

REGIONE PIEMONTE  
COMUNE DI MORETTA

PIANO REGOLATORE GENERALE  
COMUNALE

VARIANTE GENERALE

(ex secondo comma art. 17 L.R. 56/77 e succ. mod. ed int.)

PROGETTO DEFINITIVO

Adottata con Del. C.C. n.            del

ELABORATO E6.3.2  
VALUTAZIONE DELLA PERICOLOSITÀ E DEL  
RISCHIO LUNGO IL RETICOLO IDROGRAFICO  
MINORE-BEALERE DEL MOLINO E SAN  
MARTINO-TABELLE E GRAFICI DEI MODELLI

L'ASSESSORE ALL'URBANISTICA  
Geom. Carlo Cortassa

IL SINDACO  
Avv. Sergio Banchio

IL SEGRETARIO COMUNALE  
Dott. Nadia Moreal

IL GEOLOGO  
Dott. Geol. Marco Novo

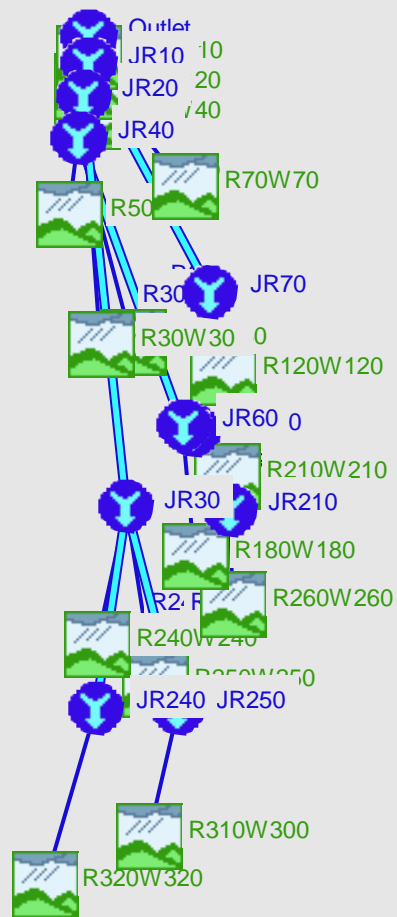
IL RESPONSABILE DEL PROCEDIMENTO  
Geom. Roberto Mina

DATA: Settembre 2010

 **Studio  
PROGEA** *di Marco Novo Geologo*  
Via Carducci 15, 13044 CRESCENTINO (VC)  
Tel. 0161-842055/348-2443334  
[www.studioprogea.com](http://www.studioprogea.com)

E6.3.2

**Parte 1:**  
**Modello idrologico (Hec-HMS)**



HMS \* Summary of Results

TARATURA

Project : bacinomolino3 Run Name : Run 1

Start of Run : 18Sep73 0000 Basin Model : NewProj9  
 End of Run : 19Sep73 1630 Met. Model : Met 4  
 Execution Time : 14May08 1810 Control Specs : Control 3

Hydrologic Element	Discharge Peak (cms)	Time of Peak	Volume (1000 cu m)	Drainage Area (sq km)
R260W260	4.7988	18 Sep 73 1502	113.09	2.471
JR210	4.7988	18 Sep 73 1502	113.09	2.471
R210	4.7979	18 Sep 73 1528	113.09	2.471
R210W210	1.9352	18 Sep 73 1321	40.597	0.887
JR190	6.5215	18 Sep 73 1508	153.69	3.358
R190	6.5214	18 Sep 73 1510	153.69	3.358
R180W180	3.3661	18 Sep 73 1650	87.636	2.295
JR60	9.5795	18 Sep 73 1552	241.32	5.653
R60	9.5708	18 Sep 73 1723	241.25	5.653
R50W50	3.2812	18 Sep 73 1511	81.295	1.454
R60W60	6.3636	18 Sep 73 1845	211.47	4.622
JR40	18.239	18 Sep 73 1730	534.01	11.729
R40	18.230	18 Sep 73 1746	533.92	11.729
R320W320	5.5311	18 Sep 73 1813	147.47	7.983
JR240	5.5311	18 Sep 73 1813	147.47	7.983
R240	5.5302	18 Sep 73 1845	147.47	7.983
R310W300	3.5630	18 Sep 73 1732	87.676	4.400
JR250	3.5630	18 Sep 73 1732	87.676	4.400
R250	3.5618	18 Sep 73 1828	87.674	4.400
R240W240	3.0758	18 Sep 73 1552	72.401	2.094
R250W250	3.4196	18 Sep 73 1712	89.557	2.729
JR30	14.602	18 Sep 73 1752	397.10	17.206
R30	14.578	18 Sep 73 1937	397.02	17.206
R40W40	0.65102	18 Sep 73 1217	10.711	0.178
R30W30	7.8309	18 Sep 73 1727	232.95	4.328
JR20	38.622	18 Sep 73 1835	1174.6	33.441
R20	38.620	18 Sep 73 1841	1174.6	33.441
R120W120	4.1199	18 Sep 73 1621	100.23	2.899
JR70	4.1199	18 Sep 73 1621	100.23	2.899
R70	4.1108	18 Sep 73 1812	100.15	2.899
R20W20	1.1319	18 Sep 73 1220	19.016	0.305
R70W70	6.8032	18 Sep 73 1703	194.52	3.614
JR10	48.836	18 Sep 73 1826	1488.3	40.259
R10	48.824	18 Sep 73 1832	1488.2	40.259
R10W10	0.54837	18 Sep 73 1212	8.7250	0.145
OutLet	48.824	18 Sep 73 1832	1496.9	40.404

HMS \* Summary of Results

TR 50

Project : bacinomolino3 Run Name : Run 2

Start of Run : 01Jan10 0000 Basin Model : NewProj9  
 End of Run : 01Jan10 2400 Met. Model : Met 1  
 Execution Time : 14May08 1824 Control Specs : Control 1

Hydrologic Element	Discharge Peak (cms)	Time of Peak	Volume (1000 cu m)	Drainage Area (sq km)
R260W260	4.9791	01 Jan 10 0928	80.206	2.471
JR210	4.9791	01 Jan 10 0928	80.206	2.471
R210	4.9758	01 Jan 10 0954	80.201	2.471
R210W210	2.1514	01 Jan 10 0834	28.791	0.887
JR190	6.6399	01 Jan 10 0933	108.99	3.358
R190	6.6395	01 Jan 10 0935	108.99	3.358
R180W180	2.9324	01 Jan 10 1051	60.136	2.295
JR60	9.1780	01 Jan 10 0953	169.13	5.653
R60	9.1438	01 Jan 10 1125	168.69	5.653
R50W50	3.4184	01 Jan 10 0940	59.621	1.454
R60W60	5.0965	01 Jan 10 1245	146.03	4.622
JR40	16.073	01 Jan 10 1122	374.34	11.729
R40	16.053	01 Jan 10 1138	373.16	11.729
R320W320	3.7182	01 Jan 10 1159	86.036	7.983
JR240	3.7182	01 Jan 10 1159	86.036	7.983
R240	3.7174	01 Jan 10 1234	85.726	7.983
R310W300	2.5739	01 Jan 10 1117	52.440	4.400
JR250	2.5739	01 Jan 10 1117	52.440	4.400
R250	2.5725	01 Jan 10 1218	52.278	4.400
R240W240	2.9069	01 Jan 10 0955	48.821	2.094
R250W250	2.8176	01 Jan 10 1107	59.671	2.729
JR30	10.559	01 Jan 10 1138	246.50	17.206
R30	10.534	01 Jan 10 1332	241.49	17.206
R40W40	0.71267	01 Jan 10 0719	7.9498	0.178
R30W30	6.8982	01 Jan 10 1133	168.55	4.328
JR20	30.908	01 Jan 10 1226	791.14	33.441
R20	30.904	01 Jan 10 1232	790.25	33.441
R120W120	3.7180	01 Jan 10 1019	67.588	2.899
JR70	3.7180	01 Jan 10 1019	67.588	2.899
R70	3.6940	01 Jan 10 1213	67.293	2.899
R20W20	1.2460	01 Jan 10 0722	14.195	0.305
R70W70	6.1461	01 Jan 10 1111	141.22	3.614
JR10	39.991	01 Jan 10 1220	1013.0	40.259
R10	39.968	01 Jan 10 1226	1011.3	40.259
R10W10	0.59670	01 Jan 10 0714	6.4760	0.145
Outlet	39.968	01 Jan 10 1226	1017.7	40.404

HMS \* Summary of Results

Project : bacinomolino3

Run Name : Run 3

TR 200

Start of Run : 01Feb10 0000 Basin Model : NewProj9

End of Run : 01Feb10 2400 Met. Model : Met 2

Execution Time : 14May08 1826 Control Specs : Control 2

Hydrologic Element	Discharge Peak (cms)	Time of Peak	Volume (1000 cu m)	Drainage Area (sq km)
R260W260	6.7558	01 Feb 10 0927	108.81	2.471
JR210	6.7558	01 Feb 10 0927	108.81	2.471
R210	6.7514	01 Feb 10 0951	108.80	2.471
R210W210	2.9197	01 Feb 10 0832	39.059	0.887
JR190	9.0359	01 Feb 10 0929	147.86	3.358
R190	9.0354	01 Feb 10 0931	147.86	3.358
R180W180	4.0881	01 Feb 10 1049	83.954	2.295
JR60	12.560	01 Feb 10 0950	231.82	5.653
R60	12.516	01 Feb 10 1115	231.27	5.653
R50W50	4.5123	01 Feb 10 0939	78.498	1.454
R60W60	6.9137	01 Feb 10 1244	198.14	4.622
JR40	21.850	01 Feb 10 1114	507.91	11.729
R40	21.824	01 Feb 10 1129	506.45	11.729
R320W320	5.9440	01 Feb 10 1154	138.16	7.983
JR240	5.9440	01 Feb 10 1154	138.16	7.983
R240	5.9428	01 Feb 10 1225	137.73	7.983
R310W300	4.0409	01 Feb 10 1112	82.769	4.400
JR250	4.0409	01 Feb 10 1112	82.769	4.400
R250	4.0386	01 Feb 10 1206	82.546	4.400
R240W240	4.1138	01 Feb 10 0953	69.289	2.094
R250W250	4.0259	01 Feb 10 1105	85.452	2.729
JR30	16.193	01 Feb 10 1132	375.02	17.206
R30	16.157	01 Feb 10 1315	368.83	17.206
R40W40	0.93517	01 Feb 10 0719	10.356	0.178
R30W30	9.1414	01 Feb 10 1132	223.16	4.328
JR20	44.061	01 Feb 10 1217	1108.8	33.441
R20	44.057	01 Feb 10 1223	1107.7	33.441
R120W120	5.2631	01 Feb 10 1016	95.924	2.899
JR70	5.2631	01 Feb 10 1016	95.924	2.899
R70	5.2308	01 Feb 10 1201	95.567	2.899
R20W20	1.6282	01 Feb 10 0721	18.397	0.305
R70W70	8.1460	01 Feb 10 1111	186.98	3.614
JR10	56.603	01 Feb 10 1211	1408.7	40.259
R10	56.574	01 Feb 10 1217	1406.6	40.259
R10W10	0.78246	01 Feb 10 0713	8.4357	0.145
Outlet	56.574	01 Feb 10 1217	1415.0	40.404

HMS \* Summary of Results

Project : bacinomolino3

Run Name : Run 4

TR 500

Start of Run : 01Mar10 0000 Basin Model : NewProj9

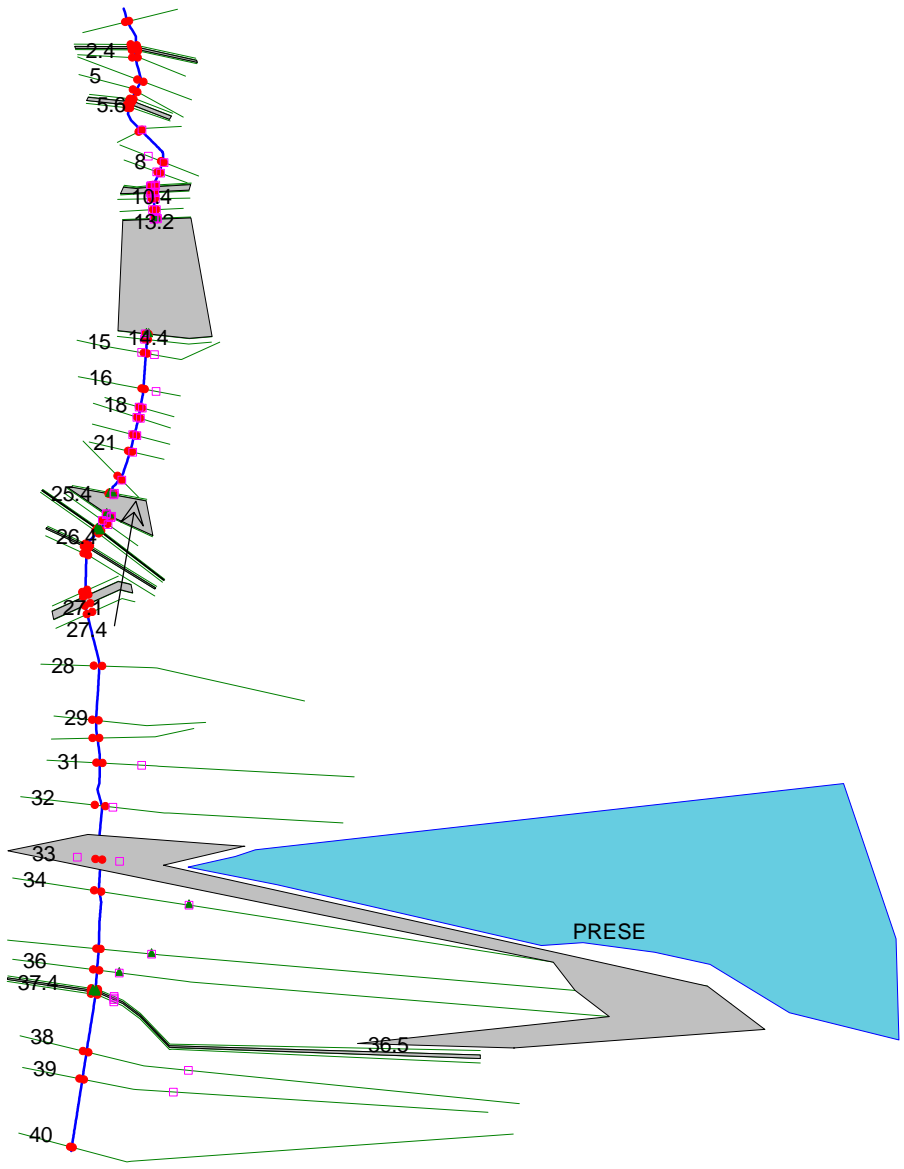
End of Run : 01Mar10 2400 Met. Model : Met 3

Execution Time : 14May08 1827 Control Specs : Control 4

Hydrologic Element	Discharge Peak (cms)	Time of Peak	Volume (1000 cu m)	Drainage Area (sq km)
R260W260	7.7637	01 Mar 10 0728	145.41	2.471
JR210	7.7637	01 Mar 10 0728	145.41	2.471
R210	7.7597	01 Mar 10 0751	145.40	2.471
R210W210	3.2706	01 Mar 10 0631	52.196	0.887
JR190	10.447	01 Mar 10 0730	197.60	3.358
R190	10.447	01 Mar 10 0732	197.59	3.358
R180W180	4.9458	01 Mar 10 0854	115.01	2.295
JR60	14.740	01 Mar 10 0753	312.60	5.653
R60	14.698	01 Mar 10 0915	312.21	5.653
R50W50	5.1262	01 Mar 10 0740	102.21	1.454
R60W60	8.5662	01 Mar 10 1100	267.28	4.622
JR40	26.024	01 Mar 10 0919	681.70	11.729
R40	26.000	01 Mar 10 0934	680.40	11.729
R320W320	8.0864	01 Mar 10 1011	211.87	7.983
JR240	8.0864	01 Mar 10 1011	211.87	7.983
R240	8.0854	01 Mar 10 1040	211.47	7.983
R310W300	5.3210	01 Mar 10 0922	125.04	4.400
JR250	5.3210	01 Mar 10 0922	125.04	4.400
R250	5.3187	01 Mar 10 1013	124.88	4.400
R240W240	4.9057	01 Mar 10 0755	96.180	2.094
R250W250	4.9832	01 Mar 10 0912	119.63	2.729
JR30	21.201	01 Mar 10 0947	552.16	17.206
R30	21.167	01 Mar 10 1123	547.11	17.206
R40W40	0.98167	01 Mar 10 0517	13.357	0.178
R30W30	10.867	01 Mar 10 0940	292.95	4.328
JR20	55.078	01 Mar 10 1025	1533.8	33.441
R20	55.073	01 Mar 10 1030	1532.9	33.441
R120W120	6.3416	01 Mar 10 0820	133.15	2.899
JR70	6.3416	01 Mar 10 0820	133.15	2.899
R70	6.3102	01 Mar 10 1000	132.92	2.899
R20W20	1.7117	01 Mar 10 0519	23.622	0.305
R70W70	9.6089	01 Mar 10 0917	245.16	3.614
JR10	70.302	01 Mar 10 1017	1934.6	40.259
R10	70.274	01 Mar 10 1023	1932.9	40.259
R10W10	0.81375	01 Mar 10 0511	10.881	0.145
Outlet	70.352	01 Mar 10 1022	1943.7	40.404

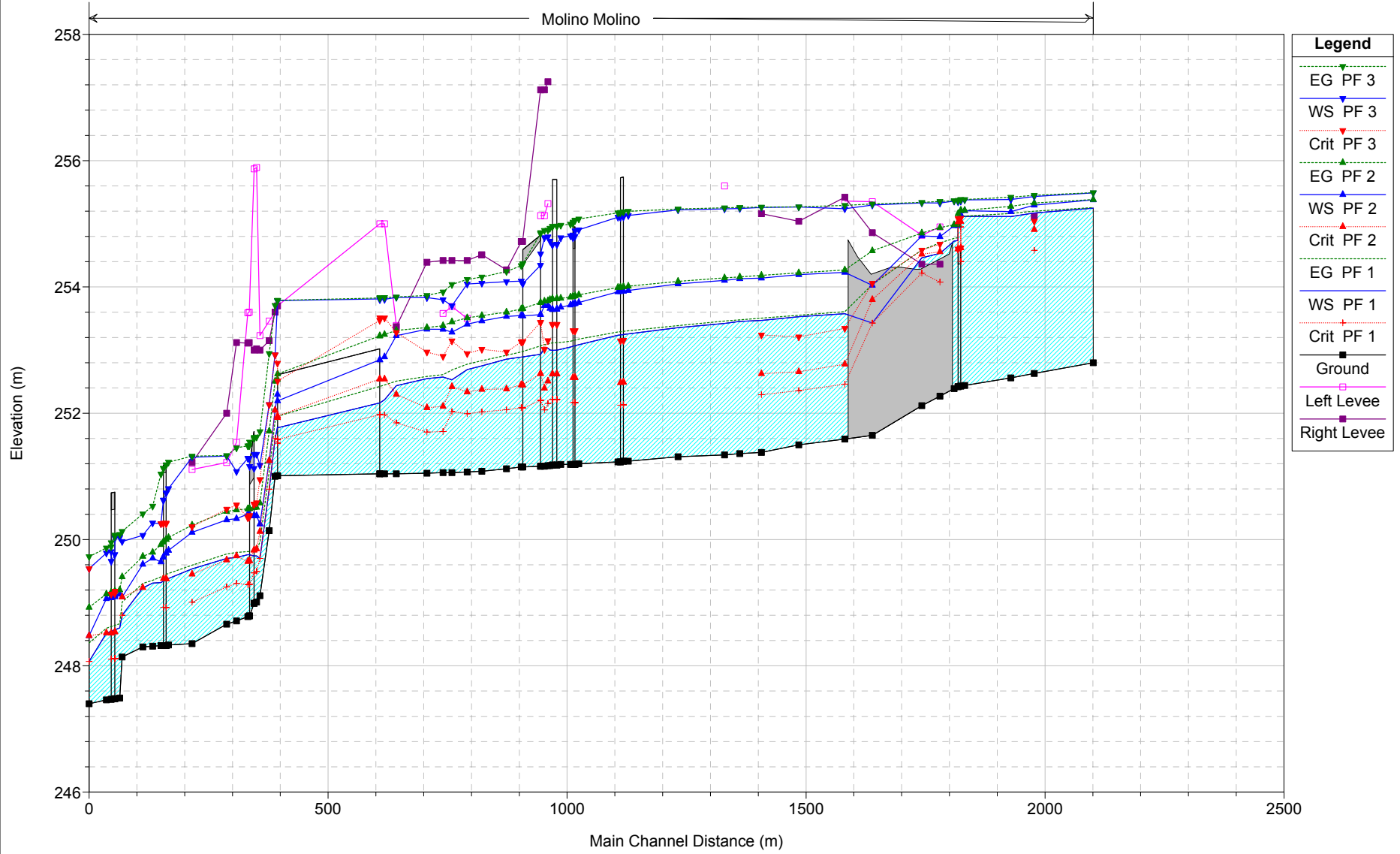
**Parte 2:**  
**Bealera del Molino**  
**Modello idraulico in moto permanente (Hec Ras)**





modello molino con area laminazione Plan: Plan 01 21/02/2009 17.39.05

Geom: molino Flow: Flow 02



HEC-RAS Plan: Plan 01 River: Molino Reach: Molino

Reach	River Sta	Profile	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
Molino	40	PF 1	40.00	252.80	255.25		255.26	0.000330	0.80	159.38	493.81	0.17
Molino	40	PF 2	56.60	252.80	255.38		255.39	0.000280	0.77	231.96	612.85	0.16
Molino	40	PF 3	70.30	252.80	255.49		255.49	0.000223	0.71	304.78	710.51	0.15
Molino	39	PF 1	40.00	252.63	255.17	254.58	255.20	0.000601	1.07	89.06	225.13	0.24
Molino	39	PF 2	56.60	252.63	255.29	254.91	255.33	0.000744	1.24	125.99	367.67	0.27
Molino	39	PF 3	70.30	252.63	255.43	255.04	255.45	0.000499	1.06	177.52	382.90	0.22
Molino	38	PF 1	40.00	252.56	255.11		255.16	0.000842	1.24	67.64	167.05	0.28
Molino	38	PF 2	56.60	252.56	255.19		255.28	0.001392	1.64	82.98	266.97	0.37
Molino	38	PF 3	70.30	252.56	255.38		255.42	0.000751	1.28	136.04	297.43	0.27
Molino	37.4	PF 1	40.00	252.44	255.12		255.12	0.000152	0.48	167.39	291.69	0.11
Molino	37.4	PF 2	56.60	252.44	255.21		255.21	0.000198	0.57	193.83	296.39	0.13
Molino	37.4	PF 3	70.30	252.44	255.38		255.39	0.000150	0.53	245.49	303.35	0.12
Molino	37.3	PF 1	40.00	252.43	255.12	254.40	255.12	0.000147	0.48	169.29	292.16	0.11
Molino	37.3	PF 2	56.60	252.43	255.21	254.62	255.21	0.000193	0.56	195.65	296.84	0.13
Molino	37.3	PF 3	70.30	252.43	255.38	254.62	255.38	0.000147	0.52	247.49	303.67	0.12
Molino	37.25		Bridge									
Molino	37.2	PF 1	40.00	252.42	254.74	254.58	254.78	0.001294	1.21	66.42	191.62	0.32
Molino	37.2	PF 2	56.60	252.42	254.97	254.60	254.99	0.000615	0.92	130.51	285.13	0.23
Molino	37.2	PF 3	70.30	252.42	255.36	254.60	255.37	0.000151	0.53	245.23	303.40	0.12
Molino	37.1	PF 1	40.00	252.39	254.73		254.77	0.001272	1.21	70.34	228.57	0.32
Molino	37.1	PF 2	56.60	252.39	254.97		254.99	0.000524	0.86	138.32	286.57	0.21
Molino	37.1	PF 3	70.30	252.39	255.36		255.37	0.000136	0.50	254.08	304.43	0.11
Molino	36.5		Lat Struct									
Molino	36	PF 1	40.00	252.27	254.53	254.08	254.70	0.002706	1.94	28.66	646.49	0.49
Molino	36	PF 2	56.58	252.27	254.80	254.56	254.94	0.002200	1.94	43.34	680.83	0.45
Molino	36	PF 3	70.30	252.27	255.33	254.68	255.35	0.000436	1.02	134.81	866.16	0.21
Molino	35	PF 1	39.94	252.12	254.46	254.22	254.58	0.002511	1.89	39.90	676.88	0.45
Molino	35	PF 2	56.58	252.12	254.81	254.52	254.85	0.001022	1.36	77.45	801.95	0.29
Molino	35	PF 3	70.30	252.12	255.33	254.58	255.34	0.000182	0.66	207.78	960.63	0.13
Molino	34	PF 1	39.18	251.65	253.43	253.43	254.04	0.013282	3.46	11.31	9.20	1.00
Molino	34	PF 2	56.58	251.65	254.03	253.80	254.57	0.008483	3.28	17.26	10.68	0.82
Molino	34	PF 3	70.30	251.65	255.30	254.06	255.31	0.000303	0.84	155.34	872.49	0.17
Molino	33	PF 1	10.99	251.59	253.58	252.46	253.61	0.000619	0.79	13.98	11.14	0.22
Molino	33	PF 2	18.98	251.59	254.23	252.78	254.27	0.000484	0.88	22.42	14.65	0.21
Molino	33	PF 3	39.00	251.59	255.24	253.34	255.29	0.000418	1.07	47.03	52.60	0.20
Molino	32	PF 1	10.99	251.50	253.53	252.36	253.55	0.000500	0.69	15.87	12.98	0.20
Molino	32	PF 2	18.98	251.50	254.20	252.66	254.22	0.000413	0.74	25.78	16.73	0.19
Molino	32	PF 3	39.00	251.50	255.27	253.21	255.27	0.000031	0.27	287.11	441.34	0.06
Molino	31	PF 1	10.99	251.38	253.47	252.29	253.51	0.000666	0.85	12.96	9.11	0.23
Molino	31	PF 2	18.98	251.38	254.14	252.63	254.18	0.000572	0.94	22.68	26.57	0.22
Molino	31	PF 3	39.00	251.38	255.26	253.24	255.26	0.000081	0.48	221.58	479.35	0.09
Molino	30	PF 1	10.99	251.36	253.45		253.48	0.000426	0.70	15.73	10.83	0.19
Molino	30	PF 2	18.98	251.36	254.13		254.16	0.000362	0.78	26.92	26.66	0.18
Molino	30	PF 3	39.00	251.36	255.24		255.26	0.000155	0.69	84.04	104.22	0.13
Molino	29	PF 1	10.99	251.34	253.42		253.46	0.000824	0.85	12.86	10.33	0.24
Molino	29	PF 2	18.98	251.34	254.10		254.14	0.000578	0.90	22.86	25.16	0.22
Molino	29	PF 3	39.00	251.34	255.24		255.25	0.000185	0.71	85.44	162.72	0.13
Molino	28	PF 1	10.99	251.31	253.35		253.39	0.000635	0.81	13.54	10.11	0.22
Molino	28	PF 2	18.98	251.31	254.05		254.09	0.000558	0.88	21.48	12.78	0.22
Molino	28	PF 3	39.00	251.31	255.22		255.24	0.000165	0.64	131.81	298.35	0.13
Molino	27.4	PF 1	10.99	251.24	253.26		253.31	0.000942	0.99	11.05	7.27	0.26
Molino	27.4	PF 2	18.98	251.24	253.94		254.01	0.000949	1.15	16.46	8.47	0.26
Molino	27.4	PF 3	39.00	251.24	255.13		255.20	0.000681	1.22	43.00	49.14	0.23
Molino	27.3	PF 1	10.99	251.24	253.25	252.13	253.30	0.000960	1.00	10.97	7.25	0.26
Molino	27.3	PF 2	18.98	251.24	253.93	252.49	254.00	0.000963	1.16	16.37	8.45	0.27
Molino	27.3	PF 3	39.00	251.24	255.12	253.15	255.19	0.000692	1.22	42.61	48.59	0.24
Molino	27.25		Bridge									
Molino	27.2	PF 1	10.99	251.23	253.24		253.29	0.000953	1.00	11.00	7.26	0.26
Molino	27.2	PF 2	18.98	251.23	253.93		254.00	0.000958	1.16	16.41	8.46	0.27
Molino	27.2	PF 3	39.00	251.23	255.11		255.18	0.000698	1.23	42.40	48.30	0.24
Molino	27.1	PF 1	10.99	251.23	253.23		253.29	0.000962	1.00	10.97	7.25	0.26
Molino	27.1	PF 2	18.98	251.23	253.92		253.99	0.000965	1.16	16.36	8.45	0.27

HEC-RAS Plan: Plan 01 River: Molino Reach: Molino (Continued)

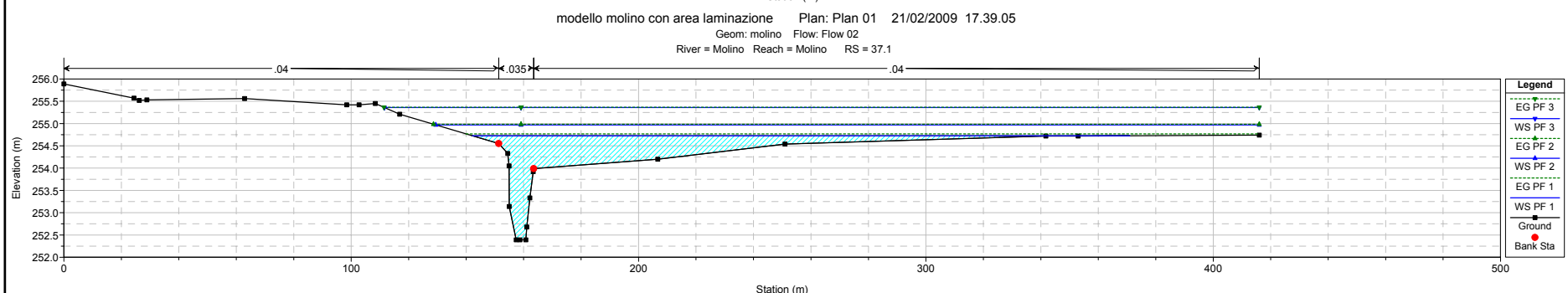
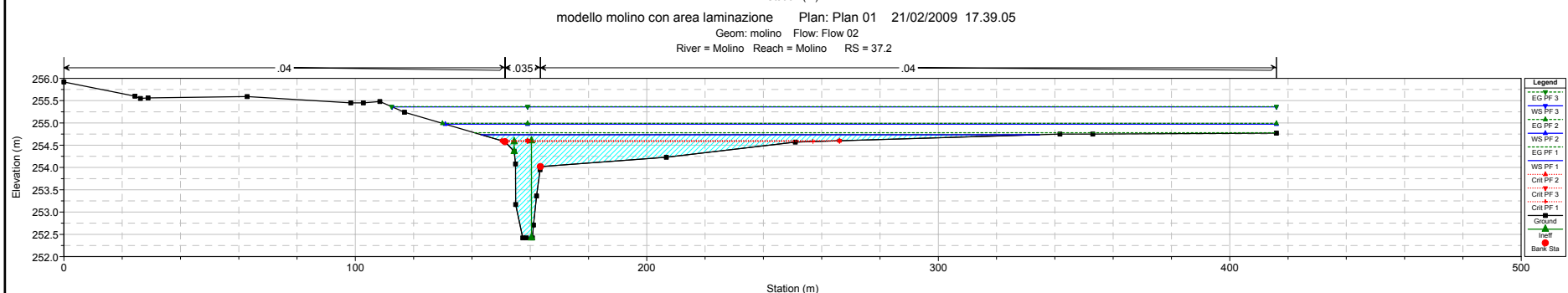
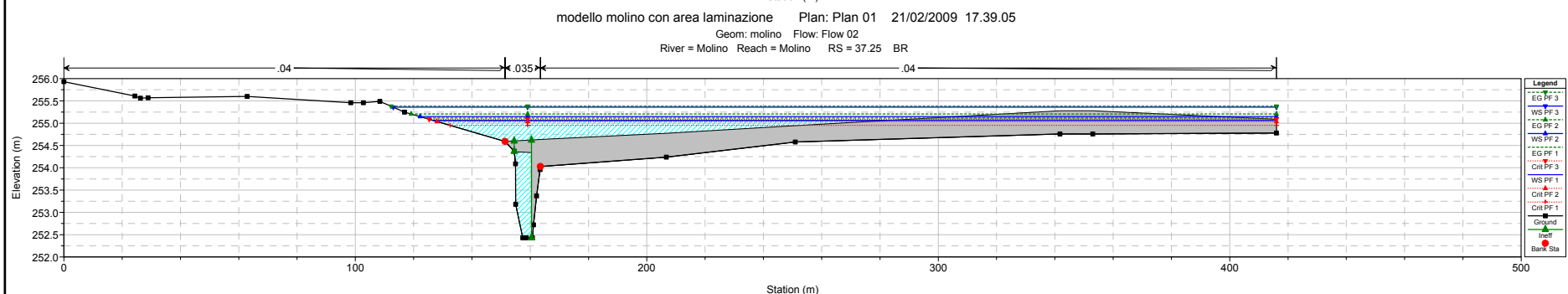
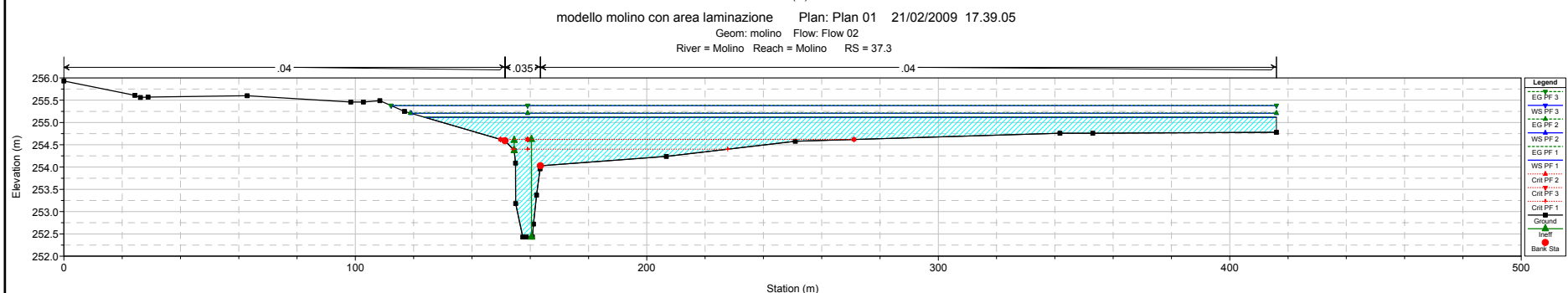
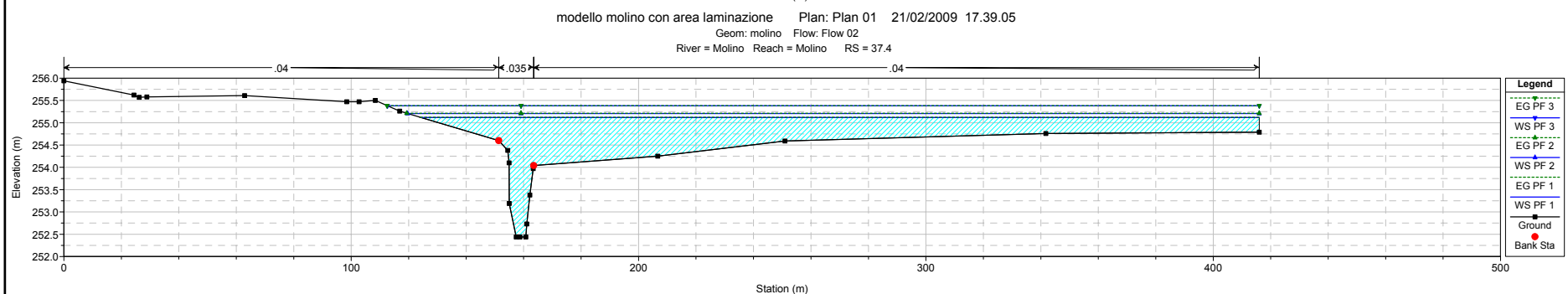
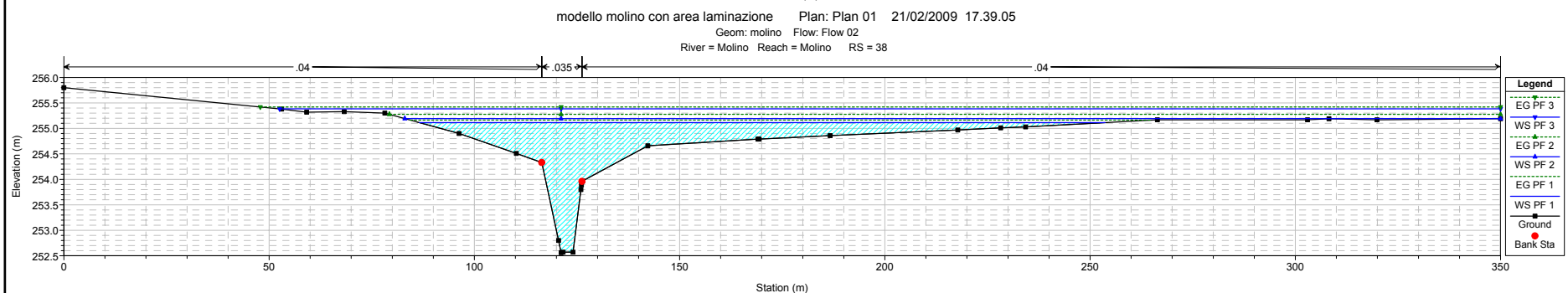
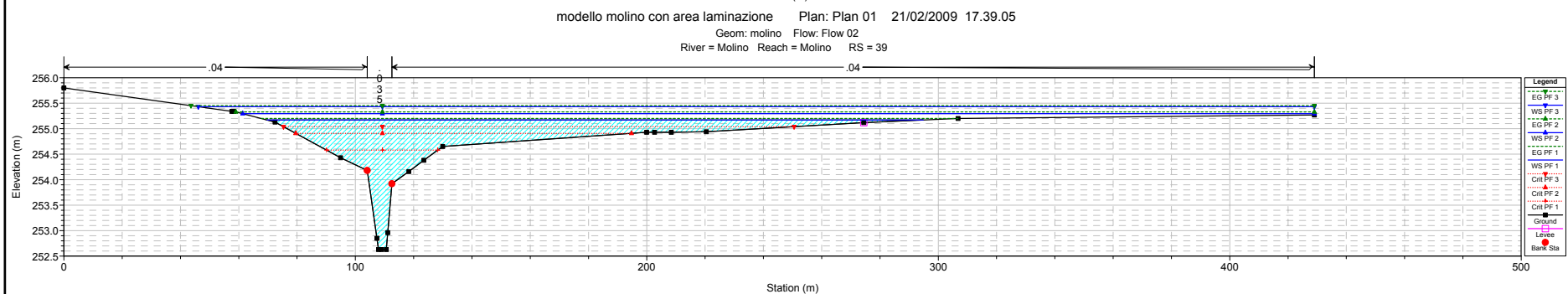
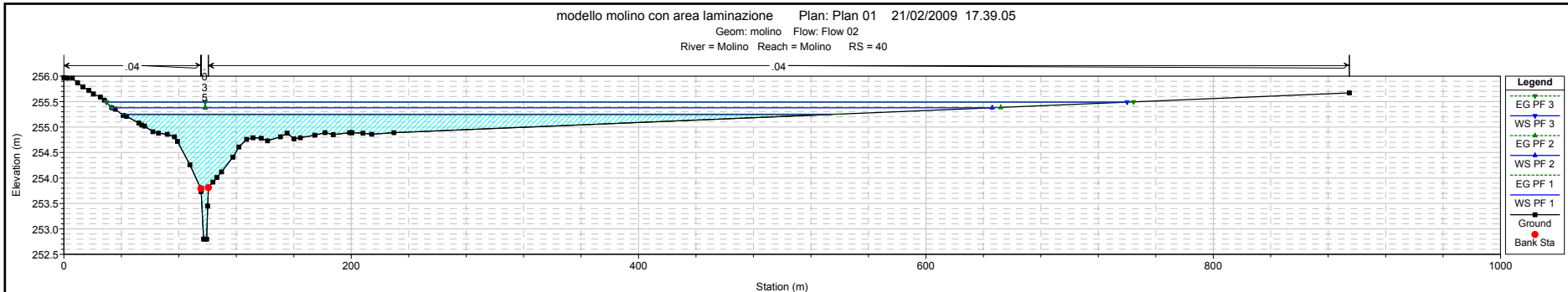
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Molino	27.1	PF 3	39.00	251.23	255.10		255.17	0.000703	1.23	42.20	48.05	0.24
Molino	26.4	PF 1	10.99	251.20	253.09		253.17	0.001919	1.32	8.34	5.54	0.34
Molino	26.4	PF 2	18.98	251.20	253.75		253.87	0.002032	1.54	12.31	6.48	0.36
Molino	26.4	PF 3	39.00	251.20	254.91		255.08	0.001983	1.84	22.02	13.54	0.37
Molino	26.3	PF 1	10.99	251.19	253.07	252.17	253.16	0.001941	1.32	8.31	5.53	0.34
Molino	26.3	PF 2	18.98	251.19	253.74	252.56	253.86	0.002052	1.55	12.26	6.46	0.36
Molino	26.3	PF 3	39.00	251.19	254.89	253.31	255.06	0.002000	1.84	21.93	13.30	0.37
Molino	26.25		Bridge									
Molino	26.2	PF 1	10.99	251.19	253.06		253.15	0.001976	1.33	8.25	5.52	0.35
Molino	26.2	PF 2	18.98	251.19	253.73		253.85	0.002080	1.56	12.19	6.44	0.36
Molino	26.2	PF 3	39.00	251.19	254.82		255.01	0.002164	1.89	21.14	11.42	0.39
Molino	26.1	PF 1	10.99	251.19	253.05		253.14	0.002017	1.34	8.19	5.50	0.35
Molino	26.1	PF 2	18.98	251.19	253.71		253.84	0.002113	1.57	12.12	6.41	0.36
Molino	26.1	PF 3	39.00	251.19	254.81		254.99	0.002202	1.91	20.98	11.35	0.39
Molino	25.4	PF 1	10.99	251.19	253.01		253.12	0.000457	1.46	7.54	5.38	0.39
Molino	25.4	PF 2	18.98	251.19	253.68		253.82	0.000445	1.66	11.42	6.28	0.39
Molino	25.4	PF 3	39.00	251.19	254.78		254.98	0.000416	2.00	23.22	18.36	0.40
Molino	25.3	PF 1	10.99	251.18	253.00	252.22	253.12	0.000416	1.52	7.23	5.37	0.40
Molino	25.3	PF 2	18.98	251.18	253.65	252.62	253.81	0.000422	1.81	10.51	6.25	0.41
Molino	25.3	PF 3	39.00	251.18	254.67	253.41	254.96	0.000511	2.38	16.36	16.91	0.46
Molino	25.25		Bridge									
Molino	25.2	PF 1	10.99	251.18	252.99	252.22	253.11	0.000420	1.52	7.21	5.37	0.40
Molino	25.2	PF 2	18.98	251.18	253.64	252.62	253.81	0.000425	1.81	10.48	6.25	0.41
Molino	25.2	PF 3	39.00	251.18	254.67	253.41	254.96	0.000514	2.39	16.32	16.82	0.47
Molino	25.1	PF 1	10.99	251.17	253.00		253.11	0.000451	1.45	7.58	5.39	0.39
Molino	25.1	PF 2	18.98	251.17	253.66		253.80	0.000445	1.66	11.42	6.28	0.39
Molino	25.1	PF 3	39.00	251.17	254.73		254.93	0.000434	2.03	22.62	17.85	0.40
Molino	24	PF 1	10.99	251.17	253.03	252.15	253.09	0.000253	1.12	9.77	7.69	0.32
Molino	24	PF 2	18.98	251.17	253.70	252.51	253.78	0.000215	1.22	15.54	9.38	0.30
Molino	24	PF 3	39.00	251.17	254.79	253.15	254.90	0.000182	1.45	27.87	12.19	0.30
Molino	23.4	PF 1	10.99	251.16	253.03	252.05	253.09	0.001043	1.03	10.72	7.61	0.28
Molino	23.4	PF 2	18.98	251.16	253.70	252.40	253.77	0.000968	1.18	16.20	9.03	0.27
Molino	23.4	PF 3	39.00	251.16	254.78	253.01	254.90	0.001008	1.50	26.45	10.00	0.29
Molino	23.3	PF 1	10.99	251.16	252.93	252.20	253.07	0.002383	1.62	6.78	7.48	0.43
Molino	23.3	PF 2	18.98	251.16	253.56	252.63	253.75	0.002468	1.92	9.87	8.60	0.44
Molino	23.3	PF 3	39.00	251.16	254.52	253.44	254.86	0.002836	2.57	15.16	9.77	0.50
Molino	23.25		Bridge									
Molino	22.2	PF 1	10.99	251.15	252.89	252.09	252.98	0.001667	1.31	8.41	6.53	0.35
Molino	22.2	PF 2	18.98	251.15	253.54	252.44	253.66	0.001489	1.52	12.47	8.01	0.35
Molino	22.2	PF 3	39.00	251.15	254.05	253.14	254.37	0.002883	2.47	15.76	8.58	0.50
Molino	22.1	PF 1	10.99	251.15	252.89	252.09	252.97	0.001821	1.27	8.64	6.53	0.35
Molino	22.1	PF 2	18.98	251.15	253.55	252.45	253.65	0.001572	1.42	13.48	8.02	0.34
Molino	22.1	PF 3	39.00	251.15	254.09	253.13	254.34	0.002923	2.21	18.01	8.62	0.48
Molino	21	PF 1	10.99	251.12	252.86	252.05	252.92	0.001331	1.09	10.12	8.50	0.32
Molino	21	PF 2	18.98	251.12	253.53	252.38	253.60	0.000988	1.16	16.41	9.88	0.29
Molino	21	PF 3	39.00	251.12	254.08	252.97	254.24	0.001732	1.78	22.03	10.67	0.39
Molino	20	PF 1	10.99	251.08	252.75	252.02	252.83	0.001931	1.28	8.60	7.09	0.37
Molino	20	PF 2	18.98	251.08	253.46	252.38	253.55	0.001156	1.30	16.78	21.24	0.31
Molino	20	PF 3	39.00	251.08	254.06	253.01	254.16	0.001174	1.58	39.83	60.79	0.32
Molino	19	PF 1	10.99	251.07	252.69	251.99	252.78	0.001774	1.29	8.64	7.60	0.36
Molino	19	PF 2	18.98	251.07	253.41	252.34	253.51	0.001162	1.40	14.10	7.60	0.32
Molino	19	PF 3	39.00	251.07	254.05	252.94	254.12	0.000842	1.44	47.94	65.11	0.28
Molino	18	PF 1	10.99	251.06	252.53	252.02	252.69	0.004223	1.75	6.27	5.21	0.51
Molino	18	PF 2	18.98	251.06	253.28	252.42	253.45	0.002778	1.80	10.63	6.36	0.43
Molino	18	PF 3	39.00	251.06	253.70	253.15	254.04	0.004740	2.71	21.06	57.70	0.58
Molino	17	PF 1	5.99	251.06	252.57	251.71	252.61	0.000866	0.86	7.18	6.56	0.24
Molino	17	PF 2	12.98	251.06	253.33	252.11	253.39	0.000864	1.09	12.98	8.83	0.25
Molino	17	PF 3	33.00	251.06	253.80	252.90	253.92	0.001813	1.78	30.61	58.17	0.37
Molino	16	PF 1	5.99	251.05	252.55	251.70	252.58	0.000767	0.82	7.67	8.99	0.24
Molino	16	PF 2	12.98	251.05	253.33	252.09	253.36	0.000401	0.82	25.26	44.18	0.18
Molino	16	PF 3	33.00	251.05	253.83	252.97	253.86	0.000517	1.08	55.81	70.84	0.22

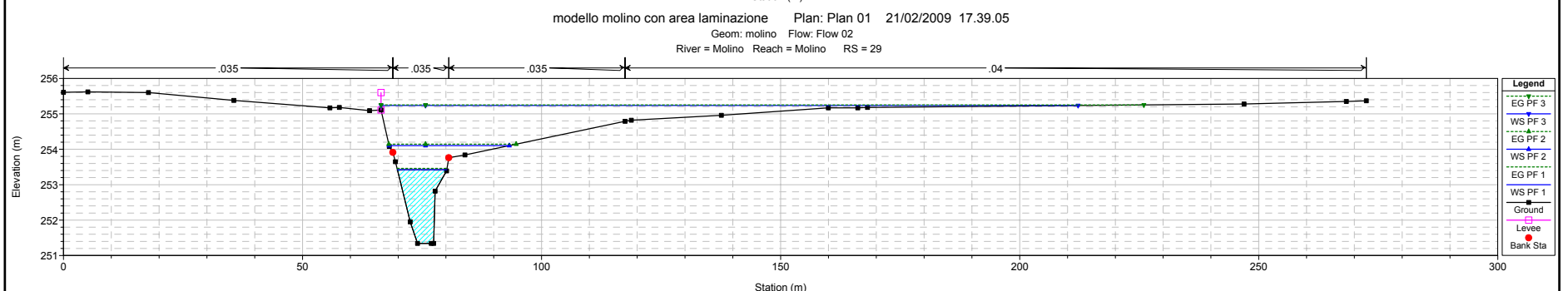
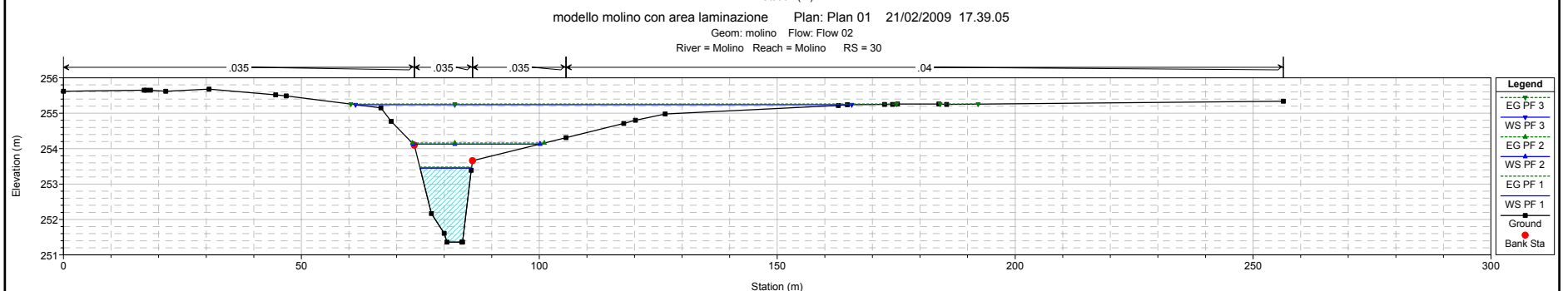
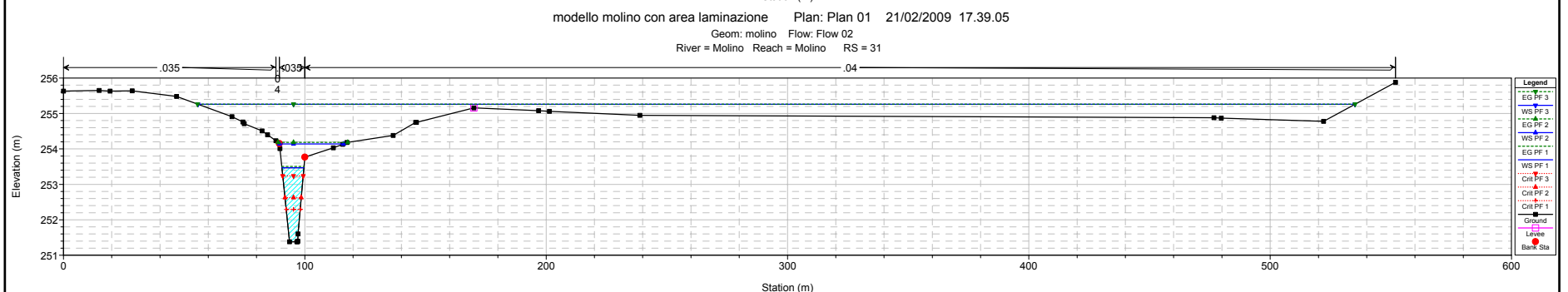
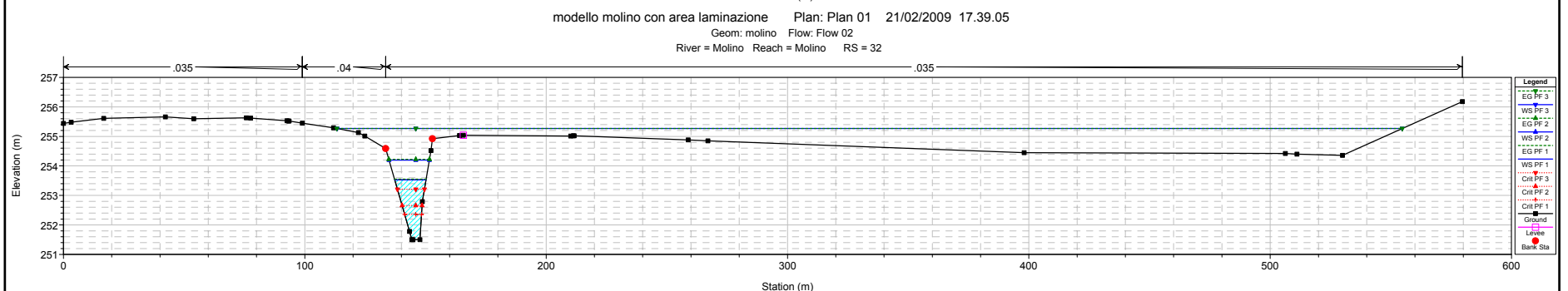
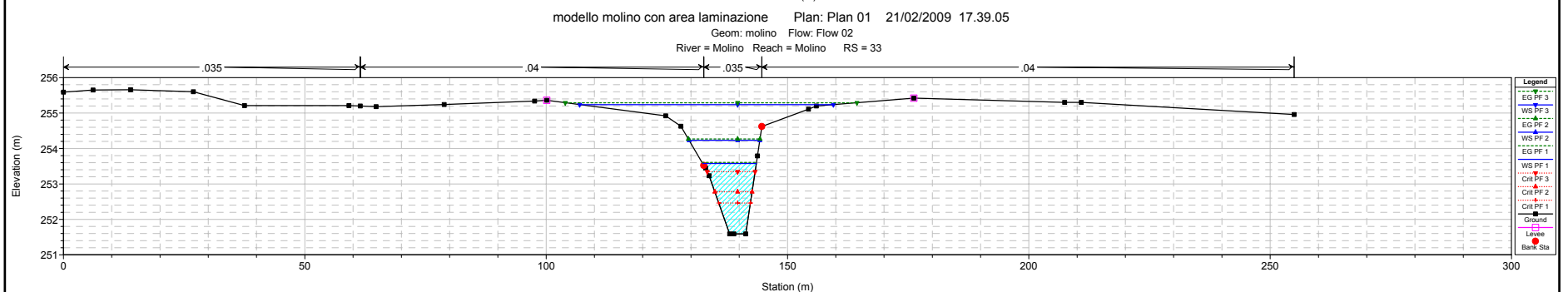
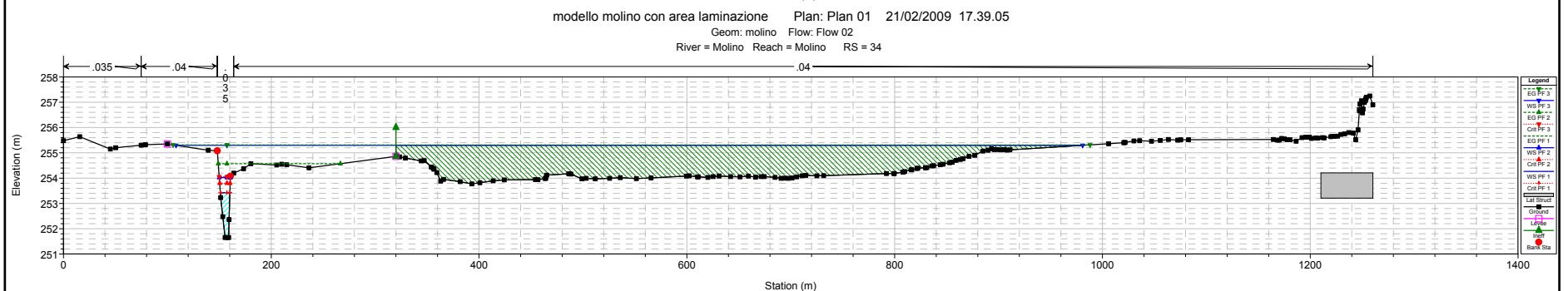
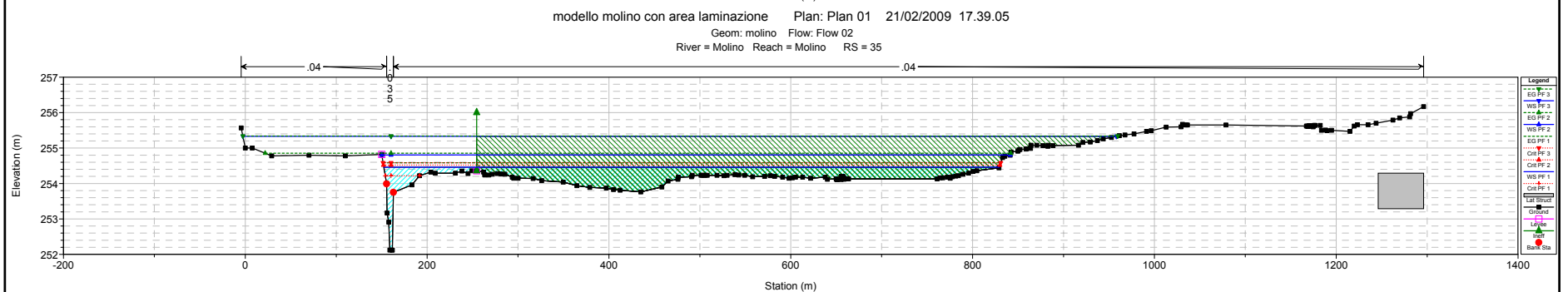
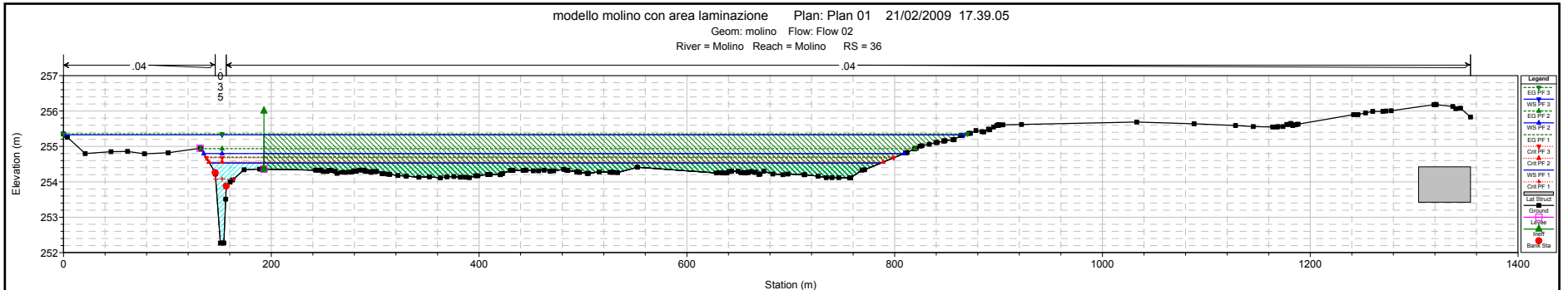
HEC-RAS Plan: Plan 01 River: Molino Reach: Molino (Continued)

Reach	River Sta	Profile	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
Molino	15	PF 1	5.99	251.04	252.44	251.85	252.51	0.001694	1.19	5.04	5.07	0.38
Molino	15	PF 2	12.98	251.04	253.23	252.30	253.31	0.001123	1.30	11.22	15.49	0.33
Molino	15	PF 3	33.00	251.04	253.83	253.28	253.84	0.000141	0.57	118.60	187.90	0.12
Molino	14.4	PF 1	5.99	251.04	252.21	251.97	252.45	0.001933	2.15	2.79	2.87	0.70
Molino	14.4	PF 2	12.98	251.04	252.89	252.54	253.25	0.002002	2.64	4.92	3.40	0.70
Molino	14.4	PF 3	33.00	251.04	253.80	253.51	253.83	0.000266	1.19	65.08	98.47	0.30
Molino	14.3	PF 1	5.99	251.04	252.16	251.98	252.42	0.002219	2.26	2.65	2.83	0.75
Molino	14.3	PF 2	12.98	251.04	252.85	252.54	253.22	0.002186	2.73	4.76	3.36	0.73
Molino	14.3	PF 3	33.00	251.04	253.80	253.51	253.83	0.000270	1.20	64.77	98.47	0.30
Molino	14.25		Bridge									
Molino	13.2	PF 1	4.99	251.01	251.78	251.53	251.90	0.000721	1.51	3.32	4.76	0.55
Molino	13.2	PF 2	11.98	251.01	252.30	251.93	252.54	0.000752	2.16	5.54	5.06	0.61
Molino	13.2	PF 3	32.00	251.01	253.78	252.79	253.79	0.000052	0.61	119.15	122.05	0.13
Molino	13.1	PF 1	4.99	251.00	251.60	251.60	251.87	0.003381	2.32	2.15	3.88	1.00
Molino	13.1	PF 2	11.98	251.00	252.05	252.05	252.51	0.003206	3.00	3.99	4.33	1.00
Molino	13.1	PF 3	32.00	251.00	252.92	252.92	253.71	0.003136	3.92	8.16	5.18	1.00
Molino	12	PF 1	4.99	250.14	250.80	250.80	251.07	0.003424	2.34	2.14	3.82	1.00
Molino	12	PF 2	11.98	250.14	251.25	251.25	251.72	0.003281	3.03	3.95	4.22	1.00
Molino	12	PF 3	32.00	250.14	252.14	252.14	252.95	0.003283	3.99	8.02	4.94	1.00
Molino	11	PF 1	4.99	249.11	249.70	249.70	249.96	0.003210	2.26	2.21	4.17	0.99
Molino	11	PF 2	11.98	249.11	250.24	250.13	250.58	0.002093	2.56	4.68	4.95	0.84
Molino	11	PF 3	32.00	249.11	251.18	250.95	251.71	0.001701	3.24	10.11	6.98	0.80
Molino	10.4	PF 1	4.99	249.01	249.74	249.50	249.83	0.000846	1.34	3.73	5.56	0.52
Molino	10.4	PF 2	11.98	249.01	250.38	249.85	250.51	0.000639	1.61	7.43	6.09	0.47
Molino	10.4	PF 3	32.00	249.01	251.35	250.58	251.62	0.000709	2.32	13.87	7.00	0.52
Molino	10.3	PF 1	4.99	248.99	249.74	249.47	249.83	0.000775	1.30	3.84	5.57	0.50
Molino	10.3	PF 2	11.98	248.99	250.38	249.83	250.50	0.000610	1.59	7.55	6.10	0.46
Molino	10.3	PF 3	32.00	248.99	251.35	250.55	251.62	0.000686	2.29	14.02	7.02	0.51
Molino	10.25		Bridge									
Molino	9.2	PF 1	4.99	248.79	249.76	249.29	249.81	0.000342	0.99	5.05	6.23	0.35
Molino	9.2	PF 2	11.98	248.79	250.40	249.66	250.49	0.000326	1.27	9.43	7.21	0.35
Molino	9.2	PF 3	32.00	248.79	251.29	250.36	251.49	0.000465	1.98	16.24	8.11	0.44
Molino	9.1	PF 1	4.99	248.78	249.76	249.28	249.81	0.000330	0.98	5.11	6.25	0.34
Molino	9.1	PF 2	11.98	248.78	250.40	249.65	250.48	0.000319	1.26	9.50	7.23	0.35
Molino	9.1	PF 3	32.00	248.78	251.29	250.35	251.48	0.000458	1.97	16.31	8.10	0.44
Molino	8	PF 1	4.99	248.71	249.72	249.31	249.80	0.000564	1.24	4.02	4.77	0.43
Molino	8	PF 2	11.98	248.71	250.33	249.74	250.47	0.000568	1.66	7.74	6.99	0.45
Molino	8	PF 3	32.00	248.71	251.08	250.55	251.45	0.000992	2.76	13.12	7.57	0.62
Molino	7	PF 1	4.99	248.66	249.70	249.25	249.77	0.002662	1.18	4.23	4.82	0.40
Molino	7	PF 2	11.98	248.66	250.31	249.68	250.44	0.003146	1.61	7.42	5.47	0.44
Molino	7	PF 3	32.00	248.66	251.32	250.48	251.33	0.000203	0.52	85.62	79.96	0.11
Molino	6	PF 1	4.99	248.35	249.53	249.01	249.59	0.002202	1.07	4.65	5.32	0.37
Molino	6	PF 2	11.98	248.35	250.11	249.45	250.23	0.002718	1.49	8.04	6.07	0.41
Molino	6	PF 3	32.00	248.35	251.30	250.20	251.32	0.000393	0.75	63.99	99.75	0.15
Molino	5.6	PF 1	4.99	248.33	249.38		249.46	0.003106	1.26	3.95	4.31	0.42
Molino	5.6	PF 2	11.98	248.33	249.83		250.03	0.005621	2.00	5.98	4.78	0.57
Molino	5.6	PF 3	32.00	248.33	250.81		251.22	0.007359	2.87	11.16	5.82	0.66
Molino	5.5	PF 1	4.99	248.32	249.36	248.92	249.45	0.003173	1.27	3.92	4.30	0.43
Molino	5.5	PF 2	11.98	248.32	249.79	249.38	250.00	0.006013	2.05	5.83	4.75	0.59
Molino	5.5	PF 3	32.00	248.32	250.74	250.25	251.18	0.007967	2.95	10.84	5.76	0.69
Molino	5.45		Bridge									
Molino	5.4	PF 1	4.99	248.32	249.34		249.43	0.003428	1.31	3.82	4.28	0.44
Molino	5.4	PF 2	11.98	248.32	249.72		249.96	0.006994	2.17	5.52	4.68	0.64
Molino	5.4	PF 3	32.00	248.32	250.62	250.25	251.13	0.009456	3.15	10.17	5.63	0.75
Molino	5.3	PF 1	4.99	248.32	249.32		249.41	0.003690	1.34	3.72	4.25	0.46
Molino	5.3	PF 2	11.98	248.32	249.65		249.92	0.008396	2.32	5.17	4.60	0.70
Molino	5.3	PF 3	32.00	248.32	250.25	250.25	251.04	0.017181	3.93	8.15	5.24	1.01
Molino	5	PF 1	5.99	248.31	249.31		249.35	0.001689	0.94	6.38	8.04	0.34
Molino	5	PF 2	12.98	248.31	249.70		249.80	0.002290	1.35	9.62	8.37	0.40
Molino	5	PF 3	33.00	248.31	250.26		250.53	0.004519	2.29	14.43	8.88	0.57
Molino	4	PF 1	5.99	248.30	249.23		249.31	0.003244	1.19	5.04	7.66	0.47
Molino	4	PF 2	12.98	248.30	249.61	249.24	249.73	0.003953	1.58	8.24	9.45	0.54

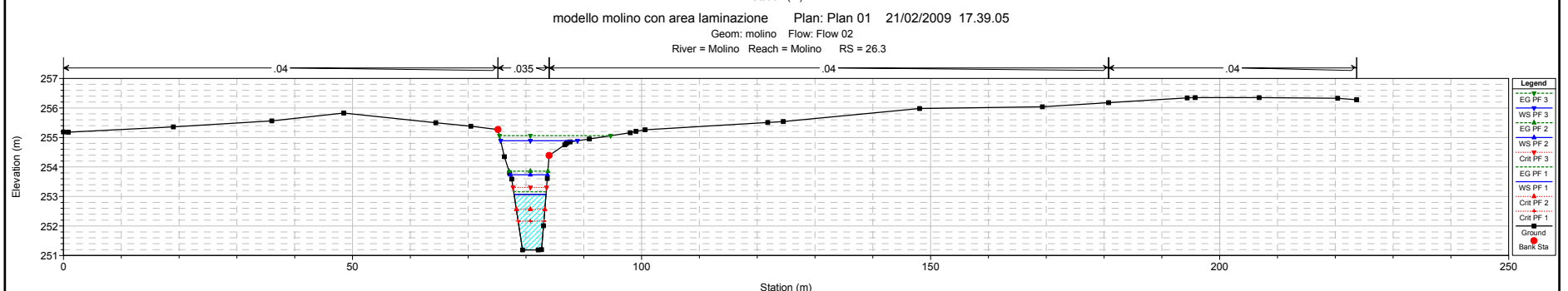
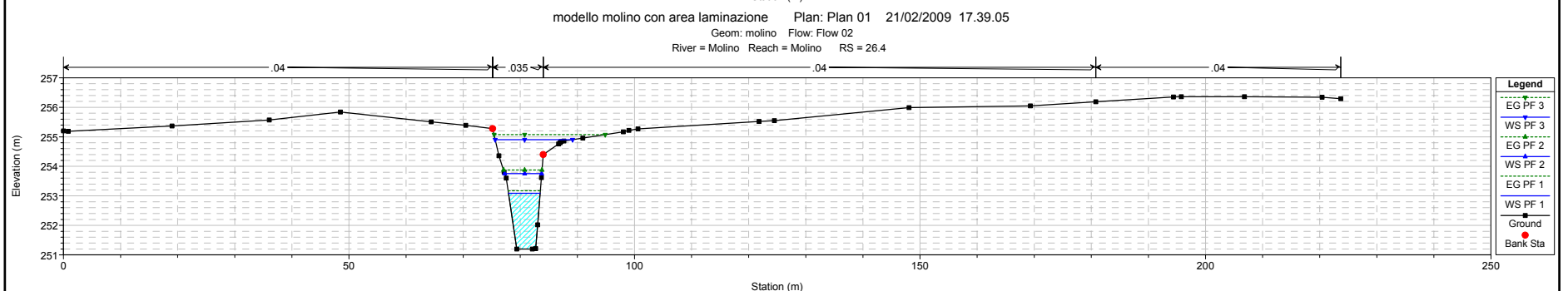
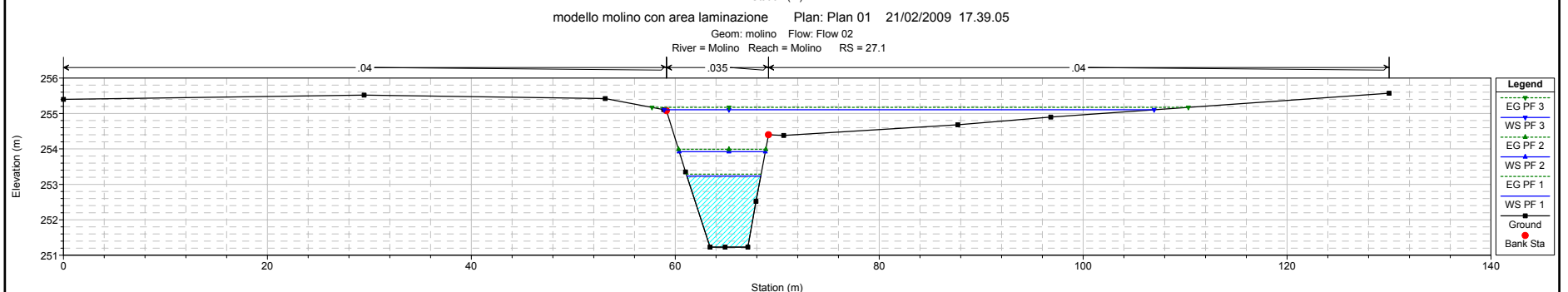
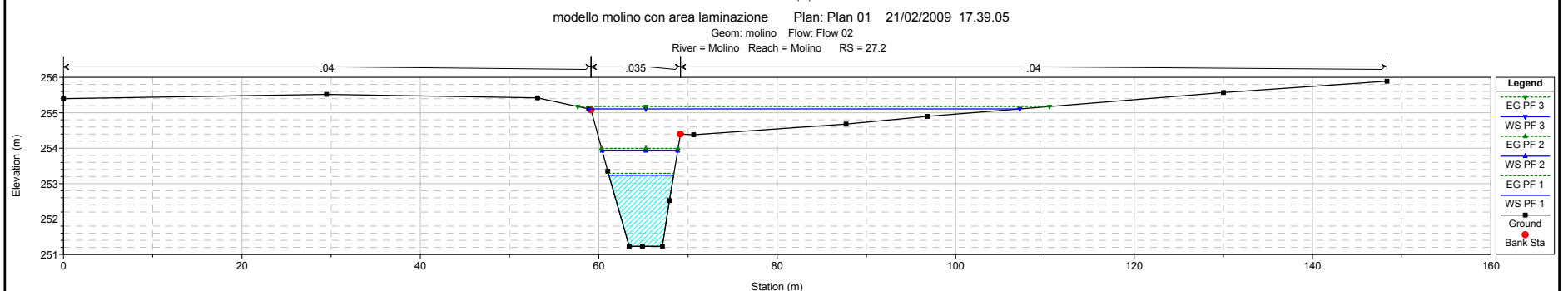
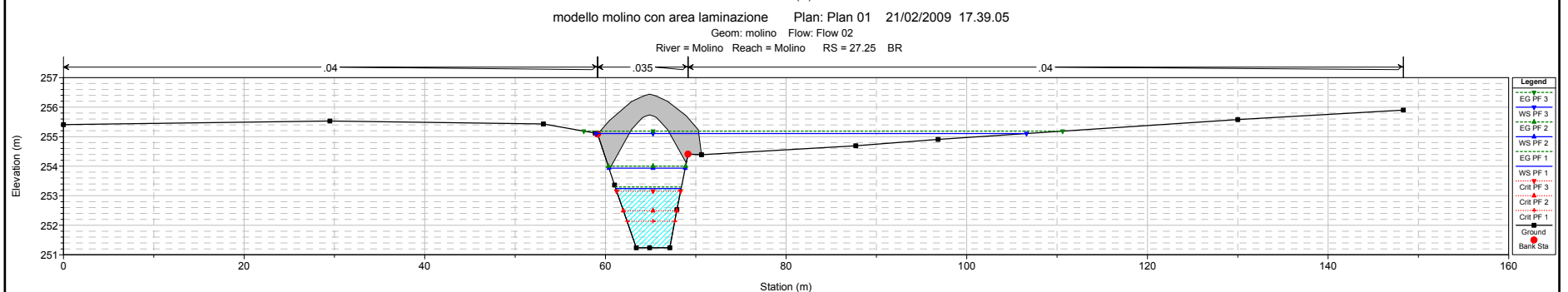
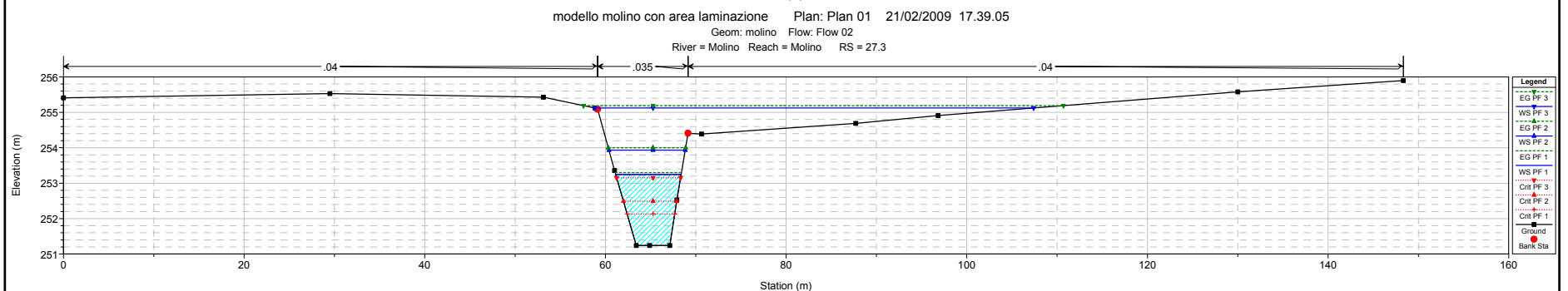
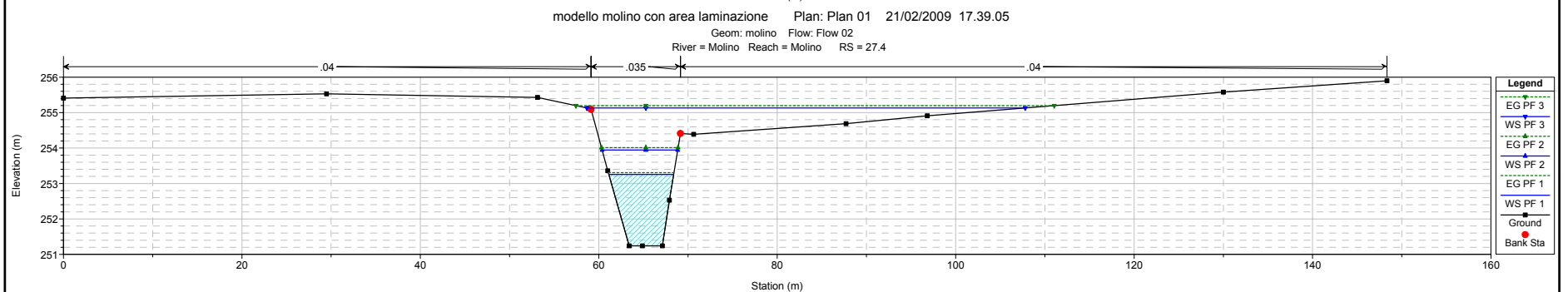
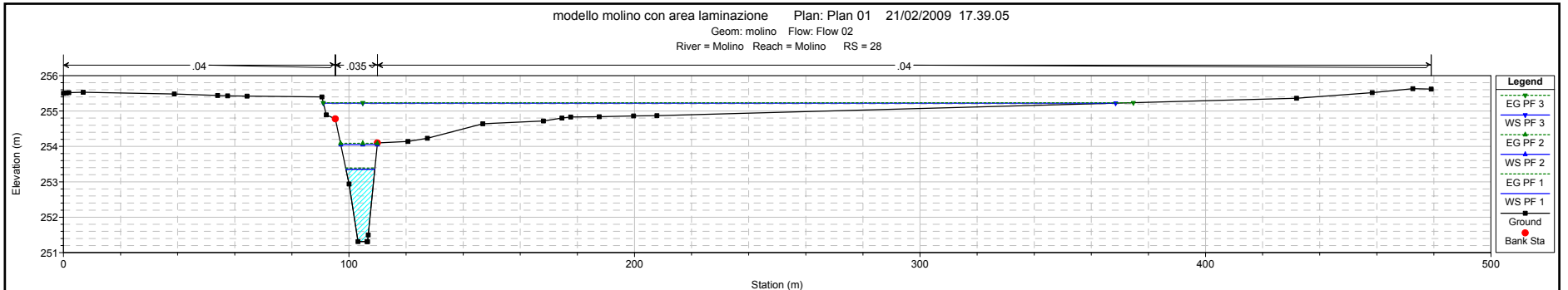
HEC-RAS Plan: Plan 01 River: Molino Reach: Molino (Continued)

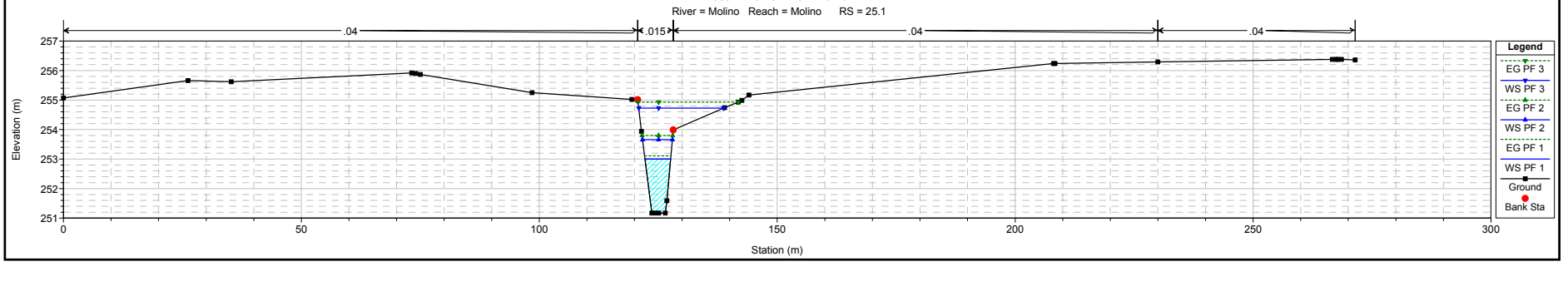
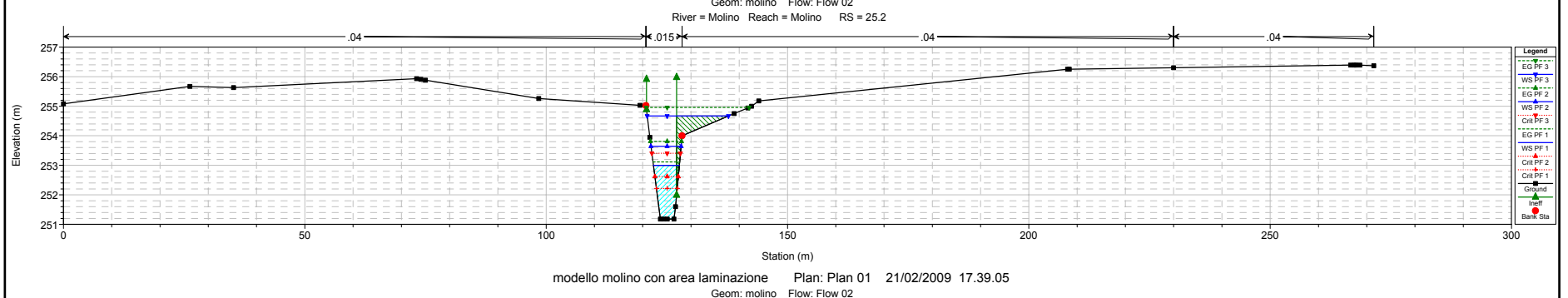
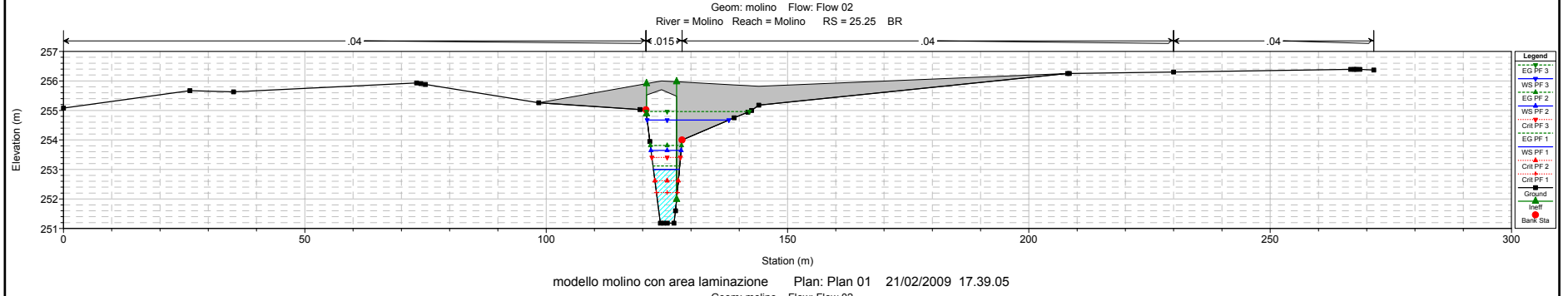
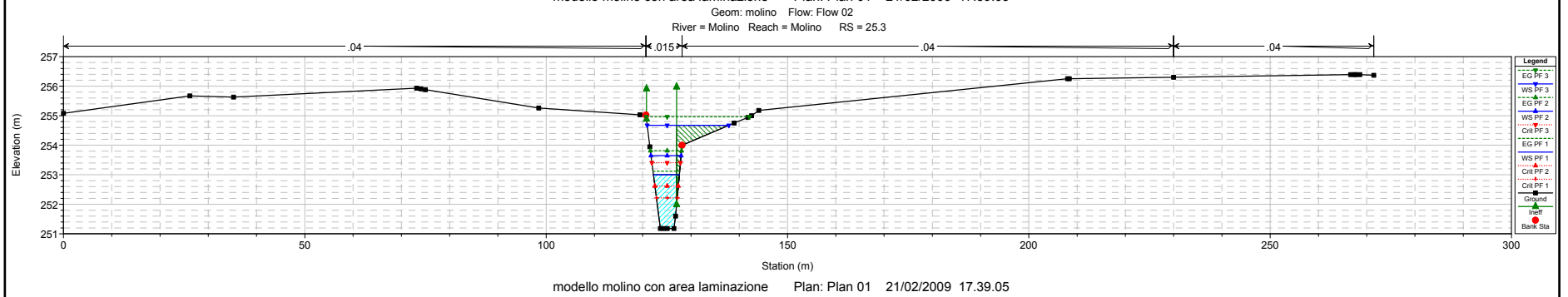
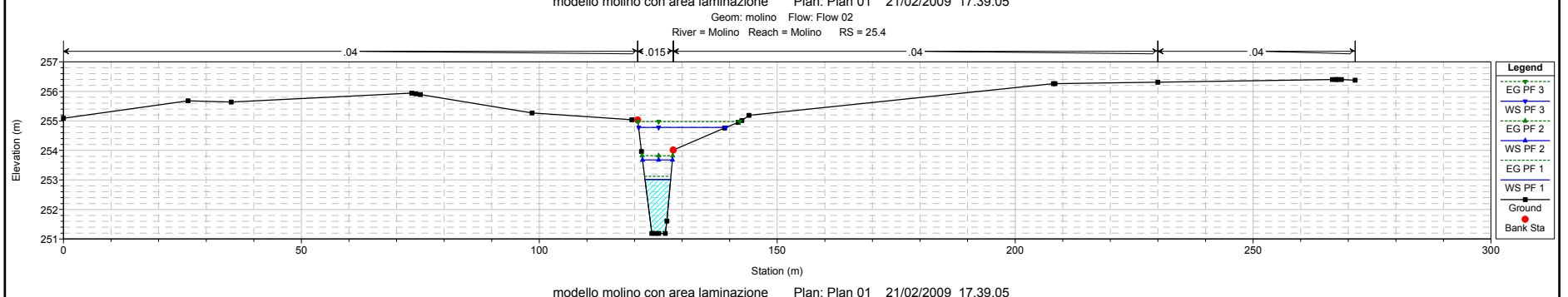
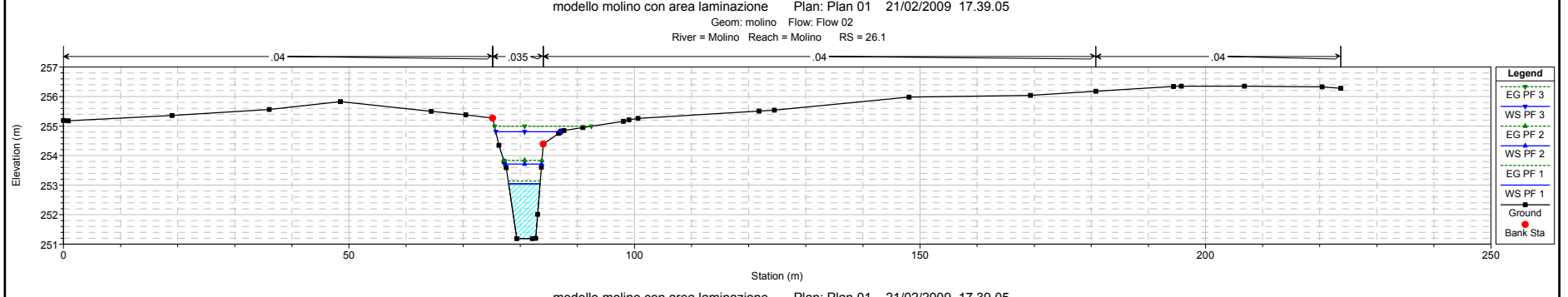
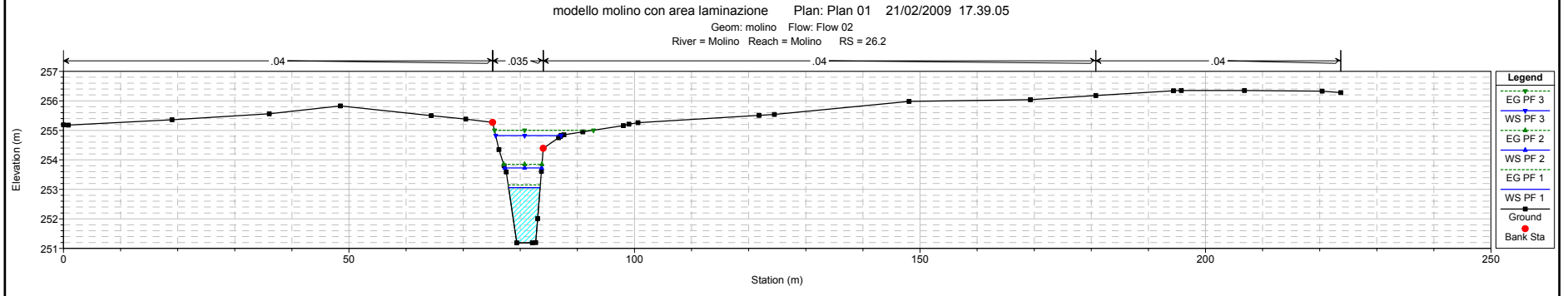
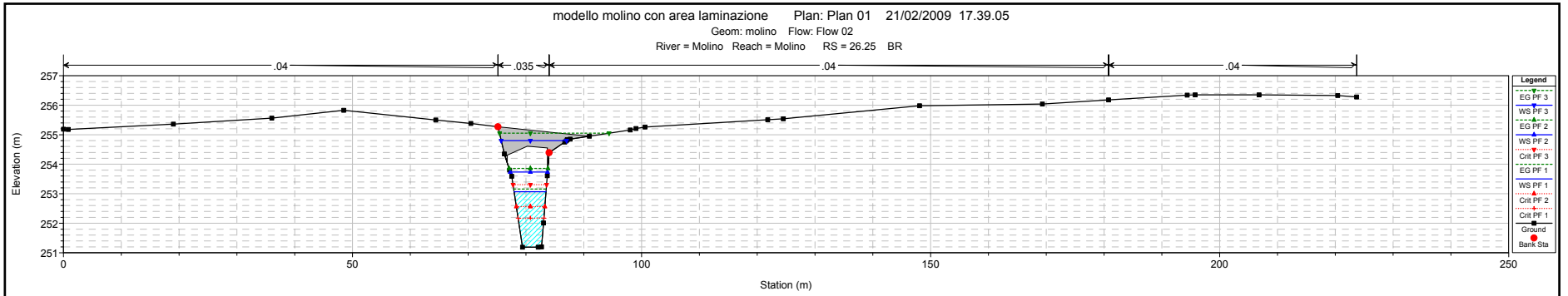
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Molino	4	PF 3	33.00	248.30	250.07		250.41	0.006982	2.58	12.78	10.29	0.74
Molino	3	PF 1	5.99	248.14	248.80	248.80	249.01	0.019264	2.02	2.97	7.36	1.02
Molino	3	PF 2	12.98	248.14	249.09	249.09	249.41	0.015962	2.51	5.26	8.55	0.98
Molino	3	PF 3	33.00	248.14	249.97		250.13	0.004044	1.96	21.84	32.41	0.54
Molino	2.4	PF 1	5.99	247.49	248.60		248.67	0.002340	1.15	5.53	9.49	0.39
Molino	2.4	PF 2	12.98	247.49	249.13		249.20	0.001818	1.23	12.92	18.17	0.36
Molino	2.4	PF 3	33.00	247.49	250.03		250.08	0.001061	1.17	37.80	43.48	0.29
Molino	2.3	PF 1	5.99	247.48	248.57	248.12	248.64	0.002494	1.17	5.36	9.28	0.40
Molino	2.3	PF 2	12.98	247.48	249.11	248.54	249.18	0.001878	1.25	12.73	18.00	0.36
Molino	2.3	PF 3	33.00	247.48	250.02	249.18	250.07	0.001063	1.17	37.77	43.45	0.29
Molino	2.25		Bridge									
Molino	2.2	PF 1	5.99	247.47	248.55		248.62	0.002612	1.20	5.25	9.02	0.41
Molino	2.2	PF 2	12.98	247.47	249.09		249.16	0.001985	1.28	12.41	17.71	0.37
Molino	2.2	PF 3	33.00	247.47	249.81		249.88	0.001758	1.44	29.81	34.19	0.37
Molino	2.1	PF 1	5.99	247.46	248.52		248.59	0.002834	1.23	5.05	8.54	0.43
Molino	2.1	PF 2	12.98	247.46	249.06	248.52	249.14	0.002070	1.30	12.17	17.49	0.38
Molino	2.1	PF 3	33.00	247.46	249.79		249.87	0.001803	1.46	29.46	33.74	0.37
Molino	1	PF 1	5.99	247.40	248.07	248.07	248.36	0.017467	2.40	2.49	4.29	1.01
Molino	1	PF 2	12.98	247.40	248.48	248.48	248.93	0.016344	2.97	4.37	4.91	1.01
Molino	1	PF 3	33.00	247.40	249.54	249.54	249.73	0.004578	2.26	24.79	65.23	0.56

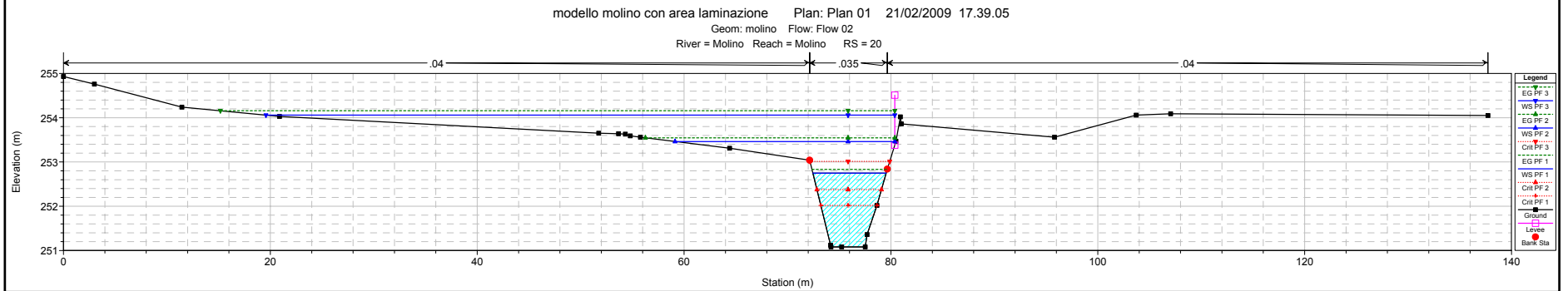
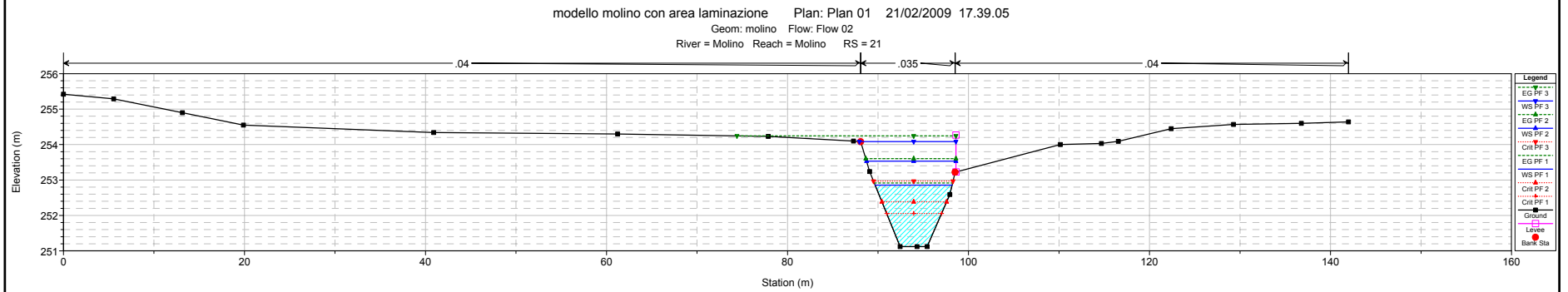
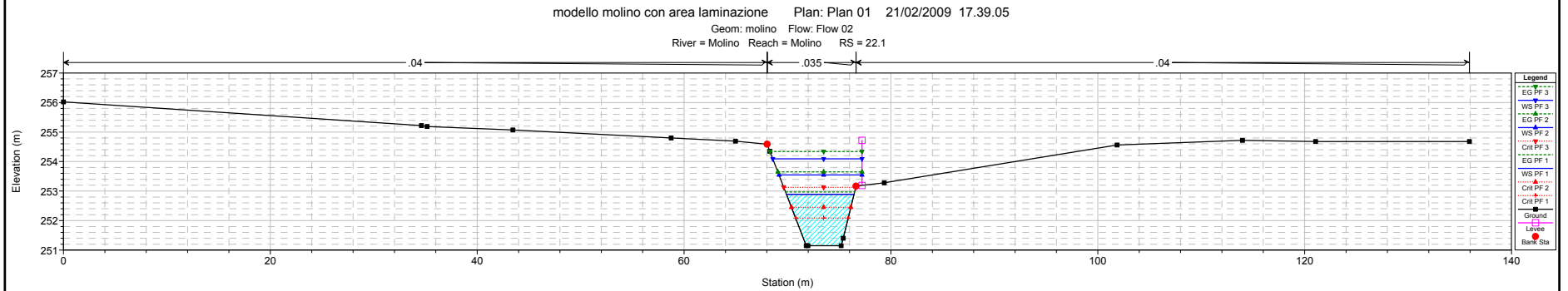
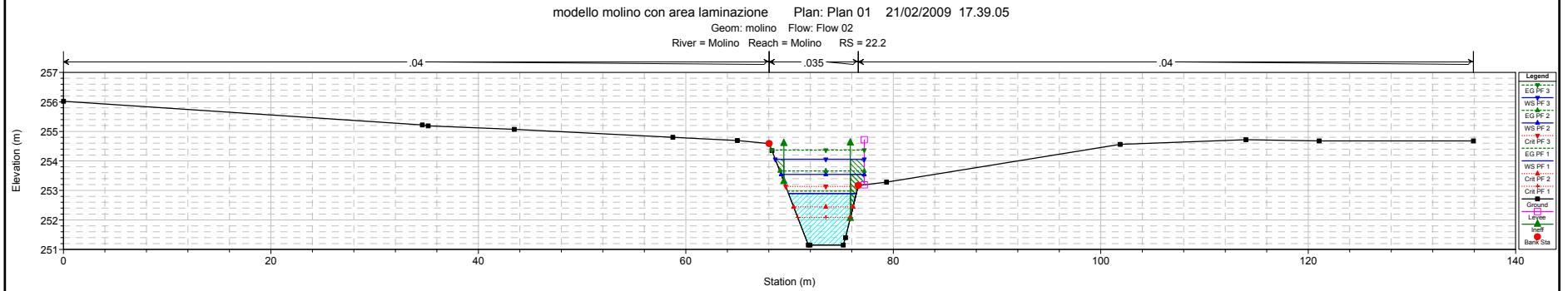
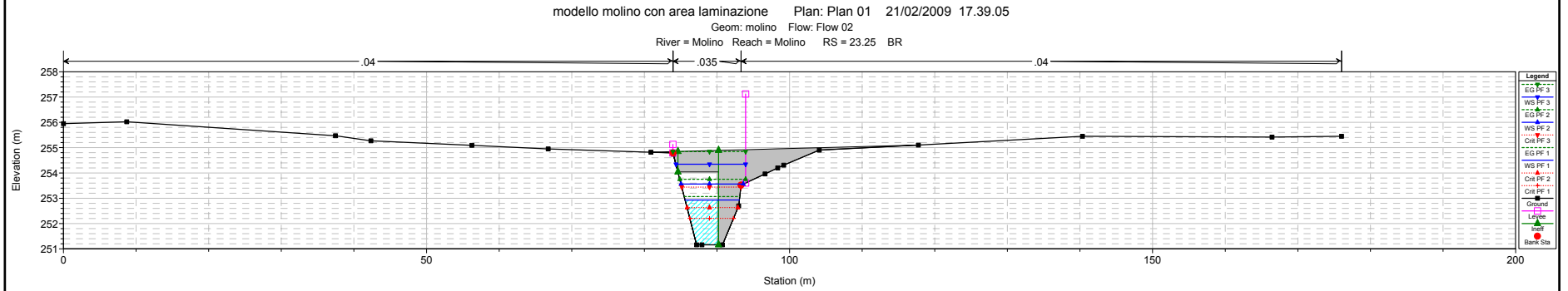
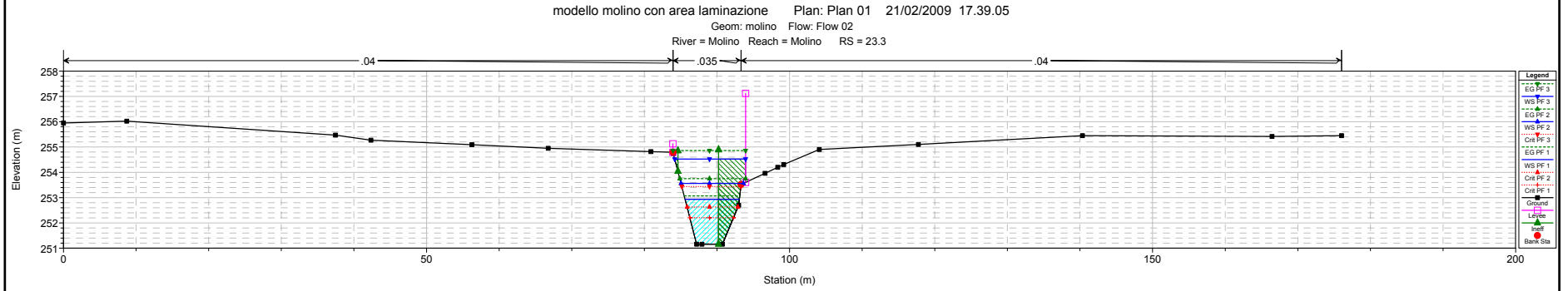
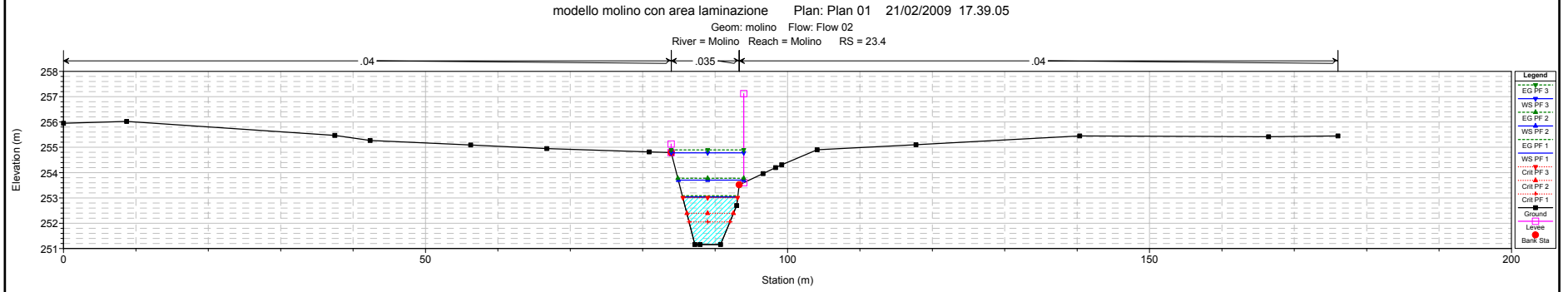
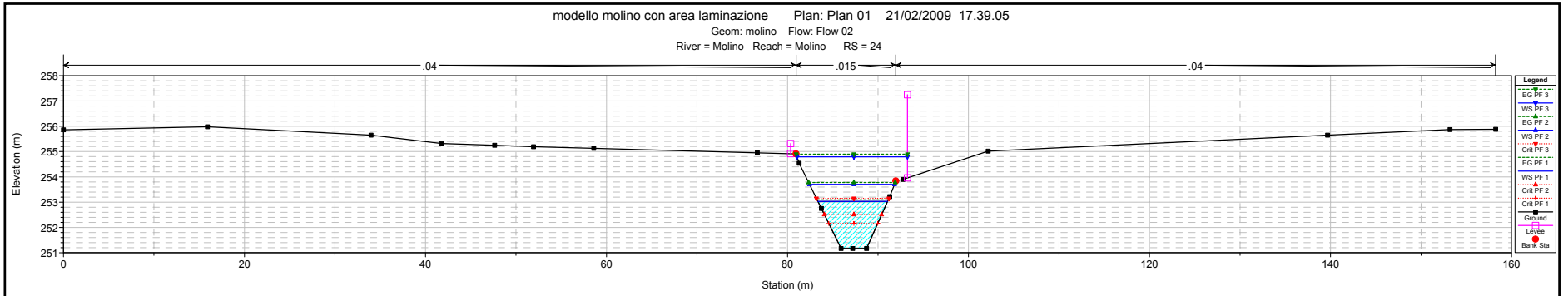


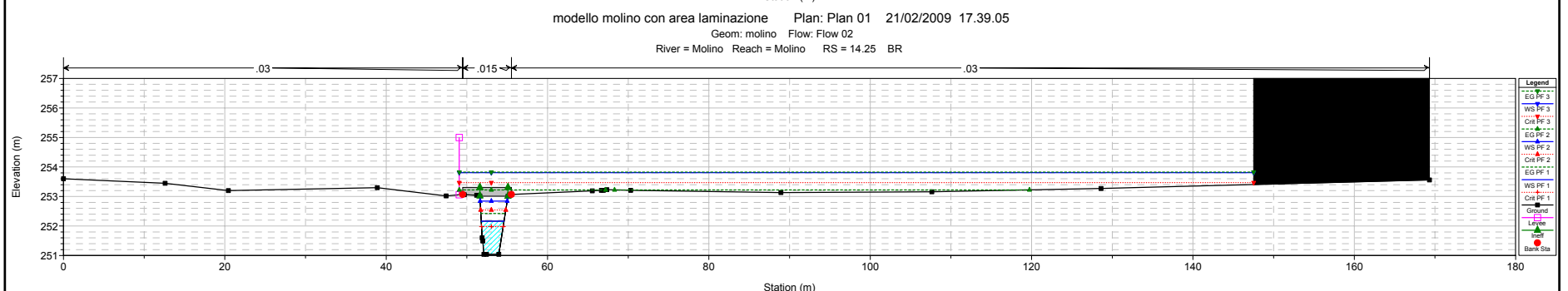
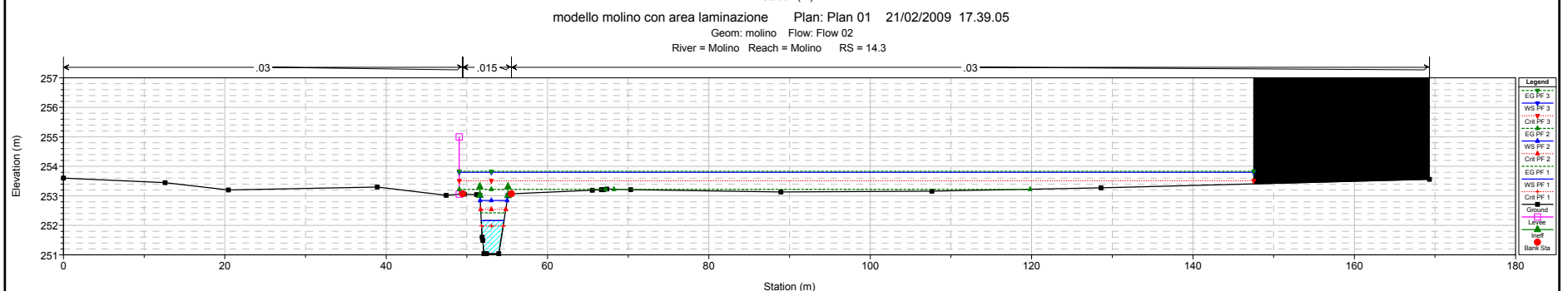
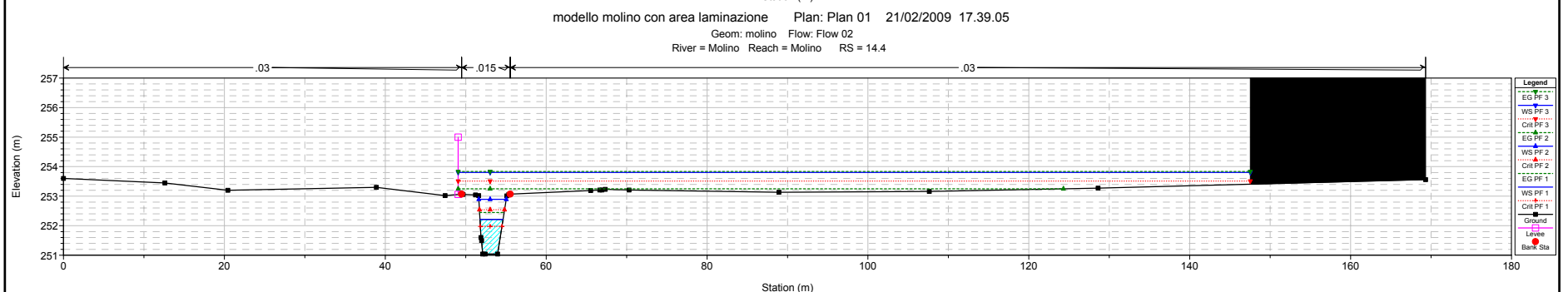
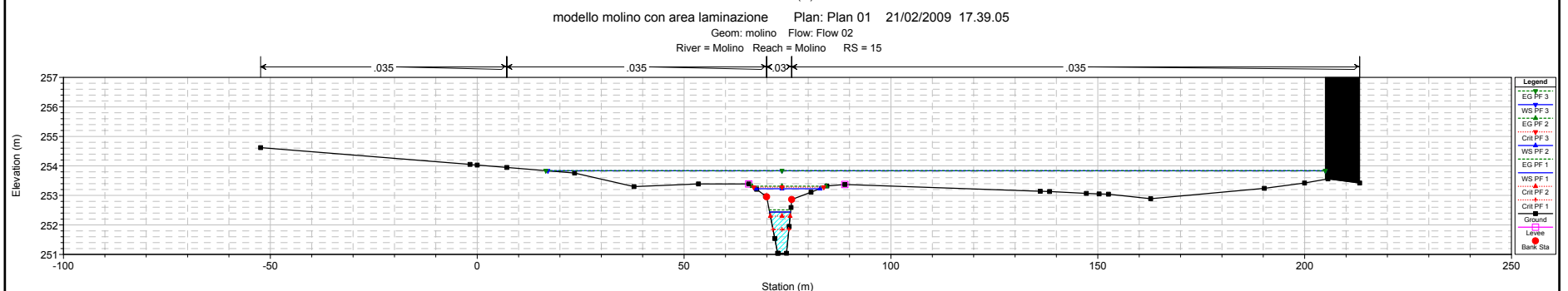
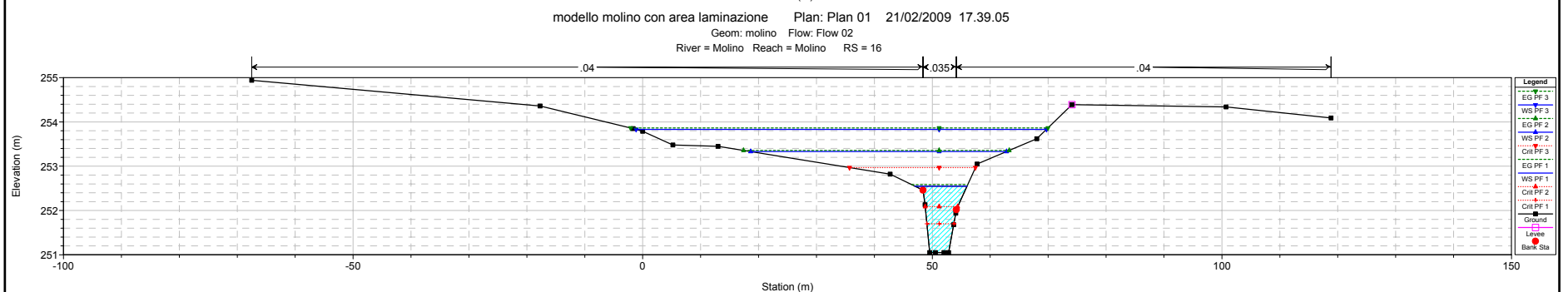
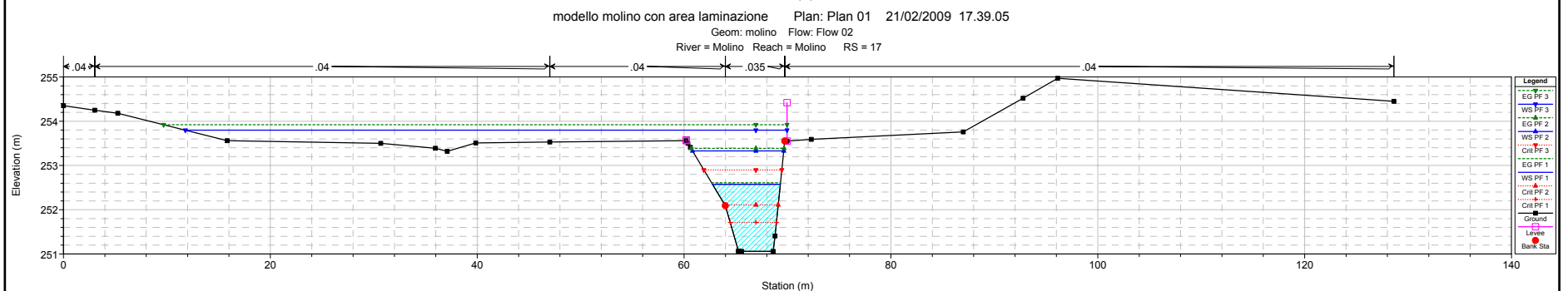
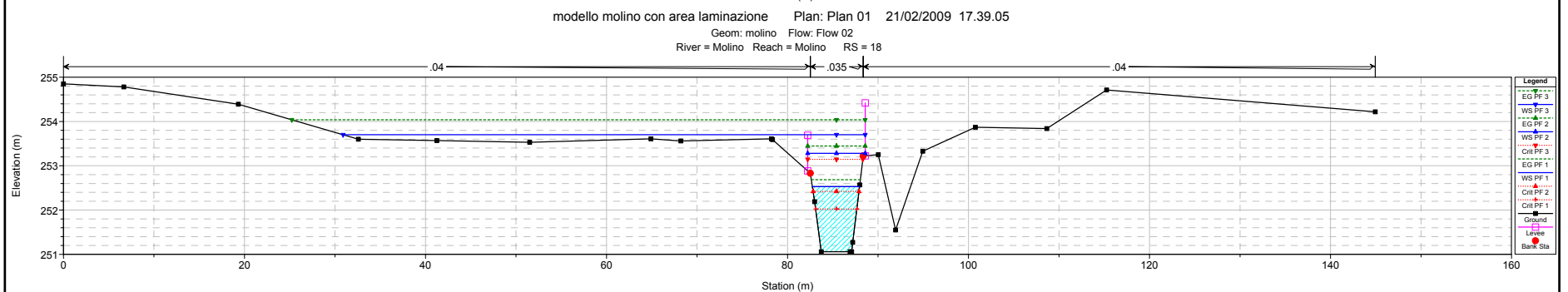
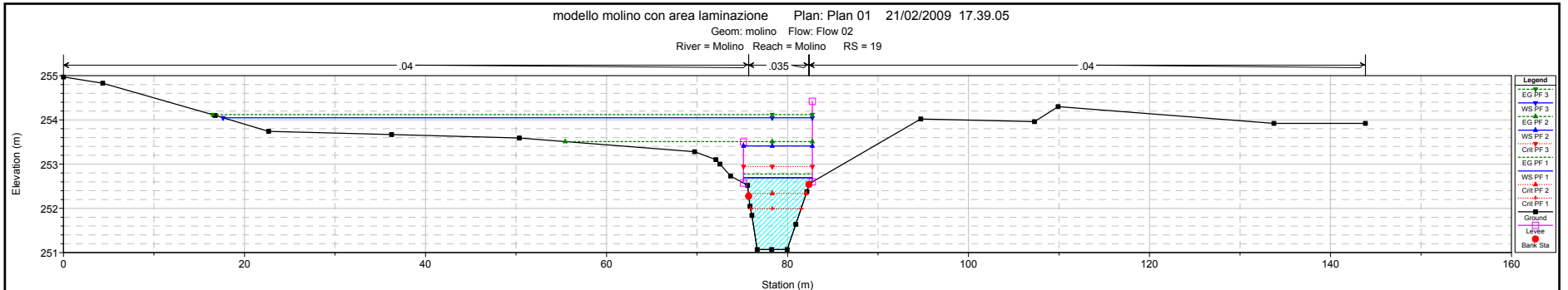


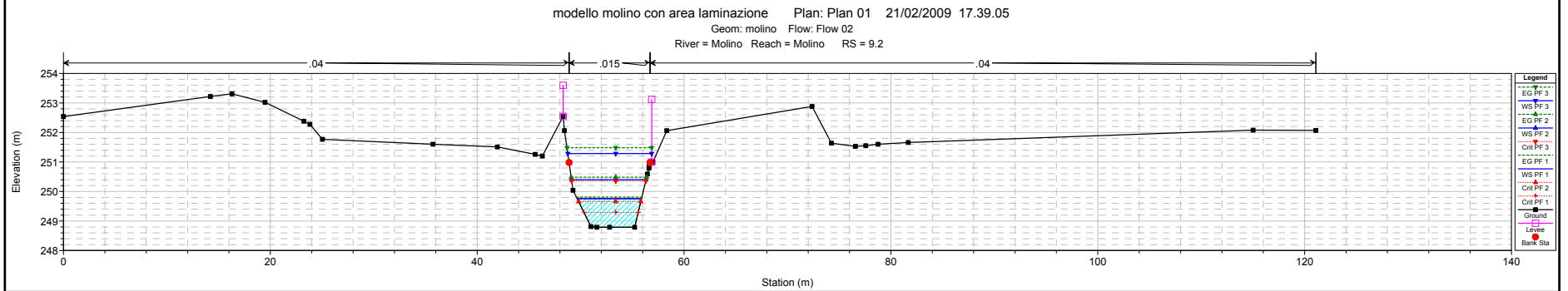
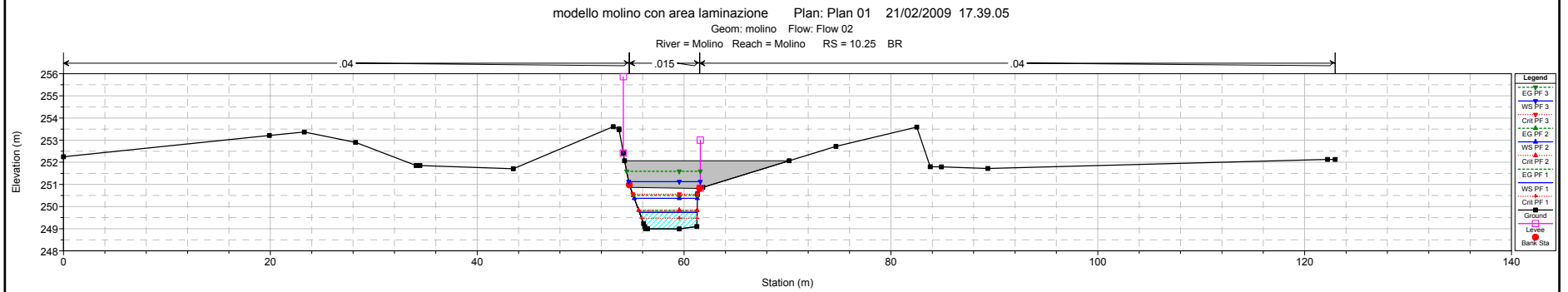
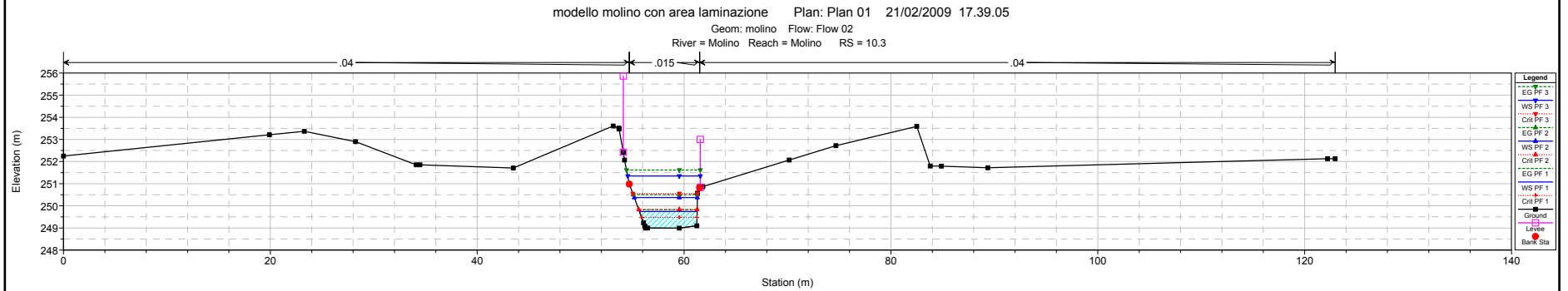
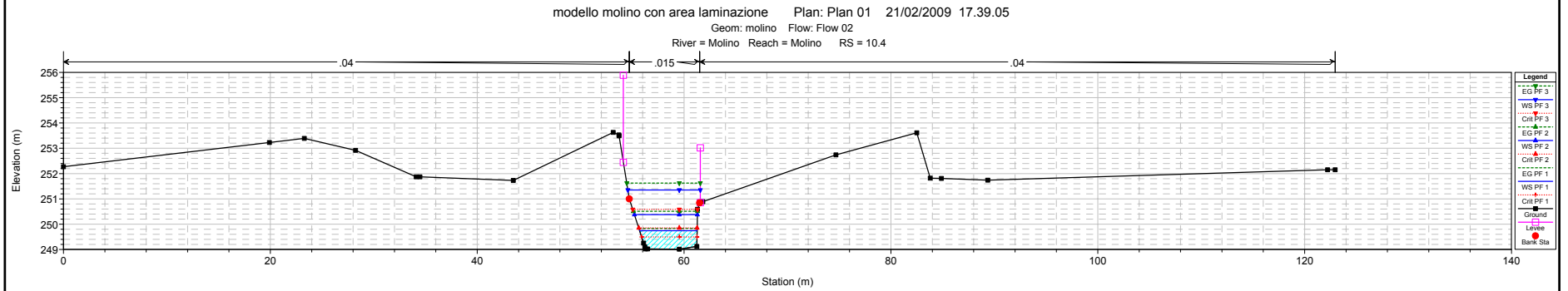
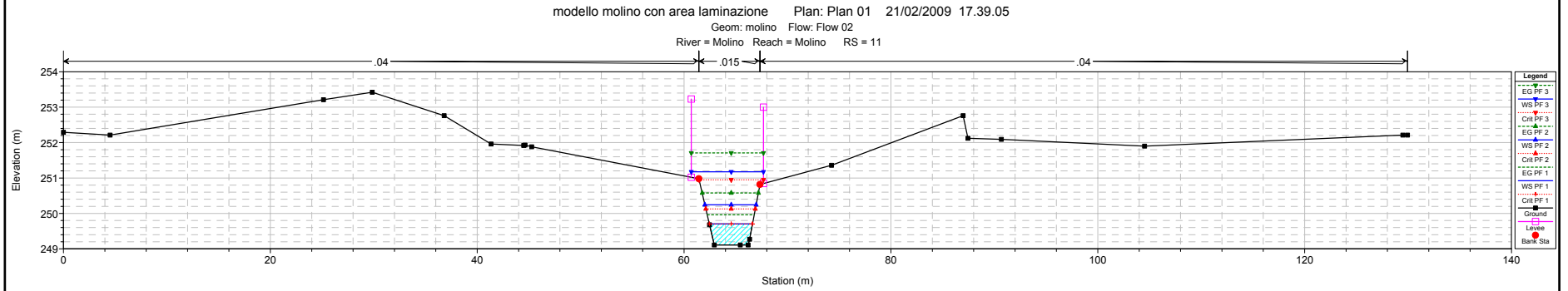
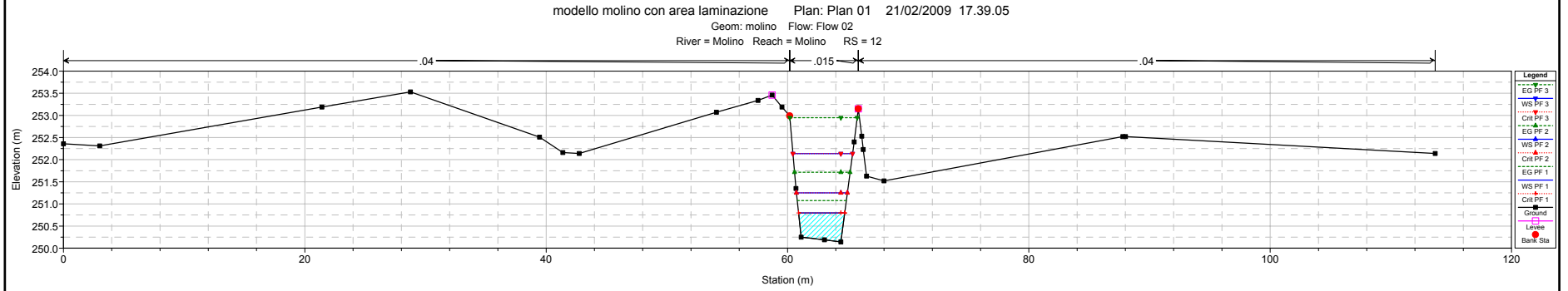
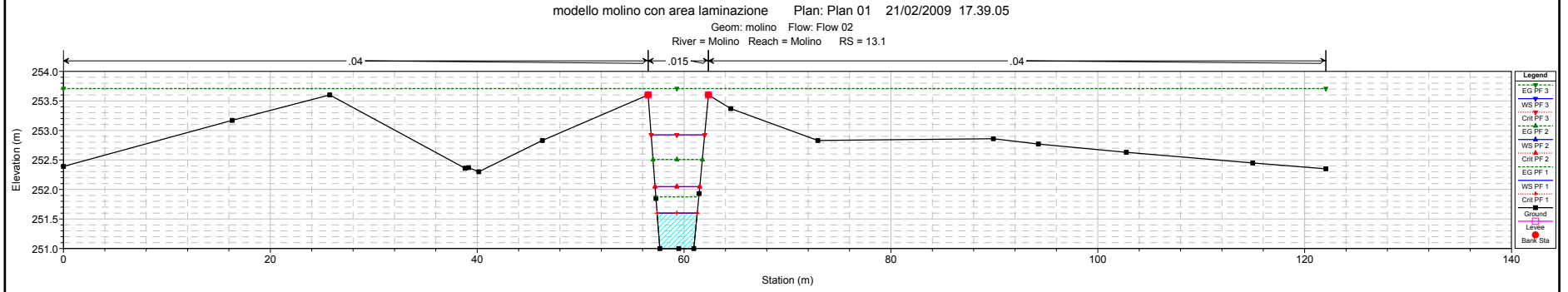
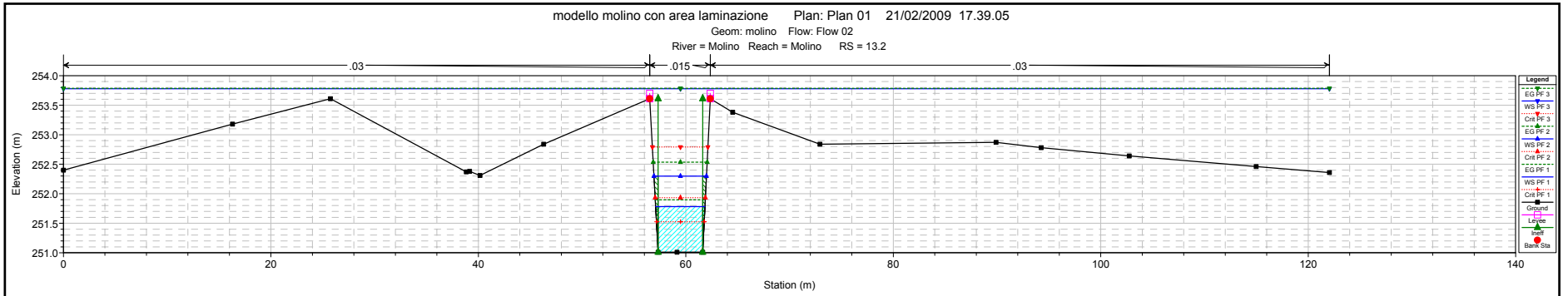


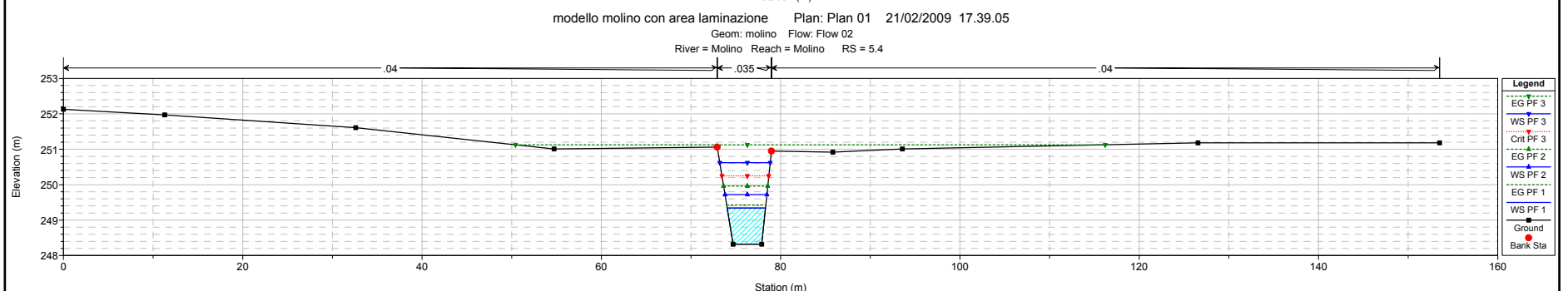
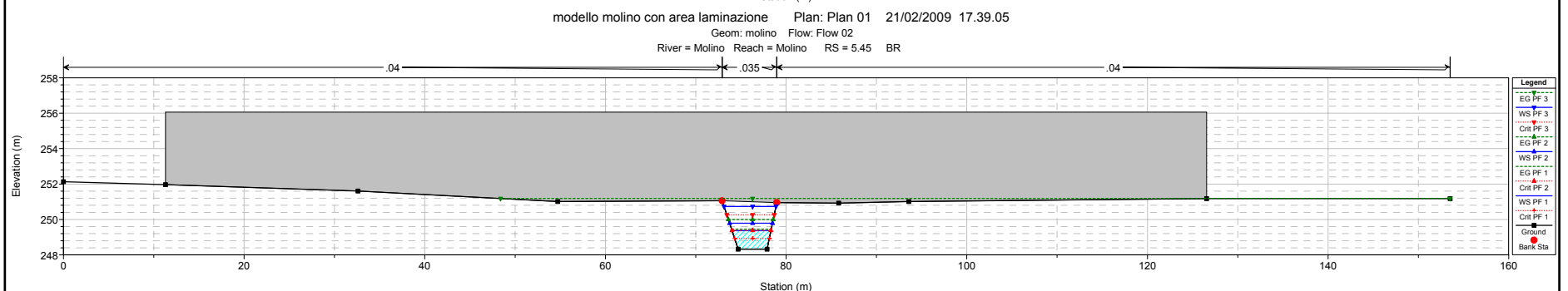
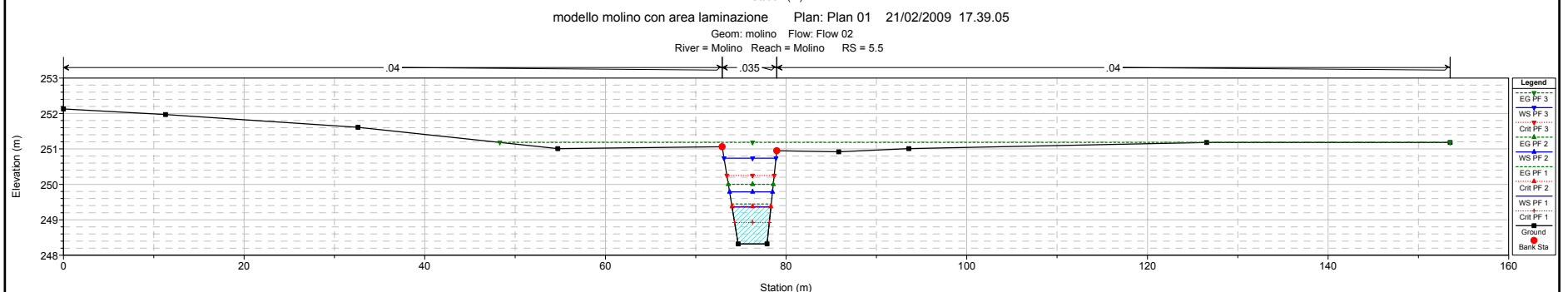
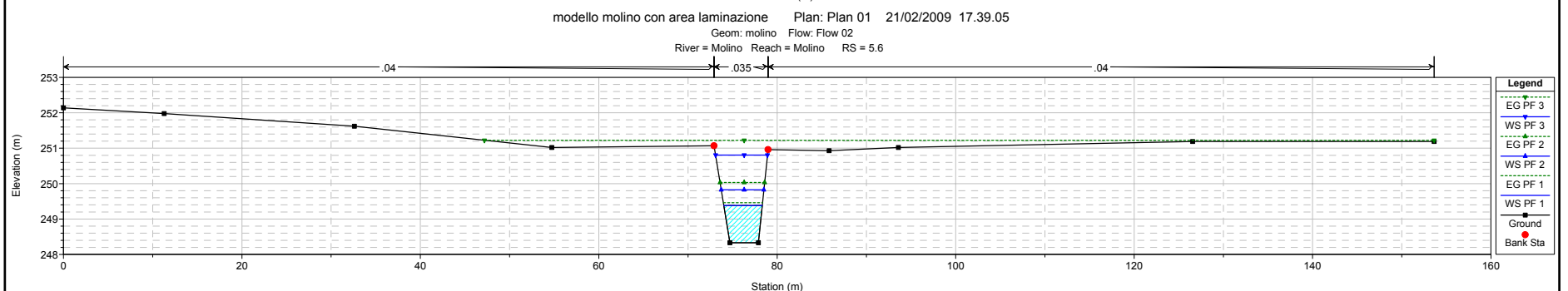
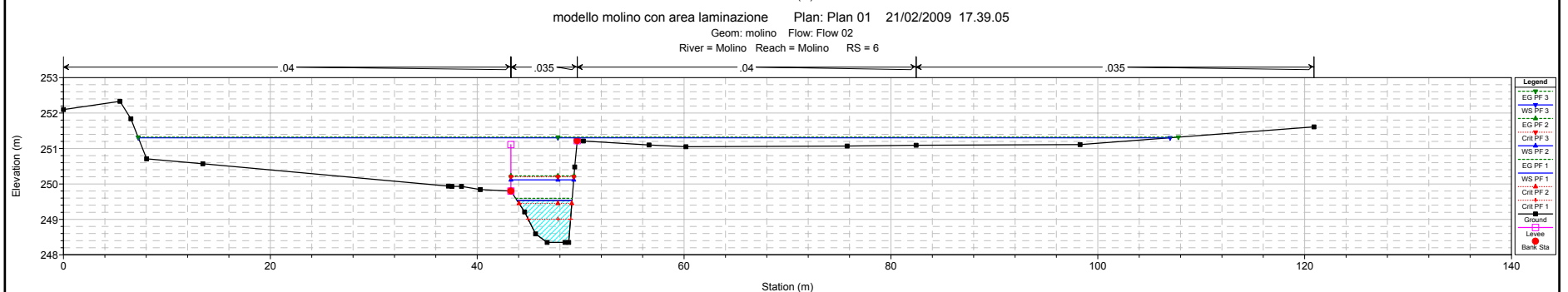
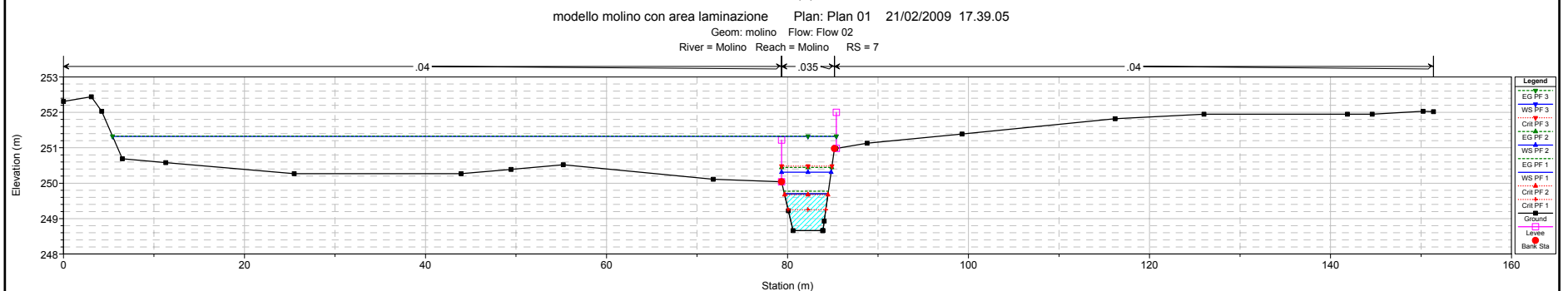
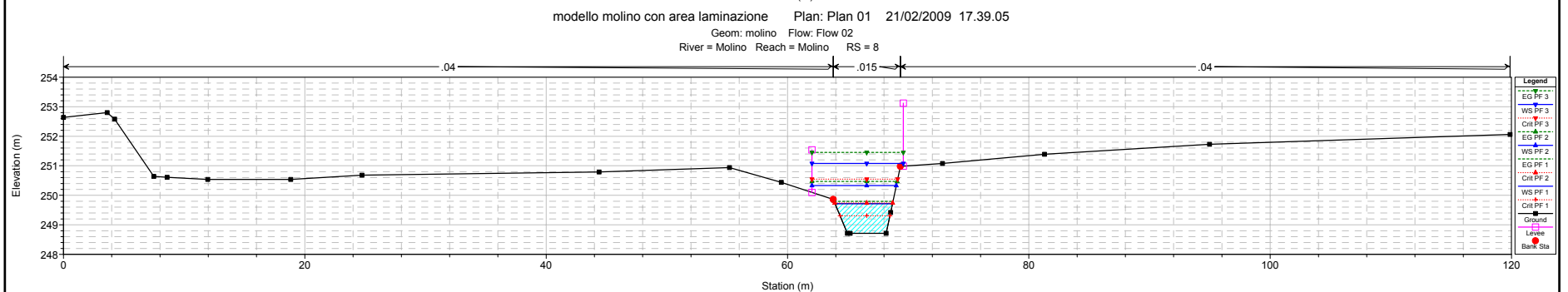
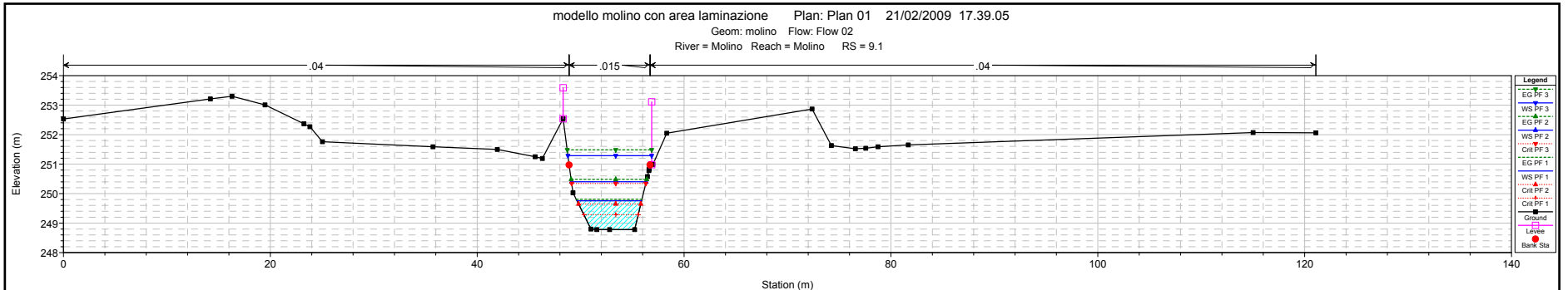


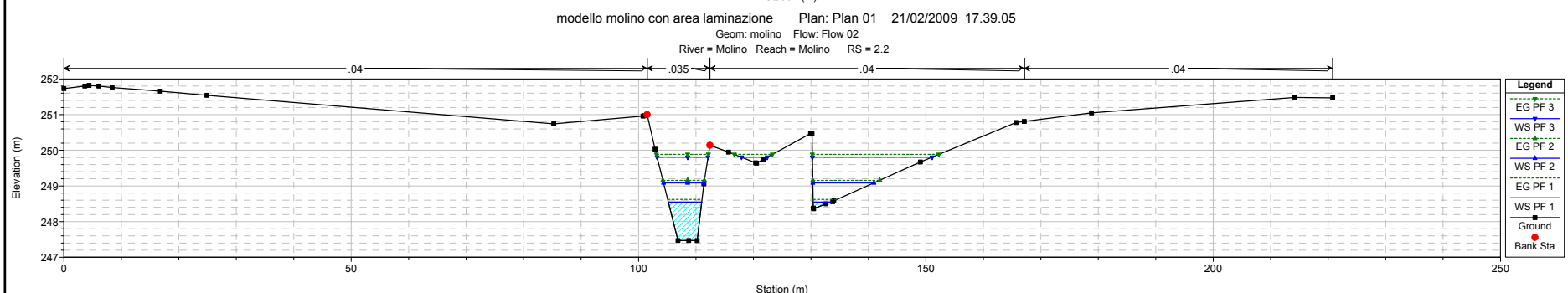
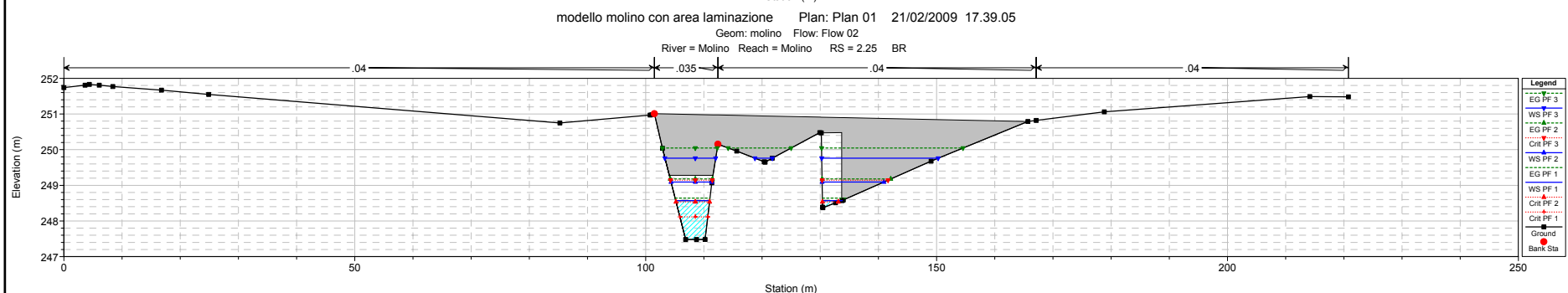
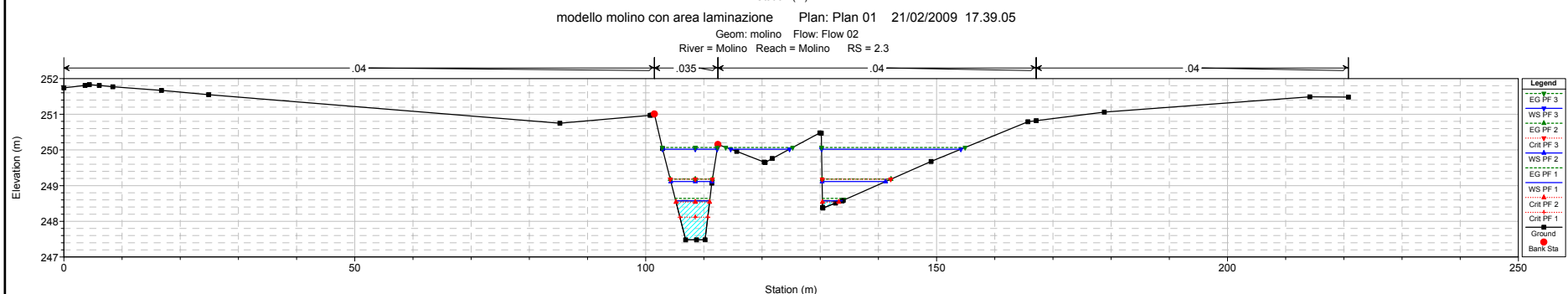
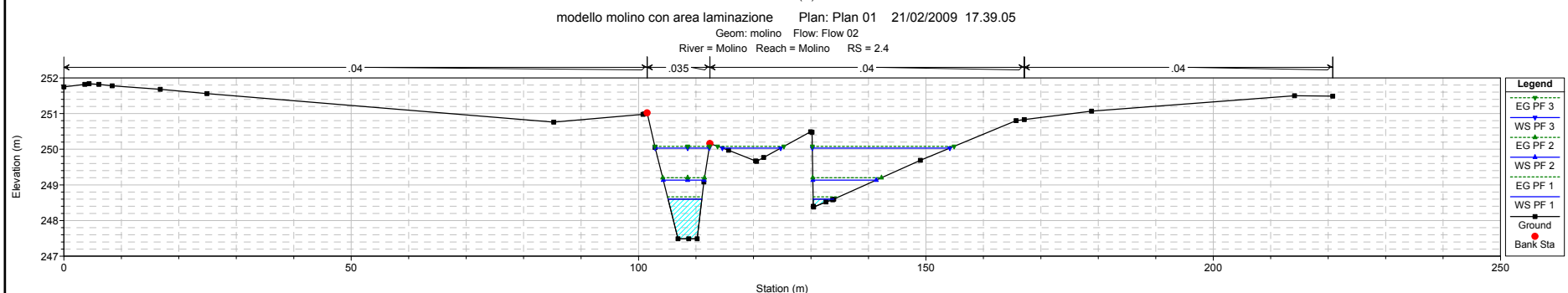
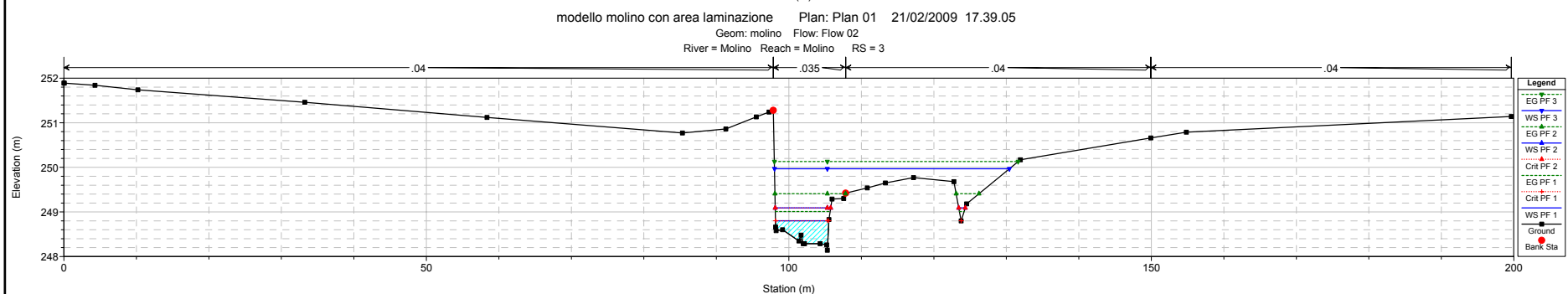
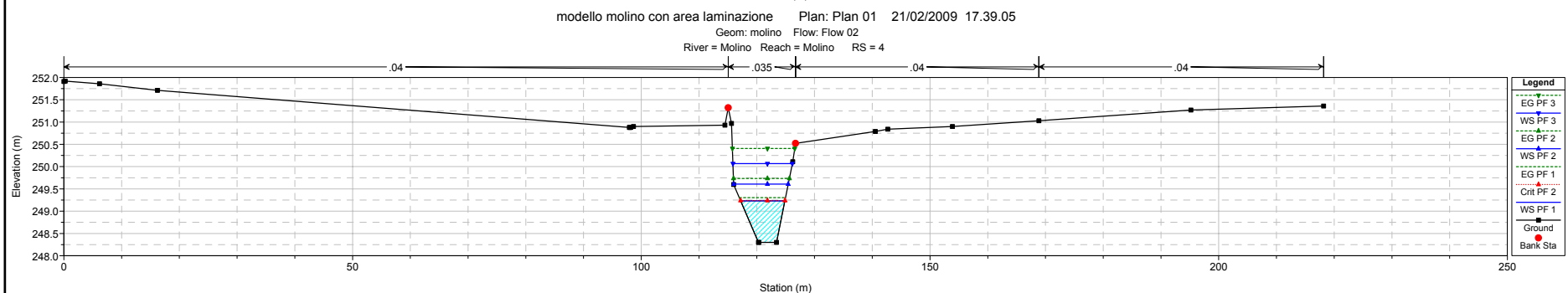
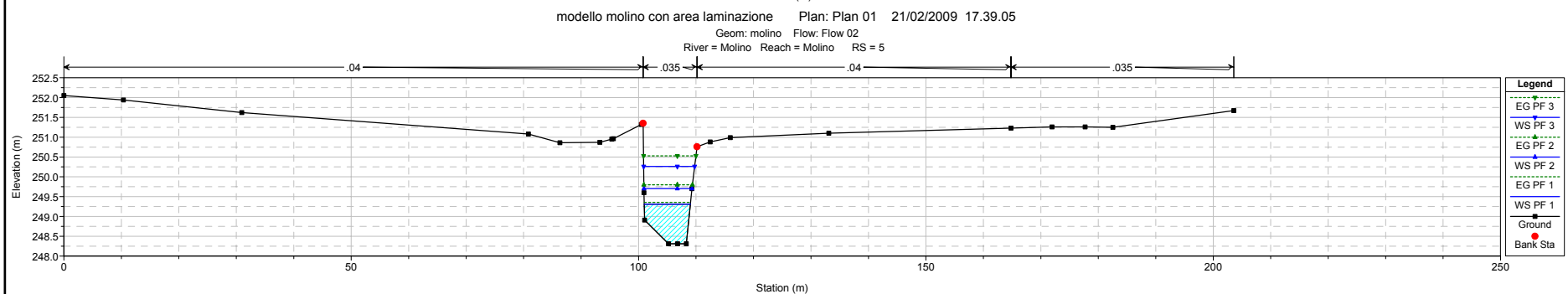
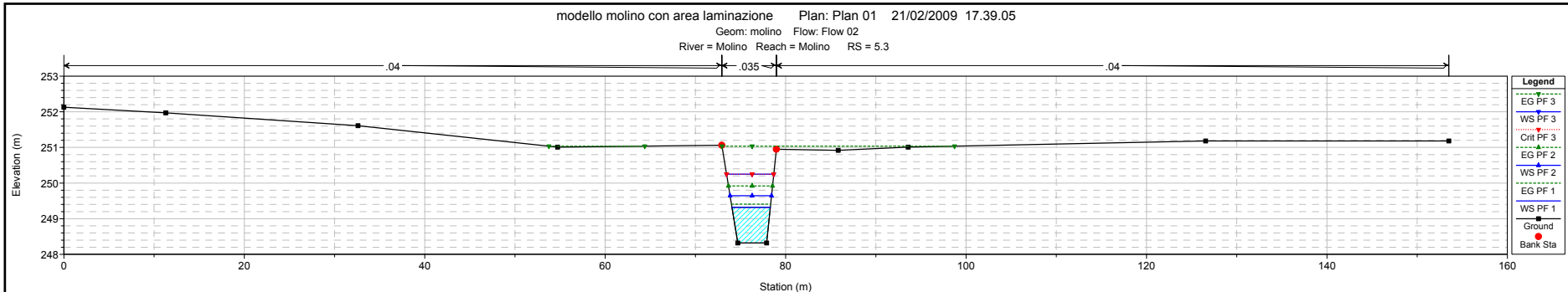






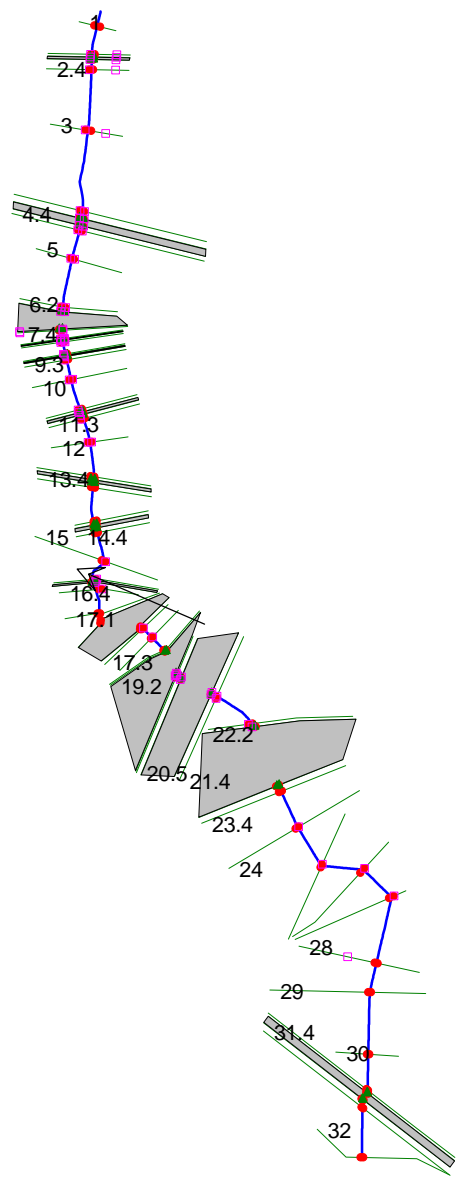






**Parte 3:**  
**Bealera San Martino**  
**Modello idraulico in moto permanente (Hec Ras)**

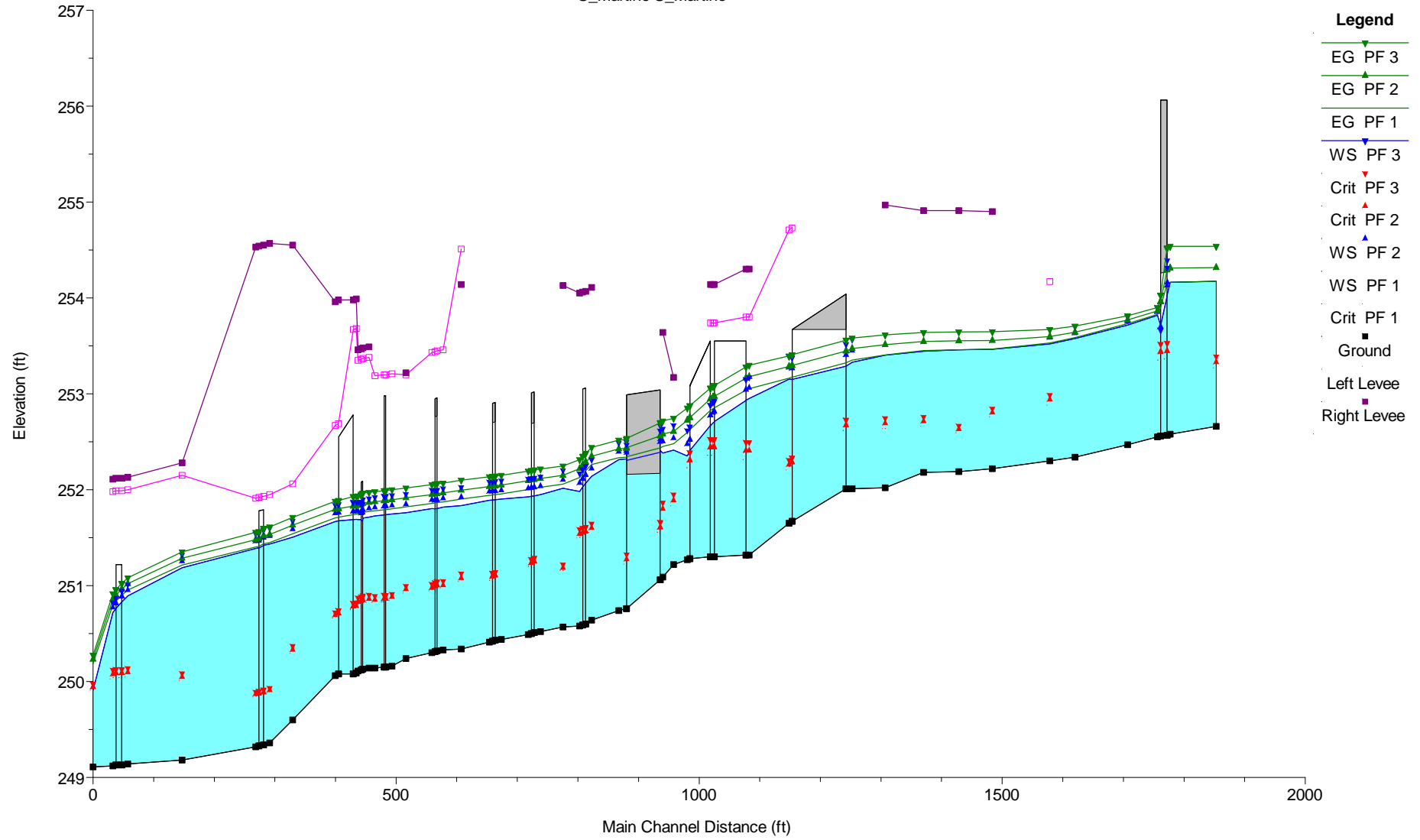




modello sanmartino Plan: Plan 01 18/05/2005 12.11.11

Geom: S\_Martino Flow: Flow 01

S\_Martino S\_Martino



HEC-RAS Plan: Plan 01 River: S\_Martino Reach: S\_Martino

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
S_Martino	32	PF 1	6.00	252.66	254.17	253.27	254.17	0.000233	0.44	23.50	109.53	0.07
S_Martino	32	PF 2	7.00	252.66	254.31	253.33	254.32	0.000080	0.28	42.77	159.96	0.04
S_Martino	32	PF 3	8.00	252.66	254.54	253.39	254.54	0.000016	0.14	85.19	205.30	0.02
S_Martino	31.4	PF 1	6.00	252.58	254.16		254.16	0.000096	0.28	32.85	116.71	0.04
S_Martino	31.4	PF 2	7.00	252.58	254.31		254.31	0.000041	0.20	53.07	157.74	0.03
S_Martino	31.4	PF 3	8.00	252.58	254.54		254.54	0.000011	0.11	97.23	223.66	0.02
S_Martino	31.3	PF 1	6.00	252.57	254.04	253.36	254.15	0.005067	2.73	2.20	83.35	0.40
S_Martino	31.3	PF 2	7.00	252.57	254.16	253.45	254.30	0.005210	2.93	2.39	119.66	0.41
S_Martino	31.3	PF 3	8.00	252.57	254.39	253.53	254.52	0.004368	2.93	2.73	188.29	0.38
S_Martino	31.25		Bridge									
S_Martino	31.2	PF 1	6.00	252.56	253.71	253.35	253.90	0.011278	3.47	1.73	28.20	0.57
S_Martino	31.2	PF 2	7.00	252.56	253.70	253.44	253.96	0.016045	4.10	1.71	27.00	0.68
S_Martino	31.2	PF 3	8.00	252.56	253.66	253.52	254.03	0.023368	4.84	1.65	20.17	0.81
S_Martino	31.1	PF 1	6.00	252.55	253.82		253.83	0.001613	0.97	9.10	43.44	0.17
S_Martino	31.1	PF 2	7.00	252.55	253.86		253.86	0.001504	0.96	10.74	48.77	0.17
S_Martino	31.1	PF 3	8.00	252.55	253.89		253.90	0.001391	0.94	12.64	56.02	0.16
S_Martino	30	PF 1	6.00	252.47	253.72		253.73	0.002130	1.17	7.20	28.05	0.20
S_Martino	30	PF 2	7.00	252.47	253.76		253.77	0.002080	1.18	8.37	31.15	0.20
S_Martino	30	PF 3	8.00	252.47	253.80		253.81	0.001886	1.15	9.83	34.61	0.19
S_Martino	29	PF 1	6.00	252.34	253.58		253.59	0.001323	0.96	8.86	34.68	0.17
S_Martino	29	PF 2	7.00	252.34	253.63		253.64	0.001116	0.92	11.02	40.21	0.15
S_Martino	29	PF 3	8.00	252.34	253.70		253.71	0.000862	0.84	13.86	46.47	0.14
S_Martino	28	PF 1	6.00	252.30	253.52	252.88	253.53	0.001285	0.96	8.51	30.13	0.17
S_Martino	28	PF 2	7.00	252.30	253.59	252.94	253.60	0.001057	0.91	10.69	35.21	0.16
S_Martino	28	PF 3	8.00	252.30	253.67	252.99	253.67	0.000782	0.82	13.67	41.14	0.14
S_Martino	27	PF 1	6.00	252.22	253.46	252.76	253.47	0.000443	0.59	15.93	75.32	0.11
S_Martino	27	PF 2	7.00	252.22	253.56	252.81	253.56	0.000229	0.45	24.36	95.97	0.08
S_Martino	27	PF 3	8.00	252.22	253.65	252.84	253.65	0.000124	0.35	33.27	96.58	0.06
S_Martino	26	PF 1	6.00	252.19	253.46	252.59	253.46	0.000079	0.25	30.40	83.67	0.04
S_Martino	26	PF 2	7.00	252.19	253.55	252.63	253.55	0.000052	0.22	38.26	84.32	0.04
S_Martino	26	PF 3	8.00	252.19	253.65	252.66	253.65	0.000037	0.19	46.18	84.97	0.03
S_Martino	25	PF 1	6.00	252.18	253.44	252.66	253.45	0.000691	0.72	8.97	17.35	0.12
S_Martino	25	PF 2	7.00	252.18	253.54	252.72	253.55	0.000554	0.68	10.68	18.90	0.11
S_Martino	25	PF 3	8.00	252.18	253.64	252.76	253.64	0.000443	0.64	12.97	27.73	0.10
S_Martino	24	PF 1	6.00	252.02	253.40	252.64	253.41	0.000481	0.56	11.99	30.62	0.10
S_Martino	24	PF 2	7.00	252.02	253.51	252.69	253.51	0.000337	0.49	15.41	35.45	0.08
S_Martino	24	PF 3	8.00	252.02	253.61	252.75	253.61	0.000255	0.45	19.48	43.69	0.07
S_Martino	23.4	PF 1	6.00	252.01	253.33		253.35	0.002533	1.25	5.07	8.67	0.22
S_Martino	23.4	PF 2	7.00	252.01	253.45		253.47	0.002071	1.21	6.25	10.54	0.20
S_Martino	23.4	PF 3	8.00	252.01	253.56		253.58	0.001691	1.15	7.54	12.26	0.18
S_Martino	23.3	PF 1	6.00	252.01	253.29	252.61	253.33	0.002455	1.52	3.94	8.12	0.26
S_Martino	23.3	PF 2	7.00	252.01	253.41	252.67	253.45	0.002371	1.60	4.37	9.89	0.26
S_Martino	23.3	PF 3	8.00	252.01	253.52	252.73	253.56	0.002325	1.68	4.76	11.54	0.26
S_Martino	23.25		Bridge									
S_Martino	22.2	PF 1	6.00	251.67	253.15	252.24	253.17	0.001193	1.23	4.86	11.23	0.19
S_Martino	22.2	PF 2	7.00	251.67	253.27	252.29	253.30	0.001227	1.32	5.29	13.71	0.19
S_Martino	22.2	PF 3	8.00	251.67	253.38	252.33	253.41	0.001265	1.41	5.68	15.96	0.20
S_Martino	22.1	PF 1	6.00	251.65	253.15	252.21	253.16	0.000943	0.89	7.23	11.71	0.14
S_Martino	22.1	PF 2	7.00	251.65	253.27	252.26	253.29	0.000800	0.88	8.81	14.26	0.14
S_Martino	22.1	PF 3	8.00	251.65	253.39	252.31	253.40	0.000677	0.85	10.53	16.59	0.13
S_Martino	21.4	PF 1	6.00	251.32	252.95	252.32	253.05	0.002961	2.56	2.34	2.00	0.42
S_Martino	21.4	PF 2	7.00	251.32	253.06	252.41	253.18	0.003238	2.72	2.57	2.07	0.43
S_Martino	21.4	PF 3	8.00	251.32	253.17	252.50	253.30	0.003389	2.86	2.80	2.88	0.44
S_Martino	21.3	PF 1	6.00	251.32	252.93	252.32	253.04	0.003068	2.60	2.30	1.98	0.43
S_Martino	21.3	PF 2	7.00	251.32	253.04	252.41	253.16	0.003361	2.77	2.53	2.06	0.44
S_Martino	21.3	PF 3	8.00	251.32	253.15	252.50	253.28	0.003569	2.91	2.75	2.27	0.45
S_Martino	21.25		Bridge									
S_Martino	20.6	PF 1	6.00	251.30	252.71	252.36	252.85	0.004281	3.06	1.96	2.19	0.57
S_Martino	20.6	PF 2	7.00	251.30	252.81	252.44	252.97	0.004303	3.18	2.20	2.31	0.57
S_Martino	20.6	PF 3	8.00	251.30	252.92	252.53	253.09	0.004241	3.26	2.45	2.44	0.57
S_Martino	20.5	PF 1	6.00	251.30	252.70	252.36	252.85	0.004436	3.10	1.93	2.18	0.58
S_Martino	20.5	PF 2	7.00	251.30	252.80	252.44	252.96	0.004450	3.22	2.17	2.30	0.58

HEC-RAS Plan: Plan 01 River: S\_Martino Reach: S\_Martino (Continued)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
S_Martino	20.5	PF 3	8.00	251.30	252.91	252.53	253.08	0.004375	3.30	2.42	2.42	0.58
S_Martino	20.4	PF 1	6.00	251.30	252.67	252.36	252.83	0.004793	3.20	1.88	2.15	0.60
S_Martino	20.4	PF 2	7.00	251.30	252.78	252.44	252.95	0.004787	3.31	2.11	2.27	0.61
S_Martino	20.4	PF 3	8.00	251.30	252.88	252.53	253.06	0.004679	3.39	2.36	2.39	0.60
S_Martino	20.25		Bridge									
S_Martino	19.2	PF 1	6.00	251.28	252.41	252.23	252.63	0.007187	3.76	1.60	1.96	0.73
S_Martino	19.2	PF 2	7.00	251.28	252.52	252.31	252.75	0.006864	3.83	1.83	2.08	0.72
S_Martino	19.2	PF 3	8.00	251.28	252.65	252.39	252.88	0.006179	3.79	2.11	2.22	0.68
S_Martino	19.1	PF 1	6.00	251.27	252.35		252.60	0.008333	3.98	1.51	1.92	0.79
S_Martino	19.1	PF 2	7.00	251.27	252.48		252.72	0.007605	3.98	1.76	2.04	0.76
S_Martino	19.1	PF 3	8.00	251.27	252.62		252.85	0.006643	3.90	2.05	2.19	0.71
S_Martino	18	PF 1	6.00	251.22	252.41	251.83	252.48	0.001377	2.04	2.94	2.79	0.35
S_Martino	18	PF 2	7.00	251.22	252.54	251.89	252.61	0.001384	2.13	3.29	2.86	0.35
S_Martino	18	PF 3	8.00	251.22	252.67	251.95	252.75	0.001343	2.18	3.68	2.93	0.34
S_Martino	17.4	PF 1	6.00	251.09	252.38	251.74	252.45	0.001513	2.10	2.86	2.42	0.34
S_Martino	17.4	PF 2	7.00	251.09	252.50	251.80	252.58	0.001592	2.22	3.16	2.45	0.34
S_Martino	17.4	PF 3	8.00	251.09	252.64	251.86	252.72	0.001610	2.30	3.48	2.49	0.34
S_Martino	17.3	PF 1	6.00	251.06	252.41	251.56	252.44	0.000519	1.40	4.30	3.37	0.22
S_Martino	17.3	PF 2	7.00	251.06	252.53	251.61	252.56	0.000549	1.48	4.72	3.41	0.22
S_Martino	17.3	PF 3	8.00	251.06	252.66	251.66	252.70	0.000559	1.55	5.17	3.44	0.22
S_Martino	17.25		Bridge									
S_Martino	17.2	PF 1	6.00	250.76	252.32		252.34	0.000266	1.09	5.51	3.75	0.16
S_Martino	17.2	PF 2	7.00	250.76	252.41		252.43	0.000310	1.20	5.84	3.77	0.17
S_Martino	17.2	PF 3	8.00	250.76	252.50		252.52	0.000347	1.30	6.18	3.80	0.18
S_Martino	17.1	PF 1	6.00	250.74	252.31		252.34	0.000326	1.18	5.10	3.44	0.17
S_Martino	17.1	PF 2	7.00	250.74	252.40		252.43	0.000382	1.30	5.40	3.47	0.18
S_Martino	17.1	PF 3	8.00	250.74	252.49		252.52	0.000431	1.40	5.70	3.49	0.19
S_Martino	16.4	PF 1	12.00	250.64	252.14	251.56	252.26	0.006186	2.83	4.25	3.46	0.45
S_Martino	16.4	PF 2	13.00	250.64	252.22	251.60	252.35	0.006078	2.86	4.54	3.52	0.44
S_Martino	16.4	PF 3	14.00	250.64	252.31	251.65	252.44	0.005888	2.88	4.86	3.59	0.44
S_Martino	16.3	PF 1	12.00	250.60	252.07	251.51	252.20	0.006612	2.90	4.14	3.43	0.46
S_Martino	16.3	PF 2	13.00	250.60	252.15	251.56	252.29	0.006451	2.93	4.44	3.50	0.46
S_Martino	16.3	PF 3	14.00	250.60	252.25	251.61	252.38	0.006192	2.94	4.76	3.57	0.45
S_Martino	16.25		Bridge									
S_Martino	16.2	PF 1	12.00	250.59	252.03	251.50	252.17	0.007083	2.97	4.04	3.41	0.48
S_Martino	16.2	PF 2	13.00	250.59	252.12	251.55	252.25	0.006865	3.00	4.34	3.48	0.47
S_Martino	16.2	PF 3	14.00	250.59	252.21	251.60	252.35	0.006541	3.00	4.67	3.55	0.46
S_Martino	16.1	PF 1	12.00	250.58	251.98	251.50	252.13	0.007705	3.07	3.91	3.37	0.50
S_Martino	16.1	PF 2	13.00	250.58	252.07	251.54	252.22	0.007399	3.08	4.22	3.45	0.49
S_Martino	16.1	PF 3	14.00	250.58	252.17	251.59	252.31	0.006976	3.07	4.56	3.53	0.48
S_Martino	15	PF 1	12.00	250.57	252.02	251.16	252.06	0.000560	1.68	7.12	5.21	0.25
S_Martino	15	PF 2	13.00	250.57	252.11	251.19	252.15	0.000548	1.71	7.59	5.23	0.25
S_Martino	15	PF 3	14.00	250.57	252.20	251.22	252.25	0.000537	1.73	8.10	5.26	0.25
S_Martino	14.4	PF 1	12.00	250.52	251.95		252.03	0.001167	2.24	5.35	3.92	0.34
S_Martino	14.4	PF 2	13.00	250.52	252.04		252.12	0.001150	2.28	5.70	3.94	0.33
S_Martino	14.4	PF 3	14.00	250.52	252.13		252.22	0.001116	2.30	6.09	3.97	0.33
S_Martino	14.3	PF 1	12.00	250.51	251.94	251.21	252.02	0.001172	2.25	5.34	3.92	0.34
S_Martino	14.3	PF 2	13.00	250.51	252.03	251.25	252.11	0.001154	2.28	5.69	3.94	0.33
S_Martino	14.3	PF 3	14.00	250.51	252.12	251.29	252.21	0.001119	2.30	6.08	3.97	0.33
S_Martino	14.25		Bridge									
S_Martino	14.2	PF 1	12.00	250.50	251.93	251.20	252.01	0.001162	2.24	5.36	3.92	0.34
S_Martino	14.2	PF 2	13.00	250.50	252.02	251.24	252.10	0.001145	2.28	5.71	3.94	0.33
S_Martino	14.2	PF 3	14.00	250.50	252.12	251.27	252.20	0.001110	2.30	6.10	3.97	0.33
S_Martino	14.1	PF 1	12.00	250.49	251.93		252.00	0.001152	2.23	5.38	3.92	0.34
S_Martino	14.1	PF 2	13.00	250.49	252.01		252.09	0.001135	2.27	5.73	3.95	0.33
S_Martino	14.1	PF 3	14.00	250.49	252.11		252.19	0.001101	2.29	6.12	3.97	0.32
S_Martino	13.4	PF 1	12.00	250.44	251.90		251.96	0.000690	1.84	6.51	4.85	0.28
S_Martino	13.4	PF 2	13.00	250.44	251.99		252.05	0.000673	1.87	6.95	4.90	0.28
S_Martino	13.4	PF 3	14.00	250.44	252.09		252.15	0.000644	1.88	7.45	4.96	0.27
S_Martino	13.3	PF 1	12.00	250.43	251.90	251.07	251.95	0.000685	1.84	6.52	4.86	0.28
S_Martino	13.3	PF 2	13.00	250.43	251.99	251.11	252.04	0.000668	1.87	6.97	4.91	0.28



HEC-RAS Plan: Plan 01 River: S\_Martino Reach: S\_Martino (Continued)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
S_Martino	6.2	PF 1	12.00	250.08	251.68	250.68	251.71	0.001374	1.56	7.67	5.11	0.23
S_Martino	6.2	PF 2	13.00	250.08	251.76	250.71	251.80	0.001375	1.60	8.12	5.15	0.22
S_Martino	6.2	PF 3	14.00	250.08	251.85	250.74	251.89	0.001380	1.64	8.55	5.18	0.22
S_Martino	6.1	PF 1	12.00	250.06	251.67	250.66	251.71	0.001339	1.55	7.74	5.12	0.22
S_Martino	6.1	PF 2	13.00	250.06	251.76	250.69	251.79	0.001343	1.59	8.19	5.15	0.22
S_Martino	6.1	PF 3	14.00	250.06	251.84	250.72	251.88	0.001349	1.62	8.62	5.18	0.22
S_Martino	5	PF 1	12.00	249.60	251.51	250.29	251.54	0.004967	1.53	7.85	4.68	0.21
S_Martino	5	PF 2	13.00	249.60	251.59	250.33	251.63	0.005095	1.58	8.25	4.72	0.21
S_Martino	5	PF 3	14.00	249.60	251.67	250.37	251.71	0.005221	1.62	8.64	4.77	0.21
S_Martino	4.4	PF 1	12.00	249.36	251.43	249.88	251.45	0.001315	0.98	12.25	6.12	0.12
S_Martino	4.4	PF 2	13.00	249.36	251.52	249.91	251.53	0.001372	1.02	12.76	6.14	0.12
S_Martino	4.4	PF 3	14.00	249.36	251.60	249.93	251.61	0.001427	1.06	13.25	6.16	0.13
S_Martino	4.3	PF 1	12.00	249.34	251.42	249.86	251.44	0.001293	0.98	12.29	6.12	0.12
S_Martino	4.3	PF 2	13.00	249.34	251.50	249.89	251.52	0.001330	1.02	12.80	6.14	0.12
S_Martino	4.3	PF 3	14.00	249.34	251.58	249.92	251.60	0.001364	1.05	13.28	6.16	0.13
S_Martino	4.25		Bridge									
S_Martino	4.2	PF 1	12.00	249.33	251.39	249.85	251.41	0.001329	0.98	12.19	6.12	0.12
S_Martino	4.2	PF 2	13.00	249.33	251.47	249.88	251.49	0.001377	1.03	12.66	6.14	0.13
S_Martino	4.2	PF 3	14.00	249.33	251.54	249.90	251.56	0.001423	1.07	13.11	6.15	0.13
S_Martino	4.1	PF 1	12.00	249.32	251.39	249.84	251.40	0.001327	0.98	12.21	6.12	0.12
S_Martino	4.1	PF 2	13.00	249.32	251.46	249.87	251.48	0.001395	1.02	12.68	6.14	0.13
S_Martino	4.1	PF 3	14.00	249.32	251.54	249.89	251.56	0.001463	1.07	13.13	6.15	0.13
S_Martino	3	PF 1	12.00	249.18	251.19	250.01	251.21	0.001800	1.33	9.02	6.78	0.20
S_Martino	3	PF 2	13.00	249.18	251.26	250.05	251.29	0.001841	1.37	9.50	6.94	0.21
S_Martino	3	PF 3	14.00	249.18	251.32	250.09	251.35	0.001881	1.41	9.96	7.10	0.21
S_Martino	2.4	PF 1	12.00	249.14	250.89	250.05	250.96	0.005219	2.02	5.95	4.85	0.32
S_Martino	2.4	PF 2	13.00	249.14	250.95	250.10	251.02	0.005336	2.08	6.25	4.98	0.33
S_Martino	2.4	PF 3	14.00	249.14	251.01	250.14	251.08	0.005445	2.14	6.54	5.09	0.33
S_Martino	2.3	PF 1	12.00	249.13	250.83	250.04	250.90	0.005828	2.10	5.70	4.75	0.34
S_Martino	2.3	PF 2	13.00	249.13	250.89	250.09	250.96	0.006022	2.17	5.98	4.87	0.35
S_Martino	2.3	PF 3	14.00	249.13	250.95	250.13	251.02	0.006151	2.24	6.26	4.98	0.35
S_Martino	2.25		Bridge									
S_Martino	2.2	PF 1	12.00	249.13	250.76	250.04	250.84	0.006847	2.24	5.36	4.61	0.37
S_Martino	2.2	PF 2	13.00	249.13	250.81	250.09	250.90	0.007094	2.31	5.62	4.72	0.37
S_Martino	2.2	PF 3	14.00	249.13	250.87	250.13	250.96	0.007331	2.38	5.88	4.82	0.38
S_Martino	2.1	PF 1	12.00	249.12	250.72	250.03	250.80	0.007327	2.30	5.22	4.55	0.38
S_Martino	2.1	PF 2	13.00	249.12	250.77	250.08	250.86	0.007610	2.38	5.47	4.65	0.39
S_Martino	2.1	PF 3	14.00	249.12	250.82	250.12	250.92	0.007884	2.45	5.71	4.76	0.39
S_Martino	1	PF 1	12.00	249.11	249.91	249.91	250.19	0.097401	4.24	2.83	5.14	1.01
S_Martino	1	PF 2	13.00	249.11	249.94	249.94	250.23	0.096445	4.32	3.01	5.28	1.01
S_Martino	1	PF 3	14.00	249.11	249.98	249.98	250.28	0.095139	4.39	3.19	5.41	1.01

