

PIANO STRUTTURALE

ai sensi della L.R.65/14



Comune di Santa Maria a Monte
(Provincia di Pisa)



Sindaco

Manuela del Grande

Responsabile del procedimento

Ing. Alessandro Veracini

Assessore Urbanistica

Elena Trovatelli

Ufficio Urbanistica

Arch. Francesca Ringressi

Garante dell'informazione e partecipazione

Arch. Ilaria Mannucci

GRUPPO DI PROGETTAZIONE

Pianificazione Urbanistica e Coordinamento

Architetti Associati Ciampa

Arch. Mauro Ciampa

Arch. Chiara Ciampa

Arch. Giovanni Giusti

Restituzione digitale degli elaborati

Pianificatore. Junior Anita Pieroni

Processo Partecipativo

Arch. Chiara Ciampa

Valutazioni ambientali (VAS - Vinca)

Dott. Agr. Federico Martinelli - PFM Srl Società tra professionisti

Studi geologici

Dott. Geol. Alessandra Giannetti - Comune di Santa Maria a Monte

Studi Idraulici

Ing. Gesualdo Bavecchi

INDAGINI IDROLOGICHE IDRAULICHE
VERIFICHE IDRAULICHE

VERIFICHE IDRAULICHE

PROFILI – SEZIONI – TABELLE OUTPUT

Tr 200 ANNI – Tr 30 anni

VERIFICHE IDRAULICHE

SISTEMA IDRAULICO RIO NERO – RIO DELLA SELVA

Tr 200 anni

**RIO NERO – Tp 1 ora
Tr=200 anni**

Tratto di monte

PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

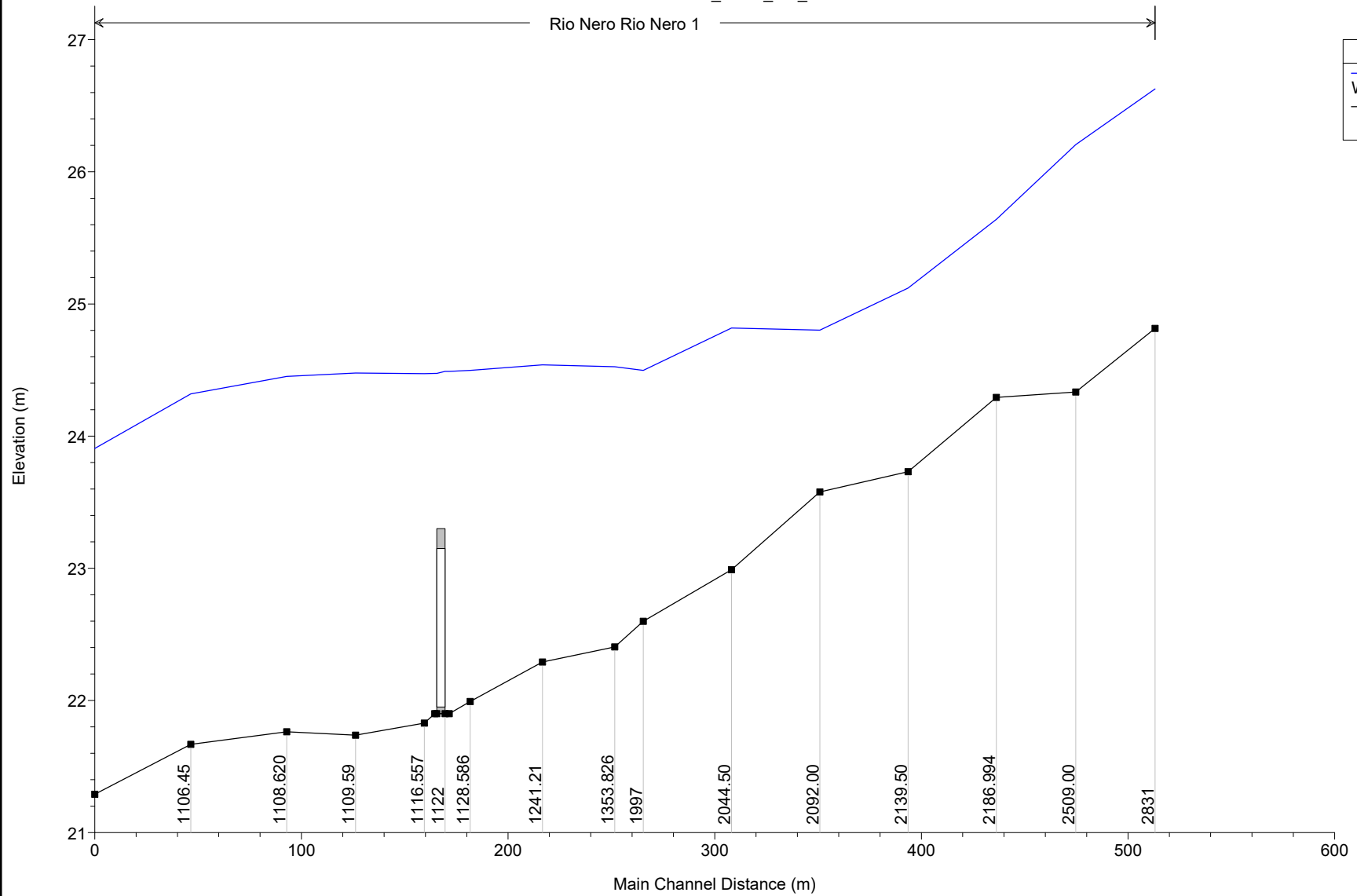
Geom: ATT_1D2D_Rio_Nero

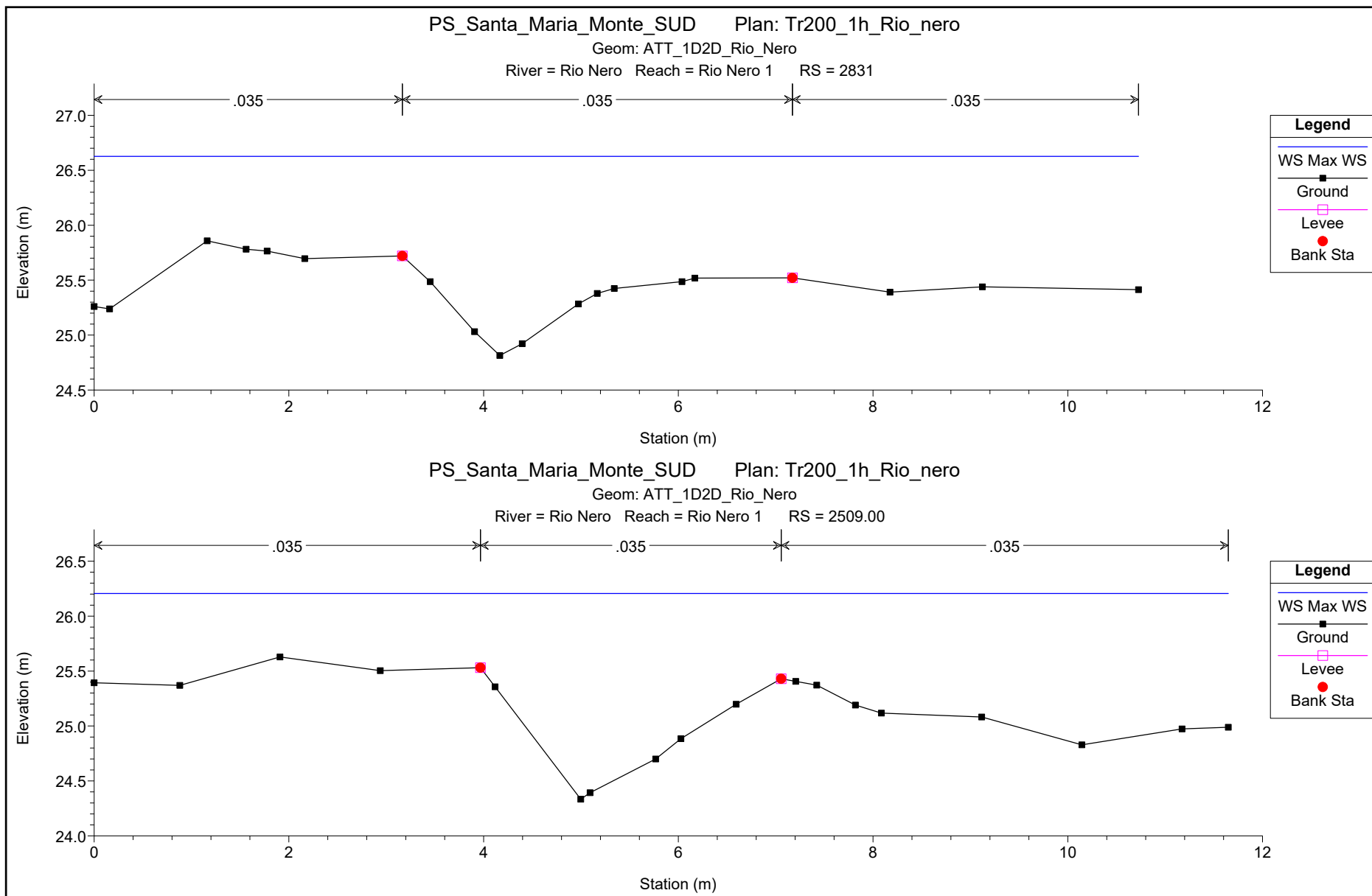
Rio Nero Rio Nero 1

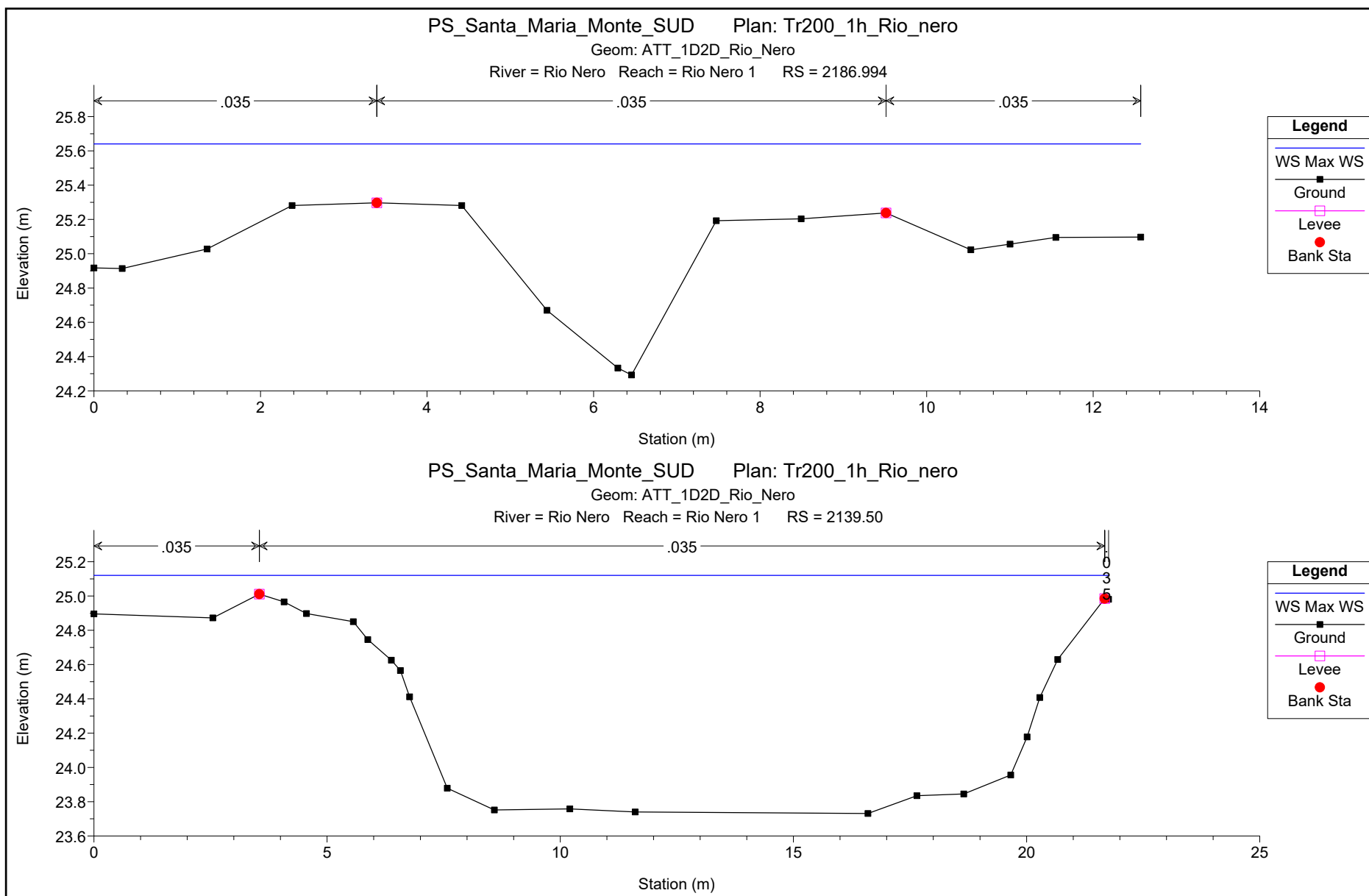
Legend

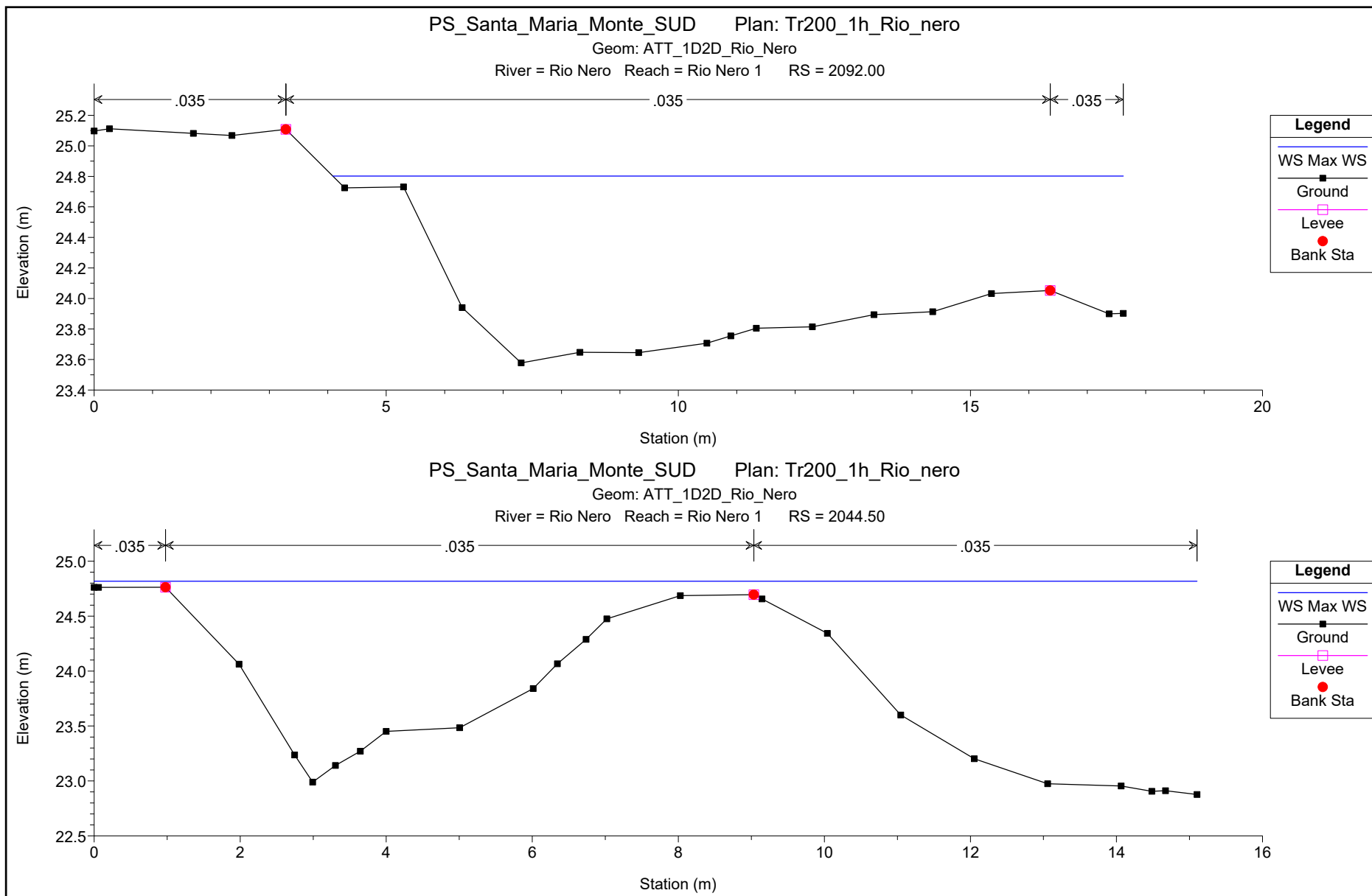
WS Max WS

Ground





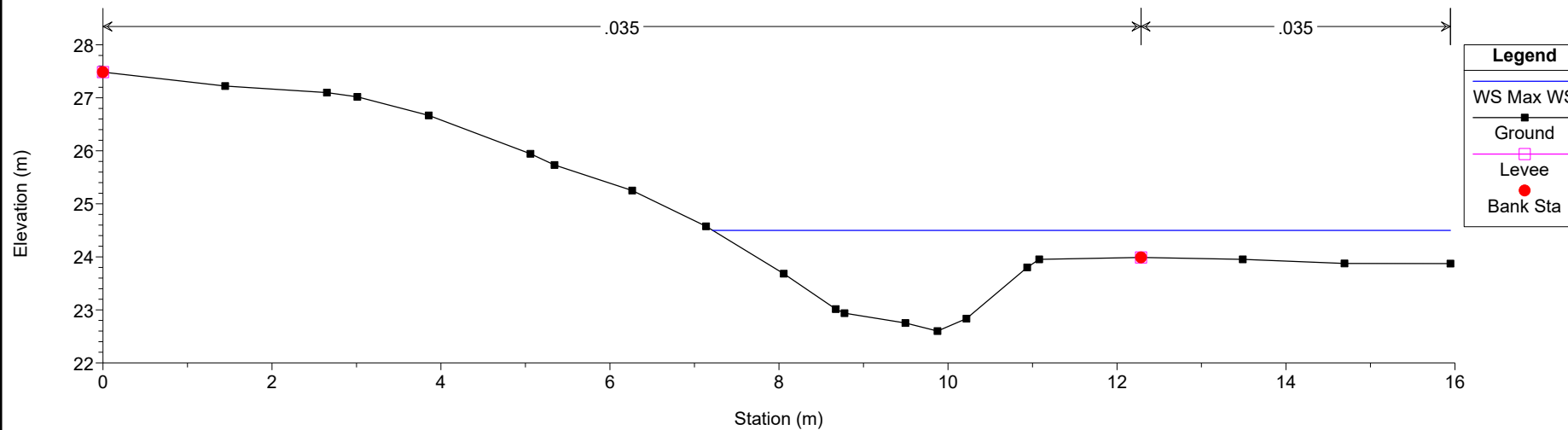




PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

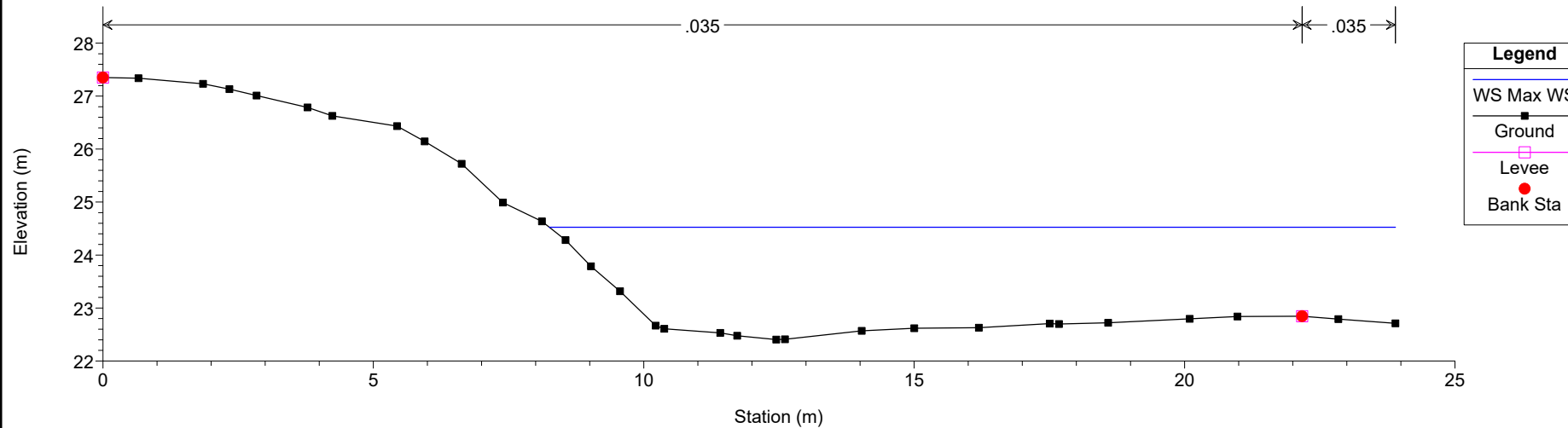
River = Rio Nero Reach = Rio Nero 1 RS = 1997



PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

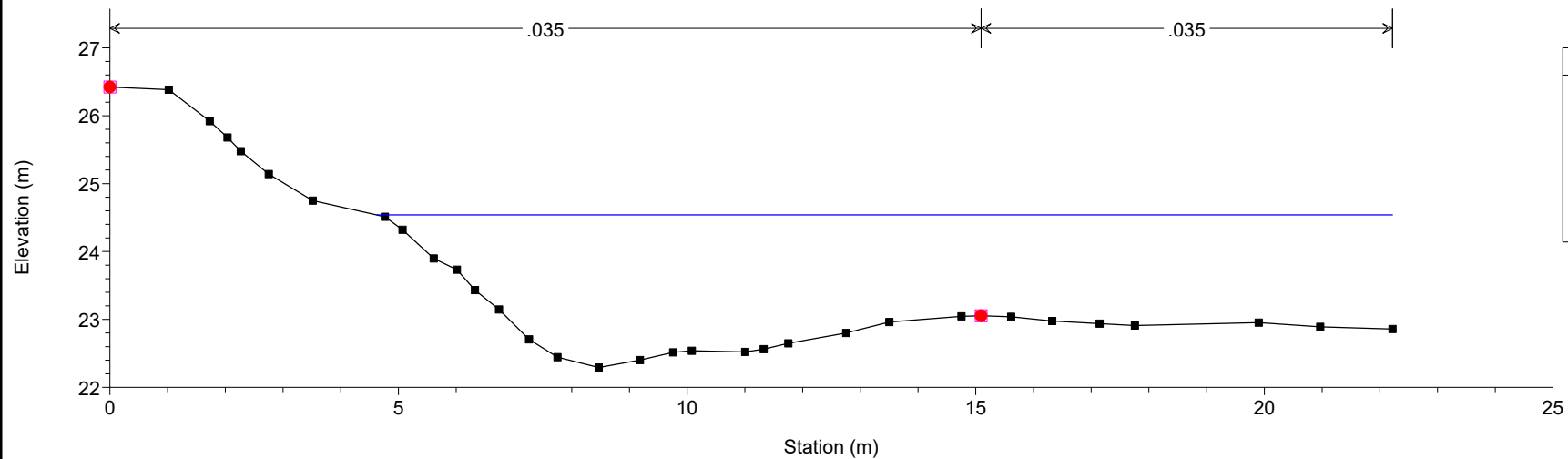
River = Rio Nero Reach = Rio Nero 1 RS = 1353.826



PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

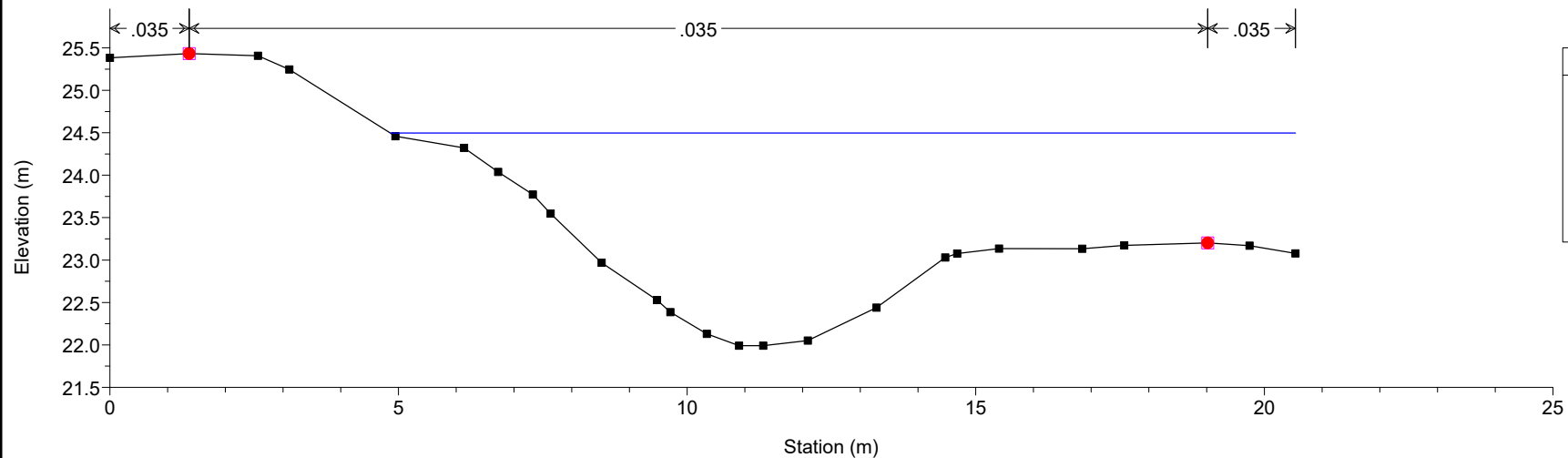
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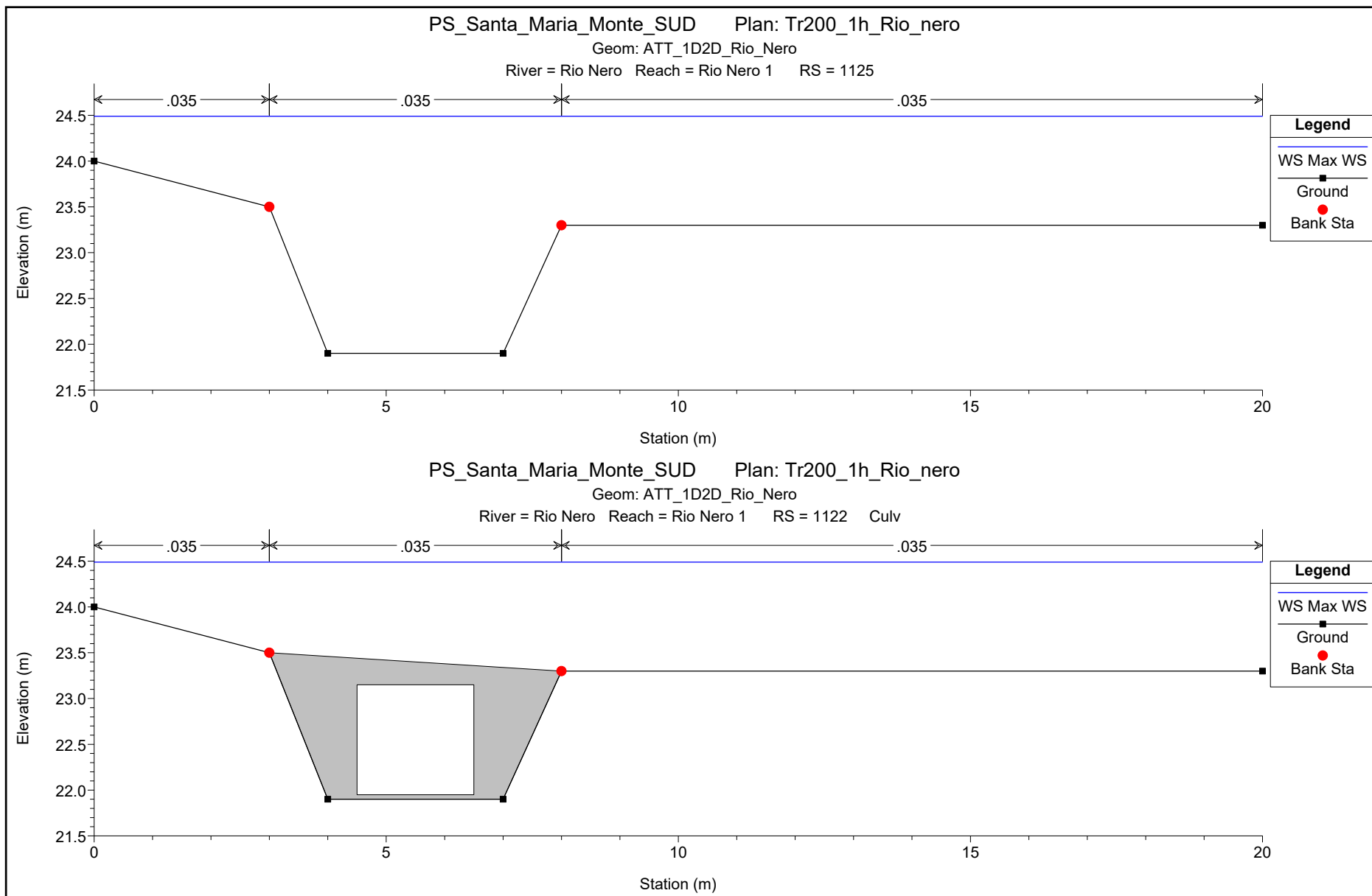


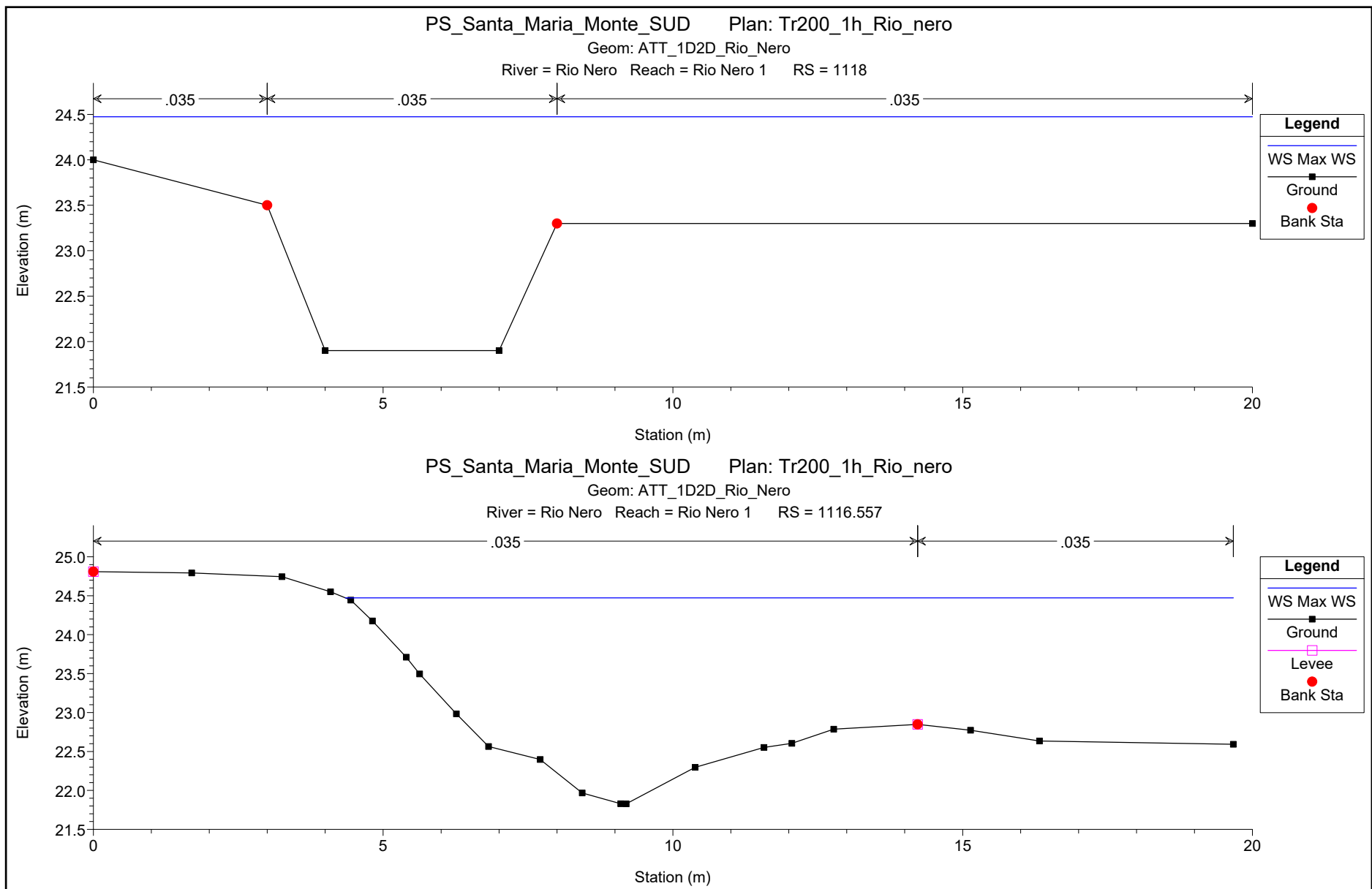
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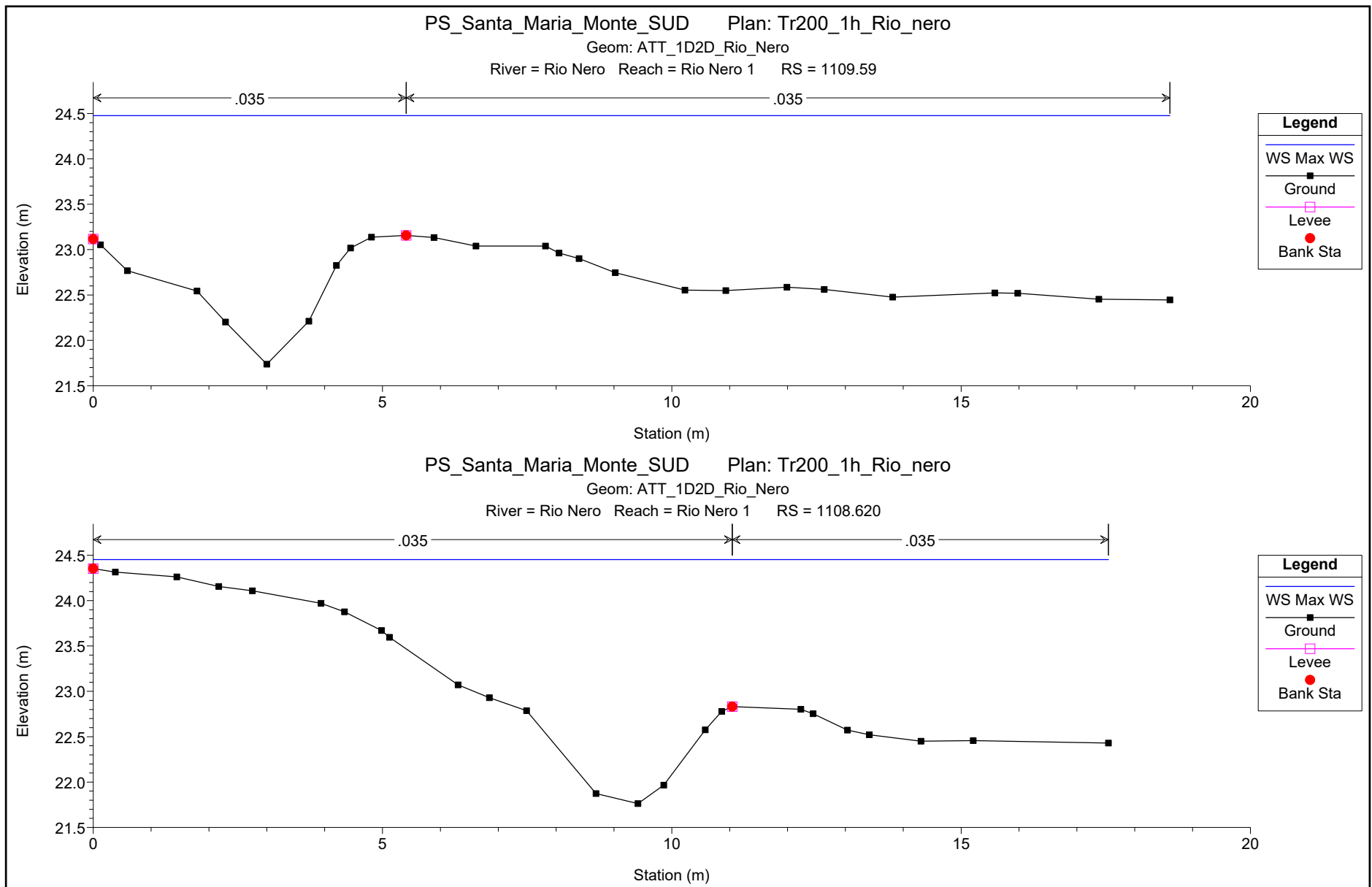
Geom: ATT_1D2D_Rio_Nero

River = Rio Nero Reach = Rio Nero 1 RS = 1128.586





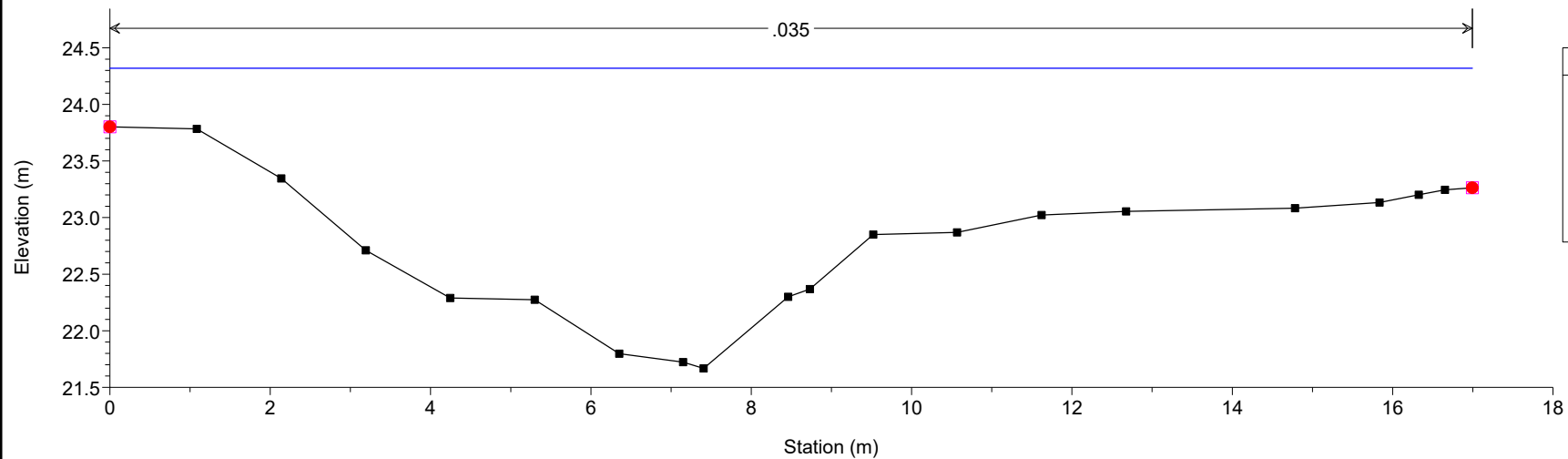




PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

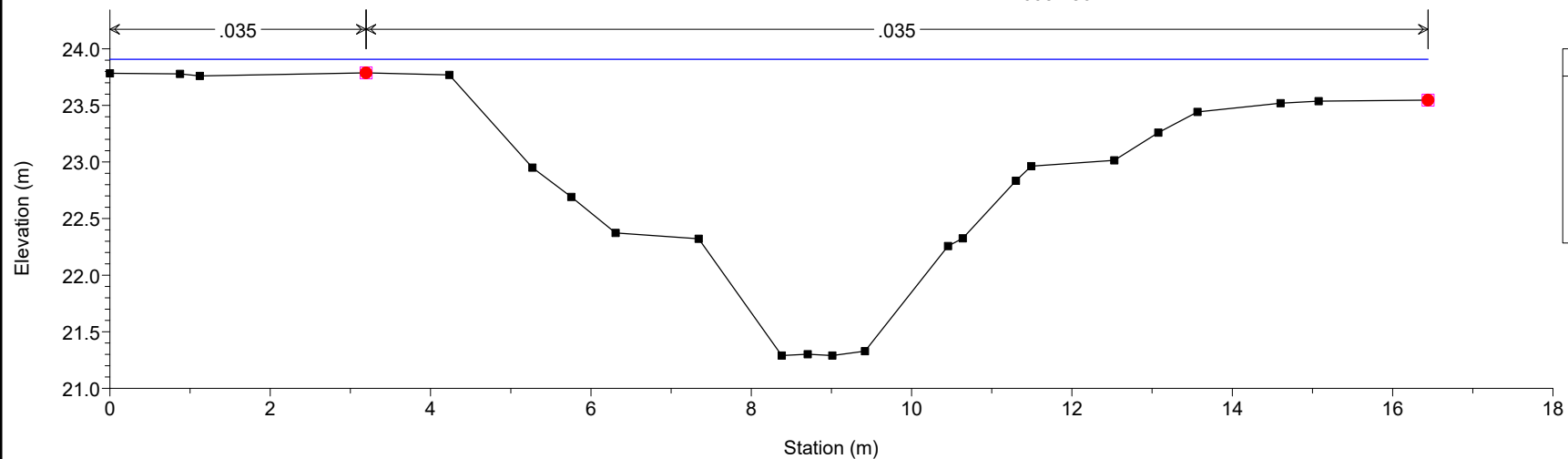
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PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

River = Rio Nero Reach = Rio Nero 1 RS = 1098.286



HEC-RAS Plan: Tr200_1h_Rio_nero River: Rio Nero Reach: Rio Nero 1 Profile: Max WS

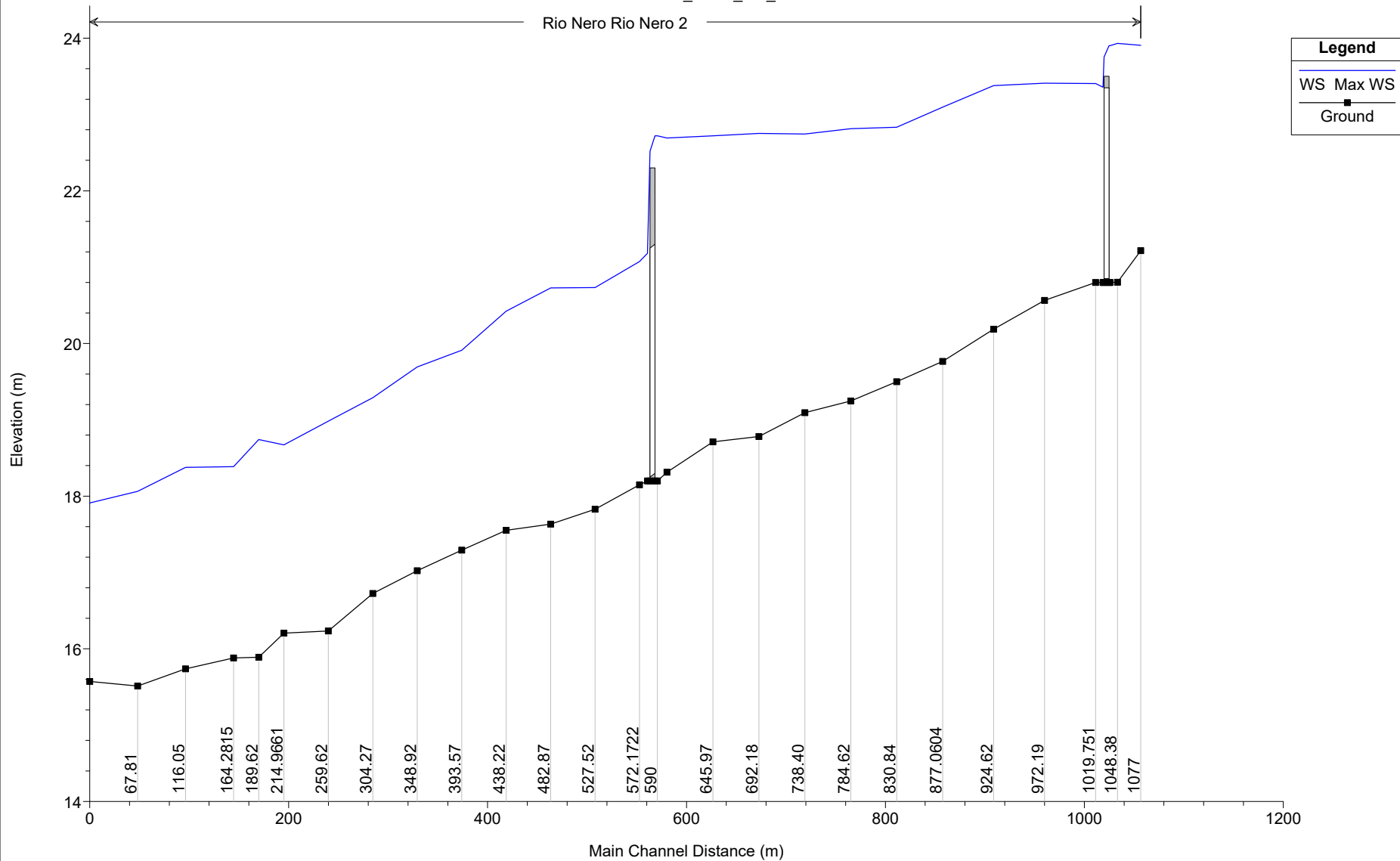
Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio Nero 1	2831	42.20	24.81	26.63	26.65	27.24	0.015388	3.88	12.50	10.73	1.09
Rio Nero 1	2801	Lat Struct									
Rio Nero 1	2800	Lat Struct									
Rio Nero 1	2509.00	25.70	24.33	26.21		26.45	0.006652	2.38	12.16	11.65	0.66
Rio Nero 1	2186.994	20.94	24.29	25.64	25.71	26.05	0.022659	3.06	7.47	12.57	1.21
Rio Nero 1	2139.50	23.61	23.73	25.12		25.19	0.001748	1.22	19.95	21.76	0.38
Rio Nero 1	2092.00	23.93	23.58	24.80		25.02	0.006884	2.11	11.67	13.53	0.72
Rio Nero 1	2044.50	17.40	22.99	24.82		24.89	0.001973	1.05	15.10	15.10	0.36
Rio Nero 1	1997	16.39	22.60	24.50		24.76	0.009271	2.42	7.39	8.73	0.76
Rio Nero 1	1353.826	16.26	22.40	24.52		24.54	0.000243	0.62	27.23	15.64	0.15
Rio Nero 1	1241.21	15.27	22.29	24.54		24.55	0.000222	0.56	28.36	17.60	0.14
Rio Nero 1	1128.586	14.58	21.99	24.50		24.52	0.000342	0.66	22.88	15.68	0.17
Rio Nero 1	1125	12.78	21.90	24.49		24.50	0.000182	0.56	27.94	20.00	0.12
Rio Nero 1	1122	Culvert									
Rio Nero 1	1118	12.78	21.90	24.47		24.49	0.000188	0.56	27.63	20.00	0.12
Rio Nero 1	1116.557	13.19	21.83	24.47		24.48	0.000162	0.50	27.42	15.32	0.12
Rio Nero 1	1115	Lat Struct									
Rio Nero 1	1114	Lat Struct									
Rio Nero 1	1109.59	12.52	21.74	24.48		24.48	0.000095	0.34	34.32	18.61	0.08
Rio Nero 1	1108.620	15.28	21.76	24.45		24.47	0.000333	0.55	25.27	17.55	0.16
Rio Nero 1	1106.45	29.65	21.67	24.32		24.39	0.001105	1.15	25.79	16.99	0.30
Rio Nero 1	1098.286	35.67	21.29	23.91		24.20	0.007211	2.39	15.23	16.44	0.72

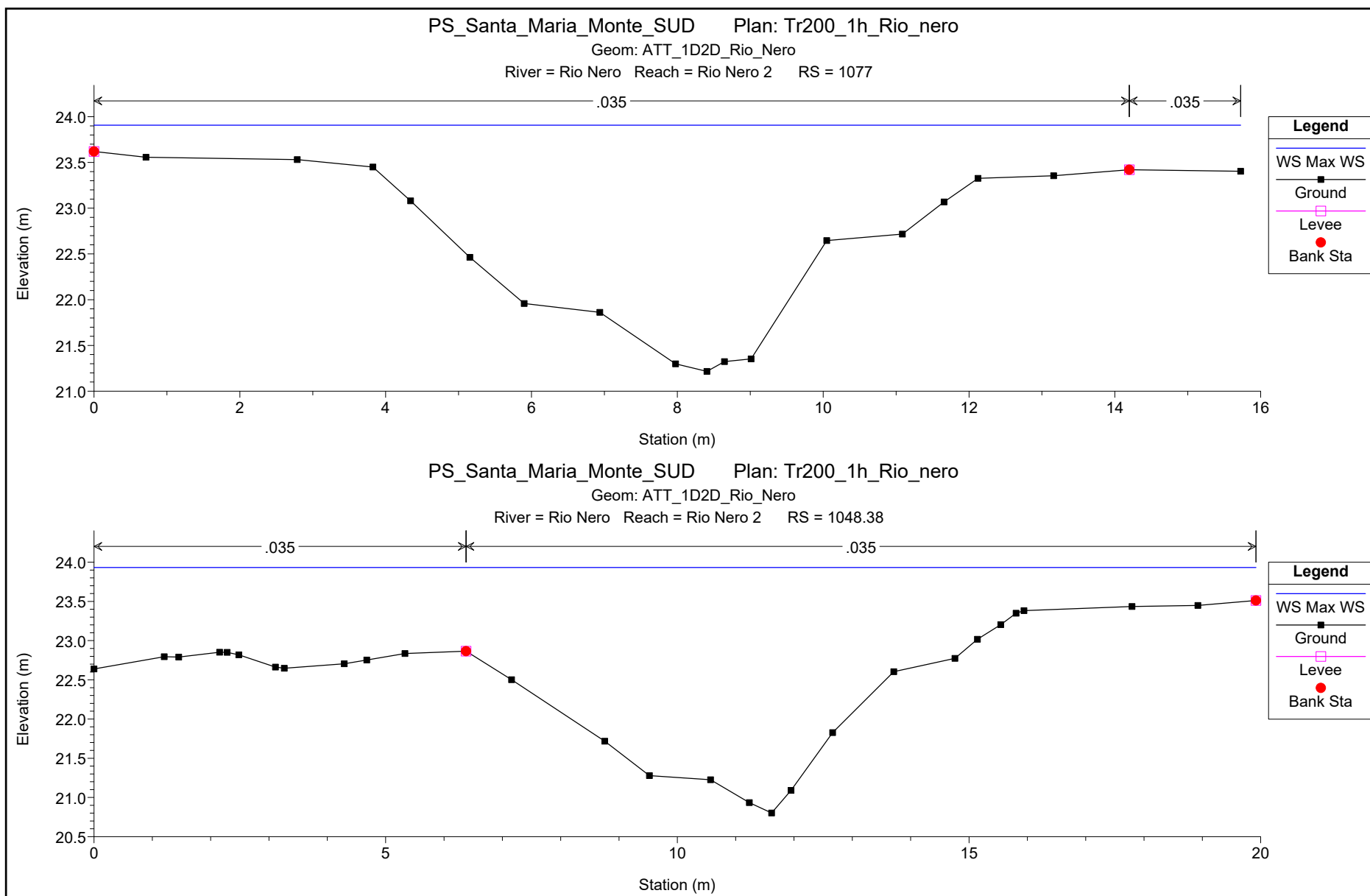
RIO NERO – Tp 1 ora
Tr=200 anni

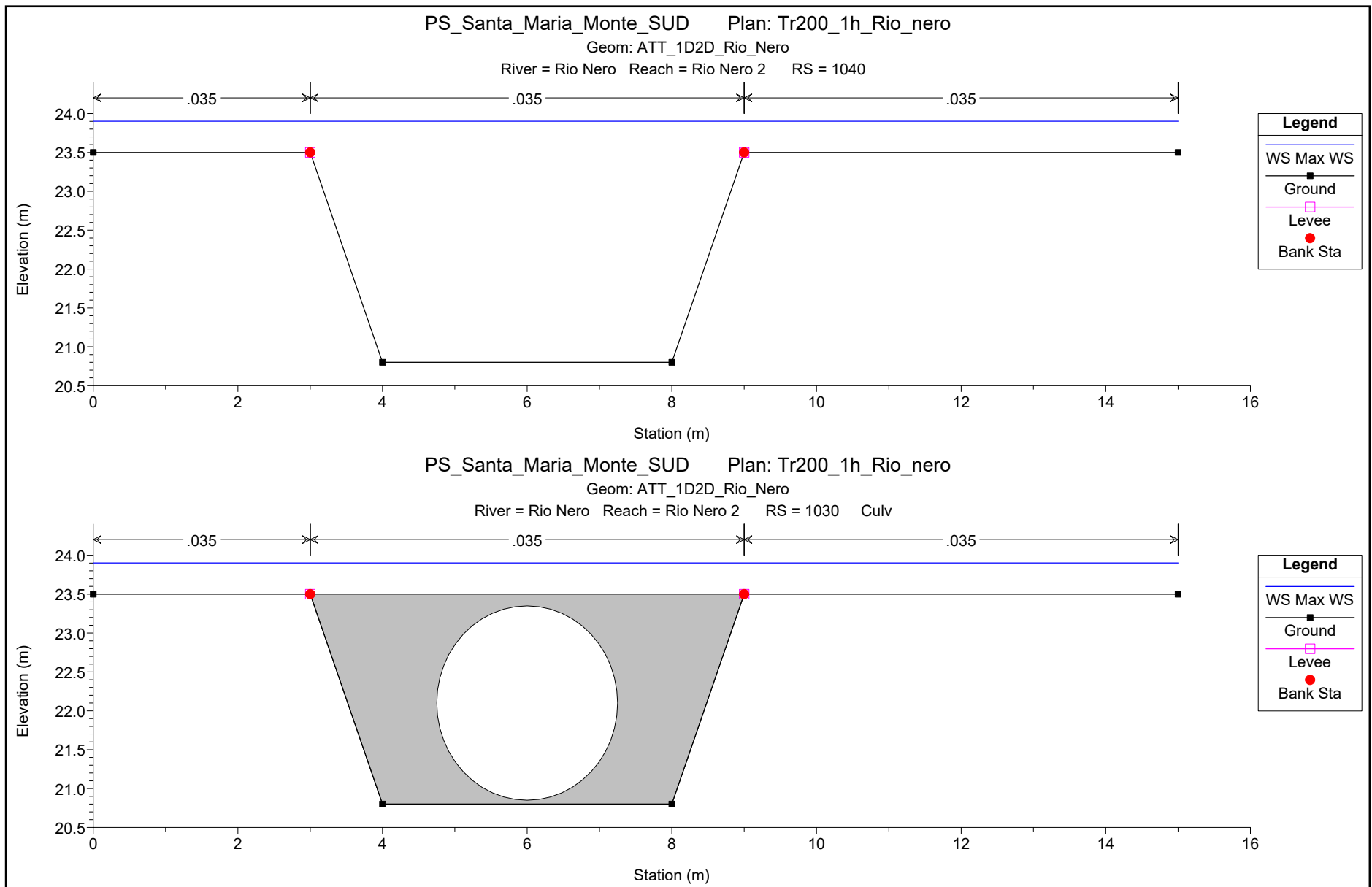
Tratto di valle

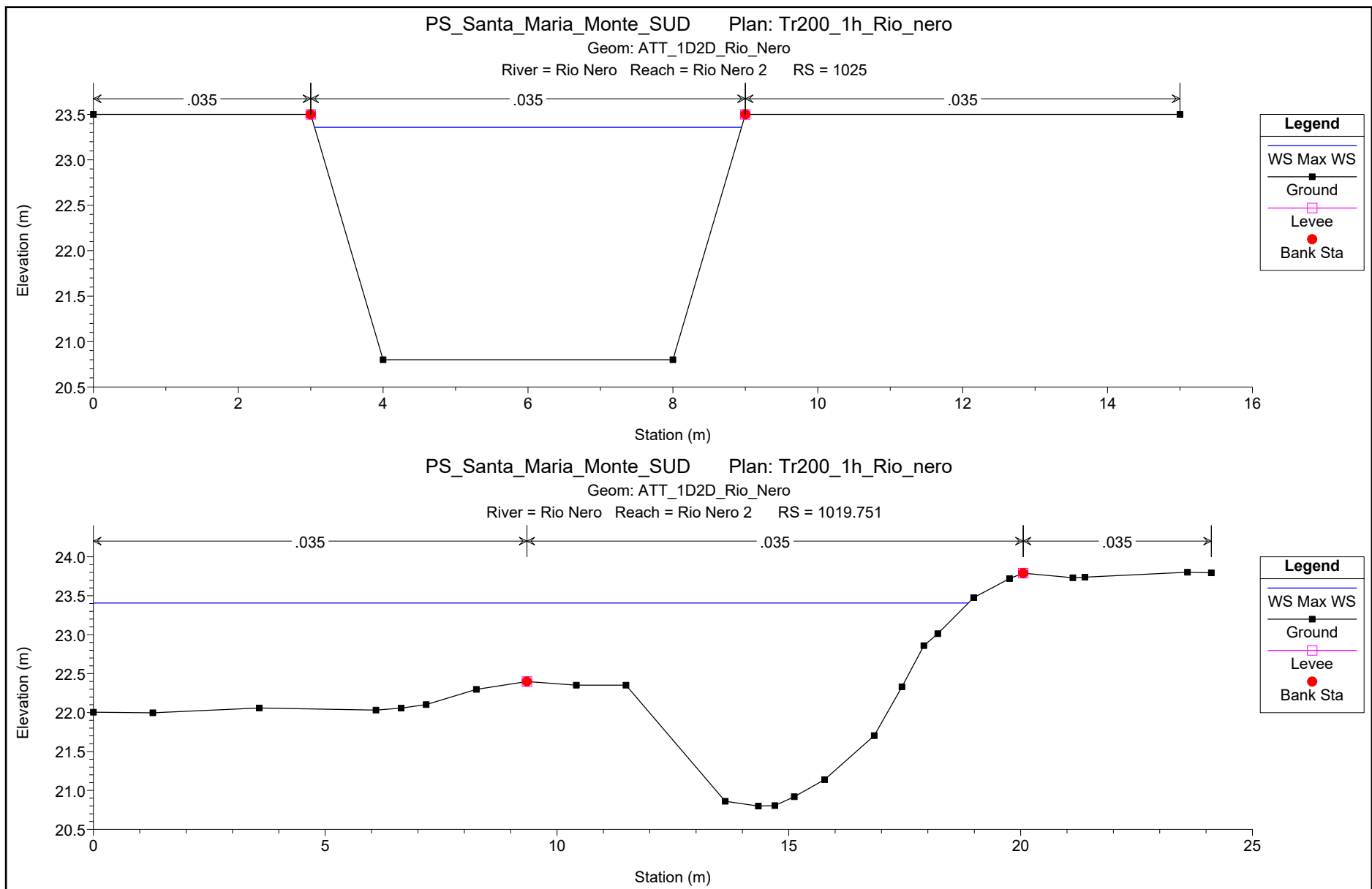
PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero





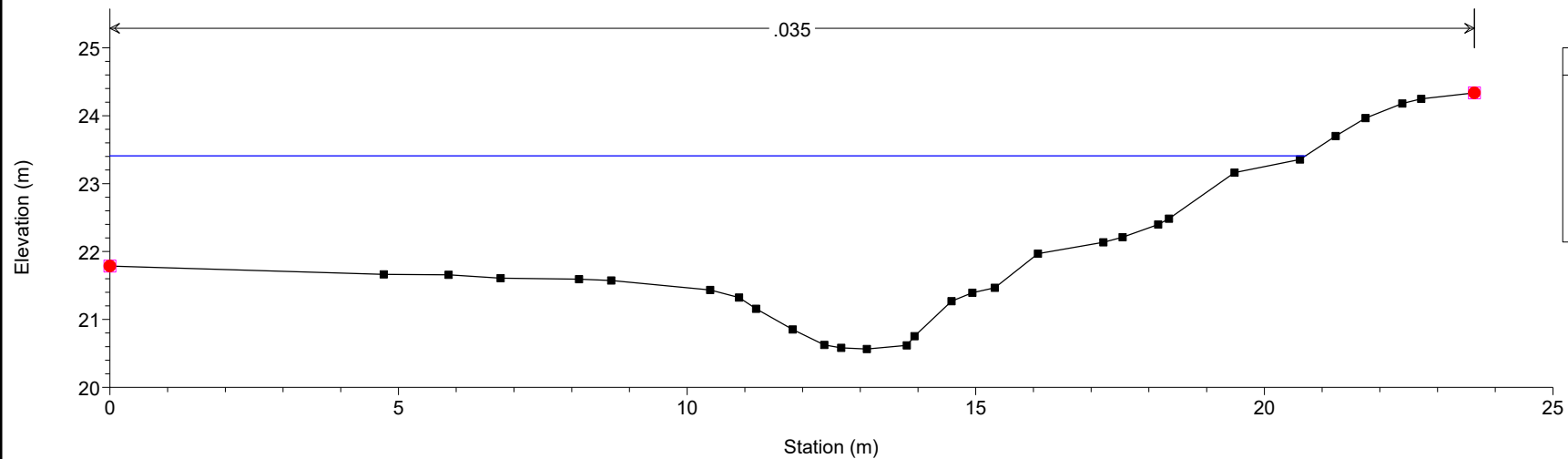




PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

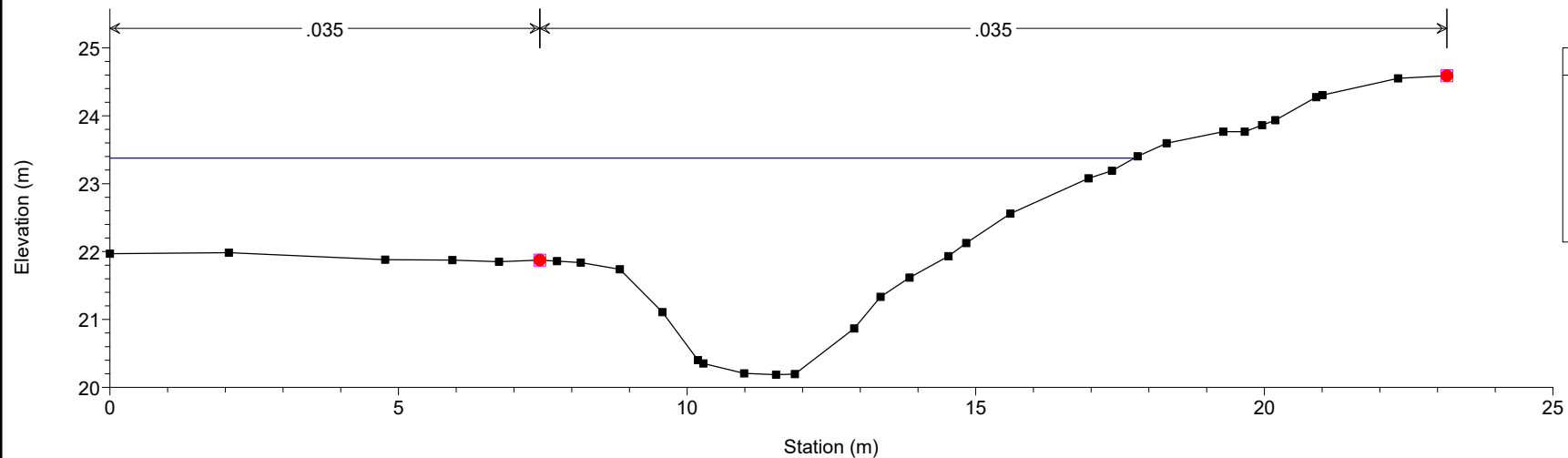
River = Rio Nero Reach = Rio Nero 2 RS = 972.19

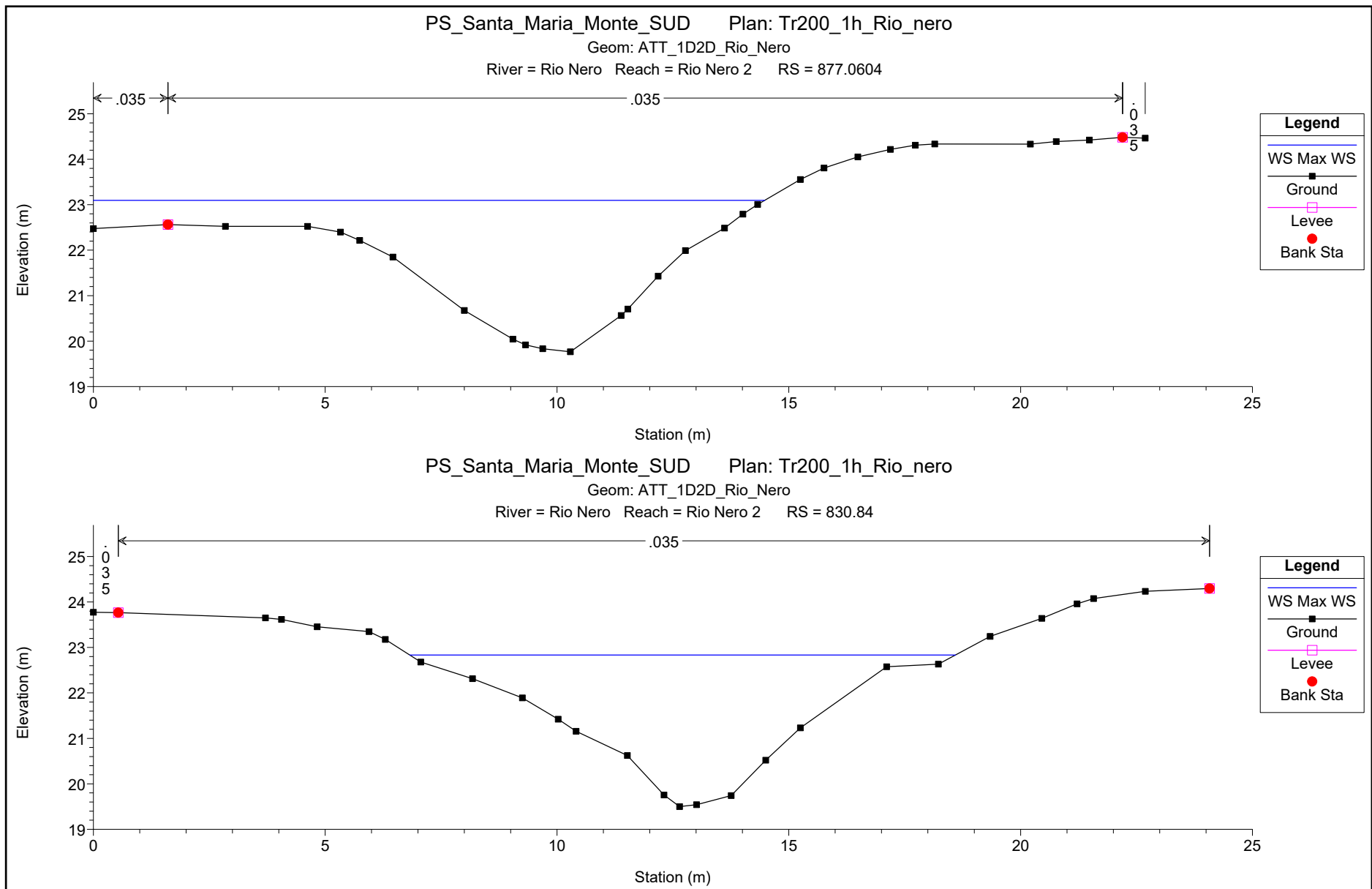


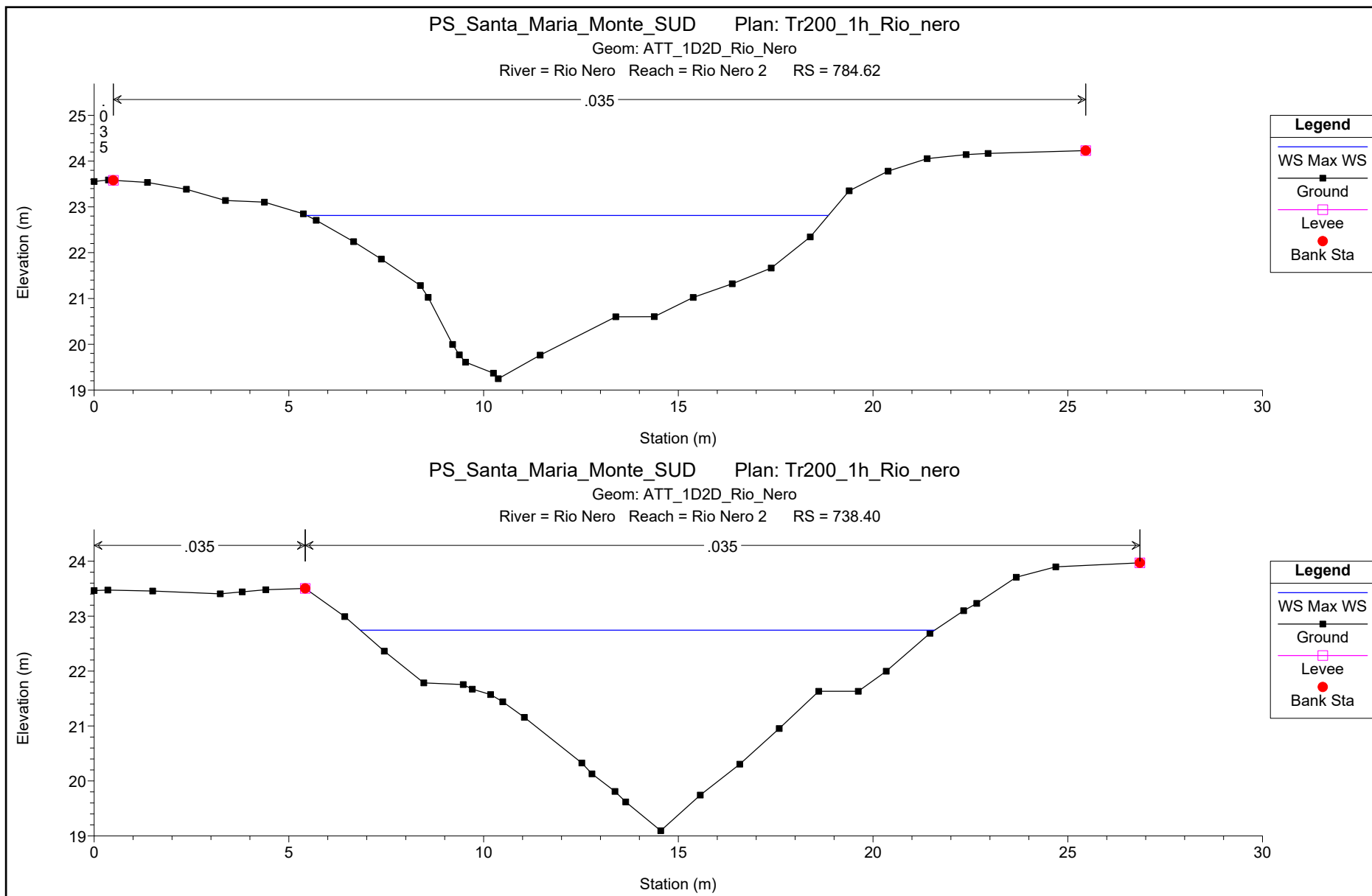
PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

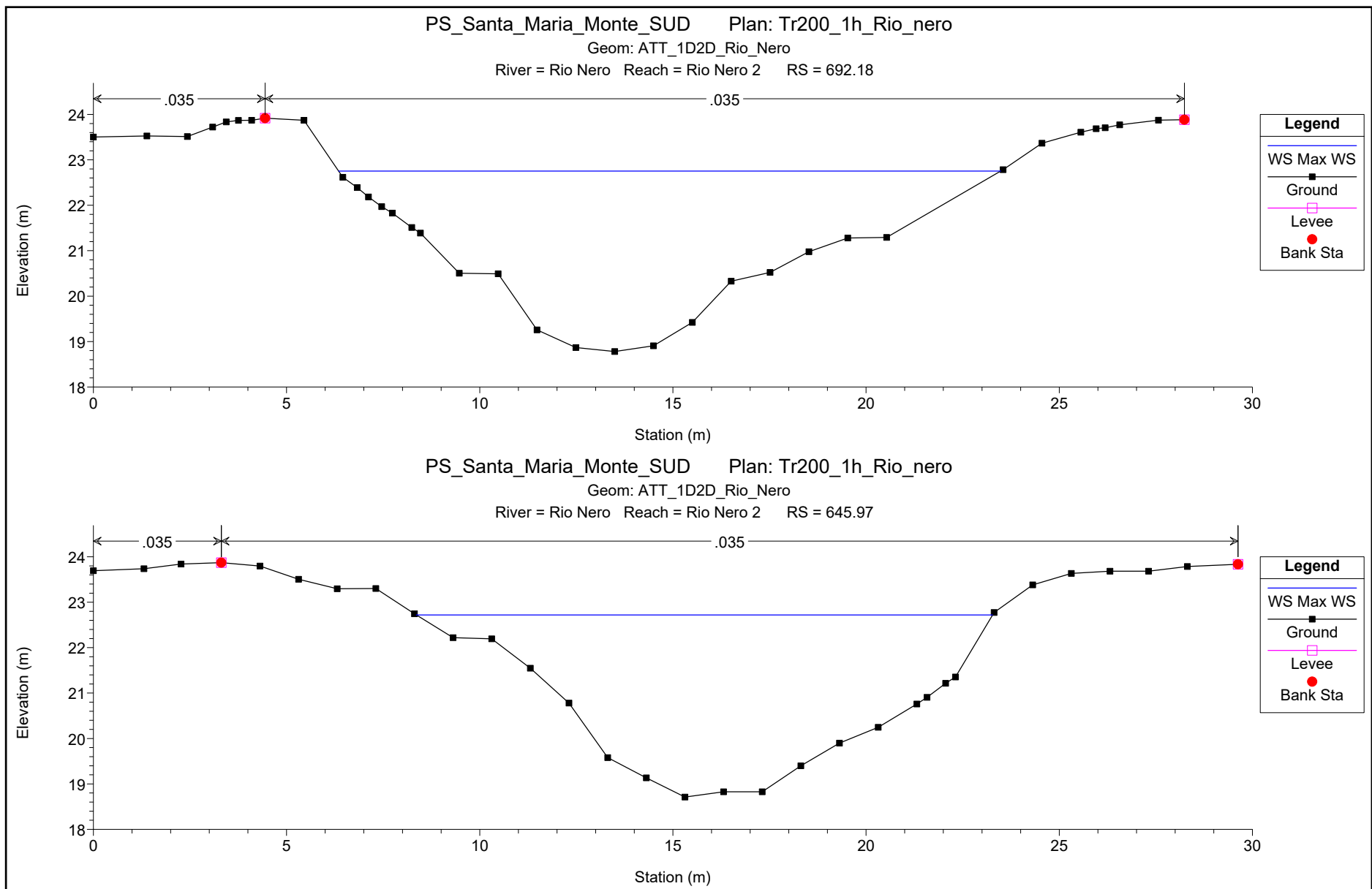
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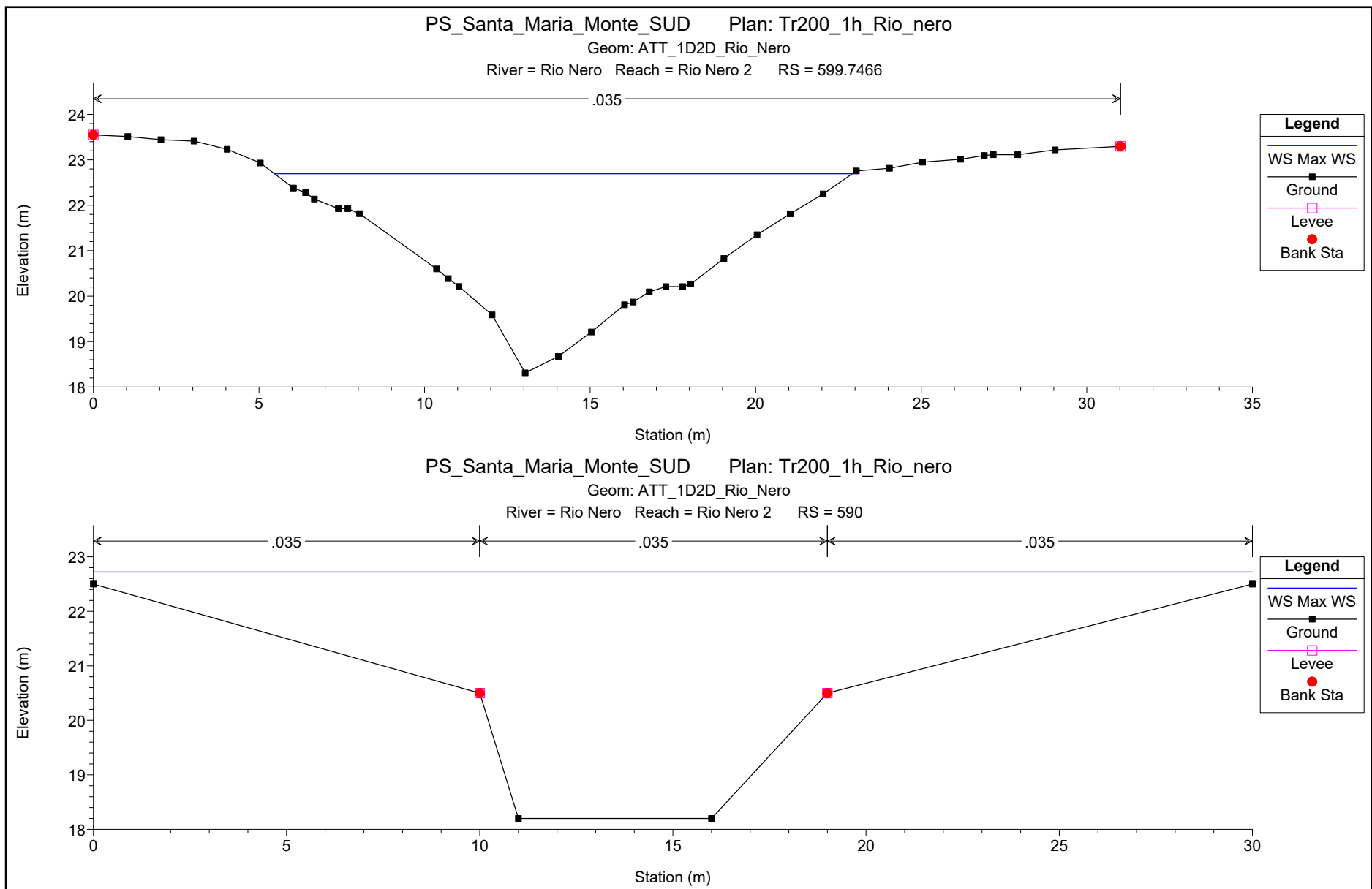
River = Rio Nero Reach = Rio Nero 2 RS = 924.62

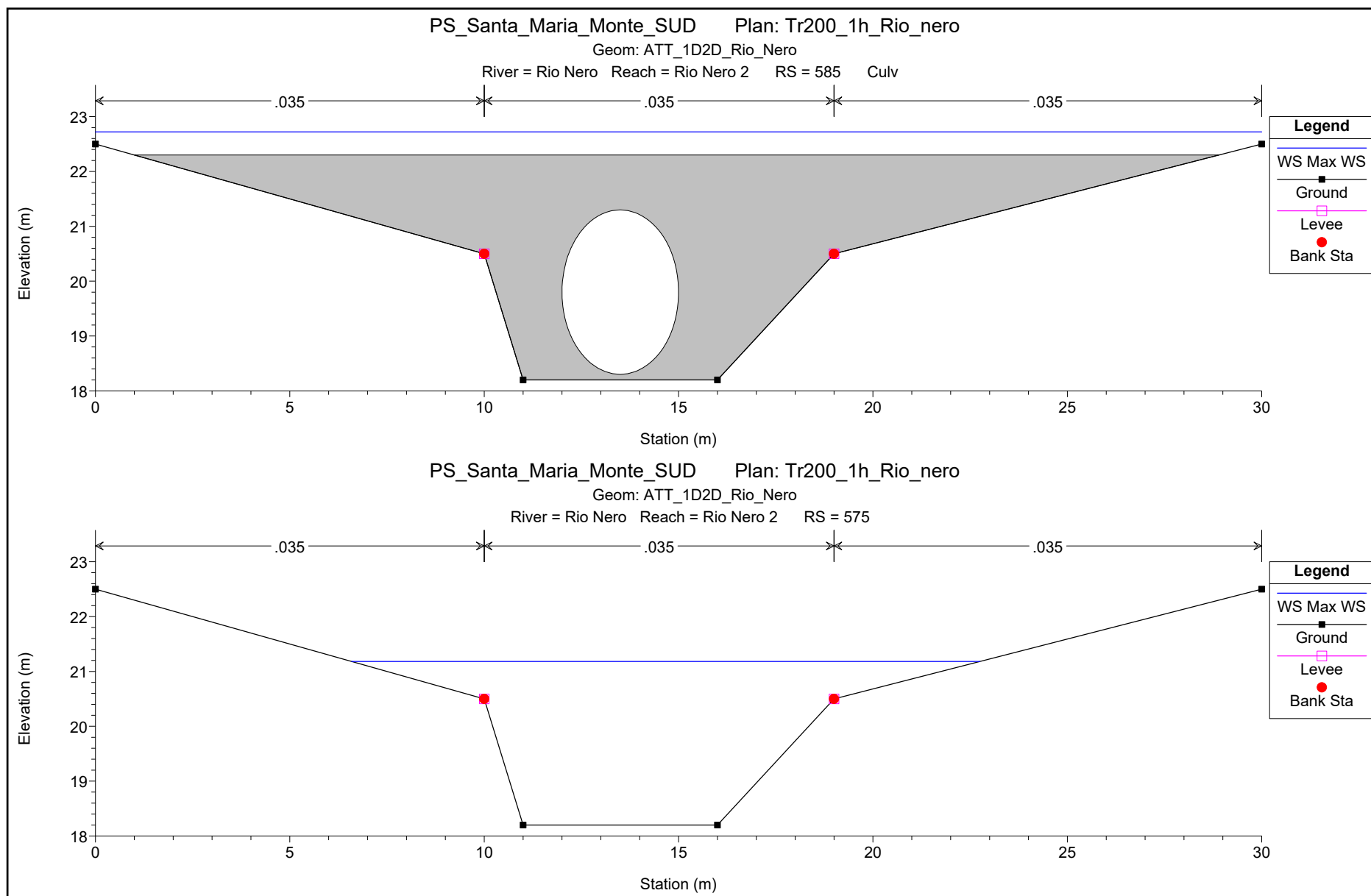








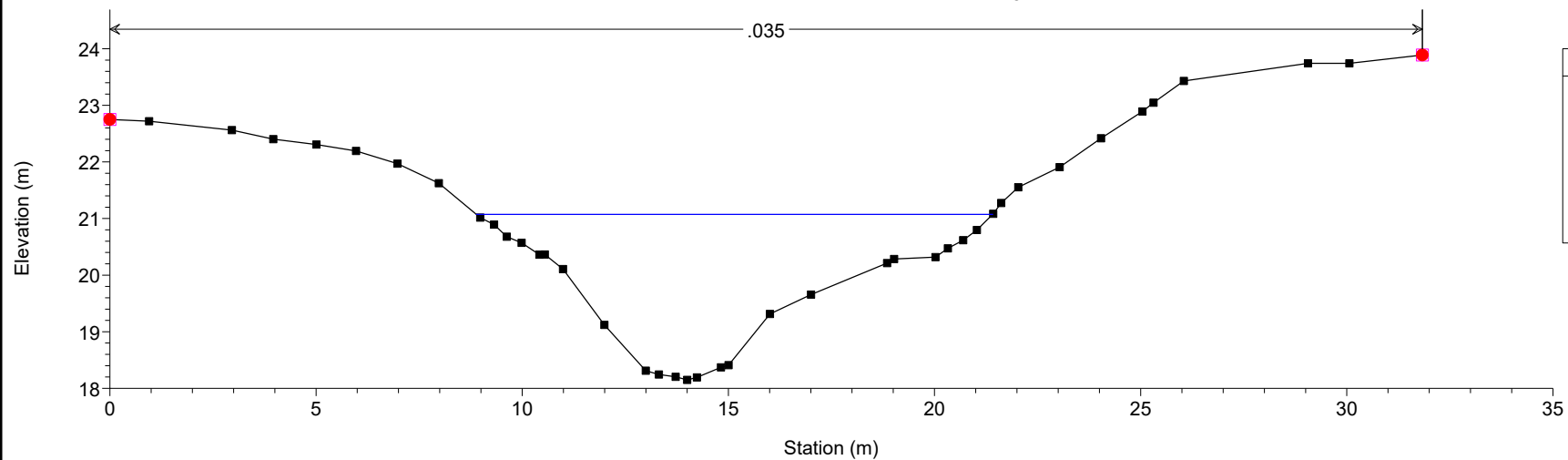




PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

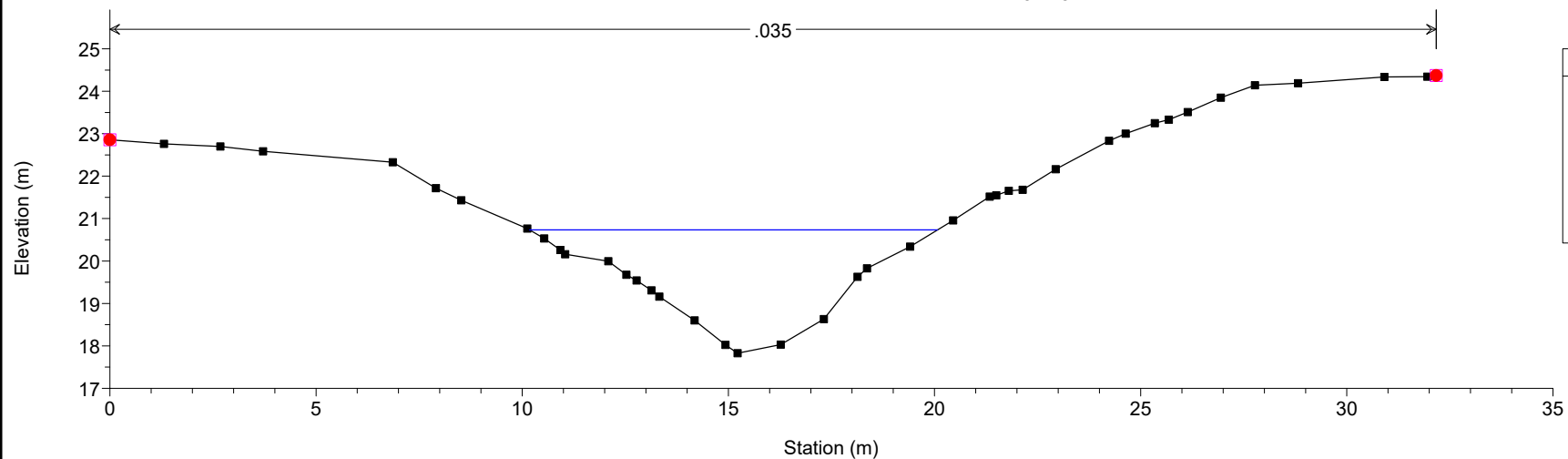
River = Rio Nero Reach = Rio Nero 2 RS = 572.1722



PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

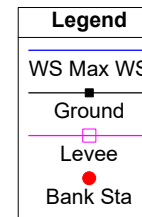
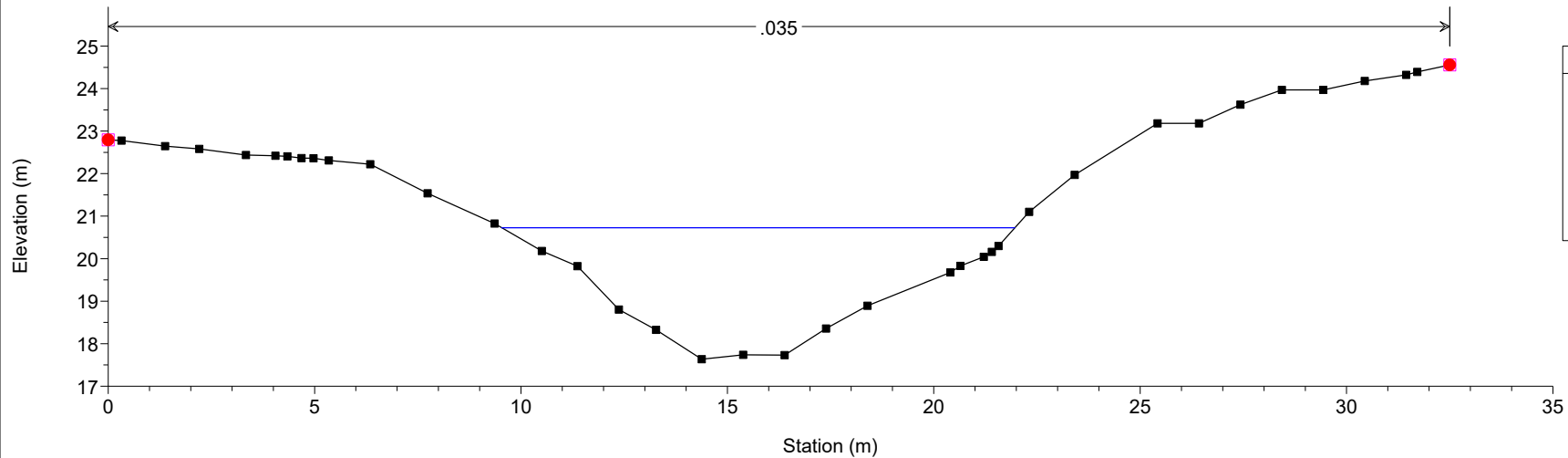
River = Rio Nero Reach = Rio Nero 2 RS = 527.52



PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

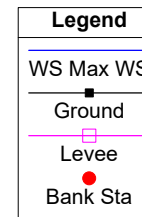
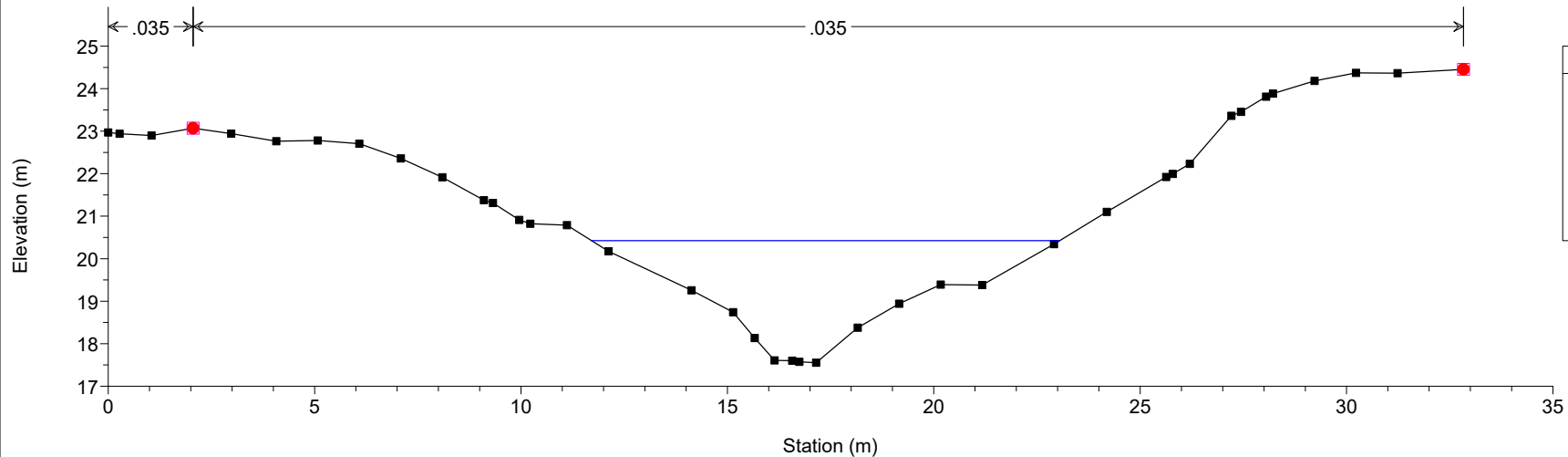
River = Rio Nero Reach = Rio Nero 2 RS = 482.87

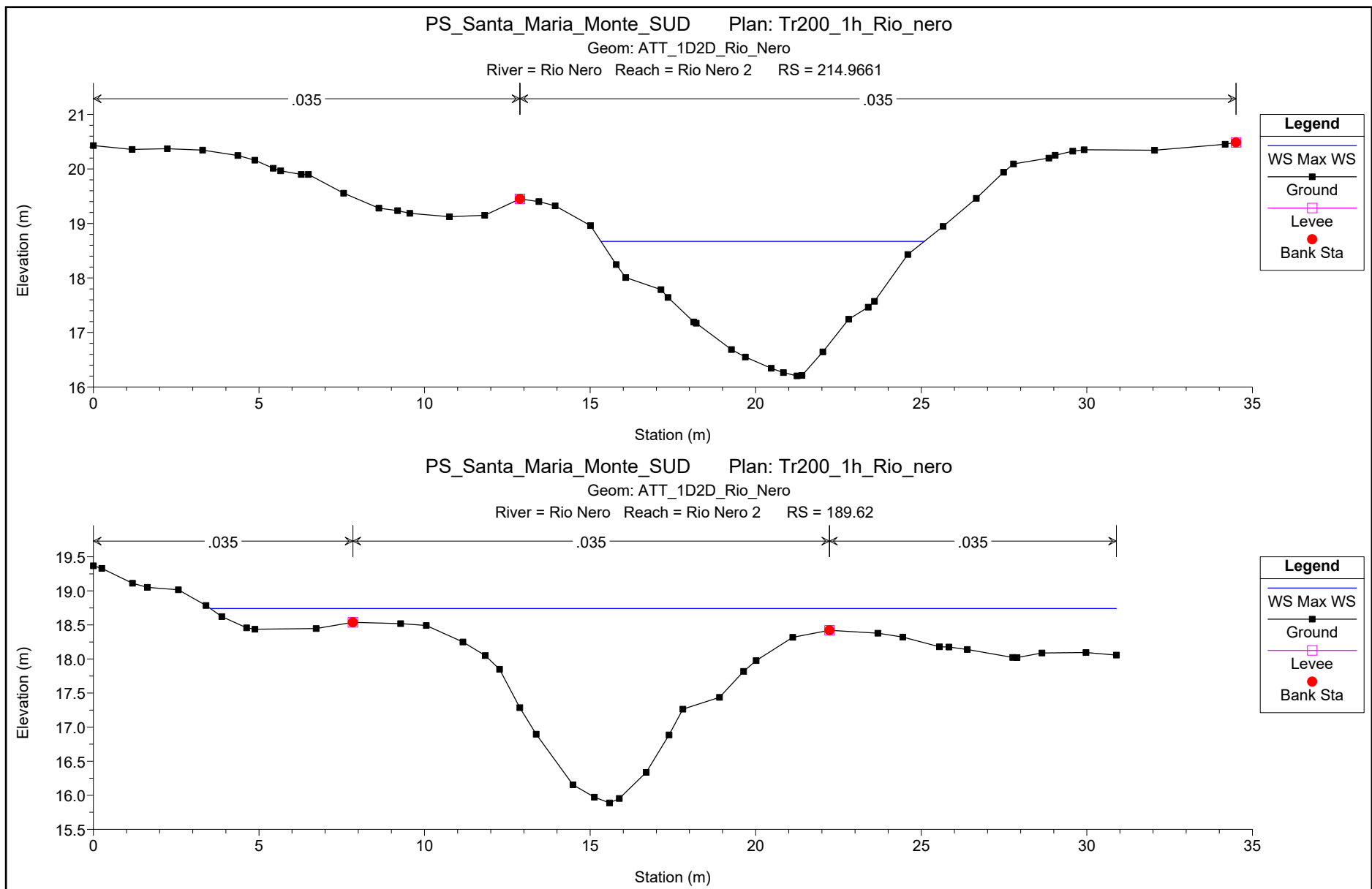


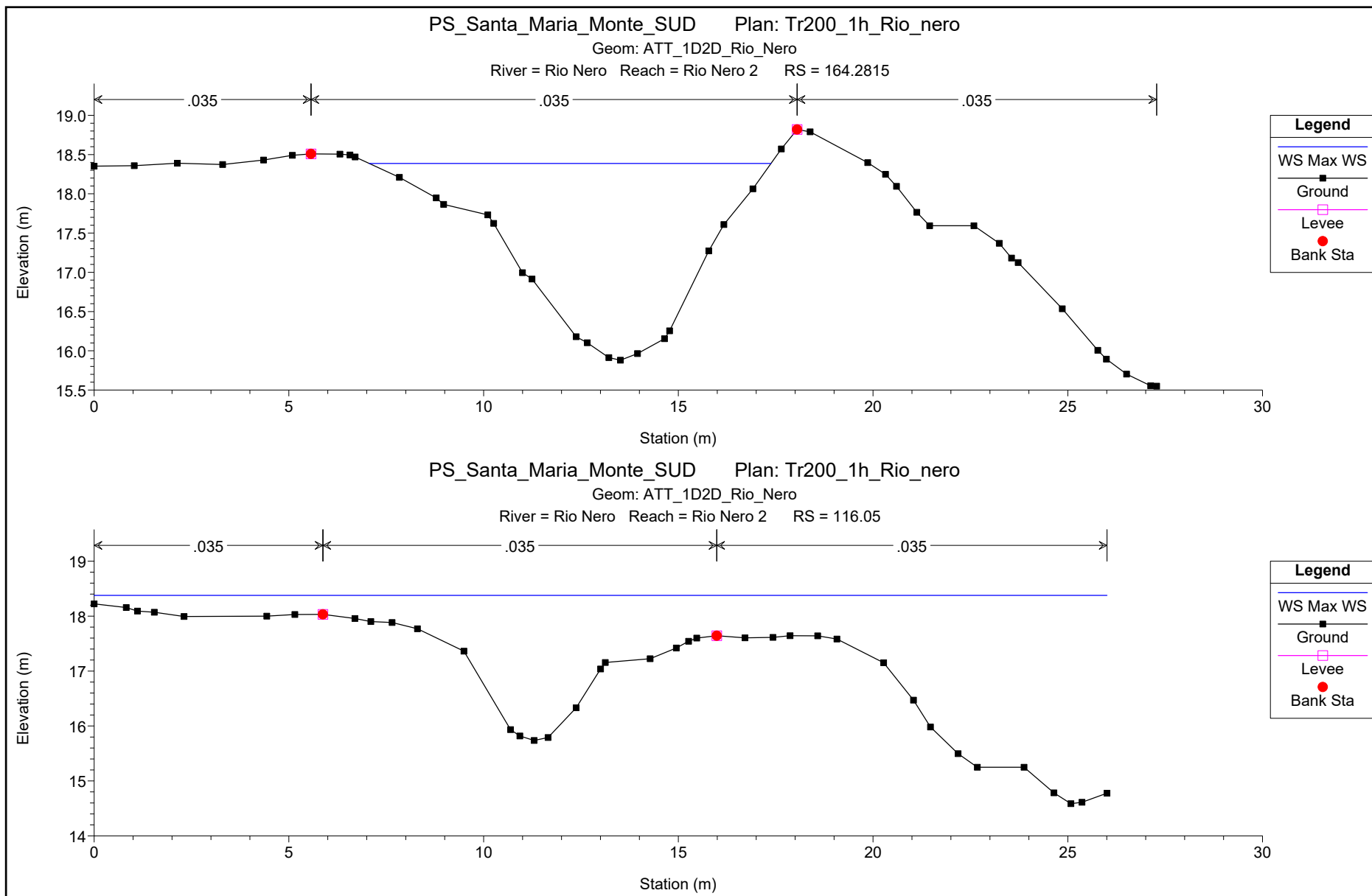
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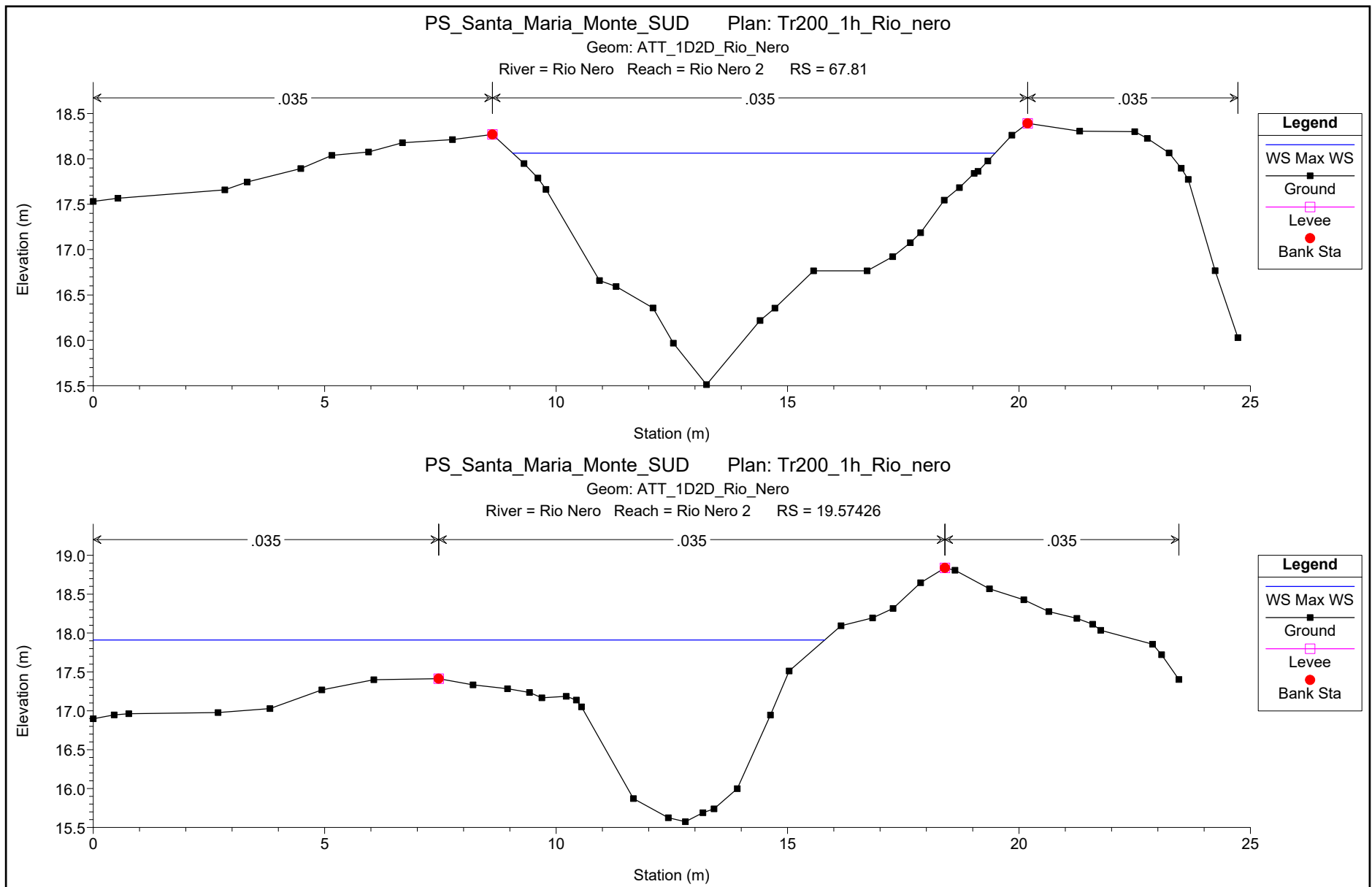
Geom: ATT_1D2D_Rio_Nero

River = Rio Nero Reach = Rio Nero 2 RS = 438.22









HEC-RAS Plan: Tr200_1h_Rio_nero River: Rio Nero Reach: Rio Nero 2 Profile: Max WS

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio Nero 2	1077	19.60	21.22	23.91		23.98	0.001602	1.17	17.17	15.72	0.35
Rio Nero 2	1071	Lat Struct									
Rio Nero 2	1070	Lat Struct									
Rio Nero 2	1048.38	18.14	20.80	23.93		23.95	0.000391	0.69	27.90	19.92	0.18
Rio Nero 2	1040	18.13	20.80	23.90		23.95	0.000705	1.05	19.52	15.00	0.21
Rio Nero 2	1030	Culvert									
Rio Nero 2	1025	15.79	20.80	23.36		23.44	0.001293	1.25	12.65	5.89	0.27
Rio Nero 2	1019.751	15.99	20.80	23.41		23.42	0.000301	0.62	27.39	18.87	0.16
Rio Nero 2	1011	Lat Struct									
Rio Nero 2	1010	Lat Struct									
Rio Nero 2	972.19	13.68	20.56	23.41		23.42	0.000105	0.39	35.31	20.72	0.09
Rio Nero 2	924.62	18.85	20.19	23.38		23.40	0.000308	0.68	29.42	17.75	0.16
Rio Nero 2	877.0604	35.68	19.77	23.10		23.26	0.002660	1.78	20.57	14.48	0.46
Rio Nero 2	830.84	37.32	19.50	22.83		23.08	0.004433	2.18	17.09	11.77	0.58
Rio Nero 2	784.62	37.33	19.25	22.81		22.93	0.001566	1.53	24.48	13.40	0.36
Rio Nero 2	738.40	37.32	19.09	22.74		22.86	0.001624	1.50	24.87	14.75	0.37
Rio Nero 2	692.18	37.33	18.78	22.75		22.81	0.000571	1.03	36.21	17.14	0.23
Rio Nero 2	645.97	37.33	18.71	22.72		22.78	0.000579	1.08	34.57	14.91	0.23
Rio Nero 2	599.7466	37.33	18.31	22.69		22.75	0.000658	1.07	34.92	17.44	0.24
Rio Nero 2	590	37.33	18.20	22.72		22.74	0.000149	0.76	61.72	30.00	0.12
Rio Nero 2	585	Culvert									
Rio Nero 2	575	37.32	18.20	21.18		21.31	0.001308	1.62	24.68	16.16	0.33
Rio Nero 2	572.1722	37.32	18.15	21.07		21.30	0.003905	2.08	17.91	12.52	0.56
Rio Nero 2	571	Lat Struct									
Rio Nero 2	570	Lat Struct									
Rio Nero 2	527.52	37.32	17.83	20.73		21.08	0.006313	2.60	14.35	9.89	0.69
Rio Nero 2	482.87	37.32	17.63	20.73		20.87	0.001957	1.69	22.03	12.43	0.41
Rio Nero 2	438.22	37.31	17.55	20.42		20.72	0.005552	2.39	15.58	11.34	0.65
Rio Nero 2	393.57	37.31	17.29	19.91	19.85	20.52	0.012474	3.44	10.84	8.02	0.95
Rio Nero 2	348.92	37.31	17.02	19.69		19.91	0.003555	2.05	18.19	12.51	0.54
Rio Nero 2	304.27	37.31	16.72	19.29		19.68	0.007598	2.77	13.47	9.81	0.75
Rio Nero 2	259.62	37.31	16.23	18.98		19.36	0.006635	2.73	13.65	8.64	0.69
Rio Nero 2	214.9661	37.31	16.21	18.67		19.06	0.007156	2.75	13.55	9.77	0.75
Rio Nero 2	189.62	37.22	15.89	18.74		18.89	0.003421	1.79	23.37	27.36	0.52
Rio Nero 2	164.2815	36.78	15.88	18.39		18.82	0.009494	2.91	12.62	10.31	0.84

HEC-RAS Plan: Tr200_1h_Rio_nero River: Rio Nero Reach: Rio Nero 2 Profile: Max WS (Continued)

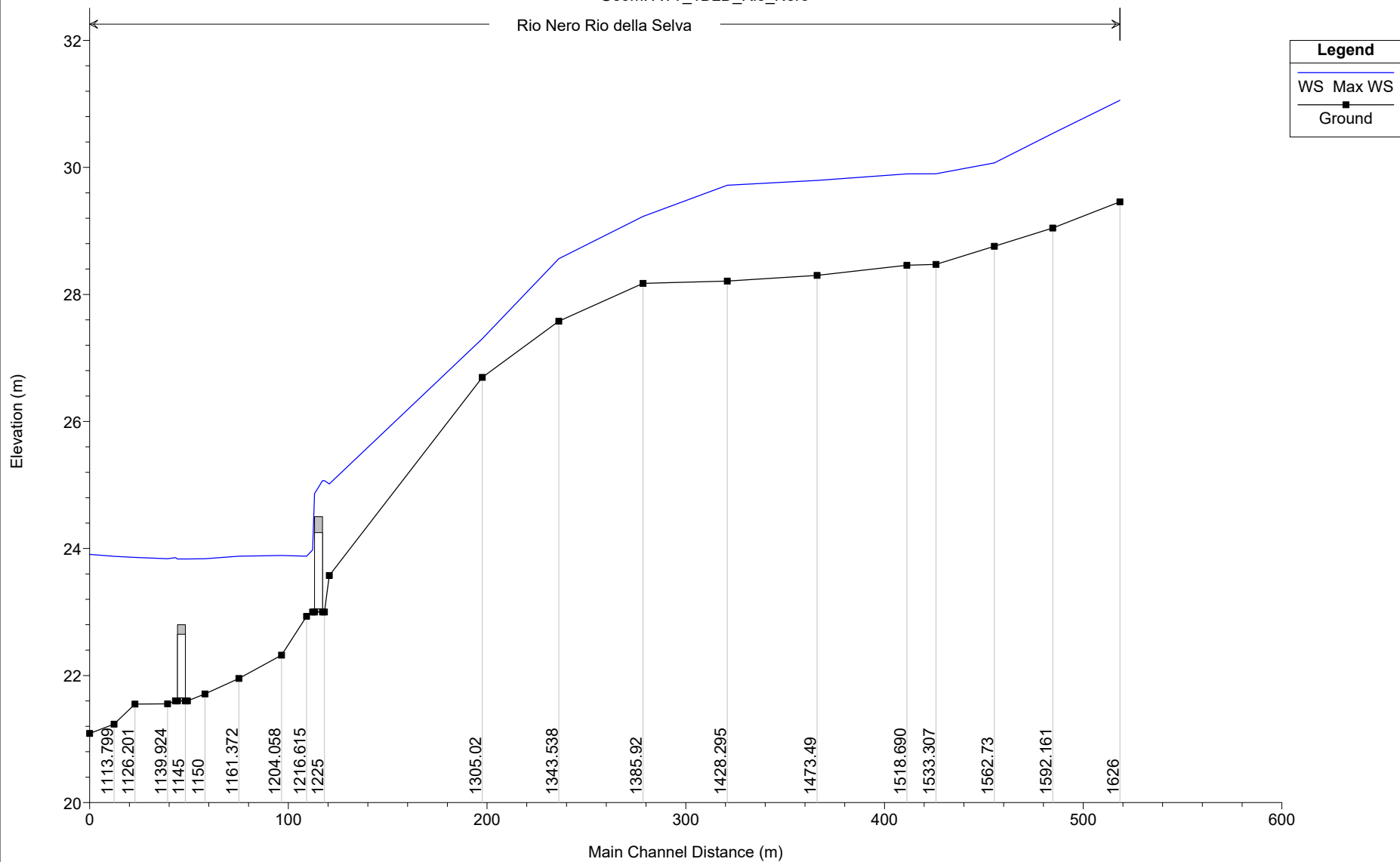
Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio Nero 2	116.05	33.72	15.74	18.38		18.43	0.000890	0.90	34.79	26.01	0.26
Rio Nero 2	67.81	30.68	15.51	18.06		18.34	0.005636	2.31	13.27	10.42	0.65
Rio Nero 2	19.57426	29.41	15.57	17.91	17.65	18.10	0.005033	2.04	15.77	15.80	0.60

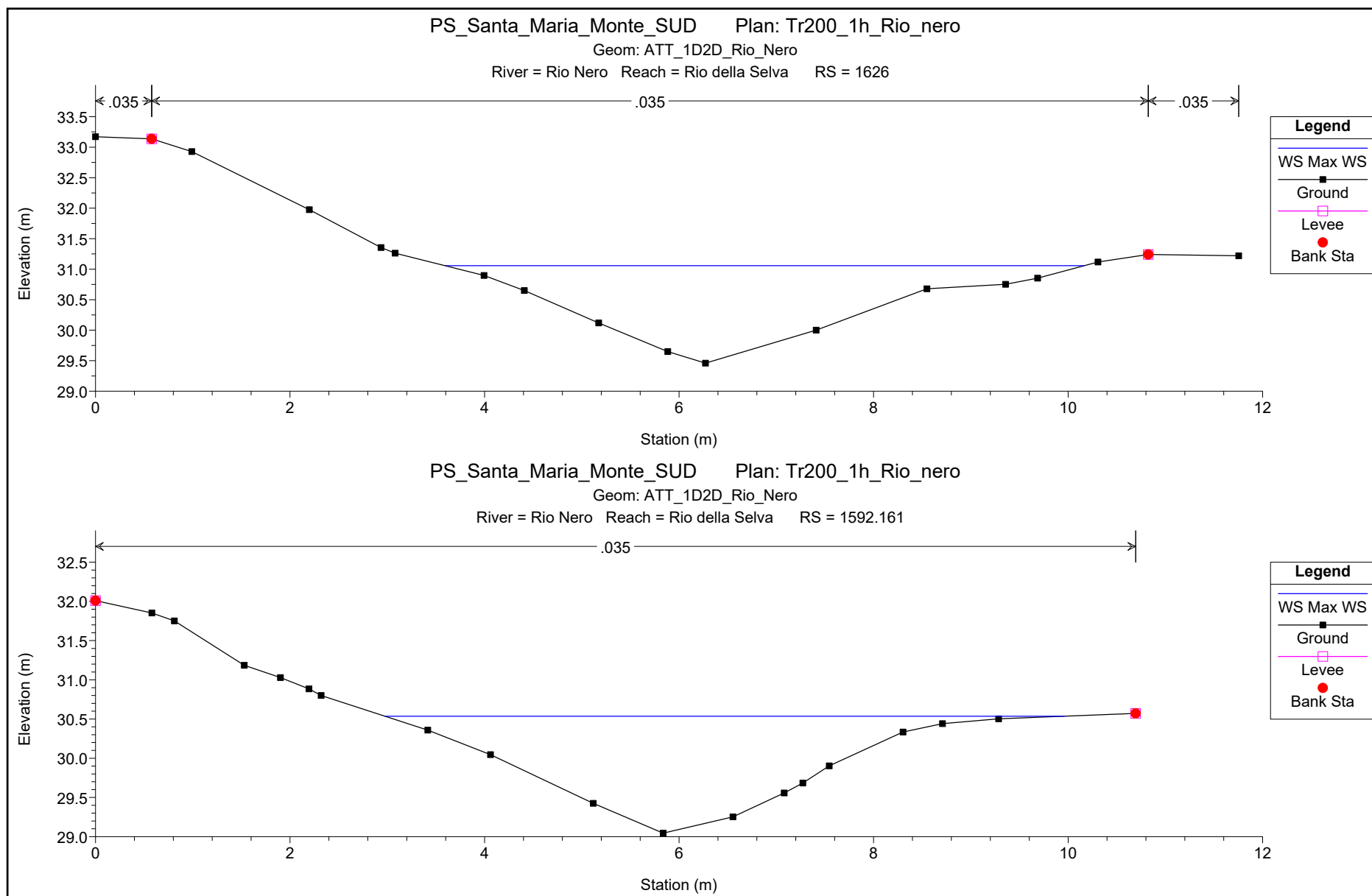
RIO DELLA SELVA – Tp 1 ora
Tr=200 anni

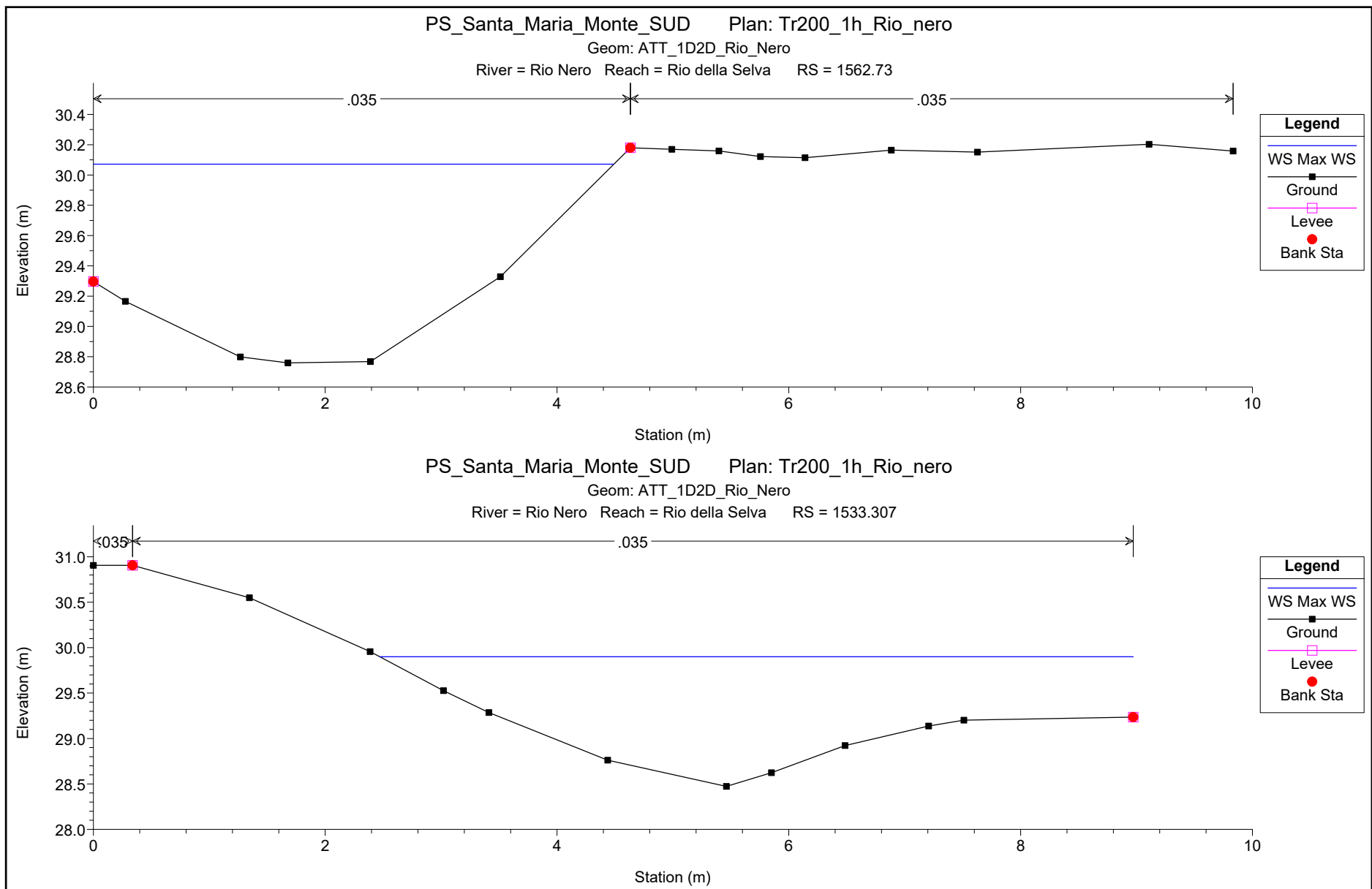
Tratto di valle

PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero



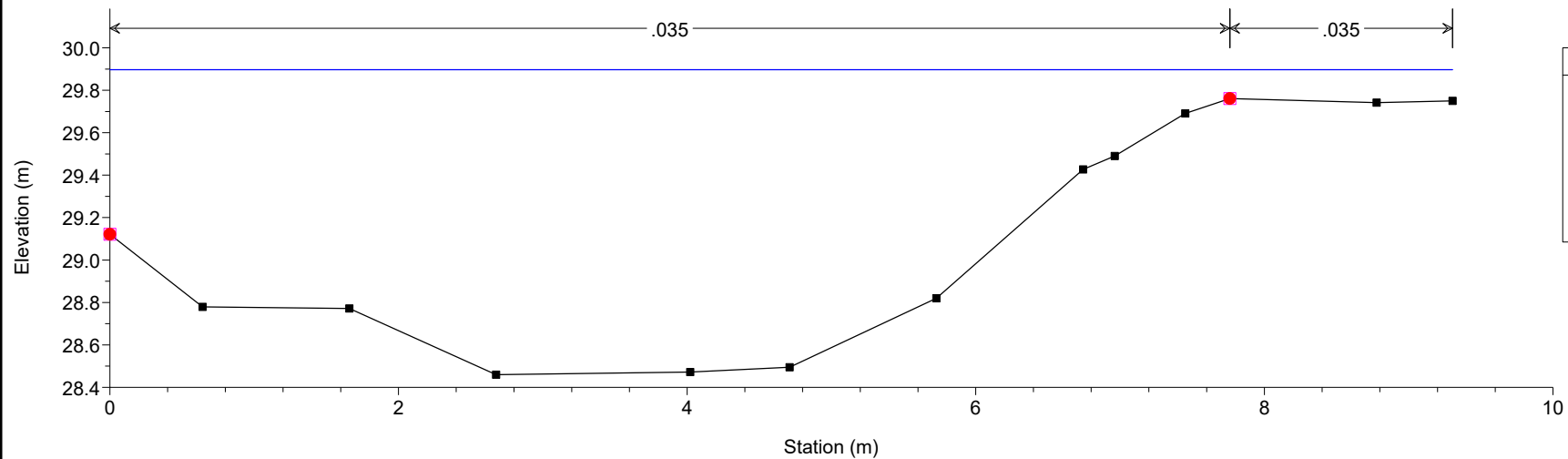




PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

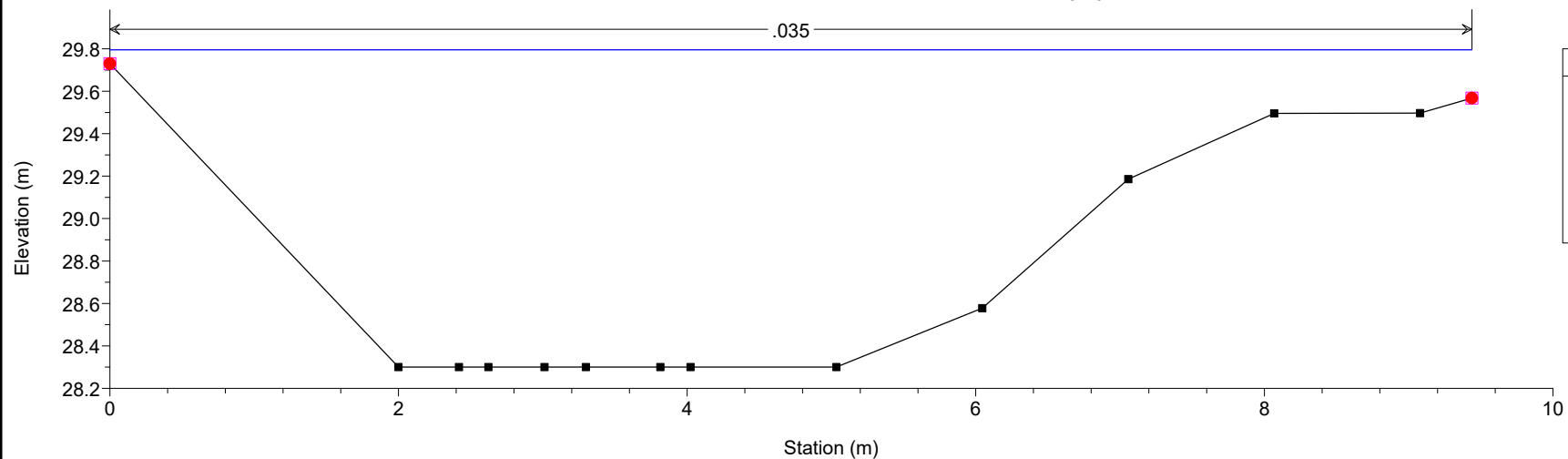
River = Rio Nero Reach = Rio della Selva RS = 1518.690



PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

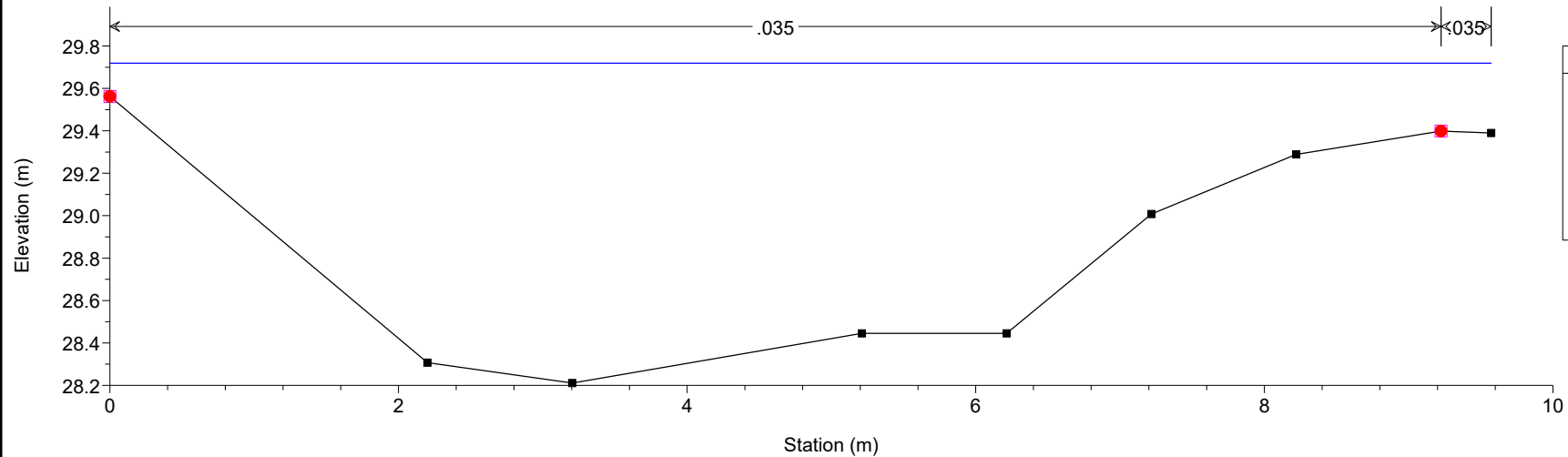
River = Rio Nero Reach = Rio della Selva RS = 1473.49



PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

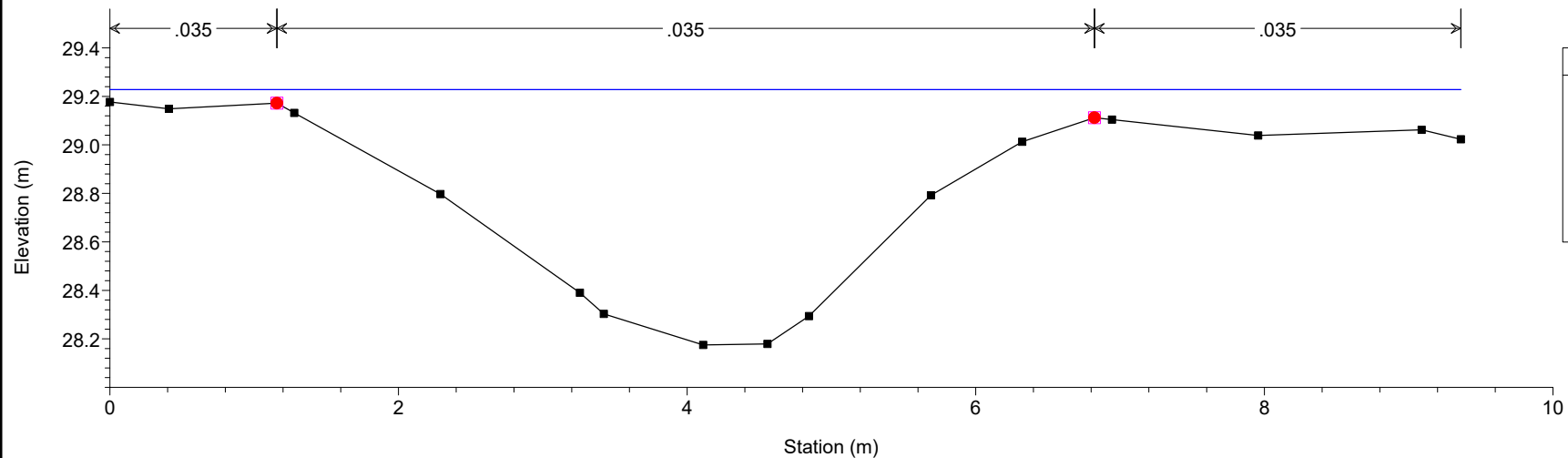
River = Rio Nero Reach = Rio della Selva RS = 1428.295

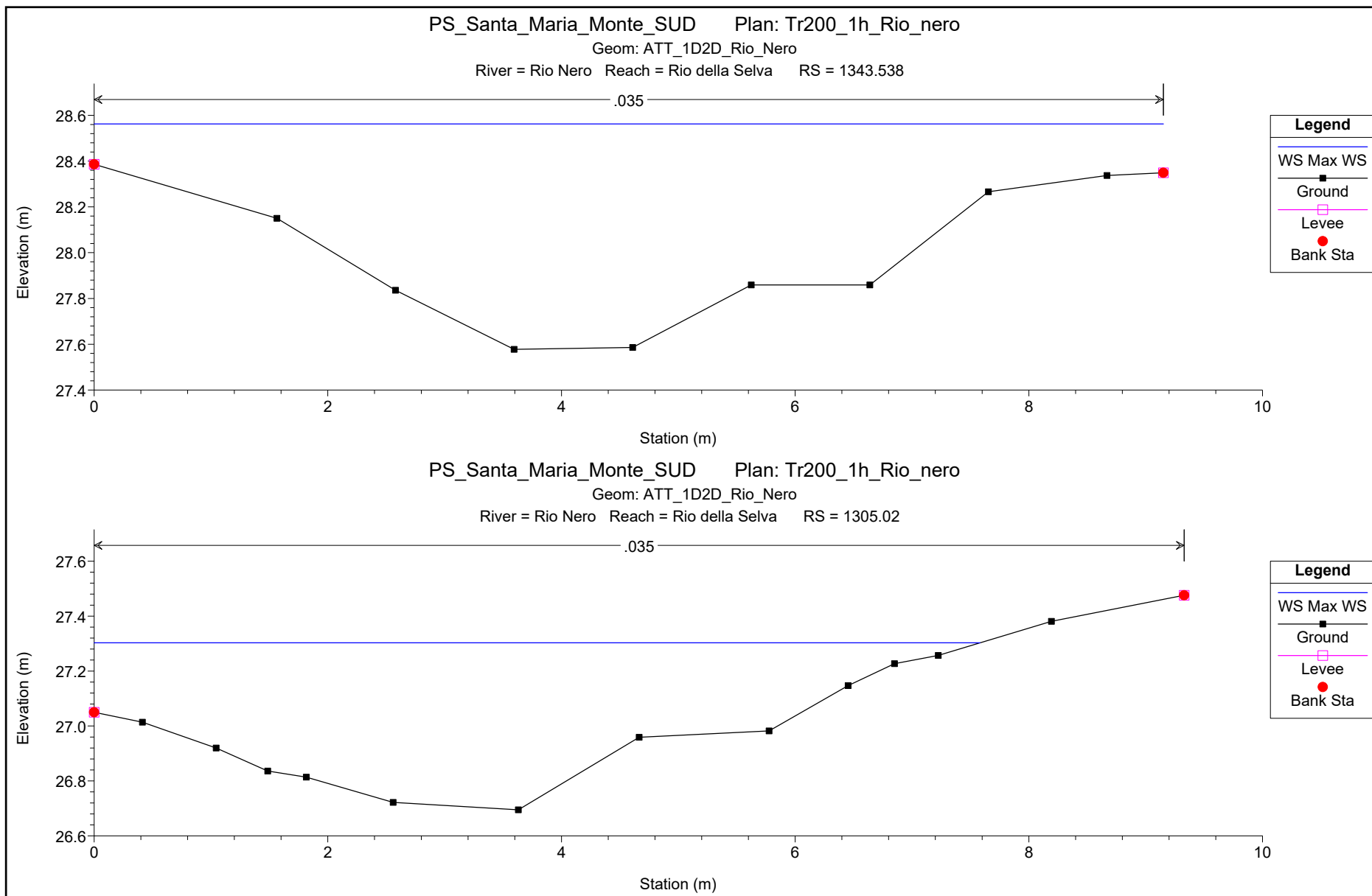


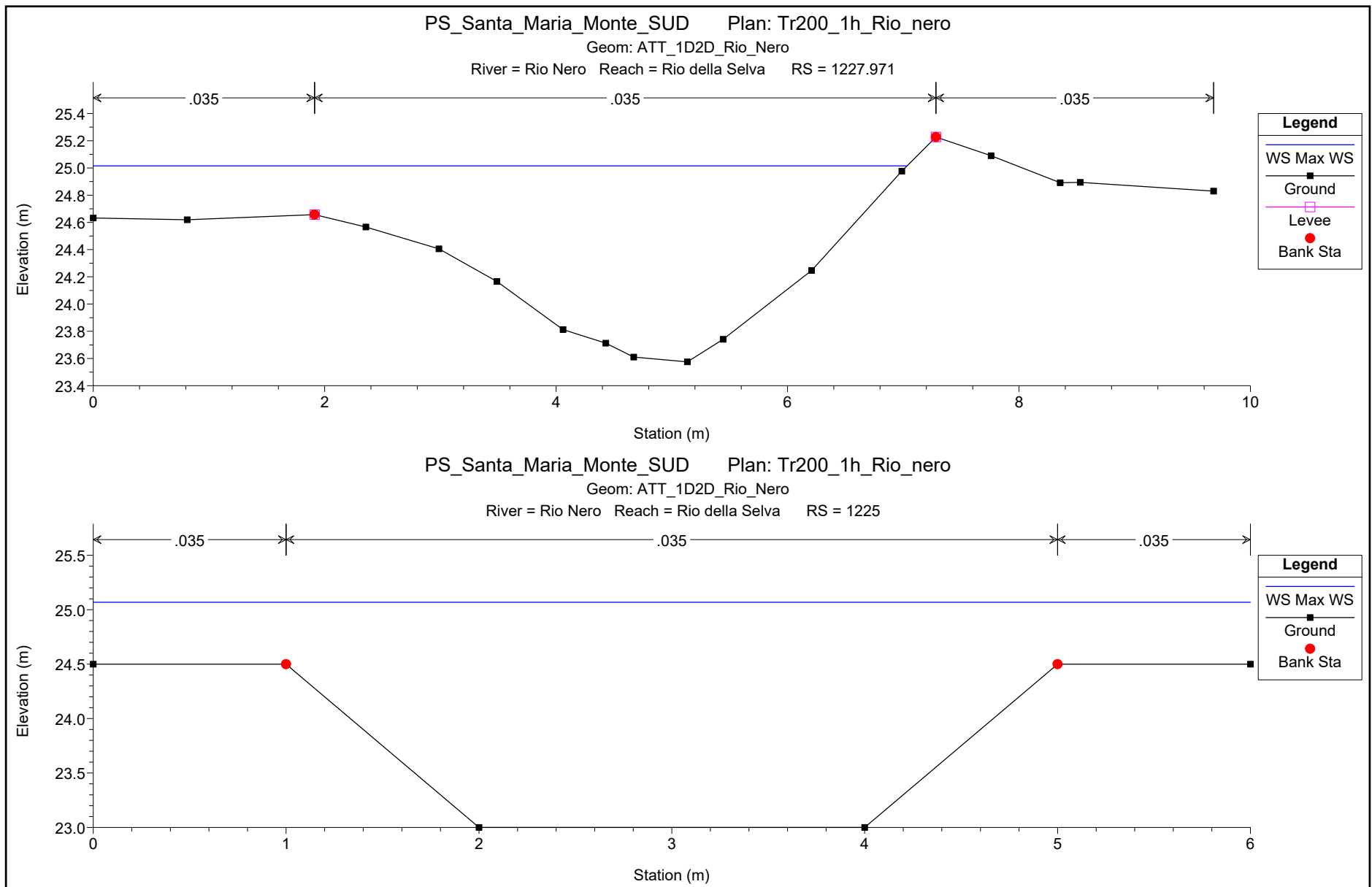
PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

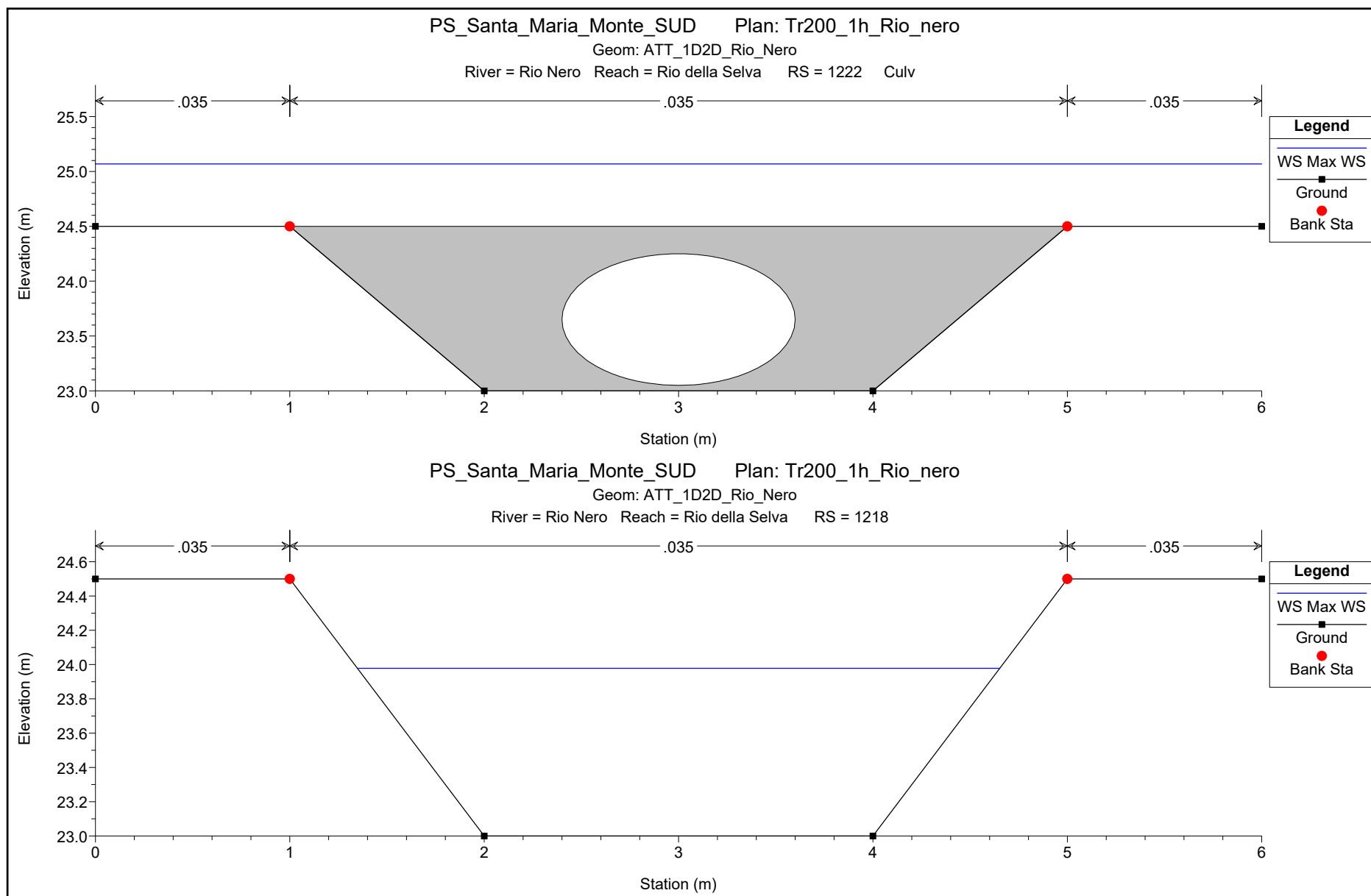
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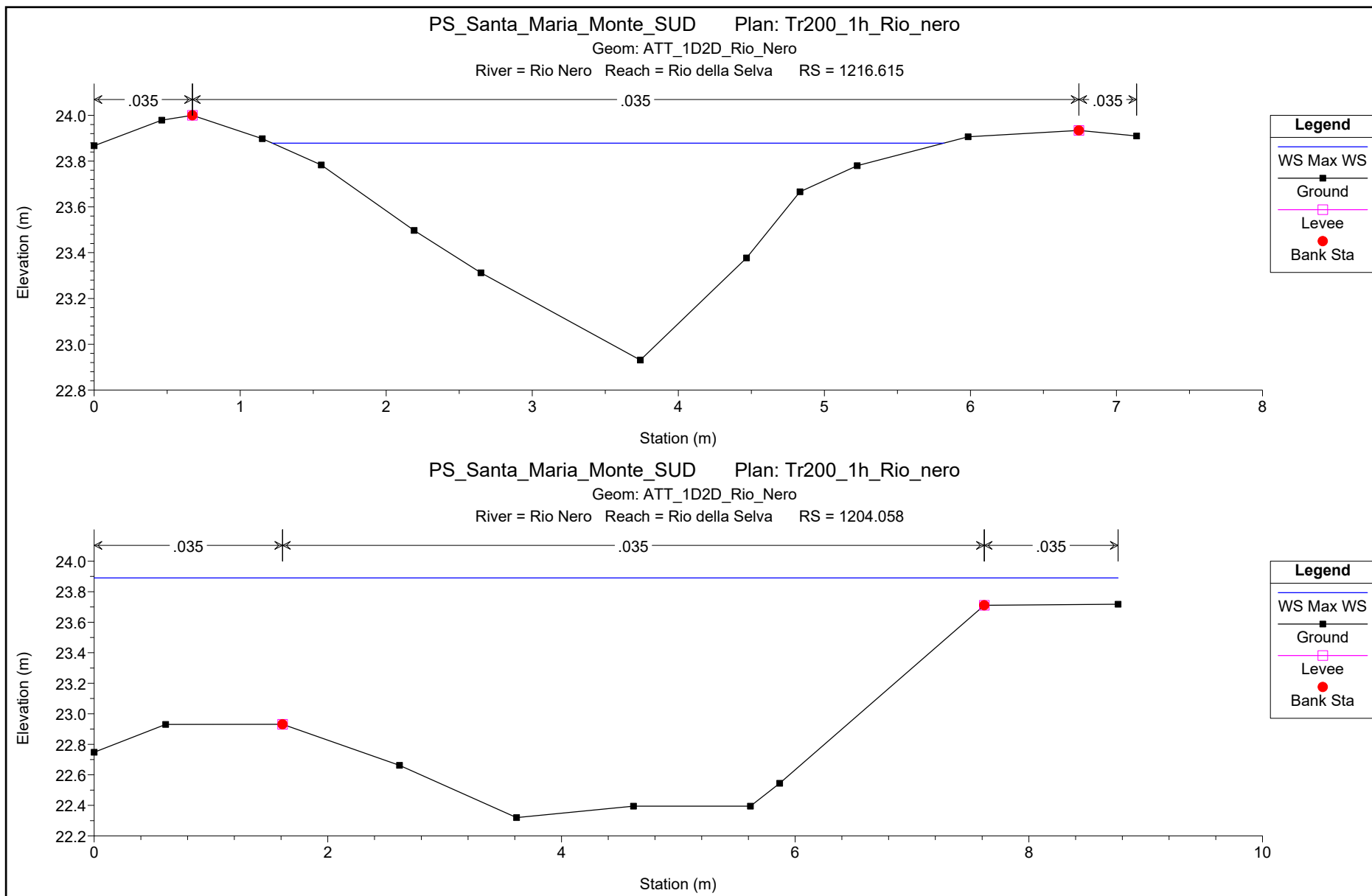
River = Rio Nero Reach = Rio della Selva RS = 1385.92

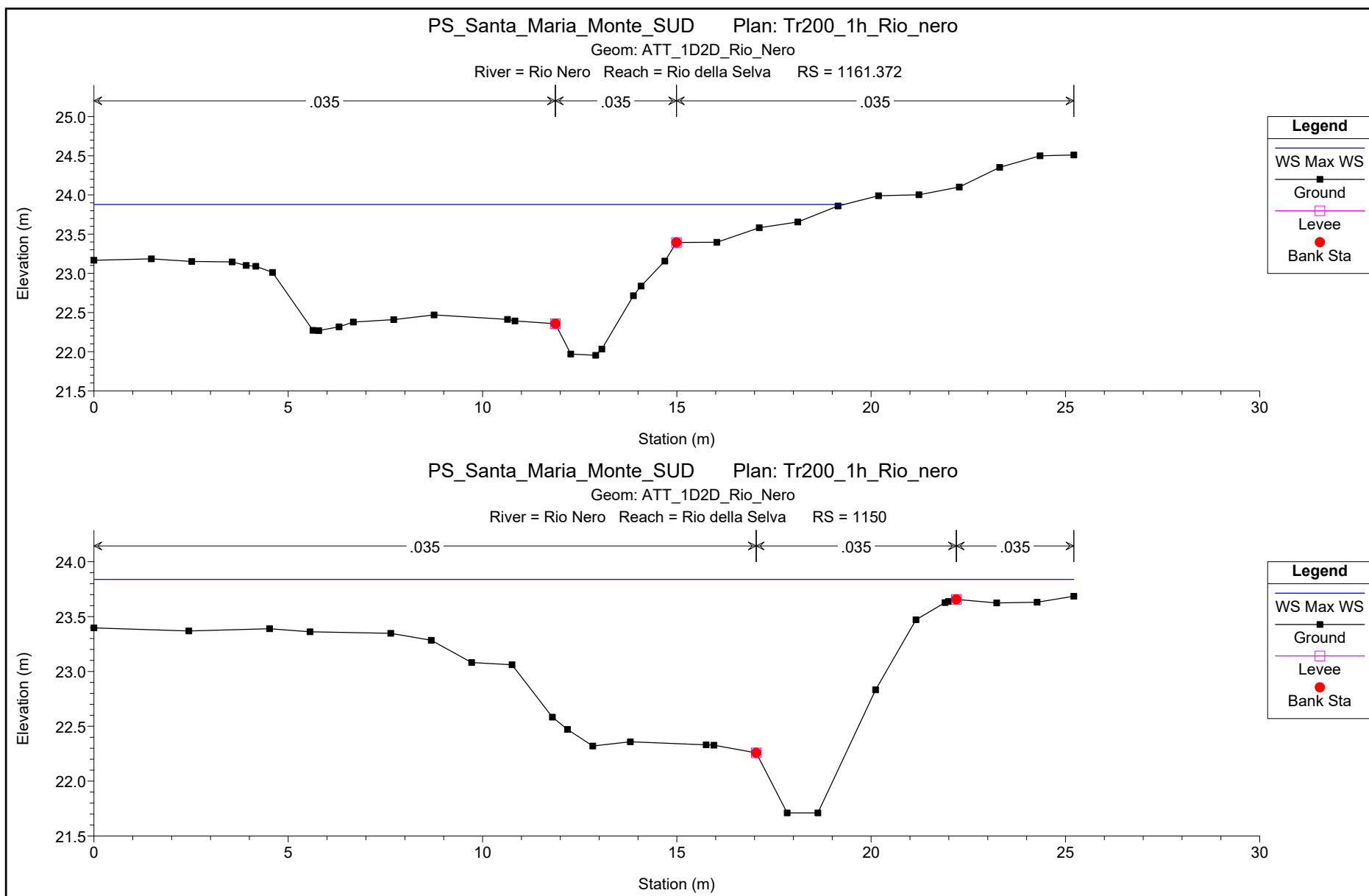


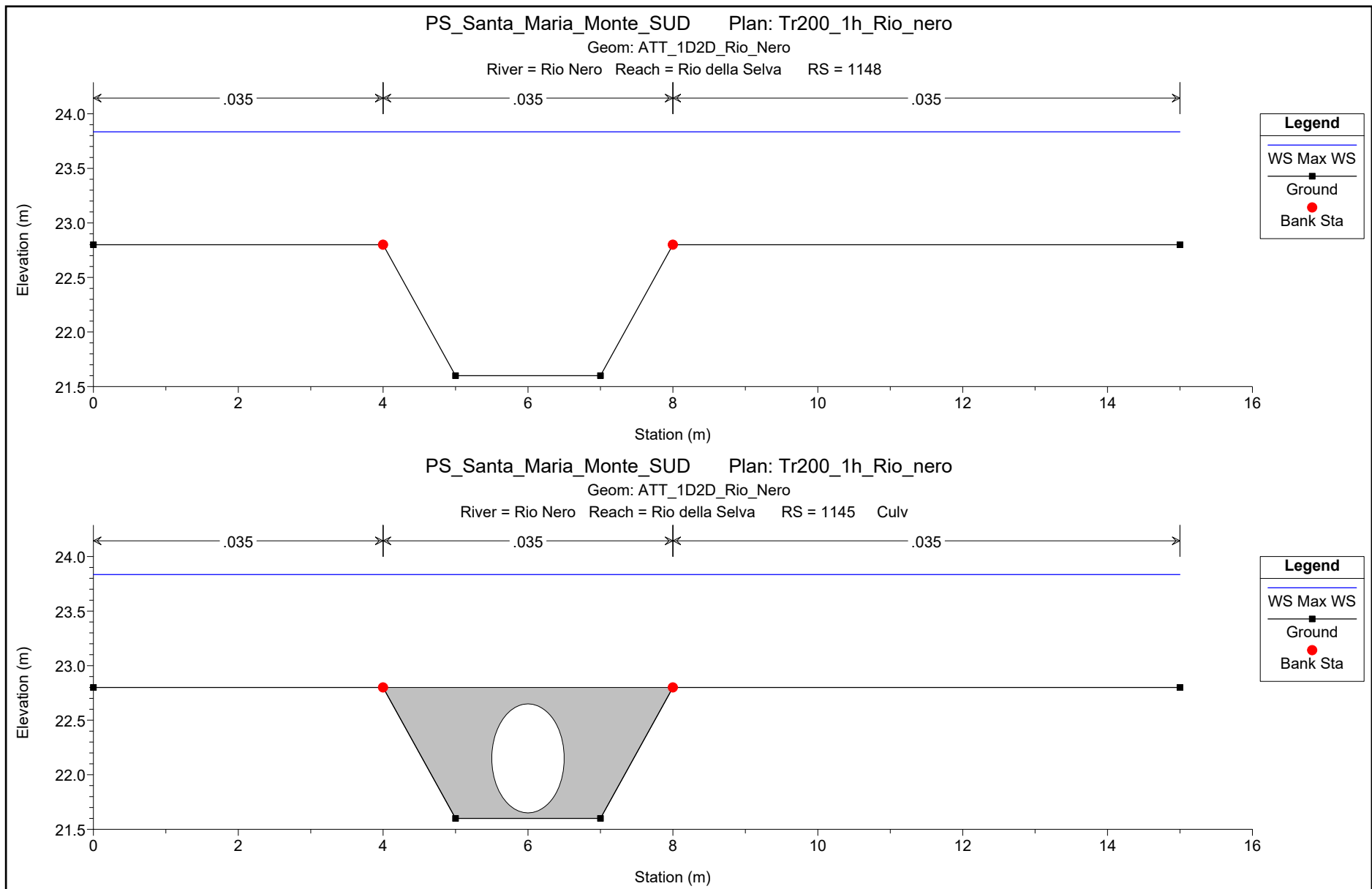


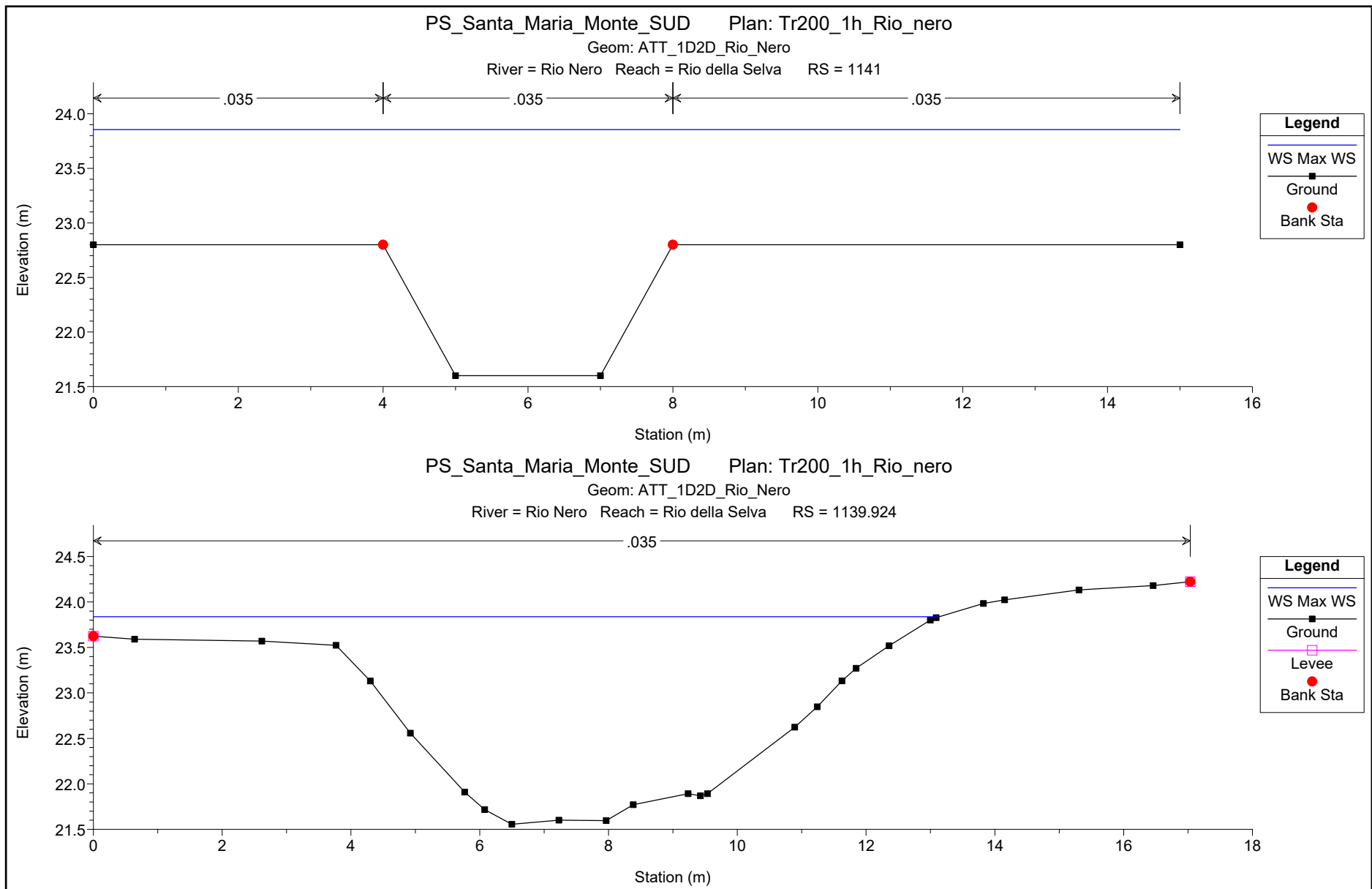








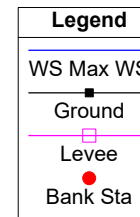
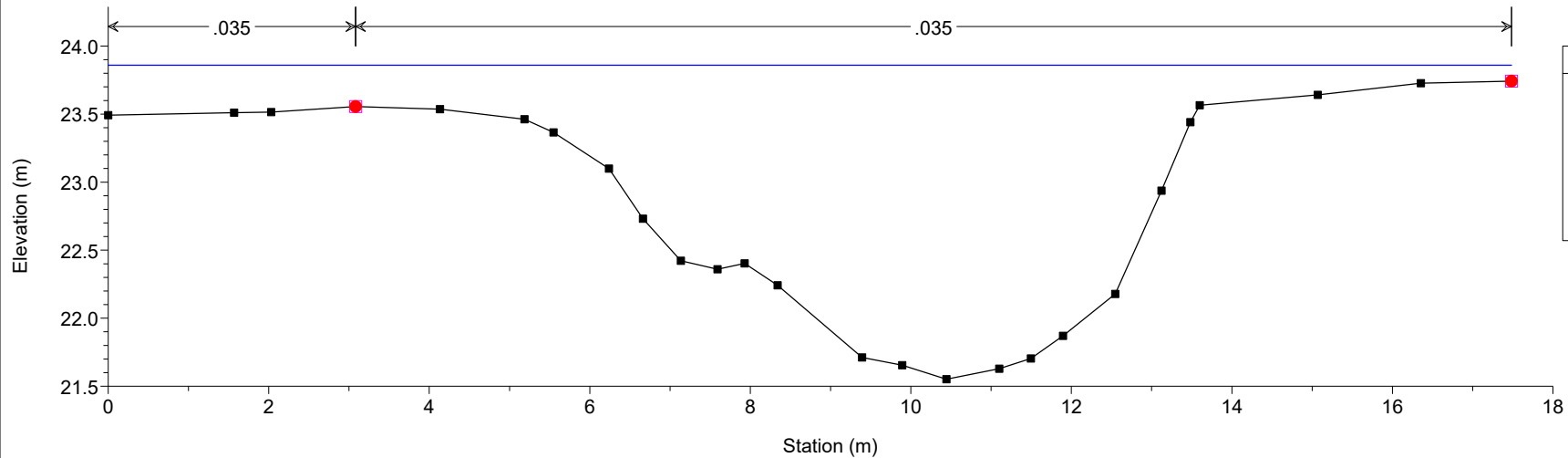




PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

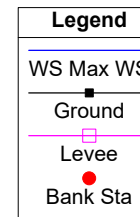
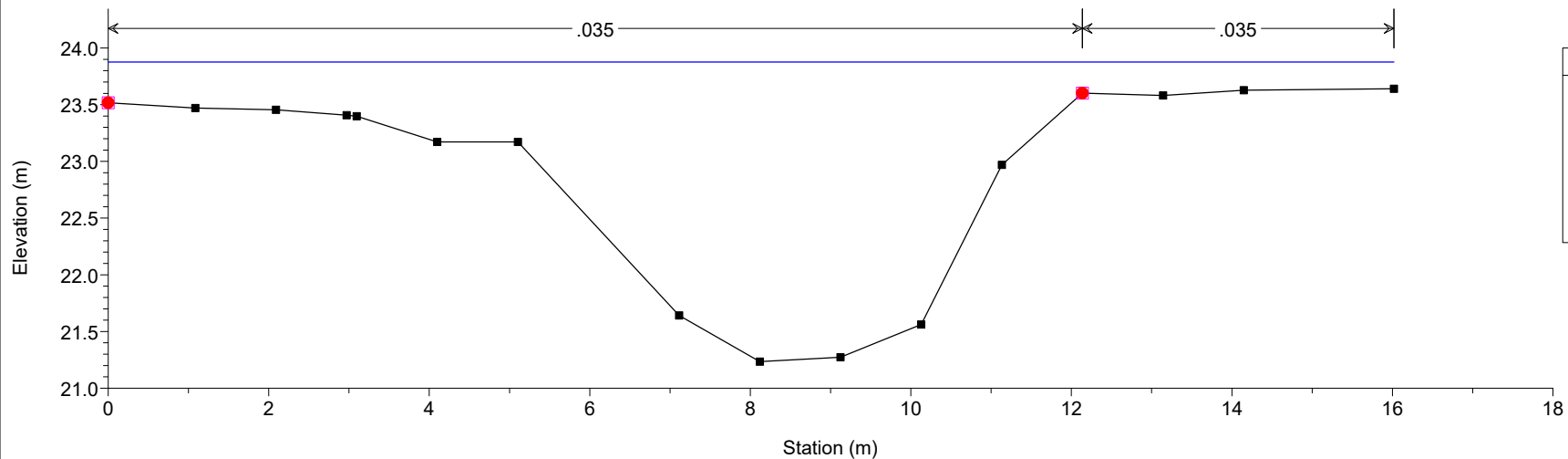
River = Rio Nero Reach = Rio della Selva RS = 1126.201



PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

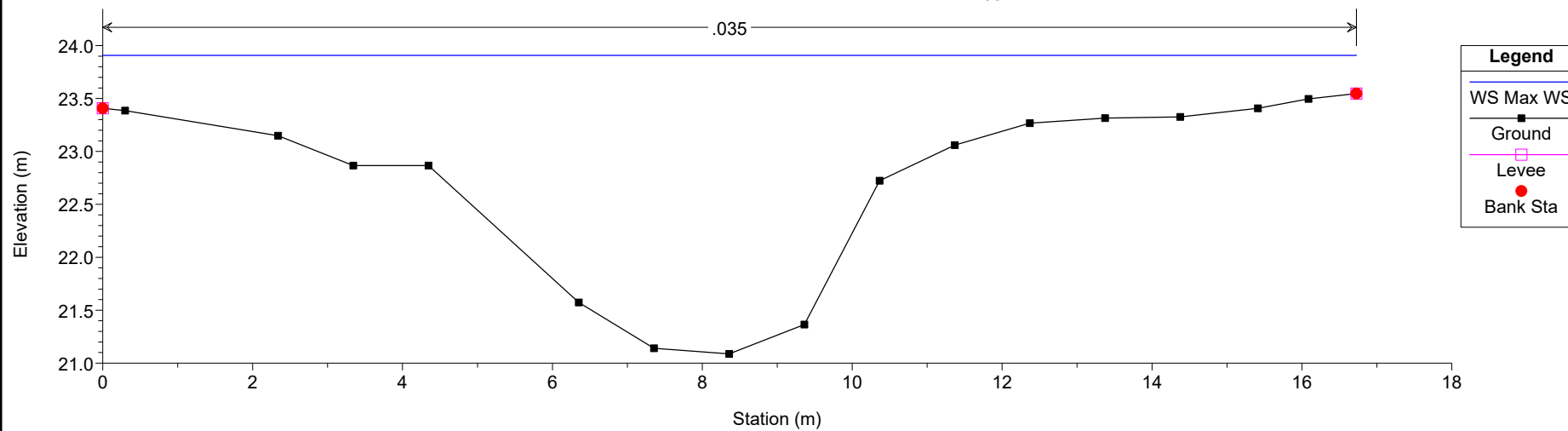
River = Rio Nero Reach = Rio della Selva RS = 1113.799



PS_Santa_Maria_Monte_SUD Plan: Tr200_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

River = Rio Nero Reach = Rio della Selva RS = 1105.224



HEC-RAS Plan: Tr200_1h_Rio_nero River: Rio Nero Reach: Rio della Selva Profile: Max WS

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio della Selva	1626	11.95	29.46	31.06		31.37	0.013357	2.48	4.81	6.57	0.93
Rio della Selva	1610	Lat Struct									
Rio della Selva	1592.161	11.92	29.05	30.54	30.59	30.91	0.018598	2.69	4.43	6.99	1.08
Rio della Selva	1562.73	11.92	28.76	30.07		30.47	0.014015	2.78	4.28	4.49	0.91
Rio della Selva	1533.307	10.78	28.47	29.90		30.09	0.006889	1.93	5.60	6.50	0.66
Rio della Selva	1518.690	11.61	28.46	29.90		29.99	0.002610	1.39	8.53	9.30	0.43
Rio della Selva	1473.49	11.82	28.30	29.80		29.88	0.002357	1.28	9.25	9.44	0.41
Rio della Selva	1428.295	11.09	28.21	29.72		29.79	0.001953	1.20	9.31	9.57	0.38
Rio della Selva	1385.92	9.91	28.18	29.23	29.32	29.61	0.021190	2.80	3.84	9.36	1.16
Rio della Selva	1381	Lat Struct									
Rio della Selva	1343.538	10.36	27.58	28.56		28.75	0.010272	1.94	5.34	9.15	0.81
Rio della Selva	1305.02	9.41	26.69	27.30	27.49	27.88	0.055230	3.36	2.80	7.58	1.76
Rio della Selva	1227.971	7.56	23.58	25.02		25.13	0.004315	1.56	5.16	7.03	0.54
Rio della Selva	1225	7.56	23.00	25.07		25.12	0.001026	1.04	7.91	6.00	0.25
Rio della Selva	1222	Culvert									
Rio della Selva	1218	7.56	23.00	23.98	24.00	24.41	0.020726	2.91	2.59	3.30	1.05
Rio della Selva	1216.615	2.98	22.93	23.88		24.00	0.009971	1.52	1.96	4.60	0.74
Rio della Selva	1211	Lat Struct									
Rio della Selva	1210	Lat Struct									
Rio della Selva	1204.058	1.53	22.32	23.89		23.89	0.000036	0.18	9.02	8.76	0.05
Rio della Selva	1161.372	-6.60	21.95	23.88		23.88	0.000133	-0.37	19.55	19.30	0.10
Rio della Selva	1150	-15.17	21.71	23.84		23.87	0.000724	-0.82	21.52	25.22	0.23
Rio della Selva	1148	-15.28	21.60	23.83		23.87	0.000675	-0.98	19.12	15.00	0.22
Rio della Selva	1145	Culvert									
Rio della Selva	1141	-15.30	21.60	23.86		23.89	0.000644	-0.96	19.43	15.00	0.22
Rio della Selva	1139.924	-15.29	21.56	23.84		23.89	0.001330	-1.05	14.63	13.14	0.32
Rio della Selva	1131	Lat Struct									
Rio della Selva	1130	Lat Struct									
Rio della Selva	1126.201	-15.77	21.55	23.86		23.91	0.001488	-1.04	15.65	17.48	0.33
Rio della Selva	1113.799	-15.77	21.23	23.88		23.93	0.001106	-1.01	16.33	16.02	0.29
Rio della Selva	1111	Lat Struct									
Rio della Selva	1110	Lat Struct									
Rio della Selva	1105.224	-16.08	21.09	23.91		23.94	0.000646	-0.77	20.79	16.73	0.22

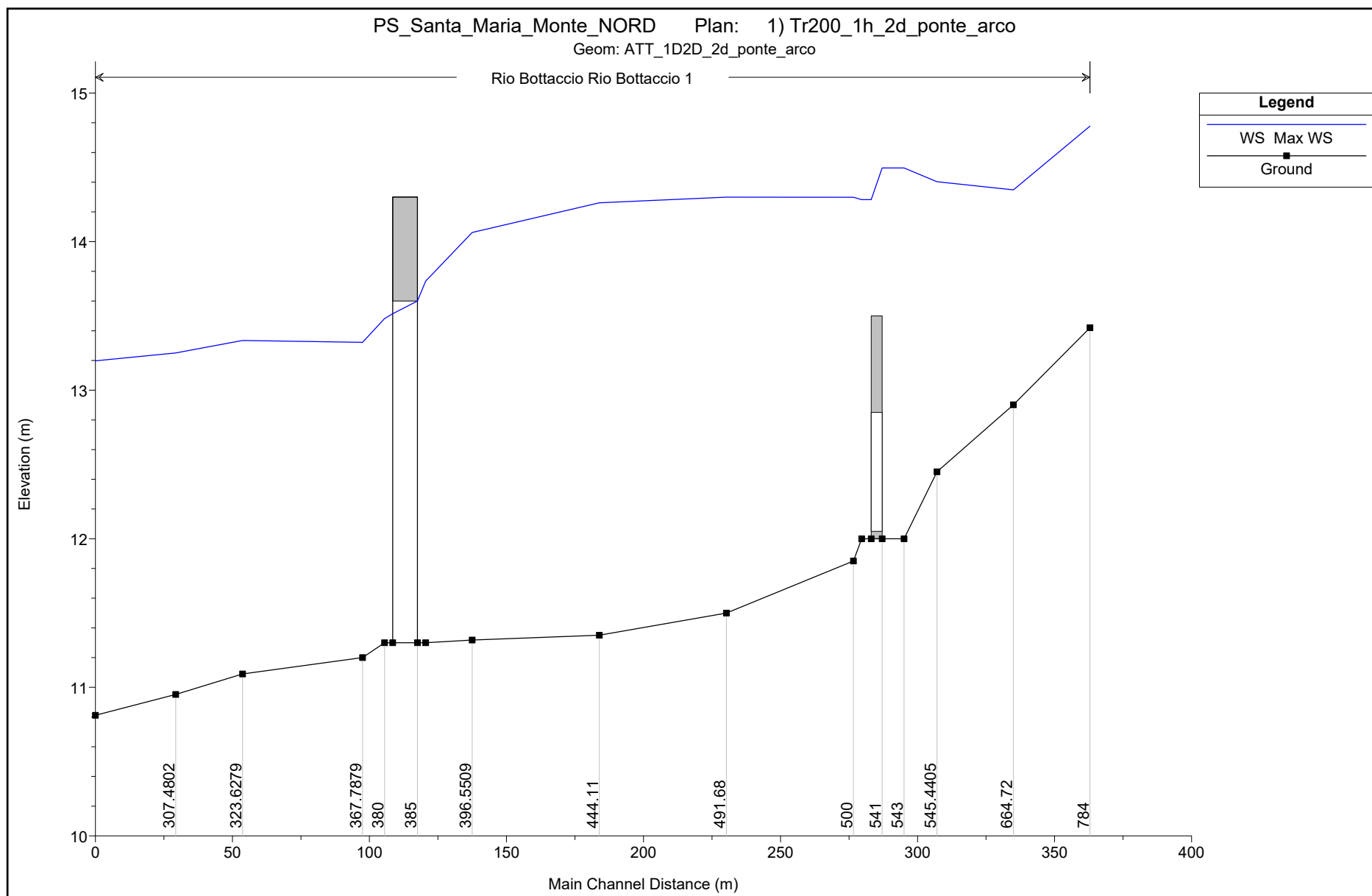
VERIFICHE IDRAULICHE

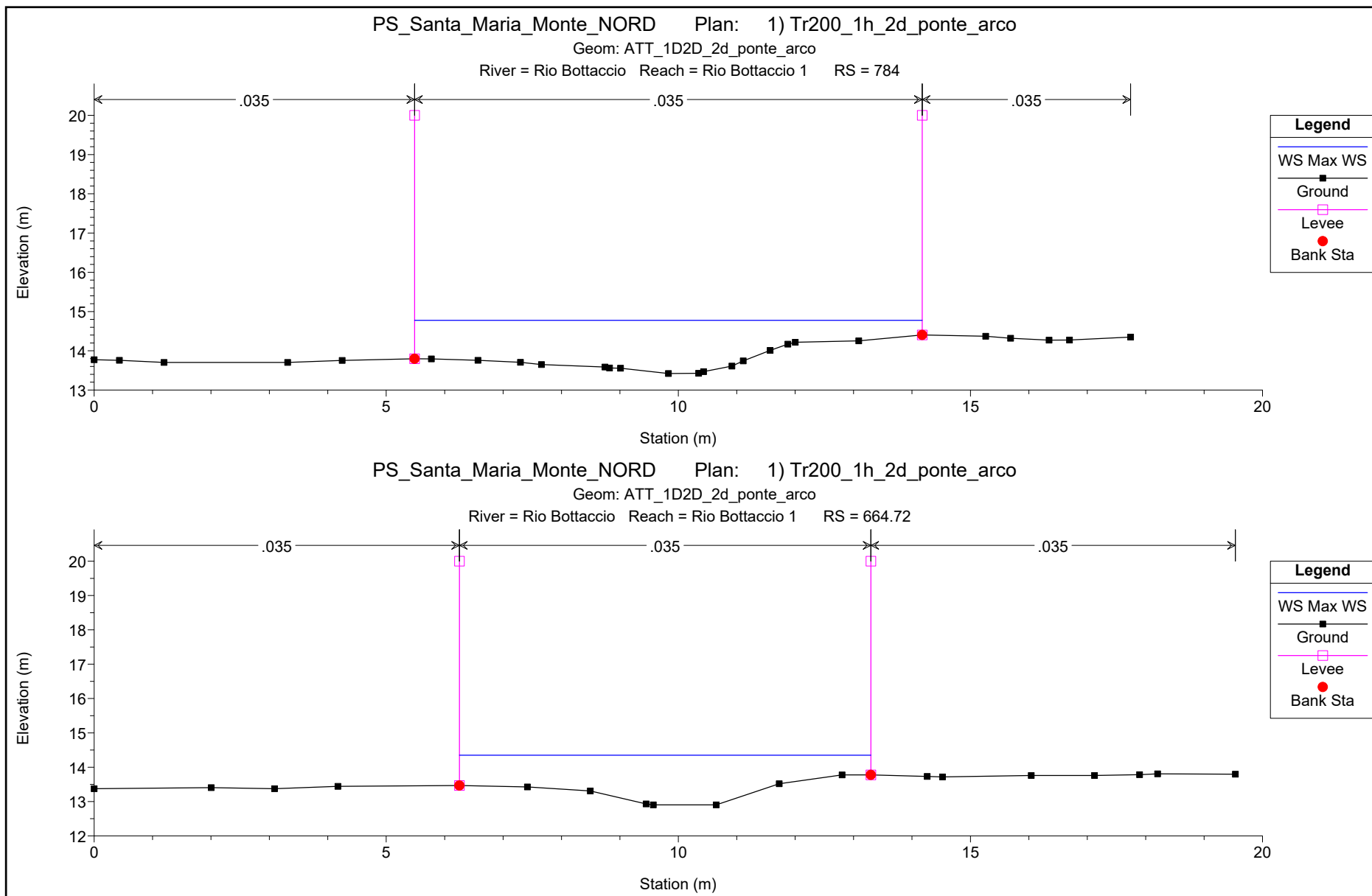
SISTEMA IDRAULICO RIO BOTTACCIO – RIO DOLCIONE – RIO VAIANO – RIO GUADAGNINO

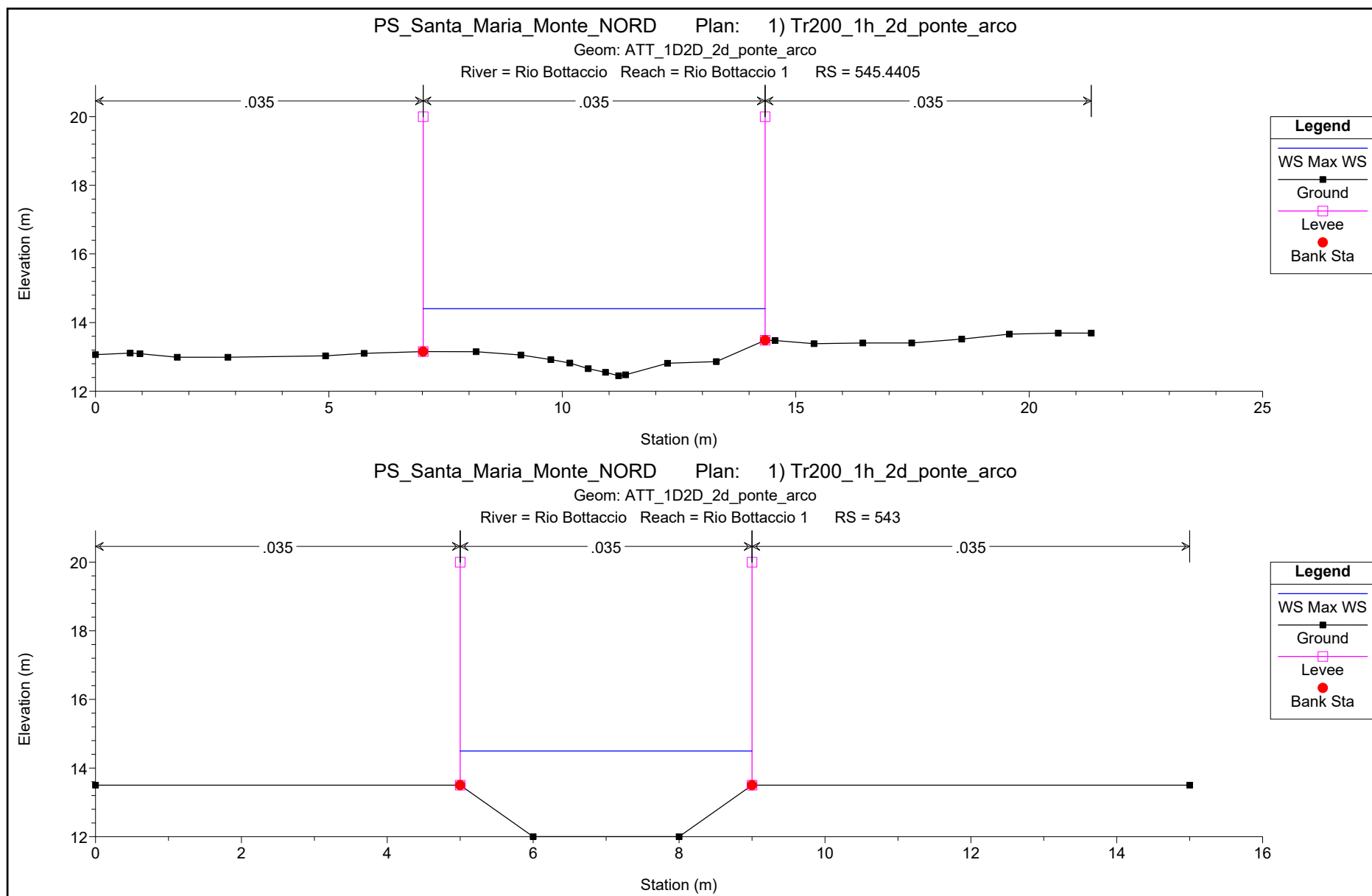
Tr 200 anni

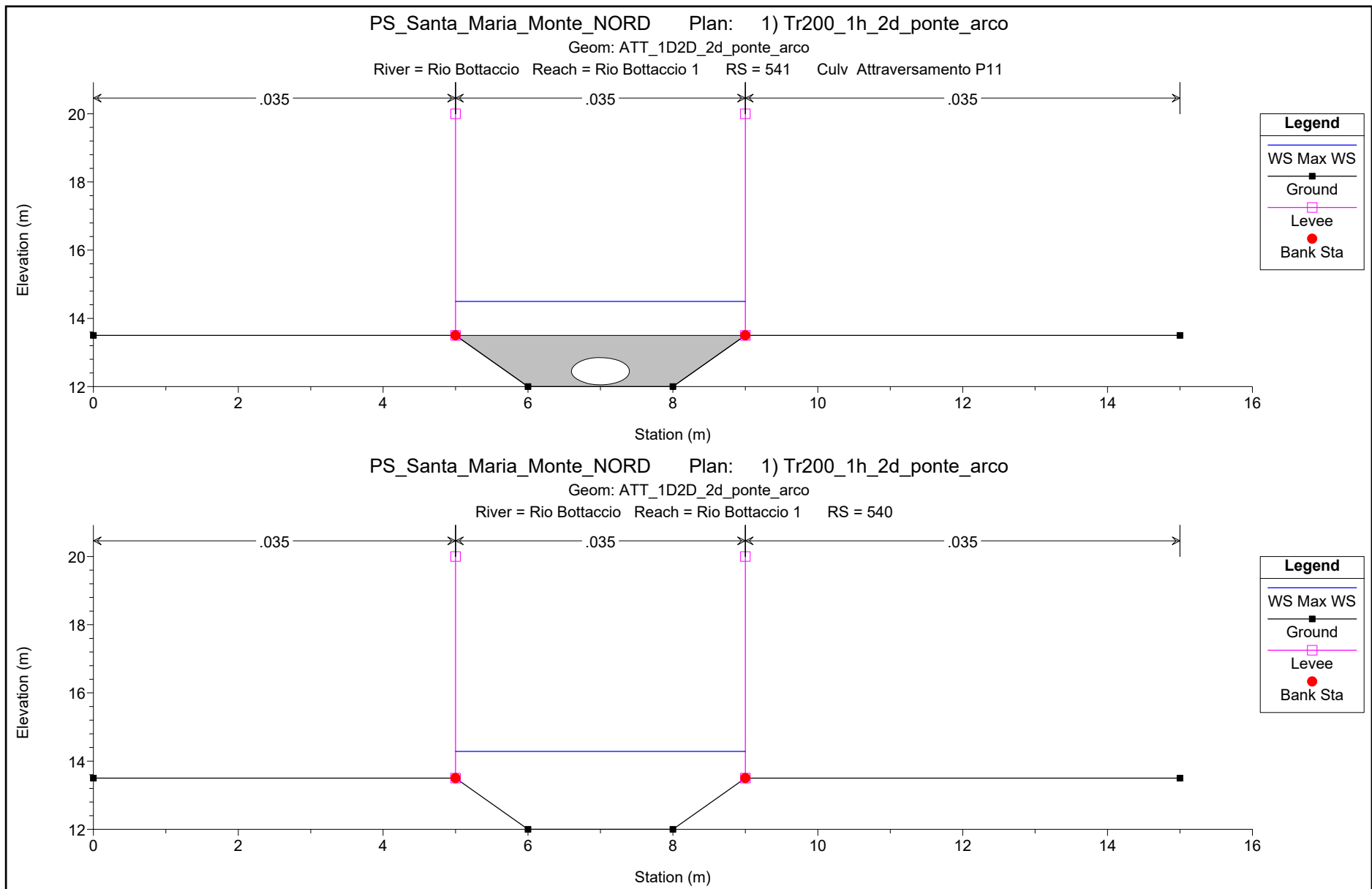
RIO DI BOTTACCIO – Tp 1 ora
Tr=200 anni

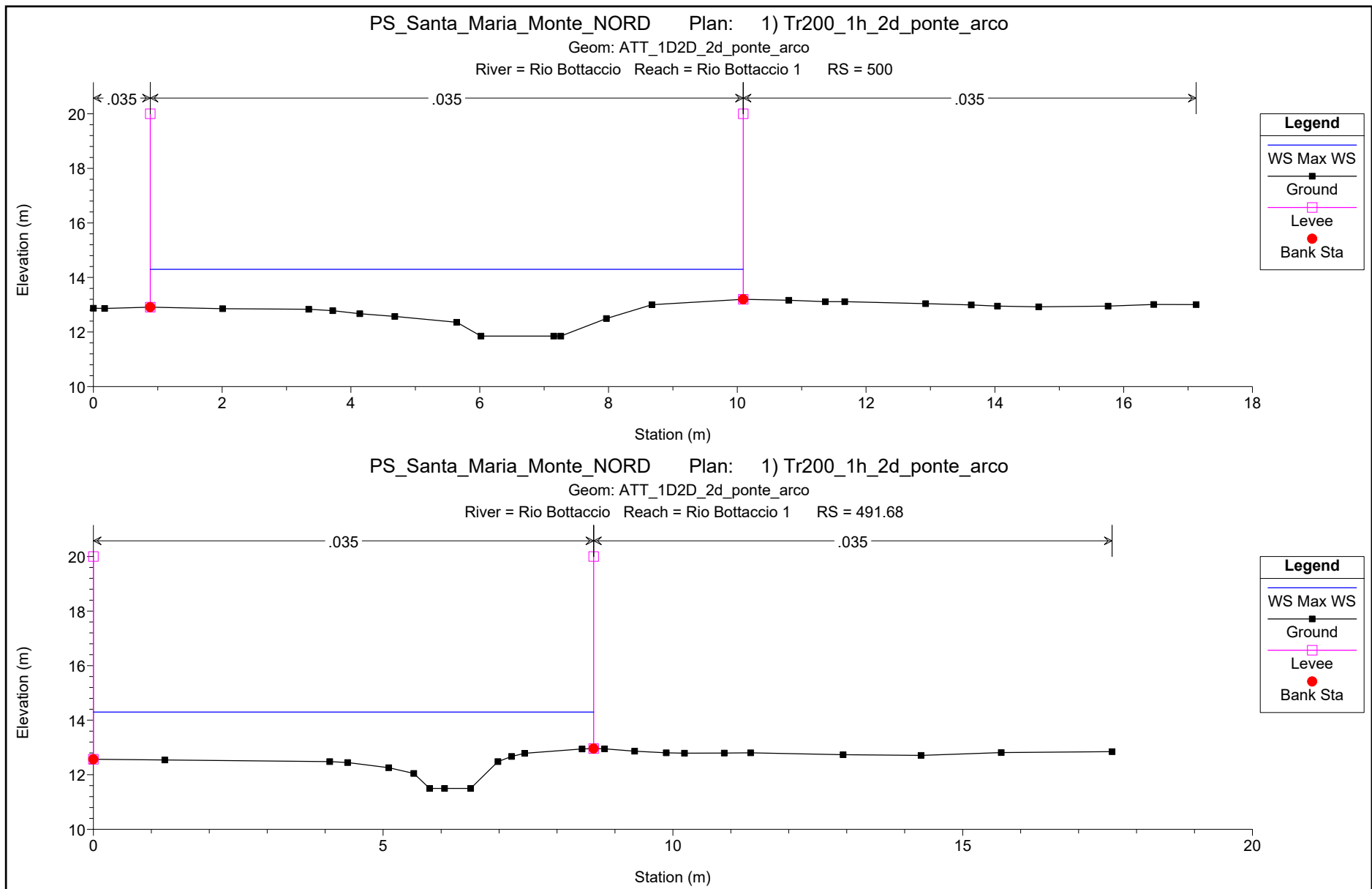
Tratto di Monte

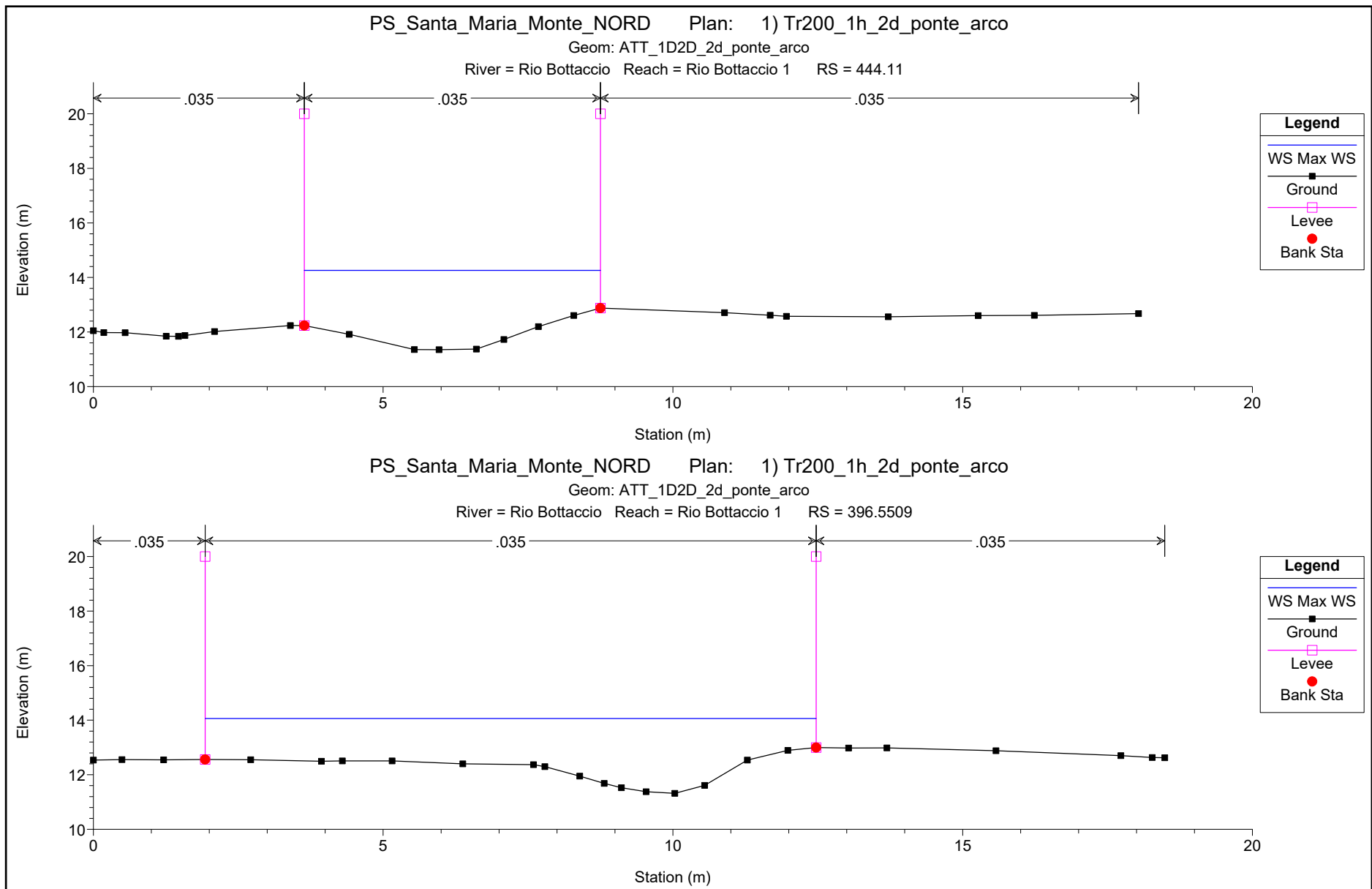


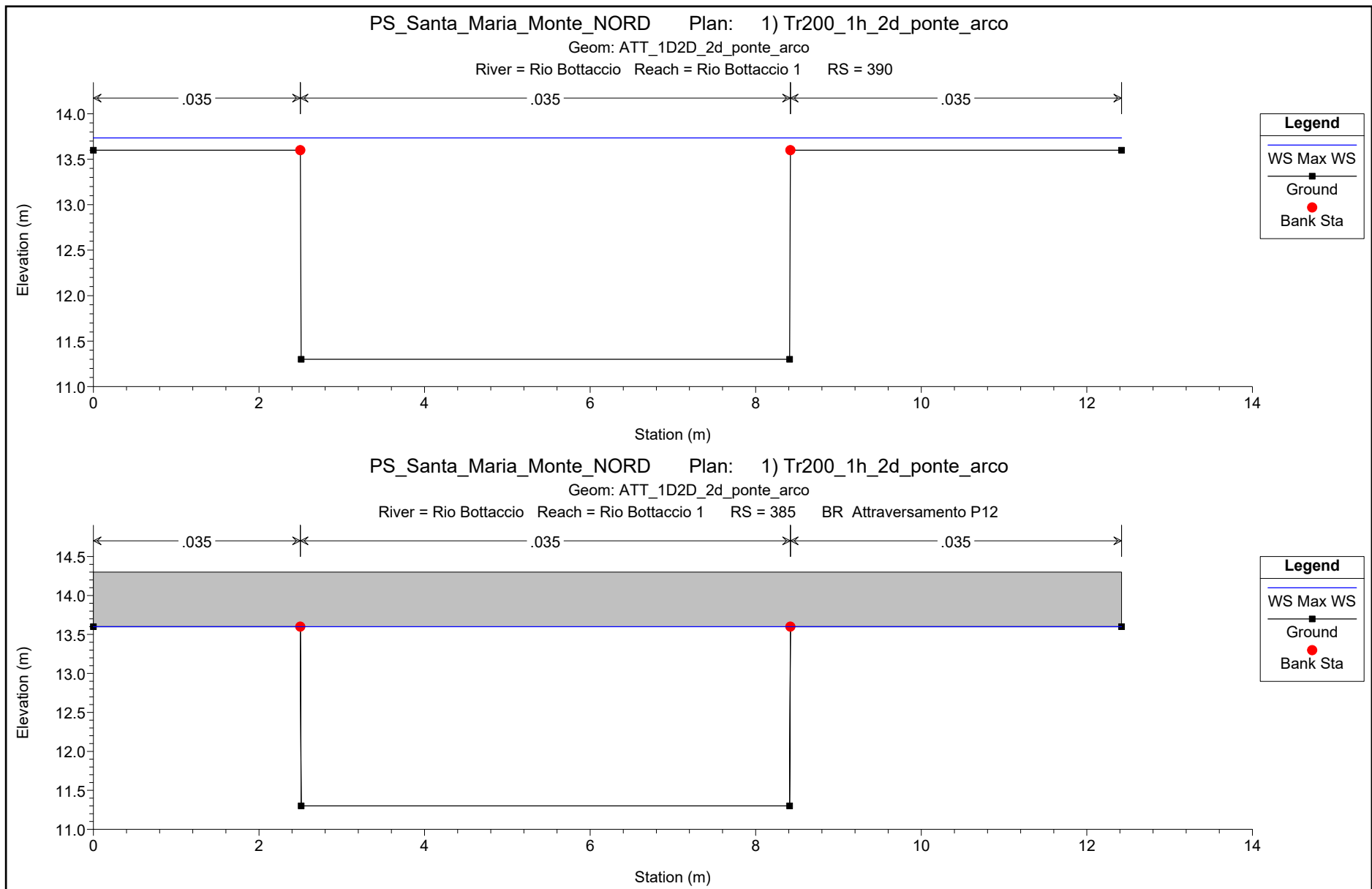


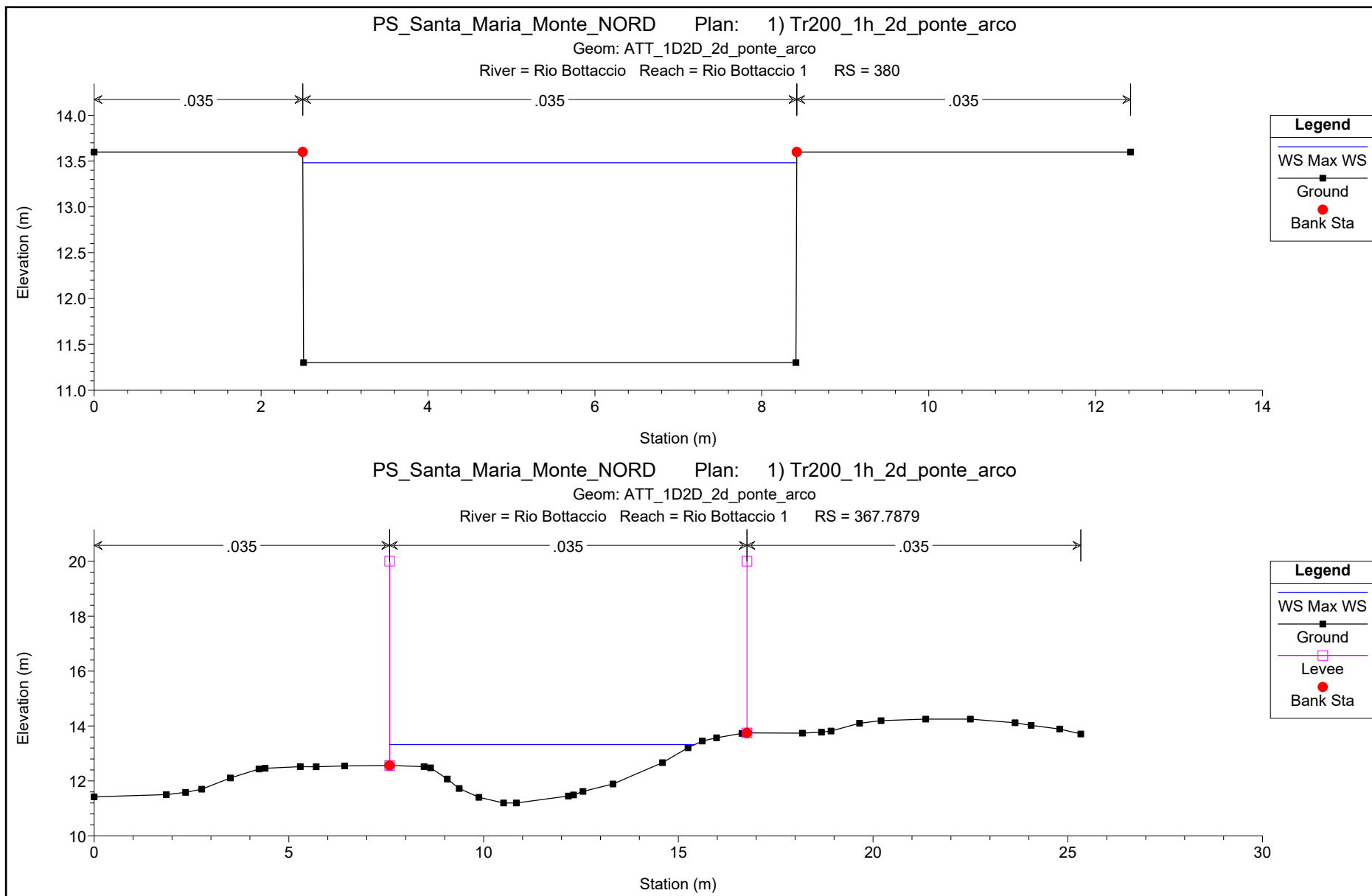


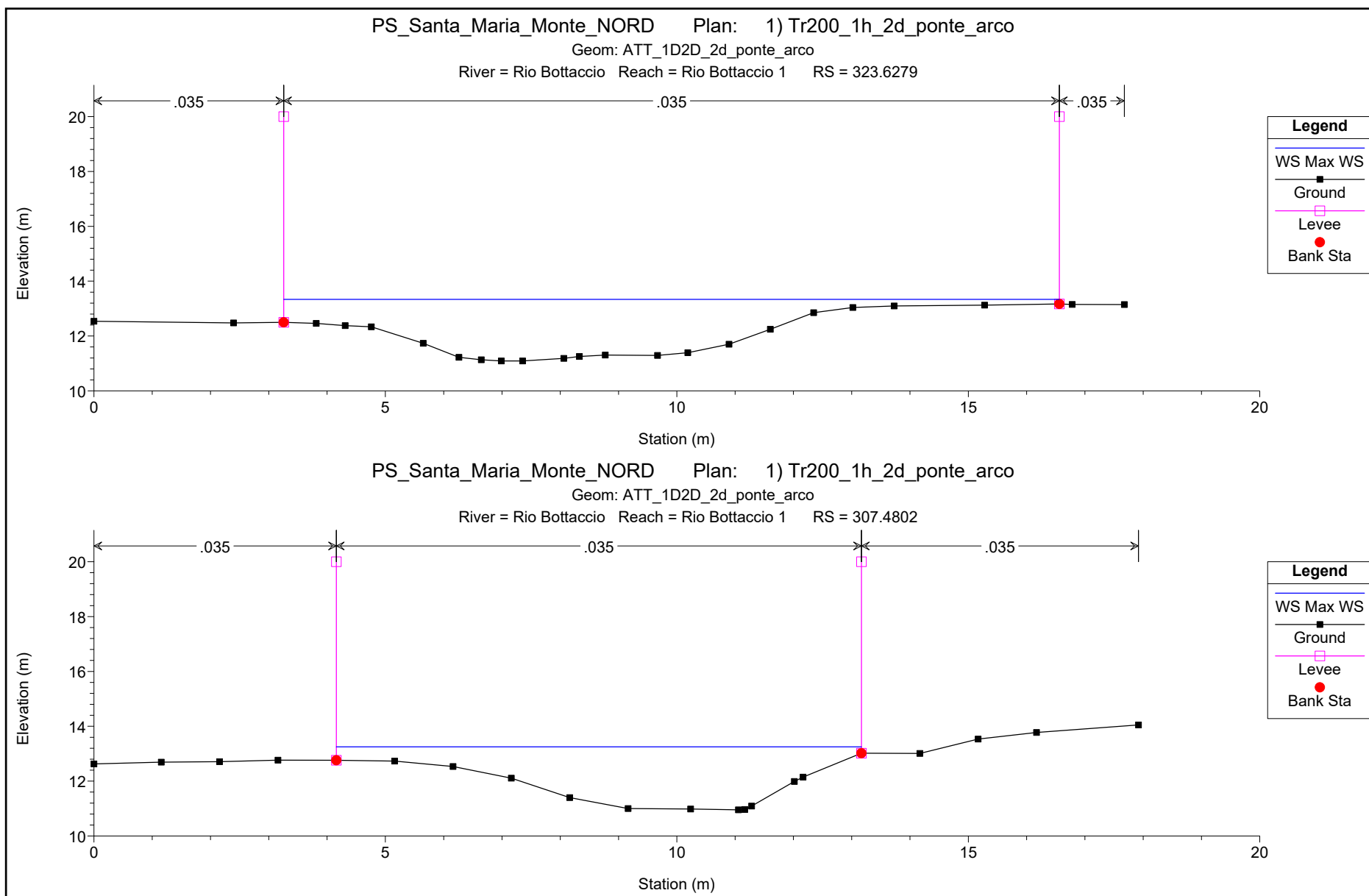








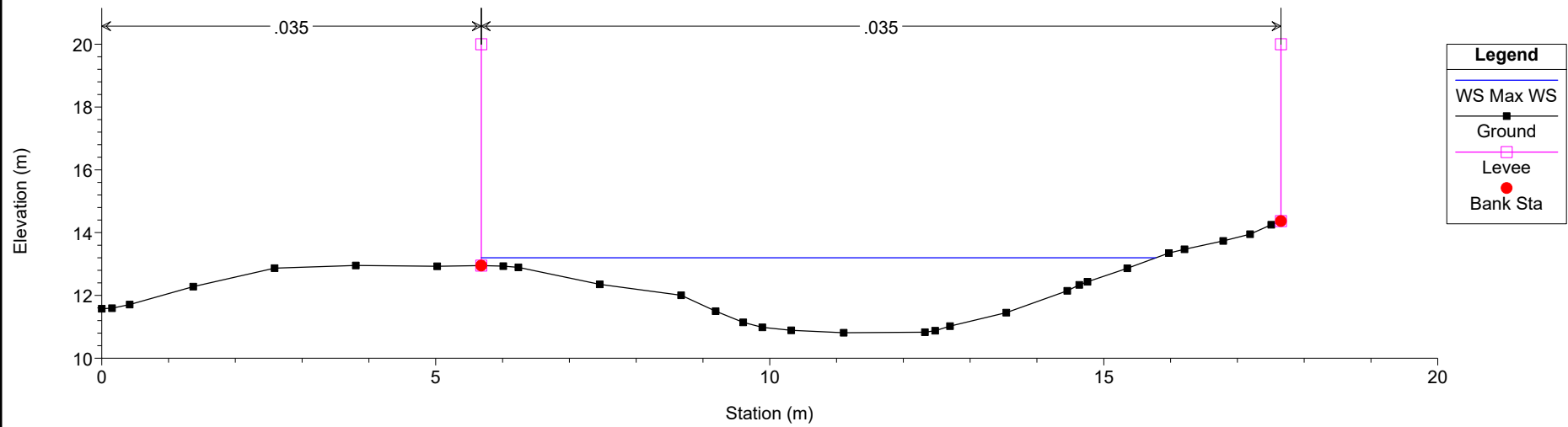




PS_Santa_Maria_Monte_NORD Plan: 1) Tr200_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

River = Rio Bottaccio Reach = Rio Bottaccio 1 RS = 290.0935

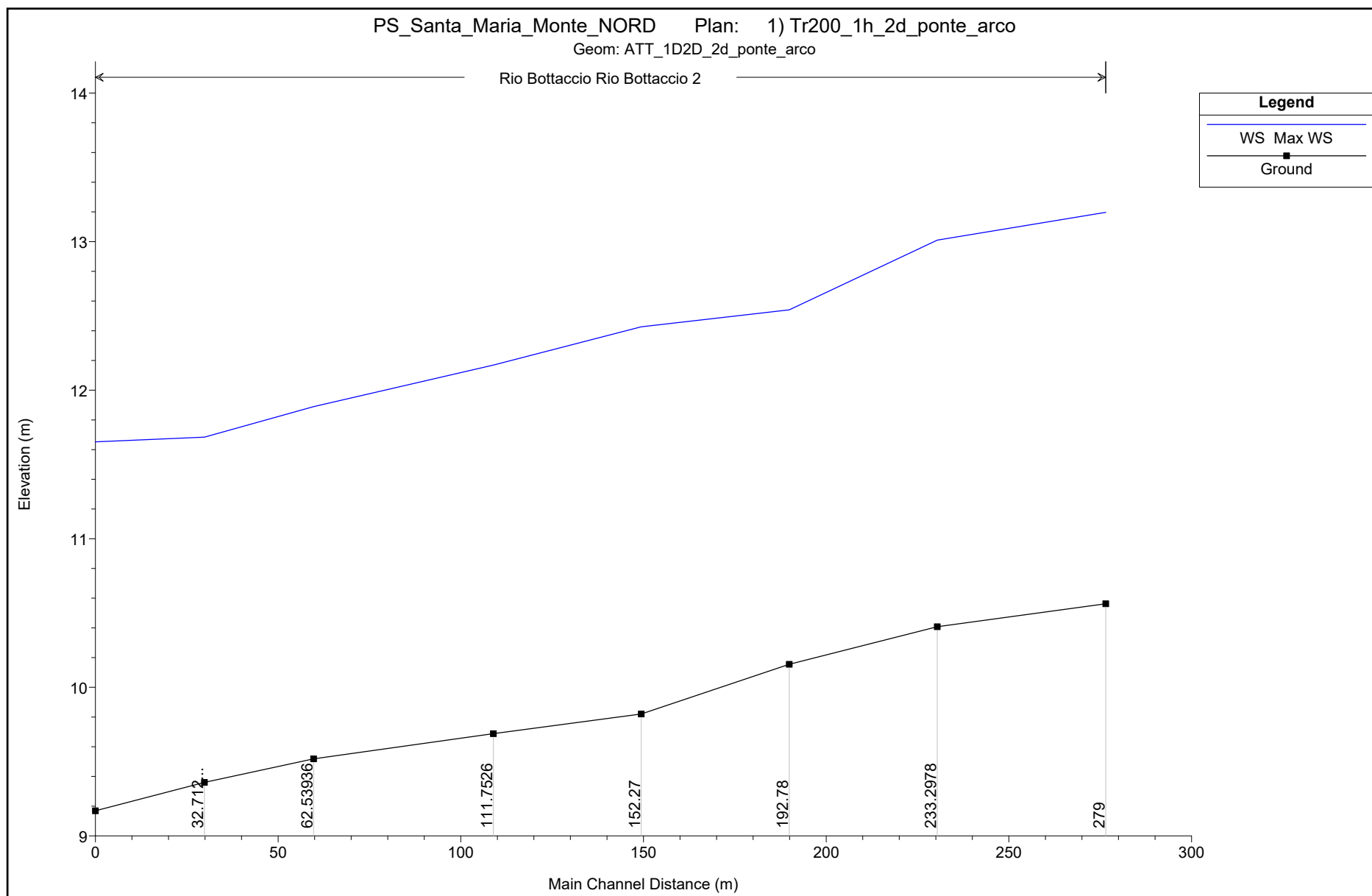


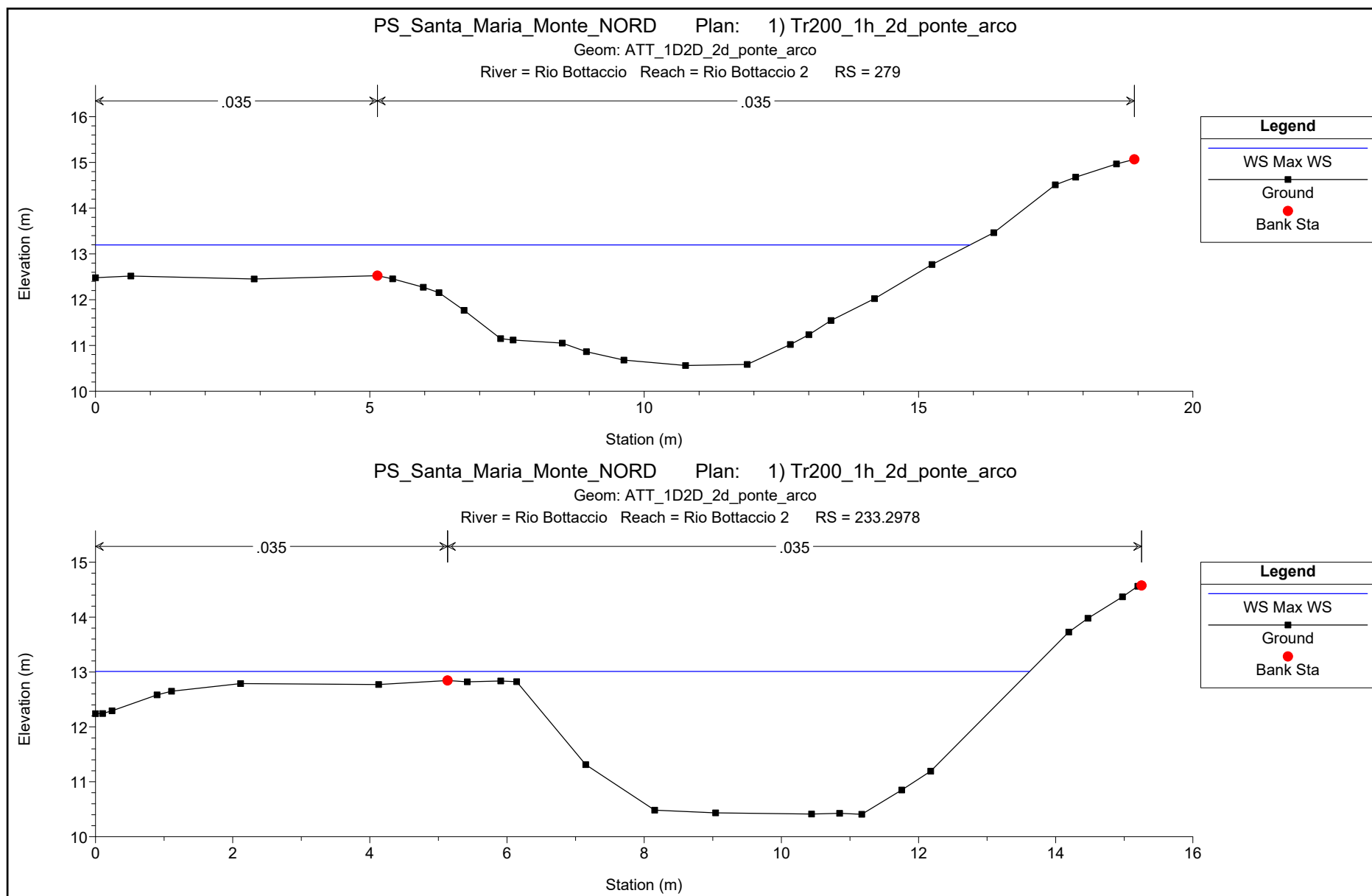
HEC-RAS Plan: Tr200_1h_2d_ponte_arco River: Rio Bottaccio Reach: Rio Bottaccio 1 Profile: Max WS

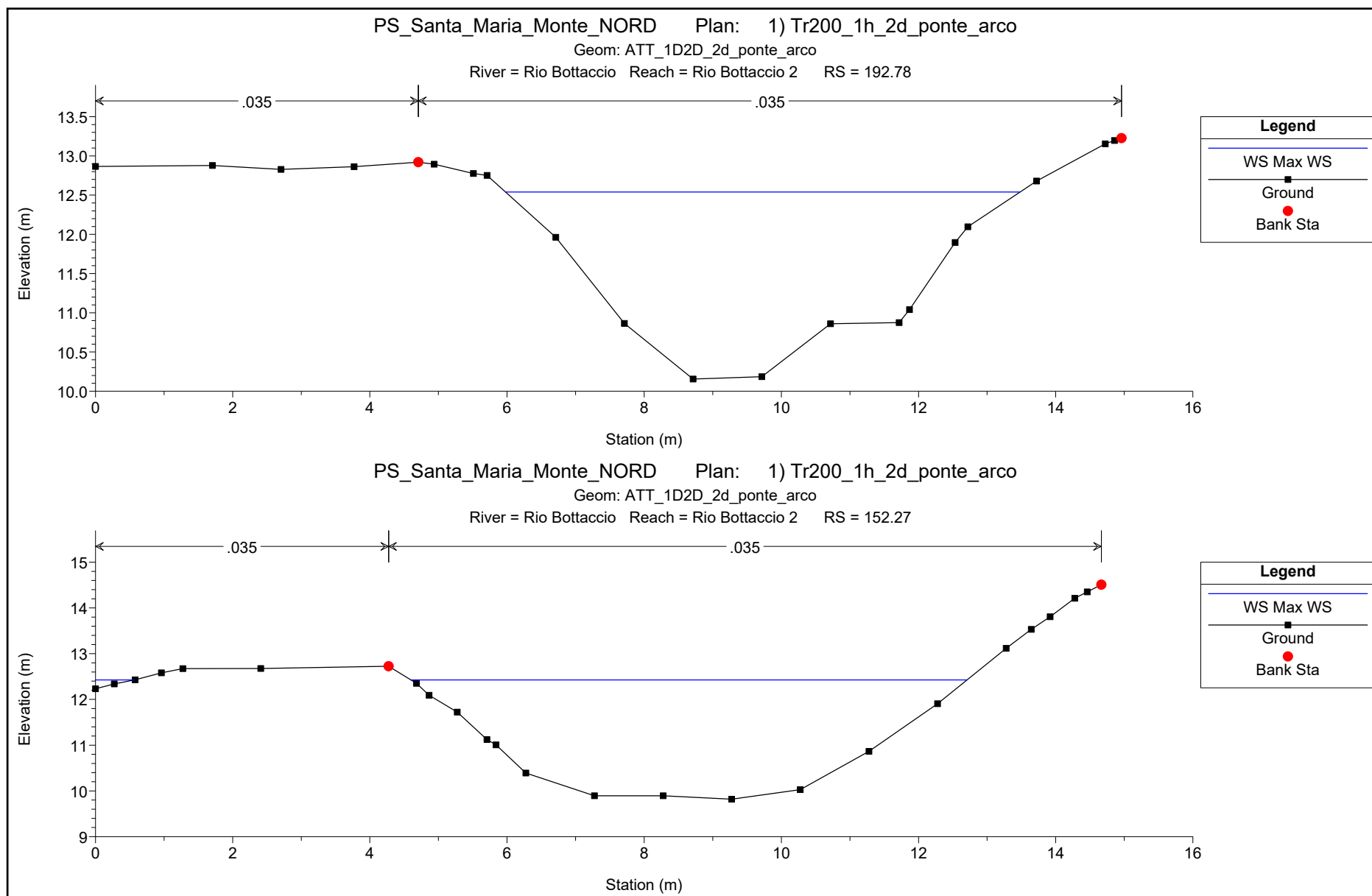
Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio Bottaccio 1	784	28.79	13.42	14.78	14.86	15.39	0.019722	3.48	8.28	8.69	1.14
Rio Bottaccio 1	781	Lat Struct									
Rio Bottaccio 1	780	Lat Struct									
Rio Bottaccio 1	664.72	18.03	12.90	14.35		14.66	0.009640	2.48	7.28	7.04	0.78
Rio Bottaccio 1	545.4405	12.21	12.45	14.40		14.47	0.001362	1.13	10.84	7.32	0.30
Rio Bottaccio 1	543	5.75	12.00	14.50		14.52	0.000486	0.68	8.48	4.00	0.15
Rio Bottaccio 1	541	Culvert									
Rio Bottaccio 1	540	5.72	12.00	14.28		14.31	0.000634	0.75	7.63	4.00	0.17
Rio Bottaccio 1	531	Lat Struct									
Rio Bottaccio 1	530	Lat Struct									
Rio Bottaccio 1	500	6.13	11.85	14.30		14.31	0.000140	0.39	15.59	9.21	0.10
Rio Bottaccio 1	491.68	-5.92	11.50	14.30		14.31	0.000117	-0.36	16.32	8.63	0.08
Rio Bottaccio 1	444.11	-11.23	11.35	14.26		14.30	0.000704	-0.92	12.24	5.11	0.19
Rio Bottaccio 1	396.5509	26.62	11.32	14.06		14.16	0.001629	1.41	18.89	10.54	0.34
Rio Bottaccio 1	390	35.39	11.30	13.73	12.84	14.03	0.004749	2.43	15.26	12.42	0.50
Rio Bottaccio 1	385	Bridge									
Rio Bottaccio 1	380	35.39	11.30	13.48		13.87	0.006805	2.74	12.90	5.92	0.59
Rio Bottaccio 1	371	Lat Struct									
Rio Bottaccio 1	367.7879	34.97	11.20	13.32		13.86	0.011273	3.26	10.71	7.83	0.89
Rio Bottaccio 1	323.6279	26.07	11.09	13.33		13.47	0.003162	1.65	15.82	13.31	0.48
Rio Bottaccio 1	307.4802	23.26	10.95	13.25		13.43	0.003574	1.86	12.51	9.01	0.50
Rio Bottaccio 1	290.0935	23.55	10.81	13.20		13.33	0.002483	1.64	14.38	10.10	0.44

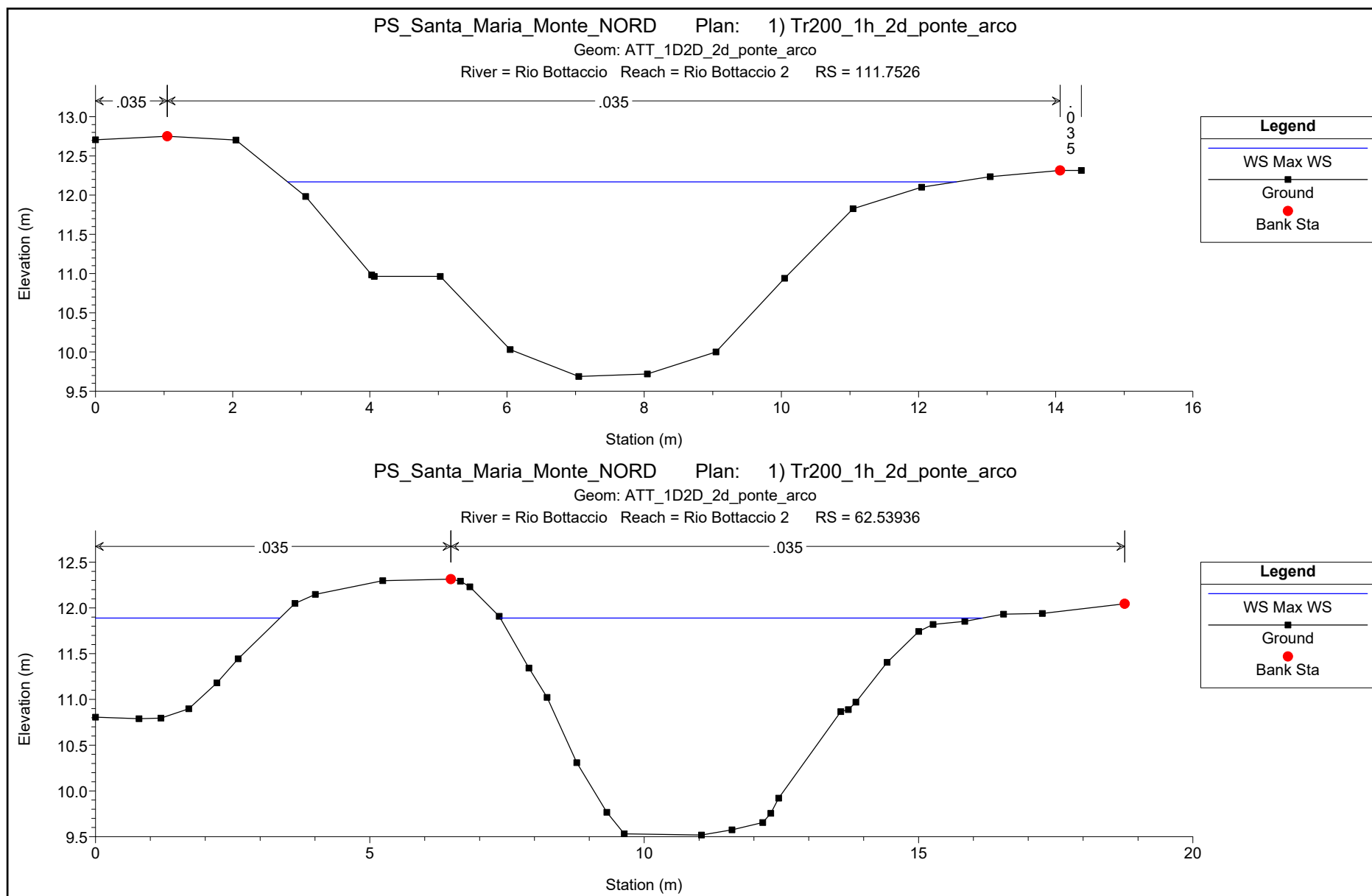
RIO DI BOTTACCIO – Tp 1 ora
Tr=200 anni

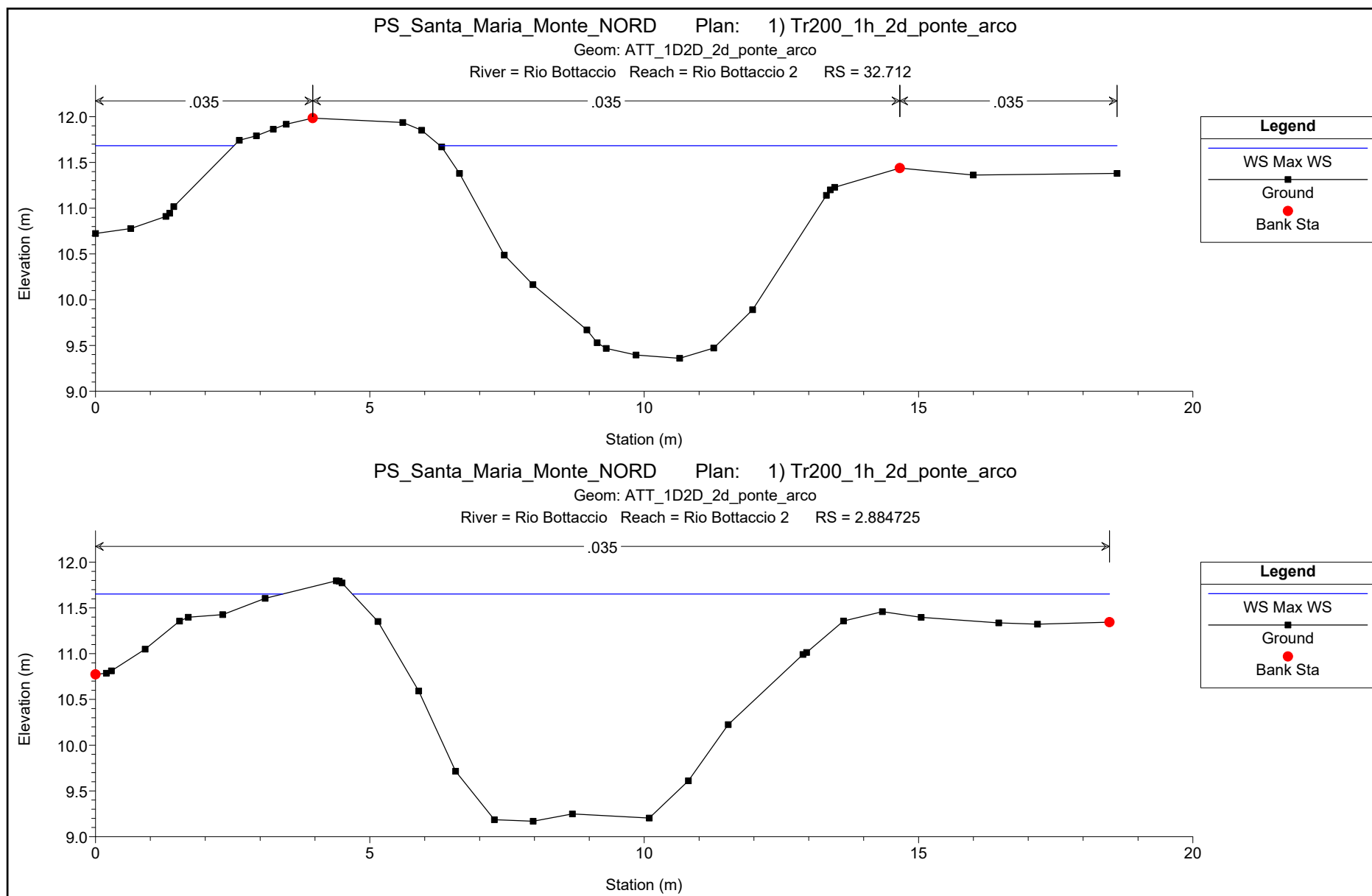
Tratto di Valle











HEC-RAS Plan: Tr200_1h_2d_ponte_arco River: Rio Bottaccio Reach: Rio Bottaccio 2 Profile: Max WS

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio Bottaccio 2	279	37.74	10.56	13.20		13.35	0.002195	1.81	22.58	15.94	0.44
Rio Bottaccio 2	271	Lat Struct									
Rio Bottaccio 2	233.2978	33.78	10.41	13.01		13.26	0.004070	2.23	16.18	13.62	0.54
Rio Bottaccio 2	192.78	33.63	10.16	12.54		13.05	0.010173	3.15	10.67	7.50	0.84
Rio Bottaccio 2	152.27	33.63	9.82	12.43		12.69	0.003993	2.30	14.69	8.67	0.55
Rio Bottaccio 2	111.7526	33.62	9.69	12.17		12.49	0.006272	2.51	13.39	9.75	0.68
Rio Bottaccio 2	62.53936	33.62	9.52	11.89		12.18	0.006400	2.48	14.56	12.15	0.68
Rio Bottaccio 2	32.712	33.62	9.36	11.68		12.00	0.006336	2.57	14.61	14.86	0.69
Rio Bottaccio 2	2.884725	31.66	9.17	11.65	11.01	11.82	0.005014	1.83	17.33	17.21	0.58

RIO DOLCIONE – Tp 1 ora
Tr=200 anni

PS_Santa_Maria_Monte_NORD Plan: 1) Tr200_1h_2d_ponte_arco

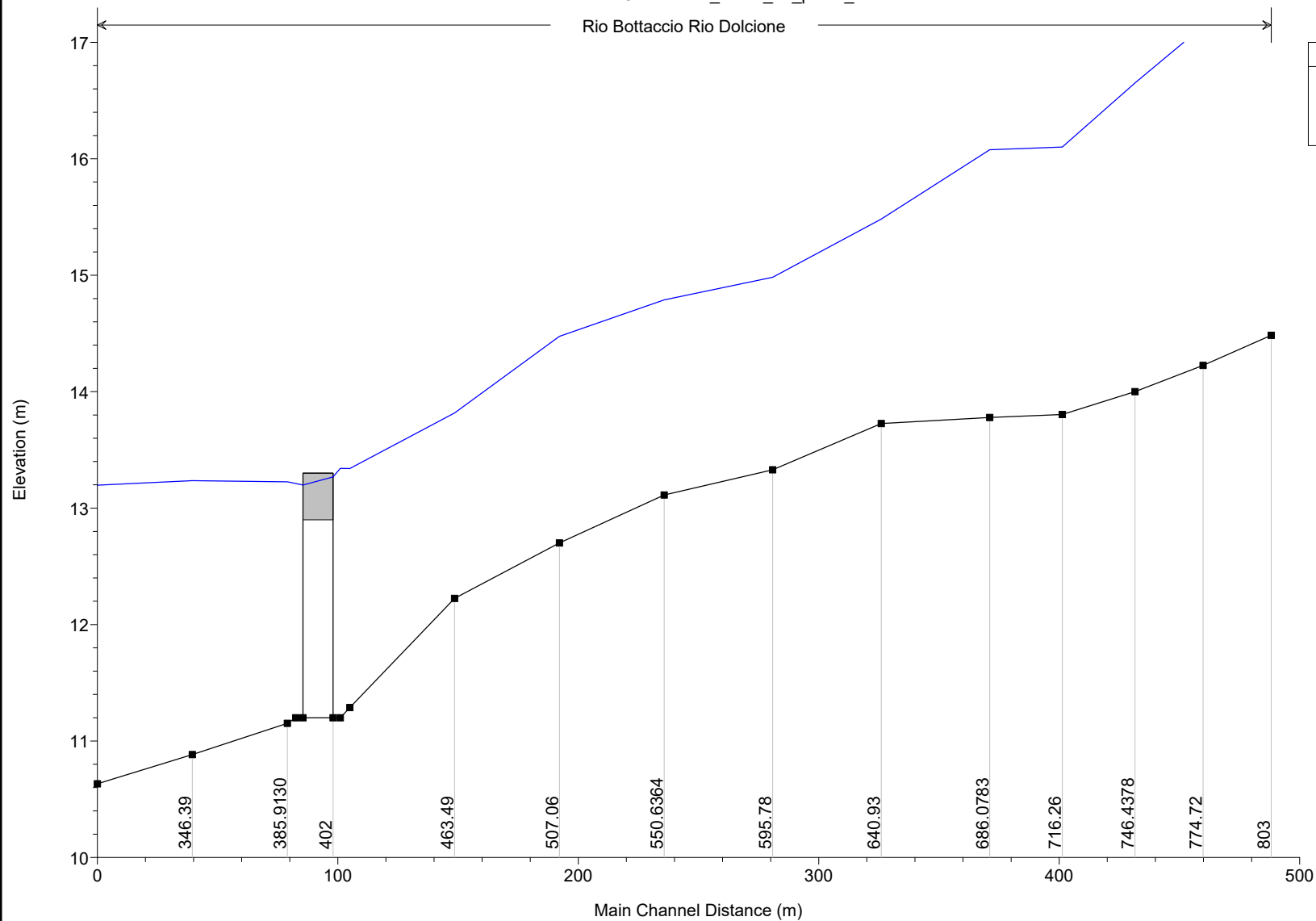
Geom: ATT_1D2D_2d_ponte_arco

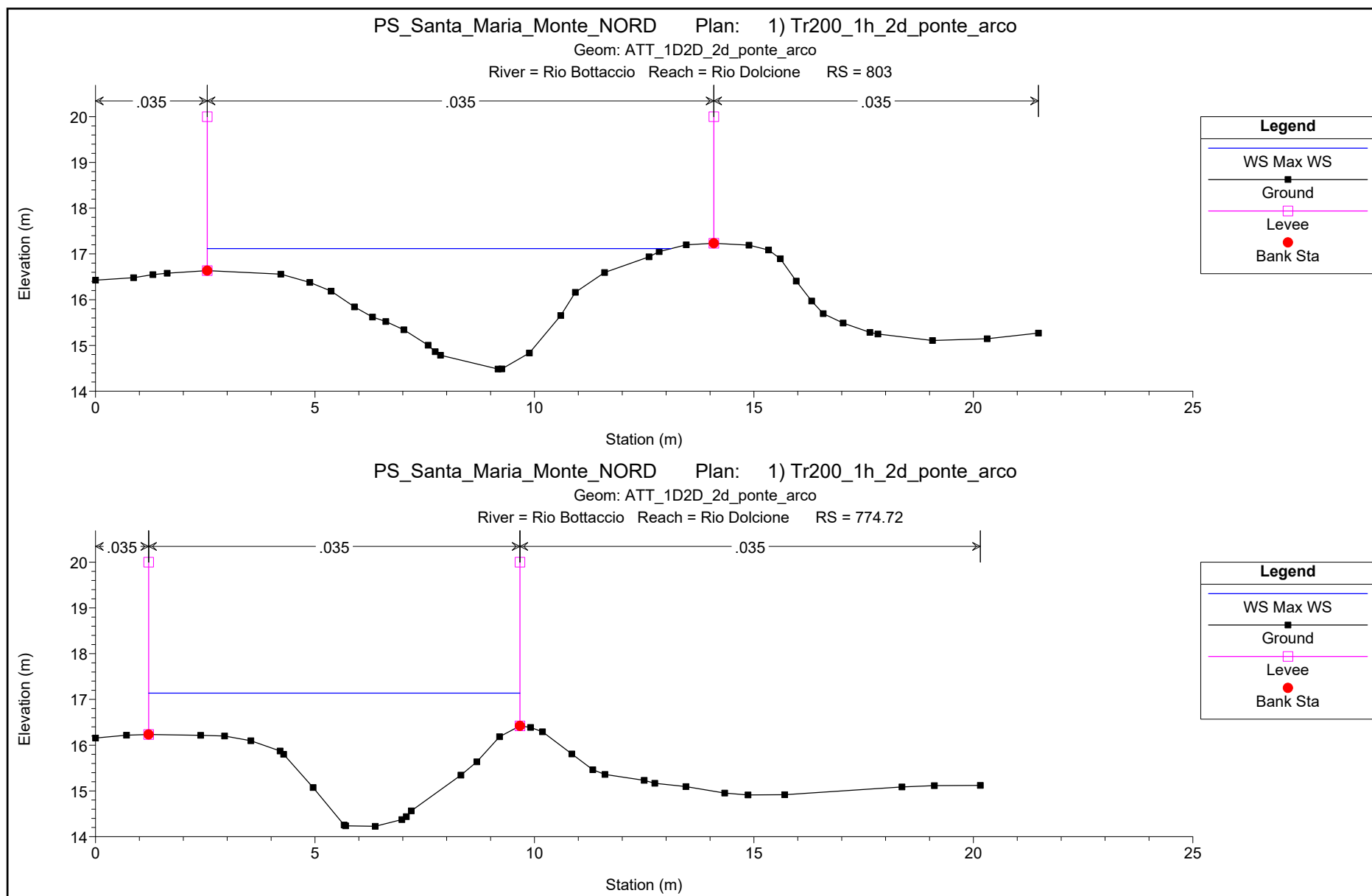
Rio Bottaccio Rio Dolcione

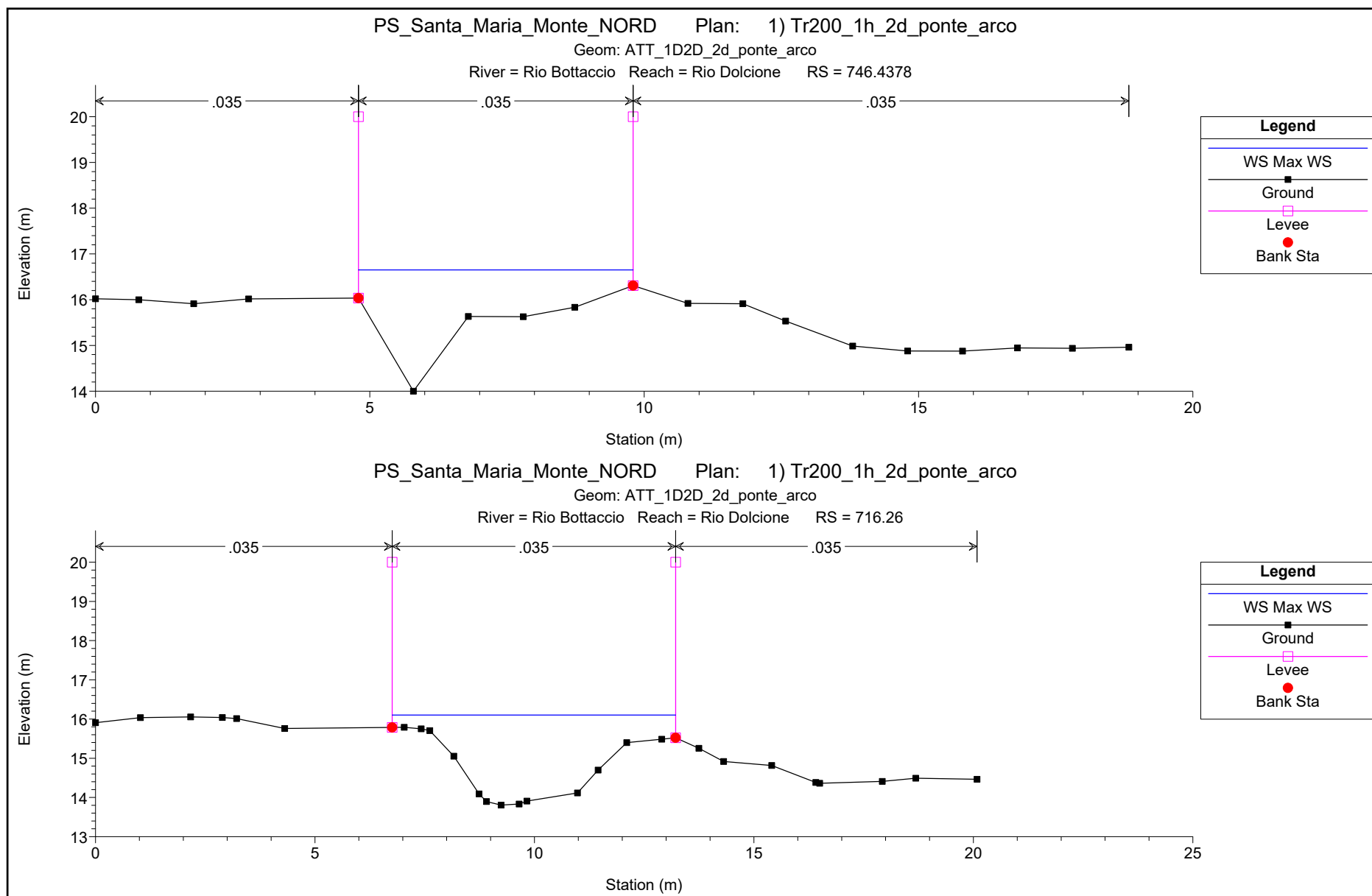
Legend

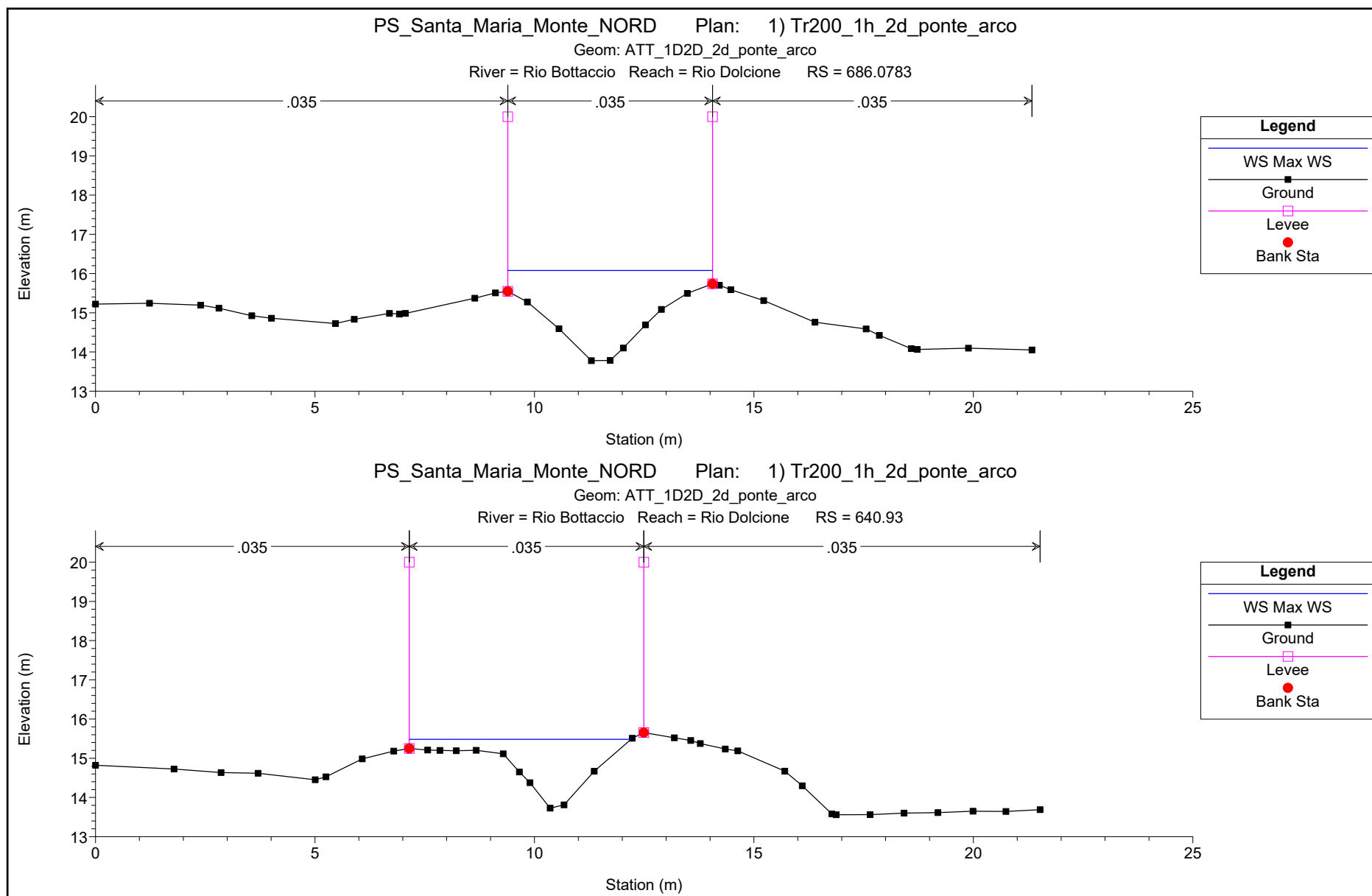
WS Max WS

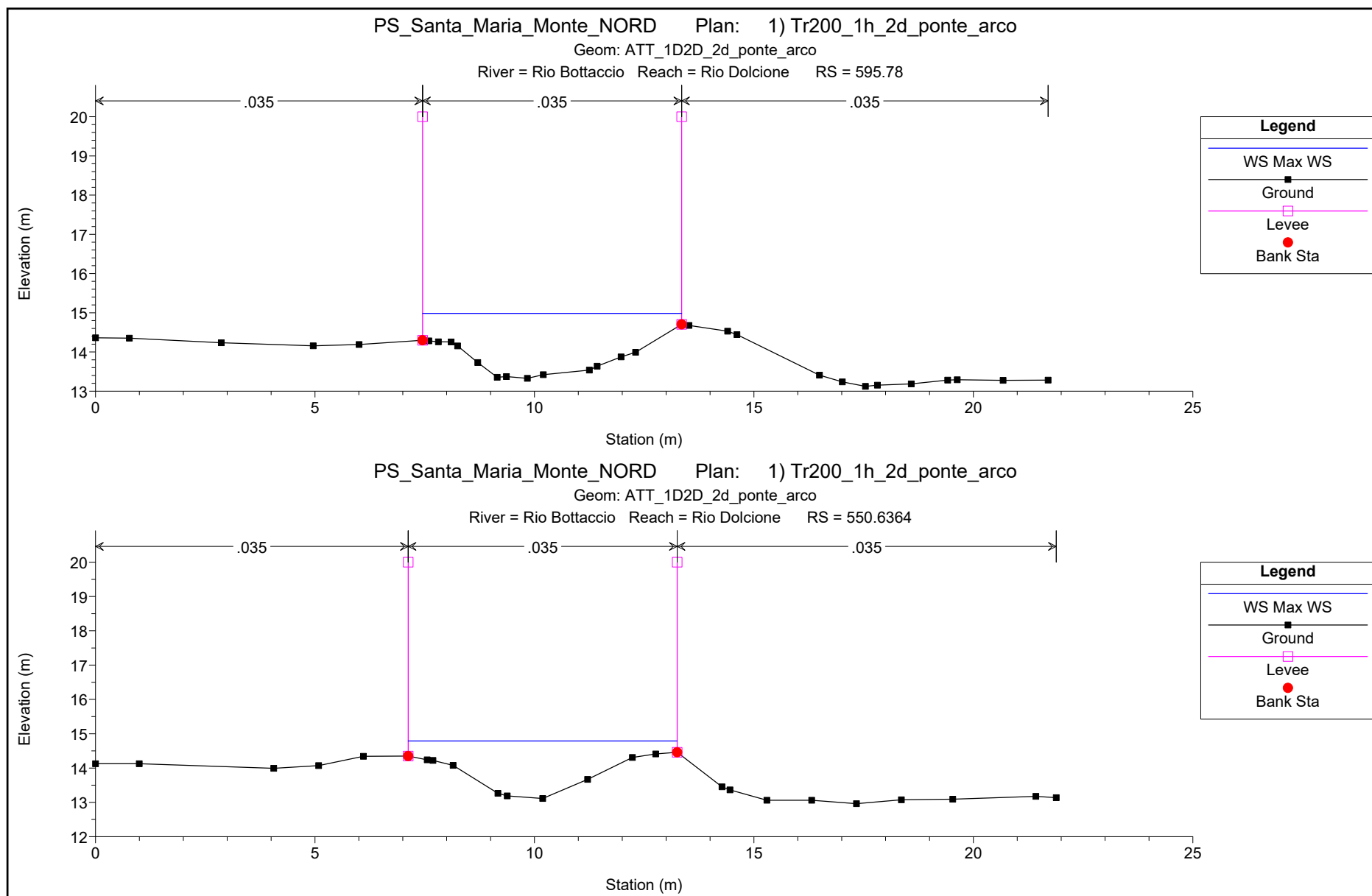
Ground

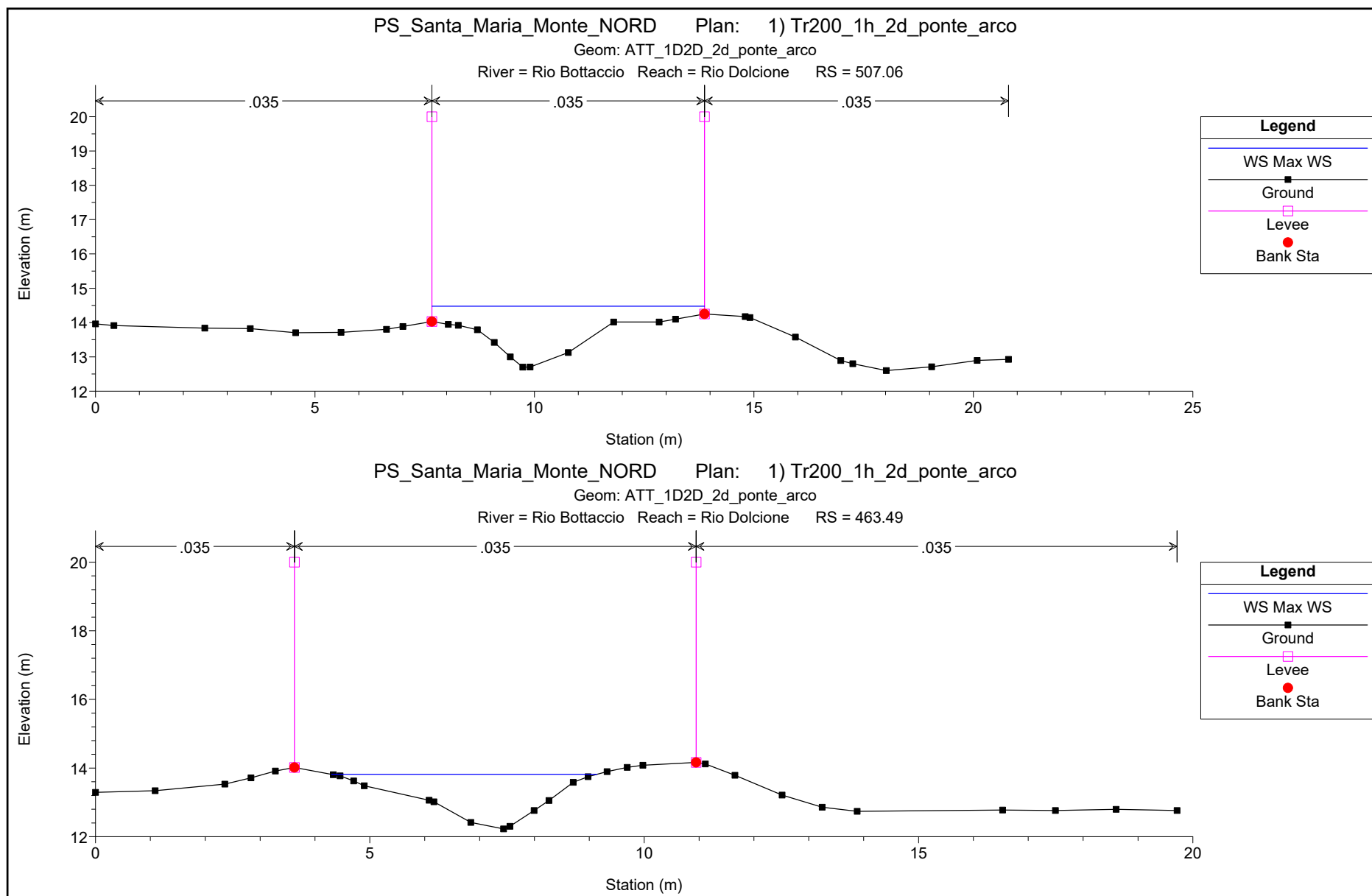


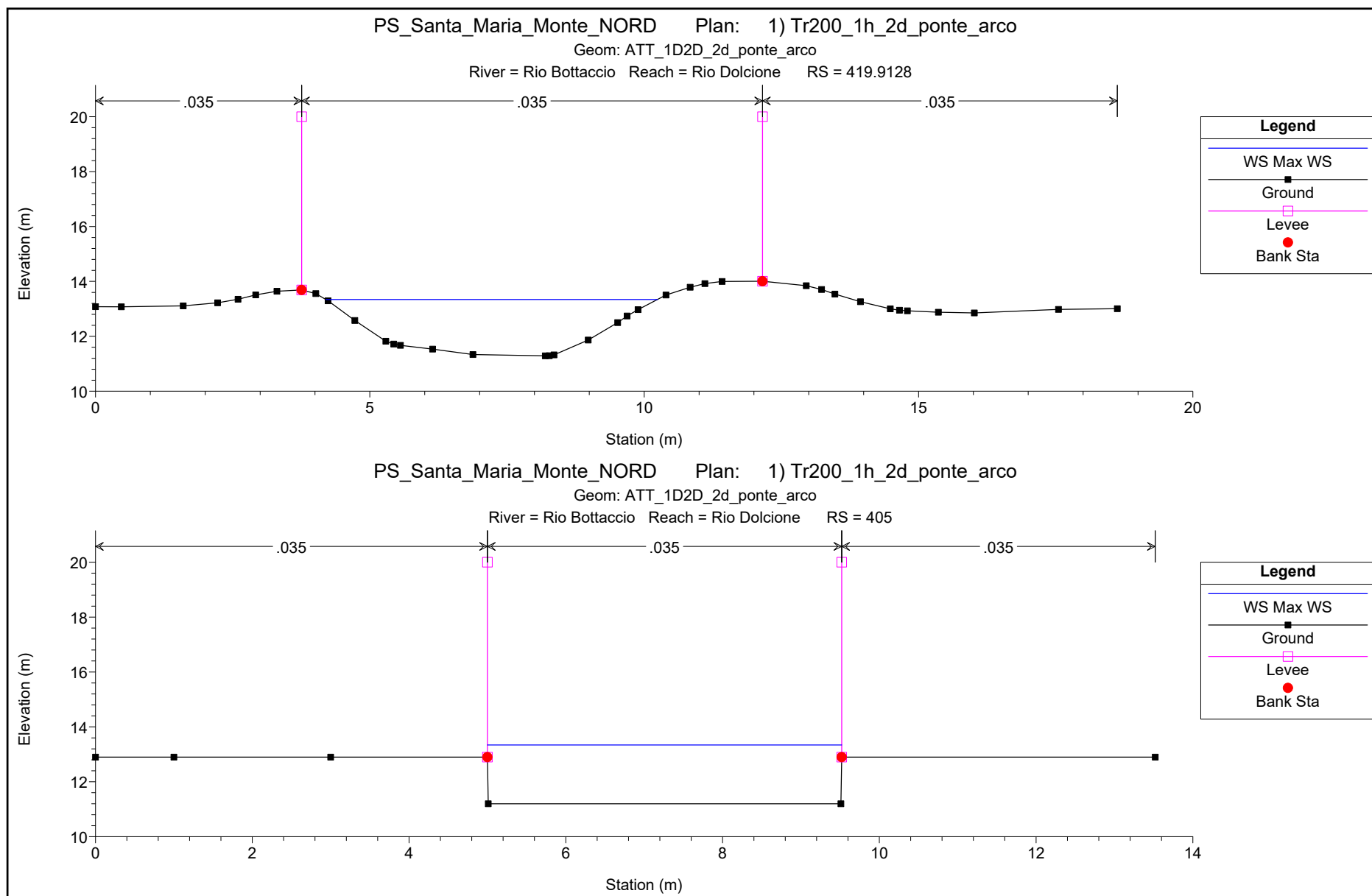


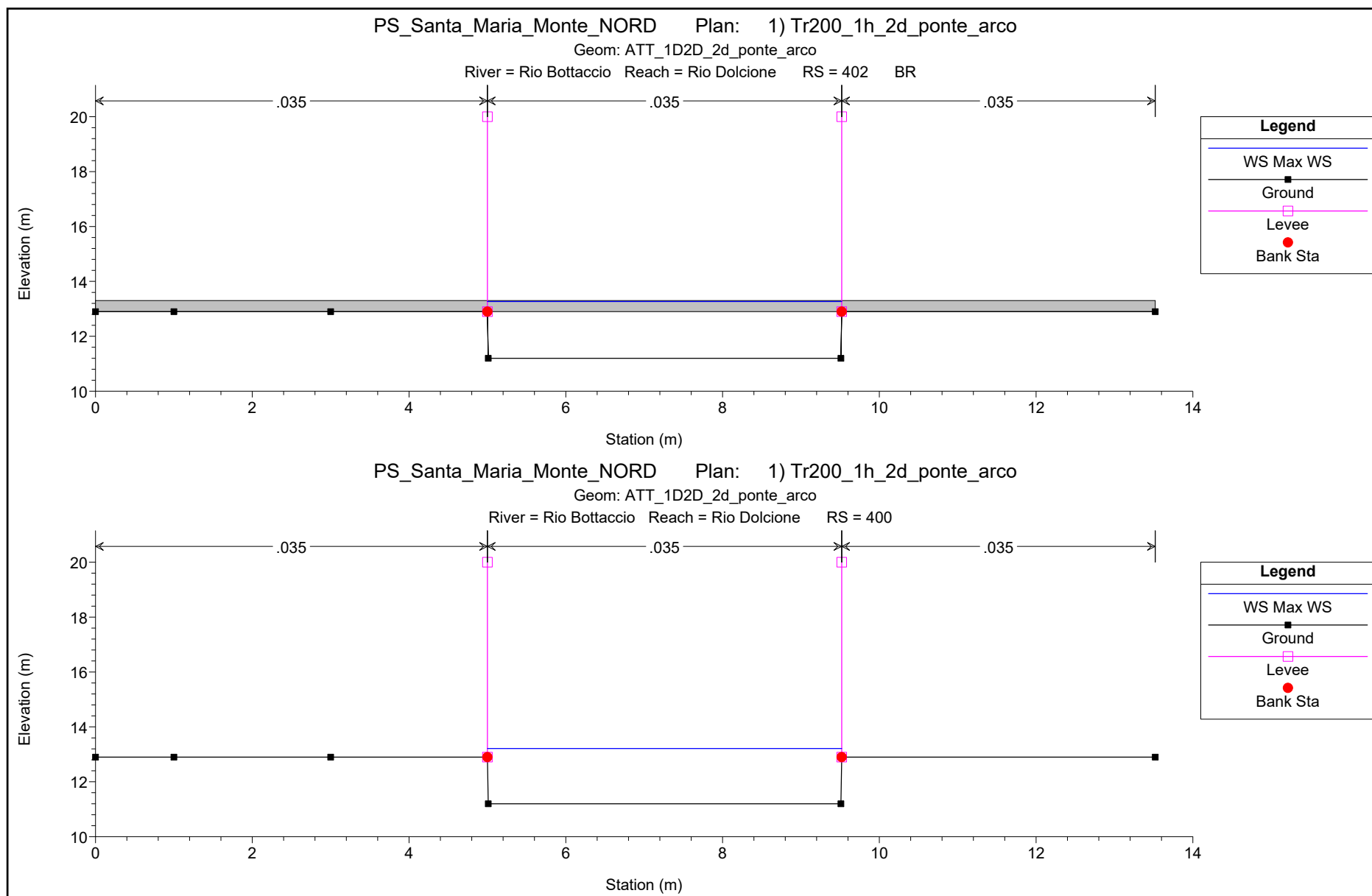


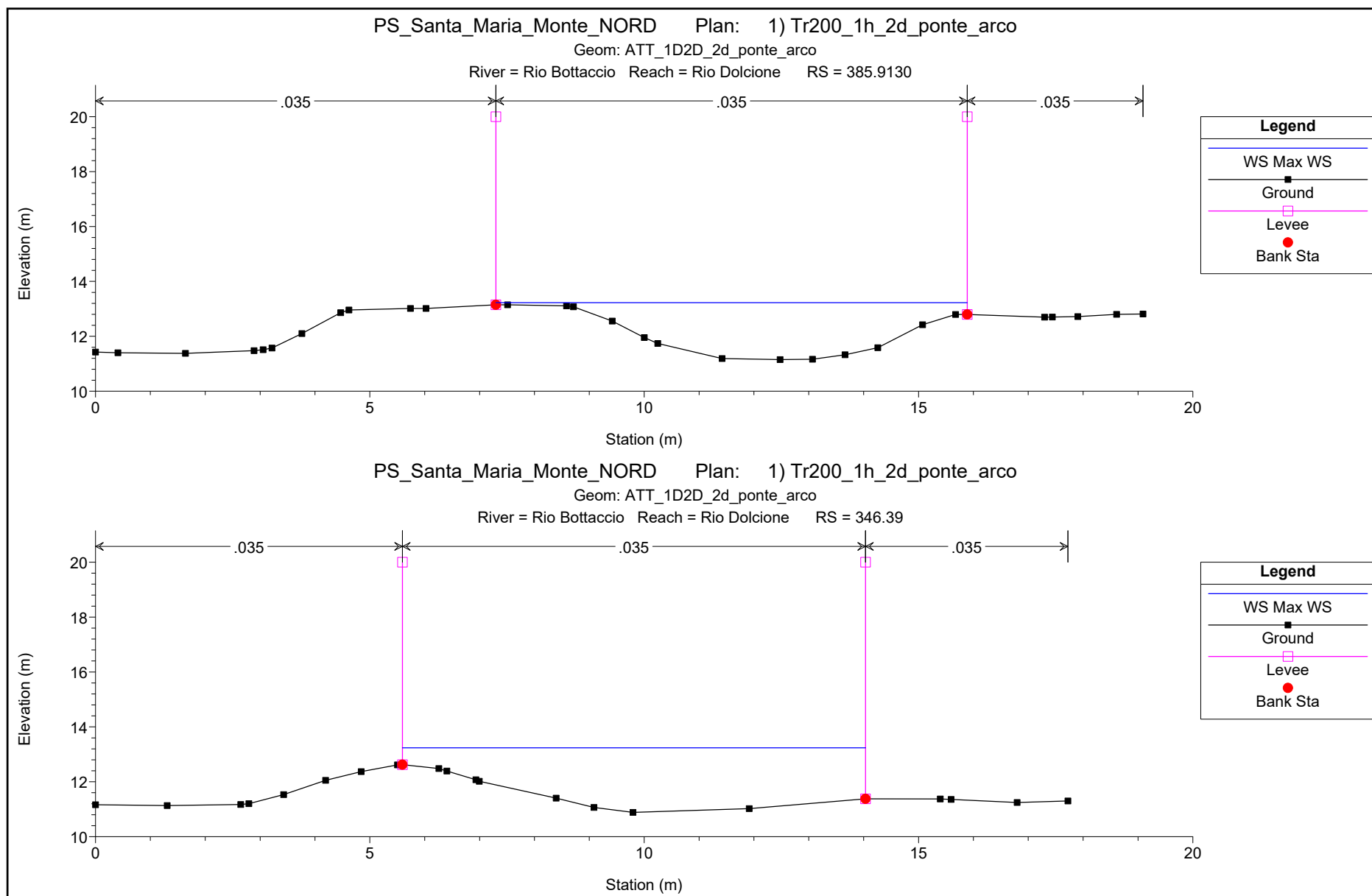








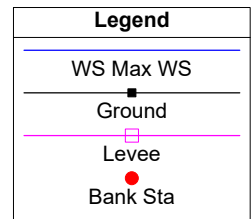
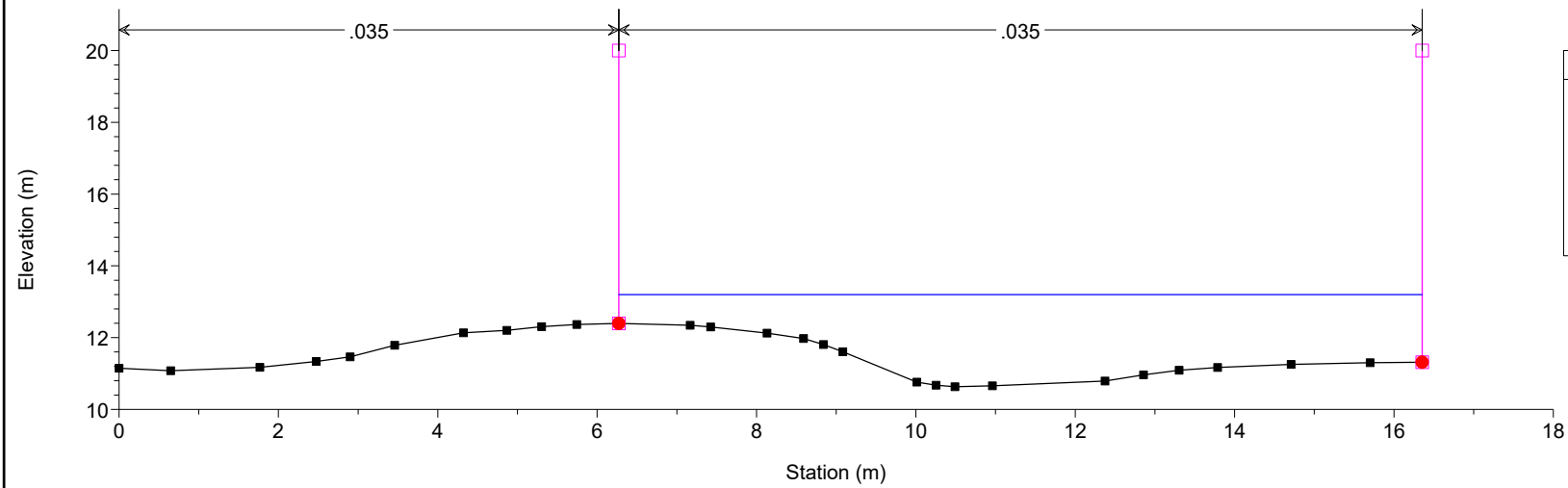




PS_Santa_Maria_Monte_NORD Plan: 1) Tr200_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

River = Rio Bottaccio Reach = Rio Dolcione RS = 306.8662



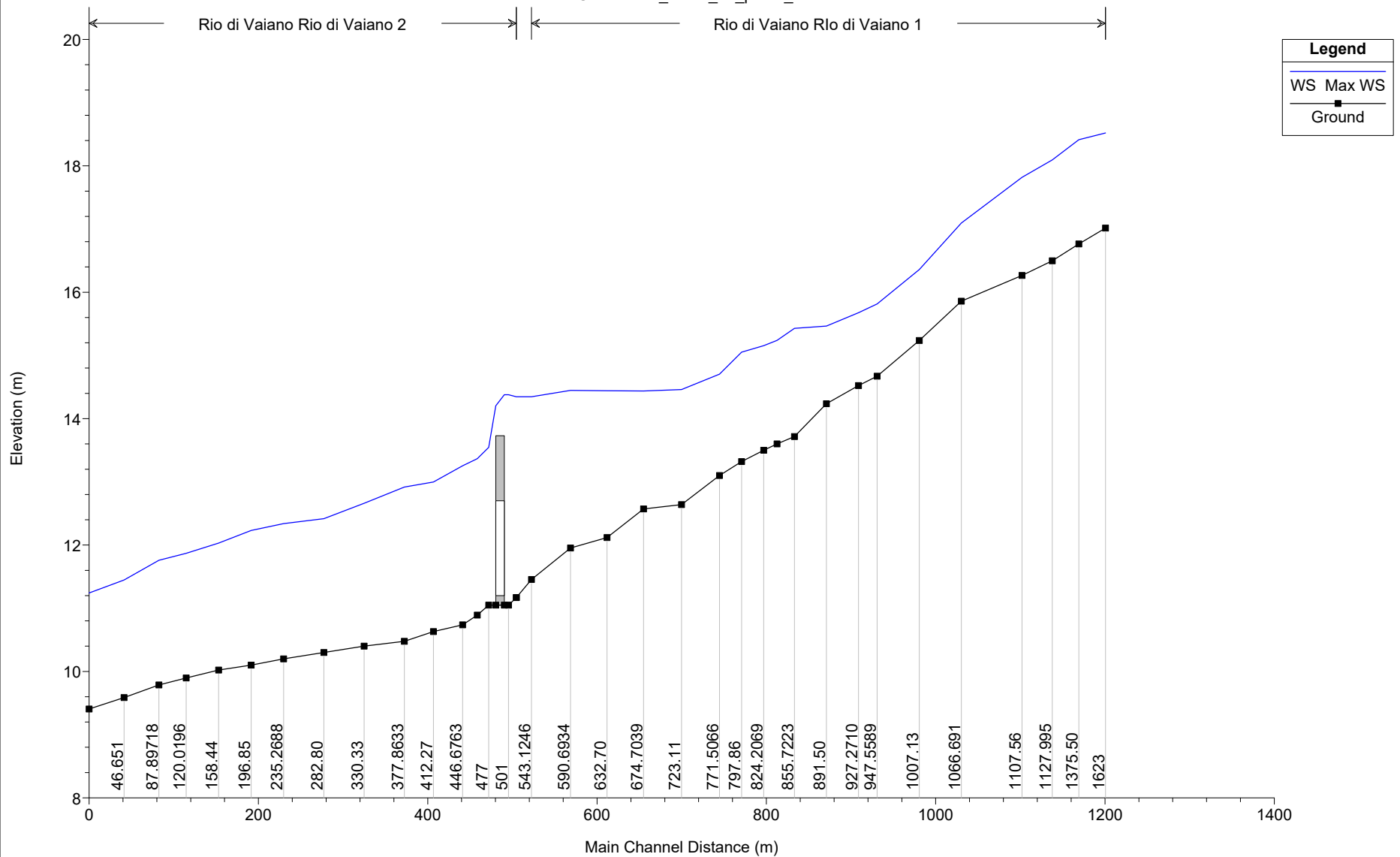
HEC-RAS Plan: Tr200_1h_2d_ponte_arco River: Rio Bottaccio Reach: Rio Dolcione Profile: Max WS

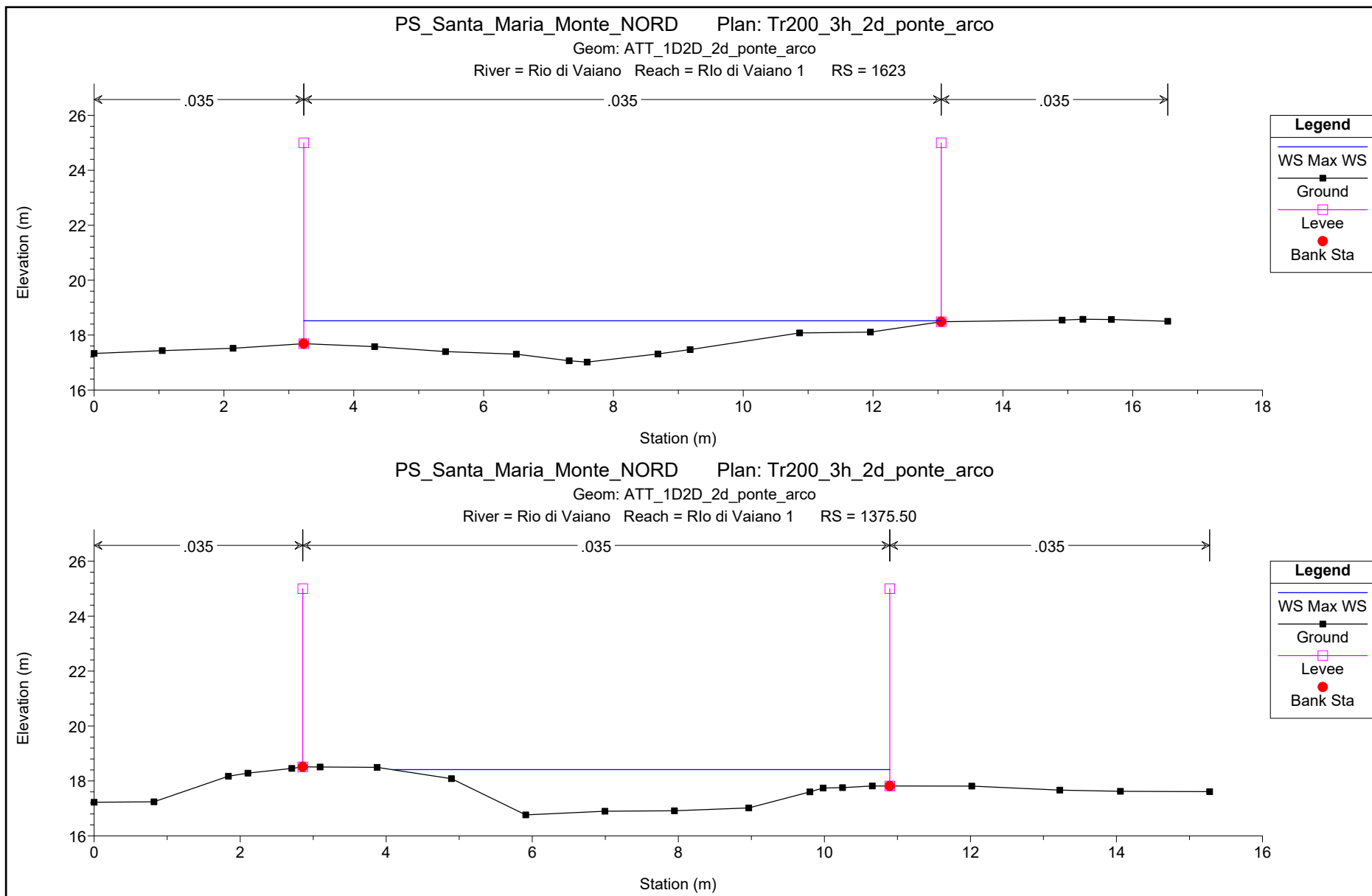
Reach	River Sta	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Rio Dolcione	803	34.32	14.48	17.12		17.45	0.007369	2.57	13.37	10.57	0.73
Rio Dolcione	801	Lat Struct									
Rio Dolcione	800	Lat Struct									
Rio Dolcione	774.72	29.67	14.23	17.14		17.36	0.003895	2.06	14.40	8.46	0.50
Rio Dolcione	746.4378	24.00	14.00	16.65	16.79	17.47	0.030515	4.02	5.97	5.00	1.17
Rio Dolcione	716.26	18.53	13.80	16.10		16.34	0.005972	2.15	8.61	6.46	0.60
Rio Dolcione	686.0783	13.05	13.78	16.08		16.31	0.006564	2.12	6.15	4.66	0.59
Rio Dolcione	640.93	9.00	13.73	15.48	15.48	15.83	0.019904	2.59	3.47	5.05	1.00
Rio Dolcione	595.78	9.05	13.33	14.98		15.07	0.002369	1.31	6.90	5.90	0.39
Rio Dolcione	550.6364	9.45	13.11	14.79		14.91	0.004097	1.57	6.02	6.13	0.51
Rio Dolcione	507.06	9.84	12.70	14.48		14.65	0.007296	1.87	5.26	6.21	0.65
Rio Dolcione	463.49	11.05	12.22	13.82	13.88	14.27	0.020708	3.00	3.69	4.83	1.10
Rio Dolcione	419.9128	11.46	11.29	13.34		13.43	0.001845	1.32	8.69	6.04	0.35
Rio Dolcione	405	11.81	11.20	13.34	12.09	13.42	0.001612	1.22	9.66	4.52	0.27
Rio Dolcione	402	Bridge									
Rio Dolcione	400	11.31	11.20	13.21		13.29	0.001750	1.25	9.08	4.52	0.28
Rio Dolcione	385.9130	11.43	11.15	13.23		13.29	0.001412	1.09	10.49	8.59	0.31
Rio Dolcione	381	Lat Struct									
Rio Dolcione	380	Lat Struct									
Rio Dolcione	346.39	10.29	10.88	13.24		13.26	0.000359	0.67	15.45	8.44	0.16
Rio Dolcione	306.8662	14.19	10.63	13.20		13.23	0.000449	0.76	18.71	10.08	0.18

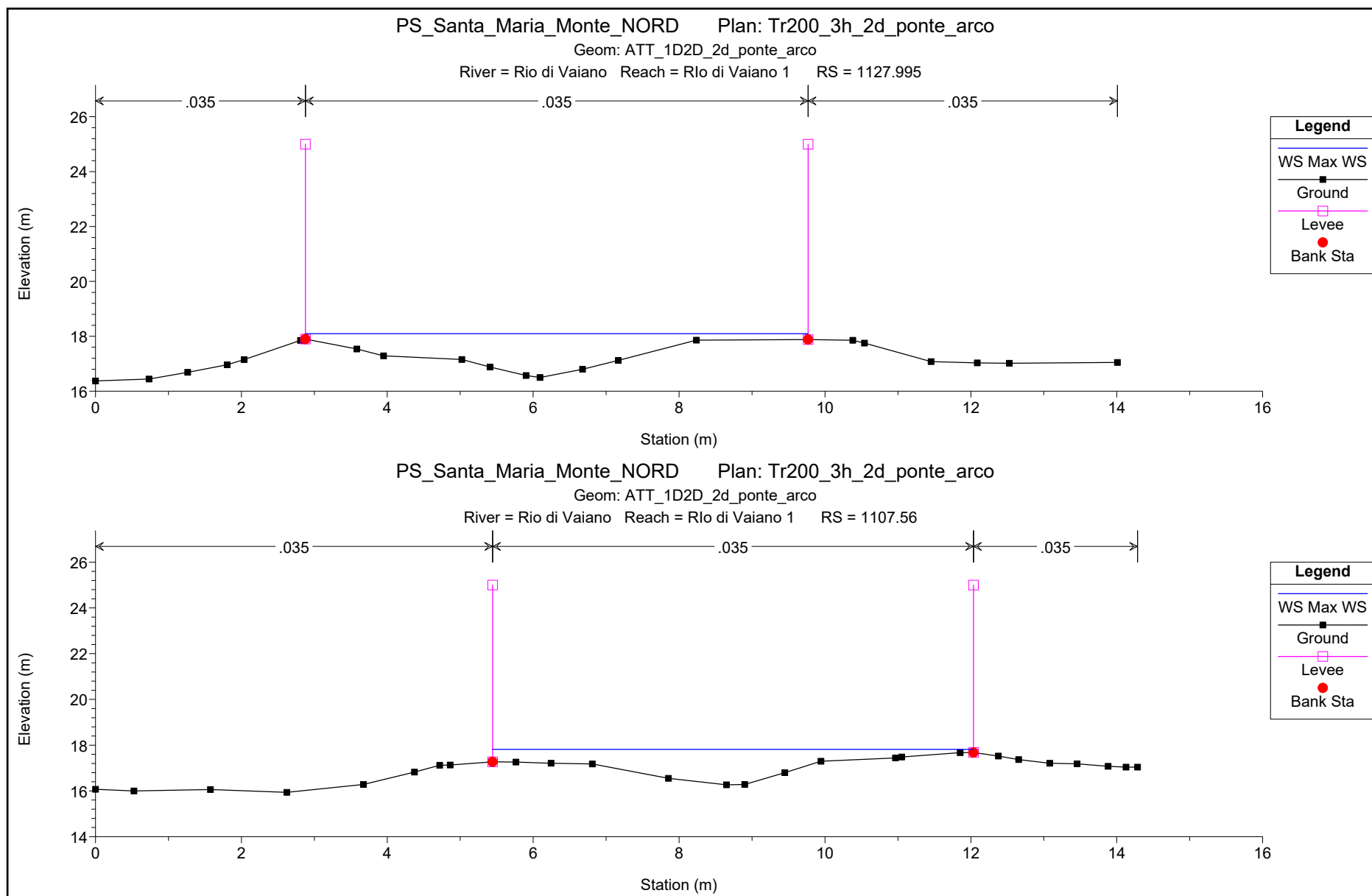
RIO DI VAIANO – Tp 1 ora
Tr=200 anni

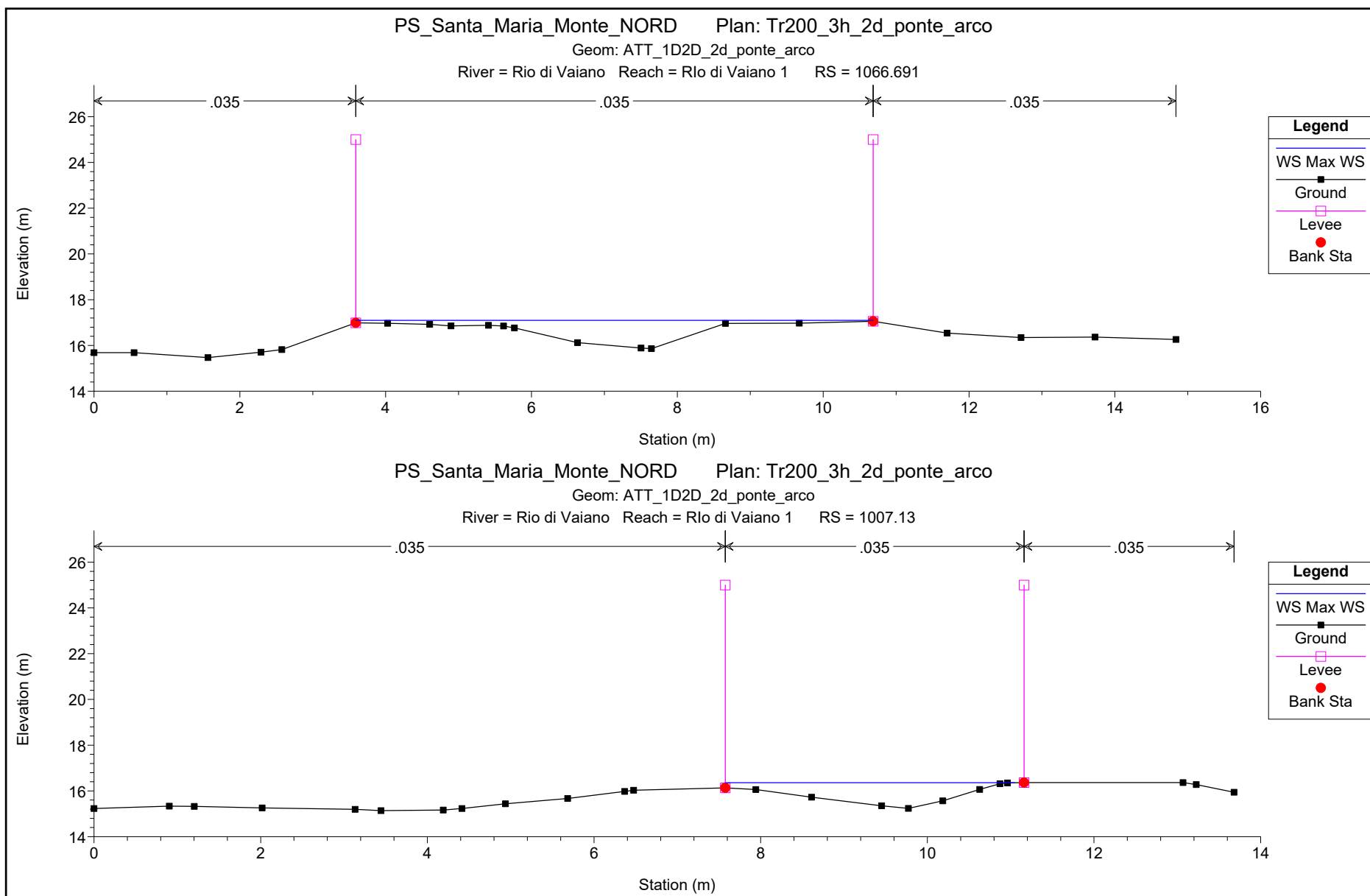
PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

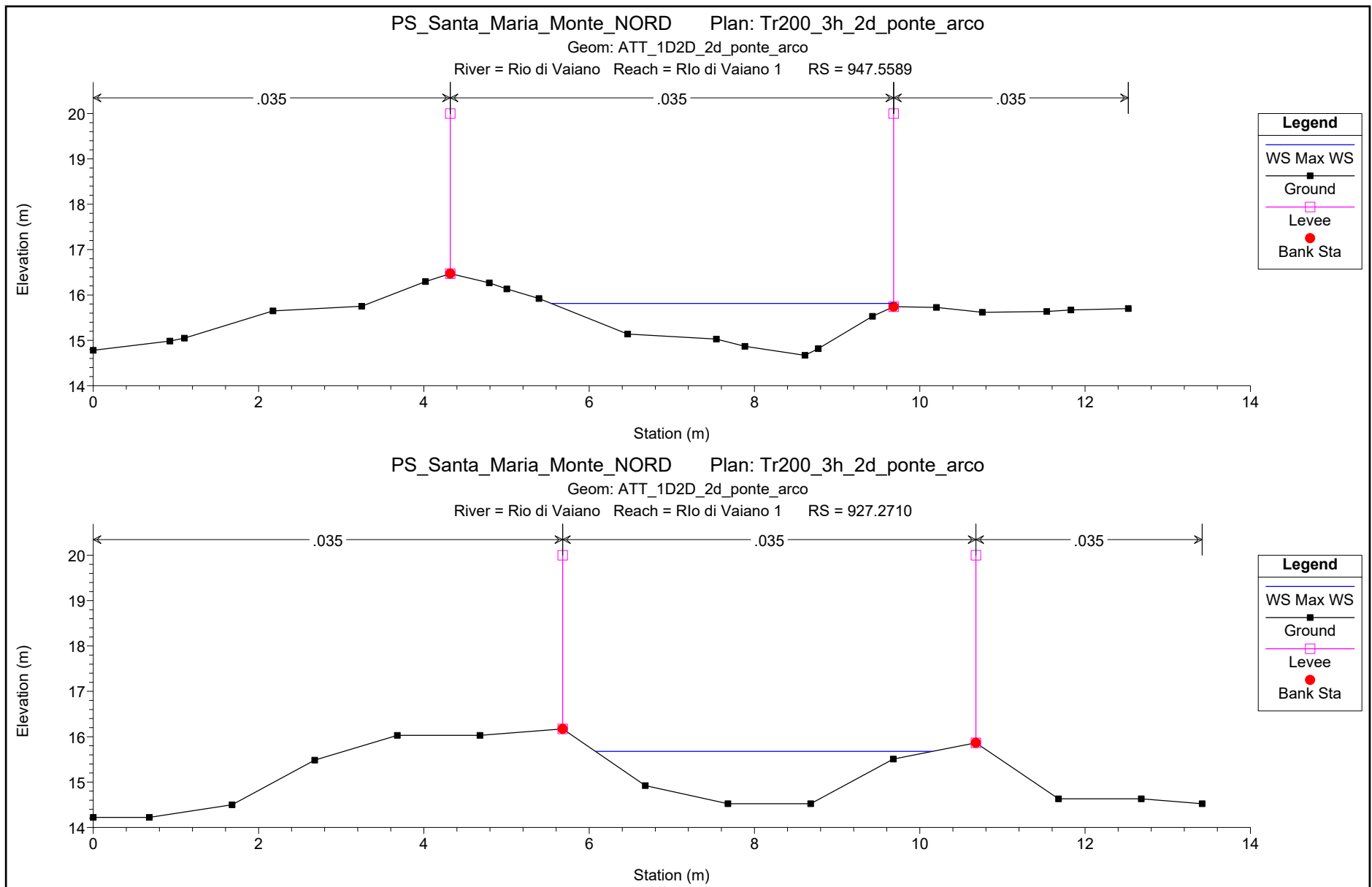
Geom: ATT_1D2D_2d_ponte_arco

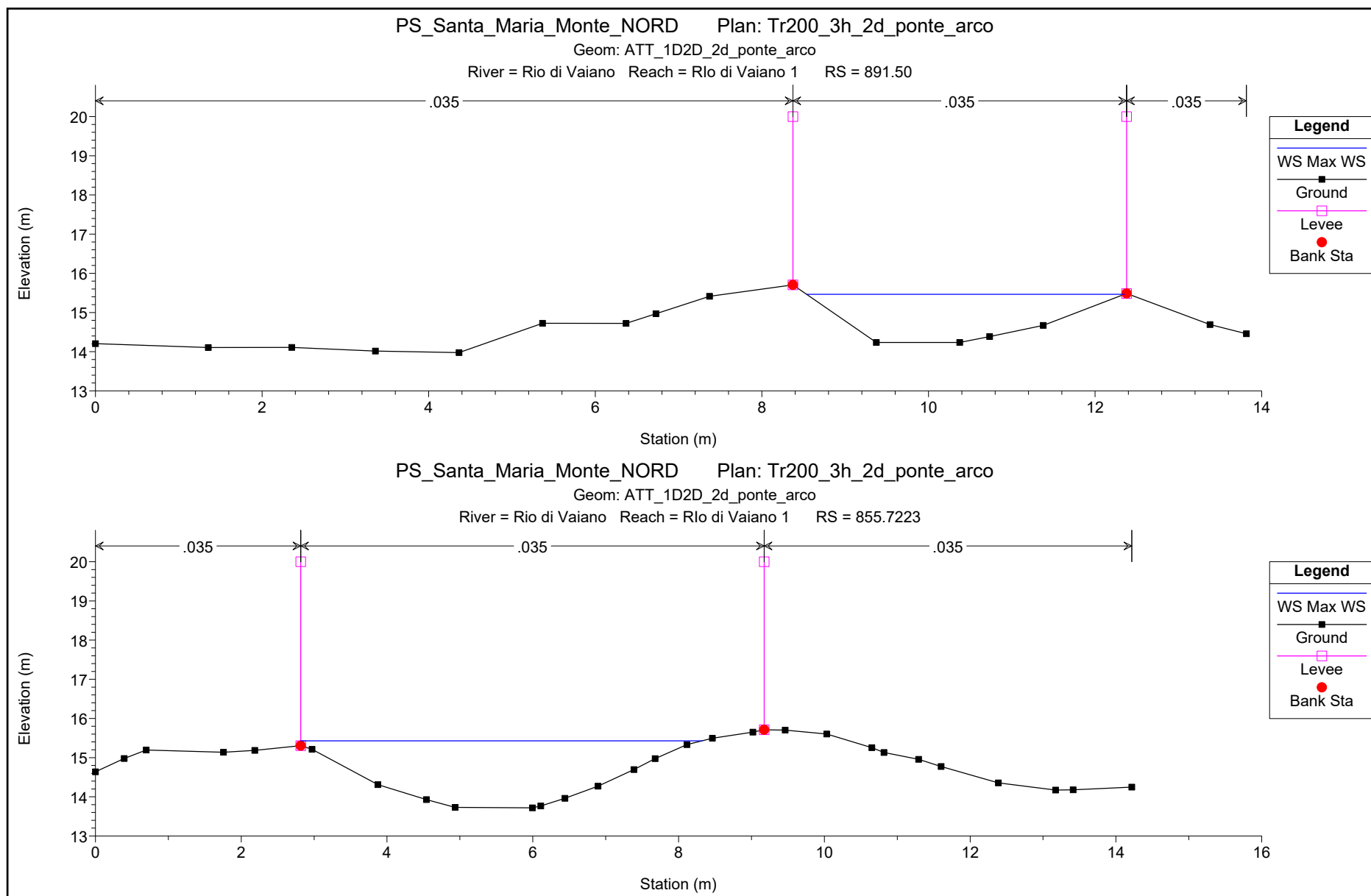


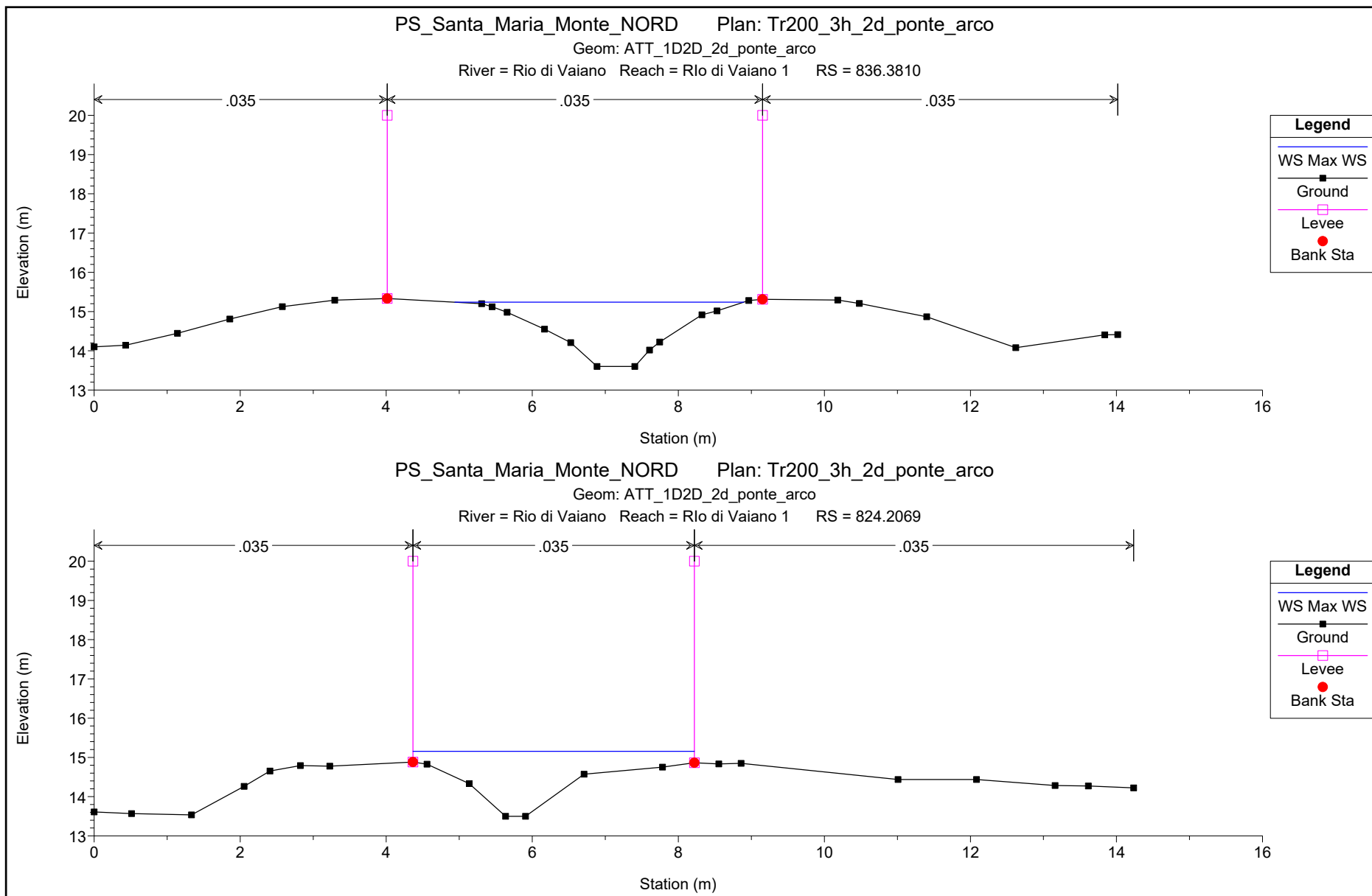


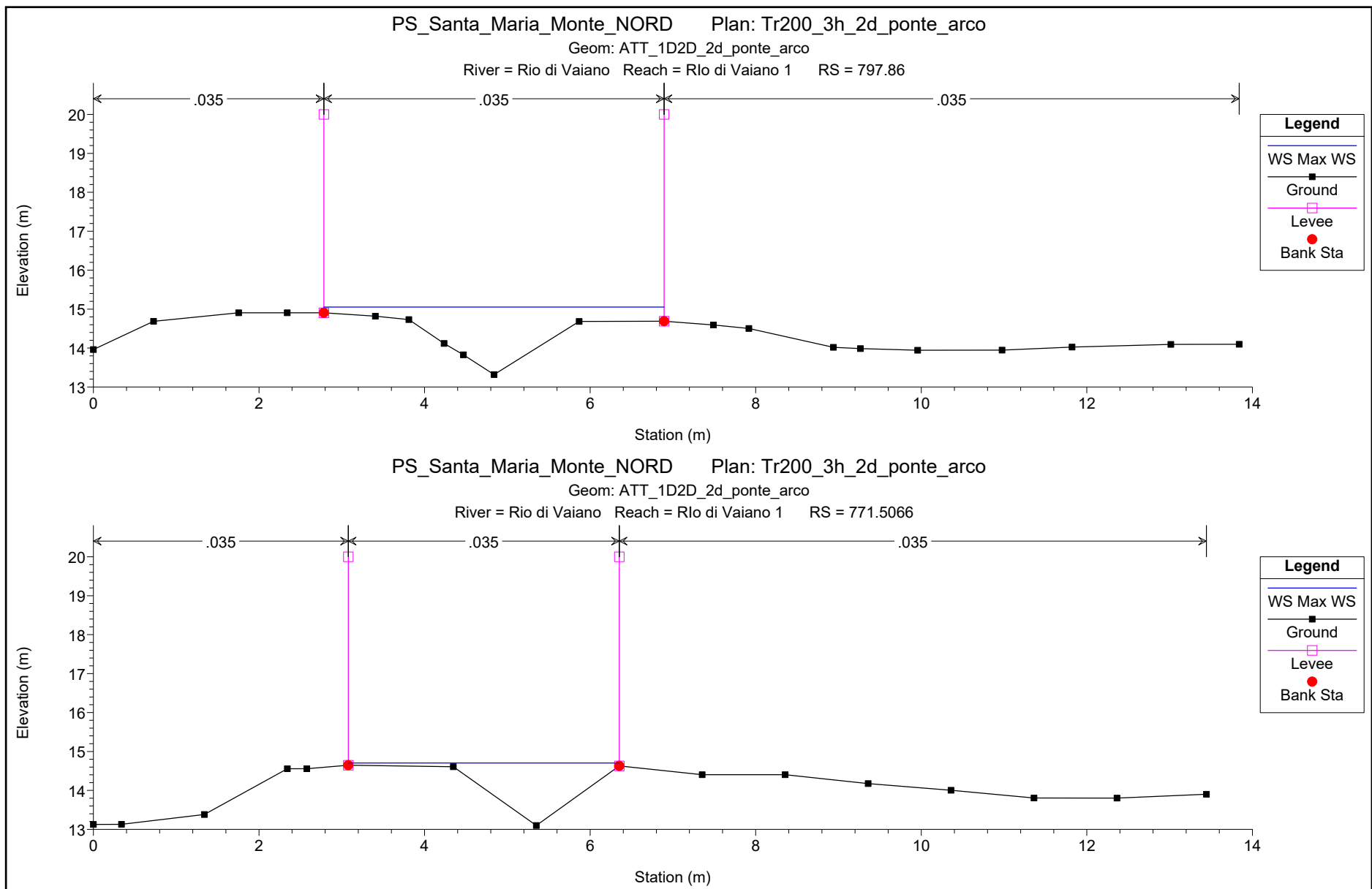


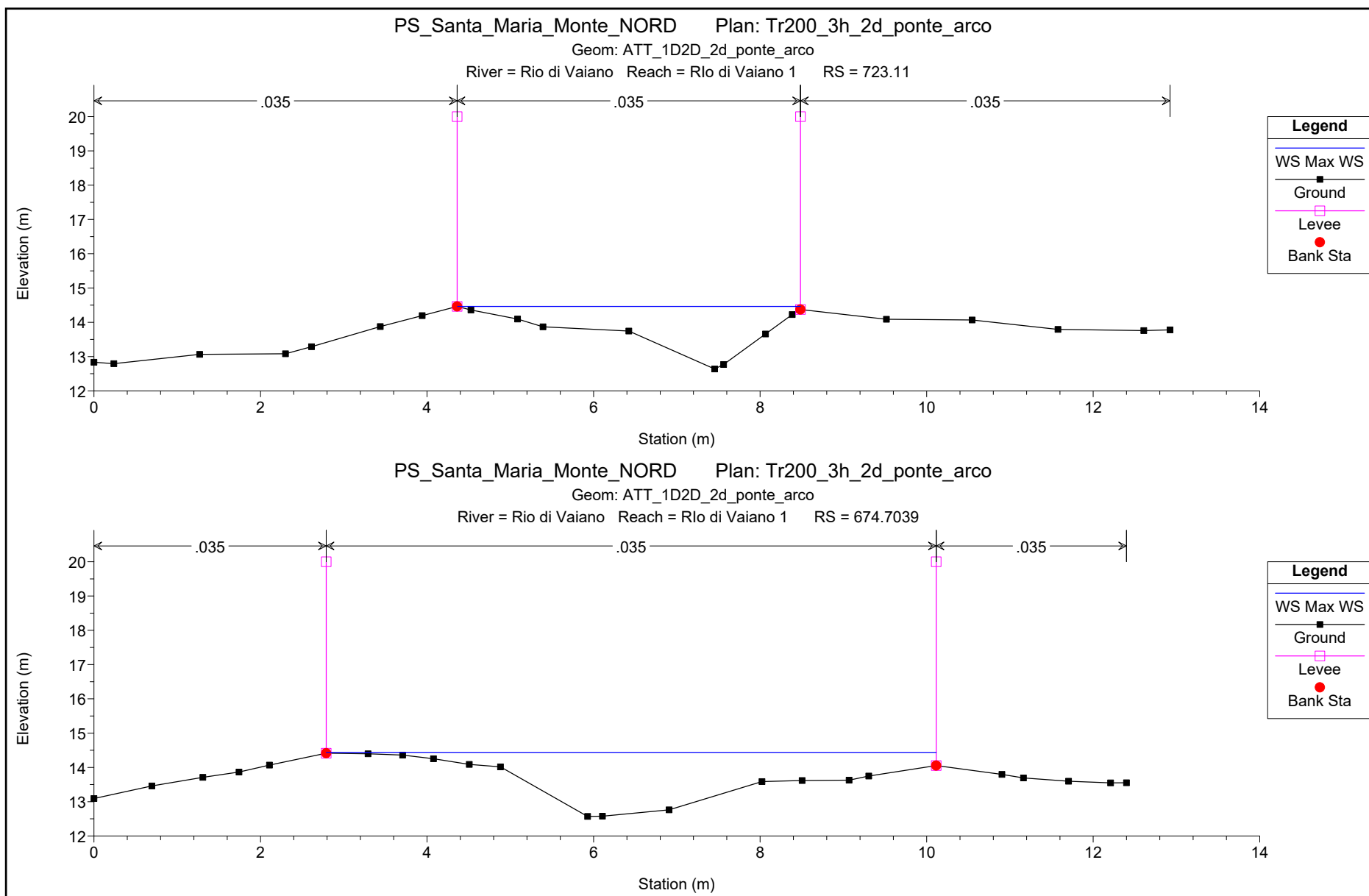


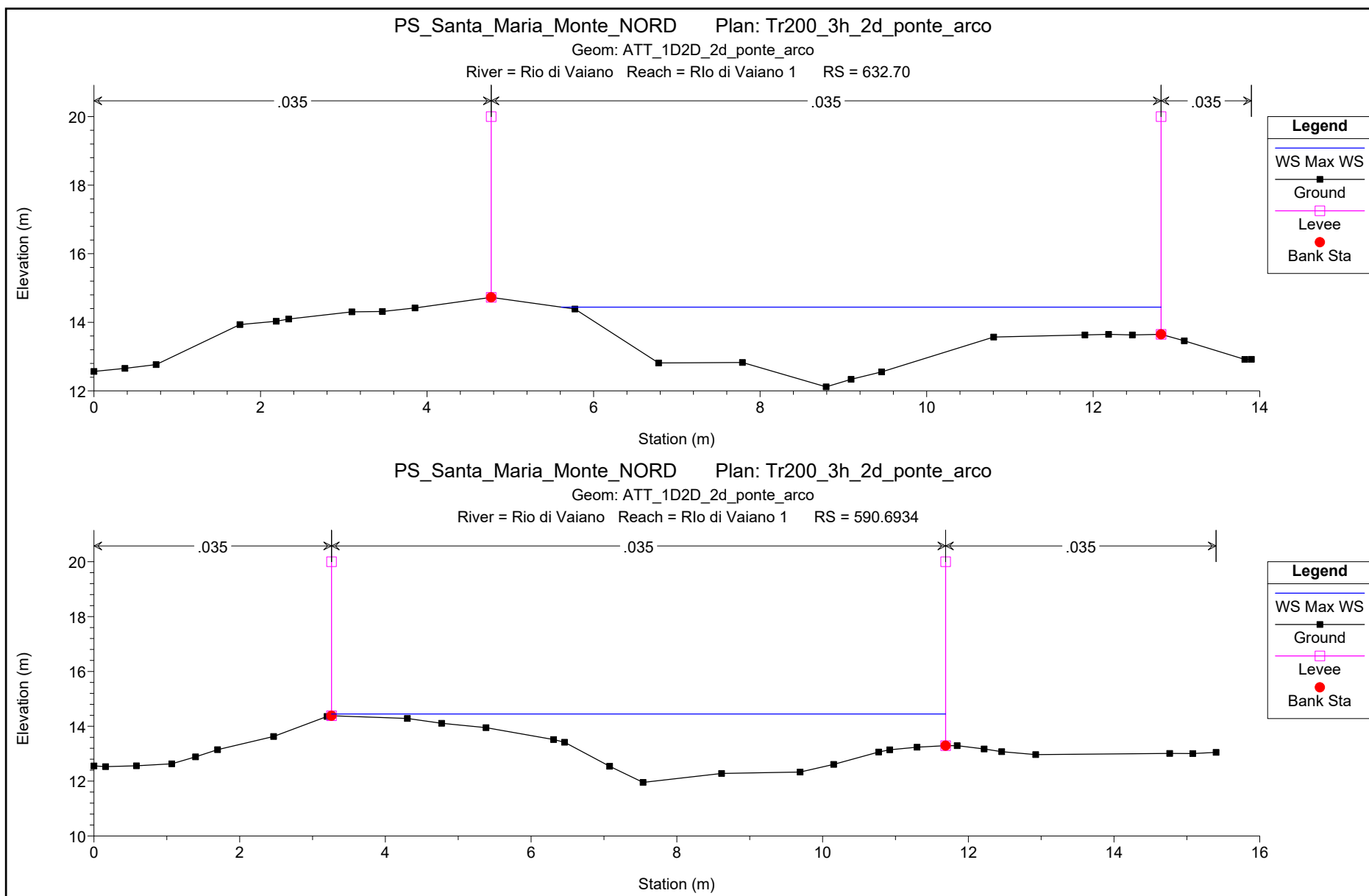


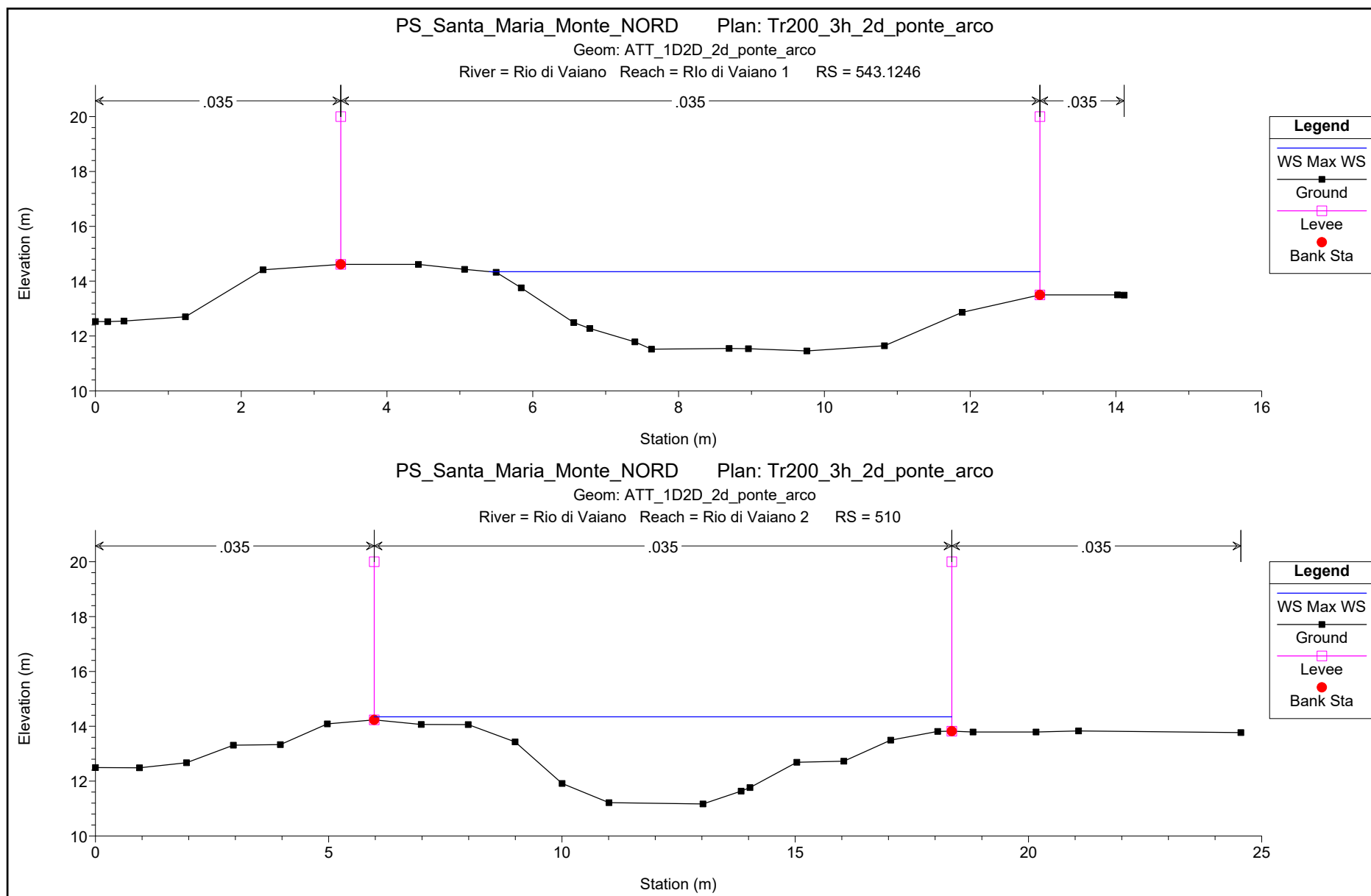


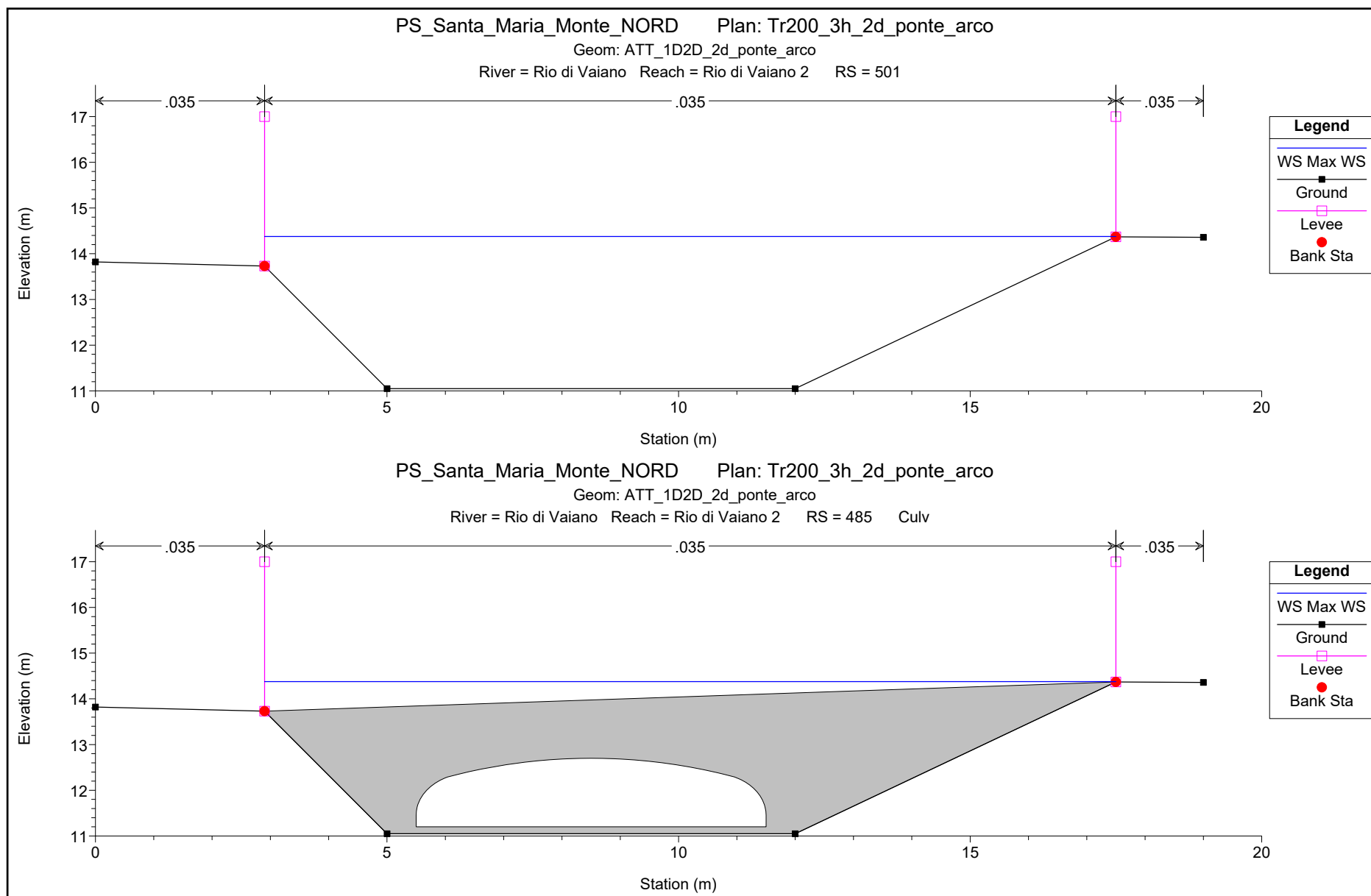


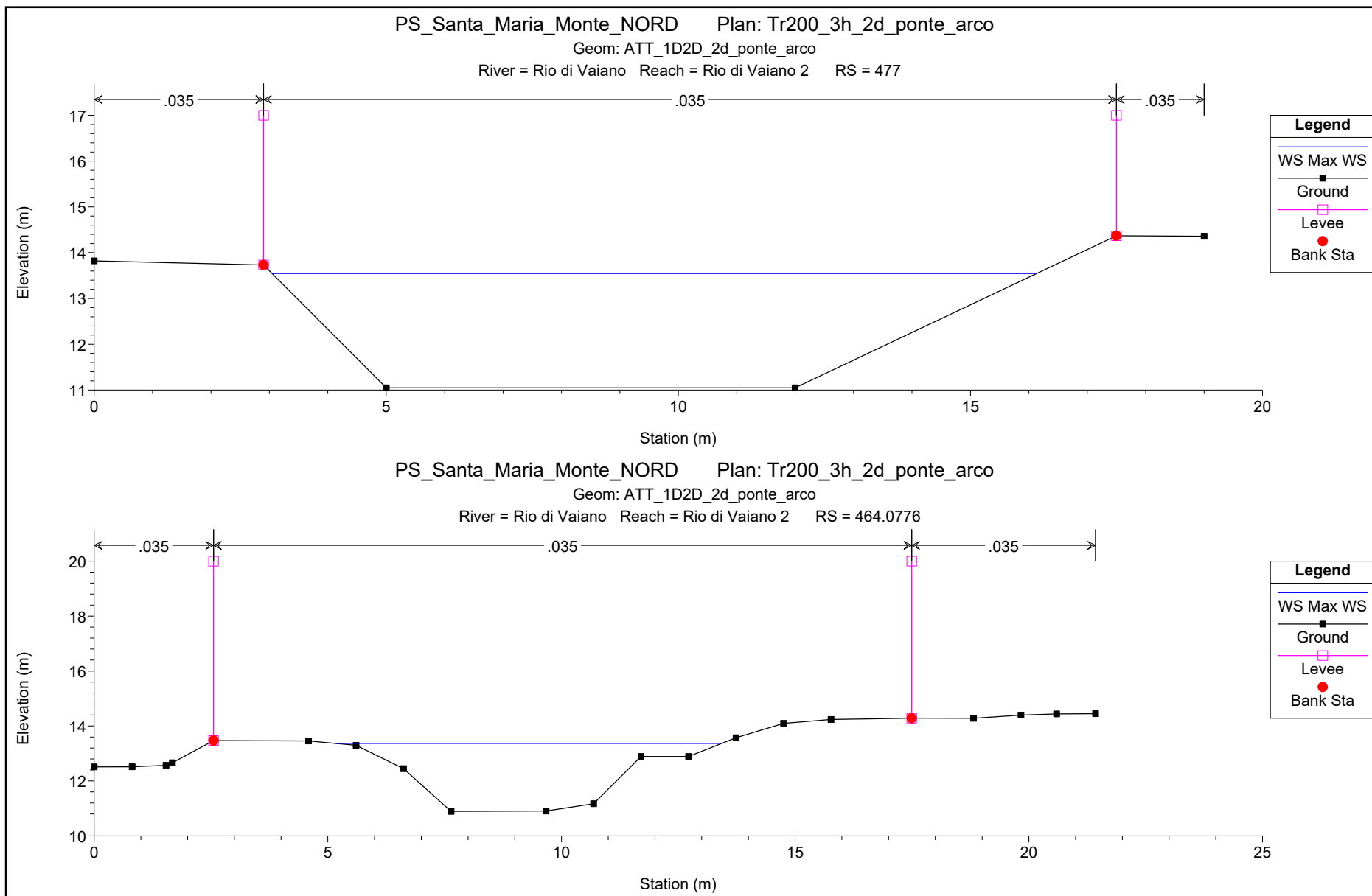


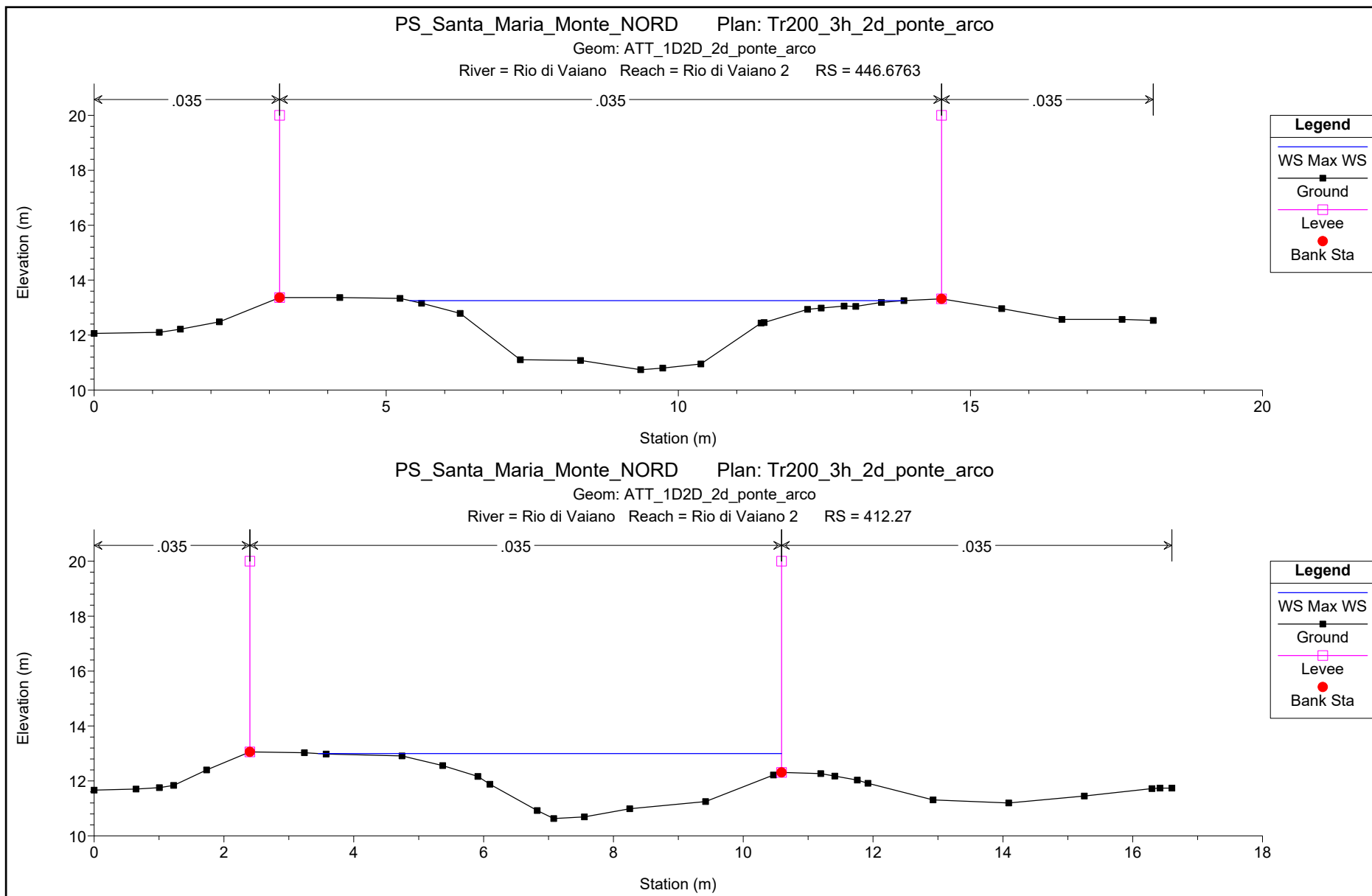


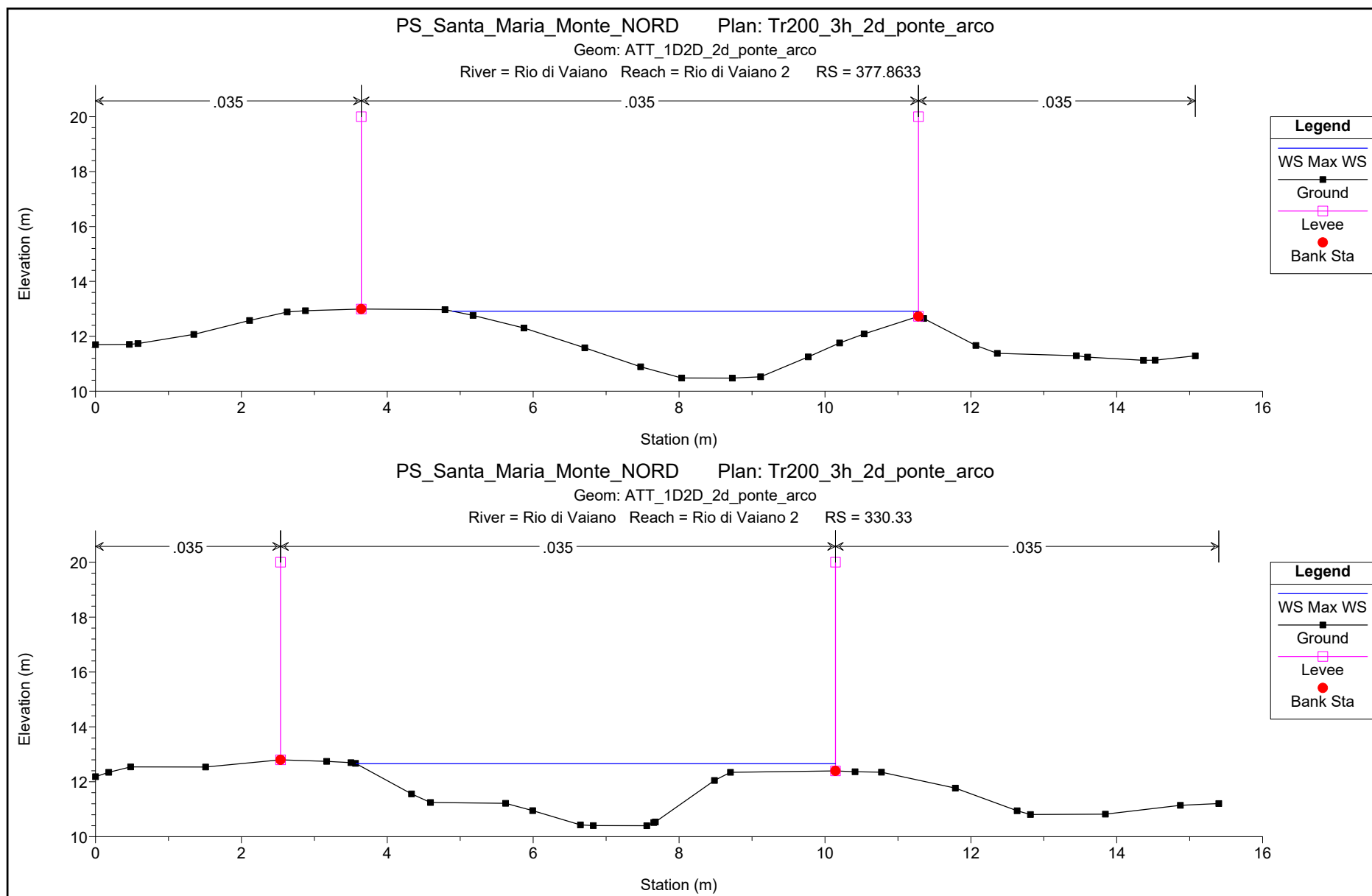


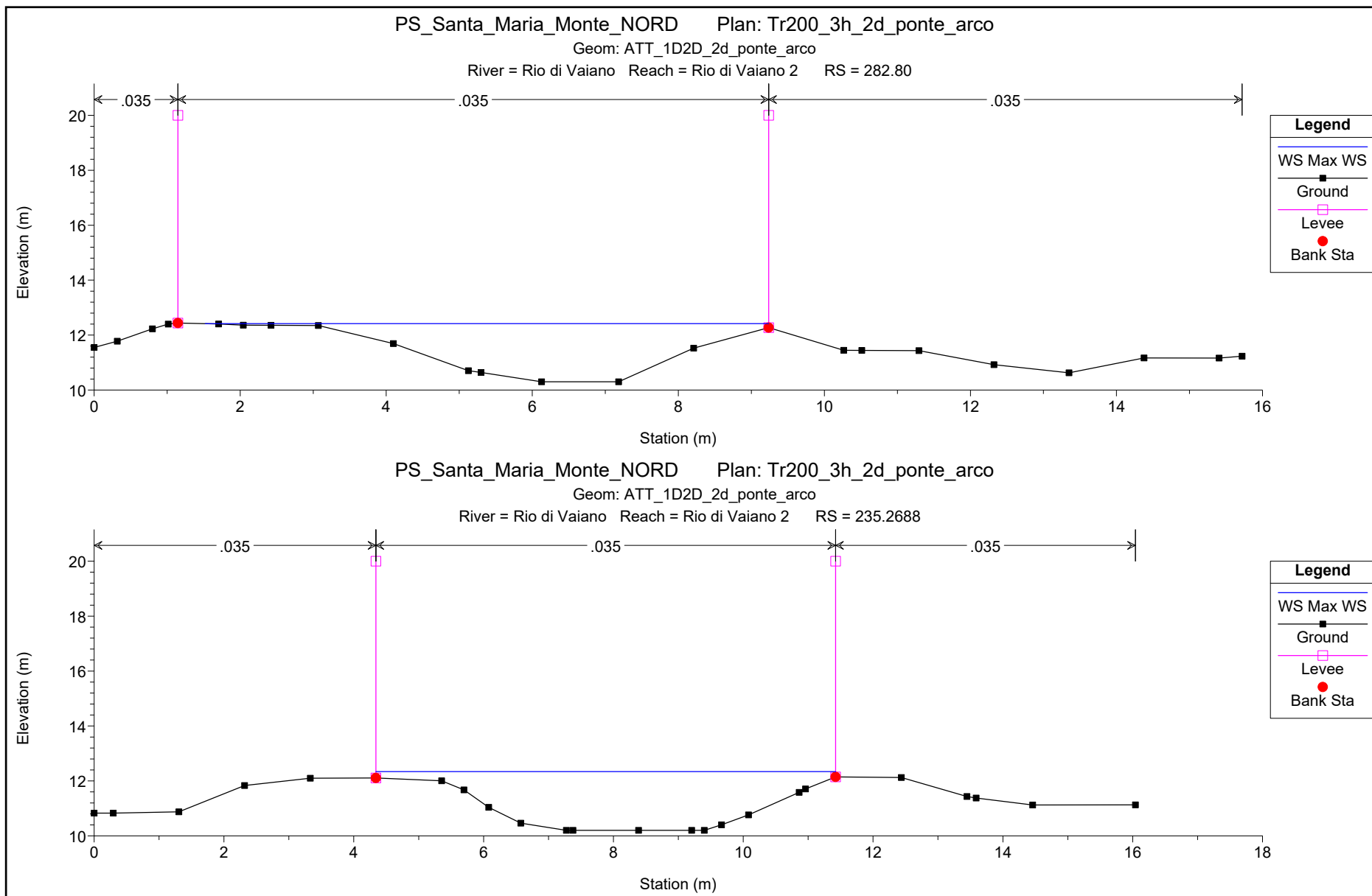


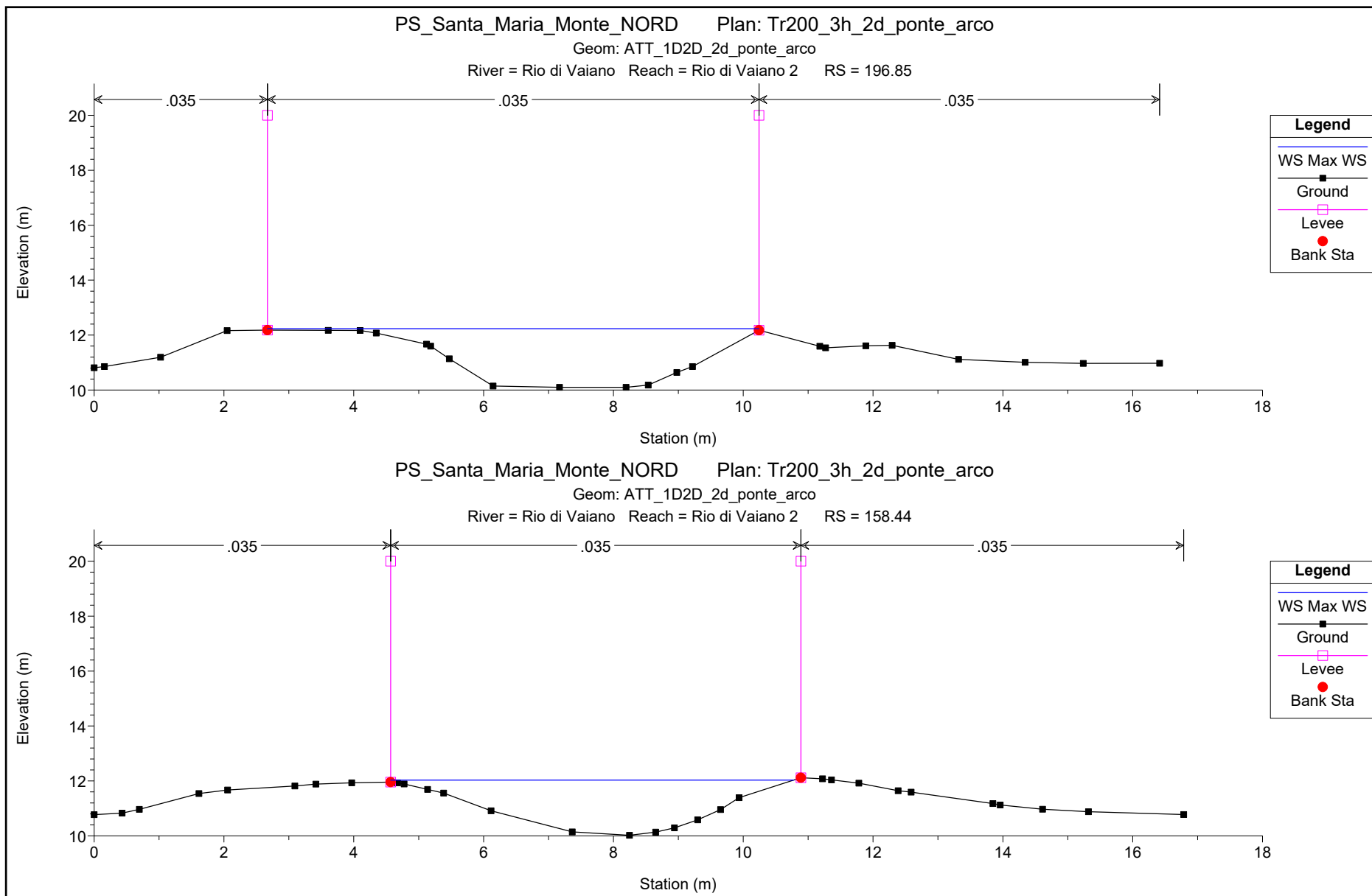


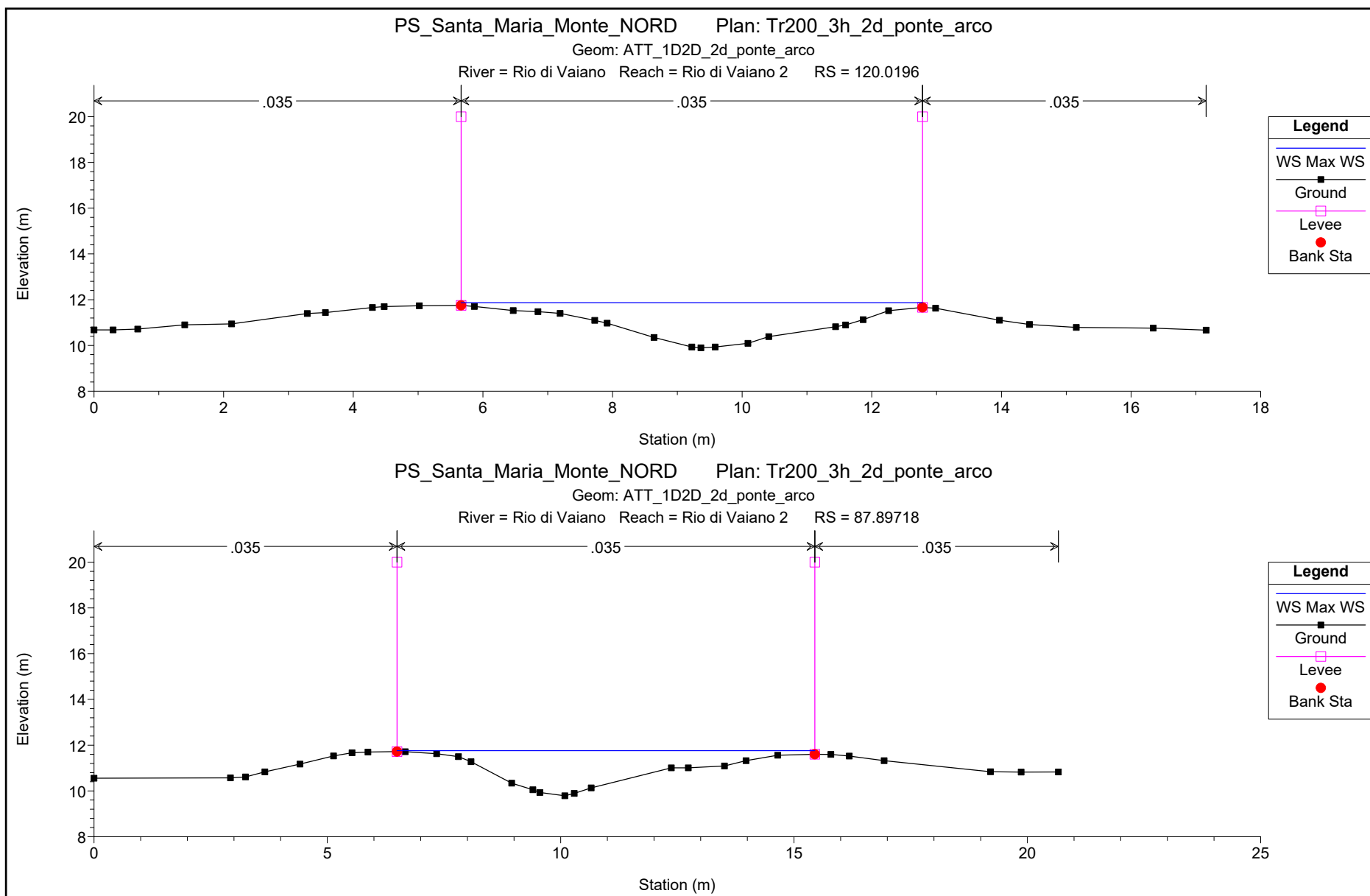


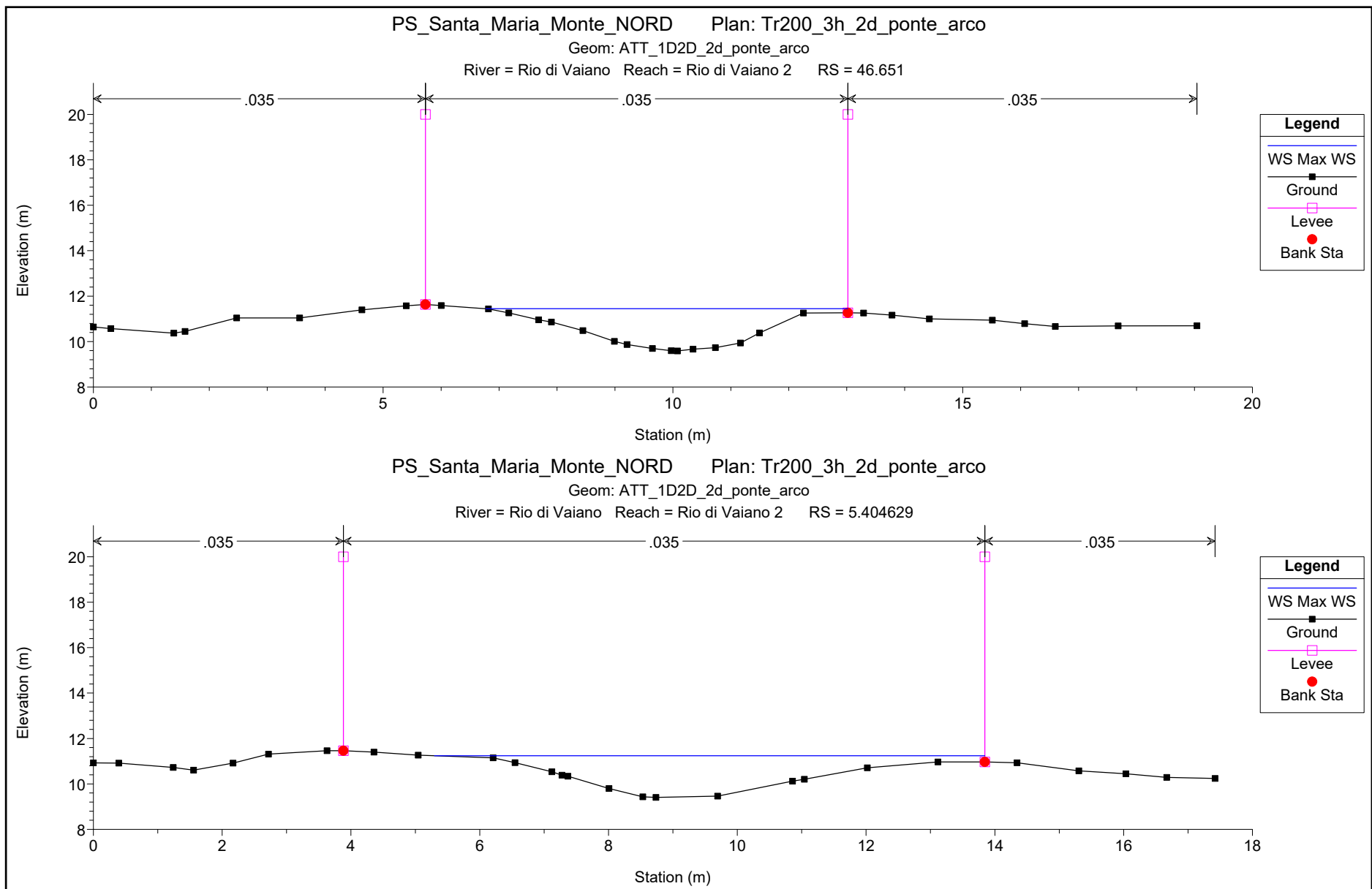












HEC-RAS Plan: Tr200_3h_2d_ponte_arco Profile: Max WS

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rlo di Vaiano 1	1623	19.22	17.02	18.52		18.76	0.007620	2.16	8.88	9.82	0.73
Rlo di Vaiano 1	1601	Lat Struct									
Rlo di Vaiano 1	1600	Lat Struct									
Rlo di Vaiano 1	1375.50	15.41	16.76	18.41		18.63	0.006261	2.08	7.40	6.82	0.64
Rlo di Vaiano 1	1127.995	13.10	16.50	18.09		18.41	0.013712	2.51	5.23	6.89	0.92
Rlo di Vaiano 1	1107.56	10.09	16.27	17.82		18.02	0.008676	1.98	5.10	6.59	0.72
Rlo di Vaiano 1	1066.691	5.52	15.86	17.10		17.27	0.015327	1.84	3.00	7.10	0.90
Rlo di Vaiano 1	1007.13	4.53	15.24	16.36		16.59	0.014643	2.14	2.12	3.47	0.88
Rlo di Vaiano 1	947.5589	4.98	14.67	15.81		15.98	0.008333	1.78	2.79	4.14	0.69
Rlo di Vaiano 1	927.2710	4.98	14.52	15.68		15.81	0.006308	1.64	3.04	4.08	0.61
Rlo di Vaiano 1	901	Lat Struct									
Rlo di Vaiano 1	900	Lat Struct									
Rlo di Vaiano 1	891.50	4.98	14.24	15.46		15.59	0.005419	1.58	3.15	3.82	0.56
Rlo di Vaiano 1	855.7223	4.92	13.72	15.43		15.46	0.000955	0.82	6.02	5.51	0.25
Rlo di Vaiano 1	836.3810	4.87	13.60	15.24		15.39	0.008367	1.70	2.86	3.96	0.64
Rlo di Vaiano 1	824.2069	3.00	13.50	15.15		15.20	0.002740	0.99	3.03	3.85	0.36
Rlo di Vaiano 1	801	Lat Struct									
Rlo di Vaiano 1	800	Lat Struct									
Rlo di Vaiano 1	797.86	3.00	13.32	15.05		15.11	0.004121	1.09	2.76	4.11	0.42
Rlo di Vaiano 1	771.5066	2.96	13.10	14.70		14.84	0.013414	1.66	1.79	3.27	0.72
Rlo di Vaiano 1	723.11	2.60	12.64	14.46		14.49	0.001689	0.80	3.27	4.12	0.29
Rlo di Vaiano 1	674.7039	2.80	12.57	14.44		14.45	0.000409	0.45	6.18	7.33	0.16
Rlo di Vaiano 1	632.70	3.78	12.12	14.44		14.45	0.000205	0.40	9.37	7.20	0.11
Rlo di Vaiano 1	590.6934	5.82	11.95	14.45		14.46	0.000330	0.53	11.08	8.43	0.15
Rlo di Vaiano 1	543.1246	12.10	11.45	14.35		14.38	0.000410	0.76	15.93	7.55	0.17
Rio di Vaiano 2	510	25.57	11.17	14.35		14.42	0.001224	1.24	20.71	12.38	0.30
Rio di Vaiano 2	501	24.07	11.05	14.38		14.40	0.000197	0.66	36.65	14.60	0.13
Rio di Vaiano 2	485	Culvert									
Rio di Vaiano 2	477	24.07	11.05	13.55		13.59	0.000570	0.96	25.06	13.09	0.22
Rio di Vaiano 2	464.0776	23.81	10.89	13.37		13.58	0.004523	2.05	11.63	8.26	0.55
Rio di Vaiano 2	451	Lat Struct									
Rio di Vaiano 2	450	Lat Struct									
Rio di Vaiano 2	446.6763	23.78	10.74	13.25		13.49	0.005398	2.16	11.01	8.46	0.60
Rio di Vaiano 2	412.27	21.54	10.63	13.00		13.31	0.008223	2.48	8.70	7.14	0.72
Rio di Vaiano 2	377.8633	18.76	10.48	12.92		13.14	0.004957	2.10	8.93	6.39	0.57

HEC-RAS Plan: Tr200_3h_2d_ponte_arco Profile: Max WS (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio di Vaiano 2	330.33	17.34	10.40	12.66		12.90	0.006609	2.16	8.03	6.57	0.62
Rio di Vaiano 2	282.80	16.11	10.30	12.42		12.63	0.006189	2.02	7.97	7.72	0.64
Rio di Vaiano 2	235.2688	14.68	10.20	12.34		12.45	0.002325	1.47	10.00	7.08	0.39
Rio di Vaiano 2	196.85	13.61	10.10	12.23		12.36	0.003400	1.57	8.69	7.57	0.47
Rio di Vaiano 2	158.44	13.44	10.02	12.03		12.21	0.004554	1.86	7.22	6.21	0.55
Rio di Vaiano 2	120.0196	12.83	9.90	11.87		12.04	0.005171	1.82	7.06	7.12	0.58
Rio di Vaiano 2	87.89718	12.24	9.79	11.76		11.89	0.004750	1.61	7.58	8.95	0.56
Rio di Vaiano 2	46.651	12.42	9.59	11.45		11.65	0.006709	2.02	6.14	6.25	0.65
Rio di Vaiano 2	5.404629	13.07	9.41	11.24	10.84	11.39	0.005047	1.72	7.60	8.55	0.58

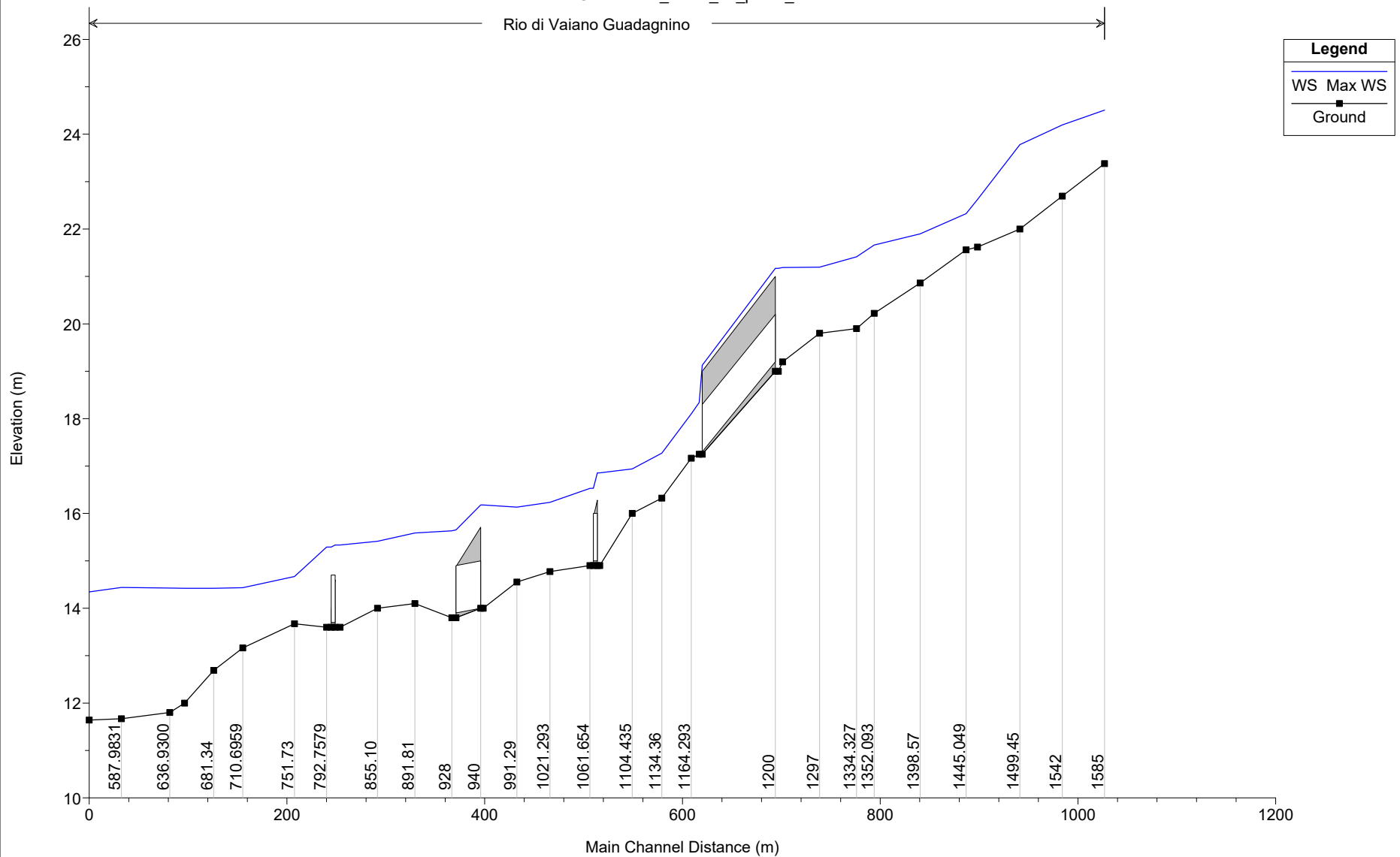
RIO GUADAGNINO – Tp 1 ora
Tr=200 anni

PS_Santa_Maria_Monte_NORD

Plan: Tr200_3h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

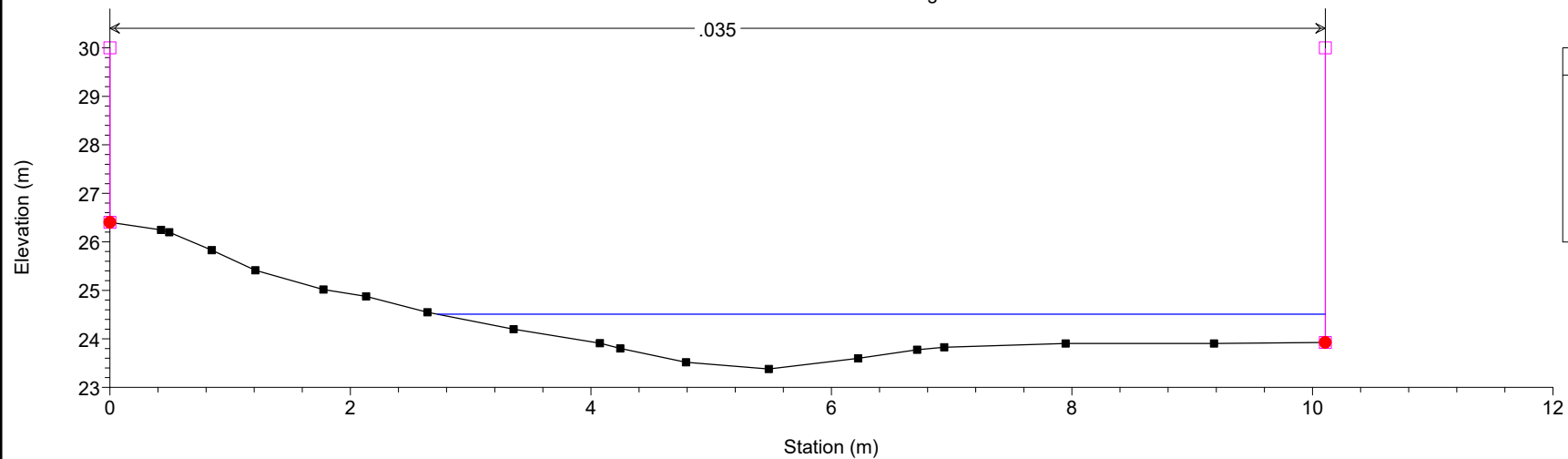
Rio di Vaiano Guadagnino



PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

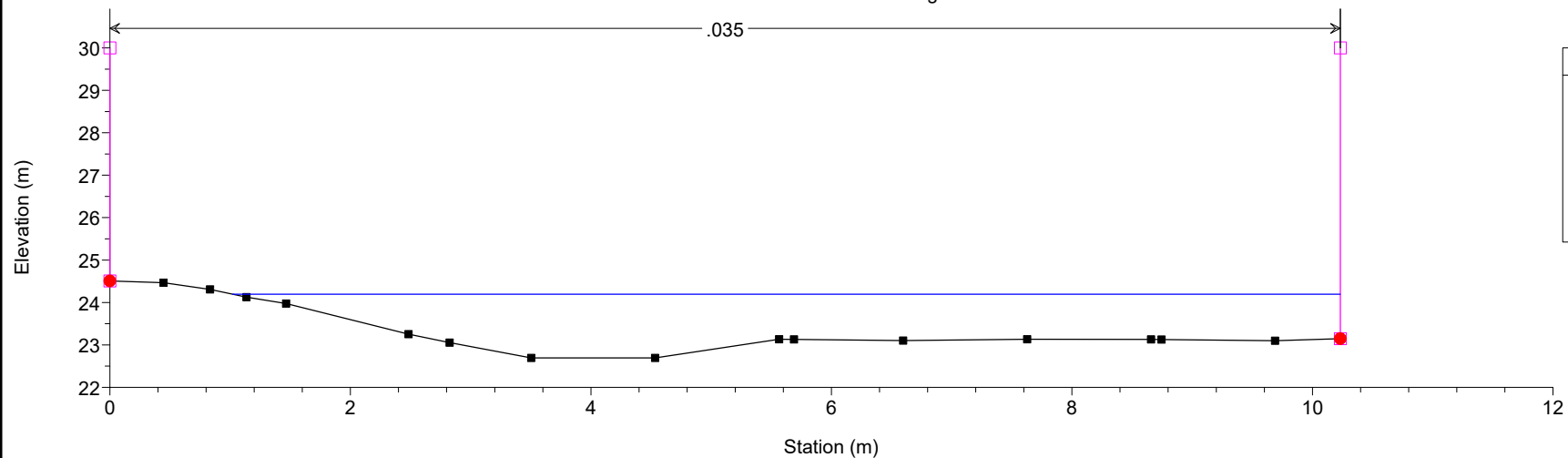
River = Rio di Vaiano Reach = Guadagnino RS = 1585



PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

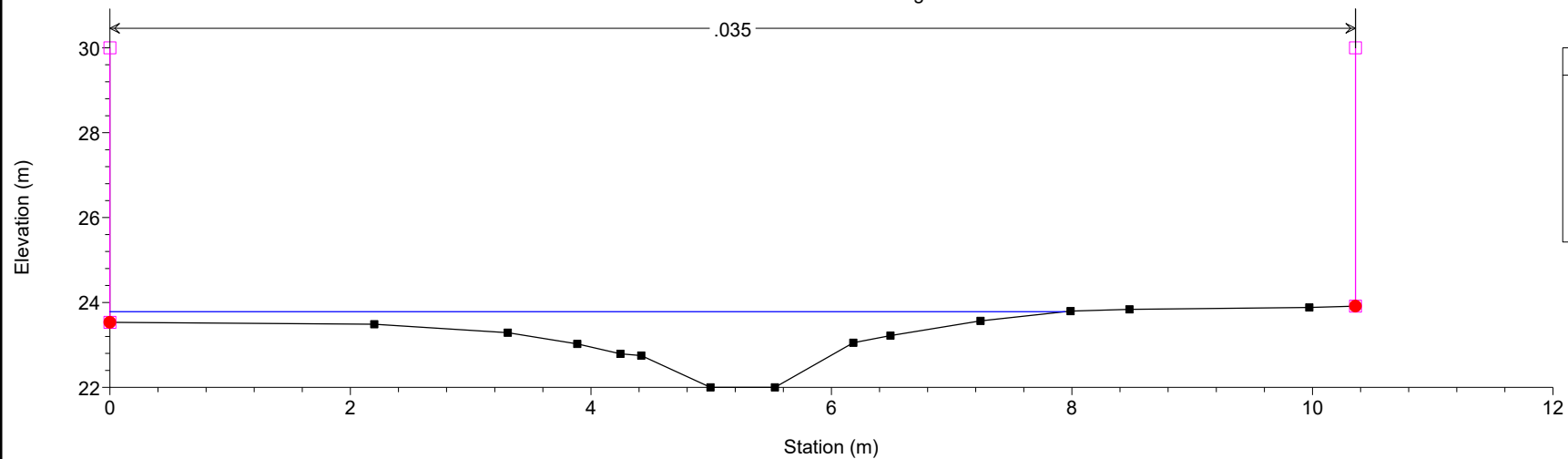
River = Rio di Vaiano Reach = Guadagnino RS = 1542



PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

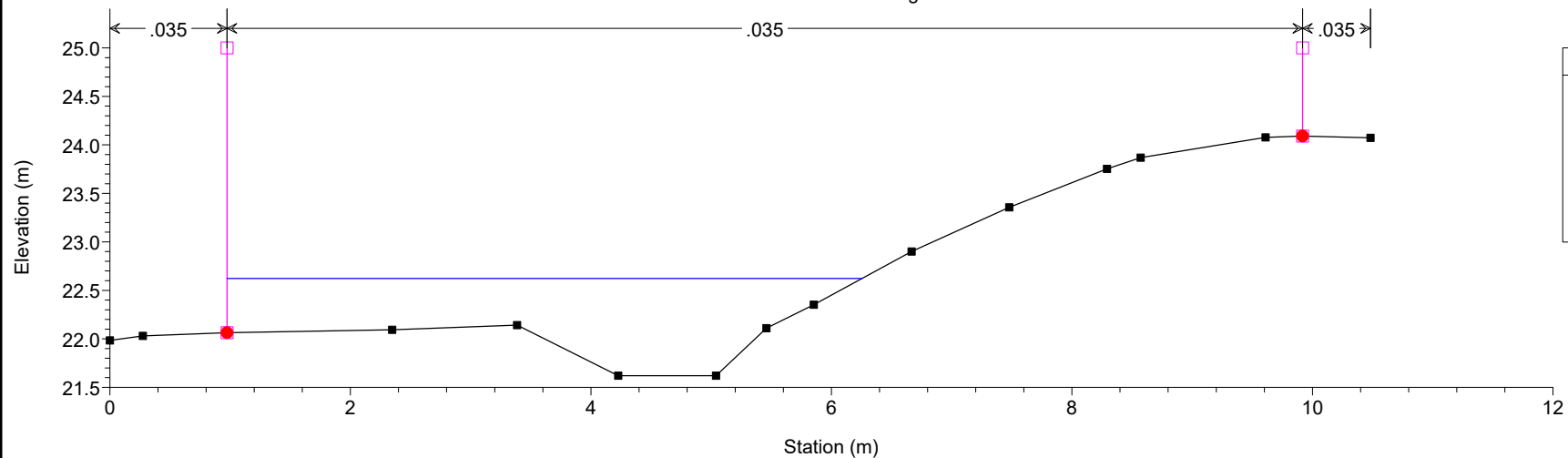
River = Rio di Vaiano Reach = Guadagnino RS = 1499.45



PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

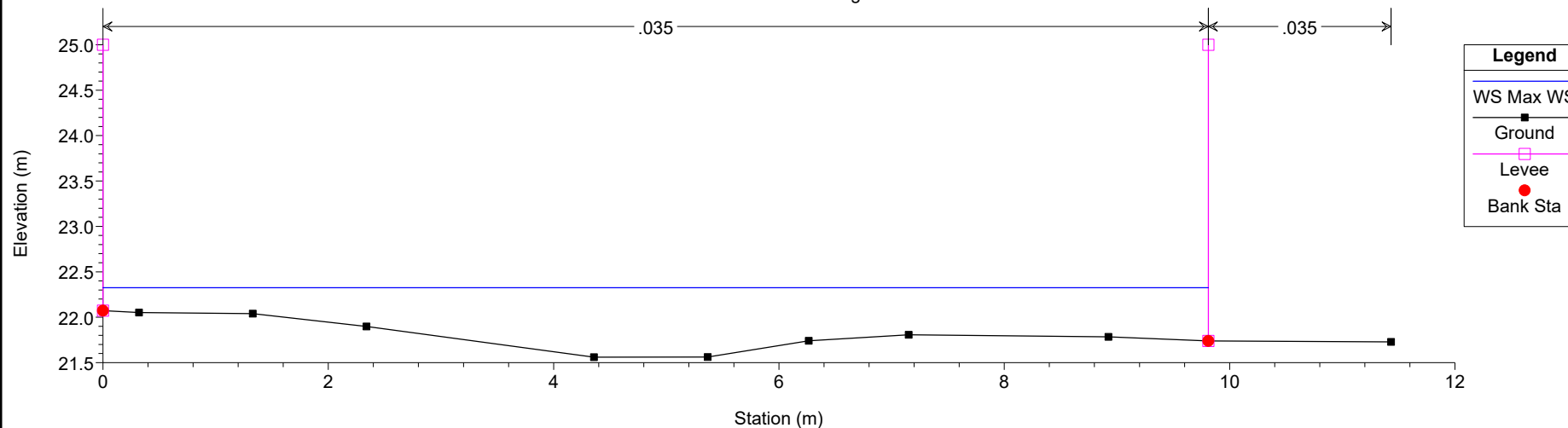
River = Rio di Vaiano Reach = Guadagnino RS = 1456.680



PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

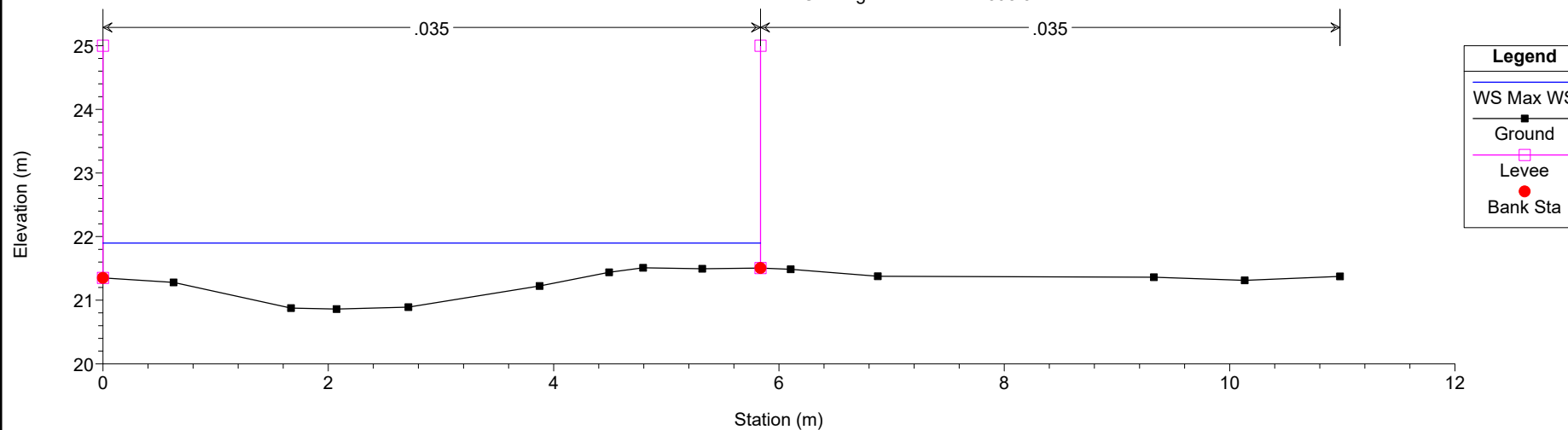
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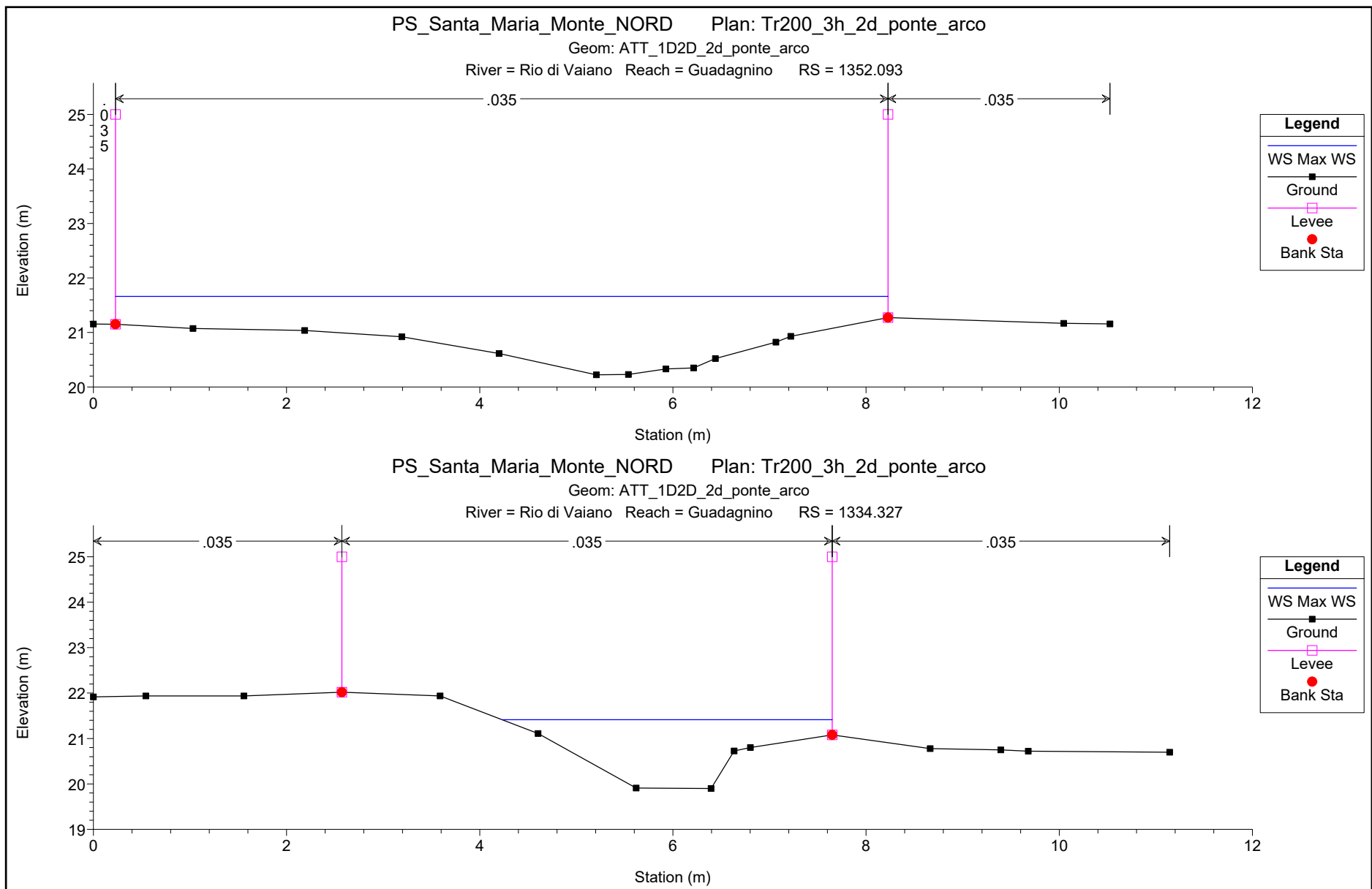


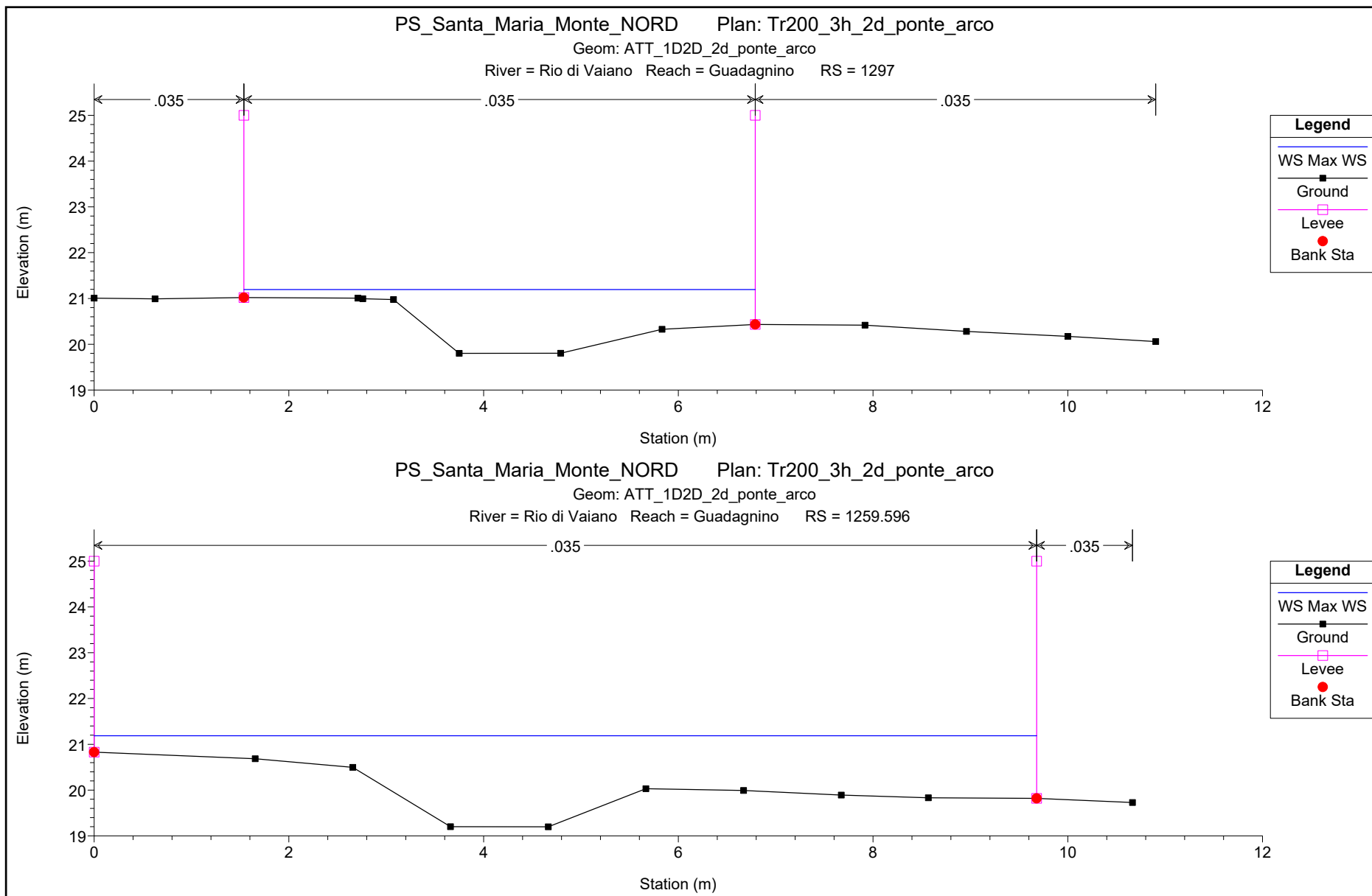
PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

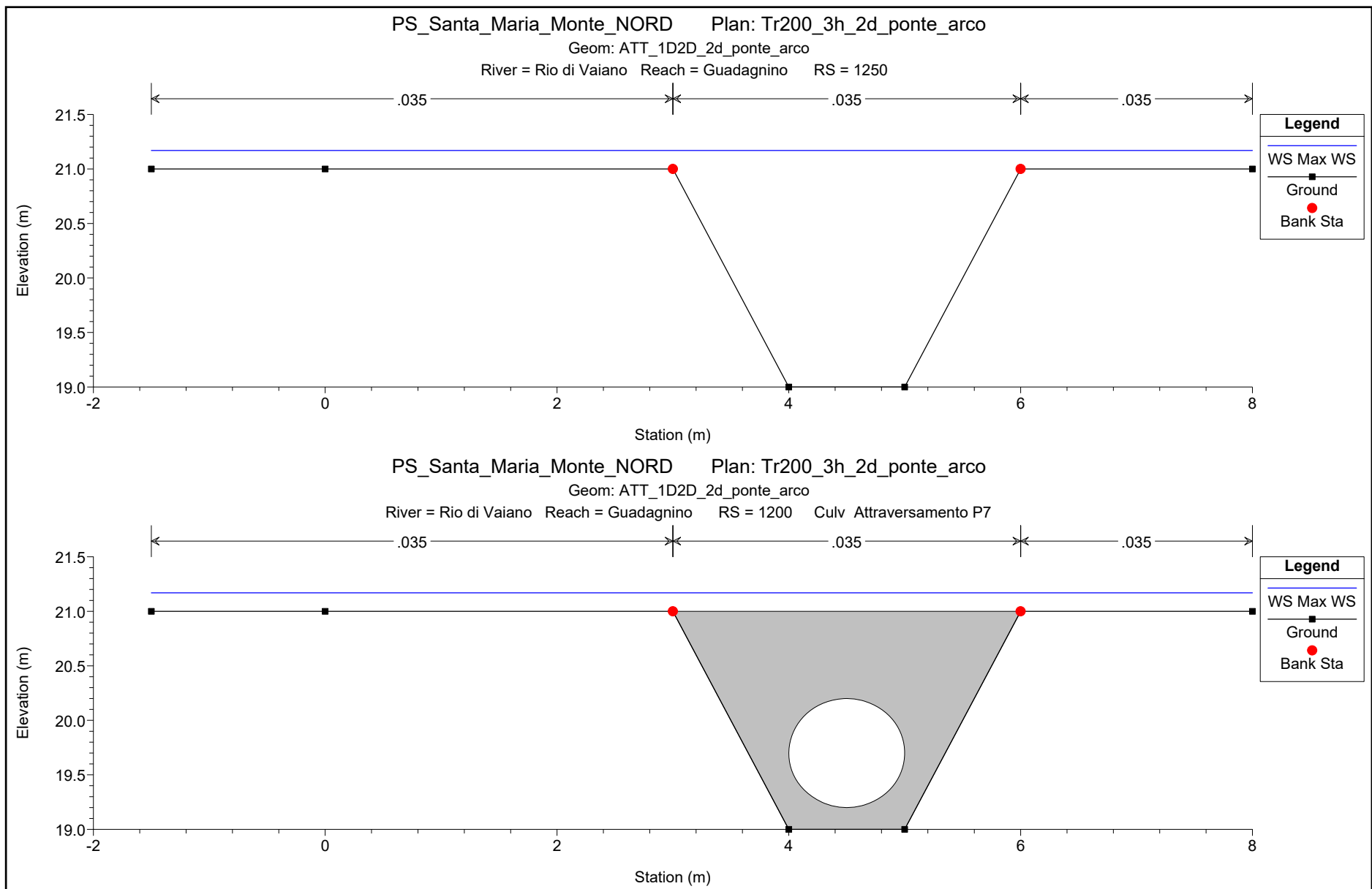
Geom: ATT_1D2D_2d_ponte_arco

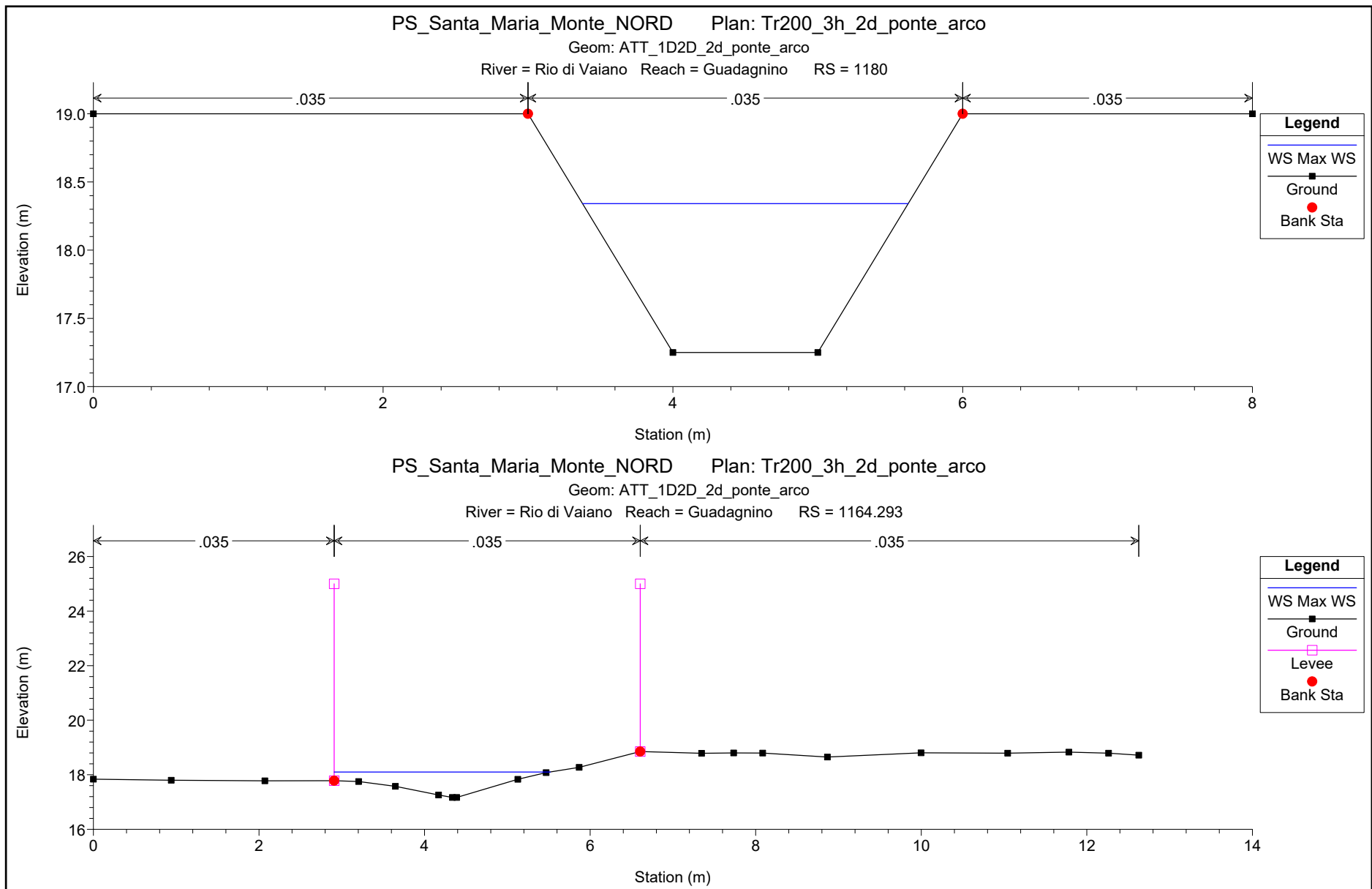
River = Rio di Vaiano Reach = Guadagnino RS = 1398.57

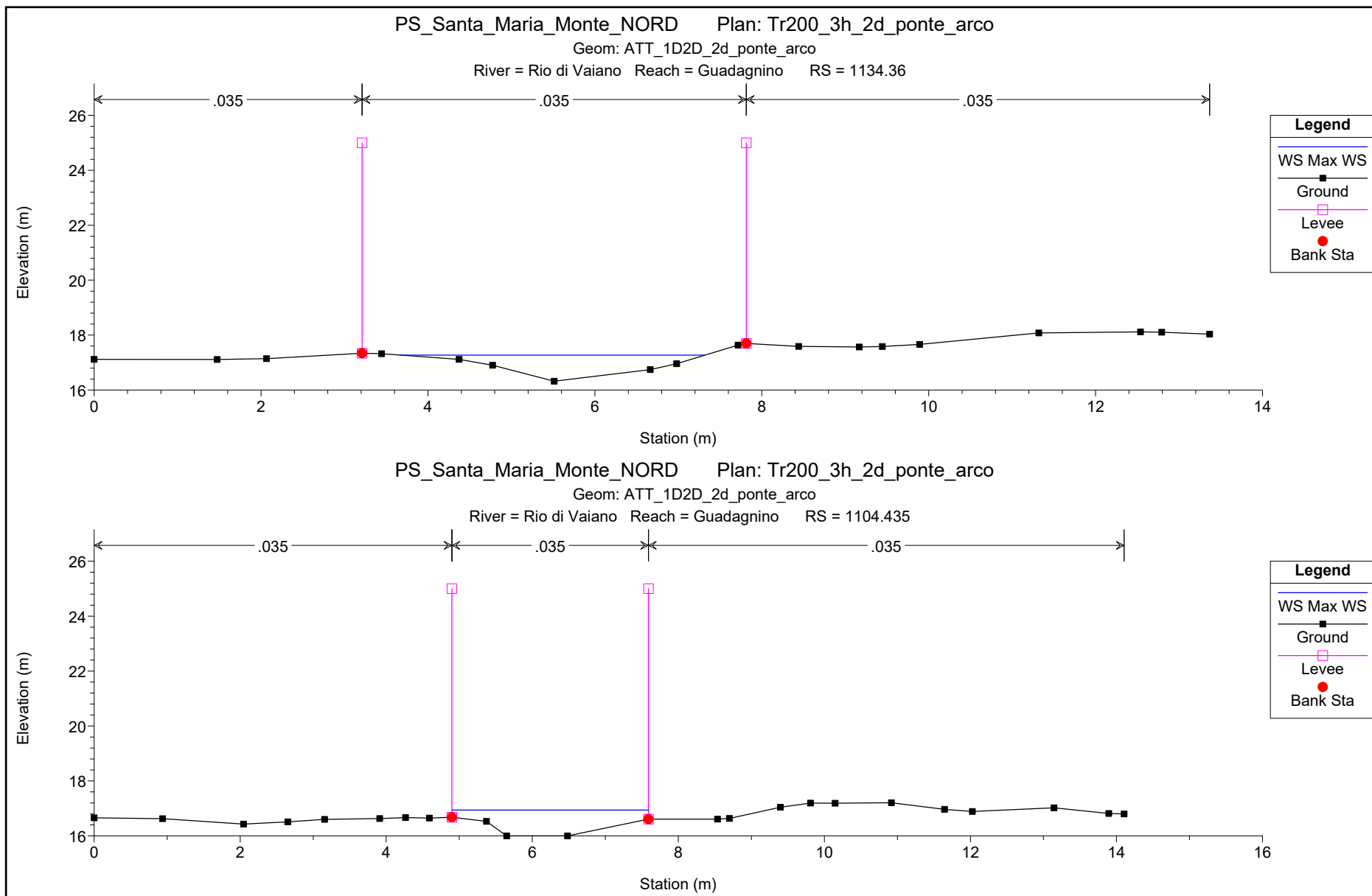


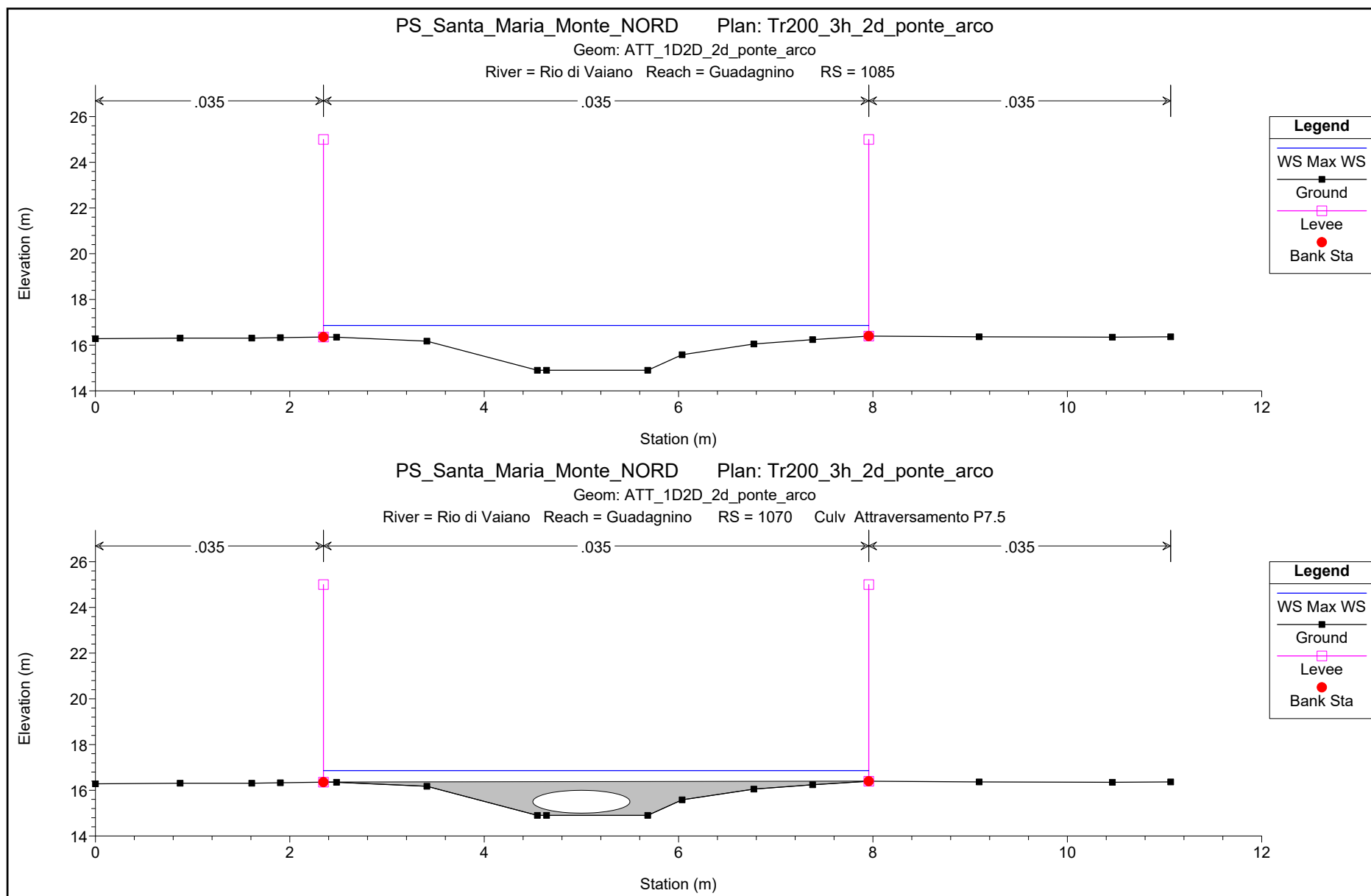


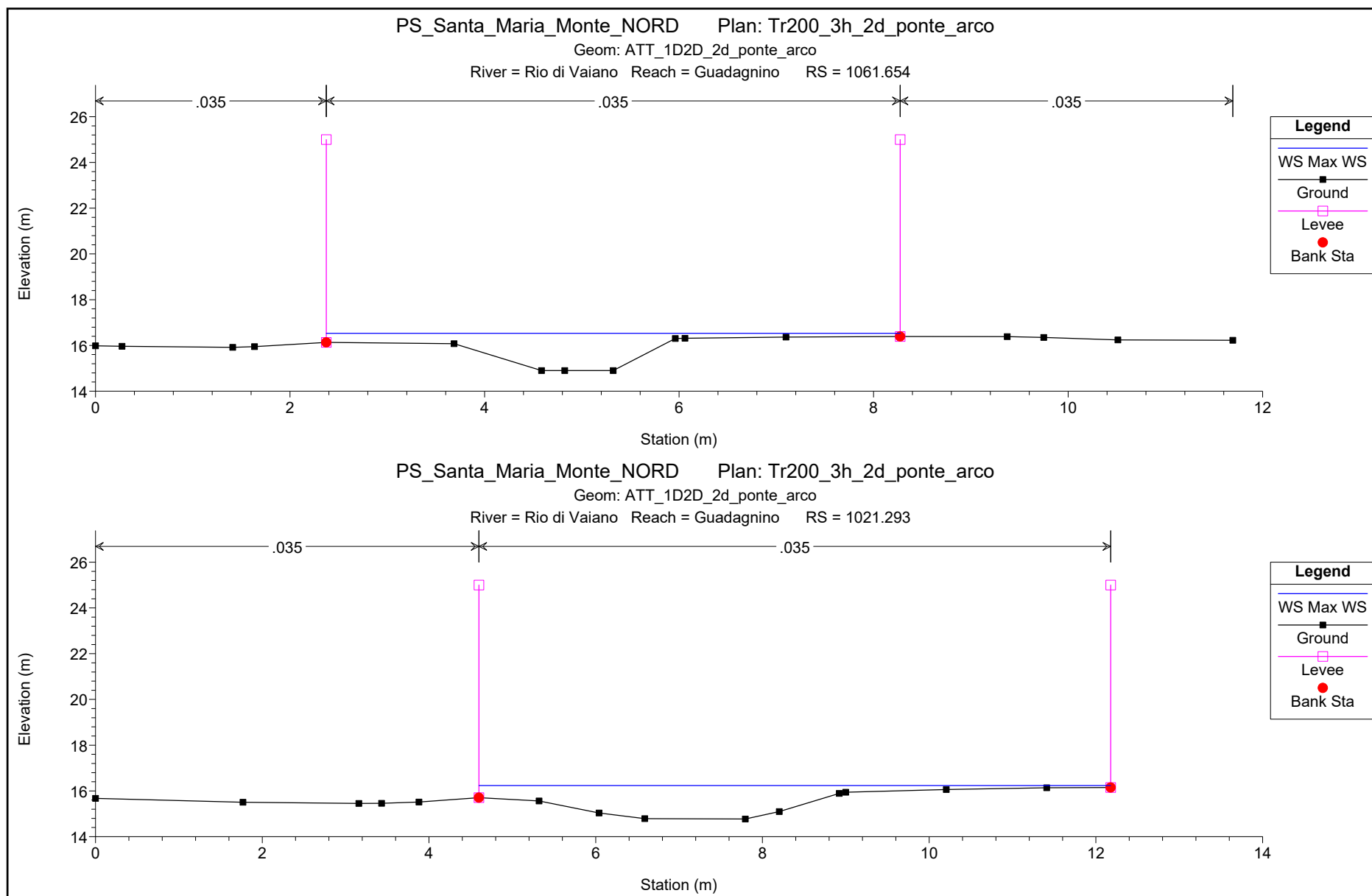


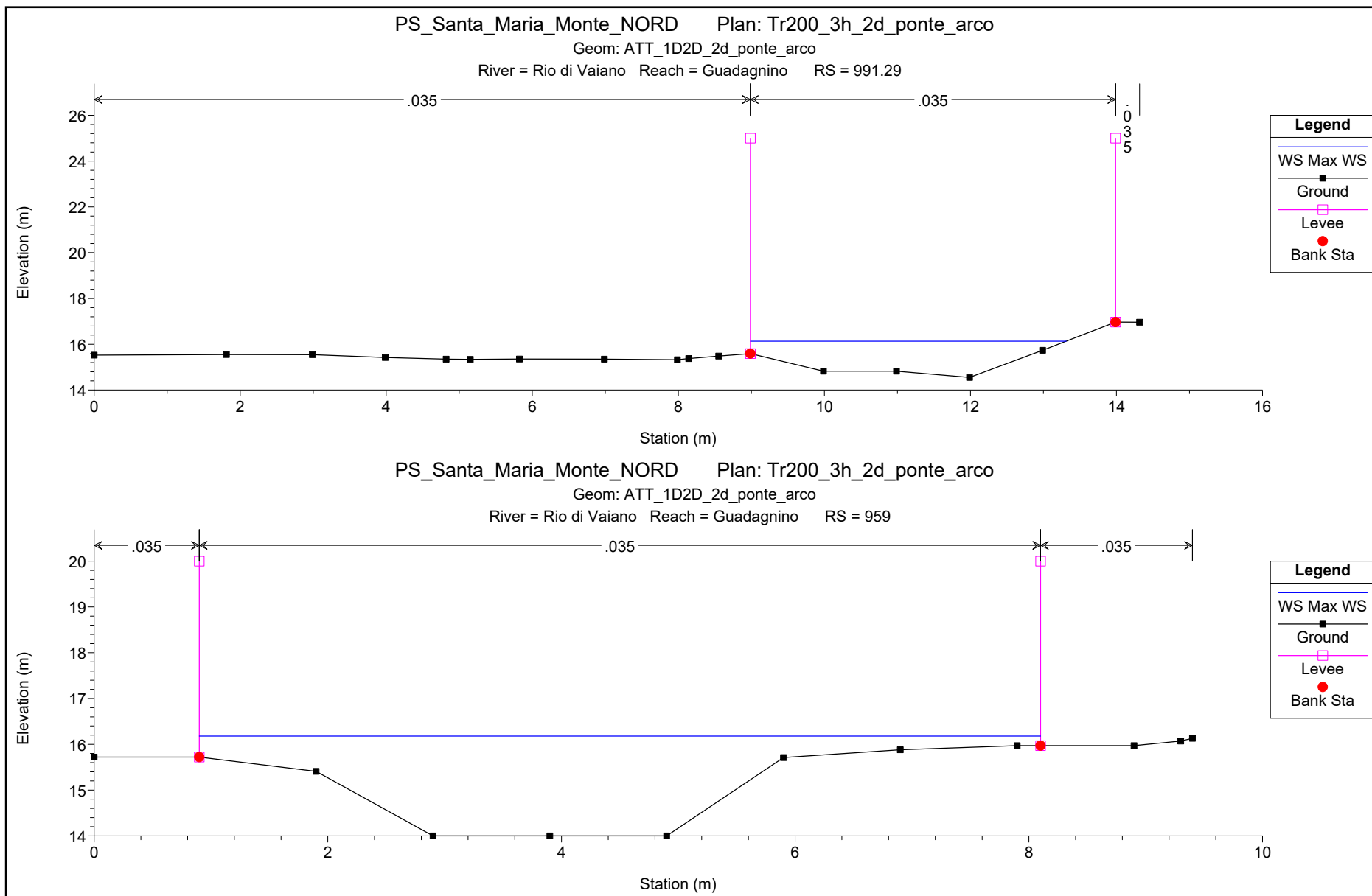








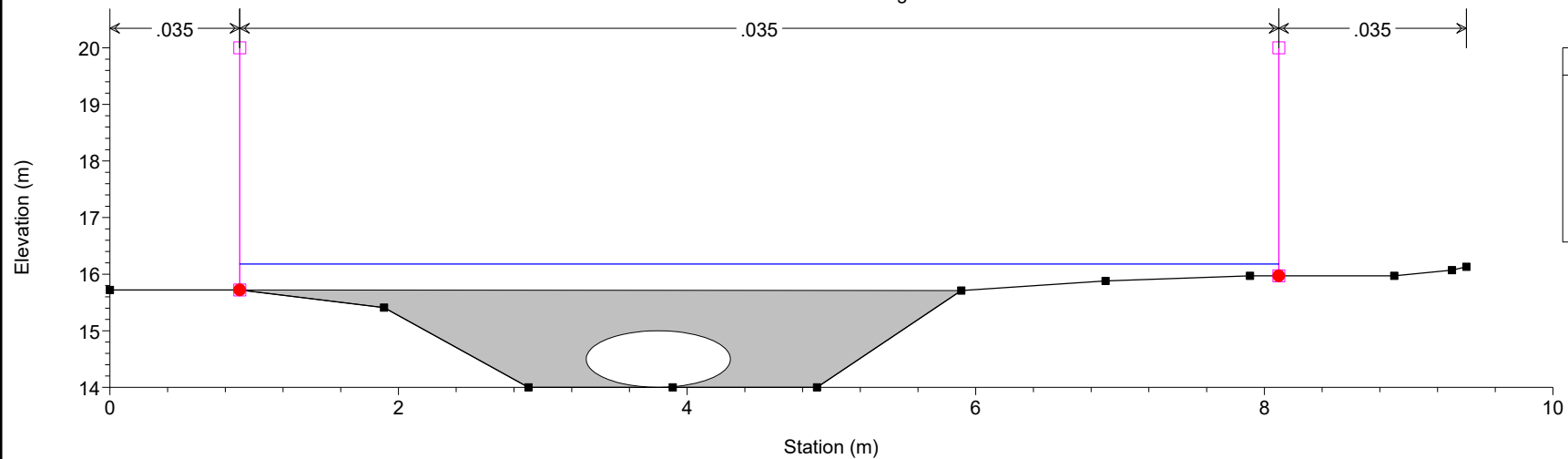




PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

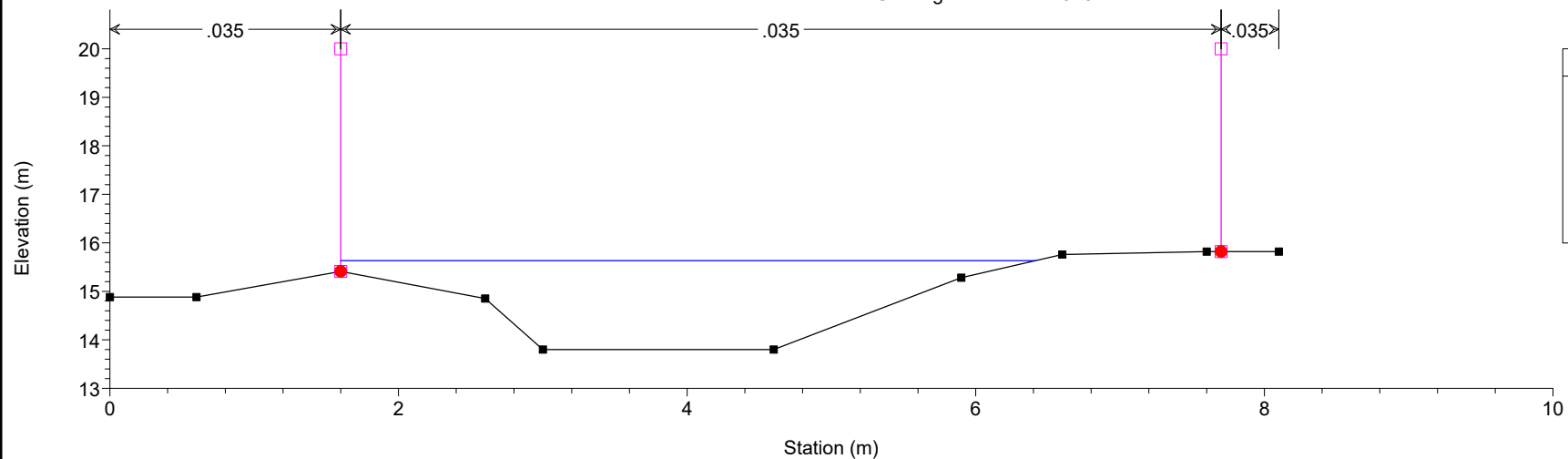
River = Rio di Vaiano Reach = Guadagnino RS = 940 Culv

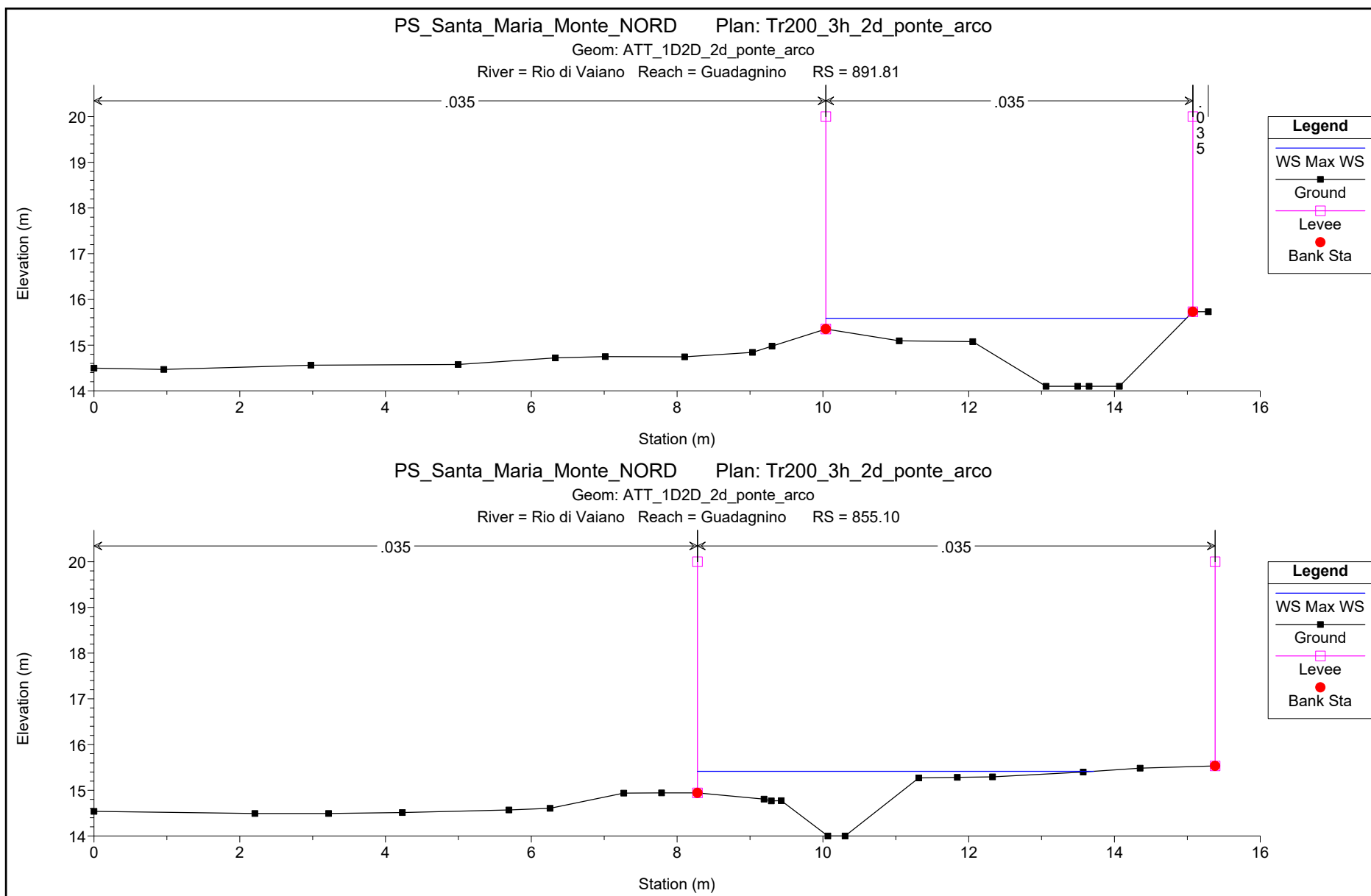


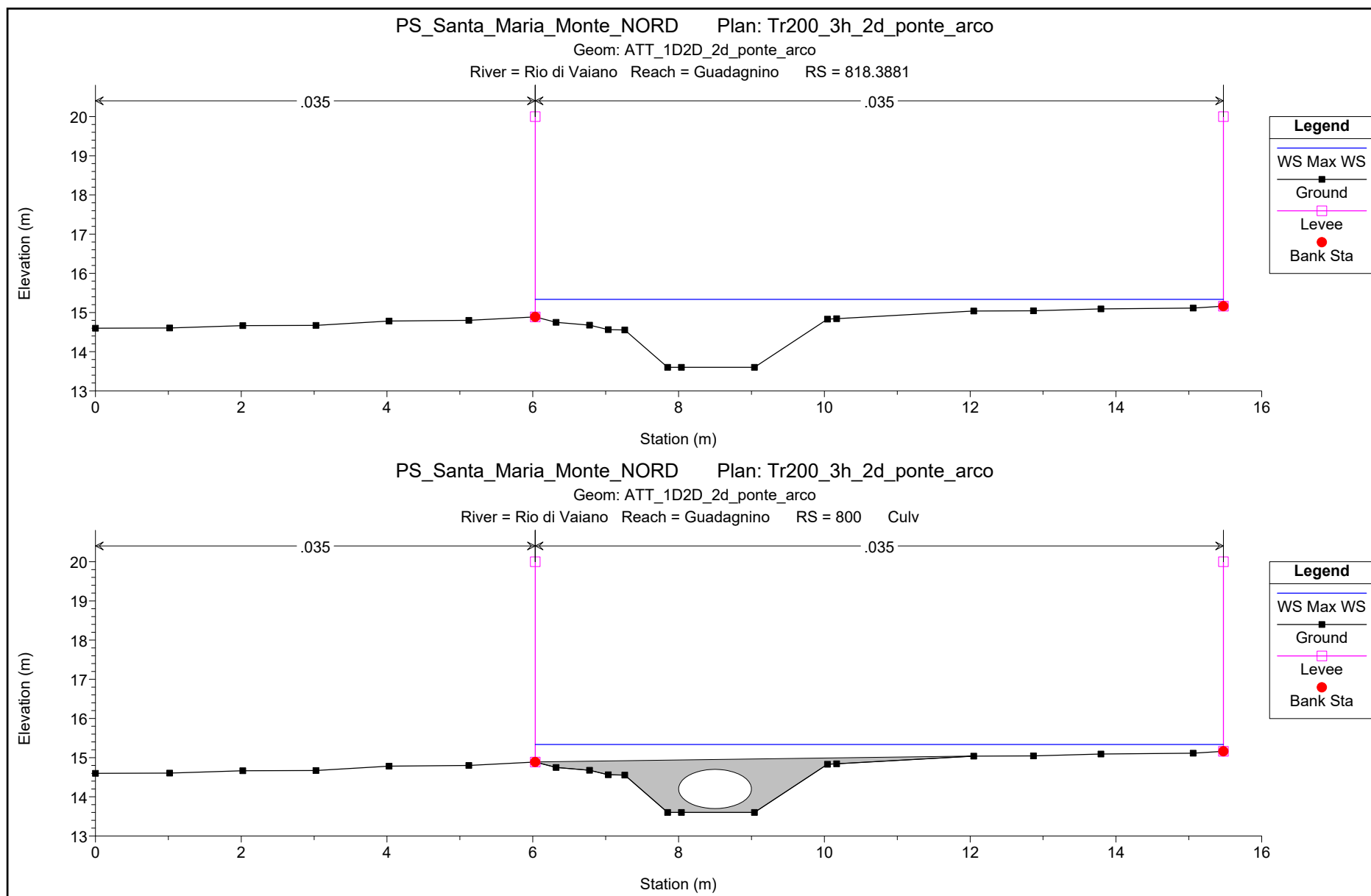
PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

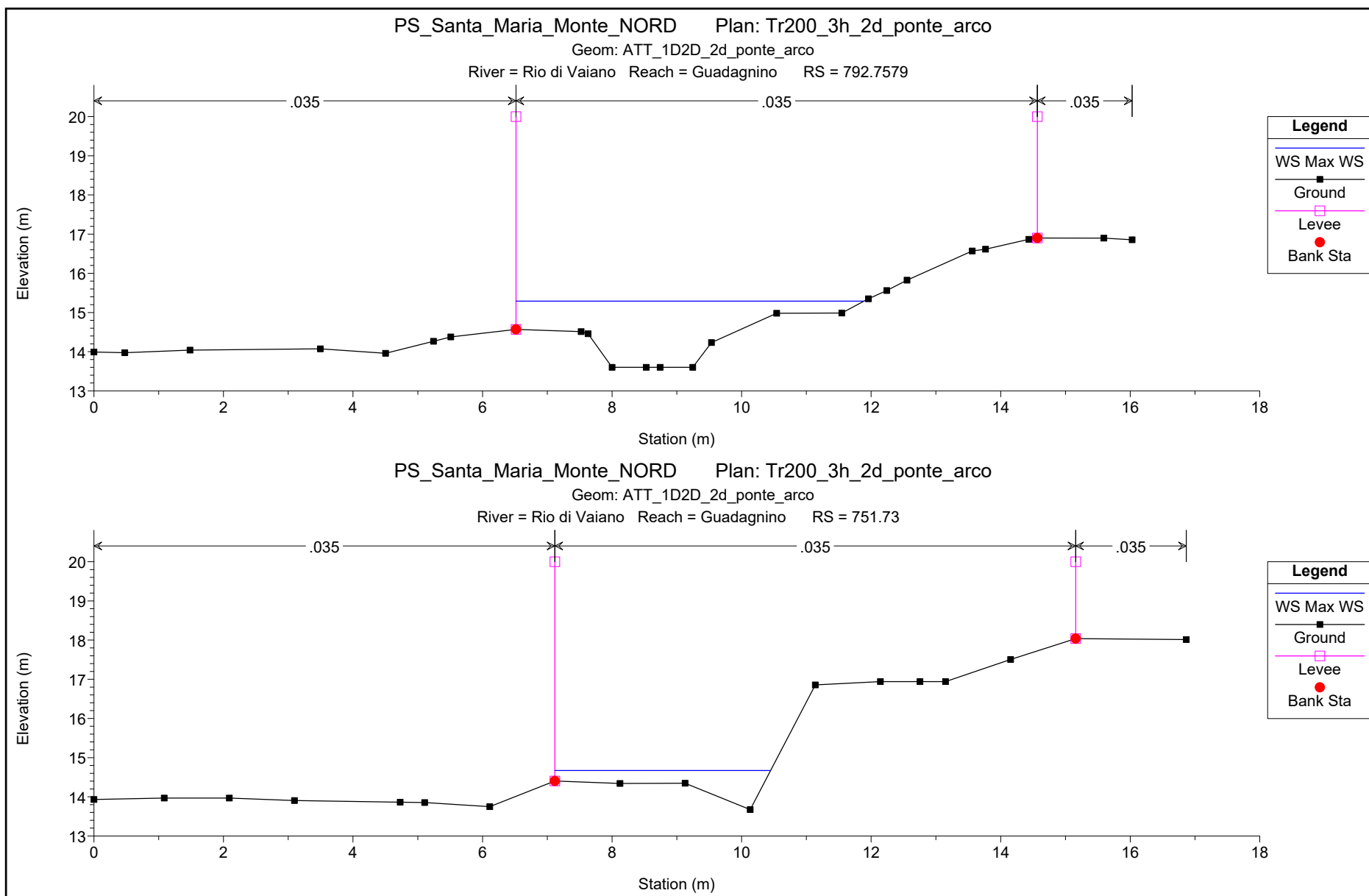
Geom: ATT_1D2D_2d_ponte_arco

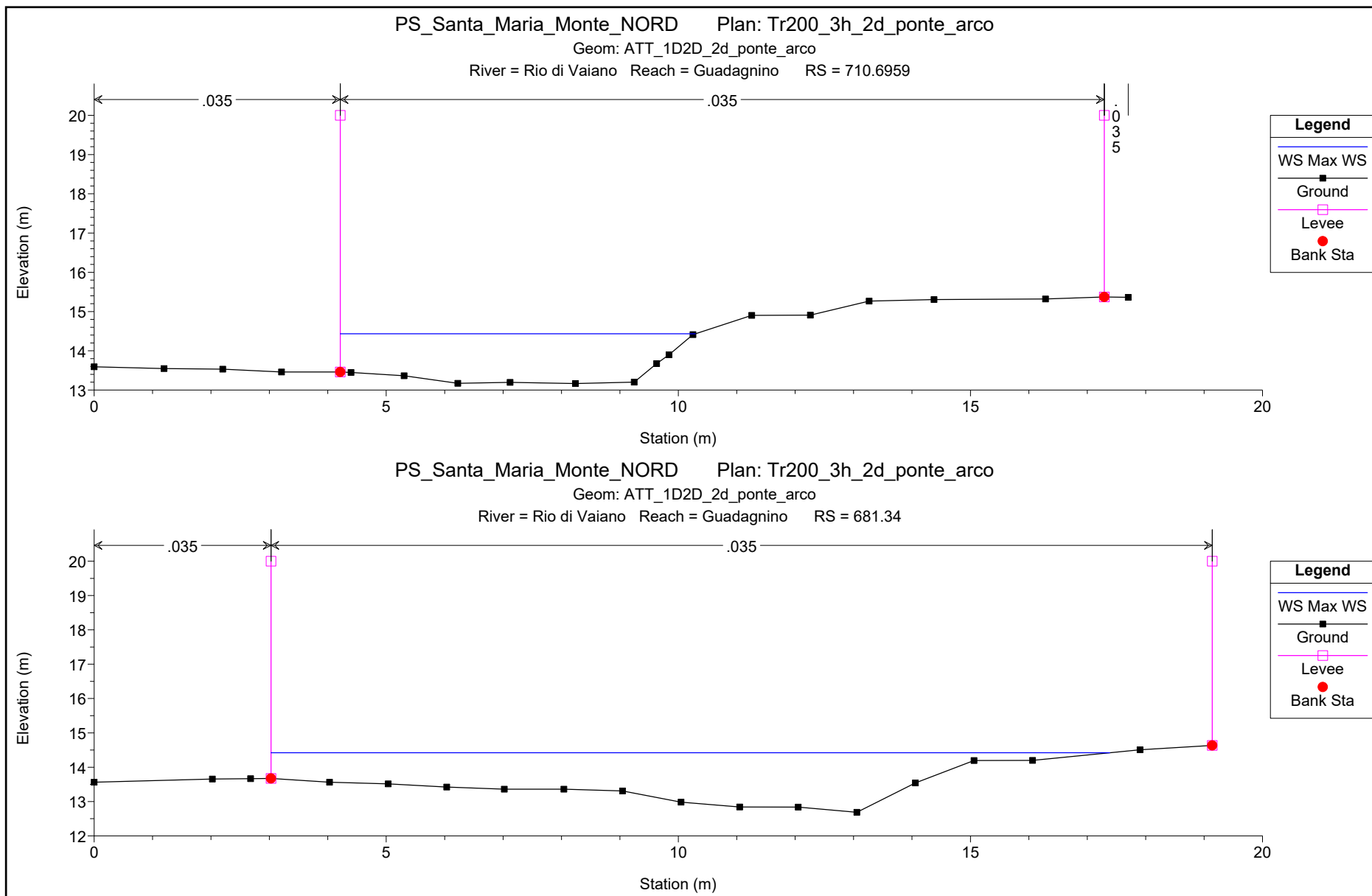
River = Rio di Vaiano Reach = Guadagnino RS = 928







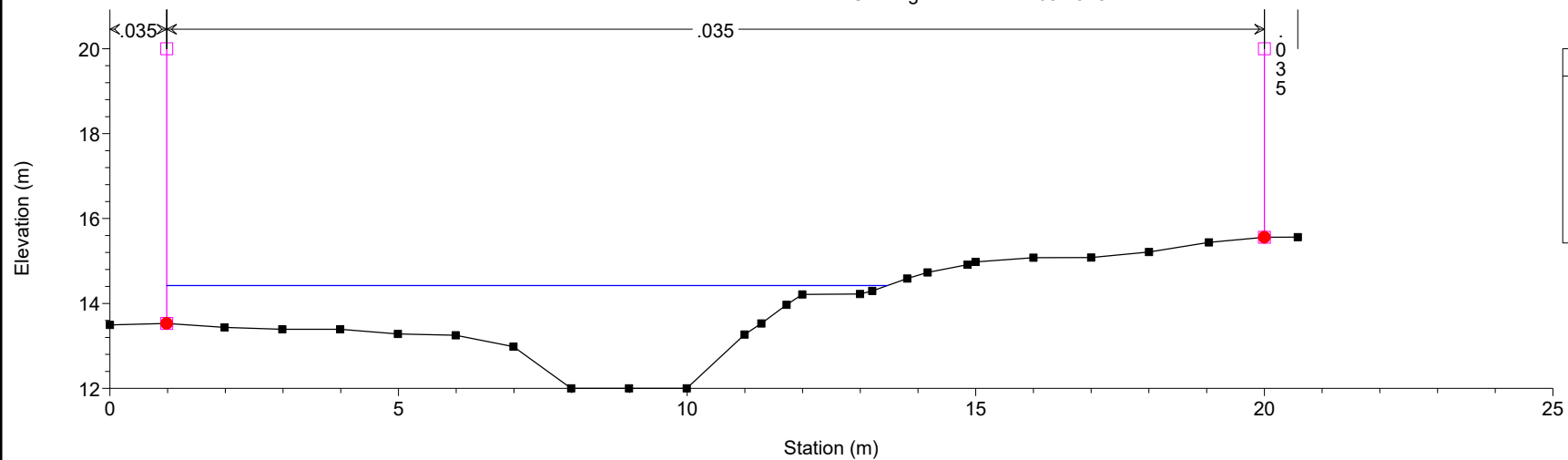




PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

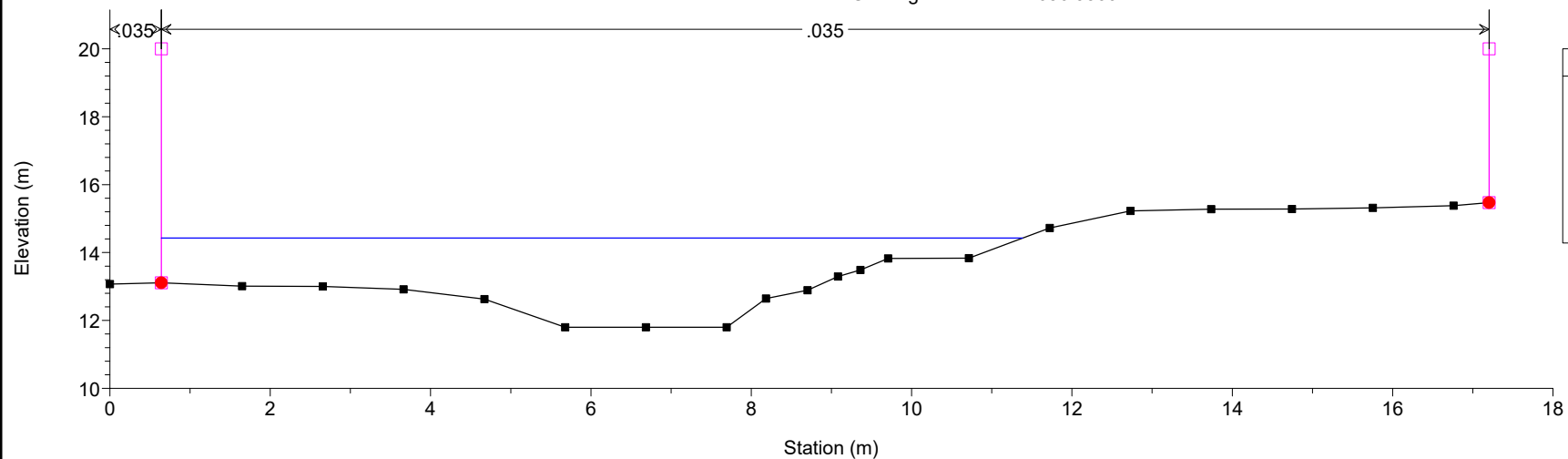
River = Rio di Vaiano Reach = Guadagnino RS = 651.9784

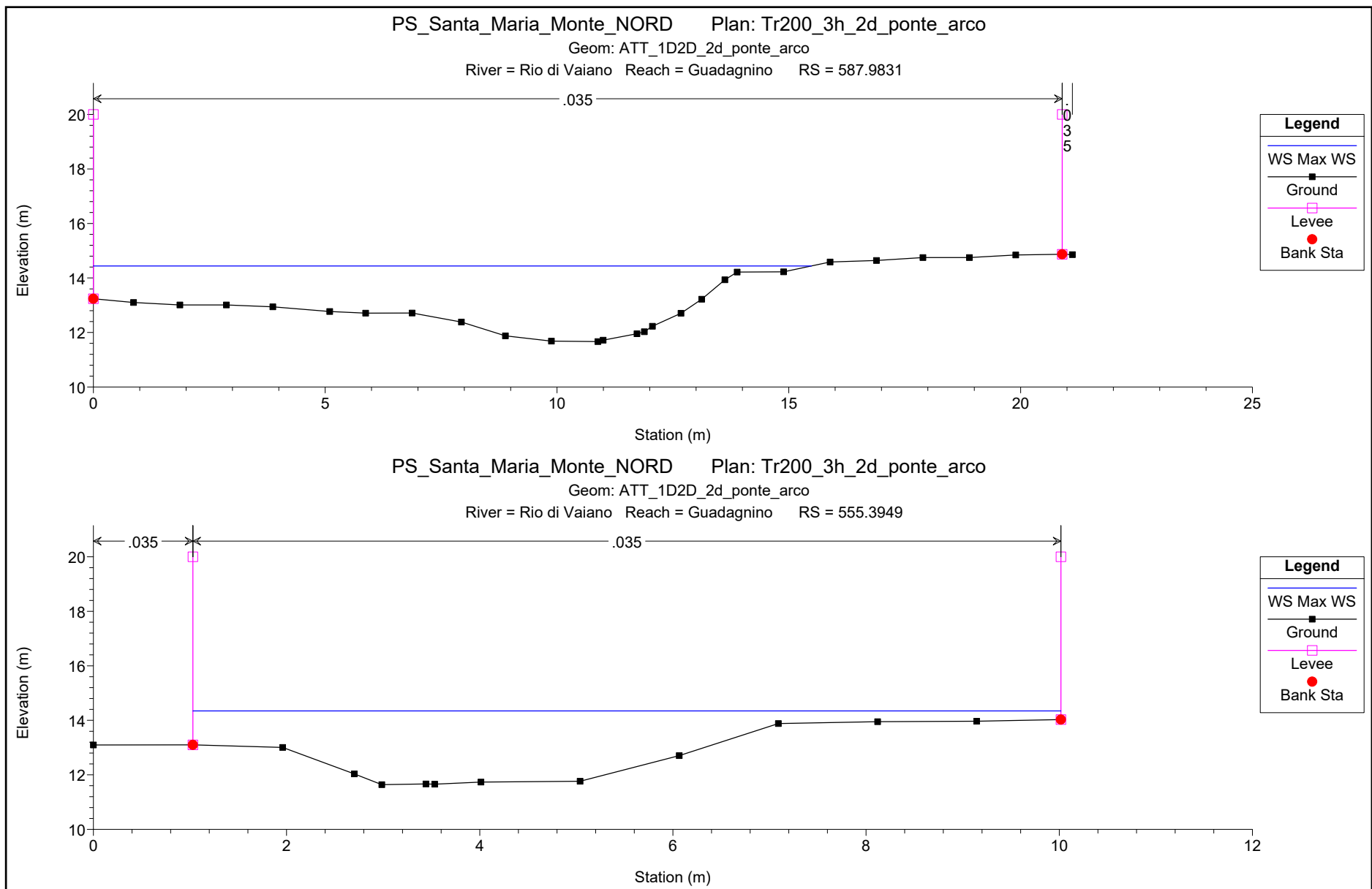


PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

River = Rio di Vaiano Reach = Guadagnino RS = 636.9300





HEC-RAS Plan: Tr200_3h_2d_ponte_arco River: Rio di Vaiano Reach: Guadagnino Profile: Max WS

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Guadagnino	1585	12.25	23.38	24.51	24.49	24.82	0.014543	2.46	4.99	7.38	0.95
Guadagnino	1581	Lat Struct									
Guadagnino	1580	Lat Struct									
Guadagnino	1542	8.92	22.70	24.20		24.24	0.001159	0.91	9.78	9.21	0.28
Guadagnino	1499.45	12.37	22.00	23.78	23.77	24.09	0.017132	2.46	5.03	7.94	0.99
Guadagnino	1456.680	11.35	21.62	22.62	22.80	23.25	0.037075	3.51	3.24	5.28	1.43
Guadagnino	1445.049	11.38	21.56	22.33	22.31	22.57	0.015070	2.18	5.23	9.81	0.95
Guadagnino	1398.57	6.69	20.86	21.90		22.03	0.006260	1.61	4.16	5.84	0.61
Guadagnino	1352.093	8.90	20.22	21.66		21.75	0.002930	1.28	6.96	8.00	0.44
Guadagnino	1334.327	8.31	19.90	21.41	21.40	21.83	0.020839	2.85	2.92	3.42	0.98
Guadagnino	1297	3.00	19.80	21.20		21.22	0.001194	0.71	4.24	5.25	0.25
Guadagnino	1259.596	3.00	19.20	21.19		21.19	0.000096	0.26	11.35	9.68	0.08
Guadagnino	1250	3.00	19.00	21.17		21.19	0.000599	0.61	5.61	9.50	0.16
Guadagnino	1200	Culvert									
Guadagnino	1180	3.00	17.25	18.34		18.49	0.008737	1.69	1.77	2.25	0.61
Guadagnino	1164.293	3.00	17.17	18.10	18.10	18.36	0.021360	2.24	1.34	2.61	1.00
Guadagnino	1151	Lat Struct									
Guadagnino	1150	Lat Struct									
Guadagnino	1134.36	1.79	16.32	17.27		17.33	0.004630	1.06	1.69	3.65	0.50
Guadagnino	1104.435	2.86	16.00	16.94		17.06	0.007796	1.56	1.84	2.69	0.60
Guadagnino	1085	3.79	14.90	16.86		16.88	0.000549	0.59	6.42	5.61	0.18
Guadagnino	1070	Culvert									
Guadagnino	1061.654	3.78	14.90	16.53		16.58	0.003579	1.03	3.68	5.90	0.41
Guadagnino	1051	Lat Struct									
Guadagnino	1050	Lat Struct									
Guadagnino	1021.293	7.01	14.77	16.24		16.33	0.004607	1.35	5.19	7.58	0.52
Guadagnino	991.29	6.26	14.55	16.13		16.22	0.002876	1.32	4.73	4.32	0.40
Guadagnino	959	3.99	14.00	16.18		16.19	0.000326	0.47	8.45	7.20	0.14
Guadagnino	940	Culvert									
Guadagnino	928	3.00	13.80	15.63		15.65	0.000482	0.55	5.47	4.81	0.16
Guadagnino	921	Lat Struct									
Guadagnino	920	Lat Struct									
Guadagnino	891.81	3.00	14.10	15.59		15.61	0.001245	0.74	4.05	4.95	0.26
Guadagnino	855.10	3.00	14.00	15.41		15.48	0.005705	1.14	2.64	5.44	0.52
Guadagnino	818.3881	3.00	13.60	15.33		15.35	0.000576	0.47	6.38	9.44	0.18

HEC-RAS Plan: Tr200_3h_2d_ponte_arco River: Rio di Vaiano Reach: Guadagnino Profile: Max WS (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Guadagnino	800	Culvert									
Guadagnino	792.7579	3.00	13.60	15.29		15.31	0.000822	0.62	4.86	5.38	0.21
Guadagnino	791	Lat Struct									
Guadagnino	790	Lat Struct									
Guadagnino	751.73	3.00	13.67	14.67	14.67	14.89	0.023949	2.07	1.45	3.33	1.00
Guadagnino	710.6959	-0.21	13.16	14.43		14.43	0.000001	-0.03	6.60	6.08	0.01
Guadagnino	681.34	3.60	12.69	14.42		14.42	0.000092	0.25	14.12	14.36	0.08
Guadagnino	651.9784	6.16	12.00	14.42		14.43	0.000164	0.38	16.02	12.48	0.11
Guadagnino	636.9300	7.37	11.80	14.43		14.43	0.000161	0.43	17.27	10.74	0.11
Guadagnino	587.9831	9.57	11.67	14.44		14.45	0.000106	0.37	25.69	15.49	0.09
Guadagnino	555.3949	13.48	11.64	14.35		14.40	0.001181	1.03	13.07	8.99	0.27

VERIFICHE IDRAULICHE

SISTEMA IDRAULICO RIO NERO – RIO DELLA SELVA

Tr 30 anni

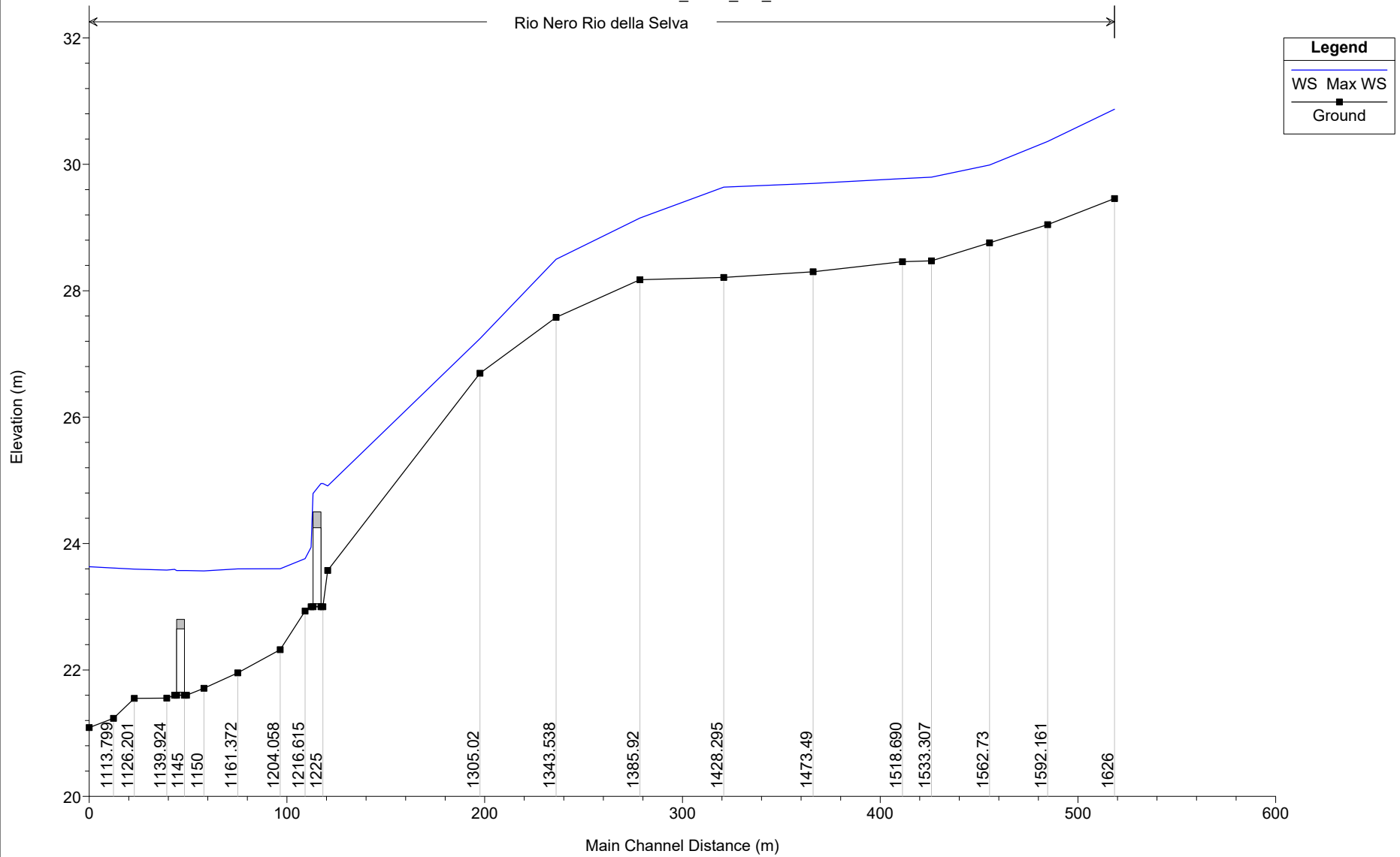
RIO NERO – Tp 1 ora
Tr=30 anni

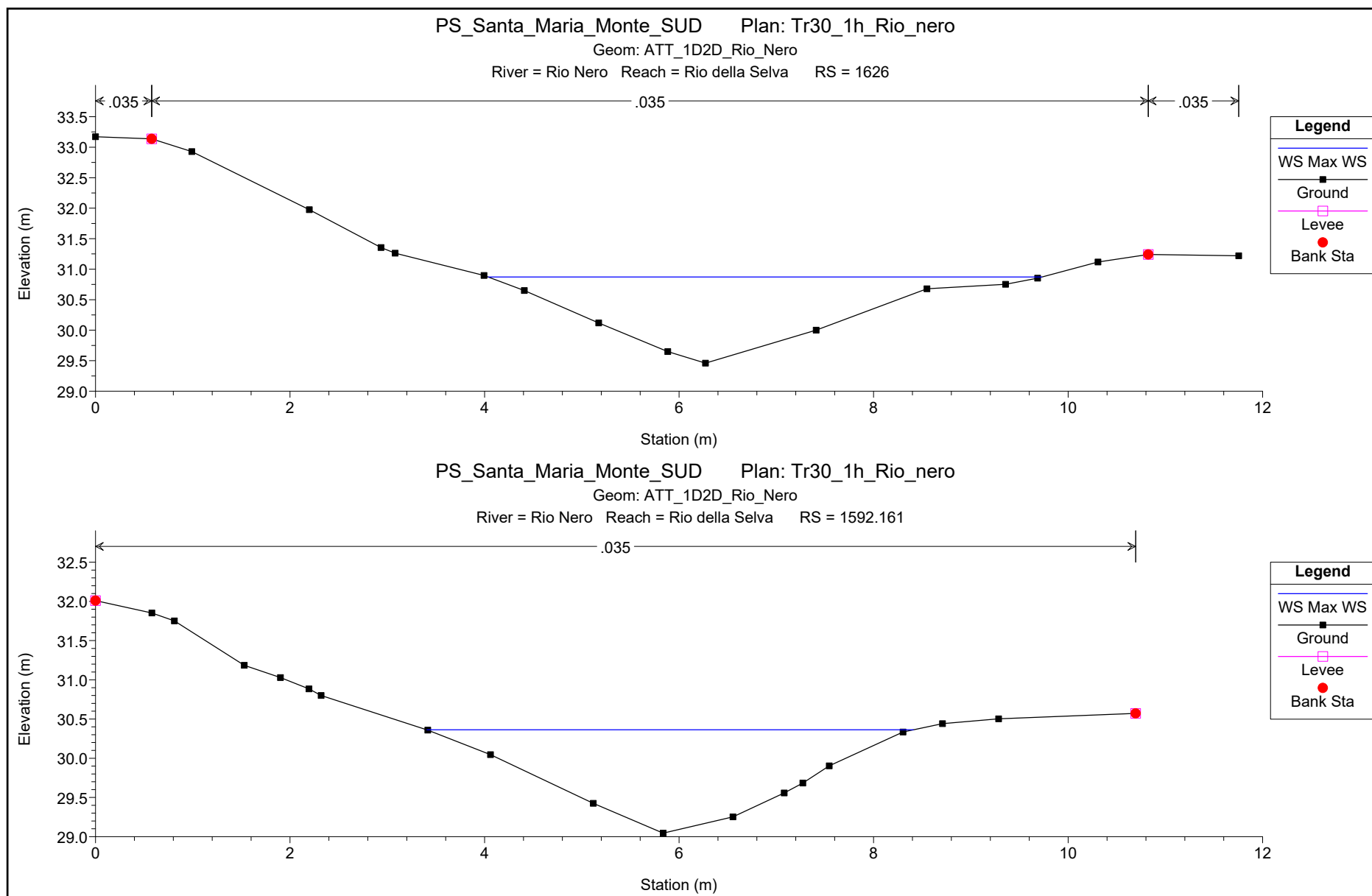
Tratto di monte

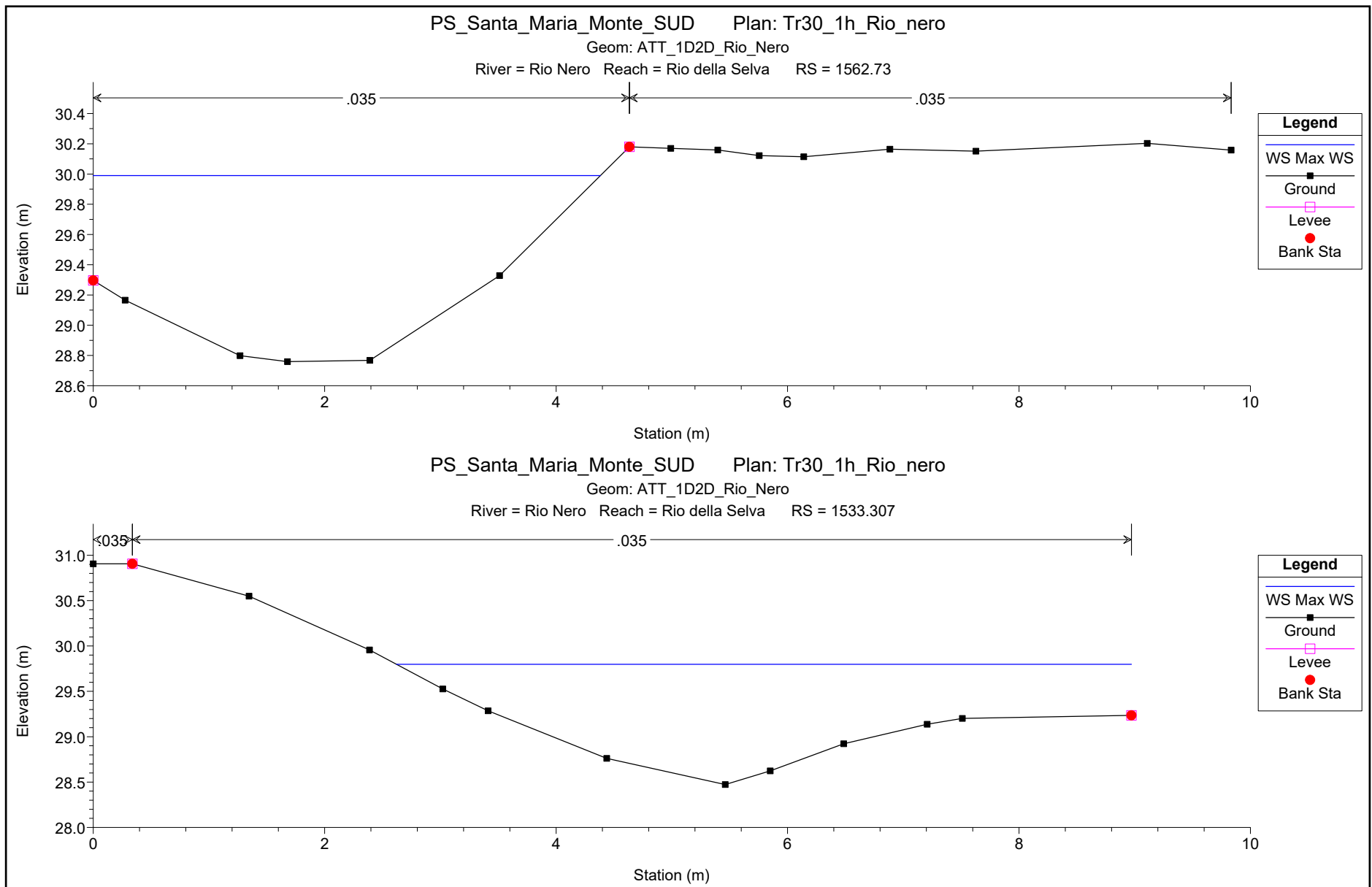
PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

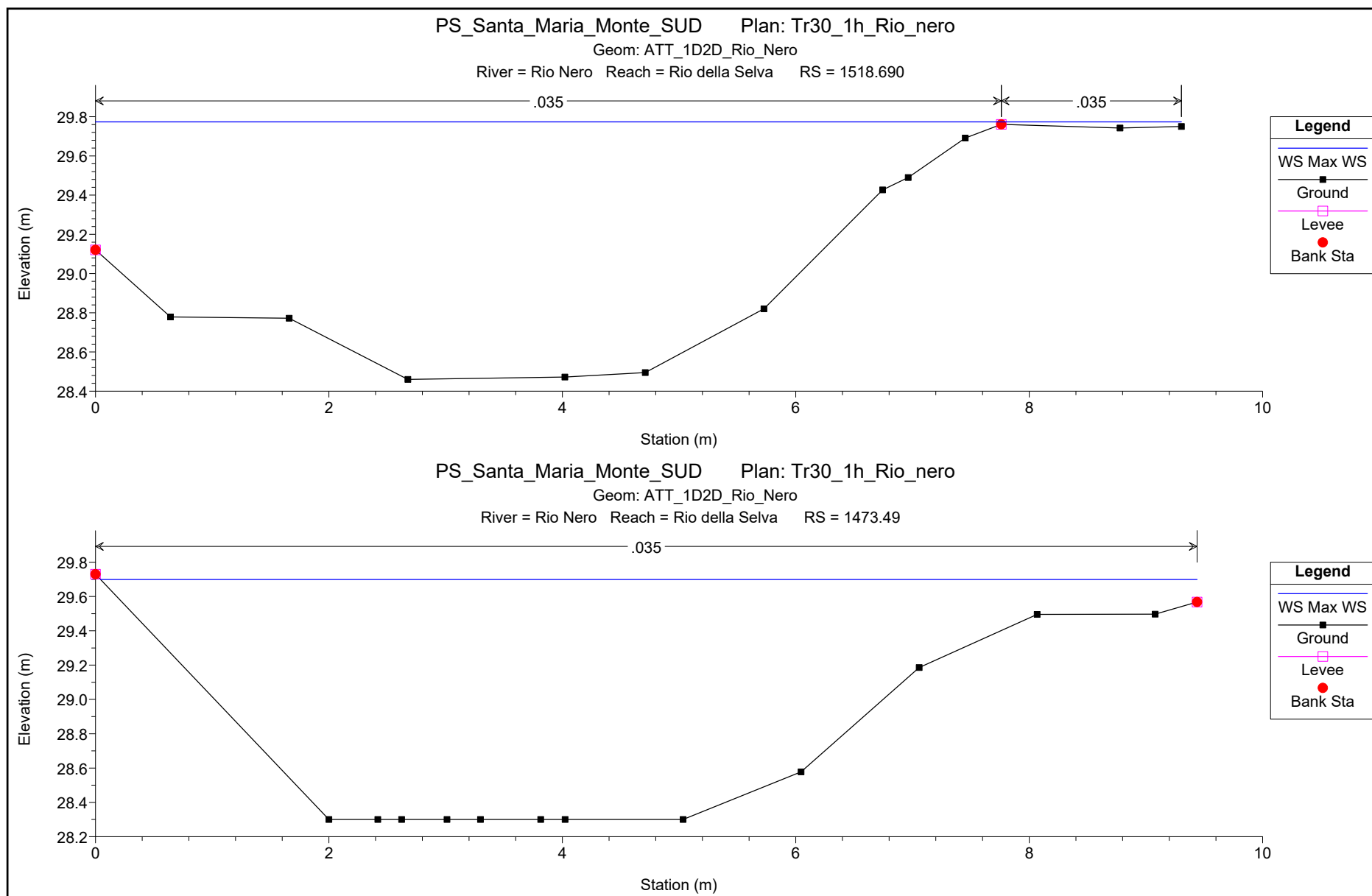
Geom: ATT_1D2D_Rio_Nero

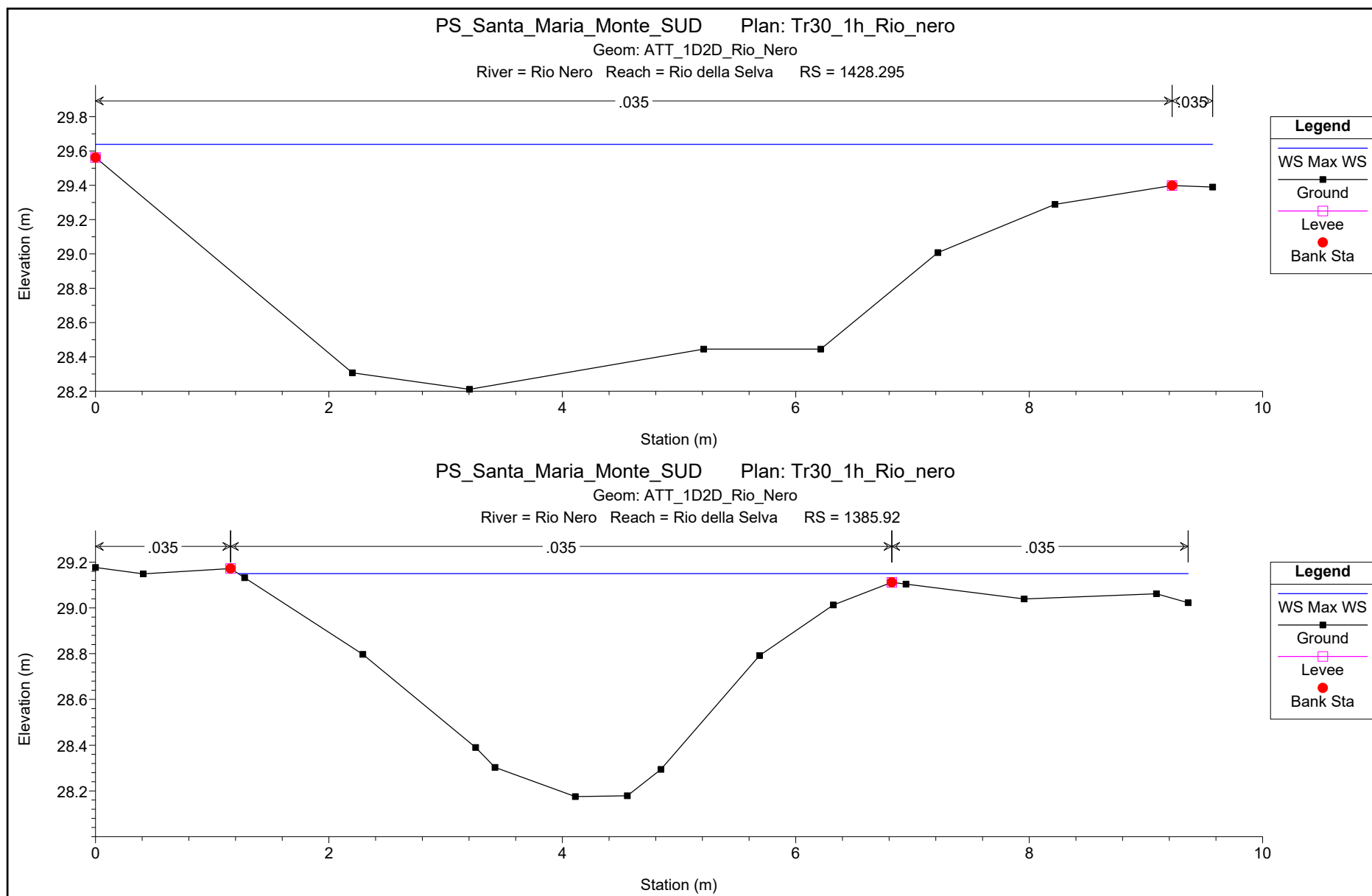
Rio Nero Rio della Selva







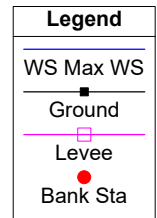
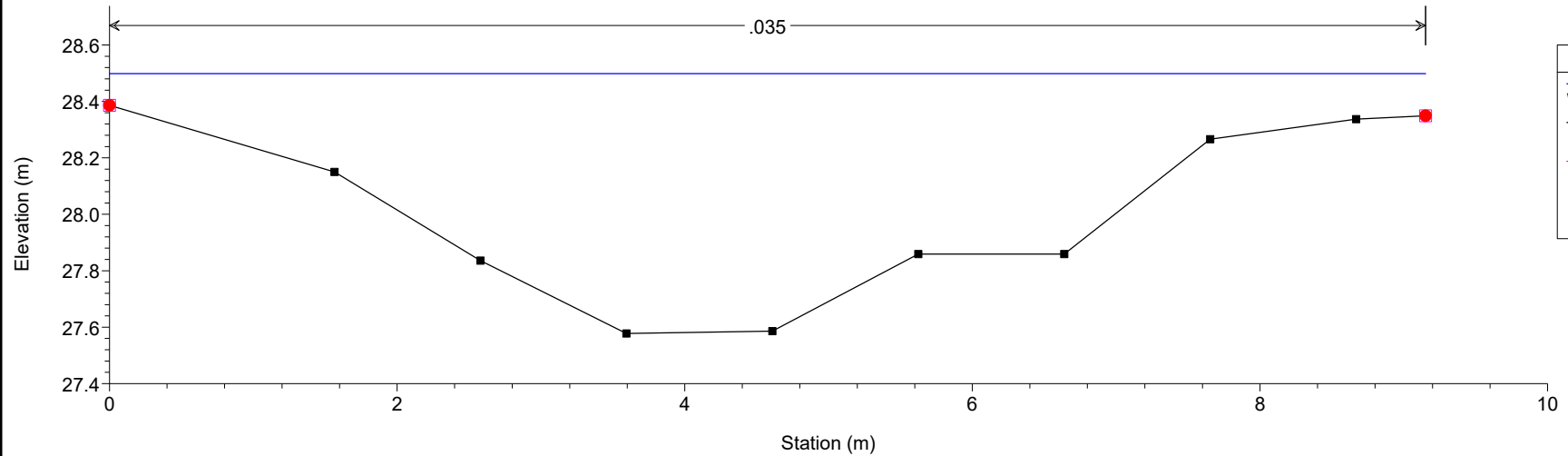




PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

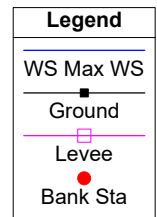
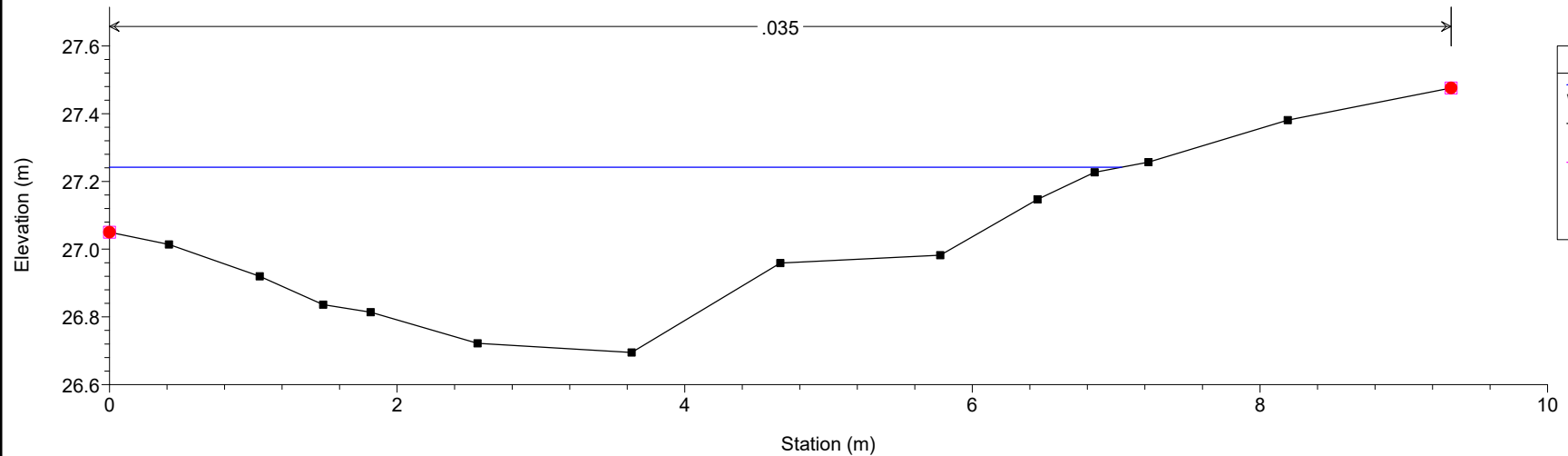
River = Rio Nero Reach = Rio della Selva RS = 1343.538

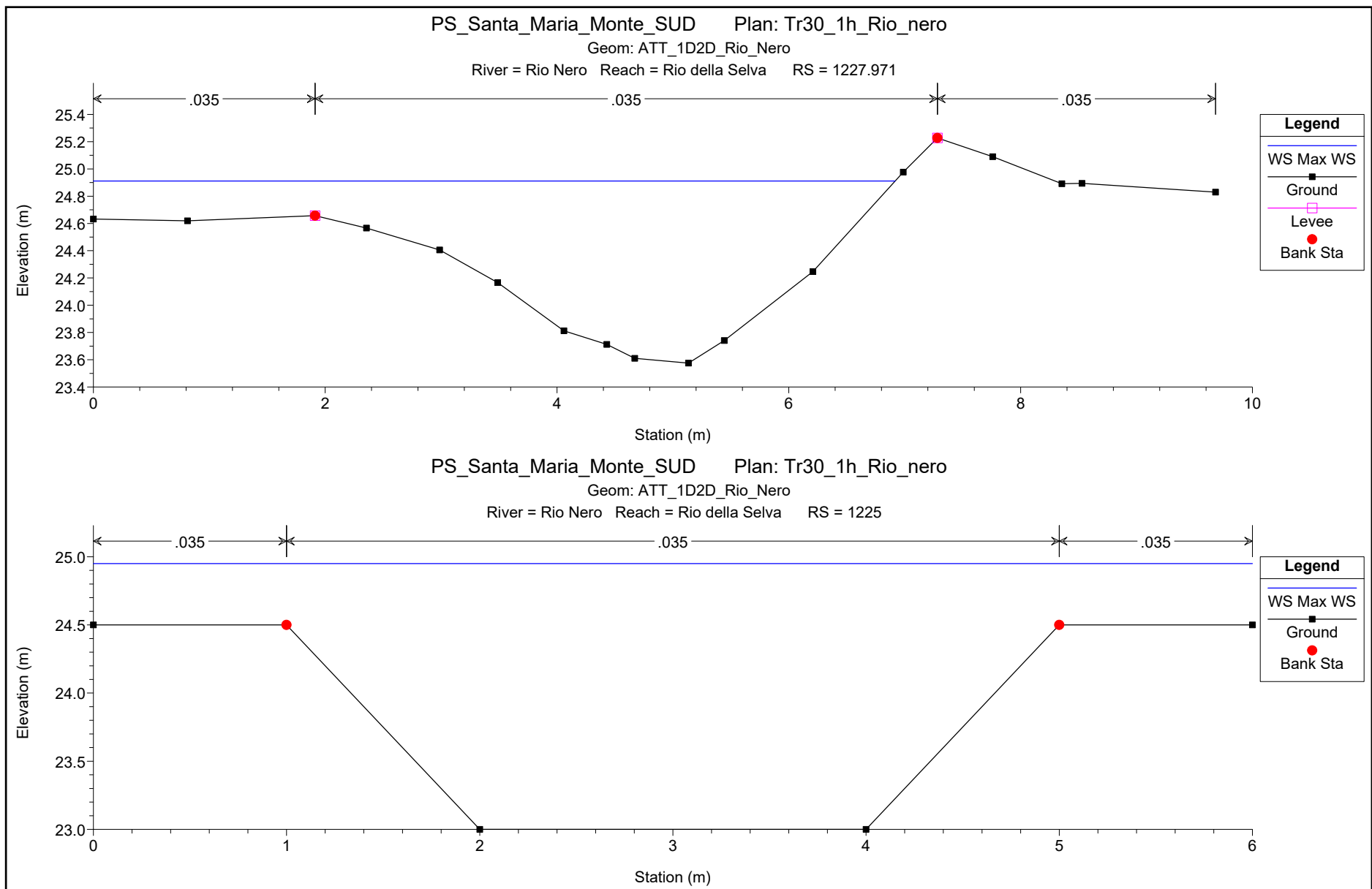


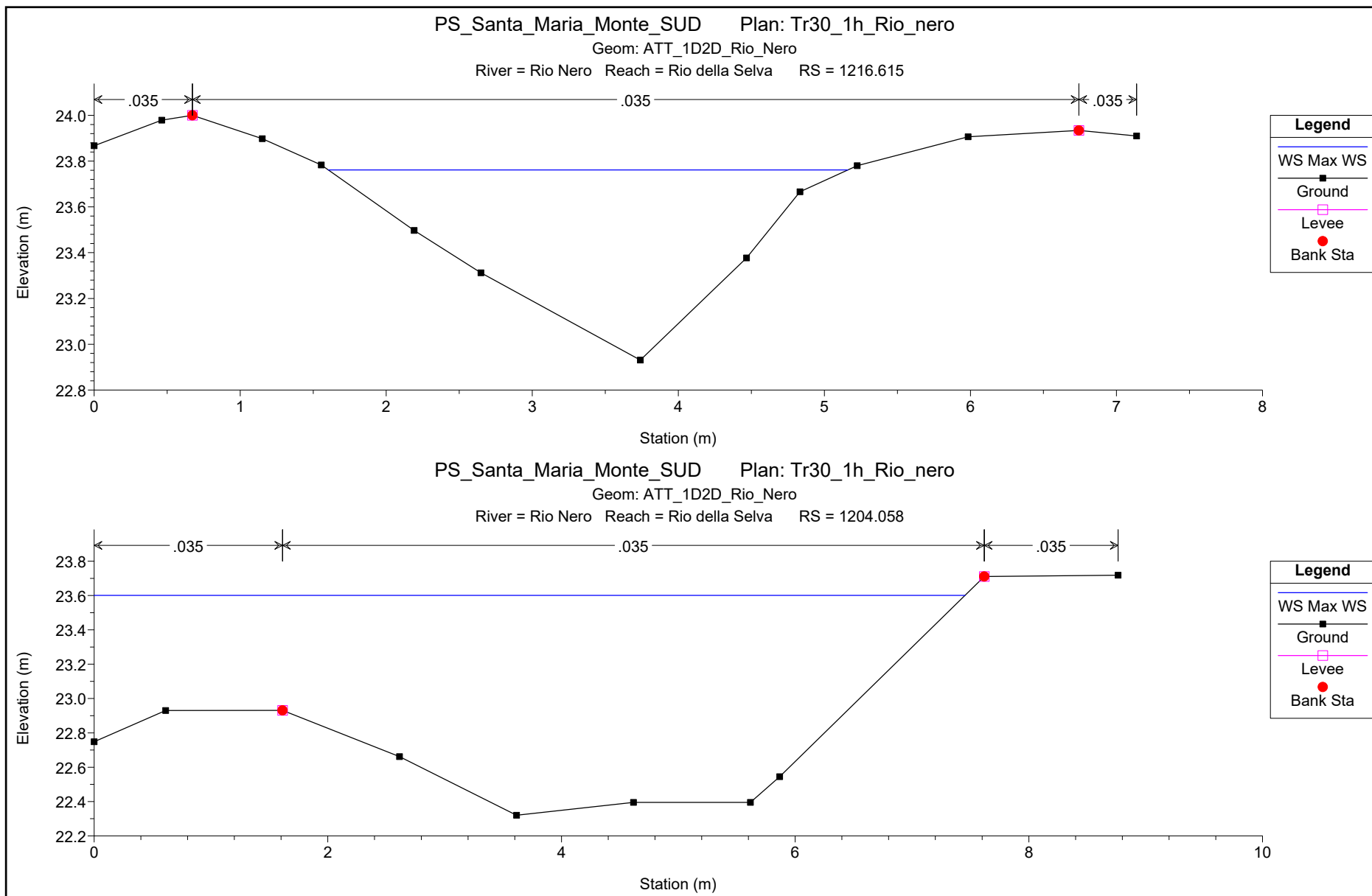
PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

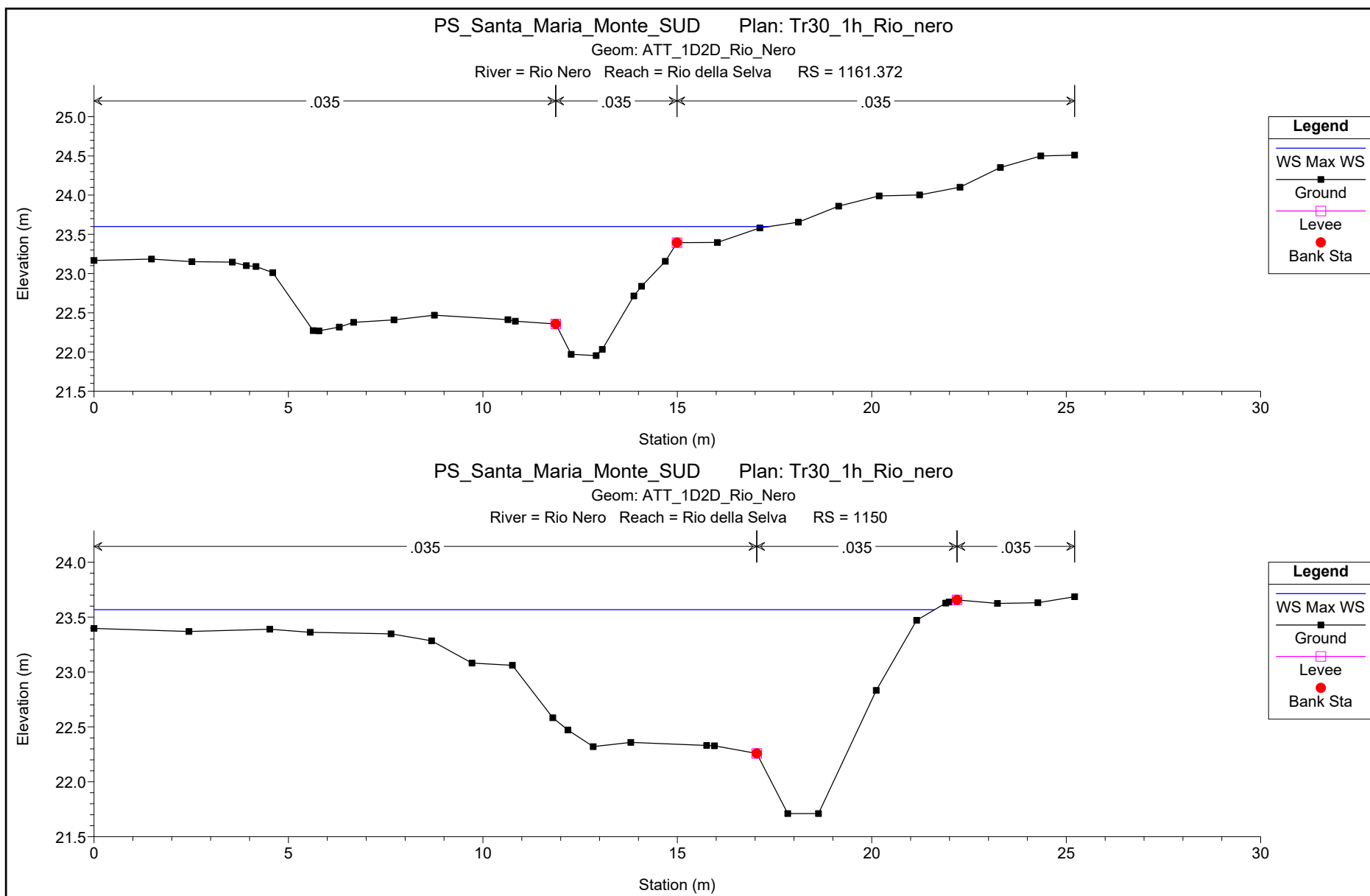
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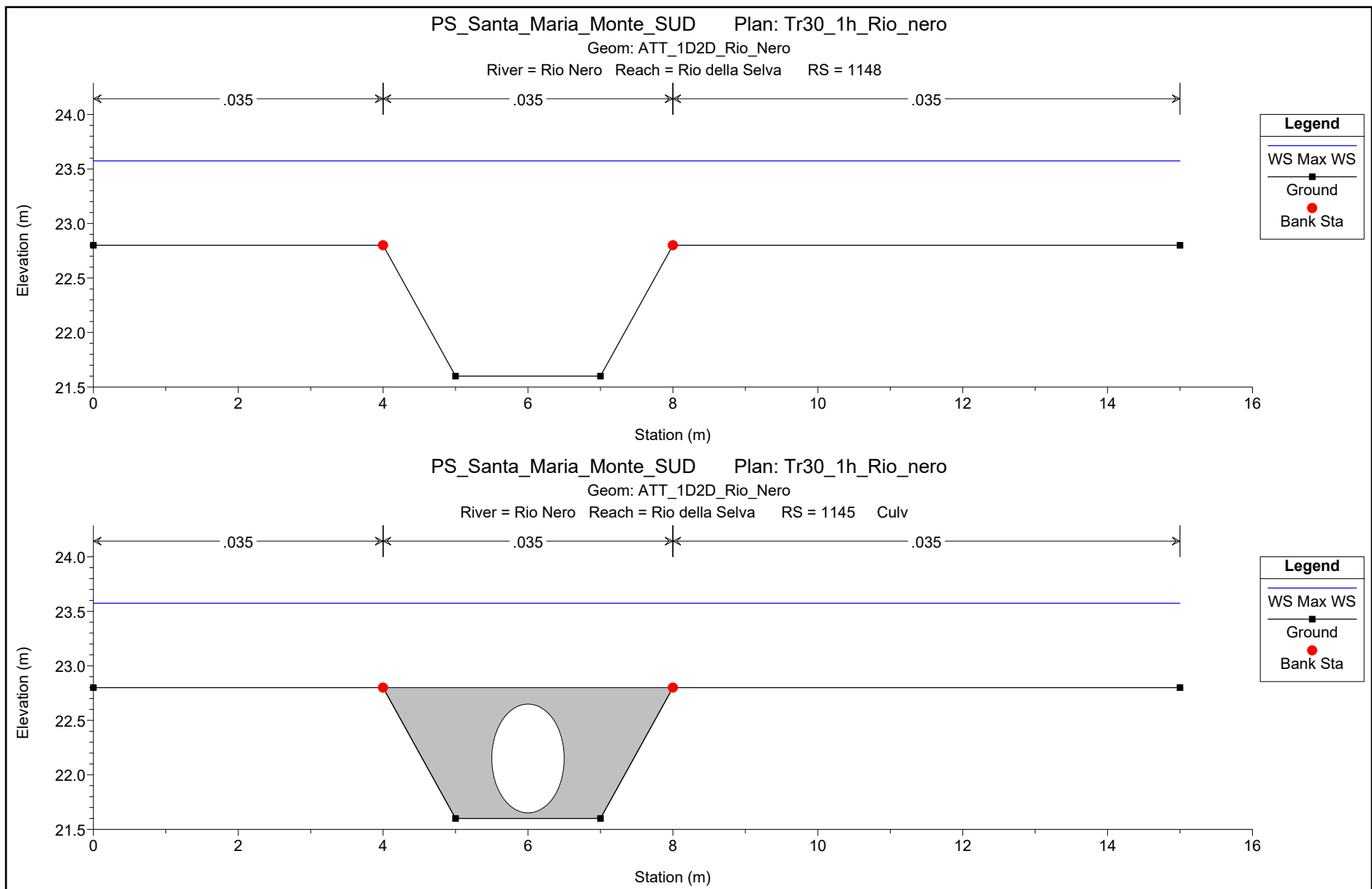
River = Rio Nero Reach = Rio della Selva RS = 1305.02

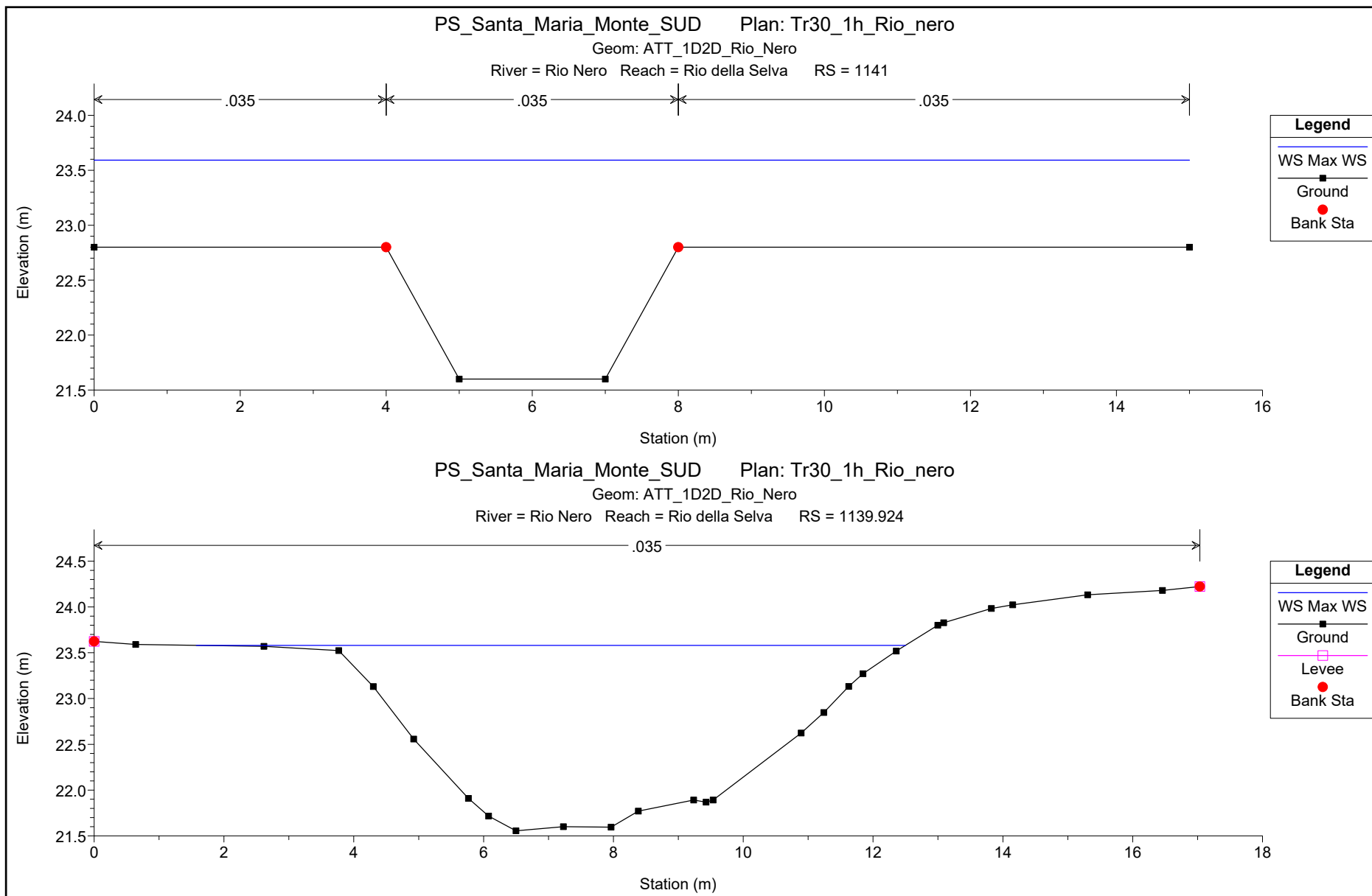


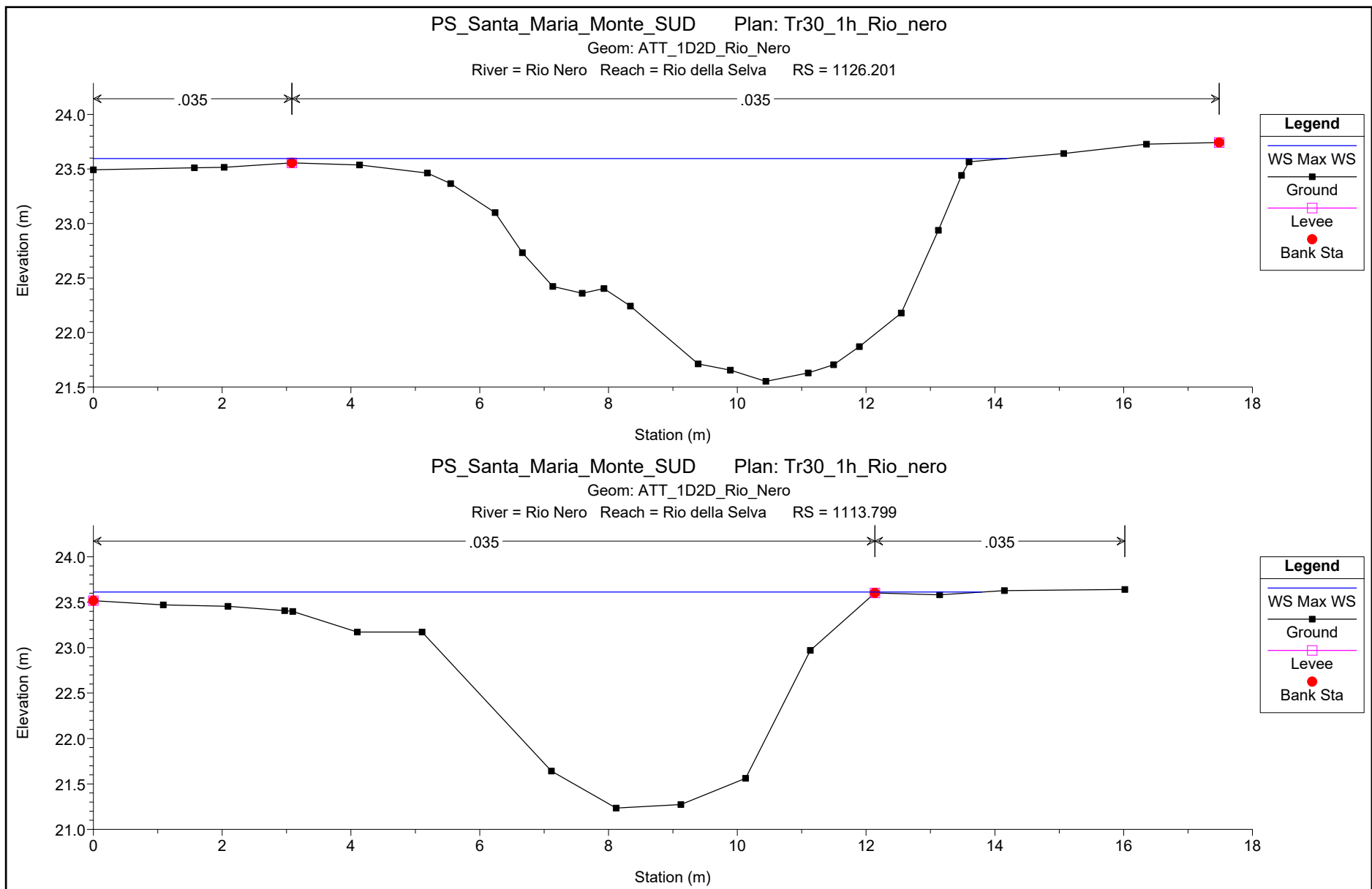








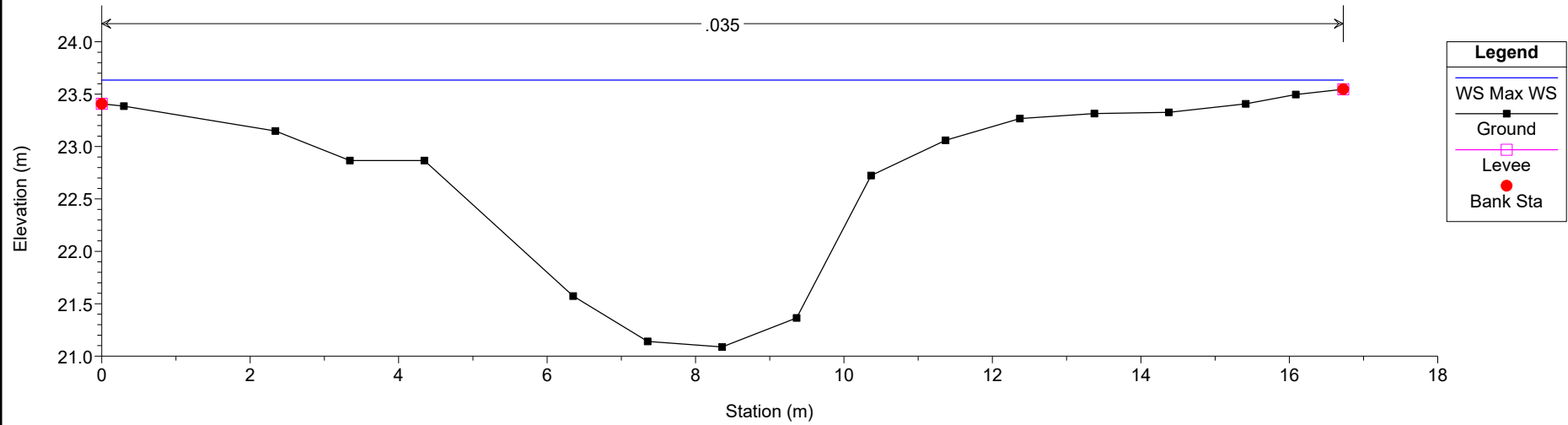




PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

River = Rio Nero Reach = Rio della Selva RS = 1105.224



HEC-RAS Plan: Tr30_1h_Rio_nero River: Rio Nero Reach: Rio della Selva Profile: Max WS

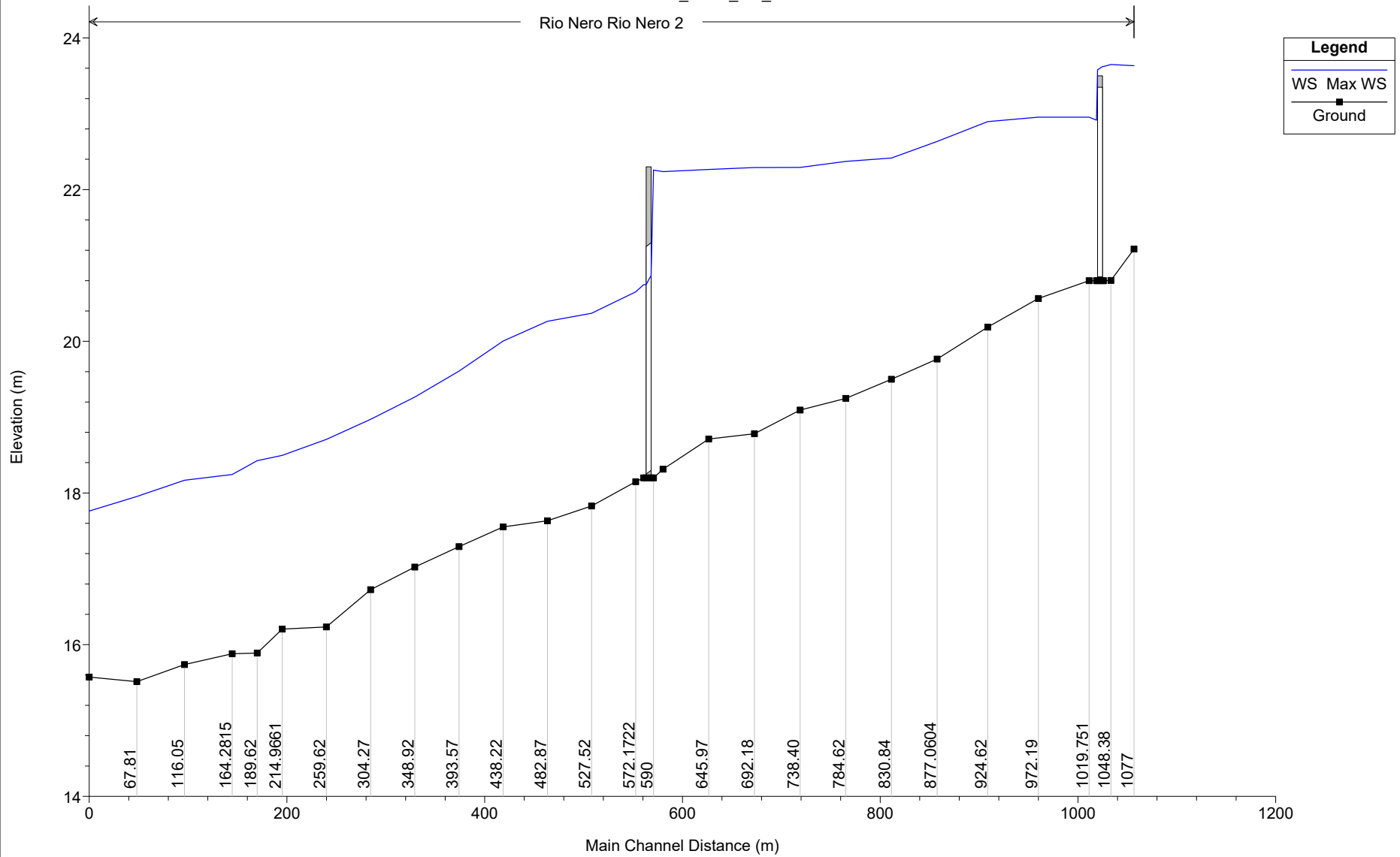
Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio della Selva	1626	8.80	29.46	30.87	30.85	31.16	0.014774	2.39	3.68	5.69	0.95
Rio della Selva	1610	Lat Struct									
Rio della Selva	1592.161	8.79	29.05	30.36	30.35	30.70	0.015692	2.56	3.43	5.00	0.99
Rio della Selva	1562.73	8.78	28.76	29.99		30.24	0.009705	2.24	3.92	4.38	0.76
Rio della Selva	1533.307	8.01	28.47	29.80		29.93	0.005486	1.62	4.94	6.35	0.59
Rio della Selva	1518.690	8.69	28.46	29.77		29.85	0.002192	1.18	7.38	9.30	0.39
Rio della Selva	1473.49	8.71	28.30	29.70		29.75	0.001753	1.04	8.34	9.40	0.35
Rio della Selva	1428.295	8.31	28.21	29.64		29.69	0.001434	0.98	8.55	9.57	0.33
Rio della Selva	1385.92	7.69	28.18	29.15	29.24	29.48	0.021584	2.59	3.12	8.14	1.15
Rio della Selva	1381	Lat Struct									
Rio della Selva	1343.538	8.13	27.58	28.50		28.65	0.009141	1.71	4.76	9.15	0.76
Rio della Selva	1305.02	7.50	26.69	27.24	27.41	27.76	0.056137	3.18	2.36	7.04	1.76
Rio della Selva	1227.971	6.20	23.58	24.91		25.02	0.004455	1.49	4.44	6.92	0.54
Rio della Selva	1225	6.20	23.00	24.95		24.99	0.000902	0.93	7.20	6.00	0.24
Rio della Selva	1222	Culvert									
Rio della Selva	1218	3.00	23.00	23.94		24.02	0.003718	1.21	2.47	3.26	0.44
Rio della Selva	1216.615	3.00	22.93	23.76	23.76	23.97	0.018483	2.02	1.48	3.56	1.00
Rio della Selva	1211	Lat Struct									
Rio della Selva	1210	Lat Struct									
Rio della Selva	1204.058	2.33	22.32	23.60		23.61	0.000205	0.37	6.63	7.45	0.12
Rio della Selva	1161.372	-3.31	21.95	23.60		23.60	0.000081	-0.25	14.41	17.37	0.07
Rio della Selva	1150	-9.84	21.71	23.57		23.59	0.000870	-0.82	14.91	21.61	0.25
Rio della Selva	1148	-9.85	21.60	23.57		23.60	0.000559	-0.81	15.20	15.00	0.20
Rio della Selva	1145	Culvert									
Rio della Selva	1141	-9.85	21.60	23.59		23.62	0.000530	-0.79	15.48	15.00	0.19
Rio della Selva	1139.924	-9.85	21.56	23.58		23.62	0.001000	-0.87	11.36	10.93	0.27
Rio della Selva	1131	Lat Struct									
Rio della Selva	1130	Lat Struct									
Rio della Selva	1126.201	-9.87	21.55	23.60		23.64	0.001121	-0.89	11.32	14.18	0.28
Rio della Selva	1113.799	-9.88	21.23	23.61		23.65	0.000974	-0.82	12.12	13.80	0.26
Rio della Selva	1111	Lat Struct									
Rio della Selva	1110	Lat Struct									
Rio della Selva	1105.224	-10.07	21.09	23.63		23.65	0.000558	-0.62	16.22	16.73	0.20

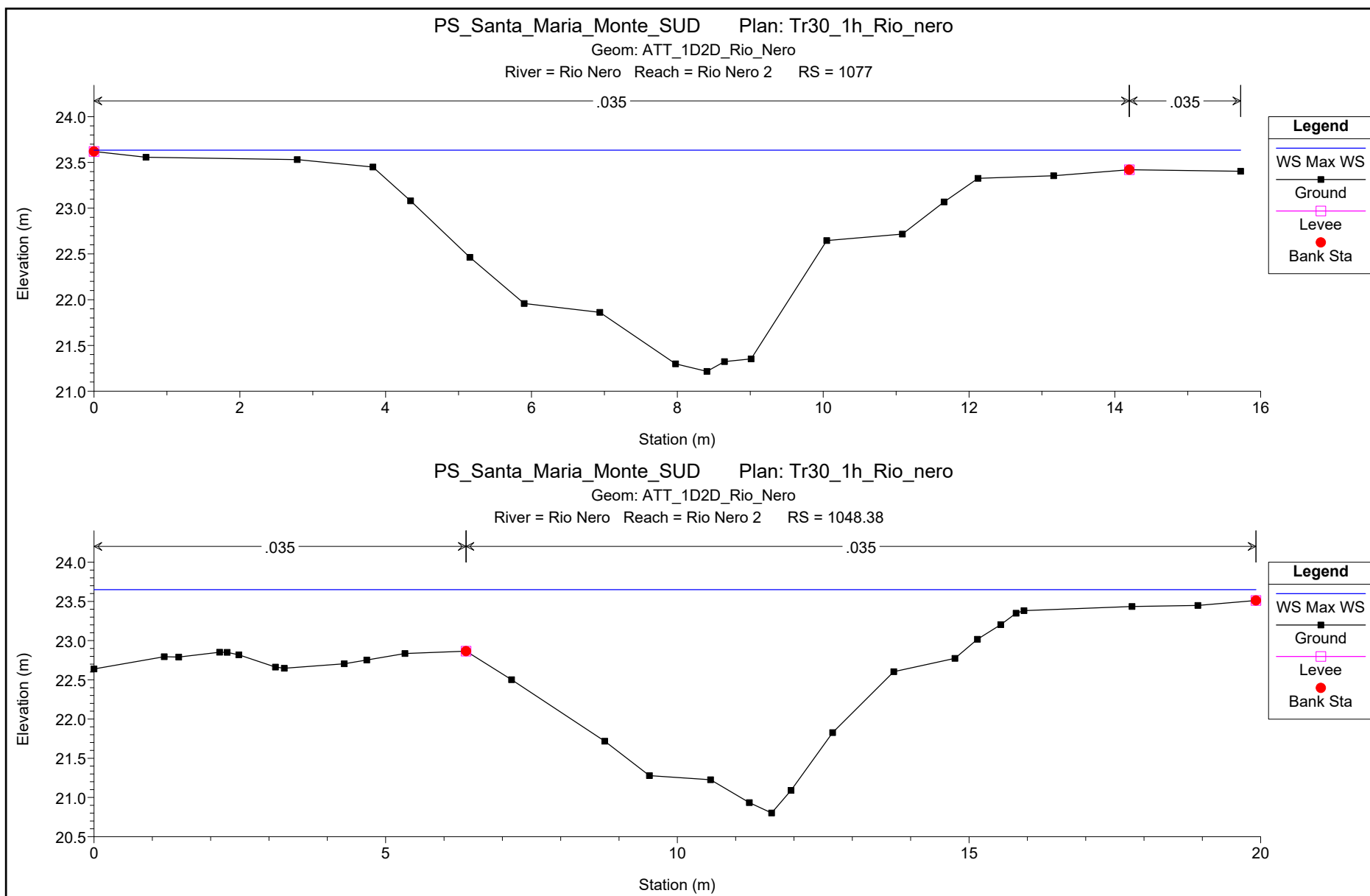
RIO NERO – Tp 1 ora
Tr=30 anni

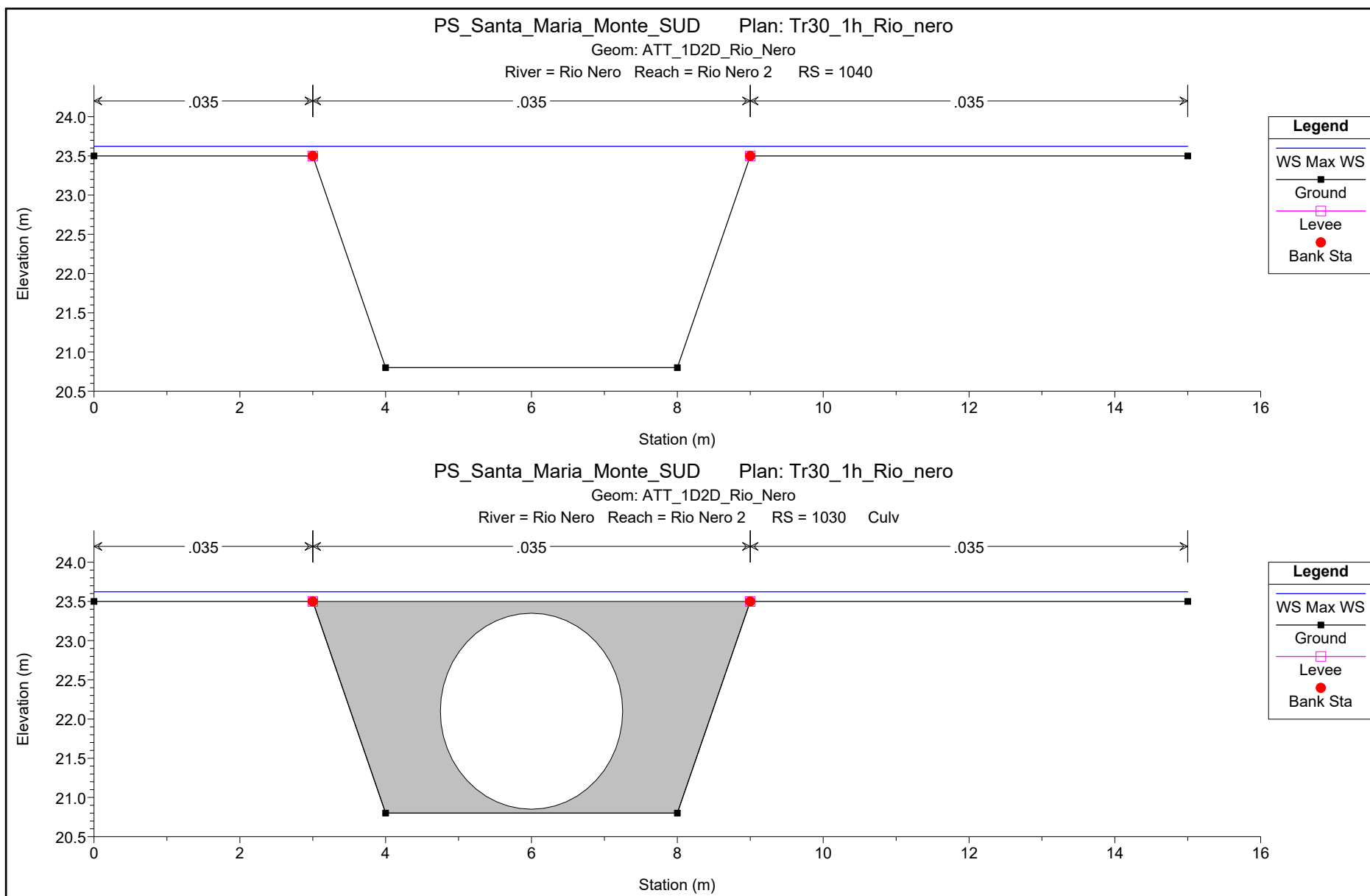
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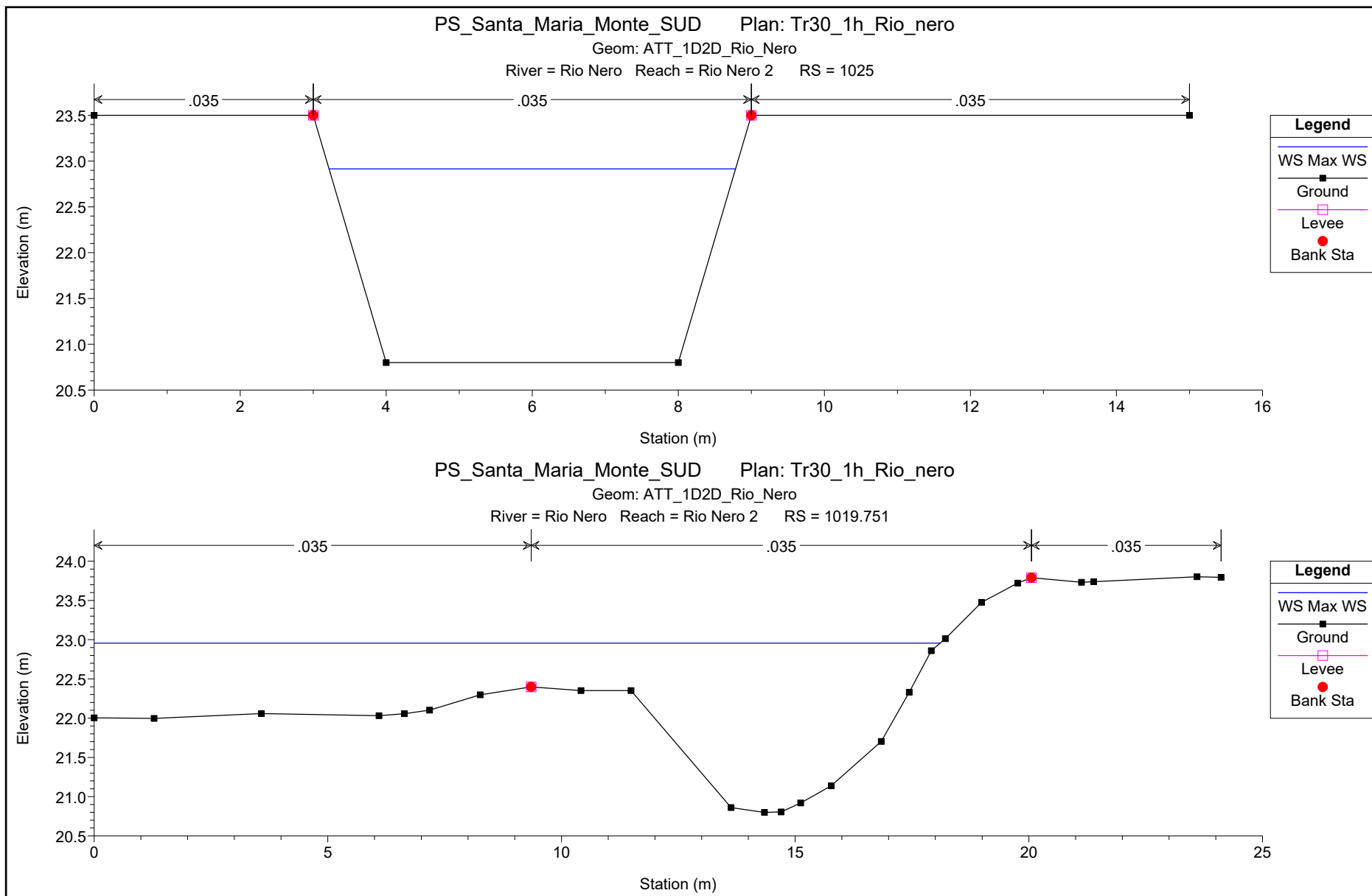
PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero





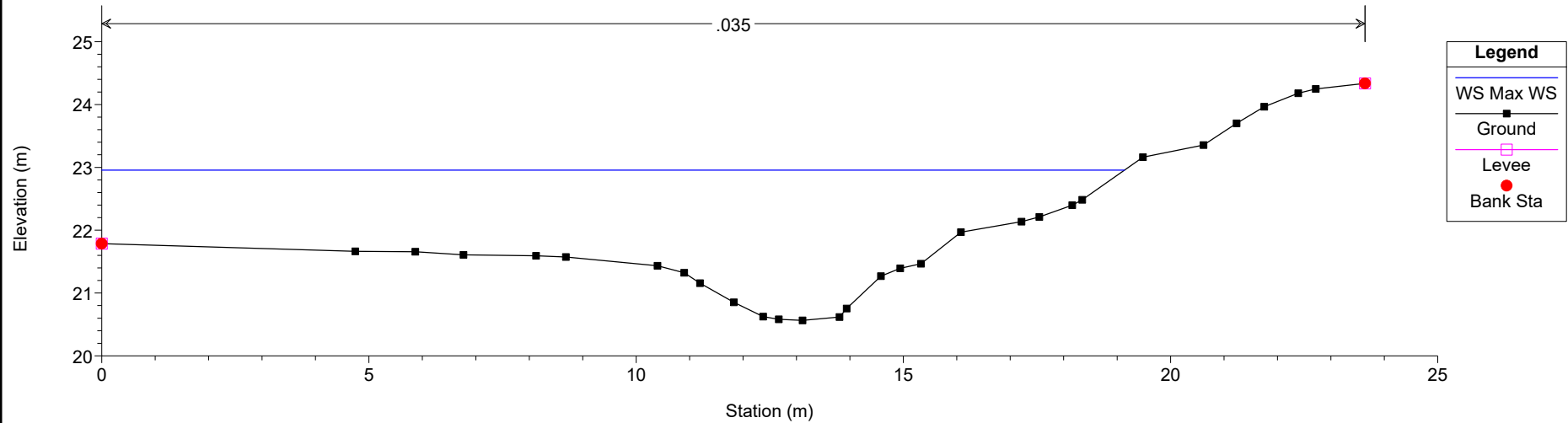




PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

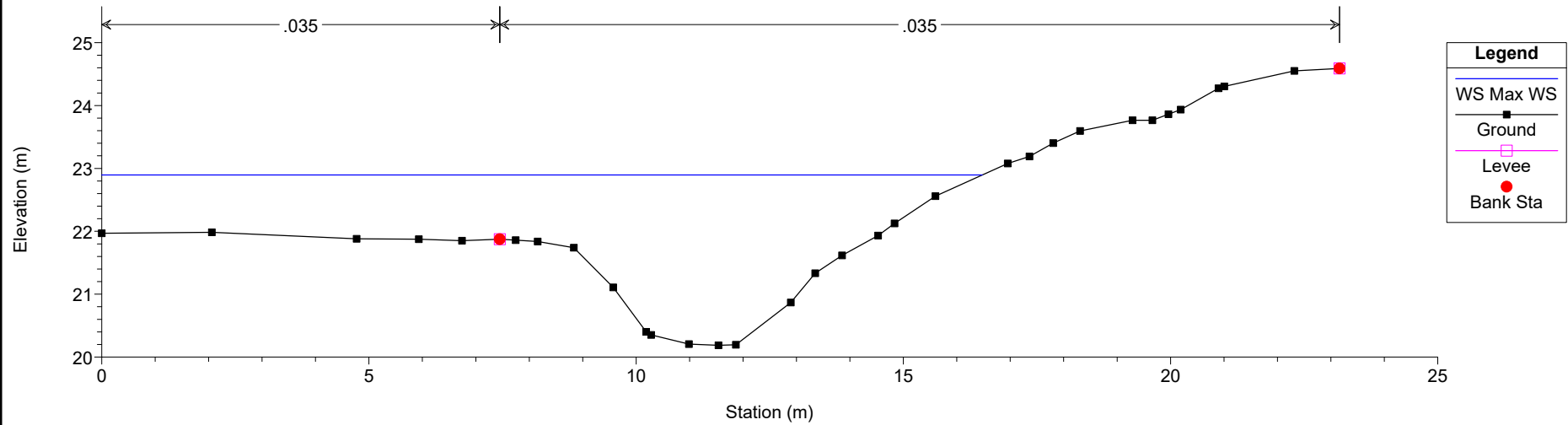
River = Rio Nero Reach = Rio Nero 2 RS = 972.19

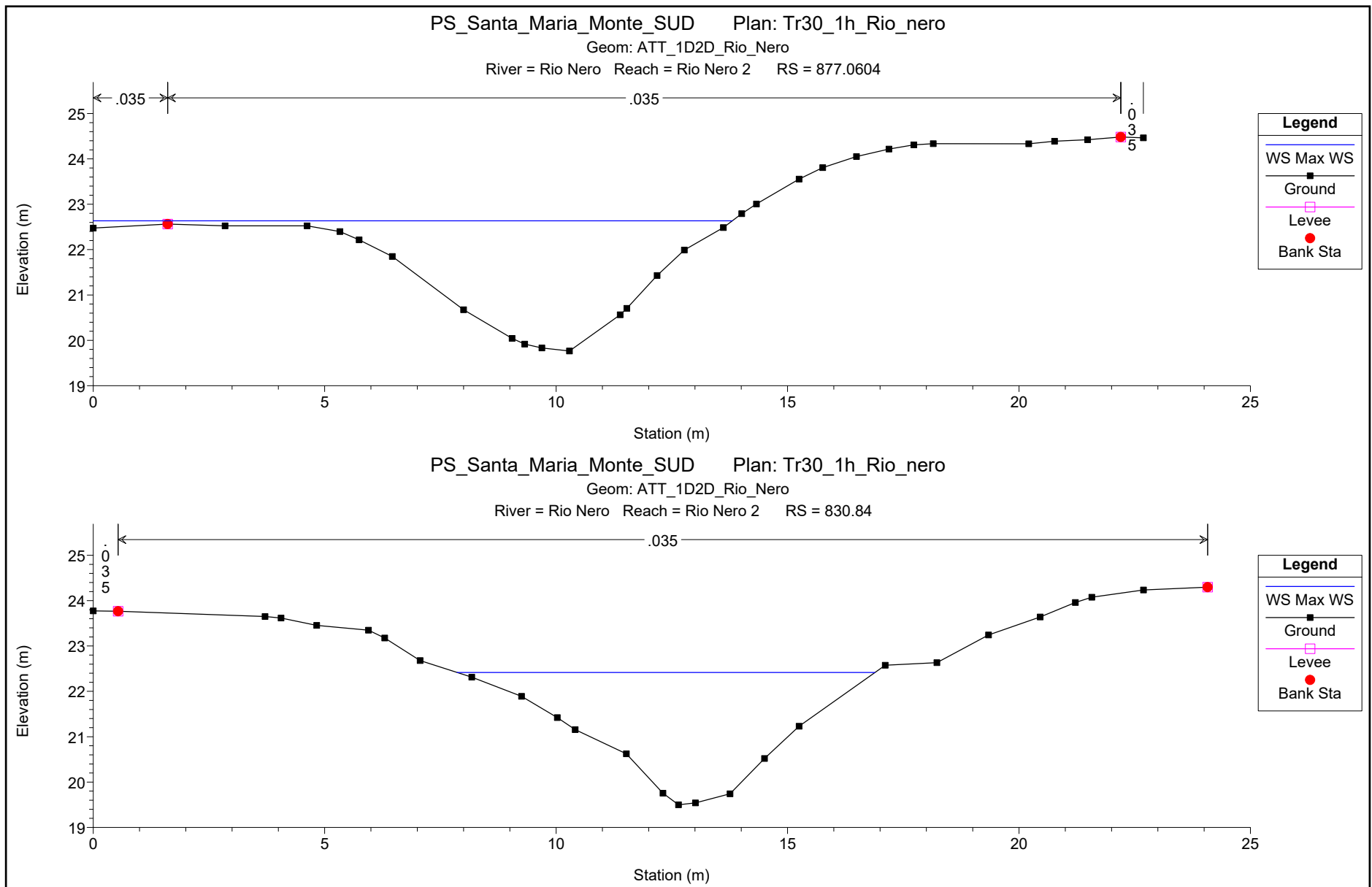


PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

River = Rio Nero Reach = Rio Nero 2 RS = 924.62

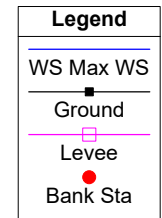
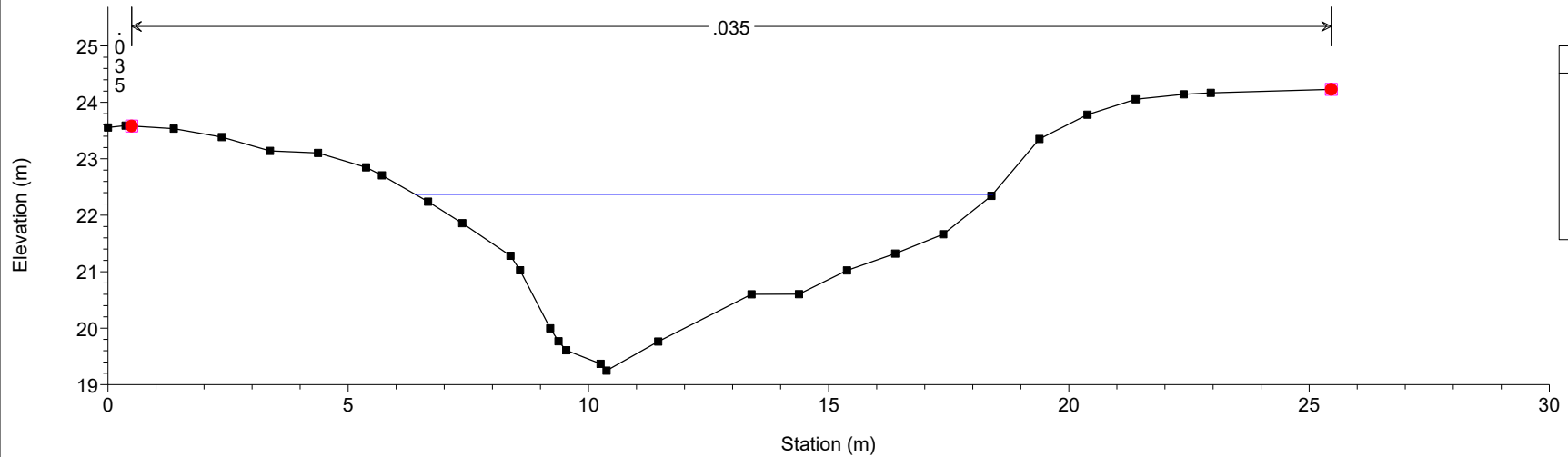




PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

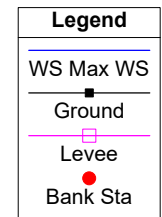
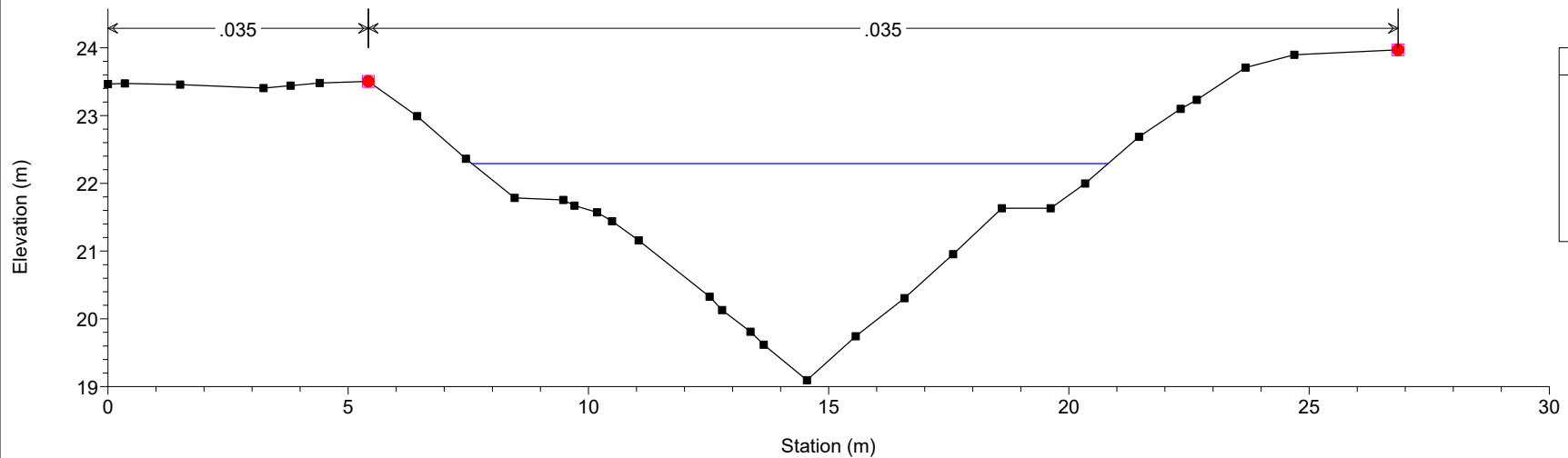
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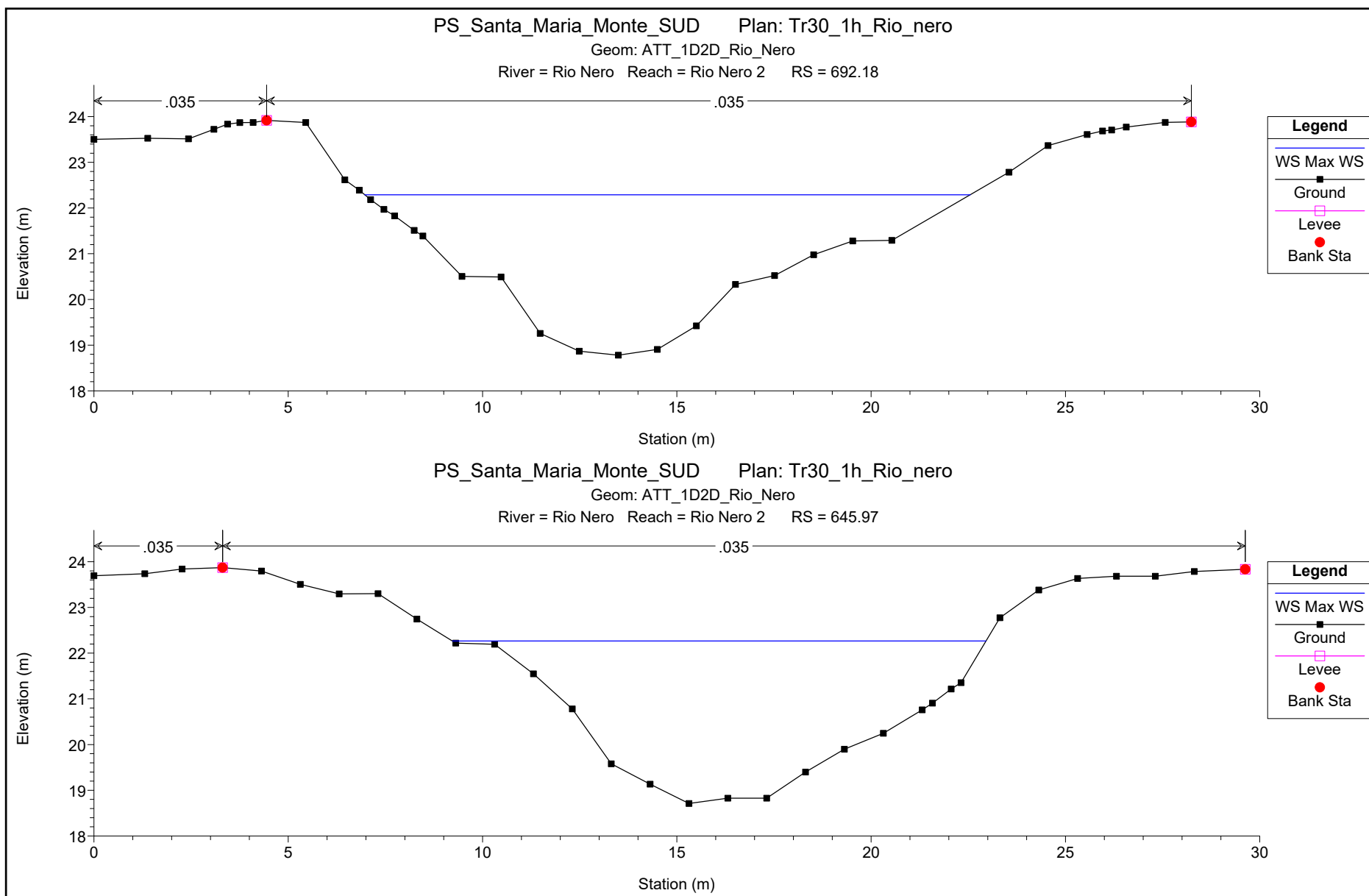


PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

River = Rio Nero Reach = Rio Nero 2 RS = 738.40

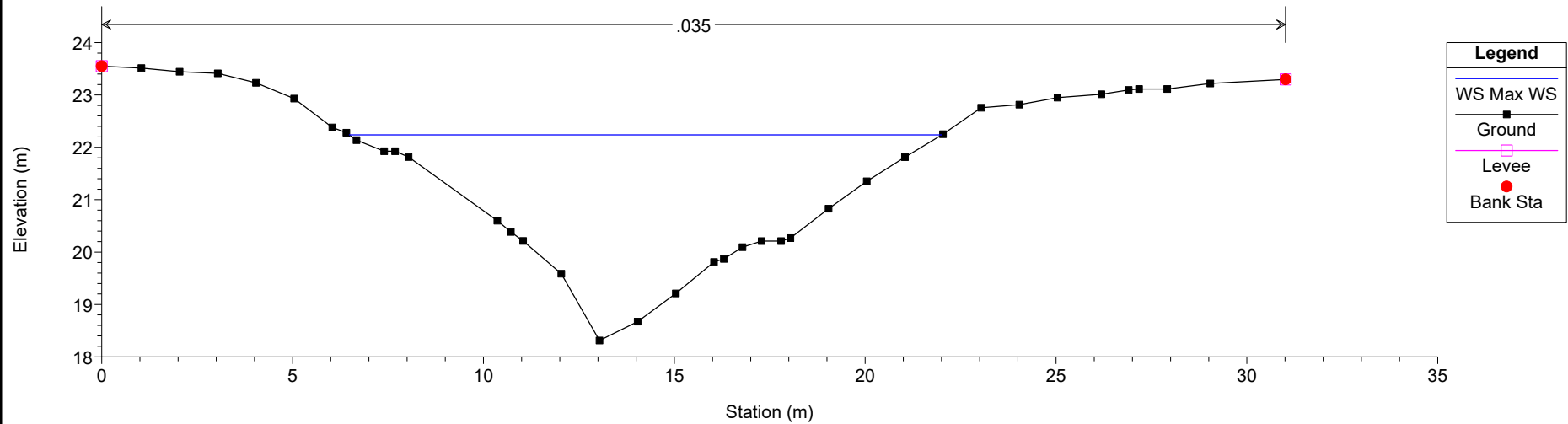




PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

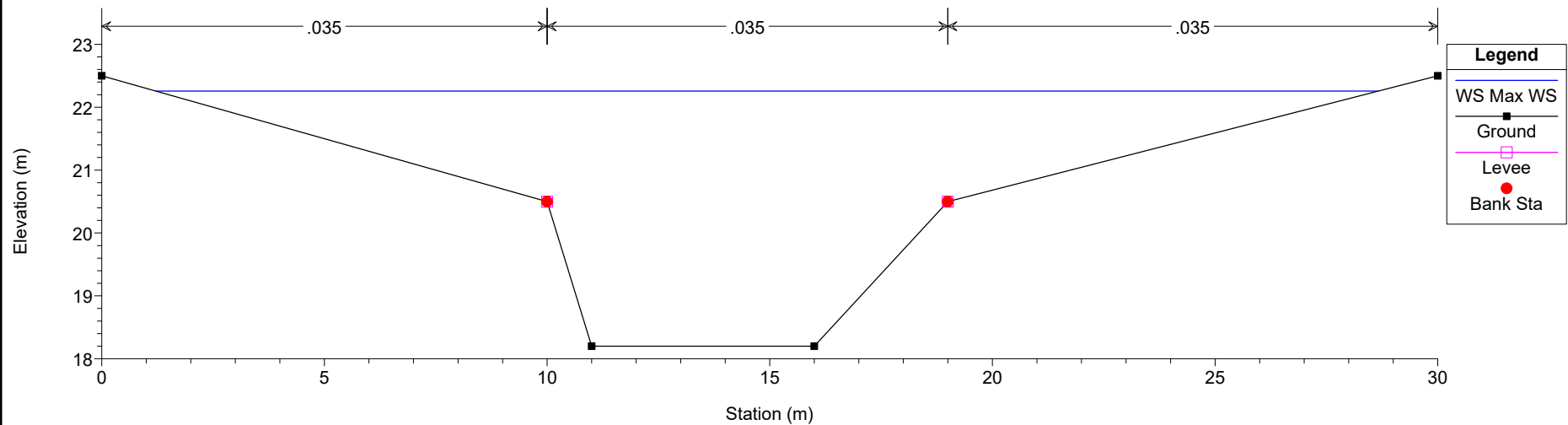
River = Rio Nero Reach = Rio Nero 2 RS = 599.7466

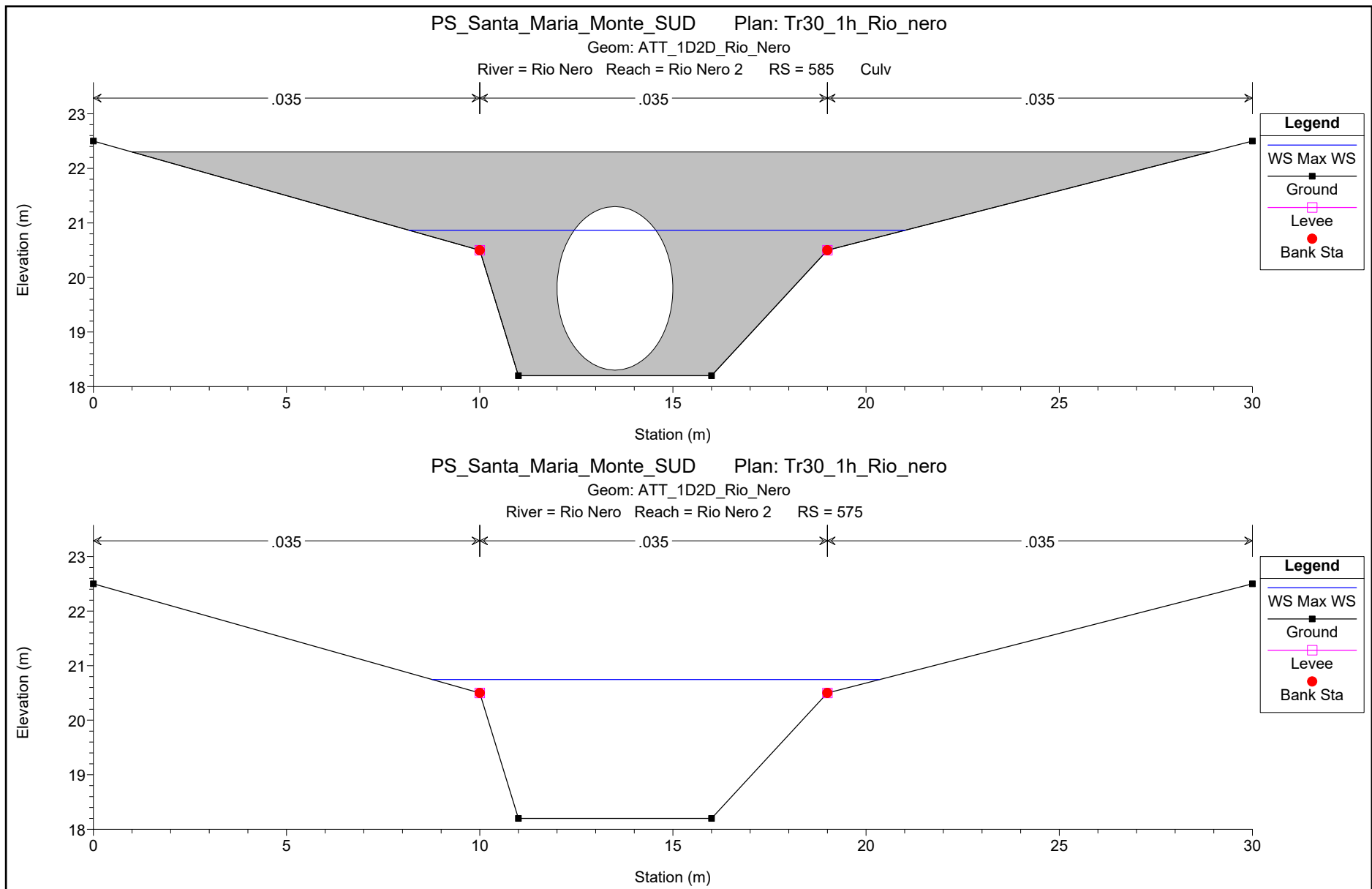


PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

River = Rio Nero Reach = Rio Nero 2 RS = 590

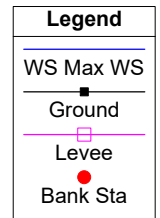
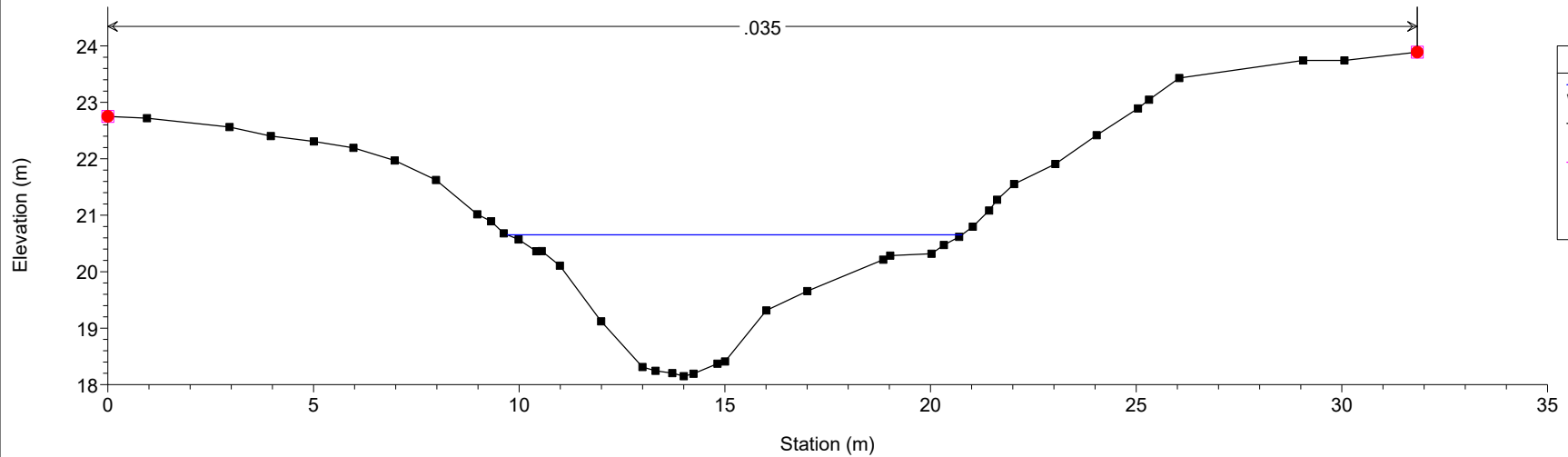




PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

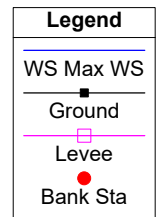
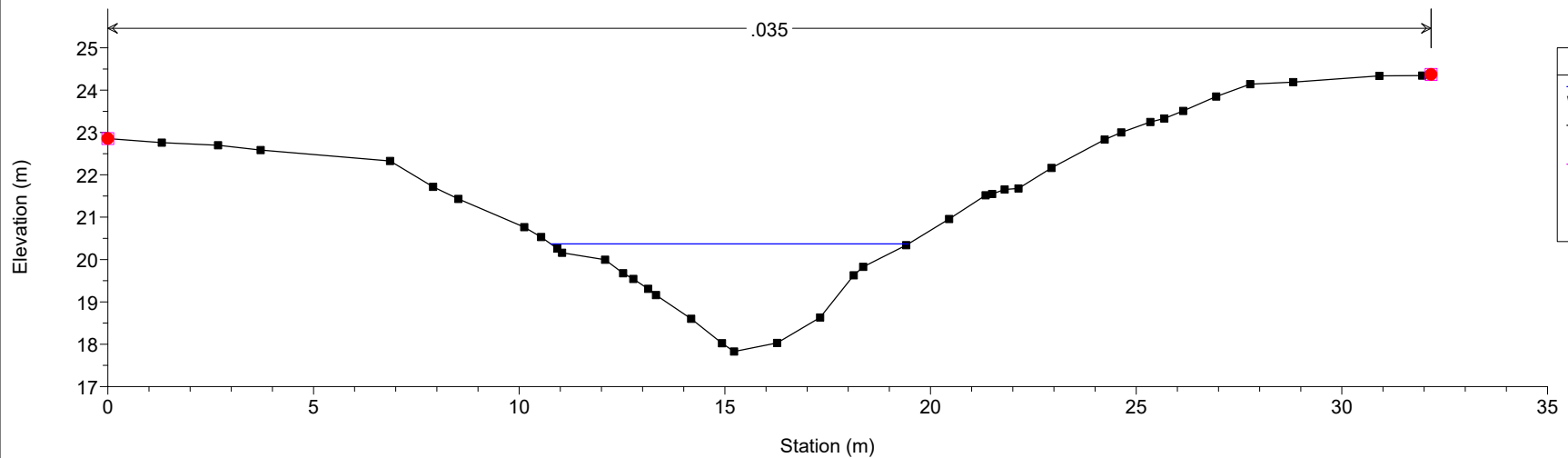
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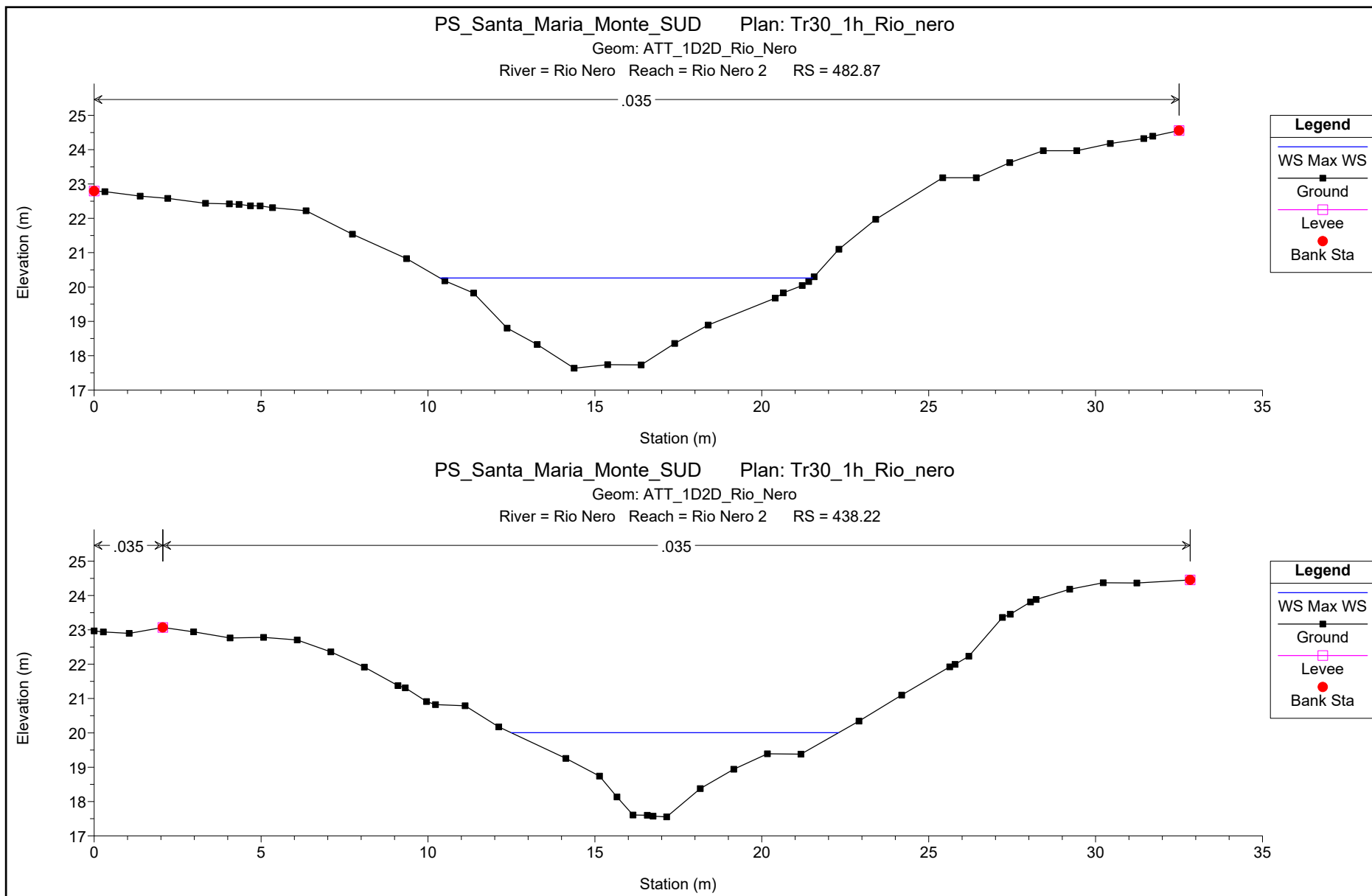


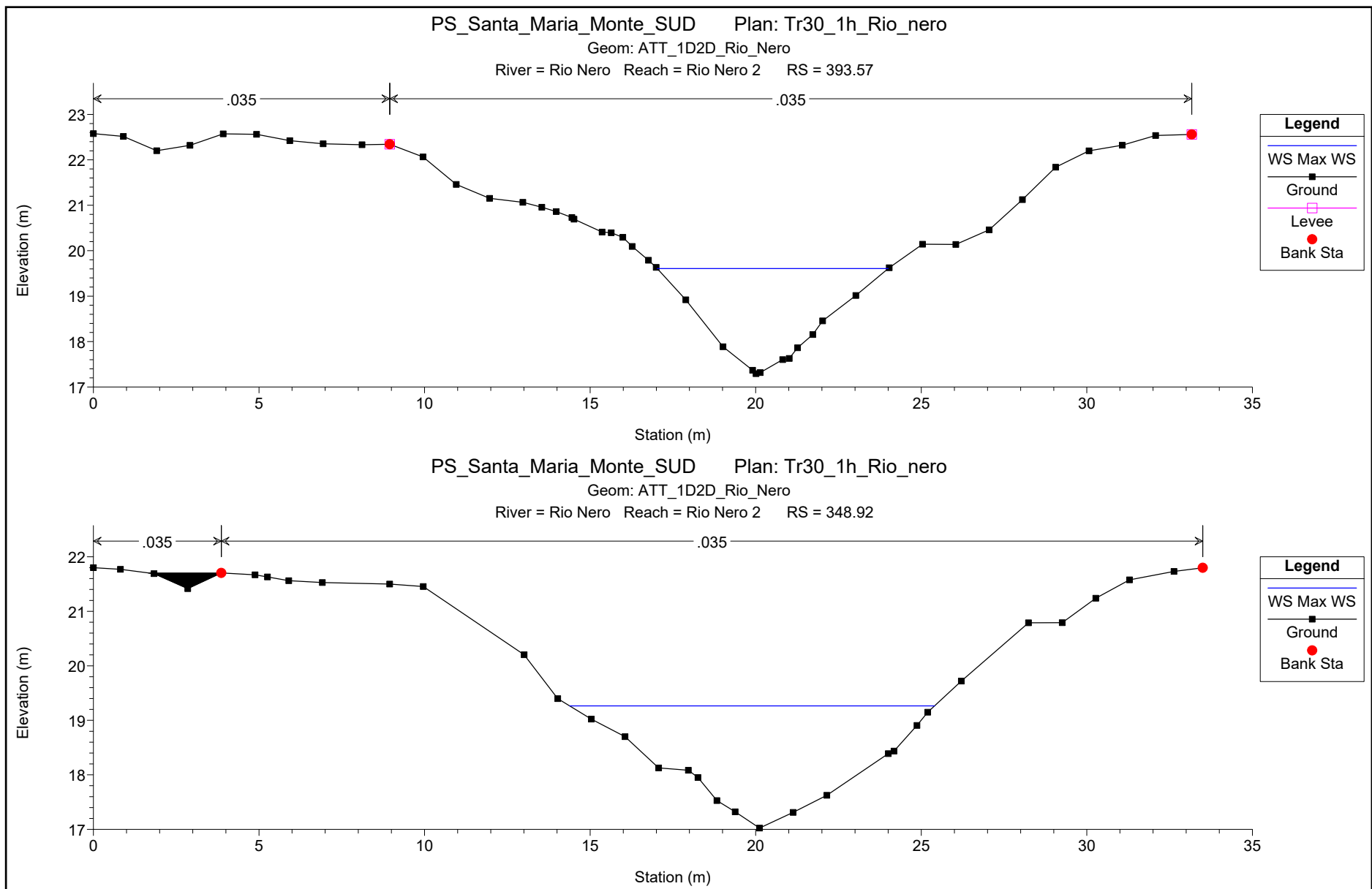
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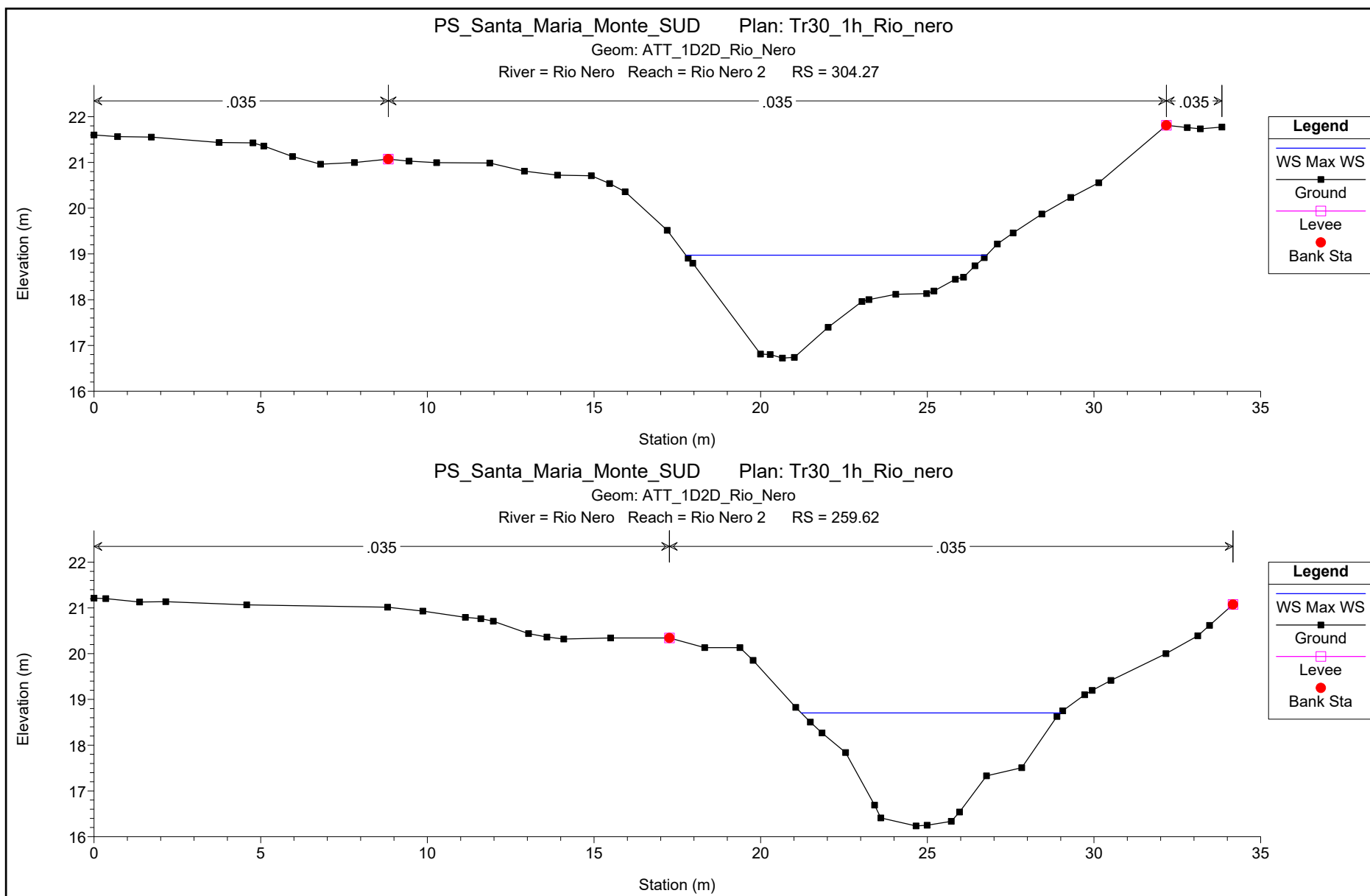
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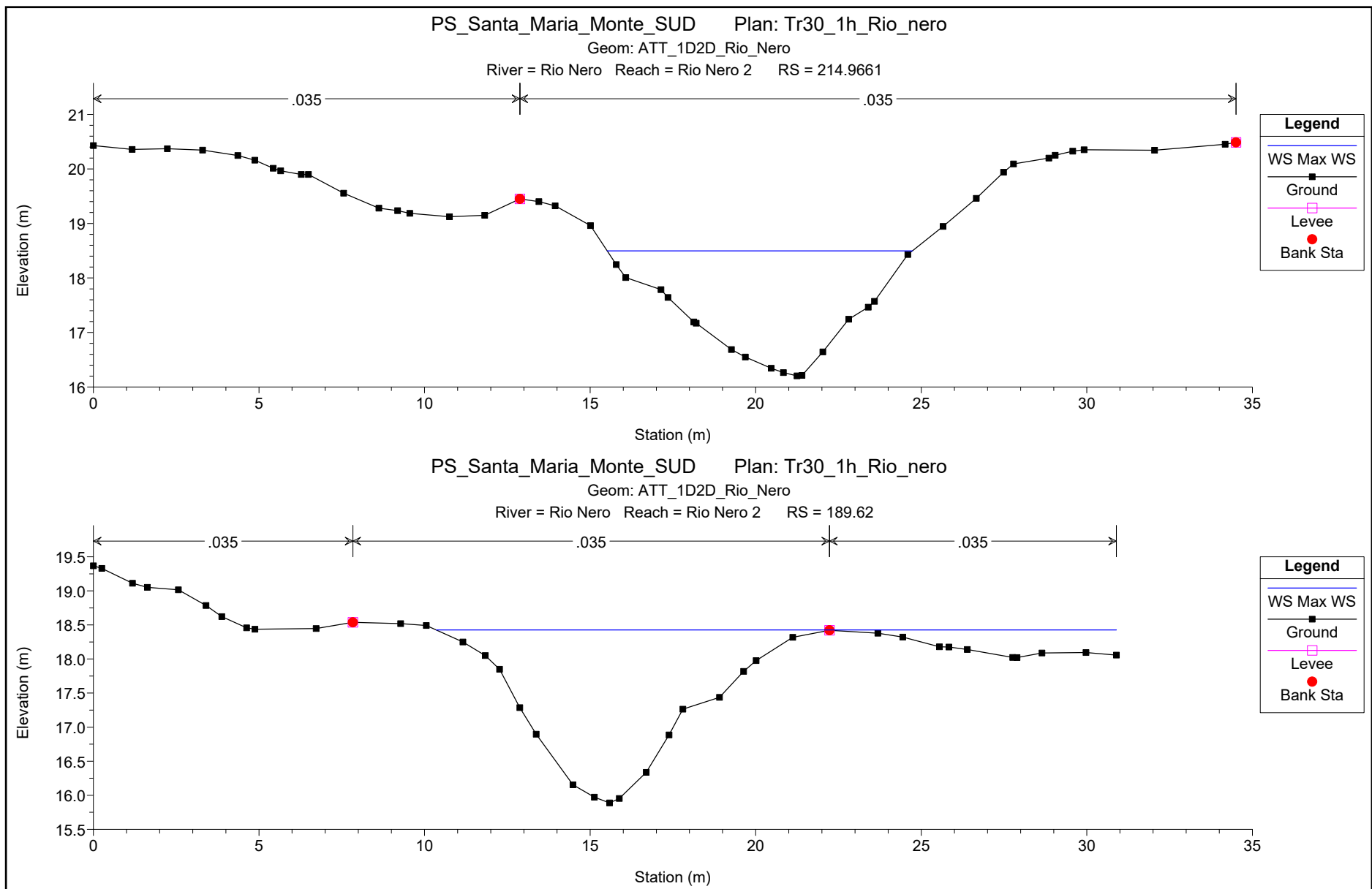
River = Rio Nero Reach = Rio Nero 2 RS = 527.52

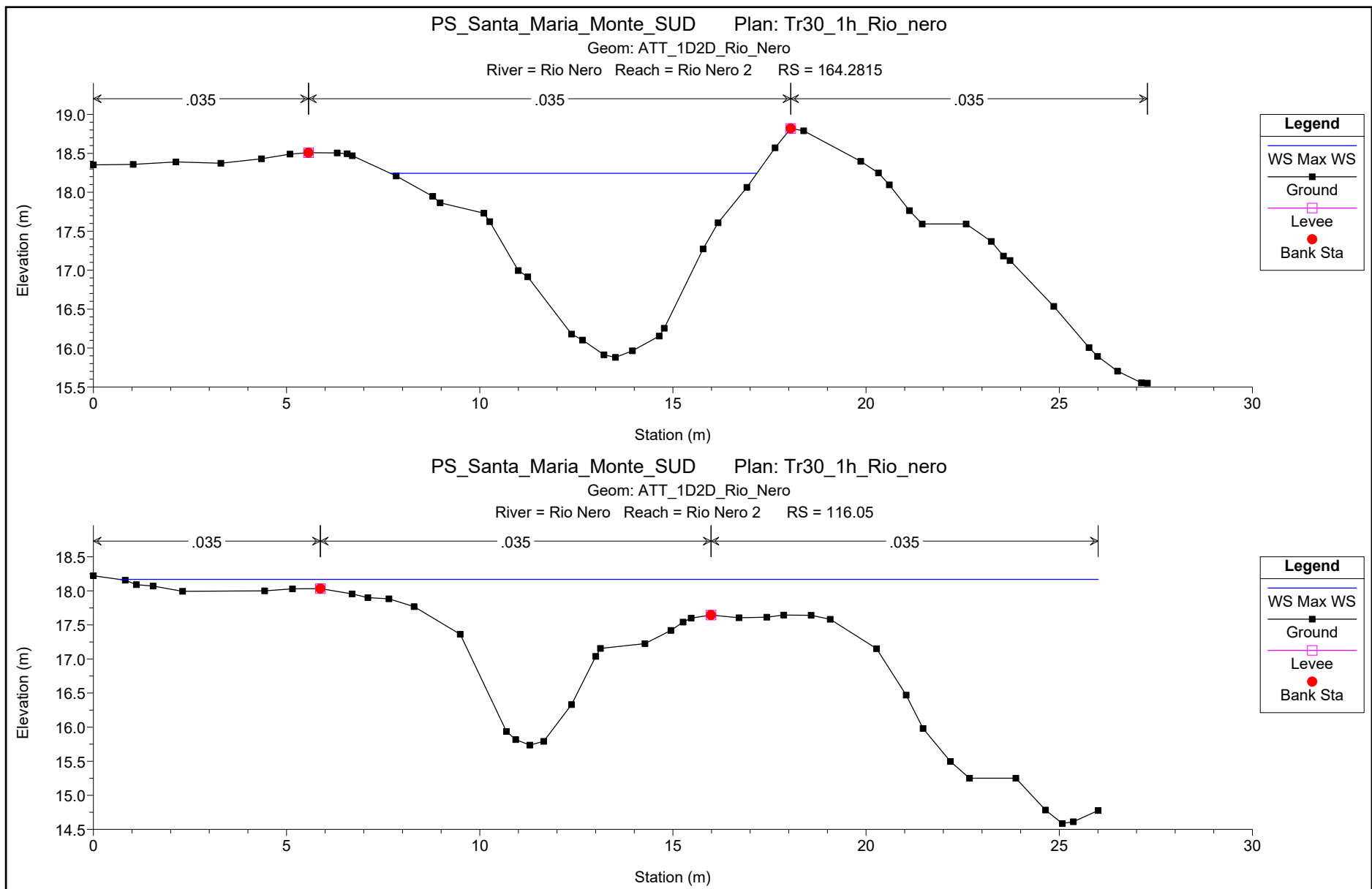


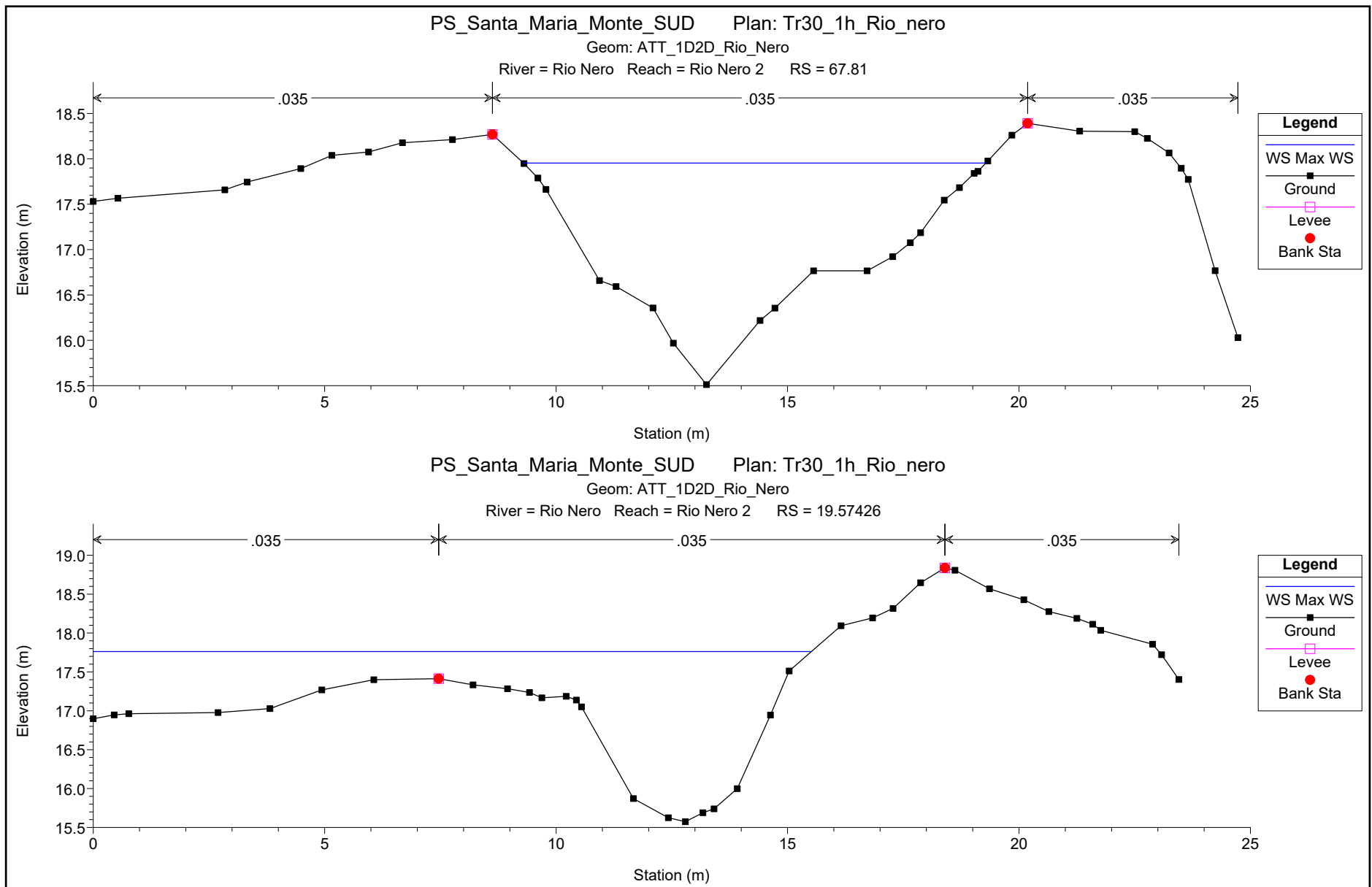












HEC-RAS Plan: Tr30_1h_Rio_nero River: Rio Nero Reach: Rio Nero 2 Profile: Max WS

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio Nero 2	1077	14.45	21.22	23.63		23.70	0.002143	1.14	12.88	15.72	0.39
Rio Nero 2	1071	Lat Struct									
Rio Nero 2	1070	Lat Struct									
Rio Nero 2	1048.38	13.32	20.80	23.65		23.67	0.000429	0.63	22.27	19.92	0.18
Rio Nero 2	1040	13.30	20.80	23.62		23.67	0.000628	0.92	15.34	15.00	0.19
Rio Nero 2	1030	Culvert									
Rio Nero 2	1025	12.40	20.80	22.92		22.99	0.001459	1.22	10.12	5.57	0.29
Rio Nero 2	1019.751	12.49	20.80	22.96		22.98	0.000554	0.72	19.05	18.10	0.20
Rio Nero 2	1011	Lat Struct									
Rio Nero 2	1010	Lat Struct									
Rio Nero 2	972.19	10.53	20.56	22.96		22.96	0.000146	0.40	26.34	19.14	0.11
Rio Nero 2	924.62	16.90	20.19	22.90		22.93	0.000634	0.87	21.16	16.48	0.22
Rio Nero 2	877.0604	25.74	19.77	22.64		22.81	0.004256	1.85	14.05	13.81	0.55
Rio Nero 2	830.84	25.80	19.50	22.42		22.63	0.004136	2.03	12.71	9.02	0.55
Rio Nero 2	784.62	25.75	19.25	22.37		22.47	0.001530	1.37	18.86	12.02	0.35
Rio Nero 2	738.40	25.68	19.09	22.29		22.39	0.001764	1.38	18.55	13.25	0.37
Rio Nero 2	692.18	25.59	18.78	22.29		22.33	0.000514	0.89	28.65	15.58	0.21
Rio Nero 2	645.97	25.46	18.71	22.27		22.31	0.000478	0.91	28.06	13.73	0.20
Rio Nero 2	599.7466	25.42	18.31	22.24		22.28	0.000589	0.93	27.40	15.53	0.22
Rio Nero 2	590	25.39	18.20	22.26		22.28	0.000128	0.65	48.15	27.46	0.11
Rio Nero 2	585	Culvert									
Rio Nero 2	575	25.94	18.20	20.75		20.85	0.001280	1.41	18.64	11.59	0.32
Rio Nero 2	572.1722	25.94	18.15	20.65		20.86	0.004693	2.00	12.94	11.05	0.59
Rio Nero 2	571	Lat Struct									
Rio Nero 2	570	Lat Struct									
Rio Nero 2	527.52	25.94	17.83	20.37		20.65	0.006266	2.36	10.99	8.70	0.67
Rio Nero 2	482.87	25.94	17.63	20.26		20.39	0.002095	1.57	16.55	11.17	0.41
Rio Nero 2	438.22	25.94	17.55	20.00		20.28	0.006807	2.33	11.12	9.81	0.70
Rio Nero 2	393.57	25.93	17.29	19.61		20.08	0.011101	3.03	8.55	6.98	0.87
Rio Nero 2	348.92	25.93	17.02	19.27		19.46	0.004258	1.98	13.13	11.02	0.58
Rio Nero 2	304.27	25.93	16.72	18.97		19.28	0.007479	2.47	10.48	9.02	0.73
Rio Nero 2	259.62	25.93	16.23	18.71		18.97	0.005141	2.28	11.38	7.78	0.60
Rio Nero 2	214.9661	25.93	16.21	18.50		18.74	0.004924	2.18	11.90	9.21	0.61
Rio Nero 2	189.62	25.93	15.89	18.43		18.59	0.004247	1.86	15.25	20.54	0.56
Rio Nero 2	164.2815	25.93	15.88	18.24		18.52	0.006305	2.31	11.21	9.49	0.68

HEC-RAS Plan: Tr30_1h_Rio_nero River: Rio Nero Reach: Rio Nero 2 Profile: Max WS (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio Nero 2	116.05	24.81	15.74	18.17		18.21	0.000767	0.74	29.38	25.33	0.23
Rio Nero 2	67.81	23.74	15.51	17.95		18.15	0.004284	1.95	12.15	9.99	0.57
Rio Nero 2	19.57426	23.15	15.57	17.76	17.54	17.92	0.005040	1.91	13.42	15.52	0.59

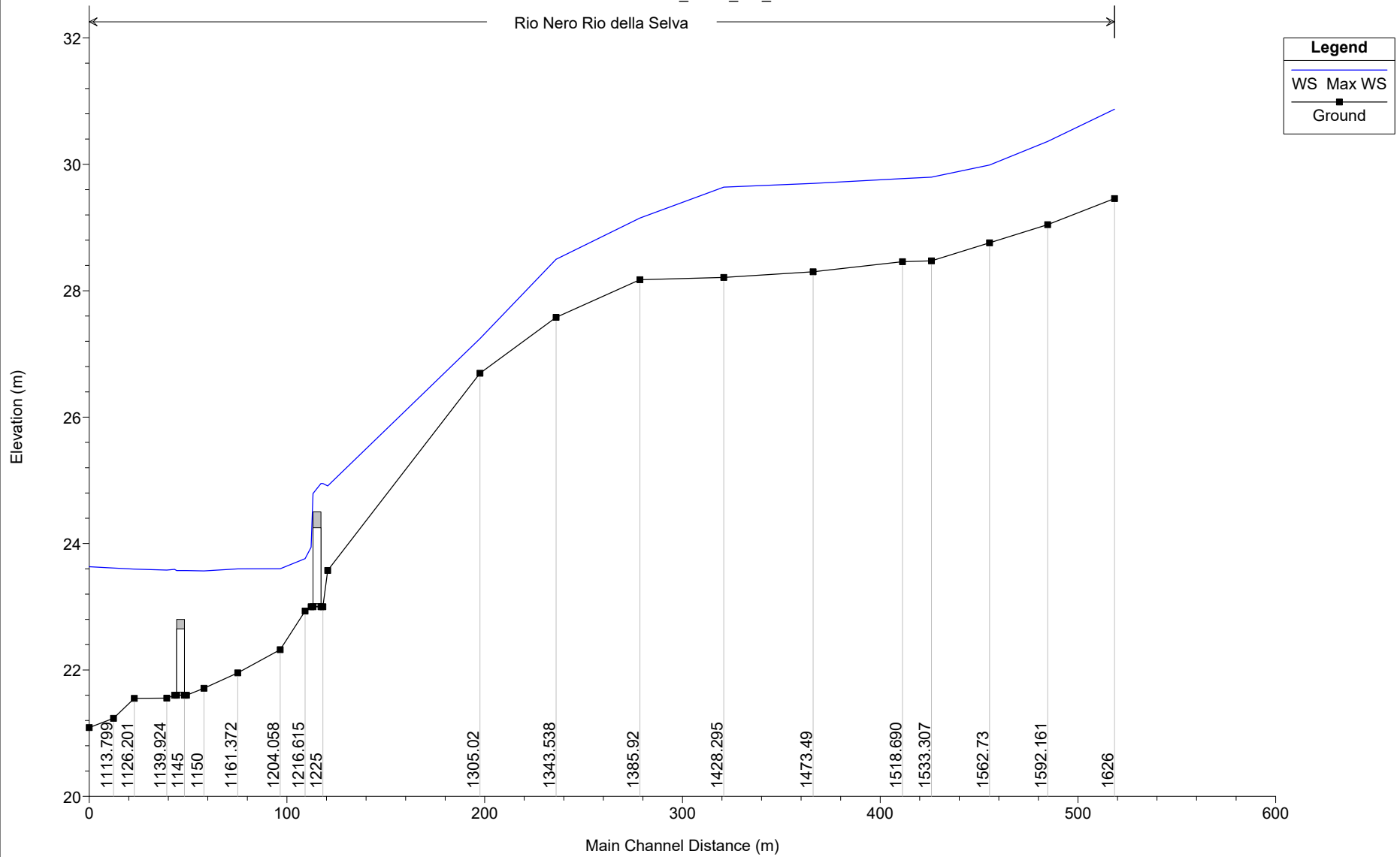
RIO DELLA SELVA – Tp 1 ora
Tr=30 anni

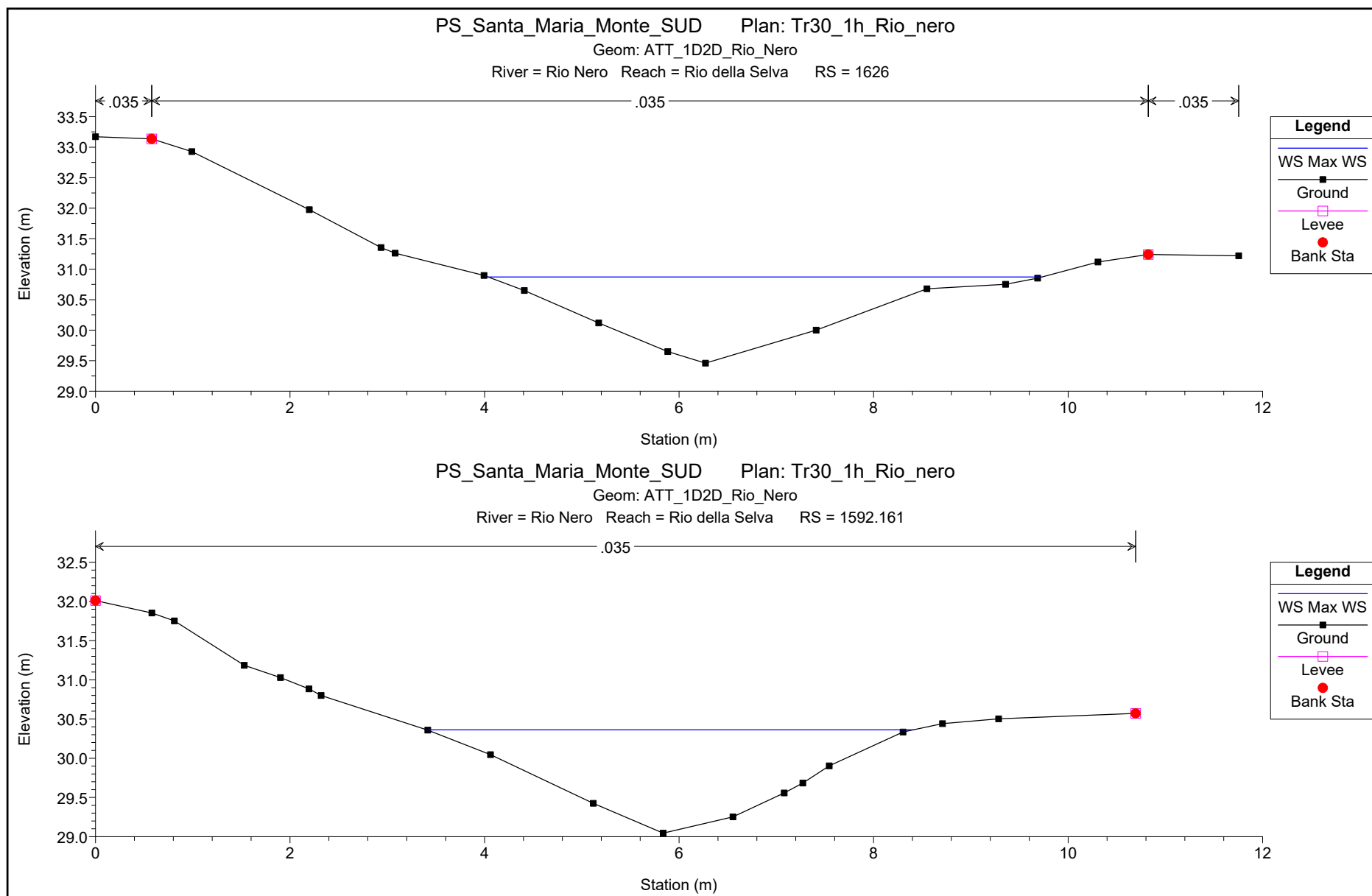
Tratto di valle

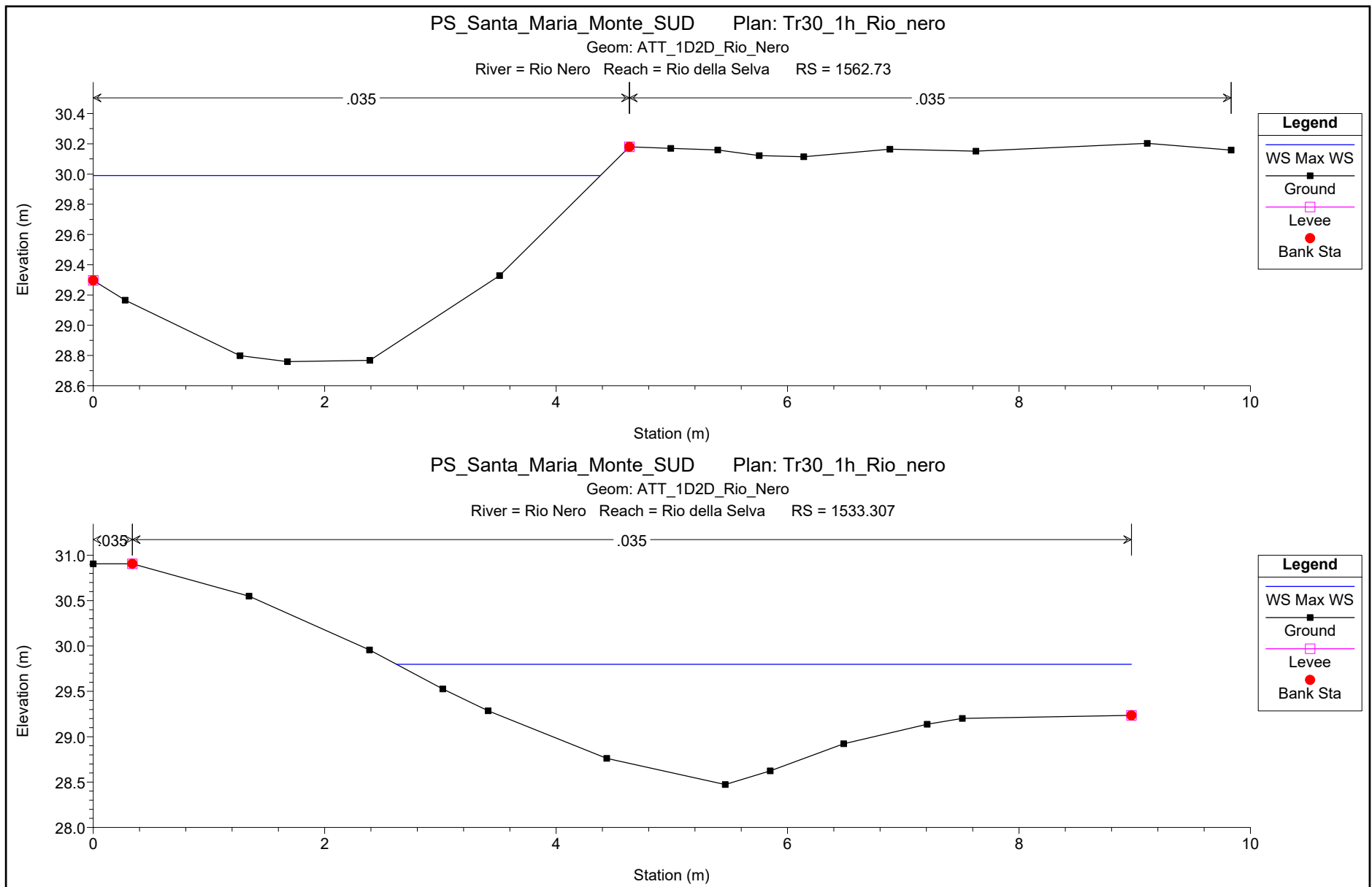
PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

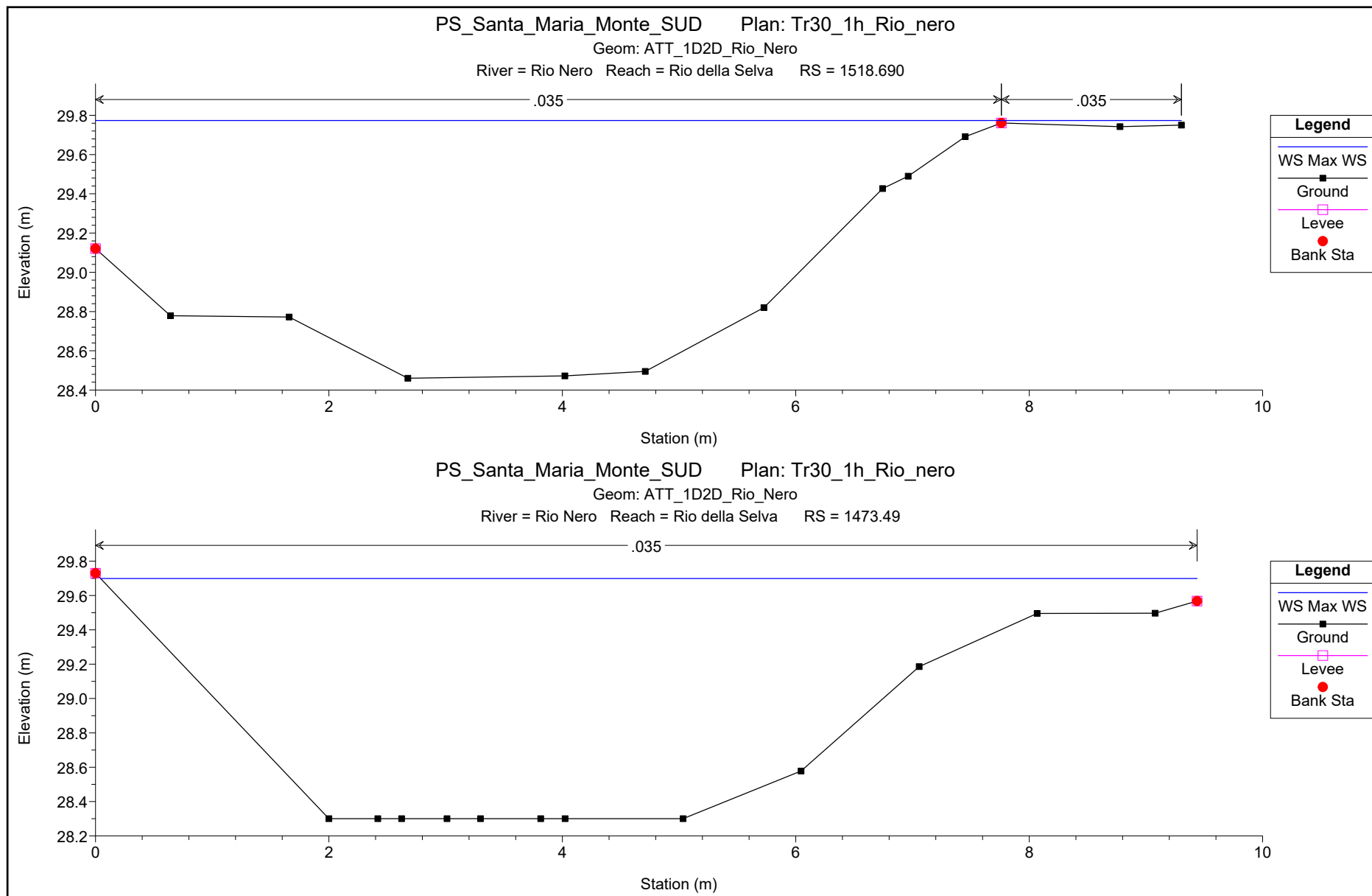
Geom: ATT_1D2D_Rio_Nero

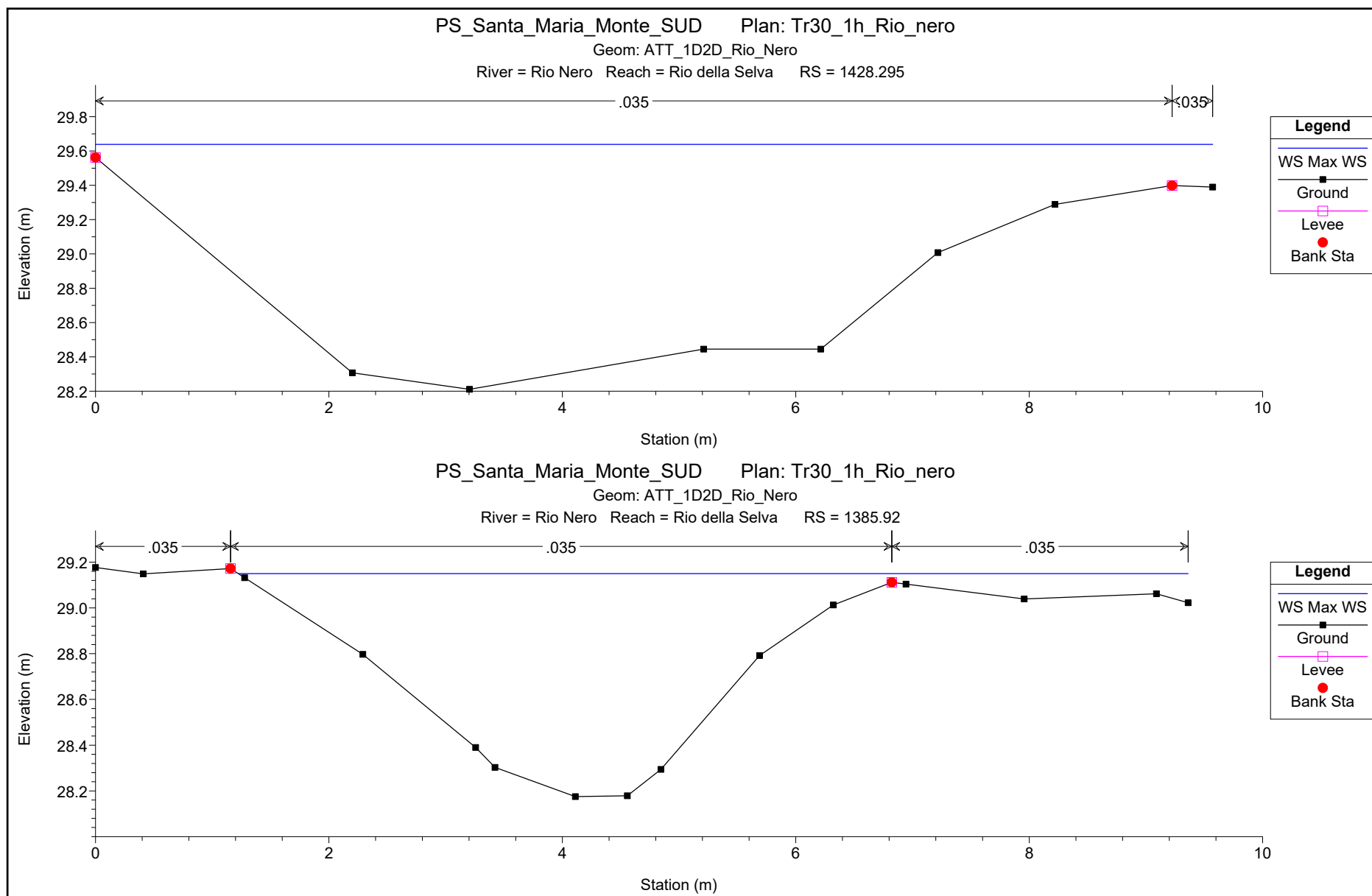
Rio Nero Rio della Selva







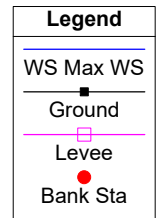
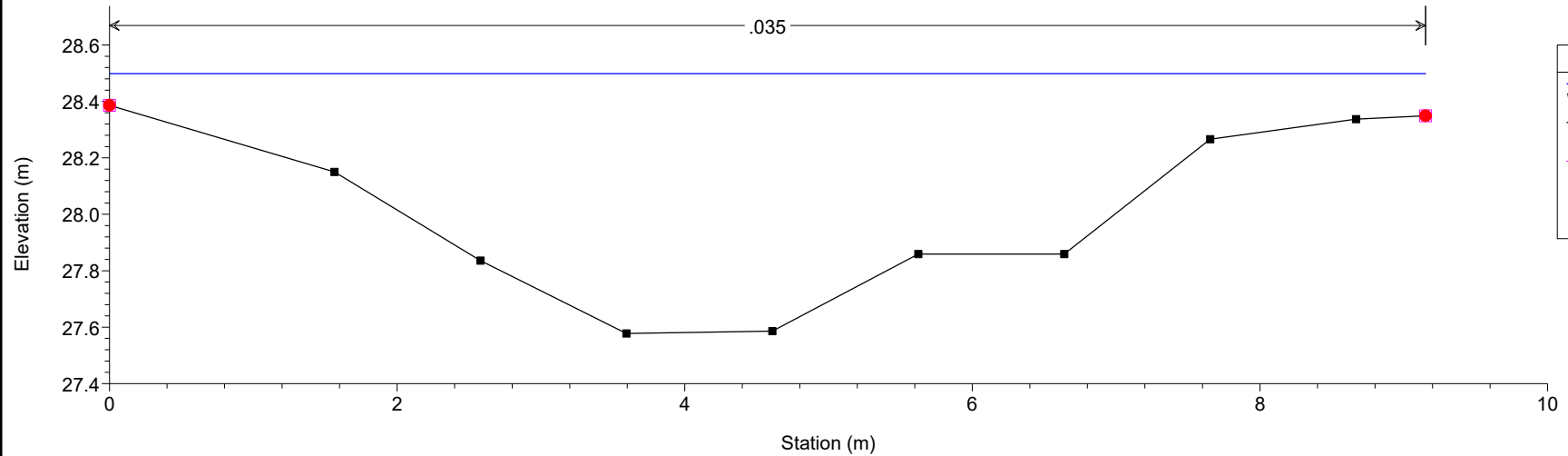




PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

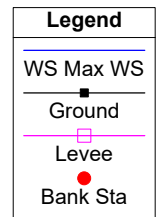
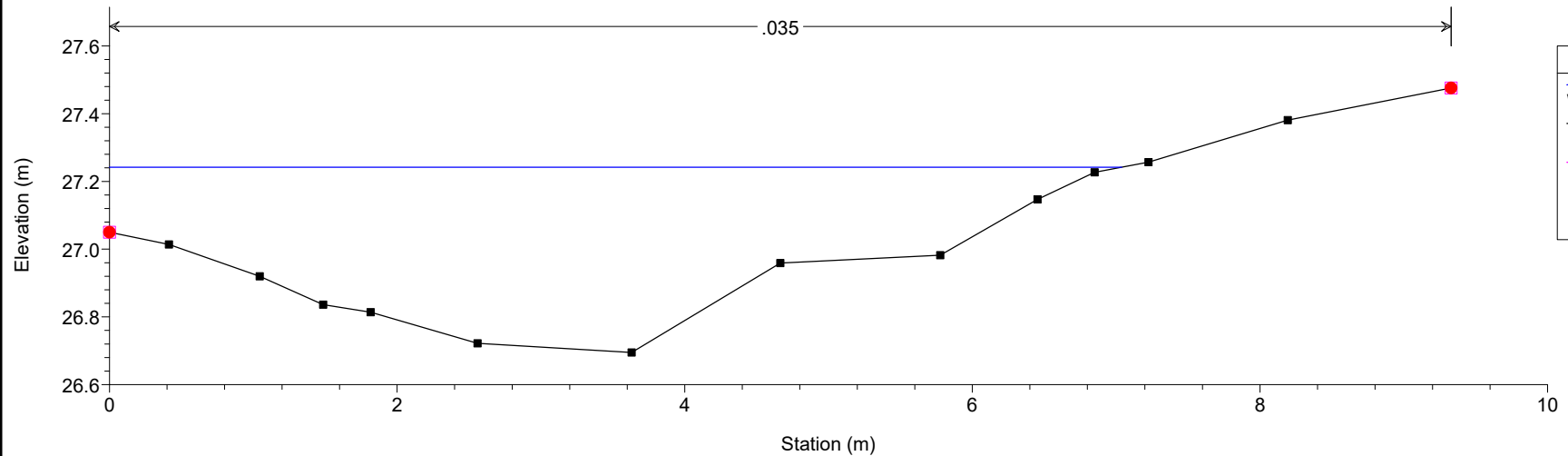
River = Rio Nero Reach = Rio della Selva RS = 1343.538

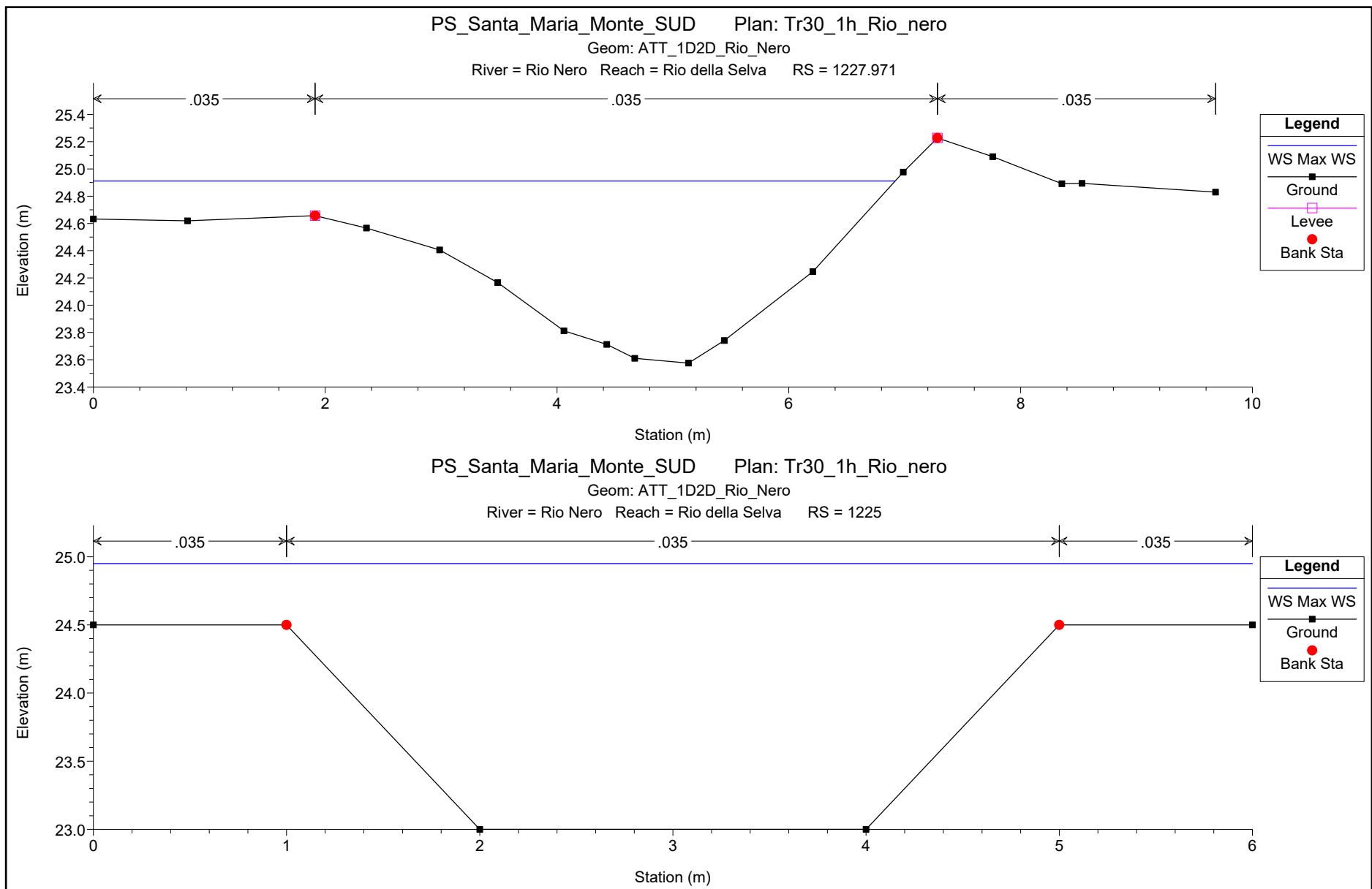


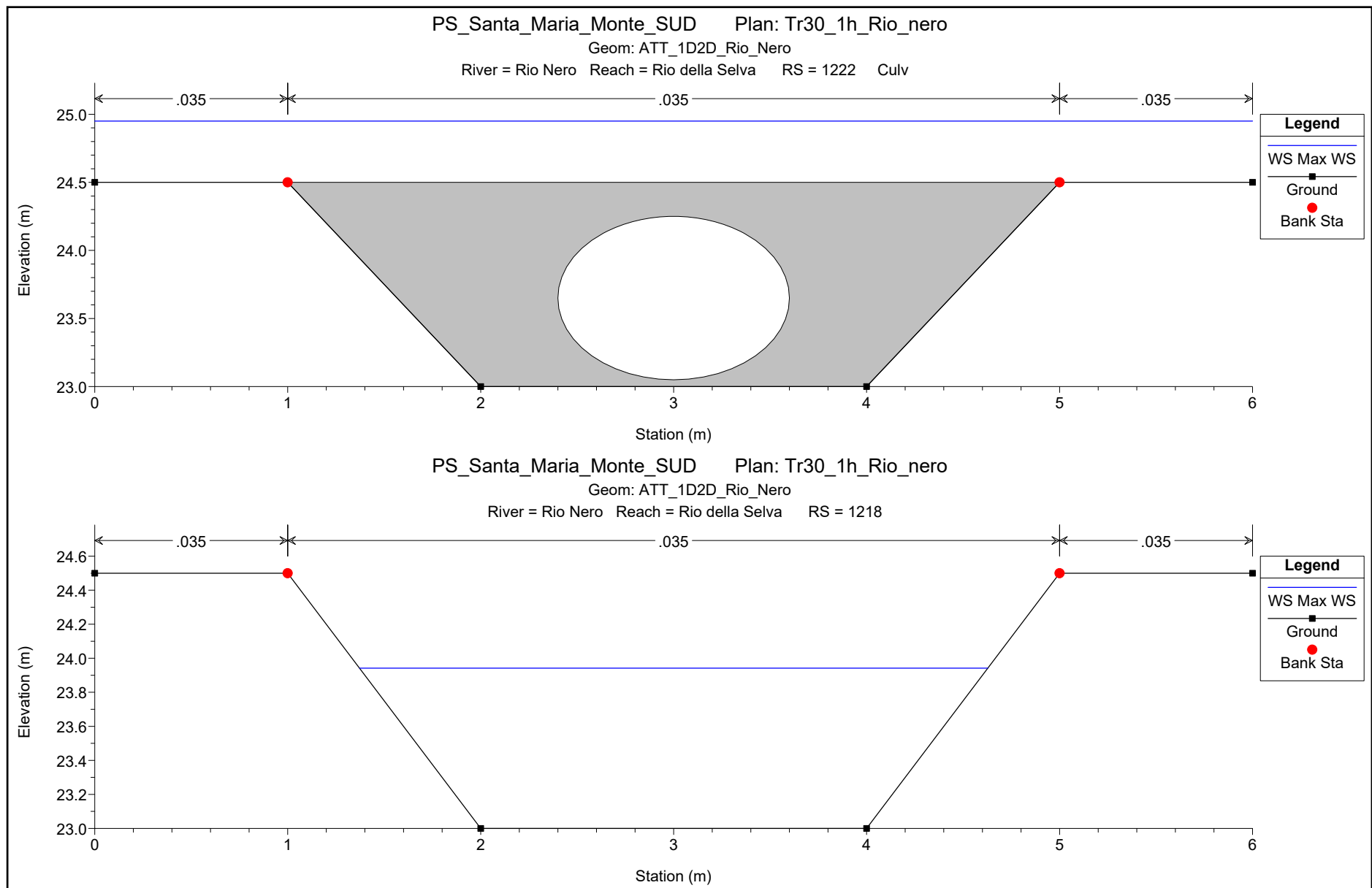
PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

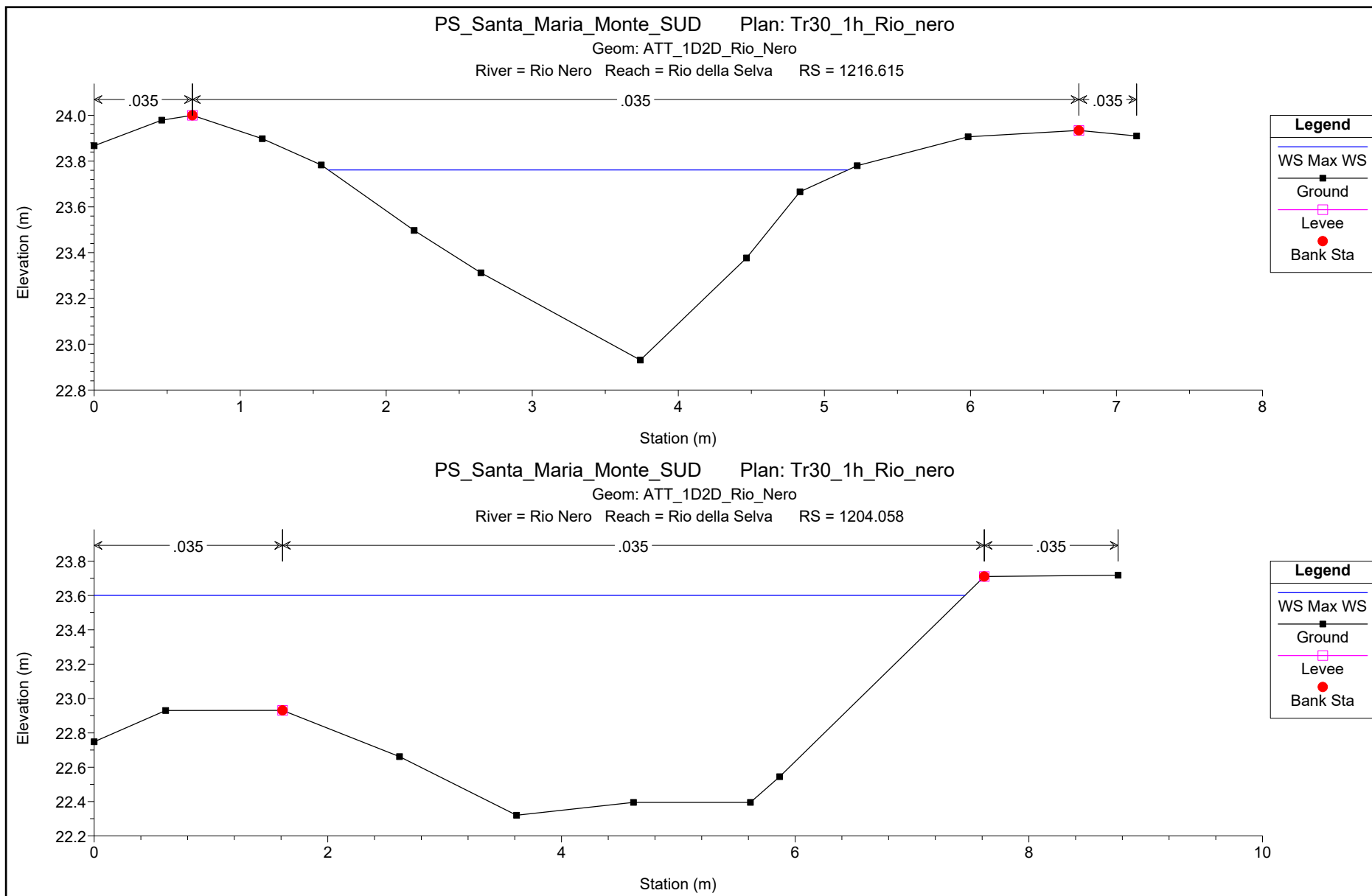
Geom: ATT_1D2D_Rio_Nero

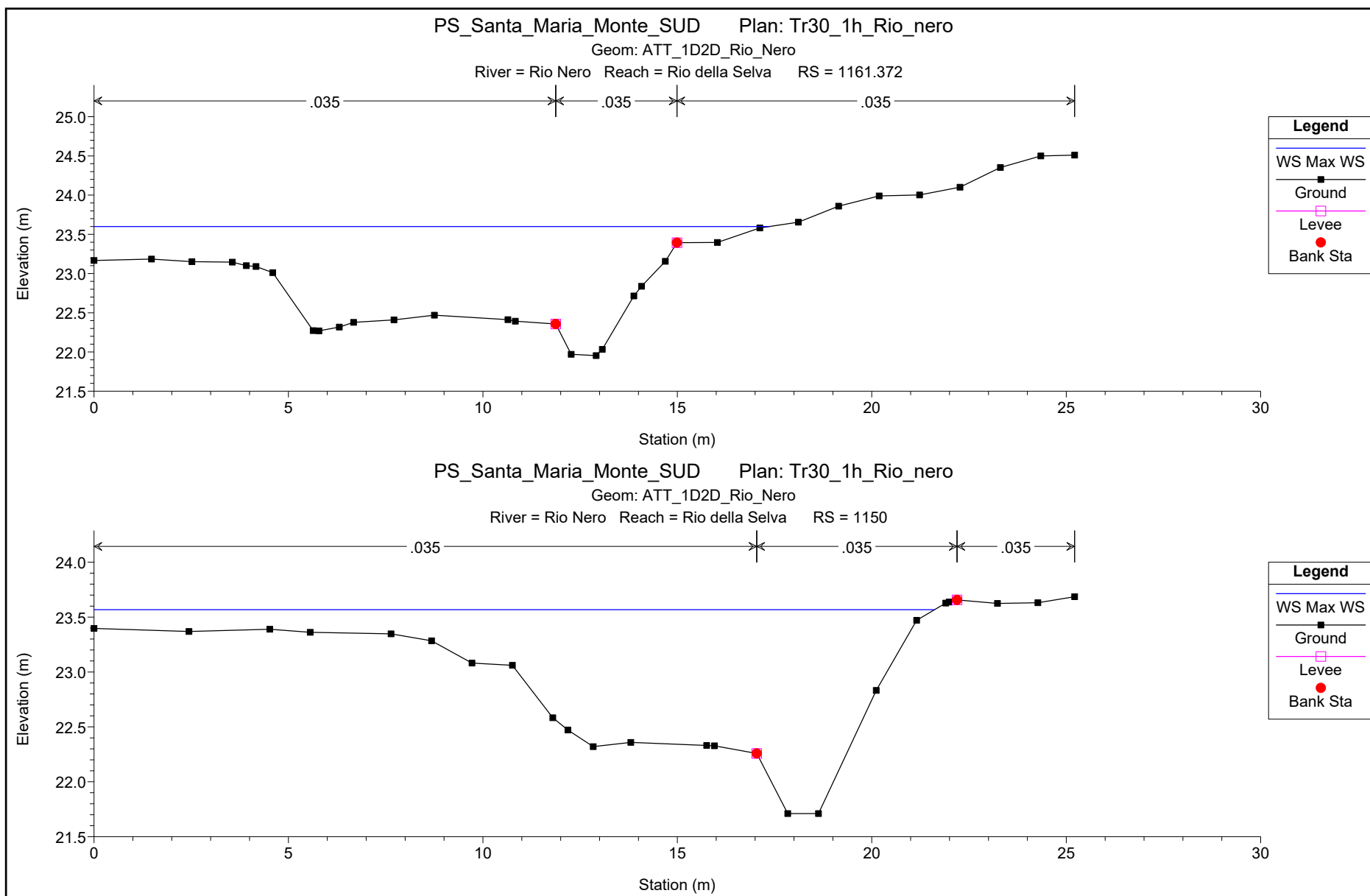
River = Rio Nero Reach = Rio della Selva RS = 1305.02

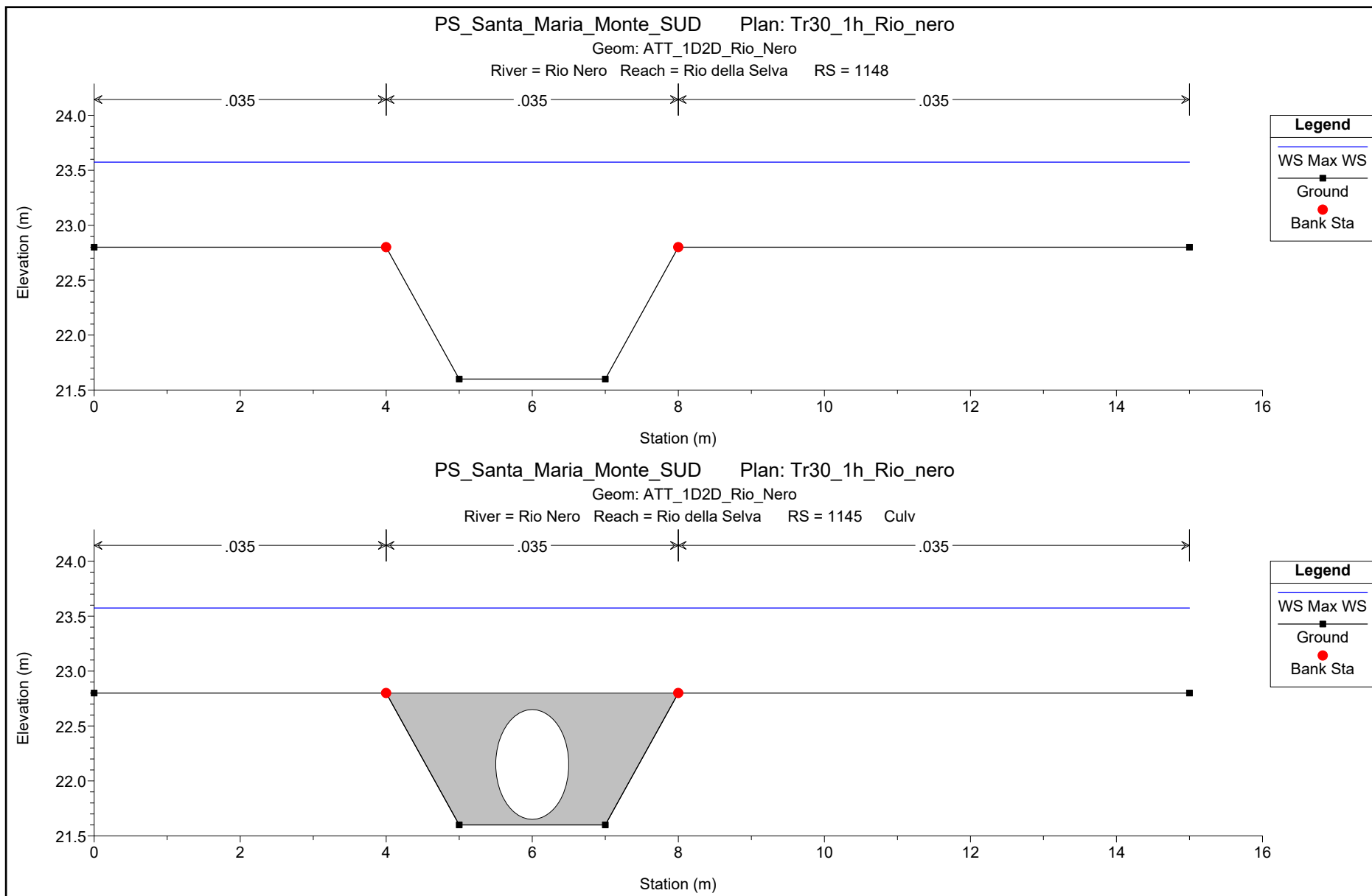


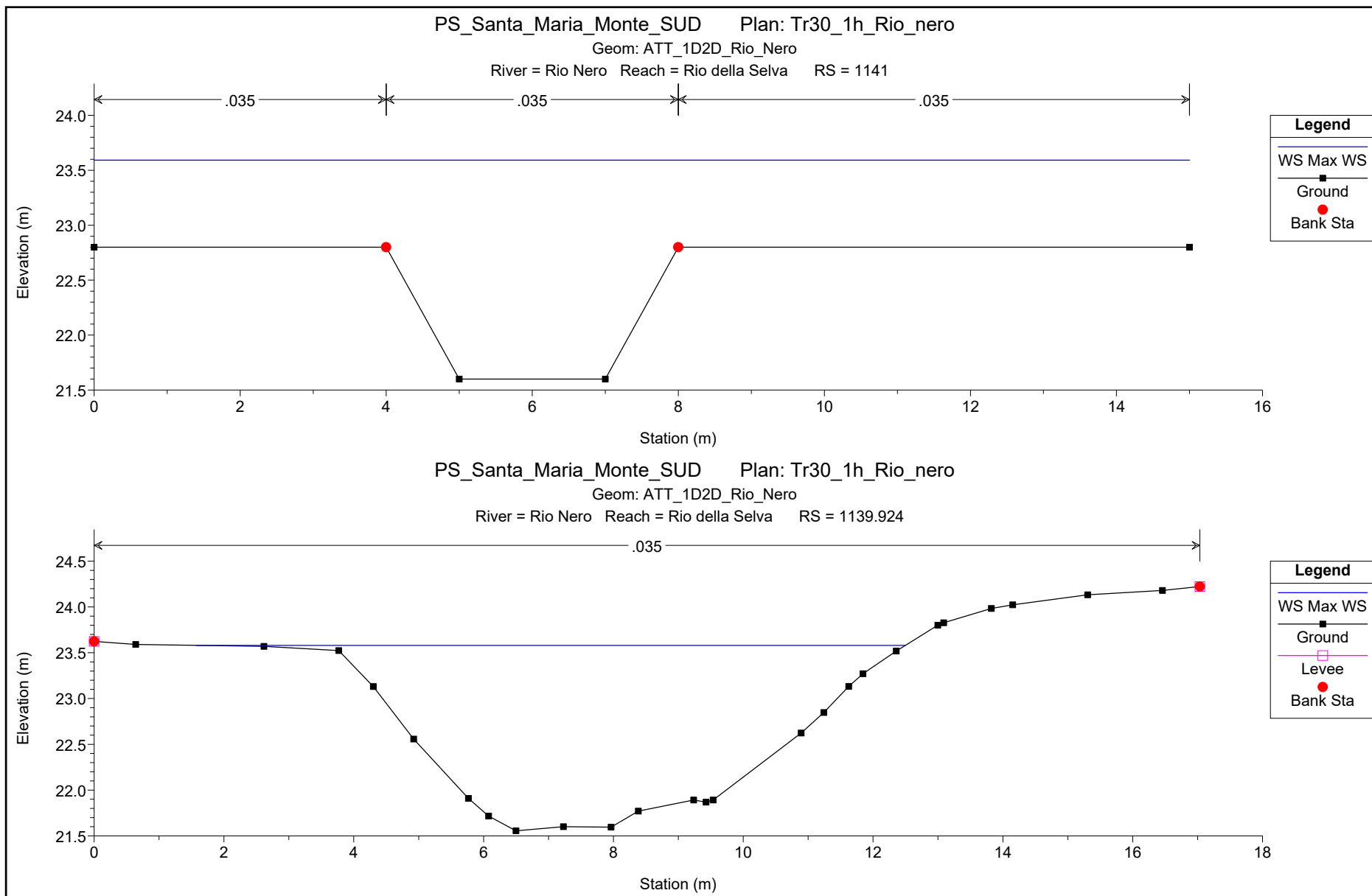


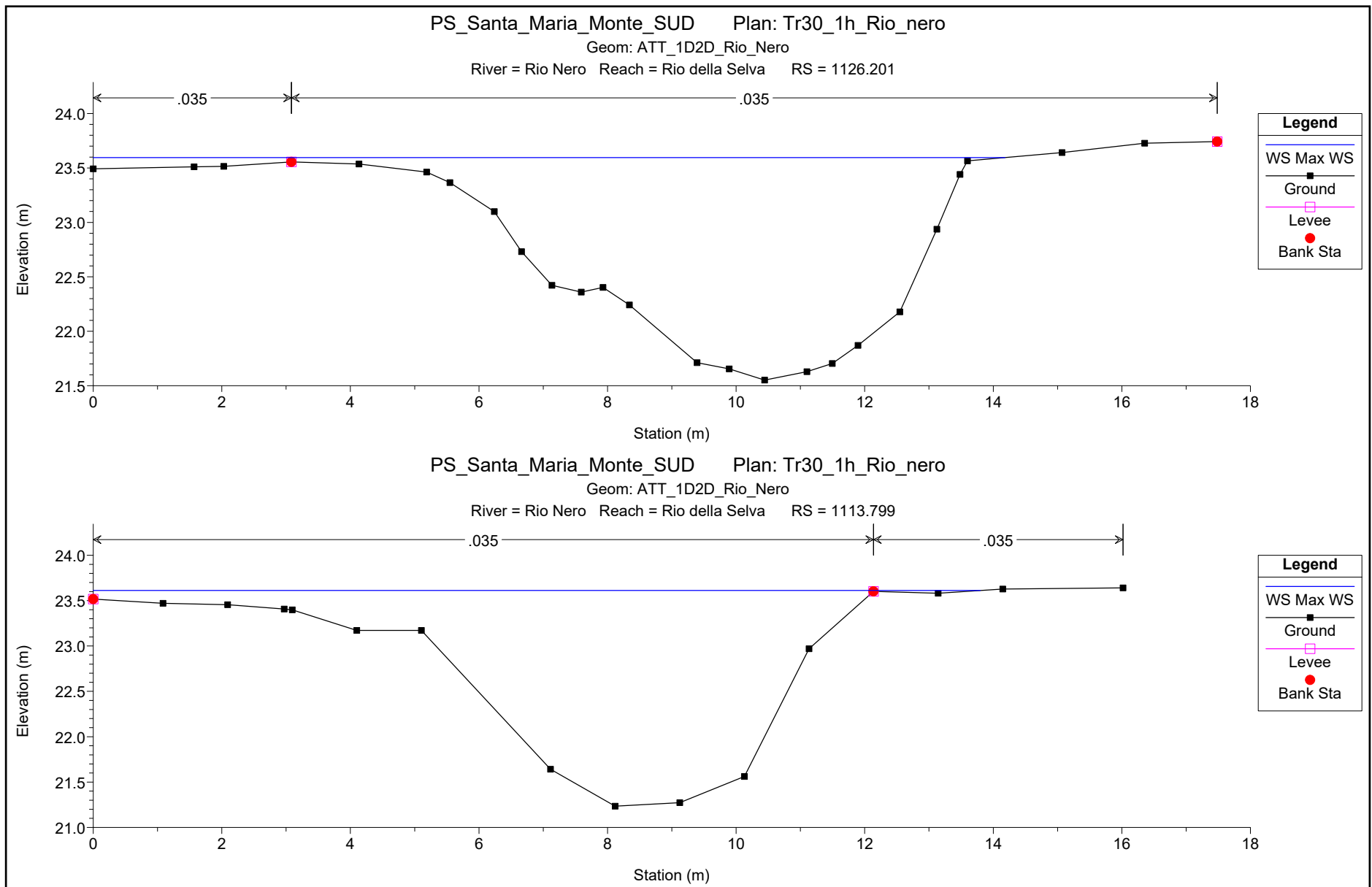








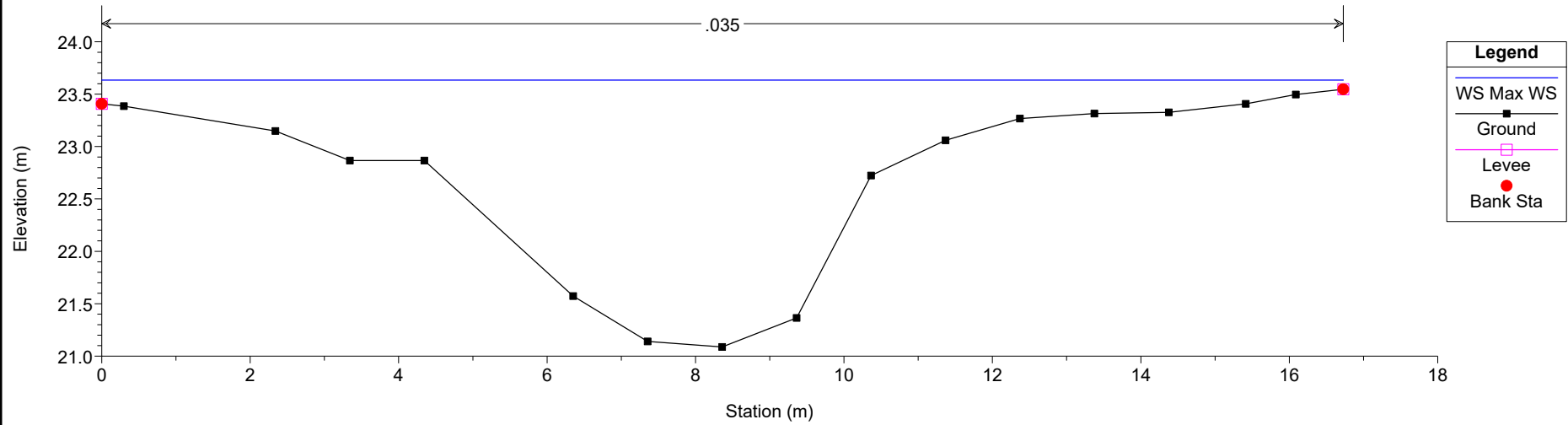




PS_Santa_Maria_Monte_SUD Plan: Tr30_1h_Rio_nero

Geom: ATT_1D2D_Rio_Nero

River = Rio Nero Reach = Rio della Selva RS = 1105.224



HEC-RAS Plan: Tr30_1h_Rio_nero River: Rio Nero Reach: Rio della Selva Profile: Max WS

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio della Selva	1626	8.80	29.46	30.87	30.85	31.16	0.014774	2.39	3.68	5.69	0.95
Rio della Selva	1610	Lat Struct									
Rio della Selva	1592.161	8.79	29.05	30.36	30.35	30.70	0.015692	2.56	3.43	5.00	0.99
Rio della Selva	1562.73	8.78	28.76	29.99		30.24	0.009705	2.24	3.92	4.38	0.76
Rio della Selva	1533.307	8.01	28.47	29.80		29.93	0.005486	1.62	4.94	6.35	0.59
Rio della Selva	1518.690	8.69	28.46	29.77		29.85	0.002192	1.18	7.38	9.30	0.39
Rio della Selva	1473.49	8.71	28.30	29.70		29.75	0.001753	1.04	8.34	9.40	0.35
Rio della Selva	1428.295	8.31	28.21	29.64		29.69	0.001434	0.98	8.55	9.57	0.33
Rio della Selva	1385.92	7.69	28.18	29.15	29.24	29.48	0.021584	2.59	3.12	8.14	1.15
Rio della Selva	1381	Lat Struct									
Rio della Selva	1343.538	8.13	27.58	28.50		28.65	0.009141	1.71	4.76	9.15	0.76
Rio della Selva	1305.02	7.50	26.69	27.24	27.41	27.76	0.056137	3.18	2.36	7.04	1.76
Rio della Selva	1227.971	6.20	23.58	24.91		25.02	0.004455	1.49	4.44	6.92	0.54
Rio della Selva	1225	6.20	23.00	24.95		24.99	0.000902	0.93	7.20	6.00	0.24
Rio della Selva	1222	Culvert									
Rio della Selva	1218	3.00	23.00	23.94		24.02	0.003718	1.21	2.47	3.26	0.44
Rio della Selva	1216.615	3.00	22.93	23.76	23.76	23.97	0.018483	2.02	1.48	3.56	1.00
Rio della Selva	1211	Lat Struct									
Rio della Selva	1210	Lat Struct									
Rio della Selva	1204.058	2.33	22.32	23.60		23.61	0.000205	0.37	6.63	7.45	0.12
Rio della Selva	1161.372	-3.31	21.95	23.60		23.60	0.000081	-0.25	14.41	17.37	0.07
Rio della Selva	1150	-9.84	21.71	23.57		23.59	0.000870	-0.82	14.91	21.61	0.25
Rio della Selva	1148	-9.85	21.60	23.57		23.60	0.000559	-0.81	15.20	15.00	0.20
Rio della Selva	1145	Culvert									
Rio della Selva	1141	-9.85	21.60	23.59		23.62	0.000530	-0.79	15.48	15.00	0.19
Rio della Selva	1139.924	-9.85	21.56	23.58		23.62	0.001000	-0.87	11.36	10.93	0.27
Rio della Selva	1131	Lat Struct									
Rio della Selva	1130	Lat Struct									
Rio della Selva	1126.201	-9.87	21.55	23.60		23.64	0.001121	-0.89	11.32	14.18	0.28
Rio della Selva	1113.799	-9.88	21.23	23.61		23.65	0.000974	-0.82	12.12	13.80	0.26
Rio della Selva	1111	Lat Struct									
Rio della Selva	1110	Lat Struct									
Rio della Selva	1105.224	-10.07	21.09	23.63		23.65	0.000558	-0.62	16.22	16.73	0.20

VERIFICHE IDRAULICHE

SISTEMA IDRAULICO RIO BOTTACCIO – RIO DOLCIONE – RIO VAIANO – RIO GUADAGNINO

Tr 30 anni

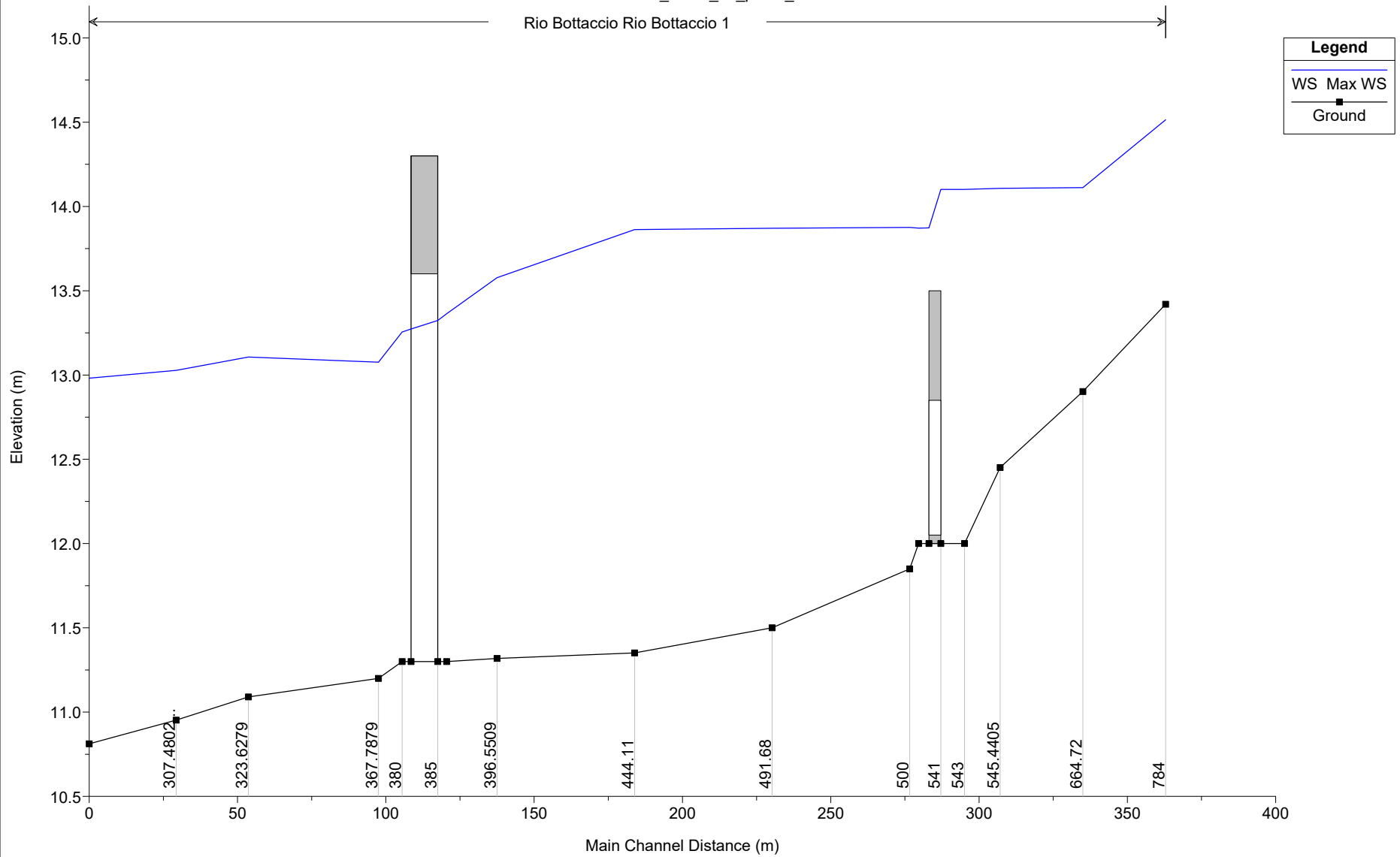
RIO DI BOTTACCIO – Tp 1 ora
Tr=30 anni

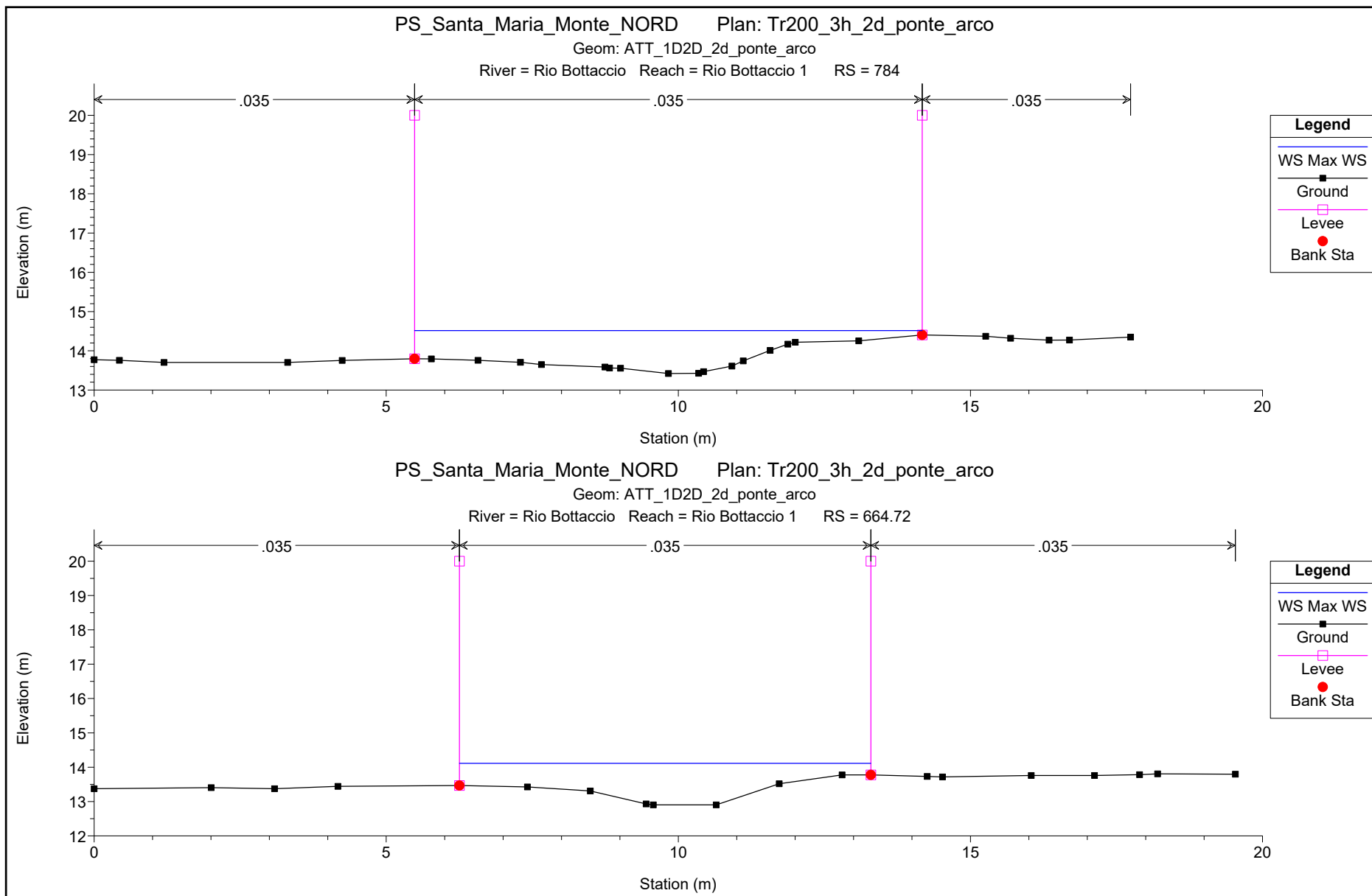
Tratto di Monte

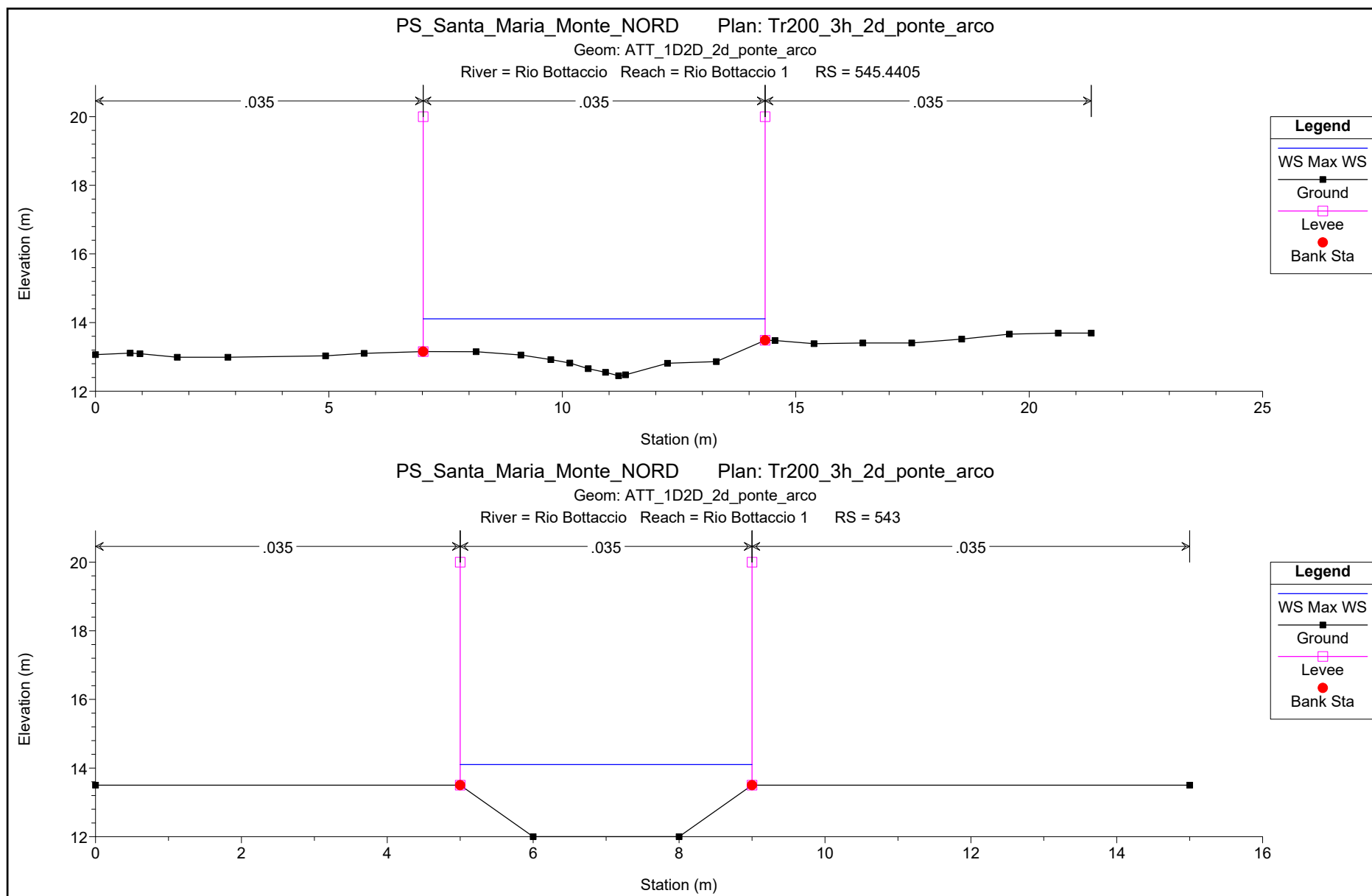
PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

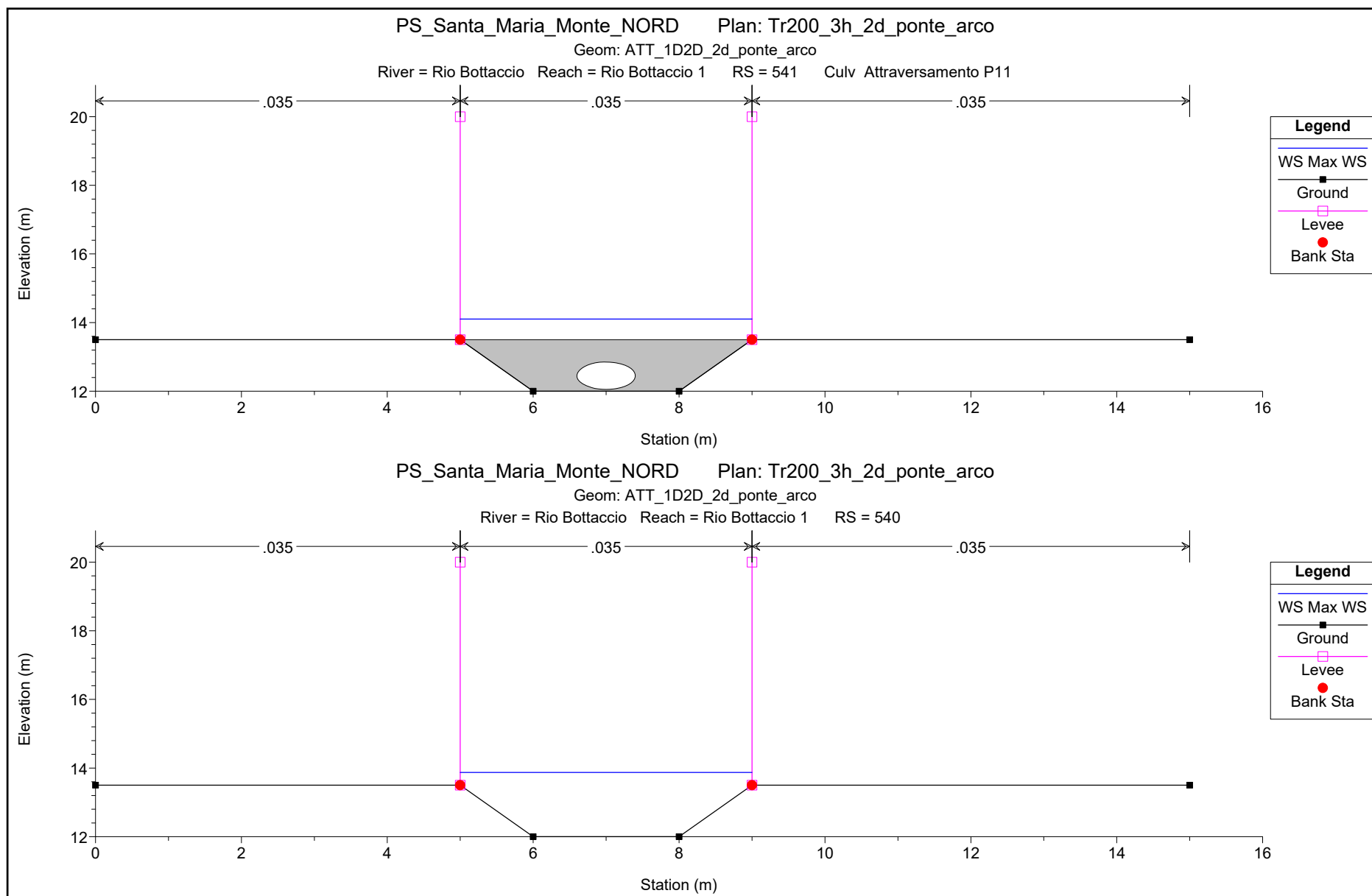
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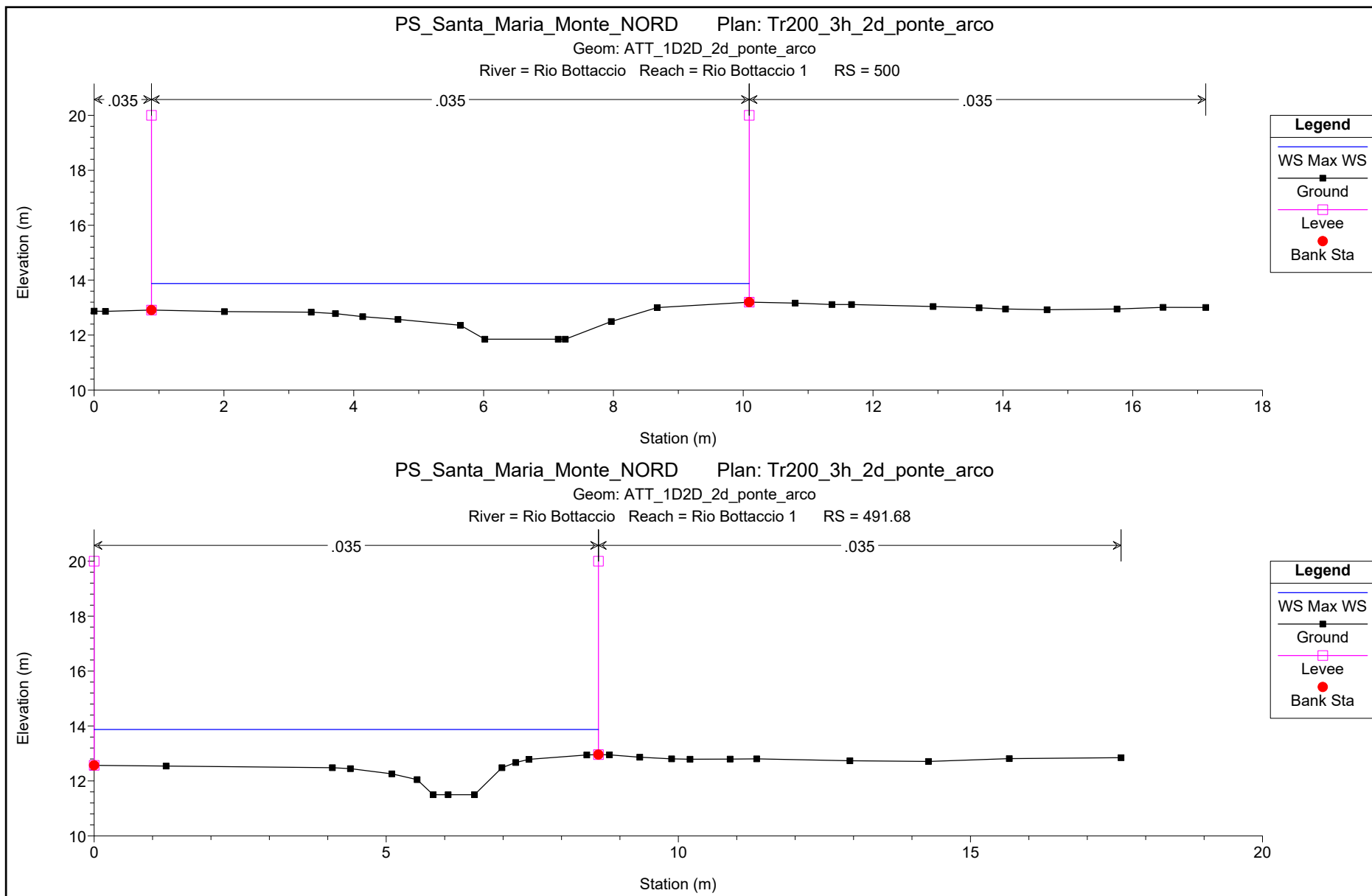
Rio Bottaccio Rio Bottaccio 1

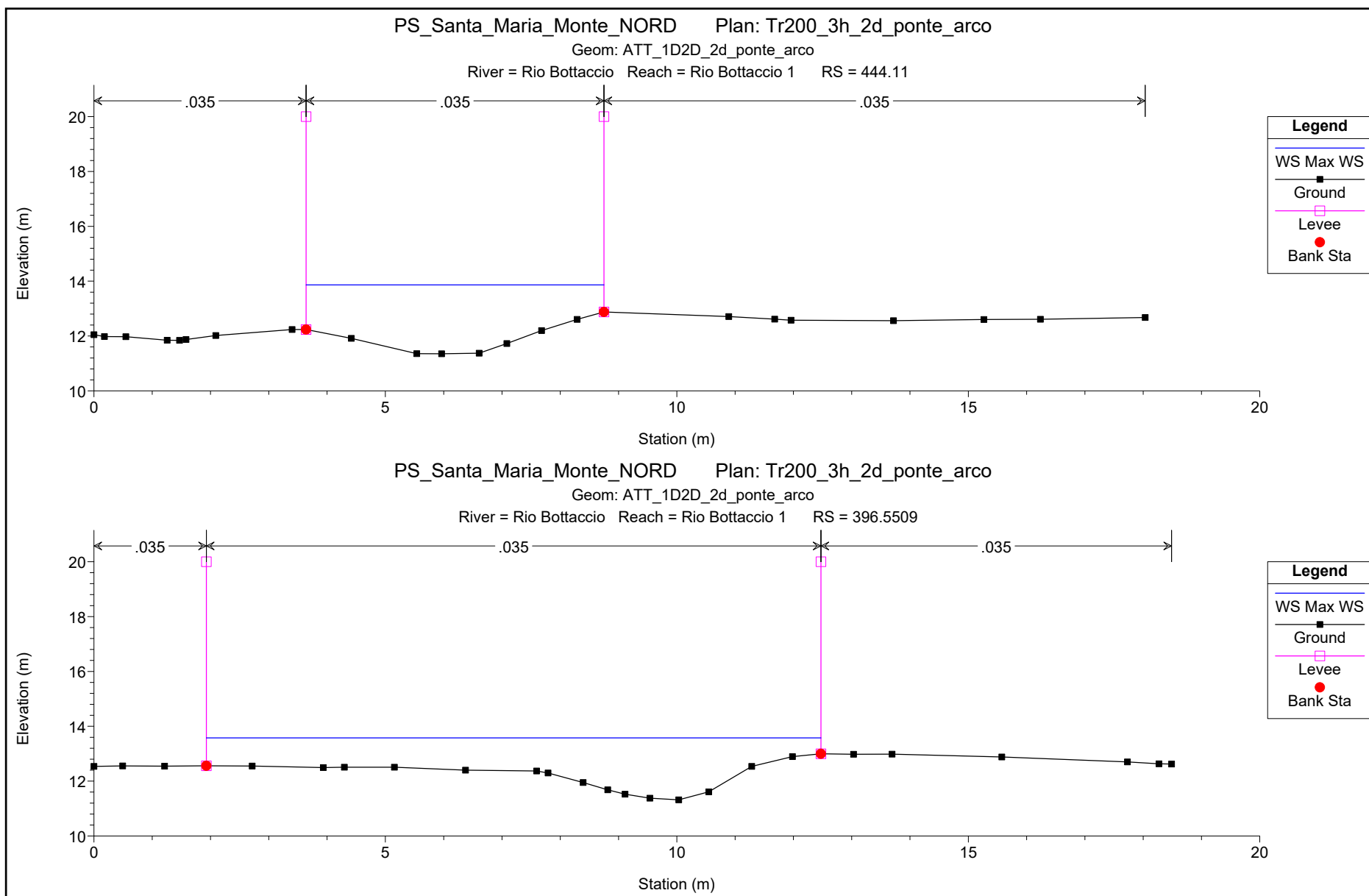


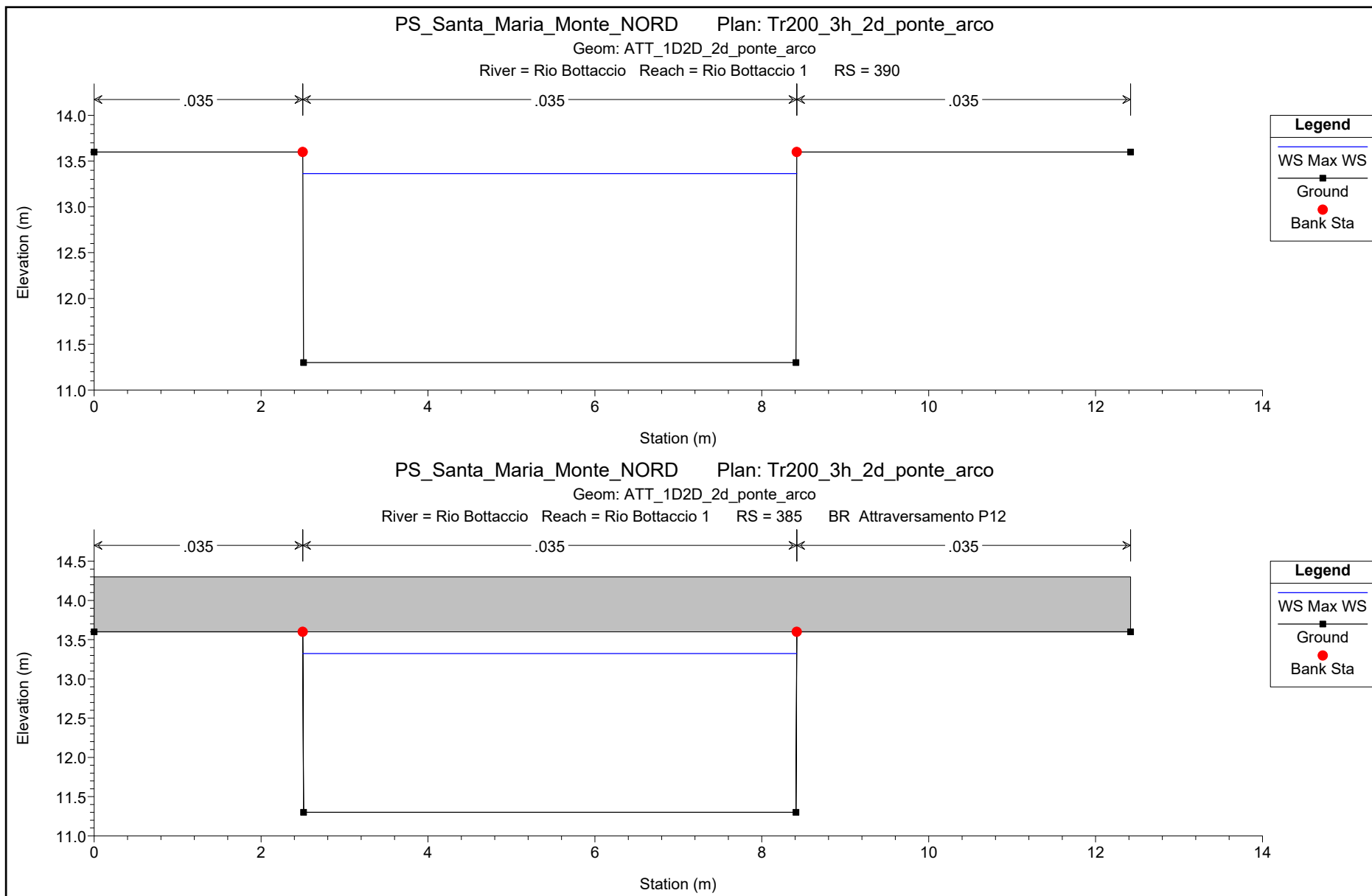


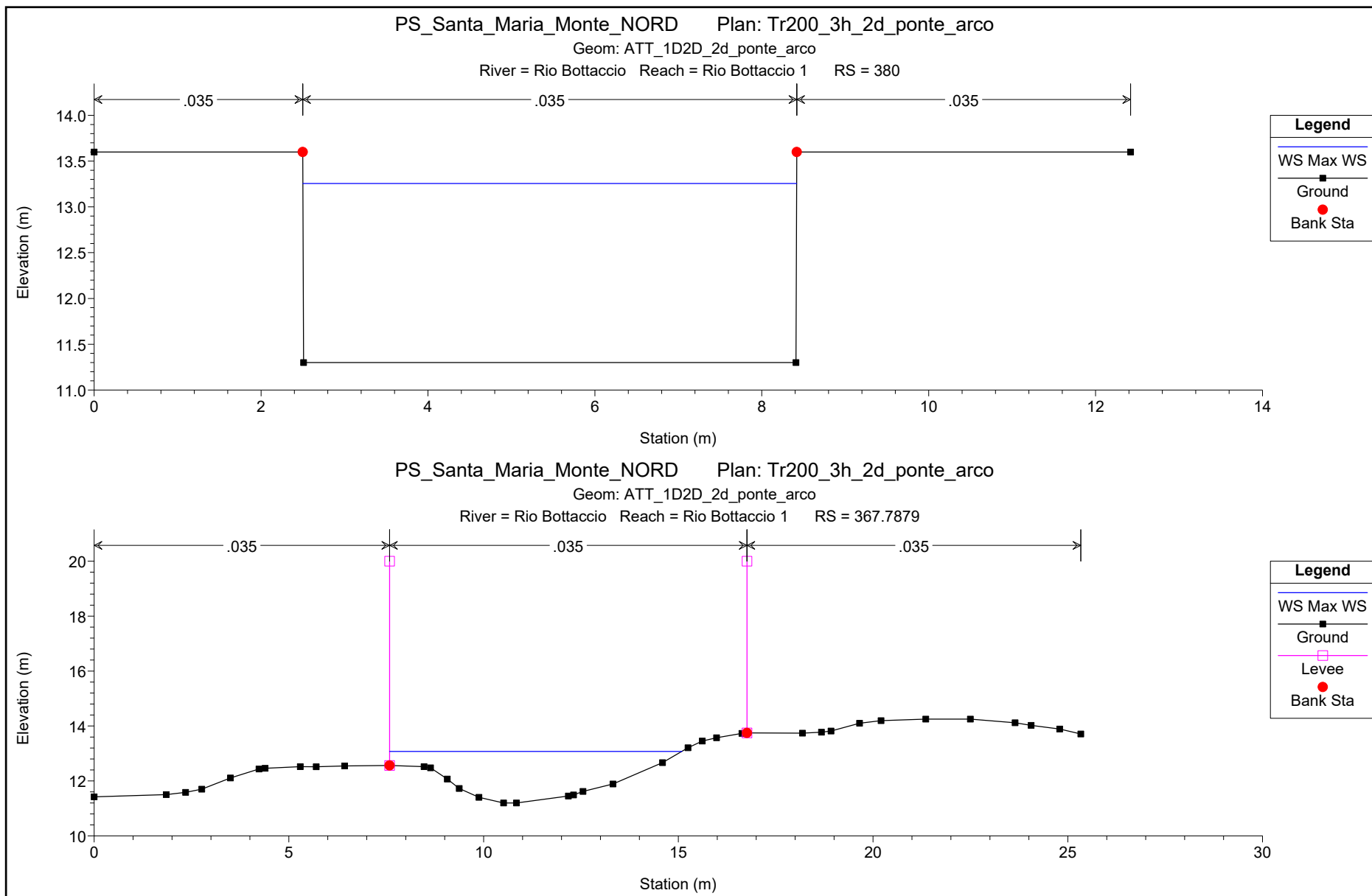


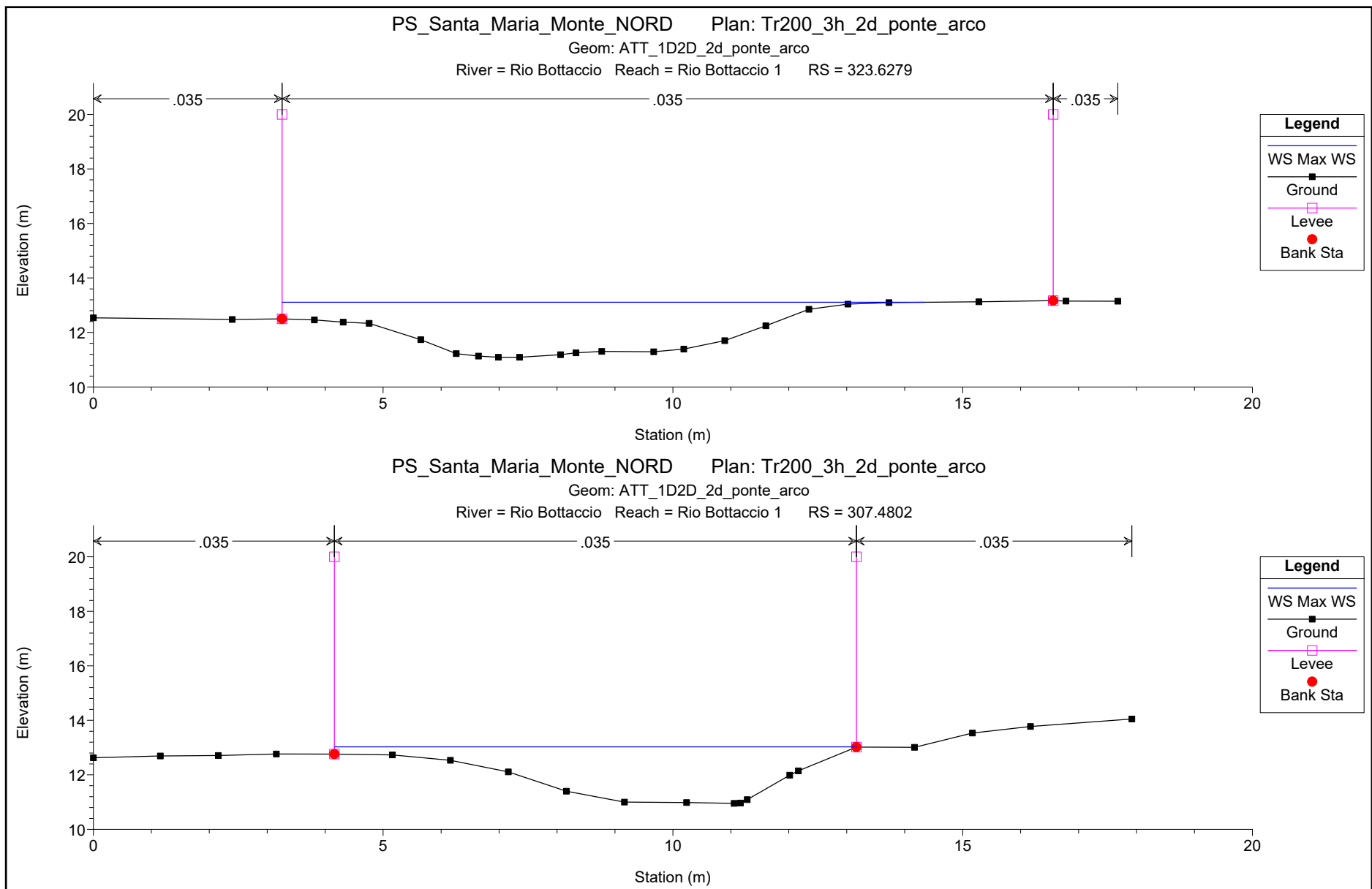








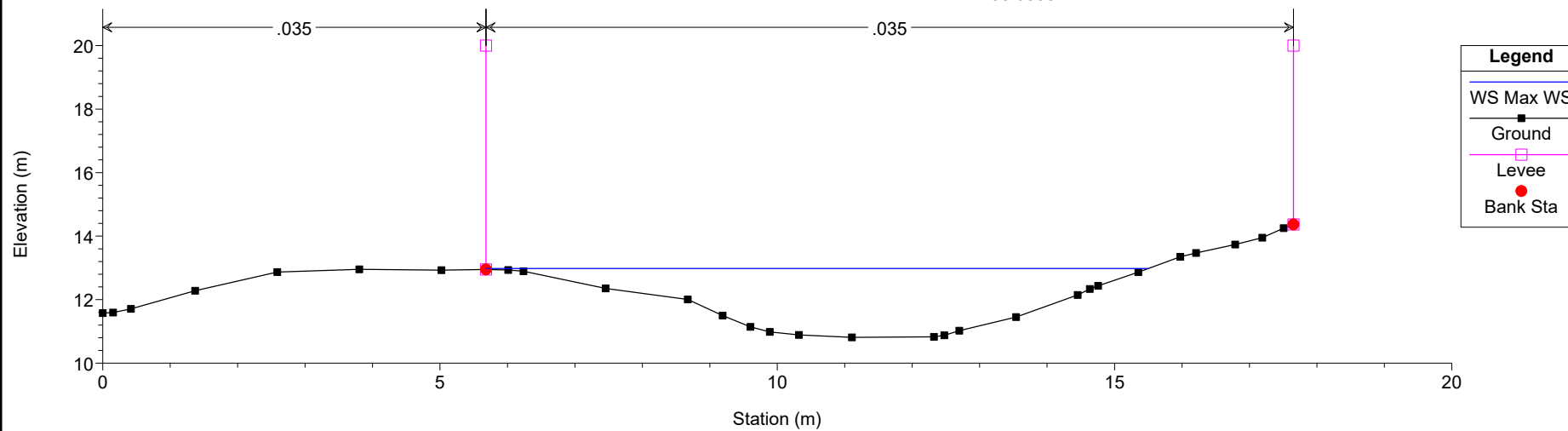




PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

River = Rio Bottaccio Reach = Rio Bottaccio 1 RS = 290.0935



HEC-RAS Plan: Tr200_3h_2d_ponte_arco River: Rio Bottaccio Reach: Rio Bottaccio 1 Profile: Max WS

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio Bottaccio 1	784	17.26	13.42	14.51	14.56	14.94	0.019426	2.88	5.99	8.69	1.11
Rio Bottaccio 1	781	Lat Struct									
Rio Bottaccio 1	780	Lat Struct									
Rio Bottaccio 1	664.72	3.00	12.90	14.11		14.13	0.000591	0.53	5.61	7.04	0.19
Rio Bottaccio 1	545.4405	3.00	12.45	14.11		14.11	0.000159	0.35	8.68	7.32	0.10
Rio Bottaccio 1	543	3.00	12.00	14.10		14.11	0.000227	0.43	6.90	4.00	0.11
Rio Bottaccio 1	541	Culvert									
Rio Bottaccio 1	540	2.65	12.00	13.87		13.88	0.000259	0.44	5.99	4.00	0.12
Rio Bottaccio 1	531	Lat Struct									
Rio Bottaccio 1	530	Lat Struct									
Rio Bottaccio 1	500	2.94	11.85	13.88		13.88	0.000076	0.25	11.70	9.21	0.07
Rio Bottaccio 1	491.68	3.40	11.50	13.87		13.87	0.000083	0.27	12.61	8.63	0.07
Rio Bottaccio 1	444.11	-4.55	11.35	13.86		13.87	0.000187	-0.45	10.21	5.11	0.10
Rio Bottaccio 1	396.5509	20.19	11.32	13.58		13.69	0.002430	1.46	13.79	10.54	0.41
Rio Bottaccio 1	390	24.70	11.30	13.36	12.51	13.57	0.003870	2.03	12.20	5.92	0.45
Rio Bottaccio 1	385	Bridge									
Rio Bottaccio 1	380	24.64	11.30	13.26		13.49	0.004481	2.13	11.55	5.92	0.49
Rio Bottaccio 1	371	Lat Struct									
Rio Bottaccio 1	367.7879	24.46	11.20	13.08		13.47	0.009546	2.77	8.83	7.50	0.82
Rio Bottaccio 1	323.6279	19.11	11.09	13.11		13.22	0.002640	1.49	12.85	11.08	0.44
Rio Bottaccio 1	307.4802	17.47	10.95	13.03		13.17	0.003421	1.66	10.50	9.01	0.49
Rio Bottaccio 1	290.0935	17.56	10.81	12.98		13.09	0.002219	1.44	12.23	9.82	0.41

RIO DI BOTTACCIO – Tp 1 ora
Tr=30 anni

Tratto di Valle

PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

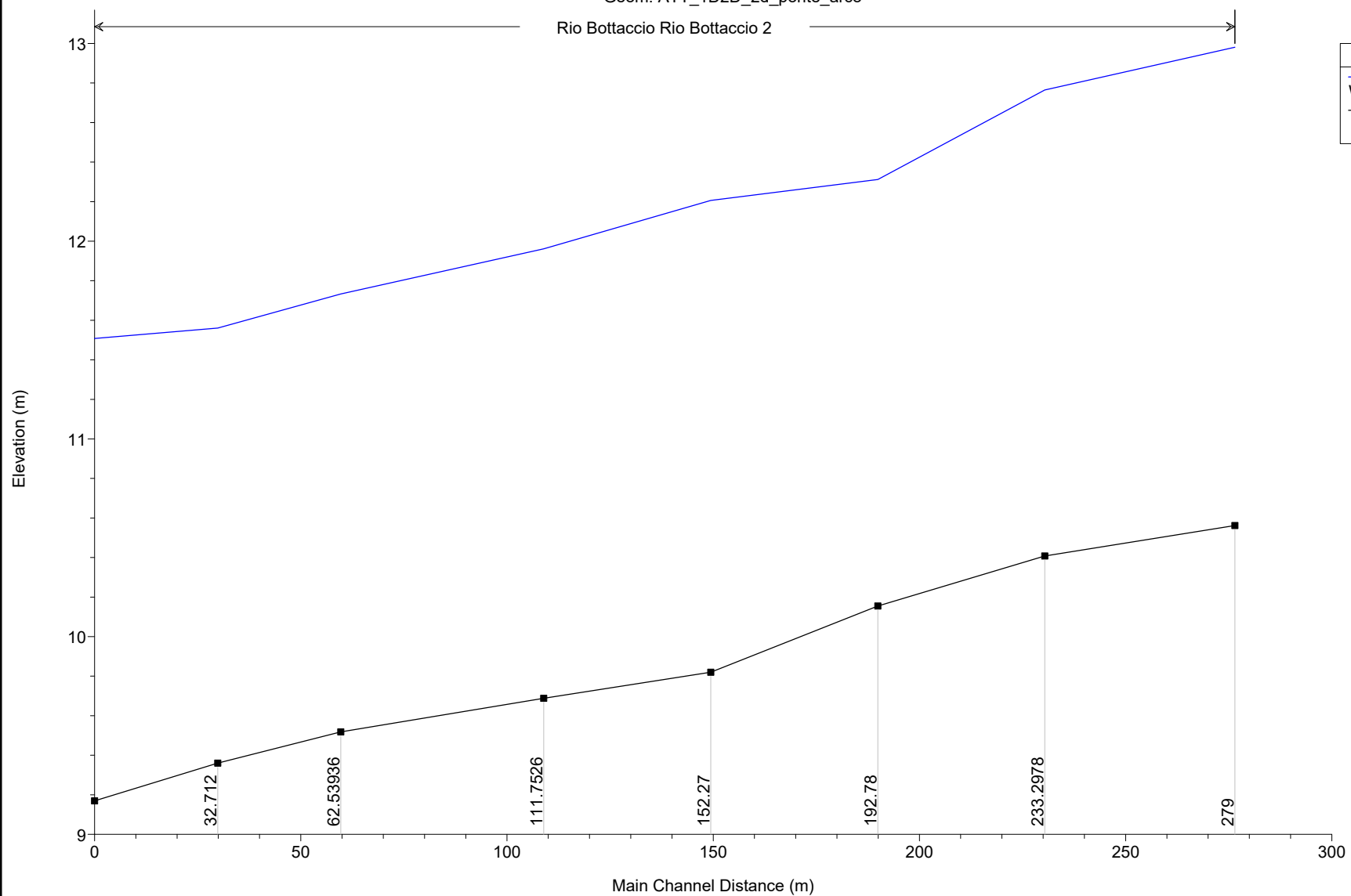
Geom: ATT_1D2D_2d_ponte_arco

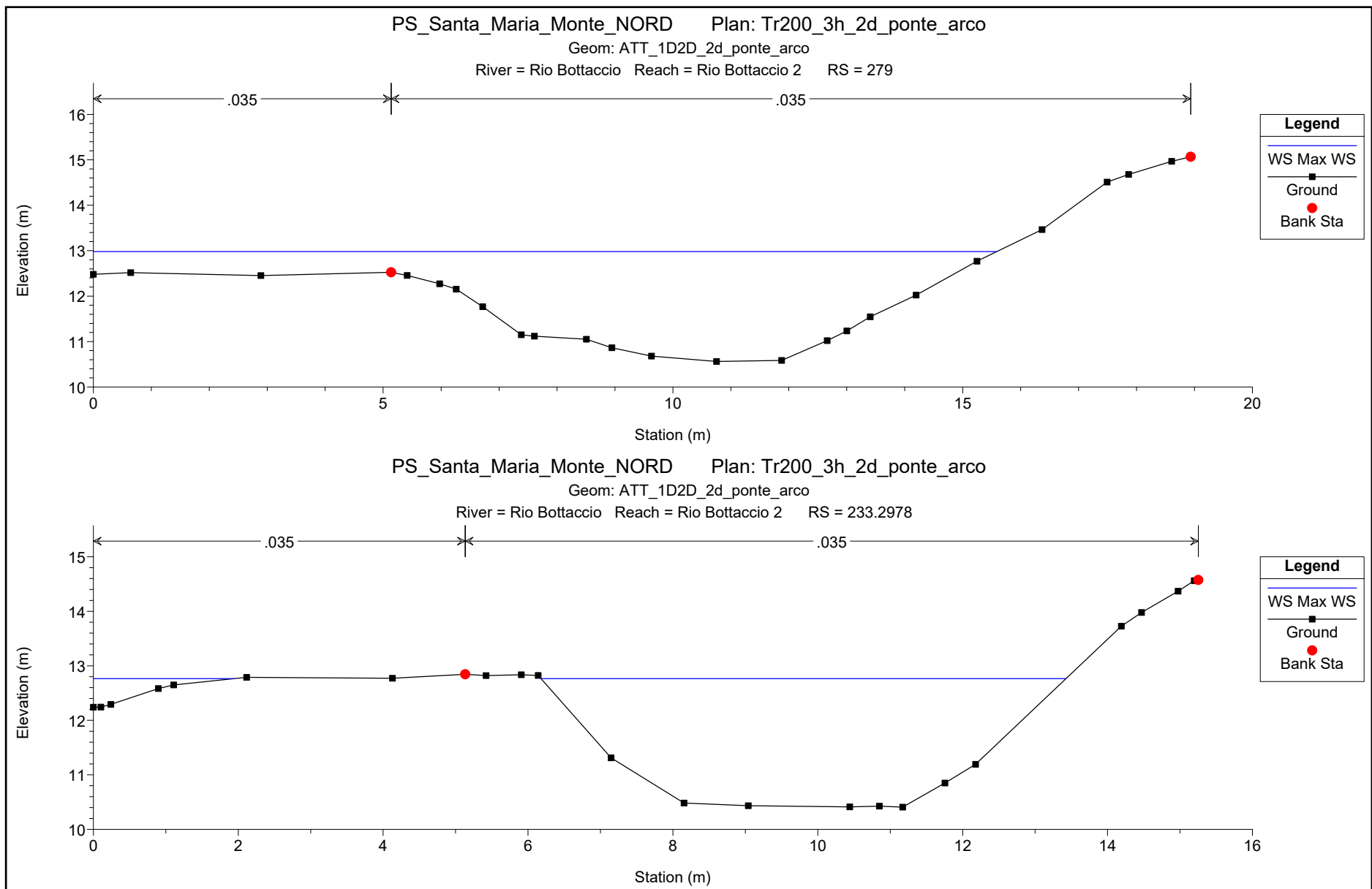
Rio Bottaccio Rio Bottaccio 2

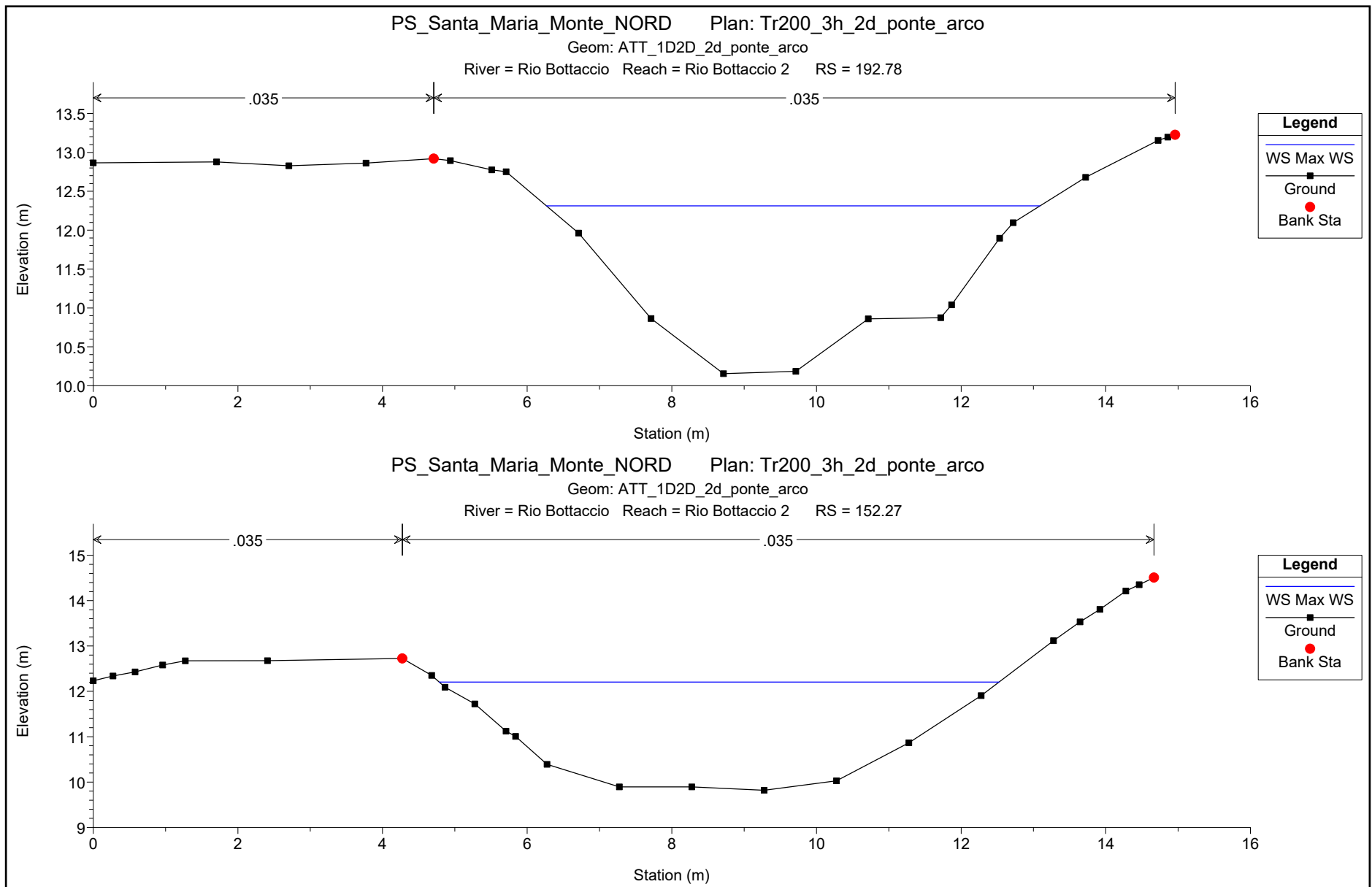
Legend

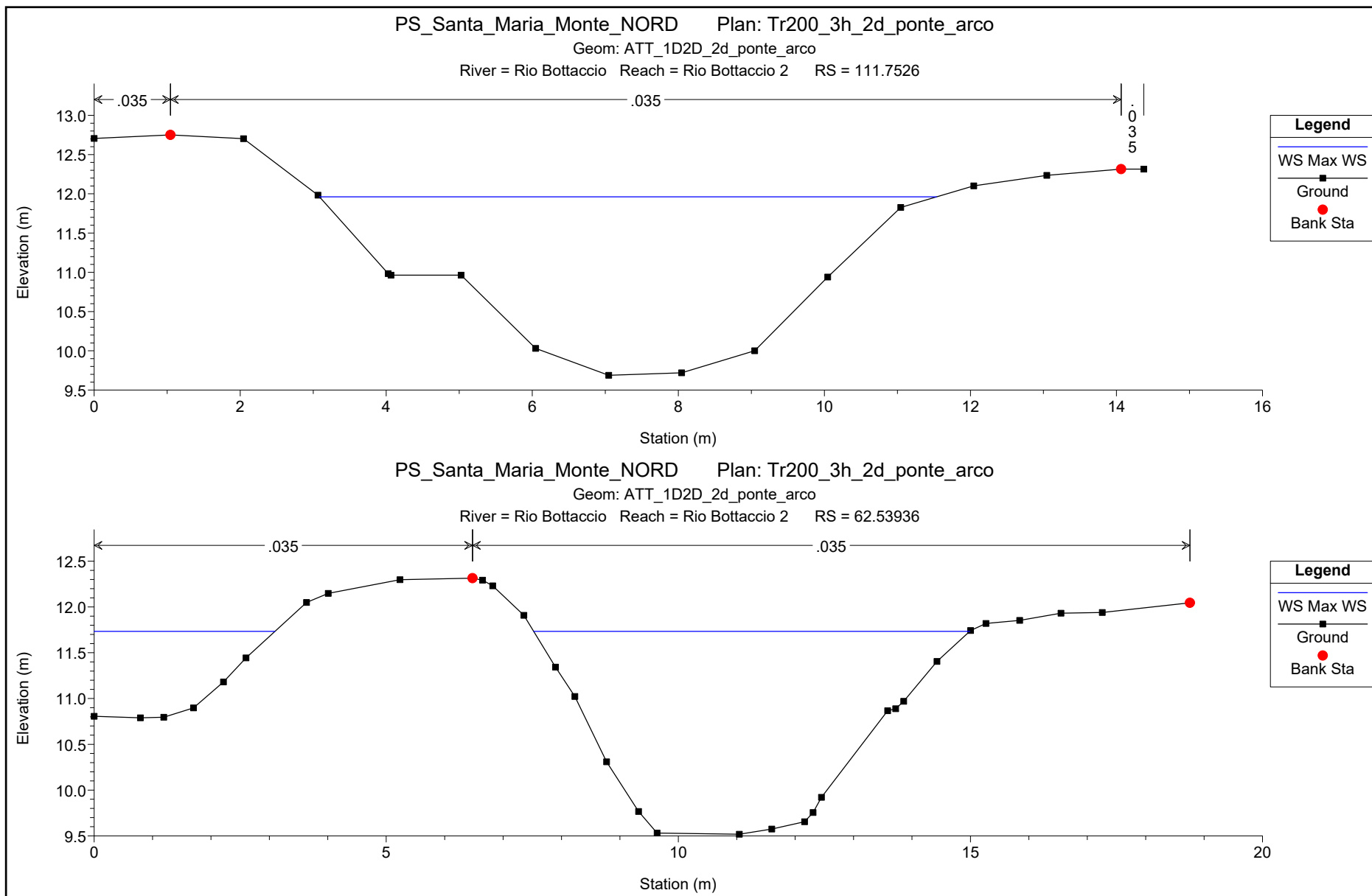
WS Max WS

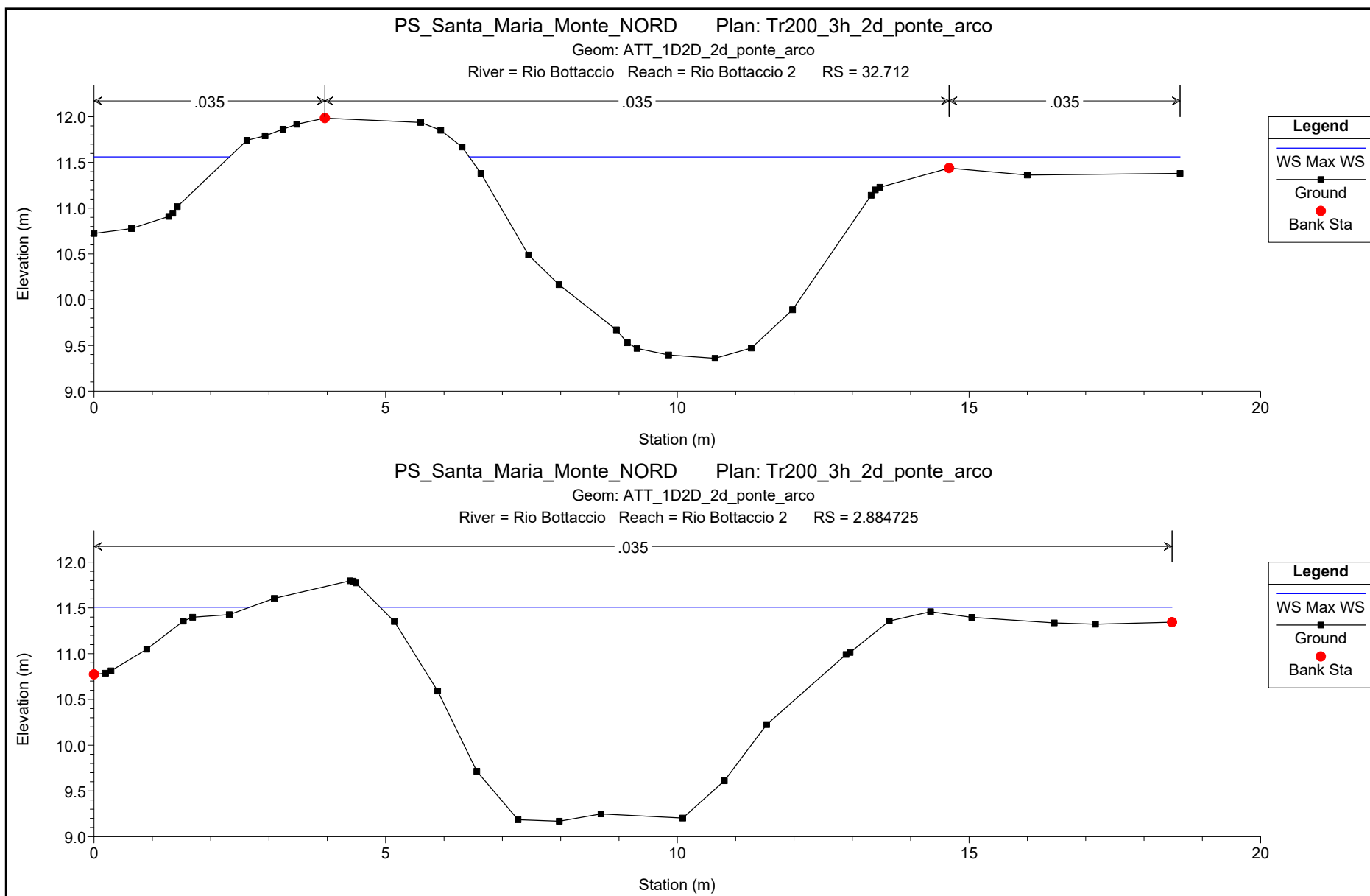
Ground











HEC-RAS Plan: Tr200_3h_2d_ponte_arco River: Rio Bottaccio Reach: Rio Bottaccio 2 Profile: Max WS

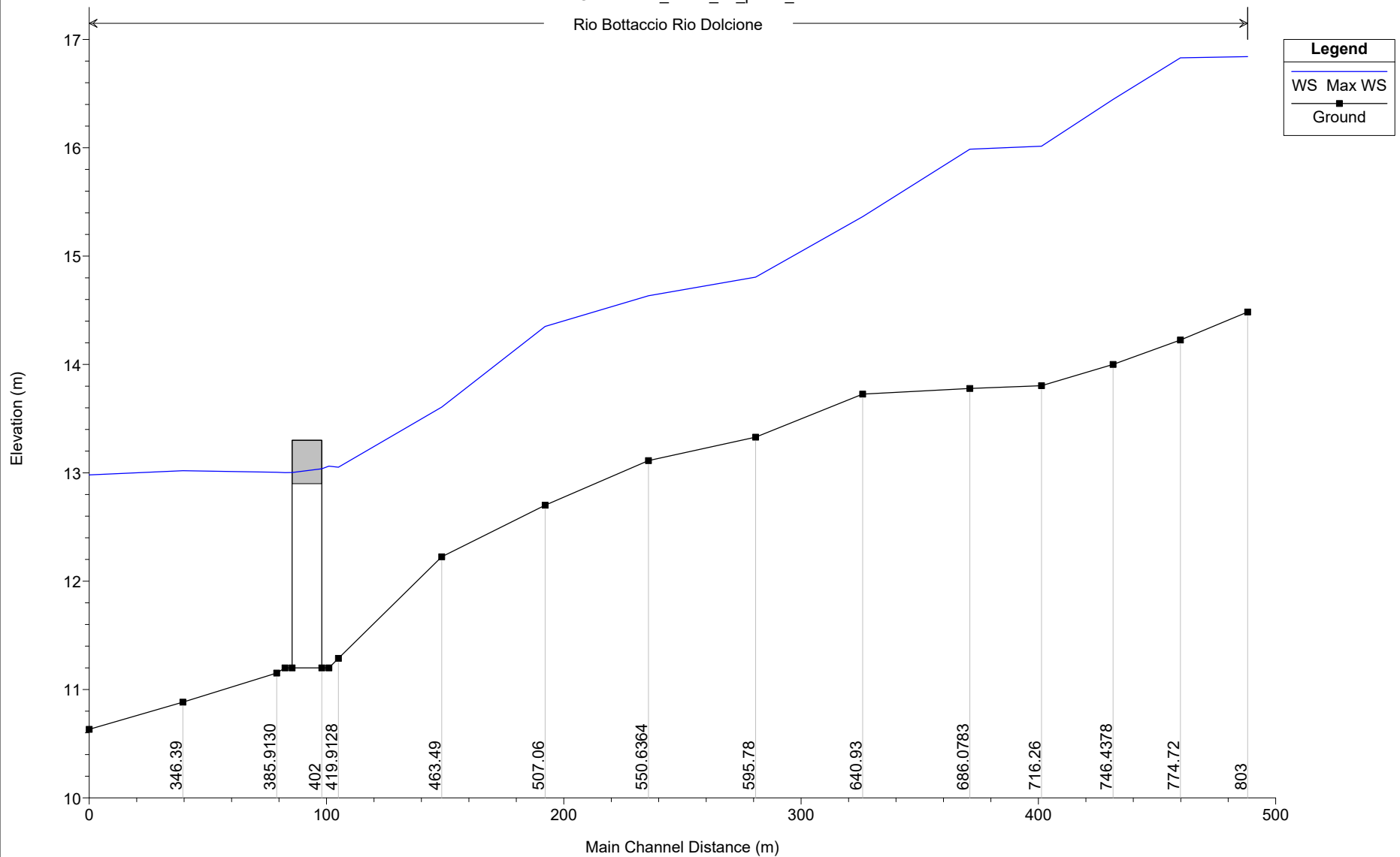
Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio Bottaccio 2	279	28.65	10.56	12.98		13.11	0.001978	1.61	19.17	15.59	0.41
Rio Bottaccio 2	271	Lat Struct									
Rio Bottaccio 2	233.2978	27.14	10.41	12.77		13.00	0.003771	2.14	13.01	9.19	0.52
Rio Bottaccio 2	192.78	27.13	10.16	12.31		12.77	0.010197	3.00	9.03	6.82	0.83
Rio Bottaccio 2	152.27	27.13	9.82	12.21		12.43	0.003675	2.10	12.90	7.74	0.52
Rio Bottaccio 2	111.7526	27.12	9.69	11.96		12.24	0.005671	2.35	11.52	8.45	0.64
Rio Bottaccio 2	62.53936	27.12	9.52	11.73		11.98	0.005191	2.28	12.81	10.56	0.61
Rio Bottaccio 2	32.712	27.12	9.36	11.56		11.82	0.005716	2.33	12.81	14.51	0.65
Rio Bottaccio 2	2.884725	25.83	9.17	11.51	10.80	11.66	0.005017	1.73	14.93	16.25	0.58

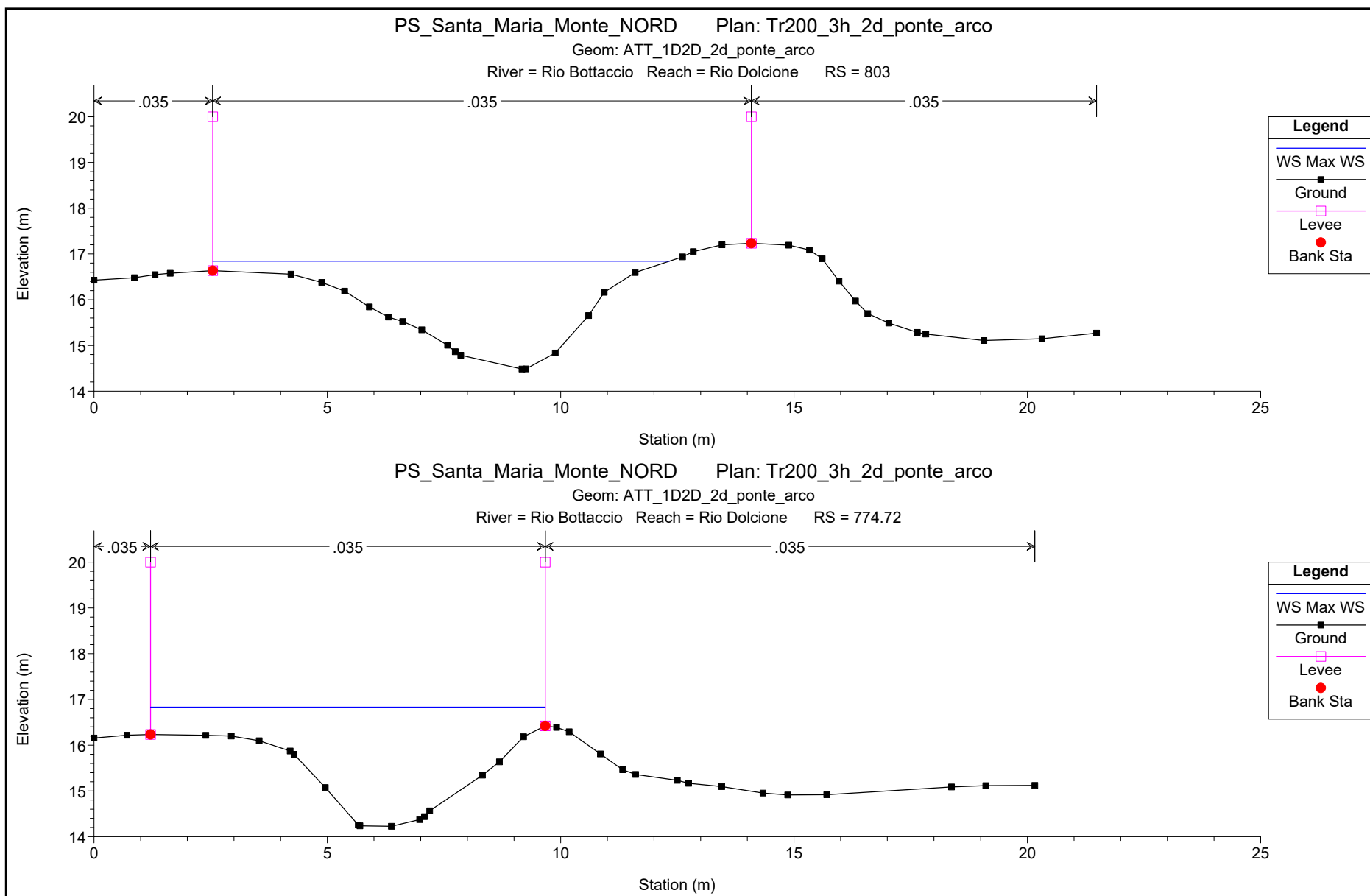
RIO DOLCIONE – Tp 1 ora
Tr=30 anni

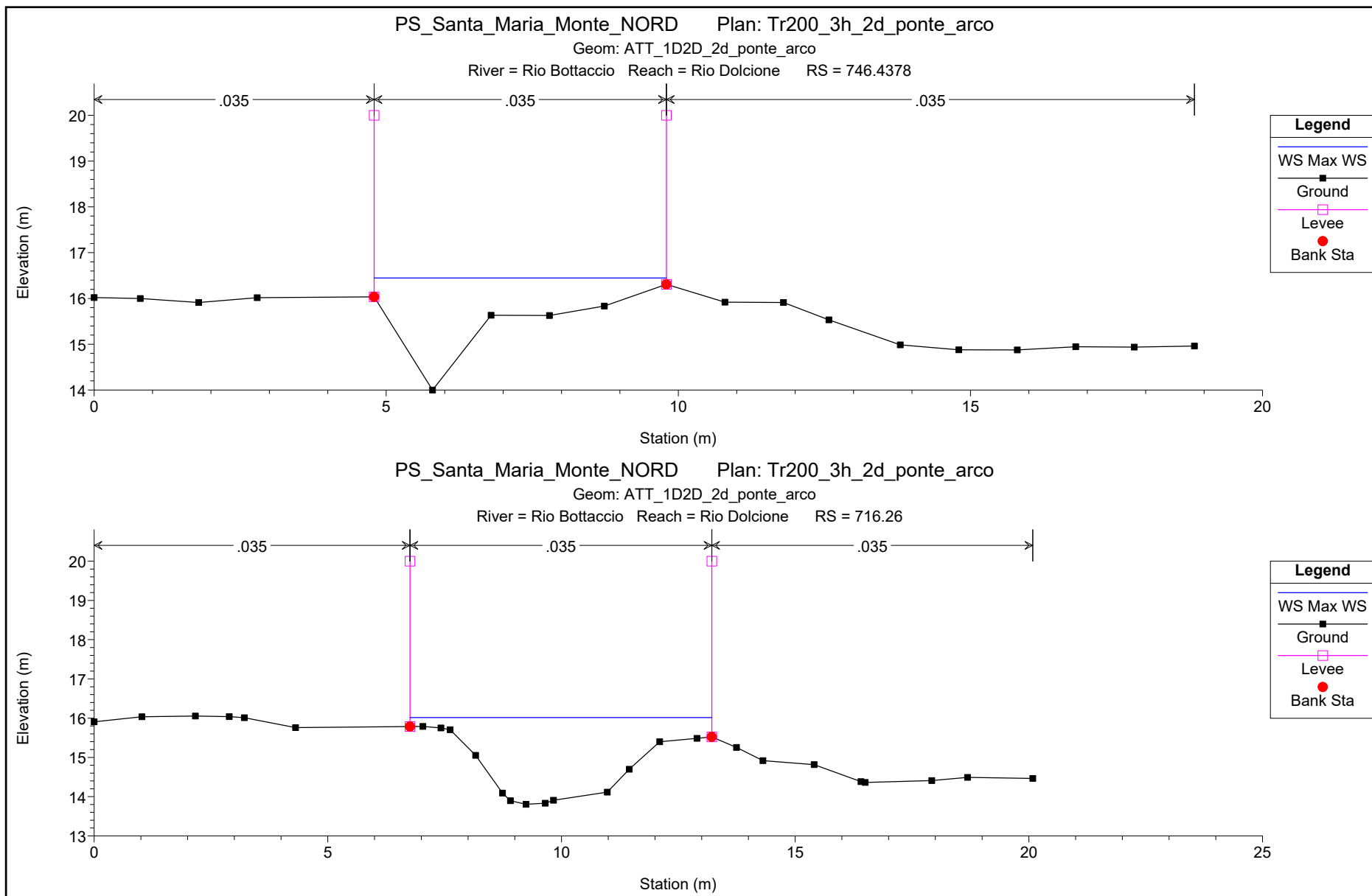
PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

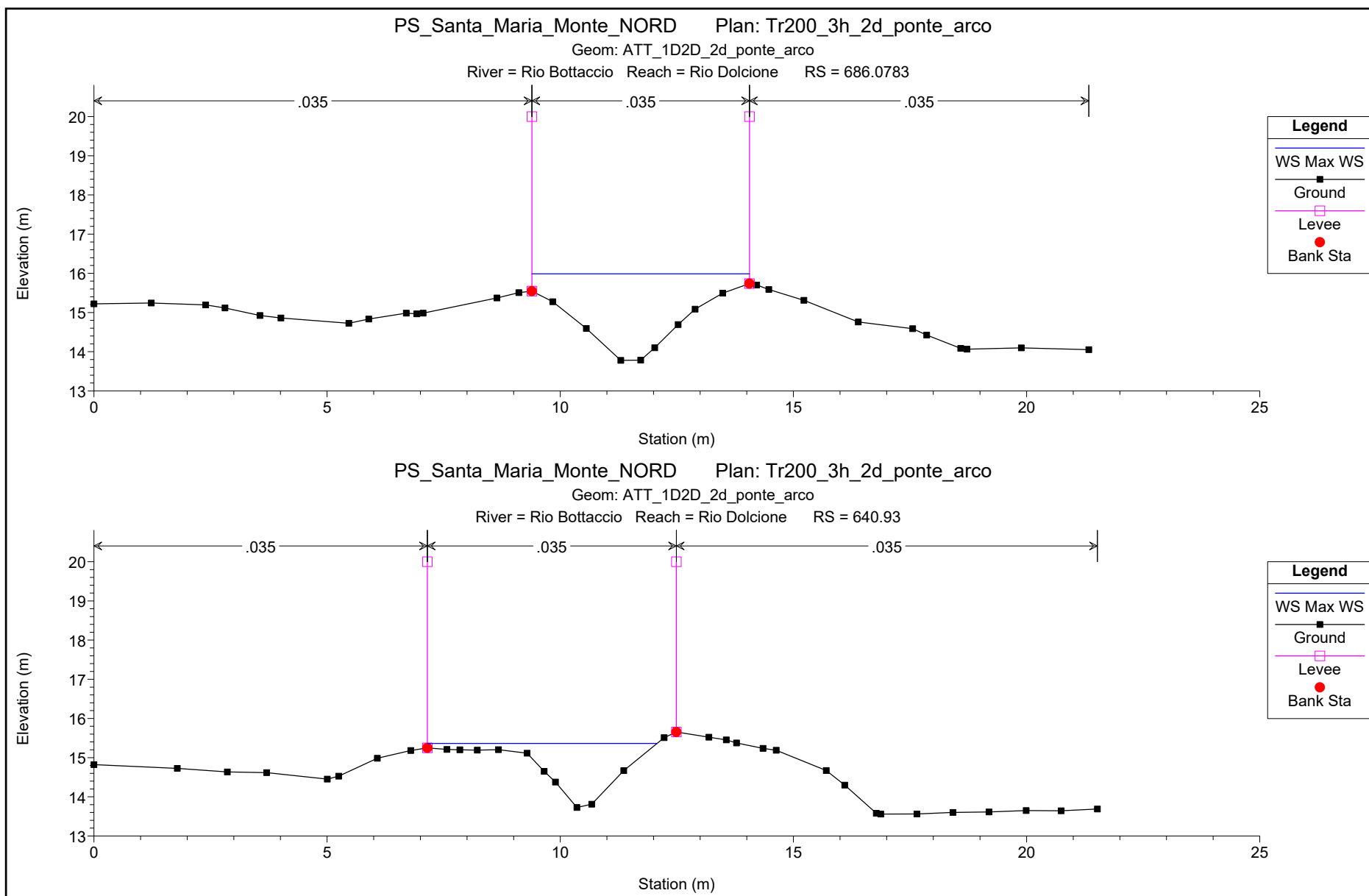
Geom: ATT_1D2D_2d_ponte_arco

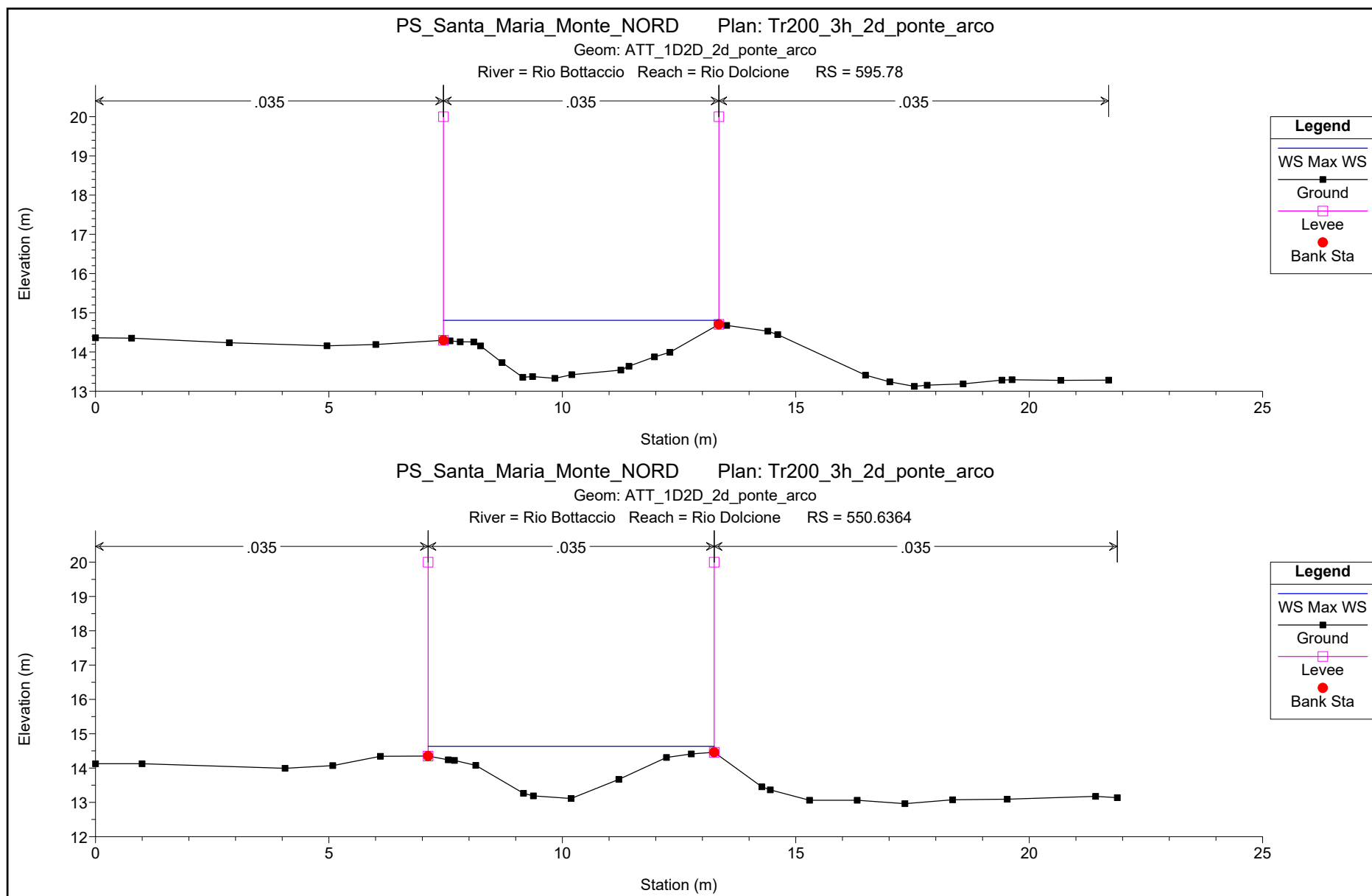
Rio Bottaccio Rio Dolcione

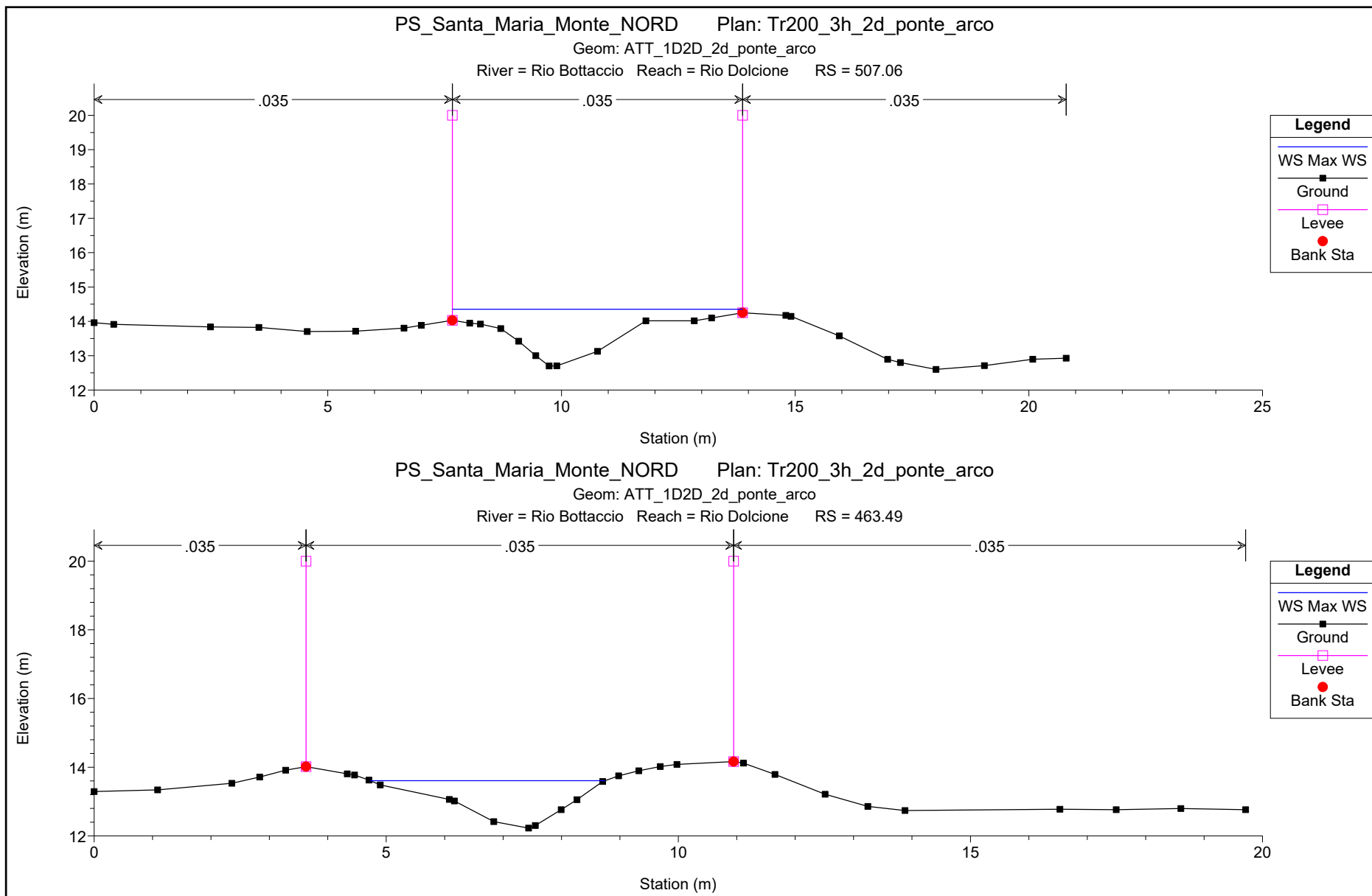


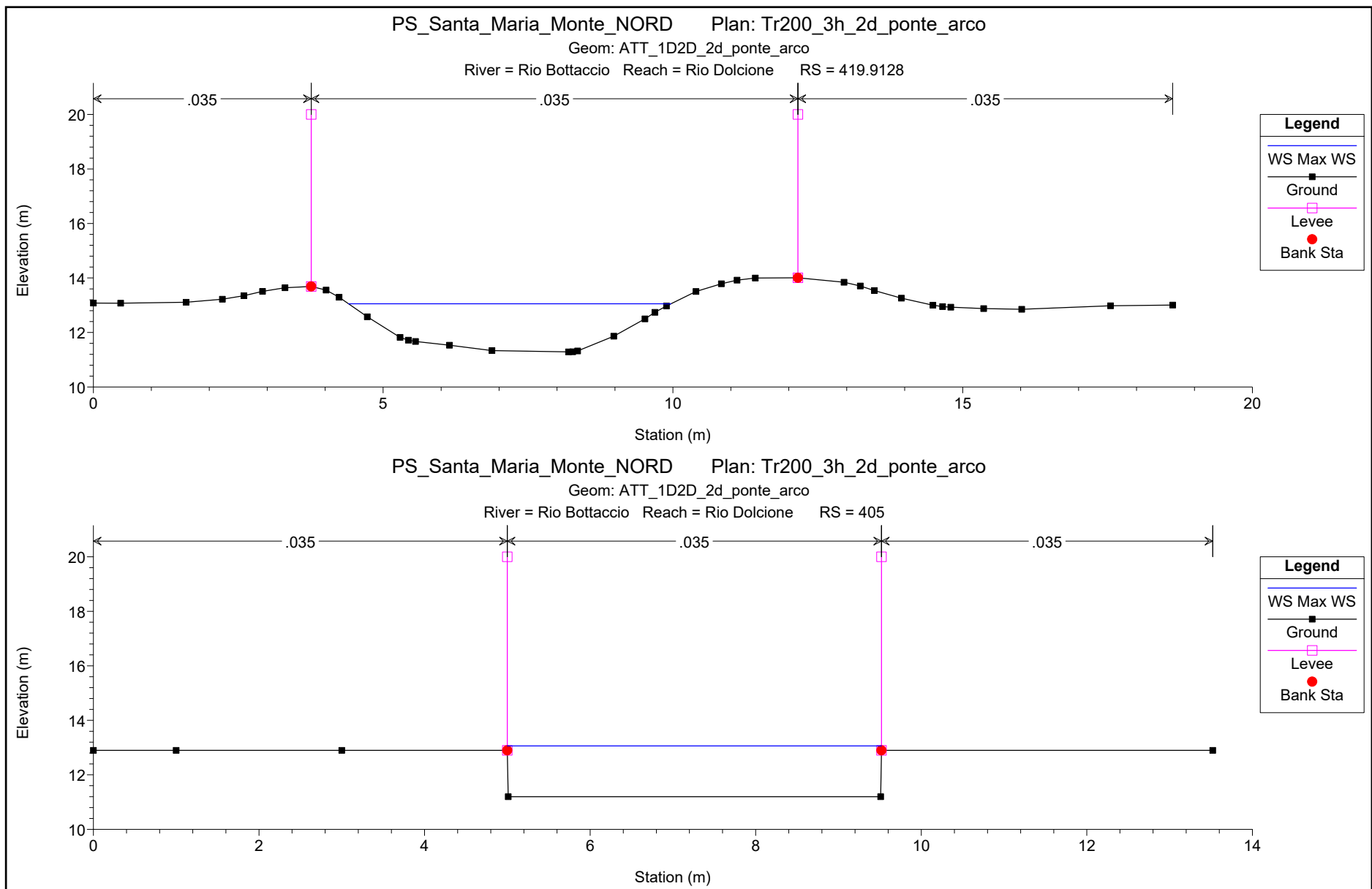


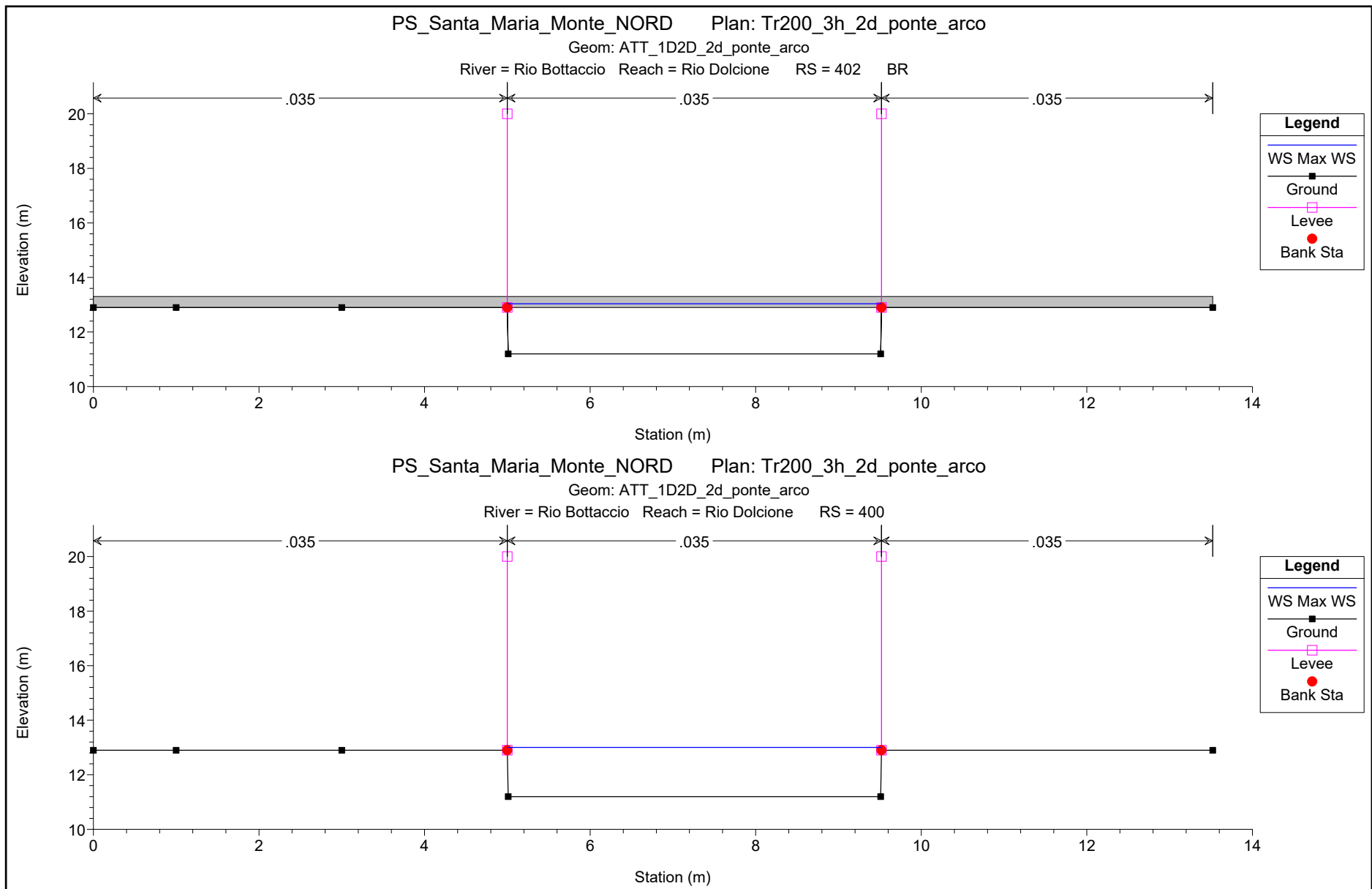


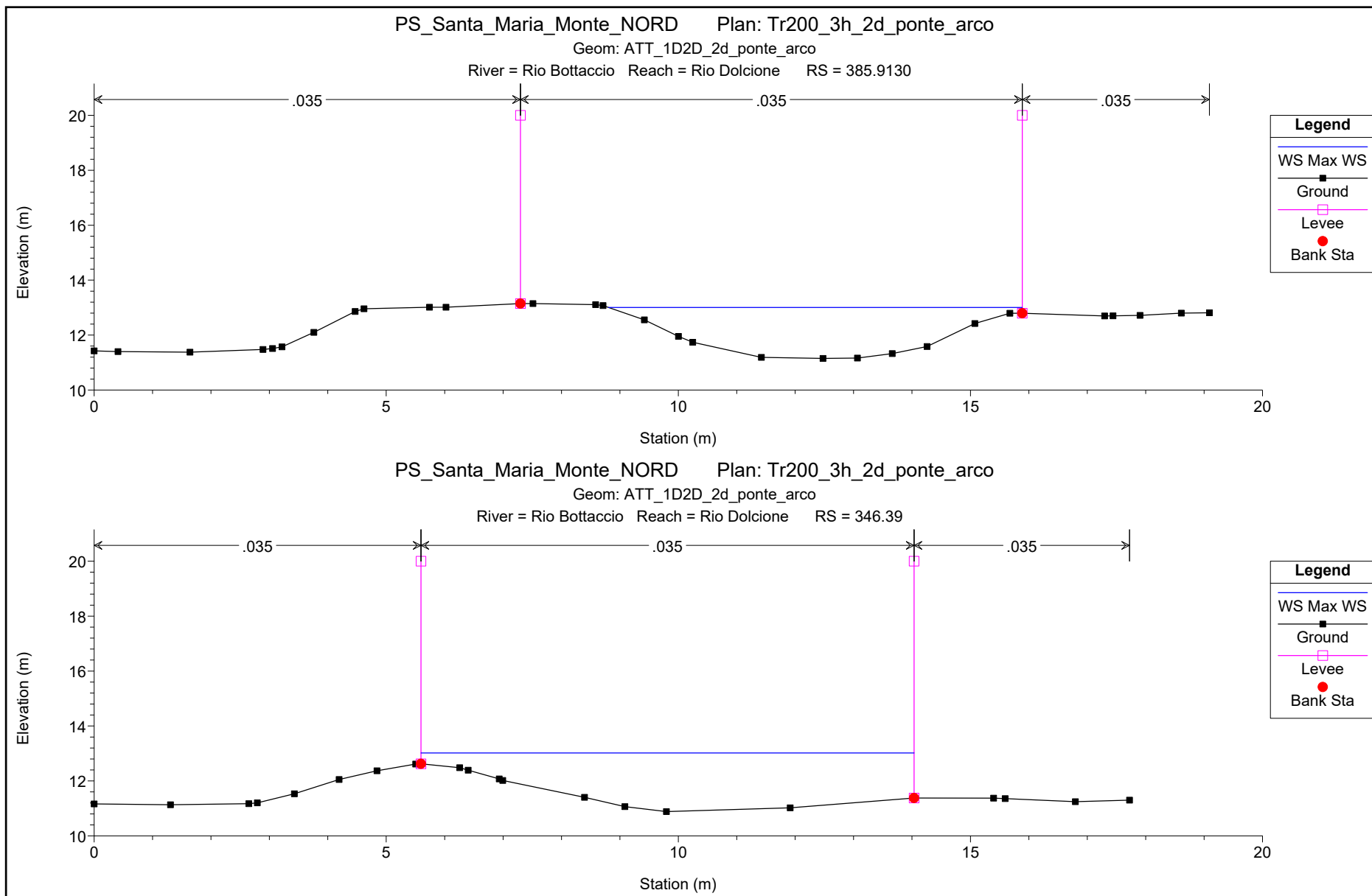








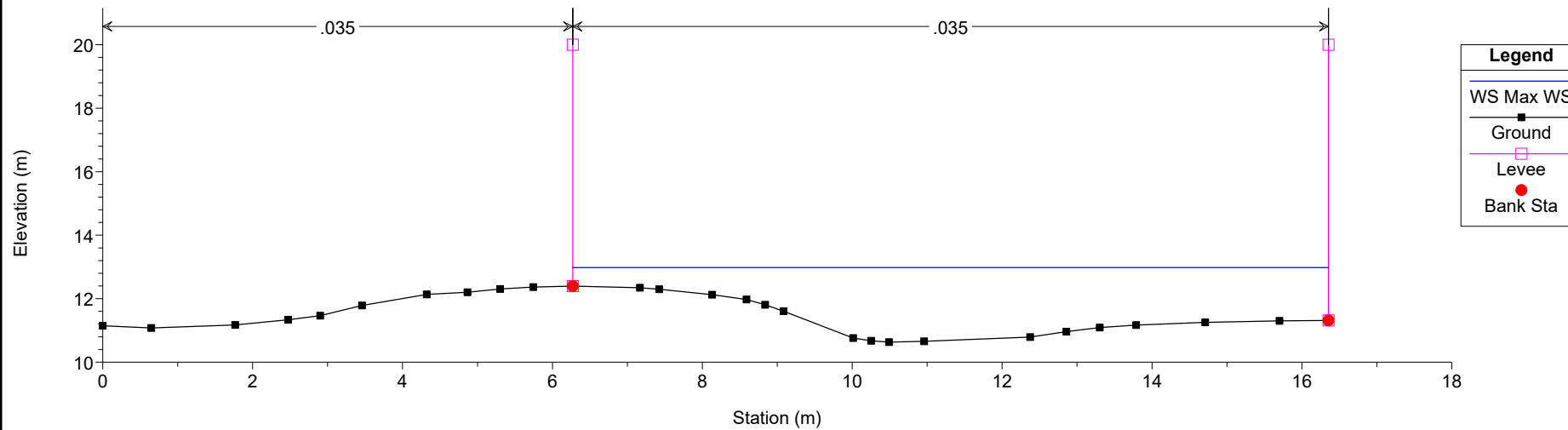




PS_Santa_Maria_Monte_NORD Plan: Tr200_3h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

River = Rio Bottaccio Reach = Rio Dolcione RS = 306.8662



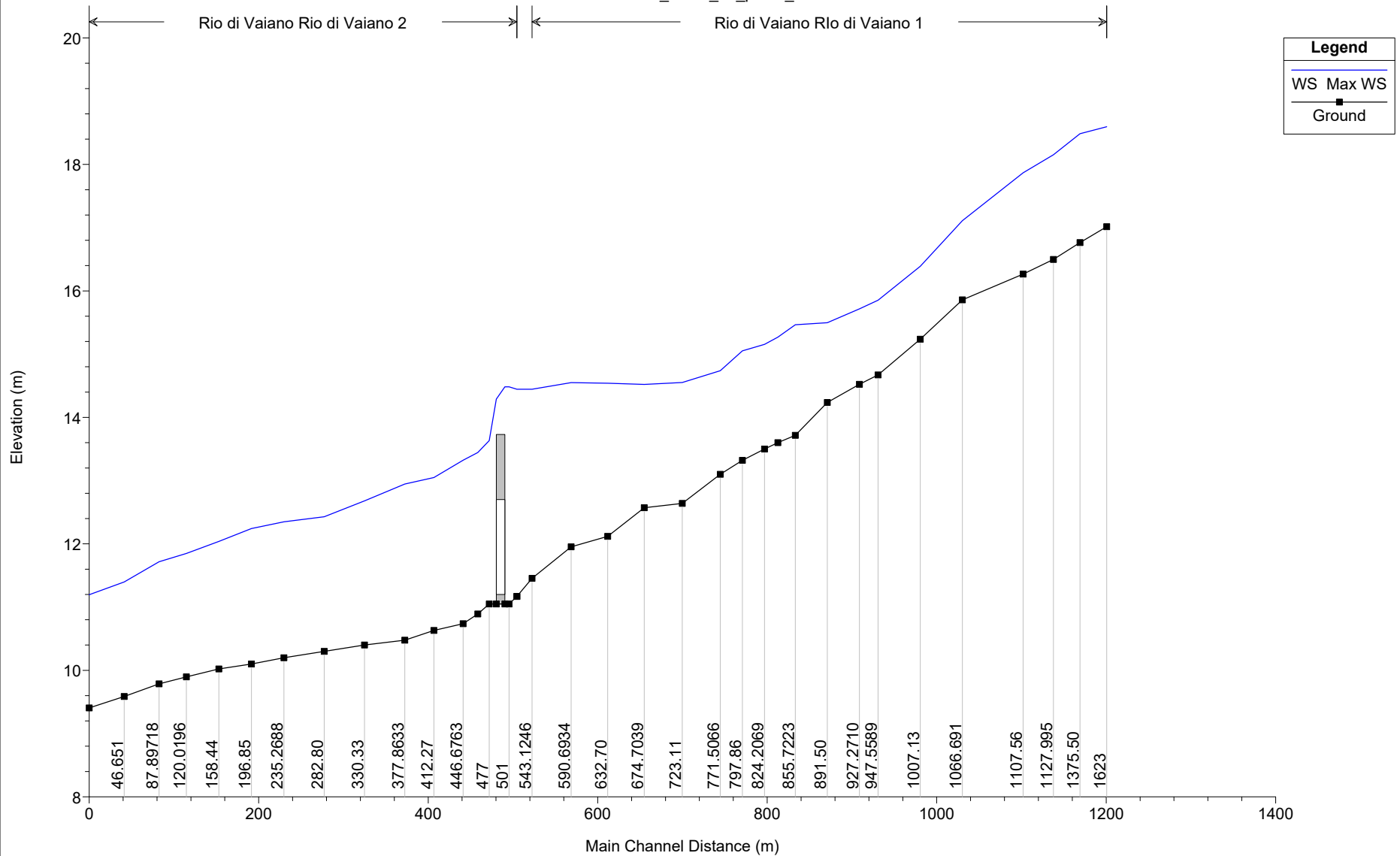
HEC-RAS Plan: Tr200_3h_2d_ponte_arco River: Rio Bottaccio Reach: Rio Dolcione Profile: Max WS

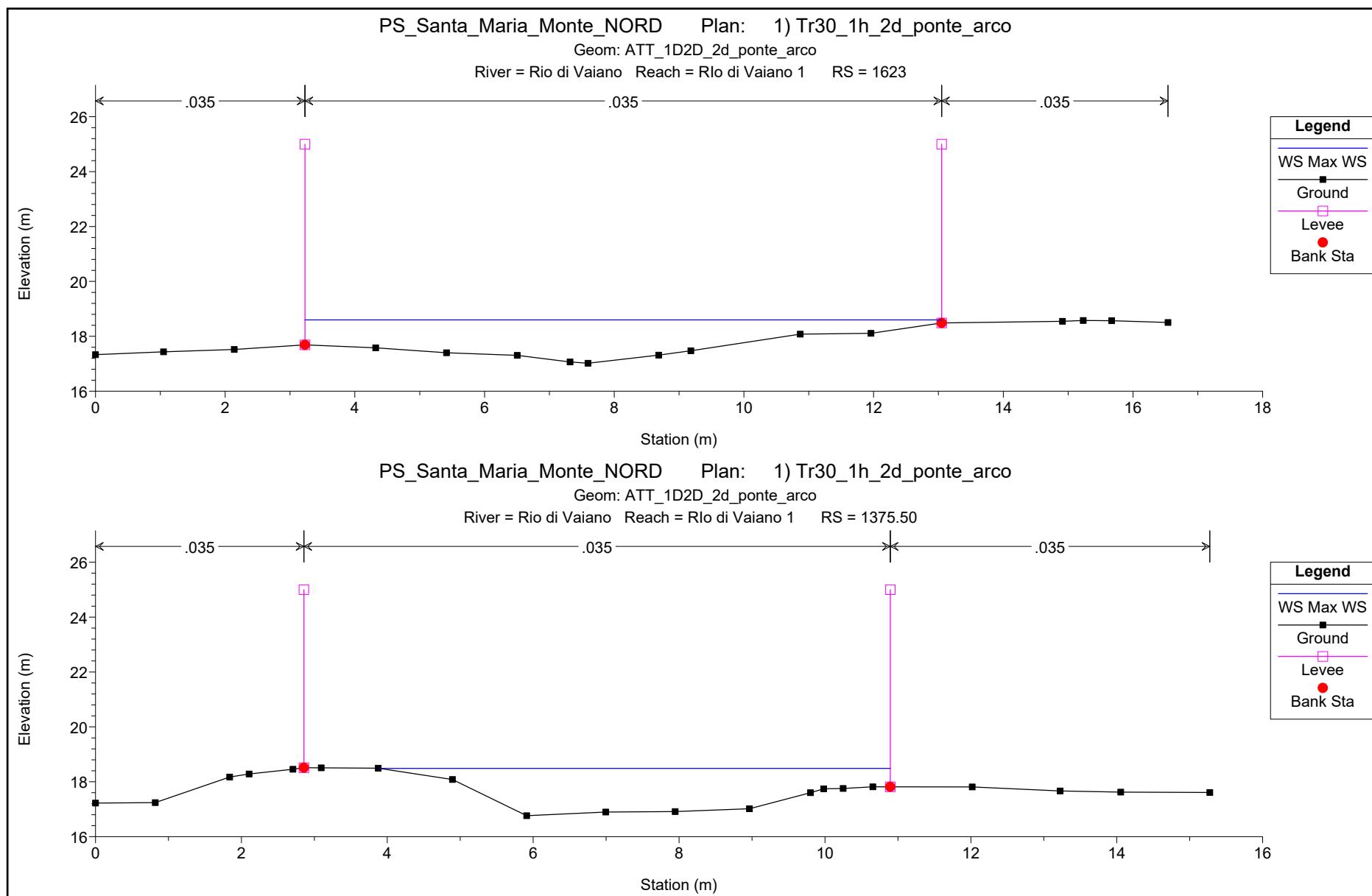
Reach	River Sta	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Rio Dolcione	803	19.64	14.48	16.84		17.02	0.004655	1.86	10.57	9.78	0.57
Rio Dolcione	801	Lat Struct									
Rio Dolcione	800	Lat Struct									
Rio Dolcione	774.72	17.65	14.23	16.83		16.94	0.002492	1.50	11.79	8.46	0.40
Rio Dolcione	746.4378	16.25	14.00	16.45	16.48	17.00	0.024487	3.28	4.95	5.00	1.05
Rio Dolcione	716.26	13.94	13.80	16.01		16.17	0.004114	1.73	8.05	6.46	0.50
Rio Dolcione	686.0783	9.83	13.78	15.99		16.14	0.004568	1.72	5.72	4.66	0.50
Rio Dolcione	640.93	7.29	13.73	15.36	15.39	15.69	0.022967	2.53	2.88	4.93	1.06
Rio Dolcione	595.78	6.17	13.33	14.81		14.86	0.001782	1.05	5.86	5.90	0.34
Rio Dolcione	550.6364	6.77	13.11	14.63		14.73	0.003509	1.33	5.08	6.13	0.47
Rio Dolcione	507.06	6.05	12.70	14.35		14.44	0.004486	1.35	4.49	6.21	0.51
Rio Dolcione	463.49	8.25	12.22	13.61	13.68	14.06	0.023967	2.98	2.77	4.02	1.15
Rio Dolcione	419.9128	8.19	11.29	13.05		13.12	0.001680	1.17	7.02	5.56	0.33
Rio Dolcione	405	8.37	11.20	13.06	11.91	13.11	0.001181	1.00	8.40	4.52	0.23
Rio Dolcione	402	Bridge									
Rio Dolcione	400	8.36	11.20	13.00		13.06	0.001292	1.03	8.13	4.52	0.25
Rio Dolcione	385.9130	8.36	11.15	13.01		13.05	0.001055	0.95	8.77	7.08	0.27
Rio Dolcione	381	Lat Struct									
Rio Dolcione	380	Lat Struct									
Rio Dolcione	346.39	7.18	10.88	13.02		13.03	0.000253	0.53	13.62	8.44	0.13
Rio Dolcione	306.8662	11.08	10.63	12.98		13.00	0.000396	0.67	16.53	10.08	0.17

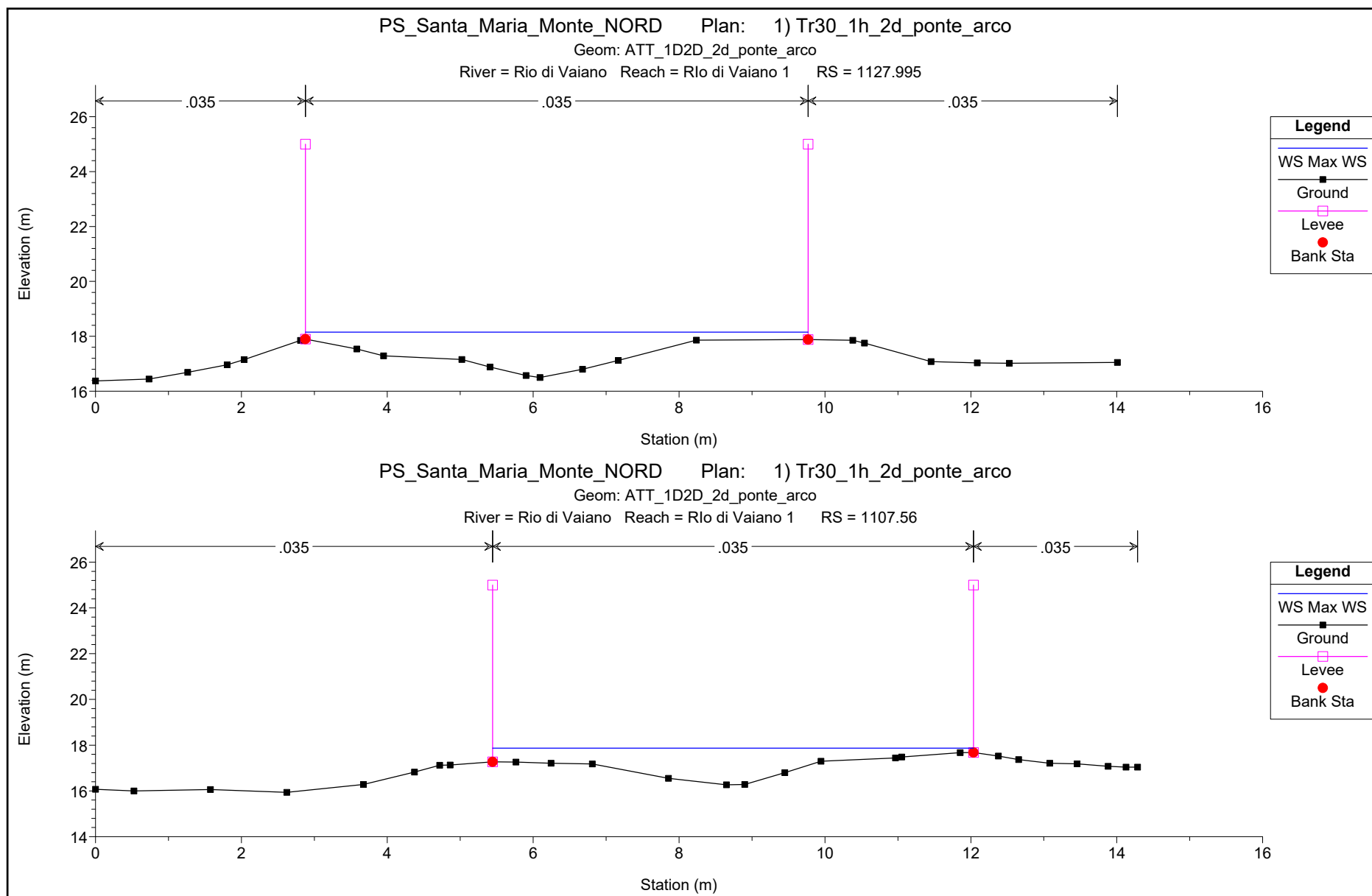
RIO DI VAIANO – Tp 1 ora
Tr=30 anni

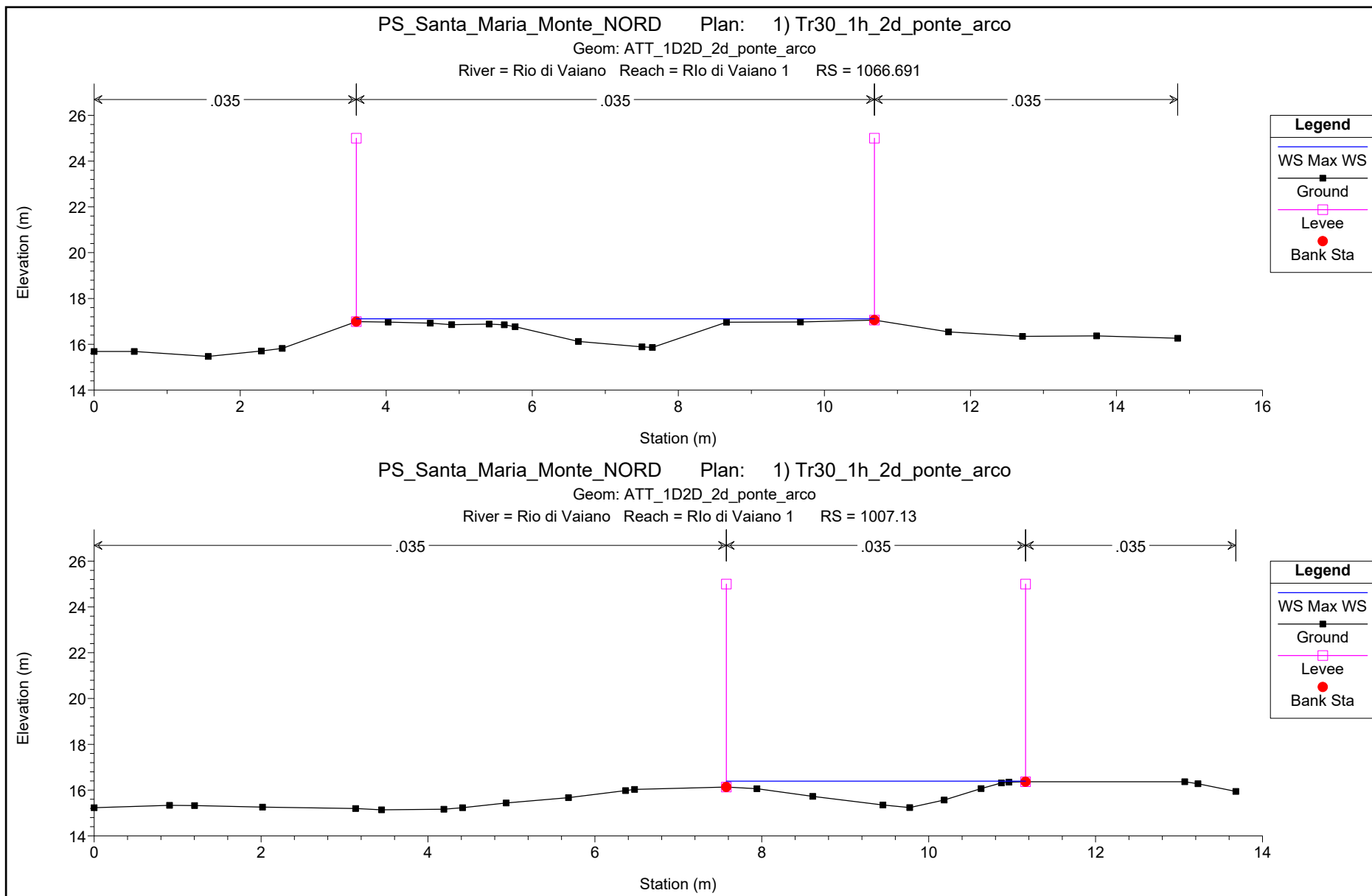
PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

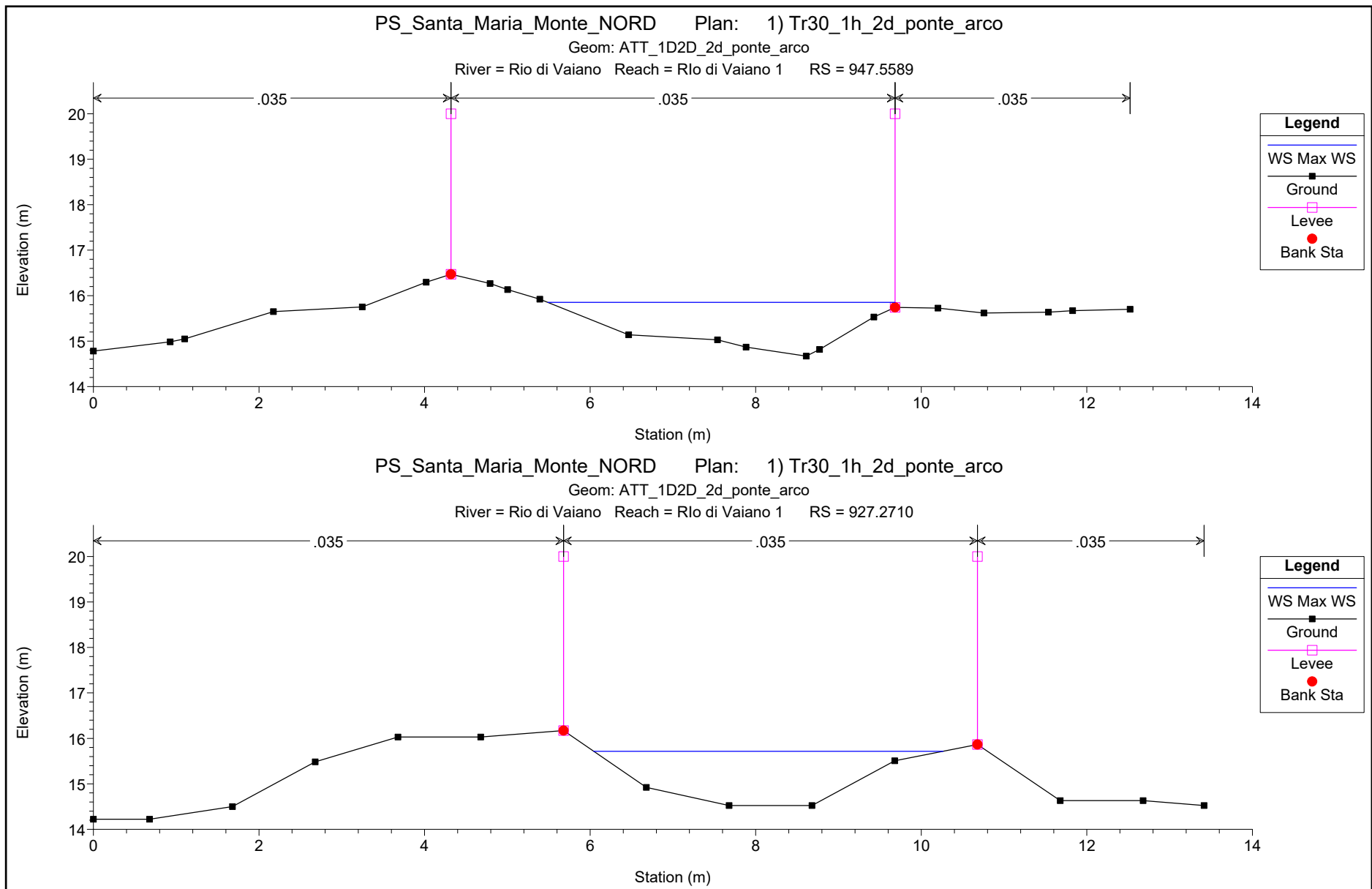
Geom: ATT_1D2D_2d_ponte_arco

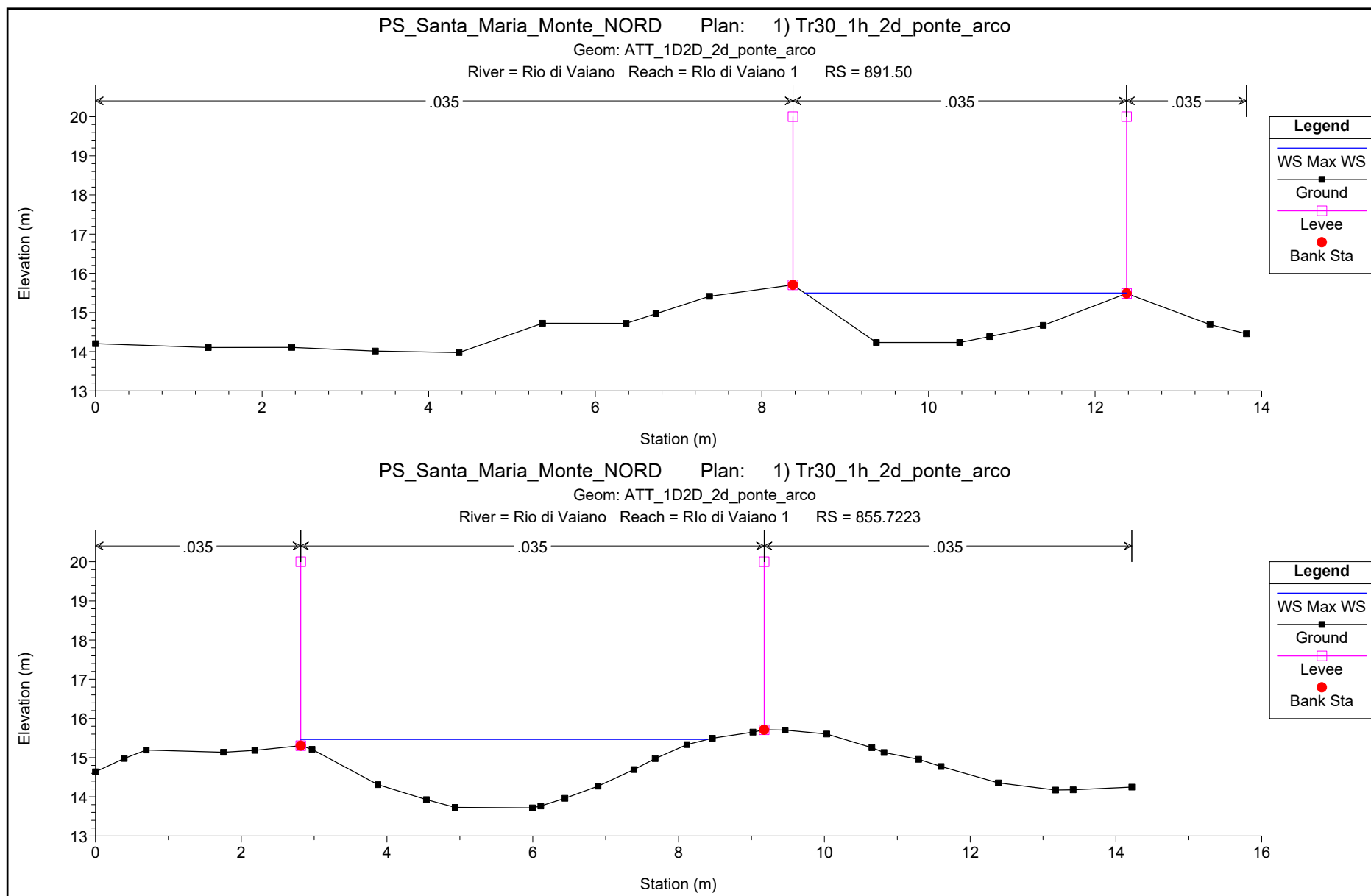


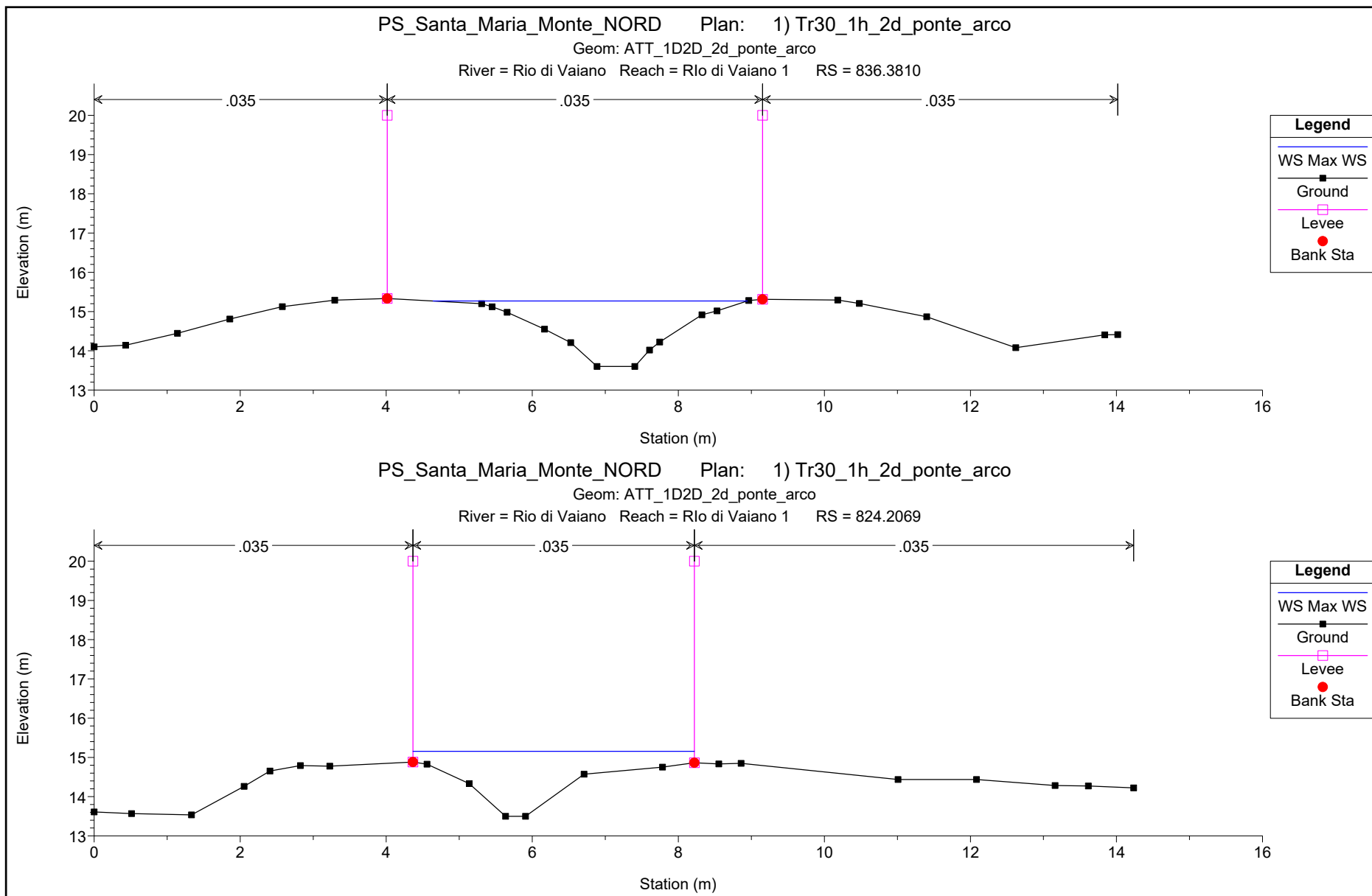


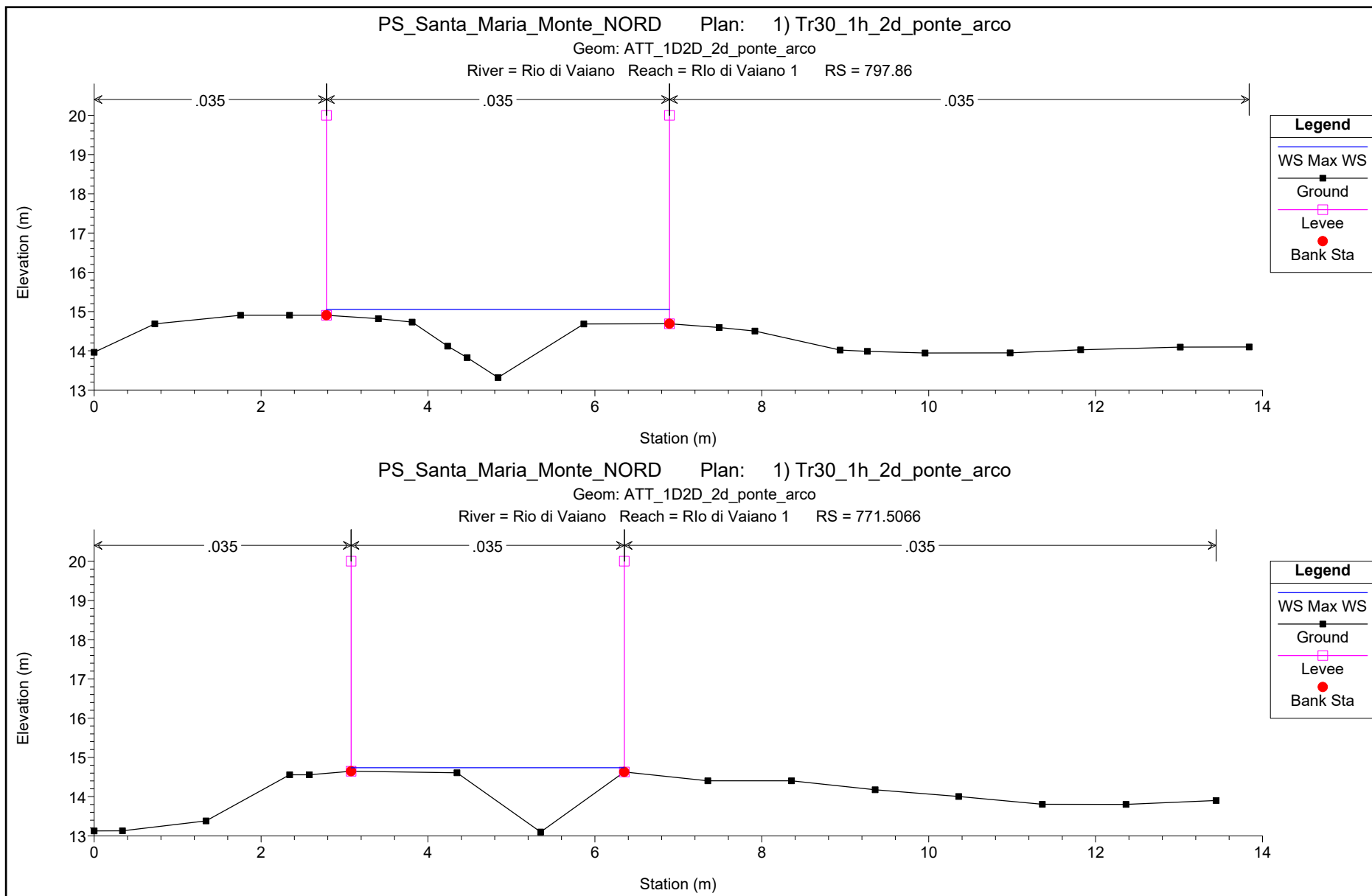


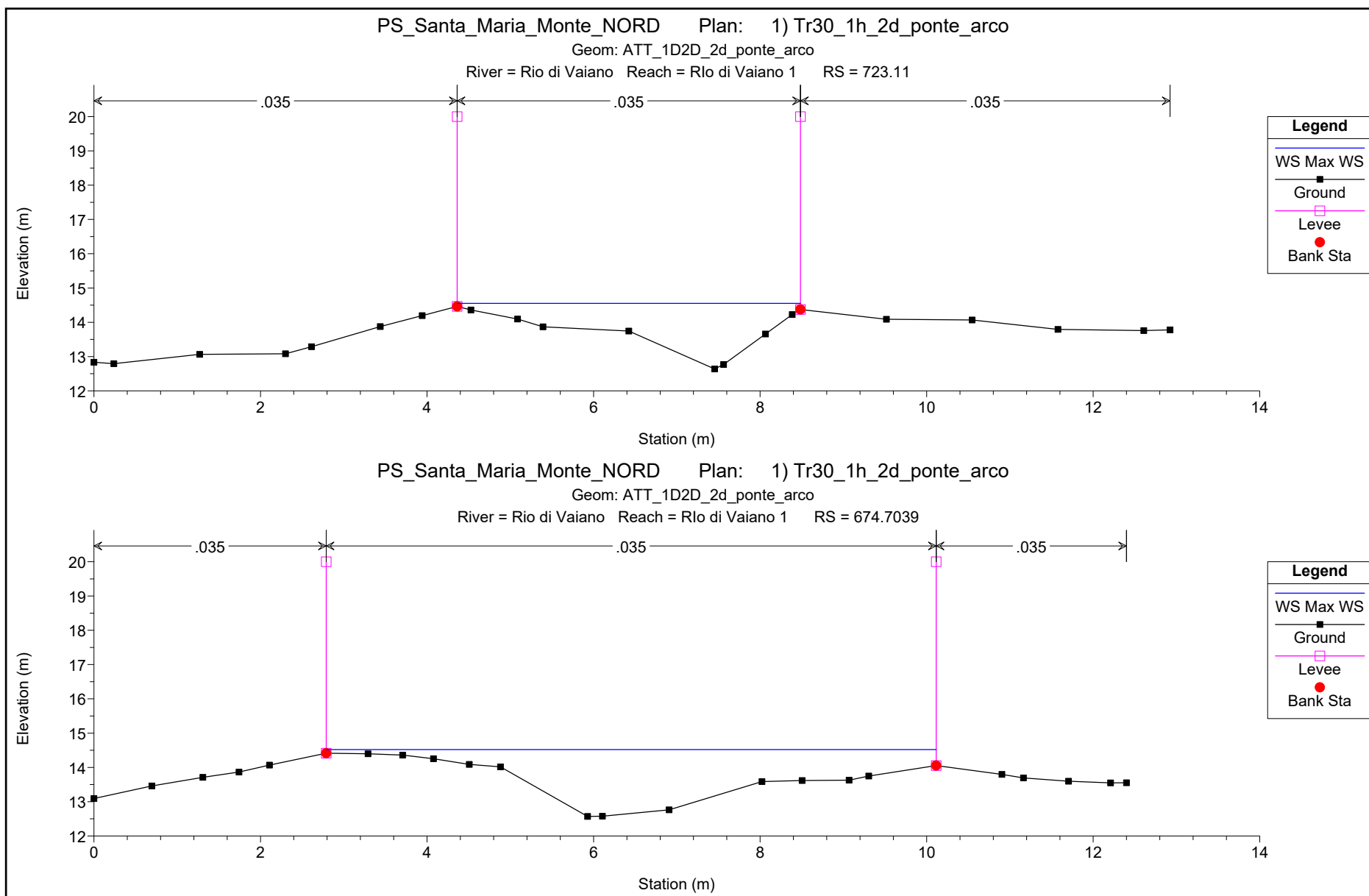


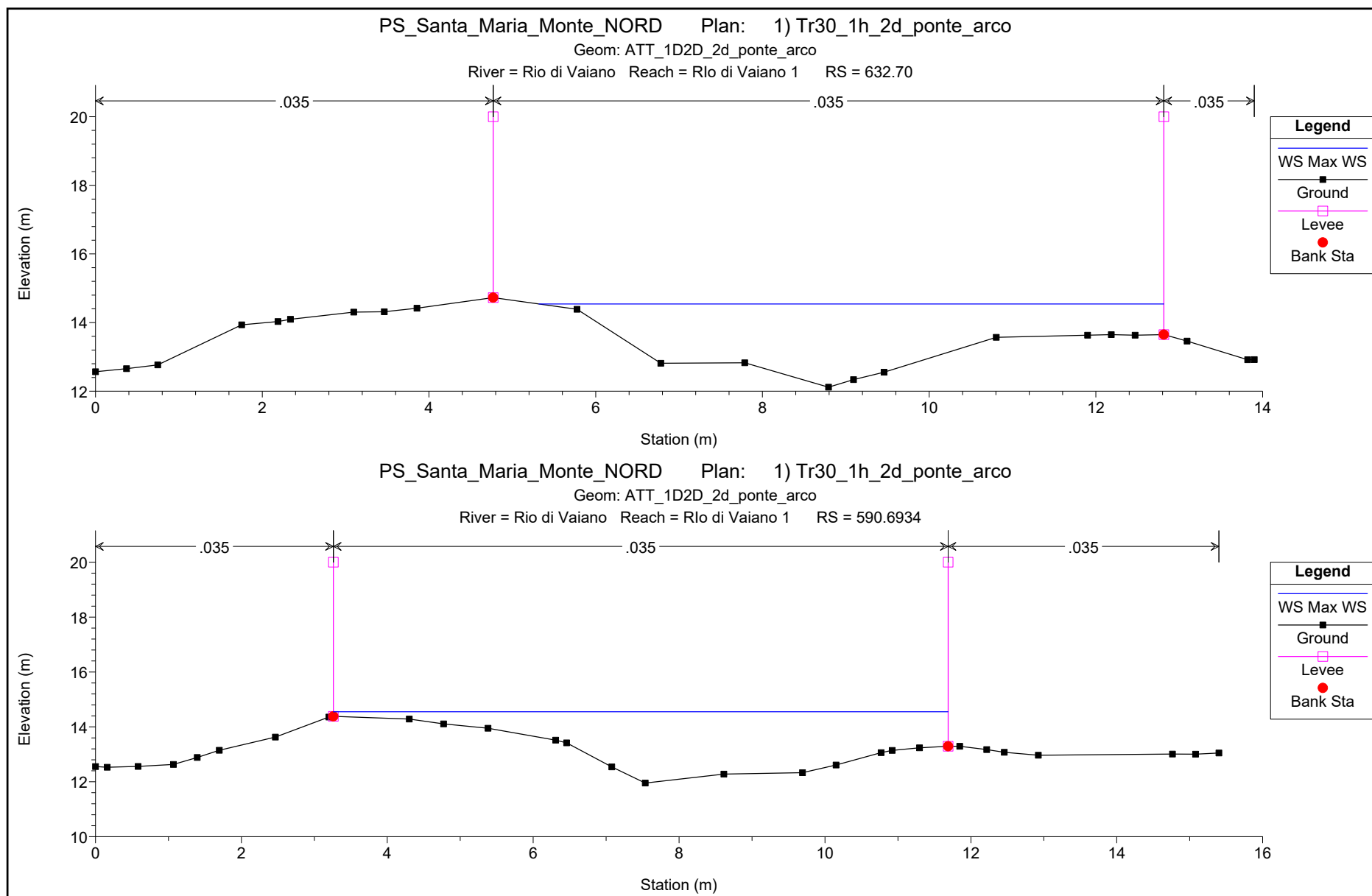


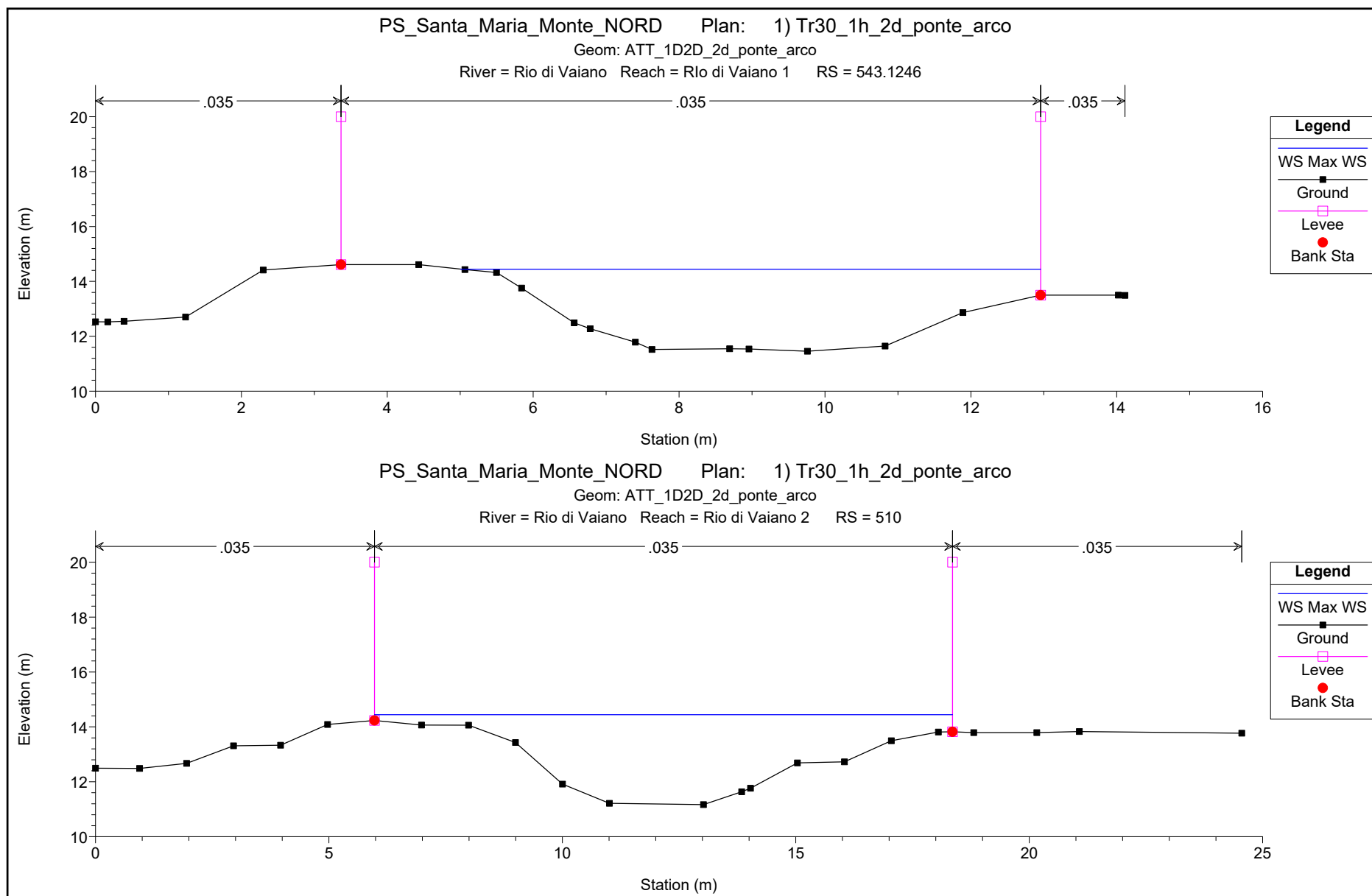


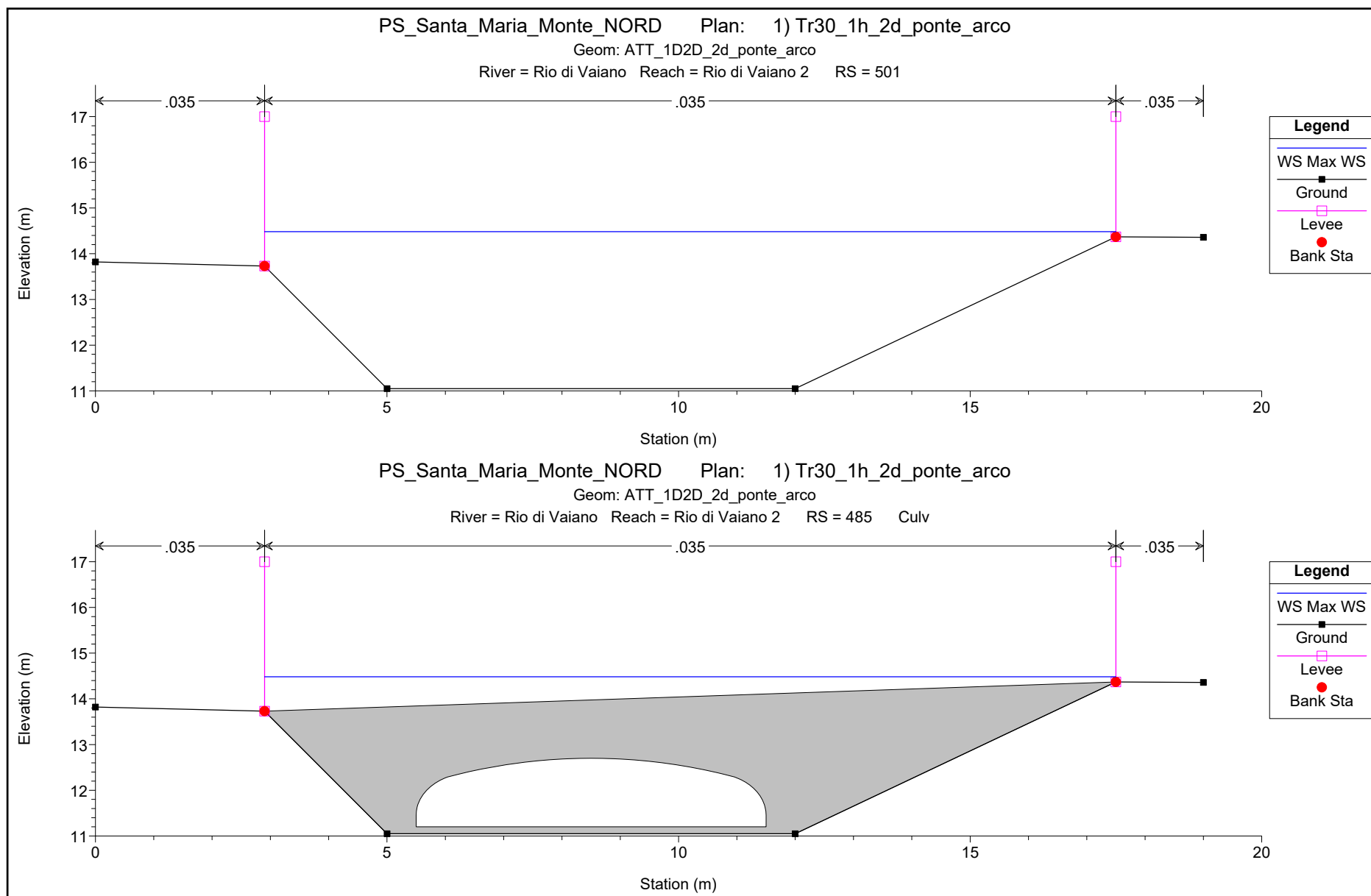


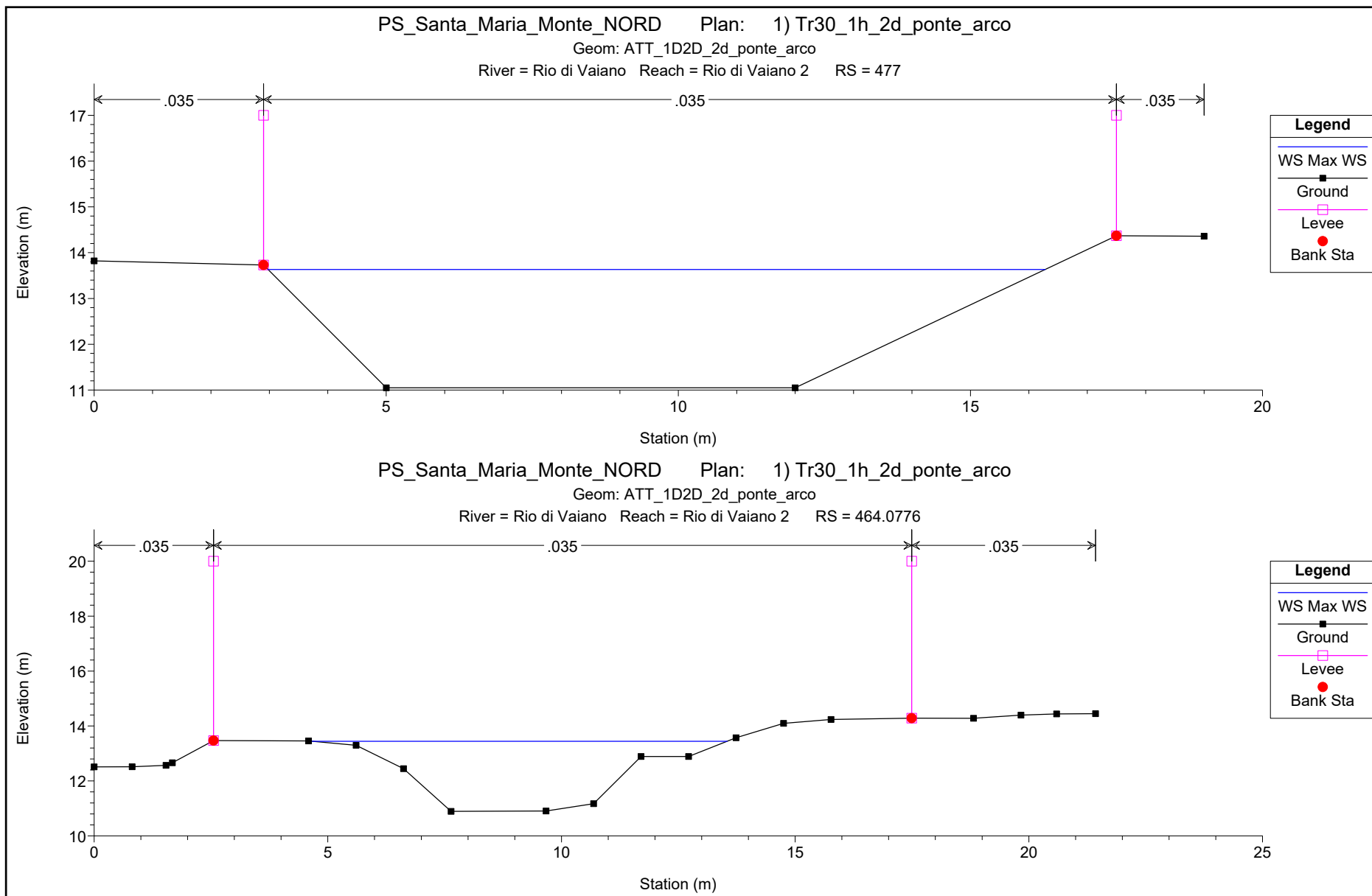


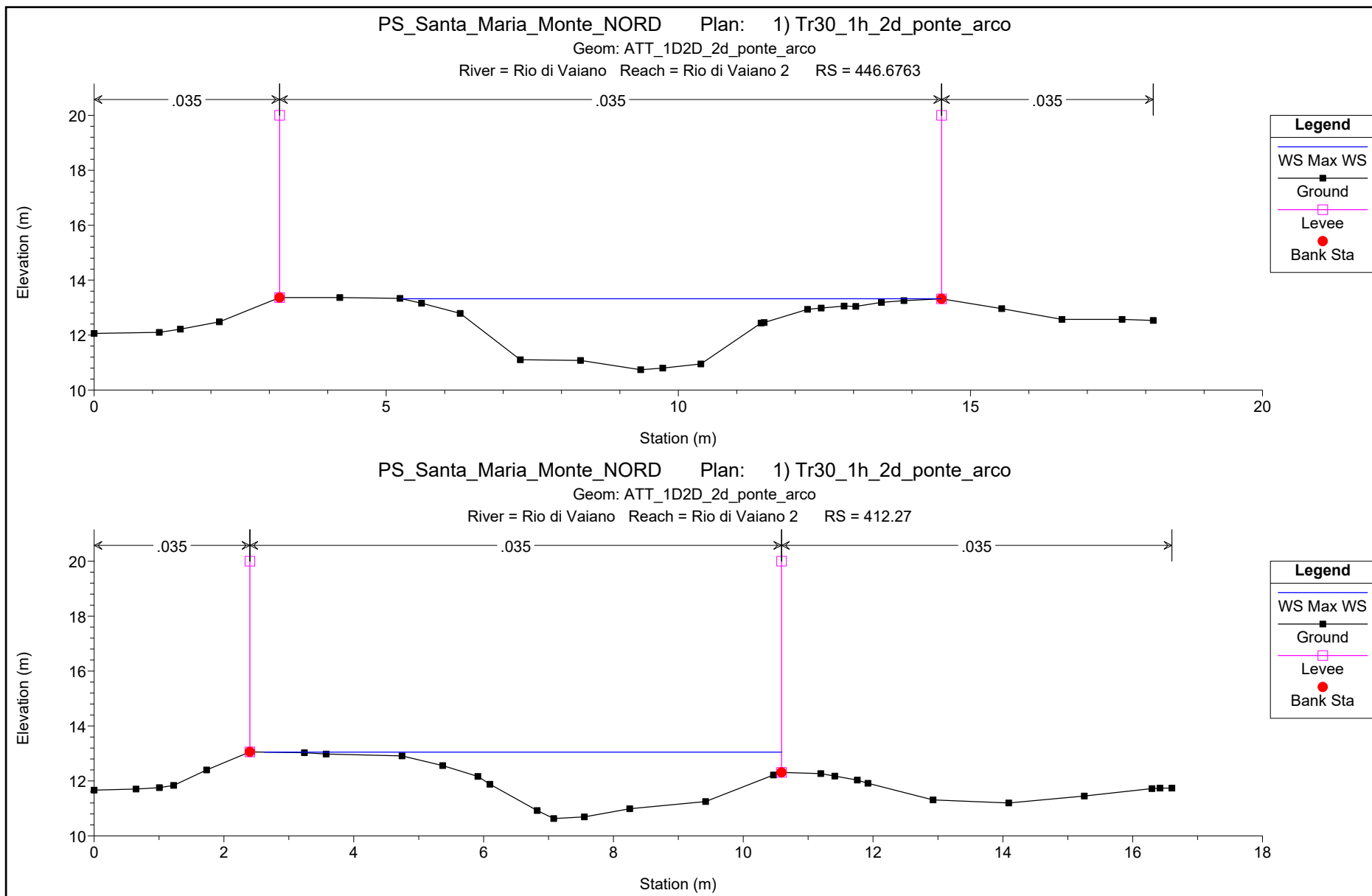


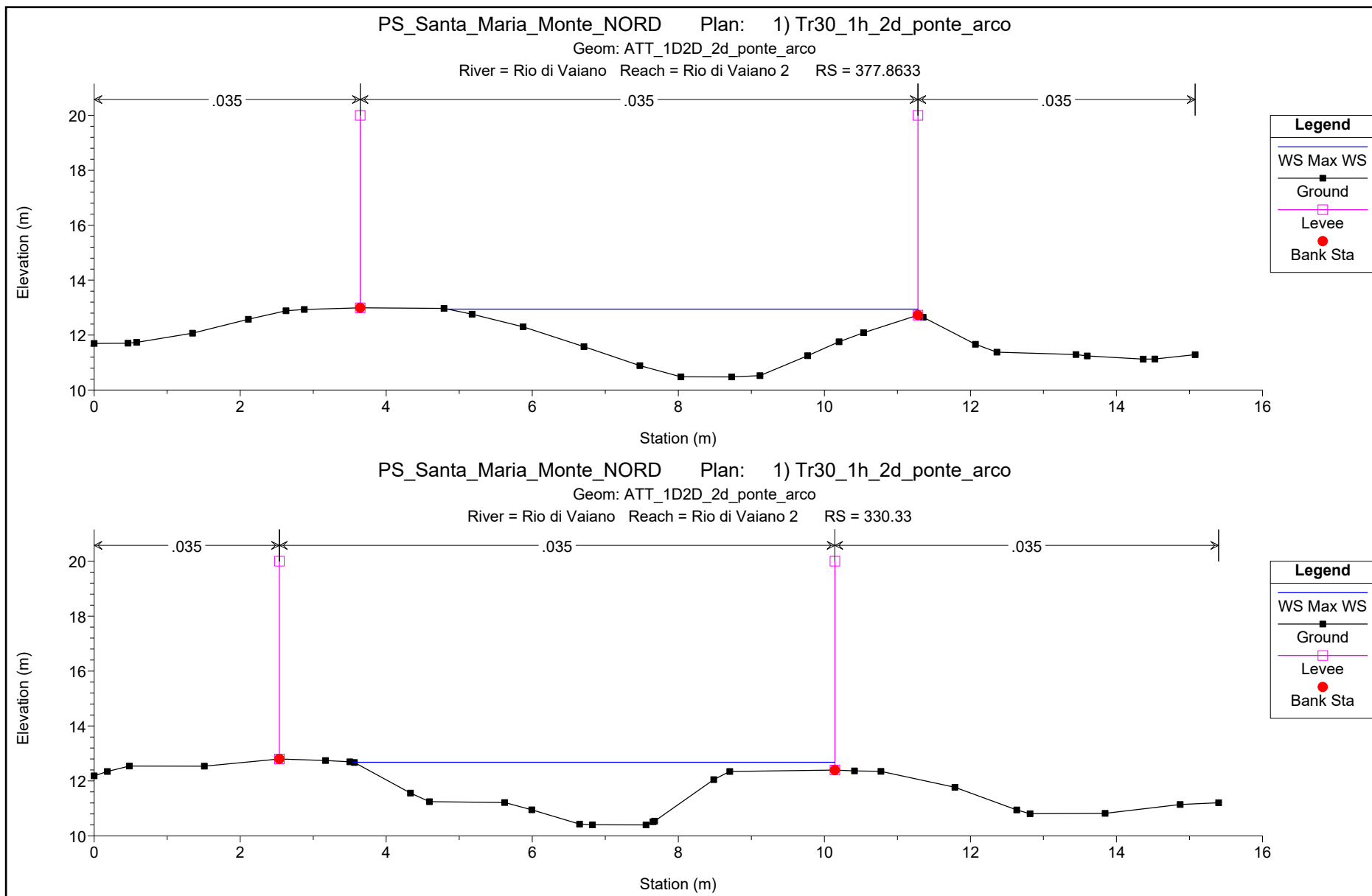


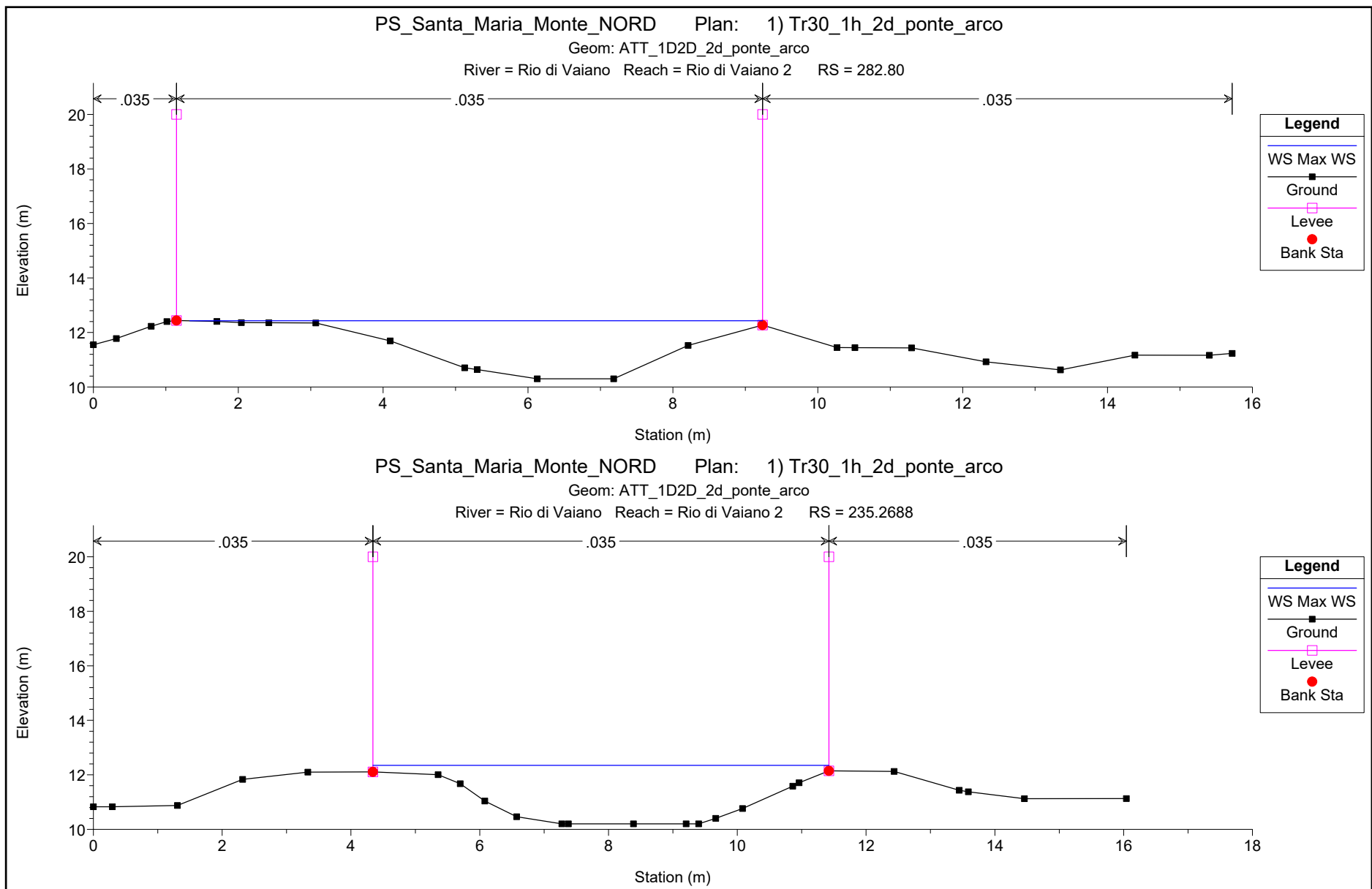


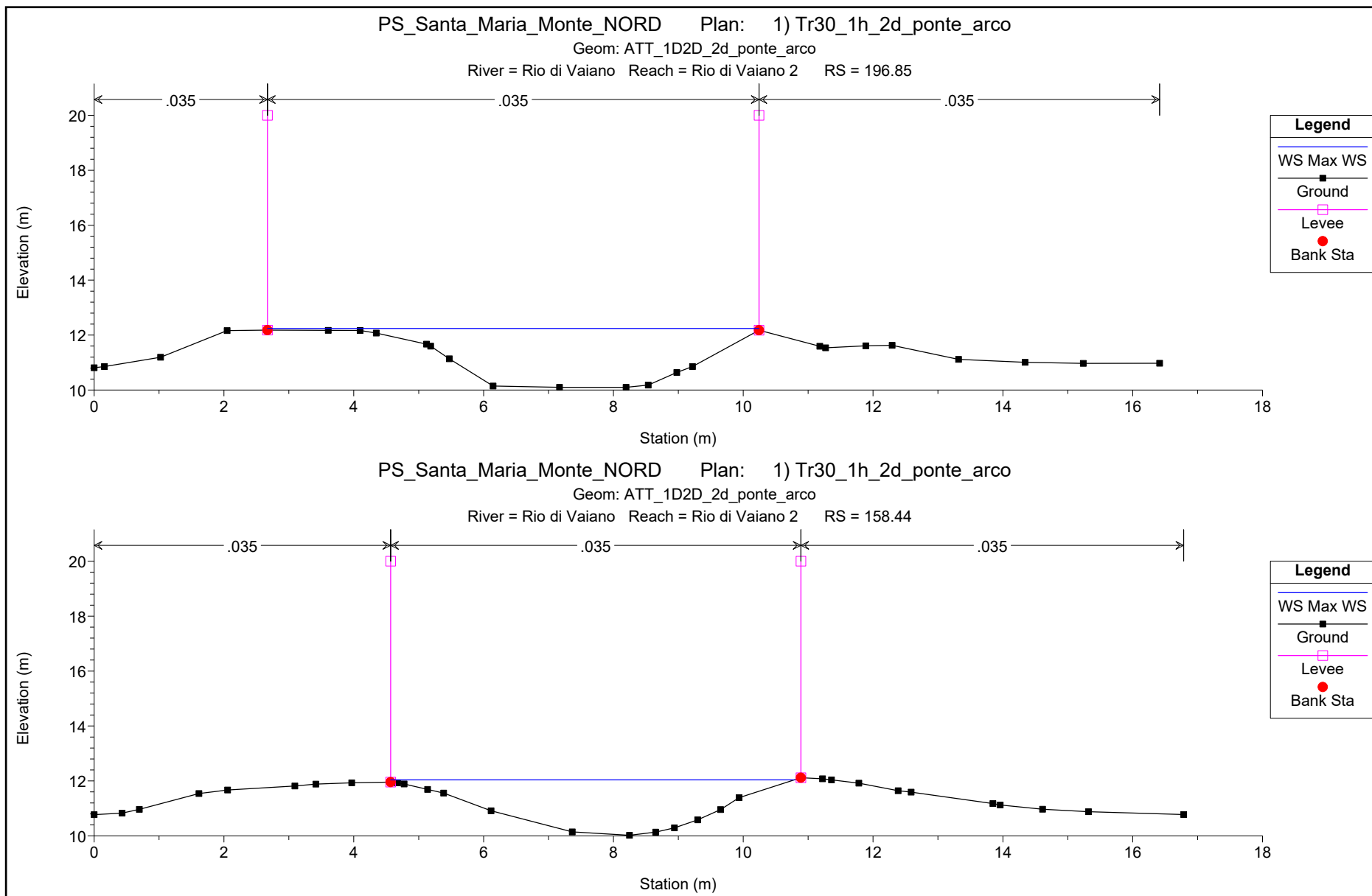


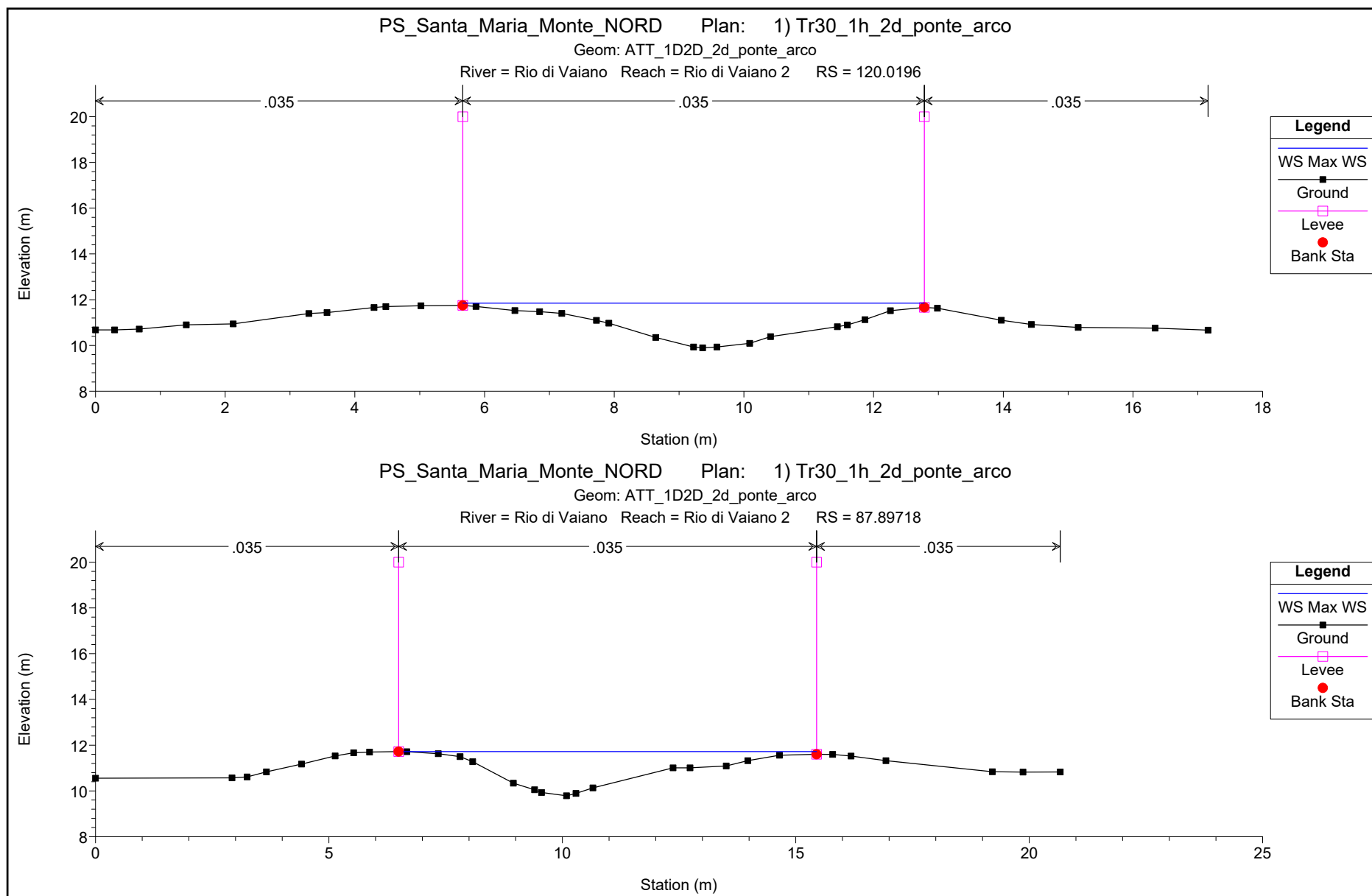


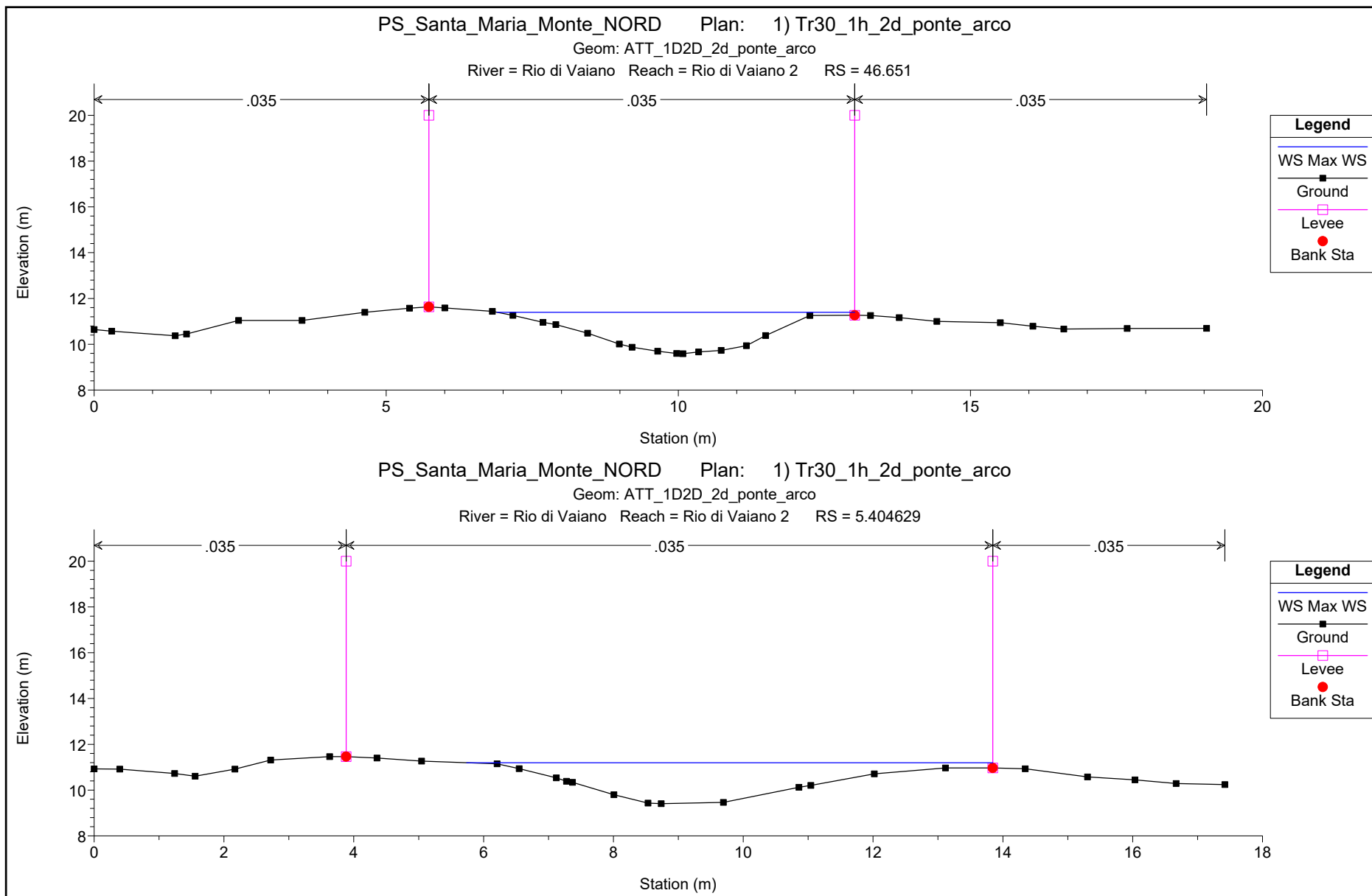












HEC-RAS Plan: Tr30_1h_2d_ponte_arco Profile: Max WS

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rlo di Vaiano 1	1623	22.90	17.02	18.60		18.89	0.008422	2.38	9.63	9.82	0.77
Rlo di Vaiano 1	1601	Lat Struct									
Rlo di Vaiano 1	1600	Lat Struct									
Rlo di Vaiano 1	1375.50	17.99	16.76	18.49		18.75	0.007144	2.27	7.91	7.00	0.68
Rlo di Vaiano 1	1127.995	14.95	16.50	18.15		18.51	0.014223	2.66	5.63	6.89	0.94
Rlo di Vaiano 1	1107.56	10.97	16.27	17.87		18.08	0.008461	2.02	5.43	6.59	0.71
Rlo di Vaiano 1	1066.691	5.76	15.86	17.11		17.29	0.014794	1.85	3.12	7.10	0.89
Rlo di Vaiano 1	1007.13	4.26	15.24	16.39		16.58	0.011482	1.91	2.23	3.59	0.78
Rlo di Vaiano 1	947.5589	5.34	14.67	15.85		16.02	0.008178	1.81	2.95	4.19	0.69
Rlo di Vaiano 1	927.2710	5.33	14.52	15.72		15.86	0.006357	1.67	3.20	4.22	0.61
Rlo di Vaiano 1	901	Lat Struct									
Rlo di Vaiano 1	900	Lat Struct									
Rlo di Vaiano 1	891.50	5.33	14.24	15.50		15.63	0.005607	1.63	3.27	3.86	0.57
Rlo di Vaiano 1	855.7223	5.22	13.72	15.46		15.50	0.000991	0.84	6.21	5.58	0.25
Rlo di Vaiano 1	836.3810	5.14	13.60	15.27		15.42	0.008796	1.72	2.99	4.30	0.66
Rlo di Vaiano 1	824.2069	3.00	13.50	15.15		15.20	0.002740	0.99	3.03	3.85	0.36
Rlo di Vaiano 1	801	Lat Struct									
Rlo di Vaiano 1	800	Lat Struct									
Rlo di Vaiano 1	797.86	3.00	13.32	15.05		15.11	0.004121	1.09	2.76	4.11	0.42
Rlo di Vaiano 1	771.5066	3.05	13.10	14.74		14.87	0.011777	1.60	1.90	3.27	0.67
Rlo di Vaiano 1	723.11	2.34	12.64	14.55		14.57	0.000991	0.64	3.64	4.12	0.22
Rlo di Vaiano 1	674.7039	3.23	12.57	14.52		14.53	0.000408	0.48	6.78	7.33	0.16
Rlo di Vaiano 1	632.70	4.39	12.12	14.54		14.55	0.000227	0.43	10.10	7.50	0.12
Rlo di Vaiano 1	590.6934	5.56	11.95	14.55		14.56	0.000240	0.47	11.94	8.43	0.12
Rlo di Vaiano 1	543.1246	13.15	11.45	14.45		14.48	0.000439	0.79	16.71	7.95	0.17
Rio di Vaiano 2	510	27.66	11.17	14.45		14.53	0.001200	1.26	21.94	12.38	0.30
Rio di Vaiano 2	501	26.21	11.05	14.48		14.51	0.000207	0.69	38.18	14.60	0.14
Rio di Vaiano 2	485	Culvert									
Rio di Vaiano 2	477	26.21	11.05	13.63		13.68	0.000595	1.00	26.23	13.30	0.23
Rio di Vaiano 2	464.0776	25.72	10.89	13.44		13.67	0.004747	2.09	12.30	8.88	0.57
Rio di Vaiano 2	451	Lat Struct									
Rio di Vaiano 2	450	Lat Struct									
Rio di Vaiano 2	446.6763	25.70	10.74	13.32		13.57	0.005809	2.21	11.63	9.25	0.63
Rio di Vaiano 2	412.27	22.91	10.63	13.05		13.37	0.009143	2.53	9.07	7.97	0.76
Rio di Vaiano 2	377.8633	19.74	10.48	12.95		13.19	0.005188	2.17	9.12	6.44	0.58

HEC-RAS Plan: Tr30_1h_2d_ponte_arco Profile: Max WS (Continued)

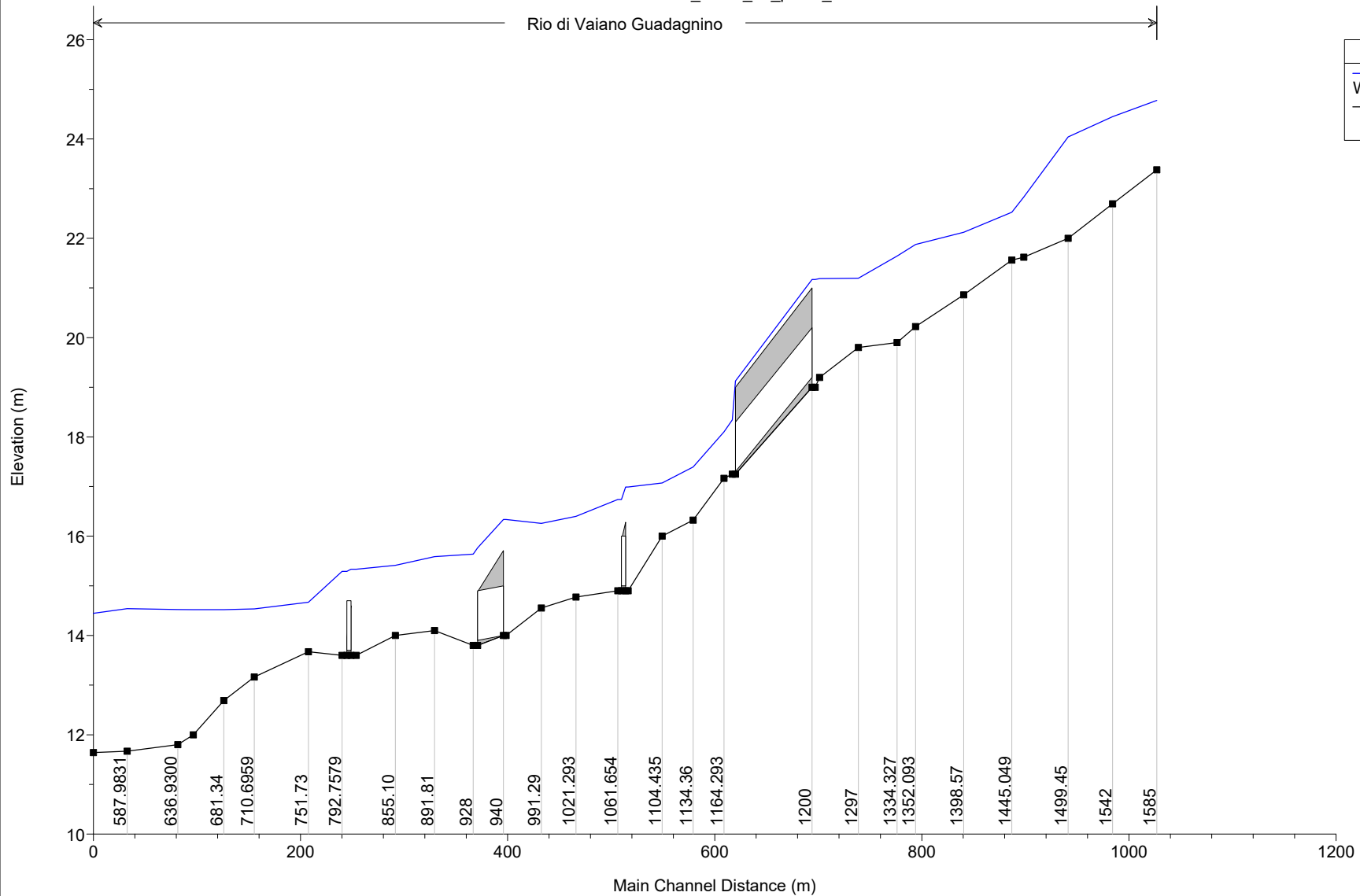
Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Rio di Vaiano 2	330.33	18.06	10.40	12.68		12.93	0.006858	2.21	8.15	6.60	0.64
Rio di Vaiano 2	282.80	16.69	10.30	12.43		12.65	0.006577	2.07	8.06	7.91	0.65
Rio di Vaiano 2	235.2688	15.10	10.20	12.35		12.46	0.002412	1.50	10.07	7.08	0.40
Rio di Vaiano 2	196.85	13.92	10.10	12.24		12.37	0.003460	1.59	8.77	7.57	0.47
Rio di Vaiano 2	158.44	13.70	10.02	12.04		12.22	0.004656	1.89	7.26	6.22	0.56
Rio di Vaiano 2	120.0196	13.16	9.90	11.85		12.03	0.005784	1.90	6.92	7.12	0.62
Rio di Vaiano 2	87.89718	11.89	9.79	11.72		11.86	0.005171	1.65	7.21	8.85	0.58
Rio di Vaiano 2	46.651	11.91	9.59	11.40		11.61	0.007058	2.04	5.84	6.12	0.67
Rio di Vaiano 2	5.404629	12.36	9.41	11.20	10.80	11.35	0.004981	1.71	7.23	8.11	0.58

RIO GUADAGNINO – Tp 1 ora
Tr=30 anni

PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

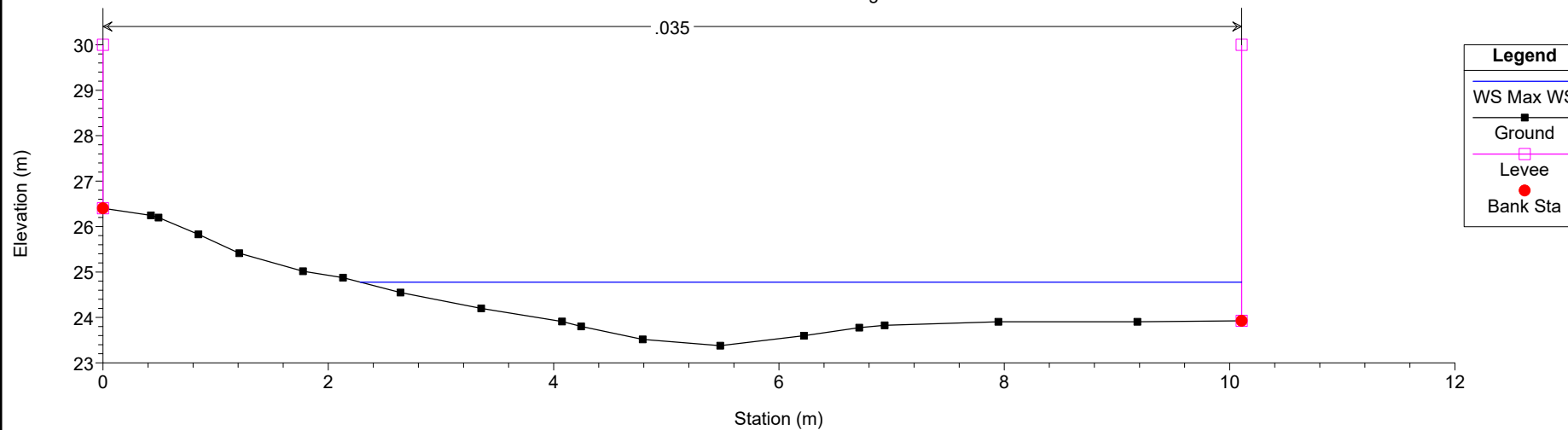
Rio di Vaiano Guadagnino



PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

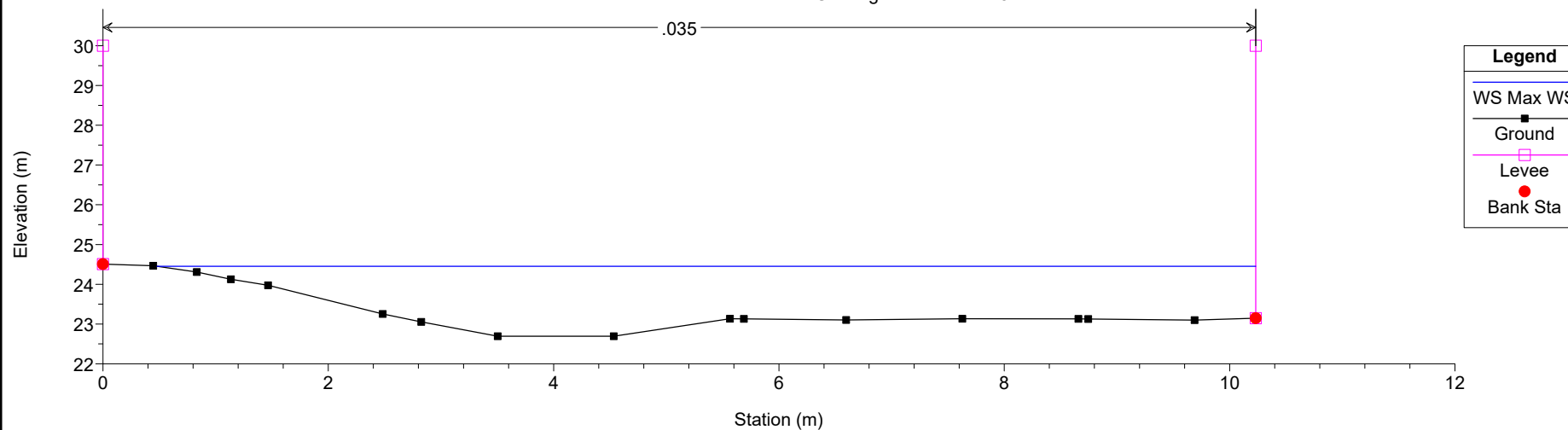
River = Rio di Vaiano Reach = Guadagnino RS = 1585



PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

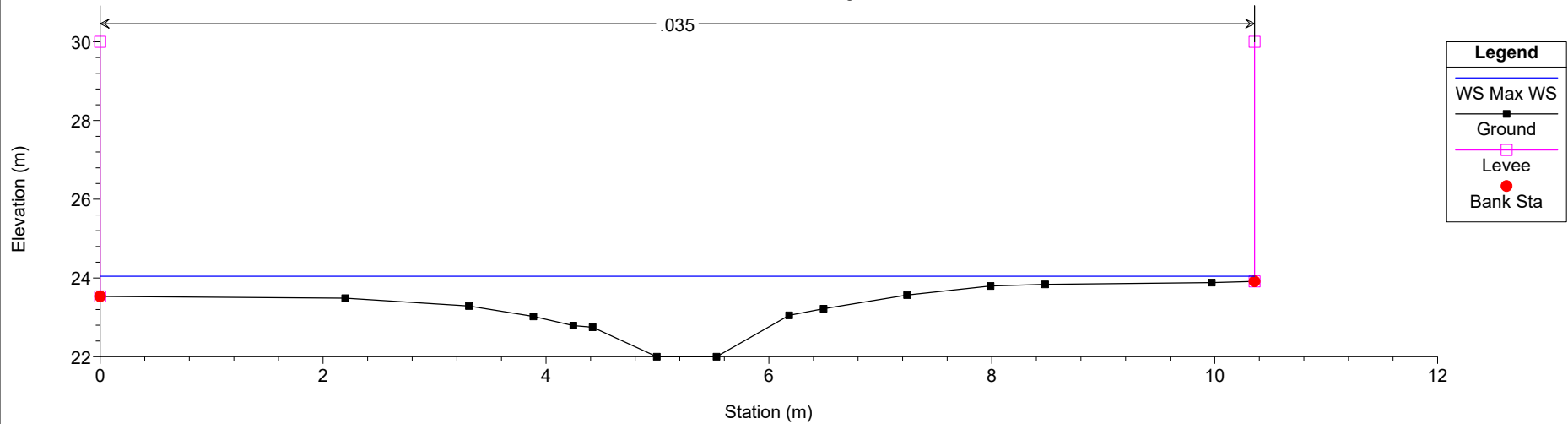
River = Rio di Vaiano Reach = Guadagnino RS = 1542



PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

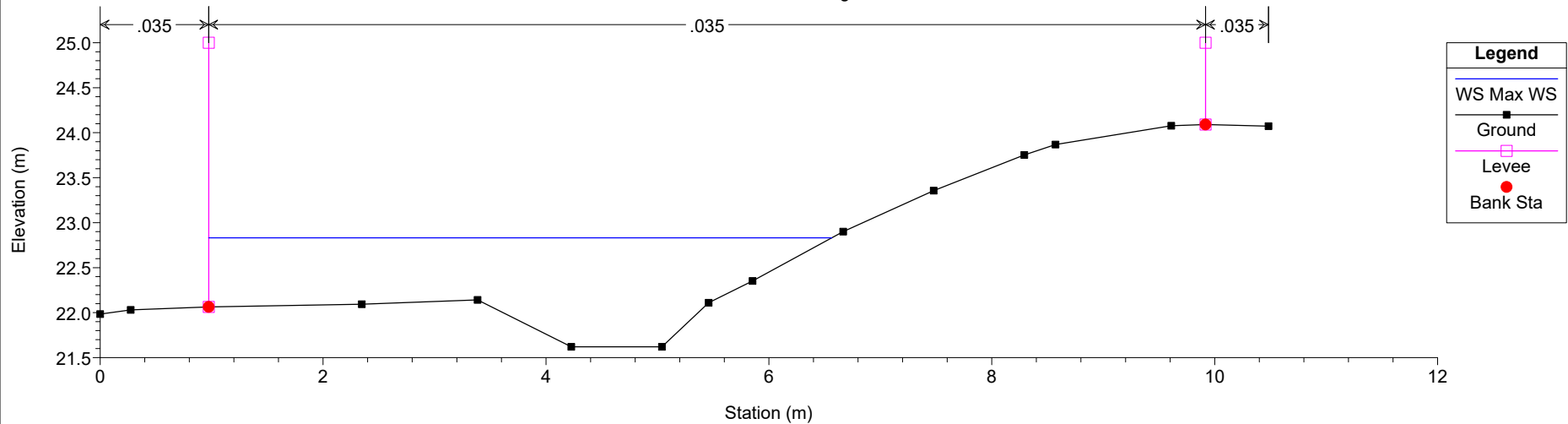
River = Rio di Vaiano Reach = Guadagnino RS = 1499.45



PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

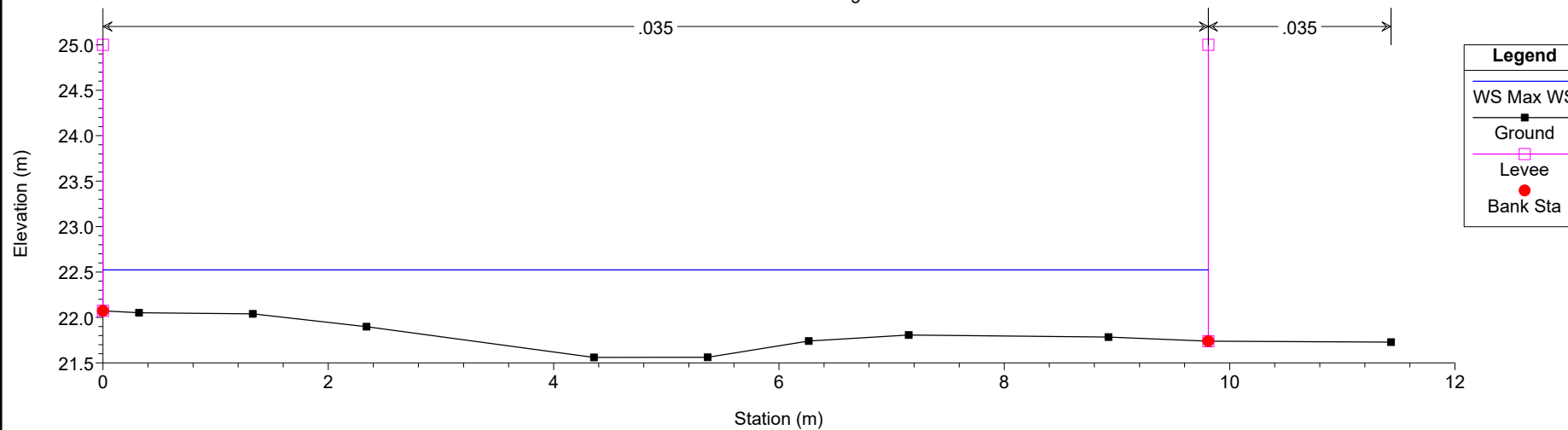
River = Rio di Vaiano Reach = Guadagnino RS = 1456.680



PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

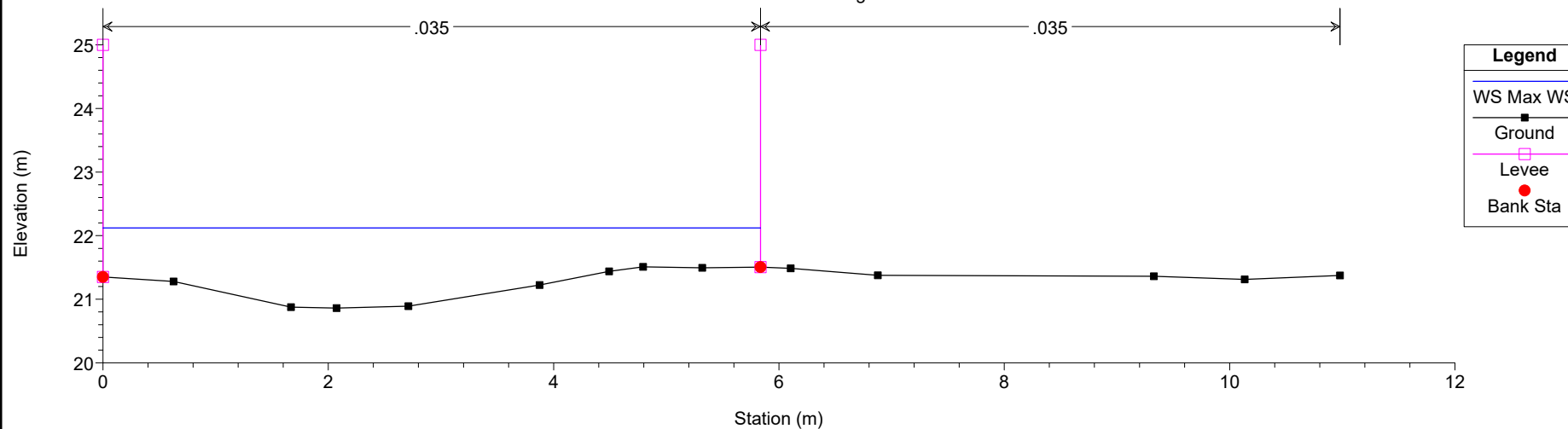
River = Rio di Vaiano Reach = Guadagnino RS = 1445.049

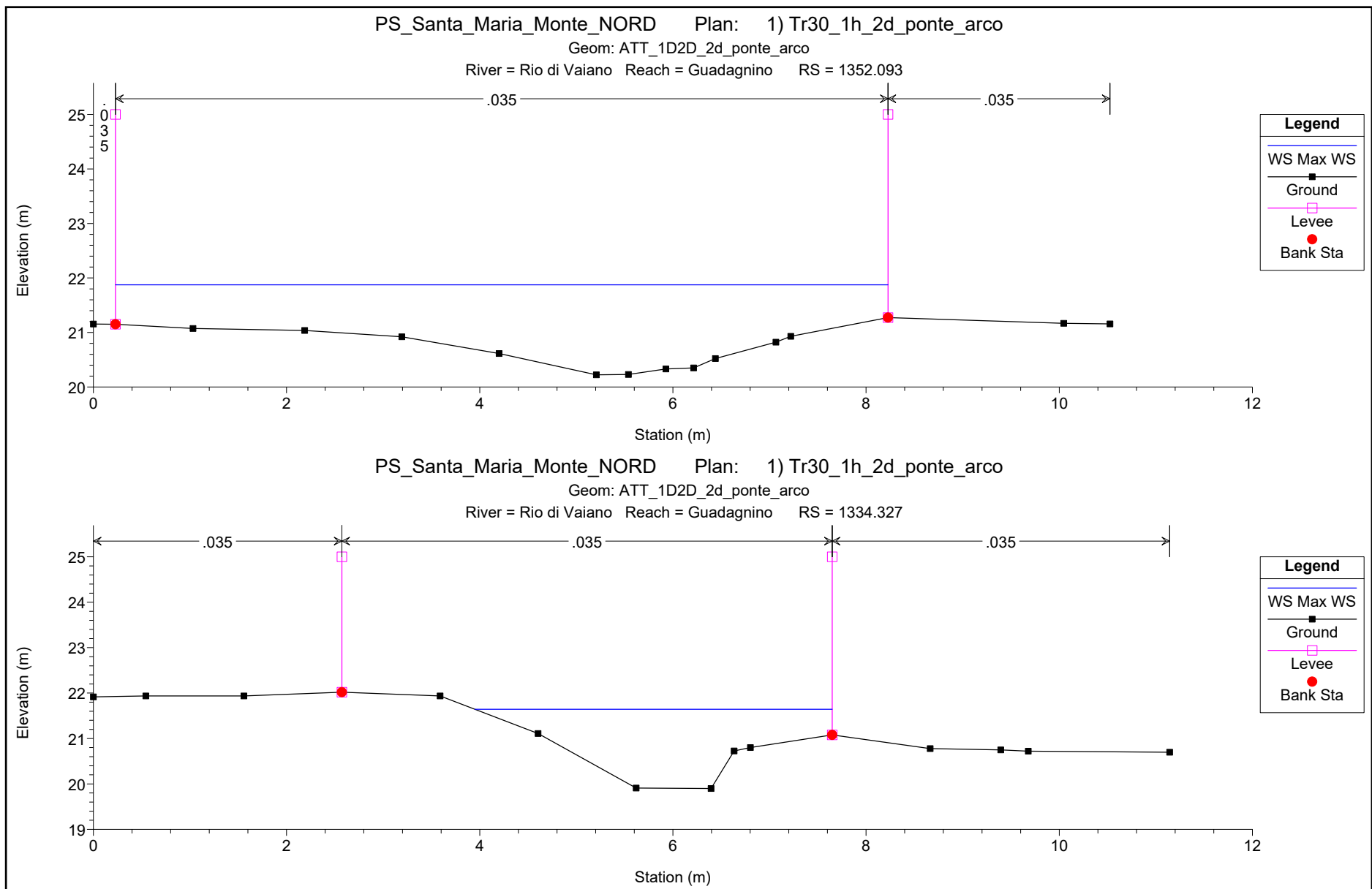


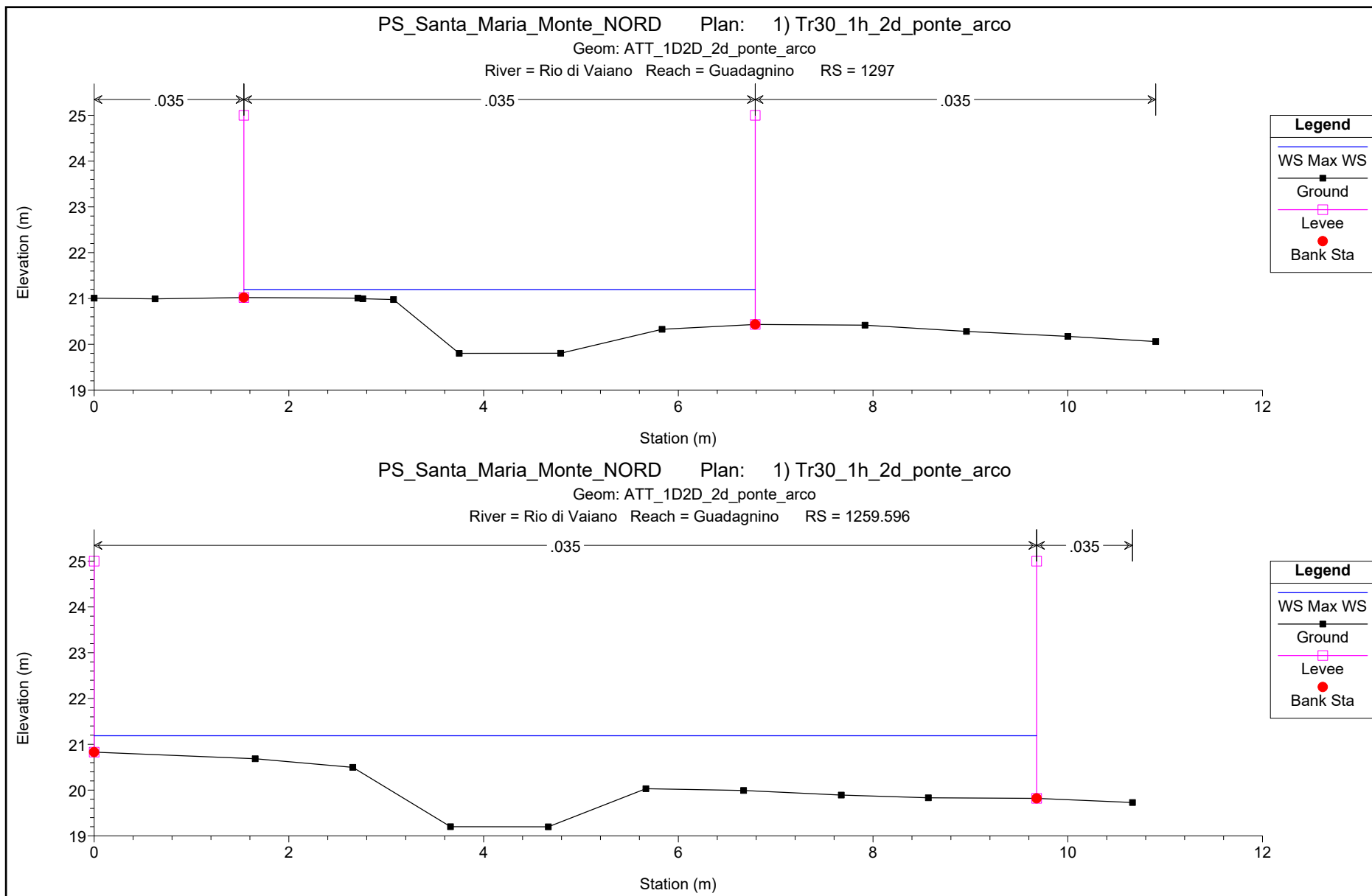
PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

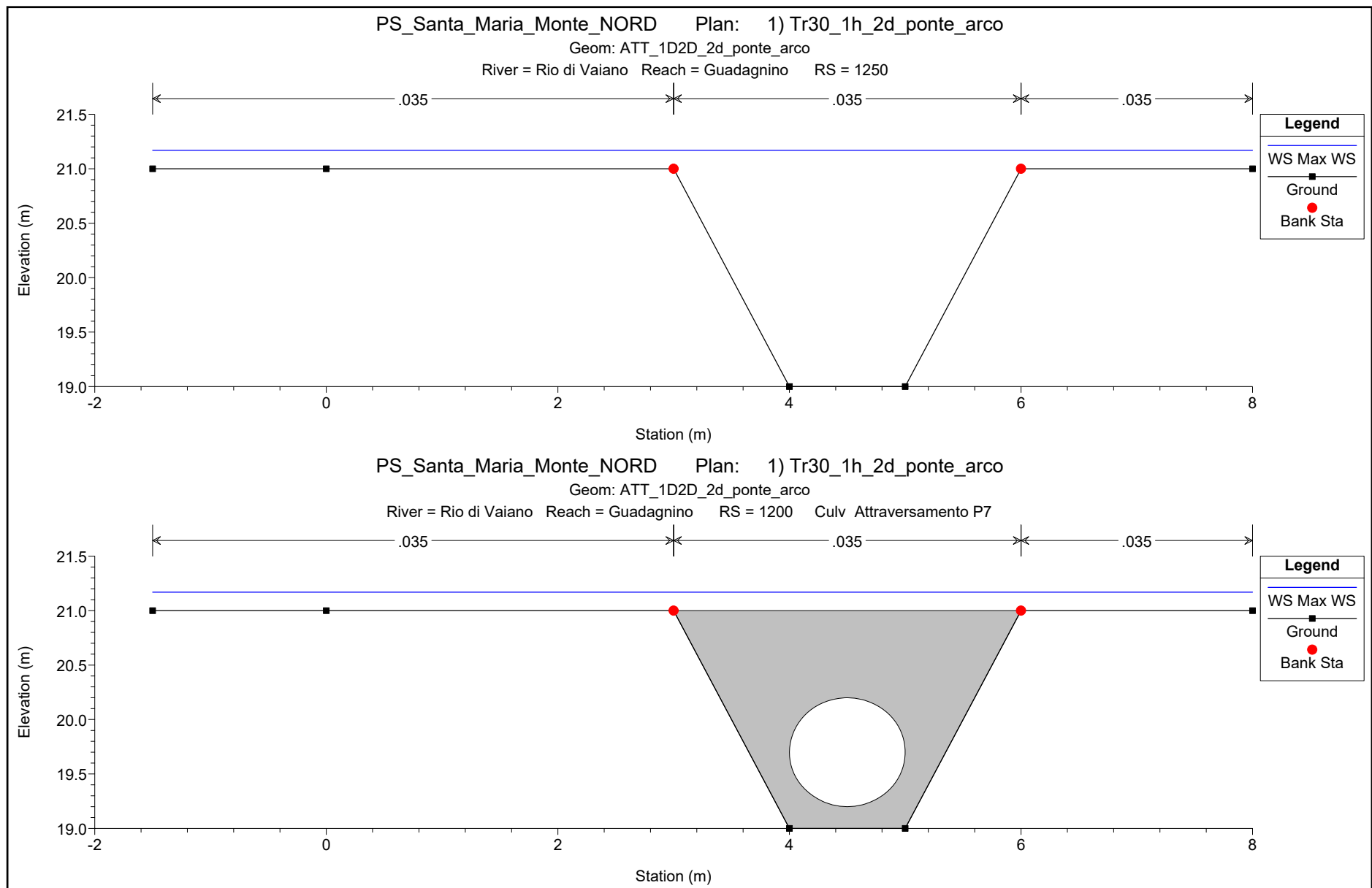
Geom: ATT_1D2D_2d_ponte_arco

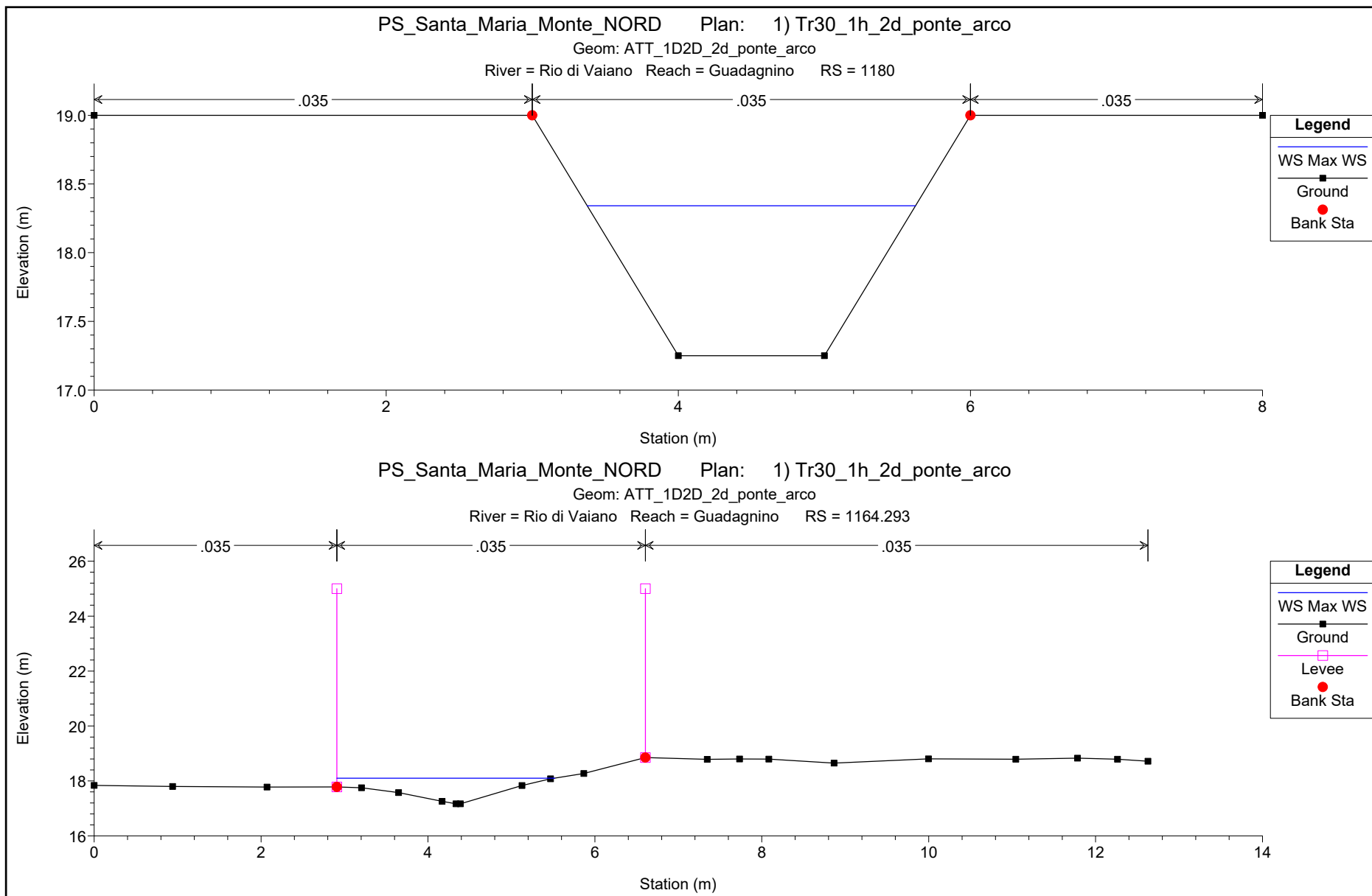
River = Rio di Vaiano Reach = Guadagnino RS = 1398.57

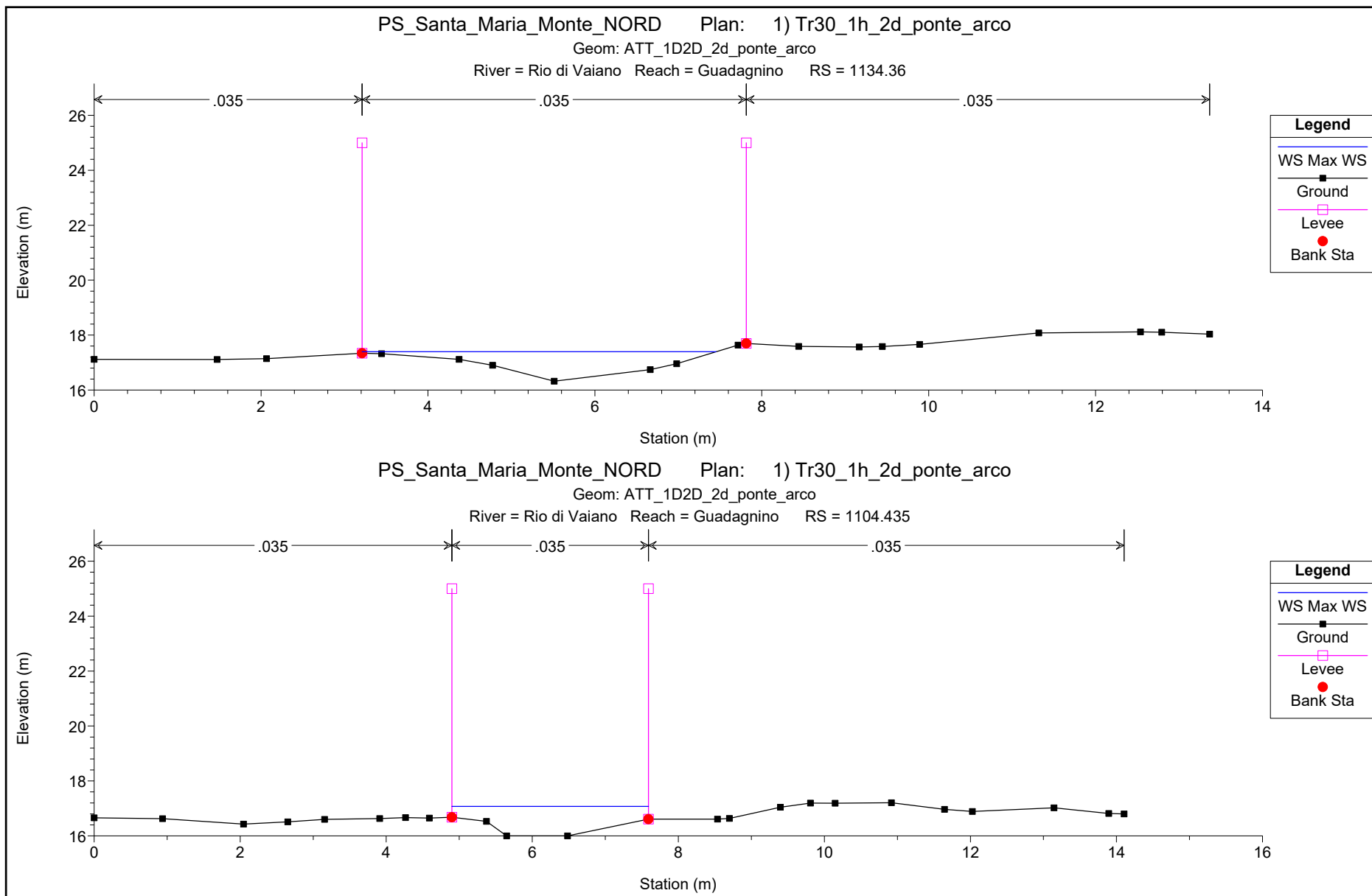


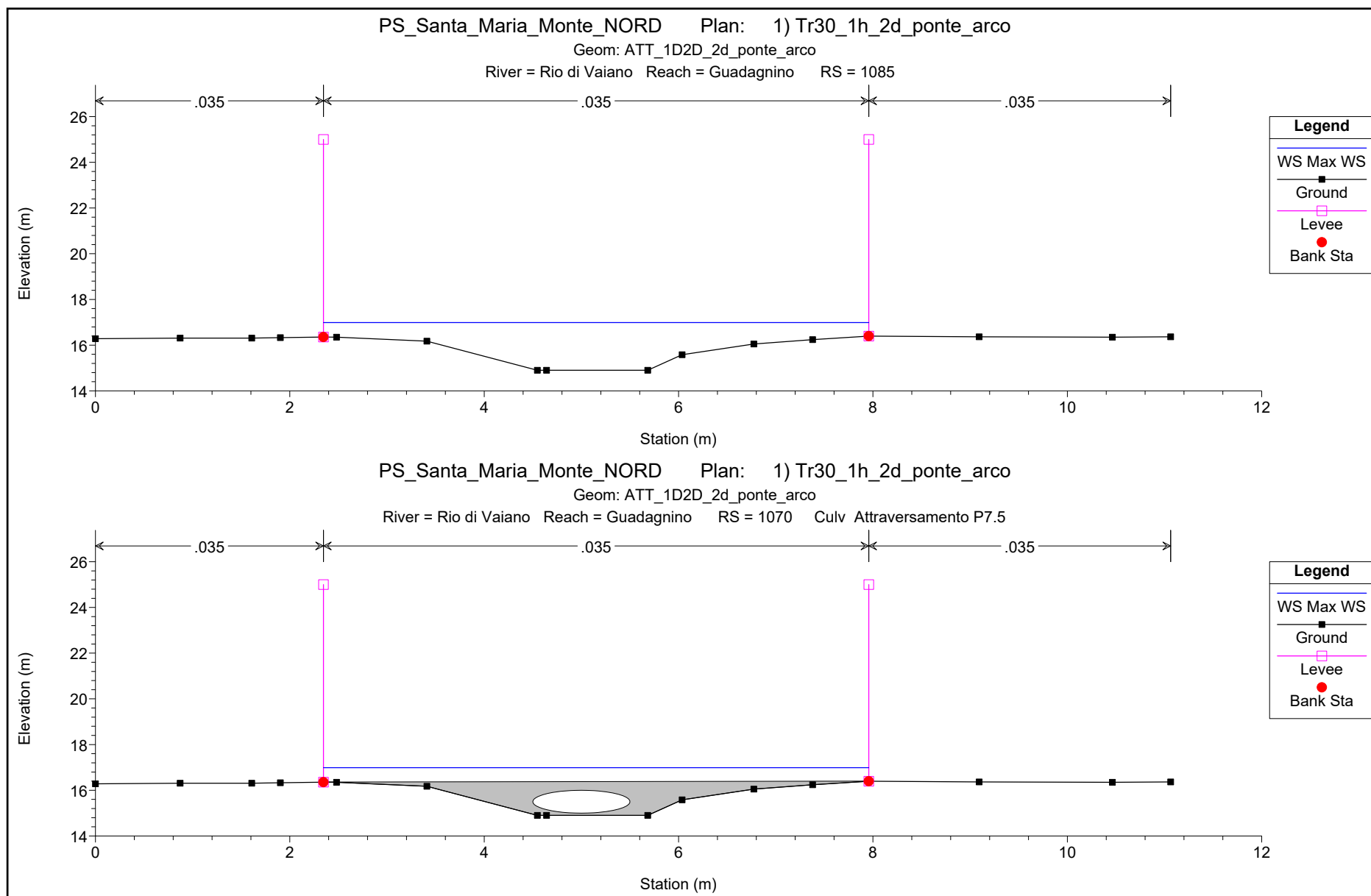


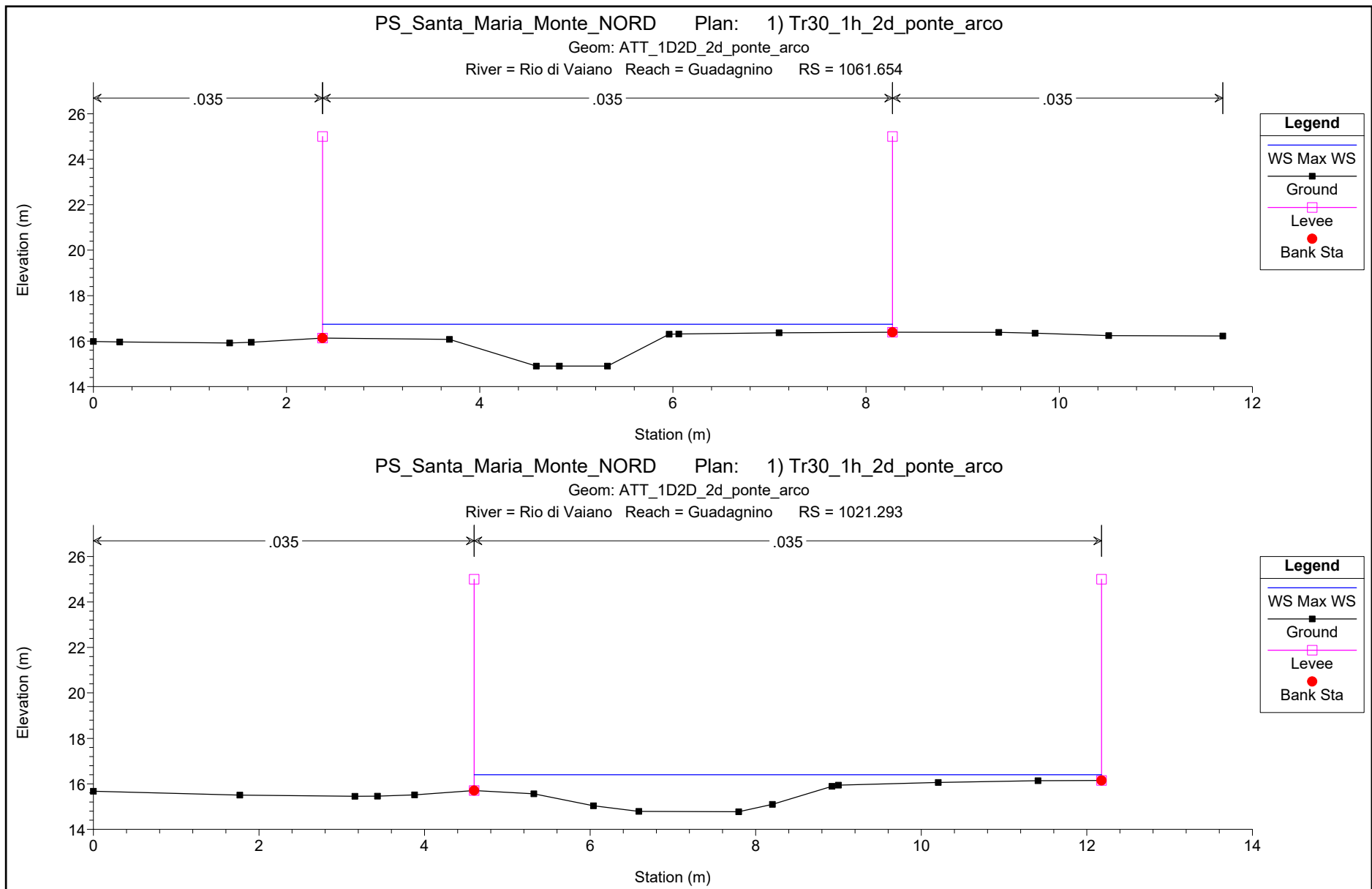


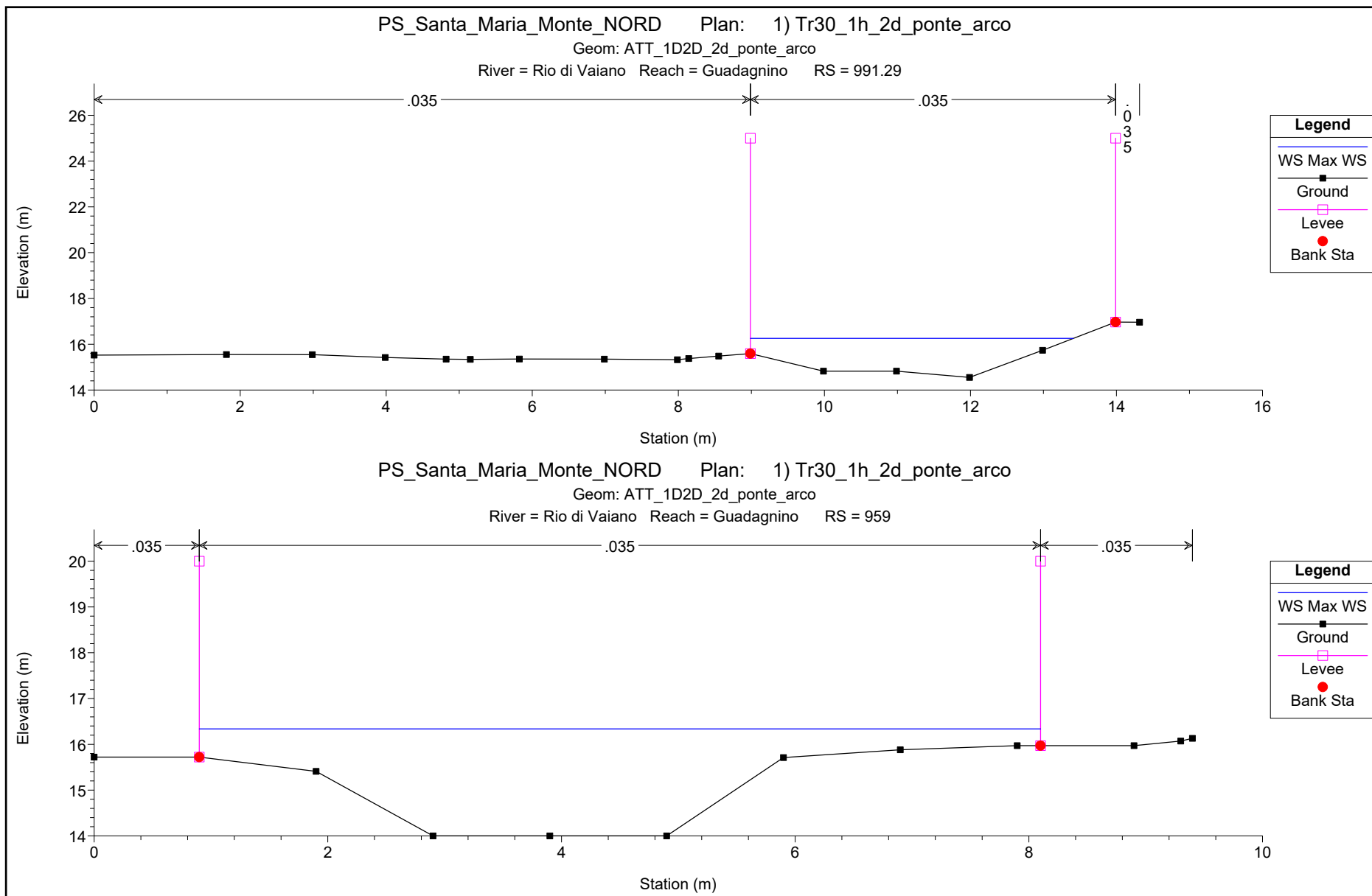








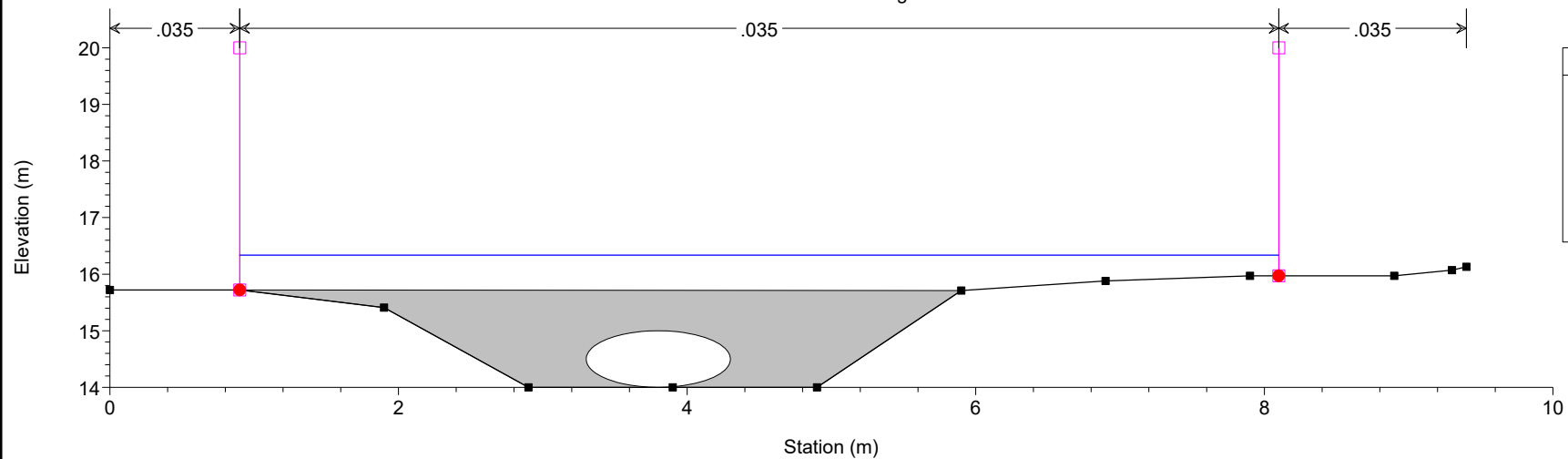




PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

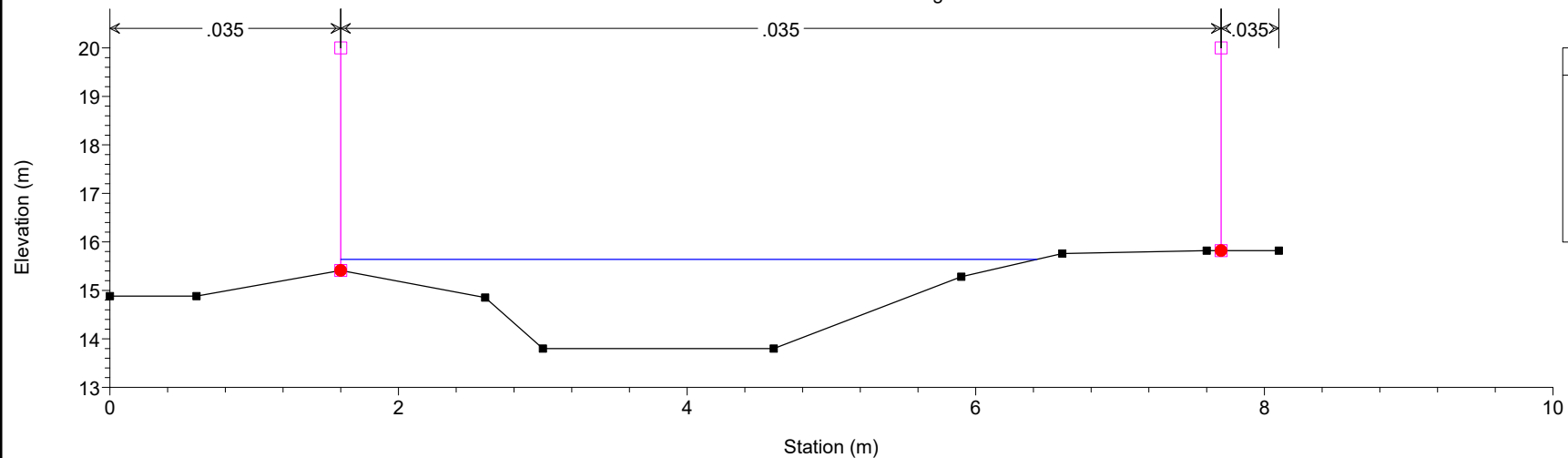
River = Rio di Vaiano Reach = Guadagnino RS = 940 Culv



PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

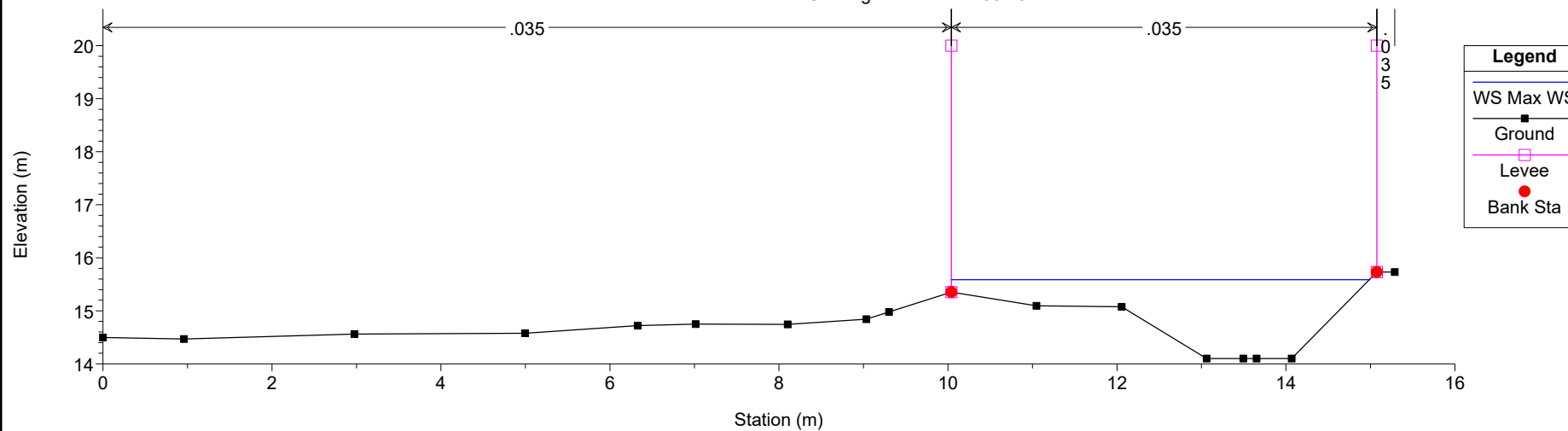
River = Rio di Vaiano Reach = Guadagnino RS = 928



PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

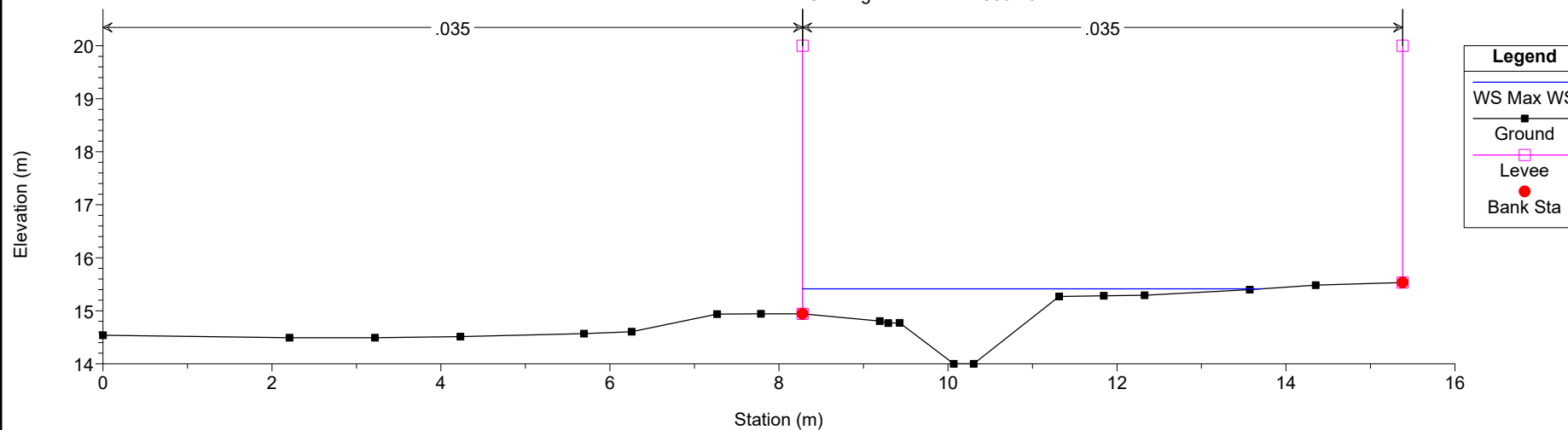
River = Rio di Vaiano Reach = Guadagnino RS = 891.81

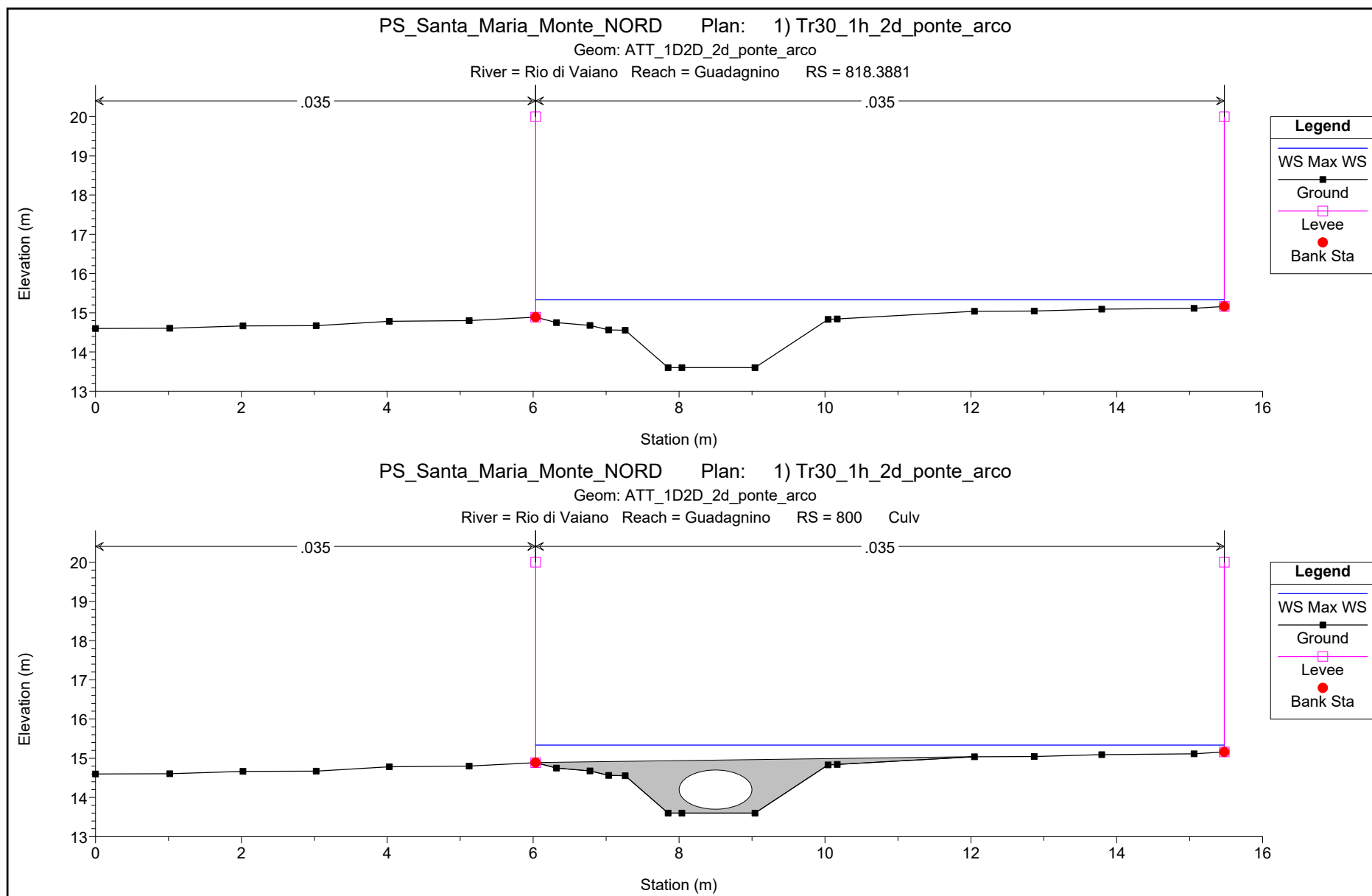


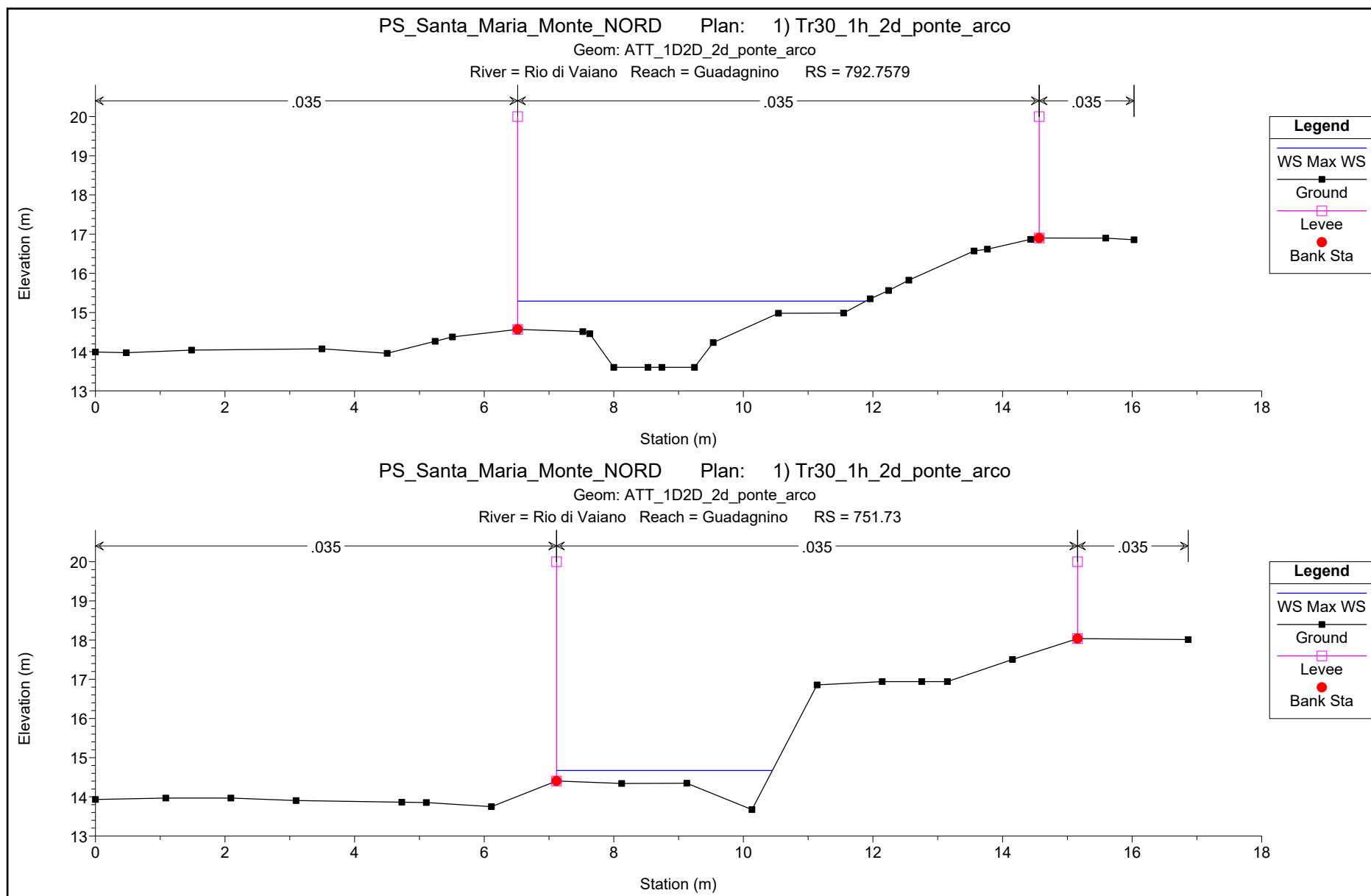
PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

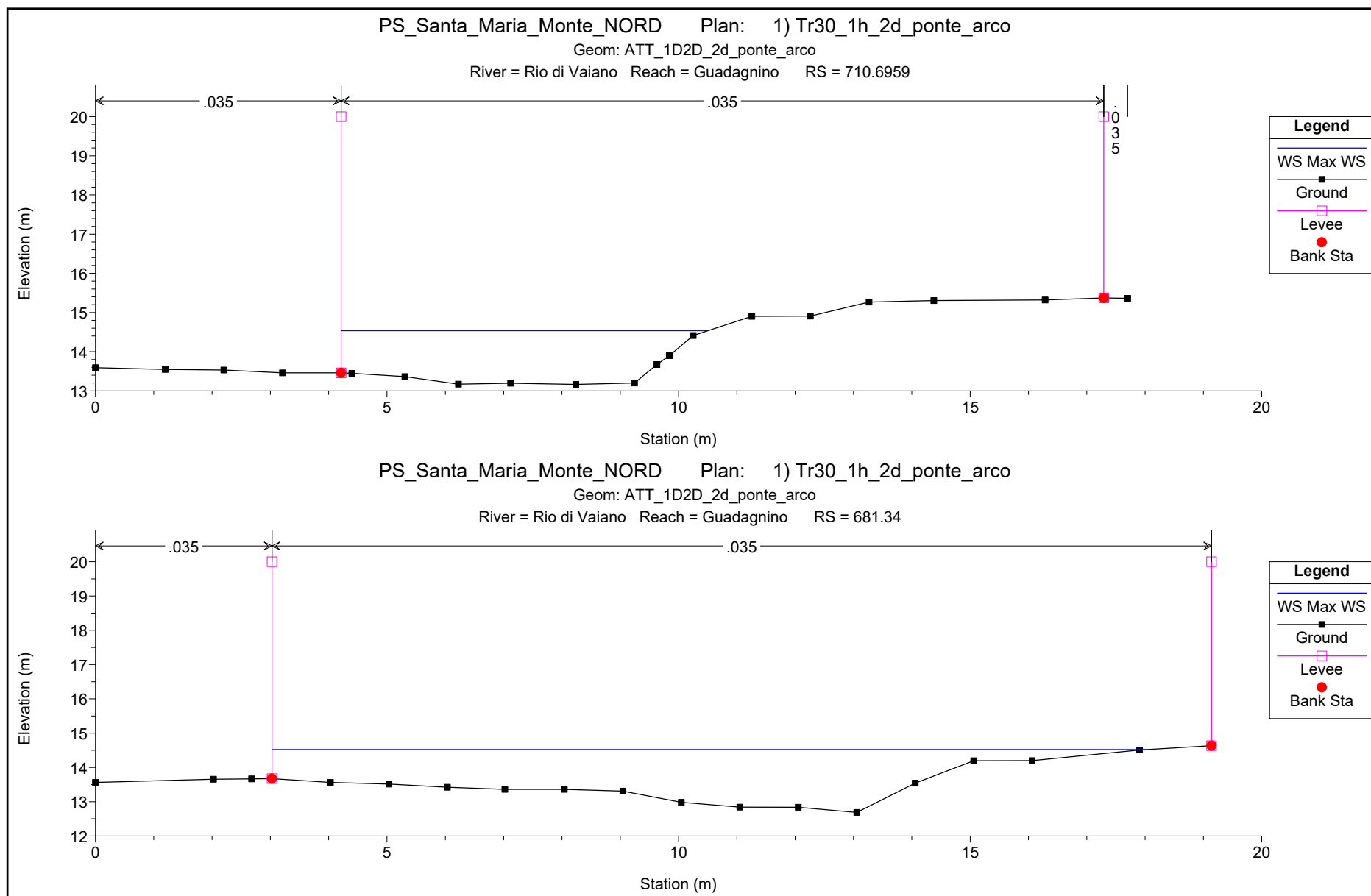
Geom: ATT_1D2D_2d_ponte_arco

River = Rio di Vaiano Reach = Guadagnino RS = 855.10





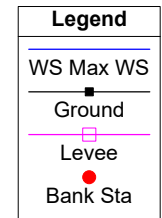
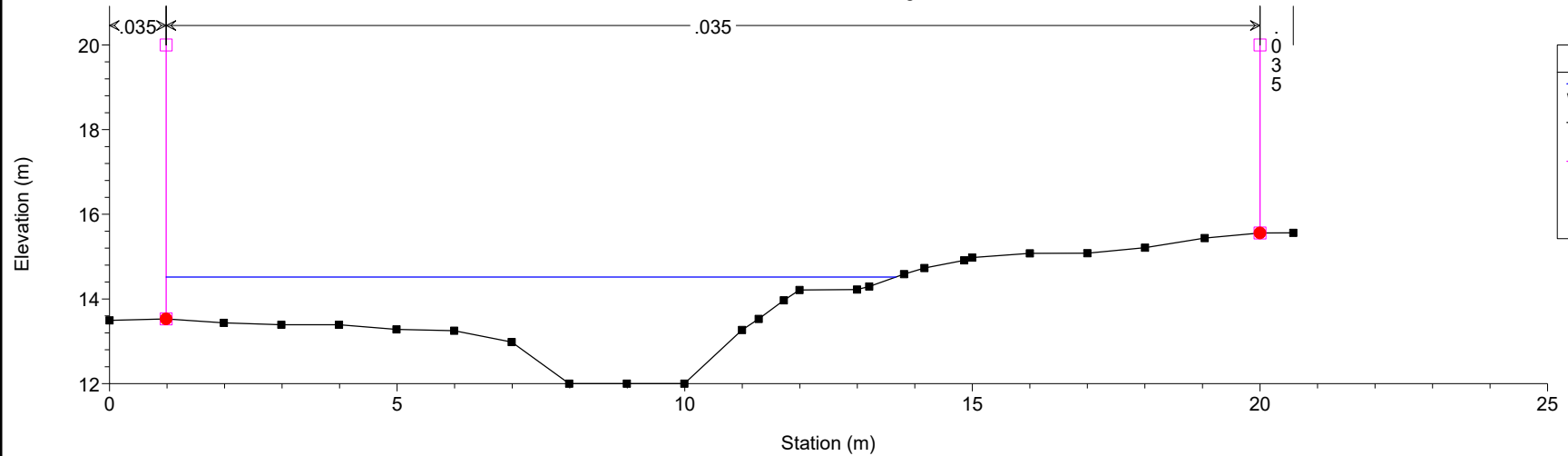




PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

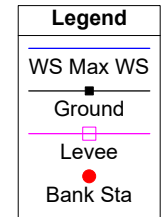
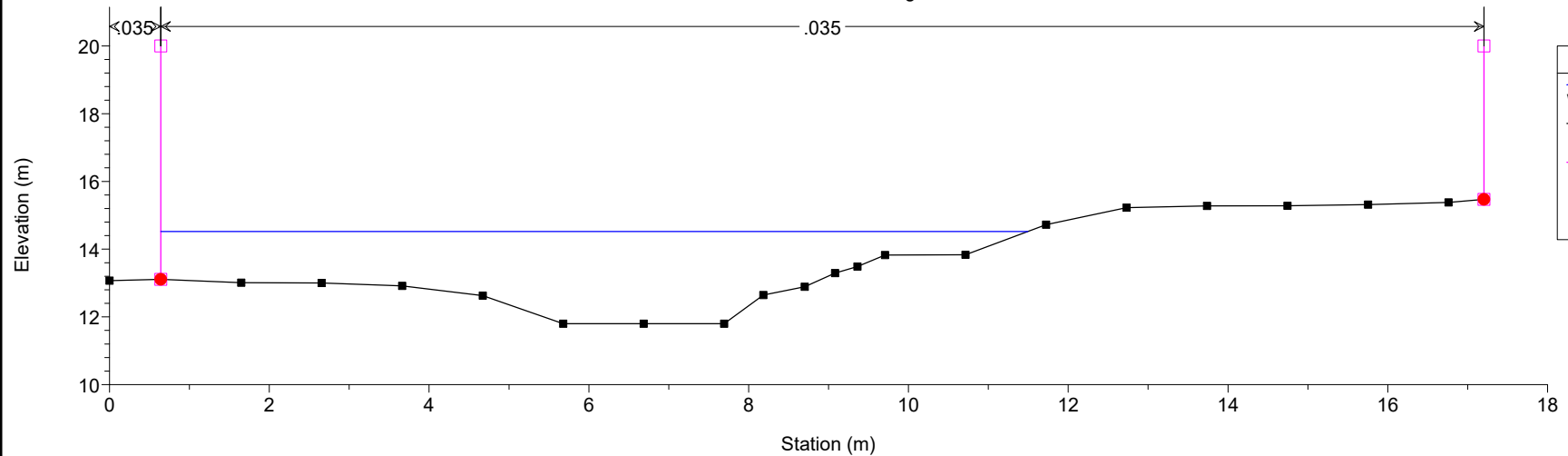
River = Rio di Vaiano Reach = Guadagnino RS = 651.9784



PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

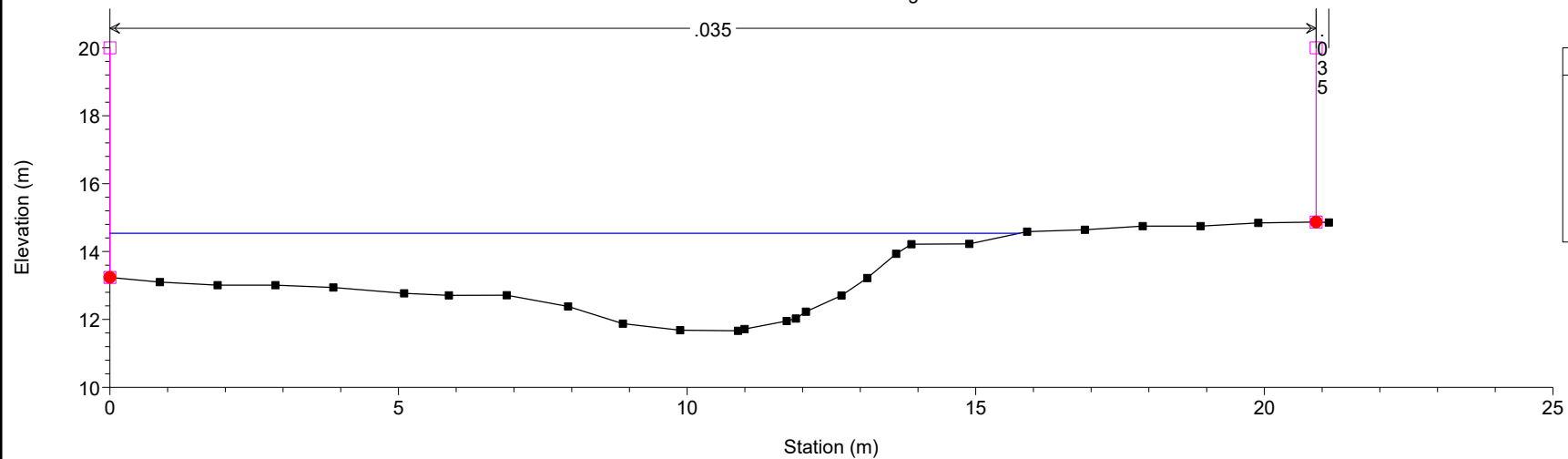
River = Rio di Vaiano Reach = Guadagnino RS = 636.9300



PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

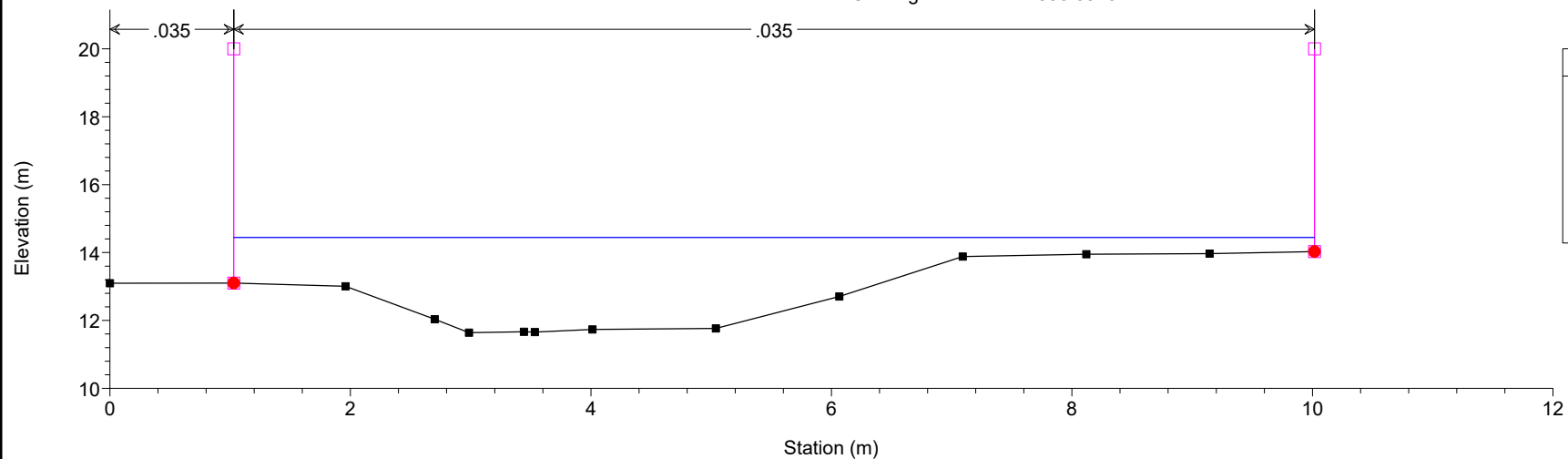
River = Rio di Vaiano Reach = Guadagnino RS = 587.9831



PS_Santa_Maria_Monte_NORD Plan: 1) Tr30_1h_2d_ponte_arco

Geom: ATT_1D2D_2d_ponte_arco

River = Rio di Vaiano Reach = Guadagnino RS = 555.3949



HEC-RAS Plan: Tr30_1h_2d_ponte_arco River: Rio di Vaiano Reach: Guadagnino Profile: Max WS

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Guadagnino	1585	20.23	23.38	24.78	24.76	25.20	0.014203	2.88	7.04	7.82	0.97
Guadagnino	1581	Lat Struct									
Guadagnino	1580	Lat Struct									
Guadagnino	1542	12.25	22.70	24.45		24.50	0.001158	1.00	12.20	9.75	0.29
Guadagnino	1499.45	19.75	22.00	24.04	24.03	24.39	0.015908	2.61	7.56	10.36	0.98
Guadagnino	1456.680	18.52	21.62	22.83	23.10	23.75	0.040687	4.23	4.38	5.59	1.53
Guadagnino	1445.049	17.51	21.56	22.52		22.83	0.013023	2.44	7.18	9.81	0.91
Guadagnino	1398.57	11.09	20.86	22.12		22.33	0.007564	2.03	5.46	5.84	0.67
Guadagnino	1352.093	13.21	20.22	21.87		21.99	0.003310	1.53	8.66	8.00	0.47
Guadagnino	1334.327	12.16	19.90	21.64	21.67	22.18	0.022809	3.26	3.73	3.70	1.04
Guadagnino	1297	3.00	19.80	21.20		21.22	0.001194	0.71	4.24	5.25	0.25
Guadagnino	1259.596	3.00	19.20	21.19		21.19	0.000096	0.26	11.35	9.68	0.08
Guadagnino	1250	3.00	19.00	21.17		21.19	0.000599	0.61	5.61	9.50	0.16
Guadagnino	1200	Culvert									
Guadagnino	1180	3.00	17.25	18.34		18.49	0.008737	1.69	1.77	2.25	0.61
Guadagnino	1164.293	3.00	17.17	18.10	18.10	18.36	0.021360	2.24	1.34	2.61	1.00
Guadagnino	1151	Lat Struct									
Guadagnino	1150	Lat Struct									
Guadagnino	1134.36	1.66	16.32	17.39		17.42	0.002094	0.76	2.17	4.24	0.34
Guadagnino	1104.435	3.15	16.00	17.07		17.18	0.005754	1.44	2.19	2.69	0.51
Guadagnino	1085	4.96	14.90	16.99		17.01	0.000681	0.69	7.17	5.61	0.20
Guadagnino	1070	Culvert									
Guadagnino	1061.654	4.94	14.90	16.74		16.79	0.002490	1.00	4.92	5.90	0.35
Guadagnino	1051	Lat Struct									
Guadagnino	1050	Lat Struct									
Guadagnino	1021.293	9.87	14.77	16.40		16.52	0.004659	1.53	6.44	7.58	0.53
Guadagnino	991.29	8.80	14.55	16.26		16.40	0.004229	1.67	5.27	4.42	0.49
Guadagnino	959	5.60	14.00	16.34		16.35	0.000441	0.58	9.58	7.20	0.16
Guadagnino	940	Culvert									
Guadagnino	928	5.60	13.80	15.64		15.69	0.001657	1.02	5.49	4.82	0.30
Guadagnino	921	Lat Struct									
Guadagnino	920	Lat Struct									
Guadagnino	891.81	3.00	14.10	15.59		15.61	0.001245	0.74	4.05	4.95	0.26
Guadagnino	855.10	3.00	14.00	15.41		15.48	0.005705	1.14	2.64	5.44	0.52
Guadagnino	818.3881	3.00	13.60	15.33		15.35	0.000576	0.47	6.38	9.44	0.18

HEC-RAS Plan: Tr30_1h_2d_ponte_arco River: Rio di Vaiano Reach: Guadagnino Profile: Max WS (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Guadagnino	800	Culvert									
Guadagnino	792.7579	3.00	13.60	15.29		15.31	0.000822	0.62	4.86	5.38	0.21
Guadagnino	791	Lat Struct									
Guadagnino	790	Lat Struct									
Guadagnino	751.73	3.00	13.67	14.67	14.67	14.89	0.023949	2.07	1.45	3.33	1.00
Guadagnino	710.6959	2.07	13.16	14.54		14.54	0.000115	0.29	7.23	6.29	0.09
Guadagnino	681.34	5.79	12.69	14.52		14.53	0.000183	0.37	15.57	14.99	0.12
Guadagnino	651.9784	8.46	12.00	14.52		14.53	0.000248	0.49	17.27	12.69	0.13
Guadagnino	636.9300	9.54	11.80	14.52		14.54	0.000227	0.52	18.32	10.85	0.13
Guadagnino	587.9831	10.82	11.67	14.54		14.55	0.000114	0.40	27.25	15.77	0.10
Guadagnino	555.3949	14.51	11.64	14.45		14.50	0.001122	1.04	13.97	8.99	0.27