BF 71275 Local Road Over Cardinal Ck Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.0003
B = 8 m, h = 1.8 m, T_h = 12 m
Use n = 0.04

At Bank Height : Y = 1.8 m, V = 0.5 m/s, Q = 10 cms
At Channel Capacity : Y = 2.7 m, V = 0.7 m/s, Q = 25 cms

Historical Highwater Data :

A 1952 report notes a HWM over the deck (Y = 1.5m) and estimates Q = 17 - 20cms. A 1954 report notes a HWM with Y = 1.5m and estimates Q = 14 – 17cms. A 1997 BIM report notes water ponded close to the bottom of the girders (possibly BW from Cardinal Lake).

There are no WSC gauges on this stream. Gauges in the area suggest HW events in 1974, 1979, 1990, and 1997. The largest event in the storm database for this area is July 1963 with 100mm of rainfall.

Basin Runoff Potential :

d = 40mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 141 km^2.
Q_p = 78 cms.

Conclusion :

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

Recommended parameters : Y = 2.7 m, V = 0.7 m/s, Q = 25 cms.