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FRONT COVER:

The first locomotive built in Canada was the "Toronto" built by James Good in 1853. As this year is the sesquicentennial of the city of Toronto we are happy to print this drawing of the historic locomotive. The drawing was made in 1932 by John Loye, the founder of the C.R.H.A., and shows the "Toronto" as it was after it lost its outside frames in an early re-vamping. It was, unfortunately, scrapped in 1881.

INSIDE FRONT COVER:

TOP:

A rare view of a short-lived train. VIA No. 19, St.Laurent at Drummondville Que. on Dec. 27 1982. The regular engine 6760 had broken down which explains why C.N. 3679 was leading.

Photo by Willie Radford. BOTTOM:

Back in 1948, Montreal Tramways car 879 was operating on route 5A "Ontario" as an extra. This was one of the first steel street cars in Canada (1907), but the series became extinct in 1953.

C.R.H.A. Archives, Toohey Coll.

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AND THE C.P.R. SAID LET THERE BE DIVISION POINTS...

By Elinor Barr

The distant whistle of a train always quickened the pulse of a division point. People appeared on the station platform as if by magic. Workmen stood poised, ready to begin their appointed tasks even before the locomotive thundered past. Right on time, they agreed, looking at their watches.

Near the head end of the train the postmaster caught his incoming mailbag and despatched one in return. The agent accepted freight and express from the baggage car amid good-natured banter. News from along the line filled the air.

Further down, porters assisted passengers stepping downto the platform for a stroll. Their stylish clothes contrasted vividly with the oilstained overalls of the car inspector checking the wheels of each coach for hot boxes.

Here, workmen hustled blocks of ice into water coolers, and into refrigerator cars. There, others uncoupled the locomotive, accompanying it to the yards to begin routine maintenance. Still others attached a replacement locomotive to the head of the train. They had fired it up hours earlier in preparation for this haul to the next division point.

The fresh iron horse pants, then snorts impatiently. Soon the conductor's familiar "Boo-oard!" warns passengers to hurry back to their coach. A bell rings. Doors clang shut. The train shudders noisily as wheels begin to turn. The cars gain momentum, pass by, then diminish in size and sound until nothing remains.

Human figures seem to melt away as the community resumes its normal pace. Unclaimed parcels are transferred to the freight shed for pickup. Women and children gather at the general store, socilaizing while mail is sorted and a fresh shipment of groceries unpacked. The running crewengineer, fireman, conductor brakeman-- amble to the bunkhouse to await a call for the return trip home. Workmen with soot-rimmed eyes shovel ashes from the spent locomotive and guide it to the water tank, to the coal chute, to the round-



1. LOG HOTEL

The CPR did not encourage private enterprise at division points. The hotel at Ignace, which also housed a general store, was an exception. The owner frequently found himself at loggerheads with the railway company. Photo courtesy Mrs. Ira Wilson





house. Everyone's routine revolves around the railway and its schedule.

The Canadian Pacific Railway created dozens of division points during the 1880s. They were located every 125 to 150 miles, the distance a nineteenth century steam locomotive could travel without extensive servicing other than fuel and water. Division points, whether new creations or superimposed upon existing settlements, shaped, indeed often ensured, a town's future. They also played a vital role in Canada's development, both as service centres for trains and as communities in their own right.

Many were literally carved out of the wilderness, yet they cannot be called frontier settlements in the accepted sense of the term. They were company towns, links in a chain. The needs of Canada's first transcontinental railway determined their location and physical layout. The promise of a job attracted the pioneers that made up the population.

A look at one of these "instant communities" offers a great deal of practical information about

early railroading. ignace, for example, became a division point in 1883 because of its central location between existing population centres. At the time it boasted little more than a wye, a woodpile and a watertrough. Within four years these ragtag remnants of construction days would be replaced by a transportation complex of generous proportions.

A survey of the townsite dated August 31, 1883 shows only three railway facilities -- a narrow strip representing the right-of-way, a wye jutting from it (allowing locomotives to turn around), angling toward a water source outside the plan. The location of the fuel supply, cordwood, is not given. "Bush fires have been raging", stated a report earlier in the summer. "At Ignace a great deal of ties and cordwood were destroyed." So few words. So much left unsaid.

Hugging both sides of the right-of-way are ten buildings, three of them larger than the others. The large one on the south side, a two-storey hotel built of squared timbers, appeared during the summer of 1883. Owner W.H. Cobb commissioned the survey. Only his hotel and the right-ofway survived the transformation period.

The CPR's engineering department drafted a detailed plan dated October 13, 1887 to mark completion of facilities. The right-of-way remains a strip 132 feet wide, but now expands to double width for a distance of 1,950 feet. Protruding from both sides are irregular areas of additional CPR land. All structures fall within these boundaries, except for several to the east -- Cobb's hotel and stable, two frame and four log dwellings, a henhouse, a shack, and part of a fenced field marked "Cattle Kraal", a resting place where prairie cattle broke their long journey eastward.

The dining station stands south of the main line, fronted by a wooden platform more than 300 feet long. An extension leads behind the station to a water closet, the only toilet facility shown. From each side of the station a line of track runs southward to form a triangle; at the tip a turntable balances within a circular pit. This

arrangement allows the engine turner to direct a locomotive either into the 12-stall roundhouse, east to the main line, or west to the ash pit and coal sheds. Still further westward huddle the picturesque trio that caught the eye of so many early travellers-- an auxiliary coal shed, windmill and pumphouse, and water tank.

Ranging along the triangle's outer edge are workshops, storage sheds and living quarters. The locomotive foreman's home is located on one side of the roundhouse and his office on the other. Both are fenced. In between stand five structures measuring 10 \times 30 feet and labeled "Port. Car", indicating they were once boxcars. One houses a school, while the others are earmarked for the inspector, night car inspector, tanner, and carpenter. Scattered shelters protect sand, oil, ice, tools, and, beside the blacksmithy, "Iron Racks".

Comparison of the two plans reveals that the number of buildings increased from ten to thirtyfive. A bridge and building crew (B & B gang)



2. STATION

Ignace station included a dining room for passengers as well as a telegraph office and accommodation for employees. The structure resembles the two-storey frame design Van Horne introduced to the prairies. A weather station is attached to the wall, foreground. Photo courtesy Mrs. Ira Wilson





3. BUNKHOUSE

Running crews changed at Ignace along with the locomotive that pulled their train. The long building (foreground) was their headquarters until being called for the return trip home. Noise from the small building behind, a carpenter's shop, must have caused problems for those wanting to sleep. Photo courtesy John E. Davies.

4. COALBURNER

An engineer (right) oils locomotive No. 837 as it sits on the shop track at Ignace, the finishing touch before hauling a train to the next division point. Photo courtesy John E. Davies

completed the two-storey dining hall and telegraph office in May 1884, just in time for the inauguration of daily passenger service. Most other facilities came into existance around the same time.

Henderson's Directory for 1884 lists 50 men living in Ignace that year-- 39 CPR employees, 8 laborers, a blacksmith, a boarding house keeper, and W.H. Cobb. Their names are Anglo-Saxon and they came from eastern Canada. Only two would still be there a decade later -- W.H. Cobb and John Dwyer, a coal shed worker.

Among the CPR employees listed are S.B. Fraser as yardmaster, station agent J.R. Harding, telegraph operator George Turner, and John Beaumont and John Haggarty of the dining hall. Six men staffed the coal sheds, including foreman John Wilson, indicating that woodburning engines were already being phased out. Locomotive foreman J.B. Hammond supervised two fitters, a fitter's helper and seven engine cleaners. They worked in repair shops that were transferred to a neighboring division point after construction of Ignace's roundhouse.

The 1887 plan shows no trace of the six buildings on the north side of the tracks. The largest, a boarding house, burned to the ground. The others met a similar fate two weeks later during a bush fire that threatened the entire community. According to a crisp newspaper account, the CPR buildings were saved "with great difficulty". The blaze was so spectacular that residents dubbed 1886 The Year of the Big Fire rather than recog-

nizing the first transcontinental train as an event which carried far greater significance.

The following year westbound passengers included five cars of immigrants from Iceland, 300 excursionists from Maine, and a number of harvest workers heading for the prairies. By October 1887 cargoes of buffalo bones going east to be pulverized for fertilizer vied for rail space with the grain trains glutting the single main line. Ever increasing traffic, soon to include the legendary silk trains, taxed the company's new division points to the limit.

Over the years division points underwent several periods of heavy construction as facilities expanded and traffic increased. Finally, during the 1950s, the CPR implemented a drastic change, one which signalled the end of division points across the country, by switching to diesel locomotives. Since they required far less servicing than steam locomotives, division points became redundant. Structures, now unused, disappeared. Employees transferred to larger centres. The arrival of trains no longer caused a flurry of excitement. A species had become extinct.

Former division points retain few physical reminders of steam technology, even though it shaped their destinies over a 70-year period. The extent of the loss becomes painfully apparent during the centennial decade of the 1980s. Little more than a few faded photographs and mementoes have survived to commemorate the founding of individual communities.







5. WOODBURNER

An Ignace crew prepares this unnumbered woodburner as a deadhead engine by disconnecting the driving rods. Photo courtesy John E. Davies.



By: Fred Angus

The railway preservation movement is one segment of heritage conservation which has gained considerable strength in the last quarter century. As in most efforts there has been progress and setbacks, successes and failures, artifacts saved and artifacts lost. We will consider here some of the important relics that were lost, why they were lost, and, more important, to try to prevent further loss of significant railway items in the future.

During 1982 railway historians were stunned by the news from Nova Scotia that the Scotian Railway Society had scrapped its entire collection of railway equipment without proper notification to other preservation organizations, organizations that might have taken some of the equipment and saved it from being destroyed. Included in this wanton destruction were: a steam locomotive, an 1894 coach from the Sydney and Louisburg Railway, the Nineteenth Century private car "Ethan Allen" from the United States, a caboose and, perhaps the most significant, an extremely rare open-platform wooden baggage car originally an Intercolonial Railway coach built in 1875 and

CANADIAN RAIL 83

formerly in the C.N.R. museum train. Only one other car of this type exists in Canada – the 1877 car now at Edmonton and also from C.N.'s museum train.

While this is the most extreme case of its kind ever to occur in Canada, there have been, and unfortunately will continue to be, other lesser incidents of loss of railway heritage. Consider the following, all of which have occurred within the last two years:

In West Toronto to historic railway station is demolished despite the intention of the city to preserve it.

In Saint John thousands of waybills of the 1880's are carted off to the dump with only a small portion saved for museums.

In Toronto a detailed large-scale model, made in 1867, of a Grand Trunk passenger car is given to children as a plaything instead of going to a museum. This model had been exhibited at the World's Fair held in Paris France in the year of Canada's confederation.

And, briefly crossing the U.S. border, in Philadelphia two street cars, one dating back to 1894, are scrapped because the museum to whom they were promised was delayed for two days in picking them up due to weather conditions.

No doubt other "horror stories.. could be told, but these four examples, in addition to the Nova Scotia diaster, are enough to make the point.

Efforts to preserve railway artifacts go back a surprisingly long way to within a generation of the birth of railways. The pioneer locomotive "Rocket", albeit much the worse for wear, found a home in the Science Museum in England as early as 1862, and other significant pieces were saved. often by the railways themselves, from time to time. In the United States, the Baltimore and Ohio Railroad was foremost in the realization of the importance of saving early equipment and so laid the foundation not only for the magnificant collection now in Baltimore, but also for the railway museum concept itself. Even in the early days there were set-backs. Often old engines were saved more as curiosities and, having outlived their reason for survival were cut up. Most regrettable was the action of the Great Western railway in England which had, in the 1870's and 1880's "preserved" the board-gauge engines "North Star" (1837) and "Lord Of The Isles" (1851). In 1906,



Our first example of "Heritage Lost" is the scrapping of the two locomotives of the Carillon & Grenville Railway in 1914. Here we see the "Grenville", built by D.C. Gunn of Hamilton in August 1858, as it appeared near the end of its career. The other engine "Ottawa" (formerly "Carillon") was an 1856 "Birkenhead" bought from the Grand Trunk about 1870. This was Canada's last 5'6" gauge railway and was like an operating museum piece when it closed in 1910. Despite efforts to save them, the locomotives were sent to Montreal in 1914 and scrapped.



In 1937 she attained a speed of 112 miles an hour. In 1958 she, and all of her type, was scrapped. No. 3003, seen here at Hochelaga on September 10 1949, was one of C.P.R.'s famous "Jubilee" type 4-4-4's of 1936; they were in service until almost the end of the steam era but none was saved. C.R.H.A. Archives. Toohey Collection 49-635.



A former Montreal Terminal Railway car built by Ottawa in 1896, No. 1054 was later an instruction car and is seen here on an excursion on the Cartierville line on August 7 1948. It survived until 1953, well into the era when equipment was being preserved, but in the end it got scrapped.

C.R.H.A. Archives. Toohey Collection 48-489.

due to lack of space, both locomotives were scrapped by the railway so depriving future generations of the sight of an authentic 7-foot gauge mainline locomotive. In 1925 the G.W.R. did build a full-size replica of "North Star" but this is not, of course, the original engine. In Canada no real attempt at railway preservation occured until after World War II, and what was saved survived mainly by chance. Among the equipment saved before World War I may be mentioned the early locomotives "Sampson" and "albion", C.P.R.'s famous "Countess of Dufferin" and Montreal's first electric street car No. 350 "The Rocket." The chance to save Canada's last broad-gauge locomotives was lost in 1914 when the equipment of the Carillon and Grenville Ry. was taken to Montreal and scrapped despite some talk that it should be saved. In the last 35 years great progress has been made, spurred on by the retirement of steam locomotives and street cars. and older equipment that has survived has now shown that we still have a long way to go to ensure the safety of these collections.

Historic railway equipment can be lost through fire or other disaster or by being scrapped by the railway companies. These losses, regrettable as they are, can be explained. Fires can occur despite the best precautions, and railway companies can not be expected to preserve relics, after all they are not in the Museum business. What we are concerned with here is what can be done by people who ARE in the museum business or are interested in railway history to prevent losses such as those described. There are several ways in which this can be done:

- 1. Discovering and safeguarding artifacts, owned by railways and others, before they are destroyed.
- 2. Proper selection and appreciation of items to be preserved.
- 3. Correct and well-planned restoration of exhibits.
- 4. Adequate physical protection for exhibits.
- 5. Protection of artifacts against siezure for debts and against unwarrented disposal in the future by directors.
- 6. Making the public and governments aware of the importance of preserving our railway heritage.

Let us briefly discuss each of the above and see how neglect of any of them can result in the loss of significant pieces of historic railway items.

1. Artifacts can not be saved if those entrusted with saving them do not know they exist. In an association such as the C.R.H.A. there are many members who can "spot" important items and mention them to the association. This has resulted in the saving of much in the past, the most recent example being the rescue of the 1882 C.P.R. coach No. 54 in Alberta due to observant enthusiasts who noticed it and appreciated (and later spent much time and effort rescuing it). Of course smaller items can be saved too; old books and timetables on the garbage pile, waybills in an abandoned station, hundred-year-old rails being lifted from an abandoned branch line, grandfather's toy train set, all these may well be worth saving if we know they are there.



The first steel street car in Canada, and one of the first in the world, Montreal car 863, built by Pressed Steel Car in 1907, sits forelornely at the back of Youville shops on June 27 1948. While 863 was scrapped soon after, two of the same type (869 and 881) lasted until 1953. One of these should have been kept to show the new technology of steel equipment.

C.R.H.A. Archives. Toohey Collection 48-291.



A Montreal Tramways two-car train in a snowstorm at Sault on January 1 1949. Every one of the one hundred trailers was scrapped despite the intention to preserve No. 1676. C.R.H.A. Archives. Toohey Collection 49-2.

2. The question of what to select for the preservation is one that can cause more arguments than any other. The most controversial question of all seems to be "Should equipment be preserved only if it is 'typical' or should brave but oftenunsuccessful experiments (sometimes unjustly called 'freaks') be included in the collection, and where do we draw the line?". A good example is Montreal street cat 2501 which was one of two "duplex" articulated cars built in 1928 and scrapped in the 1950's. 2501 was of a patented Canadian design developed by the Canadian Car and Foundry Co, and introduced by the Montreal Tramways Co. It was slightly different from its sister 2500 (the only other one ever built) in that it had bucket seats instead of conventional seating. Although considered for preservation it was not saved because it was "un-typical", and yet today the articulated car in the latest thing in urban transit. How valuable a 56 year old Canadian-designed car of this type would have been in a museum, and yet it was not preserved. What about C.P.R. mogul No. 3011 (built 1888), a Montreal trailer street car, Montreal Terminal Railway No. 1054 (1896), C.P.R. 3000class locomotive? All these were in service well into the 1950's and considered for saving; none got saved. Who knows, maybe in later years the Turbo train will be considered in this category!

3. Although not often realized, improper restoration can destroy heritage. The question here is usually to which period to restore a piece of equipment since it has likely had numerous changes over the years. Often the urge to "back date" to its earliest appearance results in the destruction of later additions which may be of more importance than the original item. An example is New Brunswick Power Co. street car No. 82 whose

significance lies in being an example of how a smaller company converted its equipment to emulate the configuration introduced by the Birney cars in the 1920's. Restore No. 82 to its original 1912 appearance and we would have just another single-truck street car rather than an interesting conversion. The "original content" of an exhibit can vary from 0 percent (i.e. a replica) to almost 100 percent depending on age, deterioration and re-building. How much of C.P. locomotive 144 or car "Saskatchewan" really date back to the 1880's, and how much of their later history would be lost if an ill-conceived back dating was attempted? One remembers how the vintage American locomotive "General" was "restored" at great cost to operating condition (but with its post-Civil-War appearance) including such 20th century devices as oil firing! How much better to have used the money to build a replica of the "General" as it really was in 1862 and to keep the original intact as it was when retired. The choice of paint job is also important but there is not so much irrepairable damage for equipment can always be repainted. The exception is where fragments of original paint (which might be needed to match the colour) are destroyed in the process.

4. Adequate physical protection is rather obvious. Equipment should be under cover and protected from fire, rot, rust and vandalism. Smaller items should also be safeguarded against theft, and books and archival material should be kept in a controlled, dust free environment. Of course ideal conditions cost money and usually are an unattainable goal, but some safeguards are cheaper and can be effective. For example a locomotive that must be stored outside can be given a temporary coat of paint before final restoration for

CANADIAN	87	RAIL	

"black paint is better than red rust". Sometimes this is better than a tarpaulin which can hold moisture and actually cause worse rusting. Naturally passenger equipment should have its windows boarded up and roof made leak-proof until it can go inside.

5. The protection of a collection against destruction to satisfy debts, or because a museum has fallen on bad times, is a serious consideration. Despite the best efforts a project can fail due to many reasons such as lack of proper support. This is what happened in Nova Scotia with such tragic results. One method of protection would be to set up a board of trustees which would be organized separately from the museum itself and which would have title to the exhibits so protecting them from claims against the museum. Trustees could also guard against unwise decisions of the museum directors who might act on too short term an outlook. All groups preserving equipment must realize that they are custodians of our railway heritage and, if unable to maintain the collection, make SERIOUS efforts to place the items in other collections before contemplating anything so reprehensible as scrapping them. By serious efforts is meant personal contact with the directors of these other collections, and not just

vaguely-worded items in a newsletter. Another reason why equipment may be lost is due to unwise disposal just because an item is not fashionable at the moment or is thought, by the directors of the day, to be not "typical" or representitive. This is analogous to item No. 2 on selection, and it should be added that the collection is being formed and maintained for future generations and not just to satisfy the whims of today.

6. The last, and perhaps the most important, way that railway heritage can be lost is to lack of public awareness or apathy. This will translate into lack of support without which even the best projects will fail. It is only too true that governments, foundations and others support projects that have great public appeal if for no better reason than the obvious one that popular projects bring in the most votes. If railway preservation is perceived as a group of "fans" simply "playing trains" it can not hope for great support.

Perhaps as there is more realization that railway artifacts are not just old nostalgic "puffing billies" or "toonerville trollies" there will be a more general tendency to save these pieces of our history and consider them of equal importance as art exhibits in a gallery. No art gallery which lack-



Upside down at the bottom of a pile of burning street cars, 1676 reaches a fiery end on the morning of August 28 1959. This car was the last of the 1600-series trailers and the one that was slated to be saved to go with front-unit 1801. Why it was scrapped was never satisfactorily explained. Montreal Star. ed the space or resources to save works of art would destroy these works - they would be sold or traded to another museum. Why should this not happen at our railway museums? Many railway exhibits, due to their size, cannot be stored indoors without great cost. Thus deterioration will inevitably set in. Consider how many locomotives have been set up in parks with great fanfare and then, as the years went by and the nove-Ity wore off, they slowly decay. How many of these are truly preserved? Sometimes the story has a happy ending as exemplified by the recent rescue of C.P.R. No. 374 in Vancouver. This historic locomotive had suffered 38 years of vandalism but now is being restored. Others, however, are still threatened. Smaller items do not present the storage problem but are often discarded as "junk", sometimes even when they are in a museum. The answer to this is obvious; everything acquired should be documented with the reason for its acquisition, too often forgotton. The small things are important too and everything adds up to tell the whole story.

Several years ago a Canadian Council of Rail Heritage was set up which is a step in the right direction. Unfortunately after an initial enthusiasm, the local groups failed to support it. The result is that its activities to date have been virtually non-existant; a pity for this sort of group is sorely needed. At the more local level associations owning exhibits should consider establishing boards of trustees who would oversee the conservation of historical material. One thing is certain; if the railway historical movement does not do it no one else will!

While it is easy to lay the blame for the 1982 Nova Scotia scrapping on the Scotian Railway Society this would not be entirely fair since they are not the real culprits. The S.R.S. did act with grave improptiety, and cannot escape the strongest censure, but so did the Nova Scotia Provincial Museum for not giving the equipment sanctury. But the true blame should be laid on the shoulders of apathetic governments and general public. It is strange that a social structure that can afford a million dollars for a hockey or baseball player can not afford to safeguard our heritage. The truly frightening thing is that what happened in Nova Scotia in 1982 could happen to any preservation group, even to the C.R.H.A. Shall the future produce horror stories like that in Nova Scotia, or happier events like car 54 and locomotive 374? The railway enthusiasts must lead the way in deciding the outcome; the answer to the question is in the hands of the reader of this editiorial.



On its last run Montreal articulated car 2501 is seen on a C.R.H.A. excursion on March 14 1953. This car was one of two built in 1928 and was ahead of its time; only now are articulated street cars coming into their own in North America. Both 2500 and 2501 were scrapped in 1955 after the plan was dropped to convert them into single units.

C.R.H.A. Archives. Toohey Collection.



One of C.P.R.'s well-known E-8's, No. 1802 stops at Newport Vermont on June 14 1952 en route to Boston with the "Alouette". 1800 and 1802 remained in service with VIA until 1984 and are now up for disposal. Strangely they are not on the list of locomotives to be saved because they are "not typical"!! Is this to be our next example of HERITAGE LOST?

Photo by Fred Angus.

VIA, Kingston to Toronto

By FRED CURTIS

6:50 a.m. I sat on the cold leather seat of Via Rail's "Dayliner", Service From Kingston to Toronto, Ontario, Canada, and waited for the train to nudge slowly ahead. My thoughts drifted to the early morning events, which I performed seemingly automatically: dressed in the dark; ate breakfast; called a cab; travelled to the station; bought my ticket; waited for the train; heard the announcement; quickly stepped through the automatic door; positioned myself on the platform; shivered as the cold morning air hit my face; answered the conductor, "Toronto"; stepped up; climbed four stairs; swung to the left; looked for the 'Nonsmoking' section; sought out my seat on the left side of the train; lifted my bags to the overhead carrier; took my coat off; and slumped into my seat.

The first step onto the train was slippery this morning. "How will I manage to get on the train when I am old", I muttered silently, angrily. My thoughts drifted to a young man and girl standing in front of me while I waited to purchase my ticket. Were they married? No, I didn't think so, - the young girl wasn't wearing a wedding ring. Were they living together? I mused at the thought that they were eloping to start a life together in Toronto. I stared out the greasy, large, rectangular window which supported my left shoulder. In the distance, algal ponds, scattered in the Little Cataraqui Creek floodplain, gave way to low shrubs, then to poplar and pine trees. Above the tree line, the city slept. Nearby, the arrowheads were beginning to turn green, and the cattails were slowly pumping nutrients from their watery bed up straight, tan-coloured stalks. The dynamic biological and physical processes of the Little Cataraqui Creek continued incessantly. My face tightened as I recounted the battles with developers who did not care about the adverse impacts their projects had on the creek.

7:00 a.m. Two blasts of the whistle sounded. I felt the familiar pull of the train and heard the squeek from the wheels as the air brakes released their grip. The train inched forward.

Gaining speed, the train passed under the Highway 2 overpass, supported on either side by sedentary, white pillars of concrete. There, to the left, was the John L. Smith property, sheathed in morning mist.

John L. Smith was an interesting character. A short, pudgy, balding man occupied with real estate, John wanted to sell 35 acres of land, to anyone who would offer him one million dollars.

Unfortunately, a large portion of land was in the floodplain of the Little Cataraqui Creek, John had unsuccessfully sought a permit from local Conservation Authority to fill 46 acres of land to make it suitable for residential or commercial develop-



ment. In frustration, John dug a long, deep trench to drain ponding water from the land, but enraged local enrivonmentalist, called the news media, the mayor and the Conservation Authority. John was caught red-handed, and was told to desist his trenching operation. Later, the Conservation Authority told John to rehabilitate the scarred land, or be slapped with a stiff fine. Obviously, John did not abide, because the trench, now half covered by weeds, was still present.

Five long blasts of the train whistle broke my thoughts. The train approached Gardiner's Road, a major north-south arterial in Kingston Township. Five cars, waiting impatiently, lined up behind a zebra coloured horizontal barricade, while clanging bells broke the stillness of the morning air.

Have you ever closely examined the right-ofway beside train tracks? The bed of grey stones supporting our train track, sloped down at a crisp angle to flat terrain where mounds of dark, oily, rail ties lay half broken. The railway bed was weedfree (I wondered why) in sharp contrast to the nearby vegetation. As the train ribboned through a light industrial area, I noticed paper, wood, plastics, metal refuse and other assortments of garbage beside the tracks. I peered into backyards of homes and tried to guess the house-hold secrets which lay within.

The train raced along, and a car travelling on Highway 33, raced the train. My eyes fixed on a rock quarry, which neighborhood residents were able to have shutdown after a lengthy Ontario Municipal Board hearing. The quarry gave way to Collins Bay where small crafts sailed in and out during warm weather months.

7:10 a.m. The Ernestown Township Iollipop, a water tower, came into view. I wondered how long the black lettering had been painted on the outside of the elevated reservoir. I half smiled at a sign which indicated the site of the Ernestown Industrial Park. Ernestown, like all Eastern Ontario municipalities, savoured new industry, and had serviced land waiting ... waiting. My ear pricked up to catch the conductor's reply to the passenger sitting ahead of me that we would arrive in Toronto at 9:30 a.m. I mentally calculated 2 hours and 20 minutes until arrival, and silently grunted my satisfaction.

The conductor leaned over me and snapped, "ticket please!" I reached lackadaisically into my coat pocket and handed him my ticket. After quickly punching two clean holes, he thrust the mutilated ticket into my open hand. I slid down in my seat, and turned to take in more of the passing show.

The Lennox Generating Station, an oil fired plant, now defunct, loomed in the distance. The Ontario government had shut it down when oil prices and associated transport costs escalated to a level which made the plant uneconomical to generate electrical power. Lennox, plagued with start-up problems in 1977, never produced power at full capacity. How many thousands of dollars had Ontario taxpayers foolishly wasted!



Blasts from engine's whistle appeared to have no impact on cattle nonchanlantly chomping on verdant grass in a nearby field. As telephone poles whizzed by, I caught the pungent odour of a cigarette smoke circling towards me.

Near Napanee, an abandoned limestone quarry came into view. Hardy wild flowers like purple vetch contrasted sharply against the variation in greens. The Springside Park Dam on the Napanee River certainly looked inviting for a picnic on a warm summer's day.

7:24 a.m. The air brakes began to grip the train wheels and the bell began to ring; At a road crossing, six cars lined up in single file and drivers snarled at the speeding train. The scenery - scrap metal, road construction, Purina Foods, and a gray warehouse badly needing paint - slowed down. The grip of the brakes tightened, like a cobra snake around its prey, and all movement in the train halted. The bell ran on. "Shut it off', I screamed silently. After 5 long minutes, the train moved forward. Hesitantly, the brakes squeaked noisily as they released. The bell continued to clang on and annoy me enormously. The train clicked into higher gear and the speed increased. Outside, like lonely sentinels standing guard, transmission towers, supporting heavy lines, saluted the passing train. As my eyes lifted to the distance, grassy flat fields receded to fence lines, farmhouses and trees. Suddenly,

without warning, the conductor barked that coffee was available. In Pavlovian style, six people rose from their seat, shuffled up the aisle, pulled at a heavy metal door, and disappeared through the opening.

7:39 a.m. Sighing with relief at the bell being turned off, I caught the sight of an airstrip with grounded planes. With a long and cautious stare, a young boy standing away from the tracks, clung to a beaten leather baseball glove in one hand, and with his free hand, tossed a handball rhythmically. The bell rang again and I watched the boy grow smaller. The train slowed, jerked forward then backward before coming to a dead stop. Belleville (beautiful city) I proclaimed. To the right, 12 side tracks carried an assortment of cars boxcars, flatbeds, tankers, car carriers. Only grain cars were absent. To the left, a white and red billboard listing Belleville industries, was strongly planted beside the reddish brick station. Across the street from the station, a food store and restaurant beckoned hungry people. Within 3 minutes, the engine began the familiar pull. The cars gave way without resistance and moved forward down the track. The swaying motion of the train, the silence and increasing heat in our car made me drowsy. My eyelids, heavy with tiredness, closed.

8:03 a.m. Near Trenton, a magnificent orange, steel bridge spanned the water. In May and June





hundreds of weekend fishermen would drop anchor from skiffs and cast for pike, perch, walleye and other fish which migrated from the deeper water of Lake Ontario to rest, feed and spun in shallower waters of the bay. The Moira River had 3 people fishing from its banks.

The train collected more passengers in Trenton and accelerated again. The scenery from Trenton to Cobourg was bland; the train whistle blasted every 4 minutes.

8:32 a.m. The train chugged into the Cobourg Station. Limestone and red brick characterized the train station. About 30 people, suitcases in hand, climbed aboard on the left side of the train. Most were dressed in outdated clothes. All the time the bell clanged incessantly.

As I watched the terns circle above the waves crashing on the Lake Ontario shore, my ears detected a soft voice across the aisle and one row behind. I swung my head around, and met the eyes of an attractive woman, probably in her early twenties. My up and down glance revealed a black wool jacket and skirt, set off by a white silk blouse and black patent leather shoes. Her straw blonde hair was pulled back, tied tightly on he head and held in place with a pearl-lustre comb. I tuned in on the conversation she was travelling to Toronto to engage a lawyer in a custody suit over her one year old child. Her jealous husband, after 5 years of marriage, had suspected her of having an affair with another man - she was innocent of course. He kidnapped the child about 6 months ago and never returned. When she found him, he threatened to kill her (earlier he had mercilessly shot their dog) if she took the child. This situation was too much for her emotionally, so she travelled to Calgary to seek counsel and refuge with her parents. With renewed strength, she returned east and move in with her brother-in-taw near Trenton, Ontario. She had decided to initiate legal action against her husband. She had no money and no job. I felt sad for her.

9:00 a.m. The train whistled by two chemical plants and a sewage treatment plant with holding ponds filled with suspicious, dark grey effluents. Port Hope, home of Eldorado Nuclear, popped into view. A smokestack discharged a white plume (contents unknown) over Lake Ontario. In the foreground, a number of metal barrels containing wastes were stacked in a fenced-off area. What toxic wastes resided inside? Where would the wastes be disposed? A passing freight train created a dizzying effect like strobe-lights as my eyes focussed straight-levelled on the last glimpses of the barrels flashing between the speeding cars.

9:20 a.m. A long, steep, earth berm hid the Darlington Nuclear Power Plant, still under construction. Darlington was proposed to consist of four generating units of the CANDU pressurized heavy water type reactor. Each unit would com-



prise a nuclear reactor, a steam turbine generator with associated equipment and common station services. The total station output was expected to be 3,400 megawatts. A 500 kV transmission line, located north of the site would distribute the electricity to the Ontario grid system.

Ontario hydro had embarked on a policy of greater self-sufficiency in energy supply. This policy meant more utilization of uranium fuel for nuclear reactors. But what bothered me were the uncertain environmental risks to public health, safety and welfare. Also issues, such as the storage and disposal of residual wastes, the effects of radioactive liquids emissions, commissioning chemical (e.g. chlorine), and water treatment plant wastes (albeit at prescribed statutory limits) on the lake ecosystem were not fully resolved. Most disconcerting was that Darlington (the site had been purchased by the Ontario Government prior to 1971) was exempted from a formal environmental assessment (a study to assess potential environmental effects).

9:10 a.m. Flat roofed, rectangular, industrial plants introduced Oshawa. We passed a series of railroad car carriers each carrying shiny new 'personal driving machines'. Across the railroad yard, Highway 401, the major arterial linking Montreal to Toronto, operated at normal level of service. Mounds of dirt, and a right-of-way reduced noise for ticky-tacky row housing beyond. Nearer, a ground hog, half visible from his hole in the ground, stretched his head high to check out the sights and sounds of the early morning. More urban structures whizzed by - manufacturing plants, housing, a golf course and power lines.

9:28 a.m. The proposed "new town" in North Pickering and a new airport were to be part of the Toronto Central Region Concept of concentrating future urban development. The Community development, situated 18 miles northeast of Toronto, would add 23,000 units of new housing stock and would cover 24,000 acres. After an exhaustive planning process involving the Province and a consortium of 13 private firms, the project was shelved in the late seventies.

On February 28, 1979, one of the largest spills of radioactive heavy water in the history of Canada's nuclear power program occured at the Pickering generating stations. However, the public was not told about the incident until 4 months later. Because of the size of Lake Ontario the mixture was quickly diluted to a 'safe' radiation level. However, the town of Pickering, like many coastal zone communities, intakes and treats Lake Ontario water for drinking and other uses. Although the regional health officer stated that Pickering's water supply was safe for human consumption, a number of residents were apprehensive. As I stared at Lake Ontario, the beach looked so inviting, but the light brown murky water, turning grey as the water deepened looked ominous to me.

9:35 a.m. At Guildwood, the train stopped. A green and white double decker Go Train for commuters to Toronto passed by in the direction we had come from. To the left, the Park and Ride car lot was 50 per cent full.

9:36 a.m. A lady yelled at the conductor that she missed her stop. The conductor calmly explained she should have been ready. The bell clanged on. The train slowed to 20 m.p.h.

The Eglington Park and Ride car lot was nearly full. Billboards became more prominent. Plants, offices and warehouses with side tracks lined our main line track. The Scarborough Park and Ride car lot was filled with cars. A bridge overpass under construction came and went.

9:44 a.m. We passed an east bound VIA passenger train. Our train unexpectedly picked up speed.

9:46 a.m. Residential homes, 18 to 25 years old with long, narrow back yards, preceded a regional shopping centre. Heavy industries and expressways abruptly emerged.

9:49 a.m. The train swayed through the switches in the Union Station yard. Toronto's monoliths spiralled skyward.

9:52 a.m. The train lurched forward, then back-ward and stopped.



PHOTO SECTION







Eighty years ago, in 1904, Canadian Pacific completed its Angus Shops in Montreal. These rare photos, taken by a member of the building contractor's firm of D.G. Loomis and Sons, shows the structures being erected about 1903.

Courtesy of Mr. R. Hunter.





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Question: When is a 440 not a 4-4-0? Answer: When it's a 4-6-0 (class D4g, built 1912). C.P.R. 4-6-0 No. 440 was photographed at St. Luc on March 18 1951. C.R.H.A. Archives. Toohey Collection 51-101.



Old 974 is STILL good for one more trip! Thanks to Jim Hope of Trail B.C. we have another photo of the "star" of our Jan-Feb issue. There is no data as to where or when the photo was taken. Jim Hope Collection.



On April 28 1984 an era came to an end when the last Canadian long-distance train left Montreal's Windsor Station bound for Quebec City. Here we see C.P.'s Quebec train in happier days at Montreal West on May 20 1951 behind "Jubilee" class 3004. All Quebec trains now leave Central station; however Amtrak's "Adirondack" still runs into Windsor, its only remaining long distance train.

C.R.H.A. Archives. Toohey Collection 51-243.



"A Bibliography of British Railway History" first appeared in 1965. Compiled by George Ottley of the British Museum Library, with the cooperation of four fellow members of the Railway & Canal Historical Society, it immediately became an indispensible guide to almost 8,000 books and pamphlets, publisted up to 1963, a work of unique comprehensiveness. Its value was further enhanced by the fact that the term, "railways", has been broadly defined, to include trackways, wagonways and tramways, and that "British" includes Irish. Those who consulted it were particularly grateful for the care taken with the annotations, the classification and the index.

In 1983 a second edition appeared. Again it was compiled by Ottley and associates, though the

CANADIAN RAIL 97

copyright has been transferred from George Allen & Unwin Ltd. to Her Majesty's Stationery Office, London.

One may criticize the application of the label, "second edition", to this publication. It is not a revised and enlarged work. It is "a reprint with typographical corrections.., no less welcome for that reason. What has changed is the price, which has markedly (and understandably) increased. Serious students, who for whatever reason, failed to acquire a copy of the earlier book, will surely wish to own this one.

Ottley has promised in his Introduction that a Supplement will be offered in the near future. It will contain more than 4,500 new entries, mostly devoted to descriptions of works, which appeared between 1963 and 1980, but some to those of an earlier period, which recently came to light. The admirable mode of presentation of the existing volumes will be retained. The "Ottley Supplement" will be awaited with pleasurable anticipation.

Robert Nicholls,

February, 1984

NZR LOCOMOTIVES AND RAILCARS 1983

Eighth edition, by T.A. McGavin

Published in December 1983 by the New Zealand Railway and Locomotive Society Inc., P.O. Box 5134, Wellington, New Zealand.

ISBN 0-908573-38-3

72 pp. plus full-colour cover, 240 x 180mm, illustrated \$9.00 NZ

SINCE the seventh edition of this tri-ennial review was published in 1980, diesel traction has

remained the predominant form of motive power on the 4300-kilometre railway system of the New Zealand, but some older locomotives have been retired and a number of new ones have entered service, together with a sizeable fleet of new electric multiple-unit train sets. In 1983 some 580 locomotives were in service, ranging in size from little shunting tractors of less than 10 tonnes weight up to massive and powerful 97-tonne diesel-electric locomotives capable of hauling heavy express trains at speeds up to 120 km/hr. In addition there were 83 electric motor-coaches and the three twin-coach Silver Fern diesel-electric railcars.

The object of this book is to offer a comprehensive survey of the motive power in use on New Zealand Railways, to give a brief outline of its development, and to provide some reference to retired equipment preserved by various groups throughout the country. Each chapter covers a distinct type of motive power and gives a summary of the principal dimensions and features of the various classes in that group, with lists showing where and when each locomotive was built, and where appropriate when it was reclassified or retires.

Steam locomotives of course have not been used in ordinary commercial service on the NZR since 1971, unless one counts the vintage "Kingston Flyer" tourist train as "commercial", but many have been preserved and some restored to full working order, and chapter 6 in this new book offers an up-to-date survey of developments in this field.

The whole book is well illustrated, and dimensioned drawings or diagrams of some of the principal types of equipment will be of special interest to model builders. Reference is included to the forthcoming electrification of the North Island main trunk railway between Palmerson North and Hamilton, and the probable characteristics of the new electric locomotives being sought for this project.



The source of the second secon

OPERATORS OF THE CLOSED WHITE PASS

and Yukon Route System say they are encouraged by a federal report favoring northern rail operations. But, until their major mining customer resumes production, White Pass trains will remain idle.

In a preliminary report on the Yukon's transportation requirements, a three-member Canadian Transport Commission investigation team recently came out in support of the railway as the best option for transporting lead-zinc concentrates from the Cyprus Anvil mine near Faro, Yukon.

In June, 1982, digging at the site was ordered stopped by the new parent company, Dome Petroleum Ltd. of Calgary, which had acquired the mine as part of the takeover of Hudson's Bay Oil and Gas Co. Ltd. of Calgary.

Assisted by the federal and territorial governments, mining operations were resumed last April, but the mill remained closed.

The commission report says full production cannot resume before next fall. And if the green light is not given before April, 1984, the startup will have to be put back to fall, 1985.

Faced with a variety of transportation options, Cyprus Anvil Mining Corp. would prefer to have its production moved by truck from Faro to Skagway, Alaska, vias the South KInodike Highway.

But to support year-round ore truck operations, at least \$18-million would have to be spent on the Canadian portion of the highway to prevent danger to public safety, the report says. The State of Alaska would probably refuse to pay for snow removal or other necessary costs. Until these and other issues are resolved, the Yukon Government should not permit year-round heavy ore trucking operations, the report says. At the same time, it recommends that the railway and its unionized employees co-operate in costcutting and that Cyprus Anvil be charged only a break-even rate for rail services.

"In negotiations over the past year or more, labor unions have demonstrated a spirit of concilation which we expect to continue," said Thomas King, president of White Pass and Yukon Corp. Ltd., a subsidiary of Federal Industries Ltd. of Winnipeg. "The critical factor will be the approach taken by Cyprus Anvil and its owners."

The authors of the commission's report also say federal subsidies of up to \$1-million a year might be appropriate for a maximum of two years to underwrite the mothballing costs incurred by White Pass.

S. The Gazette.

THE FIRST COAL TRAIN OUT OVER THE Tumbler Ridge branchline was one month earlier than planned, when SD 40-2 no. 758 headed a 4-unit power group (2 SD40-2's bracketing 2 M630's, one being no. 708), pulling 50 new coal cars in the BCNE 9009XX series, from Tumbler Ridge on Nov. 1. A few moments earlier, the official "last spike" on the branch had been driven just east of the Wolverine Tunnel by Industry Minister Don Philips. The processed bedding coal, from the Teck Bullmoose mine, was moved to



St. John

Cranbrook

U. S. A.

COLUMBIA

In what promises to be the biggest rail construction project since the last spike in the transcontinental railroad was hammered home in 1885, both Canadian National and Canadian Pacific railways are carrying out overdue inprovements to their lines and rolling stock.

The process was set in motion by parliamentary approval in November of long-awaited reforms to Canada's Crowsnest Pass freight rate — the 87year-old grain-handling rate that gave the railways hundreds of millions of dollars in losses.

Ron Lawless, president of CN's rail division, remembers the night Parliament passed the Crow bill. "It was a feeling of relief," he said. "A crushing burden was lifted from our shoulders."

The new rates and a \$651-million annual subsidy paid to them by the federal government will allow the railways to recover their grain-handling costs and will provide them with the capital for expansion.

In the Montreal head offices of CN and CP Rail, plans are already being laid to hire thousands of Canadian construction workers who will be double-tracking western lines and adding new terminals, bridges, tunnels and routing systems in the biggest rail expansion this century.

And that will mean more jobs in Quebec as orders are placed for everything from locomotives to electronic signalling devices to computers.

Both CN Rail, a division of Crown-owned Canadian National Railway Co., and CP Rail, a subsidiary of Canadian Pacific Ltd., are expected to place equipment orders of \$1.2 billion in Quebec alone. Ontario will get the lion's share of work with contracts totalling \$4.1 billion.

Among the Quebec firms expected to benefit are Marine Industries Ltd. of Sorel, which makes covered grain hopper cars, and Bombardier Inc. of Montreal, which builds locomotives. Bombardier has already been invited to bid on a first contract. for \$40 million worth of locomotives. The expansion project will add another chapter to the Great Canadian Railway Story, providing more proof that the real ties binding Canadians together are the ones that lie between the rails.

Our rail romance began with the Confederation pact of 1867 — a deal that helped Canada's four founding provinces sell railway bonds.

The story picked up steam with the completion of our national dream, the CPR, and later amalgamation of other lines into the Canadian National system.



BRITISH COLUMBIA

TRANSPORTATION CORRIDOR

100 100 10

showing NORTH EAST COAL

The first of the GF6C electric units arrived from GMDD London on Nov. 20. After a 2-day stopover in North Vancouver, it proceeded north to Tumbler Ridge. Attached was GMDD's new test car, ET840, which will stay with no. 6001 for 4 months. No. 6002 was seen in North Van. Nov. 27, while no. 6003 stopped off on Dec. 21-28. (NG) The first two units have been testing on a 10km. stretch of electrified track, including coalloading, when they run through at a steady 0.3 mph. Catenary from km 129 to km 24 will be completed early in the New Year, with the remaining 24 km to be done later in the spring. 98-car coal trains have been operating to Ridley Island (Prince



Rupert) since Dec. 1. CN loaned SD40 no. 5122 and SD40-2W's no. 5318/29 to handle the coal trains until electrification is completed. All 3 have slow-speed control for coal-loading. In exchange, BCR SD40-2's no. 760/2 have been loaned to CN, who will keep them longer to equalize the 3 for 2 swap.

S. The Sandhouse.

Now the saga takes another twist as the crusty old Crow rate bows out of the action and Western farmers begin paying more of the cost of moving grain.

CN Rail's Ron Lawless, relieved to see the end of huge annual grain-handling losses, said: "If something hadn't been done, the two railways would have been in very dire straits in a very short period time."

Western grain farmers have complained bitterly about losing the incredible bargain rate of half a cent per ton they've been paying since the end of the 19th century.

By the end of the decade, farmers will be paying 60 per cent of the real cost of grain transportation compared with 18 per cent today.

Farm industry officials complain the Crow bill was a virtual sellout to the railways.

But Russell Allison, executive vice-president of CP Rail, said farmers "got themselves an excellent deal. I don't know of any other industry paying 60 per cent of its real costs."

In addition, the prairie grain growers will end up with a vastly improved rail system and better service once the modernization program is completed. Canadian grain exporters had been losing potential sales because of their inability to move large volumes of grain to market.

Both railroads said they could not modernize their networks as long as they were losing \$300 million on the grain trade.

Lawless said everybody involved in the complex task of reforming the Crow rate had to make compromises and he rejected the notion that the railways are the big winners. A better way of putting it, he said, might be that the railways "are no longer the big losers."

The grain rate increased to \$5.76 a ton from its previous level of \$4.89 on Jan. 1. It will double by 1985 and increase five times by 1991.

Lawless calculates only that in 1982 CN Rail received only \$67 million in revenues for grain transportation as it rolled up a loss of \$120 million for the year. But it would have received grain revenues of \$200 million in 1982 if the current Crow reform had been in place.

In the first nine months of 1983, CN Rail showed profit of \$188.6 million compared with a loss of \$11.7 million in the 1982 period. The '83 profit figure was boosted by interim grain payments made to both railways by the federal government.

Lawless, a former vice-president of marketing at CN Rail who took over the presidency of the rail division in 1979, said capital spending will rise from just under \$500 million last year to "well over \$600 million" in 1984. By 1985, spending should climb to \$1 billion.

The major problem in the system is inadequate capacity in the western rail network. For that reason, CN plans to double-track its route from Winnipeg to Vancouver by the mid-1980s. By comparison, CP Rail will be double-tracking only in selected locations where there's a steep grade in its track. CP is expected to begin calling tenders this month for the first major project on its shopping list a \$600-million tunnel through the Rogers Pass area of the Selkirk Mountains in British Columbia.

CP will spend \$3 billion during the first five years of its construction program, Allison said.

The Crow change "makes it possible for the railways to improve their plant and handle all our goods, and, more important, our exports," Allison added. "Canada is an exporting nation and this will head us in the right direction. I give full credit to the federal government for recognizing the problem."

Both railways expect to hire considerable numbers of construction workers this summer. Allison said CP will have at least 800 people working in the Rogers Pass area in the first year. CN expects to have 3,300 construction workers employed this summer.

Both railways say their modernization programs will also include installation of high-technology equipment such as computer-aided dispatching and monitoring devices and microwave communications facilities.

The expansion comes at a time when rail traffic is picking up. "The latter part of '83 has exceeded our expectations, particularly in bulk commodities such as grain, coal and potash," said CP's Allison. "Toward the end of the year we were really setting records in the tons we handled.

"We see that trend continuing in '84 although our crystal ball isn't quite as clear for the end of the year, when there may be some hesitancy in the economy."

CP Rail reported profit of \$132.5 million in the first nine months of 1983, far ahead of its earnings pace in 1982, when it made a \$117.8-million profit for the whole year.

CN is also encouraged by its level of traffic, Lawless said, after moving its smallest volumes "in many, many years" during the depth of the recession. Such commodities as lumber are moving well as demand for Canadian lumber picks up in the U.S., where lower interest rates have boosted housing starts.

But the recession did force both companies to trim staff. CP Rail,, with 30,000 employees, laid off about 3,000, although many of those have been recalled. CN Rail, with 50,000 employees, has cut 15 per cent of its work force in the last three years.

Looking to the future, both railways say they will have to offer more intermodal or "piggyback" services to maintain their market share in an increasingly competitive and deregulated North American transportation market. S. The Gazette.

CANADIAN 101 RAIL

DOWN A UTILITY MANHOLE IN THE MIDDLE

of a bustling Brooklyn street and through a hole excavated in the wall of a passageway below lies an unconventional urban archeological site: the world's first subway tunnel. Amoung the artifacts possibly awaiting discovery are an antique locomotive and human bones.

Bulit in 1844 as part of a railway for hauling freight and produce from Long Island to Brooklyn, the half-mile tunnel is still intact. "It's a magnificent piece of engineering especially for its time," says Robert Diamond, an electrical engineering student at the City College of New York and discoverer of the tunnel.

The builders of the 21-foot-wide, 17-foot-high subway pioneered a construction technique that has been used ever since. Called "cut and cover," it involved digging a trench down the middle of Atlantic Avenue, building stone walls and an arched brick ceiling, covering it all with earth, then resurfacing the street. More than 1,000 laborers spent seven months accomplishing this feat with only picks, shovels and pack mules. But cut and cover wasn't the only engineering innovation employed. The tunnel was apparently the first to have ventilation shafts, which to this day keep it cool even on sweltering summer afternoons.

"The process of subway-tunnel construction has remained unchanged ever since this one was built," says Diamond. "But in place of stone and brick, today's subways use steel and reinforced concrete."

The tunnel's existance was once only a legend known to railway and Brooklyn history buffs. Diamond vowed to find it when he heard of the legend on the radio three years ago. After poring over old newspapers and documents, he discovered construction plans filed away in a government office. These led him to the manhole. In 1981 Diamond and engineers from the local gas and electric companies ventured down it and into a dirt-filled crawl space. Shining a flashlight at the wall ahead of him, he spotted a small hole. And through the hole he found the elusive tunnel just as it was left in 1861 when it was sealed up.

Diamond and volunteers enlarged the crawlway and broke through the wall to provide easy access. So far, their investigations have unearthed old railroad spikes (the tracks were torn up when the tunnel was closed), boot soles, ax heads, wheelbarrows and pottery shards. They've also discovered a ham bone, an empty sardine can and a whiskey bottle - the remnants of a workman's lunch. The crew is still searching for buried remains of 25 workers, victims of cave-ins and other construction mishaps whose bodies were never dug out, as well as an ancient locomotive that may lie behind a wall deep within the tunnel.

No evidence has yet been found to support any of the legends surrounding the tunnel. Over the past century, Diamond says, stories have linked it to Confederate spies during the Civil War, bootleggers during Prohibition, smugglers, German spies during both world wars, and Muder, Inc., hit man Bo Weinberg.

Diamond is now raising funds to construct a tourist railway in the tunnel.

S. SANDHOUSE, PACIFIC COAST DIVISION

MANY PEOPLE ENJOYED THE SPECTACLE OF big steam locomotives laboring heroically

to surmount B.C.'s rumpled terrain. But only a few took photographers and fewer still took fine photographs.

We can only be grateful to the members of the small group who have left a worthwhile permanent record of railroading in pre-diesel days, when locomotives tired easily and had to be changed out, like stage coach horses, at a set mileage intervals.

One deserving high thanks is the late AI Paull, whose collection of photographs is now in the safekeeping of the B.C. Provincial Archives, Paull, who died in last month, devoted the bulk of his efforts to filming Canadian Pacific Railway activity. This loyalty is not too surprising in light of the fact that he was the son of a CPR conductor.

Born in Nanaimo in 1910, Paull was using a box camera to photograph trains before he was 15. He made photographs during years when the railways were not interested in maintaining comprehensive pictorial records.

Photographs were taken on special occasions or for publicity purposes, but normal operations were ignored.

Most members of the public accepted the railway as a fixture, necessary and as unexciting as a water closet. But Paull was excited and, during time out from the upholstery trade, he was to be found waiting patiently at trackside setting up shots. B.C. railway historian Barrie Sanford says Paull took several thousand photographs of railway scenes between the mid-1920s and 1960. His activity lessened after the scrapping of steam power.

Paull's important contribution to preserving B.C.'s railway history passed to Bordertown Photographs in the U.S. and was subsequently acquired by the B.C. Provincial Archives. S. The Province. A 52-CAR FREIGHT TRAIN DESTINED FOR the Stelco Steel plant at Nanticoke, Ont., was

the first CP Rail train to use the railway's reactivated Lake Erie and Northern Railway (LE &N) line.

CP Rail spent about \$1 million to construct and reactivate the one and a half miles (2.4 kilometres) of track and a 532-foot (159.4-metre) bridge over ConRail tracks to join the Toronto, Hamilton and Buffalo (TH&B) rail line. Canadian Pacific owns the LE&N and the TH&B.

The project eliminated a bottleneck which existed when trains tried to cross the ConRail tracks at a level crossing point elsewhere in Waterford.

"Crossing ConRail tracks was like waiting at a busy intersection and delayed CP Rail trains an hour or more," explained D.C. Coleman, Eastern Region vice-president.

Reactivating the LE&N line reduces the returntrip time between Hamilton and Nanticoke by more than two hours.



Ianner breaking: Number 4216 officially reopens the LE&N line Waterford, Ont.

SOME OF THE MOST SPECTACULAR SCENERY in B.C. greets passengers on B.C. Rail's service from North Vancouver to Prince George.

Every Sunday, Wednesday and Friday, a train consisting of four dayliners (self-propelled passenger cars) travels the 745-km route north. On Mondays, Thursdays and Saturdays, the train makes the 13-hour return run to Vancouver.

Depending on the layout, up to 80 passengers can be accommodated in a car. But in the lead car, which offers full-course meals as well as baggage storage, seating is reduced to 40.

There is no snack bar, but the railway offers three hot meals as an \$18 addition to the oneway fare of \$46.30 to Prince George. The menu changes daily, says company spokesman Jerry Collins. Seconds after leaving the B.C. Rail terminal at 7:30 a.m., the train offers passengers a view of Vancouver's skyline. Then it passes beneath Lion's Gate Bridge and, skirting the shores of Horseshoe Bay, hugs the mountainsides.

Throughout the journey, travellers may glimpse deer, elk, moose and bears.

From Squamish east, the train begins climbing, crossing Cheekeye and Cheakamus Rivers and passing Cheakamus Canyon. The mountain scenery becomes more spectacular, with the snow-capped peaks of Garibaldi and Whistler.

At Alta Lake, the train reaches the summit of the Coastal range and begins a roller-coaster ride as it passes through the Coastal and Cascade ranges.

At Lillooet the train is split. At least one car continues on the 490-km journey to Prince George. The remaining cars return to Vancouver.

Just north of Lillooet, the train crosses the Fraser River on a high bridge. From that point north to Prince George, after briefly following the Fraser, it swings farther inland.

At Kelly Lake, it enters the Cariboo ranching area. But even here, the train continues climbing, reaching 1,177m (3,861 ft.) at Horse Lake, the highest point on the route.

Later, the train passes the community of Chasm, so named because of a canyon hundreds of metres deep. At Quesnel, travellers see a mixture of industry, ranching and lumbering. Ranches give way to farms as the train nears Prince George, a city of 76,000.

S. The Province.

CANADIAN NATIONAL RAILWAYS WILL SP-

end \$80 million to buy 48 new wide-body locomotives, but has decided after some soulsearching to split the order between the country's two manufacturers.

The lion's share goes to General Motors of Canada Ltd. at London, Ont., which will build 29 main-line locomotives, the railway said yesterday.

General Motors boasts that its new SD-50 model, a 3,500-horse-power unit being developed by the parent company in the United States, is state-ofthe-art for locomotives.

Bombardier Ltd. of Montreal will build 15 of its HR-616 3,000-horsepower locomotives. It will also sell CN four others that it bought back from the railway last year to lease to CP Rail as demonstrators.

The 48 locomotives will augment Canadian National's current fleet of 2,100.

The railway will spend \$22.7 million rebuilding 32 medium-horsepower locomotives in its Montreal shops, although there won't be any new jobs created, said a spokesman.

C.R.H.A. Communications

NEWS FROM THE DIVISIONS

We are pleased to announce the formation of the KEYSTONE DIVISION of the CRHA to serve the members of the Province of Manitoba. We will be keeping you posted on the plans of the Division as they become available and in the mean-time if you are interested in joining the keystone Division please contact Mr. Paul Schuff, 14 Reynolds Bay, Winnipeg, Manitoba R3K 0M4 Telephone No. (204) 837-2714. Congratulations and welcome into the CRHA family.

St. Lawrence Valley Division

The St. Lawrence Valley Division would like to take this opportunity to remind members that have not renewed for 1984 that it is still not too late to do so. New members are also welcome. Dues for 1984 are \$4.00 which should be sent along with your name and address to the address given on the third page of Canadian Rail. Only Division members are guaranteed to receive notification of all meetings, excursions and other special events.

La Division de la Vallée de St. Laurent voudrais rappeler à ses membres qui n'ont pas renouvelé pour l'année 1984, qu'il n'est pas trop tard de le faire. Les nouveaux membres sont aussi les bienvenus. Les frais pour 1984 sont \$4.00. Veuillez envoyer la somme ainsi que votre nom et adresse à l'adresse mentionné sur la troisième page de 'Canadian Rail'. Seulement les membres de Divisions sont guarantis de recevoir avis de toutes les reunions, excursions et d'autres évènements spéciaux.

Toronto & York Division

For their Ontario Bicentennial Project the Division will restore ex-CP business car number 23 which was acquired from the National Museum of Science and Technology in Ottawa. The Division also has a Fairmont Track Motor Car which is temporairly in storage at the O.N.R. shops.

> TORONTO & YORK EXECUTIVE 1984

President: J. C. Bell

Vice-President: J. C. Kyle

Vice-President: A. Rubin

Secretary: H. Lowry

Museum: J. S. Rice

Restoration: G. Billinghurst

DIRECTORS:

- L. H. Partridge,
- C. Langstaff,
- J. Latimer,
- J. Picur,
- D. Henderson,

The Division has issued a 1984 catalogue for CRHA publications which is available to members by writing to them at P.O. Box 5849, Station A Toronto, Ont. M5W 1P3

Bytown Railway Society

The 1984 edition of the Society's "Trackside Guide. . . " is now available at \$9.50 postage paid. As previously reported it will now include VIA Rail passenger equipment, streetcars and rapid transit equipment.

Ex-CPR 4-6-2 number 1201 "celebrates" its 40th birthday this year and the Society is working on the preparation of a special booklet. More on this later.

Niagara Division

An imprompto field trip was held by some members who visited the old Grand Trunk Tunnel at Thorold Ontario. The explorers discovered six foot diameter icicles which hung from ceiling to floor.

Two Division members were featured in a local newspaper, "The Niagara Falls Review". The article concerned Andy Panko and Peter Bowen who formed Niagara Rail Publications for the purpose of publishing such books as their recent "Steam in Niagara", Their venture has been successful and they expect to publish more in the future.

Windsor & Essex Division

After a dormant period, the Division's newsletter Semaphore is back on the rails. Besides the regular meetings held the second Thursday of each month (except July & August), the Division will be holding a Flea Market in the fall.

The Divisions 1984 executive are as follows:

President:
Vice President:
Treasurer:
Rec. Secretary:
Archivist:
Editor:
Directors:

Ken Annett Syd Smitherman Ken Garber Todd Shaw Larry Johnston David Parker Neil Smitherman Bob Sanford Jack Hart

Rocky Mountain Division/APRA

.The association has had a busy fall and winter with work continuing at the museum. One liter-

ally big job was the moving of the Gibbons, 1919 40,000 imperial gallon, covered water tank to the museum. It was moved IN ONE PIECE! This example of a once-familiar structure on the Canadian landscape in the days of steam, will form an important and unique part of the museum complex. Hopefully we can get more, details on its history and move for future publishing in Canadian Rail.

Some of the other museum activities included repairs to the tender of engine 1392; work on 1392 itself for spring inspection and steam-up; installation of a furnace in the station; and of course preparation of footings to accept the Gibbons watertank.

The association has acquired ex-CP F7B No. 4459 which became "famous" as the "B" unit for the British Columbia Museum Tram when it travelled across Canada with Royal Hudson 2860 as the "A" unit.

Canadian Railway Museum News

CN 69831 as it arrived at the St. Constant Museum in Nov. 1979. Built in June of 1910 this 36 foot double sheathed its 69 years of service remarkably well, due in part to its exile to maintenance of way service in Manitoba. Doubtless the dry cold praire winters had helped slow the inevitable decay that stalks wooden freight cars. Thus, from a weedy siding in Carman, Manitoba came an example of the Grand Trunk's standard vehicle of 1910 for the movement of 30 tons of freight.

Grand Trunk 17084 at the Canadian Railway Museum Sept. 1983. The transformation from CN 69831 is nearly complete; only conversion to arch bar trucks remains outstanding, has been installed and grab irons have been straightened. Several coats of primer and paint have soaked into the woodwork. An exhaustive search of the Associations Archives has turned up the stencilling blueprints for Grand Trunk box cars and the correct letters, numbers and data have been applied. Volunteer Odilan Perrault a CN pensioner has spent tireless hours preparing the car for display. Perrault's magic has worked. The photos speak for themselves.

Our thanks to Ken Goslett for the news and photos.



PHOTOS WANTED

Railfare has requested our assistance in their search for photos for a new up-coming book. Anyone who has photos of electric trolley coaches of the cities of Cornwall, Ontario or Saskatoon, Saskatchewan is requested to contact Railfare c/o Mr. Tony Clegg, 344 Beaulac, St. Hilaire P.Q. Canada, J3H 2W1

CRHA Membership

Our membership continues to climb thanks to the prompt renewals that we are receiving from our members. All deliquant 1982 and '83 members have been re-invoiced and our membership total now stands at 1225. We ask you to please keep up the good work and if any member or Division requires additional membership promotion material please drop us a line.

LETTERS FROM MEMBERS

Mr. Allan Paul, 403 Glascock Street, Raleigh, North Carolina 27604 writes as follows:

I have recently restored a 36 inch guage, Climax geared logging locomotive for the United States Forest Service. This locomotive, C/N 1323 built in 1915, is a Class B, 40 Ton model, thought to be the only factory built narrow guage Climax still in existence in the United States or Canada. It is now on display at the Cradle of Forestry in America Museum, Pisgah National Forest, North Carolina.

As part of my continuing research on Climax locomotives, I am trying to put together a comprehensive list of the known examples of this type of geared locomotive still in existence in the United States and Canada. I am aware of the two Climax locomotives on display at the British Columbia Forest Museum. I was hoping that you or other members of the Canadian Railroad Histroical Association might be aware of more Climax locomotives in Canada. I understand that the Climax was a very popular logging engine in your country. Also, that several Climaxs were still operating well into the 1950's in your country.

Should you or any of your colleagues know of other examples of this rare locomotive, I would be most interested in learning about them. If possible, I would like to know the locomotive's present owner, location, construction number, date built, class, weight and condition (restored, operable, derelict, etc.).

Any assistance would be greatly appreciated. I look forward to hearing from you.

SWITCH LIST

Douglas Courtney, 5 Melody Dr., Halifax N.S. B3M 1P8 has for sale extra slides consisting mostly of Canadian diesel roster shots, some action shots and some equipment shots. All slides are Kodachrome.

Lon Marsh, 8731-67 Avenue, Edmonton Alta. T6E 0M9 would like to obtain items and photos from the Northern Alberta Railways 1929 - 1984. He would also like any information concerning the role the N.A.R. had in transporting troops and suppliers during World War II.

THANK YOU

Over the years several major donations have been made to the Canadian Railway Museum at Delson/ St. Constant P.Q. The original list of donors was prepared by our Treasurer Mr. A.S. Walbridge and recently updated by Dr. R.V.V. Nicholls. The list does not include donations made to the CRHA in the name of a Division. We wish at this time to publish this list of generous donors who have contributed from 1961 to date and express our sincere thanks for your help in making the Canadian Railway Museum possible.

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BACK COVER:

A Montreal Tramways Cc. two-car train, consisting of car 1574 and an unidentified 1600-class trailer, is seen en route to Blue Bonnets race track on June 19 1948. The branch from the Cartierville line to the track was still very rural in appearance then. C.R.H.A. Archives. Tochey Collection. **Canadian Rail** P.O. Box 282 St. Eustache, Qué., Canada J7R 4K6



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