

0.3 Storm Drainage System Analysis

Design Requirements

Storm drainage in Heber City is provided through collection pipes, street curb & gutter, detention basins, and sumps. Peak runoff is determined by the Rational method for residential and non-residential areas in the ultimate 2023 boundary area. Table 7-1 shows the storm Intensity-Duration-Frequency data for Heber City used in the Rational method.

Table 7-1 Heber Area IDF Data

Average Intensity of Precipitation For Time Period Indicated (Inches Per Hour)										
	5-min	10-min	15-min	30-min	1-hr	2-hr	3-hr	6-hr	12-hr	24-hr
2-yr	1.920	1.500	1.200	0.820	0.510	0.315	0.237	0.155	0.098	0.058
5-yr	2.640	2.040	1.680	1.120	0.700	0.410	0.303	0.190	0.119	0.072
10-yr	3.360	2.520	2.080	1.400	0.870	0.505	0.363	0.223	0.138	0.083
25-yr	4.320	3.360	2.760	1.860	1.150	0.655	0.460	0.270	0.164	0.099
50-yr	5.400	4.080	3.360	2.280	1.410	0.795	0.547	0.308	0.186	0.112
100-yr	6.480	4.980	4.080	2.760	1.710	0.955	0.650	0.353	0.209	0.125

Total Precipitation In The Time Period Indicated (Inches)										
	5-min	10-min	15-min	30-min	1-hr	2-hr	3-hr	6-hr	12-hr	24-hr
2-yr	0.16	0.25	0.30	0.41	0.51	0.63	0.71	0.93	1.17	1.40
5-yr	0.22	0.34	0.42	0.56	0.70	0.82	0.91	1.14	1.43	1.72
10-yr	0.28	0.42	0.52	0.70	0.87	1.01	1.09	1.34	1.65	2.0
25-yr	0.36	0.56	0.69	0.93	1.15	1.31	1.38	1.62	1.97	2.38
50-yr	0.45	0.68	0.84	1.14	1.41	1.59	1.64	1.85	2.23	2.69
100-yr	0.54	0.83	1.02	1.38	1.71	1.91	1.95	2.12	2.51	3.01

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