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Toronto as an Airport

First the canoe, the boat and the foot-path ;
Then the ship and the ship-of-the-desert,
plus what went before ;
Then the highway and railway, plus what went before ;
Then the airship and the airways, plus what went before.

Toronto has the railways.
It has the highways.
It has the waterways

What about the airways?

Different Times, Different Modes of Travel

The sites of almost all great cities have been at points where transportation was convenient and trade routes met.

Originally this usually meant location on navigable waters. To this day forward-looking cities, located on the sea or inland navigable waters, incur much expense in order to keep their facilities for transportation by water in advance of requirements.

Then came railroads. Cities even on valuable water fronts spent large sums in order to insure that they might be railway transportation centres. Now, while the rail transportation has not displaced water transportation, few cities can hope to become metropolitan centres without the co-ordination of efficient land and water transportation.

With air transportation any city may become a port. Can any existing great commercial and industrial centre, even if it now possesses adequate land and water transportation, afford to neglect the development of air-borne traffic?

A Sketch of Flying Progress.

When Langley, in September, 1903, attempted to fly, and his machine crashed, he was ridiculed by the entire world for attempting what was considered impossible. In December of the same year the Wright Brothers successfully accomplished the first aeroplane flight.

Soon after the commencement of the World War, it was evident that the aeroplane was to be a great factor in deciding the issue and almost from the first it took the place of cavalry as the "eyes and ears of the army". Each participating nation used every endeavor to increase the speed, carrying capacity, etc., of its aeroplane fleet, and the rapid growth of aeroplane traffic since the War has largely been made possible by the experience and knowledge gained during the conflict.

It is fairly obvious that any conveyance that will carry men and commodities in comparative safety at the rate of 100 miles per hour must have a place in any civilized country. The main question is—will it carry sufficiently large loads, will the goods be carried safely and on schedule?

A large modern transport plane, weighing 5,200 pounds, can carry a load of 4,000 pounds. A smaller plane, weighing 1,850 pounds, can carry a load of 1,425 pounds. In Canada the total aircraft mileage has risen from 255,826 miles in 1925 to 829,010 miles in 1927; passengers carried from 4,897 to 18,932; freight and express carried in 1927 was 1,003,384 pounds and in the first six months of air mail operations ending June 30th, 1928, over 90,000 pounds of mail was carried without loss or damage. During the fiscal year 1926, the U. S. A. Government operated air mail flew 2,547,992 miles, over a million of which were flown at night with but two fatalities, and percentage of "on time" arrivals has crept up until at present it equals mail train records. The machines of the Imperial Airways, Ltd., of Great Britain since 1924 have flown over two and a half million miles and carried 68,000 passengers without a serious mishap, and the increase of passengers carried in the year ending March 31st, 1928, was 47% over the previous year, with freight traffic showing a similar increase.

It is now generally conceded that the aeroplane is a coming factor in commercial and passenger transportation. Cities desiring to utilize this method of rapid transit must provide facilities for aeroplanes, either through privately or municipally owned airports.

Should the Airport be Publicly or Privately Owned?

Croydon, the main airport in Great Britain, is controlled by the British Government and most of the commercial flying in that country has been subsidized by the Government. There are aerodromes at Manchester, Nottingham, Newcastle, Glasgow, Bristol, Birmingham, Leeds, Plymouth and several other cities which although not municipally owned are recognized and in some cases assisted by the cities as terminal aerodromes for their municipalities. Belfast, however, has a municipal airport, and Liverpool, Cardiff and Leicester are making preparations for this purpose.

In addition to government airports, in Germany, every great city has provided its own aerodrome.

The Report of the U. S. Department of Commerce, May 1st, 1928, showed that, of the total number of airports then in use, 319 were municipal airports and 263 were commercial. There were, in addition, a large number of auxiliary, intermediate and army and navy ports, which, along with 600 projected ports, will bring the total to about 1,800.

In addition to private commercial airports, many of the larger United States cities have already made provision for a

municipal aerodrome or are now doing so. *Cleveland* has had a municipal airport for three years and now has a traffic of about 400 planes per week. *Chicago* has had a municipal airport for over a year, with 800 landings and departures per week. It is now overcrowded and plans are being made for doubling its size and creating another on the lakefront. *Boston* has had a municipal airport for 8 years and has had to double the field in size this year. *San Francisco's* municipal airport was dedicated in May, 1927, and now has an average weekly traffic of 400 landings and 600 passengers. *Detroit* has a municipal airport which was officially opened in the fall of 1927, but is still only partially developed. The establishment of a large County-City airport is now under consideration there. *Buffalo's* municipal airport was opened in September, 1926, and has an average weekly traffic of about 50 ships. *Philadelphia's* municipal airport has been in existence since September, 1926, but has as yet been only partially developed. It has an average weekly traffic of about 35 strange ships. *Los Angeles, Cincinnati* and *Newark* now have municipal airports under construction and practically completed. Some other United States cities with municipal airports now operating or under construction are: *Albany, Rochester, Syracuse, Pittsburgh, St. Paul, Indianapolis, Seattle, Spokane, Sacramento, Oakland* and *Portland*.

Canada's air traffic has had a natural growth. The field of operation has been mainly in the work of aerial forest patrol and surveying, mining exploration and aerial photography, in the latter of which it is said to lead the world. Air mail, express and passenger traffic has been a recent development. Some Canadian cities have begun preparations for municipal or quasi-municipal airports, but in general private concerns have met the need. In *Montreal* the Dominion Government is developing a large air terminal at St. Hubert and, in addition, there are three privately owned landing fields. *Winnipeg* has recently dedicated the Stephenson Flying Field. *Hamilton* has acquired an area for this purpose and is developing it in conjunction with a private company. *London* voted on the question of establishing a municipal port last January and the project was defeated, but a port has been established by some of the public-spirited citizens under the auspices of the Chamber of Commerce. The *Border Cities* are developing an airport under the auspices of the Chamber of Commerce in conjunction with the Walker Estate on land leased from the latter. In *Toronto* the fields at Dufferin Street and at Leaside are, the Bureau understands, on leased land under private control. The city gives a grant to the Flying Club, which has its headquarters at the latter field.

The Dominion Government, at best, might establish ports at strategic locations across the country, but can scarcely be looked to for establishment of commercial ports in all cities or municipalities. Intermediate airports along regular air lines will be required in the future in order to insure safety, and possibly this will be undertaken by the provinces and financed through the tax on gasoline used by air machines in a manner similar to present highway financing. It seems likely therefore that the larger cities will have to depend on privately controlled airports or else construct municipally owned ones. Privately controlled airports on land held under short lease offer no guarantee of permanency to the municipality. In addition, the large element of monopoly involved due to dependence on obtaining a comparatively large area in a favorable location and to the fact that competing and independent lines have freedom of the air but must depend on a landing place in order to do business in any community, would seem to point to the necessity, in order to protect the community, the travelling and shipping public, of establishing an airport either under municipal ownership and operation or under private ownership and operation in conjunction with municipal aid under existing legislation and, in the event of the latter, the municipality should have the right of regulation as to landings, etc., and should also safeguard itself by the right of purchase at the end of a stipulated period.

What are Some Requirements of a First-class Airport?

1. Convenience of location—

Croydon is about 10 miles from Trafalgar Square, London; Le Bourget field is 7 miles from the centre of Paris; Templehof is 15 minutes from the heart of Berlin. The municipal airport in *Cleveland* is 8½ miles, or 25 minutes, from the centre of the city. In *Buffalo*, 9 miles; in *Cincinnati*, 5 miles; in *Detroit*, 5½ miles; in *Boston*, 20 minutes; in *Portland*, 1½ miles from centre of city; in *St. Paul*, 7,500 feet from the post office; in *Spokane*, 15 minutes from centre of city; in *San Francisco*, 13 miles from city's centre; in *Los Angeles*, 13½ miles; in *Chicago*, 12 miles. ("Too far" is the remark of the Bureau's correspondent.) *Chicago's* proposed new airport, however, will be on the edge of Lake Michigan in line with the terminus of a dozen railroads. The *Newark* airport will be only 20 minutes by automobile from Broadway when the new highway is completed.

Speed is the essence of air transportation and it would be useless to save an hour or two flying from one city to another if the greater part of an hour were consumed travelling from the airport to the centre of the city of destination. Any time in excess of 30

or 40 minutes from downtown is foolish economy. One European city abandoned an outlying airport and razed a block of buildings to place its airport near the heart of the city.

The airport should be on a good highway and when possible should be convenient to steam or electric transportation or both. It requires telegraph, telephone and radio service and a convenient water supply.

Many municipal airports are located on the waterfront. The Newark port adjoins the municipal docks and ship basin at Port Newark. Chicago's proposed new port is to be on filled land on the edge of Lake Michigan. Baltimore's proposed new port is on the waterfront. St. Paul's port is located along the river. Oakland's is on the water's edge. Milwaukee at the mouth of the river. In Portland and San Diego the airports are being developed as part and parcel of the harbour, the authorities taking the position that a port is a port whether for marine or aerial traffic. A waterfront location no doubt has advantages since it adds to the ease of location and makes it possible to provide facilities for land and water planes close at hand. A clear approach is provided in one direction and the nuisance which the noise of many planes may create in a residential district is overcome. On the other hand, it is possible that most planes in use here in the future will be amphibian in character, making a land port sufficient, so that if fog and smoke conditions are bad any advantages of a harbour location may be outweighed. Prevailing winds in Toronto in winter are northwest and west and southwest and west in summer so that if smoke conditions, etc., are troublesome, they are likely to be less so in a western location, whether at waterfront or inland.

2. Sufficient area—

Croydon will occupy an area of about 400 acres. Cleveland's municipal airport is 1,000 acres in area; Buffalo 518 acres; Cincinnati 959 acres; Detroit 225, with possible future addition of 270 acres; Boston 250 acres; Los Angeles 640 acres; Chicago 320 acres; San Francisco 150 acres; Philadelphia 111 acres; Windsor, Ont., 640 acres; Hamilton 200 acres; London, Ont., 140 acres; Newark will ultimately occupy 500 acres, but the first section to be used will be 160 acres.

The area should be chosen with a view to future expansion and should be of solid level ground, preferably with good turf and either well drained or capable of being well drained. Many experts state that runways into the wind of about 2,500-3,000 feet are desirable, although many machines operate successfully in smaller

space. Any future developments along the line of increasing the rapidity of rate of climb will, of course, make possible smaller airports, but, on the other hand, provision for lighter than air machines must be considered.

3. Visibility and approachability—

When any choice offers, the landing field should be a location as free as possible from smoke and fog and near some natural or prominent landmark, such as railway line or harbour, etc., easily discerned from the air. According to the Meteorological Office, fogs are rare in Toronto and would not average three days a year, although foggy weather on the lake off the island shore is more common.

As the presence of air obstacles surrounding an airport reduces the available landing area by about seven times the height of the obstacle, the character of the neighborhood surrounding airports is an important point.

A first-class airport also requires aeroplane shelters, repair shops, machine shop, gasoline service, waiting rooms for passengers where food may be obtained, cargo transportation terminal, parking space for automobiles, administration and control offices, meteorological stations and quarters for the personnel. The future of commercial airports in Canada will also require lighting systems for night flying.

What Capital Outlay Would be Required?

This depends largely on the area acquired and the price paid per acre. The buildings and equipment at first need not be elaborate. In regard to the price of land, it should be considered that in a growing city a wisely chosen piece of ground is not likely to deteriorate in price and, even if the future development of the aeroplane renders the large landing field unnecessary, the investment is not likely to result in a heavy loss as the land will be saleable for other purposes.

The Buffalo airport cost \$416,088 for the land and \$405,284 for improvements. In Chicago about \$300,000 has been spent on the field to date and the proposed new field is expected to cost about \$5,000,000. In Detroit about \$200,000 has been spent on the field and equipment to date. In Cincinnati the land cost \$250 per acre and the bond issue of \$500,000 is expected to cover land and improvements. In San Francisco the cost of putting the field in shape was about \$250,000. In Philadelphia the field is on city-owned land and the cost of putting it in shape is estimated at \$125,000. St.

Louis voted, by 6 to 1, on August 7th of this year to take over a private port which has been operating since 1921. The original field consists of 246 acres and an option is held on an additional 447 acres. The city will acquire the land for \$485,000, and cost of improvements contemplated by the city will amount to \$1,463,000. Baltimore contemplates a 1,000-acre development at a cost of \$4,000,000. In Hamilton 200 acres have been acquired for \$200,000, and a further \$150,000 is expected to be required for development.

Would an Airport Operate at a Profit?

From information received as to revenue and operating costs of municipal airports in existence, it would appear that, on a basis of the present development of air travel, the port would not likely pay operating charges let alone any interest on capital invested. Operating costs are, however, fairly low. In Cleveland this is \$13,000 per annum; San Francisco \$30,000; Chicago \$80,000; Buffalo \$65,350. What the future will bring forth, however, no one can even guess.

Before the ratepayers are asked whether or not it is advisable for Toronto to have a municipal airport, data on location, capital outlay, estimated operating expenses, etc., should be obtained if a wise choice is to be made.

Should not the City Council appoint a committee to look into this important matter, or else, as the location of the airport will have a bearing on traffic problems and is related to City Planning, ask the City Planning Commission to take the matter under consideration?