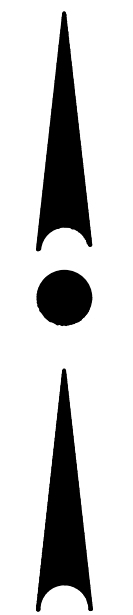
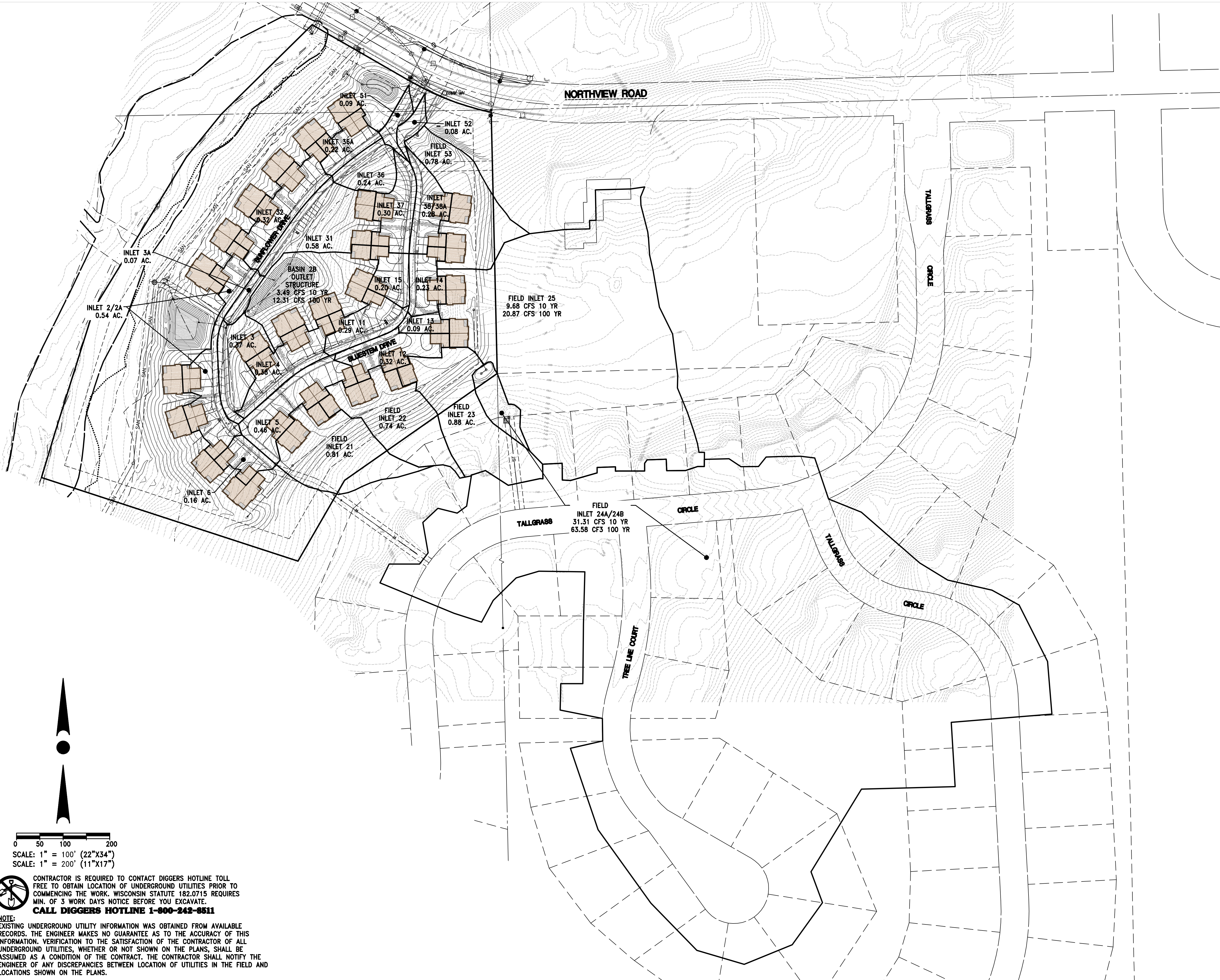


X:\2021\21-059-966 BIELINSKI TALL GRASS WAUKESHA\DRAWINGS\CONSTRUCTION PLANS\CIVIL_TALLGRASS VILLAS_STORM SEWER BASIN MAP_22X34.DWG

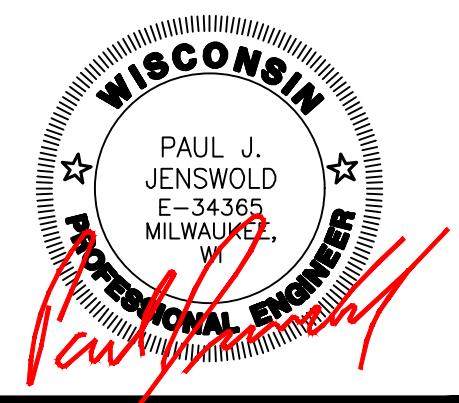


0 50 100 200
SCALE: 1" = 100' (22"x34")
SCALE: 1" = 200' (11"x17")



CONTRACTOR IS REQUIRED TO CONTACT DIGGERS HOTLINE TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING THE WORK. WISCONSIN STATUTE 182.0715 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.
CALL DIGGERS HOTLINE 1-800-242-8511

NOTE:
EXISTING UNDERGROUND UTILITY INFORMATION WAS OBTAINED FROM AVAILABLE RECORDS. THE ENGINEER MAKES NO GUARANTEE AS TO THE ACCURACY OF THIS INFORMATION. VERIFICATION TO THE SATISFACTION OF THE CONTRACTOR OF ALL UNDERGROUND UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE ASSUMED AS A CONDITION OF THE CONTRACT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN LOCATION OF UTILITIES IN THE FIELD AND LOCATIONS SHOWN ON THE PLANS.



4100 N. CALHOUN RD., SUITE 300
BROOKFIELD, WI 53005
PHONE: (262) 790-1480
FAX: (262) 790-1481
EMAIL: jpadelfino@trioeng.com

PROJECT:
TALLGRASS VILLAS
CITY OF WAUKESHA, WISCONSIN
BY: BIELINSKI HOMES
1830 MEADOW LN., SUITE A
PEWAUKEE, WI 53072

REVISION HISTORY	
DATE	DESCRIPTION
1/30/21	PRELIMINARY PLAN SET
2/2/22	CIVIL PLAN SET

DATE:
FEBRUARY 21, 2021

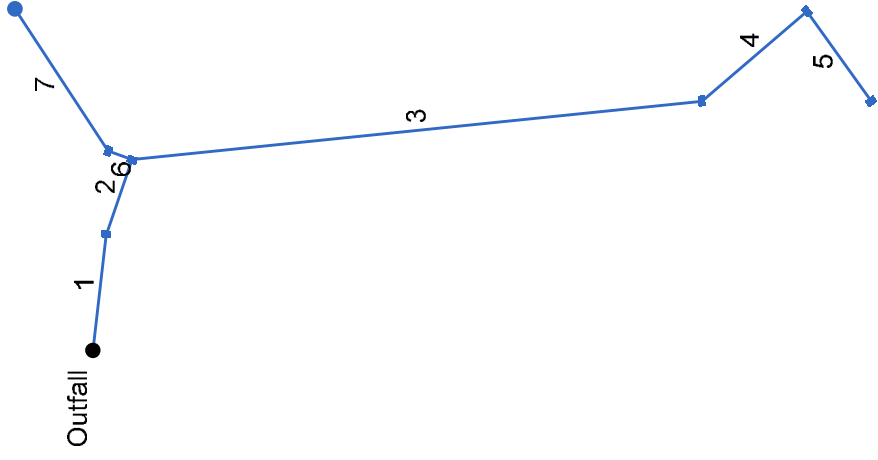
JOB NUMBER:
21-059-966

DESCRIPTION:
STORM SEWER
BASIN MAP

SHEET

E1.0

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Storm Sewer Tabulation

Station	Line	To Line	Len (ft)	Drng Area (ac)		Rknoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev (ft)		HGL Elev (ft)		Grnd / Rim Elev (ft)		Line ID
				Incr	Total		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn	Up	Dn	Up	Dn	Up	
1	End		36.468	0.54	1.98	0.50	0.27	0.99	10.0	12.4	4.8	17.08	24.56	7.63	24	1.18	95.00	95.43	96.23	96.92	0.00	104.69	Pipe 2-1
2	1		25.000	0.37	1.44	0.50	0.19	0.72	10.0	12.3	4.8	15.79	22.62	6.43	24	1.00	95.43	95.68	96.92	97.11	104.69	104.69	Pipe 3-2
3	2		180.227	0.38	1.00	0.50	0.19	0.50	10.0	11.4	5.0	2.51	8.21	6.80	12	5.32	100.69	110.27	101.07	110.95	104.69	114.27	Pipe 4-3
4	3		43.483	0.46	0.62	0.50	0.23	0.31	10.0	11.1	5.1	1.58	4.80	3.25	12	1.82	110.27	111.06	110.95	111.59	114.27	115.89	Pipe 5-4
5	4		34.547	0.16	0.16	0.50	0.08	0.08	10.0	10.0	5.3	0.43	3.58	1.75	12	1.01	111.06	111.41	111.59	111.68	115.89	115.41	Pipe 6-5
6	2		8.000	0.07	0.07	0.50	0.04	0.04	10.0	10.0	5.3	12.50	22.62	5.57	24	1.00	95.68	95.76	97.11	97.03	104.69	104.72	Pipe 3A-3
7	6		53.319	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	12.31	9.85	10.03	15	2.33	95.76	97.00	97.03	98.97	104.72	104.75	Pipe O2B-3A

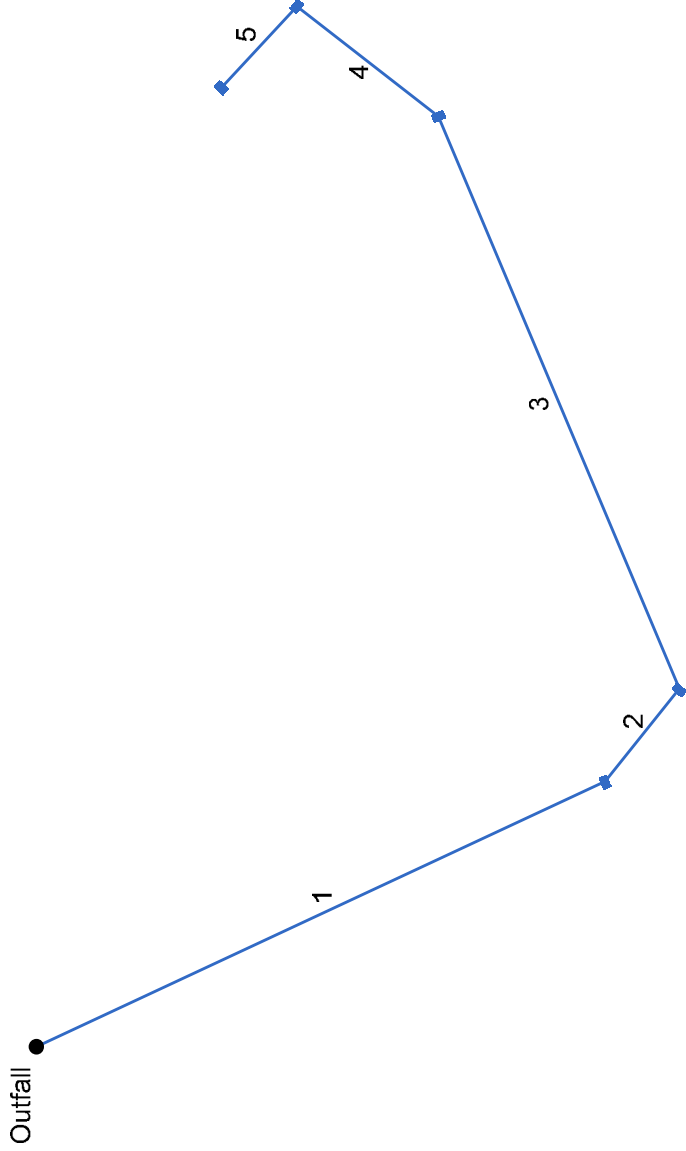
Project File: STM SEWER 1-6.stm

Number of lines: 7

Run Date: 2/17/2022

NOTES: Intensity = 33.54 / (Inlet time + 4.60) ^ 0.68; Return period = Yrs. 10 ; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan

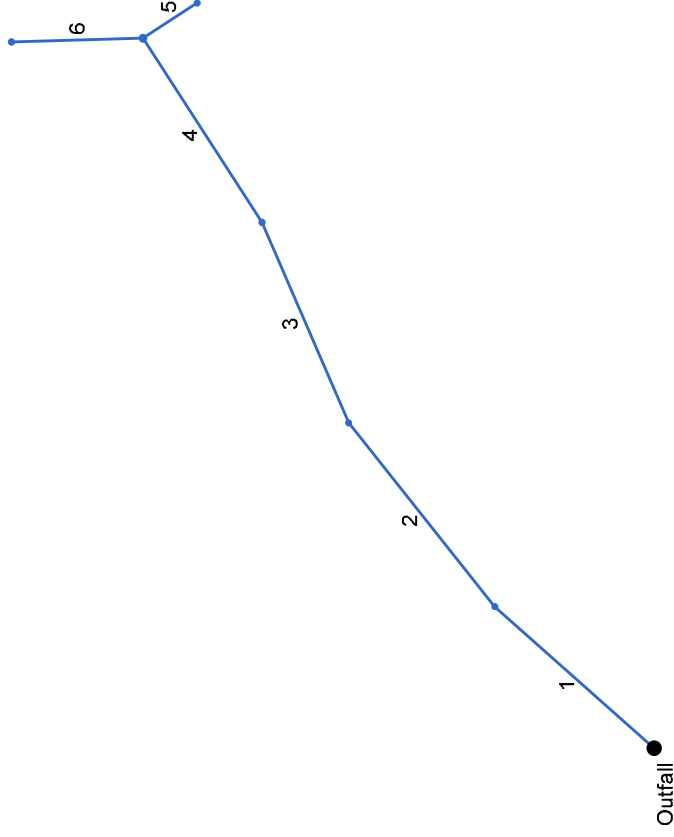


Storm Sewer Tabulation

Station	Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
				Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End		153.014	0.29	1.13	0.50	0.15	0.57	10.0	12.8	4.7	2.68	10.80	7.97	12	9.20	102.85	116.93	103.19	117.63	0.00	121.02	Pipe 11-10
2	1		28.762	0.32	0.84	0.50	0.16	0.42	10.0	12.6	4.8	2.01	3.58	3.73	12	1.01	116.93	117.22	117.63	117.82	121.02	121.22	Pipe 12-11
3	2		150.952	0.09	0.52	0.50	0.05	0.26	10.0	11.2	5.1	1.32	4.26	3.08	12	1.43	117.22	119.38	117.82	119.86	121.22	123.38	Pipe 13-12
4	3		43.720	0.23	0.43	0.50	0.12	0.22	10.0	10.7	5.2	1.11	3.57	3.13	12	1.01	119.38	119.82	119.86	120.26	123.38	123.94	Pipe 14-13
5	4		26.996	0.20	0.20	0.50	0.10	0.10	10.0	10.0	5.3	0.53	3.56	2.12	12	1.00	119.82	120.09	120.26	120.39	123.94	124.09	Pipe 15-14
Project File: STM SEWER 10-15.stm																Number of lines: 5						Run Date: 2/17/2022	

NOTES: Intensity = 33.54 / (Inlet time + 4.60) ^ 0.68; Return period = Yrs. 10 ; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Storm Sewer Tabulation

Station	Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
				Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End		147.003	0.81	2.43	0.30	0.24	0.73	15.0	16.2	4.2	44.05	93.85	8.52	42	0.74	109.50	110.59	111.19	112.66	0.00	116.50	Pipe 21-20
2	1		161.919	0.74	1.62	0.30	0.22	0.49	15.0	15.6	4.3	43.07	96.15	7.33	42	0.78	110.59	111.85	112.66	113.89	116.50	119.00	Pipe 22-21
3	2		150.387	0.88	0.88	0.30	0.26	0.26	15.0	15.0	4.4	42.14	94.89	7.28	42	0.76	111.85	112.99	113.89	115.01	119.00	121.50	Pipe 23-22
4	3		151.192	0.00	0.00	0.00	0.00	0.00	0.0	0.4	0.0	40.99	101.6	9.62	36	1.98	113.49	116.48	115.01	118.56	121.50	124.75	Pipe 24-23
5	4		44.573	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	31.31	146.7	15.78	30	10.90	120.00	124.86	120.78	126.76	124.75	133.04	Pipe 24A-24
6	4		91.048	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	9.68	15.26	6.23	21	0.79	117.73	118.45	118.74	119.61	124.75	123.20	Pipe 25-24

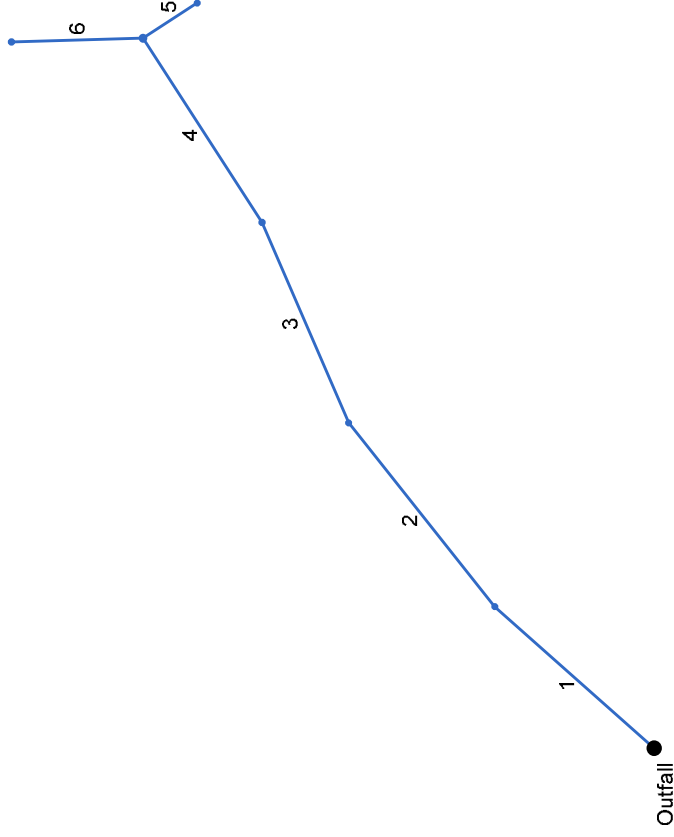
Project File: STM SEWER 20-25.stm

Number of lines: 6

Run Date: 2/18/2022

NOTES: Intensity = 33.54 / (Inlet time + 4.60) ^ 0.68; Return period = Yrs. 10 ; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan

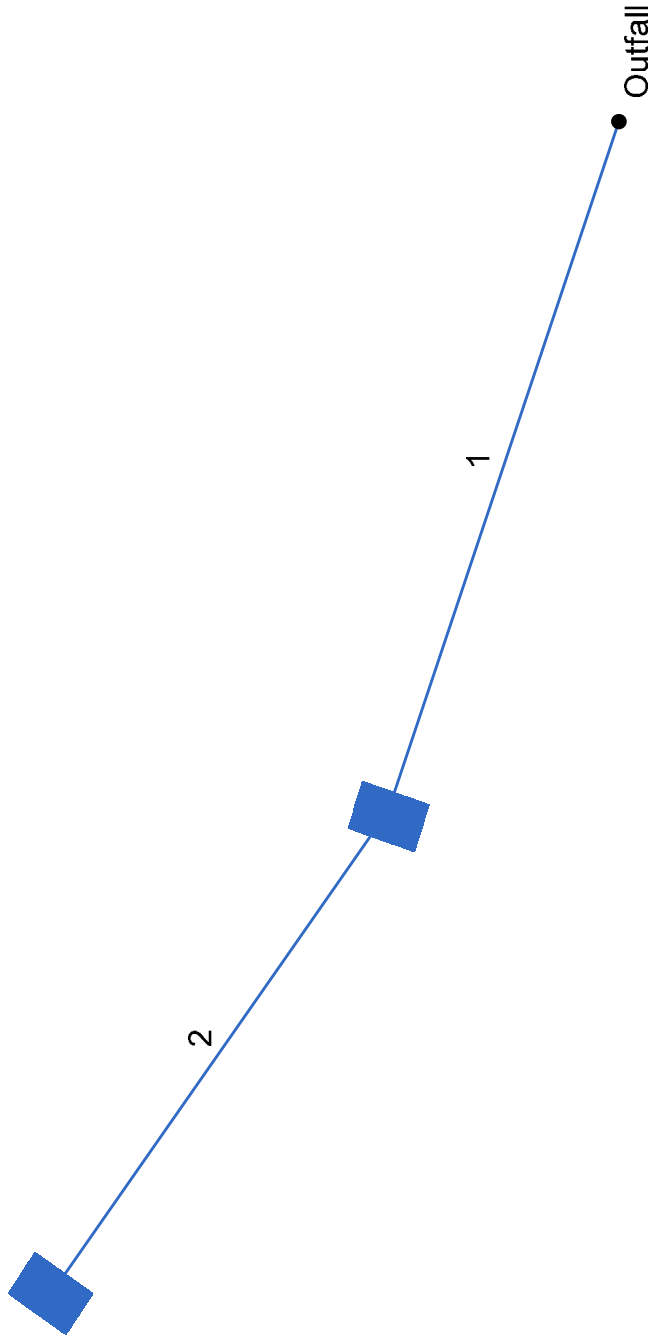


Storm Sewer Tabulation

Station	Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
				Incr (ac)	Total (ac)		Incr (min)	Syst (min)	Total	Inlet (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End		147.003	0.81	2.43	0.30	0.24	0.73	15.0	15.6	6.3	89.03	93.85	10.73	42	0.74	109.50	110.59	112.22	113.52	0.00	116.50	Pipe 21-20
2	1		161.919	0.74	1.62	0.30	0.22	0.49	15.0	15.3	6.3	87.53	96.15	10.22	42	0.78	110.59	111.85	113.52	114.76	116.50	119.00	Pipe 22-21
3	2		150.387	0.88	0.88	0.30	0.26	0.26	15.0	15.0	6.4	86.14	94.89	10.12	42	0.76	111.85	112.99	114.76	115.88	119.00	121.50	Pipe 23-22
4	3		151.192	0.00	0.00	0.00	0.00	0.00	0.0	0.2	0.0	84.45	101.6	13.14	36	1.98	113.49	116.48	115.88	119.29	121.50	124.75	Pipe 24-23
5	4		44.573	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	63.58	146.7	20.95	30	10.90	120.00	124.86	121.15	127.27	124.75	133.04	Pipe 24A-24
6	4		91.048	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	20.87	15.26	8.68	21	0.79	117.73	118.45	119.48	120.83	124.75	123.20	Pipe 25-24
Project File: STM SEWER 20-25.stm															Number of lines: 6		Run Date: 2/18/2022						

NOTES: Intensity = 34.00 / (Inlet time + 2.20) ^ 0.59; Return period = Yrs. 100 ; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Storm Sewer Tabulation

Station	Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
				Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End		30.946	0.58	0.90	0.50	0.29	0.45	10.0	10.4	5.3	2.36	3.56	4.56	12	1.00	101.69	102.00	102.29	102.66	0.00	106.25	Pipe 31-30
2	1		25.000	0.32	0.32	0.50	0.16	0.16	10.0	10.0	5.3	0.86	3.56	2.31	12	1.00	102.00	102.25	102.66	102.64	106.25	106.25	Pipe 32-31

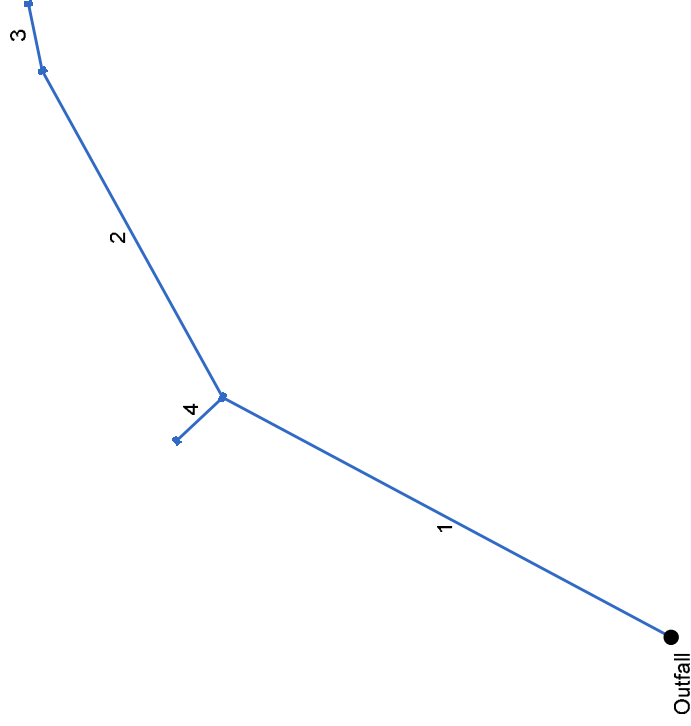
Project File: STM SEWER 30-32.stm

Number of lines: 2

Run Date: 2/17/2022

NOTES: Intensity = 33.54 / (Inlet time + 4.60) ^ 0.68; Return period = Yrs. 10 ; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Storm Sewer Tabulation

Station	Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
				Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End		199.863	0.24	1.04	0.50	0.12	0.52	10.0	11.7	5.0	2.58	4.77	5.33	12	1.79	101.50	105.08	102.02	105.77	0.00	109.33	Pipe 36-35
2	1		146.296	0.30	0.58	0.50	0.15	0.29	10.0	10.5	5.2	1.52	4.94	3.15	12	1.93	105.08	107.90	105.77	108.42	109.33	111.90	Pipe 37-36
3	2		26.924	0.28	0.28	0.50	0.14	0.14	10.0	10.0	5.3	0.75	4.90	2.37	12	1.89	107.90	108.41	108.42	108.77	111.90	112.41	Pipe 38-37
4	1		25.000	0.22	0.22	0.50	0.11	0.11	10.0	10.0	5.3	0.59	3.56	1.88	12	1.00	105.08	105.33	105.77	105.65	109.33	109.33	Pipe 36A-36

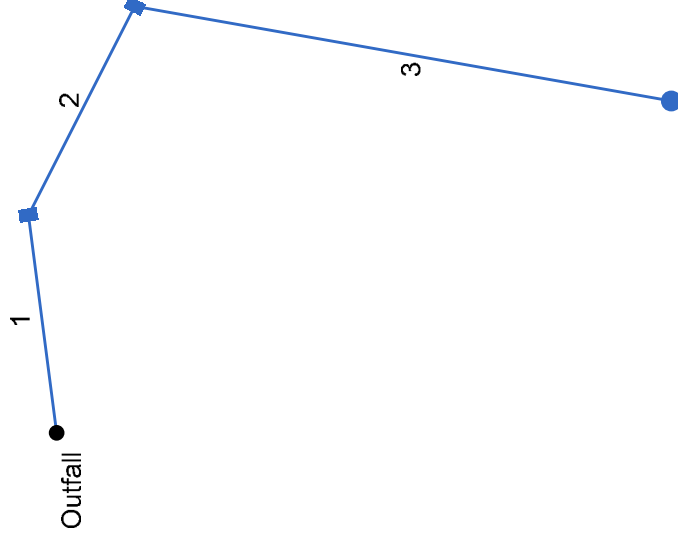
Project File: STM SEWER 35-38A.stm

Number of lines: 4

Run Date: 2/17/2022

NOTES: Intensity = 33.54 / (Inlet time + 4.60) ^ 0.68; Return period = Yrs. 10 ; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Storm Sewer Tabulation

Station	Line	To Line	Len (ft)	Drng Area (ac)		Rnoff coeff (C)	Area x C		Tc (min)		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev (ft)		HGL Elev (ft)		Grnd / Rim Elev (ft)		Line ID
				Incr	Total		Inlet	Syst	Incr	Total					Dn	Up	Dn	Up	Dn	Up	Dn	Up	
1	End		36.502	0.09	0.95	0.90	0.08	0.39	10.0	16.6	4.1	1.60	2.78	3.67	12	0.52	100.81	101.00	101.35	101.55	0.00	104.25	Pipe 51-50
2	1		39.051	0.08	0.86	0.90	0.07	0.31	10.0	16.2	4.2	1.29	8.31	2.76	12	4.63	101.00	102.81	101.74	103.29	104.25	106.06	Pipe 52-51
3	2		90.827	0.78	0.78	0.30	0.23	0.23	15.0	15.0	4.4	1.02	8.09	2.99	12	4.39	102.81	106.80	103.29	107.22	106.06	110.80	Pipe 53-52
Project File: STM SEWER 50-53.stm																Number of lines: 3		Run Date: 2/17/2022					

NOTES: Intensity = 33.54 / (Inlet time + 4.60) ^ 0.68; Return period = Yrs. 10 ; c = cir e = ellip b = box