

EXAMPLE 7.2.2

Using equation (7.2.3), compute the design rainfall intensities for a 10-year return period, 10-, 20-, and 60-min duration storms for $c = 62.5$, $e = 0.89$, and $f = 9.10$.

SOLUTION

The rainfall intensity duration frequency relationship is then

$$i = \frac{62.5}{T_d^{0.89} + 9.10}$$

For $T_d = 10$ min, $i = \frac{62.5}{10^{0.89} + 9.10} = 3.71$ in/hr. For $T_d = 20$ min, $i = 2.66$ in/hr, and for $T_d = 60$ min,

$$i = 1.32 \text{ in/hr.}$$