CANADIAN RAILROAD HISTORICAL ASSOCIATION
INCORPORATED.
MONTREAL, CANADA

NEWS REPORT NO.58 — JULY-AUGUST 1955

No regular meetings are scheduled during the summer months of July and AUgust.

- - - - - - - -

Association News

Owing to an almost unparallelled increase in the number of subscribing associate memberships, and the consequent greatly increased volume of mail, the Association recently applied for and received, a post office box, which will replace all of the various addresses presently used for various purposes, effective at once. The new address is:

P.O.Box 22, Postal Station "B", Montreal, Canada.

Mail intended for the Editorial Committee should be addressed to the Editor, at this address.
Mail intended for the Museum Committee (when purchasing timetables, photographs, or other documentary matter other than Association publications) should be addressed to the Chairman, Museum Committee, at this address.
All other correspondence should be addressed to the Corresponding Secretary, at this address.

- - - - - - - - -

EXCURSION PLANNED FOR THE AUTUMN

After a lapse of three years, the Association has decided to plan for a Fall Foliage excursion once again, similar to the enjoyable ones which have been staged in the past. The date has been set for Sunday, October 2nd, and the destination is planned to be Rawdon, Que., in the Laurentian foothills. Although final arrangements have not been concluded, it is expected that the trip, if operated will consist of a Canadian National Railways 2-6-0 type steam locomotive, and several cars, and suitable photo stops will be arranged en route. A picnic lunch will be had at Rawdon, where there are picturesque waterfalls, and the price of a return ticket, including box lunch, is expected to be about $3.50. If the out-of-town response is large, we will consider arranging some form of trolley excursion on the Saturday preceding, October 1st, so that out-of-town visitors will have an opportunity to spend a weekend in Montreal and its vicinity. Further information can be obtained by writing to the Corresponding Secretary at the above address.

- - - - - - -

M&SC ENDS SERVICE OVER VICTORIA BRIDGE

The initial step in the recently-announced Canadian National Railways plan to end all service on the Montreal & Southern Counties Railway, took place on Wednesday, June 8th, when the M&SC Ry. announced that the last car from Montreal would leave the McGill Street Terminal at 12:30 AM, EST, on Sunday, June 19th, 1955, and that thereafter car service would operate from St. Lambert only, connecting with CNR trains to Central Station, Montreal. The ten days between these days were occupied by the application of padlocks to all cars which would no longer be required, completion of the transfer platforms alongside the CNR embankment behind the M&SC St.Lambert carhouse, and publication of the drastically-reduced schedules. On June 18th, fourteen cars were brought to the McGill Street yard, locked, and left. These cars are: Nos. 5, 6, 8, 107, 200, 220, 301, 501, 502, 504, 620, 621, 622, 623. The 620's and companion trailer 220 are destined to be sent to St.Catharines for use on the Niagara St.Catharines & Toronto Railway, also a CNR subsidiary. No.220 will be scrapped to supply parts for the four 620 series motor cars.

The last run was made by car No.326. It was patronized by about forty passengers who were carried free. Among the passengers was a gentleman from St.Lambert who had been on board the first M&SC car to cross the bridge in 1909. Several press photographers were present. Also in attendance was Mr. R. Cannon, Superintendent of the M&SC Railway, and eight members of the Association, Messrs.F. Angus, Douglas Brown, Chivers, Lavallee, Pharoah, Saint Pierre and Stannard. The car left Montreal ten minutes late at 12:40 AM due to the observance of various formalities, chiefly picture-taking, and it arrived at Montreal South at 1:07 AM. The strains of "Auld Lang Syne" rang out as the car clattered across the Victoria Bridge for the last time.

The new service which was begun on June 19th, is a great change from the twenty-minute service previously offered. There are now 32 trips to Mackayville and 30 trips to Montreal South Mondays to Fridays inclusive. On Saturdays and Sundays, fewer trips are offered. Not all trips make connections to or from Montreal; there are 28 scheduled connections inbound, and 29 outbound. These are made by regular trains and by special shuttle trains, made up of wooden coaches drawn by diesel switching locomotives, or road-switchers, which operate between Central Station and Saint Lambert.

Cars of the interurban division also connect with CNR trains at St.Lambert. A few of these runs, which closely followed CNR diesel-powered trains to Granby and Waterloo, have been withdrawn. The diesel trains now make all intermediate stops, Sunlight City to Marieville. An additional trip by a CNR diesel train (designated no.722-723) leaves Central Station at 7:05 PM daily except Sunday for Marieville, returning at 10:05 PM. This replaces a similar trip by M&SC cars.

Schedules of cars to and from Ste.Angele, Marieville, Chambly and Brookline have been altered so as to make connections at St. Lambert. Baggage service has been discontinued on the electric cars, hence the retirement of baggage motors 501, 502 and 504. It is now carried only on the CNR diesel trains.

oooo00000oooo

CNRAC&HBGVVDCP NARPGEC&GT
R H
& &
C NOTES AND NEWS B
S N
& J
L&PSQNS&LMCR&PRSA&JQCRONR

Canadian National Railways recently disclosed the placing of orders for more than $40,000,000 worth of new railway equipment, comprised of 1,950 new freight cars, and 173 diesel-electric locomotive units. One of the largest equipment orders in Canadian National's history, the diesel locomotives will account for about $25,000,000 of the new order, while the freight cars willcomprise the balance. About 1,750 of the new cars will be box cars, and the other 200 cars will be open cars of various types. The diesel locomotive order, when completed, will bring to more than 900, the number of diesel locomotive units in use on the National system.

Despite the expense involved in remedying the effect of flash floods during the month of June on the Pacific Great Eastern Railway, the Province of British Columbia (which owns the railway) expects that the operating profit will be double that of last year's $255,000. Premier Bennett of British Columbia has been quoted as saying that the line is not for sale' but rather, that the next step is to extend the line to the Peace River area. The railway is receiving federal aid to extend its lines into a timber area some 50 miles north of Prince George, the present northern terminal, which is on the CNR Jasper to Prince Rupert and Kitimat line.

On Tuesday, July 14th, Canadian Pacific Railway took delivery of the largest diesel-electric locomotive yet to be built in Canada. It is the 2,400 horsepower "Trainmaster' road-switcher type, built by the Canadian Locomotive Company at Kingston. Carrying road number 8900, the new unit was put into test service immediately between Montreal and Saint John, NB, and will later be sent to British Columbia to undergo further tests. It has a maximum speed of 75 miles per hour.

Canadian Pacific recently placed an order for 1,640 new freights cars, including 1,000 box cars, 200 gondola cars, 40 covered hopper cars, 200 triple hopper cars, and 200 flatcars, all for delivery this year.

Is the business car on its way out ? Chesapeake & Ohio Railway is leasing a two-engined DC-3 passenger aircraft from Capitol Airlines, for use by the road's executive officers on certain business trips. While it is not intended to replace business cars, company officials claim that officials will be enabled to cover the 5,000-mile rail line more efficiently in the plane, which will be painted in C&O colours of blue and yellow.

COTE DES NEIGES AND GUY - BEAVER HALL STREET CARS LINES REPLACED BY BUSSES

ON THE LAST DAY OF OPERATION of these two Montreal Transportation Commission routes, a special trip was operated by the Association, using car 1981. The route included all trackage on which operation was discontinued, except for that portion on University Street, which is only two blocks in length.

The car left St.Henri Division at 1:40 PM Daylight Time, and ran via St.James Street, Beaver Hall Hill, Dorchester, Guy and Cote des Neiges, to Queen Mary Road. It then proceeded around the loop and returned on Cote des Neiges, but turned west on the Boulevard, and then followed the 14 line on Lansdowne, Westmount Avenue, and Claremont. Return to St.Henri was made via Sherbrooke Greene Avenue, St. Catherine and Glen Road. The car arrived at St. Henri at 3:30 PM. Stops were made for photographs at Beaver Hall near Belmont; Guy and Forchester; in the private right-of-way behind the Gleneagles Apartments; at Remembrance Road, where the car was backed in on the wye of route 93, which was replaced by bus on May 28th; at Gatineau and Queen Mary; The Boulevard and Lansdowne; Roslyn and Westmount Avenue; and on the hill at Claremont and Windsor Avenues. Also under the viaduct at Glen Road, and finally, at the conclusion of the trip, inside the carhouse at St.Henri. Nineteen persons spent the afternoon on this trip, marked by very suitable weather.

THE "ROVING REPORTER"

On an extended trip to the WEST, we present herewith a few comments on operation on Canadian National train operation on the former National Transcontinental line, just received from our "roving reporter", Mr. Forster A. Kemp.

There is still plenty of steam power on the lines in the Abitibi region. 3300 class 2-8-2, and 2400-2600 class 2-8-0 engines on freight, and 5000-5100-5200 class Pacifics on passenger.... a few Northerns operate to Senneterre; No.6211 on #24 and #21, and No.6213 at Senneterre.... Ontario Northland still keeps a steam switcher at Cochrane - 2-8-0 No.500 was there Friday; it still has smoke deflectors with painted "winged circles" thereon. It is rather unusual to see a switcher with smoke deflectors.... There are quite a few MLW 1600 HP road switchers of the 1800 series operating between Senneterre and Hearst. but proportion of steam to diesel still seems to be about two to one. The line from Hearst to Nakina is apparently all diesel, as most of the water tanks are out of commission, although none have been dismantled.

I am now aboard CNR train No.421 -- a mixed which operates twice weekly in each direction....Train is scheduled to leave Hearst at 9:00 AM....order for 9:30 AM....Engine and crews ready and passenger cars placed on main line at 9:30....Commenced making up train....switched out 60 cars, coupled onto train at 10:50; brakes OK at 11:05, left at 11:10 AM with 63 cars. Overran switches at Carey Lake, backed up, set out six cars, time 40 minutes.... Set out 17 cars and lifted 6 at Calstock, time 45 minutes....

thereafter most of the stops were only of a few minutes duration except for Pagwa where there is an American base....we arrived at Nakina at 7:20 PM, just in time for No.3 -- if it had been on time. However, it turned out to be expected two hours late! No.421 had been scheduled to arrive at 4:50 PM and No.3 to arrive at 7:50 PM. Actually, the respective times were 7:20PM and 10:35 PM !

oOoOoOoOoOo

We are pleased to know that the nightly viewing of television has ceased to be a novelty and we are able to resume publication of the series "Crossing the River" - highlights on the construction of the Victoria Bridge across the Saint Lawrence River at Montreal, during the years 1854 to 1859.

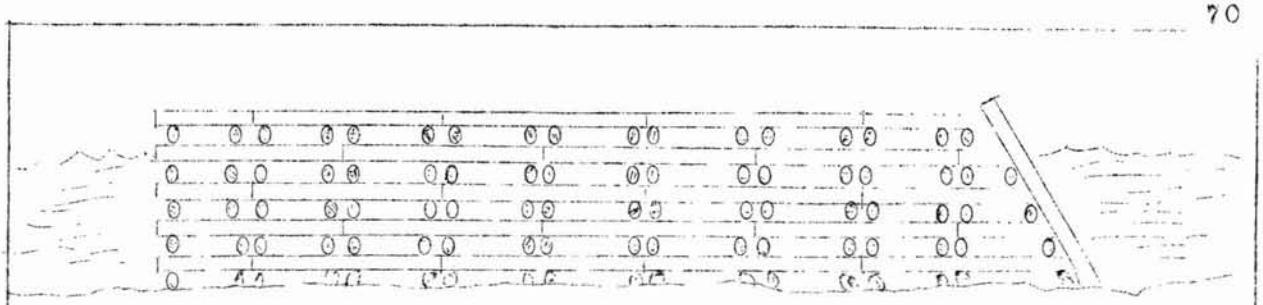
CROSSING THE RIVER - Part 5
by Robert R. Brown

THE CONSTRUCTION OF THE VICTORIA BRIDGE posed many serious problems for the designers and builders; no bridge, as long, had ever been built before, and in addition to the usual engineering difficulties, there were some purely local conditions which were positively alarming.

AT the site selected for the bridge, the river was shallower than at any other point between Lake Ontario and the sea, but there was a very strong current which, since that time, has been greatly reduced in volume and violence by the dredging of a submarine escape flume on the south side of St.Helen's Island. In the old days, the speed of the current was more than seven miles per hour and Champlain who visited it in 1611, described it as Le Petit Sault.

Then, in the days before the larger ice-breaking steamers cleared the channel, the annual spring debacle was a terrifying sight. Many Montrealers still living, remember the ice shoves which piled up a huge mountain of ice in the narrow tickle between St.Helen's Island and the Montreal shore -- higher, 'tis said, than the dome on Bonsecours Market!q The engineers from England, however, who had never seen such a sight before, were aghast at man's impotence in the face of such uncontrollable and destructive violences of nature.

Finally, the export of timber to England from the shipping centres at Garden Island and Ottawa, was then at its height, and huge rafts of pine timbers floated down the river to the coves at Quebec. The rafts varied in size but usually were 40 feet wide by 250 feet long, and although they were equipped with steering sweeps, they were quite unmanageable and it was thought that the raftsmen would never be able to run them through the channel without striking the bridge piers, which surely would be destroyed by the impact of the enormous weight carried along by the strong current. One English engineer reported having seem, with some dismay, 35 huge rafts, AT ONE TIME, charging erratically down towards the bridge site. Fortunately, the raftsmen were amazingly skilful, and the danger was not as great as was feared. Perhaps, too, the hazards were decreased by the increasing use of sidewheel towboats to speed up the deliveries.



SIDE ELEVATION OF CRIBWORK COFFERDAM.

No longer did the rafts wander aimlessly all over the river, getting in everyone's way. However, the engineers got busy, and, with typical British tenacity, they solved the problems one by one.

AS previously mentioned, a careful survey was made on the surface of the ice, and the exact centre of each pier was located and marked. Then a small hole was cut in the ice on the mark, and iron rods, 5 feet long and four inches in diameter, were driven down into the bed of the river. To these rods were attached lengths of chain and buoys, which were thrust under the ice to reappear in the spring. The late William H. Breithaupt, in his outline history of the Grand Trunk Railway, which was published in Railway & Locomotive Historical Society Bulletin No.23, said, " of the 25 spans, 24 were 242 to 247 feet in length -- it was apparently easier to slightly vary the tube length than to exactly locate the piers. " In this respect, he was mistaken, evidently having been led astray by the varying thickness of the piers, which increased from 14'4" at piers Nos.1 and 24, to a thickness of 27' in piers 12 and 13.

The pier thicknesses are as follows:

Piers 1 and 24 - 14'4"	5 and 20 - 16'0"	9 and 16 - 17'8"
2 and 23 - 14'8"	6 and 19 - 16'4"	10 and 15 - 23'0"
3 and 22 - 15'0"	7 and 18 - 17'0"	11 and 14 - 25'0"
4 and 21 - 15'8 "	8 and 17 - 17'4"	12 and 13 - 27'0"

The iron spans, except No.13, were of uniform length, but of course the openings between the piers varied, but not in the haphazard manner that Mr.Breithaupt's statement implied. Actually the piers were located with remarkable precision, not only with respect to the longitudinal axis of the bridge, but also the distance from one pier to another, centre-to-centre.

The shallow water was full of glacial boulders, some of them of immense size, as may be seen by examining the one which now forms part of the Ship Fever Monument in Bridge Street, Montreal. The river bed is solid rock for about 1900 feet out from the north shore, and about 600 feet from the south shore, free from deposit except for the large boulders. Towards the middle of the river, there is shale, clay and quicksand, overlaid by hardpan, 12 to 14 feet thick, which at first was thought to be a continuation of the solid rock and subsequently caused a great deal of trouble. The most important consideration at the beginning of operations was the method to be employed in placing the foundations of the piers and abutments.

CANADIAN RAILROAD HISTORICAL ASSOCIATION, INC.

News Report No. 58
July-AUGUST 1955.

Editorial Address:
P.O.Box 22,
Postal Station "B",
Montreal, Canada.

Editor: Omer S.A. Lavallee
Asst. Editor: R.D. Brown
Committee: Robert R. Brown
Anthony Clegg
Ernest Modler
Kenneth Chivers

With such a varied assortment of difficulties, it was evident that the methods generally used for foundations, such as diving-bells, or by means of concrete confined in round caissons, would be useless.

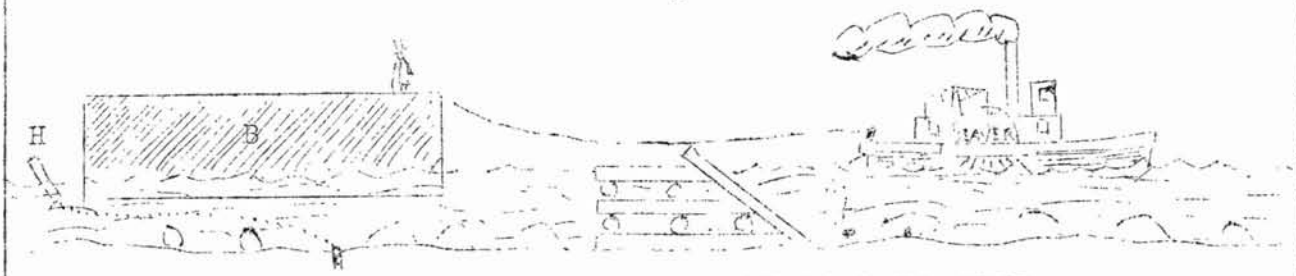
The first plan was the construction of large floating cofferdams, roughly boat-shaped so as to present the least resistance to the current, and furnished with an inner wall or opening sufficiently large to admit of the pier being built, after the water and the boulders were removed. They would have to be capable, also, of being refloated on completion of the masonry, and taken to the site of another pier. Three of these floating cofferdams (see diagrams on page 72) were built, and in some ways, they proved to be very satisfactory, but serious unforeseen disadvantages developed. No.2, just after being moored at the site of Pier No.2, was struck by a large raft, its "spuds" were broken, and it drifted downstream. Some repairs were needed, and then the mooring had to be done again. Cofferdams Nos.1 and 2 were used in the construction of piers 1 and 2, and, while the masonry work was completed in time, the cofferdams were destroyed by the ice before they could be moved to a place of safety. No.3 was more successful, and was used in the building of piers 7, 17 and 18, and continued in use until the bridge was completed.

The second plan was a cofferdam of cribwork, and was used for piers 3, 4, 5, 6, 8, 9, 10, 11, [illegible] 14, 15, 16, 19, 20, 21, 22, 23, 24 and the two abutments. (see diagram page 70)

The third plan was a combined system, used for piers 12 and 13 which were somewhat larger than the others.

PLAN NO.1 - THE floating cofferdam was built in two pieces; the principal one consisting of the wedge-shaped upper end and the two parallel sides. The height of the structure was 16 feet and the sides 20 feet wide, and made watertight. The second, or tail piece, was rectangular, 16 by 20 feet, and was made to fit into and close the opening in between the sides of the other at the lower end. The first one was towed upstream from the lower entrance of the Lachine Canal on May 24th, 1854, and this was the actual beginning of work on the bridge. However, the current was so strong that the caisson could not be moored properly, so a cribwork breakwater, similar to those which may still be seen alongside the New York Central bridge at Chateauguay Basin, was built upstream from the mooring position, and this provided quieter water, and no further difficulty was encountered.

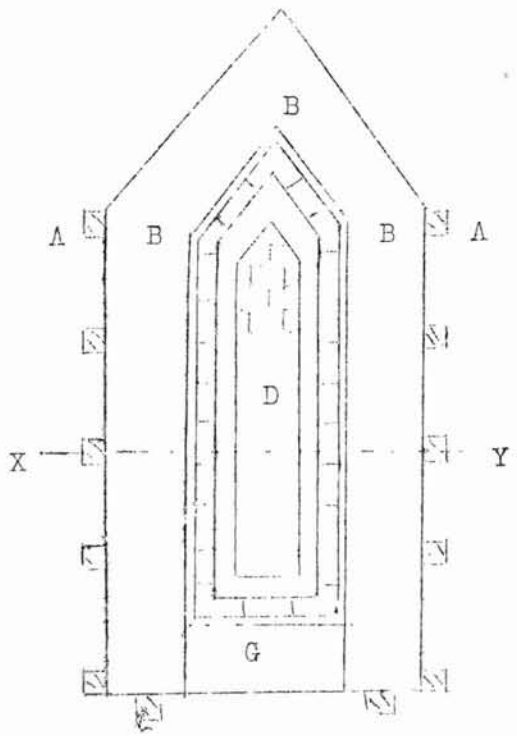
When the caisson was brought to its exact position, over the iron rod in the bed of the river, strong "spuds" or piles



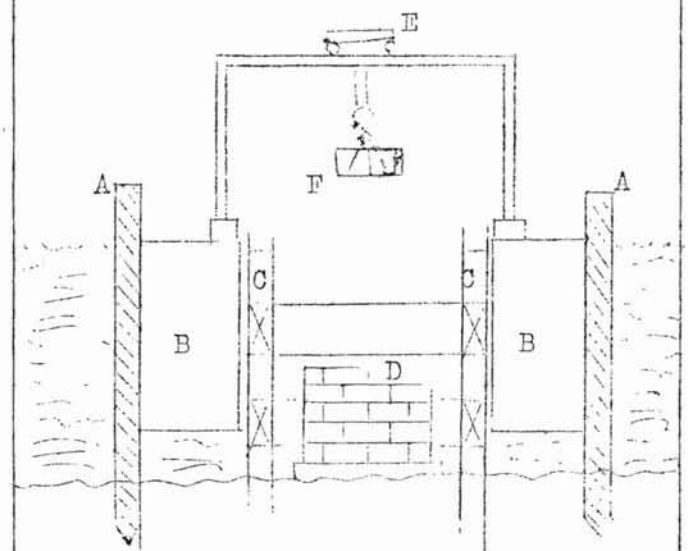
TOWING A FLOATING COFFERDAM TO PIER SITE
SHOWING BREAKWATER TO REDUCE FORCE OF CURRENT.

H–Buoy

PLAN OF FLOATING COFFERDAM.



ELEVATION OF FLOATING COFFERDAM THROUGH " X - Y "



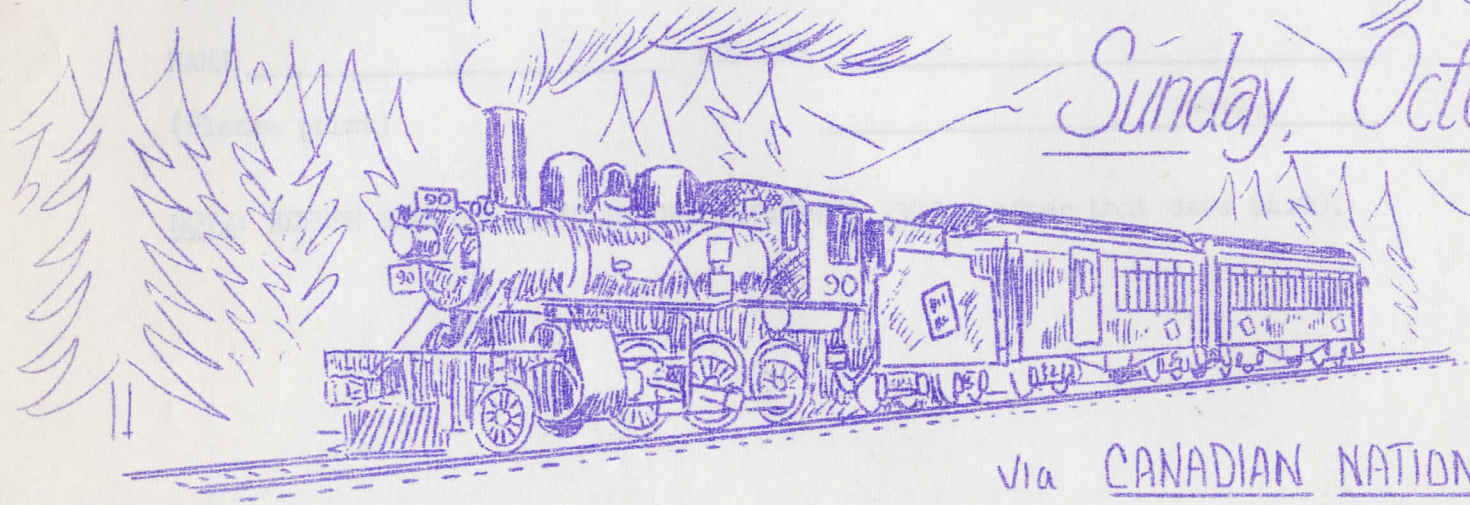
A– Spuds to hold dam in position.
B– Caissons filled with water.
C– Puddle chamber
D– Pier in course of erection.
E– Traveller to carry stones.
F– Block of stone.
G– Removable section of caisson.

were shipped down through guides into the bed of the river, thoroughly driven home by pile drivers, and these served to keep the cofferdam stationary. Sluice gates were opened, allowing water to flow into the pontoon and causing it to sink to within a few feet of the bed of the river, the piles playing freely in their guides and allowing this subsidence to take place. When the required depth was reached, strong iron bolts secured the piles to the main body of the cofferdam, and, with additional weight on the deck, rendered the whole mass, now resting on the numerous pile legs, stationary and firm. Sheet piling, reaching to the bed of the river, was then placed around the outside to prevent the current from sweeping underneath the cofferdam.

THE CANADIAN RAILROAD HISTORICAL ASSOC'N INC.

PRESENTS ITS THIRD ANNUAL

FALL FOLIAGE TRIP



Sunday, October 2nd 1955

MONTREAL to

RAWDON QUE. & return

via CANADIAN NATIONAL RAILWAYS

FOR THE RAIL PHOTO ENTHUSIASTS THIS TRIP WILL FEATURE :

- MANY PHOTO STOPS
- 2-6-0 TYPE STEAM LOCOMOTIVE
- MEETS WITH OTHER TRAINS

A SPECIAL INVITATION IS EXTENDED TO OUR FRIENDS FROM OUT-OF-TOWN

THE TRIP WILL LEAVE MONTREAL ABOUT 9:00 A.M. AND WILL RETURN ABOUT 8:00 P.M. WITH THREE HOURS AT RAWDON

THE EXCURSION PRICE OF

$3.50

INCLUDES A DELICIOUS BOX LUNCH

BEFORE SEPTEMBER 24TH - TICKETS CAN BE OBTAINED FROM

WILLIAM H. STANNARD - GENERAL PASSENGER AGENT
CANADIAN RAILROAD HISTORICAL ASSOC'N - INC.
P.O. BOX 22 - STATION "B" - MONTREAL 5, CANADA