CANADA'S FIRST RAILWAY TUNNEL: Brockville is home to Canada's first railway tunnel constructed between 1854 and 1860 as part of the Brockville and Ottawa (B&O) Railway. The B&O tied the St. Lawrence River to the Ottawa River to take part in the lucrative timber trade. The B&O was chartered in 1853.



TO TUNNEL OR NOT TO

TUNNEL: The B&O's charter specified that a station had to be built on the waterfront within the town's limits, resulting in much debate. Should the line go straight to the waterfront by way of a tunnel, or should the line loop around to the west and avoid the town's substantial rise? The tunnel proposal won out with tunnel construction starting in 1854 by John Booth and Son.

Plans called for a single track tunnel on a one percent grade from the waterfront up to Pearl Street. The Grand Truck Railway (GTR) built a beautiful stone-arched bridge north of Pearl Street, to allow the B&O to pass under the GTR as it headed north towards Sand Point on the Ottawa River.

MULTIPLE CONSTRUCTION TECHNIQUES: The tunnel was constructed in three distinct sections. The south portion was trenched from Water to King Street, lined, then covered over. Two air drafts were fitted in the lined stonework to draw off steam and smoke. These shafts connected to smoke stacks above the tunnel. After City Hall was constructed in 1862, the shafts were extended right up through City Hall. The tunnel portion north of King Street was blasted through solid granite using gun powder, as dynamite had not yet been invented. Still today, the centre section is comprised of open craggy rock with interesting and colourful mineral deposits. The northern third section was tunneled and lined from the inside.

After two years of construction, work stopped due to financial problems. For the next two years, Brockville citizens had to put up with a stalled construction zone, especially as it crossed King Street. Planks were used to cross "the dig" and were quite dangerous as noted by the citizenry.

TOWN REFERENDUM ON

TUNNEL: The B&O secured additional funding while debate continued regarding the tunnel. Finally a referendum was held and Brockville voted to complete the tunnel. Yes, Brockville wanted its tunnel.

Finally after two more years of construction the first train passed through the tunnel in December of 1860, six years after the laying of the cornerstone.



WATERFRONT EXPANSION: Rubble from the tunnel was used to extend Brockville's waterfront and create a causeway connecting to Block House Island. (Yes, it was actually an island at one time). The B&O constructed a passenger station and an engine works with a large roundhouse was built out on Block House Island. Spur lines were installed along the waterfront to service the many waterfront industries.

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MIGRATION TO THE CANADIAN PACIFIC RAILWAY: The B&O was absorbed by the Canada Central Railway in 1878. Within three more years the entire system

RAILWAY TUNNEL

Canada's First – 1860

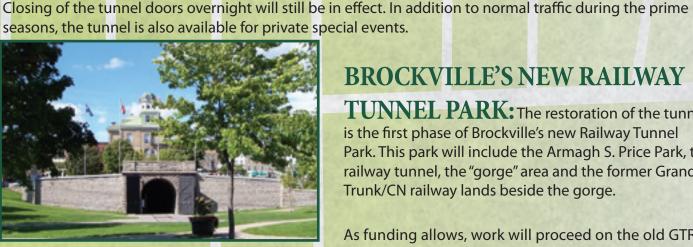
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TUNNEL INFORMATI GUIDE

Brockville Railway Tunnel Open Daily

> 9:00am to 9:00pm No Admission Charge

www.brockvillerailwaytunnel.com



network access.

was transferred over to the Canadian Pacific Railway (CP).

removed from the tunnel and waterfront area.

TUNNEL COMMITTEE RESTORATION

chairmanship of councillor David LeSueur. Much engineering

work was undertaken to determine the feasibility of opening

Masonry rehabilitation work was completed during 2016-

installed. State-of-the-art lighting, manufactured by Philips

and emergency "help" buttons, along with Wi-Fi and cellular

the tunnel for public recreational use. An independent market

2017. A new drainage system and smooth concrete floor were

Lighting, was installed to highlight the structural and geological

features. Security systems were added including video cameras

assessment study was completed and fund raising commenced.

PROJECT: The Brockville Railway Tunnel committee

was formed in 2011 by Brockville city council under the

rightful and original owners, the people of Brockville.

CP operated traffic through the tunnel for over 110 years. Regular steam-engine operation ceased in 1956, as the last two Mogul 2-6-0 engines became unserviceable. Small yard diesels replaced the

steam engines with the last diesel passing through the tunnel in 1969. In the 1970's, the tracks were

CITY OF BROCKVILLE ACQUIRES TUNNEL: The City of Brockville wanted

the CPR waterfront property to create a new park. In 1983 a deal was struck. Brockville purchased the waterfront

lands from CP for one dollar which included the tunnel. These negotiations finally saw the tunnel returned to its

Armagh Sifton Price Park was created and the first 80 feet of the tunnel opened for viewing. Brockville and

visitors have enjoyed the park for decades but the full length of the tunnel remained closed to the public.

Gorge

ROC

H

R

C

Z

Pearl St. W.

King St.

TUNKEL BAY

BROCKVILLE'S NEW RAILWAY

TUNNEL PARK: The restoration of the tunnel is the first phase of Brockville's new Railway Tunnel Park. This park will include the Armagh S. Price Park, the railway tunnel, the "gorge" area and the former Grand Trunk/CN railway lands beside the gorge.

As funding allows, work will proceed on the old GTR/ CN property.

Brockville citizens now have their railway tunnel back. The railway tunnel was an amazing engineering feat in its day. In its new life, it is sure to serve its citizens for decades to come.

BROCK TRAIL

Plans are to have the railway tunnel and north gorge area extend through the stone arch bridge under the CN tracks and connect to the city's Brock Trail recreational path system. Residents and visitors will be able to walk or cycle from the St. Lawrence River, through the tunnel, and onto the city-wide Brock Trail system.

PHASE II

The Brockville Railway Tunnel Park concept envisions redeveloping the old railway lands beside the tunnel's gorge area. Architect concept plans provide for parking of cars and buses, a railway roundhouse-themed multipurpose centre, old railway cars, play and viewing areas and spaces for gathering and historical displays. Plans will proceed as funds are raised and city council approvals received.

Photo Credits: Brockville Museum, Keith Hare



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IUNNEL

Canada's First – 1860

CONTACT INFORMATION

City of Brockville Railway Tunnel Committee tunnel@brockville.com www.brockvillerailwaytunnel.com



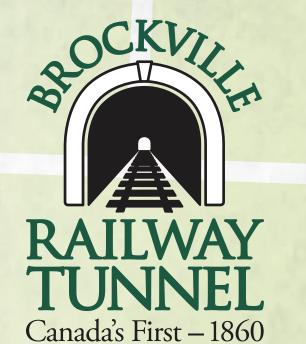












CANADA'S FIRST RAILWAY TUNNEL

Brockville's Railway Tunnel Park

FREE ADMISSION

There is no admission charge to tour the tunnel. Please go through, as many times as you wish.

OPEN SEASONS

The tunnel is open for public touring from the first of April to the end of November, plus for special events throughout the year. The tunnel may stay open during winter months (be sure to check).

OFFICIAL OPENING

Restoration of our historic tunnel was completed during 2016-2017, for Canada's 150th birthday. The tunnel was opened to the public officially on August 12, 2017, following a grand parade and an opening ceremony at the tunnel's south portal. Over 25,000 people toured the tunnel that first weekend.

WELCOME

The City of Brockville welcomes you to Canada's First Railway Tunnel at Brockville's new Railway Tunnel Park.

BROCKVILLE AND OTTAWA (B&O) RAILWAY

Brockville chartered its own railway company in 1853, with a vision to tie the St. Lawrence River to the Ottawa River for the lucrative timber trade. The tunnel built by the B&O connected the railway directly to a waterfront station within the town's borders.

DONATIONS

Donations help cover costs of lighting and general maintenance. Donation boxes are located just inside the tunnel at both entrances. Your support is much appreciated.

DAMPNESS

The tunnel is damp and ground water does drip from the tunnel's ceiling and walls. Blocking the water would negatively affect the tunnel's integrity. Water is carried away through the tunnel's drainage system. Visitors may wish to wear head gear.

TUNNEL FACTS

Tunnel constructed between 1854 and 1860

It is half a kilometre (525 metres) long. For our American friends, one third of a mile long (1753 feet). It is 4.5 metres wide (14.5 feet) and 4.3 metres high (14 feet).

The tunnel is straight with a one percent grade from south to north.

The average temperature inside is about 13 degrees Celsius (55 degrees Fahrenheit) year-round.

The tunnel starts south of Water Street at Armagh S. Price Park and exits north of Pearl Street.

The wooden doors at both entrances are closed each

evening. Originally used to keep the cows out.

NORTH GORGE AREA

TUNNEL

OPEN HOURS

The tunnel is open daily,

7 days a week, from:

9:00 AM to 9:00 PM

The tunnel doors are closed overnight.

The tunnel exits at Pearl and Victoria below street level. This north "gorge" area curves to the east and runs to the Canadian National Railway (CN) mainline where a beautiful stone arch bridge exists. A paved wheelchair accessible ramp, allows visitors to exit to the tunnel's north parking; site of the future phase II of Railway Tunnel Park.

SPECIAL EVENTS

The tunnel is available for special events, even in winter, (tunnel does freeze). Contact the Railway Tunnel Committee at tunnel@ brockville.com to book an event.

GEOLOGY

Groundwater has always seeped through the walls and ceiling. Minerals in this water have been deposited to create the beautiful mineral formations seen in the tunnel.

They are primarily calcite, which is white in colour, and dolomite which is yellowish. Traces of iron appear orange/red, while nickel and copper are blue/green

There are stalactites hanging from the ceiling and walls and grow about one millimeter per year.

RESTORATION **ACTIVITIES**

Masonry repointing and repair inside the tunnel was completed late 2016 to the spring of 2017. A new gravel floor and drainage system was then added, followed by a smooth concretepaved walkway and curbs.

LIGHTING AND **SOUND SYSTEMS**

The LED lighting system, manufactured by Philips Lighting, runs along the walkway. The system has 735 light fixtures, each with 48 programmable Light Emitting Diodes, for a total of over 35,000 LEDs. The tunnel's lighting and sound systems allow for an infinite variety of special effects for the entertainment of visitors of all ages.

TRAIN TRAFFIC

Trains travelled through the tunnel for over110 years. Originally 4-4-0 wood-burning engines, then 2-6-0 steam engines. Small diesels replaced the steam engines in 1954. The last train passed through the tunnel in 1972. CP removed the tracks from the waterfront and tunnel in the mid 1970's.

TUNNEL SOUVENIRS

Tunnel merchandise is available. Tee-shirts, golf-type shirts, hats, pins, stickers, are available at the Brockville & 1000 Islands Tourism Office, 10 Market Street West. Profits support the tunnel's construction fund.

SAFETY FEATURES

Video cameras have been installed and emergency "HELP" buttons along the tunnel's length connect to Brockville's Police department. The tunnel features a free public Wi-Fi connection and cell phones are usable.

CITY OF BROCKVILLE ACQUISITION

The City acquired the tunnel and waterfront lands in 1983 from the Canadian Pacific Railway (CP). The Armagh S. Price Park was developed and the first 25 metres (80 feet) of the tunnel were opened for visitors in 1986.

LOCAL CONTRACTORS AND SUPPLIERS

Much of the design, supply and renovation work was conducted by a consortium of local contractors and suppliers under the leadership of Brockville's Ford Electric.

TOUR TRAIN

With Brockville and District Rotary Club support, the tunnel committee is pursuing a visitor tour train which will operate from the tunnel's south portal and transport visitors to various Brockville downtown locations.

BROCKVILLE'S OTHER ATTRACTIONS

Aquatarium **Brockville Arts Centre** 1000 Islands Boat Cruises **Brockville Museum**

Fulford Place

Brockville Country Club Dive Centre Skywood Zip-Line Park

Rotary Park and Splash Pad

ESCAPE ROOM

The historic railway caboose at the tunnel's south portal becomes Brockville's escape room. Escape rooms are a trendy gaming experience for all ages. Privately operated, "Brockville Escape" adds to the overall Brockville railway Tunnel experience.

Photo Credit: Keith Hare



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