

RETHINKING LIGHT RAIL TRANSIT PLANNING IN HAMILTON, ONTARIO: A COMPARATIVE REVIEW AND CRITICAL ASSESSMENT

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ABSTRACT

The Province of Ontario is in the midst of an unprecedented expansion of light rail transit [LRT]. But what factors are behind the determination to build LRT? The case of light rail in Hamilton offers important insights into the tangible and intangible motivations and justifications that inform the light rail transit planning process. The decision to construct LRT is based on the tangible goals of city-building and increasing economic development, revitalization, land use change, and transit ridership. The planning process is also based on the intangible symbolic goals of city branding, differentiation, and image-led planning as a means of altering perceptions and increasing competitiveness. However, an extensive review of the literature demonstrates that a series of prerequisites that must be in place if an investment in light rail is to achieve these goals. Applying this knowledge to the case of Hamilton reveals a project that faces significant challenges to inducing land use change and altering perceptions. The research presents several lessons relevant to planners and policymakers involved in the light rail transit planning process.

1 INTRODUCTION

2 The past three decades have seen a remarkable growth in the number of light rail transit [LRT]
3 systems in North America, with more route-kilometres of LRT constructed than any other type
4 of rail transit technology. This trend continues in the Province of Ontario, where all three levels
5 of government are actively engaged in an unprecedented expansion of light rail. The cities of
6 Toronto and Ottawa and Region of Waterloo collectively have 83.4 route-kilometres of new light
7 rail transit projects worth \$11.8 Billion that have been approved and are in the early stages of
8 procurement and construction. Outside of these projects, the cities of Toronto, Mississauga, and
9 Hamilton have an additional 122.4 route-kilometres of new light rail lines and system extensions
10 in various stages of planning and design.

11 The determination to build an extensive network of light rail lines in Ontario raises an
12 important question: What factors are behind the decision by policy and planning actors to invest
13 in LRT? As a city's public and political actors consider an investment in rapid transit, the debate
14 inevitably turns towards a discussion of the benefits that can be achieved. This can include
15 tangible objectives such as lower levels of congestion and air pollution and the promotion of
16 transit-oriented land use change, as well as intangible symbolic or emotional benefits, such as
17 remaking the image of the host city as a more modern metropolis or increasing local and regional
18 competitiveness in the global economy. In some cases, the accumulation of these benefits has
19 been true. However, the idea that these benefits can first be bundled into a composite package,
20 and second, that they are not only transferrable but inevitable in other host cities is ignorant of
21 the wider North American LRT experience (54). Such claims are politically and intellectually
22 irresponsible and hazardous to short and long-term public and political confidence in rapid
23 transit as a tool for encouraging more sustainable patterns of growth and travel.

24 The goal of this paper is to explore the motivations and justifications that inform the light
25 rail transit planning process currently underway in one of the five cities planning to construct
26 light rail in Ontario. The City of Hamilton is currently at the 30 percent design stage for the
27 \$829 million 14km B-Line LRT and the project is considered "implementation-ready", pending
28 funding from upper-tier levels of government. But a closer examination of the policy and
29 planning narrative surrounding the B-Line LRT shows a number of contentious propositions that
30 have been disseminated by policy and planning actors in support of light rail. A critical
31 comparative assessment of current plans against the academic literature and experiences with
32 LRT in other cities in North America reveals a project that, at least at present, faces significant
33 challenges to achieving its stated goals.

34 This paper will proceed in two sections. The first frames the research through an
35 overview of the literature and a discussion of the rationale behind light rail and other rail transit
36 projects. Section two then applies this knowledge to a critical assessment of the light rail transit
37 planning process underway in Hamilton, Ontario, concluding with an appraisal of the
38 propositions that have been utilized by planners and policymakers involved in the light rail
39 transit planning process. The outcomes of this research offer lessons relevant to planners and
40 policymakers engaged in rapid transit planning in Hamilton and add value to policy and planning
41 debates surrounding LRT in other cities in Ontario and across North America.

42

1 BACKGROUND

2 Many cities in North America and around the world have turned to light rail and other rapid
3 transit technologies to achieve a number of objectives. This section discusses both the tangible
4 and intangible goals and justifications commonly used to rationalize investments in light rail and
5 other transit infrastructure.

6 **Tangible Motivations and Justifications behind Light Rail Transit**

7 As Cohen-Blankshtain and Feitelson (2) explain, there are two main justifications behind
8 investments in light rail. The first is to achieve high levels of ridership by responding to high
9 levels of existing travel demand, as light rail cannot be considered cost-effective or said to have
10 had an impact on travel times or the environment without high levels of patronage. The second
11 is to affect land use settlement patterns, typically with the goals of promoting transit-oriented
12 development, revitalizing declining areas, or strengthening the city core.

13 *Existing Demand: Rapid Transit and Ridership*

14 The first rationale for constructing light rail systems is to serve existing corridors of high
15 demand. It is believed that the accessibility benefit obtained by providing light rail service to a
16 congested corridor will result in increased transit ridership and a cost-effective transit line, as
17 well as a reduction in congestion or increase in throughput and a decrease in emissions (2).
18 However, previous research has been critical of the ridership and cost projections used to
19 rationalize investments in rapid transit in a number of cities, arguing these systems have been
20 subject to systematic cost overruns and ridership shortfalls (3-6).

21 One explanation for this has been that the light rail transit planning process is tainted
22 through an irrational political and planning framework that favours the construction of LRT over
23 less-costly bus services (7) or overestimating benefits and underestimating costs as part of a
24 competition for funding from different levels of government (6). Another explanation can be
25 found in examining the connection between land use and transportation demand. Land use
26 considerations are fundamentally important to rapid transit and at its most basic, the existing
27 built environment provides a foundation for travel demand. Early research established minimum
28 densities required for cost-effective transit service (8). For light rail specifically, recent work has
29 further explored the link between LRT ridership and factors such as residential and employment
30 densities, destinations in station areas, and service quality in the United States (9) and Europe,
31 Australia, and North America (10). As such, constructing light rail in corridors where these
32 factors are present is crucial to attracting high levels of transit ridership.

33 *Induced Demand: The Land Use Impacts of Rapid Transit*

34 The second rationale used to motivate and justify investments in light rail transit is to induce
35 demand to areas where developmental potential is currently under-utilized due to a lack of
36 accessibility. It is argued that once a light rail line is constructed, these areas will enjoy higher
37 land prices and higher density development, which will in turn lead to higher ridership for light
38 rail (2). Indeed, many proponents of light rail argue that an investment in LRT can spur urban
39 growth, revitalize declining areas, and promote more transit-oriented development in a city's
40 downtown core, inner suburbs, and outlying areas. But what does the literature say regarding the
41 impact of rapid transit investments on land use change?

42 Handy (11) notes that in theory, rapid transit can potentially have both a "generative" and
43 "redistributive" impact on land use and development. However, a growing body of scholarly
44 research challenges the generative land use effects of rapid transit, arguing that rail transit on its

1 own cannot generate new urban economic or population growth (12-19). Yet there is evidence
2 that light rail and other rapid transit systems can have a substantial redistributive impact and
3 influence where and how growth in a region occurs (11-12, 14, 16, 20). As such, rapid transit
4 should not be understood as a primary driver of *new* growth and revitalization, but rather as a
5 tool to guide growth that would have occurred anyhow. But even the redistributive effect of
6 rapid transit is dependent on a number of basic prerequisites (11-12, 15-16, 20-21). A review of
7 the literature has revealed six factors that contribute to the ability of investments in rapid transit
8 to promote development and land use change, without which rail transit is not likely to have an
9 impact on land use and development:

- 10
- 11 1. Increase in accessibility offered by public transit infrastructure
- 12 2. Positive regional economic, population, and employment growth and demand for
- 13 development
- 14 3. Positive social conditions in transit corridor and station areas
- 15 4. Positive physical conditions in transit corridor and station areas
- 16 5. Available land for development and ease of land assembly
- 17 6. Complimentary government policy such as growth plans and developmental incentives

18 **Intangible Objectives of Light Rail: Transit Infrastructure and Image-Led Planning**

19 Aside from the desire to achieve the tangible benefits of rapid transit, the construction of many
20 such projects is grounded in a desire to cultivate a specific image, message, or perception to
21 those within and outside the host region or city. At its core, planning based wholly or in part on
22 image considerations is about marketing or designing the city as a brand and many cities have
23 engaged in marketing exercises based on what Kavartzis and Ashworth (22, p. 506) refer to as a
24 need to “differentiate themselves from each other, to assert their individuality in pursuit of
25 various economic, political or socio-psychological objectives.”

26 One method used to alter perceptions and images of a city is rail transit. As Vuchic (23)
27 explains, the construction of rapid transit systems can help serve as a landmark and presents an
28 opportunity to give a city an identity. And indeed, many cities around the world associate
29 investments in rail transit with a positive image of economic development and a method of
30 differentiation in a competition against other urban areas (24-27). In North America, studies of
31 Atlanta, Miami, and Detroit have identified the objective of projecting a world-class image as a
32 major stimulus for investing in a new rail transit systems (24, 28). For light rail cities, both
33 Dallas and Sacramento constructed their LRTs in part to achieve ‘world-class’ city status, with
34 planners and policymakers in Dallas in particular expressing a desire to compete against other
35 major international trade centres like Chicago, New York, and Boston (7, 24).

36 It is also common to see rail rapid transit associated with a broader image of investment
37 and revitalization. For example, Buffalo’s Metro Rail LRT was constructed in part to address
38 the real and perceived challenges posed by the decline of the downtown core (20, 24, 50), while
39 the Blue Line in Los Angeles was designed to help revitalize inner-city neighbourhoods (17).
40 Image considerations are also often cited in support of investing in light rail over bus transit
41 systems, with LRT exhibiting the perceived benefits of superior comfort, security, and reliability
42 that stand to attract more by-choice riders (29-30), as well as a stronger message of permanence
43 to property developers and patrons (14).

44 Such intangible justifications are often invoked during the light rail transit planning
45 process to create symbolic or emotional messages surrounding the purported benefits of an
46 investment in LRT and can elicit powerful responses from planners, policymakers, and the

1 general public. Furthermore, when these intangibles are combined with the more concrete goals
2 and objectives outlined earlier, they form the backbone of support for the political coalition and
3 complex selling job required to bring a light rail or other transit project to fruition (*1, 31*).

4 **LIGHT RAIL TRANSIT PLANNING IN HAMILTON, ONTARIO**

5 In order to frame the comparative critical assessment, this paper will first provide an introduction
6 to the City of Hamilton and its regional context followed by an overview of the light rail transit
7 planning process and the motivations and justifications used in support of the B-Line LRT
8 project.

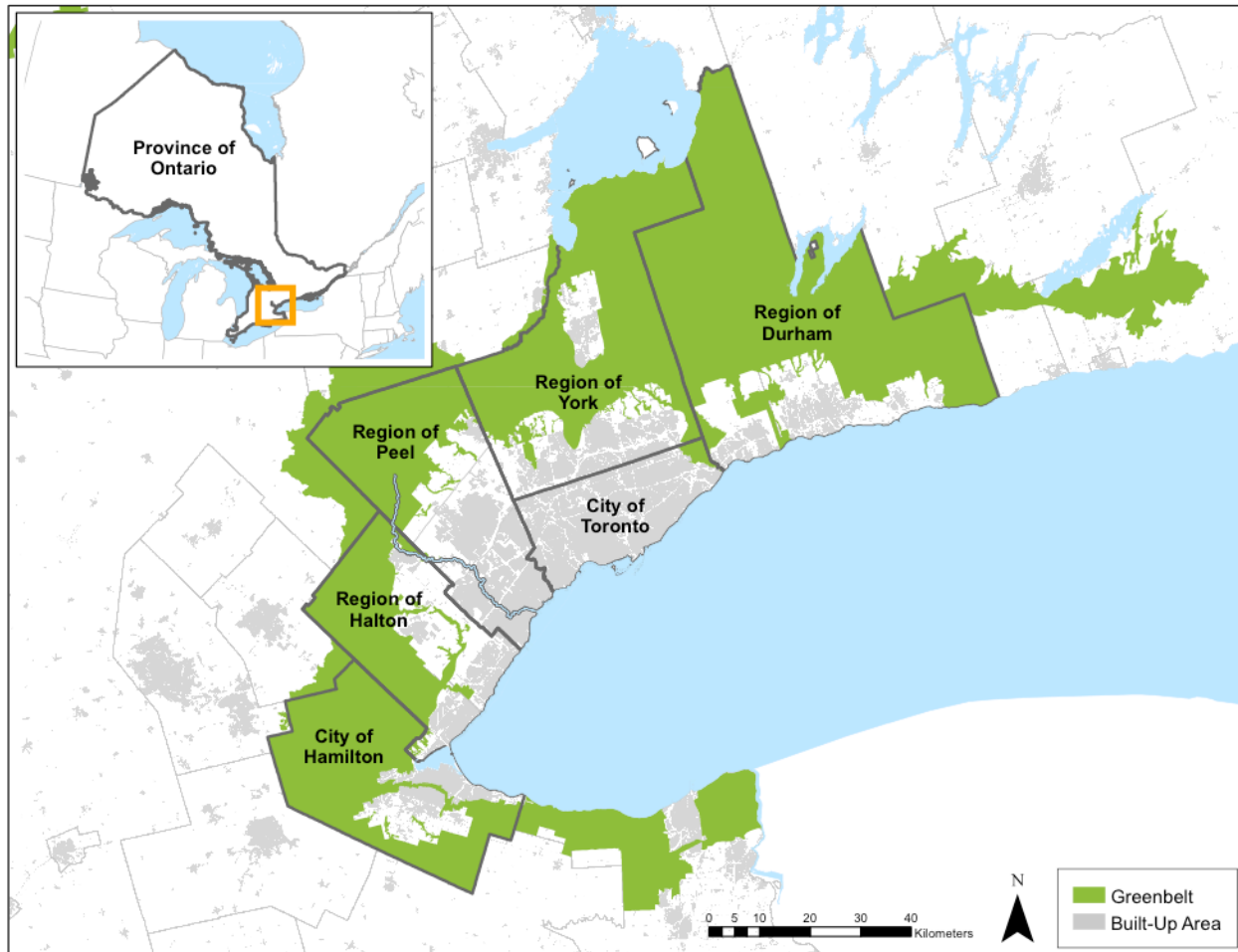
9 **Study Area**

10 The study area chosen for this research is the City of Hamilton, located approximately 75
11 kilometres southwest of the City of Toronto (Figure 1). Hamilton forms the western-most
12 portion of the Greater Toronto and Hamilton Area [GTHA] and has a total population of 520,000
13 according to the 2011 Canadian Census, making it the 10th largest city in Canada.
14 Geographically, the city is divided by the Niagara Escarpment, with the older lower city and the
15 central business district separated from the upper city, or ‘mountain’ areas by a 100-metre
16 vertical wall of limestone, sandstone, and shale. While many access roads have been constructed
17 to overcome this natural barrier, the escarpment continues to present a challenge to transportation
18 in the city, especially to the feasibility of providing rail-based transit between the upper and
19 lower areas.

20 The major economic engine of Hamilton has historically been rooted in primary metals
21 manufacturing and heavy industry, but like many of the rust-belt cities of the northeastern United
22 States, the past two decades have seen a significant decline in employment in these areas.
23 Employment in primary metals fell from a high of 34,000 jobs in 1989 to less than 10,000 by
24 2009. Likewise, all other manufacturing sectors employed 22,000 people in 2009, down from a
25 high of 37,000 jobs in 1989. However, losses in these areas were overcome by gains in
26 education and healthcare as well as goods distribution, business services, finance, and
27 construction. Subsequently, the city has become more services oriented – out of a total of nearly
28 200,000 jobs in 2006, 77 percent are in the service sector with the remaining 23 percent in
29 export-oriented industries (32).

30

1

FIGURE 1 Hamilton in the Greater Toronto and Hamilton Area.

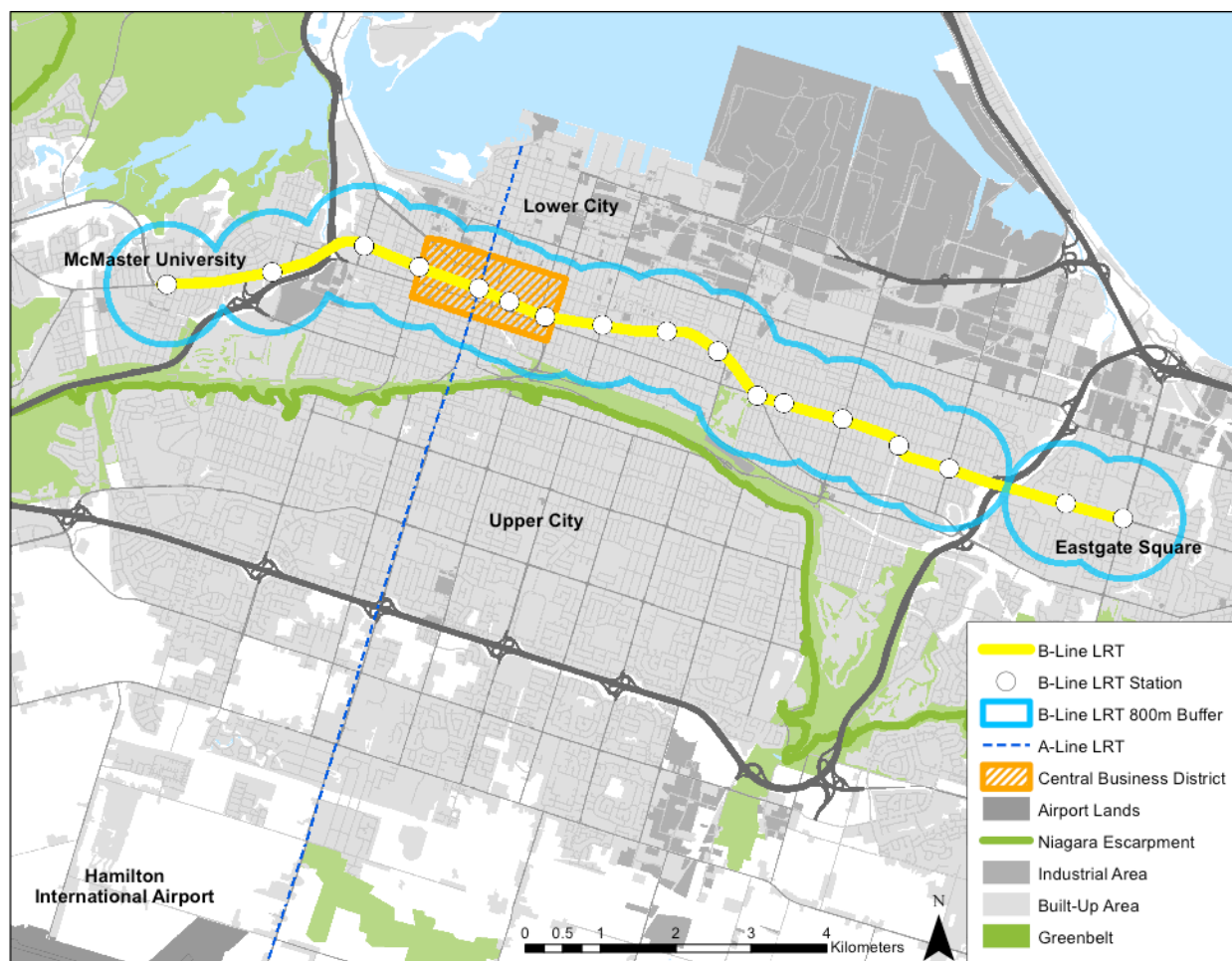
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3 **Light Rail Transit in Hamilton**

4 The City of Hamilton has identified a need for rapid transit along five key corridors, one of
 5 which is the east-west B-Line corridor through the lower city and central business district (Figure
 6 2). Plans for bus rapid transit along the corridor have existed since 1984, but it was not until the
 7 provincial election of 2007 that the Premier Dalton McGuinty championed the idea of provincial
 8 funding light rail along the B-Line, as well as the north-south A-Line to the Hamilton
 9 International Airport sometime in the future. In this sense, it is worth emphasizing that light rail
 10 was in many respects a provincial rather than local initiative.

11 In response, the City of Hamilton embarked on an extensive planning process for rapid
 12 transit with an emphasis on light rail, beginning with two feasibility studies (33-34), the launch
 13 of a simultaneous land use planning process designed to promote transit-oriented development
 14 along key transportation corridors in the city (35-37), and an extensive public consultation
 15 process to build a groundswell of support for the project. Based on these activities and a cost-
 16 benefit analysis conducted by the provincial transit agency Metrolinx (51), the City of Hamilton
 17 was awarded \$3 million to plan the B-Line project to a stage of 30 percent design, considered
 18 'implementation-ready' when funding is made available. As design work continues, planners
 19 and policymakers involved in the planning process continue to present an investment in light rail
 20 as one that will bring considerable benefits to the city, as discussed further below.

1

FIGURE 2 The City of Hamilton and the B-Line LRT.

2

3 Motivations and Justifications in Support of the B-Line Light Rail Project

4 Hamilton's B-Line LRT project is motivated and justified in part by tangible land use, economic,
 5 and social goals, as well as a number of intangible objectives. Unlike some cities, the
 6 overarching problem to be addressed through an investment in light rail is not one of congestion.
 7 Rather, the primary goal of the B-Line LRT is based on promoting land use change and
 8 revitalization in the lower city and downtown core. For example, the City of Hamilton's Rapid
 9 Transit team (38) notes that an investment in LRT promises to:

10

- 11 • Promote transit ridership
- 12 • Induce land use change through an increase in new transit-oriented residential and
- 13 commercial development
- 14 • Revitalize Hamilton's lower city neighbourhoods, waterfront, and downtown core and
- 15 make these areas more attractive by:
 - 16 ○ Stimulating higher density, mixed-use development
 - 17 ○ Generating increased tax assessment
 - 18 ○ Reducing automobile usage in the city core
- 19 • Increase land values by 8 to 14 percent for properties within 800m of a light rail station
- 20 area

1 However, the tangible goals of revitalization also transcend to the intangible motivations
2 and justifications with LRT designed to “transform our community” and support the concept of
3 “city building” (38). Other political and community actors have gone beyond this to support
4 light rail as a tool to alter internal and external images and perceptions of the city. Fred
5 Eisenberger, mayor of Hamilton from 2006 to 2010 and a pioneer of the campaign for light rail,
6 notes that the LRT project “can be a catalyst to help Hamilton reach its full potential as a city”
7 and allow it to “move ahead of the pack of medium-sized cities, not only in Canada, but in North
8 America and around the world” (39). Other actors have also contributed to this narrative, such as
9 the editor of the local newspaper who argues that “There’s very little that promises to be as
10 transformative to this city’s fortunes – its image, its collective self-confidence and its economic
11 development – as a quality light rail transit system” and the Hamilton Light Rail community
12 group, which proclaims that LRT will “bring billions of dollars of new investment to our urban
13 core, and show the world that Hamilton is an attractive, dynamic, and environmentally
14 responsible place to live and do business.” (38, p. 17)

15 But these tangible and intangible propositions employed in support of the B-Line LRT
16 raise many important questions. As the literature review has shown, there are several important
17 prerequisites to be considered if light rail or any other form of rapid transit is to achieve its
18 economic, social, and land use objectives. Based on this information, how do local conditions in
19 Hamilton affect the ability of light rail to achieve these goals?

20 **A COMPARATIVE REVIEW AND CRITICAL ASSESSMENT OF LIGHT RAIL IN** 21 **HAMILTON, ONTARIO**

22 Using the prerequisites established in the literature as a guide, this paper will conduct a
23 comparative critical assessment to address the ability of the B-Line LRT to achieve its stated
24 goals. This analysis will first consider the local factors that affect light rail followed by a
25 discussion of their impact on the potential to achieve the tangible and intangible goals of the B-
26 Line LRT project.

27 **Existing Travel Demand and Light Rail Ridership**

28 Ridership and population densities along the prospective B-Line light rail corridor are currently
29 beneficial to an investment in rapid transit. The corridor maintains the highest levels of
30 ridership, productivity, and efficiency among the City of Hamilton’s regular and express service
31 bus lines. The city’s bus system carried 21 million riders in 2008, and the three east-west
32 mainline routes that traverse the corridor together accounted for more than 9 million boardings in
33 2007. Major trip generators along the corridor include the central business district, and the
34 potential light rail endpoints of McMaster University and the Eastgate Square shopping centre
35 (40). Furthermore, density along the line is also reasonably high at 25 persons and jobs per
36 hectare, rising to 200 persons and jobs per hectare in the downtown core (41). Dwelling
37 densities along the line of 17 units per acre are higher than the minimum of 9 cited in the
38 literature in support of light rail (8) and comparable to the Canadian case of Calgary’s LRT
39 corridor (14.59) prior to construction (53).

40 **Land Use Considerations**

41 *Increase in Accessibility*

42 If there is one defining feature of transportation in Hamilton, it is the city’s abundance of large,
43 one-way streets. Coinciding with the removal of Hamilton’s last streetcars, traffic planners in

1 the 1950's began a large-scale conversion of the lower city's main roads into one-way, high-
2 speed, and multi-lane arterials designed to expedite automobile travel to heavy industry at the
3 waterfront and the downtown core for commuters residing in the upper city. With a system of
4 synchronized traffic signals and up to five lanes in each direction through the downtown core,
5 travel by private automobile in Hamilton is exceptionally easy.

6 Unsurprisingly, the private automobile is the dominant mode of transport for those
7 commuting to the lower city. But even out of those that live and work within the downtown
8 core, 75 percent choose to travel to work by automobile (32). However, Hamilton's network of
9 one-way streets, while ideal for automobile travel, is less than ideal for the provision of cost-
10 effective transit service and the promotion of transit-oriented development. In a congested city,
11 rapid transit service can entice individuals to live closer to transit and developers to construct
12 housing to meet this new demand. But in an automobile-oriented city with relatively free-flow
13 traffic conditions, transit is likely to offer only a marginal accessibility benefit, if any benefit at
14 all.

15 Future projections of road capacity and congestion carried out as part of the city's
16 Transportation Master Plan reinforce this position, noting that by the year 2031, even in a base
17 case scenario of growth and transportation maintaining current automobile-oriented patterns,
18 there will be no congestion along the vast majority of the prospective B-Line corridor in the
19 lower city (42). For these reasons, light rail in Hamilton is unlikely to promote land use change
20 based on an increase in accessibility alone.

21 *Positive Economic Conditions*

22 A key prerequisite for achieving the land use potential of rapid transit is local economic,
23 population, and employment growth. But compared to prominent nearby municipalities,
24 Hamilton's population is growing more slowly. According to annualized compound growth
25 rates from the Canadian Census, between the years 2001 to 2011, the population of Hamilton
26 grew 0.59 percent per year, compared to 2.84 percent for the regional municipalities of Halton,
27 Peel, York, and Durham. Hamilton's growth rate is similar to that of the City of Toronto (0.53
28 percent), but the two do not compare equally, as Hamilton has a large supply of greenfield land
29 available for development and Toronto's growth rate from 2006 to 2011 accelerated to 0.88
30 while Hamilton's stayed at 0.6. Within the city, the population of the lower city and downtown
31 core has generally remained stagnant and the majority of new growth has occurred in suburban
32 areas of the city far away from the B-line corridor. Indeed, home prices in the lower city in part
33 reflect a lack of demand, with 22.3 percent lower average prices compared to the upper city
34 according to the 2006 census.

35 Employment growth has also been slow. Historic data from Statistics Canada shows that
36 the unemployment rate dropped from 9.1 percent in 1996 to 6.5 percent in 2006. Unemployment
37 rose again in 2009 to reach 8.5 percent, though employment growth lowered this to 6.3 percent
38 in 2011. However, Statistics Canada's most recent seasonally adjusted numbers show that
39 unemployment has again risen to 7.3 percent between June 2011 to June 2012 on a loss of 3,300
40 jobs. Downtown employment growth has been similarly sluggish. City surveys show the central
41 business district grew by 6 percent between 2001 and 2010, adding 1,500 jobs for an average of
42 .76 percent per year. But demand for office space in the downtown core remains soft with a high
43 vacancy rate of 13 percent in 2010, the majority of which is Class A office space, though this is
44 down from 15 percent in 2009. Likewise, vacancy rates for retail and commercial properties
45 are also high at 15.6 percent in the downtown, though this too is down from 19 percent in 2004
46 (43).

1 Projections for future population growth in Hamilton from the Government of Ontario are
2 also lower than that for its regional counterparts, though the rate of growth is estimated to
3 accelerate as the region builds out. Hamilton's population is expected to grow by 120,000, or 1.1
4 percent each year from 2011 to 2031, compared to 1.3 percent for the rest of the GTHA.
5 Similarly, Hamilton is projected to add 90,000 jobs in the same period at a rate of 1.4 percent per
6 year versus 1.6 percent in the region (52).

7 As such, some growth is occurring in Hamilton, albeit at a slow pace. Furthermore, there
8 is still a strong employment and population base in the lower city that would be served by the B-
9 Line LRT, with the City of Hamilton estimating that 17 percent of the city's residents and 20
10 percent of its jobs are within 800 metres of the prospective LRT corridor (41). But as recent
11 history shows, Hamilton's economic, population, and employment growth cannot currently be
12 classified as strong and demand for space in the core, while improving, remains soft.

13 *Positive Social Conditions*

14 Hamilton's B-Line LRT corridor is affected by a number of social and demographic challenges.
15 Data from the 2006 Canadian Census shows that compared to the upper city, the census tracts of
16 the lower city are characterized by 22.5 percent lower median family incomes and a higher
17 percentage of children below the low income cutoff (28.7% versus 17.3%), government transfers
18 as a percentage of income (18% versus 13.6%), and number of high school dropouts per 1,000
19 students (11% versus 6%). Additionally, research by DeLuca et al. (44) has shown serious
20 disparities in determinants of health in the lower city compared to the upper city and the rest of
21 Hamilton.

22 Furthermore, many of these indicators appear to be concentrated in the downtown. The
23 core area maintains a higher proportion of those between the ages of 25-64 that have less than a
24 high school education (approximately 24 versus 15 percent for the city as a whole). One-quarter
25 of those living downtown have attended university, compared to 31 percent of those who travel
26 to downtown for work. For individuals that live and work downtown, the majority of incomes
27 range from \$0 to \$29,999 and the highest proportion earns between \$10,000-\$19,000, though
28 nearly 7 percent have no income. The downtown is home to a number of high paying jobs, with
29 one-quarter of downtown workers earning more than \$60,000, but these jobs tend to be held by
30 those travelling to the CBD from elsewhere in the city (32).

31 Crime and the perception of safety are also a factor in promoting land use change in the
32 lower city and downtown core. For the perception of safety in Hamilton's downtown areas,
33 respondents to a survey conducted by the city's Economic Development department noted that
34 more than 41.5 percent "usually" felt safe, while 29.6 and 18.8 percent felt safe "sometimes" and
35 "never" respectively (32). This feeling is supported by research from the Hamilton Police
36 Service. Using data from incident reports and calls-for-service for violent crimes, the Hamilton
37 Police have identified several spatial clusters of violent criminal activity, and their results
38 indicate that the majority of violent crime is isolated to the lower-city and downtown core,
39 precisely the areas in which the B-Line LRT will operate (45).

40 *Positive Physical Conditions*

41 In order to attract land use change and development, the literature notes that the physical
42 environment of station areas along the corridor must be attractive to developers, project
43 financiers, and prospective buyers. But the physical conditions of many station areas along the
44 B-Line corridor do not meet these criteria. Outside of the physical impact of the social
45 challenges affecting the B-Line outlined above, many station areas, particularly those located in

1 the central portions of the corridor, suffer from the detrimental effects of Hamilton's network of
2 one-way streets.

3 While no research of the physical impacts of these streets exists for Hamilton
4 specifically, early studies have examined the humanist impact of streets on neighbourhoods,
5 observing adverse social impacts associated with one-way streets and high volumes of traffic
6 (46-47). Later studies have characterized the negative impacts of one-way streets on commercial
7 uses, noting that high-speed automobile traffic presents a hazard to pedestrian movement that
8 erodes confidence in the physical environment and discourages shopping in nearby commercial
9 districts (48-49).

10 *Available Land*

11 The B-Line LRT corridor does have a significant amount of land available for development. The
12 IBI group estimates that there are more than 500 vacant parcels totaling 243 hectares located
13 within a two-kilometre radius of the proposed line, much of which consists of parking lots or
14 vacant residential properties. This total includes a significant amount of industrial brownfield
15 land (115 hectares), but these parcels are generally located far from the corridor in the city's
16 industrial north end. Excluding brownfield sites, there are 128 hectares available for
17 development. For parking, the City of Hamilton owns 63 lots in the downtown core with another
18 28 privately held, and the vast majority of these are located in the downtown core within 400
19 metres of the proposed LRT line. As such, there is a considerable amount of available land,
20 much of which will not require land assembly or expensive environmental remediation (41).

21 *Complimentary Government Policy*

22 The City of Hamilton benefits from being part of an extensive regional planning exercise
23 underway at the provincial level. Designed to address sprawling land use settlement patterns and
24 congestion in the GTHA, the Government of Ontario's Greenbelt and Places to Grow Acts of
25 2005 and the Growth Plan for the Greater Golden Horseshoe of 2006 as well as the attendant
26 transportation plans of the Big Move from 2008 provide a comprehensive transportation and land
27 use planning model for the Greater Toronto and Hamilton Area and wider region. Under this
28 planning paradigm, development in Hamilton is subject to the Greenbelt urban growth boundary
29 and the city will be mandated to construct at least 40 percent of its new housing stock as infill
30 development by the year 2015. At the local level, the City of Hamilton's Urban Official Plan is
31 committed to achieving these targets by promoting medium and high density mixed-use
32 development in designated "nodes and corridors" in advance of rapid transit, though it also
33 largely continues to promote the outward expansion of suburban areas. Nevertheless, part of the
34 B-Line LRT transit planning process includes an ongoing exploratory land use planning exercise
35 designed to promote complementary land uses through transit-oriented design guidelines that
36 may be implemented as policy in the future.

37 **Image and Perception**

38 Whether deserved or not, the City of Hamilton has a reputation for heavy industry and a blue-
39 collar workforce. The main regional highway passing through Hamilton is in close proximity to
40 heavy industrial concentrations and this has helped to shape perceptions. The city also maintains
41 an image and perception problem among its own residents, divided along the upper and lower
42 cities. A survey conducted by the city's Economic Development department found that more
43 than 55 percent of Hamilton's citizens have either a negative or very negative view of
44 downtown, compared to only 25 percent maintaining a positive or very positive attitude (32).

1 But can light rail transit address the significant challenges facing the lower city and
2 project an image of investment and revitalization not just to its own citizens, but those around the
3 world? The presence of rail transit has been found to be a significant factor in the composition
4 of global- or world-city status among cities in the United States (30). However, the ability of rail
5 transit alone to provide a world-class or global city status has not been proven (24). Boschken
6 (30) identified rail transit as one factor among many that converge to project this image, such as
7 a large, monocentric urban area, a presence in the global economy, global entertainment and
8 media production, global research capacity, multicultural exchange, and international transport
9 gateways. Likewise, Neuwirth (24) cites similar characteristics in addition to transit that must be
10 present to qualify as world-class.

11 Thus, while rail transit might be a worthwhile investment in pursuit of image objectives,
12 rail alone cannot achieve these goals. In Hamilton, it is likely that the ability to achieve the
13 intangible objectives set out in the rapid transit planning process are contingent on first achieving
14 the tangible economic, social, and land use goals. To that end, as the above analysis has
15 demonstrated, serious challenges stand in the way of the B-Line LRT from having the impact
16 planners and policymakers have projected.

17 **DISCUSSION AND CONCLUSIONS**

18 As one of the cities in Ontario currently engaged in an unprecedented expansion of light rail
19 transit, the story of the B-Line LRT in Hamilton provides interesting insight into the transit
20 planning process and what Brooks (1) refers to as the ‘sell job’ required to bring such a
21 significant project to fruition. The paper has considered the tangible land use and economic
22 development objectives and intangible image-led planning motivations posited by planners and
23 policymakers in support of the B-Line LRT. But when contrasted against the wider literature on
24 the light rail experience in other cities across North America, it is clear that local conditions in
25 Hamilton present an obstacle to the realization of policy and planning goals used to rationalize
26 the project.

27 The B-Line corridor does feature a strong ridership, population, and employment base on
28 which to build. However, the primary rationale behind the potential light rail project is one
29 framed in city-building, using light rail as a catalyst for redevelopment and revitalization in the
30 lower city and downtown core, and much of this outcome is dependent on inducing land use
31 change. But this research shows that local conditions compare favourably to only two of six land
32 use prerequisites identified in the literature. While available parcels and complimentary
33 government policy help, the B-Line corridor is uncongested and faces significant economic,
34 social, and physical challenges to attracting new demand and development. As well, an analysis
35 of the intangible objectives of the project suggests that the desire to re-brand the city through
36 light rail is misplaced. Rail transit systems, while important, form only one part of several
37 characteristics required to project a world-city image.

38 Consequently, the research reveals considerable challenges to achieving the tangible and
39 intangible goals used to motivate and justify the LRT planning process in Hamilton. Planners
40 and policymakers should first consider addressing the current shortcomings identified in the
41 literature by improving near-term economic, social, and physical conditions in the downtown
42 core and prospective station areas as well as making travel by personal automobile less
43 attractive. This can include solutions that are potentially more cost-effective, such as streetscape
44 improvements and traffic calming through the conversion of the city’s one-way arterials back to
45 two-way traffic.

1 This assessment is based on recent trends, and certainly there is no telling what the future
2 holds for Hamilton. Nevertheless, while light rail transit can bring considerable transportation
3 and land use benefits to host cities, the literature shows that local conditions must be receptive
4 and a number of prerequisites must be in place. While LRT in Hamilton would undoubtedly
5 have some positive impact in the city, the project is better understood not as a driver of new
6 growth, economic investment, development, and land use change, but as a singular, albeit
7 potentially costly element in a long-term effort to revitalize, reshape, and re-brand the city.

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