BF 01030 Hwy 833 Over Camrose Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0007
B = 4 m, h = 1.5 m, T_h = 7 m
Use n = 0.045

At Bank Height : Y = 1.5 m, V = 0.6 m/s, Q = 5 cms
At Channel Capacity : Y = 2.3 m, V = 0.9 m/s, Q = 11 cms

Historical Highwater Data :

HW was noted in April 1974 with water 0.6m over the grade (Y d/s ~ 2.1 – 2.4m) and damage to the existing structure. A 1956 report notes a HWM over the grade and estimates Q = 9cms.

WSC Gauge 05FA010 (DA = 496km^2, 1929 – 1930) did not record any HW events. Gauges in the area suggest HW events in April 1974, April 1982, July 1983, April 1985, and April 1997. The largest event in the storm database for this area is June 1965 with 120mm of rainfall.

Basin Runoff Potential :

d = 35mm, T_p = 40 hrs, q = 0.25 cms/km^2.
Gross DA = 410 km^2.
Q_p = 105 cms.

Conclusion :

The channel capacity estimate is consistent with historic observations and is within the basin runoff potential.

Recommended parameters : Y = 2.3 m, V = 0.9 m/s, Q = 11 cms.