BF 76212 Hwy 64 Over Clear River
Hydrotechnical Summary

Channel Capacity :

S = 0.0025
B = 33 m, h = 3.0 m, T_h = 45 m
Use AT Equation

At Bank Height : Y = 3.0 m, V = 2.4 m/s, Q = 280 cms
At Channel Capacity : Y = 4.0 m, V = 3.1 m/s, Q = 500 cms

Historical Highwater Data :

The 1958 design was based on Y = 4.3m.

WSC gauge 05FD009 (DA = 2890km^2, 1971 – Now) reports Q = 430cms in April 1974 (gauged at Q = 250cms with stage rise = 2.5m), and Q = 350cms in April 1997. The storm database indicates that the largest rainfall event on record for this area is about 100mm in July 1987.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.85 cms/km^2.
Gross DA = 2890 km^2.
Q_p = 2450 cms.

Conclusion :

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

Recommended parameters : Y = 4.0 m, V = 3.1 m/s, Q = 500 cms.