BF 75187 Hwy 41 Over South Saskatchewan River
Hydrotechnical Summary

Channel Capacity :

S = 0.00023
B = 210 m, h = 12 m, T_h = 290 m
Use AT equation

At Bank Height : Y = 12 m, V = 2.3 m/s, Q = 7000 cms
At Channel Capacity : Y = 13 m, V = 2.5 m/s, Q = 8200 cms

Historical Highwater Data :

An ice jam was observed in 1960. The 1962 design was based on an estimated 1908 HW level of Y ~ 11.5m and Q ~ 7800cms.

WSC Gauge 05AJ001 (DA ~ 56400km^2, 1911 – Now) reports Q ~ 5100cms (1995, stage rise ~ 8m, gauged at Q = 4100cms), Q ~ 4300cms (1953), Q ~ 4100cms (1995), and Q > 3000cms in 1929, 1975, and 2005. WSC Gauge 05AK001 (DA ~ 66000km^2, 1966 – 1993) reports Q ~ 3000cms in 1975. Major tributaries are Oldman River (Q ~ 5000cms) and Bow River (Q ~ 2500cms) but coincident peaks unlikely due to storm location and timing. The ungauged flood in 1902 is known to be significant in both basins.

Basin Runoff Potential :

Gross DA = 66000 km^2, runoff potential is not applicable

Conclusion :

Historic observations govern. Recommended parameters :

Y = 11.0 m, V = 2.2 m/s, Q = 6000 cms.
HW EL 594.5m (Dwg. 2689)