

C.N.R. Main Line Relocation along St. Lawrence

The work being done by the Hydro-Electric Power Commission of Ontario and the Power Authority of the State of New York for the development of hydro-electric power, in the international rapids section of the St. Lawrence River, involves raising of the water level in the river between the site of the power house being built (a short distance west of Cornwall) and a point west of Iroquois, and this in turn involves considerable flooding of land on both sides of the river. Much has appeared in the daily press in regard to the effect of this flooding upon the towns of Iroquois and Morrisburg and the smaller settlements and the farms of the areas affected, the measures taken by the H.E.P.C. of Ontario to relocate residents concerned (including the provision of carefully-planned entire new towns), and the determination of the amounts of compensation to be paid, but one feature of the raised water level's effect which has received only limited publicity is that having to do with the Canadian National Rys. Montreal-Toronto double track main line which traverses the area. From a point a short distance east of Morrisburg to a point easterly of the new power house site, the present track will be covered with water, except for a short section north of Weaver Point, and the present track will be submerged in the Iroquois area also. To compensate

the C.N.R. for the loss of this trackage, the H.E.P.C. of Ontario undertook to provide a new double track line, north of the original line, and at time of writing, at mid-March, work

portion of which shows the extent of the river water as it will be when the level is raised and the flooding has taken place. The east end of the relocated line ties in with the original

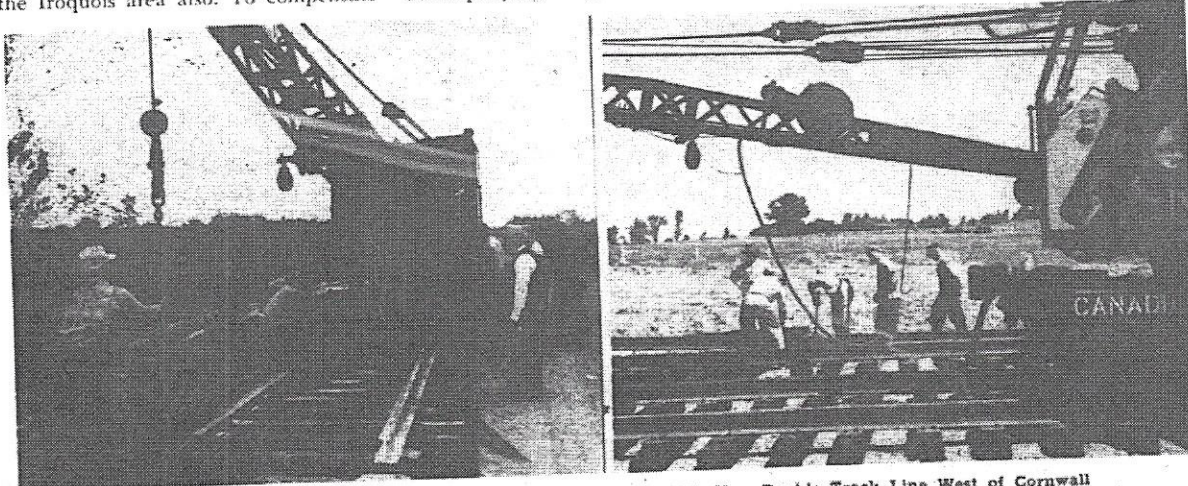


Operating a Power Spike Driving Machine in Construction of the New Line

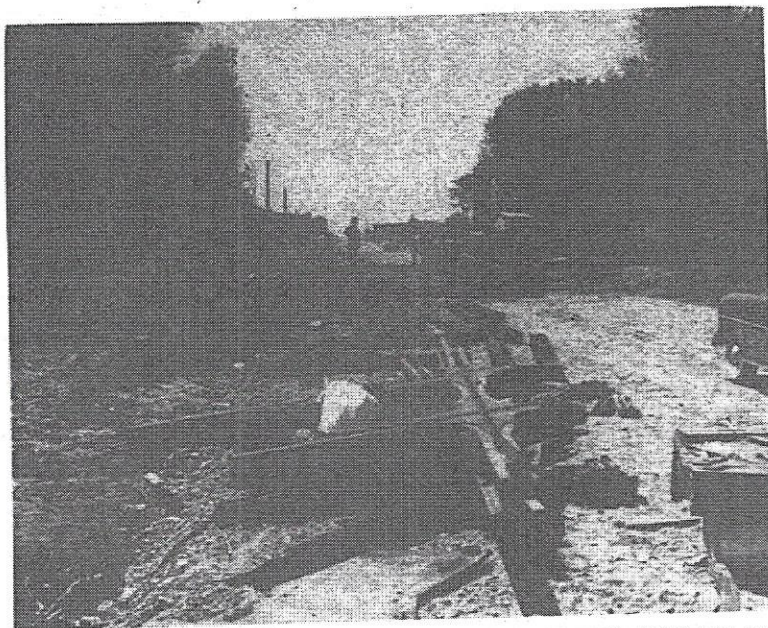
on construction of the new line is about completed.

The location of the new railway line, except as concerns the extreme east and west ends of it, is shown by the accompanying map, the solid black

line just east of Cornwall, while its west end ties in north of Cardinal, just beyond the left side of the map. Between Iroquois and Morrisburg the original line's location coincides with the new location of Ontario Highway



Two Views Showing Laying of the 132 Lb. Steel on the C.N.R. New Double Track Line West of Cornwall
Use of the crane for handling the rails reduced muscle work to a minimum.



Assembling the Diamond for Use at the Crossing of the New Line by the C.P.R. Line into Cornwall

No. 2; this is the case also for a short distance east of Morrisburg and for a short section north of Weaver Point, but elsewhere, east of Morrisburg, the original line is well south of the relocated No. 2 Highway and will therefore, as the map shows, be flooded out.

The new double track line forms part of the C.N.R. Cornwall Subdivision, St. Lawrence Division, Montreal District; at its east end it ties in with the original line at mile 65.7 (from Montreal). Where it ties in at its west end, the original line mileage is 104.6 and the new line mileage 103.2; thus the mileage of the relocated line is 39.5, and the relocated line is 0.6 mile longer than the one replaced.

For the grading of the new line, which did not present any unusual difficulties or problems, three contracts were awarded, viz., to Iroquois Constructors, C. A. Pitts, Ltd., and Robert McAlpine, Mannix, Ltd., Calgary, Alta., was the general contractor for the tracklaying and ballasting. The

main line rail employed is 132 lb., supplied by Dosco, and similar to that in the Quebec, North Shore and Labrador Ry. main line, while passing tracks and spurs are laid with 100 lb. rail. About 15,300 tons of main line rail and 1,000 tons of the lighter section were required. The track is laid with hardwood ties, given creosote preservative treatment, and tie plates are used throughout. Maximum grade is 0.5% and maximum curvature 1 deg. A very thorough job was done on the ballasting. On top of the subgrade is a 6 in. layer of gravel, while over that is 18 in. of crushed stone, with the track to be given a total of three lifts. The first two lifts were carried out by the contractor, while the final lift will be carried out by the Canadian National with its own forces. Only a short haul of the ballast was required, as it was obtained from a quarry at Iroquois. Two crossings of other railway lines were involved, viz., of the Canadian Pacific line into Cornwall, crossing the new C.N.R. line just a

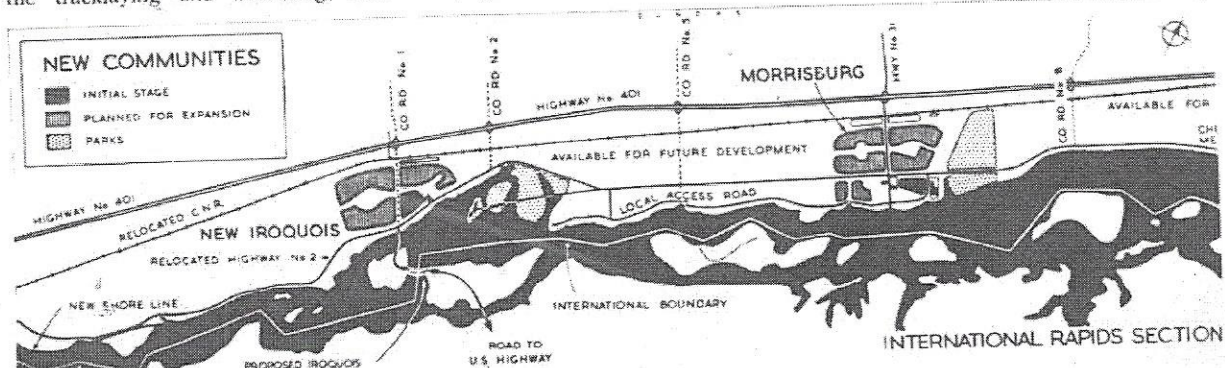
short distance west of the point of tie-in of the original and new lines, and of the New York Central Rd. Ottawa line, at a point northwest of Cornwall; this N.Y.C. line is to be abandoned, as recorded in the February issue, pg. 54. Three small bridges, 60 ft. steel spans, were required on the relocated line. In carrying out the tracklaying and ballasting work, the contractor employed labor saving machinery to large extent, including tie tampers and spike drivers. The ballast requirement totaled about 411,000 cu. yd. Cross-overs and passing tracks were installed at Morrisburg and Cornwall, and a steel water tank, removed from another location, was erected at each of those two places.

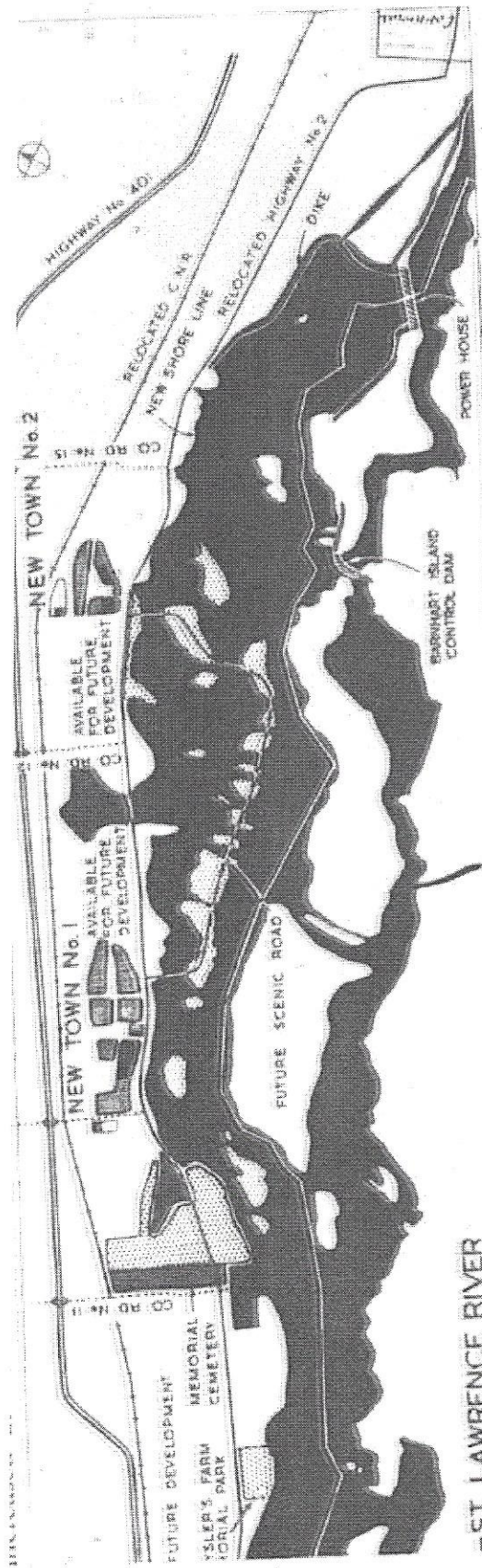
Whereas there was only one railway-highway grade separation on the original line, the residents of the area have not been backward in asking for separations on the new line, and as matters stand at present it appears that highways will be carried over the tracks at seven locations, viz., two in the Cornwall area, and at Iroquois, Morrisburg, Chrysler Memorial Park, New Town No. 1 (Ingleside) and New Town No. 2 (Long Sault).

Five new stations, of brick construction, are being built by contract; work on these started last year and the buildings are to be completed this summer. They are at Cornwall, Ingleside, Long Sault, Morrisburg and Iroquois.

Block signal installation and pole and wire line work are being handled by C.N.R. forces.

The transfer of operation from the original line to the new one will be a gradual process. In a month or two some freight trains will be routed over the new line, following which the track will be given its third lift, and probably about July passenger train operation will be commenced. Flooding of the area occupied by the original line will not occur until the summer of 1958, but removal of the original track well in advance of the raising of the water level will be necessary, in order to permit completion of dykes required and of highway relocation work.





ST. LAWRENCE RIVER

Easterly Portion of Relocated C.N.R. Main Line

CANADIAN TRANSPORTATION—APRIL, 1957