BF 76986 Hwy 947 Over Athabasca River
Hydrotechnical Summary

Channel Capacity :

S = 0.0014
B = 100 m, h = 4.5 m, T_h = 160 m
Use AT equation

At Bank Height : Y = 4.5 m, V = 2.4 m/s, Q = 1400 cms
At Channel Capacity : Y = 5.5 m, V = 2.8 m/s, Q = 2100 cms

Historical Highwater Data :

HW was noted in July 1986 (Y ~ 4m). The 1970 design was based on Y ~ 6m.

WSC gauge 07AE001 (DA = 19600km^2, 1960 - Now) reports Q ~ 2250cms in June 1960 and July 1965, and Q ~ 1800 – 2000cms many times. The highest flow measurement was Q ~ 1870cms (1980) with a stage rise of about 4m.

Basin Runoff Potential :

Gross DA = 18160km^2, exceeds range of application of runoff depth method.

Conclusion :

Historic observations govern. Recommended parameters :

Y = 5.5 m, V = 2.8 m/s, Q = 2100 cms.
HW EL 792.5m (5547-P)