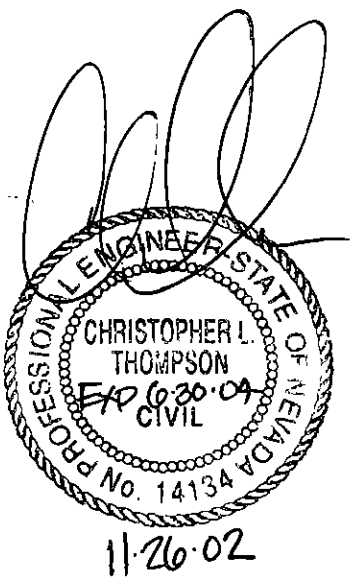
MASTER
HYDROLOGY AND HYDRAULICS REPORT

DOUBLE DIAMOND RANCH, PHASE 4
VILLAGES 23 AND 7



PREPARED FOR:

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NOVEMBER 2002

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APPENDIX

INTRODUCTION

Double Diamond Ranch Villages 7 and 23, a 45.84 acre residential subdivision, consists of 154 single family lots, 63 lots within Village 7 and 91 within Village 23, ranging in size from 6,695 square feet to 20,018 square feet with an average lot size of 8,659 square feet. These Villages are bounded on the north by the future extension of Carat Drive, on the west by the Double Diamond Central Channel, on the east by the proposed Damonte Ranch Development, and to the south by future villages of Double Diamond Phase 4. The two villages are separated by the extension of Wilbur May Parkway, Which runs north and south (Ref. Appendix A for Vicinity Map).

The subject site is located within a FEMA flood zone designation "X". These areas are defined by FEMA as areas outside of the 500 year floodplain.

The Double Diamond Ranch, Phase 4 Villages 7 and 23 sites are currently vacant and covered with sparse vegetation and native grasses, but have been used as a staging and borrow site for grading operations associated with previous phases of Double Diamond Ranch. The site has relief from south to north at varying slopes of 0.5% to 1%.

METHODOLOGY

The Rational Method of Urban Hydrology was utilized for all hydrologic calculations in this report. This methodology was used based upon the small sizes of the analyzed basins. All times of concentration associated with this development were calculated to be less than the minimum of 10 minutes and are therefore assumed to be 10 minutes. The City of Reno Intensity Duration Frequency Curve was used for all modeling, and is presented in the Appendix.

The storm drainage infrastructure that will be constructed with Villages 7 and 23 was analyzed using StormCad version 4.1 by Haestad Methods.

All methods used are in accordance with the City of Reno Development Standards. Calculations and supporting materials are presented in the Appendix of this report.

PRE-DEVELOPMENT HYDROLOGY

The existing site generally drains overland in a northerly direction until it is intercepted in the existing Central Channel which drains into the existing detention pond located at the north end of the Double Diamond Ranch Development.

Since the hydraulic condition created with the development of this site in relation to surrounding areas was analyzed with the Nimbus Engineers *Hydrologic and Hydraulic analysis South Meadows/Double Diamond Ranch, Reno Nevada* the pre-developed condition has been neglected with this analysis

POST DEVELOPMENT HYDROLOGY

With the development of Double Diamond Ranch Villages 7 and 23, the site has been divided into 34 sub-basins, which are defined by inlets located within these villages, and 3 basins which will collect flows from future villages (ref. Appendix for Developed Drainage Basin Maps). Table 1, contained within the appendix of this report outlines all basin areas runoff coefficients time of concentration and five (5) and 100-year storm flows.

Storm drainage infrastructure, shown on the Developed Drainage Basins Maps, has been designed to capture and perpetuate 5-year storm flows from the developed basins and deliver them to either the Central Channel which will carry flows to the Double Diamond detention pond located north of the intersection of future South Meadows Parkway and Wilbur May Parkway or to the proposed Double Diamond, Phase 4 East Boundary Channel which will carry flows through the proposed Damonte Ranch to the Steamboat Creek, which passes through the Damonte Ranch Development. An Agreement is in place between Double Diamond Ranch and Damonte Ranch to allow for this discharge to the steamboat Creek. This agreement outlines that the design for the improved Steamboat Creek will include the developed flows from Double Diamond Ranch Phase 4. For the ultimate build out of Double Diamond Phase 4 several storm sewer systems will be constructed which will collect flows from within the development through catch basins and convey these flows, via the piped storm sewer system, to the improved East Boundary Channel section. This channel will carry flows from south to north to the East Channel discharge point at Carat Drive. From this point the channel section will be turned east and will pass 880 feet to its intersection with Steamboat Creek. Future flows have been accounted for in the design of this East Boundary Channel.

These are the developed discharge point for flows generated within these villages in accordance with the Double Diamond Storm Water Management plan, as outlined by Nimbus Engineers in the report titled *Addendum-Hydrology and Hydraulics Analysis Double Diamond Ranch,* Dated August 2000. Based upon this there has been no further investigation of the existing downstream detention facility improvements or their capacity.

Seven (7) separate piped storm water collection systems have been designed to collect and convey flows from within these Villages. These systems are denoted as System A through System G. Dynamic modeling of these systems was performed with StormCad storm sewer system modeling software as outlined above. This modeling is included within the appendix of this report with inlet characteristics and performance details, pip system configuration maps and profiles illustrating the hydraulic grade included within the StormCad sections of the appendix of this report. Also included within the appendix are street spread calculation rating tables and supporting calculations for the East Boundary Channel.

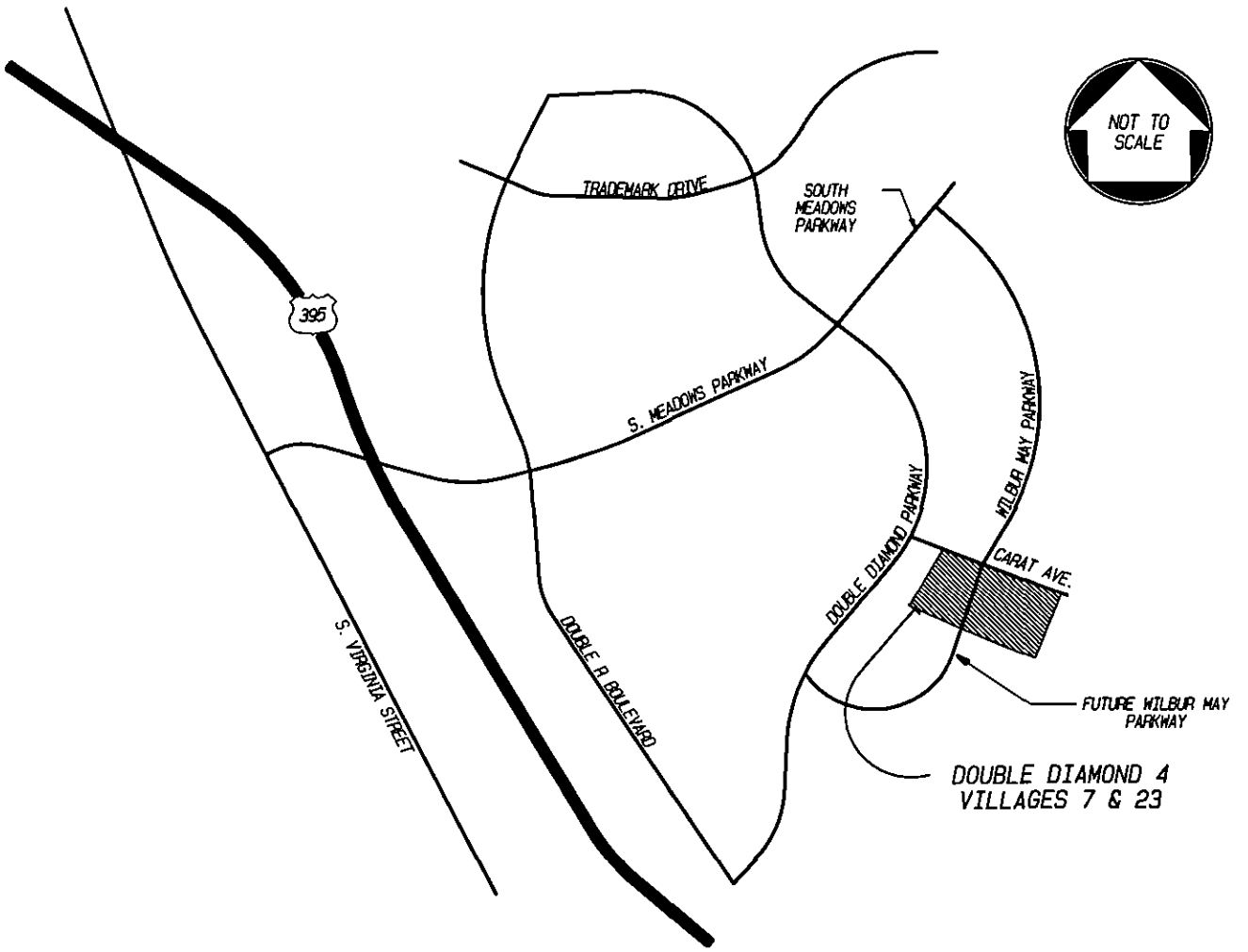
CONCLUSION

The drainage facilities that will be constructed with Double Diamond Ranch Villages 28 and 29 have been designed to perpetuate the 5-year and 100-year storm flows within

the site to offsite detention facilities using existing and proposed drainage infrastructure. This conveyance of flows is in conformance with the City of Reno Design Handbook.

With the final design of each of the five units, which will collectively make up Village 28 and 29, a letter of verification with this report will be needed to verify the design information contained within this report has not changed.

All analysis was performed in accordance with the City of Reno Design Handbook. Supporting calculations and exhibits are contained within the Appendix of this report for reference.



VICINITY MAP

DOUBLE DIAMOND PHASE 4

VILLAGES 7 & 23

RENO NEVADA

F:\Reynan & Bardis Dev\Double Diamond Phase 4\master hydrology basin map.pro
Tue Nov 26, 2002 2:16:50PM

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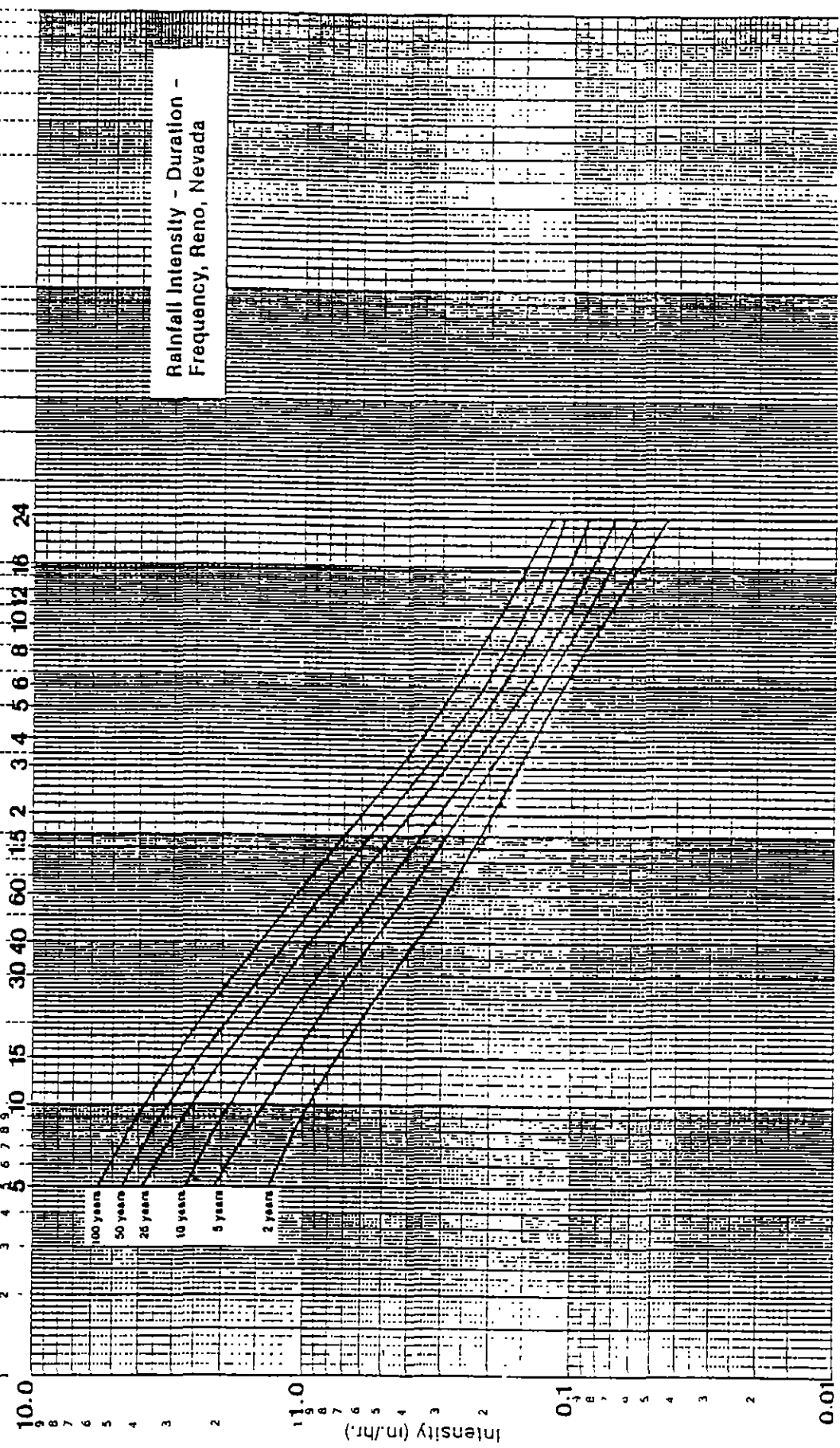
RAINFALL INTENSITY CHART



City of Reno

Rainfall Intensity - Duration - Frequency Curves for General Reno Area

Based on Rainfall Data from Cannon Airport Gauging Station

Figure 1

BASIN INFO

BASIN	Q5	Q100
1	0.73	1.98
2	0.66	1.79
3	0.93	2.53
4	0.51	1.38
6	0.22	0.60
7	1.57	4.27
8	1.06	2.87
9	1.80	4.90
10	0.40	1.08
11	0.64	1.75
12	0.75	2.02
13	0.30	0.83
14	1.41	3.82
15	2.02	5.49
16	2.68	7.29
17	0.51	1.38
18	0.96	2.60
19	1.31	3.56
20	0.31	0.85
21	2.24	6.07
22	0.89	2.41
23	1.57	4.27
24	1.15	3.13
25	0.80	2.16
27	0.73	1.98
28	1.41	3.84
29	0.92	2.51
30	1.32	3.59
31	3.31	8.99
32	0.66	1.79
33	0.53	1.45
34	0.52	1.42
35	2.93	7.95
36	0.25	0.69
37	0.50	1.36

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NO. DATE REVISION BY

DOUBLE DIAMOND 4 VILLAGE 7 & 23 DEVELOPED DRAINAGE BASIN MAP

RENO NEVADA

Date: Nov 26, 2002 11:50:35
Designed by: NAME
Checked by: NAME

DRAWING

SHEET 1 OF 1

Scenario: 5-YEAR

TABLE 1

Inlet Report

Label	Area (acres)	Inlet C	Time of Concentration (min)	Local Rational Flow (cfs)	Total Flow To Inlet (cfs)	Total Intercepted Flow (cfs)
CB #1	0 86	0.60	10.00	0 73	0 94	0 94
CB #2	0.78	0 60	10.00	0 66	0 72	0.72
CB #3	1.10	0.60	10.00	0.93	0.93	0.72
CB #4	0 60	0 60	10.00	0 51	0.51	0.44
CB #6	0.26	0.60	10.00	0.22	0.22	0.22
CB #7	1.86	0.60	10 00	1 57	1.57	1 57
CB #8	1.25	0.60	10 00	1 06	1 06	1 06
CB #9	2.13	0.60	10.00	1.80	1 80	1 80
CB #10	0.47	0.60	10.00	0.40	0.40	0.36
CB #11	0.76	0.60	10.00	0.64	0.68	0.68
CB #12	0.88	0.60	10.00	0.75	0.76	0.76
CB #13	0.36	0 60	10 00	0.30	0.30	0.29
CB #14	1.66	0.60	10.00	1.41	1.41	1 41
CB #15	2.39	0.60	10.00	2 02	2.02	2.02
CB #16	3.17	0.60	10 00	2 68	2 68	2.68
CB #17	0.60	0 60	10.00	0.51	0.73	0 73
CB #18	1.13	0.60	10.00	0 96	0.96	0.73
CB #19	1.55	0.60	10.00	1.31	1 31	1.31
CB #20	0.37	0.60	10.00	0.31	0.31	0 31
CB #21	2.64	0.60	10.00	2.24	2 54	2.54
CB #22	1.05	0.60	10.00	0 89	0.89	0.89
CB #23	1 86	0.60	10.00	1.57	1.74	1.74
CB #24	1.36	0.60	10.00	1 15	1.15	0.84
CB #25	0.94	0.60	10.00	0 80	0.80	0.63
CB #27	0.86	0.60	10.00	0.73	0 73	0.73
CB #28	1.67	0 60	10.00	1.41	1 41	1 41
CB #29	1 09	0.60	10.00	0.92	0.92	0 92
CB #30	1 56	0 60	10.00	1 32	1.32	1.32
CB #31	3.91	0 60	10 00	3.31	3.31	3.31
CB #32	0.78	0.60	10.00	0.66	0.66	0.66
CB #33	0.63	0.60	10.00	0.53	0.53	0.53
CB #34	0.62	0.60	10.00	0.52	0.52	0.52
CB #35	3.46	0.60	10.00	2.93	2.93	2.93
CB #36	0.30	0.60	10.00	0.25	0.25	0.25
CB #37	0.59	0.60	10.00	0.50	0.50	0.50

CHECK MAX STREET SPREAD VS. MOST LIMITING SECTION (43' ROW)
Q_{5max} = 2.98cfs @ 0.60%

CB 31 IS OVER BUT FLOW IS SPLIT IN CULDESAC 1.65cfs each side so OK

ALL OTHERS OK

Scenario: 5-YEAR

Pipe Report

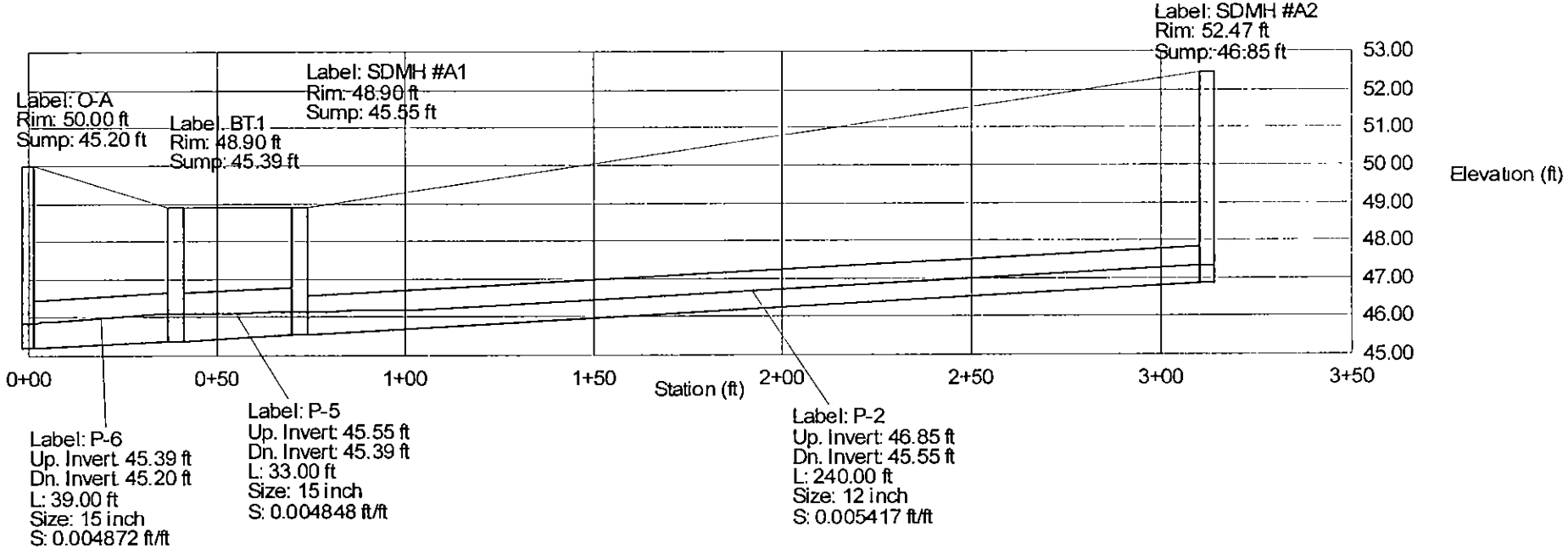
Label	Upstream Node	Downstream Node	Upstream Inlet Area (acres)	Upstream Inlet Rational Coefficient	Upstream Inlet CA (acres)	Upstream Calculated System CA (acres)	System Intensity (in/hr)	Total System Flow (cfs)	Length (ft)	Constructed Slope (ft/ft)	Section Size	Mannings n	Full Capacity (cfs)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Upstream Ground Elevation (ft)	Downstream Ground Elevation (ft)	Upstream Cover (ft)	Downstream Cover (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)	Description
LAT CB1	CB #1	BT1	0.86	0.60	0.52	0.67	1.40	0.94	60.00	0.037167	10 inch	0.014	3.92	47.62	45.39	50.62	48.90	2.17	2.68	48.05	46.10	
LAT CB2	CB #2	SDMH #A1	0.78	0.60	0.47	0.51	1.40	0.72	62.00	0.033387	10 inch	0.014	3.72	47.62	45.55	50.62	48.90	2.17	2.52	48.00	46.15	
LAT CB3	CB #3	SDMH #A2	1.10	0.60	0.66	0.51	1.40	0.72	8.00	0.357500	10 inch	0.014	12.16	49.71	46.85	52.71	52.47	2.17	4.79	50.08	47.33	
LAT CB4	CB #4	SDMH #A2	0.60	0.60	0.36	0.31	1.40	0.44	26.00	0.110385	10 inch	0.014	6.76	49.72	46.85	52.72	52.47	2.17	4.79	50.01	47.33	
LAT CB6	CB #6	BT6/7	0.26	0.60	0.16	0.16	1.40	0.22	15.00	0.142667	10 inch	0.014	7.68	51.71	49.57	54.71	54.71	2.17	4.31	51.91	50.56	
LAT CB7	CB #7	BT6/7	1.86	0.60	1.12	1.12	1.40	1.57	42.00	0.050952	10 inch	0.014	4.59	51.71	49.57	54.71	54.71	2.17	4.31	52.27	50.56	
LAT CB8	CB #8	BT8	1.25	0.60	0.75	0.75	1.40	1.06	61.00	0.049672	10 inch	0.014	4.53	52.00	48.97	55.00	55.00	2.17	5.20	52.46	50.07	
LAT CB9	CB #9	BT9	2.13	0.60	1.28	1.28	1.40	1.80	60.00	0.053000	10 inch	0.014	4.68	52.00	48.82	55.00	55.47	2.17	5.82	52.60	49.99	
LAT CB1	CB #10	BT10	0.47	0.60	0.28	0.26	1.40	0.36	6.00	0.510000	10 inch	0.014	14.53	50.69	47.63	53.69	53.69	2.17	5.23	50.95	48.66	
LAT CB1	CB #11	BT11	0.76	0.60	0.46	0.48	1.40	0.68	49.00	0.031224	10 inch	0.014	3.59	47.95	46.42	50.95	50.97	2.17	3.72	48.31	47.47	
LAT CB1	CB #12	BT12	0.88	0.60	0.53	0.54	1.40	0.76	51.00	0.032941	10 inch	0.014	3.69	47.95	46.27	50.95	50.95	2.17	3.85	48.34	47.34	
LAT CB1	CB #13	BT13	0.36	0.60	0.22	0.20	1.40	0.29	29.00	0.099655	10 inch	0.014	6.42	50.32	47.43	53.32	53.69	2.17	5.43	50.55	48.47	
LAT CB1	CB #14	BT14	1.66	0.60	1.00	1.00	1.40	1.41	29.00	0.111034	10 inch	0.014	6.78	51.07	47.85	54.07	54.07	2.17	5.39	51.60	48.87	
LAT CB1	CB #15	O-C	2.39	0.60	1.43	1.43	1.40	2.02	38.00	0.056316	12 inch	0.014	7.85	50.14	48.00	53.14	52.00	2.00	3.00	50.75	48.35	
LAT CB1	CB #16	BT16	3.17	0.60	1.90	1.90	1.40	2.68	11.00	0.214545	12 inch	0.014	15.32	51.48	49.12	54.48	54.48	2.00	4.36	52.18	50.11	
LAT CB1	CB #17	BT17	0.60	0.60	0.36	0.52	1.40	0.73	5.00	0.584000	10 inch	0.014	15.55	54.79	51.87	57.79	57.30	2.17	4.60	55.17	52.59	
LAT CB1	CB #18	BT18	1.13	0.60	0.68	0.52	1.40	0.73	5.00	0.632000	10 inch	0.014	16.17	56.22	53.06	59.22	59.22	2.17	5.33	56.60	53.71	
LAT CB1	CB #19	SDMH #D3	1.55	0.60	0.93	0.93	1.40	1.31	30.00	0.084333	10 inch	0.014	5.91	56.11	53.58	59.11	59.10	2.17	4.69	56.62	53.85	
LAT CB2	CB #20	SDMH #D3	0.37	0.60	0.22	0.22	1.40	0.31	43.00	0.057442	10 inch	0.014	4.88	56.05	53.58	59.05	59.10	2.17	4.69	56.29	53.86	
LAT CB2	CB #21	SDMH #B2	2.64	0.60	1.58	1.80	1.40	2.54	41.00	0.039024	10 inch	0.014	4.02	51.65	50.05	54.65	54.48	2.17	3.60	52.36	50.92	
LAT CB2	CB #22	SDMH #B2	1.05	0.60	0.63	0.63	1.40	0.89	15.00	0.106667	10 inch	0.014	6.64	51.65	50.05	54.65	54.48	2.17	3.60	52.07	50.92	
LAT CB2	CB #23	SDMH #B3	1.86	0.60	1.12	1.23	1.40	1.74	27.00	0.101481	10 inch	0.014	6.48	53.59	50.85	56.59	56.59	2.17	4.91	54.18	51.54	
LAT CB2	CB #24	SDMH #B4	1.36	0.60	0.82	0.60	1.40	0.84	27.00	0.095926	10 inch	0.014	6.30	54.89	52.30	57.89	57.89	2.17	4.76	55.30	52.79	
LAT CB2	CB #25	BT25	0.94	0.60	0.56	0.45	1.40	0.63	6.00	0.428333	10 inch	0.014	13.31	54.77	52.20	57.77	57.77	2.17	4.74	55.12	52.77	
LAT CB2	CB #29	J-28	1.09	0.60	0.65	0.65	1.40	0.92	50.00	0.026200	10 inch	0.014	3.29	53.61	52.30	56.61	57.70	2.17	4.57	54.04	52.97	
LAT CB3	CB #30	SDMH #F1	1.56	0.60	0.94	0.94	1.40	1.32	6.00	0.170000	10 inch	0.014	8.39	55.43	54.41	59.43	59.36	3.17	4.12	55.94	54.96	
LAT CB3	CB #31	J-29	3.91	0.60	2.35	2.35	1.40	3.31	50.00	0.029800	10 inch	0.014	3.51	53.61	52.12	56.61	57.07	2.17	4.12	54.38	52.97	
LAT CB3	CB #32	SDMH #F1	0.78	0.60	0.47	0.47	1.40	0.66	27.00	0.037037	10 inch	0.014	3.92	55.41	54.41	59.41	59.36	3.17	4.12	55.77	54.96	
LAT CB3	CB #35	BTG2	3.46	0.60	2.08	2.08	1.40	2.93	38.00	0.007105	15 inch	0.014	5.06	53.33	53.06	57.33	58.17	2.75	3.86	54.02	53.76	
LATCB33	CB #33	BTG1	0.63	0.60	0.38	0.38	1.40	0.53	30.00	0.031667	10 inch	0.014	3.62	57.25	56.30	60.25	60.93	2.17	3.80	57.57	56.86	
LATCB34	CB #34	SDMH #G1	0.62	0.60	0.37	0.37	1.40	0.52	30.00	0.026000	10 inch	0.014	3.28	57.25	56.47	60.25	60.93	2.17	3.63	57.57	56.87	
LATCB36	CB #36	SDMH #G1	0.30	0.60	0.18	0.18	1.40	0.25	56.00	0.014643	10 inch	0.014	2.46	57.29	56.47	60.29	60.93	2.17	3.63	57.51	56.87	
LATCB37	CB #37	BTG1	0.59	0.60	0.35	0.35	1.40	0.50	54.00	0.018519	10 inch	0.014	2.77	57.30	56.30	60.30	60.93	2.17	3.80	57.61	56.86	
P-2	SDMH #A2	SDMH #A1	N/A	N/A	N/A	0.82	1.39	1.15	240.00	0.005417	12 inch	0.014	2.43	46.85	45.55	52.47	48.90	4.62	2.35	47.33	46.15	
P-5	SDMH #A1	BT1	N/A	N/A	N/A	1.34	1.29	1.74	33.00	0.004848	15 inch	0.014	4.18	45.55	45.39	48.90	48.90	2.10	2.26	46.15	46.10	
P-6	BT1	O-A	N/A	N/A	N/A	2.00	1.28	2.58	39.00	0.004872	15 inch	0.014	4.19	45.39	45.20	48.90	50.00	2.26	3.55	46.10	45.84	
P-10	SDMH #B4	BT25	N/A	N/A	N/A	0.60	1.39	0.84	20.00	0.005000	12 inch	0.014	2.34	52.30	52.20	57.89	57.77	4.59	4.57	52.79	52.77	
P-11	BT25	SDMH #B3	N/A	N/A	N/A	1.05	1.38	1.45	250.00	0.005000	12 inch	0.014	2.34	52.20	50.95	57.77	56.59	4.57	4.64	52.77	51.54	
P-12	SDMH #B3	SDMH #B2	N/A	N/A	N/A	2.28	1.29	2.97	143.00	0.004895	18 inch	0.014	6.82	50.85	50.15	56.59	54.48	4.24	2.83	51.54	50.92	
P-13	SDMH #B2	BT6/7	N/A	N/A	N/A	4.71	1.25	5.93	94.00	0.005106	24 inch	0.014	15.01	50.05	49.57	54.48	54.71	2.43	3.14	50.92	50.56	
P-14	BT6/7	BT8	N/A	N/A	N/A	5.98	1.22	7.38	119.00	0.005042	24 inch	0.014	14.92	49.57	48.97	54.71	55.00	3.14	4.03	50.56	50.07	
P-15	BT8	BT9	N/A	N/A	N/A	6.73	1.20	8.11	32.00	0.004687	24 inch	0.014	14.38	48.97	48.82	55.00	55.47	4.03	4.65	50.07	49.99	
P-16	BT9	SDMH #B1	N/A	N/A	N/A	8.01	1.19	9.59	143.00	0.005035	24 inch	0.014	14.90	48.82	48.10	55.47	54.35	4.65	4.25	49.99	49.21	
P-17	SDMH #B1	BT14	N/A	N/A	N/A	8.01	1.16	9.36	32.00	0.004687	36 inch	0.014	42.40	48.00	47.85	54.35	54.07	3.35	3.22	48.97	48.87	
P-18	BT14	BT10	N/A	N/A	N/A	9.01	1.15	10.45	44.00	0.005000	36 inch	0.014	43.79	47.85	47.63	54.07	53.69	3.22	3.06	48.87	48.66	
P-19	BT10	BT13	N/A	N/A	N/A	9.26	1.14	10.66	41.00	0.004878	36 inch	0.014	43.25	47.63	47.43	53.69	53.69	3.06	3.26	48.66	48.47	
P-20	BT13	BT11	N/A	N/A	N/A	9.47	1.13	10.81	202.00	0.005000	36 inch	0.014	43.79	47.43	46.42	53.69	50.97	3.26	1.55	48.47	47.47	
P-21	BT11	BT12	N/A	N/A	N/A	9.95	1.09	10.92	30.00	0.005000	36 inch	0.014	43.79	46.42	46.27	50.97	50.95	1.55	1.68	47.47	47.34	
P-22	BT12	O-B	N/A	N/A	N/A	10.49	1.08	11.45	54.00	0.005000	36 inch	0.014	43.79	46.27	46.00	50.95	50.00	1.68	1.00	47.34	47.05	
P-38	SDMH #D3	BT18	N/A	N/A	N/A	1.15	1.38	1.60	53.00	0.005094	15 inch	0.014	4.28	53.33	53.06	59.10	59.22	4.52	4.91	53.86	53.71	
P-39	BT18	BT17	N/A	N/A	N/A	1.67	1.36	2.29	239.00	0.004979	15 inch	0.014	4.23	53.06	51.87	59.22	57.30	4.91	4.18	53.71	52.59	

Scenario: 5-YEAR

Pipe Report

Label	Upstream Node	Downstream Node	Upstream Inlet Area (acres)	Upstream Inlet Rational Coefficient	Upstream Inlet CA (acres)	Upstream Calculated System CA (acres)	System Intensity (in/hr)	Total System Flow (cfs)	Length (ft)	Constructed Slope (ft/ft)	Section Size	Mannings n	Full Capacity (cfs)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Upstream Ground Elevation (ft)	Downstream Ground Elevation (ft)	Upstream Cover (ft)	Downstream Cover (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)	Description
P-40	BT17	SDMH #D2	N/A	N/A	N/A	2.19	1.28	2.83	13.00	0.005385	15 inch	0.014	4.40	51.87	51.80	57.30	57.50	4.18	4.45	52.59	52.48	
P-41	SDMH #D2	SDMH #D1	N/A	N/A	N/A	2.19	1.28	2.82	273.00	0.006227	18 inch	0.014	7.70	51.70	50.00	57.50	55.50	4.30	4.00	52.34	50.63	
P-42	SDMH #D1	BT16	N/A	N/A	N/A	2.19	1.21	2.66	233.00	0.003348	18 inch	0.014	5.64	49.90	49.12	55.50	54.48	4.10	3.86	50.62	50.11	
P-43	BT16	O-D	N/A	N/A	N/A	4.09	1.11	4.59	39.00	0.003077	18 inch	0.014	5.41	49.12	49.00	54.48	53.00	3.86	2.50	50.11	49.82	
P-48	CB #28	SDMH #E1	1.67	0.60	1.00	1.00	1.40	1.41	27.00	0.015185	10 inch	0.014	2.51	54.41	54.00	57.41	57.41	2.17	2.58	54.94	54.62	
P-49	SDMH #E1	O-E	N/A	N/A	N/A	1.52	1.39	2.13	30.00	0.079000	12 inch	0.014	9.30	54.00	51.63	57.41	54.00	2.41	1.37	54.62	51.96	
P-50	CB #27	SDMH #E1	0.86	0.60	0.52	0.52	1.40	0.73	7.00	0.058571	10 inch	0.014	4.92	54.41	54.00	57.41	57.41	2.17	2.58	54.79	54.62	
P-52	SDMH #F1	SDMH #F2	N/A	N/A	N/A	1.40	1.39	1.96	53.00	0.005094	18 inch	0.014	6.96	54.41	54.14	59.36	59.04	3.45	3.40	54.96	54.67	
P-53	SDMH #F2	SDMH #F3	N/A	N/A	N/A	1.40	1.37	1.94	53.00	0.004906	18 inch	0.014	6.83	54.04	53.78	59.04	58.71	3.50	3.43	54.59	54.31	
P-54	SDMH #F3	SDMH #F4	N/A	N/A	N/A	1.40	1.35	1.92	91.00	0.005055	18 inch	0.014	6.93	53.68	53.22	58.71	58.16	3.53	3.44	54.22	53.74	
P-55	SDMH #F4	J-28	N/A	N/A	N/A	1.40	1.33	1.88	163.00	0.005031	24 inch	0.014	14.90	53.12	52.30	58.16	57.70	3.04	3.40	53.60	52.97	
P-56	J-28	J-29	N/A	N/A	N/A	2.06	1.26	2.62	33.00	0.005455	24 inch	0.014	15.51	52.30	52.12	57.70	57.07	3.40	2.95	52.97	52.97	
P-57	J-29	O-F	N/A	N/A	N/A	4.40	1.25	5.53	25.00	0.004800	24 inch	0.014	14.55	52.12	52.00	57.07	55.00	2.95	1.00	52.97	52.83	
P-61	SDMH #G1	BTG1	N/A	N/A	N/A	0.55	1.36	0.76	33.00	0.005152	15 inch	0.014	4.31	56.47	56.30	60.93	60.93	3.21	3.38	56.87	56.86	
P-62	BTG1	SDMH #G2	N/A	N/A	N/A	1.28	1.34	1.74	336.00	0.005000	15 inch	0.014	4.24	56.30	54.62	60.93	58.91	3.38	3.04	56.86	55.14	
P-63	SDMH #G2	SDMH #G3	N/A	N/A	N/A	1.28	1.24	1.60	72.00	0.004861	15 inch	0.014	4.18	54.52	54.17	58.91	58.48	3.14	3.06	55.06	54.67	
P-64	SDMH #G3	SDMH #G4	N/A	N/A	N/A	1.28	1.22	1.57	55.00	0.004000	15 inch	0.014	3.79	54.07	53.85	58.48	58.17	3.16	3.07	54.63	54.35	
P-65	SDMH #G4	SDMH #G5	N/A	N/A	N/A	1.28	1.20	1.55	74.00	0.004865	15 inch	0.014	4.18	53.75	53.39	58.17	58.03	3.17	3.39	54.28	53.88	
P-71	SDMH #G5	BTG2	N/A	N/A	N/A	1.28	1.17	1.52	45.00	0.005111	24 inch	0.014	15.02	53.29	53.06	58.03	58.17	2.74	3.11	53.76	53.76	
P-72	BTG2	O-G	N/A	N/A	N/A	3.36	1.15	3.90	47.00	0.005106	24 inch	0.014	15.01	53.06	52.82	58.17	58.00	3.11	3.18	53.76	53.51	

Profile
Scenario: 5-YEAR



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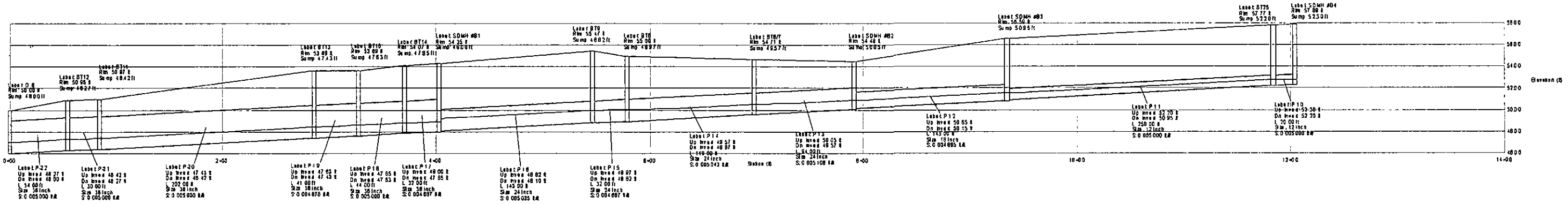
Profile
Scenario: 5-YEAR



Carat Drive

basin 5
0.50 ac

basin 26
2.21 ac

basin 22
1.05 ac

basin 27
0.86 ac

basin 28
1.67 ac

basin 6
0.26 ac

basin 23
1.86 ac

basin 30
1.56 ac

basin 29
1.09 ac

basin 7
1.86 ac

basin 21
2.64 ac

basin 32
0.78 ac

basin 31
3.91 ac

basin 33
0.62 ac

basin 34
0.63 ac

basin 25
0.94 ac

basin 8
1.25 ac

basin 24
1.36 ac

basin 35
3.46 ac

future
basin 37
0.30 ac

future
basin 36
0.59 ac

Future Villages

Future Villages

Future Villages

annel

CB #6
Local Rational Flow: 0.22 cfs
Total Flow To Inlet: 0.22 cfs
Total Intercepted Flow: 0.22 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB6
Section Size: 10 Inch
Total System Flow: 0.22 cfs
Design Capacity: 7.69 cfs

CB #22
Local Rational Flow: 0.89 cfs
Total Flow To Inlet: 0.89 cfs
Total Intercepted Flow: 0.89 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB22
Section Size: 10 Inch
Total System Flow: 0.89 cfs
Design Capacity: 8.64 cfs

CB #23
Local Rational Flow: 1.57 cfs
Total Flow To Inlet: 1.74 cfs
Total Intercepted Flow: 1.74 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB23
Section Size: 10 Inch
Total System Flow: 1.74 cfs
Design Capacity: 6.48 cfs

SDMH #B5

SDMH #B2

P-12
Section Size: 18 Inch
Total System Flow: 2.97 cfs
Design Capacity: 5.82 cfs

P-13
Section Size: 24 Inch
Total System Flow: 3.83 cfs
Design Capacity: 18.01 cfs

P-14
Section Size: 24 Inch
Total System Flow: 7.38 cfs
Design Capacity: 14.92 cfs

CB #7
Local Rational Flow: 1.57 cfs
Total Flow To Inlet: 1.57 cfs
Total Intercepted Flow: 1.57 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB7
Section Size: 10 Inch
Total System Flow: 1.57 cfs
Design Capacity: 4.59 cfs

CB #21
Local Rational Flow: 2.24 cfs
Total Flow To Inlet: 2.54 cfs
Total Intercepted Flow: 2.54 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB21
Section Size: 10 Inch
Total System Flow: 2.54 cfs
Design Capacity: 4.02 cfs

CB #8
Local Rational Flow: 1.06 cfs
Total Flow To Inlet: 1.06 cfs
Total Intercepted Flow: 1.06 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB8
Section Size: 10 Inch
Total System Flow: 1.06 cfs
Design Capacity: 4.53 cfs

P-11
Section Size: 12 Inch
Total System Flow: 1.45 cfs
Design Capacity: 2.34 cfs

CB #25
Local Rational Flow: 0.89 cfs
Total Flow To Inlet: 0.89 cfs
Total Intercepted Flow: 0.83 cfs
Total Bypassed Flow: 0.16 cfs
LAT CB25
Section Size: 10 Inch
Total System Flow: 0.83 cfs
Design Capacity: 13.31 cfs

P-10
Section Size: 12 Inch
Total System Flow: 0.84 cfs
Design Capacity: 2.34 cfs

CB #24
Local Rational Flow: 1.15 cfs
Total Flow To Inlet: 1.15 cfs
Total Intercepted Flow: 0.84 cfs
Total Bypassed Flow: 0.31 cfs
LAT CB24
Section Size: 10 Inch
Total System Flow: 0.84 cfs
Design Capacity: 6.30 cfs

P-51
Section Size: 15 Inch
Total System Flow: 0.78 cfs
Design Capacity: 4.31 cfs

CB #34
Local Rational Flow: 0.52 cfs
Total Flow To Inlet: 0.52 cfs
Total Intercepted Flow: 0.52 cfs
Total Bypassed Flow: 0.00 cfs
LATCB34
Section Size: 10 Inch
Total System Flow: 0.59 cfs
Design Capacity: 3.28 cfs

CB #33
Local Rational Flow: 0.53 cfs
Total Flow To Inlet: 0.53 cfs
Total Intercepted Flow: 0.53 cfs
Total Bypassed Flow: 0.00 cfs
LATCB33
Section Size: 10 Inch
Total System Flow: 0.83 cfs
Design Capacity: 3.62 cfs

BTG1

SDMH #G1

CB #36
Local Rational Flow: 0.25 cfs
Total Flow To Inlet: 0.25 cfs
Total Intercepted Flow: 0.25 cfs
Total Bypassed Flow: 0.00 cfs
LATCB36
Section Size: 10 Inch
Total System Flow: 0.25 cfs
Design Capacity: 2.46 cfs

CB #37
Local Rational Flow: 0.50 cfs
Total Flow To Inlet: 0.25 cfs
Total Intercepted Flow: 0.50 cfs
Total Bypassed Flow: 0.00 cfs
LATCB37
Section Size: 10 Inch
Total System Flow: 0.50 cfs
Design Capacity: 2.77 cfs

CB #30
Local Rational Flow: 1.32 cfs
Total Flow To Inlet: 1.32 cfs
Total Intercepted Flow: 1.32 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB30
Section Size: 10 Inch
Total System Flow: 1.32 cfs
Design Capacity: 8.39 cfs

P-52
Section Size: 18 Inch
Total System Flow: 1.96 cfs
Design Capacity: 8.96 cfs

SDMH #P1

SDMH #P2

SDMH #P3

P-53
Section Size: 18 Inch
Total System Flow: 1.94 cfs
Design Capacity: 6.83 cfs

P-54
Section Size: 18 Inch
Total System Flow: 1.92 cfs
Design Capacity: 6.83 cfs

CB #32
Local Rational Flow: 0.66 cfs
Total Flow To Inlet: 0.66 cfs
Total Intercepted Flow: 0.66 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB32
Section Size: 10 Inch
Total System Flow: 0.66 cfs
Design Capacity: 3.92 cfs

P-42
Section Size: 15 Inch
Total System Flow: 1.74 cfs
Design Capacity: 4.24 cfs

P-43
Section Size: 15 Inch
Total System Flow: 1.80 cfs
Design Capacity: 4.18 cfs

P-45
Section Size: 15 Inch
Total System Flow: 1.85 cfs
Design Capacity: 4.18 cfs

P-64
Section Size: 15 Inch
Total System Flow: 1.87 cfs
Design Capacity: 3.79 cfs

P-71
Section Size: 24 Inch
Total System Flow: 1.52 cfs
Design Capacity: 15.02 cfs

SDMH #G2

SDMH #G3

SDMH #G4

SDMH #G5

BTG2

P-72
Section Size: 24 Inch
Total System Flow: 3.90 cfs
Design Capacity: 15.01 cfs

O-G
Total System Flow: 3.86 cfs

CB #35
Local Rational Flow: 3.83 cfs
Total Flow To Inlet: 3.83 cfs
Total Intercepted Flow: 2.85 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB35
Section Size: 15 Inch
Total System Flow: 2.83 cfs
Design Capacity: 5.88 cfs

CB #28
Local Rational Flow: 1.41 cfs
Total Flow To Inlet: 1.41 cfs
Total Intercepted Flow: 1.41 cfs
Total Bypassed Flow: 0.00 cfs

P-49
Section Size: 10 Inch
Total System Flow: 1.41 cfs
Design Capacity: 5.51 cfs

P-50
Section Size: 10 Inch
Total System Flow: 0.73 cfs
Design Capacity: 4.92 cfs

O-E
Total System Flow: 2.12 cfs

SDMH #E4

P-48
Section Size: 12 Inch
Total System Flow: 2.13 cfs
Design Capacity: 9.30 cfs

CB #27
Local Rational Flow: 0.73 cfs
Total Flow To Inlet: 0.73 cfs
Total Intercepted Flow: 0.73 cfs
Total Bypassed Flow: 0.00 cfs

CB #29
Local Rational Flow: 0.82 cfs
Total Flow To Inlet: 0.82 cfs
Total Intercepted Flow: 0.82 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB29
Section Size: 10 Inch
Total System Flow: 0.82 cfs
Design Capacity: 3.29 cfs

CB #31
Local Rational Flow: 3.31 cfs
Total Flow To Inlet: 3.31 cfs
Total Intercepted Flow: 3.31 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB31
Section Size: 10 Inch
Total System Flow: 3.31 cfs
Design Capacity: 3.51 cfs

J-29

J-29

O-F
Total System Flow: 5.51 cfs

P-55
Section Size: 24 Inch
Total System Flow: 1.88 cfs
Design Capacity: 14.90 cfs

P-57
Section Size: 24 Inch
Total System Flow: 5.53 cfs
Design Capacity: 14.55 cfs

P-58
Section Size: 24 Inch
Total System Flow: 2.82 cfs
Design Capacity: 15.31 cfs

NOV 2002

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11/13/02 11:19:51 AM

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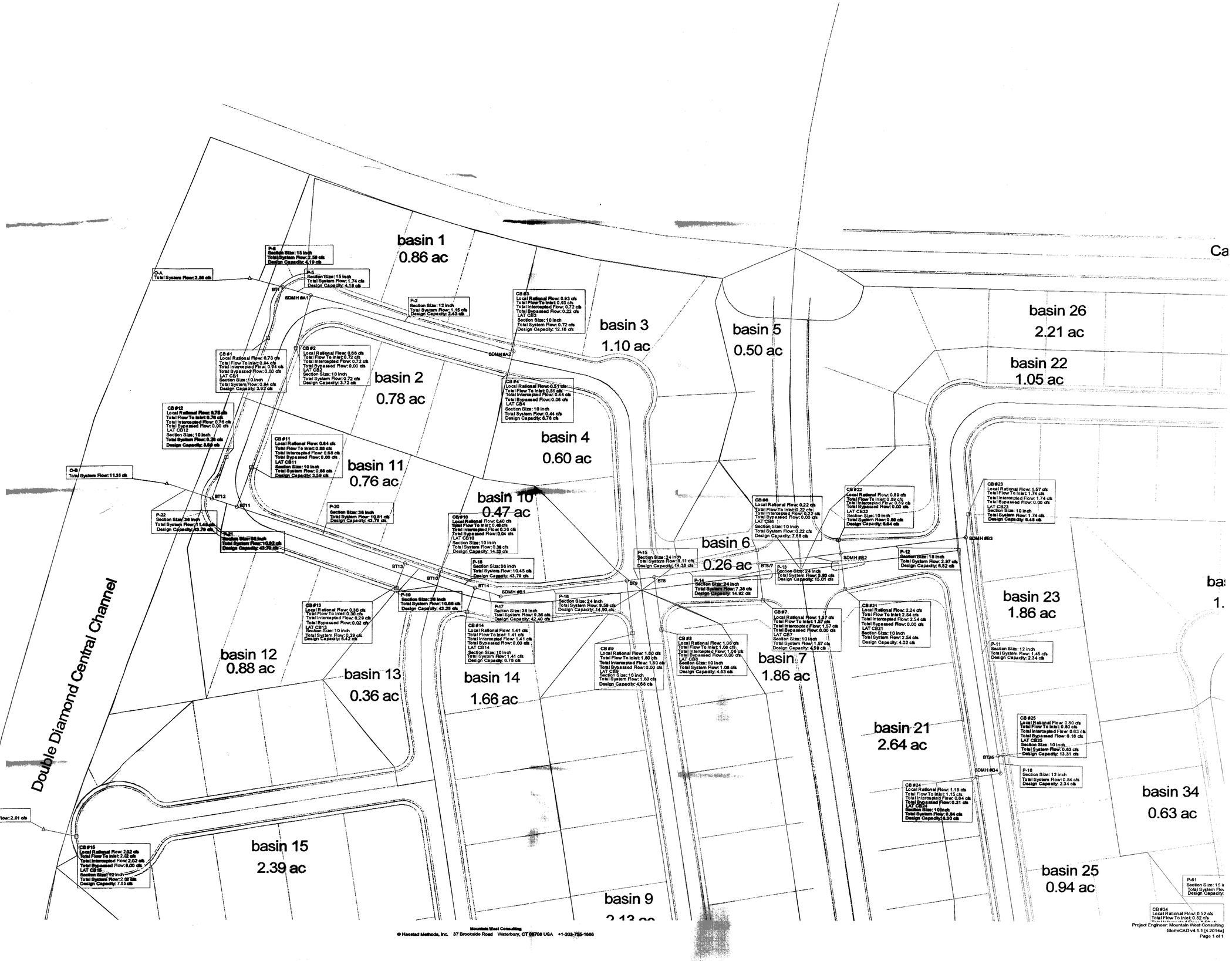
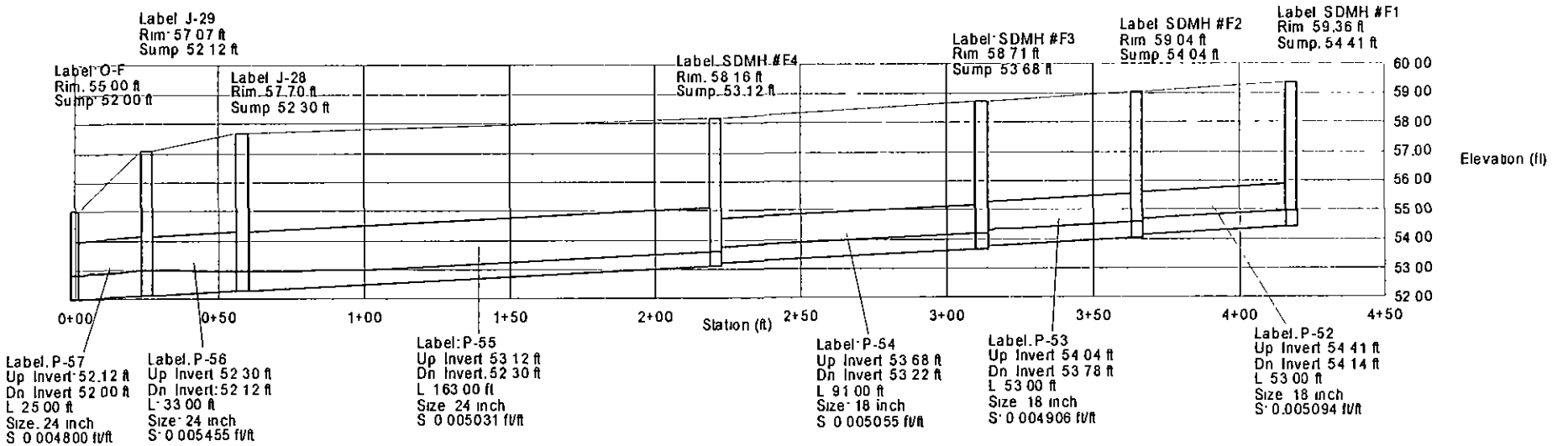
Project Engineer: Mountain West Consulting
StormCAD v4.1.1 [4.2014a]
Page 1 of 1

Scenario: 5-YEAR

Scenario: 5-YEAR



Profile
Scenario: 5-YEAR



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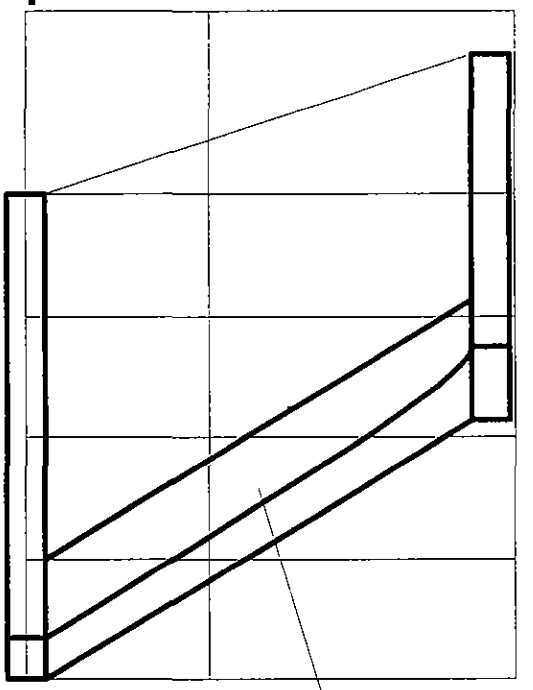
Profile
Scenario: 5-YEAR

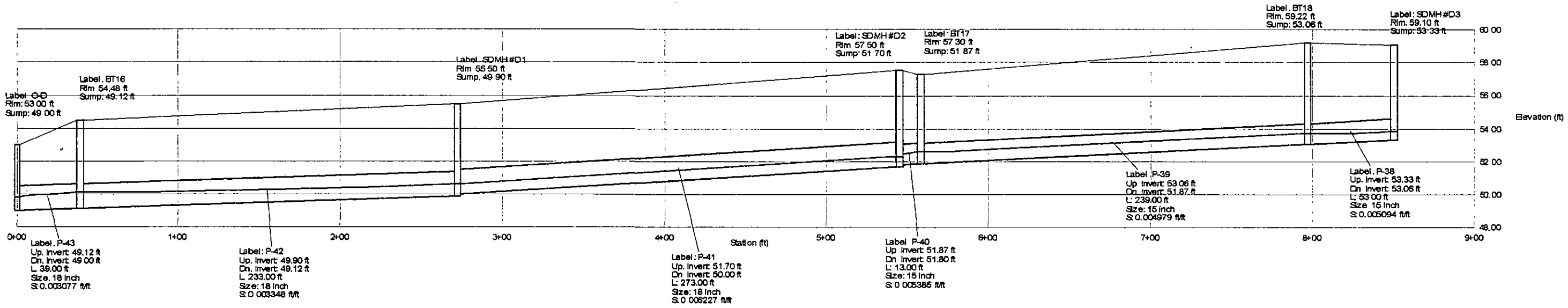
Label: CB #15
Rim: 53.14 ft
Sump: 50.14 ft

Label: O-C
Rim: 52.00 ft
Sump: 48.00 ft



Label: LAT CB15
Up. Invert: 50.14 ft
Dn. Invert: 48.00 ft
L: 38.00 ft
Size: 12 inch
S: 0.056316 ft/ft

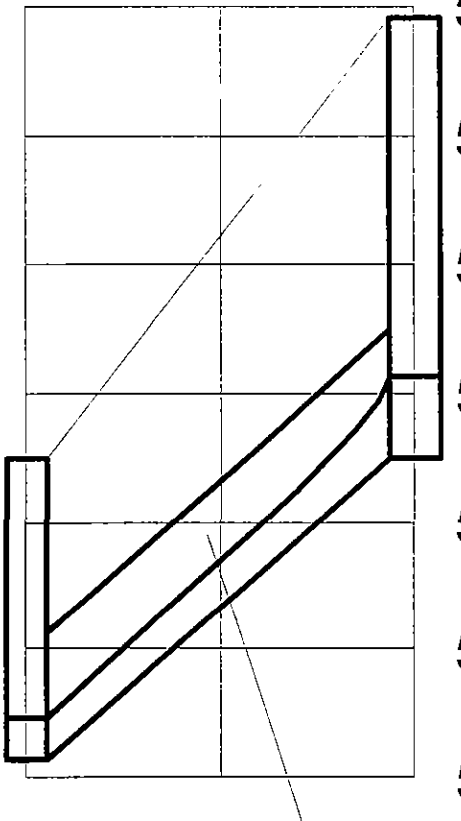
Profile
Scenario: 5-YEAR



Profile
Scenario: 5-YEAR

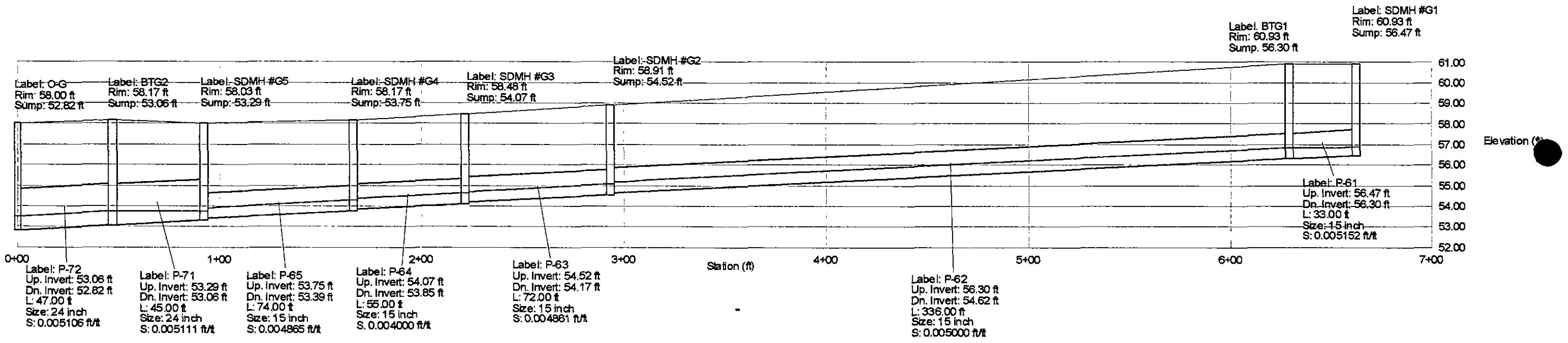
Label: O-E
Rim: 54.00 ft
Sump: 51.63 ft

Label: SDMH #E1
Rim: 57.41 ft
Sump: 54.00 ft



Label: P-49
Up. Invert: 54.00 ft
Dn. Invert: 51.63 ft
L: 30.00 ft
Size: 12 inch
S: 0.079000 ft/ft

Profile
Scenario: 5-YEAR



Detailed Report for Inlet: CB #1

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,443.84 ft	Calculated Station	0+99 ft
Y	14,834,037.86 ft		

Elevations			
Ground Elevation	50.62 ft	Hydraulic Grade Line In	48.05 ft
Rim Elevation	50.62 ft	Hydraulic Grade Line Out	48.05 ft
Sump Elevation	47.62 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.43 ft
Headloss Method	Absolute	Velocity Out	3.32 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.17 ft

System Flow Summary			
Total System Flow	0.94 cfs	System Rational Flow	0.94 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.67 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.86 acres	Composite Rational C	0.60
Inlet CA	0.52 acres	Carryover CA	0.15 acres
Total Inlet CA	0.67 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.94 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.94 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening Le	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #1

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0 00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.94 cfs	Intercepted CA	0.67 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	1 40 in/hr
Intercepted Known Flow	0 00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0.94 cfs	Capture Efficiency	100 0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0 00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.86	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #2

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,475.41 ft	Calculated Station	1+34 ft
Y	14,834,026.35 ft		

Elevations			
Ground Elevation	50 62 ft	Hydraulic Grade Line In	48.00 ft
Rim Elevation	50.62 ft	Hydraulic Grade Line Out	48.00 ft
Sump Elevation	47.62 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.38 ft
Headloss Method	Absolute	Velocity Out	3.04 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.14 ft

System Flow Summary			
Total System Flow	0.72 cfs	System Rational Flow	0.72 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0 00 cfs
System CA	0.51 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.78 acres	Composite Rational C	0.60
Inlet CA	0.47 acres	Carryover CA	0.05 acres
Total Inlet CA	0.51 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.72 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.72 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #2

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.72 cfs	Intercepted CA	0.51 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1 40 in/hr
Intercepted Known Flow	0 00 cfs	Intercepted Tc	10 00 min
Total Intercepted Flow	0.72 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.78	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #3

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,722.02 ft	Calculated Station	3+20 ft
Y	14,834,029.89 ft		

Elevations			
Ground Elevation	52.71 ft	Hydraulic Grade Line In	50.08 ft
Rim Elevation	52.71 ft	Hydraulic Grade Line Out	50.08 ft
Sump Elevation	49.71 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.37 ft
Headloss Method	Absolute	Velocity Out	3.03 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.14 ft

System Flow Summary			
Total System Flow	0.72 cfs	System Rational Flow	0.72 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.51 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.10 acres	Composite Rational C	0.60
Inlet CA	0.66 acres	Carryover CA	0.00 acres
Total Inlet CA	0.66 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.93 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.93 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #1

Detailed Report for Inlet: CB #3

Inlet Characteristics					
Longitudinal Slope	0.006000	ft/ft	Mannings n	0.015	

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.72	cfs	Intercepted CA	0.51	acres
Intercepted Additional Flow	0 00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.72	cfs	Capture Efficiency	76.9	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0 00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0 00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0 00	ft

Subwatershed Information

Area (acres)	Inlet C
1.10	0 60

User Data
Date Installed

Detailed Report for Inlet: CB #4

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,716.41 ft	Calculated Station	3+38 ft
Y	14,833,996.56 ft		

Elevations			
Ground Elevation	52.72 ft	Hydraulic Grade Line In	50.01 ft
Rim Elevation	52.72 ft	Hydraulic Grade Line Out	50.01 ft
Sump Elevation	49.72 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.29 ft
Headloss Method	Absolute	Velocity Out	2.62 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.11 ft

System Flow Summary			
Total System Flow	0.44 cfs	System Rational Flow	0.44 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.31 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.60 acres	Composite Rational C	0.60
Inlet CA	0.36 acres	Carryover CA	0.00 acres
Total Inlet CA	0.36 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	*0.51 cfs*	*Total Inlet Time of Concentration*	*10.00 min*
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.51 cfs		

Inlet Characteristics			
Inlet Type	*Combination Inlet*	*Inlet Location*	*On Grade*
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #2

Detailed Report for Inlet: CB #4

Inlet Characteristics			
Longitudinal Slope	0.006000 ft/ft	Mannings n	0.015

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.44 cfs	Intercepted CA	0.31 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0.44 cfs	Capture Efficiency	87.3 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.60	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #6

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,000.59 ft	Calculated Station	7+12 ft
Y	14,833,796.77 ft		

Elevations			
Ground Elevation	54.71 ft	Hydraulic Grade Line In	51.91 ft
Rim Elevation	54.71 ft	Hydraulic Grade Line Out	51.91 ft
Sump Elevation	51.71 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.20 ft
Headloss Method	Absolute	Velocity Out	2.15 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.07 ft

System Flow Summary			
Total System Flow	0.22 cfs	System Rational Flow	0.22 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1 40 in/hr	System Known Flow	0.00 cfs
System CA	0.16 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.26 acres	Composite Rational C	0.60
Inlet CA	0.16 acres	Carryover CA	0.00 acres
Total Inlet CA	0.16 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.22 cfs	Total Inlet Time of Concentration	10 00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.22 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #6

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.22	cfs	Intercepted CA	0.16	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1 40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0 22	cfs	Capture Efficiency	100 0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	*Inverts*		*Allow Drop Structure?*	*true*	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.26	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #7

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,008.04 ft	Calculated Station	7+39 ft
Y	14,833,740.15 ft		

Elevations			
Ground Elevation	54.71 ft	Hydraulic Grade Line In	52.27 ft
Rim Elevation	54.71 ft	Hydraulic Grade Line Out	52.27 ft
Sump Elevation	51.71 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0 56 ft
Headloss Method	Absolute	Velocity Out	4.02 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.25 ft

System Flow Summary			
Total System Flow	1.57 cfs	System Rational Flow	1.57 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	1.12 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1 86 acres	Composite Rational C	0.60
Inlet CA	1.12 acres	Carryover CA	0.00 acres
Total Inlet CA	1 12 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	1 57 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.57 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #7

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1.57 cfs	Intercepted CA	1.12 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1 40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	1 57 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0 00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.86	0.60

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #8

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,892.94 ft	Calculated Station	6+39 ft
Y	14,833,706.25 ft		

Elevations			
Ground Elevation	55.00 ft	Hydraulic Grade Line In	52.46 ft
Rim Elevation	55.00 ft	Hydraulic Grade Line Out	52.46 ft
Sump Elevation	52.00 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.46 ft
Headloss Method	Absolute	Velocity Out	3.45 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0 19 ft

System Flow Summary			
Total System Flow	1.06 cfs	System Rational Flow	1.06 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.75 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.25 acres	Composite Rational C	0.60
Inlet CA	0.75 acres	Carryover CA	0.00 acres
Total Inlet CA	0.75 acres	Total Inlet Intensity	1 40 in/hr
Total Inlet Rational Flow	1.06 cfs	Total Inlet Time of Concentration	10 00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.06 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #8

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1.06 cfs	Intercepted CA	0.75 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	1.06 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0 00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.25	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #9

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	*Base-Boundary Conditions*
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,860.53 ft	Calculated Station	6+06 ft
Y	14,833,702.16 ft		

Elevations			
Ground Elevation	55.00 ft	Hydraulic Grade Line In	52.60 ft
Rim Elevation	55.00 ft	Hydraulic Grade Line Out	52.60 ft
Sump Elevation	52.00 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.60 ft
Headloss Method	Absolute	Velocity Out	4.27 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.28 ft

System Flow Summary			
Total System Flow	1.80 cfs	System Rational Flow	1.80 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	1.28 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	2.13 acres	Composite Rational C	0.60
Inlet CA	1.28 acres	Carryover CA	0.00 acres
Total Inlet CA	1.28 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	1.80 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.80 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #9

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0 00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1.80 cfs	Intercepted CA	1 28 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	1.40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10 00 min
Total Intercepted Flow	1.80 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0 00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0 00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
2.13	0.60

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #10

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,641.25 ft	Calculated Station	3+33 ft
Y	14,833,773.72 ft		

Elevations			
Ground Elevation	53.69 ft	Hydraulic Grade Line In	50.95 ft
Rim Elevation	53.69 ft	Hydraulic Grade Line Out	50.95 ft
Sump Elevation	50.69 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.26 ft
Headloss Method	Absolute	Velocity Out	2.47 ft/s
Absolute Headloss	0 00 ft	Velocity Head Out	0.09 ft

System Flow Summary			
Total System Flow	0.36 cfs	System Rational Flow	0.36 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.26 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	0.47 acres	Composite Rational C	0.60
Inlet CA	0.28 acres	Carryover CA	0.00 acres
Total Inlet CA	0.28 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.40 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.40 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft	Bypass Target	CB #11

Detailed Report for Inlet: CB #10

Inlet Characteristics					
Longitudinal Slope	0 006000	ft/ft	Mannings n	0.015	

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.36	cfs	Intercepted CA	0 26	acres
Intercepted Additional Flow	0 00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.36	cfs	Capture Efficiency	91.1	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0 00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.47	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #11

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,425 45 ft	Calculated Station	1+33 ft
Y	14,833,891.01 ft		

Elevations			
Ground Elevation	50.95 ft	Hydraulic Grade Line In	48.31 ft
Rim Elevation	50.95 ft	Hydraulic Grade Line Out	48.31 ft
Sump Elevation	47 95 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.36 ft
Headloss Method	Absolute	Velocity Out	2.98 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.14 ft

System Flow Summary			
Total System Flow	0.68 cfs	System Rational Flow	0 68 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.48 acres	Total Diverted Flow In	0 00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.76 acres	Composite Rational C	0.60
Inlet CA	0.46 acres	Carryover CA	0.02 acres
Total Inlet CA	0.48 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.68 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.68 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #11

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.68	cfs	Intercepted CA	0.48	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1 40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.68	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0 00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.76	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #12

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,396.77 ft	Calculated Station	1+05 ft
Y	14,833,902.56 ft		

Elevations			
Ground Elevation	50.95 ft	Hydraulic Grade Line In	48.34 ft
Rim Elevation	50.95 ft	Hydraulic Grade Line Out	48.34 ft
Sump Elevation	47.95 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.39 ft
Headloss Method	Absolute	Velocity Out	3.09 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.15 ft

System Flow Summary			
Total System Flow	0.76 cfs	System Rational Flow	0.76 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.54 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.68 acres	Composite Rational C	0.60
Inlet CA	0.53 acres	Carryover CA	0.01 acres
Total Inlet CA	0.54 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.76 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.76 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #12

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0 00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.76	cfs	Intercepted CA	0.54	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.76	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.88	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #13

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,591 21 ft	Calculated Station	3+15 ft
Y	14,833,753.56 ft		

Elevations			
Ground Elevation	53.32 ft	Hydraulic Grade Line In	50.55 ft
Rim Elevation	53.32 ft	Hydraulic Grade Line Out	50.55 ft
Sump Elevation	50 32 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0 23 ft
Headloss Method	Absolute	Velocity Out	2.32 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.08 ft

System Flow Summary			
Total System Flow	0.29 cfs	System Rational Flow	0.29 cfs
System Flow Time	10.00 min	System Additional Flow	0 00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0 20 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.36 acres	Composite Rational C	0.60
Inlet CA	0.22 acres	Carryover CA	0 00 acres
Total Inlet CA	0.22 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0 30 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.30 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #12

Detailed Report for Inlet: CB #13

Inlet Characteristics					
Longitudinal Slope	0.006000	ft/ft	Mannings n	0 015	

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.29	cfs	Intercepted CA	0.20	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0 29	cfs	Capture Efficiency	94.8	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0 36	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #14

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	*Base-Design Constraints*
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,671.67 ft	Calculated Station	4+00 ft
Y	14,833,726.37 ft		

Elevations			
Ground Elevation	54 07 ft	Hydraulic Grade Line In	51.60 ft
Rim Elevation	54.07 ft	Hydraulic Grade Line Out	51.60 ft
Sump Elevation	51.07 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0 53 ft
Headloss Method	Absolute	Velocity Out	3.84 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.23 ft

System Flow Summary			
Total System Flow	1.41 cfs	System Rational Flow	1.41 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 *in/hr*	*System Known Flow*	0.00 cfs
System CA	1 00 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.66 acres	Composite Rational C	0.60
Inlet CA	1.00 acres	Carryover CA	0.00 acres
Total Inlet CA	1.00 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	1.41 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.41 *cfs*		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening Le	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #14

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1.41 cfs	Intercepted CA	1 00 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	1 40 in/hr
Intercepted Known Flow	0 00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	1.41 cfs	Capture Efficiency	100 0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0 00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.66	0 60

User Data
Date Installed

Detailed Report for Inlet: CB #15

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,227.36 ft	Calculated Station	0+38 ft
Y	14,833,471 83 ft		

Elevations			
Ground Elevation	53.14 ft	Hydraulic Grade Line In	50 75 ft
Rim Elevation	53.14 ft	Hydraulic Grade Line Out	50.75 ft
Sump Elevation	50.14 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.61 ft
Headloss Method	Absolute	Velocity Out	4.06 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.26 ft

System Flow Summary			
Total System Flow	2.02 cfs	System Rational Flow	2.02 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	1.43 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	2.39 acres	Composite Rational C	0.60
Inlet CA	1.43 acres	Carryover CA	0.00 acres
Total Inlet CA	1.43 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	2.02 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.02 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3 00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #15

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	2.02 cfs	Intercepted CA	1 43 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1 40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	2.02 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0 00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0 00 cfs	Upstream Time Of Concentration	0 00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
2.39	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #16

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,195.39 ft	Calculated Station	0+50 ft
Y	14,833,159.33 ft		

Elevations			
Ground Elevation	54 48 ft	Hydraulic Grade Line In	52.18 ft
Rim Elevation	54.48 ft	Hydraulic Grade Line Out	52.18 ft
Sump Elevation	51.48 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.70 ft
Headloss Method	Absolute	Velocity Out	4 55 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.32 ft

System Flow Summary			
Total System Flow	2.68 cfs	System Rational Flow	2.68 cfs
System Flow Time	10 00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	1.90 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	3.17 acres	Composite Rational C	0.60
Inlet CA	1.90 acres	Carryover CA	0.00 acres
Total Inlet CA	1.90 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	2.68 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.68 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #16

External Pipe Flow					
External CA	0 00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	2.68	cfs	Intercepted CA	1 90	acres
Intercepted Additional Flow	0 00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10 00	min
Total Intercepted Flow	2.68	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0 00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0 00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
3.17	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #17

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,700.87 ft	Calculated Station	5+63 ft
Y	14,833,237.55 ft		

Elevations			
Ground Elevation	57.79 ft	Hydraulic Grade Line In	55.17 ft
Rim Elevation	57.79 ft	Hydraulic Grade Line Out	55.17 ft
Sump Elevation	54.79 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.38 ft
Headloss Method	Absolute	Velocity Out	3.05 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.14 ft

System Flow Summary			
Total System Flow	0.73 cfs	System Rational Flow	0.73 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.52 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.60 acres	Composite Rational C	0.60
Inlet CA	0.36 acres	Carryover CA	0.16 acres
Total Inlet CA	0.52 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.73 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.73 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening Li	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #17

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.73 cfs	Intercepted CA	0.52 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1 40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0.73 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0 00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.60	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #18

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,738 12 ft	Calculated Station	8+02 ft
Y	14,833,001.02 ft		

Elevations			
Ground Elevation	59.22 ft	Hydraulic Grade Line In	56.60 ft
Rim Elevation	59 22 ft	Hydraulic Grade Line Out	56.60 ft
Sump Elevation	56 22 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.38 ft
Headloss Method	Absolute	Velocity Out	3.05 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.14 ft

System Flow Summary			
Total System Flow	0 73 cfs	System Rational Flow	0 73 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.52 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0 00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.13 acres	Composite Rational C	0.60
Inlet CA	0.68 acres	Carryover CA	0.00 acres
Total Inlet CA	0.68 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.96 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.96 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening Le	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #17

Detailed Report for Inlet: CB #18

Inlet Characteristics			
Longitudinal Slope	0.006000 ft/ft	Mannings n	0.015

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0 00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.73 cfs	Intercepted CA	0.52 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1 40 in/hr
Intercepted Known Flow	0 00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0 73 cfs	Capture Efficiency	76.4 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0 00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.13	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #19

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,751.08 ft	Calculated Station	8+80 ft
Y	14,832,918.61 ft		

Elevations			
Ground Elevation	59.11 ft	Hydraulic Grade Line In	56.62 ft
Rim Elevation	59.11 ft	Hydraulic Grade Line Out	56.62 ft
Sump Elevation	56.11 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.51 ft
Headloss Method	Absolute	Velocity Out	3.73 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.22 ft

System Flow Summary			
Total System Flow	1.31 cfs	System Rational Flow	1.31 cfs
System Flow Time	10 00 min	System Additional Flow	0.00 cfs
System Intensity	1 40 in/hr	System Known Flow	0.00 cfs
System CA	0 93 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.55 acres	Composite Rational C	0.60
Inlet CA	0.93 acres	Carryover CA	0 00 acres
Total Inlet CA	0 93 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	1 31 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1 31 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #19

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1.31	cfs	Intercepted CA	0.93	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1 40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	1.31	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0 00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0 00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.55	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #20

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,716.15 ft	Calculated Station	8+93 ft
Y	14,832,913.48 ft		

Elevations			
Ground Elevation	59.05 ft	Hydraulic Grade Line In	56.29 ft
Rim Elevation	59.05 ft	Hydraulic Grade Line Out	56.29 ft
Sump Elevation	56.05 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0 24 ft
Headloss Method	Absolute	Velocity Out	2.37 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.09 ft

System Flow Summary			
Total System Flow	0.31 cfs	System Rational Flow	0.31 cfs
System Flow Time	10.00 min	System Additional Flow	0 00 cfs
System Intensity	1 40 in/hr	System Known Flow	0.00 cfs
System CA	0.22 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.37 acres	Composite Rational C	0.60
Inlet CA	0.22 acres	Carryover CA	0.00 acres
Total Inlet CA	0.22 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.31 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.31 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0 020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #20

External Pipe Flow					
External CA	0.00	*acres*	*External Time of Concentration*	0.00	*min*

Intercepted Flow Summary					
Intercepted Rational Flow	0.31	cfs	Intercepted CA	0.22	acres
Intercepted Additional Flow	0 00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10 00	min
Total Intercepted Flow	0.31	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0 00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0 00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0 00	ft

Subwatershed Information

Area (acres)	Inlet C
0.37	*0.60*

User Data
Date Installed

Detailed Report for Inlet: CB #21

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,100.79 ft	Calculated Station	8+32 ft
Y	14,833,753.19 ft		

Elevations			
Ground Elevation	54.65 ft	Hydraulic Grade Line In	52.36 ft
Rim Elevation	54.65 ft	Hydraulic Grade Line Out	52.36 ft
Sump Elevation	51.65 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.71 ft
Headloss Method	Absolute	Velocity Out	5.16 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.41 ft

System Flow Summary			
Total System Flow	2.54 cfs	System Rational Flow	2.54 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1 40 in/hr	System Known Flow	0.00 cfs
System CA	1.80 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	2.64 acres	Composite Rational C	0.60
Inlet CA	1.58 acres	Carryover CA	0.22 acres
Total Inlet CA	1.80 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	2 54 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0 00 cfs
Total Flow To Inlet	2.54 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #21

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	2.54	cfs	Intercepted CA	1.80	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	2.54	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0 00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0 00	min
Total Upstream Flow	*0.00*	*cfs*			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
2.64	0.60

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #22

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	*Base-Physical Properties*
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,092.97 ft	Calculated Station	8+06 ft
Y	14,833,808.69 ft		

Elevations			
Ground Elevation	54.65 ft	Hydraulic Grade Line In	52.07 ft
Rim Elevation	54.65 ft	Hydraulic Grade Line Out	52.07 ft
Sump Elevation	51.65 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.42 ft
Headloss Method	Absolute	Velocity Out	3.25 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.16 ft

System Flow Summary			
Total System Flow	0.89 cfs	System Rational Flow	0.89 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.63 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.05 acres	Composite Rational C	0.60
Inlet CA	0.63 acres	Carryover CA	0.00 acres
Total Inlet CA	0.63 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.89 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.89 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	*Gutter Section*	*Road Cross Slope*	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #22

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.89 cfs	Intercepted CA	0.63 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0 89 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0 00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0 00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.05	0 60

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #23

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,240.11 ft	Calculated Station	9+61 ft
Y	14,833,838.86 ft		

Elevations			
Ground Elevation	56.59 ft	Hydraulic Grade Line In	54 18 ft
Rim Elevation	56.59 ft	Hydraulic Grade Line Out	54.18 ft
Sump Elevation	53.59 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.59 ft
Headloss Method	Absolute	Velocity Out	4.20 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.27 ft

System Flow Summary			
Total System Flow	1.74 cfs	System Rational Flow	1.74 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1 40 in/hr	System Known Flow	0.00 cfs
System CA	1.23 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.86 acres	Composite Rational C	0.60
Inlet CA	1 12 acres	Carryover CA	0.11 acres
Total Inlet CA	1.23 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	1.74 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.74 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #23

External Pipe Flow					
External CA	*0.00*	*acres*	*External Time of Concentration*	*0.00*	*min*

Intercepted Flow Summary					
Intercepted Rational Flow	1.74	cfs	Intercepted CA	1.23	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	1.74	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	*0.00*	*cfs*	*Upstream Time Of Concentration*	*0.00*	*min*
Total Upstream Flow	0.00	cfs			

Design Constraints Summary				
Pipe Matching	Inverts	Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true	Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.86	*0.60*

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #24

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary					
X	2,299,251.66	ft	Calculated Station	12+31	ft
Y	14,833,541.24	ft			

Elevations					
Ground Elevation	57.89	ft	Hydraulic Grade Line In	55.30	ft
Rim Elevation	57.89	ft	Hydraulic Grade Line Out	55.30	ft
Sump Elevation	54.89	ft			

Headlosses					
Gravity Element Headloss	0 00	ft	Depth Out	0.41	ft
Headloss Method	Absolute		Velocity Out	3.19	ft/s
Absolute Headloss	0.00	ft	Velocity Head Out	0.16	ft

System Flow Summary					
Total System Flow	0.84	cfs	System Rational Flow	0.84	cfs
System Flow Time	10.00	min	System Additional Flow	0.00	cfs
System Intensity	1 40	in/hr	System Known Flow	0.00	cfs
System CA	0.60	acres	Total Diverted Flow In	0.00	cfs

Incoming Diverted Flow					
Local Diverted Flow In	0.00	cfs	Global Diverted Flow In	0.00	cfs
Total Diverted Flow In	0 00	cfs			

Inlet Flow Summary					
Area	1 36	acres	Composite Rational C	0.60	
Inlet CA	0.82	acres	Carryover CA	0.00	acres
Total Inlet CA	0.82	acres	Total Inlet Intensity	1.40	in/hr
Total Inlet Rational Flow	1.15	cfs	Total Inlet Time of Concentration	10.00	min
Total Inlet Additional Flow	0.00	cfs	Total Inlet Known Flow	0.00	cfs
Total Flow To Inlet	1.15	cfs			

Inlet Characteristics					
Inlet Type	Combination Inlet		Inlet Location	On Grade	
Inlet	Combination type 4r		Combination Inlet Curb Opening L	3.00	ft
Combination Inlet Grate Opening L	3.00	ft	Combination Inlet Clogging Factor	0.0	%
Inlet Section Properties	Gutter Section		Road Cross Slope	0.020	ft/ft
Depressed Gutter?	true		Gutter Cross Slope	0.083	ft/ft
Gutter Width	1.50	ft	Bypass Target	CB #21	

Detailed Report for Inlet: CB #24

Inlet Characteristics					
Longitudinal Slope	0 006000	ft/ft	Mannings n	0.015	

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.84	cfs	Intercepted CA	0.60	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1 40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10 00	min
Total Intercepted Flow	0.84	cfs	Capture Efficiency	73 1	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.36	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #25

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,281.83 ft	Calculated Station	11+90 ft
Y	14,833,566.19 ft		

Elevations			
Ground Elevation	57.77 ft	Hydraulic Grade Line In	55.12 ft
Rim Elevation	57.77 ft	Hydraulic Grade Line Out	55.12 ft
Sump Elevation	54.77 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.35 ft
Headloss Method	Absolute	Velocity Out	2.91 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.13 ft

System Flow Summary			
Total System Flow	0.63 cfs	System Rational Flow	0.63 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.45 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.94 acres	Composite Rational C	0.60
Inlet CA	0.56 acres	Carryover CA	0.00 acres
Total Inlet CA	0.56 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.80 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.80 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #23

Detailed Report for Inlet: CB #25

Inlet Characteristics					
Longitudinal Slope	0.006000	ft/ft	Mannings n	0.015	

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.63	cfs	Intercepted CA	0.45	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.63	cfs	Capture Efficiency	79.7	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.94	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #27

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,300,171.68 ft	Calculated Station	0+37 ft
Y	14,833,891.08 ft		

Elevations			
Ground Elevation	57.41 ft	Hydraulic Grade Line In	54.79 ft
Rim Elevation	57.41 ft	Hydraulic Grade Line Out	54.79 ft
Sump Elevation	54.41 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0 38 ft
Headloss Method	Absolute	Velocity Out	3.04 ft/s
Absolute Headloss	0 00 ft	Velocity Head Out	0.14 ft

System Flow Summary			
Total System Flow	0.73 cfs	System Rational Flow	0.73 cfs
System Flow Time	10.00 min	System Additional Flow	0 00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.52 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.86 acres	Composite Rational C	0.60
Inlet CA	0.52 acres	Carryover CA	0.00 acres
Total Inlet CA	0.52 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.73 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.73 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #27

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0 00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.73	cfs	Intercepted CA	0 52	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1 40	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.73	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0 00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0 86	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #28

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,300,139.00 ft	Calculated Station	0+57 ft
Y	14,833,891.08 ft		

Elevations			
Ground Elevation	57 41 ft	Hydraulic Grade Line In	54.94 ft
Rim Elevation	57.41 ft	Hydraulic Grade Line Out	54.94 ft
Sump Elevation	54.41 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.53 ft
Headloss Method	Absolute	Velocity Out	3.85 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.23 ft

System Flow Summary			
Total System Flow	1.41 cfs	System Rational Flow	1 41 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1 40 in/hr	System Known Flow	0.00 cfs
System CA	1.00 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.67 acres	Composite Rational C	0.60
Inlet CA	1.00 acres	Carryover CA	0.00 acres
Total Inlet CA	1.00 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	1 41 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.41 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #28

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1 41 cfs	Intercepted CA	1 00 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	1.41 cfs	Capture Efficiency	100 0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0 00 ft

Subwatershed Information

Area (acres)	Inlet C
1.67	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #29

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,300,136.20 ft	Calculated Station	1+08 ft
Y	14,833,754.40 ft		

Elevations			
Ground Elevation	56.61 ft	Hydraulic Grade Line In	54.04 ft
Rim Elevation	56.61 ft	Hydraulic Grade Line Out	54.04 ft
Sump Elevation	53 61 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.43 ft
Headloss Method	Absolute	Velocity Out	3 29 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.17 ft

System Flow Summary			
Total System Flow	0.92 cfs	System Rational Flow	0.92 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.65 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	1.09 acres	Composite Rational C	0.60
Inlet CA	0.65 acres	Carryover CA	0.00 acres
Total Inlet CA	0.65 acres	Total Inlet Intensity	1 40 in/hr
Total Inlet Rational Flow	0.92 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.92 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #29

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0 00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.92 cfs	Intercepted CA	0.65 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0.92 cfs	Capture Efficiency	100 0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.09	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #30

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,787.37 ft	Calculated Station	4+24 ft
Y	14,833,695.66 ft		

Elevations			
Ground Elevation	59.43 ft	Hydraulic Grade Line In	55.94 ft
Rim Elevation	59.43 ft	Hydraulic Grade Line Out	55.94 ft
Sump Elevation	55.43 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.51 ft
Headloss Method	Absolute	Velocity Out	3.74 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.22 ft

System Flow Summary			
Total System Flow	1.32 cfs	System Rational Flow	1.32 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.94 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0 00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.56 acres	Composite Rational C	0.60
Inlet CA	0.94 acres	Carryover CA	0.00 acres
Total Inlet CA	0 94 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	1.32 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.32 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #30

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1.32	cfs	Intercepted CA	0.94	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	1 32	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.56	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #31

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,300,168.88 ft	Calculated Station	0+75 ft
Y	14,833,754.40 ft		

Elevations			
Ground Elevation	56.61 ft	Hydraulic Grade Line In	54.38 ft
Rim Elevation	56.61 ft	Hydraulic Grade Line Out	54.38 ft
Sump Elevation	53.61 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.77 ft
Headloss Method	Absolute	Velocity Out	6.27 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.61 ft

System Flow Summary			
Total System Flow	3.31 cfs	System Rational Flow	3.31 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	2.35 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	3.91 acres	Composite Rational C	0.60
Inlet CA	2.35 acres	Carryover CA	0.00 acres
Total Inlet CA	2.35 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	3.31 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3.31 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #31

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	3.31 cfs	Intercepted CA	2.35 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1 40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10 00 min
Total Intercepted Flow	3.31 cfs	Capture Efficiency	100 0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0 00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
3.91	0.60

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #32

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,781.08 ft	Calculated Station	4+45 ft
Y	14,833,663.87 ft		

Elevations			
Ground Elevation	59.41 ft	Hydraulic Grade Line In	55.77 ft
Rim Elevation	59.41 ft	Hydraulic Grade Line Out	55.77 ft
Sump Elevation	55.41 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.36 ft
Headloss Method	Absolute	Velocity Out	2.95 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.14 ft

System Flow Summary			
Total System Flow	0.66 cfs	System Rational Flow	0.66 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1 40 in/hr	System Known Flow	0.00 cfs
System CA	0.47 acres	Total Diverted Flow In	0 00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.78 acres	Composite Rational C	0.60
Inlet CA	0.47 acres	Carryover CA	0.00 acres
Total Inlet CA	0.47 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.66 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.66 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3 00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #32

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.66	cfs	Intercepted CA	0 47	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1 40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.66	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0 00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0 00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.78	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #33

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,570.67 ft	Calculated Station	6+59 ft
Y	14,833,394.12 ft		

Elevations			
Ground Elevation	60.25 ft	Hydraulic Grade Line In	57.57 ft
Rim Elevation	60.25 ft	Hydraulic Grade Line Out	57.57 ft
Sump Elevation	57.25 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.32 ft
Headloss Method	Absolute	Velocity Out	2.77 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.12 ft

System Flow Summary			
Total System Flow	0.53 cfs	System Rational Flow	0.53 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.38 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.63 acres	Composite Rational C	0.60
Inlet CA	0.38 acres	Carryover CA	0.00 acres
Total Inlet CA	0.38 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.53 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.53 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #33

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.53 cfs	Intercepted CA	0.38 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	1.40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0.53 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0 00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.63	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #34

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,537.00 ft	Calculated Station	6+92 ft
Y	14,833,389.01 ft		

Elevations			
Ground Elevation	60.25 ft	Hydraulic Grade Line In	57.57 ft
Rim Elevation	60.25 ft	Hydraulic Grade Line Out	57 57 ft
Sump Elevation	57.25 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.32 ft
Headloss Method	Absolute	Velocity Out	2.75 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.12 ft

System Flow Summary			
Total System Flow	0.52 cfs	System Rational Flow	0.52 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0 00 cfs
System CA	0.37 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.62 acres	Composite Rational C	0.60
Inlet CA	0.37 acres	Carryover CA	0.00 acres
Total Inlet CA	0.37 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.52 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.52 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #34

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.52	cfs	Intercepted CA	0.37	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.52	cfs	Capture Efficiency	100 0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0 00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.62	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #35

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,300,161.44 ft	Calculated Station	0+85 ft
Y	14,833,380 48 ft		

Elevations			
Ground Elevation	57.33 ft	Hydraulic Grade Line In	54.02 ft
Rim Elevation	57.33 ft	Hydraulic Grade Line Out	54.02 ft
Sump Elevation	53.33 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.69 ft
Headloss Method	Absolute	Velocity Out	4.23 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.28 ft

System Flow Summary			
Total System Flow	2.93 cfs	System Rational Flow	2.93 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	2.08 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	3.46 acres	Composite Rational C	0.60
Inlet CA	2.08 acres	Carryover CA	0.00 acres
Total Inlet CA	2.08 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	2.93 cfs	Total Inlet Time of Concentration	10 00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.93 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0 020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #35

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	2.93 cfs	Intercepted CA	2.08 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	2.93 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0 00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0 00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
3.46	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #36

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,549.79 ft	Calculated Station	7+18 ft
Y	14,833,304.19 ft		

Elevations			
Ground Elevation	60.29 ft	Hydraulic Grade Line In	57.51 ft
Rim Elevation	60.29 ft	Hydraulic Grade Line Out	57.51 ft
Sump Elevation	57.29 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.22 ft
Headloss Method	Absolute	Velocity Out	2.24 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.08 ft

System Flow Summary			
Total System Flow	0.25 cfs	System Rational Flow	0.25 cfs
System Flow Time	10 00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.18 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.30 acres	Composite Rational C	0.60
Inlet CA	0.18 acres	Carryover CA	0.00 acres
Total Inlet CA	0.18 acres	Total Inlet Intensity	1 40 in/hr
Total Inlet Rational Flow	0.25 cfs	Total Inlet Time of Concentration	10 00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.25 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening Li	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #36

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.25 cfs	Intercepted CA	0.18 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	1 40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0.25 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.30	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #37

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,584.31 ft	Calculated Station	6+83 ft
Y	14,833,311.86 ft		

Elevations			
Ground Elevation	60.30 ft	Hydraulic Grade Line In	57.61 ft
Rim Elevation	60.30 ft	Hydraulic Grade Line Out	57 61 ft
Sump Elevation	57.30 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.31 ft
Headloss Method	Absolute	Velocity Out	2.71 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.11 ft

System Flow Summary			
Total System Flow	0.50 cfs	System Rational Flow	0.50 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.35 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.59 acres	Composite Rational C	0 60
Inlet CA	0.35 acres	Carryover CA	0 00 acres
Total Inlet CA	0.35 acres	Total Inlet Intensity	1 40 in/hr
Total Inlet Rational Flow	0.50 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.50 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening Li	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #37

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.50 cfs	Intercepted CA	0.35 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.40 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0.50 cfs	Capture Efficiency	100 0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0 00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.59	0.60

User Data
Date Installed

Scenario: 100-YEAR

TABLE 1

Inlet Report

Label	Area (acres)	Inlet C	Time of Concentration (min)	Local Rational Flow (cfs)	Total Flow To Inlet (cfs)	Total Intercepted Flow (cfs)
CB #1	0.86	0.60	10.00	1.98	3.00	3 00
CB #2	0 78	0 60	10 00	1 79	2.21	2.21
CB #3	1 10	0 60	10 00	2.53	2 53	1 50
CB #4	0.60	0.60	10 00	1.38	1 38	0.96
CB #6	0.26	0.60	10.00	0.60	0.60	0.60
CB #7	1.86	0 60	10.00	4 27	4 27	4.27
CB #8	1.25	0.60	10.00	2 87	2.87	2.87
CB #9	2.13	0.60	10.00	4.90	4.90	4.90
CB #10	0.47	0.60	10 00	1 08	1.08	0.80
CB #11	0.76	0.60	10.00	1.75	2.02	2.02
CB #12	0.88	0.60	10.00	2.02	2.20	2.20
CB #13	0.36	0.60	10.00	0.83	0.83	0.65
CB #14	1.66	0.60	10.00	3.82	3.82	3.82
CB #15	2.39	0 60	10.00	5.49	5 49	5 49
CB #16	3.17	0.60	10.00	7.29	7.29	7.29
CB #17	0.60	0.60	10.00	1 38	2.45	2.45
CB #18	1.13	0.60	10.00	2.60	2.60	1.53
CB #19	1.55	0.60	10.00	3 56	3.56	3.56
CB #20	0.37	0.60	10.00	0.85	0.85	0.85
CB #21	2.64	0.60	10.00	6.07	7.45	7 45
CB #22	1.05	0.60	10.00	2.41	2.41	2.41
CB #23	1.86	0.60	10 00	4 27	5.09	5.09
CB #24	1.36	0.60	10.00	3.13	3.13	1.75
CB #25	0.94	0.60	10.00	2.16	2.16	1.34
CB #27	0 86	0.60	10.00	1.98	1.98	1 98
CB #28	1.67	0.60	10.00	3.84	3 84	3.84
CB #29	1 09	0.60	10.00	2.51	2.51	2.51
CB #30	1.56	0.60	10.00	3.59	3.59	3.59
CB #31	3.91	0.60	10.00	8.99	8.99	8.99
CB #32	0.78	0.60	10.00	1.79	1 79	1 79
CB #33	0.63	0.60	10.00	1.45	1 45	1.45
CB #34	0.62	0.60	10.00	1 42	1.42	1.42
CB #35	3.46	0.60	10.00	7 95	7.95	7.95
CB #36	0.30	0.60	10 00	0.69	0.69	0.69
CB #37	0.59	0.60	10 00	1 36	1.36	1.36

CHECK MAX STREET SPREAD VS. MOST LIMITING SECTION (43' EOW) Qsmax = 7.15cfs @ 0.6%

CB 31 IS OVER BUT FLOW IS SPLIT IN CUL DE SAC 4.5cfs each side ∴ OK

ALL OTHER OK

Scenario: 100-YEAR

Pipe Report

Label	Upstream Node	Downstream Node	Upstream Inlet Area (acres)	Upstream Inlet Rational Coefficient	Upstream Inlet CA (acres)	Upstream Calculated System CA (acres)	System Intensity (in/hr)	Total System Flow (cfs)	Length (ft)	Constructed Slope (ft/ft)	Section Size	Mannings n	Full Capacity (cfs)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Upstream Ground Elevation (ft)	Downstream Ground Elevation (ft)	Upstream Cover (ft)	Downstream Cover (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)	Description
LAT CB1	CB #1	BT1	0.86	0.60	0.52	0.78	3.80	3.00	60.00	0.037167	10 inch	0.014	3.92	47.62	45.39	50.62	48.90	2.17	2.68	48.37	46.91	
LAT CB2	CB #2	SDMH #A1	0.78	0.60	0.47	0.58	3.80	2.21	62.00	0.033387	10 inch	0.014	3.72	47.62	45.55	50.62	48.90	2.17	2.52	48.28	47.08	
LAT CB3	CB #3	SDMH #A2	1.10	0.60	0.66	0.39	3.80	1.50	8.00	0.357500	10 inch	0.014	12.16	49.71	46.85	52.71	52.47	2.17	4.79	50.26	48.39	
LAT CB4	CB #4	SDMH #A2	0.60	0.60	0.36	0.25	3.80	0.96	26.00	0.110385	10 inch	0.014	6.76	49.72	46.85	52.72	52.47	2.17	4.79	50.16	48.39	
LAT CB6	CB #6	BT6/7	0.26	0.60	0.16	0.16	3.80	0.60	15.00	0.142667	10 inch	0.014	7.68	51.71	49.57	54.71	54.71	2.17	4.31	53.93	53.92	
LAT CB7	CB #7	BT6/7	1.86	0.60	1.12	1.12	3.80	4.27	42.00	0.050952	10 inch	0.014	4.59	51.71	49.57	54.71	54.71	2.17	4.31	55.77	53.92	
LAT CB8	CB #8	BT8	1.25	0.60	0.75	0.75	3.80	2.87	61.00	0.049672	10 inch	0.014	4.53	52.00	48.97	55.00	55.00	2.17	5.20	53.99	52.77	
LAT CB9	CB #9	BT9	2.13	0.60	1.28	1.28	3.80	4.90	60.00	0.053000	10 inch	0.014	4.68	52.00	48.82	55.00	55.47	2.17	5.82	55.87	52.40	
LAT CB1	CB #10	BT10	0.47	0.60	0.28	0.21	3.80	0.80	6.00	0.510000	10 inch	0.014	14.53	50.69	47.63	53.69	53.69	2.17	5.23	51.09	49.49	
LAT CB1	CB #11	BT11	0.76	0.60	0.46	0.53	3.80	2.02	49.00	0.031224	10 inch	0.014	3.59	47.95	46.42	50.95	50.97	2.17	3.72	48.82	48.33	
LAT CB1	CB #12	BT12	0.88	0.60	0.53	0.57	3.80	2.20	51.00	0.032941	10 inch	0.014	3.69	47.95	46.27	50.95	50.95	2.17	3.85	48.82	48.23	
LAT CB1	CB #13	BT13	0.36	0.60	0.22	0.17	3.80	0.65	29.00	0.099655	10 inch	0.014	6.42	50.32	47.43	53.32	53.69	2.17	5.43	50.68	49.29	
LAT CB1	CB #14	BT14	1.66	0.60	1.00	1.00	3.80	3.82	29.00	0.111034	10 inch	0.014	6.78	51.07	47.85	54.07	54.07	2.17	5.39	51.87	49.67	
LAT CB1	CB #15	O-C	2.39	0.60	1.43	1.43	3.80	5.49	38.00	0.056316	12 inch	0.014	7.85	50.14	48.00	53.14	52.00	2.00	3.00	51.08	48.64	
LAT CB1	CB #16	BT16	3.17	0.60	1.90	1.90	3.80	7.29	11.00	0.214545	12 inch	0.014	15.32	51.48	49.12	54.48	54.48	2.00	4.36	52.46	51.13	
LAT CB1	CB #17	BT17	0.60	0.60	0.36	0.64	3.80	2.45	5.00	0.584000	10 inch	0.014	15.55	54.79	51.87	57.79	57.30	2.17	4.60	55.49	54.40	
LAT CB1	CB #18	BT18	1.13	0.60	0.68	0.40	3.80	1.53	5.00	0.632000	10 inch	0.014	16.17	56.22	53.06	59.22	59.22	2.17	5.33	56.77	56.59	
LAT CB1	CB #19	SDMH #D3	1.55	0.60	0.93	0.93	3.80	3.56	30.00	0.084333	10 inch	0.014	5.91	56.11	53.58	59.11	59.10	2.17	4.69	57.78	56.86	
LAT CB2	CB #20	SDMH #D3	0.37	0.60	0.22	0.22	3.80	0.85	43.00	0.057442	10 inch	0.014	4.88	56.05	53.58	59.05	59.10	2.17	4.69	56.94	56.86	
LAT CB2	CB #21	SDMH #B2	2.64	0.60	1.58	1.94	3.80	7.45	41.00	0.039024	10 inch	0.014	4.02	51.65	50.05	54.65	54.48	2.17	3.60	59.97	54.48	
LAT CB2	CB #22	SDMH #B2	1.05	0.60	0.63	0.63	3.80	2.41	15.00	0.106667	10 inch	0.014	6.64	51.65	50.05	54.65	54.48	2.17	3.60	54.69	54.48	
LAT CB2	CB #23	SDMH #B3	1.86	0.60	1.12	1.33	3.80	5.09	27.00	0.101481	10 inch	0.014	6.48	53.59	50.85	56.59	56.59	2.17	4.91	57.05	55.36	
LAT CB2	CB #24	SDMH #B4	1.38	0.60	0.82	0.46	3.80	1.75	27.00	0.095926	10 inch	0.014	6.30	54.89	52.30	57.89	57.89	2.17	4.76	57.73	57.53	
LAT CB2	CB #25	BT25	0.94	0.60	0.56	0.35	3.80	1.34	6.00	0.428333	10 inch	0.014	13.31	54.77	52.20	57.77	57.77	2.17	4.74	57.50	57.48	
LAT CB2	CB #29	J-28	1.09	0.60	0.65	0.65	3.80	2.51	50.00	0.026200	10 inch	0.014	3 29	53.61	52.30	56.61	57.70	2.17	4 57	54.48	53.72	
LAT CB3	CB #30	SDMH #F1	1.56	0.60	0.94	0.94	3.80	3.59	6.00	0.170000	10 inch	0.014	8.39	55.43	54.41	59.43	59.36	3.17	4.12	56.22	55.40	
LAT CB3	CB #31	J-29	3.91	0.60	2.35	2.35	3.80	8.99	50.00	0.029800	10 inch	0.014	3.51	53.61	52.12	56.61	57.07	2.17	4.12	63.46	53.71	
LAT CB3	CB #32	SDMH #F1	0.78	0.60	0.47	0.47	3.80	1.79	27.00	0.037037	10 inch	0.014	3.92	55.41	54.41	59.41	59.36	3.17	4.12	56.01	55.40	
LAT CB3	CB #35	BTG2	3.46	0.60	2.08	2.08	3.80	7.95	38.00	0.007105	15 inch	0.014	5.06	53.33	53.06	57.33	58.17	2.75	3.86	54.99	54.33	
LATCB33	CB #33	BTG1	0.63	0.60	0.38	0.38	3.80	1.45	30.00	0.031667	10 inch	0.014	3.62	57.25	56.30	60.25	60.93	2.17	3.80	57.79	57.65	
LATCB34	CB #34	SDMH #G1	0.62	0.60	0.37	0.37	3.80	1.42	30.00	0.026000	10 inch	0.014	3.28	57.25	56.47	60.25	60.93	2.17	3.63	57.78	57.69	
LATCB36	CB #36	SDMH #G1	0.30	0.60	0.18	0.18	3.80	0.69	58.00	0.014643	10 inch	0.014	2.46	57.29	56.47	60.29	60.93	2.17	3.63	57.69	57.69	
LATCB37	CB #37	BTG1	0.59	0.60	0.35	0.35	3.80	1.36	54.00	0.018519	10 inch	0.014	2.77	57.30	56.30	60.30	60.93	2.17	3.80	57.82	57.65	
P-2	SDMH #A1	SDMH #A1	N/A	N/A	N/A	0.64	3.77	2.45	240.00	0.005417	12 inch	0.014	2.43	46.85	45.55	52.47	48.90	4.62	2.35	48.39	47.08	
P-5	SDMH #A	BT1	N/A	N/A	N/A	1.22	3.54	4.35	33.00	0.004848	15 inch	0.014	4.18	45.55	45.39	48.90	48.90	2.10	2.26	47.08	46.91	
P-6	BT1	O-A	N/A	N/A	N/A	2.00	3.51	7.09	39.00	0.004872	15 inch	0.014	4.19	45.39	45.20	48.90	50.00	2.26	3.55	46.91	46.27	
P-10	SDMH #B4	BT25	N/A	N/A	N/A	0.46	3.77	1.73	20.00	0.005000	12 inch	0.014	2.34	52.30	52.20	57.89	57.77	4.59	4.57	57.53	57.48	
P-11	BT25	SDMH #B3	N/A	N/A	N/A	0.81	3.75	3.04	250.00	0.005000	12 inch	0.014	2.34	52.20	50.95	57.77	56.59	4.57	4.64	57.48	55.36	
P-12	SDMH #B3	SDMH #B2	N/A	N/A	N/A	2.14	3.55	7.65	143.00	0.004895	18 inch	0.014	6.82	50.85	50.15	56.59	54.48	4.24	2.83	55.36	54.48	
P-13	SDMH #B2	BT6/7	N/A	N/A	N/A	4.71	3.46	16.40	94.00	0.005106	24 inch	0.014	15.01	50.05	49.57	54.48	54.71	2.43	3.14	54.49	53.92	
P-14	BT6/7	BT8	N/A	N/A	N/A	5.98	3.40	20.51	119.00	0.005042	24 inch	0.014	14.92	49.57	48.97	54.71	55.00	3.14	4.03	53.92	52.77	
P-15	BT8	BT9	N/A	N/A	N/A	6.73	3.35	22.71	32.00	0.004687	24 inch	0.014	14.38	48.97	48.82	55.00	55.47	4.03	4.65	52.77	52.40	
P-16	BT9	SDMH #B1	N/A	N/A	N/A	8.01	3.33	26.91	143.00	0.005035	24 inch	0.014	14.90	48.82	48.10	55.47	54.35	4.65	4.25	52.40	49.91	
P-17	SDMH #B1	BT14	N/A	N/A	N/A	8.01	3.28	26.52	32.00	0.004687	36 inch	0.014	42.40	48.00	47.85	54.35	54.07	3.35	3.22	49.76	49.67	
P-18	BT14	BT10	N/A	N/A	N/A	9.01	3.27	29.68	44.00	0.005000	36 inch	0.014	43.79	47.85	47.63	54.07	53.69	3.22	3.06	49.67	49.49	
P-19	BT10	BT13	N/A	N/A	N/A	9.22	3.25	30.18	41.00	0.004878	36 inch	0.014	43.25	47.63	47.43	53.69	53.69	3.06	3.26	49.49	49.29	
P-20	BT13	BT11	N/A	N/A	N/A	9.39	3.23	30.56	202.00	0.005000	36 inch	0.014	43.79	47.43	46.42	53.69	50.97	3.26	1.55	49.29	48.33	
P-21	BT11	BT12	N/A	N/A	N/A	9.91	3.14	31.37	30.00	0.005000	36 inch	0.014	43.79	46.42	46.27	50.97	50.95	1.55	1.68	48.33	48.23	
P-22	BT12	O-B	N/A	N/A	N/A	10.49	3.13	33.04	54.00	0.005000	36 inch	0.014	43.79	46.27	46.00	50.95	50.00	1.68	1.00	48.23	47.88	
P-38	SDMH #D3	BT18	N/A	N/A	N/A	1.15	3.72	4.32	53.00	0.005094	15 inch	0.014	4.28	53.33	53.06	59.10	59.22	4.52	4.91	56.86	56.59	
P-39	BT18	BT17	N/A	N/A	N/A	1.55	3.67	5.74	239.00	0.004979	15 inch	0.014	4.23	53.06	51.87	59.22	57.30	4.91	4.18	56.59	54.40	

Scenario: 100-YEAR

Pipe Report

Label	Upstream Node	Downstream Node	Upstream Inlet Area (acres)	Upstream Inlet Rational Coefficient	Upstream Inlet CA (acres)	Upstream Calculated System CA (acres)	System Intensity (in/hr)	Total System Flow (cfs)	Length (ft)	Constructed Slope (ft/ft)	Section Size	Mannings n	Full Capacity (cfs)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Upstream Ground Elevation (ft)	Downstream Ground Elevation (ft)	Upstream Cover (ft)	Downstream Cover (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)	Description
P-40	BT17	SDMH #D2	N/A	N/A	N/A	2.19	3.52	7.77	13.00	0.005385	15 inch	0.014	4.40	51.87	51.80	57.30	57.50	4.18	4.45	54.40	54.18	
P-41	SDMH #D2	SDMH #D1	N/A	N/A	N/A	2.19	3.51	7.75	273.00	0.006227	18 inch	0.014	7 70	51.70	50.00	57.50	55.50	4.30	4.00	54.18	52.45	
P-42	SDMH #D1	BT16	N/A	N/A	N/A	2.19	3.33	7.34	233.00	0.003348	18 inch	0.014	5.64	49.90	49.12	55.50	54.48	4.10	3.86	52.45	51.13	
P-43	BT16	O-D	N/A	N/A	N/A	4.09	3.16	13.03	39.00	0.003077	18 inch	0.014	5.41	49.12	49.00	54.48	53.00	3.86	2.50	51.13	50.35	
P-48	CB #28	SDMH #E1	1.67	0.60	1.00	1.00	3.80	3.84	27.00	0.015185	10 inch	0.014	2.51	54.41	54.00	57.41	57.41	2.17	2.58	55.91	54.95	
P-49	SDMH #E1	O-E	N/A	N/A	N/A	1.52	3.79	5.80	30.00	0.079000	12 inch	0.014	9.30	54.00	51.63	57.41	54.00	2.41	1.37	54.95	52.24	
P-50	CB #27	SDMH #E1	0.86	0.60	0.52	0.52	3.80	1.98	7.00	0.058571	10 inch	0.014	4.92	54.41	54.00	57.41	57.41	2.17	2.58	55.04	54.95	
P-52	SDMH #F1	SDMH #F2	N/A	N/A	N/A	1.40	3.78	5.35	53.00	0.005094	18 inch	0.014	6.96	54.41	54.14	59.36	59.04	3.45	3.40	55.40	55.03	
P-53	SDMH #F2	SDMH #F3	N/A	N/A	N/A	1.40	3.74	5.30	53.00	0.004906	18 inch	0.014	6.83	54.04	53.78	59.04	58.71	3.50	3.43	55.03	54.67	
P-54	SDMH #F3	SDMH #F4	N/A	N/A	N/A	1.40	3.71	5.25	91.00	0.005055	18 inch	0.014	6.93	53.68	53.22	58.71	58.16	3.53	3.44	54.66	54.10	
P-55	SDMH #F4	J-28	N/A	N/A	N/A	1.40	3.65	5.17	163.00	0.005031	24 inch	0.014	14.90	53.12	52.30	58.16	57.70	3.04	3.40	53.93	53.72	
P-56	J-28	J-29	N/A	N/A	N/A	2.06	3.50	7.26	33.00	0.005455	24 inch	0.014	15.51	52.30	52.12	57.70	57.07	3.40	2.95	53.72	53.71	
P-57	J-29	O-F	N/A	N/A	N/A	4.40	3.46	15.38	25.00	0.004800	24 inch	0.014	14.55	52.12	52.00	57.07	55.00	2.95	1.00	53.71	53.41	
P-61	SDMH #G1	BTG1	N/A	N/A	N/A	0.55	3.72	2.07	33.00	0.005152	15 inch	0.014	4.31	56.47	56.30	60.93	60.93	3.21	3.38	57.69	57.65	
P-62	BTG1	SDMH #G2	N/A	N/A	N/A	1.28	3.66	4.73	336.00	0.005000	15 inch	0.014	4.24	56.30	54.62	60.93	58.91	3.38	3.04	57.65	55.58	
P-63	SDMH #G2	SDMH #G3	N/A	N/A	N/A	1.28	3.42	4.43	72.00	0.004861	15 inch	0.014	4.18	54.52	54.17	58.91	58.48	3.14	3.06	55.58	55.15	
P-64	SDMH #G3	SDMH #G4	N/A	N/A	N/A	1.28	3.37	4.36	55.00	0.004000	15 inch	0.014	3.79	54.07	53.85	58.48	58.17	3.16	3.07	55.15	54.78	
P-65	SDMH #G4	SDMH #G5	N/A	N/A	N/A	1.28	3.33	4.31	74.00	0.004865	15 inch	0.014	4.18	53.75	53.39	58.17	58.03	3.17	3.39	54.78	54.34	
P-71	SDMH #G5	BTG2	N/A	N/A	N/A	1.28	3.28	4.24	45.00	0.005111	24 inch	0.014	15.02	53.29	53.06	58.03	58.17	2.74	3.11	54.34	54.33	
P-72	BTG2	O-G	N/A	N/A	N/A	3.36	3.22	10.89	47.00	0.005106	24 inch	0.014	15.01	53.06	52.82	58.17	58.00	3.11	3.18	54.33	54.00	

Scenario: 100-YEAR

basin 1
0.86 ac

basin 2
0.78 ac

basin 3
1.10 ac

basin 4
0.60 ac

basin 5
0.50 ac

basin 6
0.26 ac

basin 7
1.86 ac

basin 9
2.13 ac

basin 10
0.47 ac

basin 11
0.76 ac

basin 12
0.88 ac

basin 13
0.36 ac

basin 14
1.66 ac

basin 15
2.39 ac

basin 21
2.64 ac

basin 22
1.05 ac

basin 23
1.86 ac

basin 25
0.94 ac

basin 26
2.21 ac

basin 34
0.63 ac

Double Diamond Central Channel

O-A
Total System Flow:7.05 cfs

O-S
Total System Flow:32.79 cfs

O-C
Total System Flow:5.47 cfs

P-5
Section Size: 15 inch
Total System Flow: 4.35 cfs
Design Capacity: 4.18 cfs

P-8
Section Size: 15 inch
Total System Flow:7.06 cfs
Design Capacity: 4.19 cfs

P-2
Section Size: 12 inch
Total System Flow: 2.45 cfs
Design Capacity: 2.43 cfs

P-20
Section Size: 36 inch
Total System Flow: 30.54 cfs
Design Capacity: 43.79 cfs

P-22
Section Size: 36 inch
Total System Flow: 33.04 cfs
Design Capacity: 43.79 cfs

P-21
Section Size: 36 inch
Total System Flow: 31.37 cfs
Design Capacity: 43.79 cfs

P-18
Section Size:36 inch
Total System Flow: 28.68 cfs
Design Capacity: 43.79 cfs

P-19
Section Size: 36 inch
Total System Flow: 30.18 cfs
Design Capacity: 43.25 cfs

P-17
Section Size: 36 inch
Total System Flow: 26.52 cfs
Design Capacity: 42.40 cfs

P-16
Section Size: 24 inch
Total System Flow: 26.01 cfs
Design Capacity: 14.90 cfs

P-15
Section Size: 24 inch
Total System Flow: 22.71 cfs
Design Capacity: 14.38 cfs

P-14
Section Size: 24 inch
Total System Flow: 20.51 cfs
Design Capacity: 14.92 cfs

P-13
Section Size: 24 inch
Total System Flow: 16.40 cfs
Design Capacity: 16.01 cfs

P-12
Section Size: 18 inch
Total System Flow: 7.85 cfs
Design Capacity: 6.82 cfs

P-11
Section Size: 12 inch
Total System Flow: 3.04 cfs
Design Capacity: 2.34 cfs

P-10
Section Size: 12 inch
Total System Flow: 1.73 cfs
Design Capacity: 2.34 cfs

P-61
Section Size: 15 i
Total System Flo
Design Capacity:

CB #1
Local Rational Flow: 1.98 cfs
Total Flow To Inlet: 3.00 cfs
Total Intercepted Flow: 3.00 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB1
Section Size: 10 inch
Total System Flow: 3.00 cfs
Design Capacity: 3.92 cfs

CB #2
Local Rational Flow: 1.76 cfs
Total Flow To Inlet: 2.21 cfs
Total Intercepted Flow: 2.21 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB2
Section Size: 10 inch
Total System Flow: 2.21 cfs
Design Capacity: 3.72 cfs

CB #3
Local Rational Flow: 2.53 cfs
Total Flow To Inlet: 2.53 cfs
Total Intercepted Flow: 1.50 cfs
Total Bypassed Flow: 1.03 cfs
LAT CB3
Section Size: 10 inch
Total System Flow: 1.50 cfs
Design Capacity: 12.16 cfs

CB #4
Local Rational Flow: 1.38 cfs
Total Flow To Inlet: 1.38 cfs
Total Intercepted Flow: 0.96 cfs
Total Bypassed Flow: 0.41 cfs
LAT CB4
Section Size: 10 inch
Total System Flow: 0.96 cfs
Design Capacity: 6.76 cfs

CB #5
Local Rational Flow: 0.60 cfs
Total Flow To Inlet: 0.60 cfs
Total Intercepted Flow: 0.60 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB5
Section Size: 10 inch
Total System Flow: 0.60 cfs
Design Capacity: 7.68 cfs

CB #6
Local Rational Flow: 2.87 cfs
Total Flow To Inlet: 2.87 cfs
Total Intercepted Flow: 2.87 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB6
Section Size: 10 inch
Total System Flow: 2.87 cfs
Design Capacity: 4.53 cfs

CB #7
Local Rational Flow: 4.27 cfs
Total Flow To Inlet: 4.27 cfs
Total Intercepted Flow: 4.27 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB7
Section Size: 10 inch
Total System Flow: 4.27 cfs
Design Capacity: 4.59 cfs

CB #8
Local Rational Flow: 4.90 cfs
Total Flow To Inlet: 4.90 cfs
Total Intercepted Flow: 4.90 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB8
Section Size: 10 inch
Total System Flow: 4.90 cfs
Design Capacity: 4.68 cfs

CB #9
Local Rational Flow: 1.88 cfs
Total Flow To Inlet: 1.08 cfs
Total Intercepted Flow: 0.80 cfs
Total Bypassed Flow: 0.28 cfs
LAT CB10
Section Size: 10 inch
Total System Flow: 0.80 cfs
Design Capacity: 14.53 cfs

CB #10
Local Rational Flow: 1.75 cfs
Total Flow To Inlet: 2.02 cfs
Total Intercepted Flow: 2.02 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB11
Section Size: 10 inch
Total System Flow: 2.02 cfs
Design Capacity: 3.59 cfs

CB #11
Local Rational Flow: 1.75 cfs
Total Flow To Inlet: 2.02 cfs
Total Intercepted Flow: 2.02 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB11
Section Size: 10 inch
Total System Flow: 2.02 cfs
Design Capacity: 3.59 cfs

CB #12
Local Rational Flow: 2.02 cfs
Total Flow To Inlet: 2.26 cfs
Total Intercepted Flow: 2.26 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB12
Section Size: 10 inch
Total System Flow: 2.26 cfs
Design Capacity: 3.59 cfs

CB #13
Local Rational Flow: 0.83 cfs
Total Flow To Inlet: 0.83 cfs
Total Intercepted Flow: 0.65 cfs
Total Bypassed Flow: 0.17 cfs
LAT CB13
Section Size: 10 inch
Total System Flow: 0.65 cfs
Design Capacity: 8.42 cfs

CB #14
Local Rational Flow: 3.82 cfs
Total Flow To Inlet: 3.82 cfs
Total Intercepted Flow: 3.82 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB14
Section Size: 18 inch
Total System Flow: 3.82 cfs
Design Capacity: 6.78 cfs

CB #15
Local Rational Flow: 5.49 cfs
Total Flow To Inlet: 5.49 cfs
Total Intercepted Flow: 5.49 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB15
Section Size: 18 inch
Total System Flow: 5.49 cfs
Design Capacity: 7.85 cfs

CB #21
Local Rational Flow: 6.07 cfs
Total Flow To Inlet: 7.45 cfs
Total Intercepted Flow: 7.45 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB21
Section Size: 10 inch
Total System Flow: 7.45 cfs
Design Capacity: 4.02 cfs

CB #22
Local Rational Flow: 2.41 cfs
Total Flow To Inlet: 2.41 cfs
Total Intercepted Flow: 2.41 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB22
Section Size: 10 inch
Total System Flow: 2.41 cfs
Design Capacity: 6.64 cfs

CB #23
Local Rational Flow: 4.27 cfs
Total Flow To Inlet: 5.09 cfs
Total Intercepted Flow: 5.09 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB23
Section Size: 10 inch
Total System Flow: 5.09 cfs
Design Capacity: 6.48 cfs

CB #24
Local Rational Flow: 3.13 cfs
Total Flow To Inlet: 3.13 cfs
Total Intercepted Flow: 1.75 cfs
Total Bypassed Flow: 1.38 cfs
LAT CB24
Section Size: 10 inch
Total System Flow: 1.75 cfs
Design Capacity: 6.30 cfs

CB #25
Local Rational Flow: 2.16 cfs
Total Flow To Inlet: 2.16 cfs
Total Intercepted Flow: 1.34 cfs
Total Bypassed Flow: 0.82 cfs
LAT CB25
Section Size: 10 inch
Total System Flow: 1.34 cfs
Design Capacity: 13.31 cfs

CB #34
Local Rational Flow: 1.42 cfs
Total Flow To Inlet: 1.42 cfs

SDMH #81
SDMH #82
SDMH #83
SDMH #84

ST1
ST2
ST3
ST4
ST5
ST6
ST7
ST8
ST9
ST10
ST11
ST12
ST13
ST14
ST15
ST25

Title: double diamond phase 4
c:\...double diamond phase 4 villages 7 and 23.stm
11/13/02 11:13:12 AM

Mountain West Consulting
© Haestad Methods, Inc. 37 Brookside Road Waterbury, CT 06708 USA +1-203-755-1666

Project Engineer: Mountain West Consulting
StormCAD v4.1.1 [4.2014a]
Page 1 of 1

Scenario: 100-YEAR

Double Diamon

basin 15
2.39 ac

basin 9
2.13 ac

basin 8
1.25 ac

basin 21
2.64 ac

basin 34
0.63 ac

basin 25
0.94 ac

basin 24
1.36 ac

future
basin 16
3.17 ac

basin 17
0.60 ac

future
basin 18
1.13 ac

future
basin 39
0.72 ac

future
basin 40
0.94 ac

future
basin 56
1.36 ac

future
basin 57
1.27 ac

future
basin 58
1.30 ac

basin 59

future
basin 20
0.37 ac

future
basin 19
1.55 ac

future
basin 49
0.29 ac

future
basin 48
0.24 ac

future
basin 51
1.15 ac

future
basin 50
1.17 ac

future
basin 47
0.66 ac

future
basin 46

Future Villages

Future Villages

Future Villages

Future Villages

O-C
Total System Flow: 5.47 cfs

CB #15
Local Rational Flow: 5.49 cfs
Total Flow To Inlet: 5.49 cfs
Total Intercepted Flow: 5.49 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB15
Section Size: 12 inch
Total System Flow: 5.49 cfs
Design Capacity: 7.85 cfs

O-D
Total System Flow: 12.96 cfs

ST16

CB #16
Local Rational Flow: 7.28 cfs
Total Flow To Inlet: 7.29 cfs
Total Intercepted Flow: 7.29 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB16
Section Size: 12 inch
Total System Flow: 7.29 cfs
Design Capacity: 19.22 cfs

P-43
Section Size: 18 inch
Total System Flow: 13.03 cfs
Design Capacity: 5.41 cfs

P-42
Section Size: 18 inch
Total System Flow: 7.34 cfs
Design Capacity: 5.64 cfs

SDMH #01

P-41
Section Size: 18 inch
Total System Flow: 7.75 cfs
Design Capacity: 7.70 cfs

P-40
Section Size: 15 inch
Total System Flow: 7.77 cfs
Design Capacity: 4.40 cfs

SDMH #02

CB #17
Local Rational Flow: 1.38 cfs
Total Flow To Inlet: 2.45 cfs
Total Intercepted Flow: 2.45 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB17
Section Size: 10 inch
Total System Flow: 2.45 cfs
Design Capacity: 16.55 cfs

P-39
Section Size: 15 inch
Total System Flow: 5.74 cfs
Design Capacity: 4.23 cfs

ST17

CB #18
Local Rational Flow: 2.80 cfs
Total Flow To Inlet: 2.80 cfs
Total Intercepted Flow: 1.23 cfs
Total Bypassed Flow: 1.57 cfs
LAT CB18
Section Size: 10 inch
Total System Flow: 1.58 cfs
Design Capacity: 16.17 cfs

P-38
Section Size: 15 inch
Total System Flow: 4.32 cfs
Design Capacity: 4.28 cfs

SDMH #03

CB #19
Local Rational Flow: 3.56 cfs
Total Flow To Inlet: 3.56 cfs
Total Intercepted Flow: 3.56 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB19
Section Size: 10 inch
Total System Flow: 3.56 cfs
Design Capacity: 3.91 cfs

CB #20
Local Rational Flow: 0.85 cfs
Total Flow To Inlet: 0.85 cfs
Total Intercepted Flow: 0.85 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB20
Section Size: 10 inch
Total System Flow: 0.85 cfs
Design Capacity: 4.88 cfs

CB #25
Local Rational Flow: 2.16 cfs
Total Flow To Inlet: 2.16 cfs
Total Intercepted Flow: 1.34 cfs
Total Bypassed Flow: 0.82 cfs
LAT CB25
Section Size: 10 inch
Total System Flow: 1.34 cfs
Design Capacity: 13.31 cfs

ST26

SDMH #04

P-10
Section Size: 12 inch
Total System Flow: 1.73 cfs
Design Capacity: 2.34 cfs

CB #24
Local Rational Flow: 3.13 cfs
Total Flow To Inlet: 3.13 cfs
Total Intercepted Flow: 1.75 cfs
Total Bypassed Flow: 1.38 cfs
LAT CB24
Section Size: 10 inch
Total System Flow: 1.75 cfs
Design Capacity: 6.30 cfs

P-61
Section Size: 15 i
Total System Flo
Design Capacity:

CB #34
Local Rational Flow: 1.42 cfs
Total Flow To Inlet: 1.42 cfs
Total Intercepted Flow: 1.42 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB34
Section Size: 10 inch
Total System Flow: 1.42 cfs
Design Capacity: 3.28 cfs

CB #36
Local Rational Flow: 0.69 c
Total Flow To Inlet: 0.69 cf
Total Intercepted Flow: 0.61
Total Bypassed Flow: 0.00
LAT CB36
Section Size: 10 inch
Total System Flow: 0.69 cfs
Design Capacity: 2.45 cfs

fu
bas
0.5

Title: double diamond phase 4
c:\...double diamond phase 4 villages 7 and 23.stm
11/13/02 11:15:05 AM

Carat Drive

basin 5
0.50 ac

basin 26
2.21 ac

basin 22
1.05 ac

basin 27
0.86 ac

basin 28
1.67 ac

basin 6
0.26 ac

basin 23
1.86 ac

basin 30
1.56 ac

basin 29
1.09 ac

basin 7
1.86 ac

basin 21
2.64 ac

basin 32
0.78 ac

basin 31
3.91 ac

basin 33
0.62 ac

basin 34
0.63 ac

basin 25
0.94 ac

basin 8
1.25 ac

basin 35
3.46 ac

basin 24
1.36 ac

future
basin 37
0.30 ac

future
basin 36
0.59 ac

Future Villages

Future Villages

Future Villages

CB #6
Local Rational Flow: 0.60 cfs
Total Flow To Inlet: 0.60 cfs
Total Intercepted Flow: 0.60 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB6
Section Size: 10 inch
Total System Flow: 0.60 cfs
Design Capacity: 7.68 cfs

CB #22
Local Rational Flow: 2.41 cfs
Total Flow To Inlet: 2.41 cfs
Total Intercepted Flow: 2.41 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB22
Section Size: 10 inch
Total System Flow: 2.41 cfs
Design Capacity: 6.64 cfs

CB #23
Local Rational Flow: 4.27 cfs
Total Flow To Inlet: 5.09 cfs
Total Intercepted Flow: 5.09 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB23
Section Size: 10 inch
Total System Flow: 5.09 cfs
Design Capacity: 6.44 cfs

SDMH #B3

SDMH #B2

BTB/7

P-13
Section Size: 24 inch
Total System Flow: 16.40 cfs
Design Capacity: 15.01 cfs

P-12
Section Size: 18 inch
Total System Flow: 7.85 cfs
Design Capacity: 6.82 cfs

P-14
Section Size: 24 inch
Total System Flow: 20.51 cfs
Design Capacity: 14.92 cfs

BTB

CB #7
Local Rational Flow: 4.27 cfs
Total Flow To Inlet: 4.27 cfs
Total Intercepted Flow: 4.27 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB7
Section Size: 10 inch
Total System Flow: 4.27 cfs
Design Capacity: 4.59 cfs

CB #8
Local Rational Flow: 2.87 cfs
Total Flow To Inlet: 2.87 cfs
Total Intercepted Flow: 2.87 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB8
Section Size: 10 inch
Total System Flow: 2.87 cfs
Design Capacity: 4.53 cfs

CB #21
Local Rational Flow: 6.07 cfs
Total Flow To Inlet: 7.45 cfs
Total Intercepted Flow: 7.45 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB21
Section Size: 10 inch
Total System Flow: 7.45 cfs
Design Capacity: 4.02 cfs

P-11
Section Size: 12 inch
Total System Flow: 3.04 cfs
Design Capacity: 2.34 cfs

CB #30
Local Rational Flow: 3.59 cfs
Total Flow To Inlet: 3.59 cfs
Total Intercepted Flow: 3.59 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB30
Section Size: 10 inch
Total System Flow: 3.59 cfs
Design Capacity: 8.39 cfs

P-52
Section Size: 18 inch
Total System Flow: 5.35 cfs
Design Capacity: 8.96 cfs

SDMH #F1

SDMH #F2

SDMH #F3

SDMH #F4

P-53
Section Size: 18 inch
Total System Flow: 5.30 cfs
Design Capacity: 6.83 cfs

P-54
Section Size: 18 inch
Total System Flow: 5.25 cfs
Design Capacity: 6.83 cfs

P-55
Section Size: 24 inch
Total System Flow: 5.17 cfs
Design Capacity: 14.90 cfs

P-56
Section Size: 24 inch
Total System Flow: 7.26 cfs
Design Capacity: 15.51 cfs

P-57
Section Size: 24 inch
Total System Flow: 15.38 cfs
Design Capacity: 14.55 cfs

O-F
Total System Flow: 15.32 cfs

J-29

J-29

CB #32
Local Rational Flow: 1.79 cfs
Total Flow To Inlet: 1.79 cfs
Total Intercepted Flow: 1.79 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB32
Section Size: 10 inch
Total System Flow: 1.79 cfs
Design Capacity: 3.82 cfs

CB #25
Local Rational Flow: 2.16 cfs
Total Flow To Inlet: 2.16 cfs
Total Intercepted Flow: 1.34 cfs
Total Bypassed Flow: 0.82 cfs
LAT CB25
Section Size: 10 inch
Total System Flow: 1.34 cfs
Design Capacity: 13.31 cfs

BTB5

P-10
Section Size: 12 inch
Total System Flow: 1.73 cfs
Design Capacity: 2.34 cfs

SDMH #B4

CB #24
Local Rational Flow: 3.13 cfs
Total Flow To Inlet: 3.13 cfs
Total Intercepted Flow: 1.75 cfs
Total Bypassed Flow: 1.38 cfs
LAT CB24
Section Size: 10 inch
Total System Flow: 1.75 cfs
Design Capacity: 6.30 cfs

P-61
Section Size: 15 inch
Total System Flow: 2.07 cfs
Design Capacity: 4.31 cfs

CB #33
Local Rational Flow: 1.45 cfs
Total Flow To Inlet: 1.45 cfs
Total Intercepted Flow: 1.45 cfs
Total Bypassed Flow: 0.00 cfs
LATCB33
Section Size: 10 inch
Total System Flow: 1.45 cfs
Design Capacity: 3.62 cfs

CB #34
Local Rational Flow: 1.42 cfs
Total Flow To Inlet: 1.42 cfs
Total Intercepted Flow: 1.42 cfs
Total Bypassed Flow: 0.00 cfs
LATCB34
Section Size: 10 inch
Total System Flow: 1.42 cfs
Design Capacity: 3.28 cfs

BTG1

SDMH #G1

SDMH #G2

SDMH #G3

SDMH #G4

SDMH #G5

BTG2

P-62
Section Size: 15 inch
Total System Flow: 4.73 cfs
Design Capacity: 4.24 cfs

P-63
Section Size: 15 inch
Total System Flow: 4.43 cfs
Design Capacity: 4.18 cfs

P-64
Section Size: 15 inch
Total System Flow: 4.36 cfs
Design Capacity: 3.76 cfs

P-65
Section Size: 15 inch
Total System Flow: 4.31 cfs
Design Capacity: 4.18 cfs

P-71
Section Size: 24 inch
Total System Flow: 4.24 cfs
Design Capacity: 15.02 cfs

O-G
Total System Flow: 10.81 cfs

P-72
Section Size: 24 inch
Total System Flow: 10.89 cfs
Design Capacity: 15.01 cfs

CB #35
Local Rational Flow: 7.95 cfs
Total Flow To Inlet: 7.95 cfs
Total Intercepted Flow: 7.95 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB35
Section Size: 15 inch
Total System Flow: 7.85 cfs
Design Capacity: 5.06 cfs

CB #38
Local Rational Flow: 0.89 cfs
Total Flow To Inlet: 0.89 cfs
Total Intercepted Flow: 0.89 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB38
Section Size: 10 inch
Total System Flow: 0.89 cfs
Design Capacity: 2.46 cfs

CB #37
Local Rational Flow: 1.36 cfs
Total Flow To Inlet: 1.36 cfs
Total Intercepted Flow: 1.36 cfs
Total Bypassed Flow: 0.00 cfs
LATCB37
Section Size: 10 inch
Total System Flow: 1.36 cfs
Design Capacity: 2.77 cfs

CB #28
Local Rational Flow: 3.84 cfs
Total Flow To Inlet: 3.84 cfs
Total Intercepted Flow: 3.84 cfs
Total Bypassed Flow: 0.00 cfs

P-48
Section Size: 10 inch
Total System Flow: 3.84 cfs
Design Capacity: 2.51 cfs

SDMH #G1

P-50
Section Size: 10 inch
Total System Flow: 1.98 cfs
Design Capacity: 4.92 cfs

O-E
Total System Flow: 5.78 cfs

P-46
Section Size: 12 inch
Total System Flow: 5.80 cfs
Design Capacity: 9.50 cfs

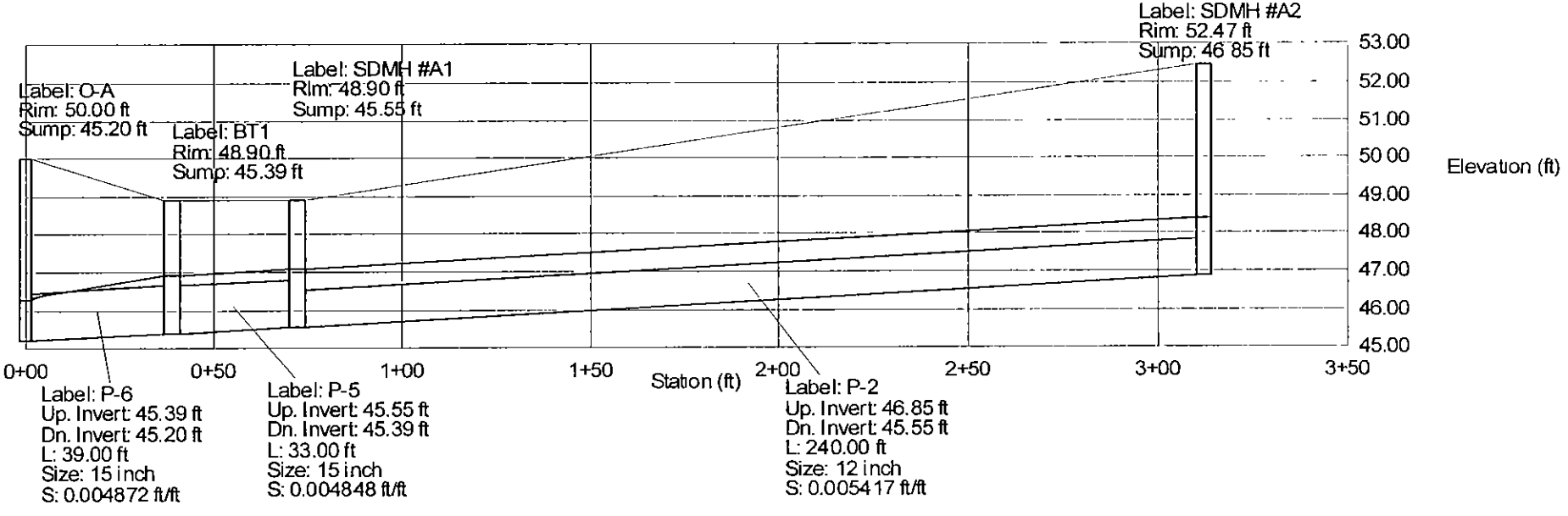
CB #27
Local Rational Flow: 1.98 cfs
Total Flow To Inlet: 1.98 cfs
Total Intercepted Flow: 1.98 cfs
Total Bypassed Flow: 0.00 cfs

CB #29
Local Rational Flow: 2.51 cfs
Total Flow To Inlet: 2.51 cfs
Total Intercepted Flow: 2.51 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB29
Section Size: 10 inch
Total System Flow: 2.51 cfs
Design Capacity: 3.29 cfs

CB #31
Local Rational Flow: 8.99 cfs
Total Flow To Inlet: 8.99 cfs
Total Intercepted Flow: 8.99 cfs
Total Bypassed Flow: 0.00 cfs
LAT CB31
Section Size: 10 inch
Total System Flow: 8.99 cfs
Design Capacity: 3.51 cfs

annel

Profile
Scenario: 100-YEAR



Mountain West Consulting
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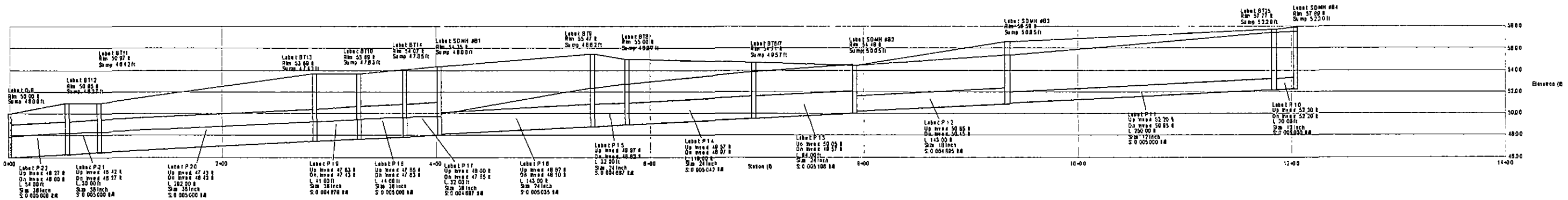
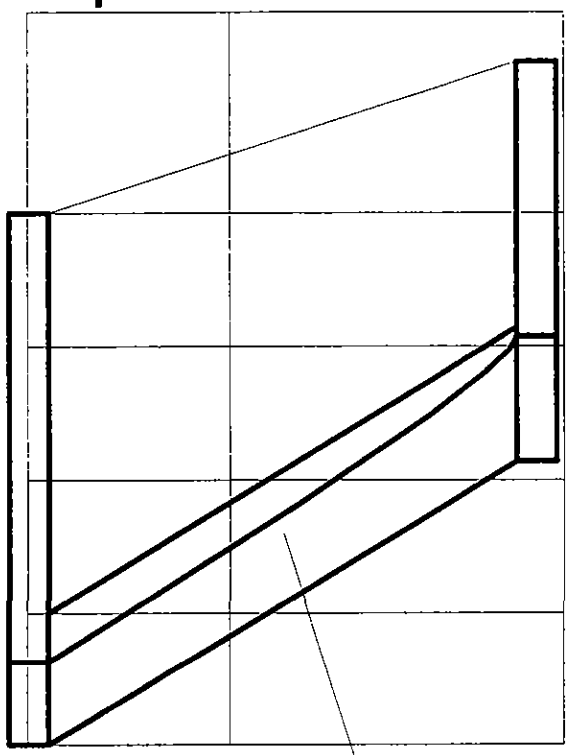
Profile
Scenario: 100-YEAR



Profile
Scenario: 100-YEAR

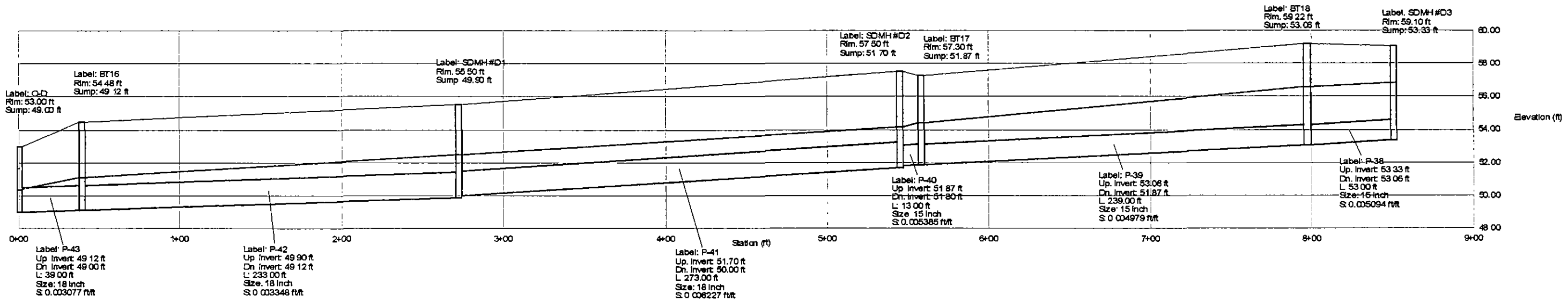
Label: O-C
Rim: 52.00 ft
Sump: 48.00 ft

Label: CB #15
Rim: 53.14 ft
Sump: 50.14 ft



Label: LAT CB15
Up. Invert: 50.14 ft
Dn. Invert: 48.00 ft
L: 38.00 ft
Size: 12 inch
S: 0.056316 ft/ft

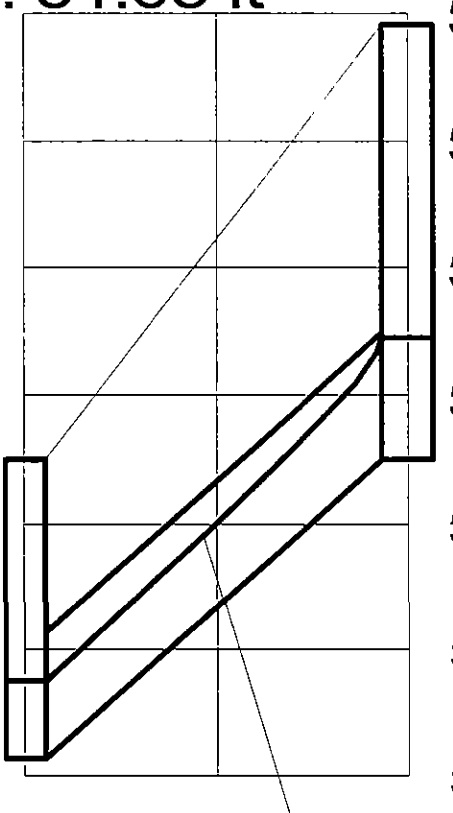
Profile
Scenario: 100-YEAR



Profile
Scenario: 100-YEAR

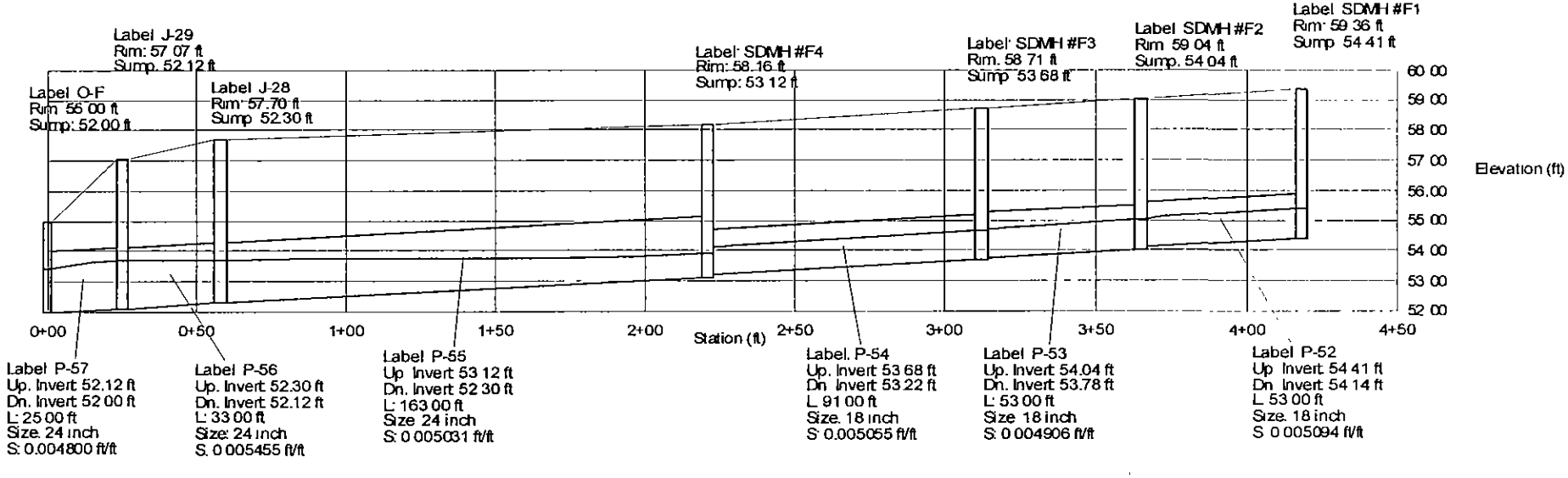
Label: SDMH #E1
Rim: 57.41 ft
Sump: 54.00 ft

Label: O-E
Rim: 54.00 ft
Sump: 51.63 ft

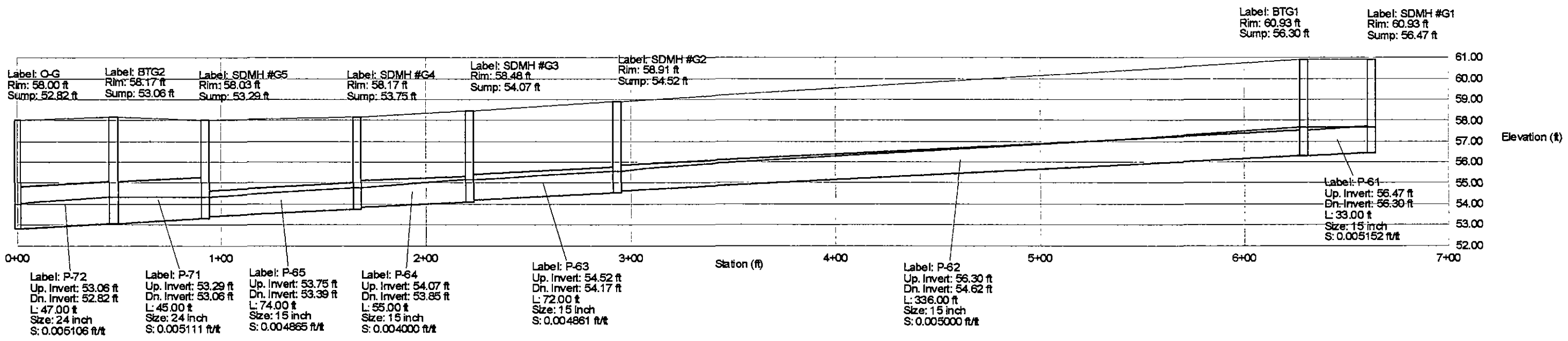


Label: P-49
Up. Invert: 54.00 ft
Dn. Invert: 51.63 ft
L: 30.00 ft
Size: 12 inch
S: 0.079000 ft/ft

Profile
Scenario: 100-YEAR



Profile
Scenario: 100-YEAR



Detailed Report for Inlet: CB #1

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,443.84 ft	Calculated Station	0+99 ft
Y	14,834,037.86 ft		

Elevations			
Ground Elevation	50.62 ft	Hydraulic Grade Line In	48.37 ft
Rim Elevation	50.62 ft	Hydraulic Grade Line Out	48.37 ft
Sump Elevation	47.62 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0 75 ft
Headloss Method	Absolute	Velocity Out	5.80 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.52 ft

System Flow Summary			
Total System Flow	3.00 cfs	System Rational Flow	3.00 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3 80 in/hr	System Known Flow	0.00 cfs
System CA	0.78 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.86 acres	Composite Rational C	0.60
Inlet CA	0.52 acres	Carryover CA	0.27 acres
Total Inlet CA	0.78 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	3.00 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3.00 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #1

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	3 00 cfs	Intercepted CA	0.78 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3 80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	3.00 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.86	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #2

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,475.41 ft	Calculated Station	1+34 ft
Y	14,834,026.35 ft		

Elevations			
Ground Elevation	50.62 ft	Hydraulic Grade Line In	48.28 ft
Rim Elevation	50.62 ft	Hydraulic Grade Line Out	48.28 ft
Sump Elevation	47.62 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.66 ft
Headloss Method	Absolute	Velocity Out	4.73 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.35 ft

System Flow Summary			
Total System Flow	2.21 cfs	System Rational Flow	2.21 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.58 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.78 acres	Composite Rational C	0.60
Inlet CA	0.47 acres	Carryover CA	0.11 acres
Total Inlet CA	0.58 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	2.21 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.21 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #2

External Pipe Flow					
External CA	*0.00*	*acres*	*External Time of Concentration*	*0.00*	*min*

Intercepted Flow Summary					
Intercepted Rational Flow	2.21	cfs	Intercepted CA	0.58	acres
Intercepted Additional Flow	0 00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	10 00	min
Total Intercepted Flow	2.21	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0 00	in/hr
Upstream Known Flow	*0.00*	*cfs*	*Upstream Time Of Concentration*	*0.00*	*min*
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.78	*0.60*

User Data
Date Installed

Detailed Report for Inlet: CB #3

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,722.02 ft	Calculated Station	3+20 ft
Y	14,834,029.89 ft		

Elevations			
Ground Elevation	52.71 ft	Hydraulic Grade Line In	50.26 ft
Rim Elevation	52.71 ft	Hydraulic Grade Line Out	50.26 ft
Sump Elevation	49.71 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.55 ft
Headloss Method	Absolute	Velocity Out	3.94 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.24 ft

System Flow Summary			
Total System Flow	1.50 cfs	System Rational Flow	1.50 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.39 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.10 acres	Composite Rational C	0.60
Inlet CA	0.66 acres	Carryover CA	0.00 acres
Total Inlet CA	0.66 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	2.53 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.53 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening Le	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #1

Detailed Report for Inlet: CB #3

Inlet Characteristics					
Longitudinal Slope	0.006000	ft/ft	Mannings n	0.015	

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1.50	cfs	Intercepted CA	0.39	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	1.50	cfs	Capture Efficiency	59.4	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0 00	acres
Upstream Additional Flow	0 00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0 00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.10	0 60

User Data
Date Installed

Detailed Report for Inlet: CB #4

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,716.41 ft	Calculated Station	3+38 ft
Y	14,833,996.56 ft		

Elevations			
Ground Elevation	52.72 ft	Hydraulic Grade Line In	50.16 ft
Rim Elevation	52.72 ft	Hydraulic Grade Line Out	50.16 ft
Sump Elevation	49.72 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0 44 ft
Headloss Method	Absolute	Velocity Out	3.34 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.17 ft

System Flow Summary			
Total System Flow	0.96 cfs	System Rational Flow	0.96 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.25 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.60 acres	Composite Rational C	0.60
Inlet CA	0.36 acres	Carryover CA	0.00 acres
Total Inlet CA	0.36 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	1.38 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.38 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening Li	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0 020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #2

Detailed Report for Inlet: CB #4

Inlet Characteristics			
Longitudinal Slope	0.006000 ft/ft	Mannings n	0.015

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.96 cfs	Intercepted CA	0.25 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3 80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0.96 cfs	Capture Efficiency	69.9 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0 00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0 00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.60	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #6

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,000.59 ft	Calculated Station	7+12 ft
Y	14,833,796.77 ft		

Elevations			
Ground Elevation	54.71 ft	Hydraulic Grade Line In	53.93 ft
Rim Elevation	54.71 ft	Hydraulic Grade Line Out	53.93 ft
Sump Elevation	51.71 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	2.22 ft
Headloss Method	Absolute	Velocity Out	1.10 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.02 ft

System Flow Summary			
Total System Flow	0.60 cfs	System Rational Flow	0.60 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.16 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.26 acres	Composite Rational C	0.60
Inlet CA	0.16 acres	Carryover CA	0.00 acres
Total Inlet CA	0.16 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	0.60 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.60 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening Le	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #6

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.60 cfs	Intercepted CA	0.16 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0.60 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0 00 in/hr
Upstream Known Flow	0 00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0 00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0 00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.26	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #7

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,008.04 ft	Calculated Station	7+39 ft
Y	14,833,740.15 ft		

Elevations			
Ground Elevation	54.71 ft	Hydraulic Grade Line In	54.71 ft
Rim Elevation	54.71 ft	Hydraulic Grade Line Out	54.71 ft
Sump Elevation	51.71 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	3.00 ft
Headloss Method	Absolute	Velocity Out	7.84 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0 95 ft

System Flow Summary			
Total System Flow	4.27 cfs	System Rational Flow	4.27 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	1 12 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0 00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.86 acres	Composite Rational C	0.60
Inlet CA	1.12 acres	Carryover CA	0.00 acres
Total Inlet CA	1.12 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	4.27 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	4.27 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #7

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	4.27	cfs	Intercepted CA	1 12	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	10 00	min
Total Intercepted Flow	4.27	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0 00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.86	0.60

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #8

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,892.94 ft	Calculated Station	6+39 ft
Y	14,833,706.25 ft		

Elevations			
Ground Elevation	55.00 ft	Hydraulic Grade Line In	53.99 ft
Rim Elevation	55 00 ft	Hydraulic Grade Line Out	53.99 ft
Sump Elevation	52.00 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	1.99 ft
Headloss Method	Absolute	Velocity Out	5.27 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.43 ft

System Flow Summary			
Total System Flow	2.87 cfs	System Rational Flow	2.87 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.75 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0 00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.25 acres	Composite Rational C	0.60
Inlet CA	0 75 acres	Carryover CA	0.00 acres
Total Inlet CA	0.75 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	2.87 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.87 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #8

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	2.87 cfs	Intercepted CA	0.75 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3 80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10 00 min
Total Intercepted Flow	2.87 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.25	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #9

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,860.53 ft	Calculated Station	6+06 ft
Y	14,833,702.16 ft		

Elevations			
Ground Elevation	55.00 ft	Hydraulic Grade Line In	55.00 ft
Rim Elevation	55.00 ft	Hydraulic Grade Line Out	55.00 ft
Sump Elevation	52.00 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	3.00 ft
Headloss Method	Absolute	Velocity Out	8.98 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	1.25 ft

System Flow Summary			
Total System Flow	4.90 cfs	System Rational Flow	4.90 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	1.28 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	2.13 acres	Composite Rational C	0.60
Inlet CA	1.28 acres	Carryover CA	0.00 acres
Total Inlet CA	1.28 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	4.90 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	4.90 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening Le	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #9

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	4.90 cfs	Intercepted CA	1.28 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0 00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	4.90 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
2.13	0.60

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #10

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,641.25 ft	Calculated Station	3+33 ft
Y	14,833,773.72 ft		

Elevations			
Ground Elevation	53.69 ft	Hydraulic Grade Line In	51.09 ft
Rim Elevation	53.69 ft	Hydraulic Grade Line Out	51 09 ft
Sump Elevation	50.69 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.40 ft
Headloss Method	Absolute	Velocity Out	3.14 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0 15 ft

System Flow Summary			
Total System Flow	0.80 cfs	System Rational Flow	0.80 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.21 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.47 acres	Composite Rational C	0.60
Inlet CA	0.28 acres	Carryover CA	0.00 acres
Total Inlet CA	0 28 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	1.08 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.08 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening Le	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #11

Detailed Report for Inlet: CB #10

Inlet Characteristics					
Longitudinal Slope	0.006000	ft/ft	Mannings n	0.015	

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.80	cfs	Intercepted CA	0.21	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.80	cfs	Capture Efficiency	74.3	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.47	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #11

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,425.45 ft	Calculated Station	1+33 ft
Y	14,833,891.01 ft		

Elevations			
Ground Elevation	50.95 ft	Hydraulic Grade Line In	48.82 ft
Rim Elevation	50.95 ft	Hydraulic Grade Line Out	48.82 ft
Sump Elevation	47 95 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.87 ft
Headloss Method	Absolute	Velocity Out	3.71 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.21 ft

System Flow Summary			
Total System Flow	2.02 cfs	System Rational Flow	2.02 cfs
System Flow Time	10.00 min	System Additional Flow	0 00 cfs
System Intensity	3.80 in/hr	System Known Flow	0 00 cfs
System CA	0.53 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.76 acres	Composite Rational C	0.60
Inlet CA	0.46 acres	Carryover CA	0.07 acres
Total Inlet CA	0 53 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	2.02 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2 02 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0 0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #11

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	2.02 cfs	Intercepted CA	0.53 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0 00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	2.02 cfs	Capture Efficiency	100 0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0 00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.76	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #12

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,396.77 ft	Calculated Station	1+05 ft
Y	14,833,902.56 ft		

Elevations			
Ground Elevation	50.95 ft	Hydraulic Grade Line In	48 82 ft
Rim Elevation	50.95 ft	Hydraulic Grade Line Out	48.82 ft
Sump Elevation	47.95 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0 87 ft
Headloss Method	Absolute	Velocity Out	4.03 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.25 ft

System Flow Summary			
Total System Flow	2.20 cfs	System Rational Flow	2.20 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.57 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0 00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.88 acres	Composite Rational C	0.60
Inlet CA	0.53 acres	Carryover CA	0.05 acres
Total Inlet CA	0 57 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	2.20 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.20 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #12

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	2.20 cfs	Intercepted CA	0.57 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3 80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	2.20 cfs	Capture Efficiency	100 0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0 00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.88	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #13

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,591 21 ft	Calculated Station	3+15 ft
Y	14,833,753.56 ft		

Elevations			
Ground Elevation	53.32 ft	Hydraulic Grade Line In	50.68 ft
Rim Elevation	53.32 ft	Hydraulic Grade Line Out	50.68 ft
Sump Elevation	50.32 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.36 ft
Headloss Method	Absolute	Velocity Out	2.94 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.13 ft

System Flow Summary			
Total System Flow	0.65 cfs	System Rational Flow	0.65 cfs
System Flow Time	10.00 min	System Additional Flow	0 00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.17 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0 00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.36 acres	Composite Rational C	0.60
Inlet CA	0.22 acres	Carryover CA	0.00 acres
Total Inlet CA	0.22 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	0.83 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0 83 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #12

Detailed Report for Inlet: CB #13

Inlet Characteristics					
Longitudinal Slope	0.006000	ft/ft	Mannings n	0.015	

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.65	cfs	Intercepted CA	0 17	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.65	cfs	Capture Efficiency	79.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.36	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #14

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,671 67 ft	Calculated Station	4+00 ft
Y	14,833,726.37 ft		

Elevations			
Ground Elevation	54.07 ft	Hydraulic Grade Line In	51.87 ft
Rim Elevation	54.07 ft	Hydraulic Grade Line Out	51.87 ft
Sump Elevation	51.07 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.80 ft
Headloss Method	Absolute	Velocity Out	7 10 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.78 ft

System Flow Summary			
Total System Flow	3.82 cfs	System Rational Flow	3.82 cfs
System Flow Time	10 00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	1.00 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	1.66 acres	Composite Rational C	0.60
Inlet CA	1.00 acres	Carryover CA	0.00 acres
Total Inlet CA	1.00 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	3.82 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3.82 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3 00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #14

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	3.82 cfs	Intercepted CA	1.00 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3 80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10 00 min
Total Intercepted Flow	3.82 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0 00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.66	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #15

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,227.36 ft	Calculated Station	0+38 ft
Y	14,833,471.83 ft		

Elevations			
Ground Elevation	53.14 ft	Hydraulic Grade Line In	51.08 ft
Rim Elevation	53.14 ft	Hydraulic Grade Line Out	51.08 ft
Sump Elevation	50.14 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.94 ft
Headloss Method	Absolute	Velocity Out	7.17 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.80 ft

System Flow Summary			
Total System Flow	5 49 cfs	System Rational Flow	5.49 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	1.43 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	2.39 acres	Composite Rational C	0.60
Inlet CA	1 43 acres	Carryover CA	0.00 acres
Total Inlet CA	1.43 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	5.49 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0 00 cfs
Total Flow To Inlet	5.49 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0 0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #15

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	5.49 cfs	Intercepted CA	1.43 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	5.49 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
2.39	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #16

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,195.39 ft	Calculated Station	0+50 ft
Y	14,833,159.33 ft		

Elevations			
Ground Elevation	54.48 ft	Hydraulic Grade Line In	52.46 ft
Rim Elevation	54.48 ft	Hydraulic Grade Line Out	52.46 ft
Sump Elevation	51.48 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.98 ft
Headloss Method	Absolute	Velocity Out	9.33 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	1.35 ft

System Flow Summary			
Total System Flow	7.29 cfs	System Rational Flow	7.29 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	1.90 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0 00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	3.17 acres	Composite Rational C	0.60
Inlet CA	1.90 acres	Carryover CA	0.00 acres
Total Inlet CA	1 90 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	7 29 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	7.29 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening Li	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #16

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	7.29 cfs	Intercepted CA	1.90 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10 00 min
Total Intercepted Flow	7.29 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
3.17	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #17

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,700.87 ft	Calculated Station	5+63 ft
Y	14,833,237 55 ft		

Elevations			
Ground Elevation	57.79 ft	Hydraulic Grade Line In	55.49 ft
Rim Elevation	57.79 ft	Hydraulic Grade Line Out	55.49 ft
Sump Elevation	54 79 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.70 ft
Headloss Method	Absolute	Velocity Out	5.03 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.39 ft

System Flow Summary			
Total System Flow	2.45 cfs	System Rational Flow	2.45 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0 00 cfs
System CA	0.64 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.60 acres	Composite Rational C	0.60
Inlet CA	0 36 acres	Carryover CA	0.28 acres
Total Inlet CA	0.64 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	2.45 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.45 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #17

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	2.45 cfs	Intercepted CA	0.64 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	2.45 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.60	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #18

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,738.12 ft	Calculated Station	8+02 ft
Y	14,833,001.02 ft		

Elevations			
Ground Elevation	59.22 ft	Hydraulic Grade Line In	56 77 ft
Rim Elevation	59 22 ft	Hydraulic Grade Line Out	56.77 ft
Sump Elevation	56.22 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.55 ft
Headloss Method	Absolute	Velocity Out	3.97 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.25 ft

System Flow Summary			
Total System Flow	1.53 cfs	System Rational Flow	1.53 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.40 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1 13 acres	Composite Rational C	0.60
Inlet CA	0 68 acres	Carryover CA	0.00 acres
Total Inlet CA	0 68 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	2.60 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.60 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #17

Detailed Report for Inlet: CB #18

Inlet Characteristics					
Longitudinal Slope	0.006000	ft/ft	Mannings n	0.015	

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1 53	cfs	Intercepted CA	0 40	acres
Intercepted Additional Flow	0 00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	1.53	cfs	Capture Efficiency	58.9	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0 00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1 13	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #19

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,751.08 ft	Calculated Station	8+80 ft
Y	14,832,918 61 ft		

Elevations			
Ground Elevation	59.11 ft	Hydraulic Grade Line In	57.78 ft
Rim Elevation	59.11 ft	Hydraulic Grade Line Out	57.78 ft
Sump Elevation	56.11 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	1 67 ft
Headloss Method	Absolute	Velocity Out	6.53 ft/s
Absolute Headloss	0 00 ft	Velocity Head Out	0.66 ft

System Flow Summary			
Total System Flow	3.56 cfs	System Rational Flow	3.56 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.93 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.55 acres	Composite Rational C	0.60
Inlet CA	0.93 acres	Carryover CA	0 00 acres
Total Inlet CA	0.93 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	3.56 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3.56 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0 0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #19

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	3.56 cfs	Intercepted CA	0.93 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	3.56 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0 00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.55	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #20

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,298,716.15 ft	Calculated Station	8+93 ft
Y	14,832,913.48 ft		

Elevations			
Ground Elevation	59.05 ft	Hydraulic Grade Line In	56.94 ft
Rim Elevation	59.05 ft	Hydraulic Grade Line Out	56.94 ft
Sump Elevation	56.05 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.89 ft
Headloss Method	Absolute	Velocity Out	1.56 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.04 ft

System Flow Summary			
Total System Flow	0.85 cfs	System Rational Flow	0 85 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.22 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.37 acres	Composite Rational C	0.60
Inlet CA	0.22 acres	Carryover CA	0.00 acres
Total Inlet CA	0 22 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	0.85 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.85 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0 083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #20

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.85 cfs	Intercepted CA	0.22 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	0.85 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.37	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #21

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,100.79 ft	Calculated Station	8+32 ft
Y	14,833,753.19 ft		

Elevations			
Ground Elevation	54.65 ft	Hydraulic Grade Line In	54.65 ft
Rim Elevation	54.65 ft	Hydraulic Grade Line Out	54.65 ft
Sump Elevation	51.65 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	3.00 ft
Headloss Method	Absolute	Velocity Out	13.65 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	2.90 ft

System Flow Summary			
Total System Flow	7 45 cfs	System Rational Flow	7.45 cfs
System Flow Time	10.00 min	System Additional Flow	0 00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	1.94 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	2.64 acres	Composite Rational C	0.60
Inlet CA	1.58 acres	Carryover CA	0.36 acres
Total Inlet CA	1.94 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	7.45 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	7.45 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3 00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #21

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	7 45 cfs	Intercepted CA	1.94 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	7.45 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0 00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
2.64	0.60

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #22

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,092.97 ft	Calculated Station	8+06 ft
Y	14,833,808.69 ft		

Elevations			
Ground Elevation	54 65 ft	Hydraulic Grade Line In	54.65 ft
Rim Elevation	54.65 ft	Hydraulic Grade Line Out	54.65 ft
Sump Elevation	51.65 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	3.00 ft
Headloss Method	Absolute	Velocity Out	4.42 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.30 ft

System Flow Summary			
Total System Flow	2.41 cfs	System Rational Flow	2.41 cfs
System Flow Time	10.00 min	System Additional Flow	0 00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.63 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.05 acres	Composite Rational C	0.60
Inlet CA	0.63 acres	Carryover CA	0.00 acres
Total Inlet CA	0.63 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	2.41 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.41 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #22

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	2.41 cfs	Intercepted CA	0.63 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3 80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	2.41 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.05	0.60

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #23

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	*Base-Physical Properties*
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,240.11 ft	Calculated Station	9+61 ft
Y	14,833,838 86 ft		

Elevations			
Ground Elevation	56.59 ft	Hydraulic Grade Line In	56.59 ft
Rim Elevation	56.59 ft	Hydraulic Grade Line Out	56.59 ft
Sump Elevation	53.59 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	3 00 ft
Headloss Method	Absolute	Velocity Out	9 34 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	1.36 ft

System Flow Summary			
Total System Flow	5.09 cfs	System Rational Flow	5.09 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	1.33 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.86 acres	Composite Rational C	0.60
Inlet CA	1.12 acres	Carryover CA	0.21 acres
Total Inlet CA	1.33 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	5.09 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	5.09 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening Li	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	*Gutter Section*	*Road Cross Slope*	*0.020 ft/ft*
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #23

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0 00 min

Intercepted Flow Summary			
Intercepted Rational Flow	5.09 cfs	Intercepted CA	1.33 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	5 09 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.86	0.60

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #24

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,251.66 ft	Calculated Station	12+31 ft
Y	14,833,541.24 ft		

Elevations			
Ground Elevation	57.89 ft	Hydraulic Grade Line In	57.73 ft
Rim Elevation	57.89 ft	Hydraulic Grade Line Out	57.73 ft
Sump Elevation	54.89 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	2.84 ft
Headloss Method	Absolute	Velocity Out	3.20 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.16 ft

System Flow Summary			
Total System Flow	1.75 cfs	System Rational Flow	1.75 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.46 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.36 acres	Composite Rational C	0.60
Inlet CA	0.82 acres	Carryover CA	0.00 acres
Total Inlet CA	0.82 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	3.13 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3.13 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft	Bypass Target	CB #21

Detailed Report for Inlet: CB #24

Inlet Characteristics					
Longitudinal Slope	0.006000	ft/ft	Mannings n	0.015	

External Pipe Flow					
External CA	0 00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1 75	cfs	Intercepted CA	0.46	acres
Intercepted Additional Flow	0 00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	1.75	cfs	Capture Efficiency	55.9	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0 00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0 00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.36	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #25

Inlet Characteristics					
Longitudinal Slope	0.006000	ft/ft	Mannings n	0.015	

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1.34	cfs	Intercepted CA	0.35	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	1.34	cfs	Capture Efficiency	62.1	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.94	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #27

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,300,171.68 ft	Calculated Station	0+37 ft
Y	14,833,891.08 ft		

Elevations			
Ground Elevation	57.41 ft	Hydraulic Grade Line In	55.04 ft
Rim Elevation	57.41 ft	Hydraulic Grade Line Out	55.04 ft
Sump Elevation	54.41 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.63 ft
Headloss Method	Absolute	Velocity Out	4.46 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.31 ft

System Flow Summary			
Total System Flow	1.98 cfs	System Rational Flow	1.98 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.52 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.86 acres	Composite Rational C	0.60
Inlet CA	0.52 acres	Carryover CA	0.00 acres
Total Inlet CA	0.52 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	1.98 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.98 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #27

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1.98 cfs	Intercepted CA	0.52 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	1 98 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.86	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #28

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,300,139.00 ft	Calculated Station	0+57 ft
Y	14,833,891.08 ft		

Elevations			
Ground Elevation	57.41 ft	Hydraulic Grade Line In	55.91 ft
Rim Elevation	57.41 ft	Hydraulic Grade Line Out	55 91 ft
Sump Elevation	54.41 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	1.50 ft
Headloss Method	Absolute	Velocity Out	7.04 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.77 ft

System Flow Summary			
Total System Flow	3.84 cfs	System Rational Flow	3.84 cfs
System Flow Time	10 00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	1.00 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.67 acres	Composite Rational C	0.60
Inlet CA	1.00 acres	Carryover CA	0.00 acres
Total Inlet CA	1.00 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	3.84 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3.84 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #28

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	3.84 cfs	Intercepted CA	1.00 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10 00 min
Total Intercepted Flow	3.84 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0 00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.67	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #29

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,300,136.20 ft	Calculated Station	1+08 ft
Y	14,833,754 40 ft		

Elevations			
Ground Elevation	56.61 ft	Hydraulic Grade Line In	54.48 ft
Rim Elevation	56.61 ft	Hydraulic Grade Line Out	54.48 ft
Sump Elevation	53.61 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.87 ft
Headloss Method	Absolute	Velocity Out	4.59 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.33 ft

System Flow Summary			
Total System Flow	2.51 cfs	System Rational Flow	2.51 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.65 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.09 acres	Composite Rational C	0.60
Inlet CA	0.65 acres	Carryover CA	0.00 acres
Total Inlet CA	0.65 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	2.51 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.51 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0 0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #29

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	2.51 cfs	Intercepted CA	0.65 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	2.51 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.09	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #30

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,787.37 ft	Calculated Station	4+24 ft
Y	14,833,695 66 ft		

Elevations			
Ground Elevation	59.43 ft	Hydraulic Grade Line In	56.22 ft
Rim Elevation	59.43 ft	Hydraulic Grade Line Out	56.22 ft
Sump Elevation	55.43 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.79 ft
Headloss Method	Absolute	Velocity Out	6.72 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0 70 ft

System Flow Summary			
Total System Flow	3.59 cfs	System Rational Flow	3.59 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.94 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1 56 acres	Composite Rational C	0.60
Inlet CA	0.94 acres	Carryover CA	0.00 acres
Total Inlet CA	0.94 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	3.59 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3.59 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #30

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	3.59	cfs	Intercepted CA	0.94	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3 80	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	3.59	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0 00	ft

Subwatershed Information

Area (acres)	Inlet C
1.56	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #31

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,300,168.88 ft	Calculated Station	0+75 ft
Y	14,833,754.40 ft		

Elevations			
Ground Elevation	56.61 ft	Hydraulic Grade Line In	56.61 ft
Rim Elevation	56.61 ft	Hydraulic Grade Line Out	56.61 ft
Sump Elevation	53.61 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	3.00 ft
Headloss Method	Absolute	Velocity Out	16.48 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	4.22 ft

System Flow Summary			
Total System Flow	8.99 cfs	System Rational Flow	8.99 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	2.35 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	3.91 acres	Composite Rational C	0.60
Inlet CA	2.35 acres	Carryover CA	0.00 acres
Total Inlet CA	2 35 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	8.99 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	8 99 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #31

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	8.99 cfs	Intercepted CA	2.35 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0 00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	8.99 cfs	Capture Efficiency	100 0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0 00 ft

Subwatershed Information

Area (acres)	Inlet C
3.91	0.60

User Data
Date Installed

Message List

Message List
Warning: Flooding is occurring. Calculations continue with hydraulic grade reset.

Detailed Report for Inlet: CB #32

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,781.08 ft	Calculated Station	4+45 ft
Y	14,833,663.87 ft		

Elevations			
Ground Elevation	59.41 ft	Hydraulic Grade Line In	56.01 ft
Rim Elevation	59.41 ft	Hydraulic Grade Line Out	56.01 ft
Sump Elevation	55.41 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.60 ft
Headloss Method	Absolute	Velocity Out	4.26 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.28 ft

System Flow Summary			
Total System Flow	1.79 cfs	System Rational Flow	1.79 cfs
System Flow Time	10.00 min	System Additional Flow	0 00 cfs
System Intensity	3.80 in/hr	System Known Flow	0 00 cfs
System CA	0.47 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.78 acres	Composite Rational C	0.60
Inlet CA	0.47 acres	Carryover CA	0.00 acres
Total Inlet CA	0.47 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	1.79 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.79 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #32

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1.79	cfs	Intercepted CA	0.47	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	1.79	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0 00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.78	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #33

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,570.67 ft	Calculated Station	6+59 ft
Y	14,833,394.12 ft		

Elevations			
Ground Elevation	60.25 ft	Hydraulic Grade Line In	57 79 ft
Rim Elevation	60.25 ft	Hydraulic Grade Line Out	57.79 ft
Sump Elevation	57.25 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.54 ft
Headloss Method	Absolute	Velocity Out	3.88 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.23 ft

System Flow Summary			
Total System Flow	1.45 cfs	System Rational Flow	1.45 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.38 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.63 acres	Composite Rational C	0.60
Inlet CA	0.38 acres	Carryover CA	0.00 acres
Total Inlet CA	0.38 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	1.45 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.45 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #33

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1.45 cfs	Intercepted CA	0.38 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	1 45 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0 00 min
Total Upstream Flow	0 00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0 00 ft

Subwatershed Information

Area (acres)	Inlet C
0.63	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #34

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,537.00 ft	Calculated Station	6+92 ft
Y	14,833,389.01 ft		

Elevations			
Ground Elevation	60.25 ft	Hydraulic Grade Line In	57.78 ft
Rim Elevation	60.25 ft	Hydraulic Grade Line Out	57.78 ft
Sump Elevation	57.25 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.53 ft
Headloss Method	Absolute	Velocity Out	3 86 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.23 ft

System Flow Summary			
Total System Flow	1.42 cfs	System Rational Flow	1.42 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.37 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.62 acres	Composite Rational C	0.60
Inlet CA	0.37 acres	Carryover CA	0 00 acres
Total Inlet CA	0.37 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	1.42 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.42 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #34

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1.42 cfs	Intercepted CA	0.37 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3 80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	1.42 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0 00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.62	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #35

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,300,161.44 ft	Calculated Station	0+85 ft
Y	14,833,380.48 ft		

Elevations			
Ground Elevation	57.33 ft	Hydraulic Grade Line In	54.99 ft
Rim Elevation	57.33 ft	Hydraulic Grade Line Out	54.99 ft
Sump Elevation	53.33 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	1.66 ft
Headloss Method	Absolute	Velocity Out	6.48 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.65 ft

System Flow Summary			
Total System Flow	7 95 cfs	System Rational Flow	7.95 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3 80 in/hr	System Known Flow	0.00 cfs
System CA	2.08 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	3.46 acres	Composite Rational C	0.60
Inlet CA	2.08 acres	Carryover CA	0 00 acres
Total Inlet CA	2.08 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	7.95 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	7.95 cfs		

Inlet Characteristics			
Inlet Type	*Combination Inlet*	*Inlet Location*	*In Sag*
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #35

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	7.95	cfs	Intercepted CA	2.08	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10 00	min
Total Intercepted Flow	7.95	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0 00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0 00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0 00	ft

Subwatershed Information

Area (acres)	Inlet C
3.46	*0.60*

User Data
Date Installed

Detailed Report for Inlet: CB #36

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,549.79 ft	Calculated Station	7+18 ft
Y	14,833,304.19 ft		

Elevations			
Ground Elevation	60.29 ft	Hydraulic Grade Line In	57.69 ft
Rim Elevation	60.29 ft	Hydraulic Grade Line Out	57.69 ft
Sump Elevation	57.29 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.40 ft
Headloss Method	Absolute	Velocity Out	2.70 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.11 ft

System Flow Summary			
Total System Flow	0.69 cfs	System Rational Flow	0.69 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.18 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.30 acres	Composite Rational C	0.60
Inlet CA	0.18 acres	Carryover CA	0.00 acres
Total Inlet CA	0.18 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	0.69 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.69 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #36

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.69	cfs	Intercepted CA	0.18	acres
Intercepted Additional Flow	*0.00*	*cfs*	*Intercepted Intensity*	*3.80*	*in/hr*
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.69	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0 00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.30	*0.60*

User Data
Date Installed

Detailed Report for Inlet: CB #37

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	2,299,584.31 ft	Calculated Station	6+83 ft
Y	14,833,311.86 ft		

Elevations			
Ground Elevation	60.30 ft	Hydraulic Grade Line In	57.82 ft
Rim Elevation	60.30 ft	Hydraulic Grade Line Out	57 82 ft
Sump Elevation	57.30 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.52 ft
Headloss Method	Absolute	Velocity Out	3.78 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.22 ft

System Flow Summary			
Total System Flow	1.36 cfs	System Rational Flow	1.36 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.35 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0 00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.59 acres	Composite Rational C	0.60
Inlet CA	0.35 acres	Carryover CA	0.00 acres
Total Inlet CA	0.35 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	1.36 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.36 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #37

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1.36 cfs	Intercepted CA	0.35 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.80 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	10.00 min
Total Intercepted Flow	1.36 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.59	*0.60*

User Data
Date Installed

43' ROW STREET CAPACITY RATING TABLE MINOR EVENT
Rating Table for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\dd29.fm2
Worksheet	STREET SPREAD
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Constant Data	
Water Surface Elevation	0.34 ft

Input Data			
	Minimum	Maximum	Increment
Channel Slope	0.005000	0.030000	0.001000 ft/ft

Rating Table

Channel Slope (ft/ft)	Wtd. Mannings Coefficient	Discharge (cfs)	Velocity (ft/s)
0.005000	0.015	2.72	1.75
0.006000	0.015	2.98	1.92
0.007000	0.015	3.22	2.07
0.008000	0.015	3.44	2.22
0.009000	0.015	3.65	2.35
0.010000	0.015	3.85	2.48
0.011000	0.015	4.04	2.60
0.012000	0.015	4.21	2.71
0.013000	0.015	4.39	2.82
0.014000	0.015	4.55	2.93
0.015000	0.015	4.71	3.03
0.016000	0.015	4.87	3.13
0.017000	0.015	5.02	3.23
0.018000	0.015	5.16	3.32
0.019000	0.015	5.30	3.41
0.020000	0.015	5.44	3.50
0.021000	0.015	5.58	3.59
0.022000	0.015	5.71	3.67
0.023000	0.015	5.84	3.76
0.024000	0.015	5.96	3.84
0.025000	0.015	6.08	3.92
0.026000	0.015	6.20	3.99
0.027000	0.015	6.32	4.07
0.028000	0.015	6.44	4.14
0.029000	0.015	6.55	4.22
0.030000	0.015	6.66	4.29

43' ROW STREET CAPACITY RATING TABLE MAJOR EVENT
Rating Table for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\dd29.fm2
Worksheet	STREET SPREAD
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Constant Data	
Water Surface Elevation	0.44 ft

Input Data			
	Minimum	Maximum	Increment
Channel Slope	0.005000	0.030000	0.001000 ft/ft

Rating Table

Channel Slope (ft/ft)	Wtd. Mannings Coefficient	Discharge (cfs)	Velocity (ft/s)
0.005000	0.015	6.52	2.17
0.006000	0.015	7.15	2.38
0.007000	0.015	7.72	2.57
0.008000	0.015	8.25	2.74
0.009000	0.015	8.75	2.91
0.010000	0.015	9.23	3.07
0.011000	0.015	9.68	3.22
0.012000	0.015	10.11	3.36
0.013000	0.015	10.52	3.50
0.014000	0.015	10.92	3.63
0.015000	0.015	11.30	3.76
0.016000	0.015	11.67	3.88
0.017000	0.015	12.03	4.00
0.018000	0.015	12.38	4.12
0.019000	0.015	12.72	4.23
0.020000	0.015	13.05	4.34
0.021000	0.015	13.37	4.45
0.022000	0.015	13.69	4.55
0.023000	0.015	13.99	4.65
0.024000	0.015	14.29	4.75
0.025000	0.015	14.59	4.85
0.026000	0.015	14.88	4.95
0.027000	0.015	15.16	5.04
0.028000	0.015	15.44	5.13
0.029000	0.015	15.71	5.22
0.030000	0.015	15.98	5.31

46' ROW CAPACITY RATING TABLE MINOR EVENT
Rating Table for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\dd29.fm2
Worksheet	STREET SPREAD 46' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Constant Data	
Water Surface Elevation	0.36 ft

Input Data			
	Minimum	Maximum	Increment
Channel Slope	0.005000	0.030000	0.001000 ft/ft

Rating Table

Channel Slope (ft/ft)	Wtd. Mannings Coefficient	Discharge (cfs)	Velocity (ft/s)
0.005000	0.015	3.32	1.84
0.006000	0.015	3.64	2.01
0.007000	0.015	3.93	2.17
0.008000	0.015	4.20	2.32
0.009000	0.015	4.45	2.47
0.010000	0.015	4.69	2.60
0.011000	0.015	4.92	2.73
0.012000	0.015	5.14	2.85
0.013000	0.015	5.35	2.96
0.014000	0.015	5.55	3.07
0.015000	0.015	5.75	3.18
0.016000	0.015	5.94	3.29
0.017000	0.015	6.12	3.39
0.018000	0.015	6.30	3.49
0.019000	0.015	6.47	3.58
0.020000	0.015	6.64	3.68
0.021000	0.015	6.80	3.77
0.022000	0.015	6.96	3.85
0.023000	0.015	7.12	3.94
0.024000	0.015	7.27	4.03
0.025000	0.015	7.42	4.11
0.026000	0.015	7.57	4.19
0.027000	0.015	7.71	4.27
0.028000	0.015	7.85	4.35
0.029000	0.015	7.99	4.43
0.030000	0.015	8.13	4.50

46' ROW CAPACITY RATING TABLE MAJOR EVENT
Rating Table for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\dd29.fm2
Worksheet	STREET SPREAD 46' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Constant Data	
Water Surface Elevation	0.46 ft

Input Data			
	Minimum	Maximum	Increment
Channel Slope	0.005000	0.030000	0.001000 ft/ft

Rating Table

Channel Slope (ft/ft)	Wtd. Mannings Coefficient	Discharge (cfs)	Velocity (ft/s)
0.005000	0.015	7.56	2.25
0.006000	0.015	8.28	2.46
0.007000	0.015	8.94	2.66
0.008000	0.015	9.56	2.84
0.009000	0.015	10.14	3.02
0.010000	0.015	10.69	3.18
0.011000	0.015	11.21	3.34
0.012000	0.015	11.71	3.48
0.013000	0.015	12.18	3.63
0.014000	0.015	12.64	3.76
0.015000	0.015	13.09	3.90
0.016000	0.015	13.52	4.02
0.017000	0.015	13.93	4.15
0.018000	0.015	14.34	4.27
0.019000	0.015	14.73	4.38
0.020000	0.015	15.11	4.50
0.021000	0.015	15.49	4.61
0.022000	0.015	15.85	4.72
0.023000	0.015	16.21	4.82
0.024000	0.015	16.56	4.93
0.025000	0.015	16.90	5.03
0.026000	0.015	17.23	5.13
0.027000	0.015	17.56	5.23
0.028000	0.015	17.88	5.32
0.029000	0.015	18.20	5.42
0.030000	0.015	18.51	5.51

WILBUR MAY CAPACITY RATING TABLE MINOR EVENT
Rating Table for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\dd29.fm2
Worksheet	STREET SPREAD WILBUR MAY PARKWAY
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Constant Data	
Water Surface Elevation	0.40 ft

Input Data			
	Minimum	Maximum	Increment
Channel Slope	0.005000	0.030000	0.001000 ft/ft

Rating Table

Channel Slope (ft/ft)	Wtd. Mannings Coefficient	Discharge (cfs)	Velocity (ft/s)
0.005000	0.015	4.76	2.01
0.006000	0.015	5.21	2.20
0.007000	0.015	5.63	2.37
0.008000	0.015	6.02	2.54
0.009000	0.015	6.38	2.69
0.010000	0.015	6.73	2.84
0.011000	0.015	7.06	2.98
0.012000	0.015	7.37	3.11
0.013000	0.015	7.67	3.23
0.014000	0.015	7.96	3.36
0.015000	0.015	8.24	3.47
0.016000	0.015	8.51	3.59
0.017000	0.015	8.77	3.70
0.018000	0.015	9.03	3.81
0.019000	0.015	9.27	3.91
0.020000	0.015	9.52	4.01
0.021000	0.015	9.75	4.11
0.022000	0.015	9.98	4.21
0.023000	0.015	10.20	4.30
0.024000	0.015	10.42	4.40
0.025000	0.015	10.64	4.49
0.026000	0.015	10.85	4.57
0.027000	0.015	11.06	4.66
0.028000	0.015	11.26	4.75
0.029000	0.015	11.46	4.83
0.030000	0.015	11.65	4.91

WILBUR MAY CAPACITY RATING TABLE MAJOR EVENT
Rating Table for Irregular Channel

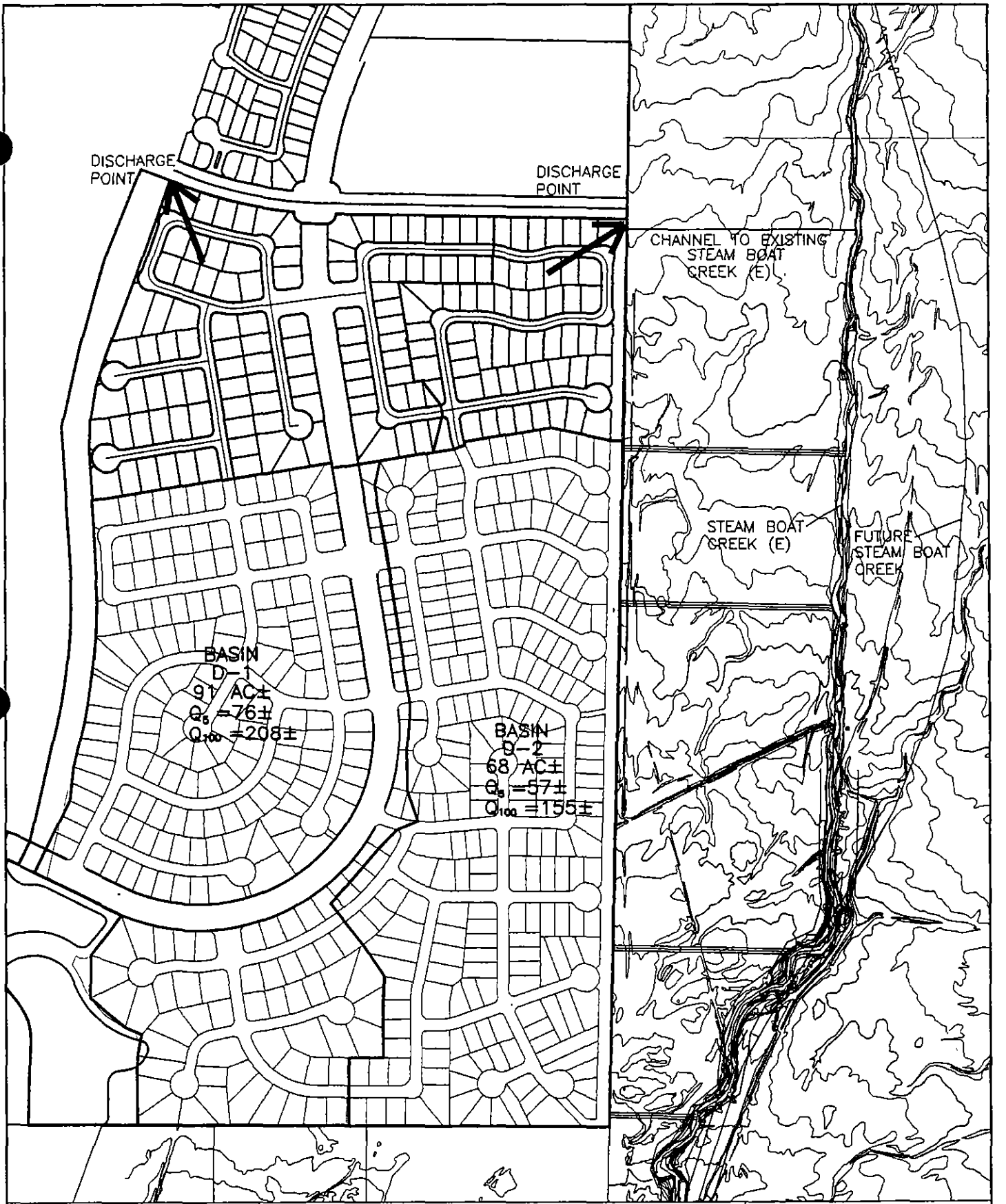
Project Description	
Project File	c:\haestad\fmw\dd29.fm2
Worksheet	STREET SPREAD WILBUR MAY PARKWAY
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Constant Data	
Water Surface Elevation	0.50 ft

Input Data			
	Minimum	Maximum	Increment
Channel Slope	0.005000	0.030000	0.001000 ft/ft

Rating Table

Channel Slope (ft/ft)	Wtd. Mannings Coefficient	Discharge (cfs)	Velocity (ft/s)
0.005000	0.015	9.92	2.40
0.006000	0.015	10.87	2.63
0.007000	0.015	11.74	2.85
0.008000	0.015	12.55	3.04
0.009000	0.015	13.31	3.23
0.010000	0.015	14.03	3.40
0.011000	0.015	14.71	3.57
0.012000	0.015	15.37	3.73
0.013000	0.015	15.99	3.88
0.014000	0.015	16.60	4.02
0.015000	0.015	17.18	4.16
0.016000	0.015	17.74	4.30
0.017000	0.015	18.29	4.43
0.018000	0.015	18.82	4.56
0.019000	0.015	19.34	4.69
0.020000	0.015	19.84	4.81
0.021000	0.015	20.33	4.93
0.022000	0.015	20.81	5.04
0.023000	0.015	21.27	5.16
0.024000	0.015	21.73	5.27
0.025000	0.015	22.18	5.38
0.026000	0.015	22.62	5.48
0.027000	0.015	23.05	5.59
0.028000	0.015	23.47	5.69
0.029000	0.015	23.89	5.79
0.030000	0.015	24.30	5.89



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DOUBLE DIAMOND RANCH

VILLAGE 7 & 23
BASIN AND EASEMENT MAP

RENO NEVADA

TENTATIVE MAP PACKAGE
AUGUST 2002

mountain west consulting
Civil Engineering – Planning – Project Management
P.O. Box 21400 – Reno, Nevada 89515-1400 – (775) 337-0775

EAST PROPERTY LINE CUT OFF CHANNEL (ULT)
Worksheet for Trapezoidal Channel

Project Description	
Project File	c:\haestad\fmw\ddr 28 a.fm2
Worksheet	channel along east side of ddr - HW1
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Mannings Coefficient	0.035	
Channel Slope	0.003000	ft/ft
Left Side Slope	3.000000	H : V
Right Side Slope	3.000000	H : V
Bottom Width	6.00	ft
Discharge	150.00	cfs

Results		
Depth	2.96	ft
Flow Area	43.93	ft²
Wetted Perimeter	24.69	ft
Top Width	23.73	ft
Critical Depth	1.95	ft
Critical Slope	0.017112	ft/ft
Velocity	3.41	ft/s
Velocity Head	0.18	ft
Specific Energy	3.14	ft
Froude Number	0.44	
Flow is subcritical.		

Cross Section
Cross Section for Trapezoidal Channel

Project Description	
Project File	c:\haestad\fmw\ddr 28 a.fm2
Worksheet	channel along east side of ddr - HW1
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.035	
Channel Slope	0.003000	ft/ft
Depth	2.96	ft
Left Side Slope	3.000000	H : V
Right Side Slope	3.000000	H : V
Bottom Width	6.00	ft
Discharge	150.00	cfs

FLOW IS SUBCRITICAL ($Fr < 0.80$)

∴ FREEBOARD REQUIRED

$$F_b = 0.5 + \frac{V^2}{2g}$$

$$F_b = 0.5 + \frac{(3.41)^2}{32.2} = 0.86'$$

∴ DEPTH OF FLOW = 2.96' + 0.86' F_b

3.82' Reqd

∴ USE 4' DEEP DITCH SECTION