

CROSS SECTION
REACH: Reach-1

RS: 90

INPUT

Description: 64

Station Elevation Data		num= 112									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
179.79	374.24	180.55	374	187.81	372.31	189.06	372	196.26	370.27		
197.31	370	210.65	368.23	211.88	368	220.27	367.51	247.03	366		
247.55	365.9	259.7	364	263.2	362.42	264.07	362	265.74	361.15		
268.05	360	268.34	359.88	270.34	359.19	271.14	358.96	271.84	358.74		
271.9	358.62	278.14	358.7	278.43	358.83	278.66	358.88	287.02	360		
292.36	362	297.32	363.83	297.77	364	297.99	364.09	303.18	366		
309.03	366.79	311.01	367.07	311.6	367.16	313.95	367.46	314.86	367.59		
315.51	367.69	315.95	367.74	316.1	367.76	316.26	367.79	316.44	367.82		
317.76	367.82	317.84	367.81	318	367.8	318.35	367.79	318.51	367.78		
318.68	367.77	318.82	367.75	318.95	367.71	319.04	367.69	319.56	367.63		
320.22	367.55	320.35	367.54	323.47	367.4	323.94	367.4	328.87	367.19		
329.21	367.17	331.18	367.1	331.85	367.06	348.3	366	377.9	364.6		
390.92	364.57	392.75	364.57	394.01	364.56	395.38	364.56	396.44	364.55		
397.06	364.55	452.19	364.13	467.81	364.4	490.45	364.98	504.25	364.82		
506.7	364.85	510.27	364.91	543.61	364.61	580.52	365.24	606.18	364.33		
617.28	364.06	617.89	364.06	619.88	364.05	620.79	364	627.24	364.04		
628.18	364.04	630.57	364.06	635.57	364.09	641.75	364.14	646.19	364.16		
652.34	364.17	655.85	364.19	658.43	364.2	659.92	364.21	660.94	364.22		
662.03	364.21	663.61	364.2	668	364.18	679.13	365.63	685.71	366		
687.62	366.88	690.14	368	690.92	368.35	691.94	368.8	694.65	369.97		
694.72	370	699.17	371.92	699.36	372	703.69	373.87	704	374		
708.21	375.82	708.64	376	712.73	377.76	713.27	378	713.9	378.27		
717.91	380	750	380.4								

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
.035	179.79	.035	750	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	179.79	750		25 25	25	.1	.3

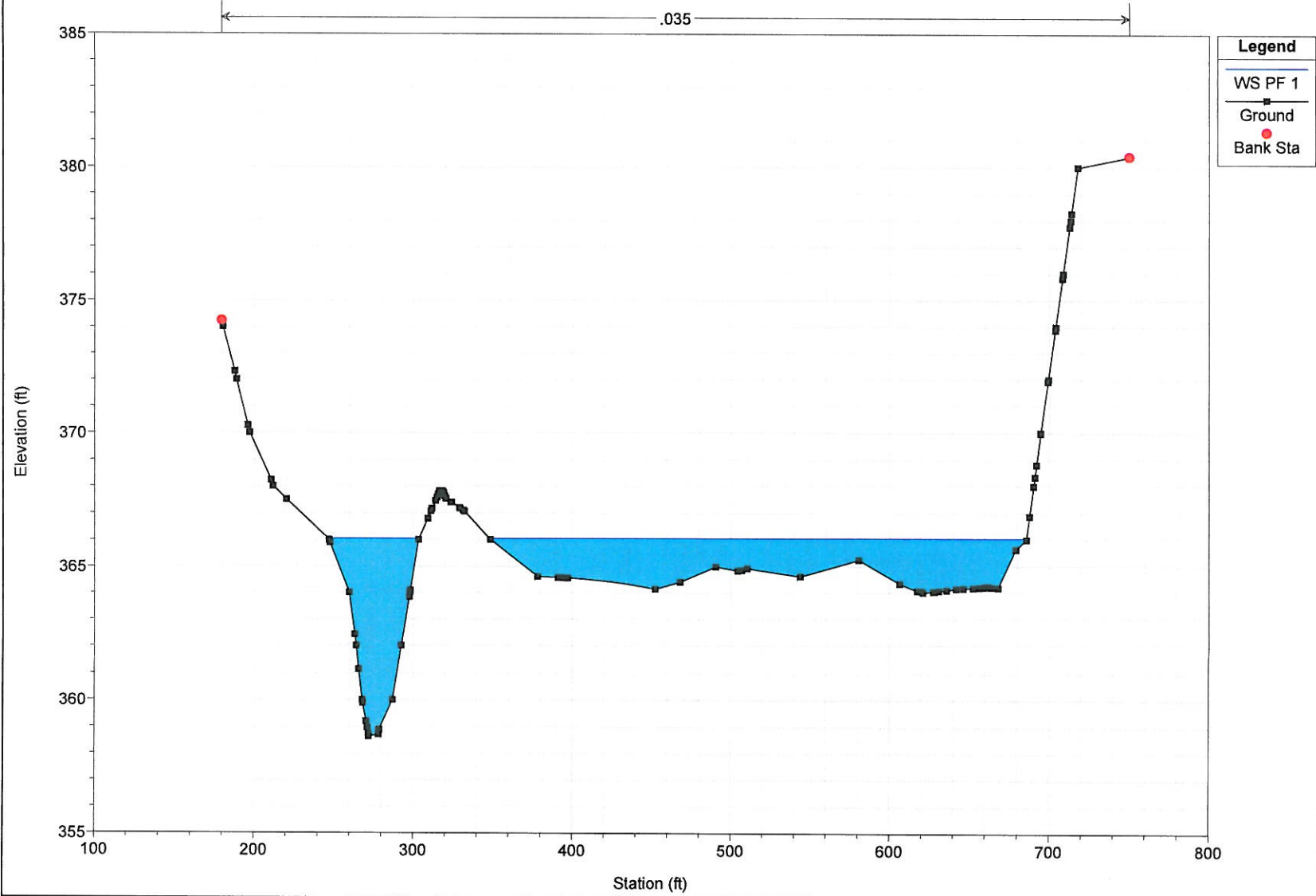
CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 366.97	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.91	* Wt. n-Val.	* 25.00	* 0.035	* 25.00
* W.S. Elev (ft)	* 366.06	* Reach Len. (ft)			
* Crit W.S. (ft)	* 366.06	* Flow Area (sq ft)		* 706.37	
* E.G. Slope (ft/ft)	* 0.015145	* Area (sq ft)		* 706.37	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 396.07	* Top Width (ft)		* 396.07	
* Vel Total (ft/s)	* 7.65	* Avg. Vel. (ft/s)		* 7.65	
* Max Chl Dpth (ft)	* 7.44	* Hydr. Depth (ft)		* 1.78	
* Conv. Total (cfs)	* 43900.9	* Conv. (cfs)		* 43900.9	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 398.80	
* Min Ch El (ft)	* 358.62	* Shear (lb/sq ft)		* 1.67	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 750.00	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 30.64	
* C & E Loss (ft)		* Cum SA (acres)		* 14.05	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012

RS = 90

.035



CROSS SECTION
REACH: Reach-1

RS: 80

INPUT

Description: 74

Station Elevation Data		num= 65									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
189.17	368.82	193.32	368	202.02	366.56	205.53	366	206.71	365.8		
212.46	364.88	216.8	364.17	217.96	364	226.06	362.06	226.32	362		
226.51	361.9	230.1	360	232.55	358.73	234.16	358	246.71	358		
247.48	358.31	251.79	360	254.95	361.18	257.13	362	259.72	363		
262.36	364	270.79	364.13	318.38	364.02	318.7	364	384.2	362.55		
384.42	362.54	384.56	362.54	384.86	362.53	386.54	362.48	386.92	362.47		
387.02	362.47	388.79	362.46	389.29	362.46	390.01	362.45	440.15	362.23		
443.28	362.19	456.74	362.14	462.24	362.11	488.22	361.88	529.86	361.84		
534.35	361.93	550.53	362.18	563.94	362.36	569.63	362.42	572.72	362.43		
575.05	362.43	577.25	362.51	590.28	363.02	648.38	364	649.16	364.31		
653.39	366	653.76	366.15	658	367.84	658.41	368	658.49	368.03		
663.54	370	664.73	370.46	673.8	374	686.09	374.14	695.03	374.22		
696.32	374.23	696.63	374.24	742.83	374.69	743.02	374.7	750	374.76		

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
.035	189.17	.035	750	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	189.17	750		25 25	25	.1	.3

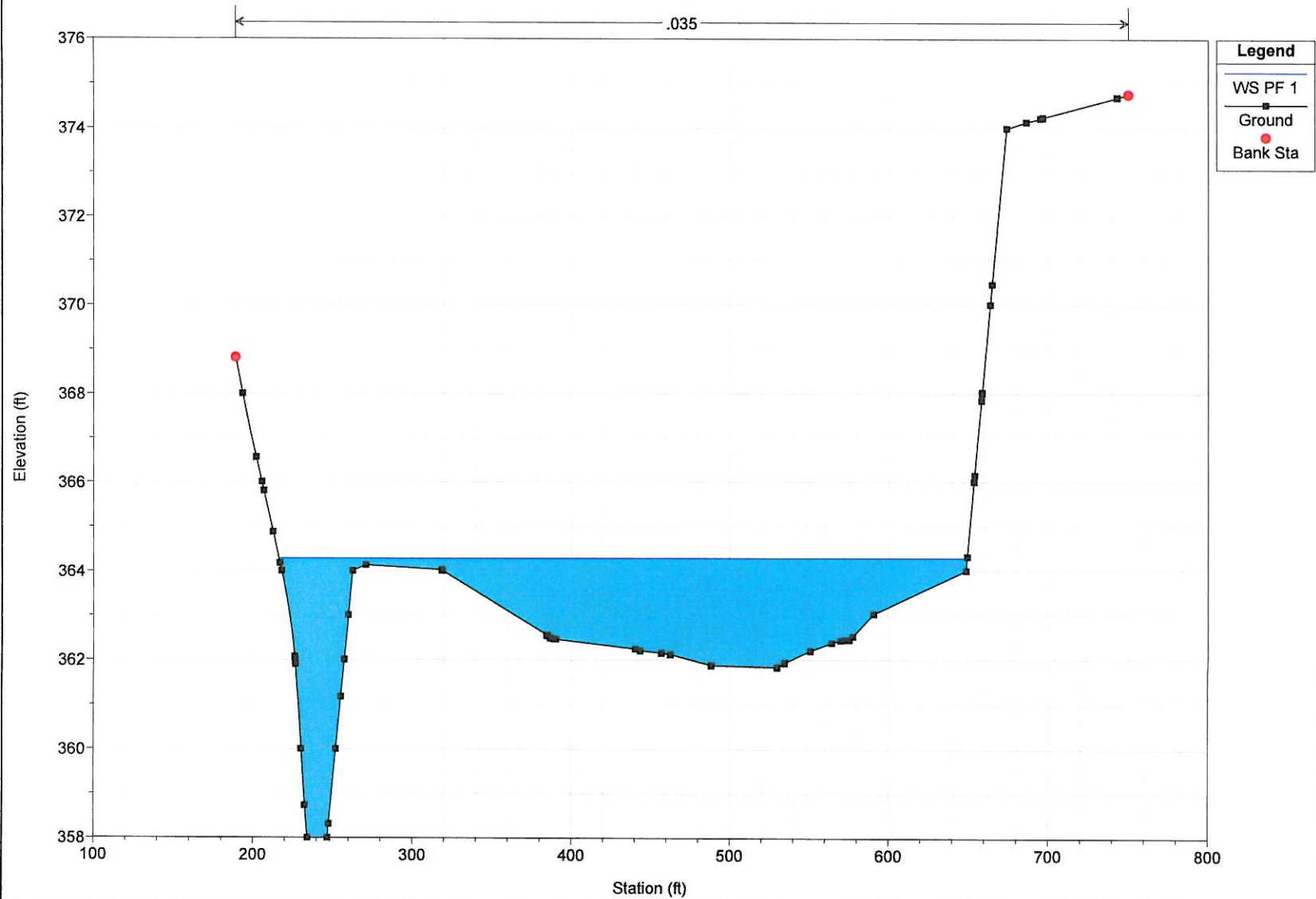
CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 365.13	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.85	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 364.28	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 364.28	* Flow Area (sq ft)		* 731.17	
* E.G. Slope (ft/ft)	* 0.015176	* Area (sq ft)		* 731.17	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 432.98	* Top Width (ft)		* 432.98	
* Vel Total (ft/s)	* 7.39	* Avg. Vel. (ft/s)		* 7.39	
* Max Chl Dpth (ft)	* 6.28	* Hydr. Depth (ft)		* 1.69	
* Conv. Total (cfs)	* 43855.8	* Conv. (cfs)		* 43855.8	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 435.41	
* Min Ch El (ft)	* 358.00	* Shear (lb/sq ft)		* 1.59	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 750.00	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 26.43	
* C & E Loss (ft)		* Cum SA (acres)		* 11.43	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012

RS = 80

.035



CROSS SECTION
REACH: Reach-1

RS: 70

INPUT

Description: 84

Station Elevation Data

num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
215.04	366	222.42	365.48	229.07	365.05	232.6	364.88	235.26	364.81
237.59	364.77	240.28	364.73	249.1	364	255.88	363.83	270.06	363.19
276.84	362.95	280.06	362.85	284.11	362.76	295.14	362	299.09	360.67
301.05	360	301.81	359.75	307.03	358	309.56	357.71	311	357.46
311.5	357.35	311.54	357.28	311.86	357.25	312.17	357.18	323.34	357.11
324.85	357.28	326.24	357.47	327.7	357.76	329.19	358	330.57	358.64
333.61	360	336.44	361.34	337.9	362	339	362.2	352.51	364
353.38	364.04	358	364.28	359.72	364.39	360.24	364.46	366.5	364.53
368.71	364.31	371.53	364	385.36	362.82	400.73	362	403.29	361.93
419.65	361.69	480.1	360.58	489.67	360.5	544.08	361.14	550.65	361.32
565.82	362	566.2	362.19	569.86	364	570.37	364.25	573.9	366
574.54	366.32	581.98	370	582.88	370.44	586.02	372	593.62	372.22
627.7	373.34								

Manning's n Values

num= 3

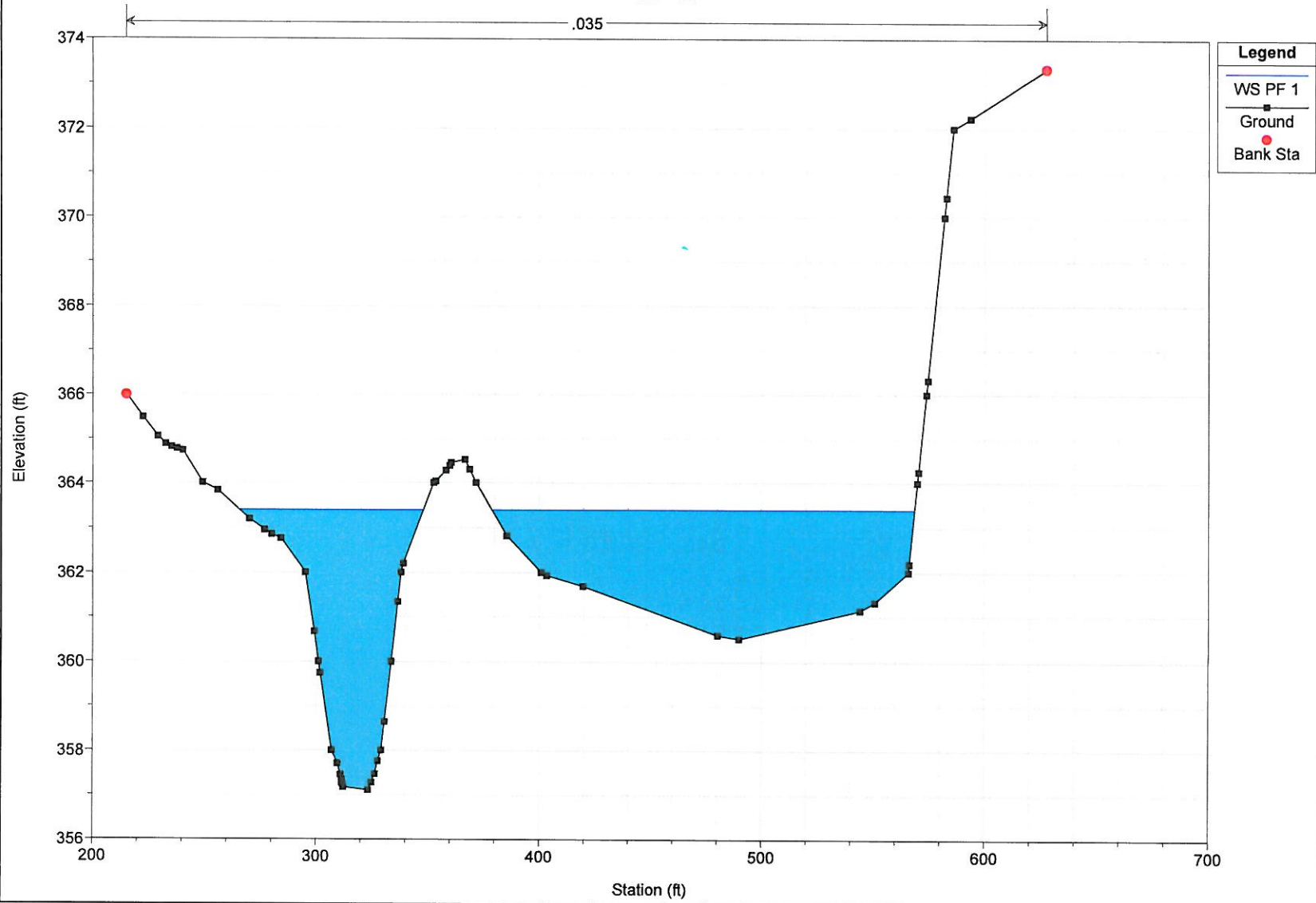
Sta	n Val	Sta	n Val	Sta	n Val
.035	215.04	.035	627.7	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	215.04	627.7		25 25	25	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 364.57	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.17	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 363.40	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 363.40	* Flow Area (sq ft)		* 622.62	
* E.G. Slope (ft/ft)	* 0.014043	* Area (sq ft)		* 622.62	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 272.63	* Top Width (ft)		* 272.63	
* Vel Total (ft/s)	* 8.68	* Avg. Vel. (ft/s)		* 8.68	
* Max Chl Dpth (ft)	* 6.29	* Hydr. Depth (ft)		* 2.28	
* Conv. Total (cfs)	* 45590.1	* Conv. (cfs)		* 45590.1	
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)		* 274.88	
* Min Ch El (ft)	* 357.11	* Shear (lb/sq ft)		* 1.99	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 627.70	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 22.74	
* C & E Loss (ft)		* Cum SA (acres)		* 9.70	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012
RS = 70



CROSS SECTION
REACH: Reach-1 RS: 60

INPUT

Description: 94

Station Elevation Data		num= 54							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
233.08	367.28	241.11	366	243.71	365.41	250.47	364	253.91	362
255.65	360.98	257.45	360	259.03	359.07	260.96	358	262.18	357.26
264.49	356	264.94	355.74	265.13	355.43	266.02	355.22	266.36	355.08
266.45	355.05	267.41	354.97	268.09	354.91	275.86	354.99	275.95	355.01
277.87	355.15	279.31	355.26	280.99	355.41	283.31	355.7	285.66	355.93
286.28	356	286.82	356.41	289.51	358	290.65	358.79	292.62	360
299.89	360.27	304.48	360.46	332	360	332.82	360.04	333.55	360
339.63	359.83	359.2	359.25	363.59	359.14	364.95	359.1	365.97	359.06
375.79	358.74	418.64	358.46	486.35	358.64	489.93	358.83	495.78	360
503.41	363.71	504.02	364	507.63	365.75	508.14	366	511.84	367.8
512.26	368	516.06	369.84	516.38	370	539.71	370.53		

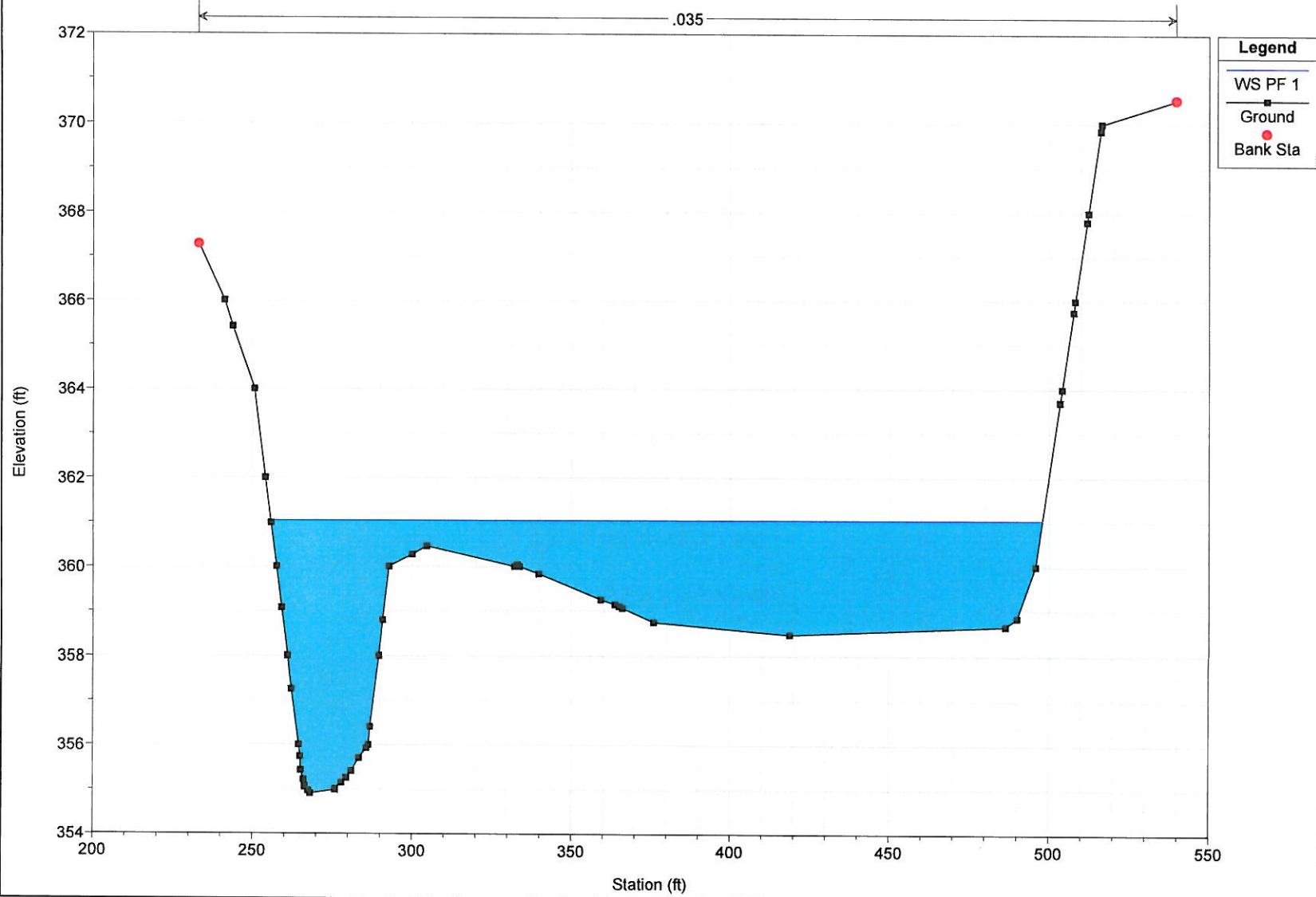
Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
.035	233.08	.035	539.71	.035	

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	233.08	539.71		25	25	25		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 362.47	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.42	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 361.04	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 361.19	* Flow Area (sq ft)		* 564.13	
* E.G. Slope (ft/ft)	* 0.016792	* Area (sq ft)		* 564.13	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 242.38	* Top Width (ft)		* 242.38	
* Vel Total (ft/s)	* 9.58	* Avg. Vel. (ft/s)		* 9.58	
* Max Chl Dpth (ft)	* 6.13	* Hydr. Depth (ft)		* 2.33	
* Conv. Total (cfs)	* 41691.2	* Conv. (cfs)		* 41691.2	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 245.62	
* Min Ch El (ft)	* 354.91	* Shear (lb/sq ft)		* 2.41	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 539.71	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.41	* Cum Volume (acre-ft)		* 19.31	
* C & E Loss (ft)	* 0.01	* Cum SA (acres)		* 8.26	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012
RS = 60



CROSS SECTION
REACH: Reach-1

RS: 50

INPUT

Description: 104

Station Elevation Data

num= 48

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
97.67	364	110.39	362.44	113.43	362	127.98	360	131.89	359.7
143.38	358.61	155.96	358.02	156.44	358	156.53	357.96	161.04	356
165.07	354.21	165.58	354	166.79	353.46	170.03	352	174.68	352
176.31	352.31	184.93	354	187.16	355	189.52	356	191.7	357
193.87	358	195.29	358.32	195.92	358.46	196.46	358.55	211.49	358.54
211.63	358.43	212.1	358.38	213.1	358.32	220	358	246.69	358
252.88	358.07	255.16	358.1	266.3	358.1	268.94	358.09	270.14	358.09
277.82	358	285.23	357.79	330.82	357.47	350.69	357.46	367.27	357.41
422.53	357.64	424.53	357.69	432.58	357.81	434.87	358	437.94	359.52
438.59	360	450.6	366	503.9	367.8				

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
97.67	.035	503.9	.035		

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	97.67	503.9		25	25	.1	.3

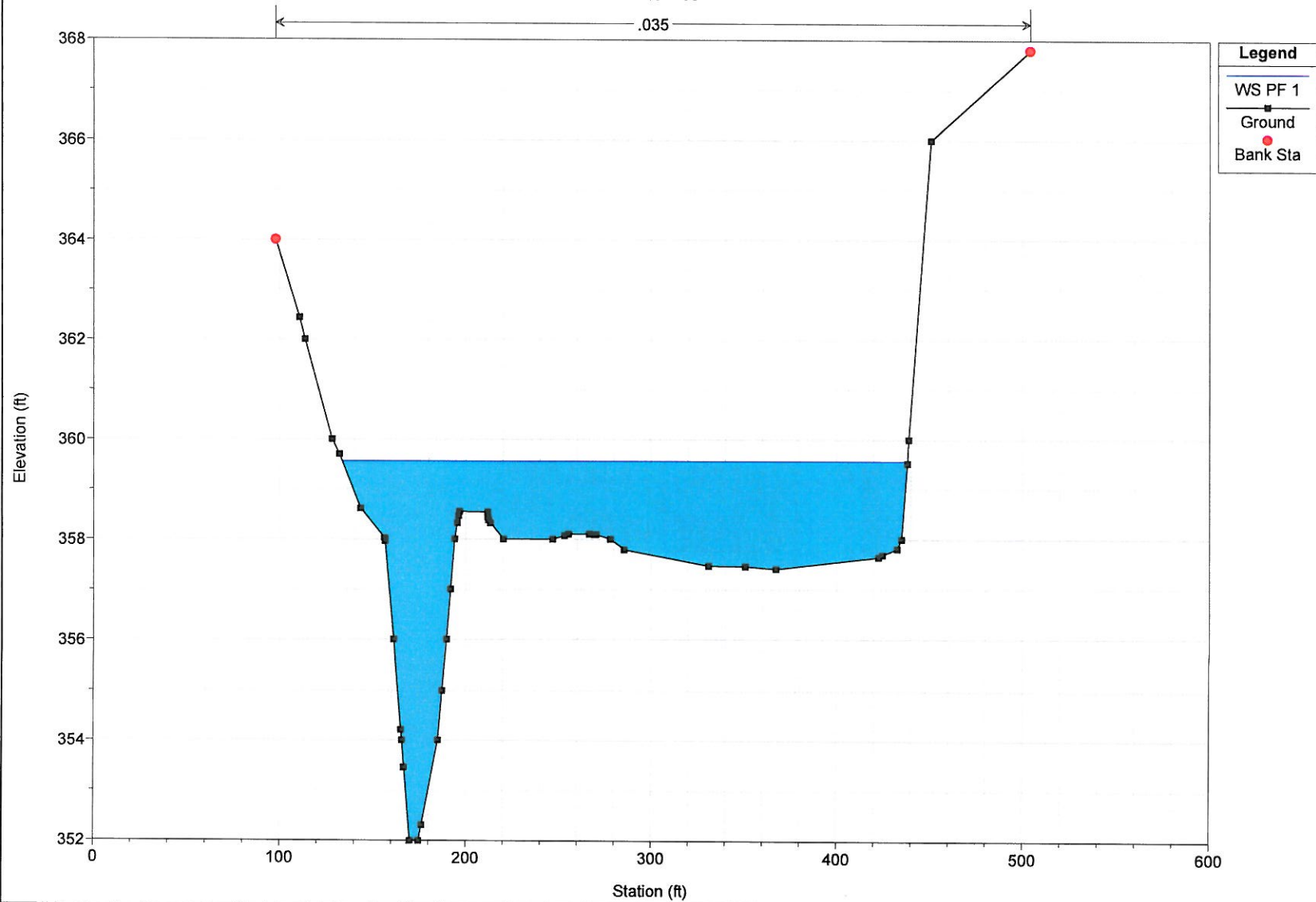
CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 360.63	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.06	* Wt. n-Val.	* 25.00	* 0.035	* 25.00
* W.S. Elev (ft)	* 359.57	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 359.57	* Flow Area (sq ft)	* 652.65	* 652.65	* 652.65
* E.G. Slope (ft/ft)	* 0.013945	* Area (sq ft)	* 5402.57	* 5402.57	* 5402.57
* Q Total (cfs)	* 5402.57	* Flow (cfs)	* 304.75	* 304.75	* 304.75
* Top Width (ft)	* 304.75	* Top Width (ft)	* 8.28	* 8.28	* 8.28
* Vel Total (ft/s)	* 8.28	* Avg. Vel. (ft/s)	* 2.14	* 2.14	* 2.14
* Max Chl Dpth (ft)	* 7.57	* Hydr. Depth (ft)	* 45750.3	* 45750.3	* 45750.3
* Conv. Total (cfs)	* 45750.3	* Conv. (cfs)	* 307.62	* 307.62	* 307.62
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)	* 1.85	* 1.85	* 1.85
* Min Ch El (ft)	* 352.00	* Shear (lb/sq ft)	* 503.90	* 0.00	* 0.00
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 15.70	* 15.70	* 15.70
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 6.59	* 6.59	* 6.59
* C & E Loss (ft)	*	* Cum SA (acres)	*	*	*

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012

RS = 50

.035



CROSS SECTION
REACH: Reach-1

RS: 40

INPUT

Description: 114

Station Elevation Data num= 43

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
91.89	362.5	93.04	362.23	96.97	361.61	101.77	361	109.4	360
111.97	359.65	113.01	359.66	113.71	359.69	113.79	359.72	114.07	359.71
114.26	359.7	114.33	359.69	135.1	358	136.75	356.97	138.29	356
140.26	354.77	141.5	354	142.41	353.43	144.75	352	163.93	352
167.38	353.41	168.72	354	170.57	354.8	173.33	356	175.45	356.87
178.05	358	184.41	358	210.09	356	235.52	355.67	280.65	355.27
308.33	355.56	311.59	355.58	315.36	355.59	316.15	355.57	336.64	355.7
364.91	356	366.23	356.63	369.12	358	372.23	359.49	373.29	360
377.47	362	381.63	364	383.12	364.06				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
.035	91.89	.035	383.12	.035	

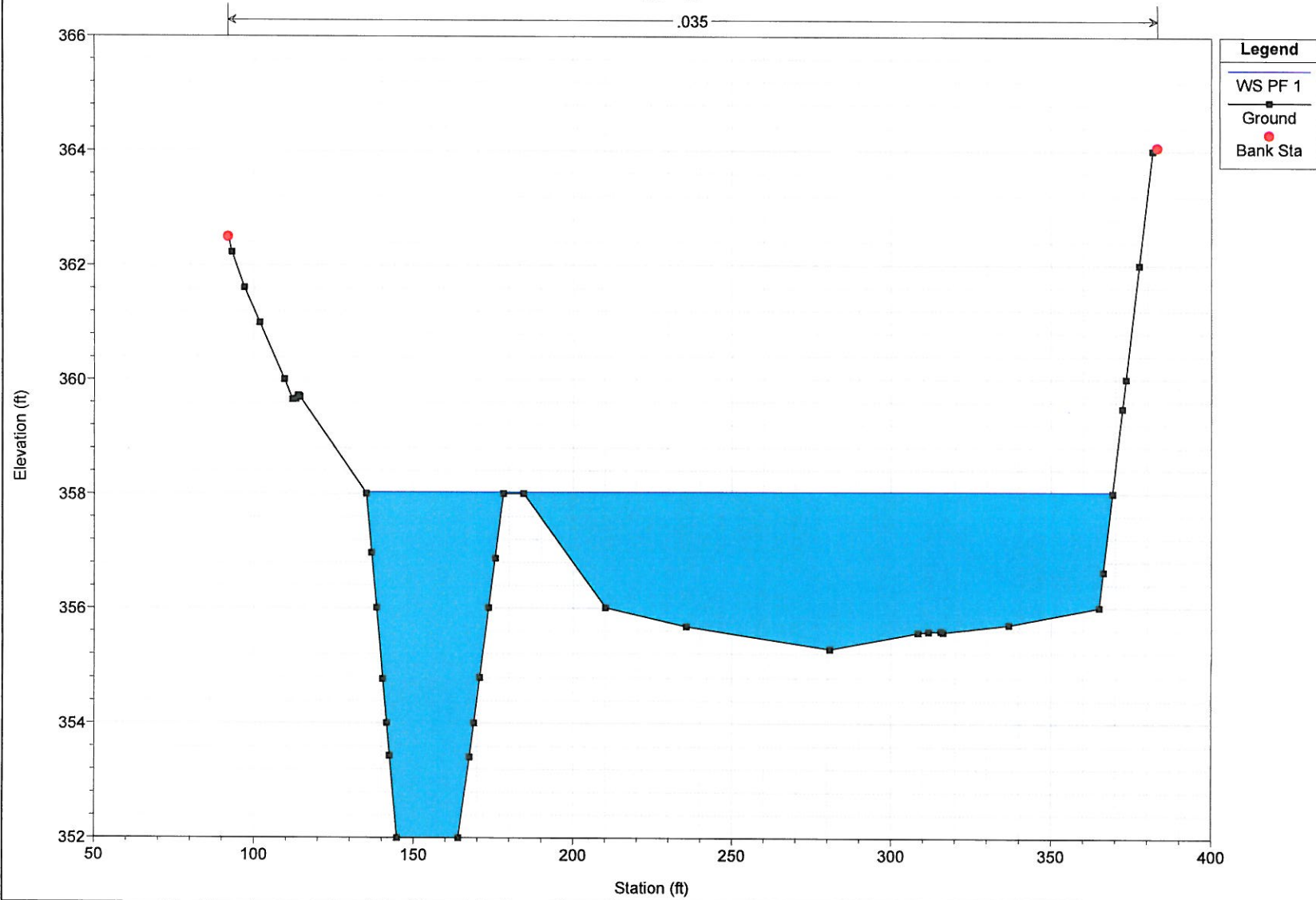
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	91.89	383.12		25	25	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 359.32	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.29	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 358.03	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 358.03	* Flow Area (sq ft)		* 593.08	
* E.G. Slope (ft/ft)	* 0.013624	* Area (sq ft)		* 593.08	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 234.48	* Top Width (ft)		* 234.48	
* Vel Total (ft/s)	* 9.11	* Avg. Vel. (ft/s)		* 9.11	
* Max Chl Dpth (ft)	* 6.03	* Hydr. Depth (ft)		* 2.53	
* Conv. Total (cfs)	* 46285.9	* Conv. (cfs)		* 46285.9	
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)		* 237.96	
* Min Ch El (ft)	* 352.00	* Shear (lb/sq ft)		* 2.12	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 383.12	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 12.09	
* C & E Loss (ft)		* Cum SA (acres)		* 4.98	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012

RS = 40



CROSS SECTION
REACH: Reach-1

RS: 30

INPUT

Description: 124

Station Elevation Data

num= 59

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
103.38	360.79	105.92	360.11	106.38	360	111.41	359.64	113.8	359.48
115.74	359.38	116.32	359.68	119.59	359.54	123.77	359.24	134.49	358
153.17	356.9	167.14	356	174.71	354.36	176.17	354	181.48	352.16
181.92	352	182.27	351.97	185.03	351.68	186.34	351.51	186.85	351.43
187.92	351.11	187.97	350.88	188.17	350.73	195.47	350.73	195.56	350.74
195.75	350.76	196.65	350.93	200.15	351.41	204.85	352	205.05	352.1
208.61	354	211.5	355.51	212.43	356	213.02	356.23	213.26	356.69
213.58	356.91	214.22	357.09	214.66	357.23	214.8	357.23	215	357.21
217.38	357.08	219.22	356.96	220.44	356.84	221.39	356.72	225.26	356.36
227.72	356.11	228.58	356	230.6	355.83	233.08	355.59	253.72	355.08
296.19	354.38	326.62	355.46	347.05	356	349.79	357.36	351.07	358
353.84	359.38	357.89	361.39	359.11	362	369.58	362		

Manning's n Values

num= 3

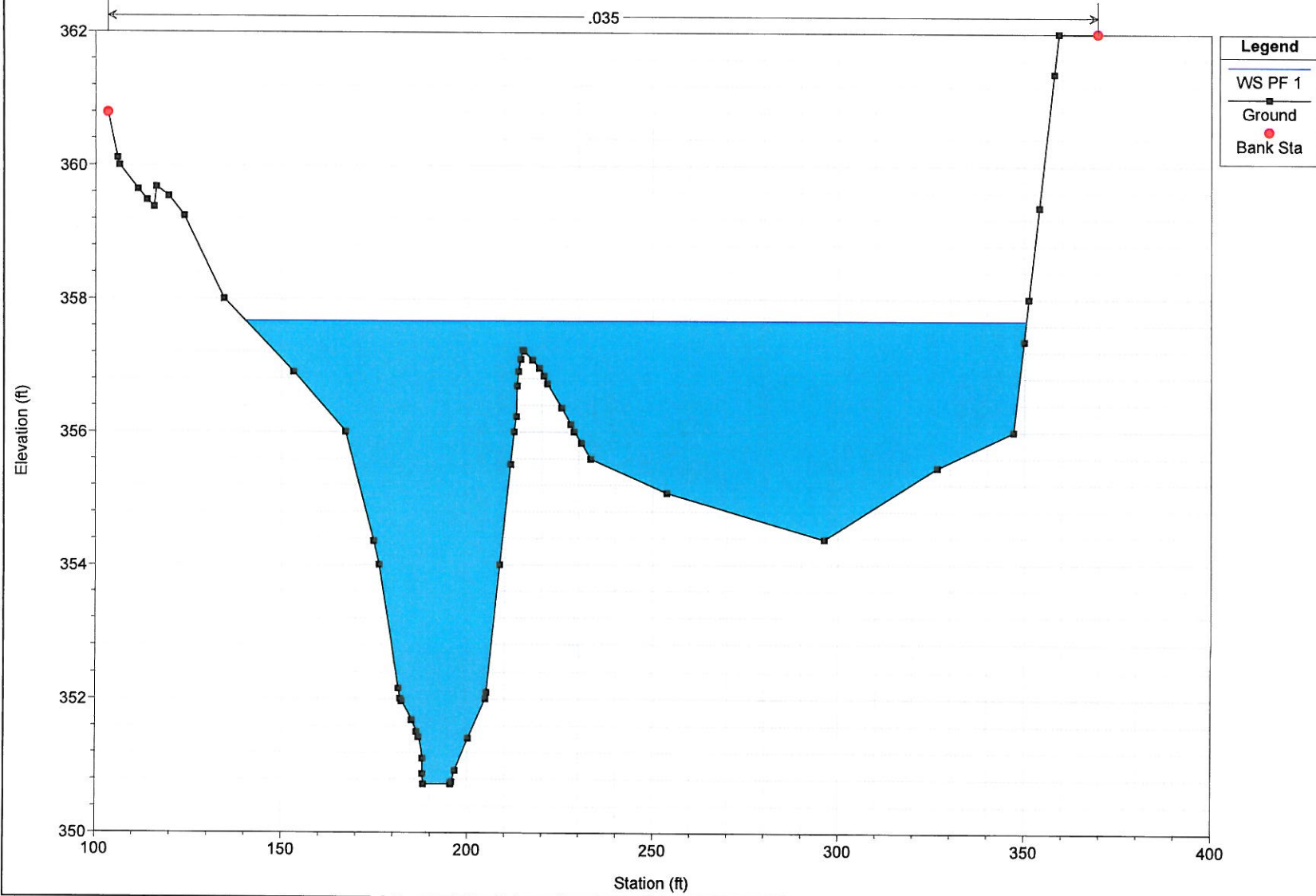
Sta	n Val	Sta	n Val	Sta	n Val
.035	103.38	.035	369.58	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	103.38	369.58		25	25	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 359.06	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.39	* Wt. n-Val.	* 0.035	*	*
* W.S. Elev (ft)	* 357.67	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 357.67	* Flow Area (sq ft)	*	* 571.82	*
* E.G. Slope (ft/ft)	* 0.013299	* Area (sq ft)	*	* 571.82	*
* Q Total (cfs)	* 5402.57	* Flow (cfs)	*	* 5402.57	*
* Top Width (ft)	* 210.36	* Top Width (ft)	*	* 210.36	*
* Vel Total (ft/s)	* 9.45	* Avg. Vel. (ft/s)	*	* 9.45	*
* Max Chl Dpth (ft)	* 6.94	* Hydr. Depth (ft)	*	* 2.72	*
* Conv. Total (cfs)	* 46847.7	* Conv. (cfs)	*	* 46847.7	*
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)	*	* 213.31	*
* Min Ch El (ft)	* 350.73	* Shear (lb/sq ft)	*	* 2.23	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 369.58	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	*	* 8.61	*
* C & E Loss (ft)	*	* Cum SA (acres)	*	* 3.53	*

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012
RS = 30



CROSS SECTION

REACH: Reach-1

RS: 18

INPUT

Description: 136

Station Elevation Data

num= 51

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
153.66	354.87	154.62	354.96	154.8	354.98	159.5	355.03	159.83	354.99
160.26	354.94	161.61	354.77	163.22	354.59	166.96	354.16	168.5	354
169.5	353.32	171.45	352	173.34	350.79	174.57	350	176.32	348.98
178.05	348	180.32	347.6	181.54	347.35	182.92	347.03	183.53	346.92
185.58	346.63	186.19	346.56	186.7	346.47	191.54	346.46	191.62	346.47
192.57	346.62	195.03	347.02	195.75	347.11	203.63	348	206.21	348.44
214.58	350	218.49	351.2	221.43	352	224.51	353.31	226.17	354
241.48	354	247.23	353.84	271.41	353	341.82	352.56	359.47	352.52
372.6	353.17	378.82	353.59	383.68	354	386.12	355.14	387.97	356
389.81	356.86	396.55	360	398.43	360	448.3	359.23	456.24	359.12
470.14	358.96								

Manning's n Values

num= 3

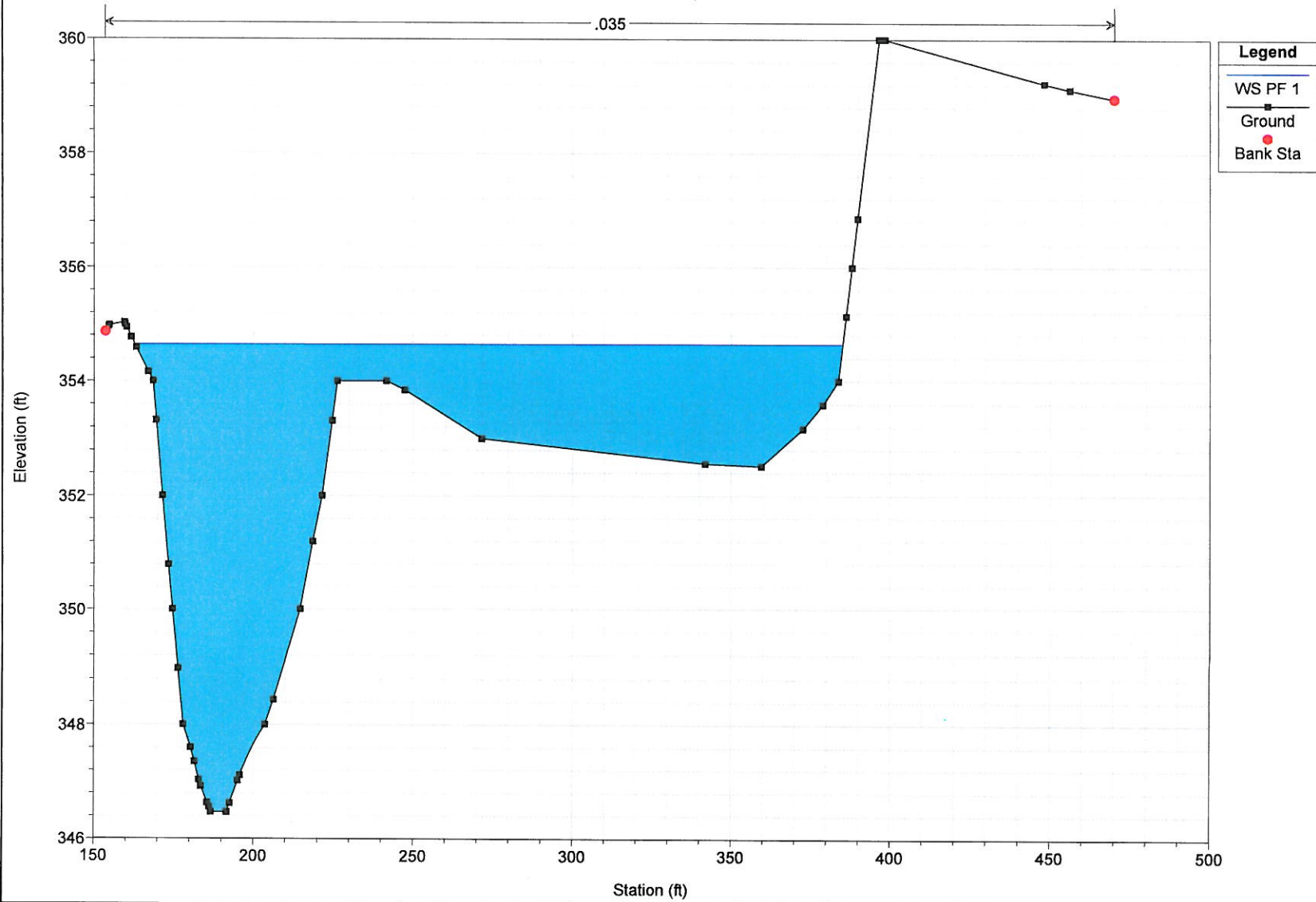
Sta	n Val	Sta	n Val	Sta	n Val
.035	153.66	.035	470.14	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	153.66	470.14		25	25	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 356.02	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.37	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 354.65	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 354.65	* Flow Area (sq ft)		* 574.82	
* E.G. Slope (ft/ft)	* 0.014074	* Area (sq ft)		* 574.82	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 222.40	* Top Width (ft)		* 222.40	
* Vel Total (ft/s)	* 9.40	* Avg. Vel. (ft/s)		* 9.40	
* Max Chl Dpth (ft)	* 8.19	* Hydr. Depth (ft)		* 2.58	
* Conv. Total (cfs)	* 45539.7	* Conv. (cfs)		* 45539.7	
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)		* 225.49	
* Min Ch El (ft)	* 346.46	* Shear (lb/sq ft)		* 2.24	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 470.14	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 4.43	
* C & E Loss (ft)		* Cum SA (acres)		* 1.59	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012
RS = 18



CROSS SECTION
REACH: Reach-1

RS: 17

INPUT

Description: 137

Station Elevation Data num= 39

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
149.3	354.53	160.94	354.63	161.78	354.53	162.84	354.4	163.85	354.27
166.02	354	166.29	353.8	168.78	352	170.44	350.9	172.96	349.54
175.5	348	181.9	346.24	182.76	346	191.53	346	196.49	346.7
205.4	348	208.26	348.66	214.48	350	218.89	351.72	219.67	352
221.38	352.68	224.67	354	243.99	354	269.53	352.99	282.37	352.55
301.49	352.43	353.6	352.3	380.44	353.64	388.41	353.67	389.07	354
392.5	355.68	393.14	356	396.5	357.65	397.22	358	400.5	359.61
401.29	360	408.51	360	503.94	358.58	511.11	358.49		

Manning's n Values num= 3

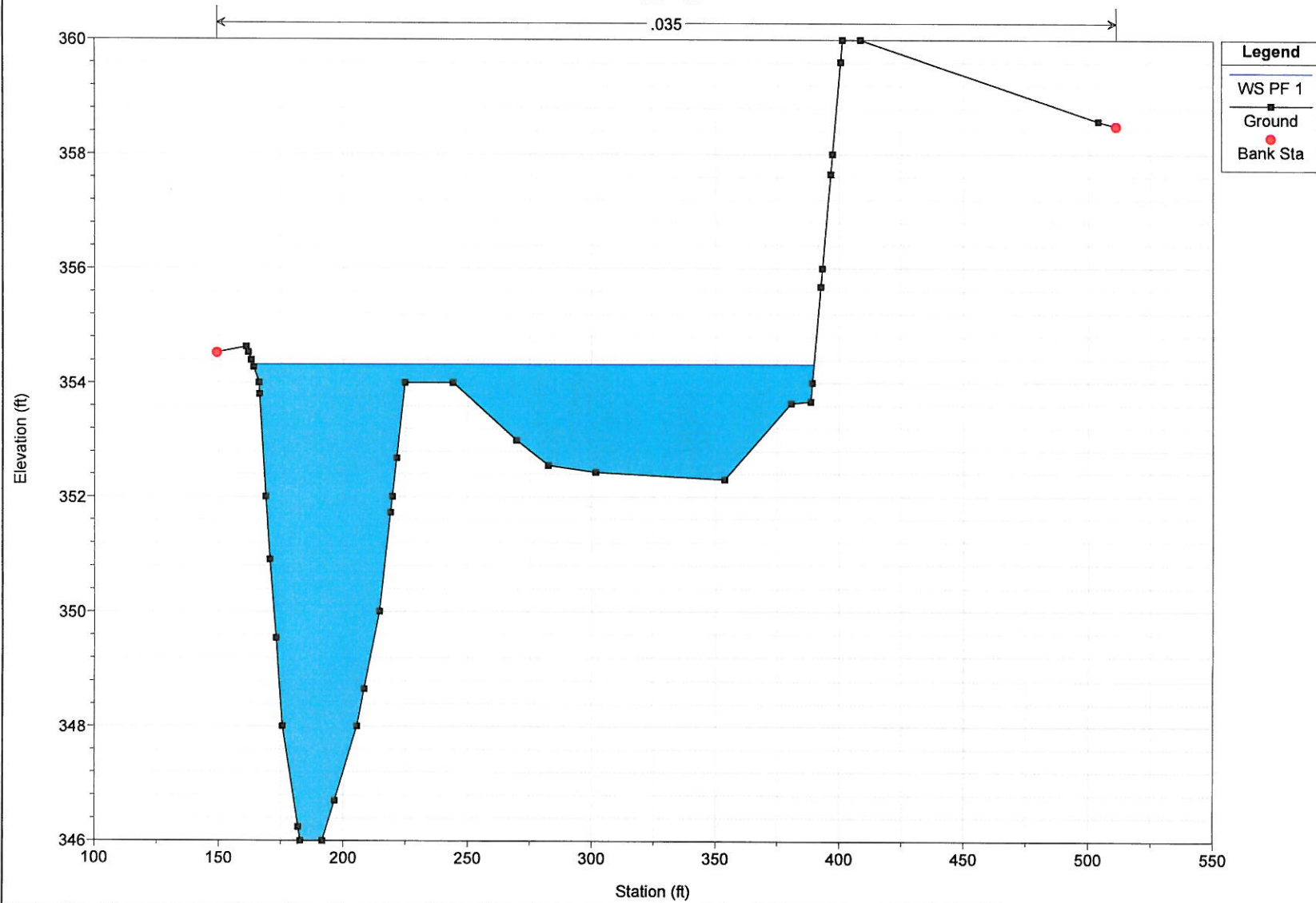
Sta	n Val	Sta	n Val	Sta	n Val
.035	149.3	.035	511.11	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	149.3	511.11		25 25	25	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

```
*****
* E.G. Elev (ft)      * 355.77 * Element      * Left OB * Channel * Right OB *
* Vel Head (ft)      * 1.44 * Wt. n-Val.   *      *      *      *
* W.S. Elev (ft)     * 354.33 * Reach Len. (ft) * 25.00 * 25.00 * 25.00 *
* Crit W.S. (ft)     * 354.43 * Flow Area (sq ft) *      * 561.34 *      *
* E.G. Slope (ft/ft) * 0.015617 * Area (sq ft) *      * 561.34 *      *
* Q Total (cfs)      * 5402.57 * Flow (cfs) *      * 5402.57 *      *
* Top Width (ft)     * 226.37 * Top Width (ft) *      * 226.37 *      *
* Vel Total (ft/s)   * 9.62 * Avg. Vel. (ft/s) *      * 9.62 *      *
* Max Chl Dpth (ft)  * 8.33 * Hydr. Depth (ft) *      * 2.48 *      *
* Conv. Total (cfs)  * 43232.0 * Conv. (cfs) *      * 43232.0 *      *
* Length Wtd. (ft)   * 25.00 * Wetted Per. (ft) *      * 229.75 *      *
* Min Ch El (ft)     * 346.00 * Shear (lb/sq ft) *      * 2.38 *      *
* Alpha              * 1.00 * Stream Power (lb/ft s) * 511.11 * 0.00 * 0.00 *
* Frctn Loss (ft)    * 0.35 * Cum Volume (acre-ft) *      * 4.11 *      *
* C & E Loss (ft)    * 0.01 * Cum SA (acres) *      * 1.46 *      *
*****
```

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012
RS = 17



CROSS SECTION
REACH: Reach-1

RS: 16

INPUT

Description: 138

Station Elevation Data

num=

41

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
143.43	354	143.6	354.02	143.75	354.06	162.38	354.22	163.73	354.07
164.31	354	165.23	353.29	166.96	352	169.12	350.44	169.78	350
170.7	349.6	173.93	348	180.24	346.18	180.82	346	194.78	346
205.35	347.77	206.63	348	207.18	348.16	214.04	350	218.02	351.59
219.1	352	219.89	352.31	223.84	354	238.2	354	243.8	353.78
293.1	352.23	294.92	352.21	297.46	352.2	345.58	352.08	346.03	352.08
346.61	352.09	347.46	352.09	347.74	352.08	359.13	352.07	390.23	352.2
393.89	354	394.71	354.4	402.03	358	402.71	358.33	406.11	360
413.94	360								

Manning's n Values

num=

3

Sta	n Val	Sta	n Val	Sta	n Val
.035	143.43	.035	413.94	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	143.43	413.94		25	25	.1	.3

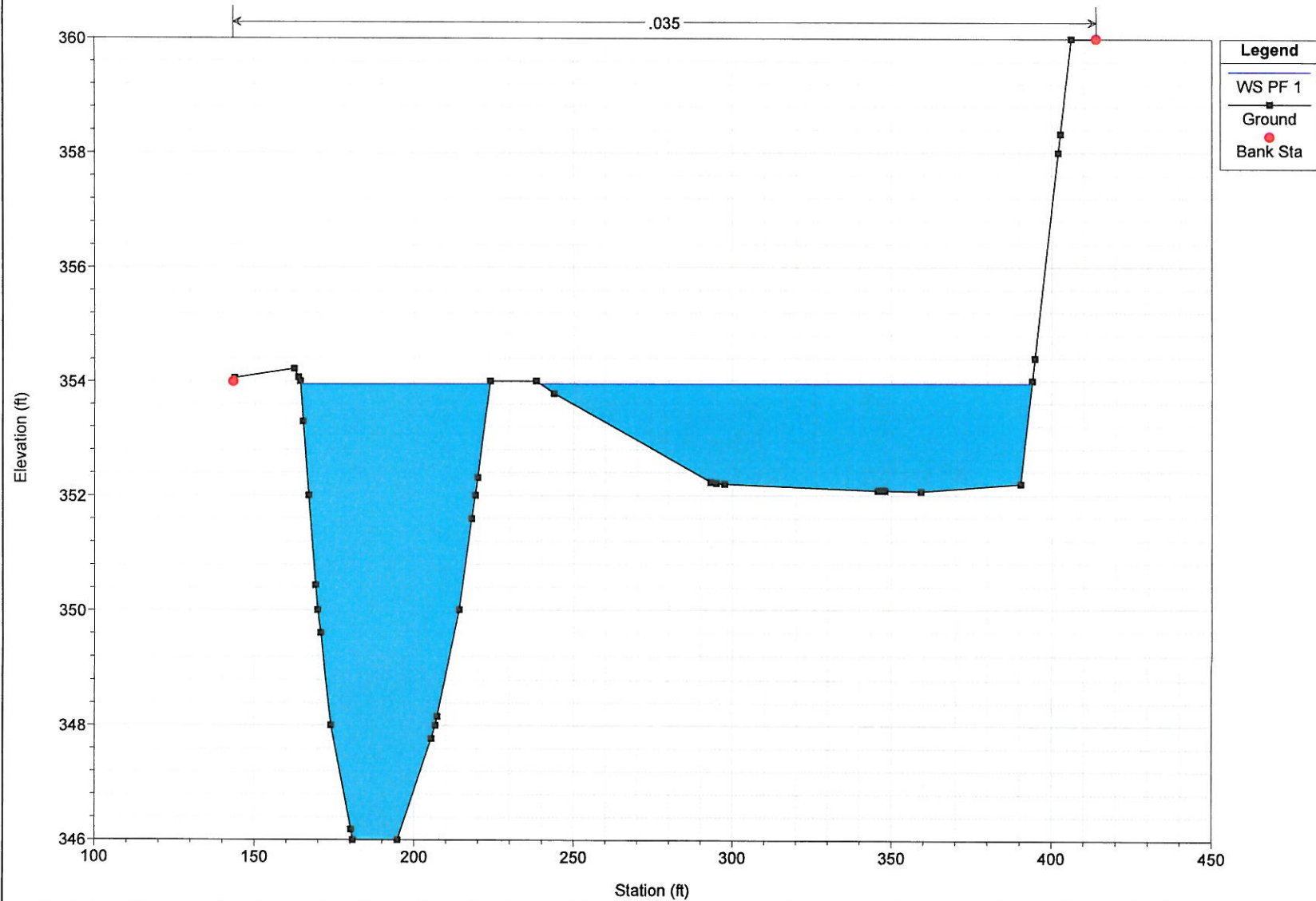
CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 355.42	* Element	* Left OB *	* Channel *	* Right OB *
* Vel Head (ft)	* 1.46	* Wt. n-Val.	* *	* 0.035 *	* *
* W.S. Elev (ft)	* 353.96	* Reach Len. (ft)	* 25.00 *	* 25.00 *	* 25.00 *
* Crit W.S. (ft)	* 354.14	* Flow Area (sq ft)	* *	* 557.07 *	* *
* E.G. Slope (ft/ft)	* 0.014901	* Area (sq ft)	* *	* 557.07 *	* *
* Q Total (cfs)	* 5402.57	* Flow (cfs)	* *	* 5402.57 *	* *
* Top Width (ft)	* 213.93	* Top Width (ft)	* *	* 213.93 *	* *
* Vel Total (ft/s)	* 9.70	* Avg. Vel. (ft/s)	* *	* 9.70 *	* *
* Max Chl Dpth (ft)	* 7.96	* Hydr. Depth (ft)	* *	* 2.60 *	* *
* Conv. Total (cfs)	* 44258.6	* Conv. (cfs)	* *	* 44258.6 *	* *
* Length Wtd. (ft)	* *	* Wetted Per. (ft)	* *	* 217.61 *	* *
* Min Ch El (ft)	* 346.00	* Shear (lb/sq ft)	* *	* 2.38 *	* *
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 413.94 *	* 0.00 *	* 0.00 *
* Frctn Loss (ft)	* 0.37	* Cum Volume (acre-ft)	* *	* 3.79 *	* *
* C & E Loss (ft)	* 0.05	* Cum SA (acres)	* *	* 1.34 *	* *

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012

RS = 16

.035



CROSS SECTION
REACH: Reach-1

RS: 15

INPUT

Description: 139

Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
141.74	354	162.25	354	163.89	352.84	165.13	352	166.72	350.88
167.98	350	171.9	348	177.69	346.13	178.09	346	203.31	346
206.47	347.28	208.01	348	210.29	348.93	218.02	351.72	218.84	352
219.82	352.35	224.37	354	230	354	295.12	352.22	297.09	352.16
302.74	352	305.62	351.98	317.63	351.95	321.25	351.96	323.38	351.98
324.14	352	327.44	352.01	333.08	352.01	335.97	352	336.18	352
346.79	351.93	350.42	351.92	353.8	351.92	356.8	351.95	358.48	351.98
359.14	352	394.21	352	395.17	352.47	398.27	354	399.27	354.49
402.32	356	403.36	356.51	406.38	358	407.71	358.66	410.44	360
419.36	360								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
.035	141.74	.035	419.36	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	141.74	419.36		25	25	.1	.3

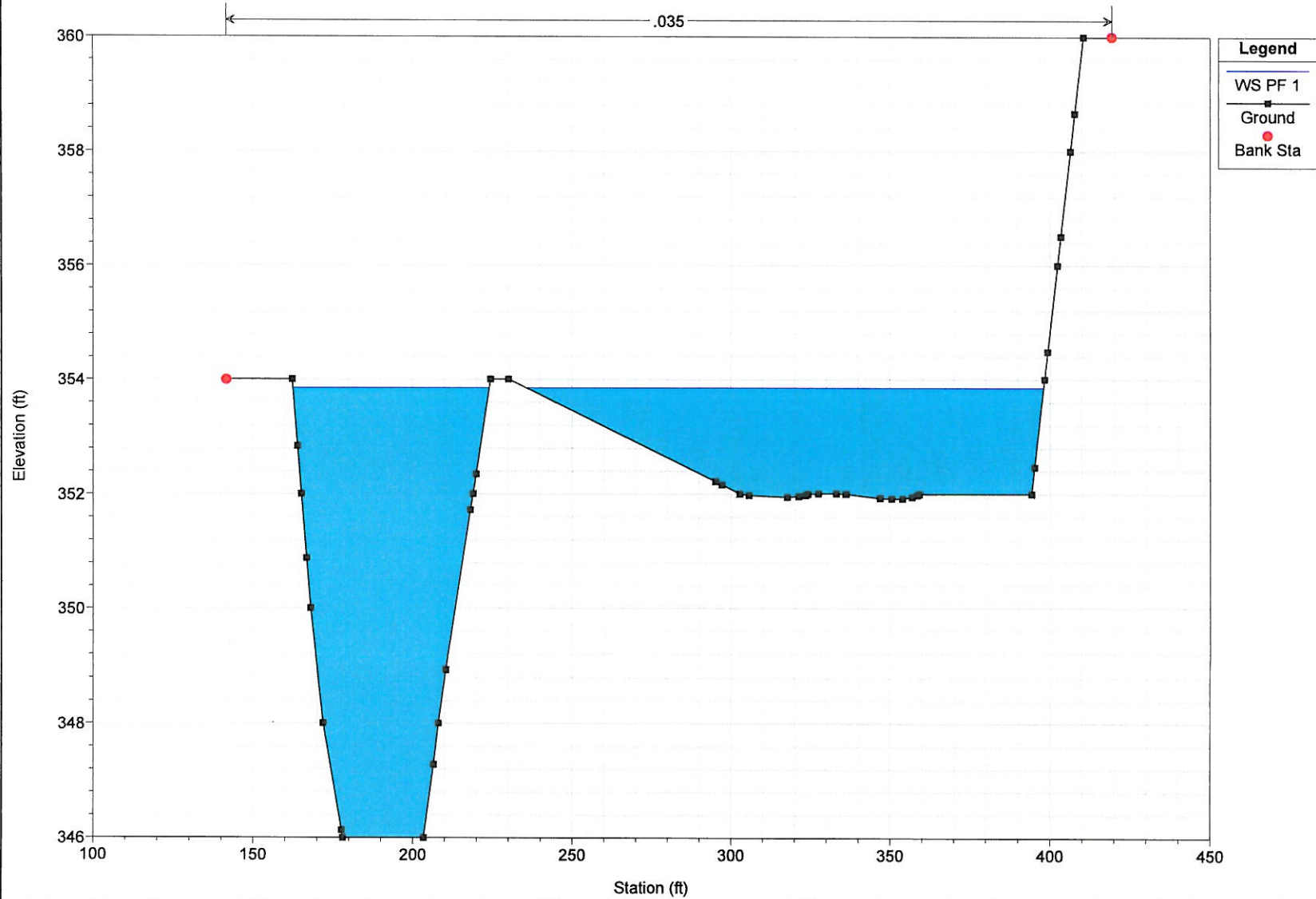
CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 355.18	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.32	* Wt. n-Val.	* 25.00	* 0.035	* 25.00
* W.S. Elev (ft)	* 353.86	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 353.86	* Flow Area (sq ft)	* 586.20	* 586.20	* 586.20
* E.G. Slope (ft/ft)	* 0.013395	* Area (sq ft)	* 586.20	* 586.20	* 586.20
* Q Total (cfs)	* 5402.57	* Flow (cfs)	* 5402.57	* 5402.57	* 5402.57
* Top Width (ft)	* 224.28	* Top Width (ft)	* 224.28	* 224.28	* 224.28
* Vel Total (ft/s)	* 9.22	* Avg. Vel. (ft/s)	* 9.22	* 9.22	* 9.22
* Max Chl Dpth (ft)	* 7.86	* Hydr. Depth (ft)	* 2.61	* 2.61	* 2.61
* Conv. Total (cfs)	* 46680.0	* Conv. (cfs)	* 46680.0	* 46680.0	* 46680.0
* Length Wtd. (ft)	* 228.20	* Wetted Per. (ft)	* 228.20	* 228.20	* 228.20
* Min Ch El (ft)	* 346.00	* Shear (lb/sq ft)	* 2.15	* 2.15	* 2.15
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 419.36	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.46	* Cum Volume (acre-ft)	* 3.46	* 3.46	* 3.46
* C & E Loss (ft)	* 1.21	* Cum SA (acres)	* 1.21	* 1.21	* 1.21

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012

RS = 15

.035



CROSS SECTION
REACH: Reach-1

RS: 14

INPUT

Description: 140

Station Elevation Data num= 62

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
143.18	354	161.27	354	163.76	352.14	163.94	352	164.09	351.88
166.48	350	168.69	348.88	170.22	348	174.84	346.65	177.32	346
205.6	346	208.79	347.69	209.33	348	210	348.32	213.38	350
218.83	351.94	219.02	352	219.35	352.11	219.66	352.23	220.04	352.35
224.13	353.74	227.64	353.86	229.24	353.8	231.65	353.69	238.66	353.38
242.88	353.18	274.86	352.29	277.48	352.27	323.58	352	331.46	351.92
336.51	351.86	337.86	351.83	338.29	351.81	338.87	351.8	339.9	351.79
342.97	351.77	345.3	351.77	345.84	351.78	346.17	351.79	348.86	351.79
351.79	351.77	352.71	351.76	353.57	351.76	354.33	351.77	354.76	351.78
355.46	351.8	356.73	351.82	359.36	351.84	362.42	351.85	363.93	351.84
384.59	352	398.4	352	400.82	353.19	402.45	354	404.91	355.21
406.51	356	409.01	357.23	410.56	358	413.69	359.54	414.62	360
424.77	360	447.19	359.68						

Manning's n Values num= 3

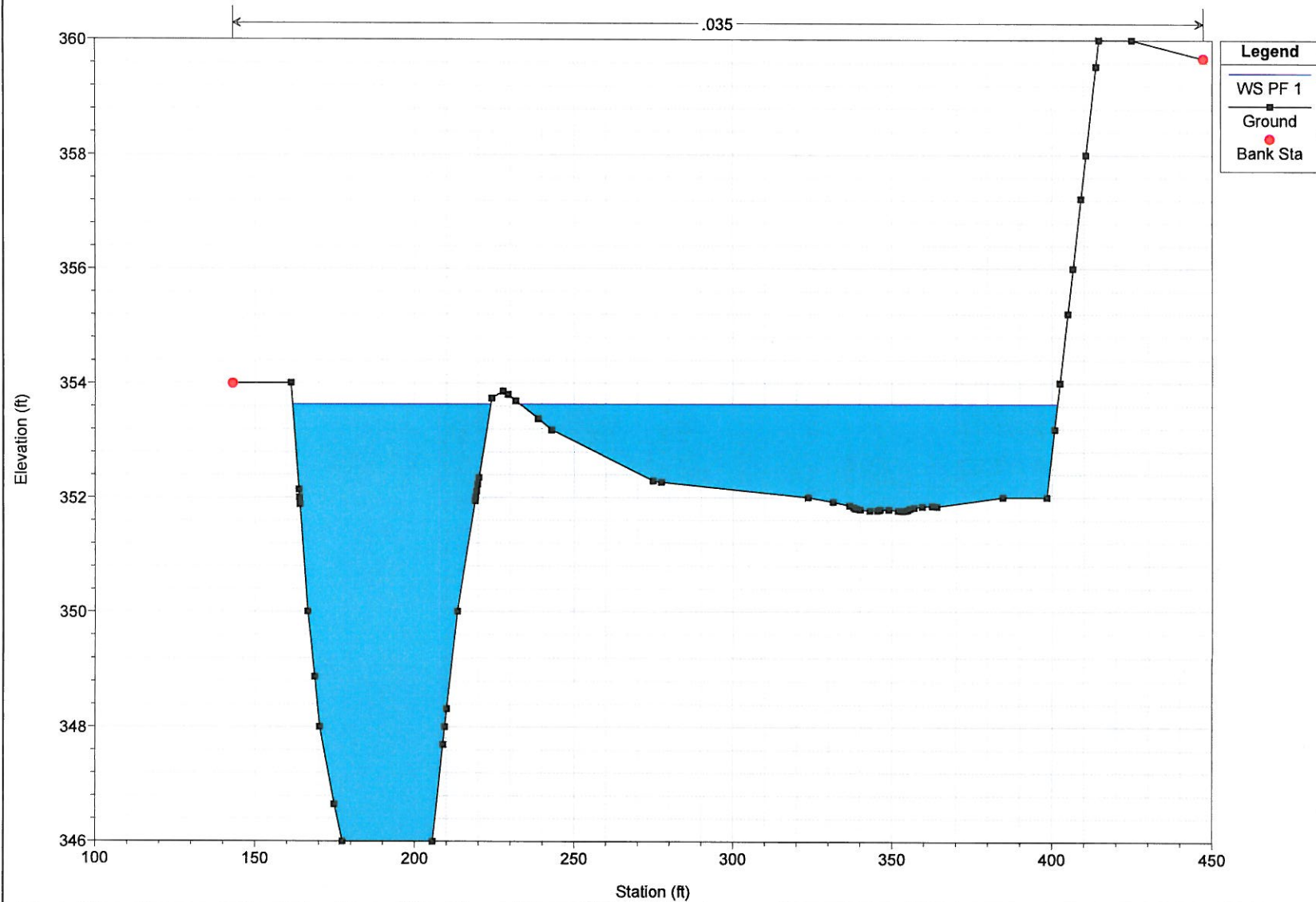
Sta	n Val	Sta	n Val	Sta	n Val
.035	143.18	.035	447.19	.035	

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
143.18	447.19	25	25	25	.1		.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 354.95	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.30	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 353.64	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 353.64	* Flow Area (sq ft)		* 589.33	
* E.G. Slope (ft/ft)	* 0.013690	* Area (sq ft)		* 589.33	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 231.05	* Top Width (ft)		* 231.05	
* Vel Total (ft/s)	* 9.17	* Avg. Vel. (ft/s)		* 9.17	
* Max Chl Dpth (ft)	* 7.64	* Hydr. Depth (ft)		* 2.55	
* Conv. Total (cfs)	* 46173.6	* Conv. (cfs)		* 46173.6	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 235.07	
* Min Ch El (ft)	* 346.00	* Shear (lb/sq ft)		* 2.14	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 447.19	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 3.12	
* C & E Loss (ft)		* Cum SA (acres)		* 1.08	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012
RS = 14



CROSS SECTION
REACH: Reach-1

RS: 13

INPUT

Description: 141

Station Elevation Data

num= 52

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
143.29	354	161.26	354	161.86	353.47	163.52	352	164.81	350.8
165.71	350	166.09	349.65	167.74	348	173.16	346.79	176.86	346
199.84	346	206.31	347.39	208.47	348	209.81	348.45	214.34	350
218.7	351.7	219.44	352	245	352.38	249.65	352.44	252.97	352.45
253.89	352.45	255.31	352.43	255.44	352.42	256.76	352.4	258.97	352.39
263.63	352.39	265.44	352.38	312.21	352	315.1	351.96	323.1	351.93
339.78	351.65	394.23	351.95	400.83	352	402.58	352	406.46	353.91
406.63	354	410.56	355.93	410.69	356	414.65	357.95	414.74	358
415.22	358.23	415.75	358.26	416.09	358.26	420.12	359.04	420.86	359
422.72	359.18	423.81	359.26	424.76	359.31	425.67	359.34	428.17	359.33
429.01	359.29	447.74	359.07						

Manning's n Values

num= 3

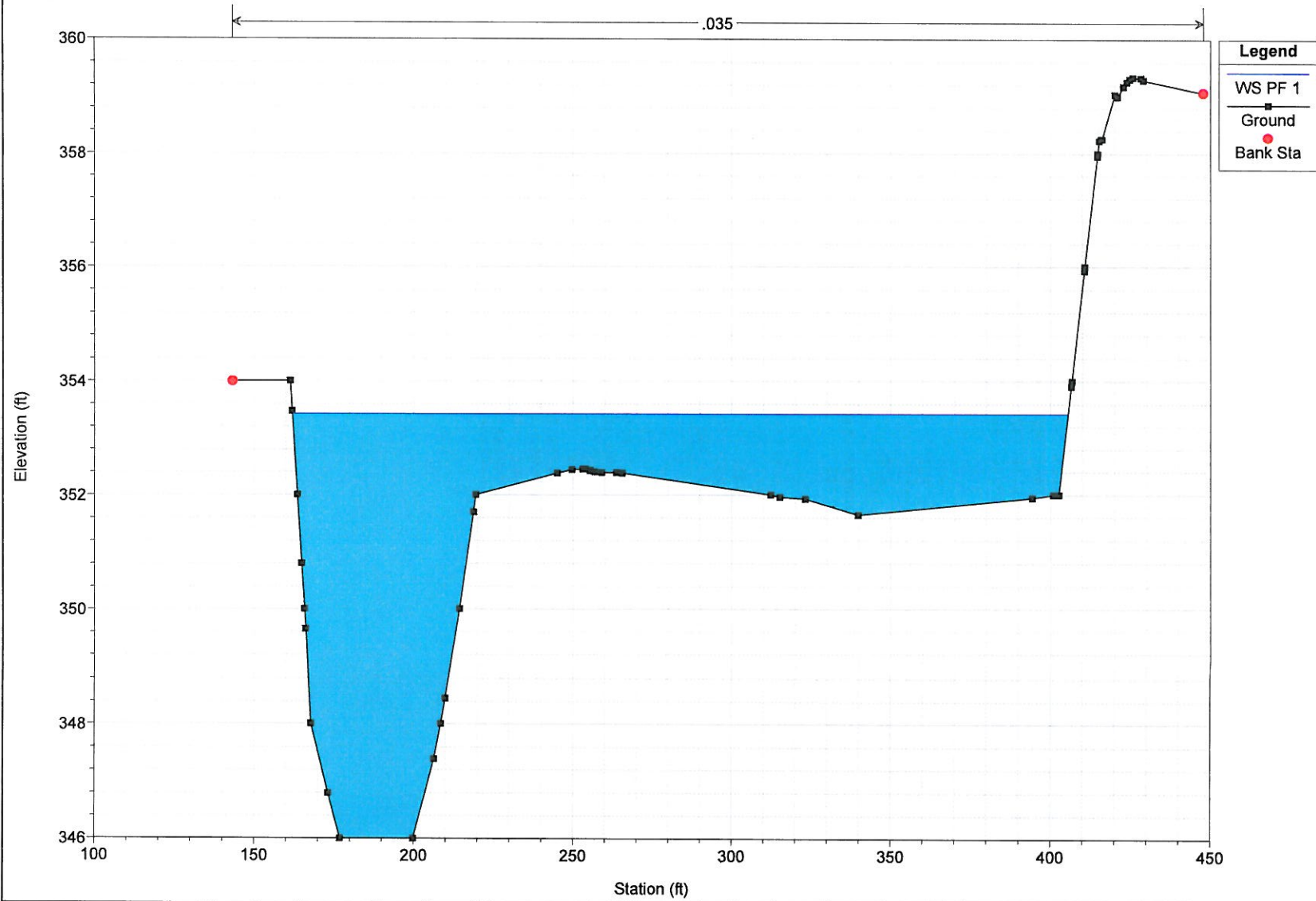
Sta	n Val	Sta	n Val	Sta	n Val
.035	143.29	.035	447.74	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	143.29	447.74		25	25	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 354.71	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.28	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 353.43	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 353.43	* Flow Area (sq ft)		* 595.60	
* E.G. Slope (ft/ft)	* 0.014133	* Area (sq ft)		* 595.60	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 243.57	* Top Width (ft)		* 243.57	
* Vel Total (ft/s)	* 9.07	* Avg. Vel. (ft/s)		* 9.07	
* Max Chl Dpth (ft)	* 7.43	* Hydr. Depth (ft)		* 2.45	
* Conv. Total (cfs)	* 45444.0	* Conv. (cfs)		* 45444.0	
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)		* 247.21	
* Min Ch El (ft)	* 346.00	* Shear (lb/sq ft)		* 2.13	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 447.74	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 2.78	
* C & E Loss (ft)		* Cum SA (acres)		* 0.95	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012
RS = 13



CROSS SECTION
REACH: Reach-1

RS: 12

INPUT

Description: 142

Station Elevation Data num= 69

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
142.2	354	149.86	354	153.09	353.62	157.53	353.15	158.8	353.21
159.54	354	160.76	354	161.04	353.71	163.11	352	163.85	351.27
165.06	350	166.34	348.72	167.03	348	172.04	346.48	172.85	346
193.55	346	194.4	346.11	202.27	347.05	209.12	348	211.62	348.8
215.08	350	218.07	351.17	220.41	352	228.62	352.11	235.2	352.21
249.8	352.25	253.81	352.25	260.06	352.15	260.63	352.1	266.46	352.05
276.14	352	278.7	352	291.77	351.9	296.54	351.9	304.15	351.81
316.1	351.59	316.75	351.58	317.14	351.57	317.73	351.57	318.97	351.55
406.91	352	410.51	353.77	410.97	354	412.29	354.65	415.13	356
419.83	357.23	422.41	357.5	425.26	357.66	426.06	357.79	426.5	357.8
426.78	357.8	428.64	357.42	433.92	357.38	434.72	357.38	474.9	354.59
535.88	351.44	538.01	351.35	543.24	351.15	546.4	351.44	547.18	351.51
550.25	352	551.99	352.43	553.99	354	560.64	355.99	560.71	356
565.16	356.91	566.83	357.26	568.31	357.2	568.59	357.49		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
.035	142.2	.035	568.59	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	142.2	568.59		25	25	.1	.3

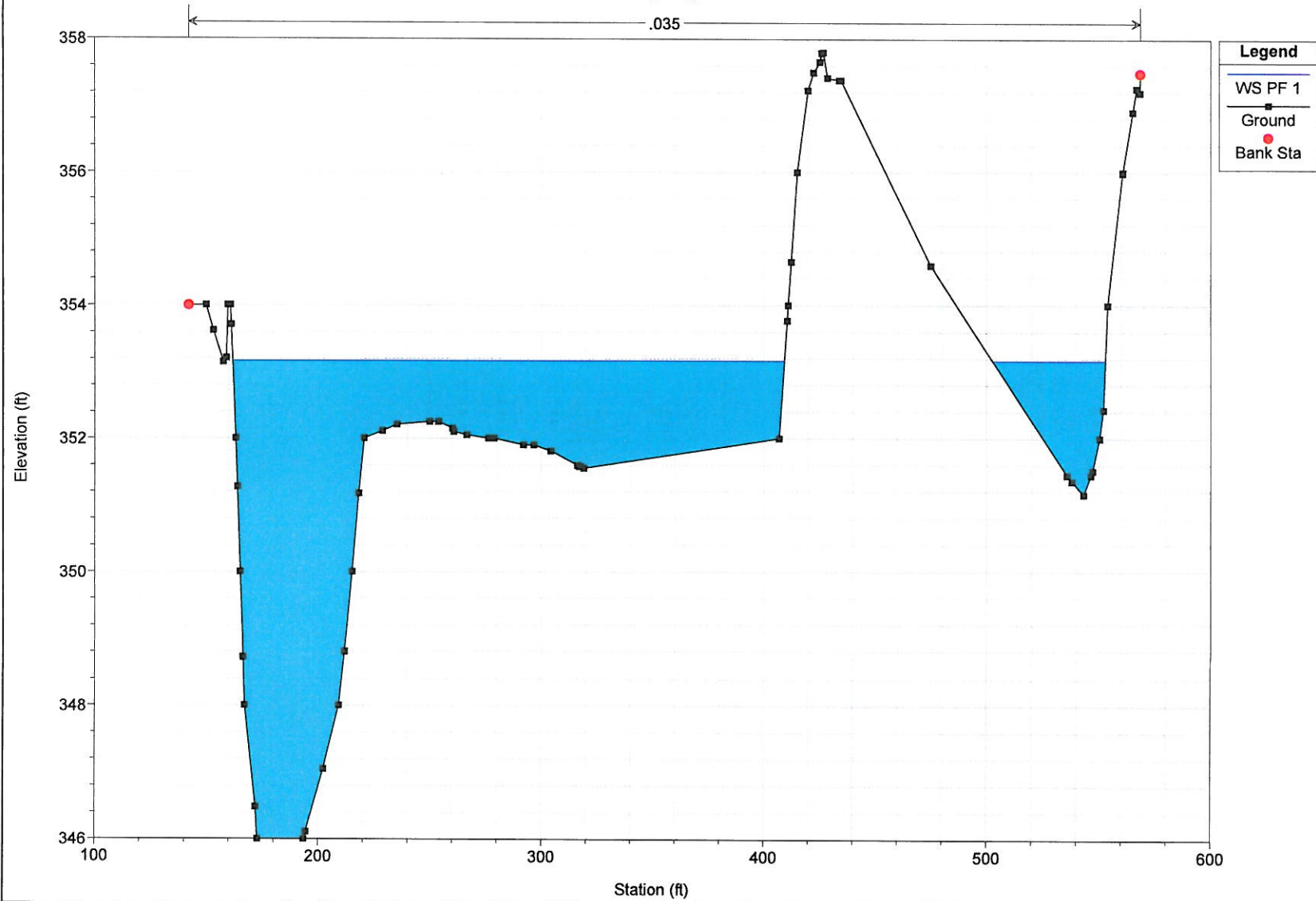
CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 354.33	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.16	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 353.17	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 353.20	* Flow Area (sq ft)		* 624.96	
* E.G. Slope (ft/ft)	* 0.015773	* Area (sq ft)		* 624.96	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 298.76	* Top Width (ft)		* 298.76	
* Vel Total (ft/s)	* 8.64	* Avg. Vel. (ft/s)		* 8.64	
* Max Chl Dpth (ft)	* 7.17	* Hydr. Depth (ft)		* 2.09	
* Conv. Total (cfs)	* 43017.1	* Conv. (cfs)		* 43017.1	
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)		* 302.73	
* Min Ch El (ft)	* 346.00	* Shear (lb/sq ft)		* 2.03	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 568.59	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.36	* Cum Volume (acre-ft)		* 2.43	
* C & E Loss (ft)	* 0.05	* Cum SA (acres)		* 0.79	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012

RS = 12

.035



CROSS SECTION
REACH: Reach-1

RS: 11

INPUT

Description: 143

Station Elevation Data		num=		40							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
149.58	353.2	161.6	352	162.61	350.97	163.61	350	164.21	349.41		
165.63	348	166.92	346.7	167.54	346	204.8	346	205.77	346.31		
210.62	348	214.55	349.36	216.25	350	221.04	351.72	221.8	352		
222.39	352.16	226.7	352	246.63	352.05	253.74	352.05	256.88	352		
269.53	352	272.36	351.98	280.15	351.89	280.51	351.87	285.01	351.76		
286.99	351.75	288.13	351.72	288.69	351.72	291.96	351.71	293.9	351.71		
294.62	351.7	368.67	351.79	371.78	351.8	411.27	352	413.08	352.89		
413.55	353.06	415.8	354	415.92	354.06	416.05	354.07	421.47	354.26		

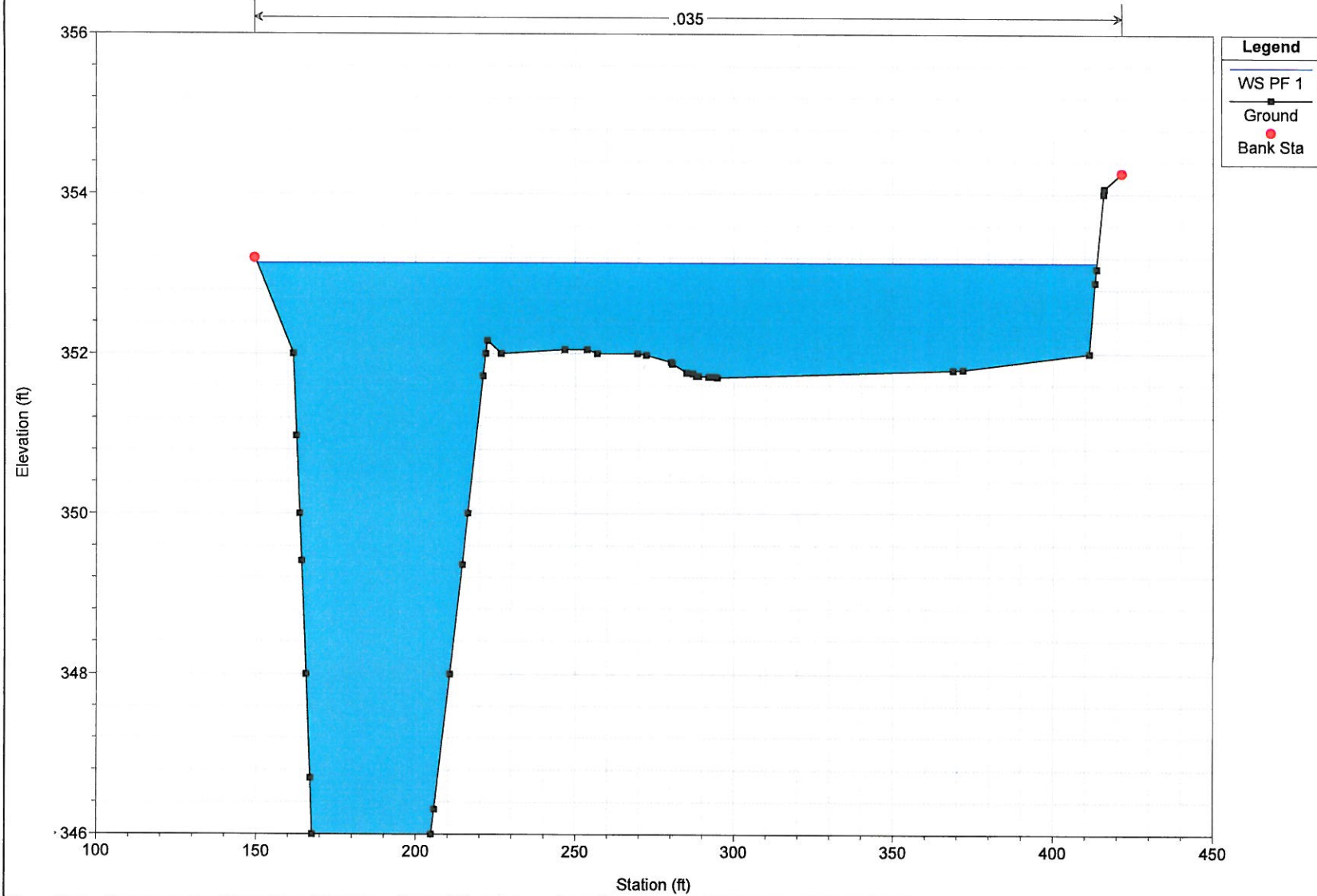
Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
.035	149.58	.035	421.47	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	149.58	421.47		25	25	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 354.35	* Element	* Left OB *	* Channel *	* Right OB *
* Vel Head (ft)	* 1.21	* Wt. n-Val.	* *	* 0.035 *	* *
* W.S. Elev (ft)	* 353.14	* Reach Len. (ft)	* 25.00 *	* 25.00 *	* 25.00 *
* Crit W.S. (ft)	* 353.14	* Flow Area (sq ft)	* *	* 611.01 *	* *
* E.G. Slope (ft/ft)	* 0.014413	* Area (sq ft)	* *	* 611.01 *	* *
* Q Total (cfs)	* 5402.57	* Flow (cfs)	* *	* 5402.57 *	* *
* Top Width (ft)	* 263.53	* Top Width (ft)	* *	* 263.53 *	* *
* Vel Total (ft/s)	* 8.84	* Avg. Vel. (ft/s)	* *	* 8.84 *	* *
* Max Chl Dpth (ft)	* 7.14	* Hydr. Depth (ft)	* *	* 2.32 *	* *
* Conv. Total (cfs)	* 45001.5	* Conv. (cfs)	* *	* 45001.5 *	* *
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)	* *	* 267.41 *	* *
* Min Ch El (ft)	* 346.00	* Shear (lb/sq ft)	* *	* 2.06 *	* *
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 421.47 *	* 0.00 *	* 0.00 *
* Frctn Loss (ft)	* 0.38	* Cum Volume (acre-ft)	* *	* 2.08 *	* *
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* *	* 0.63 *	* *

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012
RS = 11



CROSS SECTION
REACH: Reach-1

RS: 10

INPUT

Description: 144

Station Elevation Data

num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
134.76	353.04	148.6	352.81	160.85	352	162.12	350.62	162.72	350
163.95	348.48	164.41	348	166.03	346.14	166.15	346	202.23	346
205.94	346.62	212.06	348	214.79	349.21	216.6	350	220.01	351.53
221.16	352	223.76	353.15	225.58	354	226.39	354.21	227.82	354.38
229.69	354.42	231.6	354.36	233.09	354.19	234.21	354	235.3	353.83
239.96	353.18	242.85	352.95	248.89	352.29	250.71	352	254.03	351.97
256.42	351.93	256.87	351.92	257.58	351.92	264.42	351.9	268.47	351.88
397.76	352	411.58	350.85	413.95	350.65	414.99	350.56	418.28	350
481	350	483.71	350.17	494.6	350.87	496.12	351	496.37	351.02
530.95	354								

Manning's n Values

num= 3

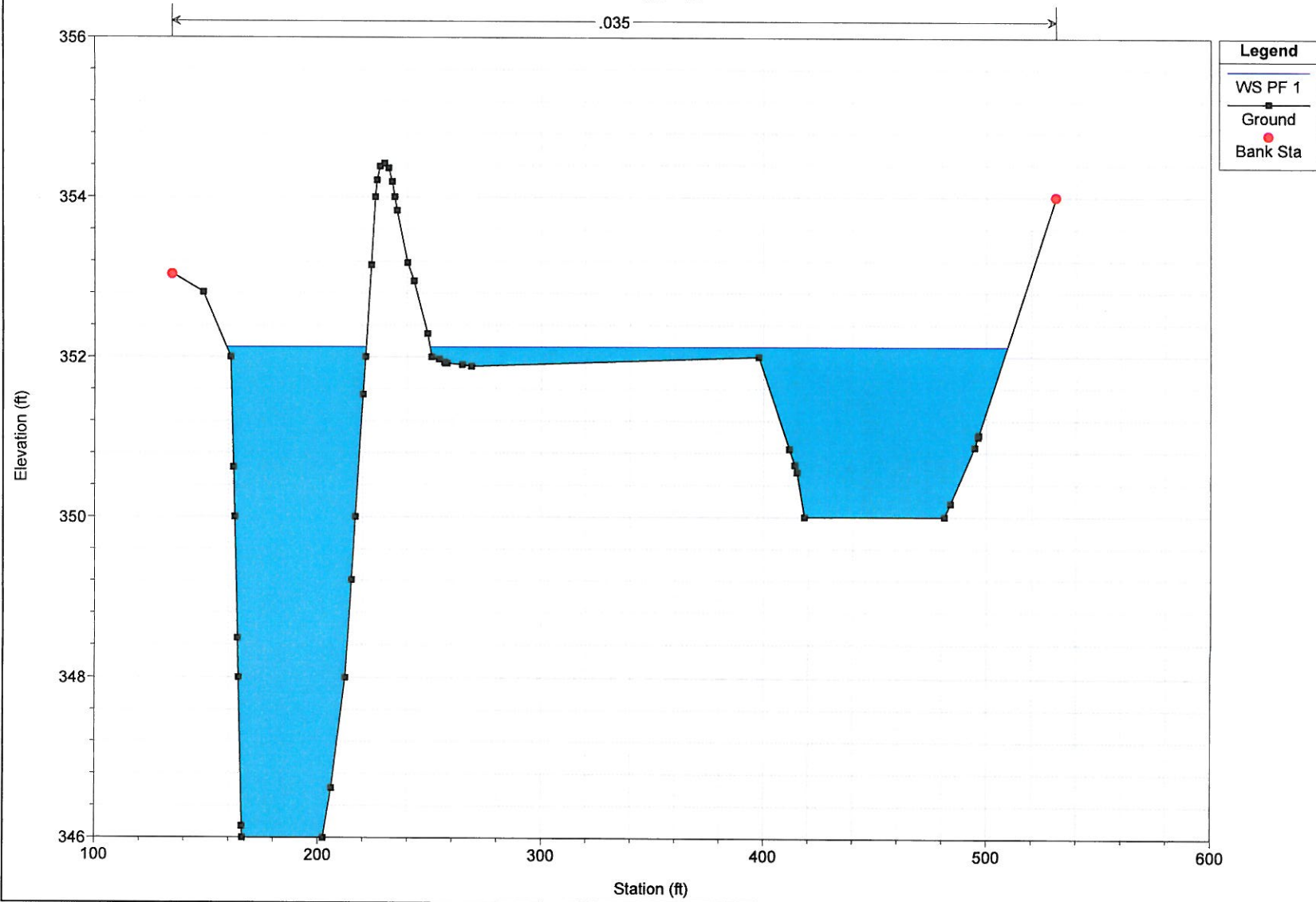
Sta	n Val	Sta	n Val	Sta	n Val
.035	134.76	.035	530.95	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	134.76	530.95		25	25	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 353.79	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.66	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 352.13	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 352.56	* Flow Area (sq ft)		* 522.40	
* E.G. Slope (ft/ft)	* 0.031626	* Area (sq ft)		* 522.40	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 321.87	* Top Width (ft)		* 321.87	
* Vel Total (ft/s)	* 10.34	* Avg. Vel. (ft/s)		* 10.34	
* Max Chl Dpth (ft)	* 6.13	* Hydr. Depth (ft)		* 1.62	
* Conv. Total (cfs)	* 30379.3	* Conv. (cfs)		* 30379.3	
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)		* 325.86	
* Min Ch El (ft)	* 346.00	* Shear (lb/sq ft)		* 3.17	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 530.95	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.51	* Cum Volume (acre-ft)		* 1.75	
* C & E Loss (ft)	* 0.04	* Cum SA (acres)		* 0.46	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012
RS = 10



CROSS SECTION
REACH: Reach-1

RS: 9

INPUT

Description: 145

Station Elevation Data

num= 52

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
133.86	354.07	134.52	354.09	135.92	354.1	137.47	354.08	138.66	354.05
139.8	354	151.31	354	154.5	353.99	155.22	354	166.82	354
167.66	353.59	170.53	352	172.79	350.95	174.6	350	176.87	348.87
178.68	348	181.49	346.63	182.77	346	204.2	346	206.32	346.59
211.54	348	213.37	348.81	218.72	351.26	220.41	352	221.82	352.61
224.85	354	225.84	354.35	226.73	354.64	226.8	354.65	226.86	354.65
228.2	354.57	229.71	354.49	231.56	354.42	234.22	354.34	234.86	354.31
235.57	354.28	236.28	354.23	236.98	354.14	237.99	354	243.18	352.45
244.61	352.26	246.1	352	272.24	352	315.47	349.21	318.67	349
348.6	349	348.92	349.05	369.54	350	408.48	352.82	410.49	353
411.75	353.11	421.79	354						

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
.035	133.86	.035	421.79	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	133.86	421.79		25	25	.1	.3

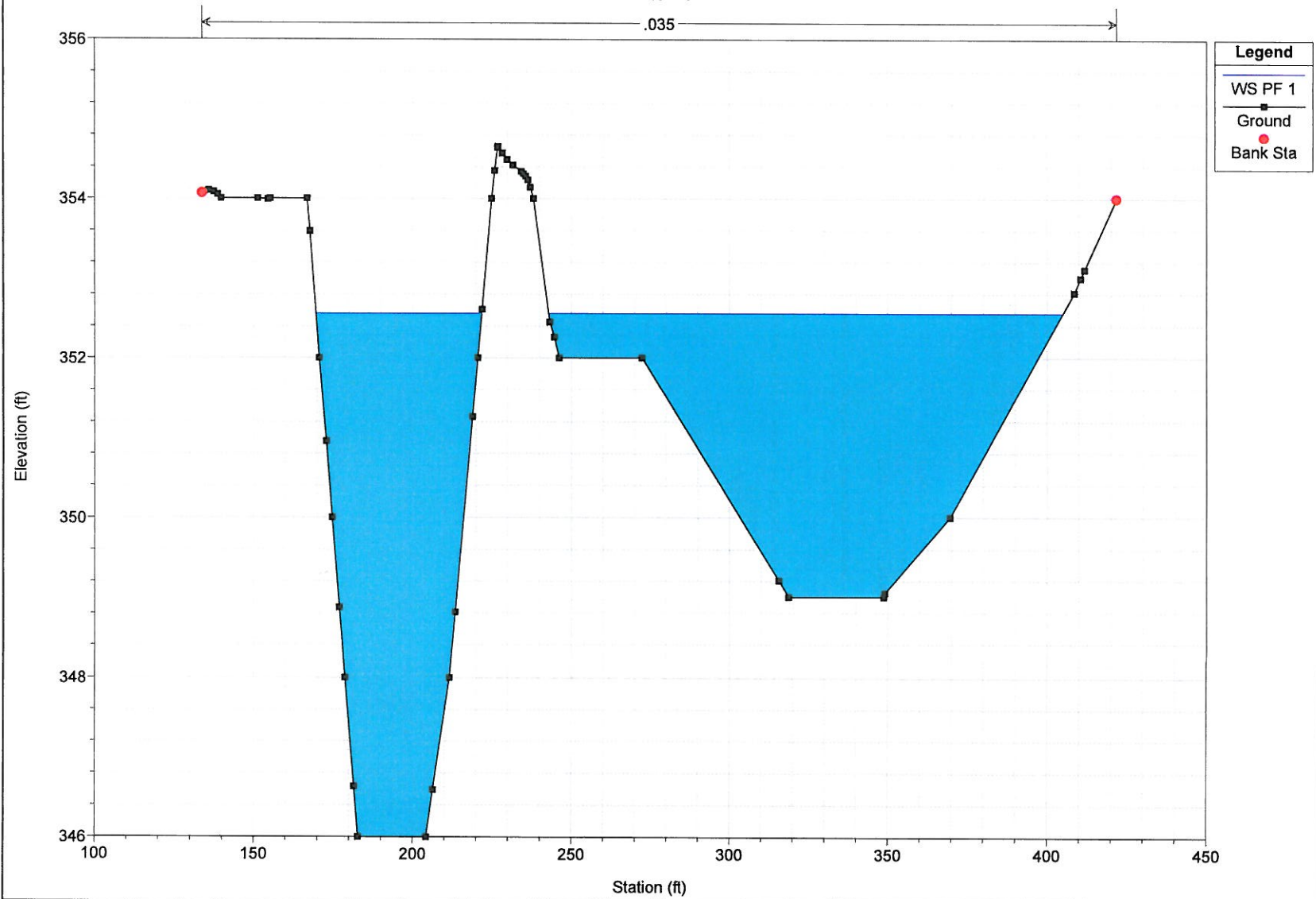
CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 353.93	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.37	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 352.56	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 352.56	* Flow Area (sq ft)	* 575.50		
* E.G. Slope (ft/ft)	* 0.013350	* Area (sq ft)	* 575.50		
* Q Total (cfs)	* 5402.57	* Flow (cfs)	* 5402.57		
* Top Width (ft)	* 214.33	* Top Width (ft)	* 214.33		
* Vel Total (ft/s)	* 9.39	* Avg. Vel. (ft/s)	* 9.39		
* Max Chl Dpth (ft)	* 6.56	* Hydr. Depth (ft)	* 2.69		
* Conv. Total (cfs)	* 46758.9	* Conv. (cfs)	* 46758.9		
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)	* 217.38		
* Min Ch El (ft)	* 346.00	* Shear (lb/sq ft)	* 2.21		
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 421.79	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.49	* Cum Volume (acre-ft)	* 1.44		
* C & E Loss (ft)	* 0.09	* Cum SA (acres)	* 0.31		

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012

RS = 9

.035



CROSS SECTION
REACH: Reach-1

RS: 8

INPUT

Description: 146

Station Elevation Data

num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
129.67	354.66	129.72	354.67	129.91	354.66	130.05	354.66	130.17	354.65
130.23	354.65	163.11	354	167.87	354	169.79	353.1	171.86	352
174.52	350.73	175.93	350	177.04	349.44	180.01	348	181.19	347.42
184.02	346	208.37	346	209.19	346.24	209.83	346.41	210.93	346.64
215.62	347.85	217.33	347.85	218.73	347.77	219.36	347.63	219.97	347.28
221.44	347.02	221.72	347.2	221.75	347.31	222.04	347.44	222.66	347.61
228.31	348.87	228.53	348.91	228.66	348.93	228.75	348.95	229.03	349
230.83	349	231.65	349.05	261.78	351	262.29	351.38	266.58	351.31
285.96	352.56	291.43	352.92	292.74	353	308.22	354	496.19	354

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
.035	129.67	.035	496.19	.035	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	129.67	496.19		50	50	.1	.3

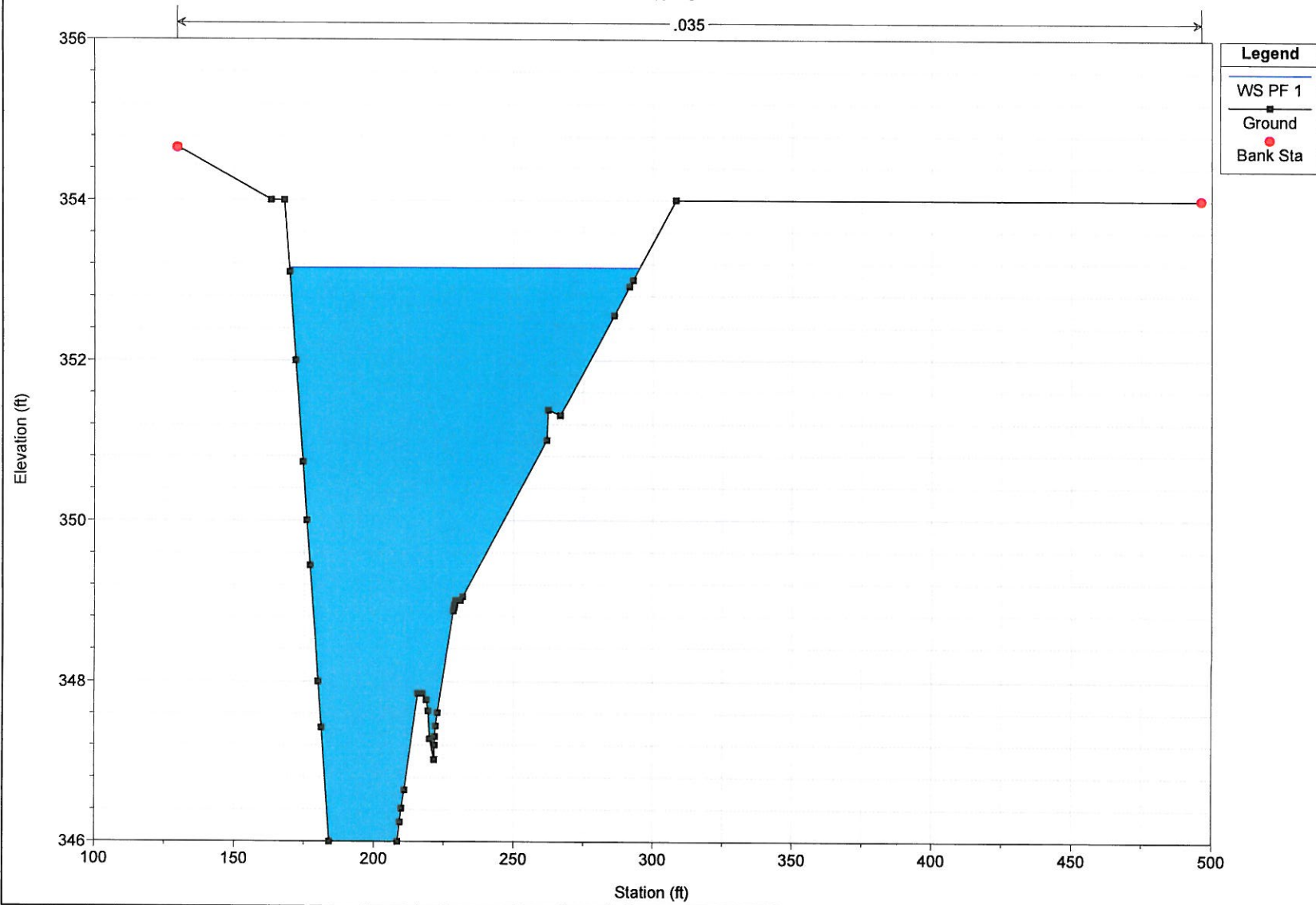
CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 355.11	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.95	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 353.16	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 353.16	* Flow Area (sq ft)		* 481.57	
* E.G. Slope (ft/ft)	* 0.011950	* Area (sq ft)		* 481.57	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 125.49	* Top Width (ft)		* 125.49	
* Vel Total (ft/s)	* 11.22	* Avg. Vel. (ft/s)		* 11.22	
* Max Chl Dpth (ft)	* 7.16	* Hydr. Depth (ft)		* 3.84	
* Conv. Total (cfs)	* 49422.5	* Conv. (cfs)		* 49422.5	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 128.13	
* Min Ch El (ft)	* 346.00	* Shear (lb/sq ft)		* 2.80	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 496.19	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.32	* Cum Volume (acre-ft)		* 1.13	
* C & E Loss (ft)	* 0.06	* Cum SA (acres)		* 0.21	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012

RS = 8

.035



CROSS SECTION
REACH: Reach-1

RS: 6

INPUT

Description: 148

Station Elevation Data

num= 43

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
103.66	354	166.32	354	167.5	353.38	169.81	352	170.66	351.34
173.14	350	174.18	349.29	176.93	348	178.71	347.24	181.08	346
182.04	345.19	193.73	345.05	197.15	344.79	199.66	344.64	201.36	344.51
202.91	344.42	203.13	344.4	203.43	344.37	203.51	344.36	203.56	344.33
207.08	344.32	207.39	344.37	207.61	344.43	207.66	344.44	207.75	344.45
207.85	344.46	208.14	344.55	208.29	344.58	208.87	344.64	209.03	344.66
209.17	344.69	209.24	344.81	209.38	344.85	211.8	346	214.05	347.21
217.14	348	220.32	349.28	221.49	350	225.17	351.34	226.08	352
227.78	353	229.18	354	333.94	354				

Manning's n Values

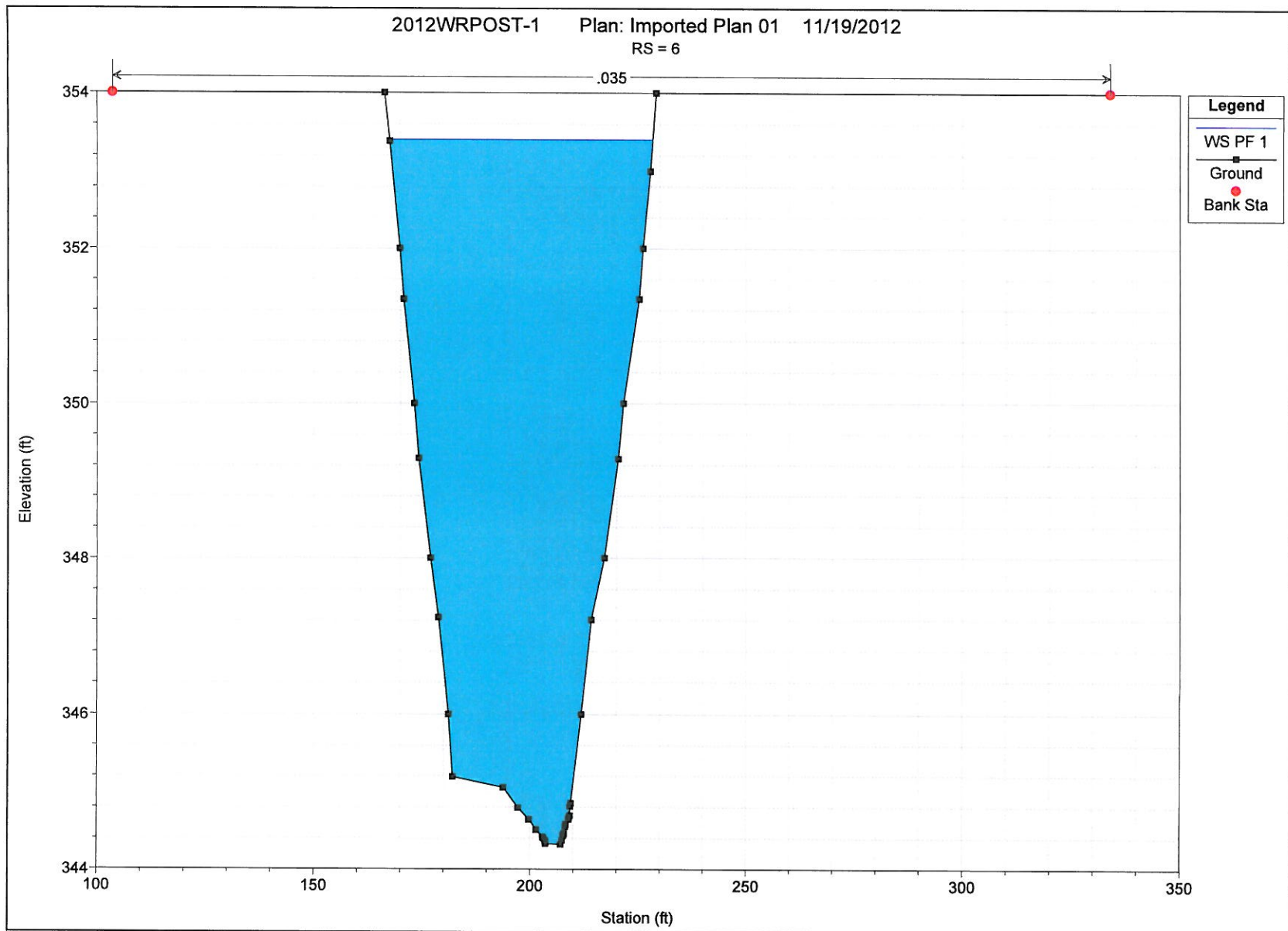
num= 3

Sta	n Val	Sta	n Val	Sta	n Val
103.66	.035	103.66	.035	333.94	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	103.66	333.94		25	25	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 356.53	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 3.13	* Wt. n-Val.	* *	* 0.035	* *
* W.S. Elev (ft)	* 353.40	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 353.40	* Flow Area (sq ft)	* *	* 380.72	* *
* E.G. Slope (ft/ft)	* 0.010627	* Area (sq ft)	* *	* 380.72	* *
* Q Total (cfs)	* 5402.57	* Flow (cfs)	* *	* 5402.57	* *
* Top Width (ft)	* 60.88	* Top Width (ft)	* *	* 60.88	* *
* Vel Total (ft/s)	* 14.19	* Avg. Vel. (ft/s)	* *	* 14.19	* *
* Max Chl Dpth (ft)	* 9.08	* Hydr. Depth (ft)	* *	* 6.25	* *
* Conv. Total (cfs)	* 52407.4	* Conv. (cfs)	* *	* 52407.4	* *
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)	* *	* 65.21	* *
* Min Ch El (ft)	* 344.32	* Shear (lb/sq ft)	* *	* 3.87	* *
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 333.94	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.56	* Cum Volume (acre-ft)	* *	* 0.64	* *
* C & E Loss (ft)	* 0.12	* Cum SA (acres)	* *	* 0.10	* *



CROSS SECTION
REACH: Reach-1

RS: 5

INPUT

Description: 149

Station Elevation Data

num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
110.5	354	167.68	354	169.34	353.18	170.42	352.73	171.41	352
173.63	350.27	174.05	350	174.75	349.58	177.43	348	180.28	346.45
181.36	346	181.79	345.65	184.79	344	207.02	344	211.18	345.67
211.94	346	213.63	346.72	215.04	347.27	216.87	348	218.61	348.69
220.91	349.58	222.06	350	224.98	351.18	226.88	352	228.39	352.85
229.2	353.25	229.53	353.46	229.67	353.59	229.72	353.81	229.81	353.84
229.95	353.87	230.06	353.9	230.14	353.91	230.27	353.92	230.39	353.91
230.8	353.91	230.89	353.9	231.05	353.88	231.76	353.83	232.06	353.8
232.5	353.78	233.1	353.74	234.63	353.66	235.63	353.61	237.9	353.49

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
110.5	.035	110.5	.035	237.9	.035

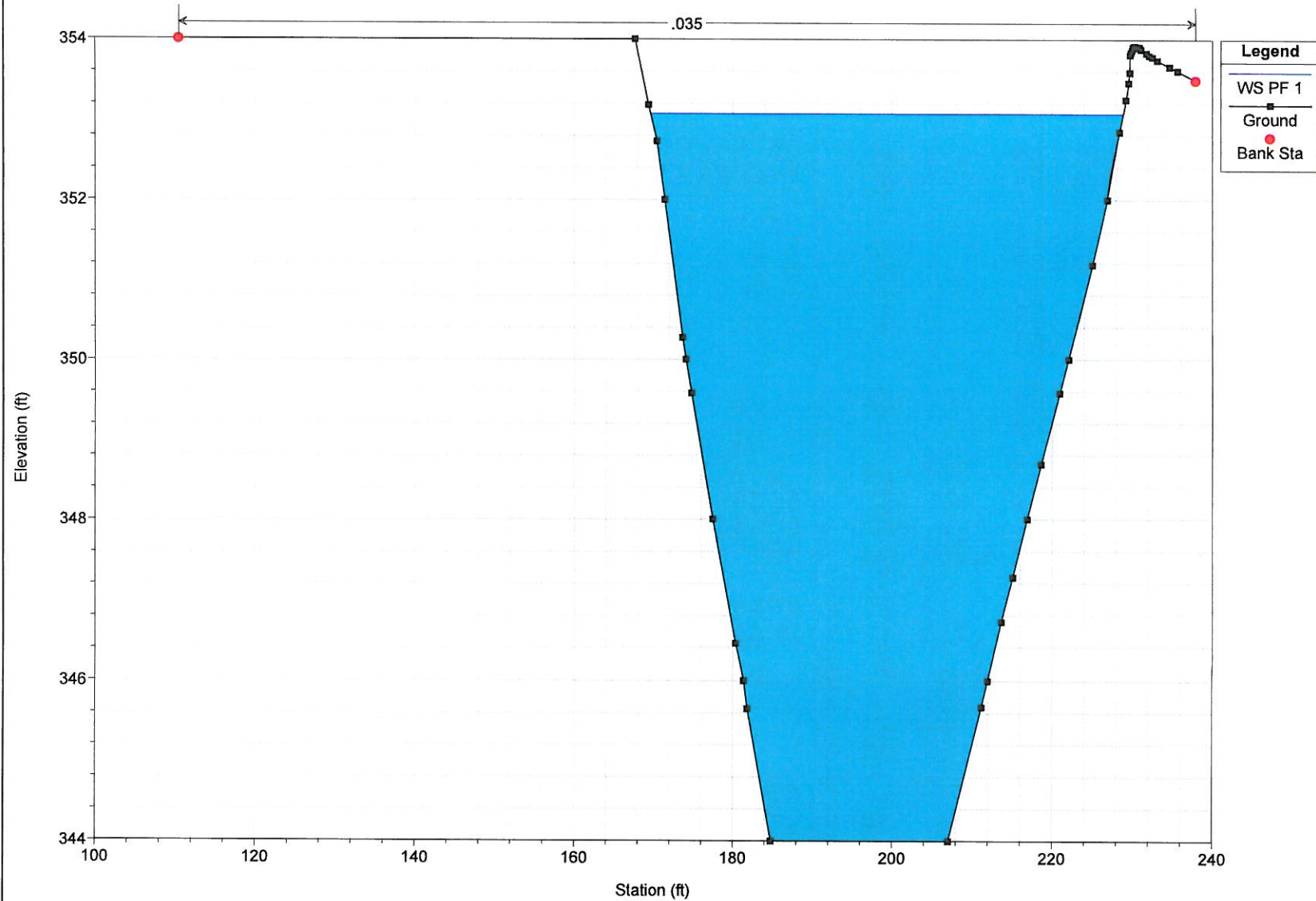
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	110.5	237.9		25	25	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 356.29	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 3.21	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 353.08	* Reach Len. (ft)	* 25.00	* 25.00	* 25.00
* Crit W.S. (ft)	* 353.10	* Flow Area (sq ft)		* 375.71	
* E.G. Slope (ft/ft)	* 0.010753	* Area (sq ft)		* 375.71	
* Q Total (cfs)	* 5402.57	* Flow (cfs)		* 5402.57	
* Top Width (ft)	* 59.26	* Top Width (ft)		* 59.26	
* Vel Total (ft/s)	* 14.38	* Avg. Vel. (ft/s)		* 14.38	
* Max Chl Dpth (ft)	* 9.08	* Hydr. Depth (ft)		* 6.34	
* Conv. Total (cfs)	* 52099.0	* Conv. (cfs)		* 52099.0	
* Length Wtd. (ft)	* 25.00	* Wetted Per. (ft)		* 63.65	
* Min Ch El (ft)	* 344.00	* Shear (lb/sq ft)		* 3.96	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 237.90	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.27	* Cum Volume (acre-ft)		* 0.42	
* C & E Loss (ft)	* 0.01	* Cum SA (acres)		* 0.07	

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012

RS = 5



CROSS SECTION
REACH: Reach-1

RS: 4

INPUT

Description: 150

Station Elevation Data num= 26

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
168.9	354.21	171.73	354.11	173.98	354	175.02	353.35	177.32	352
178.45	351.3	180.66	350	181.85	349.25	184.03	348	185.24	347.25
187.54	346	189.65	344.78	191.47	344	209.52	344	211.75	344.65
216.56	346	220.17	347.41	221.84	348	223.35	348.94	224.3	349.63
224.93	350	227.15	351.04	229.33	352	229.82	352.18	235.12	354
241.82	354								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
	.035	168.9	.035	241.82	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	168.9	241.82		25	25	.1	.3

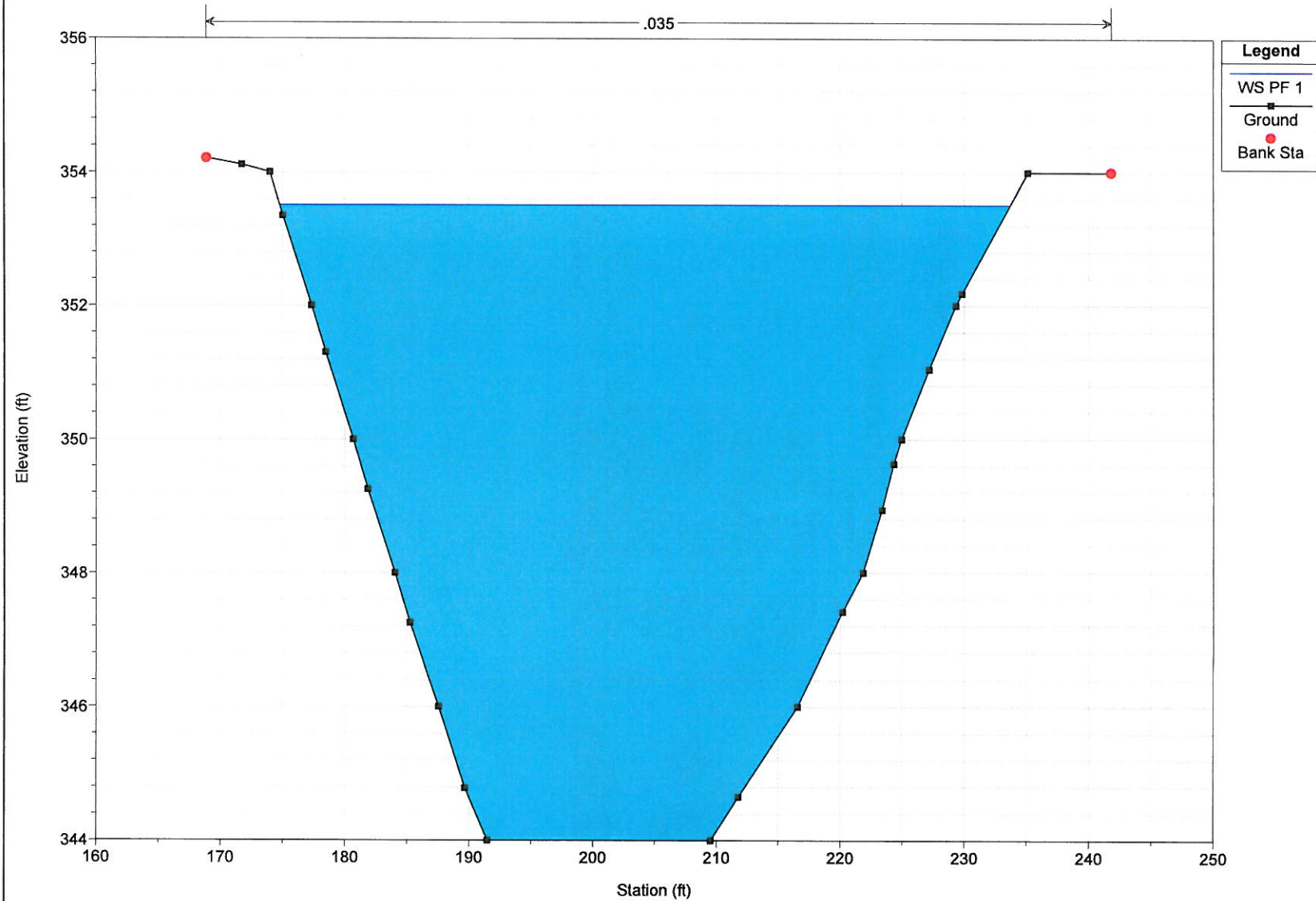
CROSS SECTION OUTPUT Profile #PF 1

```
*****
* E.G. Elev (ft)      * 356.71 * Element          * Left OB * Channel * Right OB *
* Vel Head (ft)       * 3.20  * Wt. n-Val.      *          * 0.035  *          *
* W.S. Elev (ft)      * 353.51 * Reach Len. (ft) * 25.00  * 25.00  * 25.00  *
* Crit W.S. (ft)      * 353.51 * Flow Area (sq ft) *          * 376.50 *          *
* E.G. Slope (ft/ft)  * 0.010625 * Area (sq ft)    *          * 376.50 *          *
* Q Total (cfs)       * 5402.57 * Flow (cfs)      *          * 5402.57 *          *
* Top Width (ft)      * 58.95  * Top Width (ft)  *          * 58.95  *          *
* Vel Total (ft/s)    * 14.35  * Avg. Vel. (ft/s) *          * 14.35  *          *
* Max Chl Dpth (ft)   * 9.51   * Hydr. Depth (ft) *          * 6.39   *          *
* Conv. Total (cfs)   * 52413.8 * Conv. (cfs)     *          * 52413.8 *          *
* Length Wtd. (ft)    * 25.00  * Wetted Per. (ft) *          * 63.41  *          *
* Min Ch El (ft)      * 344.00 * Shear (lb/sq ft) *          * 3.94   *          *
* Alpha               * 1.00   * Stream Power (lb/ft s) * 241.82 * 0.00   * 0.00   *
* Frctn Loss (ft)     * 0.27   * Cum Volume (acre-ft) *          * 0.21   *          *
* C & E Loss (ft)     * 0.00   * Cum SA (acres)   *          * 0.03   *          *
*****
```

2012WRPOST-1 Plan: Imported Plan 01 11/19/2012

RS = 4

.035



CROSS SECTION
REACH: Reach-1

RS: 3

INPUT

Description: 151

Station Elevation Data num= 28

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
167.55	352.94	168.78	352.95	170.37	352.88	171.78	352.79	173.64	352.69
175.33	352.62	176.69	352.55	177.98	352.38	179.98	352	181.48	351.07
183.24	350	183.9	349.55	186.44	348	187.64	347.17	189.63	346
190.98	345.09	192.81	344	215.6	344	220.05	345.76	220.26	345.84
220.66	346	220.88	346.07	225.92	348	228.94	349.06	233.39	350.8
238.23	352.43	239.14	352.54	240.57	352.53				

Manning's n Values num= 3

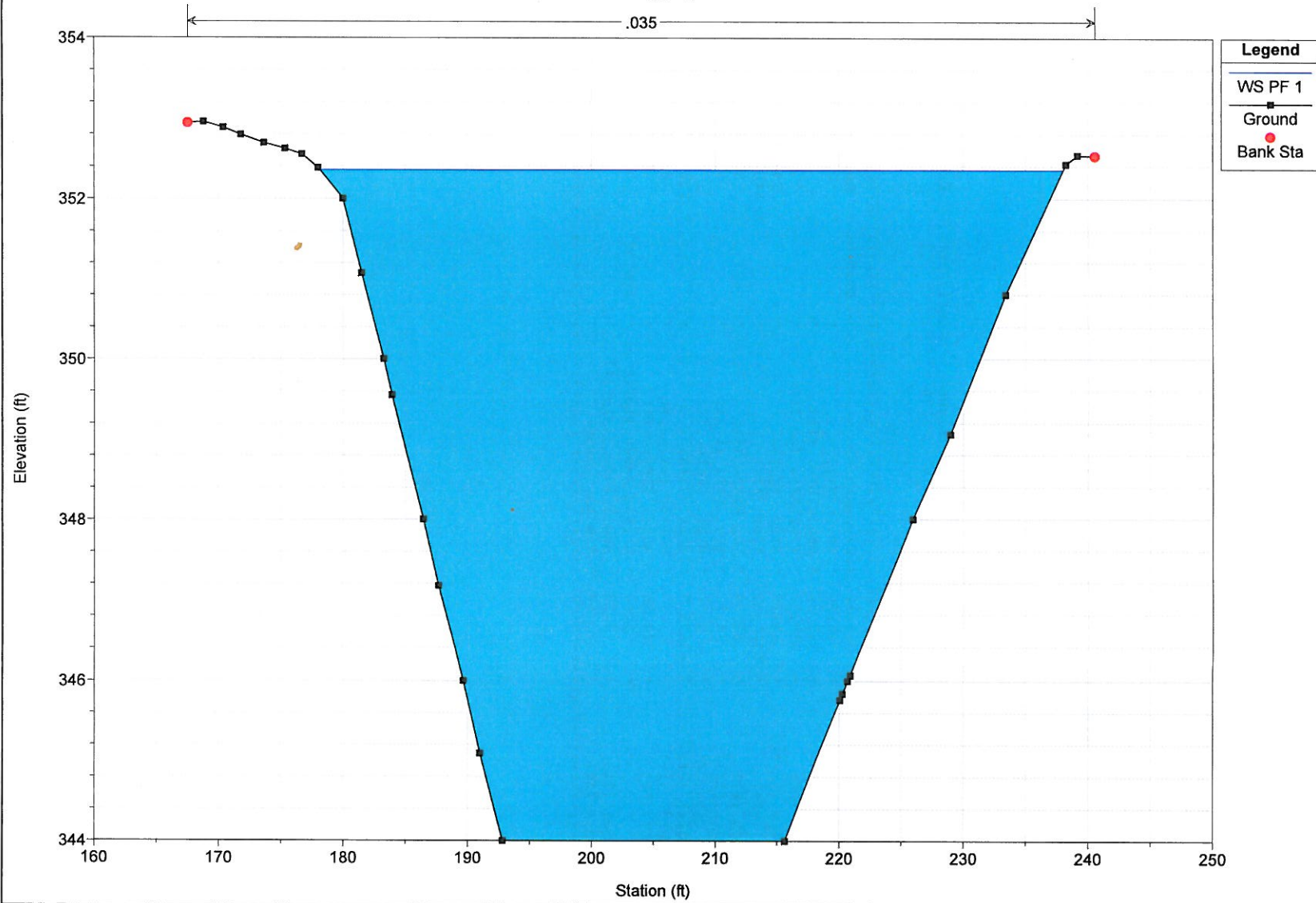
Sta	n Val	Sta	n Val	Sta	n Val
167.55	.035	240.57	.035		

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	167.55	240.57		75	75	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

```
*****
* E.G. Elev (ft)      * 356.32 * Element          * Left OB * Channel * Right OB *
* Vel Head (ft)       * 3.96  * Wt. n-Val.       *          * 0.035  *          *
* W.S. Elev (ft)      * 352.36 * Reach Len. (ft)  *          *          *          *
* Crit W.S. (ft)      * 353.33 * Flow Area (sq ft) *          * 338.35 *          *
* E.G. Slope (ft/ft)  * 0.015290 * Area (sq ft)    *          * 338.35 *          *
* Q Total (cfs)       * 5402.57 * Flow (cfs)       *          * 5402.57 *          *
* Top Width (ft)      * 59.94  * Top Width (ft)   *          * 59.94  *          *
* Vel Total (ft/s)    * 15.97  * Avg. Vel. (ft/s) *          * 15.97  *          *
* Max Chl Dpth (ft)   * 8.36   * Hydr. Depth (ft) *          * 5.64   *          *
* Conv. Total (cfs)   * 43691.7 * Conv. (cfs)      *          * 43691.7 *          *
* Length Wtd. (ft)    *          * Wetted Per. (ft) *          * 63.78  *          *
* Min Ch El (ft)      * 344.00 * Shear (lb/sq ft) *          * 5.06   *          *
* Alpha               * 1.00   * Stream Power (lb/ft s) * 240.57 * 0.00   * 0.00   *
* Frctn Loss (ft)     * 0.32   * Cum Volume (acre-ft) *          *          *          *
* C & E Loss (ft)     * 0.08   * Cum SA (acres)    *          *          *          *
*****
```


2012WRPOST-1 Plan: Imported Plan 01 11/19/2012
RS = 3



Hec-Ras Analysis

Basin 103 100-year Floodplain Existing Condition Analysis

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```

X      X  XXXXXX      XXXX      XXXX      XX      XXXX
X      X  X          X      X      X      X  X      X
X      X  X          X      X      X      X  X      X
XXXXXXX XXXX      X      XXX XXXX      XXXXXX      XXXX
X      X  X          X      X      X      X      X
X      X  X          X      X      X      X      X
X      X  XXXXXX      XXXX      X      X      X      XXXXX

```

PROJECT DATA

Project Title: Basin103-pre-1
Project File : Basin103-pre-1.prj
Run Date and Time: 6/13/2013 11:09:40 AM

Project in English units

Project Description:

***** Autodesk, Inc. HEC-2 Input Data file *****

Minimum Data Input *****

PLAN DATA

Plan Title: Imported Plan 01

Plan File : C:\Shapouri&Associates\Active Projects\Warner Ranch\Hydrology\Hecras 2012\Basin 103
Pre\Basin103-pre-1.p01

Geometry Title: Imported Geom 01

Geometry File : C:\Shapouri&Associates\Active Projects\Warner Ranch\Hydrology\Hecras
2012\Basin 103 Pre\Basin103-pre-1.g01

Flow Title : Imported Flow 01

Flow File : C:\Shapouri&Associates\Active Projects\Warner Ranch\Hydrology\Hecras
2012\Basin 103 Pre\Basin103-pre-1.f01

Plan Summary Information:

Number of: Cross Sections =	38	Multiple Openings =	0
Culverts =	0	Inline Structures =	0
Bridges =	0	Lateral Structures =	0

Computational Information

Water surface calculation tolerance =	0.01
Critical depth calculation tolerance =	0.01
Maximum number of iterations =	20
Maximum difference tolerance =	0.3
Flow tolerance factor =	0.001

Computation Options

Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Supercritical Flow

FLOW DATA

Flow Data (cfs)

```
*****
* River          Reach          RS          *          PF 1 *
* RIVER-1        Reach-1        85          *          248.3 *
*****
```

Boundary Conditions

```
*****
****
* River          Reach          Profile          *          Upstream          Downstream
*
*****
****
* RIVER-1        Reach-1        PF 1          *          Critical
*
```

GEOMETRY DATA

REACH: Reach-1 RS: 85

INPUT

Description: 1

```
Station Elevation Data      num=      73
Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev
*****
0   447.77   2.07   446.23   2.44   446   3.37   445.44   5.65   444
9.06   442.02   12.16   440.35   12.85   440   15.48   438.6   16.65   438
18.94   436.79   20.48   436   30.17   434.47   43.89   432.14   44.72   432
44.97   431.85   45.36   431.65   47.36   430.56   47.8   430.29   48.05   430.11
48.11   430.06   48.24   430.05   48.47   430.06   48.57   430.07   49.14   430.16
50.47   430.4   54.06   431.06   56.64   431.51   58.97   432   59.9   432.62
60.86   433.35   61.44   434   61.95   434.48   62.09   434.61   64.15   436
65.56   436.82   67.26   438   69.77   439.51   70.74   440   72.82   441.15
74.74   442   76.35   442.7   79.31   444   83.77   445.98   83.83   446.01
87.95   448   88.03   448.04   90.6   449.33   91.91   449.98   92.8   450.4
96.14   452   96.4   452.13   98.01   452.76   100.32   453.66   101.31   454
106.99   456   107.81   456.29   108.62   456.59   112.85   458   117.67   459.64
120.79   460.87   123.7   462   124.66   462.42   125.2   462.64   125.99   462.93
126.51   463.09   128.38   463.62   129.83   464   132.93   464.85   136.87   465.61
140.66   465.85   148.85   465.61   150.78   465.58
```

Manning's n Values

```
num=      3
Sta   n Val   Sta   n Val   Sta   n Val
*****
0   .035   3.37   .035   136.87   .035
```

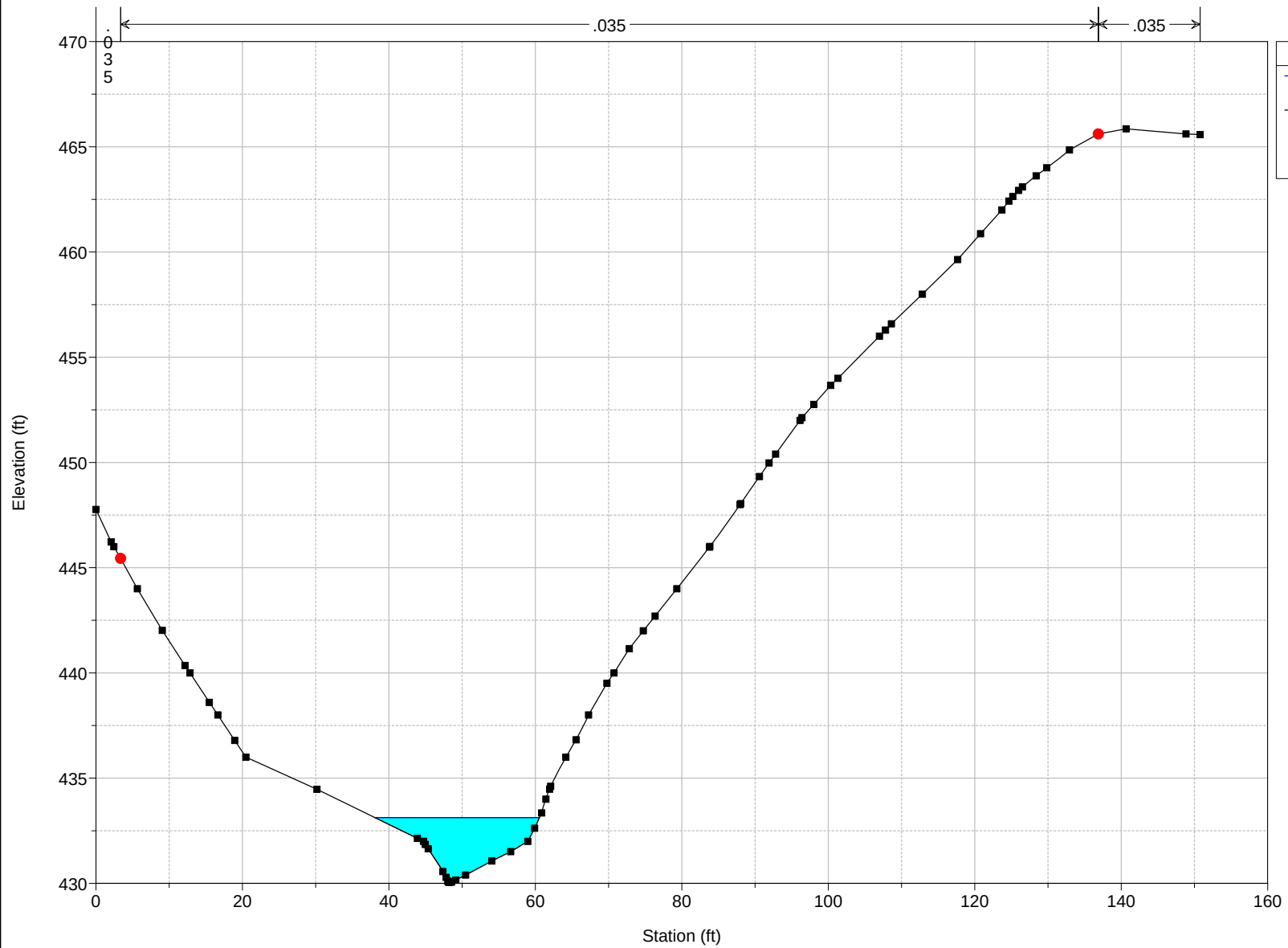
```
Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
3.37   136.87   50   50   50   .1   .3
```

CROSS SECTION OUTPUT Profile #PF 1

```
*****
* E.G. Elev (ft)      * 433.90   * Element      * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.78   * Wt. n-Val.      *      * 0.035 *      *
* W.S. Elev (ft)      * 433.13   * Reach Len. (ft)      * 50.00 * 50.00 * 50.00 *
* Crit W.S. (ft)      * 433.13   * Flow Area (sq ft)      *      * 35.13 *      *
* E.G. Slope (ft/ft)      * 0.016343   * Area (sq ft)      *      * 35.13 *      *
* Q Total (cfs)      * 248.30   * Flow (cfs)      *      * 248.30 *      *
* Top Width (ft)      * 22.49   * Top Width (ft)      *      * 22.49 *      *
* Vel Total (ft/s)      * 7.07   * Avg. Vel. (ft/s)      *      * 7.07 *      *
* Max Chl Dpth (ft)      * 3.08   * Hydr. Depth (ft)      *      * 1.56 *      *
* Conv. Total (cfs)      * 1942.3   * Conv. (cfs)      *      * 1942.3 *      *
* Length Wtd. (ft)      * 50.00   * Wetted Per. (ft)      *      * 23.64 *      *
* Min Ch El (ft)      * 430.05   * Shear (lb/sq ft)      *      * 1.52 *      *
* Alpha      * 1.00   * Stream Power (lb/ft s)      * 150.78 * 0.00 * 0.00 *
* Frctn Loss (ft)      *      * Cum Volume (acre-ft)      * 0.01 * 1.88 *      *
* C & E Loss (ft)      *      * Cum SA (acres)      * 0.01 * 3.46 *      *
*****
```

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 85



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 84

INPUT

Description: 2

Station Elevation Data num= 74

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	446.94	1.58	446	3.35	444.88	4.84	444	6.75	442.79
8.07	442	10.51	440.44	11.2	440	14.1	438.22	14.4	438
15.04	437.56	15.16	437.5	15.23	437.47	15.31	437.44	15.46	437.38
15.64	437.31	16.01	437.13	18.09	436	19.83	435.28	22.54	434
22.73	433.91	26.4	432	28.44	431.19	31.41	430	31.89	429.89
35.81	428.86	37.31	428.53	38.01	428.4	38.24	428.34	38.35	428.31
38.49	428.32	38.69	428.34	38.95	428.35	39.21	428.37	39.43	428.38
39.78	428.41	39.97	428.43	40.82	428.6	41.33	428.76	46.24	429.8
47.24	430	50.34	430.69	55.9	432	57.88	432.4	60.87	432.76
61.25	432.81	62.26	432.96	63.48	433.12	67.63	433.62	71.52	434
78.25	434.94	85.97	436	90.73	437.08	95.45	438	95.6	438.04
95.9	438.09	100.98	439.04	104.51	439.56	107.59	440	114.01	441.07
115.09	441.26	115.49	441.29	118.4	441.53	118.83	441.56	121.42	441.66
131.68	442	132.22	442.02	132.29	442.03	139.22	442.23	139.9	442.23
151.73	442.09	152.28	442.08	155.31	442	157.67	441.96		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	8.07	.035	139.22	.035

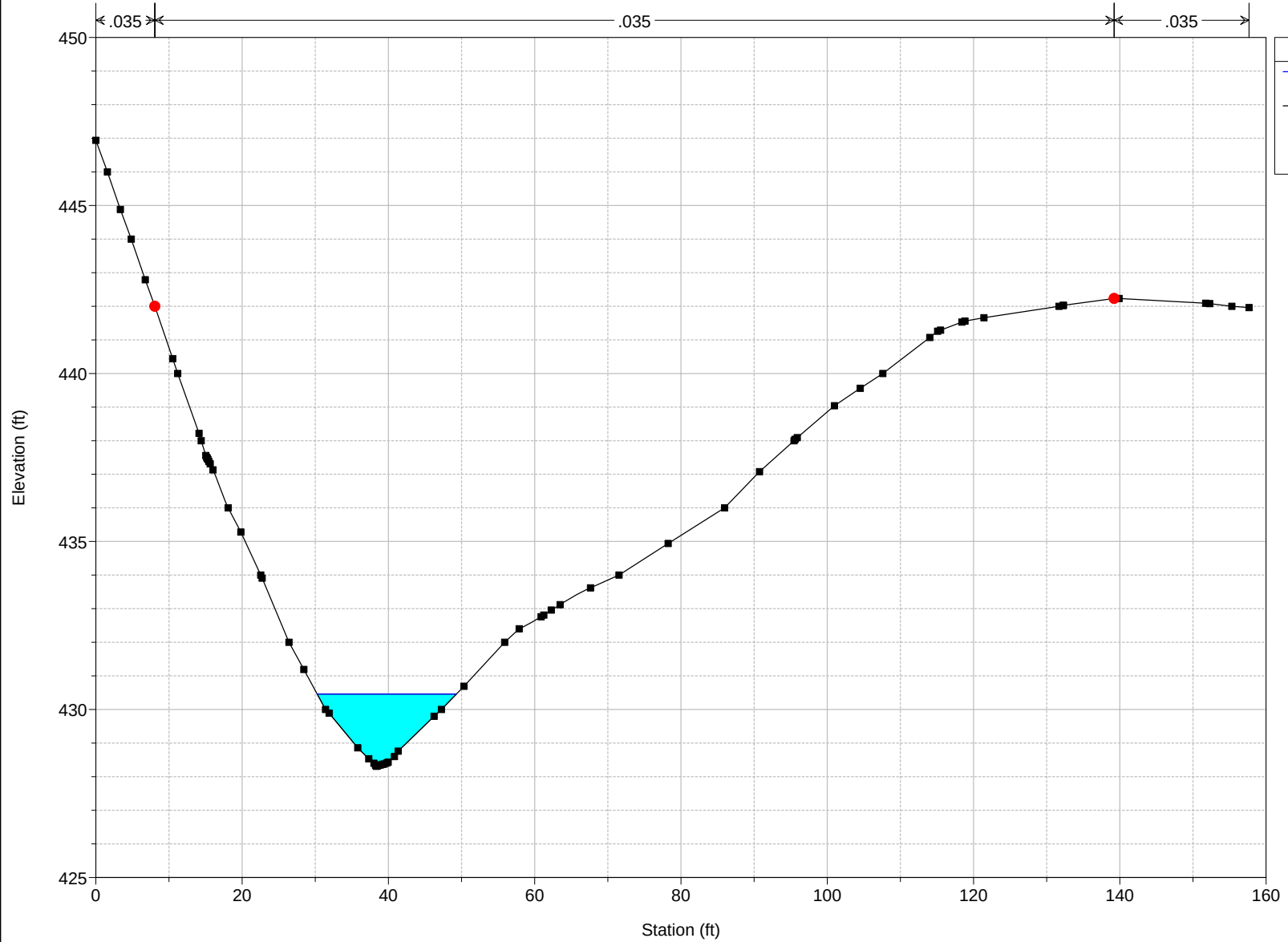
Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	8.07	139.22	50	50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 432.39	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.93	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 430.46	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 431.07	* Flow Area (sq ft)		* 22.26	
* E.G. Slope (ft/ft)	* 0.058068	* Area (sq ft)		* 22.26	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 19.03	* Top Width (ft)		* 19.03	
* Vel Total (ft/s)	* 11.16	* Avg. Vel. (ft/s)		* 11.16	
* Max Chl Dpth (ft)	* 2.15	* Hydr. Depth (ft)		* 1.17	
* Conv. Total (cfs)	* 1030.4	* Conv. (cfs)		* 1030.4	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 19.55	
* Min Ch El (ft)	* 428.31	* Shear (lb/sq ft)		* 4.13	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 157.67	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.40	* Cum Volume (acre-ft)	* 0.01	* 1.85	
* C & E Loss (ft)	* 0.12	* Cum SA (acres)	* 0.01	* 3.43	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 84



CROSS SECTION
REACH: Reach-1

RS: 83

INPUT

Description: 3

Station	Elevation	Data	num=	115	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	449.62	.69	449.24	3.14	448	4.05	447.19	5.56	446			
7.48	444.12	7.59	444	7.77	443.79	9.41	442	10.4	440.85			
11.13	440	12.76	438.11	12.87	438	12.99	437.83	13.46	437.29			
14.79	436	15.58	435.08	16.5	434	17.27	433.07	18.37	432			
19.38	430.99	20.39	430	21.23	429.54	24.67	428.16	25.06	428			
26.96	427.74	28.49	427.51	29.6	427.36	31.29	427.18	32.12	427.06			
32.76	426.94	34.21	426.61	34.6	426.47	34.83	426.44	35.27	426.38			
35.68	426.34	36.03	426.35	36.31	426.37	36.44	426.4	36.51	426.42			
36.61	426.43	36.77	426.44	37.02	426.45	38.25	426.53	38.45	426.55			
38.61	426.57	39.1	426.61	39.24	426.63	39.3	426.65	41.59	427.43			
43.37	428	54.31	429.9	54.77	430	55.06	430.02	55.14	430.03			
62.63	430.49	67.76	430.77	69.55	430.86	76.76	431.19	85.15	431.46			
88.15	431.59	99.37	432	101.38	432.1	102.02	432.12	112.99	432.58			
117.07	432.72	122.23	432.84	128.42	432.97	131.74	433.05	134.15	433.12			
142.88	433.43	144.51	433.51	148.77	433.68	155.66	434	157.29	434.09			
157.42	434.09	160.51	434.17	162.87	434.21	164.29	434.24	164.94	434.24			
166.24	434.27	167.3	434.24	167.65	434.24	167.98	434.23	168.16	434.23			
168.32	434.24	168.61	434.26	169.11	434.28	169.81	434.31	175.51	434.49			
177.07	434.53	177.96	434.54	178.95	434.54	185.54	434.58	187.02	434.62			
191.14	434.65	192.45	434.67	194.02	434.71	197.32	434.7	199.76	434.81			
202.92	434.98	203.59	435	207.84	435.26	208.48	435.29	209.22	435.33			
210.87	435.41	214.46	435.55	220.89	435.77	226.19	435.99	226.24	435.99			
226.34	436	229.87	436.29	239.34	437.56	240.92	437.75	241.89	437.86			

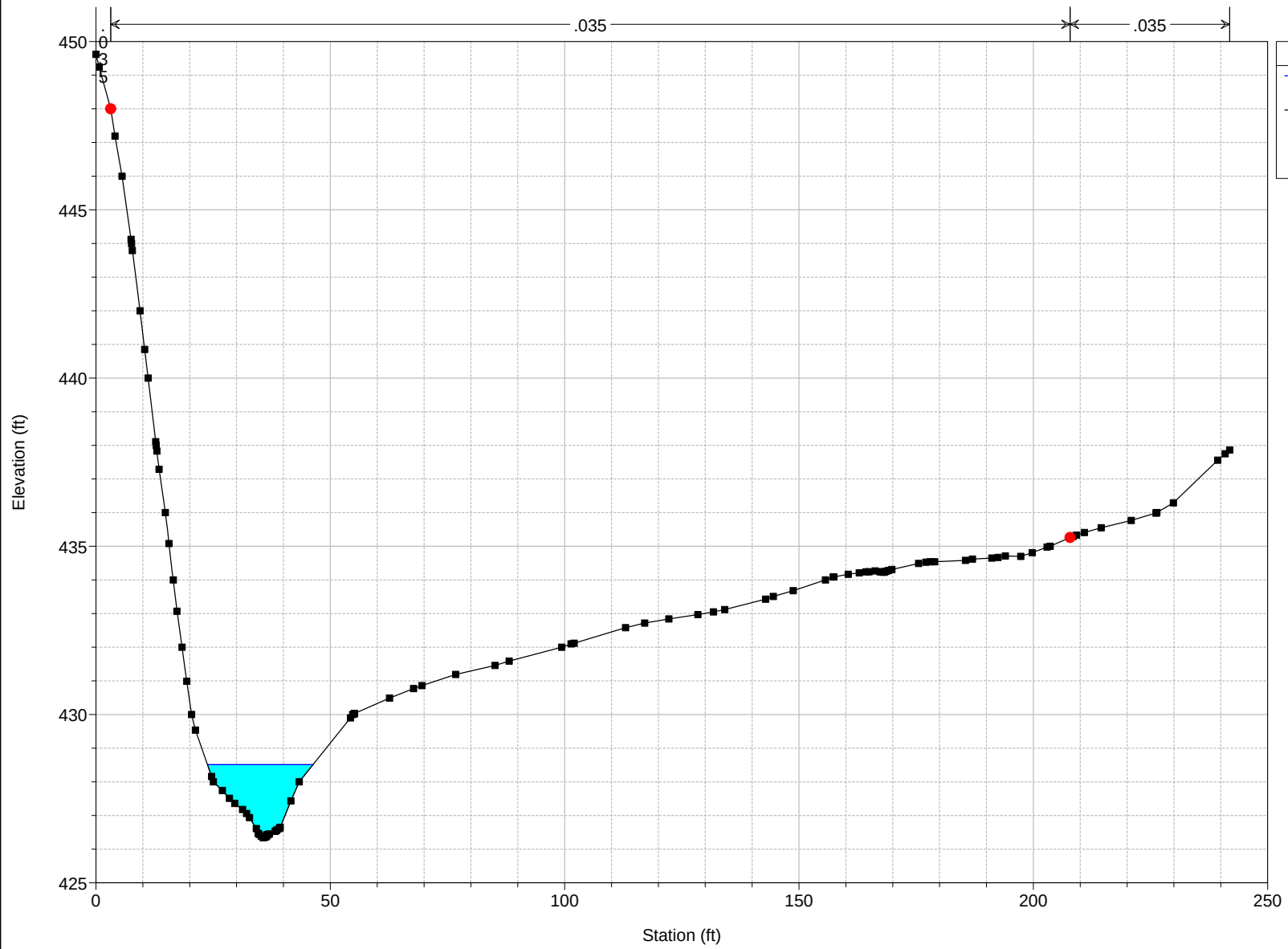
Manning's n Values		num=	3
Sta	n Val	Sta	n Val
0	.035	3.14	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	3.14	207.84		50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 429.85	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.33	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 428.51	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 428.91	* Flow Area (sq ft)		* 26.79	
* E.G. Slope (ft/ft)	* 0.038995	* Area (sq ft)		* 26.79	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 22.53	* Top Width (ft)		* 22.53	
* Vel Total (ft/s)	* 9.27	* Avg. Vel. (ft/s)		* 9.27	
* Max Chl Dpth (ft)	* 2.17	* Hydr. Depth (ft)		* 1.19	
* Conv. Total (cfs)	* 1257.4	* Conv. (cfs)		* 1257.4	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 23.05	
* Min Ch El (ft)	* 426.34	* Shear (lb/sq ft)		* 2.83	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 241.89	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.36	* Cum Volume (acre-ft)	* 0.01	* 1.82	
* C & E Loss (ft)	* 0.18	* Cum SA (acres)	* 0.01	* 3.41	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013
RS = 83



CROSS SECTION
REACH: Reach-1

RS: 82

INPUT

Description: 4

Station Elevation Data num= 126

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	452.24	.51	452	1.25	451.61	4.37	450	8.88	448.02
12.73	446.22	13.24	446	14.51	445.46	17.77	444	18.6	443.51
19.7	442.78	20.51	442	20.89	441.59	22.38	440	22.77	439.58
24.3	438	24.81	437.4	26.06	436	27.01	434.95	28.02	434
29.6	432.45	30.01	432	30.61	431.34	31.91	430	33.43	428.56
34.2	428	36.88	426.62	38.34	426	44.06	424.94	45.8	424.65
49.14	424.58	49.39	424.88	49.71	424.98	50.3	425.1	56.44	426
59.3	426.34	60.42	426.46	63.05	426.78	66.18	427.14	72.45	428
75.42	428.16	78.25	428.28	78.96	428.3	86.57	428.53	87.36	428.54
88.96	428.57	90.34	428.62	91.55	428.68	95.82	429.01	97.88	429.11
101.84	429.39	103.26	429.48	105.57	429.64	108.9	429.75	109.32	429.77
109.54	429.78	109.66	429.78	109.74	429.79	109.82	429.79	109.91	429.8
110.04	429.8	111	429.83	114.15	429.86	120.44	429.99	120.55	429.99
121.48	430	125.46	430.01	126.34	430.07	126.4	430.07	139.3	430.35
139.46	430.36	139.74	430.36	143.29	430.47	143.93	430.47	144.67	430.46
151.63	430.71	152.68	430.69	153.93	430.68	155.8	430.73	157.3	430.74
158.74	430.74	160.42	430.72	164.52	430.65	167.7	430.68	168.81	430.67
170.55	430.67	171.57	430.66	175.46	430.66	178.23	430.63	178.93	430.62
179.52	430.6	180.68	430.6	183.49	430.55	186.29	430.45	189.09	430.31
191.98	430.15	192.68	430.16	194.91	430.02	194.98	430.02	195.3	430
196.41	429.98	197.69	429.97	198.97	429.99	199.27	430	200.72	430.12
201.69	430.19	209.9	430.91	212.35	431.03	215.57	431.27	217.73	431.4
219.13	431.46	222.48	431.52	223.27	431.53	225.62	431.52	233.75	431.56
236.66	431.69	239.18	431.88	239.6	431.88	241.09	432	242.21	432.16
255.66	434	259.23	435.01	261.8	436	266.33	437.62	267.31	438
271.09	439.28								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	17.77	.035	255.66	.035

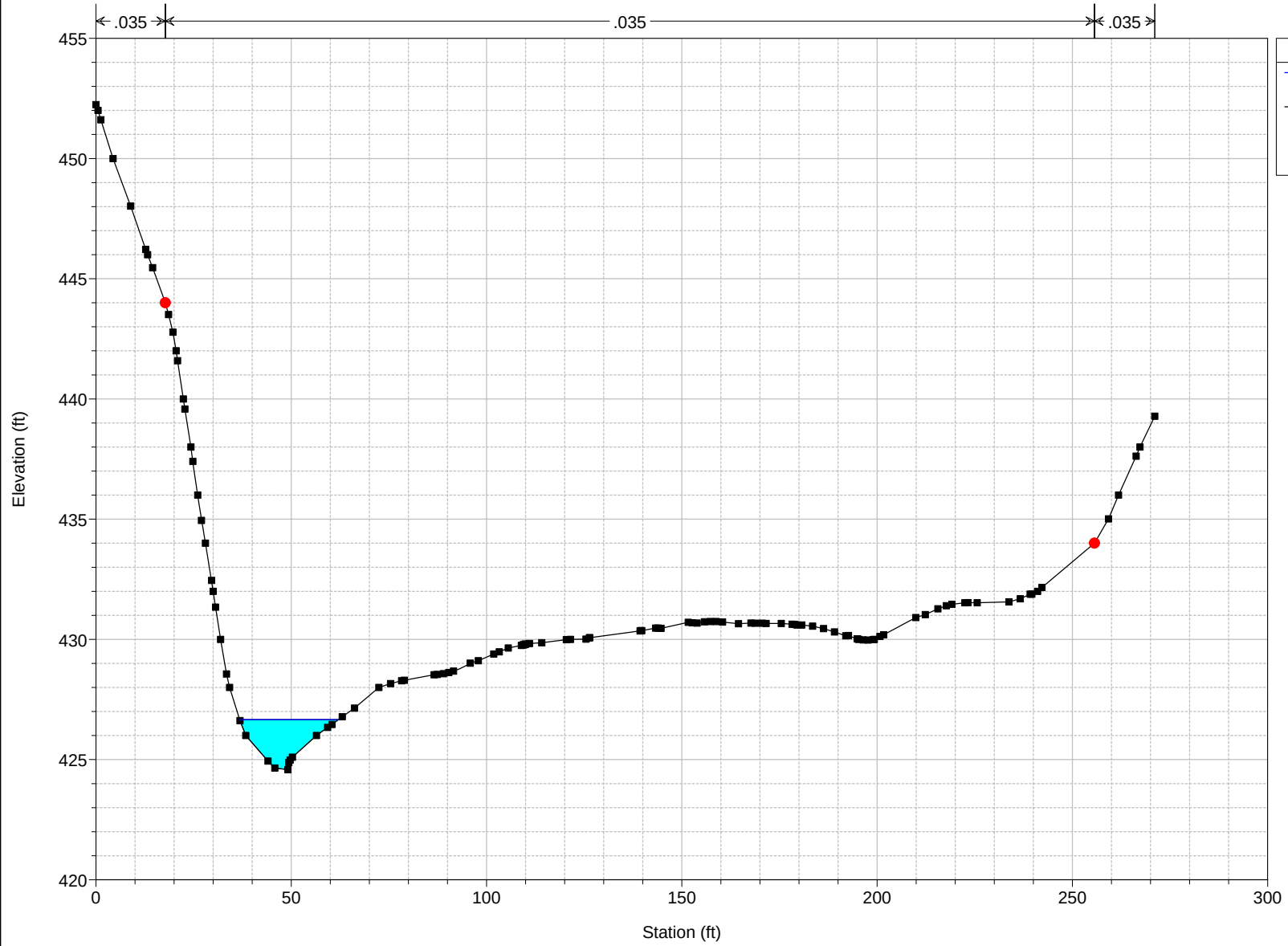
Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	17.77	255.66	50	50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 427.87	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.21	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 426.66	* Reach Len. (ft)	* 50.00	* 50.00	
* Crit W.S. (ft)	* 427.02	* Flow Area (sq ft)		* 28.16	
* E.G. Slope (ft/ft)	* 0.038449	* Area (sq ft)		* 28.16	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 25.30	* Top Width (ft)		* 25.30	
* Vel Total (ft/s)	* 8.82	* Avg. Vel. (ft/s)		* 8.82	
* Max Chl Dpth (ft)	* 2.08	* Hydr. Depth (ft)		* 1.11	
* Conv. Total (cfs)	* 1266.3	* Conv. (cfs)		* 1266.3	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 25.83	
* Min Ch El (ft)	* 424.58	* Shear (lb/sq ft)		* 2.62	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 271.09	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.94	* Cum Volume (acre-ft)	* 0.01	* 1.79	
* C & E Loss (ft)	* 0.04	* Cum SA (acres)	* 0.01	* 3.38	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 82



CROSS SECTION
REACH: Reach-1

RS: 81

INPUT

Description: 5

Station Elevation Data num= 103

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	452.52	1.26	452	3.37	451.24	6.34	450	7.98	449.44
11.94	448	16.2	446.57	17.91	446	21.06	444.98	24.02	444
25.74	443.44	30.7	442	33.58	441.1	37.45	440	40.84	438.27
41.31	438	41.7	437.79	44.85	436	47.89	434.29	48.41	434
49.06	433.65	51.81	432	54.82	430.22	55.09	430.05	55.17	430
55.61	429.81	59.77	428	62.96	427.15	67.72	426	75.6	424.16
76.21	424	76.33	423.91	76.41	423.79	78.29	422	82.57	422
82.62	422.01	92.51	424	95.66	424.58	96.88	424.81	101	425.49
103.85	426	109.91	426.79	111.23	426.81	112.75	426.79	114.34	426.78
120.31	427.27	127.79	427.31	127.99	427.32	128.22	427.33	128.55	427.34
129.38	427.35	130.82	427.37	133.09	427.43	137.02	427.49	137.78	427.49
138.35	427.47	138.98	427.44	148.03	427.96	148.08	427.95	148.16	427.95
148.79	428	163.93	428.22	165.97	428.24	166.35	428.25	166.74	428.25
180.77	428.17	183.15	428.14	184.35	428.1	185.31	428.07	189.1	428
189.86	427.97	193.73	427.78	196.83	427.59	202.41	427.14	205.16	426.91
207.09	426.72	207.29	426.72	209.62	426.48	210.02	426.45	210.53	426.46
213.56	426.55	214.17	426.55	215.48	426.56	217.15	426.58	218.64	426.64
224.29	426.83	226.15	426.9	227.03	426.95	227.97	427.04	236.76	428
246.07	428.93	251.23	429.41	252.77	429.51	253.74	429.52	255.37	429.69
257.01	429.66	258.32	429.76	260.46	430	261.37	430.13	261.82	430.24
267.61	431.5	269.88	432	274.33	433.47				

Manning's n Values num= 3

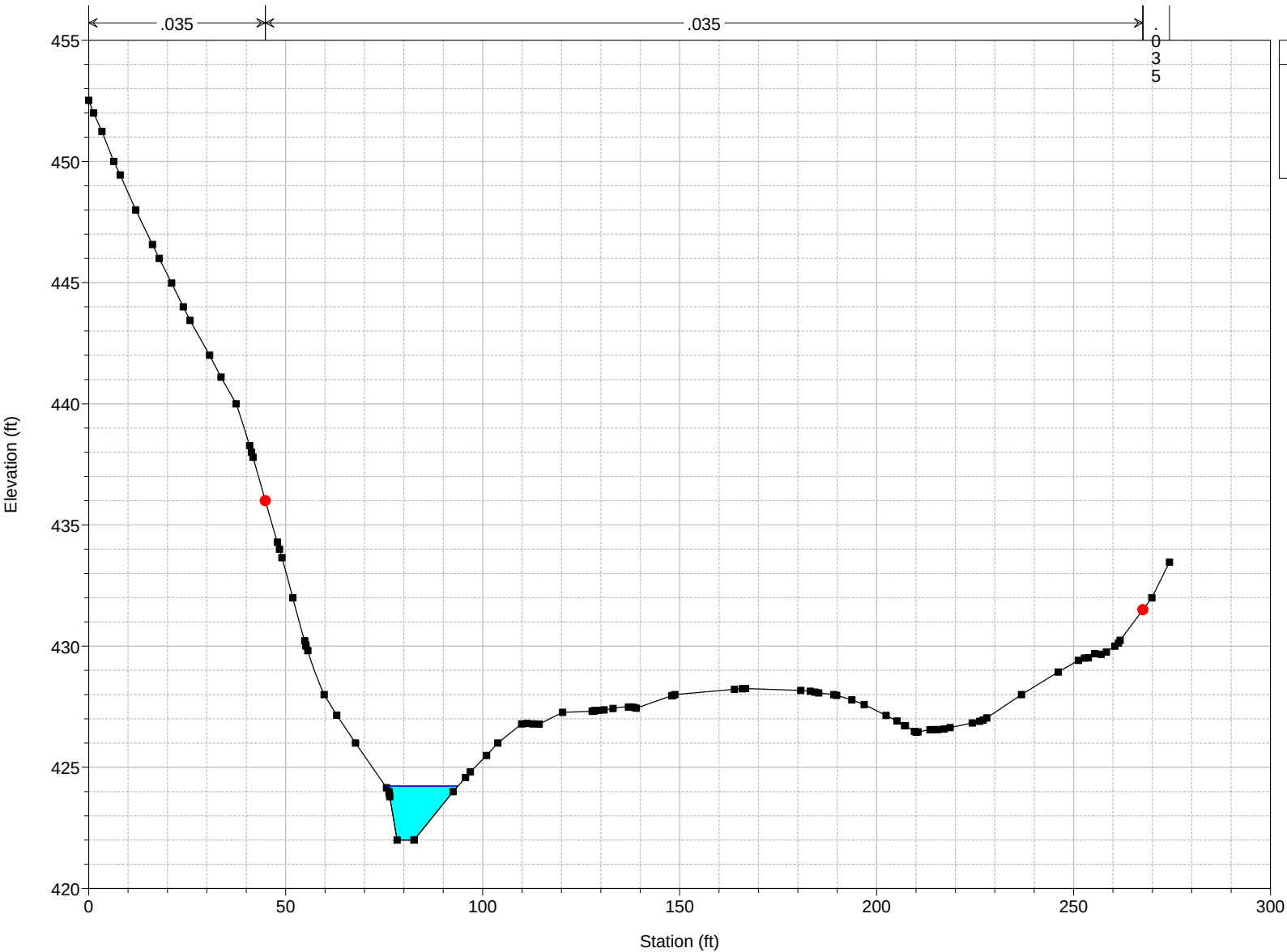
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	44.85	.035	267.61	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	44.85	267.61		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 425.82	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.60	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 424.23	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 424.75	* Flow Area (sq ft)		* 24.50	
* E.G. Slope (ft/ft)	* 0.041954	* Area (sq ft)		* 24.50	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 18.41	* Top Width (ft)		* 18.41	
* Vel Total (ft/s)	* 10.14	* Avg. Vel. (ft/s)		* 10.14	
* Max Chl Dpth (ft)	* 2.23	* Hydr. Depth (ft)		* 1.33	
* Conv. Total (cfs)	* 1212.3	* Conv. (cfs)		* 1212.3	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 19.47	
* Min Ch El (ft)	* 422.00	* Shear (lb/sq ft)		* 3.30	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 274.33	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.01	* Cum Volume (acre-ft)	* 0.01	* 1.76	
* C & E Loss (ft)	* 0.04	* Cum SA (acres)	* 0.01	* 3.36	

RS = 81



CROSS SECTION
REACH: Reach-1

RS: 80

INPUT

Description: 6

Station Elevation Data				num= 116			
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	457.19	3	456	5.76	454.96	8.25	454
13.51	452	19.29	450	22.89	448.92	25.7	448
34.56	445.11	38.02	444	42.41	442.69	44.89	442
51.39	440	55.36	438.73	57.32	438	58.44	437.56
65.68	434.44	66.77	434	67.64	433.43	69.84	432
72.65	430	72.78	429.9	75.75	428	77.31	426.89
82.87	424.02	82.93	424	86.11	422	88.57	420.66
89.55	420.27	89.94	420.23	90.08	420.25	90.58	420.27
91.95	420.41	93.62	420.6	93.73	420.62	93.85	420.64
96.44	420.95	97.05	420.99	99.82	421.29	101.49	421.48
104.38	421.84	105.63	422	111.68	422.52	113.71	422.69
120.84	423.22	121.73	423.31	121.91	423.25	122.2	423.21
124.52	423.19	126.71	423.26	128.31	423.3	131.04	423.35
134.09	423.41	135.54	423.48	138.32	423.48	139.14	423.54
140.38	423.62	140.94	423.63	141.41	423.64	142.98	423.67
155.01	423.58	173.68	423.97	173.9	423.97	174.01	423.96
178.49	424.04	184.65	424.05	184.8	424.05	184.99	424.06
195.34	424	197.12	423.97	205.29	423.9	208.71	423.85
210.94	423.73	212.01	423.68	212.84	423.62	213	423.57
232.21	423.88	234.87	423.85	235.14	423.85	235.23	423.86
237.98	423.97	238.05	423.97	241.2	424	242.89	424
254.98	424	255.37	424	259.72	424.06	260.16	424.09
271.15	424.62	273.51	424.92	277.01	425.15	280.61	426
281.61	426.35						

Manning's n Values				num= 3	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	72.42	.035	280.61	.035

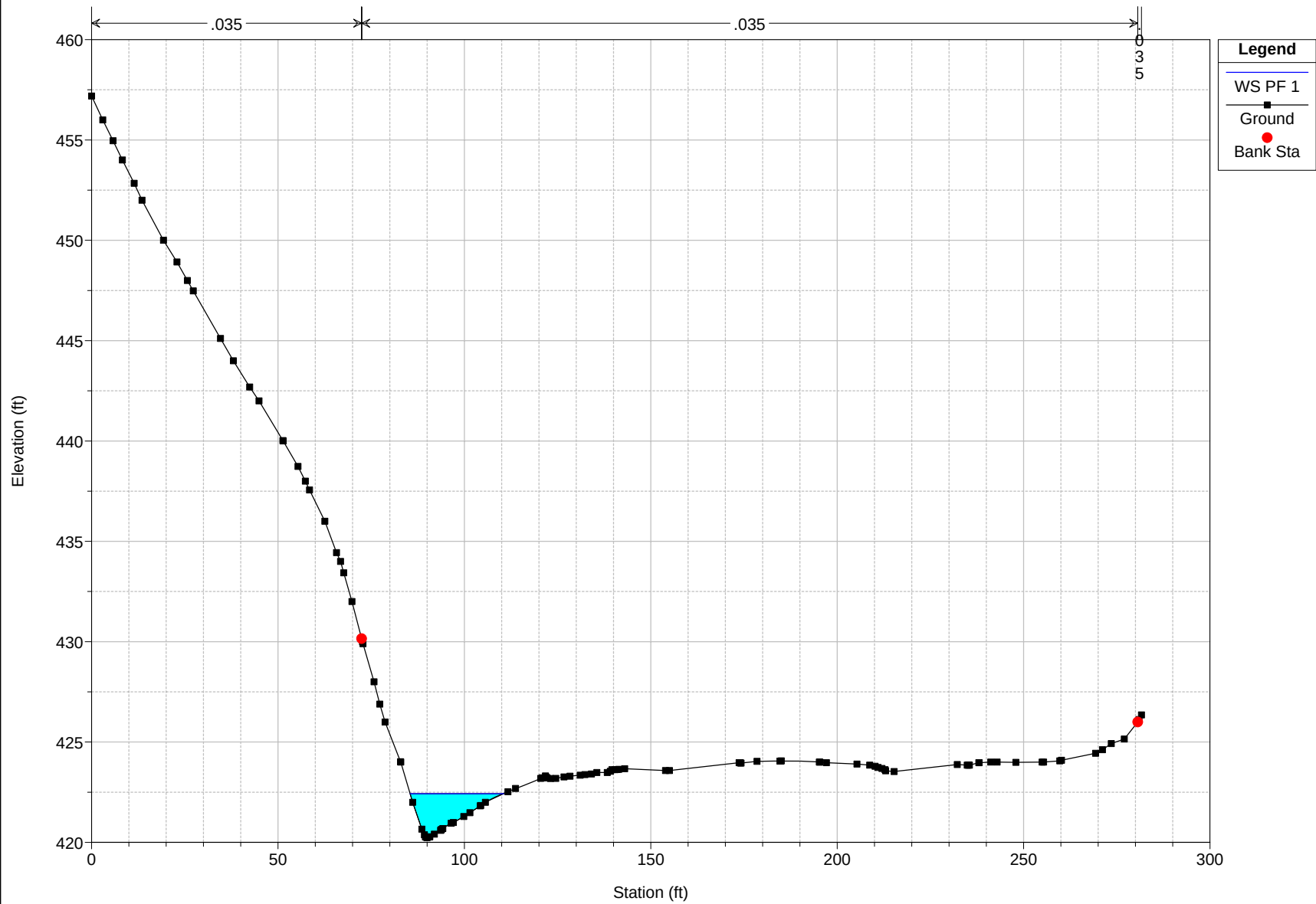
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	72.42	280.61		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 423.67	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.24	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 422.42	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 422.81	* Flow Area (sq ft)		* 27.76	
* E.G. Slope (ft/ft)	* 0.040257	* Area (sq ft)		* 27.76	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 25.13	* Top Width (ft)		* 25.13	
* Vel Total (ft/s)	* 8.94	* Avg. Vel. (ft/s)		* 8.94	
* Max Chl Dpth (ft)	* 2.19	* Hydr. Depth (ft)		* 1.10	
* Conv. Total (cfs)	* 1237.5	* Conv. (cfs)		* 1237.5	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 25.80	
* Min Ch El (ft)	* 420.23	* Shear (lb/sq ft)		* 2.70	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 281.61	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.05	* Cum Volume (acre-ft)	* 0.01	* 1.73	
* C & E Loss (ft)	* 0.11	* Cum SA (acres)	* 0.01	* 3.33	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 80



CROSS SECTION
REACH: Reach-1

RS: 79

INPUT

Description: 7

Station Elevation Data				num=	82				
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	454.65	59	454.41	1.71	454	2.64	453.64	6.96	452
11.27	450.19	11.5	450.09	11.67	450	11.81	449.93	15.95	448
21.39	446.2	21.92	446	22.76	445.75	29.24	444	32.57	443.03
36.43	442	39.22	441.18	42.95	440	46.26	438.98	49.26	438
52.84	436.9	55.73	436	64.56	434.23	64.68	434.21	66.04	434
76.5	432.25	77.68	432	79.57	431.33	83.76	430	86.69	429.06
89.87	428	90.6	427.72	93.97	426.44	94.9	426	95.26	425.79
95.33	425.78	100.71	424	101.4	423.77	101.59	423.7	101.96	423.58
103.42	423.14	104.81	422.68	105.89	422.37	106.95	422	107.73	421.71
108.93	421.31	109.55	421.15	109.94	421.05	110.27	420.93	110.57	420.78
111.79	420	114.68	419.79	123.43	419.69	126.56	420	130.55	420.17
131.16	420.17	131.43	420.18	132.93	420.23	134.3	420.29	135.9	420.32
144.62	420.74	145.77	420.79	146.91	420.81	148.18	420.81	149.66	420.79
151.01	420.75	151.83	420.74	152.3	420.74	157.96	420.89	158.38	420.89
159.12	420.91	160.36	420.95	163.85	421.02	165.42	421.06	167.11	421.09
168.97	421.14	172.31	421.1	174.38	421.17	176.37	421.26	176.73	421.26
176.98	421.27	177.38	421.28						

Manning's n Values				num=	3
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	55.73	.035	176.73	.035

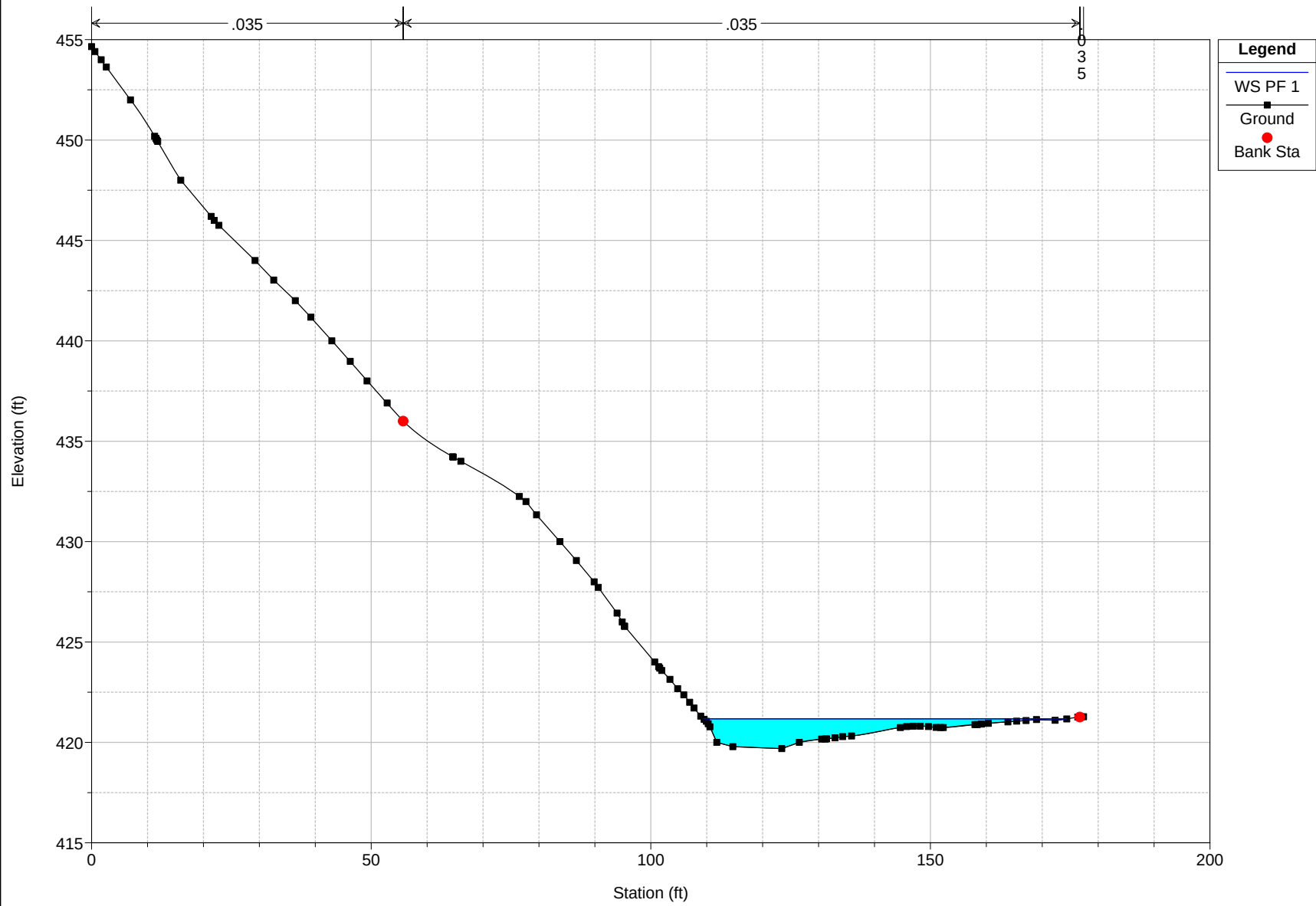
Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	55.73	176.73	50	50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 421.68	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.51	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 421.17	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 421.28	* Flow Area (sq ft)		* 43.48	
* E.G. Slope (ft/ft)	* 0.031128	* Area (sq ft)		* 43.48	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 64.98	* Top Width (ft)		* 64.98	
* Vel Total (ft/s)	* 5.71	* Avg. Vel. (ft/s)		* 5.71	
* Max Chl Dpth (ft)	* 1.48	* Hydr. Depth (ft)		* 0.67	
* Conv. Total (cfs)	* 1407.3	* Conv. (cfs)		* 1407.3	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 65.33	
* Min Ch El (ft)	* 419.69	* Shear (lb/sq ft)		* 1.29	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 177.38	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.76	* Cum Volume (acre-ft)	* 0.01	* 1.69	
* C & E Loss (ft)	* 0.22	* Cum SA (acres)	* 0.01	* 3.28	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 79



CROSS SECTION
REACH: Reach-1

RS: 78

INPUT

Description: 8

Station Elevation Data num= 69

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	451	.4	450.88	3.03	450	5.98	449.12	9.67	448
11.93	447.32	14.79	446.42	15.91	446	17.38	445.5	21.74	444
27.6	442	30.68	440.97	33.5	440	36.48	439.23	41.07	438
47.18	436.83	51.19	436	57.04	434.91	61.36	434	64.61	433.45
73.59	432	82.89	430.09	83.37	430	83.77	429.91	86.8	429.21
91.95	428	96.08	427.23	102.89	426	111.5	424.68	116.06	424
124.03	422	128.51	420	134.34	419.69	134.45	419.68	136.71	419.58
147.77	418.72	150.18	418.57	156.9	418	160.92	417.46	167.16	416.58
172.65	416.99	172.7	417.03	174.42	417.75	174.94	417.95	175.14	418
175.47	418.02	176.26	418.06	177.09	418.1	177.78	418.11	178.48	418.11
179.62	418.14	192.06	418.28	192.47	418.29	194.46	418.33	195.08	418.36
195.87	418.35	196.76	418.33	197.6	418.33	207.76	418.49	208.36	418.47
218.42	418.41	223.86	418.43	231.1	418.53	232.72	418.56	233.92	418.61
234.73	418.62	238.13	418.65	238.57	418.66	238.76	418.67		

Manning's n Values num= 3

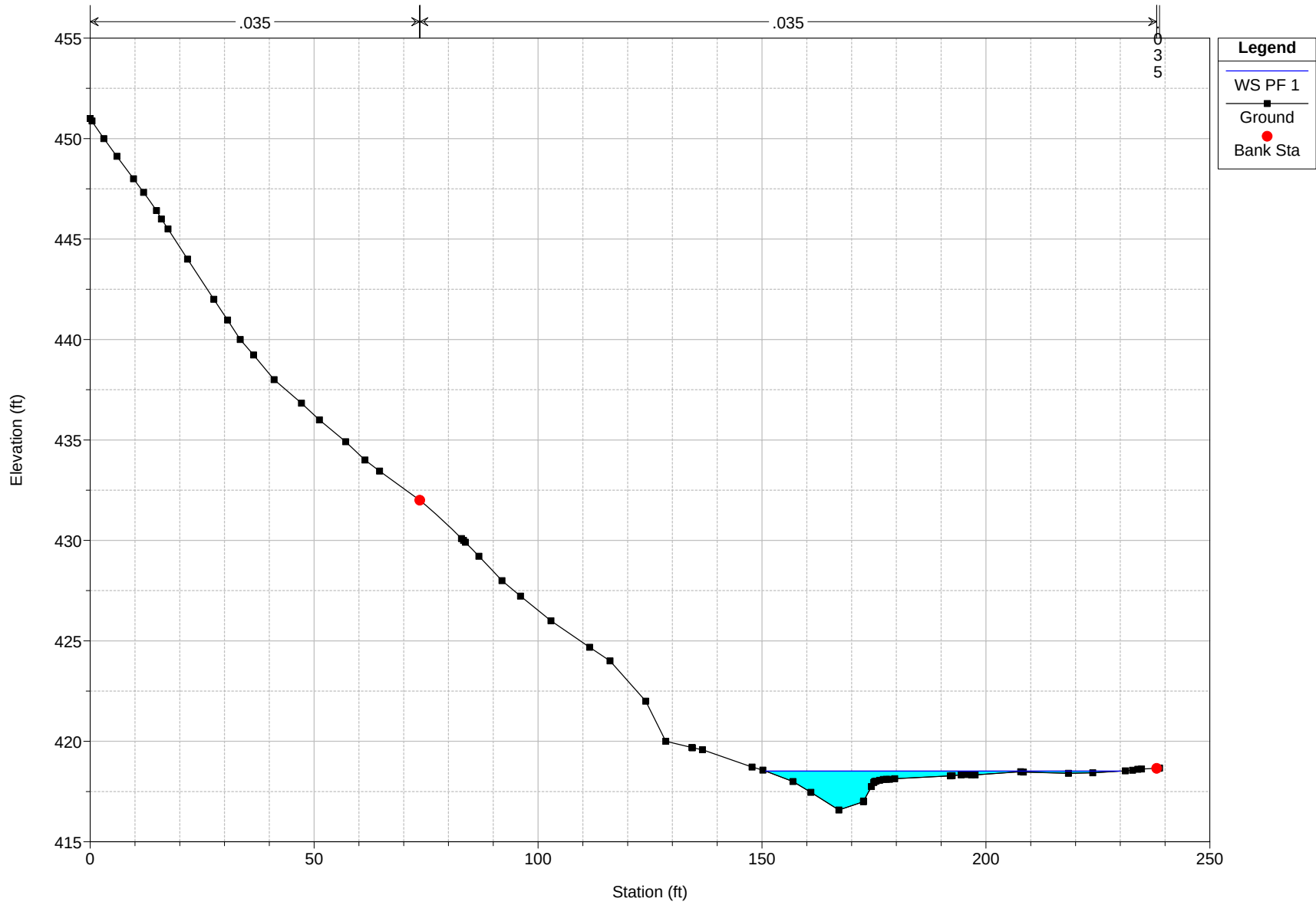
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	73.59	.035	238.13	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	73.59	238.13		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 419.28	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.76	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 418.52	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 418.75	* Flow Area (sq ft)		* 35.40	
* E.G. Slope (ft/ft)	* 0.080356	* Area (sq ft)		* 35.40	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 79.20	* Top Width (ft)		* 79.20	
* Vel Total (ft/s)	* 7.01	* Avg. Vel. (ft/s)		* 7.01	
* Max Chl Dpth (ft)	* 1.94	* Hydr. Depth (ft)		* 0.45	
* Conv. Total (cfs)	* 875.9	* Conv. (cfs)		* 875.9	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 79.54	
* Min Ch El (ft)	* 416.58	* Shear (lb/sq ft)		* 2.23	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 238.76	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.37	* Cum Volume (acre-ft)	* 0.01	* 1.65	
* C & E Loss (ft)	* 0.03	* Cum SA (acres)	* 0.01	* 3.20	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013
RS = 78



CROSS SECTION
REACH: Reach-1

RS: 77

INPUT

Description: 9

Station Elevation Data num= 73

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	446.32	1.07	446.05	1.27	446.01	9.97	444.09	10.39	444
19.1	442	21.24	441.45	26.41	440	31.02	438.88	34.96	438
45.89	436	54.16	434.51	57.16	434	59.34	433.55	66.79	432
68.57	431.61	76.19	430	83.77	428.85	89.03	428	92.43	427.5
103.67	426	118.78	424.43	123.04	424	140.38	422	150.36	420
161.34	418.44	164.84	418	168.92	417.66	175.5	417.18	180.39	416.93
183.68	416.81	185.6	416.78	186.8	416.79	198.33	416.07	199.02	416
199.86	415.8	200	415.8	203.04	415.04	203.53	414.89	203.72	414.81
203.99	414.44	206.29	414.34	207.18	414.4	207.44	414.42	207.65	414.45
209.11	414.64	209.64	414.7	211.58	414.86	212.48	414.88	213.32	414.94
215.03	415.02	218.08	415.2	218.19	415.21	222.3	415.56	226.06	416
230.41	416.17	246.54	417.05	249.4	417.1	253.67	417.23	273.51	417.76
277.63	417.83	282.4	418	286.93	418.27	289.42	418.44	314.92	419.77
315.98	419.83	318.62	420	339.53	421.77	342.87	422	347.2	422.56
349.2	422.75	352.69	423.13	354.24	423.27				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	92.43	.035	339.53	.035

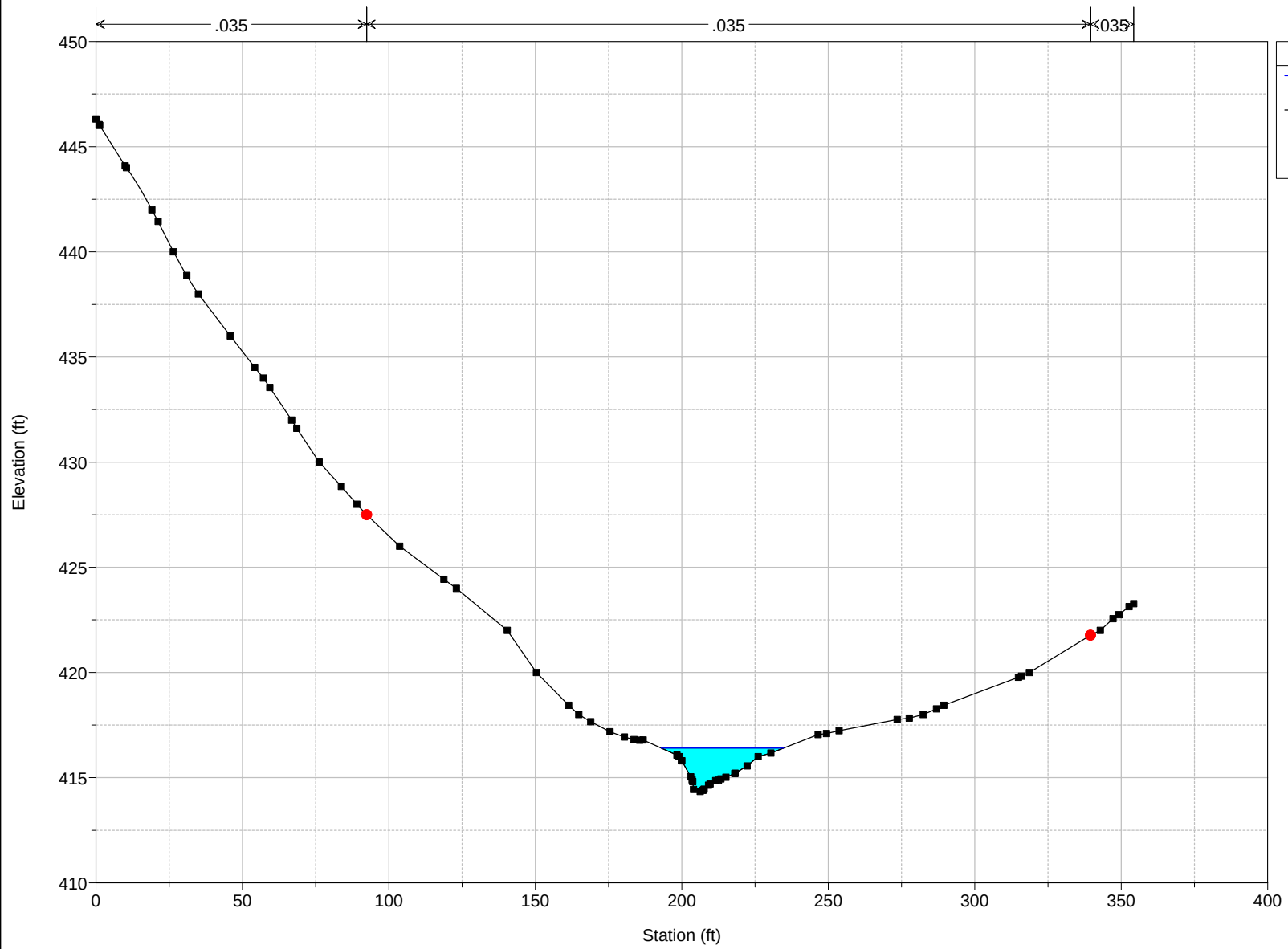
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	92.43	339.53		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 417.07	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.66	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 416.41	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 416.55	* Flow Area (sq ft)		* 37.99	
* E.G. Slope (ft/ft)	* 0.027331	* Area (sq ft)		* 37.99	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 41.82	* Top Width (ft)		* 41.82	
* Vel Total (ft/s)	* 6.54	* Avg. Vel. (ft/s)		* 6.54	
* Max Chl Dpth (ft)	* 2.07	* Hydr. Depth (ft)		* 0.91	
* Conv. Total (cfs)	* 1501.9	* Conv. (cfs)		* 1501.9	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 42.27	
* Min Ch El (ft)	* 414.34	* Shear (lb/sq ft)		* 1.53	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 354.24	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.18	* Cum Volume (acre-ft)	* 0.01	* 1.60	
* C & E Loss (ft)	* 0.03	* Cum SA (acres)	* 0.01	* 3.13	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 77



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 76

INPUT

Description: 10

Station Elevation Data num= 68

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	441.76	.14	441.74	9.69	440	15.52	438.99	16.78	438.8
26.52	437.08	32.35	436	44.43	434	55.04	432.51	58.32	432
62.25	431.22	67.98	430	73.99	428.98	75.05	428.81	87.35	426.56
90.71	426	102.23	424.31	104.54	424	118.21	422.33	121.06	422
132.11	420.74	135.13	420.42	136.45	420.31	146.47	418.95	152.58	418
164.01	416.51	168.09	416	175.9	414.99	176.9	414.92	178.24	414.81
183.03	414.31	186.58	414	186.86	413.96	186.92	413.94	187.01	413.92
187.15	413.89	193.57	412.74	194.14	412.58	194.64	412.46	196.57	412
201.02	411.68	204.39	411.22	204.6	411.18	204.79	411.16	205.19	411.14
205.88	411.14	206.75	411.18	207.72	411.25	208.96	411.38	209.03	411.39
210.83	411.77	211.24	411.88	211.91	412	212.82	412.19	222.07	413.02
230.18	413.81	230.27	413.82	230.32	413.83	230.44	413.84	230.79	413.87
233.21	414	238.52	414.4	240.03	414.55	252.17	416	261.41	416.41
264.18	416.5	267.41	416.54	271.48	416.56				

Manning's n Values num= 3

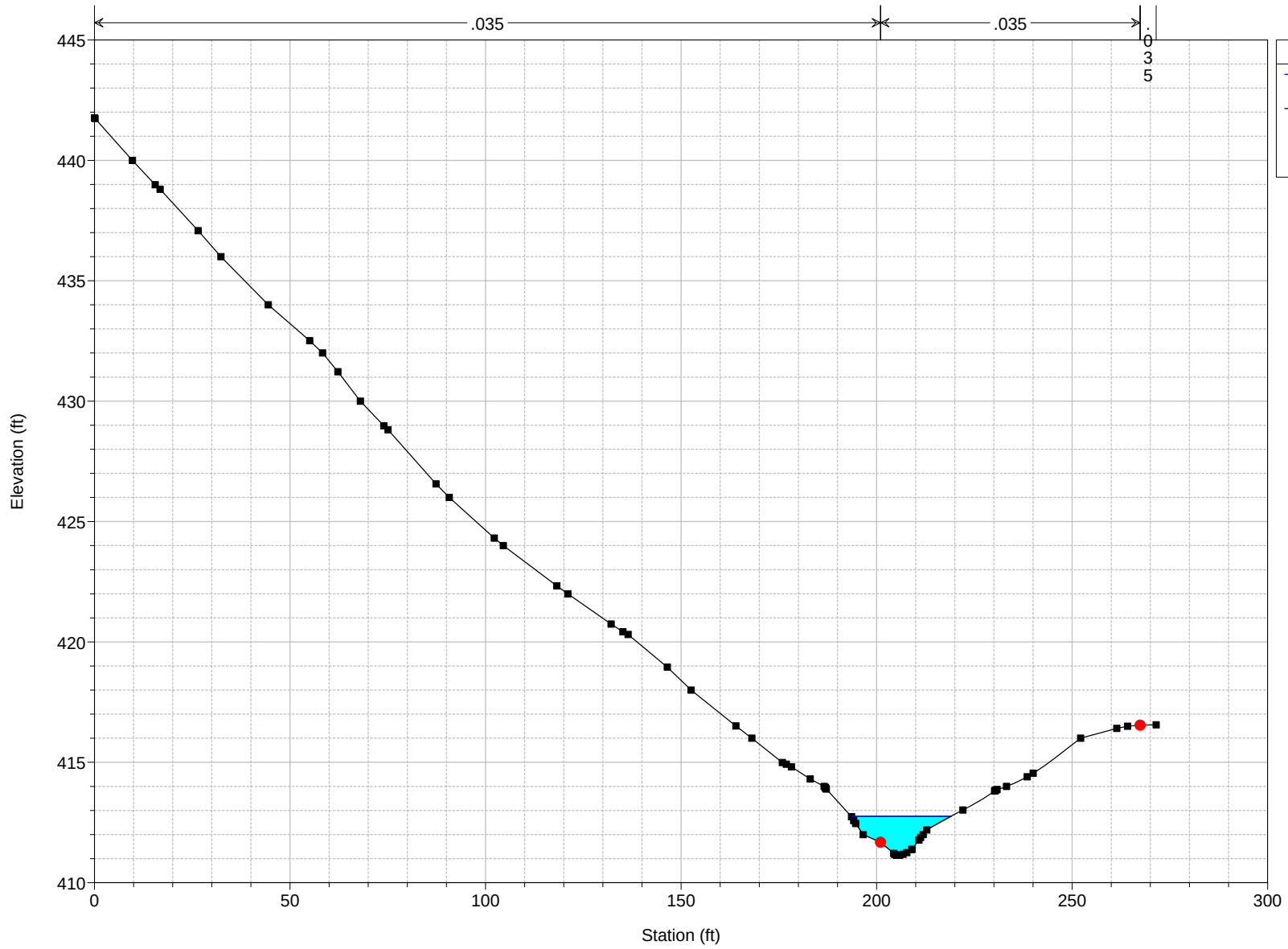
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	201.02	.035	267.41	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	201.02	267.41		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 414.73	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.97	* Wt. n-Val.	* 0.035	* 0.035	*
* W.S. Elev (ft)	* 412.76	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 413.36	* Flow Area (sq ft)	* 5.26	* 16.97	*
* E.G. Slope (ft/ft)	* 0.083296	* Area (sq ft)	* 5.26	* 16.97	*
* Q Total (cfs)	* 248.30	* Flow (cfs)	* 50.24	* 198.06	*
* Top Width (ft)	* 25.63	* Top Width (ft)	* 7.54	* 18.10	*
* Vel Total (ft/s)	* 11.17	* Avg. Vel. (ft/s)	* 9.55	* 11.67	*
* Max Chl Dpth (ft)	* 1.62	* Hydr. Depth (ft)	* 0.70	* 0.94	*
* Conv. Total (cfs)	* 860.3	* Conv. (cfs)	* 174.1	* 686.2	*
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)	* 7.64	* 18.26	*
* Min Ch El (ft)	* 411.14	* Shear (lb/sq ft)	* 3.58	* 4.83	*
* Alpha	* 1.02	* Stream Power (lb/ft s)	* 271.48	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.21	* Cum Volume (acre-ft)	* 0.00	* 1.57	*
* C & E Loss (ft)	* 0.13	* Cum SA (acres)	* 0.00	* 3.09	*

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013
RS = 76



Legend	
WS PF 1	■
Ground	■
Bank Sta	●

CROSS SECTION
REACH: Reach-1

RS: 75

INPUT

Description: 11

Station Elevation Data				num=	58				
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	437.45	2.58	437.01	8.26	436	12.74	435.15	18.93	434
25.68	432.65	29.52	432	32.05	431.54	41.16	430	43.64	429.74
54.99	428	68.57	426	77.89	424.52	81.33	424	84.75	423.46
93.66	422	96.26	421.59	99.42	421.15	103.02	420.62	108.04	420
125.5	418.15	126.98	418	139.5	416.53	142	416.26	144	416
156.67	414.05	157	414	157.05	413.99	157.28	413.95	164.57	412.7
165.48	412.56	166.17	412.44	166.38	412.4	166.87	412.34	168.88	412
170.96	410.87	171.91	410.31	172.31	410.1	172.48	410	172.9	409.78
176.23	408	181.21	408	182.46	408.35	184.4	408.96	189.54	410
206.12	411.64	208.99	412	215.61	412.22	222.1	412.41	223.18	412.43
226.3	412.51	242.09	413.34	244.65	413.41	249.22	413.52	249.91	413.55
250.63	413.57	260.67	414	264.33	414.3				

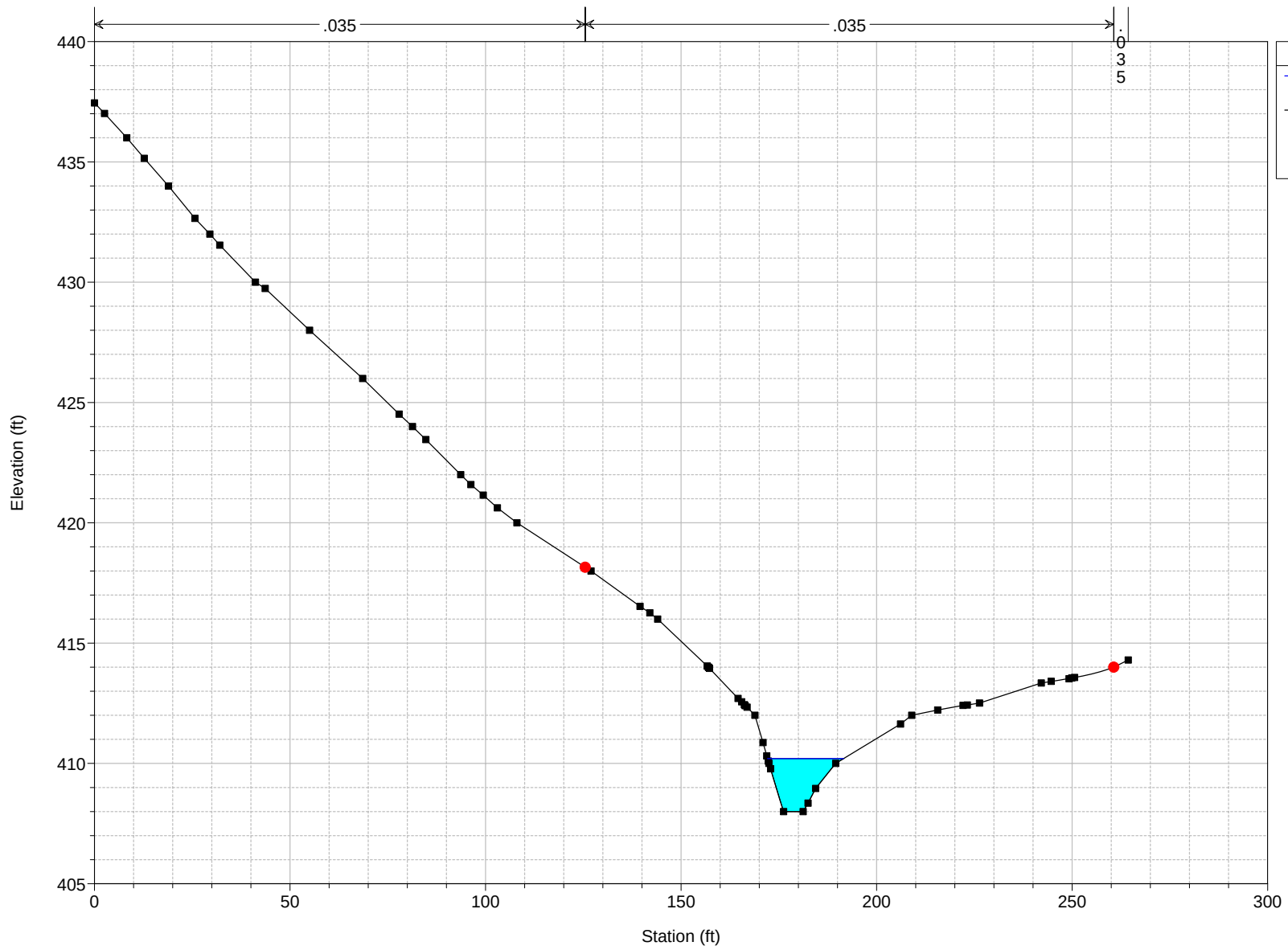
Manning's n Values				num=	3
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	125.5	.035	260.67	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	125.5	260.67		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 411.74	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.54	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 410.20	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 410.71	* Flow Area (sq ft)		* 24.94	
* E.G. Slope (ft/ft)	* 0.041694	* Area (sq ft)		* 24.94	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 19.46	* Top Width (ft)		* 19.46	
* Vel Total (ft/s)	* 9.96	* Avg. Vel. (ft/s)		* 9.96	
* Max Chl Dpth (ft)	* 2.20	* Hydr. Depth (ft)		* 1.28	
* Conv. Total (cfs)	* 1216.0	* Conv. (cfs)		* 1216.0	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 20.27	
* Min Ch El (ft)	* 408.00	* Shear (lb/sq ft)		* 3.20	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 264.33	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.86	* Cum Volume (acre-ft)		* 1.55	
* C & E Loss (ft)	* 0.13	* Cum SA (acres)		* 3.07	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013
RS = 75



Legend	
WS PF 1	
Ground	■
Bank Sta	●

CROSS SECTION
REACH: Reach-1

RS: 74

INPUT

Description: 12

Station Elevation Data		num= 89							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	437.7	7.53	436.31	9.23	436	9.87	435.87	19.41	434
28.39	432.07	28.7	432	29.42	431.84	37.88	430	48.58	428.81
56.15	428	69.66	426	70.07	425.93	80.81	424	89.53	422.6
93.14	422	96.41	421.41	105.25	420	114.74	418.51	118.09	418
124.63	417.3	135.75	416	137.59	415.75	145.36	414.73	150.44	414
155.43	413.13	161.8	412	162.43	411.33	163.82	410	164.51	409.28
165.92	408	168.35	407.69	168.59	407.66	177.68	407.61	177.89	408
186.09	409.23	191.6	410	198	410.71	199.82	410.79	201.72	410.8
208.35	411.29	208.98	411.34	209.26	411.37	209.74	411.41	209.94	411.42
210.27	411.43	210.46	411.43	210.7	411.44	211.7	411.47	212.47	411.48
213.44	411.47	214.59	411.44	215.91	411.36	218.78	411.17	220.71	411.06
223.94	410.97	229.72	410.74	233.04	410.65	236.82	410.54	240.35	410.5
241.83	410.44	243.19	410.4	244.52	410.39	245.87	410.42	247.33	410.5
250.03	410.53	252.68	410.75	254.61	410.82	255.3	410.86	256.79	410.94
257.44	410.96	263.74	411.2	264.6	411.21	265.73	411.22	268.18	411.29
269.35	411.26	272.36	411.33	273.52	411.25	275.41	411.02	276.59	410.93
278.27	410.91	280.05	410.92	281.38	410.94	283.54	411	284.98	411.06
287.09	411.18	289.78	411.38	296.32	412	297.77	412.12		

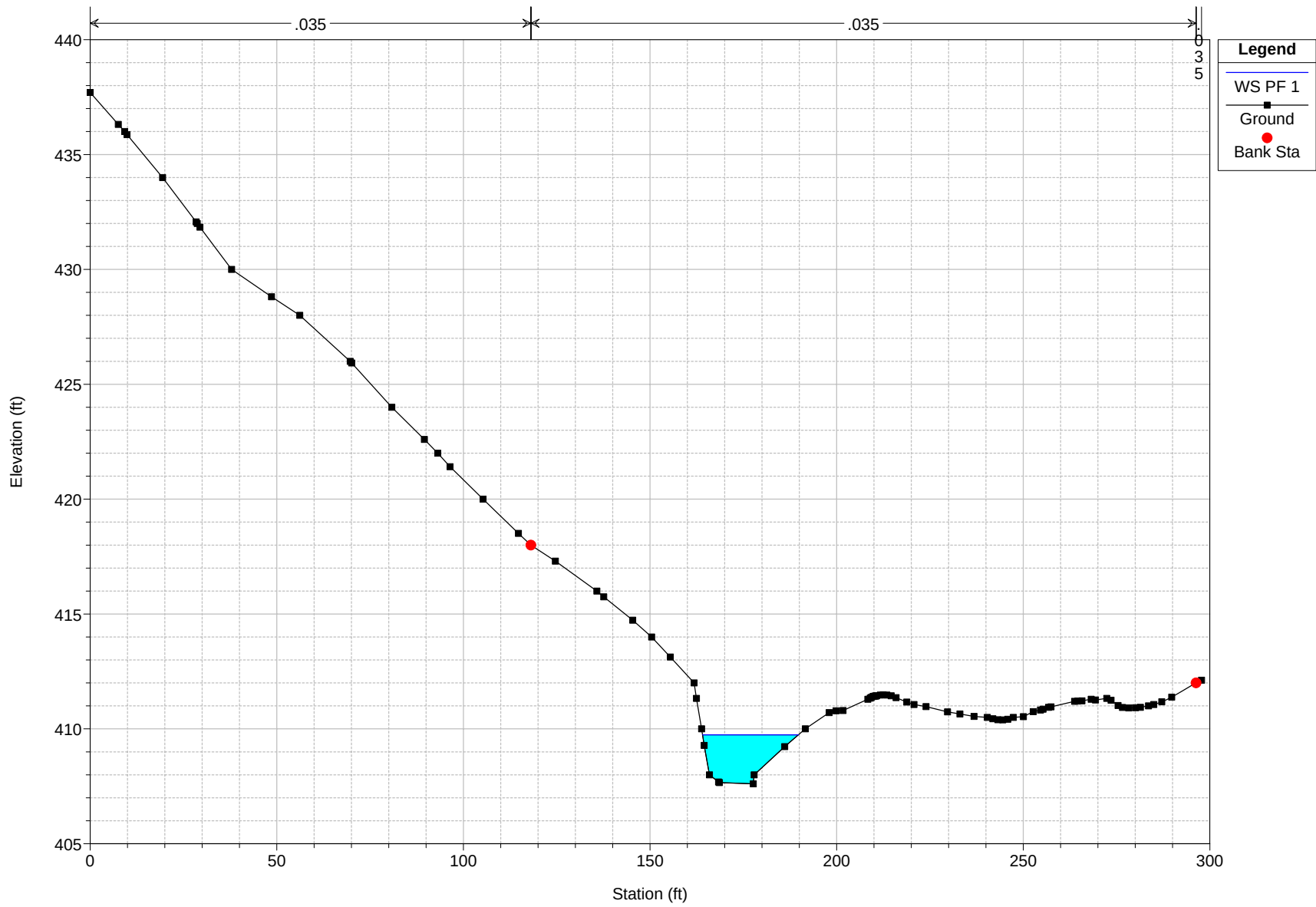
Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	118.09	.035	296.32	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	118.09	296.32		5.67	50	160.5	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 410.46	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.72	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 409.74	* Reach Len. (ft)	* 5.67	* 50.00	* 160.50
* Crit W.S. (ft)	* 409.74	* Flow Area (sq ft)		* 36.42	
* E.G. Slope (ft/ft)	* 0.017075	* Area (sq ft)		* 36.42	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 25.66	* Top Width (ft)		* 25.66	
* Vel Total (ft/s)	* 6.82	* Avg. Vel. (ft/s)		* 6.82	
* Max Chl Dpth (ft)	* 2.13	* Hydr. Depth (ft)		* 1.42	
* Conv. Total (cfs)	* 1900.2	* Conv. (cfs)		* 1900.2	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 26.73	
* Min Ch El (ft)	* 407.61	* Shear (lb/sq ft)		* 1.45	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 297.77	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 1.51	
* C & E Loss (ft)		* Cum SA (acres)		* 3.05	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013
RS = 74



CROSS SECTION
REACH: Reach-1

RS: 73

INPUT

Description: 13

Station Elevation Data num= 67

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	436.71	45	436.64	4.71	436	13.52	434.75	19.09	434
31.94	432	35.81	431.32	42.32	430	44.32	429.69	55.14	428
63.96	426.71	67.24	426.31	69.46	426	71.61	425.54	77	424.49
79.45	424	84.61	422.7	87.36	422	87.69	421.97	87.82	421.96
88.17	421.92	91.45	421.55	104.98	420	106.23	419.83	121.32	418
134.87	416	137.1	415.83	154.39	414	159.74	412.99	165.08	412
175.72	410.07	176.14	410	183.36	408.73	190.1	408	191.31	407.64
193.99	406.67	195.43	406	206.28	406	209.3	406.81	211.79	407.5
213.73	407.84	214.95	408	215.31	408.01	216.53	408.04	218.37	408.01
218.87	408	221.05	407.89	223.43	407.84	225.2	408	225.28	408.01
225.4	408	232.19	408.22	234.89	408.29	236.74	408.33	238.05	408.34
239.1	408.36	243.67	408.46	244.67	408.48	245.57	408.48	246.96	408.45
252.73	408.27	257.93	408.25	276.28	408.84	279.84	409.08	283.85	409.32
288.29	409.55	291.74	409.74						

Manning's n Values num= 3

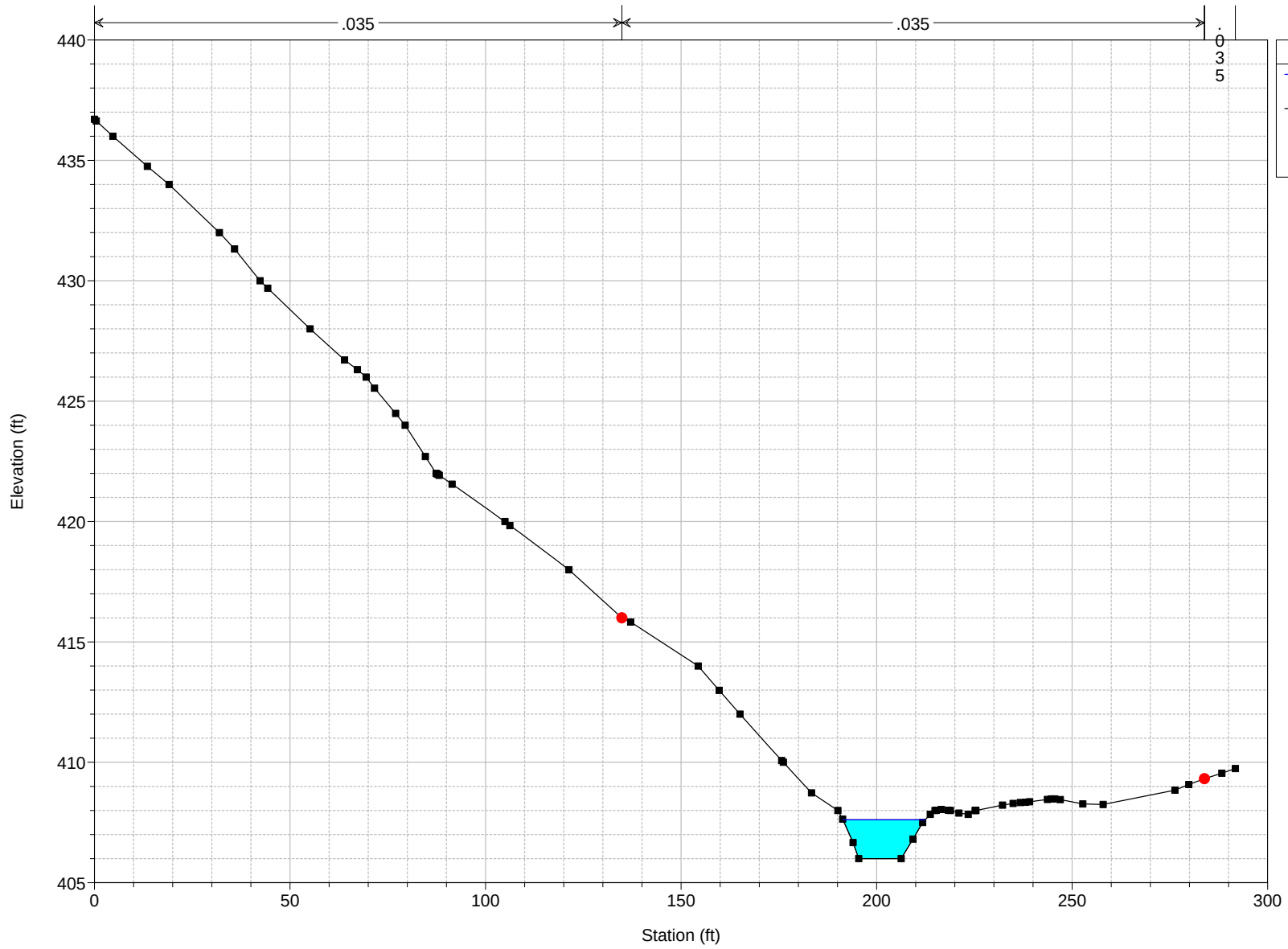
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	134.87	.035	283.85	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	134.87	283.85		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 409.10	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.49	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 407.61	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 408.31	* Flow Area (sq ft)		* 25.39	
* E.G. Slope (ft/ft)	* 0.042714	* Area (sq ft)		* 25.39	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 21.05	* Top Width (ft)		* 21.05	
* Vel Total (ft/s)	* 9.78	* Avg. Vel. (ft/s)		* 9.78	
* Max Chl Dpth (ft)	* 1.61	* Hydr. Depth (ft)		* 1.21	
* Conv. Total (cfs)	* 1201.4	* Conv. (cfs)		* 1201.4	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 21.57	
* Min Ch El (ft)	* 406.00	* Shear (lb/sq ft)		* 3.14	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 291.74	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.28	* Cum Volume (acre-ft)		* 1.48	
* C & E Loss (ft)	* 0.08	* Cum SA (acres)		* 3.02	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013
RS = 73



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 72

INPUT

Description: 14

Station Elevation Data num= 93

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	434.11	.42	434	.87	433.9	9.54	432	13.07	431.29
14.68	430.99	19.61	430	27.55	428.42	29.99	428	33.75	427.19
39.14	426	41.65	425.47	42.95	425.26	49.68	424.24	50.8	424.06
51.18	424	62.99	422.4	65.6	422	77.18	420.04	77.42	420
86.38	418.73	95.47	418.3	97.03	418.18	101.12	418	104.16	417.82
104.68	417.78	105.57	417.69	111.22	417.19	118.38	416.33	121.05	416
124.38	415.6	138.07	414	138.82	413.92	149.66	412.54	154.2	412
160.4	411.15	174.74	409.34	185.87	408	192.82	407.79	216.92	406.32
225.29	406.17	228.62	406.09	231.61	406	232.49	405.3	234.22	404
234.49	403.89	235.66	403.69	237.62	403.58	239.38	403.51	240.13	403.46
240.47	403.41	241.93	403.23	242.2	403.21	242.55	403.21	243.08	403.24
245.78	403.37	248.14	403.55	249	403.71	249.07	403.74	249.27	403.87
249.72	404	249.83	404.09	249.92	404.16	252.56	406	252.94	406.02
254.51	406.06	255.64	406.03	256.28	406	257.17	405.92	259.22	405.88
260.42	406	262.42	406.09	262.66	406.11	262.99	406.14	273.1	406.89
275.45	407.02	276.84	407.06	277.53	407.07	277.62	407.08	277.81	407.1
278.27	407.12	279.44	407.16	281.09	407.22	283	407.28	284.99	407.32
286.7	407.34	292.28	407.35	293.84	407.37	297.53	407.43	301.9	407.64
307.45	408	311.29	408.13	313.12	408.17				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	174.74	.035	307.45	.035

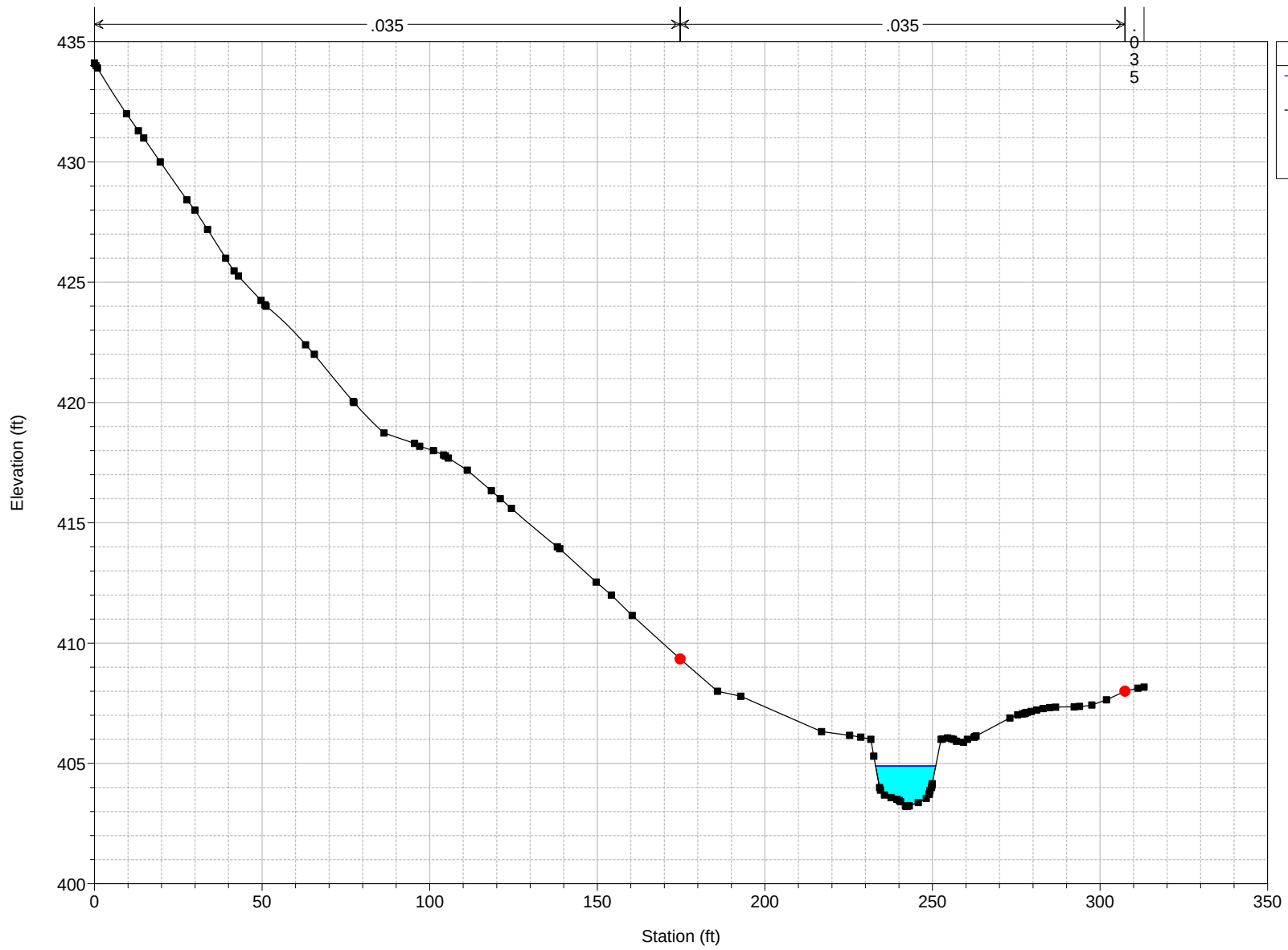
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	174.74	307.45		50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 406.74	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.84	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 404.90	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 405.46	* Flow Area (sq ft)		* 22.79	
* E.G. Slope (ft/ft)	* 0.050521	* Area (sq ft)		* 22.79	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 17.95	* Top Width (ft)		* 17.95	
* Vel Total (ft/s)	* 10.89	* Avg. Vel. (ft/s)		* 10.89	
* Max Chl Dpth (ft)	* 1.69	* Hydr. Depth (ft)		* 1.27	
* Conv. Total (cfs)	* 1104.7	* Conv. (cfs)		* 1104.7	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 18.69	
* Min Ch El (ft)	* 403.21	* Shear (lb/sq ft)		* 3.85	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 313.12	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.32	* Cum Volume (acre-ft)		* 1.45	
* C & E Loss (ft)	* 0.04	* Cum SA (acres)		* 3.00	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 72



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 71

INPUT

Description: 15

Station Elevation Data		num=		80					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	427.82	3.61	426.98	8.81	426	13.27	425.06	18.37	424
27.8	422	34.64	420.5	37.09	420	40.73	419.22	43.15	418.81
48.56	418	54.21	417.53	54.43	417.51	54.63	417.49	54.9	417.45
64.21	416	67.4	415.4	70.03	414.92	74.09	414.25	76.04	414
76.37	413.96	76.5	413.96	79.68	413.69	86.82	413.24	91.18	413.04
97.54	412.67	106.37	412	111.24	411.7	112.9	411.66	116.12	411.49
121.74	411.18	131.24	410.82	136.58	410.51	137.51	410.46	141.61	410.11
142.67	410	149.5	409.32	150.64	409.2	154.37	408.76	161.92	408
170.36	407.51	170.47	407.51	177.85	407.05	182.91	407.08	186.46	407.06
189.91	407	194.85	406.83	204.83	406.46	205.17	406.45	214.14	406.13
218.23	406	222.89	405.8	226.35	405.59	239.14	405.01	251.35	404
252.87	402.75	253.81	402	261.09	402	266.36	403.41	269.48	404
271.06	404.06	271.41	404.07	279.12	404.36	280.98	404.44	290.24	404.86
298.55	405.21	306.76	405.59	307.17	405.61	317.71	405.98	317.79	405.99
317.96	405.99	318.22	406	321.18	406.06	324.39	406.1	329.82	406.39
333.7	406.61	336.1	406.74	347.78	407.46	356.25	408	362.7	408.38

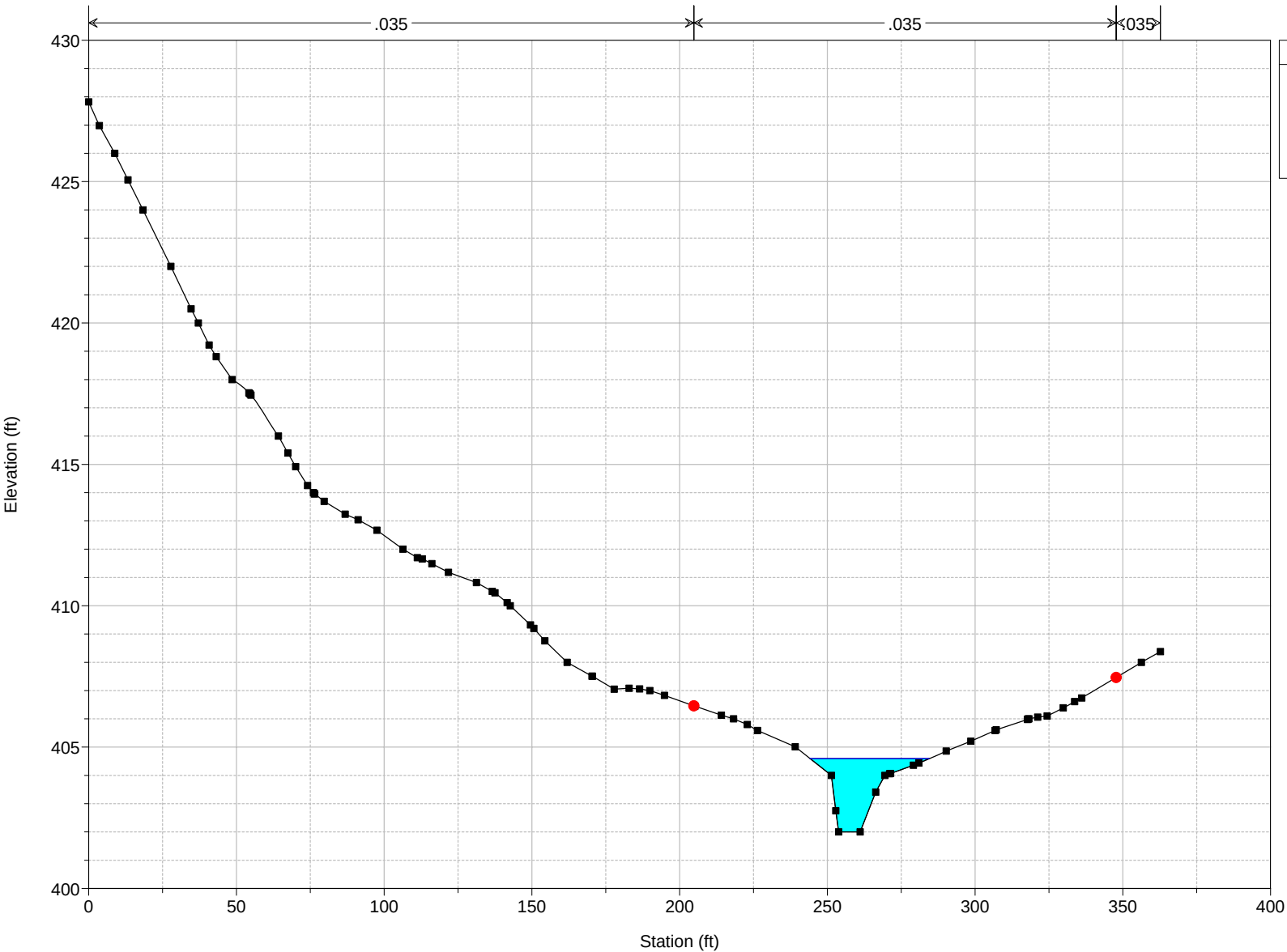
Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	204.83	.035	347.78	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	204.83	347.78		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 405.13	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.53	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 404.60	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 404.60	* Flow Area (sq ft)	*	* 42.40	*
* E.G. Slope (ft/ft)	* 0.018357	* Area (sq ft)	*	* 42.40	*
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.30	*
* Top Width (ft)	* 40.29	* Top Width (ft)	*	* 40.29	*
* Vel Total (ft/s)	* 5.86	* Avg. Vel. (ft/s)	*	* 5.86	*
* Max Chl Dpth (ft)	* 2.60	* Hydr. Depth (ft)	*	* 1.05	*
* Conv. Total (cfs)	* 1832.6	* Conv. (cfs)	*	* 1832.6	*
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)	*	* 41.27	*
* Min Ch El (ft)	* 402.00	* Shear (lb/sq ft)	*	* 1.18	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 362.70	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	*	* 1.41	*
* C & E Loss (ft)	*	* Cum SA (acres)	*	* 2.96	*

RS = 71



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 70

INPUT

Description: 16

Station Elevation Data		num=		97					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	420.5	2.29	420	8.11	418.69	11.24	418	14.06	417.3
16.95	416.6	18.99	416.15	19.64	416	25.6	414.64	28.11	414
34.17	412.81	37.82	412	42.78	410.93	43.49	410.77	44.19	410.64
45.38	410.47	47.02	410.17	49.13	410	57.13	409.64	61.9	409.25
67.79	408.87	71.29	408.48	72.93	408.33	74.84	408	80.92	407.3
81.86	407.22	84.2	406.99	86.72	406.76	88.08	406.74	89	406.68
90.04	406.65	91.43	406.64	93.35	406.65	102.93	406.73	105.52	406.72
107.49	406.73	109.9	406.7	112.48	406.66	125.1	406.42	127.68	406.36
128.25	406.34	128.71	406.32	135.1	406	143.44	405.65	145.39	405.6
155.63	405.19	158.51	405.1	162.54	405.08	169.02	404.92	181.39	404.69
184.32	404.71	186.51	404.73	190.25	404.73	194.49	404.76	195.56	404.77
196.13	404.77	196.7	404.76	198.23	404.74	208.27	404.59	223.59	404.55
225.39	404.52	236.18	404.23	239.44	404.13	244.24	404	251.29	403.25
256.58	402.38	258.96	402	260.12	401.84	263.75	401.38	271.06	401.45
271.11	401.51	272.68	402	277.32	402.51	277.5	402.52	277.9	402.54
279.09	402.62	283.61	403.03	285.65	403.11	288.76	403.18	291.25	403.38
291.96	403.44	293.25	403.54	293.54	403.56	306.05	403.66	306.84	403.7
309.46	403.73	312.54	403.81	317.27	404	317.97	404.04	319.23	404.11
334.25	404.98	336.05	405.06	341.02	405.29	342.24	405.34	343.67	405.45
345.04	405.54	345.77	405.58						

Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	196.13	.035	341.02	.035

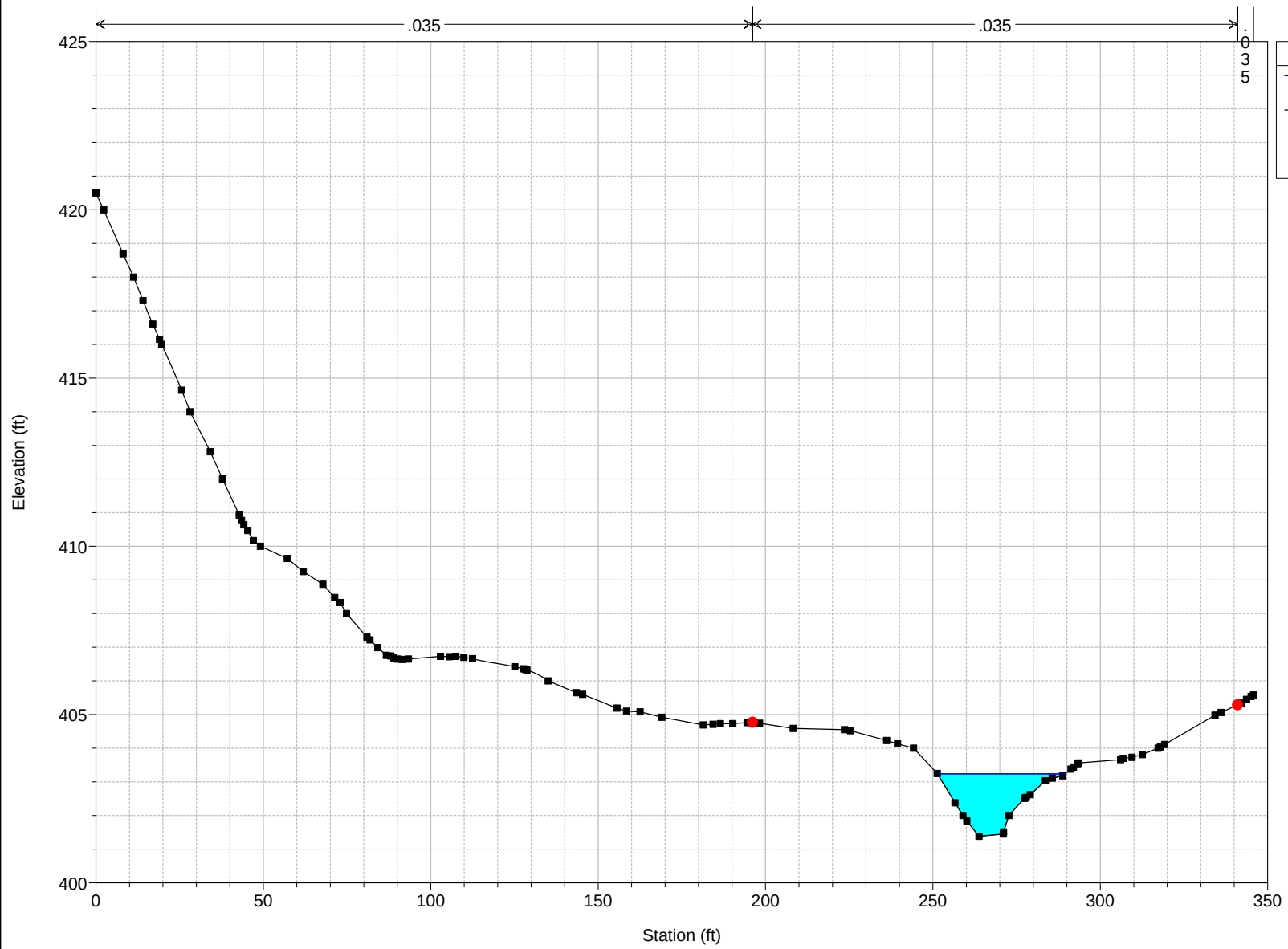
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	196.13	341.02		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 403.97	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.73	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 403.24	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 403.39	* Flow Area (sq ft)		* 36.09	
* E.G. Slope (ft/ft)	* 0.028494	* Area (sq ft)		* 36.09	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 38.07	* Top Width (ft)		* 38.07	
* Vel Total (ft/s)	* 6.88	* Avg. Vel. (ft/s)		* 6.88	
* Max Chl Dpth (ft)	* 1.86	* Hydr. Depth (ft)		* 0.95	
* Conv. Total (cfs)	* 1471.0	* Conv. (cfs)		* 1471.0	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 38.37	
* Min Ch El (ft)	* 401.38	* Shear (lb/sq ft)		* 1.67	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 345.77	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.13	* Cum Volume (acre-ft)		* 1.37	
* C & E Loss (ft)	* 0.02	* Cum SA (acres)		* 2.92	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 70



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 69

INPUT

Description: 17

Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	416	8.11	414.48	9.74	414.17	10.66	414	11.69	413.79
20.71	412	21.34	411.86	29.82	410	37.11	408.53	40.1	408
54.16	406.03	54.42	406	61.3	405.34	64.58	405.07	78.56	404.08
79.15	404.04	79.65	404	91.53	403.57	94.84	403.48	98.12	403.49
103.36	403.63	115.94	404	119.08	404.03	120.05	404	123.72	403.85
136.2	403.17	139.26	403.03	141.12	403	142.75	402.99	145.91	402.9
147.87	402.88	150.01	402.87	152.21	402.88	154.24	402.9	192.39	403.06
198.43	402.91	218.52	402.87	219.03	402.85	219.99	402.81	221.94	402.76
225.01	402.76	227.97	402.73	231.94	402.67	258.87	402.18	260.55	402.14
263.5	402.05	264.92	402	280.45	400.41	284.66	400	296.87	400
297.54	400.18	298.21	400.38	306.14	402	309.77	402.19	315.86	402.53
317.98	402.7	333.1	403.62	342.09	404	373.66	405.96	374.36	406
374.99	406.05								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	218.52	.035	373.66	.035

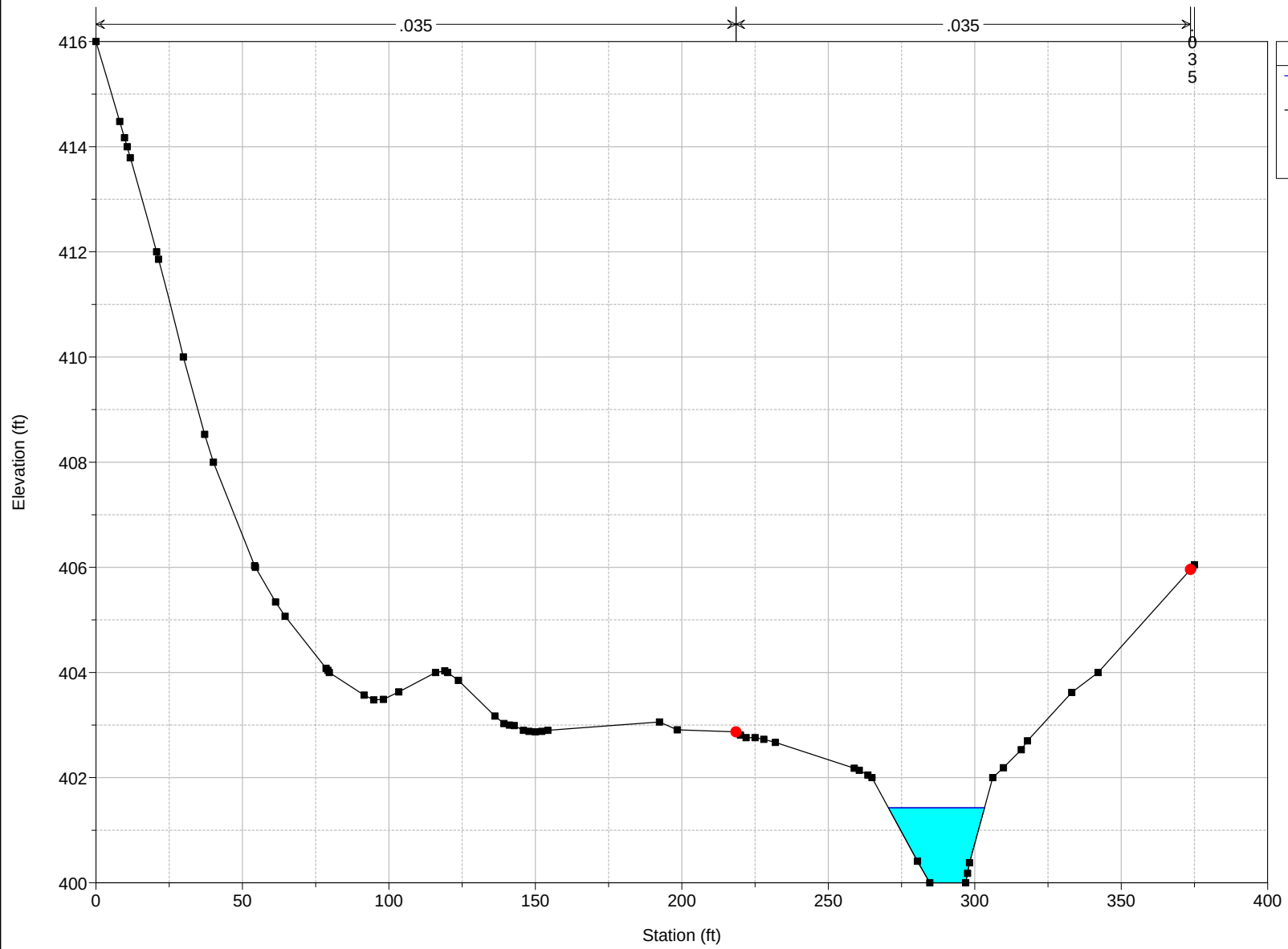
Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	218.52	373.66		50	50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 402.36	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.94	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 401.43	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 401.69	* Flow Area (sq ft)		* 31.94	
* E.G. Slope (ft/ft)	* 0.035060	* Area (sq ft)		* 31.94	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 32.81	* Top Width (ft)		* 32.81	
* Vel Total (ft/s)	* 7.77	* Avg. Vel. (ft/s)		* 7.77	
* Max Chl Dpth (ft)	* 1.43	* Hydr. Depth (ft)		* 0.97	
* Conv. Total (cfs)	* 1326.1	* Conv. (cfs)		* 1326.1	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 33.04	
* Min Ch El (ft)	* 400.00	* Shear (lb/sq ft)		* 2.12	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 374.99	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.58	* Cum Volume (acre-ft)		* 1.33	
* C & E Loss (ft)	* 0.02	* Cum SA (acres)		* 2.88	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 69



CROSS SECTION
REACH: Reach-1

RS: 68

INPUT

Description: 18

Station Elevation Data

num=

97

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	414.75	.33	414.67	3.15	414	12.06	412	18.4	410.55
20.51	410	23.14	409.26	27.81	408	31.55	407.15	36.1	406
44.63	404.03	44.79	404	52.43	403.46	56.84	403.16	59.03	403.02
60.48	402.93	76.45	402	94.89	401.55	100.11	401.44	102.95	401.4
105.13	401.38	107.49	401.38	109.95	401.36	113.55	401.29	116.58	401.27
117.79	401.26	118.92	401.26	120.45	401.28	122.39	401.33	127.91	401.48
148.8	402	149.68	402.02	151.88	402.02	159.17	402	161.68	401.95
161.98	401.95	172.3	401.76	180.88	401.64	182.78	401.6	190.53	401.48
194.53	401.38	195.55	401.34	196.7	401.28	201.54	401.16	203.15	401.1
204.01	401.06	205.75	400.96	207.54	400.85	213.13	400.57	214.12	400.5
221.01	400	224.46	399.22	227.96	398.41	228.47	398.3	229.12	398.17
229.66	398.07	229.77	398.05	229.87	398.05	229.93	398.04	230.3	398
259.23	398	262.09	398.3	263.86	398.52	266.33	398.73	267.69	398.71
268.6	398.59	269.28	398.52	269.82	398.61	273.01	398.55	273.2	398.56
273.36	398.57	273.62	398.6	274.3	398.62	275.52	398.88	277.51	399.19
279.8	399.47	280.12	399.53	280.35	399.58	282.08	400	289.55	400.64
289.85	400.69	290.26	400.71	290.67	400.75	291.76	400.8	295.05	401.19
295.3	401.22	295.49	401.24	295.71	401.25	295.9	401.26	306.13	401.75
309.42	401.95	309.86	402	312.45	402.25	315.14	402.38	315.38	402.4
340.89	404	344.82	404.39						

Manning's n Values

num=

3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	180.88	.035	340.89	.035

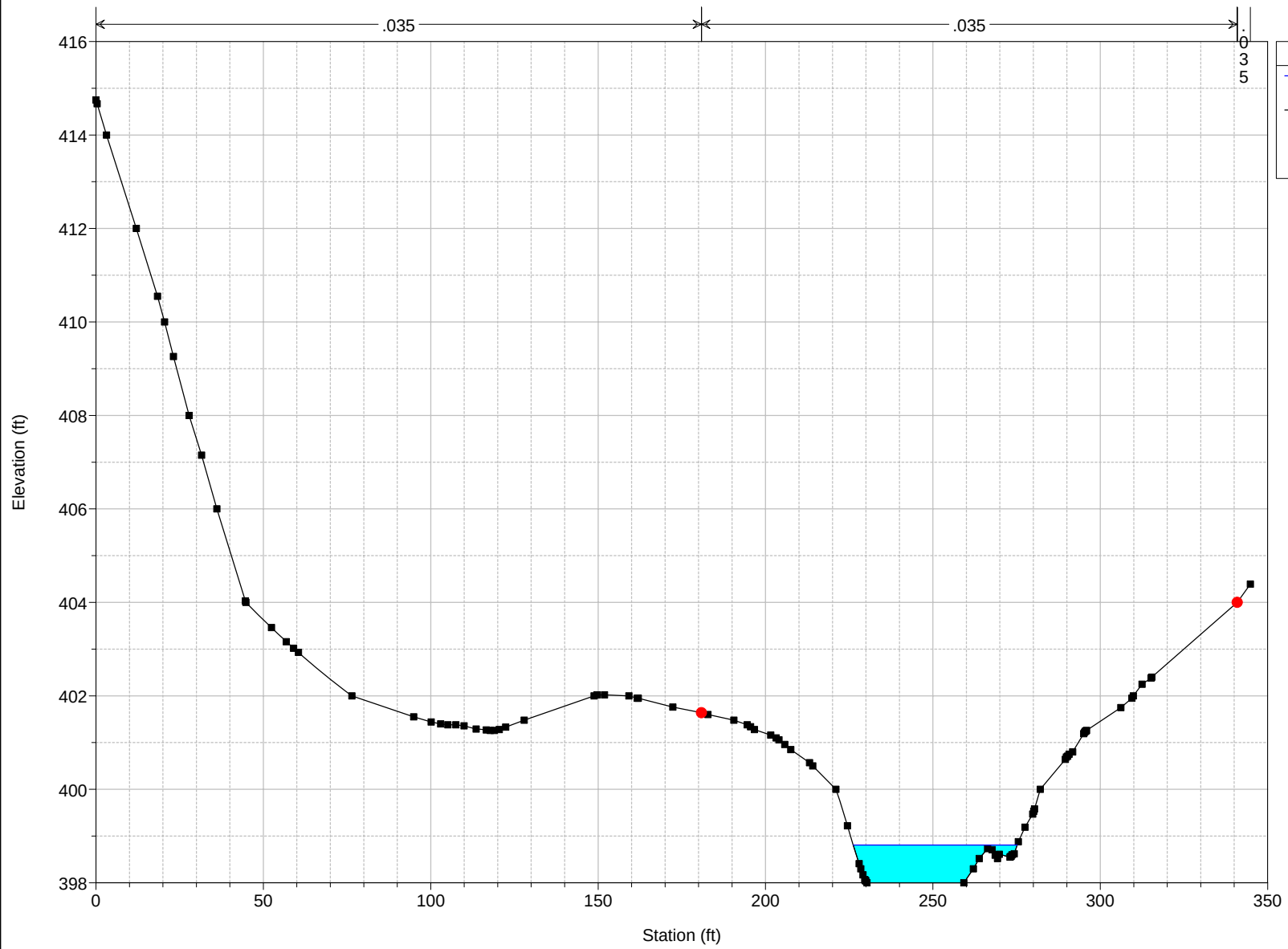
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	180.88	340.89		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 399.88	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.07	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 398.81	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 399.13	* Flow Area (sq ft)		* 29.85	
* E.G. Slope (ft/ft)	* 0.074534	* Area (sq ft)		* 29.85	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 48.94	* Top Width (ft)		* 48.94	
* Vel Total (ft/s)	* 8.32	* Avg. Vel. (ft/s)		* 8.32	
* Max Chl Dpth (ft)	* 0.81	* Hydr. Depth (ft)		* 0.61	
* Conv. Total (cfs)	* 909.5	* Conv. (cfs)		* 909.5	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 49.10	
* Min Ch El (ft)	* 398.00	* Shear (lb/sq ft)		* 2.83	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 344.82	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.47	* Cum Volume (acre-ft)		* 1.29	
* C & E Loss (ft)	* 0.01	* Cum SA (acres)		* 2.83	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 68



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 67

INPUT

Description: 19

Station Elevation Data num= 63

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	416.27	1.22	416	4.15	415.12	7.61	414	11.5	412.86
14.18	412	18.63	410.76	21.7	410	23.6	409.59	30.88	408
34.03	407.28	39.78	406	45.9	404.35	47.34	404	52.79	402.48
54.83	402	60.03	401.16	62.48	401.05	64.13	400.86	65.06	400.72
68.51	400.73	71.98	400.84	72.13	400.84	92.02	399.85	92.28	399.85
100.9	399.49	105.21	399.38	108.52	399.39	116.71	399.47	119.89	399.44
122.94	399.46	124.25	399.45	125.39	399.45	125.65	399.43	126.31	399.39
126.59	399.37	129.58	399.35	134.6	399.06	138.06	398.98	143.96	398.56
147.44	398.42	153.97	398	160.01	397.72	160.73	397.7	163.76	397.58
166.23	397.52	168.73	397.48	171.42	397.43	175.25	397.37	177.5	397.37
179.38	397.38	180.77	397.38	181.56	397.4	183.04	397.38	189.21	397.26
190.71	397.2	202.79	398	225.18	398	235.67	399.19	242.69	400
269.3	402	273.69	402.26	292.78	403.36				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	64.13	.035	269.3	.035

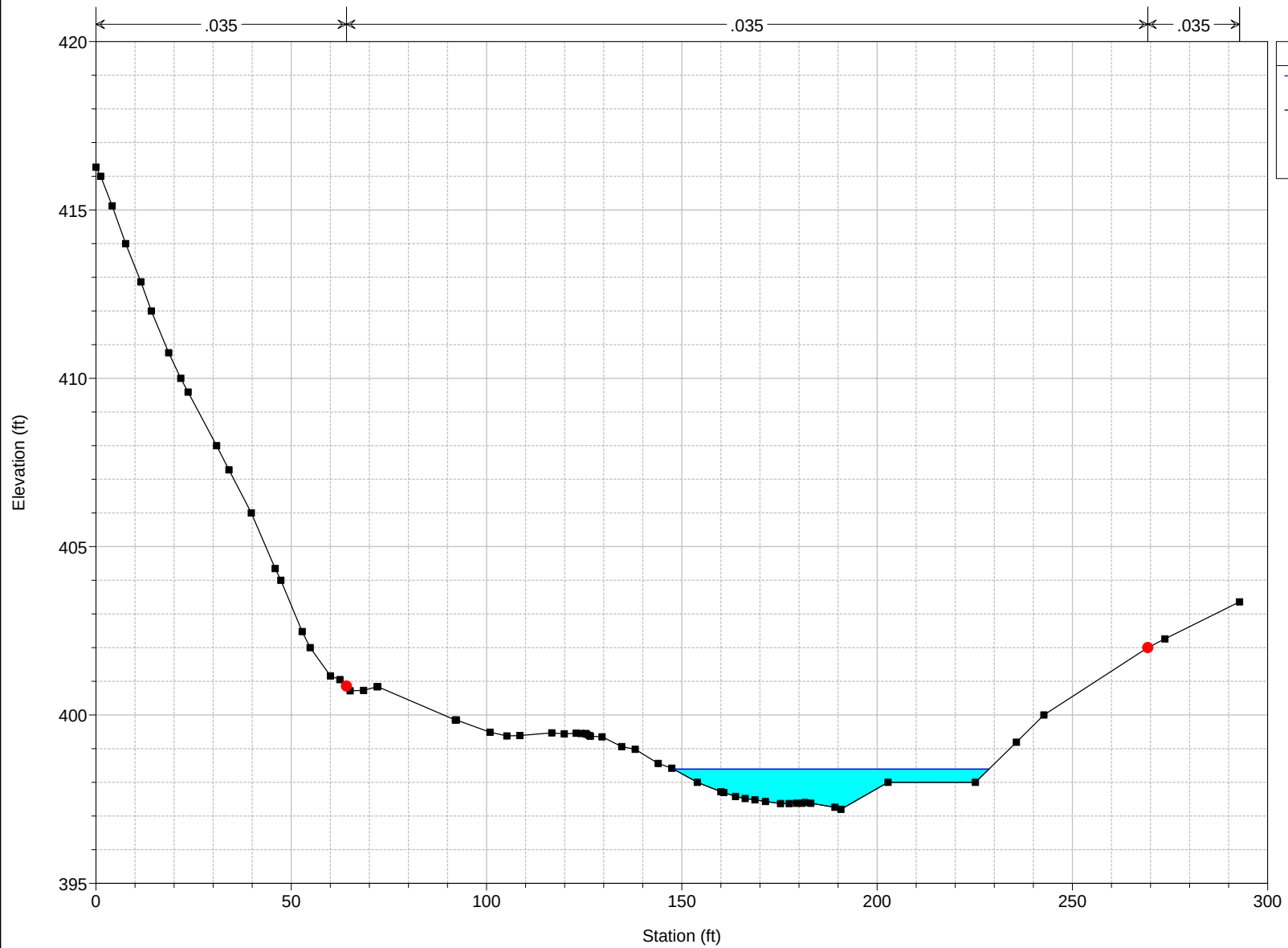
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	64.13	269.3		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 398.73	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.34	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 398.39	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 398.39	* Flow Area (sq ft)		* 53.08	
* E.G. Slope (ft/ft)	* 0.021274	* Area (sq ft)		* 53.08	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 80.76	* Top Width (ft)		* 80.76	
* Vel Total (ft/s)	* 4.68	* Avg. Vel. (ft/s)		* 4.68	
* Max Chl Dpth (ft)	* 1.19	* Hydr. Depth (ft)		* 0.66	
* Conv. Total (cfs)	* 1702.4	* Conv. (cfs)		* 1702.4	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 80.84	
* Min Ch El (ft)	* 397.20	* Shear (lb/sq ft)		* 0.87	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 292.78	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 1.25	
* C & E Loss (ft)		* Cum SA (acres)		* 2.76	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 67



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 66

INPUT

Description: 20

Station Elevation Data		num= 64									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	415.22	.98	414.94	4.18	414	9.22	412.45	10.62	412		
15.19	410.66	17.67	410	21.08	409.04	22.03	408.8	25.1	408		
32.4	406	35.35	405.2	39.73	404	42.53	403.22	46.99	402		
50.82	400.96	55.1	400	57.5	399.65	59.06	399.38	62.24	398.85		
67.57	398	76.43	397.6	82.13	397.37	85.8	397.28	93.11	397.19		
97.4	397.1	100.21	396.89	103.62	396.77	107.59	396.55	110.41	396.45		
112.27	396.4	115.13	396.23	119.95	395.92	121.57	395.8	122.91	395.71		
125.08	395.62	133.29	395.35	135.87	395.28	136.35	395.27	136.71	395.27		
136.82	395.26	137.09	395.25	137.31	395.25	138.04	395.23	139.64	395.21		
142.13	395.2	148.74	395.25	150.79	395.25	151.76	395.22	152.35	395.19		
153.35	395.16	160.5	395.35	160.67	395.38	164.8	395.75	167.86	396		
175.57	396.57	198.1	398	199.75	398.06	211.85	398.43	218.81	398.54		
225.04	398.56	226.98	398.67	227.62	398.69	248.76	399.71				

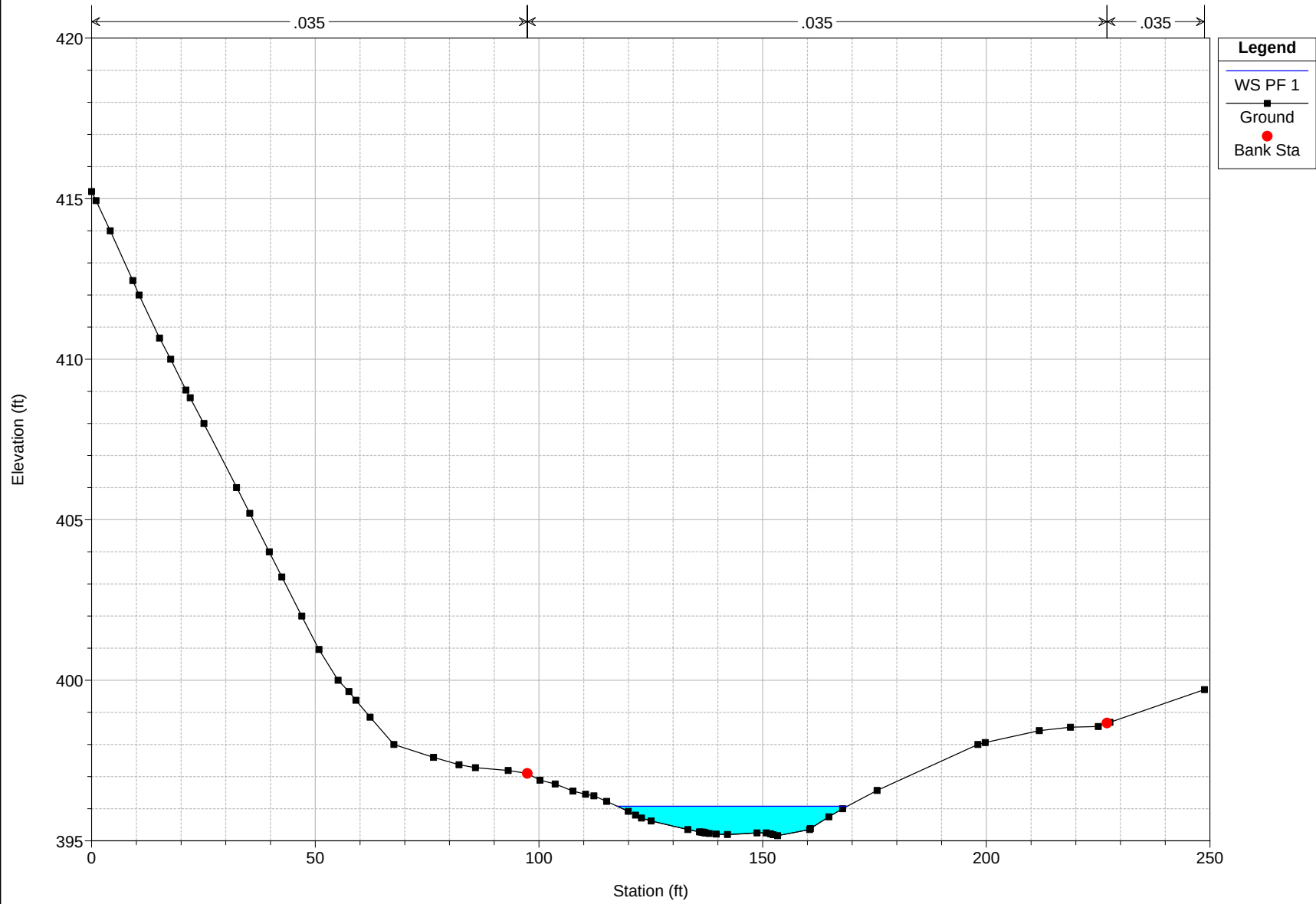
Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	97.4	.035	226.98	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	97.4	226.98		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 397.00	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.92	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 396.08	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 396.37	* Flow Area (sq ft)		* 32.26	
* E.G. Slope (ft/ft)	* 0.061179	* Area (sq ft)		* 32.26	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 51.34	* Top Width (ft)		* 51.34	
* Vel Total (ft/s)	* 7.70	* Avg. Vel. (ft/s)		* 7.70	
* Max Chl Dpth (ft)	* 0.92	* Hydr. Depth (ft)		* 0.63	
* Conv. Total (cfs)	* 1003.9	* Conv. (cfs)		* 1003.9	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 51.40	
* Min Ch El (ft)	* 395.16	* Shear (lb/sq ft)		* 2.40	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 248.76	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.68	* Cum Volume (acre-ft)		* 1.20	
* C & E Loss (ft)	* 0.06	* Cum SA (acres)		* 2.68	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013
RS = 66



CROSS SECTION
REACH: Reach-1

RS: 65

INPUT

Description: 21

Station Elevation Data num= 44

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	410.42	.91	410.19	1.22	410.09	1.58	410	4.23	409.18
8.73	408	10.36	407.59	13.13	406.94	14.38	406.58	17.21	405.89
17.34	405.86	17.5	405.81	19.77	405.08	21.38	404.48	23.35	404
31.03	402.34	32.5	402	38.62	400.6	41.54	400	44.03	399.73
53.94	398.73	58.44	398	80.49	396.47	87.71	396	95.29	395.33
99.26	395.01	102.57	394.77	103.69	394.71	104.75	394.68	115.77	394.23
125.66	394.07	130.57	394	144.62	394	146.03	394.14	146.57	394.15
146.87	394.16	147.26	394.19	150.43	394.39	160.37	395.09	172.18	396
173.64	396.01	214.68	397.29	236.16	397.88	241.18	398		

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	58.44	.035	236.16	.035

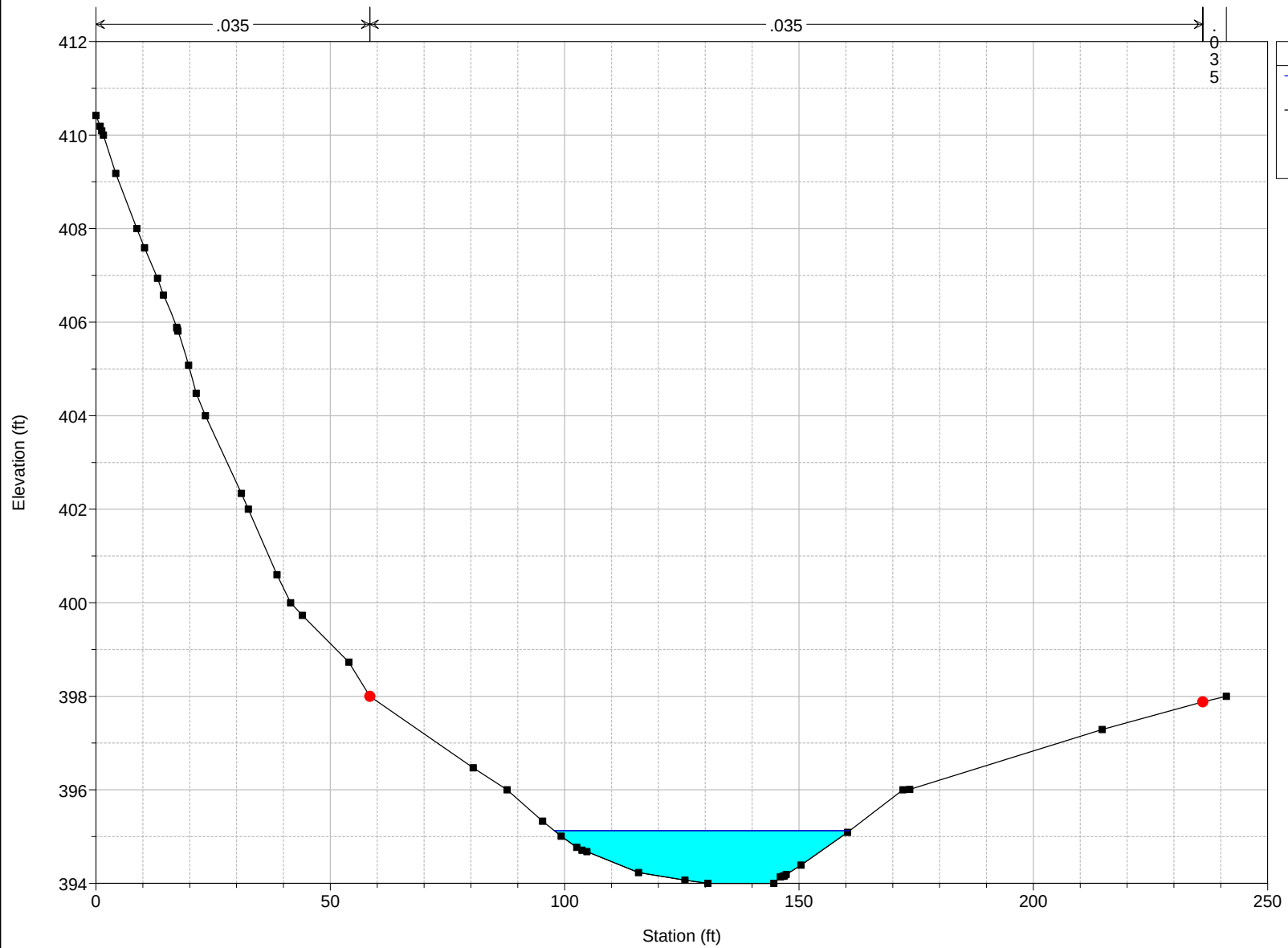
Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	58.44	236.16	50	50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 395.52	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.40	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 395.13	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 395.13	* Flow Area (sq ft)		* 49.13	
* E.G. Slope (ft/ft)	* 0.019769	* Area (sq ft)		* 49.13	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 63.01	* Top Width (ft)		* 63.01	
* Vel Total (ft/s)	* 5.05	* Avg. Vel. (ft/s)		* 5.05	
* Max Chl Dpth (ft)	* 1.13	* Hydr. Depth (ft)		* 0.78	
* Conv. Total (cfs)	* 1766.0	* Conv. (cfs)		* 1766.0	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 63.07	
* Min Ch El (ft)	* 394.00	* Shear (lb/sq ft)		* 0.96	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 241.18	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 1.15	
* C & E Loss (ft)		* Cum SA (acres)		* 2.61	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 65



CROSS SECTION
REACH: Reach-1

RS: 64

INPUT

Description: 22

Station Elevation Data num= 48

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	412.65	1.74	412.21	2.37	412.04	2.59	412	3.46	411.69
4.78	411.23	5.88	410.78	7.98	410	12.11	408.71	13.39	408.28
13.49	408.24	14.3	408	21.62	406.03	21.73	406	28.65	404.19
29.4	404	32.13	403.28	37.1	402	39.55	401.64	46.45	400
48.24	399.72	52.53	399.11	58.02	398	65.13	396.68	69.18	396
75.27	395.42	93.06	394	94.68	393.92	94.99	393.9	95.33	393.89
101.48	394	103.34	394	109.1	394.01	112.08	394.01	115.78	394
115.9	394	118.93	393.85	121.09	394	141.58	394	158.51	395.09
163.72	395.44	171.24	396	172.52	396.01	179	396.05	183.29	396.06
189.43	396.06	196.23	396.08	196.63	396.08				

Manning's n Values num= 3

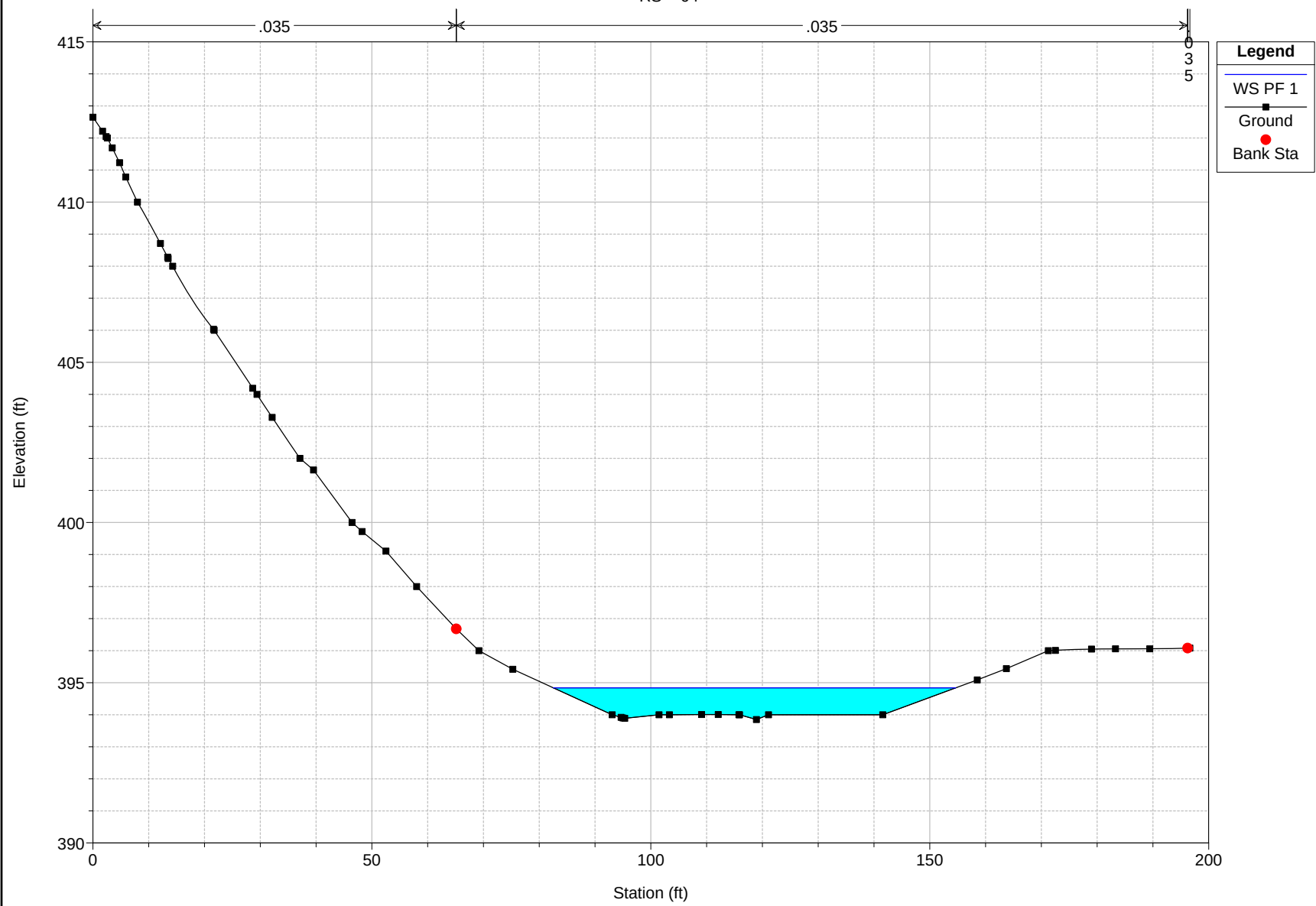
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	65.13	.035	196.23	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	65.13	196.23		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 395.20	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.36	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 394.84	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 394.84	* Flow Area (sq ft)		* 51.57	
* E.G. Slope (ft/ft)	* 0.020154	* Area (sq ft)		* 51.57	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 72.14	* Top Width (ft)		* 72.14	
* Vel Total (ft/s)	* 4.82	* Avg. Vel. (ft/s)		* 4.82	
* Max Chl Dpth (ft)	* 0.99	* Hydr. Depth (ft)		* 0.71	
* Conv. Total (cfs)	* 1749.0	* Conv. (cfs)		* 1749.0	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 72.22	
* Min Ch El (ft)	* 393.85	* Shear (lb/sq ft)		* 0.90	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 196.63	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 1.09	
* C & E Loss (ft)		* Cum SA (acres)		* 2.54	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013
RS = 64



CROSS SECTION
REACH: Reach-1

RS: 63

INPUT

Description: 23

Station Elevation Data num= 41

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	408.28	3.65	407.69	11.06	406.22	11.85	406.06	11.98	406.03
12.16	406	24.62	404.23	26.21	404	26.27	403.99	35.68	402.57
38.71	402	42.22	401.44	43.72	401.18	51.1	400	57.99	398.77
60.41	398	62.69	397.15	63.1	397.02	65.32	396.41	65.81	396.27
66.28	396.15	66.89	396	68.63	395.49	74.63	394	94.89	392.96
97	392.86	97.8	392.82	102.24	392.62	111.57	392	115.04	392
115.41	392.02	121.72	392.3	123.82	392.4	127.2	392.58	137.38	393.15
149.25	393.64	156.89	394	158.1	394.06	161.54	394.21	169.62	394.27
170.21	394.27								

Manning's n Values

num= 3

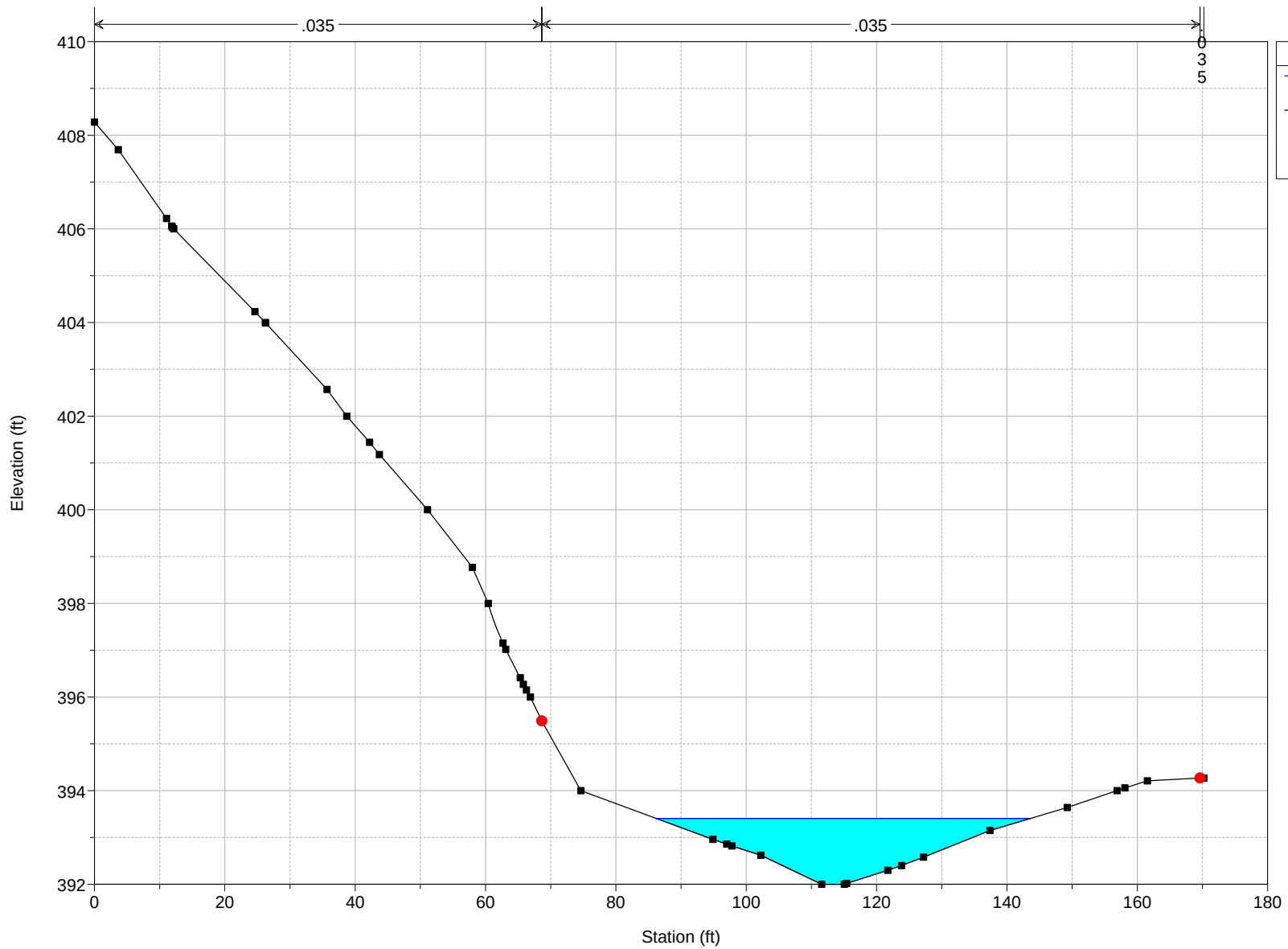
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	68.63	.035	169.62	.035

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	68.63	169.62	50	50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 393.96	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.55	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 393.41	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 393.53	* Flow Area (sq ft)		* 41.61	
* E.G. Slope (ft/ft)	* 0.030393	* Area (sq ft)		* 41.61	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 57.40	* Top Width (ft)		* 57.40	
* Vel Total (ft/s)	* 5.97	* Avg. Vel. (ft/s)		* 5.97	
* Max Chl Dpth (ft)	* 1.41	* Hydr. Depth (ft)		* 0.72	
* Conv. Total (cfs)	* 1424.3	* Conv. (cfs)		* 1424.3	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 57.48	
* Min Ch El (ft)	* 392.00	* Shear (lb/sq ft)		* 1.37	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 170.21	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.22	* Cum Volume (acre-ft)		* 1.04	
* C & E Loss (ft)	* 0.02	* Cum SA (acres)		* 2.46	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013
RS = 63



Legend	
WS PF 1	
Ground	■
Bank Sta	●

CROSS SECTION
REACH: Reach-1

RS: 62

INPUT

Description: 24

Station Elevation Data		num= 49									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	403.86	15.83	402.26	18.99	402	21.11	401.76	30.32	400.78		
37.44	400	42.26	399.62	43.49	399.5	46.01	399.28	53.38	398.66		
58.52	398.09	59.29	398	71.22	396.48	74.21	396.12	74.49	396.08		
75.33	396	90.14	394.35	93.39	394	98.02	393.38	104.36	392		
124.15	392	124.86	392.06	130.08	392.42	144.16	393.1	146.03	393.1		
147.25	393.11	148.49	393.13	149.54	393.15	150.81	393.17	156.06	393.28		
164.01	393.42	170.13	393.51	191.84	393.7	195.44	393.78	196.02	393.77		
198.29	393.81	200.14	393.83	200.57	393.83	204.42	393.96	214.54	393.96		
219.39	393.97	224.1	394	224.54	394	229.37	394.11	274.38	394.35		
279.56	394.39	281.45	394.39	308.93	396	309.17	396.02				

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	75.33	.035	308.93	.035

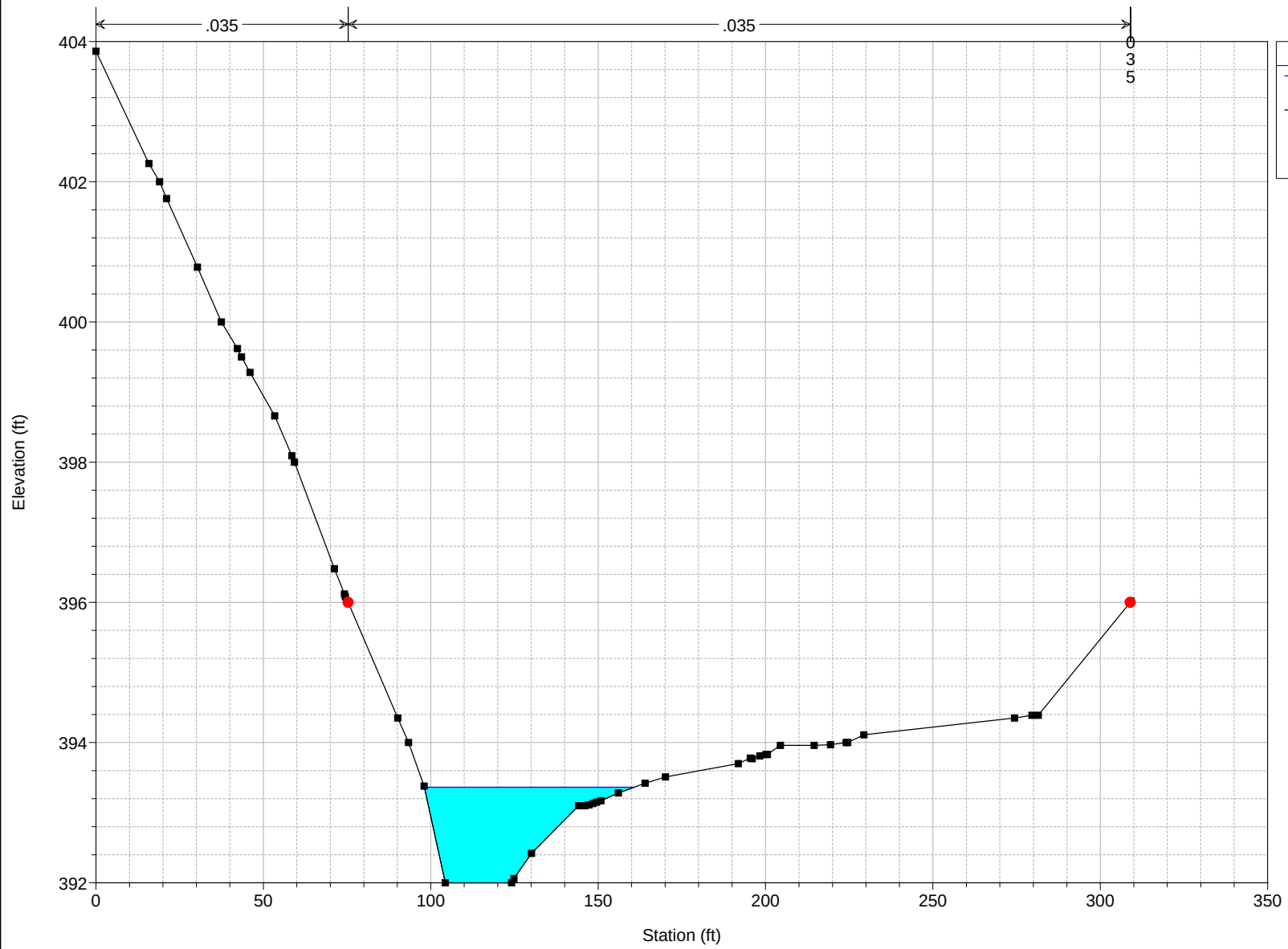
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	75.33	308.93		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 393.76	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.40	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 393.36	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 393.36	* Flow Area (sq ft)		* 49.05	
* E.G. Slope (ft/ft)	* 0.019781	* Area (sq ft)		* 49.05	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 62.67	* Top Width (ft)		* 62.67	
* Vel Total (ft/s)	* 5.06	* Avg. Vel. (ft/s)		* 5.06	
* Max Chl Dpth (ft)	* 1.36	* Hydr. Depth (ft)		* 0.78	
* Conv. Total (cfs)	* 1765.4	* Conv. (cfs)		* 1765.4	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 62.85	
* Min Ch El (ft)	* 392.00	* Shear (lb/sq ft)		* 0.96	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 309.17	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 0.99	
* C & E Loss (ft)		* Cum SA (acres)		* 2.39	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 62



CROSS SECTION
REACH: Reach-1

RS: 61

INPUT

Description: 25

Station Elevation Data

num=

47

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	404.76	3.36	404	10.93	402.52	13.52	402	16.82	401.51
26.49	400	36.28	398.62	40.87	398	55.11	396	63.12	394.65
67.14	394	68.86	393.75	81.36	392	84.34	391.77	86.51	391.61
87.83	391.53	89.21	391.47	91.34	391.43	98.25	391.36	101.33	391.31
102.78	391.32	104.94	391.27	105.95	391.23	106.28	391.18	106.73	390.9
117.26	390.88	121.82	391.14	123.89	391.25	127.46	391.4	128.37	391.42
145.22	392	145.33	392	146.19	392.04	147.69	392.08	150.22	392.11
153.89	392.13	162.06	392.15	165.99	392.15	176.75	392.05	189.51	391.97
194.12	391.99	194.47	392	201.18	392.16	207.38	392.34	216.39	392.64
220.61	392.77	223.09	392.87						

Manning's n Values

num=

3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	68.86	.035	216.39	.035

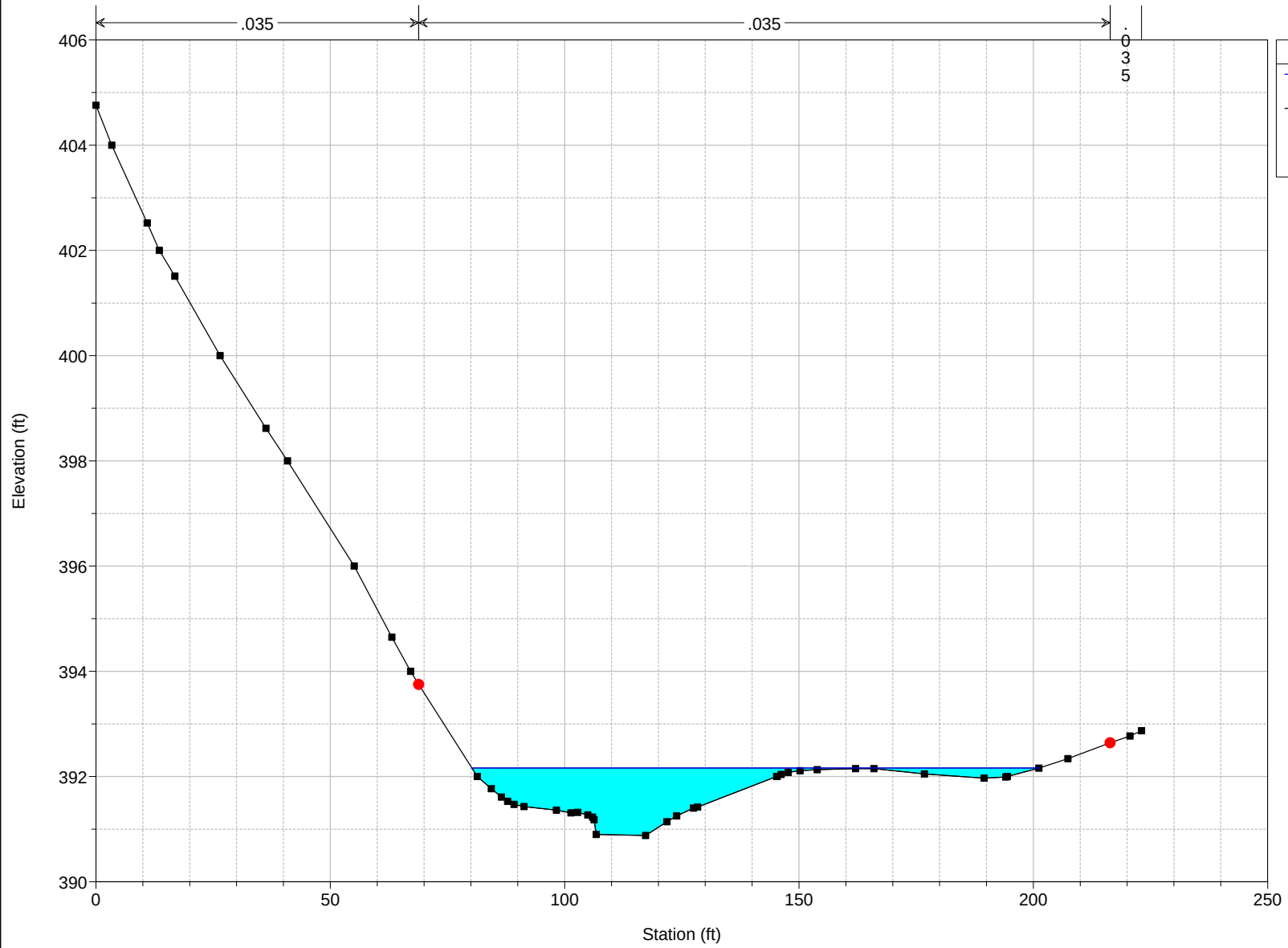
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	68.86	216.39		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 392.48	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.32	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 392.16	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 392.22	* Flow Area (sq ft)		* 54.78	
* E.G. Slope (ft/ft)	* 0.032873	* Area (sq ft)		* 54.78	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 121.08	* Top Width (ft)		* 121.08	
* Vel Total (ft/s)	* 4.53	* Avg. Vel. (ft/s)		* 4.53	
* Max Chl Dpth (ft)	* 1.28	* Hydr. Depth (ft)		* 0.45	
* Conv. Total (cfs)	* 1369.5	* Conv. (cfs)		* 1369.5	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 121.22	
* Min Ch El (ft)	* 390.88	* Shear (lb/sq ft)		* 0.93	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 223.09	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.25	* Cum Volume (acre-ft)		* 0.93	
* C & E Loss (ft)	* 0.02	* Cum SA (acres)		* 2.29	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 61



CROSS SECTION
REACH: Reach-1

RS: 60

INPUT

Description: 26

Station Elevation Data num= 70

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	404.13	.49	404	6.8	402.21	7.55	402	11.17	400.95
14.53	400	25.34	398.13	26.08	398	26.32	397.96	34.86	396.47
41.72	395.15	48.08	394	55.48	392.63	59.31	392	65.33	391.02
72.04	390	75.03	389.89	78.48	389.79	80.95	389.77	82.03	389.75
82.76	389.72	84.18	389.67	92.11	389.5	94.33	389.47	97.55	389.45
100.65	389.45	102.43	389.47	104.29	389.55	115.29	389.92	118.24	390
120.51	390.08	128.57	390.31	129.37	390.31	140.62	390.59	143.92	390.61
164.37	390.44	178.43	390.57	179.91	390.58	182.15	390.6	184.82	390.61
186.55	390.63	190.27	390.66	190.63	390.66	195.34	390.63	196.12	390.63
199.74	390.64	201.56	390.64	202.28	390.63	203.48	390.63	225.04	391.43
229.11	391.42	232.55	391.43	234.62	391.42	256.19	391.08	258.11	391.08
260	391.1	262.75	391.15	263.3	391.15	263.9	391.14	266.93	390.98
267.68	390.96	268.35	390.95	269.74	390.95	270.79	390.97	273.67	391.03
275.83	391.08	311.84	392	318.65	392.6	339.99	394	345.34	394.53

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	41.72	.035	339.99	.035

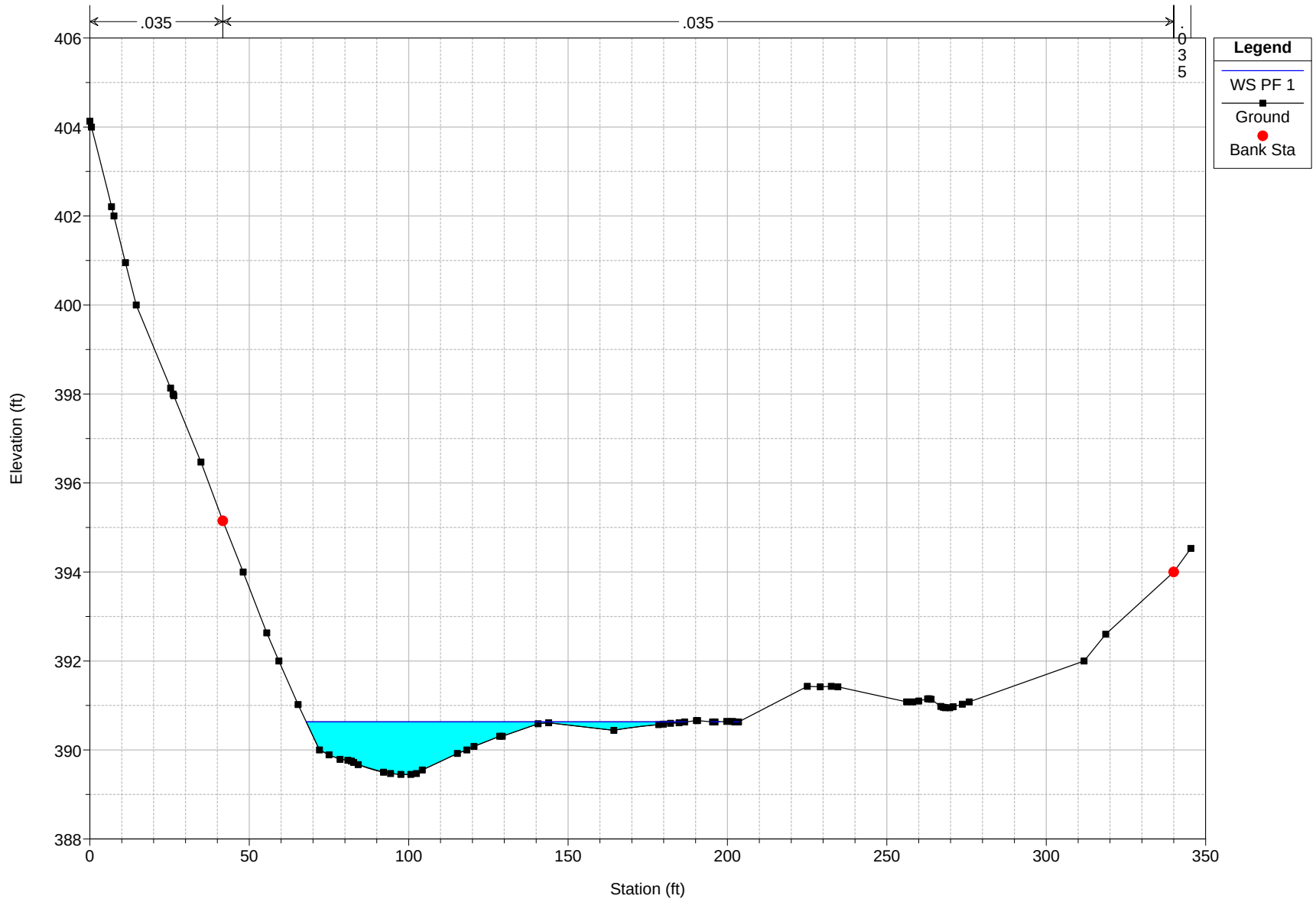
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	41.72	339.99		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 390.93	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.29	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 390.63	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 390.69	* Flow Area (sq ft)		* 57.24	
* E.G. Slope (ft/ft)	* 0.029217	* Area (sq ft)		* 57.24	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 123.76	* Top Width (ft)		* 123.76	
* Vel Total (ft/s)	* 4.34	* Avg. Vel. (ft/s)		* 4.34	
* Max Chl Dpth (ft)	* 1.18	* Hydr. Depth (ft)		* 0.46	
* Conv. Total (cfs)	* 1452.7	* Conv. (cfs)		* 1452.7	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 123.84	
* Min Ch El (ft)	* 389.45	* Shear (lb/sq ft)		* 0.84	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 345.34	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.55	* Cum Volume (acre-ft)		* 0.86	
* C & E Loss (ft)	* 0.01	* Cum SA (acres)		* 2.15	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 60



CROSS SECTION
REACH: Reach-1

RS: 59

INPUT

Description: 27

Station Elevation Data				num= 78							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	400.3	1.2	400	3.48	399.39	9.35	398	11.1	397.54		
17.35	396.15	17.73	396.06	18.01	396	28.09	394.55	30.79	394		
37.04	392.59	39.71	392	42.75	391.27	44.72	390.84	48.78	390		
50.11	389.94	55.28	389.72	59.48	389.51	61	389.47	68.14	389.08		
74.57	388.75	75.42	388.7	76.33	388.65	79.84	388.51	82.03	388.43		
82.5	388.42	82.82	388.41	83.39	388.41	83.64	388.4	83.8	388.39		
84.13	388.38	85.95	388.34	86.46	388.34	87.19	388.33	87.9	388.33		
88.31	388.34	88.53	388.34	88.74	388.35	90.1	388.4	91.26	388.44		
92.39	388.47	95.97	388.98	96.3	389.09	97.41	389.21	99.54	389.42		
100.82	389.55	103.36	389.75	108.06	390	108.15	390	110.87	390.04		
113.83	390.05	119.5	390.02	121.75	390	126.34	389.97	126.52	389.96		
132.64	389.89	133.47	389.87	136.6	389.83	172.16	389.99	174.75	389.99		
193.01	389.91	195.18	389.91	205.45	389.93	208.55	389.93	214.6	389.85		
217.1	389.84	219.43	389.82	222.58	389.8	233.31	389.79	238.52	389.76		
242.68	389.76	246.58	389.81	254.93	389.96	255.86	390	259.99	390.14		
300.4	391.6	304.3	391.85	307	392						

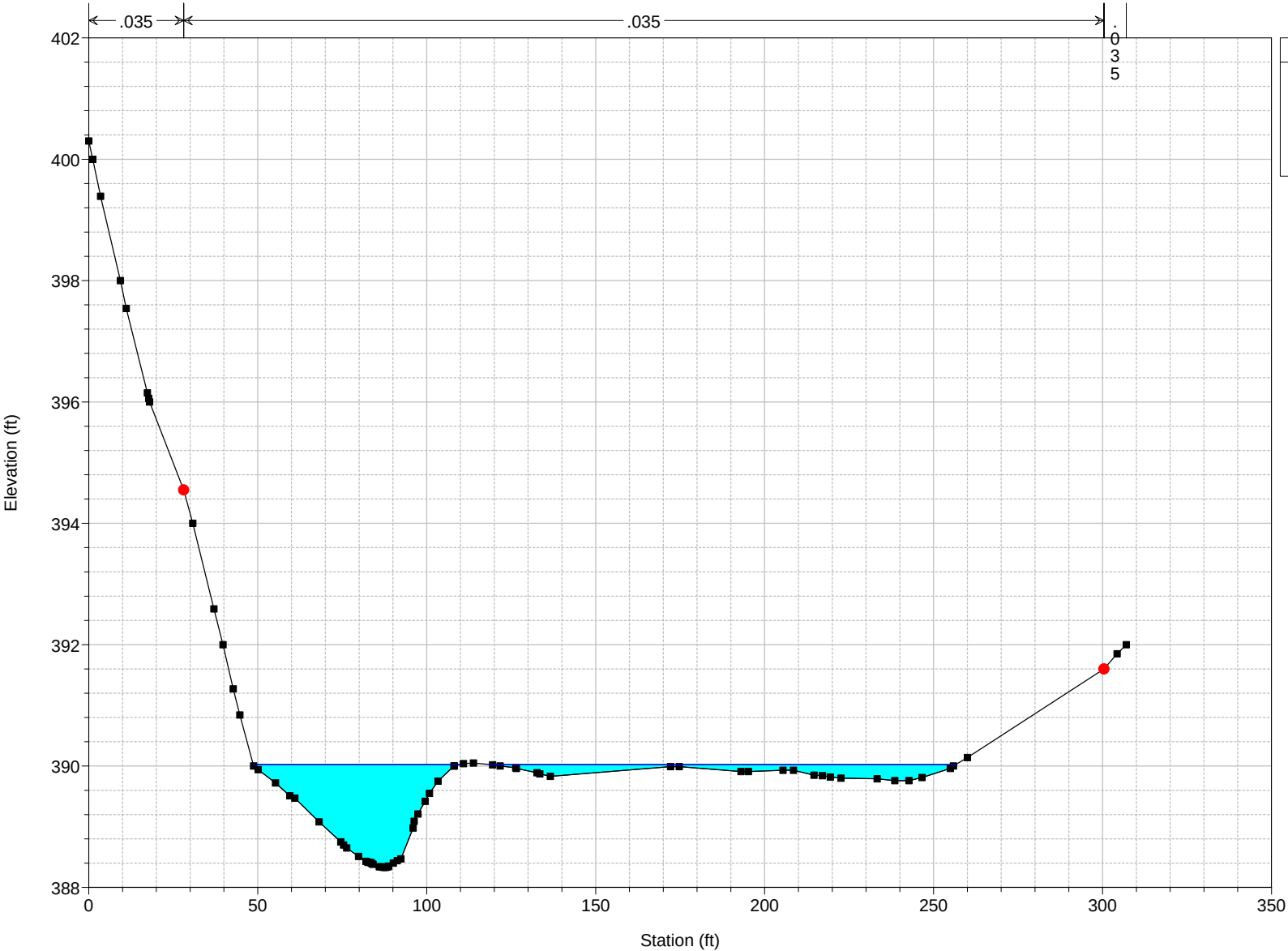
Manning's n Values				num= 3	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	28.09	.035	300.4	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	28.09	300.4		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 390.21	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.18	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 390.03	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 390.03	* Flow Area (sq ft)		* 71.98	
* E.G. Slope (ft/ft)	* 0.025709	* Area (sq ft)		* 71.98	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 199.37	* Top Width (ft)		* 199.37	
* Vel Total (ft/s)	* 3.45	* Avg. Vel. (ft/s)		* 3.45	
* Max Chl Dpth (ft)	* 1.70	* Hydr. Depth (ft)		* 0.36	
* Conv. Total (cfs)	* 1548.6	* Conv. (cfs)		* 1548.6	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 199.51	
* Min Ch El (ft)	* 388.33	* Shear (lb/sq ft)		* 0.58	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 307.00	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 0.79	
* C & E Loss (ft)		* Cum SA (acres)		* 1.96	

RS = 59



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 58

INPUT

Description: 28

Station Elevation Data num= 35

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	394.52	4.18	394	4.46	393.97	4.6	393.95	9.76	393.29
14.39	392.84	15.19	392.74	20.06	392	25.12	391.31	32.79	390
42.38	389.21	48.32	388.67	51.3	388.42	56.09	388	78.16	388
93.52	388.84	95.76	388.94	98.32	389.03	99.11	389.06	99.6	389.08
103.64	389.36	104.57	389.36	105.09	389.35	105.16	389.35	105.42	389.34
105.65	389.35	107.08	389.35	108.44	389.36	204.61	389.32	206.68	389.29
259.75	389.66	270.51	389.85	277.47	390	289.03	390.62	294.29	390.82

Manning's n Values

num= 3

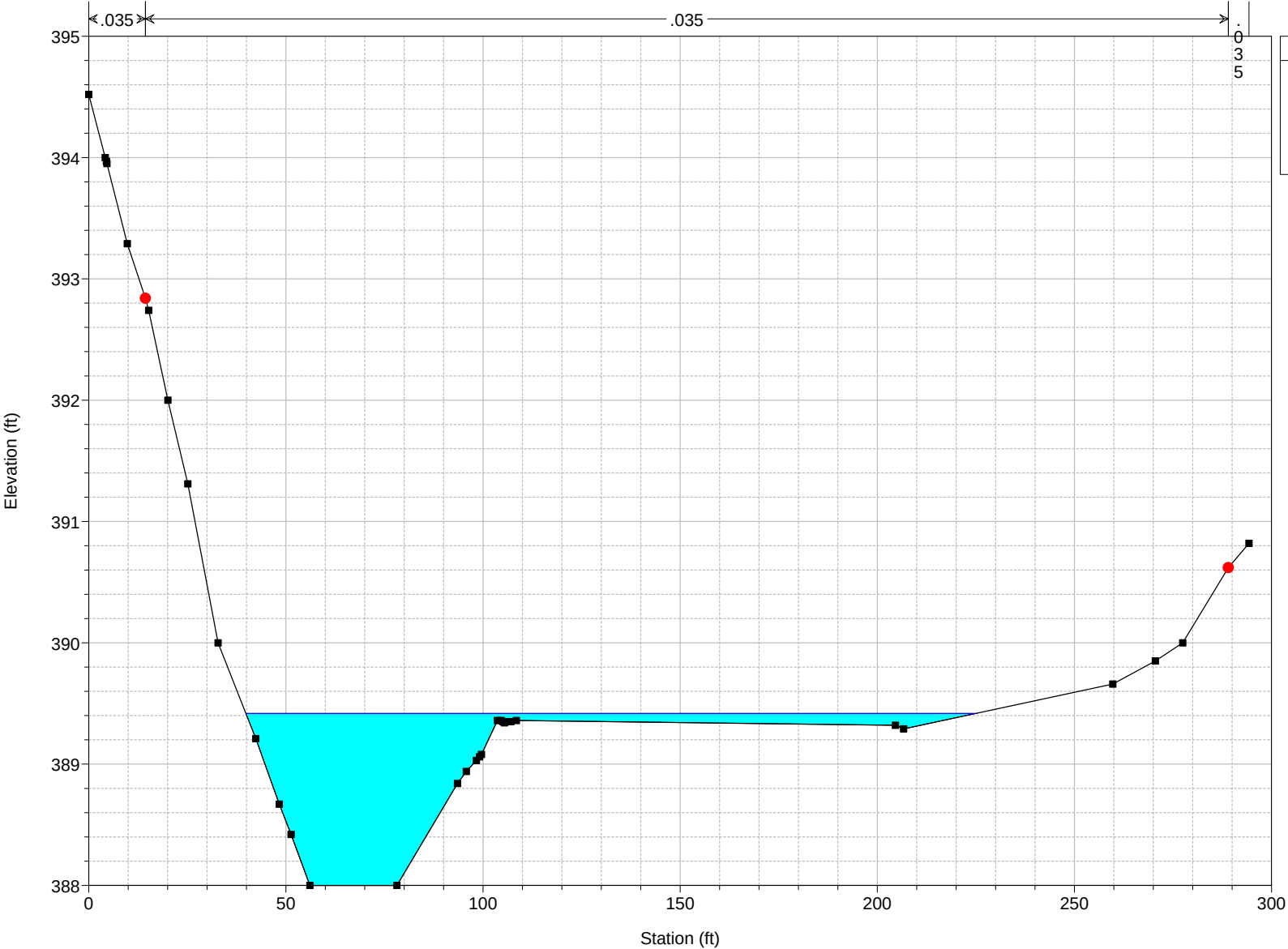
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	14.39	.035	289.03	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	14.39	289.03		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 389.61	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.19	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 389.42	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 389.42	* Flow Area (sq ft)		* 70.69	
* E.G. Slope (ft/ft)	* 0.024710	* Area (sq ft)		* 70.69	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 185.01	* Top Width (ft)		* 185.01	
* Vel Total (ft/s)	* 3.51	* Avg. Vel. (ft/s)		* 3.51	
* Max Chl Dpth (ft)	* 1.42	* Hydr. Depth (ft)		* 0.38	
* Conv. Total (cfs)	* 1579.6	* Conv. (cfs)		* 1579.6	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 185.11	
* Min Ch El (ft)	* 388.00	* Shear (lb/sq ft)		* 0.59	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 294.29	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 0.71	
* C & E Loss (ft)		* Cum SA (acres)		* 1.74	

RS = 58



Legend

- WS PF 1
- Ground
- Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 57

INPUT

Description: 29

Station Elevation Data num= 103

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	396.17	.43	396.1	1	396	1.96	395.8	11.1	394
20.42	392.19	21.47	392	27.88	390.79	32.16	390	38.71	389.67
44.91	389.38	59.18	388.74	64.27	388.52	65.15	388.48	65.71	388.47
66.65	388.44	67.04	388.43	67.29	388.42	67.77	388.4	70.68	388.3
71.46	388.29	72.14	388.28	72.51	388.27	72.7	388.28	72.88	388.28
73.97	388.3	75.51	388.32	77.4	388.57	77.55	388.63	78.03	388.67
78.85	388.73	79.3	388.77	80.07	388.81	81.3	388.81	83.14	388.86
84.51	388.83	88.2	389.05	89.63	388.98	103.53	389.7	106.42	389.67
109.33	389.62	109.41	389.62	112.08	389.56	112.41	389.55	113.61	389.52
119.55	389.52	123.04	389.51	145.54	389.3	184.47	388.54	188.65	388.53
210.52	389.66	258.29	388.04	260.54	388.04	263.99	388	267.36	387.98
272.03	387.98	276.13	387.99	278.09	388	281.05	388.05	286.75	388.16
290.91	388.31	292.84	388.44	293.77	388.5	294.91	388.47	296.67	388.39
298.62	388.35	300.15	388.37	301.14	388.43	301.83	388.46	302.69	388.43
304.41	388.39	321.26	388.32	326.37	388.35	326.79	388.36	331.51	388.42
332.39	388.43	336.61	388.52	340.4	388.61	344.16	388.67	348.61	388.65
358.89	388.54	361.99	388.58	373.68	388.53	375.2	388.53	375.51	388.54
376.64	388.58	397.1	388.98	400.3	389.13	403.22	389.1	404.3	389.1
407.67	389.27	408.37	389.29	416.96	389.68	417.27	389.69	418.24	389.72
422.43	389.98	422.69	390	442.13	391.16	447.59	391.41	451.05	391.8
452.93	392	460	393.44	463.1	394				

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	20.42	.035	416.96	.035

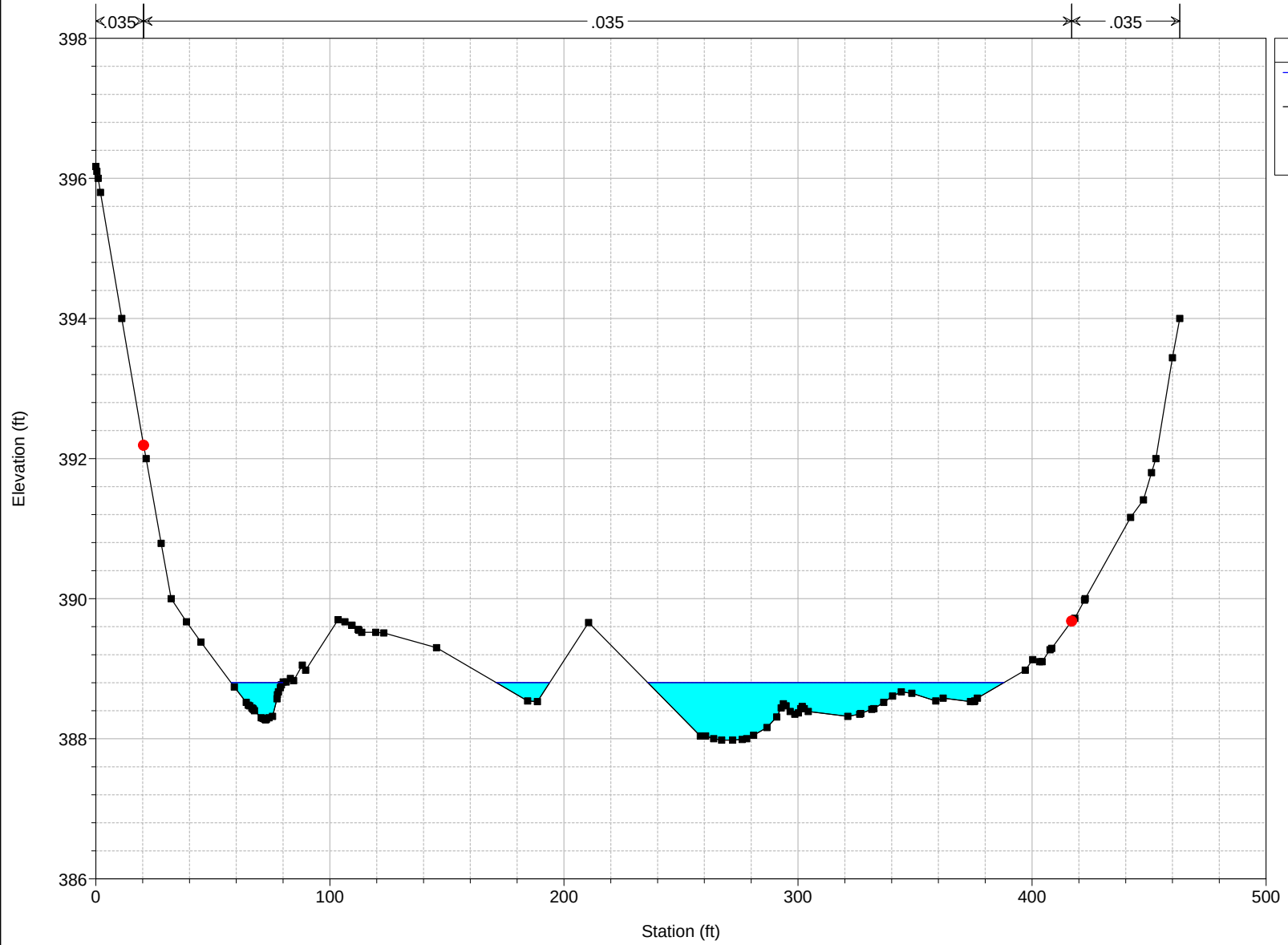
Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	20.42	416.96		103.95	50	421.91		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 388.98	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.18	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 388.80	* Reach Len. (ft)	* 103.95	* 50.00	* 421.91
* Crit W.S. (ft)	* 388.80	* Flow Area (sq ft)		* 72.31	
* E.G. Slope (ft/ft)	* 0.024907	* Area (sq ft)		* 72.31	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 197.00	* Top Width (ft)		* 197.00	
* Vel Total (ft/s)	* 3.43	* Avg. Vel. (ft/s)		* 3.43	
* Max Chl Dpth (ft)	* 0.82	* Hydr. Depth (ft)		* 0.37	
* Conv. Total (cfs)	* 1573.3	* Conv. (cfs)		* 1573.3	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 197.09	
* Min Ch El (ft)	* 387.98	* Shear (lb/sq ft)		* 0.57	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 463.10	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 0.62	
* C & E Loss (ft)		* Cum SA (acres)		* 1.52	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 57



CROSS SECTION
REACH: Reach-1

RS: 56

INPUT

Description: 30

Station Elevation Data num= 83

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	401.38	6.21	400	6.44	399.95	7.21	399.76	12.01	398.54
13.98	398	14.78	397.76	21.16	396	24.2	395.43	32.48	394
42.18	392.53	45.77	392	52.7	391.12	60.23	390	69.86	389.16
75.83	388.58	80.48	388.14	81.86	388	110.45	388	117.28	388.31
119.55	388.42	122.32	388.48	126.78	388.49	132.17	388.45	138.15	388.3
144.86	388.07	146.56	388	202.6	388	202.9	388.01	207.26	388.13
212.91	388.22	218.76	388.27	224.22	388.21	229.47	388.08	231.54	388
234.17	387.91	235.25	387.89	240.54	387.68	243.11	387.63	248.6	387.39
252.05	387.23	253.99	387.16	261.13	387.01	267.6	386.91	272.04	386.8
274.87	386.7	276.42	386.64	277.33	386.61	278.25	386.59	282.14	386.59
284.79	386.61	286.08	386.64	286.95	386.68	287.66	386.71	291.03	386.69
310.43	387.1	310.95	387.1	311.58	387.08	312.49	387.08	312.92	387.09
313.4	387.09	313.67	387.08	314.33	387.08	315.2	387.09	316.04	387.09
317.81	387.11	318.93	387.12	364.6	386.73	365.8	386.77	394.26	387.42
397.05	387.5	399.1	387.55	400.58	387.57	401.65	387.58	404.03	387.58
413.08	387.84	413.71	387.84	417.07	387.93	417.23	387.93	419.86	388
428.87	388.33	430.83	388.46	436.66	388.7				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	42.18	.035	436.66	.035

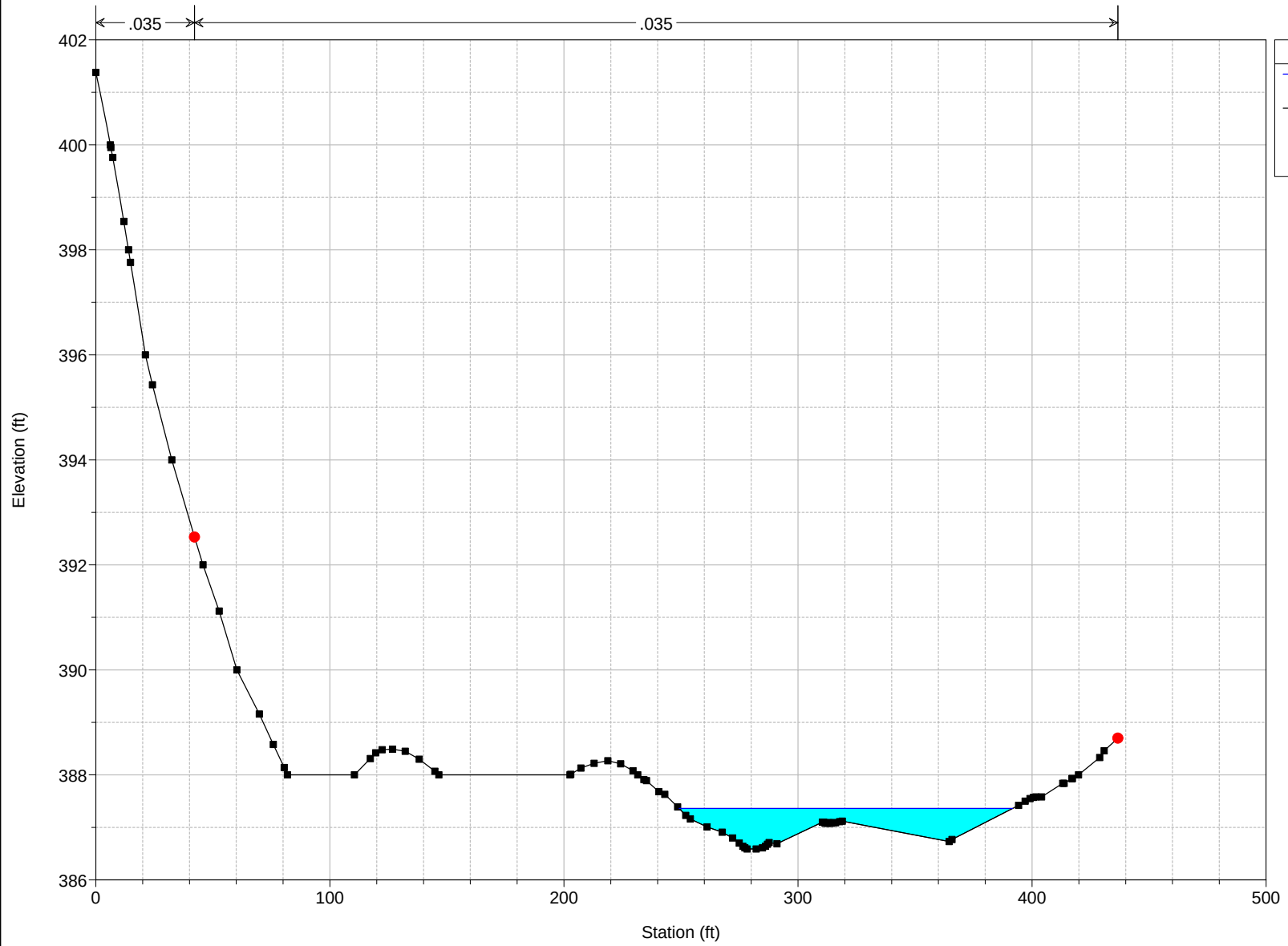
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	42.18	436.66		50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 387.62	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.26	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 387.36	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 387.39	* Flow Area (sq ft)		* 60.35	
* E.G. Slope (ft/ft)	* 0.029515	* Area (sq ft)		* 60.35	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 142.44	* Top Width (ft)		* 142.44	
* Vel Total (ft/s)	* 4.11	* Avg. Vel. (ft/s)		* 4.11	
* Max Chl Dpth (ft)	* 0.77	* Hydr. Depth (ft)		* 0.42	
* Conv. Total (cfs)	* 1445.3	* Conv. (cfs)		* 1445.3	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 142.47	
* Min Ch El (ft)	* 386.59	* Shear (lb/sq ft)		* 0.78	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 436.66	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.35	* Cum Volume (acre-ft)		* 0.55	
* C & E Loss (ft)	* 0.01	* Cum SA (acres)		* 1.33	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 56



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 55

INPUT

Description: 31

Station Elevation Data num= 87

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	404.14	.56	404	2.33	403.58	6.05	402.67	8.76	402
9.98	401.73	17.35	400	20.29	399.27	25.59	398	32.18	396.45
34.16	396	36.1	395.66	44.98	394	49.41	393.31	58.43	392
65.47	390.93	72.31	390	90.18	388.94	95.86	388.59	104.12	388
110.86	388	117.67	387.38	140.11	387.36	142.39	387.55	149.34	388
152.02	388.34	152.53	388.39	153.54	388.41	155.65	388.4	159.36	388.35
169.46	388.12	212.78	386.96	224.57	386.6	229.47	386.47	233.17	386.4
235.27	386.38	237.02	386.38	239	386.35	241.02	386.31	249.64	386.02
251.04	386.01	255.54	386.02	264.56	386	266.27	385.96	268.92	385.86
268.96	385.79	274.36	385.62	280.46	385.57	283.92	385.56	288.06	385.59
295.39	385.66	297.44	385.7	298.75	385.74	299.66	385.79	302.28	386
302.9	386.08	304.26	386.14	307.5	386.18	313.19	386.2	318.83	386.19
321.93	386.19	324.25	386.15	339.68	385.78	344.19	385.68	345.81	385.65
346.9	385.65	349.8	385.66	351.84	385.66	353.64	385.63	354.57	385.58
354.73	385.54	354.94	385.52	355.83	385.54	357.83	385.58	360.95	385.63
364.38	385.66	367.28	385.68	384.32	385.76	390.86	385.78	394.78	385.78
402.16	385.74	406.24	385.74	411.22	385.8	417.86	385.95	419.79	386
430.01	386.37	444.8	386.82						

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	49.41	.035	444.8	.035

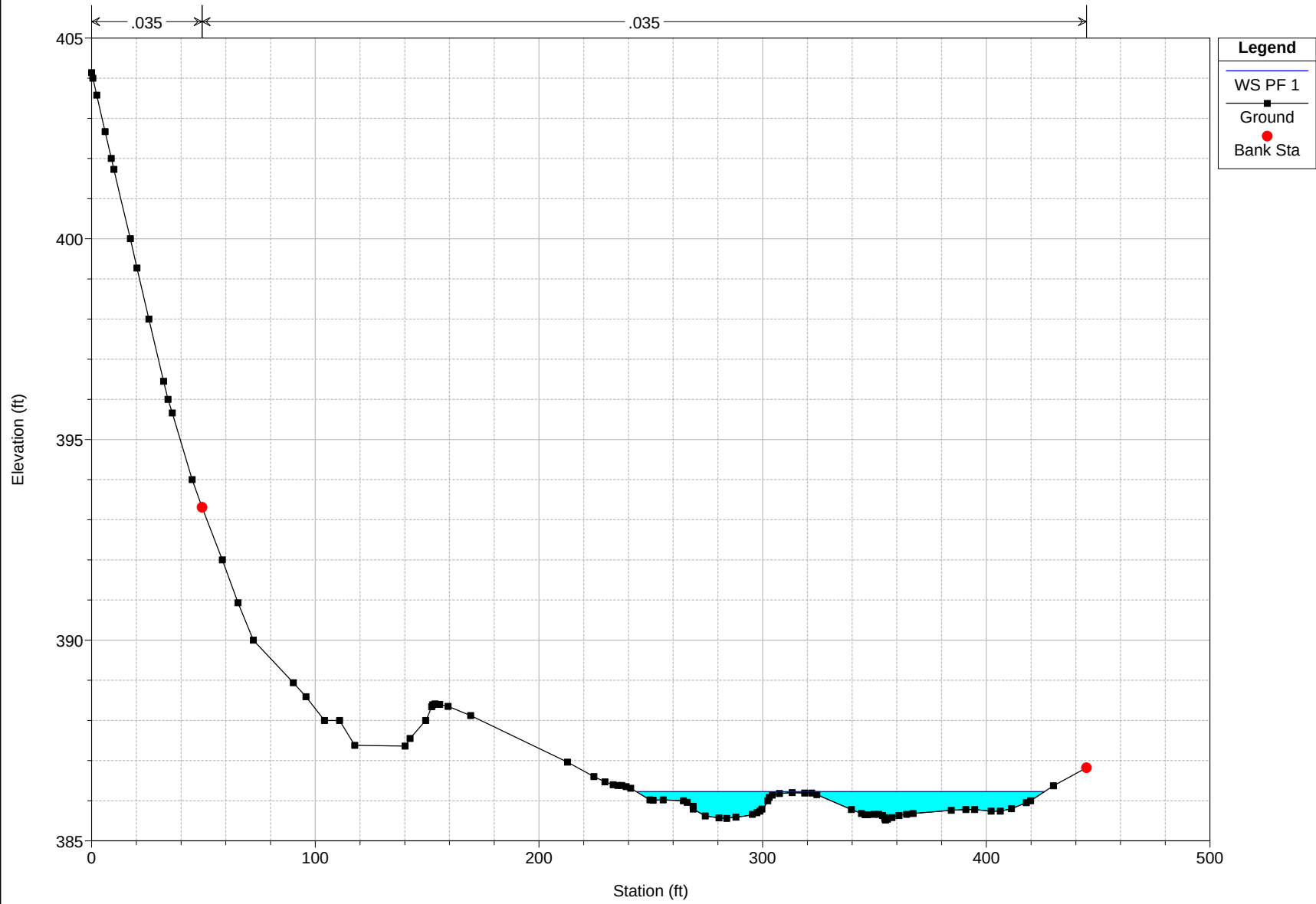
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	49.41	444.8		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 386.42	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.20	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 386.22	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 386.22	* Flow Area (sq ft)		* 69.59	
* E.G. Slope (ft/ft)	* 0.025552	* Area (sq ft)		* 69.59	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 182.43	* Top Width (ft)		* 182.43	
* Vel Total (ft/s)	* 3.57	* Avg. Vel. (ft/s)		* 3.57	
* Max Chl Dpth (ft)	* 0.70	* Hydr. Depth (ft)		* 0.38	
* Conv. Total (cfs)	* 1553.3	* Conv. (cfs)		* 1553.3	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 182.51	
* Min Ch El (ft)	* 385.52	* Shear (lb/sq ft)		* 0.61	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 444.80	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 0.47	
* C & E Loss (ft)		* Cum SA (acres)		* 1.14	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 55



CROSS SECTION
REACH: Reach-1

RS: 54

INPUT

Description: 32

Station Elevation Data num= 99

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	402.46	2.03	402	9.61	400.38	11.23	400	16.66	398.99
21.53	398	28.87	396.75	32.96	396	36.5	395.61	49.87	394
64.29	392.38	68.72	392	77.34	391.49	80.07	391.36	104.1	390
111.14	389.48	132.07	388	135.64	387.73	140.26	387.39	141.73	387.3
151.97	386.73	170.06	386.03	170.33	386.02	170.81	386	191.74	386
192.15	386.03	195.46	386.17	207.7	386.53	208.34	386.55	209.32	386.57
210.65	386.58	216.32	386.46	234.84	386.11	239.97	386	248.71	385.7
256.17	385.42	262	385.17	265.4	385.03	266.28	384.99	267.43	384.93
267.87	384.91	268.96	384.93	269.83	384.92	270.62	384.9	272.06	384.84
273.15	384.83	274.51	384.83	275.25	384.84	275.81	384.85	276.18	384.85
276.41	384.86	276.58	384.87	277.06	384.91	277.35	384.92	277.88	384.94
278.95	384.96	280.66	384.96	320.11	385.19	325.34	385.19	351.62	384.77
363.23	384.51	366.01	384.46	374.16	384.4	383.7	384.29	388.48	384.25
394.34	384.28	395.9	384.28	400.55	384.27	402.32	384.27	403.08	384.28
404.1	384.3	405.74	384.34	410.18	384.36	412.34	384.41	415.79	384.44
418.58	384.51	425.82	384.61	429.83	384.65	433.56	384.65	436.5	384.62
438.01	384.6	438.54	384.58	438.79	384.57	439.25	384.55	439.58	384.56
449.38	384.36	460.83	384.1	463.6	384	465.81	383.97	477.33	383.75
478.75	383.75	483.81	383.83	491.69	383.97	492.46	383.98	492.9	384
492.96	384.01	493.03	384.02	496.54	384.43	509.67	386		

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	77.34	.035	509.67	.035

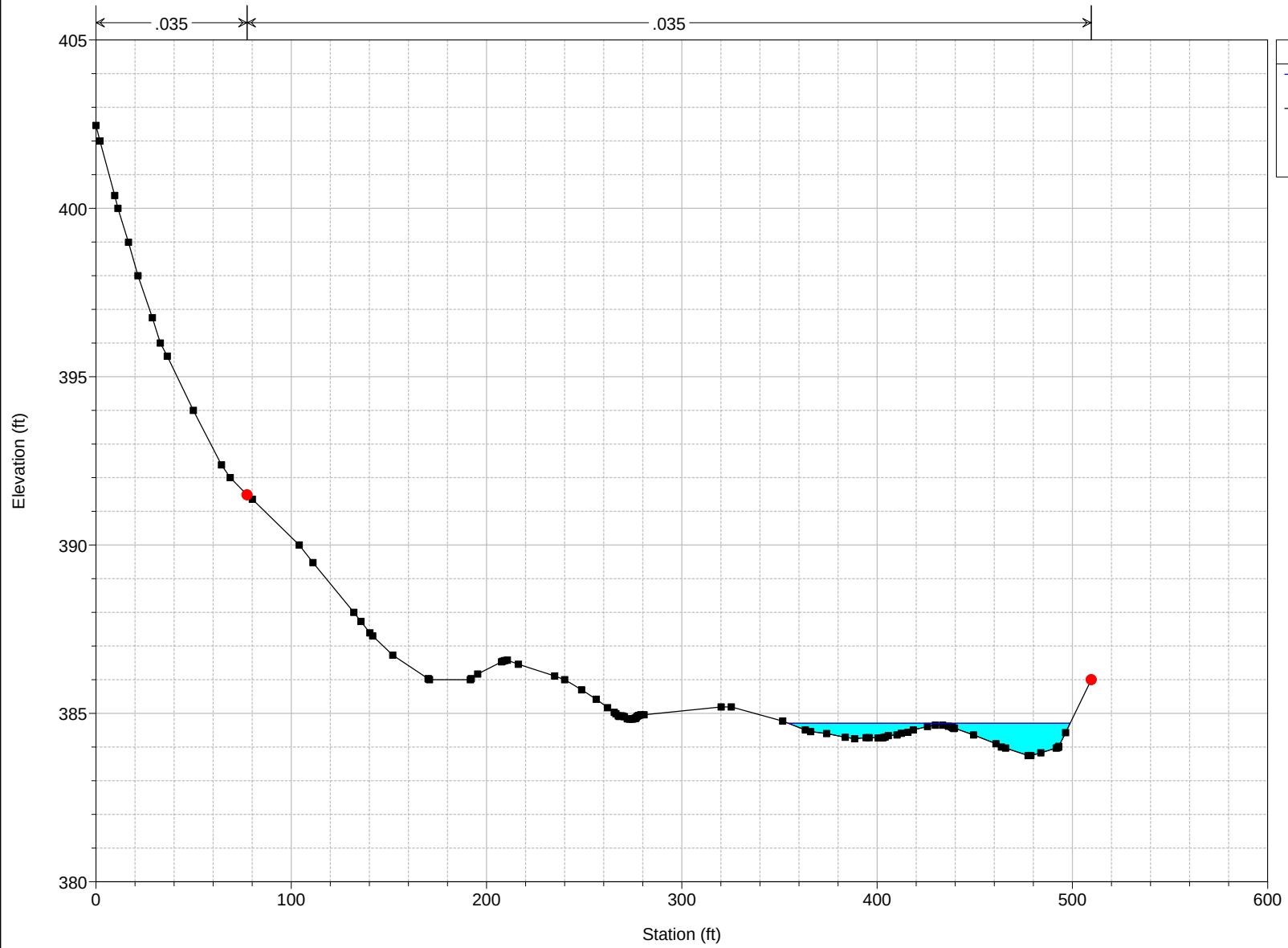
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	77.34	509.67		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 384.98	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.28	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 384.71	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 384.76	* Flow Area (sq ft)		* 58.90	
* E.G. Slope (ft/ft)	* 0.032584	* Area (sq ft)		* 58.90	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 144.33	* Top Width (ft)		* 144.33	
* Vel Total (ft/s)	* 4.22	* Avg. Vel. (ft/s)		* 4.22	
* Max Chl Dpth (ft)	* 0.96	* Hydr. Depth (ft)		* 0.41	
* Conv. Total (cfs)	* 1375.6	* Conv. (cfs)		* 1375.6	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 144.39	
* Min Ch El (ft)	* 383.75	* Shear (lb/sq ft)		* 0.83	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 509.67	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.44	* Cum Volume (acre-ft)		* 0.40	
* C & E Loss (ft)	* 0.01	* Cum SA (acres)		* 0.95	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 54



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 53

INPUT

Description: 33

Station Elevation Data

num=

85

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	400.83	4.6	400	16.99	398.47	20	398	25.61	397.26
36.75	396	40.26	395.79	41.05	395.74	42.74	395.62	57.61	394.72
62.67	394.36	63.61	394.29	68.75	394	81.5	393.1	84.93	392.81
98.06	392	102.91	391.6	103.12	391.58	106.71	391.33	108.16	391.2
116.62	390.54	122.4	390	133.76	389.02	144.43	388	156.37	387.42
183.65	386	185.41	385.9	187.53	385.71	188.67	385.68	190.97	385.64
193.58	385.61	195.75	385.58	196.88	385.56	202.34	385.5	211.14	385.55
211.93	385.56	213.82	385.56	228.4	385.07	243.65	385.5	268.98	384.78
293.64	384.21	294.96	384.2	316.72	384.25	321.67	384.22	326.53	384.17
332.38	384.09	337.04	384	342.83	383.93	343.54	383.92	344.12	383.92
344.82	383.93	346.96	383.94	351.74	383.97	357.7	383.97	360.61	383.91
369.16	383.77	376.7	383.58	385.17	383.31	388.32	383.27	400.97	383.14
403.43	383.11	406.1	383.11	410.57	383.13	417.69	383.18	441.72	382.9
444.91	382.82	447.24	382.82	457.8	382.5	459.07	382.49	464.08	382.33
464.54	382.32	470.09	382.15	470.24	382.15	470.31	382.14	471.4	382.13
473.54	382.12	476.59	382.04	477.2	382.07	482.44	382.14	483.95	382.23
490.88	382.5	495.62	382.73	502.1	383.13	505.16	383.31	515.85	384

Manning's n Values

num=

3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	156.37	.035	515.85	.035

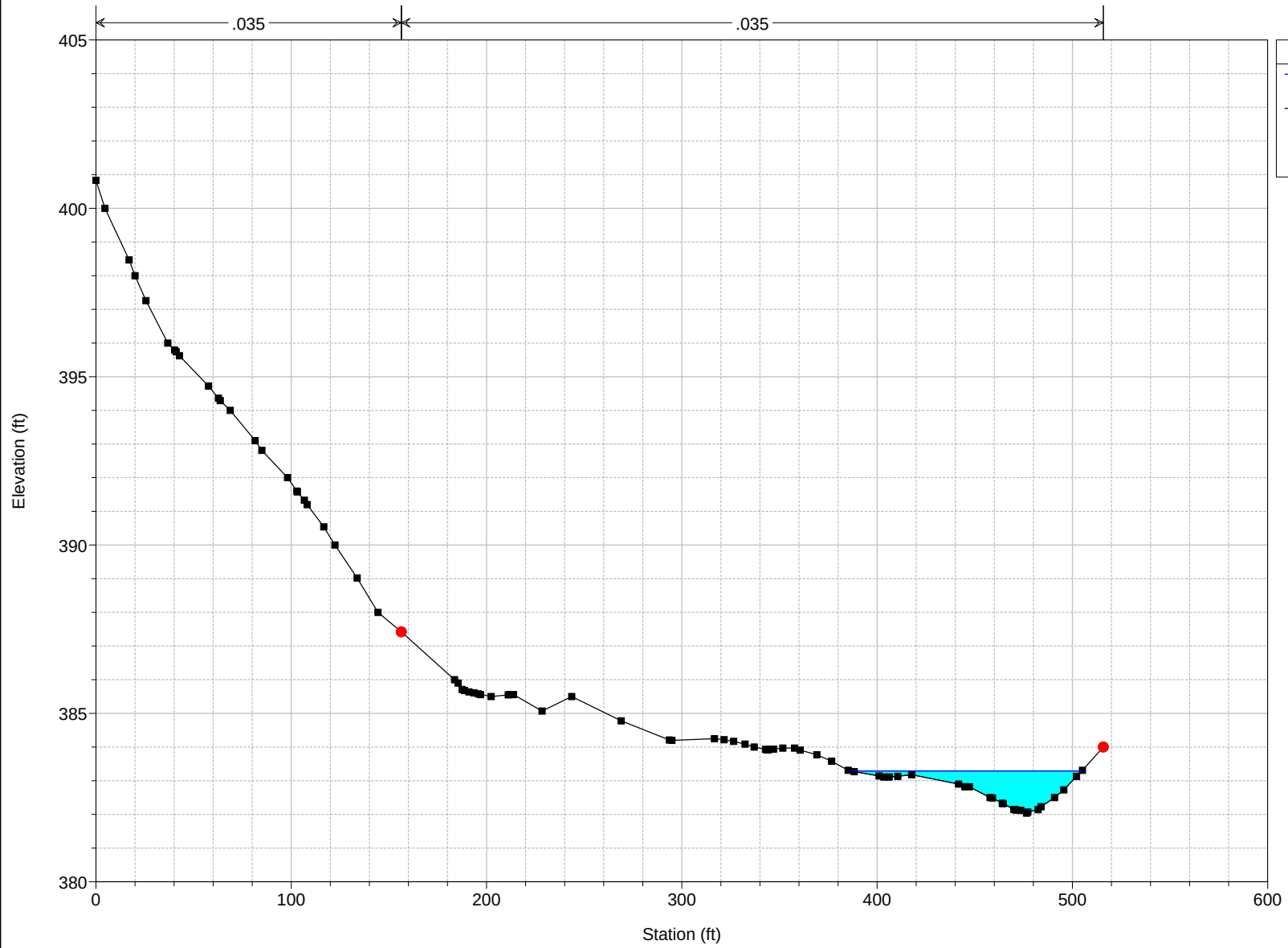
Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	156.37	515.85	50	50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 383.56	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.27	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 383.29	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 383.30	* Flow Area (sq ft)		* 59.04	
* E.G. Slope (ft/ft)	* 0.024746	* Area (sq ft)		* 59.04	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 118.08	* Top Width (ft)		* 118.08	
* Vel Total (ft/s)	* 4.21	* Avg. Vel. (ft/s)		* 4.21	
* Max Chl Dpth (ft)	* 1.25	* Hydr. Depth (ft)		* 0.50	
* Conv. Total (cfs)	* 1578.4	* Conv. (cfs)		* 1578.4	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 118.13	
* Min Ch El (ft)	* 382.04	* Shear (lb/sq ft)		* 0.77	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 515.85	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.41	* Cum Volume (acre-ft)		* 0.33	
* C & E Loss (ft)	* 0.00	* Cum SA (acres)		* 0.80	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 53



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 52

INPUT

Description: 34

Station Elevation Data num= 90

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	398.21	1.18	398	10.16	396.65	13.83	396	27.29	394.57
28.55	394.44	28.77	394.42	28.99	394.41	30.56	394.31	32.96	394
41.11	393.32	46.71	393.12	48.25	393.04	52.85	392.93	54.69	392.83
58.97	392.74	67.92	392.22	68.35	392.2	72.49	392	74.79	391.91
75.65	391.85	84.94	391.47	85.8	391.39	89.2	391.28	89.83	391.23
90.26	391.21	98.66	391	99.1	390.99	104.03	390.93	104.65	390.91
108.9	390.8	113.22	390.52	113.65	390.48	118.48	390	130.12	388.93
130.6	388.91	132.22	388.79	136.66	388.54	148.63	388	150.52	387.94
150.84	387.92	152.41	387.83	170.24	386.97	171.14	386.89	172.58	386.78
174.86	386.65	178.12	386.43	184.96	386	191.83	385.84	213.74	384.66
220.13	384.36	225.19	384	253.18	384	253.48	384.01	254.66	384.04
256.72	384.06	260.51	384.06	266.64	384.02	277.71	383.9	284	383.82
290.7	383.71	294.28	383.66	297.84	383.62	300.83	383.57	302.82	383.53
412.83	381.04	414.83	381.01	415.3	381.03	416.17	381.03	418.21	380.97
419.71	380.92	420.6	380.9	421.32	380.88	444.16	380.13	454.64	380
483.03	379.83	485.57	379.8	487.35	379.76	488.79	379.7	490.39	379.66
492.73	379.63	560.9	379.22	585.46	379.52	595.87	379.58	599.82	379.61
602.66	379.66	602.95	379.67	618.4	380	623.29	380.91	628.43	382

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	213.74	.035	623.29	.035

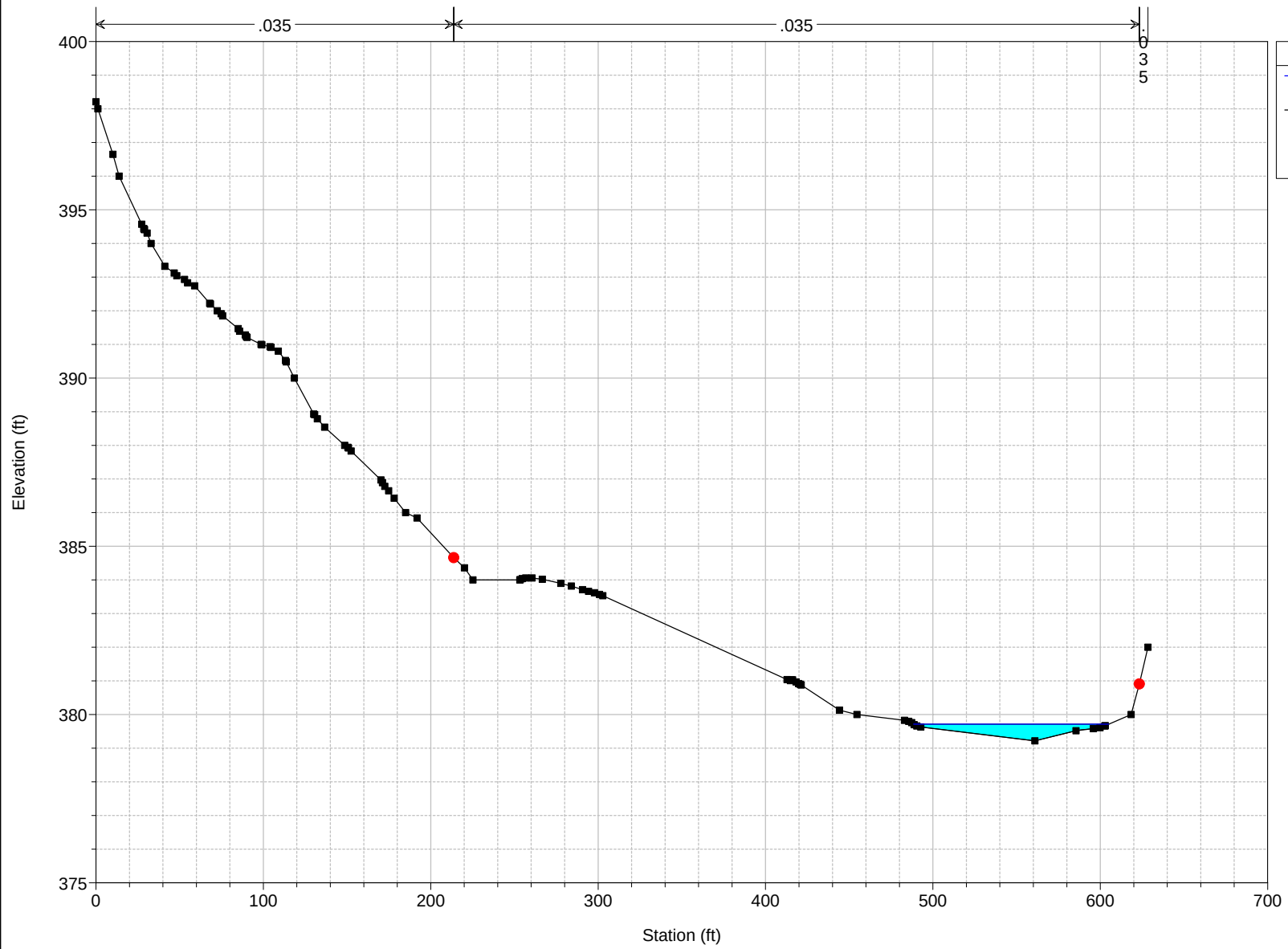
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	213.74	623.29		59.3	50	316.33	.1 .3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 380.73	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.02	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 379.71	* Reach Len. (ft)	* 59.30	* 50.00	* 316.33
* Crit W.S. (ft)	* 379.98	* Flow Area (sq ft)		* 30.68	
* E.G. Slope (ft/ft)	* 0.215164	* Area (sq ft)		* 30.68	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 116.47	* Top Width (ft)		* 116.47	
* Vel Total (ft/s)	* 8.09	* Avg. Vel. (ft/s)		* 8.09	
* Max Chl Dpth (ft)	* 0.49	* Hydr. Depth (ft)		* 0.26	
* Conv. Total (cfs)	* 535.3	* Conv. (cfs)		* 535.3	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 116.47	
* Min Ch El (ft)	* 379.22	* Shear (lb/sq ft)		* 3.54	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 628.43	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.76	* Cum Volume (acre-ft)		* 0.28	
* C & E Loss (ft)	* 0.07	* Cum SA (acres)		* 0.67	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 52



CROSS SECTION
REACH: Reach-1

RS: 51

INPUT

Description: 35

Station Elevation Data num= 89

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	402.41	2.47	402	12.18	400.19	13.02	400.03	13.2	400
28.62	398.09	29.71	398	39.93	397.1	43.5	396.85	53.31	396.55
57.61	396.35	58.44	396.3	64.03	396	64.16	395.99	64.28	395.99
72.32	395.53	77.68	395.18	93.81	394.48	102.97	394.1	105.03	394
108.4	393.66	110.28	393.58	112.36	393.46	117.85	393.07	131.28	392
136.03	391.65	157.35	390	182.02	388	205.07	386	217.46	385.02
231.73	384	241.4	383.89	316.98	382.71	318.41	382.7	320.03	382.7
322.11	382.69	324.24	382.7	326.95	382.7	327.46	382.69	328.11	382.61
328.79	382.57	329.94	382.54	340.71	382.43	346.07	382.36	367.98	382
372.02	381.92	382.18	381.59	384.2	381.55	387.34	381.5	389.18	381.46
393.93	381.31	399.29	381.13	422.88	380.27	430.61	380	456.57	379.76
463.1	379.69	468.57	379.62	478.78	379.37	500.82	379.12	573.29	378.61
578.8	378.68	579.48	378.69	581.13	378.7	582.01	378.7	582.65	378.71
582.72	378.71	584.77	378.76	587.96	378.83	589.14	378.85	589.48	378.86
589.77	378.86	596	379.06	597.97	379.11	604.8	379.31	613.75	379.54
633.16	379.96	635.41	380	639.96	380.34	646.2	381.31	646.72	381.38
651.03	382	655.95	382.43	669.7	384	680.36	385.63	684.47	386
694.94	387.14	698.69	387.49	699.78	387.62	700	387.64		

Manning's n Values

num= 3

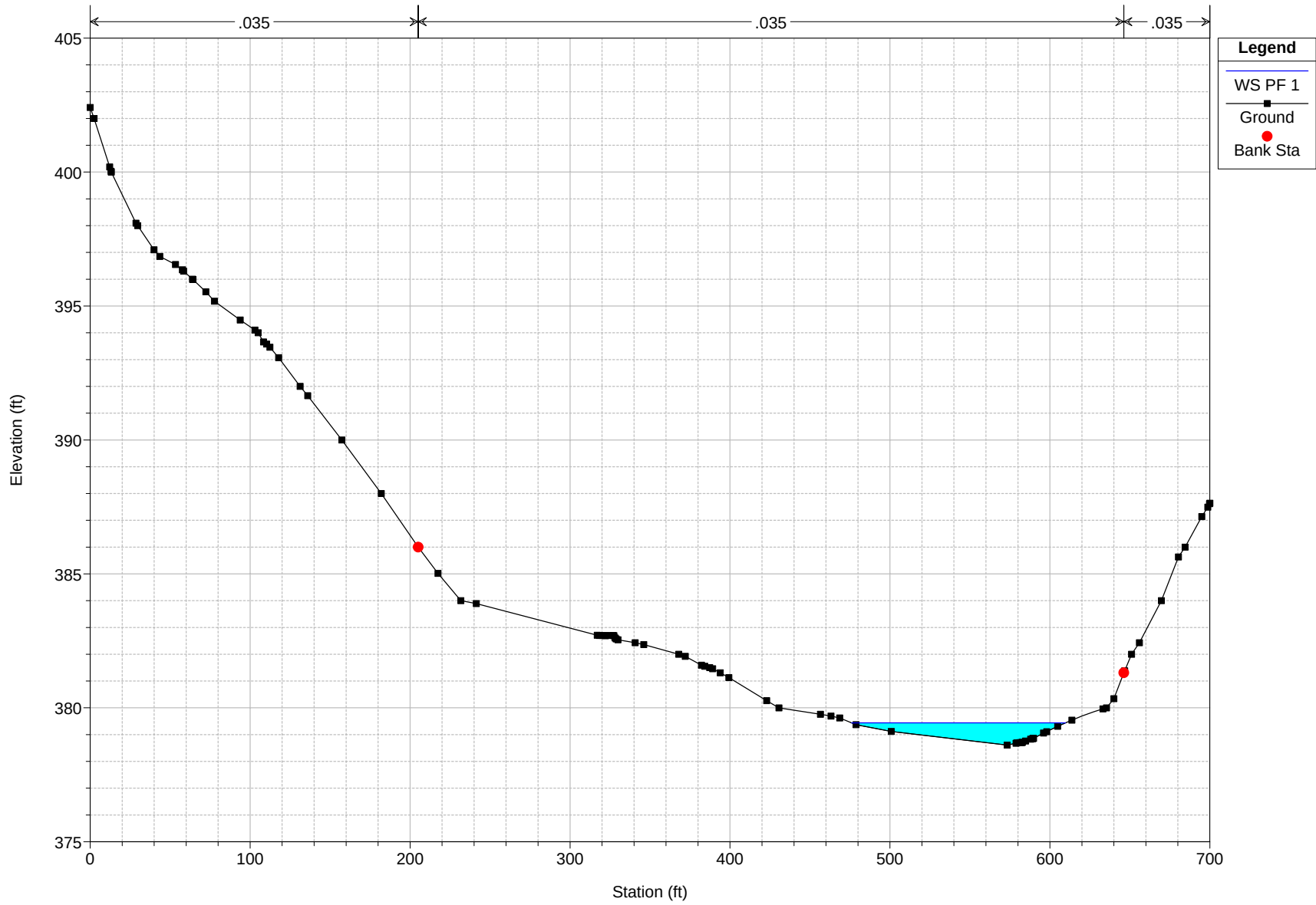
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	205.07	.035	646.2	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	205.07	646.2		50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 379.68	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.24	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 379.44	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 379.44	* Flow Area (sq ft)		* 63.10	
* E.G. Slope (ft/ft)	* 0.023374	* Area (sq ft)		* 63.10	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 133.68	* Top Width (ft)		* 133.68	
* Vel Total (ft/s)	* 3.93	* Avg. Vel. (ft/s)		* 3.93	
* Max Chl Dpth (ft)	* 0.83	* Hydr. Depth (ft)		* 0.47	
* Conv. Total (cfs)	* 1624.1	* Conv. (cfs)		* 1624.1	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 133.70	
* Min Ch El (ft)	* 378.61	* Shear (lb/sq ft)		* 0.69	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 700.00	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.64	* Cum Volume (acre-ft)		* 0.23	
* C & E Loss (ft)	* 0.23	* Cum SA (acres)		* 0.52	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013
RS = 51



CROSS SECTION
REACH: Reach-1

RS: 50

INPUT

Description: 36

Station Elevation Data				num=	52				
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
186.35	387.41	201.57	386	202.18	385.95	228.72	384	237.04	383.47
239.8	383.4	248.74	382.93	251.39	382.9	256.96	382.63	258.28	382.57
260.98	382.46	284.03	382.82	314.06	382.07	317.25	382.02	320.37	382
321.53	381.99	326.45	381.97	337.85	381.96	342.21	381.97	345.02	381.96
351.4	381.77	354.59	381.66	364.55	381.34	397.68	380.37	404.31	380.14
409.38	380	415.31	379.9	427.82	379.72	429.03	379.7	456.51	379.07
464.32	379.13	505.34	378.65	537.03	378.39	557.51	378.18	560.35	378.18
564.83	378.16	572.09	378.21	585.75	378.1	588.99	378.08	592.05	378.09
593.99	378.09	596.42	378.06	612.58	378.01	614.33	378.04	618.95	378.11
624.09	378.4	659.94	380	661.41	380.15	678.56	382	683.92	382.77
692.71	384	700	384.6						

Manning's n Values

num= 3

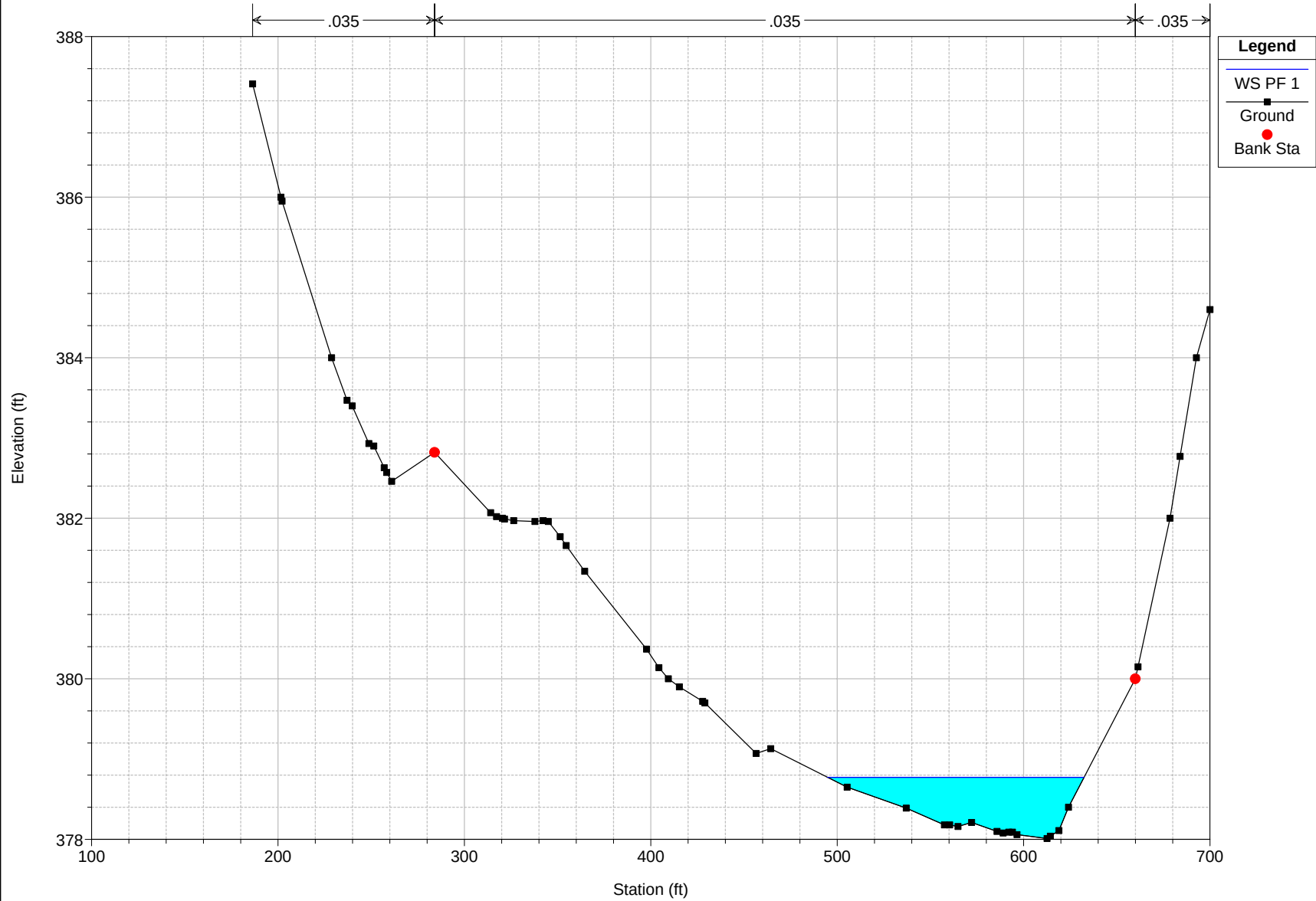
Sta	n Val	Sta	n Val	Sta	n Val
186.35	.035	284.03	.035	659.94	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	284.03	659.94		39.68	50	75.79	.1 .3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 379.01	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.24	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 378.77	* Reach Len. (ft)	* 39.68	* 50.00	* 75.79
* Crit W.S. (ft)	* 378.77	* Flow Area (sq ft)		* 63.66	
* E.G. Slope (ft/ft)	* 0.023574	* Area (sq ft)		* 63.66	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 137.53	* Top Width (ft)		* 137.53	
* Vel Total (ft/s)	* 3.90	* Avg. Vel. (ft/s)		* 3.90	
* Max Chl Dpth (ft)	* 0.76	* Hydr. Depth (ft)		* 0.46	
* Conv. Total (cfs)	* 1617.2	* Conv. (cfs)		* 1617.2	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 137.55	
* Min Ch El (ft)	* 378.01	* Shear (lb/sq ft)		* 0.68	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 700.00	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 0.15	
* C & E Loss (ft)		* Cum SA (acres)		* 0.37	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013
RS = 50



CROSS SECTION
REACH: Reach-1

RS: 49

INPUT

Description: 37

Station Elevation Data num= 73

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
194.8	387.18	207.14	386	208.28	385.92	209.35	385.84	232.66	384
237.94	383.57	241.53	383.36	248.52	382.89	256.82	382.41	263.21	382
263.59	381.89	288.67	381.31	295.48	381.46	296.32	381.44	296.44	381.38
297.62	381.37	303.46	381.39	314.57	382	314.91	382	356.21	381.03
356.53	381.02	356.86	381.02	357.17	381.01	357.83	381.01	357.95	381
358.42	381	360.33	380.95	360.6	380.94	360.98	380.93	362.32	380.9
363.86	380.87	368.97	380.78	409.51	380	474.39	378.44	484.57	378.21
486.97	378.16	487.83	378.14	488.79	378.12	496.98	378	497.95	377.99
516.52	377.94	530.62	377.93	537.42	377.91	540.82	377.88	551.22	377.71
556.09	377.69	565.11	377.59	570.19	377.55	596.8	377.41	599.65	377.38
605.18	377.29	607.68	377.26	609.59	377.27	610.84	377.28	620.16	377.37
620.38	377.42	622.02	377.46	624.51	377.48	628.22	377.49	640.22	377.48
642.9	377.5	653.89	377.77	656.84	377.83	658.49	377.87	660.3	377.93
662.29	378	681.36	379.87	681.81	379.91	683.07	380	690.02	380.77
692.46	381.05	699.22	382	700	382.08				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
194.8	.035	314.57	.035	681.36	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	314.57	681.36		50	50	.1	.3

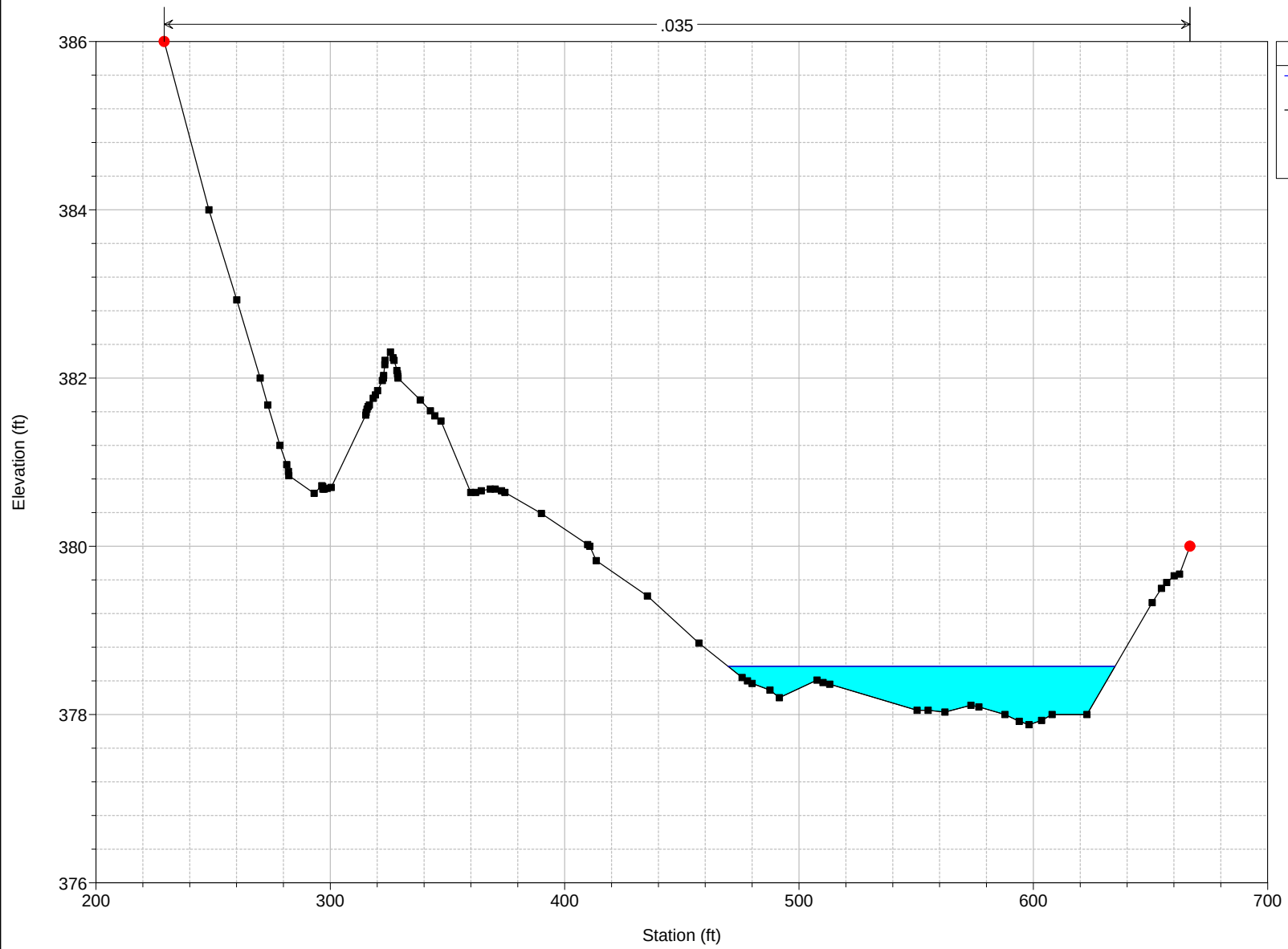
CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 378.27	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.20	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 378.06	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 378.06	* Flow Area (sq ft)		* 68.53	
* E.G. Slope (ft/ft)	* 0.024498	* Area (sq ft)		* 68.53	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 170.20	* Top Width (ft)		* 170.20	
* Vel Total (ft/s)	* 3.62	* Avg. Vel. (ft/s)		* 3.62	
* Max Chl Dpth (ft)	* 0.80	* Hydr. Depth (ft)		* 0.40	
* Conv. Total (cfs)	* 1586.4	* Conv. (cfs)		* 1586.4	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 170.22	
* Min Ch El (ft)	* 377.26	* Shear (lb/sq ft)		* 0.62	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 700.00	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 0.08	
* C & E Loss (ft)		* Cum SA (acres)		* 0.19	

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 48

.035



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 48

INPUT

Description: 38

Station Elevation Data		num= 78									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
229.1	386	248.19	384	260.09	382.93	270.05	382	273.28	381.68		
278.52	381.2	281.42	380.97	282.11	380.89	282.3	380.84	293.11	380.63		
296.37	380.72	296.78	380.71	296.84	380.68	297.43	380.68	298.67	380.69		
300.38	380.7	315.13	381.56	315.29	381.59	315.69	381.63	316.12	381.66		
316.65	381.68	318.33	381.76	319.22	381.8	320.16	381.85	322.19	381.97		
322.63	382	322.77	382.03	323.24	382.16	323.33	382.21	325.67	382.31		
326.75	382.24	327.19	382.21	328.39	382.09	328.67	382.05	328.83	382.02		
328.89	382	338.37	381.74	342.7	381.61	344.58	381.55	347.23	381.49		
359.94	380.64	362.02	380.64	364.43	380.66	368.23	380.68	370.34	380.68		
373.05	380.66	374.5	380.64	390.07	380.39	409.83	380.02	410.76	380		
413.5	379.83	435.33	379.41	457.29	378.85	475.73	378.44	478.01	378.4		
479.99	378.37	487.6	378.29	491.62	378.2	507.67	378.41	510.23	378.38		
513.1	378.36	550.4	378.05	555.08	378.05	562.26	378.03	573.37	378.11		
576.73	378.09	587.87	378	593.97	377.92	598.13	377.88	603.52	377.93		
608.02	378	622.88	378	650.74	379.33	654.67	379.5	656.89	379.57		
660.08	379.65	662.4	379.67	666.81	380						

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
229.1	.035	229.1	.035	666.81	.035

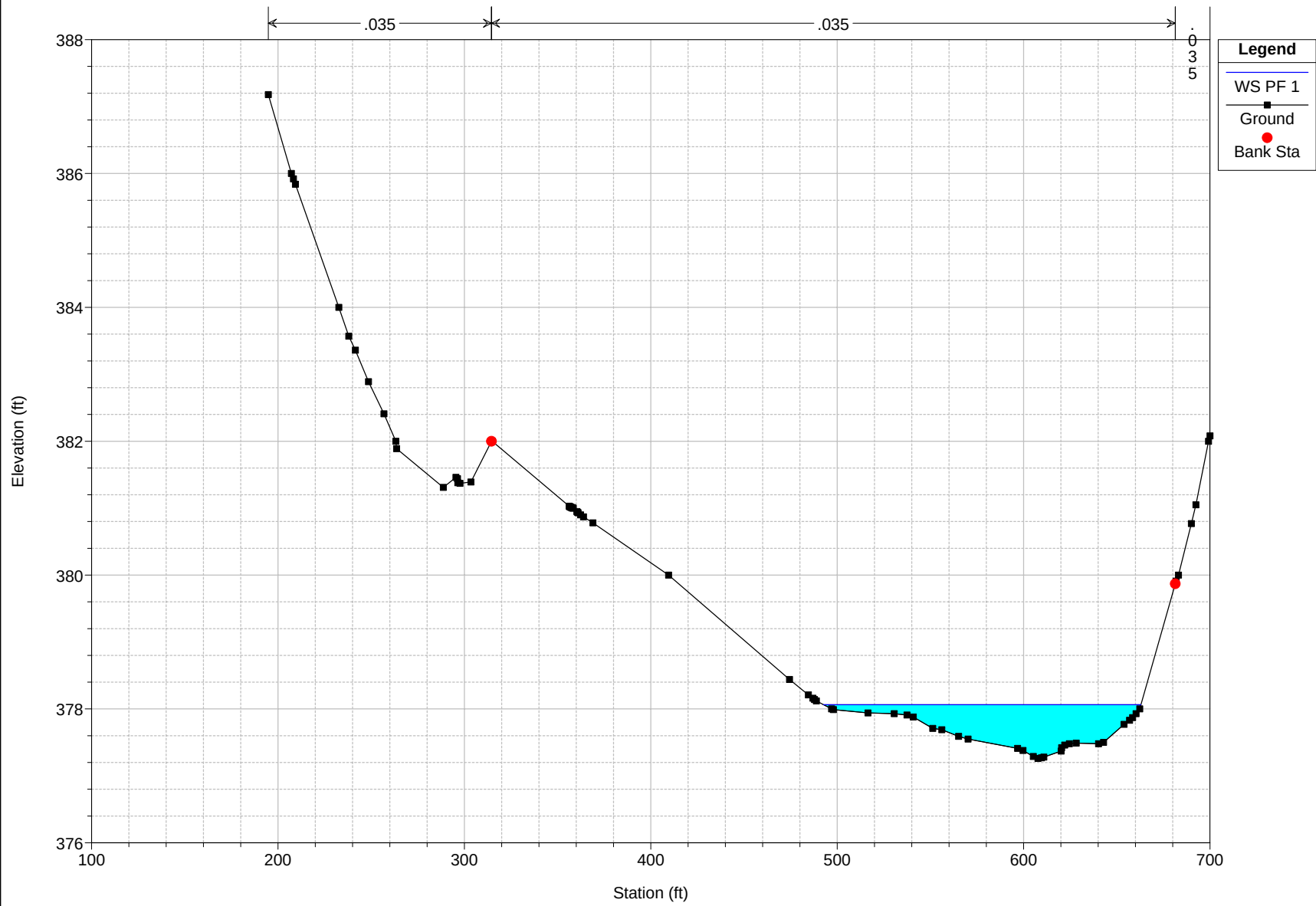
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	229.1	666.81		50 50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 378.78	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.21	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 378.57	* Reach Len. (ft)	*	*	*
* Crit W.S. (ft)	* 378.57	* Flow Area (sq ft)	*	* 67.46	*
* E.G. Slope (ft/ft)	* 0.024802	* Area (sq ft)	*	* 67.46	*
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.30	*
* Top Width (ft)	* 165.11	* Top Width (ft)	*	* 165.11	*
* Vel Total (ft/s)	* 3.68	* Avg. Vel. (ft/s)	*	* 3.68	*
* Max Chl Dpth (ft)	* 0.69	* Hydr. Depth (ft)	*	* 0.41	*
* Conv. Total (cfs)	* 1576.7	* Conv. (cfs)	*	* 1576.7	*
* Length Wtd. (ft)	*	* Wetted Per. (ft)	*	* 165.13	*
* Min Ch El (ft)	* 377.88	* Shear (lb/sq ft)	*	* 0.63	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 666.81	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.23	* Cum Volume (acre-ft)	*	*	*
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	*	*	*

Basin103-pre-1 Plan: Imported Plan 01 6/13/2013

RS = 49



Hec-Ras Analysis

Basin 103 100-year Floodplain Development Condition Analysis

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```

X      X  XXXXXX      XXXX      XXXX      XX      XXXX
X      X  X          X      X      X      X      X
X      X  X          X      X      X      X      X
XXXXXXX XXXX      X      XXX XXXX      XXXXXX      XXXX
X      X  X          X      X      X      X      X
X      X  X          X      X      X      X      X
X      X  XXXXXX      XXXX      X      X      X      XXXXX

```

PROJECT DATA

Project Title: Basin103-1
Project File : Basin103-1.prj
Run Date and Time: 6/13/2013 3:23:44 PM

Project in English units

Project Description:

***** Autodesk, Inc. HEC-2 Input Data file *****

Minimum Data Input *****

PLAN DATA

Plan Title: Imported Plan 01

Plan File : C:\Shapouri&Associates\Active Projects\Warner Ranch\Hydrology\Hecras 2012\Basin 103 Post\Basin103-1.p01

Geometry Title: Imported Geom 01

Geometry File : C:\Shapouri&Associates\Active Projects\Warner Ranch\Hydrology\Hecras 2012\Basin 103 Post\Basin103-1.g01

Flow Title : Imported Flow 01

Flow File : C:\Shapouri&Associates\Active Projects\Warner Ranch\Hydrology\Hecras 2012\Basin 103 Post\Basin103-1.f01

Plan Summary Information:

Number of:	Cross Sections =	46	Multiple Openings =	0
	Culverts =	1	Inline Structures =	0
	Bridges =	0	Lateral Structures =	0

Computational Information

Water surface calculation tolerance =	0.01
Critical depth calculation tolerance =	0.01
Maximum number of iterations =	20
Maximum difference tolerance =	0.3
Flow tolerance factor =	0.001

Computation Options

Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Supercritical Flow

FLOW DATA

Flow Data (cfs)

```
*****
* River      Reach      RS      *      PF 1 *
* RIVER-1    Reach-1    85      *      248.3 *
*****
```

Boundary Conditions

```
*****
****
* River      Reach      Profile      *      Upstream      Downstream
*
*****
****
* RIVER-1    Reach-1    PF 1      *      Critical      Critical
*
*****
```

GEOMETRY DATA

CROSS SECTION

REACH: Reach-1 RS: 85

INPUT

Description: 1

```
Station Elevation Data      num=      73
Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev
*****
0   447.77   2.07   446.23   2.44   446   3.37   445.44   5.65   444
9.06   442.02   12.16   440.35   12.85   440   15.48   438.6   16.65   438
18.94   436.79   20.48   436   30.17   434.47   43.89   432.14   44.72   432
44.97   431.85   45.36   431.65   47.36   430.56   47.8   430.29   48.05   430.11
48.11   430.06   48.24   430.05   48.47   430.06   48.57   430.07   49.14   430.16
50.47   430.4   54.06   431.06   56.64   431.51   58.97   432   59.9   432.62
60.86   433.35   61.44   434   61.95   434.48   62.09   434.61   64.15   436
65.56   436.82   67.26   438   69.77   439.51   70.74   440   72.82   441.15
74.74   442   76.35   442.7   79.31   444   83.77   445.98   83.83   446.01
87.95   448   88.03   448.04   90.6   449.33   91.91   449.98   92.8   450.4
96.14   452   96.4   452.13   98.01   452.76   100.32   453.66   101.31   454
106.99   456   107.81   456.29   108.62   456.59   112.85   458   117.67   459.64
120.79   460.87   123.7   462   124.66   462.42   125.2   462.64   125.99   462.93
126.51   463.09   128.38   463.62   129.83   464   132.93   464.85   136.87   465.61
140.66   465.85   148.85   465.61   150.78   465.58
```

Manning's n Values

```
num=      3
Sta   n Val   Sta   n Val   Sta   n Val
*****
0   .035   9.06   .035   100.32   .035
```

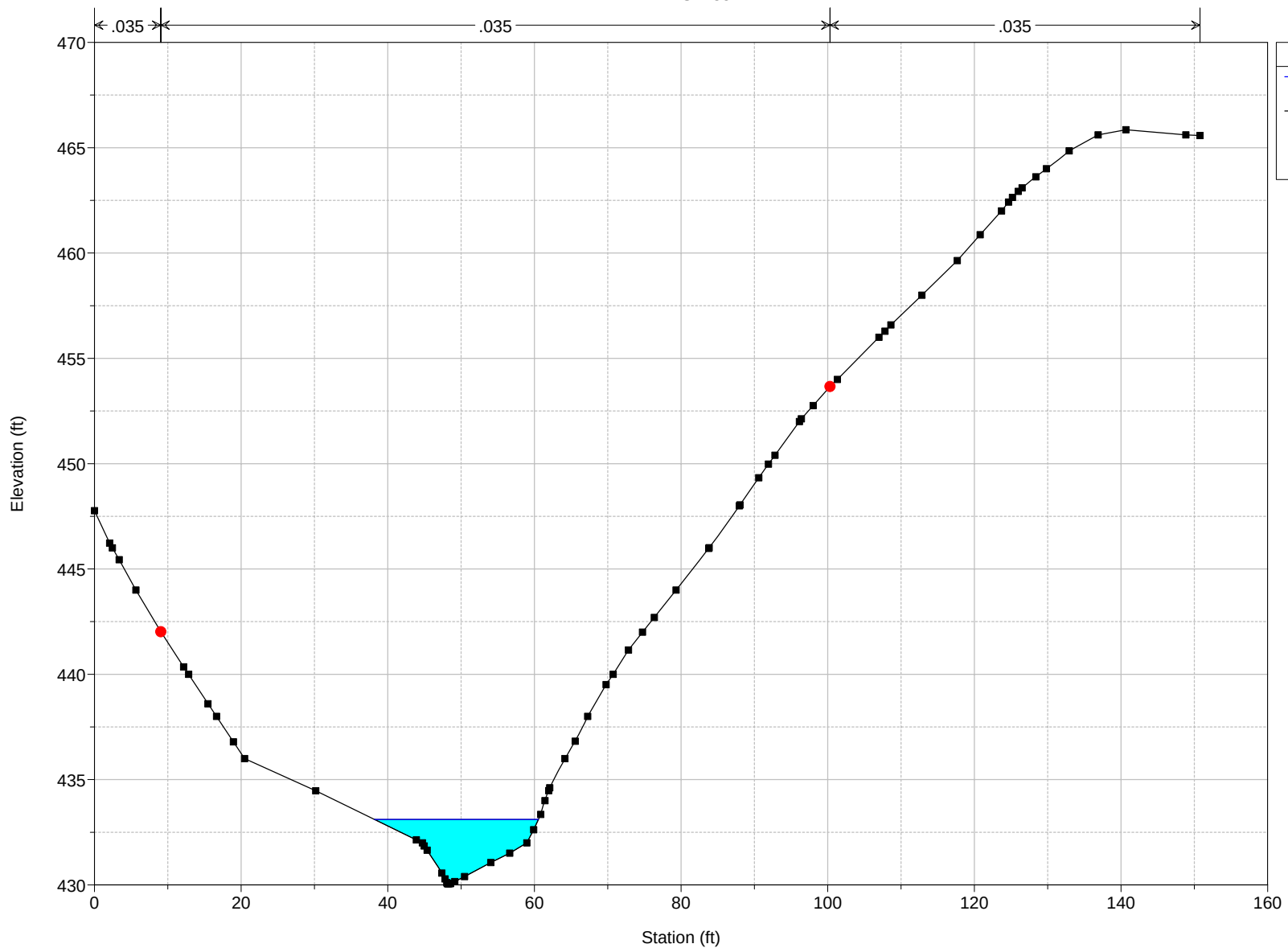
```
Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
          9.06   100.32            50   50            50            .1            .3
```

CROSS SECTION OUTPUT Profile #PF 1

```
*****
* E.G. Elev (ft)      * 433.90   * Element      * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.80   * Wt. n-Val.      * 0.035 *
* W.S. Elev (ft)      * 433.11   * Reach Len. (ft)      * 50.00 * 50.00 *
* Crit W.S. (ft)      * 433.11   * Flow Area (sq ft)      * 34.69 *
* E.G. Slope (ft/ft)      * 0.016899   * Area (sq ft)      * 34.69 *
* Q Total (cfs)      * 248.30   * Flow (cfs)      * 248.30 *
* Top Width (ft)      * 22.35   * Top Width (ft)      * 22.35 *
* Vel Total (ft/s)      * 7.16   * Avg. Vel. (ft/s)      * 7.16 *
* Max Chl Dpth (ft)      * 3.06   * Hydr. Depth (ft)      * 1.55 *
* Conv. Total (cfs)      * 1910.1   * Conv. (cfs)      * 1910.1 *
* Length Wtd. (ft)      * 50.00   * Wetted Per. (ft)      * 23.49 *
* Min Ch El (ft)      * 430.05   * Shear (lb/sq ft)      * 1.56 *
* Alpha      * 1.00   * Stream Power (lb/ft s)      * 150.78 * 0.00 *
* Frctn Loss (ft)      *      * Cum Volume (acre-ft)      * 2.70 * 0.00 *
* C & E Loss (ft)      *      * Cum SA (acres)      * 3.34 * 0.01 *
*****
```

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 85



CROSS SECTION
REACH: Reach-1

RS: 84

INPUT

Description: 2

Station Elevation Data num= 74

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	446.94	1.58	446	3.35	444.88	4.84	444	6.28	443.14
8.07	442	10.51	440.44	11.2	440	14.1	438.22	14.4	438
15.04	437.56	15.16	437.5	15.23	437.47	15.31	437.44	15.46	437.38
15.64	437.31	16.01	437.13	18.09	436	19.83	435.28	22.54	434
22.73	433.91	26.4	432	28.44	431.19	31.41	430	31.89	429.89
35.81	428.86	37.31	428.53	38.01	428.4	38.24	428.34	38.35	428.31
38.49	428.32	38.69	428.34	38.95	428.35	39.21	428.37	39.43	428.38
39.78	428.41	39.97	428.43	40.82	428.6	41.33	428.76	46.24	429.8
47.24	430	50.34	430.69	55.9	432	57.88	432.4	60.87	432.76
61.25	432.81	62.26	432.96	63.48	433.12	67.63	433.62	71.52	434
78.25	434.94	85.97	436	90.73	437.08	95.45	438	95.6	438.04
95.9	438.09	100.98	439.04	104.51	439.56	107.59	440	114.01	441.07
115.09	441.26	115.49	441.29	118.4	441.53	118.83	441.56	121.42	441.66
131.68	442	132.22	442.02	132.29	442.03	139.22	442.23	139.9	442.23
151.73	442.09	152.28	442.08	155.31	442	157.67	441.96		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	14.1	.035	85.97	.035

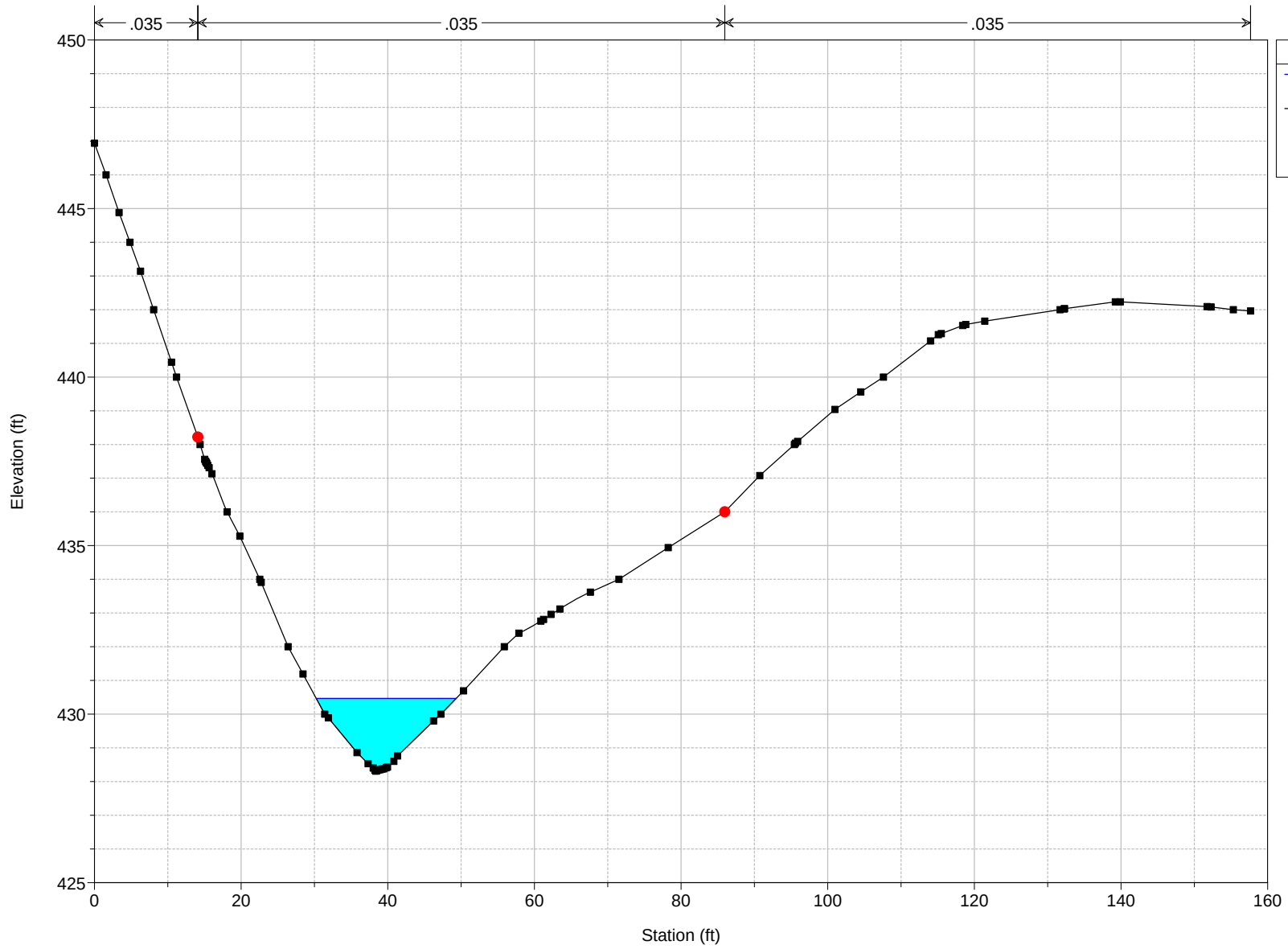
Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	14.1	85.97	50	50	50	.1	.3	

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 432.37	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.91	* Wt. n-Val.	* 0.035	* 0.035	* 0.035
* W.S. Elev (ft)	* 430.47	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 431.07	* Flow Area (sq ft)	* 22.40	* 22.40	* 22.40
* E.G. Slope (ft/ft)	* 0.057049	* Area (sq ft)	* 22.40	* 22.40	* 22.40
* Q Total (cfs)	* 248.30	* Flow (cfs)	* 248.30	* 248.30	* 248.30
* Top Width (ft)	* 19.08	* Top Width (ft)	* 19.08	* 19.08	* 19.08
* Vel Total (ft/s)	* 11.08	* Avg. Vel. (ft/s)	* 11.08	* 11.08	* 11.08
* Max Chl Dpth (ft)	* 2.15	* Hydr. Depth (ft)	* 1.17	* 1.17	* 1.17
* Conv. Total (cfs)	* 1039.6	* Conv. (cfs)	* 1039.6	* 1039.6	* 1039.6
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)	* 19.60	* 19.60	* 19.60
* Min Ch El (ft)	* 428.31	* Shear (lb/sq ft)	* 4.07	* 4.07	* 4.07
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 157.67	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.42	* Cum Volume (acre-ft)	* 2.67	* 2.67	* 2.67
* C & E Loss (ft)	* 0.11	* Cum SA (acres)	* 3.32	* 3.32	* 3.32

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 84



Legend

- WS PF 1
- Ground
- Bank Sta

CROSS SECTION

RIVER: RIVER-1

REACH: Reach-1

RS: 83

INPUT

Description: 3

Station Elevation Data

num= 115

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	449.62	.69	449.24	3.14	448	4.05	447.19	5.56	446
7.48	444.12	7.59	444	7.77	443.79	9.41	442	10.4	440.85
11.13	440	12.76	438.11	12.87	438	12.99	437.83	13.46	437.29
14.79	436	15.58	435.08	16.5	434	17.27	433.07	18.37	432
19.38	430.99	20.39	430	21.23	429.54	24.67	428.16	25.06	428
26.96	427.74	28.49	427.51	29.6	427.36	31.29	427.18	32.12	427.06
32.76	426.94	34.21	426.61	34.6	426.47	34.83	426.44	35.27	426.38
35.68	426.34	36.03	426.35	36.31	426.37	36.44	426.4	36.51	426.42
36.61	426.43	36.77	426.44	37.02	426.45	38.25	426.53	38.45	426.55
38.61	426.57	39.1	426.61	39.24	426.63	39.3	426.65	41.59	427.43
43.37	428	54.31	429.9	54.77	430	55.06	430.02	55.14	430.03
62.63	430.49	67.76	430.77	69.55	430.86	76.76	431.19	85.15	431.46
88.15	431.59	99.37	432	101.38	432.1	102.02	432.12	112.99	432.58
117.07	432.72	122.23	432.84	128.42	432.97	131.74	433.05	134.15	433.12
142.88	433.43	144.51	433.51	148.77	433.68	155.66	434	157.29	434.09
157.42	434.09	160.51	434.17	162.87	434.21	164.29	434.24	164.94	434.24
166.24	434.27	167.3	434.24	167.65	434.24	167.98	434.23	168.16	434.23
168.32	434.24	168.61	434.26	169.11	434.28	169.81	434.31	175.51	434.49
177.07	434.53	177.96	434.54	178.95	434.54	185.54	434.58	187.02	434.62
191.14	434.65	192.45	434.67	194.02	434.71	197.32	434.7	199.76	434.81
202.92	434.98	203.59	435	207.84	435.26	208.48	435.29	209.22	435.33
210.87	435.41	214.46	435.55	220.89	435.77	226.19	435.99	226.24	435.99
226.34	436	229.87	436.29	239.34	437.56	240.92	437.75	241.89	437.86

Manning's n Values

num= 3

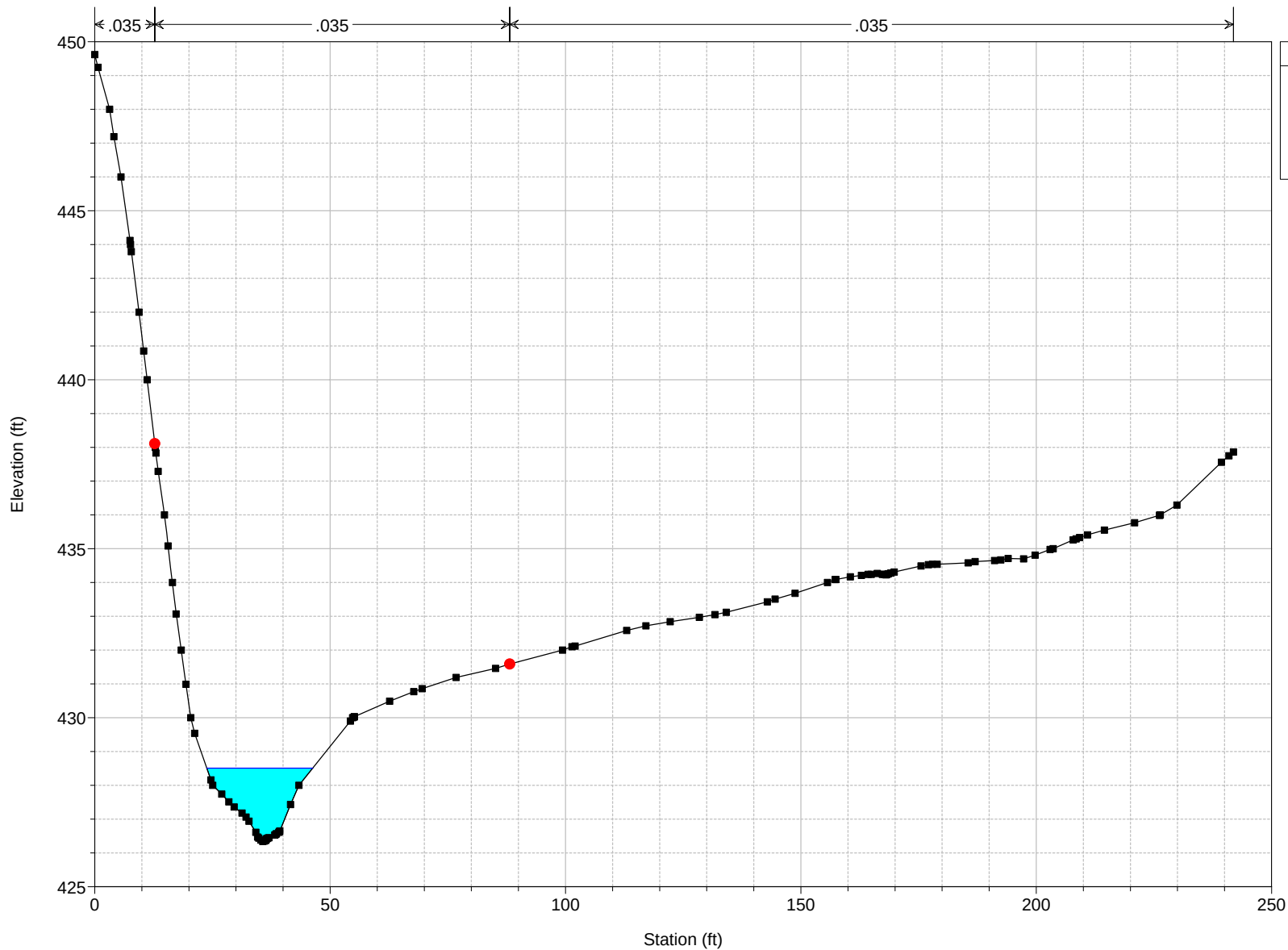
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	12.76	.035	88.15	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	12.76	88.15		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 429.85	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.34	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 428.51	* Reach Len. (ft)	* 50.00	* 50.00	
* Crit W.S. (ft)	* 428.91	* Flow Area (sq ft)		* 26.74	
* E.G. Slope (ft/ft)	* 0.039213	* Area (sq ft)		* 26.74	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 22.51	* Top Width (ft)		* 22.51	
* Vel Total (ft/s)	* 9.29	* Avg. Vel. (ft/s)		* 9.29	
* Max Chl Dpth (ft)	* 2.17	* Hydr. Depth (ft)		* 1.19	
* Conv. Total (cfs)	* 1253.9	* Conv. (cfs)		* 1253.9	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 23.03	
* Min Ch El (ft)	* 426.34	* Shear (lb/sq ft)		* 2.84	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 241.89	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.34	* Cum Volume (acre-ft)		* 2.64	* 0.00
* C & E Loss (ft)	* 0.17	* Cum SA (acres)		* 3.30	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 83



Legend	
WS PF 1	
Ground	
Bank Sta	

CROSS SECTION
REACH: Reach-1

RS: 82

INPUT

Description: 4

Station Elevation Data num= 125

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	452.24	.51	452	.87	451.82	4.37	450	8.88	448.02
12.73	446.22	13.24	446	14.51	445.46	17.77	444	18.6	443.51
20.51	442	20.89	441.59	22.38	440	22.77	439.58	24.3	438
24.81	437.4	26.06	436	27.01	434.95	28.02	434	29.6	432.45
30.01	432	30.61	431.34	31.91	430	33.43	428.56	34.2	428
36.88	426.62	38.34	426	44.06	424.94	45.8	424.65	49.14	424.58
49.39	424.88	49.71	424.98	50.3	425.1	56.44	426	59.3	426.34
60.42	426.46	63.05	426.78	66.18	427.14	72.45	428	75.42	428.16
78.25	428.28	78.96	428.3	86.57	428.53	87.36	428.54	88.96	428.57
90.34	428.62	91.55	428.68	95.82	429.01	97.88	429.11	101.84	429.39
103.26	429.48	105.57	429.64	108.9	429.75	109.32	429.77	109.54	429.78
109.66	429.78	109.74	429.79	109.82	429.79	109.91	429.8	110.04	429.8
111	429.83	114.15	429.86	120.44	429.99	120.55	429.99	121.48	430
125.46	430.01	126.34	430.07	126.4	430.07	139.3	430.35	139.46	430.36
139.74	430.36	143.29	430.47	143.93	430.47	144.67	430.46	151.63	430.71
152.68	430.69	153.93	430.68	155.8	430.73	157.3	430.74	158.74	430.74
160.42	430.72	164.52	430.65	167.7	430.68	168.81	430.67	170.55	430.67
171.57	430.66	175.46	430.66	178.23	430.63	178.93	430.62	179.52	430.6
180.68	430.6	183.49	430.55	186.29	430.45	189.09	430.31	191.98	430.15
192.68	430.16	194.91	430.02	194.98	430.02	195.3	430	196.41	429.98
197.69	429.97	198.97	429.99	199.27	430	200.72	430.12	201.69	430.19
209.9	430.91	212.35	431.03	215.57	431.27	217.73	431.4	219.13	431.46
222.48	431.52	223.27	431.53	225.62	431.52	233.75	431.56	236.66	431.69
239.18	431.88	239.6	431.88	241.09	432	242.21	432.16	255.66	434
259.23	435.01	261.8	436	266.33	437.62	267.31	438	271.09	439.28

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	30.01	.035	101.84	.035

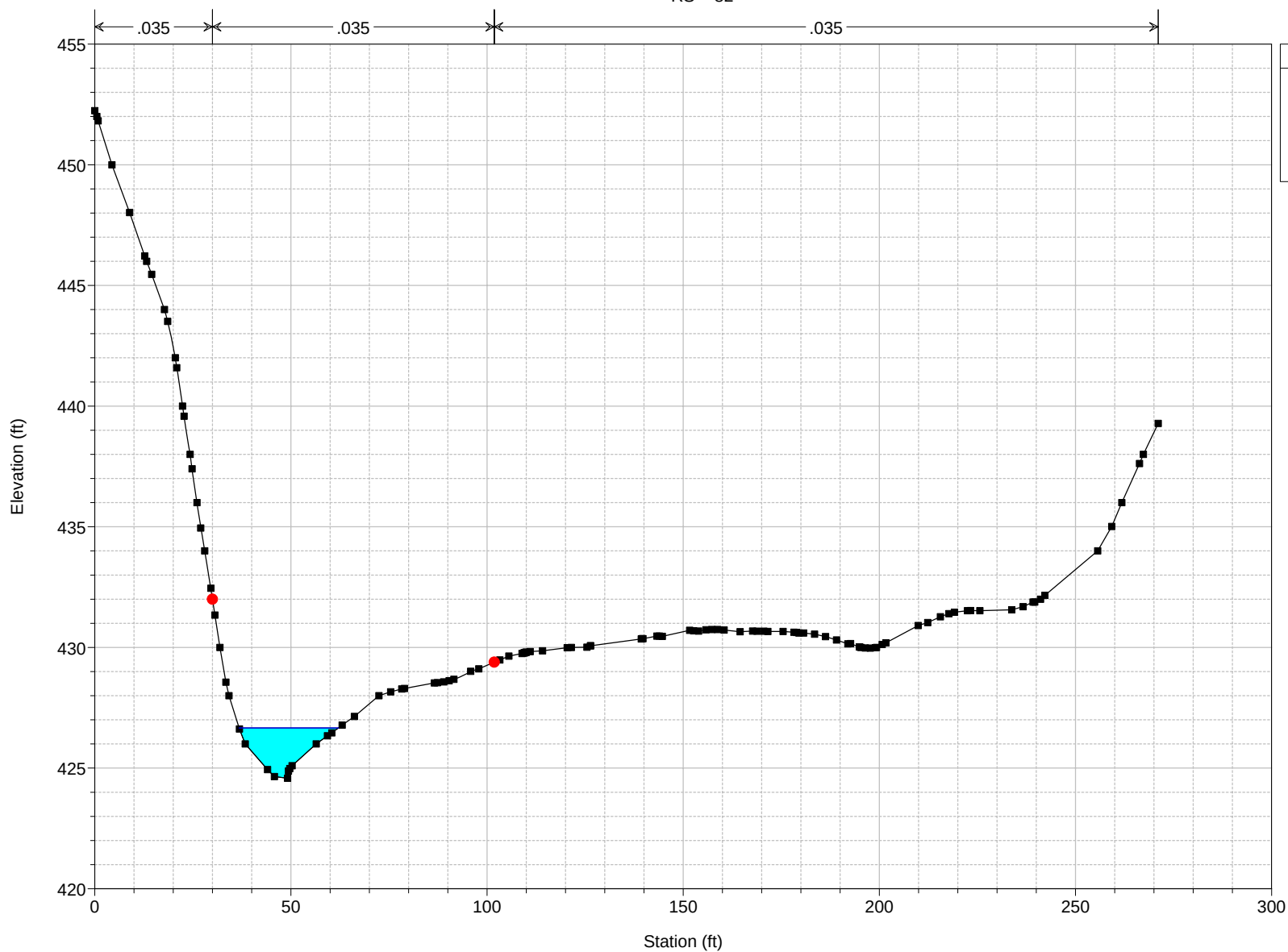
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	30.01	101.84		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 427.87	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.20	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 426.67	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 427.02	* Flow Area (sq ft)		* 28.19	
* E.G. Slope (ft/ft)	* 0.038323	* Area (sq ft)		* 28.19	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 25.32	* Top Width (ft)		* 25.32	
* Vel Total (ft/s)	* 8.81	* Avg. Vel. (ft/s)		* 8.81	
* Max Chl Dpth (ft)	* 2.09	* Hydr. Depth (ft)		* 1.11	
* Conv. Total (cfs)	* 1268.4	* Conv. (cfs)		* 1268.4	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 25.85	
* Min Ch El (ft)	* 424.58	* Shear (lb/sq ft)		* 2.61	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 271.09	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.94	* Cum Volume (acre-ft)		* 2.61	* 0.00
* C & E Loss (ft)	* 0.04	* Cum SA (acres)		* 3.27	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 82



Legend

- WS PF 1
- Ground
- Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 81

INPUT

Description: 5

Station Elevation Data num= 105

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	452.52	1.26	452	3.37	451.24	6.34	450	7.98	449.44
11.94	448	16.2	446.57	17.91	446	21.06	444.98	24.02	444
25.74	443.44	30.7	442	33.58	441.1	37.45	440	40.84	438.27
41.31	438	41.7	437.79	44.85	436	47.89	434.29	48.41	434
49.06	433.65	51.81	432	54.82	430.22	55.17	430	55.33	429.92
55.4	429.9	55.49	429.86	55.61	429.81	59.77	428	62.96	427.15
67.72	426	75.6	424.16	76.21	424	76.33	423.91	76.41	423.79
78.29	422	82.57	422	82.62	422.01	92.51	424	95.66	424.58
96.88	424.81	101	425.49	103.85	426	109.91	426.79	111.23	426.81
112.75	426.79	114.34	426.78	120.31	427.27	127.79	427.31	127.99	427.32
128.22	427.33	128.55	427.34	129.38	427.35	130.82	427.37	133.09	427.43
137.02	427.49	137.78	427.49	138.35	427.47	138.98	427.44	148.03	427.96
148.08	427.95	148.16	427.95	148.79	428	163.93	428.22	165.97	428.24
166.35	428.25	166.74	428.25	180.77	428.17	183.15	428.14	184.35	428.1
185.31	428.07	189.1	428	189.86	427.97	193.73	427.78	196.83	427.59
202.41	427.14	205.16	426.91	207.09	426.72	207.29	426.72	209.62	426.48
210.02	426.45	210.53	426.46	213.56	426.55	214.17	426.55	215.48	426.56
217.15	426.58	218.64	426.64	224.29	426.83	226.15	426.9	227.03	426.95
227.97	427.04	236.76	428	246.07	428.93	251.23	429.41	252.77	429.51
253.74	429.52	255.37	429.69	257.01	429.66	258.32	429.76	260.46	430
261.37	430.13	261.82	430.24	267.61	431.5	269.88	432	274.33	433.47

Manning's n Values

num= 3

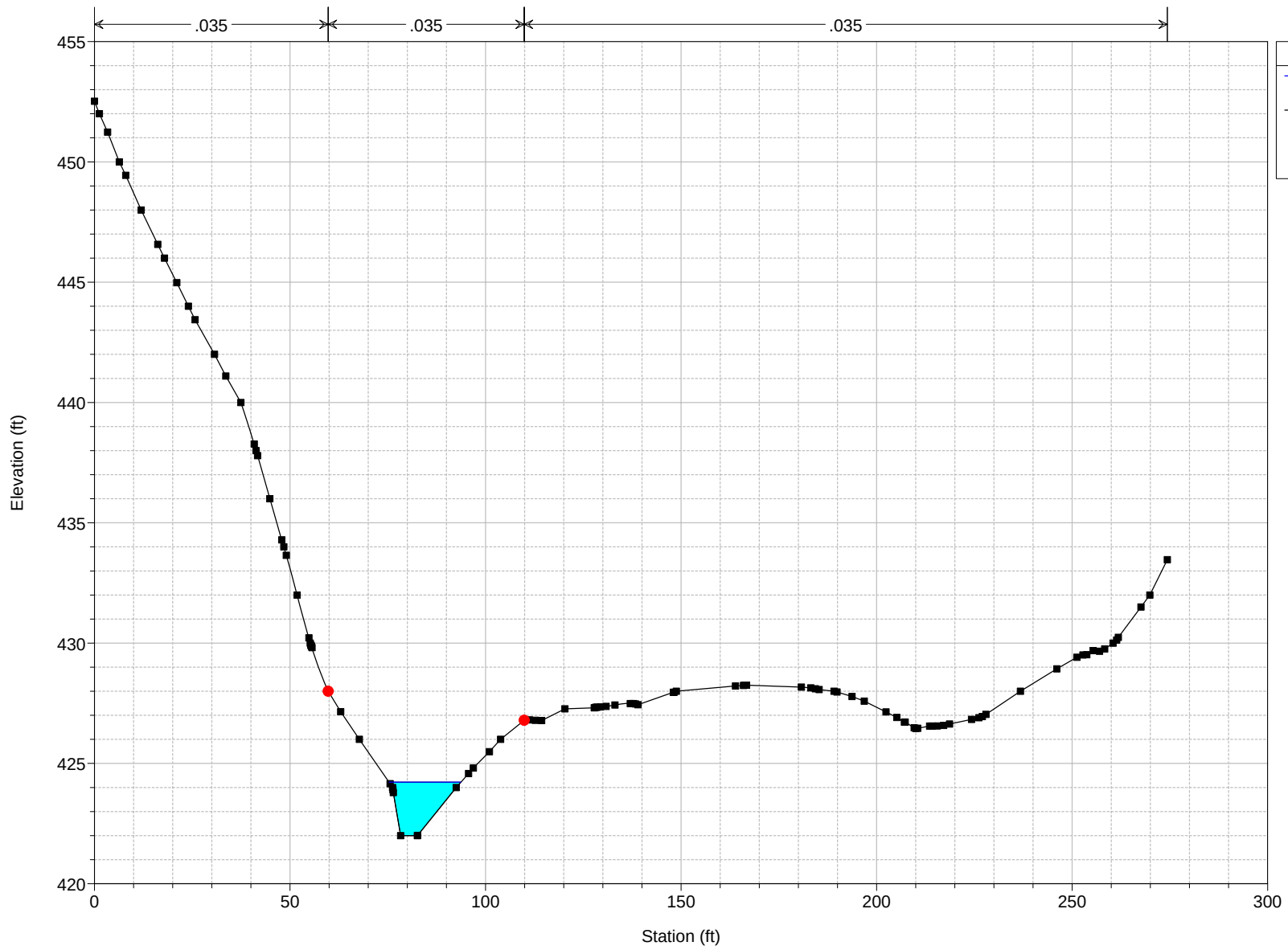
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	59.77	.035	109.91	.035

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	59.77	109.91		50	50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 425.82	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.60	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 424.22	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 424.75	* Flow Area (sq ft)		* 24.49	
* E.G. Slope (ft/ft)	* 0.041991	* Area (sq ft)		* 24.49	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 18.41	* Top Width (ft)		* 18.41	
* Vel Total (ft/s)	* 10.14	* Avg. Vel. (ft/s)		* 10.14	
* Max Chl Dpth (ft)	* 2.22	* Hydr. Depth (ft)		* 1.33	
* Conv. Total (cfs)	* 1211.7	* Conv. (cfs)		* 1211.7	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 19.46	
* Min Ch El (ft)	* 422.00	* Shear (lb/sq ft)		* 3.30	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 274.33	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.00	* Cum Volume (acre-ft)		* 2.58	* 0.00
* C & E Loss (ft)	* 0.04	* Cum SA (acres)		* 3.24	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 81



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 80

INPUT

Description: 6

Station Elevation Data				num= 116			
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	457.19	3	456	5.76	454.96	8.25	454
13.51	452	19.29	450	22.89	448.92	25.7	448
34.56	445.11	38.02	444	42.41	442.69	44.89	442
51.39	440	55.36	438.73	57.32	438	58.44	437.56
65.68	434.44	66.77	434	67.64	433.43	69.84	432
72.65	430	72.78	429.9	75.75	428	77.31	426.89
82.87	424.02	82.93	424	86.11	422	88.57	420.66
89.55	420.27	89.94	420.23	90.08	420.25	90.58	420.27
91.95	420.41	93.62	420.6	93.73	420.62	93.85	420.64
96.44	420.95	97.05	420.99	99.82	421.29	101.49	421.48
104.38	421.84	105.63	422	111.68	422.52	113.71	422.69
120.84	423.22	121.73	423.31	121.91	423.25	122.2	423.21
124.52	423.19	126.71	423.26	128.31	423.3	131.04	423.35
134.09	423.41	135.54	423.48	138.32	423.48	139.14	423.54
140.38	423.62	140.94	423.63	141.41	423.64	142.98	423.67
155.01	423.58	173.68	423.97	173.9	423.97	174.01	423.96
178.49	424.04	184.65	424.05	184.8	424.05	184.99	424.06
195.34	424	197.12	423.97	205.29	423.9	208.71	423.85
210.94	423.73	212.01	423.68	212.84	423.62	213	423.57
232.21	423.88	234.87	423.85	235.14	423.85	235.23	423.86
237.98	423.97	238.05	423.97	241.2	424	242.89	424
254.98	424	255.37	424	259.72	424.06	260.16	424.09
271.15	424.62	273.51	424.92	277.01	425.15	280.61	426
281.61	426.35						

Manning's n Values				num= 3	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	82.87	.035	138.32	.035

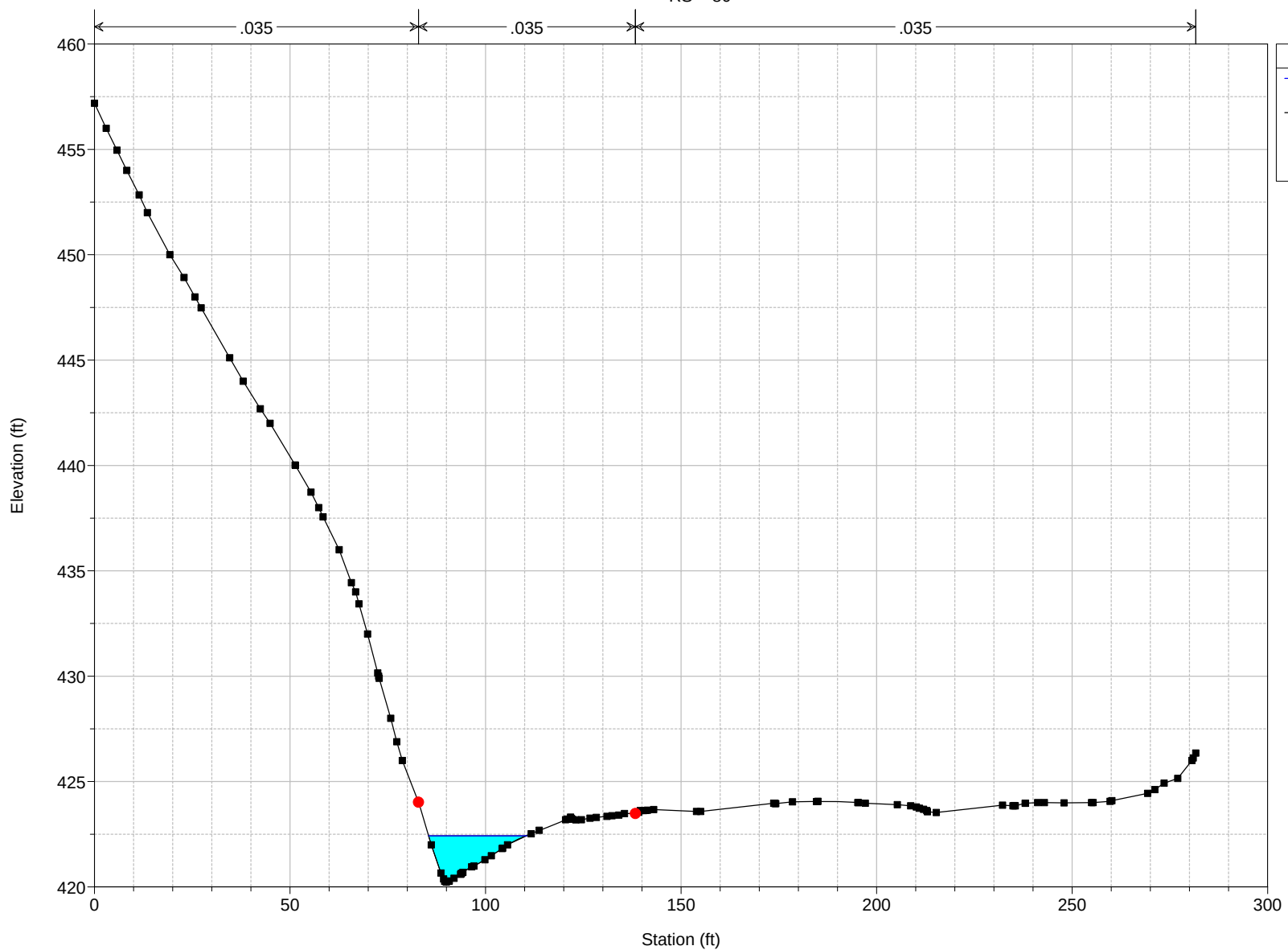
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	82.87	138.32		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 423.67	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.24	* Wt. n-Val.	* 50.00	* 0.035	* 50.00
* W.S. Elev (ft)	* 422.42	* Reach Len. (ft)			
* Crit W.S. (ft)	* 422.81	* Flow Area (sq ft)		* 27.77	
* E.G. Slope (ft/ft)	* 0.040225	* Area (sq ft)		* 27.77	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 25.14	* Top Width (ft)		* 25.14	
* Vel Total (ft/s)	* 8.94	* Avg. Vel. (ft/s)		* 8.94	
* Max Chl Dpth (ft)	* 2.19	* Hydr. Depth (ft)		* 1.10	
* Conv. Total (cfs)	* 1238.0	* Conv. (cfs)		* 1238.0	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 25.80	
* Min Ch El (ft)	* 420.23	* Shear (lb/sq ft)		* 2.70	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 281.61	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.05	* Cum Volume (acre-ft)		* 2.55	* 0.00
* C & E Loss (ft)	* 0.11	* Cum SA (acres)		* 3.22	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 80



CROSS SECTION
REACH: Reach-1

RS: 79

INPUT

Description: 7

Station Elevation Data num= 81

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	454.65	.59	454.41	1.71	454	2.64	453.64	6.96	452
11.27	450.19	11.67	450	11.81	449.93	15.95	448	21.39	446.2
21.92	446	22.76	445.75	29.24	444	32.57	443.03	36.43	442
39.22	441.18	42.95	440	46.26	438.98	49.26	438	52.84	436.9
55.73	436	64.56	434.23	64.68	434.21	66.04	434	76.5	432.25
77.68	432	79.57	431.33	83.76	430	86.69	429.06	89.87	428
90.6	427.72	93.97	426.44	94.9	426	95.26	425.79	95.33	425.78
100.71	424	101.4	423.77	101.59	423.7	101.96	423.58	103.42	423.14
104.81	422.68	105.89	422.37	106.95	422	107.73	421.71	108.93	421.31
109.55	421.15	109.94	421.05	110.27	420.93	110.57	420.78	111.79	420
114.68	419.79	123.43	419.69	126.56	420	130.55	420.17	131.16	420.17
131.43	420.18	132.93	420.23	134.3	420.29	135.9	420.32	144.62	420.74
145.77	420.79	146.91	420.81	148.18	420.81	149.66	420.79	151.01	420.75
151.83	420.74	152.3	420.74	157.96	420.89	158.38	420.89	159.12	420.91
160.36	420.95	163.85	421.02	165.42	421.06	167.11	421.09	168.97	421.14
172.31	421.1	174.38	421.17	176.37	421.26	176.73	421.26	176.98	421.27
177.38	421.28								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	105.89	.035	177.38	.035

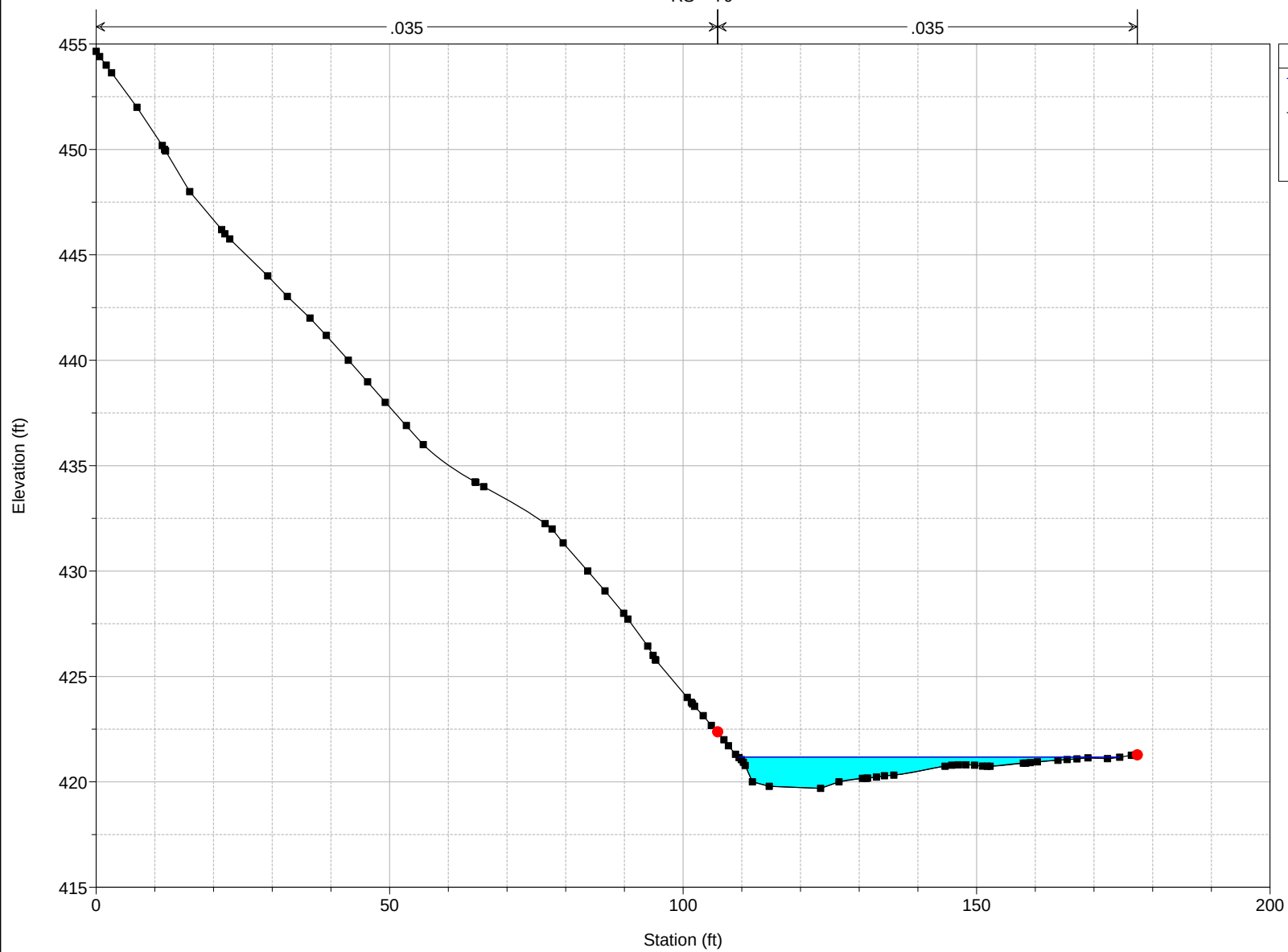
Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	105.89	177.38		50	50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 421.68	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.51	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 421.17	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 421.28	* Flow Area (sq ft)		* 43.47	
* E.G. Slope (ft/ft)	* 0.031149	* Area (sq ft)		* 43.47	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 64.97	* Top Width (ft)		* 64.97	
* Vel Total (ft/s)	* 5.71	* Avg. Vel. (ft/s)		* 5.71	
* Max Chl Dpth (ft)	* 1.48	* Hydr. Depth (ft)		* 0.67	
* Conv. Total (cfs)	* 1406.9	* Conv. (cfs)		* 1406.9	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 65.32	
* Min Ch El (ft)	* 419.69	* Shear (lb/sq ft)		* 1.29	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 177.38	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.76	* Cum Volume (acre-ft)		* 2.51	* 0.00
* C & E Loss (ft)	* 0.22	* Cum SA (acres)		* 3.17	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 79



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 78

INPUT

Description: 8

Station Elevation Data num= 69

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	451	.4	450.88	3.03	450	5.98	449.12	9.67	448
11.93	447.32	14.79	446.42	15.91	446	17.38	445.5	21.74	444
27.6	442	30.68	440.97	33.5	440	36.48	439.23	41.07	438
47.18	438.83	51.19	436	57.04	434.91	61.36	434	64.61	433.45
73.59	432	82.89	430.09	83.37	430	83.77	429.91	86.8	429.21
91.95	428	96.08	427.23	102.89	426	111.5	424.68	116.06	424
124.03	422	128.51	420	134.34	419.69	134.45	419.68	136.71	419.58
147.77	418.72	150.18	418.57	156.9	418	160.92	417.46	167.16	416.58
172.65	416.99	172.7	417.03	174.42	417.75	174.94	417.95	175.14	418
175.47	418.02	176.26	418.06	177.09	418.1	177.78	418.11	178.48	418.11
179.62	418.14	192.06	418.28	192.47	418.29	194.46	418.33	195.08	418.36
195.87	418.35	196.76	418.33	197.6	418.33	207.76	418.49	208.36	418.47
218.42	418.41	223.86	418.43	231.1	418.53	232.72	418.56	233.92	418.61
234.73	418.62	238.13	418.65	238.57	418.66	238.76	418.67		

Manning's n Values num= 3

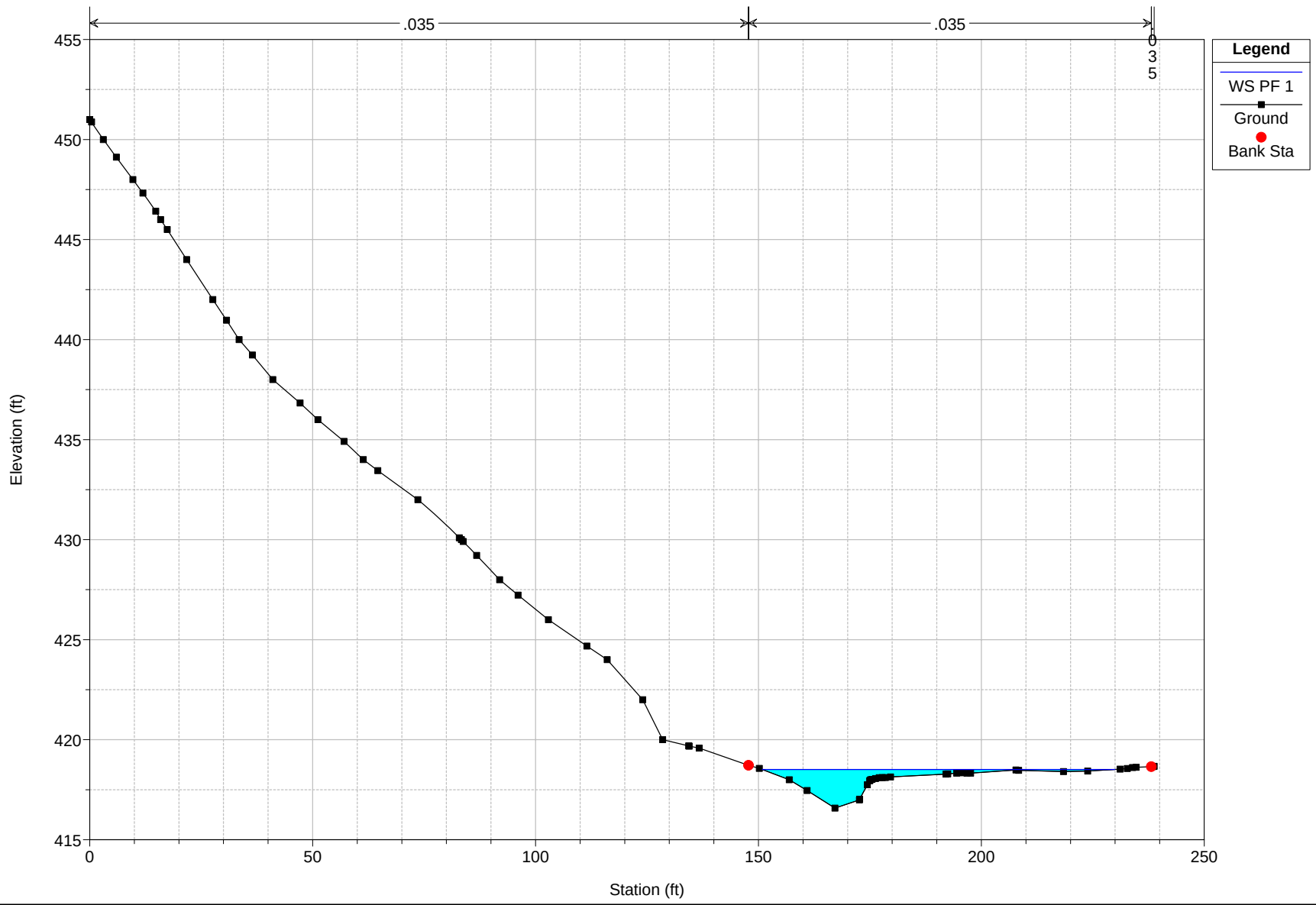
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	147.77	.035	238.13	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	147.77	238.13		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 419.28	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.77	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 418.51	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 418.75	* Flow Area (sq ft)		* 35.31	
* E.G. Slope (ft/ft)	* 0.080922	* Area (sq ft)		* 35.31	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 79.10	* Top Width (ft)		* 79.10	
* Vel Total (ft/s)	* 7.03	* Avg. Vel. (ft/s)		* 7.03	
* Max Chl Dpth (ft)	* 1.93	* Hydr. Depth (ft)		* 0.45	
* Conv. Total (cfs)	* 872.9	* Conv. (cfs)		* 872.9	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 79.45	
* Min Ch El (ft)	* 416.58	* Shear (lb/sq ft)		* 2.25	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 238.76	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.37	* Cum Volume (acre-ft)		* 2.46	* 0.00
* C & E Loss (ft)	* 0.03	* Cum SA (acres)		* 3.08	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 78



CROSS SECTION
REACH: Reach-1

RS: 77

INPUT

Description: 9

Station Elevation Data num= 74

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	446.32	1.07	446.05	1.27	446.01	9.97	444.09	10.39	444
19.1	442	21.24	441.45	26.41	440	31.02	438.88	34.96	438
45.89	436	54.16	434.51	57.16	434	59.34	433.55	66.79	432
68.57	431.61	76.19	430	83.77	428.85	89.03	428	92.43	427.5
103.67	426	118.78	424.43	123.04	424	140.38	422	150.36	420
161.34	418.44	164.84	418	168.92	417.66	175.5	417.18	180.39	416.93
183.68	416.81	185.6	416.78	186.8	416.79	198.33	416.07	199.02	416
199.86	415.8	200	415.8	203.04	415.04	203.53	414.89	203.72	414.81
203.99	414.44	206.29	414.34	207.18	414.4	207.44	414.42	207.65	414.45
209.11	414.64	209.64	414.7	211.58	414.86	212.48	414.88	213.32	414.94
215.03	415.02	218.08	415.2	218.19	415.21	222.3	415.56	226.06	416
230.41	416.17	246.54	417.05	249.4	417.1	253.67	417.23	273.51	417.76
277.63	417.83	282.4	418	286.93	418.27	289.42	418.44	314.92	419.77
315.98	419.83	318.62	420	320.02	420.18	326.51	420.62	342.87	422
347.01	422.54	348.8	422.71	352.26	424	355.9	425.37		

Manning's n Values num= 3

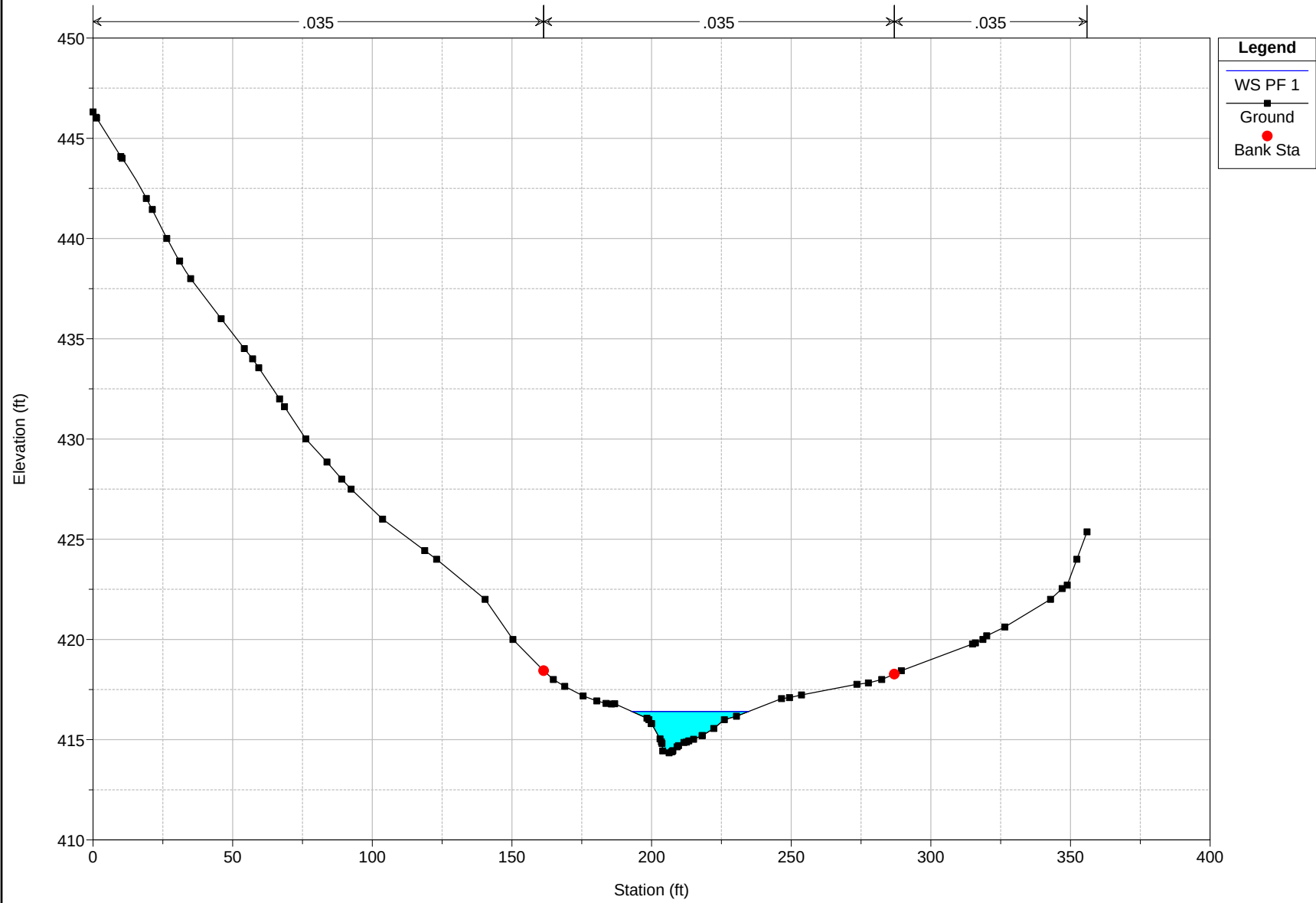
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	161.34	.035	286.93	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	161.34	286.93		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 417.07	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.66	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 416.41	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 416.55	* Flow Area (sq ft)		* 38.03	
* E.G. Slope (ft/ft)	* 0.027256	* Area (sq ft)		* 38.03	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 41.86	* Top Width (ft)		* 41.86	
* Vel Total (ft/s)	* 6.53	* Avg. Vel. (ft/s)		* 6.53	
* Max Chl Dpth (ft)	* 2.07	* Hydr. Depth (ft)		* 0.91	
* Conv. Total (cfs)	* 1504.0	* Conv. (cfs)		* 1504.0	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 42.31	
* Min Ch El (ft)	* 414.34	* Shear (lb/sq ft)		* 1.53	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 355.90	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.18	* Cum Volume (acre-ft)		* 2.42	* 0.00
* C & E Loss (ft)	* 0.03	* Cum SA (acres)		* 3.01	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 77



CROSS SECTION
REACH: Reach-1

RS: 76

INPUT

Description: 10

Station Elevation Data

num=

68

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	441.76	.14	441.74	9.69	440	15.52	438.99	16.78	438.8
26.52	437.08	32.35	436	44.43	434	55.04	432.51	58.32	432
62.25	431.22	67.98	430	73.99	428.98	75.05	428.81	87.35	426.56
90.71	426	102.23	424.31	104.54	424	118.21	422.33	121.06	422
132.11	420.74	135.13	420.42	136.45	420.31	146.47	418.95	152.58	418
164.01	416.51	168.09	416	175.9	414.99	176.9	414.92	178.24	414.81
183.03	414.31	186.58	414	186.86	413.96	186.92	413.94	187.01	413.92
187.15	413.89	193.57	412.74	194.14	412.58	194.64	412.46	196.57	412
201.02	411.68	204.39	411.22	204.6	411.18	204.79	411.16	205.19	411.14
205.88	411.14	206.75	411.18	207.72	411.25	208.96	411.38	209.03	411.39
210.83	411.77	211.24	411.88	211.91	412	212.82	412.19	222.07	413.02
230.18	413.81	230.27	413.82	230.32	413.83	230.44	413.84	230.79	413.87
233.21	414	238.52	414.4	240.03	414.55	252.17	416	261.41	416.41
264.18	416.5	267.41	416.54	271.48	416.56				

Manning's n Values

num=

3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	164.01	.035	252.17	.035

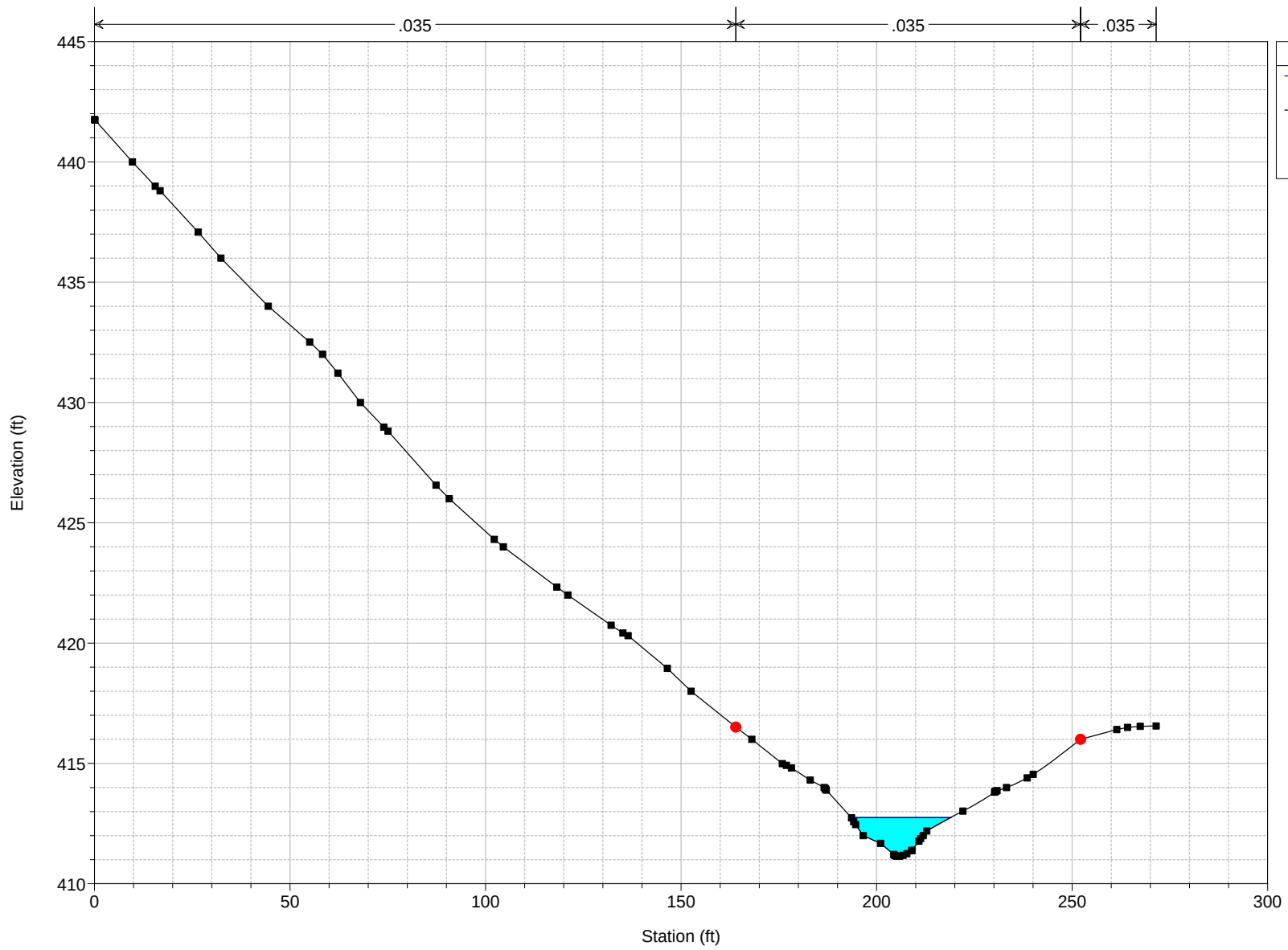
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	164.01	252.17		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 414.71	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.96	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 412.75	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 413.35	* Flow Area (sq ft)		* 22.12	
* E.G. Slope (ft/ft)	* 0.085944	* Area (sq ft)		* 22.12	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 25.56	* Top Width (ft)		* 25.56	
* Vel Total (ft/s)	* 11.23	* Avg. Vel. (ft/s)		* 11.23	
* Max Chl Dpth (ft)	* 1.61	* Hydr. Depth (ft)		* 0.87	
* Conv. Total (cfs)	* 847.0	* Conv. (cfs)		* 847.0	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 25.82	
* Min Ch El (ft)	* 411.14	* Shear (lb/sq ft)		* 4.60	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 271.48	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.23	* Cum Volume (acre-ft)		* 2.39	* 0.00
* C & E Loss (ft)	* 0.13	* Cum SA (acres)		* 2.98	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 76



Legend

- WS PF 1
- Ground
- Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 75

INPUT

Description: 11

Station Elevation Data		num=		58					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	437.45	2.58	437.01	8.26	436	12.74	435.15	18.93	434
25.68	432.65	29.52	432	32.05	431.54	41.16	430	43.64	429.74
54.99	428	68.57	426	77.89	424.52	81.33	424	84.75	423.46
93.66	422	96.26	421.59	99.42	421.15	103.02	420.62	108.04	420
125.5	418.15	126.98	418	139.5	416.53	142	416.26	144	416
156.67	414.05	157	414	157.05	413.99	157.28	413.95	164.57	412.7
165.48	412.56	166.17	412.44	166.38	412.4	166.87	412.34	168.88	412
170.96	410.87	171.91	410.31	172.31	410.1	172.48	410	172.9	409.78
176.23	408	181.21	408	182.46	408.35	184.4	408.96	189.54	410
206.12	411.64	208.99	412	215.61	412.22	222.1	412.41	223.18	412.43
226.3	412.51	242.09	413.34	244.65	413.41	249.22	413.52	249.91	413.55
250.63	413.57	260.67	414	267.07	414.85				

Manning's n Values

num=		3			
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	156.67	.035	223.18	.035

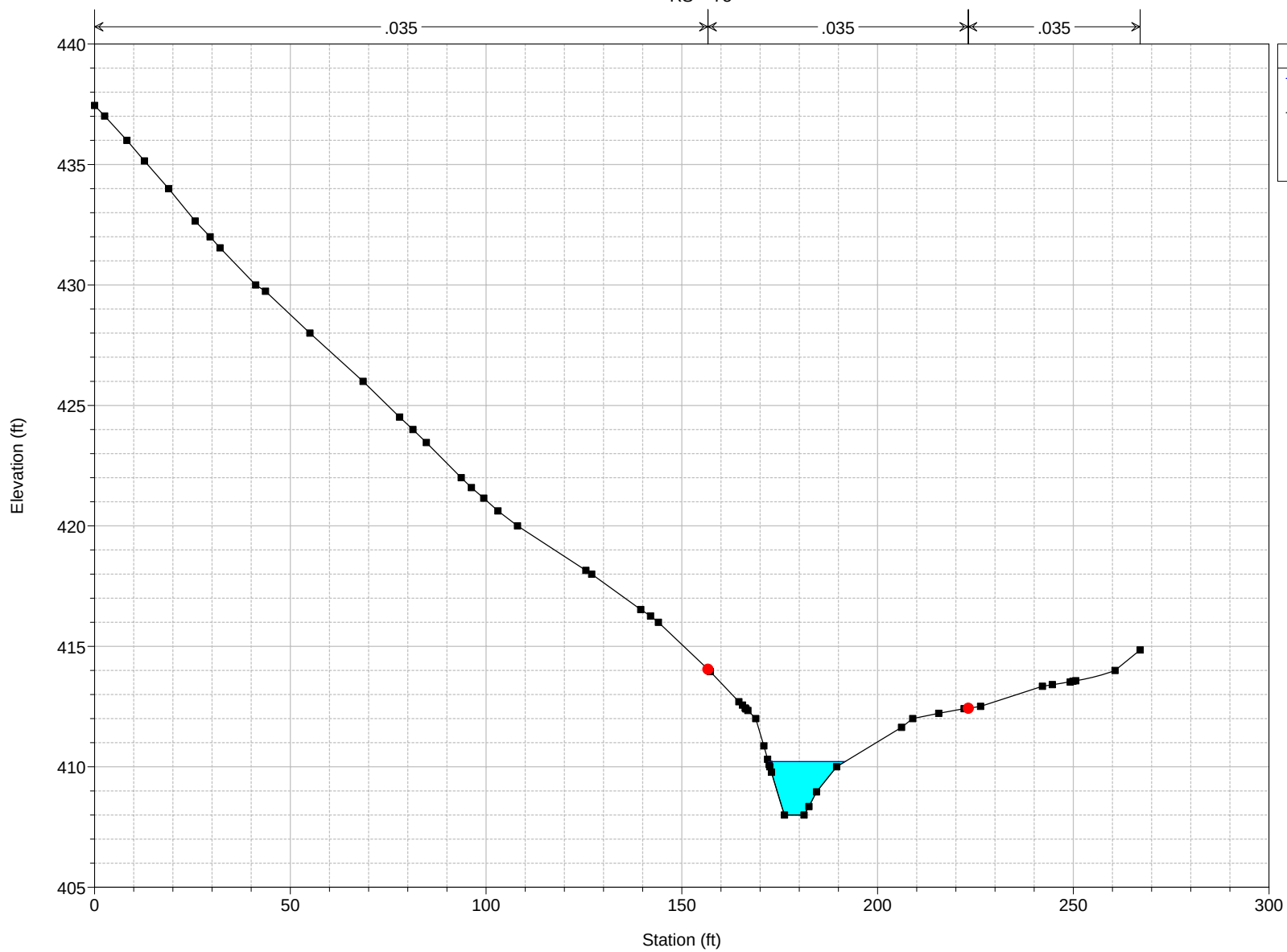
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	156.67	223.18		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 411.72	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.50	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 410.22	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 410.71	* Flow Area (sq ft)	*	* 25.23	*
* E.G. Slope (ft/ft)	* 0.040610	* Area (sq ft)	*	* 25.23	*
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.30	*
* Top Width (ft)	* 19.64	* Top Width (ft)	*	* 19.64	*
* Vel Total (ft/s)	* 9.84	* Avg. Vel. (ft/s)	*	* 9.84	*
* Max Chl Dpth (ft)	* 2.22	* Hydr. Depth (ft)	*	* 1.28	*
* Conv. Total (cfs)	* 1232.1	* Conv. (cfs)	*	* 1232.1	*
* Length Wtd. (ft)	*	* Wetted Per. (ft)	*	* 20.45	*
* Min Ch El (ft)	* 408.00	* Shear (lb/sq ft)	*	* 3.13	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 267.07	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.85	* Cum Volume (acre-ft)	*	* 2.36	* 0.00
* C & E Loss (ft)	* 0.14	* Cum SA (acres)	*	* 2.95	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 75



CROSS SECTION
REACH: Reach-1

RS: 74

INPUT

Description: 12

Station Elevation Data		num= 87							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	437.7	7.53	436.31	9.23	436	9.87	435.87	19.41	434
28.39	432.07	28.7	432	29.42	431.84	37.88	430	48.58	428.81
56.15	428	69.66	426	70.07	425.93	80.81	424	89.53	422.6
93.14	422	96.41	421.41	105.25	420	114.74	418.51	118.09	418
124.63	417.3	135.75	416	137.59	415.75	145.36	414.73	150.44	414
155.43	413.13	161.8	412	162.43	411.33	163.82	410	164.51	409.28
165.92	408	168.35	407.69	168.59	407.66	177.68	407.61	177.89	408
186.09	409.23	191.6	410	198	410.71	199.82	410.79	201.72	410.8
208.35	411.29	208.98	411.34	209.26	411.37	209.74	411.41	209.94	411.42
210.27	411.43	210.46	411.43	210.7	411.44	211.7	411.47	212.47	411.48
213.44	411.47	214.59	411.44	215.91	411.36	218.78	411.17	220.71	411.06
223.94	410.97	229.72	410.74	233.04	410.65	236.82	410.54	240.35	410.5
241.83	410.44	243.19	410.4	244.52	410.39	245.87	410.42	247.33	410.5
250.03	410.53	252.68	410.75	254.61	410.82	255.3	410.86	256.79	410.94
257.44	410.96	258.15	410.98	267.78	412	269.3	412.72	271.98	414
275.42	415.71	276.04	416	279.94	417.88	280.2	418	280.83	418.31
284.47	420	287.95	421.7	288.57	422	289.15	422.29	292.82	424
294.65	424.91	297.03	426						

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	145.36	.035	213.44	.035

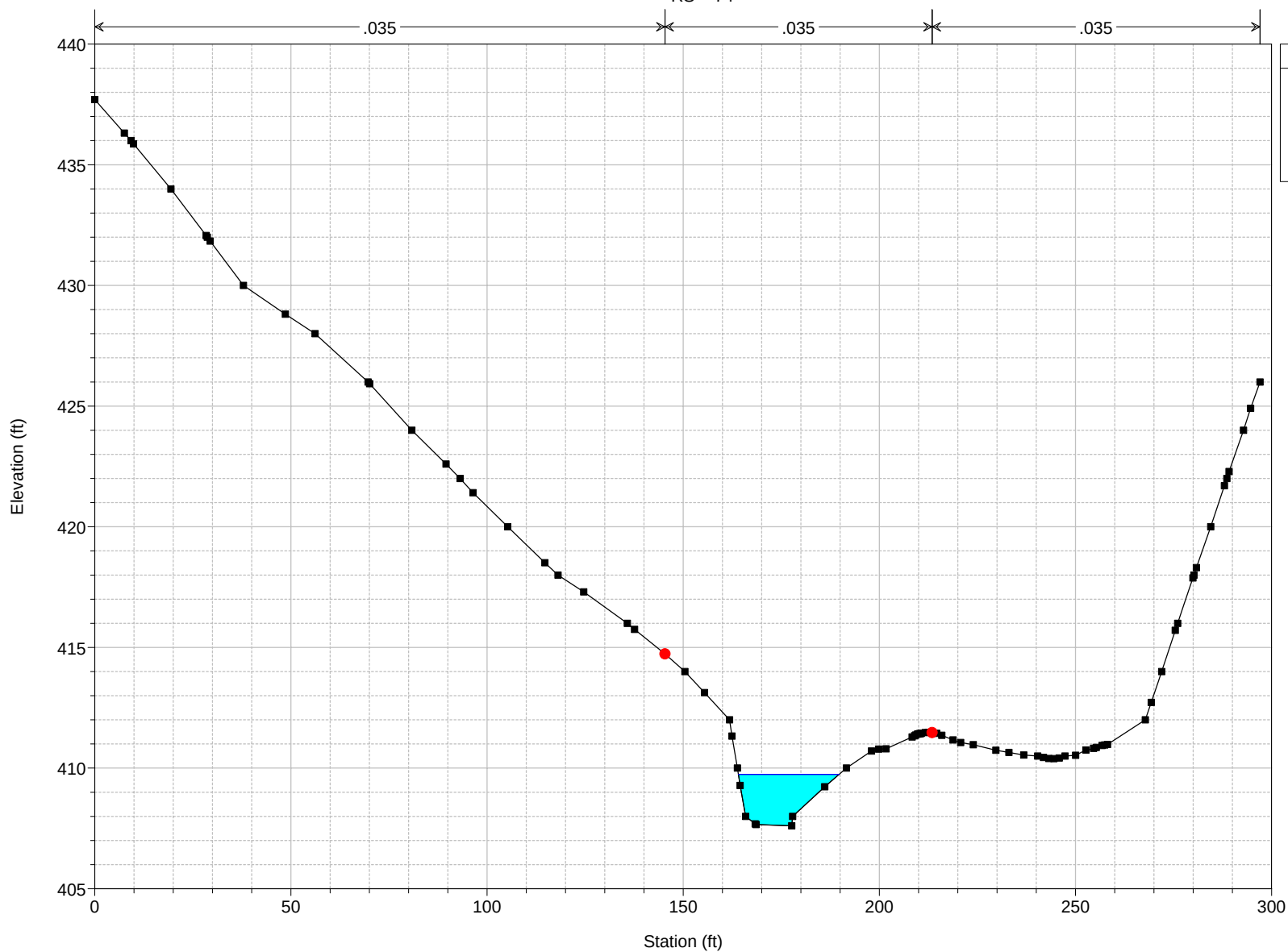
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	145.36	213.44		5.67	50	94.03	.1 .3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 410.46	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.72	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 409.74	* Reach Len. (ft)	* 5.67	* 50.00	* 94.03
* Crit W.S. (ft)	* 409.74	* Flow Area (sq ft)		* 36.41	
* E.G. Slope (ft/ft)	* 0.017083	* Area (sq ft)		* 36.41	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 25.66	* Top Width (ft)		* 25.66	
* Vel Total (ft/s)	* 6.82	* Avg. Vel. (ft/s)		* 6.82	
* Max Chl Dpth (ft)	* 2.13	* Hydr. Depth (ft)		* 1.42	
* Conv. Total (cfs)	* 1899.7	* Conv. (cfs)		* 1899.7	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 26.73	
* Min Ch El (ft)	* 407.61	* Shear (lb/sq ft)		* 1.45	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 297.03	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 2.32	* 0.00
* C & E Loss (ft)		* Cum SA (acres)		* 2.92	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 74



Legend

- WS PF 1
- Ground
- Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 73

INPUT

Description: 13

Station Elevation Data num= 71

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	436.71	.45	436.64	4.71	436	13.52	434.75	19.09	434
31.94	432	35.81	431.32	42.32	430	44.32	429.69	55.14	428
63.96	426.71	67.24	426.31	69.46	426	71.61	425.54	77	424.49
79.45	424	84.61	422.7	87.36	422	87.69	421.97	87.82	421.96
88.17	421.92	91.45	421.55	104.98	420	106.23	419.83	121.32	418
134.87	416	137.1	415.83	154.39	414	159.74	412.99	165.08	412
175.72	410.07	176.14	410	183.36	408.73	190.1	408	191.31	407.64
193.99	406.67	195.43	406	200.14	406	206.28	406	209.3	406.81
211.79	407.5	213.73	407.84	214.95	408	215.31	408.01	216.53	408.04
218.37	408.01	218.87	408	221.05	407.89	223.43	407.84	225.2	408
225.28	408.01	225.4	408	232.19	408.22	234.89	408.29	236.74	408.33
238.05	408.34	239.1	408.36	243.67	408.46	244.67	408.48	245.57	408.48
246.96	408.45	252.73	408.27	257.93	408.25	262.04	408.4	267.68	408.82
274.21	409.13	284.25	410	286.17	410.86	288.86	412	291.02	412.95
293.55	414								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	175.72	.035	236.74	.035

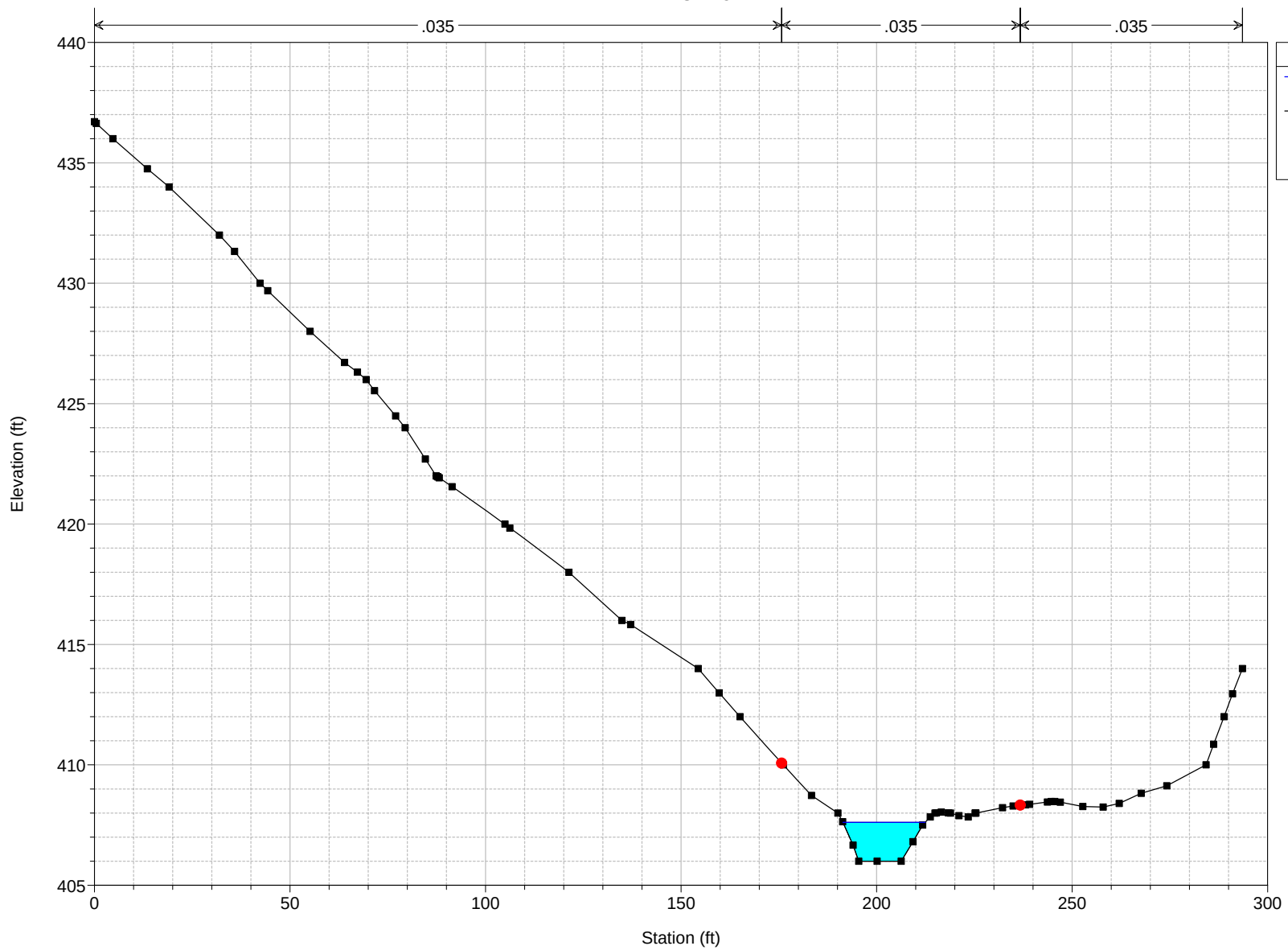
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	175.72	236.74		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 409.10	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.49	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 407.61	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 408.24	* Flow Area (sq ft)		* 25.37	
* E.G. Slope (ft/ft)	* 0.042804	* Area (sq ft)		* 25.37	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 21.04	* Top Width (ft)		* 21.04	
* Vel Total (ft/s)	* 9.79	* Avg. Vel. (ft/s)		* 9.79	
* Max Chl Dpth (ft)	* 1.61	* Hydr. Depth (ft)		* 1.21	
* Conv. Total (cfs)	* 1200.1	* Conv. (cfs)		* 1200.1	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 21.56	
* Min Ch El (ft)	* 406.00	* Shear (lb/sq ft)		* 3.14	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 293.55	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.28	* Cum Volume (acre-ft)		* 2.29	* 0.00
* C & E Loss (ft)	* 0.08	* Cum SA (acres)		* 2.90	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 73



CROSS SECTION
REACH: Reach-1

RS: 72

INPUT

Description: 14

Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	434.11	.42	434	.87	433.9	9.54	432	13.07	431.29
14.68	430.99	19.61	430	27.55	428.42	29.99	428	33.75	427.19
39.14	426	41.65	425.47	42.95	425.26	49.68	424.24	50.8	424.06
51.18	424	62.99	422.4	65.6	422	77.18	420.04	77.42	420
86.38	418.73	95.47	418.3	97.03	418.18	101.12	418	104.16	417.82
104.68	417.78	105.57	417.69	111.22	417.19	118.38	416.33	121.05	416
124.38	415.6	138.07	414	138.82	413.92	149.66	412.54	154.2	412
160.4	411.15	174.74	409.34	185.87	408	192.82	407.79	216.92	406.32
225.29	406.17	228.62	406.09	231.61	406	232.49	405.3	234.22	404
234.49	403.89	235.66	403.69	237.62	403.58	239.38	403.51	240.13	403.46
240.47	403.41	241.93	403.23	242.2	403.21	242.55	403.21	243.08	403.24
245.78	403.37	248.14	403.55	249	403.71	249.07	403.74	249.27	403.87
249.72	404	249.83	404.09	249.92	404.16	252.56	406	252.94	406.02
254.51	406.06	255.64	406.03	256.28	406	257.17	405.92	259.22	405.88
260.42	406	262.42	406.09	262.66	406.11	262.99	406.14	273.1	406.89
275.45	407.02	276.84	407.06	277.53	407.07	277.62	407.08	277.81	407.1
278.27	407.12	279.44	407.16	281.09	407.22	283	407.28	284.99	407.32
286.7	407.34	292.28	407.35	293.84	407.37	297.53	407.43	301.9	407.64
307.45	408	310.22	408.33	311.41	408.45	311.94	408.44	312.97	408.39
315.36	408.32								

Manning's n Values

num= 3

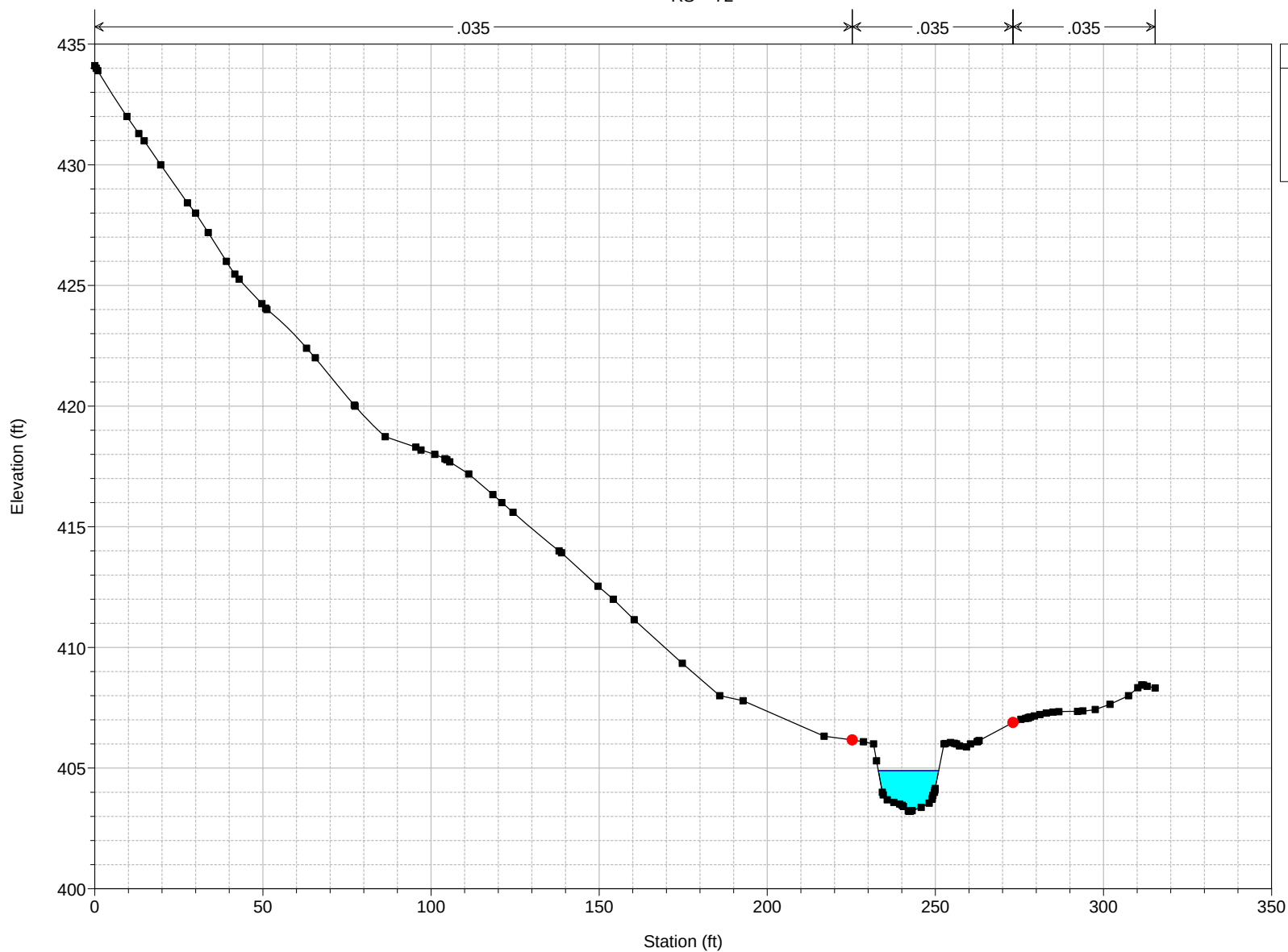
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	225.29	.035	273.1	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	225.29	273.1		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 406.74	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.84	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 404.90	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 405.46	* Flow Area (sq ft)		* 22.80	
* E.G. Slope (ft/ft)	* 0.050495	* Area (sq ft)		* 22.80	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 17.95	* Top Width (ft)		* 17.95	
* Vel Total (ft/s)	* 10.89	* Avg. Vel. (ft/s)		* 10.89	
* Max Chl Dpth (ft)	* 1.69	* Hydr. Depth (ft)		* 1.27	
* Conv. Total (cfs)	* 1105.0	* Conv. (cfs)		* 1105.0	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 18.69	
* Min Ch El (ft)	* 403.21	* Shear (lb/sq ft)		* 3.85	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 315.36	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.32	* Cum Volume (acre-ft)		* 2.26	* 0.00
* C & E Loss (ft)	* 0.04	* Cum SA (acres)		* 2.87	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 72



Legend

- WS PF 1
- Ground
- Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 71

INPUT

Description: 15

Station Elevation Data num= 84

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	427.82	3.61	426.98	8.81	426	13.27	425.06	18.37	424
27.8	422	34.64	420.5	37.09	420	40.73	419.22	43.15	418.81
48.56	418	54.21	417.53	54.43	417.51	54.63	417.49	54.9	417.45
64.21	416	67.4	415.4	70.03	414.92	74.09	414.25	76.04	414
76.37	413.96	76.5	413.96	79.68	413.69	86.82	413.24	91.18	413.04
97.54	412.67	106.37	412	111.24	411.7	112.9	411.66	116.12	411.49
121.74	411.18	131.24	410.82	136.58	410.51	137.51	410.46	141.61	410.11
142.67	410	149.5	409.32	150.64	409.2	154.37	408.76	161.92	408
170.36	407.51	170.47	407.51	177.85	407.05	182.91	407.08	186.46	407.06
189.91	407	194.85	406.83	204.83	406.46	205.17	406.45	214.14	406.13
218.23	406	222.89	405.8	226.35	405.59	239.14	405.01	251.35	404
252.87	402.75	253.81	402	261.09	402	266.36	403.41	269.48	404
271.06	404.06	271.41	404.07	279.12	404.36	280.98	404.44	290.24	404.86
298.55	405.21	306.76	405.59	307.17	405.61	317.71	405.98	317.79	405.99
317.96	405.99	318.22	406	321.18	406.06	324.39	406.1	329.82	406.39
333.7	406.61	336.1	406.74	347.78	407.46	356.25	408	363.24	408.41
386.35	410	388.65	410.55	391.41	410.67	400	411.93		

Manning's n Values num= 3

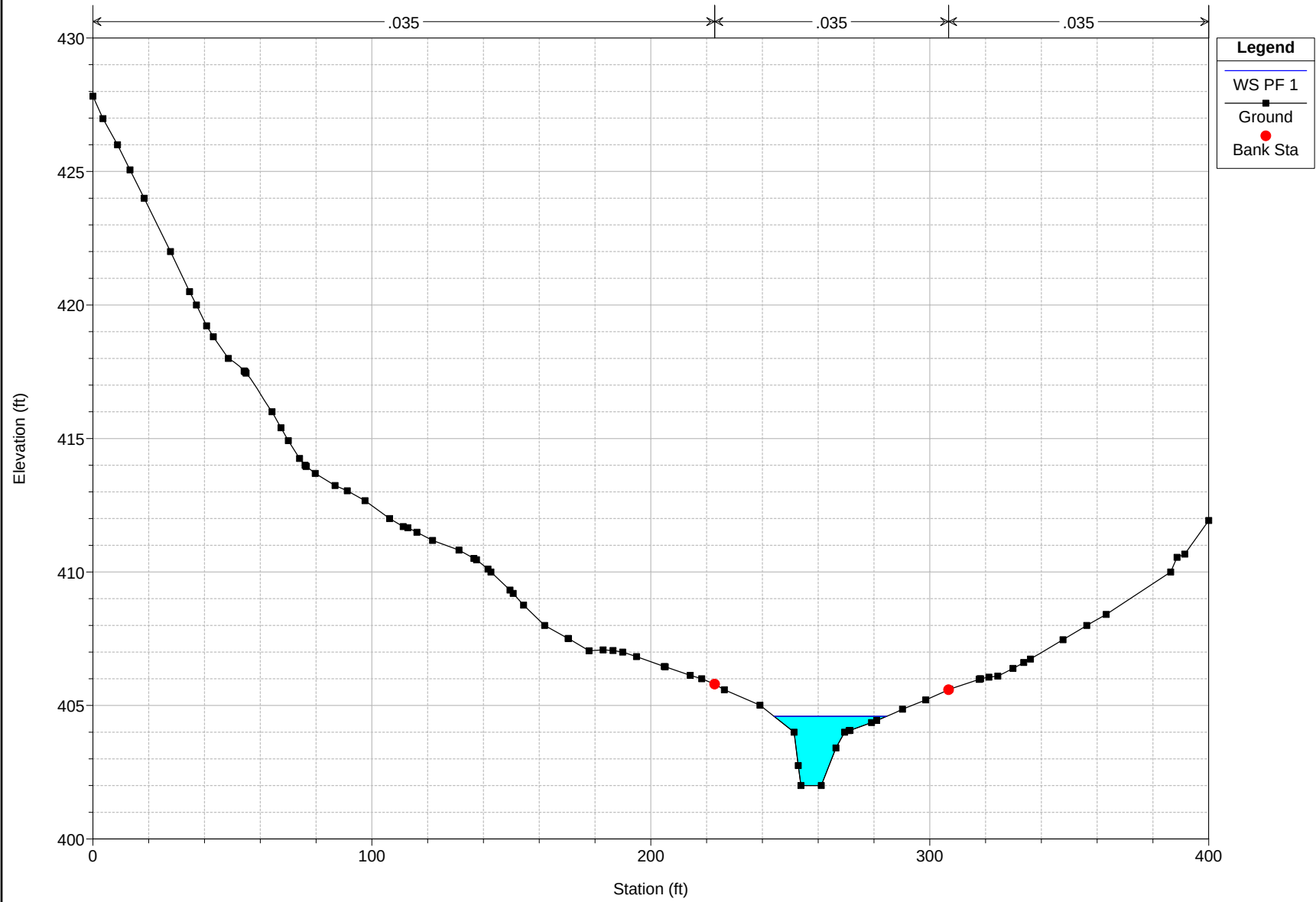
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	222.89	.035	306.76	.035

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	222.89	306.76	50	50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 405.13	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.53	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 404.60	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 404.60	* Flow Area (sq ft)		* 42.39	
* E.G. Slope (ft/ft)	* 0.018370	* Area (sq ft)		* 42.39	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 40.27	* Top Width (ft)		* 40.27	
* Vel Total (ft/s)	* 5.86	* Avg. Vel. (ft/s)		* 5.86	
* Max Chl Dpth (ft)	* 2.60	* Hydr. Depth (ft)		* 1.05	
* Conv. Total (cfs)	* 1832.0	* Conv. (cfs)		* 1832.0	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 41.26	
* Min Ch El (ft)	* 402.00	* Shear (lb/sq ft)		* 1.18	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 2.22	* 0.00
* C & E Loss (ft)		* Cum SA (acres)		* 2.84	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 71



CROSS SECTION
REACH: Reach-1

RS: 70

INPUT

Description: 16

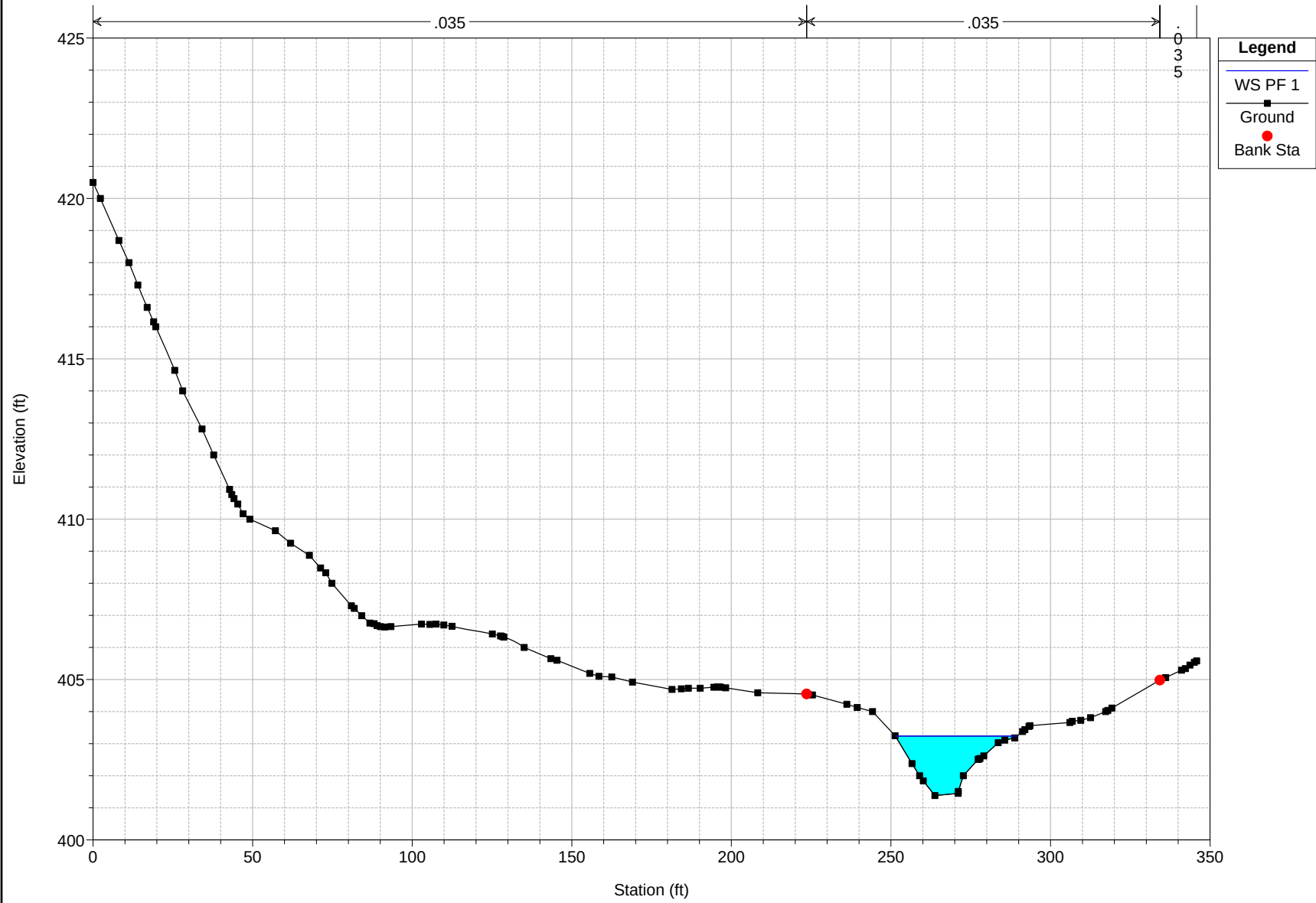
Station Elevation Data		num=		97					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	420.5	2.29	420	8.11	418.69	11.24	418	14.06	417.3
16.95	416.6	18.99	416.15	19.64	416	25.6	414.64	28.11	414
34.17	412.81	37.82	412	42.78	410.93	43.49	410.77	44.19	410.64
45.38	410.47	47.02	410.17	49.13	410	57.13	409.64	61.9	409.25
67.79	408.87	71.29	408.48	72.93	408.33	74.84	408	80.92	407.3
81.86	407.22	84.2	406.99	86.72	406.76	88.08	406.74	89	406.68
90.04	406.65	91.43	406.64	93.35	406.65	102.93	406.73	105.52	406.72
107.49	406.73	109.9	406.7	112.48	406.66	125.1	406.42	127.68	406.36
128.25	406.34	128.71	406.32	135.1	406	143.44	405.65	145.39	405.6
155.63	405.19	158.51	405.1	162.54	405.08	169.02	404.92	181.39	404.69
184.32	404.71	186.51	404.73	190.25	404.73	194.49	404.76	195.56	404.77
196.13	404.77	196.7	404.76	198.23	404.74	208.27	404.59	223.59	404.55
225.39	404.52	236.18	404.23	239.44	404.13	244.24	404	251.29	403.25
256.58	402.38	258.96	402	260.12	401.84	263.75	401.38	271.06	401.45
271.11	401.51	272.68	402	277.32	402.51	277.5	402.52	277.9	402.54
279.09	402.62	283.61	403.03	285.65	403.11	288.76	403.18	291.25	403.38
291.96	403.44	293.25	403.54	293.54	403.56	306.05	403.66	306.84	403.7
309.46	403.73	312.54	403.81	317.27	404	317.97	404.04	319.23	404.11
334.25	404.98	336.05	405.06	341.02	405.29	342.24	405.34	343.67	405.45
345.04	405.54	345.77	405.58						

Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	223.59	.035	334.25	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	223.59	334.25		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 403.97	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.73	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 403.24	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 403.40	* Flow Area (sq ft)		* 36.09	
* E.G. Slope (ft/ft)	* 0.028489	* Area (sq ft)		* 36.09	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 38.07	* Top Width (ft)		* 38.07	
* Vel Total (ft/s)	* 6.88	* Avg. Vel. (ft/s)		* 6.88	
* Max Chl Dpth (ft)	* 1.86	* Hydr. Depth (ft)		* 0.95	
* Conv. Total (cfs)	* 1471.1	* Conv. (cfs)		* 1471.1	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 38.37	
* Min Ch El (ft)	* 401.38	* Shear (lb/sq ft)		* 1.67	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 345.77	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.13	* Cum Volume (acre-ft)		* 2.18	* 0.00
* C & E Loss (ft)	* 0.02	* Cum SA (acres)		* 2.80	* 0.01



CROSS SECTION
REACH: Reach-1

RS: 69

INPUT

Description: 17

Station Elevation Data num= 63

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	416	8.11	414.48	9.74	414.17	10.66	414	11.69	413.79
20.71	412	21.34	411.86	29.82	410	37.11	408.53	40.1	408
54.16	406.03	54.42	406	61.3	405.34	64.58	405.07	78.56	404.08
79.15	404.04	79.65	404	91.53	403.57	94.84	403.48	98.12	403.49
103.36	403.63	115.94	404	119.08	404.03	120.05	404	123.72	403.85
136.2	403.17	139.26	403.03	141.12	403	142.75	402.99	145.91	402.9
147.87	402.88	150.01	402.87	152.21	402.88	154.24	402.9	192.39	403.06
198.43	402.91	218.52	402.87	219.03	402.85	219.99	402.81	221.94	402.76
225.01	402.76	227.97	402.73	231.94	402.67	258.87	402.18	260.55	402.14
263.5	402.05	264.92	402	280.45	400.41	284.66	400	296.87	400
297.54	400.18	298.21	400.38	306.14	402	309.77	402.19	315.86	402.53
317.98	402.7	333.1	403.62	342.09	404	373.66	405.96	374.36	406
374.84	406.04	399.84	408	400	408.05				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	227.97	.035	317.98	.035

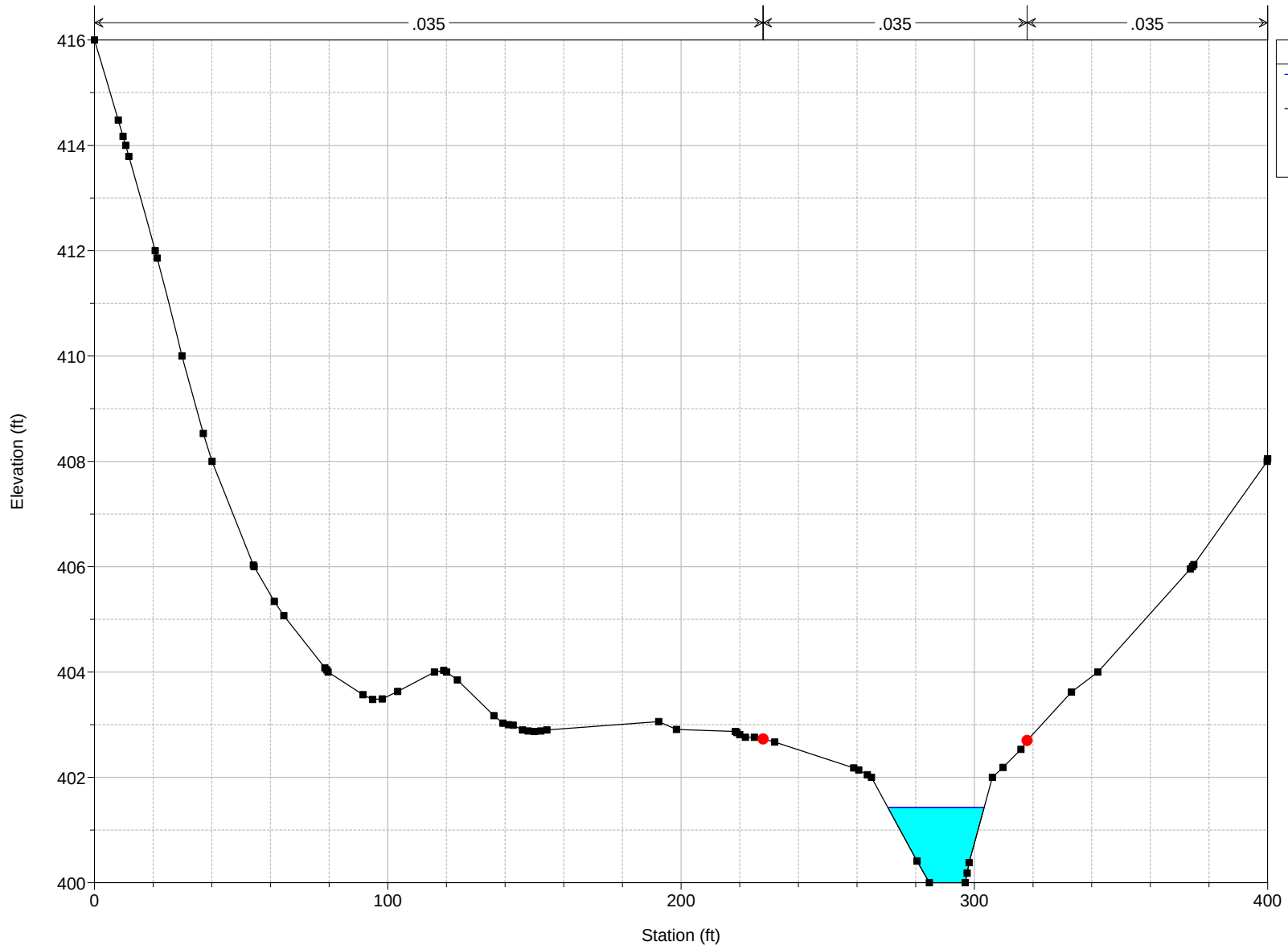
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	227.97	317.98		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 402.36	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.94	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 401.43	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 401.69	* Flow Area (sq ft)		* 31.94	
* E.G. Slope (ft/ft)	* 0.035069	* Area (sq ft)		* 31.94	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 32.81	* Top Width (ft)		* 32.81	
* Vel Total (ft/s)	* 7.77	* Avg. Vel. (ft/s)		* 7.77	
* Max Chl Dpth (ft)	* 1.43	* Hydr. Depth (ft)		* 0.97	
* Conv. Total (cfs)	* 1325.9	* Conv. (cfs)		* 1325.9	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 33.04	
* Min Ch El (ft)	* 400.00	* Shear (lb/sq ft)		* 2.12	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.58	* Cum Volume (acre-ft)		* 2.14	* 0.00
* C & E Loss (ft)	* 0.02	* Cum SA (acres)		* 2.76	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 69



CROSS SECTION
REACH: Reach-1

RS: 68

INPUT

Description: 18

Station Elevation Data		num= 97									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	414.75	.33	414.67	3.15	414	12.06	412	18.4	410.55		
20.51	410	23.14	409.26	27.81	408	31.55	407.15	36.1	406		
44.63	404.03	44.79	404	52.43	403.46	56.84	403.16	59.03	403.02		
60.48	402.93	76.45	402	94.89	401.55	100.11	401.44	102.95	401.4		
105.13	401.38	107.49	401.38	109.95	401.36	113.55	401.29	116.58	401.27		
117.79	401.26	118.92	401.26	120.45	401.28	122.39	401.33	127.91	401.48		
148.8	402	149.68	402.02	151.88	402.02	159.17	402	161.68	401.95		
161.98	401.95	172.3	401.76	180.88	401.64	182.78	401.6	190.53	401.48		
194.53	401.38	195.55	401.34	196.7	401.28	201.54	401.16	203.15	401.1		
204.01	401.06	205.75	400.96	207.54	400.85	213.13	400.57	214.12	400.5		
221.01	400	224.46	399.22	227.96	398.41	228.47	398.3	229.12	398.17		
229.66	398.07	229.77	398.05	229.87	398.05	229.93	398.04	230.3	398		
259.23	398	262.09	398.3	263.86	398.52	266.33	398.73	267.69	398.71		
268.6	398.59	269.28	398.52	269.82	398.61	273.01	398.55	273.2	398.56		
273.36	398.57	273.62	398.6	274.3	398.62	275.52	398.88	277.51	399.19		
279.8	399.47	280.12	399.53	280.35	399.58	282.08	400	289.55	400.64		
289.85	400.69	290.26	400.71	290.67	400.75	291.76	400.8	295.05	401.19		
295.3	401.22	295.49	401.24	295.71	401.25	295.9	401.26	306.13	401.75		
309.42	401.95	309.86	402	312.45	402.25	315.14	402.38	315.38	402.4		
340.89	404	344.82	404.39								

Manning's n Values

num= 3

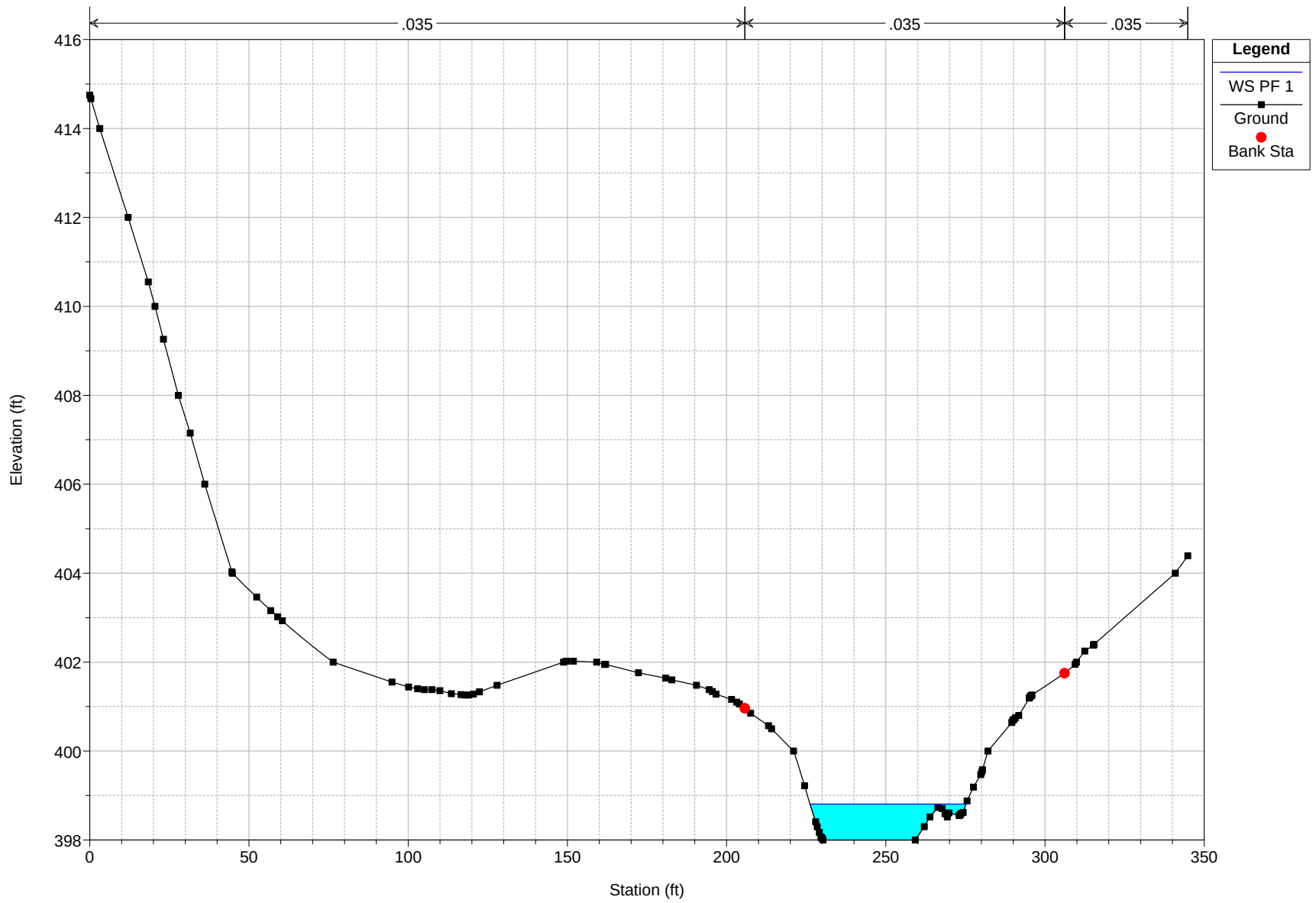
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	205.75	.035	306.13	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	205.75	306.13		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 399.88	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.07	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 398.81	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 399.13	* Flow Area (sq ft)		* 29.85	
* E.G. Slope (ft/ft)	* 0.074522	* Area (sq ft)		* 29.85	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 48.94	* Top Width (ft)		* 48.94	
* Vel Total (ft/s)	* 8.32	* Avg. Vel. (ft/s)		* 8.32	
* Max Chl Dpth (ft)	* 0.81	* Hydr. Depth (ft)		* 0.61	
* Conv. Total (cfs)	* 909.6	* Conv. (cfs)		* 909.6	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 49.10	
* Min Ch El (ft)	* 398.00	* Shear (lb/sq ft)		* 2.83	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 344.82	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.47	* Cum Volume (acre-ft)		* 2.10	* 0.00
* C & E Loss (ft)	* 0.01	* Cum SA (acres)		* 2.71	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 68



CROSS SECTION
REACH: Reach-1

RS: 67

INPUT

Description: 19

Station Elevation Data num= 63

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	416.27	1.22	416	4.15	415.12	7.61	414	11.5	412.86
14.18	412	18.63	410.76	21.7	410	23.6	409.59	30.88	408
34.03	407.28	39.78	406	45.9	404.35	47.34	404	52.79	402.48
54.83	402	60.03	401.16	62.48	401.05	64.13	400.86	65.06	400.72
68.51	400.73	71.98	400.84	72.13	400.84	92.02	399.85	92.28	399.85
100.9	399.49	105.21	399.38	108.52	399.39	116.71	399.47	119.89	399.44
122.94	399.46	124.25	399.45	125.39	399.45	125.65	399.43	126.31	399.39
126.59	399.37	129.58	399.35	134.6	399.06	138.06	398.98	143.96	398.56
147.44	398.42	153.97	398	160.01	397.72	160.73	397.7	163.76	397.58
166.23	397.52	168.73	397.48	171.42	397.43	175.25	397.37	177.5	397.37
179.38	397.38	180.77	397.38	181.56	397.4	183.04	397.38	189.21	397.26
190.71	397.2	202.79	398	225.18	398	235.67	399.19	242.69	400
269.3	402	273.69	402.26	292.78	403.36				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	105.21	.035	269.3	.035

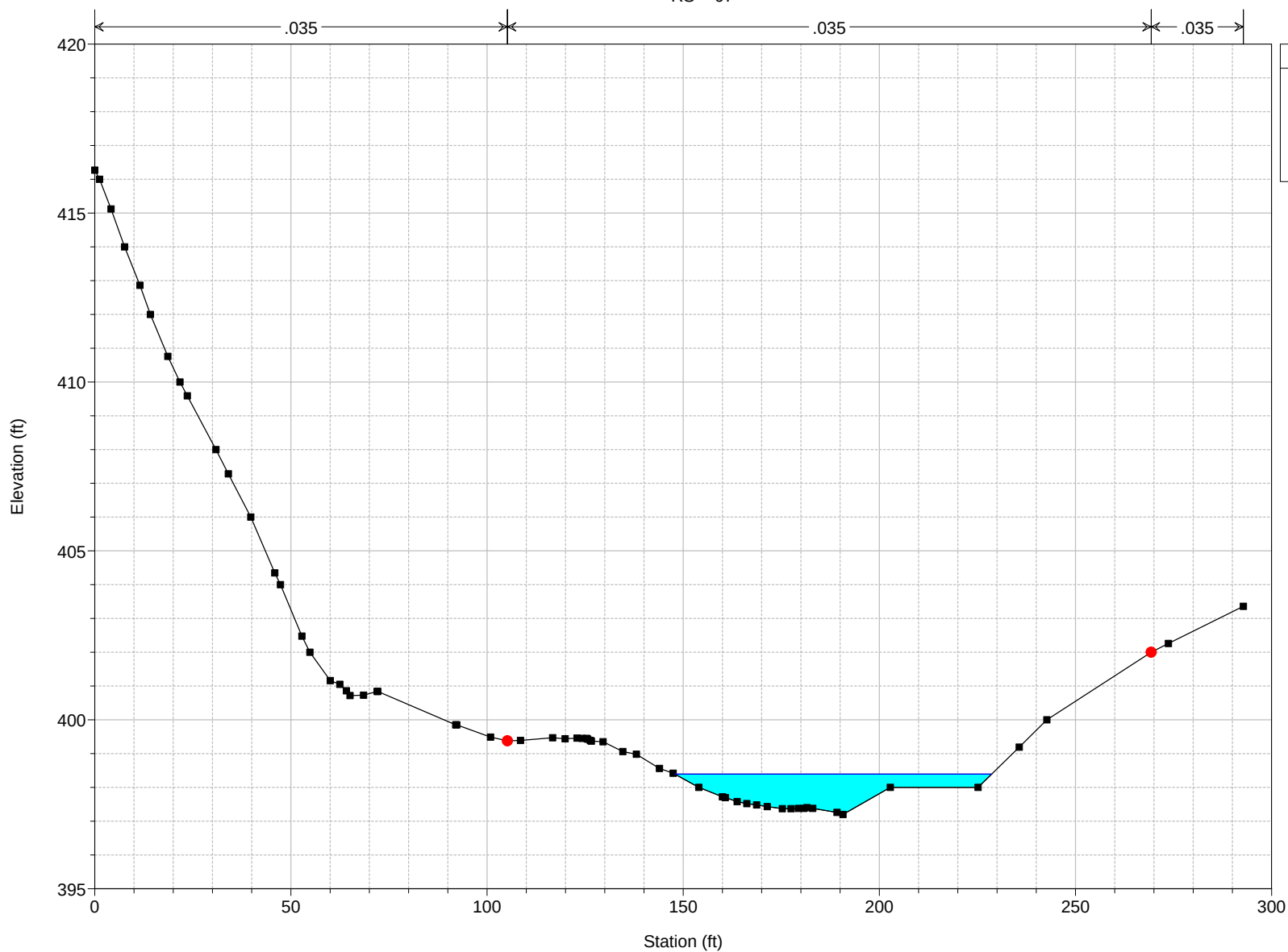
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	105.21	269.3		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 398.73	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.34	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 398.39	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 398.39	* Flow Area (sq ft)		* 53.08	
* E.G. Slope (ft/ft)	* 0.021274	* Area (sq ft)		* 53.08	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 80.76	* Top Width (ft)		* 80.76	
* Vel Total (ft/s)	* 4.68	* Avg. Vel. (ft/s)		* 4.68	
* Max Chl Dpth (ft)	* 1.19	* Hydr. Depth (ft)		* 0.66	
* Conv. Total (cfs)	* 1702.4	* Conv. (cfs)		* 1702.4	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 80.84	
* Min Ch El (ft)	* 397.20	* Shear (lb/sq ft)		* 0.87	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 292.78	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 2.06	* 0.00
* C & E Loss (ft)		* Cum SA (acres)		* 2.63	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 67



CROSS SECTION
REACH: Reach-1

RS: 66

INPUT

Description: 20

Station Elevation Data num= 64

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	415.22	.98	414.94	4.18	414	9.22	412.45	10.62	412
15.19	410.66	17.67	410	21.08	409.04	22.03	408.8	25.1	408
32.4	406	35.35	405.2	39.73	404	42.53	403.22	46.99	402
50.82	400.96	55.1	400	57.5	399.65	59.06	399.38	62.24	398.85
67.57	398	76.43	397.6	82.13	397.37	85.8	397.28	93.11	397.19
97.4	397.1	100.21	396.89	103.62	396.77	107.59	396.55	110.41	396.45
112.27	396.4	115.13	396.23	119.95	395.92	121.57	395.8	122.91	395.71
125.08	395.62	133.29	395.35	135.87	395.28	136.35	395.27	136.71	395.27
136.82	395.26	137.09	395.25	137.31	395.25	138.04	395.23	139.64	395.21
142.13	395.2	148.74	395.25	150.79	395.25	151.76	395.22	152.35	395.19
153.35	395.16	160.5	395.35	160.67	395.38	164.8	395.75	167.86	396
175.57	395.57	198.1	398	199.75	398.06	211.85	398.43	218.81	398.54
225.04	398.56	226.98	398.67	227.62	398.69	248.76	399.71		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	93.11	.035	199.75	.035

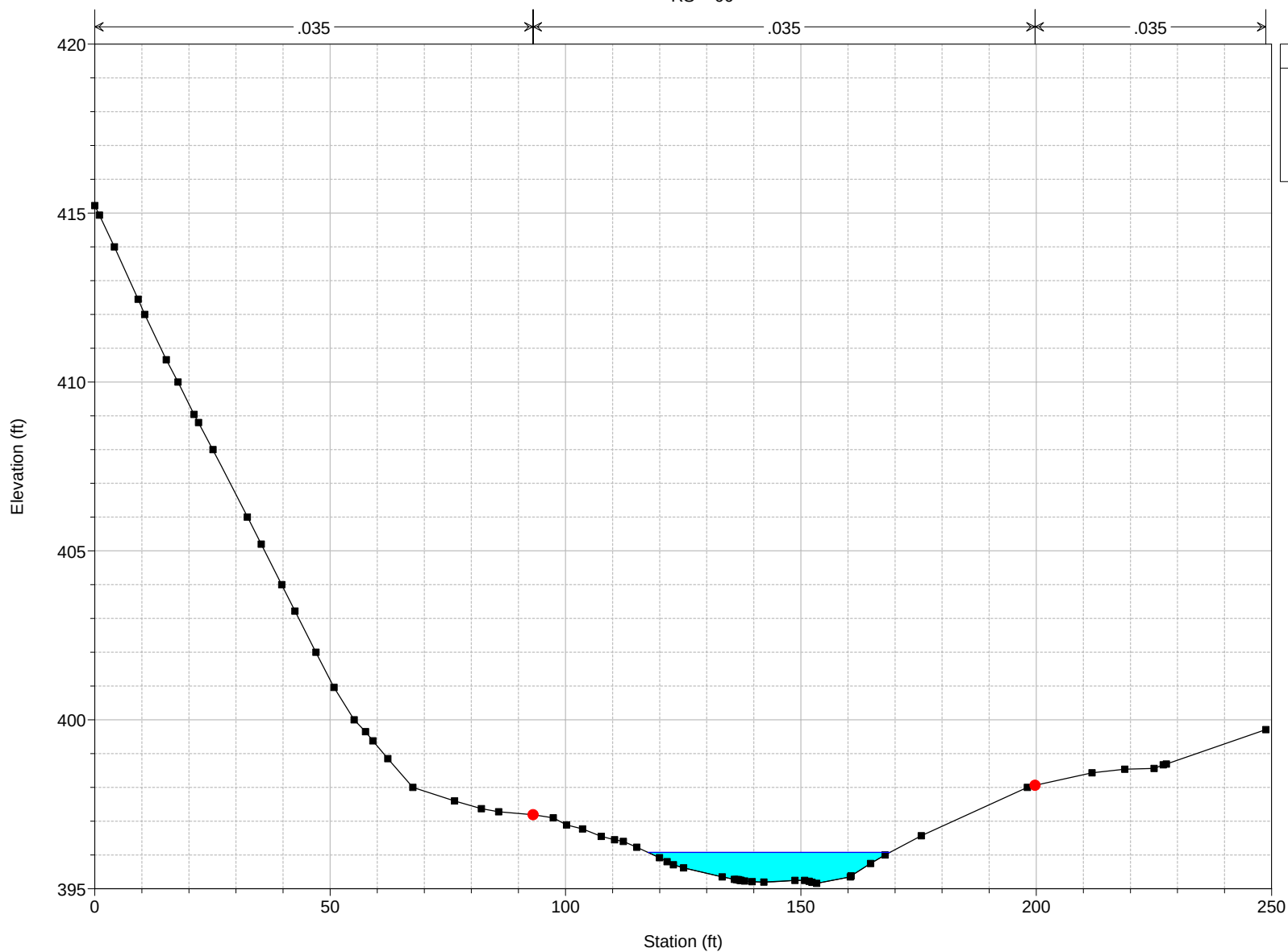
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	93.11	199.75		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 397.00	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.92	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 396.08	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 396.37	* Flow Area (sq ft)		* 32.26	
* E.G. Slope (ft/ft)	* 0.061179	* Area (sq ft)		* 32.26	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 51.34	* Top Width (ft)		* 51.34	
* Vel Total (ft/s)	* 7.70	* Avg. Vel. (ft/s)		* 7.70	
* Max Chl Dpth (ft)	* 0.92	* Hydr. Depth (ft)		* 0.63	
* Conv. Total (cfs)	* 1003.9	* Conv. (cfs)		* 1003.9	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 51.40	
* Min Ch El (ft)	* 395.16	* Shear (lb/sq ft)		* 2.40	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 248.76	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.68	* Cum Volume (acre-ft)		* 2.01	* 0.00
* C & E Loss (ft)	* 0.06	* Cum SA (acres)		* 2.56	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 66



CROSS SECTION
REACH: Reach-1

RS: 65

INPUT

Description: 21

Station Elevation Data

num=

44

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	410.42	.91	410.19	1.22	410.09	1.58	410	4.23	409.18
8.73	408	10.36	407.59	13.13	406.94	14.38	406.58	17.21	405.89
17.34	405.86	17.5	405.81	19.77	405.08	21.38	404.48	23.35	404
31.03	402.34	32.5	402	38.62	400.6	41.54	400	44.03	399.73
53.94	398.73	58.44	398	80.49	396.47	87.71	396	95.29	395.33
99.26	395.01	102.57	394.77	103.69	394.71	104.75	394.68	115.77	394.23
125.66	394.07	130.57	394	144.62	394	146.03	394.14	146.57	394.15
146.87	394.16	147.26	394.19	150.43	394.39	160.37	395.09	172.18	396
173.64	396.01	214.68	397.29	236.16	397.88	241.18	398		

Manning's n Values

num=

3

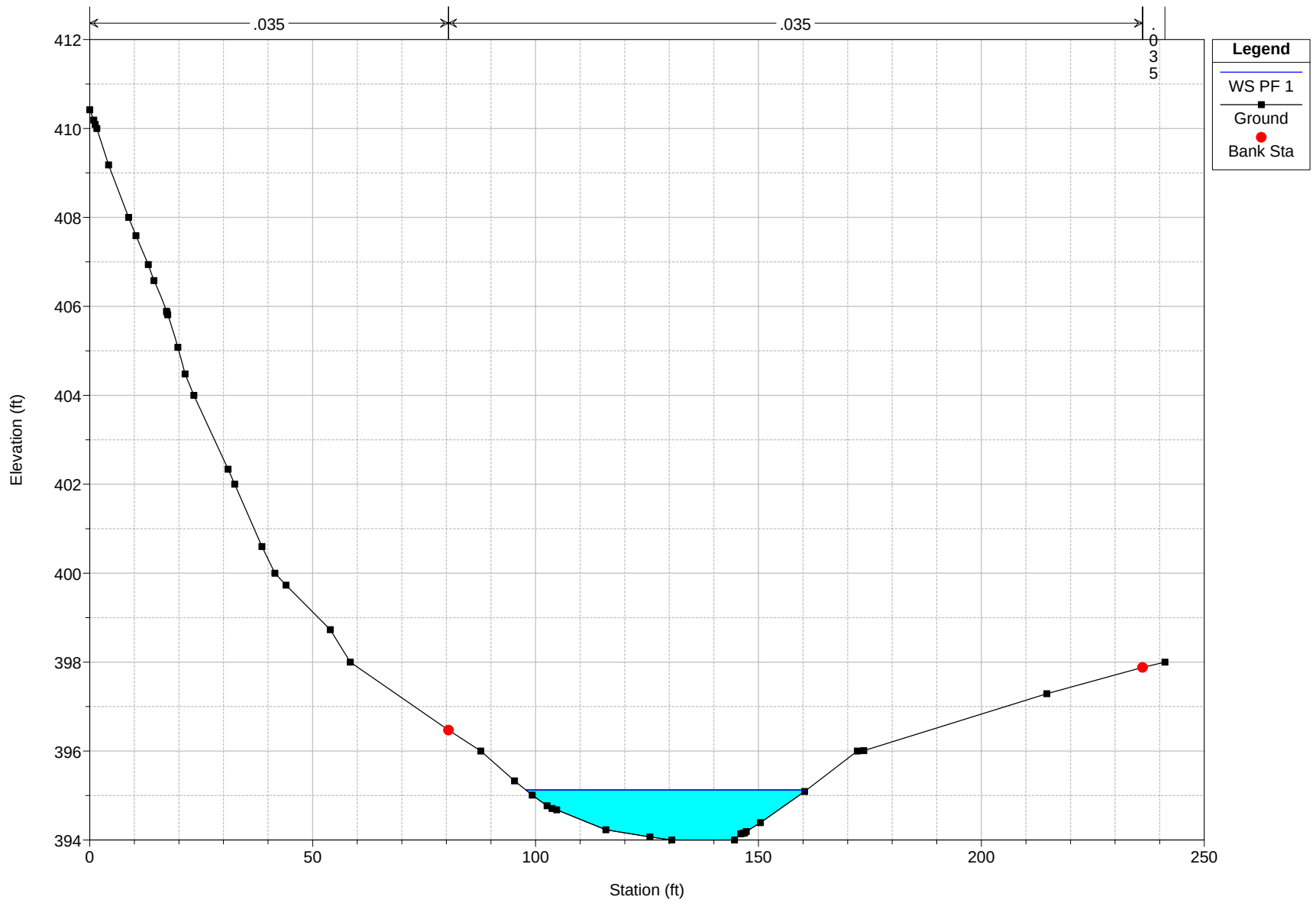
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	80.49	.035	236.16	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	80.49	236.16		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 395.52	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.40	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 395.13	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 395.13	* Flow Area (sq ft)		* 49.13	
* E.G. Slope (ft/ft)	* 0.019769	* Area (sq ft)		* 49.13	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 63.01	* Top Width (ft)		* 63.01	
* Vel Total (ft/s)	* 5.05	* Avg. Vel. (ft/s)		* 5.05	
* Max Chl Dpth (ft)	* 1.13	* Hydr. Depth (ft)		* 0.78	
* Conv. Total (cfs)	* 1766.0	* Conv. (cfs)		* 1766.0	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 63.07	
* Min Ch El (ft)	* 394.00	* Shear (lb/sq ft)		* 0.96	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 241.18	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 1.96	* 0.00
* C & E Loss (ft)		* Cum SA (acres)		* 2.49	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 65



CROSS SECTION
REACH: Reach-1

RS: 64

INPUT

Description: 22

Station Elevation Data num= 48

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	412.65	1.74	412.21	2.37	412.04	2.59	412	3.46	411.69
4.78	411.23	5.88	410.78	7.98	410	12.11	408.71	13.39	408.28
13.49	408.24	14.3	408	21.62	406.03	21.73	406	28.65	404.19
29.4	404	32.13	403.28	37.1	402	39.55	401.64	46.45	400
48.24	399.72	52.53	399.11	58.02	398	65.13	396.68	69.18	396
75.27	395.42	93.06	394	94.68	393.92	94.99	393.9	95.33	393.89
101.48	394	103.34	394	109.1	394.01	112.08	394.01	115.78	394
115.9	394	118.93	393.85	121.09	394	141.58	394	158.51	395.09
163.72	395.44	171.24	396	172.52	396.01	179	396.05	183.29	396.06
189.43	396.06	196.23	396.08	196.63	396.08				

Manning's n Values num= 3

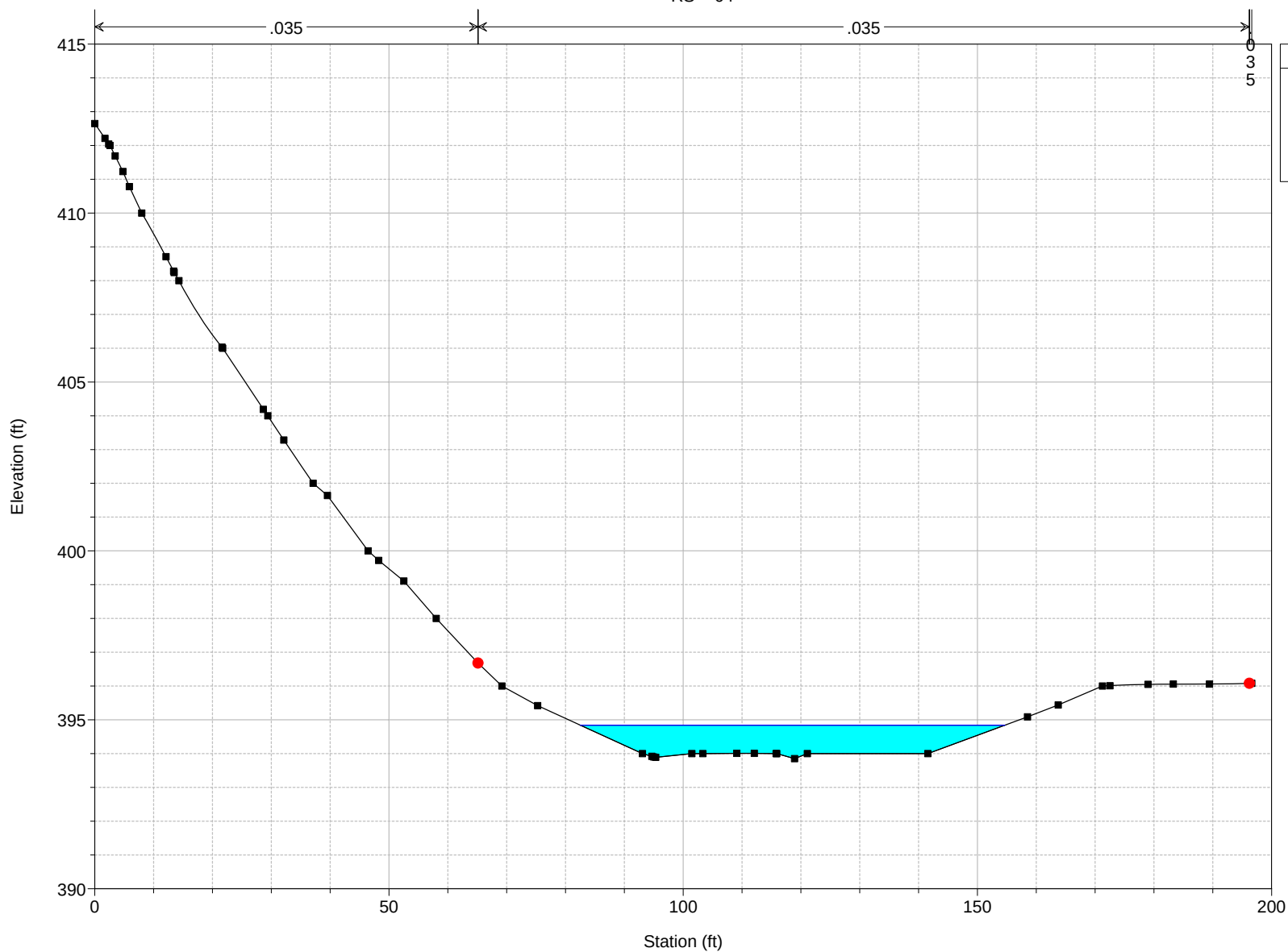
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	65.13	.035	196.23	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	65.13	196.23		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 395.20	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.36	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 394.84	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 394.84	* Flow Area (sq ft)	*	* 51.57	*
* E.G. Slope (ft/ft)	* 0.020154	* Area (sq ft)	*	* 51.57	*
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.30	*
* Top Width (ft)	* 72.14	* Top Width (ft)	*	* 72.14	*
* Vel Total (ft/s)	* 4.82	* Avg. Vel. (ft/s)	*	* 4.82	*
* Max Chl Dpth (ft)	* 0.99	* Hydr. Depth (ft)	*	* 0.71	*
* Conv. Total (cfs)	* 1749.0	* Conv. (cfs)	*	* 1749.0	*
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)	*	* 72.22	*
* Min Ch El (ft)	* 393.85	* Shear (lb/sq ft)	*	* 0.90	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 196.63	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	*	* 1.90	* 0.00
* C & E Loss (ft)	*	* Cum SA (acres)	*	* 2.41	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 64



CROSS SECTION
REACH: Reach-1

RS: 63

INPUT

Description: 23

Station Elevation Data num= 41

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	408.28	3.65	407.69	11.06	406.22	11.85	406.06	11.98	406.03
12.16	406	24.62	404.23	26.21	404	26.27	403.99	35.68	402.57
38.71	402	42.22	401.44	43.72	401.18	51.1	400	57.99	398.77
60.41	398	62.69	397.15	63.1	397.02	65.32	396.41	65.81	396.27
66.28	396.15	66.89	396	68.63	395.49	74.63	394	94.89	392.96
97	392.86	97.8	392.82	102.24	392.62	111.57	392	115.04	392
115.41	392.02	121.72	392.3	123.82	392.4	127.2	392.58	137.38	393.15
149.25	393.64	156.89	394	158.1	394.06	161.54	394.21	169.62	394.27
170.21	394.27								

Manning's n Values num= 3

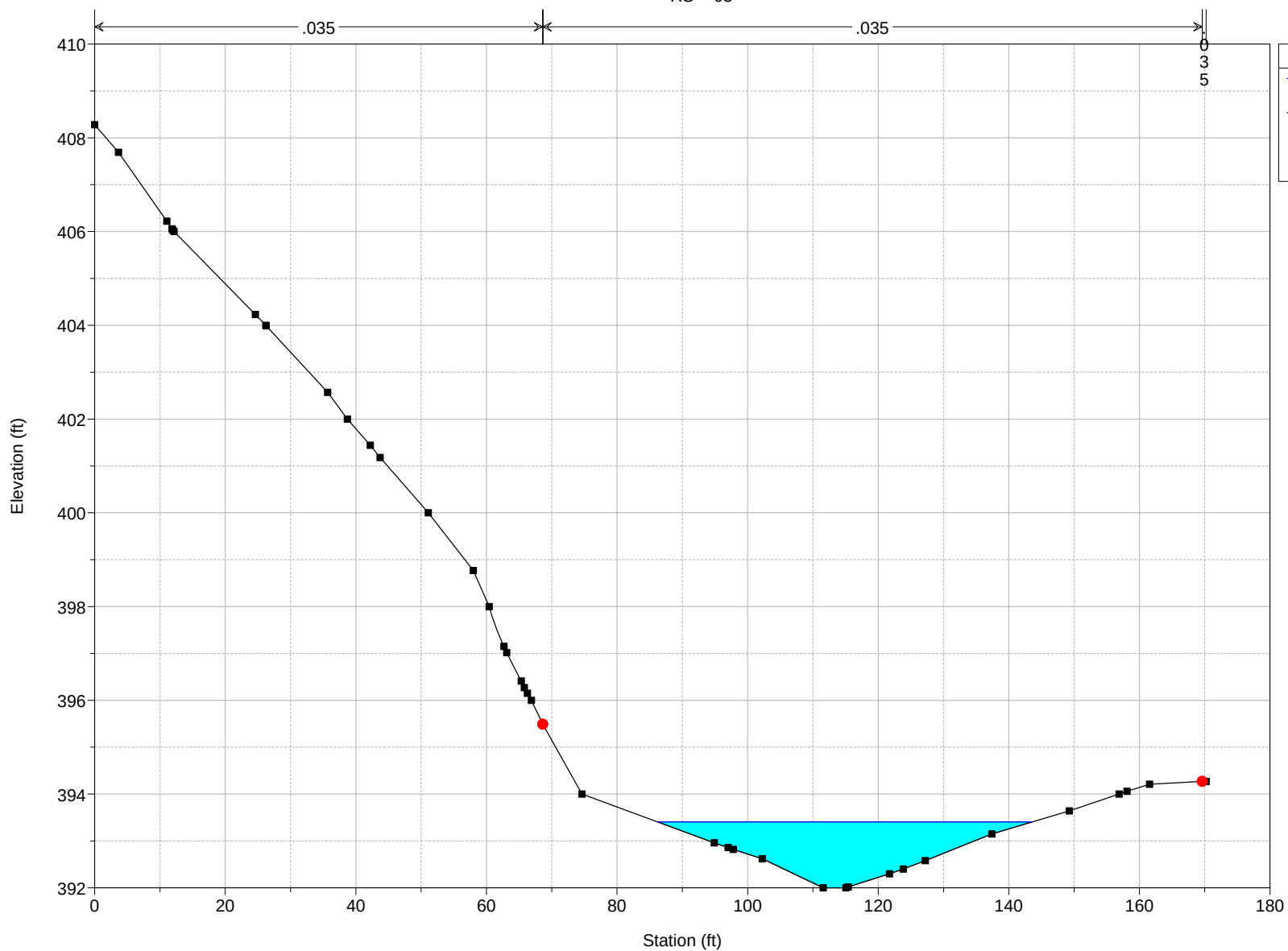
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	68.63	.035	169.62	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	68.63	169.62		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 393.96	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.55	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 393.41	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 393.53	* Flow Area (sq ft)		* 41.61	
* E.G. Slope (ft/ft)	* 0.030393	* Area (sq ft)		* 41.61	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 57.40	* Top Width (ft)		* 57.40	
* Vel Total (ft/s)	* 5.97	* Avg. Vel. (ft/s)		* 5.97	
* Max Chl Dpth (ft)	* 1.41	* Hydr. Depth (ft)		* 0.72	
* Conv. Total (cfs)	* 1424.3	* Conv. (cfs)		* 1424.3	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 57.48	
* Min Ch El (ft)	* 392.00	* Shear (lb/sq ft)		* 1.37	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 170.21	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.22	* Cum Volume (acre-ft)		* 1.85	* 0.00
* C & E Loss (ft)	* 0.02	* Cum SA (acres)		* 2.34	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 63



CROSS SECTION
REACH: Reach-1

RS: 62

INPUT

Description: 24

Station Elevation Data				num= 49			
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	403.86	15.83	402.26	18.99	402	21.11	401.76
37.44	400	42.26	399.62	43.49	399.5	46.01	399.28
58.52	398.09	59.29	398	71.22	396.48	74.21	396.12
75.33	396	90.14	394.35	93.39	394	98.02	393.38
124.15	392	124.86	392.06	130.08	392.42	144.16	393.1
147.25	393.11	148.49	393.13	149.54	393.15	150.81	393.17
164.01	393.42	170.13	393.51	191.84	393.7	195.44	393.78
198.29	393.81	200.14	393.83	200.57	393.83	204.42	393.96
219.39	393.97	224.1	394	224.54	394	229.37	394.11
279.56	394.39	281.45	394.39	308.93	396	309.17	396.02

Manning's n Values				num= 3			
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.035	90.14	.035	191.84	.035		

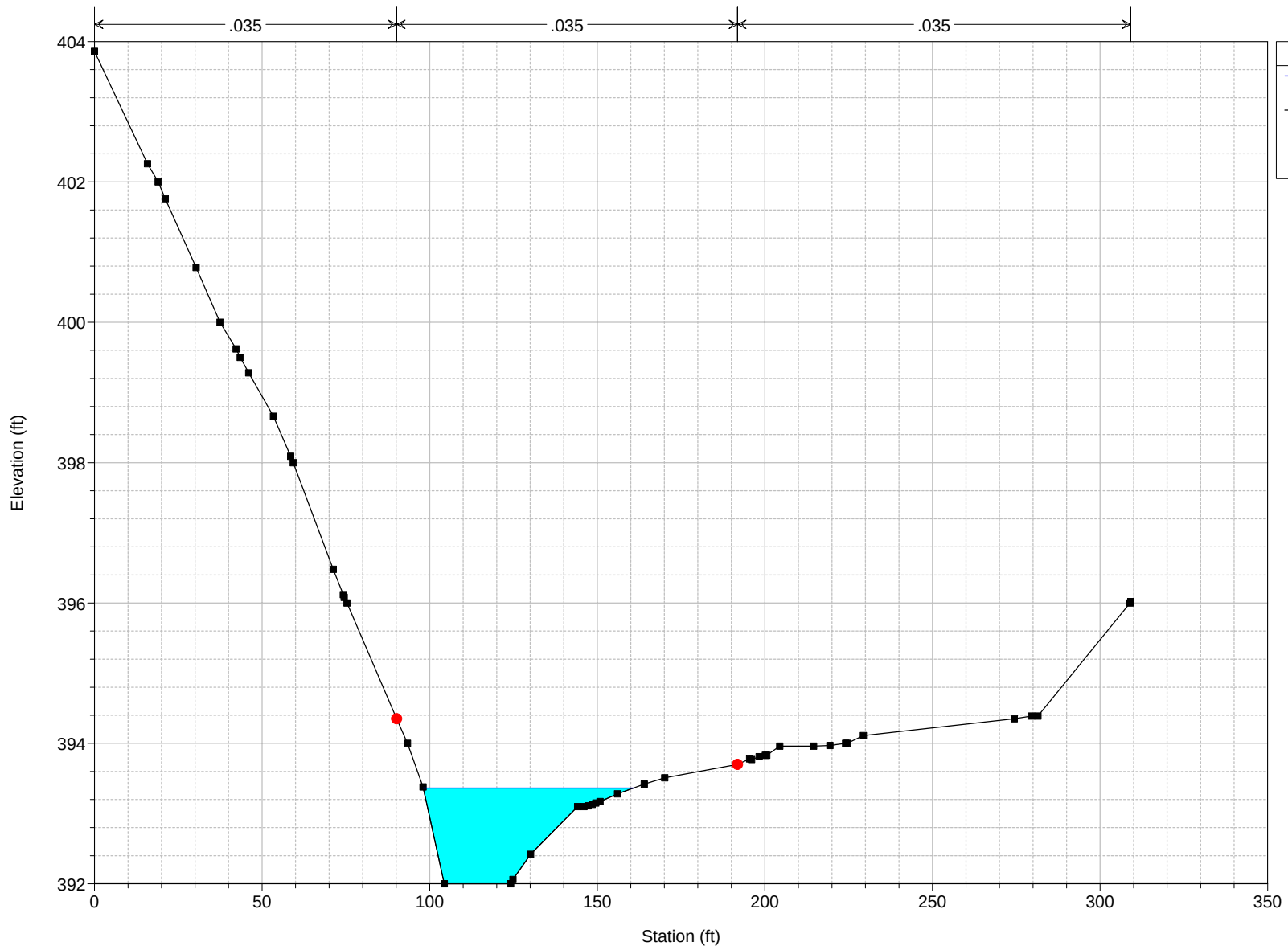
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	90.14	191.84		50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 393.76	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.40	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 393.36	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 393.36	* Flow Area (sq ft)		* 49.05	
* E.G. Slope (ft/ft)	* 0.019781	* Area (sq ft)		* 49.05	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 62.67	* Top Width (ft)		* 62.67	
* Vel Total (ft/s)	* 5.06	* Avg. Vel. (ft/s)		* 5.06	
* Max Chl Dpth (ft)	* 1.36	* Hydr. Depth (ft)		* 0.78	
* Conv. Total (cfs)	* 1765.4	* Conv. (cfs)		* 1765.4	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 62.85	
* Min Ch El (ft)	* 392.00	* Shear (lb/sq ft)		* 0.96	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 309.17	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 1.80	* 0.00
* C & E Loss (ft)		* Cum SA (acres)		* 2.27	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 62



Legend

- WS PF 1
- Ground
- Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 61

INPUT

Description: 25

Station Elevation Data num= 48

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	404.76	3.36	404	10.93	402.52	13.52	402	16.82	401.51
26.49	400	36.28	398.62	40.87	398	55.11	396	63.12	394.65
67.14	394	68.86	393.75	81.36	392	84.34	391.77	86.51	391.61
87.83	391.53	89.21	391.47	91.34	391.43	98.25	391.36	101.33	391.31
102.78	391.32	104.94	391.27	105.95	391.23	106.28	391.18	106.73	390.9
117.26	390.88	121.82	391.14	123.89	391.25	127.46	391.4	128.37	391.42
145.22	392	145.33	392	146.19	392.04	147.69	392.08	150.22	392.11
153.89	392.13	162.06	392.15	165.99	392.15	176.75	392.05	183.91	392
189.51	391.97	194.12	391.99	194.47	392	201.18	392.16	207.38	392.34
216.39	392.64	220.61	392.77	223.09	392.87				

Manning's n Values num= 3

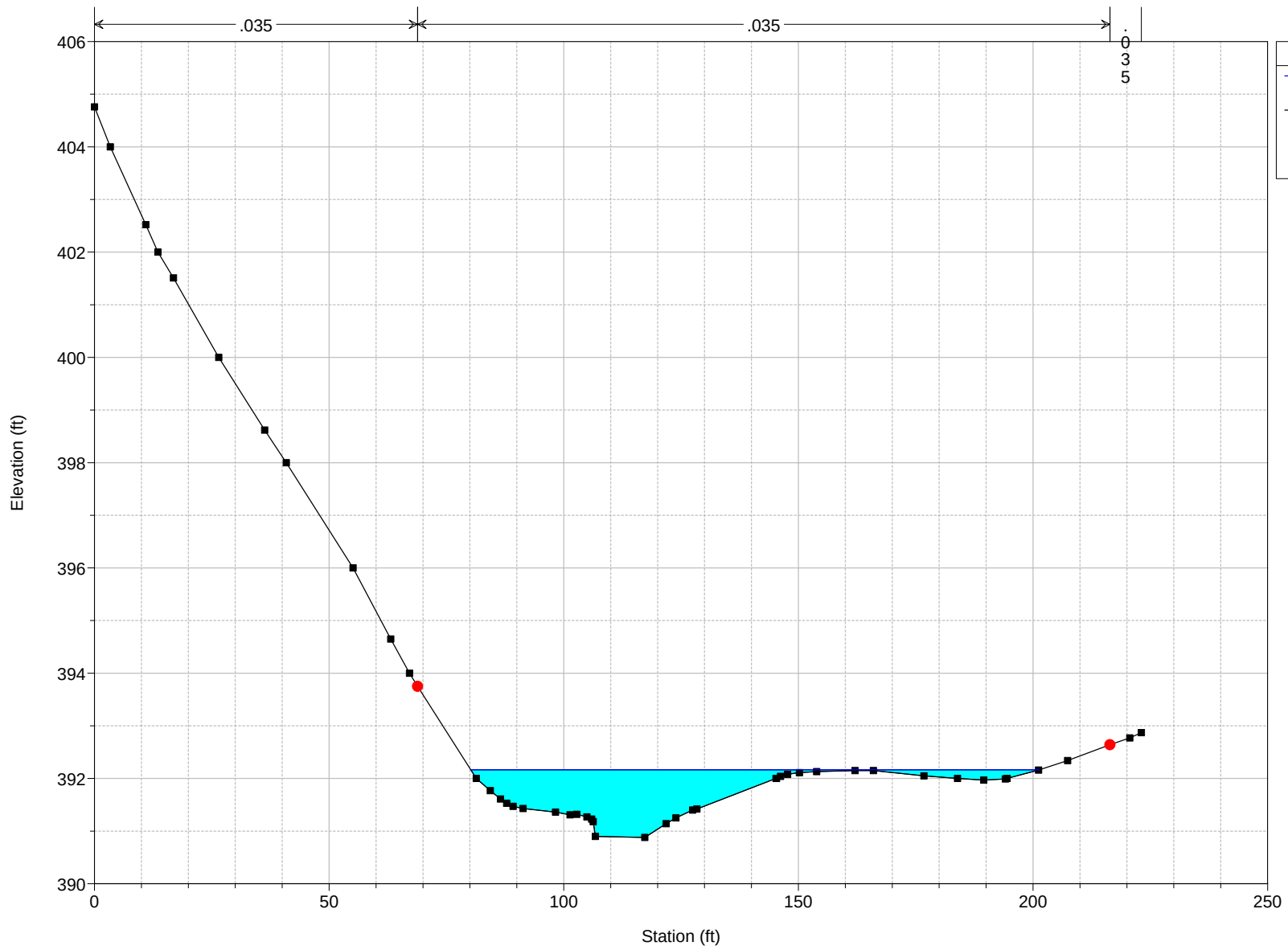
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	68.86	.035	216.39	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	68.86	216.39		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 392.48	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.32	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 392.16	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 392.22	* Flow Area (sq ft)	*	* 55.02	*
* E.G. Slope (ft/ft)	* 0.032417	* Area (sq ft)	*	* 55.02	*
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.30	*
* Top Width (ft)	* 121.15	* Top Width (ft)	*	* 121.15	*
* Vel Total (ft/s)	* 4.51	* Avg. Vel. (ft/s)	*	* 4.51	*
* Max Chl Dpth (ft)	* 1.28	* Hydr. Depth (ft)	*	* 0.45	*
* Conv. Total (cfs)	* 1379.1	* Conv. (cfs)	*	* 1379.1	*
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)	*	* 121.30	*
* Min Ch El (ft)	* 390.88	* Shear (lb/sq ft)	*	* 0.92	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 223.09	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.25	* Cum Volume (acre-ft)	*	* 1.74	* 0.00
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	*	* 2.17	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 61



Legend

- WS PF 1
- Ground
- Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 60

INPUT

Description: 26

Station Elevation Data num= 71

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	404.13	.49	404	6.8	402.21	7.55	402	11.17	400.95
14.53	400	25.34	398.13	26.08	398	26.32	397.96	34.86	396.47
41.72	395.15	48.08	394	55.48	392.63	59.31	392	65.33	391.02
72.04	390	75.03	389.89	78.48	389.79	80.95	389.77	82.03	389.75
82.76	389.72	84.18	389.67	92.11	389.5	94.33	389.47	97.55	389.45
100.65	389.45	102.43	389.47	104.29	389.55	115.29	389.92	118.24	390
120.51	390.08	128.57	390.31	129.37	390.31	140.62	390.59	143.92	390.61
164.37	390.44	178.43	390.57	179.91	390.58	182.15	390.6	184.82	390.61
186.55	390.63	190.27	390.66	190.63	390.66	195.34	390.63	196.12	390.63
199.74	390.64	200.79	390.64	201.56	390.64	202.28	390.63	203.48	390.63
225.04	391.43	229.11	391.42	232.55	391.43	234.62	391.42	256.19	391.08
258.11	391.08	260	391.1	262.75	391.15	263.3	391.15	263.9	391.14
266.93	390.98	267.68	390.96	268.35	390.95	269.74	390.95	270.79	390.97
273.67	391.03	275.83	391.08	311.84	392	318.65	392.6	339.98	394
341.54	394.58								

Manning's n Values

num= 3

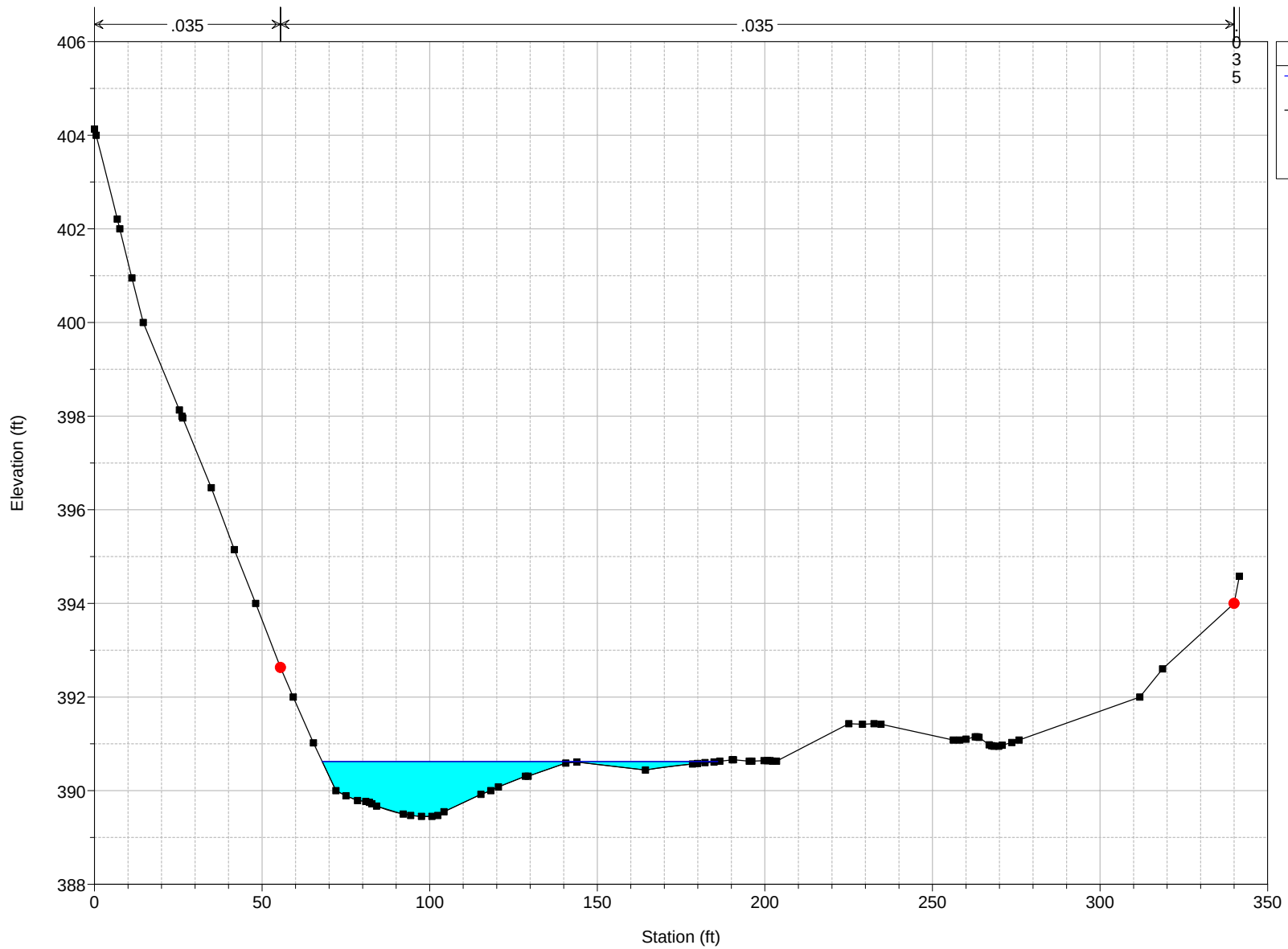
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	55.48	.035	339.98	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	55.48	339.98		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 390.93	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.31	* Wt. n-Val.	* 0.035	* 0.035	* 0.035
* W.S. Elev (ft)	* 390.62	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 390.70	* Flow Area (sq ft)	* 55.94	* 55.94	* 55.94
* E.G. Slope (ft/ft)	* 0.029609	* Area (sq ft)	* 55.94	* 55.94	* 55.94
* Q Total (cfs)	* 248.30	* Flow (cfs)	* 248.30	* 248.30	* 248.30
* Top Width (ft)	* 118.04	* Top Width (ft)	* 118.04	* 118.04	* 118.04
* Vel Total (ft/s)	* 4.44	* Avg. Vel. (ft/s)	* 4.44	* 4.44	* 4.44
* Max Chl Dpth (ft)	* 1.17	* Hydr. Depth (ft)	* 0.47	* 0.47	* 0.47
* Conv. Total (cfs)	* 1443.0	* Conv. (cfs)	* 1443.0	* 1443.0	* 1443.0
* Length Wtd. (ft)	* 118.11	* Wetted Per. (ft)	* 118.11	* 118.11	* 118.11
* Min Ch El (ft)	* 389.45	* Shear (lb/sq ft)	* 0.88	* 0.88	* 0.88
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 341.54	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.55	* Cum Volume (acre-ft)	* 1.67	* 1.67	* 1.67
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 2.03	* 2.03	* 2.03

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 60



CROSS SECTION
REACH: Reach-1

RS: 59

INPUT

Description: 27

Station Elevation Data		num= 78							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	400.3	1.2	400	3.48	399.39	9.35	398	11.1	397.54
17.35	396.15	17.73	396.06	18.01	396	28.09	394.55	30.79	394
37.04	392.59	39.71	392	42.75	391.27	44.72	390.84	48.78	390
50.11	389.94	55.28	389.72	59.48	389.51	61	389.47	68.14	389.08
74.57	388.75	75.42	388.7	76.33	388.65	79.84	388.51	82.03	388.43
82.5	388.42	82.82	388.41	83.39	388.41	83.64	388.4	83.8	388.39
84.13	388.38	85.95	388.34	86.46	388.34	87.19	388.33	87.9	388.33
88.31	388.34	88.53	388.34	88.74	388.35	90.1	388.4	91.26	388.44
92.39	388.47	95.97	388.98	96.3	389.09	97.41	389.21	99.54	389.42
100.82	389.55	103.36	389.75	108.06	390	108.15	390	110.87	390.04
113.83	390.05	119.5	390.02	121.75	390	126.34	389.97	126.52	389.96
132.64	389.89	133.47	389.87	136.6	389.83	172.16	389.99	174.75	389.99
193.01	389.91	195.18	389.91	205.45	389.93	208.55	389.93	214.6	389.85
217.1	389.84	219.43	389.82	222.58	389.8	233.31	389.79	238.52	389.76
242.68	389.76	246.58	389.81	254.93	389.96	255.86	390	259.99	390.14
300.4	391.6	304.3	391.85	307	392				

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	39.71	.035	300.4	.035

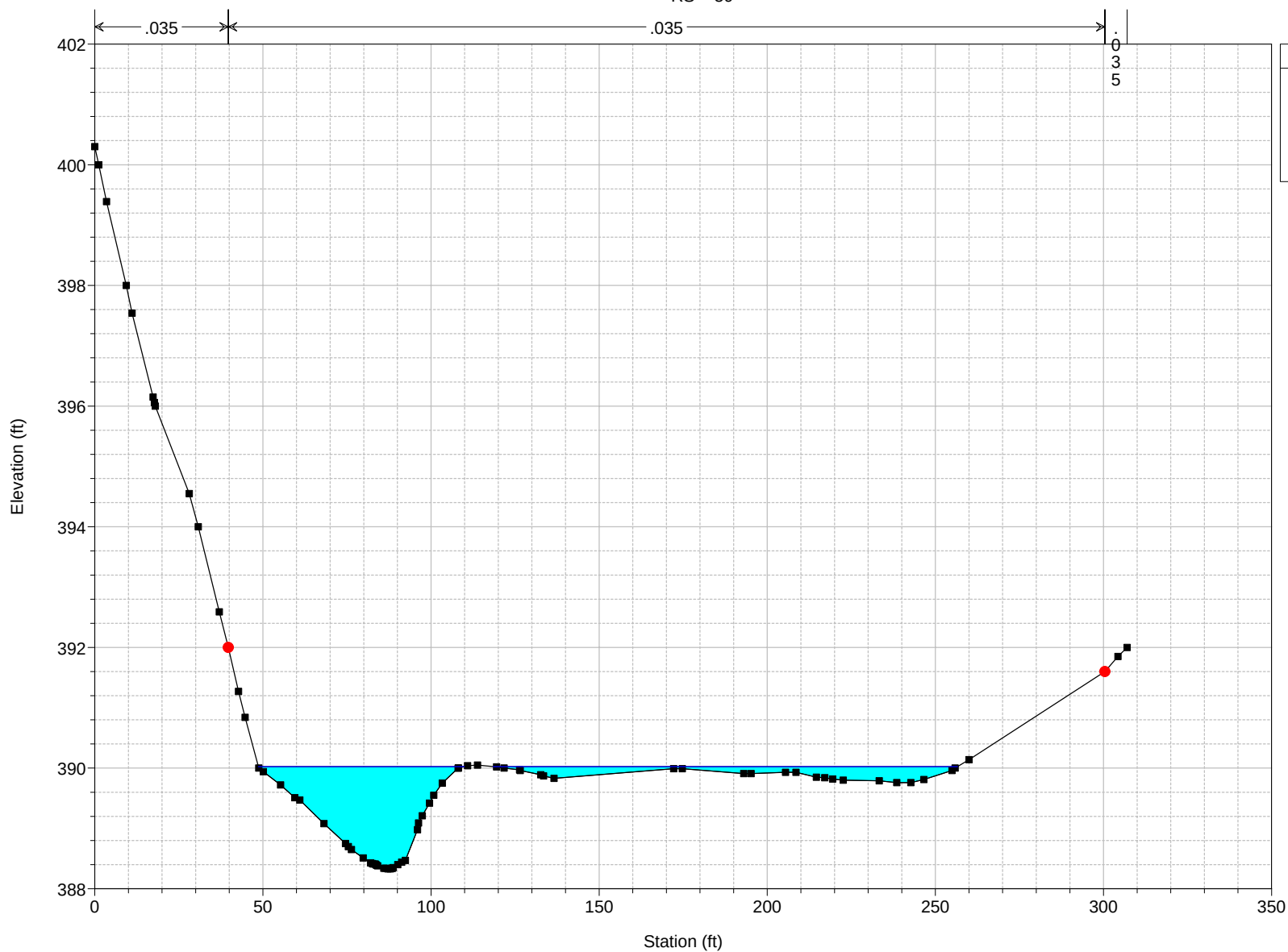
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	39.71	300.4		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 390.21	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.19	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 390.03	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 390.03	* Flow Area (sq ft)		* 71.93	
* E.G. Slope (ft/ft)	* 0.025755	* Area (sq ft)		* 71.93	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 199.30	* Top Width (ft)		* 199.30	
* Vel Total (ft/s)	* 3.45	* Avg. Vel. (ft/s)		* 3.45	
* Max Chl Dpth (ft)	* 1.70	* Hydr. Depth (ft)		* 0.36	
* Conv. Total (cfs)	* 1547.2	* Conv. (cfs)		* 1547.2	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 199.44	
* Min Ch El (ft)	* 388.33	* Shear (lb/sq ft)		* 0.58	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 307.00	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 1.60	* 0.00
* C & E Loss (ft)		* Cum SA (acres)		* 1.85	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 59



Legend

WS PF 1

Ground

Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 58

INPUT

Description: 28

Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	394.52	4.18	394	4.46	393.97	4.6	393.95	9.76	393.29
14.39	392.84	15.19	392.74	20.06	392	25.12	391.31	32.79	390
42.38	389.21	48.32	388.67	51.3	388.42	56.09	388	78.16	388
93.52	388.84	95.76	388.94	98.32	389.03	99.11	389.06	99.6	389.08
103.64	389.36	104.57	389.36	105.09	389.35	105.16	389.35	105.42	389.34
105.65	389.35	107.08	389.35	108.44	389.36	203.37	389.32	204.61	389.32
206.68	389.29	259.75	389.66	270.51	389.85	277.47	390		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	25.12	.035	270.51	.035

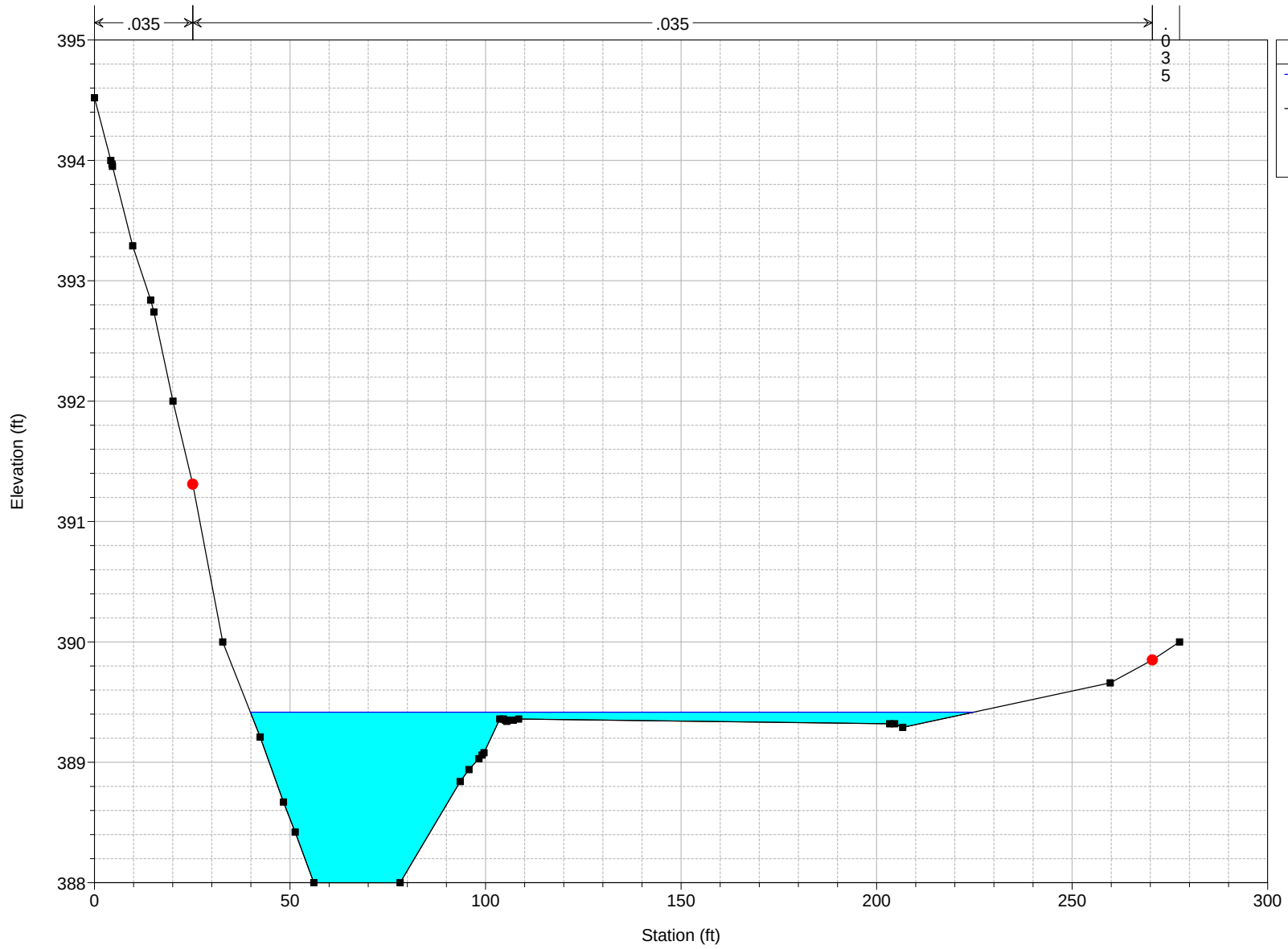
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	25.12	270.51		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 389.61	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.19	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 389.42	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 389.42	* Flow Area (sq ft)		* 70.59	
* E.G. Slope (ft/ft)	* 0.024802	* Area (sq ft)		* 70.59	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 184.91	* Top Width (ft)		* 184.91	
* Vel Total (ft/s)	* 3.52	* Avg. Vel. (ft/s)		* 3.52	
* Max Chl Dpth (ft)	* 1.42	* Hydr. Depth (ft)		* 0.38	
* Conv. Total (cfs)	* 1576.7	* Conv. (cfs)		* 1576.7	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 185.01	
* Min Ch El (ft)	* 388.00	* Shear (lb/sq ft)		* 0.59	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 277.47	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 1.52	* 0.00
* C & E Loss (ft)		* Cum SA (acres)		* 1.63	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 58



CROSS SECTION
REACH: Reach-1

RS: 57

INPUT

Description: 29

Station Elevation Data num= 82

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	396.17	.43	396.1	1	396	1.96	395.8	11.1	394
20.42	392.19	21.47	392	27.88	390.79	32.16	390	38.71	389.67
44.91	389.38	59.18	388.74	64.27	388.52	65.15	388.48	65.71	388.47
66.65	388.44	67.04	388.43	67.29	388.42	67.77	388.4	70.68	388.3
71.46	388.29	72.14	388.28	72.51	388.27	72.7	388.28	72.88	388.28
73.97	388.3	75.51	388.32	77.4	388.57	77.55	388.63	78.03	388.67
78.85	388.73	79.3	388.77	80.07	388.81	81.3	388.81	83.14	388.86
84.51	388.83	88.2	389.05	89.63	388.98	103.53	389.7	106.42	389.67
109.33	389.62	109.41	389.62	112.08	389.56	112.41	389.55	113.61	389.52
119.55	389.52	123.04	389.51	145.54	389.3	184.47	388.54	188.65	388.53
210.52	389.66	258.29	388.04	260.54	388.04	263.08	388.01	263.99	388
267.36	387.98	272.03	387.98	276.13	387.99	278.09	388	281.05	388.05
286.75	388.16	290.91	388.31	292.84	388.44	293.77	388.5	294.91	388.47
296.67	388.39	298.62	388.35	300.15	388.37	301.14	388.43	301.83	388.46
302.69	388.43	304.41	388.39	317.79	388.65	320.61	388.63	324.64	388.68
328.08	388.76	332.5	390	332.53	390.2	332.54	390.29	332.65	391.15
333.01	394	333.05	393.55						

Manning's n Values num= 3

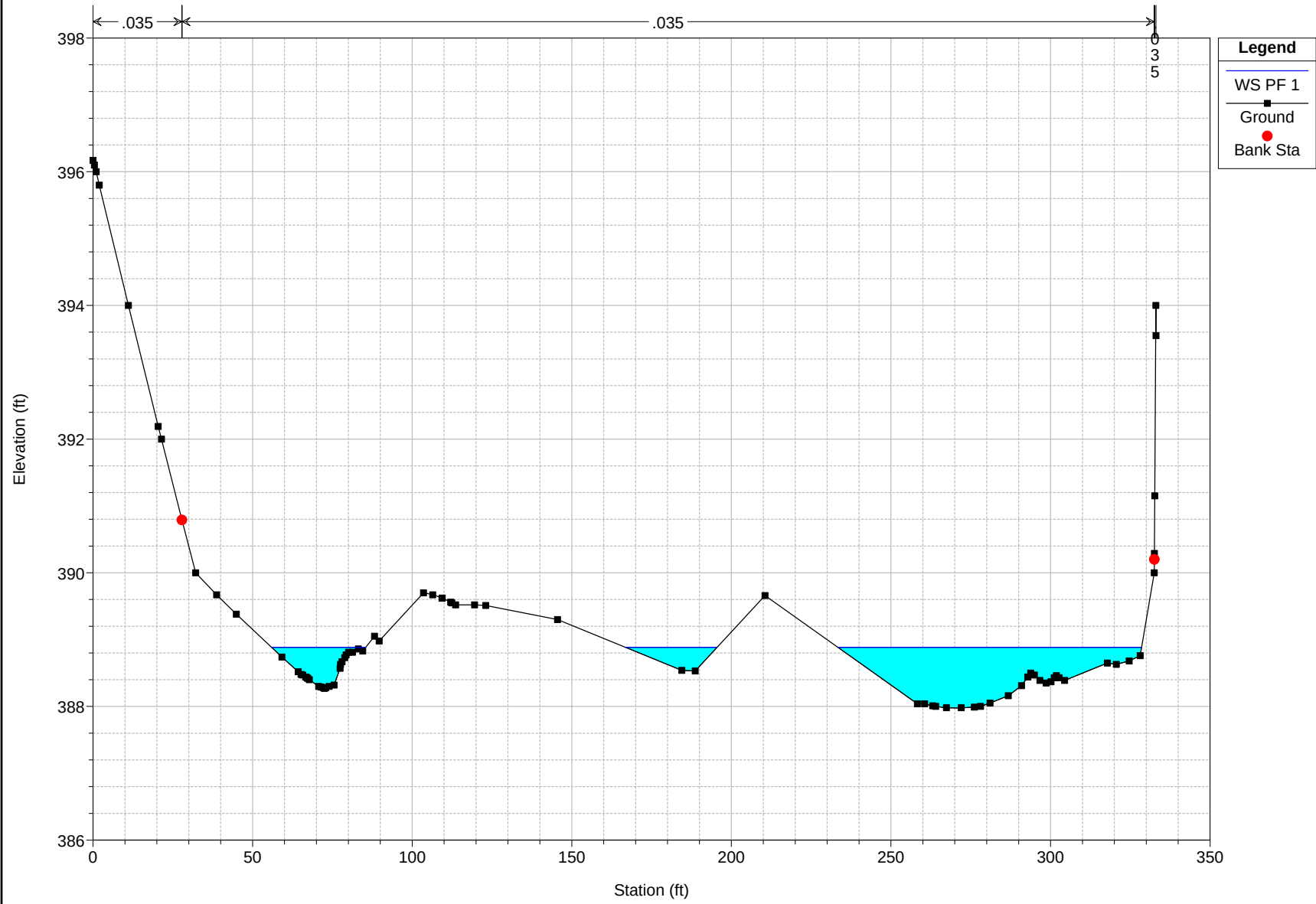
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	27.88	.035	332.53	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	27.88	332.53		103.95	50	196.6	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 389.10	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.22	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 388.88	* Reach Len. (ft)	* 103.95	* 50.00	* 196.60
* Crit W.S. (ft)	* 388.88	* Flow Area (sq ft)		* 65.72	
* E.G. Slope (ft/ft)	* 0.024478	* Area (sq ft)		* 65.72	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 153.11	* Top Width (ft)		* 153.11	
* Vel Total (ft/s)	* 3.78	* Avg. Vel. (ft/s)		* 3.78	
* Max Chl Dpth (ft)	* 0.90	* Hydr. Depth (ft)		* 0.43	
* Conv. Total (cfs)	* 1587.0	* Conv. (cfs)		* 1587.0	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 153.22	
* Min Ch El (ft)	* 387.98	* Shear (lb/sq ft)		* 0.66	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 333.05	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 1.44	* 0.00
* C & E Loss (ft)		* Cum SA (acres)		* 1.43	* 0.01

RS = 57



CROSS SECTION
REACH: Reach-1

RS: 56

INPUT

Description: 30

Station Elevation Data num= 67

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	401.38	6.21	400	6.44	399.95	7.21	399.76	12.01	398.54
13.98	398	14.78	397.76	21.16	396	24.2	395.43	32.48	394
42.18	392.53	45.77	392	52.7	391.12	60.23	390	69.86	389.16
75.83	388.58	80.48	388.14	81.86	388	110.45	388	117.28	388.31
119.55	388.42	122.32	388.48	126.78	388.49	132.17	388.45	138.15	388.3
144.86	388.07	146.56	388	202.6	388	202.9	388.01	207.26	388.13
212.91	388.22	218.76	388.27	224.22	388.21	229.47	388.08	231.54	388
234.17	387.91	235.25	387.89	240.54	387.68	243.11	387.63	248.6	387.39
252.05	387.23	253.99	387.16	261.13	387.01	267.6	386.91	272.04	386.8
274.87	386.7	276.42	386.64	277.33	386.61	278.25	386.59	282.14	386.59
284.79	386.61	286.08	386.64	286.95	386.68	287.66	386.71	291.03	386.69
310.43	387.1	310.95	387.1	311.58	387.08	312.49	387.08	312.92	387.09
313.25	387.09	322.47	388.85	324.34	389.54	325.47	389.82	325.56	390
326.03	393.46	326.05	393.59						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	218.76	.035	325.56	.035

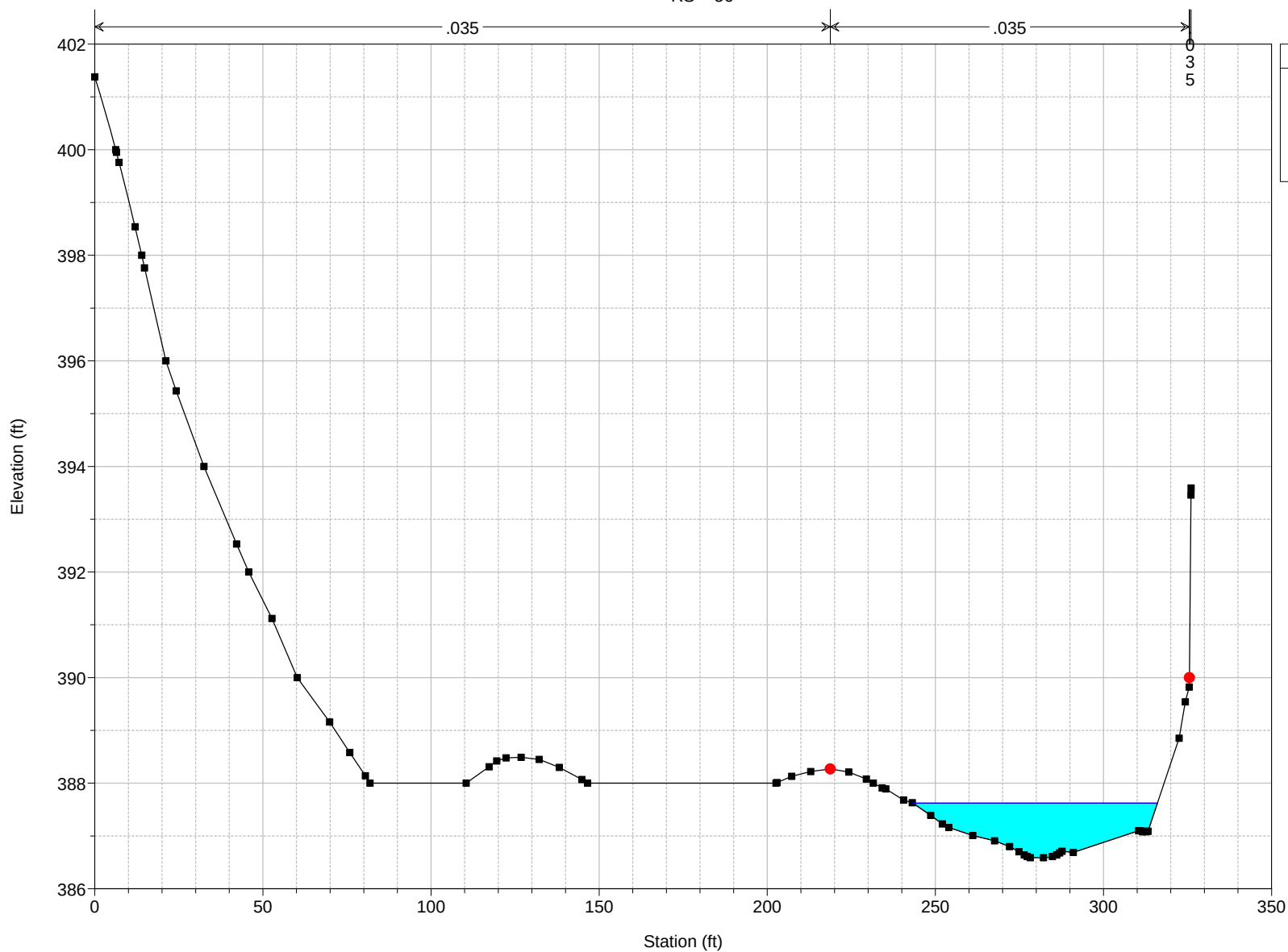
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	218.76	325.56		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 388.02	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.40	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 387.62	* Reach Len. (ft)	* 50.00	* 50.00	
* Crit W.S. (ft)	* 387.67	* Flow Area (sq ft)		* 48.74	
* E.G. Slope (ft/ft)	* 0.024587	* Area (sq ft)		* 48.74	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 72.72	* Top Width (ft)		* 72.72	
* Vel Total (ft/s)	* 5.09	* Avg. Vel. (ft/s)		* 5.09	
* Max Chl Dpth (ft)	* 1.03	* Hydr. Depth (ft)		* 0.67	
* Conv. Total (cfs)	* 1583.5	* Conv. (cfs)		* 1583.5	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 72.80	
* Min Ch El (ft)	* 386.59	* Shear (lb/sq ft)		* 1.03	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 326.05	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.12	* Cum Volume (acre-ft)		* 1.37	* 0.00
* C & E Loss (ft)	* 0.01	* Cum SA (acres)		* 1.30	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 56



Legend

- WS PF 1
- Ground
- Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 55

INPUT

Description: 31

Station Elevation Data				num= 60							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	404.14	.56	404	2.33	403.58	6.05	402.67	8.76	402		
9.98	401.73	17.35	400	20.29	399.27	25.59	398	32.18	396.45		
34.16	396	36.1	395.66	44.98	394	49.41	393.31	58.43	392		
65.47	390.93	72.31	390	90.18	388.94	95.86	388.59	104.12	388		
110.86	388	117.67	387.38	140.11	387.36	142.39	387.55	149.34	388		
152.02	388.34	152.53	388.39	153.54	388.41	155.65	388.4	159.36	388.35		
169.46	388.12	212.78	386.96	224.57	386.6	229.47	386.47	233.17	386.4		
235.27	386.38	237.02	386.38	239	386.35	241.02	386.31	249.64	386.02		
251.04	386.01	255.54	386.02	264.56	386	266.27	385.96	268.92	385.86		
268.96	385.79	274.36	385.62	280.46	385.57	283.92	385.56	288.06	385.59		
295.39	385.66	297.44	385.7	298.75	385.74	299.66	385.79	302.28	386		
304.31	386.53	308.52	387.6	310.23	388	311.3	388.54	316.87	391.32		

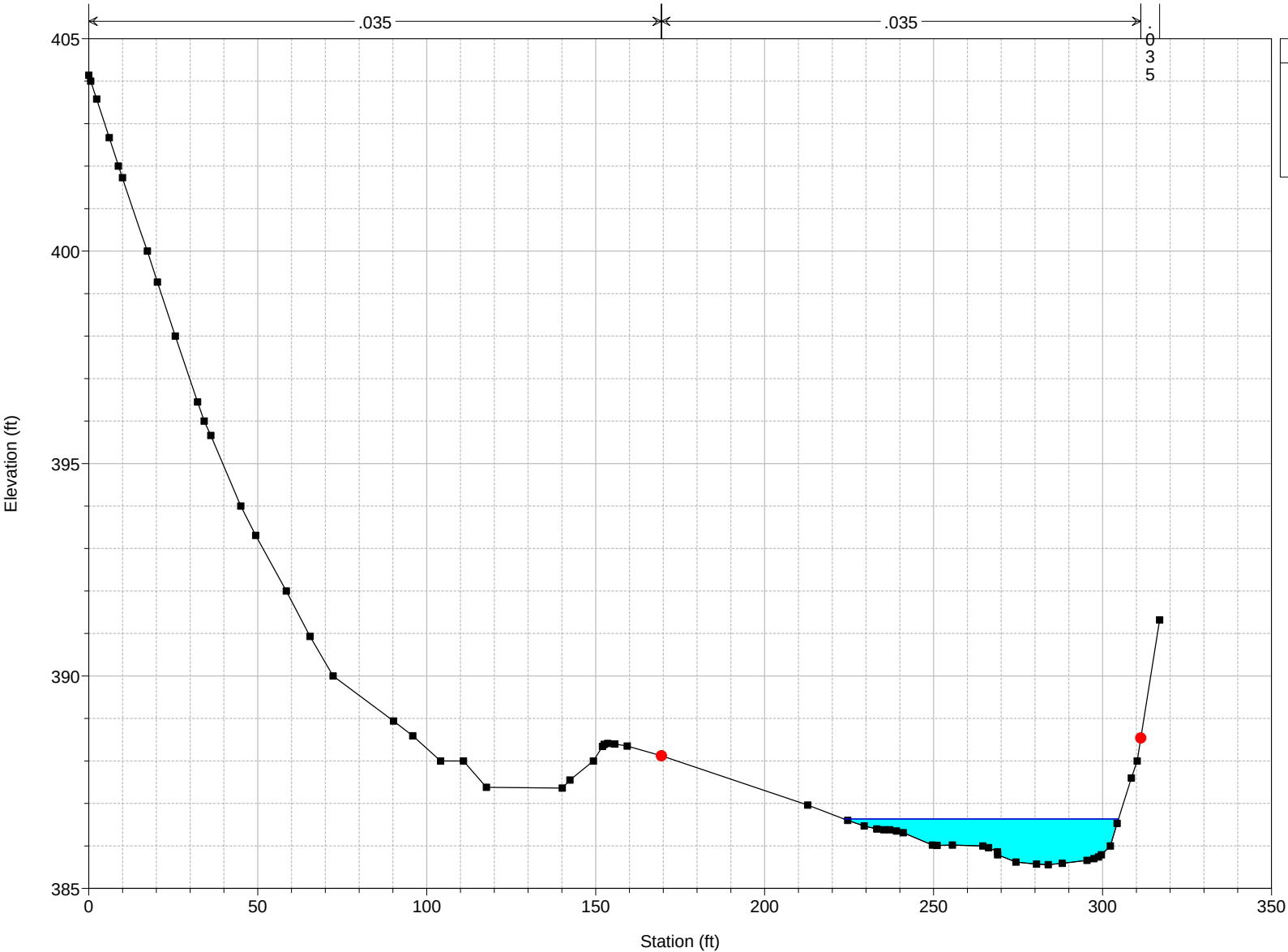
Manning's n Values				num= 3			
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.035	169.46	.035	311.3	.035		

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	169.46	311.3		50 50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 386.97	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.34	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 386.63	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 386.63	* Flow Area (sq ft)	*	* 53.30	*
* E.G. Slope (ft/ft)	* 0.021197	* Area (sq ft)	*	* 53.30	*
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.30	*
* Top Width (ft)	* 81.30	* Top Width (ft)	*	* 81.30	*
* Vel Total (ft/s)	* 4.66	* Avg. Vel. (ft/s)	*	* 4.66	*
* Max Chl Dpth (ft)	* 1.07	* Hydr. Depth (ft)	*	* 0.66	*
* Conv. Total (cfs)	* 1705.4	* Conv. (cfs)	*	* 1705.4	*
* Length Wtd. (ft)	*	* Wetted Per. (ft)	*	* 81.44	*
* Min Ch El (ft)	* 385.56	* Shear (lb/sq ft)	*	* 0.87	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 316.87	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	*	* 1.31	* 0.00
* C & E Loss (ft)	*	* Cum SA (acres)	*	* 1.21	* 0.01

RS = 55



CROSS SECTION
REACH: Reach-1

RS: 54

INPUT

Description: 32

Station Elevation Data num= 60

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	402.46	2.03	402	9.61	400.38	11.23	400	16.66	398.99
21.53	398	28.87	396.75	32.96	396	36.5	395.61	49.87	394
64.29	392.38	68.72	392	77.34	391.49	80.07	391.36	104.1	390
111.14	389.48	132.07	388	135.64	387.73	140.26	387.39	141.73	387.3
151.97	386.73	170.06	386.03	170.33	386.02	170.81	386	191.74	386
192.15	386.03	195.46	386.17	203.23	386.4	207.7	386.53	208.34	386.55
209.32	386.57	210.65	386.58	216.32	386.46	234.84	386.11	239.97	386
248.71	385.7	256.17	385.42	262	385.17	265.4	385.03	266.28	384.99
267.43	384.93	267.87	384.91	268.96	384.93	269.83	384.92	270.62	384.9
271.09	384.88	272.06	384.84	273.15	384.83	274.51	384.83	275.25	384.84
275.81	384.85	276.18	384.85	276.41	384.86	276.58	384.87	277.06	384.91
277.35	384.92	288.65	385.29	308.48	386	317.06	390.29	322.64	393.09

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	141.73	.035	317.06	.035

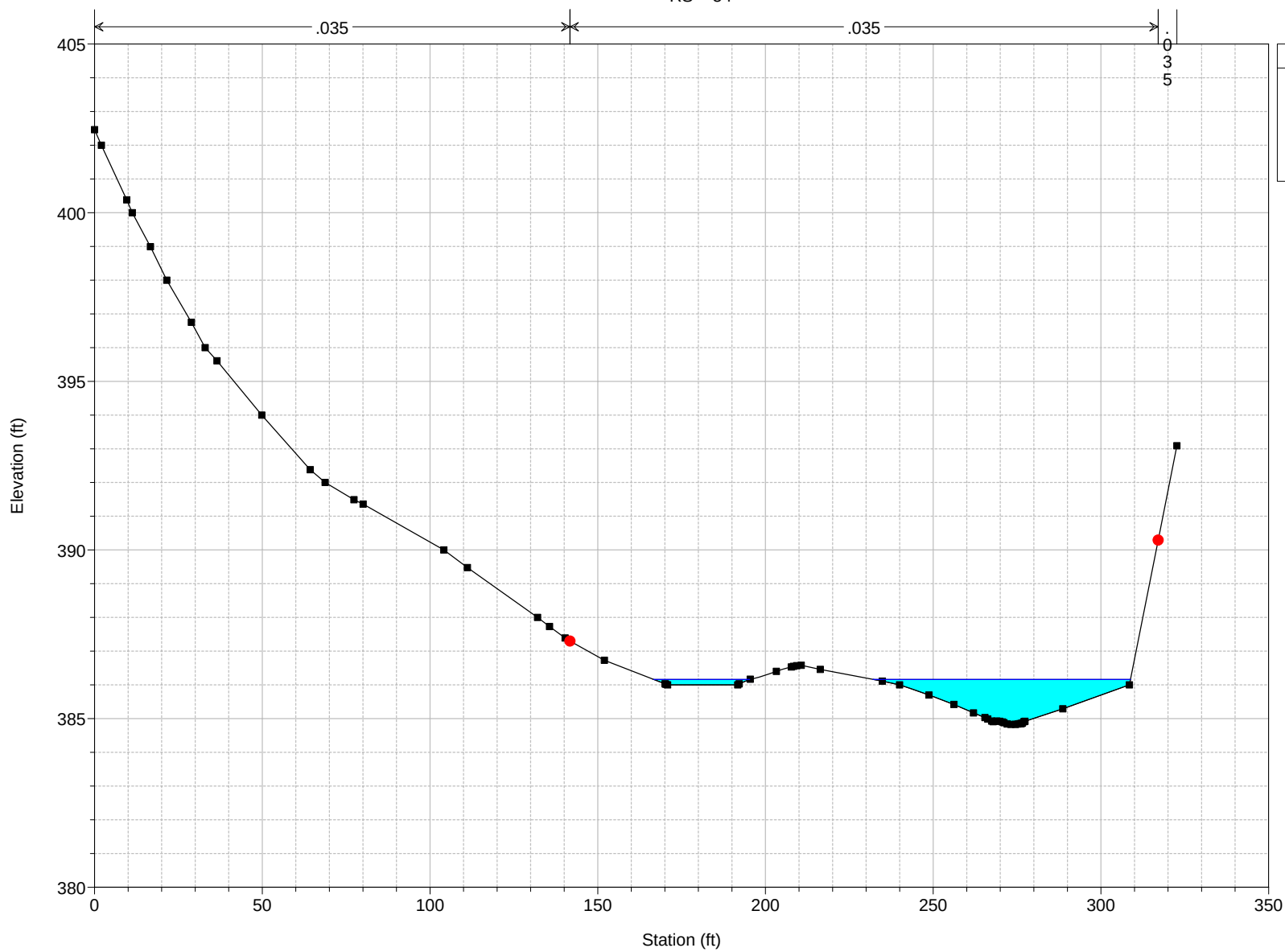
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	141.73	317.06		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 386.45	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.28	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 386.16	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 386.16	* Flow Area (sq ft)	*	* 57.99	*
* E.G. Slope (ft/ft)	* 0.022602	* Area (sq ft)	*	* 57.99	*
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.30	*
* Top Width (ft)	* 105.43	* Top Width (ft)	*	* 105.43	*
* Vel Total (ft/s)	* 4.28	* Avg. Vel. (ft/s)	*	* 4.28	*
* Max Chl Dpth (ft)	* 1.33	* Hydr. Depth (ft)	*	* 0.55	*
* Conv. Total (cfs)	* 1651.6	* Conv. (cfs)	*	* 1651.6	*
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)	*	* 105.52	*
* Min Ch El (ft)	* 384.83	* Shear (lb/sq ft)	*	* 0.78	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 322.64	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	*	* 1.25	* 0.00
* C & E Loss (ft)	*	* Cum SA (acres)	*	* 1.11	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 54



CROSS SECTION
REACH: Reach-1

RS: 53

INPUT

Description: 33

Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	400.83	4.6	400	16.99	398.47	20	398	25.61	397.26
36.75	396	40.26	395.79	41.05	395.74	42.74	395.62	57.61	394.72
62.67	394.36	63.61	394.29	68.75	394	81.5	393.1	84.93	392.81
98.06	392	102.91	391.6	103.12	391.58	106.71	391.33	108.16	391.2
116.62	390.54	122.4	390	133.76	389.02	144.43	388	156.37	387.42
183.65	386	185.41	385.9	187.53	385.71	188.67	385.68	190.97	385.64
193.58	385.61	195.75	385.58	196.88	385.56	202.34	385.5	211.14	385.55
211.93	385.56	213.82	385.56	261.03	386	274.53	385.66	300.39	385.89
305.53	386	308.15	387.05	310.14	388	310.51	388.18	317.05	391.32

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	144.43	.035	310.14	.035

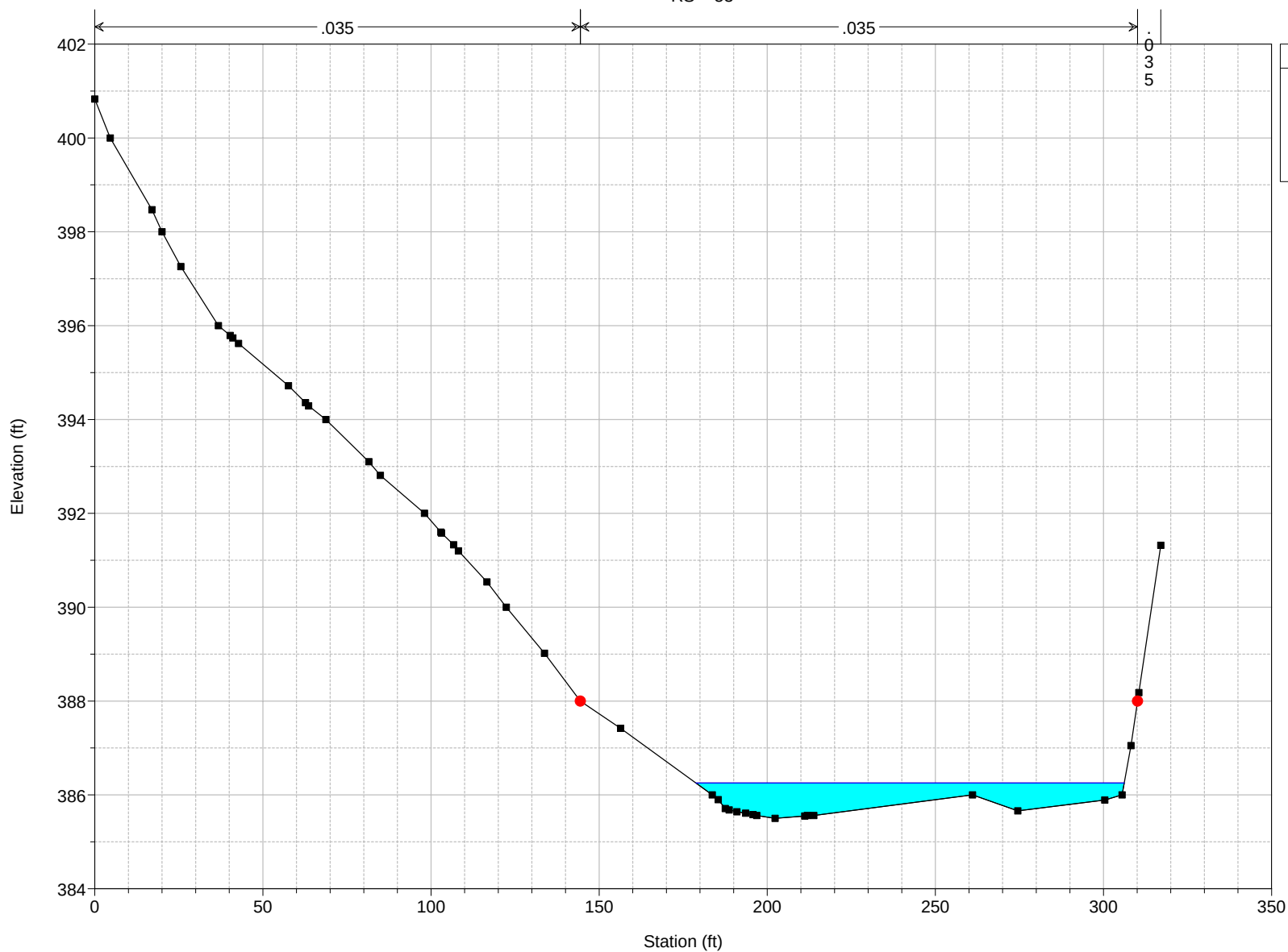
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	144.43	310.14		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 386.50	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.25	* Wt. n-Val.	* 0.035	* 0.035	*
* W.S. Elev (ft)	* 386.25	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 386.25	* Flow Area (sq ft)	*	* 62.26	*
* E.G. Slope (ft/ft)	* 0.022940	* Area (sq ft)	*	* 62.26	*
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.30	*
* Top Width (ft)	* 127.38	* Top Width (ft)	*	* 127.38	*
* Vel Total (ft/s)	* 3.99	* Avg. Vel. (ft/s)	*	* 3.99	*
* Max Chl Dpth (ft)	* 0.75	* Hydr. Depth (ft)	*	* 0.49	*
* Conv. Total (cfs)	* 1639.4	* Conv. (cfs)	*	* 1639.4	*
* Length Wtd. (ft)	*	* Wetted Per. (ft)	*	* 127.46	*
* Min Ch El (ft)	* 385.50	* Shear (lb/sq ft)	*	* 0.70	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 317.05	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.14	* Cum Volume (acre-ft)	*	* 1.18	* 0.00
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	*	* 0.97	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 53



CROSS SECTION
REACH: Reach-1

RS: 52

INPUT

Description: 34

Station Elevation Data

num=

77

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	398.21	1.18	398	10.16	396.65	13.83	396	27.29	394.57
28.55	394.44	28.77	394.42	28.99	394.41	30.56	394.31	32.96	394
41.11	393.32	46.71	393.12	48.25	393.04	52.85	392.93	54.69	392.83
58.97	392.74	67.92	392.22	68.35	392.2	72.49	392	74.79	391.91
75.65	391.85	84.94	391.47	85.8	391.39	89.2	391.28	89.83	391.23
90.26	391.21	98.66	391	99.1	390.99	104.03	390.93	104.65	390.91
108.9	390.8	113.22	390.52	113.65	390.48	118.48	390	130.12	388.93
130.6	388.91	132.22	388.79	136.66	388.54	148.63	388	150.52	387.94
150.84	387.92	152.41	387.83	170.24	386.97	171.14	386.89	172.58	386.78
174.86	386.65	178.12	386.43	184.95	386	195.02	384.88	206.32	384
223.23	384	225.01	384.83	229.12	386.76	236.04	390	237.31	390.6
240.31	392	241.41	392.51	244.58	394	248.85	396	249.59	396.34
253.12	398	253.67	398.26	257.39	400	257.76	400.17	261.66	402
261.83	402.08	265.39	403.74	265.88	403.97	265.95	404	269.77	405.73
270.36	406	275.88	406.11	280	406.17	344.53	407.28	360.58	407.44
368.86	407.57	400	407.84						

Manning's n Values

num=

3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	148.63	.035	229.12	.035

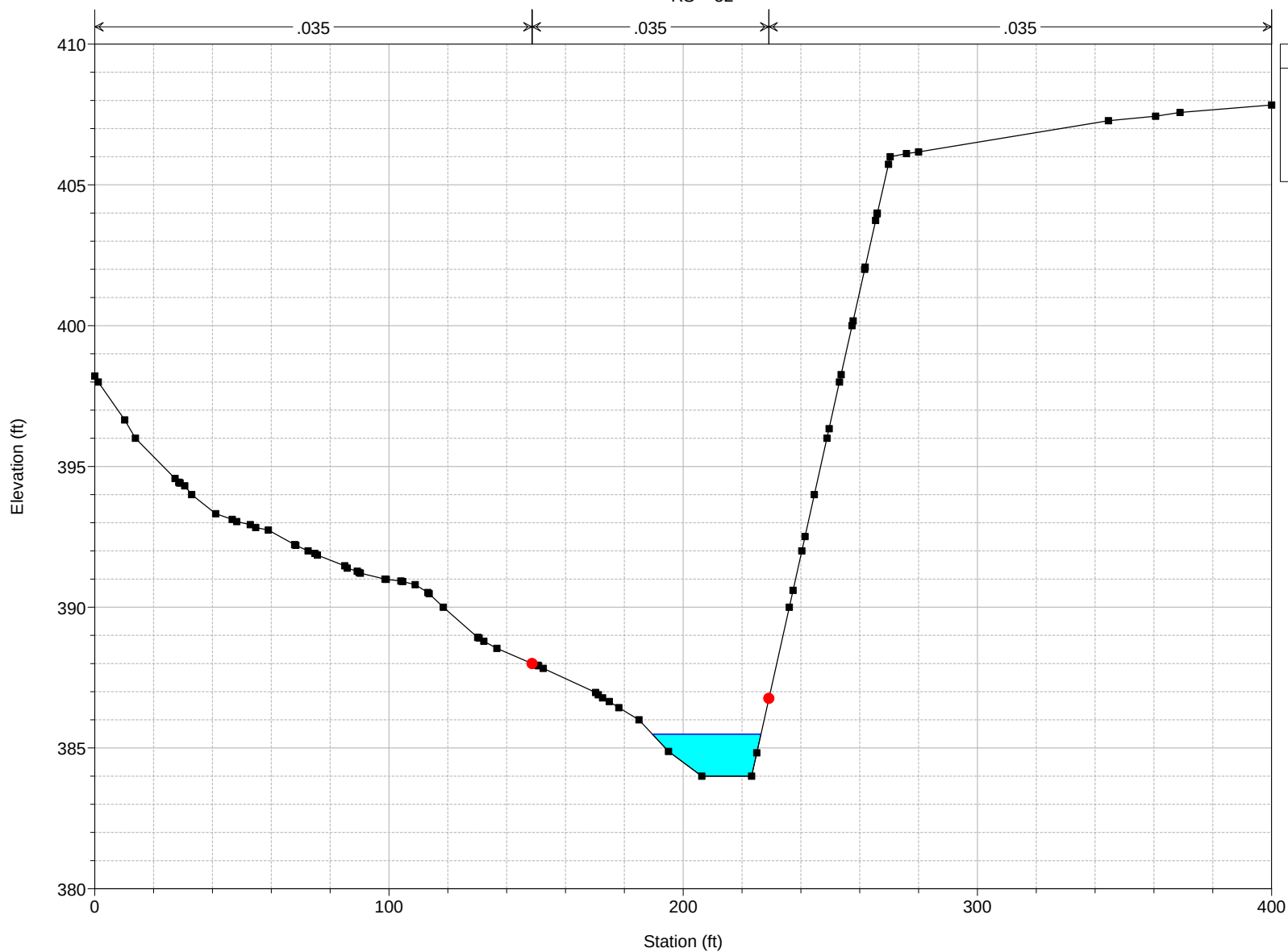
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	148.63	229.12		59.3	50	155.5	.1 .3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 386.06	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.57	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 385.49	* Reach Len. (ft)	* 59.30	* 50.00	* 155.50
* Crit W.S. (ft)	* 385.49	* Flow Area (sq ft)		* 41.14	
* E.G. Slope (ft/ft)	* 0.017732	* Area (sq ft)		* 41.14	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 36.89	* Top Width (ft)		* 36.89	
* Vel Total (ft/s)	* 6.04	* Avg. Vel. (ft/s)		* 6.04	
* Max Chl Dpth (ft)	* 1.49	* Hydr. Depth (ft)		* 1.12	
* Conv. Total (cfs)	* 1864.7	* Conv. (cfs)		* 1864.7	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 37.29	
* Min Ch El (ft)	* 384.00	* Shear (lb/sq ft)		* 1.22	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 1.12	* 0.00
* C & E Loss (ft)		* Cum SA (acres)		* 0.88	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 52



CROSS SECTION
REACH: Reach-1

RS: 51

INPUT

Description: 35

Station Elevation Data num= 54

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	402.41	2.47	402	12.18	400.19	13.02	400.03	13.2	400
28.62	398.09	29.71	398	39.93	397.1	43.5	396.85	53.31	396.55
57.61	396.35	58.44	396.3	64.03	396	64.16	395.99	64.28	395.99
72.32	395.53	77.68	395.18	93.81	394.48	102.97	394.1	105.03	394
108.4	393.66	110.28	393.58	112.36	393.46	117.85	393.07	131.28	392
136.03	391.65	157.35	390	182.02	388	182.89	387.78	185.2	387.11
188.15	386	190.72	384.72	192.15	384	202.31	384	208.32	384
212.4	386	213.71	386.64	226.56	392.94	228.71	394	230.86	395.05
232.79	396	235.17	397.16	236.87	398	243.81	401.4	245.03	402
248.14	403.52	249.11	404	252.48	405.65	253.19	406	305.39	406.69
313.55	406.75	375.56	407.47	383.3	407.55	400	407.61		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	157.35	.035	226.56	.035

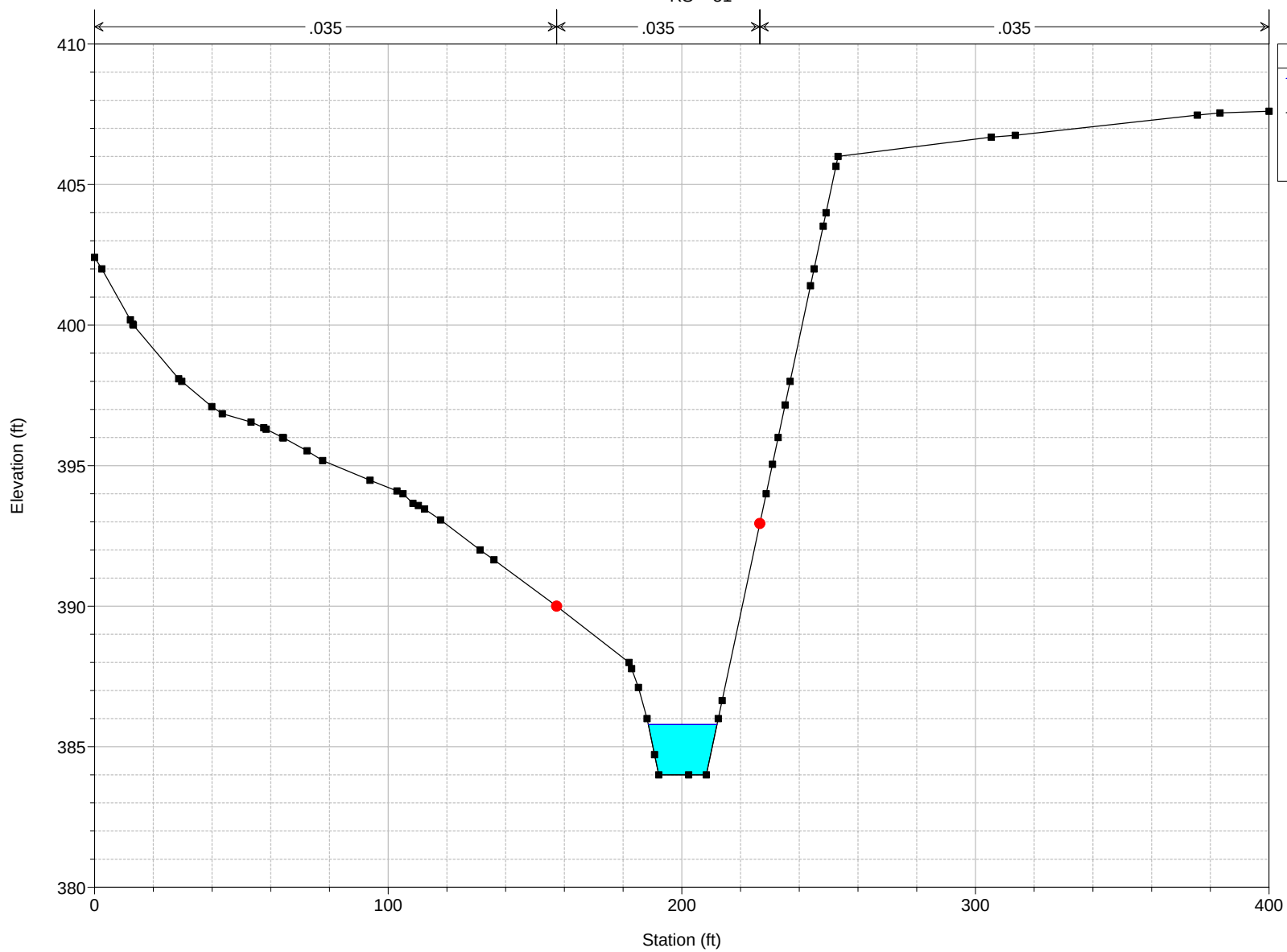
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	157.35	226.56		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 386.55	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.77	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 385.79	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 385.79	* Flow Area (sq ft)		* 35.37	
* E.G. Slope (ft/ft)	* 0.016512	* Area (sq ft)		* 35.37	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 23.39	* Top Width (ft)		* 23.39	
* Vel Total (ft/s)	* 7.02	* Avg. Vel. (ft/s)		* 7.02	
* Max Chl Dpth (ft)	* 1.79	* Hydr. Depth (ft)		* 1.51	
* Conv. Total (cfs)	* 1932.3	* Conv. (cfs)		* 1932.3	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 24.23	
* Min Ch El (ft)	* 384.00	* Shear (lb/sq ft)		* 1.50	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.86	* Cum Volume (acre-ft)		* 1.08	* 0.00
* C & E Loss (ft)	* 0.02	* Cum SA (acres)		* 0.84	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 51



CROSS SECTION
REACH: Reach-1

RS: 50

INPUT

Description: 36

Station Elevation Data		num=		56							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	403.49	9.23	402	11.53	401.71	25.34	400.16	25.98	400.1		
26.42	400.06	26.95	400	37.04	399.39	39.01	399.29	41.43	399.19		
43.9	399.08	46.31	398.94	49.3	398.76	56.71	398.37	62.22	398.06		
62.34	398.05	63.39	398	74.2	396.73	77.08	396.43	81.69	396		
84.65	395.87	87.14	395.63	95.31	395.02	103.99	394	116.99	392.81		
128.24	392	157.15	389.52	170.34	388.58	174.09	388.28	175.58	388.18		
178.47	388	179.28	387.94	180.63	387.83	186.93	386	189.14	385.2		
192.4	384	204.51	384	208.51	386	210.64	387.07	212.51	388		
216.51	390	218.66	391.08	220.51	392	224.51	394	226.68	395.09		
228.51	396	232.51	398	234.7	399.1	236.51	400	244.51	404		
246.74	405.11	248.51	406	331.75	406.94	337.96	407	396.38	407.21		
400	407.21										

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	180.63	.035	212.51	.035

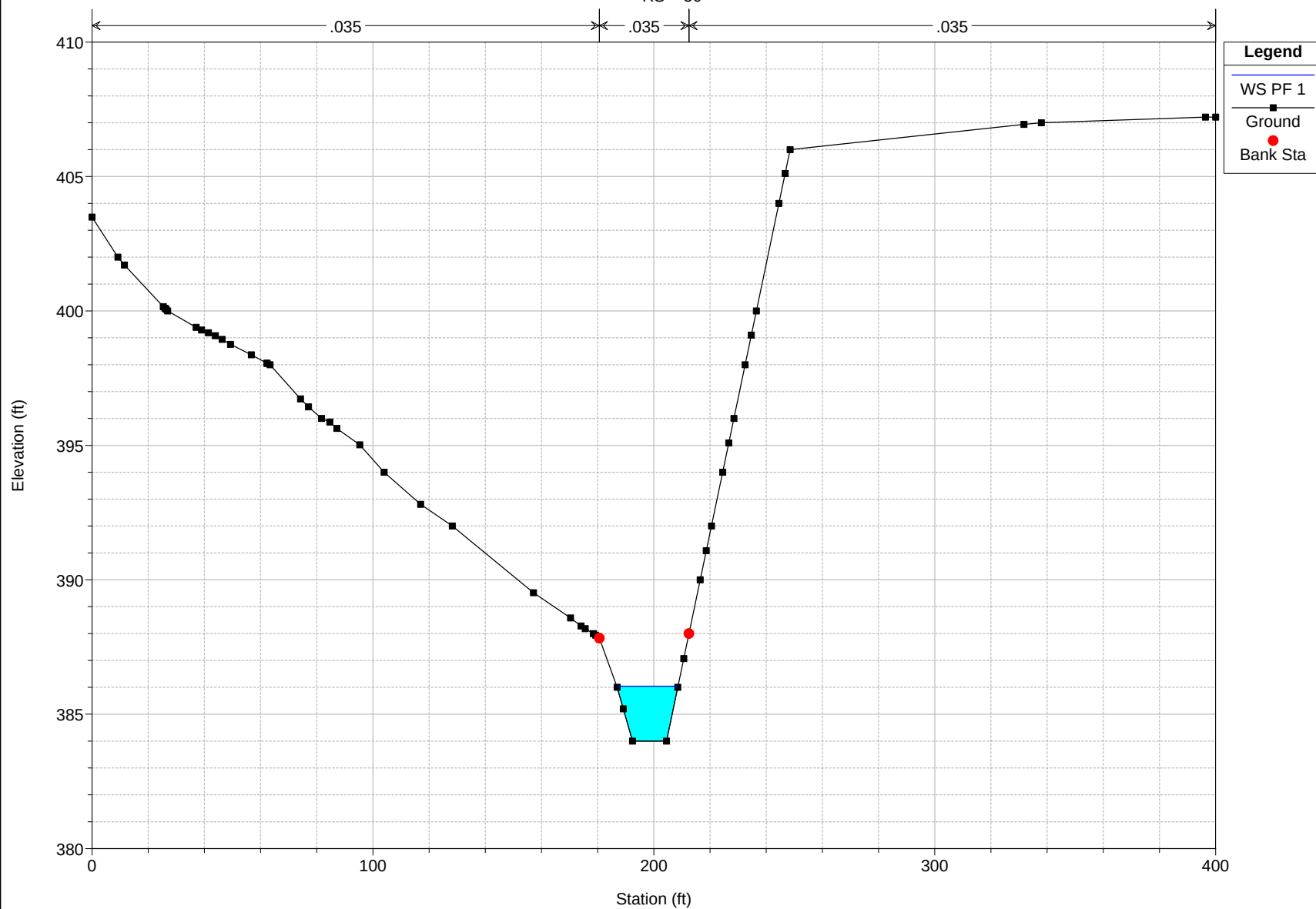
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	180.63	212.51		39.68	50	60.31	.1 .3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 386.84	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.80	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 386.04	* Reach Len. (ft)	* 39.68	* 50.00	* 60.31
* Crit W.S. (ft)	* 386.04	* Flow Area (sq ft)		* 34.56	
* E.G. Slope (ft/ft)	* 0.016299	* Area (sq ft)		* 34.56	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 21.80	* Top Width (ft)		* 21.80	
* Vel Total (ft/s)	* 7.18	* Avg. Vel. (ft/s)		* 7.18	
* Max Chl Dpth (ft)	* 2.04	* Hydr. Depth (ft)		* 1.59	
* Conv. Total (cfs)	* 1944.9	* Conv. (cfs)		* 1944.9	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 22.65	
* Min Ch El (ft)	* 384.00	* Shear (lb/sq ft)		* 1.55	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.82	* Cum Volume (acre-ft)		* 1.04	* 0.00
* C & E Loss (ft)	* 0.00	* Cum SA (acres)		* 0.82	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 50



CROSS SECTION
REACH: Reach-1

RS: 49

INPUT

Description: 37

Station Elevation Data

num=

67

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	405.12	2.07	405.06	2.4	405.03	3.02	405	9.35	404.82
14.04	404.61	16.67	404.51	20.4	404.31	25.28	404	25.89	403.95
25.95	403.94	26.89	403.85	38.34	402.69	45.57	402	45.97	401.96
52.18	401.5	57.61	401.15	65.02	400.8	70.62	400.46	77.24	400
78.11	399.9	78.93	399.78	83.48	399.12	90.67	398	92.25	397.75
94.1	397.5	100.51	396.58	112.27	395.29	118.36	394.64	123.74	394
126.94	393.59	138.44	392	143.98	391.53	147.51	391.27	150.85	391
155.94	390.64	163.08	390	172.95	389.31	182.83	388	186.83	386
189.16	384.84	190.84	384	206.1	384	208.77	385.34	210.1	386
212.76	387.33	214.11	388	218.11	390	220.74	391.31	222.12	392
224.73	393.3	226.13	394	228.72	395.29	230.13	396	232.71	397.29
234.14	398	236.69	399.28	238.14	400	240.68	401.27	242.15	402
246.15	404	248.66	405.25	250.16	406	291.19	406.46	300.28	406.54
385.61	406.85	400	406.86						

Manning's n Values

num=

3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	182.83	.035	218.11	.035

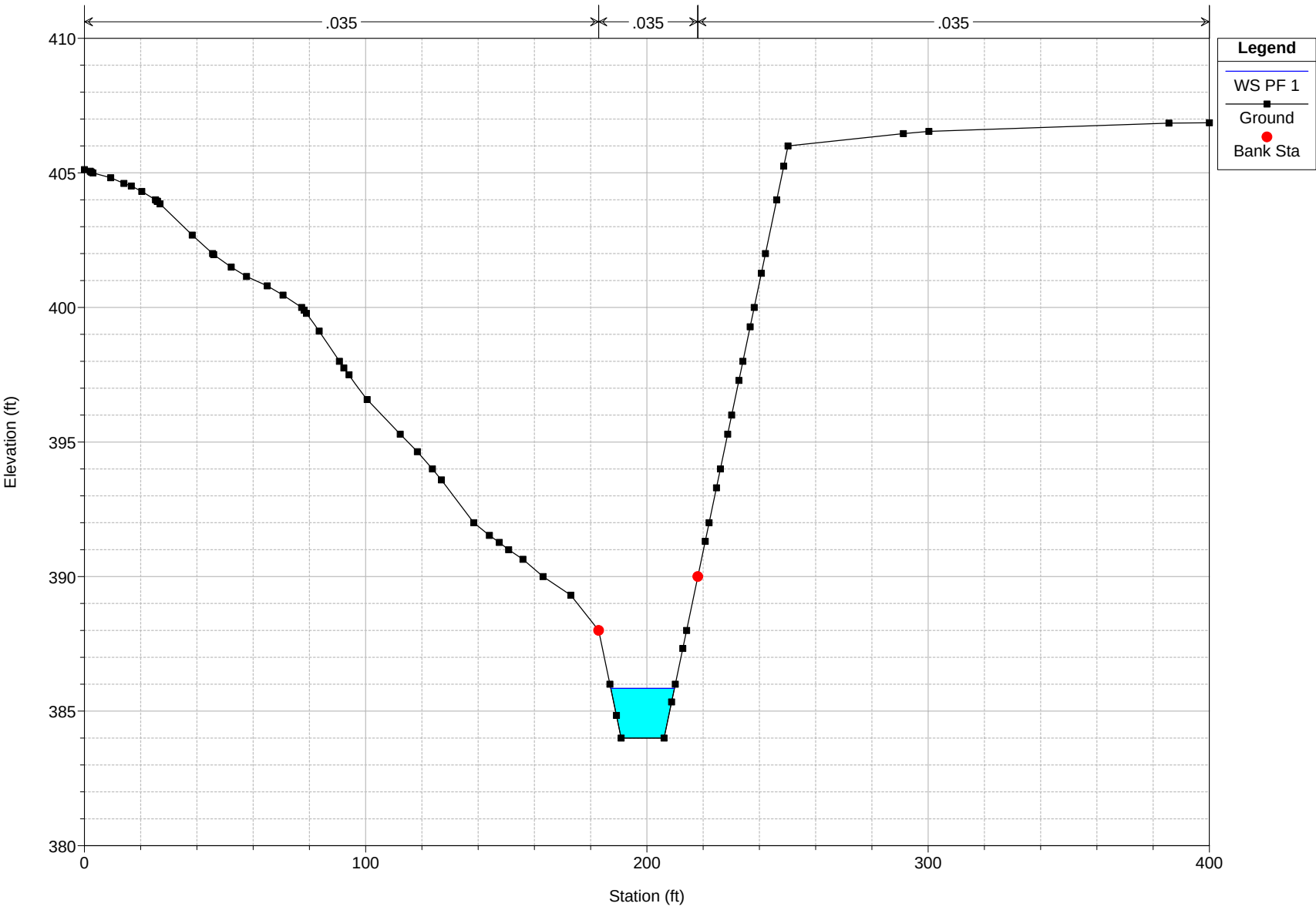
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	182.83	218.11		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 386.63	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.78	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 385.85	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 385.85	* Flow Area (sq ft)		* 34.99	
* E.G. Slope (ft/ft)	* 0.016453	* Area (sq ft)		* 34.99	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 22.65	* Top Width (ft)		* 22.65	
* Vel Total (ft/s)	* 7.10	* Avg. Vel. (ft/s)		* 7.10	
* Max Chl Dpth (ft)	* 1.85	* Hydr. Depth (ft)		* 1.54	
* Conv. Total (cfs)	* 1935.8	* Conv. (cfs)		* 1935.8	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 23.52	
* Min Ch El (ft)	* 384.00	* Shear (lb/sq ft)		* 1.53	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 1.00	* 0.00
* C & E Loss (ft)		* Cum SA (acres)		* 0.79	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 49



CROSS SECTION
REACH: Reach-1

RS: 48

INPUT

Description: 38

Station Elevation Data num= 73

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	427.45	4.13	427.18	11.71	426.75	16.67	426.15	16.93	426.12
17.67	426	27.71	424.41	30.04	424	35.36	423.11	41.13	422
44.45	421.35	51.96	420	54.54	419.55	56.7	419.11	59.09	418.66
64.45	417.47	71.14	416	71.48	415.93	80.25	414	80.91	413.86
89.02	412	92.65	411.2	99.03	410	102.54	409.37	107.26	408.45
108.67	408.17	112.53	407.34	121.39	405.29	126.77	404	135.17	402.25
136.31	402	136.77	401.91	137.63	401.77	142.52	400.82	146.83	400
147.92	399.8	157.53	398	162.12	397.17	168.11	396	170.86	395.13
178.2	390.25	178.58	390	182.03	388.28	182.59	388	185.97	386.32
186.61	386	189.92	384.35	190.62	384	200.21	384	204.61	384
211.65	387.49	212.69	388	216.72	390	219.64	391.44	220.76	392
224.8	394	227.61	395.4	228.83	396	231.6	397.37	232.87	398
235.58	399.34	236.91	400	239.56	401.32	240.94	402	243.54	403.29
244.98	404	247.52	405.26	249.02	406	257.14	406.09	270.77	406.21
382.25	406.76	387.27	406.76	400	406.8				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	146.83	.035	224.8	.035

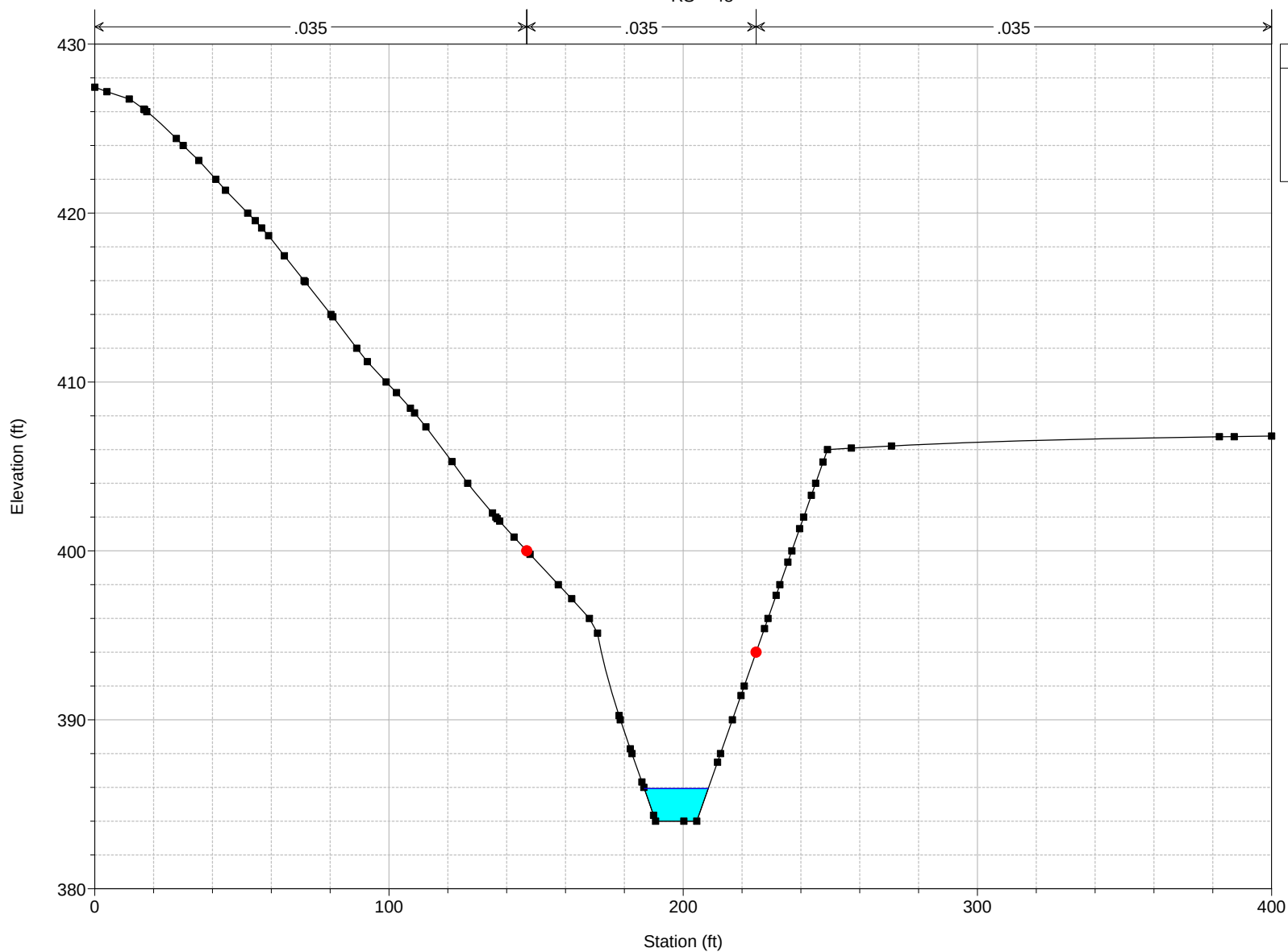
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	146.83	224.8		153.56	40.25	78.21	.1 .3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 386.73	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.80	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 385.93	* Reach Len. (ft)	* 153.56	* 40.25	* 78.21
* Crit W.S. (ft)	* 385.93	* Flow Area (sq ft)		* 34.54	
* E.G. Slope (ft/ft)	* 0.016353	* Area (sq ft)		* 34.54	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 21.76	* Top Width (ft)		* 21.76	
* Vel Total (ft/s)	* 7.19	* Avg. Vel. (ft/s)		* 7.19	
* Max Chl Dpth (ft)	* 1.93	* Hydr. Depth (ft)		* 1.59	
* Conv. Total (cfs)	* 1941.7	* Conv. (cfs)		* 1941.7	
* Length Wtd. (ft)	* 40.25	* Wetted Per. (ft)		* 22.67	
* Min Ch El (ft)	* 384.00	* Shear (lb/sq ft)		* 1.56	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.82	* Cum Volume (acre-ft)		* 0.96	* 0.00
* C & E Loss (ft)	* 0.00	* Cum SA (acres)		* 0.77	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 48



CROSS SECTION

REACH: Reach-1

RS: 38.1

INPUT

Description: 38.1

Station Elevation Data		num= 9	
Sta	Elev	Sta	Elev
0	477.53	104.9	430
207.49	384	216.01	390

Manning's n Values

num= 3	
Sta	n Val
0	.035
104.9	.035
257.59	.035

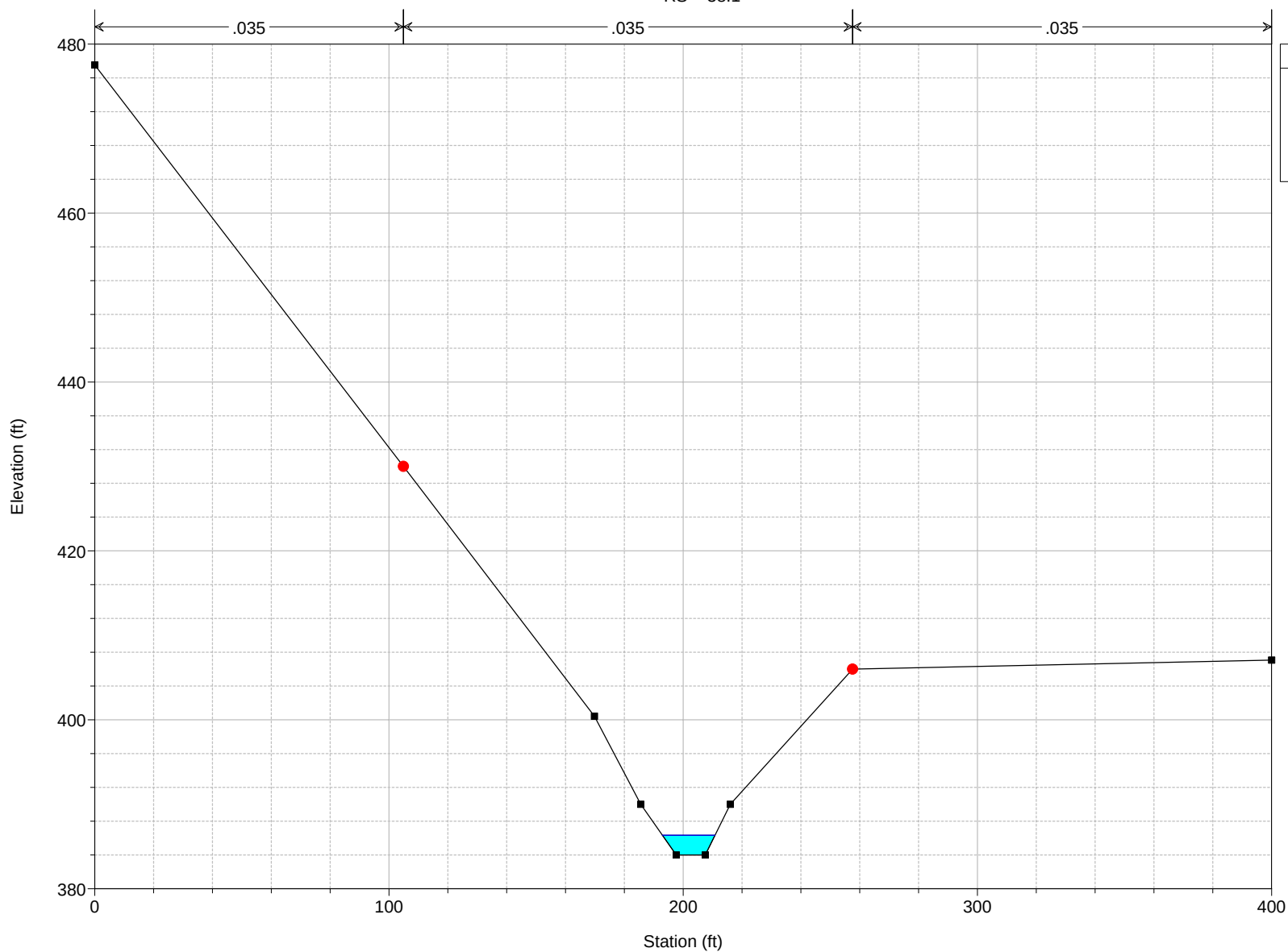
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	104.9	257.59		2022.92	2022.92	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 387.25	* Element	* Left OB	* Channel	* Right OB	*	
* Vel Head (ft)	* 0.92	* Wt. n-Val.	*	* 0.035	*	*	
* W.S. Elev (ft)	* 386.33	* Reach Len. (ft)	* 2022.92	* 2022.92	* 2022.92	*	
* Crit W.S. (ft)	* 386.33	* Flow Area (sq ft)	*	* 32.30	*	*	
* E.G. Slope (ft/ft)	* 0.016312	* Area (sq ft)	*	* 32.30	*	*	
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.30	*	*	
* Top Width (ft)	* 17.85	* Top Width (ft)	*	* 17.85	*	*	
* Vel Total (ft/s)	* 7.69	* Avg. Vel. (ft/s)	*	* 7.69	*	*	
* Max Chl Dpth (ft)	* 2.33	* Hydr. Depth (ft)	*	* 1.81	*	*	
* Conv. Total (cfs)	* 1944.1	* Conv. (cfs)	*	* 1944.1	*	*	
* Length Wtd. (ft)	* 2022.92	* Wetted Per. (ft)	*	* 19.14	*	*	
* Min Ch El (ft)	* 384.00	* Shear (lb/sq ft)	*	* 1.72	*	*	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00	*	
* Frctn Loss (ft)	* 0.66	* Cum Volume (acre-ft)	*	* 0.93	* 0.00	*	
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	*	* 0.75	* 0.01	*	

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 38.1



CULVERT

REACH: Reach-1

RS: 38

INPUT

Description: RCP-Culvert 66in

Distance from Upstream XS = 1

Deck/Roadway Width = 2020

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
185.56	390	384	216.01	390	384				

Upstream Bridge Cross Section Data

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	477.53	104.9	430	169.81	400.43	185.56	390	197.65	384
207.49	384	216.01	390	257.59	406	400	407.08		

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	104.9	.035	257.59	.035

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	104.9	257.59	.1		.3

Downstream Deck/Roadway Coordinates

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
194.88	363.66	354	204.8	362.04	354				

Downstream Bridge Cross Section Data

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	367.92	116.96	365.85	194.88	363.66	196.58	354	203.47	354
204.8	362.04	225.1	362.04	309.92	362.04	400	362.04		

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	116.96	.035	225.1	.035

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	116.96	225.1	.1		.3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical

Downstream Embankment side slope = 0 horiz. to 1.0 vertical

Maximum allowable submergence for weir flow = .98

Elevation at which weir flow begins =

Energy head used in spillway design =

Spillway height used in design =

Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span

Culvert #1 Circular 5.5

FHWA Chart # 1 - Concrete Pipe Culvert

FHWA Scale # 1 - Square edge entrance with headwall

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
1	2020	.015	.015	0	.2	1

Upstream Elevation = 384

Centerline Station = 200.43

Downstream Elevation = 354

Centerline Station = 200.02

CULVERT OUTPUT Profile #PF 1 Culv Group: Culvert #1

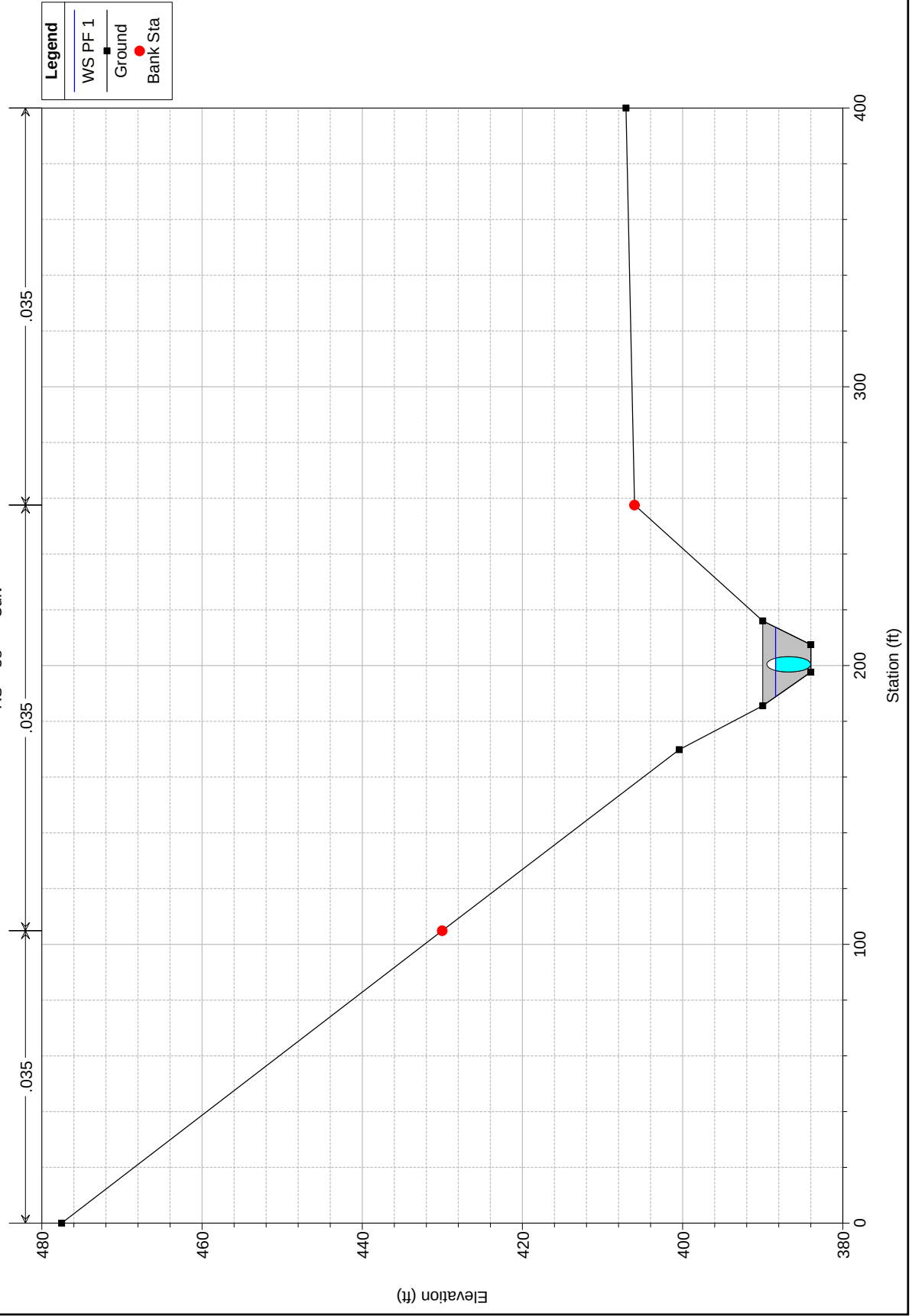
```

*****
* Q Culv Group (cfs)      * 248.30 * Culv Full Len (ft)      *      *
* # Barrels              *      1 * Culv Vel US (ft/s)     * 12.20 *
* Q Barrel (cfs)         * 248.30 * Culv Vel DS (ft/s)     * 16.14 *
* E.G. US. (ft)          * 387.25 * Culv Inv El Up (ft)    * 384.00 *
* W.S. US. (ft)          * 386.33 * Culv Inv El Dn (ft)    * 354.00 *
* E.G. DS (ft)           * 358.88 * Culv Frctn Ls (ft)     * 29.27 *
* W.S. DS (ft)           * 357.32 * Culv Exit Loss (ft)    * 2.56 *
* Delta EG (ft)          * 28.37 * Culv Entr Loss (ft)    * 0.00 *
* Delta WS (ft)          * 29.01 * Q Weir (cfs)           *      *
* E.G. IC (ft)           *      * Weir Sta Lft (ft)      *      *
* E.G. OC (ft)           *      * Weir Sta Rgt (ft)      *      *
* Culvert Control        * Outlet * Weir Submerg           *      *
* Culv WS Inlet (ft)     * 388.40 * Weir Max Depth (ft)    *      *
* Culv WS Outlet (ft)    * 357.39 * Weir Avg Depth (ft)    *      *
* Culv Nml Depth (ft)    * 3.39 * Weir Flow Area (sq ft) *      *
* Culv Crt Depth (ft)    * 4.40 * Min El Weir Flow (ft) * 390.01 *
*****

```

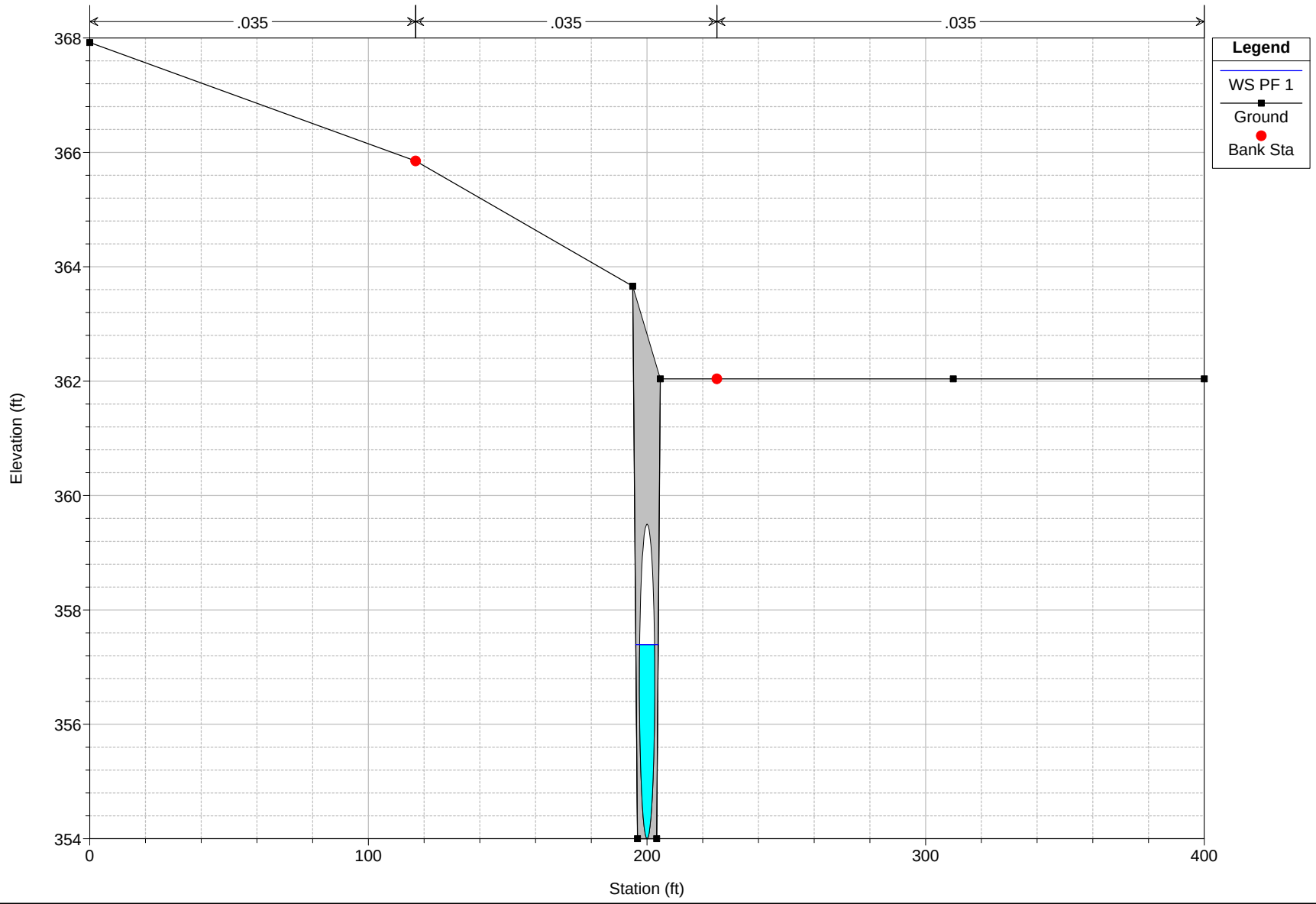

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 38 Culv



Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 38 Culv



CROSS SECTION

REACH: Reach-1

RS: 6.1

INPUT

Description: 80.1

Station Elevation Data		num= 9		Sta Elev		Sta Elev		Sta Elev		Sta Elev	
0	367.92	116.96	365.85	194.88	363.66	196.58	354	203.47	354		
204.8	362.04	225.1	362.04	309.92	362.04	400	362.04				

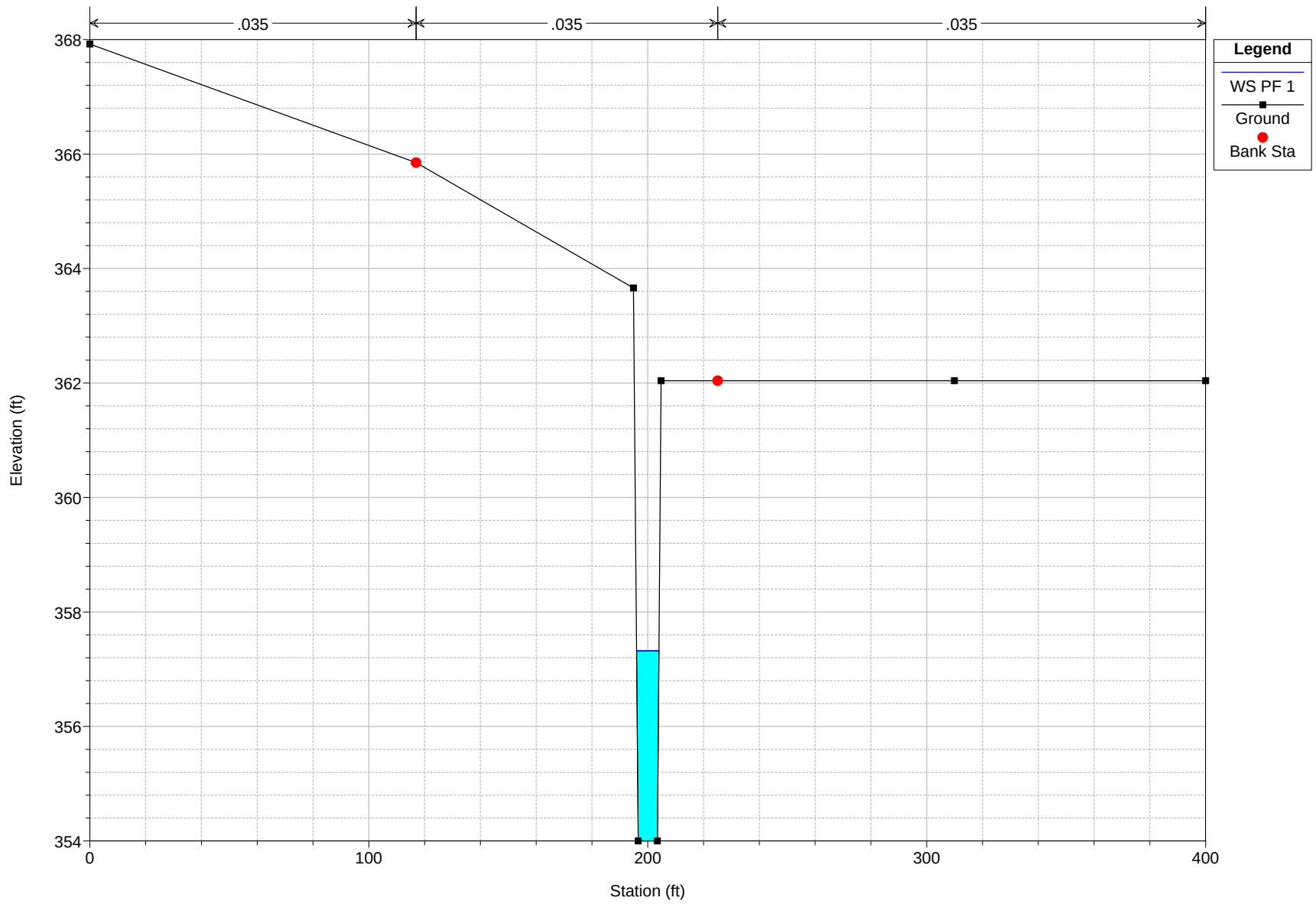
Manning's n Values		num= 3		Sta n Val		Sta n Val		Sta n Val	
0	.035	116.96	.035	225.1	.035				

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	116.96	225.1		56.91	37.57	18.27	.1 .3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 358.88	* Element	* Left OB	* Channel	* Right OB	*	
* Vel Head (ft)	* 1.56	* Wt. n-Val.	*	* 0.035	*	*	
* W.S. Elev (ft)	* 357.32	* Reach Len. (ft)	* 56.91	* 37.57	* 18.27	*	
* Crit W.S. (ft)	* 357.32	* Flow Area (sq ft)	*	* 24.78	*	*	
* E.G. Slope (ft/ft)	* 0.025107	* Area (sq ft)	*	* 24.78	*	*	
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.30	*	*	
* Top Width (ft)	* 8.02	* Top Width (ft)	*	* 8.02	*	*	
* Vel Total (ft/s)	* 10.02	* Avg. Vel. (ft/s)	*	* 10.02	*	*	
* Max Chl Dpth (ft)	* 3.32	* Hydr. Depth (ft)	*	* 3.09	*	*	
* Conv. Total (cfs)	* 1567.0	* Conv. (cfs)	*	* 1567.0	*	*	
* Length Wtd. (ft)	* 37.57	* Wetted Per. (ft)	*	* 13.63	*	*	
* Min Ch El (ft)	* 354.00	* Shear (lb/sq ft)	*	* 2.85	*	*	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00	*	
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	*	* 0.20	* 0.00	*	
* C & E Loss (ft)	*	* Cum SA (acres)	*	* 0.15	* 0.01	*	

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 6.1



CROSS SECTION
REACH: Reach-1

RS: 6

INPUT

Description: 80

Station Elevation Data num= 71

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	368	7.98	368	35.61	367.02	42.82	366.9	45.45	366.77
49.01	366.65	53.23	366.54	57.1	366.47	60.1	366.44	63.44	366.42
64.77	366.42	66.72	366.41	98.8	366	106.45	365.89	106.75	365.89
107.62	365.88	108.08	365.87	108.61	365.86	108.94	365.85	109.22	365.85
109.7	365.83	110.39	365.82	111.14	365.8	112.45	365.75	116.53	365.58
122.03	365.37	130.63	365.09	161.1	364	163.77	362.66	165.1	362
167.87	360.61	169.1	360	173.1	358	174.94	357.39	182.1	355
183.4	354.56	185.1	354	188.1	353	202.28	353	204.14	353.38
205.29	353.39	206.39	353.23	209.89	353.48	213.75	354	215.8	354.71
215.89	356	215.97	357.29	217.49	358	219.29	359.1	221.42	360
233.13	360	234.51	359.3	234.83	359.33	234.89	359.19	235.49	358.94
236.65	358.7	237.78	358.57	237.85	358.61	237.99	358.6	244.97	358.36
265.03	358	284.46	357.75	286.22	357.76	287.12	357.78	289.25	357.86
291.78	357.84	291.89	357.84	294.78	357.81	300.27	357.72	332.27	357.43
400	356.31								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	161.1	.035	221.42	.035

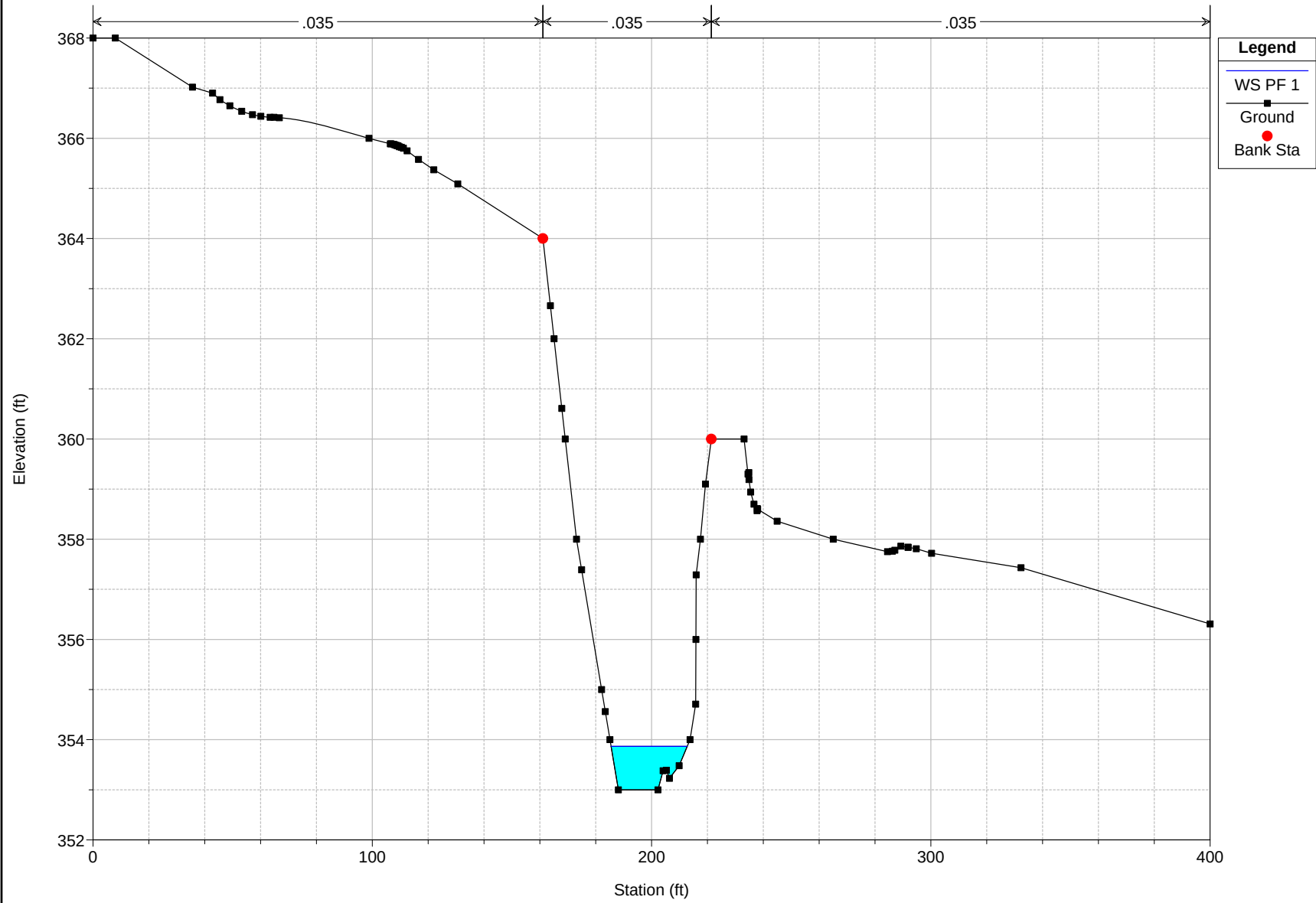
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	161.1	221.42		75.91	50	23.95	.1 .3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 356.75	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 2.89	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 353.87	* Reach Len. (ft)	* 75.91	* 50.00	* 23.95
* Crit W.S. (ft)	* 354.57	* Flow Area (sq ft)		* 18.22	
* E.G. Slope (ft/ft)	* 0.178511	* Area (sq ft)		* 18.22	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 27.27	* Top Width (ft)		* 27.27	
* Vel Total (ft/s)	* 13.63	* Avg. Vel. (ft/s)		* 13.63	
* Max Chl Dpth (ft)	* 0.87	* Hydr. Depth (ft)		* 0.67	
* Conv. Total (cfs)	* 587.7	* Conv. (cfs)		* 587.7	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 27.50	
* Min Ch El (ft)	* 353.00	* Shear (lb/sq ft)		* 7.38	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.00	* Cum Volume (acre-ft)		* 0.18	* 0.00
* C & E Loss (ft)	* 0.13	* Cum SA (acres)		* 0.13	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 6



CROSS SECTION
REACH: Reach-1

RS: 5

INPUT

Description: 81

Station Elevation Data				num= 54							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	368	20.27	368	40.98	367.17	61.74	366	84.31	365.36		
104.66	365.06	135.03	364.63	145.54	364.51	157.48	364.31	161.42	364.22		
167.75	364.05	170.6	364	170.74	364	173.62	362.75	175.34	362		
177.08	361.25	179.94	360	180.84	359.61	184.54	358	185.2	357.87		
185.61	357.75	186.66	357.38	190.21	356.21	196.57	354.1	196.86	354		
197.14	353.91	198.06	353.74	199.87	353	203.29	353	207.55	353		
209.61	353.64	210.79	354	217.25	356	219.83	357.2	221.56	358		
229.55	358	231.11	357.29	243.76	356.04	243.88	356.02	244	356.01		
244.71	356	251.35	355.98	252.51	356	267.83	356	278.47	356.07		
285.77	356.19	303.1	356.83	323.59	356.71	324.04	356.7	324.5	356.7		
347.98	356.48	349.44	356.46	399.06	356.02	400	356.01				

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	170.6	.035	229.55	.035

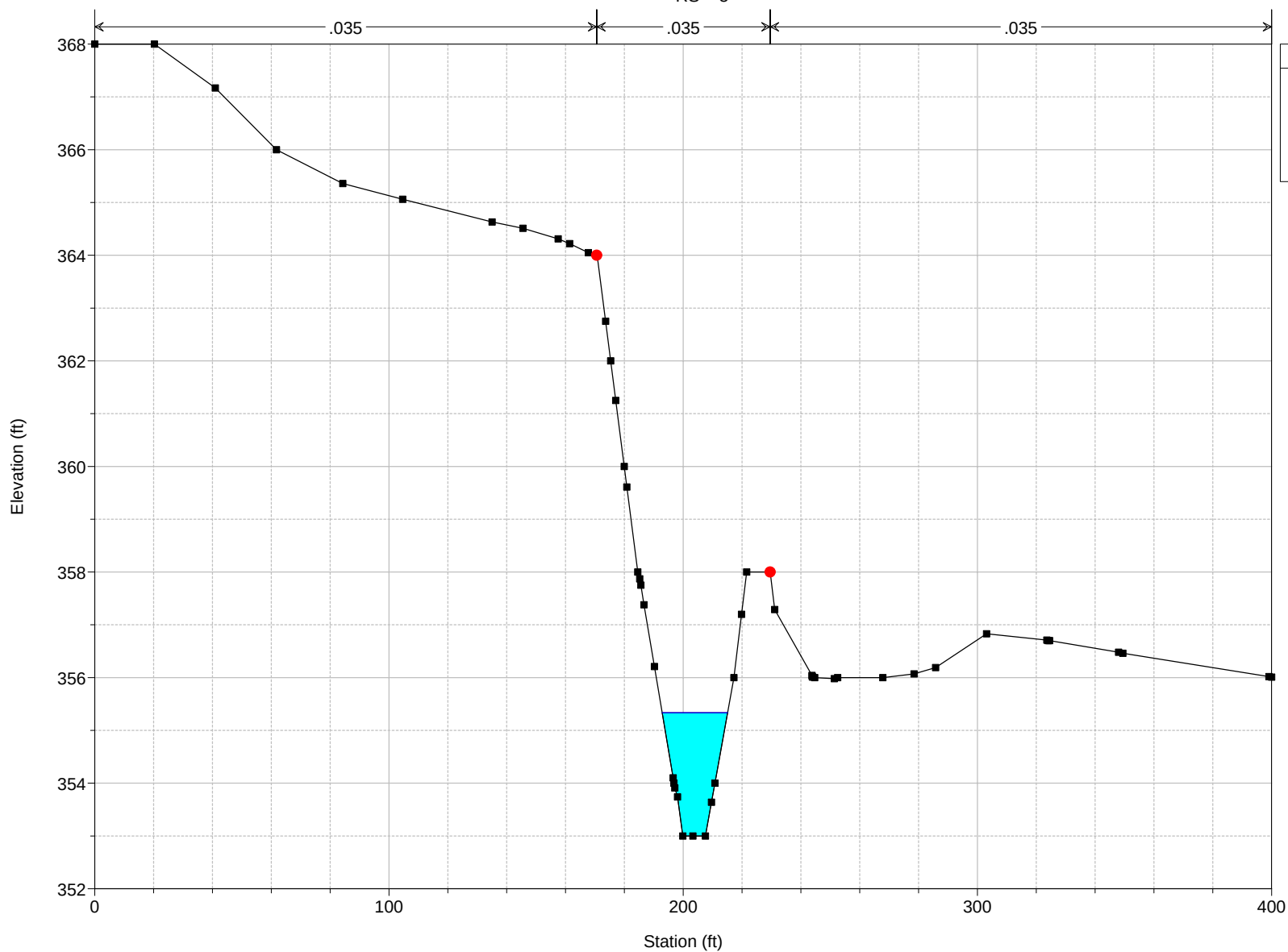
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	170.6	229.55		50	50		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 356.13	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.79	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 355.33	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 355.33	* Flow Area (sq ft)		* 34.74	
* E.G. Slope (ft/ft)	* 0.016343	* Area (sq ft)		* 34.74	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 22.25	* Top Width (ft)		* 22.25	
* Vel Total (ft/s)	* 7.15	* Avg. Vel. (ft/s)		* 7.15	
* Max Chl Dpth (ft)	* 2.33	* Hydr. Depth (ft)		* 1.56	
* Conv. Total (cfs)	* 1942.3	* Conv. (cfs)		* 1942.3	
* Length Wtd. (ft)	* 50.00	* Wetted Per. (ft)		* 23.00	
* Min Ch El (ft)	* 353.00	* Shear (lb/sq ft)		* 1.54	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 0.15	* 0.00
* C & E Loss (ft)		* Cum SA (acres)		* 0.10	* 0.01

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 5



CROSS SECTION
REACH: Reach-1

RS: 4

INPUT

Description: 82

Station Elevation Data num= 43

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	367.56	77.78	366	169.5	364	169.51	363.94	169.75	362
170.34	361.58	171.79	360.37	172.25	360	176.25	358	176.94	357.86
185.12	356	194.12	353	195.18	352.65	197.12	352	203.82	352
207.52	351.95	207.62	352	208.29	352.22	210.62	353	211.3	353.23
213.62	354	216.62	355	217.12	355	238.82	354.72	240.05	354.72
303.35	354	310.58	353.82	313.79	353.75	316.77	353.77	319.61	353.8
321.21	353.84	322.25	353.9	324.18	353.93	330.09	354	361.68	354.15
365.2	354.15	367.62	354.14	370.67	354.14	375.9	354.12	387.34	354.05
393.47	354	395.04	353.99	400	353.94				

Manning's n Values num= 3

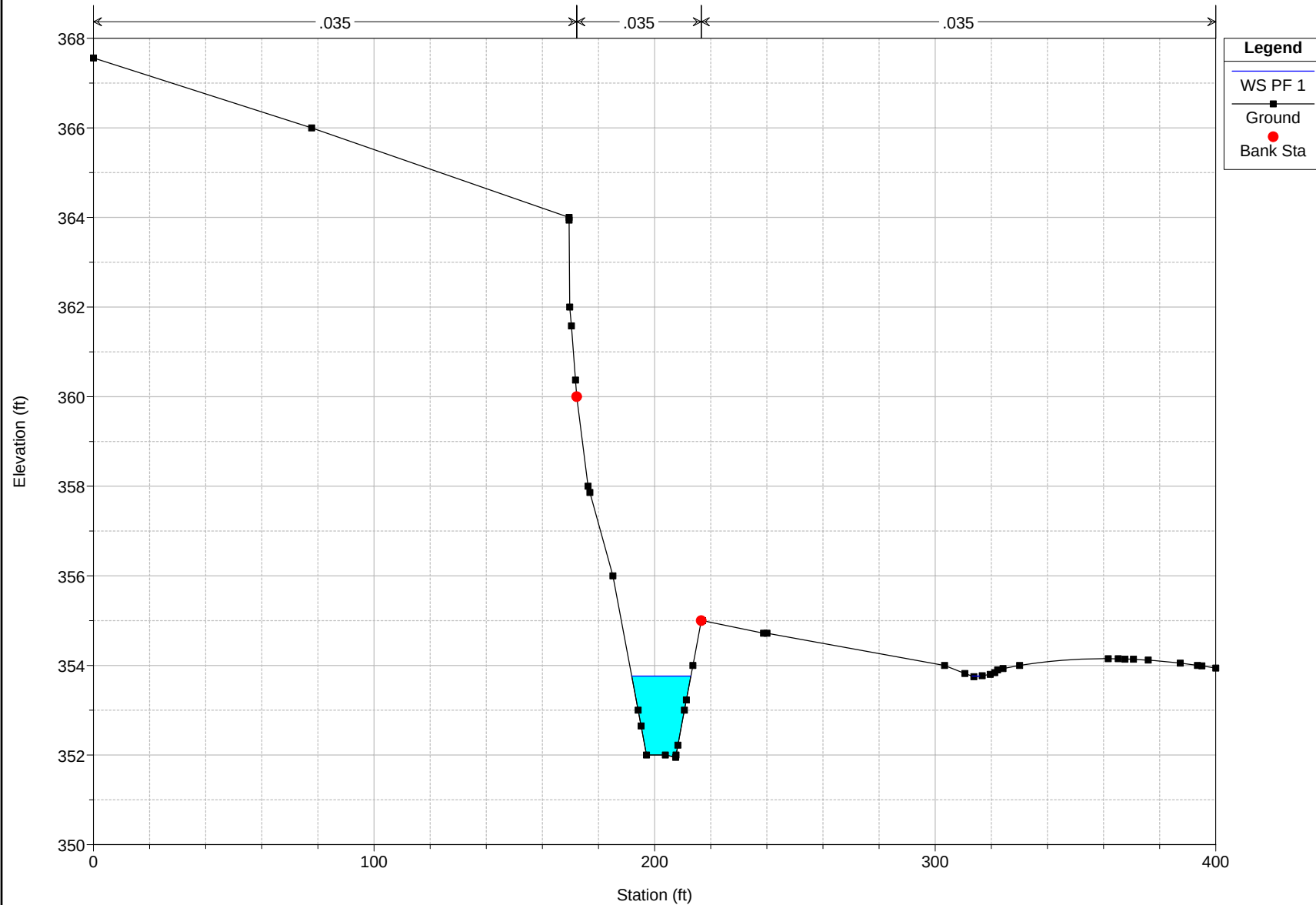
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	172.25	.035	216.62	.035

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	172.25	216.62	114.7	50	206.29		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 354.99	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.23	* Wt. n-Val.	* 0.035	* 0.035	*
* W.S. Elev (ft)	* 353.76	* Reach Len. (ft)	* 114.70	* 50.00	* 206.29
* Crit W.S. (ft)	* 354.36	* Flow Area (sq ft)	*	* 27.95	* 0.02
* E.G. Slope (ft/ft)	* 0.031193	* Area (sq ft)	*	* 27.95	* 0.02
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.29	* 0.01
* Top Width (ft)	* 23.79	* Top Width (ft)	*	* 21.08	* 2.71
* Vel Total (ft/s)	* 8.88	* Avg. Vel. (ft/s)	*	* 8.88	* 0.27
* Max Chl Dpth (ft)	* 1.81	* Hydr. Depth (ft)	*	* 1.33	* 0.01
* Conv. Total (cfs)	* 1405.9	* Conv. (cfs)	*	* 1405.9	* 0.0
* Length Wtd. (ft)	*	* Wetted Per. (ft)	*	* 21.67	* 2.71
* Min Ch El (ft)	* 351.95	* Shear (lb/sq ft)	*	* 2.51	* 0.01
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 400.00	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.10	* Cum Volume (acre-ft)	*	* 0.12	* 0.00
* C & E Loss (ft)	* 0.04	* Cum SA (acres)	*	* 0.08	* 0.01

RS = 4



CROSS SECTION
REACH: Reach-1

RS: 3

INPUT

Description: 83

Station Elevation Data num= 35

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	367.89	1.9	367.84	61.17	366.67	75.8	366	86.59	365.76
115.75	365.48	131.57	365.38	134.44	365.27	142.34	365.04	147.02	364.89
162.71	364.34	171.9	364	172.02	363.1	172.15	362	172.27	361.08
172.41	360	173.28	359.38	175.92	358	181.05	356.82	184.8	356
186.91	355.3	187.8	355	189.92	354.29	190.8	354	195.94	352.29
196.8	352	197.41	351.95	206.28	351.84	206.59	352	211.85	353.75
212.59	354	214.86	354.76	215.59	355	216.09	355	286.83	354.1

Manning's n Values num= 3

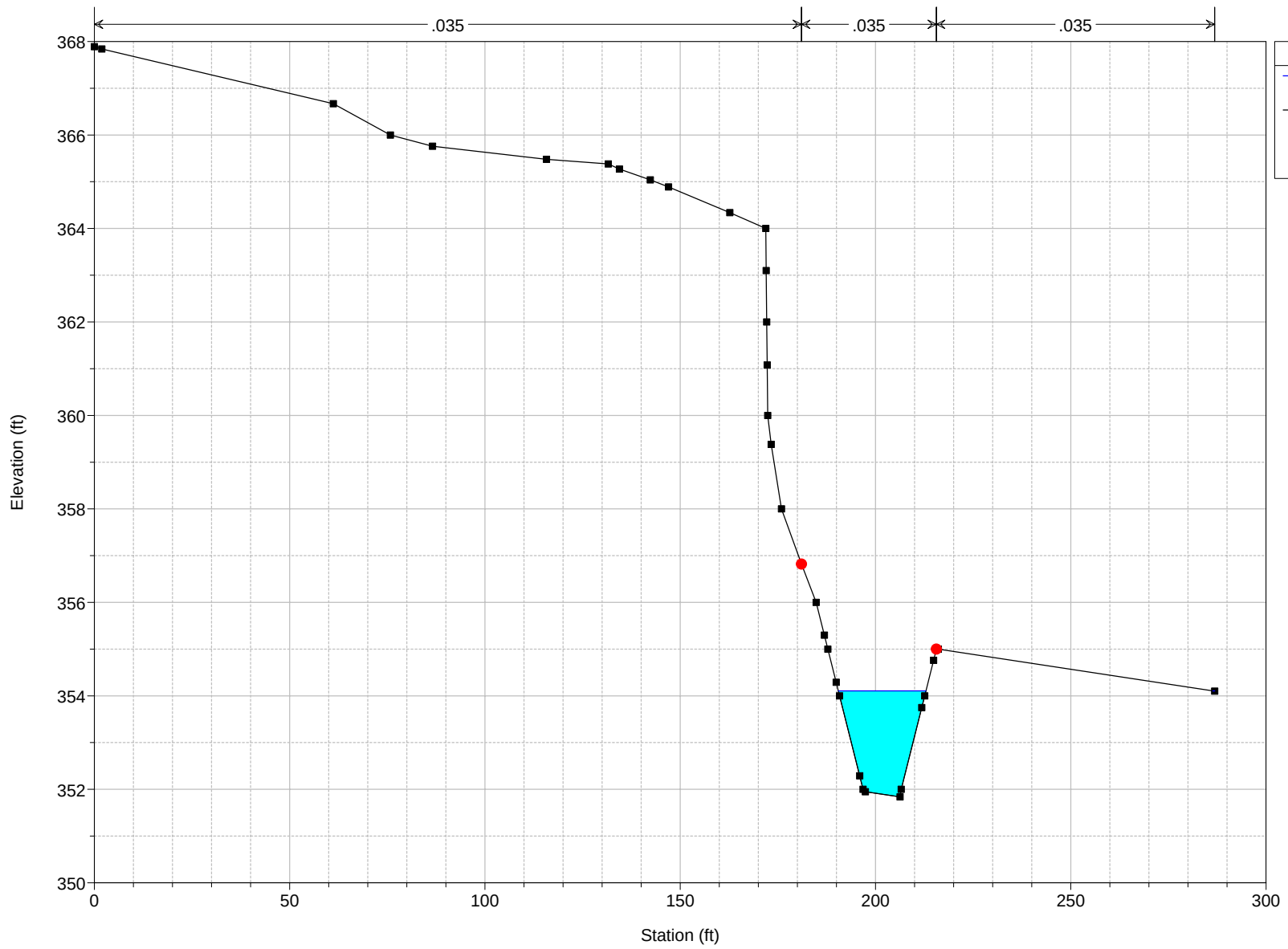
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	181.05	.035	215.59	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	181.05	215.59		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 354.89	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.79	* Wt. n-Val.	* 0.035	* 0.000	*
* W.S. Elev (ft)	* 354.11	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 354.11	* Flow Area (sq ft)	*	* 34.90	* 0.00
* E.G. Slope (ft/ft)	* 0.016251	* Area (sq ft)	*	* 34.90	* 0.00
* Q Total (cfs)	* 248.30	* Flow (cfs)	*	* 248.30	* 0.00
* Top Width (ft)	* 22.92	* Top Width (ft)	*	* 22.43	* 0.49
* Vel Total (ft/s)	* 7.11	* Avg. Vel. (ft/s)	*	* 7.11	* 0.11
* Max Chl Dpth (ft)	* 2.27	* Hydr. Depth (ft)	*	* 1.56	* 0.00
* Conv. Total (cfs)	* 1947.8	* Conv. (cfs)	*	* 1947.8	* 0.0
* Length Wtd. (ft)	*	* Wetted Per. (ft)	*	* 23.15	* 0.49
* Min Ch El (ft)	* 351.84	* Shear (lb/sq ft)	*	* 1.53	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 286.83	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	*	* 0.08	* 0.00
* C & E Loss (ft)	*	* Cum SA (acres)	*	* 0.06	* 0.00

Basin103-1 Plan: Imported Plan 01 6/13/2013
RS = 3



Legend

- WS PF 1
- Ground
- Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 2

INPUT

Description: 84

Station Elevation Data		num=		51							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	368	61.24	368	65.01	367.4	78.64	367.46	82.8	368		
116.54	368	119.94	366.4	120.78	366	122.99	364.96	127.6	364		
132.36	363.35	133.53	363.37	134.96	364	138.98	365.24	139.81	365.33		
140.34	365.33	145.01	365.19	146.56	364.99	149.16	364	150.3	362.64		
152.46	362.73	153.98	363.18	154.41	363.4	156.86	362.99	161.01	362		
165.93	359.57	169.12	358	171.48	357.65	182.34	356	183.57	355.6		
185.38	355	186.52	354.62	188.42	354	189.48	353.65	191.46	353		
192.44	352.68	194.5	352	197.17	351.95	199.09	351.8	205.04	351.73		
205.36	351.9	206.89	351.93	207.62	352	209.71	352.7	210.62	353		
216.62	355	217.12	355	219.83	354.22	222.91	354.81	225.42	354.81		
236.55	354.69										

Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	171.48	.035	222.91	.035

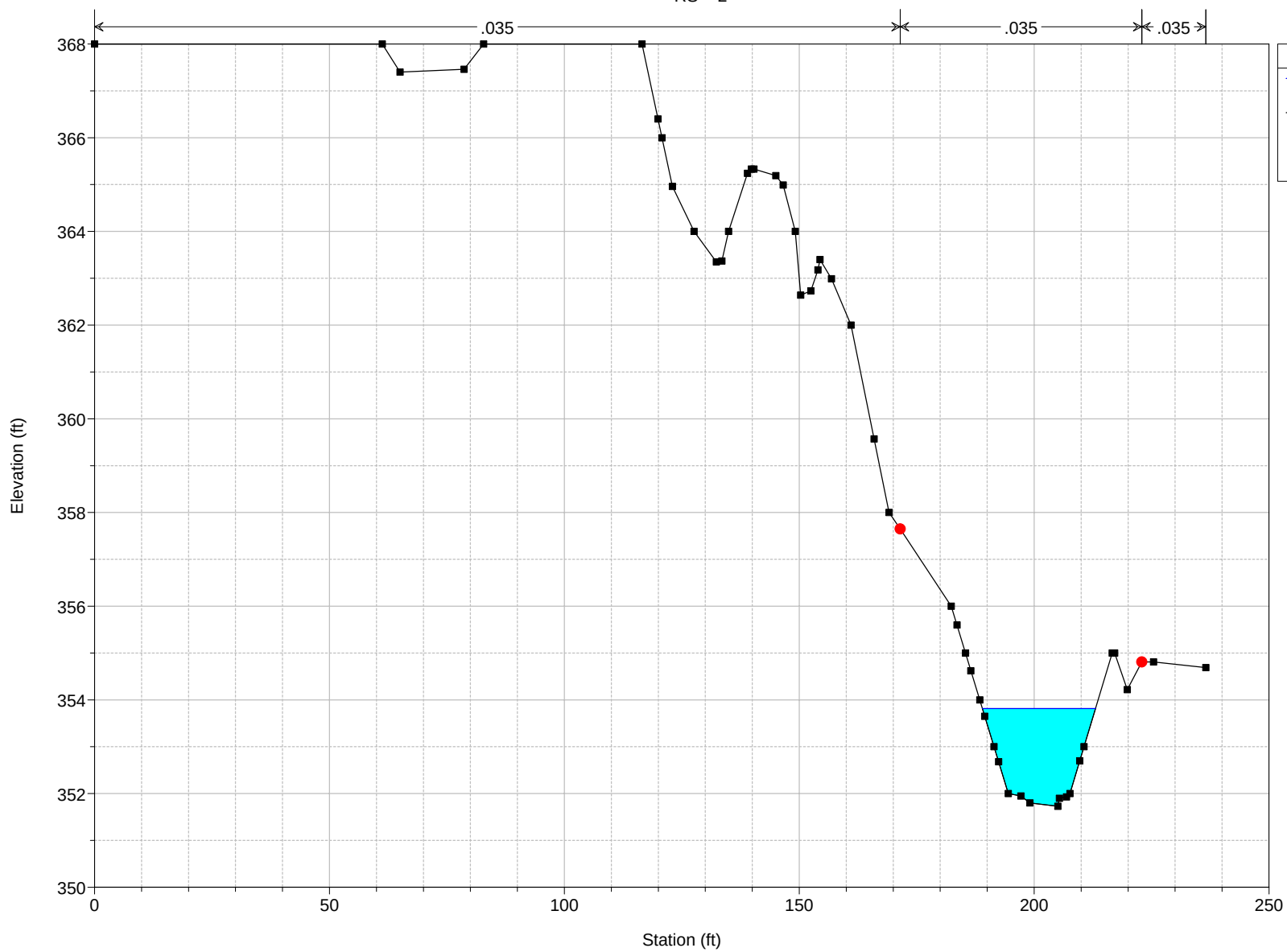
Bank Sta:	Left	Right	Lengths:		Left Channel	Right	Coeff Contr.	Expan.
	171.48	222.91			50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 354.57	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.75	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 353.81	* Reach Len. (ft)	* 50.00	* 50.00	* 50.00
* Crit W.S. (ft)	* 353.81	* Flow Area (sq ft)		* 35.66	
* E.G. Slope (ft/ft)	* 0.016503	* Area (sq ft)		* 35.66	
* Q Total (cfs)	* 248.30	* Flow (cfs)		* 248.30	
* Top Width (ft)	* 24.08	* Top Width (ft)		* 24.08	
* Vel Total (ft/s)	* 6.96	* Avg. Vel. (ft/s)		* 6.96	
* Max Chl Dpth (ft)	* 2.08	* Hydr. Depth (ft)		* 1.48	
* Conv. Total (cfs)	* 1932.8	* Conv. (cfs)		* 1932.8	
* Length Wtd. (ft)		* Wetted Per. (ft)		* 24.72	
* Min Ch El (ft)	* 351.73	* Shear (lb/sq ft)		* 1.49	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 236.55	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)		* 0.04	
* C & E Loss (ft)		* Cum SA (acres)		* 0.03	

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 2



Legend

- WS PF 1
- Ground
- Bank Sta

CROSS SECTION
REACH: Reach-1

RS: 1

INPUT

Description: 85

Station Elevation Data

num=

44

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	368	54.19	368	62	368.4	63.63	368.6	68.37	368.6
77.1	368.62	91.39	368.62	130.38	368.21	133.66	368	137.84	366
140.09	364.93	142.03	364	144.25	362.94	146.21	362	153.25	362
156.3	360.99	162.68	360	165.61	358.12	168.29	358	175.57	357.24
177.91	356.91	179.63	356	181.92	355.24	182.63	355	184.92	354.24
185.63	354	191.63	352	194.59	351.85	196.86	351.79	198.99	351.74
199.78	351.73	200.76	351.66	203.79	351.62	203.96	351.7	204.74	351.72
205.31	351.77	206.45	351.9	207.13	351.98	207.31	352	212.55	353.75
213.31	354	215.57	354.75	216.31	355	216.81	355		

Manning's n Values

num=

3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	175.57	.035	216.31	.035

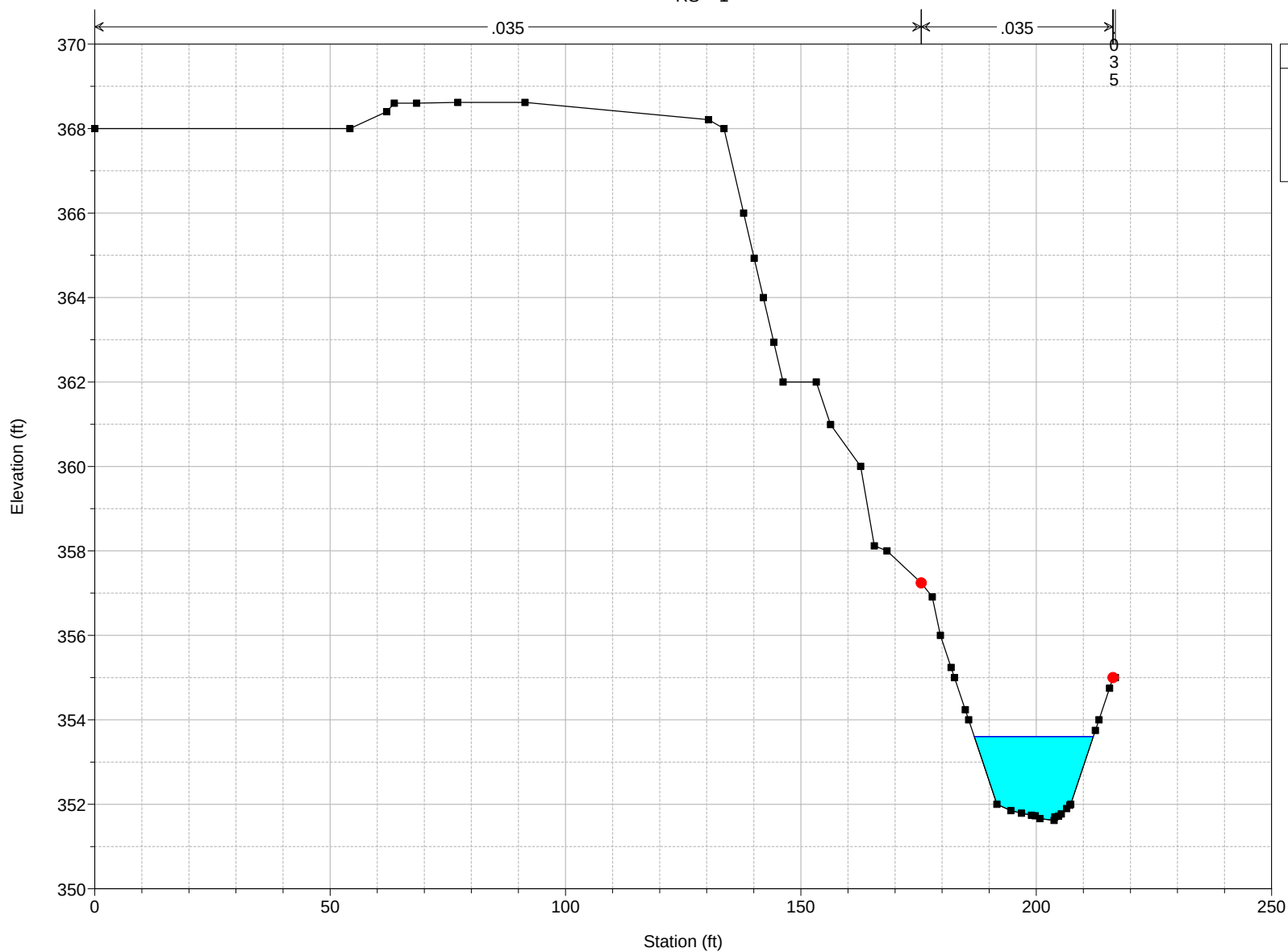
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	175.57	216.31		50	50	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

* E.G. Elev (ft)	* 354.33	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.73	* Wt. n-Val.	* 0.035		
* W.S. Elev (ft)	* 353.60	* Reach Len. (ft)			
* Crit W.S. (ft)	* 353.60	* Flow Area (sq ft)		36.27	
* E.G. Slope (ft/ft)	* 0.016562	* Area (sq ft)		36.27	
* Q Total (cfs)	* 248.30	* Flow (cfs)		248.30	
* Top Width (ft)	* 25.30	* Top Width (ft)		25.30	
* Vel Total (ft/s)	* 6.85	* Avg. Vel. (ft/s)		6.85	
* Max Chl Dpth (ft)	* 1.98	* Hydr. Depth (ft)		1.43	
* Conv. Total (cfs)	* 1929.4	* Conv. (cfs)		1929.4	
* Length Wtd. (ft)		* Wetted Per. (ft)		25.86	
* Min Ch El (ft)	* 351.62	* Shear (lb/sq ft)		1.45	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 216.81	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)			
* C & E Loss (ft)		* Cum SA (acres)			

Basin103-1 Plan: Imported Plan 01 6/13/2013

RS = 1



Legend

- WS PF 1
- Ground
- Bank Sta