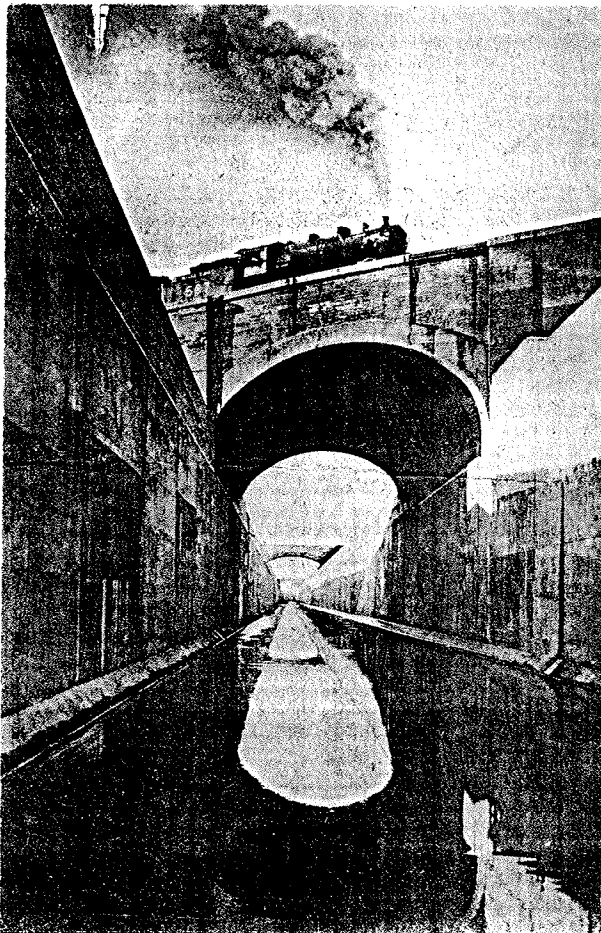


## HYDRO CANAL AND BRIDGES

Until the construction of the Chippawa-Queenston Power Plant (now Sir Adam Beck No. 1) in Queenston, power stations which harnessed water from the Niagara River were all located near the Falls. However, a station which was located further down the river would provide a higher generating potential for electricity, and so, Sir Adam Beck, the first chairman of Ontario Hydro (created in 1906), proposed the construction of a plant located on the Gorge, 12 1/2 miles downriver from the Falls. On January 1, 1917, the proposal to establish a hydro-electric plant at Queenston was passed in a vote by the electorate of Ontario. A bill was introduced in parliament soon thereafter, and this was passed in May of 1917.

Work began almost immediately on the construction of an intake structure at Chippawa. A reservoir was constructed at the top of the Gorge at Queenston, 294 feet above the river. This location provided the maximum possible drop for generating electricity in the powerplant, which would be situated directly below the reservoir. To convey the water from the intake to the plant, the 4-mile long Welland River in Chippawa was widened and deepened, and its flow was reversed. A canal running from the Welland River to Queenston would transport the water for the remaining 8 1/2 miles to the plant. The power station, measuring 590 feet x 180 feet, was completed in December, 1921, at a final cost of \$75,000,000. It was tested on Christmas Day, 1921 and opening ceremonies for the Chippawa-Queenston Power Station were held three days later. The plant was renamed the Sir Adam Beck Generating Station on August 15, 1950, 25 years after the death of Sir Adam Beck, who had been the driving force behind the project.



*A railway bridge over the hydro canal, c. 1920*

As the hydro canal was built through highly developed farmland in Stamford Township, a system of 10 bridges was built to allow traffic to cross. The first bridges to be built over the canal were the three railway bridges. Each bridge was built by a different railway line: the Wabash in 1918, and the Niagara, St. Catharines and Toronto Electric Street Railway, and the Michigan Central Railway in 1919. These bridges were made of poured concrete, and bear their construction dates in large numerals. The NS&T bridge was abandoned in 1947, when the line ceased its service to Niagara Falls, but was revived when the NS&T was incorporated into the Canadian National Railway in 1960.

The remaining seven bridges were built to accommodate vehicular traffic. These bridges all have small metal plaques which record, along with other information, the year in which the bridge was built. The location and year of construction of each of the bridges is as follows:

Thorold Stone Road -- 1922; Portage Road -- 1922; Lundy's Lane -- 1922; Drummond Road -- 1924; McLeod Road -- 1924; Dorchester Road -- 1925; Whirlpool Road -- 1928

Due to increasing amounts of traffic, each of the vehicular bridges had to be replaced, beginning in 1969, with the Thorold Stone Road bridge. In 1972, both the McLeod and Dorchester Road bridges were replaced, followed by Drummond Road in 1974 and Lundy's Lane, which had already been repeatedly widened to accommodate traffic, in 1976. The Portage Road Bridge, which had been repaired in 1964 and 1977, was finally closed in 1979, as a result of severe deterioration. A new bridge on Morrison Street was built in 1977-1978 as a replacement structure. The Whirlpool Road bridge was replaced in 1984.