BF 02487 Hwy 22 Over Sheep River
Hydrotechnical Summary

Channel Capacity :

S = 0.006
B = 30 m, h = 2 m, T_h = 50 m
Use AT equation

At Bank Height : Y = 2 m, V = 2.5 m/s, Q = 200 cms
At Channel Capacity : Y = 3 m, V = 3.4 m/s, Q = 450 cms

Historical Highwater Data :

HW was observed in 1942 (Y ~ 2.5m, erosion), June 1963 (Y ~ 2.5m, over road to east), May 1967 (Y ~ 2.5m), May 1990 (Y ~ 1.5m), June 1995 (Y ~ 2.5m), and June 2005 (Y ~ 2.5m). The 1962 design was based on Y ~ 2.7m (Q ~ 340cms).

WSC Gauge 05BL014 (DA ~ 595 km^2, 1909 – 1916, 1968 – Now) reports Q ~ 380 cms (June 2005, gauged at Q ~ 280cms, stage rise ~ 2.3m), Q ~ 365cms (June 1995), and Q ~ 320cms (June 1916). WSC Gauge 05BL018 (DA ~ 455km^2, 1950 – 1969) reports Q ~ 340cms (June 1963), and Q ~ 300cms (May 1967).

Basin Runoff Potential :

d = 60/80 mm, T_p = 20 hrs, q ~ 1.0 cms/km^2.
Gross DA = 555 km^2.
Q_p = 550 cms.

Conclusion :

The channel capacity estimate is consistent with historic observations. Recommended parameters :

Y = 3.0 m, V = 3.4 m/s, Q = 450 cms.
EL 1175.0 m (3304-P)