



PEAK 100 YEAR FLOW
 $Q = CIA$
 $C100 = 0.89$
 $TC = 5MM$
 $A = 0.18 \text{ AC.}$
 $C100 = 9.48 \text{ IN/HR}$
 $Q100 = 1.52 \text{ CFS}$

Eq.	$QI = 5.37Ad0.5/F$	Taken from page 4-13 of the Rapid City Drainage Criteria Manual	
Grate Length (ft) =	2	Feet	
Grate Width (ft) =	2	Feet	
Grate Area (sf) =	4.00	Square Feet	
Allowable Inundation Depth (ft) =		2	Feet
Clogging Factor (Grate Inlet) =		1.7	
	$QI =$	17.9	cfs

*GRATE HAS 100% INLET CAPTURE EFFICIENCY

RECEIVED

MAY 18 2011

Rapid City Growth Management Department



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LEGAL DESCRIPTION
 [Illegible text]
 DRAWN BY: J.J.

REVISIONS
 [Illegible text]

DATE
 [Illegible text]

REGISTERED PROFESSIONAL ENGINEER
 REG. NO. 7198
 KALE R. McNABO
 SOUTH DAKOTA
 5-18-11

DR. SARA ANN LIFE CHURCH
 DRAINAGE MAP

SHEET 2/8