

Culvert Report

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

Tuesday, Sep 28 2021

New Elk SAE Culvert Calculations

Invert Elev Dn (ft) = 7376.00
Pipe Length (ft) = 40.00
Slope (%) = 10.00
Invert Elev Up (ft) = 7380.00
Rise (in) = 12.0
Shape = Circular
Span (in) = 12.0
No. Barrels = 1
n-Value = 0.023
Culvert Type = Circular Corrugate Metal Pipe
Culvert Entrance = Projecting
Coeff. K,M,c,Y,k = 0.034, 1.5, 0.0553, 0.54, 0.9

Embankment

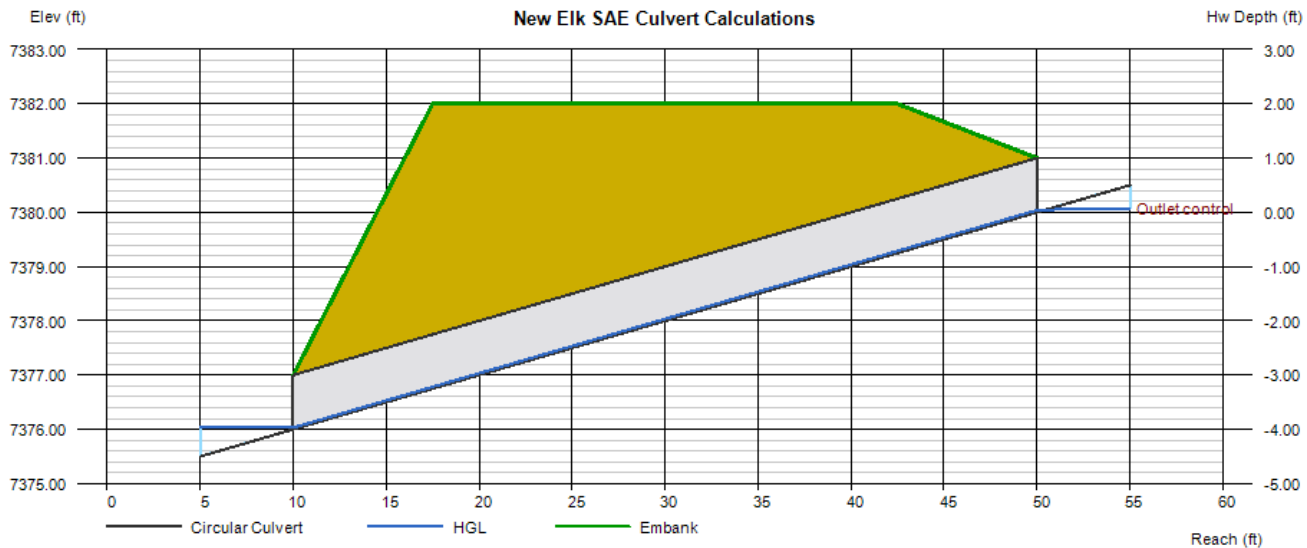
Top Elevation (ft) = 7382.00
Top Width (ft) = 25.00
Crest Width (ft) = 10.00

Calculations

Qmin (cfs) = 0.00
Qmax (cfs) = 0.12
Tailwater Elev (ft) = Normal

Highlighted

Qtotal (cfs) = 0.01
Qpipe (cfs) = 0.01
Qovertop (cfs) = 0.00
Veloc Dn (ft/s) = 1.32
Veloc Up (ft/s) = 0.93
HGL Dn (ft) = 7376.03
HGL Up (ft) = 7380.04
Hw Elev (ft) = 7380.07
Hw/D (ft) = 0.07
Flow Regime = Outlet Control



Q			Veloc		Depth		HGL			
Total	Pipe	Over	Dn	Up	Dn	Up	Dn	Up	Hw	Hw/D
(cfs)	(cfs)	(cfs)	(ft/s)	(ft/s)	(in)	(in)	(ft)	(ft)	(ft)	
0.01	0.01	0.00	1.32	0.93	0.39	0.49	7376.03	7380.04	7380.07	0.07
0.02	0.02	0.00	1.80	1.12	0.50	0.69	7376.04	7380.06	7380.09	0.09
0.03	0.03	0.00	2.06	1.24	0.60	0.84	7376.05	7380.07	7380.12	0.12
0.04	0.04	0.00	2.27	1.33	0.68	0.97	7376.06	7380.08	7380.13	0.13
0.05	0.05	0.00	2.38	1.41	0.76	1.09	7376.06	7380.09	7380.15	0.15
0.06	0.06	0.00	2.56	1.48	0.82	1.20	7376.07	7380.10	7380.16	0.16
0.07	0.07	0.00	2.68	1.54	0.88	1.29	7376.07	7380.11	7380.18	0.18
0.08	0.08	0.00	2.77	1.59	0.95	1.38	7376.08	7380.12	7380.19	0.19
0.09	0.09	0.00	2.89	1.64	1.00	1.46	7376.08	7380.12	7380.20	0.20
0.10	0.10	0.00	2.99	1.69	1.05	1.55	7376.09	7380.13	7380.21	0.21
0.11	0.11	0.00	3.06	1.73	1.10	1.62	7376.09	7380.14	7380.22	0.22
0.12	0.12	0.00	3.12	1.77	1.15	1.70	7376.10	7380.14	7380.23	0.23