

BROCKVILLE RAILWAY TUNNEL - BROCKVILLE, ONTARIO



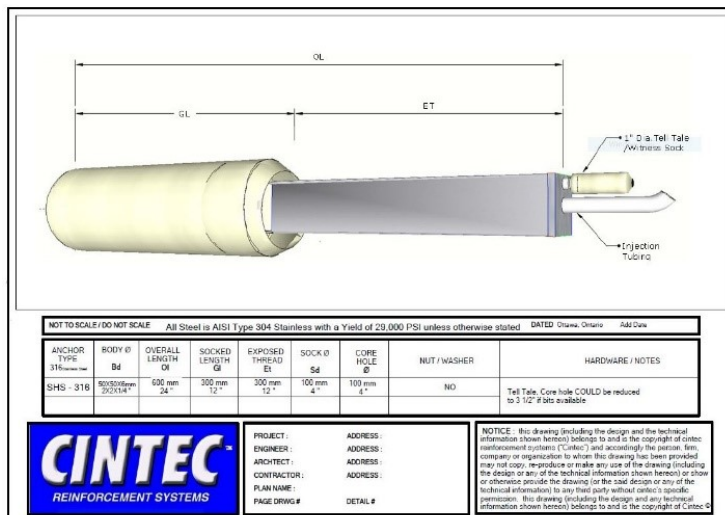
THE BROCKVILLE TUNNEL 1860

Construction of Canada's first railway tunnel which runs from this point for 1,730 feet in a northerly direction, began in September, 1854. Designed to give the Brockville and Ottawa Railway access to the riverfront, it was opened on December 31, 1860. This railway, incorporated in 1853, ran from Brockville to Sand Point, near Arnprior, with a branch line from Smiths Falls to Perth. Its first train left Brockville's Grand Trunk station on January 23, 1859, almost two years before finances permitted completion of the tunnel. The Brockville and Ottawa amalgamated in 1878 with the Canada Central Railway, which was absorbed by the Canadian Pacific Railway in 1981.

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Situated along the shores of the St. Lawrence River in the City of Brockville, Ontario, sits one of Canada's little-known pre-Confederation engineering gems; the arch-shaped, 1,723 foot long Brockville Tunnel (Diagram 1). This underpass served as a rail link for the Ottawa Valley timber trade in the north to the shipping route along the St. Lawrence River in the south. Predating the many tunnels in the western Rockies, and notwithstanding financial woes and logistical planning debates, construction of the railway tunnel began in August of 1854 by the Brockville and Ottawa Railway and welcomed its inaugural locomotive traffic on New Year's Eve of 1860.

The single-track fairway consisted of an archway tunnel 14 feet 5 inches in height and spanned 14 feet across. The tunnel's interior bottom and top thirds was composed of the combination of stone bonded with water lime. The central band's rugged stone remained unlined and with the assistance of dripping groundwater over a 40 year time period, exposed striking mineral deposit formations.



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As the demand for and development of larger iron horses increased and the need to utilize the small line decreased, the Brockville Tunnel experienced its imminent closure and its last track visitor in 1969. The tracks were completely removed by 1976, the tunnel and surrounding property sold to the City of Brockville in 1983 and after the North and South tunnel entrances were mandated as Historic Sites, a Tunnel Committee formed in 2011 to purpose preservation and rehabilitation plans.



Amongst the interior masonry rehab requirements was the implementation of Cintec Reinforcement Systems' anchors. The custom designed stainless steel anchors (Diagram 2) consisted of 24" long, high-grade square hollow section steel rods, which included 12" of socked Presstec grout and as set out by the Engineer's strategic placements, were drilled into 4" diameter holes within the interior arched stonework. This extensive masonry project commenced in August 2016 and continued on into the summer of 2017.

Stepping forward into present day, the restored Brockville Tunnel now serves as a major City attraction, featuring a LED light and music experience highlighting the colourful mineral deposits and stalactites. The restoration, as part of Phase One of the Railway Tunnel Park redevelopment, was completed in 2017 and officially opened to the public on August 12, 2017, in time for Canada's 150 celebrations. The attraction not only entices thousands of guests to travel the entire 525 meters under the Brockville City Hall through to the North Gorge foot path, but has encouraged other redevelopments and improvement plans within the city.

