

LACHINE BRIDGE

The Lachine bridge by which the main line of the Canadian Pacific Railway crosses the St. Lawrence River was first built in 1886. The site is about seven miles west of Montreal and was chosen by the railway company as their outlet for the east after several locations had been considered.

As originally built the bridge was somewhat remarkable, including as it did the longest continuous span in the world. The main channel was crossed by two 408 feet (124.34 m) spans which with their flanking spans of 270 feet span (82.3 m) made a continuous layout over five supports with a total length of about 1356 feet (413.3 m). The remainder of the bridge consisted of an approach from the east of a 120 feet (36.6 m) deck lattice girder and an approach from the west of three 80 feet (24.4 m) deck plate girder spans followed by eight deck trusses of 240 feet span (73.15 m). The channel spans were made of the through type to give waterway, the transition from the deck construction being achieved in graceful curves. The first illustration on page 17 gives a view of this early bridge which remained in service up to 1913 when the increase of traffic, in weight and volume, demanded a modern double track structure. The necessity of permitting full continuance of both railway and river traffic had an important bearing on the design of the new bridge, and after careful investigation by the engineers of the railway in collaboration with the engineers of the bridge company, it was decided to build two separate but adjacent bridges. New piers were built to divide up four of the 240 feet (73.15 m) openings so that the new structure consists for each track of the following spans beginning from the west end:— Three 80 feet (24.4 m) deck plate girders, eight 120 feet (36.6 m) deck lattice girders, four 240 feet (73.15 m) deck trusses, one 270 feet (82.4 m) deck truss span, two 408 feet (124.34 m) through truss spans over the main channel, one 270 feet (82.3 m) deck truss and one 120 feet (36.5 m) deck lattice girder. The channel spans and their flanking trusses are built to a 20'0" (6.1 m) centre to centre width, the 240 feet spans to 46' (4.877 m) width, the lattice girders to 10' and the plate girders to 9', the distance between centres of tracks varying from 16'3" (4.953 m) at the west end to 27'0" (8.23 m) on the channel spans.