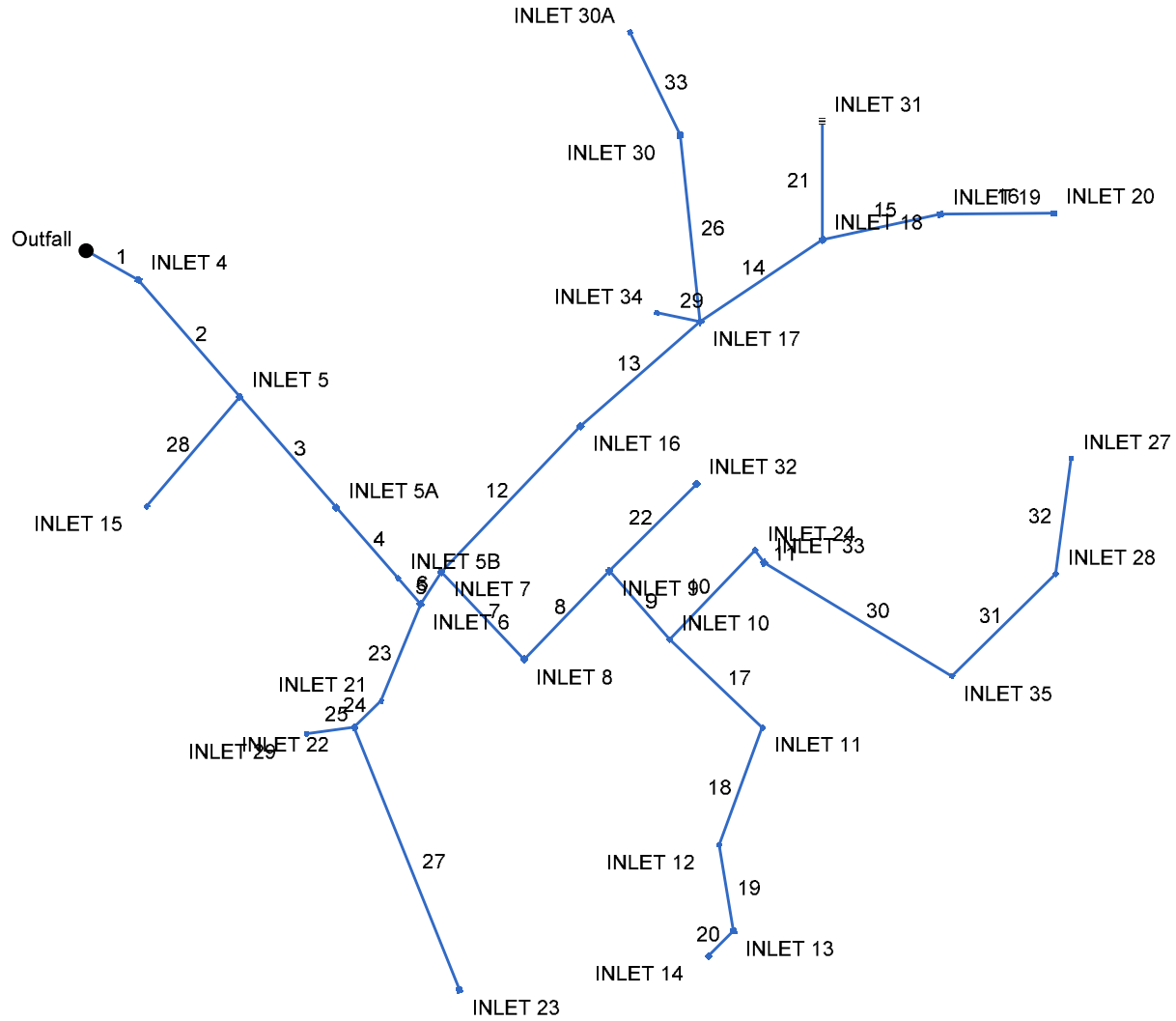


Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: 19157 - Pipe Sizing.stm

Number of lines: 33

Date: 10/11/2023

Line No.	Inlet ID	Drng Area (ac)	Runoff Coeff (C)	Incr CxA	Inlet Time (min)	i Inlet (in/hr)	Incr Q (cfs)	Q Capt (cfs)	Q Byp (cfs)	Q Carry (cfs)	Capac Full (cfs)	Flow Rate (cfs)	Vel Ave (ft/s)	Line Size (in)
1	INLET 4	0.03	0.86	0.03	5.0	7.19	0.19	0.19	0.00	0.00	51.32	45.48	8.19	36
2	INLET 5	0.01	0.71	0.01	5.0	7.19	0.05	0.05	0.00	0.00	51.64	45.85	7.53	36
3	INLET 5A	0.13	0.87	0.11	5.0	7.19	0.81	0.81	0.00	0.00	51.78	45.88	8.26	36
4	INLET 5B	0.26	0.85	0.22	5.0	7.19	1.59	1.59	0.00	0.00	51.54	45.51	8.19	36
5	INLET 6	0.05	0.75	0.04	5.0	7.19	0.27	0.27	0.00	0.00	51.34	44.25	8.04	36
6	INLET 7	0.35	0.84	0.29	5.0	7.19	2.11	2.63	0.00	0.52	51.93	36.30	7.21	36
7	INLET 8	0.29	0.95	0.28	5.0	7.19	1.98	1.98	0.00	0.00	22.59	20.15	7.78	24
8	INLET 9	0.40	0.84	0.34	5.0	7.19	2.41	3.20	0.00	0.79	22.59	18.59	7.21	24
9	INLET 10	0.01	0.95	0.01	5.0	7.19	0.07	0.07	0.00	0.00	22.59	14.46	6.12	24
10	INLET 24	0.01	0.95	0.01	5.0	7.19	0.07	0.07	0.00	0.00	7.91	7.80	7.07	15
11	INLET 33	0.43	0.88	0.38	5.0	7.19	2.72	2.72	0.00	0.00	6.39	7.74	6.31	15
12	INLET 16	0.29	0.79	0.23	5.0	7.19	1.65	1.18	0.52	0.05	17.55	14.89	5.48	24
13	INLET 17	0.10	0.77	0.08	5.0	7.19	0.55	0.50	0.05	0.00	17.54	13.66	5.55	24
14	INLET 18	0.10	0.86	0.09	5.0	7.19	0.62	0.62	0.00	0.00	6.46	5.57	5.73	15
15	INLET 19	0.20	0.85	0.17	5.0	7.19	1.22	2.55	0.00	1.32	6.44	4.37	5.29	15
16	INLET 20	0.62	0.73	0.45	5.0	7.19	3.25	1.93	1.32	0.00	6.46	3.25	4.33	15
17	INLET 11	0.01	0.95	0.01	5.0	7.19	0.07	0.07	0.00	0.00	10.52	7.05	4.94	18
18	INLET 12	0.60	0.71	0.43	5.0	7.19	3.06	3.06	0.00	0.00	10.51	7.11	5.84	18
19	INLET 13	0.55	0.71	0.39	5.0	7.19	2.81	2.81	0.00	0.00	6.46	4.19	4.57	15
20	INLET 14	0.29	0.70	0.20	5.0	7.19	1.46	1.46	0.00	0.00	6.46	1.46	2.68	15
21	INLET 31	0.15	0.89	0.13	5.0	7.19	0.96	0.96	0.00	0.00	6.45	0.96	2.03	15
22	INLET 32	0.39	0.84	0.33	5.0	7.19	2.35	1.56	0.79	0.00	6.45	2.35	4.39	15
23	INLET 21	0.01	0.95	0.01	5.0	7.19	0.07	0.07	0.00	0.00	22.63	8.63	3.33	24

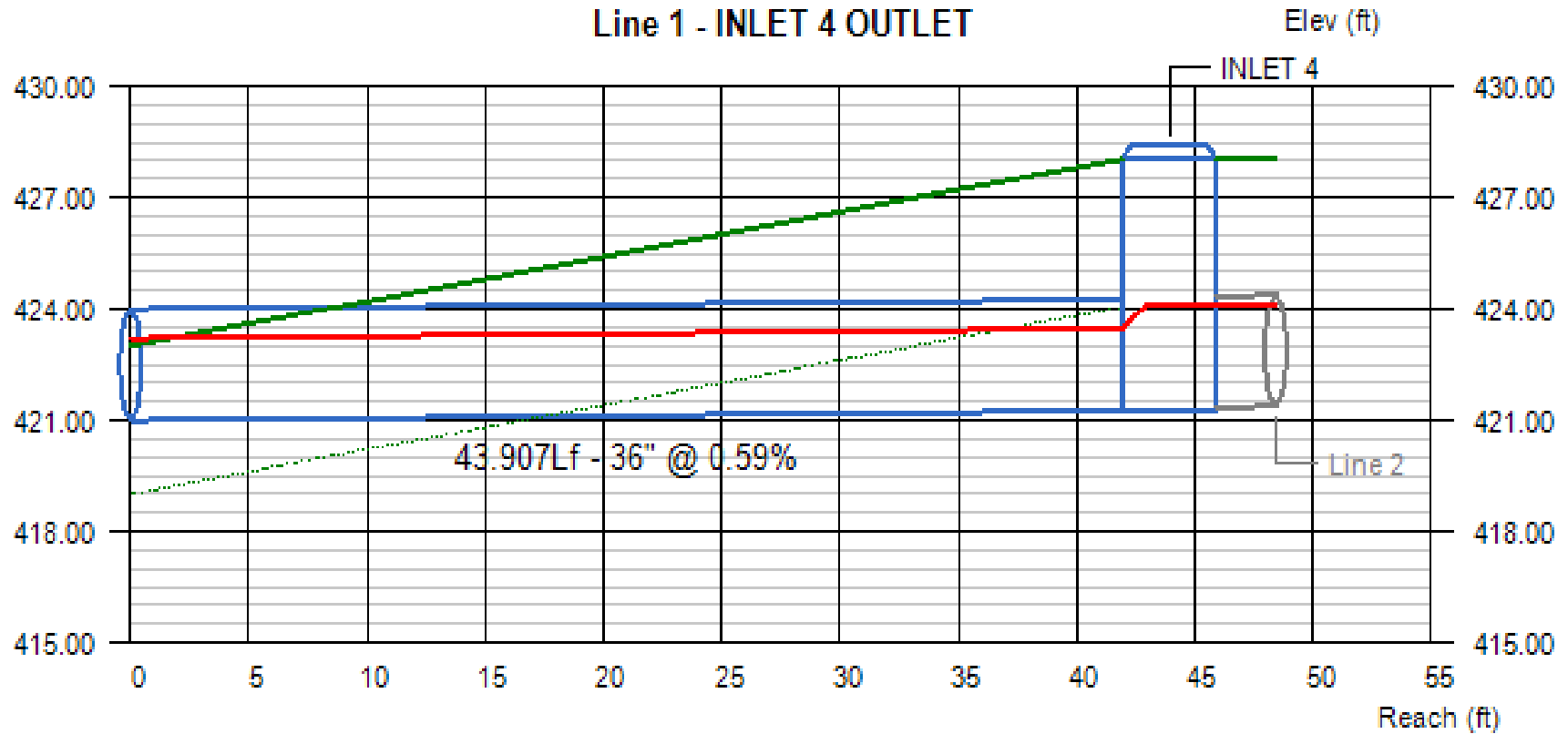
Project File: 19157 - Pipe Sizing.stm	Number of lines: 33	Date: 10/11/2023
---------------------------------------	---------------------	------------------

NOTES: Intensity = 67.84 / (Inlet time + 12.00) ^ 0.79 -- Return period = 10 Yrs. ; ** Critical depth

Line No.	Inlet ID	Drng Area (ac)	Runoff Coeff (C)	Incr CxA	Inlet Time (min)	i Inlet (in/hr)	Incr Q (cfs)	Q Capt (cfs)	Q Byp (cfs)	Q Carry (cfs)	Capac Full (cfs)	Flow Rate (cfs)	Vel Ave (ft/s)	Line Size (in)
24	INLET 22	0.54	0.88	0.48	5.0	7.19	3.42	5.62	0.00	2.20	6.50	8.59	7.00	15
25	INLET 29	0.21	0.51	0.11	5.0	7.19	0.77	0.77	0.00	0.00	6.47	0.77	0.63	15
26	INLET 30	1.06	0.56	0.59	5.0	7.19	4.27	4.27	0.00	0.00	8.15	5.63	4.31	18
27	INLET 23	0.81	0.82	0.66	5.0	7.19	4.77	2.57	2.20	0.00	6.46	4.77	3.89	15
28	INLET 15	0.13	0.60	0.08	5.0	7.19	0.56	0.56	0.00	0.00	6.44	0.56	1.52	15
29	INLET 34	0.45	0.79	0.36	5.0	7.19	2.55	2.55	0.00	0.00	3.55	2.55	4.69	12
30	INLET 35	0.36	0.92	0.33	5.0	7.19	2.38	2.38	0.00	0.00	6.46	5.39	4.69	15
31	INLET 28	0.17	0.94	0.16	5.0	7.19	1.15	1.15	0.00	0.00	6.46	3.25	3.52	15
32	INLET 27	0.36	0.86	0.31	5.0	7.19	2.23	2.23	0.00	0.00	6.47	2.23	3.07	15
33	INLET 30A	0.24	0.95	0.23	5.0	7.19	1.64	1.64	0.00	0.00	4.56	1.64	2.33	15

Project File: 19157 - Pipe Sizing.stm	Number of lines: 33	Date: 10/11/2023
---------------------------------------	---------------------	------------------

NOTES: Intensity = 67.84 / (Inlet time + 12.00) ^ 0.79 -- Return period = 10 Yrs. ; ** Critical depth



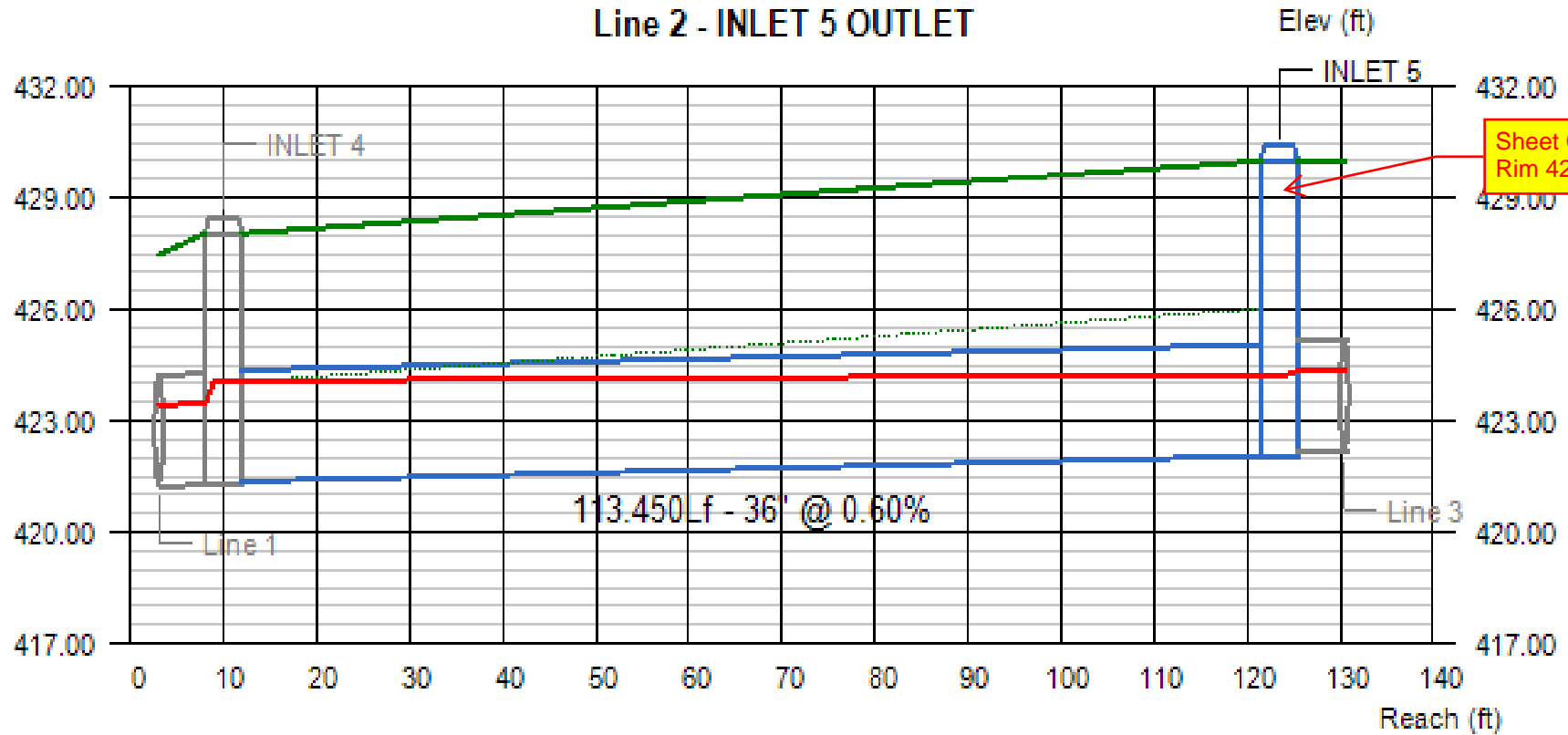
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
1	45.48	421.00	421.26	2.19	2.20	2.82	423.19	423.46	424.08	8.21	8.18	-1.00	3.78

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 2) - INLET 5 OUTLET



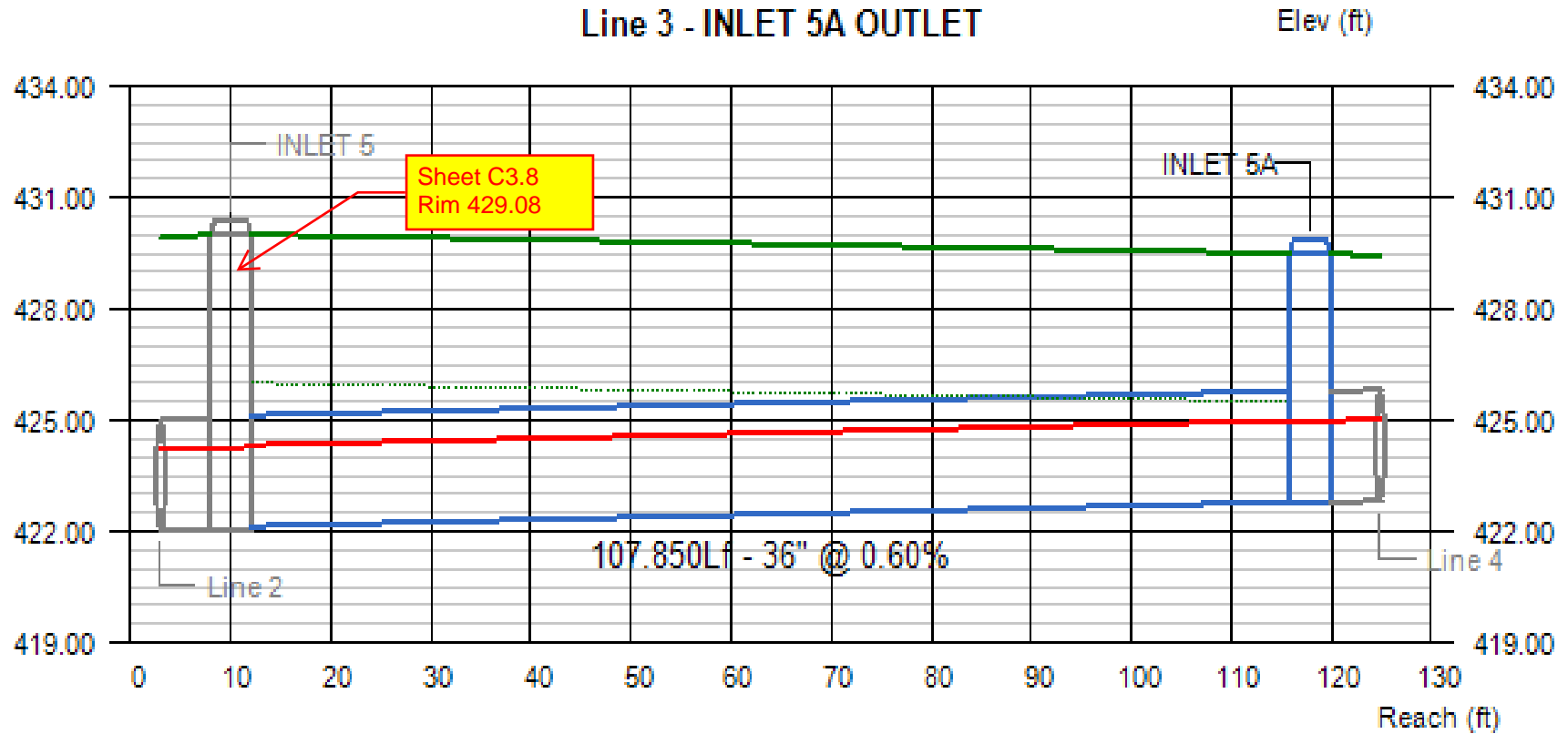
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
2	45.85	421.36	422.04	2.72	2.20	2.20	424.08	424.24	424.24	6.81	8.24	3.68	4.96

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 3) - INLET 5A OUTLET



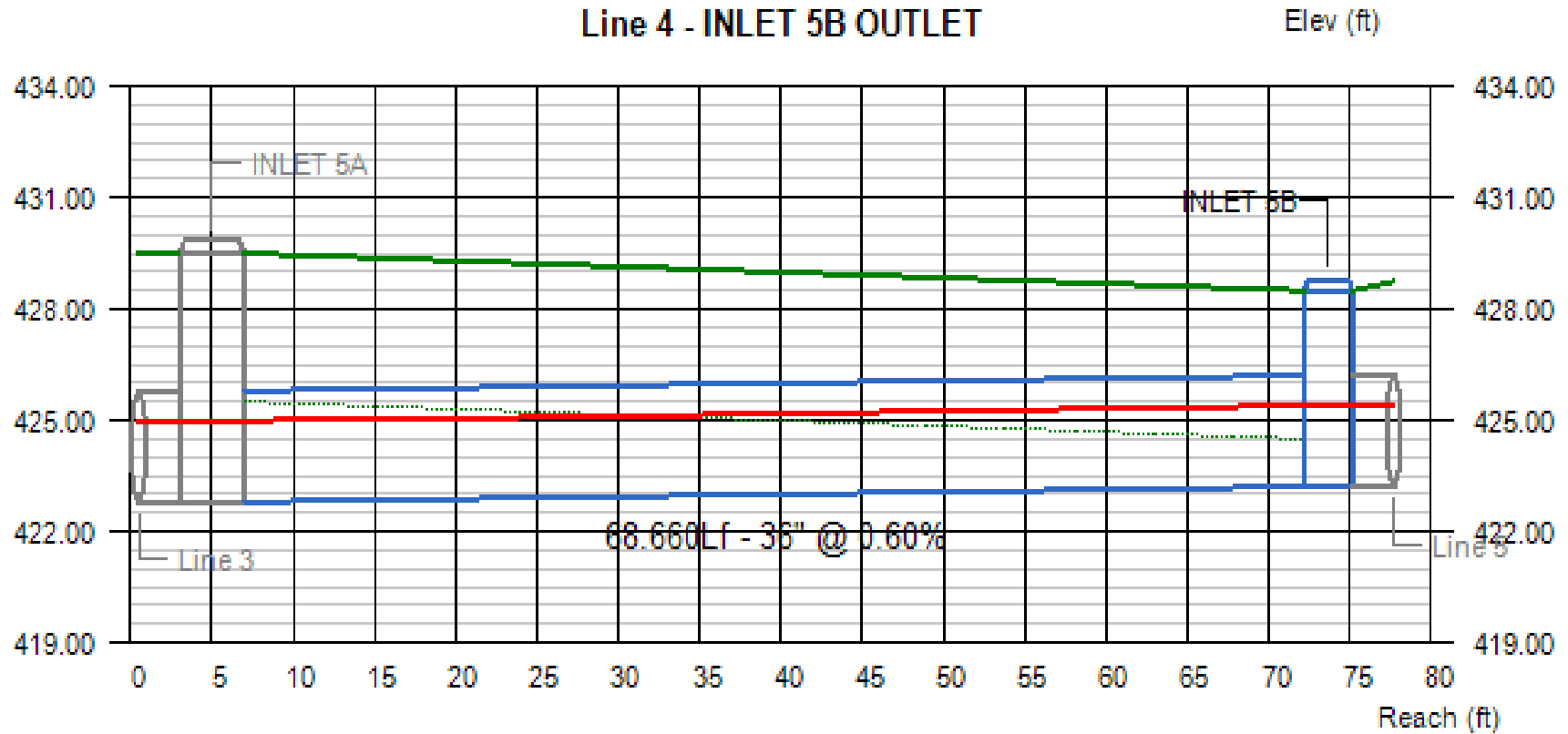
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
3	45.88	422.14	422.79	2.20	2.20	2.20	424.34	424.99	424.99	8.27	8.24	4.86	3.71

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 4) - INLET 5B OUTLET

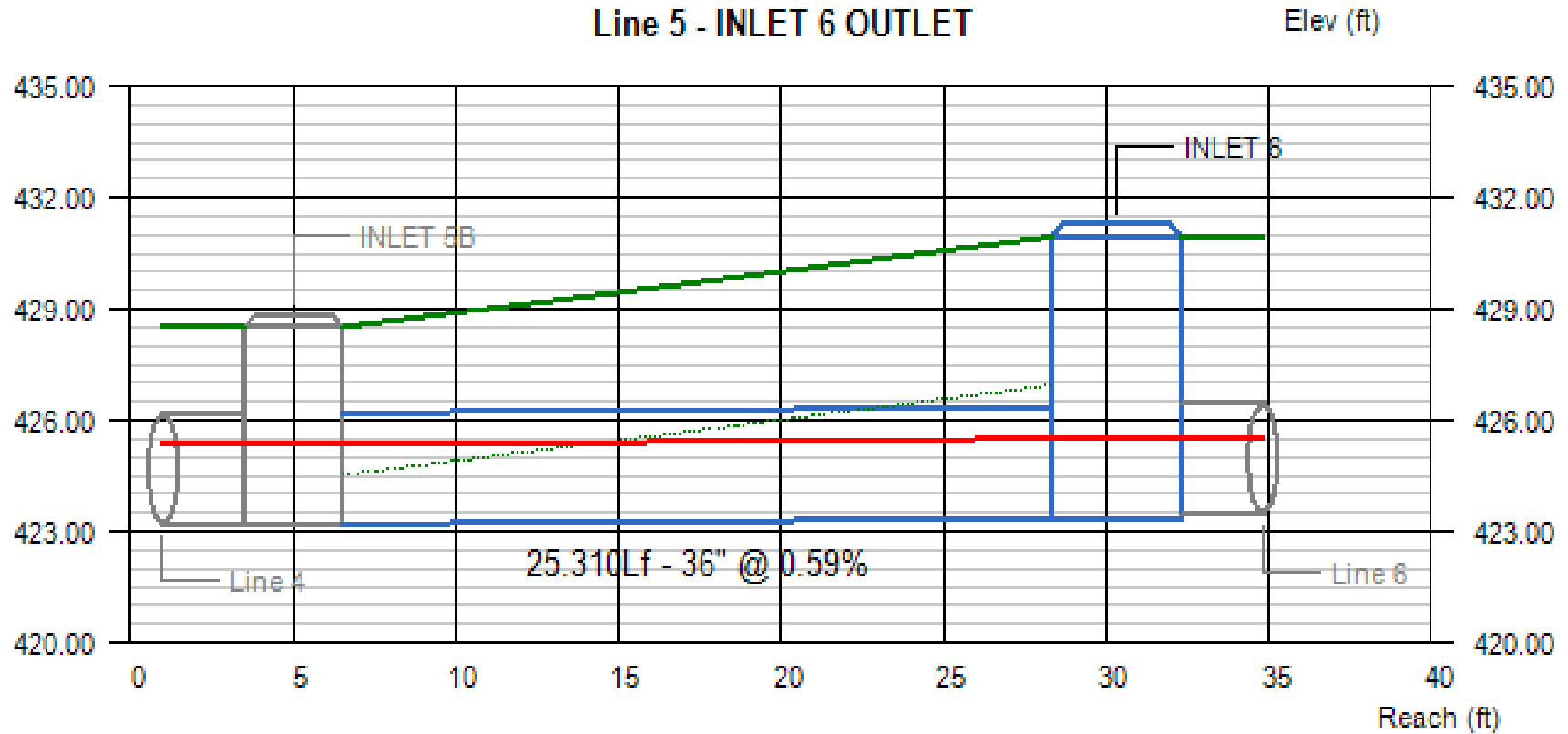


Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
4	45.51	422.79	423.20	2.20	2.20	2.20	424.99	425.40 j	425.40	8.17	8.21	3.71	2.30

Project File:

No. Lines: 33

Run Date: 10/11/2023

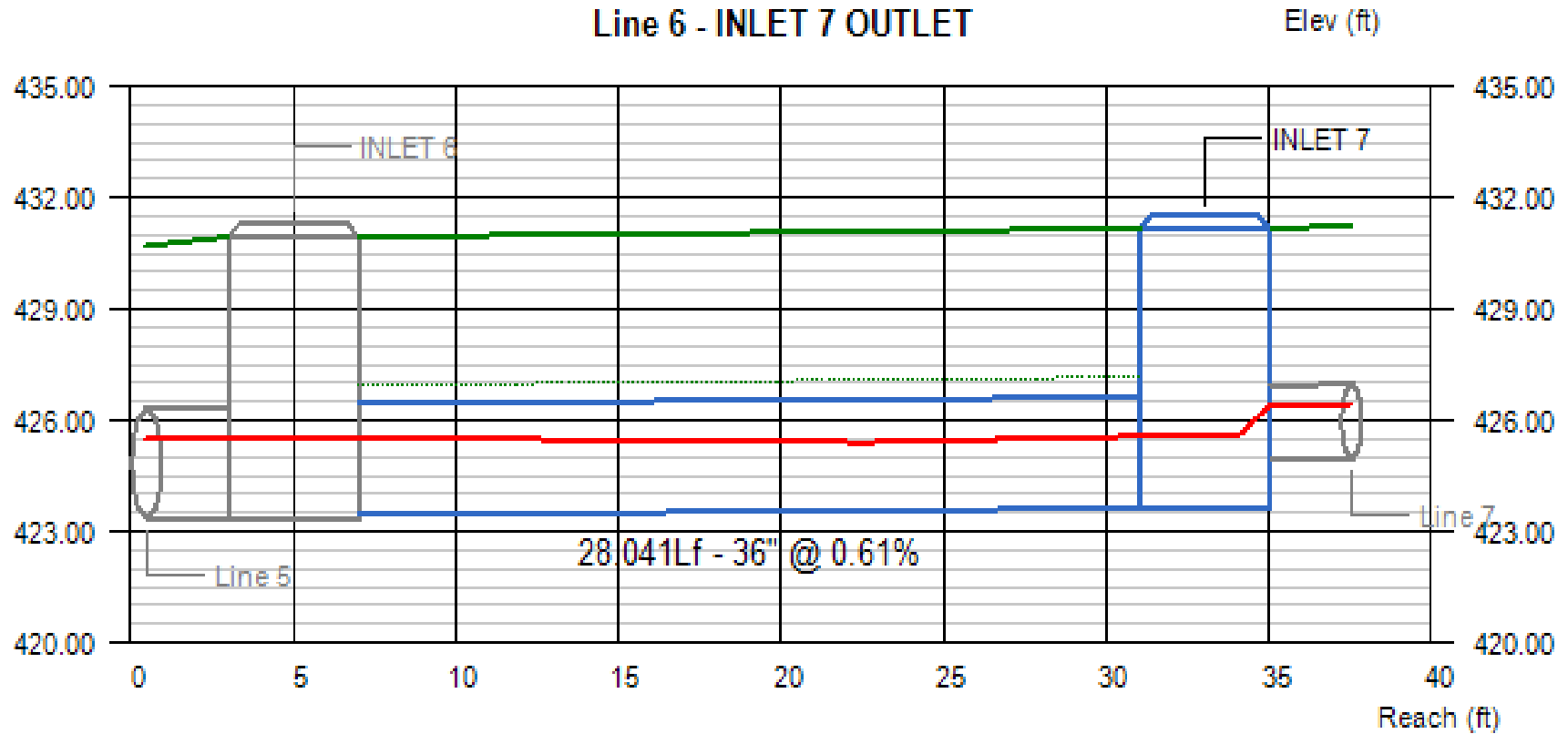


Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
5	44.25	423.20	423.35	2.20	2.17	2.17	425.40	425.52 j	425.52	7.98	8.10	2.30	4.59

Project File:

No. Lines: 33

Run Date: 10/11/2023



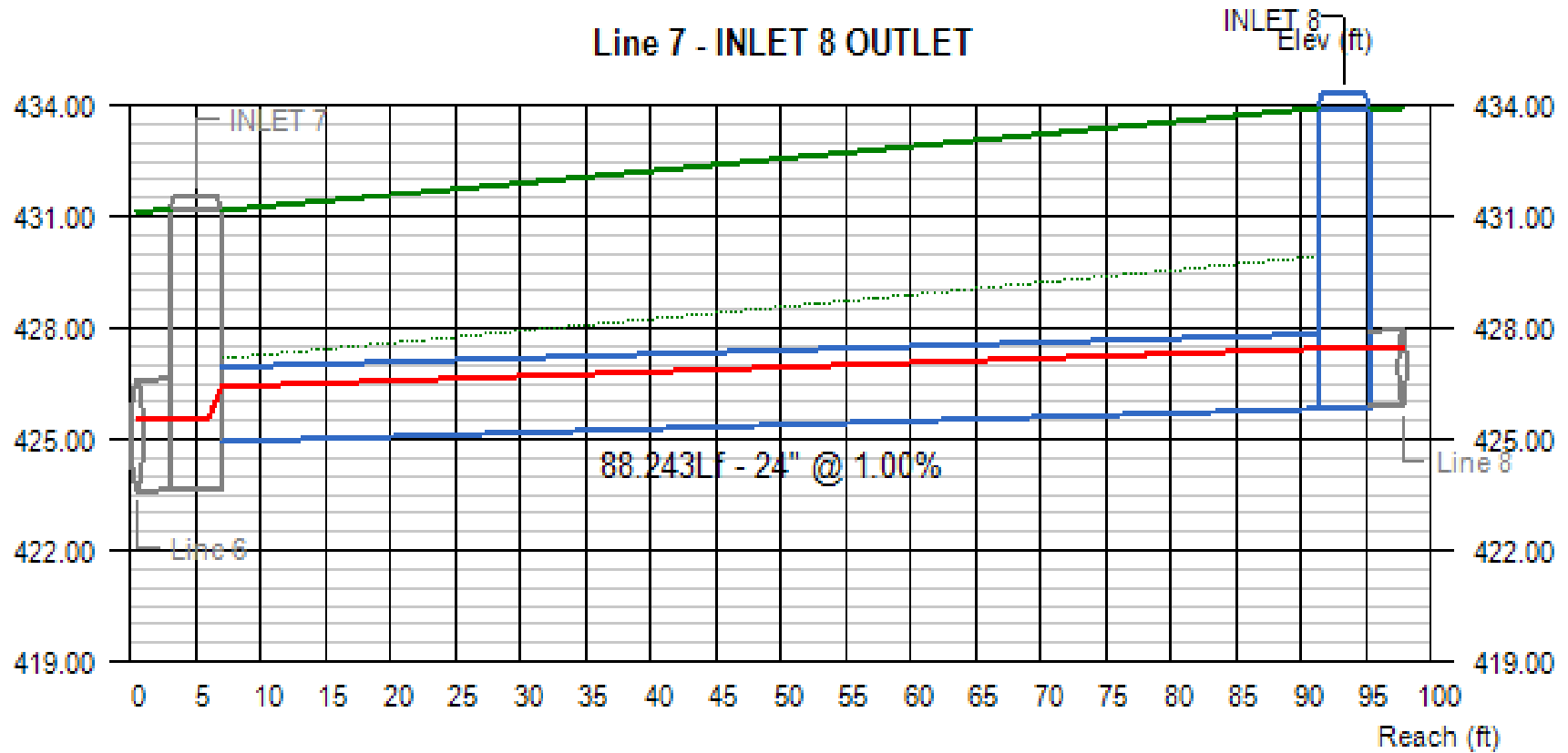
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
6	36.30	423.45	423.62	2.07	1.96	1.96	425.52	425.58 j	425.58	6.99	7.43	4.49	4.54

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 7) - INLET 8 OUTLET



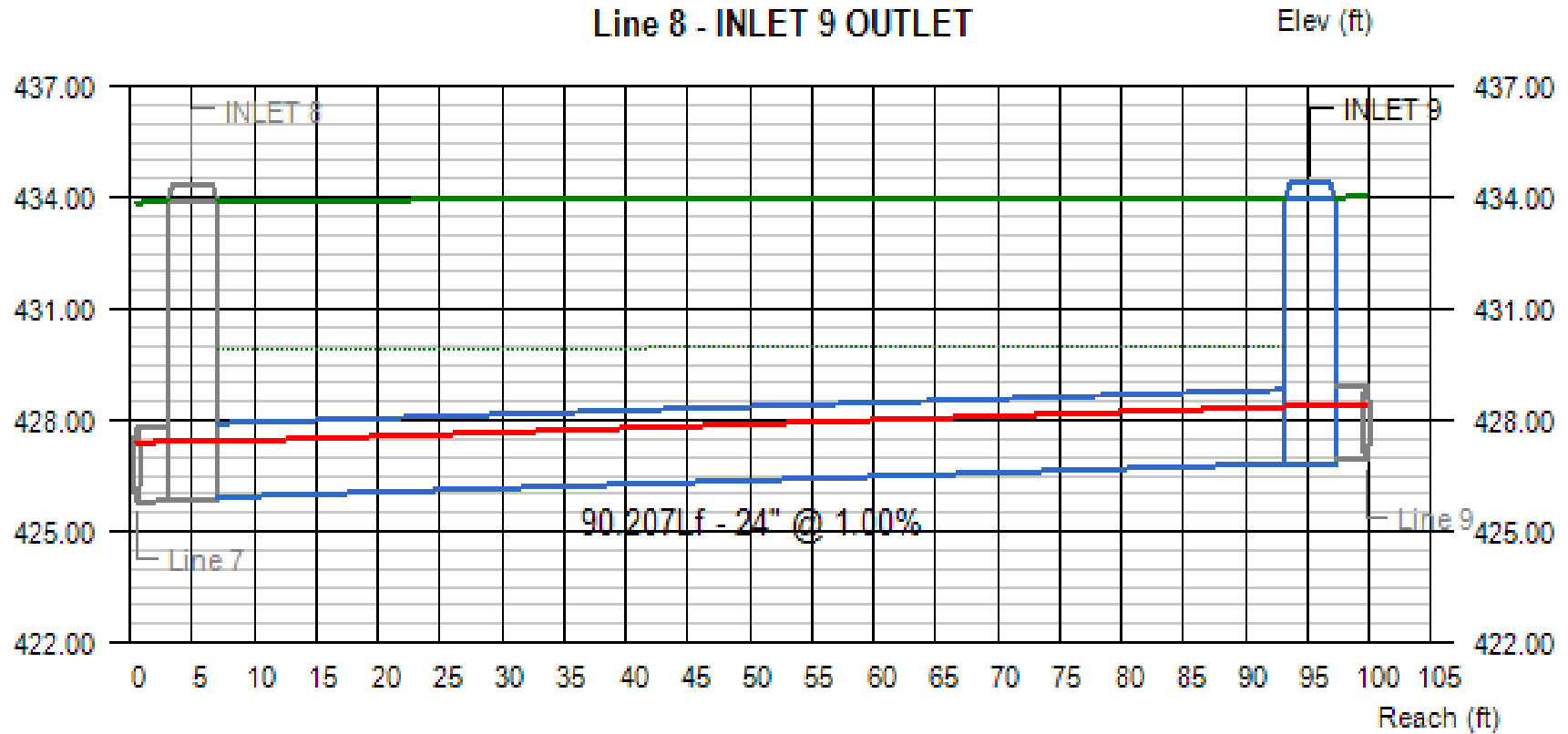
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
7	20.15	424.94	425.82	1.47	1.61	1.61	426.41	427.43	427.43	8.13	7.43	4.22	6.10

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 8) - INLET 9 OUTLET



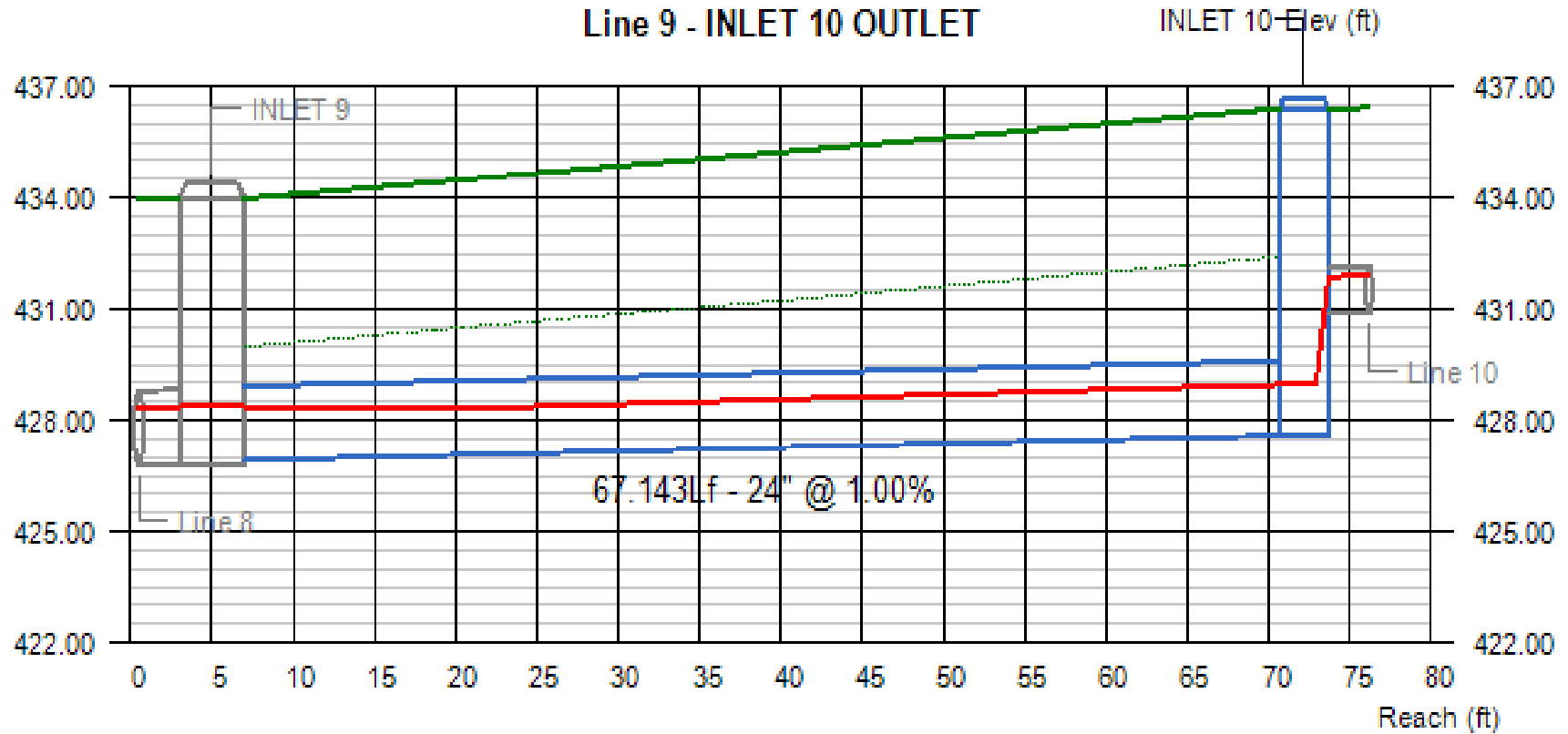
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
8	18.59	425.92	426.82	1.51	1.55	1.55	427.43	428.37	428.37	7.30	7.11	6.00	5.15

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 9) - INLET 10 OUTLET



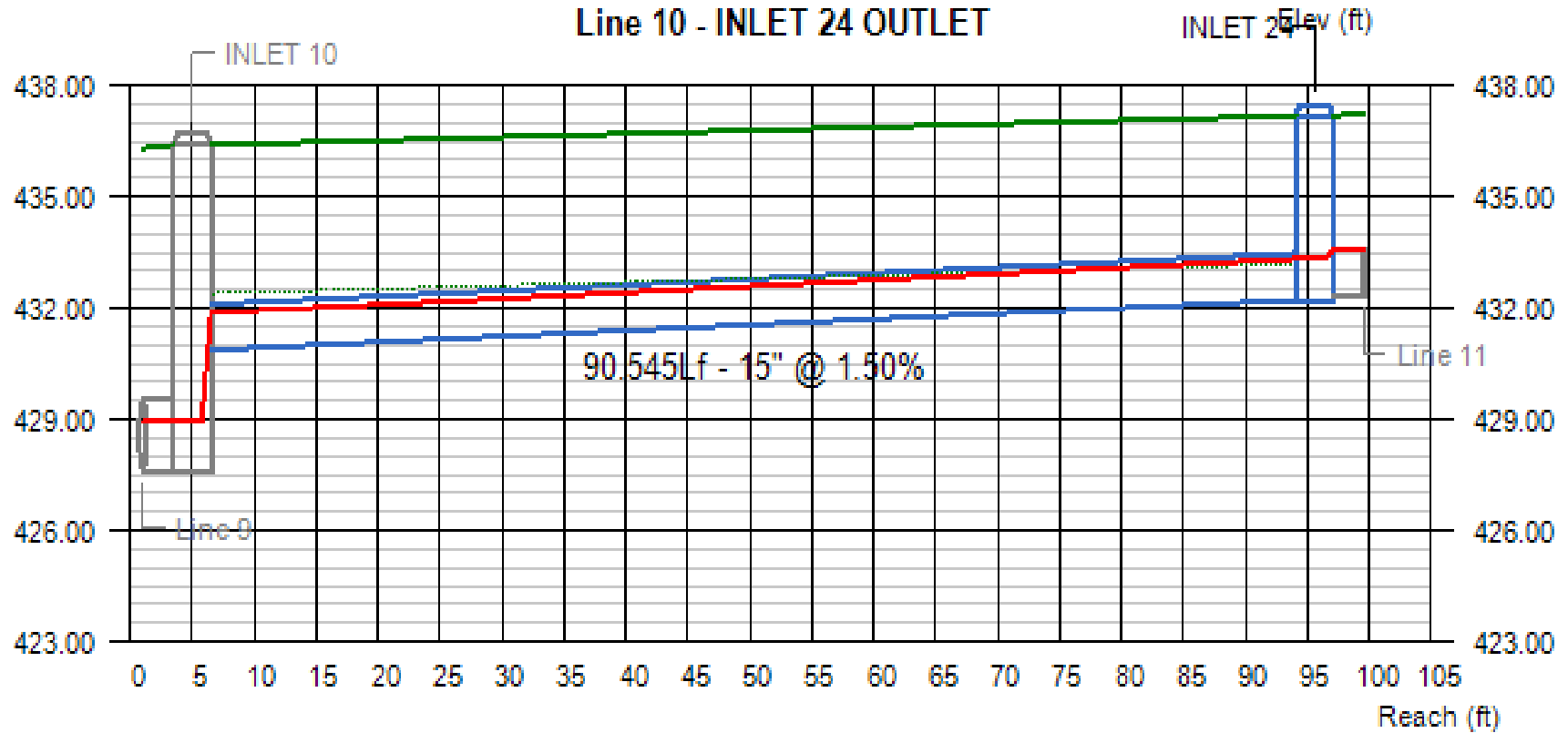
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
9	14.46	426.92	427.59	1.45	1.37	1.37	428.37	428.96 j	428.96	5.93	6.31	5.05	6.81

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line 10 - INLET 24 OUTLET



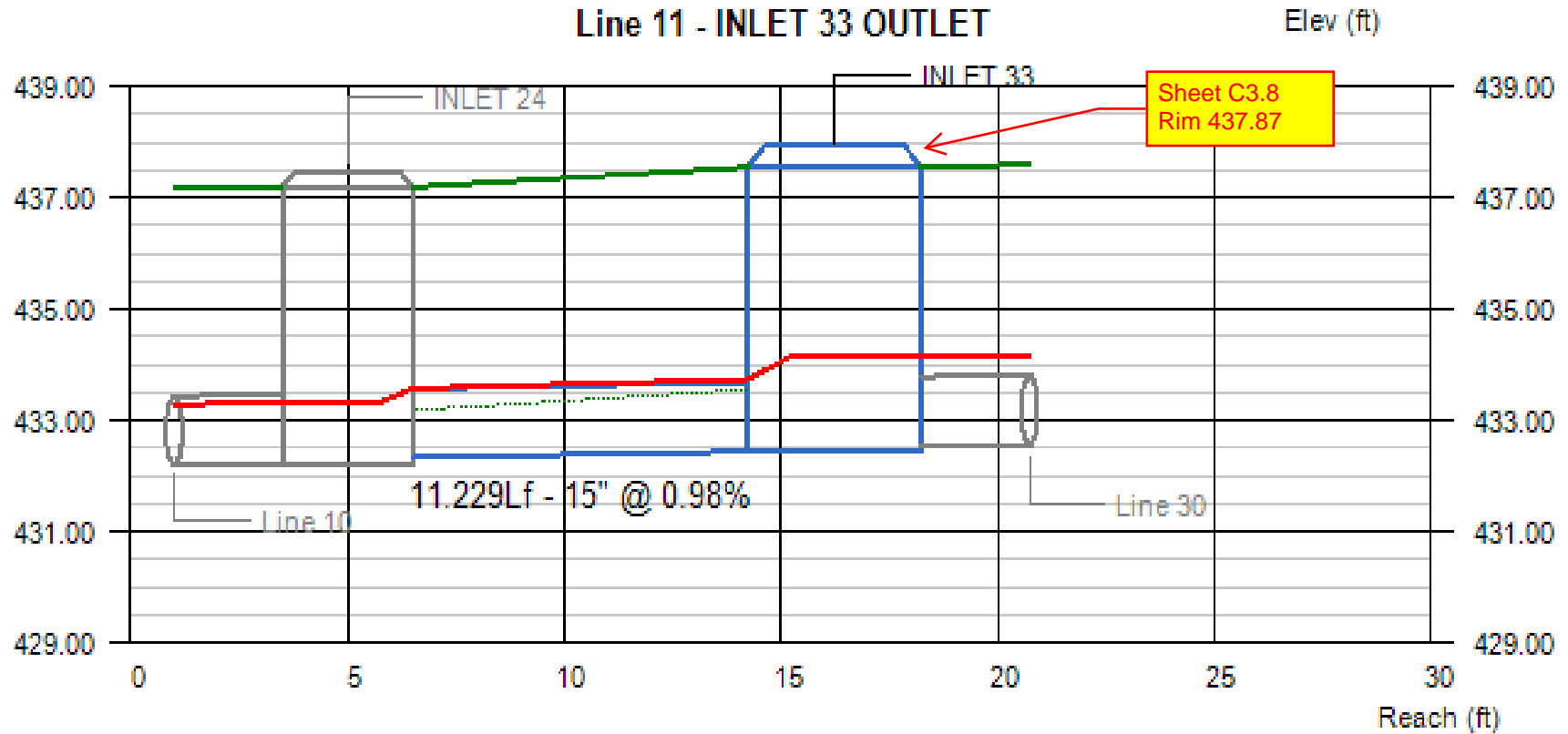
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
10	7.80	430.86	432.22	1.01	1.10	1.10	431.87	433.32	433.32	7.35	6.80	4.29	3.71

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 11) - INLET 33 OUTLET



Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
11	7.74	432.32	432.43	1.25	1.25	1.71	433.57	433.73	434.14	6.31	6.31	3.61	3.87

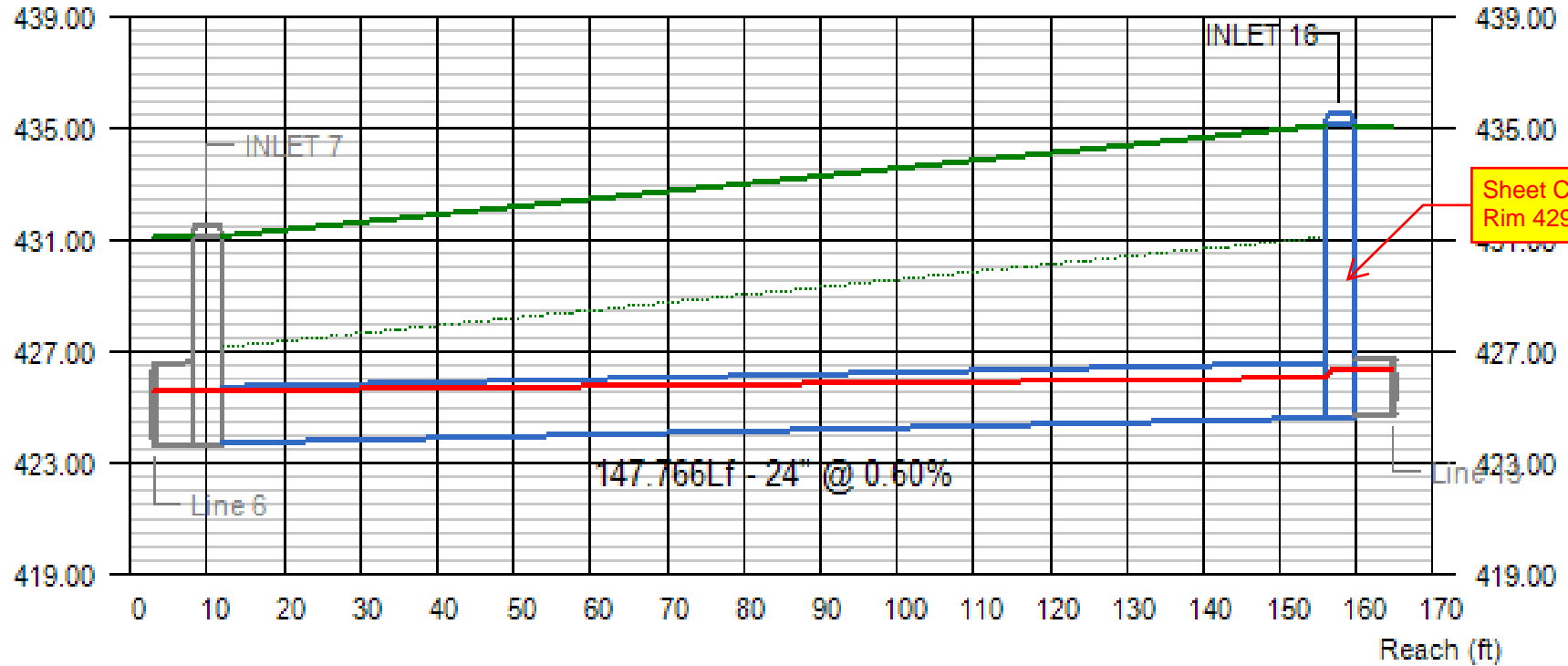
Project File:

No. Lines: 33

Run Date: 10/11/2023

Line 12 - INLET 16 OUTLET

Elev (ft)



Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
12	14.89	423.72	424.61	1.86	1.46	1.74	425.58	426.07	426.35	4.89	6.07	5.44	8.49

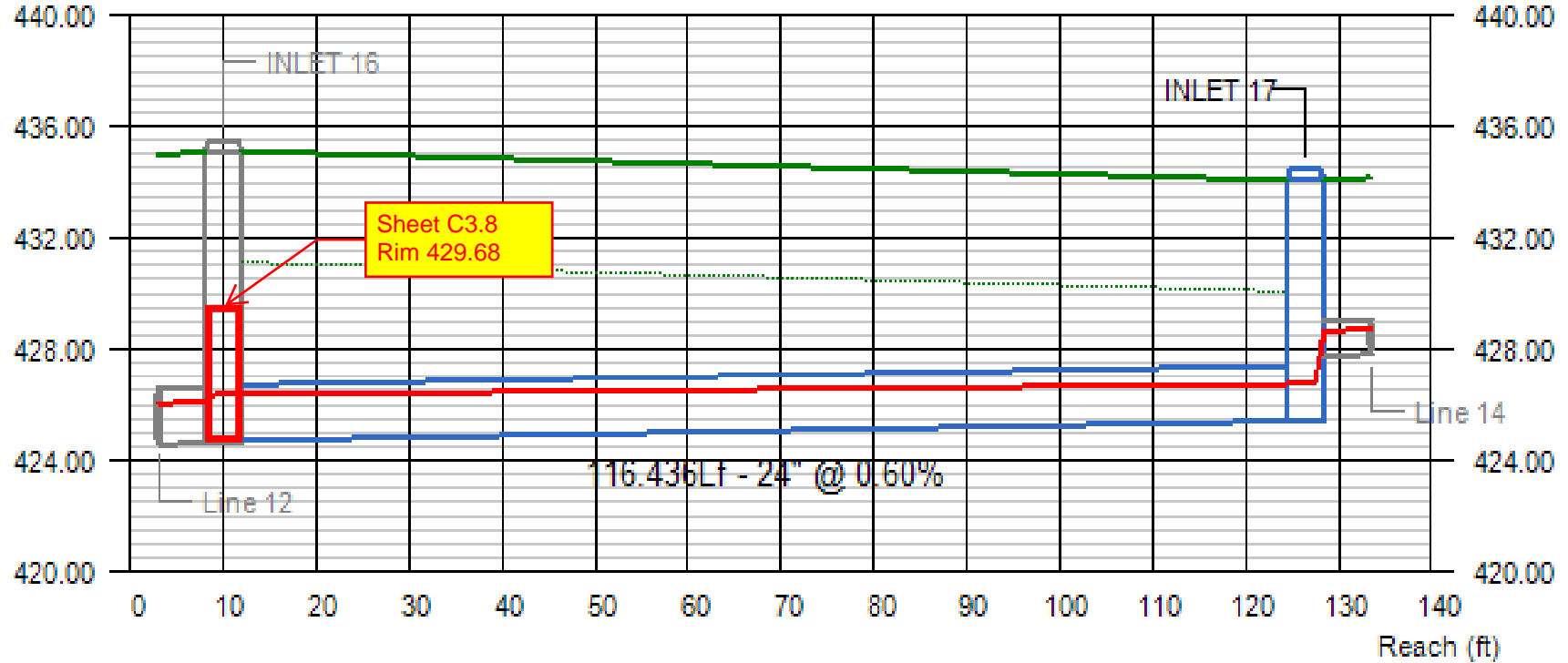
Project File:

No. Lines: 33

Run Date: 10/11/2023

Line 13 - INLET 17 OUTLET

Elev (ft)



Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
13	13.66	424.71	425.41	1.64	1.33	1.33	426.35	426.74	426.74	4.94	6.16	8.39	6.66

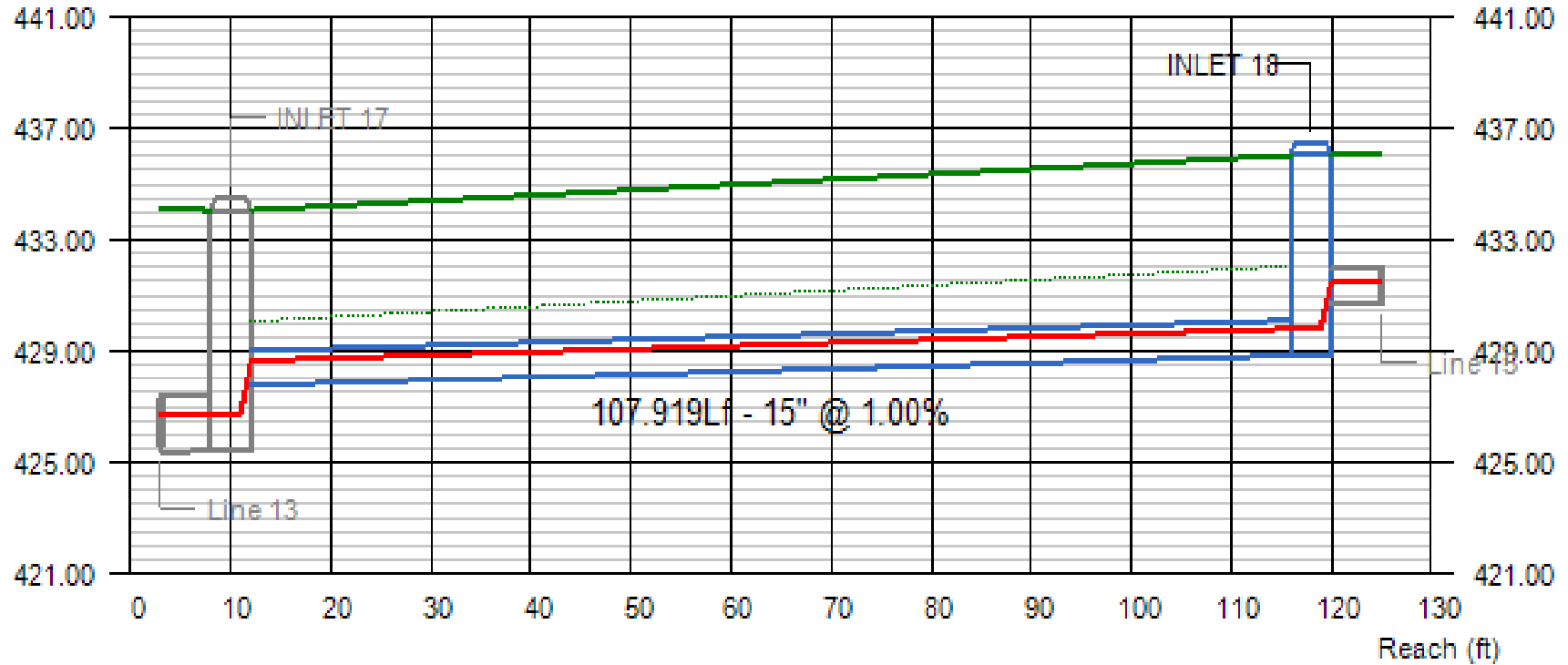
Project File:

No. Lines: 33

Run Date: 10/11/2023

Line 14 - INLET 18 OUTLET

Elev (ft)



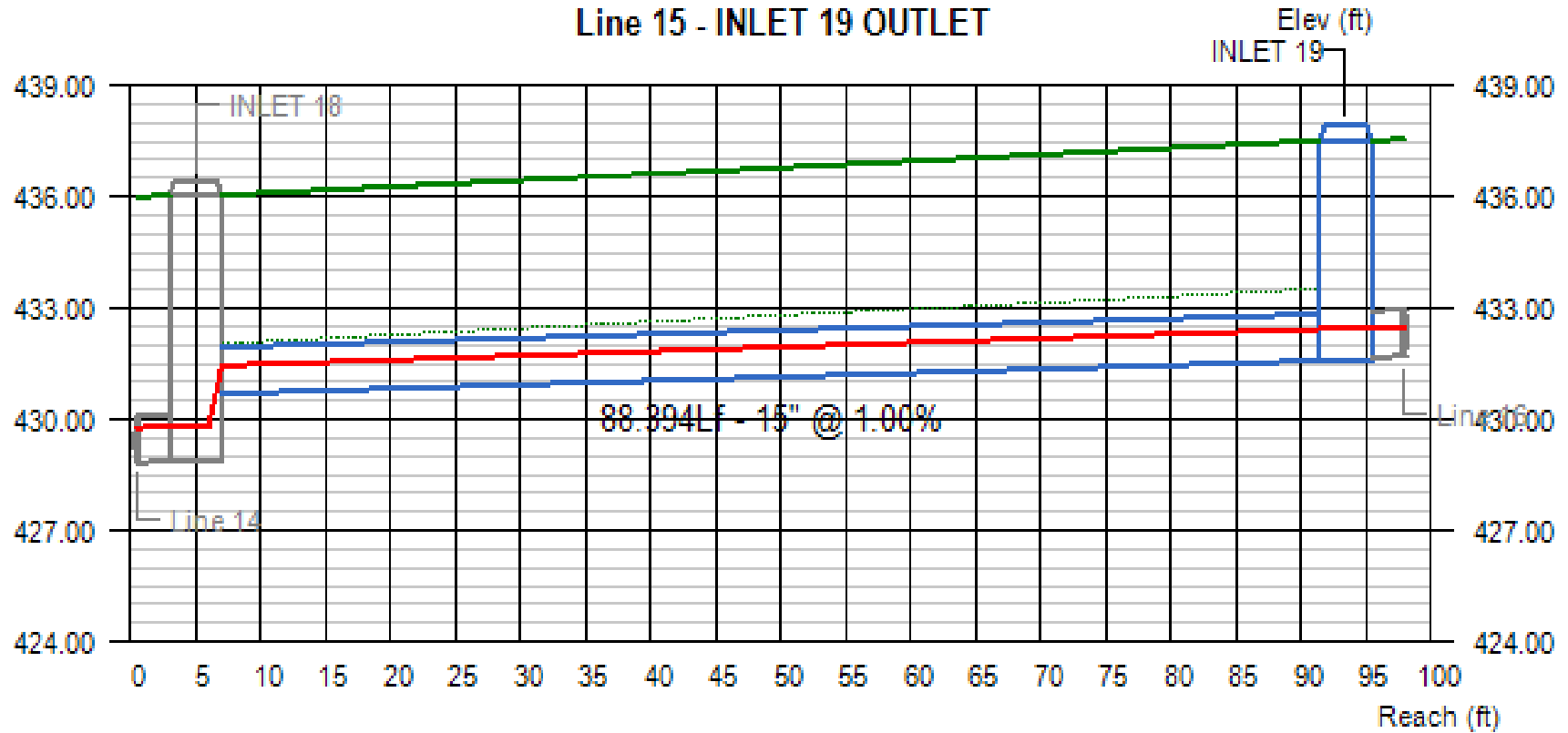
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
14	5.57	427.77	428.85	0.90	0.96	0.96	428.67	429.81	429.81	5.92	5.54	5.05	5.93

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line 15 - INLET 19 OUTLET

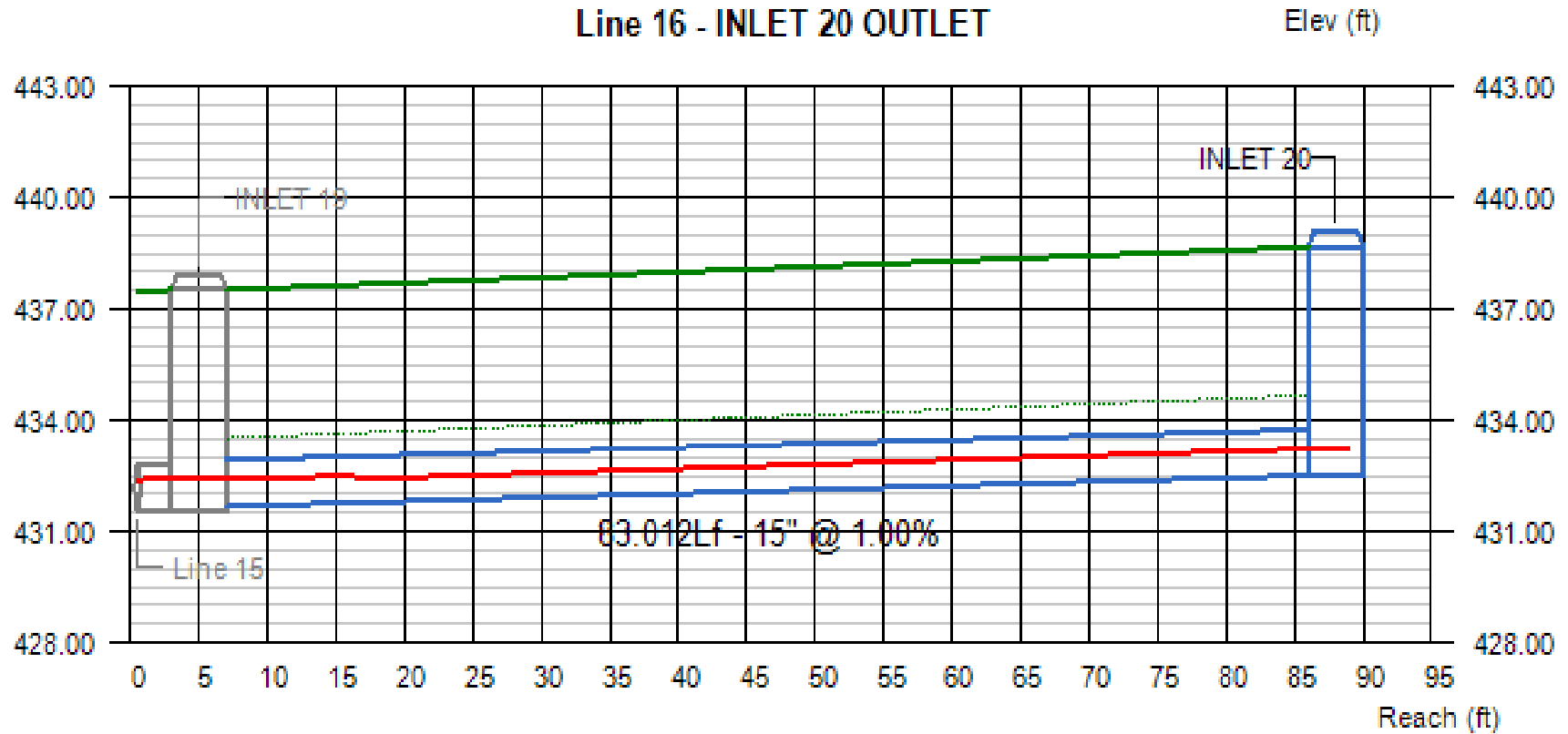


Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
15	4.37	430.69	431.57	0.75	0.85	0.85	431.44	432.42	432.42	5.64	4.94	4.09	4.70

Project File:

No. Lines: 33

Run Date: 10/11/2023



Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
16	3.25	431.67	432.50	0.75	0.73	0.73	432.42	433.23 j	433.23	4.26	4.40	4.60	4.92

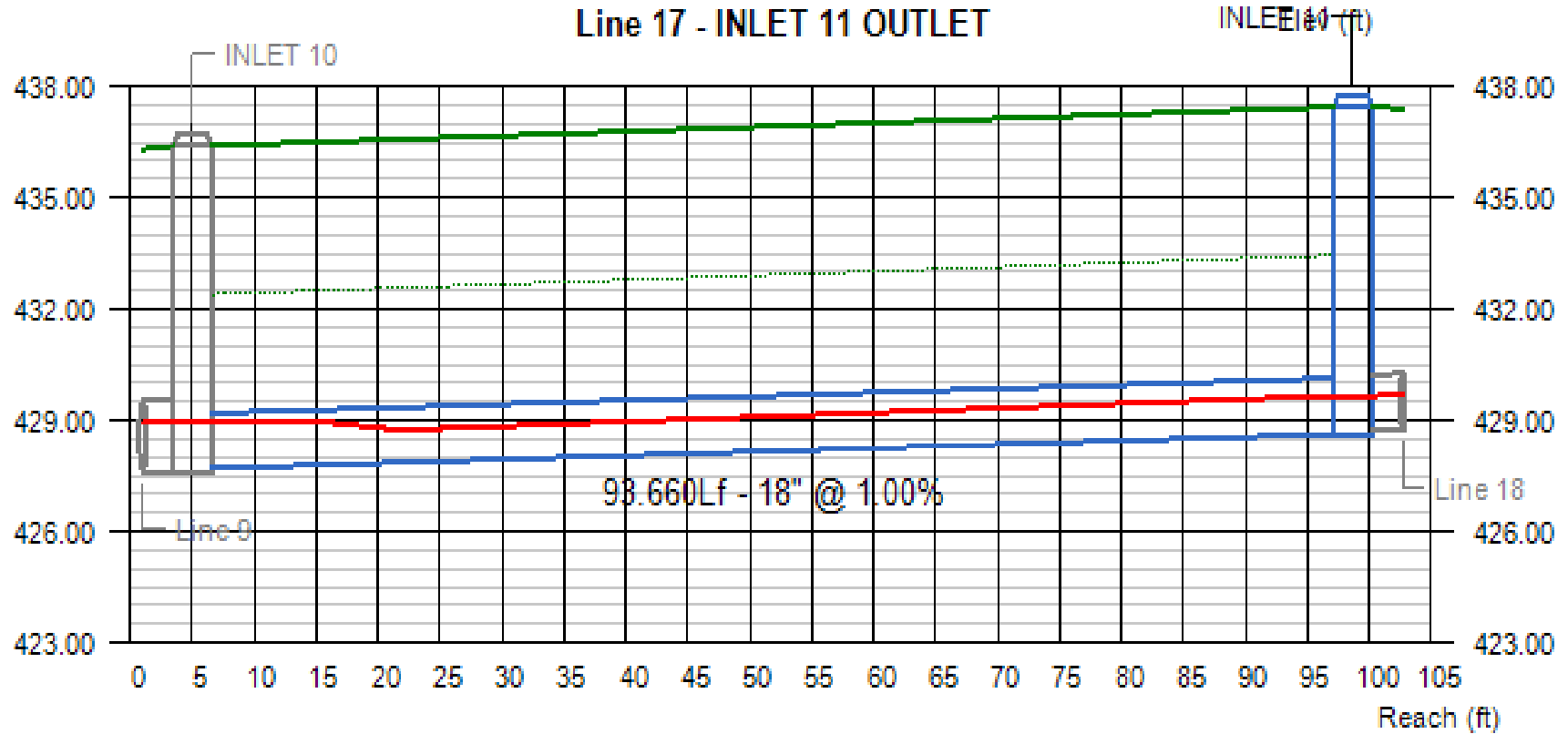
Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 17) - INLET 11 OUTLET

Line 17 - INLET 11 OUTLET



Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
17	7.05	427.69	428.63	1.27	1.03	1.03	428.96	429.66 j	429.66	4.42	5.47	7.21	7.31

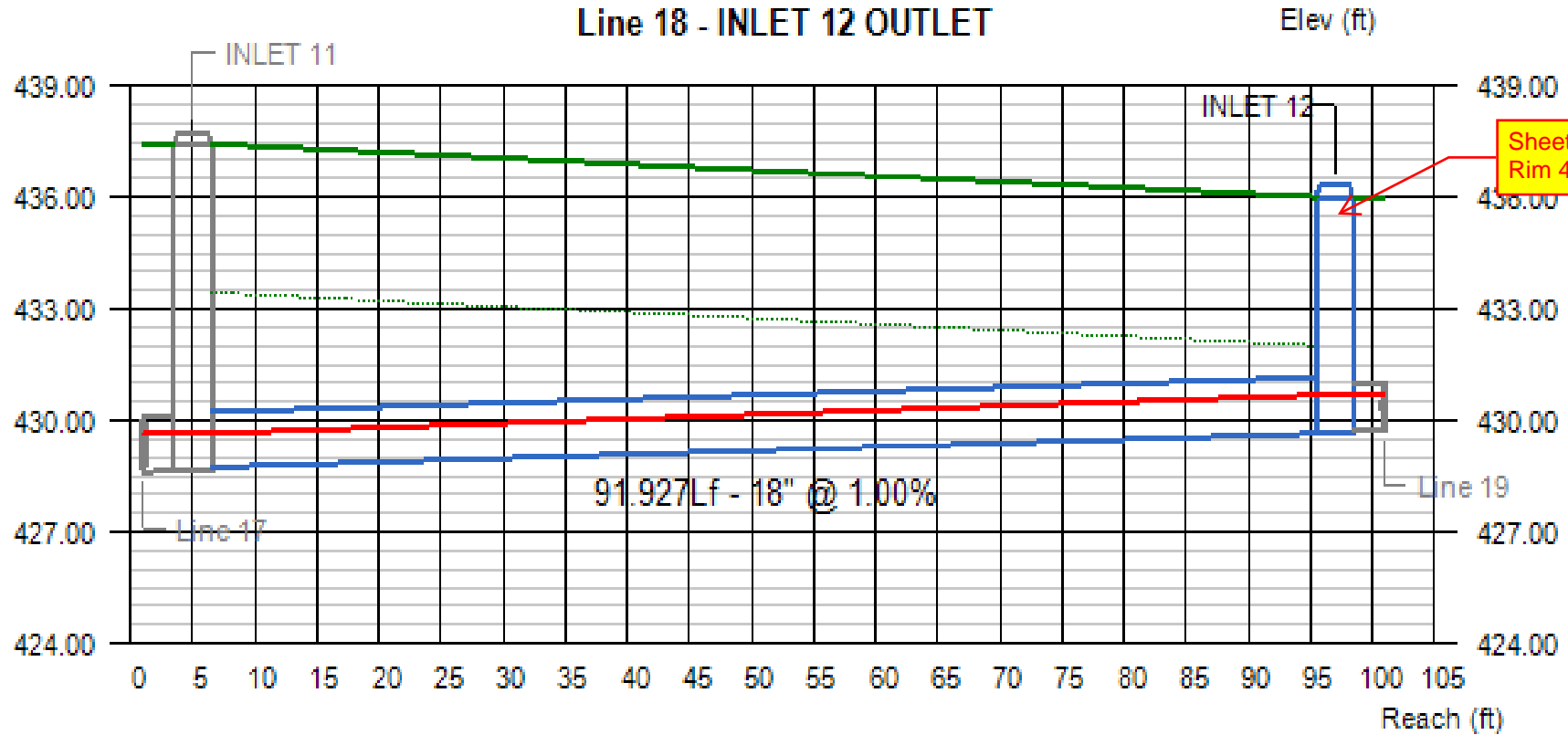
Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 18) - INLET 12 OUTLET

Line 18 - INLET 12 OUTLET



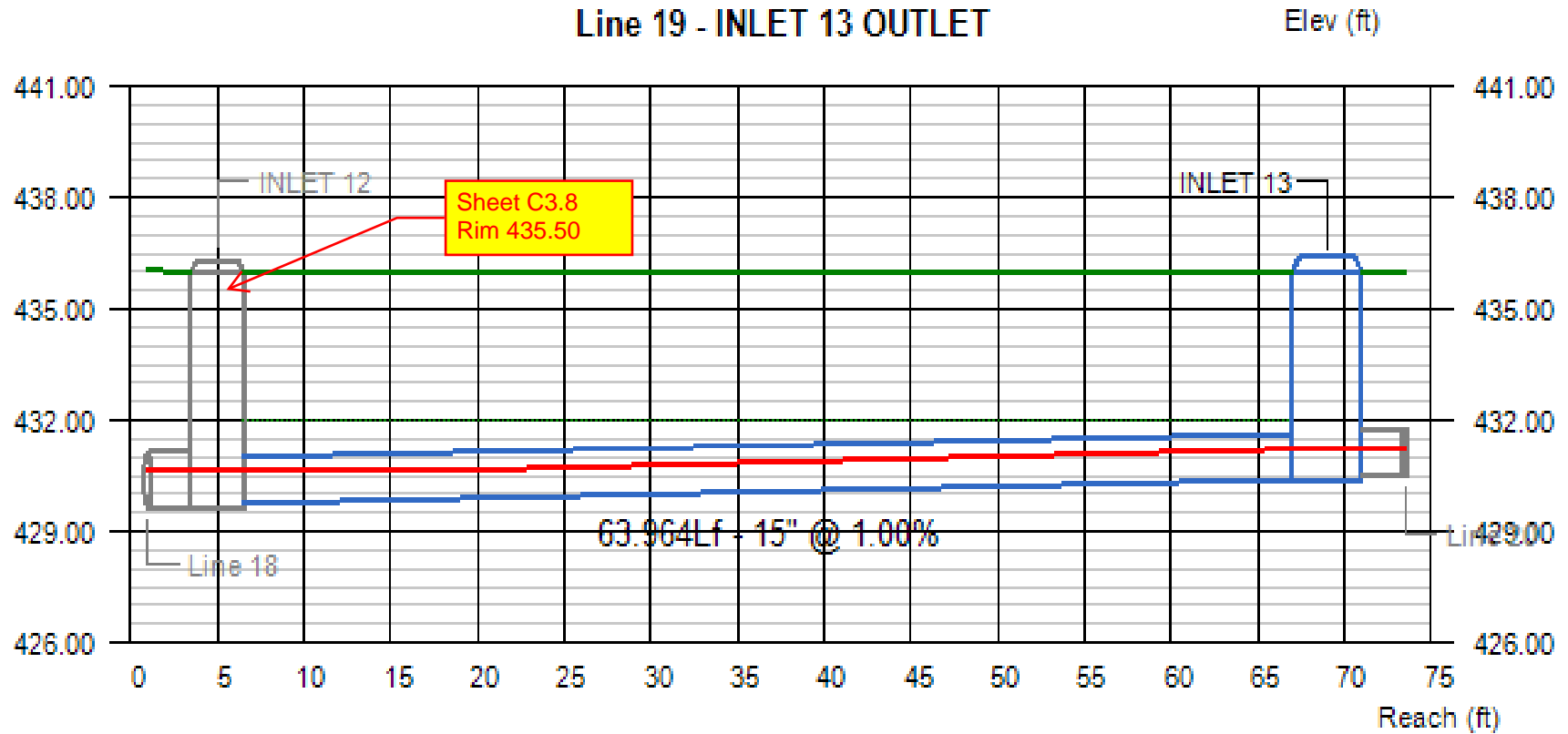
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
18	7.11	428.73	429.65	0.93	1.03	1.03	429.66	430.68	430.68	6.19	5.49	7.21	4.85

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 19) - INLET 13 OUTLET



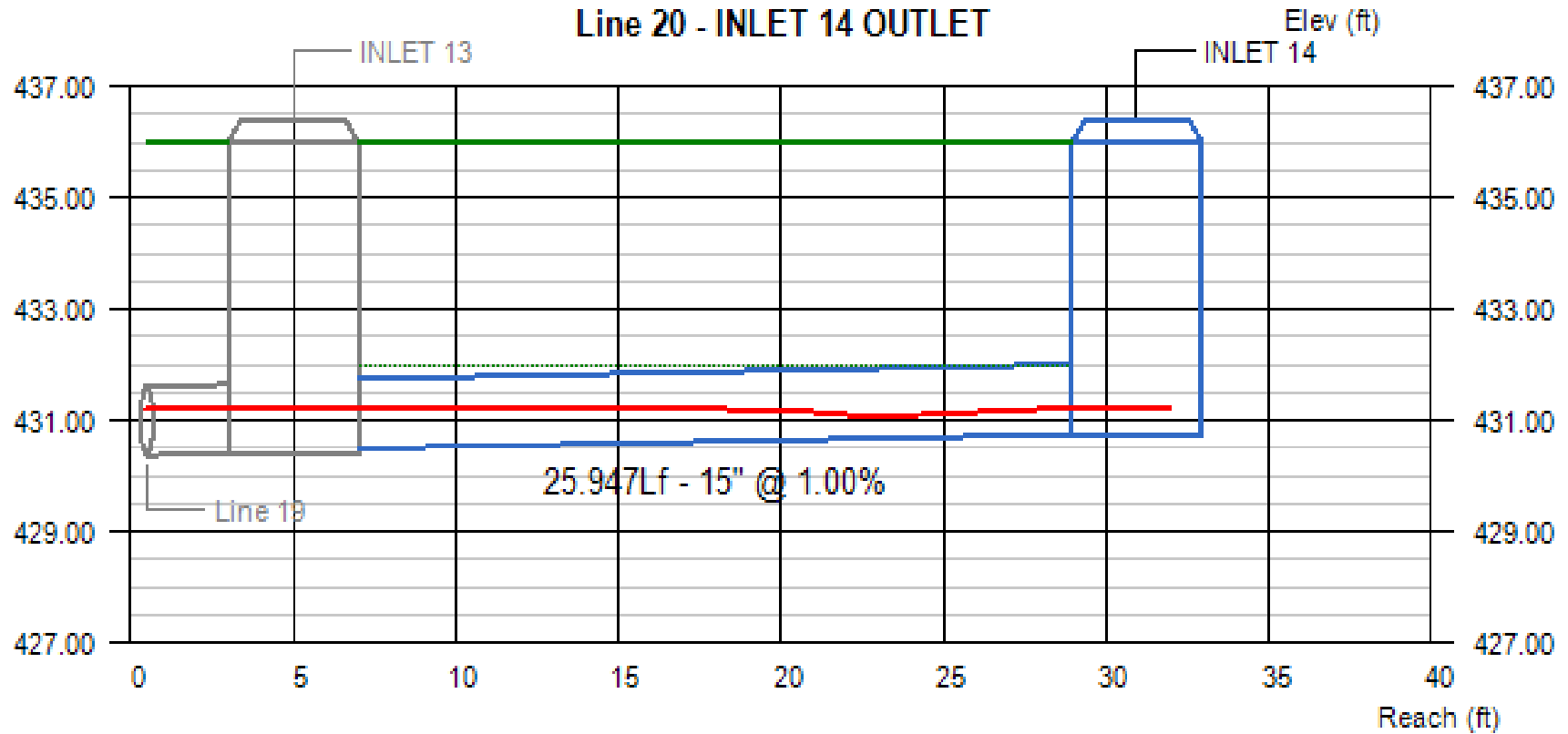
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
19	4.19	429.75	430.39	0.93	0.83	0.83	430.68	431.22 j	431.22	4.28	4.86	5.00	4.36

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 20) - INLET 14 OUTLET

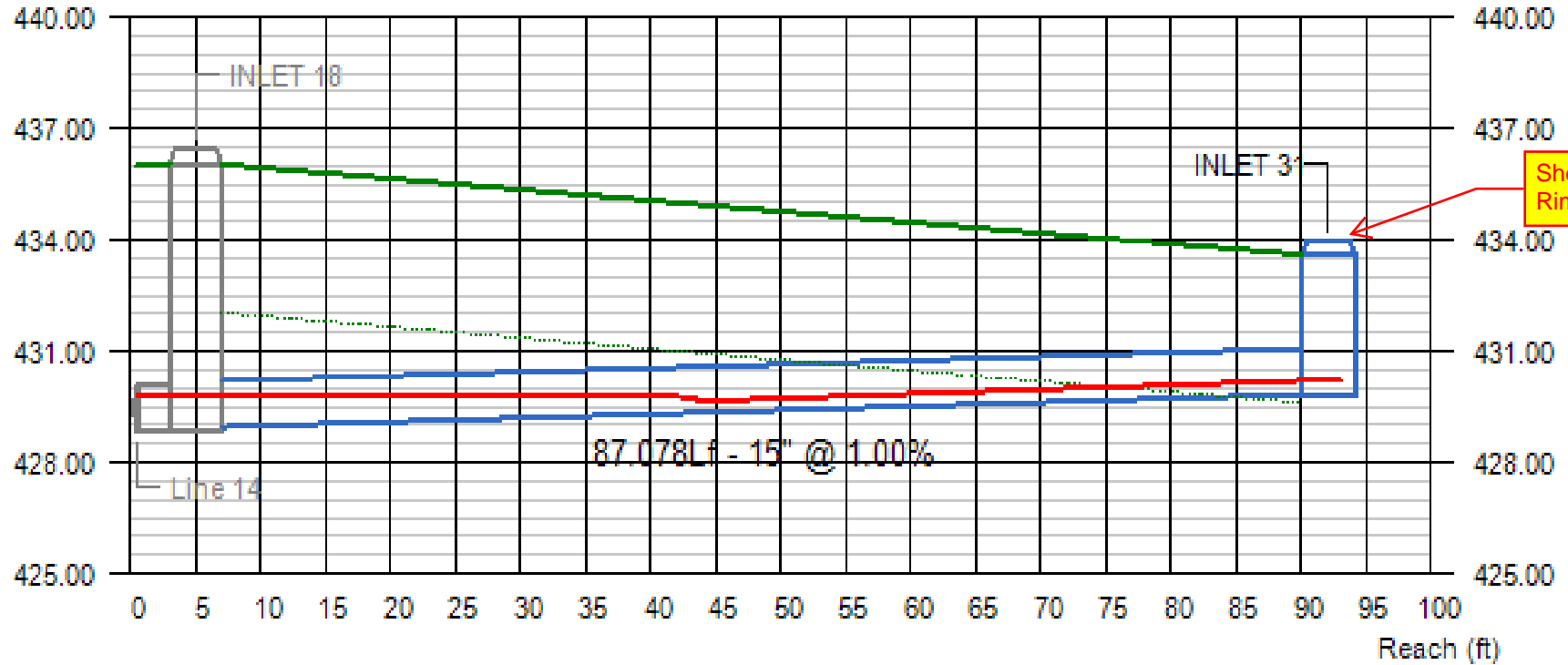


Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
20	1.46	430.49	430.75	0.73	0.48	0.48	431.22	431.23 j	431.23	1.97	3.39	4.26	4.00

Project File: _____ No. Lines: 33 Run Date: 10/11/2023

Line 21 - INLET 31 OUTLET

Elev (ft)

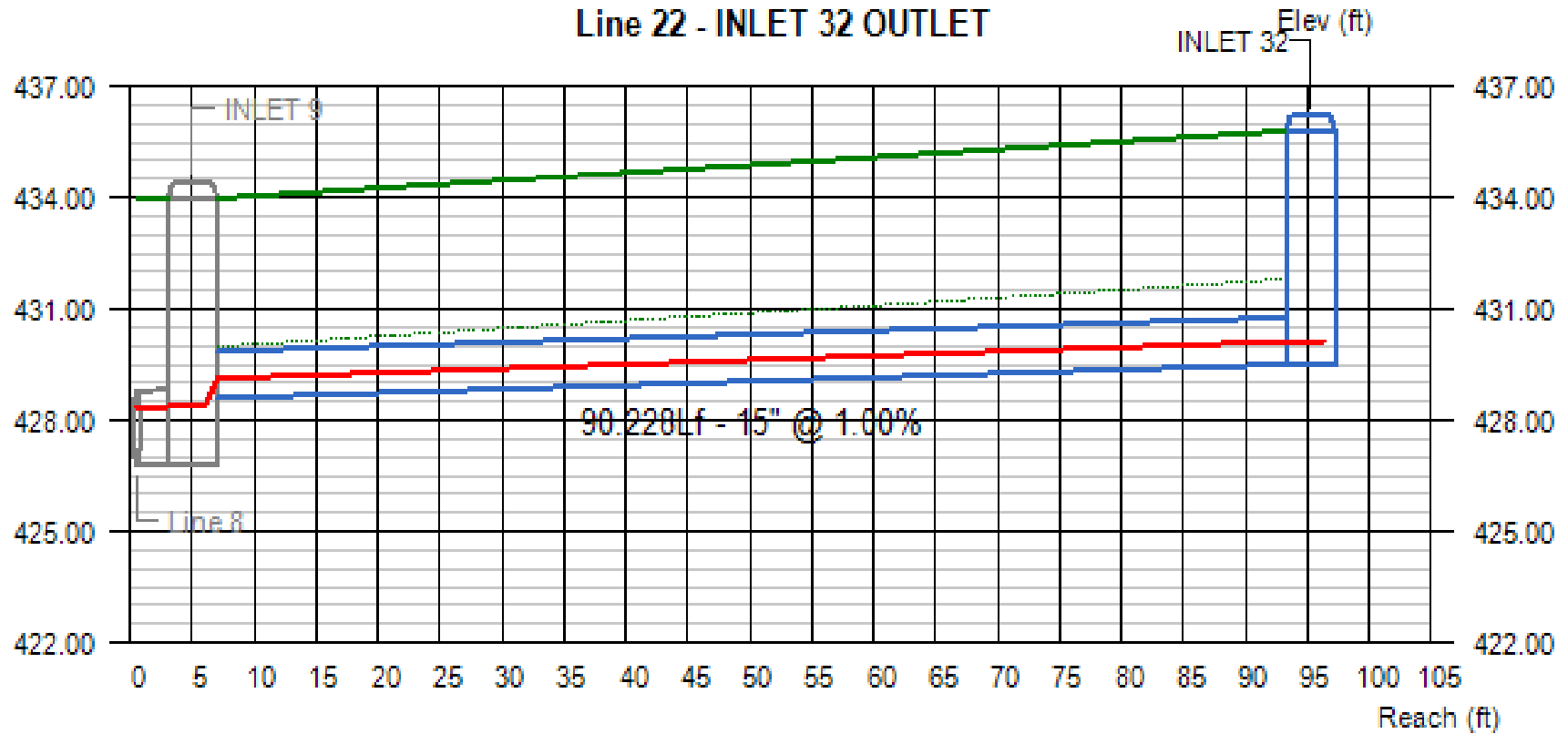


Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
21	0.96	428.95	429.82	0.86	0.38	0.38	429.81	430.20 j	430.20	1.07	2.99	5.83	2.52

Project File:

No. Lines: 33

Run Date: 10/11/2023



Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
22	2.35	428.60	429.50	0.52	0.61	0.61	429.12	430.11	430.11	4.84	3.93	4.12	5.05

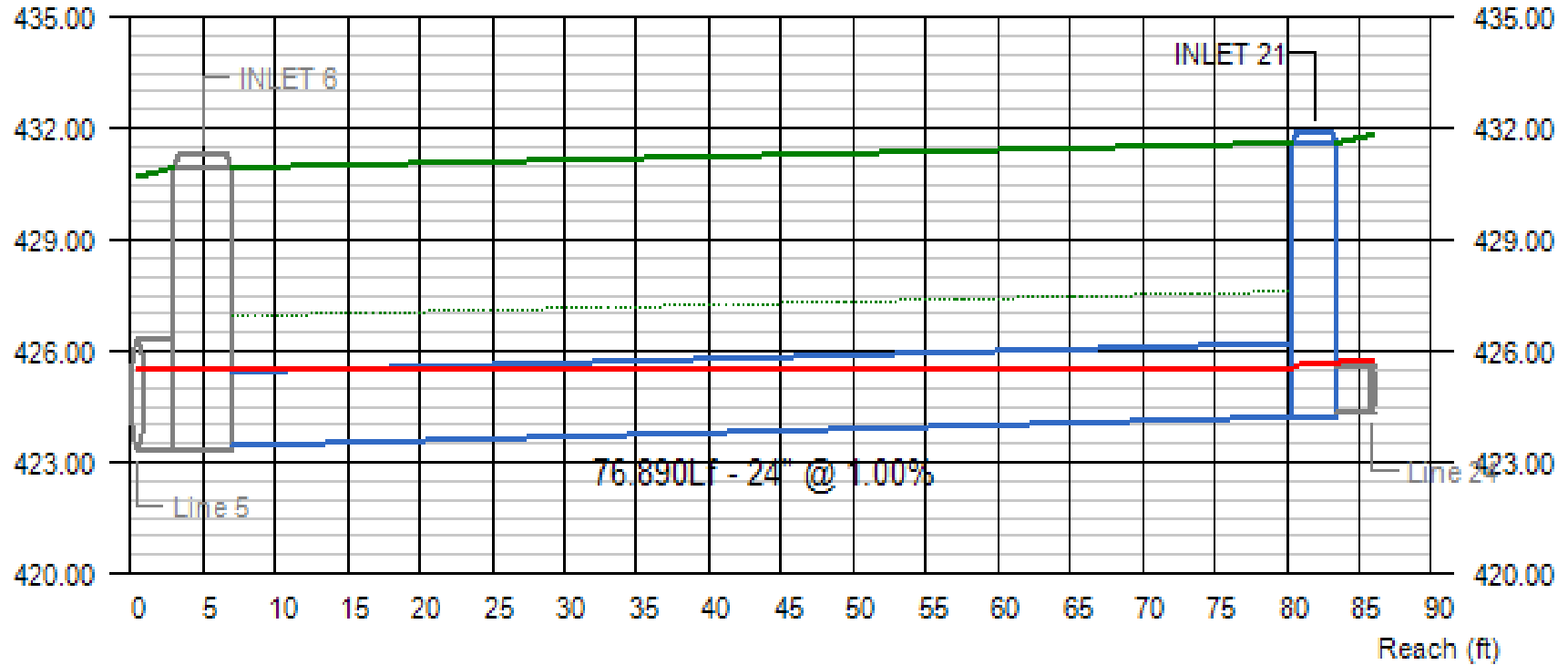
Project File:

No. Lines: 33

Run Date: 10/11/2023

Line 23 - INLET 21 OUTLET

Elev (ft)

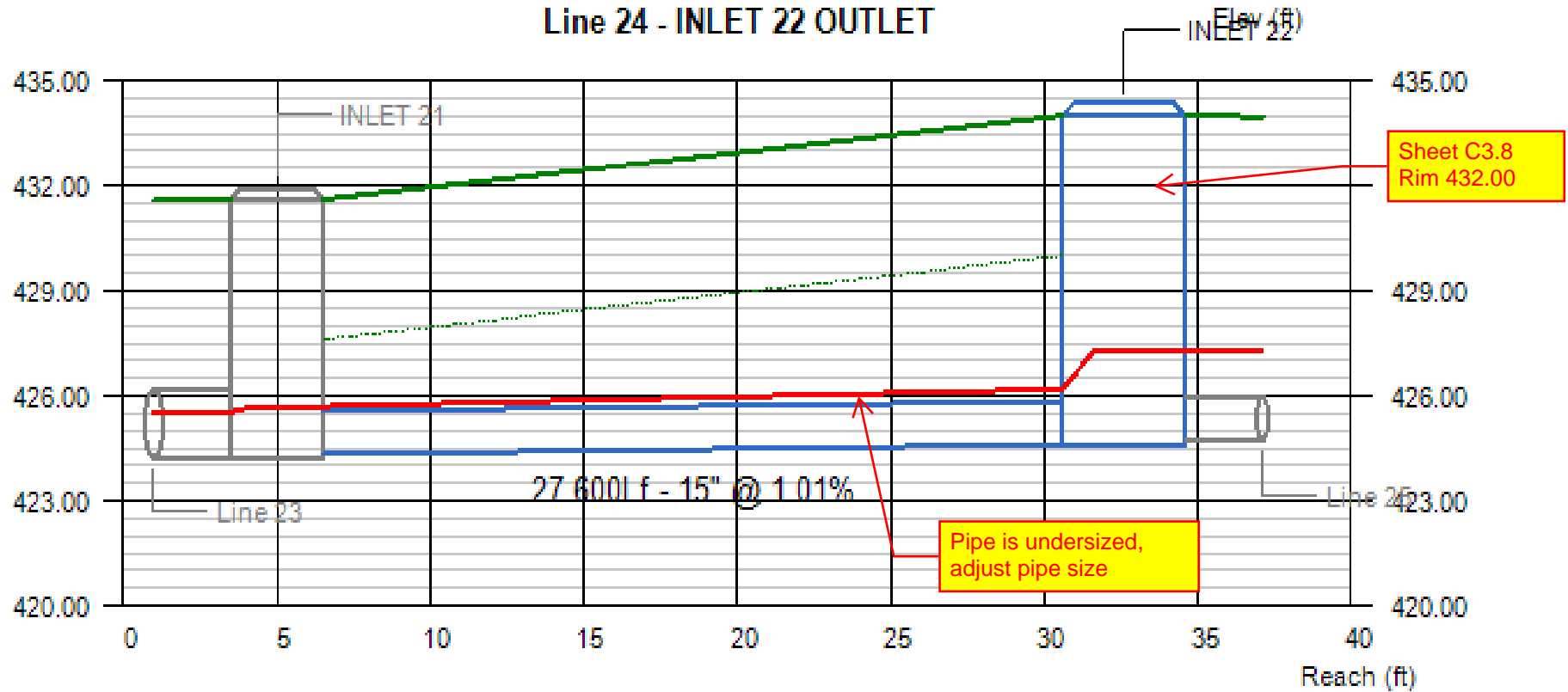


Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
23	8.63	423.45	424.22	2.00	1.33	1.49	425.52	425.55	425.71	2.75	3.90	5.49	5.38

Project File:

No. Lines: 33

Run Date: 10/11/2023



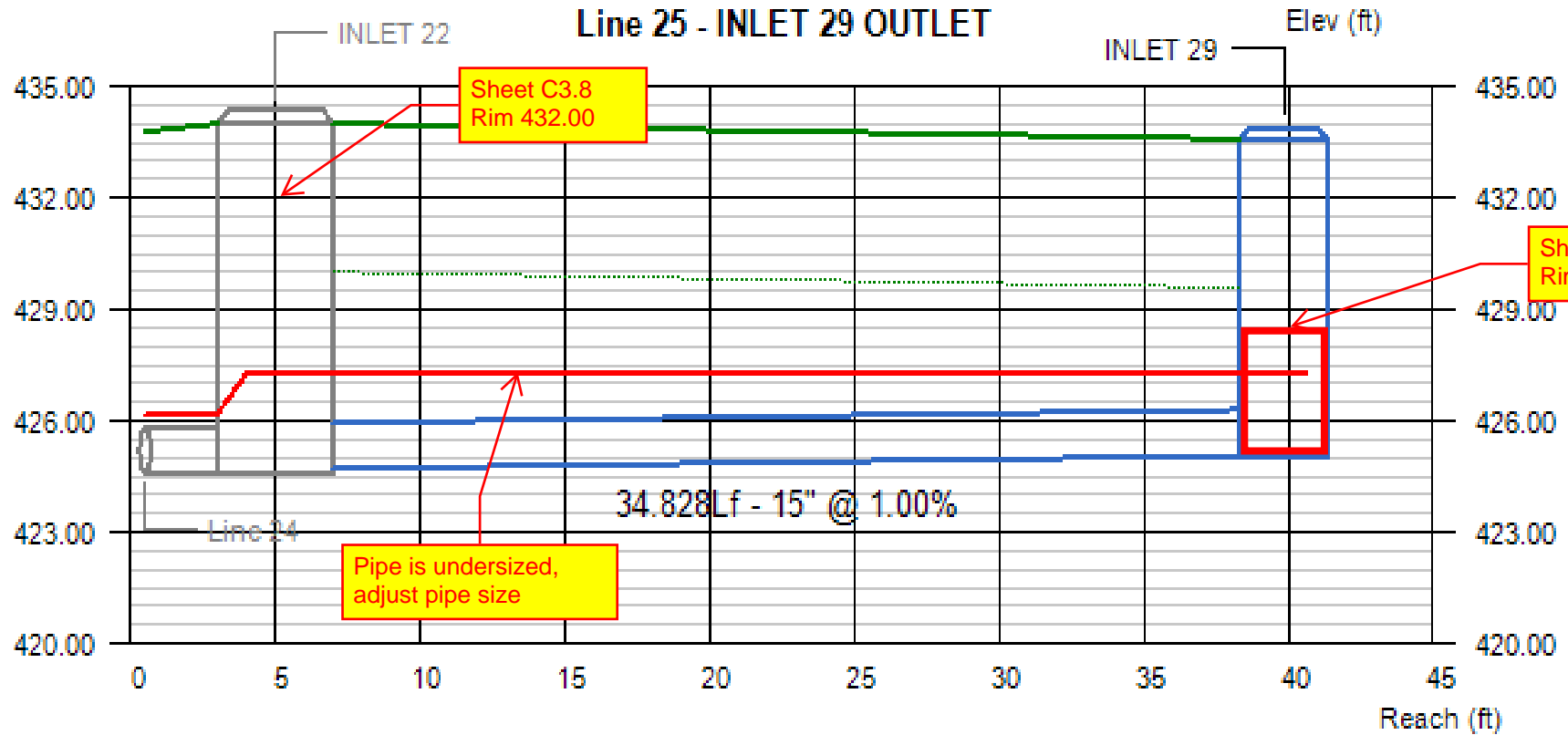
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
24	8.59	424.32	424.60	1.25	1.25	2.67	425.71	426.20	427.27	7.00	7.00	6.03	8.15

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 25) - INLET 29 OUTLET



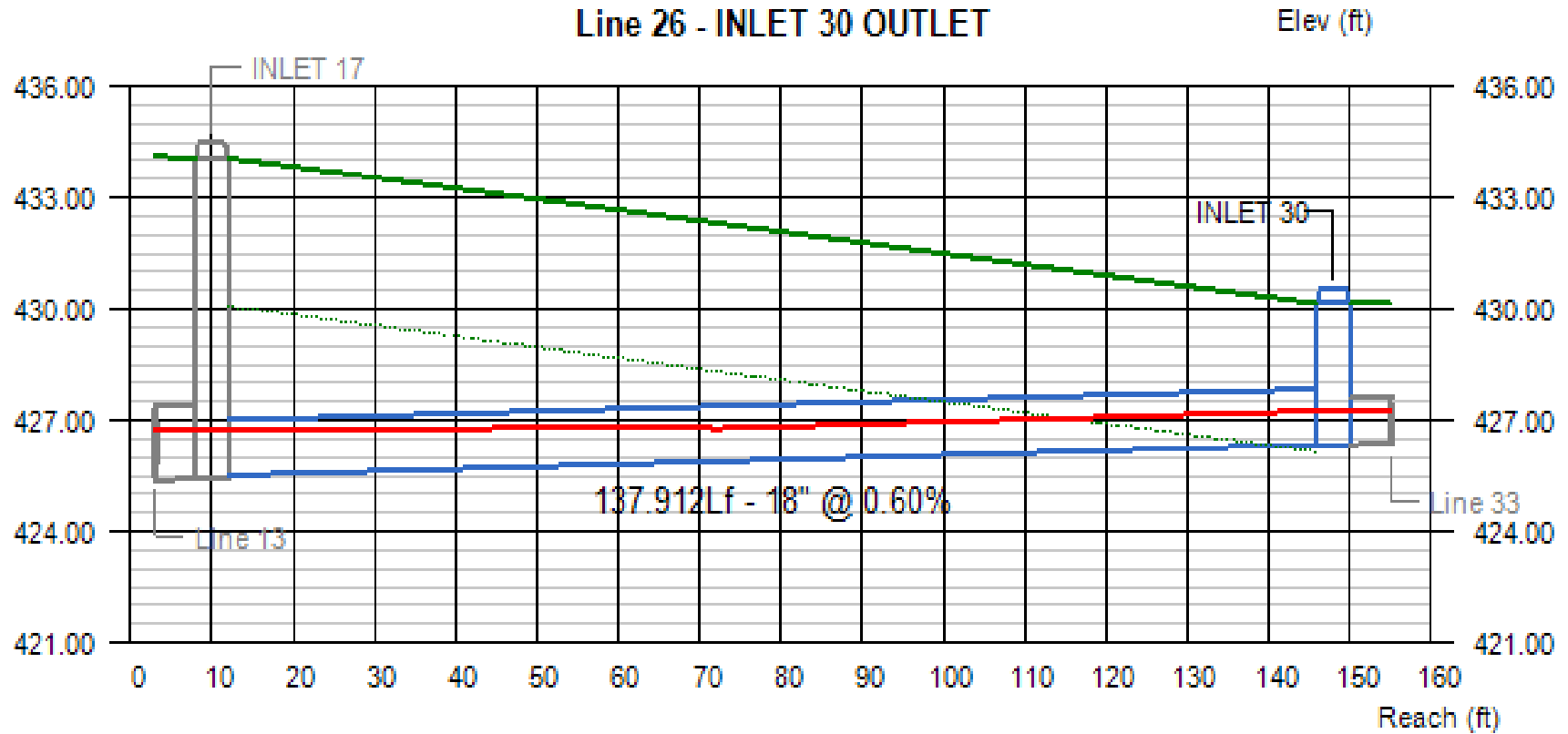
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
25	0.77	424.70	425.05	1.25	1.25	2.23	427.27	427.27	427.28	0.63	0.63	8.05	7.29

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 26) - INLET 30 OUTLET



Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
26	5.63	425.51	426.34	1.23	0.91	0.91	426.74	427.25 j	427.25	3.63	4.99	7.06	2.31

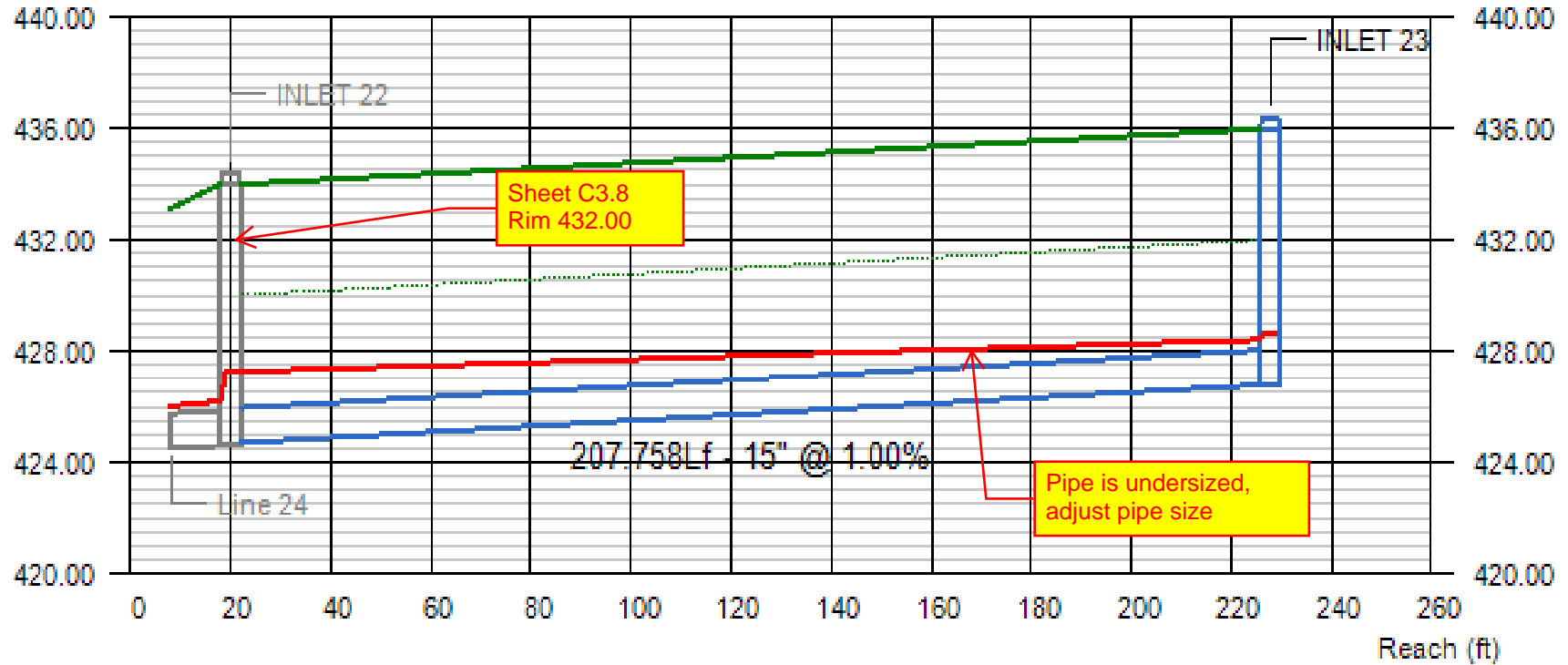
Project File:

No. Lines: 33

Run Date: 10/11/2023

Line 27 - INLET 23 OUTLET

Elev (ft)



Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
27	4.77	424.70	426.78	1.25	1.25	1.86	427.27	428.41	428.64	3.89	3.89	8.05	7.94

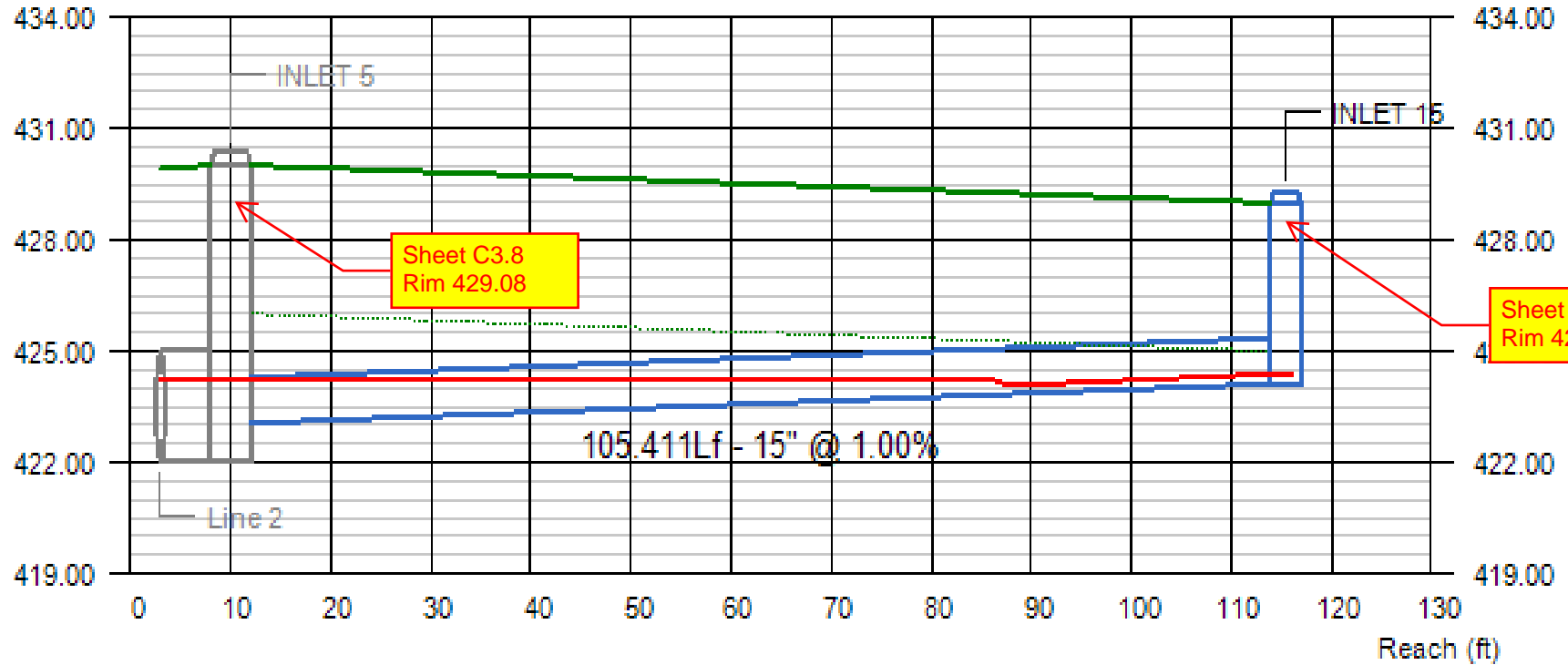
Project File:

No. Lines: 33

Run Date: 10/11/2023

Line 28 - INLET 15 OUTLET

Elev (ft)



Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
28	0.56	423.05	424.10	1.19	0.29	0.29	424.24	424.39 j	424.39	0.46	2.58	5.70	3.65

Project File:

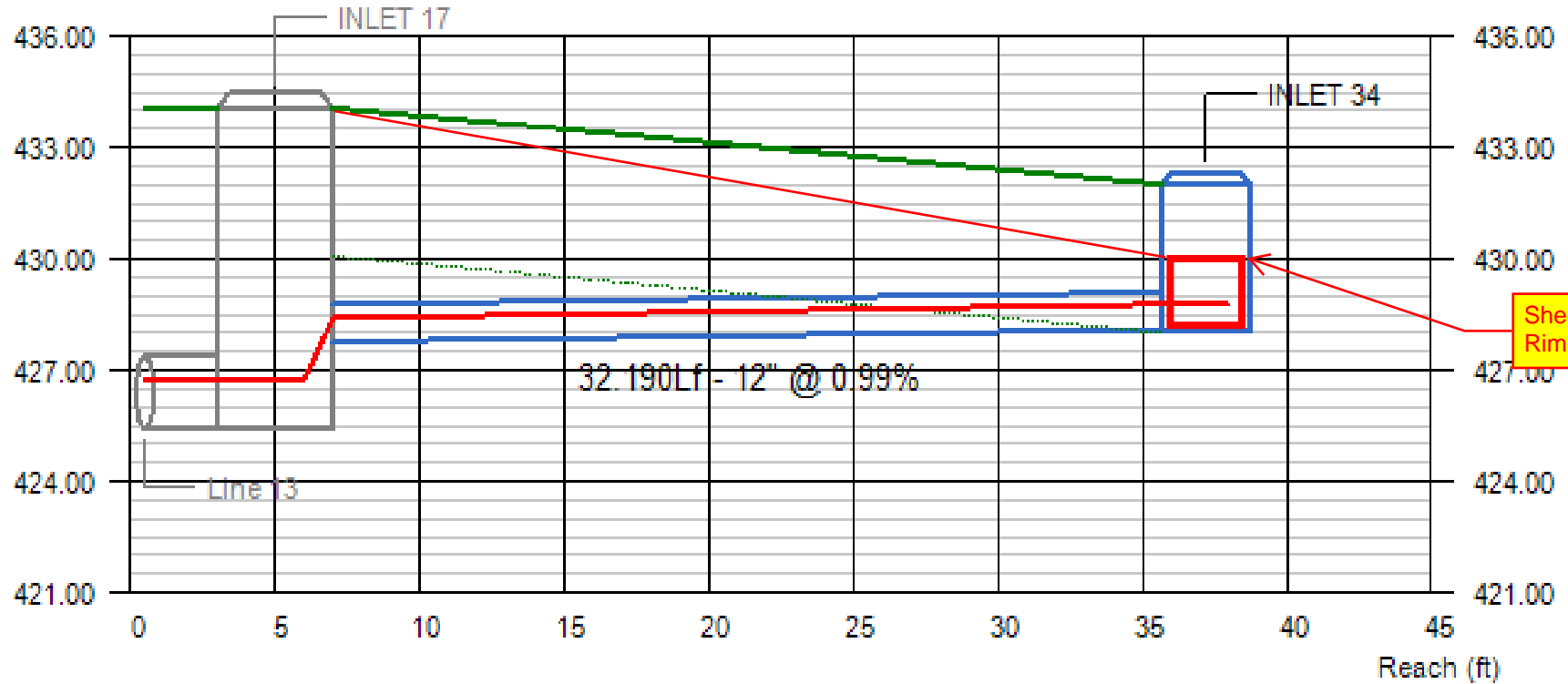
No. Lines: 33

Run Date: 10/11/2023

Line Profile (Line 29) - INLET 34 OUTLET

Line 29 - INLET 34 OUTLET

Elev (ft)



Sheet C3.8
Rim 430.03

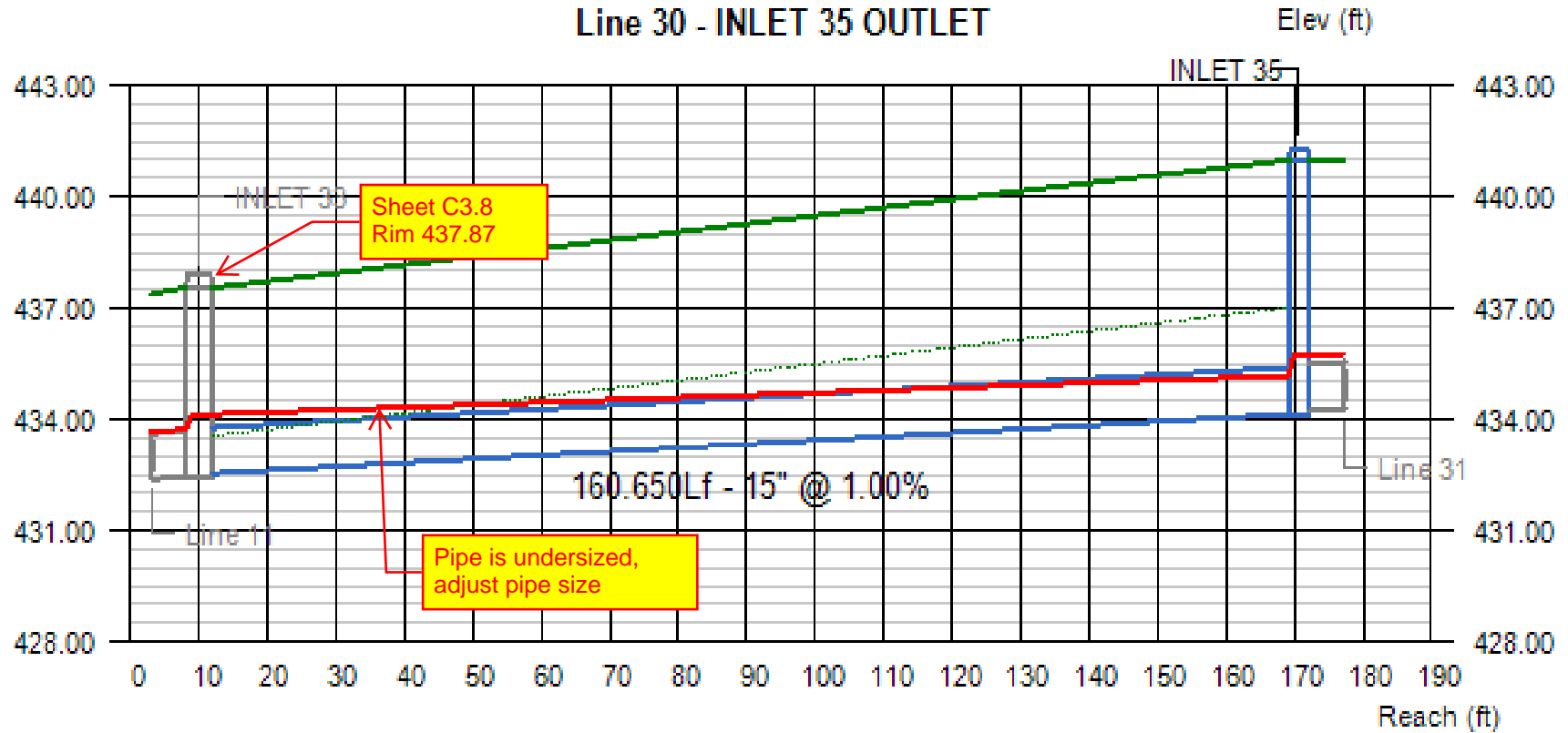
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
29	2.55	427.77	428.09	0.63	0.68	0.68	428.40	428.77	428.77	4.92	4.46	5.30	2.91

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line 30 - INLET 35 OUTLET



Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
30	5.39	432.53	434.14	1.25	1.03	1.59	434.14	435.17	435.73	4.39	4.99	3.77	5.61

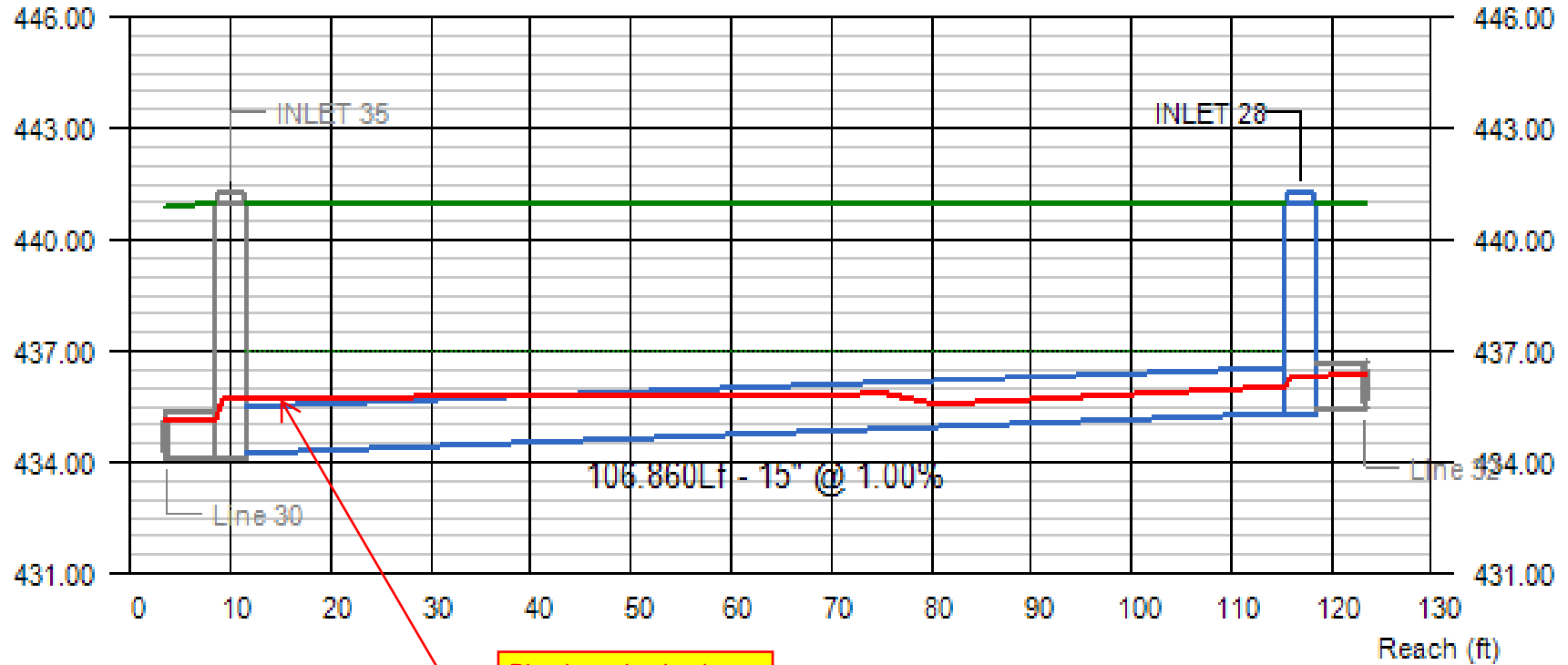
Project File:

No. Lines: 33

Run Date: 10/11/2023

Line 31 - INLET 28 OUTLET

Elev (ft)



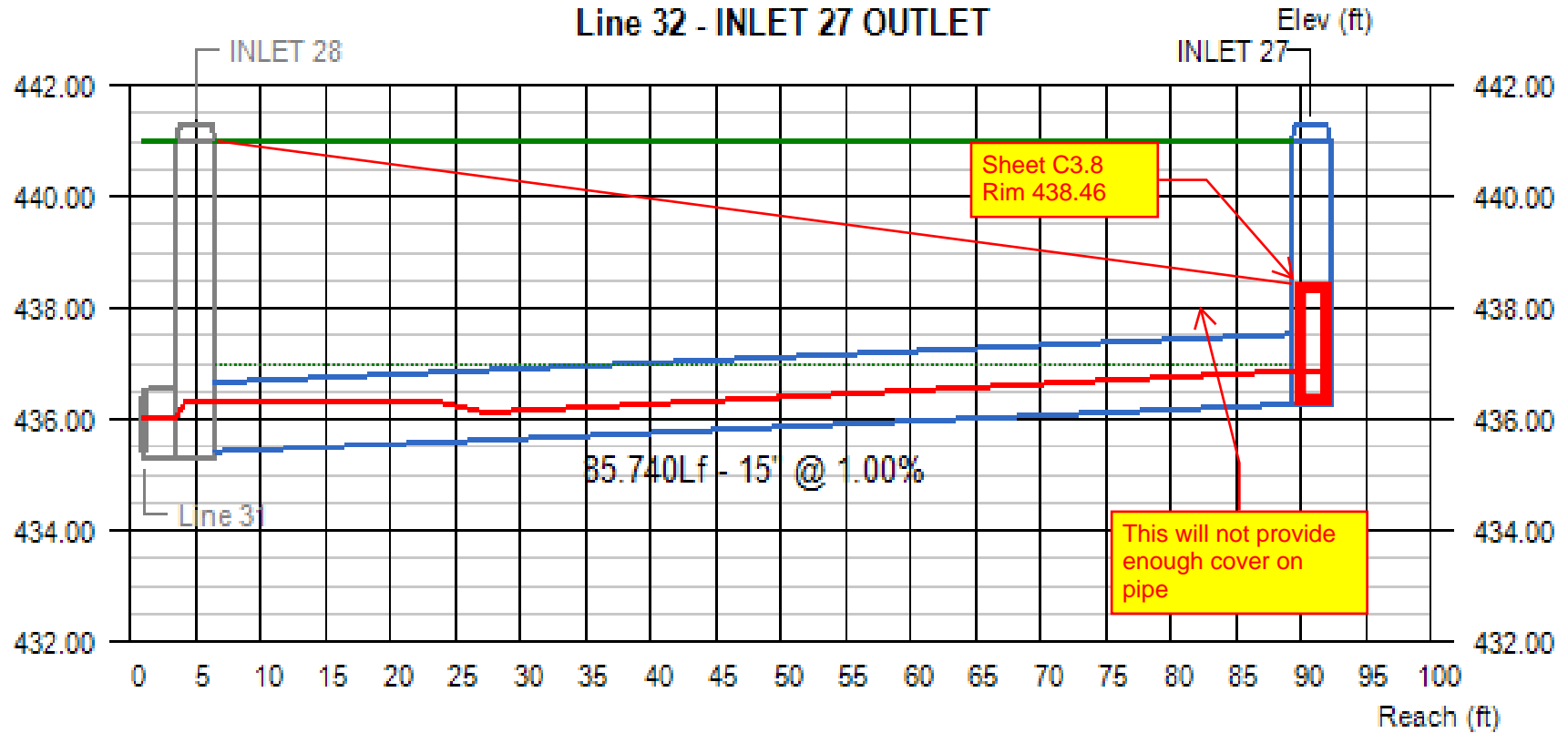
Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
31	3.25	434.24	435.31	1.25	0.73	1.03	435.73	436.04 j	436.34	2.65	4.38	5.51	4.44

Project File:

No. Lines: 33

Run Date: 10/11/2023

Line 32 - INLET 27 OUTLET



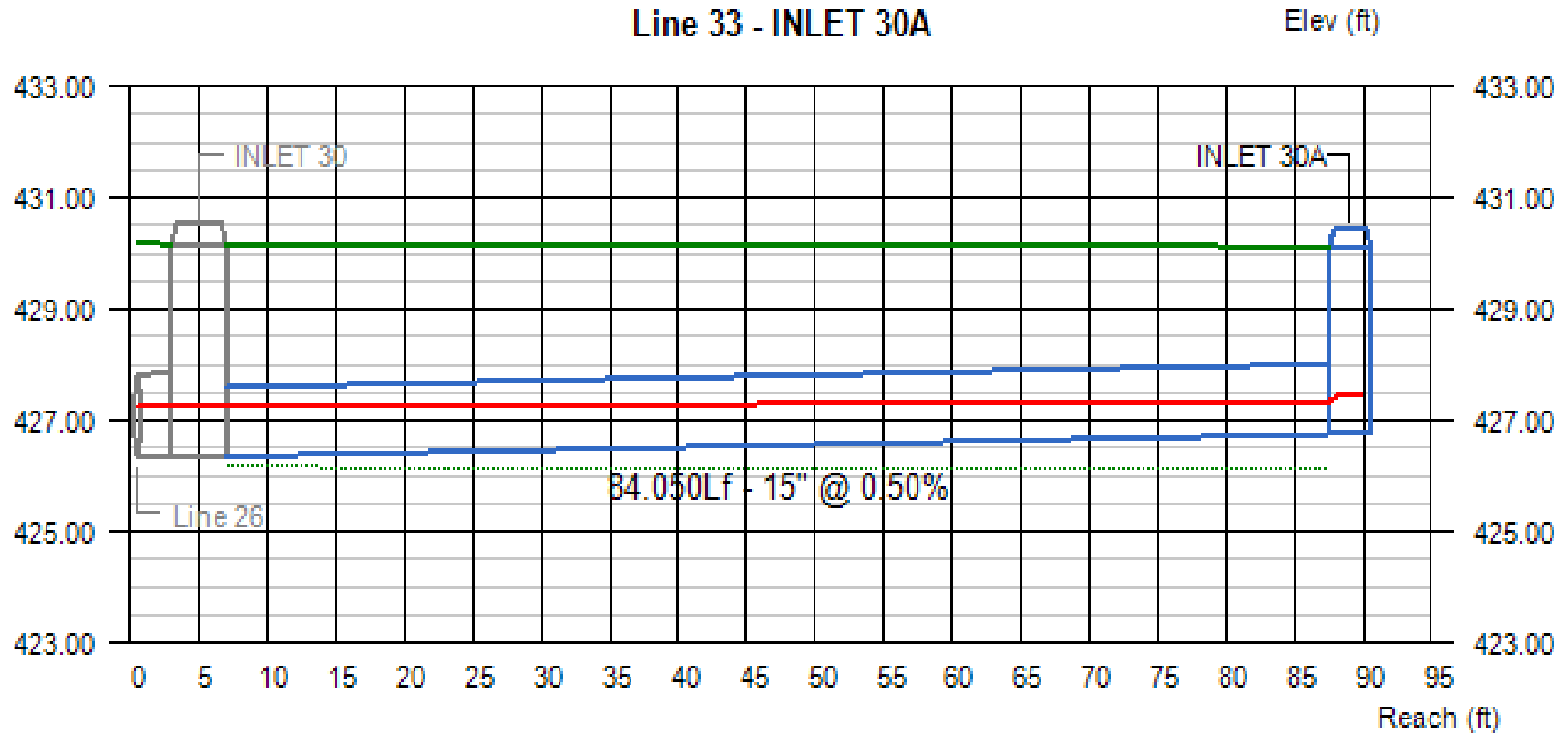
85.740Lf - 15' @ 1.00%

Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
32	2.23	435.41	436.27	0.93	0.60	0.60	436.34	436.87 j	436.87	2.28	3.86	4.34	3.48

Project File:

No. Lines: 33

Run Date: 10/11/2023



Line #	Q (cfs)	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
		Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
33	1.64	426.34	426.76	0.91	0.58	0.71	427.25	427.34	427.47	1.70	2.95	2.56	2.11

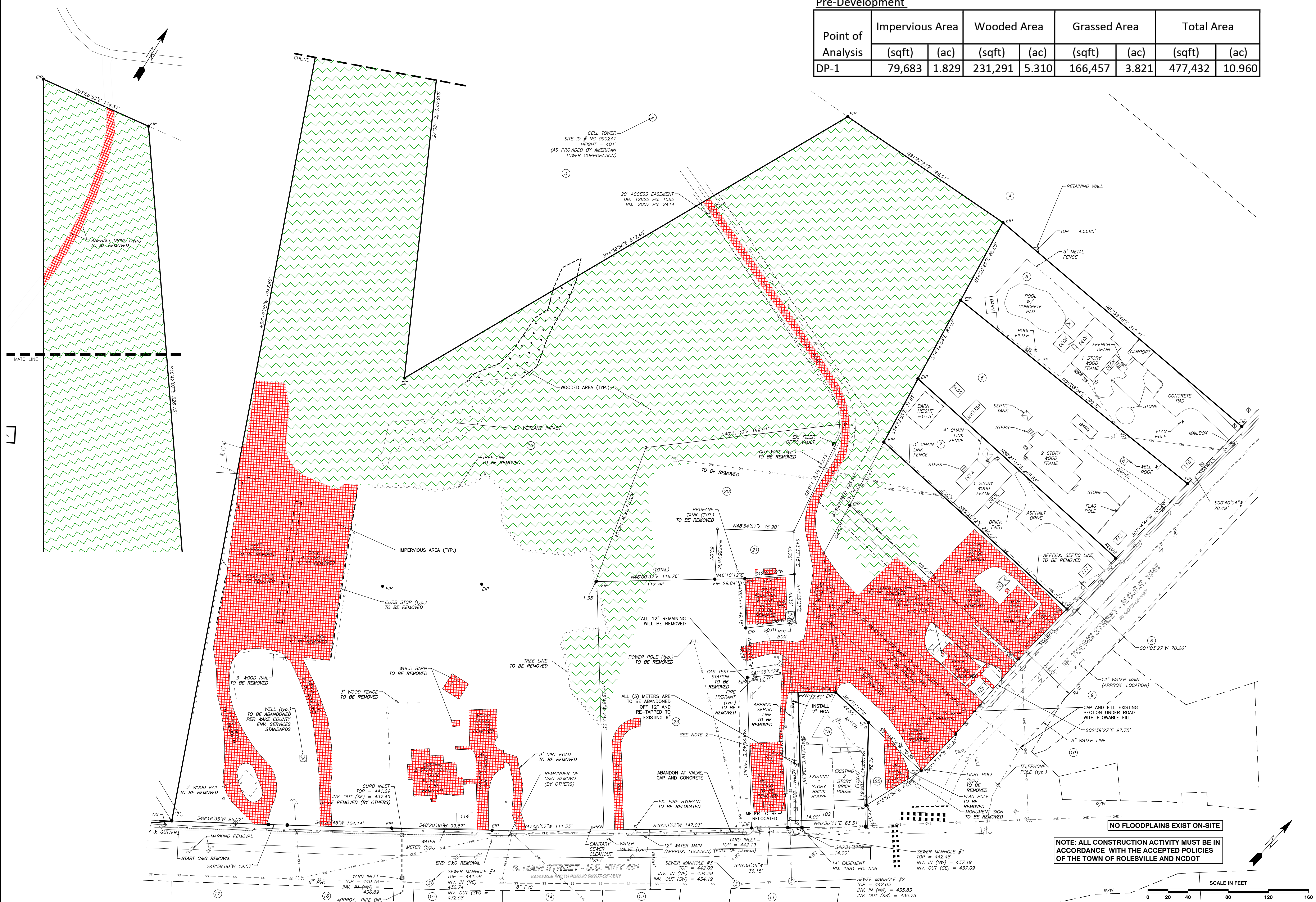
Project File:

No. Lines: 33

Run Date: 10/11/2023

Pre-Development

Point of Analysis	Impervious Area		Wooded Area		Grassed Area		Total Area	
	(sqft)	(ac)	(sqft)	(ac)	(sqft)	(ac)	(sqft)	(ac)
DP-1	79,683	1.829	231,291	5.310	166,457	3.821	477,432	10.960



BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
 TELEPHONE: (919) 881-1122 FAX: (919) 881-8686
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
2	10-16-23	T.O.R. COMMENTS	MRM
1	09-21-23	CHANGES FROM 06-02-22 CDS	MRM

03-18881 PROGRESS RAB DRAWN BY
 JOB NO. DATE
PRE-DEVELOPMENT DRAINAGE MAP
 SCALE: 1" = 40' CHK BY: MDB

COBBLESTONE VILLAGE
MIXED USE DEVELOPMENT
 TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

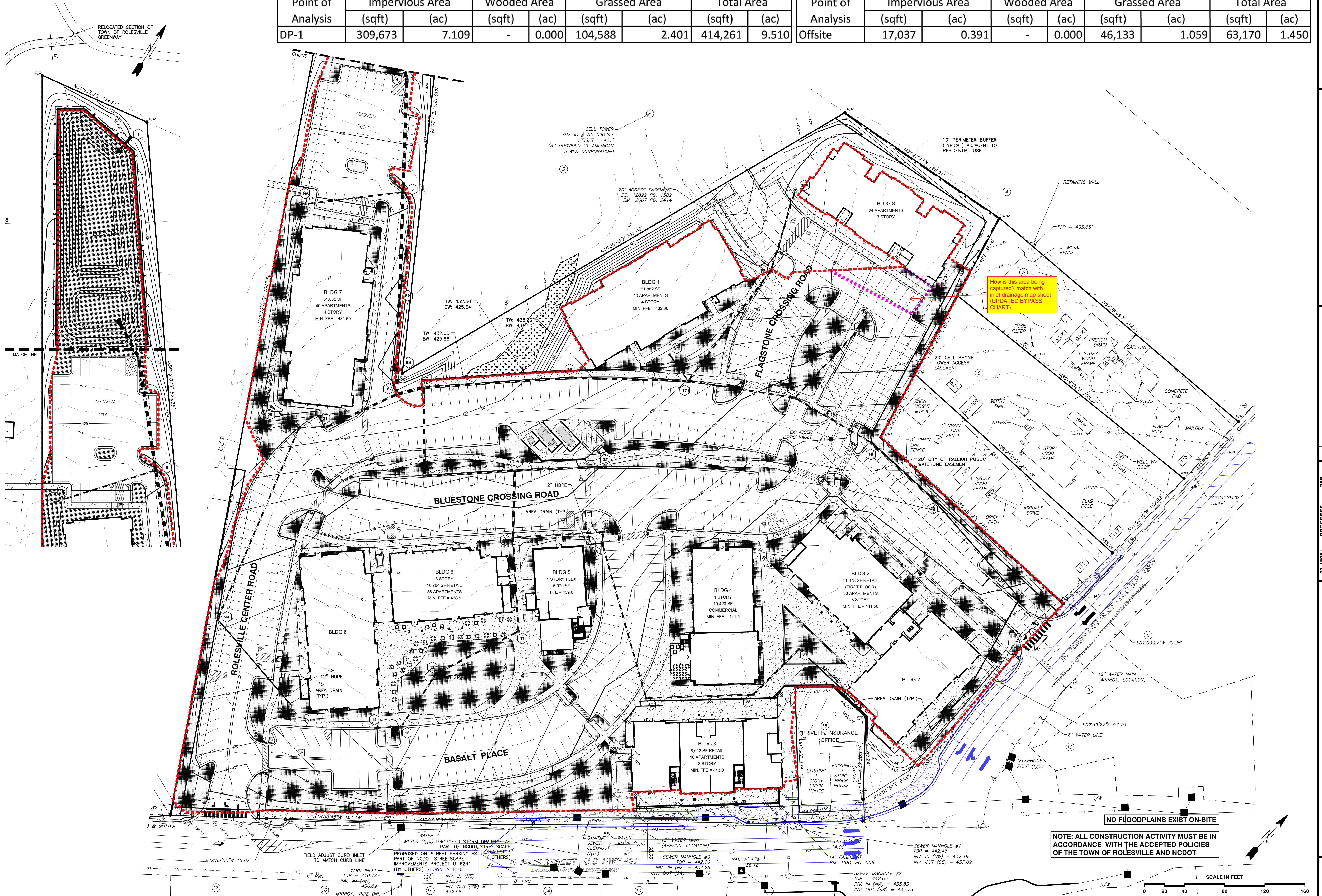
SHEET **1 OF 3**

Post-Development - to SCM

Point of Analysis	Impervious Area		Wooded Area		Grassed Area		Total Area	
	(sqft)	(ac)	(sqft)	(ac)	(sqft)	(ac)	(sqft)	(ac)
DP-1	309,673	7.109	-	0.000	104,588	2.401	414,261	9.510

Post-Development - Bypass

Point of Analysis	Impervious Area		Wooded Area		Grassed Area		Total Area	
	(sqft)	(ac)	(sqft)	(ac)	(sqft)	(ac)	(sqft)	(ac)
Offsite	17,037	0.391	-	0.000	46,133	1.059	63,170	1.450



BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919) 881-1122 FAX: (919) 881-8686
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
2	10-16-23	T.O.R. COMMENTS	MRM
1	09-21-23	CHANGES FROM 06-02-22 CDS	MRM

03-18881
JOB NO.
PROGRESS DATE
RAB DRAWN BY
POST-DEVELOPMENT DRAINAGE MAP
SCALE: 1" = 40'
CHK BY: MDB

COBBLESTONE VILLAGE MIXED USE DEVELOPMENT
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

SHEET 2 OF 3

NO.	DATE	DESCRIPTION	BY
1	09-21-23	CHANGES FROM 06-02-22 CDS	MRM
2	10-16-23	T.O.R. COMMENTS	MRM

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

