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TORY
FOR MAYOR



THE ONE TORONTO TRANSIT PLAN

SURFACE SUBWAYS FOR **TORONTO**

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SURFACE SUBWAYS FOR TORONTO

THE PROBLEM

Toronto's liveability, affordability and functionality is being effected by our inability to move.

Most cities our size in North America have about 25 lanes of freeway going in and out of the core. We have six, ten if you count the Don Valley Parkway.

Most cities in Western Europe have about 50 km of transit for every million people. Toronto has about half that.

Toronto has a Western European level of freeways, and a US sunbelt-city level of transit. That is simply the wrong mix. And that's why transit and traffic congestion is so bad in Toronto.

The only alternative to deal with our growth is to expand, significantly, our transit system. But subways are immensely expensive. We need another solution.



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THE SOLUTION

Fortunately, Toronto is blessed with an extensive network of surface railtrack. Seven lines go in and out of Toronto in a radial pattern – all of them under public ownership.

Surface rail subways are not a new concept to Toronto. Nearly one fifth of Toronto's current subway network already exists above ground.

Fig. 1. GO rail lines in Toronto



GO currently uses its lines to run rush-hour, one-way commuter-rail-style service. And now, after almost forty years, the Government of Ontario is getting serious about using these as 'surface subways,' which will provide all-day, two-way, frequent service that people inside the City can really use.

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HERE'S HOW METROLINX CHAIR ROB PRICHARD RECENTLY DESCRIBED THIS EXCITING SOLUTION:

A key priority initiative that the Premier outlined is what we call Regional Express Rail – 15-minute electric train service across the GO rail network. This is vitally important to us. It would move the most people at the least cost. It will help to alleviate highway congestion across the GTHA. The project contemplates making the GO train corridors virtual “surface subways” with service so frequent and fast that the trains became an irresistible substitute for driving, thus significantly mitigating traffic congestion. Imagine going to the GO station confident that the next train will be along soon, just like when we go to a subway station. How liberating and convenient that will be.

*Robert Prichard
Transforming the Way We Move
Address to the Empire Club
April 23, 2014*

The Government of Ontario and Metrolinx are moving to build Regional Express Rail (RER) across the region, upgrading existing GO trackage to provide all-day, two-way frequent electrified surface subways using new vehicles that can, for example, get from Rexdale to downtown in approximately 25 minutes.

THE GOVERNMENT OF ONTARIO SET OUT THE FOLLOWING POLICY IN THE 2014 BUDGET:

The province has asked Metrolinx to begin work immediately to examine opportunities to move GO service towards a regional express rail, providing fast and frequent electrified service on all corridors at intervals as frequent as 15 minutes. This would represent a game-changer in how people move about the region, and enhance ridership and efficiency on GO transit and other projects that connect to the network as well.

2014 Budget, p. 76

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HERE'S MORE FROM METROLINX CHAIRMAN ROB PRICHARD:

A key priority initiative that the Premier outlined is what we call Regional Express Rail – 15-minute electric train service across the GO rail network.

This is vitally important to us. It would move the most people at the least cost. It will help to alleviate highway congestion across the GTHA.... The GO Regional Express Rail initiative is the next natural step in our progression: from a commuter service, to two way all day service on Lakeshore, to electrified Express Rail on all seven corridors within a decade. For us at Metrolinx, it is the realization of a central element of our vision reflected in The Big Move. It will transform the way the region moves: fast, convenient, safe and reliable, building on our Passenger Charter and customer centric approach to service.

I hasten to acknowledge we have a decade of work ahead of us to make this vision a reality. But with sustained and dedicated funding in hand, we can and will do it. And it will transform the way we move.

*Robert Prichard
Op. cit.*

Extensive work has been, and is being done, by the Canadian Urban Institute, Real Estate Research Corporation and the Strategic Regional Research Association, and government agencies. A group of pension funds, engineers and railcar manufacturers proposed a city-wide RER network back in 2001. Here's what the Neptis Foundation, Toronto's best urban transportation think tank, had to say on RER in 2008.

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GO Rail represents an underdeveloped asset that has more potential to take cars off the regional highways than any other scheme... Without this “backbone” of the regional transit system, the value of most of the other schemes is reduced.

*Michael Shabas
First Class Partnerships
for Neptis Foundation
A review of Metrolinx’s Big Move
December, 2013*

RER is also being successfully deployed in many of the world’s cities. Paris has long enjoyed RER service. London has recently commenced service on the first phases of Crossrail, a major RER surface subway system going across one end of the city to the other, with 118 km of track and 40 stations - being built at a cost of \$27.5 billion (all figures Canadian dollars). Closer to home, in Washington DC – an urban area of similar size to Toronto – recently began work on the Dulles Corridor Metrorail, a 37km surface subway RER line with eleven stations at a cost of \$5.8 billion.

Fig. 3 EMU from Auckland, NZ



“REGIONAL”: CONNECTING “EDGE CITIES”

For decades, North American cities have struggled increasingly with the arrival of “edge cities” – urban agglomerations sprouting on the fringes of metropolitan areas that are disconnected from the bulk of the city they adjoin. Edge cities are created by numerous factors, such as tax differentials, greenfield land pricing, even concerns on the part of employers about physical security in downtown locations. One of the greatest challenges for metropolitan areas confronted with the edge city phenomenon is congestion. Edge cities are employment magnets. But when they are unconnected by rapid transit, those who work in edge cities have no choice but to go to and from work by car. This creates significant congestion – including in the suburban zones that lie between an edge city and a downtown core. The phenomenon of congested suburbs is particularly frustrating, as it voids one of the principal attractions of suburban life – easy mobility by car.

The unconnected edge city also creates significant economic challenges. Employers seeking the most in-demand of today’s workforce, highly-skilled knowledge workers, face severe challenges in attracting these employees to work in suburban settings. Contemporary knowledge workers prefer downtown living and are not eager to take on the cost and inconvenience of private vehicle ownership. In many cases, they are simply not interested in working for a suburban company. But with downtown location costs sometimes as high as four times that of certain suburban sites, the dilemma can be agonizing: go without the employees one’s business needs, or face significantly-higher costs of locating downtown. The squeeze can leave high-potential companies struggling with this dilemma, with significant costs to the regional economy as a whole.

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RER is the ideal solution to the challenge of connecting edge cities to downtown cores – and to the people who live in the suburban zones between the two. In Toronto, that means connecting the downtown and midtown core to the two major edge city employment centres: the Airport Corporate Centre south of the 401, and the employment lands clustered around Unionville in Markham. These are significant employment centres: each has as many workers coming in each morning as the entire midtown area of Toronto centered around Bloor and Yonge.

The numbers are significant: up to 200,000 workers in the edge cities to the

The Suburban Municipalities - the 905

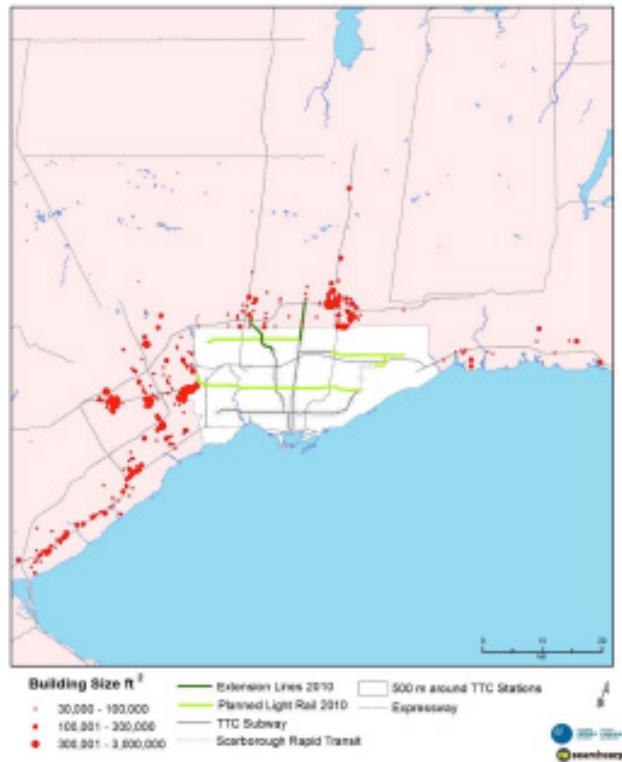


Fig. 2 Toronto's "Edge Cities" – Employment clusters in the GTA

West and in Markham. It is critical to realize that for most of these people, there is simply no practical alternative to driving to and from work. To take transit to a job in the Airport Corporate Centre and arrive at 8:30 on a Monday morning, a worker living at Kennedy and Ellesmere has to leave at 6:58 and face a grueling 92 minute commute. This is not a viable alternative to driving. The result is that the entire edge city employment base is forced to drive to and from work, creating massive congestion in the areas around our edge city employment cores. Rapid transit connecting the edge city with the rest of the metropolis solves this problem, easing congestion, economic dislocation, and the unfairness that comes from imposing onerous commute times on citizens seeking opportunity in edge cities.

As a regional express rail network, spanning municipal boundaries, the SmartTrack line is appropriately delivered by Metrolinx.

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EXPRESS: RAPID, FREQUENT CONNECTION IS THE KEY

Surface subways offering Regional Express Rail service is a city-building solution that unlocks a vast amount of potential, all across Toronto, to get a lot of people to leave their cars at home and take fast, convenient, comfortable transit to and from work – not just in the core but in all the other places people work, like out by the airport, or up the 404 north of Steeles.

The key to making RER work is that the service be express – the opposite of local service, which means numerous stations located fairly closely together. The average distance between TTC stations on the Bloor-Danforth line is about 850 metres. Travelling from Kennedy subway to Union requires 40v minutes and stops at 19 stations. Express rail service is different. A six-station line could bring commuters from Kennedy subway to Union Station in about 30 minutes. Faster trains over longer distances with fewer stops – express service – is the key to connecting the city, its people, and the places where they work.

GO transit currently offers express service, but it is infrequent, usually one-way in the morning and another in the evening, and not available all-day. True RER service entails all-day, two-way frequent service.

This in turn entails new vehicles, as existing diesel multiple units (“DMUs”) cannot start and stop swiftly enough to achieve the frequencies and speeds required. Instead, RER requires new vehicles, called “EMUs” or electrical multiple units.

RAIL: LEVERAGING EXISTING RAIL TRACK

Solving Toronto's mobility crisis cannot be achieved by building new freeways to "liberate the car", nor can it be done by unattainably expensive levels of underground subway construction. An alternative approach – LRT lines running down city streets – has proven to be a massive source of political friction. This is because it pits transit imperatives against automobile imperatives by forcing the two uses onto the same literal patch of ground. The result, as we have seen on Spadina and most spectacularly on St. Clair West, is severe political friction, with drivers alleging a "war on the car", and transit activists fighting back with equal ferocity.

Surface subways avoid this problem neatly by using an almost invisible public space, the city's abundant legacy network of rail tracks. RER surface subways run along existing rights of way, almost all of which are already grade-separated, meaning that car traffic flows above, below and around these rail lines already. Surface subway RER achieves transit imperatives without a politically damaging "war on the car." Where this can be achieved, it's a better outcome.

Leveraging the existing rail network means respecting the neighbours. From a political as well as technical standpoint, RER surface subways cannot be delivered using diesel locomotives. Surface subway RER in Toronto must be done using clean, non-polluting, quiet EMUs.

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CONCLUSION

Surface subways offering regional express rail are a sound, sensible response to get Toronto moving.

By getting on board with the latest thinking about using RER, some of the City's most fundamental challenges can be addressed.

These ideas are not new. They are in use in cities all over the world. Toronto can afford them: Crossrail has been built in London, UK, in 9 years (from legislative approval to in-service date), in spite of the British recession. The financing provisions on which this vision rests in Toronto have been law in Ontario since 2006.

John Tory has the proven leadership ability to bring people together to get the SmartTrack line built.