

FHWA Urban Drainage Design Program, HY-22
 Drainage of Highway Pavements

Inlets on Grade
 Date: 02/28/2002

Project No. :n/a
 Project Name.:Ritchie Industrial Park
 Computed by :Scott C. Lindebak

Inlets on Grade: Curb Opening Inlet

Roadway and Discharge Data

		Composite
S	Cross Slope	
S	Longitudinal Slope (ft/ft)	0.0140
Sx	Pavement Cross Slope (ft/ft)	0.0313
Sw	Gutter Cross Slope (ft/ft)	0.0521
n	Manning's Coefficient	0.016
W	Gutter Width (ft)	1.00
a	Gutter Depression (inch)	2.00
Q	Discharge (cfs)	7.350
T	Width of Spread (ft)	10.76

Gutter Flow

Eo	Gutter Flow Ratio	0.239
d	Depth of Flow (ft)	0.36
V	Average Velocity (ft/sec)	4.04

Inlet Interception

		Curb-Opening
LT	Inlet Type	
LT	Length for 100% Inteception (ft)	21.61
L	Curb-Opening Length (ft)	10.00
e	Inlet Efficiency	0.673
Qi	Intercepted Flow (cfs)	4.948
Qb	By-pass Flow (cfs)	2.402

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Cross Slope		Composite
S	Longitudinal slope (ft/ft)	0.0140
Sx	Pavement Cross Slope (ft/ft)	0.0313
Sw	Gutter Cross Slope (ft/ft)	0.0521
n	Manning's Coefficient	0.016
W	Gutter Width (ft)	1.00
a	Gutter Depression (inch)	2.00
Q	Discharge (cfs)	4.250
T	Width of spread (ft)	8.74

Gutter Flow

Eo	Gutter Flow Ratio	0.290
d	Depth of Flow (ft)	0.29
V	Average Velocity (ft/sec)	3.53

Inlet Interception

Inlet Type		Curb-Opening
LT	Length for 100% Inteception (ft)	15.98
L	Curb-Opening Length (ft)	10.00
e	Inlet Efficiency	0.830
Qi	Intercepted Flow (cfs)	3.526
Qb	By-pass Flow (cfs)	0.724