ATTACHMENT I

Pipe, Swale Summary

05-04-2020

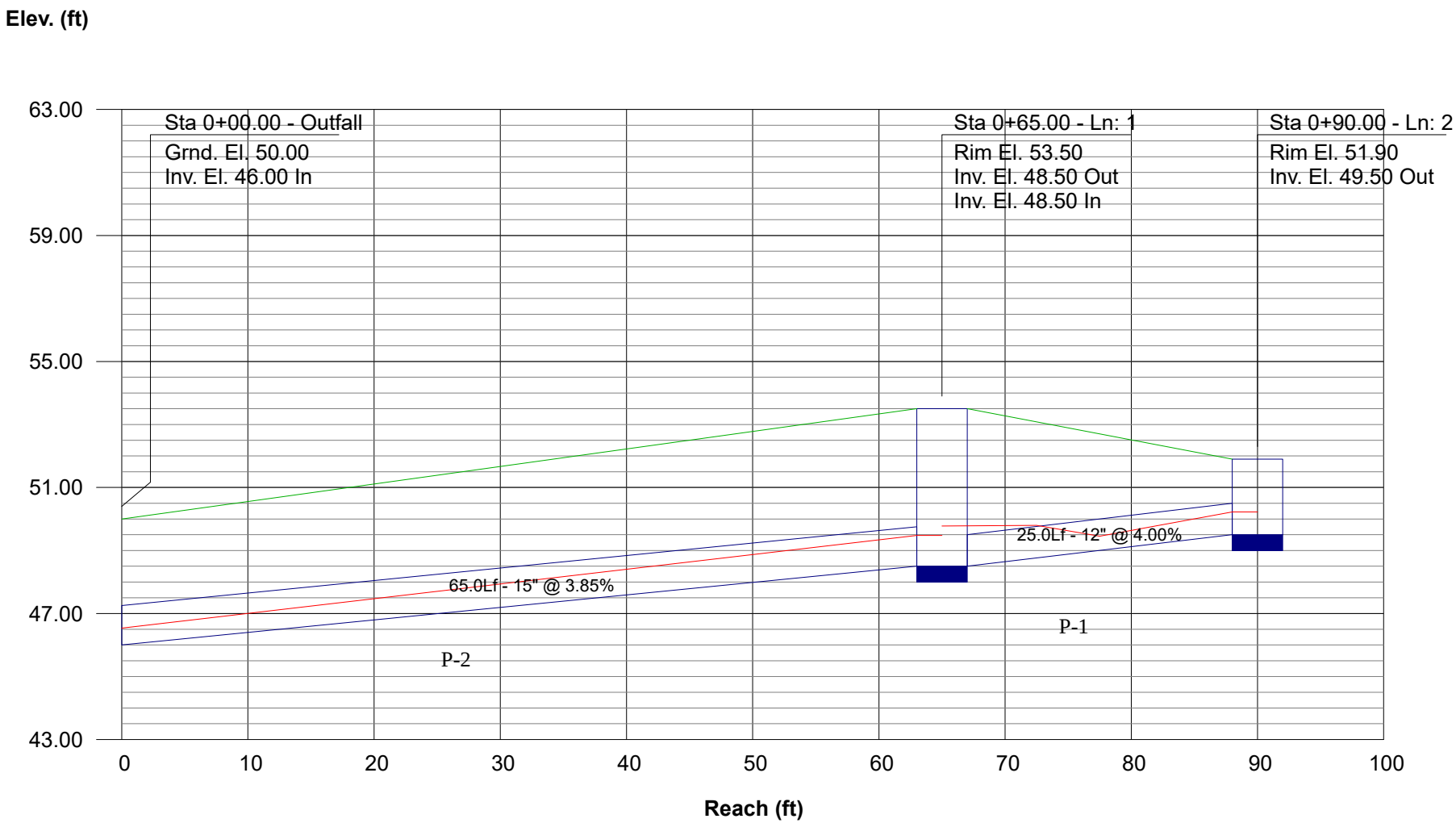
Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line type	N value (n)	J-loss coeff (K)	Inlet/ Rim El (ft)	
1	End	65.0	180.0	MH	3.01	0.00	0.00	0.0	46.00	3.85	48.50	15	Cir	0.009	0.15	53.50	P2
2	1	25.0	0.2	DrGrt	2.94	0.00	0.00	0.0	48.50	4.00	49.50	12	Cir	0.009	1.00	51.90	P1
3	End	6.5	179.6	MH	0.48	0.00	0.00	0.0	46.00	15.38	47.00	8	Cir	0.009	0.15	50.00	P4
4	3	10.5	0.0	DrGrt	0.48	0.00	0.00	0.0	47.00	9.52	48.00	8	Cir	0.009	1.00	52.50	P3
5	End	96.0	180.0	DrGrt	3.07	0.00	0.00	0.0	49.60	0.63	50.20	18	Cir	0.009	1.02	52.80	P8
6	5	58.5	39.2	DrGrt	2.51	0.00	0.00	0.0	50.20	0.51	50.50	15	Cir	0.009	1.00	52.50	P7
7	End	25.5	180.0	MH	0.36	0.00	0.00	0.0	45.00	1.96	45.50	10	Cir	0.009	0.15	47.00	P6
8	7	15.0	0.0	DrGrt	0.36	0.00	0.00	0.0	46.00	3.33	46.50	10	Cir	0.009	1.00	53.40	P5

Project File: P1-8.stm | Number of lines: 8 | Date: 05-04-2020

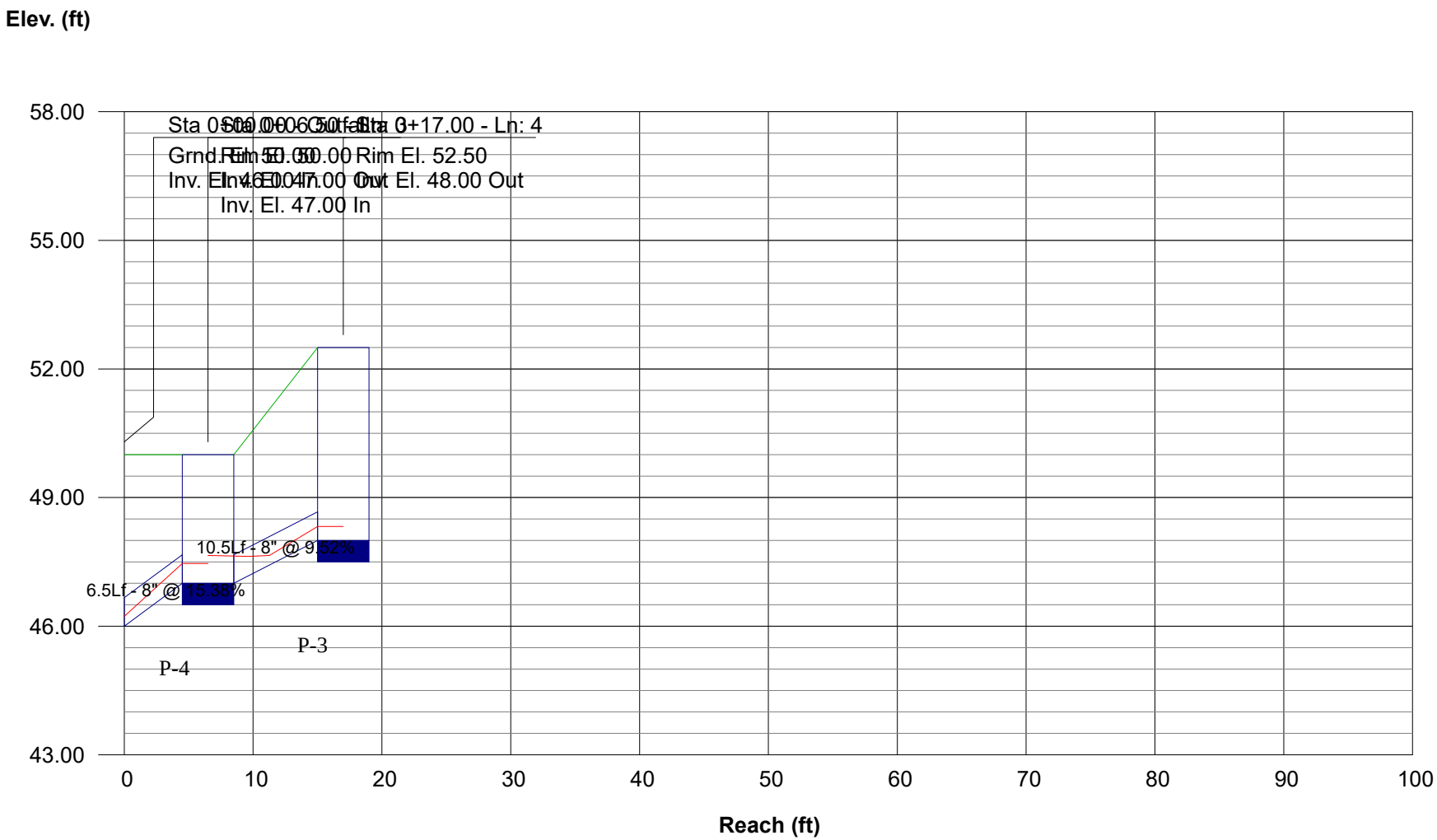
Storm Sewer Profile

Proj. file: P1-8.stm



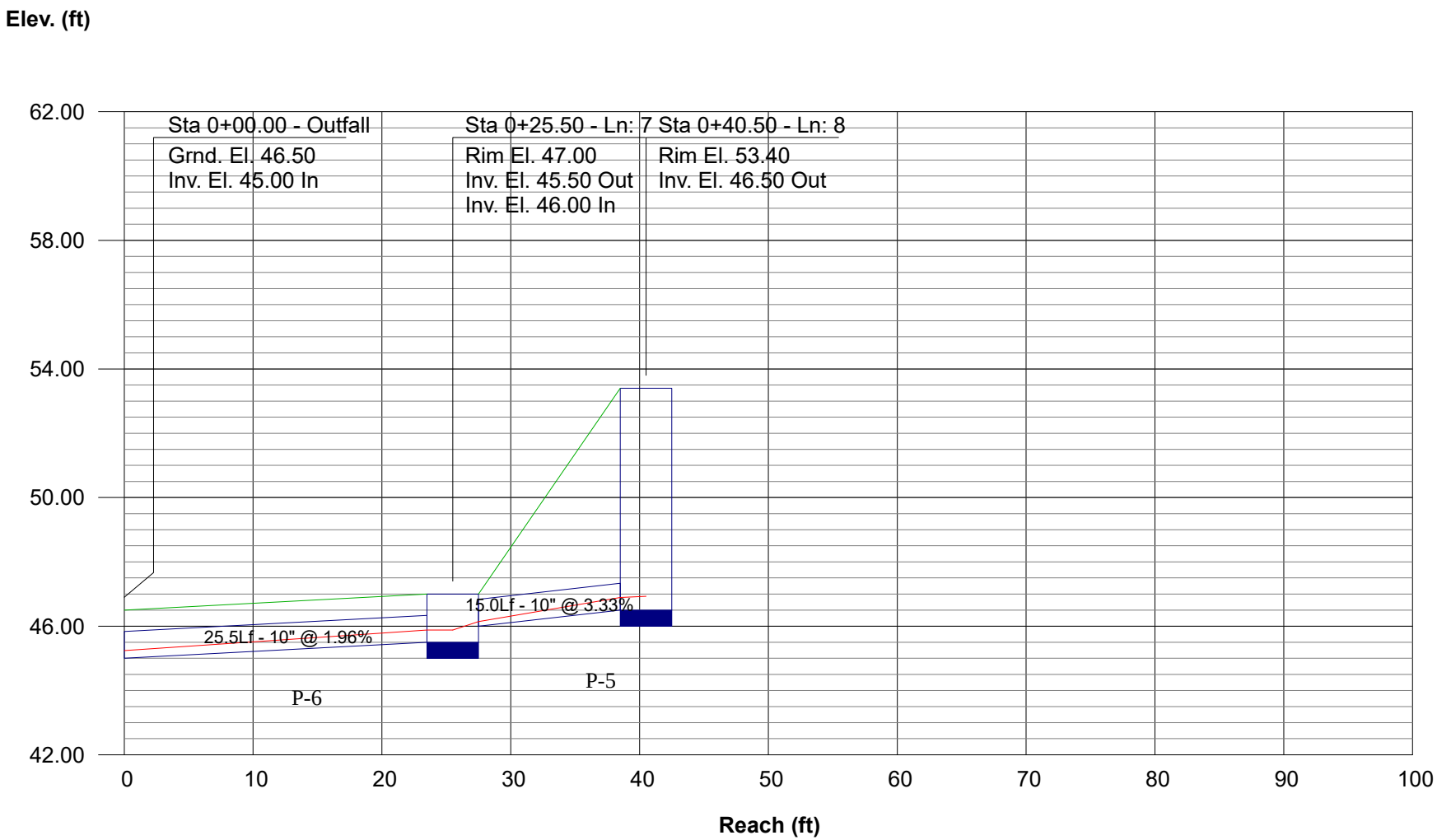
Storm Sewer Profile

Proj. file: P1-8.stm



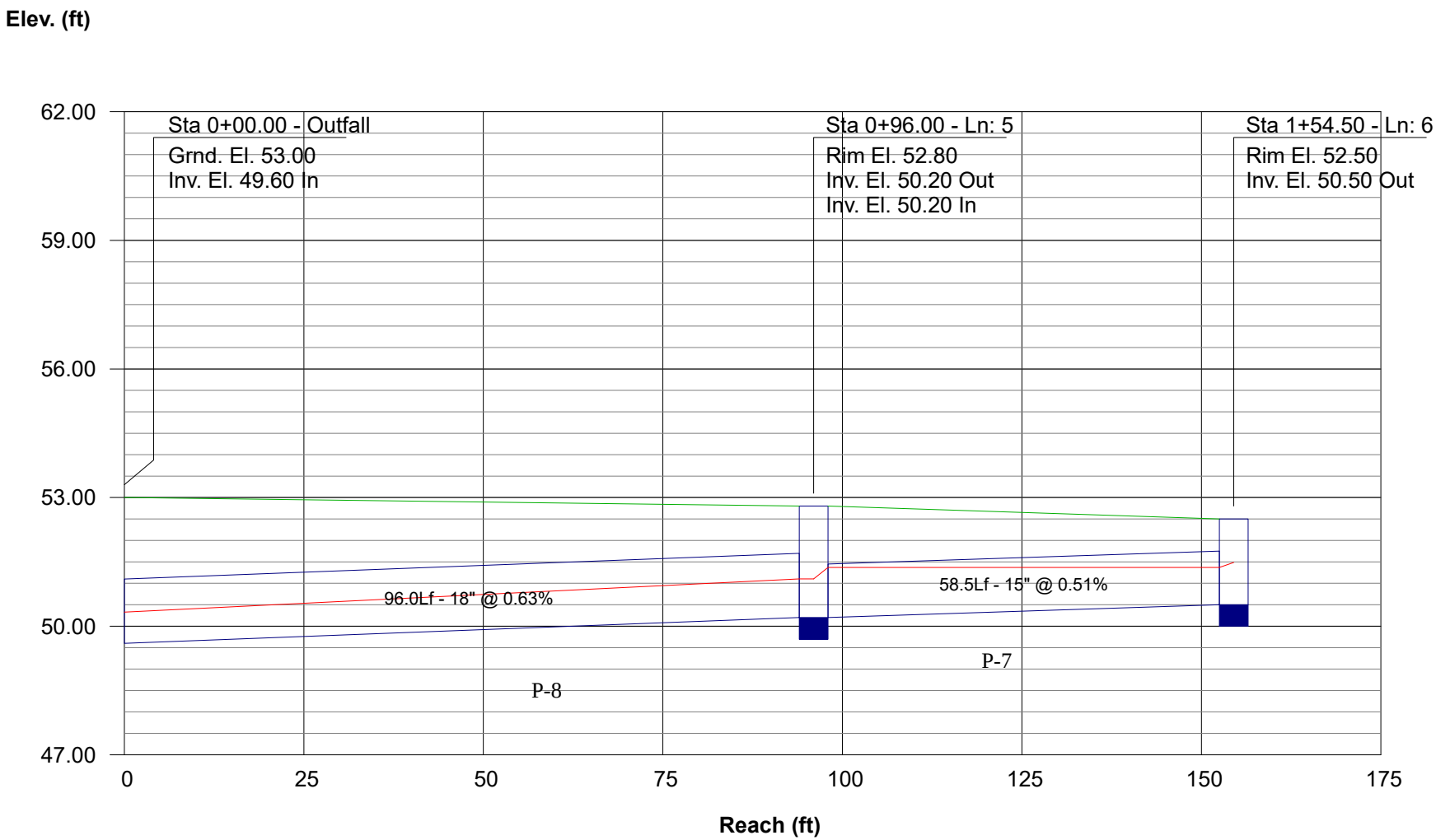
Storm Sewer Profile

Proj. file: P1-8.stm



Storm Sewer Profile

Proj. file: P1-8.stm



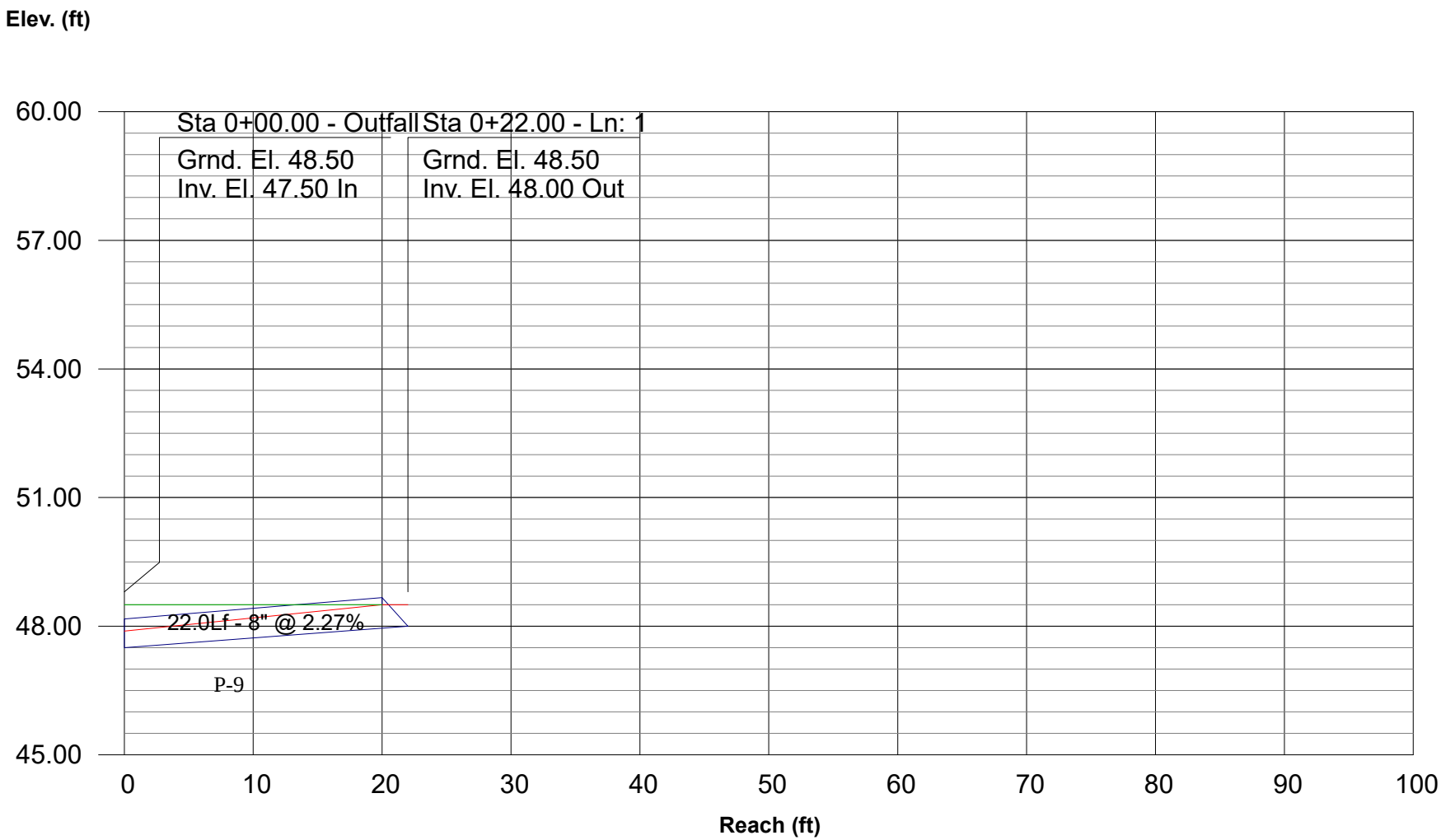
Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line type	N value (n)	J-loss coeff (K)	Inlet/ Rim El (ft)	
1	End	22.0	179.4	Hdwl	1.13	0.00	0.00	0.0	47.50	2.27	48.00	8	Cir	0.013	1.00	48.50	P9
2	End	22.0	179.3	Hdwl	2.50	0.00	0.00	0.0	42.50	2.27	43.00	10	Cir	0.013	1.00	44.50	P10
3	End	22.0	178.4	Hdwl	2.20	0.00	0.00	0.0	39.00	2.27	39.50	10	Cir	0.013	1.00	41.00	P11

P9-11 Number of lines: 3 Date: 05-04-2020

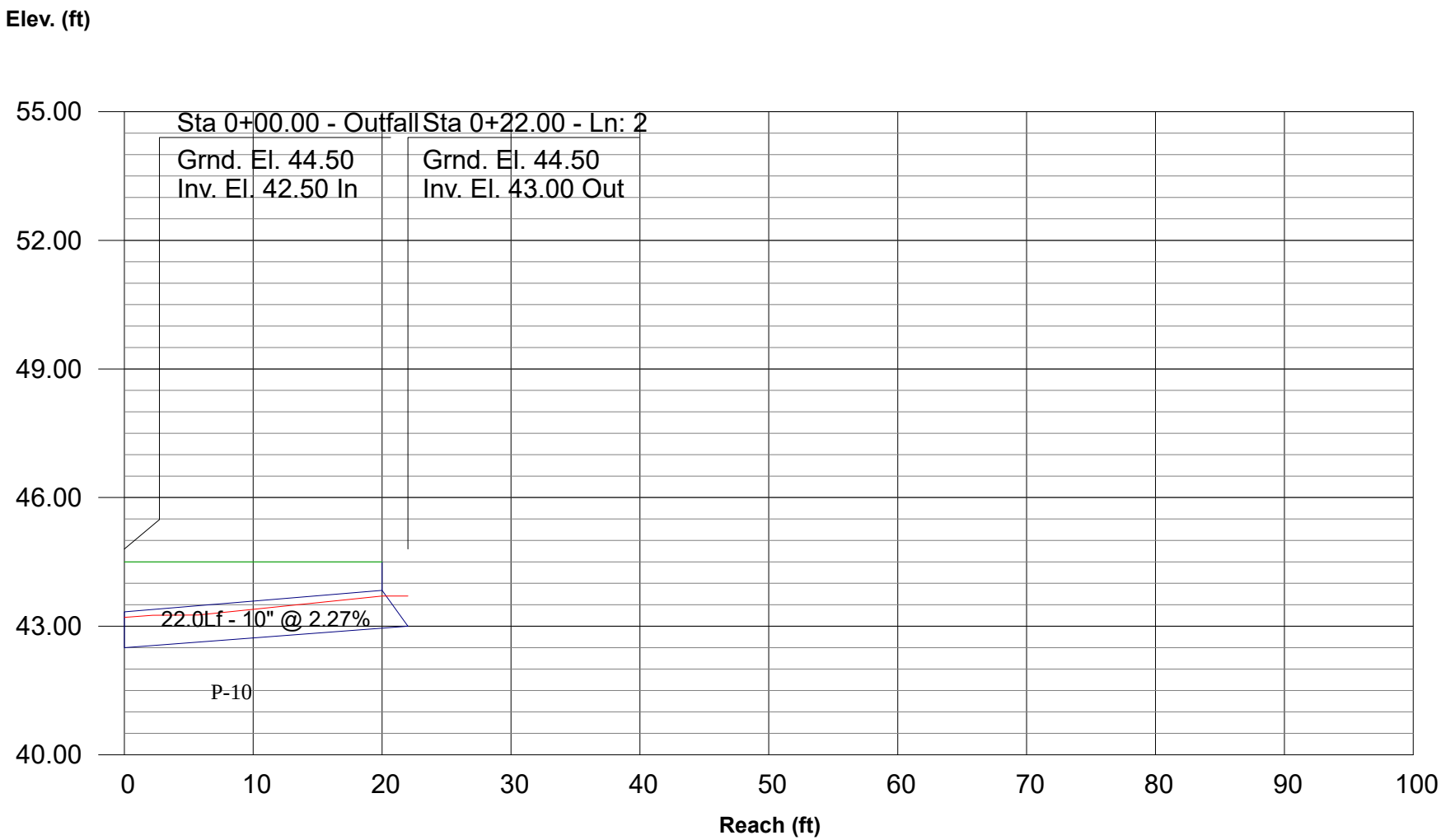
Storm Sewer Profile

Proj. file: P9-11.stm



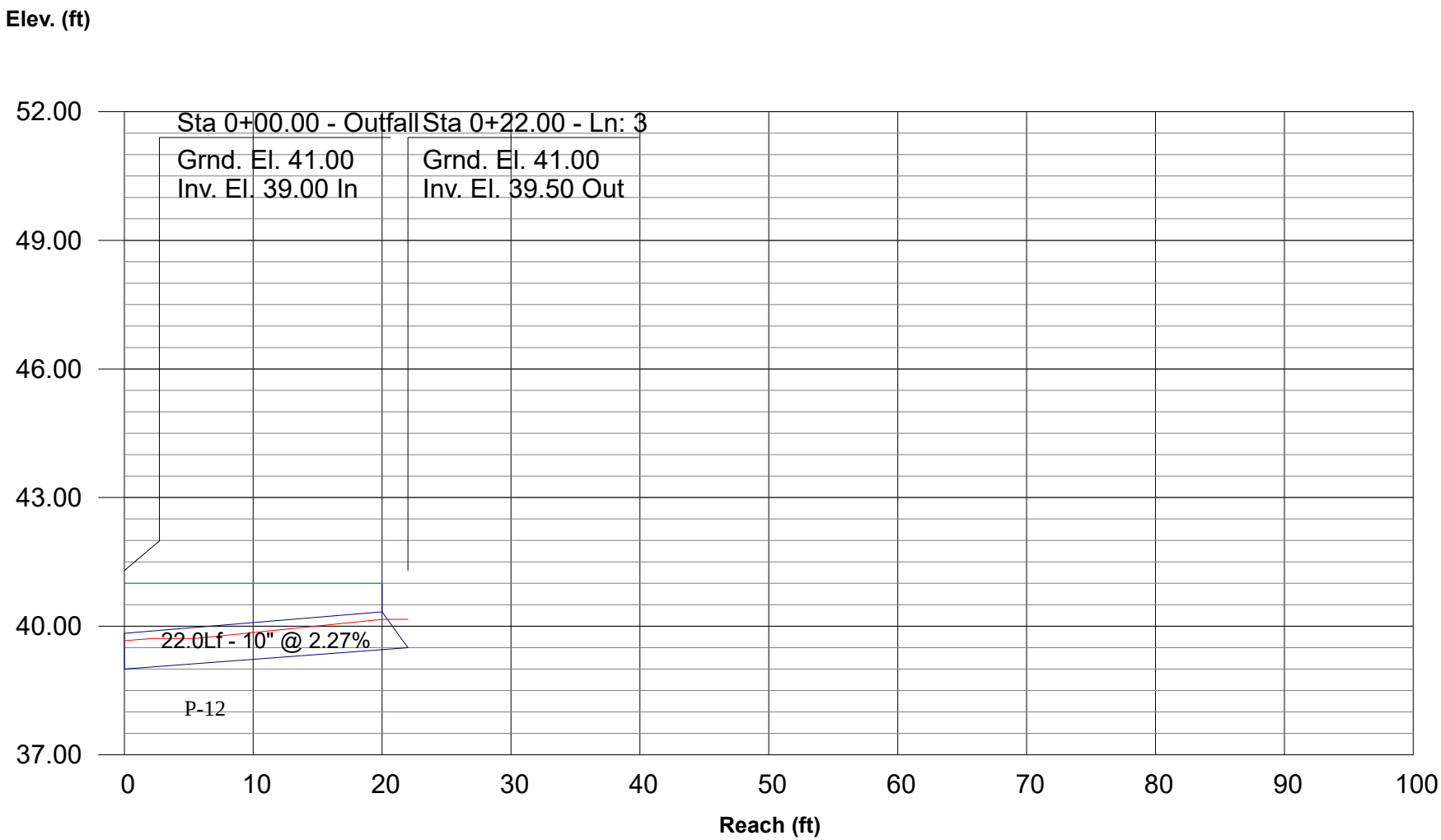
Storm Sewer Profile

Proj. file: P9-11.stm



Storm Sewer Profile

Proj. file: P9-11.stm



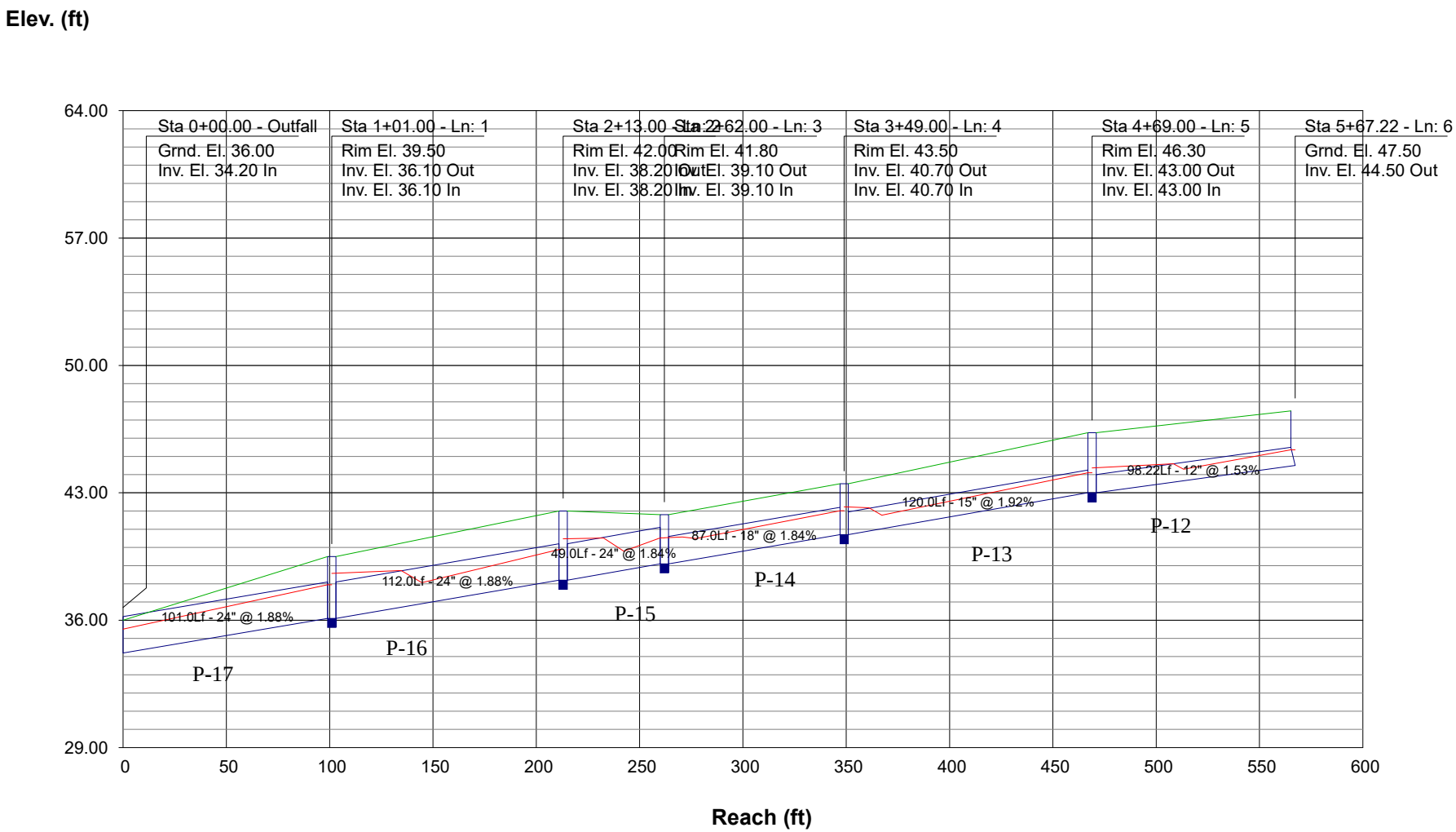
Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line type	N value (n)	J-loss coeff (K)	Inlet/ Rim El (ft)	
1	End	101.0	160.0	MH	6.48	0.00	0.00	0.0	34.20	1.88	36.10	24	Cir	0.009	0.40	39.50	P17
2	1	112.0	20.4	DrGrt	6.48	0.00	0.00	0.0	36.10	1.88	38.20	24	Cir	0.009	0.50	42.00	P16
3	2	49.0	15.0	MH	4.26	0.00	0.00	0.0	38.20	1.84	39.10	24	Cir	0.009	0.97	41.80	P15
4	3	87.0	75.6	DrGrt	4.26	0.00	0.00	0.0	39.10	1.84	40.70	18	Cir	0.009	1.49	43.50	P14
5	4	120.0	-83.9	DrGrt	3.50	0.00	0.00	0.0	40.70	1.92	43.00	15	Cir	0.009	0.50	46.30	P13
6	5	98.2	1.3	Hdwl	4.13	0.00	0.00	0.0	43.00	1.53	44.50	12	Cir	0.009	1.00	47.50	P12

Line2 | Number of lines: 6 | Date: 05-04-2020

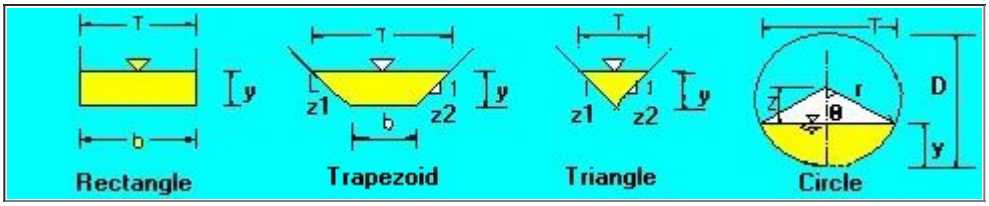
Storm Sewer Profile

Proj. file: P12-17.stm



The open channel flow calculator

Select Channel Type: Trapezoid



Depth from Q

Select unit system: Feet(ft)

Channel slope: .016 ft/ft	Water depth(y): 0.2 ft	Bottom width(b) 5 ft
Flow velocity 2.324263 ft/s	LeftSlope (Z1): 2.5 to 1 (H:V)	RightSlope (Z2): 2.5 to 1 (H:V)
Flow discharge 2.501 ft^3/s	Input n value 0.025 or select n	
Calculate!	Status: Calculation finished	Reset
Wetted perimeter 6.06 ft	Flow area 1.08 ft^2	Top width(T) 5.98 ft
Specific energy 0.28 ft	Froude number 0.97	Flow status Subcritical flow
Critical depth 0.2 ft	Critical slope 0.0153 ft/ft	Velocity head 0.08 ft

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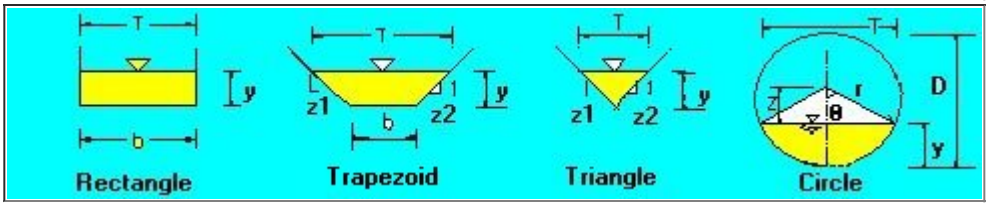
Location - Swale mid-point

The open channel flow calculator

Select Channel Type: Trapezoid



Depth from Q

Select unit system: Feet(ft)

Channel slope: .03 ft/ft	Water depth(y): 0.22 ft	Bottom width(b) 5 ft
Flow velocity 3.382213 ft/s	LeftSlope (Z1): 2.5 to 1 (H:V)	RightSlope (Z2): 2.5 to 1 (H:V)
Flow discharge 4.14 ft^3/s	Input n value 0.025 or select n	
Calculate!	Status: Calculation finished	Reset
Wetted perimeter 6.19 ft	Flow area 1.22 ft^2	Top width(T) 6.1 ft
Specific energy 0.4 ft	Froude number 1.33	Flow status Supercritical flow
Critical depth 0.27 ft	Critical slope 0.0141 ft/ft	Velocity head 0.18 ft

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Location: Upslope from Headwall