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A HISTORY OF CANADIAN RAILWAYS TO 1876

by
JOHN BESWARICK THOMPSON

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Part 1. An Overview

Introduction

The railway age began on 15 September 1830, the day on which England's Prime Minister, the Duke of Wellington, officially opened the first modern railway, the Liverpool and Manchester. For the first time all the components of the railway as we know it today were brought together to carry passengers and freight: the double track of iron, the steam locomotive, cars, stations, bridges and tunnels. A new form of transportation - one which had been gradually developed during the earlier years of the century - had been perfected to the point of operation. It was an event of major proportions. Reports were published in every English newspaper, circulated on the Continent and quickly carried across the Atlantic to North America. Newspapers in the United States printed full accounts of the opening. The Montreal Gazette featured the story on the front page of its edition of 25 October 1830. Everywhere there was enthusiastic speculation regarding the use of the railway to overcome the local problems of transportation, even though as The Gazette admitted, the idea appeared "at present very wild and chimerical".[1]

In England, of course, other lines were begun on the model of the Liverpool and Manchester. In the United States the idea was quickly embraced. Adapting English techniques to suit North American conditions, Americans in seaboard

cities started building railroads toward the west like the Baltimore and Ohio, Delaware and Hudson, and Mohawk and Hudson in the early 1830s. Canada did not lag far behind England and the United States in entering the railway age. This country's first railway, the Champlain and St. Lawrence, was opened on 21 July 1836 and was among the world's pioneer lines.

Railway mileage continued to increase in England and America during the decade of the 1830s, but except for a small mine railway at Nova Scotia's Albion Mines, the Champlain and St. Lawrence remained Canada's only operating line at this time. Schemes to connect by rail Toronto to Lake Huron, London to Lake Ontario and Quebec City to St. Andrew's, New Brunswick were proposed; however, by the time of the insurrections of 1837-38 nothing concrete had been accomplished and the economic and political problems which ensued assured that nothing would be done.

The 1840s

During the 1840s, Canadians transferred their transportation enthusiasms to the British-subsidized canal projects and the Canadian-devised plank road schemes. Continued American construction of railroads and the remarkable mania of 1844-46 which drove the British "mad on railways", however, prompted renewed Canadian enthusiasm for the subject. Indeed, beginning about 1845 Canada had its own "railway mania". Old plans

for lines promoted in the 1830s were resuscitated and often extended in scope. The London and Gore was revived as the Great Western Railroad and promoted not merely to join the town of London to Lake Ontario, but also to serve as a rail link through Canada between the American towns of Niagara and Detroit. Discussions were held regarding the construction of an intercolonial railway between Nova Scotia and the Canadas and requests for imperial aid were submitted to the Colonial Office in London. To give Montreal an ice-free winter port, the St. Lawrence and Atlantic, an international line to Portland, Maine, was chartered in 1845. To bind the Canadas together, "a chain of railway from Montreal to the Western boundary of the Province" [i.e. Windsor] was promoted and in 1846 a number of lines were chartered to serve as links in this chain. Among these schemes of the mid-1840s were 2 modest ones, the first an 8-mile portage railway between Montreal and Lachine, the second a 12-mile line from Lanoraie to the village of L'Industrie. These small railways were completed. The others were not.[2]

Although the general pattern of eventual Canadian railway development was being set in the 1840s, this second surge of Canadian zest for railways, like that of a decade before, produced little more than a flurry of railway charters. The reasons for failure were economic. The average cost per mile of Canadian railways was computed to be $32,000.

Capital for the short portage lines, like the Champlain and St. Lawrence or Montreal and Lachine, could, with difficulty, be found in Canada. To finance the longer lines outside capital was necessary. Promoters like Allan McNab of the Great Western and A.T. Galt of the St. Lawrence and Atlantic were forced to go to London to secure backing. Promises of assistance they received in 1845, but once the British railway boom collapsed in scandal in 1846, they found the first instalments impossible to collect. The economic depression that began in Canada in the fall of 1847 dampened the hopes of even the most optimistic. By then the Atlantic and St. Lawrence had managed to secure enough Canadian capital to enable it to lay tracks from Longueuil, opposite Montreal, to Saint Hyacinthe, 30 miles to the east; however, this was only one quarter the distance to its destination at the international boundary and traffic on the completed stub was unremunerative. Other lines fared worse. The Great Western held a gala sod turning ceremony in 1847, but, in the words of a disappointed civil engineer, it was "all for show", for the capital needed to begin construction could not be so easily unearthed. The dismal state of Canadian railway development at the end of the decade is revealed in the dry statistics of the year 1849 that showed that in that year when the British had almost 5,000 miles of railways, the Americans had over 8,000 miles and even the Cubans had

273 miles, Canadians could point to a mere 54 miles of track. "We Canadians", concluded one observer, "are fruitful in projects but barren in results."[3]

Government Involvement

> WHEREAS at the present day, the means of rapid and easy communication by Rail-way, between the chief centres of population and trade in any country and the more remote parts thereof, are become not merely advantageous, but essential to its advancement and prosperity; And whereas experience has shown, that whatever be the case in long settled, populous and wealthy countries, in those which are new and thinly peopled and in which capital is scarce, the assistance of Government is necessary [italics added] and may be safely afforded to the construction of lines of Rail-way of considerable extent....[4]

So began the preamble of the Guarantee Act of 1849, a statute of great importance to the development of Canadian railways. Since 1831 when the Assembly of Lower Canada had been petitioned for permission to construct the Champlain and St. Lawrence Railroad, government had been involved in railways, but its role had been a passive one of chartering those lines which had met the political approval of the legislators. Following the failure of the lines of the 1840s, it had become evident that this laissez-faire policy was unsatisfactory. Accordingly, a study of the assistance given to railways by governments in other countries was made. Two courses were open. The first, was to treat

railways like public works, as the Belgians did, and create a state-owned system using public funds. The second was to retain the concept of private ownership of railways, assuming that only those lines which seemed potentially profitable would be built, but encouraging construction of these lines by means of government assistance to the railway companies. In 1849 the Inspector General of Canada, Francis Hincks, opted for the latter and introduced legislation which provided that the Canadian government would guarantee the interest, not exceeding 6 per cent, on not more than half the bonded debt of any railway 75 miles in length which had completed half its line. Thus was taken the first step on the road of government involvement in Canadian railway development.

Other legislation followed Hincks' Guarantee Act as the Canadian government in the next few years muddled towards a railway policy which would result in the completion of lines. By 1852 the legislature had created a Board of Railway Commissioners to oversee railway affairs, and this body had, for example, determined that the gauge of railways seeking government assistance was required to be 5'6" rather than the American standard gauge of 4'8½". At the same time the governments of New Brunswick and Nova Scotia began to take an active interest in railways. In the former, proposals similar to Hincks' were introduced into the legislature in

1849 and were hotly debated; in the latter, the legislature approved a resolution in 1850 which authorized the government to subscribe for one half the necessary stock in local railways deemed important. It is not within the purview of this paper to trace in detail the nature of government involvement in railways. Suffice it to say that following 1849 politics and railways were securely wedded. The marriage did not always prove to be a happy one.

Confidence in railways had been created by the government's support. Enthusiasm was rekindled by the publication in 1850 of T.C. Keefer's Philosophy of Railroads. This was a brilliantly written, prize-winning essay that quickly became a "best seller". It damned Canadians for their inertia and praised railways for their manifold benefits. Keefer marshalled the English language and sent it off crusading for railways. Who could withstand such salvos as this paean to the locomotive?

> Those huge drivers will yet tread out the last smouldering embers of discord...will smooth the hitherto rugged path, fill up the dividing gulf, break through the intervening ridge, overcome the ups and downs of life's chequered journey, and speed the unwearied traveller upon his now rejoicing way.

Keefer armed the advocates of railways with better ammunition than they had ever had. Railway stocks, he claimed, were the soundest form of investment; indeed, "if universal ruin be inevitable they will be the last public works to succumb

to the general prostration". Canada, he suggested, could "no longer afford to do without railroads".[5]

As the economy of British North America revived in late 1850, railway fever returned. The Globe of Toronto reported in November 1850:

> Railroads, Railroads! The Canadian world is at last thoroughly alive on the subject of Railroads....Opposition seems to have died away, and there seems to be a unanimous desire to build the roads, some way or other; the prospect that something effectual will be done seems really good.

But the enthusiasm was still of the familiar, spasmodic kind that could prompt a young Canadian civil engineer to write excitedly one day in January 1851, "The whole country is up", and then to despair grumpily 2 weeks later, "I have little hope of success in Canada. The Canadians are such d--d fools. They won't believe that one of themselves can do anything." Nevertheless, the period between 1849 and 1853 was critical to the development of the Canadian railway system. Many lines were promoted, chartered and planned at this time. Many decisions were made which set the pattern of railway development in this country.[6]

Continental Lines

There were three types of railways which developed in this period: continental lines, national lines and local lines. The continental railways were those integrated with the

transportation and commercial system of the United States. The national lines were those designed to link through British territory the various sections of British North America. The local lines were the small feeder and portage railways which, although continentalist in essence, were parochial in extent and limited in scope.

In an era when Canada's commercial intercourse was declining with Great Britain and increasing with the United States, continental lines seemed not only necessary but also profitable; consequently north-south railways devised to serve as direct trade routes between the two countries were the first to follow the passage of the Guarantee Act. The St. Lawrence and Atlantic was the first to be revived. In 1850 this company recommenced construction of its line through the Eastern Townships to connect near the border with the Atlantic and St. Lawrence, a companion line being built northward from Portland, Maine. The haste with which this project was resuscitated due to the lure of government assistance did not go without notice at the time. "Hurrah, hurrah! with gold to pay", Punch in Canada mocked, "We'll make the two ends meet".[7] So confident were the people of Portland that the two ends would meet to make their city the junction of lines from Canada and New England that in August 1850 they hosted a railway convention at which the idea of another Canadian continental line was promoted. This

line, the European and North American, was proposed to run from Halifax through New Brunswick to Portland and would serve to foster international trade and provide a link - albeit through the United States - between the Canadas and the Maritimes. Delegates from Nova Scotia and New Brunswick received the idea enthusiastically; another continental scheme was underway.

The honour of becoming the continent's first international railway fell not to the St. Lawrence and Atlantic, however, but to the old Champlain and St. Lawrence when, in September 1851, an extension of this line was opened to Rouses Point, New York. So great was New England's joy in this "conjugal union" that a Railroad Jubilee was held in Boston that fall to celebrate it. The heads of state and prominent men of both nations attended the festivities - travelling to and fro by train, of course - and revelled at the banquets and balls, processions and parties. Lord Elgin set the tone of the time:

> It becomes us - Americans and Britons - to be ready at all times and all places... to cultivate towards each other feelings of brotherly love and mutual friendship.[8]

Such sentiments of continental fraternity served as incentive to eager Canadian railway promoters. Soon other lines were being pushed ahead with the same goal. The European and North American in New Brunswick, the Montreal and New York (progeny of the unprofitable Montreal and Lachine) in

Canada East, and the Bytown and Prescott in Canada West were all designed to cement north-south trade links. So it was with other small railways in Canada West leading from places like Brockville, Cobourg, Port Hope, Port Stanley and Port Dalhousie where the promise of future civic prominence was based, at least in part, on the anticipation of continental trade across the Great Lakes to American ports.

Another class of continental line encouraged by the Guarantee Act was that which relied on the carriage of American trade from the burgeoning western states through Canada to the eastern seaboard of the United States. Three major lines in Canada West fell into this category, the most important of which was the long-planned Great Western. From its first prospectus onward, the purpose of this railway was clear:

> The Great Western Rail Road is designed not only to facilitate the internal traffic of the Province of Canada, for which its route possesses eminent advantages, but also to form a connecting link in the great chain of Railway from the city of Boston, on the eastern coast of the United States, to the Mississippi River, thus drawing over it an immense and increasing foreign traffic.

As part of a "great chain of Railway", the Great Western was planned to be linked to New York state by a suspension bridge to Niagara and to Michigan by a ferry at Detroit. After years of delay, work finally began on the project in

1851. Two other continental lines, the Northern out of Toronto and the Buffalo, Brantford and Goderich were forwarded at this time in anticipation of capturing a share of the seemingly lucrative through traffic. Both counted on ships from Chicago delivering freight to their northern ports whence it would be sent in a shortcut south to be then ferried across to New York. Both were sufficiently appealing to attract capital enough to begin construction in the early 1850s. Together with the Great Western, these lines at last brought Canada West into the railway age. All were competitors in the quest for the American through trade; trade which in 1853 seemed limitless; trade which the Montreal Gazette would later aptly term "our Canadian will-o-the-wisp".[9]

National Lines

The second major type of railway to capture the attention and engage the efforts of Canadians between 1849 and 1852 was the national line. The primary aim of this type of line was to unite the various provinces of British North America. Because economic and geographic forces often were obstacles resisting construction of the national line, political considerations were as important as commercial factors in the development of these east-west links. There were two movements towards the achievement of national lines following 1849. The first was a revival of the idea of an intercolonial railway joining the Canadas to the maritime provinces, the

second was that of a trunk line connecting Canada West to Canada East. Both were confusingly interlocked; often dependent on one another, sometimes at variance. Between 1849 and 1853 the fates of both were determined.

Among the other inducements to railway construction contained in the Guarantee Act was a declaration of Canadian support, in the form of land and money, towards the construction of a railway between Halifax and Quebec. "A great national work...linking together the various portions of the British Empire" [10] the intercolonial was considered, of course, to be an imperial undertaking; however, should the British government embark upon it, the Canadian government was willing to lend what aid it could.

For the next three years politicians from Canada, Nova Scotia and New Brunswick sought to convince the colonial office of the need for this imperial line. Hincks presented the case in the summer of 1849 but was refused by the Colonial Secretary. In 1850, Joseph Howe, Nova Scotia's leader, took up the cause. By means of "lucid reasoning, startling facts, profound political philosphy and forcible eloquence",[11] Howe almost single-handedly managed to arouse the interest of the English people in the idea and persuade men in high places to reconsider their rejection of the project. In March 1851 the British government tentatively decided to guarantee the interest on a sum necessary to build the

intercolonial railway, provided it was built entirely within British territory and the provinces agreed to give support in land and money. It seemed the long-sought intercolonial was at last to become a reality.

While Howe was refusing to accept the negative British verdict of 1849, Hincks acceded and turned to encouraging a trunk line between the Canadas. This idea was not a new one. As has been pointed out, by 1849 a series of lines had been chartered which, if built, would have joined the Canadas by rail. Although the Guarantee Act stimulated action on the commercially attractive continental lines, it failed to spur construction of the links of the trunk line. Even after a meeting at Kingston in February 1851 of "delegates from places favourable to a Grand Provincial Railroad from Montreal to Toronto ", it appeared that private capital was unequal to the task of providing the province with a national trunk railway. To Hincks it was equally obvious that Canada must have such a line. Accordingly, in 1851 he dramatically scrapped his 1849 policy of government aid to private railway companies and introduced a new policy of state control of the national line. Since the trunk line was a political necessity, the province was obliged to undertake the project and the government was therefore prepared to construct and operate the railway.

It was at this point the two national projects were joined. In June 1851, aroused by the British government's

March approval of the intercolonial railway, Howe of Nova Scotia, Hincks of Canada and E.B. Chandler of New Brunswick met in Toronto to discuss interprovincial railway policy. There it was agreed that the intercolonial would be built as a joint enterprise of the three provinces financed by the sale of Crown land on both sides of the line along with provincial contributions of up to £20,000 per province to meet interest charges. The proposed railway would not terminate at Quebec, but would be extended to Windsor or Sarnia - a truly national line in every sense. The route of the railway through New Brunswick was left unsettled. A northern line through the bleak interior of the province was preferred for defensive reasons by the Colonial Office and for economic reasons by the Nova Scotians. A line along the populated Saint John River valley was the choice of the New Brunswickers. By early 1852 further meetings at Fredricton and Halifax seemed to determine the desirability of the Saint John valley route.

Flesh had been added to the skeleton of Canadian railway policy. By February 1852 there remained but transfusions of imperial cash - a loan for the staggering amount of seven million pounds - to give the creation life. Hincks and Chandler, but not Howe (who was delayed, but who was also the least enthusiastic about the chosen route), sailed for England to achieve this national dream.

In England they found a new British government which was hostile to the suggested route and uncongenial towards the

proposals for imperial aid. While negotations stalled, a firm of British railway contractors, Peto, Brassey, Jackson and Betts, took an interest in the Canadian railway plan, and, although they saw no commercial merit in the intercolonial idea, they did envisage potential profit in the trunk line between the Canadas. Approaching Hincks, the Brassey firm indicated their willingness to embark, with government assistance, on the construction of a 330-mile railway between Montreal and Hamilton. By May 1852 Hincks' acceptance of this offer had sealed the fate of future Canadian railway development. The Canadas would have a privately owned national line; New Brunswick and Nova Scotia would have to rely on local lines. The intercolonial died stillborn.

For reasons explained elsewhere, (see Chapter Two: "The Grand Trunk") by the spring of 1853 the Grand Trunk Railway of Canada had tripled in length to become a 1,100 mile national line stretching the length of the land from Rivière du Loup to Sarnia. By absorbing the Atlantic and St. Lawrence to Portland and by extending to the St. Clair River border with Michigan in competition to the Great Western, the Grand Trunk had also become a continental line. The pitch of its prospectus of 1853 makes this clear:

> The Grand Trunk Railway of Canada... commencing at the debouchure [sic] of the three largest lakes in the world pours the accumulating traffic in one unbroken line throughout the entire length of Canada into the St. Lawrence

> at Montreal and Quebec on which it rests on the north, while on the south it reaches the magnificent harbours of Portland and St. John on the open ocean. The whole future traffic between the western regions and the east...must therefore pass over the Grand Trunk Railway.[12]

By 1853 the pattern of railway development in the Maritimes had been determined along continental lines. Following the abandonment of the intercolonial idea, the Brassey firm approached the two Atlantic provinces with offers to build there. In Nova Scotia their blandishments were rejected as Joseph Howe held fast to his beliefs in state-ownership of railways. There, "determined to push on its internal improvements on the strength of its own resources",[13] the government introduced in 1853 a bill for the construction, as public works, of railways from Halifax to Windsor, Truro, Pictou and the New Brunswick border. The Brassey offer, on the other hand, was accepted by New Brunswick and in 1853 work began on the boundary-bound European and North American Railway, a continental line designed to tie New Brunswick to the United States.

Local Lines

Little need be said about the last type of railway born in the 1849-53 period, the local line. In the early 1850s, as part of Hincks' policy of encouraging railway construction, municipalities were given the power to borrow from the Municipal Loan Fund in order to invest in local railway

companies. In Canada West especially, certain places with metropolitan pretentions viewed this legislation as a means of obtaining a line to tap the resources of the hinterland and funnel this traffic their way. Continental economic forces, as has been pointed out, brightened the prospects of success of such lines and the start of construction of the Grand Trunk seemed to assure their future prosperity as feeders of the main line. In addition, the decision to build the trunk line using private British capital relieved the municipalities from contributing to the national road and freed them to give support to local railways. After 1852 many municipalities borrowed money from the Loan Fund and invested it in railways. In all, over six million dollars was used this way to construct branch lines which otherwise would not have been built. Unfortunately, many municipalities overextended their credit and many of these railways were commercially unjustifiable. But on a map of the historic Canadian railways, in addition to the continental and national lines, are these little branches, the local lines that sprouted in the 1850s.

The Boom

When the year 1853 began, Canadian railway mileage stood at 371 miles. In the few years since the passing of the Guarantee Act, 227 miles of track had been laid; not much in comparison with American totals, but enough to inspire

some confidence in the future of Canadian railway building. The next four years brought the most spectacular railway building boom in the history of the country. The most remarkable feature of this great burst of energy was the increase in track mileage in comparison to what had existed before. Dry as statistics are, they show the astounding amount of construction completed in these few years:

1853 - 212 miles
1854 - 330 miles
1855 - 236 miles
1856 - 437 miles

1,215 miles[14]

Most of this mileage belonged to the Grand Trunk Railway. Construction of this railway began in 1854 and was strenuously carried forward, section by section, for the next three years. By the fall of 1856 the trunk line extended from Lévis in the east to Stratford in the west. The completion of its first stage of construction was marked by a great celebration in November 1856 to inaugurate service between Montreal and Toronto.

In addition to the mammoth Grand Trunk enterprise, a number of lesser lines were built and completed at this time. Canada West, which had previously allowed Canada East to monopolize the field of locomotion, entered the railway age with a vengeance. In 1853, the Northern out of Toronto, although incomplete, was the first line in Canada West to run scheduled trains. On 10 January 1854 the first train

ran on the Buffalo, Brantford and Goderich (but only between Buffalo and Brantford - Goderich would take another four years to reach!). Seven days later the Great Western became the first completed railway in Canada West and was opened "with champagne corks flying"[15] for its entire 229-mile length between Niagara and Windsor. Following these continental lines were some of the local railways. In 1854 were opened the Erie and Ontario (3 July) the Bytown and Prescott (25 December) and the Cobourg and Peterborough (29 December). By 1855 Canada West had become the centre of railway traffic in British North America and the early financial success enjoyed by the Great Western, in particular, spurred other projects hurriedly along.

The Atlantic provinces were not left unaffected by the activity of the era. In New Brunswick by late 1853, two railways, the St. Andrews and Quebec and the European and North American were being pushed ahead. In 1854 Nova Scotia began its own publicly owned line from Halifax to Truro along with a branch to Windsor. There was still hope in the maritime provinces that these scattered pieces would someday form part of a national line to Quebec; in the meantime there was certainty that they would bring the continental benefits of local prosperity.

The effects of the railway building boom in Canada were startling. Provincial governments spent huge sums

supporting railways; municipal governments invested heavily in the new enterprises; private capital poured into the country from England. "The utmost activity was displayed", wrote one observer, "in running into debt". Land values rose spectacularly, especially - to the glee of speculators - in areas touched by the railways. The demand for labour led to a large influx of immigrants. The demand for materials encouraged the establishment of a host of new industries allied to railways such as locomotive works, car building shops and foundries. Railway building meant good times:

> Whilst this expenditure was going on, armies of labourers at high wages, were employed all over the province; large sums were spent in all the towns near the works in progress; and the circulation of money throughout the country was therefore largely increased. The prices of everything rapidly rose; farm produce was sold at highly remunerative rates; and, of course, all mercantile business received a corresponding stimulus.

"Everybody would soon grow rich" was the spirit of the mid-1850s. And many did. It was "the saturnalia of nearly all classes connected with the railways". It was also a time of increasing inflation, but that, it was said, was the price paid for unparalleled prosperity.[16]

But the boom brought bad as well as good. Inflation caused the costs of railway construction to escalate, and in order to preserve their profit, railway contractors

resorted to slipshod methods and second rate materials. The railways built at this time were poorly constructed affairs. In later years a price was paid. Some lines, like the Northern, had to be completely rebuilt. Others, like the Great Western, suffered serious accidents attributable to construction faults. All provided substandard service because of the scamping that had occurred.

There were adverse political effects as well. As early as 1854, scandals began to ripple through the press involving politicians and railways. The generosity of the Grand Trunk Railway towards Francis Hincks resulted in an investigation which eventually led to his resignation. Other politicians followed the leader; political morality was a victim of the boom. One contemporary critic acidly commented:

> Canadians, indeed, have had cause to blush at the spectacle of men filling the highest offices of the province, with a seat at the council-board of their sovereign, accepting fees and favours from contractors and officials of a railway company (between whom and them there should have been a gulf as wide as that which separates the judges of assize from the suitors before them), and laying the honour of their country in the dust, often at the feet of boorish and uneducated men, whose only recommendations were - the material one of ill-gotten wealth, and the immoral one of unscrupulousness in the use of it.

In the "get-rich-quick" era of the mid-1850s, bribery and

corruption flourished. Railway policy yielded to political opportunism. Nowhere is this more evident than in the case of the Grand Trunk Railway. Assured in 1852-53 that "Canada would never be asked for a copper" by the British promoters of the project, Canadians were asked for aid in 1855 and petitioned for further relief one year later. Dependent on the success of the venture, Canadian politicians complied with these demands. "Whatever may be said about the uselessness of annual meetings of Parliament", wrote one critic cynically, "they are convenient to a corporation having one to do its bidding". Few at the time questioned the wisdom of the policy that encouraged a private company to build a national railway using public funds. Of what value were such theoretical wonderings when there were fortunes to be made?[17]

The culmination of the railway boom occurred in November 1856 when the Grand Trunk line was opened for service between Toronto and Montreal and a great two-day celebration was held to mark the occasion in Montreal. "The streets were crowded with thousands of visitors from all parts of Canada and the United States", reported one participant. "There were balls, military parades, trade and society processions, torch light marches, firework illuminations, etc". There was also unbounded optimism in the future. Great things were expected from the new-born trunk line:

> The Great Enterprise now in the infancy of its existence, but waiting its christening to commence a career of which youthful promise is great, whose manhood triumphant and successful, will call forth the grateful thanks of a rising nation.

With over 1,200 miles of track having been laid in four years, the future of the country looked equally bright. "Our country Canada", wrote one celebrant, having imbibed the heady wine of prosperity, "may become a second Empire".[18]

Aftermath

The year 1857 was the great divide in early Canadian railway development. The year opened on a chilling note with a winter of "extreme cold...intense frost and great quantities of snow",[19] which played havoc with railway operations. In the spring occurred the disastrous crash of a Great Western train through a bridge over the Desjardins Canal near Hamilton. Seventy people were carried to their deaths. Summer came but for the first time in years there was virtually no railway construction during the good weather. A mere 69 miles of new track was laid that year.

The economy was no longer booming. The slowdown was summarized by the directors of the Great Western Railway who were faced for the first time with a cheerless balance sheet:

> The ending of the Crimean War and the

> cessation of railway and other public work in Canada, has given an effectual check to business and with a scanty harvest and a terrible winter, the condition of affairs is serious. The traffic has not shown a progressive increase for the first time.

The situation worsened in the fall. A "money panic" gripped the United States, financial institutions failed, and the continent was catapulted into a major depression. The effect on Canadian railways was immediate. There was a drastic reduction of traffic on all the railways that depended on international trade for their prosperity. The strongest of these continental lines, the Great Western, suffered severe losses which the directors of this company in April 1858 rather helplessly attributed to "the complete prostration of business of the American continent". Weaker local lines like the Bytown and Prescott and the Cobourg and Peterborough, crippled by the depression, went bankrupt. The Grand Trunk intensified its familiar efforts to seek relief from the Canadian government. It was a time of failure.[20]

Although Canada suffered less severely from the crash of 1857 than the United States, her economy remained depressed throughout 1858 and 1859. During these late years of the decade, most lines struggled to keep going, several under receivership. Desultory progress was made in the completion of the lines begun earlier.

In the Atlantic region, the Nova Scotia Railway reached Truro in 1860 and the company, suffering the slings and arrows

of financial misfortune, postponed further extension until better times. In New Brunswick, the government was forced in 1856 to take over the construction of the European and North American Railway following the suspension of operations on the line by the contractors. Like the Nova Scotia Railway, the European and North American ended up as a truncated version of the original project. Instead of reaching the American border, the railway linked Saint John to Shediac on the Northumberland Strait. Elsewhere in the province the St. Andrews and Quebec, renamed the New Brunswick and Canada, had probed 60 miles into the interior from St. Andrews by 1860, but even the enthusiastic had given up hope of the railway realizing the aim implied in either its old or new name.

In the Canadas 417 miles of new track were laid in the three years following 1857 but this was less than the total built in the single year of 1856. The Great Western added a branch line from Windsor to Sarnia in an effort to thwart the continental competition posed by the Grand Trunk whose far western section from Stratford to Sarnia was opened in 1859. In 1860 the Grand Trunk was finally finished when the far eastern section was completed to Rivière du Loup, there to wait in splendid isolation for the ephemeral intercolonial to join it. A few local railways like the Brockville and Ottawa and the Stanstead, Shefford and Chambly, begun during the boom, were opened in the late 1850s. Typical of the

times, the former did not reach Ottawa (or the Ottawa River) and the latter never reached Stanstead. In 1860 the finishing touches were made to the incomplete Canadian railway system. Canada's first railway tunnel was opened at Brockville. The Victoria Bridge, "the stupendous work which may be described without exaggeration as one of the 'Wonders of the World'",[21] was completed at Montreal. The railway spree was over.

The End of the Era

The railway decade had been marked by many ceremonies, from sod turnings to line openings, and it seemed only fitting to celebrate the end of the era with another. The completion of the world's longest bridge provided a suitable occasion; accordingly, in 1860 Canada invited Queen Victoria to visit Montreal and preside at the opening of the great bridge named in her honour. The Queen declined the invitation; she consented to send her son instead. As is still wont to happen, the Royal Visit to Montreal became a Royal Tour through all of British North America (as well as part of the United States). In planning the Prince's itinerary, Canadians, like children showing off new toys, arranged for him to ride on as many of their new railways as possible. From Halifax to Sarnia the heir to the throne was toted about by train. In all, 10 Canadian railways served his pleasure. Furthermore, no effort was spared by these companies to impress the young

Prince. In New Brunswick, the European and North American Railway carried his party for only a few miles, yet created a special train headed by a new locomotive aptly christened the "Prince of Wales" for the purpose. The Northern Railway constructed a special observation car for his trip to Collingwood and back. The Great Western and its rival, the Buffalo and Lake Huron (formerly the Buffalo, Brantford and Goderich) vied with each other in the construction of "truly magnificent" coaches for his brief journeys on their lines. Not to be outdone, the Grand Trunk, Canada's largest railway, built Canada's most powerful locomotive to haul over their tracks "the splendid new car built expressly for the use of the Prince".[22]

Ironically, most of the railways that spared no expense in preparing for royalty were broke or close to it. But in the few short weeks of a wet Canadian summer this seemed forgotten. Canada had become a railway power; the opening of the Victoria Bridge on 25 August 1860 symbolized this above all things. And along the decorated board platforms of important stations, at muddy depots in the dark, by scrubby sidings that might someday spawn a town, the people cheered. The railways had brought expense, trouble, scandal and disaster. They had also brought pride.

Consolidation

In 1860 there were over 2,000 miles of track in the Canadas,

Nova Scotia and New Brunswick. Many social and commercial benefits were derived from the new railways; however a high price had been paid. At Confederation the Grand Trunk, the Great Western and the Northern were indebted to the government by an amount over 33 million dollars, over two thirds of which was owed by the Grand Trunk alone. In addition, municipalities had borrowed over six and half million dollars to invest in local railways (see Appendix A), but as each of these lines failed, the municipalities were forced to default on their loans. Governments had committed the public's money lavishly to private enterprise without any return on the investment of Canadians. The huge debt created by railway construction during the 1850s - as well as the cessation of British investment in schemes which had proven to be disastrously unprofitable - halted this type of work throughout most of the 1860s. From 1860 to 1867 only about 200 miles of new track was laid in Canada.

Expansion yielded to consolidation during these years of retrenchment. Emphasis was placed by railways on improving management. Two continental lines, the Northern and the Great Western, were notably successful in this endeavour. The former was rebuilt in 1861-62 and transformed from a money-losing mover of American through freight to a money-making local line. The Great Western, on the other hand, concentrated on improving its facilities as a carrier of through trade, and, by doing so, bettered its local service

as well. So successful was it in this that by 1864 it had earned the reputation of being "one of the best equipped and best managed railways on the continent".[23]

With varying degrees of success, the local lines built in the 1850s strove to improve their organization, management and operations in the 1860s. Their struggle was one of simple survival. Some like the Cobourg and Peterborough or the Bytown and Prescott were forced to suspend operations altogether for periods during this time. Others, like the London and Port Stanley made slow but successful progress. Bankrupt, the small railways sought legislative relief to enable corporate reorganization and financial rationalization. Such relief inevitably resulted in the extinguishing of debts owed by the railways to the municipalities. Thus in the 1860s did Canadians, having publicly invested large sums in private railways, allow their investments to be wiped out while permitting private British bondholders to assume full control.

The Grand Trunk shared the distress of the local lines. Hopelessly insolvent, as usual the company attempted to remedy its plight by requesting financial assistance from the government. In 1861 its role as a national line was cited as just cause for national aid. Canadians, however, had become hostile to such pleas. The Grand Trunk Arrangements Act of 1862 gave the railway a new charter which permitted it to

defer declaring bankruptcy and so stave off total ruin. The Act was, as one commetator noted, "a burial service over the past which stopped the Sheriff but not the interest",[24] and it did nothing to ameliorate the debt-ridden state of the railway. As a result, the Grand Trunk's continuing financial misfortunes impaired all attempts at improving its management. Its equipment deteriorated but the company was unable to repair it. The efficiency of its employees decreased but the railway was unable to improve morale. Service suffered and accidents due to mechanical failure and human carelessness multiplied. Symbolic of the calamitous state of the company is the accident - still Canada's worst railway disaster - which occurred on its line at Beloeil on 29 June 1864. Eighty-nine people lost their lives, due partly to mechanical flaws, partly to human error.

Prosperity: The Old Lines

The return of prosperity around the time of Confederation marked another turning point in the historical development of Canadian railways. Ended was "the long period of repose in which railway progress was allowed to lie since the calamitous period of 1856-57".[25] Begun was a new cycle of optimism and expansion. Between 1867 and 1876, almost 3,000 miles of track was opened in Canada.

For the old established railway companies, prosperity allowed growth. Lines like the Great Western and the Northern

built branch lines to tap flourishing agricultural areas. Other lines, left unfinished after 1860, were completed as originally planned. Thus did the Brockville and Ottawa reach the Ottawa River in 1867 and the town of Ottawa three years later. Similarly, the European and North American was completed to link the Maritimes by rail to New England(and, via the Grand Trunk, to Central Canada) and on 18-19 October 1871 the event was celebrated with ceremonies attended by both the Governor General of Canada and the President of the United States.

Matters seemed to improve after Confederation even for the bankrupt roads. For lines as small as the Cobourg and Peterborough or as large as the Grand Trunk, a brighter day seemed to dawn. In the words of a Director of the latter line written in 1872, "things seemed to have turned the corner".[26]

There were major technological advances made in this era of prosperity. In 1869 the Great Western switched from iron to steel rails; track which was more expensive, but stronger, more durable and much safer. The new steel rails quickly proved to be "a great improvement...very satisfactory",[27] and caused other railways to change from iron. Another important change at this time was the abandonment of Canada's 5 ft. 6 in. Broad Gauge and the adoption of the American Standard Gauge of 4 ft. 8½ in. Begun again by the Great Western, this concession to continental convenience resulted

in the 2,000 miles of Broad Gauge track in 1870 being reduced to a mere 60 miles ten years later. Other technical improvements made at this time included the introduction of a hotel car - precursor of the diner - by the Great Western in 1867, the inauguration of Pullman Palace Sleeping Cars by the Grand Trunk in 1870 and the replacement of the wood-burning locomotives of the 1850s by the more powerful coal-burning engines of the early 1870s. Railways were becoming standardized and the standards introduced in this period - from steel rails to sleeping cars - have, with little change, endured to this day.

Prosperity: The New Lines

In addition to the impetus imparted by prosperity to the improvement of the established railways, momentum was given by the good times to new movements in Canadian railway development. Confidence in railways, so badly shaken by the disastrous effects of the recklessness of the 1850s, returned to this country around Confederation. In certain respects this renewal of railway interest resembled that of the earlier period; in others it differed. Unlike the earlier, British-backed railways, the lines of the 1870s were primarily financed by Canadian capitalists, creations of the country's new class of successful entrepreneurs. Like the schemes of the 1850s, however, the projects of the 1870s relied heavily on public assistance. Sought after

were the familiar municipal bonuses, but also eagerly looked for were grants from the newly created Provincial governments, as well as aid from the Federal government. This assistance took the form of cash, as in the earlier era, and also grants of land - an American innovation ironically adopted by Canada at about the same time as it was abandoned by the United States in 1871.

Certainly the rhythm of the railway revival was hauntingly familiar. The high point of Canadian railway enthusiasm occurred in 1872. In April of that year the General Manager of the Grand Trunk Railway, sounding like an echo of the 1850s, noted, "the whole country just now is going mad on the subject of railways". Eighteen months later the North American economy crashed into a depression like that of 1857 and the folly of railway rage again became apparent. Of the mania that engulfed Ontario, one newspaper wrote:

> It was pronounced a heresy against free trade in Railways and beyond the scope of any Government to assign any limit to this kind of speculation; and in a few short weeks in great confusion in the midst of blunders, squabbles, jobbing, canvassing, hap-hazard rascality and chaos, there were passed an amount of bills under the burden of which not only has a large portion of our Government's surplus sunk, but many Companies and Municipalities have been bowed to the ground.

Railways were investments. Once the investment became speculative, good sense was shoved aside. Inevitably came the crash. As in 1857, so in 1873 and so again in later years,

did history repeat itself.[28]

There were two main factors in the renewal of Canadian railway development around Confederation. The first was the introduction of cheaper methods of building railways. In the Province of Quebec, wooden railways which used seasoned native maple as rails instead of expensive British iron or steel gained vogue. Economy was the root of their popularity. The cost of the Quebec and Gosford, completed in 1870, was only $6,000 per mile - very cheap in comparison with the lines of the 1850s. Durability, however, was lacking.

Elsewhere, narrow gauge railways captured the attention of the Canadian public. Originally introduced in Britain in 1864, narrow gauge lines were soon being discussed in Canada, "exciting a good deal of hostile criticism and not a little ridicule". Built to a width of only 3 ft. 6 in. (narrower by 14½ in. than the American standard gauge), this type of line provided savings in the cost of first construction - estimated to be around $15,000 per mile - through the use of lightweight track, rolling stock and locomotives. Allied to this inducement of low initial investment was the appeal of economy in the day-to-day working of traffic and the attraction of future conversion to standard gauge when earnings permitted. In essence, the narrow gauge line presented Canada with an additional stage of railway development, and, due to "the consideration of cheapness", Canadians quickly

adopted the idea with Ontario their first place of popularity. In November 1872 the first narrow gauge public railway in North America, the Toronto and Nipissing, was opened. A few months later in June 1873 another narrow gauge line, the Toronto, Grey and Bruce began operations as the fourth longest railway in the Dominion.[29]

Narrow gauge lines were also popular in the Maritimes. The New Brunswick Railway, a 3 ft. 6 in. line linking Fredericton to Woodstock, was opened in May 1873. In Nova Scotia the Glasgow and Cape Breton and the Sydney and Louisbourg were built in the 1870s. Narrow gauge also induced Prince Edward Islanders, who had hardheadedly avoided the mania of the 1850s, to finally enter the railway age. The Prince Edward Island Railway, chartered in 1871, appealed to the Islanders because of its estimated cost of only $13,845 per mile. To their chagrin, the people of Prince Edward Island learned what others had been taught in the 1850s - estimates are only estimates. Not only was the cost of their railway well beyond expectations, but also when it opened in May 1875 it was 28 miles longer than originally expected! And the line, "as crooked as a cow track and with as many ups and downs as a cross-cut saw",[30] was completed at the cost of the Island's entry into Confederation.

New National Lines

The second main factor contributing to the revival of railway building in Canada was political, the committment to bind together with ties of steel, the "new nationality" created in 1867. Two national railway projects were undertaken by the Federal government at this time. One was new, a trans-continental line across the Canadian half of the North American continent to British Columbia; the other was as old as the idea of railways themselves, the intercolonial between the Maritimes and Central Canada.

Reflected in the history of these two projects is the search for a suitable government railway policy. The failure of the Grand Trunk resulted in a reaction to the government's policy of the 1850s of public support to a privately owned company. "The company in spending our money", wrote a typical critic in 1864, "was doing nothing more than we could have done for ourselves".[31] Accordingly, by 1867 the government had opted to build its own national lines and by the terms of the British North America Act had undertaken to construct the Intercolonial Railway as a public work by means of a loan guaranteed by the imperial government. With Joseph Howe's legislation of 1854 creating the Nova Scotia Railway, Canada's pioneer state-owned line, serving as a precedent, the Federal government appointed a Board of four Commissioners to supervise the building of the Intercolonial. Not so certain was the

government's policy regarding the operation of the railway. As late as 1870 the possibility of the Grand Trunk running the line was considered. In 1874, however, the Intercolonial was placed under the direct control of the Department of Public Works which assumed the powers formerly held by the Commission and which managed and operated the Dominion's first publicly owned railway.

The government's policy towards the transcontinental project differed from that of the Intercolonial. In 1871, following British Columbia's entry into Confederation, an Act was passed providing for the construction of a railway to the Pacific by private enterprise aided by grants of public money and Crown land. Canadians were not misled, as they had been in the promotion of the Grand Trunk, into believing that the transcontinental railway would cost them nothing. The price, in fact, was made clear by legislation passed in 1872 - a land grant of 50 million acres and a cash subsidy of 30 million dollars. Following the Pacific Scandal (which revolved around the railway) and a change of government, Canadian railway policy changed radically. In 1874 the legislation of 1872 was repealed and Parliament authorized the Government to borrow eight million pounds aided by an Imperial guarantee "for the construction of a railway from a point near to and south of Lake Nipissing to some point in British Columbia on the Pacific Coast, in four sections and two branches, and by private contracts

under Government supervision, but reserving for the Government the right to build all or part of the road and to purchase any part built by contractors".[32] Thus it was determined that the Pacific railway would be a publicly owned line like the Intercolonial. Economic depression and bureaucratic caution prevented this policy from achieving results and it was abandoned by Sir John A. Macdonald following his return to power in 1878 in favour of the public-assistance-private-ownership formula of 1872. It was by means of this policy that the Canadian Pacific Railway was eventually completed. Such were the shifts in the railway policy of the Canadian government following the 1850s that it must be concluded political expediency, rather than philosophical integrity, determined the course of development of Canada's national lines up to, and far beyond, the terminal date of this study, 1876.

Although much time and effort was spent in the organization of the transcontinental railway project in the 1870s, by 1876 there was little to be shown for it. It is beyond that date that the story of the Canadian Pacific Railway forms the basis of Canadian railway history. It is sufficient here to note that the idea of so important a national undertaking had a part to play in regenerating Canadian railway enthusiasm following Confederation. The aspirations of the towns of Montreal, Toronto, Quebec City and Hamilton to become the terminus

of the new transcontinental gave birth to a number of plans for privately built lines northward and westward from these places to the Lake Nipissing starting point of the Pacific railway. These schemes had much to do with the creation of the mania of 1872.

The completion of the Intercolonial Railway, on the other hand, completed a chapter in the story of Canadian railway development. The line was first suggested in 1832, four years before the completion of Canada's first railway, but in spite of years of studies, reports, meetings and lobbying, it remained an unrealized idea in 1867. Confederation, however, made the railway a reality. Section 145 of the British North America Act declared the railway "to be essential to the Consolidation of the Union of British North America", and provided "for the Construction therof without Intermission, and the Completion thereof with all practicable Speed".[33]

A few days after 1 July 1867, Sandford Fleming was appointed engineer-in-chief and construction of the Intercolonial was soon begun. Nine years, many struggles and much effort, later, the Intercolonial Railway was opened for traffic. It was an extremely well constructed railway. Its bridges, permanent way and rolling stock were first rate. Fleming wrote:

> When a line is carried out by private effort a circumscribed capital may compel the adoption of cheap structures.

> A railway constructed to meet a national requirement...like the Intercolonial is controlled by no such limitation.

Such were the benefits of government construction. The disadvantages of a government-owned, government-operated railway later became obvious. Management was not always efficient, political interference was a fact of life and the railway was regarded by the people, "more as a rich and benevolent relative than as a servant who gave service only for money received". Its failure to ever become a profitable enterprise was later often used to demonstrate the folly of public ownership; however commercial considerations were subordinate to national objectives in the location and construction of the line. Unprofitable as was the Intercolonial, it did not fail in the fulfillment of its primary objective - "the Consolidation of the Union of British North America". Almost a century later, the railway is still an important, operating national link between the two oldest regions of this country.[34]

On 1 July 1876 there were 36 railways operating 5,157 miles of track in Canada, a mileage more than double that of 1867. On that day the Intercolonial Railway was finally officially opened. It was, in the words of an Ontario newspaper editor, "a conclusion both real and symbolic to a lengthy national quest, and the end of a chapter".[35]

Part 2. The Historic Railways

The First Lines

The Champlain and St. Lawrence, Later the Montreal and Champlain

In 1832, not long after the opening of steam-powered public railways in England and the United States, the Company of Proprietors of the Champlain and St. Lawrence Rail-road was granted the first Canadian railway charter to build a portage line between St. Johns on the Richelieu and Laprairie on the St. Lawrence across from Montreal. Spearheaded by the zeal of Jason C. Pierce, a forwarder from St. Johns and supported by the Montreal merchant community, in particular John Molson and Peter McGill, the unique undertaking progressed. By 1834 enough capital - mainly Canadian - had been amassed to begin the work of construction. The company appointed W.D. Lindsay as General Manager and William R. Casey, a 26 year old American, as Chief Engineer. Together in the next two years these two men successfully laid the groundwork for the country's first railway, pioneering in those tasks which other men on later lines would repeat: surveying the road, purchasing the property, grading, grubbing and laying the line, building bridges and stations and ordering the rolling stock.

On Thursday, 21 July 1836 Lord Gosford, governor-in-chief of Canada, and a host of dignitaries rode by rail 14.5 miles from Laprairie to St. Johns and there officially opened the Champlain and St. Lawrence. The Montreal Gazette

called it "one of the proudest days in the annals of Lower Canadian improvement". Perhaps the wry comment made by Thomas Storrow Brown best indicates its significance to Canadians. "We in Canada are so accustomed to see things done ill", he wrote, "that a work well done is a miracle". A century later the event was commemorated by the erection of a plaque by the Historic Sites and Monuments Board - one of the rare plaques dedicated to Canadian railway history.[1]

Canada's first railway was Canada's only public railway for 11 years. In that relatively short period British and American railways made great strides in improving their service. Experience quickly weeded out the worst from the early jumble of highly individualistic mechanical designs. The railways developed safer and sounder track, created practical and successful locomotives and adopted standard operating procedures. Because of this, any study of the pioneer period of Canadian railway development tends to devote a disproportionate amount of attention to the Champlain and St. Lawrence for it was the only Canadian line upon which these technological changes were reflected.

Another consequence of the Champlain and St. Lawrence Railroad's long period of solitary pre-eminence is the number of "firsts" which must be credited to the little line. Some are obvious: the use of Canada's first locomotive, the Dorchester; the employment of the country's

first locomotive engineer, H. Boughton; the first to carry Canadian mail and the first to suffer a fatal railway accident. Others are less so. In 1838 the railway was the first in the world to carry troops to an engagement when it brought the British soldiers to St. Johns for the November attack on the Patriote stronghold (deserted before the troops arrived) of Napierville. In 1840 the company was an early promoter of American tourism when it sent an agent to Saratoga "for the purpose of inducing travellers to Canada".[2] The railway was the first to link Canada to the United States by rail when an extension of the line was opened to Rouses Point, New York in 1851. Finally, the Champlain and St. Lawrence was the first to abandon a section of its line when the western terminus was moved from Laprairie to St. Lambert and a five mile stretch of the original track was torn up in 1855 - an occurrence of ironic significance nowadays.

In comparison with other Canadian railways built at a later date, the Champlain and St. Lawrence holds several distinctions. First, its record of safety was extremely good and few accidents occurred on the line. From 1836 to 1849 when the railway ran on primitive flat rail, prudent management and a cautious operating policy prevented mishaps. In the 1850s the reconstruction of the line using expensive British T-rail allowed the Champlain and St. Lawrence to

avoid the tragedies which happened on the unsubstantial lines built in the boom. In the second place, unlike many later companies, Canada's first railway proved to be a profitable investment for its Canadian shareholders. Throughout the 1840s the company paid dividends and during the 1850s it successfully developed a lucrative international traffic. In 1857, the depression year that doomed so many Canadian railways, the Champlain and St. Lawrence merged with its chief rival, the Montreal and New York, to become the Montreal and Champlain Railway. The opening of the Victoria Bridge spelled the beginning of the end for the railway which then worked under the disadvantage of being connected to Montreal only by ferry. In 1864 the company's independent operations ceased when it was leased to the Grand Trunk. It retained on paper its separate corporate identity, however, until 1893 when, after 61 years, Canada's most historic railway was formally absorbed by the Grand Trunk and disappeared into its vast empire.

The Albion Mines

In 1834 the General Mining Association of Nova Scotia decided to replace their horse tramway leading from the coal pits to the docks at Pictou, Nova Scotia. Company officials in England accepted the plans for a railway drawn up by Peter Crerar, a Pictou surveyor, and construction of the Albion Mines Railway began in 1836 under Crerar's surpervision.

The six-mile line was officially opened on 19 September 1839, "one of the most memorable days...in the history of Nova Scotia".[3] Thousands turned up for the event; "the carcass of an ox"[4] was among the delectible offerings served by the company to the celebrants who witnessed the start of Canada's second railway.

Unlike the Champlain and St. Lawrence, opened three years earlier, the Albion Mines Railway was not a public line. Coal miners apparently used it to travel to and fro, and a passenger coach was built to carry company officials; however, the carriage of coal was the main function of the line. Two of the early locomotives used on the railway have been preserved. The Samson, Canada's oldest surviving locomotive, built in 1838, is displayed in a handsome shelter at New Glasgow; the Albion, a later engine, is on exhibit at the Miners' Museum in Stellarton, Nova Scotia - both priceless relics of the pioneer period of Canadian railways.

The Montreal and Lachine later the Montreal and New York

As the construction of canals on the Upper St. Lawrence improved water communications between the Canadas in the 1840s, there rose a need to improve travelling conditions between Montreal, the commercial centre of the province, and Lachine, the head of navigation. In June 1846 the Montreal and Lachine Rail Road Company was chartered for this purpose. The eight-

mile line was surveyed and planned in 1846 and constructed in the following year. There was never a railway built in Canada that was more "British" than the Montreal and Lachine. It was "made in the most substantial manner", using heavy British T-rail. Its motive power was furnished by two fine Scottish-built locomotives. Even the coaches were "got up on the English plan, the seats being transverse and not longitudinal". Not surprisingly, when on 25 November 1847 the Governor General, Lord Elgin, officially opened the Montreal and Lachine, it was reported that "His Excellency concluded by saying he had never travelled over a smoother railway".

The history of the company, unfortunately, was not so smooth. Forced by the enlargement of the Lachine Canal to rely primarily on passenger business rather than freight traffic and faced from the day of opening with the effects of the commercial depression that began in Canada in 1847, the Montreal and Lachine did not prosper. In 1850 company directors resolved that the railway's financial plight could be remedied by extending the line either to Kingston in the west or New York State in the south. The continental connection with the United States eventually proved to be the more attractive alternative and in 1851 the name of the company was changed to the Montreal and New York and work began on the construction of an extension from Caughnawaga to Mooer's, New York. In September 1852 it became the

second international railway in the country. A notable feature of the Montreal and New York was the operation of Canada's first train ferry, the Iroquois, across Lake St. Louis between Caughnawaga and Lachine. The decision to build to the United States proved to be a bad one. Beaten to the border by the older and stronger Champlain and St. Lawrence, the Montreal and New York came out second best in the competition for international traffic and was able to avoid bankruptcy only by attracting local Canadian business. Following 1854 plans to unite the two rival railways were discussed. In 1857 they were amalgamated under the name of the Montreal and Champlain. Thus ended the brief and unprofitable life of Canada's third completed railway. A well built line, the Montreal and Lachine destroyed itself by duplicating an existing service and over-extending its resources - the first, but not the last, in Canada to do so.

The St. Lawrence and Atlantic

To provide Montreal with a winter port and to link the Eastern Townships to the metropolis were the two most important factors which made attractive the idea of a railway between Montreal and Portland, Maine. The scheme was first suggested in 1843 by John A. Poor of Portland and was endorsed by Alexander T. Galt, Commissioner of the British American Land Company, through whose lands the projected

railway would pass. In 1845 the Canadian legislature chartered the St. Lawrence and Atlantic Railroad and empowered it to build to the American border where, in a unique international undertaking, it would join the Atlantic and St. Lawrence, its American counterpart which was incorporated by the State of Maine in the same year.

The first section of the railway, 33 miles between Longueuil (opposite Montreal) and St. Hyacinthe, was opened in December 1848. A shaky London money market and a severe economic depression in Canada prevented the company from acquiring additional capital to enable it to lengthen its line during the 1840s. Punch in Canada called it "as lazy a railway as ever smoked";[6] nevertheless, even incomplete the St. Lawrence and Atlantic could boast of being Canada's longest line and it maintained this distinction for the next five years of its corporate existence.

The passage of the Guarantee Act in 1849 and the promise of government aid to the St. Lawrence and Atlantic prompted a reorganization of the company that year. A.T. Galt became president, Casimir Gzowski was appointed chief engineer and work began extending the line through the Eastern Townships. In 1851 it reached Richmond, a year later Sherbrooke and on 16 July 1853 the St. Lawrence and Atlantic joined the Atlantic and St. Lawrence at Island Pond to unite Montreal and Portland. It was not, however, a well built railway.

One authority stated:

> A considerable portion of the line was entirely without ballast, and the remainder very inadequately supplied. More than one-half was unprotected by fences of any kind, and the stations and buildings connected therewith, almost in every instance, insufficient.[7]

But it was the first large scale railway project in Canada and it was finished.

No sooner had the railway been opened than it lost its corporate identity. On 5 August 1853 it was leased by the embryonic Grand Trunk Railway for 999 years. Having operated independently for only five years, the St. Lawrence and Atlantic had only limited significance in Canadian railway history. It proved to be the springboard to prominence for both A.T. Galt and C.S. Gzowski. Its broad gauge of 5 ft. 6 in. was adopted by the Board of Railway Commissioners in 1851 as the standard for future Canadian railways - a decision which proved to be a hindrance to the carriage of international freight due to the American standard gauge of 4 ft. 8½ in. It provided Montreal (and thus the St. Lawrence and Great Lakes region) with a direct connection to an ice free winter port. Finally, like all railways, it stimulated the growth of the local area through which it passed. The brief life span of the St. Lawrence and Atlantic must, however, be considered as part of the pre-history of the Grand Trunk Railway.

La Compagnie du Chemin à Rails du St. Laurent et du Village d'Industrie (The St. Lawrence and Industry)

The last of the lines built in Canada East before the dawning of the railway age in Canada West was La Compagnie du Chemin à Rails du St. Laurent et du Village d'Industrie. As its name implies, it was a French Canadian railway venture. It owed its origin to the Hon. Barthélemy Joliette, a French Canadian seigneur and capitalist. It was built by French Canadians to link present-day Joliette to the St. Lawrence River port of Lanoraie and it was operated by French Canadians from its official opening in May 1850 until its absorption by a larger company in 1882.

The little 12 mile railway was a good example of getting the most from the least. While contemporary lines like the St. Lawrence and Atlantic purchased new rails and locomotives from England and the United States, the Industry Railway bought the old flat rails and well worn rolling stock of the Champlain and St. Lawrence which, after a dozen seasons of use, Canada's first railway was replacing with new T-rails and modern cars and locomotives. Second hand the St. Lawrence and Industry might have been, but it cost only £1,000 per mile to build, while the contract price of the St. Lawrence and Atlantic was £6,550 ($26,200) per mile. As an observer of the time noted, "It has been built upon very economical principles".[8]

A relic of the past even when first opened, the St. Lawrence and Industry operated virtually unchanged in isolation and obscurity for the next 32 years, oblivious to the great advances in railway technology. Finally in 1882 the line was purchased by a larger company and, three years later, Canada's most primitive railway became part of Canada's most modern railway, the Canadian Pacific.

The Early Continental Lines of the Canadas

The Northern, formerly The Toronto, Simcoe and Lake Huron, The Ontario, Simcoe and Huron Railroad Union, later The Northern and Northwestern.

The Northern was Ontario's first operating railway. The idea of a railway running north from Toronto to the shores of Georgian Bay had been discussed first at the time the Champlain and St. Lawrence was being organized in Lower Canada. "Great exertions are making in Toronto for the prosecution of a Railroad from that city to Lake Huron...." reported a Montreal newspaper in 1836 which, noting the metropolitan ambitions of its organizers, continued, "Should this work be proceeded with and completed, it will be the making of Toronto".[9] Unlike the capitalists of Montreal who brought the Champlain and St. Lawrence to a successful completion, the railway promoters of Toronto were unable to proceed past the talking stage with their project in the 1830s. The idea had to wait until the population of Upper Canada and of Toronto had increased, until the settlement and growth of the American mid-west, until the construction of the St. Lawrence and Sault Ste. Marie Canals improved navigation, and until the repeal of the Navigation Acts. Then the idea of a railway running north from Toronto to Lake Huron became a viable proposition and an attractive investment. Such a line would not only serve a flourishing Canadian agricultural and timber region, but would also provide a

shortcut, by-passing Lake Erie, across which would be funnelled to Toronto a lucrative share of the rich American grain trade. It would a portage railway - albeit almost 100 miles in length - between Lake Huron and Lake Ontario.

The passage of the Guarantee Act in May 1849 was followed in August of the same year by the incorporation of the Toronto, Simcoe and Lake Huron Railroad. Under the leadership of F.C. Capreol, the company made efforts to organize and finance the ambitious undertaking. In May 1850 it was reported that "gentlemen of credit in the United States have proposed to enter into contracts for constructing the said Road".[10] But obstacles in the path of the project made progress so slow that one observer was prompted to write of the railway:

> We Canadians are fruitful in projects but barren in results, and no sooner is one good thing projected than we are overwhelmed with a multitude of proposed niceties, and therefore amid a variety of stools, we are still floundering in the mud.

Finally in 1851 the turning point in Toronto's drive for a railway was reached. That year the company was reorganized and its name was changed to the Ontario, Simcoe and Huron Railroad Union Company. H.C. Seymour, "with large experience as state engineer of New York" was appointed chief engineer. Contracts were made that summer with Story & Co., an American firm of contractors, for the construction of the railway at a cost per mile of £6,250 (about $25,000), the average cost

of railroads in United States. On 15 October 1851 Lady Elgin turned the first sod to mark the start of construction at a ceremony heralded by the Globe as "a harbinger of Toronto's future greatness".[11]

Construction began immediately. By the spring of 1852 the chief engineer had located the line as far as Barrie, 63 miles north of Toronto, and Story & Co. were progressing rapidly on the preparation of the roadbed. But as work pressed on there were increasing reports critical of the quality of construction and sceptical about "the vigilence of the Directors and the honesty of the contractors". At first these reports were airily dismissed, but when the contractors exhausted their funds before fulfilling the requirements necessary to obtain provincial assistance and applied for an advance of money, the government sent Samuel Keefer, chief engineer of the Department of Public Works, to inspect the line and the rumours of scamped construction were proved correct. Keefer objected to "the unnecessary curves made in order to avoid heavy cuttings", and criticized the temporary nature of the wooden culverts and superstructure. He refused to recommend provincial assistance. "The contractors", he concluded, "had taken care of their own interests without much regard for the interests of the Company". Such abuse had occurred because the engineering staff of the company was totally in the service of the

contractor and the chief engineer - the official whose duty it was to protect the company's interest - was himself being paid by Story & Co.[12]

As negative as Keefer's report had been, it failed to daunt the contractors in their quest for government aid. Story & Co. bribed the powerful Samuel Zimmerman to use his influence with Francis Hincks to secure the needed cash. The details were as follows:

> The contractors sent for their American brother [Zimmerman], who, for a brokerage of $100,000 of the first mortgage bonds of the company, undertook to obtain the guarantee. He went to his colleague in the government [Hincks]; the commissioner of public works was shunted out of office on a suddenly raised issue (which immediately thereafter was dropped), and just one week afterward the guarantee bonds were forthcoming.[13]

Keefer's report, however, stung the shareholders of the railway. Annoyed by this lesson in the American way of doing things, they forced a total reorganization of the company. Ejected from office in mid-1852 was the entire executive; dismissed was H.C. Seymour, the chief engineer. The new directors made a supplementary contract with Story & Co. which raised the standards required, transferred the engineering staff to the service of the company and centred the whole authority of construction and management in the hands of the Board of Directors. Finally, the new directors appointed a new chief engineer. They chose Frederick William

Cumberland. It was to prove a wise choice.

Cumberland recruited a staff of bright young engineers which included Sandford Fleming and Collingwood Schreiber, both of whom later gained great prominence in Canadian railway history. Together, they pushed the work of construction and location ahead rapidly. On 16 May 1853 the Ontario, Simcoe and Huron became Ontario's first operating railway when the 30-mile section between Toronto and Aurora was opened to traffic. By October of that year, an additional 33 miles of track was in operation and work was underway on the northern section of the line from Barrie to Lake Huron. Finally in June 1855 the railway justified its name when the tracks reached the company-created port of Collingwood. The Ontario, Simcoe and Huron, with its wooden bridges and culverts, its scanty ballast and its numerous curves, was typical of American railroads of the time and was far from the standard of British lines. When it was finished Cumberland retired as chief engineer and was replaced by Sandford Fleming.

Immediately the company attempted to secure a share of the western grain trade by chartering vessels to ply between Collingwood and Chicago. Prosperity did not result. Weakened by the depression of 1857, in 1859 the company was reorganized and renamed the Northern Railway of Canada. Frederick Cumberland returned to the railway, this time as managing director. Under his direction the fortunes of the company

revived. Acquiring British capital, Cumberland rebuilt the line, "which had fallen into great dilapidation", and replaced the wooden structures with stone culverts and iron girder bridges. He also changed the railway's philosophy of operations, "casting aside the through business and devoting every energy to the nurture and growth of the local interests of the district, and the economical and efficient working of the line". Unlike many other railways of this era, the Northern provided its clients with satisfactory service and was in turn each year provided with a profit.[14]

Under Cumberland's administration the Northern followed a policy of prudent expansion. It was the master of its fate and not the creature of circumstance. The railway leased several extensions at the northern end of its line, and, by 1876, it extended from Meaford in the west to Gravenhurst in the east. Four years later the Northern joined forces with a newly completed rival, the Hamilton and North Western, to become the Northern and North Western. Together, these railways dominated service in central Ontario.

Outstanding a railway administrator as Cumberland undoubtedly was, part of his reputation must rest on his unscrupulous use of political influence in advancing the interests of the company at the expense of the Canadian public. When constructed under the Guarantee Act, the

railway had been advanced £475,000 by the government. For years Cumberland avoided repayment of this loan while remaining on intimate terms with leading Canadian politicians (and even serving as a Conservative Member of the Ontario legislature and the House of Commons just after Confederation). The shareholders were provided with dividends; the government was provided with excuses. Finally in 1876 the matter was closed. The Northern was allowed to extinguish its responsibility for the £475,000 loan through the payment of only £115,500 - "terms so favorable to them", wrote one critic, "that they themselves must have been astonished at their great success".[15]

Cumberland served the Northern for 22 years until 1881 when he died. Following his death, the company's fortunes waned. Having been extended to Callendar, where the new transcontinental legally began, the railway was caught between the hammer of the Canadian Pacific and the anvil of the Grand Trunk and was financially flattened. In 1884 the Grand Trunk gained control of the company and ended the 31 years of independent operations of the Northern, a railway which filled "a larger space in the public eye than perhaps its mileage or earnings, in comparison with other Canadian railways, deserved".[16]

The Great Western

There are many parallels between the history of the

Great Western Railway and the Northern Railway. Both could trace their ancestry back to the 1830s, their actual beginnings to the passage of the Guarantee Act in 1849 and their completion to the early 1850s. Both railways were planned to profit from through traffic from the American mid-west, but, where as the Northern failed and turned to local traffic, the Great Western was fairly successful. Both railways were eventually absorbed by the Grand Trunk in its fight with the Canadian Pacific Railway in the 1880s.

The Great Western began as the London and Gore, chartered in 1834 to link Lake Huron to Lake Ontario through the village of London. The time for the completion of the road was limited to 12 years. Nothing was done under the powers of this charter. In 1845, just as it was about to lapse, the charter was revived by a group led by Sir Allen McNab. The name of the company was changed to the Great Western and power was given it to build from some point on the Niagara River through Hamilton and London to the Detroit River. American railways had, by 1845, been built to connect Boston and New York with Buffalo and Detroit with Chicago; the Great Western was envisaged as a Canadian link between the two, a continental short-cut "for travel and the transport of a large portion of the produce of the North Western States of the American Union". Perhaps John Roebling, the American engineer who designed the Niagara Suspension Bridge

(and later the famous Brooklyn Bridge), best described the Great Western. "This can never be exclusively a Canadian line", he stated in 1851, "it will be more an American one, as it will form one of the most important links in the great route from Boston to Chicago".[17]

American influence was strong in the early organization of the railway. Capital from the United States was invested in the company. The chief engineer, Roswell Benedict, and his assistant, J.T. Clark, were both from the United States. When contracts to construct the line were let in 1850, they were awarded to American contractors, the most notorious of whom was Samuel Zimmerman of Farewell and Company who got his start in the Canadian railway business supervising the construction of the eastern half of the Great Western. As on the Northern, so also on the Great Western there was an uncomfortable amount of collusion between the American engineering staff and the American contractors. In December 1850 a Canadian engineer, in dismissing an opportunity to work "under the auspices of Roswell Benedict, alias Sam Zimmerman", warned of "the danger of having all Yankee engineers who are evidently fast friends of the Yankee contractors".[18] After the Great Western was opened, the wisdom of this admonition became clear.

Although the Great Western held sod turning ceremonies in the autumn of 1847, these coincided with the start of

an economic depression in the country and, as one contemporary writer has noted, "unearthing the necessary capital was much more difficult".[19] Not until after the government intervened to assist Canadian railways through the passage of the Guarantee Act and legislation enabling municipalities to subscribe to railway stock did the Great Western finally secure enough capital to begin construction in early 1851.

With work underway, the importance of the Great Western to Canada increased as plans were developed in 1851 to build a trunk line uniting the Canadas. Since the Great Western was receiving public assistance in the form of the government guarantee, the line seemed the logical choice to serve as the westernmost link in the national railway; however, when arrangements to build the Grand Trunk Railway were made in London in the winter of 1852-53, the Great Western was left out of the scheme. Many factors were involved in this decision, the most important of which was the expansion of the trunk line into a continental railway eager to capture a share of the American through traffic and unwilling to allow a railway as avowedly continentalist as the Great Western to control the western gate. (See "The Grand Trunk" for an explanation of other causes). As a consequence, Canada's two largest railways became competitors, with their rivalry marked by the Grand Trunk entering the Great Western's territory by building to Sarnia and the Great Western

reciprocating by entering Toronto.

In January 1854 the Great Western was opened between Windsor and Niagara. Completed in its entirety before the Northern had been half finished, the Great Western was over 200 miles in length and was Canada's longest line until the Grand Trunk was opened between Montreal and Toronto in 1856. The passage of the first through train was the cause of an international celebration. In retrospect, this celebration appears as a cruel jest perpetrated in the hypocritical spirit of public relations rather than in the spirit of public interest. The railway was open. The trains ran. But the track was poorly laid, the employees poorly trained, the equipment totally inadequate and in the first year of operations there occurred 17 accidents involving the loss of life - the worst , a trainwreck near Chatham where 52 passengers were killed. Twenty-eight months later, 60 people lost their lives when a Great Western train plunged from a weak wooden bridge into the Desjardins Canal. Finally, prompted by these disasters on the Great Western, the Canadian government established safety standards for Canadian railways. The Great Western might have claimed to have opened before any other line in Canada West had been completed, but this was a very hollow claim indeed. Even C.J. Brydges, the powerful Managing Director of the line, admitted that the opening was "premature and in fact

prejudicial to all the interests concerned, even to the best interests of the public".[20]

Poorly built though it was, the Great Western was an extremely profitable undertaking once in operation. Through traffic from the United States was ferried across the border at Windsor and, after the opening of the Niagara Suspension Bridge in 1855, was delivered directly to New York State by the railway. In 1855 the company paid a dividend of eight per cent; the next year it rose to eight and a half per cent. Such prosperity encouraged other railway companies of the period to forge ahead with construction in hopes of a certain profit when completed. "The great success which attended the early years of the Great Western assisted every other Canadian road", wrote one observer, "and was doubtless the main instrument in preventing the Grand Trunk from being prematurely abandoned".[21] The railway's golden days, however, ended in 1857 when the darkness of economic depression descended upon the continent. Even so, while other railways were declaring bankruptcy and curtailing service, the Great Western managed to earn its operating expenses, and, by 1862 was again paying small dividends to its shareholders from time to time.

In 1863, C.J. Brydges, whose methods of running the Great Western had earned him the title of "Napoleon of Railways",[23] left the company to join the Grand Trunk and a

new regime under the leadership of President Thomas Dakin and General Manager Thomas Swinyard was instituted. Following the change, the Great Western was operated with two aims, to garner as much American through traffic as possible and to increase the company's local Canadian business. To achieve these goals, the railway was constantly being improved under the direction of its eminent Chief Engineer, George Lowe Reid. Its bad reputation for service, earned in the 1850s, was slowly erased by the care the railway took to upgrade its permanent way. In the early 1860s, all its old rails were replaced and a third rail was laid along the main line to accommodate American standard gauge rolling stock. (Previously, because of Canada's adoption of Broad Gauge, American goods had to be unloaded at the border, placed in Canadian cars, and then reloaded when they reached the United States again). In 1870 the Great Western was the first Canadian railway to convert its line from Broad to Standard Gauge, and, more importantly, it was the first Canadian railway to use steel rails. Allied to these advances instituted by Reid were the constant improvements made by the Great Western to its equipment. It constructed a steel all-weather ferry to operate between Detroit and Windsor (a vessel which ran from 1866 until 1965). It pioneered in the use of sleeping cars and dining cars in Canada.[23] It maintained the best machine shops in the

country for the repair and maintenance of locomotives and it was the only railway in the country that built its own locomotives. In 1863, T.C. Keefer, a normally caustic critic of Canadian railways, wrote "The Great Western is one of the best equipped and best managed railways on this continent".[24]

In addition to these technological advancements designed to improve the local and through business of the railway, the Great Western also followed a policy of expansion to further increase its traffic. To increase local traffic, it leased a number of smaller railways, which included by 1872 the London and Port Stanley, the London, Huron and Bruce and the Wellington, Grey and Bruce. Control of these railways gave the Great Western port facilities on Lake Erie and Lake Huron, provided feeder lines into the best agricultural and forest lands of south western Ontario and more than doubled the track mileage of the railway. To maintain through traffic and counter the threat of competition, the Great Western adopted a different strategy. Instead of leasing other lines, it extended its own tracks. The dominance of the Great Western in carrying American through traffic was challenged after Confederation on two sides. On one hand, the Grand Trunk began construction of a railway bridge from Fort Erie to Buffalo which, through the Grand Trunk's control of the Buffalo and Lake Huron Railway,

would offer an alternate direct route to American shippers. An even more dangerous threat was posed by the creation of the Canada Southern Railway which planned to build a line between Niagara and Windsor which would be shorter and straighter than the old line of the Great Western through Hamilton and London and which would offer a faster route for through trade. Reacting to these developments, in 1870 the Great Western began construction of 146-mile air-line between Fort Erie and Glencoe, west of London. Practically straight and with gentle grades, this branch was planned to give the Great Western an even shorter route between New York and Michigan, than that of the Canada Southern. Thus in November 1873 when the Grand Trunk opened their bridge and the Canada Southern opened their line, the Great Western had been operating trains on its air-line for four months and was still sovereign in south western Ontario. All in all, through extensions and leases, the Great Western increased its mileage in Canada from 353 to 825 between 1863 and 1876.

Eventually the strength of the Great Western - its function as a link between sections of the United States - proved to be a weakness. Equipped to handle a heavy volume of American traffic, when rate wars broke out between railroads in the United States the Great Western was forced to lower its rates to disastrous levels in order to maintain its position. In essence, it was a Canadian railway that was at

the mercy of the American railroads. In the early 1880s it appeared that this dilemma might be solved by the advent of the Canadian Pacific, the new national railway which was agressively acquiring lines in eastern Canada. An alliance with this larger line would lessen the reliance of the Great Western on American connections, as well as strengthening its position with its old rival, the Grand Trunk. In the ensuing struggle between the Canadian Pacific and the Grand Trunk, however, the Great Western stumbled into the arms of the latter and in 1882, after almost 30 years of rivalry, the old Canadian railways were amalgamated. So ended the existence of one of this country's most important and progressive railways, a line whose reputation for good service and technological innovation - reclaimed from the ashes of early mismanagement - was unequalled in Canada during the historic period.

The Buffalo and Lake Huron, formerly the Buffalo, Brantford and Goderich

The idea for this line originated in Buffalo. There in the early 1850s the capitalists of that town began to fear that their prosperity, founded on the transportation of goods by water carriers, was endangered by projected lines like the Great Western which threatened to capture the western traffic and whisk it past Buffalo. Fighting fire with fire, they retaliated by promoting a railway running diagonally

across Canada West from Buffalo to a port on Lake Huron. Such a line, they reasoned, would intercept shipping before it reached the terminus of the Great Western and would send freight on a rail shortcut to Buffalo. At the same time, they expected that their railway would also develop a sizable local traffic, much of which would also be funnelled to Buffalo.

The Buffalo promoters found willing allies in the town of Brantford, a centre which had been by-passed by the Great Western Railway. The Canada Land Company, anxious to have the railway open up its holdings around Lake Huron, threw its not-inconsiderable support behind the venture. Insurmountable as seemed the task of getting a charter for the line in the face of powerful opposition from the Great Western and the Toronto and Guelph (see "The Grand Trunk"), a legal loophole in the "Plank Road Act"[25] was discovered and in 1852 the Buffalo, Brantford, and Golderich Railway was incorporated without application to the legislature. Chartered a year after amendments had been made to the Guarantee Act which disqualified railways such as the Buffalo road from receiving public assistance in the form of the government guarantee, the Buffalo, Brantford and Goderich did benefit from legislation passed in 1852 which enabled municipalities to invest in railway companies. Accordingly, the company marshalled local support to acquire the capital needed to start construction. The United Counties of Huron and Bruce took $300,000 worth of stock, the town of

Brantford $100,000, Stratford $100,000. In all a total of $878,000 was given by generous (too generous, as it later turned out) municipalities along the line. In addition, foreign investment was sought and received. The company secured a $500,000 loan from the British banking house of Baring Brothers and found considerable financial backing in the United States. Indeed, in no other Canadian railway of the period was American influence so marked. Buffalo subscribed $70,000 and elected two directors, one of whom was the first president of the company. Symbolically, later fully one third of the company's locomotives - all of which operated exclusively in Canada - were named after American states or cities.

Construction of the railway began at the American end in 1852 under the superintendence of a civil engineer from the United States, William Wallace. In January 1854, at about the same time as the rival Great Western opened its complete line, the Buffalo company began operations between Fort Erie and Brantford. Compared to the disastrous first year of the Great Western, the first season of operations on the Buffalo, Brantford and Goderich passed smoothly and without incident. "This railway is under excellent management" reported the St. Catherines Journal in August 1855, "and the experience, good judgement and judicious arrangements of the superintendent, Mr. William Wallace, has secured for the road a high degree of popularity".[26]

In 1854 the road reached its junction with the Great Western at Paris. Unlike the latter, however, the Buffalo, Brantford and Goderich was not eligible for government assistance under the Guarantee Act which had been amended in 1851, and before it could continue with its extension to Stratford where it would cross the Grand Trunk, the company ran out of money. As the railway skimped to decrease expenses labour troubles increased, standards of operation and construction were lowered and the circumstances of the company declined. In the spring of 1855, William Wallace, the popular superintendent, resigned from the railway. In April further capital was acquired but it was not sufficient to solve the financial plight of the railway. Matters reached a crisis in January 1856. The road was not paying and there was no hope of raising the money to complete it reported John Galt, the President. Accordingly, it was closed down completely. "From the state in which the Road was", Galt admitted, "very great danger was incurred by Parties travelling over it and it was not a safe Road to travel."[27]

Unable to extend the railway to Lake Huron and attain the high hopes held by the original promoters, unable even to operate the sections that had been built, the American and Canadian owners of the railway leased their line in 1856 to the Liverpool contracting firm of Heseltine and

Powell. "They are to finish the road to Stratford within 6 months and to Goderich within twelve months after taking possession", it was reported. The English contractors rejuvenated the railway, renamed it the Buffalo and Lake Huron and proceeded to complete its construction. In June 1858 the line was formally opened between Fort Erie and Goderich. One hundred and sixty-one miles in length, the Buffalo and Lake Huron - no mean undertaking - was Canada's third longest railway. In addition, unlike the Great Western and the Northern, it had been soundly constructed in the British tradition by the English contractors under the supervision of Captain R.H. Barlow. Its track was the best in the country, and its wooden bridges were superior to those "inflicted on other roads", according to Samuel Keefer, Inspector of Railways for the government. He described it in 1858 as "a capital road in every respect".[28]

Five years after its opening, T.C. Keefer noted, "This road which has an admirable track...is splendidly equipped in stations and rolling stock". Unfortunately, the Buffalo and Lake Huron seems to have been too well built for the traffic it was able to attract. Hampered by the lack of a bridge between Fort Erie and Buffalo, it was the weak sister in an area worked by the country's two largest lines. Its position was accurately described by T.C. Keefer in 1863:

> This railway has a value in its power of mischief, for it furnishes with the

> Grand Trunk, via Stratford and Sarnia, an opposition to the Great Western, and as it has no legitimate orbit, it may become merged in one of these larger bodies.

This prediction proved correct. In 1864 the Grand Trunk leased the Buffalo line for an agreed period of 14 years. Both railways seemed to benefit. The Buffalo and Lake Huron, over capitalized and over equipped, escaped from the difficulties of independent operation in a highly competitive area. The Grand Trunk, under equipped, acquired the much needed use of the Buffalo company's surplus rolling stock without any expenditure of capital and improved its competitive position with the Great Western in the fight for through American traffic by gaining access to railroads in the United States at the Niagara frontier. In 1870, in order to insure permanent control of the tracks leading to its International Bridge, then being built between Fort Erie and Buffalo, the Grand Trunk leased the Buffalo and Lake Huron in perpetuity. Domination was full and final. "But to hold semi-annual meetings in Liverpool, where most of its owners lived, and formally confirm routine business", noted A.W. Currie, "the Buffalo Company had nothing to do".[29]

Canada's First National Line: The Grand Trunk

The idea of building a trunk railway through the St. Lawrence-Great Lakes lowlands was first suggested in December 1830. At that time, only three months after the opening of the first public railway in the world, such an idea was visionary, but premature. Even its originator admitted that it seemed "very wild and chimerical". Not until the mid-1840s, after Canada's new canals had failed to rejuvenate the trade of the province, did Canadians seriously consider building a trunk railway. In 1845-46 a number of railway companies were chartered to build local lines which, when linked, would form "a great chair of railway communication from the western extremity of the Province to the city of Montreal". The Canadian promoters of these companies held no illusions that sufficient capital could be found in Canada to construct their lines. England at that time, however, had gone "mad on railways" and the Canadians believed that British investors would finance these projects. At the height of the mania, little trouble was encountered in securing subscriptions to the stock; however, after the railway bubble had burst, British bankers lost all enthusiasm for these dubious colonial schemes. The English subscribers refused to pay up the calls and attempted to recover their deposits. The economic depression which began in North America in 1847

obliterated what little remaining hope there was that the Canadian railways could be begun. All the charters expired from non-user four years after the date of incorporation.[30]

By 1849 it had become evident that if there was to be any Canadian railway development, the government would have to assist the private railway companies, which were, in the words of Inspector General Francis Hincks, "labouring under great difficulties owing to want of capital".[31] Accordingly, Hincks introduced legislation which provided that the Canadian government would guarantee the interest not exceeding six per cent on not more than half the bonded debt of any railway 75 miles in length which had completed half its line.

Three railways were the immediate beneficiaries of the Guarantee Act, the St. Lawrence and Atlantic (Montreal-Portland, Maine), the Great Western (Niagara-Hamilton-London-Windsor), and the Ontario, Simcoe and Huron (Toronto-Lake Huron). All three were continental lines, integrated with the American transportation system and designed to serve as direct trade routes between Canada and the United States.

The movement to build a trunk line linking the Canadas did not follow immediately upon the passage of the act. Not until the late autumn of 1850 when the depression lifted and commercial confidence returned was there much

enthusiasm for the idea. Even then, at a public meeting held in Montreal on 29 November 1850 to discuss the matter, only a portage line between Prescott and Montreal "to connect smooth water with smooth water below"[32] was endorsed. A committee was appointed to investigate the idea and C.S. Gzowski, engineer-in-chief of the St. Lawrence and Atlantic, was commissioned to survey the possible routes for the railway.

Montreal support for the Prescott line encouraged others to act. "No sooner did the project begin to be discussed", noted The Gazette, "than the people of every important locality from Prescott to Toronto became sensible to the advantage of continuing it to the latter city". Cobourg was the first to suggest extending the line westward from Prescott. At a meeting held there in mid-December, financial assistance was pledged to the project, which began to assume national significance:

> We shall soon see before long the main trunk Railroad, along the borders of the St. Lawrence and the Lakes: and we shall soon hear of none of those invidious comparisons between ourselves and our republican neighbours, that are at once childish and disgraceful.

Other municipalities followed suit. By January 1851 one observer noted, "the whole country is up". In February municipal delegates from the towns between Toronto and Kingston met in the latter city, resolved that a railway

between those towns should be built and pledged to combine their resources to start the project. Thus was born the Kingston and Toronto Railroad, a unique, joint-municipal undertaking.[33]

"The whole country is up"

Fired by the enthusiasm in Canada West, railway fever grew higher in Montreal in early 1851. Delegates to a meeting held in early March to receive Gzowski's report on the route of the projected railway to Prescott voted to extend this line to Kingston. Acting decisively, the delegates appointed a committee to seek a charter from the legislature. Prominent among the members of this committee were Alexander Tilloch Galt, Luther Holton, David Macpherson, John Young and other directors of the St. Lawrence and Atlantic Railroad. In fact, so interested was the Board of this railway in the Montreal and Kingston that it secretly sanctioned payment of £1,500 to T.C. Keefer for a preliminary survey of the route of the line along the St. Lawrence in the spring of 1851. Objecting to this devious procedure, critics condemned "the unauthorized interference of the Portland directors, in imposing a line upon an unborn Company by their simple fiat".[34] The Montreal and Kingston, unlike its municipally backed counterpart in Canada West, was to be a privately owned line, dominated, it appeared by the same Canadian entrepreneurs who controlled the

railway being built to Portland.

When the legislature opened in May 1851 railway matters were the order of the day. Petitions for the incorporation of both the Montreal and Kingston Railroad and the Kingston and Toronto Railroad were received.
Both were referred to the newly created Standing Committee on Railways and Telegraph Lines. Also delegated to the Committee was the question of the role of the government in the trunk line project. Under the terms of the Guarantee Act, assistance was permitted only after half the line had been built. If a line uniting the Canadas was to be built, was such a condition not "too stringent?" On the other hand, was the Act not too liberal? "British capitalists", it was reported, "object much to the terms of the Guarantee Act as pledging the credit of the Province for the support of railway schemes to an almost unlimited extent".[35]

While the committee was deliberating changes in the railway policy of the government in June 1851, a deputation from the Maritimes consisting of Joseph Howe of Nova Scotia and E.B. Chandler of New Brunswick arrived in Toronto with a proposal for the Canadian government which immediately complicated the issue of the main trunk line. Briefly, Howe had managed to obtain a promise from Earl Grey, the Secretary of State, that if the three provinces would make a

satisfactory proposition to the Imperial Government, he would use his influence to obtain a loan of £7 million at three and half per cent interest for the construction of an intercolonial railway between Halifax and Quebec. Earl Grey expected the work to be undertaken by the province and the line to be located entirely within British territory. In March 1851 Howe had also received an encouraging offer to build the line from Edward Betts and Thomas Brassey, "some of the wealthiest capitalists and contractors in England". "They are men", Howe explained, "who have executed one-third of all the railroads in England, and will, if once interested in our projects save us from being at the mercy of speculators from beyond the lines".[36] Only later would the irony of this prophecy become apparent. Howe and Chandler met with Hincks to discuss Canadian participation in the great Imperial project and soon convinced him that the Imperial advance would be nearly sufficient to finance the construction of the Canadian trunk line.[37] Hincks agreed to bring the matter before the legislature.

In early July 1851 Hincks moved a series of resolutions based on the recommendations of the Railway Committee and the proposals of Joseph Howe which amended the Guarantee Act of 1849 and outlined a new government policy towards railways. Among the important resolutions were the following:

> That provided the Imperial Guarantee can be obtained for raising the necessary funds, it is expedient that this Province should co-operate with the Province of Nova Scotia and New Brunswick in the construction of a Railroad from Quebec to Halifax, on British territory, either by constructing the same on joint account with the said Provinces, or by constructing at the expense of this Province that portion of the said Railroad lying within Lower Canada.
>
> That provided the guarantee of the Imperial Government can be obtained for raising the funds necessary to construct a Main Trunk Line of Railroad from Quebec to the City of Hamilton, or some convenient point on the line of the Great Western Railroad, it is expedient that the whole of the said Trunk Line should be constructed by the Province as a Provincial Work.
>
> That if the guarantee of the Imperial Government cannot be obtained for the whole of the funds required for the construction of the said Trunk Line; it will be expedient that one half the said funds or one half the funds required for constructing that portion of the line for which the Imperial guarantee cannot be obtained, be raised on the credit of the Province, on the best terms on which it can be obtained, provided the remaining half shall have been subscribed for by the Municipal Corporations in the Province.
>
> That if it should be found impracticable to construct the said Railroad by either of the modes mentioned in the foregoing Resolutions, it will then be expedient to encourage the construction thereof by Private Companies...[38]

Clearly, the trunk line was to be a national undertaking and a state responsibility. Only as a last resort was it to be built by private enterprise, but in case this became necessary, the legislature approved the incorporation of the

Montreal and Kingston and Kingston and Toronto companies in late August. Royal Assent, however, was reserved "in order to keep the control of future action in the hands of the government".[39] In addition, in case the private-ownership alternative proved to be the only resort, several amendments were made to the Guarantee Act. In the future, the government loan would be available only to railways forming part of the main trunk line. It would, however, be payable immediately upon the start of construction, instead of only after the line had been half completed. When these resolutions were passed on 13 August 1851, Canada seemed to have a coherent railway policy destined to insure the construction of a national trunk line.

"I can effect an arrangement..."

Efforts were immediately concentrated on realizing the first of the proposals. Following further negotiations between Canada, New Brunswick and Nova Scotia held in early 1852, it was agreed to officially request an Imperial loan of £7 million for an intercolonial railway from Halifax to Quebec via the Saint John River Valley in New Brunswick. In March 1852 Hincks and Chandler sailed for England. Joseph Howe, detained by an election in Nova Scotia, was to join them later. Their reception by the new British government led by Lord Derby was cool. A major point of contention developed concerning the route of the railway. For military

reasons the British favoured a northern line far from the American border. New Brunswick, on the other hand, insisted that the railway run through the populated Saint John Valley.

Weeks passed without a decision. Watching developments carefully were Brassey and Betts, the railway contractors who had approached Joseph Howe a year before, and their partners Sir Morton Peto and William Jackson. Having built railways on the continent in France and Italy they were keenly interested in Canada as a new field of profit. The approval of the Imperial loan would cause them to renew their bid to build the line; however, the failure of negotiations and the abandonment of the project would complicate, but not wreck, their plans. The contractors had studied Canada's railway legislation and they were aware of the generous provincial policy of government subsidies to private companies should this be the means required to construct the trunk line. As time wore on, Brassey and his partners obtained inside information regarding the thinking of the British Cabinet. (Both Jackson and Peto were members of Parliament). The guarantee would be granted only to a railway along the northern route - a line totally unacceptable to the Province of New Brunswick. Claiming to be "reliable sources", they informed Hincks of the rumour. Then they offered their services to construct the Canadian trunk line should the

intercolonial plan fail. With this trump in hand, Hincks resolved to force the British government to an immediate decision and on the first of May wrote a stiff letter to the Colonial Secretary demanding to know whether or not the Imperial guarantee would be granted:

> I have reason to believe that I can effect an arrangement on the spot with eminent capitalists to construct all the railroads necessary for Canada on our own unaided credit.....I must leave this country by steamer of the 22nd, and I cannot possibly effect the arrangements which must be carried out whether the negotiations succeed or fail in less than a week. I therefore respectfully request you, Sir, that you may give me a final answer by the 15th inst...

Had there been any hope of assistance before Hincks wrote this letter, there was none after it had reached the Colonial Secretary. Eight days later the guarantee was refused at a meeting of the Cabinet. Francis Hincks and William Jackson were free to work out the arrangements to build the trunk line. Within days a tentative agreement, subject to the approval of the Canadian legislature, had been reached.[40]

The contract with Jackson provided for the construction of a line from Montreal to Hamilton by Peto, Brassey, Jackson and Betts. A private company would be formed to operate the railway and it would provide one-tenth of the necessary capital, with another tenth being provided by municipalities or individuals in Canada, three-tenths by

the sale of bonds and the rest - one half - provided by the government under the revised Guarantee Act. In coming to terms Hincks disregarded his second proposal of 1851 - that failing Imperial aid the trunk line would be built by the state. "His last year's creed", noted a cynical critic, "was no longer orthodox."[41]

This agreement also seemed to neglect the arrangements already made for the third alternative: construction by the two private Canadian companies whose charters required only Royal Assent to be put into effect. But such was not the case. Indeed, the existence of these companies allowed Hincks to deal with Jackson. All that had to be done to create the English-based trunk railway company was to approve the charters, allow the stockbooks to be opened to public subscription and then have the Brassey firm purchase a controlling interest.

In early summer Hincks arrived back in Canada accompanied by Jackson and the contractors' chief engineer, A.M. Ross. On 7 August 1852 the plan was set into action. Hincks published an official statement in the Canada Gazette which reviewed the policy of 1851 and set forth the government's new position. It noted that the raising of funds for the trunk line by Imperial loan had been found "impracticable". State construction of the line through funds raised half by the Province and half by the municipalities was glibly

passed off as being "inexpedient and...in fact impracticable". Hincks then declared it to be "important that the trunk line be constructed with the least possible delay by such private companies...authorized by the legislature to undertake same", and declared the charters of the Montreal and Kingston and Kingston and Toronto to be "in full force for all and every purpose thereof".[42]

"Formidable opposition"

Implementation of the scheme proved to be more difficult than Hincks had contemplated. "Formidable opposition", as he later wrote, "presented itself". In the first place there was criticism of the nature of the Hincks-Jackson plan. The Globe of Toronto led the fight. It noted that instead of the normal procedure of a railway company being organized and then hiring a contractor to build its line at the lowest bid, the trunk line scheme reversed the order to the potential disadvantage of the public whose money would be advanced to the company:

> Thus will the company be contractors and the contractors the company and they may just place what value they please on their work. What will be the result? Why the Government supply half the money, and the contractor-company will take care that one half is amply sufficient to repay their whole outlay and they will have the entire possession of the road.

The secrecy concerning the estimated cost of the line

worried the Montreal Gazette. In September Jackson revealed that the expected cost of the railway was £9,400 per mile - "a nice sum of money", ejaculated the Gazette cynically - almost double Hincks' estimate of £5,000 per mile in 1851 and enough to bear out the warning of the Globe.[43]

But the strongest opposition encountered by Hincks and Jackson came from the Canadian promoters of the Montreal Kingston Railroad, A.T. Galt, Luther Holton and D.L. Macpherson. Whereas it had been a simple matter for Jackson to secure the charter of the municipally organized Kingston and Toronto, he was prevented from gaining control of the Montreal and Kingston after the stockbook of this company was opened by the purchase of all the shares by the three Canadians. Furthermore, each agreed not to transfer any stock without the written approval of the other two. With Jackson checkmated, Hincks then demanded that Galt, Holton and Macpherson abandon their charter voluntarily. Choked with Canadian indignation, the three deplored "the impolicy of putting aside at once all Colonial enterprise", warned of "the future injury from control of these great works being held abroad", and refused to relinquish their charter to "extra-provincialists, without a Knowledge of their means, disposition or the terms".[44]

At this point Jackson was forced to reveal that the line would cost £9,400 per mile. Immediately, Holton, the

financial expert of the Canadian triumvirate, protested. "Is the instrumentality of Mr. Jackson and his associates so essential for procuring loans of English capital", he asked in an open letter, "that they should be paid from 30 per cent to 50 per cent over the cash value of their work?" He then again attacked the scheme, marshalling nationalism in the cause of self-interest:

> But apart from economic considerations there can be no doubt that a great leading thoroughfare such as our Trunk Line is designed to be, would be managed more in consonance with the wants, the habits, and the whole genius of our people by a local company than by any association of speculators residing abroad having no interest in the country beyond the punctual receipt of the largest dividends that can be wrung from it.

One day later, the beleaguered Jackson lowered his estimate to £8,400 per mile. Hincks, at this point, was rumoured to be preparing legislation to repeal the charter of the Montreal and Kingston. Finally, on 16 September 1852 each side recognized the strength of the other and a meeting was arranged to work out a compromise. Toward the end of the month a face-saving arrangement, satisfactory to both sides was announced. Galt and his partners agreed to abandon their charter in return for the promise of a bridge across the Saint Lawrence at Montreal linking their railway, the Saint Lawrence and Atlantic with the Montreal to Hamilton trunk line. They were also given a voice in future planning of

the line. Jackson agreed to accept a maximum government guarantee of £3,000 per mile, instead of half the estimated £8,400 per mile cost of the line. "We consider the bargain", wrote the Gazette, "an advantageous one."[45]

"The most comprehensive system..."

The winter of 1852-53 was spent organizing the trunk railway company. Hincks arranged for the passage of an Act sanctioning the amalgamation of the various components of the trunk line into one large company. Representatives of these smaller lines met with the British contractors and financiers to arrange for the construction of the line. Little is known about the substance of these discussions; however gradually that winter the scheme grew from a 330-mile railway between Montreal and Hamilton to a 1,112-mile national railway from one end of Canada to the other. In addition, it became a continental line as well, designed to capture at the Michigan border a lucrative share of the through traffic from the American midwest and to deliver it to the seaboard at Portland, Maine. When negotiations had been completed in April 1853, the formation of the Grand Trunk Railway of Canada was announced. It was to be "the most comprehensive system of railway in the world".[46]

How comprehensive the railway was is shown in the following description of its three divisions, its corporate components and its construction history that follows.

Western Division	(Toronto and Guelph Railroad) opened
Toronto to Guelph	July 1856
Guelph to Stratford	17 Nov. 1856
Stratford to St. Marys	col Jan. 1857
St. Marys to Sarnia	21 Nov. 1859

Originally the Toronto and Guelph Railroad, chartered in 1849 and later granted power to extend its line westward, this railway was begun in January 1852. Later that year, Galt and his associates, operating under the title of Gzowski & Company, gained control of the company "through some adroit financial manipulation". Although the original trunk railway scheme envisaged the western link in the line to be the Great Western Railroad - a line receiving a government subsidy under the Guarantee Act - the plan was changed during the negotiations of the winter of 1852-53 and the Toronto and Guelph was substituted to provide an independent connection with American railroads leading from Chicago. Following amalgamation of the Toronto and Guelph into the Grand Trunk, Gzowski & Company were given the contract to construct the line. Although Galt and his partners profited from this rather questionable deal, under the supervision of the Grand Trunk's able divisional engineer, Walter Shanly, they did construct a first class line. In 1857 Charles Hutton Gregory, an eminent English engineer, stated, "I consider that this line is a work of which both engineers and contractors may justly be proud".[47]

Central Division	(Montreal and Kingston Railroad Kingston and Toronto Railroad)
Montreal to Brockville	19 Nov. 1855
Toronto to Oshawa	Aug. 1856
Oshawa to Brockville	27 Oct. 1856

The original section of the trunk line, the contract for which the Brassey firm lobbied so strenuously and successfully to obtain, the Montreal to Toronto section was supposed to have been "equal in permanence and stability to any railway in England", but only partly fulfilled its promise. The permanent works along this section such as the Port Hope Viaduct, the Ste. Anne's Bridge and the numerous fine stations of stone, were engineering achievements of a very high order. The track, however, was not satisfactory. Not only was the line poorly ballasted and "positively hilly", as one critic noted, but also was supplied with rail which was unsuitable for the Canadian climate. "On the Central Division alone", reported the General Manager in 1861, "considerably upwards of two miles of rails have broken like glass this winter". The blame for these defects was laid at the feet of A.M. Ross, the chief engineer of the Grand Trunk and formerly the chief engineer of the Brassey firm, who was accused of having a conflict of interest. To his credit, and that of his Canadian assistant, Samuel Keefer however, are the other works which, over 115 years later, stand as testimony to competence. Although written in 1863 by an avowed critic

of the Brassey firm, this judgement seems the best assessment of the nature of the important Central Division:

> It is in vain that magnificent tubular bridges and way stations of stone are pointed to as evidences of superiority, when the very backbone of the railway, the track on which the receipts are to be earned, is defective in location and construction.[48]

Victoria Bridge

Montreal to Longueuil completed 16 Dec. 1859
officially opened Aug. 1860
length 9,184 ft.

Promised as a concession to Galt and his associates in return for abandoning the charter of the Montreal & Kingston, the Victoria Bridge was designed by the great Robert Stephenson, assisted by A.M. Ross, from plans drawn up by the Canadian engineer, T.C. Keefer. A great feat of engineering skill, the two mile long tubular bridge was built by the Brassey firm under the supervision of James Hodges. When it was officially opened by the Prince of Wales in 1860, the Victoria Bridge was five times longer than any other bridge in the world - "a stupendous work which may be described without exaggeration as one of the 'Wonders of the World'".[49]

Eastern Division (I) (Atlantic and St. Lawrence)

Trunk line

Longueuil to St. Hyacinthe	27 Dec. 1848
St. Hyacinthe to Richmond	15 Oct. 1851

Portland Section

Richmond to Sherbrooke	11 Sept. 1852
Sherbrooke to Island Pond, Vt.	16 July 1853
Island Pond, Vt. to Portland, Me.	16 July 1853

Chartered in 1845, the Atlantic and St. Lawrence was the first major Canadian railway to be undertaken. On it began the railway careers of Galt, Holton and Macpherson. As part of the agreement made in the winter of 1852-53 between these men and the Brassey firm, their formal rivals in the trunk line scheme, the Grand Trunk Railway undertook to lease the Atlantic and St. Lawrence to form part of the Canadian trunk line east of Montreal and to give the company access to Portland, an ice-free winter port. The improvident terms of the lease proved to be to the great advantage of Galt and his shrewd partners but to the detriment of the Grand Trunk. The line itself, constructed under the supervision of Gzowski for £7,200 per mile, was acceptable under the prevailing American standards of railroad quality. To A.M. Ross, the chief engineer of the Grand Trunk who was accustomed to the high standards of British construction, the Atlantic and St. Lawrence, when taken over by the Grand Trunk, was wanting:

> A considerable portion of the line was entirely without ballast and the remainder very inadequately supplied. More than one-half was unprotected by fences of any kind, and the stations and buildings connected therewith, almost in every instance, insufficient.[50]

Eastern Division (II) (Quebec and Richmond Railroad)

Richmond to Chaudière Junction (Lévis-Québec)	27 Nov. 1854

This railway was chartered by a group of Quebec City promoters in 1850 to link Quebec with Montreal by means of a junction with the Atlantic and St. Lawrence Railroad at Richmond. Difficulty in financing the venture prevented more than preliminary work on the project until October 1852 when the company entered into a contract with the Brassey firm to build the line. The contract provided for construction of a railway at £6,500 per mile, much cheaper than the cost of the Montreal to Toronto section built by the same contractor. When completed it was much less substantially built, having, for example, stations of wood rather than stone. Under the terms of Hincks' Amalgamation Act and following the negotiations of the winter of 1852-53, the Quebec and Richmond became part of the Grand Trunk Railway.

Eastern Division (III) (Grand Trunk Railway)

Chaudière Junction to St. Thomas (Lévis to Montmagny)	23 Dec. 1855
St. Thomas to St. Paschal	31 Dec. 1859
St. Paschal to Rivière du Loup	2 July. 1860

The only section of the Grand Trunk never chartered under a different corporate title, this far-eastern section was added to the trunk line plan in the winter of 1852-53 in expectation of an eventual union with an intercolonial railway from the Maritime Provinces. The depression of

1857 interrupted work on this section when it was only half completed. Built by the Brassey firm, this remote section was finally finished in 1860, the last of the Grand Trunk to be put into operation. Not until 1876 did the Intercolonial join it.

"As black as..."

"An energetic and harmonious working of the line..." read the prospectus of the Grand Trunk Railway published in April 1853, "cannot but produce the most satisfactory results".[51] Events proved differently. From practically every standpoint, the railway was a failure.

Financially the company was troubled almost from the start. Its stock quickly fell into disrepute and the English capitalists who had expected great profits received little return on their investment. During its period of construction the company was a victim of galloping inflation in Canada - greatly caused by the railway's own heavy spending - which scuttled Jackson's original estimates of its cost. By 1855 the Grand Trunk was forced to go before the Canadian legislature in forma pauperis seeking additional government aid. The province increased its advance to the company from £3,000 per mile to £5,000 per mile. One year later with costs having continued to escalate, the state of the Grand Trunk was "as black as ever",[52] and Brassey and Betts appeared in person to appeal for additional Canadian

aid. Although difficult to estimate, the final cost per mile of the railway when it was completed in 1860 was approximately £10,500. Although this sum was considerably more than Jackson had estimated in 1852, and despite fears that the contractors would reap excessive profits, the Brassey firm actually lost money in Canada. Ironically, only Galt and his associates who had argued - with justification, as it later turned out - in favour of the building of the line by Canadians, really profited from its construction by the British. Certainly the Canadian government regretted its participation in the scheme, for although it sank £3 million into the line, because the railway was privately owned, it had no direct control over its operation. In retrospect, many felt that a state owned trunk line - like that rejected by Hincks in London in the spring of 1852 - would have been more to Canada's advantage.

To detail the shortcomings of the Grand Trunk once in operation would be to needlessly duplicate the work of A.W. Currie, whose scholarly history, The Grand Trunk Railway of Canada (Toronto: University of Toronto Press, 1957), carefully documents the failings of the railway. But of all the failures of the Grand Trunk, probably none is as striking as its inability to gain the wholehearted trust, sympathy and support of the Canadian people. As has been pointed out, Canadians were suspicious from the start,

that Hincks' grand scheme was a political job. Their suspicions were confirmed by revelations of the company's collusion with its contractors, Brassey et al and Gzowski & Company and its kindnesses to politicians whose palms were lined, if not with silver, at least with stock certificates. (Francis Hincks, for example, had some difficulty in explaining away the generous gift of Grand Trunk shares worth over £10,000 made to him by Sir Morton Peto). Canadians also disliked the size of the company and the extent of its power following the amalgamations of 1853. Reactions such as the following were not uncommon:

> They control over one thousand miles of Canadian railways, to be run with as much irregularity and annoyance to the public as they see fit. They have patronage in the appointment and employment of men by the thousand, they have the patronage of purchase and small contracts in Canada...they have influence in elections, and can control votes in parliament.

The railway seemed, in the words of George Brown, editor of the Globe and the company's most powerful and inveterate enemy, "a sinister force of corruption and extravagance".[53]

Finally, Canadians were alienated by the "Britishness" of the Grand Trunk. They were critical of the British contractors who had promised a line superior to any American or Canadian railway and equal to a first class English line, but who had left behind a road superior only to the slipshod affairs built by American contractors in Canada. They

disapproved of the arrogance of British engineers that resulted in the use of unsuitable track and locomotives because of ignorance of Canadian conditions. They came to resent the fabulously paid English managers of the Grand Trunk whose special trains steamed majestically by the so-called expresses as they waited on sidings. Most of all, Canadians were embittered by the "eminent" British capitalists who controlled the national line, but who, instead of spending the great sums on which Canadians had counted, expended the funds raised by the provincial government - "a feat", claimed one critic, "that might have been accomplished by any street corner politician of our own country without pretence of being principal shareholder in the mines of Golconda".[54]

Thus were borne out the warnings made by Galt and Holton[55] in September 1852 regarding the danger of overseas control of a national undertaking. The Grand Trunk was in Canada but not of Canada. Lacking Canadian sympathy and support, the railway's shortcomings were magnified and its general failure assured. Regrettably, the company's unenviable reputation obscured much that was significant about its early attainments. The longest railway in the world when opened, the Grand Trunk speeded travel and improved communications between the widely scattered sections of the sparsely populated country. It was a unifying

national force. Canadians, who have never ceased extrolling the Canadian Pacific's role in the history of the country, have totally ignored the significance of the trunk line's existence. Today there are no tributes, no monuments, no plaques dedicated to the railway. The solid and attractive stations which still dot the main line but which are yearly being destroyed in the age of the Turbo are the last reminders of the Grand Trunk Railway of the 1850s - Canada's first national railway.

The Local Lines

The Erie and Ontario, later the Erie and Niagara

In Upper Canada during the 1830s no fewer than 19 petitions for railway charters were submitted to the legislature. Eight received Royal Assent, but only one project reached maturity. This was the Erie and Ontario. It was chartered in 1835 and completed four years later. Designed to serve as a portage around Niagara Falls, this early line connected Chippewa and Queenston. Because of its steep grades, the Erie and Ontario, unlike its counterpart in Lower Canada, the Champlain and St. Lawrence, operated during the 1840s as a horse-drawn tramway rather than a steam-powered railway. Thus seems open question the claim of one authority that this line was "the oldest railway in Upper Canada".[56]

It did not become a steam railway until the boom of the 1850s when Samuel Zimmerman, the influential American-born contractor, gained control of the company. He secured a legislative revision to its charter which permitted him to relocate, reconstruct and extend the line. Zimmerman altered the original route of the line, smoothed out the worst of its heavy grades and doubled its length by extending it northward to Niagara-on-the-Lake. In July 1854 the Erie and Ontario was opened as a steam railway.

Described as "the most picturesque and curiously constructed railway in Canada",[57] it was simply one of the hilly and hastily built American-style lines opened in the country that year.

Like so many of the local lines built in the 1850s, the Erie and Ontario fared poorly following the depression which began in 1857. Compounding the problems of this company was the death in that same year of its mastermind, Samuel Zimmerman. Hopes that the line would attract a heavy traffic in the trans-shipment of grain between Lake Erie and Lake Ontario were dashed when its southern terminus of Chippewa proved to be an unsuitable transfer port. No longer operating by 1863, the Erie and Ontario was described as "valueless".[58] So it remained throughout the 1860s. Around Confederation the railway was extended southward to run right across the Niagara Peninsula and its southern terminus was relocated at Fort Erie where the Grand Trunk was building a bridge to Buffalo. Rechristened the Erie and Niagara at this time, the railway served with mediocre success a grain portage line operated on a commission basis by the Great Western Railway. Later the line was leased to the American controlled Great Southern Railway. Fittingly, the Erie and Ontario, a creation of the notorious contractor from the United States, remained under the control of American railroads and today is part of the Penn Central system.

The Carillon and Grenville

Planned as a 12-mile rail portage to bypass the rapids on the Ottawa River between the villages contained in its name, the Carillon and Grenville was first chartered in 1840, reincorporated in 1848 and, with nothing having been accomplished by 1853, was included in a larger scheme to build a 110-mile railway on the north shore of the Ottawa between Montreal and Bytown. Following the awarding of the contract to build the line to James Sykes, a British contractor in November 1853, work began on the most urgently required section, the portage between Carillon and Grenville. In October 1854 it was opened. There were no ceremonies; only a month before James Sykes had lost his life when the Arctic, carrying him to Canada, sunk off Cape Race.

Sykes' death spelled disaster for the enterprise. Without him, his contracting firm lost the confidence of its financial backers in England, and, bankrupt, was forced to abandon its Canadian undertakings, which included the Brockville and Ottawa and St. Andrews and Quebec, as well as the Montreal and Bytown. Thus in 1855 while the main line along the Ottawa River remained but a plan on paper, a locomotive and cars ran between Carillon and Grenville. During the next four years while litigants determined the

fate of the line, the railway ran "very irregularly, and in winter and sometimes at other intervals not at all".[59] Finally in 1859 it was sold at a Sheriff's sale, rehabilitated, and given back its old name, the Carillon and Grenville. In 1864 the Ottawa River Navigation Company acquired the railway and integrated it with their steamboat service on the Ottawa. For the next 46 years the Carillon and Grenville served travellers to the nation's capital by linking the boats on the Lower Ottawa with those on the Upper Ottawa. When navigation closed for the winter, the railway also shut down.

Unlike most Canadian railways, the Carillon and Grenville never grew, never amalgamated with a larger railway, and never changed. When service on the line was abandoned in 1910, it owned the oldest active steam locomotive in Canada and was the last broad gauge railway on the continent. An effort was made at the time to save the antique rolling stock, but the worthy project was gainsaid by the scrap merchants of World War I. All that remains today of the Carillon and Grenville is a short six-mile section of its right-of-way used by Canadian National, assorted artifacts in the old museum at Carillon and an ancient passenger car which a farmer in the neighbourhood has used as a shed for over 50 years.

No finer example of a true portage railway existed in Canada.

The Bytown and Prescott, later the Ottawa and Prescott and the St. Lawrence and Ottawa

In 1850 the Ogdensburg Railroad was completed across northern New York State from Lake Champlain to the St. Lawrence River across from the Canadian town of Prescott. In that same year the Bytown and Prescott was chartered. Its chief function was seen to be the transportation of lumber from the Ottawa Valley to the wood markets in the United States. It was, in some ways, simply an extension of the Ogdensburg line northward. Accordingly, it was built to the American gauge of 4 ft. 8.5 in. rather than to the predominant Canadian gauge of 5 ft. 6 in. Although this railway was incorporated soon after the Guarantee Act, its length was under the 75-mile minimum and so it was not eligible to receive assistance from the Province and therefore relied at first on local aid and private investment. Bytown took stock worth $200,000, Prescott subscribed $100,000, and the Ottawa Valley lumber merchants invested about $88,000 in the enterprise. Later, additional capital was acquired from English investors, whose interest in Canadian railways had increased after the announcement of the Grand Trunk scheme in 1853, as well as from American sources who stood to profit from the completion of the line.

Like other local railways of this period which were built without government aid, the Bytown and Prescott suffered constant financial embarrassment. Its pecuniary plight was exacerbated by the blundering management of its small town directors who lacked experience, if not zeal. Filled with the frustrations of thwarted enthusiasm, the personal letters of the chief engineer of the line, Walter Shanly, tell the troubles encountered by the Bytown and Prescott and local lines like it:

> 1 December 1850. The Bytown and Prescott people are preparing to begin and I have every faith in them doing so...
>
> 27 January 1851. I am going to make a cheap road for the Bytown folk and "put it through" quicker than any road yet heard of.
>
> 16 March 1851. After all Canadian enterprizes are so hollow that this may go to Hell before I get the length of construction....the Directors are Ninnies in such matters, have no idea of financing and I plainly foresee that I will have to teach them everything.
>
> 14 September 1851. There has at length been got together a meeting of Directors and a resolution carried to go on with the work as far as their means will allow.... The work will go on so slowly that it seems absurd....
>
> 9 November 1851. I have contractors at work at several points here, though where their estimates [wages] are to come from, God only knows. With such ninnies as Directors a Road could not be built through the Garden of Eden.
>
> 3 August 1853. The Bytown and Prescott

> is in a hopeless State of Bankruptcy. [At this point British capital was acquired and an agreement reached with the Ebbw Vale Iron Company to provide rails for the line in return for company bonds.]
>
> 17 May 1854. The B.&P. affairs are in a most scaley condition; not a dollar to be had. Still they have commenced laying track and will have an engine and cars on in a day or two.[60]

Finally, on Christmas Day 1854, the 57-mile Bytown and Prescott was opened. What had seemed such a simple and swift project in 1850 had taken four years and £250,000 (over one million dollars) to complete. Traffic during the first season of operations failed to provide any return on the capital. An ill-located terminus in Bytown crippled the company and trans-shipment across the St. Lawrence at Prescott proved extremely expensive. In any event, the concept of a lumber railway was premature, for rail costs were not competitive with the ease and cheapness of river transportation. In December 1855, Shanly reported, "They are poorer than ever".[61] Two years later the weak local line succumbed to the depression of 1857 and went bankrupt.

Under receivership for seven years, the railway was finally sold at auction in 1865. Wiped out in this sale was $300,000 of public money subscribed by municipalities and almost $250,000 provided as relief by the province - in other words, all the investments made by Canadians in the line. Sole owners of the railway were the holders of the

first mortgage; all, without exception, were British. After two subsequent years of random operation, the company was reorganized at Confederation as the St. Lawrence and Ottawa. Aided by Ottawa's role as the capital of the new Dominion, the company's later years were slightly less dismal than its first. In 1875 it was described as "working barely able to make both ends meet".[62] Finally, in 1884 the railway's days of impecunious independent operation ceased when it was leased to the Canadian Pacific Railway.

The Cobourg and Peterborough later the Cobourg, Peterborough and Marmora Railway and Mining Company

So tangled with failure were the affairs of the Cobourg company that it has become a case study in how not to run a railway.

The people of Cobourg were among the first in the country to embrace enthusiastically the idea of building railways. In 1834 they received the first railway charter granted by the legislature of Upper Canada. With it, they planned to build a line northward to Rice Lake to tap the resources of the hinterland; however, economic conditions caused the project to miscarry. In 1850, they were the first to endorse the idea of a municipally owned trunk railway between Toronto and Kingston. Later, when municipalities were relieved from the financial support of the trunk line project (see "The Grand Trunk"), the people

of Cobourg turned again to idea of constructing a north-south feeder line to connect with the Grand Trunk in their town and to funnel traffic to their harbour. In 1852 they were granted a charter to build the Cobourg and Peterborough Railway. Money was obtained from the Municipal Loan Fund and in early 1853 the project got underway when Samuel Zimmerman, the ubiquitous American railway builder, was awarded the contract to construct the line.

Between Cobourg and Peterborough lay Rice Lake. To have skirted the edge of the lake would have added miles to the length of the line, therefore, to keep the distance between the two points as short as possible, the railway ran straight across Rice Lake on a wooden trestle bridge. It was this bridge - three miles in length - that doomed the railway. Zimmerman completed it to his satisfaction in time for the people of Cobourg and Peterborough to celebrate their union "by TIES of mutual interest" on 29 December 1854, but within weeks it became obvious that the contractor had constructed it "in a shameful manner". Cribs designed to support it had either not been built or had not been adequately filled with stone, so that the winter ice of 1855 quickly disabled the bridge. Spring revealed further shortcomings of the contractor. Gradings and cuttings fell in; the track in some places was submerged in water. Zimmerman had far exceeded his original estimates, but had turned over

to the directors of the Cobourg and Peterborough a line which was, as their report in 1855 noted, "still unfinished".[63]

The line really never was "finished". In 1855 the bridge was repaired so that service could be resumed, but until the structure could be filled in with ballast to become, in effect, a causeway, it would continue to be endangered by ice each winter, hazardous to travel on each season and a constant drain on the company's finances each year. By 1858, the onset of an economic depression and the opening of a nearby rival line between Peterborough and Port Hope sealed the fate of the Cobourg and Peterborough. The line was bankrupt. One arrangement after another was attempted to salvage the property but all were to no avail. Finally in the spring of 1862 the bridge, left to its fate, "took its departure and sailed down the Lake".[64] By then, almost one million dollars had been invested in the railway - much of it sunk into the mud of Rice Lake - and there was nothing to show for it, not even an occasional train.

The later history of the line is as bleak. The company was reorganized as the Cobourg, Peterborough and Marmora Railway and Mining Company in 1865. New capital was added to extend the line to Marmora, purchase and work the extensive iron mines there, and reopen the railway and use it to deliver ore to Cobourg for shipment across Lake Ontario to Rochester and Pittsburgh. In 1865 trains were running

again on the Cobourg railway, albeit on two separate sections, one between Cobourg and Rice Lake and the other between Rice Lake and Peterborough with steam tug boats linking the two. By 1867 there was hope that the scheme might work. A market for the iron had been found in the United States and in 1867 the extension to Marmora was completed.[65] Admittedly with its "rails displaced and ties rotting and crumbling to dust", the railway left much to be desired, but its prospects at Confederation seemed brighter than they had been for 10 years. That year a group of Americans purchased the company for a mere $113,000 on the understanding that they would rebuilt the bridge. Cobourg rejoiced. After repairing the line in the late 1860s, the new owners began restoring the Rice Lake Bridge in 1871. By 1873 over 200 cribs had been completed and trains were expected to be running through to Peterborough by the summer of '74. These hopes were dashed once again when work on the bridge was stopped after the start of the depression of 1873. Some prospect of finishing the bridge appeared in 1875, but "a hitch", according to the Cobourg Sentinel, prevented progress and postponed indefinitely work on what the newspaper sadly termed "the bridge of sighs".[66]

In 1877 the company declared bankruptcy. Reorganized, it struggled to work the mine and operate the line south of

Rice Lake in the 1880s, but abandoned all thought of using the bridge. In 1887 the company went bankrupt again. Six years later it was formally amalgamated with the Grand Trunk Railway. In 1895 the Cobourg to Rice Lake branch was abandoned and Canada's most unsuccessful local line became but a bad memory.

The London and Port Stanley

This was London's railway. Londoners promoted it, financed it and rescued it in times of trouble. It failed to bring a return on their capital, but it did bring Londoners the joys of picnic excursions to the shores of Lake Erie, aided London in lowering the freight rates of the Great Western and thus "indirectly...paid a large dividend on the amount invested".[67]

The railway's 24 miles of hilly track from London through St. Thomas and down to Port Stanley, a harbour deepened by the Department of Public Works in the 1840s, were opened in September 1856. Faced with the same financial difficulties as other local lines of the period, the London and Port Stanley fared better than most. It cultivated an international traffic, carrying agricultural produce south for trans-shipment across Lake Erie to the United States and hauling coal from the fields of Pennsylvania and Ohio north for use in Canadian factories. Its two locomotives, three

passenger cars and assorted rolling stock were kept in good repair, its track was maintained in sound condition, and it was run in the 1860s "remarkably free from accident". It also remained in Canadian hands. "By the economy of its management and the energy of its officers", it was reported in 1870, "it has gradually surmounted its difficulties".[68]

In 1872 London rented its line to the Great Western and for the next 43 years the railway was under lease, later being run by the Grand Trunk and by American railroad companies. In 1915 the London and Port Stanley, having been converted to electricity, was taken over by the London Railway Commission. They operated the line until a few years ago when it was taken over by Canadian National in an exchange of property. Until that time the London and Port Stanley was the oldest railway in Canada still operating under its original name and charter, the last of the railways of the fifties.

The Port Hope, Lindsay and Beaverton, formerly the Port Hope and Peterborough, later the Midland of Canada

Although promoters from Port Hope were successful in securing a charter to build a line to the growing inland centre of Peterborough northeast of their town in 1846, they were unsuccessful in securing enough capital to start the project, and, in 1852, they were outflanked by competitors

from neighbouring Cobourg who that year turned the first sod of their railway to Peterborough. Forced to change their plans, the Port Hope promoters turned to the northwest and sought an amendment to their charter permitting them to build through Lindsay to Beaverton on Lake Simcoe. At first, difficulties were encountered in gaining legislative approval of the new plan; however, these were overcome through an arrangement with Samuel Zimmerman, who, having opened an apartment near the legislature where "the choicest brands of champagne and cigars were free to all the peoples' representatives", was regarded as "virtually...the ruler of the province".[69] Zimmerman agreed to use his influence to deliver the necessary votes in return for the contract to build the line. Thus, in January 1855, having finished work on the nearby Cobourg and Peterborough Railway, Zimmerman was ready to undertake the Port Hope, Lindsay and Beaverton which had been sanctioned by the legislature less than two weeks previously.

Financial arrangements for the new company were relatively uncomplicated. The town of Port Hope pledged £175,000 ($700,000) to the enterprise - the largest grant made by any municipality to any railway in Canada. In addition, Zimmerman loaned the company £25,000, thereby insuring that the directors and supervising engineers would be "creatures of his own".[70] Construction of the line

proceeded apace in 1855 but inflation pushed costs up and by 1856 the company ran out of money. Zimmerman provided an additional £75,000 in the form of a first mortgage with which he was paid to carry on construction. Later, financial assistance from the province kept the project going. Following Zimmerman's sudden death in March 1857, new arrangements had to be made. The line was leased to two subcontractors of the Grand Trunk who had recently completed work on the Montreal-Toronto section of the main line, John Tate and E. Fowler. Under their supervision the line was completed to Lindsay and this 43-mile section was opened in late December 1857.

At the time of the new arrangments, the failure of the Cobourg line to satisfactorily serve Peterborough owing to its defective bridge over Rice Lake caused the directors of the Port Hope railway to revive plans to enter Peterborough. Tate and Fowler agreed to build a branch to Peterborough and to aid the work the latter town granted £30,000 and Port Hope contributed an additional £10,000. This 13-mile branch was opened in August 1858. By that time, however, financial difficulties prevented the extension of the main line past Lindsay to Lake Simcoe. Unballasted and incomplete, the Port Hope,Lindsay and Beaverton stopped 20 miles short of its intended destination.

Although the Port Hope railway funnelled a fair amount of traffic - mainly lumber - from the hinterland to the

front in the early 1860s, the line did not prosper. By 1864 it was not only unable to pay its bond interest but also incapable of maintaining its equipment in good order. About the only achievement of the line was its success in forcing its hapless rival, the Cobourg and Peterborough, out of business.[71] Only a number of relief measures, however, prevented the Port Hope, Lindsay and Beaverton from suffering the same fate in its first decade of operation.

Matters improved somewhat around Confederation. In 1868 plans to complete the road to Beaverton were revived. A year later the company was reorganized as the Midland Railway of Canada. In 1871 Adolph Hugel of Pittsburgh purchased the railway from its Canadian owners and embarked on a scheme to extend the line to the town of Midland on Georgian Bay, where it would attract grain traffic from the American midwest to be portaged diagonally across Ontario. Hugel obtained a provincial subsidy and acquired British capital and, notwithstanding the opposition of the rival Northern Railway and the depression of 1873, completed the 73½-mile extension to Midland in August 1875. Not until a further reorganization of the company in 1878 did the Midland begin to attain its expectations. In that year, the company was authorized to raise £100,000 of additional capital. During the next three years the railway embarked on an agressive policy of expansion. By 1882, through

amalgamations with other railways in Central Ontario, including the Toronto and Nipissing, the Midland had tripled in size. "Wheras a few years earlier it had 140 miles of line and was bankrupt", noted A.W. Currie in his able account of the history of the railway, "now it had 470 miles and was capable of earning dividends as well as interest on its bonds".[72] After so many years of adversity, pleasant indeed must have been the prospect of the Midland's small system prospering while satisfactorily serving Central Ontario. But, like the Great Western and the Northern, the Midland became unavoidably entrapped in the battle between the Canadian Pacific and the Grand Trunk for control of railways in eastern Canada in the early 1880s. The Midland lost its independence in 1882 when it was taken over by the Grand Trunk, which, eleven years later, formally absorbed it.

The Welland, formerly the Port Dalhousie and Thorold

This railway began as a modest scheme promoted by William Hamilton Merritt, the father of the Welland Canal, to connect the Great Western Railway at Thorold with the town of St. Catharines and the harbour of Port Dalhousie where steamboats ran to Toronto. Merritt, a member of the legislature, secured the incorporation of the company as the Port Dalhousie and Thorold in May 1853 and, following its

organization in July, was instrumental in obtaining a loan of £25,000 from the municipality of St. Catharines. The refusal of other municipalities to support the scheme and the lack of co-operation from the Great Western caused enthusiasm to wane in 1854. By November 1855, with only a few miles of track laid but with the funds of the company practically all spent on surveying and acquiring land, it became obvious that the line as chartered would not pay. Instead of abandoning the project, however, Merritt enlarged the scheme to become a railway across the Niagara Peninsula, parallel to the overtaxed Welland Canal, for the transport of grain between Lake Erie and Lake Ontario.

In 1856 after the line had been opened to Port Dalhousie, the legislature approved changes to the charter which permitted the company to extend its line to Port Colborne on Lake Erie and allowed it to increase it capital by £100,000. Following the approval of St. Catharines of an additional loan to the railway of £25,000, Merritt travelled to England to secure the remainder of the necessary funds. A superb lobbyist with influential friends, he succeeded in demonstrating the merit of the plan to a number of wealthy investors and with their backing signed a contract to construct the line with Benjamin Dales who agreed to raise the capital required. With work underway in 1857, increased costs demanded additional capital and Merritt again secured

the necessary legislation. At the same time the name of the company was changed to the Welland Railway. Merritt again went to England to raise money but his quest was complicated by the depression in the money market at the close of 1857 which caused him and the company "the greatest possible embarrassment". Dales, the contractor, failed to provide the promised money and work on the line ceased on October. Only Merritt's great influence saved the venture. By February 1858 he had induced such magnates as Samuel Cunard, Edward Betts and Thomas Brassey to subscribe to the stock and with their resources the line was completed. On 8 October 1858 the Welland Railway was "formally opened throughout, being honoured by a visit from the Governor General".[73]

Although opened, the Welland was far from completed. The movement of grain, its primary purpose, demanded the construction of large storage facilities and the installation of costly hydraulic loading equipment. In December 1858 the English shareholders agreed to purchase the remaining bonds of the company and so provide it with the necessary capital, but demanded in return the management of the line be vested in them and the head office be moved from St. Catharines to London, England. This done, work was completed on the railway in 1859 and in August it was reported that at a total cost of £300,000 (1.2 million dollars), the Welland

was finally "finished in the best and most permanent manner".[74]

But the struggles of the 25-mile line were far from over. Once in operation in the 1860s, the Welland made money handling grain, but not enough to pay the interest on its huge debt. To improve its business additional rolling stock and its own fleet of steamers on Lake Ontario were called for. As usual, this required capital but the English owners of the line were unwilling to provide it and Merritt, whose personal fortune had been ruined by the railway, was incapable of supplying it. Accordingly, in 1860 he attempted to get a loan from the Canadian government for "rolling stock by land and propellors by water".[75] He failed. In 1861, after the equipment of the Welland had been seized by the Sheriff on behalf of an unpaid creditor, Merritt tried to have the line placed under the control of the Department of Public Works but again was unsuccessful. An arrangement was then worked out whereby the bondholders agreed to accept shares in lieu of their unpaid interest, and the Welland continued to operate. Merritt's death in 1862 - caused in no small way by the troubles of the railway - spared him from further efforts to rescue the line.

In 1863 the owners of the Welland agreed to the floating of a preferential bond issue of £50,000 in order to equip the line to handle more business by building a fleet of steamships for service on Lake Ontario. Put in service

three years later, the new ships failed to provide a remedy for the ailing line. In 1870, when a few Canadian railways were finally enjoying a degree of prosperity, the Welland lost over two thousand dollars in its operations. Two years later the railway was leased to the Great Western which used it to connect its new loop line from Fort Erie to Glencoe with its main line on the northern side of the Niagara Peninsula. This marked the end of independent operations on the Welland which was described in 1875 as "a complete wreck". In 1883, after the Great Western had been acquired by the Grand Trunk, the Welland was sold to the latter for £166,592. The long suffering owners of the Welland lost much of their investment. The Grand Trunk, which purchased the Welland only to keep it from falling into the hands of the American-controlled Canada Southern, got only "a broken-down, unprofitable road". So at the end as throughout its existence, the Welland brought nobody gain.[76]

The Brockville and Ottawa, later the Canada Central

"The time for action has arrived", declared the Brockville Recorder in late April 1853 after the incorporation of the Brockville and Ottawa Railway had received Royal Assent. "Let it not be said in this instance that Americans work while Canadians only talk".[77]

Action followed swiftly. By June the company had appointed Samuel Keefer (son-in-law of the president of the railway) chief engineer. In July, having reconnoitred the route of the line from the St. Lawrence through the prosperous agricultural area around Smiths Falls and up to the lumber towns of Renfrew and Pembroke in the Ottawa Valley, Keefer predicted that the Brockville and Ottawa would be "one of the best paying roads in the world". Municipal officials were impressed. Loans totalling £350,000 were pledged to the company by the Counties of Lanark and Renfrew, the Township of Elizabethtown and the Town of Brockville by August. In September it was announced that Sykes and Company of Sheffield, "a respectable and fully competent firm", had "bargained with the Directors for the construction and equipment of a First class Road". The bargain provided for James Sykes to build a double tracked line, complete with iron bridges, between Brockville and Pembroke for £930,000. The municipalities would provide one third of the sum and Sykes would raise the remainder in England. In return, all decisions regarding the location and planning of the line would be the responsibility of the contractor. Keefer would remain as chief engineer, but his role would be limited to that of an arbitrator between the company and the contractor in matters of dispute.[78]

Within a year, Sykes had completed a survey of the route, had prepared plans for the line and had begun acquiring, clearing and grading the right-of-way of the first 60-mile section. Unique to Sykes' plan for the Brockville and Ottawa was a railway tunnel under the town of Brockville. With the Crimean War causing the company unforeseen financial difficulties in 1854, Samuel Keefer objected to the tunnel as "an unneccessary expense",[79] and the municipalities balked at such extravagance. The terms of the contract, however, allowed Sykes to proceed and on 16 September 1854 the cornerstone was laid with great fanfare. Eleven days later, James Sykes was drowned on his way to Canada to inspect his various projects. Shortly afterward work on the Brockville and Ottawa was suspended. All action ceased.

The year of 1855 was one of inaction. Sykes' firm went bankrupt and the resulting legal difficulties involving the company, the contractor and the municipalities prevented the project from continuing. By June 1856 matters had reached a critical stage. The municipalities had invested £90,000 in the company but had little more to show for it than a cleared path 60 miles long and a partly built tunnel. Furthermore the municipalities had less control of the enterprise than did the private directors whose investments were minimal in comparison. A decision was called for.

"Either we forego all idea of building the road and thus lose the whole amount already expended", summarized the Recorder, "or we let the Municipalities build the road on their own responsibility".[80] In fact, neither of these alternatives was eventually chosen. The company remained in the hands of the private shareholders who in June 1857 negotiated a new contract with Dales and Company, the English contractors then engaged in the construction of the Welland Railway. Work began again.

Finally in February 1859 the first part of the line, 27½ miles from Brockville north to Smiths Falls and 11½ miles from the latter town west to Perth, was opened. In August service began on the 25-mile section between Smiths Falls and Almonte. On 31 December 1860 Brockville's controversial railway tunnel was opened - the first in North America. There was little fanfare at any of these openings. "The funds of the company", explained the newspaper, "will not admit of champagne". Indeed, before the Brockville and Ottawa had reached the Ottawa Valley "the funds failed", and the County of Renfrew, which had loaned the company $800,000 was left without a mile of railway to show for it. In 1863 an Act was passed for the relief of the company so that money could be raised to extend the line. Two years later the track was extended to Sand Point on the Ottawa River. Although the railway was operated at

a profit during this period, its earnings were insufficient to pay the interest of its huge debt and its financial difficulties increased with every year. In 1867 Bolckow, Vaughan and Company, the English suppliers of rails to the company and holders of its first preference bonds took possession of the line. A year later legislation was passed by the Province of Ontario which reorganized the financial structure of the struggling railway forcing all those who had invested in the railway to lose from 50 to 90 per cent of their investment.[81]

Associated with the Brockville and Ottawa after Confederation was the Canada Central Railway which constructed a branch line from Carleton Place to Ottawa in 1870, which extended the line to Renfrew three years later and which, in 1874, finally completed the railway to its original destination of Pembroke. Around this time, the English owners of the Brockville and Ottawa sold the company - "at a heavy loss",[82] according to one authority - to a group of Canadians who amalgamated the two lines under the name of the Canada Central in May 1878. In 1881, while being extended up the Ottawa Valley to Callander, the official terminus of the transcontinental railway, the Canada Central was acquired by the Canadian Pacific. It was the first of the old eastern railways to become part of Canada's new national line. Recently the Canadian Pacific ended service through the Brockville Tunnel. Today it stands in silent

testimony to the Herculean efforts and noble follies of local folk who acted willingly when urged but who learned, too late, that the production lacked a happy ending.

The Stanstead, Shefford and Chambly

Having counted on the route of the St. Lawrence and Atlantic being through their town, the people of Stanstead, a flourishing village on the Vermont border of the Eastern Townships, were angered when this railway by-passed their community. In retaliation they promoted a rival line running to the south of the St. Lawrence and Atlantic through the prosperous Townships of Stanstead, Shefford and Chambly. Incorporated in 1853, this line received generous municipal loans of over £100,000 to finance in its construction, the only railway in Canada East to be so assisted. Even so, it was not until January 1859 that its first 13 miles were opened between St. Johns and West Farnham. By June 1860 an additional 30 miles of track had been completed to Waterloo but its funds had run out. There, about 50 miles short of Stanstead, construction ceased and was not begun again. The railway never did reach its destination. Moreover, no train bearing the lettering "Stanstead, Shefford and Chambly" ever ran on the line. Without capital, the company was unable to buy rolling stock and equipment and from the start leased its line to the Montreal and Champlain

Railway which it joined at St. Johns. In the mid-1860s it was leased to the Vermont Central Railroad which operated it until the twentieth century when the Canadian National Railway took over the very old lease of this very unsuccessful local line.

Maritime Lines

The New Brunswick and Canada, formerly the St. Andrews and Quebec

This line, a New Brunswick predecessor of the Intercolonial, originated in an 1832 plan for "a railway for wagons from Quebec to the Harbour of St. Andrews".[83] Fired by the concept of their town becoming the important winter port for the trade of the St. Lawrence, the people of St. Andrews promoted the scheme so successfully that in 1836 they received an unprecedented grant of £10,000 from the imperial government to explore and survey the route of this intercolonial railway. The project was halted not long afterward by the Maine-New Brunswick boundary dispute. It was not renewed again until this issue had been settled and after British interest in an intercolonial railway had revived in the 1840s. By then, however, St. Andrews had three serious rivals in the contest to become Canada's winter port: Halifax, Saint John and Portland. In addition, it was widely hinted that the route of St. Andrews' proposed railway to Quebec would be too close to the American border for British comfort. Undaunted, the people of St. Andrews reorganized their railway company, secured private British capital (the first to be invested heavily in a Canadian railway endeavour), and set to work on the project. By 1847, ten miles of the proposed route had been graded,

there the enterprise stalled for lack of money for four years.

In 1851 the scheme was revived and in April a new contract was awarded to James Sykes, the first major English contractor to embark on a Canadian project. There followed the familiar pattern of railway development in British North America at the time. The arrival in 1851 of New Brunswick's first locomotive, the Pioneer "was hailed by every demonstration of joy by the people of St. Andrews as a harbinger of a new and progressive era", and in June 1852 the recommencement of the railway was celebrated "with great ceremony". Construction of the line progressed satisfactorily until 1854, when disaster struck. James Sykes was killed in a shipwreck in September. Soon afterward, his firm was thrown into bankruptcy. All work on the line was suspended in 1855.[84]

A new company, the New Brunswick and Canada, was formed in England in 1856 with the immediate goal of recouping the investment already made in the line. Work was again resumed. Gradually the railway was opened; a 34-mile section in 1857, a 31-mile stretch in 1858, and in 1862 it reached Richmond, a town on the main road between Houlton, Maine and Woodstock. One year later, unable to meet the interest payments on its mortgage bonds, the railway passed into receivership and its financial failure was confirmed.

The New Brunswick and Canada limped along for a decade, was reorganized in 1873, and became part of the New Brunswick Railway system ten years later. In 1887 St. Andrews was finally linked to the Province of Quebec by a line through the St. John River valley. By the time this original dream of the early promoters had been realized, it was too late for their hopes for St. Andrews to be realized. Traffic from a winter-bound Canada reached the Atlantic at Halifax via the Intercolonial or at Saint John by way of the C.P.R.'s "Short Line" through Maine. It did not come to St. Andrews.

Eventually in 1889 the trackage of the New Brunswick Railway was leased to the Canadian Pacific. The moguls of that company were attracted by the genteel decay into which their stop of St. Andrews had fallen. Soon the town that had aspired to be the great Atlantic port became the peaceful resort of vacationing capitalists, the summer seaside home of the Hopkins, Shaughnessys and Van Hornes.

The Nova Scotia

"It is the first duty of a government", stated Joseph Howe in the summer of 1850, "to construct and to control the great highways of a country". Railways, he maintained, were simply highways built with crossties and iron rails. Railways, he argued, must be publically owned. With this philosophy he proposed that the Province of Nova Scotia construct its portion of the European and North American

Railway, a line designed to link Halifax with Portland, Maine which had been promoted at a great railway convention held in July 1850 at Portland. With it, Howe embarked on a mission to England in November of the same year to secure British backing for the project.

In early 1851 Howe transformed his search for funds for this continental scheme into a crusade for imperial support of an intercolonial railway through British territory from Halifax to Quebec. His efforts, outlined elsewhere (see "The Grand Trunk" also "The Intercolonial"), eventually culminated in commitments by the three governments of British North America to embark on a publically owned railway uniting the Canadas to New Brunswick and Nova Scotia, provided that an imperial loan of £ 7 million could be obtained. Failure to secure British approval of the intercolonial project in May 1852 resulted in each province going its separate way in the matter of railway development. The Canadas and New Brunswick opted for privately owned lines built with generous government subsidies and both made arrangements with the British railway contracting firm of Peto, Brassey, Jackson and Betts to this end (see "The Grand Trunk" and "The European and North American). Howe persisted in his belief that railways must be publically owned and late in 1852 he negotiated a provincial loan on favourable terms with the British financial house of Baring

Brothers so that Nova Scotia could built its own railways. "Even then", according to Howe's biographer, "he had to accede to the demands of the opposition that private enterprise have the first opportunity". Nova Scotia received offers from the Brassey firm and from James Sykes to build its railways and these were debated in the legislature. Howe opposed them. He pointed to Belgium as an example of a country "plentifully supplied by railroads all built and owned by the Government". Only after acceptance of these offers was defeated in the House by one vote in 1854 did Joseph Howe finally get railway legislation along the lines he desired.[86]

The Act incorporating the Nova Scotia Railway was passed on 31 March 1854. It provided for construction of the following:

a. A trunk line from Halifax to Pictou via Truro to connect the capital with the Eastern Counties.
b. A line running westward to Windsor and onward through the Western Counties to Victoria Beach, connecting Halifax with the Bay of Fundy, and thus insuring rapid communication with Saint John, New Brunswick and Portland, Maine and the whole railway system of Canada and the United States.
c. A line from Truro to the New Brunswick border to form a part of any intercolonial line which might be built in the future.[87]

These were to be constructed as public works out of public funds under the supervision and management of a bi-partisan board of six government-appointed commissioners. Thus was created Canada's first publically owned railway, the nucleus of the present-day Canadian National system.

The project began immediately. On 2 April 1854 the Railway Board was appointed with Joseph Howe, having resigned from political office, serving as Chief Commissioner. The Board in turn appointed James Forman, an experienced Scottish railwayman, to the important position of chief engineer. On 8 June 1854 the first sod was turned and the first contracts to build the line were awarded. Exactly one year to the day later, the first section of the line, nine miles from Sackville to Richmond (near Halifax), was opened. Work then began on the branch to Windsor. The Board divided this undertaking into five sections of five to six and a half miles each and called for separate bids on each section. Scorned by the giant British railway contractors, this piecemeal approach enabled local Nova Scotian entrepreneurs to compete successfully for the work. Each contractor was expected to finish his section completely, with the costly iron rails being supplied by the Railway Board which purchased enough for the whole line in Wales at a discount to keep costs down. Generally, the system used to build the Nova Scotia Railway worked well.

On the Windsor Branch, for example, the average winning bid was approximately £4,500 per mile, a sum which compares favourably to the costs encountered in the construction of privately owned lines. There were, of course, the usual problems of unrealistic estimates and inflated prices which brought bickering between the contractors on one side and the commissioner and their chief engineer on the other, but under Joseph Howe and James McNab, who succeeded him in March 1857, "no scandal or bumbling occurred".[88] Unlike so many of the privately owned but publically subsidized undertakings elsewhere in Canada, the Nova Scotia Railway was built while the interests of the people were served.

In 1858 the official opening ceremonies were held. On the third of June the Windsor branch was opened and Joseph Howe was honoured at the occasion with a gift of £1,000 for his services. In December of that year service was inaugurated on the Halifax-Truro "trunk line". The 93-mile railway was far from complete; however, the economic depression caused postponement of the planned extensions of the line to Pictou, Annapolis and the New Brunswick border. Some hope of completing the latter appeared when efforts to secure an imperial loan to unite the scattered bits of trackage in Nova Scotia, New Brunswick and Canada East into the intercolonial were renewed by the three provinces in 1858. British refusal to support the

project, however, again caused the idea to be abandoned.

Once in operation, the Nova Scotia Railway demonstrated both the strengths and weaknesses of a publically owned railway. On one hand it was managed only "in a more or less efficient manner"[89] owing to its use by the party in power to reward "deserving" - if not necessarily meritorious - supporters with jobs. On the other hand, it was a valuable public highway operated not to generate profits to shareholders, but to be of benefit to the country. As such, throughout the early 1860s, it made a small annual profit of about $120,000 while encouraging the development of agriculture and small industry through low freight rates. Finally, unlike the many lines that had been built with public money, the Nova Scotia Railway was owned by the people who had paid for it.

In 1863 a new government pledged to railway extension gained power. In the following year construction of the long-delayed Pictou and Annapolis branches was authorized. While the latter was not begun until after Confederation (see "The Windsor and Annapolis), the Pictou branch was completed in 1867 under the direction of Sandford Fleming who had gained his engineering experience on the Northern Railway of Canada. In the construction of this 51-mile extension, Fleming introduced a number of innovations - the most notable of which was the use of a steam shovel to

speed the work - which he would later put to good use in the building of the Intercolonial Railway. But most amazing was Fleming's unheard of achievement of completing the line within the contract estimate and finishing it on time in May 1867.

Confederation brought an end to the corporate existence of the Nova Scotia Railway when ownership of it was officially transferred the Federal Government on 1 July 1867. The Province of Nova Scotia, however, continued to operate the line until 1871. Finally, in that year the Nova Scotia Railway became part of the Intercolonial Railway, a publically owned line being built to unite the disparate parts of the new Dominion - part of what Joseph Howe had called, while endeavouring to promote it 20 years before, "a great and noble enterprise".[90]

The European and North America

There is great irony in the complicated story of this imposingly named New Brunswick railway. It was projected originally in 1848 as a 100-mile portage line linking Shediac on the Gulf of St. Lawrence with Saint John on the Bay of Fundy. It would pay, claimed its promoters, because it would serve to intensify the southward pull of New Brunswick trade with the United States. In 1849 when Maritime hopes were high that an intercolonial railway would be built with imperial aid, the folk of Saint John

insisted that good sense dictated that their projected line form an integral part of it. No sooner had these hopes dimmed than the road's promoters were invited to a railway convention held in the summer of 1850 at Portland, Maine, hosted by John A. Poor, the evangelist of railways who had earlier convinced the wary capitalists of Montreal of the value of a line between their city and his hometown of Portland. At the convention Poor proposed the idea of a railway between Halifax and Portland. Such a line would link the Maritimes not only to the railroads of New England, but also to the St. Lawrence and Atlantic which was then being constructed to Montreal. Finally, to its international and intercolonial importance, Poor added a global significance. He pointed out that Halifax was closer to Europe than New York, that railways were faster than sailing ships, and therefore it would shorten the time taken to travel between Europe and North America and "bring the continents closer together".[91]

Unrealistic as this "European and North American" scheme might now seem in retrospect, the delegates to the Portland Convention eagerly endorsed it. New Brunswickers realized that the proposed line between Saint John and Shediac fitted neatly into this grand plan - although extensions to the borders of Nova Scotia and Maine would have to be added - and they enthusiastically embraced Poor's

continental plan.

But the annual game of musical railway chairs was not yet over. In 1851 the idea of an intercolonial line through British territory was revived through the efforts of Joseph Howe and the Saint John - Shediac road again became part of this imperial undertaking. It was to be an integral part of the intercolonial if the railway was built through the Saint John River valley; it would be a branch of the main line if a more northerly route was chosen. New Brunswick sent E.B. Chandler to London with Francis Hincks of Canada to secure British support for the project. The inclusion of the Saint John - Shediac line in the plan did not meet with the approval of the British cabinet. They objected to building the intercolonial through the Saint John River valley due to its proximity to the United States; at the same time although they favoured a northern route for the railway, they were unwilling to assist with the construction of a branch line which would integrate New Brunswick with the American railway system. The government of New Brunswick, on the other hand, insisted on support for a line to Saint John. By May 1851 the intercolonial idea was abandoned.

Chandler immediately reverted to Poor's scheme for an independent European and North American line. Following the lead of Francis Hincks who negotiated a contract to

build the Grand Trunk through Canada with the firm of Peto, Brassey, Jackson and Betts, Chandler began bargaining with the same British contractors for the construction of a railway through New Brunswick from Maine to Nova Scotia. In September 1852 an agreement was reached. The Brassey firm would build the line for £6,500 ($26,000) per mile. They would supply about 54 per cent of the capital; the rest would be provided by the province of New Brunswick in the form of stock purchases of £1,200 per mile and provincial loans of £1,800 per mile.

The first sod of the European and North American was turned at Saint John on 14 September 1853. In attendance were "official personages from all British North America, and full delegations from the United States". Also there were contractors Betts and Jackson and their guest, the famous British railwayman, Robert Stephenson. It was, according to one journal, "the most imposing affair of the kind that has taken place in the country".[92] But the hopes founded on this great event were misplaced. Having overextended themselves by accepting contracts to build a 1,100-mile trunk railway in Canada and trapped by the stringent financial conditions which followed the start of the Crimean War in early 1854, the Brassey firm made little progress in the construction of the line in 1855 and a year later gave up the project altogether. At this point the

government of New Brunswick under Charles Fisher was literally forced to pick up the pieces. It purchased the bits of road already built from the contractors for £90,000, secured a loan from the British bankers Baring Brothers for £800,000 and set about completing the work. The European and North American thus was the second railway in Canada to become the property of the people. Like the first in neighbouring Nova Scotia, it was constructed slowly but surely by local contractors working under the supervision of a government-appointed board of commissioners. In August 1860 the railway was officially opened. It was not the great international line proposed in 1850 by the American promoters (who had long before reneged on their part of the bargain to build from Bangor to the border); it was essentially the realization of the original scheme of 1848, for despite its grandiose name, the 108-mile European and North American merely united Saint John to Shediac.

There was no further progress on the European and North American until after Confederation, although the government did attempt to stimulate railway development by the passage in 1863 of the Railway Facility Act which provided a subsidy of $10,000 per mile to lines built in the province. This measure caused the incorporation one year later of a new company to build "the extension from

Saint John westward", and realize the scheme of 1850, but although the first sod was turned in November 1865, serious construction of the railway under New Brunswick contractor E.R. Burpee did not begin until August 1867. On 1 December 1869, the 88-mile extension was formally opened between Saint John and Vanceboro, Maine. Finally, on 19 October 1871 the railways of the Maritimes were joined to the railroads of the United States at a ceremony attended by the Governor General of Canada and the President of the United States. The European and North American was at last completed. Ironically, however, the old Saint John-Shediac section of the line did not become part of this continental achievement. In a final twist of fate, the provincially owned part of the European and North American was transferred to the Federal Government and in 1872 became part of the Intercolonial Railway.[93]

Post-Confederation Lines

The Windsor and Annapolis

When passed in 1854, the Nova Scotia Railway Act had provided for construction of "a line running westward to Windsor and onward through the Western Counties to Victoria Beach, connecting Halifax with the Bay of Fundy".[94] Westward to Windsor the railway had reached, but the familiar financial difficulties of the late 1850s had prevented its progress onward into the Annapolis Valley. In the early 1860s, the people of this flourishing agricultural area petitioned the government to proceed with the promised line.

In 1864 the legislature of Nova Scotia acted to complete the railway system envisaged a decade before. Construction of the line west of Windsor was authorized and negotiations were undertaken which resulted in the signing of a contract in the fall of 1865 between the Commissioner of Railways of Nova Scotia and a group of British capitalists represented by Vernon Smith. The contract provided an annual government subsidy to assist in the construction of the line, and stipulated that the railway should be completed and ready for operation by the government in May 1868.

Not long after work began on a survey of the line in 1866, there occurred in England a financial panic "under which several of the most noted railway firms succumbed,

and which spread general distrust throughout monetary circles in England and on the continent". The contractors of the Windsor and Annapolis, "unable to fill their agreement", were dismissed by the government of Nova Scotia. Work on the railway ceased.[95]

Committed to the line, the government refused to abandon the project; however, to interest a new group of investors in the railway, a radical change in Nova Scotia railway policy was made. The government agreed to give the contractors a lump sum subsidy of $188,600, to locate the line and provide all lands free of charge, to exempt all material imported for use on the line from provincial duty and - most important - to allow the contractor to operate the completed railway. So died Nova Scotia's policy of public ownership of provincial railways.

The government's generosity with the people's money quickly lured a new group of British capitalists into a contract for the construction of the Windsor and Annapolis. Notable among these investors was Thomas Brassey, a former member of the firm that had been involved in the construction of the Grand Trunk and the European and North American, a master of the manipulation of public money for private ends. Under the new contractors, work began in earnest on the line in the spring of 1867 with Vernon Smith in charge as chief engineer. By the end of 1868 nearly 48 miles had

been constructed between Kentville and Annapolis. On 18 December 1869 the 85-mile railway was opened when the first through train left Halifax for Annapolis.

The Windsor and Annapolis was one of the few railways built in Canada during the 1860s. It was also one of the few lines constructed with British capital following the 1850s. It linked the prosperous Annapolis Valley to Halifax, and, following the completion of the European and North American in 1871, connected Nova Scotia by ferry to the railway systems of the United States, New Brunswick and the rest of Canada (although this function lessened in importance after the opening of the Intercolonial in 1876). The Windsor and Annapolis, although heavily supported by public funds, was Nova Scotia's first privately owned railway. Today, as part of the Canadian Pacific system, the line, now known as the Dominion Atlantic, remains in private hands.

The Toronto and Nipissing

The opening of a short railway in Wales in the year 1864 might have seemed an event too obscure to have been of any significance to Canadian railway development; however, the start of operations on the Festinog Railway was of importance to Canada, for it was the first narrow gauge line in the world. Essentially, a narrow gauge line was a

standard gauge road in miniature. From rail weighing 40 lbs. per yard instead of 70, to locomotives weighing 16 tons instead of 30, everything was lighter, everything was smaller on a narrow gauge railway. Because of this, such lines were cheaper to build than standard gauge railways. In Britain the narrow gauge concept proved to be an acceptable solution to the problem of providing sound but inexpensive railways in areas of moderate traffic.

The concept was discussed in Canada in the mid-1860s, but, according to one source, "the idea of a railway with so narrow a gauge was an entirely new idea with everyone in this country and like other ideas which conflict with interest and prejudice, excited a good deal of hostile criticism and not a little ridicule". But eventually Canadians changed their minds due to "the consideration of cheapness". A Canadian text of the time listed the following as economic advantages of the narrow gauge system:

1. The large comparative saving in first construction.
2. The large proportion of paying load to non-paying or tare weight of train.
3. The great reduction in wear and tear of permanent way, through advantage gained by light rolling stock.
4. Large proportionate increased power of locomotives.
5. Proportionate increased velocities gained by the light system.
6. Greater economy in working traffic.[96]

It was around Confederation and it was in Toronto, already a railway centre but with pretensions of greater metropolitan prominence, that the narrow gauge discussion was resolved into action. At the first session of the Ontario legislature a hotly debated bill was passed into law chartering the Toronto and Nipissing Railway. Designed to tap "the extensive agricultural and lumbering region to the east...and increase the trade of the district with the city of Toronto",[97] the Toronto and Nipissing was to be a 3 ft. 6 in., narrow gauge line.

After the Canadian promoters of the Toronto and Nipissing had secured bonuses totalling $386,500 from municipalities along the route and a provincial grant of $105,000 (or $1,300 per mile), construction of the railway began in 1870. Two years later, on 26 November 1872, the 79-mile line was opened between Scarborough, eight miles east of Toronto, and Coboconk, Ontario. It was the first narrow gauge common carrier railway in North America.

For about 10 years the Toronto and Nipissing was operated as a narrow gauge railway. During that time, its economical operation - in addition to its comparatively cheap cost of construction - demonstrated clearly the value of the narrow gauge principle to a country of limited financial resources like Canada. If narrow gauge lines were later built in every part of Canada from Prince Edward Island to the Yukon Territory, the success of the Toronto

and Nipissing was a factor in this phenomenon of Canadian railway development. Along with the Toronto, Grey and Bruce, it served as a national example.

The life of the Toronto and Nipissing was quite short - less than 15 years - but even the line's demise through absorption by the Midland Railway in 1881 proved a point, for one of the advantages claimed by proponents of narrow gauge was the ease with which such a line could be converted to standard gauge when circumstances permitted. So it was demonstrated when the Midland changed without difficulty the gauge of the Toronto and Nipissing from 3 ft. 6. in. to 4 ft. 8½ in. in the early 1880s. "Ch'un bel morir tutta la vita onora".

The Toronto, Grey and Bruce

The history of this 3 ft. 6 in. railway parallels that of the Toronto and Nipissing, its "sister enterprise".[98] Indeed, had the length of the Toronto, Grey and Bruce not been over twice that of Canada's first narrow gauge public line, this railway could have won the honour of being the first opened. Both were granted charters at the same 1867-8 session of the Ontario legislature, both were controlled by many of the same Toronto capitalists, both were constructed concurrently in the early 1870s under the supervision of the same chief engineer, Edmund Wragge.

While the Toronto and Nipissing tied the area to the northeast of Toronto to the metropolis, the Toronto, Grey and Bruce tapped the flourishing agricultural area to the northwest and funnelled its traffic to Toronto.

The first sod of the Toronto, Grey and Bruce was turned with great ceremony on 3 October 1869 by Prince Arthur, a son of Queen Victoria. The railway was opened between Toronto, Orangeville and Owen Sound in June 1873. When it was completed the Toronto, Grey and Bruce was Canada's fourth longest railway. This, as well as its low construction cost of approximately $15,000 per mile, ended any lingering Canadian doubts regarding the utility of the narrow gauge concept.

Like its sister line, the Toronto and Nipissing, the Toronto Grey and Bruce existed as an independent company for only 15 years. While the former became part of the Grand Trunk system in 1884, the latter was leased by the rival Canadian Pacific Railway in June 1883, and was later converted to standard gauge.

The Wellington, Grey and Bruce

As its name implies, this railway competed with the Toronto, Grey and Bruce for the traffic of the same, rich, agricultural area of Ontario. "To divert the trade of Wellington and Bruce Counties to Hamilton [and away from

Toronto] as far that is possible",[99] was the stated aim of this company. Like others formed after Confederation, this railway was organized by Canadian investors, financed largely through bonuses from local governments in the area it proposed to serve, and built by Canadian contractors. Unlike so many others of the 1870s the Wellington was a standard, not narrow, gauge railway.

Although nominally independent, the Wellington, Grey and Bruce was leased in 1869 by the Great Western Railway which supervised its construction from Guelph to Southampton and Palmerston to Kincardine after 1870 and operated its 167 miles of track following its completion in 1874. The Wellington was virtually a branch of the Great Western, and a poorly built and rather unprofitable one at that. Oddly enough, although the Great Western disappeared when amalgamated with the Grand Trunk in 1882, the Wellington, Grey and Bruce retained its corporate identity until 1893 when it too was formally absorbed by the Grand Trunk. In some ways it was the end of a railway that never was.

The Quebec and Gosford

When around Confederation most of Canada was attracted by the narrow gauge concept of building railways thriftily, the Province of Quebec was experimenting with another type of cheap line - the wooden railway. Based on the use of

seasoned maple rails instead of track of iron, the idea was brought to the province by J.B. Hulbert, an American contractor, around 1868. With the cost of construction of such a line estimated at only $6,000 per mile (compared to the narrow gauge average of $15,000), the government of Quebec embraced the concept as a means of stimulating railway development in the province and in 1869 passed legislation encouraging the building of wooden railways by guaranteeing the interest at three per cent for a period of 20 years on the cost of all such lines completed on or before 1 July 1872.

Altogether six companies was soon incorporated to build wooden railways using Hulbert's track. Only one, the Quebec and Gosford, was operated as a wooden railway. Built by Hulbert, this railway was begun in September 1869 and opened for 26 miles between the city of Quebec and the town of Gosford in November 1870. The experimental railway worked well during the first winter. "The track was found to be quite as smooth and solid as the iron railways of the time", according to one account, "and the success of the enterprise seemed assured".[100] But prospects soon dimmed when the Canadian spring of 1871 warped the wooden rails into uselessness. Service was maintained for about a year but finally in 1872 the venture was abandoned. Plans to build other railways with wooden track in Quebec were soon altered in favour of the use of regular iron rail. Not

until 1879 did trains run again on the line of the Quebec and Gosford, and then, as a section of the Quebec and Lake St. John Railway, on metal track. The Quebec and Gosford wooden railway was a unique experiment that failed.

The Canada Southern, formerly the Erie and Niagara Extension

Chartered in 1868 as the Erie and Niagara Extension, this railway was routed through southwestern Ontario between Fort Erie and Windsor to provide a straighter and shorter route between New York and Michigan than either the Great Western or the Grand Trunk. The charter was purchased in 1868 by a group of American speculators and promoters who renamed the line the Canadian Southern. The American buyers

> formed themselves into a Credit Mobilier or construction company, and let the making of the line to themselves, without, of course, any practical engineering supervision. They appropriated to themselves by means of this construction company, consisting entirely of themselves, the ordinary stock, and issued seven or eight million dollars of bonds in New York, and afterwards two or three million of the same series of bonds in London; they divided large profits among themselves upon the construction of the line...

Part of these fraudulent gains were taken from Canadians; municipalities along the route of the line had contributed over $400,000 to the company. Opened on 15 November 1873, the 305-mile Canada Southern went bankrupt within two

years. In 1875 Cornelius Vanderbilt, the American railway "robber baron", seized control of the railway and welded it into a unit along with his New York Central and Michigan Central systems. Ended was the charade of this American railroad masquarading as a Canadian railway.

The Prince Edward Island

Up to the time of Confederation, cautious Prince Edward Islanders had avoided the financial burdens imposed by railways on other Canadians by simply not building any lines on their island. When the idea of constructing cheap narrow gauge railways became popular in Canada around 1867, agitation for the construction of such a line on the Island began in Charlottetown. After several years of lively debate on the subject, in April 1871 the provincial legislature approved a Railway Act which directed that a publicly owned, fully equipped, 3 ft. 6 in. line be constructed across the Island from Alberton in the west to Souris in the east for a sum not to exceed £5,000 per mile.

The seeds of future financial troubles were sown by the vagueness of the Railway Act of 1871. Although its provisions carefully restricted the size of curves and scrupulously specified the maximum allowable ascent of grades, the Act did not empower the provincially appointed chief engineer to choose the route of the railway, but allowed this important decision to be left in the hands of the contractors. In September 1871 the government awarded

the contract to Schrieber and Burpee, a Canadian firm. Construction of the line began after the sod turning ceremony on 2 October 1871.

Faced with a set sum to be spent per mile, confronted by the immutable geography of the Island, but allowed the freedom to choose the route of the line, the contractors selected a route which allowed the least cost of construction. "Sharp curves and heavy gradients" became, according to a Charlottetown newspaper, "the ruling feature of the railway".[102] Furthermore, the cheapest route was not the shortest route. When the line was finally completed, it was 28 miles longer than originally contemplated. Needless to say, at £5000 per mile, the contractors were 28 miles richer.

The failure of the government to stipulate the route or length of the Prince Edward Island Railway caused a storm of controversy regarding railway policy. In 1872 the government was defeated on this issue. As costs continued to escalate in the inflationary year of 1872, the new administration began to search for a means of completing the project without ruining the Island's economy. On the mainland that year, the Canadian government was not only engaged in the construction of the Inter-colonial Railway to New Brunswick and Nova Scotia, but was also committed to assisting the construction of a multi-million dollar railway to the new province of British

Columbia. Negotiations began between Ottawa and Charlottetown regarding the entry of the Island into Confederation in return for the addition of the Prince Edward Island Railway to the Dominion's list of railway projects. On 1 July 1873 the bargain was sealed. Recalcitrant Prince Edward Island joined the six year old Dominion of Canada. Twenty-one days later, Canada's Governor-General, Lord Dufferin, "had the honour of being the chief passenger on the first passenger train that ever passed on our railway", reported the Charlottetown Patriot.[103] His trip symbolized the change in the railway's ownership. Its distance - a few miles on the only completed part of the line - demonstrated the value of Confederation. The many miles remaining to be finished were a Federal responsibility.

Construction of the Prince Edward Island Railway continued in 1873. In July 1874 the line was supposed to have opened. Instead there then began an involved game of cat and mouse between the contractor and the Canadian government. The dispute revolved around the term "completed". To the contractor it meant a line of continuous track. To the Federally appointed superintendant of a railway it meant a line in perfect working order. To the Islanders the six month battle simply meant an inoperative railway. The provincial chief engineer finally resolved the impasse. In early December he gave the contractors a certificate of completion without the prior approval of Federal authorities. The contractors vanished

from the Island as quickly as possible. Canada was forced to accept a "completed" - but unworkable - railway.

Not until the following spring did the Islanders get to use their railway, for not until 12 May 1875 was the 198.5 line finally opened to traffic. There was no great ceremony to mark the occasion. The railway had brought Prince Edward Island nothing but trouble. Unflattering though it was, this judgement of the newly opened line seemed to best summarize the Islanders' attitude:

> The road is as crooked as a cow track and has as many ups and downs in it as a cross-cut saw. The railroad that adapts itself to the natural surface of the country may be the one to suit clever contractors and easy going engineers, but it may be the worst, and for the people of the country through which it meanders, really the most expensive that could be built.[104]

Thus, with less enthusiasm than any other part of Canada, did Prince Edward Island enter the railway age.

The Intercolonial

"On this day, July 1st, 1867", wrote Sandford Fleming, "may be chronicled the completion of the Intercolonial Railway, and the full consummation of the Union of the British Provinces in North America".[106] The railway linked Halifax to Rivière du Loup, and by so doing, Nova Scotia and New Brunswick to Quebec and Ontario. It was 555 miles in length. It cost the Dominion of Canada over 22 million

dollars to build.[107] When completed, it was both an engineering attainment and a national achievement.

As an engineering work, the Intercolonial was unsurpassed among the railways that had been built in the country up to 1876 - indeed, it was one of the soundest Canadian railways ever built. Its construction was not marked by spectacular features like the Grand Trunk's Victoria Bridge or, later, the Canadian Pacific's Connaught Tunnels; however, its route through the Appalachian Highlands of Quebec, across the wide estuaries of northern New Brunswick rivers and over the marshes and mountains of Nova Scotia tested the skills of Canadian engineers. They met these challenges of geography under the leadership of the engineer-in-chief, Sandford Fleming. From the start he directed that the line be built to a high standard. "When a line is carried out by private effort, a circumscribed capital may compel the adoption of cheap structures", he wrote. "A railway constructed to meet a national requirement", he continued, "is controlled by no such limitation".[108] Accordingly, Fleming insisted that only the best materials and equipment be used in the construction of the Intercolonial and he personally challenged any decisions that put cost ahead of quality made by the Commissioners appointed by the Federal Government to oversee the undertaking. Moreover, he demanded a high quality of effort

from the men who built the railway. To this end, he recruited a bright group of young engineers, imbued them with the spirit of his own integrity, fostered among them a sense of camraderie and inspired them to excellence. He set up a competent administrative section which acquired and distributed supplies without scandal or bungling. Finally he created a capable design section which drew up standard plans based on scientific criteria to insure that the design of the smallest box culvert was as sound as that of the longest bridge. The result was a railway built of the best material in the best manner.

As a national achievement, the completion of the Intercolonial Railway ranks with the opening of the Grand Trunk or the building of the Canadian Pacific. It was the final realization of an idea which was older than the oldest Canadian railway. The first recorded suggestion of a line through British territory from the St. Lawrence Valley to the Atlantic Ocean was made in 1832 by Henry Fairbairn in an article in the United Services Journal. This original proposal envisaged a railway from Québec City to the port of St. Andrews, 300 miles distant in New Brunswick. Undermined by the Webster-Ashburton Treaty of 1842 (see The New Brunswick and Canada), this project was supplanted in the mid-1840s by a plan to build a railway between Halifax and Québec through New Brunswick.[109] It was this idea that

Howe of Nova Scotia, Chandler of New Brunswick and Hincks of Canada worked toward attaining with the help of the British government in the early 1850s. Because of the conflicting political interests of the four governments, however, the plan miscarried and resulted in only unconnected fragments of the intercolonial being constructed separately in each province. (See The Grand Trunk, The European and North American and The Nova Scotia.) Efforts to reactivate the idea were made in 1858 and in 1861, but not until 1863 was there sufficient agreement between the governments to allow an engineer to be appointed to conduct a survey of the possible routes of the line. No attempt will be made here to outline the tortuous progress of the project in the 1860s or to investigate the details of the construction of the railway. The subject has been dealt with at length by others.[110] It is sufficient to note that the idea was incorporated into the British North America Act and that the first major undertaking of the new Federal Government was the construction of the Intercolonial Railway as a public work. On the ninth anniversary of Confederation, the idea became a reality. Possibly Sandford Fleming best summed up the significance of this railway. He called it "national in its objects and character", and noted, "The Intercolonial owes its existence to the creation of the Dominion of Canada, although it may be said that neither could have been consummated without the other".[111]

Appendix. The Amounts Taken from the Municipal Loan Fund by Municipalities in Canada for Railway Purposes as of 31 December 1861

Municipalities in Upper Canada.	Amount of Loan.	Arrears of interest due Dec. 31, 1861.
Town of Port Hope.....	$740,000	$312,303.31
Township of Hope.....	60,000	25,862.56
Town of Niagara.....	280,000	148,974.02
Town of Cobourg.....	500,000	313,426.61
Village of Chippewa.....	20,000	7,109.71
Township of Bertie.....	40,000	8,873.36
Township of Brantford.....	50,000	2,428.11
Town of Brantford.....	500,000	186,754.87
Township of Wainfleet.....	20,000	1,446.37
Township of Canboro.....	8,000	330.80
Countries of Huron and Bruce...	125,000	.....
Townships of Moulton and Sherbrooke.....	20,000	.....
Village of Paris.....	40,000	172.23
City of Ottawa.....	200,000	113,411.37
Town of Prescott.....	100,000	62,625.53
Town of Woodstock.....	100,000	47,824.27
Town of St. Catharines.....	100,000	47,748.29
Township of Woodhouse.....	10,000	31.04
Township of Norwich.....	200,000	101,508.96
Township of Ops.....	80,000	39,897.36
County of Elgin.....	80,000	35.95
City of London.....	375,400	155,412.56
Township of Windham.....	100,000	50,251.66
Town of Simcoe.....	100,000	52,276.99
Countries of Lanark and Renfrew	800,000	306,189.16
Town of Brockville.....	400,000	187,432.01
Township of Elizabethtown.....	154,000	51,794.00
Village of Stratford.....	100,000	56,871.79
Town of Goderich.....	100,000	35,174.92
Town of Barrie.....	12,000	2,564.69
Town of Guelph.....	80,000	13,400.12
Town of Peterborough.....	100,000	27,274.12
Total.....	$5,594,400	$2,359,406.74
Municipalities in Lower Canada		
Country of Ottawa.....	131,600	84,740.19
County of Terrebonne.....	94,000	60,498.17
County of Shefford.....	215,000	63,340.53
County of Stanstead.....	71,000	17,581.02
County of Megantic.....	5,840	3,580.57
Township of Shefford.....	57,500	21,895.59

Town of Three Rivers.....	220,000	53,855.61
Township of Granby.....	30,000	10,938.37
Township of Bolton.....	13,000	2,834.39
Township of Stukely North.....	16,000	3,763.29
Township of Stukely South.....	10,000	2,364.00
Village of Fermont.....	32.000	6,393.00
Total.....	$925.940	$343,208.41
Add Upper Canada.....	5,594,400	2,359,406.74
Total.....	$6,520,340	$2,702,615.15

Endnotes

Part 1

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20 Ibid., p. 16

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14. Walker, op. cit., p. 353; Canada: An Encyclopedia, op.cit., p. 145.

15. Gustavus Meyers, History of Canadian Wealth (Chicago: Kerr, 1914), p. 214.

16. Canada: An Encyclopedia, op. cit., p. 145.

17. Trout, op. cit., p. 64.

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20. Reports of the Commissioners appointed to enquire into a series of Accidents and Detentions on the Great Western Railway (Quebec: Derbishive and Desbarats, 1855), p. 24.

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22. Pennington, op.cit., p. 120.

23. A "hotel car" which combined daytime dining facilities with night-time sleeping accommodation was introduced by the Great Western in 1867 and is generally conceded to have been the earliest example of the railway dining car in the world. See Hamilton Ellis, The Pictorial Encyclopedia of Railways (Middlesex: Hamlyn Publishing Group, 1968), p. 254.

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25. Canada Legislature. Journals, Appendix UU, 1851.

26. St. Catharines Journal, 24 August 1854 cited by Frank N. Walker, "Birth of the Buffalo and Brantford Railway", Ontario History, Vol. XLVII, No. 2 (Spring 1955), p. 87.

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28. Walker, "Brantford Railways", op. cit., p. 89; PAC RG11, II, vol. 290, p. 220; Ibid., p. 223. Only the Grand Trunk's iron bridges were better than those of the Buffalo and Lake Huron.

29. Keefer, "Travel", p. 235; Ibid., Currie, op. cit., p. 253.

30. The Gazette, 13 December 1830 (letter from Peter Fleming, Civil Engineer); Trout, op. cit., p. 55; W.H. Boulton, The Railways of Britain (London: Sampson, Low, 1950), p. 95.

31. F. Hincks, Reminiscences of His Public Life (Montreal: William Drysdale, 1884), p. 438.

32. The Gazette, 12 June 1851.

33. The Gazette, 12 June 1851; ibid., 18 December 1850; Walker, Walter and Francis Shanly, p. 186.

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36. The Gazette, 3 July 1851.

37. Hincks based his opinion on the following calculations:

Halifax to Quebec	636 mi.	@£7,000 /mi	£4,452,000
Quebec to Melbourne	95 mi.	@£6,000 /mi	£570,000
Montreal to Hamilton	380 mi.	@£5,000 / mi.	£1,900,000
New Brunswick to Maine	200 mi.	@£6,000 /mi.	£1,200,000
		TOTAL	£8,122,000
		BRITISH LOAN	£7,000,000
		DIFFERENCE	£1,122,000

38. The Gazette, 11 July 1851.

39. Hincks, op. cit., p. 439.

40. Hincks, op. cit., p. 440; Hincks to Pakington, 1 May 1852, cited by Longley, op. cit., pp. 218-9.

41. T.S. Brown, op. cit., p. 11.

42. The Gazette, 10 August 1852.

43. Hincks, op. cit., p. 441; The Globe (Toronto), 12 August 1852; The Gazette, 10 September 1852.

44. The Gazette, 30 August 1852.

45. Ibid., 14 September 1852; 27 September 1852.

46. The Grand Trunk Railway of Canada. A prospectus, rev. ed. (London: 1853), Appendix, p. 1.

47. Ludwik Kos-Rabcewicz - Zubkowski and William Edward Greening, Sir Casimir Stanislaus Gzowski (Toronto: Burns and MacEachern 1959), p. 63; C.H. Gregory, Report dated 15 August 1857, upon the Works of the Grand Trunk Railway of Canada cited by O.D. Skelton, The Life and Times of Sir Alexander Tilloch Galt (Toronto: Oxford University Press, 1920), p. 106. Statistical information obtained from T.C. Keefer, "Travel", p. 193.

48. Prospectus, op. cit., Appendix, p. 2; Walker, Walter and Francis Shanly, p. 320; Report of the Commission Appointed to Inquire into the Affairs of the Grand Trunk Railway (Quebec: Derbishire and Desbarats, 1861), p. 95; Keefer, "Travel", p. 211.

49. Hodges, op. cit., p. 5.

50. The Grand Trunk Railway Company of Canada. Reports... To the London Board of Directors (London: John Thomas Norris, May 1855), p. 26.

51. Prospectus, op. cit., Appendix, p. 1.

52. Walker, Walter and Francis Shanly, p. 327.

53. T.S. Brown, op. cit., p. 35; The Globe, 11 July 1861, cited by Longley, op. cit., p. 234.

54. T.S. Brown, op. cit., p. 16.

55. A warning made before Galt and his Canadian associates came to terms with Hincks, before they received contracts and other favours from the Grand Trunk Company and before they had made a handsome profit from these arrangements. There are no heroes in this story.

56. Robert V.V. Nicholls, "The Erie and Ontario Rail Road", C.R.H.A. News Report, No. 118 (January 1961), p. 6.

57. Brockville Recorder, quoting The State of Maine, 28 December 1854.

58. Keefer, "Travel", p. 194, 237.

59. Canada. Legislature. Sessional Papers, No. 16, 1862 Report of Samuel Keefer, Esq., Inspector of Railways, for 1859 and 1860 (hereafter cited as Keefer Report)

60. Walker, Walter and Francis Shanly, p. 177, 198, 207, 225, 241, 269, 298.

61. Ibid., p. 321.

62. Richard Potter, President of the Grand Trunk Railway to the Editor of the Times, 13 April 1875 cited in Canada: An Encyclopedia op. cit., p. 148.

63. Guillet, op. cit., p. 78; Cobourg Star, 25 April 1855 cited by Guillet, p. 80; Trout, op. cit., p. 117.

64. Trout, op. cit., p. 117.

65. Only on the Cobourg and Peterborough would one expect to read that a special excursion to mark the opening of the Marmora branch ended abruptly when "The fine new engine Marmora ran over two cows which lay upon the track; cutting them to pieces; and being itself thrown from rails was precipated down an embankment of twelve feet at the bottom of which it now lies, upon its back, a complete wreck". (Cobourg Sentinel, 27 June 1867.)

66. Cobourg Sentinel, 3 August 1872; 24 April 1875; 11 October 1873.

67. Trout, op. cit., p. 114.

68. Ibid., p. 115.

69. Keefer, "Travel", p. 222.

70. Ibid.

71. There is evidence to indicate that Henry Covert, who in partnership with Fowler, the engineer of the Peterborough branch, leased the Cobourg and Peterborough in 1859, sabotaged the Rice Lake bridge and so destroyed the line. By the time they terminated their lease, they had gained control of the Port Hope railway whose value had been increased by their covert actions. See Cobourg Sentinel, 20 May 1865, also Guillet, op. cit., p. 83.

72. Currie, op. cit., p. 296.

73. Final Report of the Welland Railway Company (n.p. 1859), p. 1; J.P. Merritt, Biography of the Hon. W.H. Merritt (St. Catherines; E.S. Leavenworth, 1875), p. 422.

74. Final Report, op. cit., p. 3.

75. PAC, RG11, III, vol. 191.

76. Potter to the Times cited in Canada: An Encyclopedia, op. cit., p. 149; Currie, op. cit., p. 255.

77. Brockville Recorder, 28 April 1853.

78. Ibid., 28 July 1853; 8 September 1853.

79. Ibid., 15 April 1855.

80. Ibid., 12 June 1856.

81. Ibid., 4 November 1858; T.C.Keefer, The Canada Central Railway (Ottawa: Bell & Woodlawn, 1870), p. 3.

82. Potter to the Times cited in Canada: An Encyclopedia, op. cit., p. 149.

83. United Services Journal, 1832, cited by C. Warren Anderson, "The St. Andrews and Quebec Railway", Collections of the New Brunswick Historical Society, No. 19 (1966), p. 53.

84. The Gazette, 26 March 1851; Illustrated London News 14 August 1852 cited by Anderson, op. cit., p. 56.

85. Joseph Andrew Chisholm, ed., The Speeches and Public Letters of Joseph Howe, 2 vols (Halifax: The Chronicle, 1909), Vol. 2, p. 95.

86. J. Murray Beck "Joseph Howe" Dictionary of Canadian Biography (Toronto: University of Toronto Press, 1971), Vol. 10, p. 366; G.M. Haliburton "A History of Railways in Nova Scotia", (M.A. thesis, Dalhousie University, 1955), p. 25.

87. Woodworth, op. cit., p. 34.

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90. Chisholm, op. cit., p. 17.

91. W.S. McNutt, New Brunswick A History: 1784-1867 (Toronto: Macmillan, 1963), p. 334.

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93. C. Warren Anderson, "An Historical Sketch of the European and North American Railway", Canadian Rail, No. 206, (January 1969), pp. 4-13; C. Warren Anderson, "The Completion of the European and North American Railway in October, 1871", Canadian Rail, No. 242, (March 1972), pp. 71-89.

94. Woodworth, op. cit., p. 34.

95. Ibid., p. 56.

96. Trout, op. cit., p. 150; ibid., p. 154. See also Omer Lavallée, Narrow Gauge Railways of Canada (Montreal: Railfare, 1972), pp. 6-7.

97. Trout, op. cit., p. 154.

98. Ibid., p. 151.

99. Ibid., p. 157.

100. Robert R. Brown, "A Wooden Railway of Seventy Years Ago", B.R.L.H.S., No. 28 (May 1932), p. 39.

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102. The Semi Weekly Patriot (Charlottetown), 8 April 1875.

103. Ibid., 21 July 1873.

104. Ibid., 22 May 1875.

105. T.C.L. Ketchum, A Short History of Carleton County New Brunswick (Woodstock: Sentinel, n.d.), p. 52; James Hannay, History of New Brunswick (St. John, John A. Bowes, 1909), p. 292.

106. Sandford Fleming, The Intercolonial. A Historical Sketch of the Inception, Location, Construction and Completion of the Line of Railway Uniting the Inland and Atlantic Provinces (Montreal: Dawson Brothers, 1876), p. 239.

107. Because the Intercolonial also comprised parts of the European and North American (Saint John to Shediac) as well as the Nova Scotia Railway, the total outlay for the line was estimated to have been approximately 33 million dollars. See Leonard A. Seton, "The Intercolonial, 1832-1876", C.R.H.A. News Report, No. 91 (July-August 1958), p. 92.

108. Fleming, op. cit., p. 110.

109. At the same time, the idea of railways from Montreal to Portland, Maine and from there to Saint John and Halifax (see The St. Lawrence and Atlantic and The European and North American) provided a continental alternative to an intercolonial line through British territory and seriously divided the support given to the latter.

109. Both Fleming's book and the series of articles by Seton accurately explain the history of the project. There is a need, however, for a major study of the operation of the Intercolonial from 1876 up to its incorporation into the Canadian National system.

110. Fleming, op. cit., pp. i, 236.

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