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NOTABLE RAILWAY CROSSING IN NEW BRUNSWICK

SAINT JOHN & QUEBEC RAILWAY CROSSING OVER THE CANADIAN PACIFIC RAILWAY—INTERESTING RETAINING WALL WITH COUNTERFORTS—GENERAL NOTES ON CONSTRUCTION.

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IN the location of the Saint John & Quebec Ry. it was necessary to cross the Canadian Pacific Ry. branch from McAdam Junction to Woodstock, N.B., in the vicinity of Woodstock. The latter railway runs along a slope parallel to the River St. John at about the grade

base of rail of the Saint John & Quebec Ry. was required, and a through plate girder with the floor beams and stringers set on the bottom flange of the main girders was used. After a study of the conditions, the ground plan shown in Fig. 1 was adopted as that most suitable.

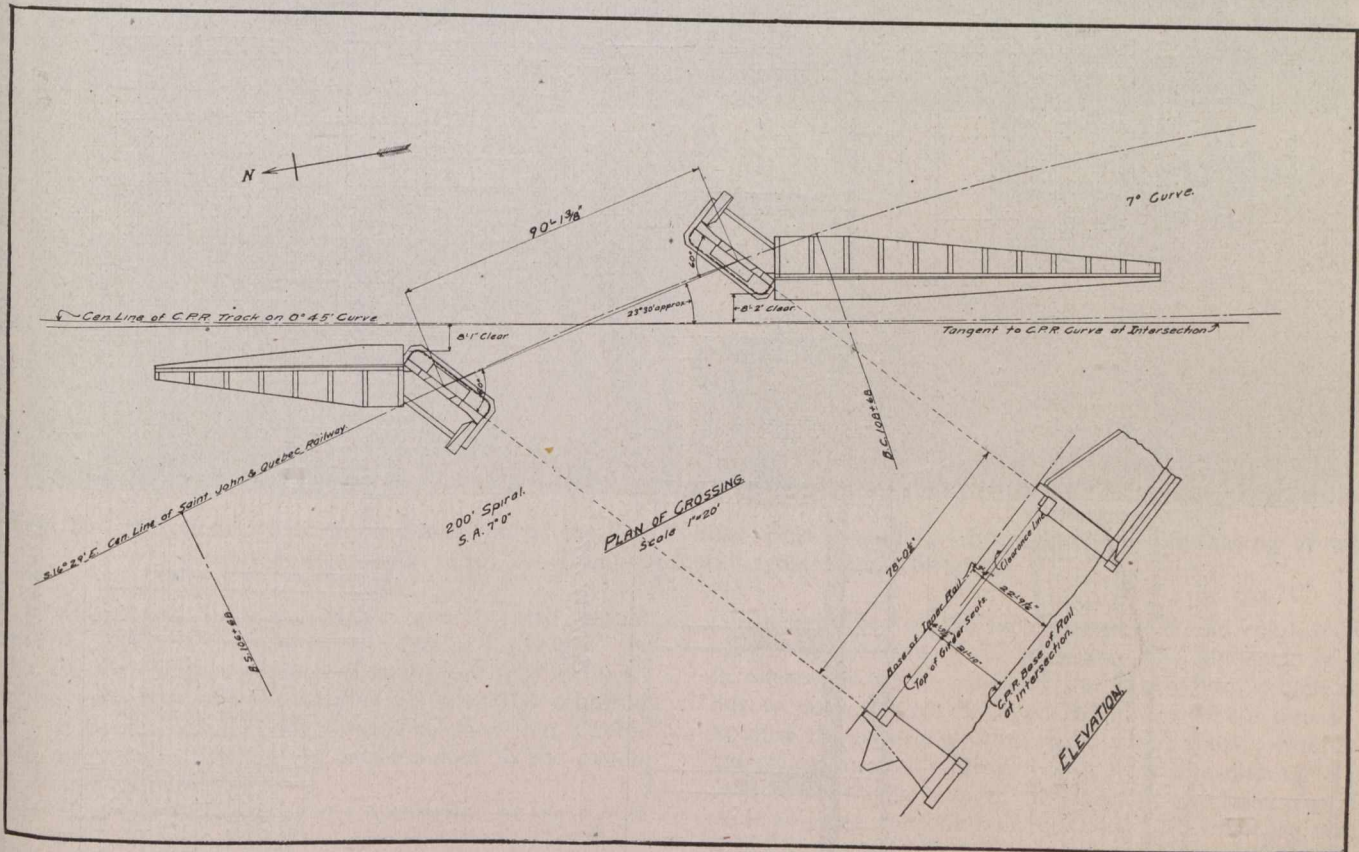


Fig. 1.—General Plan and Elevation of Crossing, Showing Alignment of Tracks.

of the natural ground. As there was no large cutting or embankment convenient for use, it was necessary to construct an embankment on the lower side of the Canadian Pacific Ry. tracks, for the support of the new road. To keep this as small as possible, the angle of crossing between the two roads was made very acute. That the grade of the embankment be kept as low as possible, the minimum distance between the bottom of the steel and the

In making these calculations the standard plans of abutments and gravity wing walls were used.

The design of the masonry for this structure was quite important and more especially the wing or retaining walls, one on each side of the Canadian Pacific Railway.

Design of Wing Retaining Walls.—As experience rather than theory is the necessary guide in building walls, and although theory would lead us to build a much thinner