BF 01153 Hwy 22 Over Oldman River
Hydrotechnical Summary

Channel Capacity :

S = 0.005
B = 40 m, h = 5 m, T_h = 65 m
Use AT Equation

At Bank Height : Y = 5.0 m, V = 4.3 m/s, Q = 1100 cms
At Channel Capacity : Y = 6.0 m, V = 5.0 m/s, Q = 1600 cms

Historical Highwater Data :

HW has been observed in 1975 (Y ~ 3.5m), 1995 (Y ~ 5m above low water), and 2005. The 1959 design was based on Y ~ 3.5m.

WSC Gauge 05AA023 (DA ~ 1450km^2, 1950 – Now) reports Q ~ 1320 in 1995 (max gauging at Q < 500cms, stage rise to peak ~ 5.5m), Q ~ 450cms in 1953 and 2005, and Q ~ 370cms in 1975. Gauge 05AA001 (DA ~ 1940km^2, 1908 – 1931, 1944 – 1949) reports Q ~ 950cms in 1923 and Q ~ 500cms in 1929.

Basin Runoff Potential :

Gross DA = 1450 km^2, runoff potential is not applicable.

Conclusion :

Historic observations govern (1995). Recommended parameters :

Y = 5.5 m, V = 4.5 m/s, Q = 1300 cms.
HW EL 307.0m (Dwg. 2362, local datum)