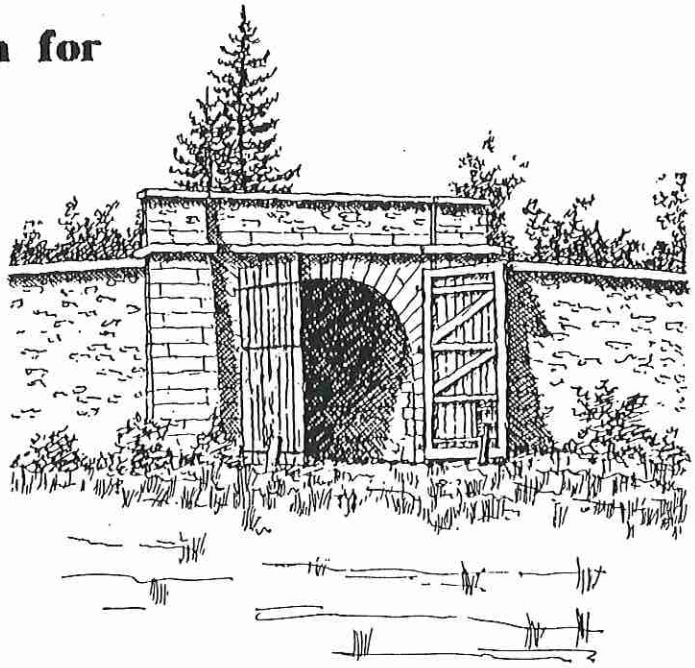
# THE LACAC OF BROCKVILLE

Local Architectural Conservation Advisory Committee

1990

## Designation Report

**Designation Recommendation and Description for**



# BROCKVILLE RAILWAY TUNNEL

## *Reasons for Designation under the Ontario Heritage Act:*

THE BROCKVILLE RAILWAY TUNNEL IS BEING RECOMMENDED FOR DESIGNATION FOR BOTH HISTORICAL AND ARCHITECTURAL REASONS. STARTED IN 1860, IT WAS CANADA'S FIRST RAILROAD TUNNEL. IT FORMED A CRITICAL LINK IN THE BROCKVILLE AND OTTAWA RALIWAY CO., AN EARLY RAILROAD WHICH WAS LATER ABSORBED INTO THE C.P.R. SYSTEM. THE CONSTRUCTION OF THE TUNNEL HAD A GREAT EFFECT ON THE DEVELOPMENT OF THE BROCKVILLE WATERFRONT BOTH COMMERCIALLY AND TOPOGRAPHICALLY. THE TUNNEL, WITH ITS LARGE WOODEN DOORS, FORMS A UNIQUE MONUMENT IN BROCKVILLE, AND IS OF DISTINCT INTEREST TO BOTH THE CITIZENS OF THE AREA AND TO VISITORS.

# *Historical Background:*

The Brockville and Ottawa Railway Co. was founded in 1853 to serve the area between the St. Lawrence River and the Ottawa Valley area, and to act as a feeder line to the much discussed, but as yet unbuilt, rail link between Montreal and Toronto. The railroad was an ambitious project with the line having a waterfront terminal in Brockville, a terminal near Arnprior and a branch line to Perth.

Money for the railroad came from both municipalities and private subscriptions. In 1853 the newly formed company entered into a contract with the Sheffield, England firm of Sykes, DeBergue and Company to complete the line in 3 years for the sum of 930,000 pounds. The company's 1852 list of provisional directors contains such notable community leaders as : the Hon. George Crawford, the Hon. A.N. Richards, the Hon. George Sherwood, William Matthie, D.B.O. Ford, James L. Schofield, R. P. Colton, Charles E. Jones, all of Brockville; Robert Bell, Carleton Place; James Shaw, Smith Falls; Robert P. Watson, Almonte; and Andrew Dicksen of Pakenham.

By April 1854, 60 miles of right-of-way had been cleared with the grading of the line in progress. The idea of a tunnel was considered by some as an unnecessary expense. Notable among the tunnel critics was Supervising Engineer, Samuel Keefer, who contended that a route through the westerly part of town could be built at half the expense, in half the time. However, Sykes, DeBergue and Co. who had the contract for the whole line insisted on the tunnel route.

On September 16, 1854 the cornerstone for Canada's first railroad tunnel was laid by Adiel Sherwood amid much fanfare. John and David Booth, the tunnel subcontractors, excavated the land between Water and King Streets, and completed 1/3 of the tunnelling north of King Street before funds ran out. Sykes, DeBergue and Co. were in financial trouble. The Booth Co. and the workers had not been paid in some time, and the municipalities were not prepared to advance any more money. When work stopped in 1855 the cost of the tunnel construction was approximately 15,000 pounds.

New financing was arranged and by December 4, 1856, an advertisement appeared in the Brockville Recorder requesting bids for the completion of the railroad. The Hon. George Crawford was sent to England to make arrangements with the firm of Dales and Company, the new general contractors, and to purchase the rails for the line. In Brockville at this time there was considerable discussion as to whether the remaining two-thirds of the tunnel should be completed or abandoned in favour of a new route around the western edge of the town. In the end the firm of Brown, Row, and Company was awarded the

sub-contract to finish the tunnel, which they finally did in December 1860. The railroad had been operating without the use of the tunnel since January 25, 1859.

The large area in front of the southern entrance of the tunnel, and what is known as Blockhouse Island, were created largely with fill from the excavation and tunnelling. This area housed the southern terminus of this railroad, a roundhouse, repair shed, docks and warehouses. A siding extended along the south side of Water Street to east of Park Street and served the industries and coal companies located there.

The roundhouse burned down in 1870, and when the Brockville and Ottawa Railway became part of the C.P.R. system in 1881, the Brockville waterfront area was no longer the southern terminus of this independent railroad. The tunnel, however, continued to be used for another 90 or so years for train traffic to the waterfront.

## *Architectural Description:*

The Brockville Tunnel is 1730 feet long, with a height of 14 feet 9 inches and a width of 14 feet. It accommodated a single 4 feet 8 and a half inch standard gauge track. A cross-sectional view of the tunnel would show it horseshoe-shaped with the arch supported by slightly bowed sides. The inside surface of two-thirds of the tunnel is lined with rough-coursed stone constructed with holes spaced to prevent the build-up of hydrostatic pressure. The centre section was cut through hard rock and is not lined, and has a large vertical shaft in the arch of the tunnel. At the southern end two air vents rise from each side of the ceiling. These two vents were disguised as chimneys on the roof of the Victoria Building.

More noticeable architecturally are the two entrances and their large wooden doors closed at night to exclude animals, snow and ice. The southern entrance was located and consturcted in such a way that Water Street passes over it on a very steep grade. The 80 foot long embankments on either side are held by a retaining wall of rough-coursed stone with a protuding pier at each end. These two piers rise above the embankment and for many years have formed the base for light standards. The tunnel arch is framed by two protruding piers with the stone wall rising above the entrance by about 7 feet. The north entrance facade of the tunnelis similar to the middle of the southern entrance, and is located in a rock cut not readily accessible.

The tunnel, in its day, was a major engineering undertaking built in part by Yorkshire men who later moved on to build other

railroad tunnels in North America. It is in remarkably good shape, a tribute to its builders. However, there is a large amount of calcification on the stone, arising from years of water seeping through the joints in the stone. There are a couple of areas where underground springs or leaking watermains have caused damage to the inside wall of the tunnel.

## *Recommendation:*

The Local Architectural Conservation Advisory Committee recommends that the Brockville Tunnel be designated under the Ontario Heritage Act.

The Brockville Tunnel was Canada's first railroad tunnel, and is a fine example of the engineering involved in the linking of all parts of Canada by rail. The presence of the tunnel played an important role in the development of Brockville and particularly its waterfront area.