# File 01074 – Oldman River at Lethbridge.

## Hydrotechnical File History

1899 Existing timber truss on stone filled timber crib substructure.

1900 Piers repaired.

1902 May flood damages bridge, one span washed away completely. June floods 0.91m higher than May and causes more damage.

1903 Bridge reconstructed. 4-53.3m steel through truss and 2-24.4m steel pony truss on concrete substructure 8.9m above streambed.

1908 High water washed out the east approach. Hwm 0.15m below the deck.

1909 Scour hole in front of the east abutment filled with rock.

1942 To stop serious bank erosion a timber and concrete retaining wall and stream diversion are constructed

1946 Calculation: 1908 hwm 828.55m and 1942 hwm 824.79m

1948 Bridge reconstructed. 6-32m and 2-24.4m steel girder spans on concrete substructure.

1952 Concrete protection wall constructed at the base of the south abutment.

1953 Hwm 4.15m below the extreme outside corner of the side wall expansion plate. West abutment eroded. The top of the dike is raised to 1.2m above the high water level.

1954 Concrete bank protection with sandbag riprap is constructed upstream of the bridge.

1964 Drift removed from piers.

1966 Bridge widened an additional 13.4m to 20.1m four lanes with median and two sidewalks. Existing substructure lengthened downstream. Each pier supported with steel H piles average penetration 5.2 m to 9.1 m. Deck 13.7m above streambed. Concrete slope protection.

1988 Hwm 827.84m

1995 Close up pictures taken at the bridge on June 8; reported Y at peak flood approx. 8.5 to 9 m which is equivalent to 827.4 m. 0.9m deep scour hole developed under the west pier.

2005 Notes and flood photos taken between June 9 and 14.

2009 Scour survey by MSI.

2013 Bim: Estimated HWM 4 m below top of curb. Drift on piers and drift line at west bank.

2013 Scour survey by MMM Group.

2019 Scour survey by Trout Hydrology.