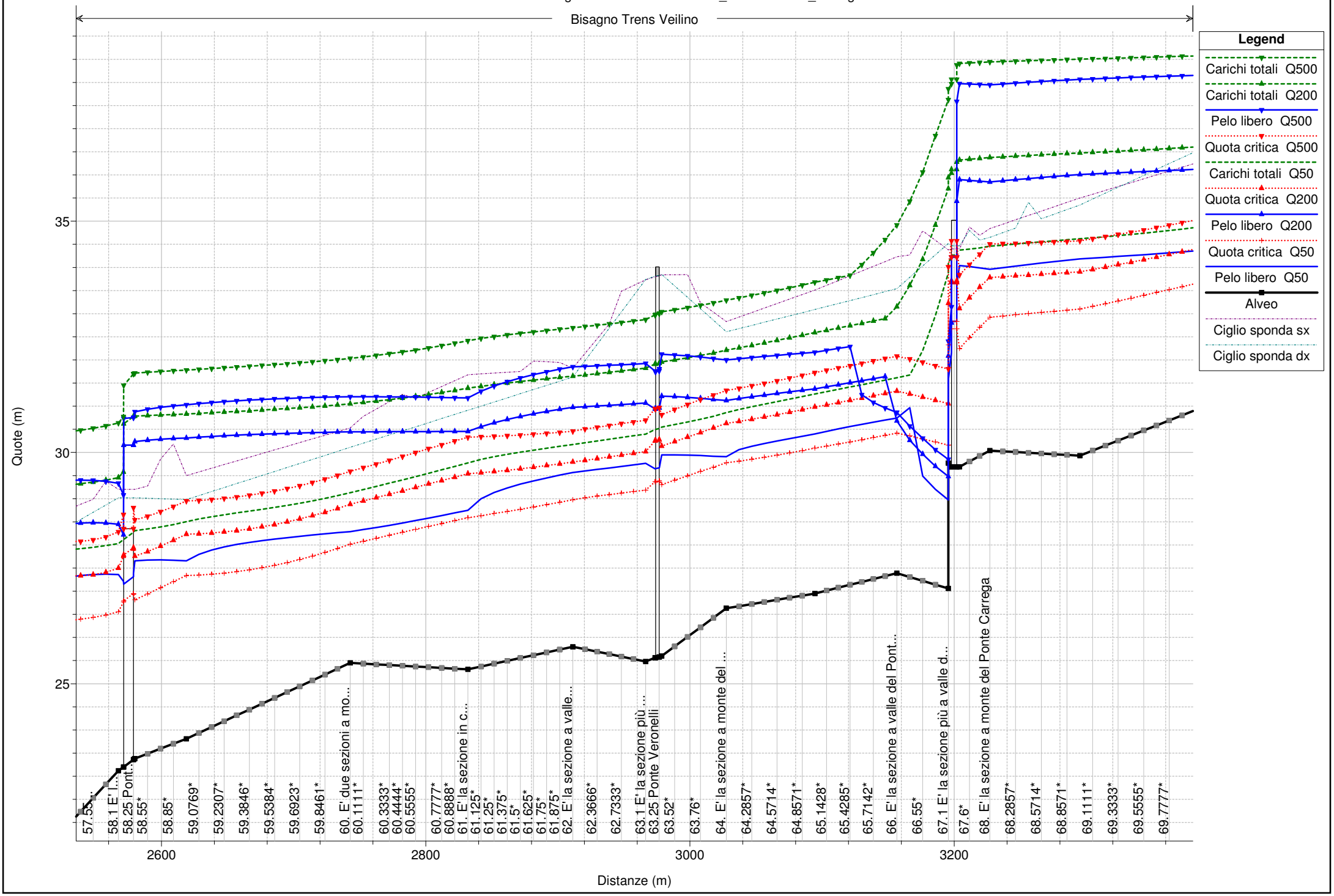
1 cm Horiz. = 35 m 1 cm Vert. = 1 m



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

Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

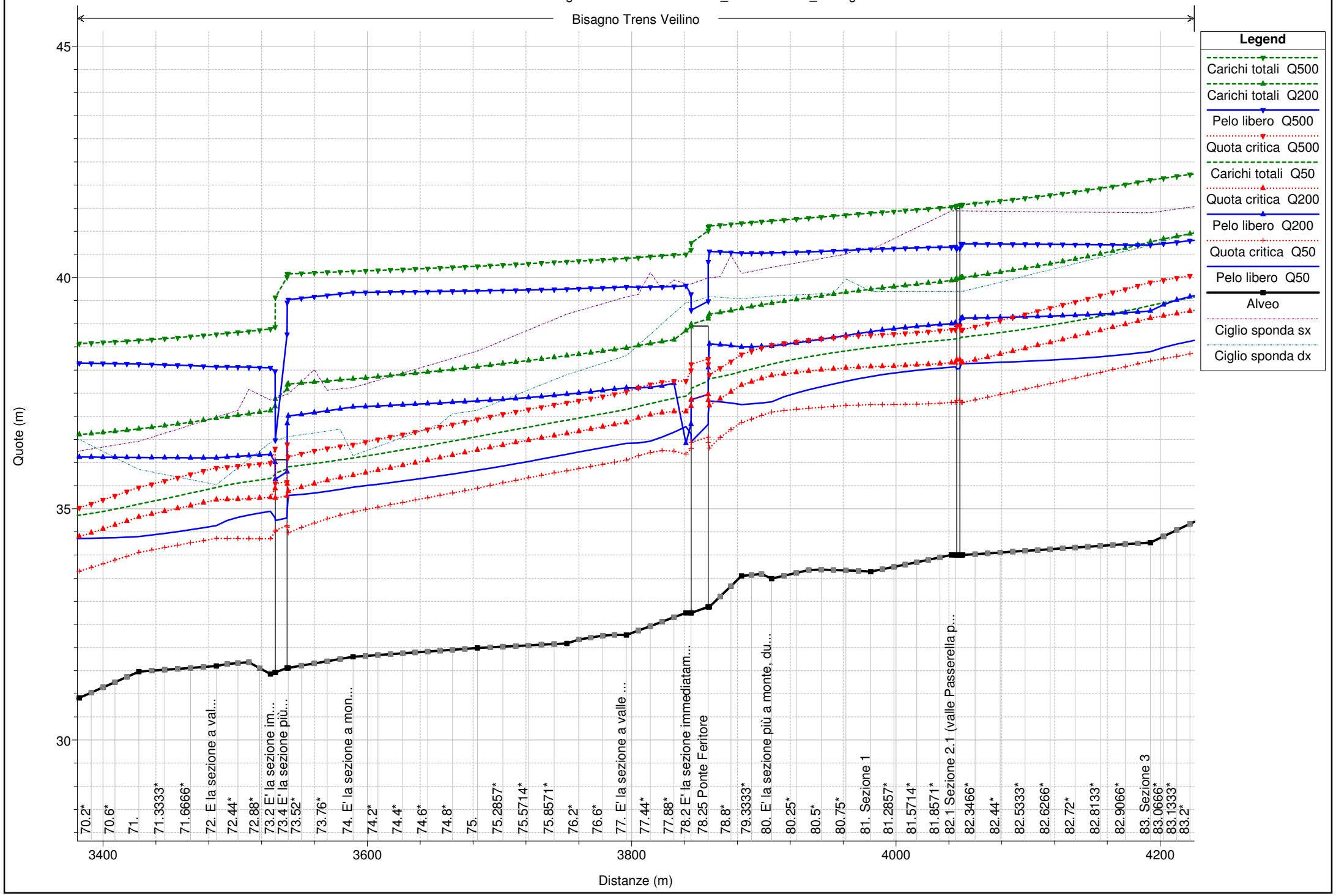
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia



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

Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

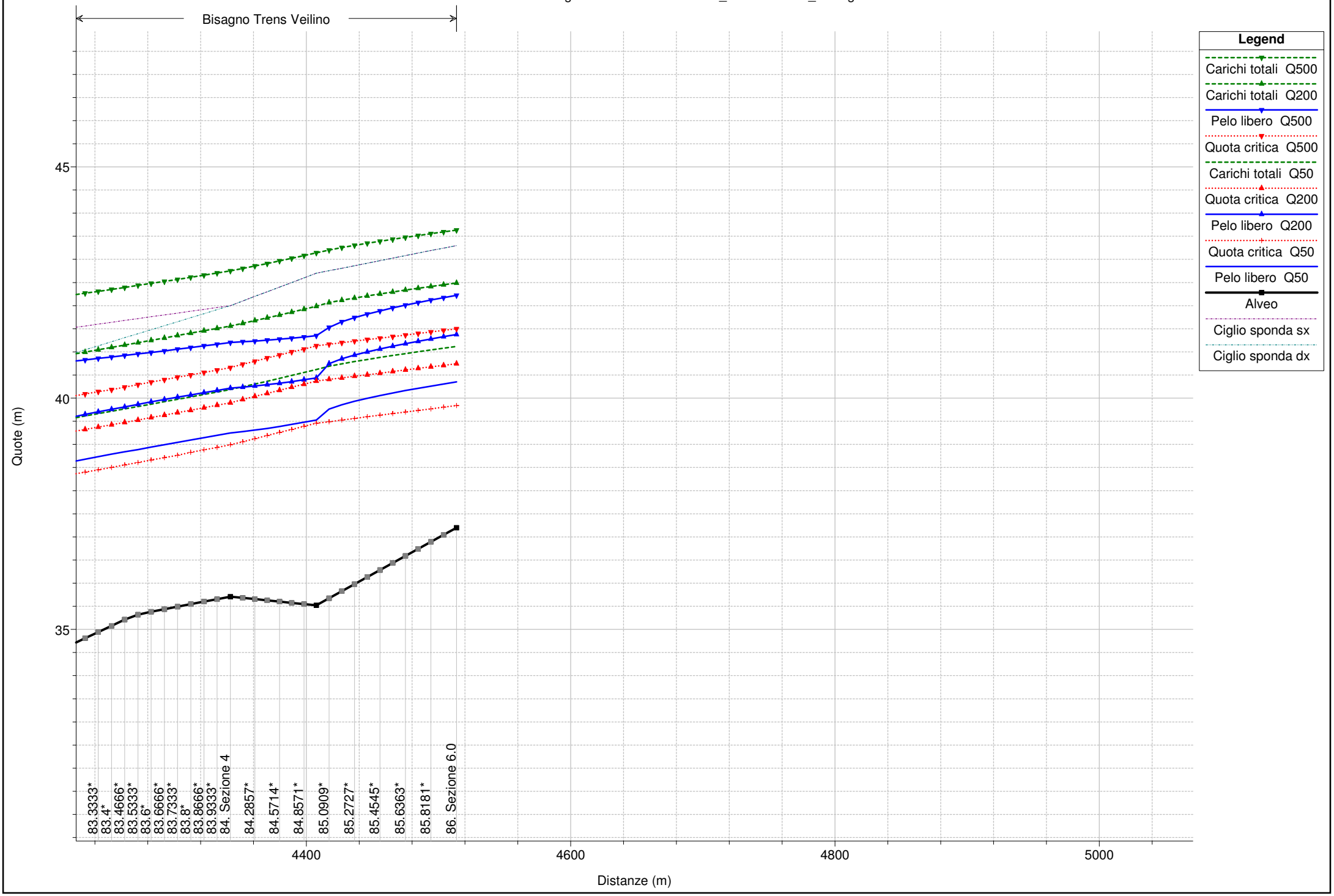
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia



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

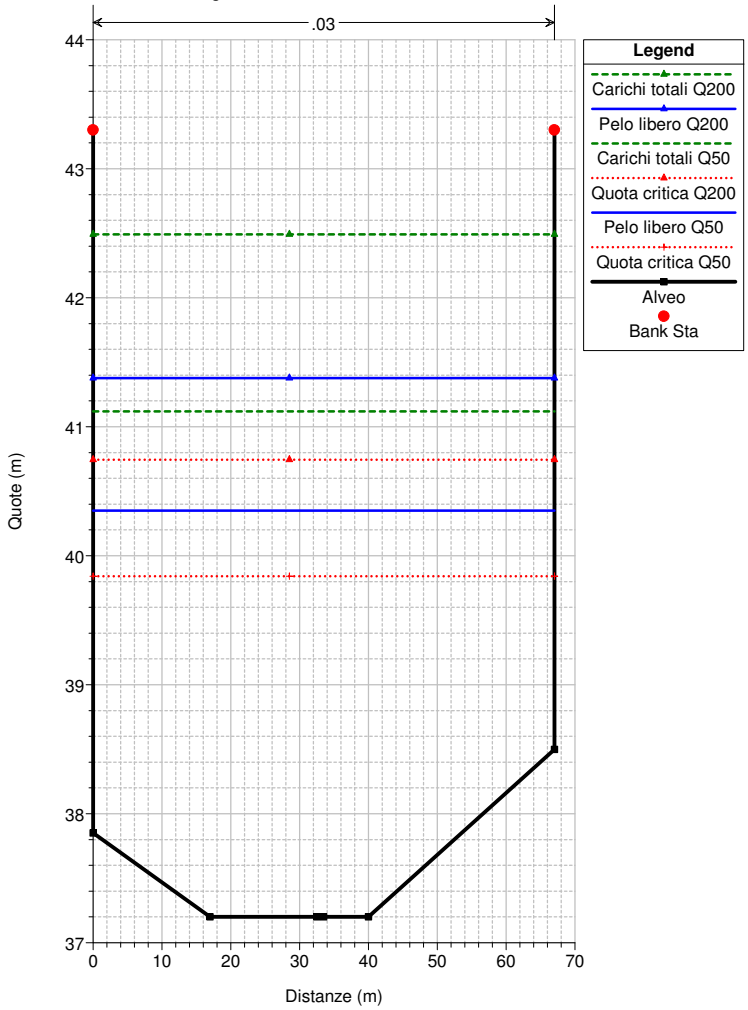
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia



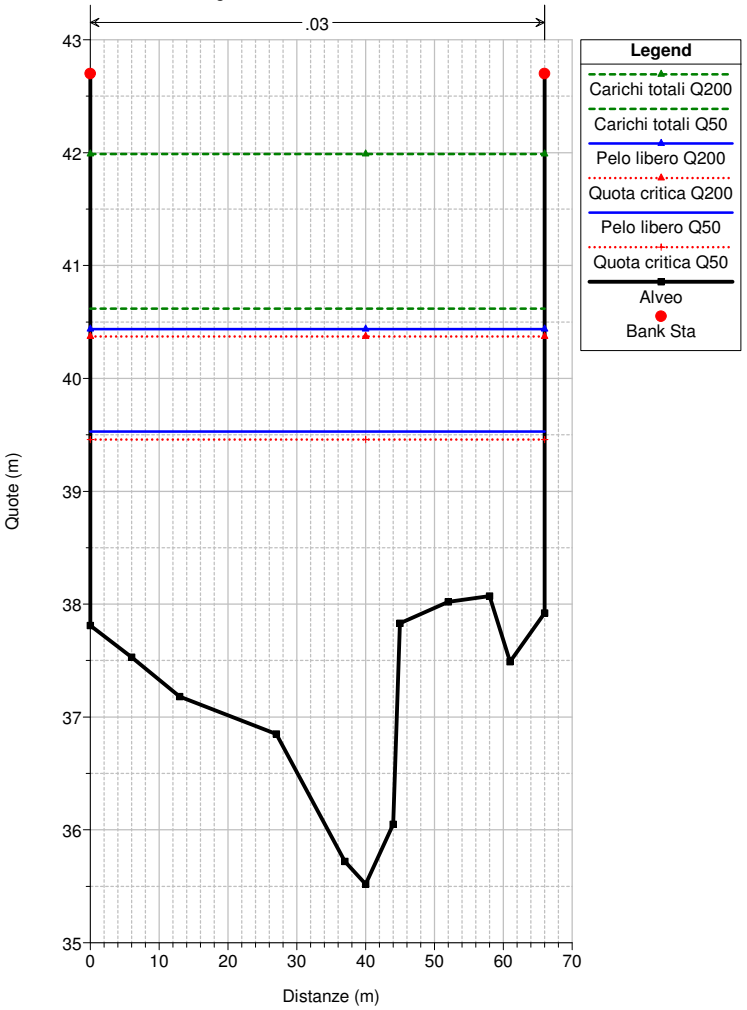
1 cm Horiz. = 35 m 1 cm Vert. = 1 m

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Bisagno Reach = Trens Veilino RS = 86. Sezione 6.0



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Bisagno Reach = Trens Veilino RS = 85. Sezione 5



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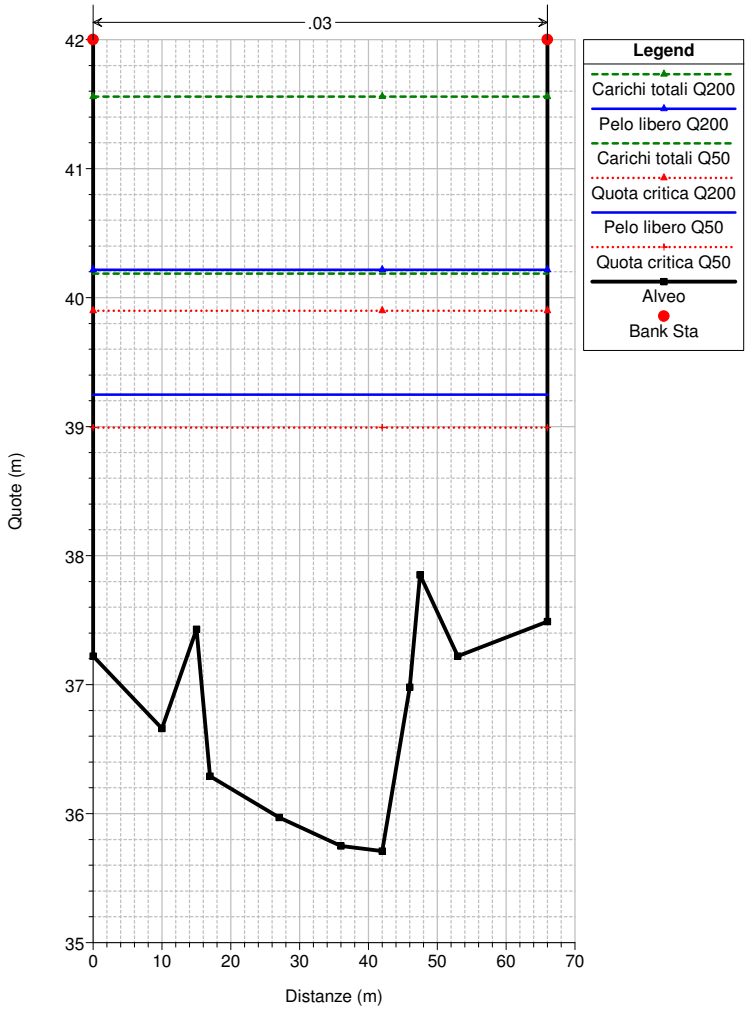
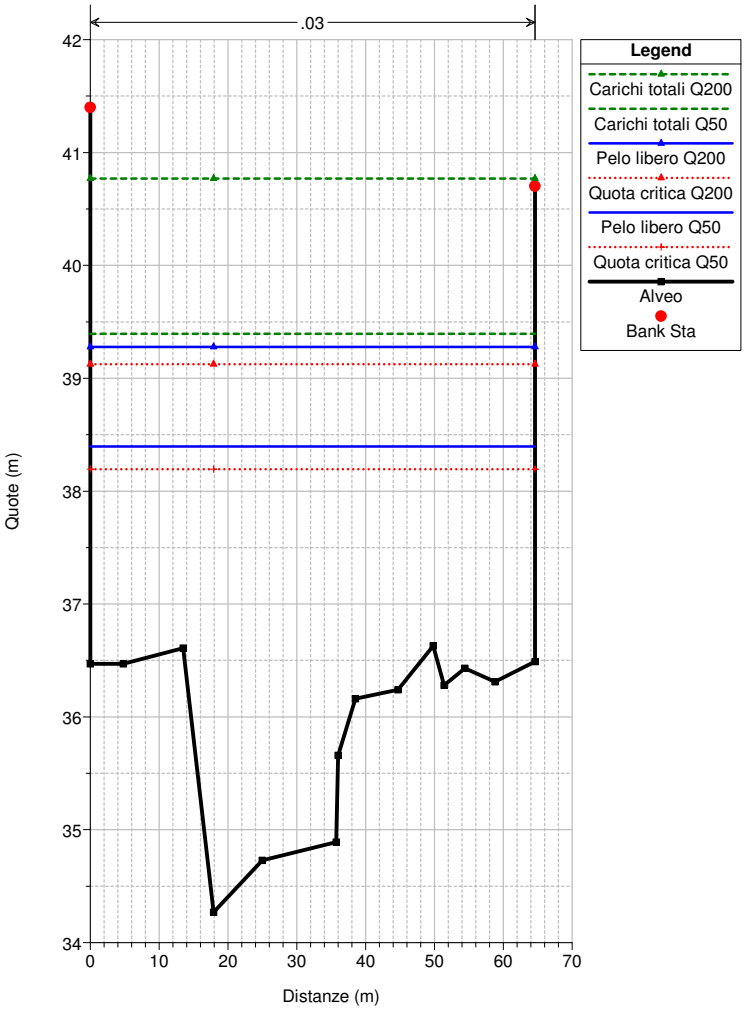
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Bisagno Reach = Trens Veilino RS = 84. Sezione 4



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

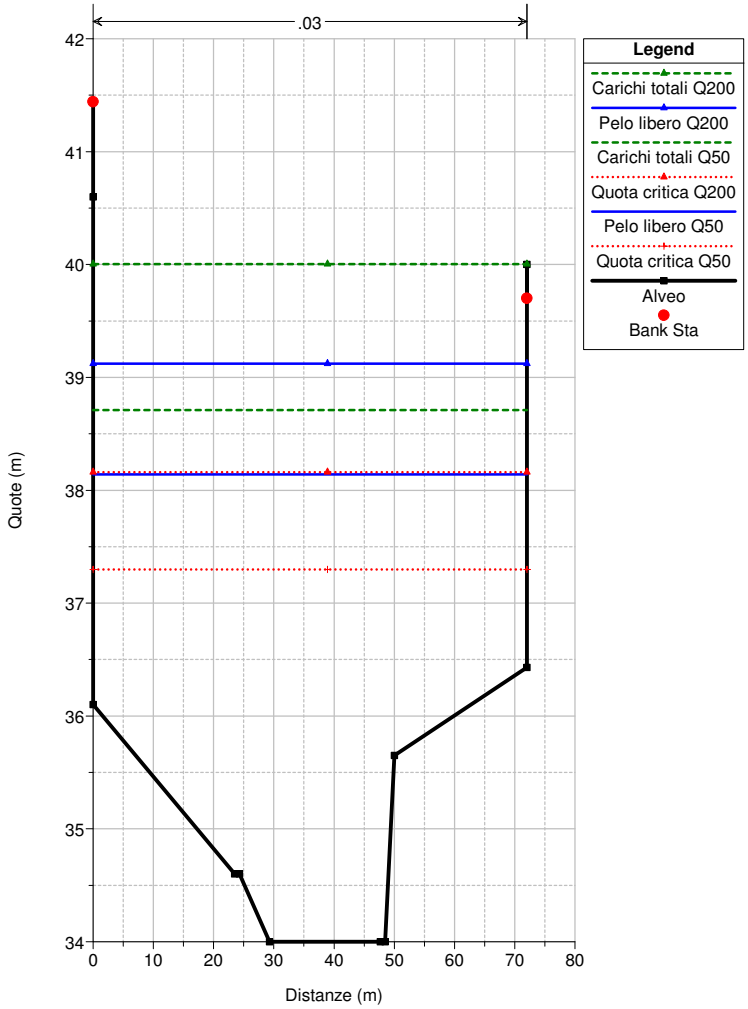
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Bisagno Reach = Trens Veilino RS = 83. Sezione 3



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

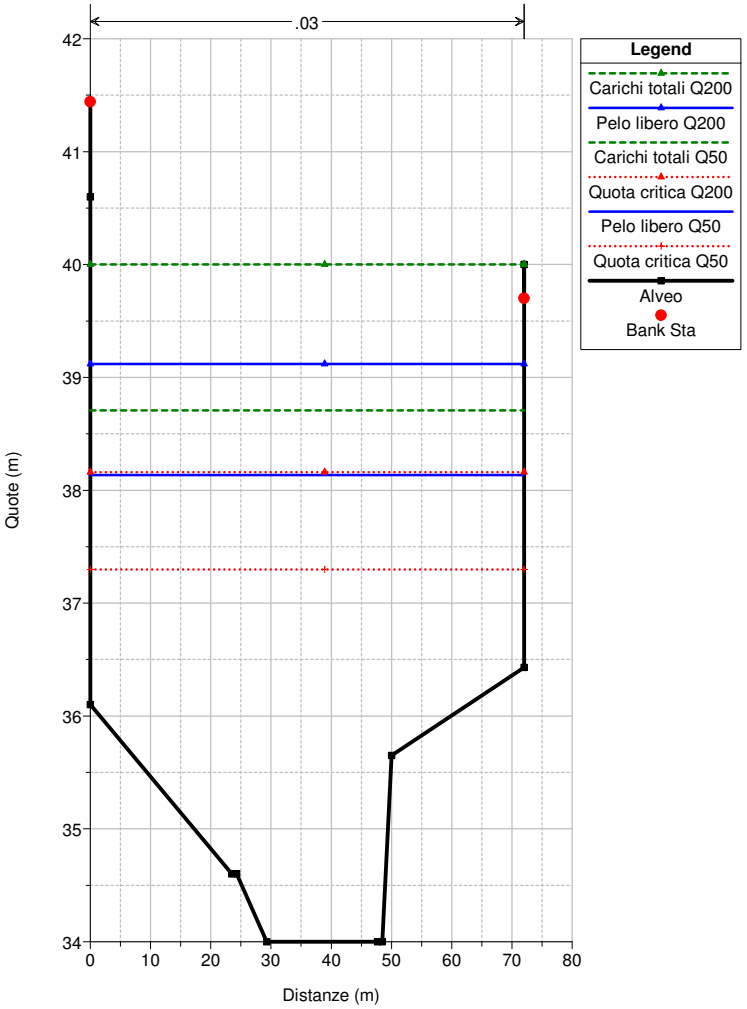
River = Bisagno Reach = Trens Veilino RS = 82.3 Sezione 2.3



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

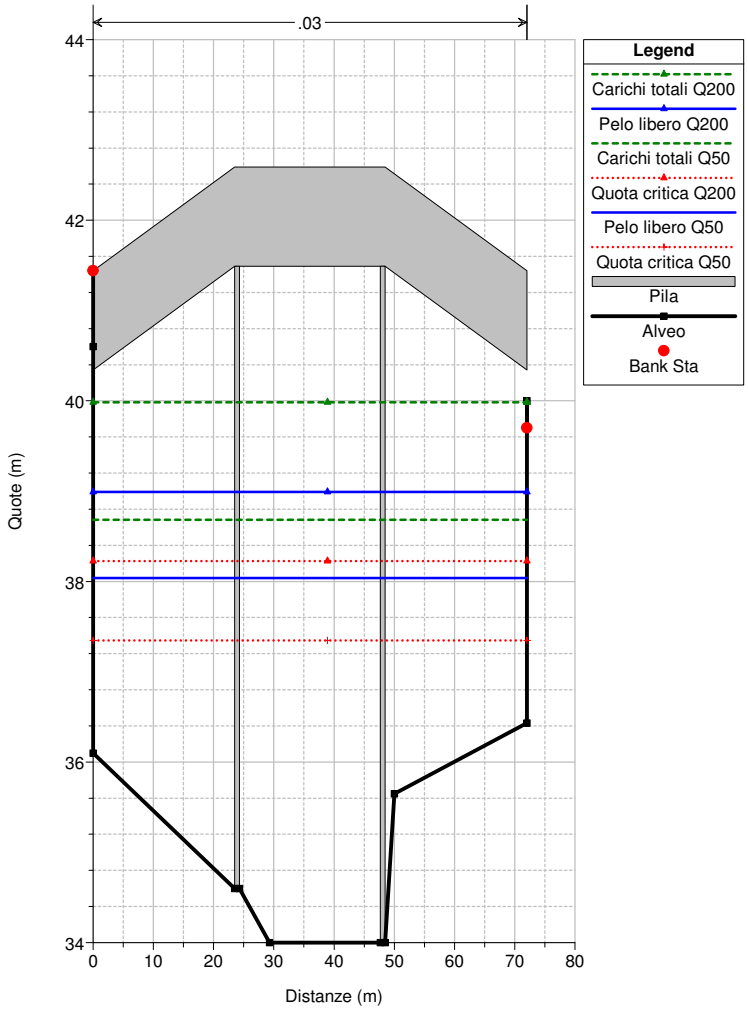
River = Bisagno Reach = Trens Veilino RS = 82.2 Sezione 2.2 (monte Passerella pedonale)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

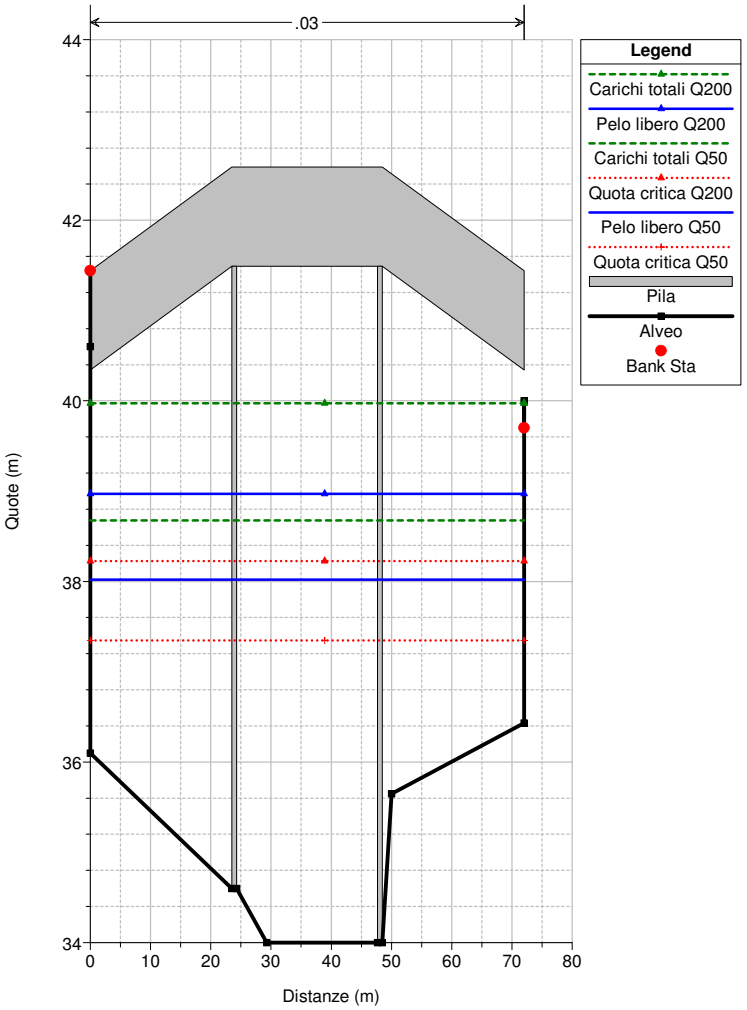
River = Bisagno Reach = Trens Veilino RS = 82.11 BR BIS 82 Passerella pedonale



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

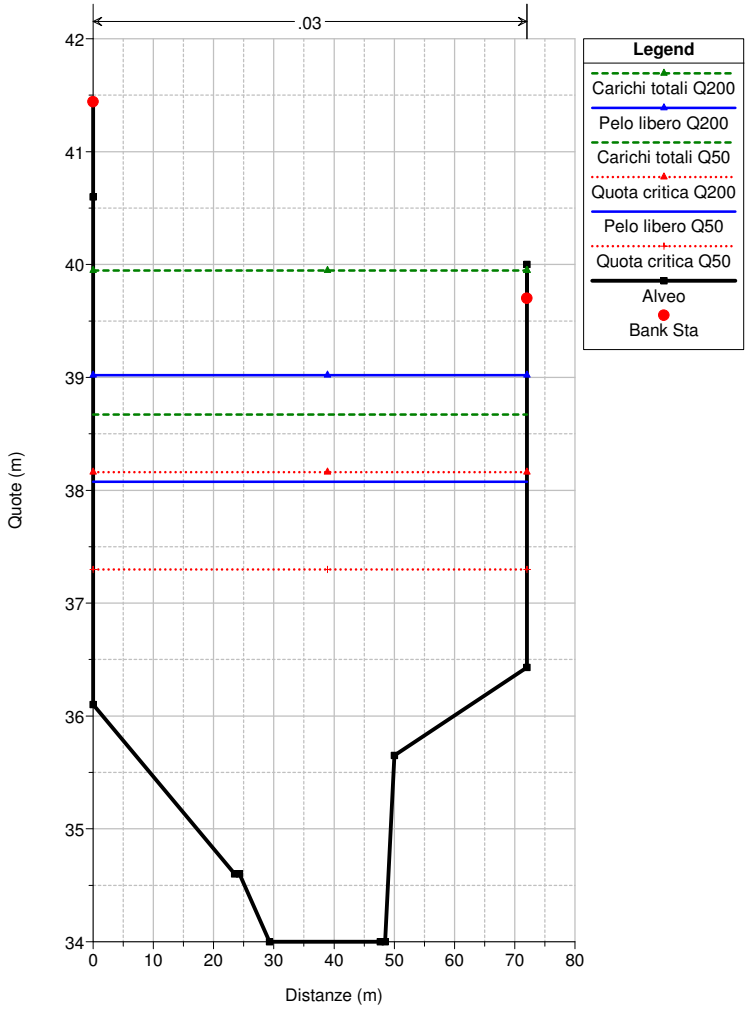
River = Bisagno Reach = Trens Veilino RS = 82.11 BR BIS 82 Passerella pedonale



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

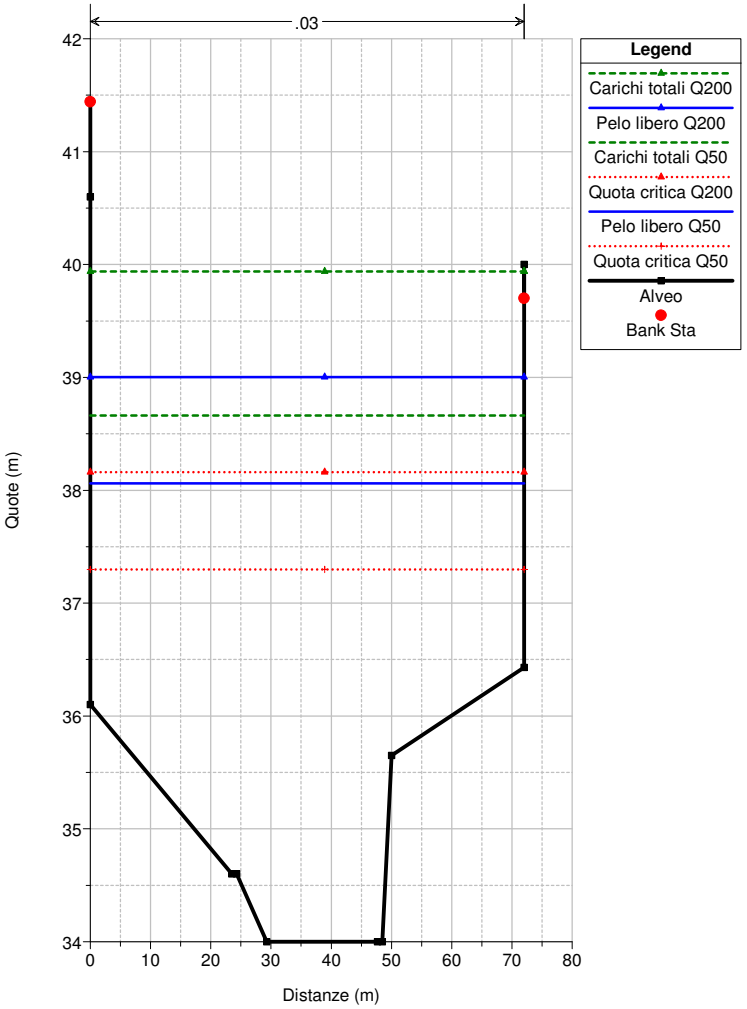
River = Bisagno Reach = Trens Veilino RS = 82.1 Sezione 2.1 (valle Passerella pedonale)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

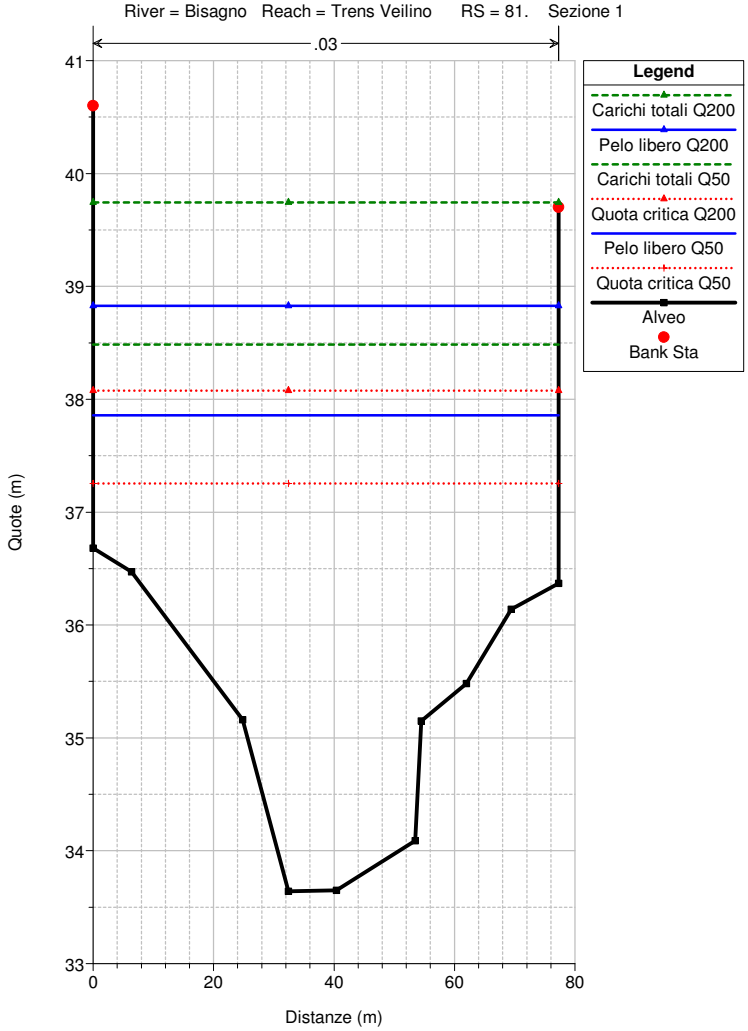
River = Bisagno Reach = Trens Veilino RS = 82. Sezione 2.0



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

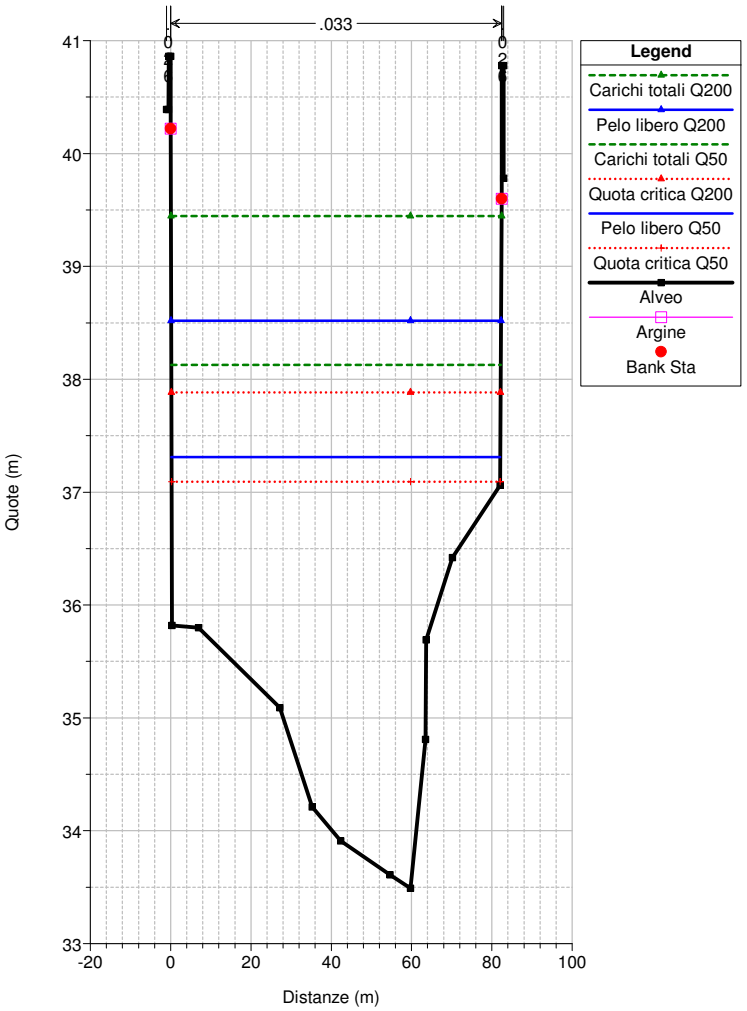
River = Bisagno Reach = Trens Veilino RS = 81. Sezione 1



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

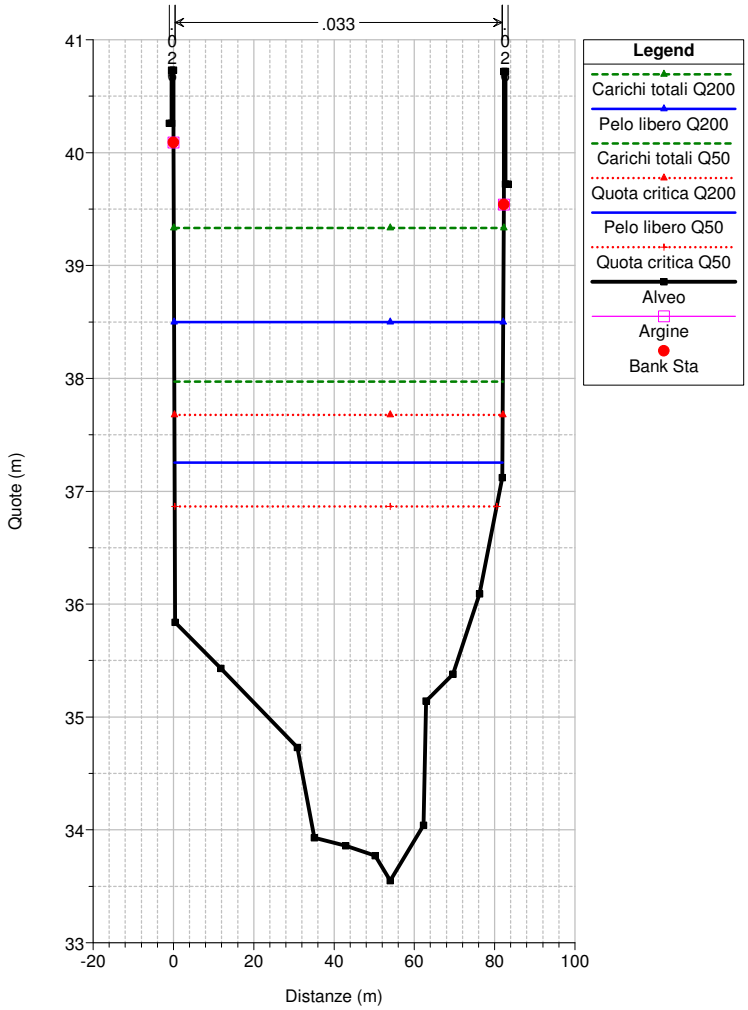
River = Bisagno Reach = Trens Veilino RS = 80. E' la sezione più a monte, due a monte del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

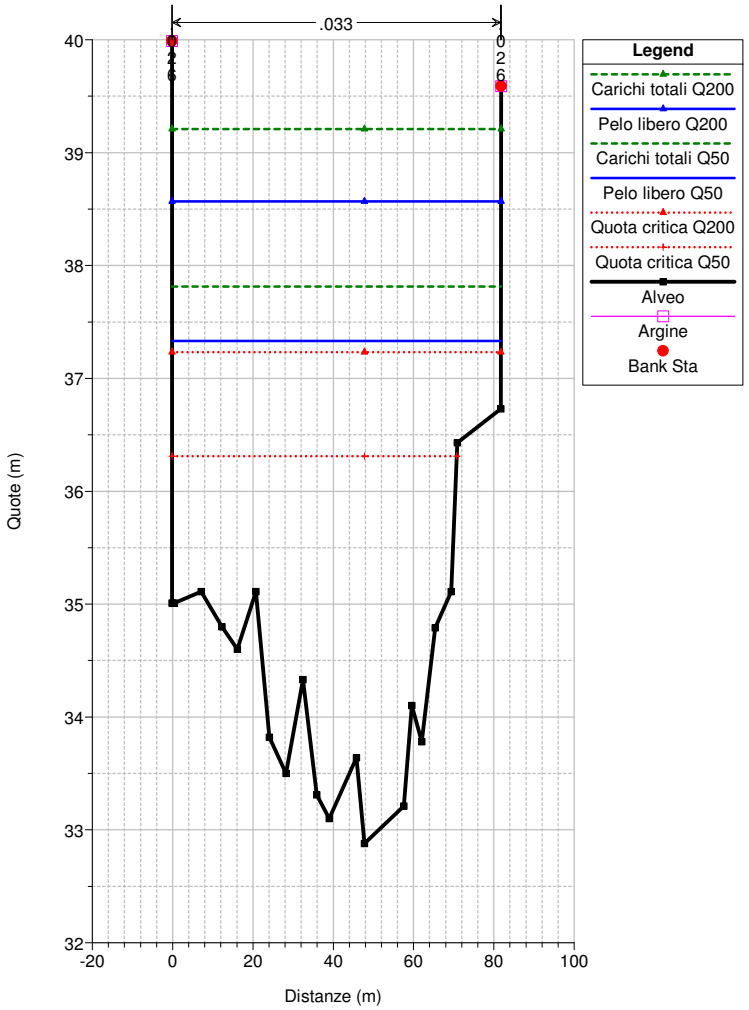
River = Bisagno Reach = Trens Veilino RS = 79. E' la sezione a monte del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

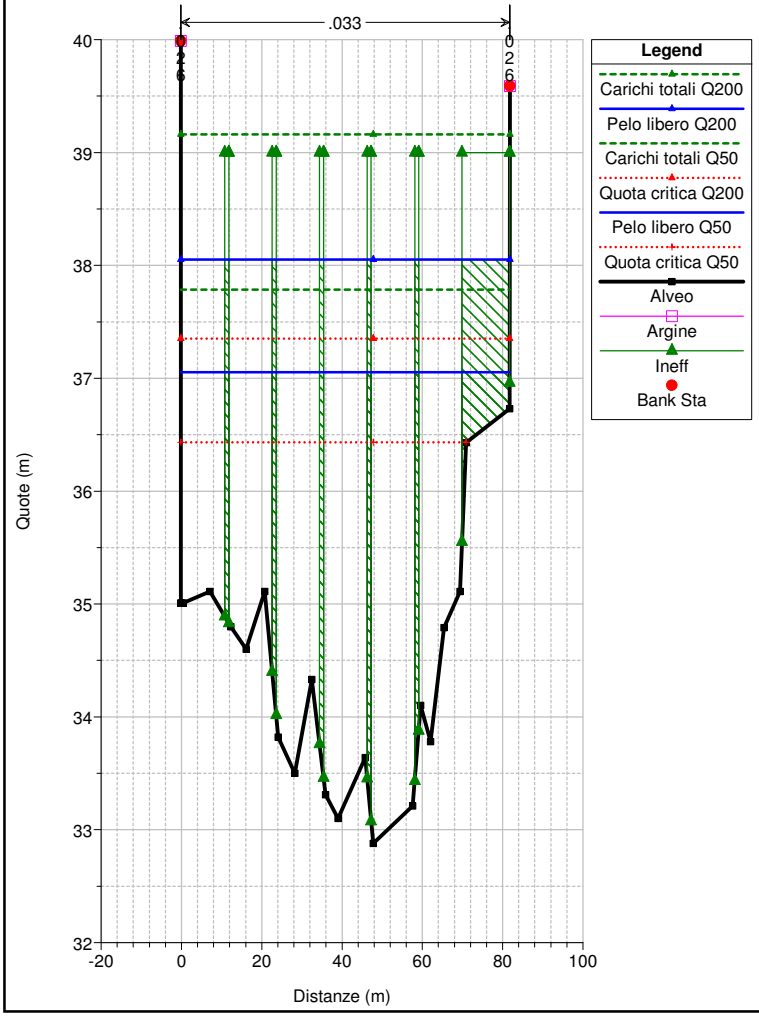
River = Bisagno Reach = Trens Veilino RS = 78.4 E' la sezione più a monte del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

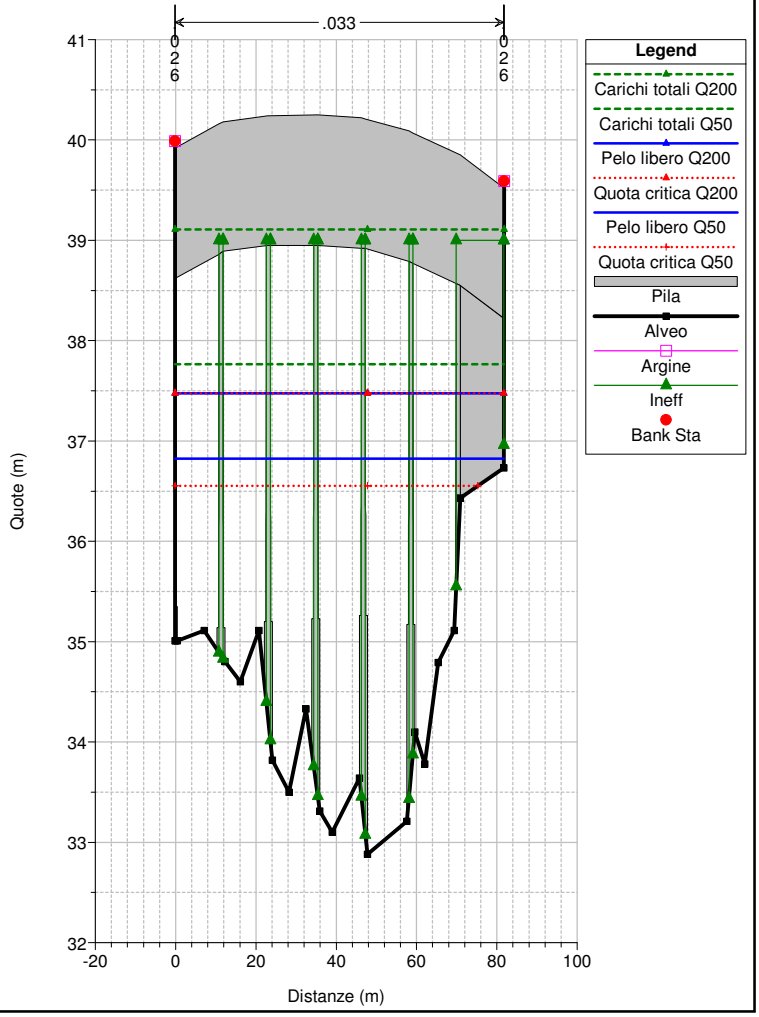
River = Bisagno Reach = Trens Veilino RS = 78.3 E' la sezione immediatamente a monte del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

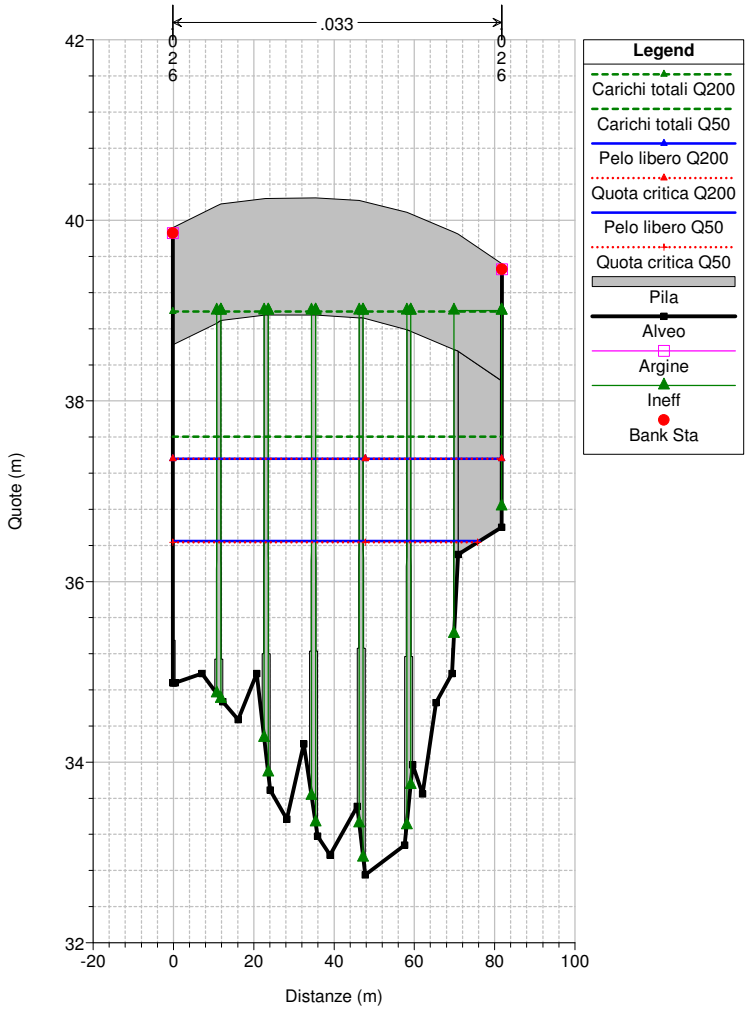
River = Bisagno Reach = Trens Veilino RS = 78.25 BR BIS 78 Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

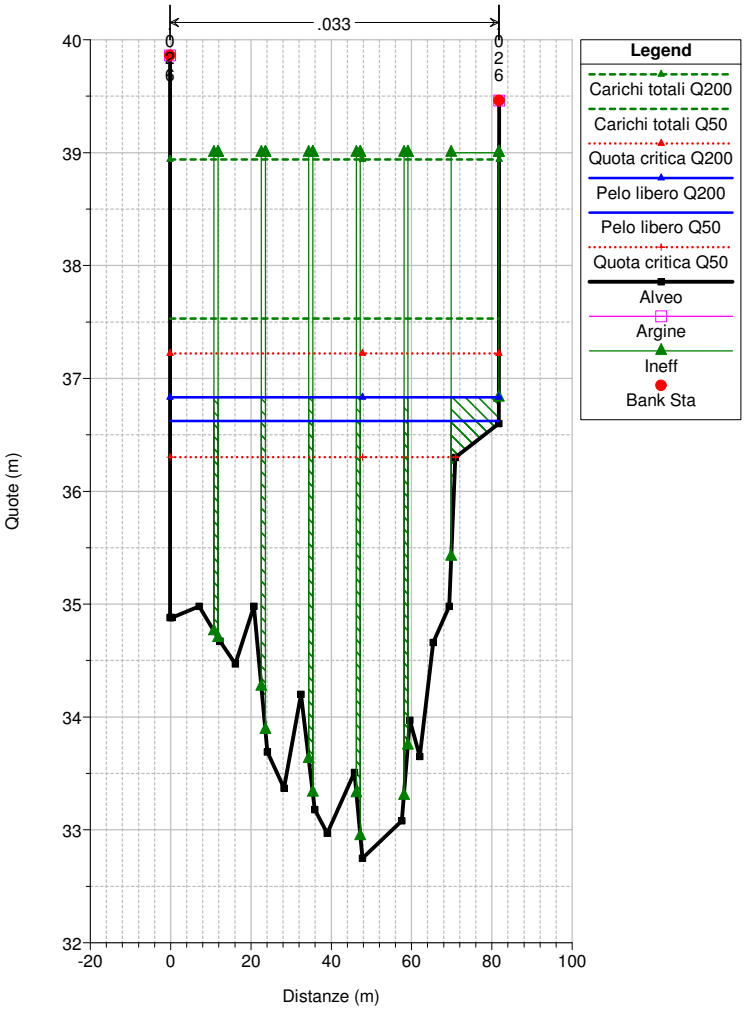
River = Bisagno Reach = Trens Veilino RS = 78.25 BR BIS 78 Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

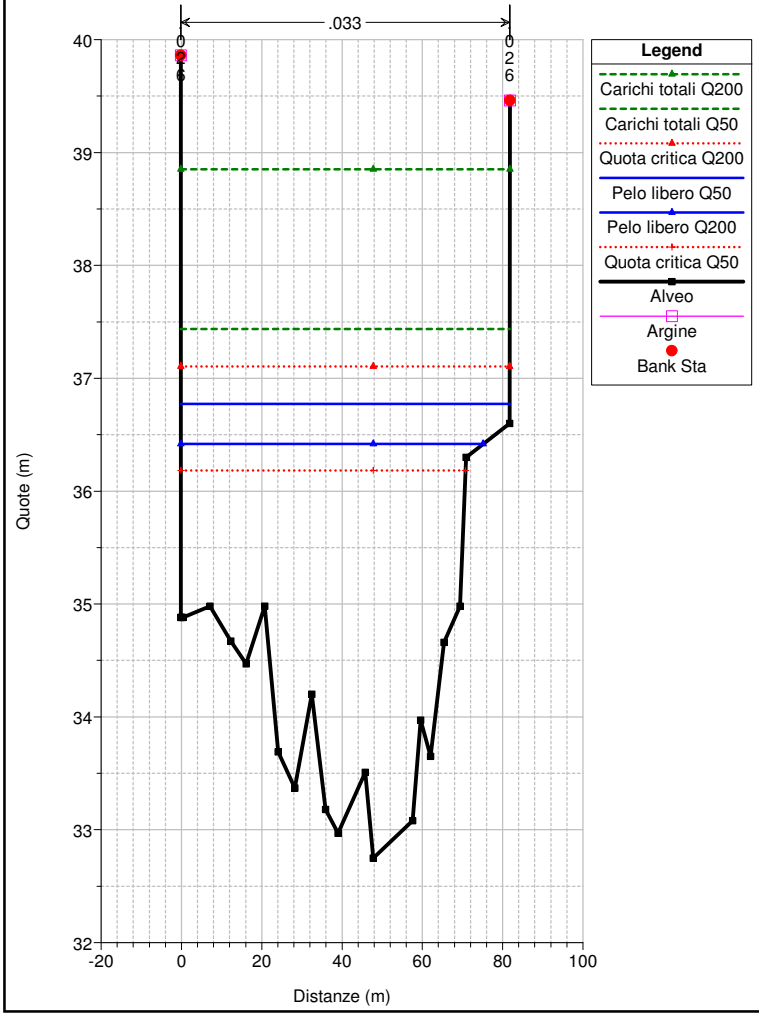
River = Bisagno Reach = Trens Veilino RS = 78.2 E' la sezione immediatamente a valle del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

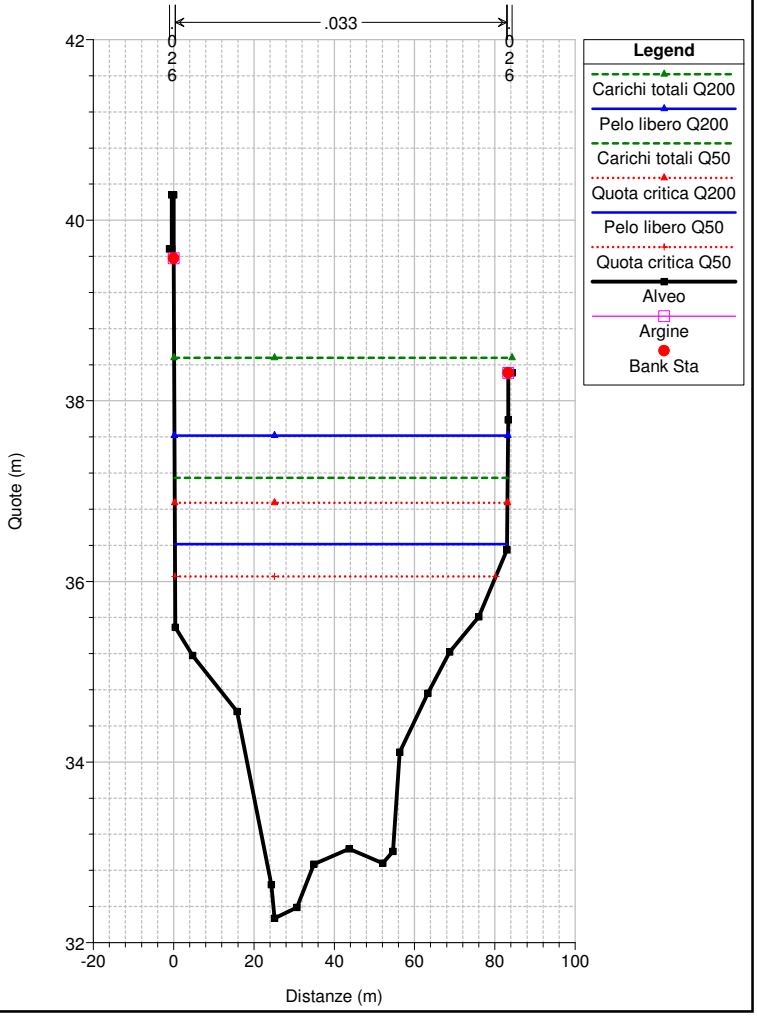
River = Bisagno Reach = Trens Veilino RS = 78.1 E' la sezione più a valle del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

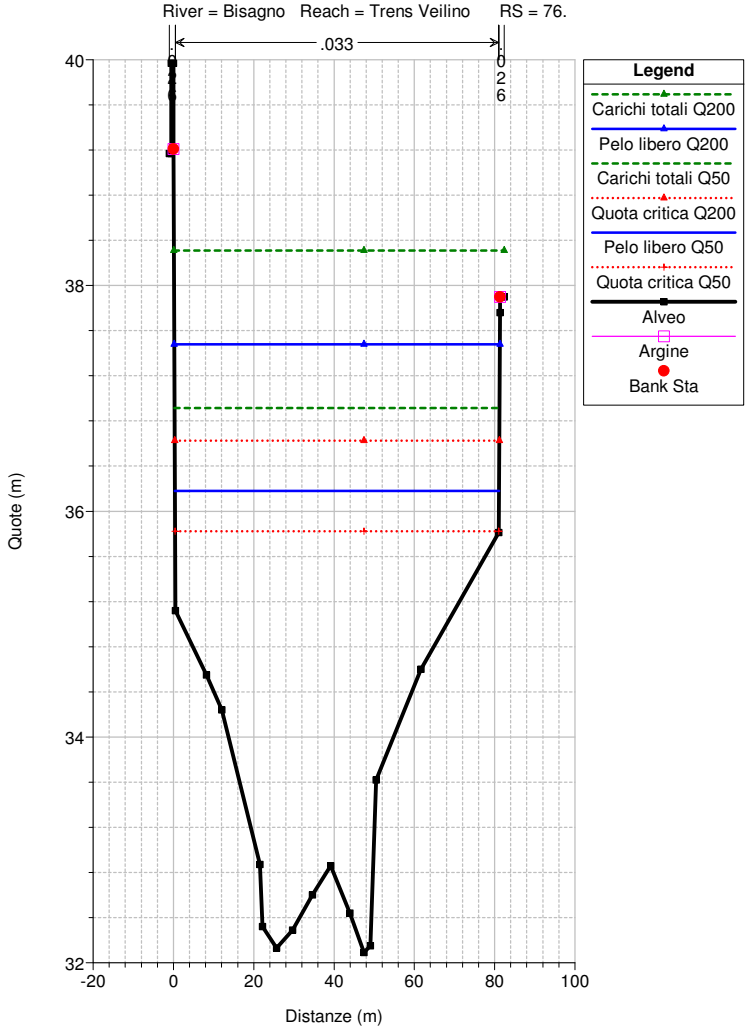
River = Bisagno Reach = Trens Veilino RS = 77. E' la sezione a valle del Ponte Feritore



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

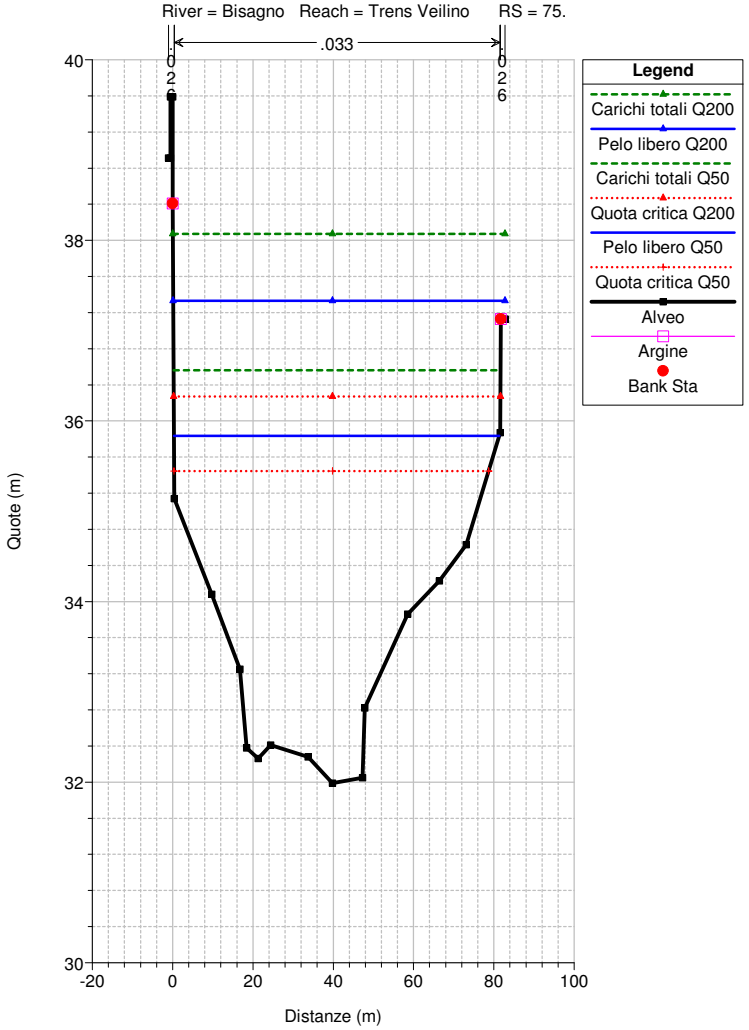
River = Bisagno Reach = Trens Veilino RS = 76.



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

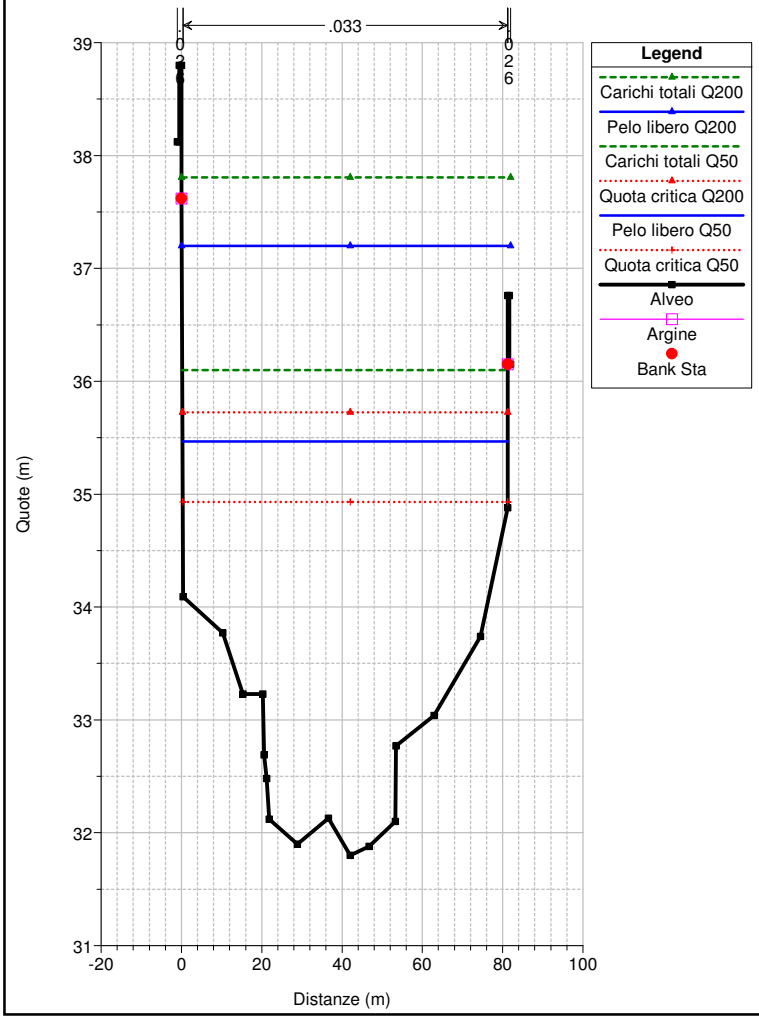
River = Bisagno Reach = Trens Veilino RS = 75.



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

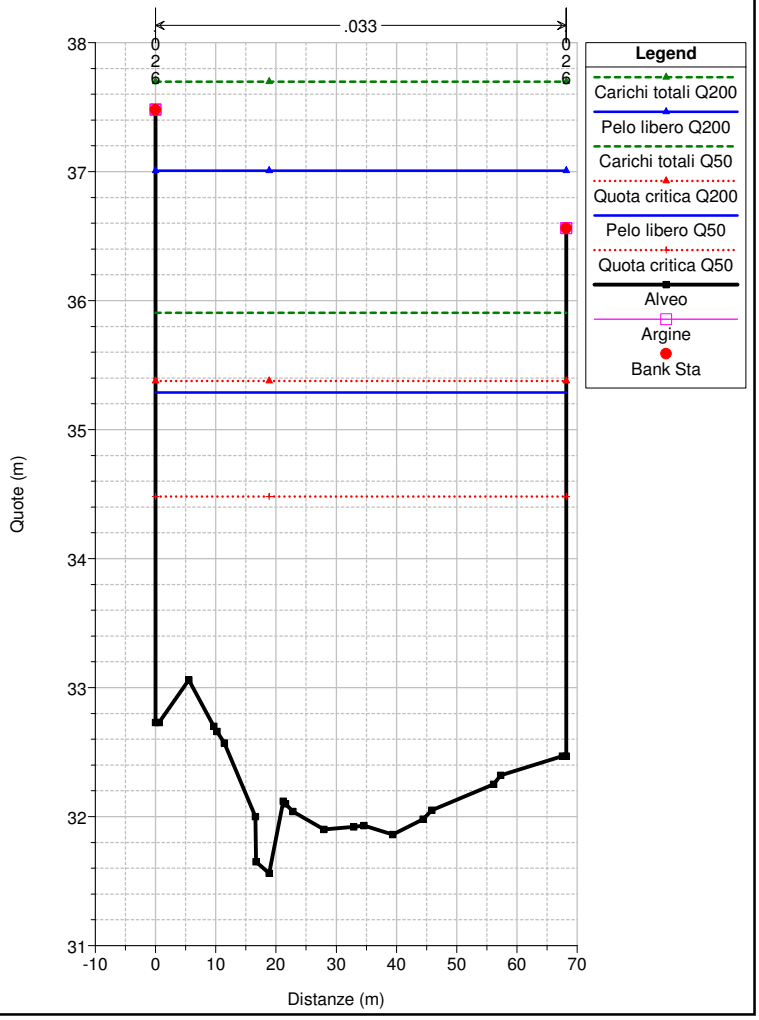
River = Bisagno Reach = Trens Veilino RS = 74. E' la sezione a monte del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

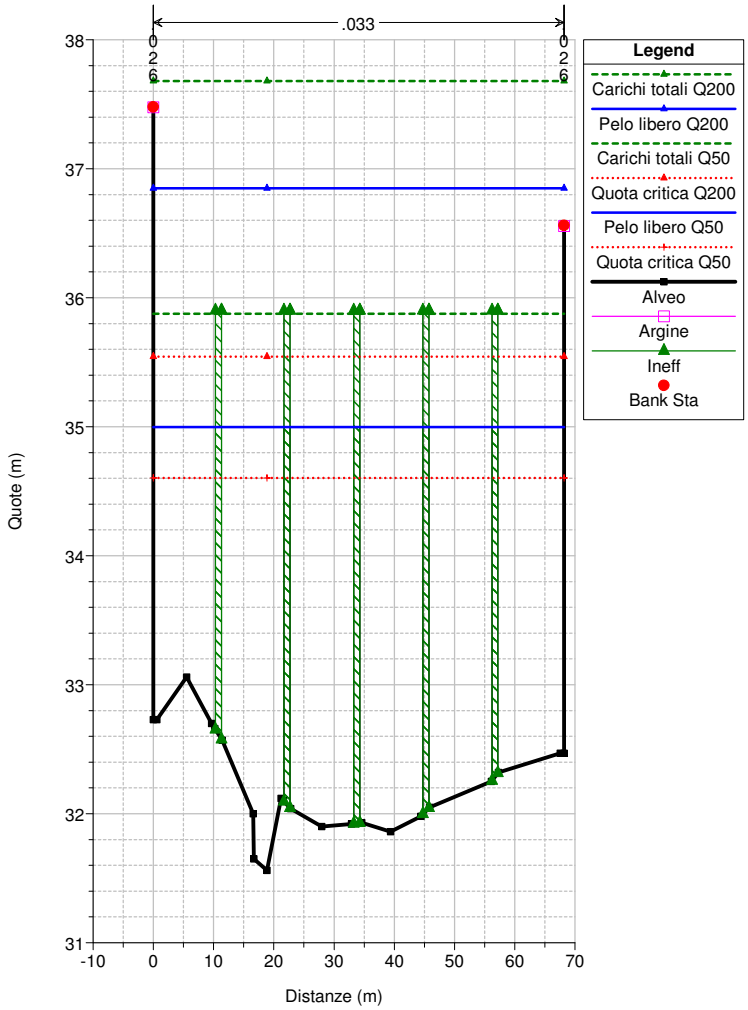
River = Bisagno Reach = Trens Veilino RS = 73.4 E' la sezione più a monte del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

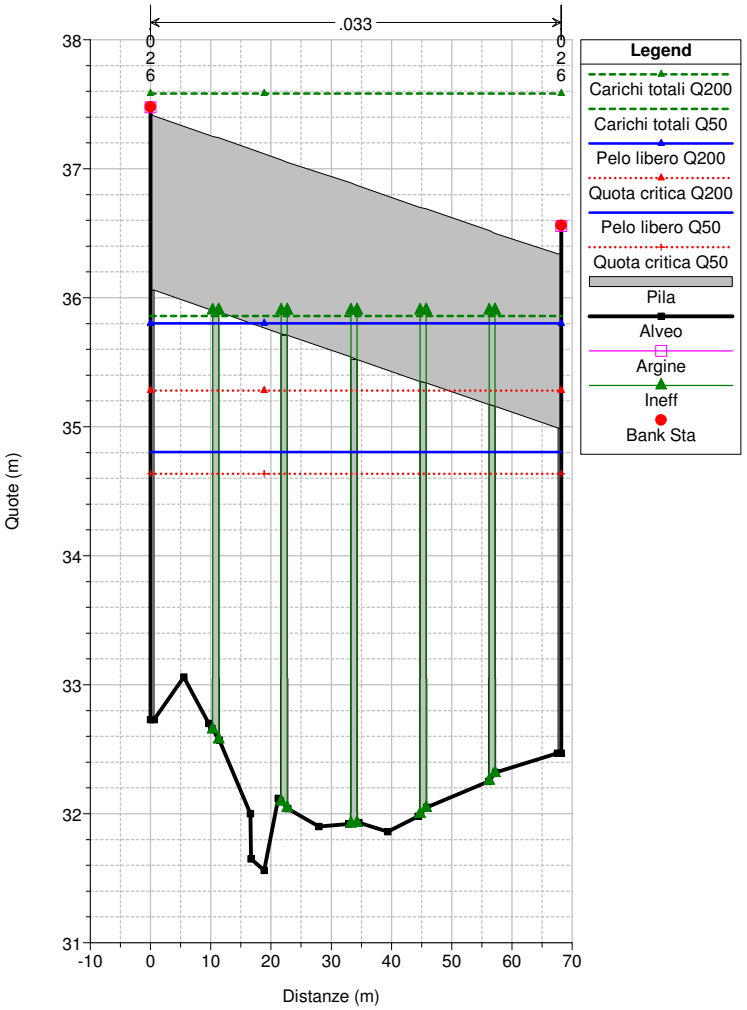
River = Bisagno Reach = Trens Veilino RS = 73.3 E' la sezione immediatamente a monte del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

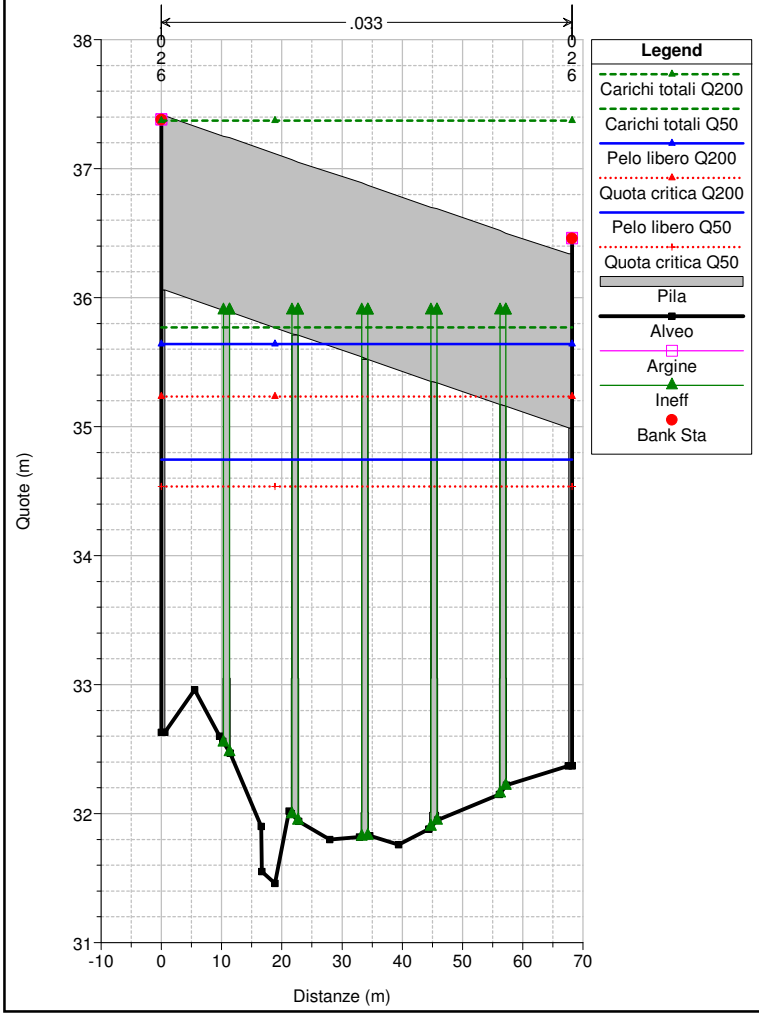
River = Bisagno Reach = Trens Veilino RS = 73.25 BR BIS 73 Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

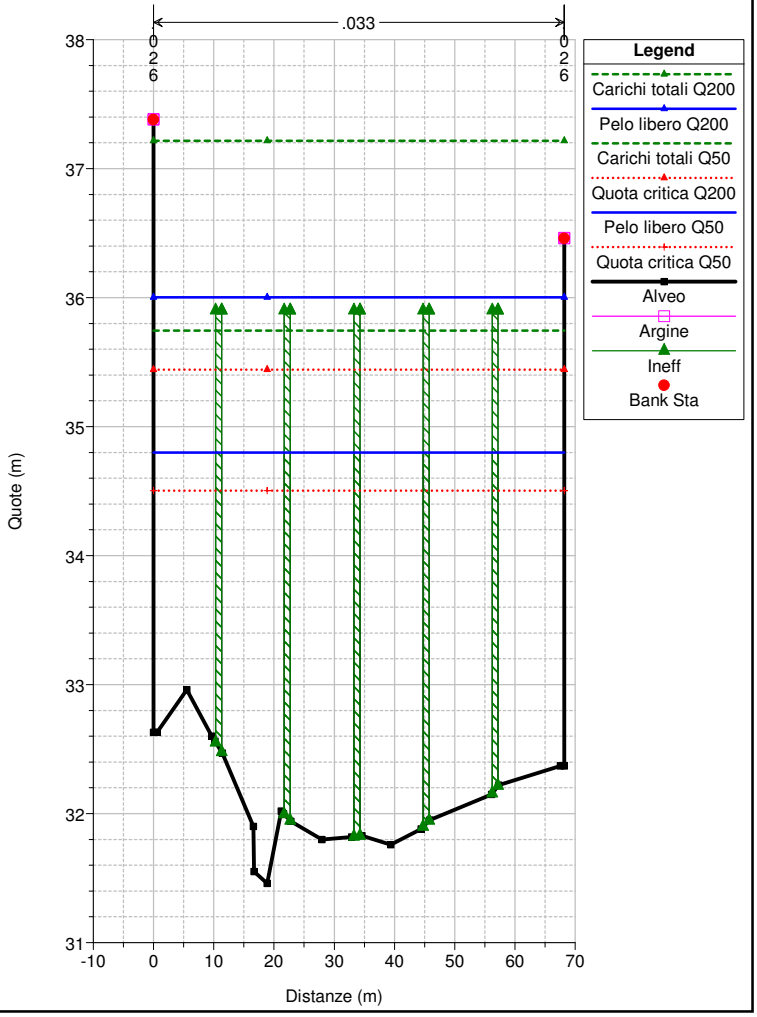
River = Bisagno Reach = Trens Veilino RS = 73.25 BR BIS 73 Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

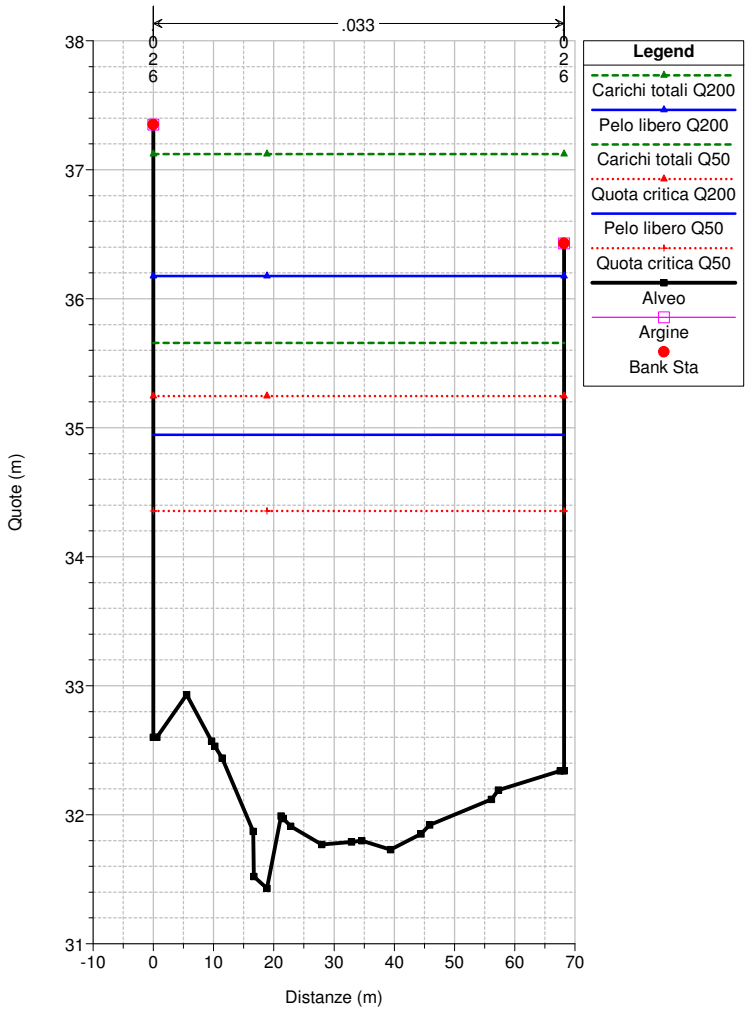
River = Bisagno Reach = Trens Veilino RS = 73.2 E' la sezione immediatamente a valle del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

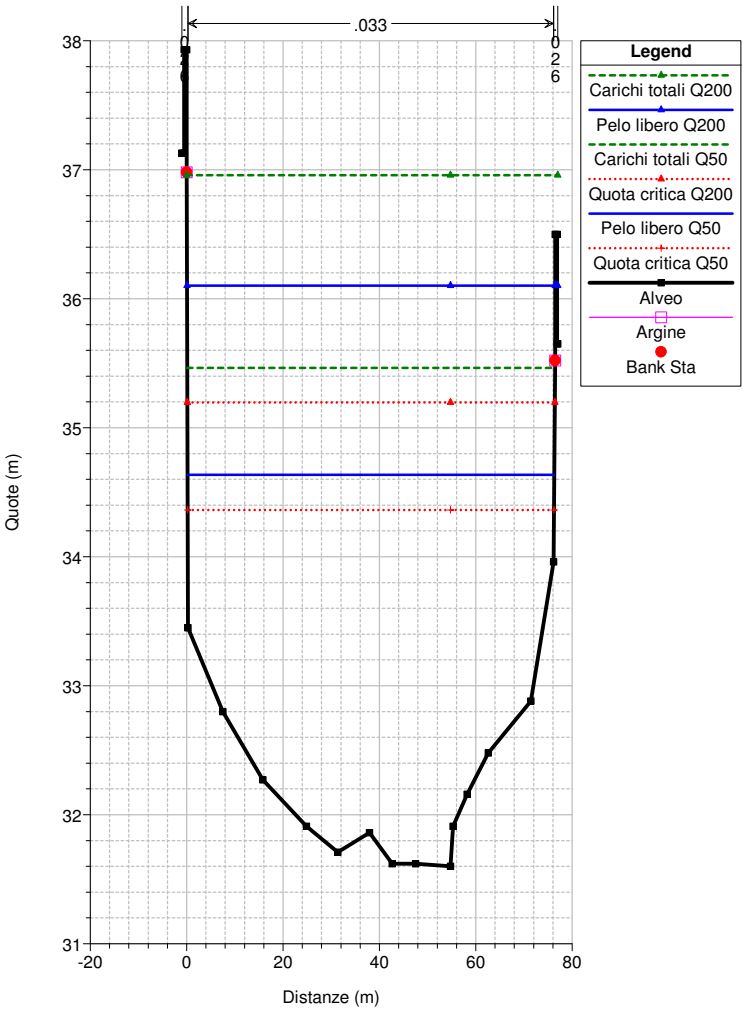
River = Bisagno Reach = Trens Veilino RS = 73.1 E' la sezione più a valle del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

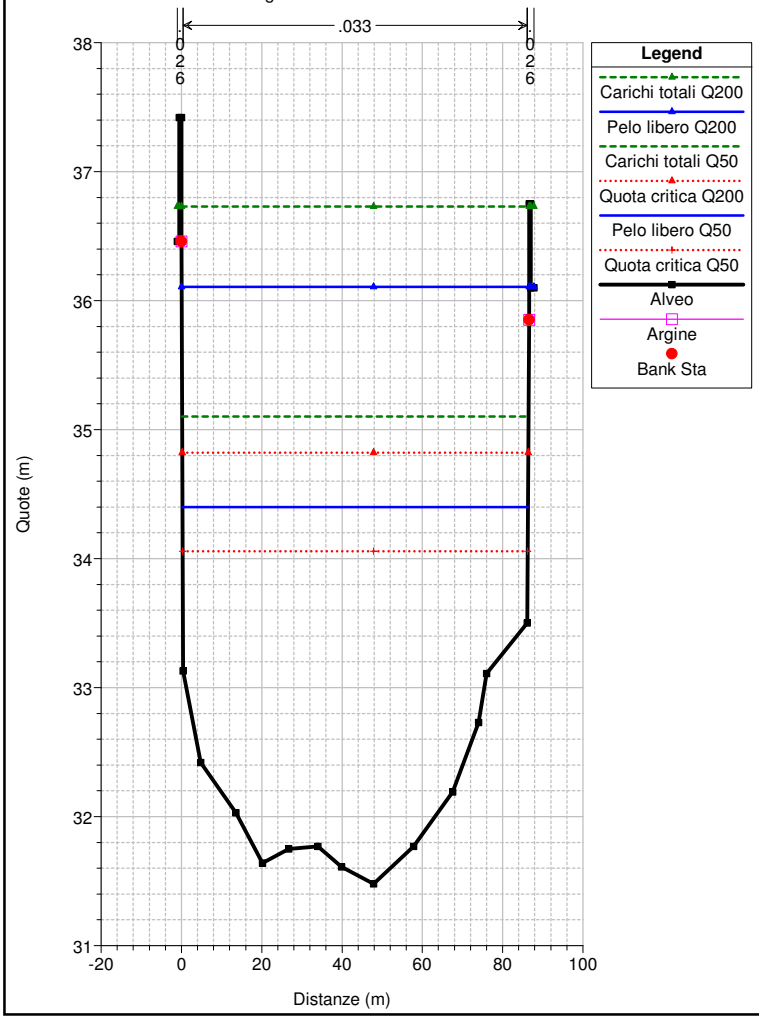
River = Bisagno Reach = Trens Veilino RS = 72. E la sezione a valle del Ponte Guglielmetti



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

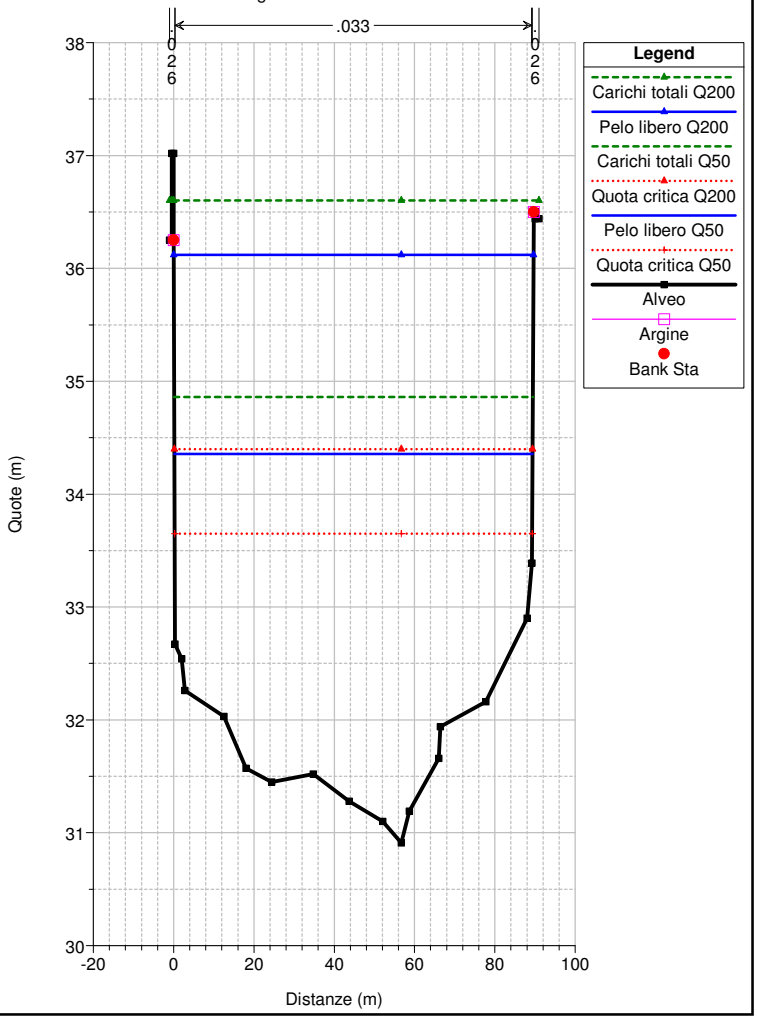
River = Bisagno Reach = Trens Veilino RS = 71.



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

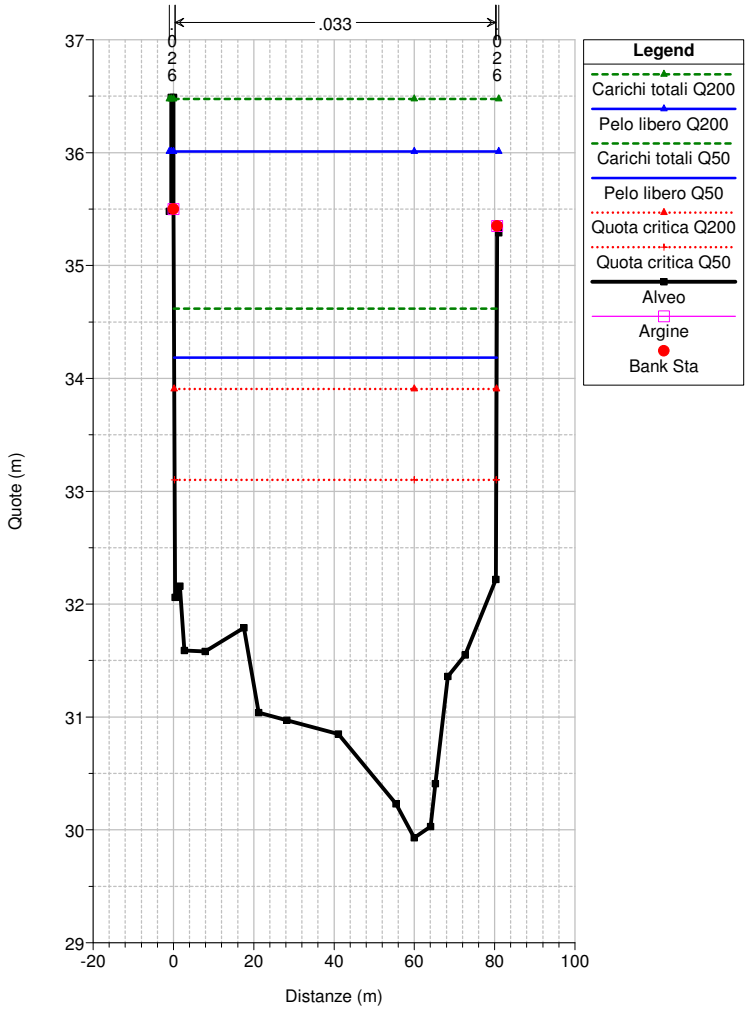
River = Bisagno Reach = Trens Veilino RS = 70.



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

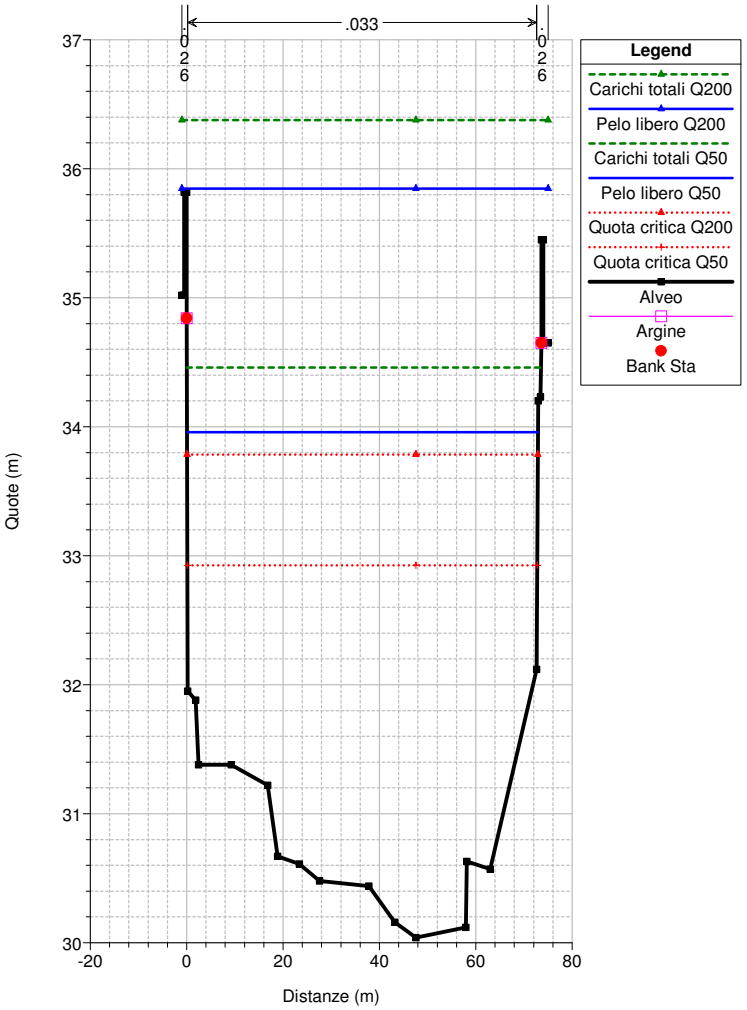
River = Bisagno Reach = Trens Veilino RS = 69. E' due sezioni a monte del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

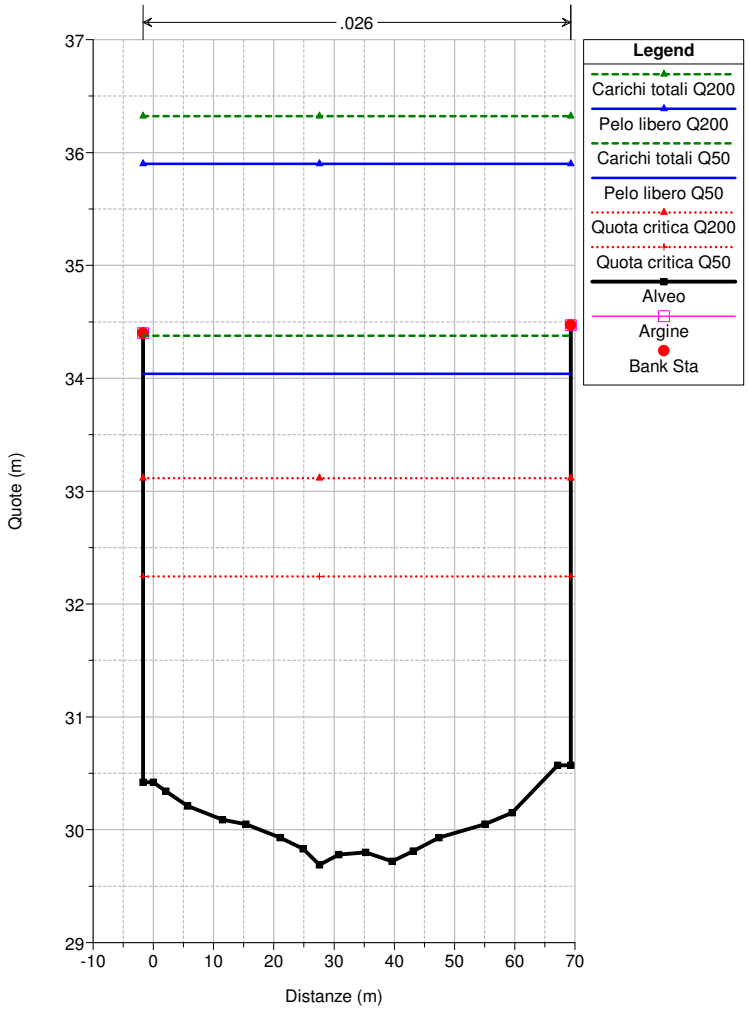
River = Bisagno Reach = Trens Veilino RS = 68. E' la sezione a monte del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

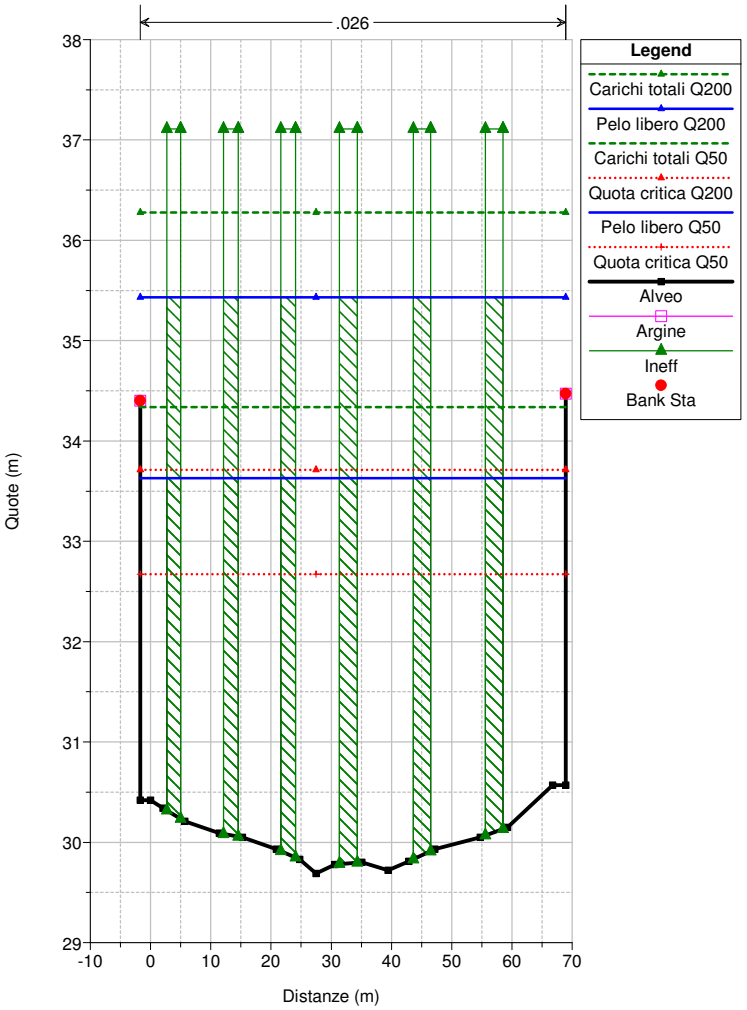
River = Bisagno Reach = Trens Veilino RS = 67.4 E' la sezione più a monte del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

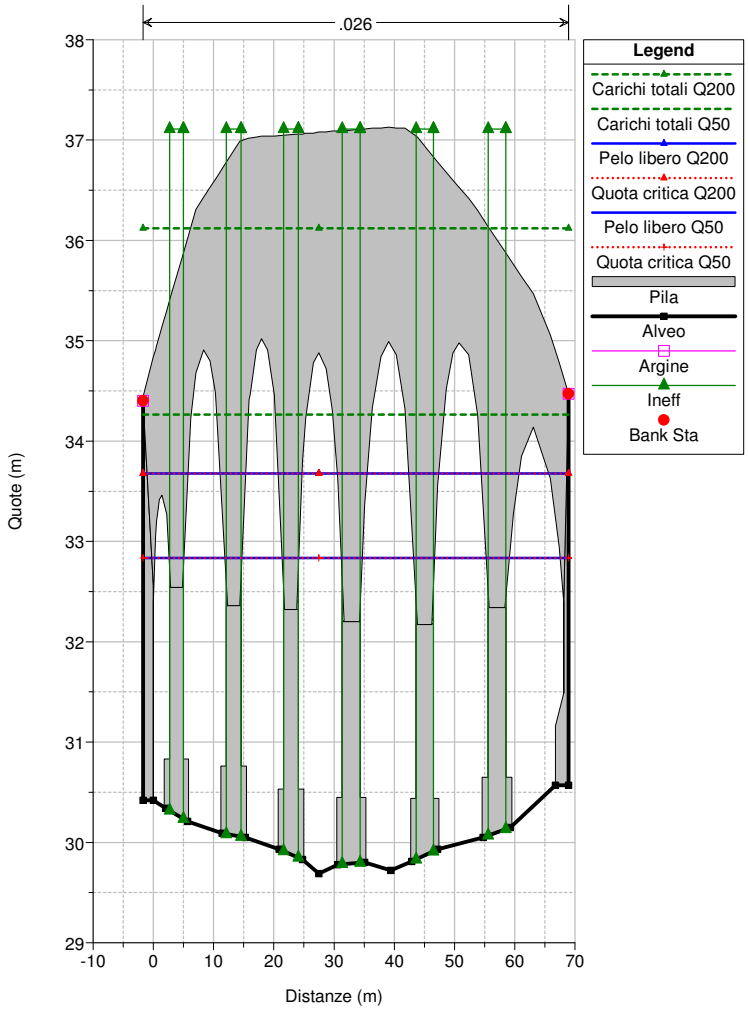
River = Bisagno Reach = Trens Veilino RS = 67.3 E' la sezione immediatamente a monte del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

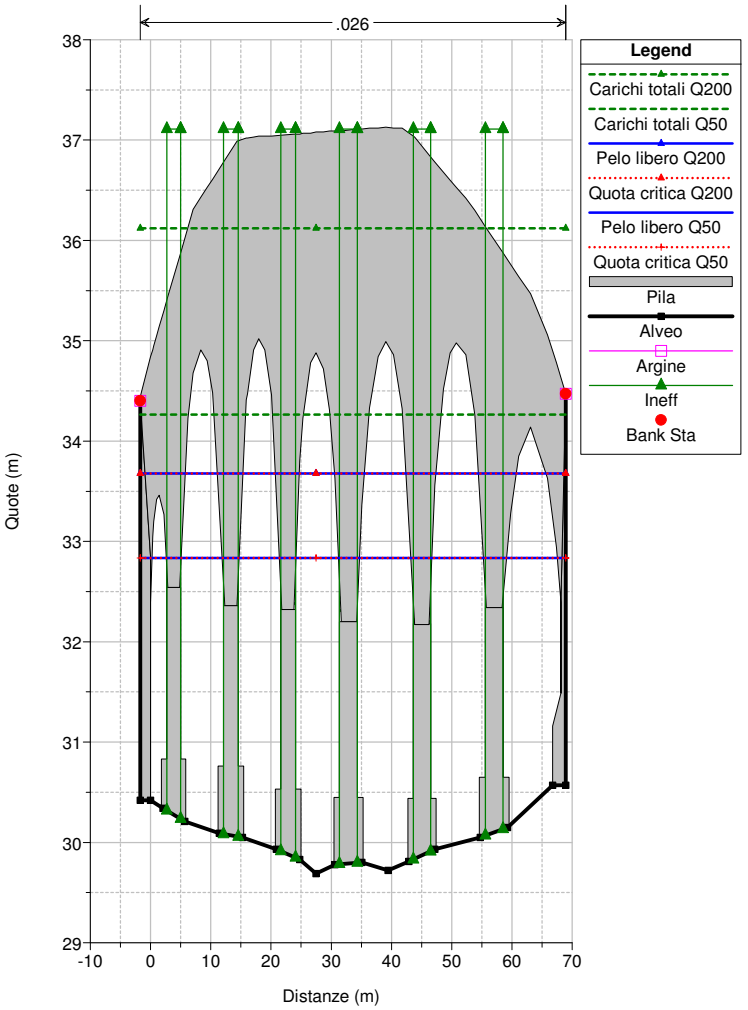
River = Bisagno Reach = Trens Veilino RS = 67.25 BR BIS 67 Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

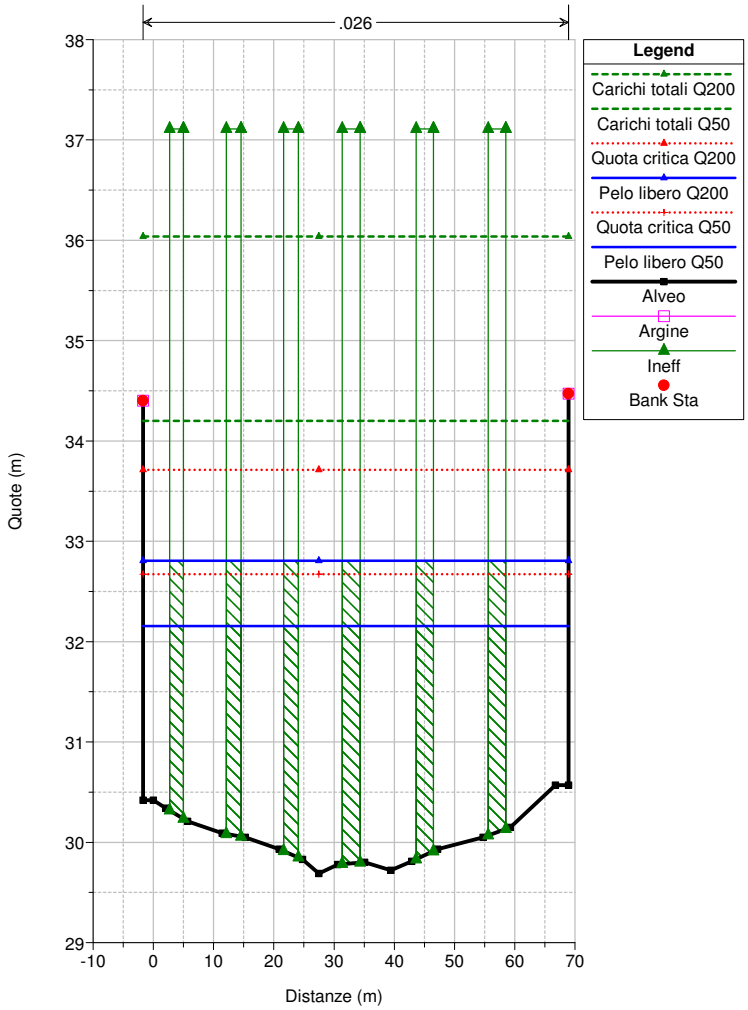
River = Bisagno Reach = Trens Veilino RS = 67.25 BR BIS 67 Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

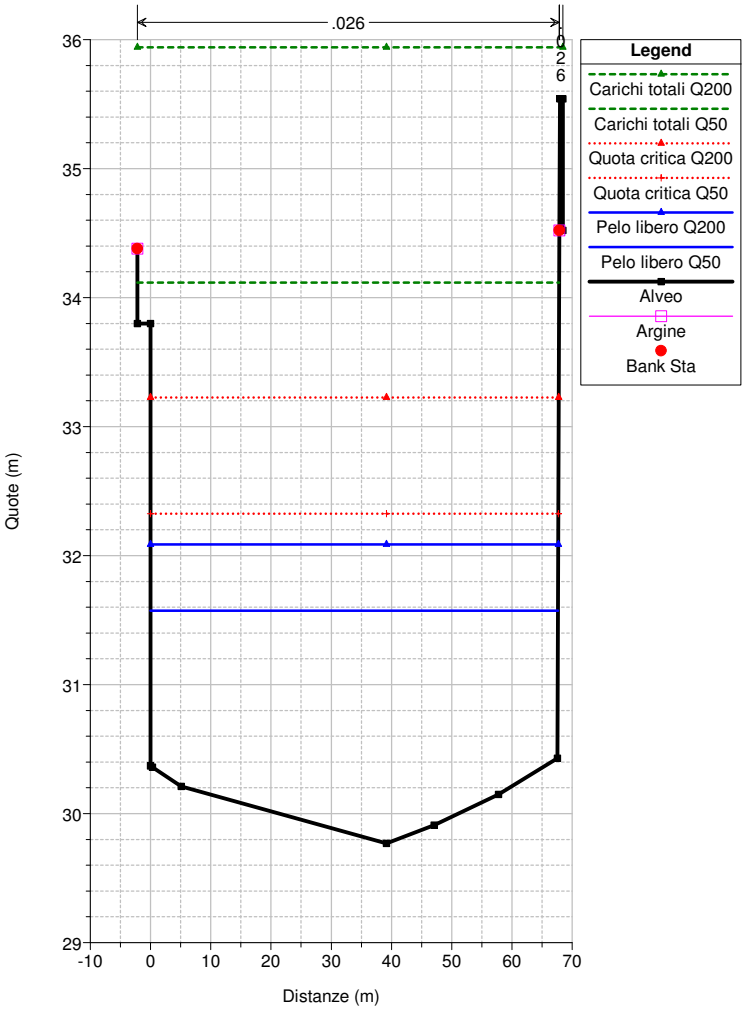
River = Bisagno Reach = Trens Veilino RS = 67.2 E' la sezione immediatamente a valle del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

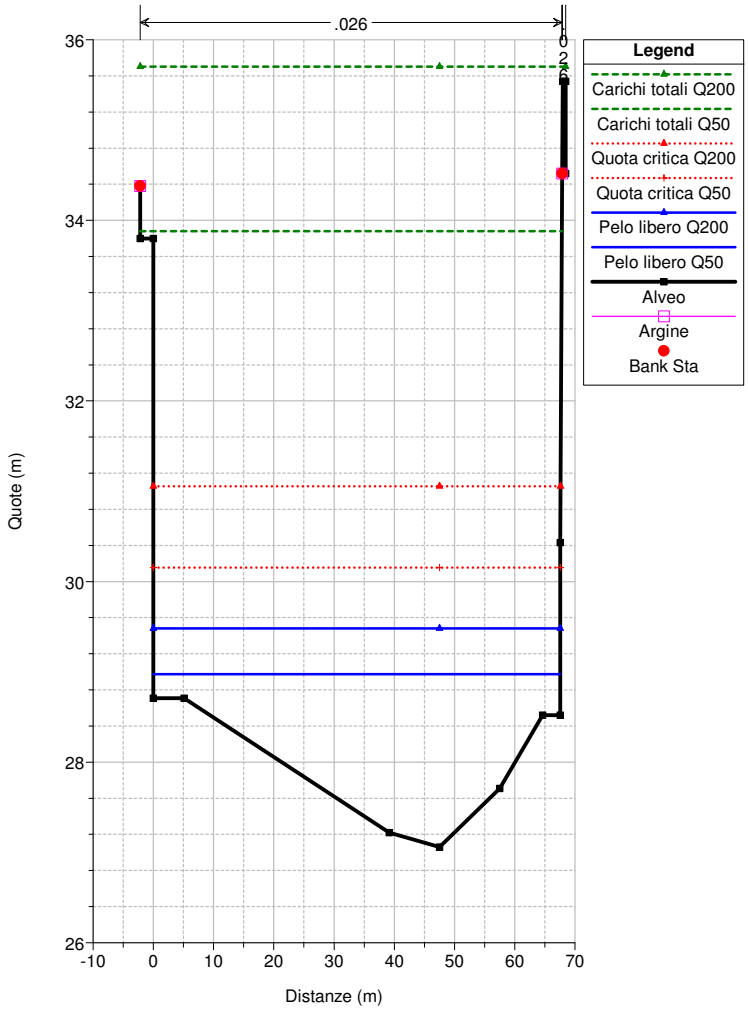
River = Bisagno Reach = Trens Veilino RS = 67.11 E' la sezione più a valle del Ponte Carrega, in corrispondenza d



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

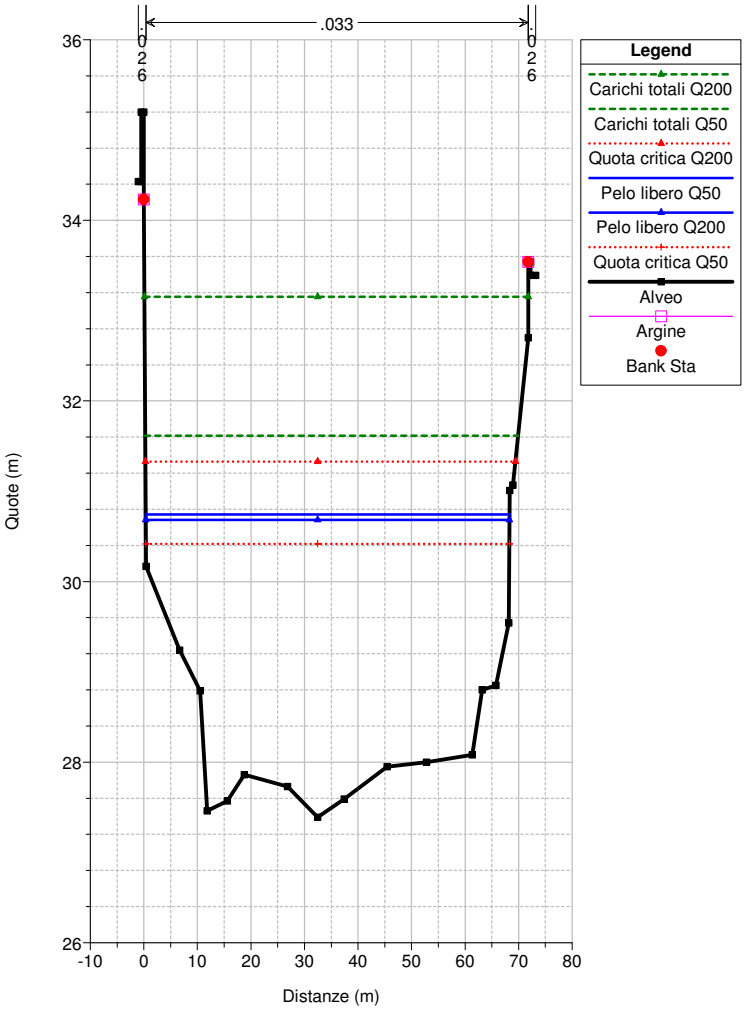
River = Bisagno Reach = Trens Veilino RS = 67.1 E' la sezione più a valle del Ponte Carrega, a valle della brigl



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

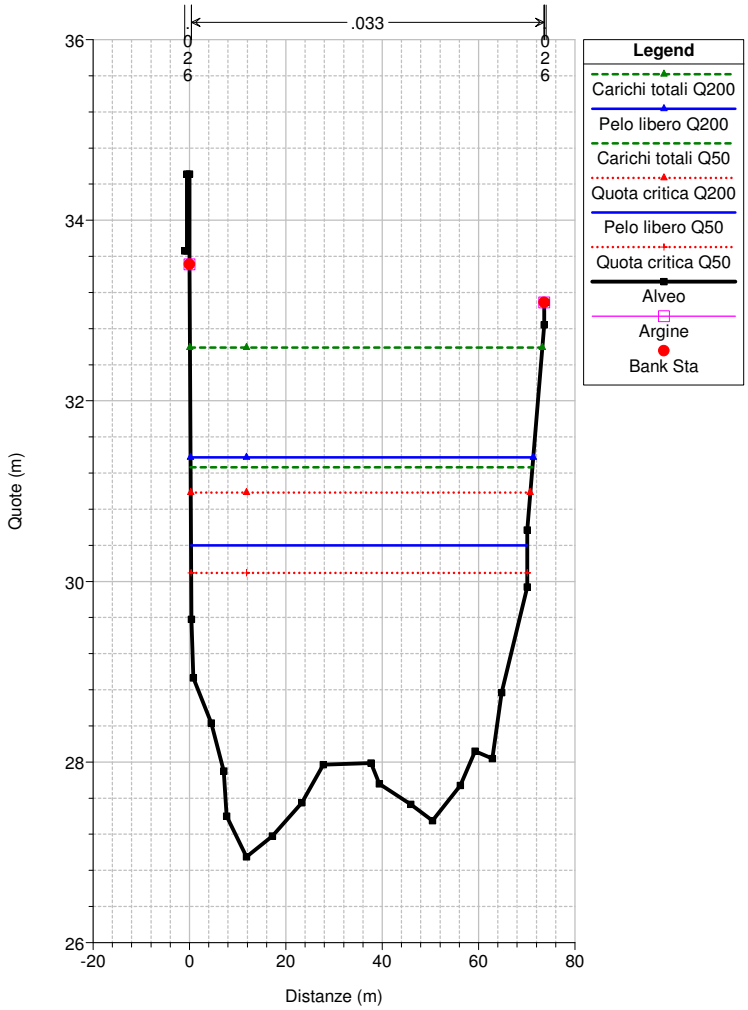
River = Bisagno Reach = Trens Veilino RS = 66. E' la sezione a valle del Ponte Carrega



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

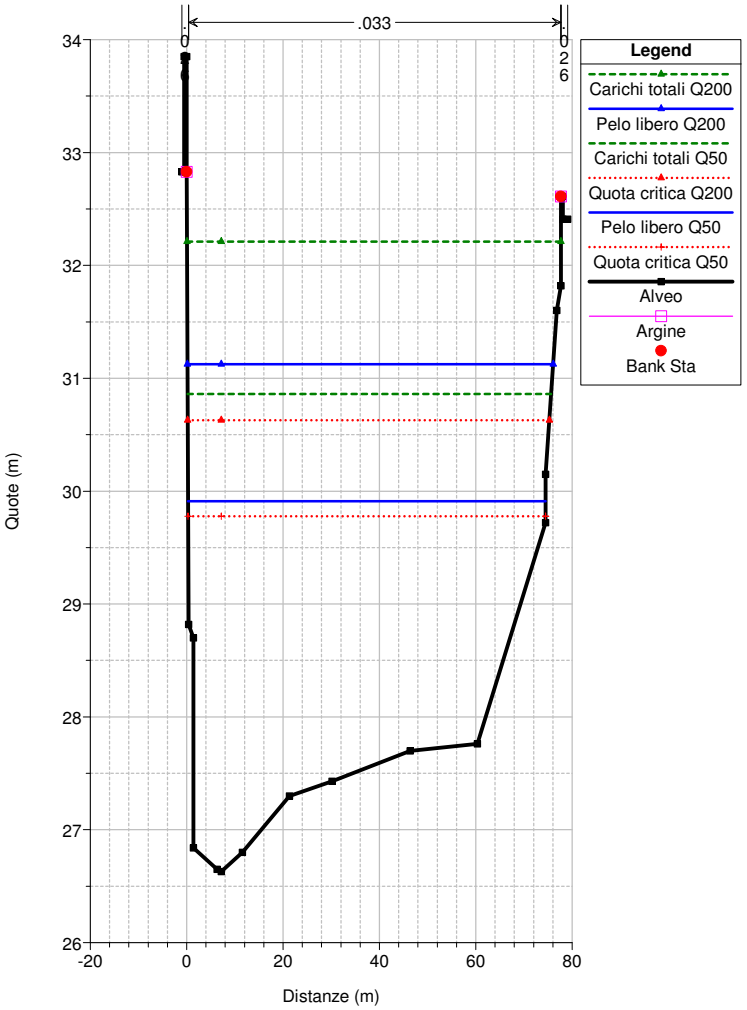
River = Bisagno Reach = Trens Veilino RS = 65.



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

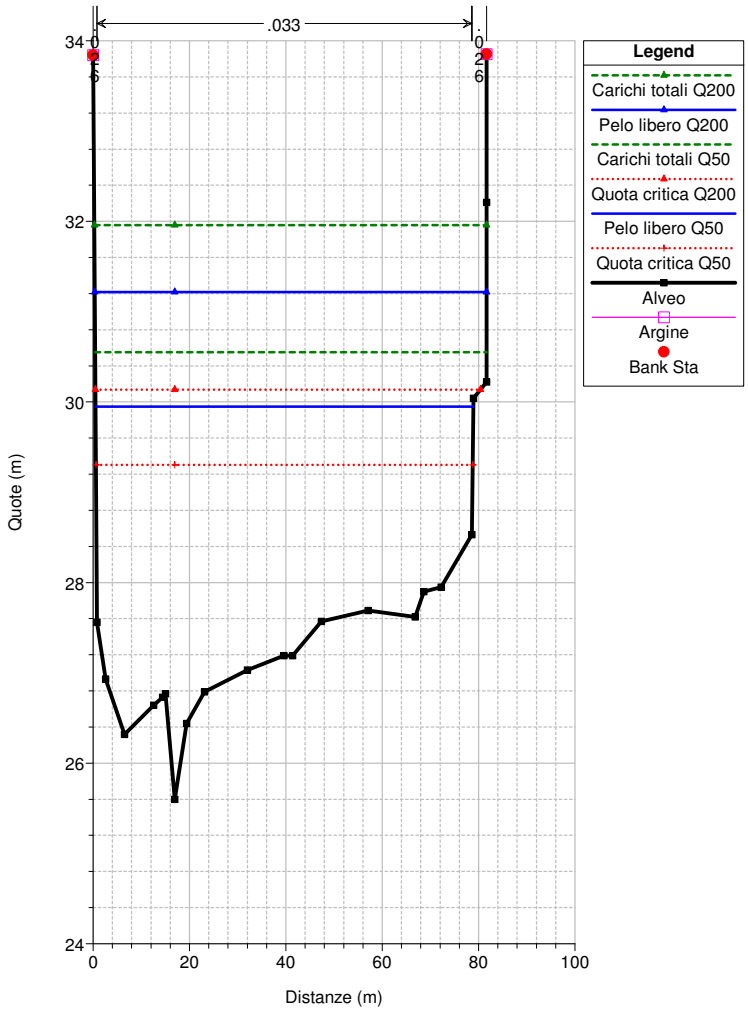
River = Bisagno Reach = Trens Veilino RS = 64. E' la sezione a monte del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

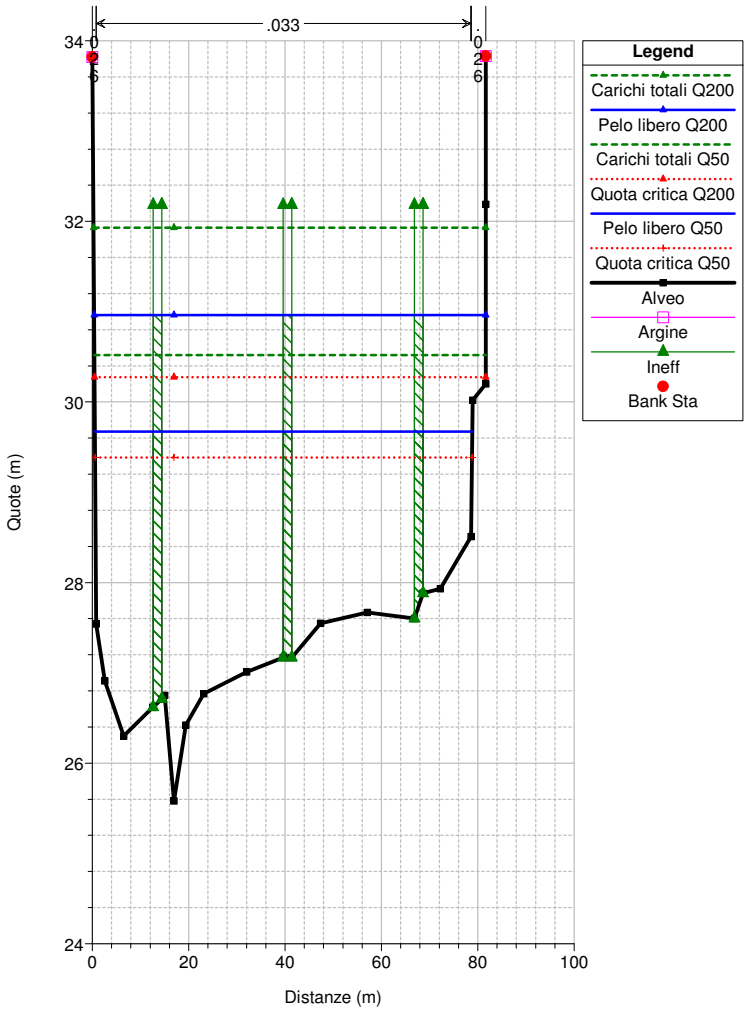
River = Bisagno Reach = Trens Veilino RS = 63.4 E' la sezione più a monte del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

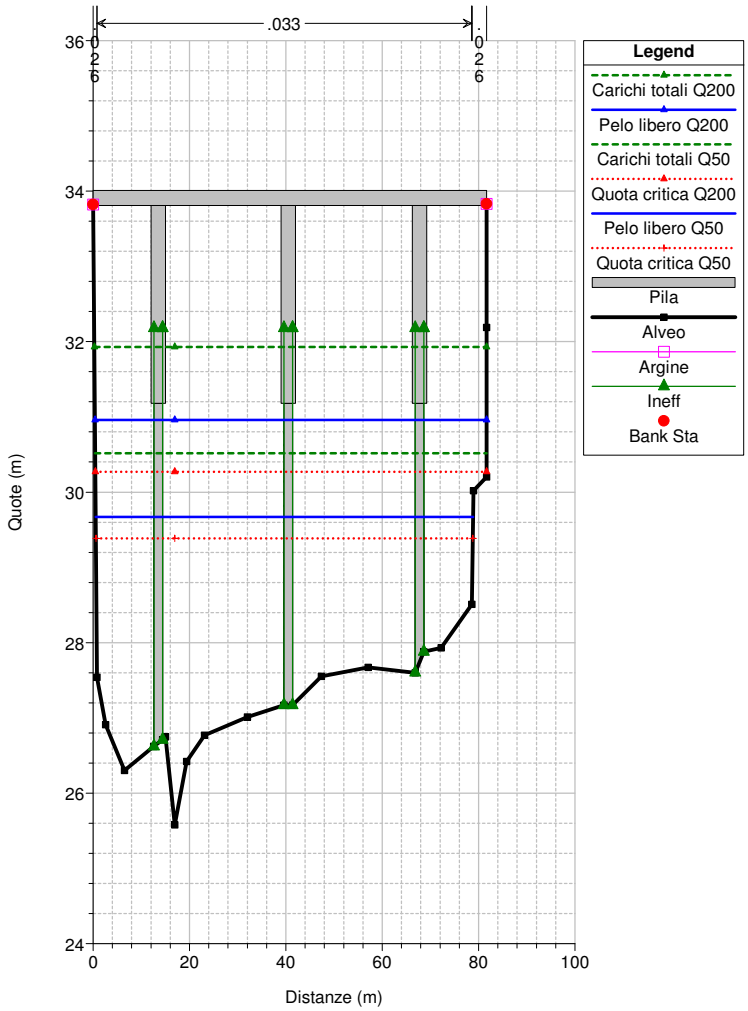
River = Bisagno Reach = Trens Veilino RS = 63.3 E' la sezione subito a monte del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

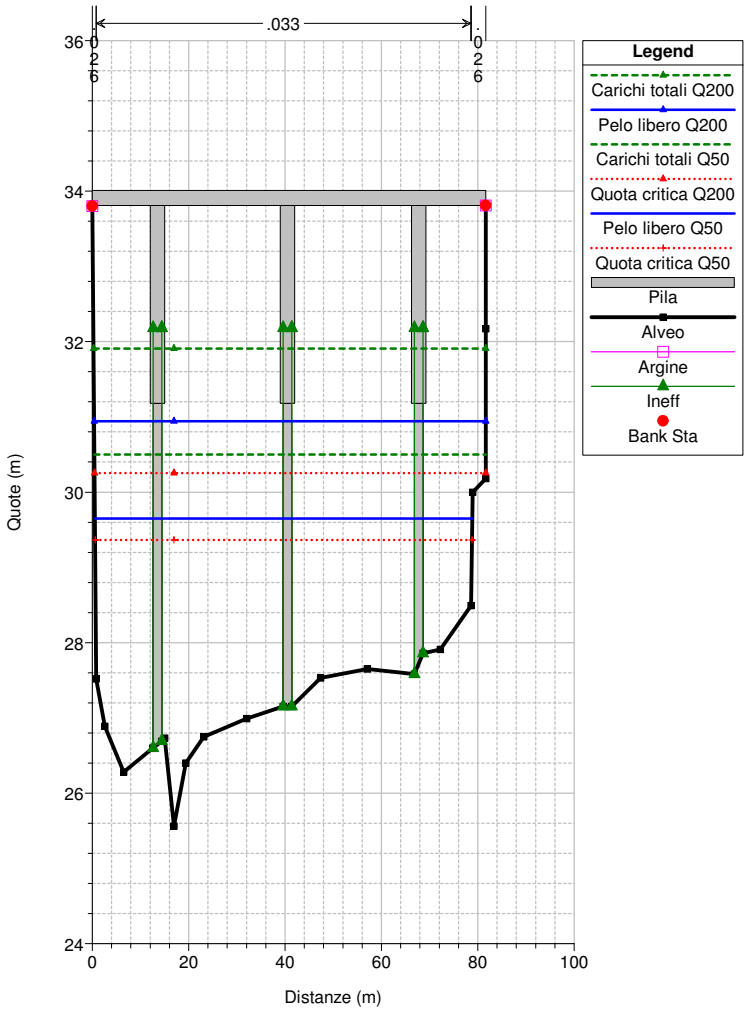
River = Bisagno Reach = Trens Veilino RS = 63.25 BR BIS 63 Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

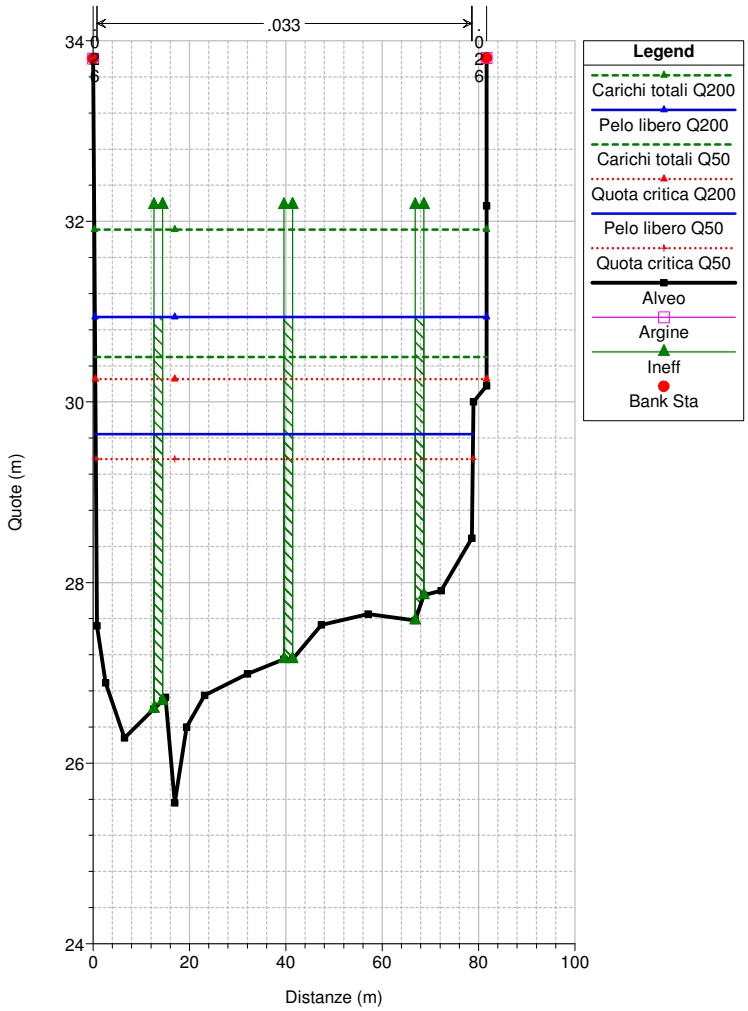
River = Bisagno Reach = Trens Veilino RS = 63.25 BR BIS 63 Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

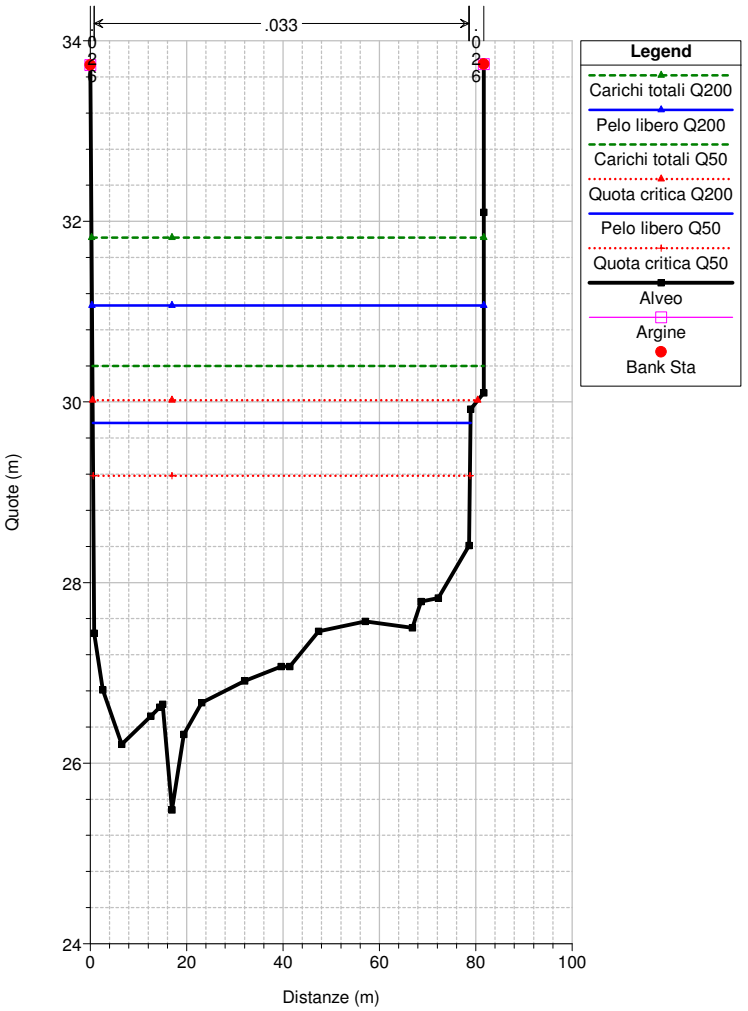
River = Bisagno Reach = Trens Veilino RS = 63.2 E' la sezione subito a valle del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

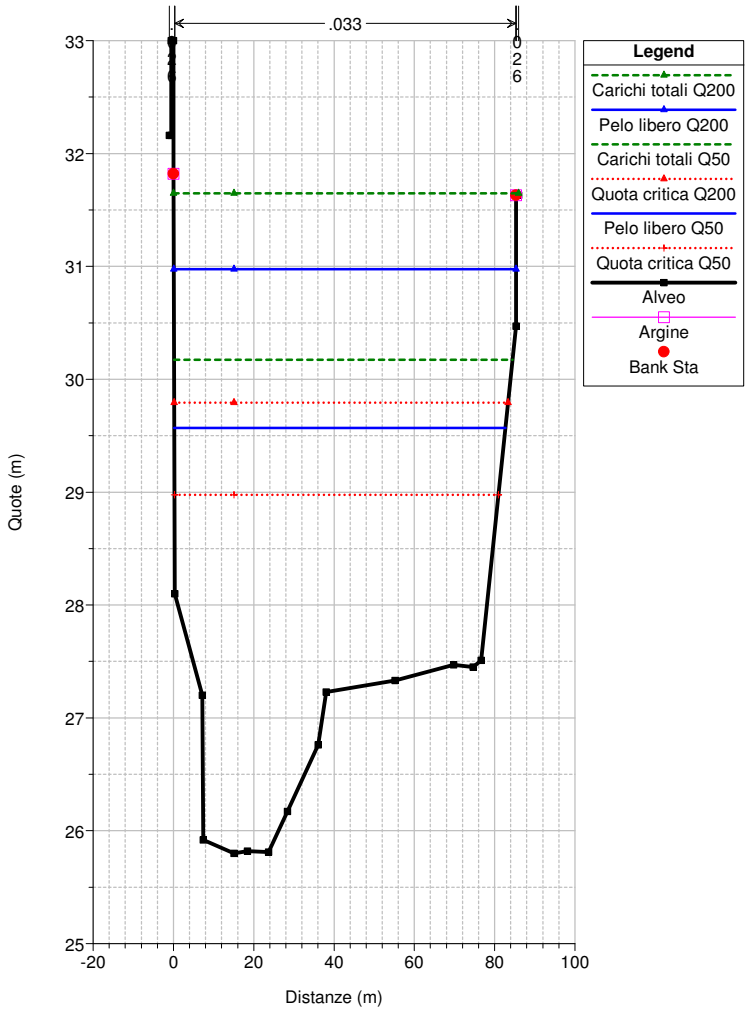
River = Bisagno Reach = Trens Veilino RS = 63.1 E' la sezione più a valle del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

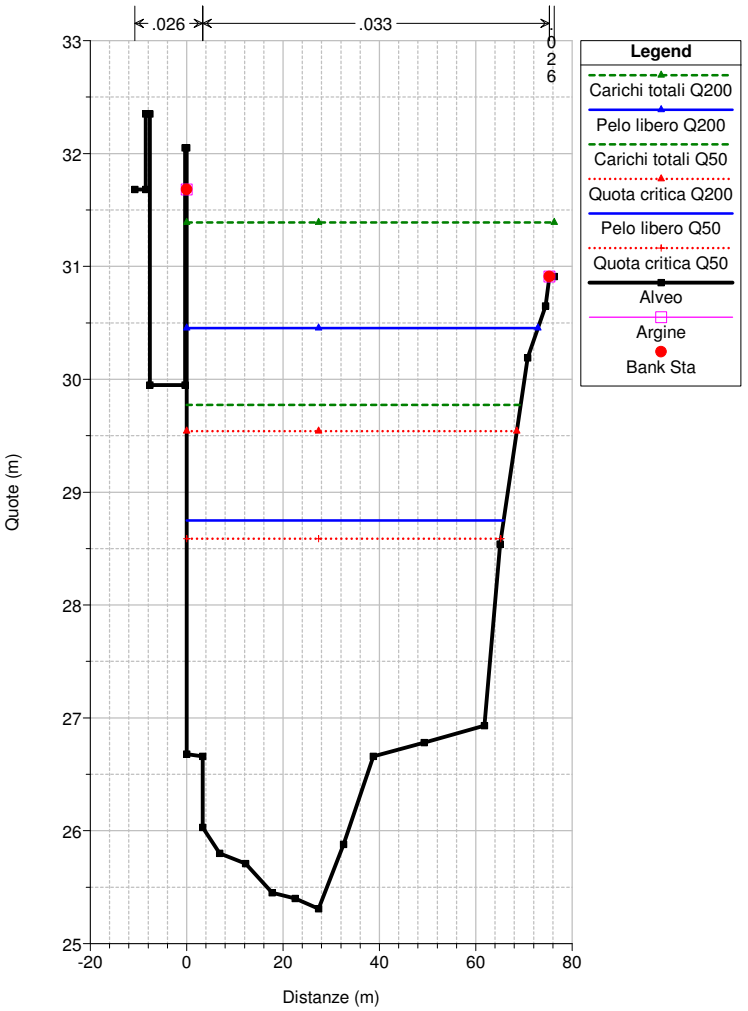
River = Bisagno Reach = Trens Veilino RS = 62. E' la sezione a valle del Ponte Veronelli



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

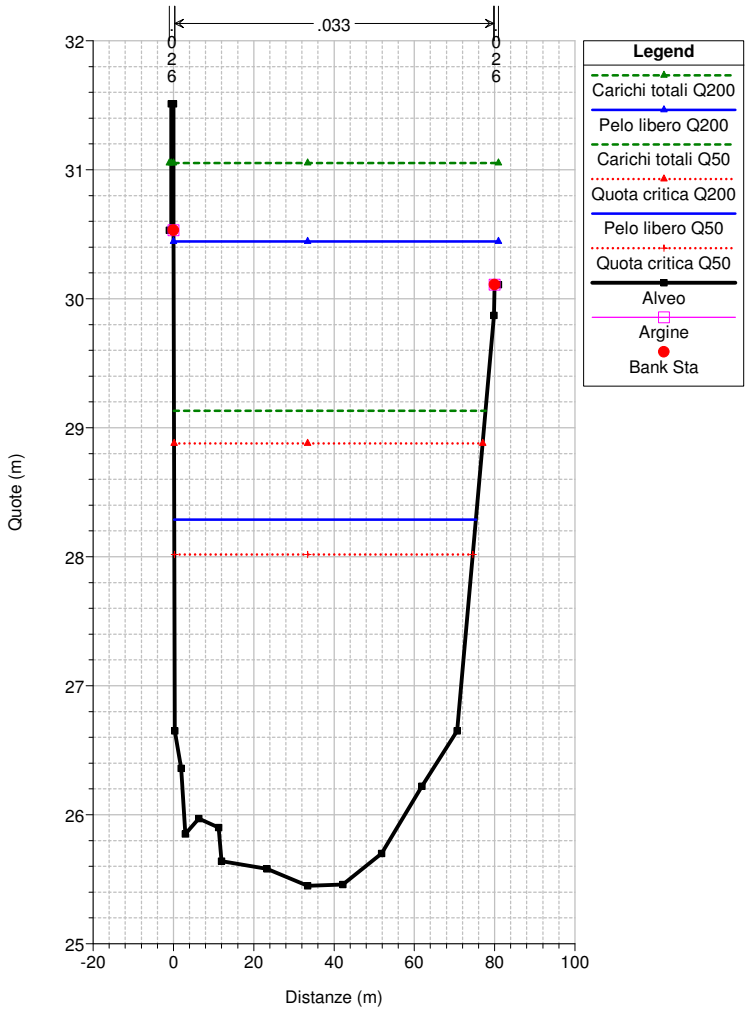
River = Bisagno Reach = Trens Veilino RS = 61. E' la sezione in corrispondenza del viadotto autostradale



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

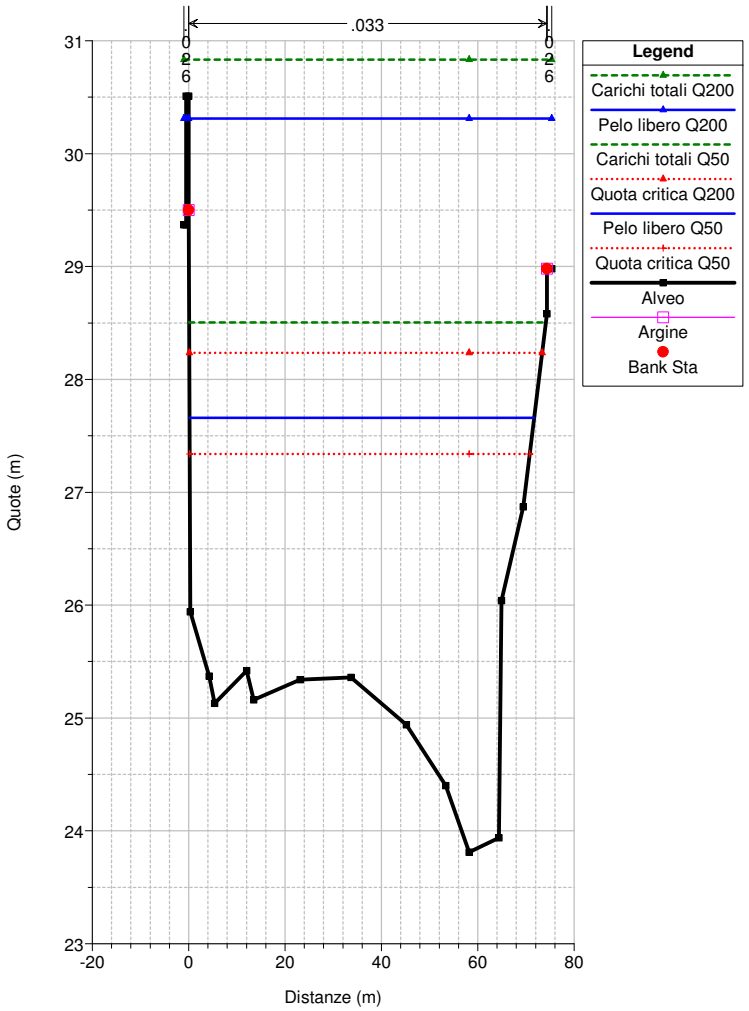
River = Bisagno Reach = Trens Veilino RS = 60. E' due sezioni a monte del Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

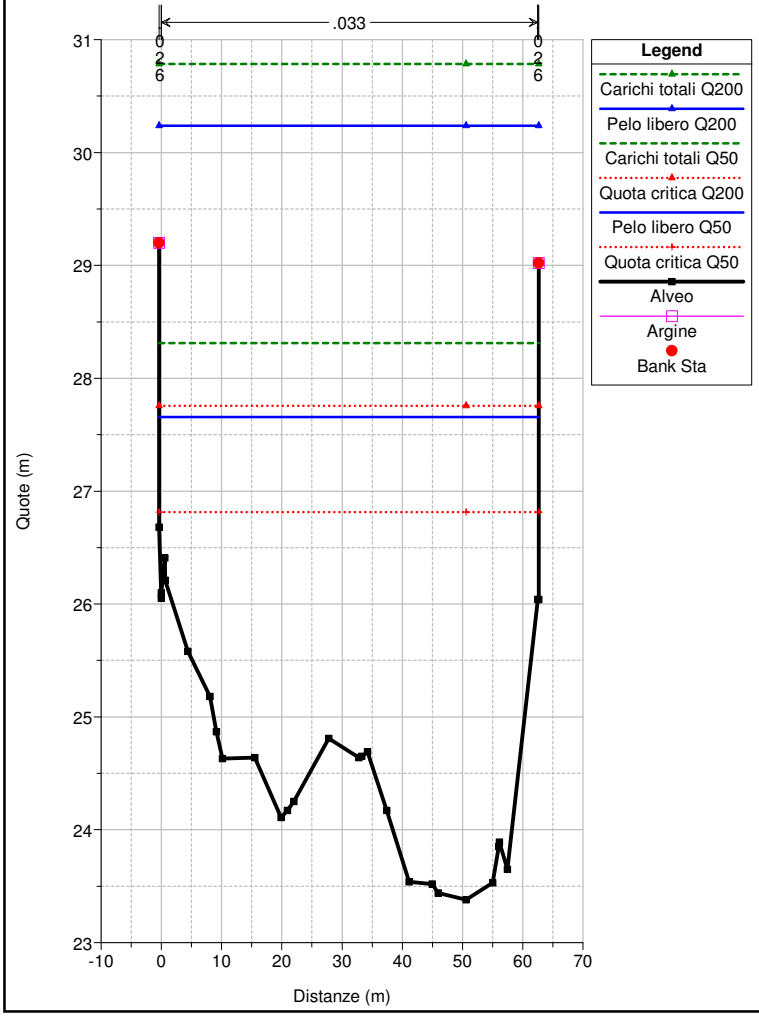
River = Bisagno Reach = Trens Veilino RS = 59. E' la sezione subito a monte del Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

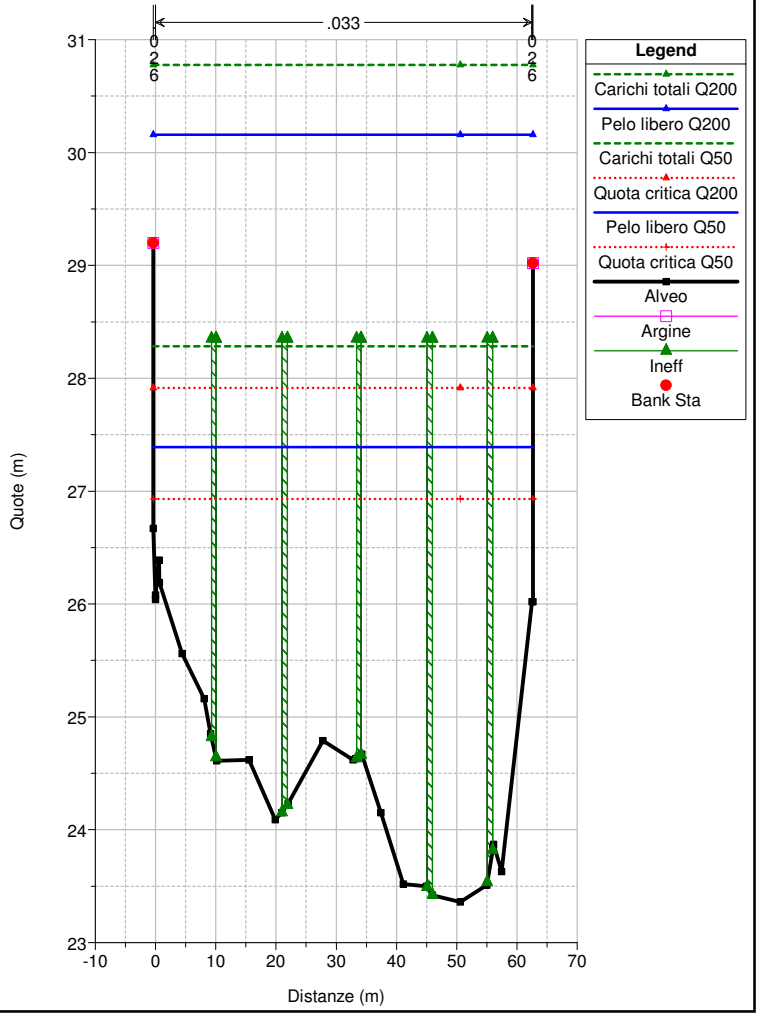
River = Bisagno Reach = Trens Veilino RS = 58.4 E' la sezione più a monte del Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

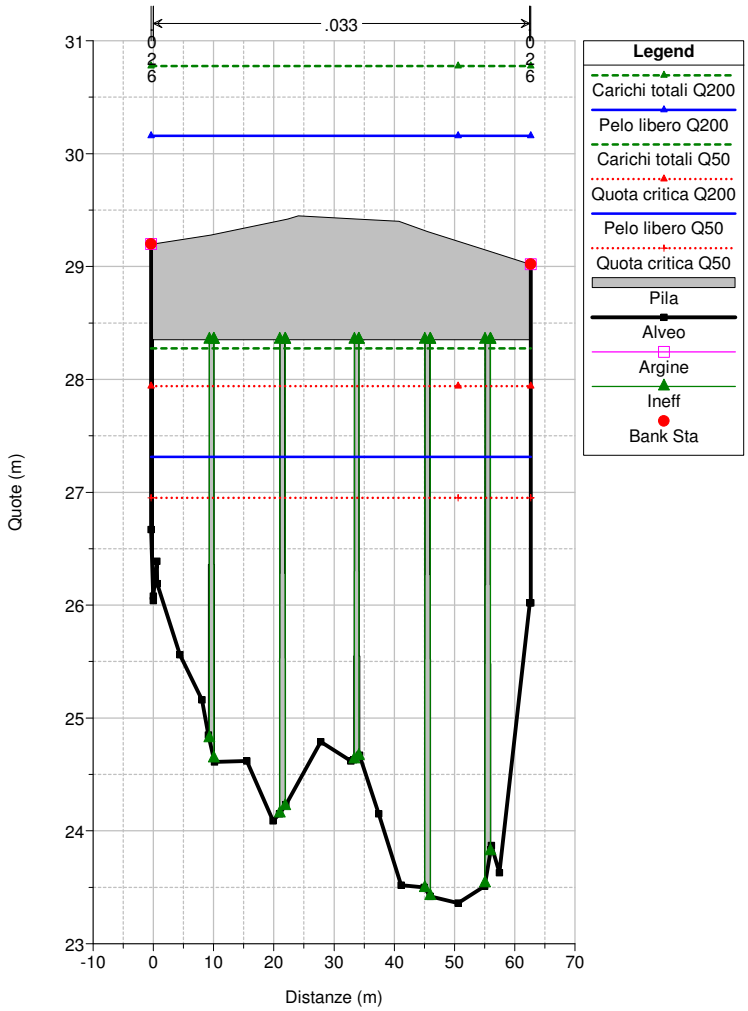
River = Bisagno Reach = Trens Veilino RS = 58.3 E' la sezione immediatamente a monte del Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

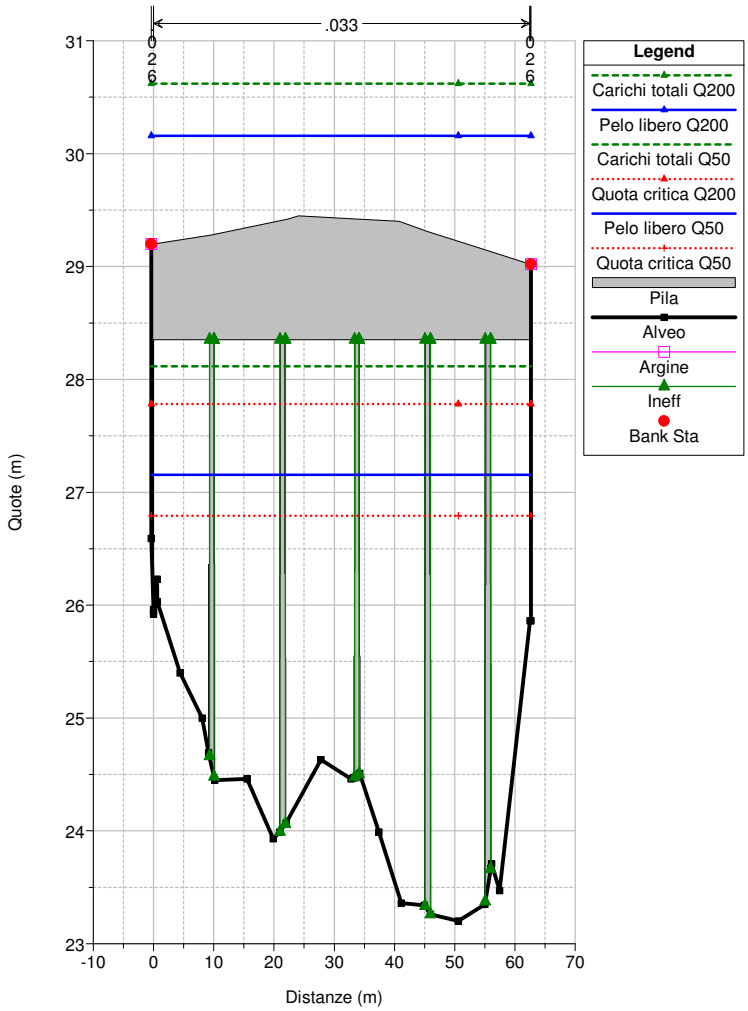
River = Bisagno Reach = Trens Veilino RS = 58.25 BR BIS 58 Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

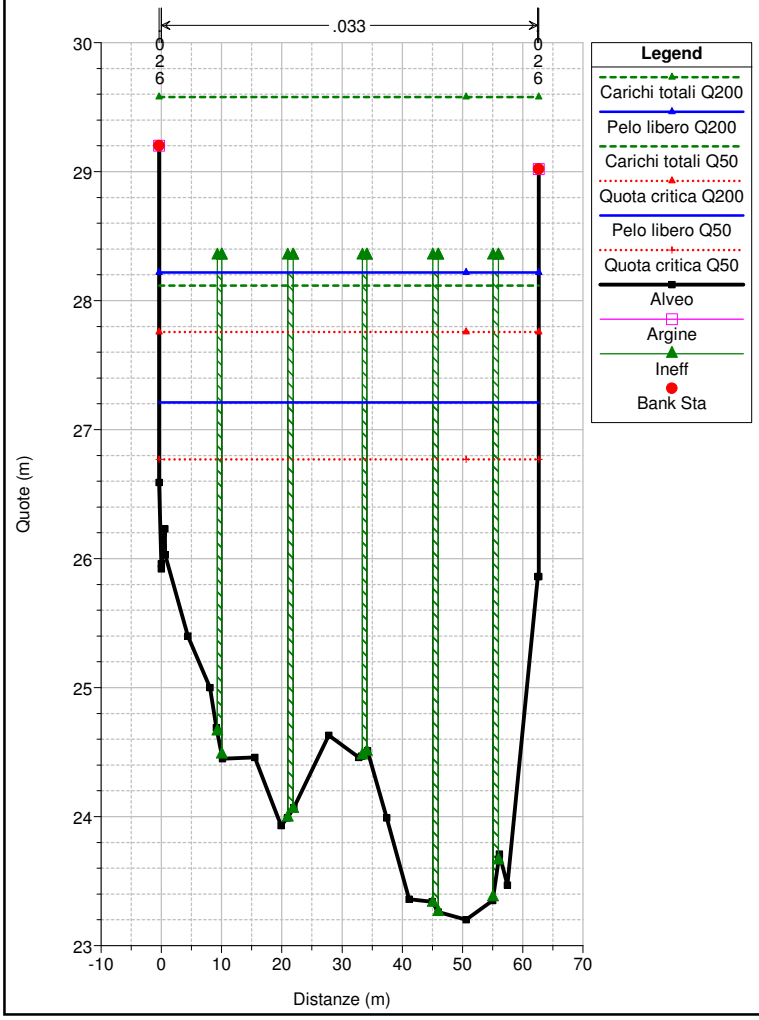
River = Bisagno Reach = Trens Veilino RS = 58.25 BR BIS 58 Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

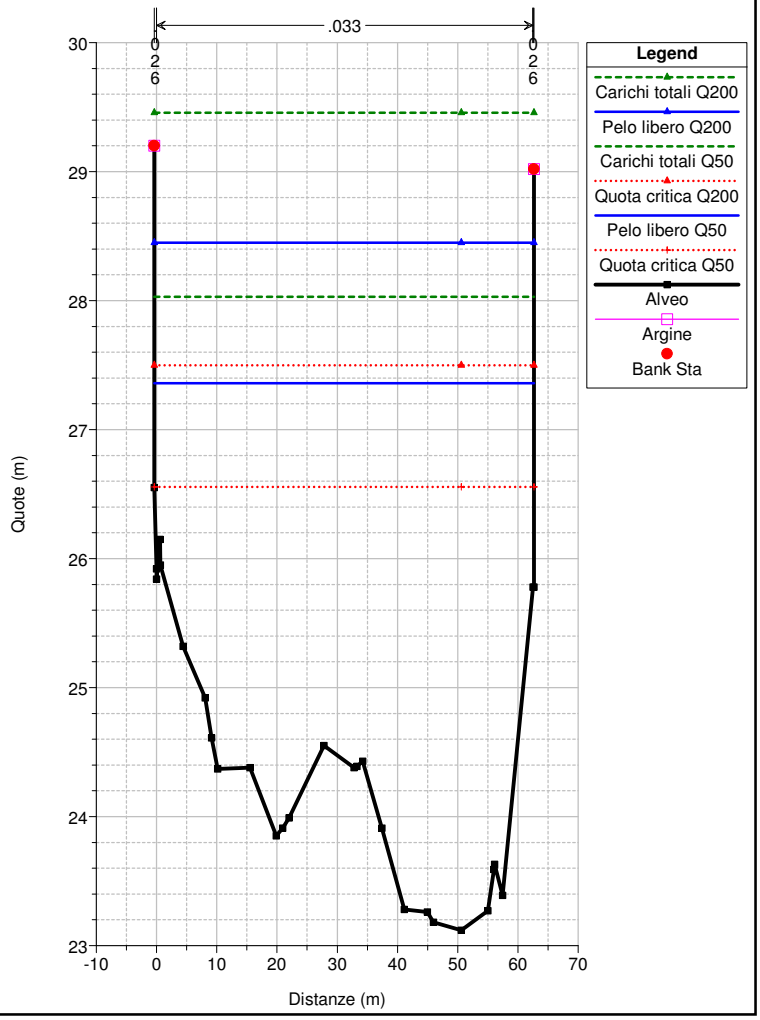
River = Bisagno Reach = Trens Veilino RS = 58.2 E' la sezione immediatamente a valle del Ponte Bezzecca



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

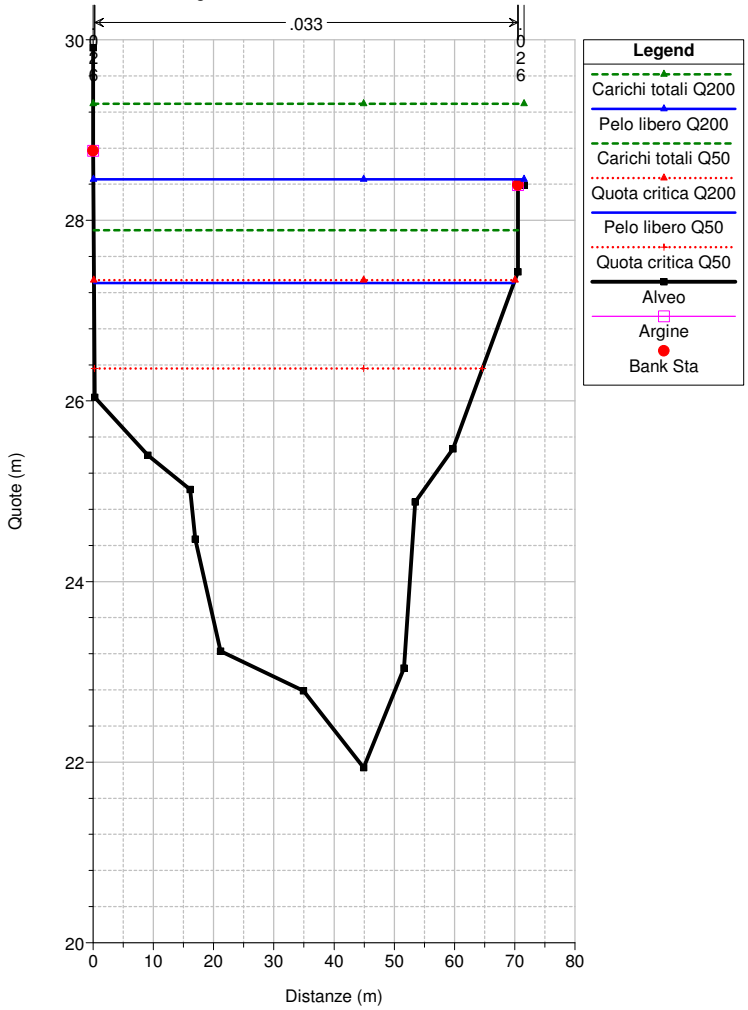
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Trens Veilino RS = 58.1 E' la sezione più a valle del Ponte Bezzecca



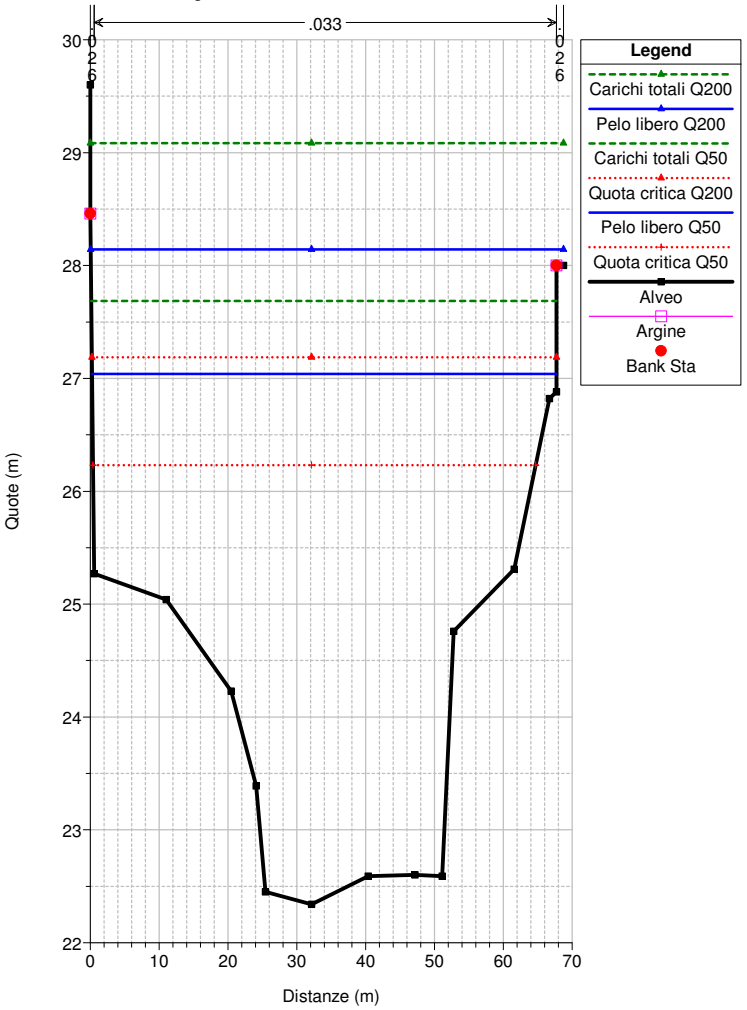
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Trens Veilino RS = 57. E' la sezione 14



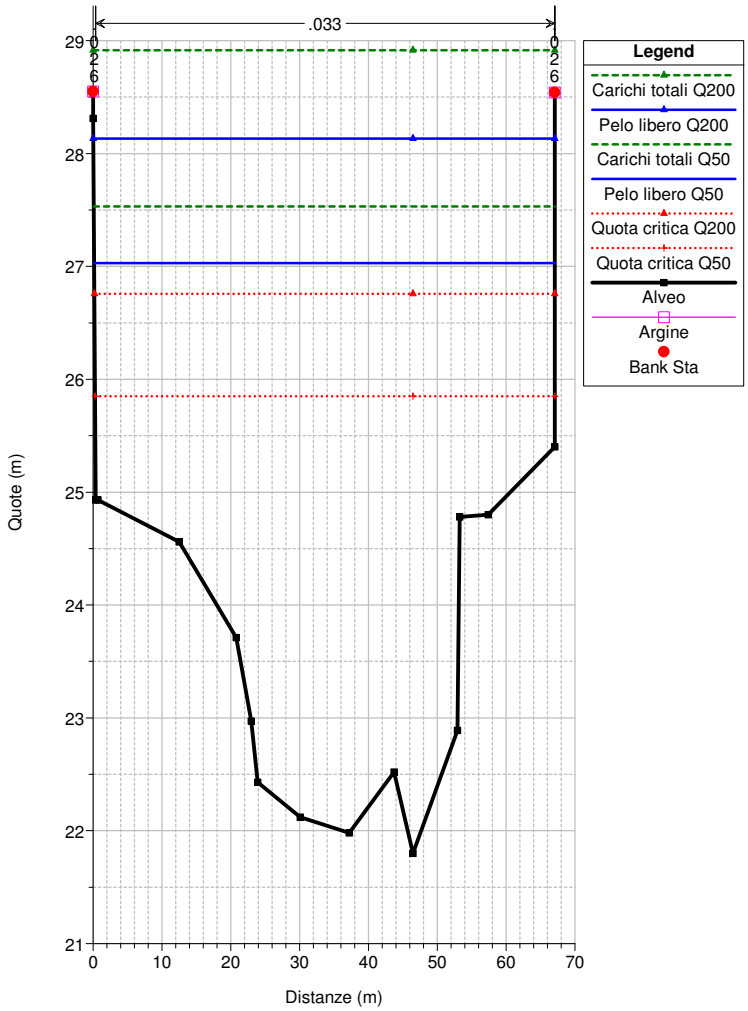
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Trens Veilino RS = 56. E' la sezione 13



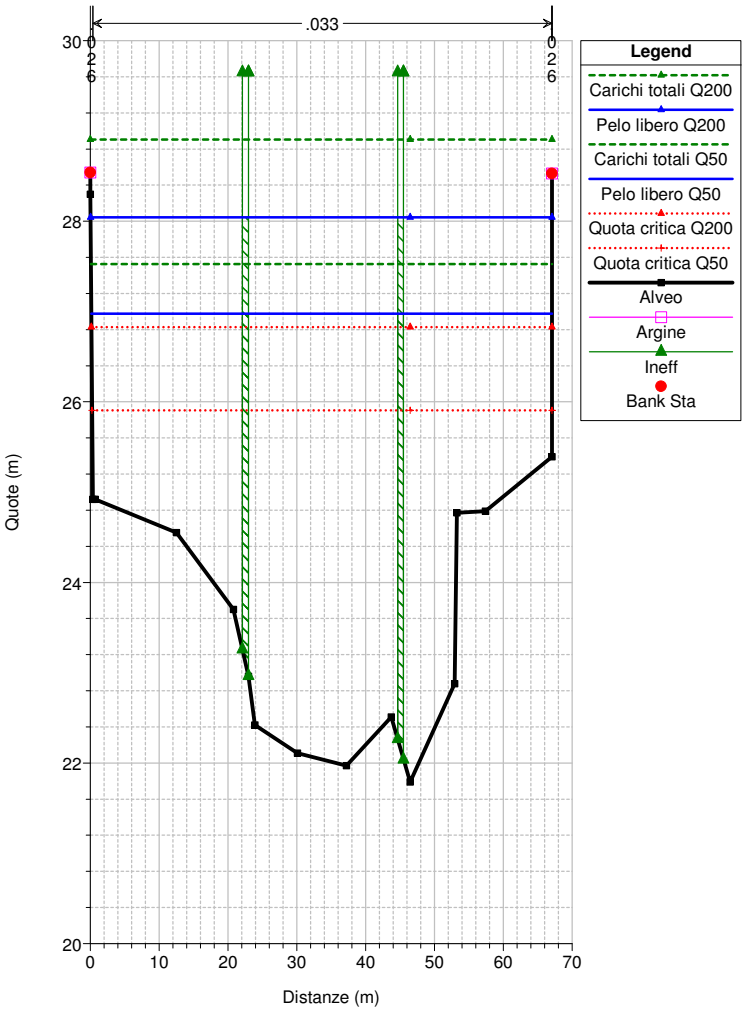
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Trens Veilino RS = 55.4 E' la sezione più a monte della passerella



Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

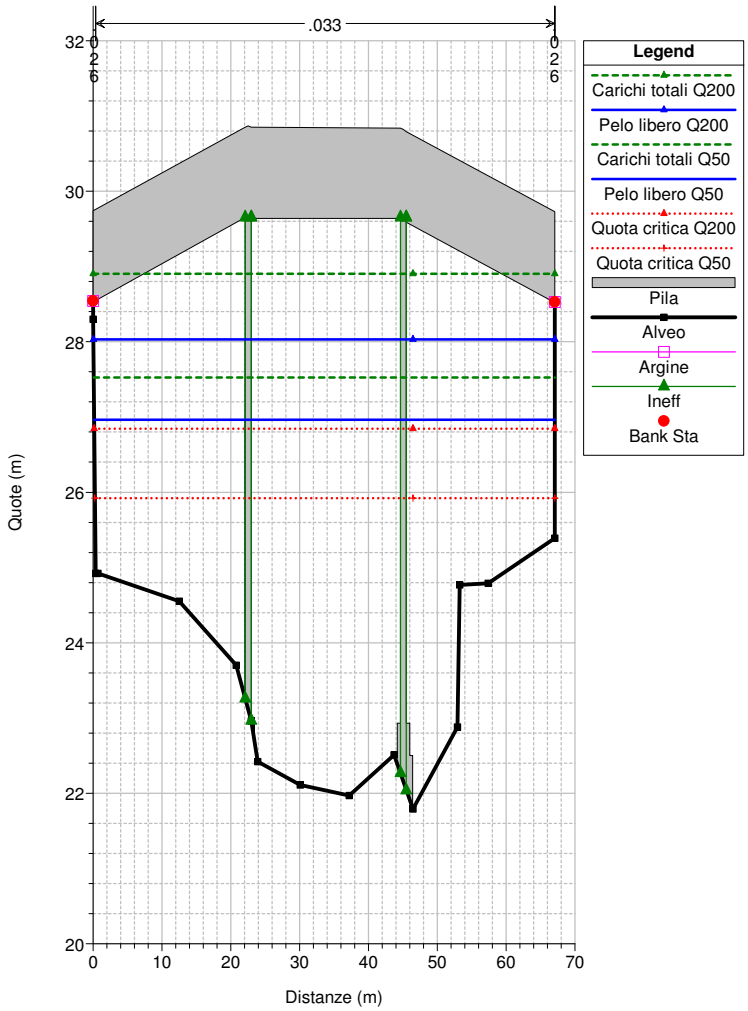
River = Bisagno Reach = Trens Veilino RS = 55.3 E' la sezione immediatamente a monte della passerella



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

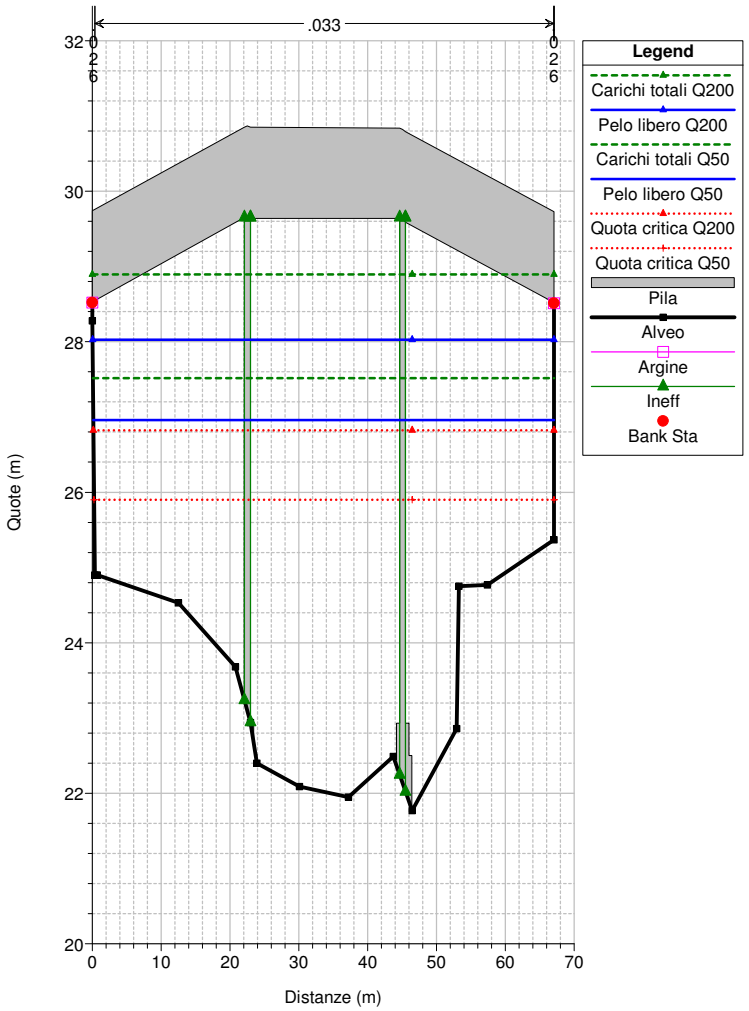
River = Bisagno Reach = Trens Veilino RS = 55.25 BR BIS 55 Passerella Pedonale



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

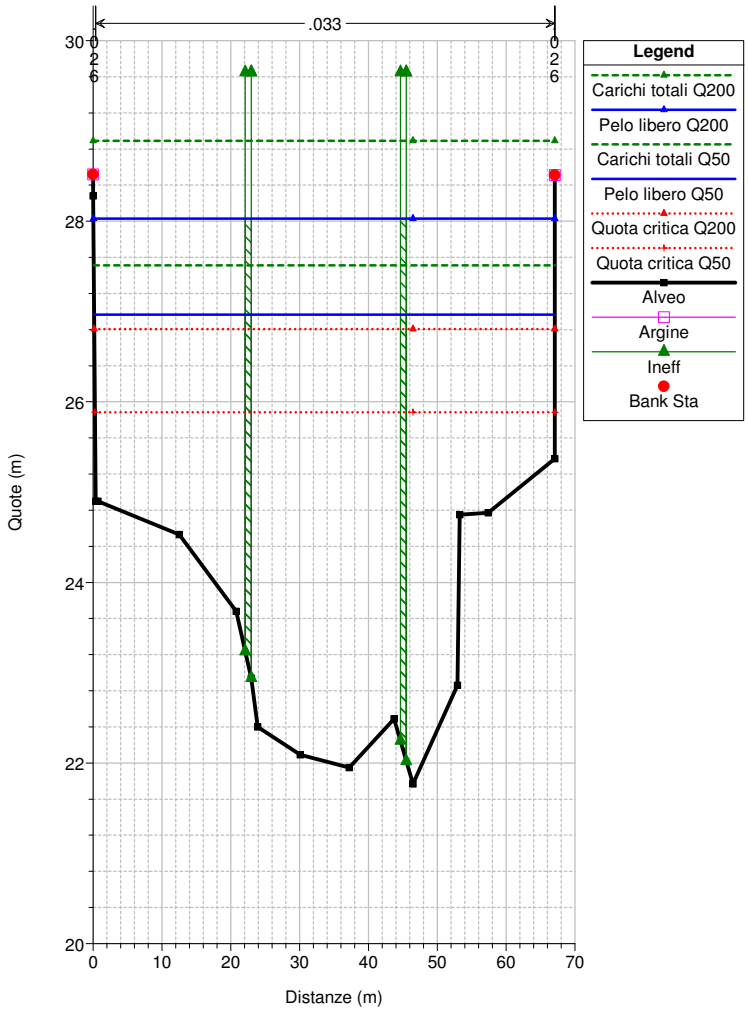
River = Bisagno Reach = Trens Veilino RS = 55.25 BR BIS 55 Passerella Pedonale



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

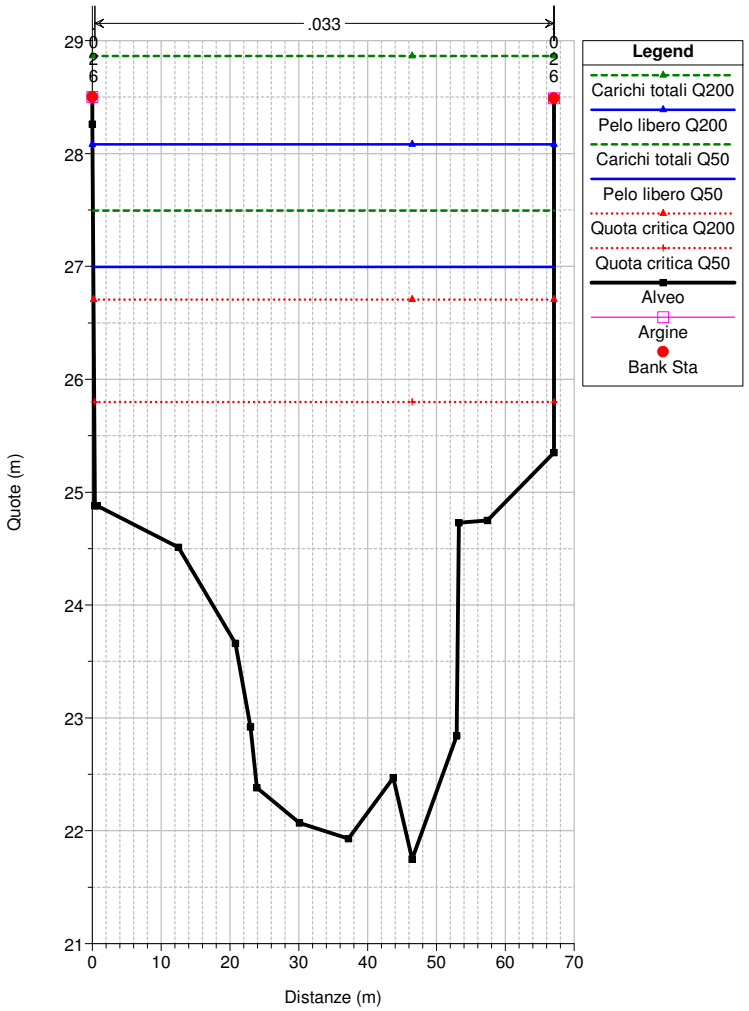
River = Bisagno Reach = Trens Veilino RS = 55.2 E' la sezione immediatamente a valle della passerella



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

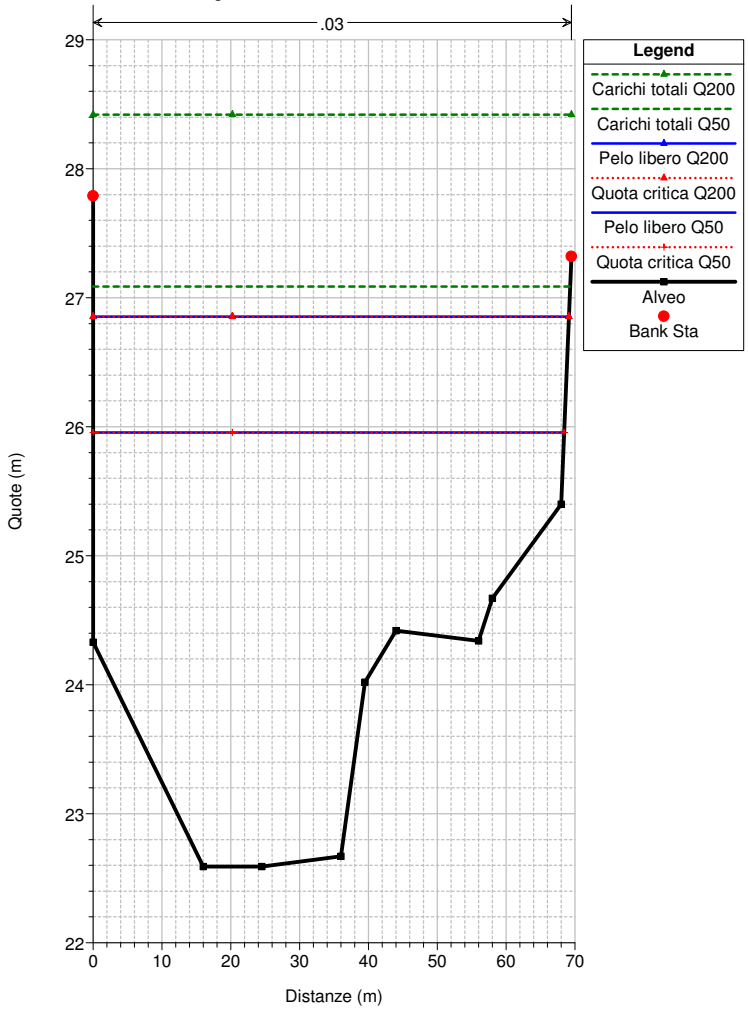
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Trens Veilino RS = 55.1 E' la sezione più a valle della passerella



Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

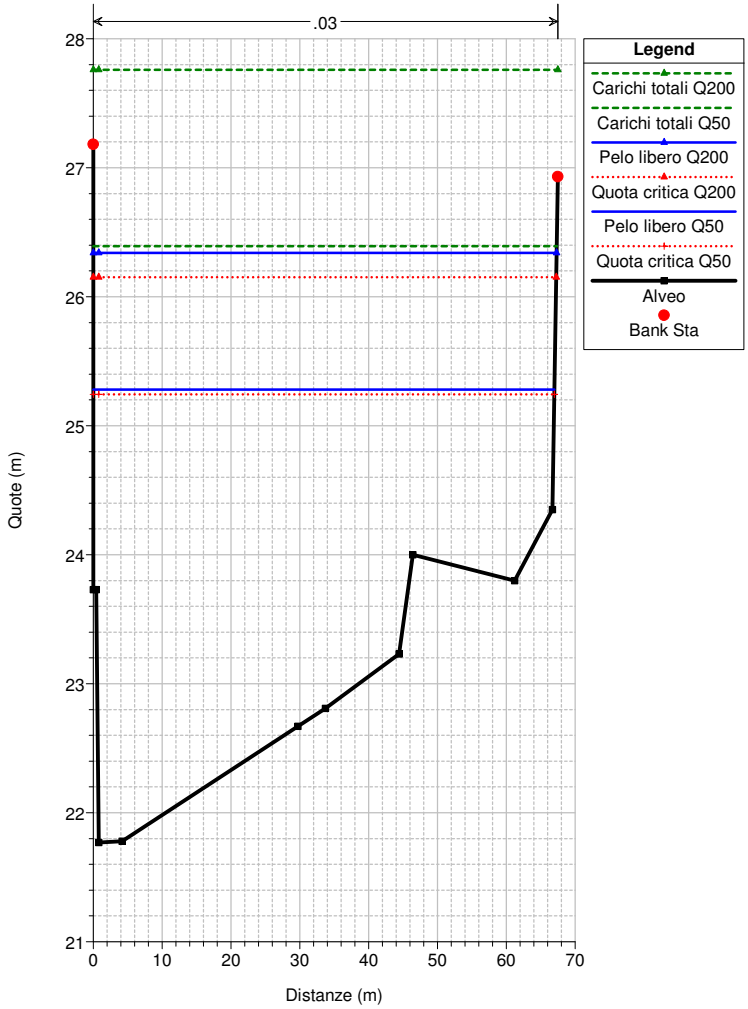
River = Bisagno Reach = Trens Veilino RS = 54 Sezione 8.0



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Trens Veilino RS = 53 Sezione 7.0



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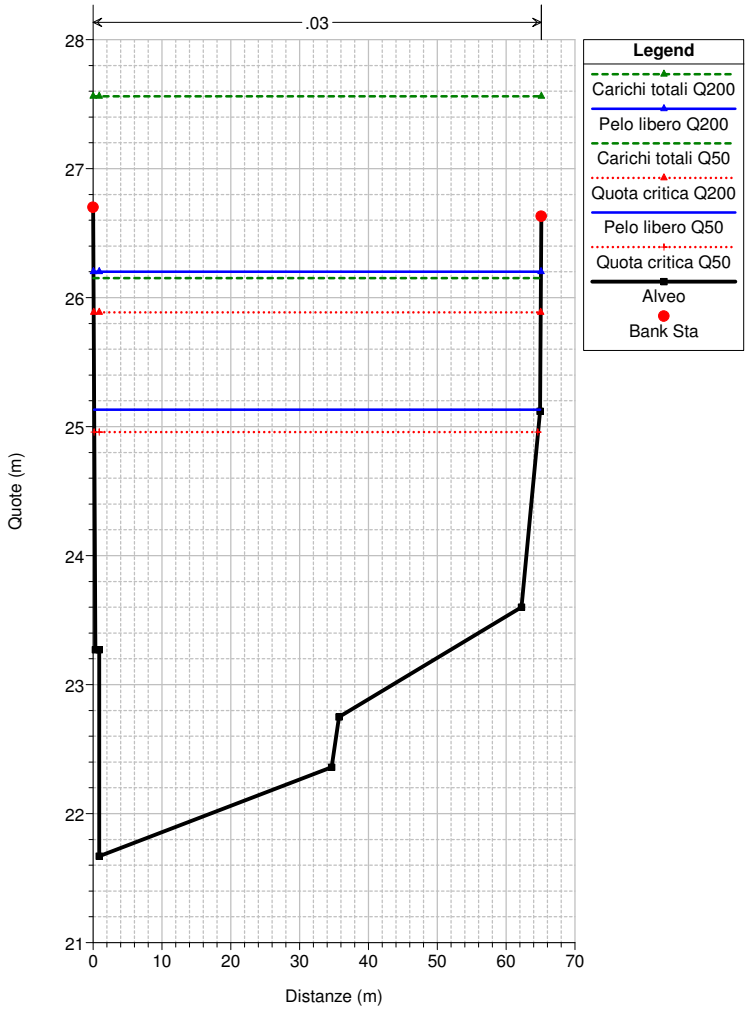
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

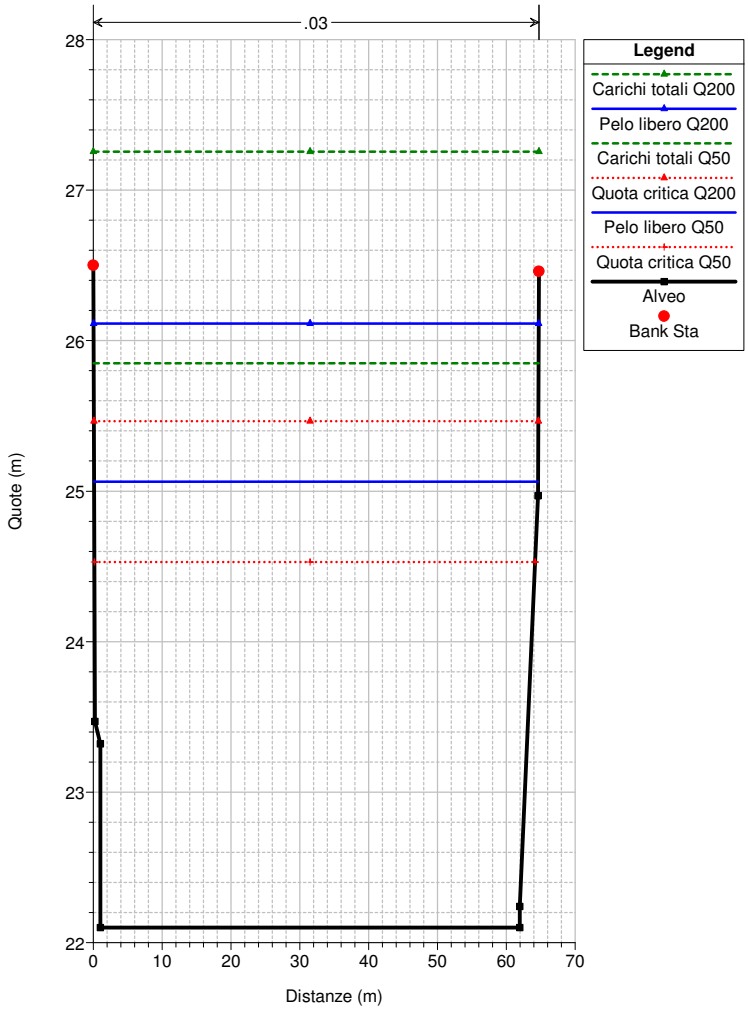
River = Bisagno Reach = Trens Veilino RS = 52. sez 15 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

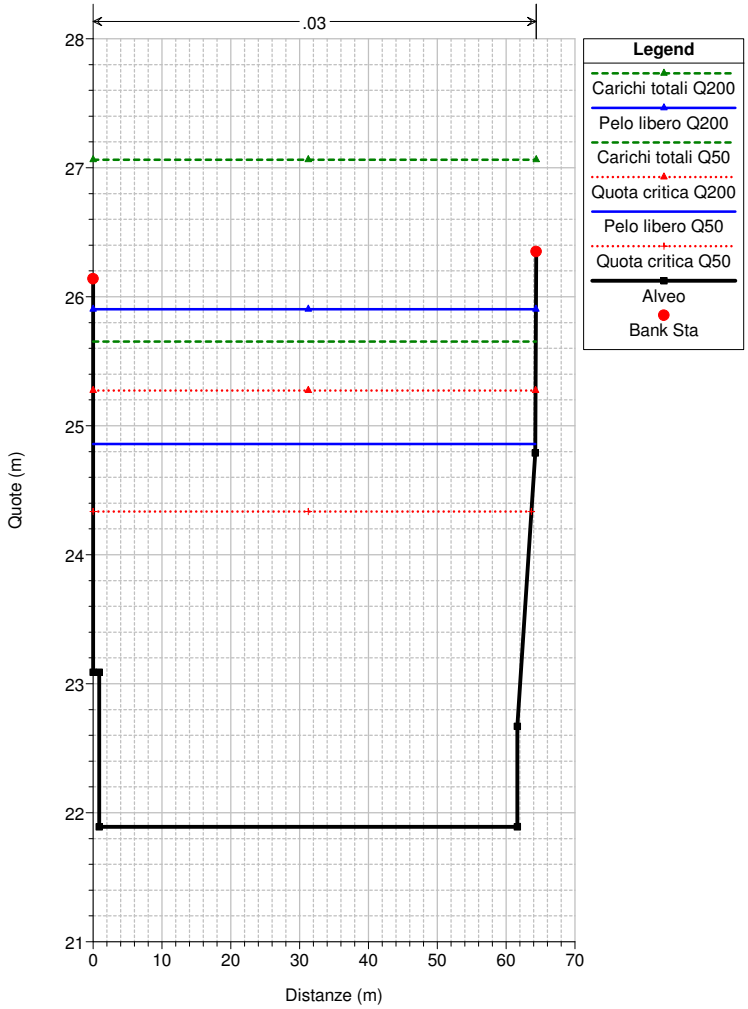
River = Bisagno Reach = Trens Veilino RS = 51. sez 14 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

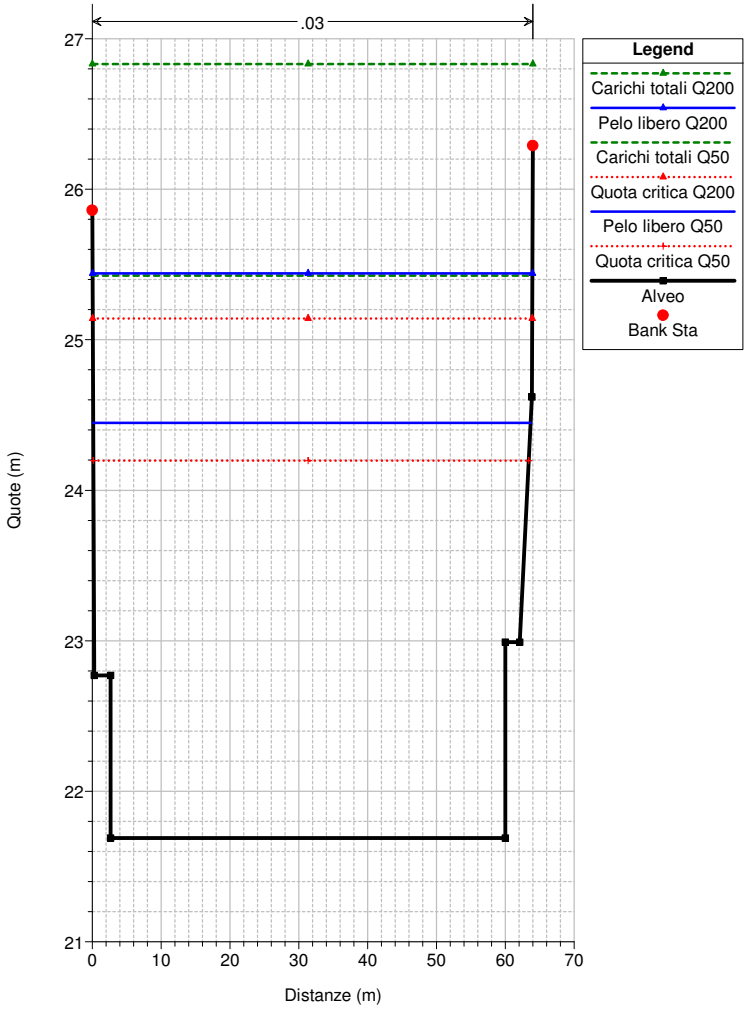
River = Bisagno Reach = Trens Veilino RS = 50. sez 12 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

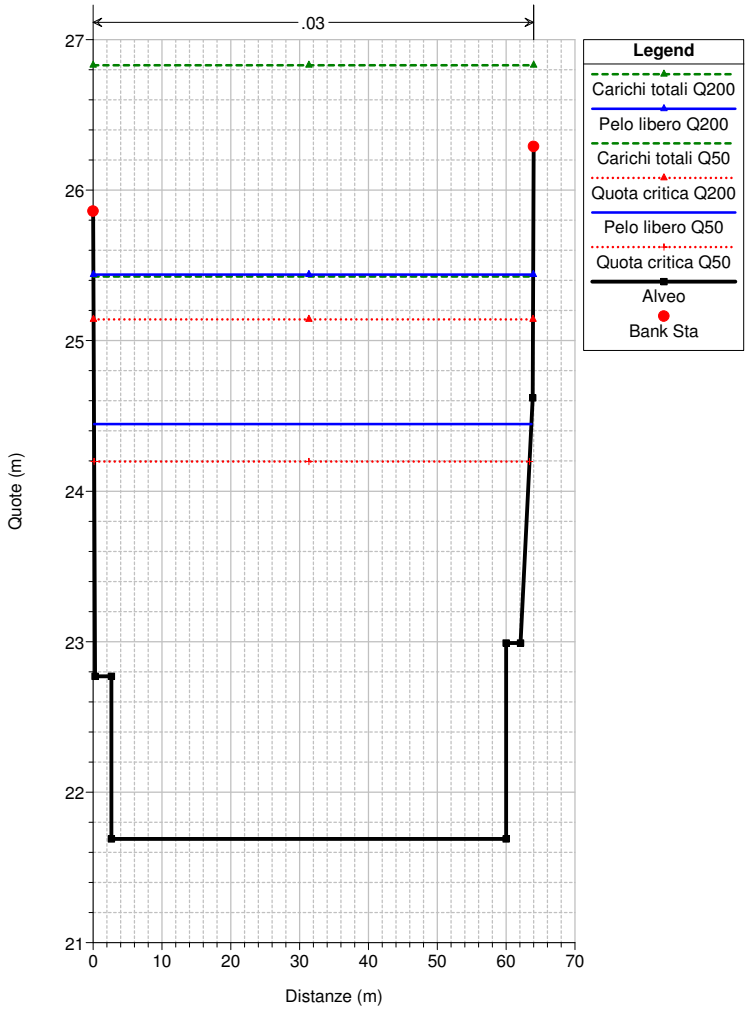
River = Bisagno Reach = Trens Veilino RS = 49.2 sez 11.2 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

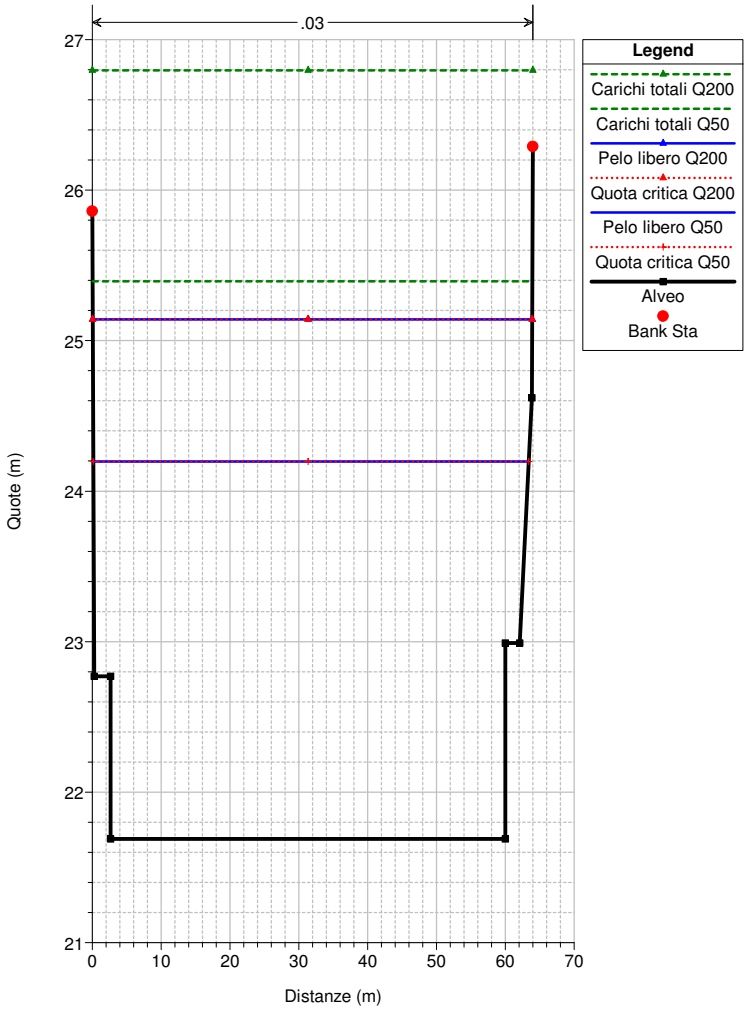
River = Bisagno Reach = Trens Veilino RS = 49.1 sez 11.1 stato progetto ponte Monteverde - coronamento briglia m



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

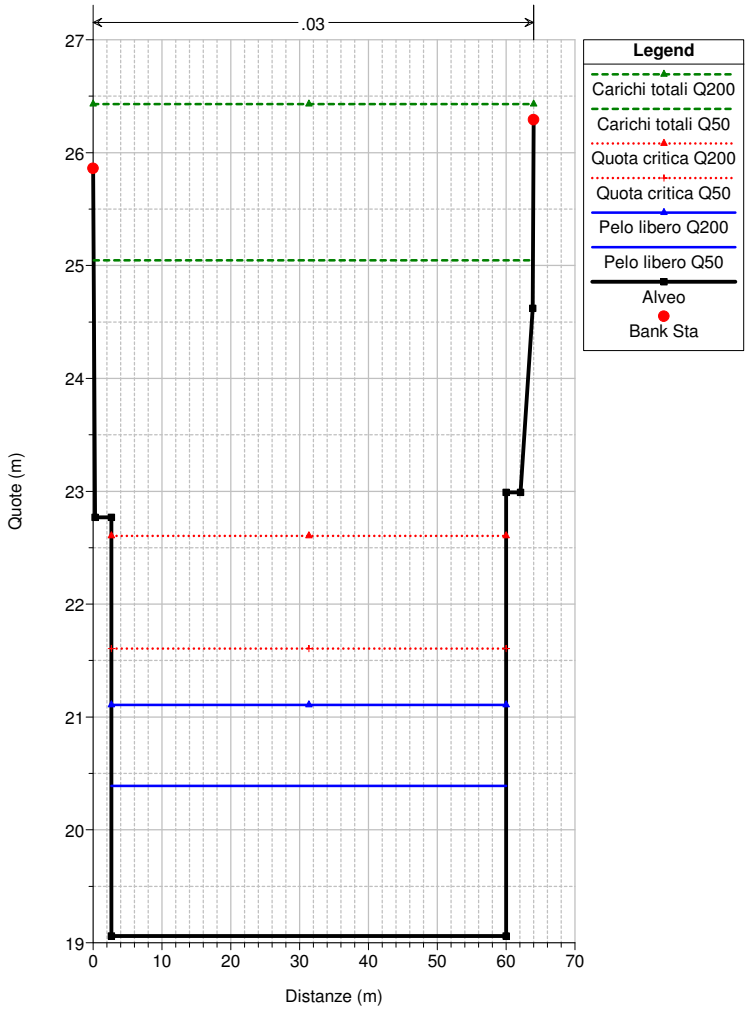
River = Bisagno Reach = Trens Veilino RS = 49. sez 11.0 stato progetto ponte Monteverde - coronamento briglia v



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

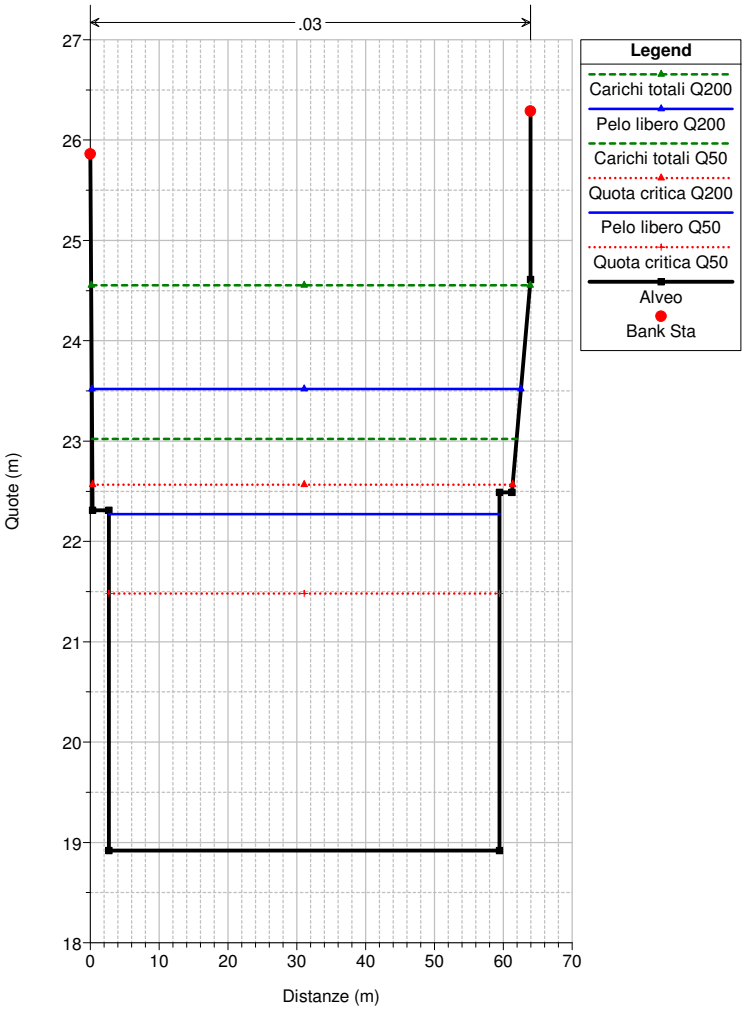
River = Bisagno Reach = Trens Veilino RS = 48.9 sez 10.9 stato progetto ponte Monteverde - valle briglia



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

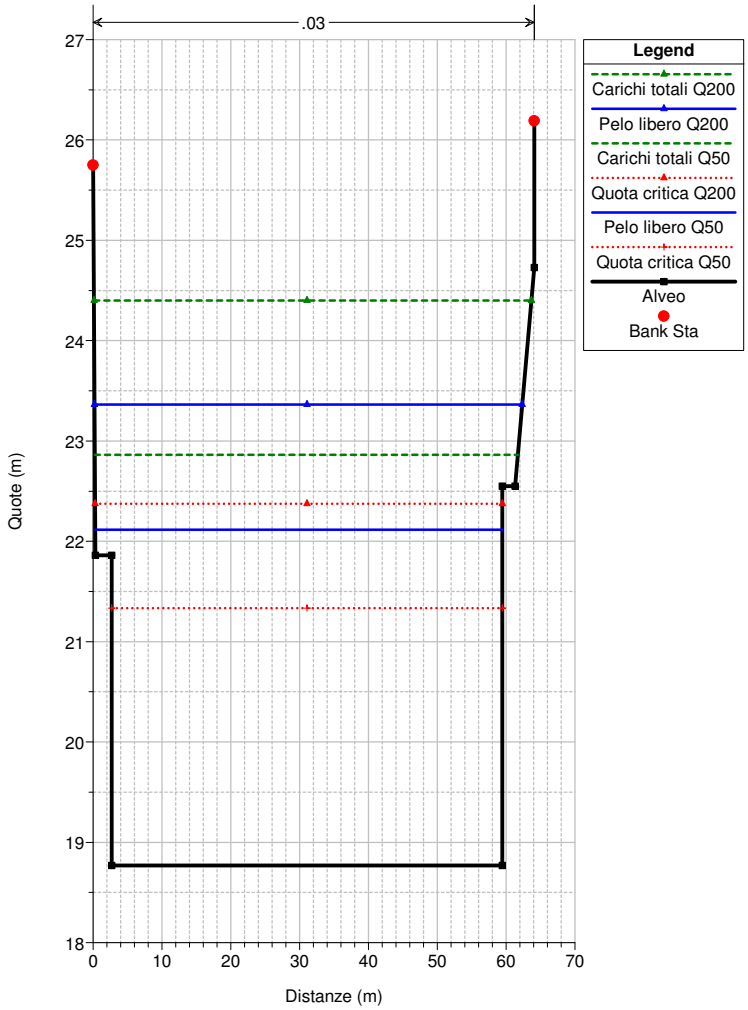
River = Bisagno Reach = Trens Veilino RS = 48. sez 10 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

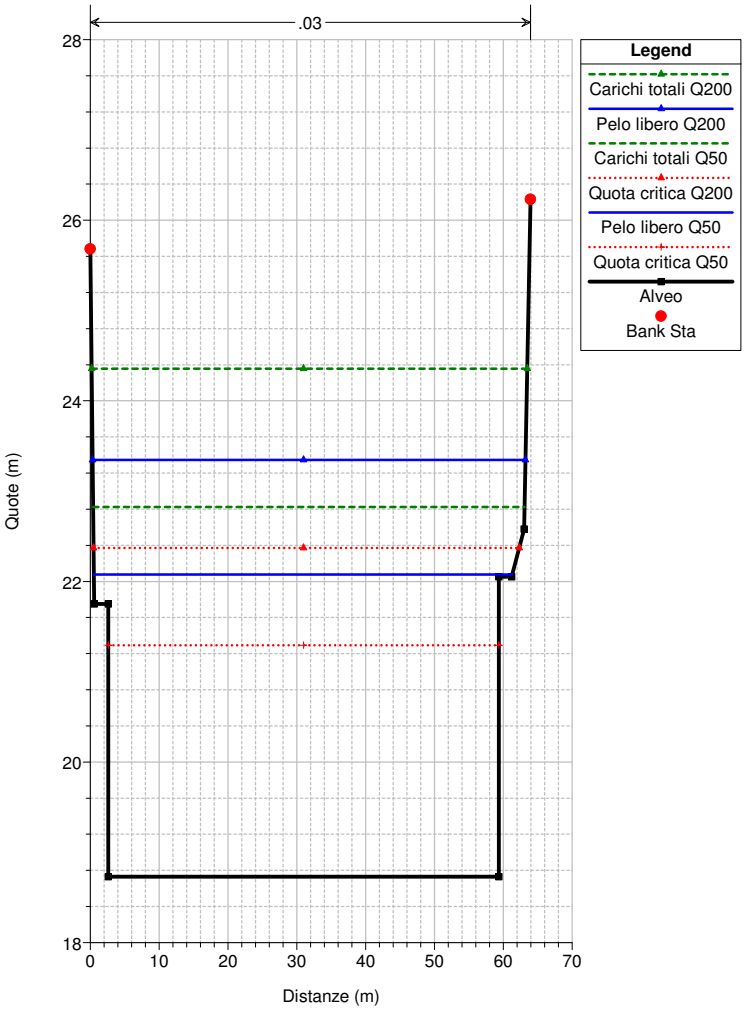
River = Bisagno Reach = Trens Veilino RS = 47 sez 9 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

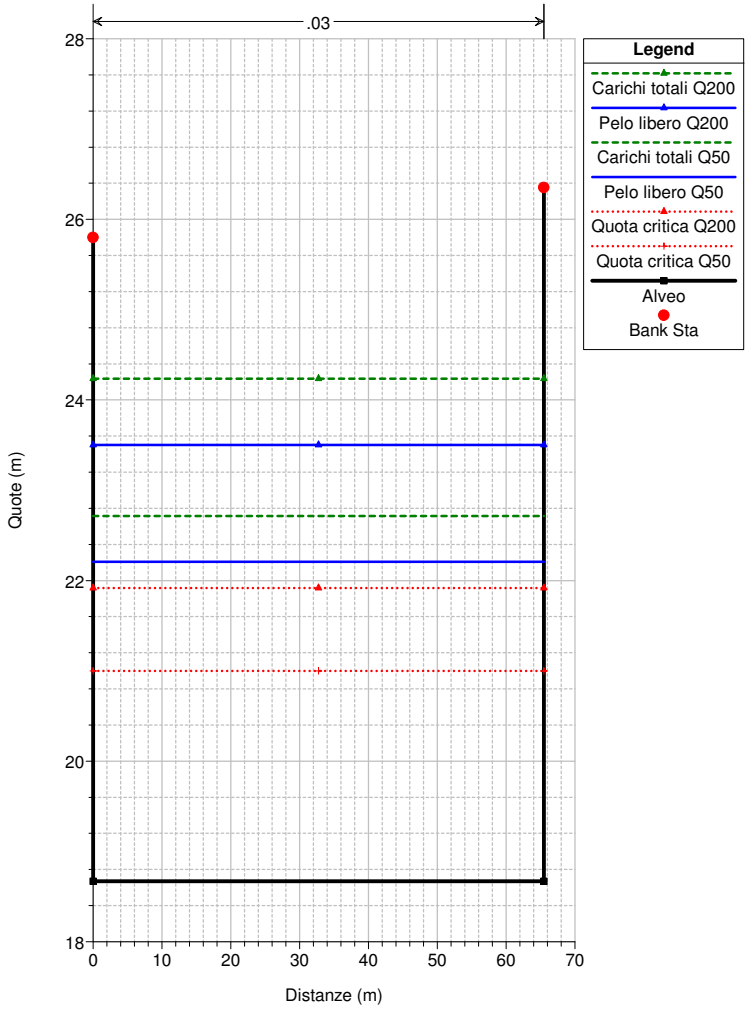
River = Bisagno Reach = Trens Veilino RS = 46 sez 8 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

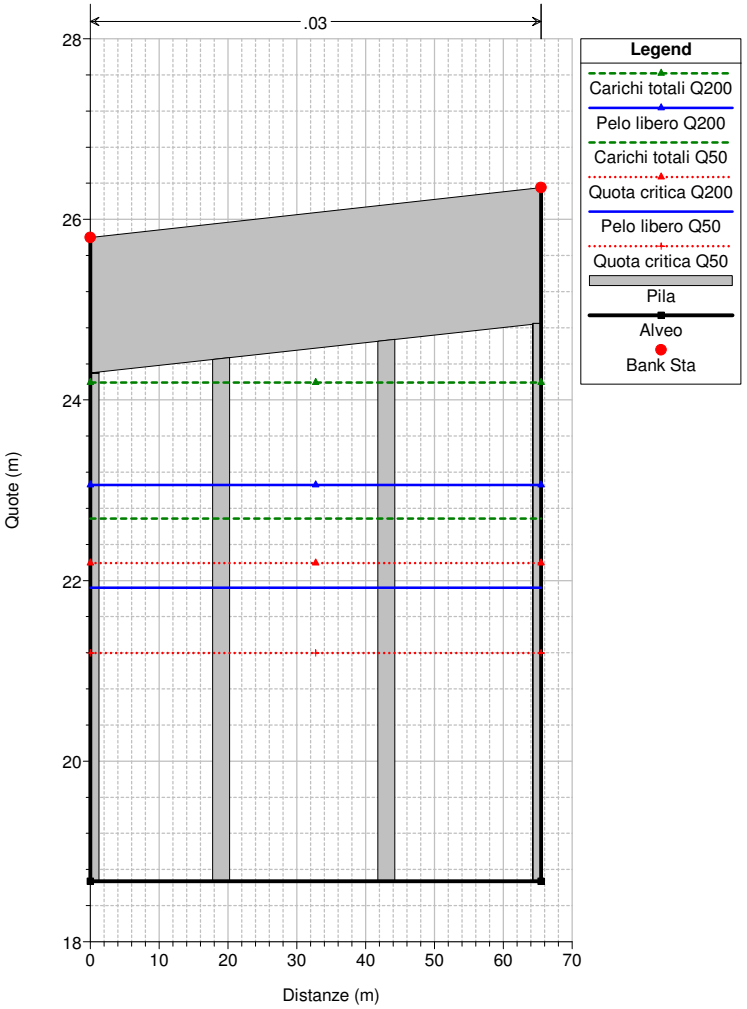
River = Bisagno Reach = Trens Veilino RS = 45.1 sez 7.1 stato progetto ponte Monteverde - monte ponte



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

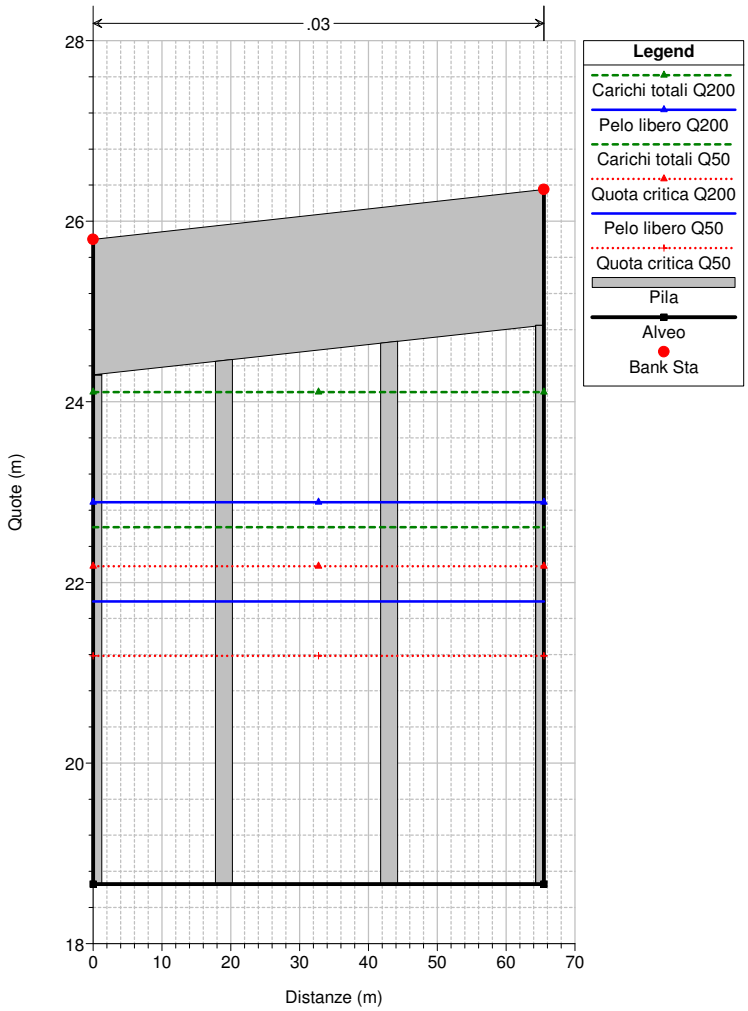
River = Bisagno Reach = Trens Veilino RS = 45 BR ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

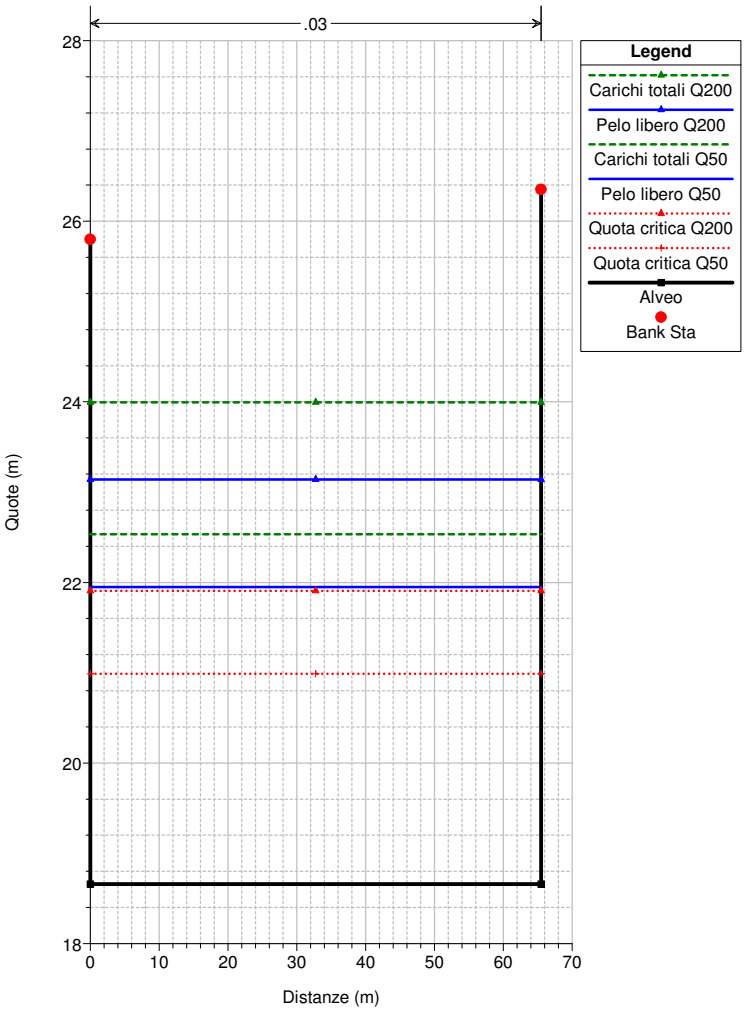
River = Bisagno Reach = Trens Veilino RS = 45 BR ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

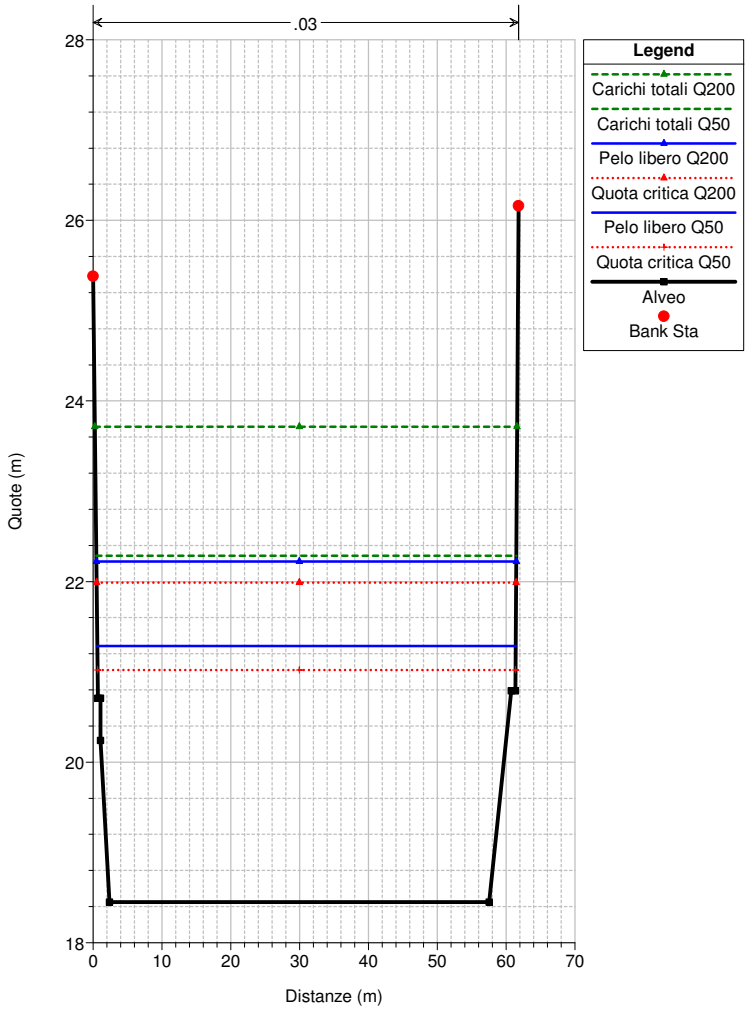
River = Bisagno Reach = Trens Veilino RS = 44.9 sez 6.9 stato progetto ponte Monteverde - valle ponte



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

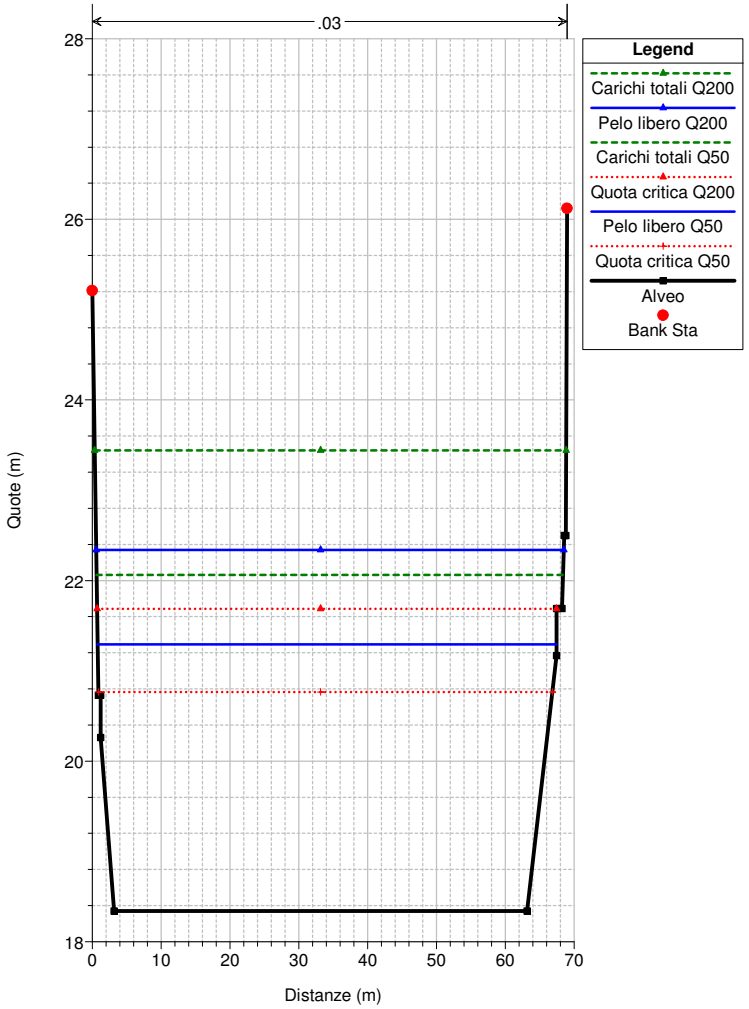
River = Bisagno Reach = Trens Veilino RS = 44 sez 4 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

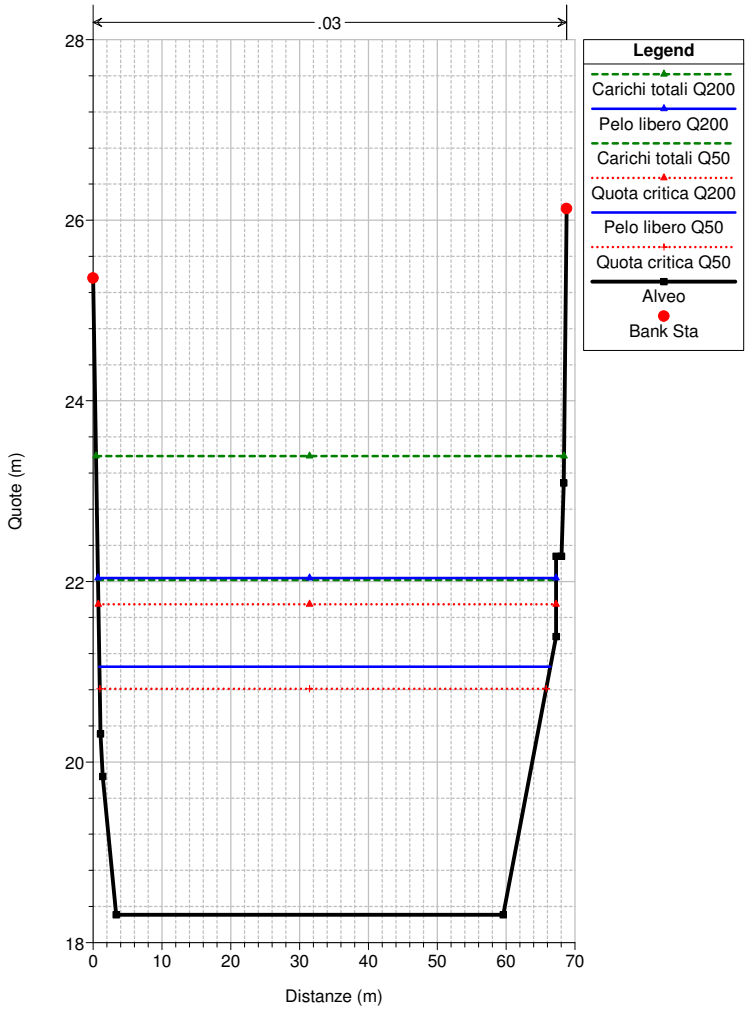
River = Bisagno Reach = Trens Veilino RS = 43 sez 3 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

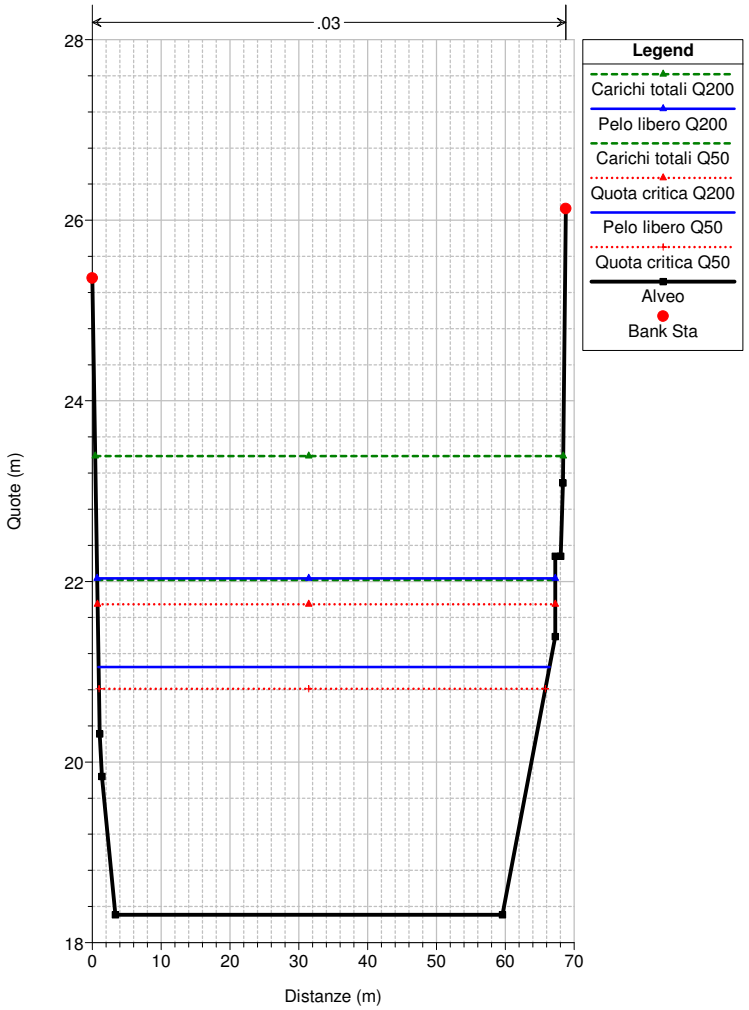
River = Bisagno Reach = Trens Veilino RS = 42.2 sez 2.2 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

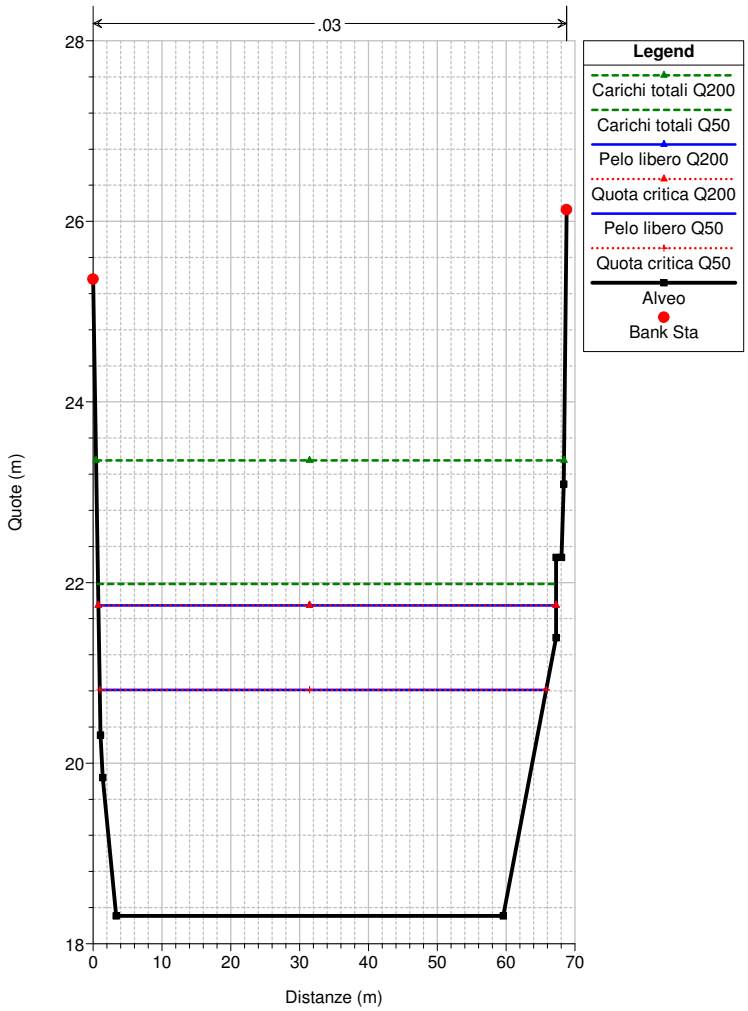
River = Bisagno Reach = Trens Veilino RS = 42.1 sez 2.1 stato progetto ponte Monteverde-coronamento briglia lato



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

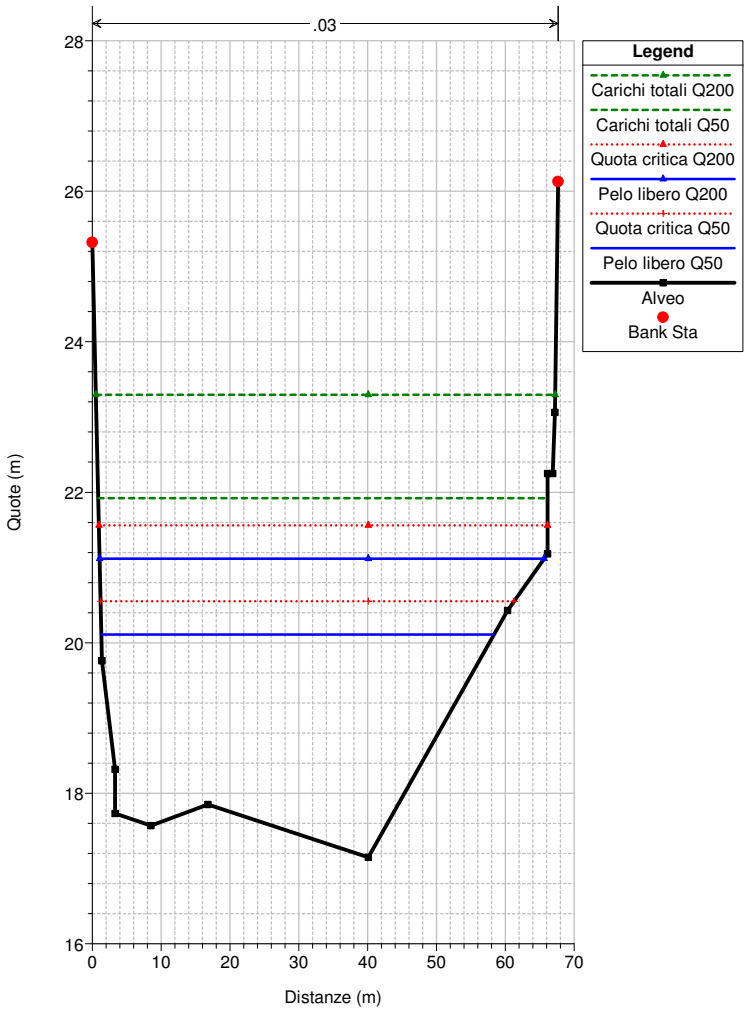
River = Bisagno Reach = Trens Veilino RS = 42 sez 2.0 stato progetto ponte Monteverde-coronamento briglia lato



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

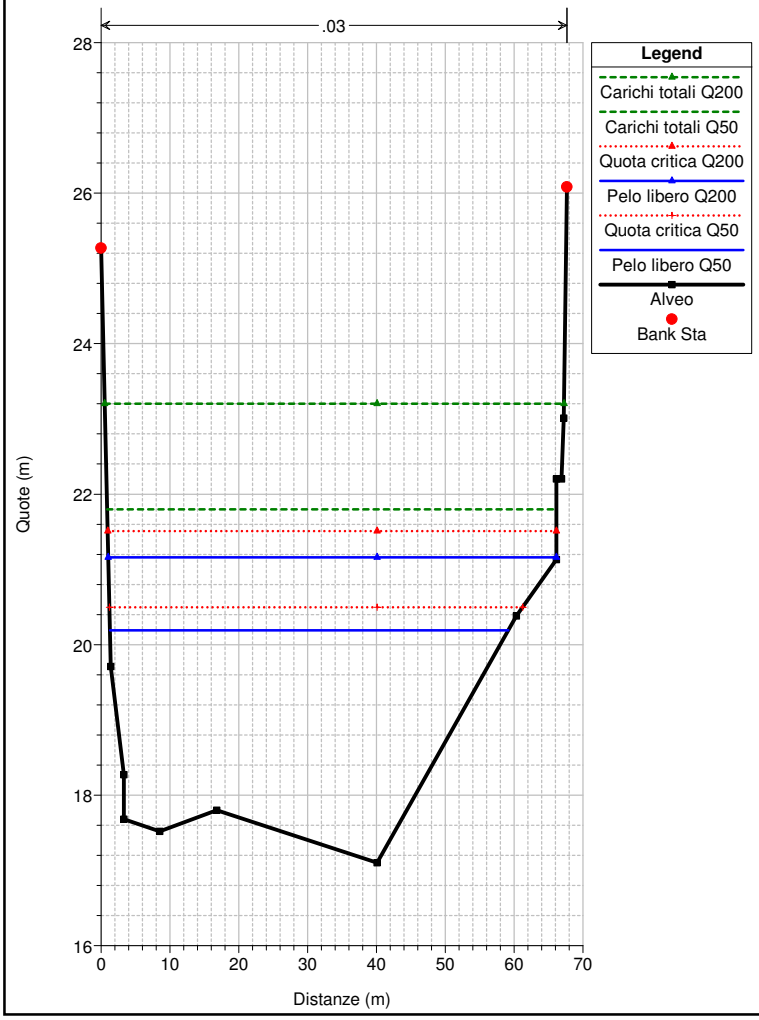
River = Bisagno Reach = Trens Veilino RS = 41.9 sez 1.9 stato progetto ponte Monteverde valle briglia



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

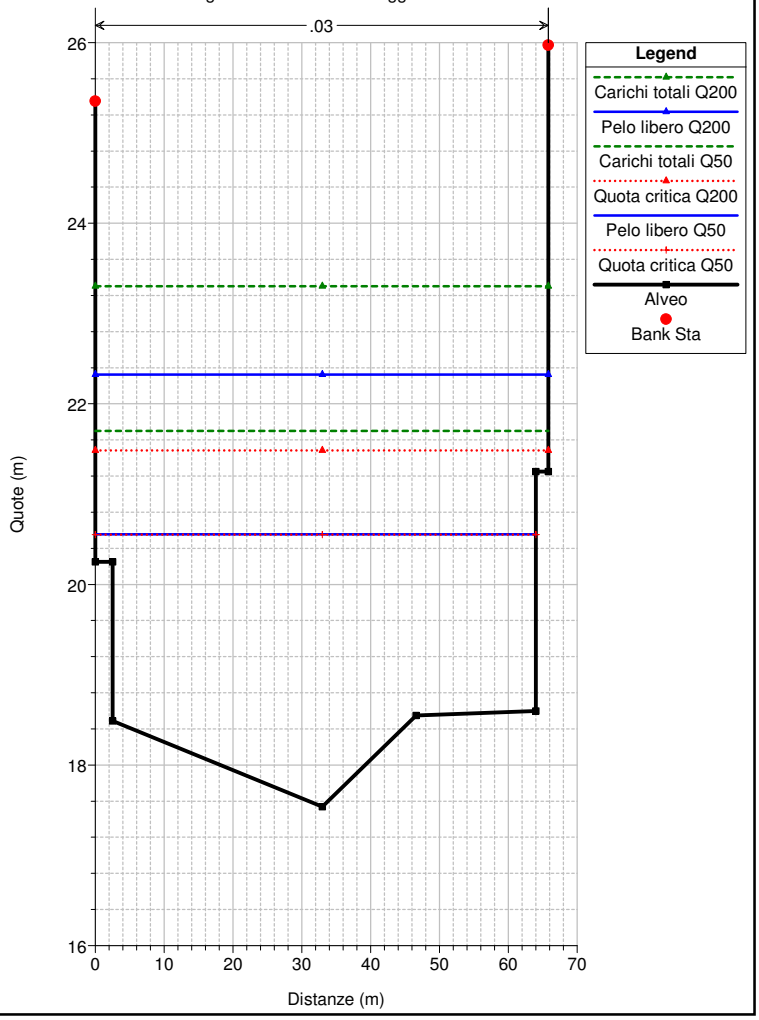
River = Bisagno Reach = Trens Veilino RS = 41 sez 1.0 stato progetto ponte Monteverde



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

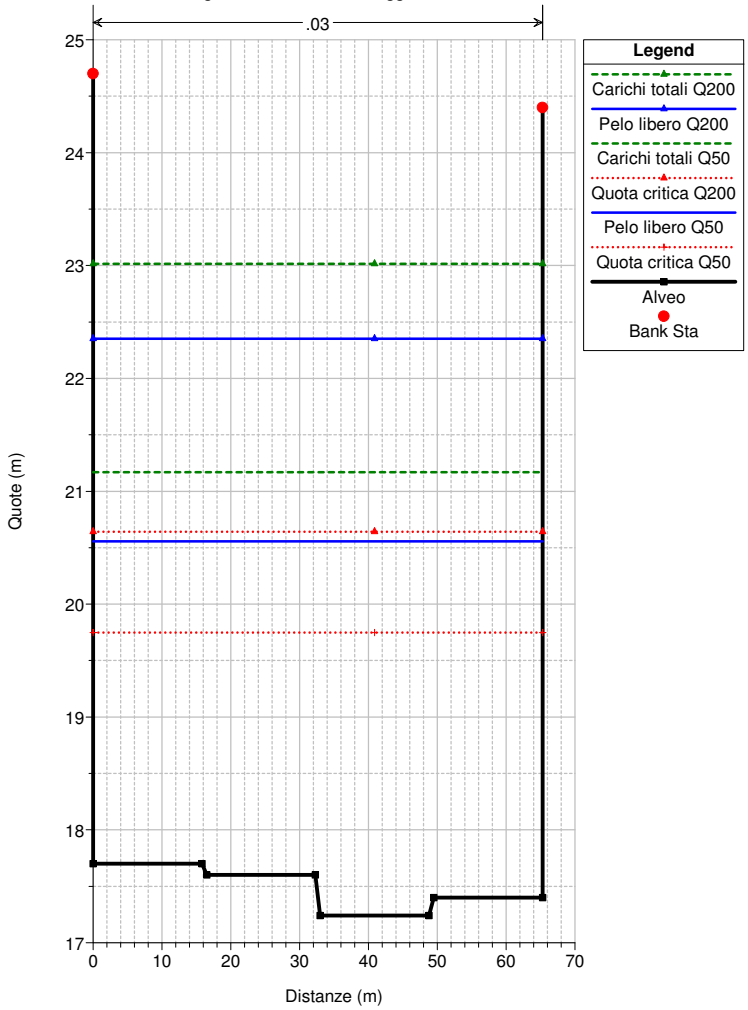
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 40. Sezione 22



Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

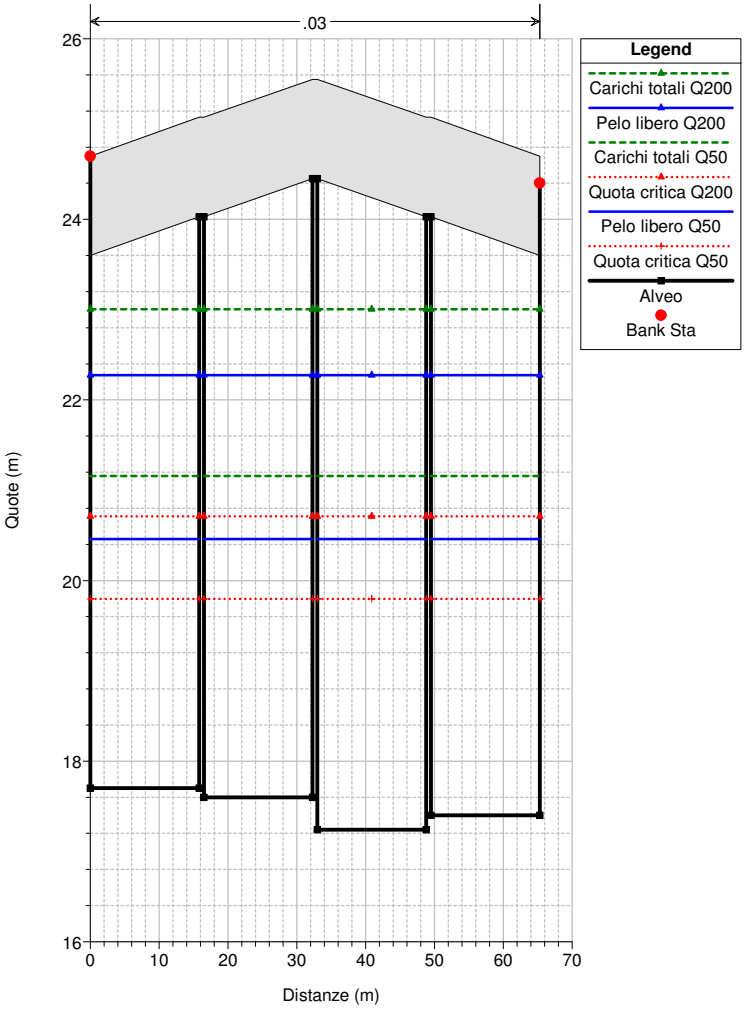
River = Bisagno Reach = Veil Fereggiano RS = 39. Sezione 21



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

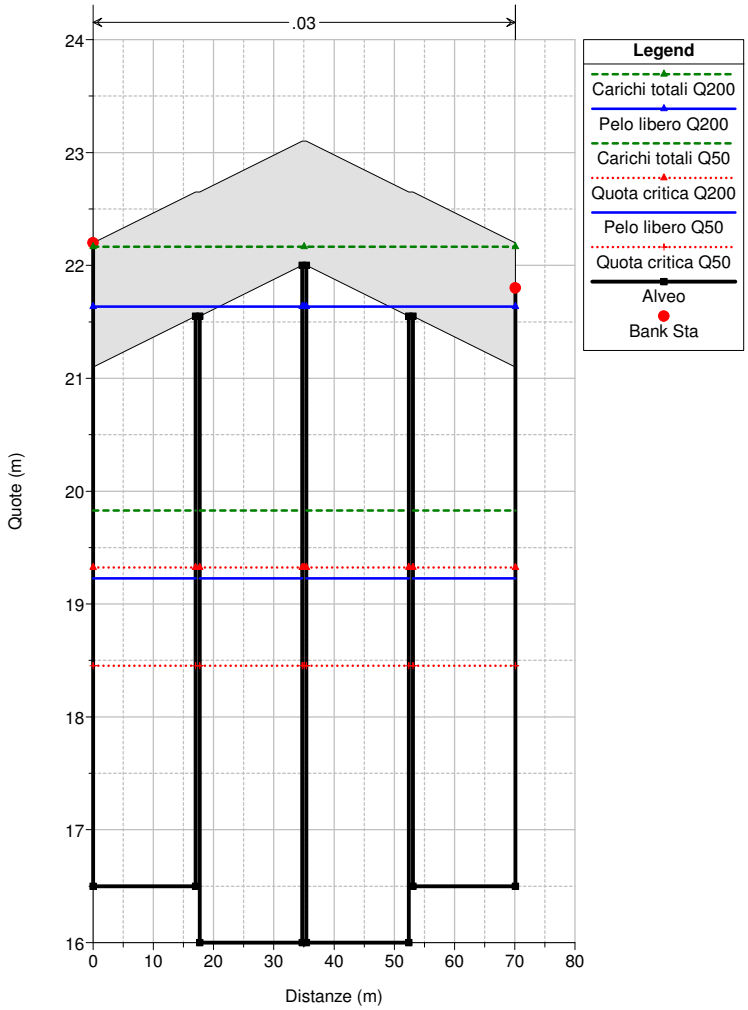
River = Bisagno Reach = Veil Fereggiano RS = 38. Sezione 20 (imbocco copertura)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

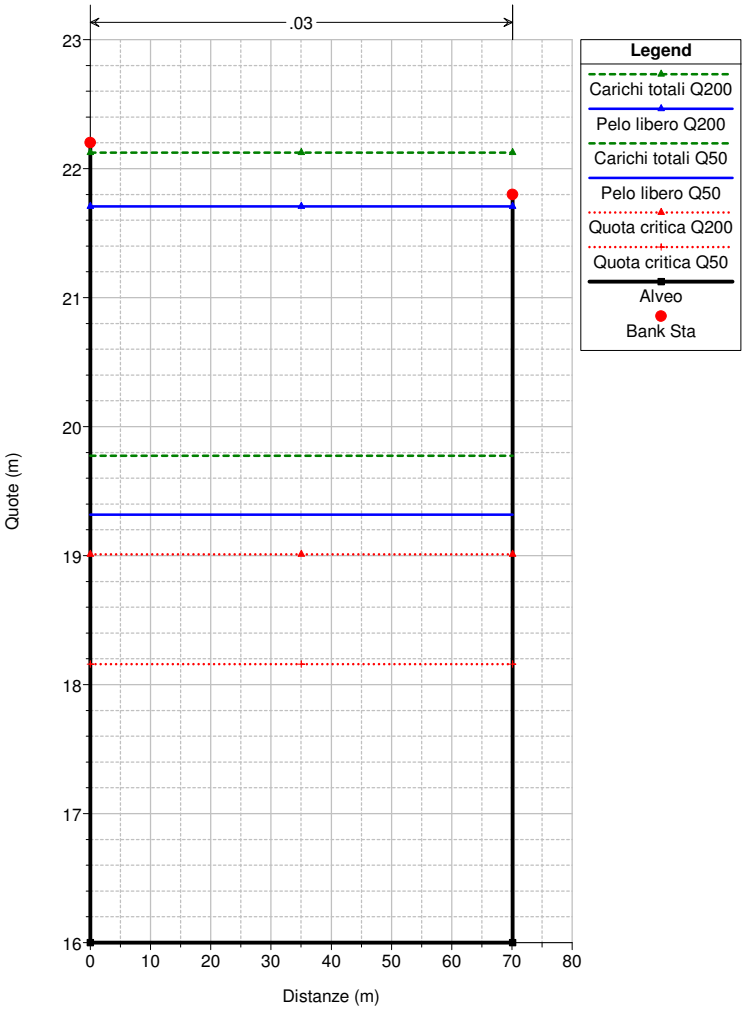
River = Bisagno Reach = Veil Fereggiano RS = 37. Sezione 19 (sbocco copertura)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

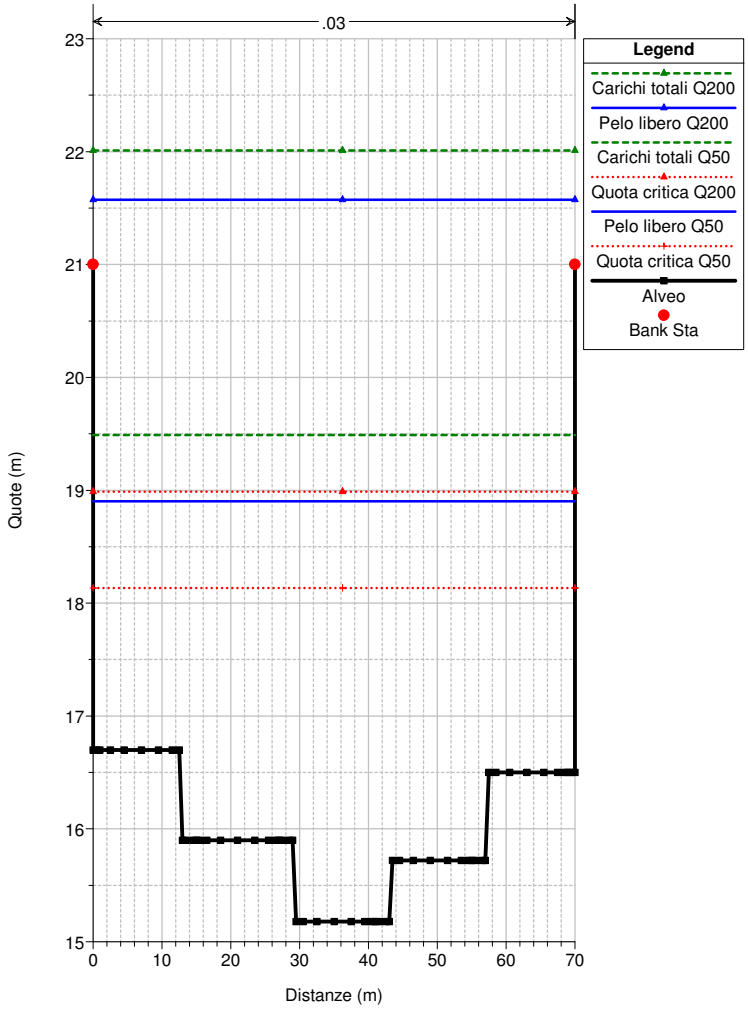
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 36. Sezione 18 (valle briglia)



Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

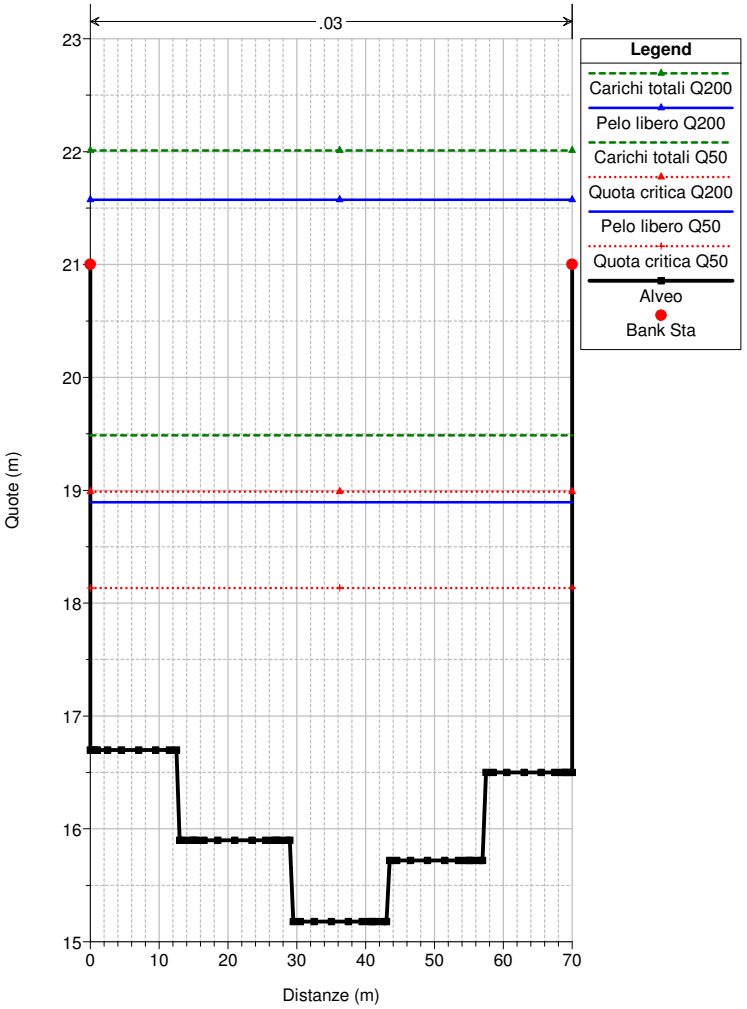
River = Bisagno Reach = Veil Fereggiano RS = 35.3 Sezione 17.3



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

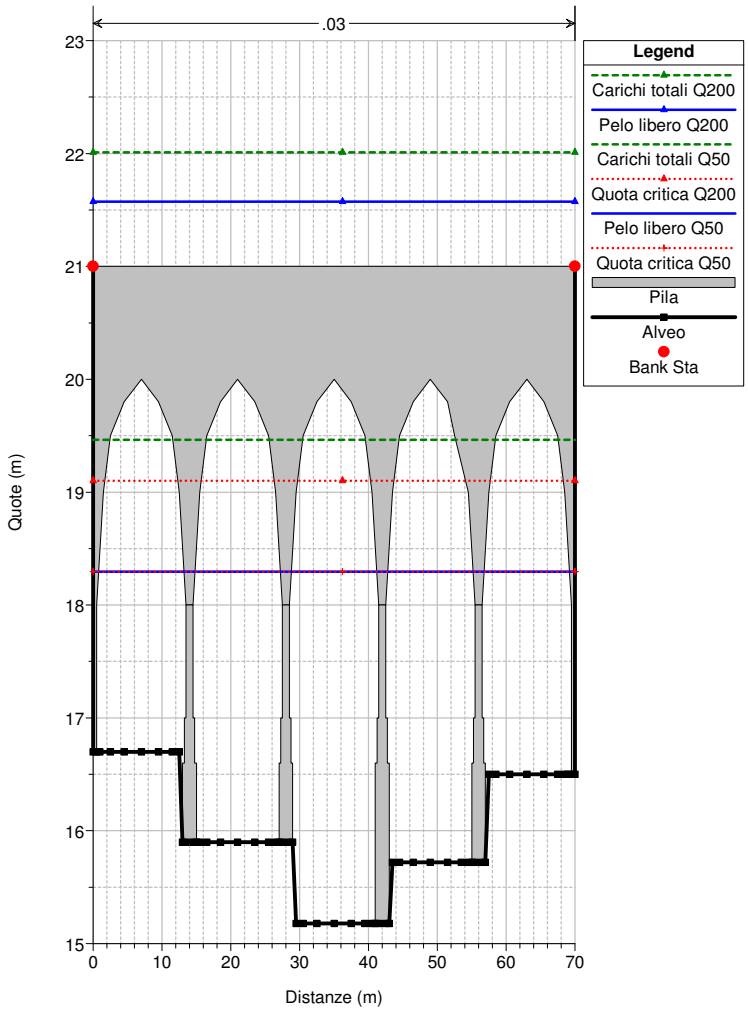
River = Bisagno Reach = Veil Fereggiano RS = 35.2 Sezione 17.2 (monte ponte Campanella)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

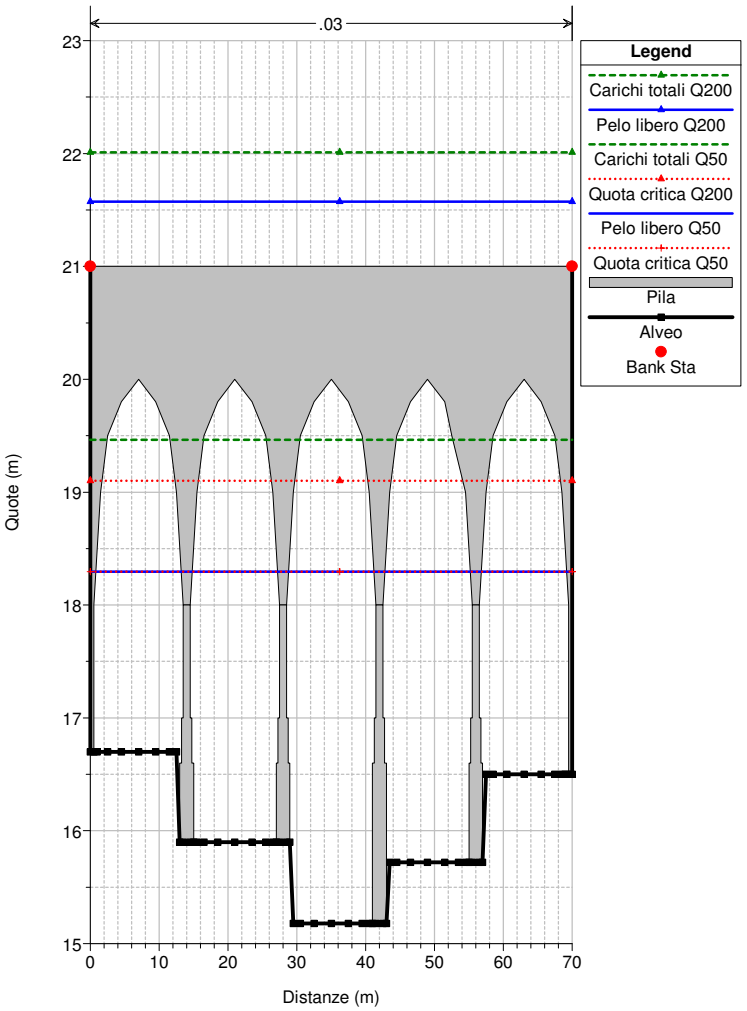
River = Bisagno Reach = Veil Fereggiano RS = 35.11 BR BIS 35 ponte Campanella



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

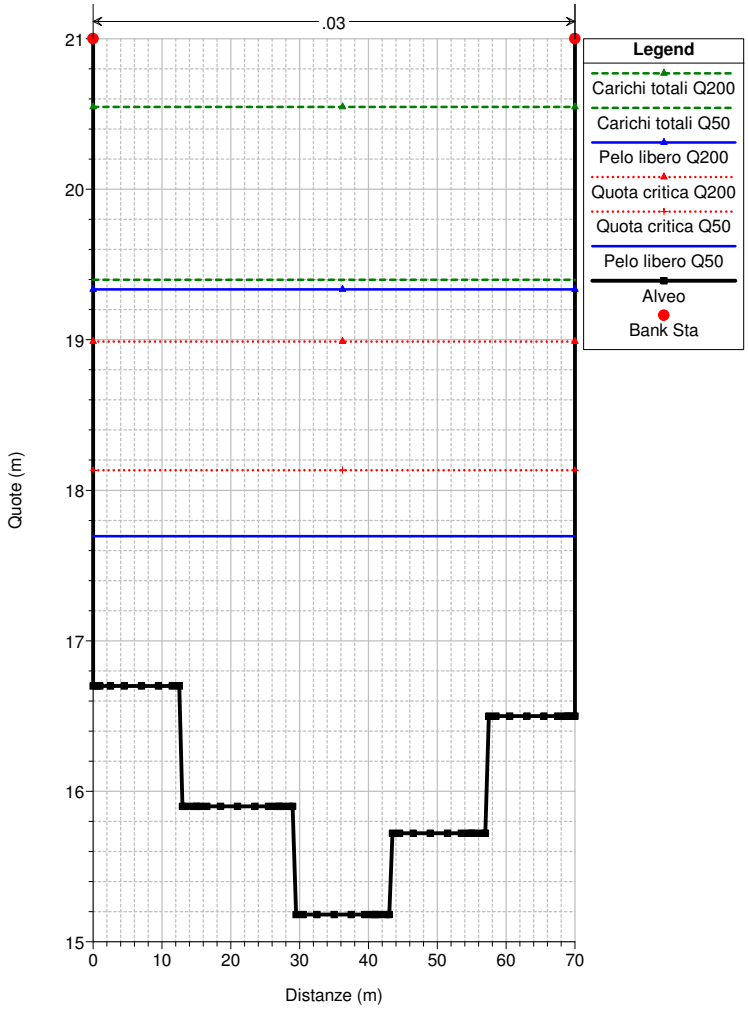
River = Bisagno Reach = Veil Fereggiano RS = 35.11 BR BIS 35 ponte Campanella



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

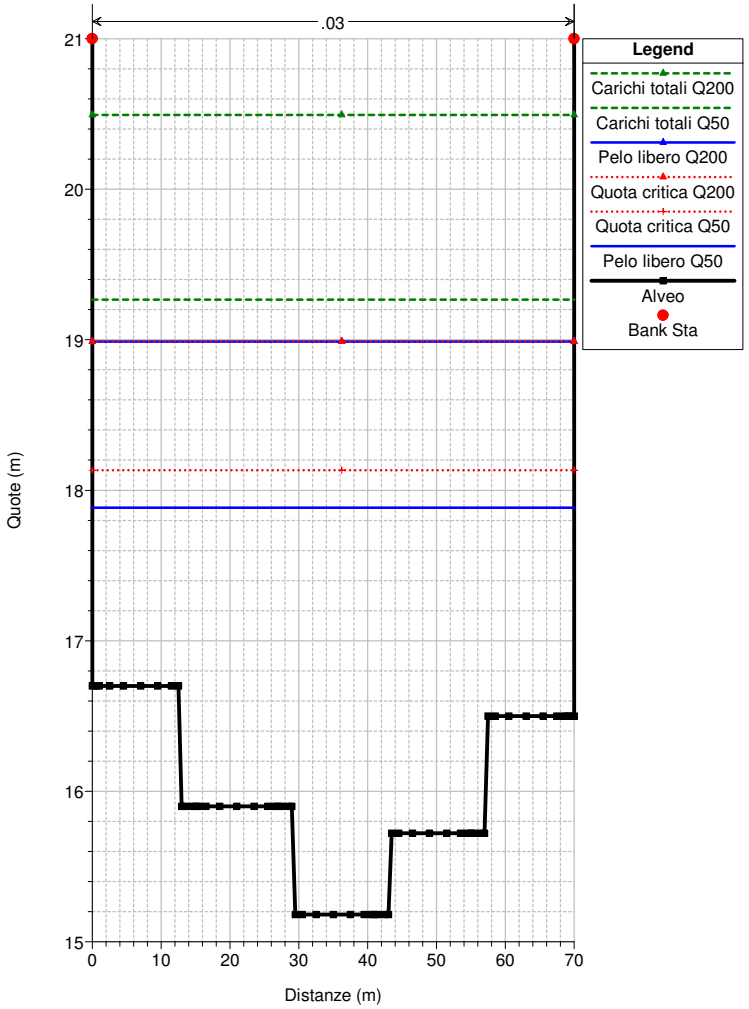
River = Bisagno Reach = Veil Fereggiano RS = 35.1 Sezione 17.1 (valle ponte Campanella)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

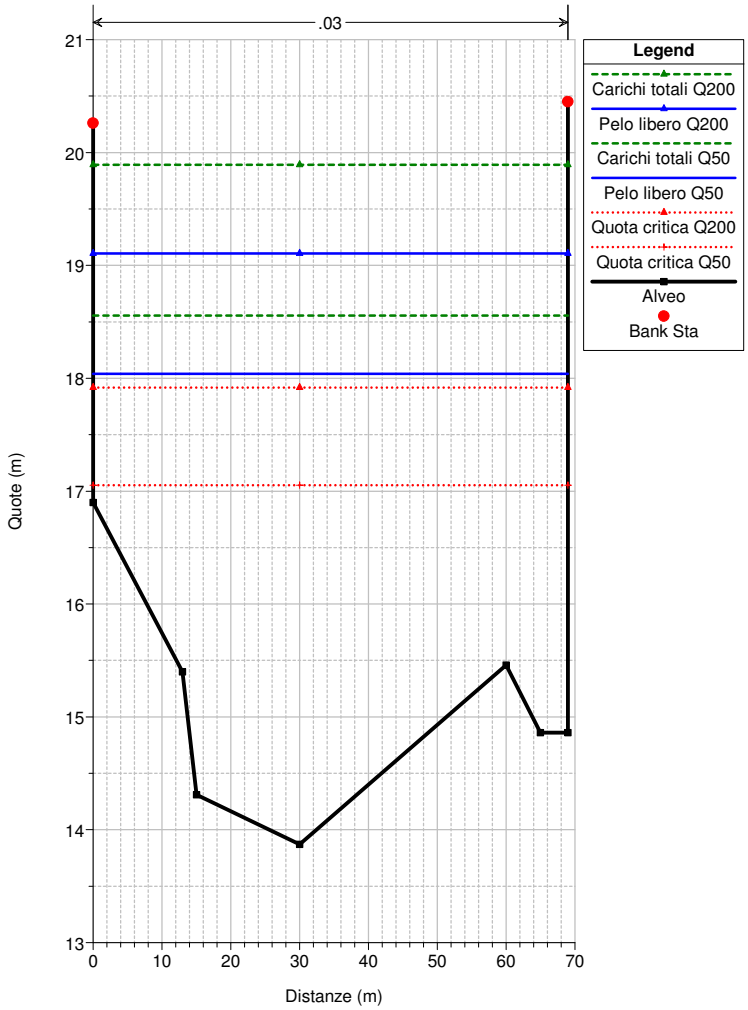
River = Bisagno Reach = Veil Fereggiano RS = 35. Sezione 17.0



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

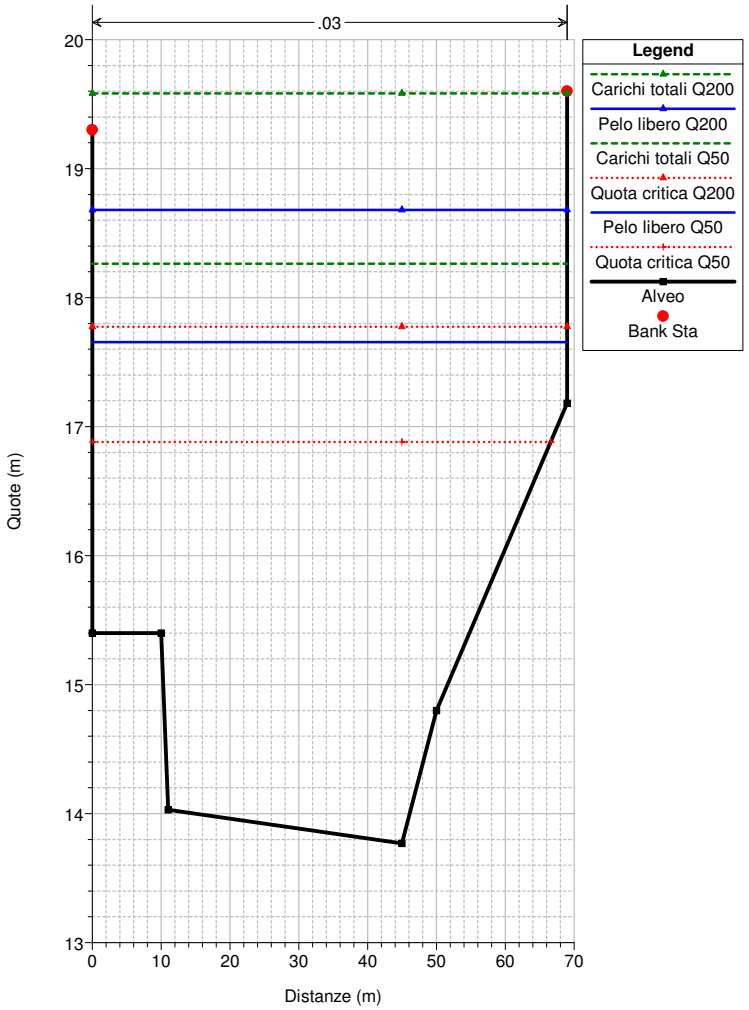
River = Bisagno Reach = Veil Fereggiano RS = 34. Sezione 16



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

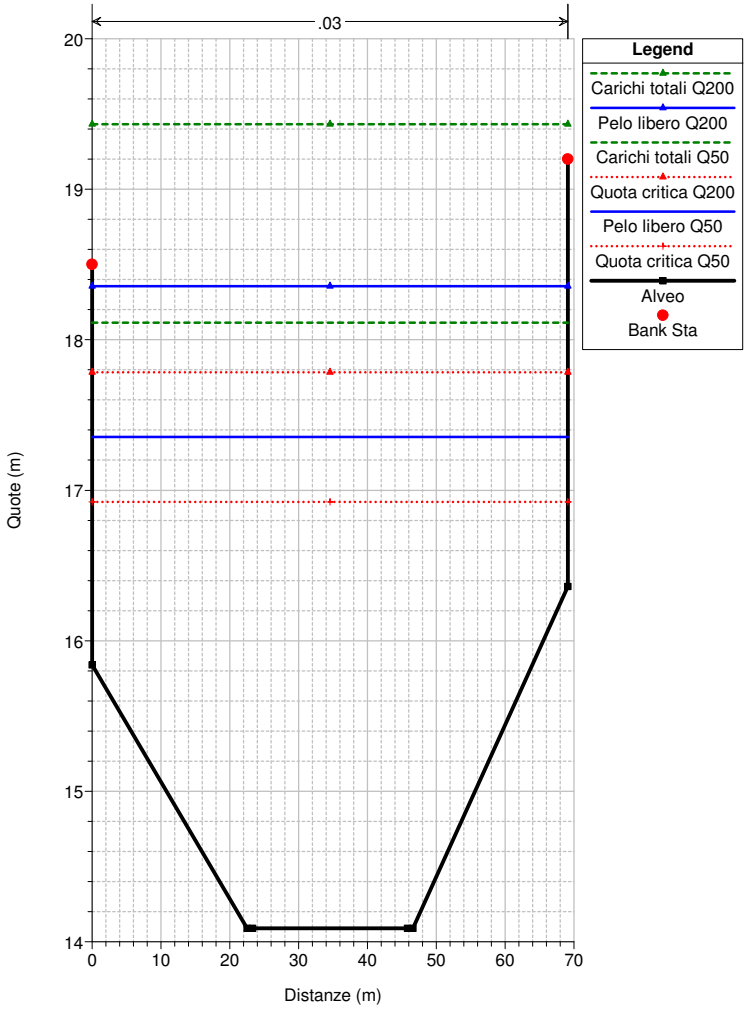
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 33. Sezione 15



Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

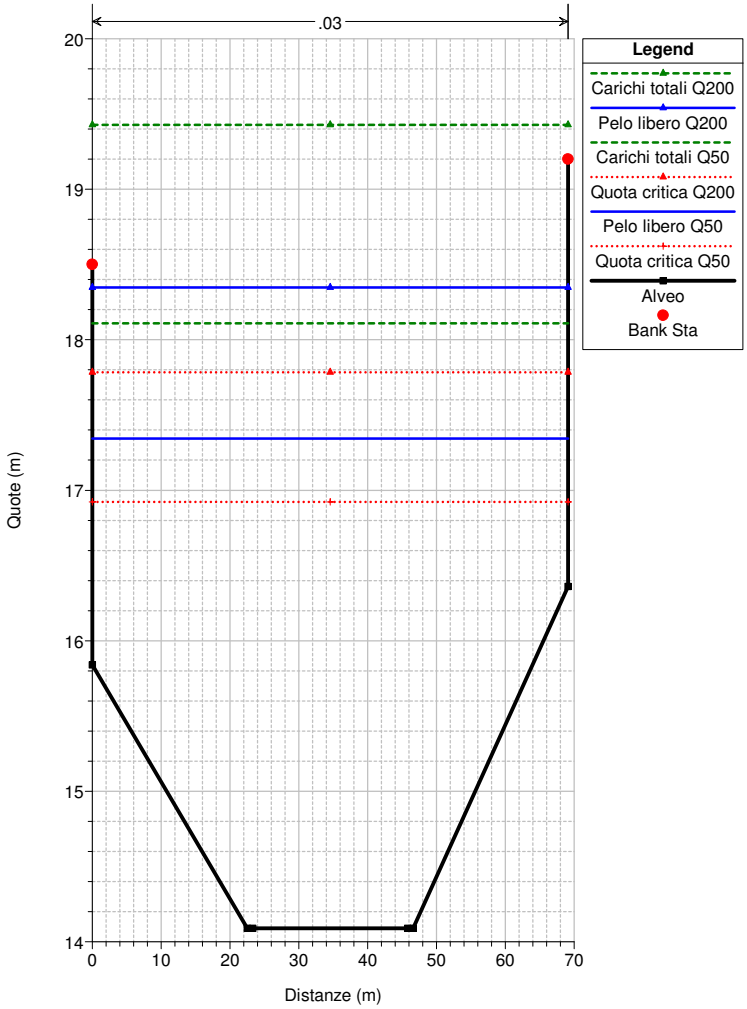
River = Bisagno Reach = Veil Fereggiano RS = 32.3 Sezione 14.3



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

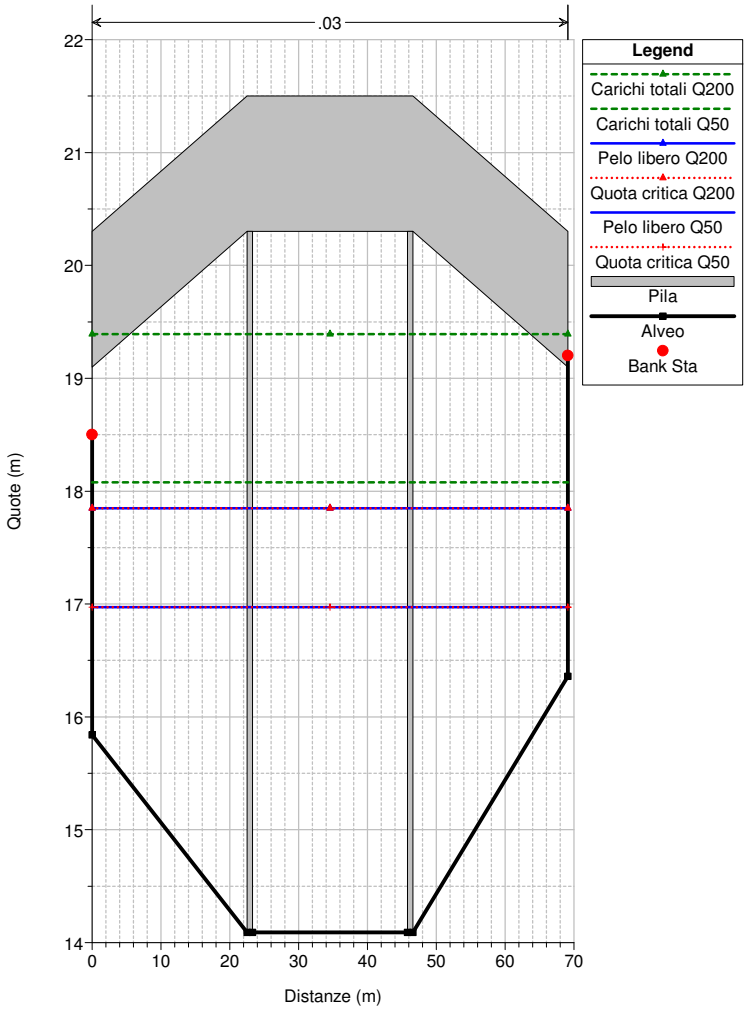
River = Bisagno Reach = Veil Fereggiano RS = 32.2 Sezione 14.2 (monte Passerella pedonale)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

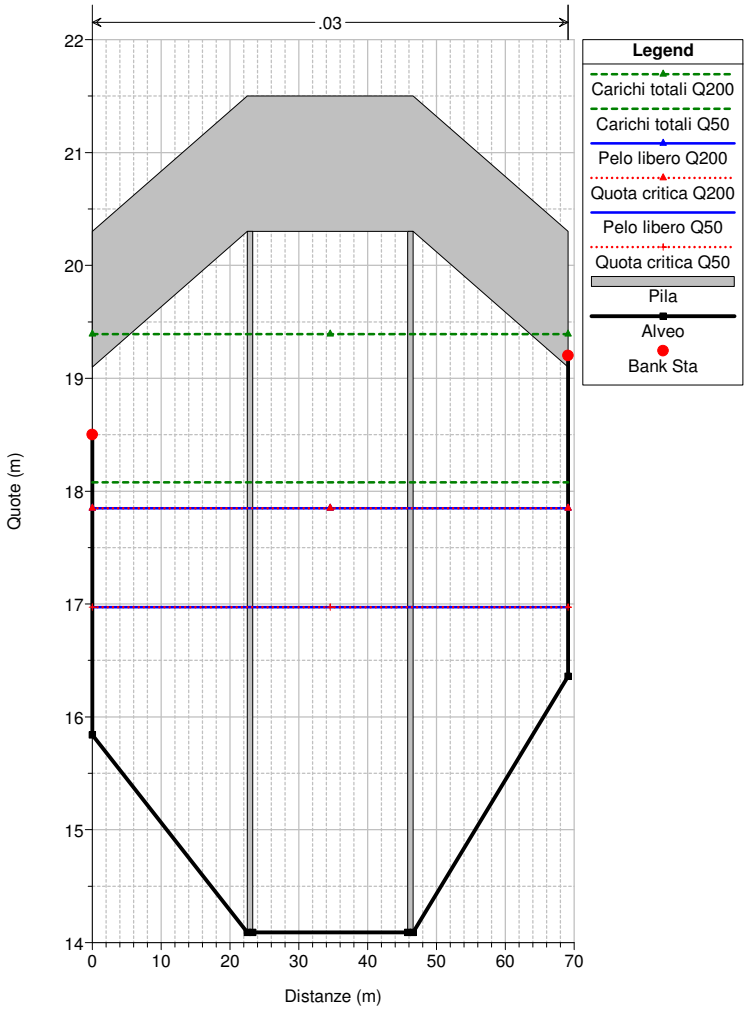
River = Bisagno Reach = Veil Fereggiano RS = 32.11 BR BIS 32 Passerella pedonale



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

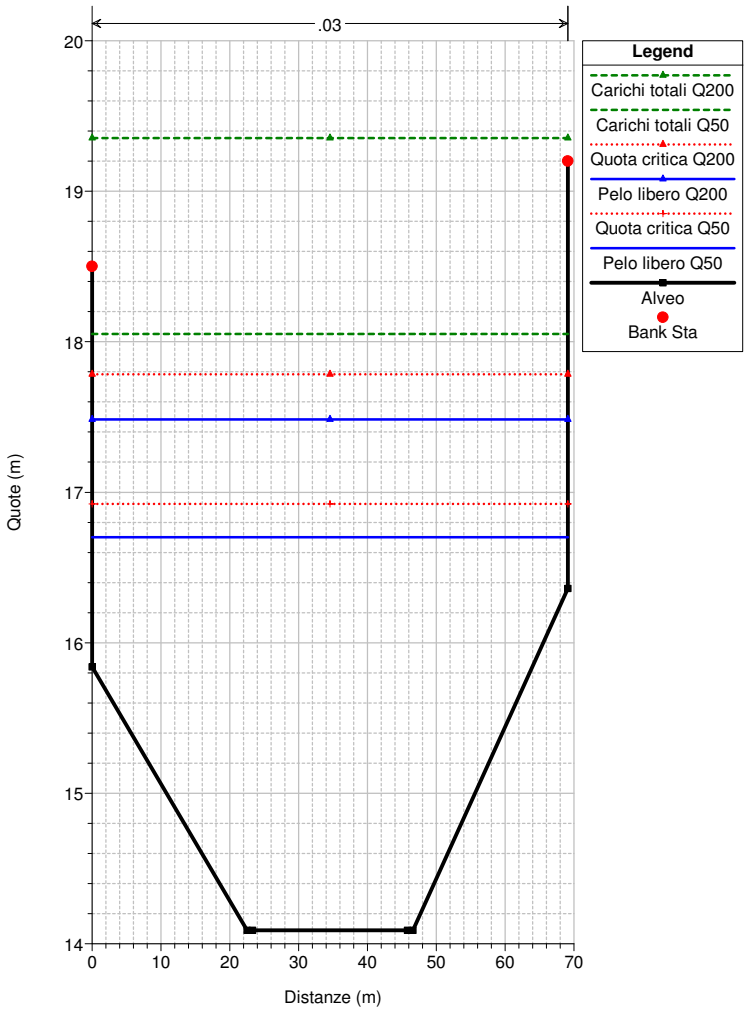
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 32.11 BR BIS 32 Passerella pedonale



Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

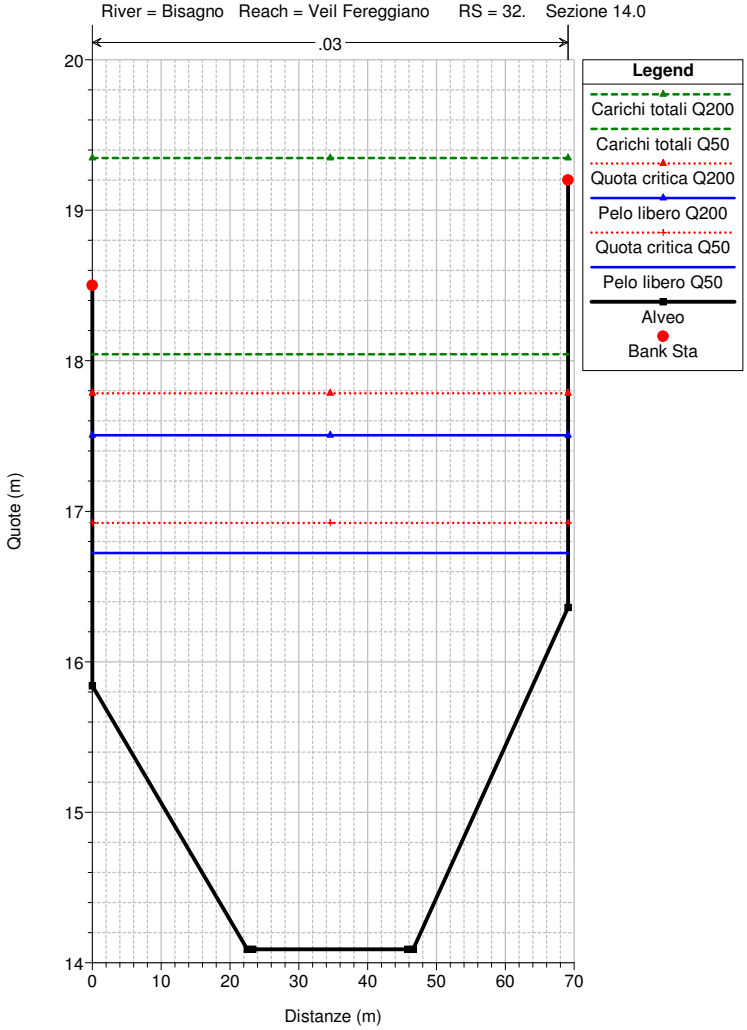
River = Bisagno Reach = Veil Fereggiano RS = 32.1 Sezione 14.1 (valle Passerella pedonale)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

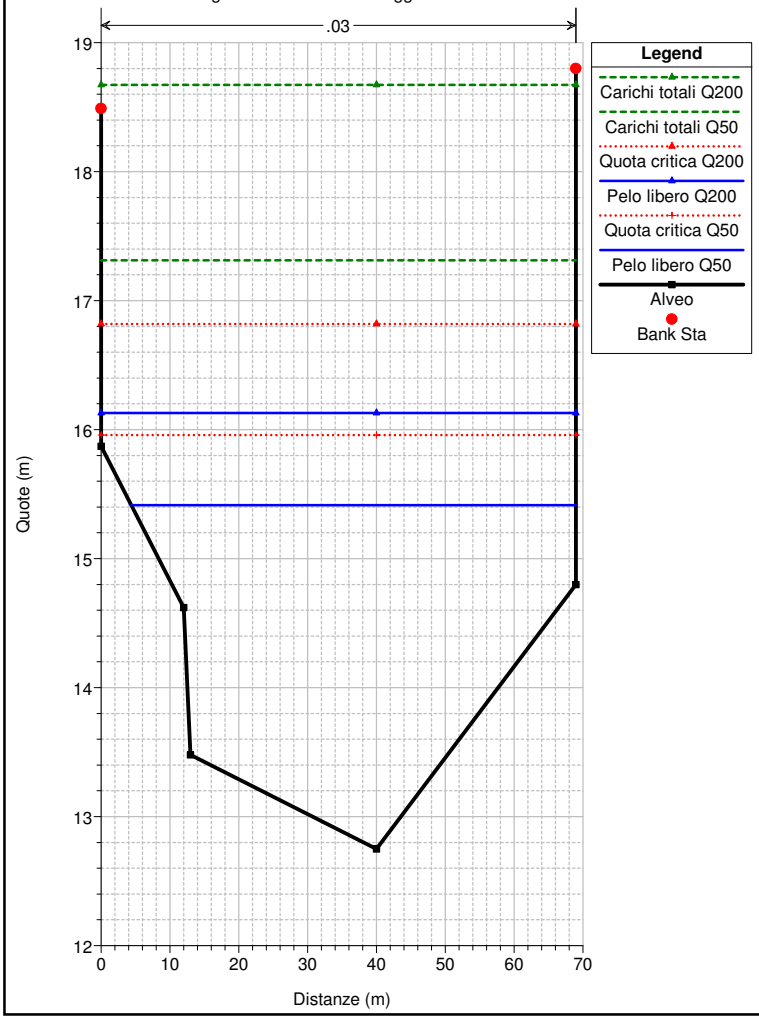
River = Bisagno Reach = Veil Fereggiano RS = 32. Sezione 14.0



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

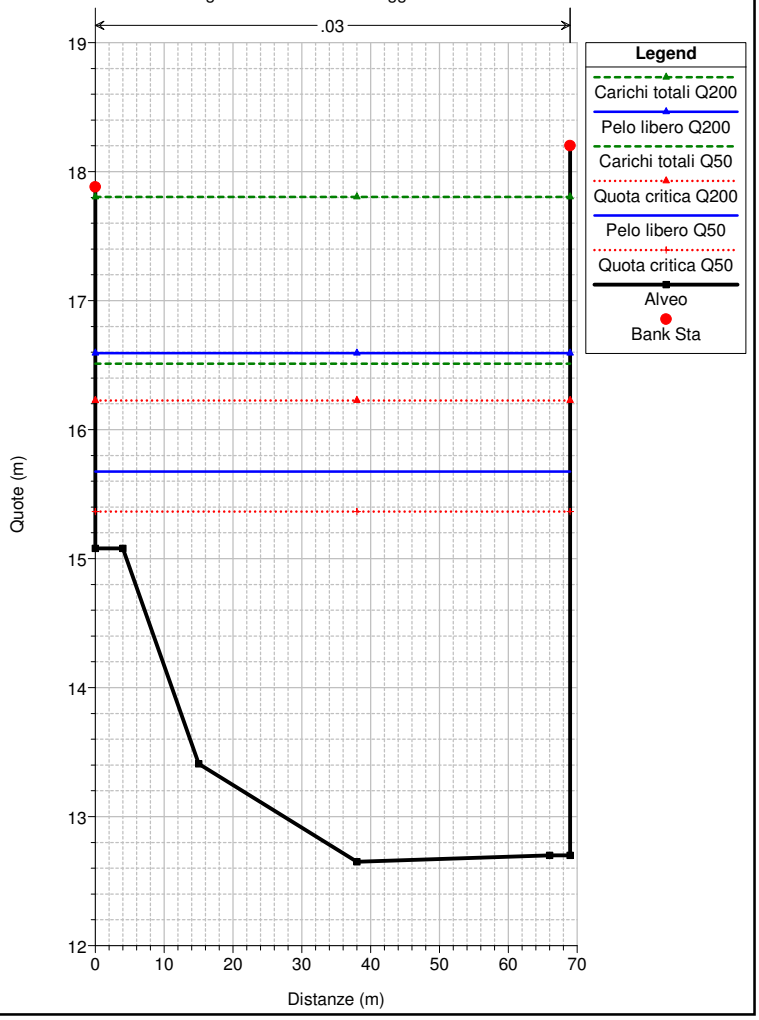
River = Bisagno Reach = Veil Fereggiano RS = 31. Sezione 13



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

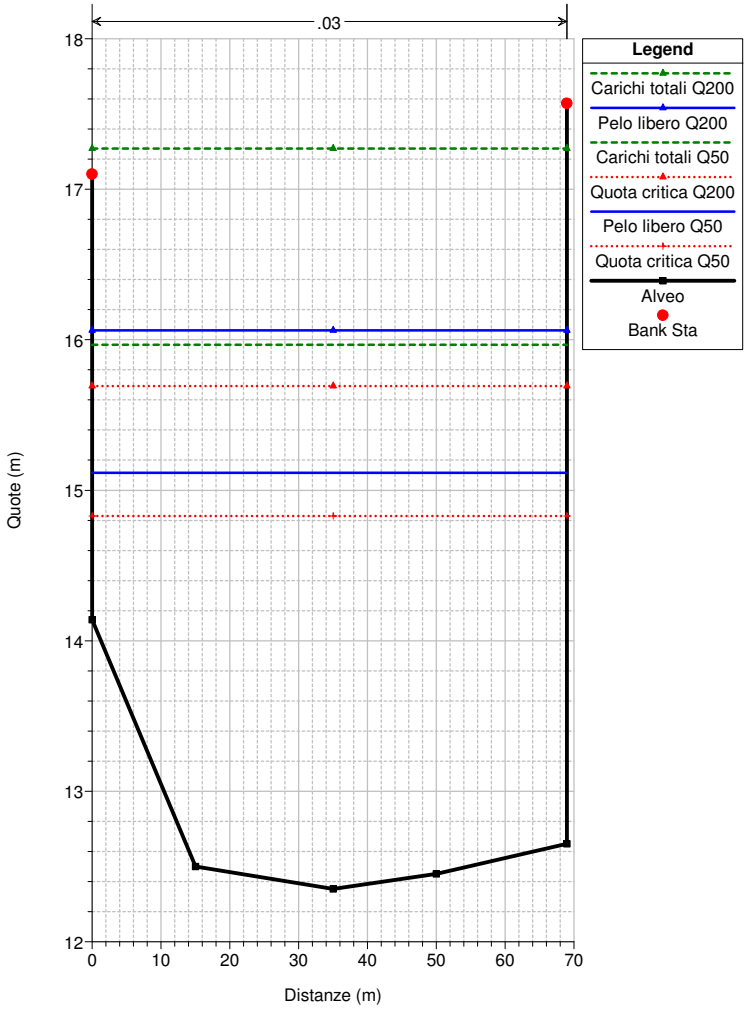
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 30. Sezione 12



Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

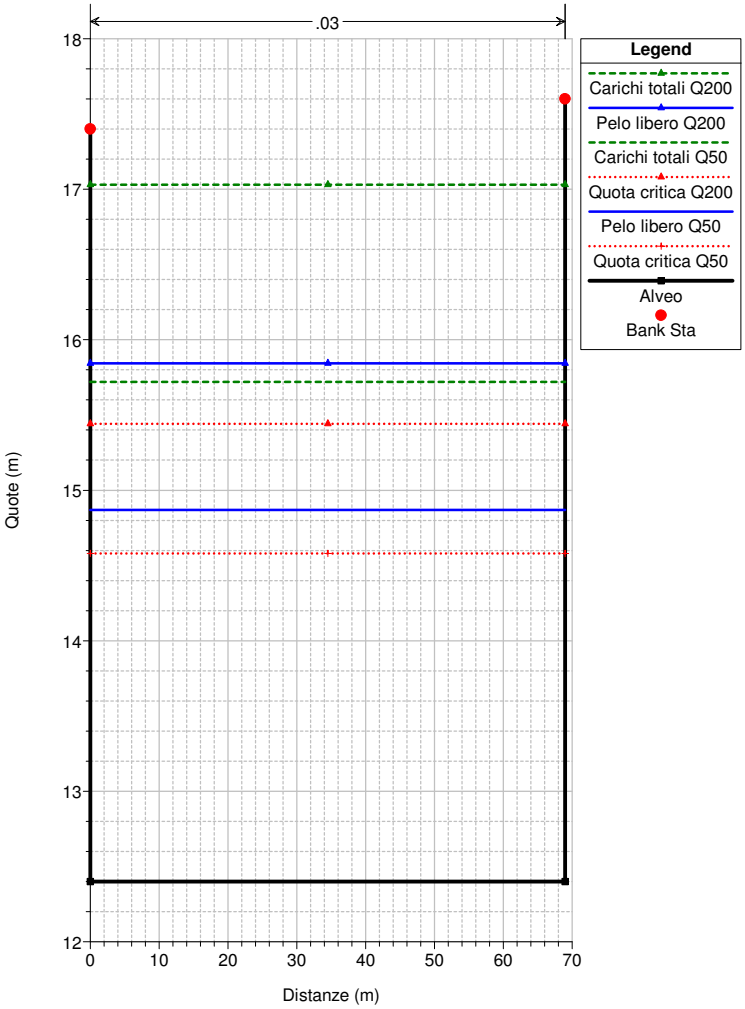
River = Bisagno Reach = Veil Fereggiano RS = 29. Sezione 11



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

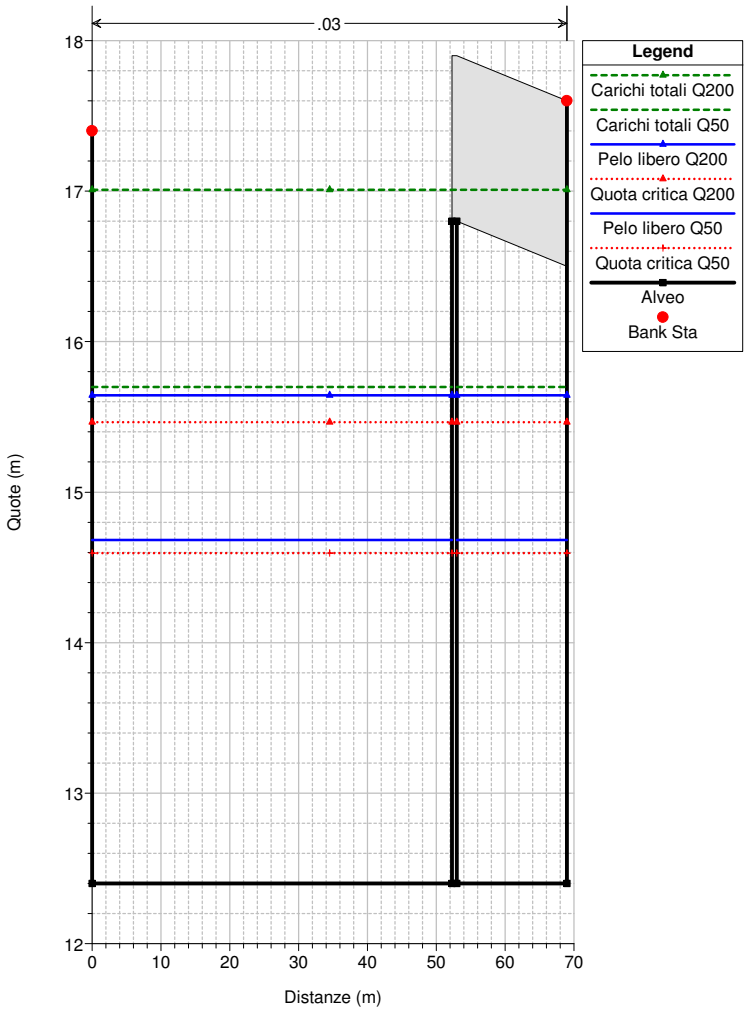
River = Bisagno Reach = Veil Fereggiano RS = 28. Sezione 10



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

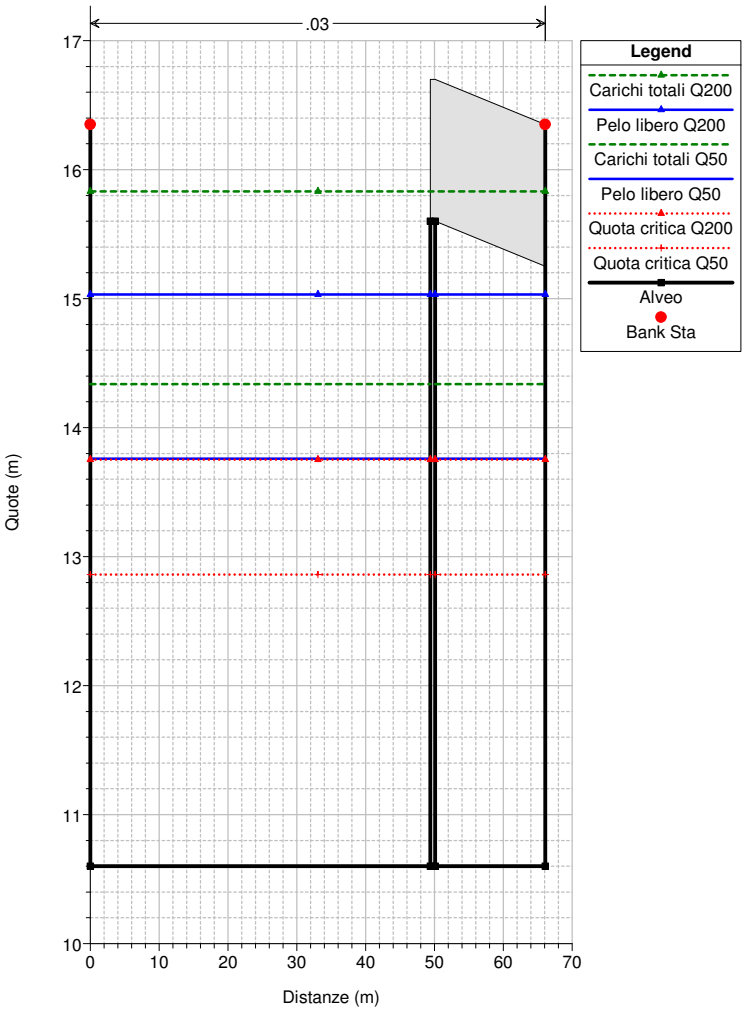
River = Bisagno Reach = Veil Fereggiano RS = 27. Sezione 9 (imbocco copertura fornice unico)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

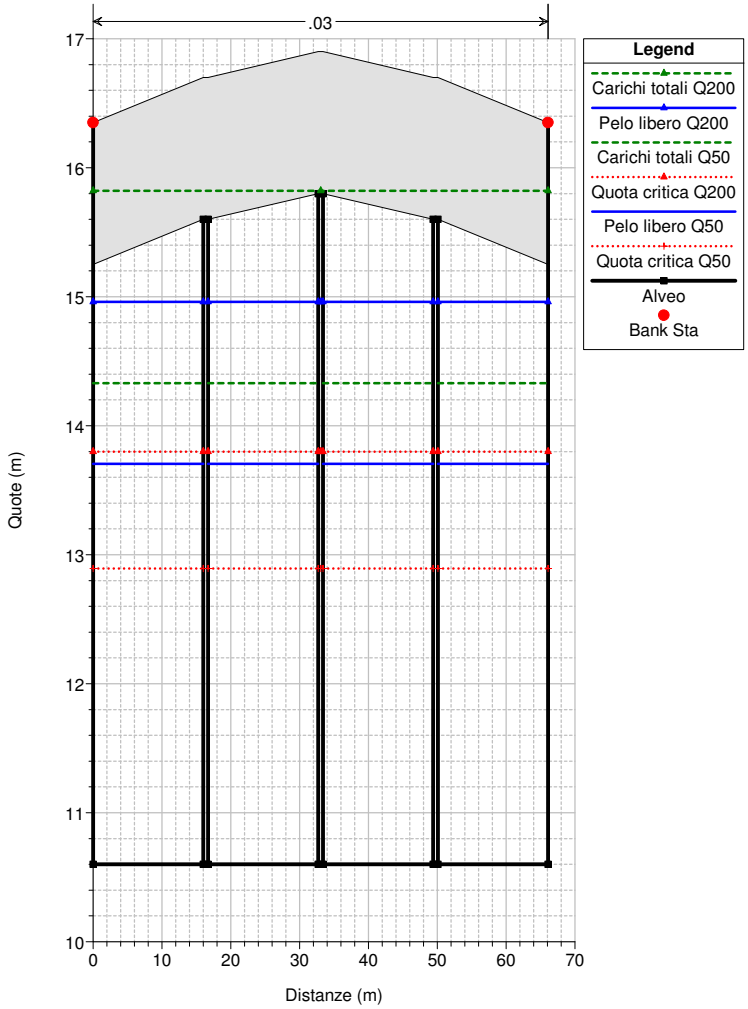
River = Bisagno Reach = Veil Fereggiano RS = 26. Sezione 8 (sbocco copertura fornice unico)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

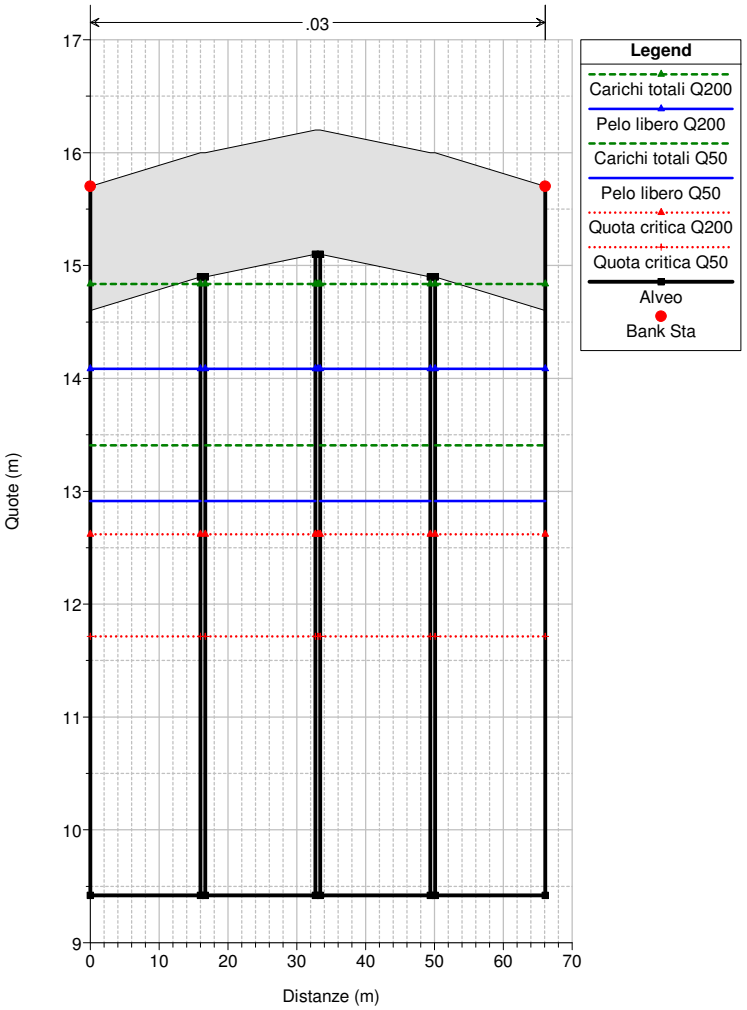
River = Bisagno Reach = Veil Fereggiano RS = 25. Sezione 7 (imbocco copertura stadio)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

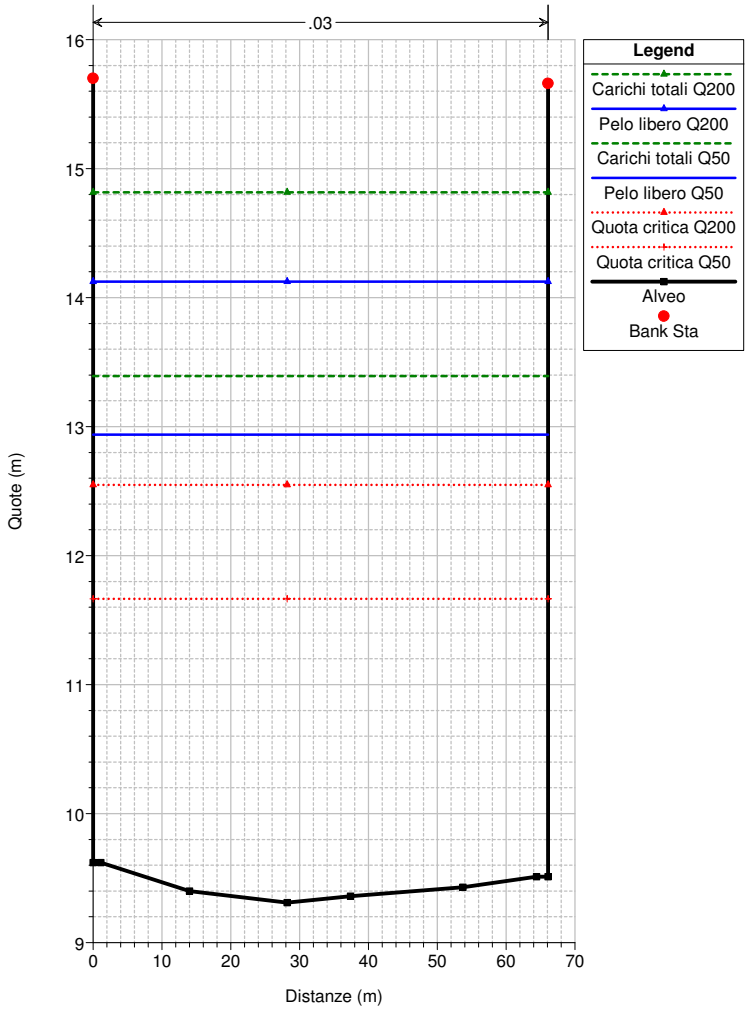
River = Bisagno Reach = Veil Fereggiano RS = 24. Sezione 6 (sbocco copertura stadio)



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

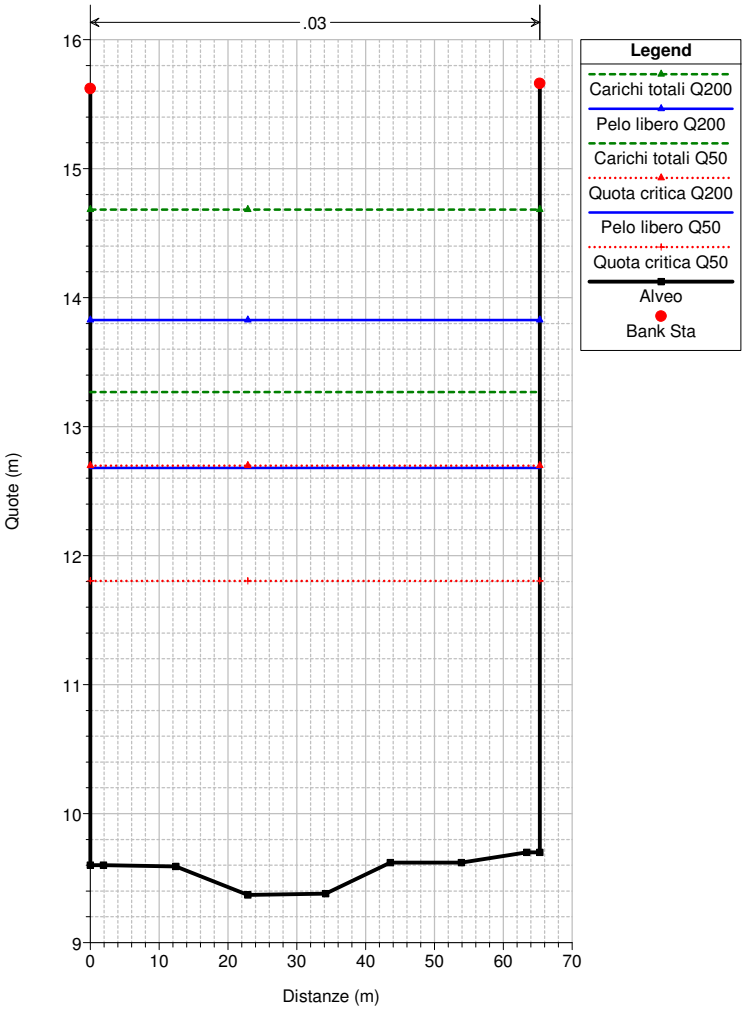
River = Bisagno Reach = Veil Fereggiano RS = 23. Sezione 5



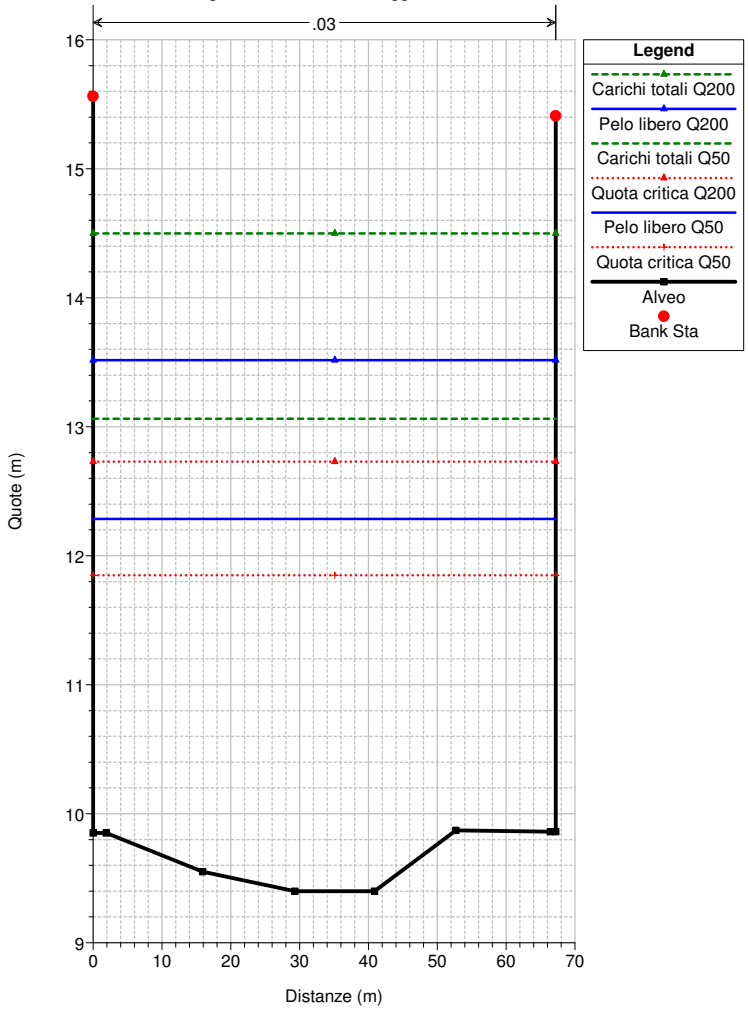
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 22. Sezione 4

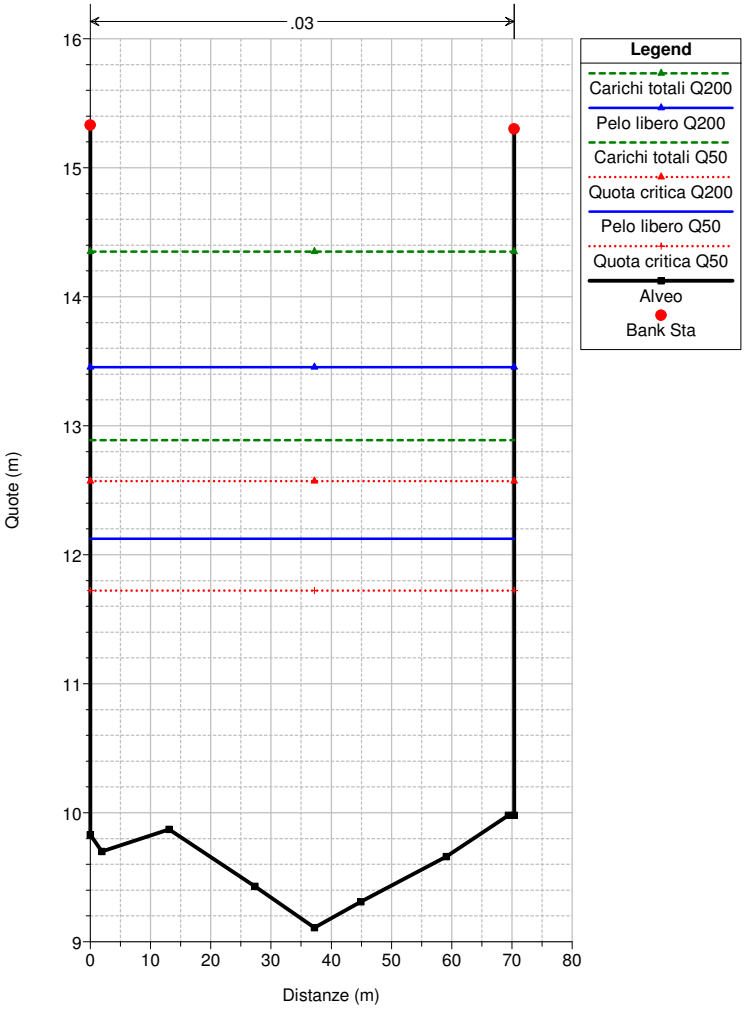


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Bisagno Reach = Veil Fereggiano RS = 21. Sezione 3



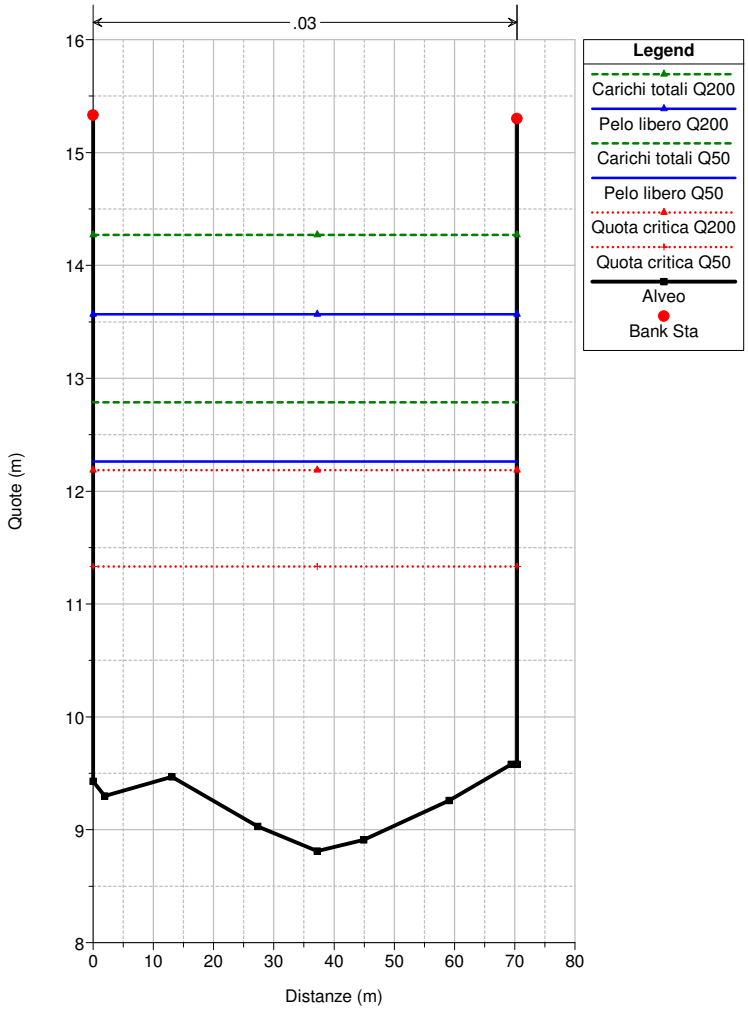
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Bisagno Reach = Veil Fereggiano RS = 20. Sezione 2



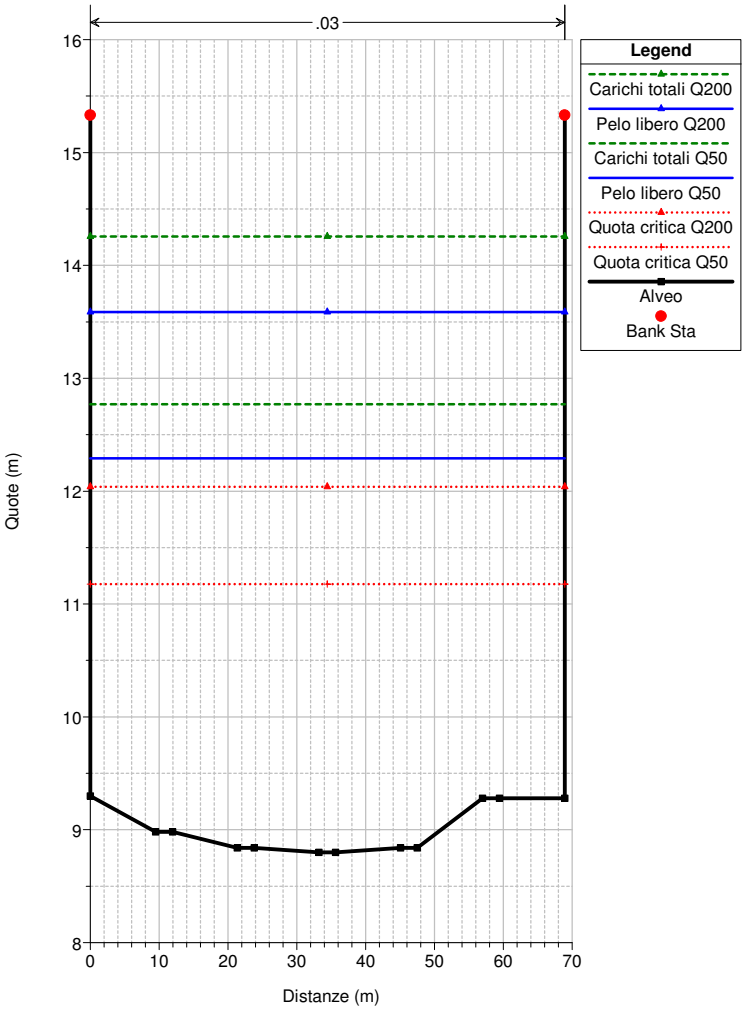
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Bisagno Reach = Veil Fereggiano RS = 19.3 Sezione 1.3



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

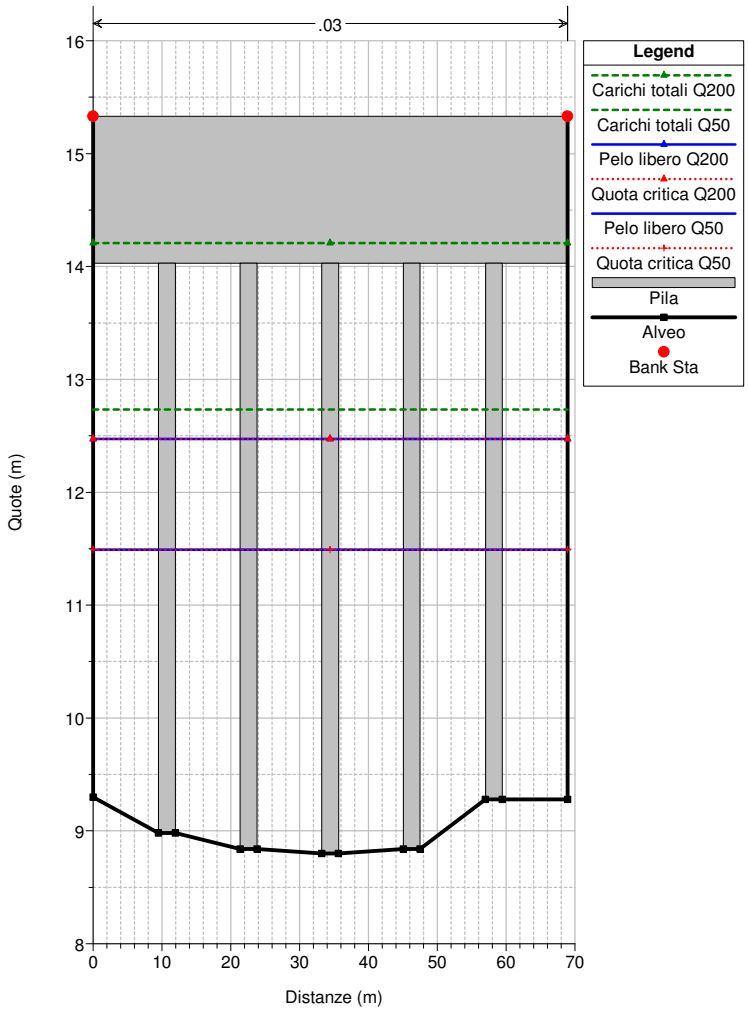
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Bisagno Reach = Veil Fereggiano RS = 19.2 Sezione 1.2



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

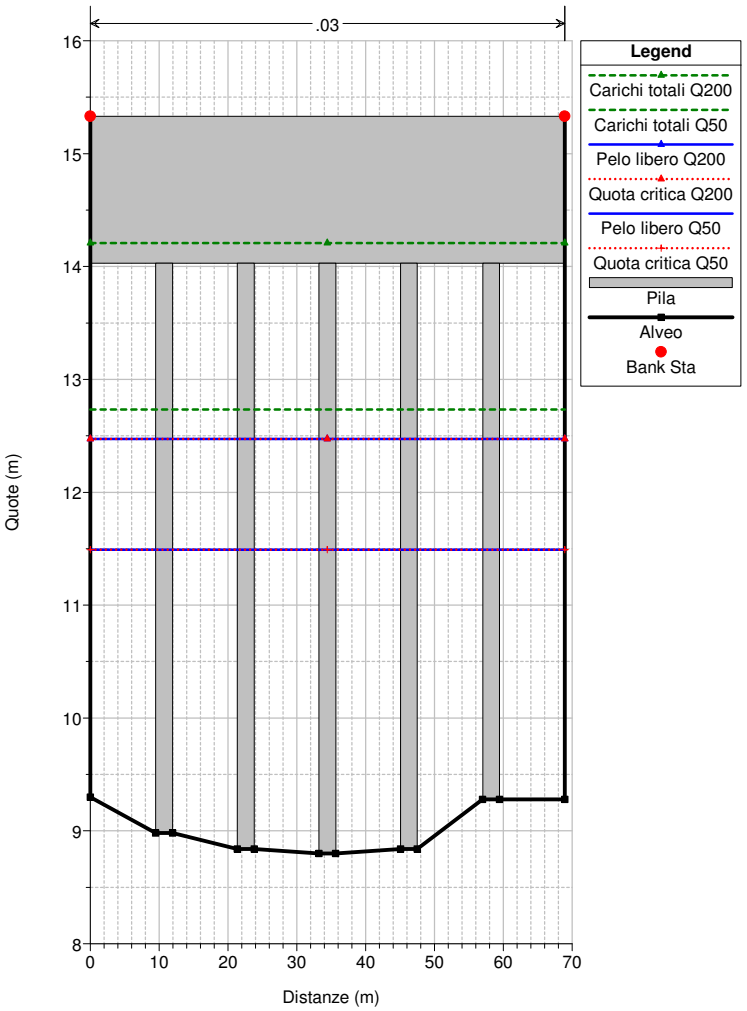
River = Bisagno Reach = Veil Fereggiano RS = 19.11 BR BIS 19 Ponte Serra



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

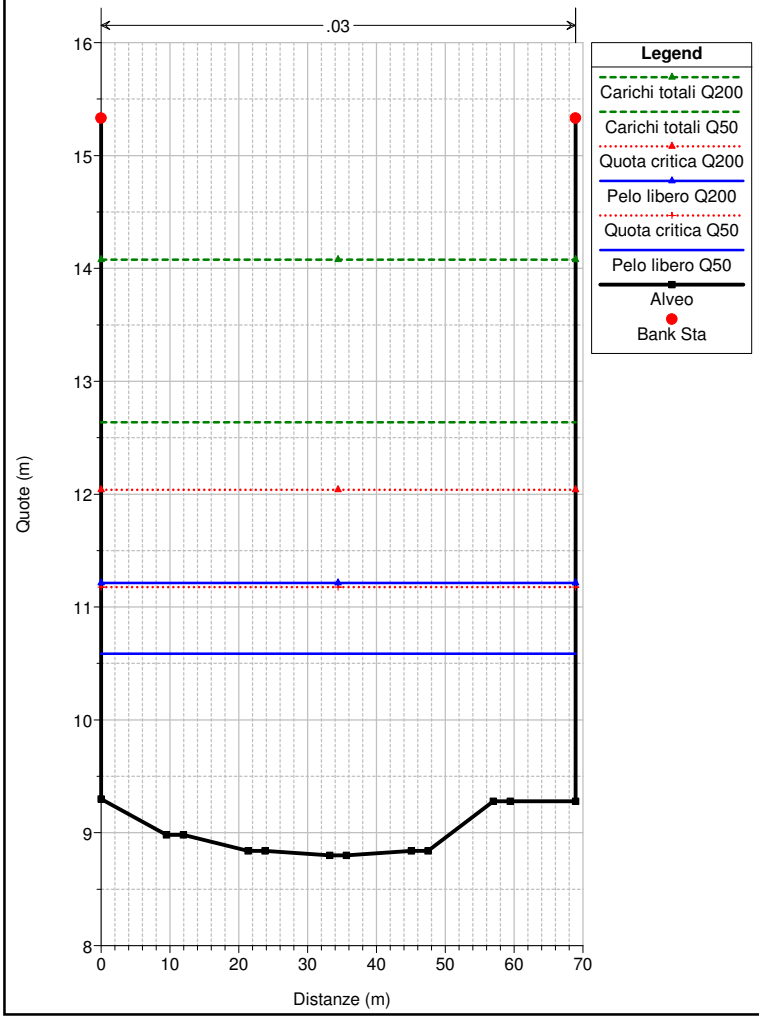
River = Bisagno Reach = Veil Fereggiano RS = 19.11 BR BIS 19 Ponte Serra

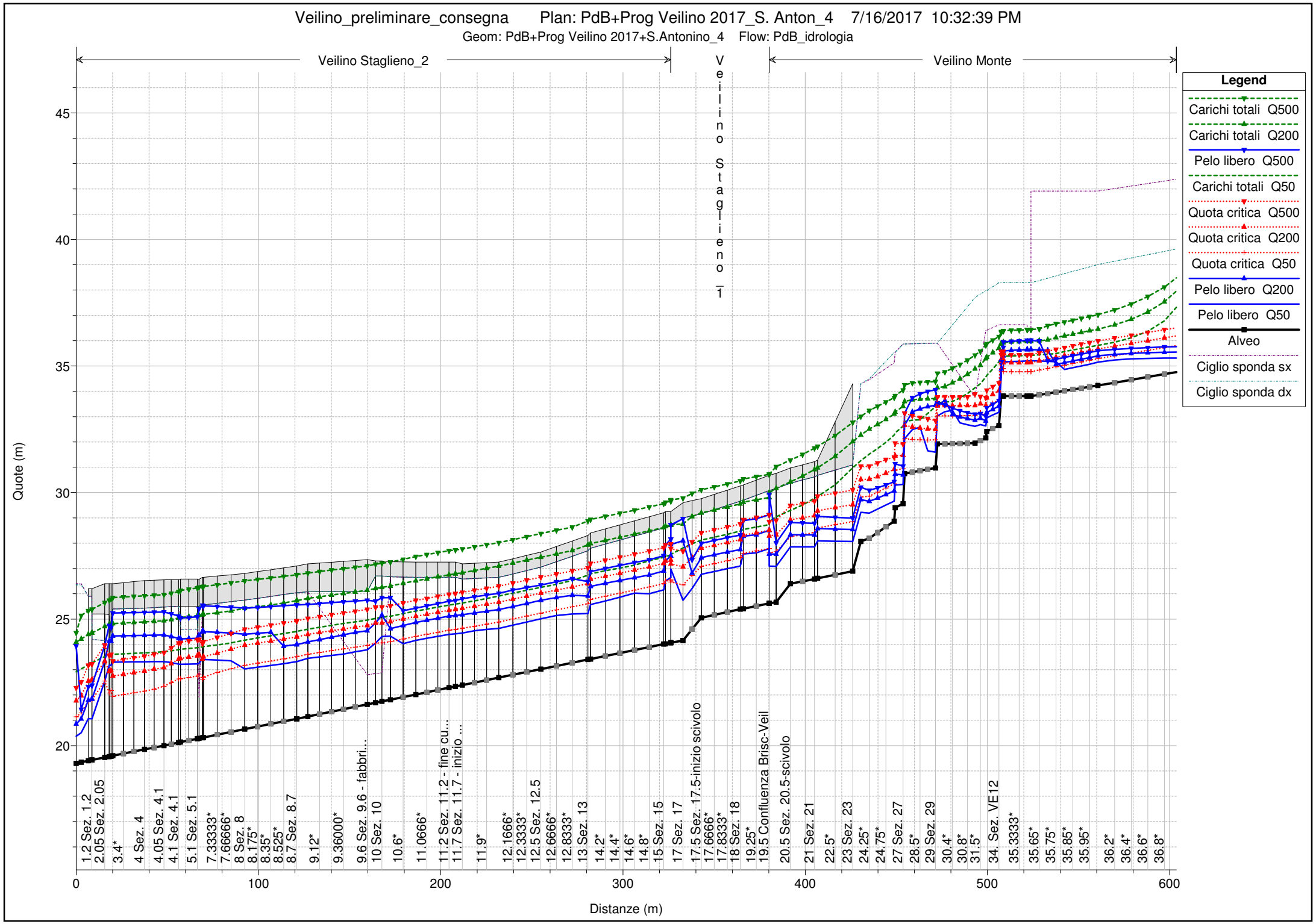


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Bisagno Reach = Veil Fereggiano RS = 19.1 Sezione 1.1 valle ponte su briglia monte Feregg

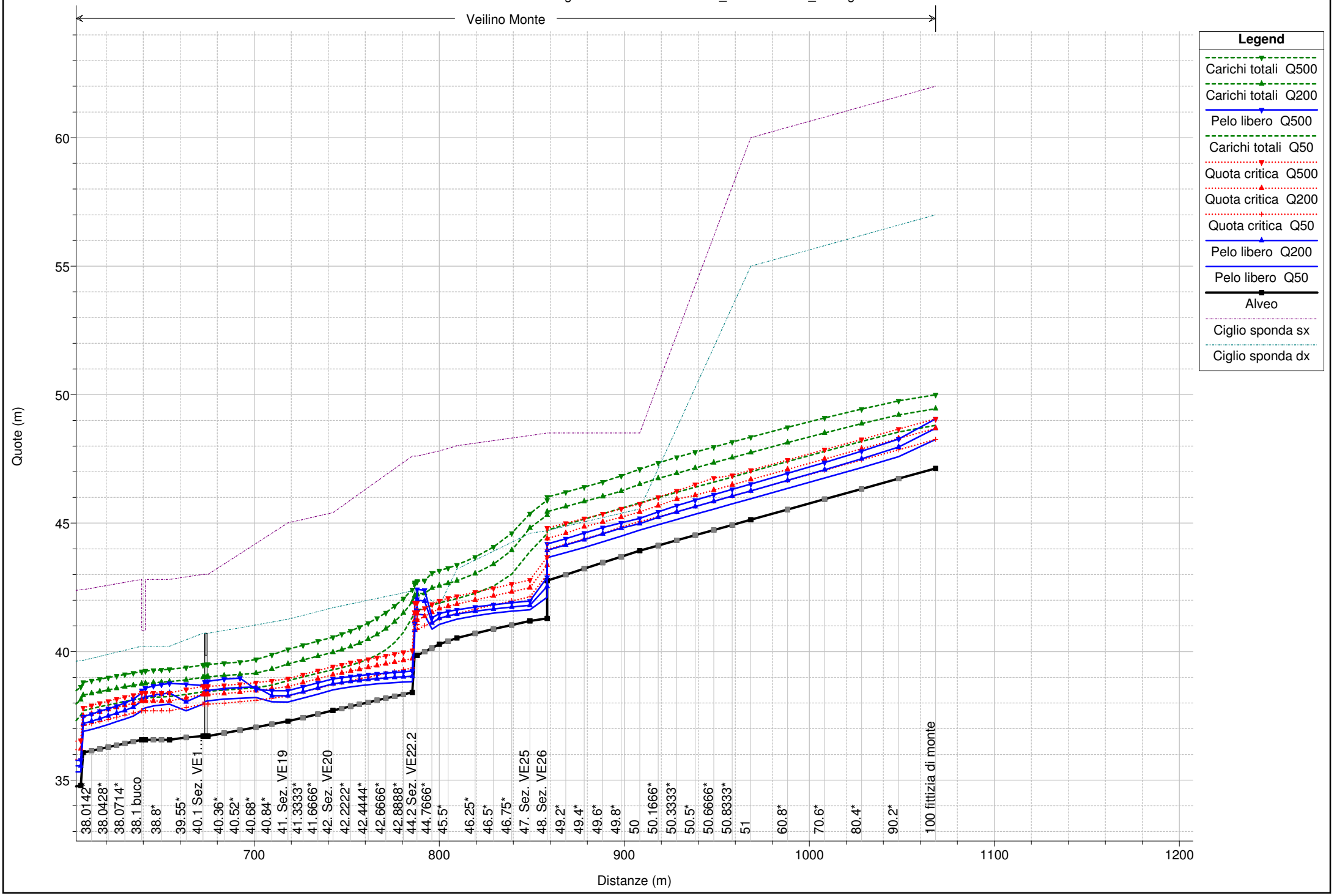




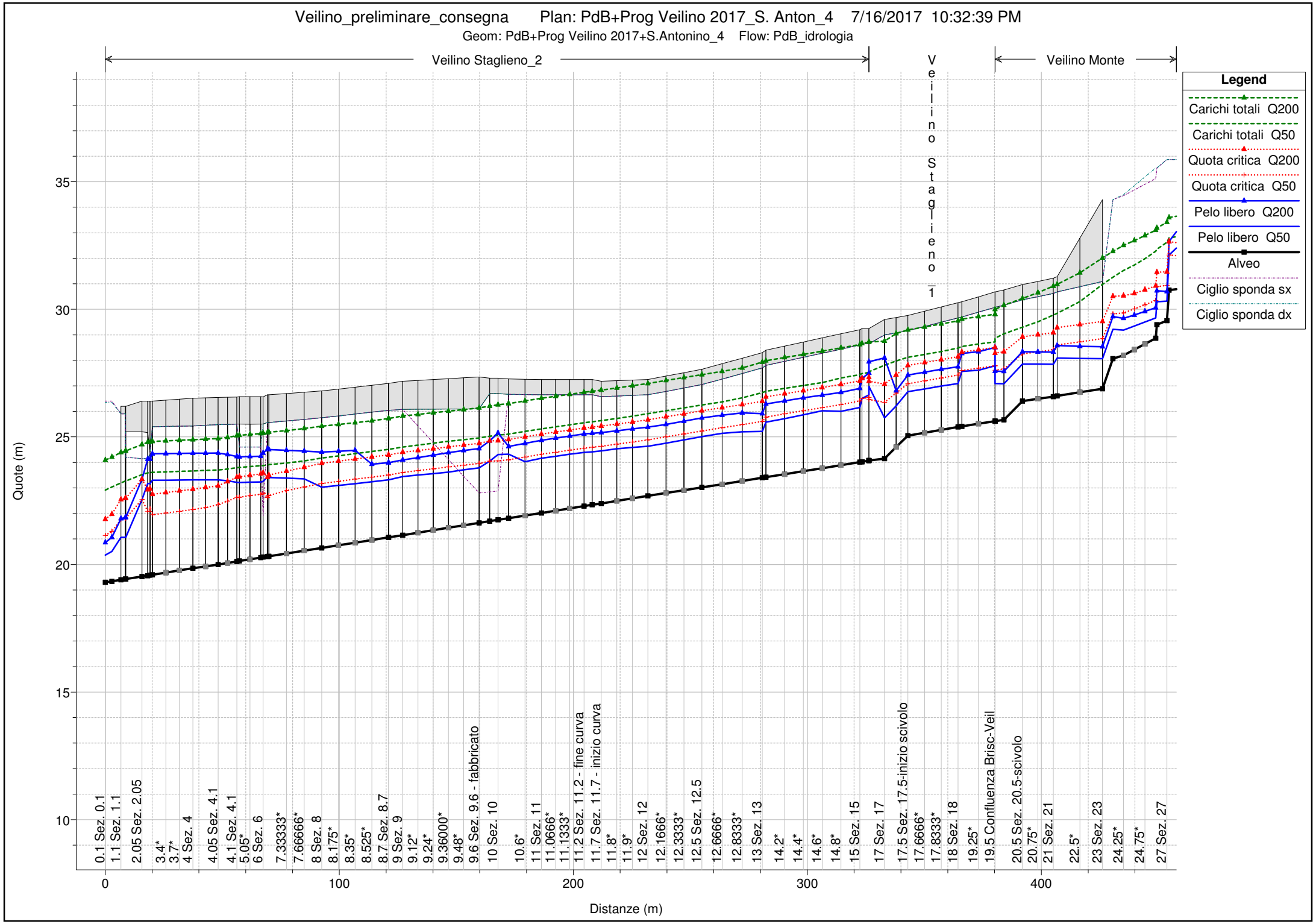
1 cm Horiz. = 25 m 1 cm Vert. = 1.8 m

Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

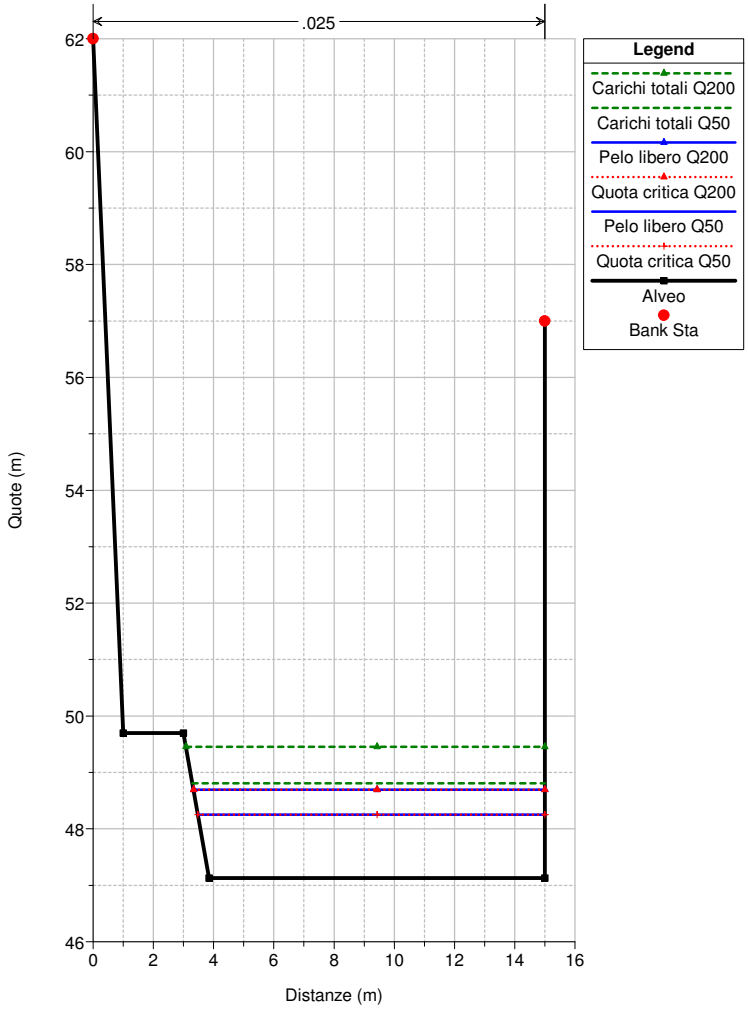
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia



1 cm Horiz. = 25 m 1 cm Vert. = 1.8 m

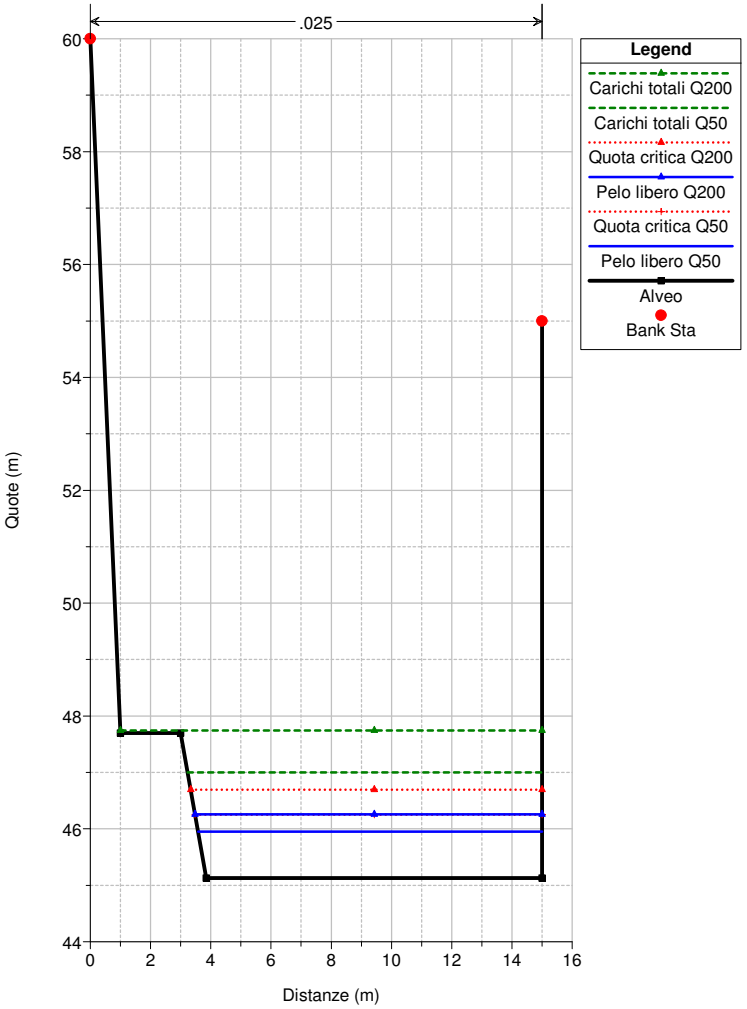

Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
Veilino Staglieno_2
Veilino Staglieno_1
Veilino Monte
Legend
Carichi totali Q200
Carichi totali Q50
Quota critica Q200
Quota critica Q50
Pelo libero Q200
Pelo libero Q50
Alveo
Ciglio sponda sx
Ciglio sponda dx
Quote (m)
Distanze (m)
0.1 Sez. 0.1
1.1 Sez. 1.1
2.05 Sez. 2.05
3.4*
3.7*
4 Sez. 4
4.05 Sez. 4.1
4.1 Sez. 4.1
5.05*
6 Sez. 6
7.33333*
7.66666*
8 Sez. 8
8.175*
8.35*
8.525*
8.7 Sez. 8.7
9 Sez. 9
9.12*
9.24*
9.36000*
9.48*
9.6 Sez. 9.6 - fabbricato
10 Sez. 10
10.6*
11 Sez. 11
11.0666*
11.1333*
11.2 Sez. 11.2 - fine curva
11.7 Sez. 11.7 - inizio curva
11.8*
11.9*
12 Sez. 12
12.1666*
12.3333*
12.5 Sez. 12.5
12.6666*
12.8333*
13 Sez. 13
14.2*
14.4*
14.6*
14.8*
15 Sez. 15
17 Sez. 17
17.5 Sez. 17.5-inizio scivolo
17.6666*
17.8333*
18 Sez. 18
19.25*
19.5 Confluenza Brisc-Veil
20.5 Sez. 20.5-scivolo
20.75*
21 Sez. 21
22.5*
23 Sez. 23
24.25*
24.75*
27 Sez. 27

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 100 fittizia di monte



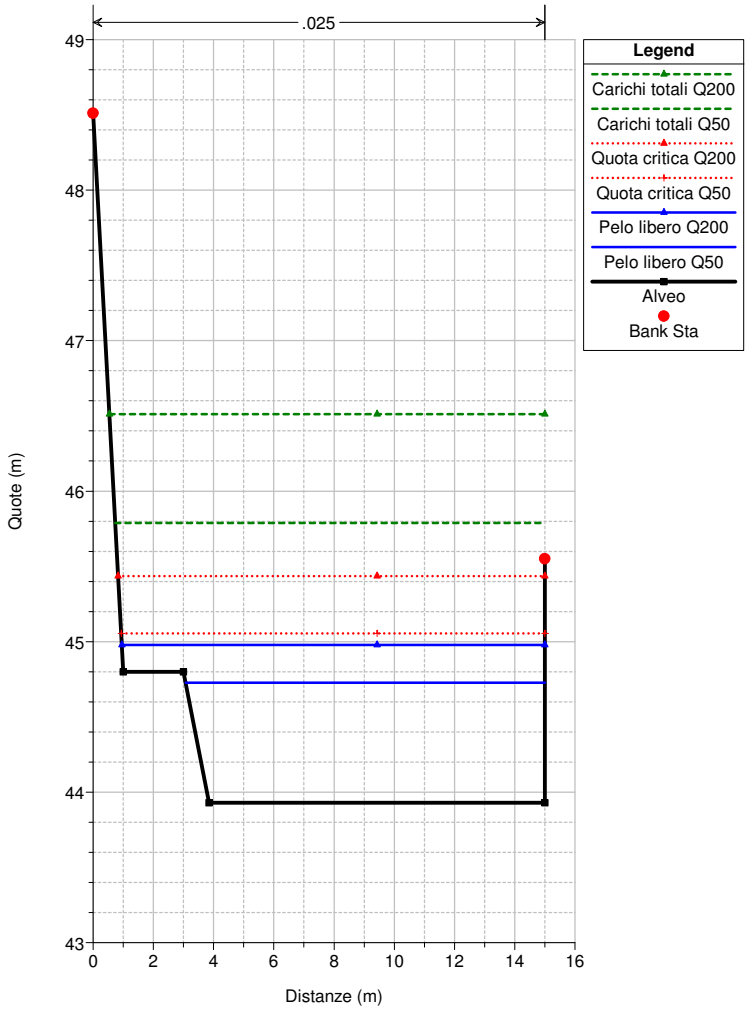
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 51 VEI 51



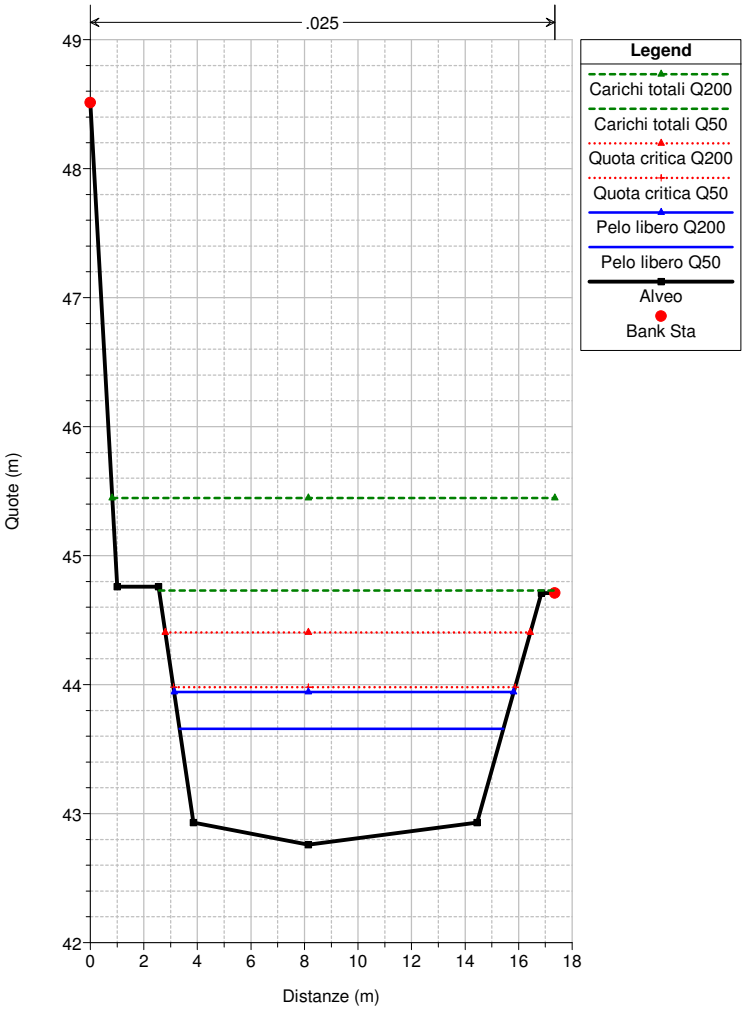
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 50 VEI 50

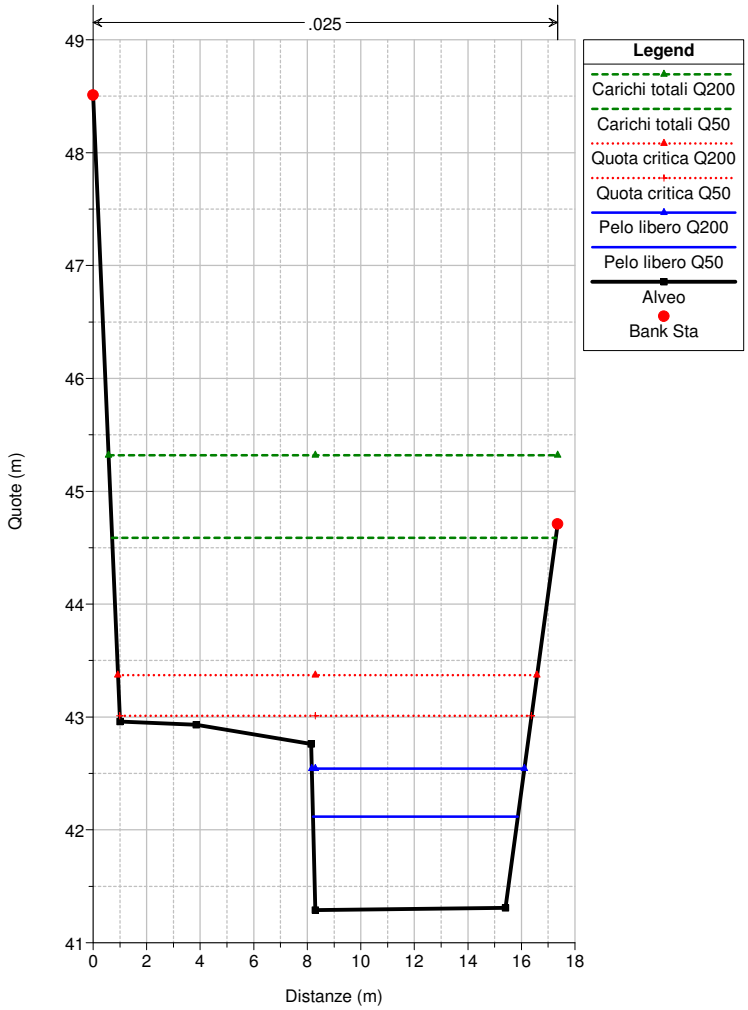


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 49. VEI 49 Sez. VE27

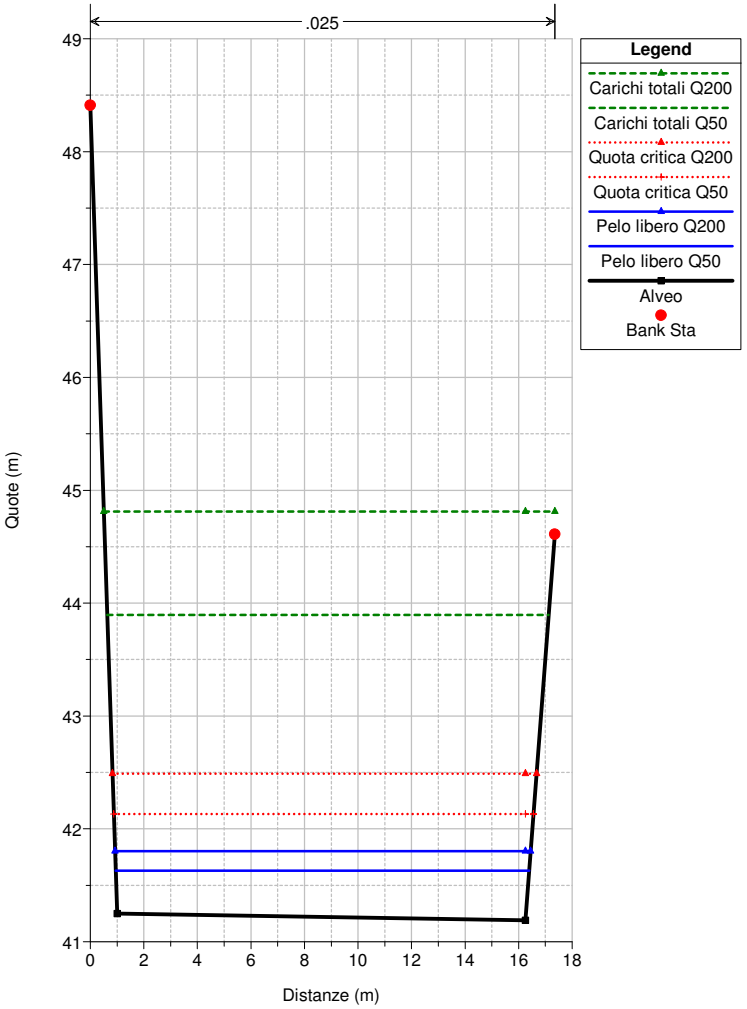


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 48. VEI 48 Sez. VE26



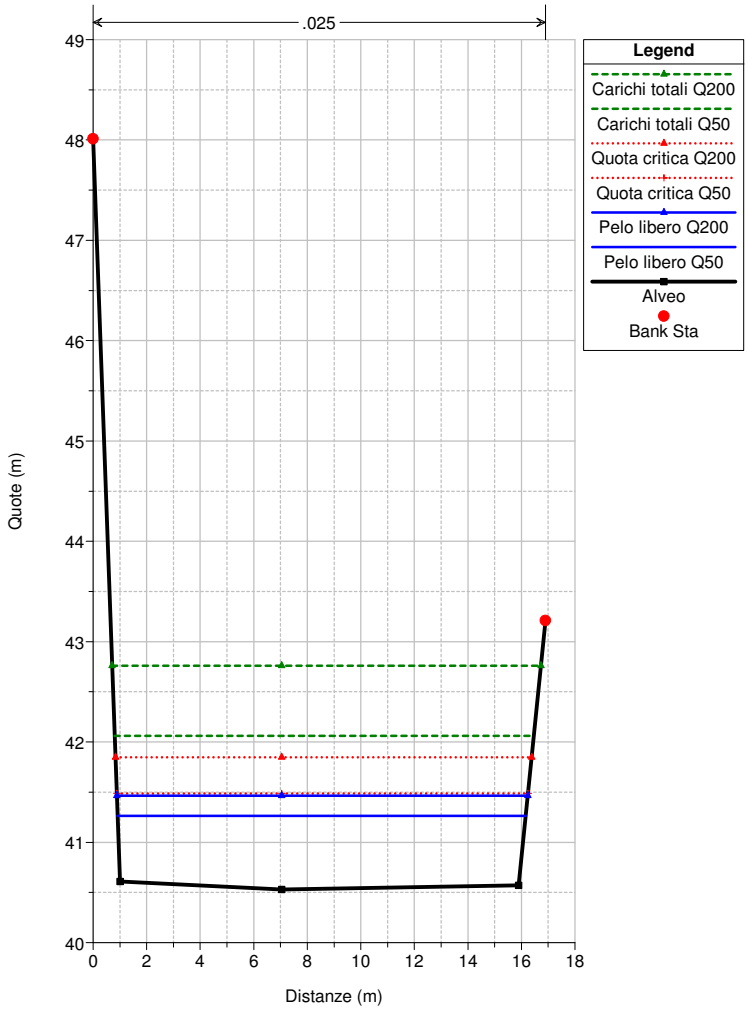
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 47. VEI 47 Sez. VE25



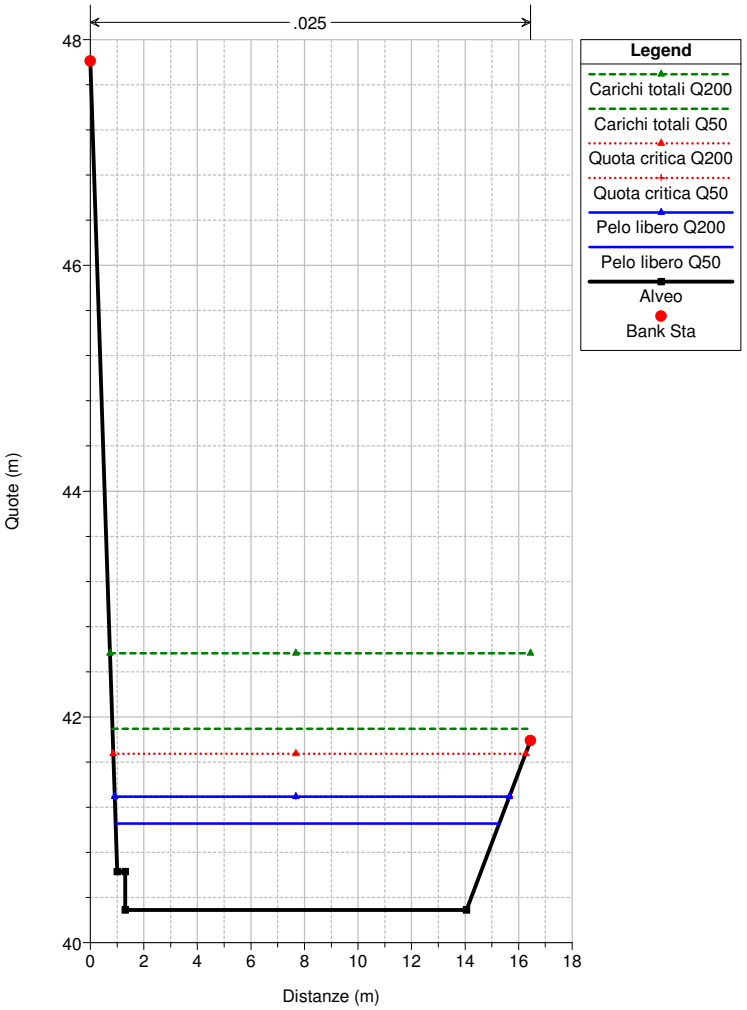
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 46. VEI 46 Sez. VE24

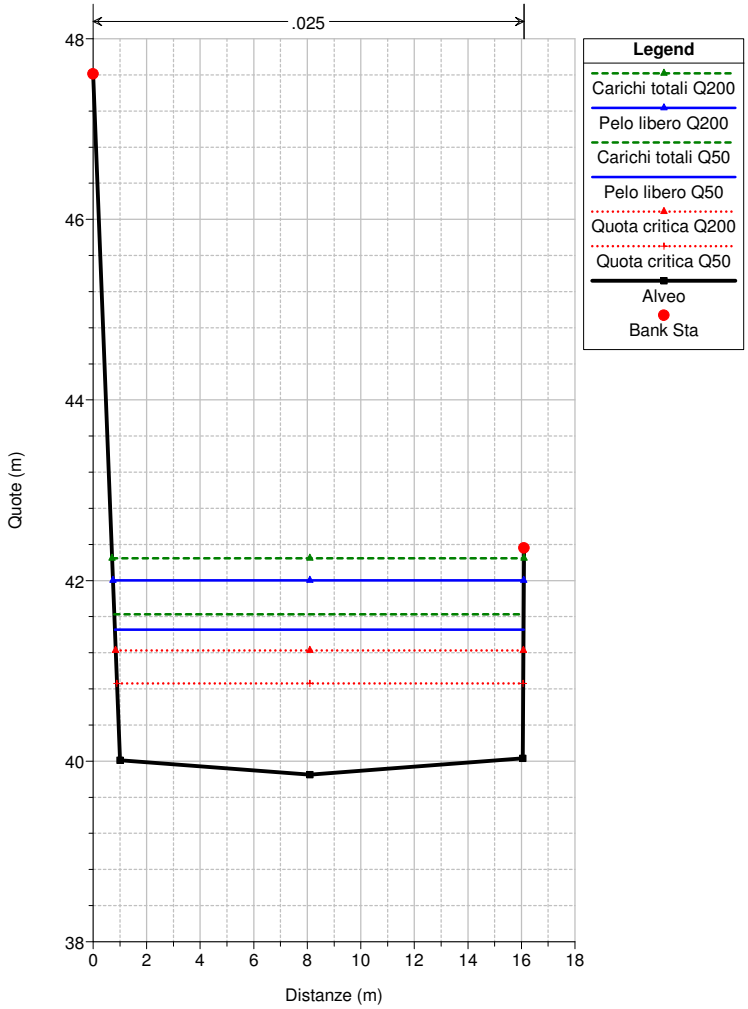


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 45. VEI 45 Sez. VE23

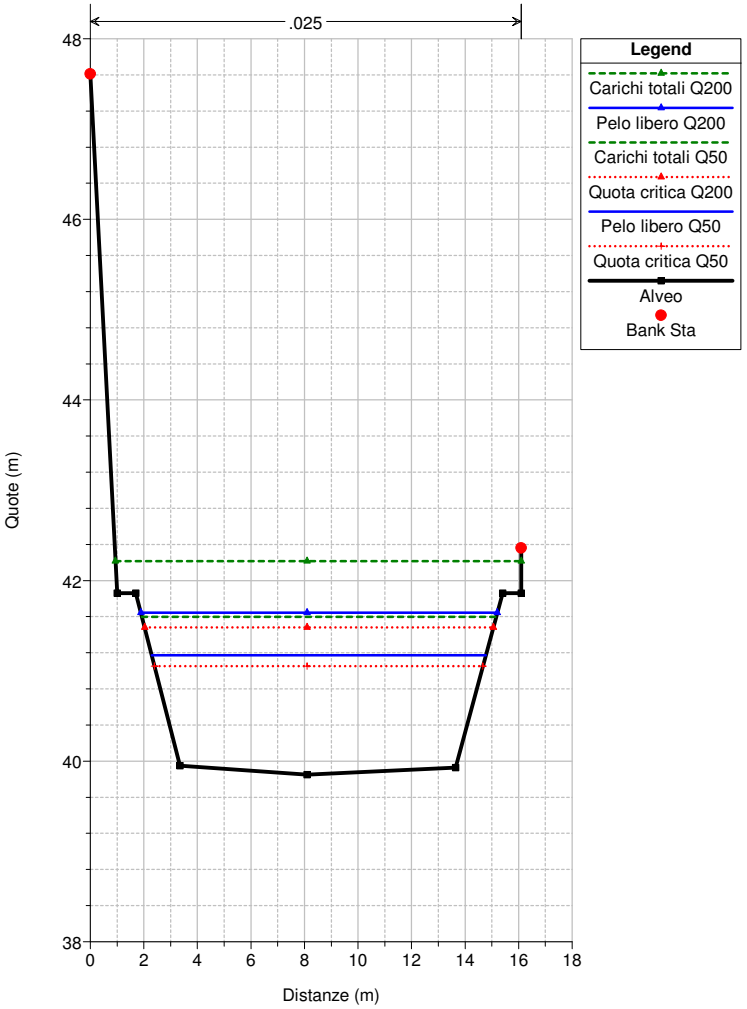


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 44.3 VEI 44.3 Sez. VE22.3



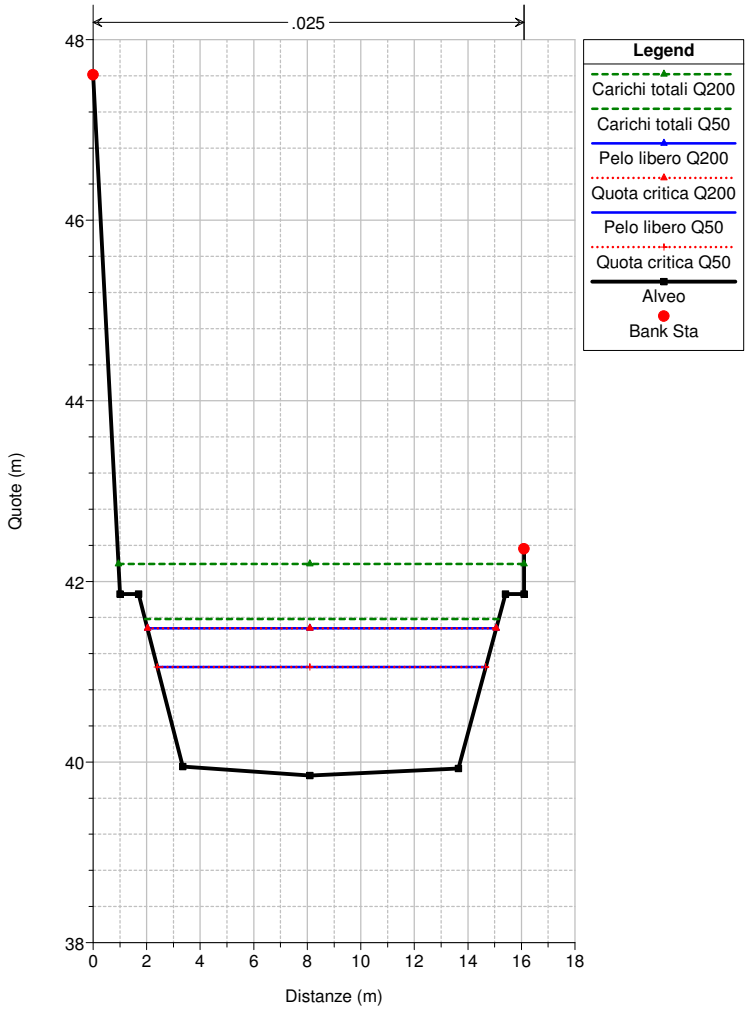
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 44.2 VEI 44.2 Sez. VE22.2



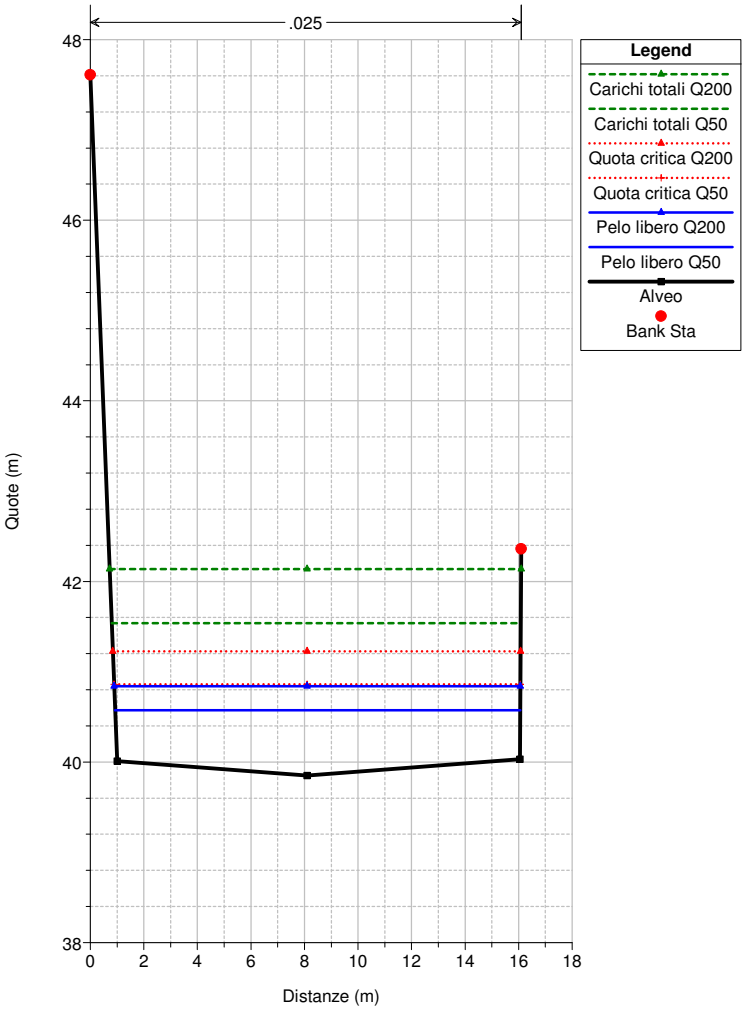
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 44.1 VEI 44.1 Sez. VE22.1

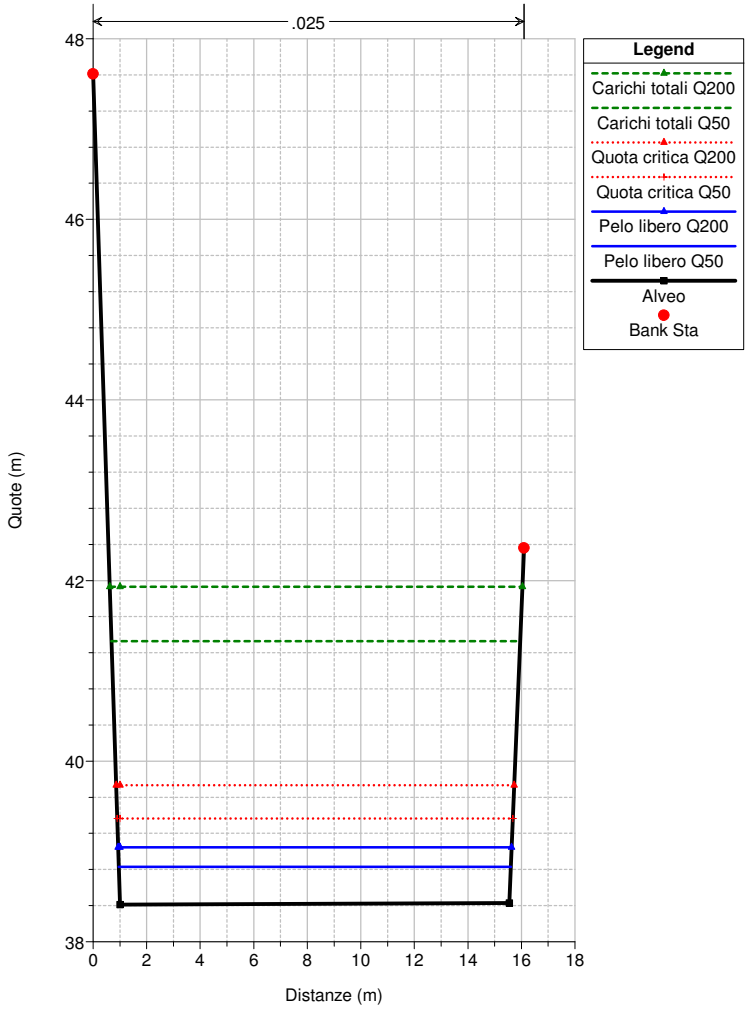


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 44. VEI 44 Sez. VE22.0

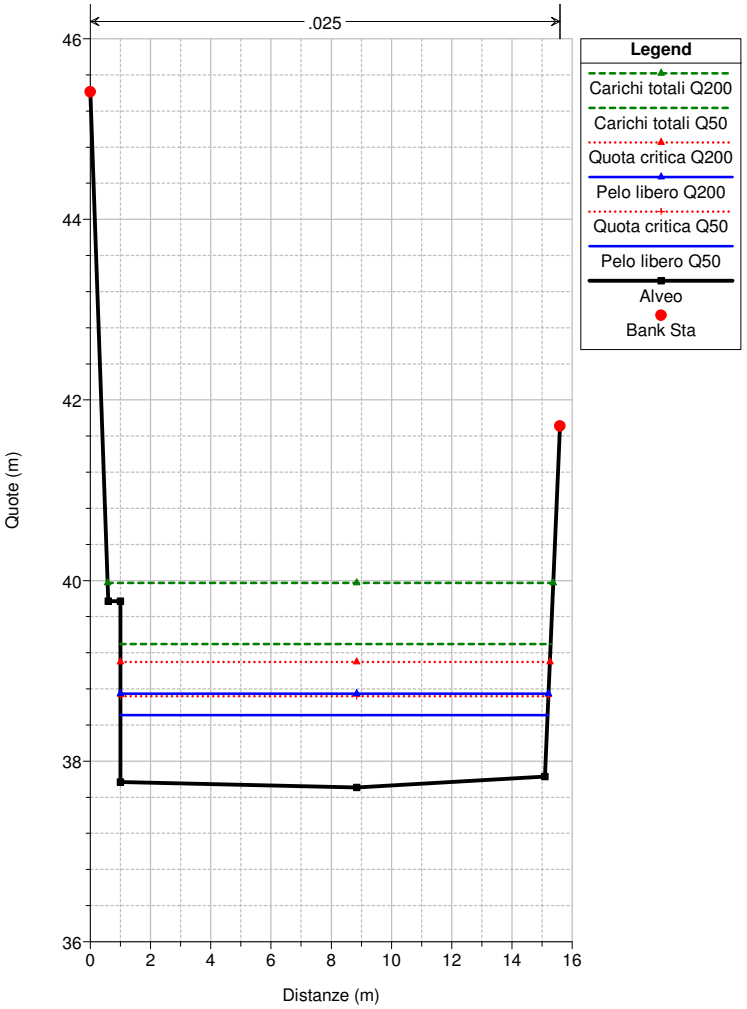


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 43. VEI 43 Sez. VE21



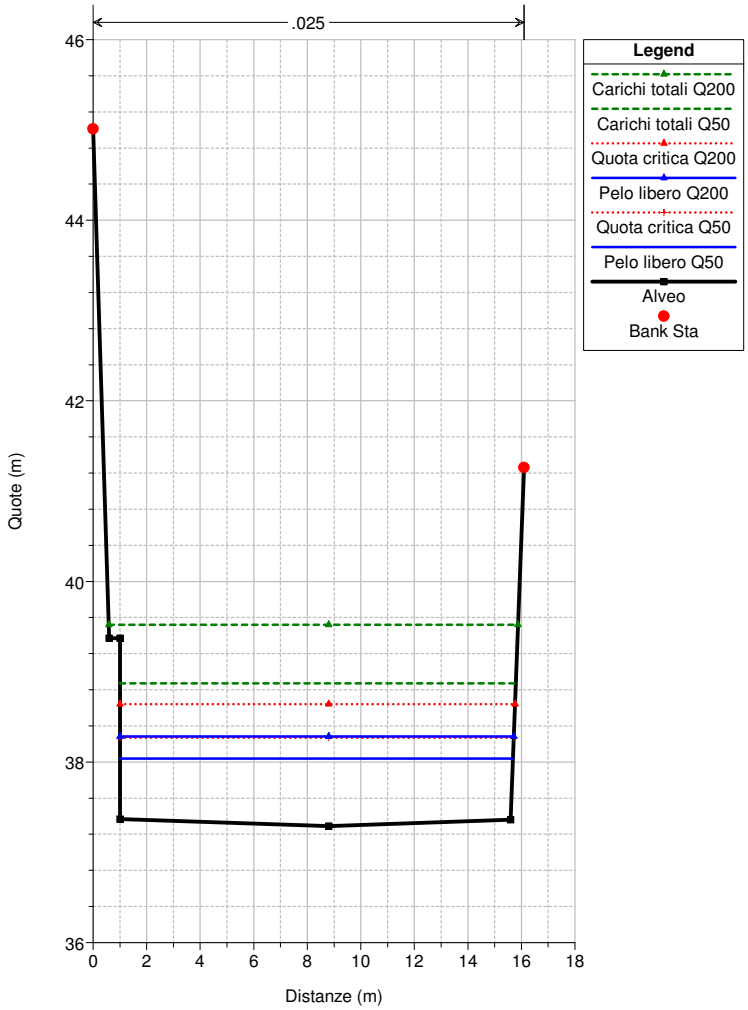
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 42. VEI 42 Sez. VE20



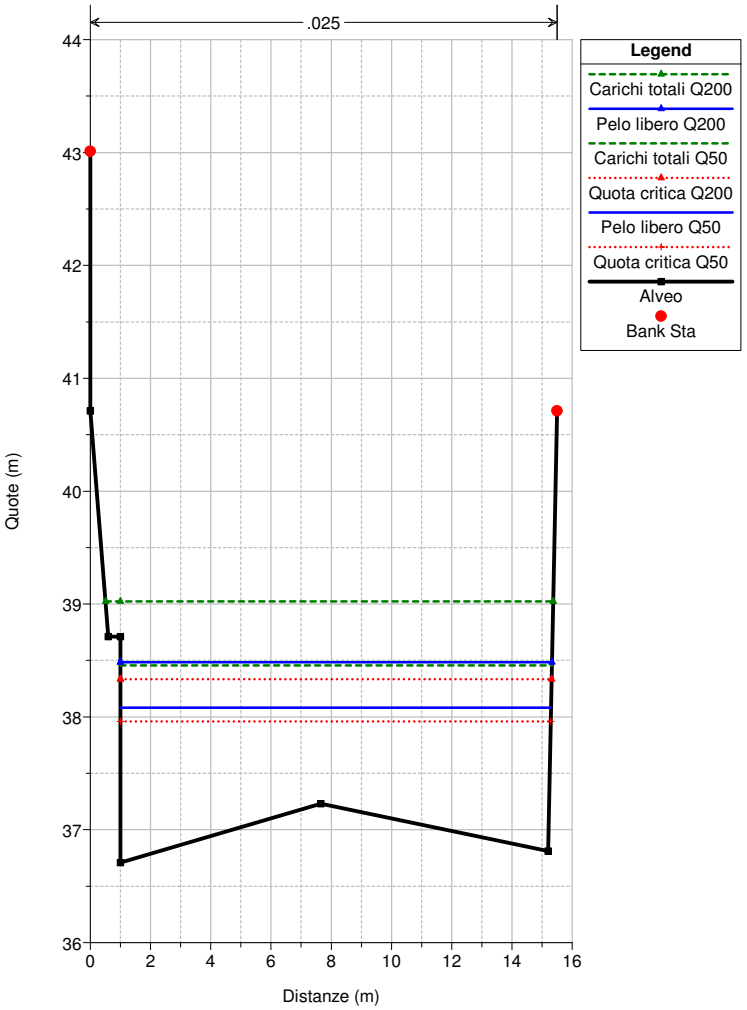
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 41. VEI 41 Sez. VE19

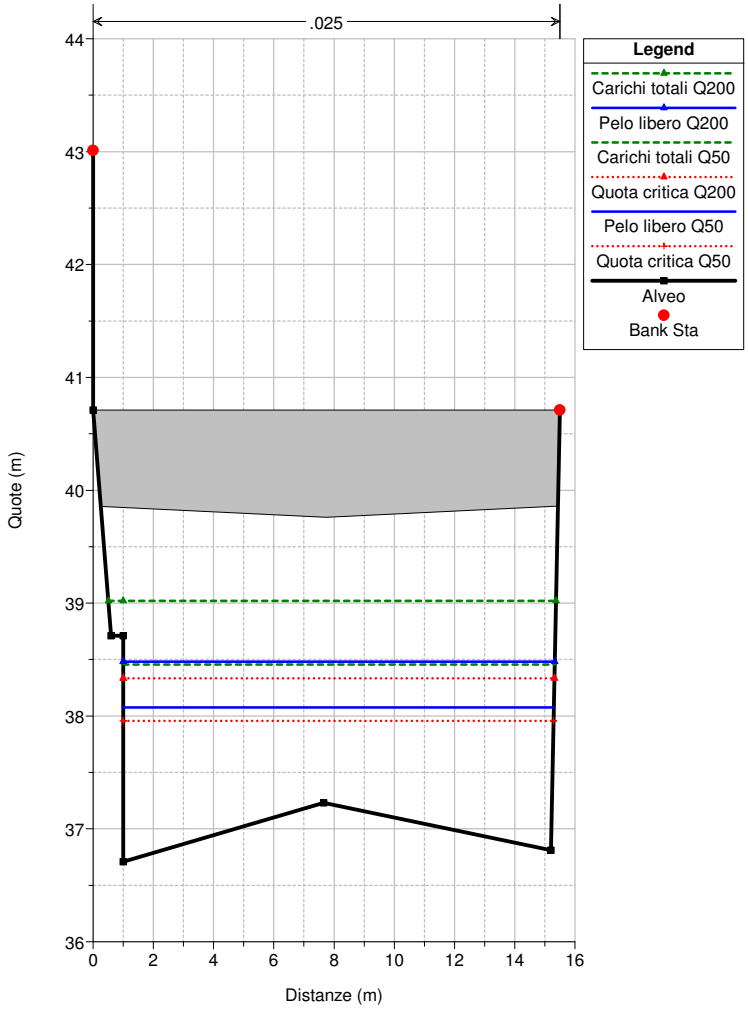


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 40.2 VEI 40 Sez. VE18.2

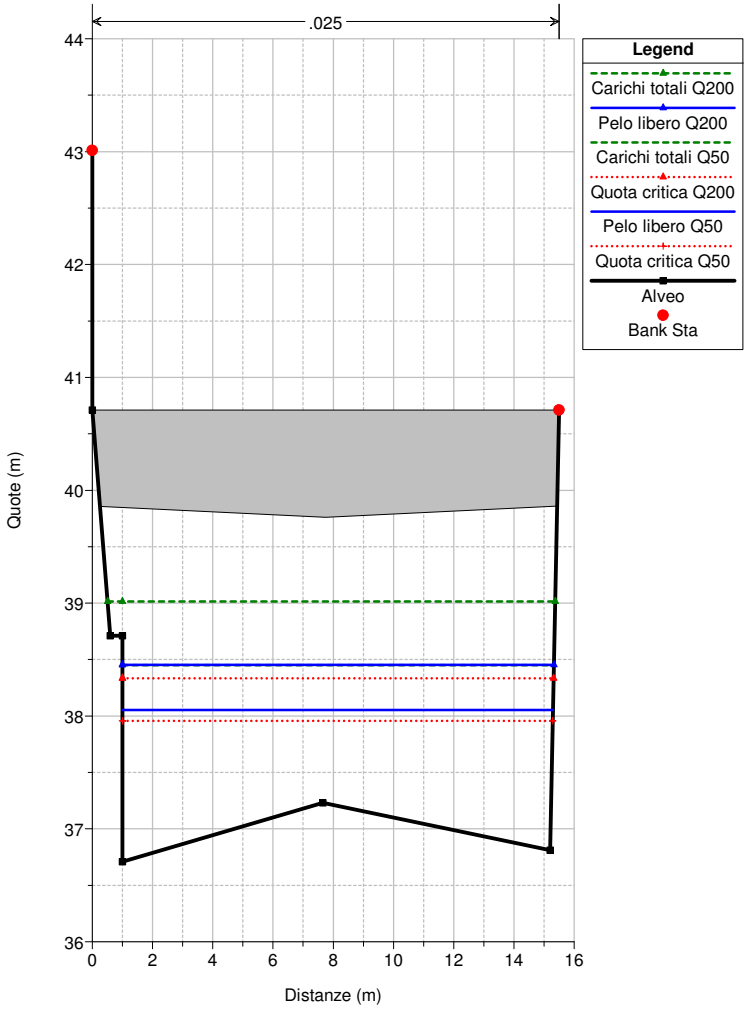


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 40.11 BR VEI 40 Sez. VE18.11



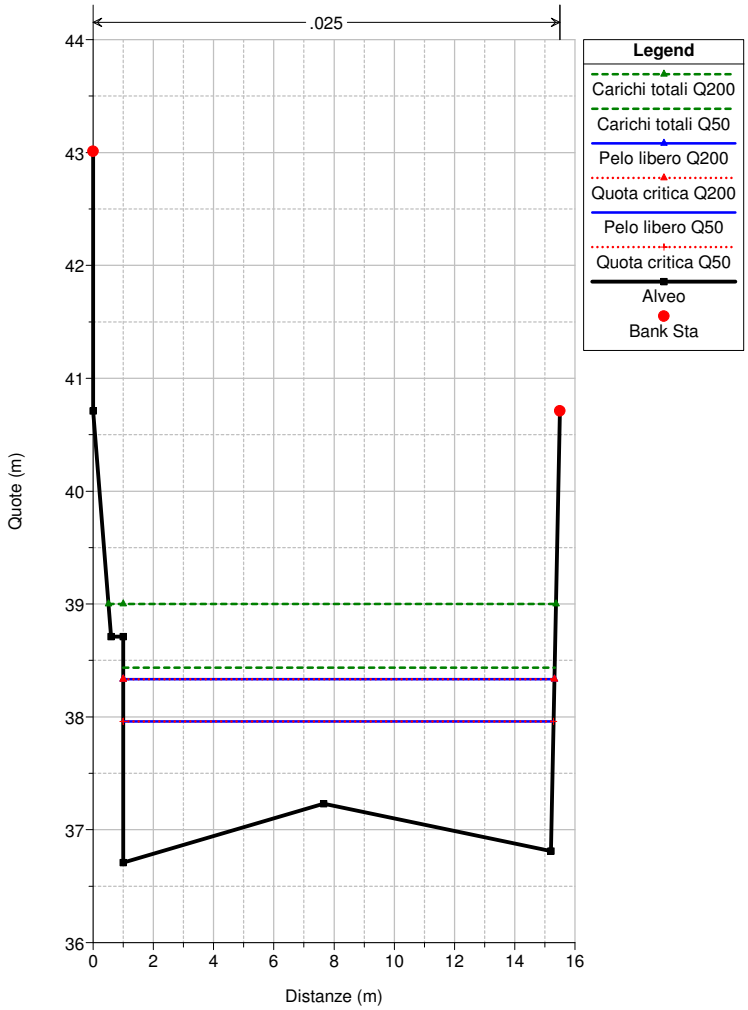
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 40.11 BR VEI 40 Sez. VE18.11



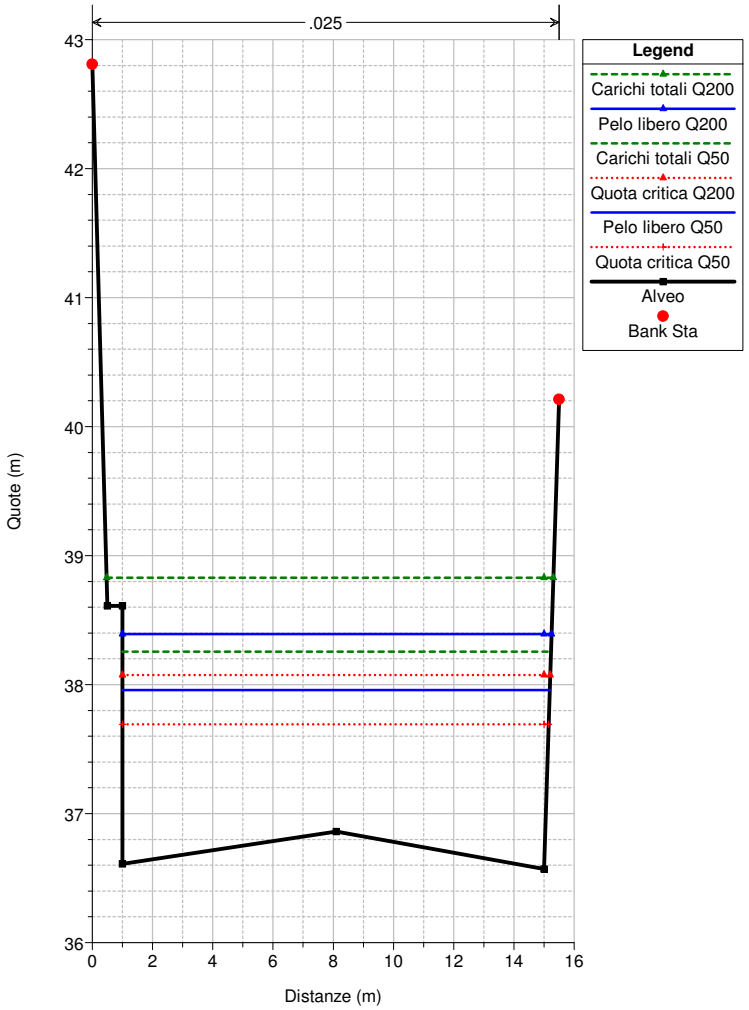
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 40.1 VEI 40 Sez. VE18.1



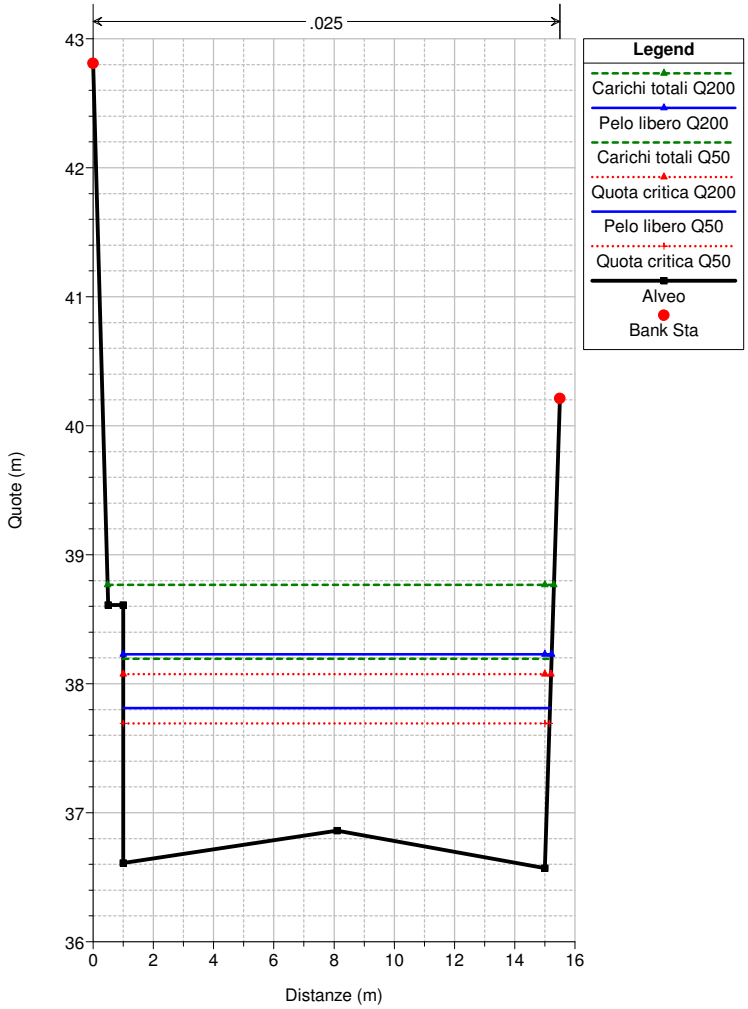
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 39. VEI 39 Sez. VE17



Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

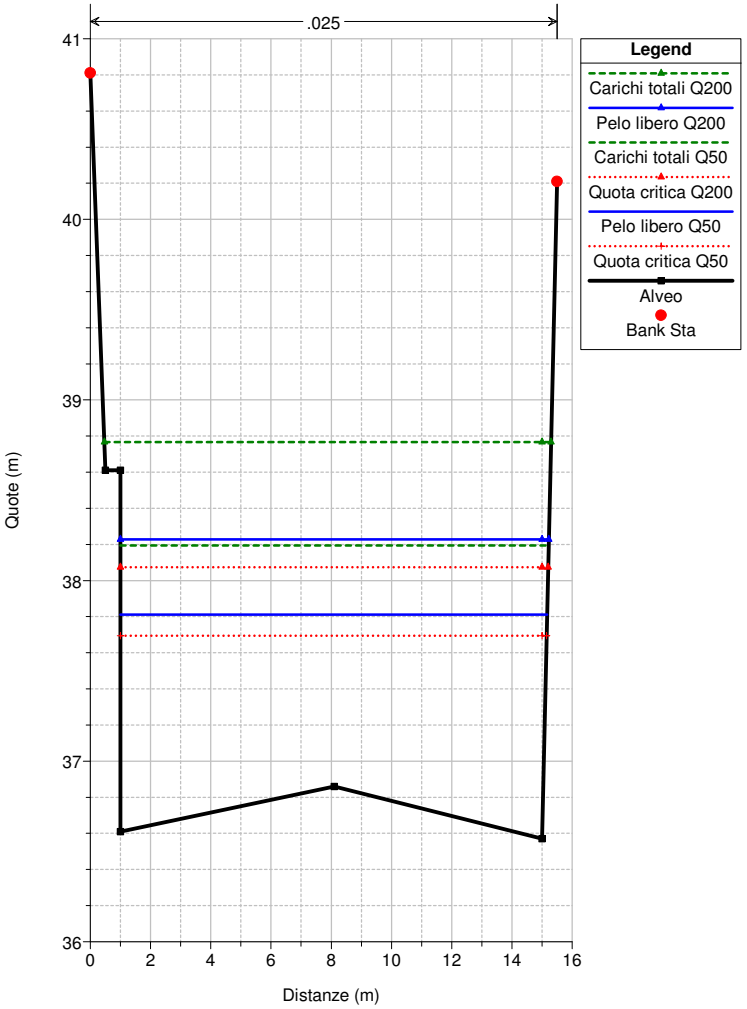
River = Veilino Reach = Monte RS = 38.4 buco



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

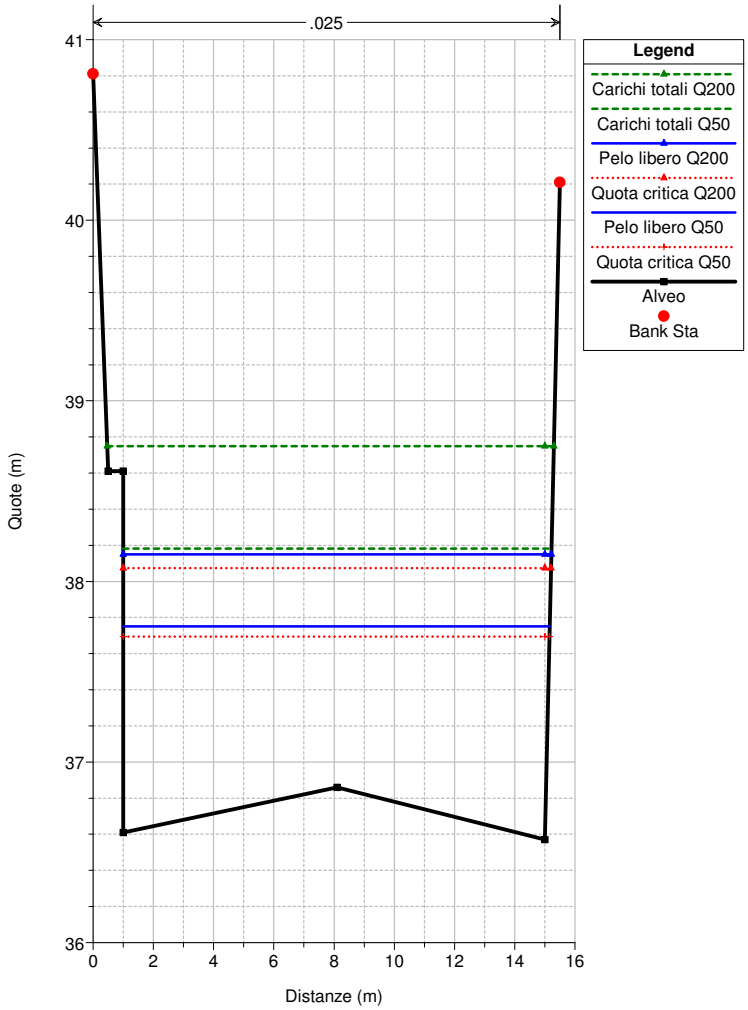
River = Veilino Reach = Monte RS = 38.3 buco



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

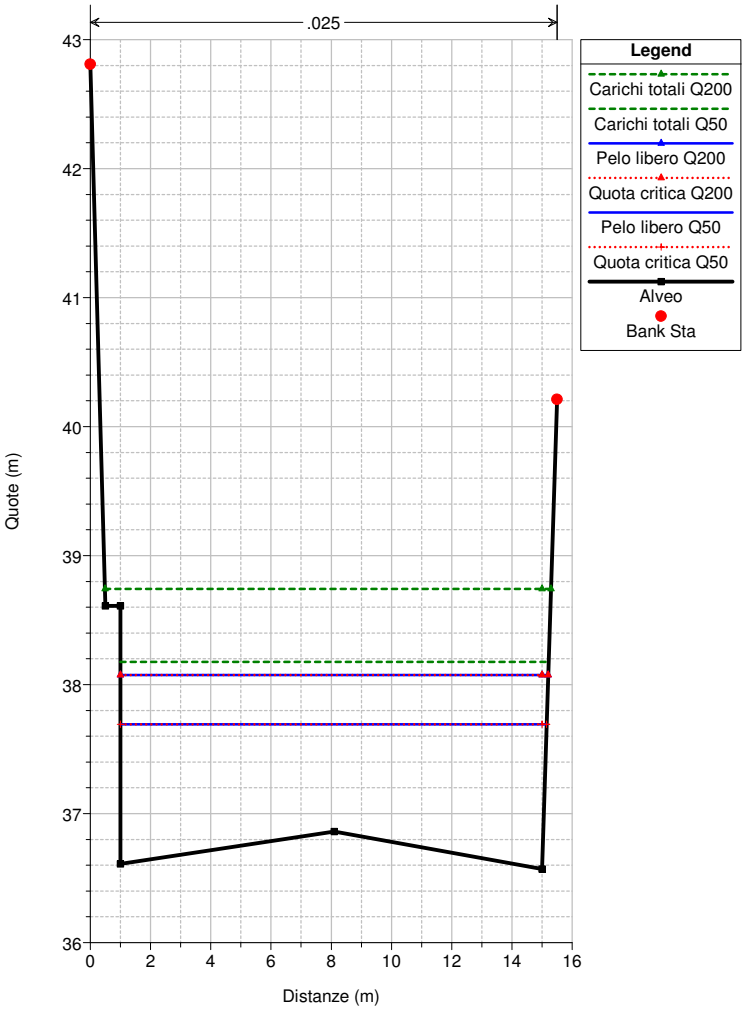
River = Veilino Reach = Monte RS = 38.2 buco



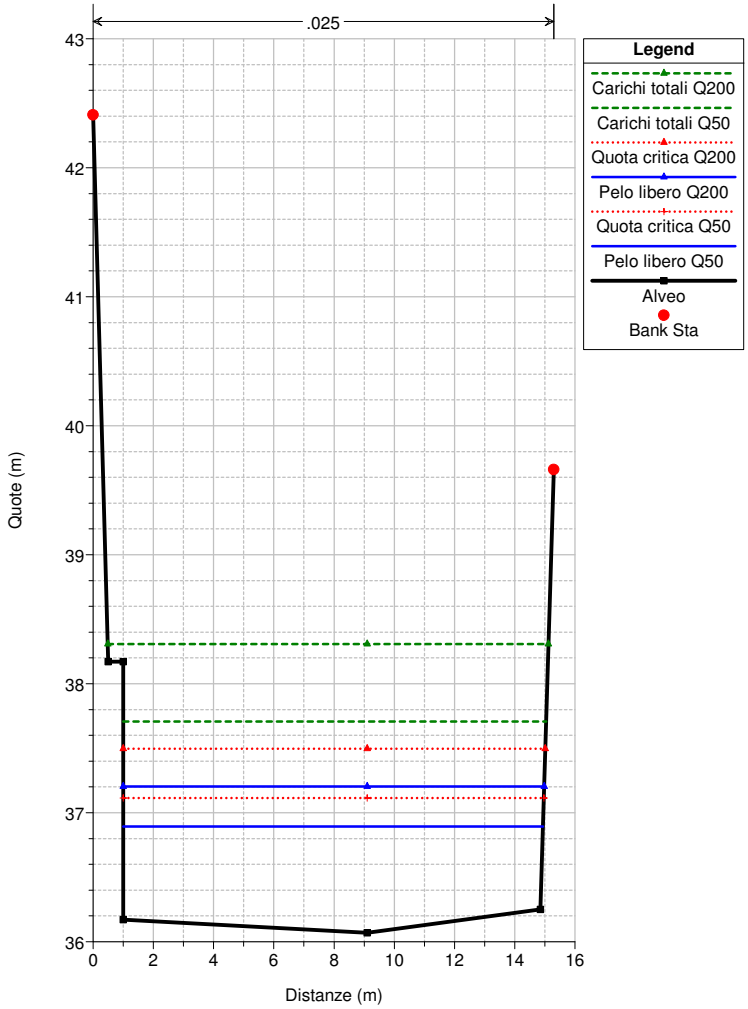
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Veilino Reach = Monte RS = 38.1 buco

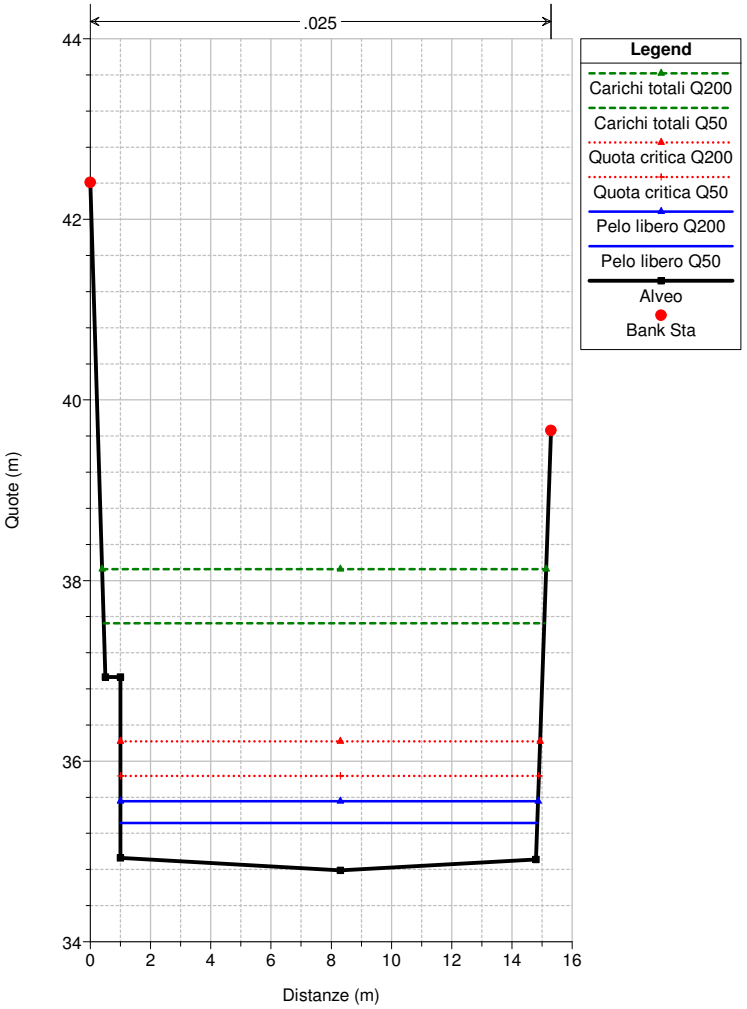


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 38. VEI 38 Sez. VE16



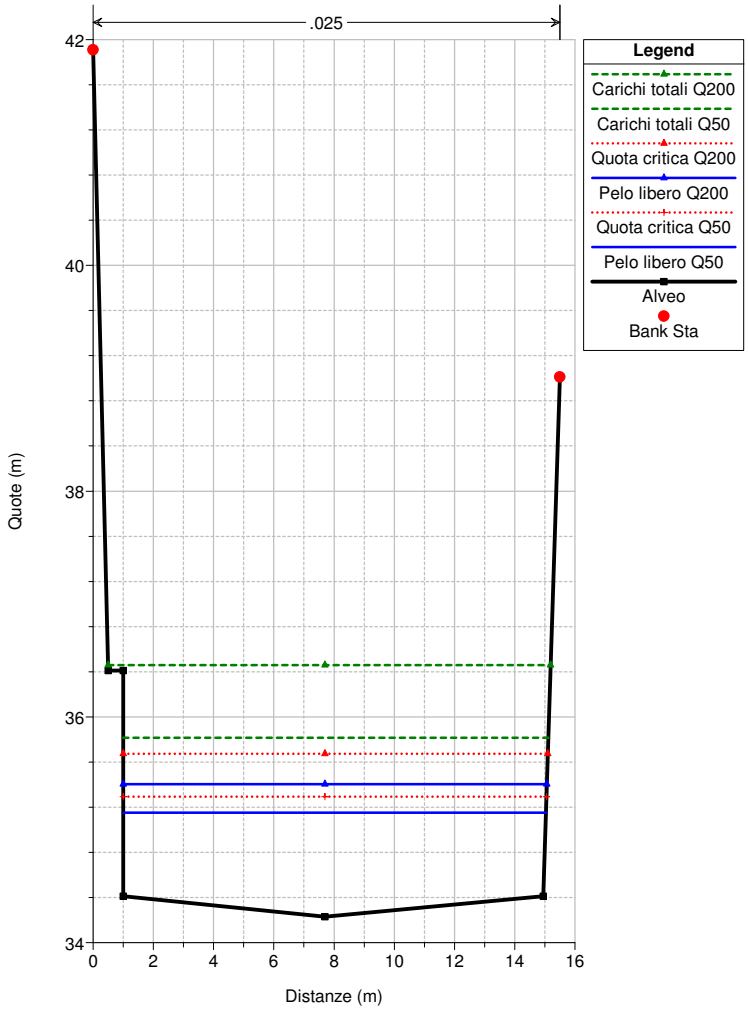
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 37. VEI 37 Sez. VE15



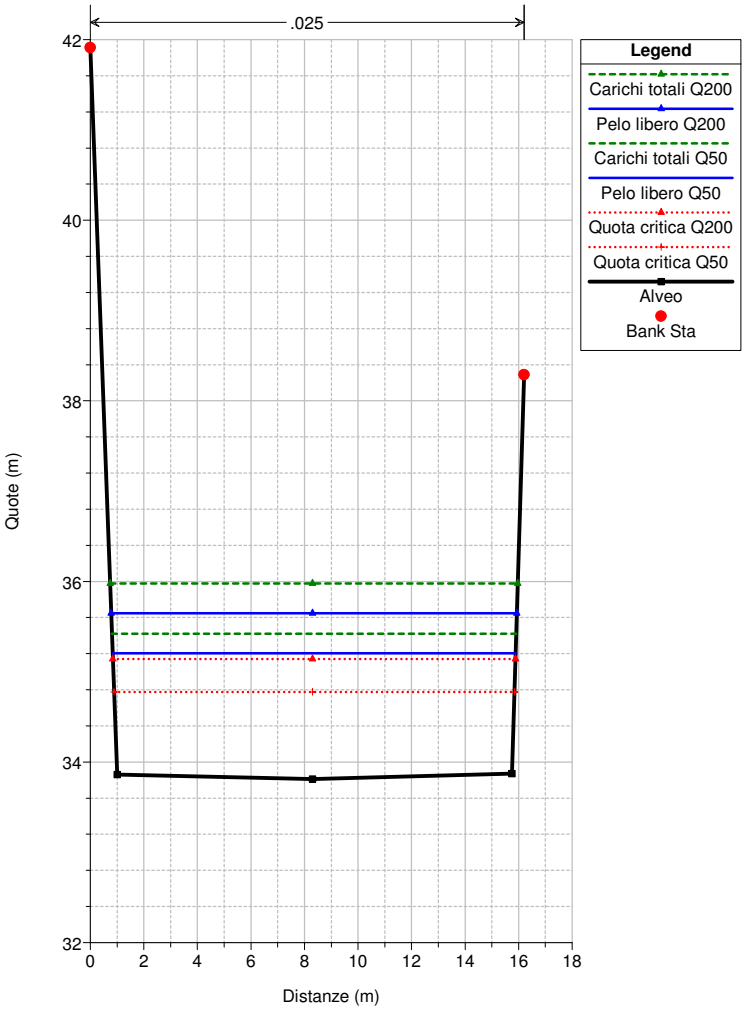
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 36. VEI 36 Sez. VE14

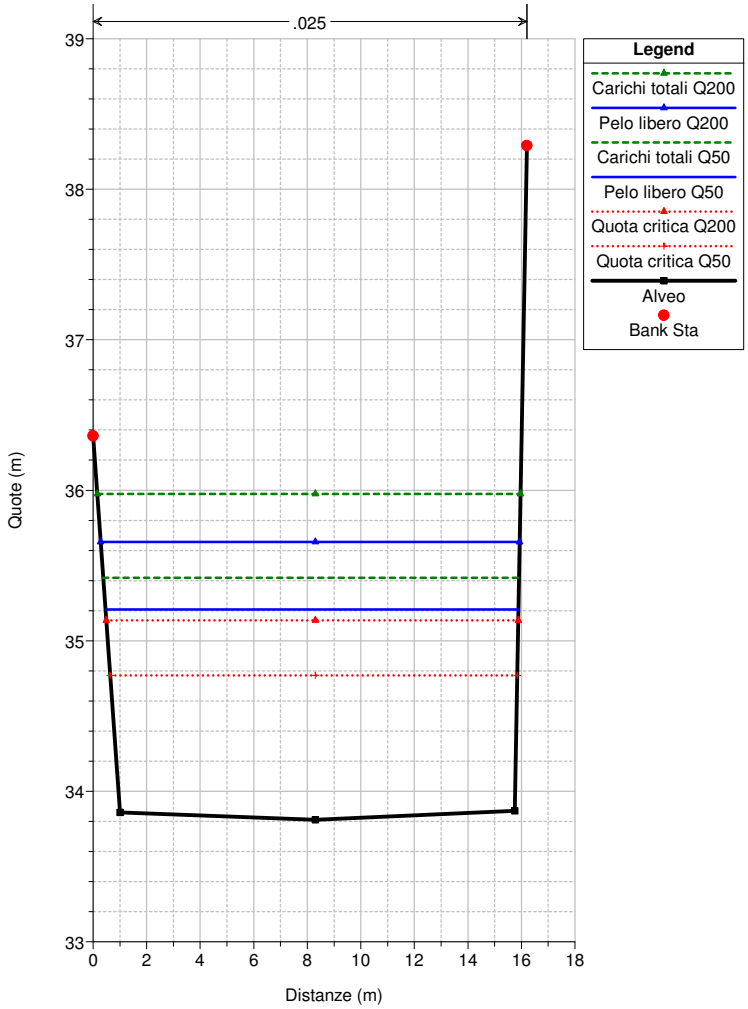


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.6 buco

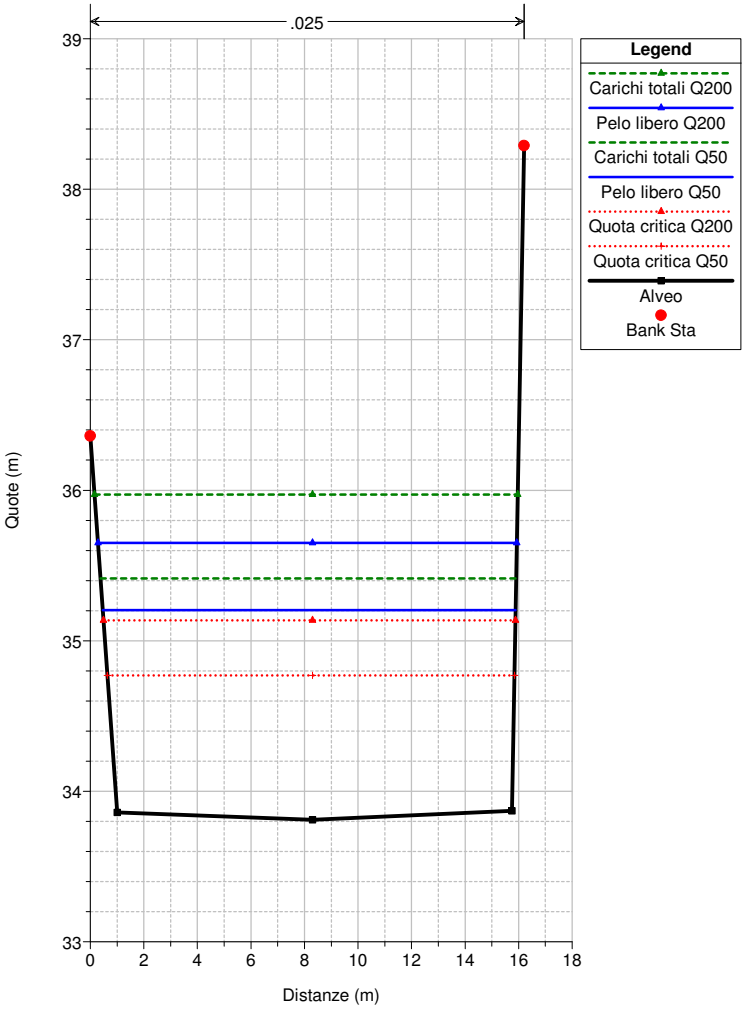


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.5 buco



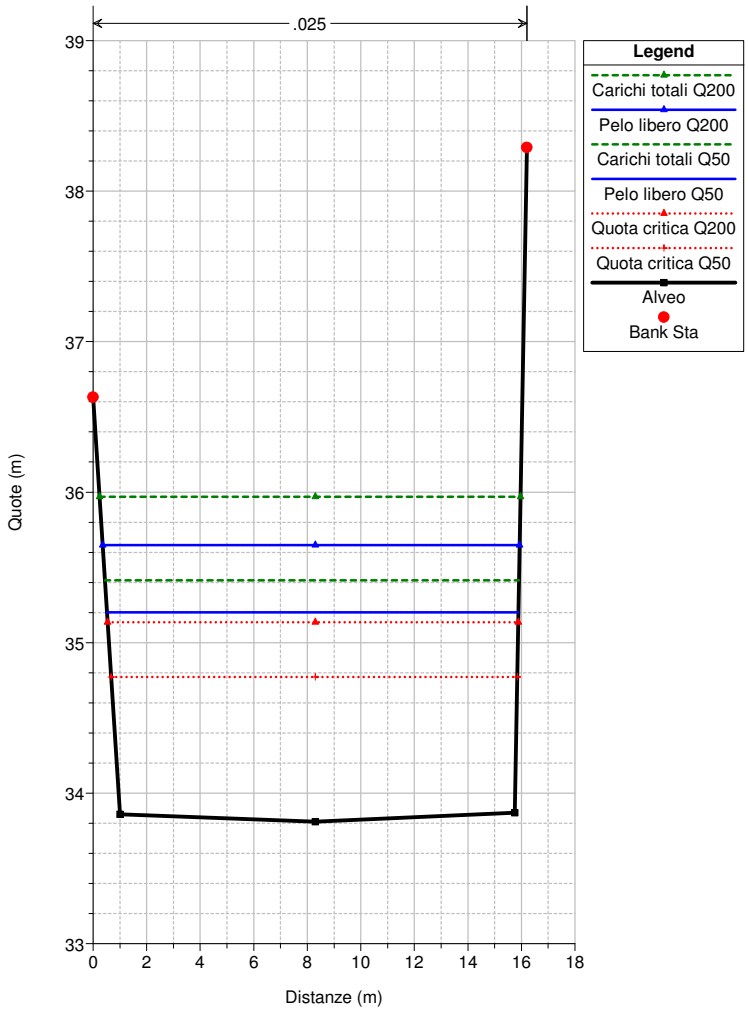
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.4 buco



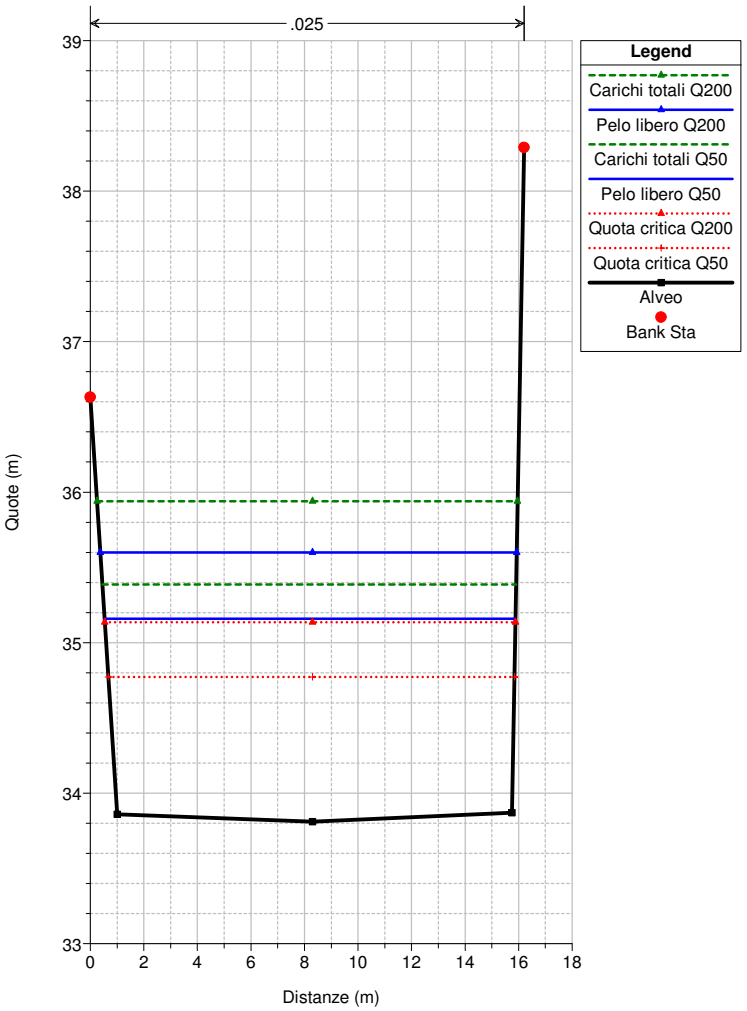
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.35 Sez. VE13.3

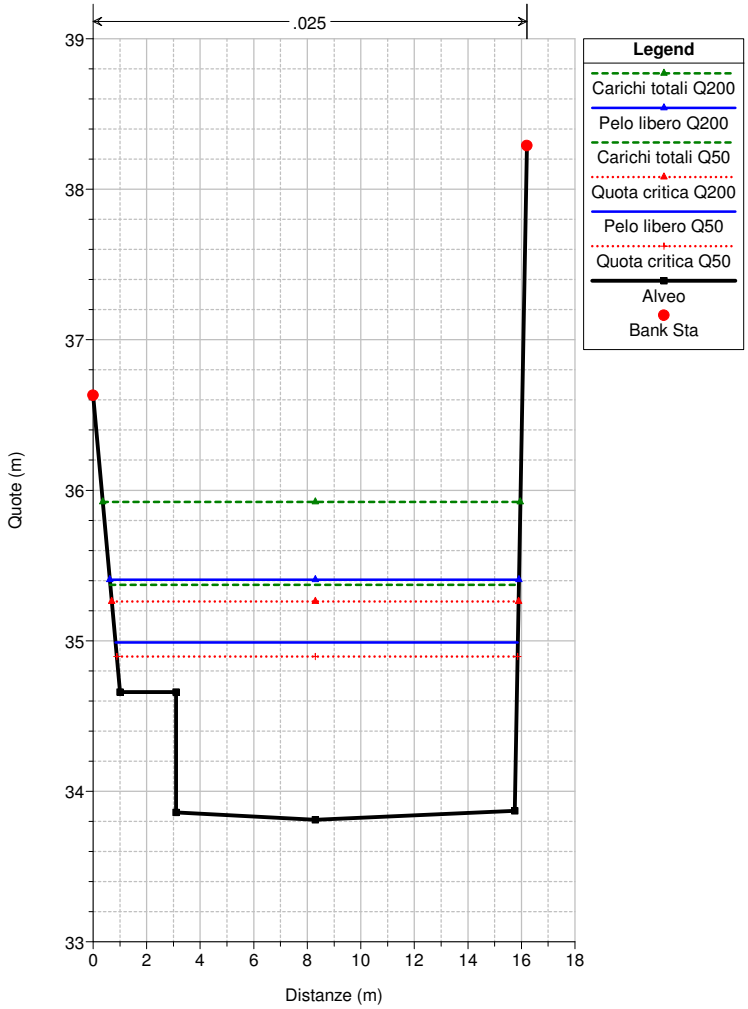


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.3 VEI 35.3 Sez. VE13.3

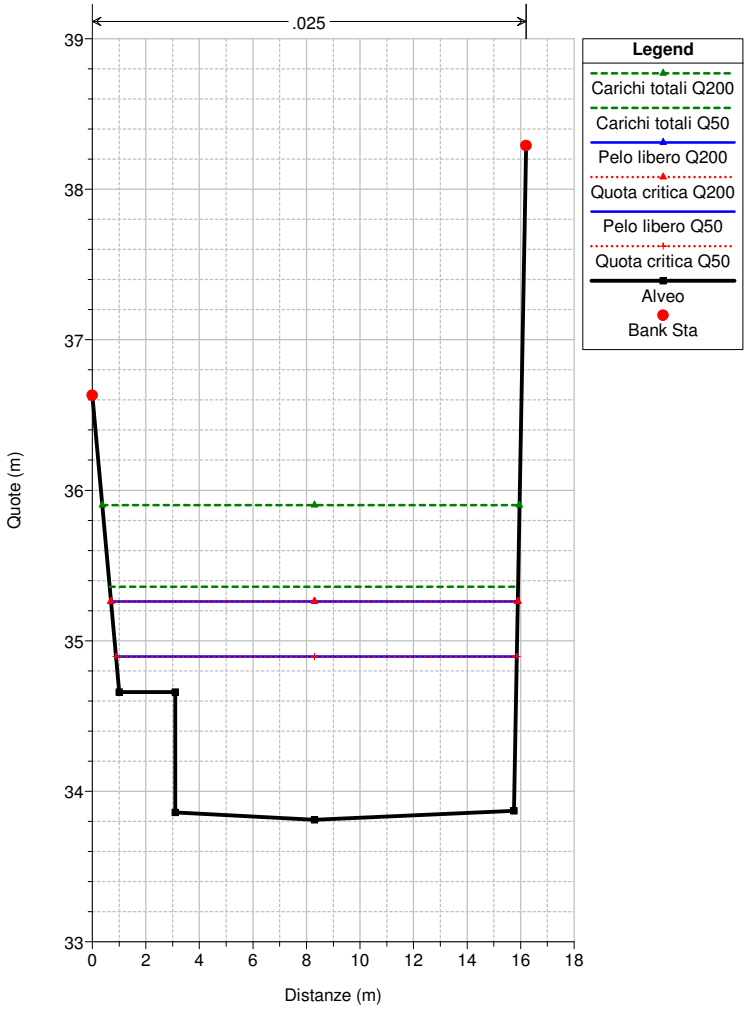


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.2 VEI 35.2 Sez. VE13.2



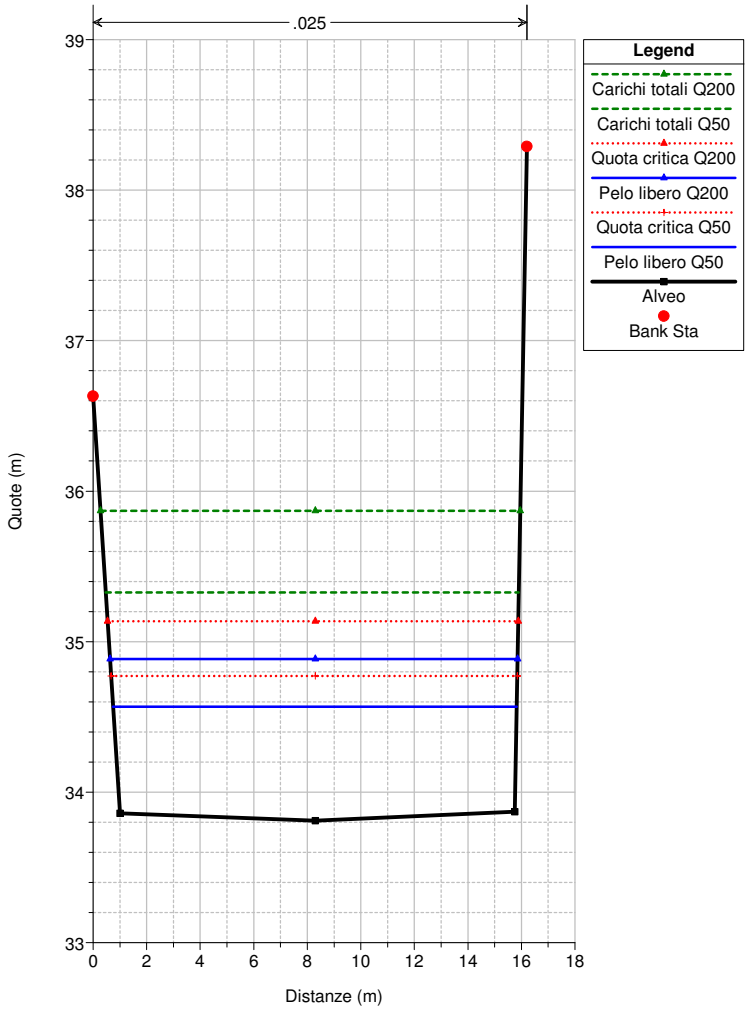
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35.1 VEI 35.1 Sez. VE13.1



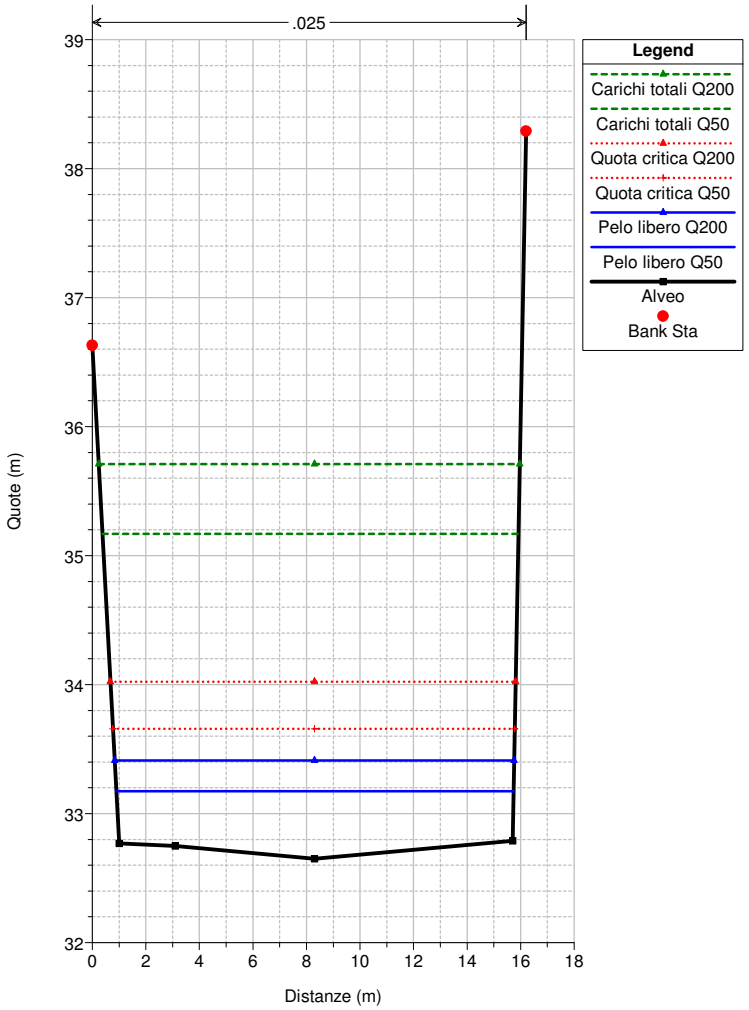
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 35. VEI 35 Sez. VE13.0

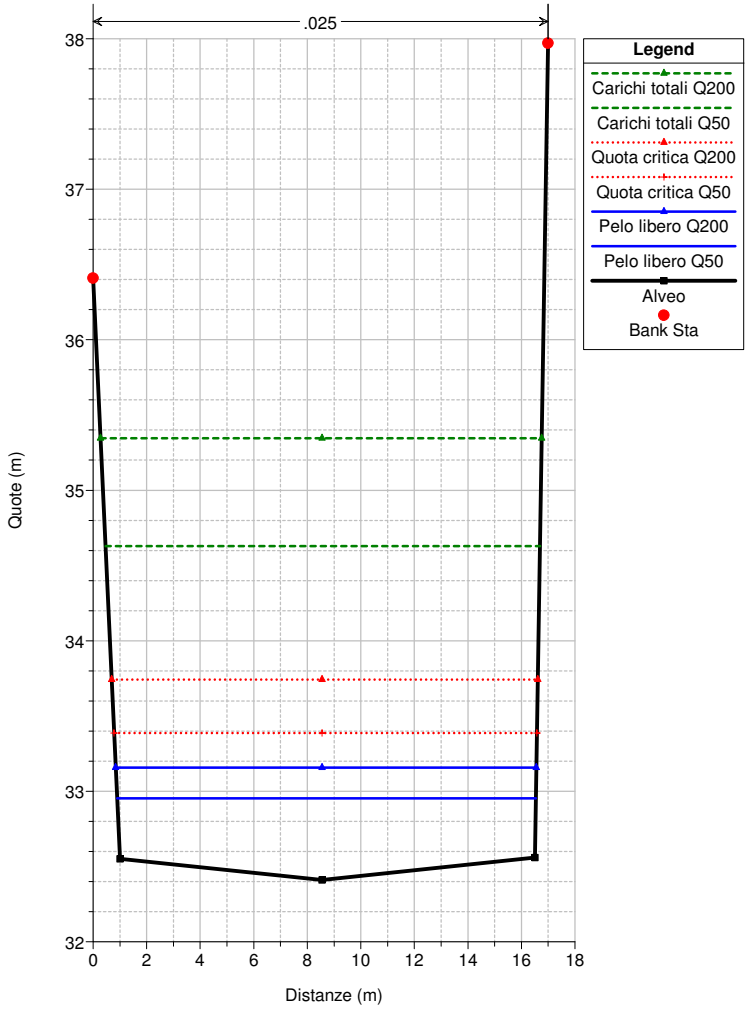


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 34. VEI 34 Sez. VE12

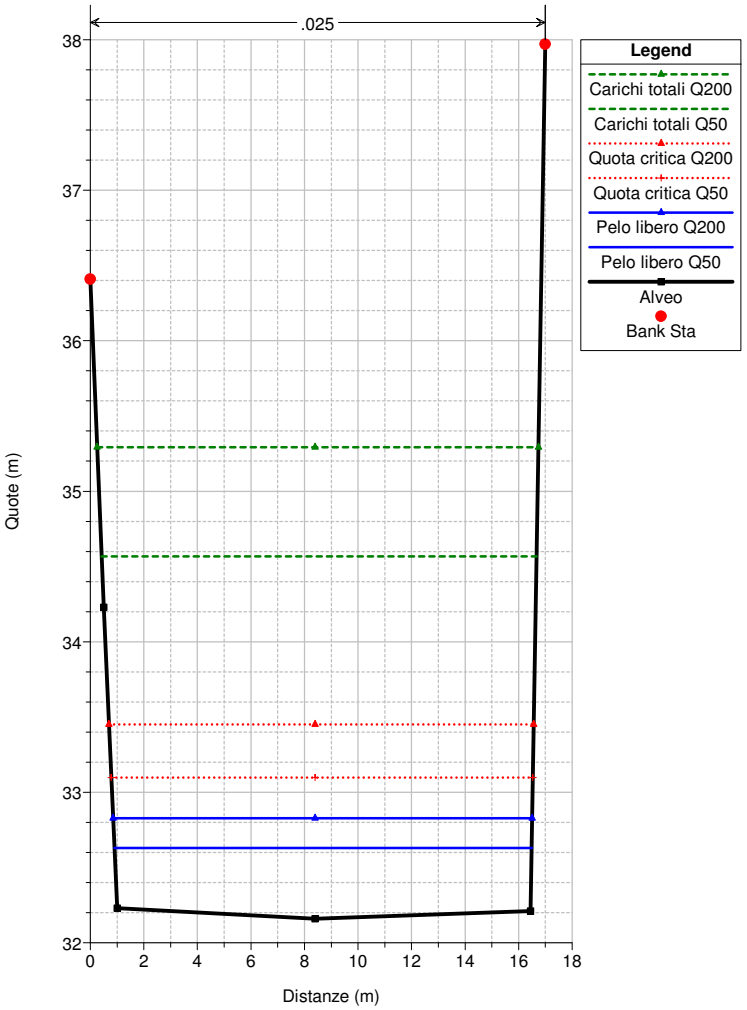


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 33. VEI 33 Sez. VE11



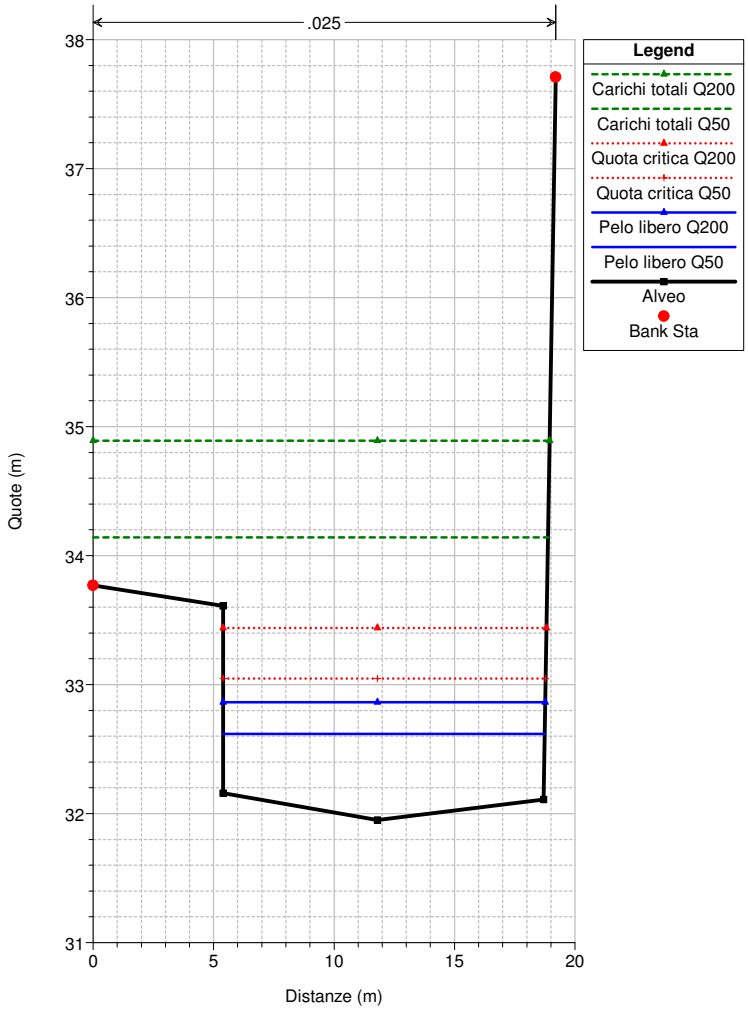
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 32. VEI 32 Sez. VE10



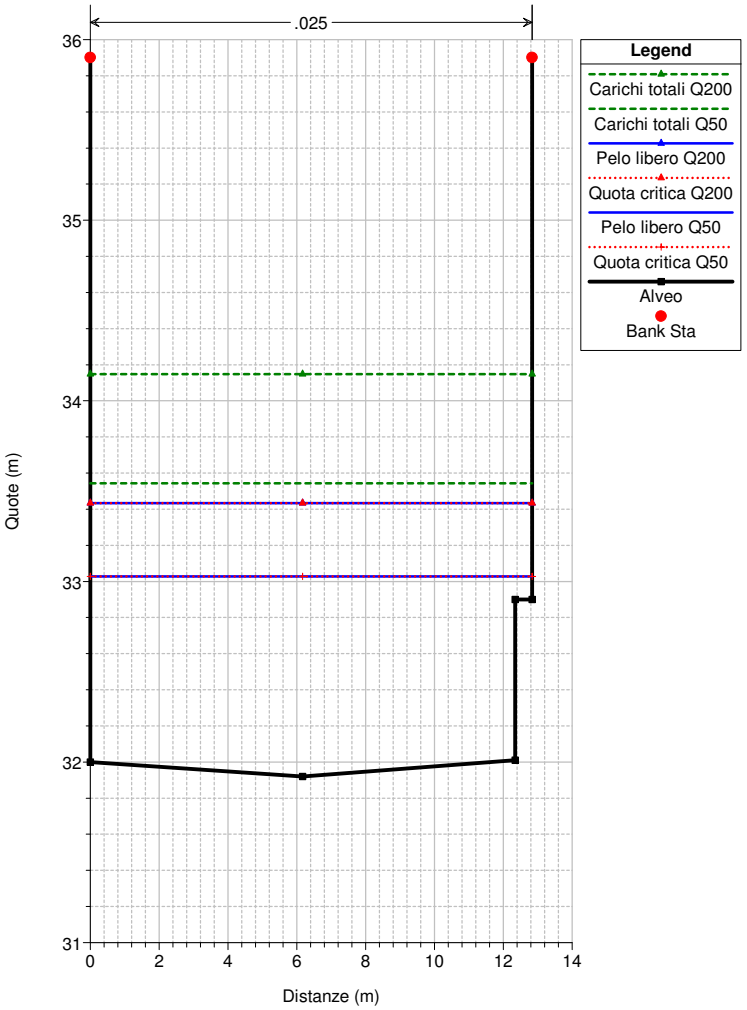
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 31. VEI 31 Sez. VE09

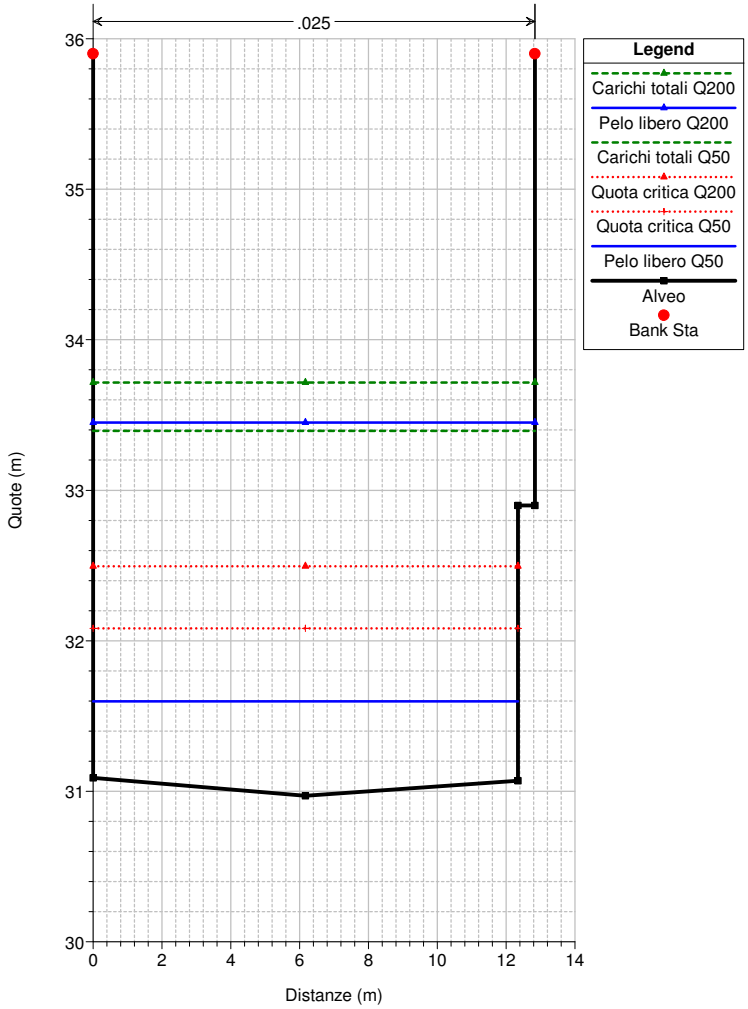


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 30 VEI 30 Sez. 30

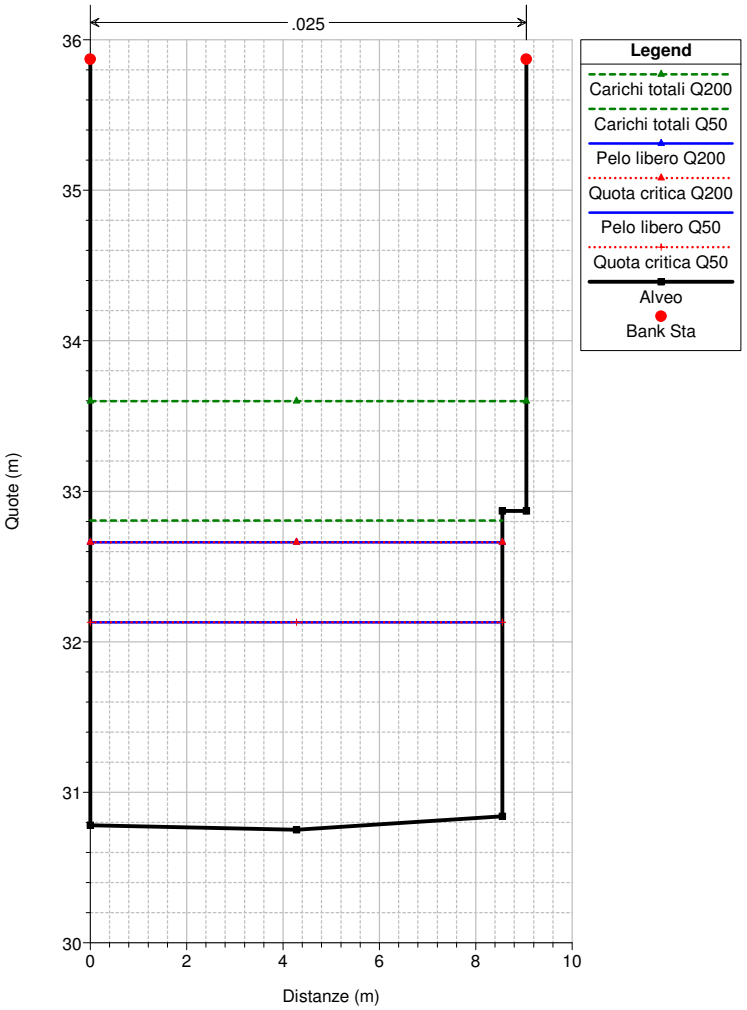


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 29 VEI 29 Sez. 29



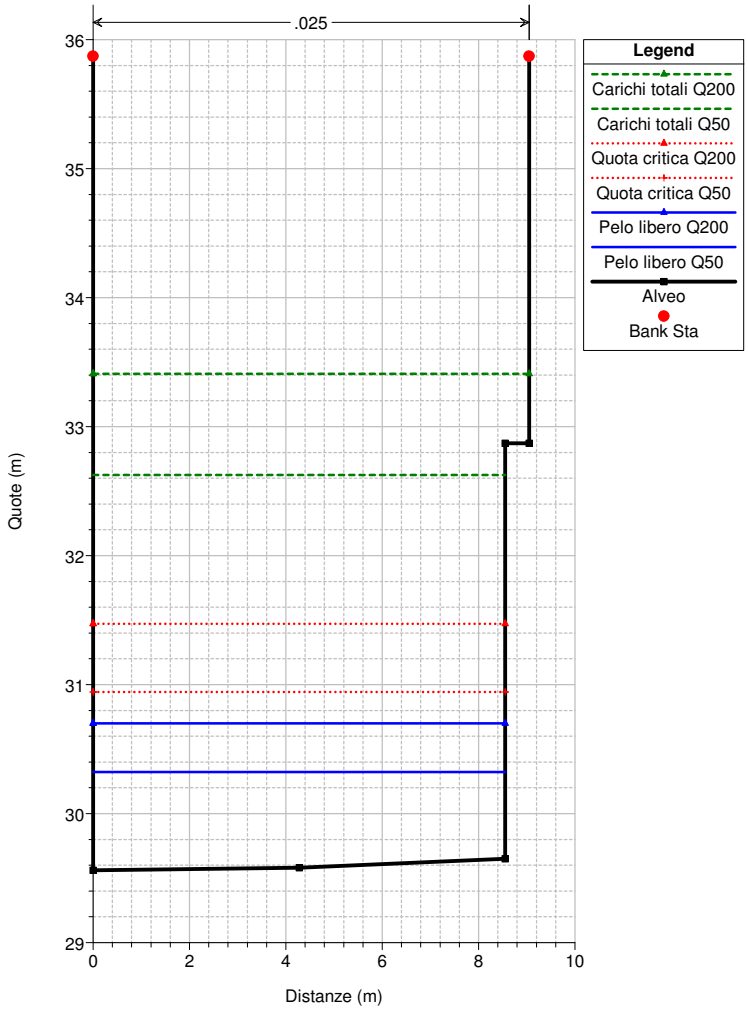
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 28 VEI 28 Sez. 28



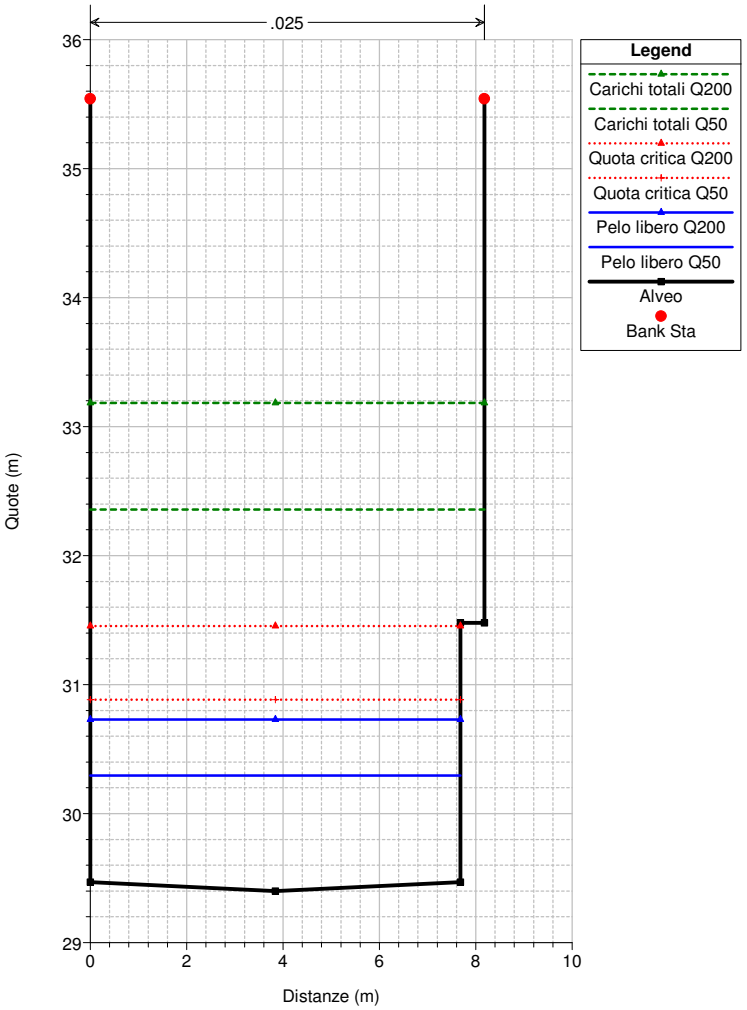
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 27 VEI 27 Sez. 27



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

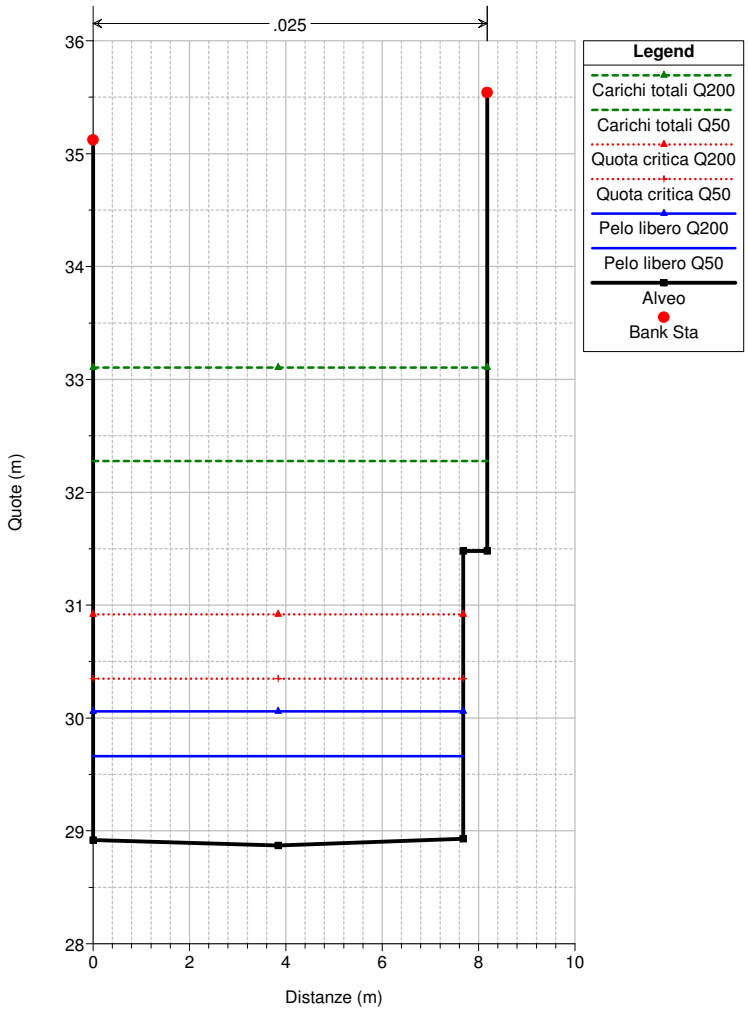
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 26 VEI 26 Sez. 26



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

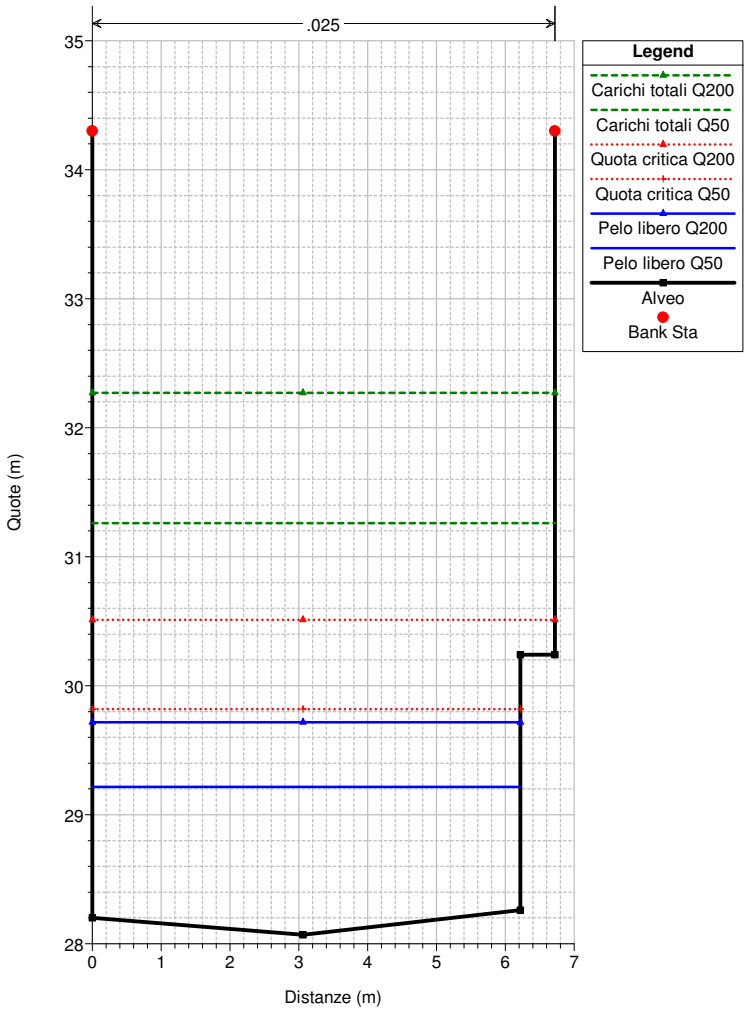
River = Veilino Reach = Monte RS = 25 VEI 25 Sez. 25 modificata con misure prese con Aurelio



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

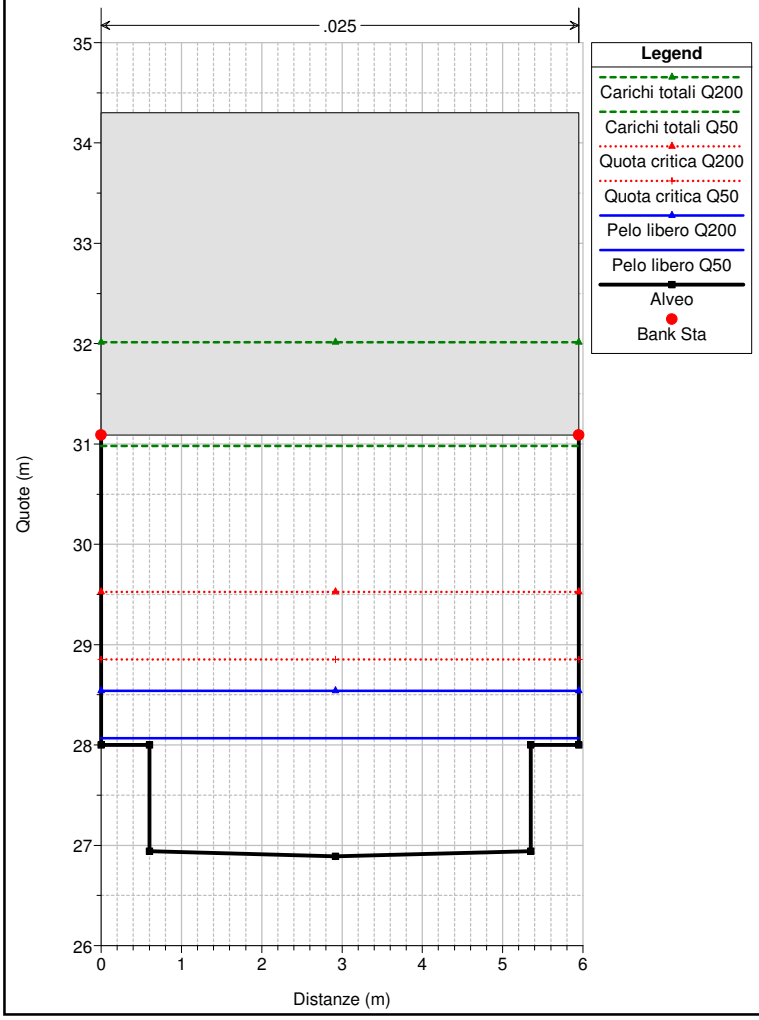
River = Veilino Reach = Monte RS = 24 VEI 24 Sez. 24 modificata con misure prese con Aurelio



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

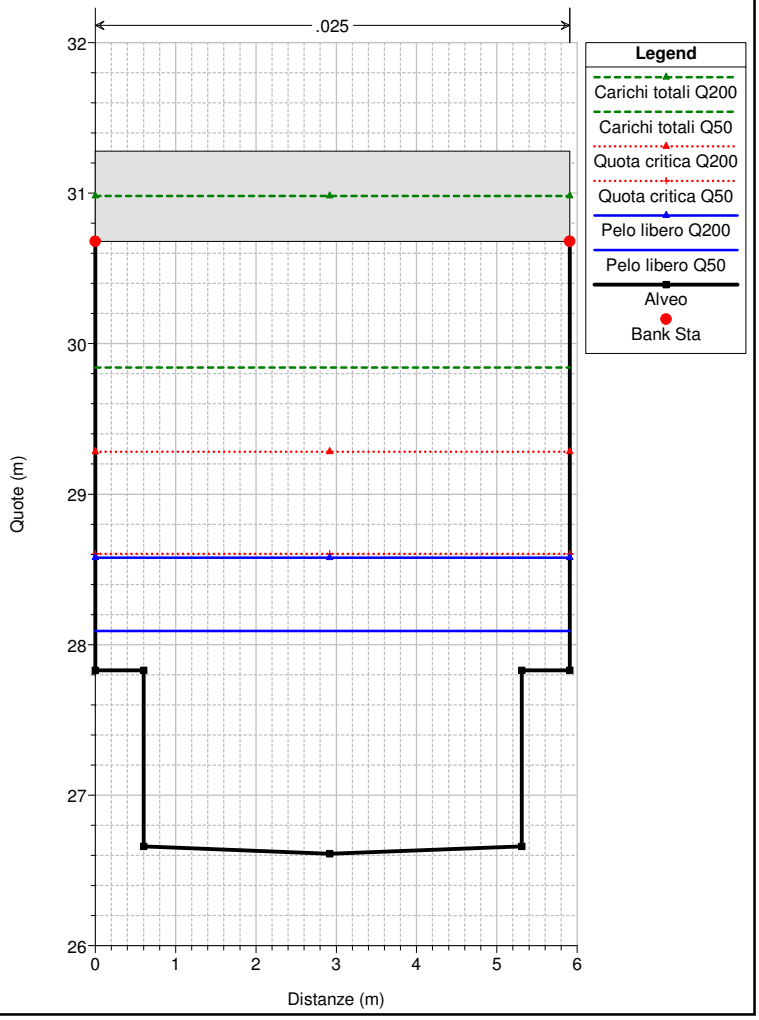
River = Veilino Reach = Monte RS = 23 VEI 23 Sez. 23



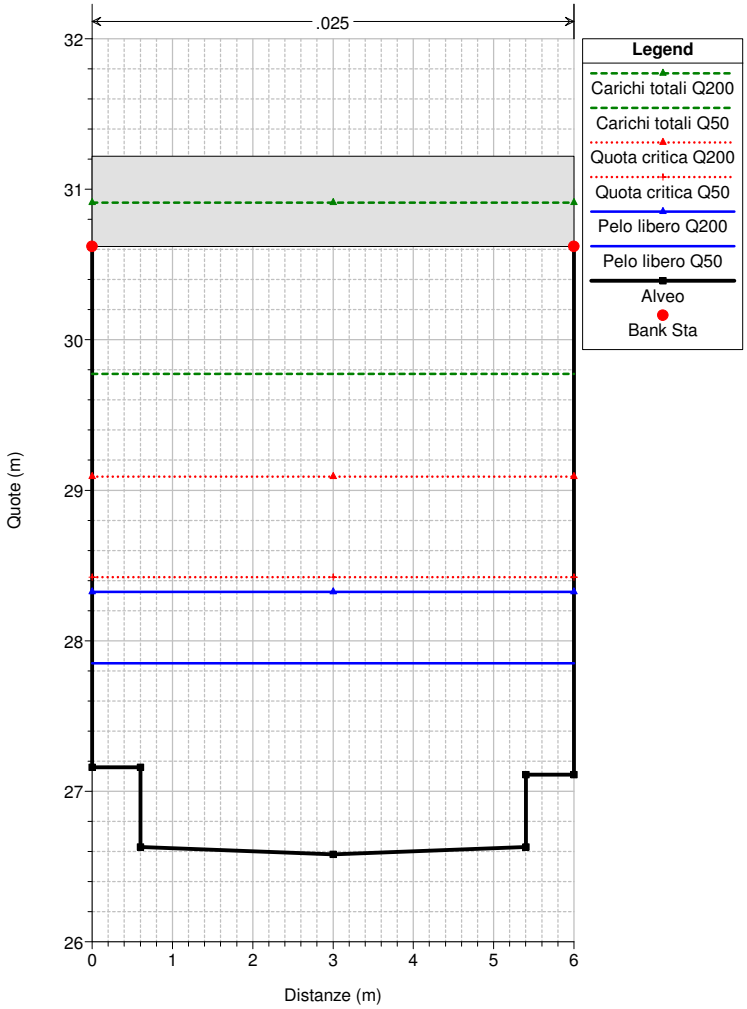
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Veilino Reach = Monte RS = 22 VEI 22 Sez. 22

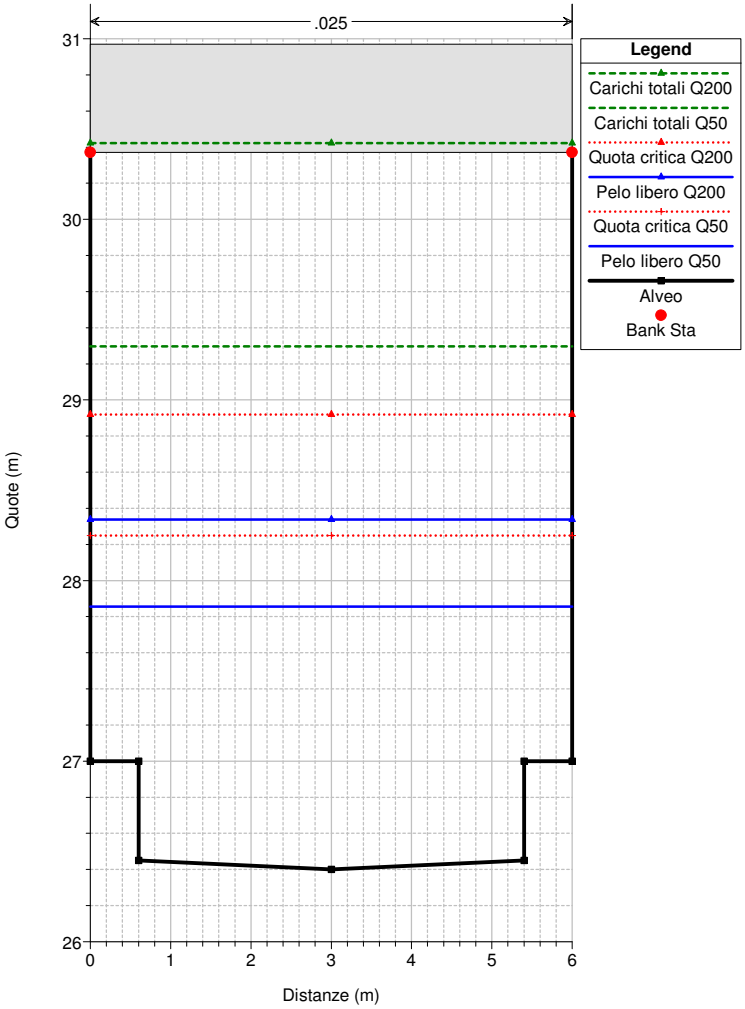


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 21 VEI 21 Sez. 21



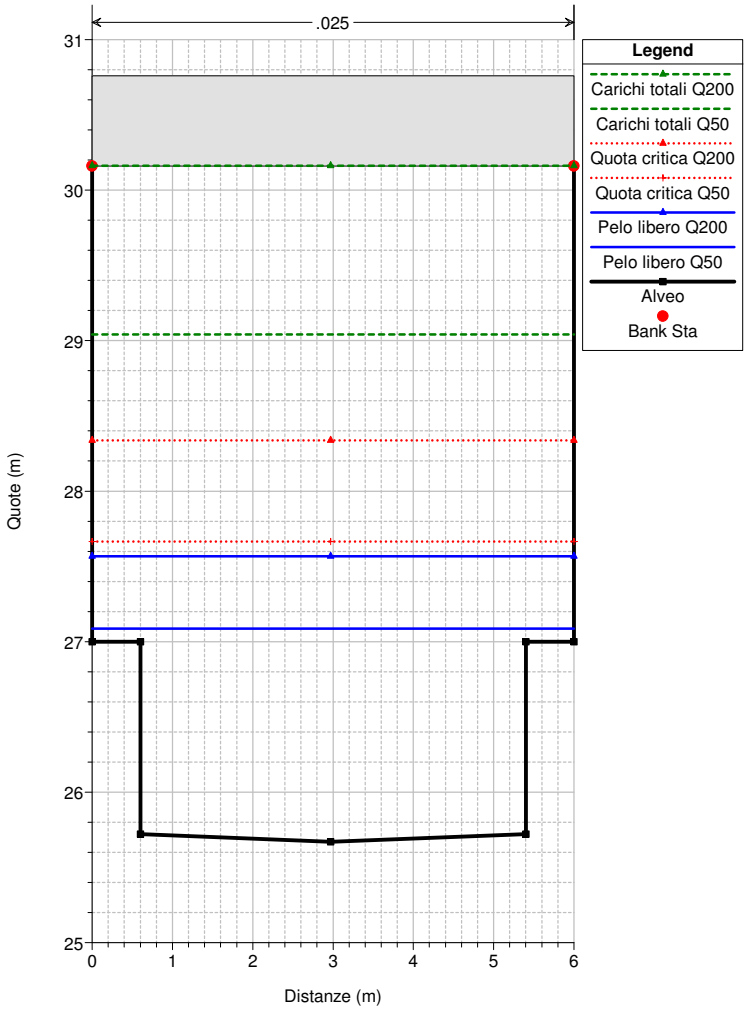
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 20.5 Sez. 20.5-scivolo



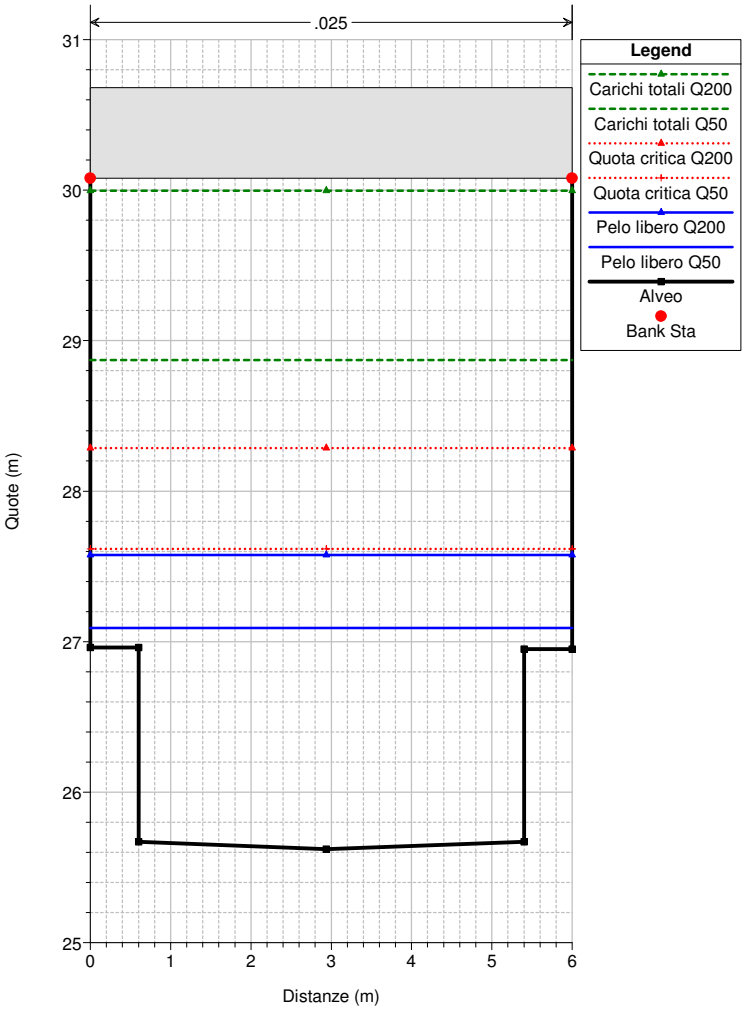
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 20 VEI 20 Sez. 20

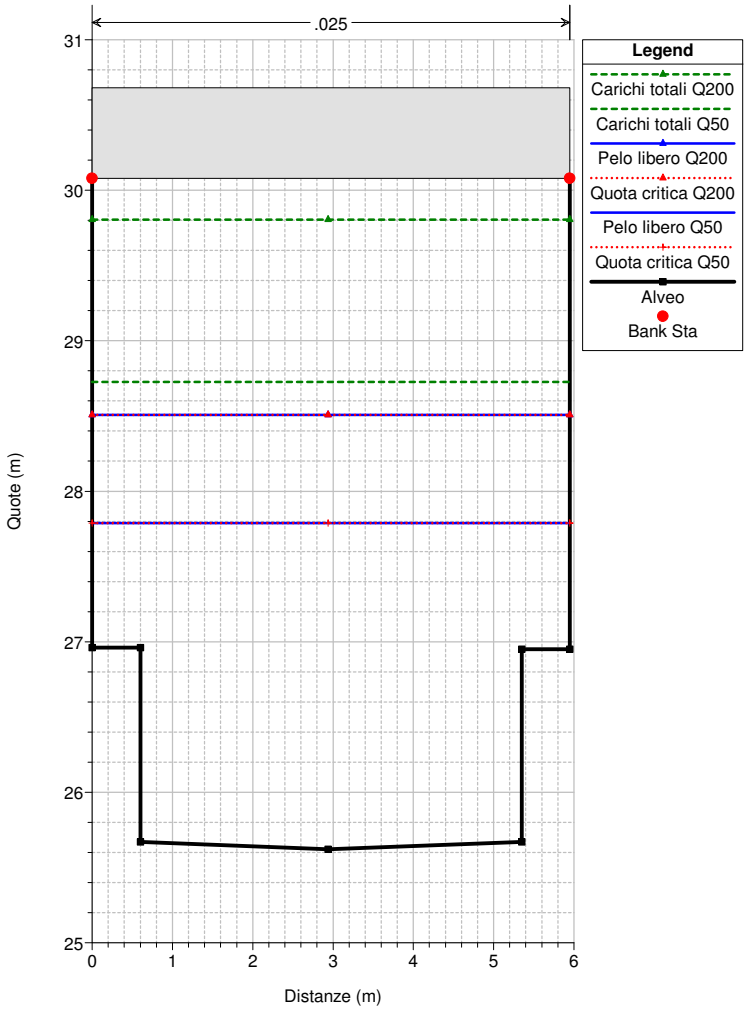


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Monte RS = 19.7 Confluenza Brisc-Veil

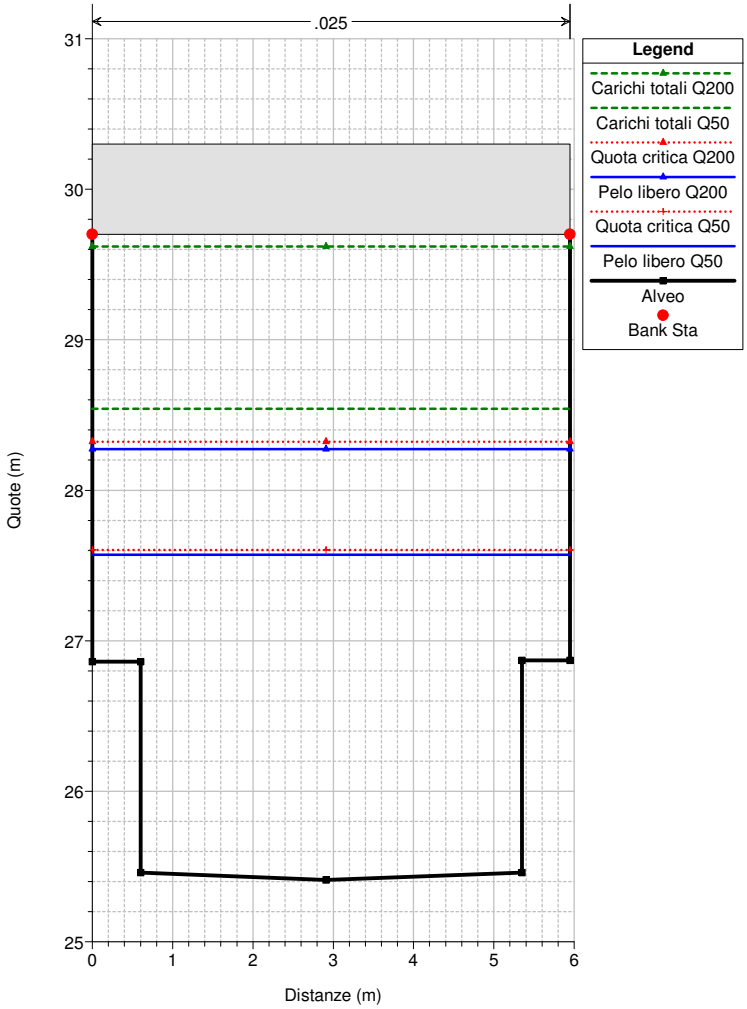


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_1 RS = 19.5 Confluenza Brisc-Veil



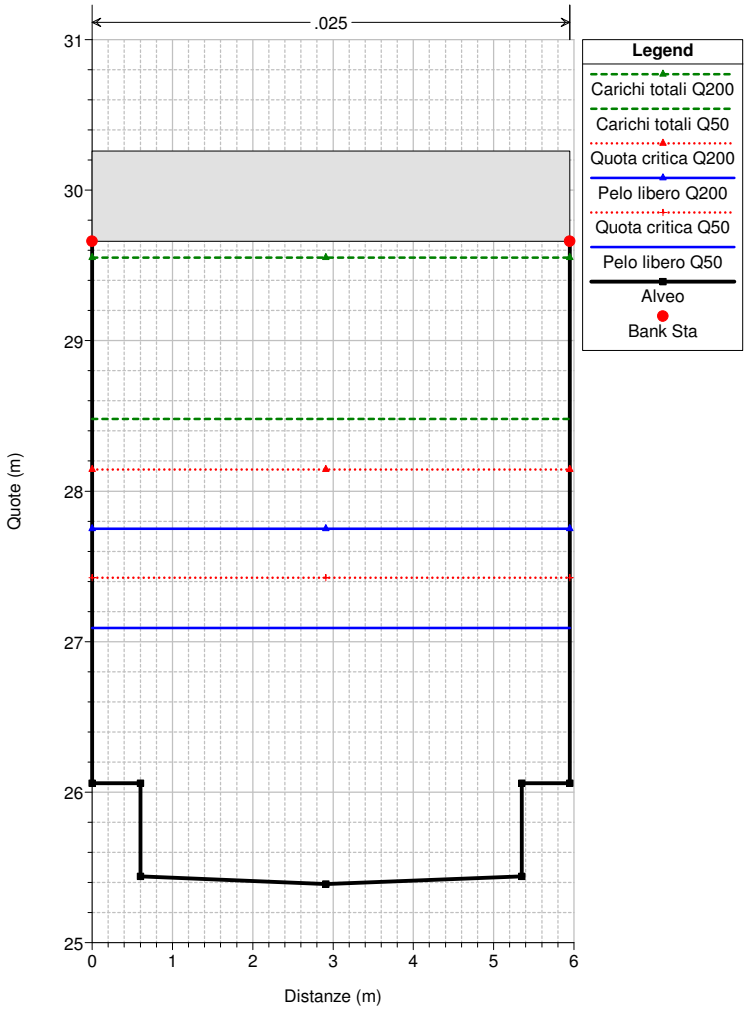
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_1 RS = 19 VEI 19 Sez. 19



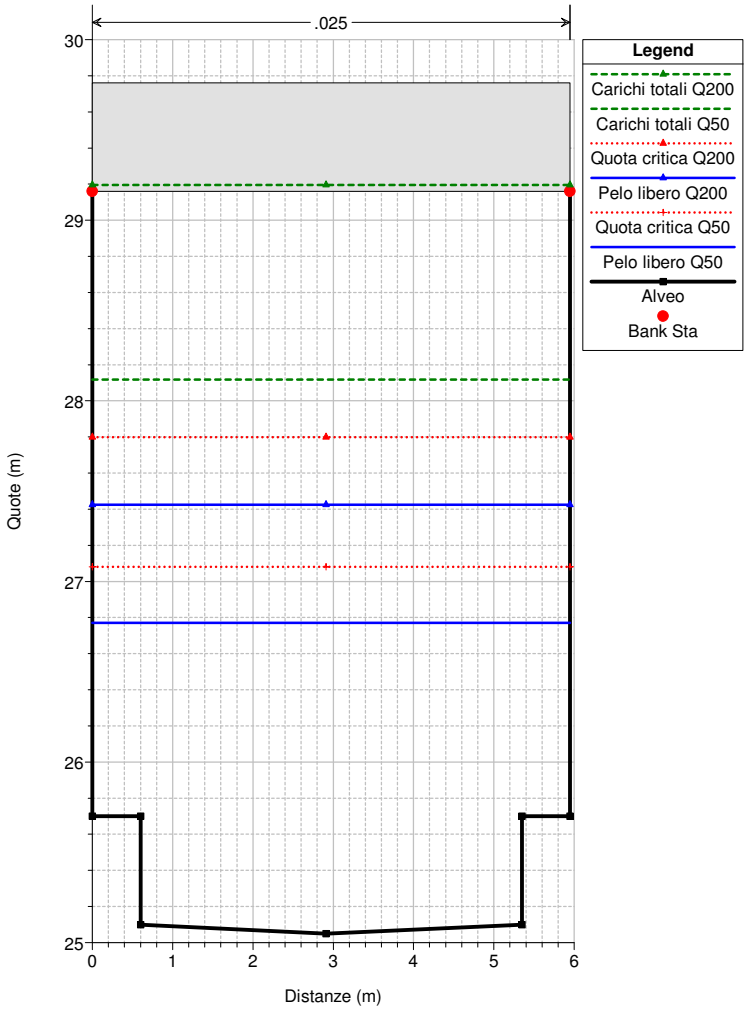
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_1 RS = 18 VEI 18 Sez. 18



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

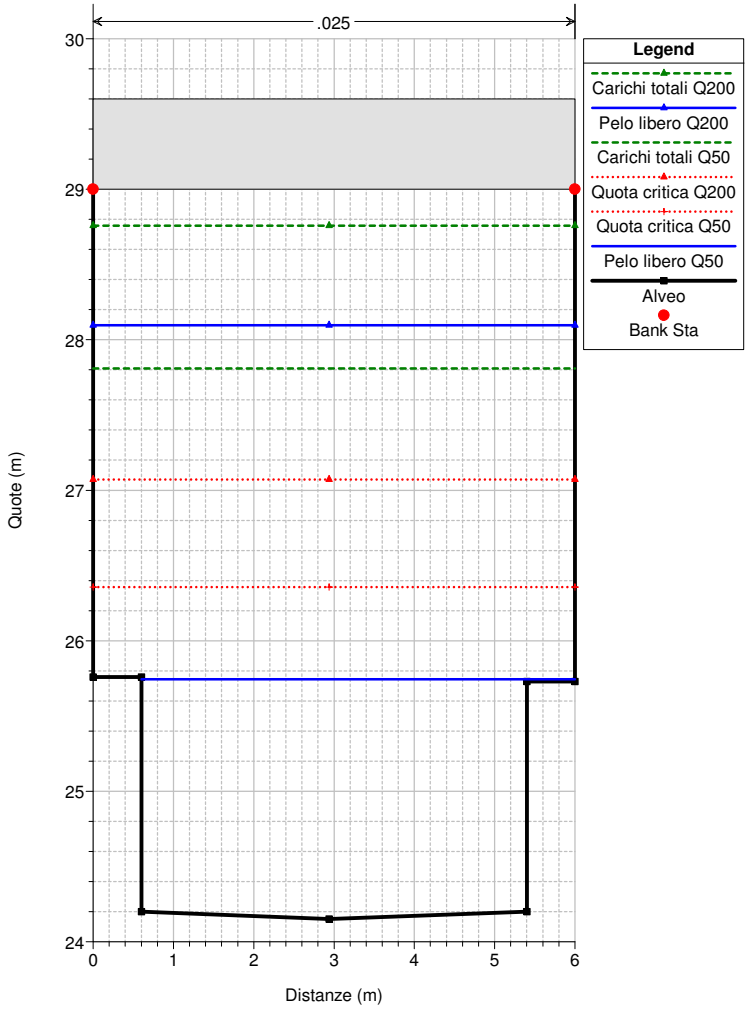
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_1 RS = 17.5 Sez. 17.5-inizio scivolo



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

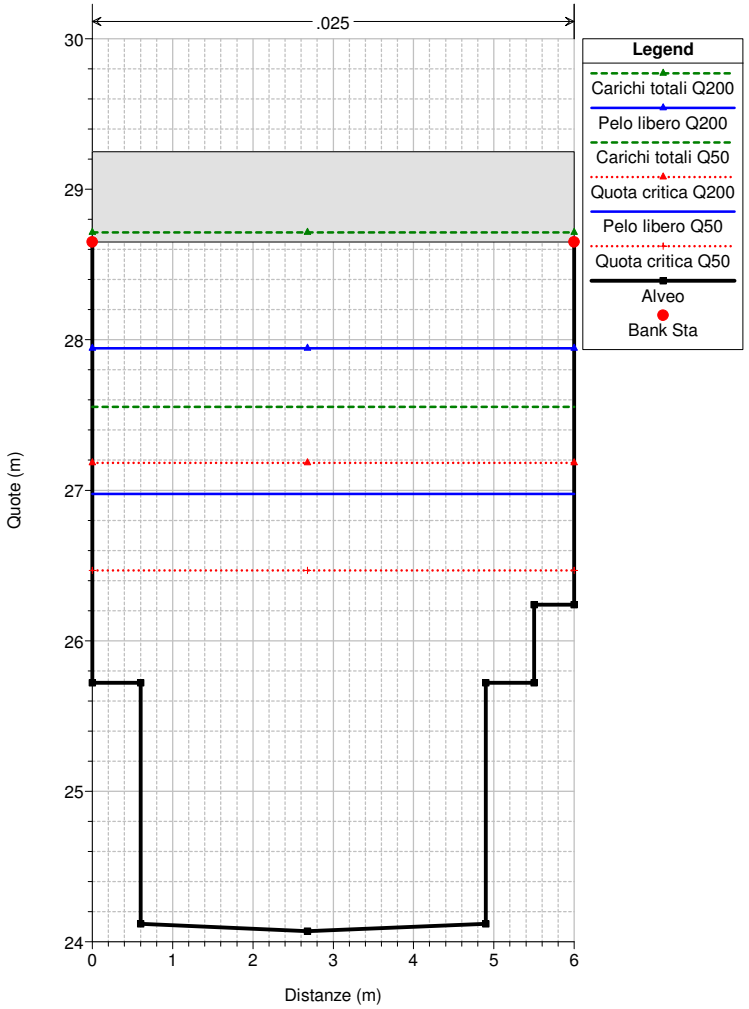
River = Veilino Reach = Staglieno_1 RS = 17 VEI 17 Sez. 17



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

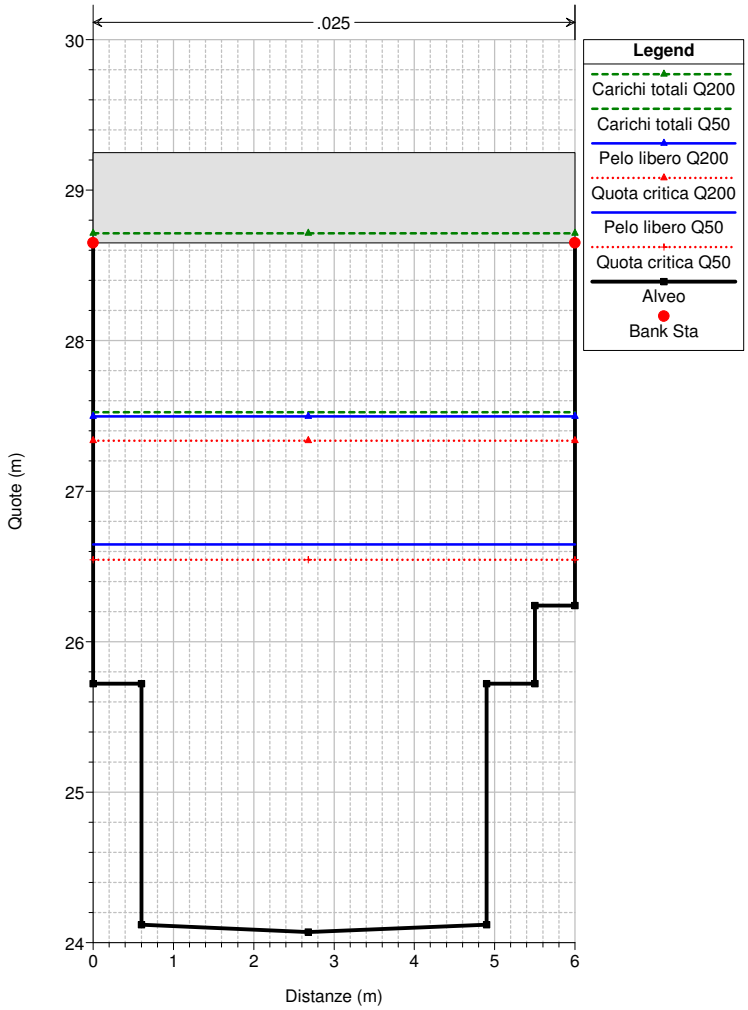
River = Veilino Reach = Staglieno_1 RS = 16.5 Confluenza S. Anton-Veil



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

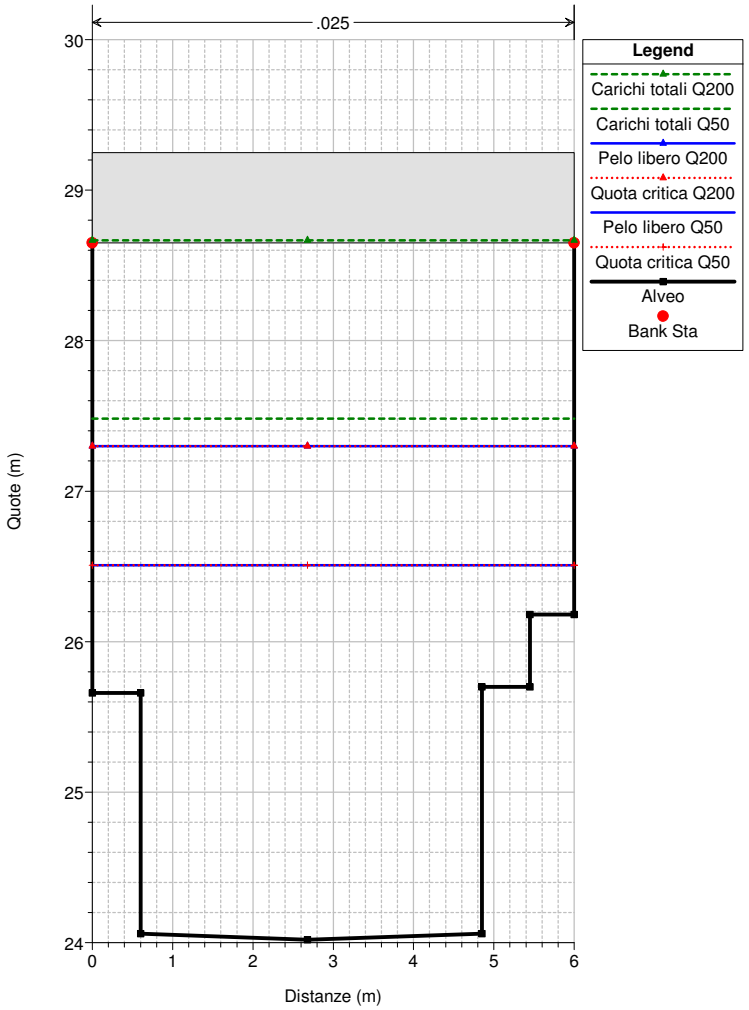
River = Veilino Reach = Staglieno_2 RS = 16.2 Confluenza S. Anton-Veil



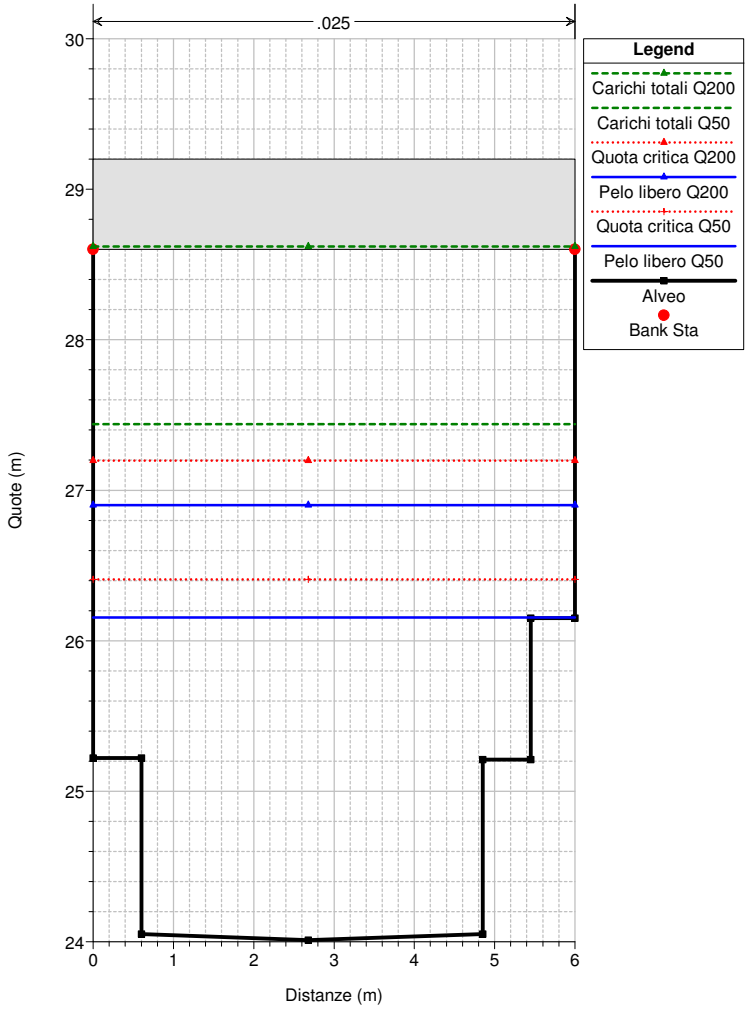
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 16 VEI 16 Sez. 16

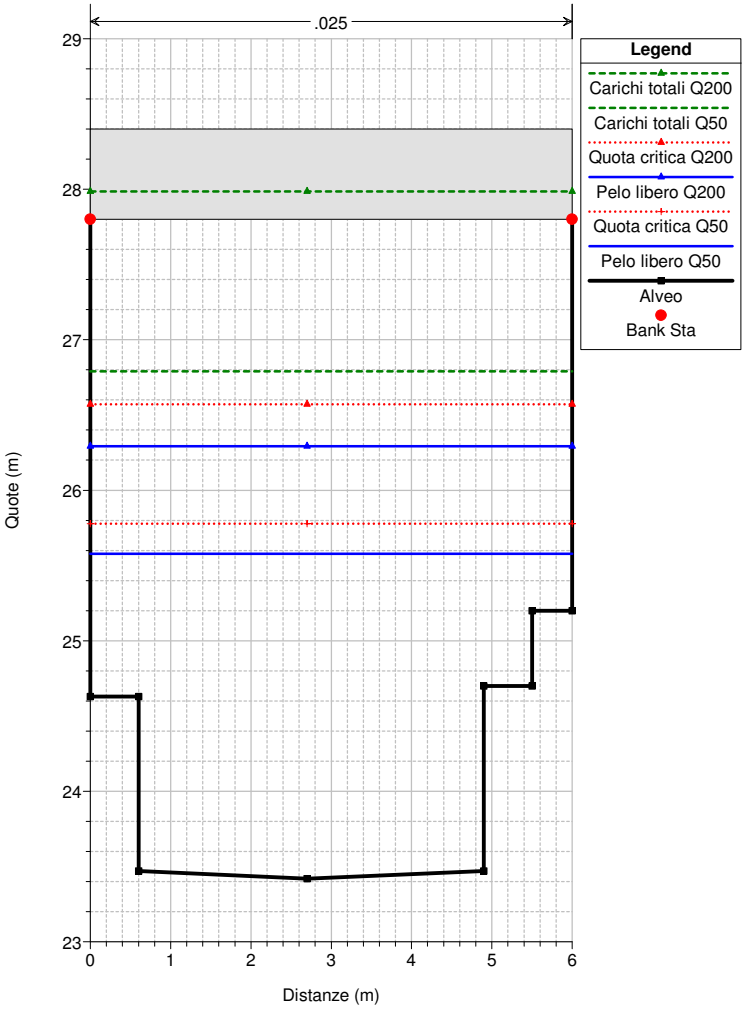


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 15 VEI 15 Sez. 15



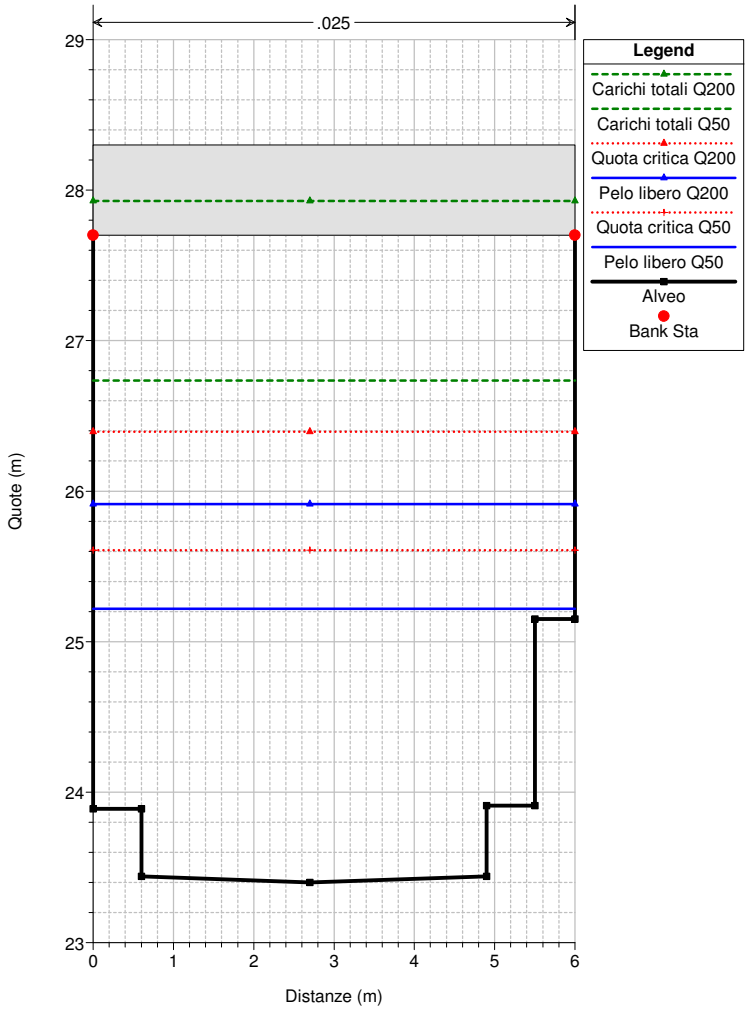
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 14 VEI 14 Sez. 14



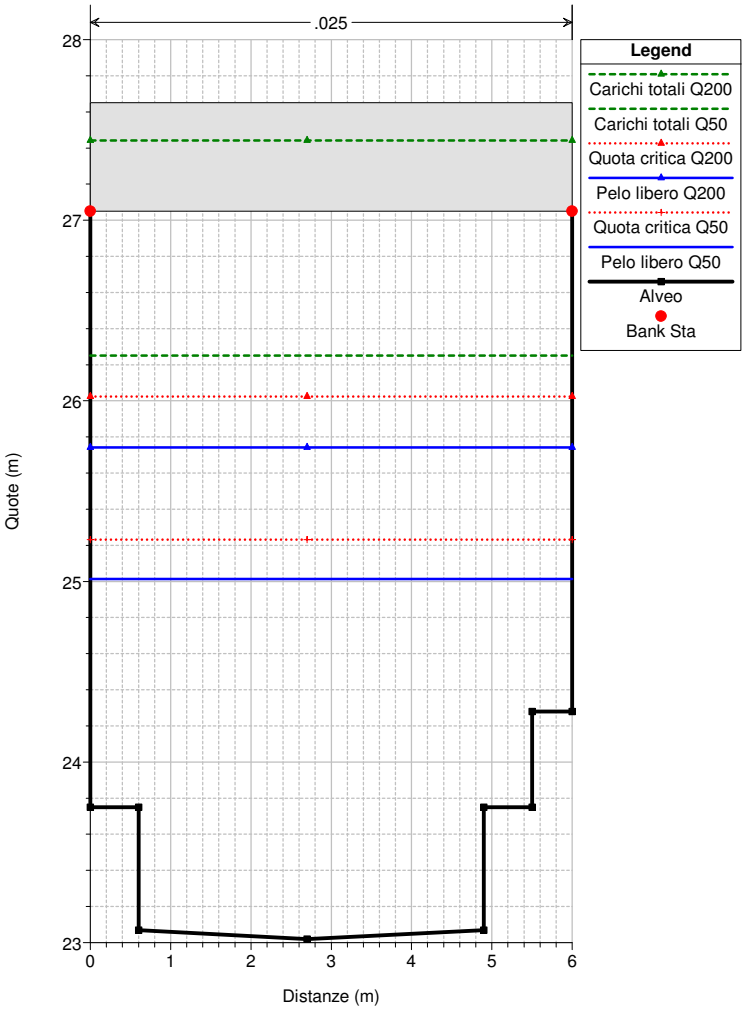
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 13 VEI 13 Sez. 13

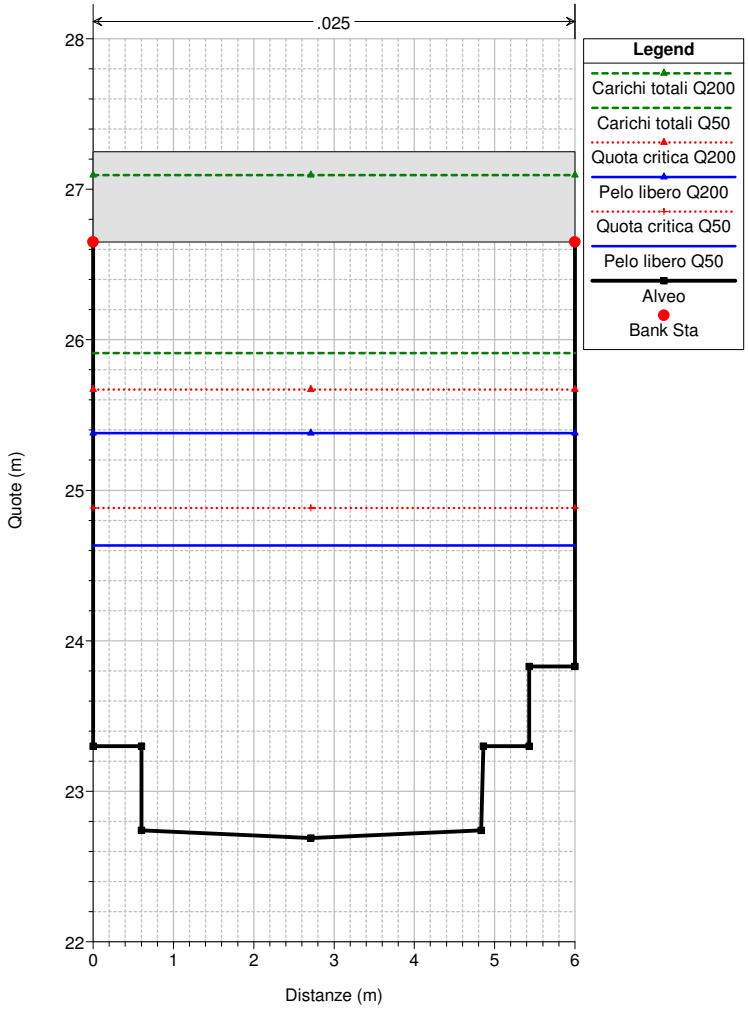


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 12.5 Sez. 12.5

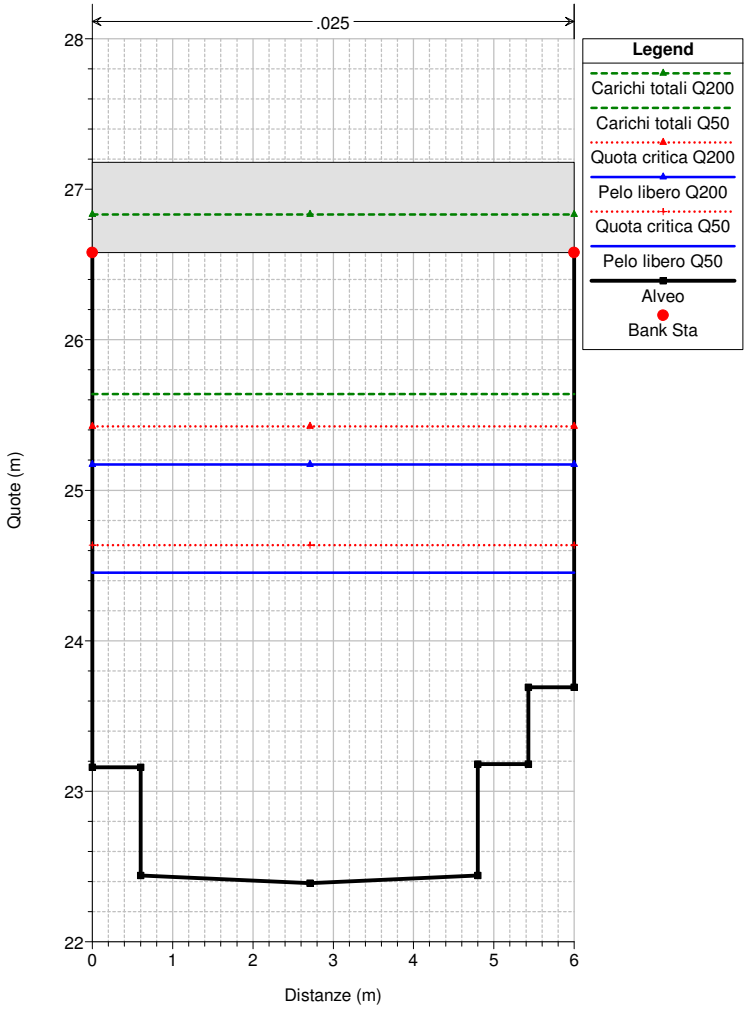


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 12 VEI 12 Sez. 12



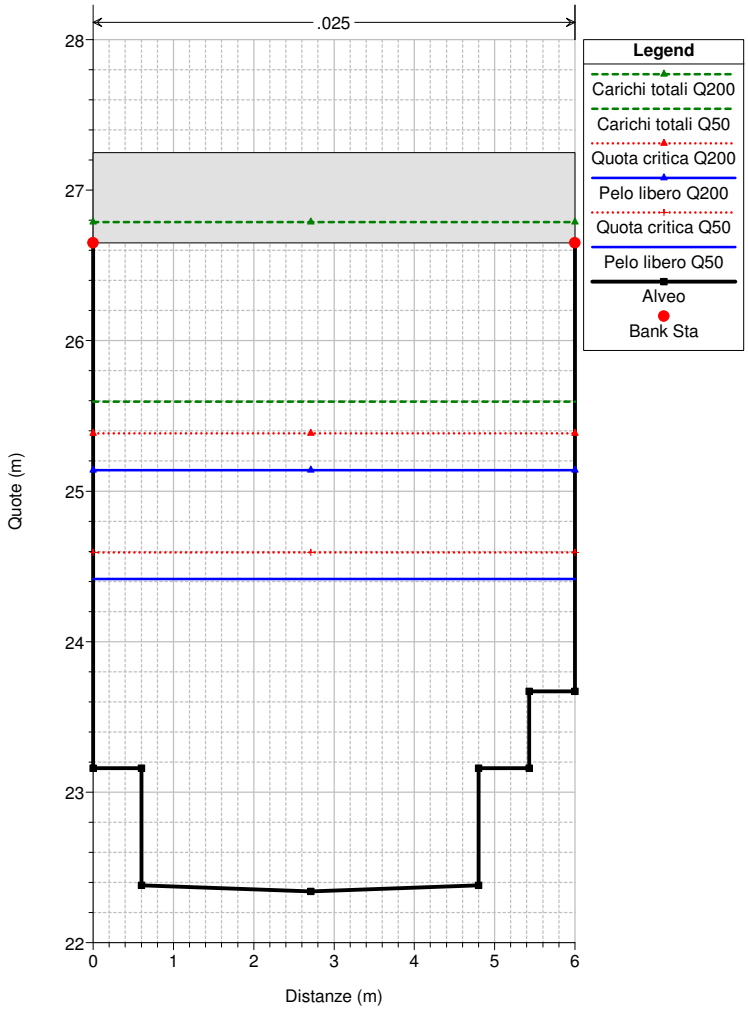
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 11.7 Sez. 11.7 - inizio curva



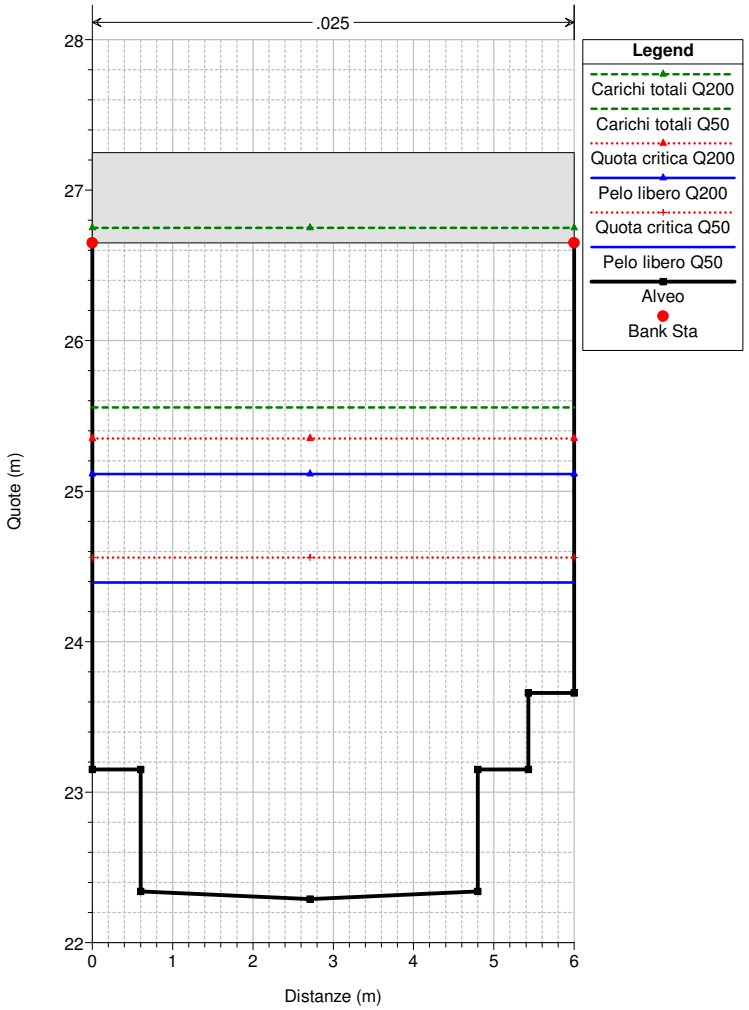
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 11.5 Sez. 11.5 - mezzeria curva



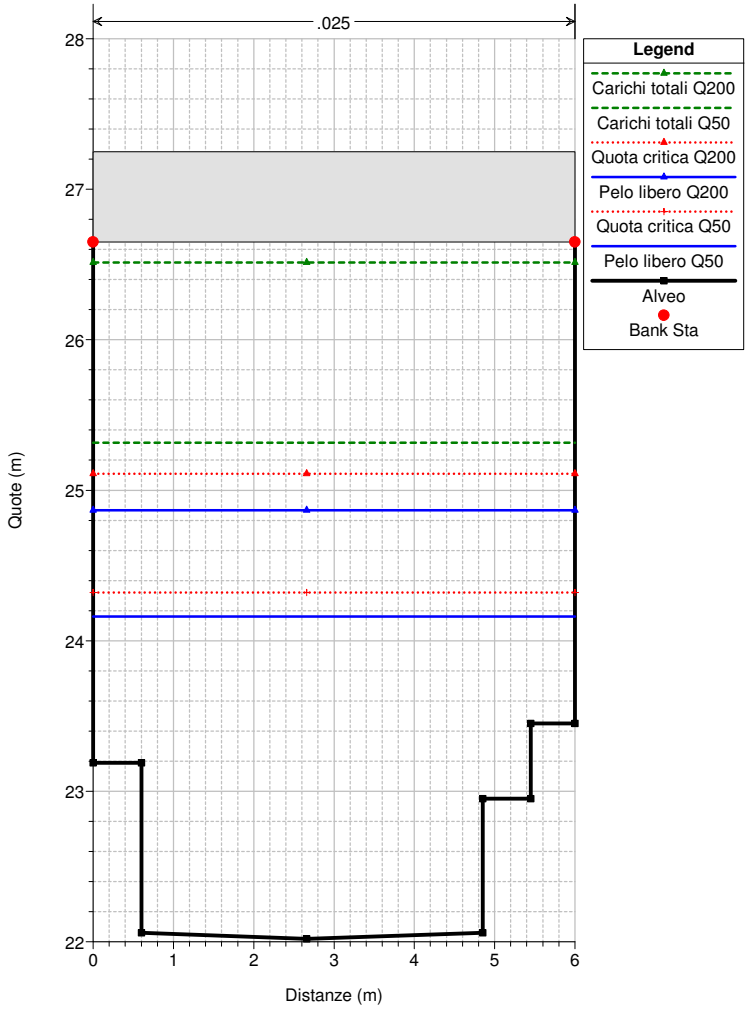
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 11.2 Sez. 11.2 - fine curva



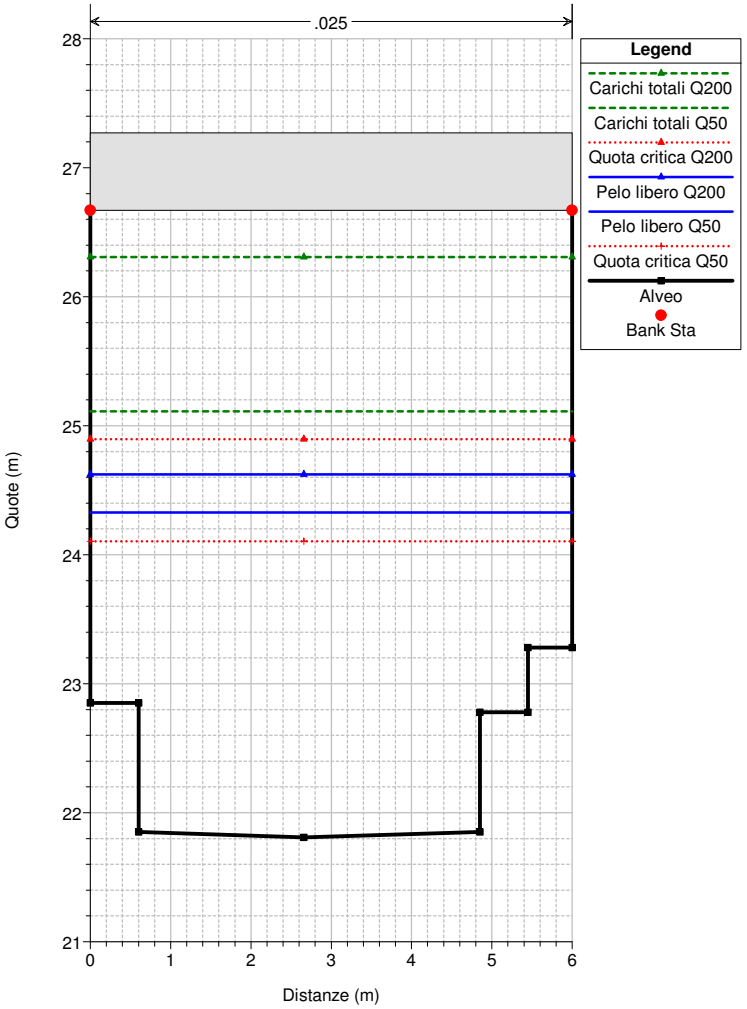
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 11 VEI 11 Sez. 11



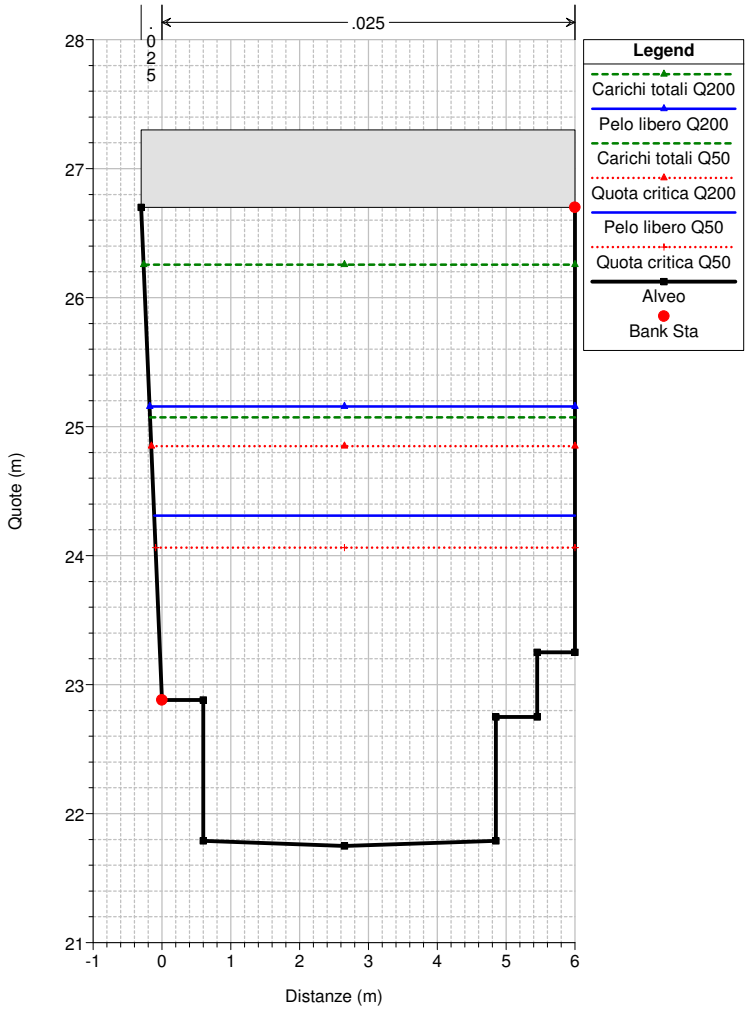
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 10.2 Sez. 10.2 . inizio curva



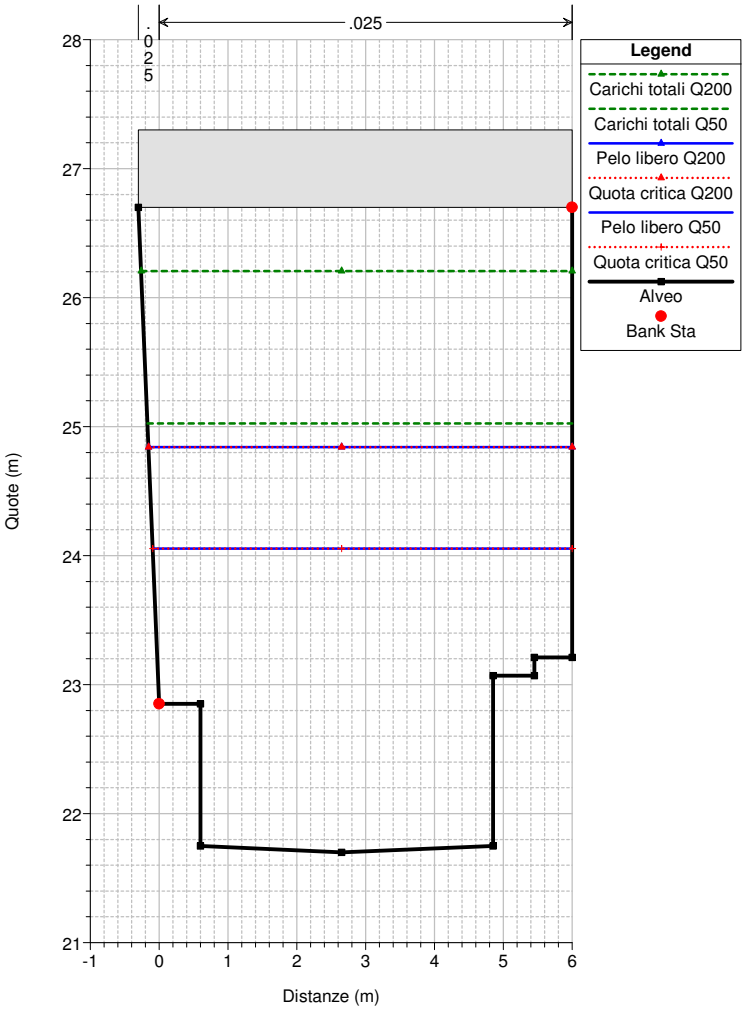
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 10 VEI 10 Sez. 10

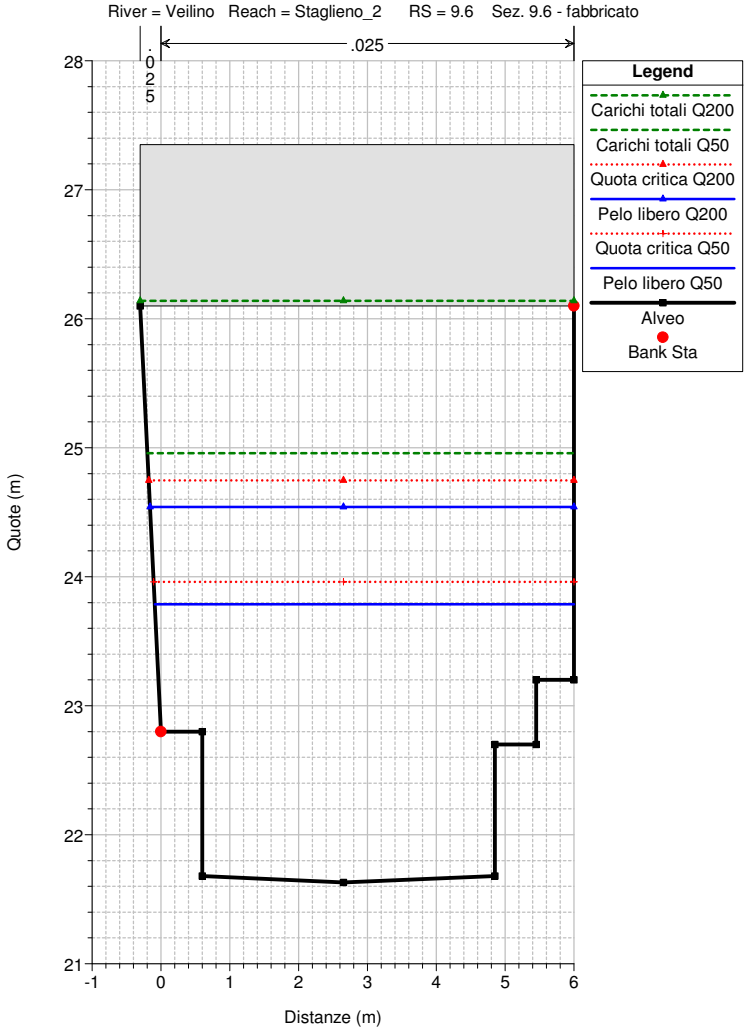


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 9.8 Sez. 9.8 - fine curva

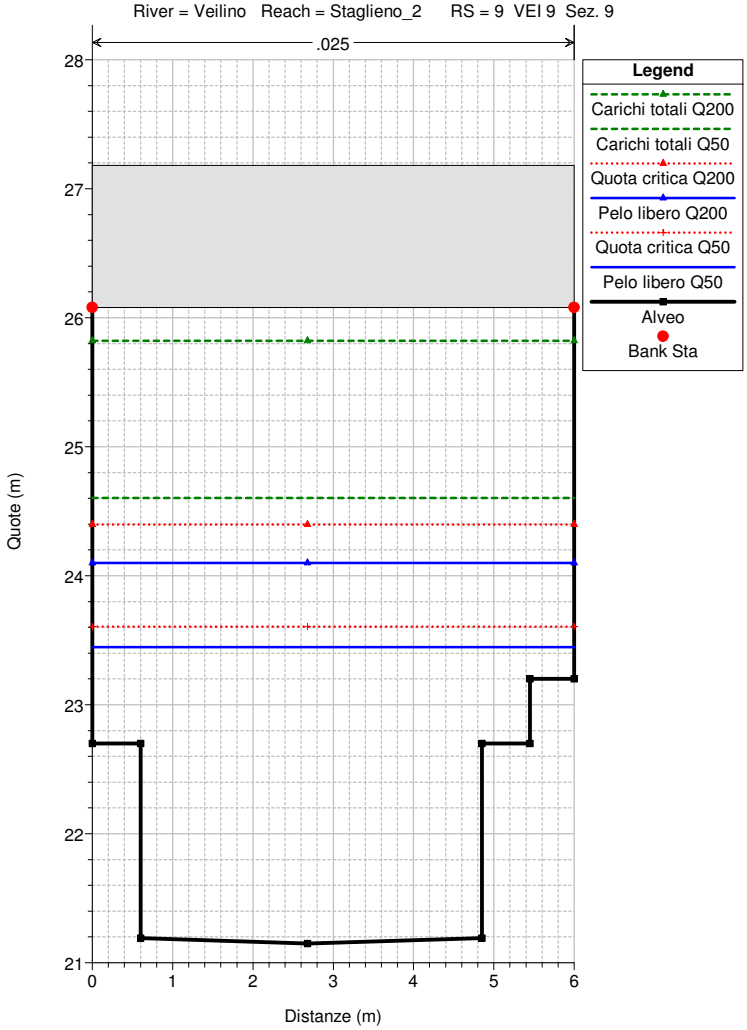


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 9.6 Sez. 9.6 - fabbricato



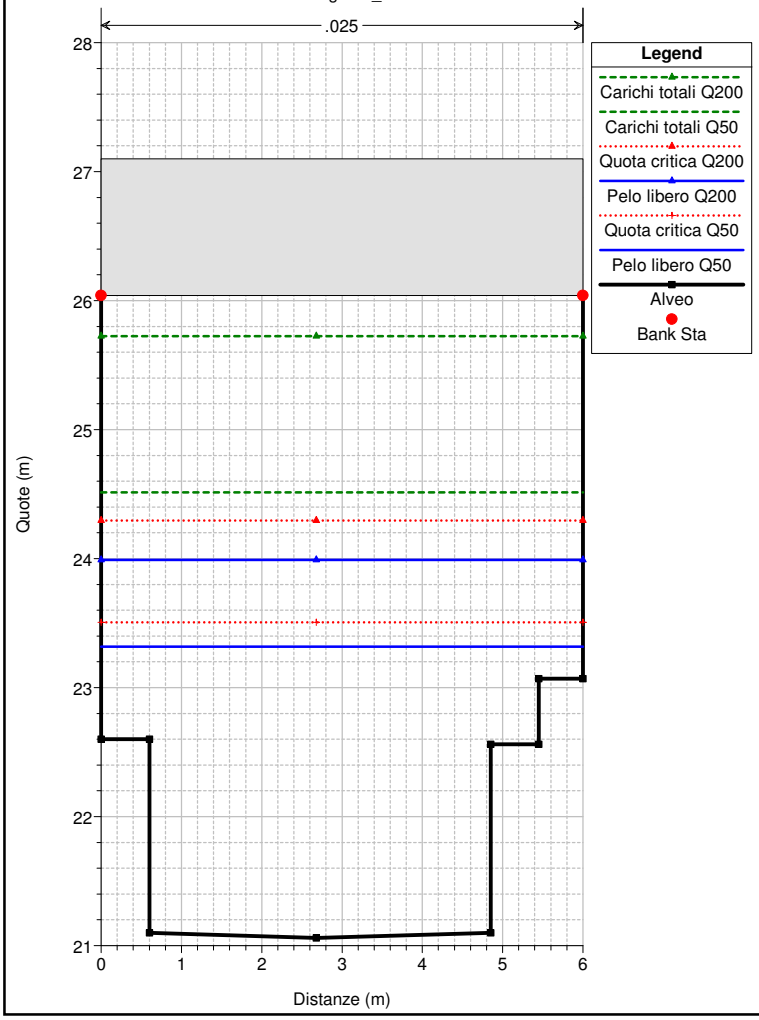
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 9 VEl 9 Sez. 9



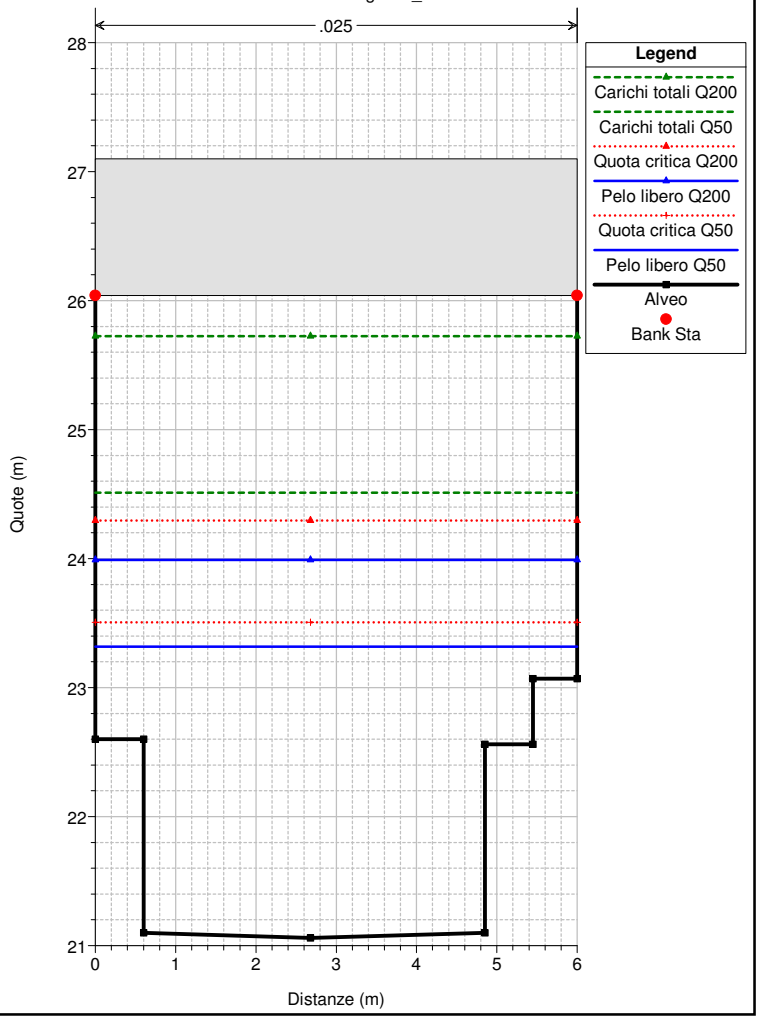
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 8.8 Sez. 8.8 - fabbricato

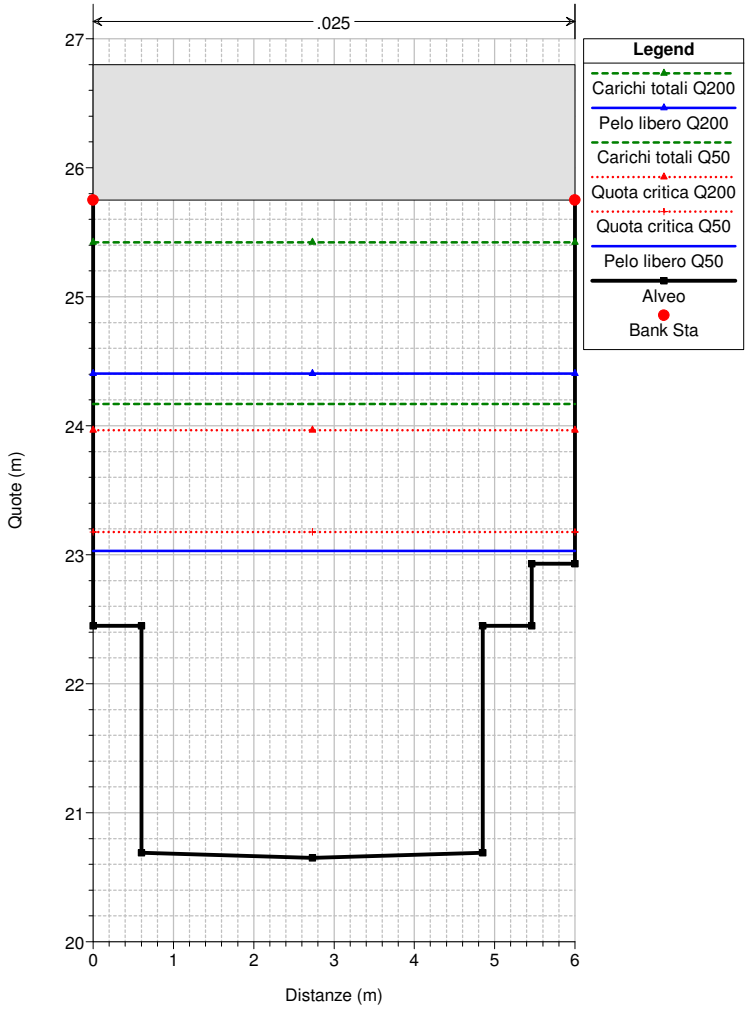


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 8.7 Sez. 8.7

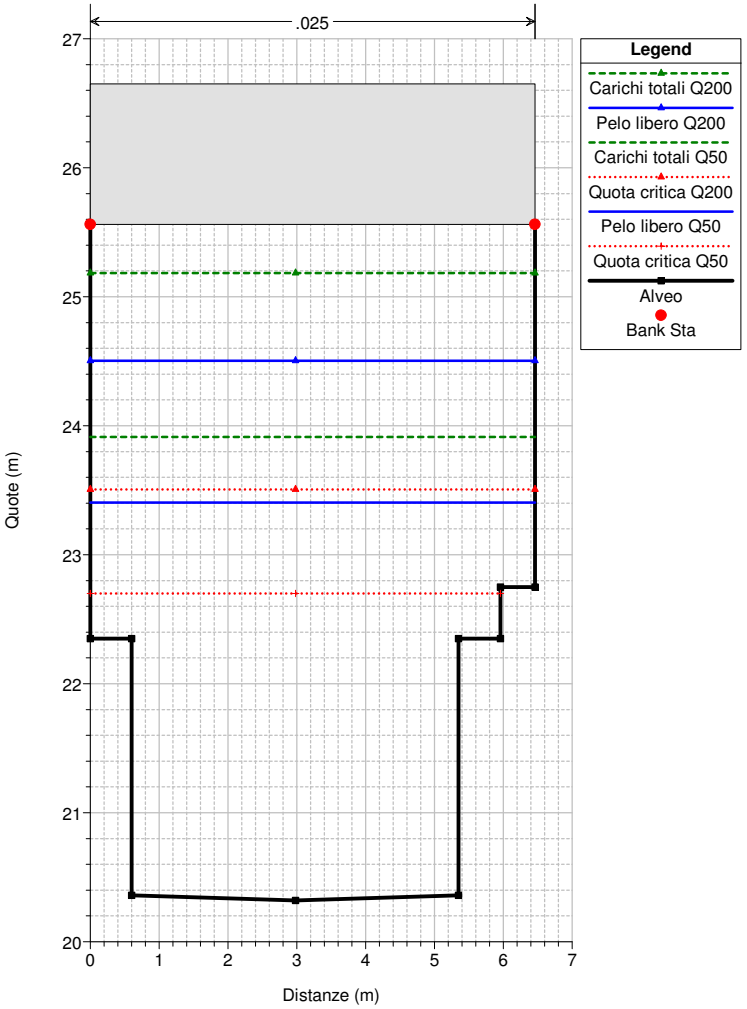


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 8 VEl 8 Sez. 8



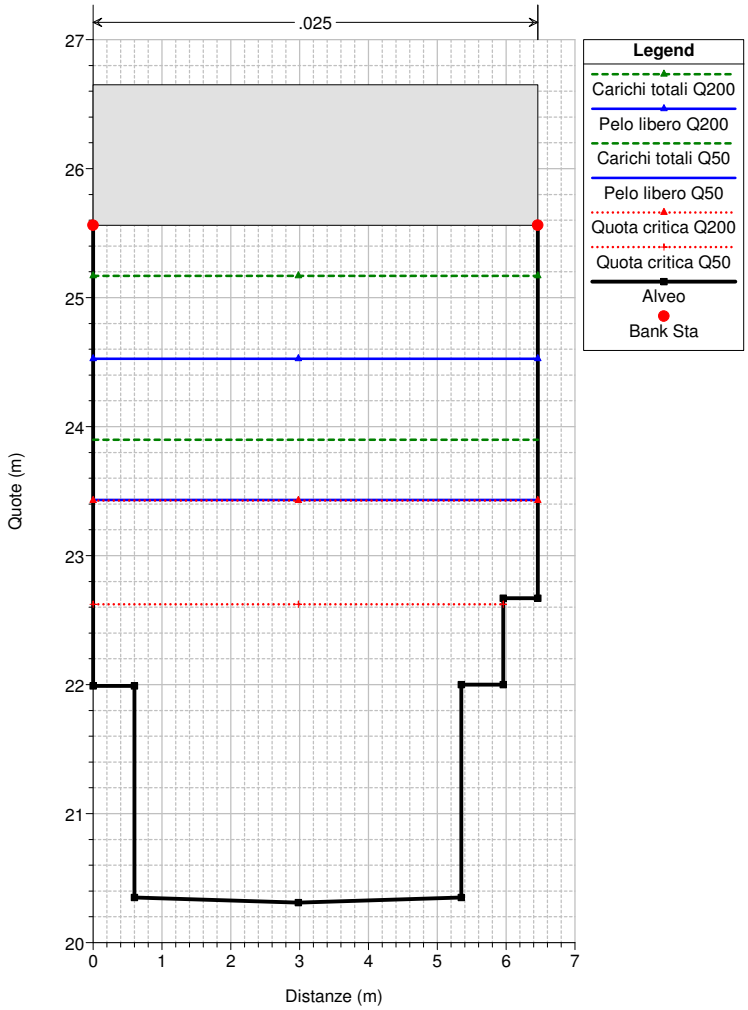
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 7 VEl 7 Sez. 7



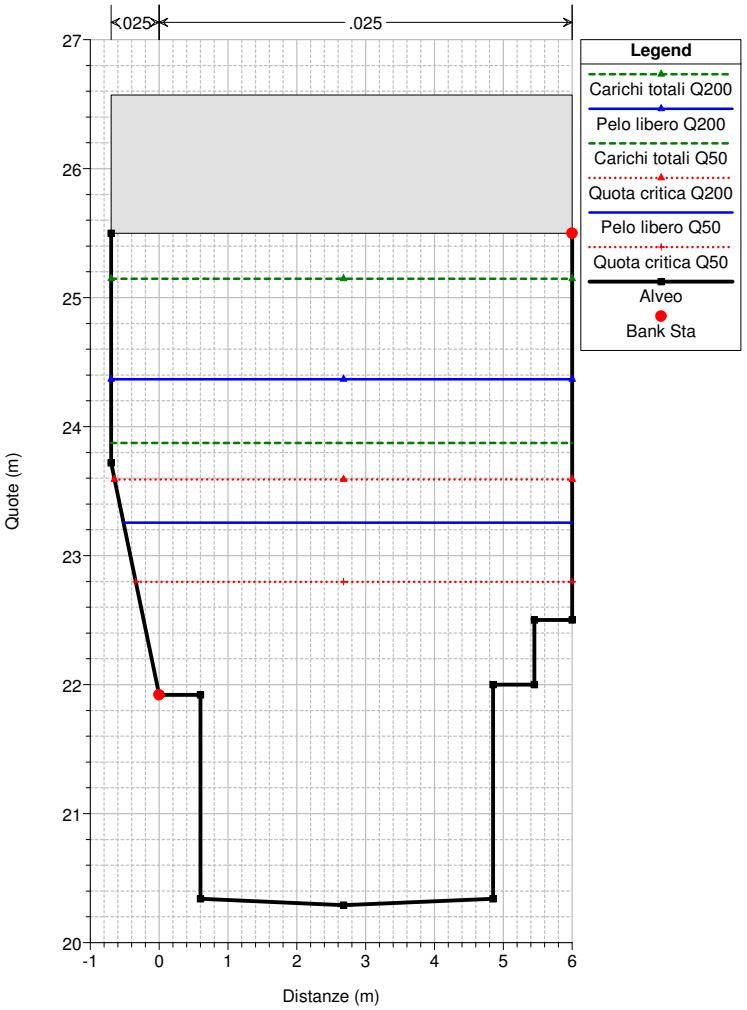
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 6.7 Sez. 6.7

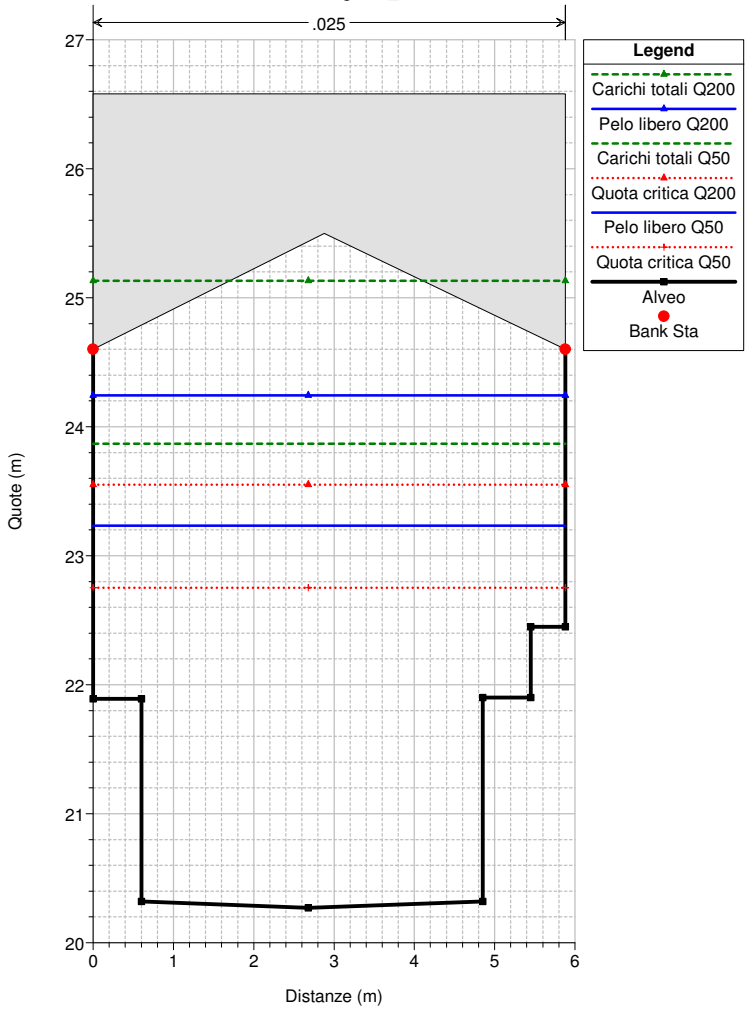


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 6 VEl 6 Sez. 6

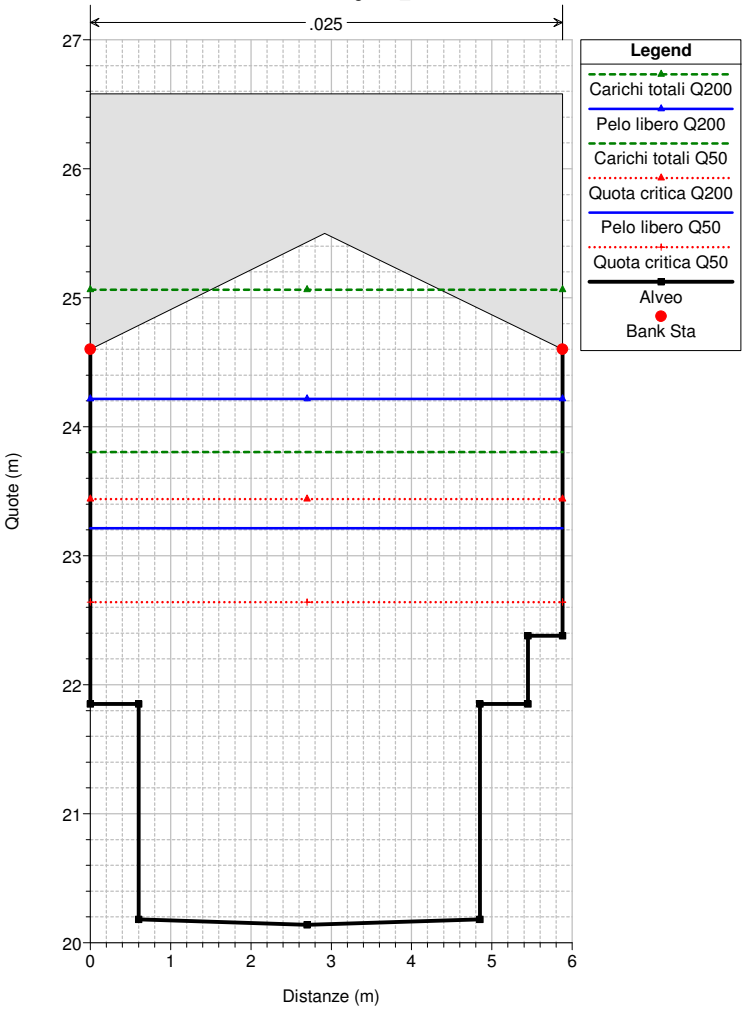


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 5.1 VEI 6 Sez. 5.1



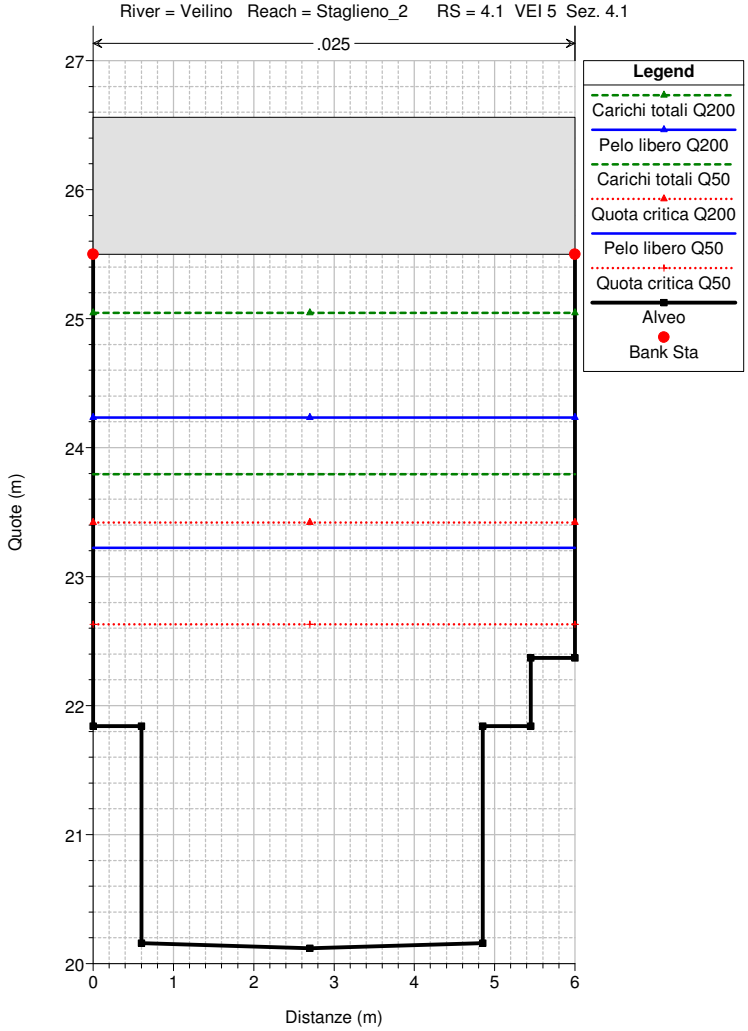
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 5 VEI 5 Sez. 5



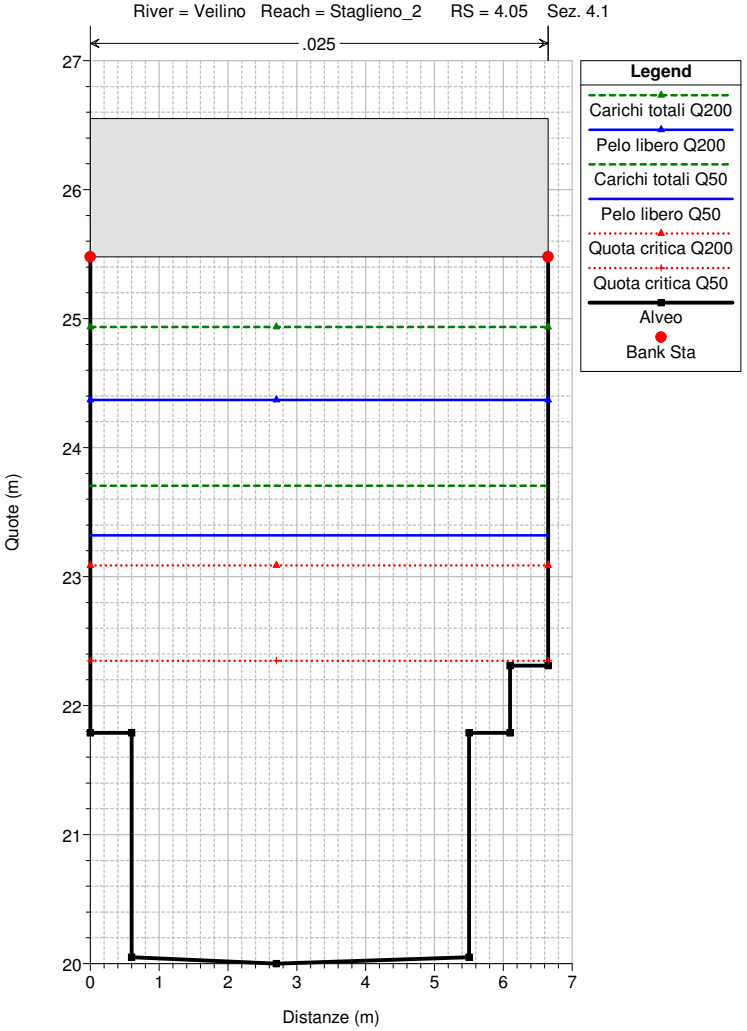
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 4.1 VEI 5 Sez. 4.1

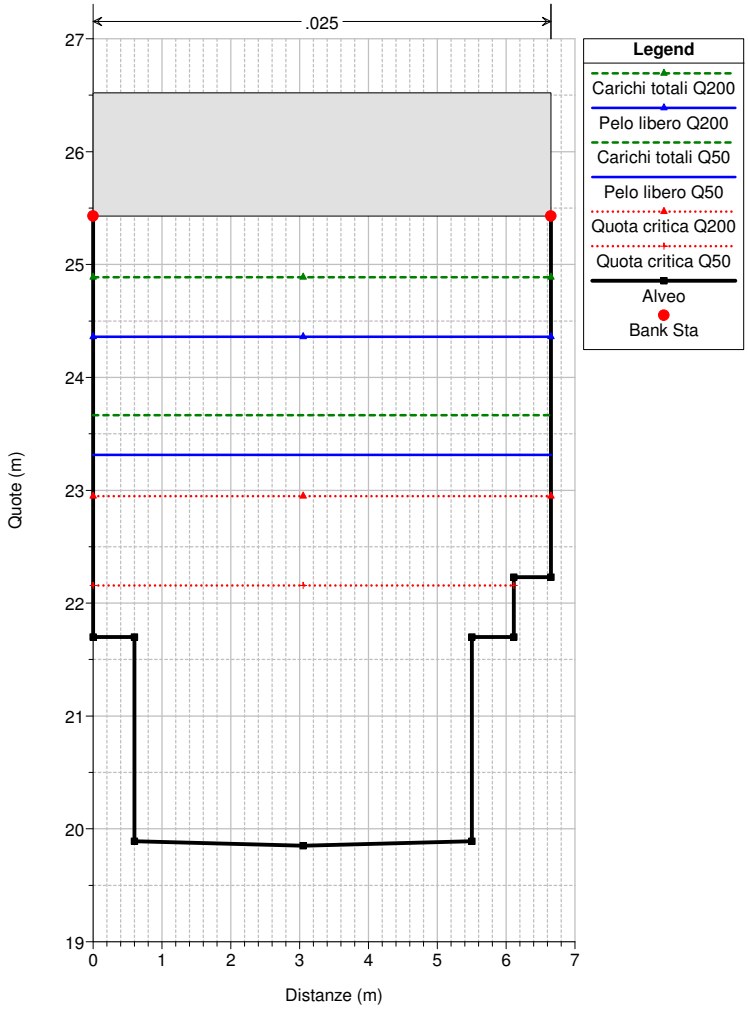


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 4.05 Sez. 4.1

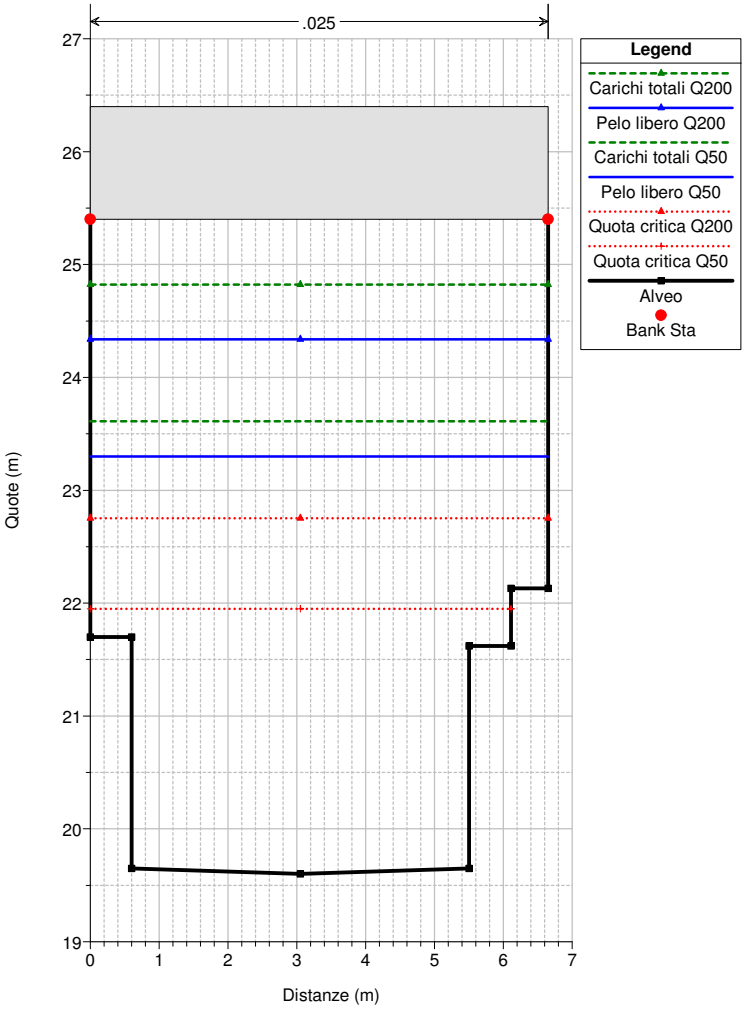


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 4 VEI 4 Sez. 4



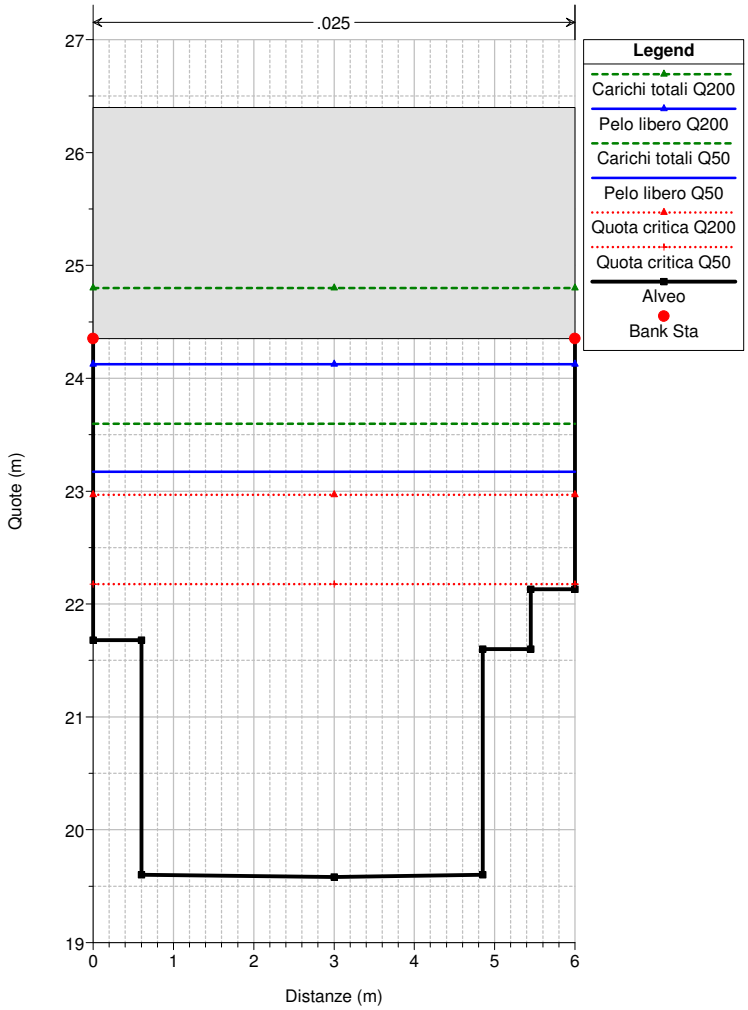
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 3.1 VEI 3 Sez. 3.1



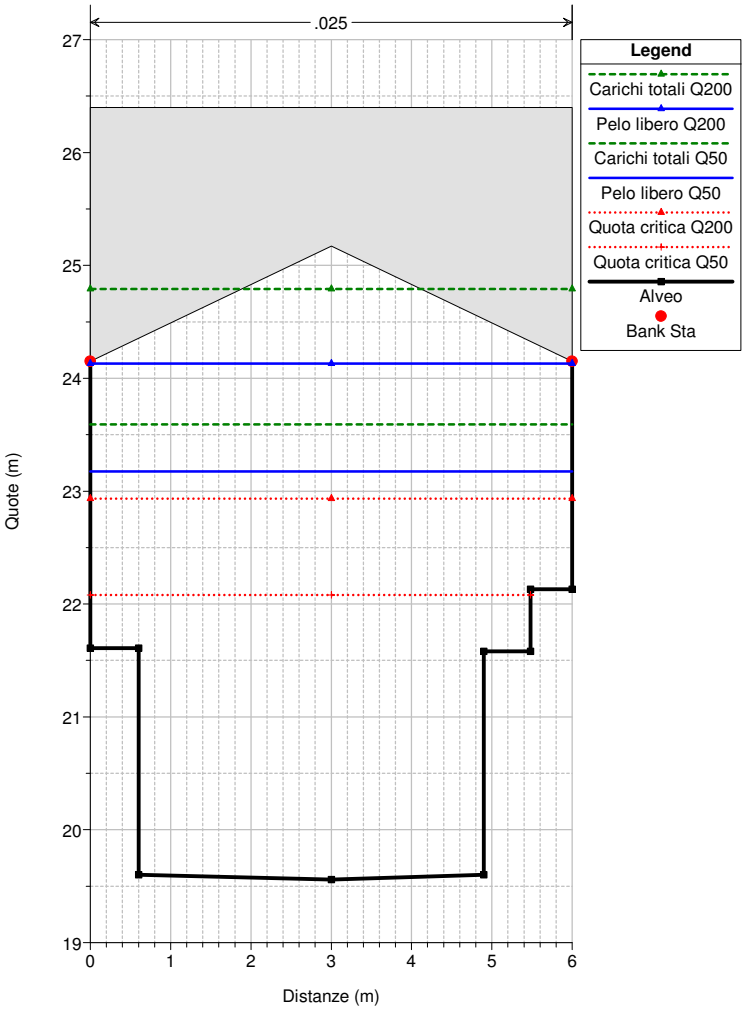
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 3 VEI 3 Sez. 3

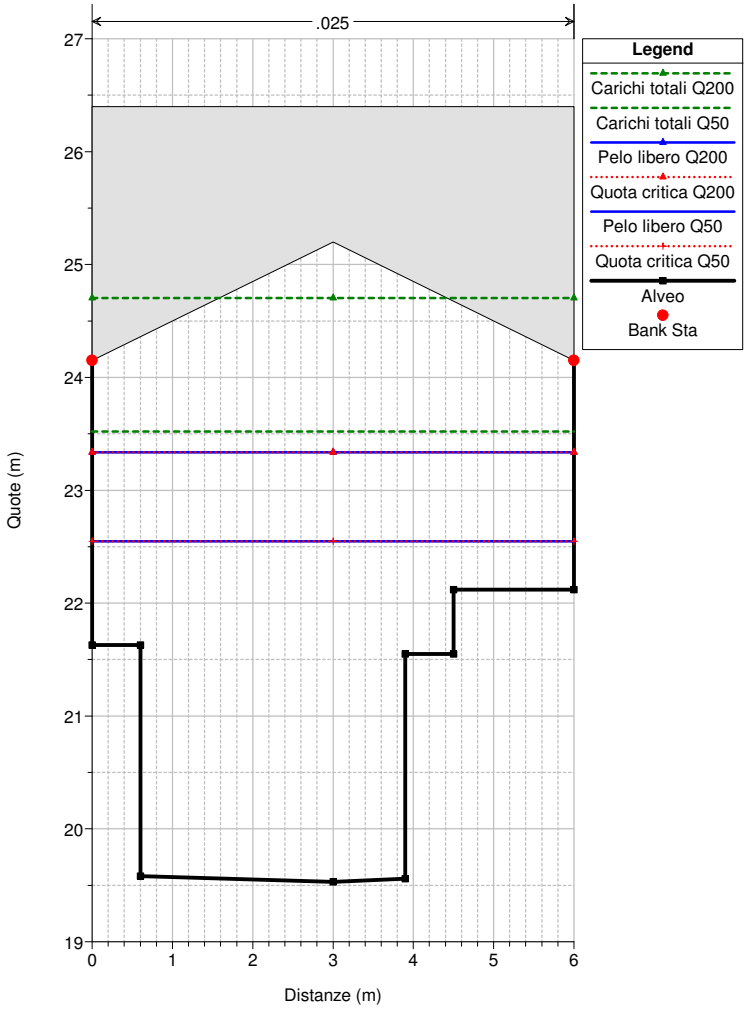


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 2.1 VEI 3 Sez. 2.1

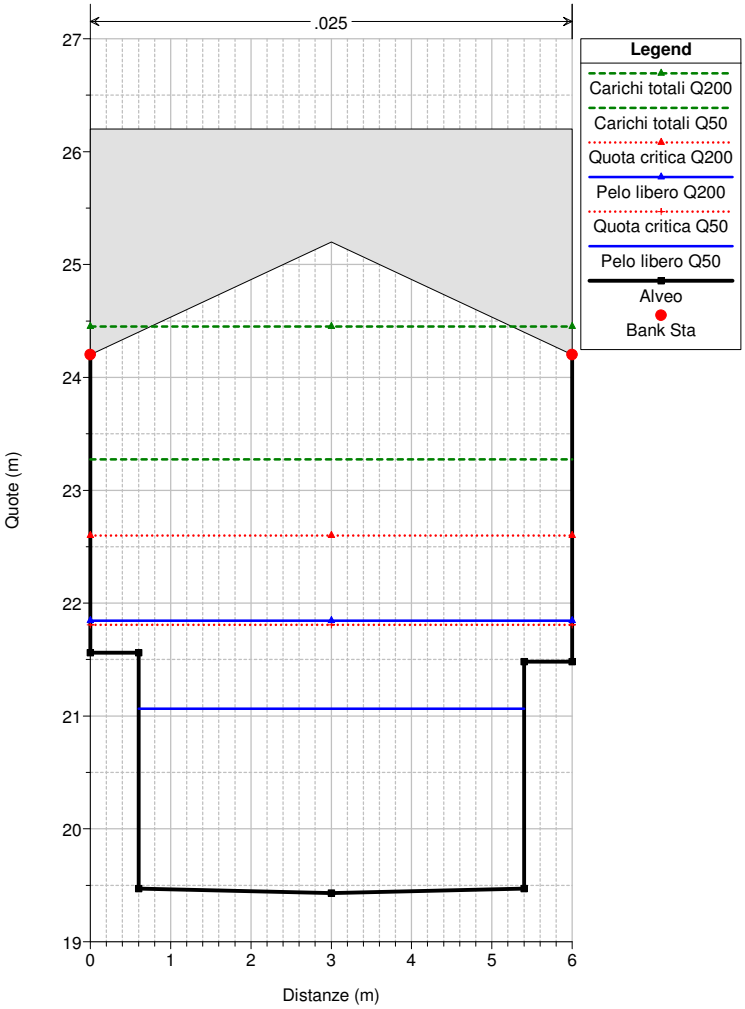


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 2.05 Sez. 2.05



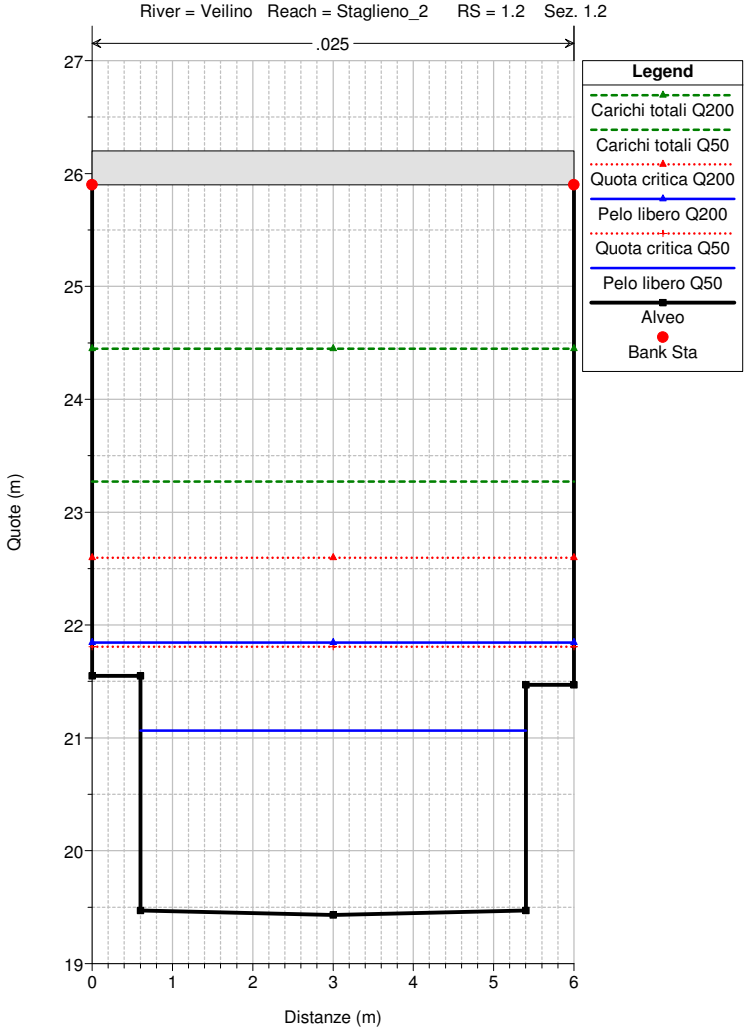
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 2 VEI 2 Sez. 2



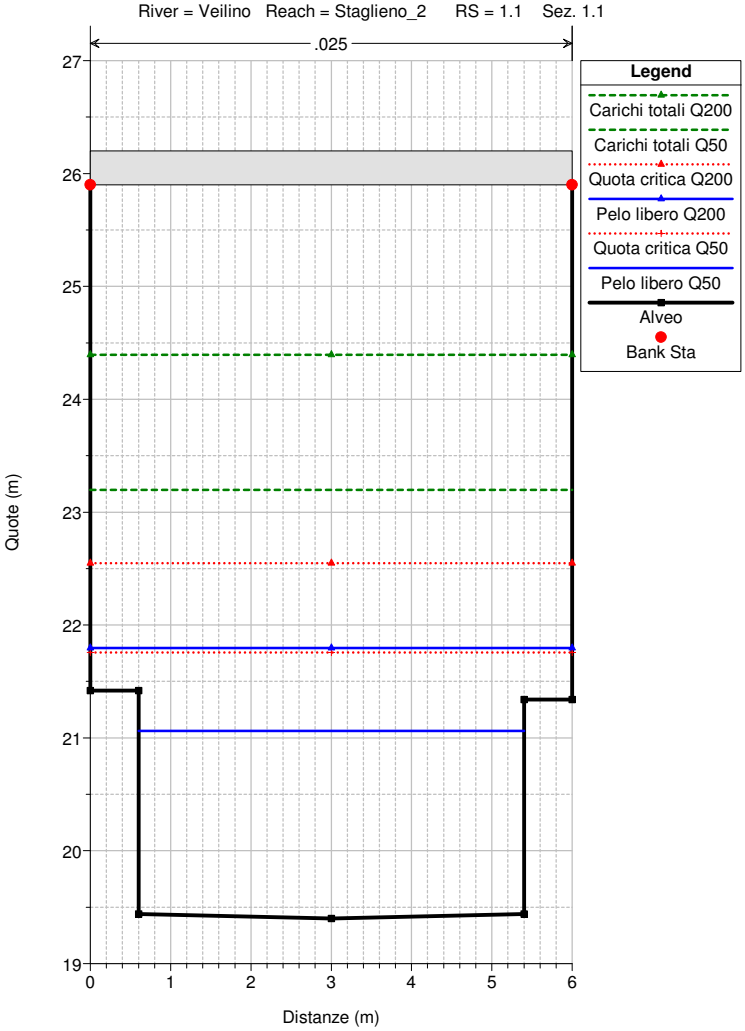
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 1.2 Sez. 1.2



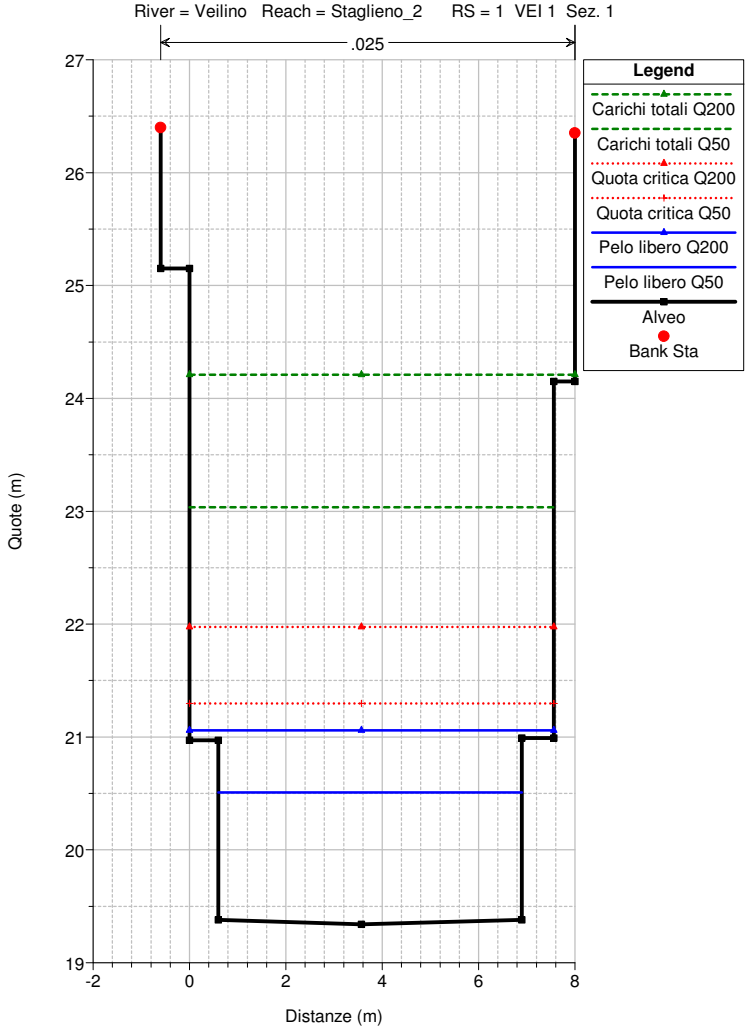
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Veilino Reach = Staglieno_2 RS = 1.1 Sez. 1.1



Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

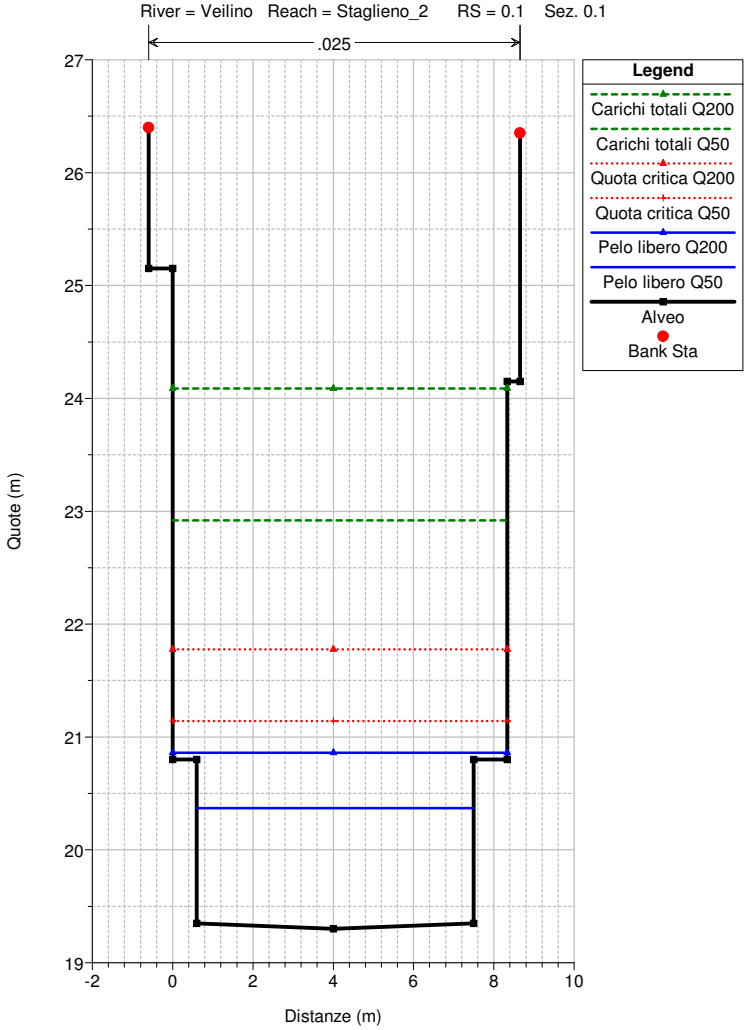
River = Veilino Reach = Staglieno_2 RS = 1 VEI 1 Sez. 1



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

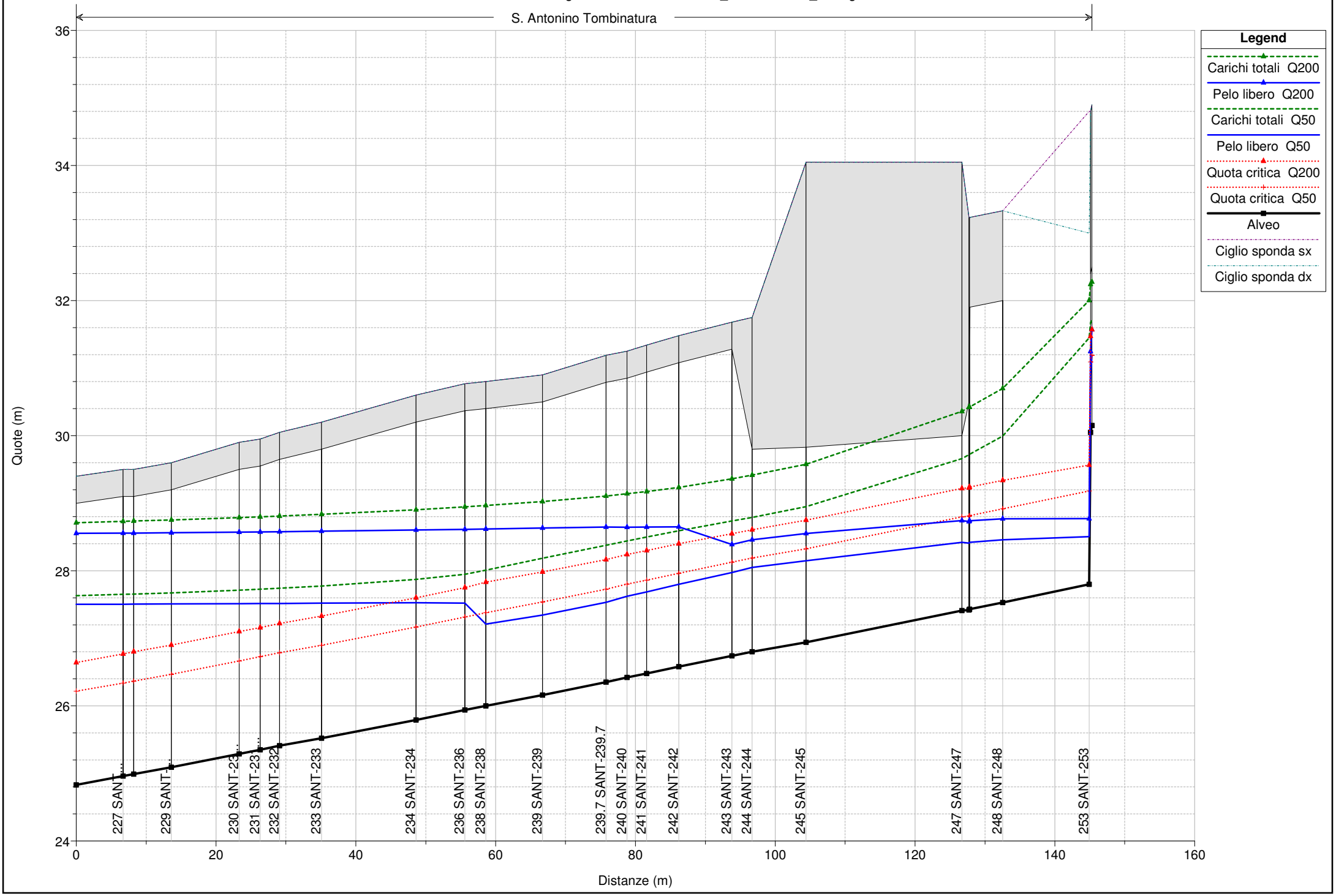
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = Veilino Reach = Staglieno_2 RS = 0.1 Sez. 0.1



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia



Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
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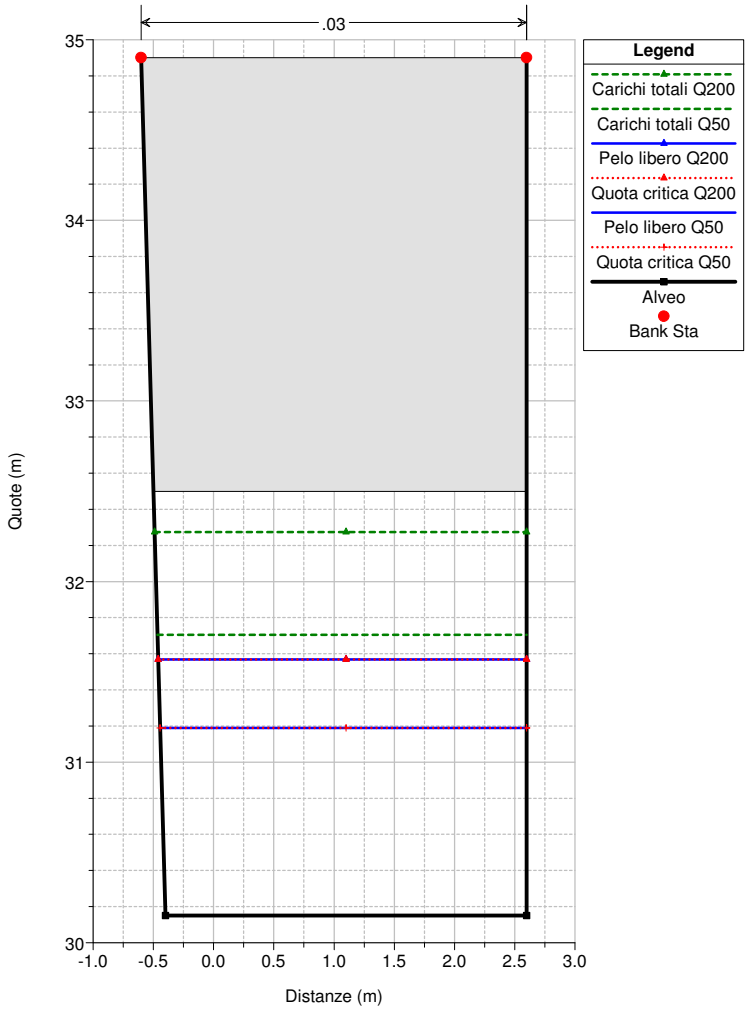
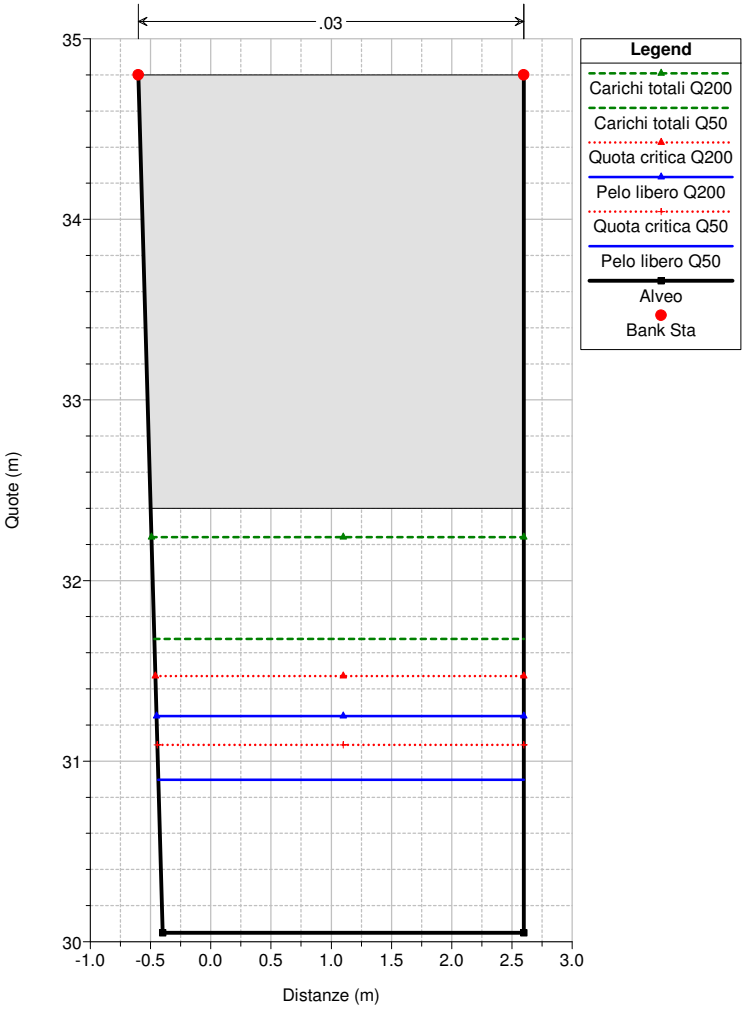


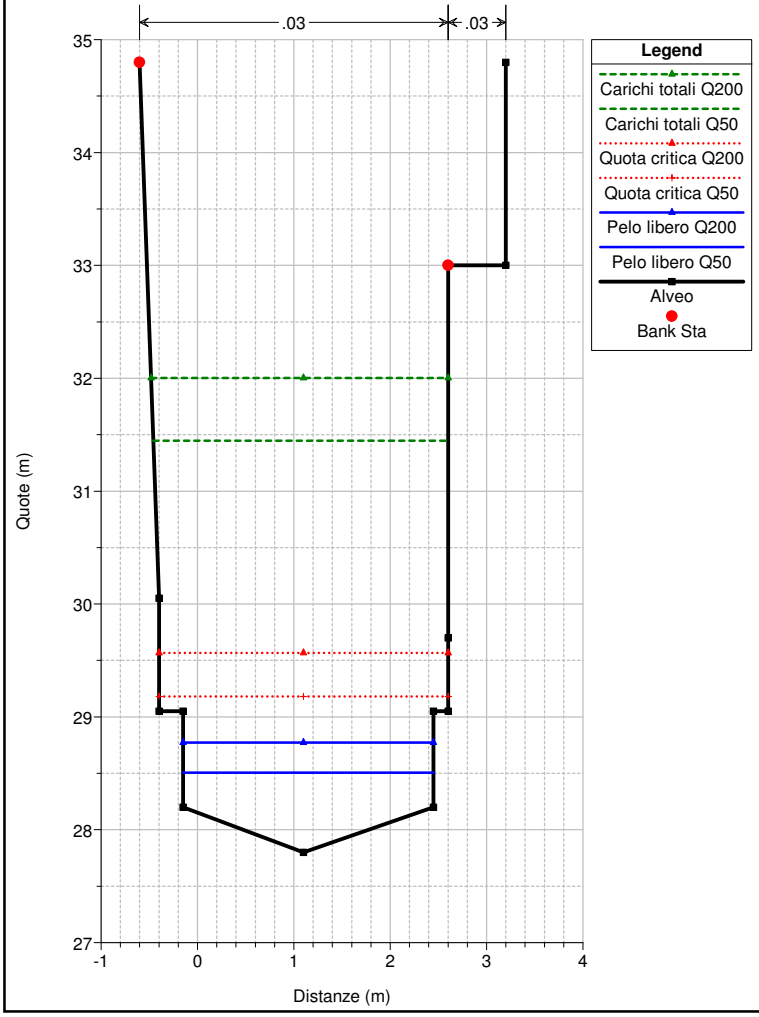
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 254 SANT-254



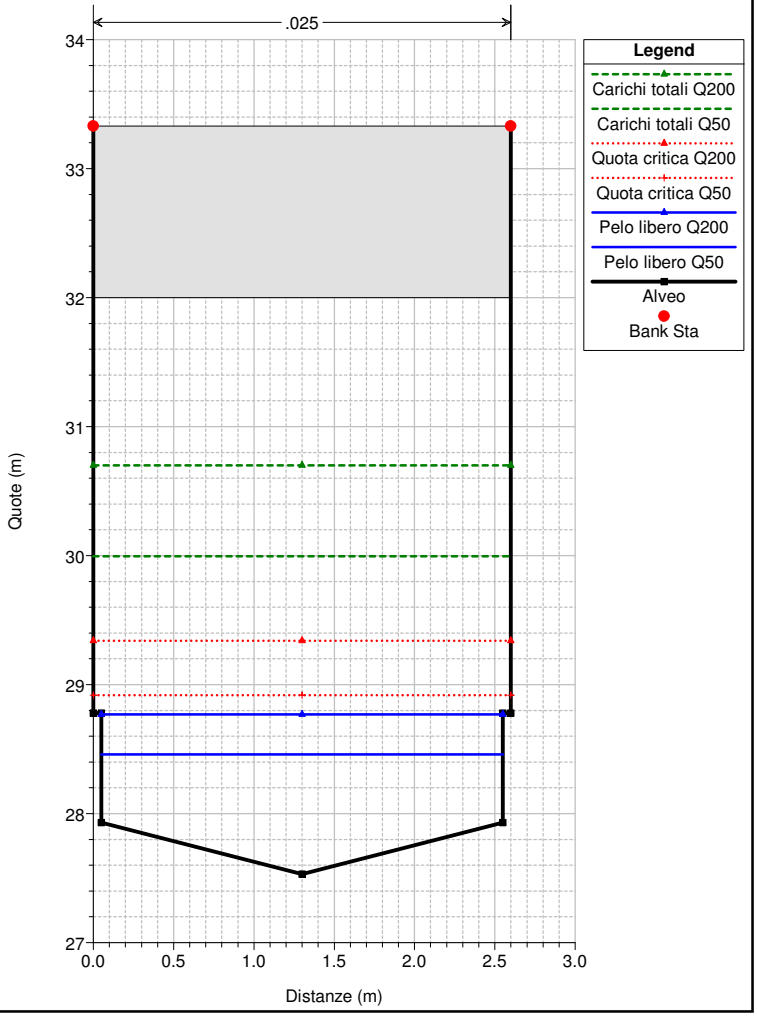
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 253 SANT-253



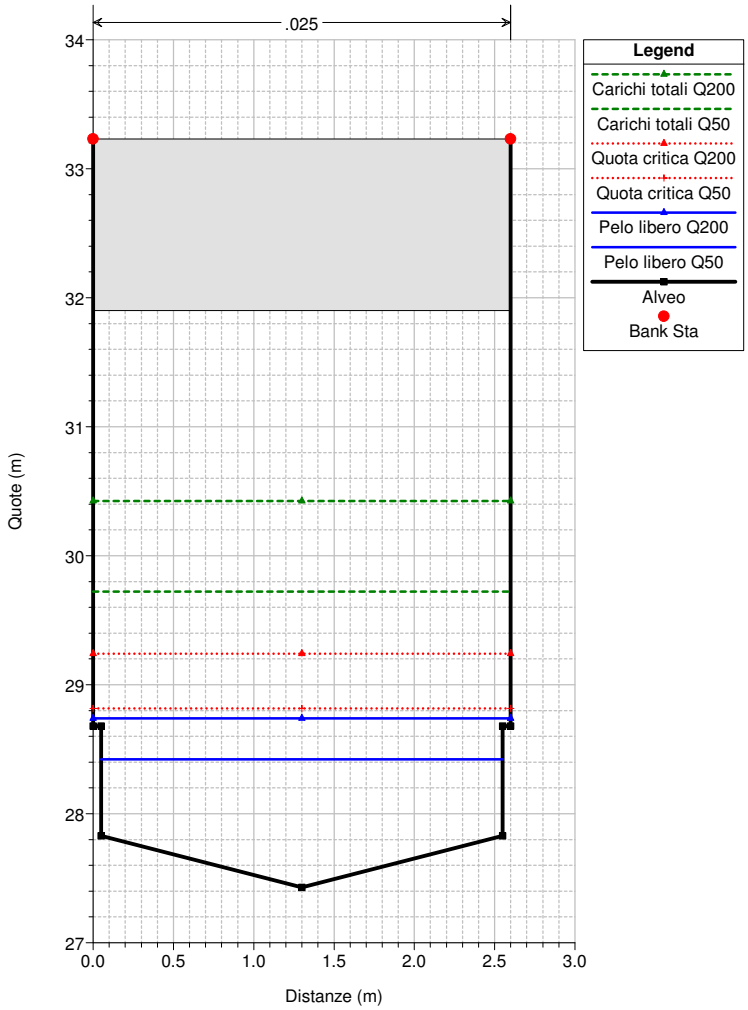
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 248 SANT-248



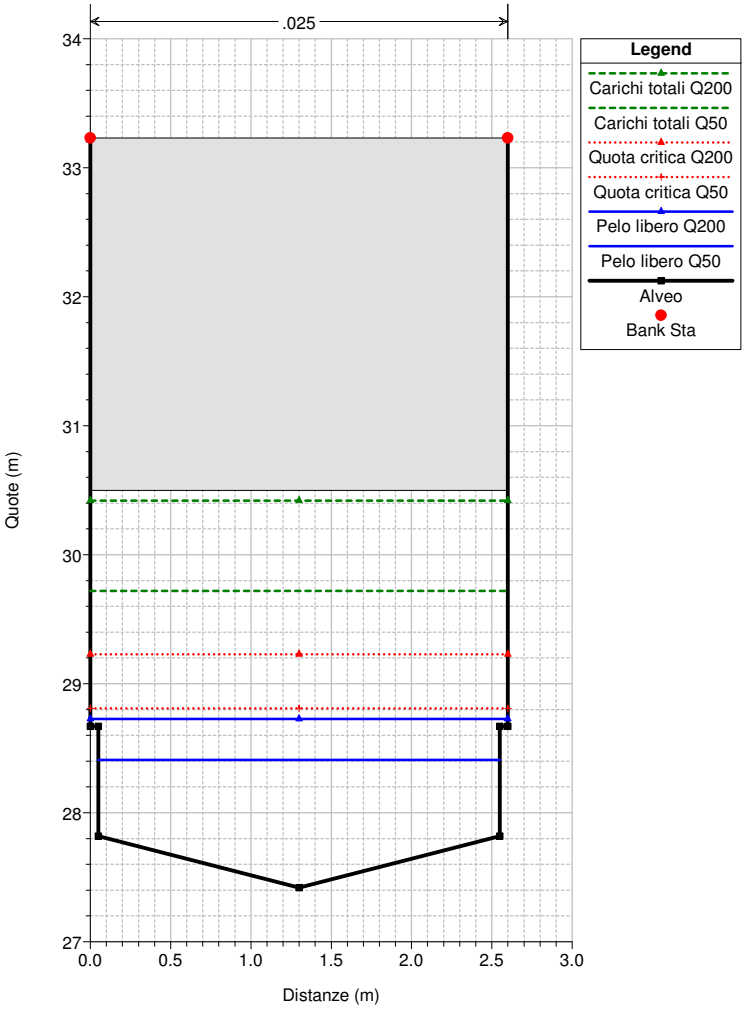
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 247.5 SANT-247.5-edificio



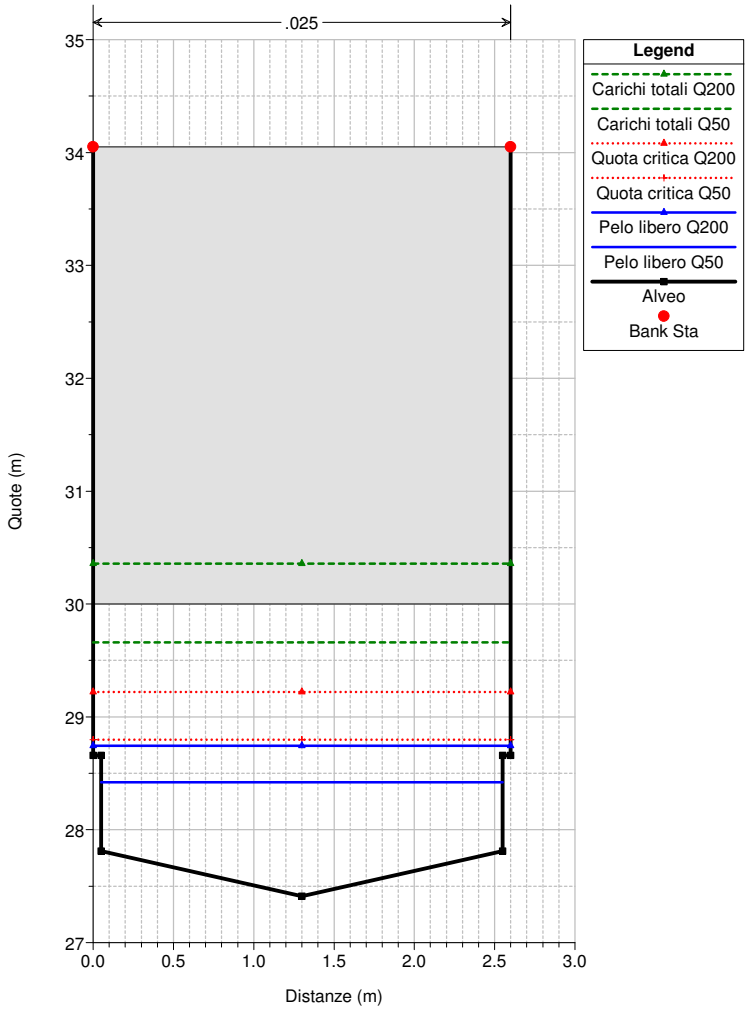
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 247.2 SANT-247.2-edificio



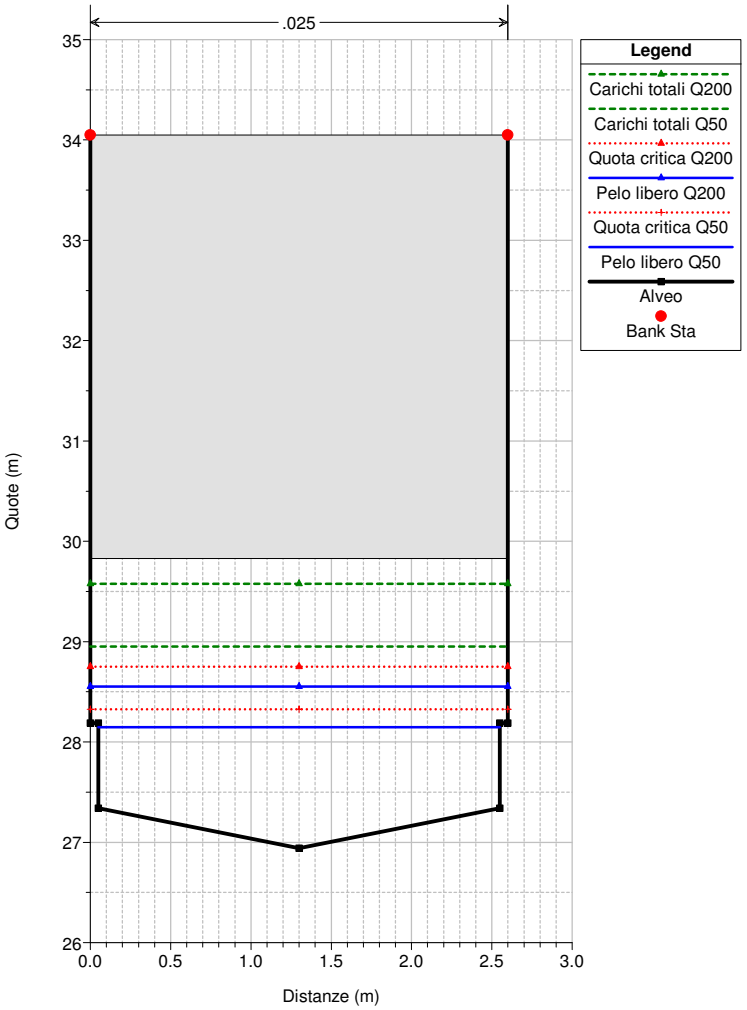
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 247 SANT-247

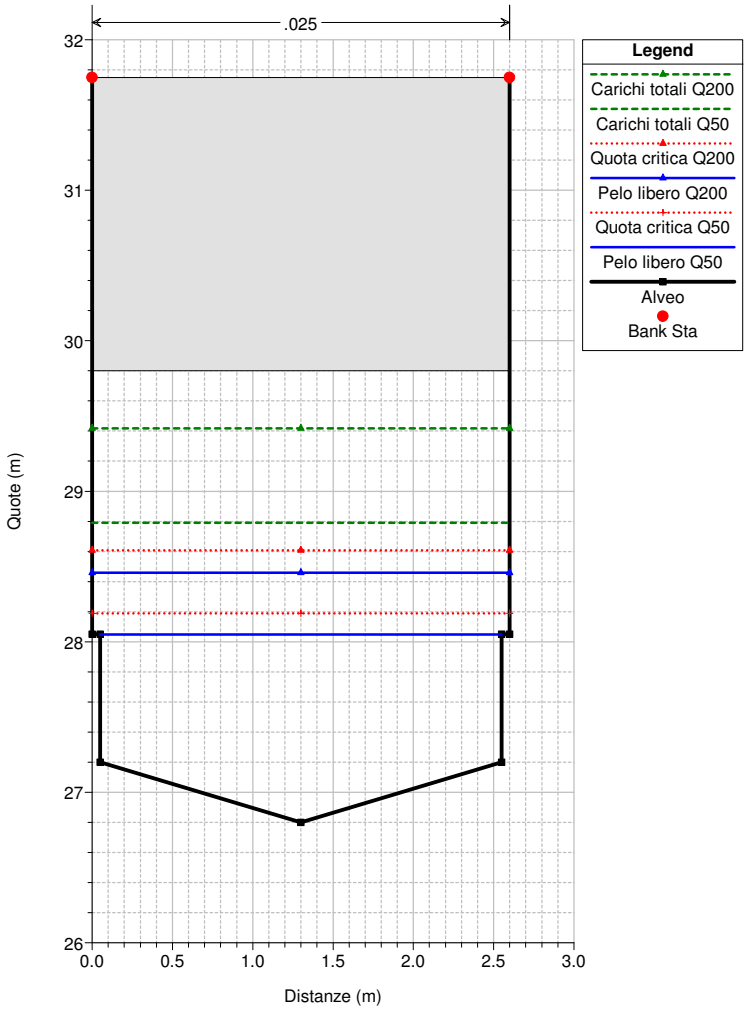


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

River = S. Antonino Reach = Tombinatura RS = 245 SANT-245

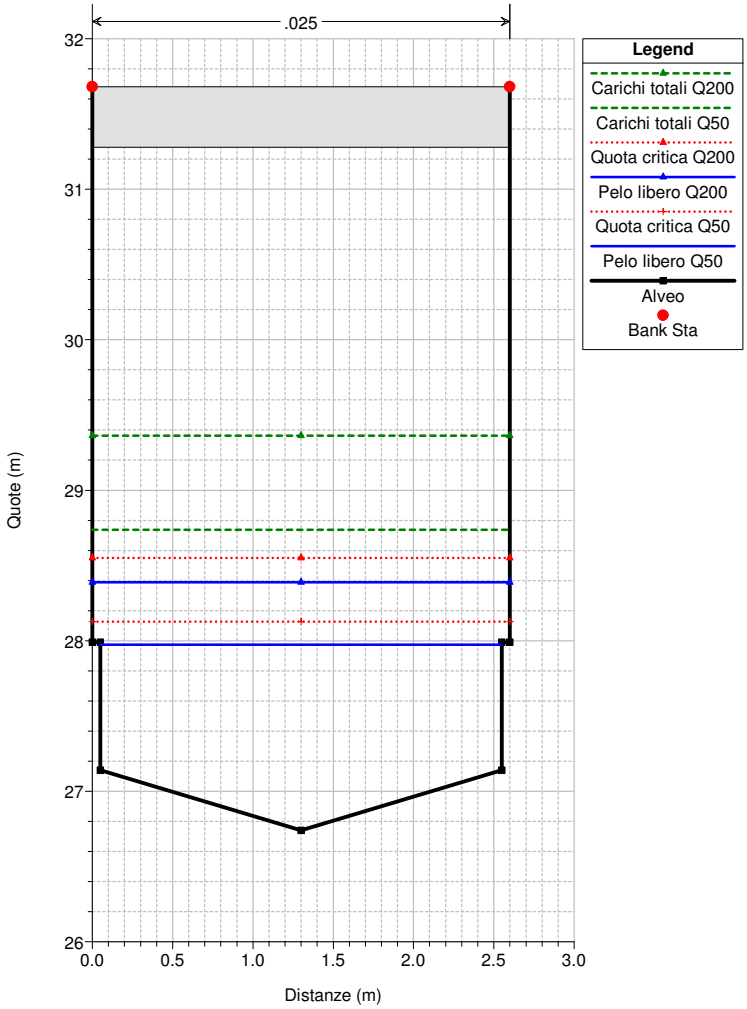


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 244 SANT-244



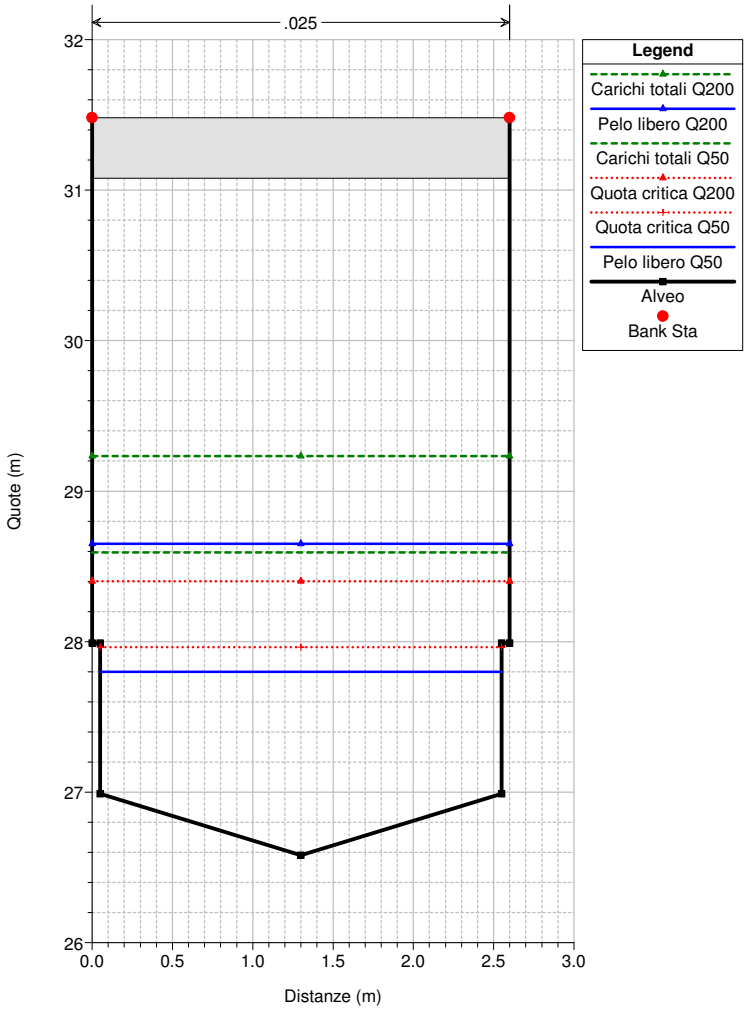
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 243 SANT-243



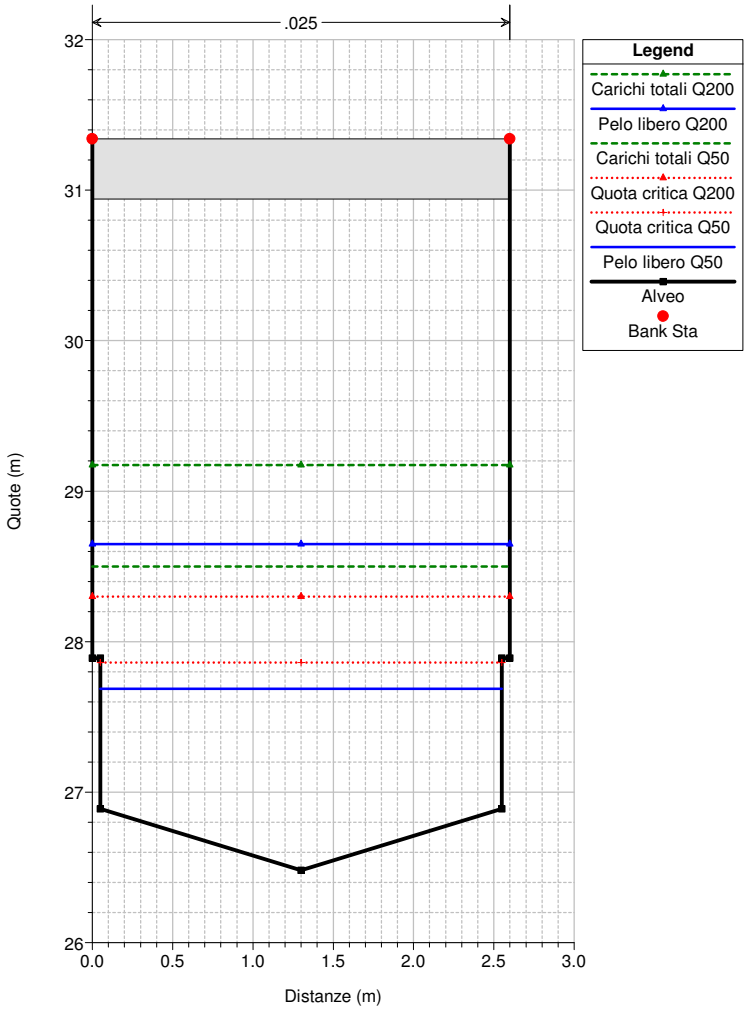
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 242 SANT-242

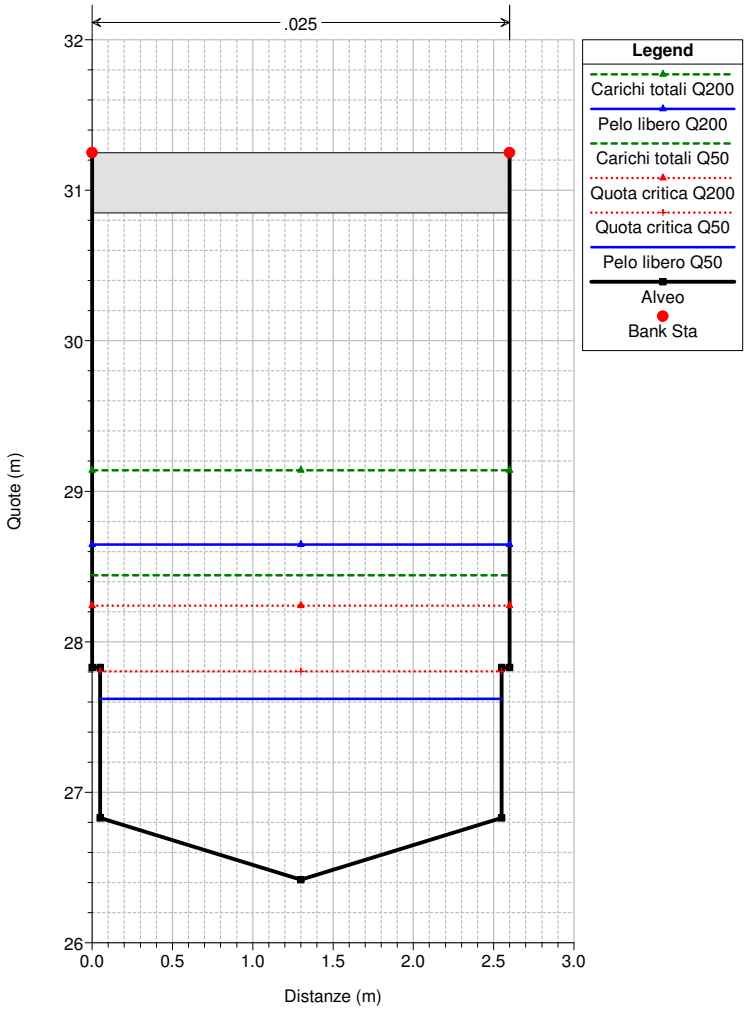


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 241 SANT-241

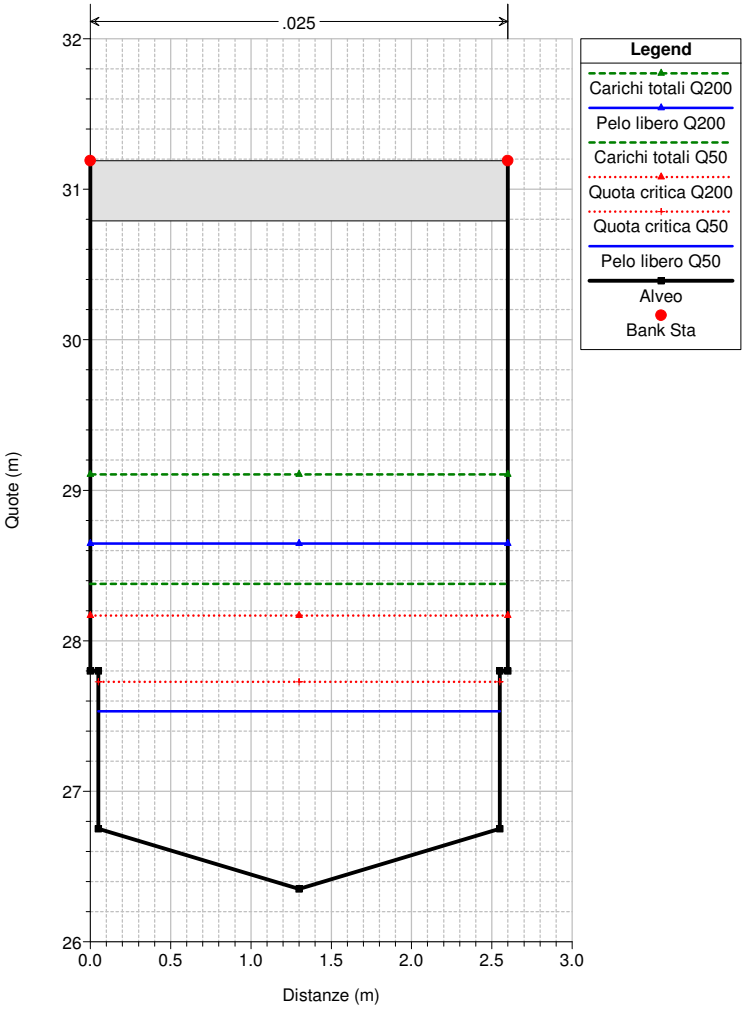


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 240 SANT-240



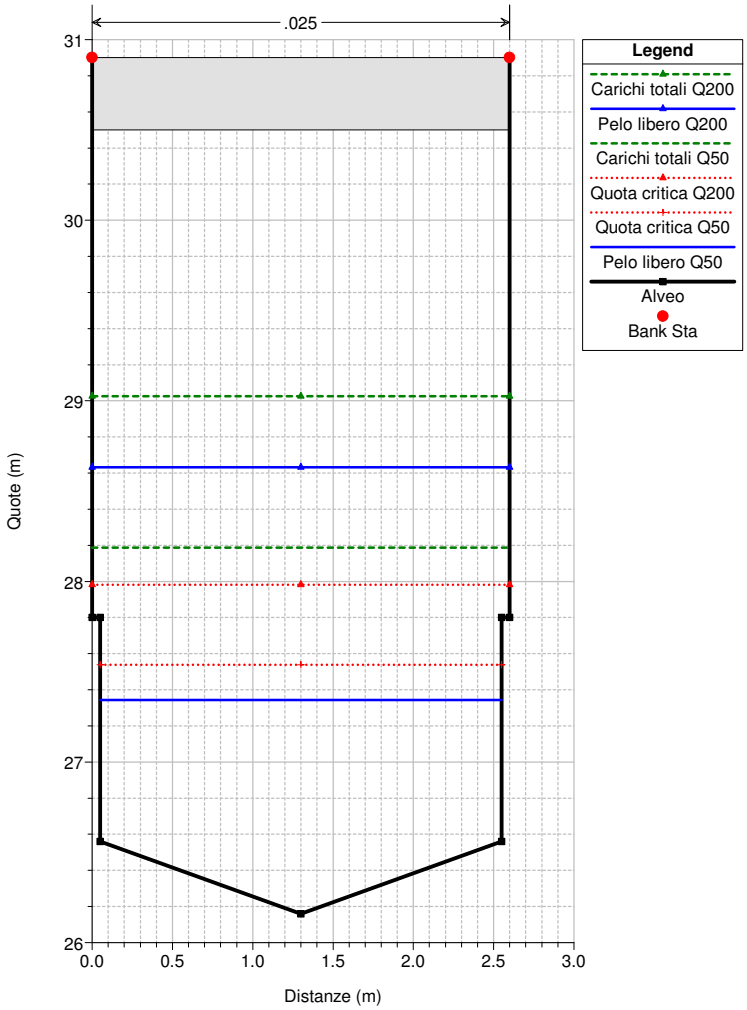
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 239.7 SANT-239.7



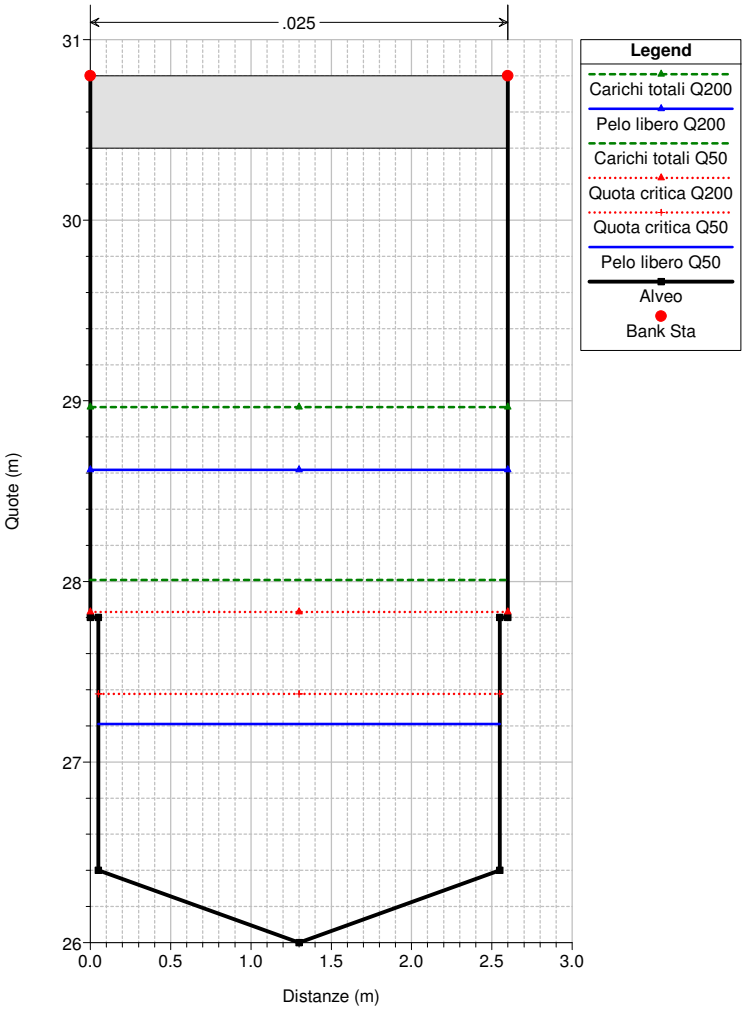
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 239 SANT-239

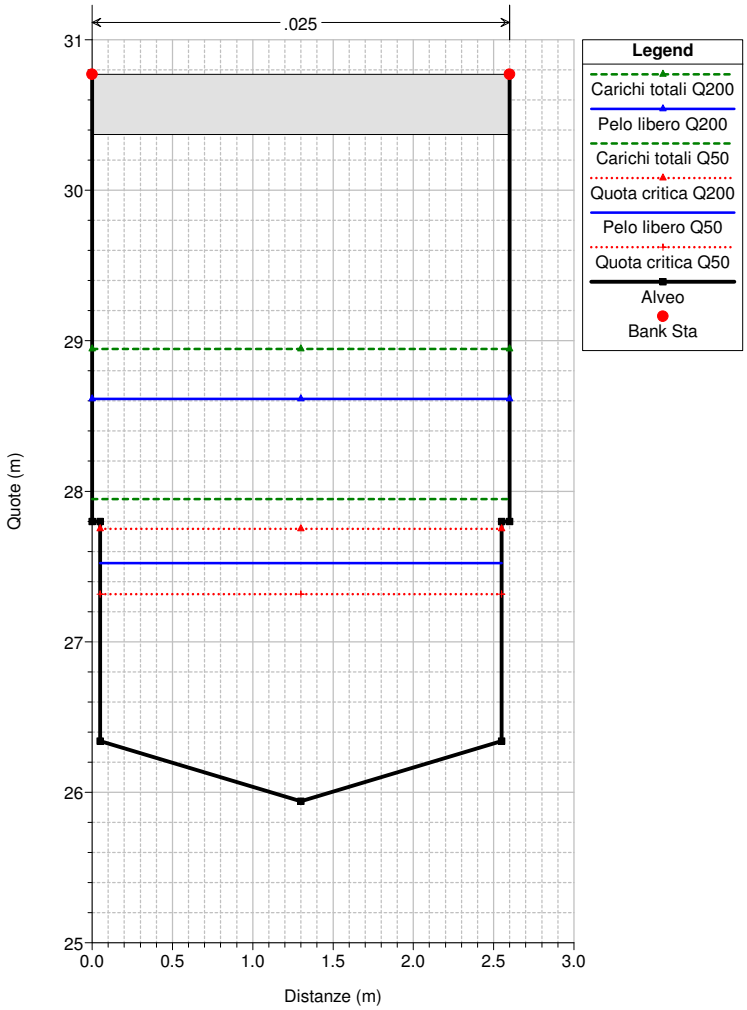


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 238 SANT-238

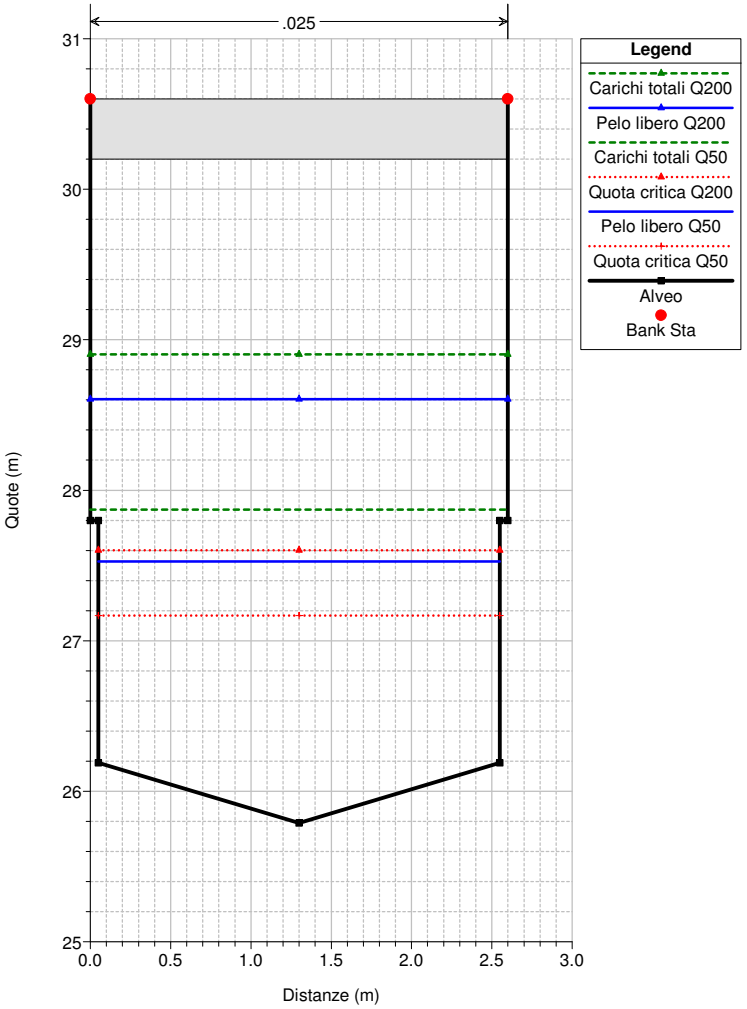


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 236 SANT-236



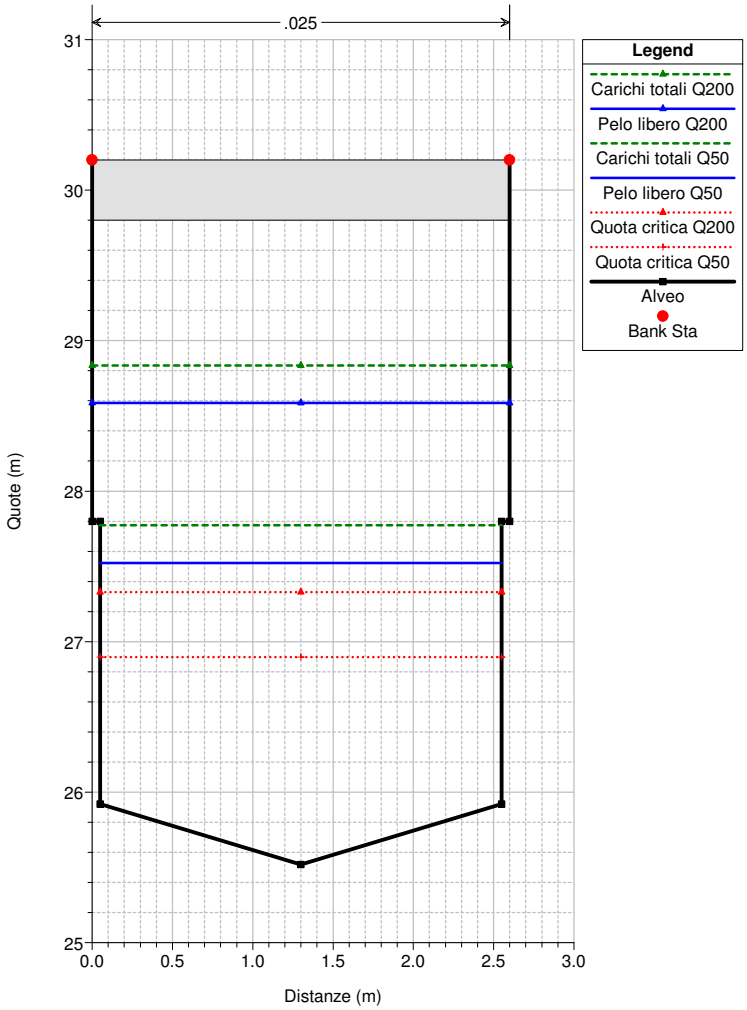
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 234 SANT-234



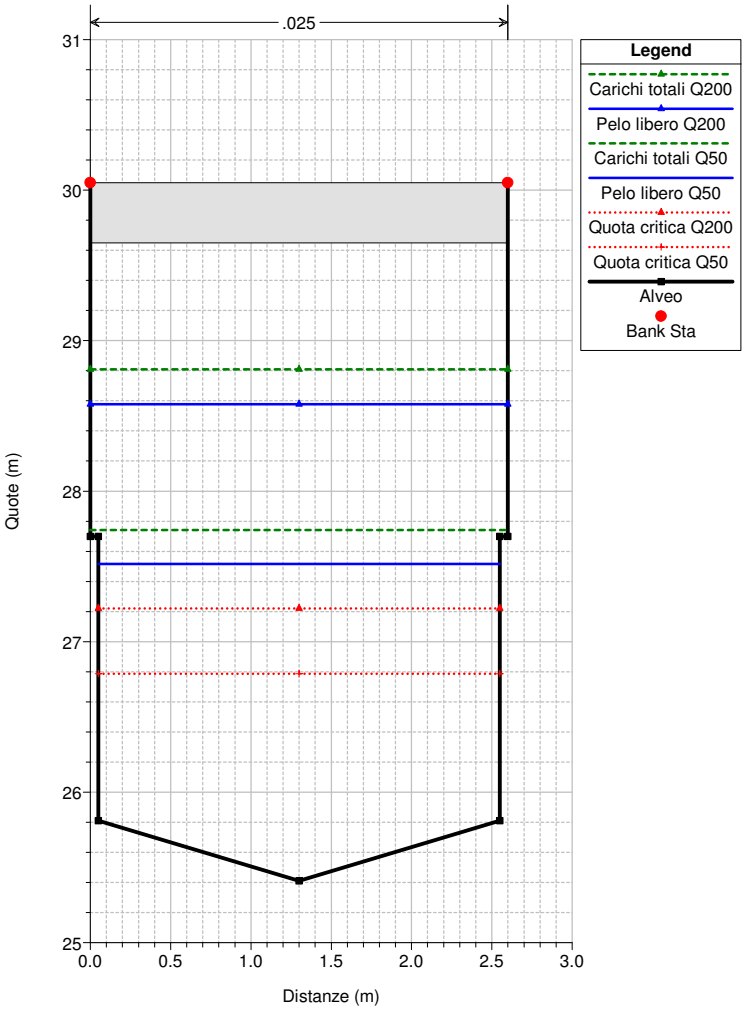
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 233 SANT-233

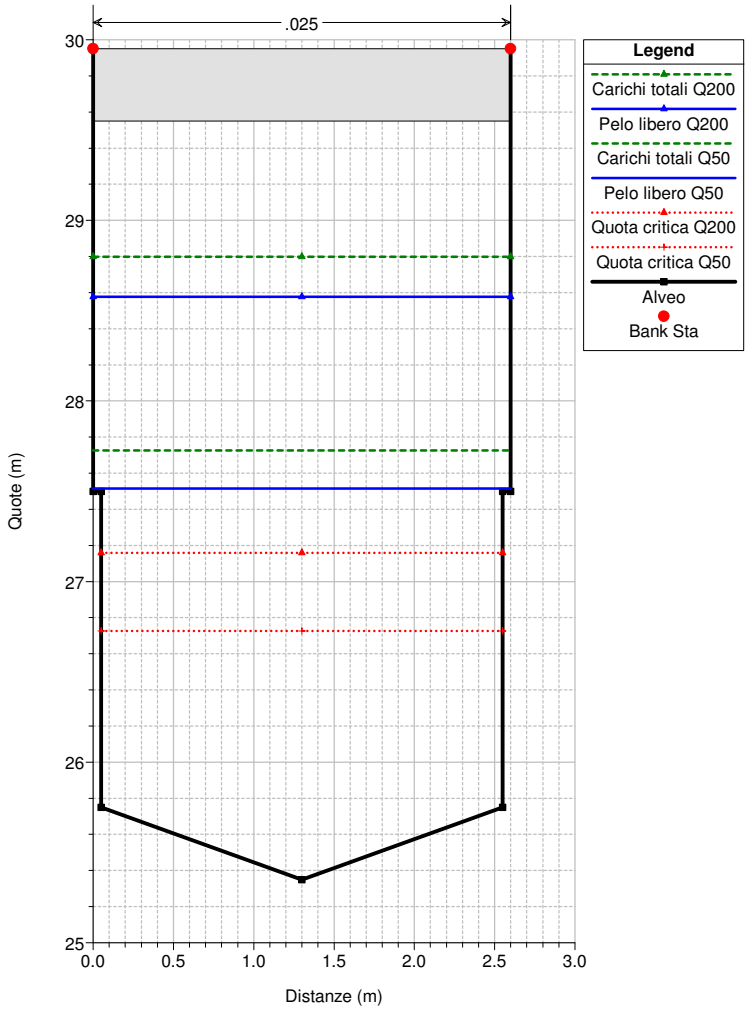


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 232 SANT-232

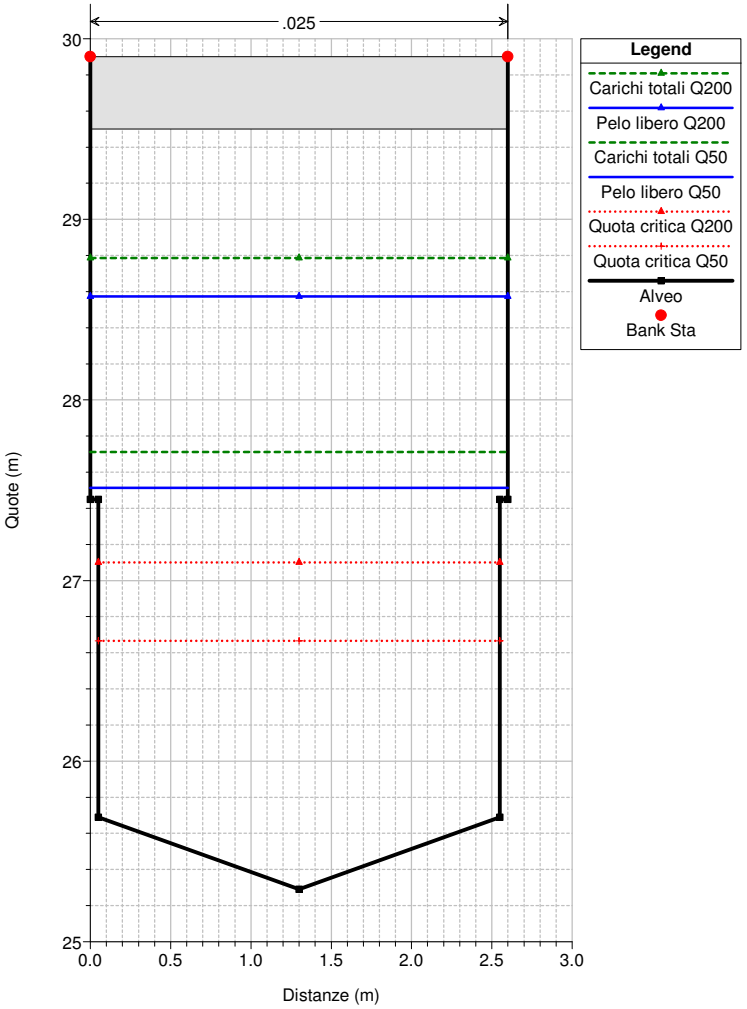


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 231 SANT-231



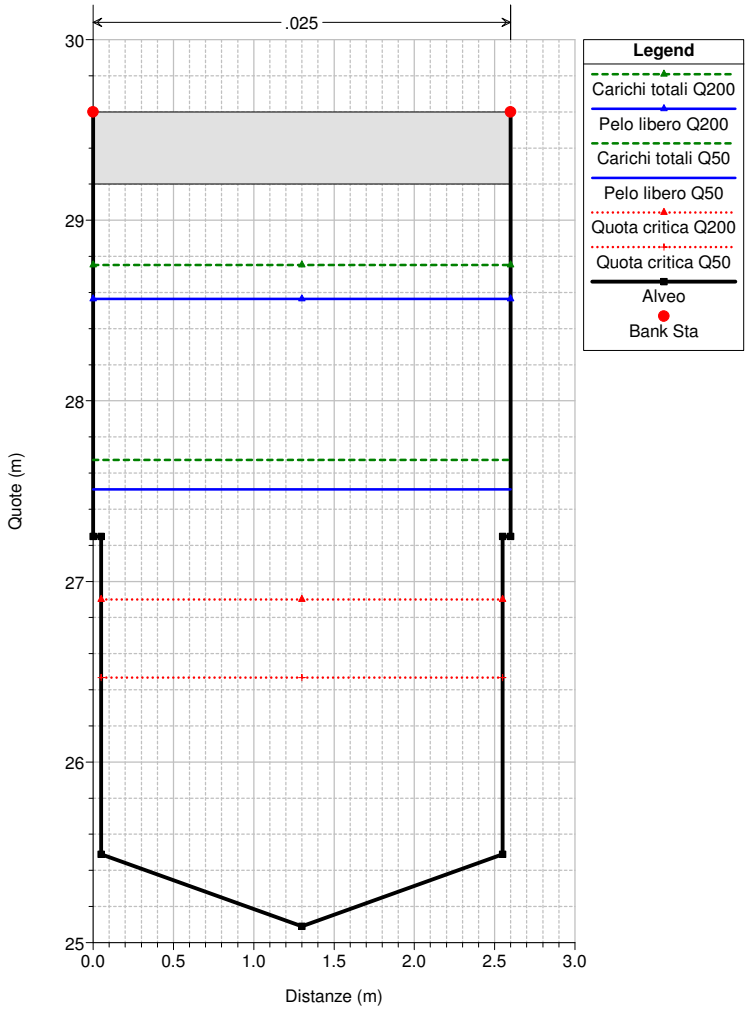
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 230 SANT-230



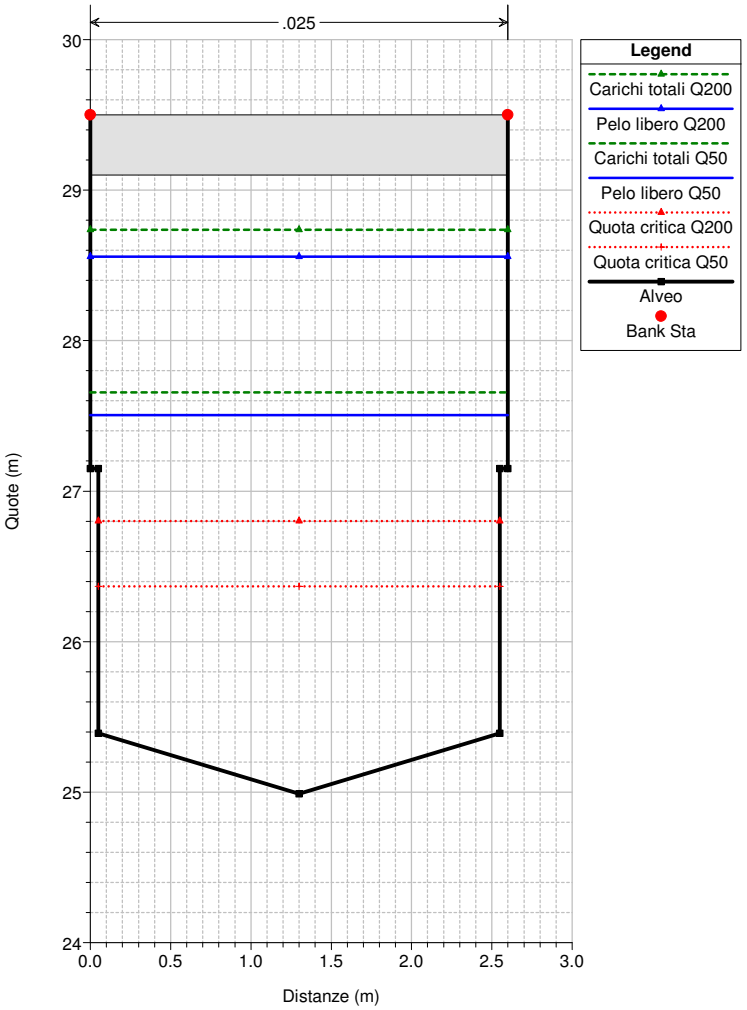
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 229 SANT-229

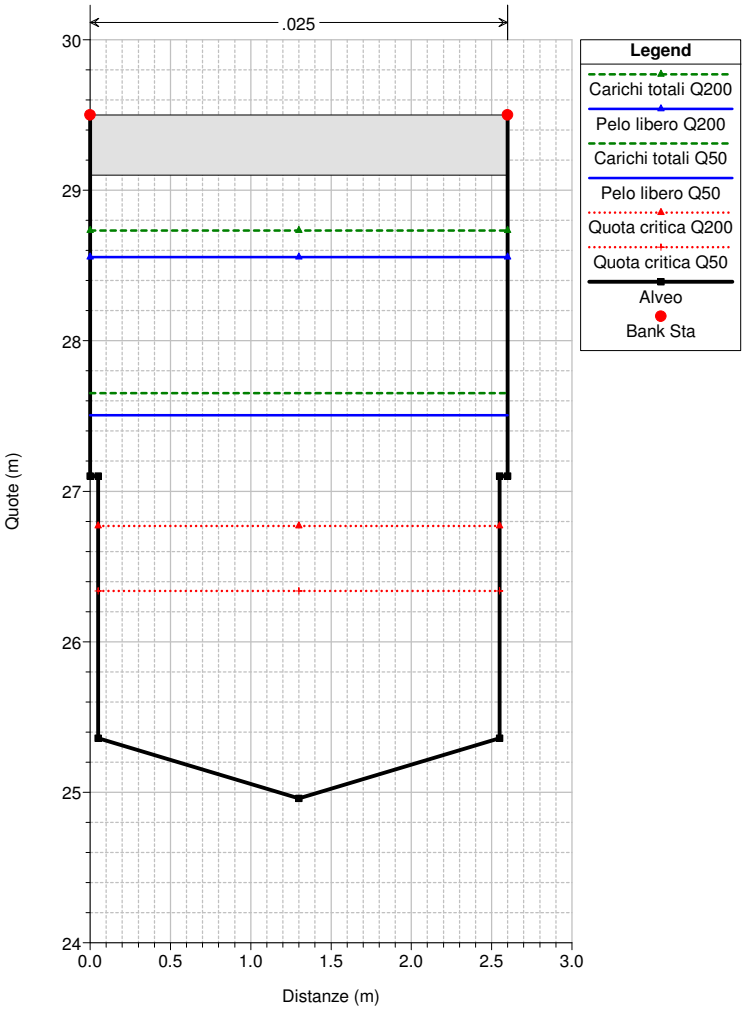


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 228 SANT-228

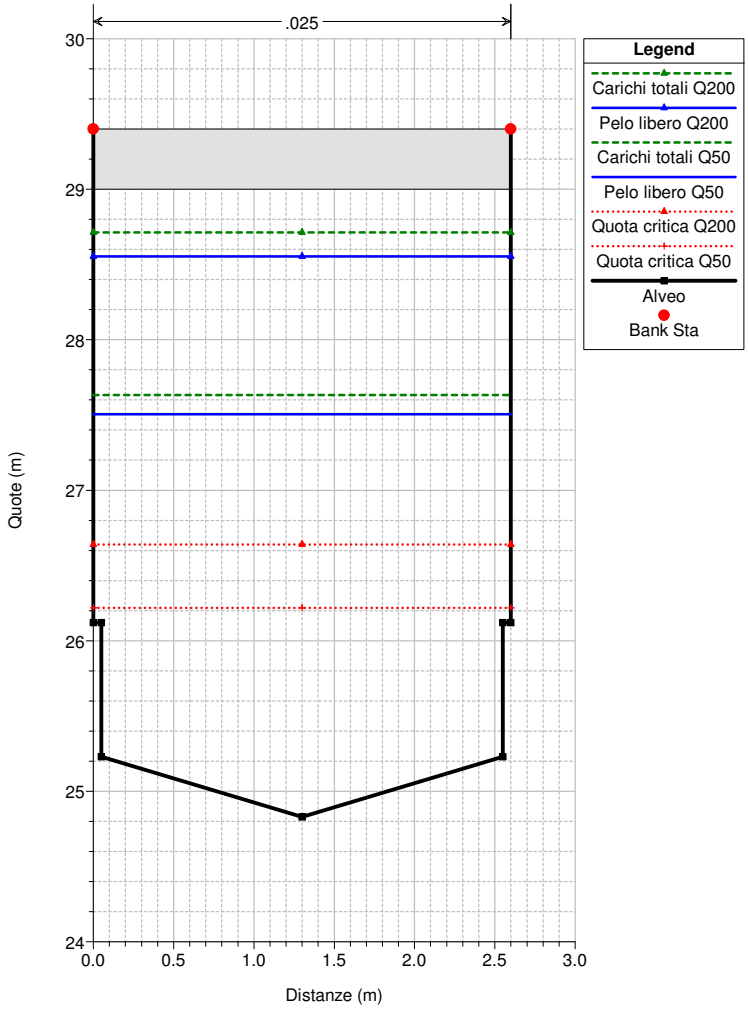


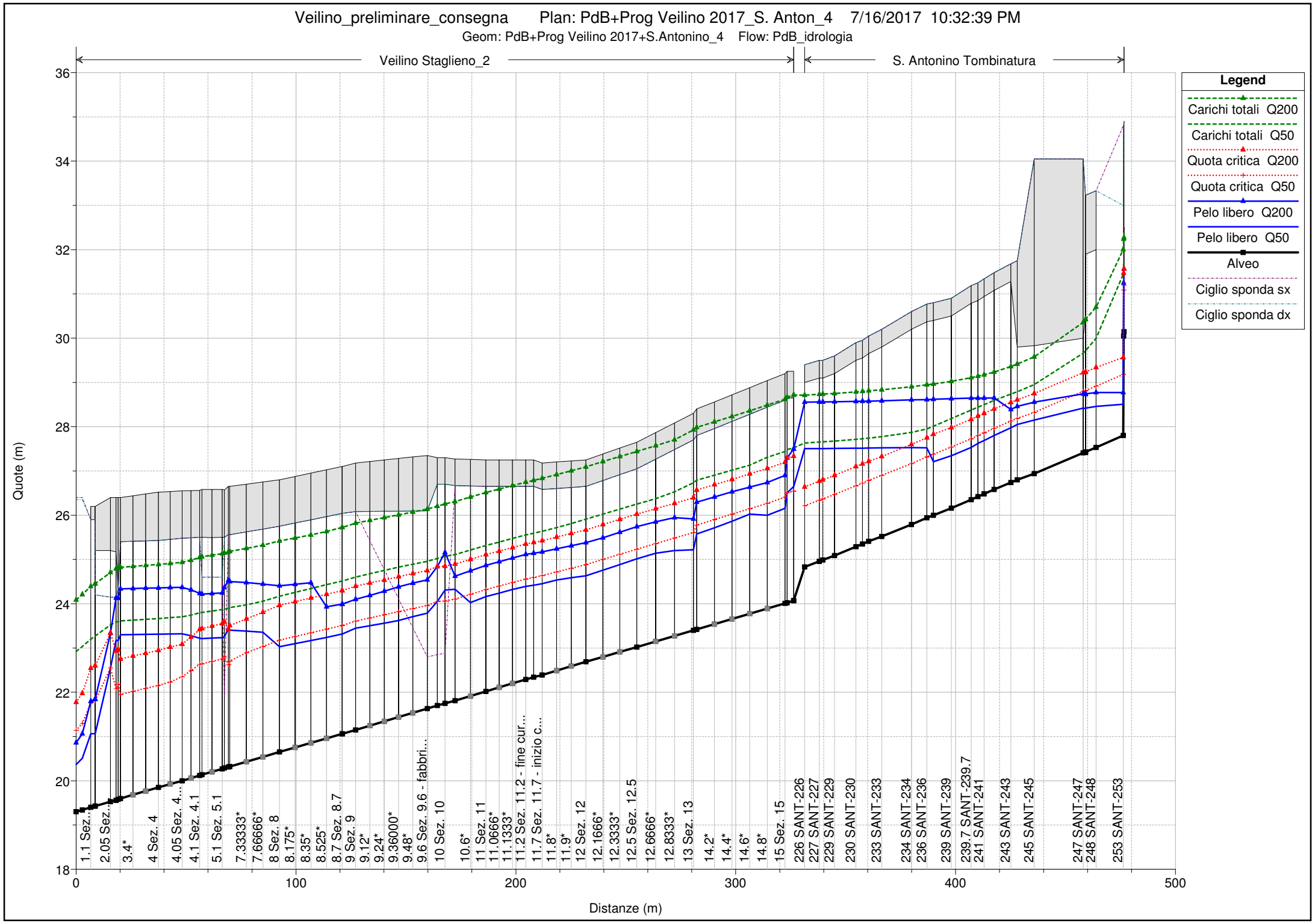
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 227 SANT-227



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

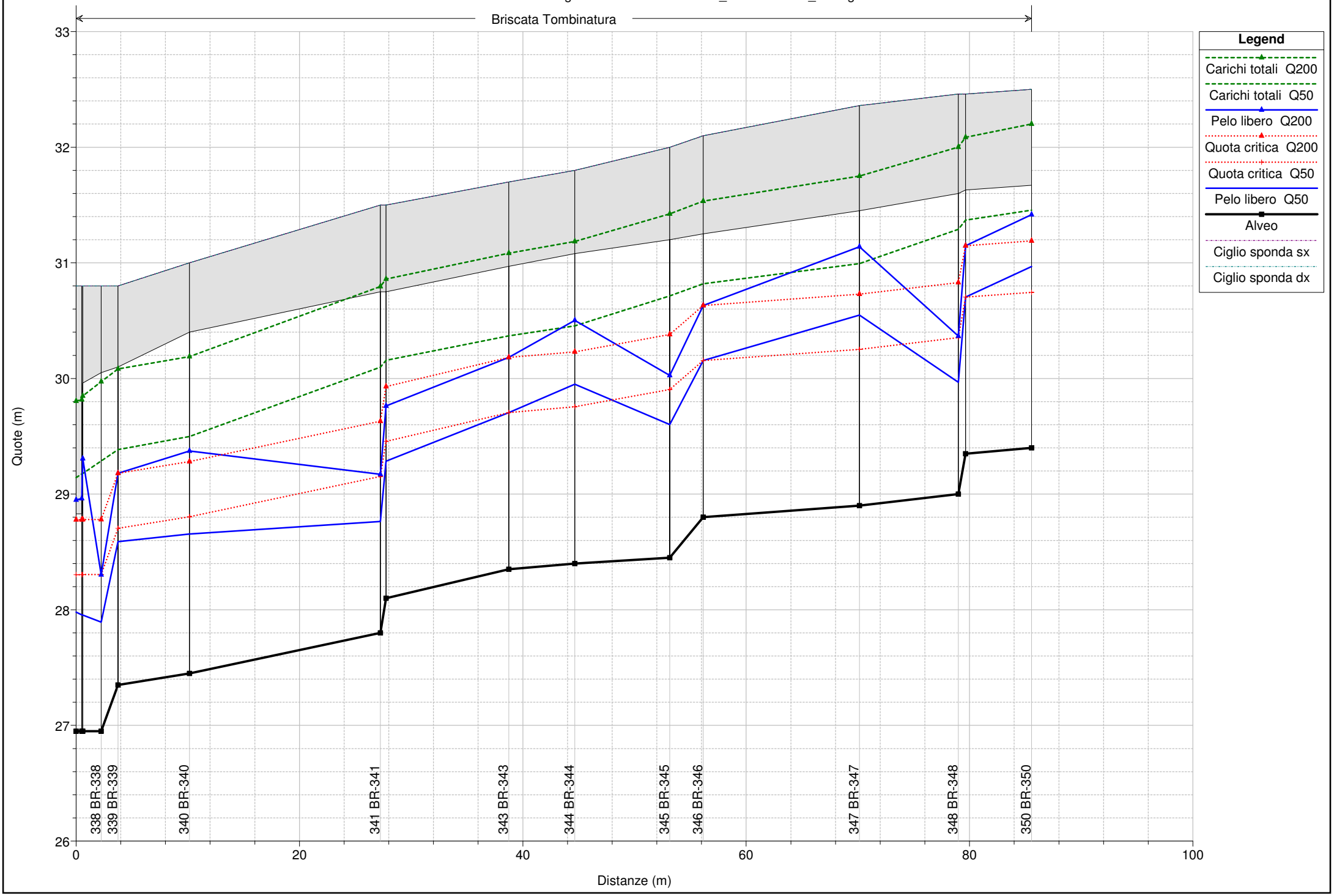
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = S. Antonino Reach = Tombinatura RS = 226 SANT-226



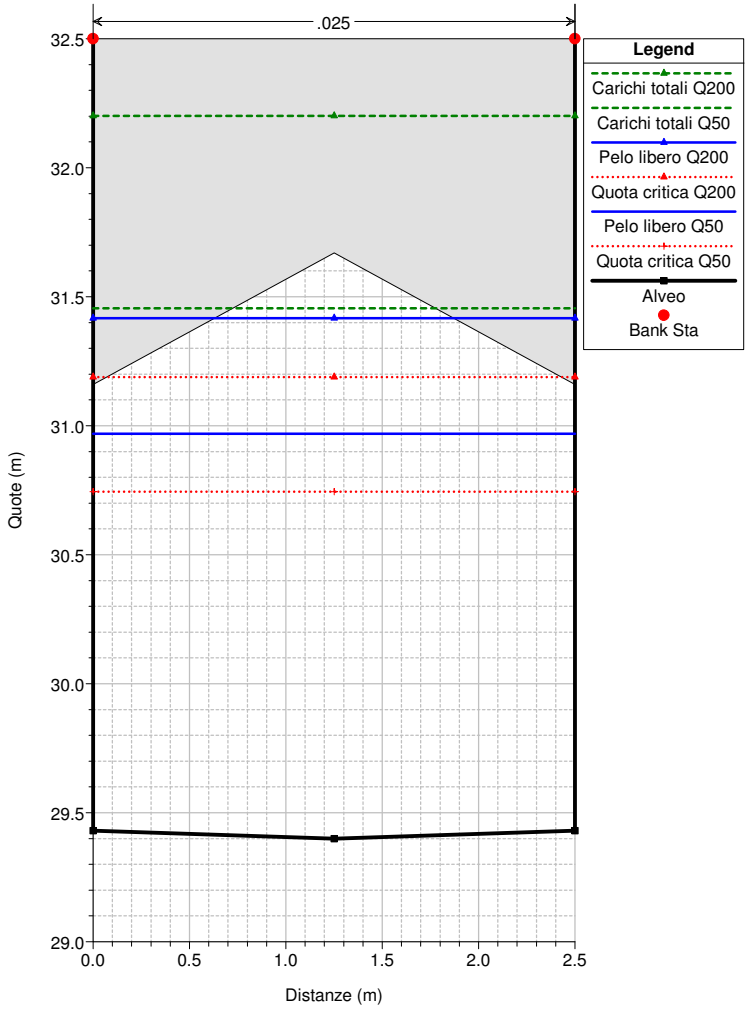

Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
Veilino Staglieno_2
S. Antonino Tombinatura
Legend
Carichi totali Q200
Carichi totali Q50
Quota critica Q200
Quota critica Q50
Pelo libero Q200
Pelo libero Q50
Alveo
Ciglio sponda sx
Ciglio sponda dx
Quote (m)
Distanze (m)
36
34
32
30
28
26
24
22
20
18
0
100
200
300
400
500
1.1 Sez...
2.05 Sez...
3.4*
4 Sez. 4
4.05 Sez. 4...
4.1 Sez. 4.1
5.1 Sez. 5.1
7.33333*
7.66666*
8 Sez. 8
8.175*
8.35*
8.525*
8.7 Sez. 8.7
9 Sez. 9
9.12*
9.24*
9.36000*
9.48*
9.6 Sez. 9.6 - fabbri...
10 Sez. 10
10.6*
11 Sez. 11
11.0666*
11.1333*
11.2 Sez. 11.2 - fine cur...
11.7 Sez. 11.7 - inizio c...
11.8*
11.9*
12 Sez. 12
12.1666*
12.3333*
12.5 Sez. 12.5
12.6666*
12.8333*
13 Sez. 13
14.2*
14.4*
14.6*
14.8*
15 Sez. 15
226 SANT-226
227 SANT-227
229 SANT-229
230 SANT-230
233 SANT-233
234 SANT-234
236 SANT-236
239 SANT-239
239.7 SANT-239.7
241 SANT-241
243 SANT-243
245 SANT-245
247 SANT-247
248 SANT-248
253 SANT-253

Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia

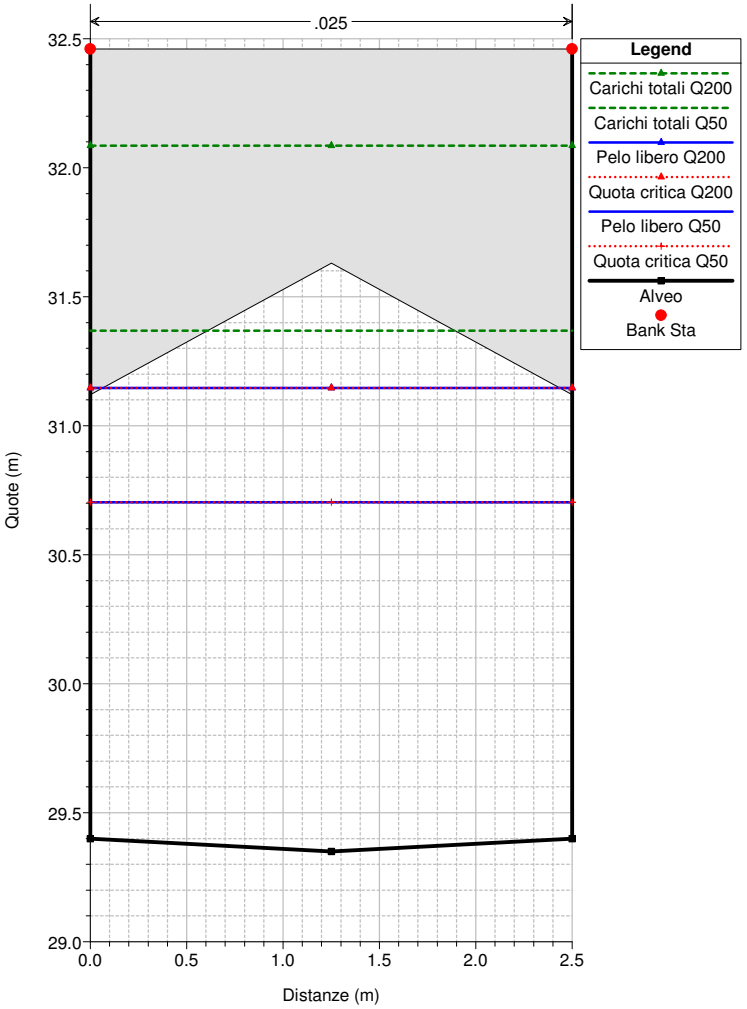


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 350 BR-350



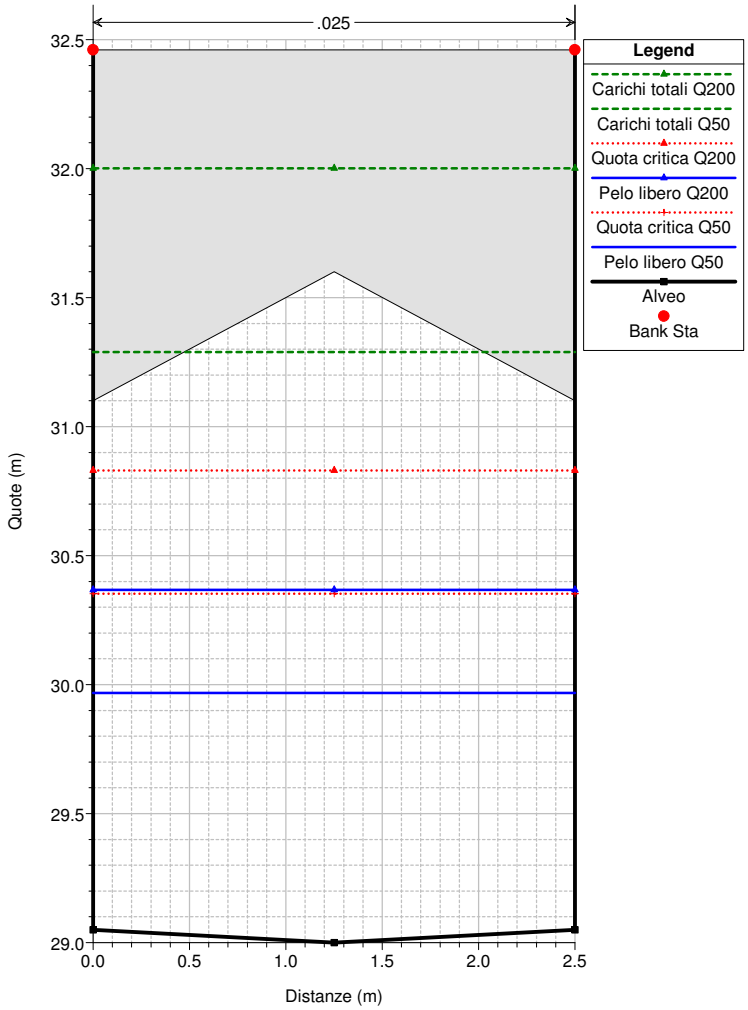
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 349 BR-349



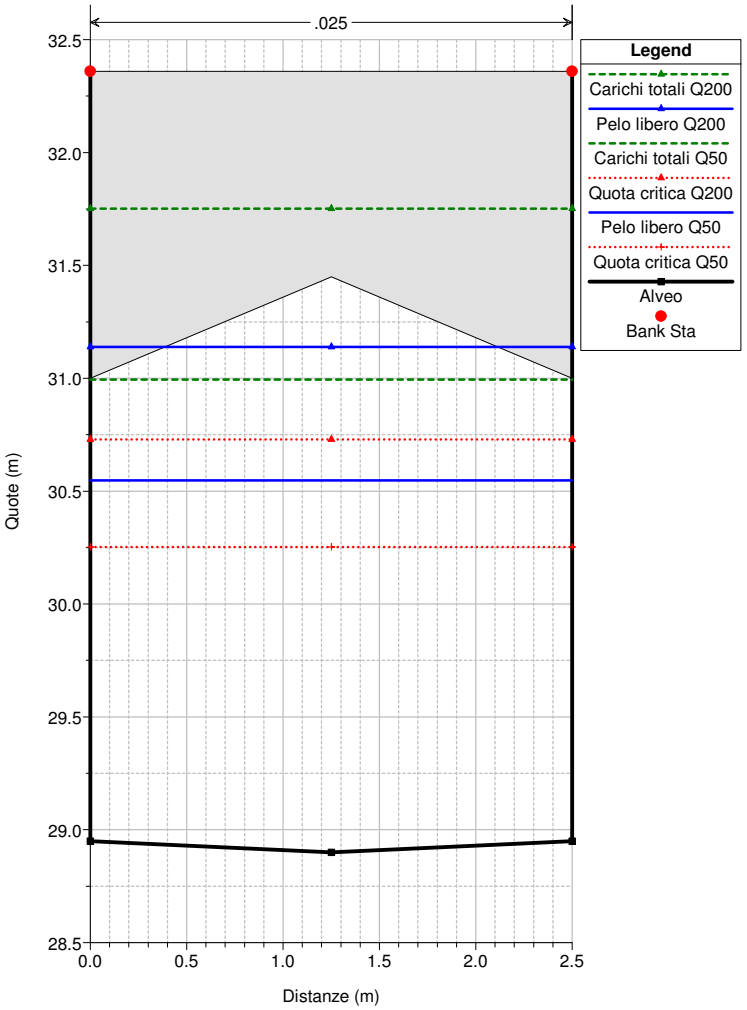
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 348 BR-348

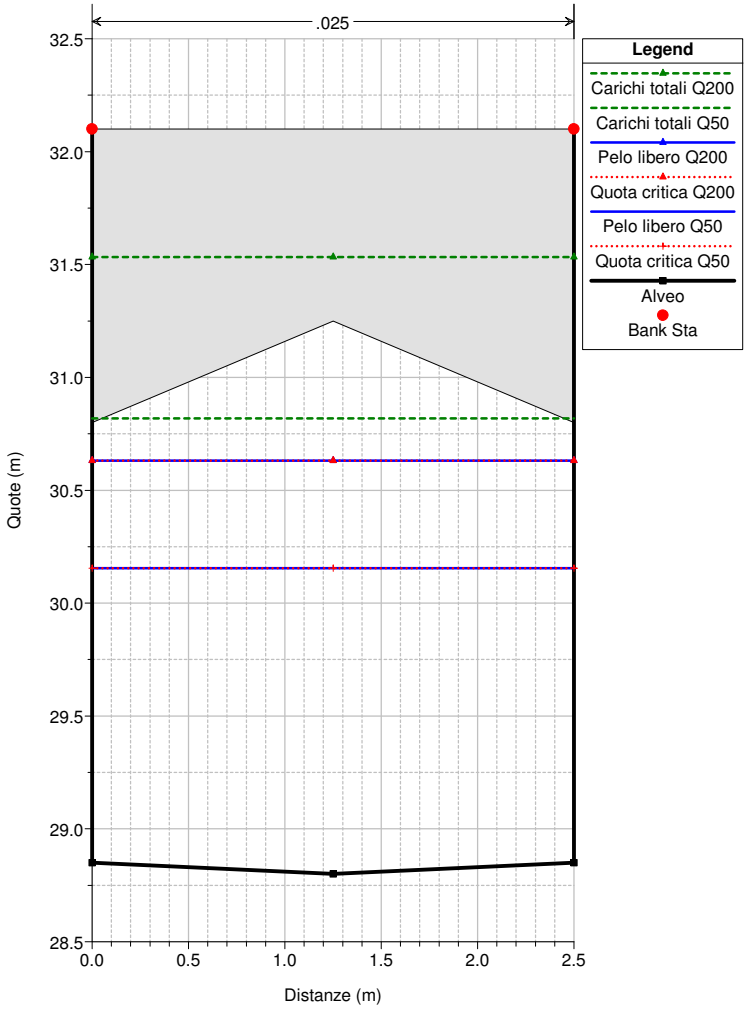


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 347 BR-347

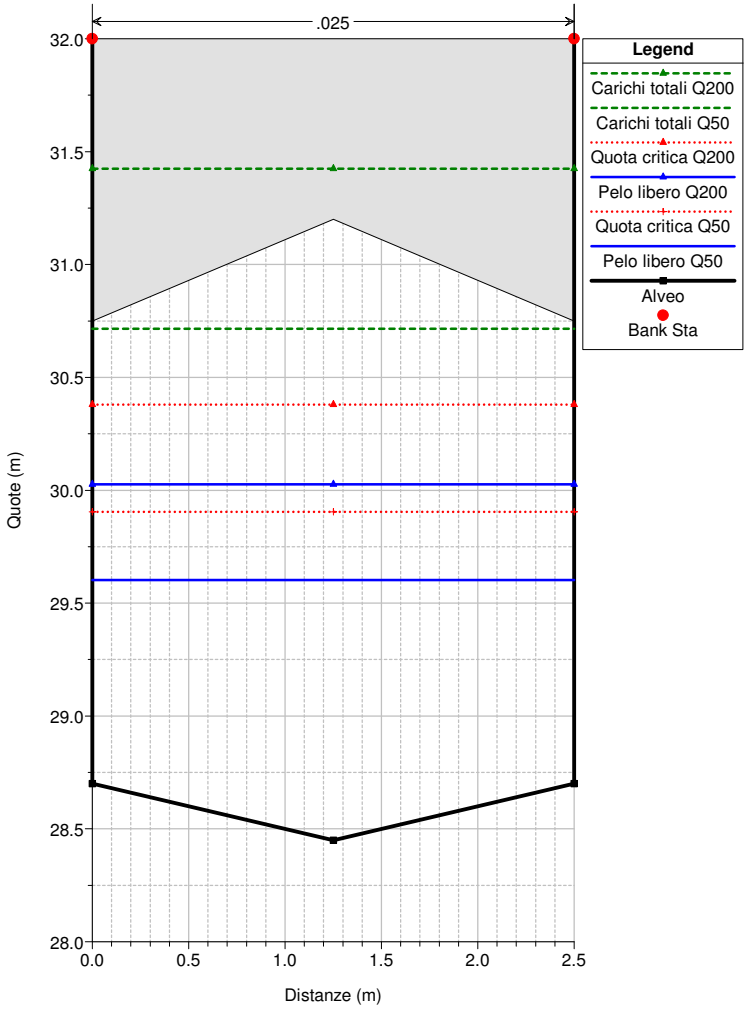


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 346 BR-346



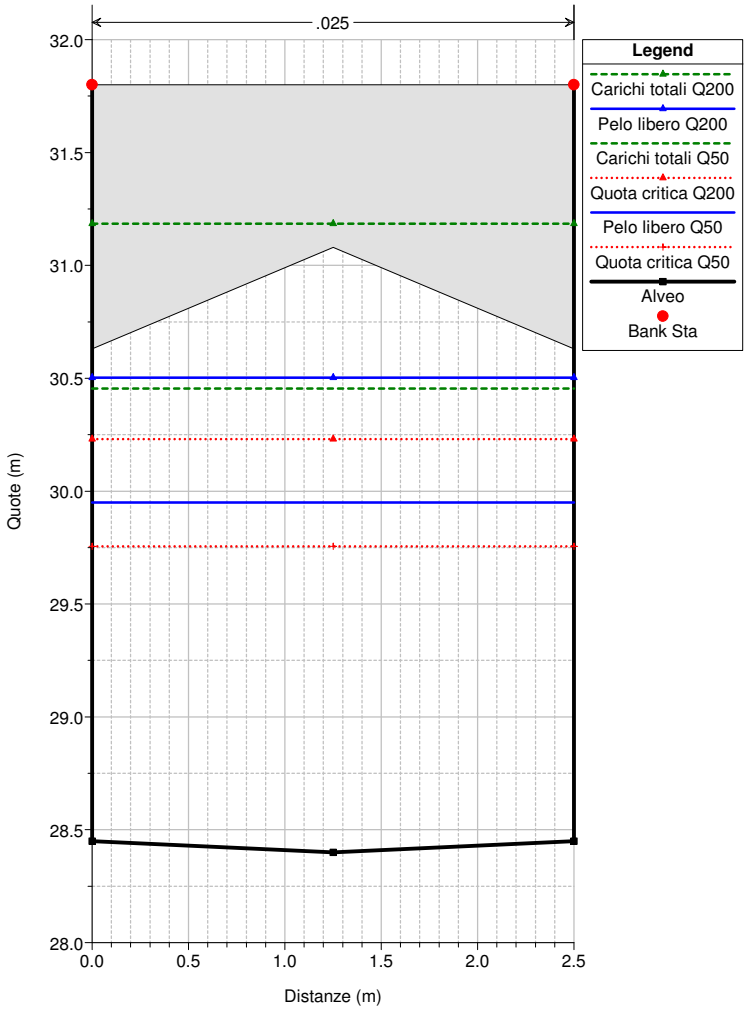
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 345 BR-345



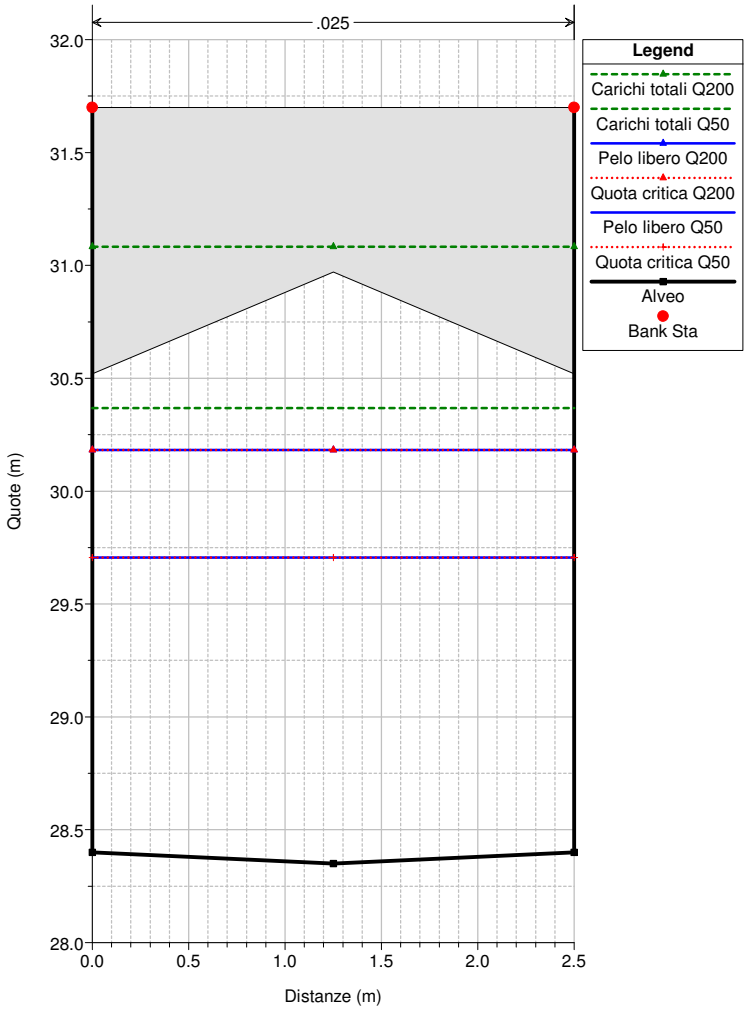
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 344 BR-344

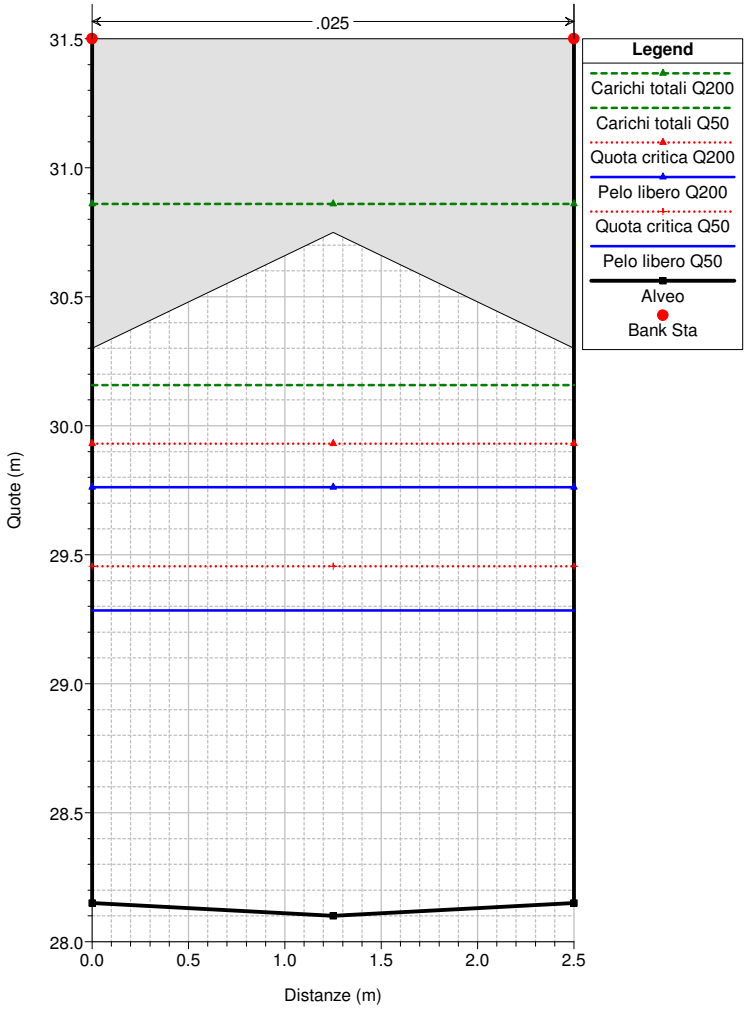


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 343 BR-343

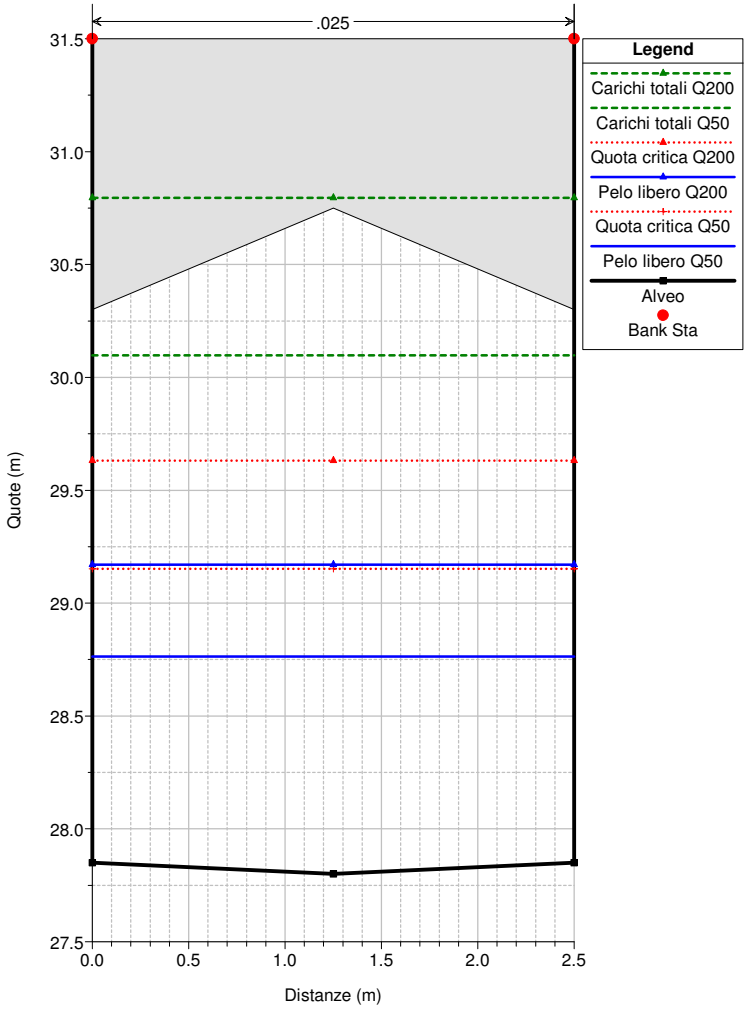


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 342 BR-342



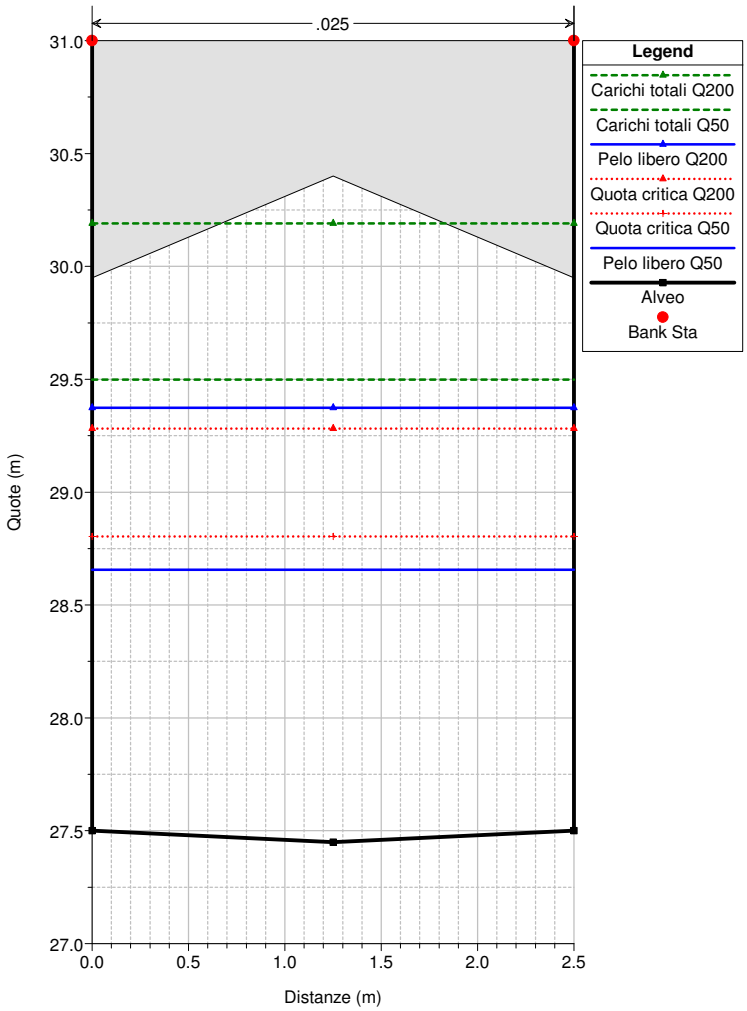
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 341 BR-341



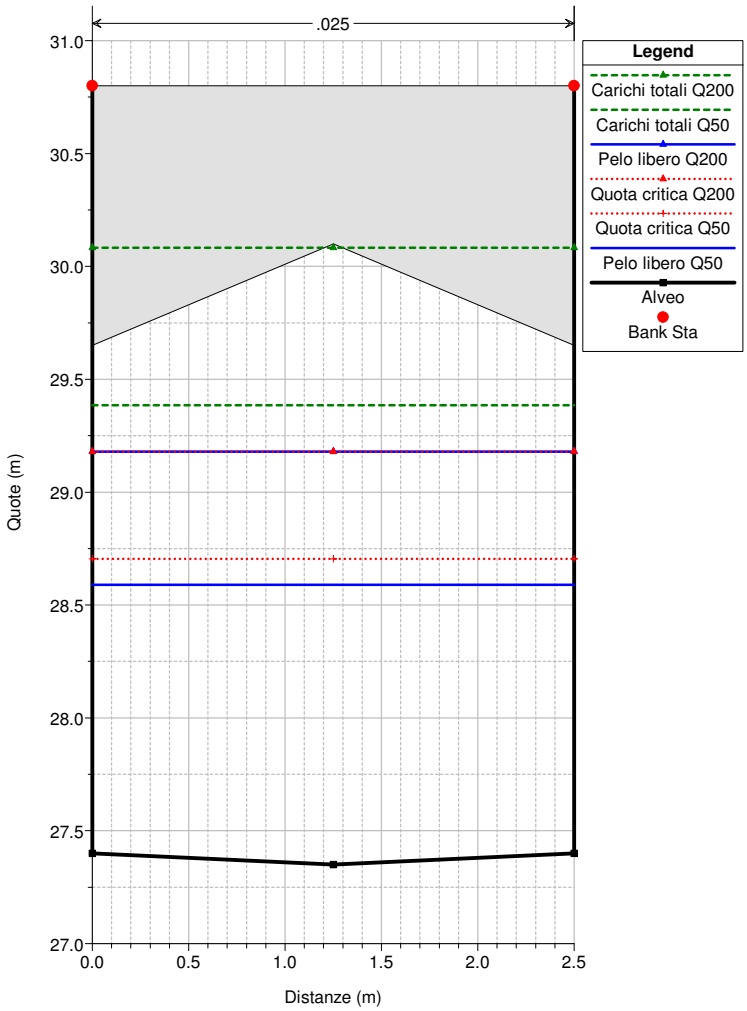
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 340 BR-340

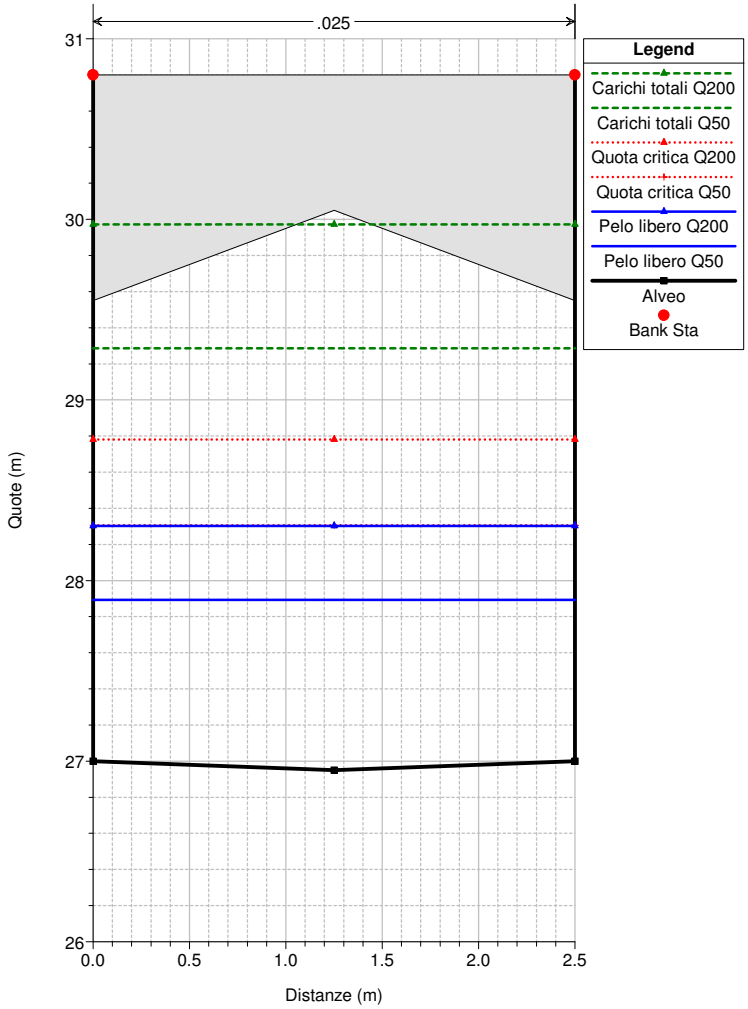


Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 339 BR-339

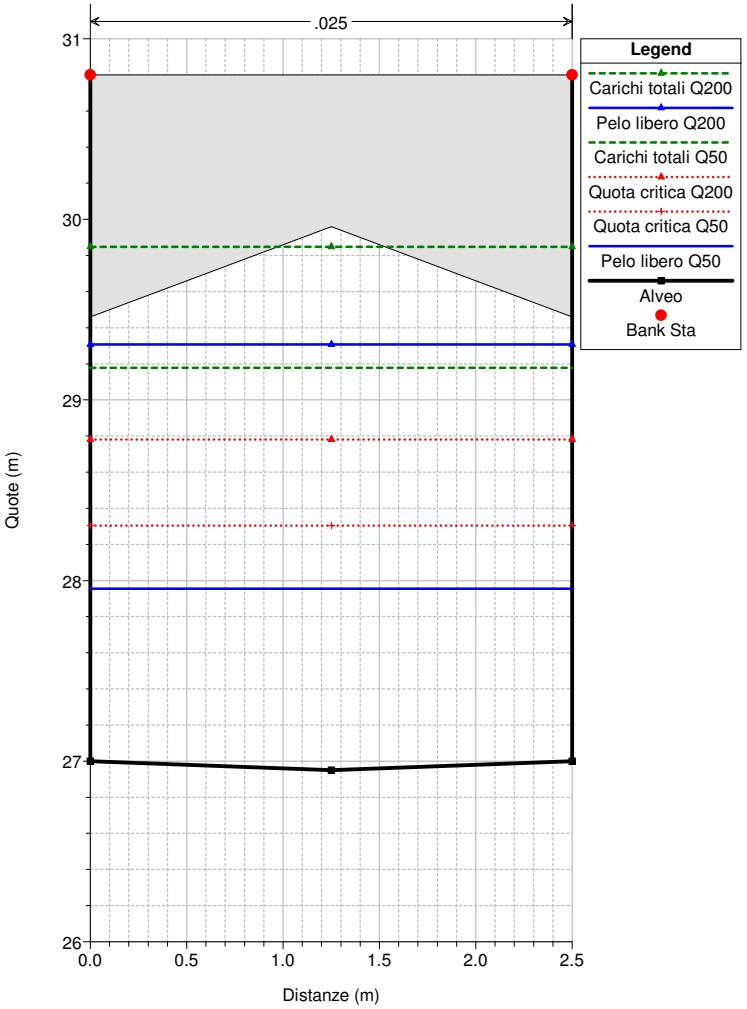


Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 338 BR-338



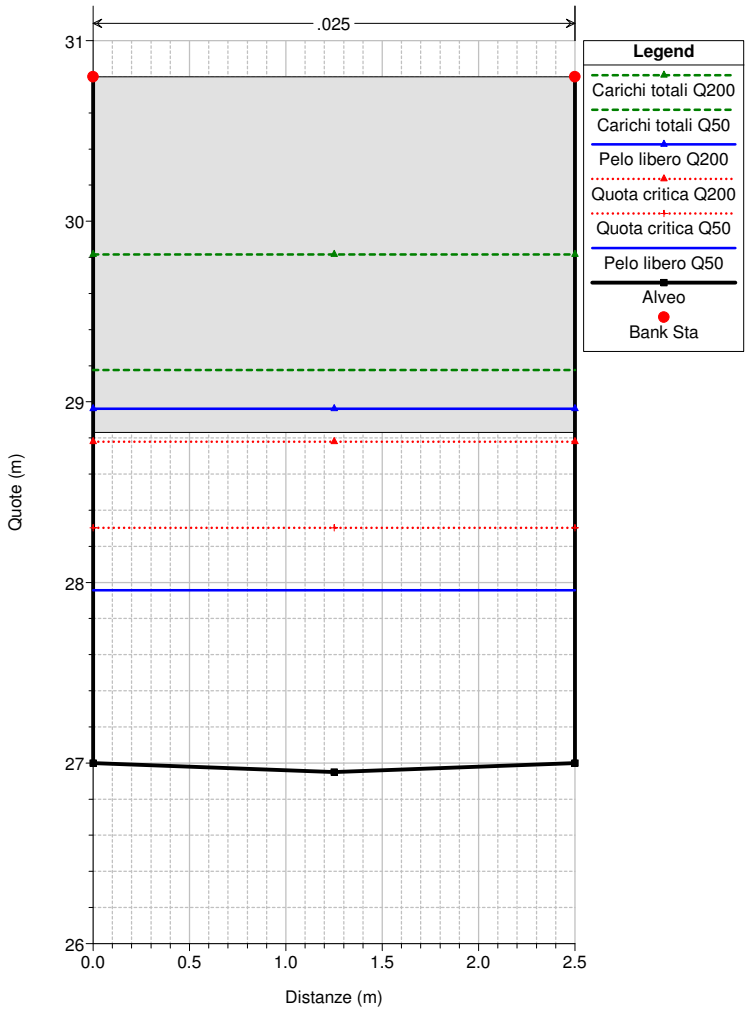
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 337 BR-337



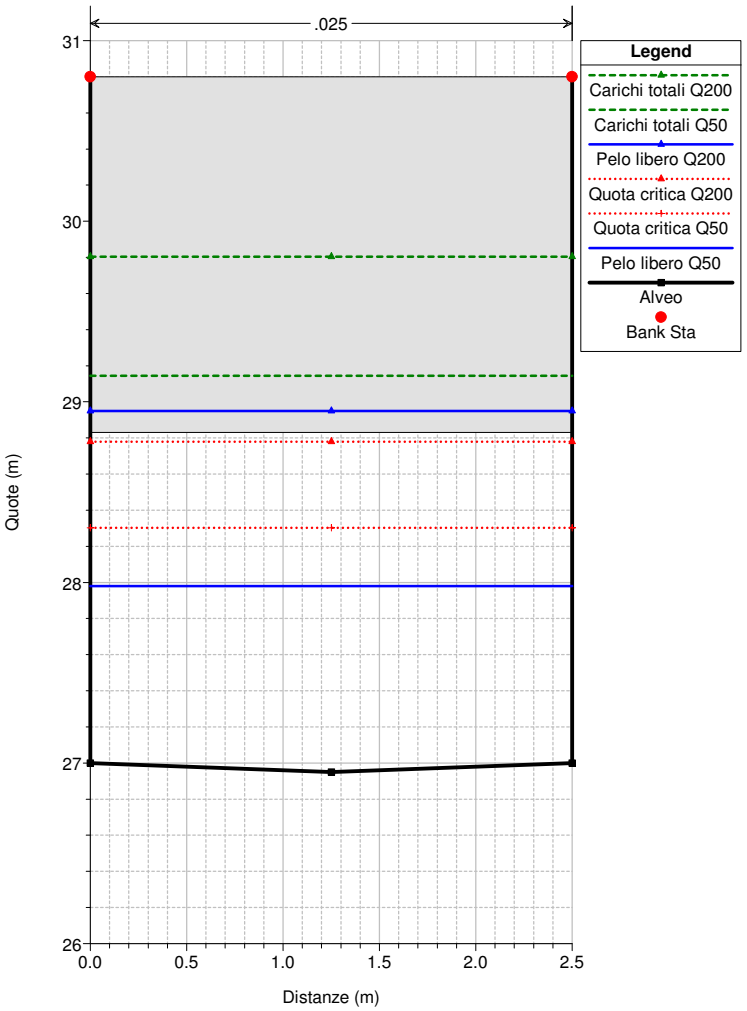
Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

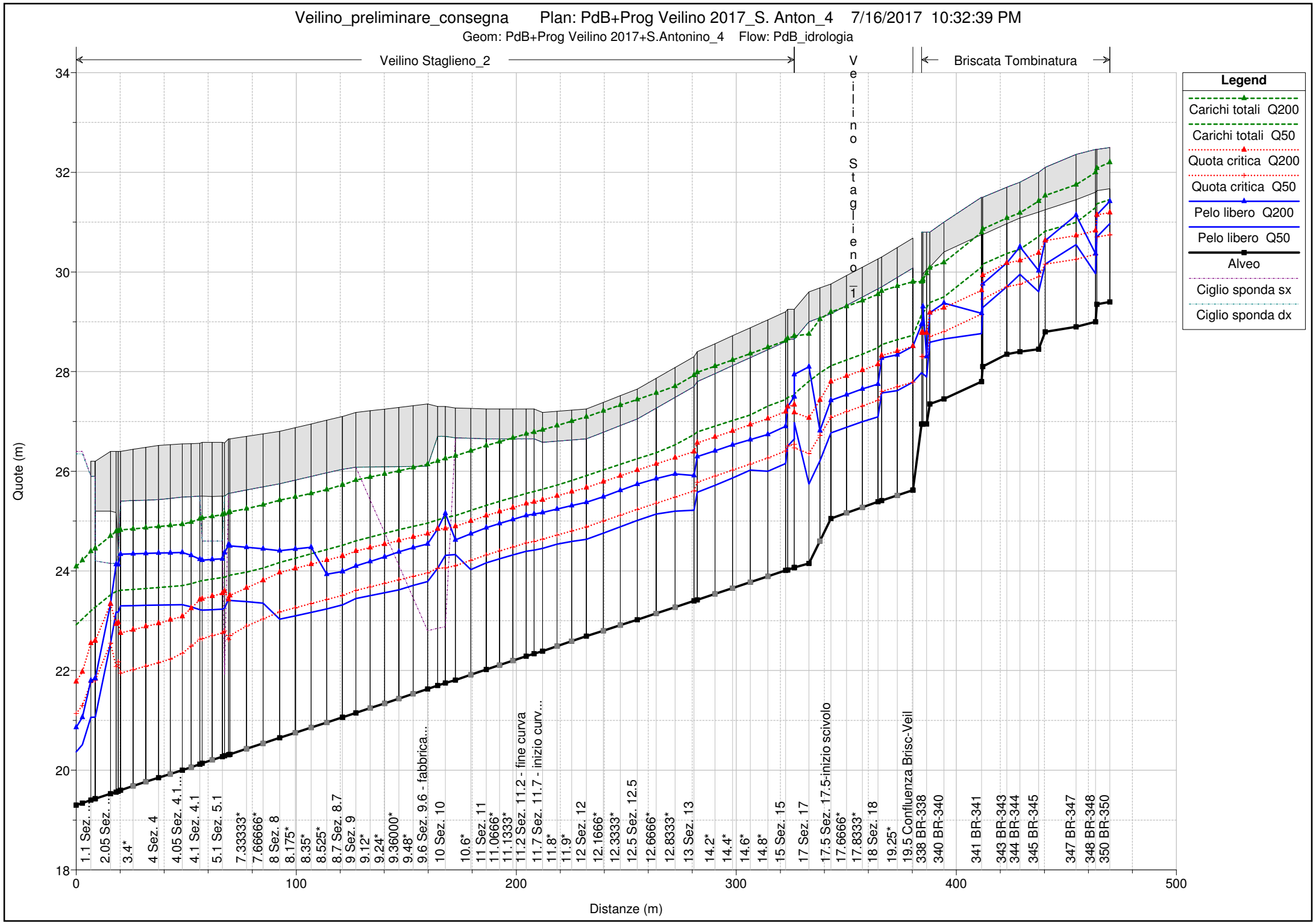
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 336 BR-336



Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM

Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
River = Briscata Reach = Tombinatura RS = 335 BR-335




Veilino_preliminare_consegna Plan: PdB+Prog Veilino 2017_S. Anton_4 7/16/2017 10:32:39 PM
Geom: PdB+Prog Veilino 2017+S.Antonino_4 Flow: PdB_idrologia
Veilino Staglieno_2
Veilino Staglieno_1
Briscata Tombinatura
Legend
Carichi totali Q200
Carichi totali Q50
Quota critica Q200
Quota critica Q50
Pelo libero Q200
Pelo libero Q50
Alveo
Ciglio sponda sx
Ciglio sponda dx
Quote (m)
Distanze (m)
34
32
30
28
26
24
22
20
18
0
100
200
300
400
500
1.1 Sez. ...
2.05 Sez. ...
3.4*
4 Sez. 4
4.05 Sez. 4.1...
4.1 Sez. 4.1
5.1 Sez. 5.1
7.33333*
7.66666*
8 Sez. 8
8.175*
8.35*
8.525*
8.7 Sez. 8.7
9 Sez. 9
9.12*
9.24*
9.36000*
9.48*
9.6 Sez. 9.6 - fabbrica...
10 Sez. 10
10.6*
11 Sez. 11
11.0666*
11.1333*
11.2 Sez. 11.2 - fine curva
11.7 Sez. 11.7 - inizio curv...
11.8*
11.9*
12 Sez. 12
12.1666*
12.3333*
12.5 Sez. 12.5
12.6666*
12.8333*
13 Sez. 13
14.2*
14.4*
14.6*
14.8*
15 Sez. 15
17 Sez. 17
17.5 Sez. 17.5-inizio scivolo
17.6666*
17.8333*
18 Sez. 18
19.25*
19.5 Confluenza Brisc-Veil
338 BR-338
340 BR-340
341 BR-341
343 BR-343
344 BR-344
345 BR-345
347 BR-347
348 BR-348
350 BR-350

HEC-RAS Plan: Prg_SAnton_4

River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	Crit W.S.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Monte	100	Q50	42.00	47.13	48.25	62.00	13.75	57.00	8.75	48.25	0.55	48.81	0.007312	3.30	12.74	11.52	1.00
Veilino	Monte	100	Q200	69.00	47.13	48.69	62.00	13.31	57.00	8.31	48.69	0.76	49.46	0.007008	3.87	17.83	11.67	1.00
Veilino	Monte	100	Q500	95.00	47.13	49.06	62.00	12.94	57.00	7.94	49.06	0.94	50.00	0.006945	4.30	22.11	11.79	1.00
Veilino	Monte	51 VEI 51	Q50	42.00	45.13	45.95	60.00	14.05	55.00	9.05	46.25	1.05	47.00	0.020029	4.55	9.24	11.42	1.61
Veilino	Monte	51 VEI 51	Q200	69.00	45.13	46.26	60.00	13.74	55.00	8.74	46.69	1.49	47.74	0.019553	5.40	12.78	11.52	1.64
Veilino	Monte	51 VEI 51	Q500	95.00	45.13	46.52	60.00	13.48	55.00	8.48	47.06	1.83	48.35	0.019016	5.99	15.86	11.61	1.64
Veilino	Monte	50 VEI 50	Q50	42.00	43.93	44.73	48.51	3.78	45.55	0.82	45.05	1.06	45.79	0.020764	4.56	9.20	11.93	1.66
Veilino	Monte	50 VEI 50	Q200	69.00	43.93	44.98	48.51	3.53	45.55	0.57	45.44	1.53	46.51	0.025042	5.48	12.58	14.05	1.85
Veilino	Monte	50 VEI 50	Q500	95.00	43.93	45.19	48.51	3.32	45.55	0.36	45.75	1.91	47.10	0.024433	6.12	15.52	14.10	1.86
Veilino	Monte	49. VEI 49	Q50	42.00	42.76	43.66	48.51	4.85	44.71	1.05	43.98	1.07	44.73	0.020418	4.59	9.15	12.10	1.68
Veilino	Monte	49. VEI 49	Q200	69.00	42.76	43.94	48.51	4.57	44.71	0.77	44.40	1.50	45.45	0.020098	5.43	12.70	12.69	1.73
Veilino	Monte	49. VEI 49	Q500	95.00	42.76	44.19	48.51	4.32	44.71	0.52	44.82	1.83	46.02	0.019480	5.99	15.85	13.19	1.74
Veilino	Monte	48. VEI 48	Q50	42.00	41.29	42.12	48.51	6.39	44.71	2.59	43.01	2.47	44.59	0.050642	6.96	6.03	7.65	2.50
Veilino	Monte	48. VEI 48	Q200	69.00	41.29	42.54	48.51	5.97	44.71	2.17	43.37	2.77	45.32	0.036149	7.38	9.35	7.94	2.17
Veilino	Monte	48. VEI 48	Q500	95.00	41.29	42.89	48.51	5.62	44.71	1.82	43.68	3.01	45.90	0.042415	7.68	12.37	11.49	2.36
Veilino	Monte	47. VEI 47	Q50	42.00	41.19	41.63	48.41	6.78	44.61	2.98	42.13	2.26	43.89	0.096989	6.67	6.30	15.44	3.33
Veilino	Monte	47. VEI 47	Q200	69.00	41.19	41.80	48.41	6.61	44.61	2.81	42.49	3.01	44.81	0.082679	7.68	8.98	15.52	3.22
Veilino	Monte	47. VEI 47	Q500	95.00	41.19	41.97	48.41	6.44	44.61	2.64	42.79	3.39	45.37	0.067969	8.16	11.64	15.60	3.02
Veilino	Monte	46. VEI 46	Q50	42.00	40.53	41.26	48.01	6.75	43.21	1.95	41.49	0.80	42.06	0.017301	3.95	10.62	15.25	1.51
Veilino	Monte	46. VEI 46	Q200	69.00	40.53	41.46	48.01	6.55	43.21	1.75	41.85	1.30	42.76	0.020769	5.04	13.68	15.35	1.71
Veilino	Monte	46. VEI 46	Q500	95.00	40.53	41.63	48.01	6.38	43.21	1.58	42.15	1.74	43.37	0.022847	5.85	16.24	15.44	1.82
Veilino	Monte	45. VEI 45	Q50	42.00	40.29	41.05	47.81	6.76	41.79	0.74	41.29	0.84	41.89	0.017293	4.06	10.35	14.33	1.53
Veilino	Monte	45. VEI 45	Q200	69.00	40.29	41.29	47.81	6.52	41.79	0.50	41.67	1.27	42.56	0.018872	4.99	13.82	14.75	1.65
Veilino	Monte	45. VEI 45	Q500	95.00	40.29	41.48	47.81	6.33	41.79	0.31	41.98	1.68	43.15	0.020475	5.74	16.55	15.07	1.75
Veilino	Monte	44.3 VEI 44.3	Q50	42.00	39.85	41.46	47.61	6.15	42.36	0.90	40.86	0.17	41.63	0.001486	1.82	23.05	15.27	0.47
Veilino	Monte	44.3 VEI 44.3	Q200	69.00	39.85	42.00	47.61	5.61	42.36	0.36	41.22	0.25	42.25	0.001545	2.20	31.42	15.35	0.49
Veilino	Monte	44.3 VEI 44.3	Q500	95.00	39.85	42.42	47.61	5.19	42.36	-0.06	41.53	0.32	42.74	0.001666	2.51	37.86	15.42	0.51
Veilino	Monte	44.2 VEI 44.2	Q50	42.00	39.85	41.17	47.61	6.44	42.36	1.19	41.05	0.43	41.60	0.004804	2.90	14.51	12.48	0.86
Veilino	Monte	44.2 VEI 44.2	Q200	69.00	39.85	41.64	47.61	5.97	42.36	0.72	41.48	0.57	42.22	0.004544	3.35	20.59	13.32	0.86
Veilino	Monte	44.2 VEI 44.2	Q500	95.00	39.85	42.04	47.61	5.57	42.36	0.32	41.89	0.67	42.71	0.004700	3.63	26.17	15.13	0.88
Veilino	Monte	44.1 VEI 44.1	Q50	42.00	39.85	41.05	47.61	6.56	42.36	1.31	41.05	0.53	41.58	0.006656	3.22	13.03	12.27	1.00
Veilino	Monte	44.1 VEI 44.1	Q200	69.00	39.85	41.48	47.61	6.13	42.36	0.88	41.48	0.71	42.19	0.006319	3.75	18.42	13.03	1.01
Veilino	Monte	44.1 VEI 44.1	Q500	95.00	39.85	41.89	47.61	5.72	42.36	0.47	41.89	0.80	42.69	0.006114	3.95	24.02	15.11	1.00
Veilino	Monte	44. VEI 44	Q50	42.00	39.85	40.58	47.61	7.03	42.36	1.78	40.86	0.96	41.54	0.023500	4.35	9.66	15.14	1.74
Veilino	Monte	44. VEI 44	Q200	69.00	39.85	40.84	47.61	6.77	42.36	1.52	41.22	1.30	42.14	0.020722	5.04	13.69	15.18	1.69
Veilino	Monte	44. VEI 44	Q500	95.00	39.85	41.08	47.61	6.53	42.36	1.28	41.53	1.54	42.62	0.018728	5.50	17.28	15.21	1.65
Veilino	Monte	43. VEI 43	Q50	42.00	38.41	38.83	47.61	8.78	42.36	3.53	39.36	2.50	41.33	0.107608	7.00	6.00	14.65	3.49
Veilino	Monte	43. VEI 43	Q200	69.00	38.41	39.05	47.61	8.56	42.36	3.31	39.73	2.89	41.93	0.073242	7.53	9.17	14.71	3.04
Veilino	Monte	43. VEI 43	Q500	95.00	38.41	39.24	47.61	8.37	42.36	3.12	40.05	3.17	42.42	0.057882	7.89	12.04	14.75	2.79
Veilino	Monte	42. VEI 42	Q50	42.00	37.71	38.51	45.41	6.90	41.71	3.20	38.72	0.79	39.30	0.015940	3.93	10.67	14.19	1.45
Veilino	Monte	42. VEI 42	Q200	69.00	37.71	38.75	45.41	6.66	41.71	2.96	39.10	1.22	39.97	0.017840	4.90	14.07	14.22	1.57
Veilino	Monte	42. VEI 42	Q500	95.00	37.71	38.94	45.41	6.47	41.71	2.77	39.41	1.62	40.56	0.019227	5.64	16.83	14.24	1.66
Veilino	Monte	41. VEI 41	Q50	42.00	37.29	38.04	45.01	6.97	41.26	3.22	38.27	0.83	38.87	0.018158	4.05	10.38	14.69	1.54
Veilino	Monte	41. VEI 41	Q200	69.00	37.29	38.28	45.01	6.73	41.26	2.98	38.64	1.24	39.52	0.018769	4.92	14.01	14.72	1.61
Veilino	Monte	41. VEI 41	Q500	95.00	37.29	38.48	45.01	6.53	41.26	2.78	38.95	1.61	40.09	0.019613	5.62	16.91	14.74	1.67

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Monte	40.2 VEI 40	Q50	42.00	36.71	38.08	43.01	4.93	40.71	2.63	37.96	0.38	38.46	0.005177	2.72	15.47	14.30	0.83
Veilino	Monte	40.2 VEI 40	Q200	69.00	36.71	38.49	43.01	4.52	40.71	2.22	38.33	0.54	39.02	0.005160	3.25	21.25	14.33	0.85
Veilino	Monte	40.2 VEI 40	Q500	95.00	36.71	38.85	43.01	4.16	40.71	1.86	38.65	0.66	39.50	0.005100	3.59	26.48	14.80	0.86
Veilino	Monte	40.11 VEI 40		Bridge														
Veilino	Monte	40.1 VEI 40	Q50	42.00	36.71	37.96	43.01	5.05	40.71	2.75	37.96	0.48	38.44	0.007589	3.06	13.71	14.29	1.00
Veilino	Monte	40.1 VEI 40	Q200	69.00	36.71	38.33	43.01	4.68	40.71	2.38	38.33	0.67	39.00	0.007215	3.62	19.08	14.32	1.00
Veilino	Monte	40.1 VEI 40	Q500	95.00	36.71	38.68	43.01	4.33	40.71	2.03	38.65	0.79	39.48	0.006656	3.95	24.06	14.34	0.97
Veilino	Monte	39. VEI 39	Q50	42.00	36.57	37.96	42.81	4.85	40.21	2.25	37.69	0.30	38.25	0.003471	2.42	17.39	14.19	0.70
Veilino	Monte	39. VEI 39	Q200	69.00	36.57	38.39	42.81	4.42	40.21	1.82	38.07	0.44	38.83	0.003640	2.93	23.57	14.25	0.73
Veilino	Monte	39. VEI 39	Q500	95.00	36.57	38.76	42.81	4.05	40.21	1.45	38.39	0.55	39.31	0.003832	3.29	28.89	14.82	0.75
Veilino	Monte	38.4	Q50	42.00	36.57	37.81	42.81	5.00	40.21	2.40	37.69	0.38	38.19	0.005175	2.74	15.32	14.17	0.84
Veilino	Monte	38.4	Q200	69.00	36.57	38.23	42.81	4.58	40.21	1.98	38.07	0.54	38.77	0.005035	3.25	21.22	14.23	0.85
Veilino	Monte	38.4	Q500	95.00	36.57	38.58	42.81	4.23	40.21	1.63	38.39	0.67	39.25	0.004947	3.62	26.26	14.28	0.85
Veilino	Monte	38.3	Q50	42.00	36.57	37.81	40.81	3.00	40.21	2.40	37.69	0.38	38.19	0.005177	2.74	15.32	14.17	0.84
Veilino	Monte	38.3	Q200	69.00	36.57	38.23	40.81	2.58	40.21	1.98	38.07	0.54	38.77	0.005036	3.25	21.22	14.23	0.85
Veilino	Monte	38.3	Q500	95.00	36.57	38.58	40.81	2.23	40.21	1.63	38.40	0.67	39.25	0.004948	3.62	26.26	14.28	0.85
Veilino	Monte	38.2	Q50	42.00	36.57	37.75	40.81	3.06	40.21	2.46	37.69	0.43	38.18	0.006205	2.90	14.46	14.16	0.92
Veilino	Monte	38.2	Q200	69.00	36.57	38.15	40.81	2.66	40.21	2.06	38.07	0.60	38.75	0.005945	3.43	20.11	14.22	0.92
Veilino	Monte	38.2	Q500	95.00	36.57	38.49	40.81	2.32	40.21	1.72	38.40	0.74	39.23	0.005799	3.81	24.93	14.26	0.92
Veilino	Monte	38.1	Q50	42.00	36.57	37.69	42.81	5.12	40.21	2.52	37.69	0.48	38.18	0.007465	3.08	13.64	14.15	1.00
Veilino	Monte	38.1	Q200	69.00	36.57	38.07	42.81	4.74	40.21	2.14	38.07	0.67	38.74	0.007051	3.62	19.04	14.21	1.00
Veilino	Monte	38.1	Q500	95.00	36.57	38.39	42.81	4.42	40.21	1.82	38.39	0.83	39.22	0.006904	4.03	23.56	14.25	1.00
Veilino	Monte	38. VEI 38	Q50	42.00	36.07	36.89	42.41	5.52	39.66	2.77	37.11	0.81	37.71	0.016348	4.00	10.51	13.93	1.47
Veilino	Monte	38. VEI 38	Q200	69.00	36.07	37.20	42.41	5.21	39.66	2.46	37.50	1.10	38.31	0.014809	4.66	14.82	13.98	1.44
Veilino	Monte	38. VEI 38	Q500	95.00	36.07	37.47	42.41	4.94	39.66	2.19	37.82	1.34	38.80	0.013883	5.12	18.55	14.01	1.42
Veilino	Monte	37. VEI 37	Q50	42.00	34.79	35.32	42.41	7.09	39.66	4.34	35.84	2.21	37.53	0.081875	6.59	6.38	13.84	3.10
Veilino	Monte	37. VEI 37	Q200	69.00	34.79	35.56	42.41	6.85	39.66	4.10	36.22	2.57	38.13	0.056669	7.10	9.71	13.87	2.71
Veilino	Monte	37. VEI 37	Q500	95.00	34.79	35.77	42.41	6.64	39.66	3.89	36.54	2.85	38.62	0.045687	7.48	12.70	13.89	2.50
Veilino	Monte	36. VEI 36	Q50	42.00	34.23	35.15	41.91	6.76	39.01	3.86	35.29	0.66	35.82	0.011883	3.61	11.63	14.04	1.27
Veilino	Monte	36. VEI 36	Q200	69.00	34.23	35.40	41.91	6.51	39.01	3.61	35.67	1.06	36.46	0.013858	4.55	15.16	14.07	1.40
Veilino	Monte	36. VEI 36	Q500	95.00	34.23	35.60	41.91	6.31	39.01	3.41	36.00	1.42	37.03	0.015397	5.29	17.97	14.09	1.49
Veilino	Monte	35.6	Q50	42.00	33.81	35.20	41.91	6.71	38.29	3.09	34.77	0.22	35.42	0.002163	2.06	20.37	15.05	0.57
Veilino	Monte	35.6	Q200	69.00	33.81	35.65	41.91	6.26	38.29	2.64	35.14	0.33	35.98	0.002420	2.55	27.06	15.15	0.61
Veilino	Monte	35.6	Q500	95.00	33.81	36.01	41.91	5.90	38.29	2.28	35.45	0.43	36.44	0.002617	2.92	32.52	15.23	0.64
Veilino	Monte	35.5	Q50	42.00	33.81	35.21	36.36	1.15	38.29	3.08	34.77	0.21	35.42	0.002071	2.03	20.68	15.43	0.56
Veilino	Monte	35.5	Q200	69.00	33.81	35.66	36.36	0.70	38.29	2.63	35.13	0.32	35.97	0.002274	2.50	27.65	15.65	0.60
Veilino	Monte	35.5	Q500	95.00	33.81	36.02	36.36	0.34	38.29	2.27	35.44	0.41	36.43	0.002422	2.84	33.41	15.83	0.62
Veilino	Monte	35.4	Q50	42.00	33.81	35.20	36.36	1.16	38.29	3.09	34.77	0.21	35.41	0.002099	2.04	20.59	15.42	0.56
Veilino	Monte	35.4	Q200	69.00	33.81	35.65	36.36	0.71	38.29	2.64	35.13	0.32	35.97	0.002300	2.50	27.55	15.65	0.60
Veilino	Monte	35.4	Q500	95.00	33.81	36.02	36.36	0.34	38.29	2.27	35.44	0.41	36.43	0.002447	2.85	33.30	15.83	0.63
Veilino	Monte	35.35	Q50	42.00	33.81	35.20	36.63	1.43	38.29	3.09	34.77	0.21	35.41	0.002115	2.05	20.53	15.37	0.56
Veilino	Monte	35.35	Q200	69.00	33.81	35.65	36.63	0.98	38.29	2.64	35.13	0.32	35.97	0.002324	2.51	27.45	15.58	0.60
Veilino	Monte	35.35	Q500	95.00	33.81	36.01	36.63	0.62	38.29	2.28	35.44	0.42	36.43	0.002480	2.87	33.14	15.74	0.63
Veilino	Monte	35.3 VEI 35.3	Q50	42.00	33.81	35.16	36.63	1.47	38.29	3.13	34.77	0.23	35.39	0.002344	2.11	19.87	15.35	0.59
Veilino	Monte	35.3 VEI 35.3	Q200	69.00	33.81	35.60	36.63	1.03	38.29	2.69	35.13	0.34	35.94	0.002536	2.59	26.68	15.55	0.63

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Monte	35.3 VEI 35.3	Q500	95.00	33.81	35.96	36.63	0.67	38.29	2.33	35.44	0.44	36.40	0.002692	2.95	32.25	15.72	0.66
Veilino	Monte	35.2 VEI 35.2	Q50	42.00	33.81	34.99	36.63	1.64	38.29	3.30	34.89	0.38	35.37	0.005385	2.74	15.35	15.03	0.86
Veilino	Monte	35.2 VEI 35.2	Q200	69.00	33.81	35.41	36.63	1.22	38.29	2.88	35.26	0.52	35.92	0.004936	3.19	21.65	15.28	0.85
Veilino	Monte	35.2 VEI 35.2	Q500	95.00	33.81	35.73	36.63	0.90	38.29	2.56	35.57	0.65	36.38	0.004904	3.56	26.68	15.48	0.87
Veilino	Monte	35.1 VEI 35.1	Q50	42.00	33.81	34.89	36.63	1.74	38.29	3.40	34.89	0.46	35.36	0.007336	3.02	13.92	14.97	1.00
Veilino	Monte	35.1 VEI 35.1	Q200	69.00	33.81	35.26	36.63	1.37	38.29	3.03	35.26	0.64	35.90	0.006877	3.54	19.47	15.20	1.00
Veilino	Monte	35.1 VEI 35.1	Q500	95.00	33.81	35.57	36.63	1.06	38.29	2.72	35.57	0.79	36.36	0.006638	3.93	24.19	15.39	1.00
Veilino	Monte	35. VEI 35	Q50	42.00	33.81	34.57	36.63	2.06	38.29	3.72	34.77	0.76	35.33	0.015883	3.86	10.87	15.08	1.45
Veilino	Monte	35. VEI 35	Q200	69.00	33.81	34.89	36.63	1.74	38.29	3.40	35.13	0.98	35.87	0.013286	4.40	15.70	15.22	1.38
Veilino	Monte	35. VEI 35	Q500	95.00	33.81	35.16	36.63	1.47	38.29	3.13	35.44	1.16	36.32	0.011871	4.77	19.93	15.35	1.33
Veilino	Monte	34. VEI 34	Q50	42.00	32.65	33.17	36.63	3.46	38.29	5.12	33.66	1.99	35.17	0.074697	6.26	6.71	14.84	2.97
Veilino	Monte	34. VEI 34	Q200	69.00	32.65	33.41	36.63	3.22	38.29	4.88	34.02	2.30	35.71	0.050794	6.71	10.28	14.92	2.58
Veilino	Monte	34. VEI 34	Q500	95.00	32.65	33.63	36.63	3.00	38.29	4.66	34.33	2.53	36.16	0.040386	7.05	13.48	15.00	2.37
Veilino	Monte	33. VEI 33	Q50	42.00	32.41	32.95	36.41	3.46	37.97	5.02	33.39	1.68	34.63	0.059810	5.74	7.32	15.64	2.68
Veilino	Monte	33. VEI 33	Q200	69.00	32.41	33.16	36.41	3.25	37.97	4.81	33.74	2.19	35.35	0.049816	6.56	10.53	15.71	2.56
Veilino	Monte	33. VEI 33	Q500	95.00	32.41	33.35	36.41	3.06	37.97	4.62	34.04	2.53	35.87	0.042650	7.05	13.48	15.78	2.43
Veilino	Monte	32. VEI 32	Q50	42.00	32.16	32.63	36.41	3.78	37.97	5.34	33.10	1.94	34.57	0.076067	6.17	6.81	15.59	2.98
Veilino	Monte	32. VEI 32	Q200	69.00	32.16	32.83	36.41	3.58	37.97	5.14	33.45	2.47	35.29	0.060530	6.96	9.92	15.66	2.79
Veilino	Monte	32. VEI 32	Q500	95.00	32.16	33.01	36.41	3.40	37.97	4.96	33.75	2.81	35.82	0.050692	7.43	12.78	15.72	2.63
Veilino	Monte	31. VEI 31	Q50	42.00	31.95	32.62	33.77	1.15	37.71	5.09	33.05	1.52	34.14	0.042722	5.47	7.68	13.35	2.30
Veilino	Monte	31. VEI 31	Q200	69.00	31.95	32.86	33.77	0.91	37.71	4.85	33.44	2.03	34.89	0.037112	6.31	10.94	13.37	2.23
Veilino	Monte	31. VEI 31	Q500	95.00	31.95	33.09	33.77	0.68	37.71	4.62	33.90	2.34	35.43	0.031966	6.77	14.03	13.39	2.11
Veilino	Monte	30 VEI 30	Q50	42.00	31.92	33.03	35.90	2.87	35.90	2.87	33.03	0.52	33.54	0.007422	3.18	13.20	12.84	1.00
Veilino	Monte	30 VEI 30	Q200	69.00	31.92	33.43	35.90	2.47	35.90	2.47	33.43	0.72	34.15	0.007096	3.75	18.41	12.84	1.00
Veilino	Monte	30 VEI 30	Q500	95.00	31.92	33.54	35.90	2.36	35.90	2.36	33.77	1.17	34.71	0.010747	4.80	19.80	12.84	1.23
Veilino	Monte	29 VEI 29	Q50	42.00	30.97	31.60	35.90	4.30	35.90	4.30	32.08	1.80	33.40	0.051594	5.94	7.07	12.34	2.50
Veilino	Monte	29 VEI 29	Q200	69.00	30.97	33.45	35.90	2.45	35.90	2.45	32.50	0.27	33.72	0.001588	2.29	30.19	12.84	0.48
Veilino	Monte	29 VEI 29	Q500	95.00	30.97	34.07	35.90	1.83	35.90	1.83	32.84	0.32	34.38	0.001513	2.49	38.13	12.84	0.46
Veilino	Monte	28 VEI 28	Q50	42.00	30.75	32.13	35.87	3.74	35.87	3.74	32.13	0.67	32.80	0.007947	3.64	11.54	8.55	1.00
Veilino	Monte	28 VEI 28	Q200	69.00	30.75	32.66	35.87	3.21	35.87	3.21	32.66	0.94	33.60	0.008020	4.29	16.07	8.55	1.00
Veilino	Monte	28 VEI 28	Q500	95.00	30.75	33.13	35.87	2.74	35.87	2.74	33.13	1.12	34.25	0.008154	4.69	20.26	9.05	1.00
Veilino	Monte	27 VEI 27	Q50	42.00	29.56	30.32	35.87	5.55	35.87	5.55	30.94	2.30	32.63	0.052787	6.72	6.25	8.55	2.51
Veilino	Monte	27 VEI 27	Q200	69.00	29.56	30.70	35.87	5.17	35.87	5.17	31.47	2.71	33.41	0.039392	7.30	9.46	8.55	2.21
Veilino	Monte	27 VEI 27	Q500	95.00	29.56	31.04	35.87	4.83	35.87	4.83	31.92	3.01	34.05	0.033297	7.69	12.35	8.55	2.04
Veilino	Monte	26 VEI 26	Q50	42.00	29.40	30.29	35.54	5.25	35.54	5.25	30.88	2.06	32.36	0.040123	6.36	6.60	7.68	2.19
Veilino	Monte	26 VEI 26	Q200	69.00	29.40	30.73	35.54	4.81	35.54	4.81	31.45	2.45	33.18	0.031165	6.94	9.94	7.68	1.95
Veilino	Monte	26 VEI 26	Q500	95.00	29.40	31.14	35.54	4.40	35.54	4.40	31.96	2.70	33.83	0.026354	7.27	13.06	7.68	1.78
Veilino	Monte	25 VEI 25	Q50	42.00	28.87	29.66	35.12	5.46	35.54	5.88	30.35	2.61	32.28	0.058092	7.16	5.86	7.68	2.62
Veilino	Monte	25 VEI 25	Q200	69.00	28.87	30.06	35.12	5.06	35.54	5.48	30.92	3.04	33.10	0.043160	7.73	8.93	7.68	2.29
Veilino	Monte	25 VEI 25	Q500	95.00	28.87	30.43	35.12	4.69	35.54	5.11	31.39	3.32	33.75	0.035875	8.08	11.76	7.68	2.08
Veilino	Monte	24 VEI 24	Q50	42.00	28.07	29.22	34.30	5.08	34.30	5.08	29.82	2.05	31.26	0.033327	6.34	6.63	6.22	1.96
Veilino	Monte	24 VEI 24	Q200	69.00	28.07	29.72	34.30	4.58	34.30	4.58	30.51	2.55	32.27	0.029023	7.08	9.75	6.22	1.81
Veilino	Monte	24 VEI 24	Q500	95.00	28.07	30.21	34.30	4.09	34.30	4.09	31.04	2.80	33.01	0.025249	7.41	12.82	6.22	1.65
Veilino	Monte	23 VEI 23	Q50	42.00	26.89	28.07	31.09	3.02	31.09	3.02	28.85	2.91	30.98	0.060131	7.56	5.55	5.95	2.50
Veilino	Monte	23 VEI 23	Q200	69.00	26.89	28.54	31.09	2.55	31.09	2.55	29.52	3.47	32.01	0.048104	8.26	8.35	5.95	2.22

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Monte	23 VEI 23	Q500	95.00	26.89	28.99	31.09	2.10	31.09	2.10	30.10	3.78	32.77	0.040961	8.61	11.03	5.95	2.02
Veilino	Monte	22 VEI 22	Q50	42.00	26.61	28.09	30.68	2.59	30.68	2.59	28.60	1.75	29.84	0.028114	5.86	7.17	5.91	1.70
Veilino	Monte	22 VEI 22	Q200	69.00	26.61	28.58	30.68	2.10	30.68	2.10	29.28	2.40	30.98	0.028305	6.87	10.05	5.91	1.68
Veilino	Monte	22 VEI 22	Q500	95.00	26.61	29.06	30.68	1.62	30.68	1.62	29.85	2.77	31.83	0.026516	7.37	12.89	5.91	1.59
Veilino	Monte	21 VEI 21	Q50	42.00	26.58	27.85	30.62	2.77	30.62	2.77	28.42	1.92	29.77	0.031245	6.14	6.84	6.00	1.84
Veilino	Monte	21 VEI 21	Q200	69.00	26.58	28.32	30.62	2.30	30.62	2.30	29.09	2.59	30.91	0.030469	7.13	9.68	6.00	1.79
Veilino	Monte	21 VEI 21	Q500	95.00	26.58	28.78	30.62	1.84	30.62	1.84	29.66	2.97	31.76	0.028423	7.64	12.43	6.00	1.69
Veilino	Monte	20.5	Q50	42.00	26.40	27.86	30.37	2.51	30.37	2.51	28.25	1.44	29.30	0.020445	5.32	7.90	6.00	1.48
Veilino	Monte	20.5	Q200	69.00	26.40	28.34	30.37	2.03	30.37	2.03	28.92	2.09	30.42	0.022447	6.40	10.78	6.00	1.52
Veilino	Monte	20.5	Q500	95.00	26.40	28.82	30.37	1.55	30.37	1.55	29.49	2.46	31.28	0.021932	6.96	13.66	6.00	1.47
Veilino	Monte	20 VEI 20	Q50	42.00	25.67	27.09	30.16	3.07	30.16	3.07	27.67	1.96	29.04	0.033614	6.19	6.78	6.00	1.86
Veilino	Monte	20 VEI 20	Q200	69.00	25.67	27.57	30.16	2.59	30.16	2.59	28.34	2.60	30.16	0.031974	7.14	9.67	6.00	1.80
Veilino	Monte	20 VEI 20	Q500	95.00	25.67	28.02	30.16	2.14	30.16	2.14	28.90	3.01	31.02	0.030046	7.68	12.36	6.00	1.71
Veilino	Monte	19.7	Q50	42.00	25.62	27.09	30.08	2.99	30.08	2.99	27.62	1.78	28.87	0.029217	5.91	7.11	6.00	1.73
Veilino	Monte	19.7	Q200	69.00	25.62	27.58	30.08	2.50	30.08	2.50	28.29	2.42	30.00	0.028909	6.89	10.01	6.00	1.70
Veilino	Monte	19.7	Q500	95.00	25.62	29.93	30.08	0.15	30.08	0.15	28.85	0.79	30.72	0.004929	3.94	24.11	6.00	0.63
Veilino	Staglieno_1	19.5	Q50	48.00	25.62	27.79	30.08	2.29	30.08	2.29	27.79	0.94	28.73	0.010169	4.29	11.18	5.95	1.00
Veilino	Staglieno_1	19.5	Q200	78.00	25.62	28.51	30.08	1.57	30.08	1.57	28.51	1.30	29.80	0.010890	5.05	15.45	5.95	1.00
Veilino	Staglieno_1	19.5	Q500	107.00	25.62	29.12	30.08	0.96	30.08	0.96	29.12	1.60	30.72	0.011597	5.61	19.08	5.95	1.00
Veilino	Staglieno_1	19 VEI 19	Q50	48.00	25.41	27.57	29.70	2.13	29.70	2.13	27.60	0.97	28.54	0.010753	4.37	10.99	5.95	1.03
Veilino	Staglieno_1	19 VEI 19	Q200	78.00	25.41	28.27	29.70	1.43	29.70	1.43	28.32	1.35	29.62	0.011531	5.14	15.17	5.95	1.03
Veilino	Staglieno_1	19 VEI 19	Q500	107.00	25.41	28.89	29.70	0.81	29.70	0.81	28.93	1.65	30.53	0.012074	5.68	18.83	5.95	1.02
Veilino	Staglieno_1	18 VEI 18	Q50	48.00	25.39	27.09	29.66	2.57	29.66	2.57	27.42	1.39	28.48	0.017176	5.22	9.19	5.95	1.34
Veilino	Staglieno_1	18 VEI 18	Q200	78.00	25.39	27.75	29.66	1.91	29.66	1.91	28.14	1.80	29.55	0.016575	5.95	13.12	5.95	1.28
Veilino	Staglieno_1	18 VEI 18	Q500	107.00	25.39	28.32	29.66	1.34	29.66	1.34	28.75	2.14	30.46	0.016622	6.48	16.50	5.95	1.24
Veilino	Staglieno_1	17.5	Q50	48.00	25.05	26.77	29.16	2.39	29.16	2.39	27.08	1.35	28.12	0.016423	5.14	9.33	5.95	1.31
Veilino	Staglieno_1	17.5	Q200	78.00	25.05	27.42	29.16	1.74	29.16	1.74	27.80	1.77	29.20	0.016166	5.90	13.23	5.95	1.26
Veilino	Staglieno_1	17.5	Q500	107.00	25.05	27.99	29.16	1.17	29.16	1.17	28.41	2.12	30.11	0.016343	6.44	16.60	5.95	1.23
Veilino	Staglieno_1	17 VEI 17	Q50	48.00	24.15	25.74	29.00	3.26	29.00	3.26	26.36	2.06	27.81	0.029667	6.37	7.54	5.40	1.72
Veilino	Staglieno_1	17 VEI 17	Q200	78.00	24.15	28.10	29.00	0.90	29.00	0.90	27.07	0.66	28.76	0.004453	3.60	21.64	6.00	0.61
Veilino	Staglieno_1	17 VEI 17	Q500	107.00	24.15	28.97	29.00	0.03	29.00	0.03	27.68	0.81	29.78	0.004769	3.98	26.88	6.00	0.60
Veilino	Staglieno_1	16.5	Q50	48.00	24.07	26.98	28.65	1.67	28.65	1.67	26.47	0.58	27.55	0.005440	3.36	14.27	6.00	0.70
Veilino	Staglieno_1	16.5	Q200	78.00	24.07	27.94	28.65	0.71	28.65	0.71	27.18	0.77	28.71	0.005644	3.89	20.07	6.00	0.68
Veilino	Staglieno_1	16.5	Q500	107.00	24.07	28.73	28.65	-0.08	28.65	-0.08	27.79	0.99	29.71	0.010004	4.40	24.31		0.65
Veilino	Staglieno_2	16.2	Q50	51.00	24.07	26.65	28.65	2.00	28.65	2.00	26.54	0.88	27.52	0.009363	4.15	12.28	6.00	0.93
Veilino	Staglieno_2	16.2	Q200	85.00	24.07	27.50	28.65	1.15	28.65	1.15	27.33	1.22	28.71	0.009886	4.89	17.38	6.00	0.92
Veilino	Staglieno_2	16.2	Q500	116.00	24.07	28.16	28.65	0.49	28.65	0.49	27.96	1.50	29.66	0.010561	5.43	21.37	6.00	0.92
Veilino	Staglieno_2	16 VEI 16	Q50	51.00	24.02	26.51	28.65	2.14	28.65	2.14	26.51	0.97	27.48	0.010918	4.37	11.66	6.00	1.00
Veilino	Staglieno_2	16 VEI 16	Q200	85.00	24.02	27.30	28.65	1.35	28.65	1.35	27.30	1.37	28.67	0.011651	5.18	16.40	6.00	1.00
Veilino	Staglieno_2	16 VEI 16	Q500	116.00	24.02	27.93	28.65	0.72	28.65	0.72	27.93	1.68	29.61	0.012342	5.74	20.19	6.00	1.00
Veilino	Staglieno_2	15 VEI 15	Q50	51.00	24.01	26.15	28.60	2.45	28.60	2.45	26.41	1.29	27.44	0.015883	5.02	10.15	6.00	1.23
Veilino	Staglieno_2	15 VEI 15	Q200	85.00	24.01	26.90	28.60	1.70	28.60	1.70	27.20	1.72	28.62	0.015642	5.81	14.64	6.00	1.19
Veilino	Staglieno_2	15 VEI 15	Q500	116.00	24.01	27.51	28.60	1.09	28.60	1.09	27.83	2.06	29.56	0.015881	6.35	18.26	6.00	1.16
Veilino	Staglieno_2	14 VEI 14	Q50	51.00	23.42	25.58	27.80	2.22	27.80	2.22	25.78	1.21	26.79	0.014418	4.88	10.46	6.00	1.18
Veilino	Staglieno_2	14 VEI 14	Q200	85.00	23.42	26.29	27.80	1.51	27.80	1.51	26.57	1.69	27.99	0.015168	5.77	14.74	6.00	1.17

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Staglieno_2	14 VEI 14	Q500	116.00	23.42	26.88	27.80	0.92	27.80	0.92	27.20	2.06	28.94	0.015778	6.36	18.24	6.00	1.16
Veilino	Staglieno_2	13 VEI 13	Q50	51.00	23.40	25.22	27.70	2.48	27.70	2.48	25.61	1.52	26.73	0.019173	5.46	9.35	6.00	1.40
Veilino	Staglieno_2	13 VEI 13	Q200	85.00	23.40	25.91	27.70	1.79	27.70	1.79	26.39	2.01	27.93	0.018640	6.29	13.52	6.00	1.34
Veilino	Staglieno_2	13 VEI 13	Q500	116.00	23.40	26.48	27.70	1.22	27.70	1.22	27.02	2.39	28.87	0.018721	6.85	16.93	6.00	1.30
Veilino	Staglieno_2	12.5	Q50	51.00	23.02	25.01	27.05	2.04	27.05	2.04	25.23	1.24	26.25	0.014277	4.93	10.35	6.00	1.20
Veilino	Staglieno_2	12.5	Q200	85.00	23.02	25.74	27.05	1.31	27.05	1.31	26.02	1.70	27.44	0.014731	5.78	14.72	6.00	1.18
Veilino	Staglieno_2	12.5	Q500	116.00	23.02	26.35	27.05	0.70	27.05	0.70	26.65	2.04	28.38	0.015054	6.32	18.35	6.00	1.15
Veilino	Staglieno_2	12 VEI 12	Q50	51.00	22.69	24.63	26.65	2.02	26.65	2.02	24.88	1.28	25.91	0.014845	5.01	10.18	6.00	1.23
Veilino	Staglieno_2	12 VEI 12	Q200	85.00	22.69	25.38	26.65	1.27	26.65	1.27	25.67	1.71	27.09	0.014783	5.80	14.65	6.00	1.18
Veilino	Staglieno_2	12 VEI 12	Q500	116.00	22.69	26.02	26.65	0.63	26.65	0.63	26.30	2.01	28.02	0.014671	6.28	18.48	6.00	1.14
Veilino	Staglieno_2	11.7	Q50	51.00	22.39	24.45	26.58	2.13	26.58	2.13	24.64	1.19	25.64	0.013587	4.83	10.56	6.00	1.16
Veilino	Staglieno_2	11.7	Q200	85.00	22.39	25.17	26.58	1.41	26.58	1.41	25.42	1.66	26.83	0.014402	5.71	14.88	6.00	1.16
Veilino	Staglieno_2	11.7	Q500	116.00	22.39	25.80	26.58	0.78	26.58	0.78	26.06	1.96	27.77	0.014448	6.21	18.68	6.00	1.12
Veilino	Staglieno_2	11.5	Q50	51.00	22.34	24.42	26.65	2.23	26.65	2.23	24.59	1.18	25.59	0.013476	4.81	10.61	6.00	1.15
Veilino	Staglieno_2	11.5	Q200	85.00	22.34	25.14	26.65	1.51	26.65	1.51	25.38	1.65	26.79	0.014292	5.69	14.94	6.00	1.15
Veilino	Staglieno_2	11.5	Q500	116.00	22.34	25.74	26.65	0.91	26.65	0.91	26.01	1.99	27.73	0.014804	6.26	18.54	6.00	1.14
Veilino	Staglieno_2	11.2	Q50	51.00	22.29	24.39	26.65	2.26	26.65	2.26	24.56	1.16	25.56	0.013284	4.78	10.67	6.00	1.14
Veilino	Staglieno_2	11.2	Q200	85.00	22.29	25.11	26.65	1.54	26.65	1.54	25.35	1.63	26.75	0.014149	5.66	15.01	6.00	1.14
Veilino	Staglieno_2	11.2	Q500	116.00	22.29	25.70	26.65	0.95	26.65	0.95	25.98	1.99	27.70	0.014825	6.26	18.54	6.00	1.14
Veilino	Staglieno_2	11 VEI 11	Q50	51.00	22.02	24.16	26.65	2.49	26.65	2.49	24.32	1.15	25.32	0.013260	4.76	10.72	6.00	1.14
Veilino	Staglieno_2	11 VEI 11	Q200	85.00	22.02	24.87	26.65	1.78	26.65	1.78	25.11	1.65	26.51	0.014437	5.69	14.95	6.00	1.15
Veilino	Staglieno_2	11 VEI 11	Q500	116.00	22.02	25.43	26.65	1.22	26.65	1.22	25.74	2.04	27.47	0.015447	6.33	18.31	6.00	1.16
Veilino	Staglieno_2	10.2	Q50	51.00	21.81	24.33	26.67	2.34	26.67	2.34	24.11	0.78	25.11	0.007656	3.92	13.00	6.00	0.85
Veilino	Staglieno_2	10.2	Q200	85.00	21.81	24.62	26.67	2.05	26.67	2.05	24.90	1.68	26.31	0.014872	5.75	14.78	6.00	1.17
Veilino	Staglieno_2	10.2	Q500	116.00	21.81	25.85	26.67	0.82	26.67	0.82	25.52	1.40	27.25	0.009293	5.24	22.16	6.00	0.87
Veilino	Staglieno_2	10 VEI 10	Q50	51.00	21.75	24.31	22.88	-1.43	26.70	2.39	24.06	0.76	25.07	0.006136	3.87	13.26	6.11	0.83
Veilino	Staglieno_2	10 VEI 10	Q200	85.00	21.75	25.16	22.88	-2.28	26.70	1.54	24.85	1.10	26.26	0.006433	4.65	18.45	6.18	0.85
Veilino	Staglieno_2	10 VEI 10	Q500	116.00	21.75	25.84	22.88	-2.96	26.70	0.86	25.48	1.36	27.20	0.006612	5.18	22.71	6.23	0.86
Veilino	Staglieno_2	9.8	Q50	51.00	21.70	24.05	22.85	-1.20	26.70	2.65	24.05	0.97	25.02	0.008925	4.37	11.73	6.09	1.00
Veilino	Staglieno_2	9.8	Q200	85.00	21.70	24.84	22.85	-1.99	26.70	1.86	24.84	1.36	26.20	0.008877	5.18	16.56	6.16	1.00
Veilino	Staglieno_2	9.8	Q500	116.00	21.70	25.70	22.85	-2.85	26.70	1.00	25.47	1.47	27.17	0.007390	5.37	21.88	6.22	0.90
Veilino	Staglieno_2	9.6	Q50	51.00	21.63	23.79	22.80	-0.99	26.10	2.31	23.96	1.17	24.96	0.011897	4.79	10.68	6.09	1.15
Veilino	Staglieno_2	9.6	Q200	85.00	21.63	24.54	22.80	-1.74	26.10	1.56	24.75	1.60	26.14	0.011242	5.60	15.29	6.16	1.13
Veilino	Staglieno_2	9.6	Q500	116.00	21.63	25.74	22.80	-2.94	26.10	0.36	25.38	1.36	27.10	0.006639	5.17	22.75	6.27	0.86
Veilino	Staglieno_2	9 VEI 9	Q50	51.00	21.15	23.45	26.08	2.63	26.08	2.63	23.61	1.16	24.60	0.013827	4.76	10.71	6.00	1.14
Veilino	Staglieno_2	9 VEI 9	Q200	85.00	21.15	24.10	26.08	1.98	26.08	1.98	24.40	1.72	25.82	0.015910	5.81	14.62	6.00	1.19
Veilino	Staglieno_2	9 VEI 9	Q500	116.00	21.15	25.57	26.08	0.51	26.08	0.51	25.03	1.24	26.82	0.008236	4.94	23.47	6.00	0.80
Veilino	Staglieno_2	8.8	Q50	51.00	21.06	23.32	26.04	2.72	26.04	2.72	23.51	1.20	24.51	0.014504	4.85	10.53	6.00	1.17
Veilino	Staglieno_2	8.8	Q200	85.00	21.06	23.99	26.04	2.05	26.04	2.05	24.30	1.74	25.73	0.016053	5.84	14.56	6.00	1.20
Veilino	Staglieno_2	8.8	Q500	116.00	21.06	25.56	26.04	0.48	26.04	0.48	24.93	1.19	26.75	0.007743	4.83	24.01	6.00	0.77
Veilino	Staglieno_2	8.7	Q50	51.00	21.06	23.32	26.04	2.72	26.04	2.72	23.51	1.19	24.51	0.014459	4.84	10.54	6.00	1.17
Veilino	Staglieno_2	8.7	Q200	85.00	21.06	23.99	26.04	2.05	26.04	2.05	24.30	1.74	25.73	0.016053	5.84	14.56	6.00	1.20
Veilino	Staglieno_2	8.7	Q500	116.00	21.06	25.56	26.04	0.48	26.04	0.48	24.93	1.19	26.75	0.007749	4.83	24.00	6.00	0.77
Veilino	Staglieno_2	8 VEI 8	Q50	51.00	20.65	23.03	25.75	2.72	25.75	2.72	23.18	1.14	24.17	0.013788	4.73	10.79	6.00	1.13
Veilino	Staglieno_2	8 VEI 8	Q200	85.00	20.65	24.41	25.75	1.34	25.75	1.34	23.97	1.02	25.42	0.007827	4.47	19.04	6.00	0.80

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Staglieno_2	8 VEI 8	Q500	116.00	20.65	25.43	25.75	0.32	25.75	0.32	24.60	1.08	26.51	0.006927	4.61	25.19	6.00	0.72
Veilino	Staglieno_2	7 VEI 7	Q50	51.00	20.32	23.41	25.56	2.15	25.56	2.15	22.70	0.51	23.91	0.004440	3.16	16.16	6.46	0.64
Veilino	Staglieno_2	7 VEI 7	Q200	85.00	20.32	24.50	25.56	1.06	25.56	1.06	23.51	0.68	25.18	0.004551	3.66	23.25	6.46	0.62
Veilino	Staglieno_2	7 VEI 7	Q500	116.00	20.32	25.52	25.56	0.04	25.56	0.04	24.10	0.77	26.29	0.004386	3.89	29.84	6.46	0.58
Veilino	Staglieno_2	6.7	Q50	51.00	20.31	23.43	25.56	2.13	25.56	2.13	22.62	0.47	23.90	0.003896	3.03	16.85	6.46	0.60
Veilino	Staglieno_2	6.7	Q200	85.00	20.31	24.53	25.56	1.03	25.56	1.03	23.43	0.64	25.17	0.004164	3.55	23.92	6.46	0.59
Veilino	Staglieno_2	6.7	Q500	116.00	20.31	25.54	25.56	0.02	25.56	0.02	24.03	0.74	26.28	0.004102	3.80	30.49	6.46	0.56
Veilino	Staglieno_2	6 VEI 6	Q50	51.00	20.29	23.25	21.92	-1.33	25.50	2.24	22.80	0.62	23.87	0.004992	3.50	14.81	6.52	0.72
Veilino	Staglieno_2	6 VEI 6	Q200	85.00	20.29	24.37	21.92	-2.45	25.50	1.13	23.59	0.78	25.15	0.004376	3.95	22.22	6.70	0.67
Veilino	Staglieno_2	6 VEI 6	Q500	116.00	20.29	25.41	21.92	-3.49	25.50	0.09	24.20	0.85	26.26	0.003810	4.13	29.20	6.70	0.62
Veilino	Staglieno_2	5.1 VEI 6	Q50	51.00	20.27	23.23	24.60	1.37	24.60	1.37	22.75	0.64	23.87	0.005915	3.54	14.42	5.88	0.72
Veilino	Staglieno_2	5.1 VEI 6	Q200	85.00	20.27	24.24	24.60	0.36	24.60	0.36	23.55	0.89	25.13	0.006434	4.17	20.37	5.88	0.72
Veilino	Staglieno_2	5.1 VEI 6	Q500	116.00	20.27	25.09	24.60	-0.49	24.60	-0.49	24.19	1.14	26.23	0.009068	4.72	24.57	2.67	0.69
Veilino	Staglieno_2	5 VEI 5	Q50	51.00	20.14	23.21	24.60	1.39	24.60	1.39	22.64	0.59	23.80	0.005365	3.41	14.98	5.88	0.68
Veilino	Staglieno_2	5 VEI 5	Q200	85.00	20.14	24.22	24.60	0.38	24.60	0.38	23.44	0.85	25.06	0.006061	4.07	20.87	5.88	0.69
Veilino	Staglieno_2	5 VEI 5	Q500	116.00	20.14	25.04	24.60	-0.44	24.60	-0.44	24.08	1.09	26.13	0.008423	4.62	25.09	2.98	0.67
Veilino	Staglieno_2	4.1 VEI 5	Q50	51.00	20.12	23.22	25.50	2.28	25.50	2.28	22.63	0.57	23.79	0.005174	3.35	15.23	6.00	0.67
Veilino	Staglieno_2	4.1 VEI 5	Q200	85.00	20.12	24.23	25.50	1.27	25.50	1.27	23.42	0.81	25.05	0.005770	3.99	21.30	6.00	0.68
Veilino	Staglieno_2	4.1 VEI 5	Q500	116.00	20.12	25.12	25.50	0.38	25.50	0.38	24.05	0.97	26.09	0.005979	4.36	26.62	6.00	0.66
Veilino	Staglieno_2	4.05	Q50	51.00	20.00	23.32	25.48	2.16	25.48	2.16	22.35	0.39	23.71	0.003005	2.75	18.54	6.65	0.53
Veilino	Staglieno_2	4.05	Q200	85.00	20.00	24.37	25.48	1.11	25.48	1.11	23.09	0.57	24.94	0.003503	3.33	25.52	6.65	0.54
Veilino	Staglieno_2	4.05	Q500	116.00	20.00	25.28	25.48	0.20	25.48	0.20	23.67	0.69	25.97	0.003731	3.68	31.56	6.65	0.54
Veilino	Staglieno_2	4 VEI 4	Q50	51.00	19.85	23.31	25.43	2.12	25.43	2.12	22.16	0.35	23.67	0.002658	2.63	19.41	6.65	0.49
Veilino	Staglieno_2	4 VEI 4	Q200	85.00	19.85	24.36	25.43	1.07	25.43	1.07	22.95	0.53	24.89	0.003225	3.22	26.36	6.65	0.52
Veilino	Staglieno_2	4 VEI 4	Q500	116.00	19.85	25.26	25.43	0.17	25.43	0.17	23.54	0.65	25.92	0.003503	3.58	32.38	6.65	0.52
Veilino	Staglieno_2	3.1 VEI 3	Q50	51.00	19.60	23.30	25.40	2.10	25.40	2.10	21.95	0.31	23.61	0.002270	2.47	20.62	6.65	0.45
Veilino	Staglieno_2	3.1 VEI 3	Q200	85.00	19.60	24.34	25.40	1.06	25.40	1.06	22.75	0.49	24.82	0.002899	3.09	27.52	6.65	0.48
Veilino	Staglieno_2	3.1 VEI 3	Q500	116.00	19.60	25.24	25.40	0.16	25.40	0.16	23.34	0.61	25.85	0.003230	3.46	33.50	6.65	0.49
Veilino	Staglieno_2	3 VEI 3	Q50	51.00	19.58	23.17	24.35	1.18	24.35	1.18	22.18	0.43	23.60	0.003538	2.89	17.62	6.00	0.54
Veilino	Staglieno_2	3 VEI 3	Q200	85.00	19.58	24.13	24.35	0.22	24.35	0.22	22.97	0.67	24.80	0.004609	3.64	23.35	6.00	0.59
Veilino	Staglieno_2	3 VEI 3	Q500	116.00	19.58	24.67	24.35	-0.32	24.35	-0.32	23.60	1.12	25.79	0.011454	4.70	24.70		0.66
Veilino	Staglieno_2	2.1 VEI 3	Q50	51.00	19.56	23.17	24.15	0.98	24.15	0.98	22.08	0.42	23.59	0.003386	2.85	17.86	6.00	0.53
Veilino	Staglieno_2	2.1 VEI 3	Q200	85.00	19.56	24.13	24.15	0.02	24.15	0.02	22.93	0.66	24.79	0.004456	3.60	23.60	6.00	0.58
Veilino	Staglieno_2	2.1 VEI 3	Q500	116.00	19.56	24.75	24.15	-0.60	24.15	-0.60	23.56	0.99	25.74	0.007828	4.42	26.25	2.48	0.62
Veilino	Staglieno_2	2.05	Q50	51.00	19.53	22.55	24.15	1.60	24.15	1.60	22.55	0.97	23.52	0.012300	4.37	11.68	6.00	1.00
Veilino	Staglieno_2	2.05	Q200	85.00	19.53	23.34	24.15	0.81	24.15	0.81	23.34	1.37	24.70	0.012974	5.18	16.41	6.00	1.00
Veilino	Staglieno_2	2.05	Q500	116.00	19.53	23.97	24.15	0.18	24.15	0.18	23.97	1.68	25.65	0.013647	5.75	20.18	6.00	1.00
Veilino	Staglieno_2	2 VEI 2	Q50	51.00	19.43	21.06	24.20	3.14	24.20	3.14	21.81	2.21	23.27	0.028235	6.58	7.75	4.80	1.65
Veilino	Staglieno_2	2 VEI 2	Q200	85.00	19.43	21.84	24.20	2.36	24.20	2.36	22.60	2.61	24.45	0.027993	7.15	11.88	6.00	1.62
Veilino	Staglieno_2	2 VEI 2	Q500	116.00	19.43	22.38	24.20	1.82	24.20	1.82	23.23	3.01	25.39	0.026610	7.68	15.10	6.00	1.55
Veilino	Staglieno_2	1.2	Q50	51.00	19.43	21.07	25.90	4.83	25.90	4.83	21.81	2.20	23.27	0.028166	6.58	7.75	4.80	1.65
Veilino	Staglieno_2	1.2	Q200	85.00	19.43	21.84	25.90	4.06	25.90	4.06	22.60	2.60	24.45	0.027900	7.15	11.89	6.00	1.62
Veilino	Staglieno_2	1.2	Q500	116.00	19.43	22.38	25.90	3.52	25.90	3.52	23.23	3.00	25.38	0.026541	7.68	15.11	6.00	1.54
Veilino	Staglieno_2	1.1	Q50	51.00	19.40	21.06	25.90	4.84	25.90	4.84	21.76	2.14	23.20	0.026956	6.48	7.87	4.80	1.61
Veilino	Staglieno_2	1.1	Q200	85.00	19.40	21.80	25.90	4.10	25.90	4.10	22.55	2.60	24.39	0.027659	7.14	11.91	6.00	1.62

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Veilino	Staglieno_2	1.1	Q500	116.00	19.40	22.33	25.90	3.57	25.90	3.57	23.18	3.00	25.33	0.026432	7.68	15.11	6.00	1.54
Veilino	Staglieno_2	1 VEI 1	Q50	51.00	19.34	20.51	26.40	5.89	26.35	5.84	21.30	2.52	23.03	0.038676	7.04	7.25	6.30	2.10
Veilino	Staglieno_2	1 VEI 1	Q200	85.00	19.34	21.06	26.40	5.34	26.35	5.29	21.97	3.15	24.21	0.039176	7.86	10.81	7.56	2.10
Veilino	Staglieno_2	1 VEI 1	Q500	116.00	19.34	21.43	26.40	4.97	26.35	4.92	22.51	3.71	25.14	0.037127	8.54	13.59	7.56	2.03
Veilino	Staglieno_2	0.1	Q50	51.00	19.30	20.37	26.40	6.03	26.35	5.98	21.14	2.55	22.92	0.041659	7.07	7.21	6.90	2.21
Veilino	Staglieno_2	0.1	Q200	85.00	19.30	20.86	26.40	5.54	26.35	5.49	21.78	3.23	24.09	0.042951	7.96	10.68	8.33	2.24
Veilino	Staglieno_2	0.1	Q500	116.00	19.30	23.93	26.40	2.47	26.35	2.42	22.28	0.52	24.46	0.002415	3.20	36.29	8.33	0.49
S. Antonino	Tombinatura	255	Q50	10.00	30.15	31.19	32.50	1.31	32.50	1.31	31.19	0.52	31.71	0.017283	3.18	3.14	3.04	1.00
S. Antonino	Tombinatura	255	Q200	16.00	30.15	31.57	32.50	0.93	32.50	0.93	31.57	0.71	32.27	0.018746	3.72	4.30	3.06	1.00
S. Antonino	Tombinatura	255	Q500	22.00	30.15	31.90	32.50	0.60	32.50	0.60	31.90	0.87	32.77	0.020042	4.13	5.33	3.07	1.00
S. Antonino	Tombinatura	254	Q50	10.00	30.05	30.90	32.40	1.50	32.40	1.50	31.09	0.78	31.68	0.030928	3.91	2.56	3.04	1.36
S. Antonino	Tombinatura	254	Q200	16.00	30.05	31.25	32.40	1.15	32.40	1.15	31.47	0.99	32.24	0.029734	4.41	3.63	3.05	1.29
S. Antonino	Tombinatura	254	Q500	22.00	30.05	31.56	32.40	0.84	32.40	0.84	31.80	1.18	32.74	0.029995	4.81	4.58	3.06	1.26
S. Antonino	Tombinatura	253	Q50	10.00	27.80	28.51	34.80	6.29	33.00	4.49	29.18	2.94	31.45	0.179343	7.60	1.32	2.60	3.41
S. Antonino	Tombinatura	253	Q200	16.00	27.80	28.77	34.80	6.03	33.00	4.23	29.57	3.23	32.00	0.136538	7.96	2.01	2.60	2.89
S. Antonino	Tombinatura	253	Q500	22.00	27.80	29.02	34.80	5.77	33.00	3.98	29.90	3.47	32.50	0.118636	8.26	2.66	2.60	2.60
S. Antonino	Tombinatura	248	Q50	10.00	27.53	28.46	32.00	3.54	32.00	3.54	28.92	1.54	30.00	0.048203	5.49	1.82	2.50	2.05
S. Antonino	Tombinatura	248	Q200	16.00	27.53	28.77	32.00	3.23	32.00	3.23	29.34	1.93	30.70	0.046356	6.15	2.60	2.50	1.93
S. Antonino	Tombinatura	248	Q500	22.00	27.53	29.06	32.00	2.94	32.00	2.94	29.71	2.20	31.26	0.045726	6.57	3.35	2.60	1.85
S. Antonino	Tombinatura	247.5	Q50	10.00	27.43	28.42	31.90	3.48	31.90	3.48	28.82	1.30	29.72	0.038237	5.06	1.98	2.50	1.81
S. Antonino	Tombinatura	247.5	Q200	16.00	27.43	28.74	31.90	3.16	31.90	3.16	29.24	1.68	30.43	0.039768	5.75	2.78	2.60	1.77
S. Antonino	Tombinatura	247.5	Q500	22.00	27.43	29.04	31.90	2.86	31.90	2.86	29.61	1.94	30.98	0.038839	6.17	3.57	2.60	1.68
S. Antonino	Tombinatura	247.2	Q50	10.00	27.42	28.41	30.50	2.09	30.50	2.09	28.81	1.31	29.72	0.038548	5.07	1.97	2.50	1.82
S. Antonino	Tombinatura	247.2	Q200	16.00	27.42	28.73	30.50	1.77	30.50	1.77	29.23	1.69	30.42	0.040010	5.76	2.78	2.60	1.78
S. Antonino	Tombinatura	247.2	Q500	22.00	27.42	29.03	30.50	1.47	30.50	1.47	29.60	1.95	30.98	0.039051	6.18	3.56	2.60	1.69
S. Antonino	Tombinatura	247	Q50	10.00	27.41	28.42	30.00	1.58	30.00	1.58	28.80	1.24	29.66	0.035744	4.93	2.03	2.50	1.75
S. Antonino	Tombinatura	247	Q200	16.00	27.41	28.74	30.00	1.26	30.00	1.26	29.22	1.62	30.36	0.037593	5.63	2.84	2.60	1.72
S. Antonino	Tombinatura	247	Q500	22.00	27.41	29.05	30.00	0.95	30.00	0.95	29.59	1.87	30.91	0.036912	6.05	3.64	2.60	1.63
S. Antonino	Tombinatura	245	Q50	10.00	26.94	28.15	29.83	1.68	29.83	1.68	28.33	0.80	28.95	0.019735	3.97	2.52	2.50	1.26
S. Antonino	Tombinatura	245	Q200	16.00	26.94	28.55	29.83	1.28	29.83	1.28	28.75	1.02	29.58	0.020495	4.48	3.57	2.60	1.22
S. Antonino	Tombinatura	245	Q500	22.00	26.94	29.91	29.83	-0.08	29.83	-0.08	29.12	0.52	30.43	0.010906	3.19	6.89		0.59
S. Antonino	Tombinatura	244	Q50	10.00	26.80	28.05	29.80	1.75	29.80	1.75	28.19	0.74	28.79	0.017721	3.82	2.62	2.50	1.19
S. Antonino	Tombinatura	244	Q200	16.00	26.80	28.46	29.80	1.34	29.80	1.34	28.61	0.96	29.42	0.018784	4.34	3.69	2.60	1.16
S. Antonino	Tombinatura	244	Q500	22.00	26.80	29.86	29.80	-0.06	29.80	-0.06	28.98	0.48	30.33	0.009795	3.07	7.17		0.56
S. Antonino	Tombinatura	243	Q50	10.00	26.74	27.97	31.28	3.31	31.28	3.31	28.13	0.76	28.74	0.018410	3.87	2.58	2.50	1.21
S. Antonino	Tombinatura	243	Q200	16.00	26.74	28.39	31.28	2.89	31.28	2.89	28.55	0.97	29.36	0.019172	4.37	3.66	2.60	1.18
S. Antonino	Tombinatura	243	Q500	22.00	26.74	29.86	31.28	1.42	31.28	1.42	28.92	0.44	30.30	0.006050	2.94	7.49	2.60	0.55
S. Antonino	Tombinatura	242	Q50	10.00	26.58	27.80	31.08	3.28	31.08	3.28	27.96	0.79	28.59	0.019359	3.94	2.54	2.50	1.25
S. Antonino	Tombinatura	242	Q200	16.00	26.58	28.65	31.08	2.43	31.08	2.43	28.40	0.58	29.23	0.009933	3.38	4.73	2.60	0.80
S. Antonino	Tombinatura	242	Q500	22.00	26.58	29.84	31.08	1.24	31.08	1.24	28.77	0.40	30.25	0.005444	2.81	7.83	2.60	0.52
S. Antonino	Tombinatura	241	Q50	10.00	26.48	27.69	30.94	3.25	30.94	3.25	27.86	0.81	28.50	0.020007	3.99	2.50	2.50	1.27
S. Antonino	Tombinatura	241	Q200	16.00	26.48	28.65	30.94	2.29	30.94	2.29	28.30	0.53	29.17	0.008717	3.21	4.98	2.60	0.74
S. Antonino	Tombinatura	241	Q500	22.00	26.48	29.84	30.94	1.10	30.94	1.10	28.67	0.38	30.21	0.005068	2.72	8.07	2.60	0.49
S. Antonino	Tombinatura	240	Q50	10.00	26.42	27.62	30.85	3.23	30.85	3.23	27.80	0.82	28.44	0.020286	4.01	2.49	2.50	1.28
S. Antonino	Tombinatura	240	Q200	16.00	26.42	28.64	30.85	2.21	30.85	2.21	28.24	0.50	29.14	0.008093	3.12	5.13	2.60	0.71

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
S. Antonino	Tombinatura	240	Q500	22.00	26.42	29.83	30.85	1.02	30.85	1.02	28.61	0.37	30.20	0.004860	2.68	8.22	2.60	0.48
S. Antonino	Tombinatura	239.7	Q50	10.00	26.35	27.53	30.79	3.26	30.79	3.26	27.73	0.85	28.38	0.021157	4.07	2.45	2.50	1.31
S. Antonino	Tombinatura	239.7	Q200	16.00	26.35	28.65	30.79	2.14	30.79	2.14	28.17	0.46	29.11	0.007385	3.00	5.33	2.60	0.67
S. Antonino	Tombinatura	239.7	Q500	22.00	26.35	29.83	30.79	0.96	30.79	0.96	28.54	0.35	30.18	0.004619	2.62	8.40	2.60	0.47
S. Antonino	Tombinatura	239	Q50	10.00	26.16	27.34	30.50	3.16	30.50	3.16	27.54	0.84	28.19	0.021076	4.07	2.46	2.50	1.31
S. Antonino	Tombinatura	239	Q200	16.00	26.16	28.63	30.50	1.87	30.50	1.87	27.98	0.39	29.02	0.006087	2.78	5.76	2.60	0.60
S. Antonino	Tombinatura	239	Q500	22.00	26.16	29.81	30.50	0.69	30.50	0.69	28.35	0.32	30.13	0.004113	2.49	8.83	2.60	0.43
S. Antonino	Tombinatura	238	Q50	10.00	26.00	27.21	30.40	3.19	30.40	3.19	27.38	0.80	28.01	0.019576	3.96	2.53	2.50	1.26
S. Antonino	Tombinatura	238	Q200	16.00	26.00	28.62	30.40	1.78	30.40	1.78	27.83	0.35	28.97	0.005249	2.61	6.13	2.60	0.54
S. Antonino	Tombinatura	238	Q500	22.00	26.00	29.80	30.40	0.60	30.40	0.60	28.20	0.29	30.09	0.003749	2.39	9.19	2.60	0.41
S. Antonino	Tombinatura	236	Q50	10.00	25.94	27.52	30.37	2.85	30.37	2.85	27.32	0.43	27.95	0.008547	2.89	3.45	2.50	0.79
S. Antonino	Tombinatura	236	Q200	16.00	25.94	28.61	30.37	1.76	30.37	1.76	27.75	0.33	28.95	0.004975	2.55	6.26	2.60	0.53
S. Antonino	Tombinatura	236	Q500	22.00	25.94	29.79	30.37	0.58	30.37	0.58	28.14	0.28	30.08	0.003624	2.36	9.33	2.60	0.40
S. Antonino	Tombinatura	234	Q50	10.00	25.79	27.53	30.20	2.67	30.20	2.67	27.17	0.34	27.87	0.006496	2.60	3.84	2.50	0.67
S. Antonino	Tombinatura	234	Q200	16.00	25.79	28.60	30.20	1.60	30.20	1.60	27.60	0.30	28.90	0.004361	2.42	6.62	2.60	0.48
S. Antonino	Tombinatura	234	Q500	22.00	25.79	29.78	30.20	0.42	30.20	0.42	28.00	0.26	30.05	0.003332	2.27	9.68	2.60	0.38
S. Antonino	Tombinatura	233	Q50	10.00	25.52	27.52	29.80	2.28	29.80	2.28	26.90	0.25	27.77	0.004342	2.22	4.50	2.50	0.53
S. Antonino	Tombinatura	233	Q200	16.00	25.52	28.59	29.80	1.21	29.80	1.21	27.33	0.25	28.83	0.003514	2.21	7.24	2.60	0.42
S. Antonino	Tombinatura	233	Q500	22.00	25.52	29.76	29.80	0.04	29.80	0.04	27.71	0.23	29.99	0.002891	2.14	10.30	2.60	0.34
S. Antonino	Tombinatura	232	Q50	10.00	25.41	27.52	29.65	2.13	29.65	2.13	26.79	0.22	27.74	0.003772	2.10	4.77	2.50	0.49
S. Antonino	Tombinatura	232	Q200	16.00	25.41	28.58	29.65	1.07	29.65	1.07	27.22	0.23	28.81	0.003224	2.13	7.51	2.60	0.40
S. Antonino	Tombinatura	232	Q500	22.00	25.41	29.74	29.65	-0.09	29.65	-0.09	27.60	0.23	29.97	0.003897	2.14	10.30		0.33
S. Antonino	Tombinatura	231	Q50	10.00	25.35	27.52	29.55	2.03	29.55	2.03	26.73	0.21	27.73	0.003569	2.03	4.91	2.60	0.47
S. Antonino	Tombinatura	231	Q200	16.00	25.35	28.58	29.55	0.97	29.55	0.97	27.16	0.22	28.80	0.003055	2.09	7.67	2.60	0.39
S. Antonino	Tombinatura	231	Q500	22.00	25.35	29.73	29.55	-0.18	29.55	-0.18	27.57	0.24	29.96	0.003980	2.16	10.20		0.33
S. Antonino	Tombinatura	230	Q50	10.00	25.29	27.51	29.50	1.99	29.50	1.99	26.67	0.20	27.71	0.003307	1.97	5.07	2.60	0.45
S. Antonino	Tombinatura	230	Q200	16.00	25.29	28.57	29.50	0.93	29.50	0.93	27.10	0.21	28.79	0.002920	2.05	7.82	2.60	0.38
S. Antonino	Tombinatura	230	Q500	22.00	25.29	29.71	29.50	-0.21	29.50	-0.21	27.51	0.24	29.95	0.003956	2.15	10.23		0.33
S. Antonino	Tombinatura	229	Q50	10.00	25.09	27.51	29.20	1.69	29.20	1.69	26.47	0.16	27.67	0.002603	1.79	5.57	2.60	0.39
S. Antonino	Tombinatura	229	Q200	16.00	25.09	28.56	29.20	0.64	29.20	0.64	26.90	0.19	28.75	0.002522	1.92	8.32	2.60	0.34
S. Antonino	Tombinatura	229	Q500	22.00	25.09	29.67	29.20	-0.47	29.20	-0.47	27.30	0.24	29.91	0.005105	2.17	10.14	2.60	0.32
S. Antonino	Tombinatura	228	Q50	10.00	24.99	27.51	29.10	1.59	29.10	1.59	26.37	0.15	27.66	0.002334	1.72	5.82	2.60	0.37
S. Antonino	Tombinatura	228	Q200	16.00	24.99	28.56	29.10	0.54	29.10	0.54	26.80	0.18	28.74	0.002355	1.87	8.56	2.60	0.33
S. Antonino	Tombinatura	228	Q500	22.00	24.99	29.65	29.10	-0.55	29.10	-0.55	27.21	0.23	29.88	0.004771	2.13	10.35	2.60	0.31
S. Antonino	Tombinatura	227	Q50	10.00	24.96	27.51	29.10	1.59	29.10	1.59	26.34	0.15	27.65	0.002258	1.69	5.90	2.60	0.36
S. Antonino	Tombinatura	227	Q200	16.00	24.96	28.56	29.10	0.54	29.10	0.54	26.77	0.17	28.73	0.002305	1.85	8.64	2.60	0.32
S. Antonino	Tombinatura	227	Q500	22.00	24.96	29.64	29.10	-0.54	29.10	-0.54	27.17	0.23	29.87	0.004695	2.11	10.42	2.60	0.31
S. Antonino	Tombinatura	226	Q50	10.00	24.83	27.50	29.00	1.50	29.00	1.50	26.22	0.13	27.63	0.001883	1.58	6.32	2.60	0.32
S. Antonino	Tombinatura	226	Q200	16.00	24.83	28.55	29.00	0.45	29.00	0.45	26.64	0.16	28.71	0.002046	1.77	9.05	2.60	0.30
S. Antonino	Tombinatura	226	Q500	22.00	24.83	29.62	29.00	-0.62	29.00	-0.62	27.01	0.21	29.83	0.004196	2.04	10.79	2.60	0.30
Briscata	Tombinatura	350	Q50	12.00	29.40	30.97	31.16	0.19	31.16	0.19	30.74	0.49	31.45	0.009669	3.09	3.88	2.50	0.79
Briscata	Tombinatura	350	Q200	19.00	29.40	31.42	31.16	-0.26	31.16	-0.26	31.19	0.78	32.20	0.016691	3.92	4.84	1.24	0.88
Briscata	Tombinatura	350	Q500	26.00	29.40	31.98	31.16	-0.82	31.16	-0.82	31.35	1.38	33.36	0.035161	5.20	5.00		1.03
Briscata	Tombinatura	349	Q50	12.00	29.35	30.70	31.12	0.42	31.12	0.42	30.70	0.67	31.37	0.014501	3.61	3.32	2.50	1.00
Briscata	Tombinatura	349	Q200	19.00	29.35	31.15	31.12	-0.03	31.12	-0.03	31.15	0.94	32.09	0.017583	4.29	4.43	2.37	1.02

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Briscata	Tombinatura	349	Q500	26.00	29.35	31.78	31.12	-0.65	31.12	-0.65	31.31	1.38	33.15	0.035059	5.20	5.00		1.07
Briscata	Tombinatura	348	Q50	12.00	29.00	29.97	31.10	1.13	31.10	1.13	30.35	1.32	31.29	0.036590	5.09	2.36	2.50	1.68
Briscata	Tombinatura	348	Q200	19.00	29.00	30.37	31.10	0.73	31.10	0.73	30.83	1.63	32.00	0.035361	5.66	3.36	2.50	1.56
Briscata	Tombinatura	348	Q500	26.00	29.00	32.01	31.10	-0.91	31.10	-0.91	31.16	1.02	33.03	0.023380	4.47	5.81		0.82
Briscata	Tombinatura	347	Q50	12.00	28.90	30.55	31.00	0.45	31.00	0.45	30.25	0.45	30.99	0.008598	2.96	4.06	2.50	0.74
Briscata	Tombinatura	347	Q200	19.00	28.90	31.14	31.00	-0.14	31.00	-0.14	30.73	0.61	31.75	0.011251	3.47	5.48	1.73	0.74
Briscata	Tombinatura	347	Q500	26.00	28.90	31.77	31.00	-0.77	31.00	-0.77	31.06	1.04	32.81	0.024119	4.52	5.75		0.85
Briscata	Tombinatura	346	Q50	12.00	28.80	30.16	30.80	0.64	30.80	0.64	30.16	0.66	30.82	0.014433	3.61	3.33	2.50	1.00
Briscata	Tombinatura	346	Q200	19.00	28.80	30.63	30.80	0.17	30.80	0.17	30.63	0.90	31.53	0.016406	4.21	4.51	2.50	1.00
Briscata	Tombinatura	346	Q500	26.00	28.80	31.31	30.80	-0.51	30.80	-0.51	30.89	1.14	32.45	0.027168	4.73	5.50		0.95
Briscata	Tombinatura	345	Q50	12.00	28.45	29.60	30.75	1.15	30.75	1.15	29.90	1.11	30.71	0.027599	4.67	2.57	2.50	1.47
Briscata	Tombinatura	345	Q200	19.00	28.45	30.03	30.75	0.72	30.75	0.72	30.38	1.40	31.42	0.027726	5.24	3.63	2.50	1.39
Briscata	Tombinatura	345	Q500	26.00	28.45	31.36	30.75	-0.61	30.75	-0.61	30.77	0.96	32.32	0.021073	4.33	6.00		0.81
Briscata	Tombinatura	344	Q50	12.00	28.40	29.95	30.63	0.68	30.63	0.68	29.76	0.50	30.45	0.010104	3.15	3.81	2.50	0.81
Briscata	Tombinatura	344	Q200	19.00	28.40	30.50	30.63	0.13	30.63	0.13	30.23	0.68	31.18	0.011521	3.66	5.20	2.50	0.81
Briscata	Tombinatura	344	Q500	26.00	28.40	31.20	30.63	-0.57	30.63	-0.57	30.64	0.93	32.14	0.020835	4.28	6.07		0.82
Briscata	Tombinatura	343	Q50	12.00	28.35	29.71	30.52	0.81	30.52	0.81	29.71	0.66	30.37	0.014439	3.61	3.33	2.50	1.00
Briscata	Tombinatura	343	Q200	19.00	28.35	30.18	30.52	0.34	30.52	0.34	30.18	0.90	31.08	0.016384	4.21	4.52	2.50	1.00
Briscata	Tombinatura	343	Q500	26.00	28.35	31.02	30.52	-0.50	30.52	-0.50	30.55	0.98	32.00	0.022267	4.39	5.92		0.86
Briscata	Tombinatura	342	Q50	12.00	28.10	29.28	30.30	1.02	30.30	1.02	29.46	0.87	30.16	0.020812	4.14	2.90	2.50	1.23
Briscata	Tombinatura	342	Q200	19.00	28.10	29.76	30.30	0.54	30.30	0.54	29.93	1.10	30.86	0.021091	4.64	4.09	2.50	1.16
Briscata	Tombinatura	342	Q500	26.00	28.10	30.80	30.30	-0.50	30.30	-0.50	30.32	0.96	31.76	0.021538	4.33	6.00		0.84
Briscata	Tombinatura	341	Q50	12.00	27.80	28.76	30.30	1.54	30.30	1.54	29.15	1.33	30.10	0.037062	5.12	2.34	2.50	1.69
Briscata	Tombinatura	341	Q200	19.00	27.80	29.17	30.30	1.13	30.30	1.13	29.63	1.62	30.80	0.035103	5.65	3.36	2.50	1.55
Briscata	Tombinatura	341	Q500	26.00	27.80	30.93	30.30	-0.63	30.30	-0.63	30.05	0.76	31.69	0.015784	3.85	6.75		0.69
Briscata	Tombinatura	340	Q50	12.00	27.45	28.66	29.95	1.29	29.95	1.29	28.80	0.84	29.50	0.019829	4.07	2.95	2.50	1.19
Briscata	Tombinatura	340	Q200	19.00	27.45	29.37	29.95	0.58	29.95	0.58	29.28	0.82	30.19	0.014456	4.00	4.75	2.50	0.93
Briscata	Tombinatura	340	Q500	26.00	27.45	30.66	29.95	-0.71	29.95	-0.71	29.70	0.76	31.42	0.015784	3.85	6.75		0.69
Briscata	Tombinatura	339	Q50	12.00	27.35	28.59	29.65	1.06	29.65	1.06	28.70	0.80	29.39	0.018374	3.95	3.04	2.50	1.14
Briscata	Tombinatura	339	Q200	19.00	27.35	29.18	29.65	0.47	29.65	0.47	29.18	0.90	30.08	0.016424	4.21	4.51	2.50	1.00
Briscata	Tombinatura	339	Q500	26.00	27.35	30.41	29.65	-0.76	29.65	-0.76	29.60	0.88	31.29	0.019327	4.16	6.25		0.76
Briscata	Tombinatura	338	Q50	12.00	26.95	27.89	29.55	1.66	29.55	1.66	28.31	1.39	29.29	0.039341	5.23	2.29	2.50	1.74
Briscata	Tombinatura	338	Q200	19.00	26.95	28.30	29.55	1.25	29.55	1.25	28.78	1.67	29.97	0.036383	5.72	3.32	2.50	1.59
Briscata	Tombinatura	338	Q500	26.00	26.95	30.52	29.55	-0.97	29.55	-0.97	29.20	0.69	31.21	0.014001	3.68	7.06		0.62
Briscata	Tombinatura	337	Q50	12.00	26.95	27.95	29.46	1.51	29.46	1.51	28.30	1.22	29.18	0.032925	4.90	2.45	2.50	1.58
Briscata	Tombinatura	337	Q200	19.00	26.95	29.31	29.46	0.15	29.46	0.15	28.78	0.54	29.85	0.008661	3.26	5.83	2.50	0.68
Briscata	Tombinatura	337	Q500	26.00	26.95	30.44	29.46	-0.98	29.46	-0.98	29.20	0.74	31.18	0.015233	3.80	6.84		0.65
Briscata	Tombinatura	336	Q50	12.00	26.95	27.96	28.83	0.87	28.83	0.87	28.30	1.22	29.18	0.032753	4.89	2.45	2.50	1.58
Briscata	Tombinatura	336	Q200	19.00	26.95	28.96	28.83	-0.13	28.83	-0.13	28.78	0.86	29.82	0.024133	4.10	4.64		0.92
Briscata	Tombinatura	336	Q500	26.00	26.95	29.49	28.83	-0.66	28.83	-0.66	28.83	1.60	31.09	0.045190	5.61	4.64		1.12
Briscata	Tombinatura	335	Q50	12.00	26.95	27.98	28.83	0.85	28.83	0.85	28.30	1.16	29.14	0.030745	4.78	2.51	2.50	1.52
Briscata	Tombinatura	335	Q200	19.00	26.95	28.95	28.83	-0.12	28.83	-0.12	28.78	0.86	29.80	0.024133	4.10	4.64		0.92
Briscata	Tombinatura	335	Q500	26.00	26.95	29.47	28.83	-0.64	28.83	-0.64	28.83	1.60	31.07	0.045190	5.61	4.64		1.13
Bisagno	Trens Veilino	86.	Q50	730.00	37.20	40.35	43.30	2.95	43.30	2.95	39.84	0.77	41.12	0.003731	3.88	188.02	67.00	0.74
Bisagno	Trens Veilino	86.	Q200	1201.00	37.20	41.38	43.30	1.92	43.30	1.92	40.74	1.11	42.49	0.003711	4.68	256.76	67.00	0.76

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Trens Veilino	86.	Q500	1649.00	37.20	42.22	43.30	1.08	43.30	1.08	41.50	1.41	43.63	0.003710	5.26	313.43	67.00	0.78
Bisagno	Trens Veilino	85.	Q50	730.00	35.52	39.53	42.70	3.17	42.70	3.17	39.46	1.09	40.62	0.006601	4.63	157.70	66.00	0.96
Bisagno	Trens Veilino	85.	Q200	1201.00	35.52	40.44	42.70	2.26	42.70	2.26	40.37	1.55	41.99	0.006304	5.52	217.76	66.00	0.97
Bisagno	Trens Veilino	85.	Q500	1649.00	35.52	41.35	42.70	1.35	42.70	1.35	41.13	1.79	43.14	0.005445	5.93	277.96	66.00	0.92
Bisagno	Trens Veilino	84.	Q50	730.00	35.71	39.25	42.00	2.75	42.00	2.75	38.99	0.94	40.19	0.005148	4.29	169.98	66.00	0.85
Bisagno	Trens Veilino	84.	Q200	1201.00	35.71	40.22	42.00	1.78	42.00	1.78	39.90	1.34	41.56	0.004985	5.13	233.90	66.00	0.87
Bisagno	Trens Veilino	84.	Q500	1649.00	35.71	41.20	42.00	0.80	42.00	0.80	40.66	1.55	42.75	0.004292	5.51	299.07	66.00	0.83
Bisagno	Trens Veilino	83.	Q50	730.00	34.27	38.40	41.40	3.00	40.70	2.30	38.20	1.00	39.39	0.005595	4.43	164.87	64.60	0.88
Bisagno	Trens Veilino	83.	Q200	1201.00	34.27	39.28	41.40	2.12	40.70	1.42	39.12	1.49	40.77	0.005826	5.42	221.79	64.60	0.93
Bisagno	Trens Veilino	83.	Q500	1649.00	34.27	40.70	41.40	0.70	40.70	0.00	39.89	1.41	42.11	0.003638	5.25	313.84	64.60	0.76
Bisagno	Trens Veilino	82.3	Q50	730.00	34.00	38.14	41.44	3.30	39.70	1.56	37.30	0.57	38.71	0.002493	3.35	218.21	71.99	0.61
Bisagno	Trens Veilino	82.3	Q200	1201.00	34.00	39.12	41.44	2.32	39.70	0.58	38.16	0.88	40.00	0.002738	4.16	288.93	71.99	0.66
Bisagno	Trens Veilino	82.3	Q500	1649.00	34.00	40.73	41.44	0.71	39.70	-1.03	38.88	0.85	41.57	0.001790	4.08	404.56	72.00	0.55
Bisagno	Trens Veilino	82.2	Q50	730.00	34.00	38.14	41.44	3.30	39.70	1.56	37.30	0.57	38.71	0.002503	3.35	217.94	71.99	0.61
Bisagno	Trens Veilino	82.2	Q200	1201.00	34.00	39.12	41.44	2.32	39.70	0.58	38.16	0.88	40.00	0.002748	4.16	288.61	71.99	0.66
Bisagno	Trens Veilino	82.2	Q500	1649.00	34.00	40.73	41.44	0.71	39.70	-1.03	38.88	0.85	41.57	0.001793	4.08	404.37	72.00	0.55
Bisagno	Trens Veilino	82.11 BIS 82		Bridge														
Bisagno	Trens Veilino	82.1	Q50	730.00	34.00	38.07	41.44	3.37	39.70	1.63	37.30	0.60	38.67	0.002674	3.42	213.52	71.99	0.63
Bisagno	Trens Veilino	82.1	Q200	1201.00	34.00	39.02	41.44	2.42	39.70	0.68	38.16	0.93	39.95	0.002974	4.27	281.55	71.99	0.69
Bisagno	Trens Veilino	82.1	Q500	1649.00	34.00	40.66	41.44	0.78	39.70	-0.96	38.88	0.87	41.53	0.001855	4.12	400.00	72.00	0.56
Bisagno	Trens Veilino	82.	Q50	730.00	34.00	38.06	41.44	3.38	39.70	1.64	37.30	0.60	38.66	0.002712	3.43	212.60	71.99	0.64
Bisagno	Trens Veilino	82.	Q200	1201.00	34.00	39.00	41.44	2.44	39.70	0.70	38.16	0.93	39.94	0.003015	4.28	280.36	71.99	0.69
Bisagno	Trens Veilino	82.	Q500	1649.00	34.00	40.66	41.44	0.78	39.70	-0.96	38.88	0.87	41.53	0.001863	4.13	399.46	72.00	0.56
Bisagno	Trens Veilino	81.	Q50	730.00	33.64	37.86	40.60	2.74	39.70	1.84	37.25	0.63	38.48	0.003127	3.51	208.18	77.30	0.68
Bisagno	Trens Veilino	81.	Q200	1201.00	33.64	38.83	40.60	1.77	39.70	0.87	38.08	0.92	39.75	0.003130	4.24	283.23	77.30	0.71
Bisagno	Trens Veilino	81.	Q500	1649.00	33.64	40.61	40.60	-0.01	39.70	-0.91	38.76	0.78	41.39	0.001665	3.92	421.04	77.30	0.54
Bisagno	Trens Veilino	80.	Q50	730.00	33.49	37.31	40.22	2.91	39.60	2.29	37.09	0.82	38.13	0.006269	4.00	182.31	81.86	0.86
Bisagno	Trens Veilino	80.	Q200	1201.00	33.49	38.52	40.22	1.70	39.60	1.08	37.88	0.93	39.45	0.004149	4.27	281.36	82.15	0.74
Bisagno	Trens Veilino	80.	Q500	1649.00	33.49	40.53	40.22	-0.31	39.60	-0.93	38.54	0.69	41.22	0.001742	3.69	447.23	82.95	0.51
Bisagno	Trens Veilino	79.	Q50	730.00	33.55	37.25	40.09	2.84	39.54	2.29	36.87	0.72	37.97	0.004946	3.75	194.72	81.67	0.77
Bisagno	Trens Veilino	79.	Q200	1201.00	33.55	38.50	40.09	1.59	39.54	1.04	37.68	0.84	39.33	0.003389	4.05	296.49	82.00	0.68
Bisagno	Trens Veilino	79.	Q500	1649.00	33.55	40.53	40.09	-0.44	39.54	-0.99	38.34	0.64	41.17	0.001482	3.56	464.12	83.40	0.48
Bisagno	Trens Veilino	78.4	Q50	730.00	32.88	37.33	39.99	2.66	39.59	2.26	36.31	0.48	37.81	0.002673	3.08	237.23	81.89	0.58
Bisagno	Trens Veilino	78.4	Q200	1201.00	32.88	38.57	39.99	1.42	39.59	1.02	37.23	0.64	39.21	0.002284	3.55	338.51	81.94	0.56
Bisagno	Trens Veilino	78.4	Q500	1649.00	32.88	40.56	39.99	-0.57	39.59	-0.97	37.89	0.55	41.11	0.001216	3.28	502.18	81.99	0.42
Bisagno	Trens Veilino	78.3	Q50	730.00	32.88	37.05	39.99	2.94	39.59	2.54	36.43	0.73	37.79	0.003854	3.79	192.72	81.88	0.70
Bisagno	Trens Veilino	78.3	Q200	1201.00	32.88	38.05	39.99	1.94	39.59	1.54	37.35	1.11	39.16	0.004075	4.66	257.61	81.92	0.75
Bisagno	Trens Veilino	78.3	Q500	1649.00	32.88	40.34	39.99	-0.35	39.59	-0.75	38.13	0.75	41.09	0.001980	3.84	428.97	81.99	0.54
Bisagno	Trens Veilino	78.25 BIS 78		Bridge														
Bisagno	Trens Veilino	78.2	Q50	730.00	32.75	36.62	39.86	3.24	39.46	2.84	36.30	0.91	37.53	0.005479	4.22	173.13	81.87	0.82
Bisagno	Trens Veilino	78.2	Q200	1201.00	32.75	36.83	39.86	3.03	39.46	2.63	37.22	2.11	38.94	0.011571	6.43	186.68	81.87	1.21
Bisagno	Trens Veilino	78.2	Q500	1649.00	32.75	39.64	39.86	0.22	39.46	-0.18	37.99	0.96	40.60	0.002938	4.34	379.86	81.99	0.64
Bisagno	Trens Veilino	78.1	Q50	730.00	32.75	36.77	39.86	3.09	39.46	2.69	36.18	0.66	37.44	0.004501	3.61	202.21	81.87	0.73
Bisagno	Trens Veilino	78.1	Q200	1201.00	32.75	36.42	39.86	3.44	39.46	3.04	37.10	2.43	38.85	0.017993	6.91	173.79	75.29	1.45

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Trens Veilino	78.1	Q500	1649.00	32.75	39.82	39.86	0.04	39.46	-0.36	37.76	0.68	40.50	0.001698	3.65	452.26	81.99	0.50
Bisagno	Trens Veilino	77.	Q50	730.00	32.27	36.41	39.58	3.17	38.31	1.90	36.05	0.73	37.15	0.005197	3.79	192.46	82.74	0.79
Bisagno	Trens Veilino	77.	Q200	1201.00	32.27	37.61	39.58	1.97	38.31	0.70	36.87	0.86	38.48	0.003599	4.11	292.02	83.10	0.70
Bisagno	Trens Veilino	77.	Q500	1649.00	32.27	39.80	39.58	-0.22	38.31	-1.49	37.53	0.62	40.41	0.001392	3.48	475.06	84.83	0.47
Bisagno	Trens Veilino	76.	Q50	730.00	32.09	36.18	39.21	3.03	37.90	1.72	35.82	0.74	36.92	0.005104	3.80	192.10	80.71	0.79
Bisagno	Trens Veilino	76.	Q200	1201.00	32.09	37.48	39.21	1.73	37.90	0.42	36.63	0.83	38.31	0.003323	4.04	297.18	81.10	0.67
Bisagno	Trens Veilino	76.	Q500	1649.00	32.09	39.75	39.21	-0.54	37.90	-1.85	37.29	0.59	40.34	0.001279	3.42	483.88	82.85	0.45
Bisagno	Trens Veilino	75.	Q50	730.00	31.99	35.83	38.41	2.58	37.13	1.30	35.44	0.73	36.56	0.004984	3.78	193.22	81.05	0.78
Bisagno	Trens Veilino	75.	Q200	1201.00	31.99	37.33	38.41	1.08	37.13	-0.20	36.27	0.74	38.07	0.002733	3.81	315.41	82.61	0.62
Bisagno	Trens Veilino	75.	Q500	1649.00	31.99	39.71	38.41	-1.30	37.13	-2.58	36.93	0.53	40.24	0.001047	3.23	512.87	83.74	0.41
Bisagno	Trens Veilino	74.	Q50	730.00	31.80	35.47	37.62	2.15	36.15	0.68	34.93	0.63	36.10	0.004013	3.52	207.31	81.03	0.70
Bisagno	Trens Veilino	74.	Q200	1201.00	31.80	37.20	37.62	0.42	36.15	-1.05	35.72	0.61	37.81	0.001984	3.45	348.48	81.95	0.53
Bisagno	Trens Veilino	74.	Q500	1649.00	31.80	39.68	37.62	-2.06	36.15	-3.53	36.39	0.46	40.13	0.000820	3.00	552.66	83.00	0.37
Bisagno	Trens Veilino	73.4	Q50	730.00	31.56	35.29	37.48	2.19	36.56	1.27	34.48	0.62	35.91	0.003200	3.48	209.55	68.17	0.63
Bisagno	Trens Veilino	73.4	Q200	1201.00	31.56	37.01	37.48	0.47	36.56	-0.45	35.38	0.69	37.70	0.002056	3.67	326.84	68.17	0.54
Bisagno	Trens Veilino	73.4	Q500	1649.00	31.56	39.52	37.48	-2.04	36.56	-2.96	36.12	0.56	40.08	0.001011	3.31	498.13	68.17	0.39
Bisagno	Trens Veilino	73.3	Q50	730.00	31.56	35.00	37.48	2.48	36.56	1.56	34.60	0.88	35.88	0.005187	4.15	175.72	68.17	0.80
Bisagno	Trens Veilino	73.3	Q200	1201.00	31.56	36.85	37.48	0.63	36.56	-0.29	35.54	0.83	37.68	0.002797	4.04	297.36	68.17	0.62
Bisagno	Trens Veilino	73.3	Q500	1649.00	31.56	39.46	37.48	-1.98	36.56	-2.90	36.39	0.61	40.07	0.001175	3.47	475.39	68.17	0.42
Bisagno	Trens Veilino	73.25 BIS 73		Bridge														
Bisagno	Trens Veilino	73.2	Q50	730.00	31.46	34.80	37.38	2.58	36.46	1.66	34.50	0.94	35.74	0.005829	4.31	169.54	68.17	0.84
Bisagno	Trens Veilino	73.2	Q200	1201.00	31.46	36.00	37.38	1.38	36.46	0.46	35.44	1.21	37.22	0.005168	4.88	245.99	68.17	0.82
Bisagno	Trens Veilino	73.2	Q500	1649.00	31.46	37.97	37.38	-0.59	36.46	-1.51	36.30	0.96	38.93	0.002394	4.34	380.22	68.17	0.59
Bisagno	Trens Veilino	73.1	Q50	730.00	31.43	34.94	37.35	2.41	36.43	1.49	34.35	0.71	35.66	0.004043	3.74	195.02	68.17	0.71
Bisagno	Trens Veilino	73.1	Q200	1201.00	31.43	36.18	37.35	1.17	36.43	0.25	35.25	0.94	37.12	0.003422	4.30	279.03	68.17	0.68
Bisagno	Trens Veilino	73.1	Q500	1649.00	31.43	38.05	37.35	-0.70	36.43	-1.62	35.99	0.84	38.89	0.001927	4.06	406.57	68.17	0.53
Bisagno	Trens Veilino	72.	Q50	730.00	31.60	34.63	36.98	2.35	35.52	0.89	34.36	0.83	35.46	0.005709	4.03	181.07	76.10	0.83
Bisagno	Trens Veilino	72.	Q200	1201.00	31.60	36.10	36.98	0.88	35.52	-0.58	35.19	0.86	36.96	0.003197	4.10	293.01	76.51	0.67
Bisagno	Trens Veilino	72.	Q500	1649.00	31.60	38.07	36.98	-1.09	35.52	-2.55	35.89	0.70	38.77	0.001526	3.72	445.05	78.00	0.49
Bisagno	Trens Veilino	71.	Q50	730.00	31.48	34.40	36.46	2.06	35.85	1.45	34.06	0.70	35.10	0.005096	3.71	196.59	86.04	0.78
Bisagno	Trens Veilino	71.	Q200	1201.00	31.48	36.11	36.46	0.35	35.85	-0.26	34.82	0.62	36.73	0.002206	3.49	344.15	87.36	0.56
Bisagno	Trens Veilino	71.	Q500	1649.00	31.48	38.13	36.46	-1.67	35.85	-2.28	35.46	0.51	38.64	0.001057	3.17	522.57	88.80	0.41
Bisagno	Trens Veilino	70.	Q50	730.00	30.91	34.36	36.25	1.89	36.50	2.14	33.65	0.50	34.86	0.003092	3.14	232.22	89.24	0.62
Bisagno	Trens Veilino	70.	Q200	1201.00	30.91	36.12	36.25	0.13	36.50	0.38	34.40	0.48	36.60	0.001542	3.08	389.89	89.66	0.47
Bisagno	Trens Veilino	70.	Q500	1649.00	30.91	38.15	36.25	-1.90	36.50	-1.65	35.02	0.42	38.57	0.000811	2.88	575.77	92.00	0.36
Bisagno	Trens Veilino	69.	Q50	730.00	29.93	34.18	35.50	1.32	35.35	1.17	33.10	0.43	34.62	0.002141	2.92	250.10	80.37	0.53
Bisagno	Trens Veilino	69.	Q200	1201.00	29.93	36.01	35.50	-0.51	35.35	-0.66	33.90	0.47	36.48	0.001275	3.02	397.64	81.52	0.43
Bisagno	Trens Veilino	69.	Q500	1649.00	29.93	38.07	35.50	-2.57	35.35	-2.72	34.57	0.44	38.50	0.000750	2.93	566.10	82.04	0.35
Bisagno	Trens Veilino	68.	Q50	730.00	30.04	33.96	34.84	0.88	34.65	0.69	32.92	0.50	34.46	0.002388	3.13	233.19	72.88	0.56
Bisagno	Trens Veilino	68.	Q200	1201.00	30.04	35.85	34.84	-1.01	34.65	-1.20	33.78	0.53	36.38	0.001395	3.23	373.75	76.00	0.46
Bisagno	Trens Veilino	68.	Q500	1649.00	30.04	37.95	34.84	-3.11	34.65	-3.30	34.51	0.49	38.44	0.000821	3.12	533.37	76.00	0.37
Bisagno	Trens Veilino	67.4	Q50	730.00	29.69	34.04	34.40	0.36	34.47	0.43	32.24	0.34	34.38	0.000795	2.57	284.45	71.05	0.41
Bisagno	Trens Veilino	67.4	Q200	1201.00	29.69	35.90	34.40	-1.50	34.47	-1.43	33.11	0.42	36.32	0.000642	2.88	416.53	71.05	0.38
Bisagno	Trens Veilino	67.4	Q500	1649.00	29.69	37.97	34.40	-3.57	34.47	-3.50	33.84	0.44	38.41	0.000471	2.92	563.99	71.05	0.33

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Trens Veilino	67.3	Q50	730.00	29.69	33.63	34.40	0.77	34.47	0.84	32.67	0.71	34.34	0.001987	3.73	195.76	70.66	0.63
Bisagno	Trens Veilino	67.3	Q200	1201.00	29.69	35.43	34.40	-1.03	34.47	-0.96	33.71	0.85	36.28	0.001489	4.08	294.45	70.66	0.56
Bisagno	Trens Veilino	67.3	Q500	1649.00	29.69	37.59	34.40	-3.19	34.47	-3.12	34.57	0.78	38.37	0.001234	3.92	420.21	70.66	0.51
Bisagno	Trens Veilino	67.25 BIS 67		Bridge														
Bisagno	Trens Veilino	67.2	Q50	730.00	29.69	32.16	34.40	2.24	34.47	2.31	32.67	2.04	34.20	0.010882	6.34	115.23	70.66	1.39
Bisagno	Trens Veilino	67.2	Q200	1201.00	29.69	32.81	34.40	1.59	34.47	1.66	33.71	3.23	36.04	0.012383	7.97	150.77	70.66	1.53
Bisagno	Trens Veilino	67.2	Q500	1649.00	29.69	33.15	34.40	1.25	34.47	1.32	34.57	4.82	37.97	0.016029	9.73	169.54	70.66	1.76
Bisagno	Trens Veilino	67.11	Q50	730.00	29.77	31.57	34.38	2.81	34.52	2.95	32.33	2.55	34.12	0.020084	7.07	103.28	67.66	1.83
Bisagno	Trens Veilino	67.11	Q200	1201.00	29.77	32.09	34.38	2.29	34.52	2.43	33.23	3.85	35.94	0.021045	8.70	138.10	67.70	1.94
Bisagno	Trens Veilino	67.11	Q500	1649.00	29.77	32.40	34.38	1.98	34.52	2.12	34.01	5.46	37.86	0.024936	10.35	159.31	67.72	2.15
Bisagno	Trens Veilino	67.1	Q50	730.00	27.06	28.97	34.38	5.41	34.52	5.55	30.16	4.91	33.88	0.058218	9.81	74.39	67.58	2.99
Bisagno	Trens Veilino	67.1	Q200	1201.00	27.06	29.48	34.38	4.90	34.52	5.04	31.05	6.22	35.70	0.045394	11.05	108.69	67.58	2.78
Bisagno	Trens Veilino	67.1	Q500	1649.00	27.06	29.85	34.38	4.53	34.52	4.67	31.80	7.78	37.63	0.043779	12.36	133.46	67.58	2.81
Bisagno	Trens Veilino	66.	Q50	730.00	27.39	30.74	34.23	3.49	33.54	2.80	30.42	0.87	31.61	0.005448	4.13	176.64	67.97	0.82
Bisagno	Trens Veilino	66.	Q200	1201.00	27.39	30.68	34.23	3.55	33.54	2.86	31.33	2.47	33.15	0.015927	6.96	172.50	67.96	1.39
Bisagno	Trens Veilino	66.	Q500	1649.00	27.39	30.87	34.23	3.36	33.54	2.67	32.08	4.05	34.92	0.023969	8.92	184.88	68.00	1.73
Bisagno	Trens Veilino	65.	Q50	730.00	26.95	30.40	33.51	3.11	33.09	2.69	30.09	0.87	31.26	0.005542	4.12	177.12	69.77	0.83
Bisagno	Trens Veilino	65.	Q200	1201.00	26.95	31.37	33.51	2.14	33.09	1.72	30.98	1.22	32.59	0.005261	4.89	245.68	71.13	0.84
Bisagno	Trens Veilino	65.	Q500	1649.00	26.95	32.17	33.51	1.34	33.09	0.92	31.73	1.51	33.68	0.005136	5.45	302.56	72.45	0.85
Bisagno	Trens Veilino	64.	Q50	730.00	26.63	29.91	32.83	2.92	32.61	2.70	29.78	0.95	30.86	0.007133	4.32	169.04	74.24	0.91
Bisagno	Trens Veilino	64.	Q200	1201.00	26.63	31.12	32.83	1.71	32.61	1.49	30.63	1.09	32.21	0.004826	4.62	260.07	75.90	0.80
Bisagno	Trens Veilino	64.	Q500	1649.00	26.63	32.00	32.83	0.83	32.61	0.61	31.34	1.29	33.29	0.004413	5.04	327.18	77.62	0.78
Bisagno	Trens Veilino	63.4	Q50	730.00	25.60	29.95	33.84	3.89	33.85	3.90	29.30	0.60	30.55	0.003560	3.43	212.56	78.42	0.67
Bisagno	Trens Veilino	63.4	Q200	1201.00	25.60	31.22	33.84	2.62	33.85	2.63	30.14	0.74	31.96	0.002747	3.81	315.10	81.31	0.62
Bisagno	Trens Veilino	63.4	Q500	1649.00	25.60	32.12	33.84	1.72	33.85	1.73	30.81	0.92	33.04	0.002621	4.24	388.82	81.43	0.62
Bisagno	Trens Veilino	63.3	Q50	730.00	25.58	29.67	33.82	4.15	33.83	4.16	29.39	0.85	30.52	0.005729	4.08	178.91	78.33	0.83
Bisagno	Trens Veilino	63.3	Q200	1201.00	25.58	30.96	33.82	2.86	33.83	2.87	30.27	0.97	31.93	0.003909	4.36	275.59	81.28	0.73
Bisagno	Trens Veilino	63.3	Q500	1649.00	25.58	31.80	33.82	2.02	33.83	2.03	30.97	1.20	33.01	0.003746	4.86	339.63	81.39	0.73
Bisagno	Trens Veilino	63.25 BIS 63		Bridge														
Bisagno	Trens Veilino	63.2	Q50	730.00	25.56	29.64	33.80	4.16	33.81	4.17	29.37	0.85	30.50	0.005775	4.09	178.48	78.32	0.83
Bisagno	Trens Veilino	63.2	Q200	1201.00	25.56	30.94	33.80	2.86	33.81	2.87	30.25	0.97	31.91	0.003908	4.36	275.61	81.28	0.73
Bisagno	Trens Veilino	63.2	Q500	1649.00	25.56	31.76	33.80	2.04	33.81	2.05	30.95	1.22	32.97	0.003817	4.88	337.65	81.38	0.74
Bisagno	Trens Veilino	63.1	Q50	730.00	25.48	29.77	33.73	3.96	33.74	3.97	29.18	0.63	30.40	0.003854	3.52	207.47	78.40	0.69
Bisagno	Trens Veilino	63.1	Q200	1201.00	25.48	31.07	33.73	2.66	33.74	2.67	30.02	0.75	31.82	0.002820	3.84	312.55	81.30	0.63
Bisagno	Trens Veilino	63.1	Q500	1649.00	25.48	31.92	33.73	1.81	33.74	1.82	30.70	0.95	32.87	0.002774	4.32	382.04	81.42	0.64
Bisagno	Trens Veilino	62.	Q50	730.00	25.80	29.57	31.82	2.25	31.63	2.06	28.98	0.60	30.17	0.003822	3.45	211.88	82.47	0.69
Bisagno	Trens Veilino	62.	Q200	1201.00	25.80	30.98	31.82	0.84	31.63	0.65	29.79	0.67	31.65	0.002500	3.63	330.64	85.23	0.59
Bisagno	Trens Veilino	62.	Q500	1649.00	25.80	31.85	31.82	-0.03	31.63	-0.22	30.46	0.84	32.69	0.002430	4.07	405.39	86.00	0.60
Bisagno	Trens Veilino	61.	Q50	730.00	25.31	28.75	31.68	2.93	30.91	2.16	28.59	1.02	29.77	0.006735	4.48	162.87	65.74	0.91
Bisagno	Trens Veilino	61.	Q200	1201.00	25.31	30.45	31.68	1.23	30.91	0.46	29.54	0.94	31.39	0.003501	4.28	280.30	72.89	0.70
Bisagno	Trens Veilino	61.	Q500	1649.00	25.31	31.18	31.68	0.50	30.91	-0.27	30.33	1.24	32.42	0.003860	4.93	334.58	76.31	0.75
Bisagno	Trens Veilino	60.	Q50	730.00	25.45	28.29	30.53	2.24	30.11	1.82	28.02	0.84	29.13	0.005785	4.07	179.57	75.15	0.84
Bisagno	Trens Veilino	60.	Q200	1201.00	25.45	30.45	30.53	0.08	30.11	-0.34	28.88	0.61	31.05	0.001922	3.45	348.34	80.96	0.53
Bisagno	Trens Veilino	60.	Q500	1649.00	25.45	31.21	30.53	-0.68	30.11	-1.10	29.59	0.83	32.03	0.002118	4.03	410.20	81.46	0.57

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Trens Veilino	59.	Q50	730.00	23.81	27.66	29.50	1.84	28.98	1.32	27.34	0.85	28.50	0.005669	4.07	179.18	71.52	0.82
Bisagno	Trens Veilino	59.	Q200	1201.00	23.81	30.31	29.50	-0.81	28.98	-1.33	28.23	0.52	30.83	0.001420	3.20	376.90	75.86	0.45
Bisagno	Trens Veilino	59.	Q500	1649.00	23.81	31.03	29.50	-1.53	28.98	-2.05	28.95	0.75	31.78	0.001715	3.84	431.64	76.37	0.51
Bisagno	Trens Veilino	58.4	Q50	730.00	23.38	27.66	29.20	1.54	29.02	1.36	26.82	0.65	28.31	0.003126	3.59	203.60	63.04	0.64
Bisagno	Trens Veilino	58.4	Q200	1201.00	23.38	30.24	29.20	-1.04	29.02	-1.22	27.76	0.55	30.78	0.001283	3.28	366.27	63.04	0.43
Bisagno	Trens Veilino	58.4	Q500	1649.00	23.38	30.88	29.20	-1.68	29.02	-1.86	28.54	0.84	31.71	0.001736	4.06	406.64	63.04	0.51
Bisagno	Trens Veilino	58.3	Q50	730.00	23.36	27.39	29.20	1.81	29.02	1.63	26.93	0.89	28.28	0.004755	4.19	174.39	63.04	0.78
Bisagno	Trens Veilino	58.3	Q200	1201.00	23.36	30.16	29.20	-0.96	29.02	-1.14	27.92	0.62	30.78	0.001561	3.48	344.76	63.04	0.48
Bisagno	Trens Veilino	58.3	Q500	1649.00	23.36	30.75	29.20	-1.55	29.02	-1.73	28.80	0.95	31.70	0.002117	4.31	382.38	63.04	0.56
Bisagno	Trens Veilino	58.25 BIS 58		Bridge														
Bisagno	Trens Veilino	58.2	Q50	730.00	23.20	27.21	29.20	1.99	29.02	1.81	26.77	0.90	28.12	0.004855	4.21	173.21	63.04	0.78
Bisagno	Trens Veilino	58.2	Q200	1201.00	23.20	28.22	29.20	0.98	29.02	0.80	27.76	1.36	29.58	0.005074	5.16	232.54	63.04	0.83
Bisagno	Trens Veilino	58.2	Q500	1649.00	23.20	29.08	29.20	0.12	29.02	-0.06	28.65	1.69	30.77	0.005332	5.76	286.29	63.04	0.86
Bisagno	Trens Veilino	58.1	Q50	730.00	23.12	27.36	29.20	1.84	29.02	1.66	26.56	0.67	28.03	0.003237	3.63	201.34	63.04	0.65
Bisagno	Trens Veilino	58.1	Q200	1201.00	23.12	28.45	29.20	0.75	29.02	0.57	27.50	1.01	29.46	0.003399	4.45	269.93	63.04	0.69
Bisagno	Trens Veilino	58.1	Q500	1649.00	23.12	29.33	29.20	-0.13	29.02	-0.31	28.28	1.31	30.64	0.003512	5.06	325.65	63.04	0.71
Bisagno	Trens Veilino	57.	Q50	730.00	21.94	27.30	28.77	1.47	28.39	1.09	26.36	0.59	27.89	0.002914	3.39	215.05	69.72	0.62
Bisagno	Trens Veilino	57.	Q200	1201.00	21.94	28.45	28.77	0.32	28.39	-0.06	27.34	0.84	29.29	0.002894	4.06	296.04	71.52	0.63
Bisagno	Trens Veilino	57.	Q500	1649.00	21.94	29.39	28.77	-0.62	28.39	-1.00	28.07	1.05	30.45	0.002788	4.55	363.34	71.55	0.64
Bisagno	Trens Veilino	56.	Q50	730.00	22.34	27.04	28.46	1.42	28.00	0.96	26.23	0.65	27.69	0.003318	3.56	204.92	67.49	0.65
Bisagno	Trens Veilino	56.	Q200	1201.00	22.34	28.14	28.46	0.32	28.00	-0.14	27.19	0.94	29.08	0.003283	4.30	279.57	68.69	0.68
Bisagno	Trens Veilino	56.	Q500	1649.00	22.34	29.05	28.46	-0.59	28.00	-1.05	27.94	1.19	30.24	0.003193	4.83	342.11	68.74	0.69
Bisagno	Trens Veilino	55.4	Q50	730.00	21.80	27.03	28.55	1.52	28.54	1.51	25.85	0.50	27.53	0.002227	3.14	232.48	66.92	0.54
Bisagno	Trens Veilino	55.4	Q200	1201.00	21.80	28.13	28.55	0.42	28.54	0.41	26.76	0.78	28.92	0.002470	3.92	306.46	67.04	0.59
Bisagno	Trens Veilino	55.4	Q500	1649.00	21.80	29.04	28.55	-0.49	28.54	-0.50	27.51	1.03	30.07	0.002598	4.49	367.60	67.06	0.61
Bisagno	Trens Veilino	55.3	Q50	730.00	21.79	26.97	28.54	1.57	28.53	1.56	25.90	0.55	27.53	0.002505	3.29	222.07	66.92	0.57
Bisagno	Trens Veilino	55.3	Q200	1201.00	21.79	28.04	28.54	0.50	28.53	0.49	26.83	0.86	28.91	0.002807	4.12	291.81	67.03	0.62
Bisagno	Trens Veilino	55.3	Q500	1649.00	21.79	28.92	28.54	-0.38	28.53	-0.39	27.59	1.14	30.06	0.002976	4.72	349.16	67.06	0.65
Bisagno	Trens Veilino	55.25 BIS 55		Bridge														
Bisagno	Trens Veilino	55.2	Q50	730.00	21.77	26.96	28.52	1.56	28.51	1.55	25.88	0.55	27.51	0.002480	3.28	222.76	66.92	0.57
Bisagno	Trens Veilino	55.2	Q200	1201.00	21.77	28.03	28.52	0.49	28.51	0.48	26.81	0.86	28.89	0.002791	4.11	292.31	67.03	0.62
Bisagno	Trens Veilino	55.2	Q500	1649.00	21.77	28.88	28.52	-0.36	28.51	-0.37	27.57	1.14	30.03	0.003007	4.74	348.06	67.06	0.66
Bisagno	Trens Veilino	55.1	Q50	730.00	21.75	27.00	28.50	1.50	28.49	1.49	25.80	0.50	27.49	0.002191	3.12	233.66	66.93	0.53
Bisagno	Trens Veilino	55.1	Q200	1201.00	21.75	28.08	28.50	0.42	28.49	0.41	26.71	0.78	28.86	0.002474	3.92	306.28	67.05	0.59
Bisagno	Trens Veilino	55.1	Q500	1649.00	21.75	28.95	28.50	-0.45	28.49	-0.46	27.46	1.04	29.99	0.002666	4.52	364.66	67.07	0.62
Bisagno	Trens Veilino	54	Q50	730.00	22.59	25.96	27.79	1.83	27.32	1.36	25.96	1.13	27.09	0.007027	4.71	154.93	68.43	1.00
Bisagno	Trens Veilino	54	Q200	1201.00	22.59	26.85	27.79	0.94	27.32	0.47	26.85	1.57	28.42	0.006463	5.54	216.61	69.14	1.00
Bisagno	Trens Veilino	54	Q500	1649.00	22.59	27.59	27.79	0.20	27.32	-0.27	27.59	1.93	29.52	0.006182	6.16	267.84	69.50	1.00
Bisagno	Trens Veilino	53	Q50	730.00	21.77	25.28	27.18	1.90	26.93	1.65	25.24	1.11	26.39	0.006845	4.67	156.39	66.99	0.98
Bisagno	Trens Veilino	53	Q200	1201.00	21.77	26.34	27.18	0.84	26.93	0.59	26.15	1.42	27.76	0.005526	5.28	227.54	67.32	0.92
Bisagno	Trens Veilino	53	Q500	1649.00	21.77	27.23	27.18	-0.05	26.93	-0.30	26.90	1.67	28.91	0.004920	5.73	287.77	67.50	0.89
Bisagno	Trens Veilino	52.	Q50	730.00	21.67	25.13	26.70	1.57	26.63	1.50	24.96	1.02	26.15	0.005677	4.48	163.11	64.77	0.90
Bisagno	Trens Veilino	52.	Q200	1201.00	21.67	26.20	26.70	0.50	26.63	0.43	25.89	1.36	27.56	0.004906	5.16	232.60	65.02	0.87
Bisagno	Trens Veilino	52.	Q500	1649.00	21.67	27.09	26.70	-0.39	26.63	-0.46	26.66	1.64	28.73	0.004560	5.68	290.44	65.13	0.86

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Trens Veilino	51.	Q50	730.00	22.10	25.06	26.50	1.44	26.46	1.40	24.53	0.79	25.85	0.003679	3.93	185.82	64.50	0.74
Bisagno	Trens Veilino	51.	Q200	1201.00	22.10	26.11	26.50	0.39	26.46	0.35	25.46	1.14	27.25	0.003676	4.74	253.62	64.67	0.76
Bisagno	Trens Veilino	51.	Q500	1649.00	22.10	26.98	26.50	-0.48	26.46	-0.52	26.24	1.44	28.42	0.003668	5.32	309.96	64.73	0.78
Bisagno	Trens Veilino	50.	Q50	730.00	21.89	24.86	26.14	1.28	26.35	1.49	24.33	0.79	25.65	0.003759	3.95	184.83	64.25	0.74
Bisagno	Trens Veilino	50.	Q200	1201.00	21.89	25.90	26.14	0.24	26.35	0.45	25.27	1.16	27.06	0.003765	4.76	252.07	64.34	0.77
Bisagno	Trens Veilino	50.	Q500	1649.00	21.89	26.77	26.14	-0.63	26.35	-0.42	26.05	1.46	28.23	0.003764	5.36	307.88	64.38	0.78
Bisagno	Trens Veilino	49.2	Q50	730.00	21.69	24.45	25.86	1.41	26.29	1.84	24.20	0.98	25.43	0.005247	4.38	166.50	63.56	0.86
Bisagno	Trens Veilino	49.2	Q200	1201.00	21.69	25.44	25.86	0.42	26.29	0.85	25.14	1.39	26.83	0.005044	5.22	229.88	63.91	0.88
Bisagno	Trens Veilino	49.2	Q500	1649.00	21.69	26.29	25.86	-0.43	26.29	0.00	25.92	1.72	28.00	0.004845	5.80	284.14	64.02	0.88
Bisagno	Trens Veilino	49.1	Q50	730.00	21.69	24.45	25.86	1.41	26.29	1.84	24.20	0.98	25.43	0.005253	4.39	166.44	63.56	0.87
Bisagno	Trens Veilino	49.1	Q200	1201.00	21.69	25.44	25.86	0.42	26.29	0.85	25.14	1.39	26.83	0.005049	5.23	229.82	63.91	0.88
Bisagno	Trens Veilino	49.1	Q500	1649.00	21.69	26.29	25.86	-0.43	26.29	0.00	25.92	1.72	28.00	0.004848	5.80	284.08	64.02	0.88
Bisagno	Trens Veilino	49.	Q50	730.00	21.69	24.20	25.86	1.66	26.29	2.09	24.20	1.20	25.39	0.007244	4.85	150.59	63.27	1.00
Bisagno	Trens Veilino	49.	Q200	1201.00	21.69	25.14	25.86	0.72	26.29	1.15	25.14	1.65	26.80	0.006656	5.70	210.81	63.85	1.00
Bisagno	Trens Veilino	49.	Q500	1649.00	21.69	25.92	25.86	-0.06	26.29	0.37	25.92	2.04	27.96	0.006358	6.32	260.82	63.99	1.00
Bisagno	Trens Veilino	48.9	Q50	730.00	19.06	20.39	25.86	5.47	26.29	5.90	21.61	4.66	25.05	0.059676	9.56	76.37	57.38	2.64
Bisagno	Trens Veilino	48.9	Q200	1201.00	19.06	21.11	25.86	4.75	26.29	5.18	22.60	5.32	26.43	0.039626	10.22	117.51	57.38	2.28
Bisagno	Trens Veilino	48.9	Q500	1649.00	19.06	21.75	25.86	4.11	26.29	4.54	23.51	5.83	27.58	0.031111	10.70	154.09	57.38	2.08
Bisagno	Trens Veilino	48.	Q50	730.00	18.92	22.27	25.86	3.59	26.29	4.02	21.48	0.75	23.02	0.003061	3.84	190.34	56.77	0.67
Bisagno	Trens Veilino	48.	Q200	1201.00	18.92	23.52	25.86	2.34	26.29	2.77	22.57	1.03	24.55	0.003118	4.51	266.54	62.35	0.70
Bisagno	Trens Veilino	48.	Q500	1649.00	18.92	24.57	25.86	1.29	26.29	1.72	23.39	1.25	25.82	0.002956	4.96	332.62	63.78	0.69
Bisagno	Trens Veilino	47	Q50	730.00	18.77	22.12	25.75	3.63	26.19	4.07	21.33	0.75	22.86	0.003203	3.83	190.51	59.14	0.68
Bisagno	Trens Veilino	47	Q200	1201.00	18.77	23.36	25.75	2.39	26.19	2.83	22.37	1.04	24.40	0.003119	4.51	266.36	62.14	0.70
Bisagno	Trens Veilino	47	Q500	1649.00	18.77	24.42	25.75	1.33	26.19	1.77	23.23	1.25	25.67	0.002948	4.96	332.74	63.56	0.69
Bisagno	Trens Veilino	46	Q50	730.00	18.73	22.08	25.68	3.60	26.23	4.15	21.29	0.75	22.82	0.003298	3.83	190.70	60.81	0.69
Bisagno	Trens Veilino	46	Q200	1201.00	18.73	23.35	25.68	2.33	26.23	2.88	22.37	1.01	24.36	0.003028	4.45	269.70	62.90	0.69
Bisagno	Trens Veilino	46	Q500	1649.00	18.73	24.41	25.68	1.27	26.23	1.82	23.18	1.22	25.63	0.002836	4.90	336.69	63.32	0.68
Bisagno	Trens Veilino	45.1	Q50	730.00	18.67	22.21	25.80	3.59	26.35	4.14	21.00	0.51	22.71	0.001899	3.15	231.75	65.51	0.53
Bisagno	Trens Veilino	45.1	Q200	1201.00	18.67	23.50	25.80	2.30	26.35	2.85	21.92	0.73	24.23	0.001907	3.80	316.45	65.51	0.55
Bisagno	Trens Veilino	45.1	Q500	1649.00	18.67	24.58	25.80	1.22	26.35	1.77	22.68	0.93	25.50	0.001910	4.26	386.95	65.51	0.56
Bisagno	Trens Veilino	45		Bridge														
Bisagno	Trens Veilino	44.9	Q50	730.00	18.66	21.95	25.80	3.85	26.35	4.40	20.99	0.58	22.53	0.002396	3.39	215.57	65.51	0.60
Bisagno	Trens Veilino	44.9	Q200	1201.00	18.66	23.14	25.80	2.66	26.35	3.21	21.91	0.85	23.99	0.002421	4.09	293.50	65.51	0.62
Bisagno	Trens Veilino	44.9	Q500	1649.00	18.66	24.13	25.80	1.67	26.35	2.22	22.67	1.08	25.21	0.002436	4.61	358.06	65.51	0.63
Bisagno	Trens Veilino	44	Q50	730.00	18.45	21.29	25.38	4.09	26.16	4.87	21.02	1.00	22.28	0.004973	4.43	164.96	60.78	0.86
Bisagno	Trens Veilino	44	Q200	1201.00	18.45	22.22	25.38	3.16	26.16	3.94	21.99	1.49	23.71	0.005212	5.41	221.86	61.00	0.91
Bisagno	Trens Veilino	44	Q500	1649.00	18.45	23.04	25.38	2.34	26.16	3.12	22.80	1.87	24.91	0.005153	6.06	271.94	61.19	0.92
Bisagno	Trens Veilino	43	Q50	730.00	18.34	21.29	25.21	3.92	26.12	4.83	20.76	0.77	22.06	0.003602	3.89	187.86	66.69	0.74
Bisagno	Trens Veilino	43	Q200	1201.00	18.34	22.34	25.21	2.87	26.12	3.78	21.69	1.10	23.44	0.003560	4.65	258.39	67.93	0.76
Bisagno	Trens Veilino	43	Q500	1649.00	18.34	23.26	25.21	1.95	26.12	2.86	22.45	1.34	24.60	0.003370	5.13	321.41	68.47	0.76
Bisagno	Trens Veilino	42.2	Q50	730.00	18.31	21.05	25.36	4.31	26.13	5.08	20.81	0.96	22.02	0.005036	4.35	167.95	65.53	0.87
Bisagno	Trens Veilino	42.2	Q200	1201.00	18.31	22.04	25.36	3.32	26.13	4.09	21.75	1.35	23.39	0.004805	5.15	233.07	66.57	0.88
Bisagno	Trens Veilino	42.2	Q500	1649.00	18.31	22.99	25.36	2.37	26.13	3.14	22.52	1.57	24.56	0.004231	5.54	297.42	67.84	0.85
Bisagno	Trens Veilino	42.1	Q50	730.00	18.31	21.05	25.36	4.31	26.13	5.08	20.81	0.96	22.02	0.005042	4.35	167.88	65.52	0.87
Bisagno	Trens Veilino	42.1	Q200	1201.00	18.31	22.04	25.36	3.32	26.13	4.09	21.75	1.35	23.39	0.004809	5.15	233.01	66.57	0.88

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Trens Veilino	42.1	Q500	1649.00	18.31	22.99	25.36	2.37	26.13	3.14	22.52	1.57	24.56	0.004233	5.55	297.37	67.84	0.85
Bisagno	Trens Veilino	42	Q50	730.00	18.31	20.81	25.36	4.55	26.13	5.32	20.81	1.17	21.99	0.006879	4.80	152.13	64.87	1.00
Bisagno	Trens Veilino	42	Q200	1201.00	18.31	21.75	25.36	3.61	26.13	4.38	21.75	1.61	23.35	0.006335	5.62	213.80	66.51	1.00
Bisagno	Trens Veilino	42	Q500	1649.00	18.31	22.96	25.36	2.40	26.13	3.17	22.52	1.59	24.55	0.004330	5.59	295.25	67.82	0.85
Bisagno	Trens Veilino	41.9	Q50	730.00	17.15	20.11	25.32	5.21	26.13	6.02	20.55	1.81	21.92	0.011995	5.96	122.40	57.02	1.30
Bisagno	Trens Veilino	41.9	Q200	1201.00	17.15	21.12	25.32	4.20	26.13	5.01	21.56	2.18	23.30	0.010034	6.54	183.69	64.58	1.24
Bisagno	Trens Veilino	41.9	Q500	1649.00	17.15	23.08	25.32	2.24	26.13	3.05	22.35	1.42	24.50	0.003559	5.28	312.46	66.66	0.78
Bisagno	Trens Veilino	41	Q50	730.00	17.10	20.19	25.27	5.08	26.08	5.89	20.50	1.61	21.80	0.010041	5.62	129.94	57.86	1.20
Bisagno	Trens Veilino	41	Q200	1201.00	17.10	21.16	25.27	4.11	26.08	4.92	21.51	2.04	23.20	0.009133	6.33	189.63	65.08	1.18
Bisagno	Trens Veilino	41	Q500	1649.00	17.10	23.05	25.27	2.22	26.08	3.03	22.30	1.41	24.45	0.003519	5.26	313.57	66.67	0.77
Bisagno	Veil Fereggiano	40.	Q50	696.00	17.54	20.56	25.35	4.79	25.97	5.41	20.55	1.14	21.70	0.007254	4.74	146.85	64.00	1.00
Bisagno	Veil Fereggiano	40.	Q200	1147.00	17.54	22.32	25.35	3.03	25.97	3.65	21.48	0.98	23.30	0.003164	4.38	261.96	65.80	0.70
Bisagno	Veil Fereggiano	40.	Q500	1573.00	17.54	23.25	25.35	2.10	25.97	2.72	22.22	1.21	24.46	0.003074	4.88	322.57	65.80	0.70
Bisagno	Veil Fereggiano	39.	Q50	696.00	17.24	20.56	24.70	4.14	24.40	3.84	19.75	0.61	21.17	0.002735	3.47	200.59	65.30	0.63
Bisagno	Veil Fereggiano	39.	Q200	1147.00	17.24	22.35	24.70	2.35	24.40	2.05	20.64	0.66	23.01	0.001710	3.61	317.78	65.30	0.52
Bisagno	Veil Fereggiano	39.	Q500	1573.00	17.24	23.28	24.70	1.42	24.40	1.12	21.38	0.88	24.16	0.001858	4.16	378.37	65.30	0.55
Bisagno	Veil Fereggiano	38.	Q50	696.00	17.24	20.46	23.60	3.14	23.60	3.14	19.80	0.70	21.16	0.004424	3.70	187.87	63.20	0.69
Bisagno	Veil Fereggiano	38.	Q200	1147.00	17.24	22.27	23.60	1.33	23.60	1.33	20.71	0.73	23.01	0.003013	3.79	302.64	63.20	0.55
Bisagno	Veil Fereggiano	38.	Q500	1573.00	17.24	23.17	23.60	0.43	23.60	0.43	21.47	0.98	24.15	0.003502	4.38	359.33	63.20	0.59
Bisagno	Veil Fereggiano	37.	Q50	696.00	16.00	19.23	21.10	1.87	21.10	1.87	18.45	0.60	19.83	0.003711	3.44	202.37	68.00	0.64
Bisagno	Veil Fereggiano	37.	Q200	1147.00	16.00	21.63	21.10	-0.53	21.10	-0.53	19.32	0.53	22.16	0.002970	3.23	355.33	27.67	0.43
Bisagno	Veil Fereggiano	37.	Q500	1573.00	16.00	21.81	21.10	-0.71	21.10	-0.71	20.04	0.98	22.79	0.006070	4.38	359.08	14.14	0.58
Bisagno	Veil Fereggiano	36.	Q50	696.00	16.00	19.32	22.20	2.88	21.80	2.48	18.16	0.46	19.77	0.001837	2.99	232.62	70.10	0.52
Bisagno	Veil Fereggiano	36.	Q200	1147.00	16.00	21.71	22.20	0.49	21.80	0.09	19.01	0.42	22.13	0.000887	2.87	400.01	70.10	0.38
Bisagno	Veil Fereggiano	36.	Q500	1573.00	16.00	21.99	22.20	0.21	21.80	-0.19	19.72	0.72	22.70	0.001436	3.75	419.59	70.10	0.49
Bisagno	Veil Fereggiano	35.3	Q50	696.00	15.18	18.90	21.00	2.10	21.00	2.10	18.13	0.59	19.49	0.002774	3.40	204.84	70.00	0.63
Bisagno	Veil Fereggiano	35.3	Q200	1147.00	15.18	21.57	21.00	-0.57	21.00	-0.57	18.99	0.44	22.01	0.000948	2.93	391.97	70.00	0.39
Bisagno	Veil Fereggiano	35.3	Q500	1573.00	15.18	21.73	21.00	-0.73	21.00	-0.73	19.69	0.78	22.51	0.001635	3.90	402.94	70.00	0.52
Bisagno	Veil Fereggiano	35.2	Q50	696.00	15.18	18.89	21.00	2.11	21.00	2.11	18.13	0.59	19.49	0.002796	3.41	204.34	70.00	0.64
Bisagno	Veil Fereggiano	35.2	Q200	1147.00	15.18	21.57	21.00	-0.57	21.00	-0.57	18.99	0.44	22.01	0.000949	2.93	391.89	70.00	0.39
Bisagno	Veil Fereggiano	35.2	Q500	1573.00	15.18	21.73	21.00	-0.73	21.00	-0.73	19.69	0.78	22.51	0.001637	3.91	402.77	70.00	0.52
Bisagno	Veil Fereggiano	35.11 BIS 35		Bridge														
Bisagno	Veil Fereggiano	35.1	Q50	696.00	15.18	17.69	21.00	3.31	21.00	3.31	18.13	1.70	19.40	0.015644	5.78	120.35	70.00	1.41
Bisagno	Veil Fereggiano	35.1	Q200	1147.00	15.18	19.33	21.00	1.67	21.00	1.67	18.99	1.21	20.55	0.004827	4.88	235.17	70.00	0.85
Bisagno	Veil Fereggiano	35.1	Q500	1573.00	15.18	20.08	21.00	0.92	21.00	0.92	19.69	1.52	21.61	0.004761	5.47	287.63	70.00	0.86
Bisagno	Veil Fereggiano	35.	Q50	696.00	15.18	17.88	21.00	3.12	21.00	3.12	18.13	1.38	19.27	0.011122	5.21	133.60	70.00	1.20
Bisagno	Veil Fereggiano	35.	Q200	1147.00	15.18	18.99	21.00	2.01	21.00	2.01	18.99	1.51	20.49	0.006856	5.44	210.91	70.00	1.00
Bisagno	Veil Fereggiano	35.	Q500	1573.00	15.18	19.69	21.00	1.31	21.00	1.31	19.69	1.86	21.55	0.006553	6.04	260.30	70.00	1.00
Bisagno	Veil Fereggiano	34.	Q50	696.00	13.87	18.04	20.26	2.22	20.45	2.41	17.05	0.52	18.56	0.002148	3.19	218.47	69.00	0.57
Bisagno	Veil Fereggiano	34.	Q200	1147.00	13.87	19.10	20.26	1.16	20.45	1.35	17.92	0.79	19.89	0.002303	3.93	292.00	69.00	0.61
Bisagno	Veil Fereggiano	34.	Q500	1573.00	13.87	20.00	20.26	0.26	20.45	0.45	18.63	1.01	21.00	0.002362	4.45	353.55	69.00	0.63
Bisagno	Veil Fereggiano	33.	Q50	696.00	13.77	17.66	19.30	1.64	19.60	1.94	16.88	0.61	18.26	0.002750	3.45	201.65	69.00	0.64
Bisagno	Veil Fereggiano	33.	Q200	1147.00	13.77	18.68	19.30	0.62	19.60	0.92	17.77	0.90	19.58	0.002848	4.21	272.28	69.00	0.68
Bisagno	Veil Fereggiano	33.	Q500	1573.00	13.77	19.56	19.30	-0.26	19.60	0.04	18.49	1.14	20.70	0.002822	4.72	333.12	69.00	0.69

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Veil Fereggiano	32.3	Q50	696.00	14.09	17.35	18.50	1.15	19.20	1.85	16.92	0.76	18.11	0.003930	3.86	180.28	69.10	0.76
Bisagno	Veil Fereggiano	32.3	Q200	1147.00	14.09	18.36	18.50	0.14	19.20	0.84	17.78	1.08	19.43	0.003744	4.60	249.59	69.10	0.77
Bisagno	Veil Fereggiano	32.3	Q500	1573.00	14.09	19.26	18.50	-0.76	19.20	-0.06	18.49	1.30	20.55	0.003466	5.05	311.71	69.10	0.76
Bisagno	Veil Fereggiano	32.2	Q50	696.00	14.09	17.34	18.50	1.16	19.20	1.86	16.92	0.77	18.11	0.003978	3.88	179.60	69.10	0.77
Bisagno	Veil Fereggiano	32.2	Q200	1147.00	14.09	18.35	18.50	0.15	19.20	0.85	17.78	1.08	19.43	0.003775	4.61	248.95	69.10	0.77
Bisagno	Veil Fereggiano	32.2	Q500	1573.00	14.09	19.25	18.50	-0.75	19.20	-0.05	18.49	1.30	20.55	0.003481	5.05	311.28	69.10	0.76
Bisagno	Veil Fereggiano	32.11 BIS 32		Bridge														
Bisagno	Veil Fereggiano	32.1	Q50	696.00	14.09	16.70	18.50	1.80	19.20	2.50	16.92	1.35	18.05	0.010002	5.15	135.22	69.10	1.17
Bisagno	Veil Fereggiano	32.1	Q200	1147.00	14.09	17.48	18.50	1.02	19.20	1.72	17.78	1.87	19.35	0.009114	6.06	189.30	69.10	1.17
Bisagno	Veil Fereggiano	32.1	Q500	1573.00	14.09	18.82	18.50	-0.32	19.20	0.38	18.49	1.59	20.41	0.004785	5.58	281.66	69.10	0.88
Bisagno	Veil Fereggiano	32.	Q50	696.00	14.09	16.72	18.50	1.78	19.20	2.48	16.92	1.32	18.04	0.009670	5.09	136.63	69.10	1.16
Bisagno	Veil Fereggiano	32.	Q200	1147.00	14.09	17.51	18.50	0.99	19.20	1.69	17.78	1.84	19.35	0.008891	6.01	190.76	69.10	1.16
Bisagno	Veil Fereggiano	32.	Q500	1573.00	14.09	18.58	18.50	-0.08	19.20	0.62	18.49	1.79	20.37	0.005805	5.93	265.12	69.10	0.97
Bisagno	Veil Fereggiano	31.	Q50	696.00	12.75	15.42	18.49	3.07	18.80	3.38	15.96	1.90	17.31	0.016110	6.10	114.09	64.64	1.47
Bisagno	Veil Fereggiano	31.	Q200	1147.00	12.75	16.13	18.49	2.36	18.80	2.67	16.82	2.54	18.67	0.014969	7.06	162.40	69.00	1.47
Bisagno	Veil Fereggiano	31.	Q500	1573.00	12.75	18.96	18.49	-0.47	18.80	-0.16	17.53	0.99	19.94	0.002244	4.40	357.62	69.00	0.62
Bisagno	Veil Fereggiano	30.	Q50	696.00	12.65	15.67	17.88	2.21	18.20	2.53	15.37	0.84	16.51	0.004694	4.05	171.79	69.00	0.82
Bisagno	Veil Fereggiano	30.	Q200	1147.00	12.65	16.59	17.88	1.29	18.20	1.61	16.23	1.21	17.80	0.004620	4.88	235.28	69.00	0.84
Bisagno	Veil Fereggiano	30.	Q500	1573.00	12.65	18.93	17.88	-1.05	18.20	-0.73	16.94	0.80	19.73	0.001652	3.97	396.70	69.00	0.53
Bisagno	Veil Fereggiano	29.	Q50	696.00	12.35	15.12	17.10	1.98	17.57	2.45	14.83	0.85	15.97	0.004824	4.09	170.23	69.00	0.83
Bisagno	Veil Fereggiano	29.	Q200	1147.00	12.35	16.06	17.10	1.04	17.57	1.51	15.69	1.21	17.27	0.004591	4.87	235.58	69.00	0.84
Bisagno	Veil Fereggiano	29.	Q500	1573.00	12.35	18.84	17.10	-1.74	17.57	-1.27	16.40	0.69	19.53	0.001305	3.68	427.37	69.00	0.47
Bisagno	Veil Fereggiano	28.	Q50	696.00	12.40	14.87	17.40	2.53	17.60	2.73	14.58	0.85	15.72	0.004930	4.08	170.43	69.00	0.83
Bisagno	Veil Fereggiano	28.	Q200	1147.00	12.40	15.84	17.40	1.56	17.60	1.76	15.44	1.19	17.03	0.004583	4.83	237.54	69.00	0.83
Bisagno	Veil Fereggiano	28.	Q500	1573.00	12.40	18.81	17.40	-1.41	17.60	-1.21	16.15	0.64	19.45	0.001200	3.56	442.33	69.00	0.45
Bisagno	Veil Fereggiano	27.	Q50	696.00	12.40	14.68	12.40	-2.28	16.50	1.82	14.59	1.02	15.70	0.007052	4.46	155.92	68.30	0.94
Bisagno	Veil Fereggiano	27.	Q200	1147.00	12.40	15.64	12.40	-3.24	16.50	0.86	15.46	1.37	17.01	0.006339	5.18	221.51	68.30	0.92
Bisagno	Veil Fereggiano	27.	Q500	1573.00	12.40	18.71	12.40	-6.31	16.50	-2.21	16.18	0.74	19.44	0.002564	3.80	413.78	69.00	0.48
Bisagno	Veil Fereggiano	26.	Q50	696.00	10.60	13.76	10.60	-3.16	15.25	1.49	12.86	0.58	14.34	0.002785	3.37	206.69	65.40	0.60
Bisagno	Veil Fereggiano	26.	Q200	1147.00	10.60	15.03	10.60	-4.43	15.25	0.22	13.75	0.80	15.83	0.002664	3.96	289.90	65.40	0.60
Bisagno	Veil Fereggiano	26.	Q500	1573.00	10.60	18.42	10.60	-7.82	15.25	-3.17	14.49	0.51	18.94	0.001430	3.18	495.11	66.10	0.36
Bisagno	Veil Fereggiano	25.	Q50	696.00	10.60	13.71	15.25	1.54	15.25	1.54	12.89	0.62	14.33	0.003774	3.50	198.73	64.00	0.63
Bisagno	Veil Fereggiano	25.	Q200	1147.00	10.60	14.96	15.25	0.29	15.25	0.29	13.80	0.86	15.82	0.003814	4.11	279.02	64.00	0.63
Bisagno	Veil Fereggiano	25.	Q500	1573.00	10.60	18.19	15.25	-2.94	15.25	-2.94	14.55	0.72	18.91	0.005850	3.76	418.51	66.10	0.44
Bisagno	Veil Fereggiano	24.	Q50	696.00	9.42	12.91	14.60	1.69	14.60	1.69	11.71	0.49	13.41	0.002669	3.11	223.53	64.00	0.53
Bisagno	Veil Fereggiano	24.	Q200	1147.00	9.42	14.08	14.60	0.52	14.60	0.52	12.62	0.75	14.84	0.003146	3.84	298.52	64.00	0.57
Bisagno	Veil Fereggiano	24.	Q500	1573.00	9.42	15.83	14.60	-1.23	14.60	-1.23	13.37	1.03	16.85	0.007773	4.49	349.95	13.35	0.57
Bisagno	Veil Fereggiano	23.	Q50	696.00	9.31	12.94	15.70	2.76	15.66	2.72	11.66	0.46	13.39	0.001716	2.99	232.50	66.10	0.51
Bisagno	Veil Fereggiano	23.	Q200	1147.00	9.31	14.12	15.70	1.58	15.66	1.54	12.55	0.69	14.82	0.001846	3.69	310.92	66.10	0.54
Bisagno	Veil Fereggiano	23.	Q500	1573.00	9.31	16.09	15.70	-0.39	15.66	-0.43	13.28	0.65	16.74	0.001160	3.57	440.87	66.10	0.44
Bisagno	Veil Fereggiano	22.	Q50	696.00	9.37	12.68	15.62	2.94	15.66	2.98	11.80	0.59	13.27	0.002544	3.40	204.91	65.30	0.61
Bisagno	Veil Fereggiano	22.	Q200	1147.00	9.37	13.83	15.62	1.79	15.66	1.83	12.70	0.86	14.68	0.002552	4.10	279.81	65.30	0.63
Bisagno	Veil Fereggiano	22.	Q500	1573.00	9.37	15.94	15.62	-0.32	15.66	-0.28	13.44	0.72	16.66	0.001358	3.76	417.82	65.30	0.48
Bisagno	Veil Fereggiano	21.	Q50	696.00	9.40	12.29	15.56	3.27	15.41	3.12	11.85	0.78	13.06	0.004096	3.90	178.34	67.20	0.76
Bisagno	Veil Fereggiano	21.	Q200	1147.00	9.40	13.52	15.56	2.04	15.41	1.89	12.73	0.98	14.50	0.003267	4.39	261.05	67.20	0.71

HEC-RAS Plan: Prg_SAnton_4 (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.	Vel Head	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)	(m/s)	(m2)	(m)	
Bisagno	Veil Fereggiano	21.	Q500	1573.00	9.40	15.86	15.56	-0.30	15.41	-0.45	13.45	0.72	16.58	0.001382	3.76	418.54	67.20	0.48
Bisagno	Veil Fereggiano	20.	Q50	696.00	9.11	12.12	15.33	3.21	15.30	3.18	11.72	0.76	12.89	0.004187	3.87	179.89	70.40	0.77
Bisagno	Veil Fereggiano	20.	Q200	1147.00	9.11	13.45	15.33	1.88	15.30	1.85	12.57	0.90	14.35	0.002947	4.19	273.50	70.40	0.68
Bisagno	Veil Fereggiano	20.	Q500	1573.00	9.11	15.86	15.33	-0.53	15.30	-0.56	13.27	0.64	16.50	0.001204	3.55	443.00	70.40	0.45
Bisagno	Veil Fereggiano	19.3	Q50	696.00	8.81	12.26	15.33	3.07	15.30	3.04	11.33	0.52	12.79	0.002289	3.21	216.83	70.40	0.58
Bisagno	Veil Fereggiano	19.3	Q200	1147.00	8.81	13.57	15.33	1.76	15.30	1.73	12.19	0.70	14.27	0.002004	3.72	308.65	70.40	0.57
Bisagno	Veil Fereggiano	19.3	Q500	1573.00	8.81	15.91	15.33	-0.58	15.30	-0.61	12.89	0.56	16.47	0.000978	3.32	473.49	70.40	0.41
Bisagno	Veil Fereggiano	19.2	Q50	696.00	8.80	12.29	15.33	3.04	15.33	3.04	11.18	0.48	12.77	0.001924	3.06	227.26	68.95	0.54
Bisagno	Veil Fereggiano	19.2	Q200	1147.00	8.80	13.59	15.33	1.74	15.33	1.74	12.04	0.67	14.26	0.001810	3.62	316.63	68.95	0.54
Bisagno	Veil Fereggiano	19.2	Q500	1573.00	8.80	15.91	15.33	-0.58	15.33	-0.58	12.75	0.55	16.47	0.000940	3.30	476.86	68.95	0.40
Bisagno	Veil Fereggiano	19.11 BIS 19		Bridge														
Bisagno	Veil Fereggiano	19.1	Q50	696.00	8.80	10.59	15.33	4.74	15.33	4.74	11.18	2.05	12.64	0.020504	6.35	109.69	68.95	1.61
Bisagno	Veil Fereggiano	19.1	Q200	1147.00	8.80	11.21	15.33	4.12	15.33	4.12	12.04	2.86	14.08	0.018801	7.50	152.98	68.95	1.61
Bisagno	Veil Fereggiano	19.1	Q500	1573.00	8.80	12.75	15.33	2.58	15.33	2.58	12.75	1.88	14.63	0.006449	6.07	259.15	68.95	1.00