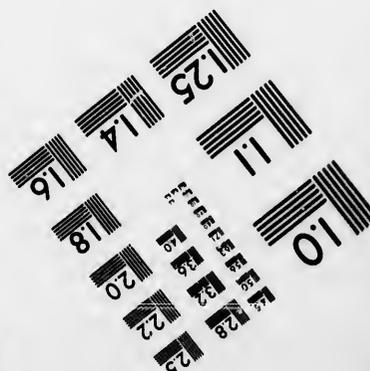
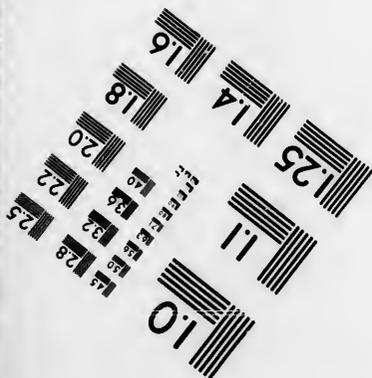
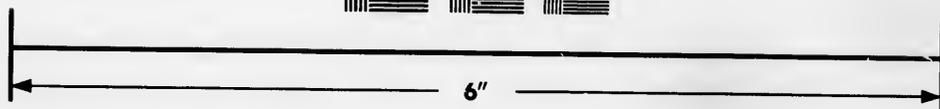
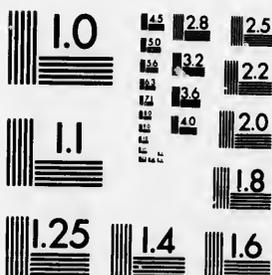


**IMAGE EVALUATION
TEST TARGET (MT-3)**



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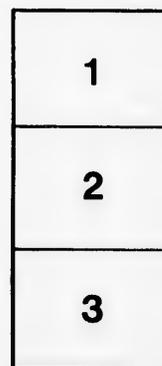
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HYDRAULIC POWER

OF

18

THE LACHINE RAPIDS,

NEAR THE

CITY OF MONTREAL.

The want of motive power for milling and manufacturing purposes is beginning to be seriously felt in Montreal. The hydraulic power supplied by the Dominion Government about seventeen years ago, as an experiment from the surplus water of the Lachine Canal, is now fully occupied by mills and factories, and complaint is made by the millers that not more than two-thirds of the water leased to them, can now be obtained. Indeed, a number of new establishments are about being erected on mill streams in different parts of the country, which would be erected in Montreal if water power could be had there. They would prefer that locality on account of the many other facilities for the transaction of a large business, for which the city is unrivalled as the financial capital, the commercial centre for the receipts and distribution of merchandize to all parts of the Province; the head of ocean navigation, the point of commencement of the great inland system of navigation, and the chief station of the Grand Trunk Railway, with its Machine Shops and Factories.

To meet this growing need, there is immediately above the city a hydraulic power which is unquestionably one of the finest and most

XX

valuable in the world. Here the entire water power of the River St. Lawrence, the outlet of the greatest body of inland water in existence, and the greater part of the Ottawa River, which is the outlet for the Thousand Lakes of the immense North West Territory, combine, and in a distance of about a mile make a descent of twenty-five feet, so as to furnish a water power estimated at four millions horse power. This enormous body of water, having its source of supply in the far interior, and not being effected by the droughts or floods which are such serious drawbacks on small or mill streams, might be the means of building up a large city of mills and factories, which is now allowed to run idly to waste. A principal reason for the neglect to utilize this natural force is the magnitude and cost of the undertaking. The development of water power on even small streams is expensive, and where the power is to be leased out to tenants some delay must necessarily take place before the returns from the investment can be made. In this case the expenditure would be large, and some time must elapse before the power could be made available, and mills established to use it. If, however, the scheme could be carried into effect in divisions, so that one portion of the works could be occupied and give a revenue before the others are commenced, it would greatly facilitate the undertaking and render it capable of being taken in hand by a Joint Stock Company of moderate capital.

The water power to be obtained is immense, and admits of being rendered available in divisions, each complete in itself. In this way a comparatively small outlay of capital will be required in the first instance, and a quicker return will be obtained. In the midst of the Lachine rapids is a cluster of islands extending the entire length thereof, which divide the river into two channels, the only navigable channel being on the south side of the islands aforesaid. The north channel, between the islands and the Montreal shore is too rocky to be ever made navigable, but is most favorably situated for hydraulic power. There is also running between the islands before mentioned a natural water course or channel for the whole length of the cluster, and by widening this channel a permanent power can be obtained on the islands alone of seventy-five

thousand horse power, for the distribution of which to mills and factories there is ample space and unusual facilities. It is to be remarked, further, that navigable water for steamboats and river craft extends close up to the lower end of the islands, and that the inundations which take place periodically in Montreal harbour do not extend thither, nor is there any obstacle to the water power being employed all the year round. It is proposed to connect these islands with the north or Montreal shore by a bridge on stone piers sufficiently strong to carry a railway train, and about fifteen feet above the water. There is a shelf of rock running quite across the river, on which the piers of the bridge can be built with great facility, while the stone for them can be had on the island, or on the island of Montreal. This bridge is to be incorporated with and form part of the dam, which is the principal feature of the second division of the scheme, the said dam being extended across the river from the islands in the rapids to the Montreal shore. It will be about two thousand eight hundred feet in length, and will give a fall of water for hydraulic power of about sixteen feet, while the shoal rocky bed of the river immediately below the dam will afford extensive space for mills and factories using the power thus supplied. The amount of hydraulic power obtained by this division of the scheme can only be limited by the want of space on which to erect mills and factories to use the same. The third division of the scheme consists of a mill stream of four hundred and fifty feet wide by fourteen feet deep, taken from the Montreal end of the dam before mentioned, and running inland a few hundred feet and then continuing down parallel with the river bank, supplying hydraulic power thereby to all the mill sites contemplated.

It is believed that the employment of the hydraulic power of the Lachine Rapids, as described, will give an enormous power, and a large return for capital invested.

By this project it is calculated that, besides the immense power obtained on the Island before mentioned, the whole of the water of the north channel, between the Islands and the Montreal shore, will be rendered available for hydraulic power to the enormous extent of half a

million of horses, in immediate connection with the Port and Harbour of Montreal, which forms the connecting link between the Ocean and the whole North-Western interior of the Continent.

From the Islands to the south shore of the St. Lawrence there is a space of about three thousand feet, with shallow water and rocky bottom, the site being admirably adapted for a bridge, with facilities for railway and ordinary traffic.

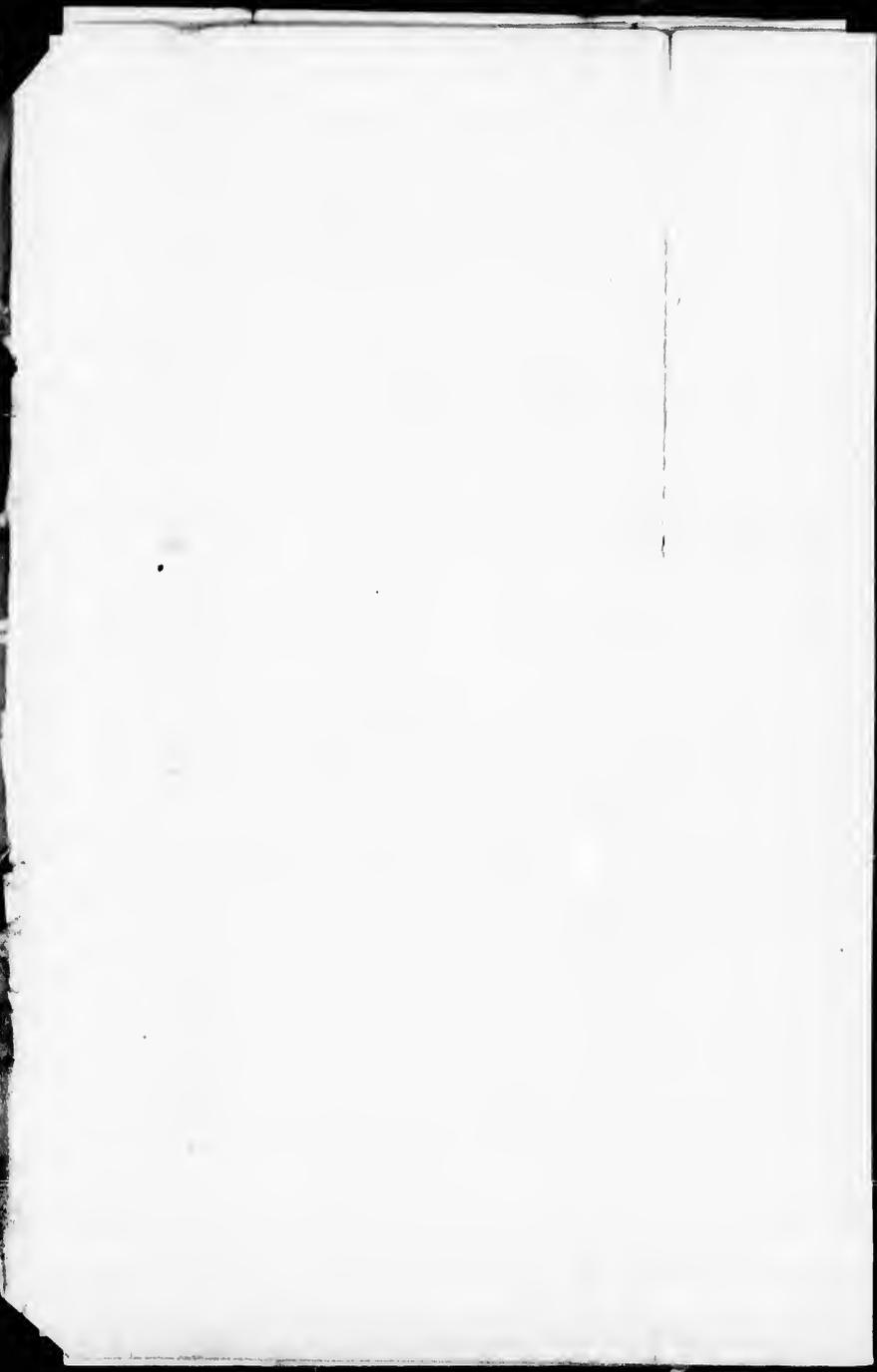
The present appears to be a very favorable moment for the utilization of this property, because the Government of Canada has, for the first time, adopted the principle of protection to home industries. This policy may now be considered as firmly established, and it will unquestionably give such an impetus to the creation of manufactories as, when taken in connection with the opening out of the North-Western Territories of Canada, must cause an enormous demand for all cheaply available motive power.

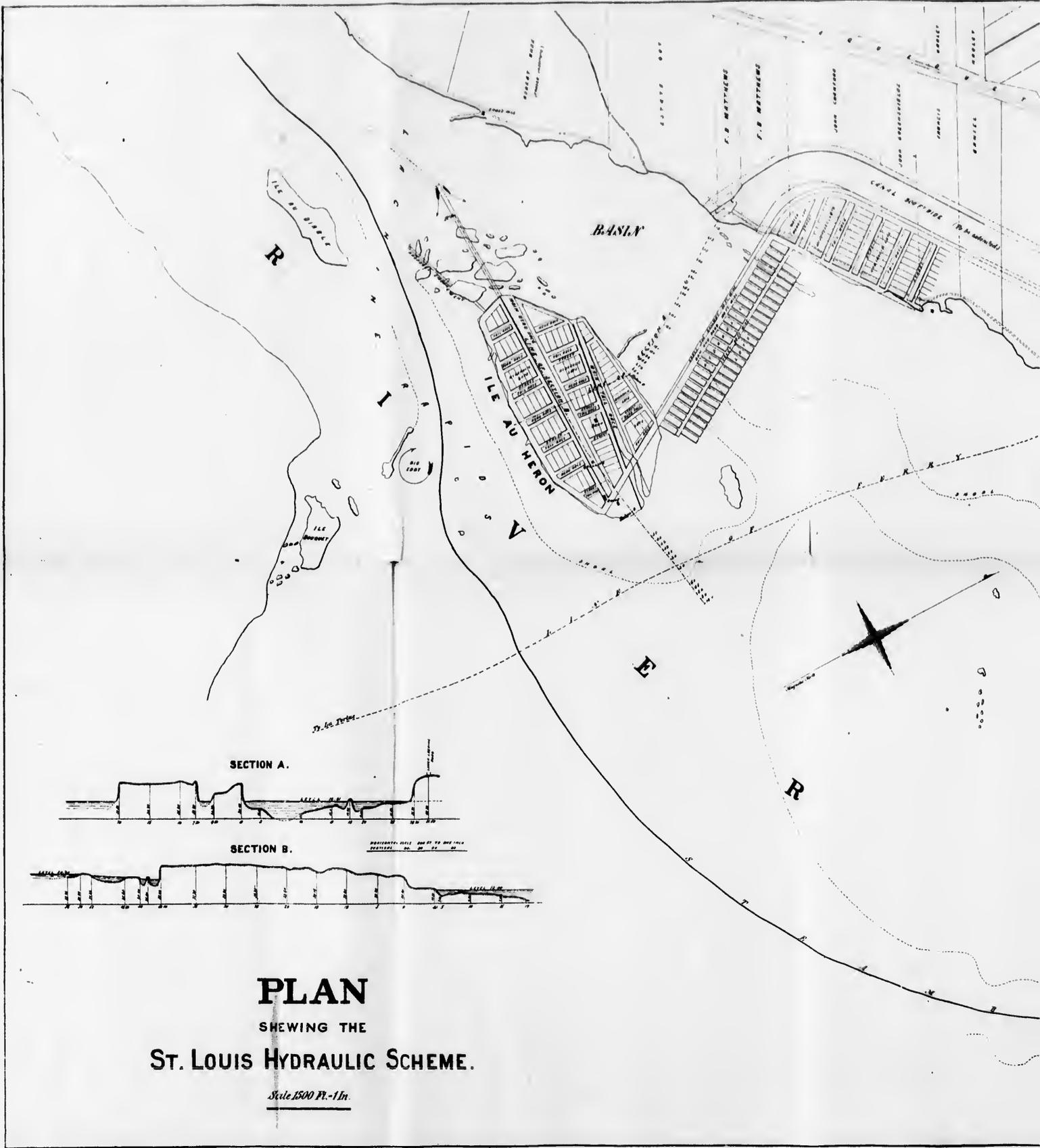
MONTREAL, 1st January, 1880.

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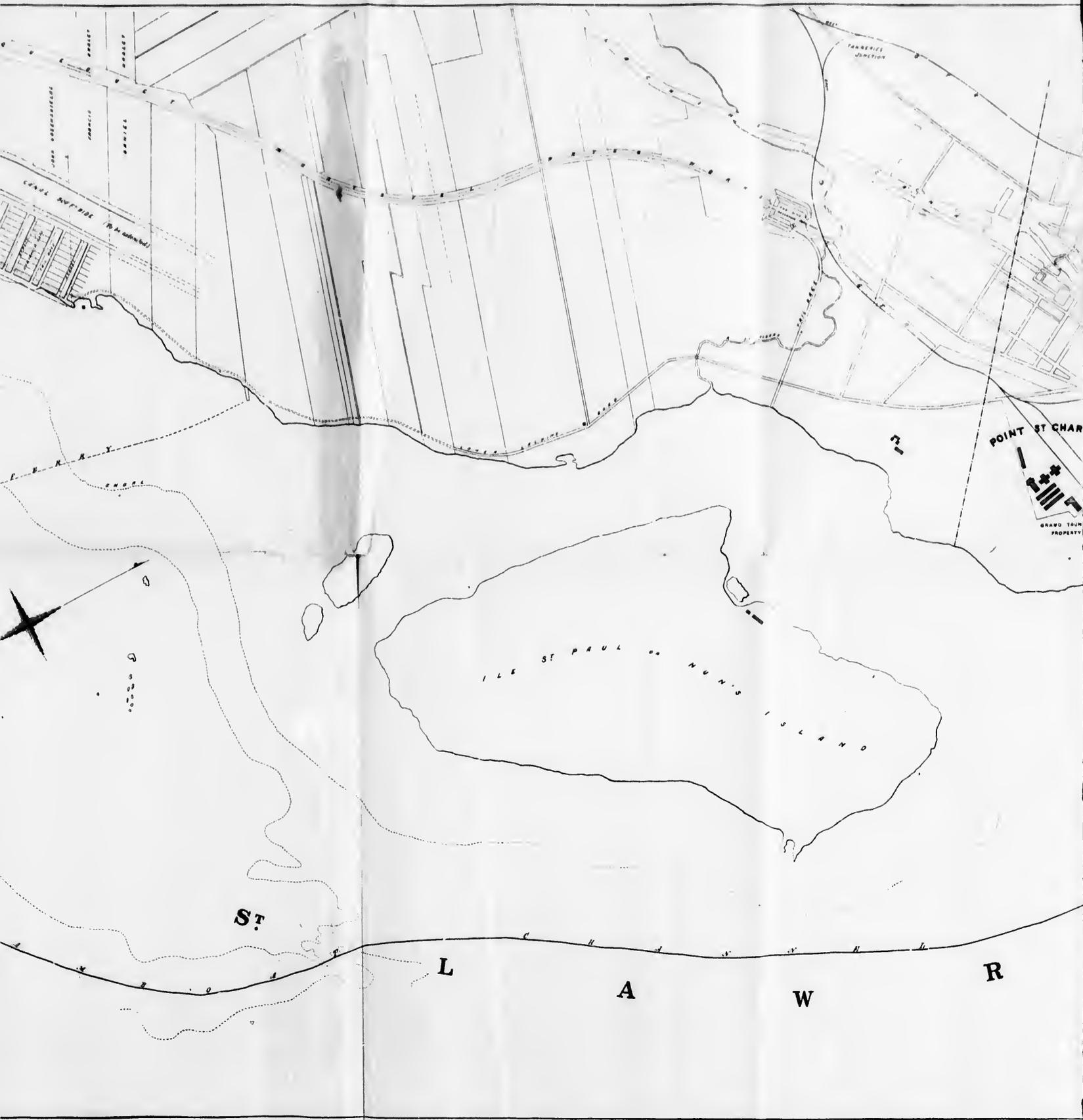
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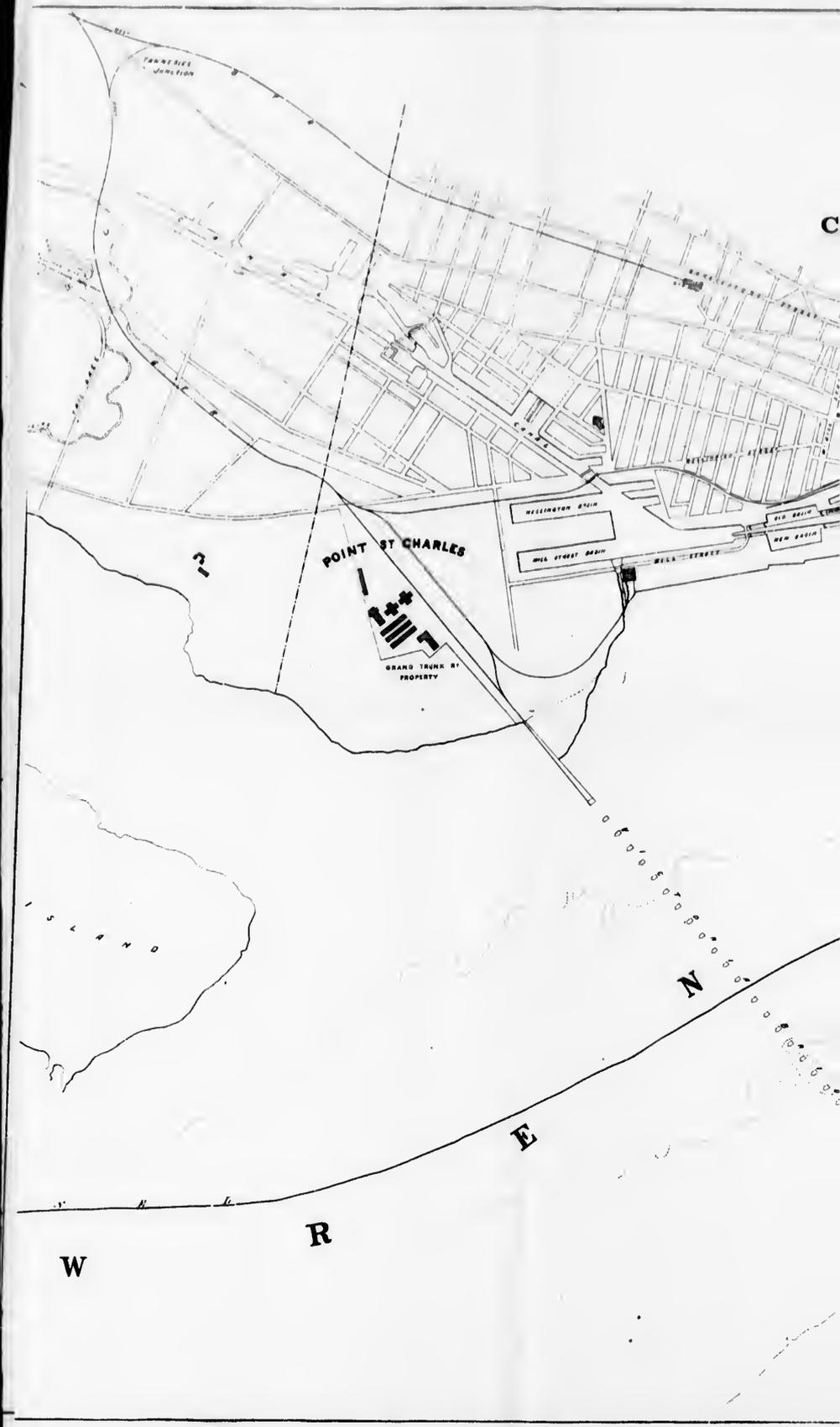




PLAN
 SHEWING THE
ST. LOUIS HYDRAULIC SCHEME.

Scale 1500 Ft. = 1 In.





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