

Area #	Area (sf)	Area (acres)	Runoff Coefficient	Tc (min)	I(100) (in/hr)	Q(100) (cfs)
1	54043	1.24	0.50	10	9.8	6.1
2	66067	1.52	0.50	10	9.8	7.4
3	52773	1.21	0.50	10	9.8	5.9
4A	91310	2.10	0.50	10	9.8	10.3
4B	84005	1.93	0.50	10	9.8	9.4
5	57298	1.32	0.50	10	9.8	6.4
6	51756	1.19	0.50	10	9.8	5.8
7	26100	0.60	0.50	10	9.8	2.9
8	73947	1.70	0.50	10	9.8	8.3
9	14629	0.34	0.50	10	9.8	1.6
10	14630	0.34	0.50	10	9.8	1.6
11	100192	2.30	0.50	10	9.8	11.3
12	115925	2.66	0.50	10	9.8	13.0
13	25031	0.57	0.50	10	9.8	2.8
14	25015	0.57	0.50	10	9.8	2.8
15	77933	1.79	0.50	10	9.8	8.8
16	42553	0.98	0.50	10	9.8	4.8
17	140694	3.23	0.50	10	9.8	15.8

**INLET CALCULATIONS**

Inlet #	Location	Station	Design Storm Frequency (yrs.)	Time of Conc. (min.)	Intensity (in/hr)	Runoff Coeff	Area (acres)	Q (cfs)	Carry-Over from Upstream (cfs)	Gutter Flow (cfs)	Gutter Capacity (cfs)	Gutter Slope (ft/ft)	Crown Type	Selected Inlet Length (ft)	Type	Carry-Over to Downstream (cfs)	Inlet Capacity (cfs)
1	Cornell	2+49.00	100	10	9.8	0.50	1.21	5.9	0.0	5.9	24.6	2.54%	6" pbl	10	STD.	0.2	5.7
2	Hanover	9+92.11	100	10	9.8	0.50	2.10	10.3	0.0	10.3	22.0	2.03%	6" pbl	15	STD.	0.6	9.7
3	Hanover	9+89.40	100	10	9.8	0.50	1.93	9.4	0.0	9.4	22.0	2.03%	6" pbl	15	STD.	0.0	9.7
4	York	16+29.36	100	10	9.8	0.50	1.32	6.4	0.2	6.6	23.3	2.28%	6" pbl	15	STD.	0.0	9.5
5	York	12+67.31	100	10	9.8	0.50	1.19	5.8	0.0	5.8	18.1	1.36%	6" pbl	15	STD.	0.0	10.5
6	York	12+03.89	100	10	9.8	0.50	0.60	2.9	0.0	2.9	18.1	1.36%	6" pbl	10	STD.	0.0	6.3
7	Harvard	9+20.18	100	10	9.8	0.50	0.34	1.6	0.6	2.2	22.7	2.18%	6" pbl	5	STD.	0.0	2.5
8	Harvard	9+20.18	100	10	9.8	0.50	0.34	1.6	0.0	1.6	22.7	2.18%	6" pbl	5	STD.	0.0	2.5
9	York	0+50.97	100	10	9.8	0.50	0.98	4.8	5.3	10.1	19.8	Low Pt	6" pbl	10	STD.	0.0	21.0
10	York	0+12.49	100	10	9.8	0.50	1.79	8.8	0.0	8.8	19.8	Low Pt	6" pbl	10	STD.	0.0	21.0
11	York	2+05.30	100	10	9.8	0.50	3.23	15.8	0.0	15.8	19.8	1.64%	6" pbl	15	STD.	5.3	10.5

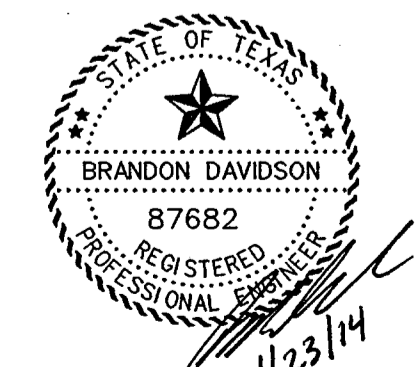
**STORM SEWER CALCULATIONS**

Upstream Station	Downstream Station	Distance (ft)	AREA NO.	Total Area (Acres)	Picked Up (Acres)	C	CA	Accumulated CA	Tc (Min)	Design Storm Intensity (in/hr)	Q (CFS)	S (ft/ft)	Pipe Size (in)	Velocity (ft/s)	Head Loss (ft)	Flow Time (Min)	Time at DS (Min)	A Velocity Head (ft)	Hydraulic Grade Upstream	Hydraulic Grade Downstream	
<b>Line D1</b>																					
4+38.49	3+01.59	136.90	11-14	6.11	0.50	3.06	3.06	10.00	100	9.80	30.0	0.0176	24	9.5	1.40	0.24	10.24	0.24	489.57	489.57	
3+01.59	2+75.49	26.10	D4	4.21	4.21	0.50	2.10	5.16	10.24	100	9.76	50.4	0.0151	30	10.3	1.65	0.04	10.28	0.25	487.17	486.92
2+75.49	2+50.00	25.49	15	1.79	1.79	0.50	0.89	6.05	10.28	100	9.76	59.1	0.0107	30	12.0	2.24	0.04	10.32	0.59	485.52	485.93
2+50.00	2+20.00	30.00	MH	0.00	0.00	0.50	0.00	6.05	10.23	100	9.75	59.0	0.0078	36	8.3	1.07	0.06	10.38	0.91	483.40	484.69
2+20.00	2+20.00	220.00	0	0.00	0.00	0.50	0.00	6.05	10.38	100	9.74	58.9	0.0078	36	8.3	1.07	0.44	10.82		484.26	
<b>Line D2</b>																					
2+54.83	1+52.00	62.83	4A,4B	4.02	3.90	0.50	1.95	1.95	10.00	100	9.80	19.1	0.0145	21	7.9	0.97	0.13	10.13	0.97	504.33	504.33
1+52.00	1+25.14	6.86	9	0.34	0.46	0.50	0.23	2.18	10.13	100	9.78	21.3	0.0089	24	6.8	0.72	0.02	10.15	0.13	503.41	503.54
1+25.14	1+51.89	33.25	10	0.34	0.34	0.50	0.17	2.35	10.15	100	9.78	23.0	0.0103	24	7.3	0.83	0.08	10.23	0.11	503.48	503.37
1+51.89	1+04.18	47.71	D3	7.07	7.07	0.50	3.54	5.89	10.23	100	9.76	57.5	0.0074	36	8.1	1.02	0.10	10.33	0.19	503.02	502.83
1+04.18	1+04.18	0	0	0.00	0.00	0.50	0.00	5.89	10.33	100	9.75	57.4	0.0074	36	8.1	1.02	0.21	10.54	0.00	502.48	
<b>Line D3</b>																					
8+51.12	6+87.72	263.40	1,2	2.76	2.76	0.50	1.38	1.38	10.00	100	9.80	13.5	0.0073	21	5.6	0.49	0.61	10.61	0.49	514.34	513.85
6+87.72	4+68.89	218.83	3	1.21	1.21	0.50	0.61	1.99	10.61	100	9.70	19.3	0.0073	24	6.1	0.58	0.60	11.21	0.09	512.35	512.26
4+68.89	1+07.61	361.28	5	1.32	1.32	0.50	0.66	2.65	11.21	100	9.61	25.5	0.0127	24	8.1	1.02	0.74	11.95	0.44	510.67	510.23
1+07.61	0+48.16	59.45	6	1.19	1.19	0.50	0.59	3.24	11.25	100	9.49	30.8	0.0185	24	9.8	1.49	0.10	12.05	0.47	505.65	505.18
0+48.16	0+00.00	48.16	7	0.60	0.60	0.50	0.30	3.54	12.05	100	9.47	33.5	0.0117	27	8.4	1.09	0.10	12.15	0.20	504.08	504.27
0+00.00	0+00.00	0.00	0	0.00	0.00	0.50	0.00	3.54	12.15	100	9.46	33.5	0.0117	27	8.1	1.02	0.00	12.15	-0.04	503.71	502.83
<b>Line D4</b>																					
2+10.66	0+43.71	166.95	17	3.23	2.14	0.50	1.07	1.07	10.00	100	9.80	10.5	0.0044	21	4.4	0.30	0.63	10.63	0.30	489.65	489.35
0+43.71	0+00.00	43.71	16	0.98	2.06	0.50	1.03	2.10	10.63	100	9.70	20.4	0.0081	24	6.5	0.66	0.11	10.74	0.36	488.62	488.26
0+00.00	0+00.00	0.00	0	0.00	0.00	0.50	0.00	2.10	10.74	100	9.68	20.3	0.0081	24	10.3	1.65	0.00	10.74	0.99	487.91	486.92

**LEGEND**

- PROP. STORM SEWER
- PROP. CURB INLETS
- PROP. CONC. HEADWALL
- EXIST. STORM SEWER
- DRAINAGE AREA DIVIDE
- FLOW ARROW
- DRAINAGE AREA NO.

AS-BUILT JANUARY 2014  
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**CORWIN ENGINEERING, INC.**  
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ALLEN, TEXAS 75013 (972)396-1200  
TBPE FIRM #5951

DEVELOPMENT PLANS FOR  
**STONE CREEK PHASE IV**  
ROCKWALL, TEXAS

DRAINAGE AREA MAP

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE:	3 OF 18
12033	FEBRUARY 2013	1"=100'	