

# Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Tuesday, Apr 14 2020

<Name>

## Trapezoidal

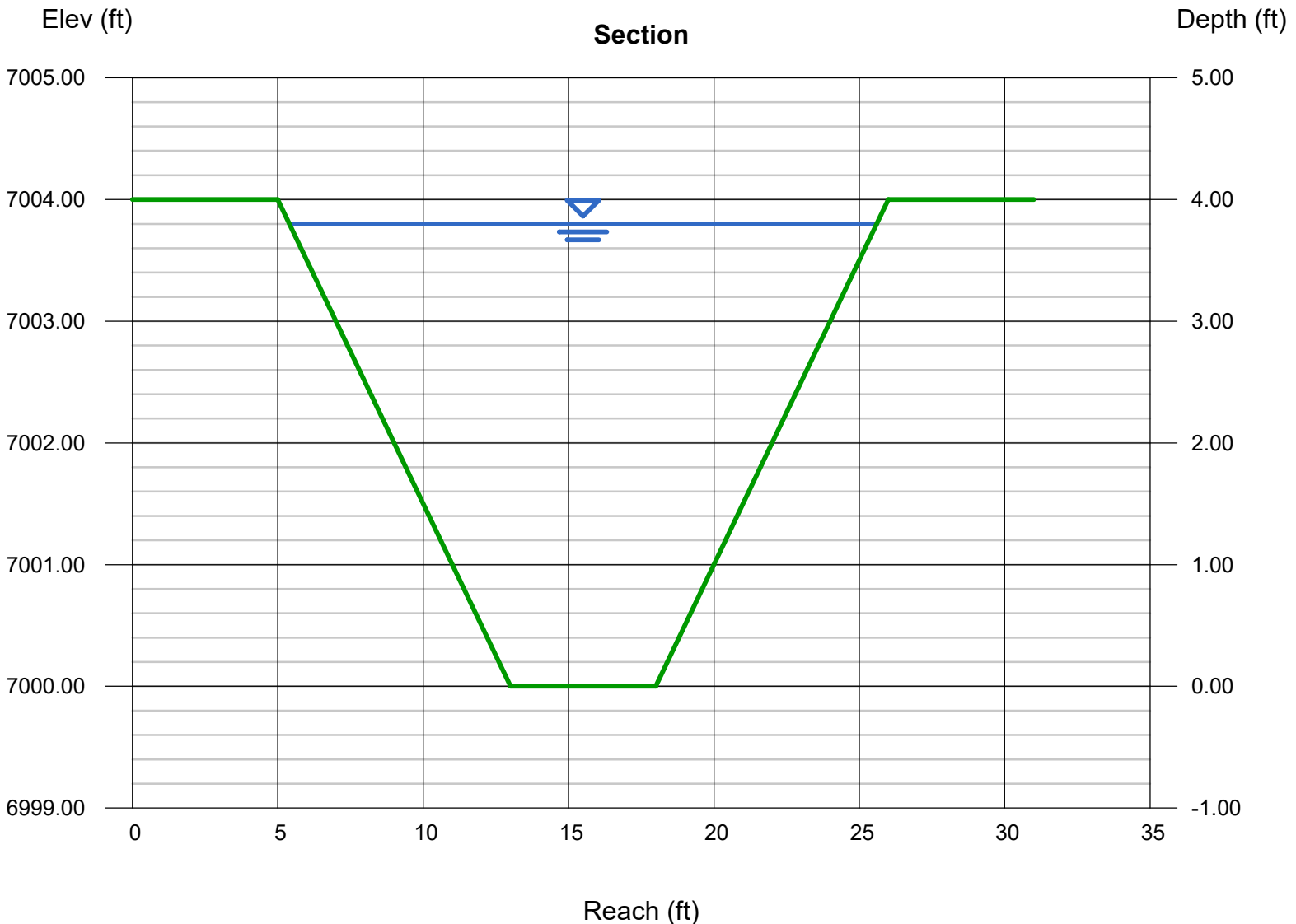
Bottom Width (ft) = 5.00  
Side Slopes (z:1) = 2.00, 2.00  
Total Depth (ft) = 4.00  
Invert Elev (ft) = 7000.00  
Slope (%) = 1.00  
N-Value = 0.013

## Highlighted

Depth (ft) = 3.80  
Q (cfs) = 919.55  
Area (sqft) = 47.88  
Velocity (ft/s) = 19.21  
Wetted Perim (ft) = 21.99  
Crit Depth, Yc (ft) = 4.00  
Top Width (ft) = 20.20  
EGL (ft) = 9.53

## Calculations

Compute by: Q vs Depth  
No. Increments = 20



Depth	Q	Area	Veloc	Wp	Yc	TopWidth	Energy
(ft)	(cfs)	(sqft)	(ft/s)	(ft)	(ft)	(ft)	(ft)
0.08	0.854	0.413	2.07	5.36	0.10	5.32	0.15
0.16	2.732	0.851	3.21	5.72	0.21	5.64	0.32
0.24	5.419	1.315	4.12	6.07	0.32	5.96	0.50
0.32	8.839	1.805	4.90	6.43	0.44	6.28	0.69
0.40	12.96	2.320	5.59	6.79	0.55	6.60	0.89
0.48	17.76	2.861	6.21	7.15	0.67	6.92	1.08
0.56	23.23	3.427	6.78	7.50	0.79	7.24	1.27
0.64	29.37	4.019	7.31	7.86	0.91	7.56	1.47
0.72	36.18	4.637	7.80	8.22	1.02	7.88	1.67
0.80	43.67	5.280	8.27	8.58	1.14	8.20	1.86
0.88	51.84	5.949	8.71	8.94	1.26	8.52	2.06
0.96	60.70	6.643	9.14	9.29	1.38	8.84	2.26
1.04	70.27	7.363	9.54	9.65	1.50	9.16	2.46
1.12	80.55	8.109	9.93	10.01	1.61	9.48	2.65
1.20	91.55	8.880	10.31	10.37	1.73	9.80	2.85
1.28	103.3	9.677	10.67	10.72	1.85	10.12	3.05
1.36	115.8	10.50	11.03	11.08	1.97	10.44	3.25
1.44	129.0	11.35	11.37	11.44	2.08	10.76	3.45
1.52	143.0	12.22	11.70	11.80	2.20	11.08	3.65
1.60	157.8	13.12	12.03	12.16	2.32	11.40	3.85
1.68	173.4	14.04	12.35	12.51	2.44	11.72	4.05
1.76	189.8	15.00	12.66	12.87	2.55	12.04	4.25
1.84	207.0	15.97	12.96	13.23	2.67	12.36	4.45
1.92	225.1	16.97	13.26	13.59	2.79	12.68	4.65
2.00	244.0	18.00	13.55	13.94	2.90	13.00	4.86
2.08	263.7	19.05	13.84	14.30	3.02	13.32	5.06
2.16	284.3	20.13	14.12	14.66	3.14	13.64	5.26
2.24	305.8	21.24	14.40	15.02	3.26	13.96	5.46
2.32	328.2	22.36	14.68	15.38	3.37	14.28	5.67
2.40	351.5	23.52	14.95	15.73	3.49	14.60	5.87
2.48	375.8	24.70	15.21	16.09	3.61	14.92	6.08
2.56	400.9	25.91	15.48	16.45	3.73	15.24	6.28
2.64	427.1	27.14	15.74	16.81	3.85	15.56	6.49
2.72	454.1	28.40	15.99	17.16	3.96	15.88	6.70
2.80	482.2	29.68	16.25	17.52	4.00	16.20	6.90
2.88	511.2	30.99	16.50	17.88	4.00	16.52	7.11
2.96	541.2	32.32	16.74	18.24	4.00	16.84	7.32
3.04	572.2	33.68	16.99	18.60	4.00	17.16	7.53
3.12	604.3	35.07	17.23	18.95	4.00	17.48	7.74
3.20	637.4	36.48	17.47	19.31	4.00	17.80	7.95
3.28	671.5	37.92	17.71	19.67	4.00	18.12	8.16
3.36	706.7	39.38	17.95	20.03	4.00	18.44	8.37
3.44	742.9	40.87	18.18	20.38	4.00	18.76	8.58
3.52	780.2	42.38	18.41	20.74	4.00	19.08	8.79

Depth	Q	Area	Veloc	Wp	Yc	TopWidth	Energy
(ft)	(cfs)	(sqft)	(ft/s)	(ft)	(ft)	(ft)	(ft)
3.60	818.7	43.92	18.64	21.10	4.00	19.40	9.00
3.68	858.2	45.48	18.87	21.46	4.00	19.72	9.21
3.76	898.8	47.08	19.09	21.82	4.00	20.04	9.43
3.84	940.6	48.69	19.32	22.17	4.00	20.36	9.64
3.92	983.5	50.33	19.54	22.53	4.00	20.68	9.86
4.00	1,028	52.00	19.76	22.89	4.00	21.00	10.07

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0.16	2.732	0.851	3.21	5.72	0.21	5.64	0.32
0.24	5.419	1.315	4.12	6.07	0.32	5.96	0.50
0.32	8.839	1.805	4.90	6.43	0.44	6.28	0.69
0.40	12.96	2.320	5.59	6.79	0.55	6.60	0.89
0.48	17.76	2.861	6.21	7.15	0.67	6.92	1.08
0.56	23.23	3.427	6.78	7.50	0.79	7.24	1.27
0.64	29.37	4.019	7.31	7.86	0.91	7.56	1.47
0.72	36.18	4.637	7.80	8.22	1.02	7.88	1.67
0.80	43.67	5.280	8.27	8.58	1.14	8.20	1.86
0.88	51.84	5.949	8.71	8.94	1.26	8.52	2.06
0.96	60.70	6.643	9.14	9.29	1.38	8.84	2.26
1.04	70.27	7.363	9.54	9.65	1.50	9.16	2.46
1.12	80.55	8.109	9.93	10.01	1.61	9.48	2.65
1.20	91.55	8.880	10.31	10.37	1.73	9.80	2.85
1.28	103.3	9.677	10.67	10.72	1.85	10.12	3.05
1.36	115.8	10.50	11.03	11.08	1.97	10.44	3.25
1.44	129.0	11.35	11.37	11.44	2.08	10.76	3.45
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2.56	400.9	25.91	15.48	16.45	3.73	15.24	6.28
2.64	427.1	27.14	15.74	16.81	3.85	15.56	6.49
2.72	454.1	28.40	15.99	17.16	3.96	15.88	6.70
2.80	482.2	29.68	16.25	17.52	4.00	16.20	6.90
2.88	511.2	30.99	16.50	17.88	4.00	16.52	7.11
2.96	541.2	32.32	16.74	18.24	4.00	16.84	7.32
3.04	572.2	33.68	16.99	18.60	4.00	17.16	7.53
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3.92	983.5	50.33	19.54	22.53	4.00	20.68	9.86
4.00	1,028	52.00	19.76	22.89	4.00	21.00	10.07