Acknowledgements

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Vision

Hamilton is changing – it anchors the western end of a fast-growing urban region and is attracting a growing number of new small businesses, entrepreneurs, and artists seeking the new urban frontier of the Greater Golden Horseshoe. Yet much of Hamilton stays the same – the majestic natural beauty of the escarpment, the amenities that make the city one of the best in which to raise a family, and a diverse mix of urban, suburban, and rural landscapes. How Hamilton moves around the city is changing too – new investment in transit and cycling, renewal of infrastructure, and changing attitudes toward multi-modal transport have created gains in positioning the city for the next leap: rapid transit.

Rapid Transit is generally defined as high frequency transit service operating in a dedicated corridor.

Over the past several years, the City of Hamilton, in partnership with Metrolinx, has advanced plans for light rail transit in the King-Main-Queenston Corridor across the city. In parallel, the city has initiated various plans and policies, reviewing transit operations, completing economic studies, and developing corridor land use plans to support rapid transit. From these initiatives, significant progress has been achieved on many fronts: the city is becoming Rapid Ready.

This report is about continuing the route to get Hamilton Rapid Ready by:

• reviewing and affirming the foundation for rapid transit in Hamilton through the plans and policies in place or under development;

• documenting progress made by the City and its partners on various fronts and setting targets and milestones in getting Rapid Ready; and,

• identifying action items for the short term to continue advancing toward Rapid Ready.

CITY OF HAMILTON STRATEGIC PLAN 2012-2015
STRATEGIC OBJECTIVE 1.4:

Improve the City’s transportation system to support multi-modal mobility and encourage inter-regional connections.

CITY-ADOPTED VISION FOR RAPID TRANSIT:

Rapid Transit is more than just moving people from place to place. It is about providing a catalyst for the development of high quality, safe, sustainable and affordable transportation options for our citizens, connecting key destination points, stimulating economic development and revitalizing Hamilton. Rapid transit planning strives to improve the quality of life for our community and the surrounding environment as we move Hamilton forward.
a. Benefits

HEALTHIER COMMUNITIES

Concerns are frequently raised that our dependence on automobiles is leading to sedentary lifestyles and less physical activity, resulting in increasing rates of obesity and other health conditions. Pollution related to congestion and auto use causes air quality issues, resulting in asthma and respiratory illness. Increased investment in transit can play a role in improving the overall health of the community by encouraging walking, reducing congestion and emissions, minimizing risk of personal injury from car accidents, and encouraging more social travel behaviour. In addition, transit and active transportation – walking and cycling – are complementary. Active transportation provides exercise, increases social contact, and also reduces congestion and pollution while providing a high degree of personal mobility provided that suitable and safe walking and cycling environments are available.

Transit is important for an age-friendly city – promoting “active ageing” through the provision of an inclusive and accessible urban environment and transportation services. An ageing population means reduced reliance on driving and an increased dependence on transit, specialized transit, and walking. It is also important on aspect of accessibility – in 2006, 20% of Hamilton’s population identified some form of physical or cognitive disability, a rate that increases with age. Improving transportation choices means easier access to community participation, civic engagement, access to amenities and services.

Reduced dependency on driving has other health benefits – lower obesity rates, improved cardiovascular health, and reduced risk of Type II diabetes and heart disease. Physical activity also enhances cognitive function in older adults and helps to fight depression.

ECONOMIC DEVELOPMENT

Transit provides major economic benefits to our cities, with an economic benefit of over $10-billion annually across Canada. Investment in transit creates jobs – capital projects create construction-related economic spin-offs while increased investment in transit service creates ongoing employment of operators, mechanics, and front-line customer service staff. Integrated with a multi-modal transportation program, congestion can be reduced in urban areas, which is estimated to cost the Greater Toronto and Hamilton area economy over $6-billion annually in lost productivity and delays in the delivery of goods and services. In addition, expanded transportation choice reduces the cost of household transportation, increasing social equity and providing more disposable income which has innumerable positive benefits to the community. This includes opportunities to address ongoing poverty issues through the provision of employment and reduced household spending.

Hamilton experiences less of the congestion characteristic in many other areas of the Greater Golden Horseshoe and in part because of its transportation advantages and superior location, is becoming an increasingly attractive place to live and invest. However, growth threatens this advantage by increasing congestion – investing in alternative transportation can help minimize growth in congestion and keep the economy moving.

A TRANSIT-ORIENTED COMMUNITY

As a fundamental driver of community well-being, public transportation must recognized as a strategic priority and put at the centre of the community. Mobility should be a foremost consideration of elected officials and community stakeholders in decision making processes. Decisions and actions should strive to broaden the choice of modes, improve the seamless integration of modes and foster a more integrated approach to planning and design. The end goal is a future in which public transportation maximizes its contribution to quality of life with benefits that support a vibrant and equitable society, a complete and compact community form, a dynamic and efficient economy, and a healthy natural environment.
b. Report Structure

Throughout this document, references will be made to Mobility Programs and Special Projects work plans, which are attached as Appendix C in this document as indicated by this arrow: C1.XX

Chapter 1: Status of Light Rail in Hamilton summarizes progress and activity related to LRT planning in Hamilton and presents the 2013 work plan.

Chapter 2: Rapid Ready Essentials will outline three key elements to becoming Rapid Ready and to improve integrated mobility in Hamilton.

Chapter 3: Foundation outlines provincial and municipal policies that are advancing integrated mobility and rapid transit planning.

Chapter 4: Progress summarizes recent progress and actions taken.

Chapter 5: Looking to the Future - The Role of The Transportation Master Plan revisits the 2007 TMP targets, progress and identifies needs for a TMP update.

Chapter 6: Actions to Get Rapid Ready identifies short-term actions that will increase transit use, encourage integrated mobility, and move the city toward readiness for rapid transit investment.

Chapter 7: Funding Requirements outlines the capital and operating budget implications of the identified actions.

Also attached to this report are three Appendix sections:

Appendix A: Light Rail Transit-related attachments and reports.

Appendix B: includes a more in-depth review of national, provincial, and municipal policy, as well as an overview of the Hamilton Street Railway Operational Review. Also a Background Paper on the Intersection of Transportation and Health.

Appendix C: Mobility Programs and Special Projects Workplans.
Rapid: Expanding Mobility Choices in Hamilton
1 Status of Light Rail Transit in Hamilton

a. The Growing Case for LRT

A Council requirement of this Staff report is to provide a status update on the Rapid Transit program deliverables required by Metrolinx for them to undertake a Value-for-Money evaluation of Light Rail along the B-Line in Hamilton. These works are essentially complete and Staff is recommending submission of this report in its entirety as Hamilton’s response to Metrolinx.

Light Rail Transit (LRT), if introduced today, between McMaster University and Eastgate Square would perform with ridership in the mid-range of existing North American Systems

A triple bottom line analysis of the B-Line LRT project indicates the following:

Benefits

FINANCIAL

- B-Line Corridor Capital Works – Reduction of scheduled and unscheduled backlog capital works in the order of approximately $79 million.
- The CUI Study found:
  - That three times the number of developments were likely to occur (e.g. 108 projects vs. 32) within the same timeframe with LRT as compared to without LRT.
  - Tax Benefit from new development by LRT estimated at $22.4 million.
  - Building permit fees and development charges (existing development exemptions removed) estimated at $30.2 million.
  - Residential property value premium estimated at $29 million (net value = $0). This uplift premium increases the property taxes paid by property owners benefiting from the LRT and reduces taxes for all other tax payers.

- Potential for 6,000 construction jobs (provincial); 3,500 directly in Hamilton1.
- Potential for 1,000 permanent jobs (provincial); 300 jobs in Hamilton to deliver regular operations and maintenance1.
- B-Line LRT investment may result in an estimated increase of more than $443 million in Ontario’s GDP1.
- Annual accident costs are expected to reduce by $3.48 million over 22 years (Steer Davies Gleave).

1 Hamilton Rapid Transit Initiative, Economic Potential Study

Costs

- Project Capital is $811 million - (plus/minus 20% $649M to $973M).
- City Capital costs is $1.8 million (including aerial articulating device for the fire department).
- Day One stand alone Project Operating cost is $14.5 million with an organizational structure of approximately 182 staff.
- Day One In-house Project Operating is a net levy increase of $2.9 to $3.5 million with the removal of redundant transit fleet and the use of in-house staff
- City Operating (over and above LRT operating) costs (e.g. winter control, parking, By-law services) = $8.7 million.
**HEALTH**

- Investments in public transportation such as LRT can help shape a city’s built environment into a more walkable, complete and compact community (Metcalfe and Higgins).
- Individuals who walked an additional kilometre per day reduced their chances of becoming obese by 5% compared to motorists driving an additional hour who are 6% more likely to become obese (Frank et al).

**ENVIRONMENT**

- Public transportation produces on average (per person) 50 - 95% lower emissions than driving (Shapiro et al).
- A 30% - 50% reduction in car traffic (GTA) can lower emission rates and have the potential to save an estimated 200 lives and $900 million per year (McKeown, D.).
- Auto-dependent communities require 20 to 50 times more space than transit-friendly communities, resulting in storm water management challenges (VTPI).
- LRT attracts a broader cross section of society and draws transit users from a broader distance than traditional bus transit.

**SOCIAL/TOURISM**

- LRT has the potential to connect people living in downtown neighbourhoods with job opportunities and amenities, including health and social facilities
- In Hamilton, 17% of the existing population and 20% of employment opportunities are located within 800 metres of the B-Line Corridor. 80% of the city’s population is serviced by HSR transit routes that connect directly with the B-Line (Steer Davies Gleave).
- High quality light rail systems have an iconic value that is attractive to tourists, commuters and residents because transportation is a key element in the visitor experience, an efficient public transportation system can significantly enhance a city’s reputation among travelers.

**b. Summary of 2012 Work Plan Activities**

A significant amount of rapid transit work has been completed since 2007. In 2012, staff have worked on a number of strategic rapid transit priorities to advance the B-Line to a funding decision point. The preliminary design and engineering (PDE) and 2012 work plan items are required to be submitted to Metrolinx so that a funding decision can be made by its Board of Directors.

Work completed in 2012 included the following, which is provided in greater detail in Appendix A:

- **The LRT Benefit and Cost Report**, which outlines the estimated capital cost for the B-Line at $811 million (2011 dollars) +/- 20%, based on 30% detailed design. The B-Line operating cost per passenger for LRT on day one ranges from $0.95 to $1.80, dependent on the day one level of ridership uptake compared to $1.07 for the existing B-Line bus service. By 2031, LRT cost, per passenger, is estimated at a net revenue of ($0.75) compared to a $1.12 subsidy for bus only operation.

- A **comparison of the proposed B-Line LRT with other systems in Canada and the United States** showed that system performance as it relates to ridership would be mid range as compared to the other successful LRT systems on opening day and be one of the top-performing systems in 2031.

- Metrolinx has agreed to deferring an environmental assessment for the Maintenance and Storage Facility until a funding agreement is reached. The proposed cost of an MSF is within the range allocated in the capital budget estimates.

- An **Electromagnetic Field and Vibration Analysis** was also completed. Vibration mitigation would require an elevated level of vibration isolation in some areas (from encapsulated boot to floating slab). The cost for this is within range of the budget estimates. The results of the electromagnetic field mitigation study indicate that there are technical solutions available to mitigate electromagnetic field interference on the scanning electron microscope at McMaster University.
A comparison of projected LRT ridership in Hamilton with other systems across North America shows that Hamilton has potential to be one of the leading systems.

Activities identified for 2013 include:
1. LRT vehicle optimization modelling;
2. Value engineering of the B-Line/overhead power changes;
3. Additional geotechnical investigations;
4. Assist with preparing funding evaluation;
5. A-Line routing and technology development;
6. HSR network optimization;
7. Delivery model assessment strategy; and,

Should funding for implementation of the LRT be forthcoming, additional work plan items for 2013 include:
9. Advanced B-Line utilities coordination;
10. early enabling works, including utility relocations in advance of a design-build contract;
11. environmental project report for the maintenance and storage facility (MSF);
12. property impact assessments
13. power substation site location; and,
14. development of specifications for B-Line LRT procurement process.

Additional projects identified for 2014 include:
15. Development of land acquisition and expropriation process and commencement of B-Line land acquisition;
16. Neighbourhood parking strategies (phase 1 neighbourhoods including Queenston, Parkdale, Nash, and Eastgate);
17. B-Line land acquisition;
18. Survey work and establishment of project control line; and,

Continual advancement of Rapid Transit planning will ensure that Hamilton is in a strong position to implement LRT upon reaching an agreeable funding position. Continuation of work ensures that advancement of rapid transit lines continues, that project implementation is cost effective and provides the best solution for Hamilton as well as the region.
Building rapid transit requires more than simply constructing a right-of-way and running trains on it. Rapid transit can play a transformational role in how the city moves around and how the city grows provided that the conditions, policies, and plans are in place to maximize ridership, integration, and positive impacts on surrounding urban systems.

Rapid Ready focuses on three key ingredients that are necessary to support rapid transit investment: building an integrated transit network and growing ridership, creating supportive land uses and communities, and developing a seamless multi-modal transportation system.

**IMPROVING TRANSIT**
Structuring the transit network around rapid transit corridors, increasing transit service, and improving the customer experience are essential to build ridership in anticipation of rapid transit and to position transit as a competitive mobility choice.

**SUPPORTIVE COMMUNITY PLANNING**
Transit-supportive land uses and densities set within well-designed communities are important elements of rapid transit implementation. Planning how the city will grow and around rapid transit is necessary and engaging impacted neighbourhoods to shape this growth is essential.

**MULTI-MODAL INTEGRATION**
Rapid transit will serve as the main transit spines in the city; however, it is just one aspect of expanded mobility choice. Integrating more travel options will maximize the impact of rapid transit and make it easier to get around the city.
The first key contributor to becoming Rapid Ready in Hamilton is to invest in improving transit services and reconfigure the transit network in anticipation of rapid transit. These early investments would increase ridership, elevate the role of public transit in Hamilton, and prepare customers for rapid transit implementation.

Increasing transit ridership in Hamilton should be a key component of a strategy to get Rapid Ready in order to grow the market of transit riders that would be eventual rapid transit users. This ensures that new rapid transit services are well utilized, increases transportation user benefits, and provides a more attractive financial business case for rapid transit investment. While there are many measures to increase transit ridership, the proven approach is to provide more hours of service. Increasing service makes transit more frequent and attractive to riders, with a direct correlation between revenue service hours per capita and transit ridership per capita.

Increasing municipal investment in transit service to build ridership will demonstrate that Hamilton is serious about public transit as a competitive travel choice.

In addition to investing in more service hours, transit can become Rapid Ready by reconfiguring the network to prepare for rapid transit service, by reorienting existing transit services to feed planned rapid transit corridors to establish travel patterns in advance of implementation. Taking a proactive approach to network changes, in conjunction with engagement of impacted communities, will help customers and residents understand, influence, and champion improvements to the transit network.

Finally, getting Rapid Ready means elevating of the role of public transit in Hamilton – making transit a competitive mobility choice that is central to the city’s communities. Currently, there are strong perceptions of public transit in Hamilton as not a choice, but a service relegated only to those who cannot drive. Changing this perception, through a combination of improved service, an enhanced customer experience, marketing, and branding are key to reposition transit as a viable and attractive choice. Giving transit greater priority on streets, making it faster and more reliable, will reinforce transit’s role in keeping Hamilton moving.
A second key element for getting Hamilton Rapid Ready is to continue the citywide discussion of how the city should grow around transit and rapid transit. Over the past several years, this has included discussions on building forms, heights, densities, mixed-uses, heritage preservation, public space, and community services, among many others. Tough decisions will be necessary to protect stable urban neighbourhoods and identify opportunities for intensification and redevelopment – particularly at planned key nodes of planned rapid transit lines.

Using a mix of tools, such as the city’s Official Plan, zoning bylaws, corridor studies, secondary plans, and urban design guidelines, Hamilton can shape land uses around the future rapid transit corridor. Much of this work has begun, such as the completion of the city’s Urban Official Plan, the Transit Oriented Development Guidelines, and the Main King Queenston Corridor Strategy Study. These and other studies (such as existing downtown and Business Improvement Area (BIA) development incentives) explore incentives to encourage redevelopment and intensification at designated locations, while community benefit frameworks could ensure that benefits from new development and rapid transit are distributed on a wider scale.

Developing the land use-planning framework along the rapid transit corridor would have major benefits, the greatest of which is the building of community support and buy-in for a renewed vision and plan. Also important is the environment of certainty it provides for developers and property owners, reducing the level of risk and barriers for development.

With careful guidance and inclusive community engagement, Hamilton’s rapid transit corridors can evolve to become vibrant, transit-supportive, and rapid ready communities with safe and active linkages to and from rapid transit and throughout communities.

Engaging communities early and continuing the conversation on how rapid transit corridors should evolve and change are essential to integrating rapid transit with our neighbourhoods and future development.
A third component is to develop a multi-modal transportation system in Hamilton with connections to rapid transit by other modes, including park and ride, walking, cycling, and local and inter-regional transit. An essential first step is to change the way city departments interact and make decisions around transportation. This starts with reorganizing city departments around mobility management and developing working groups to tackle pressing and long-term multi-modal integration issues. This will allow rapid transit, when implemented, to integrate easily into the modal mix in the city.

Improving pedestrian environments in advance of rapid transit is essential. This means closing gaps in sidewalks and pedestrian linkages from transit stops to adjacent communities and destinations, calming traffic to increase safety, and improving pedestrian amenities and streetscapes to make a more pleasant walking environment. Creating barrier-free and accessible pedestrian environments will be a priority to respond to the mobility needs of an ageing population. Cycling can also play a major role for medium-distance travel. It can also extend the catchment of rapid transit and bridge the “last-mile” gap by providing reliable access to final destinations. Providing safe cycling routes coupled with secure bike parking, are two keys to encourage cycling to transit. In addition, public bike share transit systems provide public fee-for-use bicycles to efficiently transport riders to major transit nodes.

It is recognized that a majority of trips in Hamilton will continue to be by car. However, from a rapid transit perspective, there are actions and strategies that can be taken in advance to promote the shift of travel from car to transit and other modes, such as developing park-and-ride facilities and allowing high-occupancy vehicle access to transit-only lanes. This could encourage changes in travel behaviour which could be a precursor to transit use. The key to these policies is to phase auto-related strategies in concert with improved transit services and implementation of rapid transit.

Multi-modal integration also looks at the role of regional and intercity transit, which in Hamilton’s context, is important for linkages throughout the Greater Golden Horseshoe, and beyond. As the western gateway to the Greater Toronto and Hamilton Area, home of the second largest airport in the region, and active port and at the junction of major rail and road corridors, rapid transit will play a role in providing connections between and access to these linkages. Advancing plans for multi-modal transit hubs and mobility hubs to create seamless connections between local, rapid, and interregional transportation services is a major priority.
Substantial foundation has been laid in preparation for rapid transit in Hamilton, the result of years of planning on a master plan, corridor, and local scale. There are many policies and initiatives that are already in place that support Hamilton’s objective for rapid transit, expanded mobility choice, and for more liveable, accessible, and inclusive communities.

Exhibit 1 provides a timeline summary of many of the initiatives completed or in progress relating to the development of rapid transit and mobility initiatives in Hamilton.

This section provides a summary of these policies and initiatives at national, provincial, city, and corridor levels. Additional detail on these initiatives and policies can be found in Appendix B1.

National-Level Initiatives

On the national level, the Canadian Urban Transit Association, which represents public transit systems across the country, has led research, policy development, and government lobbying efforts to improve public transit and create supportive urban systems. The centrepiece of CUTA’s efforts is its national policy document - Transit Vision 2040 - and through exercising its efforts around its new vision statement: “to inspire and influence the evolution of integrated urban mobility.”

Provincial-Level Initiatives

The Province has provided substantial leadership over the past decade in advancing policy that encourages alternative transportation and more sustainable land use development patterns. Starting with the 2005 Provincial Policy Statement, Greenbelt Plan and the Growth Plan for the Greater Golden Horseshoe these policies have provided the foundation for municipalities to pursue reurbanization and intensification policies around transit.

The establishment of Metrolinx and the development of The Big Move has allowed for the advancement of a regional transit network, including the identification of rapid transit in Hamilton as a priority.

City-Wide Initiatives

Hamilton has also taken a leadership role in adopting policies that promote sustainable transportation and land use since the adoption of the city’s vision, which precipitated in city-wide plans and initiatives, such as GRIDS, the Transportation Master Plan, and a renewed Urban Official Plan. These initiatives have led to extensive progress in establishing a strong framework for integrated mobility and rapid transit.

Corridor-Level Initiatives

With provincial support, the city has embarked on extensive planning on rapid transit corridors, notably in the King-Main-Queenston (B-Line) corridor, where much planning and design work has been completed. Other project-level initiatives for integrated mobility have also advanced over the past several years, creating momentum for further action and progress.
Provincial/Metrolinx Initiatives

City-Level Initiatives

Corridor/Community Level Initiatives

Secondary Planning Processes
### Policy or Plan

#### National Initiatives

**Canadian Urban Transit Association - Transit Vision 2040**

The Canadian Urban Transit Association represents the collective knowledge of public transit providers from across Canada. CUTA Transit Vision 2040 defines a future in which public transit maximizes its contribution to quality of life with benefits that support a vibrant and equitable society, a complete and compact community form, a dynamic and efficient economy, and a healthy natural environment. Transit is widely recognized as an important part of the solution to national challenges such as climate change, public health, economic development, and safety and security.

#### Provincial Initiatives

**Places to Grow: Growth Plan for the Greater Golden Horseshoe**

The Growth Plan is the pre-eminent land use planning document in the Province of Ontario, which provides forecasts for population and employment growth in the Greater Golden Horseshoe (GGH) and sets policies for how municipalities will accommodate forecasted growth. Hamilton was forecast to grow from 510,000 residents in 2006 to 660,000 residents in 2031; and from 210,000 jobs to 300,000 jobs over the same period. The plan also designates Downtown Hamilton an urban growth centre, which recognizes it as an important urban node in the GGH and as such is allocated substantial growth. The Growth Plan sets policies on intensification, particularly in existing urban areas and near rapid transit. It also sets density targets for urban growth centres and intensification targets for municipalities. Hamilton’s rapid transit plans are very much aligned with Growth Plan objectives.

**NOTE:** The Province has released a proposed amendment of the Growth Plan to reflect population and employment forecasts to 2041, with projections for Hamilton at 780,000 people and 350,000 jobs.

**The Big Move: Regional Transportation Plan for the Greater Toronto and Hamilton Area**

Adopted in 2008 by Metrolinx, The Big Move is a regional transportation plan for the Greater Toronto and Hamilton Area (GTHA), setting transportation policy and infrastructure planning to 2031 and aligned with Growth Plan objectives and policies. The Big Move proposes a network of rapid transit lines across the GTHA, and Hamilton’s B-Line, A-Line, and Mohawk rapid transit corridors are included in the strategy. The B-Line was identified as a “Top 15” project by Metrolinx in The Big Move and was announced as part of the “next wave” projects in November, 2012 for funding upon finalization of the Investment Strategy in mid-2013.

The Big Move also identifies multi-modal strategies, land use integration policies, including a network of mobility hubs, and provides guidance and policy support for transportation planning.
<table>
<thead>
<tr>
<th>Policy or Plan</th>
<th>Improving Transit</th>
<th>Supportive Land Use</th>
<th>Multi-Modal Integration</th>
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<tr>
<td><strong>City-Wide Initiatives</strong></td>
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<tr>
<td><strong>Hamilton Vision 2020 Update</strong></td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Renewed in 2003, Hamilton's Vision 2020 sets out the over arching objectives that guide the planning, governance, and operations of the city. Specific to becoming Rapid Ready, the Vision includes a “Getting Around” component, where the statement: “An integrated transportation system serves the entire city in an affordable, efficient, and accessible way” is most representative of the goals and objectives of rapid transit in Hamilton.</td>
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<tr>
<td><strong>Hamilton's Strategic Plan 2012-2015</strong></td>
<td>✓</td>
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<td>The City's strategic plan confirms the city vision, mission, values, and strategic priorities, providing a direction for the planning of the city and the delivery of services. One of the strategic priorities, “Improve the City’s transportation system to support multi-modal mobility and encourage inter-regional connections,” is highly tied to the need to be Rapid Ready.</td>
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<tr>
<td><strong>Transportation Master Plan</strong></td>
<td>✓</td>
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<tr>
<td>The City of Hamilton’s over arching transportation strategy is to rely on transit and travel demand management, in combination with road capacity optimization to solve transportation problems, before looking to road expansion. It is also recognized that adequate road infrastructure is essential for economic development and that strategies must reflect a balanced transportation network. The TMP also identified the city’s rapid transit corridors, including those along King/Main and Upper James, which have served as the foundation for rapid transit planning. Also included in the TMP were strategy papers related to walking, cycling, and the road network, which guided the development of other modal master plans.</td>
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<tr>
<td><strong>Growth Related Integrated Development Strategy (GRIDS)</strong></td>
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<td>GRIDS includes a growth management study and a collection of infrastructure-related master plans to determine where Hamilton should and will grow over the next 30 years, integrating land use, transportation, water, waste water, and stormwater planning into one project. The Transportation Master Plan is one of the plans under GRIDS, which set in motion the city’s rapid transit and multi-modal initiatives. GRIDS also set nine directions to guide development, among which included development infill and intensification, expanded transportation options, and maximization of use of existing infrastructure.</td>
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EXHIBIT 2: Conceptual Rapid Transit Corridors

EXHIBIT 3: Hamilton Urban Official Plan - Urban Structure

Legend
Urban Structure Elements
- Employment Areas
- Major Activity Centres
- Major Open Space

Nodes
- Downtown Urban Growth Centre
- Sub Regional Service
- Community

Corridors
- Primary
- Secondary
- Potential Expansion of Corridors (after OMB Hearing)

Other Features
- Rural Area
- John C. Munro Hamilton International Airport
- Major Open Space
- Municipal Boundary
- Subject to Future OMB Hearing
### Policy or Plan

#### Hamilton’s Urban Official Plan
Hamilton’s Urban Official Plan was approved by City Council in 2009, replacing a number of Official Plans from pre-amalgamation and conforming to the Province’s Growth Plan for the Greater Golden Horseshoe. The Urban Official Plan will play a major role in getting Hamilton Rapid Ready from a land use, community development, and planning perspective, by providing policies in transit supportive land use and the creation of complete communities. The King-Main-Queenston and James-Upper James rapid transit corridors are identified as primary corridors in the plan, which will be a focus for intensification and infill development (see exhibit 3). Development would be supported by an Integrated Transportation Network, in which rapid transit plays a key role. The Urban Official Plan has clear policies for getting rapid ready, including policies on compatible and transit supportive land use, multi-modal integration (including park and ride), and increased transit services (Policies 4.4.1; 4.4.2, 4.4.10, 4.4.11, 4.4.12). NOTE: The Hamilton Urban Official Plan is currently before the Ontario Municipal Board.

#### Shifting Gears – Hamilton’s Cycling Master Plan
Shifting Gears is Hamilton’s Cycling Master Plan, which takes a holistic view at initiatives to encourage cycling as viable and attractive mode choice in the city. The plan includes policies regarding all aspects of cycling, from routes, to end-of-trip facilities, to education and promotion programs. From a Rapid Ready perspective, the cycling master plan proposes bikeway routes along rapid transit corridors to facilitate access to transit, continued support of bike racks on buses, and providing bike parking at rapid transit stations. Bike Share is also proposed as an approach to improve multi-modal integration.

#### Pedestrian Mobility Master Plan
Rather than proposing specific infrastructure projects, the Pedestrian Mobility Master Plan includes a toolkit of Context Sensitive Design applications that will encourage the provision of amenities within the right of way that make public transit, pedestrian movement and cycling effective alternative transportation modes including better access to interesting destinations, increased shade from trees, differing sidewalk widths, pedestrian plazas.

#### Hamilton Street Railway Operational Review
In 2010, Hamilton Street Railway completed an operational review of the entire transit system to identify challenges and opportunities in the route network and propose service enhancements to improve the operation, reliability, and attractiveness of transit service. The over arching theme of the report’s recommendations was the need to provide greater investment into transit service in Hamilton through an increase in service hours, reconfiguration of the route network, renewing transit branding and marketing, and investing in transit priority to improve operations and reliability. The Review also recommended enhanced express service along the A-Line and B-Line, as well as other designated major transit corridors. A summary of the HSR Operational Review is attached in Appendix B2.

#### City-Wide Corridor Planning Principles and Design Guidelines
In April 2012, the City of Hamilton adopted City Wide Corridor Planning Principles and Design Guidelines. The purpose of the Guideline is to provide a set of planning principles and implementing design guidelines for Corridors in the City of Hamilton. These principles and guidelines provide direction for new development, public realm investments and future planning studies along primary and secondary Corridors across the City.
Policy or Plan

Corridor-Level Initiatives

Rapid Transit Feasibility Study Phase 1 to 3

The Rapid Transit Feasibility Study for Hamilton was completed in three phases between 2008 and 2009. The Feasibility Study identified potential rapid transit technologies for the BLAST rapid transit network and assessed phasing strategies for implementation of rapid transit in the corridors. Other supportive studies were also completed on economic potential, community impacts, implementation guidance, and environmental impacts. Each phase also provided recommendations for supportive policies, including land use, transit system integration, quality of service, and travel demand management.

The Preliminary Design and Feasibility Study for the B-Line was completed with the submission of the Environmental Project Report in October 2011. A notice of completion for the transit project assessment was submitted in early 2012.

Main King Queenston Corridor Strategy Study

The purpose of the strategy is to guide future growth and change along the Main King Queenston Corridor, to identify appropriate transit-supportive land use and development patterns, and develop other strategies to support the revitalization of the corridor itself and improve and sustain the well being of the adjacent neighbourhoods.

In April 2012 Council approved a “Focused Reurbanization” option for the Main King Queenston Corridor, which would promote the Corridor as a mixed use, transit oriented corridor and would provide the necessary direction to achieve the City’s intensification targets.
Hamilton is starting to see the impacts of the foundation established over the past decade. Change is occurring on all levels from the way the City departments are organized to the way communities and transportation systems are being designed. Transportation and community planning is no longer done in silos, but in an integrated fashion. Evidence of this change at the City level is demonstrated by:

- A downtown that is recovering, witnessing new buildings being built and old one’s being renovated and re-purposed;
- Tight urban boundaries that were defined and are being respected, upholding the principles of the Provincial Growth Plan;
- Neighbourhood associations, citizens groups and advocacy groups that are freely voicing opinions because they believe their voices will be heard and that their actions will matter. An example is the success of coalitions such as Open Streets Hamilton which are creating events that promote multi-modal, healthy and vibrant streets.

Transportation is closely tied to many of these changes. In 2007, when GRIDS was being undertaken, the City evaluated options to manage growth in-line with Places to Grow and the Greenbelt Plan. Without these policies the City may have continued to expand outward requiring the construction of new roads to serve this outward growth. As the City has chosen to grow from within as much as possible, in a nodes and corridors urban structure, investment in a multi-modal transportation system and managing demand is needed.

### RECENT ACTIONS AND SUCCESSES

**Launching the A-Line bus service**, which is a precursor to rapid transit in the Airport to Waterfront Corridor

**Becoming one of the first transit systems in the country with a 100% Low Floor Bus fleet**

**Bike racks on all buses** since 2007

**Adding over 24,000 transit service hours** to the regular transit system as guided by the Service Investment Plan

**Completion of the MacNab Street Transit Terminal**, providing a new multi-modal transportation hub in the heart of downtown

**Implementing a travel training pilot** for DARTS

**Expanding accessible taxi plates**, with a further increase of 16 accessible taxis planned in 2013

**Computer-aided dispatch and vehicle tracking system for DARTS** in 2013

**Expanding cycling infrastructure in primary corridors**, including 10 km of new bike lanes and new bike storage facilities at Mohawk College and 20 schools (with funding from Metrolinx and MTO)

**Working with Mohawk College to implement a student pass**, which subsequently increased transit ridership to the college by 20%

**Leveraging the Smart Commute Initiative, and working with 14 major employers to enrol over 87,000 employees to date; more than one-third of city’s employment base**

**Initiating a community based-social marketing campaign**, as a pilot project to be rolled out to other communities

**Developing and Open Streets event** to promote walking and cycling as normative behaviours.
Current Initiatives

MACNAB STREET TRANSIT TERMINAL
New platforms and amenities at downtown terminal serving B-Line and A-Line

MOHAWK MULTI-MODAL TRANSIT HUB
New transit hub serving the A-Line corridor and mountain bus routes, with integrated development and mobility hub features

A-LINE/B-LINE ENHANCED STOPS AND SHELTERS
New platforms and amenities at downtown terminal serving B-Line and A-Line

MOUNTAIN TRANSIT TERMINAL/PARK AND RIDE
New transit terminal and 72-space park and ride located at Mount Hope
GO TRANSIT McMaster University Terminal
New bus terminal at McMaster University serving GO Transit

BIKE PARKING AT MUNICIPAL FACILITIES
Audit of bicycle parking at municipal facilities and providing bike racks where they are not available

GO TRANSIT James North Station
Extension of Lakeshore West GO Transit rail service to James North Station scheduled for operation in Spring 2015. Station is currently in design phase.

Improving Transit
Supportive Community Planning
Multi-modal Integration
Funded by QuickWins
Looking to the Future: The Role of the Transportation Master Plan

a. Targets

In 2007, the City adopted a Transportation Master Plan which set targets for reducing the number of kilometres made by single occupant vehicles, referred to as vehicle-kilometres of travel (VKT). This was a bold, but deliberate move which recognized that VKT is related to so many indicators from emissions, to personal travel costs, to congestion. The TMP established a clear path how this would be achieved. Reductions would be achieved by facilitating compact mixed use development and therefore shorter trips. In addition, a comprehensive suite of travel demand management (TDM) measures promoting carpooling, building facilities to encourage walking and cycling and increasing the share of trips made by transit all would limit VKT growth. Of course, rapid transit was central to the 2007 TMP and set the course for all of the work on rapid transit since.

For transit, the TMP expected transit’s mode share to increase from 6% to 9% by 2011, increasing to 12% for the 2021-2031 period. This implied that the number of annual transit rides per capita (a common benchmark for transit usage) would increase from 40 rides per capita to 80-100 rides per capita in the longer term (2031). This was an aggressive goal, but rationalized to some extent by the fact that Hamilton did achieve these mode split levels in the 1980’s. It also implied significant changes in

The Transportation Master Plan (TMP) sets targets and the framework for transport policy and investment over a 25-year period. Hamilton’s TMP was approved in 2008.

Transportation Master Plan Targets

<table>
<thead>
<tr>
<th>Estimated Daily Vehicle Kilometres of Travel</th>
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<td>4.8M</td>
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<table>
<thead>
<tr>
<th>Share of Daily Trips by Transit</th>
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<td><strong>EXISTING</strong> (2001)</td>
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<td>5%</td>
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<table>
<thead>
<tr>
<th>Annual Transit Rides per Capita</th>
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<tr>
<td><strong>EXISTING</strong> (2001)</td>
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<tr>
<td>40</td>
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<table>
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<tr>
<th>Share of Daily Trips by Walking or Cycling</th>
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<tbody>
<tr>
<td><strong>EXISTING</strong> (2001)</td>
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<tr>
<td>6%</td>
</tr>
</tbody>
</table>
investment priorities, with a focus on transit.

To date, there have been some positive gains in ridership, but the annual rides per capita remains at just over 40. Hamilton has added some 55,000 transit service hours to the regular transit system between 2003 and 2010, but this has more or less been in line with population growth and necessary service area expansion. To achieve gains in ridership per capita and transit mode shares, the level of investment in transit; both in the amount and quality of service, needs to greatly outpace the rate of population growth.

Between 2011 and 2031, Hamilton is expected to add some 130,000 persons and 90,000 jobs. If current travel choices remain the same, Hamilton would see an additional 200,000 more car trips made each day, along with significantly greater levels of congestion, emissions and fuel use.

To put things into perspective, Hamiltonians currently spend about $680-million annually on fuel for personal travel. Providing alternatives for people to make trips using modes other than private automobiles will have significant societal and economic benefits.

**IMPLICATIONS OF NOT ACHIEVING TARGETS**

Not investing in transit poses a significant risk to the City. The obvious risk is that not achieving mode share targets would result in increased congestion and associated delays and a greater need to invest more heavily in roads. A not so obvious risk is that Hamilton residents continue to be captive to automobiles and the financial burden that this comes with. Even if transit investments allow a household to manage with one car instead of two, this can translate into significant savings over time.

There are also risks in not addressing integrated mobility needs in response to changing demographics and an ageing population that will be increasingly dependent on getting around by transit or as a pedestrian. Negative impacts on health and community could result, particularly by limiting access to services and social activities.

Economically, besides the obvious risk of increased congestion on competitiveness, Hamilton could lose the opportunity to create walkable neighbourhoods proven to be key attractors to the creative industries that Hamilton wants to build its economy upon.

Essentially, Hamilton cannot afford to not invest in improving mobility. Investments made now will continue to pay dividends for many generations.
b. What is required to get there?

Hamilton is at a critical point in its evolution towards a more sustainable city. Much progress is being made on transit, walking and cycling, but what will it take to get to the next level? The answer lies in rapid transit. As shown below, cities in Canada that have achieved at least 85 rides per capita all have some form of rapid transit. Although there are many factors involved, such as population, employment, urban form, and congestion levels, it can be concluded that if Hamilton is to achieve its transportation targets, rapid transit is necessary.

However, just building rapid transit alone will not get Hamilton where it needs to be. Cities that have or are moving towards rapid transit are also making significant increases in base transit service levels in advance of rapid transit. For example, London, Halifax, Winnipeg and Victoria have all significantly increased regular transit service levels over the past few years in advance of recent or pending investments in bus rapid transit or light rail transit. In the case of Winnipeg, a city which is similar in size as Hamilton, service hours per capita are about 40% greater than Hamilton. Winnipeg recently opened the first phase of its bus rapid transit system and continues to incrementally expand its transit system.

It would not be productive for Hamilton to build light rail while maintaining 30-minute headways on regular transit routes serving LRT. Perhaps more importantly, early and significant investments in base transit levels are required.

Several Canadian cities have higher per capita ridership without rapid transit, demonstrating an opportunity to increase ridership in the interim prior to LRT implementation in Hamilton.

Hamilton invests approximately 1.4 revenue service hours per capita, a level similar to its peers. However, cities with higher ridership, Winnipeg, Victoria, and Quebec City all exceed 2.0 hours per capita.

**KEY MESSAGES**

- There is considerable room for increasing transit service in advance of rapid transit
- Increasing transit service hours can provide significant gains in transit ridership even without rapid transit
- Rapid transit is most productive with established ridership demand that justifies and can benefit from additional capacity

**EXHIBIT 6:** Ridership vs. Service Hours per Capita for Transit Systems Across Canada (2010)

to build towards rapid transit.

c. Reviewing the Transportation Master Plan

As reflected throughout this report, the City of Hamilton is at a pivotal point in the evolution of its transportation network. The City’s Transportation Master Plan was adopted in 2007. Best practices are to review a master plan every five years to examine conditions and trends, measure achievements and progress, determine if the plan goals and objectives are still valid and update the plan as necessary. There are a number of mobility and transit planning elements in light of this report, recent Council directives, stakeholder input and LRT planning that should be considered through a publicly accessible Five Year Review process, including:

- the prioritization of projects and financial strategies;

- review of the rapid transit studies undertaken to date in the context of the proposed transit network and in light of other plan elements including the road network (auto travel), active transportation (cycling and pedestrian networks), travel demand management, the identification of planned transportation infrastructure (road and transit) and the protection of transportation right of ways;

- if there are additional projects (e.g. the S-Line - Ancaster Business Park to Eastgate via Centennial Road/Rymal Road), which should be prioritized, and could result in possible City requested adjustments to the Metrolinx Regional Transportation Plan;

- the establishment of evaluation criteria as part of a transparent framework for assessing future transportation priorities, such as network connectivity, ridership, level of service, equity and accessibility, environmental sustainability, community impact, cost and constructability;

- a network wide review of one-way and two-way traffic systems;

- the development and implementation of a complete streets strategy as noted above; and,

- development of the Terms of Reference through the Mobility Corporate Working Team (MCWT).

In addition to the above, on September 12, 2012, Council approved the establishment of a Ward 1, Ward 2 and Ward 3 One-Way to Two-Way Street Study Group to study and report on possible one-way street conversions in the downtown area, specifically Cannon Street and Queen Street, to inform the requisite environmental assessments. As two-way conversions have potential system wide implications for the transportation network, it is proposed that this work be undertaken as an integral component of the Five Year Review. This will also allow the consideration of the complete streets approach as a mechanism to achieve the desired outcomes for the Ward 1, 2 and 3 communities. Furthermore, a complete streets demonstration project is recommended as part of this report and this initiative should be undertaken in coordination with the Working Group.
i) Developing a Complete Streets Strategy

In May 2012, the City of Hamilton held a Transportation Summit: “Complete Streets” which brought together 140 community leaders, NGOs, City staff, concerned citizens and business leaders to discuss, brainstorm and monitor progress regarding transportation issues. As a result of the summit, the community made a number of recommendations to work towards complete streets. One of the recommendations is for a Complete Streets strategy as part of the Transportation Master Plan 5 Year Review.

According to Complete Streets for Canada, a complete street:

- is designed for all ages, abilities, and modes of travel;
- process is when safe and comfortable access for pedestrians, bicycles, transit users and the mobility-impaired is not an afterthought, but an integral planning feature;
- policy approach ensures that transportation planners and engineers consistently design and operate the entire street network for all road users, not only motorists;
- offers wide ranging benefits; and,
- is cost effective, sustainable, and safe.

Designing a complete street can be straightforward when right of way width, or public space, is not constrained. However, in most established urban areas, when designing Complete Streets, a balancing act is required in finding the space for all the desired users. The characteristics of a complete street are those that are often associated with two-way traffic flow vs. a one-way traffic flow, such as slower traffic, better walking environments and more liveable streets. The strategy should be focused on the outcome, not a specific traffic design or standard (e.g. one-traffic vs. two-way). Complete Streets can exist in different communities and along various roadways; there is no singular approach to Complete Streets.

A complete streets strategy would provide a decision making framework designed to achieve “a balanced transportation network” and is supported by Official Plan policy.
6 Actions to Get Rapid Ready

Over the next few years, the City will continue to advance designs for Light Rail Transit in the King-Main-Queenston Corridor as well as accelerate plans for rapid transit in the A-Line corridor. Major investments will be required to bring these projects to fruition. In the interim, there are many things that are needed to get ready for these investments.

Early and ongoing investments to enhance sustainable transportation infrastructure and facilitate multi-modal travel in Hamilton’s Rapid Transit corridors will greatly improve the pay-back for major infrastructure investments when they are made.

Throughout this section, references will be made to Mobility Programs and Special Projects work plans, which are attached as Appendix C in this document as indicated by this arrow: 

SEVEN KEY ACTIONS

a. BUILDING A RAPID-READY TRANSIT NETWORK
Enhance and increase bus services, restructure the route network around rapid transit corridors

b. CREATING AN ACCESSIBLE TRANSPORTATION SYSTEM
Transit and the transportation system will be fully accessible

c. MAKING TRANSIT FASTER AND MORE RELIABLE
Transit must offer journey times competitive to driving to be an attractive choice

d. CREATING A REFINED TRANSIT CUSTOMER EXPERIENCE
Provide customer service and amenities to make it easier and more attractive to use transit

e. PROVIDING SAFE AND CONVENIENT WALKING AND CYCLING ENVIRONMENTS
Encourage walking and cycling for short- and medium-distance trips while creating strong linkages to transit

f. INTEGRATING CORRIDOR AND COMMUNITY PLANNING
Planning for and building the city around transit

g. DEVELOPING SEAMLESS MULTI-MODAL CONNECTIONS
Integrating different modes of transportation to maximize connections to transit.
a. BUILDING A RAPID-READY TRANSIT NETWORK

Core Actions

The Rapid Transit network will draw riders from all parts of the city. Accordingly, the base transit network must be enhanced to firstly, build ridership in the rapid transit corridors, and secondly, feed the rapid transit network. This includes enhancements to service coverage, service span (hours of operation), service levels, and route structure.

It is anticipated that routes will be restructured over time. Light rail transit and bus rapid transit are ultimate goals and their implementation will require regular bus service restructuring. In preparation, the objective will be to increase bus service levels in the A-Line and B-Line corridors to emulate rapid transit. Examples of possible service improvements are:

**King-Main-Queenston Corridor**

1. **High frequency service on B-Line corridor routes:**
   - Route 1 King/Route 10 B-Line: 5 minutes
   - Route 5 Delaware/Route 51 University: 7.5 minutes
   
   Result will be a combined headway of 3 minutes or better in the entire B-Line corridor.

2. **Additional service to/from Dundas.** This change will provide a reasonable level of service to the King Street and the Governors Road areas during all time periods and will help to avoid crush loads between Dundas, McMaster and Downtown Hamilton.

3. **Service Enlacement to the future Centennial GO Station,** subject to the development of a park and ride and transit terminal facility at this location.

4. In the medium term, **ROUTE 51 UNIVERSITY will be extended to the Mohawk College Multi-Modal Transit Hub** to provide a direct connection from McMaster University to Mohawk College.

**James-Upper James Corridor**

5. Service span and service level improvements to Route 20 A-LINE along with restructuring to provide a high level of service in the James/Upper James corridor from the airport to the waterfront. Headways will be improved to 10 minutes.

6. Extension of year-round Route 20 A-LINE service to Hamilton’s waterfront (Pier 8) via Guise Street, also improving service to the future site of James North GO Station.

Other Service Improvements

7. **Expanded service coverage** in growth areas, where permitted by the street network.

8. **Expanded span of transit service for Ancaster, Stoney Creek and Dundas** to provide service throughout the day, seven days a week.

9. **Service enhancements in Waterdown to avoid circuitious routing** and improve connections to Aldershot GO, along with service span and service level adjustments.

10. In the longer term, implementing a new service between Waterdown and Downtown Hamilton.

11. Extension of Route 21 Upper Kenilworth to Heritage Greene via Mud Street and Pritchard Road.

12. In the long term, establish an express bus service link to provide fast east/west service between peripheral nodes on the escarpment.
13. **An additional 100 buses over the longer term will be required** to execute the improved service levels. As a result, **a new transit garage will be required** to accommodate the additional fleet. This would be located in the lower city, and ideally located close to the future LRT maintenance facility so that administrative functions could be co-located. It is also proposed that the University Plaza terminal be closed and **a new terminal be established at a linkable west end location**. By 2015, the new multi-modal hub at Mohawk College is expected to be complete, enabling further restructuring of A-Line corridor routes.

14. **Improving connections to outer communities**, including service span improvements for Glanbrook TransCab and a new service to Binbrook.

15. **Definition of a Frequent Transit Network**, which would serve to highlight important routes connecting the various nodes in the City. Tentatively, referred to as “Go-To corridors”, these routes would operate at consistent headways and for consistent duration and would be readily understood by the public. **A pilot of a Go-To Corridor is proposed.**

16. **Public Bike Share transit system** to feed Rapid Transit corridor through multi-modal connections.
b. CREATING AN ACCESSIBLE TRANSPORTATION SYSTEM

Core Actions

Ensuring the transportation system is accessible to all is important to create equality of opportunity and the freedom to move around the city for work, school, leisure, and to perform simple day-to-day tasks. Hamilton has a strong foundation of accessible transit services - DARTS, accessible taxis, and a highly accessible conventional transit system all work together as a family of services.

Increasing the accessibility of the transportation system is especially important in response to an ageing population and to meet the needs of persons with disabilities, of which Hamilton has a higher than average proportion in its population. These needs are coupled with expanded legislation for accessibility, namely the Accessibility for Ontarians with Disabilities Act, and the associated Integrated Accessibility Standards. These set out legislated requirements for transportation service, built environment, and customer service with the goal of a more barrier-free environment by 2025. However, many of the requirements of the AODA and the IAS have a more immediate impact, such as accessibility requirements for conventional and specialized transit services - some standards were for immediate implementation, while others come into effect in 2017.

CUTA Vision 2040: Focus on serving customers with mobility challenges

The anticipated growth in the volume of seniors and persons with disabilities using transit demands a major response. The industry will seek to maximize the attractiveness of conventional services to seniors and persons with disabilities, in order to reduce the cost burden of specialized services. Transit systems may develop initiatives related to fares, customer education and travel training, staff sensitivity training, more accessible vehicles and structures, and the efficient concurrent operation of conventional and specialized services. Travel training programs help people with disabilities use regular transit.
Actions toward accessibility

1. Implementation of AODA legislation, as above, implementation period follows Council’s Strategic policy and budget considerations

2. The 2013 AODA Integrated Accessibility Standard requires harmonization between specialized and conventional transit services with respect to hours of service, fare structures, as well as notification of service delays for the specialized service. The City of Hamilton will meet the legislated time frames.

3. In advance of the AODA requirement of 2017 the City of Hamilton implemented on November 1, 2012 a new eligibility policy for specialized (DARTS) transit. Eligibility for DARTS service is now based on a person's functional abilities (e.g. physical, cognitive, and sensory), and on their environment as to whether they are able to use regular HSR bus service. The five-year impact of demand growth results in a requirement for approximately $5.7M in new annual operating requirements. The implementation of the new eligibility policy, well in advance of the requirement, highlights Council’s priority, through the Corporate Strategic Plan, to implement the AODA, by committing to providing equitable, affordable, and accessible transportation to all Hamilton residents, inclusive of all forms of functional mobility.

4. Review of major bus stops and terminal for compliance with Integrated Accessibility Standards as it relates to accessible bus stop and terminal design.

5. Retrofit buses with automatic pre-boarding vehicle announcements, as required by the Integrated Accessibility Standards, by January 1, 2017

6. DARTS MDT’s
The City has awarded a contract to supply, install, test, and commission a turnkey Computer Aided Dispatch and Automatic Vehicle Location (CAD/AVL) System, for the DARTS operation. It is anticipated that the implementation will be completed by mid-2013 at an approximate cost of $750,000. DARTS expects to derive from the CAD/AVL System improved vehicle utilization, a reduction in manual data entry and most importantly real time tracking and monitoring of vehicles based on schedule.

7. Accessible Taxi
AODA is vague regarding the number of accessible taxi cabs that are required however it is clear in that the City must determine the approach, program and measure the need for on-demand accessible taxicabs. In this regard the City of Hamilton approved 16 accessible taxicab plates for 2013.

8. Travel Training
The City of Hamilton has implemented a 2 year pilot to travel train cognitive disabled passengers on the HSR. Additionally the HSR does mobility training and as part of the new eligibility process the City has a 5 year contract to teach passengers that do not qualify for DARTS unconditionally, how to use the HSR.

9. Conduct accessibility audits of major transit stop areas and prioritize improvements to improve universal access

10. Identify locations for pick-up and drop-off connections between specialized transit (DARTS) and conventional transit services at key transit nodes and provide convenient waiting, drop-off, and pick-up areas to allow for seamless connections between the two systems
c. MAKING TRANSIT FASTER AND MORE RELIABLE

Core Actions

A modern, attractive and cost-effective public transit system includes service that people can depend on and one that gets them to their destination as quickly as possible. When transit vehicles are caught in general traffic, the attractiveness and efficiency of the service can be significantly reduced. Transit Priority Measures give transit vehicles priority over general traffic. Completely segregated transit lanes provide the highest level of service, and are reflective of the ultimate plans for rapid transit in the City, including LRT along the Main, King, Queenston corridor. This section provides actions to make transit faster and more reliable - increasing attractiveness of service and encouraging greater ridership.

King Street Bus-Only Lanes Pilot Project

1. In order to begin to introduce transit priority in Hamilton, staff have evaluated 21 route segments of the B-Line & A-Line for appropriateness to pilot a transit only lane. Criteria was established for comparison of route segments, including average travel speeds, schedule adherence, existing and projected intersection level of service and number of HSR trips. King Street from Mary Street to Queen Street was determined to be best location for a trial pilot project for bus-only lanes. The design includes a one year pilot project with the following components:

   » Utilization of one westbound travel lane for all day dedicated transit only purposes.

   » Beginning at Mary Street, the second lane from the northerly curb would be dedicated, allowing for parking, loading, bus stops and right turns in the northerly curb lane. No new right turn restrictions are necessary.

   » Short term on street parking in the southerly lane from James Street to Bay Street (e.g. in front of the Ellen Fairclough building) and in the northerly lane in front of the Sheraton Hotel would not be impacted.

   » At Bay Street, the dedicated transit lane transitions to the northerly curb lane. This does require removal of the parking and loading in this lane. However, the plan includes the relocation of parking and loading to the southerly curb lane, with no to minimal net loss in parking. Loading provision on the south side may be an inconvenience to businesses on the north side of the street; however solutions can be investigated with the business community (e.g. loading along side streets).

   » Two through general purpose lanes throughout the alignment.

Next steps, following approval of this report, are to refine the design, investigate signal priority at James, develop a communications plan, develop a monitoring plan, implementation in summer 2013 and reporting back to Council with results. This project would be fully funded from Metrolinx Quick Wins.
EXHIBIT 8: King Street Transit-Only Lanes (Queen Street to Mary Street) Concept
James-Upper James Corridor

Improving transit operations in the James-Upper James corridor is a priority to provide a high quality north-south transit spine, connecting the waterfront, downtown, upper city, and the airport. The corridor also connects to the Mohawk-Upper James mobility hub and the future James North GO Station. Actions in this corridor include:

2. **Implementing transit priority measures on Upper James** at Mohawk Road, Stone Church Road, and Rymal Road through the development of queue-jump lanes and transit signal priority

3. **Conducting an Upper James transit corridor study** to establish the need for other priority measures to enhance A-Line service. Implement recommendations from this study in the medium and long term

4. **Improve transit operations on James Street North**, either through intersection treatments or through selective removal of on-street parking to eliminate bottlenecks

5. **Improve transit operations on James Street South** by removing on-street parking

6. In the longer term, **provide transit signal priority on James Street North and South**. Potential locations include St. Josephs Drive, Hunter Street, York Street, and Barton Street. Coordinate with a city-wide transit signal priority program (see supporting initiatives)

7. Conduct feasibility study for the long-term **conversion of James Mountain Road to a two-way, bus-only roadway**

Supporting Initiatives

8. Initiate a **City-wide Transit Signal Priority Program** to improve transit operations throughout the city, starting with a study on identifying locations where transit priority would benefit transit operations most, establishing guidelines and framework for implementation

9. Establish need and develop **transit-only accesses at major transit terminals**, including Eastgate Square and Limeridge Mall to improve operations and reduce delay
d. CREATING A REFINED TRANSIT CUSTOMER EXPERIENCE

Core Actions

Creating a high quality traveller experience on transit is important to increase the awareness, visibility, and attractiveness of transit. In addition, integrating all modes in the marketing and positioning of travel choices is highly important to build support for, and to encourage the choice of transit, walking, cycling, and other TDM measures to accommodate travel demand.

Marketing and Branding

1. Develop an integrated branding strategy for mobility in Hamilton, which will include a new brand and identity for Hamilton Street Railway  C1.12

2. Implement a marketing strategy to position transit and integrated mobility as attractive and competitive travel choices  C1.12

Customer Service and Information

3. Implement service information displays at MacNab Street Transit Terminal, as approved in 2012 and funded by Quick Wins.  C1.7

4. Implement real-time transit service information program with open data feed and displays at transit terminals, major transit nodes, and busy stops

Bus Stops and Passenger Amenities

5. Complete design and implementation of enhanced A-Line and B-Line bus stops and shelters, including expansion to all A-Line and B-Line stops in the medium term  C1.7

6. Complete PRESTO implementation on both conventional and specialized transit, expand availability of PRESTO customer service at major transit terminals

Supporting Initiatives

7. Conduct audit of existing transit shelters and complete a rehabilitation program for deficient shelters  C1.11

8. Expand provision of bus shelters across city (a separate report has been submitted on this item)  C1.11

9. Maintain high standard of fleet renewal and condition to maximize recent investment in achieving one of the newest fleets in the country

10. Continued fleet conversion from a 40-foot to 60-foot articulated bus fleet to provide more capacity and seating on busy routes

11. Continued partnership with Metrolinx for regional coordination of fare products and to realize savings through group procurement

12. Program of continuous improvement for vehicles and facilities

13. Develop a fare and customer loyalty strategy to maximize opportunities afforded by PRESTO and fare integration with GO Transit and other transit agencies

14. Sustainable transportation and transit routing smart phone application
e. PROVIDING SAFE AND CONVENIENT WALKING AND CYCLING ENVIRONMENTS

Core Actions

Implementing the City’s cycling and pedestrian mobility master plans will play a large role in providing more mobility choices and creating strong linkages with transit and rapid transit corridors. Increasing overall investment in walking and cycling infrastructure will be important, as will integration with built form, education and awareness programs. Some core actions to achieve safer and more convenient walking and cycling environments include:

1. **Continue implementation of the Cycling Master Plan** and increase annual investment in cycling infrastructure

2. **Endorse the Pedestrian Mobility Plan;** implementation actions within, upon approval of separate forthcoming report

3. Aim to providing secure, high quality, weather protected **bike racks at selected B-Line and A-Line stops**

4. **Wayfinding signage for both cyclists and pedestrians** in the downtown and in proximity to rapid transit nodes and stops

5. Pursue a bike-sharing program focused on rapid transit nodes and downtown. A pilot of this program has been identified for funding through Quick Wins (a separate report is being submitted on this item)
6. **Identifying and accelerate development of bikeway connections** to rapid transit corridors and in the downtown, including the implementation of the following bikeway projects:
   - Victoria Avenue (Escarpment to Burlington St.)
   - Gage Avenue (Escarpment to Burlington St.)
   - Bay Street to James North GO Station
   - Upper James multi-use trail

7. **Identify opportunities for pilot segregated bike lanes**, in conjunction with the review of the Transportation Master Plan

8. Introduce the **Escarpmont-Climber bus pass** to maximize use of A-Line corridor routes

9. **Conduct walkability audits and implement targeted sidewalk improvements in rapid transit corridors**, for example, providing sidewalks and pedestrian facilities on Upper James Street from Malton Drive to Airport Road

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**Supporting Initiatives**

10. **Review zoning and development guidelines** to encourage or require the provision of bicycle parking and facilities at workplaces

11. **Review deficiencies in bike parking at municipal facilities** and provide parking where it is currently deficient (a separate report has been submitted on this item)

12. Continue and expand the **School Travel Planning program** to encourage active transportation and transit use to school

13. **Align coordinated furniture study with rapid transit corridor planning** to ensure a consistent streetscape and urban design

14. **Continue to support the Hamilton Cycling Committee**

15. **Continue active transportation marketing and educational programs** as part of overall integrated mobility marketing and branding

16. **Adopt Complete Streets policy** to prioritize sustainable modes and inform decision making processes

17. **Establish Pedestrian Mobility Advisory Committee**
f. INTEGRATING CORRIDOR AND COMMUNITY PLANNING

Core Actions

1. **Complete the next phase of the Main King Queenston Corridor Strategy Study** including detailed actions and implementing planning documents

2. **Develop an Upper A-Line corridor strategy** following similar process as the Main King Queenston Corridor Strategy Study. Integrate corridor strategy with planning of the Mohawk-Upper James and Hamilton-LIUNA Mobility Hubs

3. **Develop a station area planning study for Centennial GO Station**

4. **Adopt zoning by-law amendments** for B-Line and A-Line corridors to facilitate transit-oriented development

5. **Finalize and implement Urban Official Plan**

6. **Develop new/enhance development incentives**

Supporting Initiatives

7. Establish a corporate working team for integrated mobility to coordinate decisions around mobility, land use, and other municipal decision-making

8. Better integrate TDM and land use through joint projects and inter-departmental working groups.

9. Integrate transit and TDM into land use decision-making/ Require TDM statements in Traffic Impact Studies; develop and enforce a TDM checklist for development applications

10. Continue engagement with Business Improvement Areas to encourage travel demand management in retail areas
g. DEVELOPING SEAMLESS MULTI-MODAL CONNECTIONS

Core Actions

1. **Advance development of park and ride at site of future Centennial GO Station** to serve as a hub for GO Transit buses, HSR buses. This site would replace the existing park and ride site at Barton Street and Nash Road.

2. **Introduce regular Lakeshore West GO Bus service to east Hamilton at Centennial Station** in advance of GO Rail service with connecting bus services to Niagara Region (in partnership with Metrolinx/GO Transit).

3. **Integrate feeder route service with Burlington TRANSIT 101 EXPRESS Service** – explore extension of Burlington TRANSIT 101 EXPRESS to James North GO Station (in partnership with Burlington Transit).

4. **Identify location of transit terminal near McMaster University/west Hamilton** for future integration with Burlington Transit service and interregional bus services to Brantford, Waterloo Region, and other destinations.

5. **Provide active transportation connections to GO Transit stations and stops** where currently deficient, such as Aldershot Station, and where new stations are planned, such as James North Station and Centennial Station.

Supporting Initiatives

6. **Work with the Ministry of Transportation to develop new carpool parking lots and amenities** on the Queen Elizabeth Way at Centennial Parkway (potentially integrated with Centennial GO Station) and on Highway 403 at Meadowlands.

7. **Explore opportunities for fare integration** between HSR and GO Transit and Burlington Transit.

8. **Continue coordination with Metrolinx in the development of a regional traveller information portal.**

9. **Continue partnership with Metrolinx to implement Smart Commute** and engage employers on developing workplace TDM programs **C1.2**.

10. **Conduct community-based or individual social marketing programs for TDM** to encourage multi-modal travel choices **C1.1**.
Funding Requirements

The city has achieved much progress with the one-time funding received to date - Metrolinx Quick Wins funding, for example, has produced substantial returns in new and improved transit facilities. Much of the planning associated with rapid transit in the King Main Queenston corridor has been supported by the Provincial government. In addition, municipal support for integrated mobility and rapid transit initiatives has continued, creating momentum and showing significant progress.

While it is recognized much foundational and planning work has been completed for rapid transit, a gap remains between where we are today and where rapid transit will take us to the future. Bridging these gaps with the actions identified in this report will make Hamilton more ready for rapid transit when the funding becomes available; however, further funding commitments are required.

The following tables summarize the short- and long-term capital and operating implications of the actions described in this report and the associated work plans. Within these actions, some have received or are budgeted to receive funding commitments. Approximately $5.4-million worth of initiatives and actions are shown to have budgeted commitments and fall under existing funding envelopes, such as Quick Wins.

In total, approximately $155-million of additional short-term capital funding commitments are identified in the actions in this report. Over a five-year period, this represents approximately $30-million in additional capital funding annually, a level of investment consistent with the recommendations of the Transportation Master Plan, which recommended an investment of $12-million annually in transit alone. It is an achievable level of capital investment for substantial gain.

Of the unfunded actions, opportunities for continued support from Metrolinx are identified for actions that have a regional transportation benefit or are consistent with the furthering of policies and plans identified in The Big Move and The Next Wave. Approximately $107-million of the initiatives could be candidates for funding partnerships with Metrolinx.

Additional to identified capital funding needs, a significant increase in transit service is requested in the form of a $45-million increase in transit investment each year compared to existing levels. This would result in a substantial increase in service hours, provide higher frequency service across the transit network, and encourage ridership increases to levels that can justify further investment into rapid transit. The proposed investment would increase the number of service hours per capita to approximately 2.0.

While a large figure, evidence shows that increasing investment in transit service hours optimizes overall financial performance of a transit system, as evidenced in the chart above. As revenue hours per capita increases, the net cost per passenger decreases, meaning each dollar of transit investment goes further.
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<td><strong>Corridor and Community Planning</strong></td>
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<tr>
<td>6.f.1 Complete Main King Queenston Corridor Strategy Study (P&amp;ED Lead)</td>
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<td>6.g.1 Centennial GO Station Park and Ride Lot and Regional Transit Terminal</td>
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<td>6.g.2 Introduction of GO Bus Service at Centennial GO Station</td>
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<td>6.g.3 Integration of B-Line and Burlington Transit 101/Route 1 Service</td>
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<td>6.g.5 Active transportation links to GO Transit stations and stops</td>
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