EXHIBIT NO. 20

Bulletin 45 Computation Sheet (Sheet 1 of 4)

Project: _____ Date: _____ By: _____

Located: _____ feet _____ of _____ Road

Existing structure is:

(1) Drainage Area (A) = _____ sq. miles or _____ Acres.

(2) Length or Major Stream (L) = _____ Mi. or _____ Ft.

(3) 0.85 (L) = _____ Mi. or _____ Ft. Elevation at 0.85 (L) = _____ Ft., as measured along the existing watercourse from the downstream end

(4) 0.10 (L) = _____ Mi. or _____ Ft. Elevation at 0.10 (L) = _____ Ft., as measured along the existing watercourse from the downstream end

(5) 0.75 (L) = _____ Mi. or _____ Ft.

(6) Elevation 0.85 (L) - Elevation 0.10 (L) = _____ Ft.

(7) Slope (S) = Step (6) ÷ Step (5) _____ Ft/Mi.

(8) Soil Factor (C) _____ (See EXHIBIT 20, Sheet 2 of 4)

(9) Mean Annual Flood (Qa) = _____ cfs (See EXHIBIT 20, Sheet 3 of 4)

Urban correction factor (UCF) = $\frac{\text{\_\_\_\_\_ \% Rural}}{100}$ + f $\frac{\text{\_\_\_\_\_ \% Urban}}{100}$

Bulletin 45

Flood Recurrence Interval	2	5	10	25	50	100
Urban Factor (f)	2.9	2.2	1.9	1.7	1.6	1.5
(UCF)						

Caution should be exercised when using the above factor, especially for small drainage areas and recurrence intervals of 10 years and less.

Q 10 Yr. = Qa _____ X FF _____ X UCF _____ = _____ cfs

Q 25 Yr. = Qa _____ X FF _____ X UCF _____ = _____ cfs

Q 50 Yr. = Qa _____ X FF _____ X UCF _____ = _____ cfs

Q 100 Yr. = Qa _____ X FF _____ X UCF _____ = _____ cfs

FF (Frequency Factor)
See EXHIBIT 20 (Sheet 4 of 4)