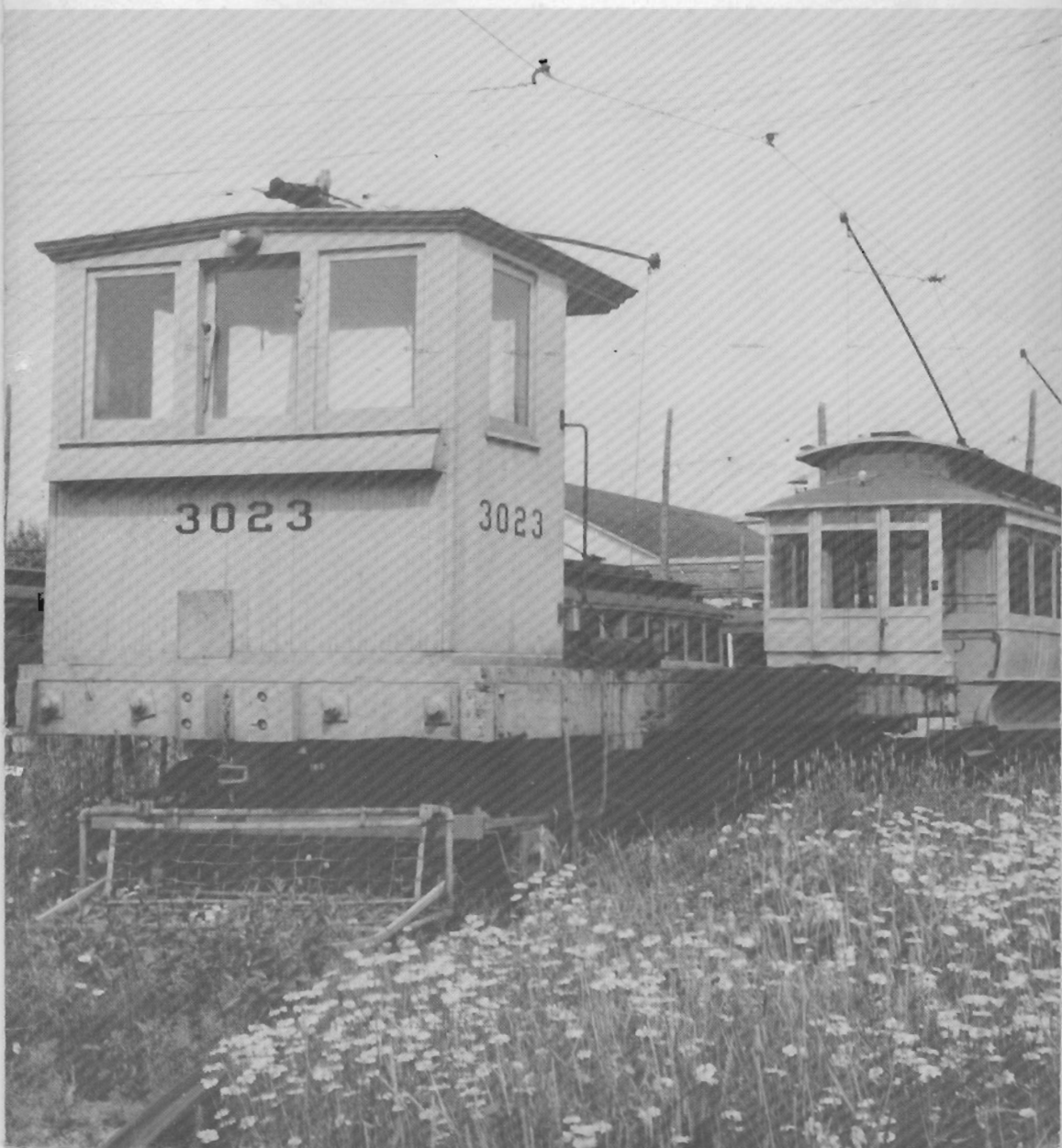


# Canadian Rail



No. 279  
April 1975





# **The Farm on Chemin Vervais ! 1913 - 1963**

Jacques Pharand, ing.

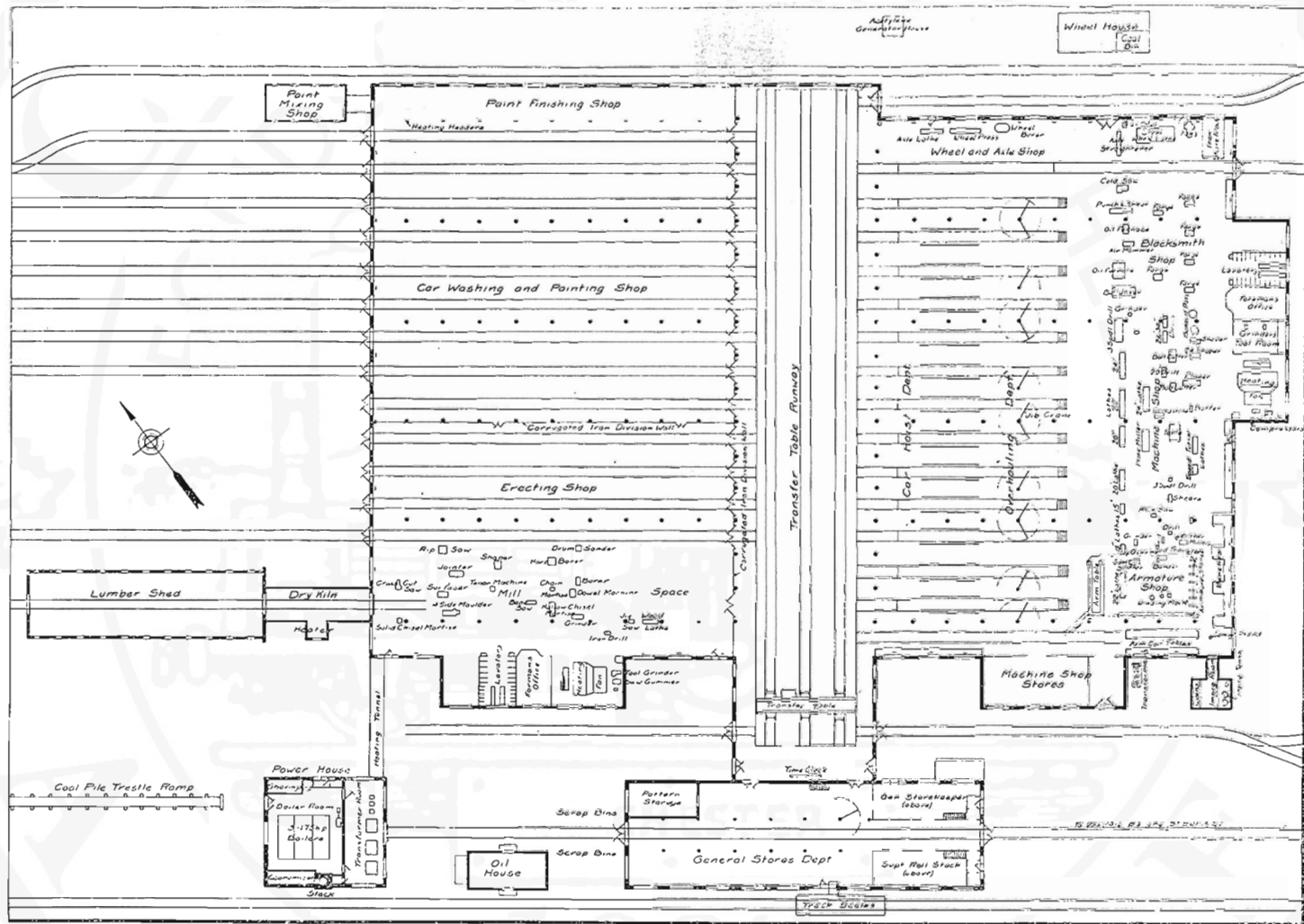
**N**ineteen eleven was a year of frantic activity as far as urban transportation in Montréal, Canada, was concerned. The Montreal Tramways Company had just been formed by the amalgamation of the various streetcar companies within the City and an ambitious expansion program was being considered, which would further extend the 232-mile-long track layout. One hundred twenty five new cars, the 1200 series, were delivered that same year and another order for two hundred more was in the offing. It was in this generally progressive atmosphere that the construction of the Montreal Tramways' Youville Shops began. Parts of this complex are still standing today.

We must go back to the beginning of electric streetcar operation in Montréal to understand better the purpose of Youville Shops. From the very beginning, streetcar maintenance was performed at the Hochelaga Car barn in the eastern (1) part of the City, but larger facilities were soon needed and, when electrification was completed in 1894, the former Côté Street horse-stables were modified "to accommodate motor works on the ground floor, a car shop for repairs and building new cars on the next floor, while the other building (became) a storeroom and blacksmith shop". The reason for this move was stated laconically: "The Hochelaga works are far too far from the center of the City"(2).

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↪ ONCE AN ICE-CAR ON THE MONTREAL STREET RAILWAY, FLAT CAR NUMBER 3023 was built in 1903 and scrapped by the MTC in 1958. In the picture on the front cover, Number 3023 was stored among the daisies behind Youville Shops on June 27, 1948. Photo CRHA Archives-E.A.Toohy Coll.

← A GENERAL VIEW OF YOUVILLE SHOPS OF THE MONTREAL TRAMWAYS COMPANY as they appeared about 1913. The view is looking north toward the Parish of Sault-au-Récollet. Photo CRHA Archives: CTCUM Collection.





This arrangement was short-lived, however, as a pressing need for more cars obliged the Company to undertake car-building itself, which, in turn, led to the construction between 1896 and 1898 of the new Hochelaga combined Repair Shops and Construction Plant, on the northeast corner of Ste-Catherine and du Havre Streets. This venture was obviously successful, as some 550 new cars were manufactured in these facilities up to the year 1906. However, the Company decided that, from that time on, it would not build cars anymore, but rather would provide equipment only. This was the case with the 703-series and 901-series streetcars.

However, the production of so many vehicles implied that larger repair facilities would have to be considered sooner or later. Consequently, the decision was taken on November 27, 1907, to acquire a large tract of farmland in the St-Denis Ward, owned by Mr. Nelson Bickerdike. This property extended from Vervais Road, today Boulevard Crémazie, as far as the boundary of the Parish of Sault-au-Récollet at Sauvé Street, and had an average width of 576 feet. The total area was 75 arpents, approximately 2.8 million square feet, and the cost was a modest \$ 35,000. The name by which the future shops were to be known was derived from the nearby Village of Youville, which was located at the north end of the St-Denis Street tramway line.

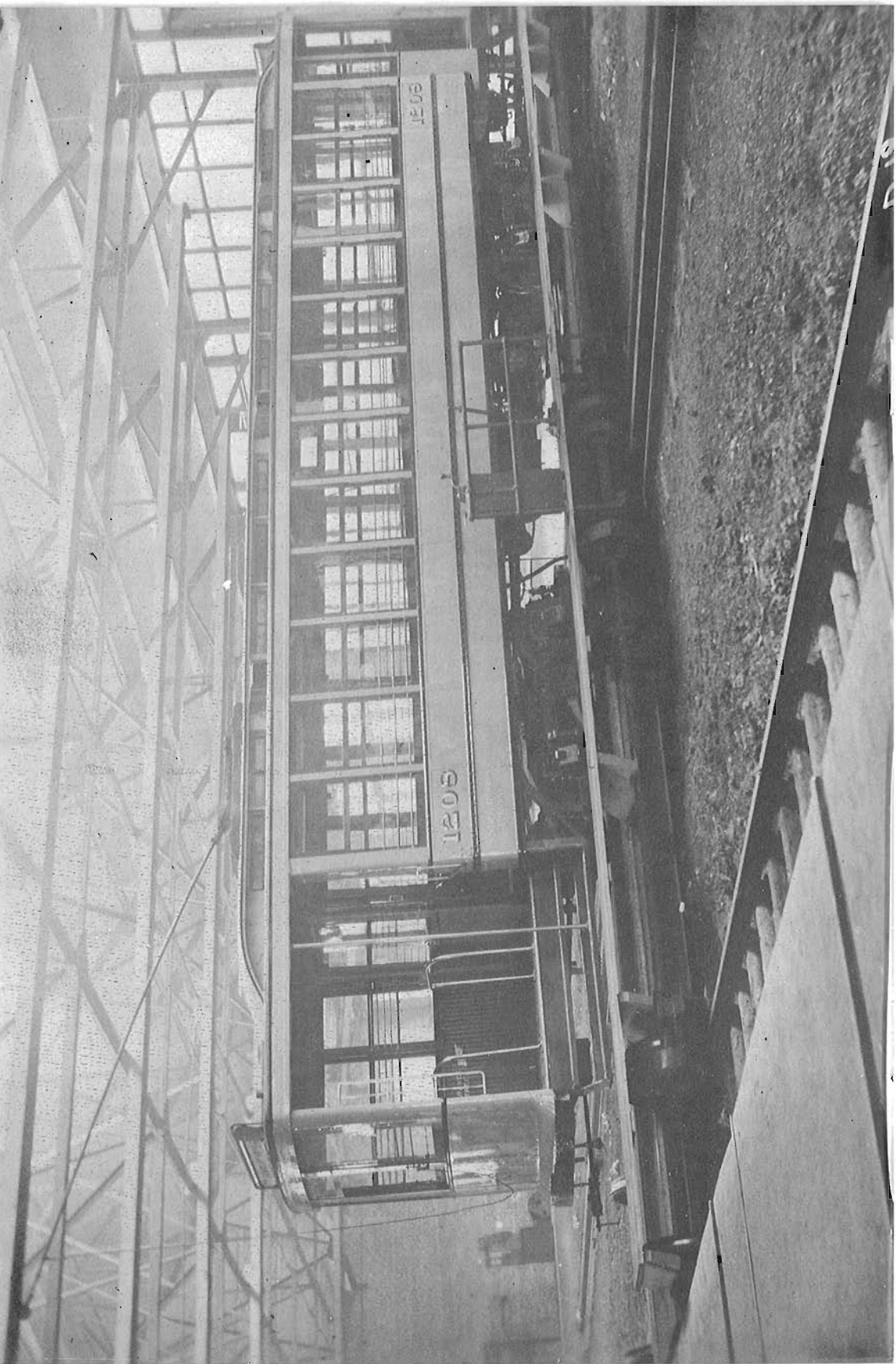
- (1) For ease of reference to maps accompanying this article, the City of Montréal's arbitrary orientation has been preferred over the true magnetic pole orientation; thus "north" refers to a true northwest orientation, and so forth.

- (2) The Montréal GAZETTE: June 27, 1894.

In fact, the Montreal Tramways Company never made use of the whole area purchased, but later sold or exchanged the lots north of the proposed Canadian National Railways' right-of-way, this latter not being built upon until 1944. Only the southern half of the Bickerdike Farm on the Chemin Vervais was developed in the first thirty years of MTC ownership. The property, however, did extend sufficiently east and west to allow for a new streetcar entrance from Boulevard St-Laurent and for the later construction of the Villeray Bus Garage in 1946.

The Montreal Park and Island Railway, which was the official purchaser of the Bickerdike Farm, further directed the construction of a large building 425 feet long by 269 feet wide on this land, which would become the main structure of the future Youville Shops. The design of the building was developed by Messrs. Marchand and Haskell, architects, under the supervision of Mr. D.E. Blair, then Superintendent of Rolling Stock of the Company. The general lines of the project were more or less similar to those of the Plank Road Shops of the New Jersey Public Service Company of the United States. A spur line was completed in early 1913, to connect the new facilities with the existing St-Denis Street line, although the Rolling Stock Division had already been housed in its new quarters since October 1911.

← FROM THE "CANADIAN RAILWAY & MARINE WORLD" OF MARCH, 1913, THE PLAN of the Montreal Tramways Company's new plant, showing the layout of all shops, is presented.



The main building itself, built of brick on concrete foundations, was essentially composed of two units, separated by a street-car transfer table, all under a single roof, an unusual practice in those days. But it was understandable, if one gives thought to Montréal's average snowfall, which would surely have hampered any open-air operations between buildings. The car-transfer table itself was 70 feet 8 inches long and operated in a runway 346 feet long, on three standard-gauge tracks laid with 80-pound rails on a cinder floor. The table was covered by a 70-foot steel truss, supporting a monitor roof with windows throughout which, together with ten eastward-facing skylights in the two side-sections, provided ample daylight to all areas within the building.

The southern half of the building was devoted to the Overhauling Department and its associated trades: hoist, wheel-and-axle, blacksmith, machine and armature shops. The other half was mainly devoted to car-body work and included a mill space and erecting and paint shops.

Of the 17 tracks leading south off the transfer table, 12 were equipped with car-hoists, an innovation in those days. These were basically a pair of I-beams, each 30 feet long, running parallel to the track, which could be raised or lowered through a system of driveshafts and worm-and-bevel gears, each pair of such hoists being activated by motors with one double-throw controller. The practice was to place another shorter I-beam across both "sides" of the hoist, under each end of the car; thus, the car body could be raised from its trucks, the latter run out, and the car lowered again in the best position for the job to be undertaken. Similarly, car bodies from outside manufacturers could be brought in on flat cars, lifted on the hoist, the flat car removed, the trucks positioned and the body lowered again, an assembly practice which the Company adopted as a standard.

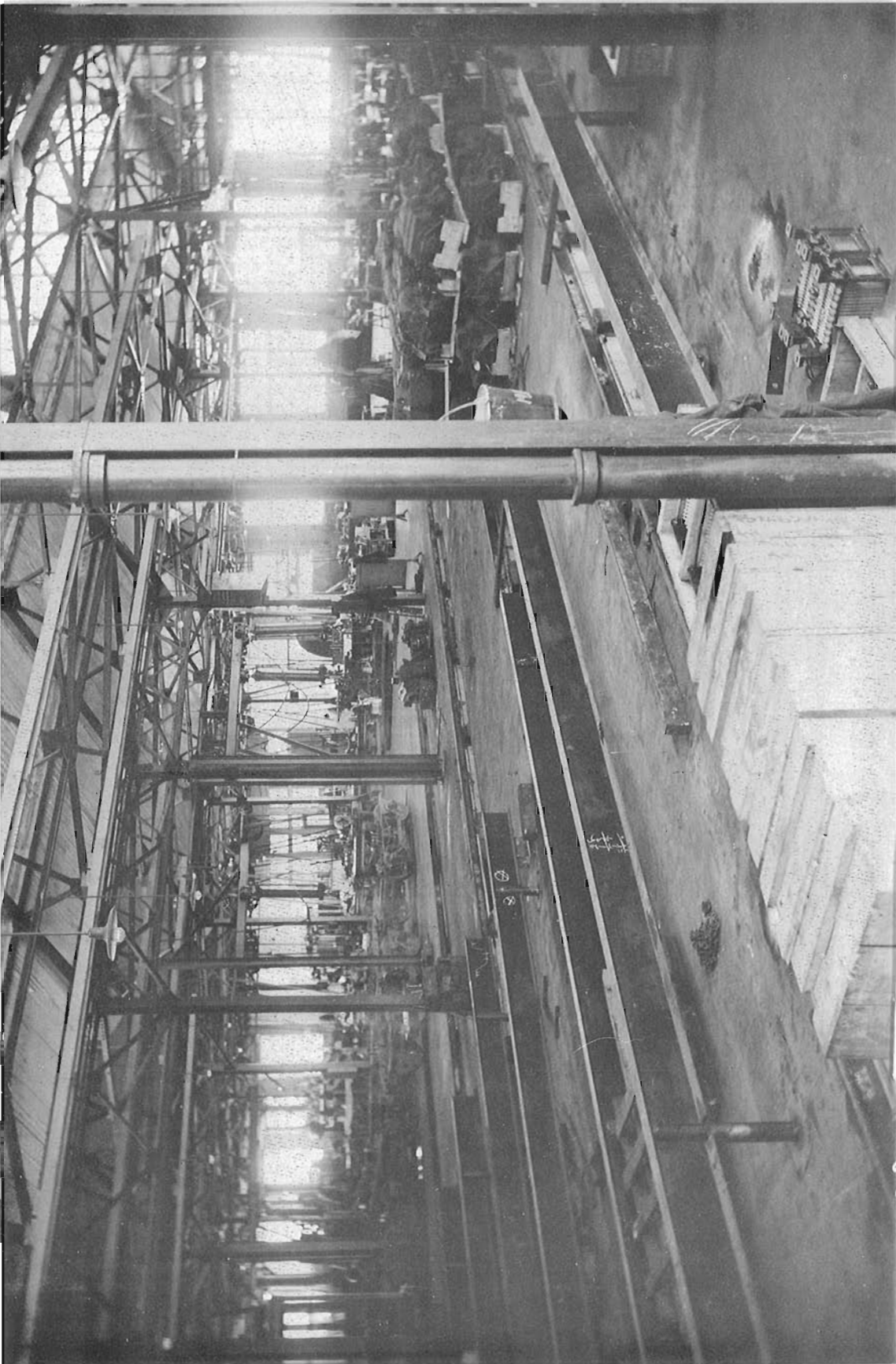
To complete the equipment in each of these bays, all tracks provided with a hoist also had an inner pit, 87 feet 10 inches long, with a 4-foot-gauge track running full length, on which dolleys could travel back and forth. The motors and undergear of the cars being serviced could be lowered onto these dolleys by means of a swiveling jib-crane, each serving two adjacent pits. This combination of hoist, pit, drolley and jib-crane, provided for every possible assembly and dismantling operation one could think of.

➤ YOUVILLE SHOPS: CAR NUMBER 1208 OF THE MTC RIDES THE TRANSFER TABLE after having been repaired and repainted. Photo CRHA Archives, CTCUM Collection.

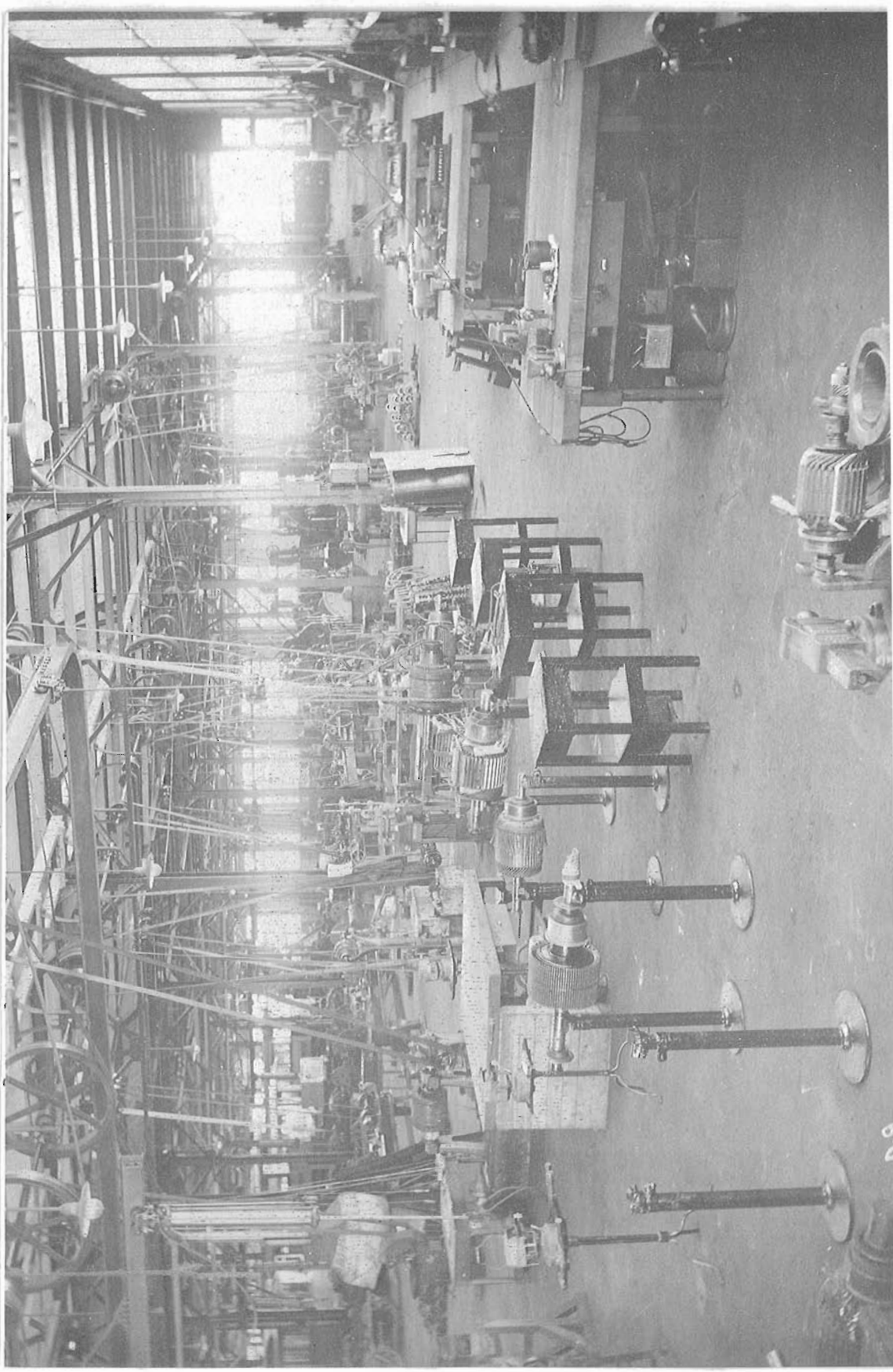
➤ YOUVILLE SHOPS: THE CAR-HOIST AREA, SHOWING THE TWO LONGITUDINAL beams for lifting the streetcar bodies from their trucks. Photo CRHA Archives, CTCUM Collection.

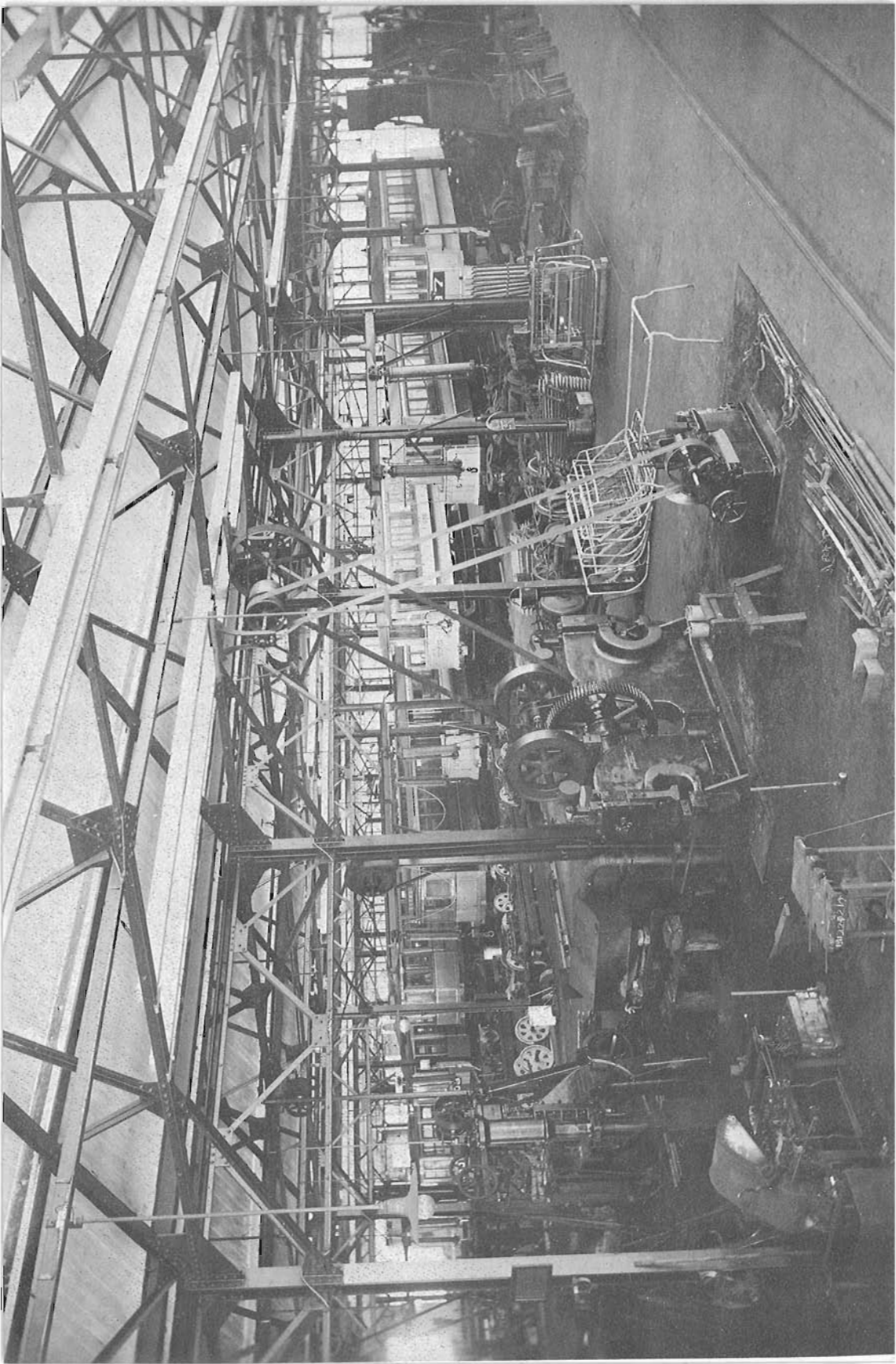
YOUVILLE SHOPS: A GENERAL VIEW OF THE ARMATURE SHOP. THE OVERHEAD girder hoist system for moving the heavy armatures from one location to another is visible. This was a primitive assembly-line process. Photo CRHA Archives, CTCUM Collection.













The wheels and axles could be brought in on the track leading into the particular section by means of the transfer table and lifted by an air-hoist for servicing: the required equipment included wheel and axle lathes, a wheel-press and borer and an axle straightener. In addition, some inside storage space and a storage shed nearby outside was provided.

The blacksmith shop, next to the wheel and axle department, was equipped with a cold saw, a punch and shear press, oil furnaces, a bulldozer, a dry grinder, six down-draft forges and an upright steam hammer, installed on a bitulithic pavement for the comfort of standing operators and to avoid damage to parts dropped accidentally. The raw material supply was located in an adjacent storeroom.

The machine shop was spread over a 71 x 100-foot area, with the usual lathes, drills and cutters driven by overhead shafting. Two compressors, rated at 19 and 20 hp. respectively, provided air at 80 psi, which could be boosted to 100 psi for rivetting. These were also located in this area. As for the armature shop, operations were based on assembly-line processing, by means of a belt-line overhead trolley. As in the case of the wheels and axles, armatures were brought from a track connection with the transfer table, picked up as required, repaired and removed, all in a constant forward movement. Treating of the armature was carried out in the adjacent impregnating room, which had two tanks for that purpose.

On the other side of the transfer table, the body-work section was divided from the rest of the shop by a corrugated iron partition on account of the flammable nature of the materials used. A similar wall separated the paint shop from the erecting and mill shops. In the latter, equipment driveshafts and exhaust blowers were located in a shallow basement, thereby optimizing efficiency. Four tracks with pits 66 feet long were also located in this section.

The paint shop was the largest department, where the major portion of car overhauling, repainting and brightening was undertaken. The paint finishing shop in the northeast area was responsible for painting, glazing and varnishing removable parts, such as sashes and doors. The paint mixing area was located appropriately outside the main building, to which it was linked by a covered passageway.

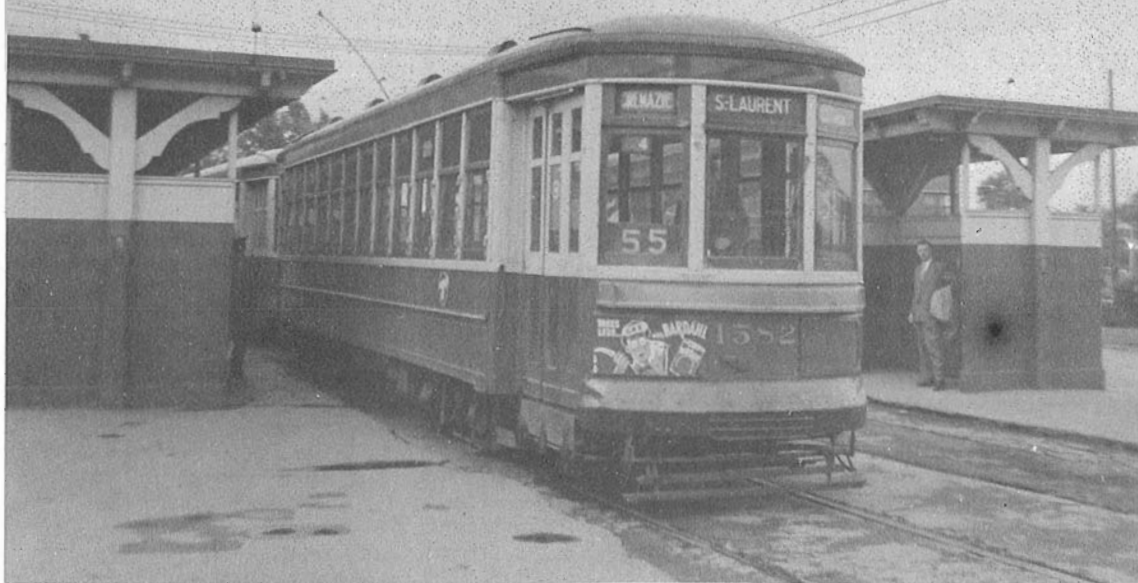
The general stores department was actually a two-storey wing, located at the west end of the transfer table, the upper floor including the offices of the Rolling Stock Superintendent and the General Storekeeper, while the main floor was arranged with tiers of bins and drawers for smaller components and also a huge vault, 35 by 18 feet, for blueprint and pattern storage.

Originally, a track leading to the power house crossed this area, by which store-cars could be brought directly into the building for loading and unloading of parts. This access was discontinued in 1928, when a new track for these operations was added, in the recess immediately east of the said wing, to avoid congestion within the building and the attendant possibility of injury to the employees.

← YOVILLE SHOPS: GENERAL VIEW OF THE CAR-HOIST DEPARTMENT WITH CARS of the 651 and 800-class on the hoists.

Photo CRHA Archives, CTCUM Collection.





↑ **YOUVILLE SHOPS: MTC STREETCAR TERMINAL JUST OFF BOULEVARD ST-LAURENT**  
on June 11, 1952. Motor car Number 1582 heads a southbound two-car  
train, about to leave the terminus and turn south on Boulevard St-  
Laurent. Photo courtesy F.F.Angus.

To the rear of the stores wing were two rows of scrap bins, the materials from which were weighed on a track scale initially located on the west outside track, but relocated behind the power house in 1923, until its removal in 1948. In the oil house, a small brick structure measuring 37 by 17 feet, tiers of oil barrels were installed, with a hoist on an overhead track to lift them to or from the stores car. A waste-treating plant for impregnating cotton waste with oil before packing it in barrels was housed in this structure.

Next to it was the power house, which supplied steam to heat the shops through a system of pipes located in a five by six-foot tunnel, linking it to the main building. Three 175 hp. boilers supplied steam at 100 psi pressure. In the same building, there were four transformers for electrical supply, three 50 KW (ratio 13200:2200 volts, further reduced to 220 volts in the machine shop itself) and one 30 KW (ratio 2200:110 volts) for the shop lighting system. Coal for the boilers was originally wheelbarrowed from under a trestle adjacent to the power house, on which railway coal cars were shunted and emptied. This trestle was relocated on a 600-foot spur, off the west outside track. After being tallied, used streetcar tickets and transfers were also used as fuel for the boilers.

The last building in the complex was the lumber shed and dry-kiln, located to the rear of the mill space in the main building, for obvious reasons of safety. Here were piled assorted varieties and grades of treated wood, used in car construction and interior finishing.

As mentioned previously, it should be remembered that Youville Shops were intended mainly as car assembly and repair facilities. Nevertheless, some cars were built completely here. To mention a few, there were observation cars Numbers 3 and 4, wartime cars Numbers 1175 through 1178, as well as a variety of special purpose cars, work cars, electric locomotives and snow-fighting vehicles. A fine example of the car-rebuilding capability was the work done on the 1032-series, cars built originally at Hochelaga at the turn of the century and totally rebuilt at Youville Shops in the mid-twenties (3). Preventive maintenance was a chief concern of the MTC at that time and particular series of cars were brought in regularly for general overhaul. They emerged in almost "as new" condition.

In 1932, the purchase of additional land to the west of the original farm on Chemin Vervais finally provided an access to the shops from Boulevard St-Laurent. It was not until ten years later, however, that further acquisition of adjacent land allowed the construction of terminal facilities on that site. The transfer point between St-Laurent - Route 55 streetcars and Bordeaux - Route 56 buses was thus relocated from Jean Talon Street to the yard entrance.

(3) cf. CANADIAN RAIL Number 265, February 1974.

↓ MTC - YESTERDAY AND THE DAY BEFORE! A 1958-59 SCENE ON THE RELOCATED single-track line on Boulevard Crémazie at Casgrain Street, looking east. On the right, concrete pillars for the Métropolitan Expressway are being erected. Photo courtesy L. Dauphinais.



# LEGEND

BUILDINGS



TRACKS



FENCE



GRAVELLED AREAS  
AND WALKWAYS

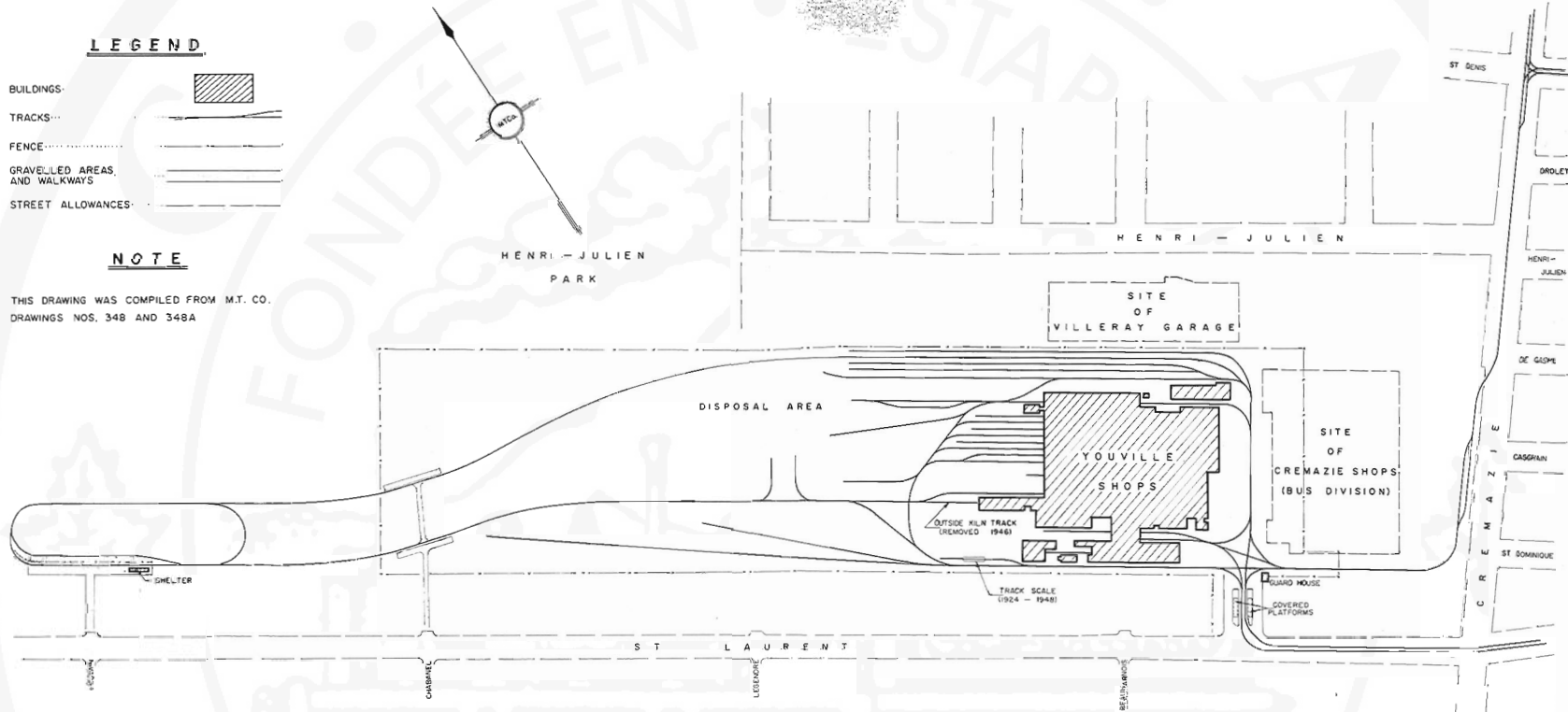


STREET ALLOWANCES



## NOTE

THIS DRAWING WAS COMPILED FROM M.T. CO.  
DRAWINGS NOS. 348 AND 348A



MONTREAL TRAMWAYS

YOUVILLE SHOPS

ACCESS AND YARD TRACKAGE AT PEAK





Route 55 streetcars were "wyed" on the existing shop trackage for the southbound return trip. Passengers exited from the streetcars to board the buses on the opposite side of the same platform. Even after buses replaced the streetcars on Boulevard St-Laurent, the change-point was retained in use until the St-Laurent bus line was extended north to Boulevard Henri-Bourassa, absorbing the aforementioned Bordeaux bus line in the process.

Youville Shops played an important role during both World War periods. Shell casings were manufactured in the shops during World War I. A machine shop was established for the purpose, under the supervision of Mr. D.E. Blair, and the project was a notable success. Similarly, in August 1942, the MTC extended the tracks in the northern part of the property to form an outer loop with the existing trackage to the south. Platforms were built and joined by footwalks to adjacent Chabanel and Louvain Streets, thus enabling the Company to provide transportation for the workers in war materiel plants in this section of the City. This rush-hour service was provided by extra cars on the St-Denis route. An inner loop was also constructed at that time to be used as a training section for new streetcar motormen.

In 1946, Youville Shops underwent further expansion, as construction began on the Crémazie Shop south of the main building and Villeray Garage, to the east. The former was enlarged to 185,000 square feet and could then accommodate some 66 buses at the same time for major repairs and overhauling, while Villeray Garage was chiefly intended as a bus depot; to avoid superfluous traffic, a new entrance for buses was opened off Boulevard Crémazie at de Gaspé Street in 1951.

Oddly enough, major maintenance of the MTC's fleet of trolleybuses was also carried out at Youville Shops, although the overhead wires for their operation were never extended to anywhere near the Shops. The standard practice was to tow the trolleybuses with the regular bus towtruck from the St-Denis or Mont-Royal trolleybus depots to and into the Youville Shops when repairs were needed. Movements inside Youville Shops also required the towtruck. St-Denis and Mont-Royal trolleybus depots had no facilities for making repairs to these electric "trackless trolleys".

On August 31, 1958, with the progressive curtailment of streetcar operation and the conversion of the St-Denis car line to bus operation, the streetcar system was split into three divisions, having no physical connection between one another. The last assignment on the St-Denis Street tramway line was performed during the night of September 16, 1958, by MTC Crane W-3, pulling Montreal and Southern Counties Railway preserved interurban cars Numbers 611 and 104 from the Canadian Pacific Railway-Montréal Transportation Commission interchange at St-Denis Car barn, to Youville Yard.

From then on, service on the City of Montréal's northernmost streetcar lines, Millen: Route 24 and Montréal Nord: Route 40, was based at Youville Shops until these lines were abandoned on May 3, 1959. As the Métropolitain Expressway was under construction at the time, trackage had to be relocated along the new expressway service

← **YOUVILLE SHOPS:** THIS PLAN SHOWS YOUVILLE SHOPS AT ITS MAXIMUM DEVELOPMENT. The single-track connection to St-Denis Street, the Boulevard St-Laurent terminus and the Chabanel and Louvain Street platforms are shown. Courtesy D. Latour.

road from the right-of-way of the Millen line to the yard at Youville, 0.4 mile.

Some 28 streetcars were thus isolated, officially being included as part of the Villeray Garage division. All available double-ended streetcars, Numbers 2001 through 2010, 2050 through 2056, 2064, 2065, 2078, 2079, 2081 and 2082, were reserved for the Millen line, while cars Numbers 1872, 1873 and 1874 were used on the Montréal-Nord service. Cars Numbers 2069 and 2076 were retained as spares.

In the early Fifties, as the Company found itself encumbered with a surplus of aging streetcars, it was faced with the necessity of either disposing of them or destroying them outright. As there were no other streetcar systems interested in purchasing these cars, the second alternative prevailed and Youville Shops, with its large vacant areas to the north, was selected as a suitable location for the process of destruction.

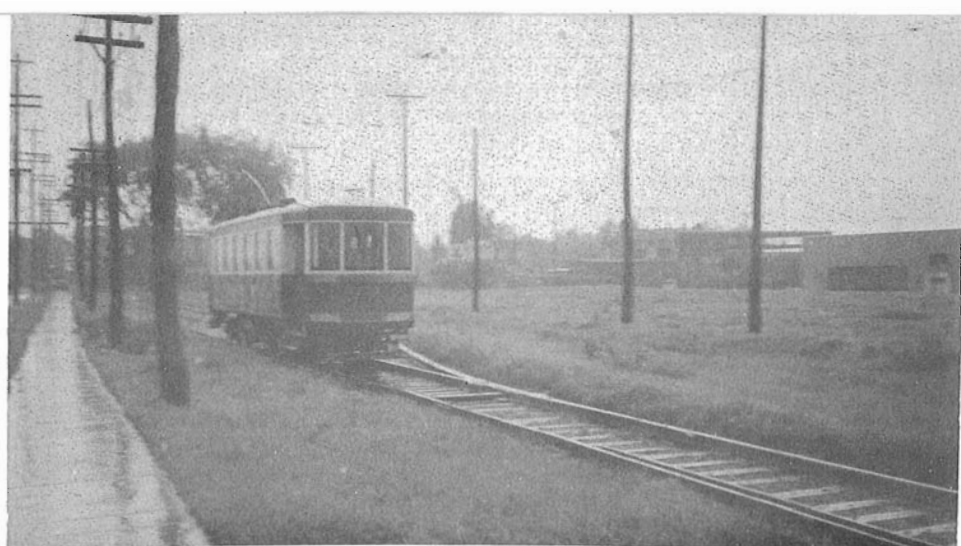
The first step was to accumulate streetcars of the same class. They were lined up, bumper-to-bumper, on the eastern storage tracks, in a state of "dead storage". As the need for returning them to service did not materialize, a large circle of red paint was applied to the car-bodies, identifying them as candidates for the next act of destruction. The cars were then assembled in lots, stripped of their reusable parts (as long as there was compatible equipment on those streetcars still running), pulled off to terminal trackage, built for the purpose, to be burned periodically, with firemen from the City of Montréal cordoning the area. The charred metal which remained after the holocaust was sold to scrap-iron salvage firms in the City.

With the opening of Legendre Street in 1958, Youville Yard was split in two and both halves alongside that street were fenced, while streetcars designated for destruction had to be carried by crane and float into the northern portion of the yard, as trackage had been severed between the two portions.

The main building at Youville Shops was now being used to perform trolleybus maintenance operations and to provide shelter for the vehicles in the MTC historical collection which were reserved for preservation and future display in a museum. The shop transfer table represented the last remnant for possible streetcar operation in the City of Montréal.

The last chapter in the history of Youville Shops as a whole was written in 1963, when discussions regarding Montréal's projected METRO subway were in the offing. It was concluded that most of the buildings at Youville would logically have to be torn down, to make way for the new METRO Shops and Garage. Consequently, the MTC historic streetcar collection was moved out between June 11 and 17 of that year and demolition of Youville Shops, save for the southwest wing, was completed some weeks later, hastened by a fire which broke out during the demolition.

Thus the streetcar epoch ended and the METRO era began at Youville Shops, a proud continuation of some fifty years of usefulness. The appearance of Mr. Bickerdike's farm on Chemin Vervais had changed remarkably in half-a-century and, with the completion of METRO in Montréal, would continue to change. How Youville Shops became Plateau Youville and what has happened in more recent years is another interesting story.



↑

TURNING AROUND ON THE SAME SPOT, EIGHT YEARS BEFORE ON A RAINY SEP-  
tember 1, 1951, eastbound car Number 1177 clattered over the single-  
track line to Youville Shops, parallel to Boulevard Crémazie. This  
car was built at Youville Shops originally as a passenger car but  
was later converted to an instruction car. Photo courtesy S.D. Maguire  
from L. Dauphinais.

#### ACKNOWLEDGEMENTS

The Author is grateful to the following gentlemen for their  
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Communauté Urbaine de Montréal;

Messrs. M.P. Murphy, D. Latour, F. Angus and L. Dauphinais  
members of the Canadian Railroad Historical Association.

#### REFERENCES

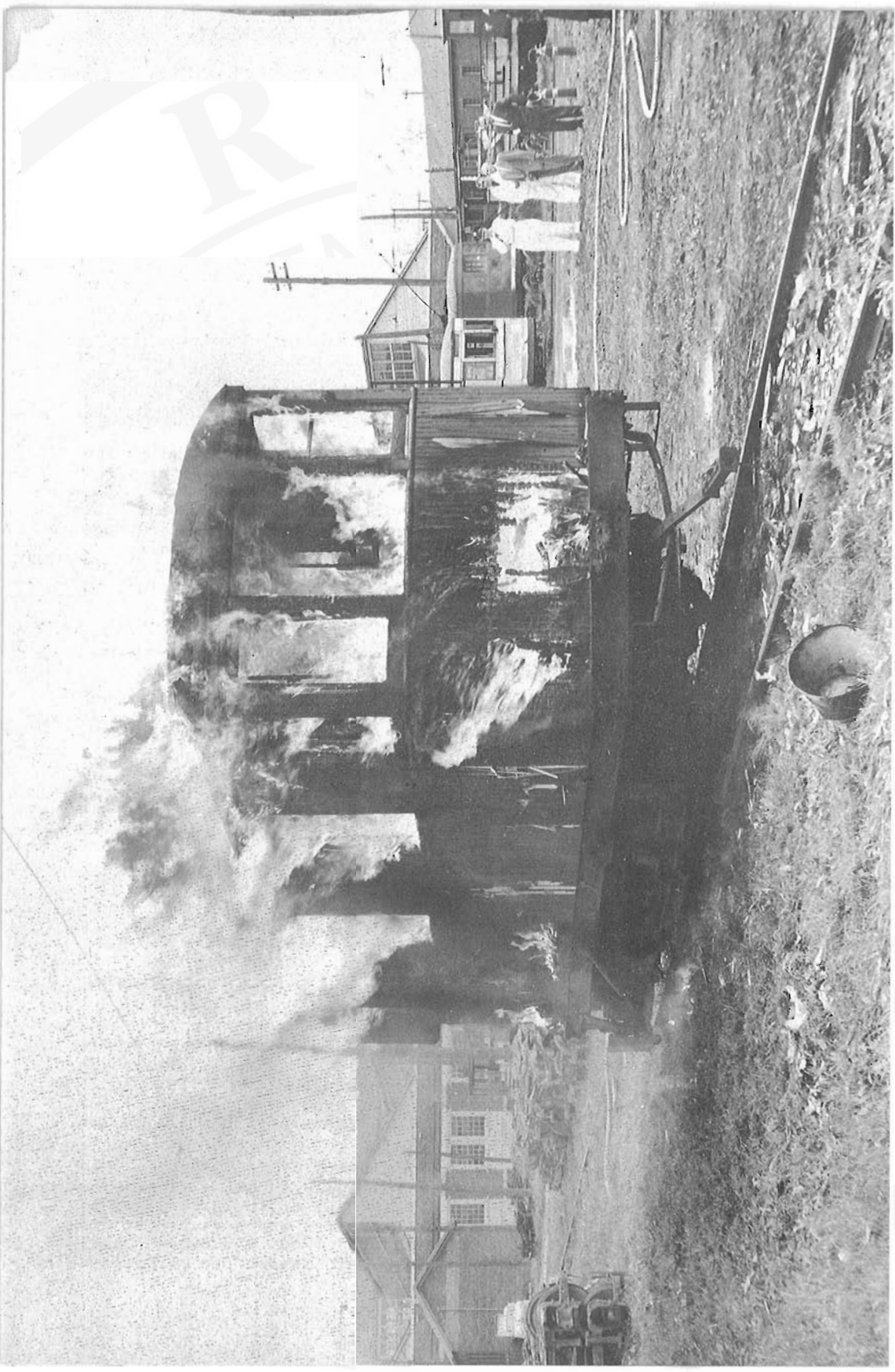
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|--|-------------|
| Canadian Railway and Marine World  | March, 1913 |
| Le Plateau Youville - CTCUM  | April, 1973 |
| Archives - Commission de Transport de la Communauté<br>Urbaine de Montréal |             |
| Archives - Canadian Railroad Historical Association                        |             |
| Personal Notes: Mr. Richard M. Binns, Victoria, B.C.                       |             |
| (Author of "Montréal's Electric Streetcars")                               |             |

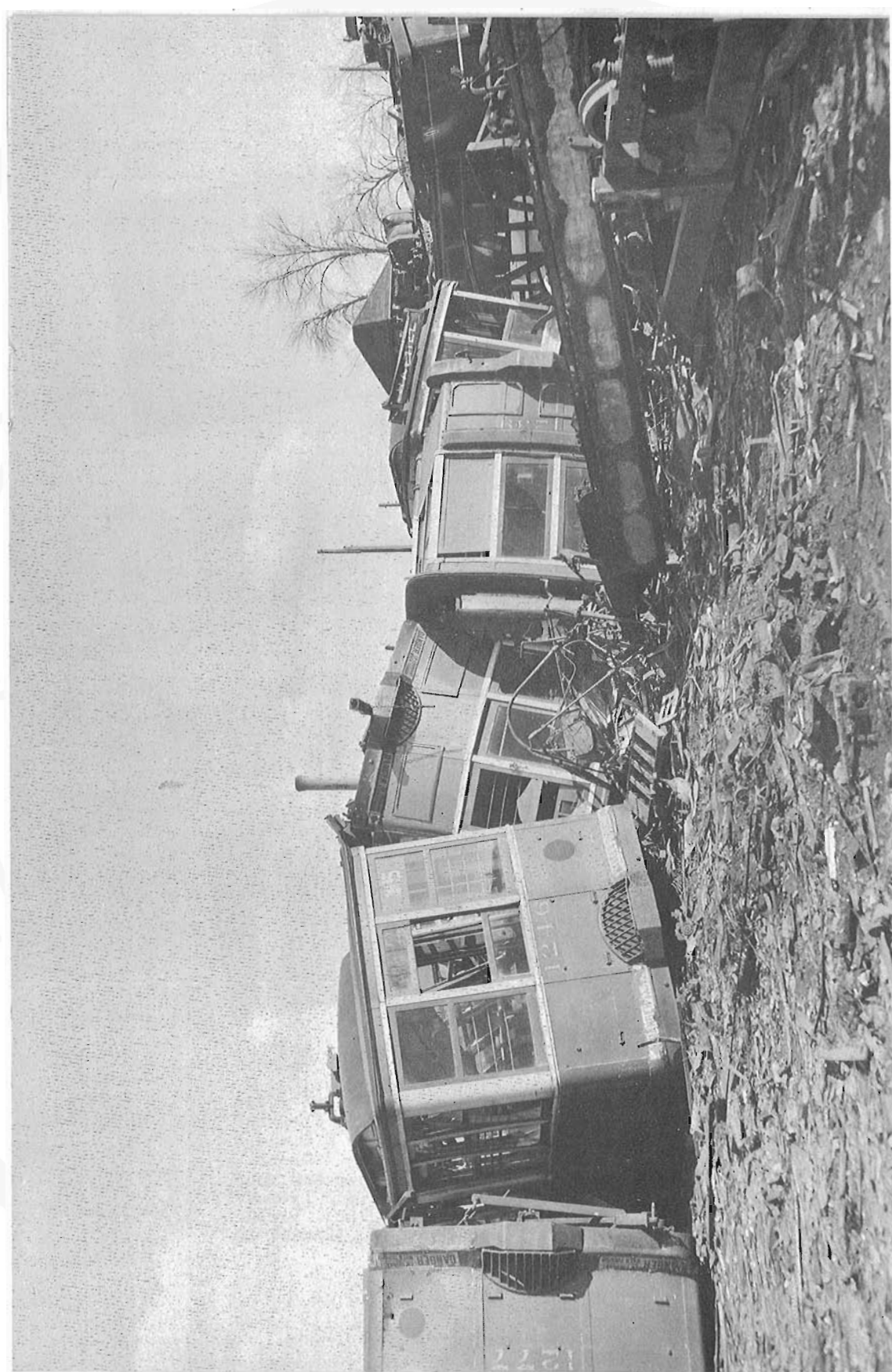
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A VIKING FUNERAL: MTC WOODEN SNOWPLOW NUMBER 105 WAS THE "SACRIFICE"  
during a fire-drill for the training of MTC firemen of Youville Shops.  
The car in the background, Number 2052, was donated in 1953 to be  
preserved at the Seashore Trolley Museum, Kennebunkport, Maine, USA.  
Photo CRHA Archives, CTCUM Collection.

THE FINAL SCENE: STRIPPED OF ALL USEFUL PARTS, THE BODIES OF FIVE  
1200-class cars of the MTC are piled pêle-mêle in the yard at You-  
ville Shops, to be burned. The "scrap" status of these cars was in-  
dicated by the red circle painted on the sides and ends of the cars.  
They were destroyed shortly after April 20, 1956, the date this  
picture was taken. Photo Public Archives of Canada, per L. Dauphinais.

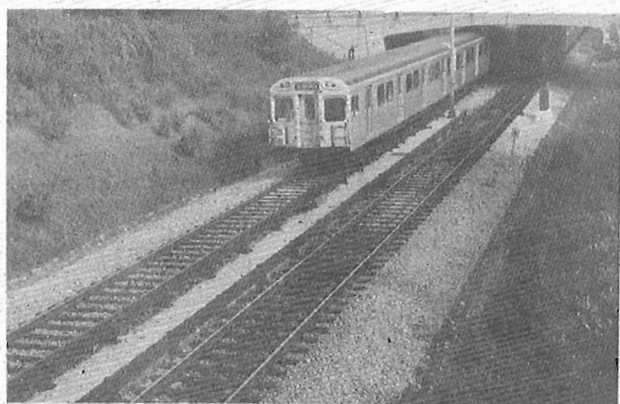








# **RAPID TRANSIT IN CANADA**



**J. W. BOORSE, JR.**

**I**n 1967, coincident with and perhaps somewhat overshadowed by Canada's Centennial celebrations, Mr. J. W. Boorse, jr., head of the Traffic Investigation Section of the City of Philadelphia, Pennsylvania, U.S.A. and formerly of the Engineering Department of the Baltimore & Ohio Railroad and the Staten Island Rapid Transit Railway Company, composed an excellent study entitled **RAPID TRANSIT IN CANADA.**



It is utterly mystifying to this reviewer why Mr. Boorse's book has apparently been overlooked in the intervening period and this mystery is probably equally puzzling to the electric traction enthusiasts. Now, RAPID TRANSIT IN CANADA is brought to their attention.

The first Canadian rapid transit system considered by Mr. Boorse is that of the Toronto Transit Commission (TTC), the emphasis being placed on the subway portion. The author's description of the planning and construction of the lines is that of the transit engineer - informative and critical without being tedious. He describes the various location problems encountered and points out that a genuine attempt was made to minimize what has since been referred to as "pollution of the environment" by noise. The subway's "covered bridge" over Rosedale Ravine, on a graceful curve, is but one example of this effort.

While it is likely that some of the information on the TTC subway is now "old hat" to traction enthusiasts in the Metro Toronto area, Mr. Boorse's objective evaluation will be of interest to the enthusiasts in other parts of North America. Now that the Yonge Street extension has been opened and the alignment of the Spadina Extension approved, there is every justification for a second, revised edition of this reference work.

After the route map, rolling stock description and general information tables on the TTC subway, Mr. Boorse next describes GO TRANSIT, devoting several pages to this activity which assists in maintaining "proper perspective" in the rapid transit picture. In 1967, Mr. Boorse suggested that "the entire project must, at this time, be considered somewhat experimental in nature..." Subsequent events have, happily, proved that GO TRANSIT is here to stay and, far from being experimental, has become an integral part of rapid transit in Metro Toronto and neighbouring cities along the Lake Ontario shore.

Mr. Boorse qualifies his description of GO TRANSIT when he says: "Its geographic extent prevents GO from being a rapid transit line in itself and the lack of stations within Toronto proper precludes any significant competition with the TTC subway. The two systems to meet at Union Station, thus supplementing each other."

Canada's largest city, Montréal, has two rapid transit systems: Canadian National Railways' Mount Royal Tunnel lines and the famous Montréal METRO. The Mount Royal Tunnel line, intended originally to assist in the development of the area on the north flank of Mount Royal, became a sort of electrified main line railway/rapid transit hybrid about 1920 and was extended to Deux Montagnes in 1925 and to Montréal-Nord in 1945-46. At the time Mr. Boorse was writing his book, "serious consideration is being given to the conversion of this system into a more orthodox rapid transit line employing subway-type cars, floor level platforms and (possibly) third-rail." In this instance, Mr. Boorse's anticipated changes have not yet materialized, but current studies by provincial and federal transport boards will without doubt include such modifications, if the new jumbo-jet airport at Mirabel, northwest of Montréal, is to be linked to the city by rapid and reliable means of transport.

This portion of Mr. Boorse's book is embellished with many interesting illustrations and a route-map.

It seems as though Mr. Boorse was waiting for the opportunity to write about Montréal's rubber-tired METRO, since, to the average North American rapid transit engineer, the METRO includes the most astonishing number of dramatic innovations ever before encountered. Even METRO's operating voltage - 750 v.DC - is a little different from the 600v DC normally used in subway operation.

Mr. Boorse's descriptions of route location and station design are most interesting and thought-provoking. When he suggests that "disregarding a few dimensional differences, the Montréal rolling stock would probably function quite satisfactorily under the Champs Elysées", he is being either waggish or naive. The author has not much to say in favour of the rubber-tired system per se, and notes, in passing, that "despite their small size, these cars are among the most expensive ever built."

The last rapid transit system to be examined by Mr. Boorse is the EXPO EXPRESS, which ran from Place d'Acceuil at Cité du Havre, Montréal, to La Ronde, the amusement-park section of EXPO '67. This system has been described previously in the December 1967 issue Number 194 of CANADIAN RAIL, but notwithstanding the "expert" opinions contained therein, Mr. Boorse uncovers a number of techniques not encountered in the rapid transit systems previously considered. His conclusion of this portion of his book is of interest:

"From the time that Adam first put one foot in front of the other and discovered that he could move, man has relentlessly sought better and better means of transportation. All world expositions are conceived and designed with the hope that some of the exhibits or some of the principles or some of the technology displayed to the world will be of a lasting nature. Ten short years from now, EXPO '67 will be very dead. Even its memory will have been largely blotted out by the United States Bicentennial, which by then will be but a memory itself. The EXPO EXPRESS lacks the glamour of the Eiffel Tower, the Space Needle or the Unisphere, but in the final analysis the things that transportation men will have learned, tested and demonstrated through it will leave this old world and its millions of swarming, moving peoples at least a little better off than they otherwise would have been."

Mr. Boorse's book is liberally sprinkled with illustrations, some of them reproduced rarely and all of them interesting. His system maps, albeit schematically drawn, help to convey to the reader the scope of the systems described.

As previously remarked, this reviewer is quite unable to account for the lack of attention to Mr. Boorse's RAPID TRANSIT IN CANADA, when it ought to be available in Canadian libraries and on the bookshelves of Canadian electric railway enthusiasts.

S.S.Worthen.

RAPID TRANSIT IN CANADA

Boorse, J.W., jr.

1967

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# Bourlamaque Central the pole track

Marcel Deschambault

Map and Illustrations from the Author's Collection.

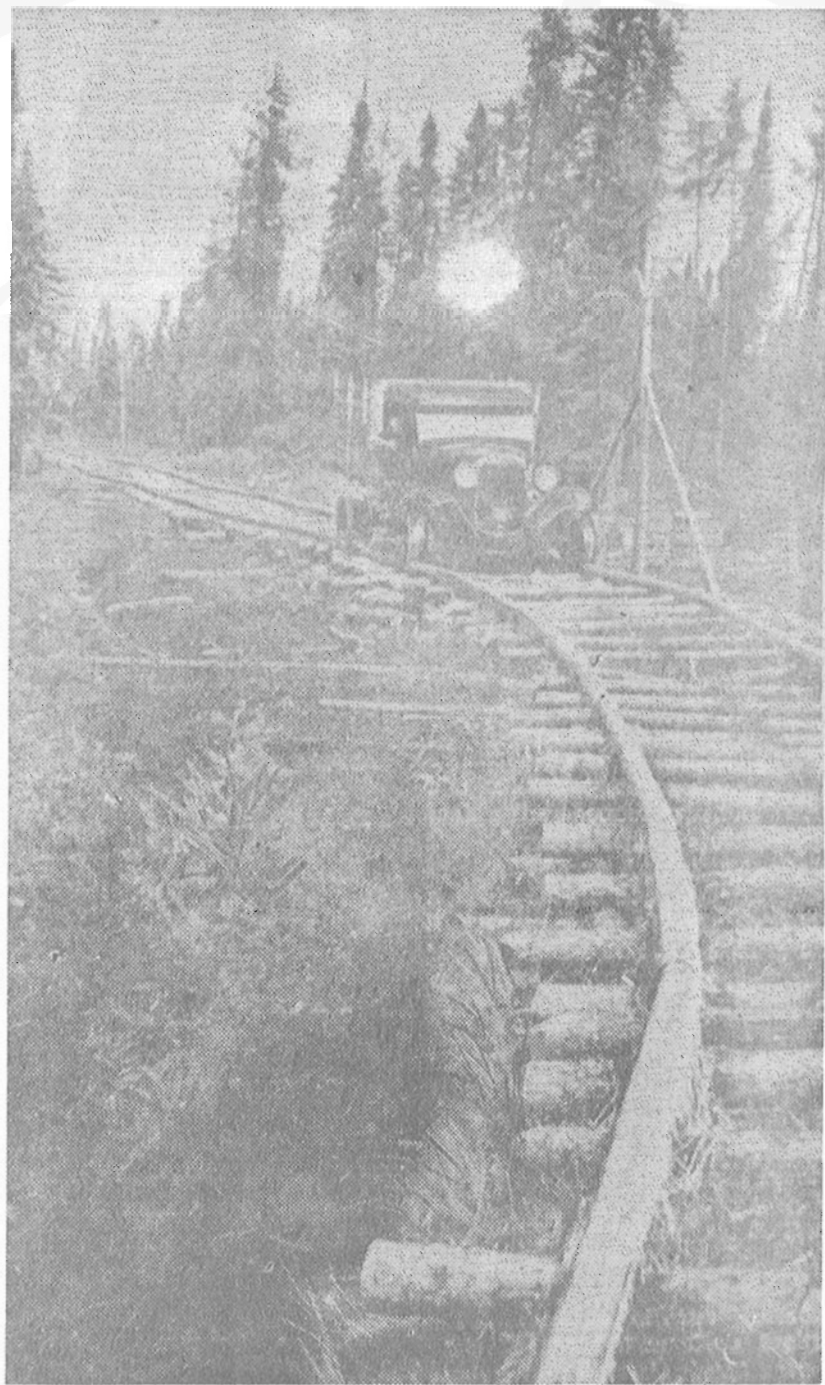
**T**he old saying, "Where there's a will, there's a way!" was never more true than it was in those days when the northern parts of the Canadian Provinces of Ontario and Québec were first being developed. The discoveries of gold, silver, cobalt, copper and nickle in the districts of the northeastern part of Ontario soon stimulated prospecting in the adjacent parts of Québec and, although mineral deposits in these areas were not as frequent as they were to the west, a sufficient number of discoveries were made to stimulate the prospectors to continuing activity.

Access to this remote country was much easier after June 1, 1915, which was the date of putting in operation of the National Transcontinental Railway from Québec to Winnipeg, a distance of 1,349.59 miles and on a location far to the north of the settled portions of the provinces through which it ran. The new line passed through the towns of Senneterre and Taschereau in northern Québec and Norembea and Cochrane in northern Ontario. In 1925, the Rouyn Mines Railway Company built a branch from Taschereau to Rouyn, Québec, a distance of 42.81 miles, and there were some other spur lines to the Waite-Montgomery and Amulet Mines.

The development of this region continued through the years. On November 29, 1937, Canadian National Railways opened a new railway line south and west from Senneterre, passing through the town of Val d'Or to Malartic and the twin cities of Rouyn and Noranda. This event brings us closer to the time and place of our little history.

About 1925, a small town was established about  $1\frac{1}{2}$  miles north of Val d'Or, at the location of a small gold mine. Initially, the only way to transport machinery and supplies into this remote area was over the primitive dirt roads, hacked through the bush and muskeg. It was not an easy way to bring in the supplies and equipment necessary to the prospectors and miners who were working to improve their claims. The construction of the Canadian National's Senneterre/Rouyn-Noranda line in 1937 was beneficial to those mines near the railway, but it did not improve the situation of the miners at East Sullivan in Bourlamaque Township, about six miles east of Val d'Or, who were mining copper-gold-silver and zinc concentrates.





↑ THE MOTIVE POWER AND ROLLING STOCK OF THE BOURLAMAQUE CENTRAL RAIL-  
way, near East Sullivan Mine in northwestern Québec. The wide concave  
wheels of the vehicle are quite visible. So is the unevenness of the  
roadbed. One wonders how this vehicle could attain a speed sufficient  
to win a race with a hungry bear!

It was for this reason that Monsieur Louis Abel, a well-known diamond-drilling contractor, decided in 1939 to build the Bourlamaque Central Railway. It was planned to be more than two miles long, from the dirt road at D'Aragon, through the settlement of Centremaque to the mine at East Sullivan. The purpose of this railway was to serve the mining and prospecting sites in Bourlamaque Township and to haul materiel and food to the mining camps.

You might have thought that in the modern times of 1939 Mr. Abel would build a regular railway. Well, you would have been wrong. What Mr. Abel actually built was a wooden pole-railway. You may have read or heard of this unusual kind of railway, which was generally used in lumbering operations. The "rails" of the pole-railway were round wood poles - in fact, the trunks of young trees, three or four inches in diameter, which had been cut down nearby and limbed clean. These pole-rails were supported on transverse round poles, which could be called ties. The latter were spaced closer together, however, and did not necessarily rest on a conventional road-bed. The rocky land, with only a thin covering of top-soil, did not favour such a type of construction. The pole-railway was built over the rocks, not on the soil.

The joints of the pole-rails were close-butted, one to the next, and were spiked to the round ties. No attempt was made to ballast the track for the reason mentioned above, which was a good thing, since each springtime the frost moved the whole track up and down and all about, during the spring thaw.

For motive power and rolling stock on the Bourlamaque Central Railway - it was the same vehicle - M. Abel selected a rather used Ford 4-cylinder truck of the 1933 model, only six years old. The "motive power" was in the front end and the "flat car" (rolling stock) was the vehicle's rear portion. It had no "van". The "combination car" did the work required, but with difficulty, sometimes.

M. Abel removed the conventional rubber-tyred wheels from the Ford truck and installed wide concave wheels which ran on the pole-rails very well. This type of wheel had already been perfected for use on pole-railways in lumbering operations, particularly in British Columbia on Vancouver Island. In fact, if you are curious about this pole-railway system, you can today see vehicles intended for this sort of operation at the Cowichan Valley Forest Museum at Duncan, Vancouver Island, British Columbia.

During the time that the Bourlamaque Central Railway was in operation, there were the normal number of exciting experiences. The Ford made a fast run, one day, when a hungry bear chased the "train" down the line, trying his best to jump on board the "fast express" to eat the meat and groceries which he had smelled on the "flat car".

Periodically, the beavers who lived in the vicinity, gnawed the pole-rails in two pieces and laboriously pulled them away to build a dam in the neighbouring stream or lake. This was only a temporary problem for the railway, for there were plenty of replacement "rails" nearby in the woods. It was only that the beavers increased the amount of track maintenance.

A ride on the Bourlamaque Central was, to say the very least, an interesting experience. Of course, the springs and what remained of the padded seat in the cab of the Ford absorbed many of the heavier shocks from the uneven pole-rails and, once in a while, the "engine" showed a tendency to derail when the pole-rails were out-of-gauge. And speaking of the gauge, it never was clear what in fact was the



First Passenger Train To Arrive In  
Val d'Or Que. Nov. 29/37.

↑ ON NOVEMBER 29, 1937, THE FIRST CANADIAN NATIONAL RAILWAYS' PASSENGER train over the new line from Senneterre on the former National Transcontinental Railway to Rouyn-Noranda arrived at Val d'Or.

gauge of the Bourlamaque Central. Well, it was the distance between the wheels of a 1933 Ford truck!

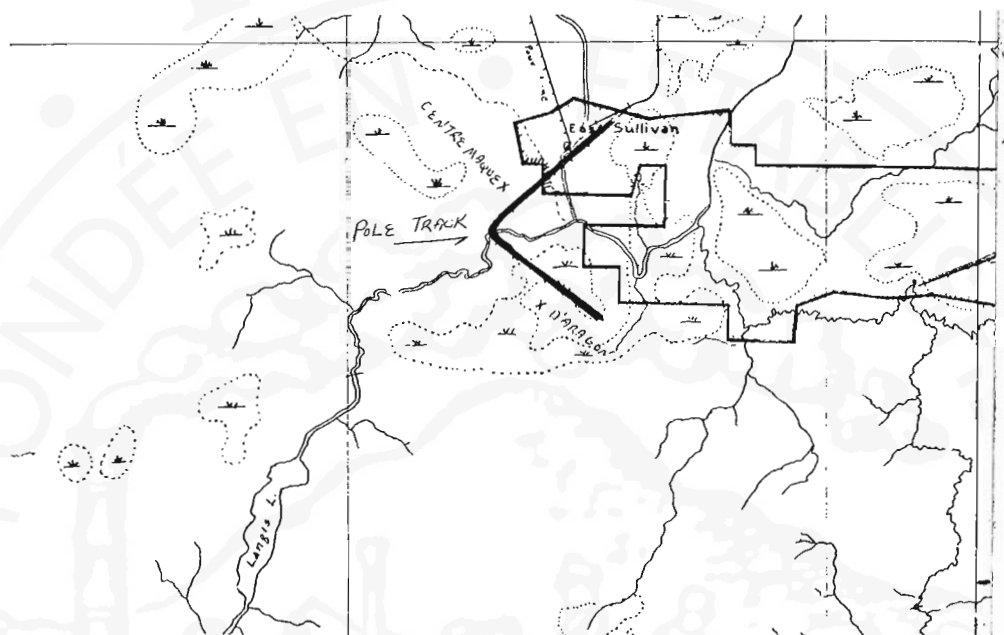
M. Abel was a very good friend of the writer and often invited him for a ride on his railway. For a young person, this was a great honour and privilege.

Since those years of the '30s, many changes have taken place in this part of Québec. If you went to the East Sullivan Mine today, you might find traces of a railway, but it would not be the Bourlamaque Central. Before 1971, it would have been a branch of the Canadian National, coming in from the north. The Bourlamaque Central came up from the south. The East Sullivan Mine was closed in 1966 and the CNR spur was taken up in 1971.

As you might expect, the BCR (not the British Columbia Railway) was not the victim of rust. Far from that. In 1944, there was a bad forest fire in the area and nothing could be done to save the wooden Bourlamaque Central. It burned to ashes. Although there is no definite record of the fate of its "locomotive and rolling stock", there is no reason to think that it survived this holocaust.

As to the rest of the history of this region, the Canadian National built branch lines to those mines which survived the economic depressions of the 1930s. The Town of Bourlamaque, which grew considerably during the years, was amalgamated with the Town of Val d'Or about six or seven years ago, to form Greater Val d'Or, which now has a population of about 25,000. Val d'Or is in the county of Abi-





A MAP OF THE AREA THROUGH WHICH THE BOURLAMAQUE CENTRAL RAILWAY WAS built. The Canadian National's main line through the region and the spur to the East Sullivan Mine are shown.

tibi East, some 340 miles northwest of Montréal. You can drive through La Verendrye Provincial Park on Route 11, or you can take the Canadian National's overnight Train 75-175, arriving at Val d'Or at 11:43 hours, daily except Sunday. The trip via Route 11 is always pleasant, but it does not compare with the journey by railway, with the reorganization of trains and sleeping cars at Hervey, at midnight, the leisurely scheduled run through Fitzpatrick, daybreak at Parent, the meet with the Mixed Train 264 at Dix and the native Canadians at almost every stop. And there are a few stops!

But we were speaking of wooden pole-railways. Do you remember that the Québec and Gosford Railway constructed in 1870 was also a wooden railway? It was, although the wooden rails were flat instead of round. Twenty-seven miles were built from Québec to the town of Gosford and an extension of nine miles was added in 1871. But M. Abel surely could not have known of this railway sixty-eight years later, when he planned the Bourlamaque Central.

The Québec and Gosford, intended to bring cord-wood from the country to the city of Québec eventually became a conventional railway and formed part of the line from Québec to Lac St-Jean. The Bourlamaque Central was not so lucky. It never really had the chance to grow up, suffering as it did a sad death at the tender age of only five years.



April 1975

## WAYBILLS

THE PHOTOGRAPH OF CANADIAN NATIONAL RAILWAYS STEAM LOCOMOTIVE NUMBER 6060 and train, presented on the cover of CANADIAN RAIL INDEX 1973, was taken at Brockville, Ontario, writes Mr. J. Norman Lowe, Manager, Historical Projects, Operations & Maintenance, Canadian National Railways. Number 6060 made a special run between Montréal and Brockville to test the equipment to be used for the Royal Train of 1951 and the train was placed "under speed" between these two cities.

THE GOVERNMENT OF SPAIN HAS DECIDED TO CONSTRUCT A STANDARD-GAUGE (1.44 m) rail line from the French frontier at Port Bou-Cerbère to Figueras, Spain, to enable centralization of freight traffic and customs and immigration inspection, prior to forwarding of traffic over the broad-gauge (1.67 m) lines of the RENFE to destinations in Spain. The line and accessory installations are expected to cost 200 million French francs, about \$ 50 million US and may be completed in 1976. It is also planned, in the future, to prolong this standard-gauge line to Barcelona (ca. 86 km) and even to Madrid (ca. 715 km).

J-M. Leclercq

CANADIAN NATIONAL RAILWAYS' 55-TANKCAR OIL UNIT-TRAIN BEGAN OPERATION in late November 1974 between Golden Eagle Canada Limited's St-Romuald, Québec, refinery, just west of Lévis, Québec, and Ontario Hydro's generating station at Lennox, Ontario. The unit-train was scheduled initially to leave the refinery every two days for Kingston, Ontario, hauling 30,800 barrels of oil, with later deliveries scheduled for Lennox. The contract called for a delivery of a total of more than 25 million barrels of fuel oil, requiring some 800 round-trips of 726 miles each.

John Welsh

GOVERNMENT OF CANADA TRANSPORT MINISTER JEAN MARCHAND ANNOUNCED IN mid-November 1974 that he would shortly inform the Cabinet in detail of what he wants to do to modernize and integrate Canada's railway passenger services and how he proposes to finance the resulting multi-million-dollar undertaking. Mr. Marchand said that he planned to have finalized by the end of 1974 a general agreement with Canada's passenger-carrying railway companies, based on the Cabinet's approval of his proposals.

But the last day of 1974 came and went, and no proposals had emerged and no agreement had been proposed, let alone finalized.

Apparently, Mr. Marchand was anxiously looking for a way to terminate or allievate the present situation wherein the Government of Canada must pay a portion of the operating losses incurred by the provision of passenger train services on unprofitable lines, which have been designated by the Government as essential to the requirements of the citizens of Canada. These Federal Government subsidies

presently cost Canadians \$ 10 million annually.

In the latter part of 1974, Mr. Marchand had discussed several proposals with representatives of the media: a CANTRAK system, said to be "something like" the AMTRAK system in the United States; the operation of transcontinental rail passenger services in short intercity daytime hops, with the abolition of trans-Canada sleeping and dining car services and consequent overnight housing of transcontinental passengers in in-city hotels, and, finally, a consolidation of Canadian National and CP RAIL trans-Canada and intercity passenger services.

While the Federal Government wants a unified and complimentary plan from CN and CP RAIL, of a clear and precise nature, Mr. Marchand observed that none of the proposals made so far have been satisfactory. Since the Federal Government is said to be prepared to spend as much as \$ 200 million of public funds over the next five years, Mr. Marchand was probably quite justified in insisting that any recommendations made should meet the criteria of his Department of Transport. Unfortunately, the criteria have not been published in very great detail, according to spokesmen for Canada's major railways, which makes it difficult to make proposals which will be at one and the same time acceptable to the Department of Transport and the railway operating departments and labour unions.

S.S.Worthen

FROM SUNNY SOUTHERN ONTARIO, WALTER BEDBROOK REPORTS THAT CHANGES are imminent for Canadian National Railways' car-ferry operation between Windsor, Ontario and Detroit, Michigan. The car-ferry service provided by the veteran S.S.LANSLOWNE, albeit not under her own power, but propelled by a tug, was scheduled initially for abandonment on October 31, 1974, but was postponed. When this service is discontinued, it will be assumed by the Windsor Detroit Barge Lines Limited, who previously acquired the former Canadian Pacific tugboat PRESCOTONT and the barge OGDENSBURG, when the Prescott, Ontario-Ogdensburg, New York car-barge service was discontinued.

The PRESCOTONT/OGDENSBURG combination operated out of the CP RAIL slip at Windsor, with loads of container-flats, the containers being off-loaded from the flats by overhead cranes on the Detroit side of the river. The flats stayed on the barge.

Windsor Detroit Barge Lines acquired an option on the CN's historic car-ferry, the S.S.HURON, the standby barge for the S.S. LANSLOWNE, as well as the latter, when the CN's service would be discontinued. The CN sent their tug to Sarnia to work the Sarnia-Port Huron car-barge service. Windsor Detroit Barge Lines then leased the CN's car-barge slip at Windsor for the shipment of container cars, with the operation in Detroit remaining as it was for the time being.

Other CN-GTW traffic was handled through the Penn Central's Detroit Tunnel, via Essex Terminal Railway trackage, to the CN yard in Windsor. When the Penn Central can manage to increase the roof clearance in the tunnel to accommodate tri-level automobile cars, hi-cube boxcars and container flats, the car-ferries/car-barges on the Detroit River will likely disappear entirely.

IT WAS WITH REGRET THAT THE ANNOUNCEMENT WAS RECEIVED IN MID-NOVEMBER 1974 that the West German firm of Krauss-Maffei A.G. had withdrawn from the development program of Ontario's GO-URBAN magnetic levitation technology. This meant that Ontario would not have a revenue system of urban transport on the magnetic levita-



tion-linear induction system until well into the 1980s, if then.

The Toronto "Globe and Mail" interpreted this withdrawal as indicative of the failure of the urban transportation revolution that Ontario was trying to achieve. The challenge presented to engineers and scientists was threefold: to prove that a magnetic suspension system was a practical replacement for the steel wheel on the steel rail; to prove that a linear induction motor can work economically as a power source, and, to develop a computer system which could operate a totally-driverless transportation network with short headway between vehicles.

None of these objectives have been accomplished successfully, previously.

The question is, according to the "Globe and Mail", whether or not the Ontario Transportation Development Corporation can deliver the new transit systems that Ontario - and Canada - will need.

The OTDC was established by the Government of Ontario in July 1973 and presently employs 45 people with a total annual salary budget approaching \$ 1 million. Its first innovation, DIAL-A-BUS, has not met with the success predicted for it. The new light-weight streetcar, which the Toronto Transit Commission is committed to buy, makes transportation experts wonder if this is a suitable alternative to the GO-Urban concept. The TTC is committed to provide 200 new streetcars for Toronto in the period 1977-79, but these will be replacements for the existing fleet and none will be available for suggested new streetcar routes to replace the Scarborough Expressway or to connect the TTC's subway with METRO Zoo or the proposed new Toronto International Airport at Pickering, through northeast Scarborough. These lines were to be GO-Urban operations.

After the announcement of the cancellation of the GO-Urban program, opinions poured in from all sides. But Mr. Stuart Robertson, professor of electrical engineering at the University of Toronto and a specialist in magnetic levitation and propulsion, said that he had mixed feelings about the whole thing. He was of the opinion that the Krauss-Maffei system was "a very bad system" for Ontario to choose. Nevertheless, he believed that the total proposal had generated considerable industrial initiative in Canada and that it was now time to re-assess the position, less hurriedly, and develop some research and development programs in Canada specific to the Canadian situation.

McDonnell-Douglas Corporation of the United States has already been dialoguing with the Government of Ontario regarding the former's possible re-entry into the program.

According to Mr. Richard Soberman, Director of the Metro Toronto Transportation Plan Review, Scarborough's citizens will get a Scarborough Expressway unless reasonable public transportation alternatives are provided immediately: i.e., before people move into the area and develop habits based on a second family automobile. And this in the face of dwindling oil supplies and increasing costs of expressway construction!

Wayne Hoagland

ON 26 DECEMBER 1974, THE CANADIAN PRESS ANNOUNCED THAT CANADA'S Department of Transport had purchased CP RAIL's passenger-automobile ferryboat, the S.S. PRINCESS OF ACADIA, which provides ferry service across the Bay of Fundy between Saint John, New Brunswick and Digby, Nova Scotia.

The service is said to have lost money continuously over the last several years. The Government of Canada paid \$ 10 million for the service, the ship and some land in Saint John.

CP RAIL said that, under a 1968 agreement, the Government prom-

ised to purchase the vessel if no satisfactory long-term operating agreement could be reached.

**BUSWIM:** WHEN BUS NUMBER 3637 WAS DELIVERED BY THE DIESEL DIVISION, General Motors of Canada, about four years ago, no one could have guessed that it would end up at the bottom of Vancouver Harbour. But it did!

Someone stole Number 3637 and drove it off the end of a pier at the harbour. Number 3637 made every effort to keep itself afloat until help arrived, drifting out about 75 feet from shore. When it could no longer stay afloat, Number 3637 settled to the bottom in about 35 feet of water.

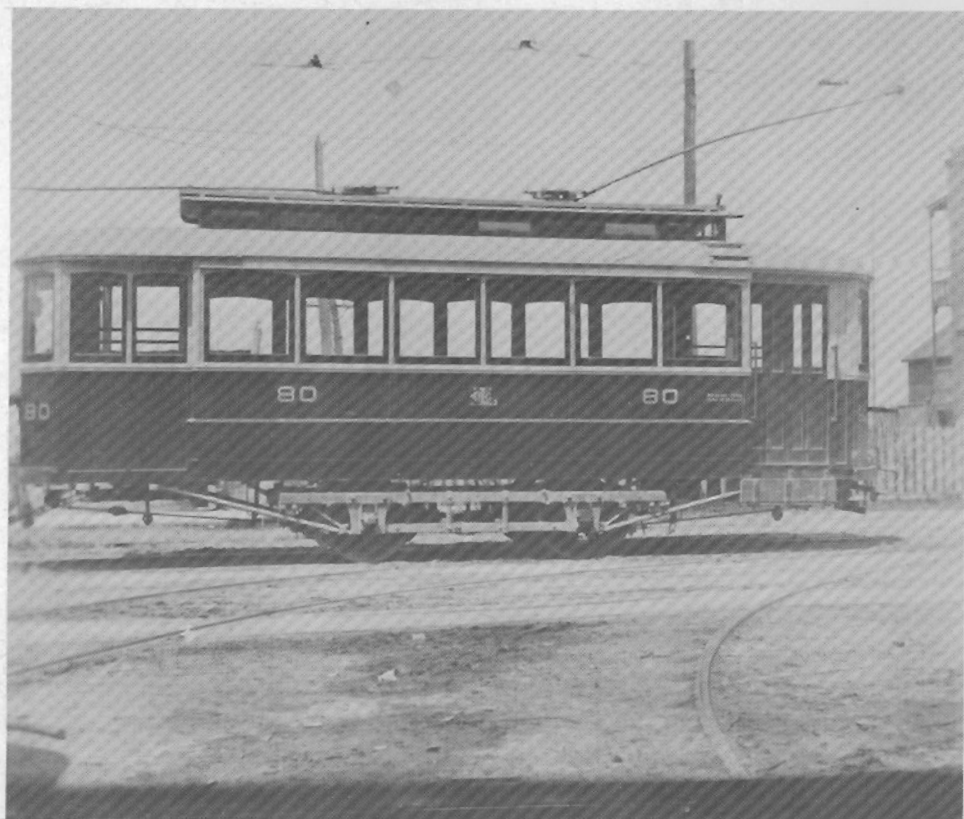
Some 36 hours later, skin-divers, who had been directed to the area by sleuths from British Columbia Hydro, found Number 3637 resting peacefully on the bottom. The divers got a cable on the bus, but could not move it until another diver went down to release the air-brakes, which were still holding fast!

Number 3637 has now been dried out and completely overhauled to rid it of the effects of salt water. By the time this item appears, Number 3637 will be running on its normal routes in Vancouver, but this time on good solid, dry land!

GM Dieselines.



**2** CAR NUMBER 80 OF THE LEVIS COUNTY RAILWAY, PREDECESSOR OF LES TRAM-ways de Lévis (Québec), was one of the first one-man cars in Lévis, being converted from a two-man car. The picture was taken in front of the car barn on Fraser Street in 1918. Number 80 was burned in the Fraser Car barn fire of February 1921 with 10 other cars. The car was painted in dark green, with white lettering and cream trim. The photo is from the collection of Mr. E. Doe, former General Manager of Lévis Transport and is reproduced with his kind permission.



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