BF 02233 Highway 14 Over Battle River
Hydrotechnical Summary

Channel Capacity :

S = 0.0003
B = 20 m, h = 4 m, Th = 45 m
Use AT equation

At Bank Height : Y = 4 m, V = 1.1 m/s, Q = 150 cms
At Channel Capacity : Y = 5 m, V = 1.4 m/s, Q = 250 cms

Historical Highwater Data :

HW was noted in 1961 (Y~4.4m), and in 1974 (Y~5.4m). The 1955 design was based on a highwater elevation of 1918' (Y~4.5m).

WSC gauge 05FE004 (DA=24,800km^2, 1978 – present) reports Q~80 -100cms in July 1983, April 1987, and April 2005. Gauge 05FE001 (DA=25,600km^2, 1944 -1979) reports Q~400cms (no rating curve), Q~280cms in 1948. Gauge 05FC001 (DA=7680km^2, 1986 - present) reports Q~240cms in April 1974.

Basin Runoff Potential :

Gross DA = 16,990 km^2 (beyond range of technique)

Conclusion :

Historic highwater observations govern.

Recommended parameters :

Y = 5.5 m, V = 1.5 m/s, Q = 290 cms