METROLINX

Executive Summary

Transit Needs and Opportunities

Background Paper for the Regional Transportation Plan Review

IBI

Prepared for Metrolinx
by IBI Group

August 2016

Table of Contents

Executive Summary

A review of the first Regional Transportation Plan (RTP) for the Greater Hamilton and Toronto Area (GTHA), *The Big Move*, is underway. The review of the RTP provides an opportunity to take stock of and build on the foundation of Big Move projects. It supports working together as a region toward the completion of an updated RTP in 2017.

Transit in the Greater Toronto and Hamilton Area: a decade of progress

The last decade has seen many positive changes for transit. All service providers have experienced steady growth in ridership, particularly GO Transit and municipal transit operators outside of the City of Toronto where population and employment growth is highest. Across the GTHA, ridership growth has outpaced population growth, meaning more people are turning to transit on a regular basis. Between 2004 and 2014, the Toronto Transit Commission (TTC) saw a 28% increase in transit ridership compared to a 13% increase in the City of Toronto's population. For municipal service providers outside of Toronto, ridership increased by 50% compared to a 20% increase in service area population. During the same period, GO Transit ridership grew by 44%.

A large part of the increases in ridership are a direct result of investments in transit service. Municipal transit agencies in the GTHA increased revenue vehicle kilometres (a standard measure of service) by 67% between 2004 and 2014. GO Transit more than tripled the amount of service during this period, including significant increases in off-peak service.

Despite these positive trends in ridership, there remain challenges. Investments in service come at a cost and over the last decade operating costs have been increasing much faster than ridership and revenue. This is particularly the case for municipal service providers outside of Toronto, where service has expanded to lower density areas that are less efficient to serve. In 2014, the average gross operating cost per passenger on the TTC was $2.88 compared to an average cost of $5.30 for municipal transit agencies in the rest of the GTHA.

Future growth presents both challenges and opportunities for transit

The GTHA's population is expected to grow from 7.2 million people in 2015 to 10.1 million people in 2041, outpacing the consumption of greenfield land and resulting in an increased population density that is more evenly distributed across the region. Approximately 80% of the GTHA's projected population growth will occur outside the City of Toronto. This represents a major challenge since transit currently accommodates a relatively low proportion of trips (6%) in these areas. Travel within municipalities outside Toronto is both the largest and fastest growing travel market, and by 2041, almost twice as many people will work outside Toronto as within the City. Overall, travel patterns in the future will be more complex with transit needing to connect many more origins and destinations than today.

However, this growth is also making some of these communities more supportive of alternative transportation options. Policies for more compact development, intensification and mixed use established by the *Growth Plan for the Greater Golden Horseshoe* are taking effect. This continued intensification will improve the cost effectiveness of transit. By 2031, approximately 58% of residents and 54% of jobs across the GTHA will be in areas with densities above 50 persons+jobs per hectare, a level which is conducive to the efficient operation of transit at attractive service levels. Notwithstanding this, a large portion of the GTHA's population and

employment will still be in areas that are challenging for transit, pointing to the need to find more cost effective ways to service these areas.

Moving towards a region connected by rapid transit

In 2008, *The Big Move* recommended a dramatic expansion of major transit infrastructure across the region in response to the need to "catch up with growth" and develop a more connected transit network. As of today, Metrolinx and municipal transit partners have committed to investing in 350 km of rapid transit across the GTHA, including over 200 km of frequent, electrified regional rail service.

With these improvements, 1.8 million residents and 1.4 million jobs will be within 800 m of rapid transit service in 2031—equivalent to about 21% of all GTHA residents and 33% of jobs. Additional rapid transit projects in the planning stage that currently lack funding commitments could conceivably be funded and completed by 2031, which would push these figures higher. This is a significant expansion over 2011 rapid transit coverage of 9% of people and 19% of jobs. An expanded rapid transit network improves access to jobs, improves the speed and reliability of transit, and helps to address capacity constraints on the existing system.

Dramatically expanded GO rail service is a cornerstone of the future rapid transit network. The GO Regional Express Rail (RER) program represents a fundamental transformation of the GO rail system from commuter rail to all-day regional transit service. The GO RER program includes the introduction of electrified service running every 15 minutes or better throughout the day in both directions over the core segments of the GO network, with all-day, two-way service at lower frequencies extending beyond these segments to cover much of the remaining network. Peak-period peak-direction services will also be increased along all seven GO corridors, and the rail network will be extended to introduce peak services to such GTHA communities as Stoney Creek and Bowmanville. New GO stations on both new line extensions and at strategic infill locations will expand access to the regional rail system. Working in combination with other rapid transit corridors, GO RER is a catalyst for increases in local transit service with the potential shape both land use and transportation patterns. GO RER fills a gap in the higher order transit network and enables municipal service providers to better integrate local transit and higher order modes.

Identifying needs and gaps

Committed transit improvements represent a major investment, but they are only just enough to keep pace with population growth. Forecasts show that with committed transit improvements in place, transit mode shares will hold steady at 18% through to 2031. While this is represents large increases in absolute transit use and a significant achievement given the patterns of growth, the implication is that growth in auto trips will continue to outpace growth in transit trips when measured in absolute terms.

Recognizing this challenge, one of the primary objectives of the transit needs and opportunities study is to examine areas where transit can do better. This requires a bottom-up approach to examine the factors that could attract new riders while also investing in those who are already using transit today, providing them with greater access, frequency, reliability, speed, affordability, comfort and convenience.

The report focuses on four main indicators to identify areas of need and areas for potential improvement. These include:

- **Connectivity:** How easy is it to get to transit and how well does transit connect people and jobs?

- **Capacity:** Where is the transit system not providing sufficient capacity and in turn affecting reliability and comfort?
- **Travel time competitiveness:** How well does travel by transit compare to travel by car and what areas are not benefitting from committed rapid transit improvements?
- **Social Equity**: How can transit be improved to benefit areas with lower incomes and higher social needs?

The report adopts a quantitative approach using data and maps to illustrate how each area of the GTHA performs against these indicators.

Matching needs to opportunities

The analysis of the core transit indicators across the GTHA revealed that a variety of strategies are needed to address existing and future needs. In many cases, needs can be addressed by enhancements to local transit service, or by combining enhanced local service with other options. In other cases, such as higher growth areas or existing areas with low transit accessibility, more transformative changes will be required.

Based on the assessment of needs, and considering the growth challenges in the GTHA, seven core strategies for the transit network are recommended:

- **Expanding the frequent transit network**: A Frequent Transit Network (FTN) is generally understood to be composed of those corridors where people can expect convenient, reliable, easy-to-use services that are frequent enough (typically every 10 minutes or less) that they do not need to refer to a schedule. Many areas of the GTHA could support an expanded FTN which would improve the connectivity of the transit system.
- **Improve first-mile and last-mile connections:** Successful public transit systems need to offer safe and accessible connections to transit stops and stations for both pedestrians and cyclists. First-mile/last-mile challenges can also be addressed by emerging technologies including ridesharing, demand-responsive transit and, in the foreseeable future, autonomous vehicles. Essentially all parts of the GTHA's transit system can benefit from improved first-mile/last-mile connections.
- **Demand-responsive transit:** The advent and widespread adoption of smartphone technology and its various applications has stimulated the advancement of several new technology-enabled transportation modes and services. Advancements in this technology have enabled ridesharing and demand-responsive services to be dynamic and user-friendly while optimizing scheduling and service logistics. These technologies offer the potential augment or replace traditional transit services in lower demand areas or where more frequent and flexible connections to major hubs are desired.
- **Improving and extending regional transit services:** Regional transit routes are currently comprised of GO rail lines and GO bus routes. The implementation of GO Regional Express Rail (RER) will greatly enhance options for regional travel by facilitating two-way travel along most corridors and providing much needed additional capacity for peak direction trips. Further improvements to regional services will help to reduce travel times for longer distance transit trips and improve transit access to key employment areas. An expanded network of **express bus services** would be a key component of an improved regional transit network.
- **Transportation Systems Management**: TSM measures focus on operational and policy changes for smoother and safer traffic movements by private vehicles, public

transit, cyclists and pedestrians, while also improving the utilization (occupancy) of vehicles and their throughput volumes where possible. Opportunities to enhance the effectiveness of TSM have been increased in recent years by significant technological developments (e.g. smart, real-time data collection, traveller information, and traffic control). TSM has the potential to address many areas of need especially travel time competitiveness and capacity.

- **Expanding the rapid transit network:** The 2008 RTP placed a strong emphasis on building a comprehensive rapid transit network (Big Move Strategy #1). This strategy is now being realized with the construction of several new rapid transit lines. Additional rapid transit projects may be justified in some areas where they are able to deliver improved connectivity, capacity and travel times.
- **Fare integration**: Improved fare integration is a key priority for Metrolinx. Improvements to the fare system—including potential changes to the structure, fare products, concessions and payment system—can simplify the passenger experience, improves the value of services a user experiences and promote regional integration by supporting a common fare medium and structure across the GTHA.

Consistent with the 2008 RTP these transit network strategies must be supported by other strategies to influence travel demand and maximize investments in the transit network including road use pricing, parking pricing, transit pricing and transit-supportive policies and initiatives. While this analysis of regional transit needs and opportunities will inform the updated RTP, it is only one part of a larger RTP development process that will consider many other factors, including provincial plans, policies, strategies, guidelines and priorities, municipal official plans and transportation master plans, and other stakeholder input.