BF 01097 Hwy 811 Over Oldman River
Hydrotechnical Summary

Channel Capacity:

S = 0.0017
B = 100 m, h = 5 m, T_h = 140 m
Use AT equation

At Bank Height: Y = 5 m, V = 2.9 m/s, Q = 1700 cms
At Channel Capacity: Y = 6 m, V = 3.3 m/s, Q = 2500 cms

Historical Highwater Data:

HW has been noted at this site in 1902, 1953, 1964, 1972 (Ice), 1975, 1995 (Y ~ 6m, over road to north), 2005, and 2013 (~1.8 m below bottom chord).

The 1909 design was based on Y ~ 6m (likely 1908 event).

Gauge 05AA024 (DA = 4400 km^2, 1966 – Now, 1995 peak missing – est. dam outflow Q ~ 2700 cms by AENV) reports
Q ~ 1560 cms in 1975
Q missing record in 1995. As per AT flood data inventory, the measured high water level at the bridge on June 9, 1995 was between 938.97 and 939.27 m.
Q ~ 1110 cms in 2005
Q ~ 1330 cms in 2013

Gauge 05AB007 (DA = 5760 km^2, 1910 – 1948) reports
Q ~ 1990 cms in 1923
Q ~ 1060 cms in 1942
Q ~ 1100 cms in 1948

Basin Runoff Potential:

Gross DA = 5800 km^2, runoff potential is not applicable

Conclusion:

Historic observations and Oldman Dam operations govern. Recommended parameters:

Y = 6.0 m, V = 3.3 m/s, Q = 2700 cms.
HW EL 939.6 m (Dwg. DD1387)

Classification: Protected A