

Electric Railway Department

Proposed Hydro Electric Radial Railways in the Niagara Peninsula.

A number of municipalities concerned in the proposed construction of radial railways between Port Credit and St. Catharines, and between Welland and Bridgeburg, will be asked to vote, on Jan. 1, 1917, to authorize the councils to enter into agreements with the Hydro Electric Power Commission of Ontario for the construction and operation of such lines.

The Port Credit-St. Catharines line is intended to connect with the proposed hydro radial line between Toronto and London, already authorized, at Port Credit, and the municipalities interested are,—Toronto, Trafalgar, Nelson, East Flamboro, West Flamboro, Barton Saltfleet, North Grimsby, Clinton, Louth and Grantham townships; Grimsby and Beamsville villages; Oakville and Burlington towns, and Hamilton and St. Catharines cities. The total mileage from Port Credit to St. Catharines is 59.57. The route proposed is as follows,—

Port Credit-Hamilton section: From a point approximately one mile west of Port Credit on the projected Toronto-London line it is proposed to parallel the Grand Trunk Railway to near Clarkson, thence southwesterly across the Toronto-Hamilton highway to Con. 3, thence through same to Oakville, where Oakville Creek will be crossed near Sheddon Ave. From Oakville the line will strike straight for the Hamilton Radial Ry. crossing of Bronte Creek, from which it is proposed to parallel the Hamilton Radial Ry. to Burlington. Through Burlington the line will cross the town in the neighborhood of Wellington Ave., and thence direct to a crossing of the old Desjardins Canal at Valley Inn;

Hamilton City section: Through Hamilton it is proposed to parallel the G.T.R. main line on the west side between the railway and the highway. Through Harvey Park and Dundurn Park the line will be south of and as close to the G.T.R. as possible, and will continue easterly, crossing Barton St. near Greig St., and keeping on the south side of Barton St. to the corner of Tiffany St., where it will cross Barton St. and continue northeasterly across Bay, Park, Murray and McNab Sts. and James St. between Murray and Stuart Sts., thence in the same general direction across Hughson, Mary, Catharine, Ferguson and Wellington Sts., at which latter point it will turn and follow south of Ferrie St., across Victoria and Emerald Sts. to a point just north of the T.H. & B.R. spur, which it will parallel on the north side to Sherman Ave., thence it bears northeasterly to the south side of the Hamilton and Northwestern Ry., which it will parallel to the city limits;

Hamilton-St. Catharines section: From Kenilworth Ave., Hamilton, just south of the Hamilton and Northwestern Ry., the line will turn and bear southeasterly to midway between the G.T.R. Stoney Creek station and the village, thence to about ¼ mile north of Fruitland and at about the same distance north of the Hamilton stone road as far as Winona, from which it will parallel the G.T.R. on the south side through Grimsby and as far east as the Grimsby and Clinton township line, from which it will bear southeasterly to Beamsville, just north of the Hamilton stone road, and thence parallel the same

to Jordan. From Jordan to the town line between Louth and Grantham it is proposed to follow in the neighborhood of the road allowance between concessions 6 and 7 of Grantham Tp. to where it crosses the G.T.R., thence southeasterly to near Victoria and Permilla Sts. and along Permilla St. to the west end of the new bridge over the old Welland Canal.

Following is an estimate of the cost of construction, equipment and operation, with estimated operating revenue,—

Capital Cost:	
Right-of-way, track construction, and buildings	\$8,935,363
Sub-station, car shops, and rolling stock	2,425,000
	\$11,360,363
Annual Operating Revenue:	
Passenger revenue	\$760,000
Freight revenue	545,000
Miscellaneous revenue	57,000
	\$1,362,000
Annual Charges:	
Operating expenses	\$570,289
Maintenance expenses	152,193
	\$722,482
Total operating and maintenance expenses	\$722,482
Interest charges	568,018
	\$1,290,500

The class of construction covered by the estimates is based upon a single track line of 80 lb. rails on private right of way for practically the entire distance. The line will be double tracked through Hamilton, with practically no level highway crossings, thus allowing high speed right through the city. By connecting with the Toronto-London line at Port Credit it will be possible to utilize the high speed entrance of that line to the large radial terminal to be provided in the centre of Toronto. The Toronto entrance will have no level highway crossings between the centre of the city and New Toronto, and will utilize a steel viaduct along the harbor front, a tunnel under the exhibition grounds, an open cut through South Parkdale, and an elevated embankment from Sunnyside to the Humber River. Ample allowance is said to have been made to cover a very high class of construction, and 80 lb. steel rails, concrete culverts, steel bridges and other similar structures are designed to carry, in an economical manner, the heaviest types of freight cars now in use on steam railways. Proper station facilities, freight sheds and team tracks have been provided for in the various municipalities, and especially in Hamilton, where provision is made for a passenger terminal of sufficient size to accommodate the other lines which are proposed for that district.

The 1,500 volt direct current system of power has been estimated upon, with 4 substations located at various points between Port Credit and St. Catharines. This voltage and substation spacing will ensure ample power supply to heavy freight trains. The following equipment has been estimated upon,—

30 3-compartment, all steel, passenger motor cars.
6 suburban passenger motor cars.
15 passenger trailer cars.
4 express motor cars.
2 motor work cars.
10 60-ton steel locomotives.
350 freight cars.

The furnishings of the passenger cars will be of a high standard, and approximately 500 h.p. in motor capacity on each car will allow high speed even when a trailer is hauled.

It is anticipated to give practically hourly service between Toronto and St. Catharines, with a suburban service for a few miles both east and north of Hamilton. Limited cars, making few stops between termini, will be run at certain hours to take care of through business, and these cars should, it is claimed, make practically the same running time between Toronto and St. Catharines as is now in effect on the G.T.R. Local cars will, of course, be run in addition to the limited trains, and these will stop at approximately one mile intervals. The 10 locomotives provided for in the estimates will be used to haul heavy freight trains, and it is anticipated that from 3 to 6 round trips a day will be required to handle the freight business which has been estimated. In addition to this, express cars will also be used to handle light package, milk and freight business. These cars can make frequent stops along the line and collect milk cans, farm produce, etc., at points convenient to the residents of the different sections.

Following are the municipalities to vote on the project, with the total amount of debentures to be issued by each for deposit with the commission under the agreements,—

Toronto Township	\$243,087
Trafalgar Township	538,735
Nelson Township	374,812
East Flamboro Township	266,626
West Flamboro Township	66,669
Barton Township	284,484
Saltfleet Township	1,002,296
North Grimsby Township	424,077
Clinton Township	473,746
Louth Township	563,595
Grantham Township	128,280
Grimsby Village	101,817
Beamsville Village	51,469
Oakville Town	203,098
Burlington Town	144,536
Hamilton City	5,869,286
St. Catharines City	623,750

Total \$11,360,363

The Proposed Welland-Bridgeburg line, via Humberstone, Port Colborne and Fort Erie, concerns Crowland, Humberstone and Bertie townships; Humberstone, Port Colborne and Fort Erie villages, and Welland and Bridgeburg towns. The route proposed is as follows,—From East Main St., Welland, southward over South Main St. to east of the Welland Canal at the Michigan Central Rd. bridge, thence along the east bank of the canal through Humberstone and Port Colborne. From Port Colborne eastward, midway between the G.T.R. and Lake Erie, as far as a point south of Sherks, thence southeasterly to the northern limits of Crystal Beach, thence to the south side of the G.T.R. a short distance east of Ridgeway, thence following the G.T.R. on the south side past Crescent Beach and Erie Beach, thence parallel to the old Huron & Erie right of way to Fort Erie. From Fort Erie northward along Niagara St. as far as the north boundary of Fort Erie, thence along the north side of the Erie & Niagara Ry., thence northward across the G.T.R. and M.C.R. to Central Ave., Bridgeburg.

Following is an estimate of the cost of construction, equipment and operation, with estimated operating revenue,—

Capital Cost:	
Right-of-way, track construction, and buildings	\$1,566,216
Sub-stations, car shops and rolling stock	642,500
	\$2,208,716