BF 78074 Local Road Over Wabasca River
Hydrotechnical Summary

Channel Capacity :

S = 0.00035
B = 85 m, h = 5.5 m, Th = 120 m
Use AT equation

At Bank Height : Y = 5.5 m, V = 1.6 m/s, Q = 900 cms
At Channel Capacity : Y = 6.5 m, V = 1.9 m/s, Q = 1300 cms

Historical Highwater Data :

The 1978 design was based on Y ~ 7.3m.

WSC gauge 07JD002 (DA = 35,800km^2, 1970 – Now) reports Q ~ 1700cms (April 1974, gauged at Q ~ 1430cms, stage rise ~ 6m at peak), and Q ~ 1630cms (June 1973). Gauge 07JD001 (DA ~ 36,300km^2, 1963 – 1970) reports Q ~ 640cms (May 1967).

Basin Runoff Potential :

Gross DA = 21,860 km^2 (beyond range of technique)

Conclusion :

Channel capacity estimate is consistent with historic highwater observations.
Recommended parameters :

Y = 6.5 m, V = 1.9 m/s, Q = 1300 cms.