



CITY OF LODI

PUBLIC WORKS DEPARTMENT

Gutter Hydraulic Capacities

Assumptions:

Street Cross Slope = 2½%
 Manning's "n" = .015
 Pavement hike-up at toe of curb = 3/8"

DRIVEWAY-TYPE CURB & GUTTER Street Flooding

Depth (ft)	Area (SF)	from top of curb (ft.)	Q/S ^{1/2} (1/2)
0.20	0.2	2.1	5.1
0.21	0.3	2.6	5.2
0.22	0.3	3.0	5.6
0.23	0.3	3.5	6.1
0.24	0.3	3.9	6.8
0.25	0.4	4.4	7.7
0.26	0.4	4.8	8.6
0.27	0.5	5.3	9.8
0.28	0.5	5.7	11.1
0.29	0.6	6.2	12.5
0.30	0.7	6.6	14.2
0.31	0.7	7.1	15.9
0.32	0.8	7.5	17.9
0.33	0.9	8.0	20.1
0.34	1.0	8.4	22.4
0.35	1.0	8.9	25.0
0.36	1.1	9.3	27.8
0.37	1.2	9.8	31.0
0.38	1.3	10.2	34.2
0.39	1.4	10.7	37.5
0.40	1.6	11.1	41.2
0.41	1.7	11.6	45.0
0.42	1.8	12.0	49.3

FLOW EXCEEDS TOP OF CURB

Q—Flow in cfs
 S—Slope in curb and gutter

SQUARE-TYPE CURB & GUTTER Street Flooding

Depth (ft)	Area (SF)	from top of curb (ft.)	Q/S ^{1/2} (1/2)
0.20	0.2	3.3	3.6
0.21	0.3	3.7	4.2
0.22	0.3	4.1	5.0
0.23	0.3	4.5	5.8
0.24	0.4	4.9	6.8
0.25	0.4	5.3	8.0
0.26	0.5	5.7	9.3
0.27	0.6	6.1	10.7
0.28	0.6	6.5	12.2
0.29	0.7	6.9	14.0
0.30	0.8	7.3	15.9
0.31	0.8	7.7	17.9
0.32	0.9	8.1	20.2
0.33	1.0	8.5	22.7
0.34	1.1	8.9	25.3
0.35	1.2	9.3	28.1
0.36	1.3	9.7	31.1
0.37	1.4	10.1	34.4
0.38	1.5	10.5	37.8
0.39	1.6	10.9	41.5
0.40	1.7	11.3	45.4
0.41	1.8	11.7	49.6
0.42	1.9	12.1	54.0
0.43	2.0	12.5	58.6
0.44	2.2	12.9	63.5
0.45	2.3	13.3	68.6
0.46	2.4	13.7	73.9
0.47	2.6	14.1	79.6
0.48	2.7	14.5	85.4
0.49	2.9	14.9	91.8
0.50	3.0	15.3	98.2

FLOW EXCEEDS TOP OF CURB

Dr. KT	No. 1	Date 2/04	Revision REVISED FORMULA	Appr.	Approved By: <i>F. Wally Sandelin</i>	STD PLAN
Ch. WS					2/12/04	608
Date 12/00					Date	