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discussion as possible at earliest date.

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ERECTION OF FRENCH RIVER BRIDGE—CANADIAN PACIFIC RAILWAY.

By C. N. MONSARRAT, M. Can. Soc. C. E.

(To be read before General Section, April 16, 1908.)

The new branch line of the Canadian Pacific Railway, extending from Romford, Ont., a point about six miles east of Sudbury, on that Company's main Trans-continental line, southerly to Bolton Junction, where it connects with the Owen Sound Section, about 21 miles north of Toronto, includes a number of important bridges, one of the largest of which is that crossing the French River, about 43 miles south of Romford.

This bridge is located at a point where the river has a width of approximately 550 ft., while the depth of the water for about three-fifths of the crossing averages 90 ft. The character of the bottom is rock, with about 10 ft. of soft mud overlying it. The current is, however, very slight, being only about $\frac{3}{10}$ of a mile per hour.

In order to avoid the great expense of building a pier in the deep water, it was found necessary to locate the first pier 415 ft. south of the north abutment, where a good foundation was obtained in about 48 ft. of water. The dimensions of this pier are 9' 0" x 30' 0" at the top under the coping, which is 2' 0" thick, with an overhang of $4\frac{1}{2}$ " on all sides, and has a batter of 1 in 12 on each side for a depth of 30' 0", making the bottom of the shaft on the