LUCIEN BRAULT

LINKS BETWEEN TWO CITIES

Historic Bridges between Ottawa and Hull

published jointly by

Ville de Hull

and

City of Ville d' Ottawa

1989

Don de Eugène Touchette 2005

this publication is a co-edition of
the City of Hull, Province of Quebec,
and the City of Ottawa, Province of Ontario,
Canada.

The co-ordination of this publication was undertaken by MEDIARECHERCHE enr. under the direction of Mesdames Francine Chevrier, Assistant Director of the Municipal Library Service of the City of Hull and Louise Roy-Brochu, Director of Archives and Corporate Records of the City of Ottawa.

Canadian Cataloguing in Publication Data

Brault, Lucien, 1904-1987

Links between two cities : historic bridges between Ottawa and Hull

Issued also in French under title: Les liens entre deux villes.
ISBN 2-9801306-0-5 (City of Hull) -
ISBN 0-9692854-2-6 (City of Ottawa)

1. Historic bridges--Ontario—Ottawa. 2. Historic bridges--Quebec (Province)--Hull. 3. Ottawa River (Ont. and Quebec)--Bridges. I. Hull (Quebec). II Ottawa (Ont.). III. Title.

FC2799.B7B7313 1989 725'.98 C88-090474-7
F1054.N38B73 1989

Legal Deposit

Bibliothèque nationale du Québec
National Library of Canada

1989

CITY OF OTTAWA
CITY HALL
111, SUSSEX DRIVE
K1N 5A1
(613) 564-1342

VILLE D'OTTAWA
HOTEL DE VILLE
111, PROMENADE SUSSEX
K1N 5A1
(613) 564-1342

JAMES A. DURRELL
MAYOR MAIRE

The City of Ottawa is happy to have joined with the City of Hull for the production of this booklet. We are, as well, proud to pay homage posthumously to Dr. Lucien Brault, renowned historian of the Ottawa Valley, who passed away last year. At the end of his life, Mr. Brault was preparing the draft version of the publication which we are now presenting. For him, this was without doubt the best way to unite in one text the numerous subjects with which he had dealt throughout his career as a writer of our regional history.

Bridges are undeniably engines of economic growth of any region since they facilitate communications and trade between the different communities living on either side of a river. The need for a bridge was felt in our region as soon as the banks of the Ottawa River were inhabited. Still today, the inhabitants of the two river banks daily cross the numerous bridges which project over the Ottawa River. Thanks to the work of Mr. Brault, our people will now be able to appreciate the origins of these bridges.

Yours sincerely,

James A. Durrell
Mayor

Ville de Hull

Dear Readers:

The history of the bridges which project over our rivers bears witness to the constant and necessary links always maintained between the population of the Outaouais region. Links of communication, brotherhood and co-operation, they are, for us, a symbol of the contribution made by the two great founding cultures of Canada to the progress of the National Capital Region, of which Hull has been the point of origin. The bridges of Ottawa and Hull remind the thousands of people who cross them each day that this unity in the diversity, constitutes one of the real riches of the Hull-Ottawa region.

The City of Hull is happy to have this occasion to join with the City of Ottawa to pay homage to the work of Mr. Lucien Brault, the Outaouais historian whose untimely loss we deeply regret. Once again, thanks to his relentless work, the people of the Outaouais region can better know and appreciate the history of the bridges they survey daily.

Michel Légère,
Mayor of Hull

Maison du Citoyen
25, rue Laurier
Hull (Québec) J8X 4C8
(819) 595-7100

TABLE OF CONTENTS

PREFACE

The agitated steam of the Asticou — that magnificent boiler where the waters of the Ottawa flow without ceasing and press into the funnel to then explode; where the course of the river twists in a bend inevitably changing its path — this steam holds secrets from the past. With a hint of imagination, it is possible to see in the steam magical memories. To perceive through the evanescence a paddle whell and straw hats. To be strirred by the noise of horses in the public square and by the creaking of the boards along the bridges. To perceive among the melange of damp odours, the cooking bread, the ovens, the winds sweening along the essence of the harvests. Beyond the imperturbable thunder of the Asticou, to hear the shouts, the grating, and all the noises that bear witness to the human stubborness to live and develop in these places. [1]

The context of this Publication

When he passed away on January 3rd, 1987, Lucien Brault left behind a project about to be completed. An incalculable number of hours had been spent in response to a joint idea of the mayors of Ottawa and Hull, launched in 1985. In the spirit of a better understanding of the reality that unites us, the river people of the Ottawa, the cities of Hull and Ottawa, had decided to jointly sponsor a study of the bridges which link the two cities: the Chaudière, Prince of Wales, Interprovincial (Royal Alexandra), Champlain, Portage and MacDonald-Cartier bridges. [2]

Lucien Brault, a prolific historian, did not limit himself only to this mandate. His study touched on the majority of the historic bridges in our region, some of which were on the Gatineau River, on the Québec side, and others, on the Rideau River, on the Ontario side. However, owing to

---

[1] This is extracted from a master's thesis presented at the Université du Québec à Montréal, in June of 1988, by Luc Villemaire, the title of which is **Histoire institutionnelle de l'Outaouais québécois: la naissance d'une région (1791-1830)**, page iii.

[2] See Resolution OC-85-203.

the initial intentions of the two cities on one hand, and the required format for this publication on the other, those parts dealing with the bridges other than those over the Ottawa River were excluded. This booklet which we are introducing is therefore not a complete work, but rather a reduced version of the last work of Lucien Brault.

The Ottawa River

"Emanating from Great Victoria Lake, this river crosses Lake Timiskaming, bathes Ottawa and empties into the Saint Lawrence near Montreal, after a course of 1 100 kilometers. [3] Unconstestably attributed to the tribes living along the great river, Le Toponyme, an information bulletin about the names of places in Quebec, produced by the Commission de toponymie, describes as follows the origins of the name of the Ottawa river:

> "It is generally agreed that the term comes from the Algonquin word adawe, meaning "to buy and sell". (...) It is well to remember that at least two other meanings are sometimes advanced to explain this name; according to some, Outaouais results from the evolution of the native word ottew, which means "to boil". According to others, among them, the historian, J.-B.-A. Ferland, this term means rather "those with ears". The term comes from the practice, still followed in certains places, of cutting the ear from the top to the bottom and inserting in the ears strips of skin or cloth; this operation made the ears very big". Regardless, the term has been used since the very beginning of the colony: "We only refer to the journal of the Chevalier de Troyes in 1696, and the map by Deshaies in 1695, which refer respectively to the "Chemin des Outaouais" (Ottawa Road) and "R. des Outaouais" (Ottawa River)." [4]

Joseph Bouchette, a prominent person in the beginning of the 19th century, described the Ottawa River in 1815 at the Asticou bend in the following manner: "... there are several small islands which very much obstruct and stop the flow of the river: on the opposite side, a waterfall 26 feet high makes for a pleasant viewpoint: a little above this place, there

---

[3] From ORIGINE DE:RIVIERE DES OUTAOUAIS in **Le Toponyme**, Volume 4, no. 3, September, 1986.

[4] **Le Toponyme**, Ibid.

is a bank of rocks, which spreads almost across the river, and the waterfalls of the Petite Chaudière". [5]

Bouchette, the Surveyor-general for Lower Canada, received on May 29, 1824, an order from the Governor, Lord Dalhousie, to proceed without delay to a tour and a report on the new establishments in the townships of Lower Canada on the north shores of the banks of the St. Lawrence and Ottawa Rivers. This, in order to verify and make recommendations upon the observed situations. [6] Of the 90 pages of this report, 24 pages, pages 26 to 50, deal directly with the colonies by the shore of the Asticou and include numerous recommendations. In his report, Bouchette was the first to recommend the construction of a bridge at this point to permit crossing the Ottawa River:

> "(...) the communication between this Province and Upper-Canada would, thereby, become uninterrupted, certain, and secure; and must, necessarily, consolidate and strenghthen the Canadas (...). It is sincerely to be hoped, that the spirit of enterprise and improvement, which has of late years made its appearance in this Colony, will be extended to the amelioration suggested, and that the Legislature of both Provinces, always awake to the interest and prosperity of their respective departments, will devote a share of their usual attention to the opening of Canals, and the erection of Bridges, which must materially facilitate their mutual commerce". [7]

From that time on, and even today, the question of bridges over the Ottawa River would be of constant concern to the people of this region.

Chantal Berniquez and Luc Villemaire

---

[5] Joseph Bouchette, **Description topographique de la province du Bas-Canada...**, Montréal: Edition Elysée, 1978. Circa 1815, London, Charing Cross, p. 259.

[6] See Joseph Bouchette, **General Report of an Official Tour Through the New Settlements of the Province of Lower-Canada,** Québec, Thomas Cary & Co., Freemasons' Hall, 1825, 91 pages with 24 pages of annexes.

[7] **Ibid,** page 30.

BRIDGING THE CHAUDIERE

THE FIRST UNION BRIDGE

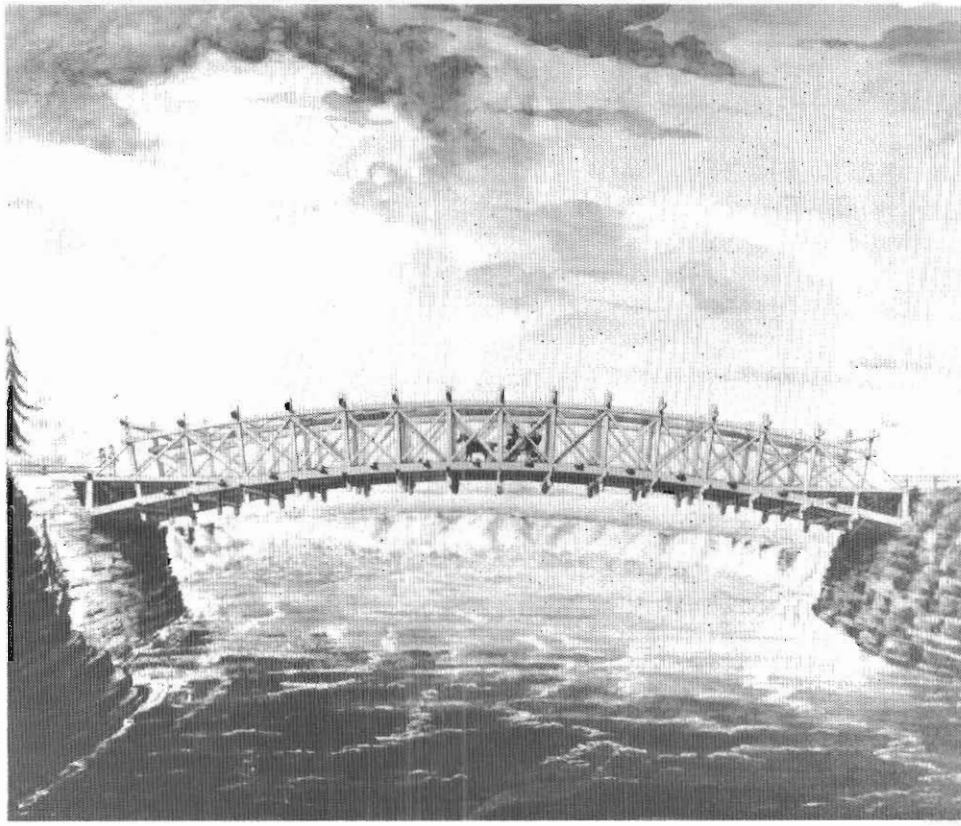
The building of the first bridge across the Ottawa River was authorized by the Earl of Dalhousie, Governor-in-chief of Canada, in a letter to Colonel John By, the engineer responsible for the construction of the Rideau Canal, on September 26, 1826. Dalhousie and By, together with John MacTaggart, C.E., and several others, had met earlier in the day on a flat rock overlooking the Chaudière Falls near the northern end of the present bridge. They had gathered to view the site and to consider the possibility of spanning the river here. Although no better site offered, the difficulties were formidable.

When the gentlemen retired in Hull to the house of the prosperous timber merchant, Philemon Wright, to discuss the proposal, they were unanimous in the opinion that the building of a chain of wooden bridges over the Chaudière was a necessary precondition to starting construction on the Canal. John MacTaggart was put in charge of designing and supervising the project. "If we manage to build and finish it off, as we ought", he wrote to a friend the following month,

> it will surpass almost any other in the world as a wonderful piece of superstructure ... The arches are to curve between a chain of rocky islands directly over the magnificent and splendid Falls of Chaudière! Behold, but the scene, look at the mass of waters coming smoking over the shelving precipices, formed of the hardest strata of laminated limestone: down they tumble, in some places more than a hundred feet into the cauldrons or kettle beneath; where, instead of their furiously driving, as you may imagine, down the channel, they in some instances vanish fairly, work their way through subterranean passages and come up boiling white half a mile down the river.

Although contemporary accounts differ slightly as tot he details of the construction at this challenging site, it is possible to get a general overview of how the bridge was built.

The bridge did not cross the river in a straight line. It was, in fact, a series of seven bridges which zigzagged across the islands and rocky promontories of the Chaudière. The largest gap to bridge, across the "Big Kettle", was just over 220 feet. In the "Big Kettle", sounding to a depth of 330 feet did not find bottom. This bridge was the main engineering challenge, and several attempts failed before the permanent structure was in place.

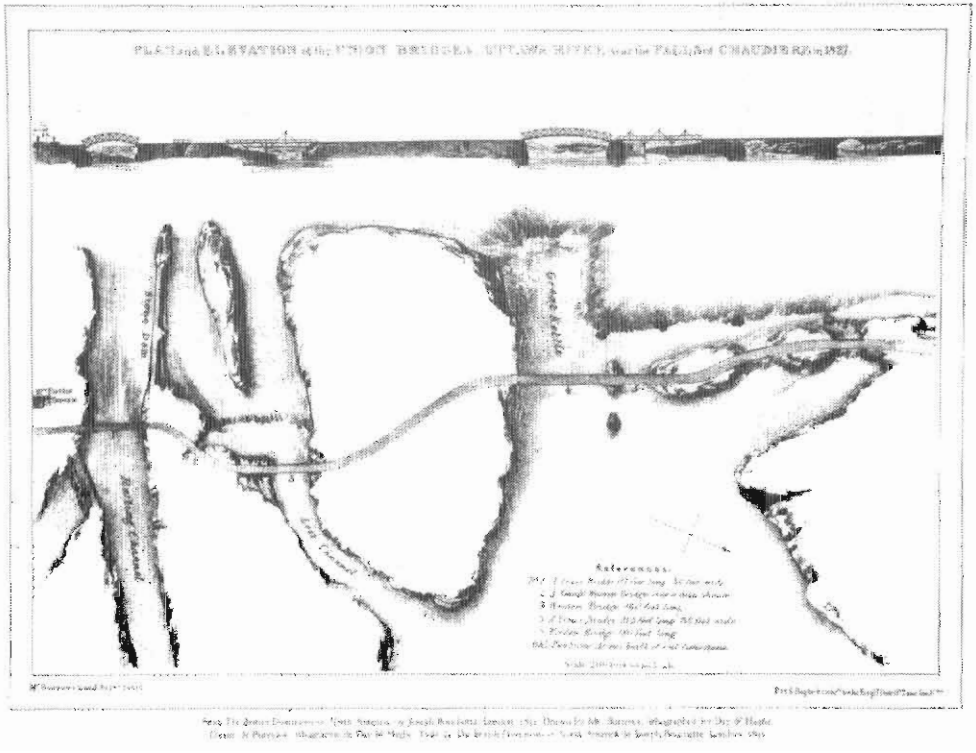


Sketch of the first suspension bridge on the Chaudière. 1827.
(Coll. Ottawa City Archives)

The first link across the Big Kettle was made by Captain Asterbrooks of the Artillery. He took a brass cannon to the ledge at the north end of the proposed bridge and shot a rope clear across to the island. The force of the firing severed the half inch rope on the first two attempts. On the third

try, one-inch rope was used, and the connection was made. The cannon rope was then used to haul across the heavier ropes, which were draped, four feet apart, over ten foot high trestles. Planks were laid traversely and pinned to the ropes; then boards were nailed longitudinally to the planks. Cleats over the boards made the steep side sections near the trestle supports less slippery, and rope handrails were slung on each side.

When Lord Dalhousie came to view the progress of the bridge on September 26, 1827, he was able to make the complete crossing, with Lady Dalhousie, from the Hull to the Ottawa side. In his diary, he described the bridge:



Lithography illustrating "The British Dominions in North America" by Joseph Bouchette. 1831.
(Coll. N.C.C.)

No.1 and 2 Bridges are stone arches dry builded but coped with lime and large stones on edge. Each arch is 57 feet.
No.3 a long straight bridge of wood, rough beams, two supports fixed on a flat rocky bed — 180 feet.
No.4 is to be a wooden Bridge 212 feet span with an easy spring of arch 20 feet. There is however now only a temporary suspension bridge to facilitate the preparations, and give a walking passage to people employed — of this I must refer to the drawing, only saying that it is a support on three cables, with planks as pathway and a handrail to hold by. I have ordered a model of this which I intend to send to Dalhousie Castle.
No. 5 a straight Bridge 104 feet in length, with three supports.
No. 6 a wooden Arch 117 feet long, spring 9 feet, this and No.4 are done on a mechanical principal common in America —the uprights tie together in triangular divisions, and give great strength to beam, or Arch on which the path rests — it is not pleasing to the eye, but that will not be considered, if it answers in more material points.

A seventh bridge, which Dalhousie does not describe, was needed to provide access to the canal site. It was a log bridge across a small stream on the south shore, long known as Pooley's Bridge after one of the Colonel By's assistant engineers.

After Dalhousie's visit, a series of discouraging setbacks delayed the work. The temporary bridge was strengthened with chains in preparation for building the main span, and new planking was laid over the chains. When the planking from each side was within ten feet of joining in the middle, a chain snapped. The workmen were thrown into the river and three were drowned.

For the next attempt, a large scow was built and anchored in the channel below the bridge site. Stronger timber trestles were erected, and two eight-inch ropes were slung across the channel over them. As the building of the permanent wooden bridge began, screw-jacks on the scow were used to keep the frame up to its proper level. The new bridge was almost complete in the summer of 1828 when a strong gale turned the superstructure over upstream against the wind and the scow was pulled downstream by wind and current. When it was clear that nothing could be saved, the cables were chopped loose and the whole structure sailed off down the river.

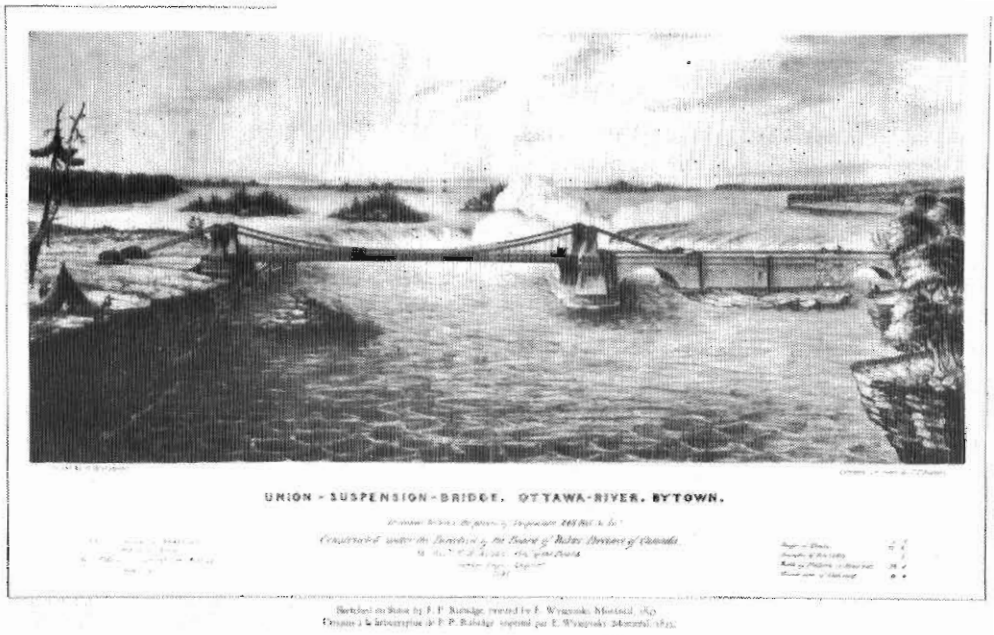
Making a fresh start, the builders used, instead of ropes, iron chains with ten-inch links procured from naval stores at Kingston. In five weeks, a kind of suspension bridge was built; and in October 1828, two years after the work begun, the series of six sturdy bridges capable of bearing six-ton loads open, a tribute to the skill of the Royal Engineers and the competence of the French Canadian and Irish workmen.

Union Bridge served its purpose in facilitating the building of the Rideau Canal. As a public toll bridge — Colonel By had conceived of the increasing number of settlers on the river. But it had not been designed for long use. In 1834, the attention of the military authorities was called to the insecure condition of the main span. Two large chain cables were stretched underneath the bridge for support. This measure sufficed to extend the life of the bridge for two more years; but on May 5, 1936, it was closed to the vehicular traffic and on the afternoon of May 18 it finally collapsed.

THE UNION SUSPENSION BRIDGE

Union Bridge was sorely missed, and citizens on both sides of the river began lobbying their provincial legislatures for funds to build a new bridge across the Big Kettle. Both legislatures granted funds in 1839; and on August 27, 1840 Engineer H.H. Killaly, Chairman of the Board of Works, was ordered to carry out a survey and make recommendations for a new bridge. Appropriately enough, 1840 was also the year in which the Union Act was passed, politically uniting the two provinces of Upper and LOwer Canada.

The new bridge, called the Union Suspension Bridge, was designed by Samuel Keefer, who was later to design the spectacular suspension bridge across Niagara Falls. His design for the Chaudière bridge was superbly elegant and, in terms of the technology of the day, extremely daring.



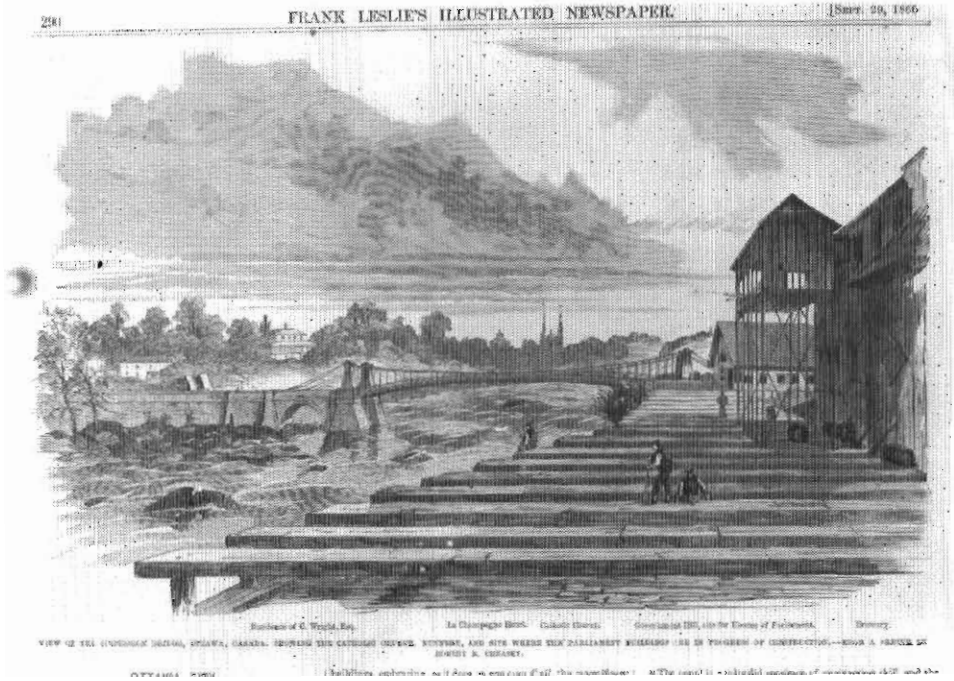
The second suspension bridge. Lithography by F.P. Rubidge. 1843.
(Coll. N.C.C.)

The contract for the construction of the new bridge was awarded to Alexander Christie and to E. Wilkinson. The four-ton foundation stone was laid, in a short public ceremony, on May 16, 1843.

The building material for the new bridge was a matter of particular attention. Sheds of sufficient length were built to cover the heavy wire cables designed to support the superstructure. The cables were all manufactured on the spot from the best quality English imported wire and each of the strands was tested to a strain of 700 lbs. before being used. By means of temporary piers built at a distance equal to that between the permanent piers, the wires were drawn and placed as if in their final position. Braces or stays were added at regular points between the piers, and weights were applied to them in proportion, as the main cable was thickened by the addition of each succeeding small wire. Finally, by means of machinery for winding the small wires into position and holding them to the proper strain, an equal amount of tension was obtained for every strand.

Once the bridge was completed, an engineer tightened or loosened the cables every morning and evening to compensate for the expansion or contraction caused by the day's temperature changes.

The bridge was opened with great éclat on September 17, 1844. Business was at a standstill. A parade, including the magistrates, brightly uniformed volunteer firemen, a marching band and prominent citizens, crossed the bridge from Ottawa to Hull. In the evening there were many fine fireworks and a grand ball at Doran's Hotel, then the great gathering place for Bytown and Hull society.



Sketch of the second suspension bridge. 1860.
(Coll. Ottawa City Archives)2277

Like its predecessor, the Union Suspension Bridge was a toll bridge. The collecting of tolls was a question on which public feeling sometimes ran high. The toll collector for the old Union Bridge had been accused in 1835 of being a public nuisance. This enterprising individual, regarding himself as under the jurisdiction of neither province, had been running a sort of duty-free shop, selling spirituous liquors without a license to passing raftsmen.

The new Union Suspension Bridge opened at the same rates of toll as

the old bridge: but Governor Metcalfe ordered it closed after two weeks, then reopened it a week later with a new set of considerably higher rates. The citizens petitioned the Governor, when he visited Bytown, for a reduction, describing the new rates as "usurious and oppressive extortion upon the public". The following March, the rates were amended and slightly reduced.

The right to collect the tolls at Government rates was sold by annual auction to the highest bidder. The toll collector was also responsible for keeping the bridge clean.

The entire set of bridges across the Chaudière came under the control of the Government of Canada until 1876, when responsibility for the bridges south on the main span passed to the City of Ottawa. In 1885 the suspension bridge across the Big Kettle was handed over to the City as well; and at that time the toll charges, which had remained a contentious issue, were abolished.

LATER BRIDGE CONSTRUCTION

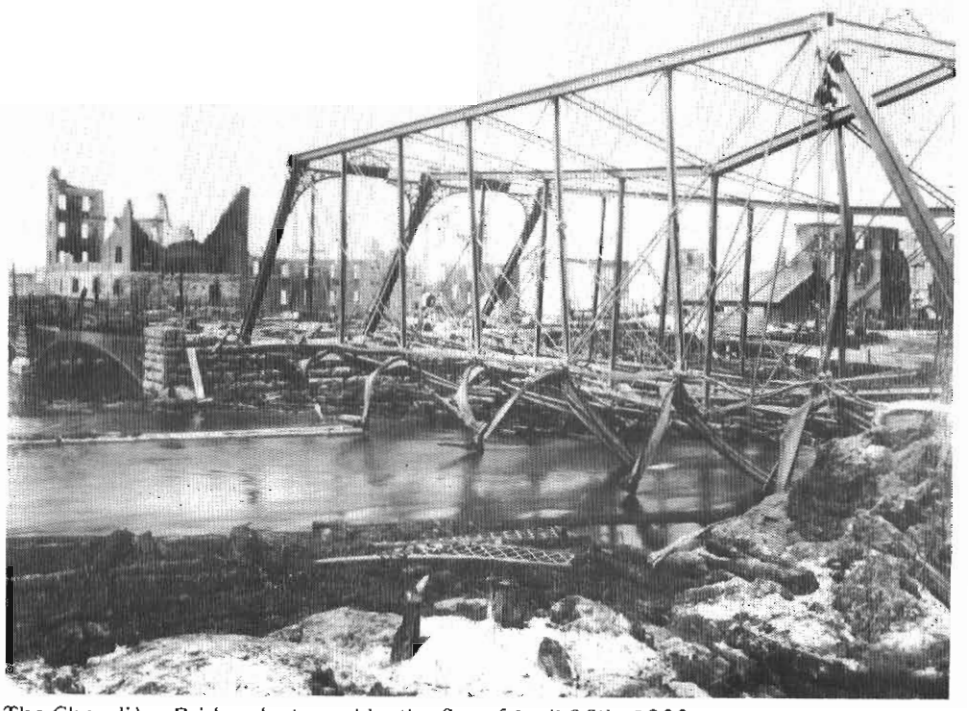
Although the Union Suspension Bridge across the Big Kettle served until 1889, problems arose long before that with the wooden bridges across the Government Timber Slide and Buchanan's CHannels.

The geography of the Chaudière had changed somewhat since the days of Colonel By, in order to facilitate the passage of logs. Three slides in all had been built, where entire cribs of logs could be passed undamaged. The first was constructed on the north side by Ruggles Wright, following Scandinavian models, in 1829. In 1836, using part of the Lost Channel, George Buchanan built another slide between Victoria and Chaudière Islands. Theses slides proved so popular that in 1845 the Government of Canada transformed its timber channel on the south side (dredged by but in disuse for years) into a slide.

Traffic through the slides and around the multiplying lumber mills began to put an excessive strain on the wooden bridges built originally by Colonel John By. The bridge over the Government Timber Slide was especially crowded, with teams of oxen constantly moving in both directions along its twenty-foot width. Accidents were commonplace. Complaints reached a crescendo in the 1870s. Eventually the City of Ottawa and the Government of Canada came to an agreement that the City

would undertake construction of an iron bridge sixty feet wide over the Slide and Buchanan's Channels, the Government of Canada paying two thirds of the cost. A contract was signed with the Canton Bridge Company of Ohio on January 1, 1876 and work commenced almost immediately. The new, five span, wrought iron, girder bridge linking the south shore to the Union Suspension Bridge opened for traffic on July 19, although a dispute between the builder and the Customs Department over payment of duties on iron imported for the bridge prevented the City from formally taking possession until August 30. City engineer Lowden was given much credit for the design. The cost was $45 000,00.

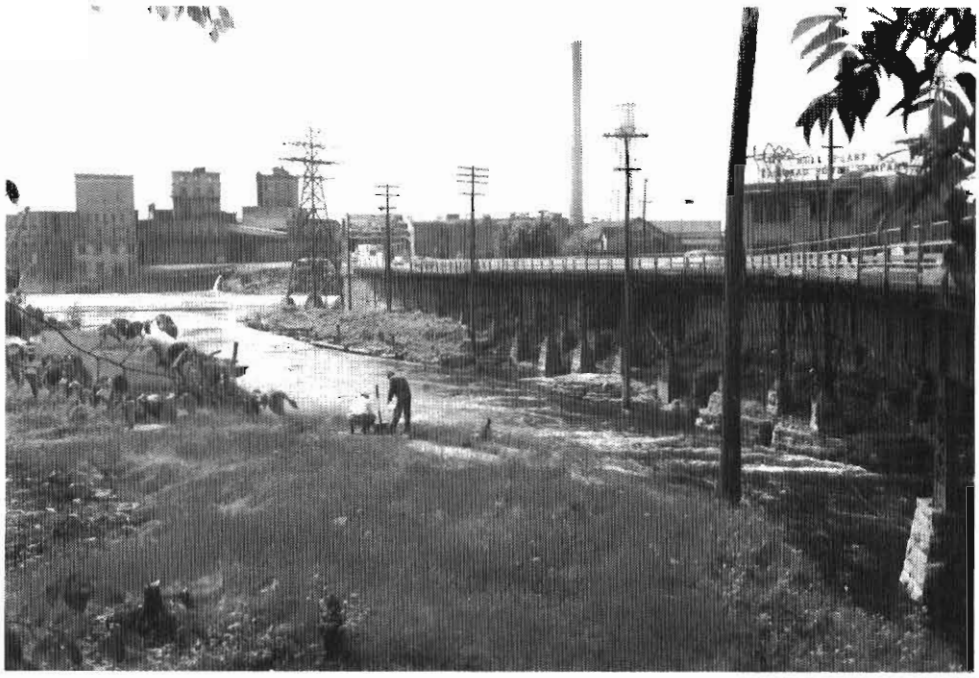
But the story of the construction of the Chaudière bridges was far from over. The constant humidity from the falls and the fumes from the mills took their toll. At the same time, traffic continued to increase. The Union Suspension Bridge was replaced in 1889 with a steel truss construction. Heavily damaged by the Great Fire of 1900, which destroyed most of Hull and large parts of Ottawa, this new bridge was repaired and continued to function until 1919.



The Chaudière Bridge destroyed by the fire of April 26th, 1900.
(Coll. Ottawa City Archives)

The bridge's destruction from another point of vue.
(Coll. Ottawa City Archives)

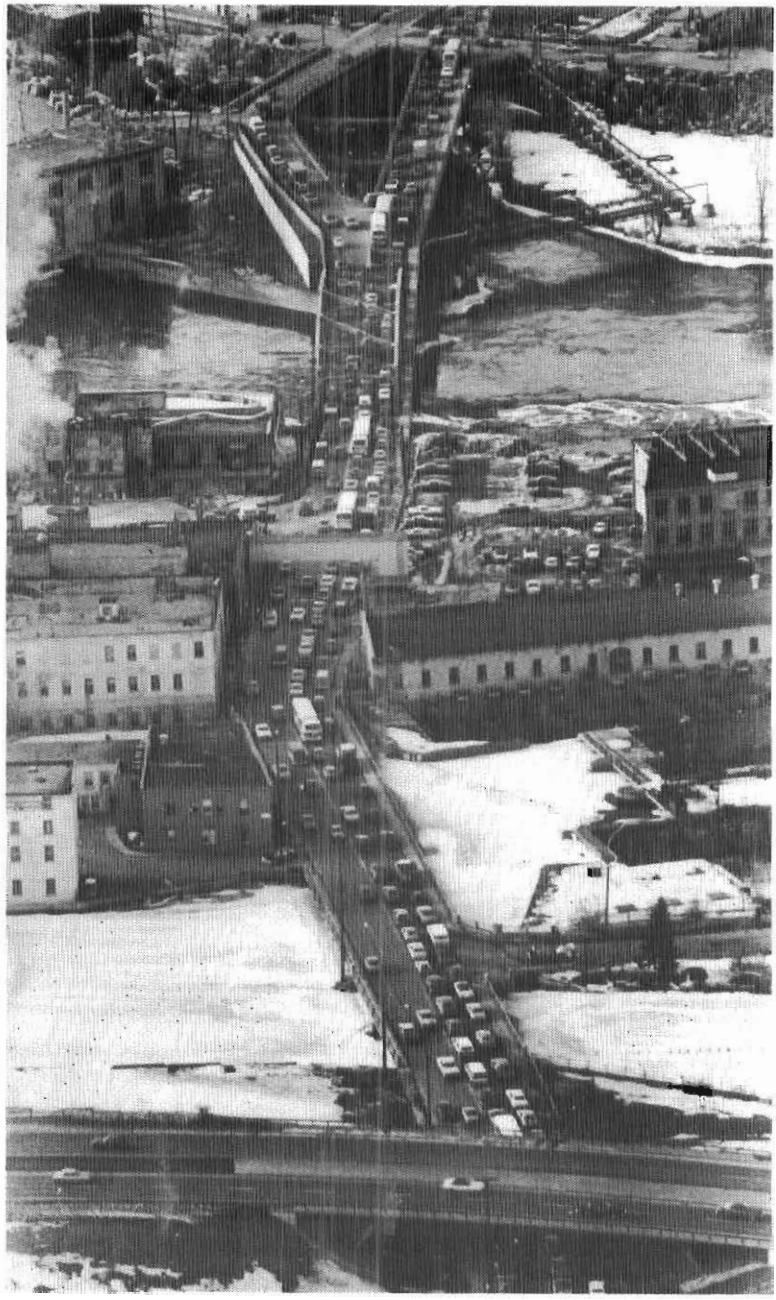
In the year, the Dominion Bridge Company built a new steel truss bridge using a singular method. The steel frame was built on a very large barge downstream from the bridge site at a level higher that of the abutment piers. When the frame was complete, the barge was towed upriver by a tugboat under Captain Charron of Gatineau Point. On the exact site of the bridge the barge was immobilized and gradually scuttled, and the steel frame sank slowly into place.



Chaudière Bridge seen from Hull in 1954.
(Coll. Ottawa City Archives)

The last major construction on the Chaudière bridges was in 1955. The approaches were improved; the remainder of the roadway was widened from 24 feet to 46 feet; and a steel trestle bridge, replacing the streetcar tracks, was constructed to provide separate north and south traffic lanes. The cost of these improvements was met by the National Capital Fund, administered by the Federal District Commission.

But of the original six bridges across the Chaudière, it is still possible to see one. The rubble stone arch on the north shore, visible from the Hydro station parking lot, is a reminder of the bridge's dramatic and historic origins.



Many automobiles still use Chaudière Bridge on a daily basis.
(Coll. Ottawa City Archives)

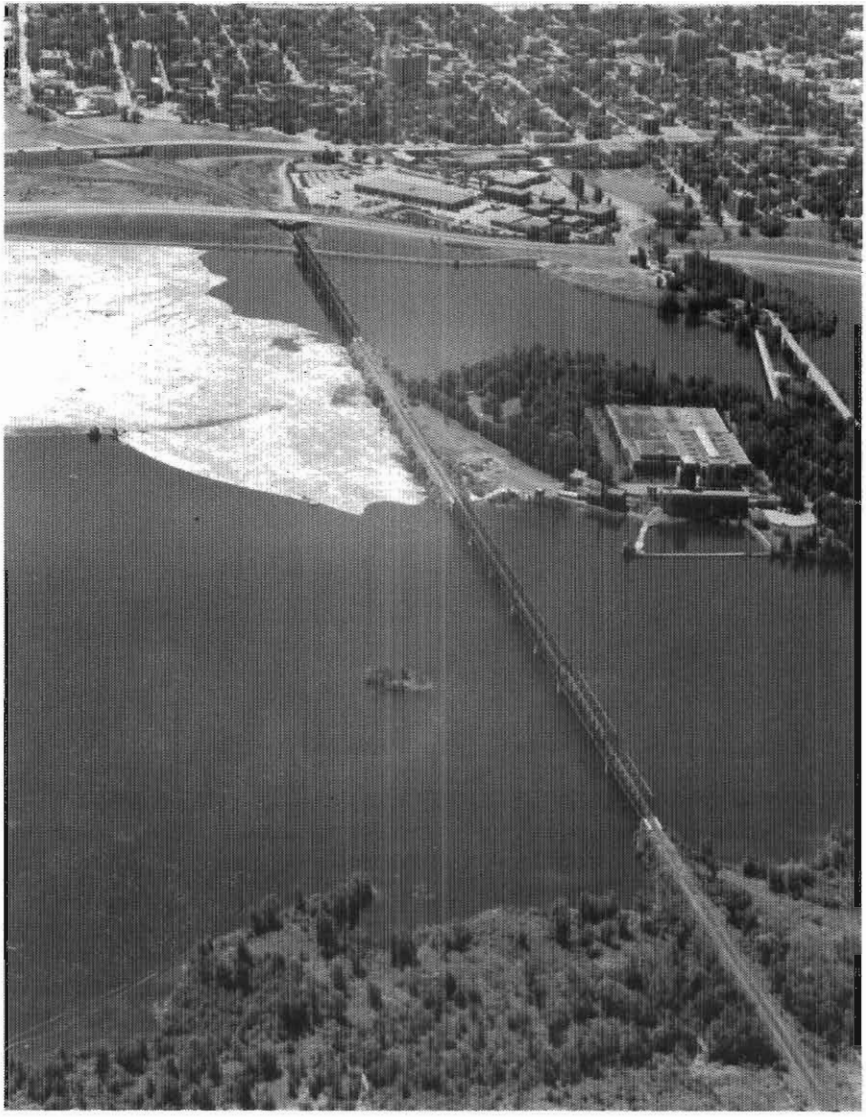
THE PRINCE OF WALES RAILWAY BRIDGE

The Prince of Wales Railway Bridge is a reminder of the great epoch of railway building in the 1860s and 1870s. Although its superstructure has been twice renewed (in 1926 and again in 1977) and some of its ornamental details have been lost, it still looks very much as it did when it first opened.

For those who know its history, the bridge contains a reminder too of the canal epoch. The great stones in its piers had been cut and dressed at Sand Point around 1860 for use in the locks of a canal being constructed around Chats Falls. The beginning of work on the Canada-Central railway along the south side of the Ottawa River in 1864 dealt the canal project a fatal blow, and the stones were left untouched until they were acquired in 1879 for the new railway bridge.

The bridge was one small item in a frenzy of railway activity that gripped Quebec politicians and businessmen beginning around 1854. A grant for the bridge was first made by the province to the Montreal Colonization Railway in February 1875. By the end of 1875, the Government of Quebec had taken over the bankrupt MCR and another company and committed itself to building a united line (the Quebec, Montreal, Ottawa and Occidental Railway) from Quebec City to Hull. A bridge to Hull remained an important element in the project because the Quebec government, faced with increasing political and economic stress from its railway commitments, hoped from the time of the takeover to dispose of the QMO&O to Canadian Pacific. Negotiations for the sale were prolonged and intricate.

By the end of 1877, the line from Montreal to Hull was complete and a daily train was running. Ferry service to Ottawa cost 25 cents. In 1880 the province let a 193 000$ contract for a bridge across the river and passed legislation to establish an Ottawa terminus.



The Prince of Wales Railway Bridge.
(Coll. Ottawa City Archives)

The bridge contract went to H.J. Beemer of Montreal. By May 20, thirty men were busy cutting brush and levelling the ground. By July, when a 36-foot steam yacht and a 55-foot scow-steamer were launched to ferry the stone to the piers, the labour force had grown to between 200 and 300 men. The target date for completion of the bridge was december.

A four-day strike slowed the work in June, when Beemer refused to raise his labourer's wages from 85 cents to 1 10$ a day. In July, 40 masons went on strike, asking 15 cents a yard (up from 10 cents) for dressing stone. At the 10 cent rate, their average daily wage was 60 cents.

Two engineering problems arose in October, one directly connected with the bridge, the other a dispute over the municipal water supply.

The coffer dam for pier number 2 (on the Ottawa side near Lemieux Island) had been placed in eight feet of water on a flat rock and was ready for puddling when a diver was sent down to ascertain if everything was firm and solid. The diver reported that the flat rock was in fact an unsupported ledge, whereupon the engineer put on the diver's suit and went down to see for himself. Indeed, the rock was a strata ledge about seven feet thick jutting out from the island, with ten feet of water under it. Work on the pier was stopped until the problem was resolved.

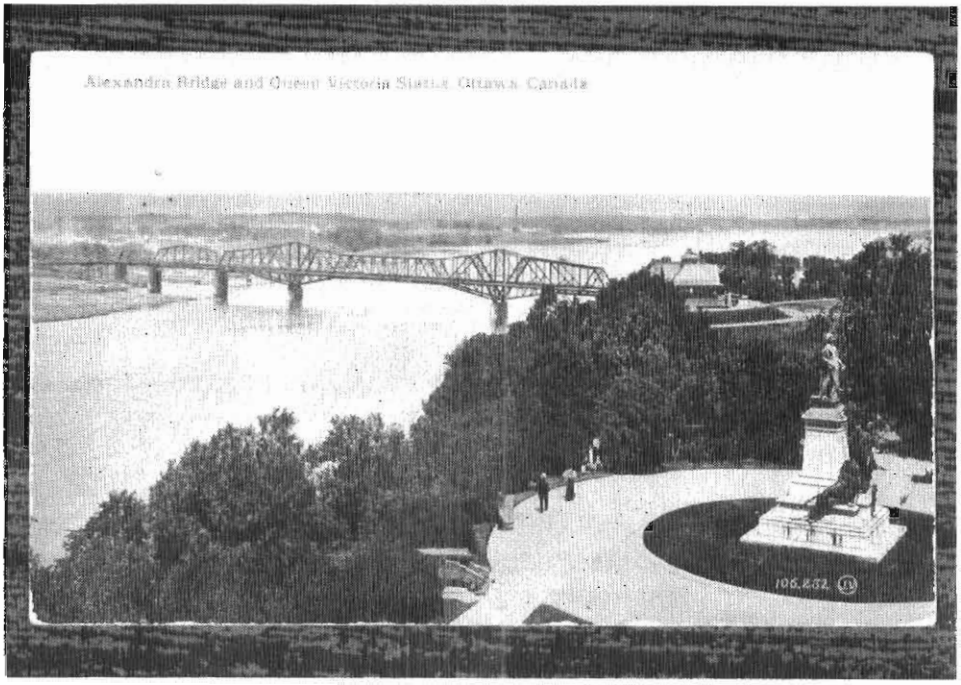
To protect Ottawa's municipal water supply, the City engineer wanted the bridge contractor to place culverts on the embankment, but Beemer insisted that the City should bear the expense. The City for a time threatened legal action, but after some weeks the dispute was resolved peacefully.

One bizarre problem reported at the time was an eight-foot fish which bit the bridge worker. The fish was eventually driven away by a diver who stabbed it with railway spikes.

The last strike came in December, when Beemer was unable to pay the men for their previous month's work. It lasted a week. A cash advance from the Quebec government solved this final dispute.

On February 25, 1882, the Government of Quebec finally accepted Canadian Pacific's offer for the QMO&O, and the Prince of Wales bridge officially became part of Canada's steel link running from sea to sea.

THE ROYAL ALEXANDRA BRIDGE



The Royal Alexandra Bridge.
(Coll. Ottawa City Archives)

Although the Royal Alexandra (Interprovincial) Bridge opened in 1901, its story belongs to the nineteenth century, for thirty years of intermittent lobbying by railways, merchants and interested governments preceded the actual building of the bridge.

The proposal for a second bridge to supplement the bridge at the Chaudière had been studied in the Quebec legislature as early as 1868.

The Pontiac, Pacific Junction Railway Company operated a hundred mile line from Aylmer west to Waltham. In September 1880, while the Prince of Wales bridge was being built on the Quebec, Montreal, Ottawa and Occidental line, the PPJR was authorized to extend its service across the river to Britannia on Lake Deschênes by means of a toll bridge. The City of Ottawa immediately approached the railway to see of the whole

project could be moved down-river so that the bridge would touch Ottawa directly. In May 1882, after the Prince of Wales bridge had been sold to the Canadian Pacific Railway, the PPJR was granted a year's delay to study the project. Ultimately, the railway company was unable to raise enough capital, but it remained, though indirectly, a principal actor in promoting another interprovincial bridge.

Between 1868 and 1888, a number of sites had been suggested for a second interprovincial bridge. The City of Ottawa showed more interest in the idea than the City of Hull, which was mainly concerned with obtaining a bridge link across the Gatineau River. Gatineau Point, meanwhile, was promoting a bridge which would connect it with Ottawa via Rockliffe (then undeveloped woodland).

A new proposal was launched in March, 1890 by the Interprovincial Bridge Company, a group of 27 regional businessmen (including the president of the PPJR), members of parliament, senators and interested citizens. The company had a capital base of 30 000$; and its intent was to build a combined railway, horse and carriage and pedestrian toll bridge between Nepean Point in Ottawa and the Indian Village in Hull.

The project was approved by both the Ottawa and Hull Councils, and the company's incorporation bill was submitted to the railway committees of the House of Commons and the Senate. Objections were raised concerning the expense of the project, the company's undercapitalization, possible duplication with the Pontiac, Pacific Junction's now dormant proposal for a Gatineau-Rockliffe bridge, and, in the Senate, the aesthetics of a bridge so close to Parliament Hill. The bill was eventually adopted, however, with a strong majority. Interested governments were to be asked for subscriptions; work was to start within two years (i.e. by 1892) and the bridge was to be completed in five (i.e. by 1895).

The ground was broken simultaneously on both sides of the river at a ceremony on April 20, 1892, but actual construction was delayed for several more years while financing was being arranged.

The railways were still major promoters of the bridge. Two companies, the Pontiac, Pacific Junction, and the Ottawa and Gatineau Valley Railway (from Maniwaki) wanted access to Ottawa. In 1893, these companies amalgamated some of their interests (including half the PPJR's bridge

rights) to from the Ottawa, Northern and Western Railway Company; and in 1898 both the PPJR and the ONWR finally vested their bridge interests in the Ottawa Interprovincial Bridge Company.

A train arriving in Ottawa by the Royal Alexandra Bridge.
(Coll. Ottawa City Archives)

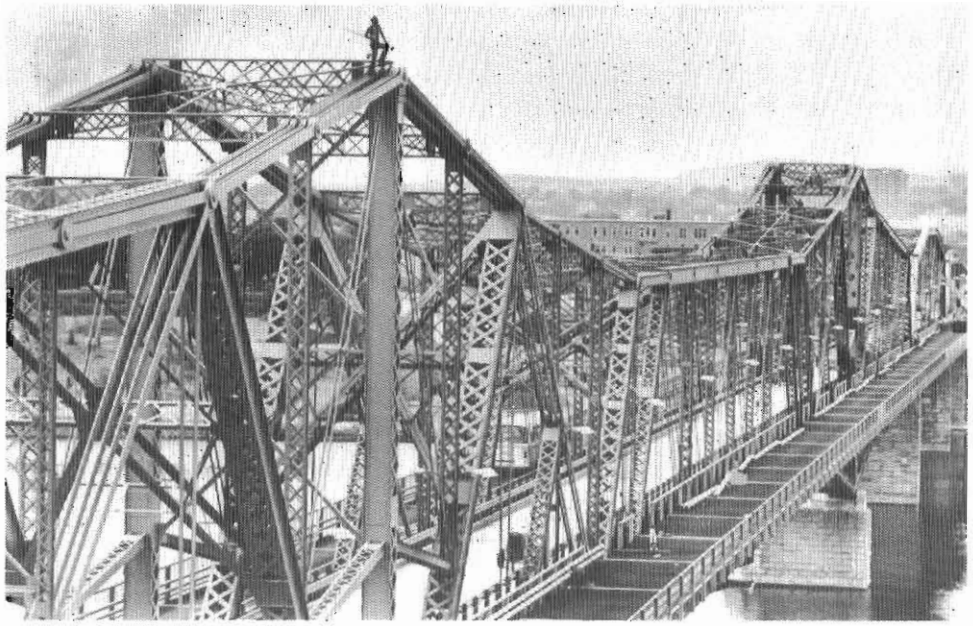
In the meantime, the City of Ottawa had made a major contribution. In 1894 (By-Law No. 1456), it subscribed 150 000$ on the condition that the proposed toll charges be eliminated.

The general contract for the bridge works was awarded to H.J. Beemer of Montreal and the contract for the steel superstructure went to the Dominion Bridge Company of Lachine, Quebec. Work on the approaches and the concrete piers was being carried on in 1898, with additional financial support (in the form of a 50 000$ bonus for meeting certain targets) from the City of Ottawa.

Building solid foundations was alone a difficult task, because a century of lumber operations had contributed to the bottom of the river a layer of sawdust and refuse that was in places 50 feet deep.

Work on the steel superstructure began on October 7, 1899. It was to be an impressive truss bridge, with five spans, 62 feet wide, extending a

total of 1 848 feet. The railway tracks were to run down the middle, with a single lane for carriages and the electric tramway on each side. The bridge's main cantilever span, at 556 feet, was in 1901 the longest in Canada and the fourth longest in the world. The tower posts on the cantilever piers were 95 feet high.



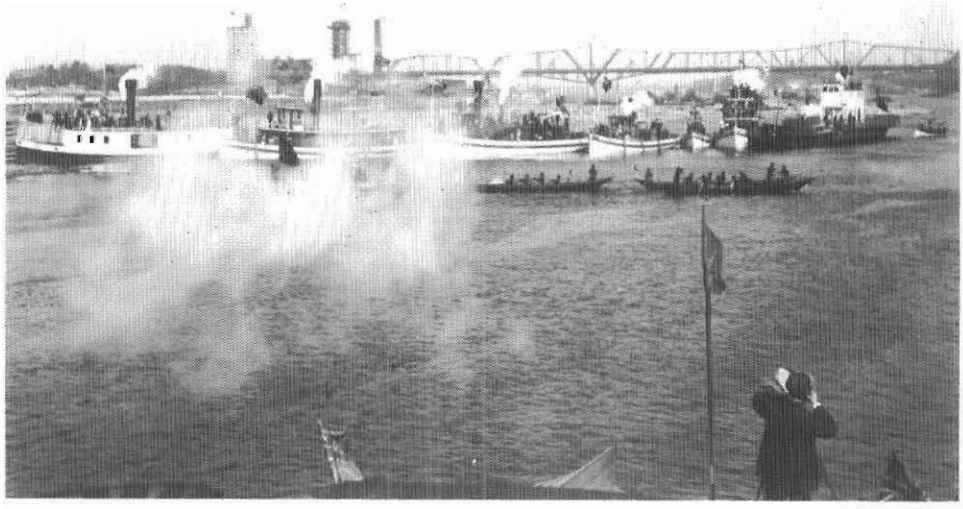
His superstructure, as shown in this picture of June 1977, incontestably makes the Royal Alexandra Bridge the most impressive one in the area.
(Coll. Ottawa City Archives)

For the winter works on the superstructure (1899-1900), four barges were built to move the beams into position, and labourers were at work 24 hours a day chopping channels in the ice for the barges to pass. Very severe winter weather that year caused considerable delays.

By September, 1900, however, the four smaller spans were largely complete and preparations were being made for placing the centre span. The Canadian Society of Civil Engineers met in Ottawa that month for its annual conclave in order that its members might tour the bridge works. The centre span was successfully put in place on October 7, and a locomotive made a trial run on December 12.

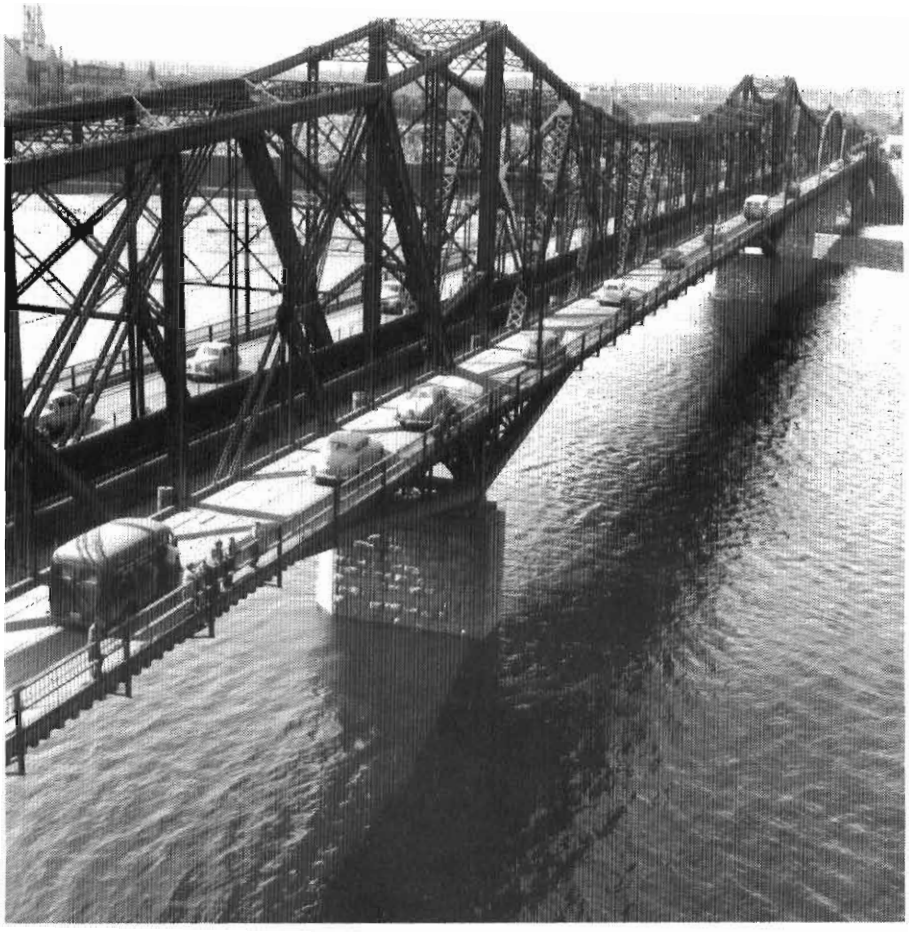
On February 18, 1901, the bridge was thrown open to vehicular traffic: and on April 22, the first regular train of the Ottawa, Northern and Western Railway Company passed over. As it rolled onto the bridge, Noel Valiquette, owner of the Cottage Hotel in Hull, broke a ceremonial bottle of wine on the engine.

When the bridge was inaugurated in 1900, it was called simply the Interprovincial Bridge, but the name was change to the Royal Alexandra Bridge (after the then queen) during the visit of the Duke of Cornwall (later George V) in September 1901.



Dedication of the Royal Alexandra Bridge by the Duke and Duchess of York on September 1901.
(Coll. Ottawa City Archives)

By the time the bridge opened, Canada's small railway companies were rapidly disappearing. On November 1, 1902, the Ottawa, Northern and Western Railway was merged with the Canadian Pacific Railway; and the bridge remained under the authority of the C.P.R. until 1967, when it passed into the hands of the National Capital Commission. The NCC removed the railway tracks and renewed the bridge extensively, turning the centre and cast lanes into roadways and reserving the west lane, with its spectacular view of the Parliament Buildings, for pedestrians and cyclists.



Traffic in September 1954.
(Coll. Ottawa City Archives)

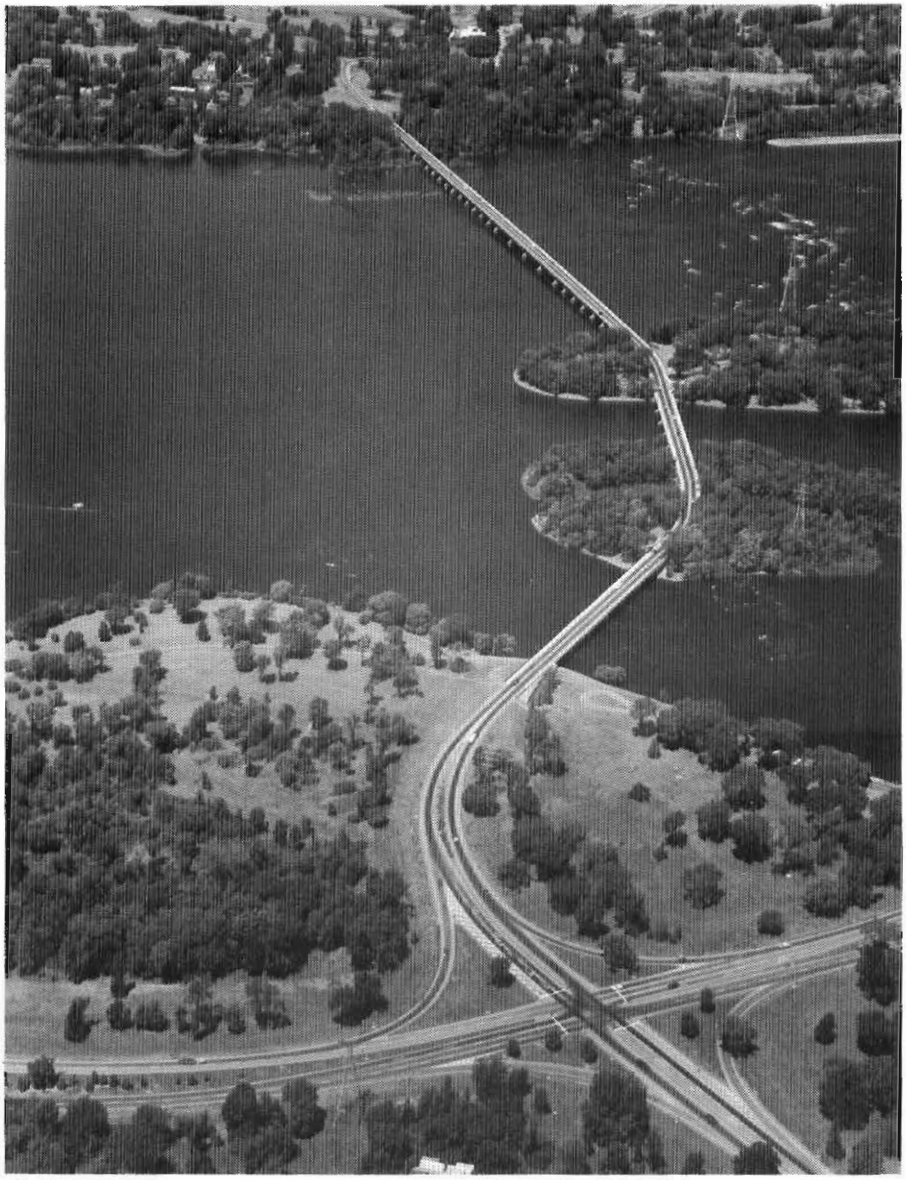
More recently, the Royal Alexandra Bridge assumed greater cultural significance as part of the NCC's proposed ceremonial route and by the siting of the new National Gallery of Canada and the new Canadian Museum of Civilization at either end of the bridge.

BRIDGES OF THE TWENTIETH CENTURY

Although this history deals with bridges which have existed in some form since the nineteenth century, it is far from telling the whole story. The spectacular growth of the Ottawa and Hull areas since 1900 made three more bridges across the Ottawa River necessary. These three uniquely 20th century bridges now carry some 72 per cent of the inter-provincial traffic.

Aerial view of Bridges crossing the Ottawa River
(Coll. Ottawa City Archives)

THE CHAMPLAIN BRIDGE



The Champlain Bridge.
(Coll. Ottawa City Archives)

The Champlain Bridge (1927) serves the western extremities of Ottawa and Hull. Built by the Federal District Commission, a crown corporation concerned with the beautification of the national capital, it was conceived as an extension of the scenic driveway system (not the Ottawa River Parkway, a later development, but the route along the west bank of the Rideau Canal, through the Central Experimental Farm and north Island Park Drive). William Lyon MacKenzie King, a former prime minister with a strong feeling for the picturesque, is said to have particularly recommended its construction. It is a very long bridge (4 2000 meters), passing over the Remic Rapids and linking three attractive islands: Riopelle, Cunningham and Bate. The bridge is particularly beautiful at night, with its attractive, ornamental light-standards. It was named after Samuel de Champlain because it touches the Hull shore near the upper end of that explorer's portage route around the falls and rapids of the Chaudière.

Although the bridge was widened in 1969 and extensively repaired in 1978 after damage during a windstorm, it retains most of the elements of its original design.

THE MCDONALD-CARTIER BRIDGE

The tremendous increase in vehicular traffic between Ottawa and Hull during and after the second World War made a new bridge in the downtown area an urgent necessity. The Mcdonald-Cartier bridge was conceived as part of a master plan for the Ottawa-Hull area by the French urban planner, Jacques Gréber. On February 28, 1961, an official cost-sharing agreement for a new bridge was signed by the governments of Canada, Quebec and Ontario. Plans were drawn and accepted in February 1962. The substructure was completed in December 1963 and the superstructure, on October 17, 1964.

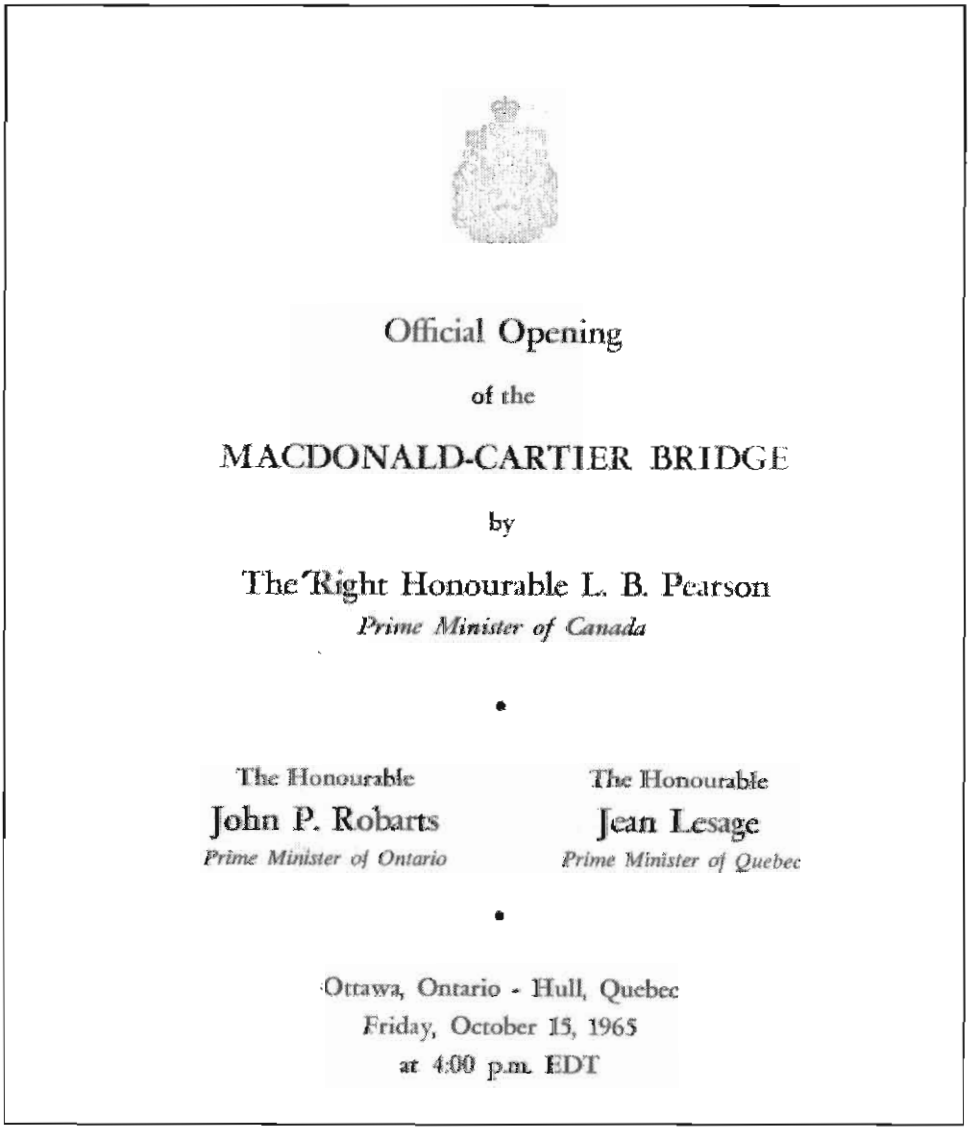
Works on one of the bridge's span in 1963.
(Coll. N.C.C.)

View of the two approach spans in 1963.
(Coll. N.C.C.)

Installing the main span in Spring 1964.
(Coll. N.C.C.)

The steel work came from Lachine (Quebec), Toronto and Hamilton (Ontario). The largest steel beam measures over 24 meters and weighs over 113 tons. By means of compressed-air coffer-dams all piers were built dryly on the solid rock river bed, at 18 meters below water-level. The last one was completed a few days before Christmas 1963, when the river was covered with ice except for a wide channel about the bridge site kept open by a tug-boat running 24 hours a day. The first Ottawa span, measuring 107 meters and weighing 1 200 tons, was erected on a temporary falsework, at 19 meters above the water-level, in the shallower water on the Hull side, and was floated across into position on the Ontario piers by powerful motor boats. The falsework was also used to construct the Hull span. The building of these two approach spans in 1963 allowed the bridging of the main gap following spring. Barges were

used to float steel for the bridge from the Dominion Bridge plant at Lachine up the Ottawa River to the bridge site.



Official Opening

of the

MACDONALD-CARTIER BRIDGE

by

The Right Honourable L. B. Pearson

Prime Minister of Canada

•

The Honourable

John P. Robarts

Prime Minister of Ontario

The Honourable

Jean Lesage

Prime Minister of Quebec

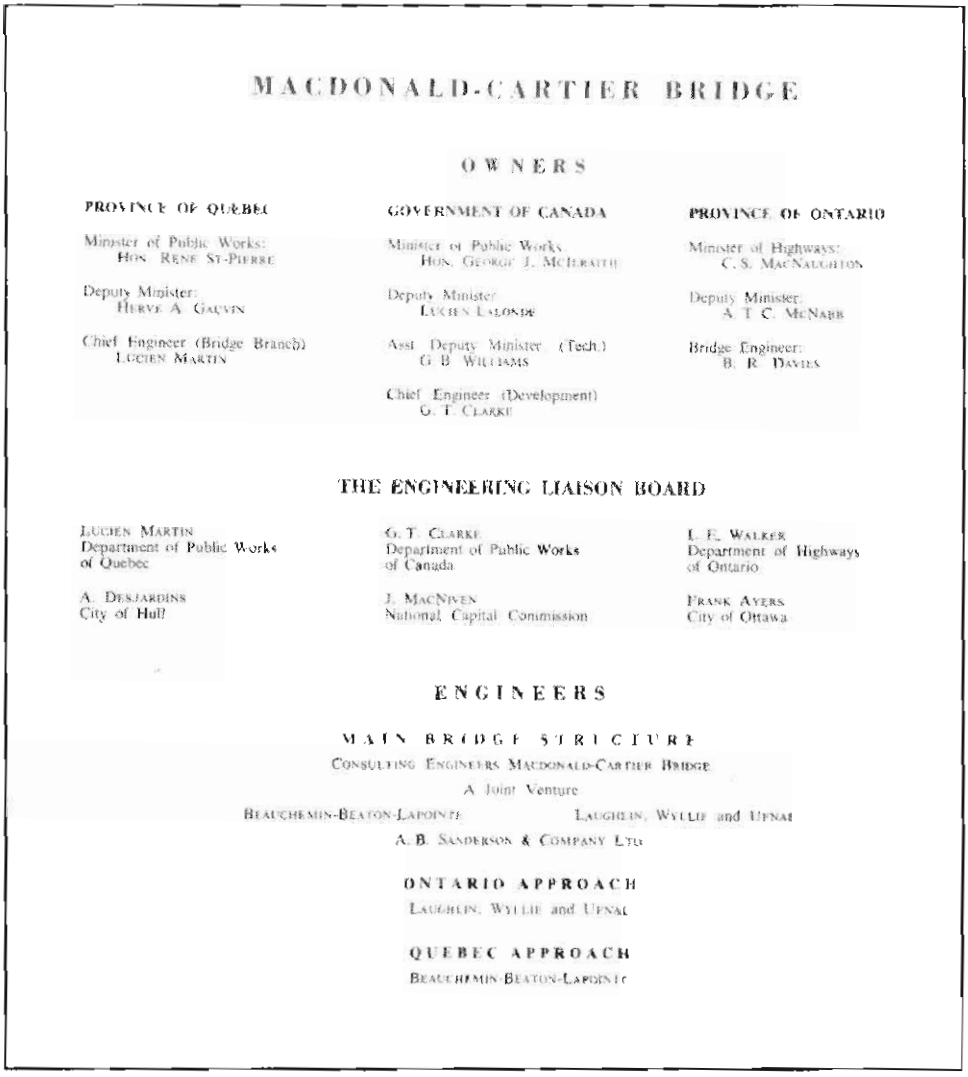
•

Ottawa, Ontario - Hull, Quebec

Friday, October 15, 1965

at 4:00 p.m. EDT

(Coll. N.C.C.)



MACDONALD-CARTIER BRIDGE

OWNERS

PROVINCE OF QUEBEC

Minister of Public Works:
HON. RENE ST-PIERRE

Deputy Minister:
HERVE A. GAUVIN

Chief Engineer (Bridge Branch)
LUCIEN MARTIN

GOVERNMENT OF CANADA

Minister of Public Works
HON. GEORGE J. MCILRAITH

Deputy Minister
LUCIEN LALONDE

Asst. Deputy Minister (Tech.)
G. B. WILLIAMS

Chief Engineer (Development)
G. T. CLARKE

PROVINCE OF ONTARIO

Minister of Highways:
C. S. MACNAUGHTON

Deputy Minister:
A. T. C. MCNABB

Bridge Engineer:
B. R. DAVIES

THE ENGINEERING LIAISON BOARD

LUCIEN MARTIN
Department of Public Works
of Quebec

A. DESJARDINS
City of Hull

G. T. CLARKE
Department of Public Works
of Canada

J. MACNIVEN
National Capital Commission

L. E. WALKER
Department of Highways
of Ontario

FRANK AYERS
City of Ottawa

ENGINEERS

MAIN BRIDGE STRUCTURE

CONSULTING ENGINEERS MACDONALD-CARTIER BRIDGE
A Joint Venture
BEAUCHEMIN-BEATON-LAPOINTE LAUGHLIN, WYLLIE and UPNAL
A. B. SANDERSON & COMPANY LTD.

ONTARIO APPROACH

LAUGHLIN, WYLLIE and UPNAL

QUEBEC APPROACH

BEAUCHEMIN-BEATON-LAPOINTE

(Coll. N.C.C.)

The official opening of the bridge took place at 4 o'clock on October 15, 1965, in the joint presence of the then Prime Minister, the Right Honourable Lester B. Pearson, Premier Jean Lesage of Quebec, and Premier John Robarts of Ontario. The bridge had cost 14 million dollars.

Two distinguished guests, Sir John A. MacDonald and Sir George Etienne Cartier took place in the Bridge's official opening procession.
(Coll. N.C.C.)

The name commemorates the last joint leaders of the United Province of Canada and the first of the Dominion of Canada: Sir John A. Mcdonald and Sir George Etienne Cartier. Coincidentally, it touches the Ontario shore only a few hundred metres west of Earnscliffe. Mcdonald's last residence.

Sir John A. MacDonald and Sir George Etienne Cartier shaking hands on the bridge for the official opening.
(Coll. N.C.C.)

The bridge does more than link Ottawa and Hull, for the road systems leading to it were designed as well to provide (via the Alonzo Wright, Lady Aberdeen and St. Patrick Street Bridges) fast, efficient communication between Gatineau and Vanier.

Aerial view of MacDonald-Cartier Bridge in 1965, before the construction of Highway 5. (Coll. Ottawa City Archives)

THE PORTAGE BRIDGE

Aerial view of Portage Bridge, first on right.
(Coll. Ottawa City Archives)

The Portage Bridge, a few hundred meters downstream from the Chaudière Bridge, is aesthetically one of the least successful of the capital area bridges. Six lanes wide and cutting across the east end of Victoria Island, it was designed for the National Capital Commission (a federal crown corporation) to provide efficient transport between the downtown areas of Ottawa and Hull.

In the foreground, pillars of the Portage bridge in march 1972.
(Coll. Ottawa City Archives)

The bridge's superstructure in August 1972.
(Coll. Ottawa City Archives)

On both sides of the river, the bridge is built across historic sites. On the Hull side was the lower end of the portage trail around the Chaudière Falls, a route used by Indians for millennia, by French explorer Samuel de Champlain in 1613, and by French and British fur traders and lumbermen until about 1850. On the Ottawa side, it passes above Richmond Landing. Here the first settlers in the Ottawa area (a group of veterans of the 99th and 100th British regiments) arrived in 1818.

Federal government officials had at first intended to name the bridge after former Prime Minister Louis S. St-Laurent, but Mayor Jean-Marie Séguin of Hull, supported by Dr. Gaston Isabelle, M.P. for Hull, strongly and successfully promoted the commemoration of the bridge's specific historical associations in the choice of the name "Portage".

The bridge was opened in 1969.

Short bibliography on the bridges on the Ottawa River [1]

LEMIEUX, Claude:

"Covered Bridges Woo Tourist Now" in The Ottawa Journal; special coverage published on October 11, 1975.]

BEAUCHEMIN, BEATON, LAPOINTE;
SANDERSON A.B., Co.;
LAUGHLIN, WYLIE et UFNAL:
Rapport sur les études techniques préliminaires - Pont MacDonald-Cartier; Ottawa, 1962; 144 pages.

LA JEUNE CHAMBRE DE HULL:
Mémoire sur la nécessité d'un nouveau pont entre Ottawa et Hull; Hull, 1959; 20 pages (bilingual).

BRAULT, Lucien:
Hull 1800 - 1950; Ottawa, les Editions de l'Université d'Ottawa, 1950;
Bridges, pages 37, 105 and 112;
Bridges inside the town, page 119;
Alexandra Bridge (Interprovincial), page 118;
Alonzo Bridge, page 107;
Chaudière Bridge, pages 112 et 115;
Gatineau Bridges, page 119;
Suspension Bridges, page 117.

[1] From: Jean-Pierre F. SAINT-AMOUR: **L'Outaouais québécois Guide de recherche et bibliographie sélective**; Hull, Université du Québec à Hull, Centre d'études universitaires dans l'Ouest québécois, 1978; 178 pages.

ROSSIGNOL, Léo:

Histoire documentaire de Hull 1792 - 1900; Université d'Ottawa, PhD in Philosophy, June 1941;

In the first part (1792-1840), Chapter VI "Services publics" pages 85 to 96...

A Bridge on the Ottawa River, pages 85 and 86;
The bridge collapse, pages 87 to 89;
The arches, page 90;
The main arch, page 91;
The cable's bridge, pages 91 and 92;
Second falling-down, page 93;
The toll bridge, page 94;
The end of the By bridge, pages 95 and 96;ZIn the second part (1840-1900), Chapter V "Ponts, Chemins, Rues" pages 224 to 233.
The Union Bridge, pages 224 to 231;
The cable's bridge, pages 226 and 227;
Restoration and improvement, page 230;
Other bridges on the Ottawa River, pages 231 to 233.

Bibliography of Lucien Brault

1. **Gaspé depuis Cartier**
   Québec, Au Moulin des Lettres, 1934; 236 pages.

2. **Historical Gaspé**
   Québec, Au Moulin des Lettres, 1934; 232 pages.

3. **Francis-J. Audet et son oeuvre**, Bio-bliographie
   Ottawa, 1940; 98 pages.

4. **Ottawa, de son origine à nos jours**
   Université d'Ottawa, 1942; 324 pages.

5. **Index to the Transactions of the Royal Society of Canada**, 1882-1943
   University of Ottawa Press, 1944; 112 pages.

6. **Le Canada, Guide du lecteur**
Services éducatifs de la Légion canadienne, 1945; 32 pages.

7. **Ottawa Old and New**
Ottawa Historical Information Institute, 1946; 349 pages.

8. **Histoire de la Pointe-Gatineau, 1807-1947**
Montréal, 1948; 182 pages.

9. **Hull, 1800-1950**
Editions de l'Université d'Ottawa, 1950; 265 pages.

10. **Bibliographie d'Ottawa**
Ottawa, Tiré à part, revue de l'Université, 1950; 30 pages.

11. **Index des mémoires de la Société d'histoire de l'Eglise catholique du Canada, 1933-1958**
Ottawa, 1960; 248 pages.

12. **Un siècle d'administration scolaire, 1866-1966**
Commission des écoles de Hull, 1966; 146 pages.

13. **Histoire des comtés unis de Prescott et de Russell**
L'Orignal, Ontario, 1966; 377 pages.

14. **Le Canada au XXe siècle**
Toronto, Thomas Nelson & Sons, (?); 341 pages.

15. **Bref exposé de l'enseignement bilingue au XXe siècle dans l'Ontario et les autres provinces**
Ottawa, Le Droit, 1966; 341 pages.

16. **A Century of Reporting // Un siècle de reportage** (in collaboration)
Toronto & Vancouver, The National Press Club Anthology, Clarke Irwin & Company Limited, 1967; 301 pages.

17. **Sainte-Anne d'Ottawa: Un siècle d'histoire, 1873-1973**
Ottawa, 1973; 80 pages.

18. **L'Académie De-La-Salle: Un édifice patrimonial prend vie** (in collaboration with John Leaning, architect)
Ottawa, Ministère d'Etat aux Affaires municipales, 1976; 110 pages.

19. **De La Salle Academy - New Life for a Heritage Building**
Ottawa, Ministry of State - Urban Affairs, 1976; 110 pages.

20. **Parliament Hill - La colline parlementaire**
Ottawa, National Capital Commission, 1976; 36 pages.

21. **The Grand Hotel, a Heritage Hostelry - Le Grand Hôtel, 125 ans au service des voyageurs**
Ottawa, 1978; 18 pages.

22. **Ottawa's Mile of History - Un Mille historique**
Ottawa, National Capital Commission, 1980; 95 pages.

23. **Du premier Hôtel de Ville à la Maison du Citoyen**
Hull, Editions Asticou, 1981; 98 pages.

24. **Aylmer d'hier / Of Yesteryear**
Aylmer (Québec), Institut d'histoire de l'Outaouais, 1981.

35 articles in **Bulletin des Recherches historiques,** from 1934 to 1946

52 articles in the **Ottawa Citizen**, from April, 1946 à April, 1947

200 articles in **Le Droit**, from April, 1954 to January, 1958

20 articles in the **Ottawa Journal**, from September to December, 1963

1 article in **(The) Humphrey's**, London, December, 1948

7 articles in **Revue d'histoire d'Amérique française**

1 article in **Revue populaire**, Montréal, 1950.

1 article in **The American Archivist**, December, 1950.

1 article in **Revue de l'Université d'Ottawa**, July-September 1954.

Collaborations in: **Encyclopedia Americana**, 1958, 1959, "Canadian Biographies".

The World Book Encyclopedia, 1958, 1959, "Ottawa"

Histoire de l'Eglise catholique, 1956-1957.

Printed by
Roger Vincent Printing Ltd in Hull (Quebec),
January 1989