BF 70037 Hwy 776 Over Pembina River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.0025
B = 3 m, h = 1.2 m, T_h = 5 m
Use n = 0.05

At Bank Height : Y = 1.2m, V = 0.9 m/s, Q = 4 cms
At Channel Capacity : Y = 1.8 m, V = 1.2 m/s, Q = 10 cms

Historical Highwater Data :

A 1968 report notes a HWM with Y ~ 1.0m. A 1954 report notes water backing up onto farmland due to culvert.

There are no gauges on this stream. Gauges in the area suggest large runoff events in April 1974, April 1982, July 1986, and April 1997. The largest storms in the storm database are 140mm in July 1953 and August 1957, and 105mm in June 1965.

Basin Runoff Potential :

d = 45mm, T_p = 20hrs, q = 0.6 cms/km^2.
Gross DA = 23 km^2.
Q_p = 14 cms.

Conclusion :

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

Recommended parameters : Y = 1.8 m, V = 1.2 m/s, Q = 10 cms.