BF 70287 Local Road Over Beavertail Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.002
B = 4 m, h = 1.5 m, T_h = 8 m
Use n = 0.05

At Bank Height : Y = 1.5 m, V = 0.9 m/s, Q = 8 cms
At Channel Capacity : Y = 2.3 m, V = 1.3 m/s, Q = 20 cms

Historical Highwater Data :

HW was observed in June 1990 with water over the grade and a washout of the existing 1.2m pipe, opening up a 6.0m wide opening through the fill. The replacement 3.7m pipe was designed for Y = 2.2m and Q = 23cms. A 1998 BIM report notes Y = 2.0m.

WSC Gauge 07GD002 (DA = 662km^2, 1983 – Now) located d/s reports Q = 123cms in June 1990, (gauged at Q = 35cms), followed by Q = 50cms in April 1997. The largest storms for this area in the storm database is about 100mm of rainfall in June 1964 and 1990.

Basin Runoff Potential :

d = 70 mm, T_p = 20 hrs, q = 1 cms/km^2.
Gross DA = 110 km^2 .
Q_p = 110 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 = 1.3 m/s, Q = 20 cms.