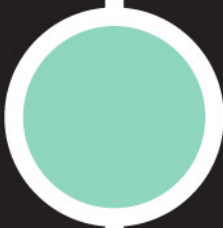




New Station **Initial Business Case**



WALKERS LINE

November 2018

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1. Introduction

1.1 Background

Recent provincial planning and policy initiatives call for significant operational changes in GO rail services in the Greater Toronto and Hamilton Area (GTHA). The GO Expansion program will bring more train trips to every GO rail corridor, including increased weekday rush-hour and non-rush hour periods, evenings and weekends. Within the most heavily travelled sections of the network, electric trains will run every 15 minutes or better, all day and in both directions.

To address considerations emerging from the GO Expansion program and other transit initiatives, Metrolinx initiated an examination of potential new station locations across the seven existing GO rail corridors. New stations should improve access to and egress from the GO rail network and meet strategic, financial (affordability), economic, and operational and deliverability objectives without significantly compromising the regional service objectives of GO and its base of users.

An initial identification of over 120 potential station sites was narrowed to 56 through a high-level evaluation of transport connectivity, planning and land use and technical feasibility. The 56 potential locations were then evaluated against 38 criteria and nine key criteria, yielding 24 sites on corridors that are subject to major infrastructure investment as part of the GO Expansion program, to be examined in more detail using an Initial Business Case (IBC) evaluation. Walkers Line station was initially not selected as one of those 24 sites; however, in June 2016, the Metrolinx Board directed staff to complete the IBC analysis for Walkers Line station.

1.2 Report Scope and Purpose

The scope of this IBC report is to develop a high-level justification of the effectiveness of a proposed new station near Walkers Line at the Lakeshore West corridor in Burlington. This report provides an initial overview of how the potential station would contribute toward meeting both Metrolinx's and local objectives (the Strategic Case), the financial and economic performance of the station (the Financial and Economic Cases), and deliverability and operational considerations (the Deliverability and Operations Case). This IBC looks at how a single new station would perform when added to the future GO network that is anticipated to be in place under GO Expansion.

1.3 Problem Statement

To maximize the benefits of the GO Expansion program, new stations are proposed on the rail network to improve access to / egress from the GO rail network and generate new ridership. Stations should meet strategic, affordability, economic, and deliverability objectives without significantly compromising the regional service objectives of GO and its base of users on opening day.

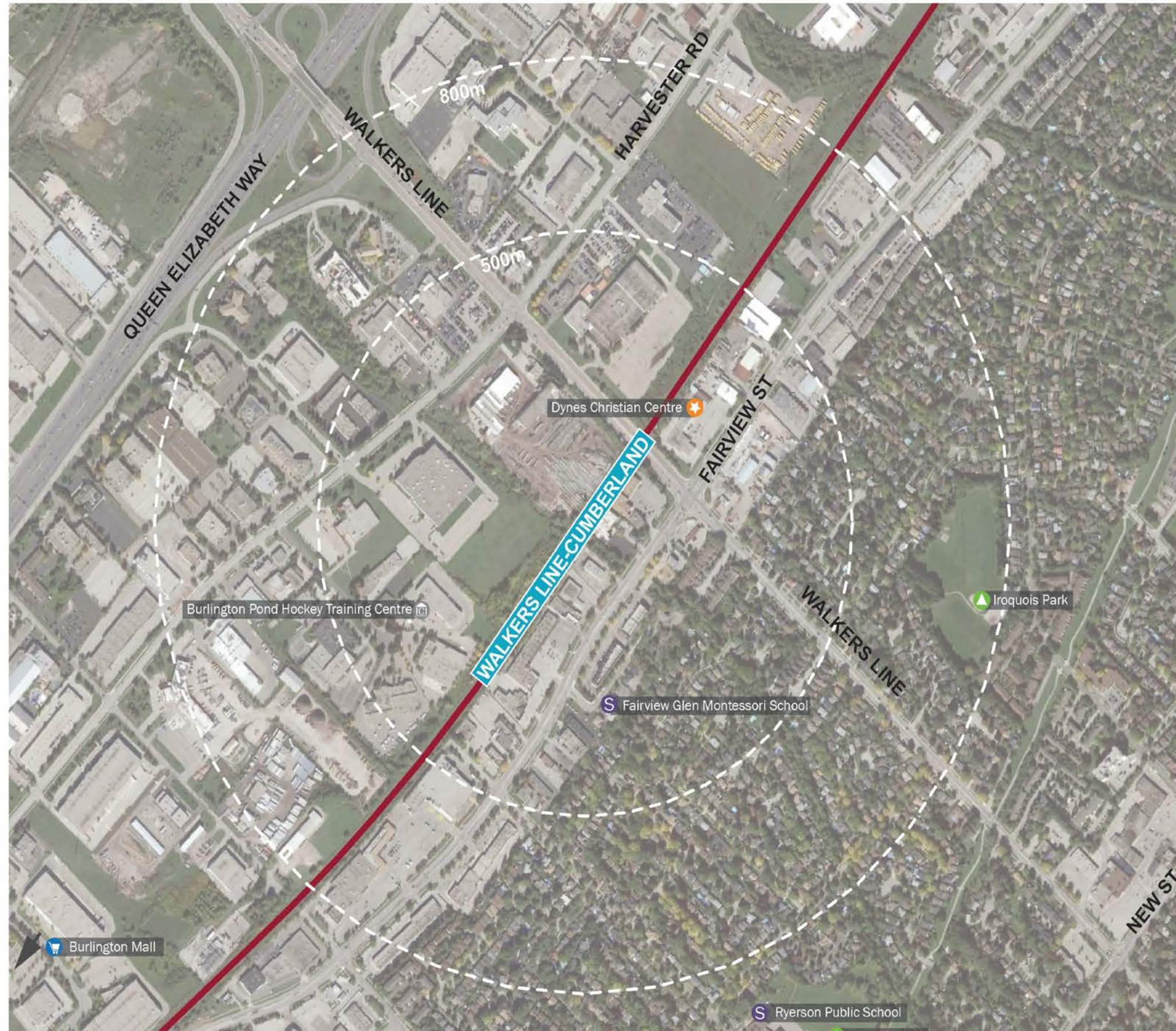
1.4 Site Options and Scenarios Analyzed

Three alternative configurations were considered for this site including a station with two island platforms crossing Walkers Line, which required modifications to the existing bridge structure, and island platform configurations to the east, and west, which avoid the impact.

Subsequently, a “slow outside, fast inside” operating pattern has been identified for the Lakeshore West corridor. This operating pattern allowed for the use of side platforms, rather than islands, avoiding additional track realignment, which generally presents fewer delivery challenges. For this reason, and because a location that intersects Walkers Line provides the best community connectivity, this configuration was carried forward in the Initial Business Case.

Appendix B provides a more detailed evaluation of the island platform alternatives.

Figure 1-1: Walkers Line Station Context Map



**Walkers Line -
Cumberland Station**
Initial Business Case Report
Site Option

Legend

- Potential Station Location
- Lakeshore West Line

Points of Interest

- ▲ Parks
- S School
- ★ Places of Worship
- 🏛️ Civic or Government Complex
- 🛒 Retail

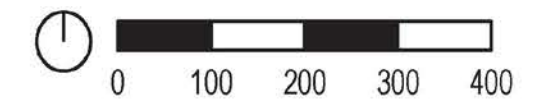
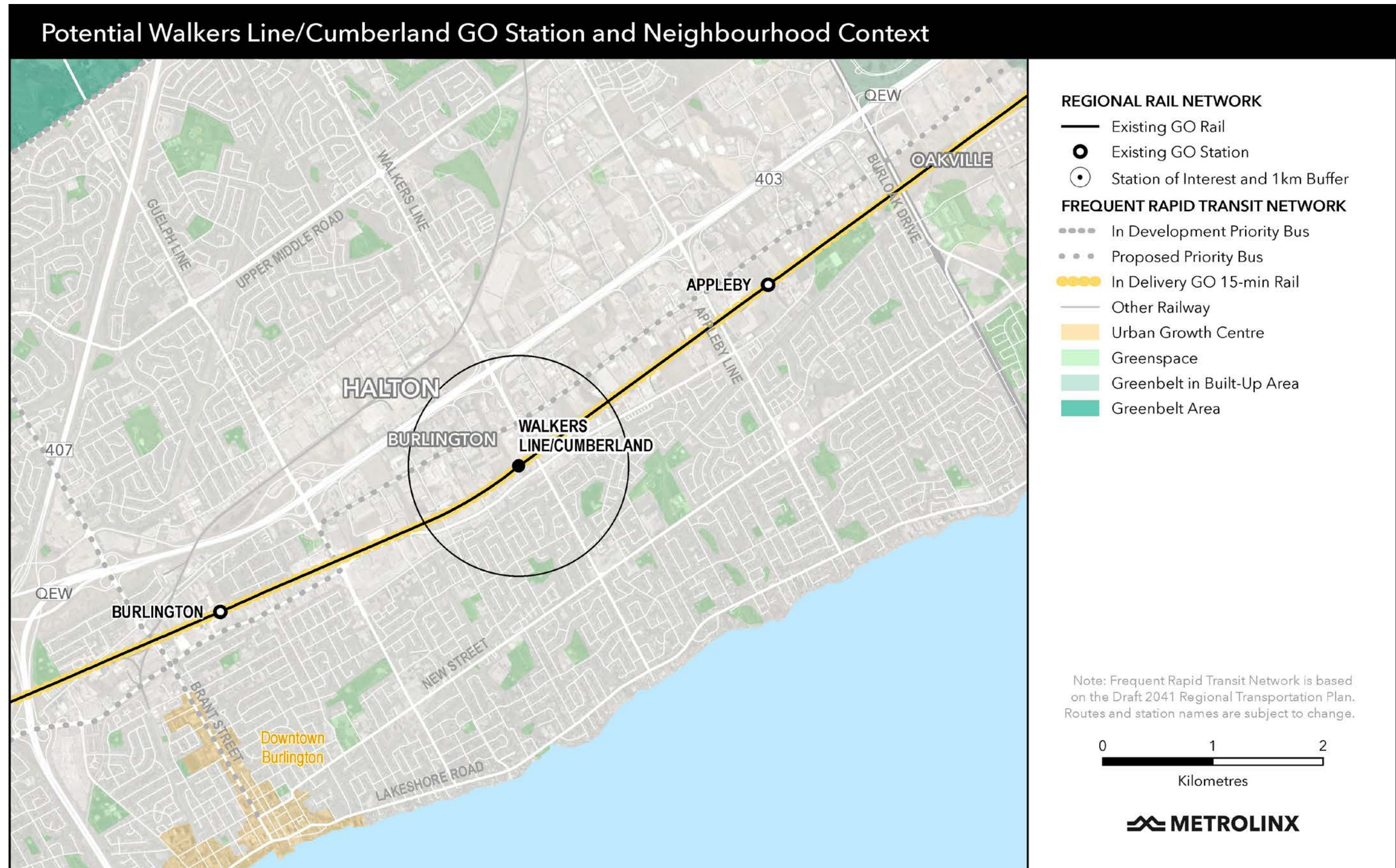


Figure 1-2: Walkers Line station in the wider rapid transit network context



2. Station Context and Concept Plan

2.1 Station Location

The Walkers Line station is located approximately 130 m north of Fairview Street, west of Walkers Line. The area around the station site contains a range of mostly low-intensity land uses, including office, industrial, commercial/retail, and residential. The site is approximately 2.7km from Appleby to the east, and 3.1km from Burlington station to the west.

While the area between Fairview Street and Queen Elizabeth Way (QEW) has undergone modest redevelopment since the early 2000s, new development has mostly matched the density of existing uses. The exceptions to this are two lots along Fairview Street, east of the station site, which were redeveloped as a mix of three-storey townhouses and condominiums with grade-related retail.

2.2 Current Land Uses in Area

The site's surroundings are characterized as follows:

- To the north: The area north of the station site, which is designated as *Employment Lands*, contains a range of office, manufacturing and commercial/retail uses, at low densities. Closer to the QEW are two hotels and a long-term care facility. Farther afield to the northeast are corporate offices fronting the QEW, as well as McMaster University's DeGroote School of Business. Immediately north of the site is the storage yards of Stresscrete Group, which manufactures concrete poles.
- To the east: East of the station site, land is designated as *Employment Lands* and *Mixed Use Activity Areas*. This area contains mostly low-intensity warehouses/manufacturing, office and retail uses. There is a compact, mixed-use development (condominiums with grade-related retail and townhouses), located along the south side of Fairview Street with stable neighbourhoods to the rear. Shoreacres Creek runs north to south approximately 900 m east of Walkers Line. To the immediate east is a retail plaza with building materials stores, a yoga studio, and a place of worship.
- To the south: Land south of the station site along the Fairview Street corridor is designated as *Mixed Use Activity Areas*. Along Fairview Street there is a mix of retail and personal and professional services, such as drive-through restaurants, body shops, banks, and dental clinics. South of Fairview Street is designated as *Residential Areas*. It is characterized by low-density residential development, predominantly bungalows. Tuck Creek runs north to south through the neighbourhood. Iroquois Park, with a playground and four sports fields, is located to the southeast. Immediately south of the site is a retail plaza with restaurants, a day spa, and a costume shop, along with 110 parking stalls.
- To the west: West of the station site is designated as *Employment Lands* and *Mixed Use Activity Areas*. Between Fairview Street and Harvester Road is a mix of uses including restaurants, personal and professional services, office and manufacturing uses. Farther to the west is the 67,000 sq. m Burlington Mall, a major regional shopping centre, as well as numerous stand-alone large format retailers. This retail area abuts an apartment and low-rise neighbourhood to the south.

2.3 Surrounding Transportation Infrastructure

Walkers Line station would be situated north of the intersection of Walkers Line and Fairview Street. North of Fairview Street, this segment of Walkers Line consists of six travel lanes (three in each direction) with left-turn lanes at intersections and providing access to some commercial and industrial properties, though much of this segment has a centre median. South of Fairview Street, which is more residential in land use, Walkers Line consists of five lanes: two travel lanes in each direction and a shared centre turn lane. Harvester Road, north of the station site, consists of four travel lanes (two in each direction) with left-turn lanes at the Walkers Line intersection. The QEW runs parallel to the rail corridor, approximately 850 m to the north, with an interchange at Walkers Line.

The Lakeshore West corridor (Oakville Subdivision) has three main tracks, which are used by GO Transit and VIA Rail. The GO Expansion program includes new track and bridge work in some locations along the Lakeshore West corridor. Passive protection will help facilitate a contiguous fourth track in future, but it is not currently captured in the program.

2.4 Concept Plan Rationale

The concept for a station at Walkers Line envisions two side platforms immediately west of Walkers Line to make it possible to serve both the east and west sides of Walkers Line over time.

The station is served by approximately 1,175 surface parking stalls, located north of the corridor along Walkers Line and Harvester Road. Design capacity was based on the anticipated ridership for this site against the percentage of park and ride mode share identified in the Station Access Plan. Over the long term, as the Fairview Street corridor intensifies, these surface parking lots could be redeveloped, with station parking potentially shifting to an above grade parking structure.

There are several points of access to the station site. Buses will enter along a dedicated road from Harvester Road along the west side of the station site to access the bus loop. This route will enable buses to quickly enter and exit the site without interference from other station users. The bus loop accommodates four buses and has been situated to provide direct access to the west station entrance. Private vehicles will enter the station site from Harvester Road or Walkers Line to access the station parking or the primary pick-up and drop-off facility (PUDO). This PUDO accommodates 35 cars and has been positioned to have clear sight lines to the station entrances. An optional secondary PUDO location has been identified on the south side of the rail corridor, east of Tuck Creek. This PUDO has space to accommodate approximately 20 vehicles and would be accessible from Fairview Street.

The primary point of access for pedestrians is from Walkers Line, with direct access from the intersection of Walkers Line and Fairview Street. The concept includes improvements to the Walkers Line streetscape to improve conditions for riders transferring from buses operating along Fairview Street, and for riders who live in the neighbourhood to the south. Pedestrians and cyclists can also access the station site from Harvester Road and the optional secondary PUDO located south of the rail corridor. Bicycle parking is provided at all station entrances. A future east access point and a pedestrian bridge have been identified to support access from the east side of Walkers Line over the longer term.

The station concept illustrates the addition of a fourth track, which would require the following: a retaining wall on the south side of the rail line; a widening of the rail bridge over Walkers Line to accommodate the additional track; acquisition of property north of the rail corridor; optional acquisition of property south of the rail corridor for use as the optional secondary PUDO; and relocation of the structure on Walkers Line immediately north of the rail corridor.

3. Strategic Case

3.1 Strategic Case Summary

The Strategic Case sets out the rationale for adding this station; it makes the case for change at a policy and long-term planning level. It defines the station rationale, explains the objectives that are to be achieved, and outlines constraints or interdependencies that should be considered with this station. The strategic policy context and the fit with wider public policy objectives are also explained. Other key criteria include relationship to market demand, social and environmental impacts, network connectivity, and ridership.

The Strategic Case for Walkers Line concludes that the station would support local, regional, land-use, and transportation policies. In terms of land use designations, the area surrounding the proposed station is mixed, including *Employment Lands*, *Mixed Use Activity Areas*, and *Residential Areas*. Furthermore, emerging policy directions from the ongoing update of the City of Burlington’s Official Plan propose to direct more growth to GO stations and Major Transit Station Areas. A new station at Walkers Line would serve the residential area south of Fairview Street, improve access to and encourage further development of the employment area north of the rail line, and facilitate the intensification of the Fairview Street corridor.

Table 3-1: Strategic Case Summary Results

Strategic Case Summary	Walkers Line
Policy Alignment	Generally supported by all provincial, regional, local policy, as well as emerging policy frameworks
Development Potential and Intensification	Current densities do not meet density targets established in Growth Plan. These targets are not a pre-requisite for the implementation of a station, but a target once a station is in operation.
Real Estate Market Demand	Limited existing demand for office or residential development, and moderate demand for retail uses; limited future demand for residential development, and moderate demand for office and retail uses.
Natural Environment	Within 800 m of Tuck Creek, which falls within lands regulated by Conservation Halton
Operational System	Nearest station (Appleby) is approximately 2.7km to the east, Burlington station 3.1km west.
Connectivity and Ridership Drivers	Good connectivity to local transit; many destinations nearby
Station Access	Supports access by walking, cycling, local transit, PUDO/taxi and automobile
Social Inclusivity and Accessibility	Station would improve access to employment opportunities in the <i>Employment Area</i> north of the rail corridor

3.2 Rationale for a New Station

3.2.1 Drivers for Change and Opportunities

Internal and external drivers for change specifically related to a new station at Walkers Line include:

- Alignment with emerging City of Burlington policy directions, which proposes urbanization and future development along the Fairview Street, Harvesters Road and Walkers Line corridors.
- Provision improved regional transit access for employment lands north of the rail corridor. The station site is part of the City of Burlington's *Prosperity Corridor*, one of five strategic employment districts in the city.

3.2.2 Constraints and Interdependencies

The strategic, economic, financial, and operational performance of the Walkers Line station is affected by a number of constraints and interdependencies with other initiatives, including:

- **Property acquisitions:** The implementation of this station would require the acquisition adjacent operating businesses. This includes the manufacturing facility and storage yard at 480 Walkers Line, and the retail stores and professional offices at 3515 and 3525 Fairview Street.

3.2.3 Stakeholders

There are a range of stakeholders that might or will be affected by the development of a new station at Walkers Line. These include:

- **Metrolinx Operations and Capital Projects Group**
- **Municipalities:** City of Burlington, Regional Municipality of Halton
- **Halton Regional Conservation Authority**
- **Elected officials:** Burlington City Councillor (Ward 4); Regional Municipality of Halton Regional Councillor; Member of Provincial Parliament; Member of Parliament
- **Transit agencies:** Burlington Transit
- **Local Business Groups** (e.g. Burlington QEW Business Park)
- **Owners, developers, and residents of adjacent properties**
- **Travelers** (transit, road, and active transportation users)

3.3 Policy, Land Use and Development

The following criteria examine how the new station conforms to provincial, regional, and local planning policy for land use and transportation. This section also discusses the station's fit or potential impact to the surrounding neighbourhoods and potential future development.

3.3.1 Policy Alignment

Policy Hierarchy	Specific Policy	Overview and Conformity
Provincial Land-Use and Transportation Policy	<i>Provincial Policy Statement</i>	A new station in this location would support transportation policies in the <i>Provincial Policy Statement</i> by improving access to the transportation network and supporting connectivity across the region.
	<i>Growth Plan for the Greater Golden Horseshoe</i>	<p>A new station at Walkers Line would support strategies and goals outlined in the <i>Growth Plan for the Greater Golden Horseshoe, 2017</i> (the Growth Plan), as it would enhance transit access for residents and workers in the area, and improve transit service in an area where future growth and intensification is anticipated.</p> <p>Section 2.2 includes policies for where and how to grow, and establishes minimum density targets to be achieved by 2031. The 2017 Growth Plan introduced the concept of <i>major transit station areas</i>, which generally correspond to the area within 500 m of a transit station. As a GO station on a <i>priority transit corridor</i>, a station at Walkers Line would be required to achieve a density of 150 people and jobs combined per hectare.</p> <p>Section 2.2.5 includes policy to support economic competitiveness in the Greater Golden Horseshoe. Municipalities are directed to make more efficient use of existing employment areas and vacant and underutilized employment lands by increasing employment densities through a built form that is more supportive of transit (Policy 2.2.5a). Policy 2.2.5c directs municipalities to improve transit connections to areas with high employment densities.</p> <p>More generally, in Section 3.2 the Growth Plan calls for a regional transportation system that offers a balance of transportation choices, reducing car-dependency and promoting active and sustainable modes of transportation.</p>
	<i>2041 Regional Transportation Plan</i>	<p>In March of 2018, Metrolinx’s Board of Directors approved the <i>2041 Regional Transportation Plan</i>. The plan establishes a vision for the Greater Toronto and Hamilton Area as a region that is well served by a transportation system that is firmly aligned with land use and which supports a high quality of life in healthy and complete communities. In addition to completing current transit projects that are in delivery and in development, the plan seeks to connect more of the GTHA with rapid transit through additional LRT, BRT and subway projects, as well as an expansion to the GO rail network.</p> <p>A station at Walkers Line would support the goal of making rapid transit more accessible to residents of the GTHA.</p>

(table continued on next page)

Policy Hierarchy	Specific Policy	Overview and Conformity
Regional/Local Land-Use and Transportation Policy	Halton Regional Official Plan	<p>The <i>Regional Official Plan</i> establishes a planning framework for the municipalities of Burlington, Oakville, Halton Hills, and Milton. As indicated in <i>Map 1 - Regional Structure</i>, the station site falls with an <i>Employment Area</i>. <i>Employment Areas</i>, which are generally located along highways and rail lines, are expected to absorb anticipated job growth, and as such protected from encroachment by incompatible uses. Through policy 77.4(5), the <i>Regional Official Plan</i> requires local municipalities to promote intensification and increased densities in <i>Employment Area</i> by facilitating compact, transit-supportive built form and minimizing surface parking.</p> <p><i>Part IV - Healthy Communities Policies</i> includes policies for transportation within Halton Region. These policies support: an integrated system of land use and transportation; increased access to employment and shopping opportunities; continual improvements to the GO system; integration between local and regional transit services; active transportation; and reduced auto-dependency.</p> <p><i>Map 3 - Functional Plan of Major Transportation Facilities</i> identifies Plains Road/Fairview Street as a <i>Multi-Purpose Arterial</i>, which means it will support transit and active transportation along dense, mixed-use corridors.</p>
	Burlington's Strategic Plan: 2015-2040	<p>The <i>Strategic Plan</i> establishes a long-term vision for Burlington based on curbing sprawl and targeting growth to build neighbourhoods that support walking, transit, active transportation. The <i>Strategic Plan</i> recognizes the key role of <i>Prosperity Corridors</i> - which includes the lands along Queen Elizabeth Way - in achieving employment targets.</p>
	City of Burlington Official Plan	<p>According to Burlington's <i>Official Plan</i>, the station site is surrounded by three main land use designations: <i>Employment Lands</i>, which have the broad purpose of job retention and growth; <i>Mixed Use Activity Areas</i> which are intended to include employment, retail, and residential uses in a compact and transit-supportive setting; and <i>Residential Areas</i>. There is also a small section of <i>Natural Features and Open Space</i> within 800 m of the station.</p> <p>Part I of the <i>Official Plan</i> sets out the policy framework on which the plan is based, and Section 3 establishes a set of guiding principles, including the efficient use of land through intensification. Part II includes functional policies for a range of issues, including transportation. Policies in this section encourage a coordinated system of land use and transportation and a multi-modal approach to travel. Moreover, this section encourages alternative travel, such as cycling, walking, and transit.</p> <p><i>Appendix A - Schedule 1 - Long Term Transit Service Network</i> identifies the long-term location of anticipated local and inter-regional transit services. Plains Road/Fairview Street are identified as part of the <i>Primary Bus Service Network</i>, which would provide peak period service frequencies of 15 minutes or better. Walkers Line is identified as a <i>Secondary Bus Service</i>, offering peak period frequencies greater than 15 minutes.</p>

(table continued on next page)

Policy Hierarchy	Specific Policy	Overview and Conformity
Regional/Local Land-Use and Transportation Policy	City of Burlington Official Plan Review	<p>The <i>Official Plan</i> is currently under review. The City released a proposed new Official Plan for adoption in the Spring of 2018.</p> <p>Urban Structure: Designated <i>Employment Lands</i> north of the rail line, and <i>Mixed Use Nodes and Intensification Corridors</i> to the south.</p> <p>Growth Framework: Designated <i>Employment Growth Area</i> north of the rail line and <i>Secondary Growth Area</i> to the south. Such areas are expected to intensify over the planning horizon. <i>Secondary Growth Areas</i> generally limited to a mid-rise built form.</p> <p>Land Use Plan: Designated <i>General Employment</i> north of the rail line and <i>Urban Corridor</i> to the south.</p> <p>Plains Road/Fairview Street is also identified as a <i>Mobility Hub Primary Connector</i>, meaning it will become a major thoroughfare that provides direct connection between hubs. As a <i>Primary Connector</i>, the corridor will be prioritized for increased public transit service and improvements to active transportation infrastructure. Plains Road/Fairview Street is also identified as a <i>Justified Frequent Transit Network (FTN)</i>, meaning it has the existing and/or planned land uses and street design conditions for viable FTN service. Likewise, Walkers Line is identified as a <i>Candidate FTN</i> as it meets some of these conditions.</p>

3.3.2 Development Potential and Intensification

Traffic zone level forecasts indicate that approximately 3,200 residents and 5,800 jobs will be located within 800 m of the station site in 2031. This equates to a projected population-and-job density of 44 people and jobs per hectare (P+J/ha), which is not considered transit-supportive, according to Metrolinx’s density guidelines for express rail stations (150-300 P+J/ha)¹. As a GO station on a *transit priority corridor*, the Walkers Line station area would have a density target of 150 P+J/ha by 2031, a density target established by the 2017 Growth Plan. While the existing densities cited here apply to an area larger than a major transit station area as defined by the Growth Plan, it is nonetheless clear that the station area is currently below the density target of 150 P+J/ha. However, Growth Plan density targets are not intended to represent a pre-requisite for the development of a new station; rather, these targets would apply to a station area once a station is in operation. In other words, the decision to build a new station or not should not be solely based on existing density of people and jobs, but on the station area’s capacity to intensify over time, considering surrounding land uses and market trends.

One active development application was identified within 800 m of the station location, representing 174 sq. m of non-residential gross floor area (GFA). There are more than 70.14 hectares of land within 800 m with the potential for redevelopment over time, which would add to the area’s density.

Figure 3-2 shows identified soft sites within 800 m of the station site. Each soft site has been categorized by its land use designation in Burlington’s Official Plan, resulting in the following table of lands with potential to redevelop over time:

¹ Transit-supportive density of an “Express Rail” mobility hub, Metrolinx Mobility Hub Guidelines for the Greater Toronto and Hamilton Area, Metrolinx, September 2011

Land use designation	Total area of soft sites within 800 m
Major Retail Areas	0.00 ha
Employment Lands	29.47 ha
Mixed Use Activity Areas	40.67 ha
Residential Areas	0.00 ha
Natural Features/Open Space	0.00 ha

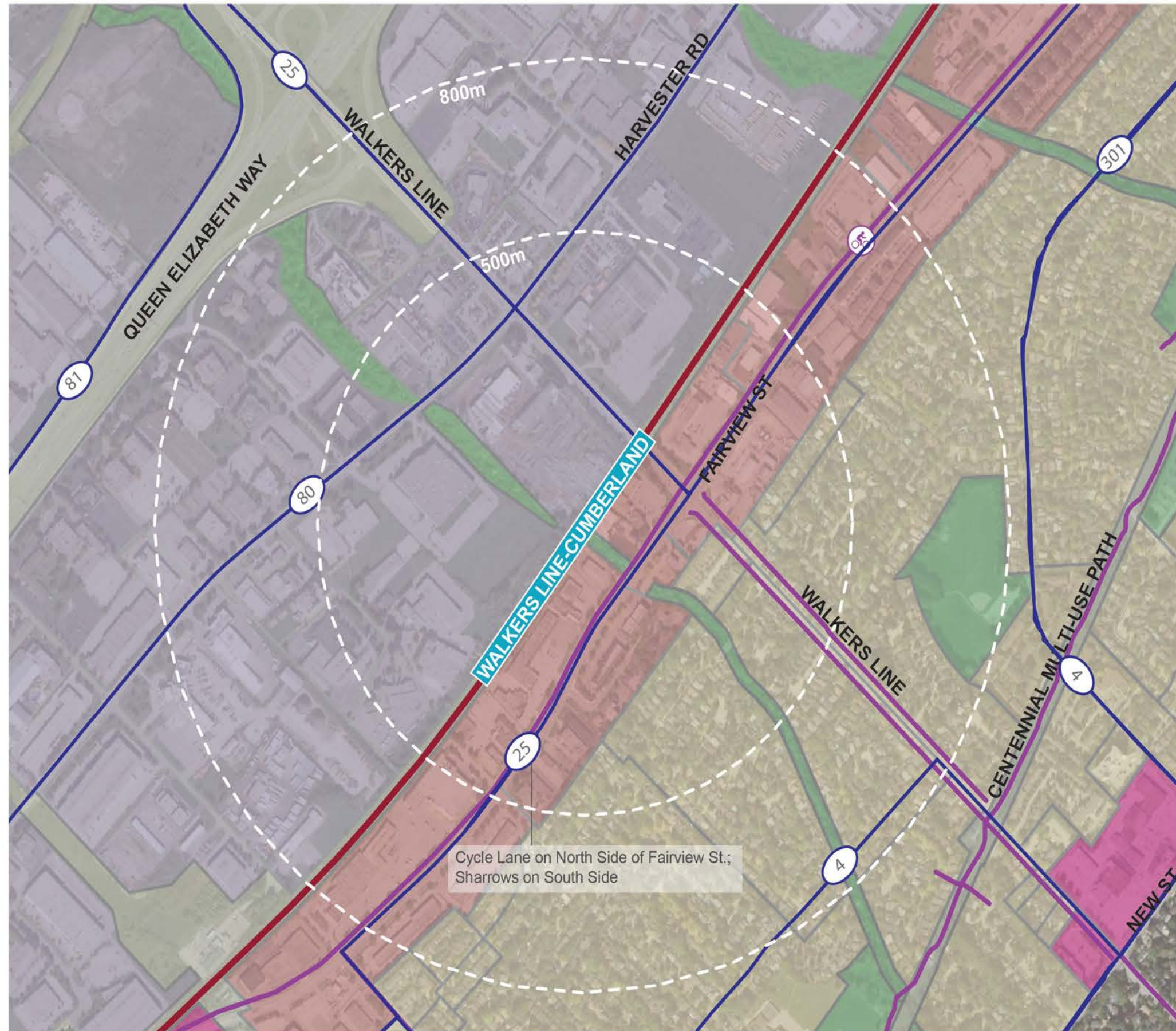
Appropriate floor space index (FSI) precedents, including built and proposed developments, have been used to determine potential GFA yields for these soft sites over time:

Type of use	Total area of soft sites within 800 m
Office/Employment	251,891 sq. m**
Retail/Commercial	51,758 sq. m**
Residential	747, 747 sq. m**

** This represents the sum of potential GFA yields from four distinct areas within the 800 m buffer, based on land use designations and proximity to the station site. A different FSI precedent was applied to each site.

If all of the building space within these development applications and all of the development potential within these soft sites were to be realized to their full potential, the station’s catchment area could increase by 6,500 jobs and 10,900 people.

Figure 3-1: Existing Land Use



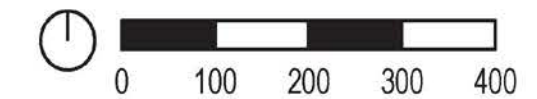
**Walkers Line -
Cumberland Station**
Initial Business Case Report
Site Context

Legend

- █ Potential Station Location
- █ Lakeshore West Line
- █ Burlington Bus Route
- █ Existing Bike Lane
- - - Proposed Bike Lane

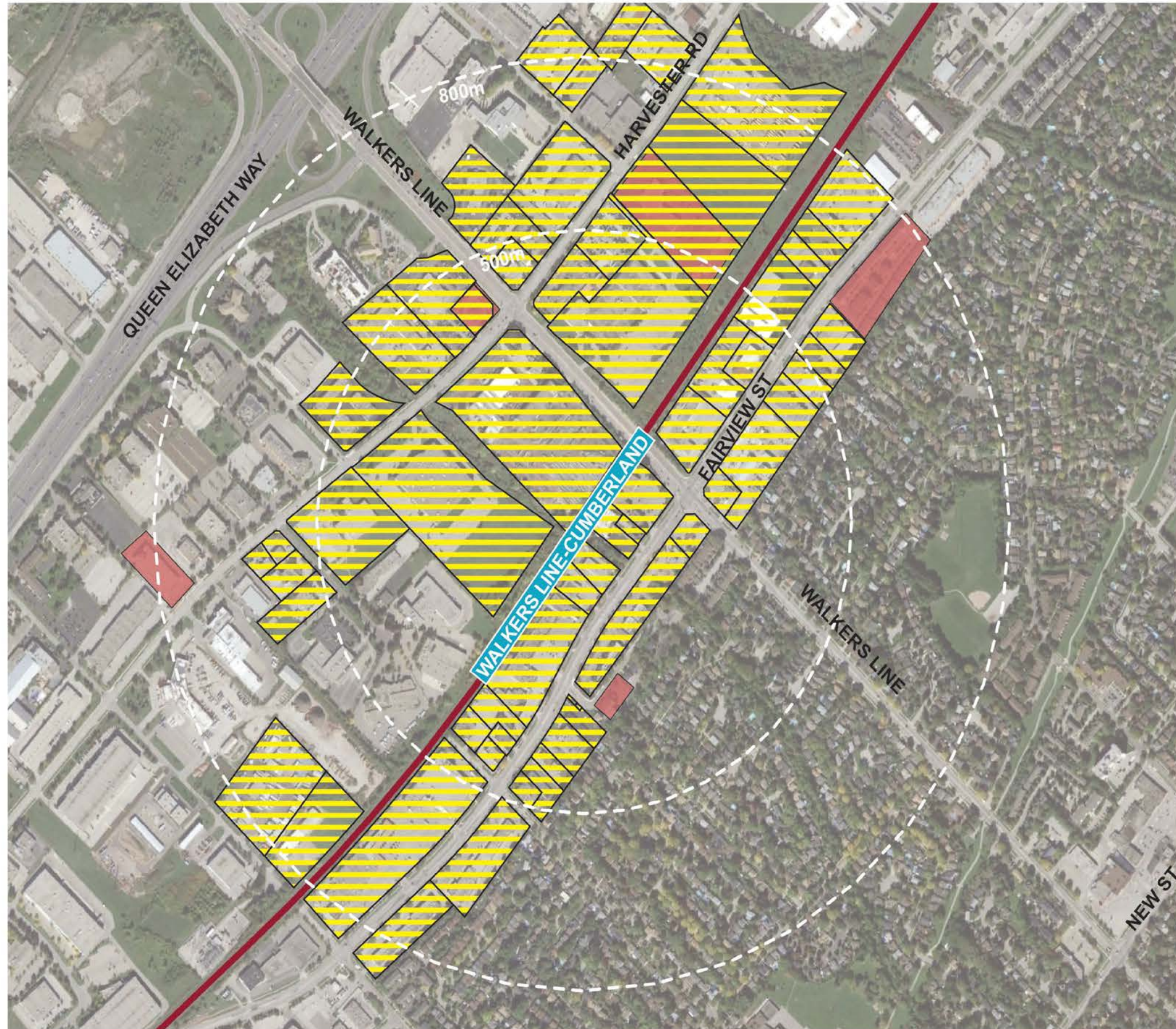
Official Plan Land Use Designations

- █ Neighbourhoods
- █ Mixed Use Areas
- █ Parks
- █ Employment Areas
- █ Service
- █ Commercial



July 2017

Figure 3-2: Current Development Applications and Potential Soft Sites



**Walkers Line -
Cumberland Station**

Initial Business Case Report

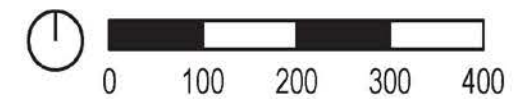
Soft Sites and Potential Future
Development

Legend

- █ Potential Station Location
- █ Lakeshore West Line

Development Activity

- █ Under construction/complete within the last 5 years
- ▨ Area of possible change



July 2017

3.3.3 Real Estate Market Demand

Relationship to Current Market Demand

The Burlington industrial market has approximately 2.1 million sq. m of existing industrial inventory and has seen 22,500 sq. m of new supply over the past five years. The station catchment area has 171,000 sq. m (8.5%) of existing industrial space. Industrial development has occurred along the north side of the rail line and this location continues to be suitable for industrial land uses.

The station catchment area is not very well-situated for major office employment demand. There is only approximately 49,700 sq. m of office space in the catchment area. Furthermore, the Burlington office market saw annual new supply of only 1,800 sq. m and annual absorption of negative 1,200 sq. m over the past five years. This shows overall weak office demand, resulting in a high vacancy rate of 17%. In addition, the lack of direct highway access and lack of highway visibility make it even less desirable for office development.

The station area along Fairview Street is somewhat suitable for retail land uses. There is a total of 618,000 sq. m of existing retail space in Burlington, of which 36,200 sq. m (5.8%) is within the station's 800 m catchment area. The lands west of the catchment area, along Fairview Street between the station and Burlington Mall, have seen most of the retail development in the broader node. Overall, while the catchment area has captured only a small share of this retail demand (generated around Burlington Mall), the surrounding land uses to the west support future retail developments.

The area surrounding the station location is not suitable for residential condominium high-rise developments. Condominium development in Burlington has primarily occurred along Lakeshore Boulevard and north of the catchment area. There are a total of 1,652 residential condominium units currently being marketed within 14 projects throughout Burlington. However, none of the projects (or units) are within the station catchment area, which has only seen some limited townhouse development.

Relationship to Future Market Demand

The area north of Fairview Street is well-located for industrial development and is supported by Burlington's strong industrial market. There is a total of 251,891 sq. m of development density potential within the identified catchment area "soft sites" for "Office/Employment" type use. The annual new supply has averaged 22,500 sq. m over the last five years and the station catchment area is well-positioned to receive a share of overall demand.

There is a total of 51,758 sq. m of development density potential (for retail/commercial land uses) on the "soft sites" identified within 800 m of the station site. While the land uses to the west have retail developments, the catchment area is somewhat distant from the prime retail area - Burlington Mall. However, in the long term the station area is likely to attract retail/commercial developments.

While a total of 747,800 sq. m of development density potential (for residential land uses) was identified within the "soft sites" in station catchment area, real estate analysis has found no market for high-rise residential condominiums within the station catchment area. There is, however, some potential for further townhouse development along Fairview Street.

3.3.4 Natural Environment

The station site is within 800 m of land designated as Open Space in the City of Burlington's Official Plan. This includes Tuck Creek, which flows north to south past the station location. Shoreacres Creek, which runs parallel to Tuck Creek, is located just east of the study area. These waterways fall within lands regulated by Halton Region Conservation Authority. As per *Ontario Regulation 162/06* under the Conservation Authorities Act, development of and interference with regulated wetlands, shorelines, watercourses, and areas subject to flooding may be restricted. The site is not near any Areas of Natural and Scientific Interest.

3.4 Network, Connectivity, and Accessibility

The following criteria examine how the new station could connect and interact with existing and planned transit and active transportation networks, as well as surrounding land uses. They also describe the general ridership potential for the new station.

3.4.1 Operational System

The Walkers Line station would be located approximately 3.1 km from Burlington GO station immediately to the west, and 2.6 km from the existing Appleby GO station immediately to the east. The station would be 47.8 km from Union Station.

The station would have potential to address access capacity constraints at existing adjacent stations. The proposed PUDO and parking facilities at existing adjacent stations are expected to reach capacity in advance of the horizon year for this project. Therefore, it is anticipated that the presence of a Walkers Line station would provide some relief and draw some of the demand from the adjacent stations, deferring the need to expand parking facilities at either station. It is estimated that there would be some overlap with the catchment area of the Burlington and Appleby GO stations for both boardings and alightings.

3.4.2 Connectivity and Ridership Drivers

Transit

Three Burlington Transit routes serve the station area with regular service. The 25 Walkers bus provides service along Walkers Line and west along Fairview Street towards Burlington Mall and Burlington GO station. The 21 Fairview bus provides service along Fairview Street, connecting Appleby and Burlington GO stations. The 80 Harvester bus provides weekday service along Harvester Road, connecting Appleby and Burlington GO stations.

In addition to regular service bus routes, there are three routes that provide peak service or late night service. The 15A Appleby-Walkers and 15B Walkers-Appleby provide morning and evening service, respectively, between Appleby GO station and the Burlington Carpool Lot at Dundas Street and Hwy 407. The 51 Burlington Northeast bus provides late night service from Burlington GO station along Fairview Street and north along Walkers Line. The 50 Burlington South bus passes through the station area along Harvester Road as part of its loop which connects Burlington GO station and Downtown Burlington.

The presence of the station could have an impact on local transit agency operations; bringing Burlington Transit services into the station would result in schedule implications for all affected routes, but also provide an opportunity to serve an otherwise untapped ridership. All of the above-noted Burlington Transit routes could conceivably be brought into the station to best serve the transferring GO rail passengers, or at least stop on-street at the station to provide a connection without notably impacting their existing operation. Further study is required to determine the impact of the station on local transit routing.

Destinations

There are four local destinations within 800 m of the station site:

- Community/Park
 1. Iroquois Park
 2. Burlington Pond Hockey Training Centre
 3. Fairview Glen Montessori School
- Place of Worship
 1. Dynes Christian Centre

In the wider area, there are numerous local destinations, including parks, schools, and places of worship. Burlington Mall, a city-wide destination, is 1.2 km west of the station location. The Ron Joyce Centre, part of

McMaster University's DeGroot School of Business, is approximately 1.5 km to the northeast. Each of which can also be served by Burlington and Appleby stations, respectively.

Active Transportation

There are several designated cycling lanes in the immediate area, including along Fairview Street and segments of Walkers Line. The Centennial Multi-Use Path is located approximately 800 m south of the station location. Most streets in the area have sidewalks on both sides.

3.4.3 Station Access

The station's conceptual design supports access by foot, cycling, local transit and car. The main station entrance is located north of the rail corridor and west of Walkers Line to facilitate direct access from the intersection of Fairview Street and Walkers Line. This will increase accessibility for riders transferring from the four Burlington Transit bus routes with stops at this intersection: 25 Walkers; 21 Fairview; 15A & B Appleby-Walkers (peak service); and 51 Burlington Northeast (late night service). The location of the main station entrance also increases the station's accessibility from the residential neighbourhood south of Fairview Street.

The station concept includes surface parking for approximately 1,175 cars. Station parking can be accessed from both Walkers Line and Harvester Road, and has been located to minimize the distance to the main station entrance. The primary PUDO, which accommodates 35 cars, has clear sight lines of the station's west entrance, which also serves the bus loop. A secondary optional PUDO is identified south of the track, accommodating 20 vehicles, as well as a pedestrian and cycling connection and bicycle parking.

3.4.4 Social Impacts

Disadvantaged Residents Served

Key income statistics for the station area, Burlington Ward 4, and the City of Burlington are provided in the following table. The data in this table is derived from the 2016 Census of Population by Statistics Canada.

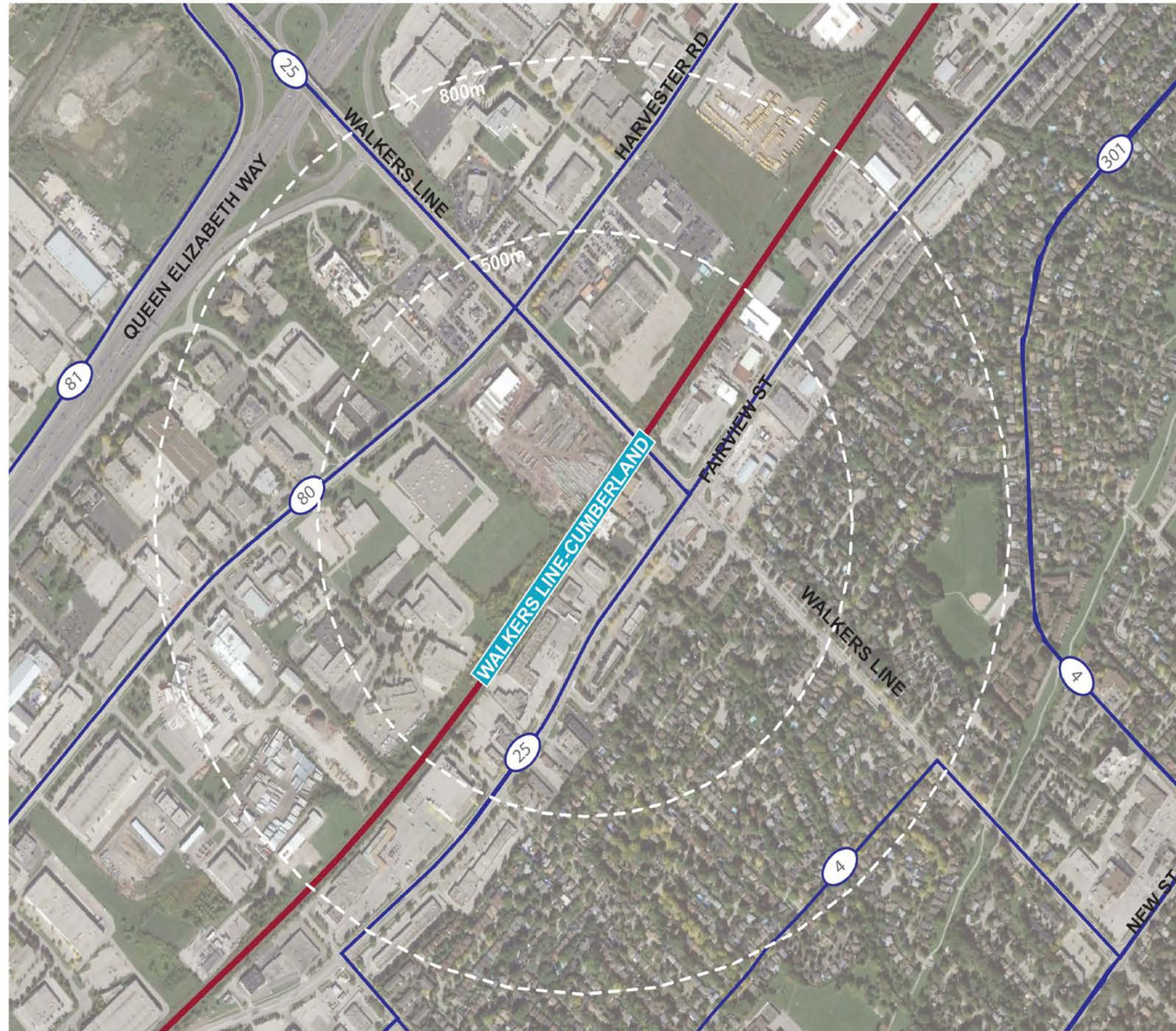
	800 m catchment area ²	Ward 4 ³	City of Burlington
Median income of households	\$95,672	\$96,997	\$93,558
% population in low income based on low-income cut-offs (LICO)	5.6%	5.2%	5.7%
% population in low income based on low-income measure (LIM)	6.9%	6.5%	7.3%

While measures of median income for the 800 m catchment area are in most cases lower than those for Ward 4 and the broader city, they are generally comparable. Key statistics for low income population indicate a slightly lower incidence of low income households. A station at this location, however, could provide improved transit access to employment opportunities for low-income residents in the broader city.

² Data refers to the entirety of the two census tracts that fall within the 800 m catchment area.

³ To allow for comparison across areas of analysis, census tracts were used to approximate City of Burlington's Ward 4. Due to boundary differences between census tracts and the Ward 4 boundary, this data refers to a larger area that includes the lands bounded by Upper Middle Road, Burloak Drive, Queen Elizabeth Way and Appleby Line.

Figure 3-3: Existing, Planned and Suggested Transit Network






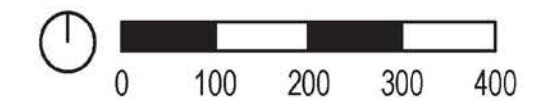
Walkers Line - Cumberland Station

Initial Business Case Report

Transit Map (Existing/Planned)

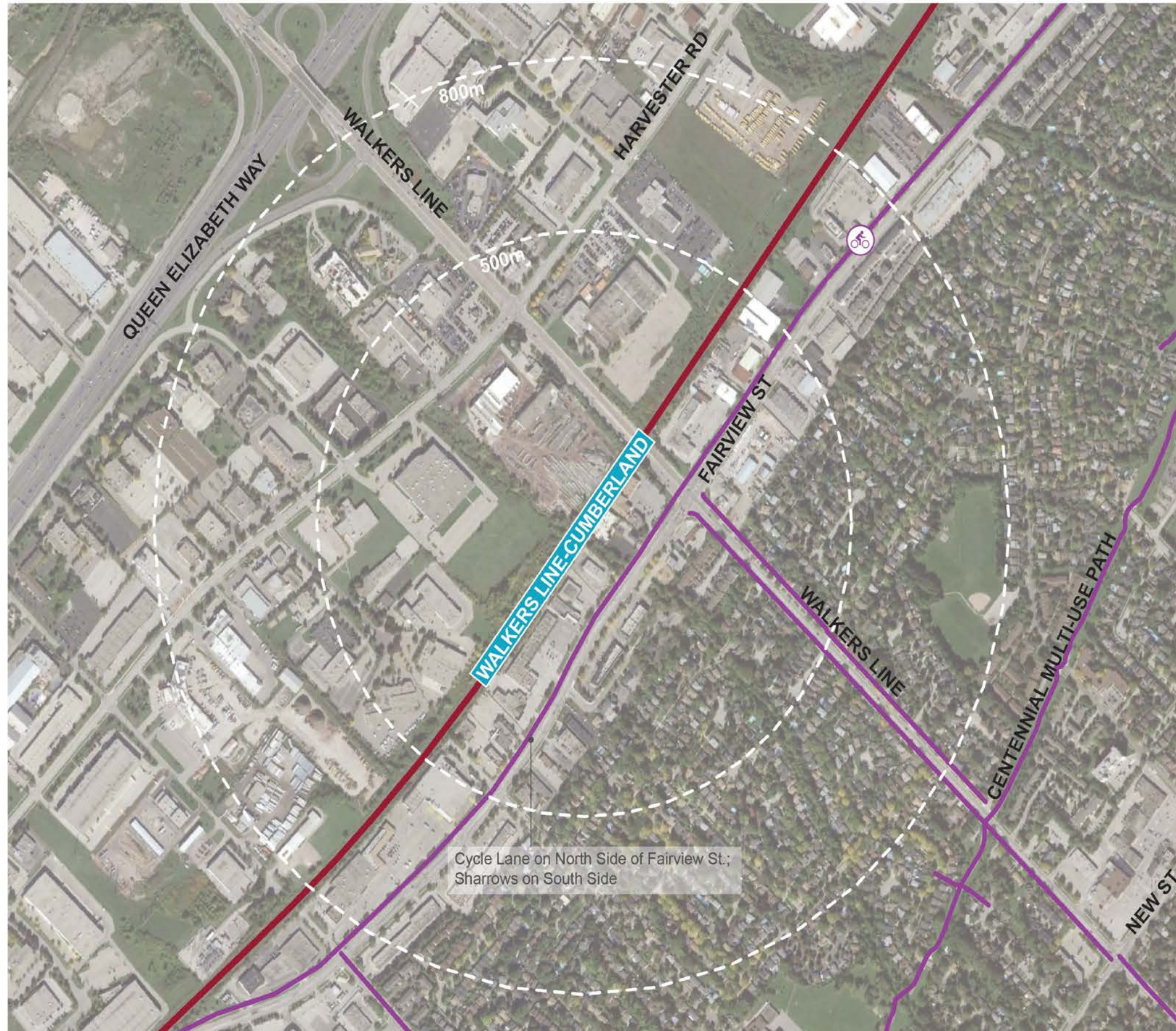
Legend

-  Potential Station Location
-  Lakeshore West Line
-  Burlington Bus Route



July 2017

Figure 3-4: Existing, Planned and Suggested Active Transportation Infrastructure



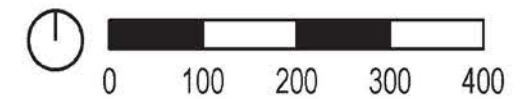
**Walkers Line -
Cumberland Station**

Initial Business Case Report

Cycling Infrastructure (Existing/
Planned)

Legend

- █ Potential Station Location
- █ Lakeshore West Line
- █ Existing Bike Lane
- ⋯ Proposed Bike Lane



July 2017

4. Financial and Economic Case

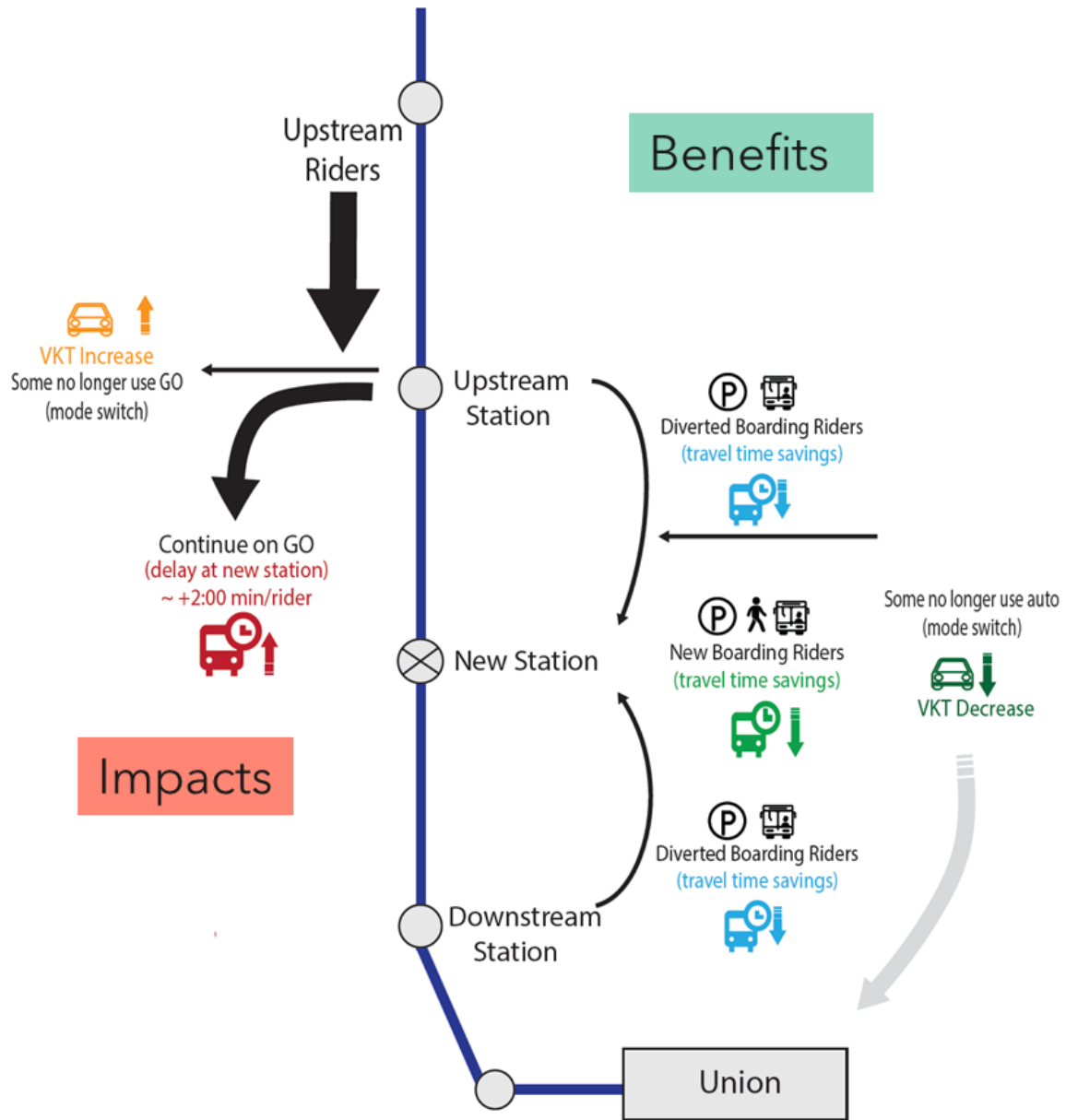
4.1 Analysis Approach

The Financial and Economic Case for a new station depends on forecasts of how travellers will respond to the presence of the new station (see Figure 4-1). Individuals who use the new station can benefit by saving time relative to their previous travel option – travelling farther to another GO station, or using a different transport mode such as subway, bus, or automobile. The new station can also negatively impact some GO riders with longer travel times if the station happens to delay riders with an added stop along their journey. Changes to automobile usage, roadway congestion, and environmental outcomes can also occur as individuals reconsider their mode choice decisions when the new station is in place (e.g. commuters that live or work in close proximity to the new station may now choose to use GO instead of their car).

The IBC for Walkers Line uses a modelling and analysis approach that is consistent with the 12 new station Preliminary Design Business Cases (PDBC) that were issued in March 2018. The Walkers Line business case analysis measures and captures the same types of travel time and automobile usage benefits and impacts and applies the same modelling and analysis methods. The analysis also shares the same travel demand modelling approach that utilizes the Greater Golden Horseshoe travel demand model to forecast ridership and transportation user benefits. Consistent with the PDBC, the business case for Walkers Line assumes that the new station is built for level boarding from the outset, thereby limiting delays to upstream passengers that travel through the station, and makes use of municipally-derived forecasts of population and employment for 2031. Please refer to the GO Expansion New Stations Modelling Backgrounder (April 2018)⁴ for a more detailed discussion of the overall modelling approach, inputs, assumptions, and tools that were used to support the analysis.

⁴ <http://www.metrolinx.com/en/regionalplanning/newstations/2018-04-13%20Stations%20Technical%20BackgrounderFINAL.pdf>

Figure 4-1: New Station Benefit and Impact Analysis



4.2 Results Summary and Sensitivity Analysis

The economic analysis monetizes the forecast transportation user benefits and impacts and environmental outcomes associated with the new station over a 60-year analysis lifecycle. Once monetized and discounted, the economic and environmental impacts are compared to the station's capital and operating costs in order to assess the performance of the proposed station investment. Please refer to **Appendix A** for an overview of the key financial and economic analysis model input assumptions used in the analysis. These assumptions have been updated for consistency with analysis parameters in the upcoming Version 1.0 release of the Metrolinx Business Case Guidance⁵. This includes generating a range of benefits through sensitivity testing using different Value of Time Growth rate assumptions (0%/year and 0.75%/year respectively).

Table 4-1, below, summarizes the key metrics that quantify the overall economic performance of Walkers Line station. **Appendix B** provides a summary of the key inputs to the IBC analysis, including modelled GO service levels and station area land use. Appendix B also provides a more detailed breakdown of the forecast ridership, including new GO riders, boardings, and alightings.

The high level cost estimate combines capital costs (excluding property) and operating costs over the 60 year analysis lifecycle. The estimated range reflects the maturity and level of design at the IBC stage of analysis. See Section 4.2.3 for more details.

Table 4-1: Economic Analysis Summary Results (Millions of 2017 \$, Present Value)

	Walkers Line	
2031 Ridership (AM Peak Period) boardings + alightings	2,400	
2031 Ridership (Daily) boardings + alightings	6,900	
Benefits Compared to Cost	Benefits are Negative due to Network Impacts	
Benefit Cost Ratio (BCR)	Less than Zero	
Total Benefits (60yr lifecycle)	-\$6 M to -\$1 M	
	<i>0.75% Value of Time Growth</i>	<i>0% Value of Time Growth</i>
Travel Time Savings	-\$5 M	\$0 M
Existing GO Riders	-\$48 M	-\$42 M
New GO Riders	\$43 M	\$41 M
Vehicle Operating Cost Savings	-\$0.3 M	-\$0.3 M
Decongestion on Road Network	-\$0.7 M	-\$0.6 M
Safety Impacts	-\$0.1 M	-\$0.1 M
Environmental Impacts	-\$0.04 M	-\$0.04 M
Total Costs	\$110 M to \$130M	
Capital Costs	\$63 M to \$80 M	
Operating Costs	\$48 M	

⁵ The Draft Business Case Guidance (March 2018) is accessible here:
http://www.metrolinx.com/en/regionalplanning/projectevaluation/benefitscases/benefits_case_analyses.aspx

4.2.1 Travel Time Savings and Ridership

The proposed Walkers Line station is forecast to primarily be used as a Park-and-Ride station, drawing the majority of its ridership from the residential areas to the north and south of the station in Burlington between the Highway 407 to the north, Lake Ontario to the south, Brant St to the west, and Appleby Line to the east. Although the station provides a more convenient access option for many riders, most Park-and-Ride users are forecast to save relatively small amounts of time relative to accessing Burlington and Appleby stations which are located only 3 km away to the west and east of the new station respectively (i.e. less than 5 minutes on average). GO riders that access the new station via walk or transit save more time (i.e. 10 minutes or more on average) but only 15% of the boarding riders are forecasted to use these access modes.

Although the station provides benefits to riders in the Burlington area, these benefits are forecast to be less than the impacts to upstream riders that use trains that travel through the station. These upstream riders include patrons that board trains at Burlington, Aldershot, West Harbour, Confederation, and Hamilton stations. Level boarding limits the incremental travel time impact of the new station to approximately 1.5 minutes, which includes the time required to slow down, load and unload passengers, and get back up to speed. With level boarding in place, the travel time impacts to upstream riders are still almost 30% higher than the travel time savings benefits for new station users.

4.2.2 New GO Riders and Automobile Usage Reductions

The forecasting exercise suggests that most of the users of Walkers Line station would have already been using GO even if the new station was not in place, accessing the network via the existing Burlington or Appleby stations. This reflects the competitiveness of GO in comparison to alternative transit options and the automobile between Burlington and downstream locations along the Lakeshore West line towards the City of Toronto. Overall, approximately 700 new daily trips (ons and offs) are forecast to be attracted to the GO network in 2031 as a result of the opening of the new Walkers Line station. When considering net new riders to GO, including modal shifts by upstream riders, this increase in GO ridership is forecast to translate to approximately \$16M (2017\$, Present Value) in additional GO fare revenue over the 60-year analysis lifecycle.

The new Walkers Line station is forecasted to result in a marginal increase to personal automobile usage, which is captured through modelled increases to automobile Vehicle Kilometres Travelled (VKT). The VKT increases are influenced by the new station's location near the end of the Lakeshore West line where many upstream riders travel longer distances between their origin, access station, and destination (e.g. Grimsby is almost 85km away from Union station). Changes in the station access and automobile usage decisions for riders from these areas can lead to larger VKT impacts that offset VKT reductions associated with Walkers Line station riders that primarily originate from the Burlington area, which is about 50km away from Union station. Overall, the modelling results suggest that the VKT increases for impacted users and VKT decreases associated with new station users balance out to a small negative impact.

4.2.3 Project Costs

Based on the Walkers Line station concept plan, Metrolinx has developed a high-level cost estimate range for this station. These indicative estimates are based on unit-pricing and contingencies for major station components and materials (e.g. number of platforms or surface areas to be paved with new asphalt). As part of future work, station designs will be further refined and transitioned from a unit cost analysis to a more elemental cost analysis based on specific requirements and assumptions, and higher degree of cost certainty.

Operating costs take into account direct station operating and maintenance costs (such as elevator maintenance, platform snow removal, etc.), station attendants, additional labour on trains resulting from longer run times, additional energy required for train acceleration, and additional wear on train brakes. These costs represent the bulk of new costs that would be attributed to a new station. Further costs related to wear and tear on the trains resulting from increased ridership are not anticipated to be significant.

5. Deliverability and Operations Case

5.1 Deliverability and Operations Case Summary

The Deliverability and Operations Case provides evidence of the ease of constructing the station, operating service through the station, and the further steps required before a station can be implemented. This case also outlines the project risks known at this stage, such as disruption during construction and potential operating changes that affect the performance of the station. This IBC assumes that all local service trains on the Lakeshore West line will stop at the new station, and that the overall GO service concept would otherwise be unaffected by the new station.

Table 5-1: Deliverability and Operations Case Summary Results

Deliverability and Operations Case Summary	Walkers Line
Constructability	Compatible track alignment/grade at an unconstrained site, assuming implementation is coordinated with the GO Expansion program
Room for Growth	Considerable room for station growth, although street-level amenities are constrained
Environmental Impacts	Typical impacts expected, but in an existing urbanized area
Approvals/Permits Required	TPAP and typical permits required
Operating Impacts	Side platform configuration supports local-express operating scenario. Track 1 and future Track 4 will accommodate stopping services while Track 2 and 3 will accommodate express service bypass

5.2 Deliverability and Operations Criteria

5.2.1 Constructability

The proposed Walkers Line station would be located within the existing GO Lakeshore West rail corridor. Two side passenger platforms would be constructed adjacent to Track 1 and the future Track 4, with elevators/stairs connecting to supporting surface access facilities such as parking, PUDO, and transit connections. The proposed station maintains the alignments of all existing tracks, minimizing the required track works and simplifying the construction staging compared to island platform alternatives.

The station concept illustrates construction of a fourth track along the Lakeshore West corridor. Current planning for GO Expansion does not include this work and it is assumed that any corridor or bridge widening associated with the implementation of the fourth track through this area would be subject to a separate study focused on the expansion of the rail corridor. Additional track work at this station is therefore not included in the scope and cost estimate of the station.

The station could equally be developed with a side platform against the 3rd track. This configuration would require adaptation in future to address adjacency of a future fourth track, which would inform the scope and cost of the future track work.

A total of approximately 1,050 sq. m of land acquisition was identified for implementation of this station platforms infrastructure. This requirement could potentially be reduced through the use of retaining walls on the north side, which could be considered in the next design phase of the project. In addition, due to the limited setback from the right-of-way to the buildings on the south side of the corridor, two buildings are anticipated be demolished or significantly modified to accommodate this option.

In terms of potential for future expansion, the station site is relatively confined by existing development to the south, Walkers Line to the east, Harvester Road to the north, and Tuck Creek to the west. Any growth of the station footprint would have to be accommodated through acquisition of additional property either to the south of the rail corridor (to Fairview Street) or on the east side of Walkers Line.

5.2.2 Environmental Impacts

The major environmental impacts that are expected to arise as part of the construction and operation of the Walkers Line station include:

- Noise and vibration impacts due to construction, and rail operations;
- Air quality impacts due to dust during construction, as well as vehicle emissions;
- Traffic impacts during construction, as well as increased traffic to the station site during operations;
- Stormwater runoff impacts on Tuck Creek; and
- Excavation of contaminated soil during construction.

Impacts are generally more pronounced in areas where there are sensitive receptors such as residential or institutional areas, natural areas, or areas with heritage resources present. In the case of Walkers Line, there are no known sensitive sites expected to be affected. The proposed Walkers Line GO station would be located in a heavily urbanized area, and the potential for impacts to significant natural environment features associated with the station is minimal. In addition, there is already a high volume of rail activity in the station area and as such, the incremental impacts of a new station would be less than on an entirely new corridor.

Environmental impacts associated with the new station will be further evaluated through more detailed study and consultation with the appropriate agencies. Regulatory processes are in place to ensure these impacts are addressed. There are numerous mitigation measures available for addressing impacts; including noise walls, silt fences, dust suppression, and environmental monitoring. The nature of impacts varies with the type of infrastructure and nearby receptors.

5.2.3 Approvals/Permits Required

Transit Project Assessment Process (TPAP)

The proposed station would require a provincial environmental approval. *Ontario Regulation 231/08 (Transit Projects and Metrolinx Undertakings)* exempts proponents of all public transit projects from the requirements under Part II of the Ontario Environmental Assessment Act, 1990 (EAA), and establishes a process that applicable projects must follow in order to be exempt. *Ontario Regulation 231/08* outlines a six-month "Transit Project Assessment Process" (TPAP), which a proponent must follow for certain classes of transit projects including the development of new stations within or adjacent to residential land uses (i.e., this project). The TPAP provides a framework for a focused consultation process so that an assessment of a project's potential environmental impacts can be completed within six months.

Canadian Environmental Assessment Act (CEAA)

Under the current Canadian Environmental Assessment Act, 2012 (CEAA), which came into effect on July 6, 2012, proponents of "designated" projects are required to follow a federal environmental assessment process. A new

station at Walkers Line would not meet the definition of a “designated” project under the CEAA, and it is therefore not anticipated that this station would require approval under the CEAA.

Other approvals required

In order to implement the station, Metrolinx may need to secure additional permits and approvals. The following list of permits and approvals reflects those typical of this type of project in the City of Burlington:

- Planning review (such as Site Plan Approval or equivalencies) for above-grade structures and facilities (through the City of Burlington)
- Building permits for the passenger services building, elevator/stair accesses, and pedestrian tunnels
- Permit(s) to Take Water (from the Ministry of the Environment), for locations where dewatering exceeds 50,000 litres per day
- Stormwater management, in accordance with the City of Burlington, Region of Halton, Conservation Halton, and Ministry of the Environment requirements
- Sewer discharge approvals, in accordance with City of Burlington, Region of Halton, Conservation Halton, and the Ministry of the Environment
- Environmental Compliance Approvals for Air Quality and Noise in accordance with the Environmental Protection Act (through the MOE)
- Permits for construction within existing road allowances (through the City of Burlington)
- Applicable Ontario Energy Board approvals for utility relocations
- City of Burlington and Region of Halton Bylaws are to be complied with, as applicable. Metrolinx must obtain all necessary permits from the City of Burlington (including Burlington’s Tree Bylaw for trees located within the City’s road allowance) and Region of Halton.

The specific requirements for the above-noted permits and approvals would be identified throughout the TPAP phase of the project.

5.2.4 Operating Impacts

The proposed concept for the Walkers Line station can likely be introduced with limited impacts to rail corridor operations. The concept maintains the existing tracks in the corridor in their current alignment, allowing for the maintenance of express services on Tracks 2 and 3 while Track 1 and the future Track 4 could accommodate stopping services at the station.

Appendix A: Financial and Economic Analysis Assumptions

Table A1: Model Input Assumptions

Model Input Assumptions	Metric	Notes
Project Evaluation Period (Years)	60	Analysis period ends in 2083
Year of Cost Estimates	2022	Per cost estimate
Annual inflation rate - General Price Level	2%	Metrolinx Business Case Guidance
Annual Inflation Rate - Construction Spending	3%	Per cost estimate
Ridership Daily Factor (from Peak Period)	2.8 - 3.85	Varies by station service level and context
Ridership Annualization Factor (days/year)	280	Annualizes weekday forecasts
Discount Rate, Nominal (%)	5.5%	Metrolinx Business Case Guidance
Construction Period (start and end dates)	2021-2023	Construction timeline
Discount Rate, Real (%)	3.5%	Metrolinx Business Case Guidance
Value of Time (\$/hr) (2017\$)	\$17.36	/w 0% Value of Time Growth Rate. Metrolinx Business Case Guidance
Value of Time Annual Growth Rate, Real (%/year)	0%	0.75% used as sensitivity test. See Metrolinx Business Case Guidance
Auto Operating Cost (\$/VKT) (2017\$)	\$0.09	Metrolinx Business Case Guidance
Auto Operating Cost Growth Rate, Real (%/year)	0%	See Metrolinx Business Case Guidance
Decongestion on Road Network (\$/VKT) (2017\$)	\$0.17 (peak) \$0.02 (off-peak)	/w 0% Value of Time Growth Rate. Metrolinx Business Case Guidance
Decongestion on Road Network Growth Rate, Real (%)	0%	0.75% used as sensitivity test. Metrolinx Business Case Guidance
Accident Reduction Benefit (\$/VKT) (2017\$)	\$0.1	Metrolinx Business Case Guidance
Accident Reduction Growth Rate (%/year)	-5.3%	Metrolinx Business Case Guidance
Greenhouse Gas Emission (GHG) Costs in CO ₂ e (\$/VKT) (2017\$)	\$0.01	Metrolinx Business Case Guidance
Greater Golden Horseshoe Model (GGHM) Forecast Year	2031	GGHM forecasts for 2031 AM peak period
Ridership annual growth rate - Lakeshore W (%)	1.9% to 2047	GGHM background growth rate

Appendix B: Ridership Inputs and Results Summary

Table B1: Modelled Service Levels: AM Peak Trains Serving the Station (Inbound to Union)

Description	Value	Unit
Frequency	10	Number of trains per hour
Headway	6	Minutes between trains
<i>Note: This is not a service plan. These service levels have been assumed for modelling purposes only. The full service plan for GO Expansion will be defined by bidders as part of the DBFOM procurement process.</i>		

Table B2: Incremental Travel Time Impact of Station (with Level Boarding)

Description	Value	Unit
Travel Time Impact	1.5	Minutes

Table B3: Station Area Land Use - 2031 Population and Employment within 800m

Description	Value	Unit
Population	3,200	People
Employment	5,800	Jobs
Density	44	People + Jobs / ha
<i>Note: Model assessment includes population and employment by traffic zone for the entire Greater Golden Horseshoe for 2031. Station area land use is shown to illustrate localized development levels assumed in the model.</i>		

Table B4: Ridership Breakdown - 2031 Daily Trips by New GO Riders

Description	Value	Unit
Daily Trips by New GO Riders	700	Trips (ons + offs)
Daily Trips by Net New GO Riders	400	Trips (ons + offs)
Total Daily Trips	6,900	Trips (ons + offs)
<i>Note: New GO Riders are defined as new station users that choose to switch to use GO when Walkers Line station is in place. The remaining trips at the station are made by riders that would have otherwise used another GO station. In addition to the new GO riders that are attracted to each new station, Net New GO Riders also considers the small numbers of upstream riders that choose to no longer use the GO system due to the longer journey times that are caused by stopping at the new station.</i>		

Table B5: Ridership Breakdown - Boardings and Alightings

Description	Value	Unit
2031 AM Peak Period Boardings	2,300	Trips (ons + offs)
2031 AM Peak Period Alightings	100	Trips (ons + offs)
2031 Daily Trips	6,900	Trips (ons + offs)

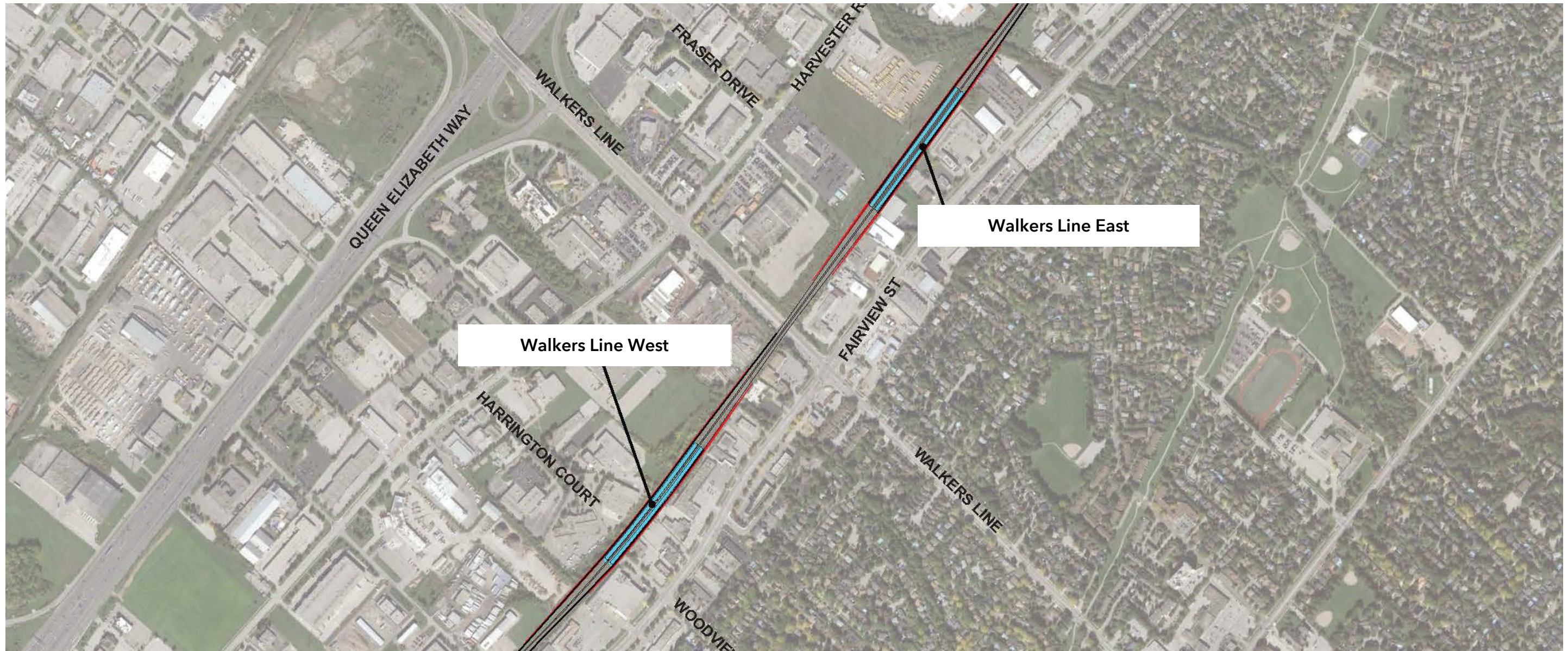
Appendix C: Alternative Site Analysis

1.1 Introduction

The IBC for Walkers Line evaluates a potential station location at the intersection of Walkers Line and the Lakeshore West Corridor, between Harvester and Fairview Street in the City of Burlington, under a four-track, side platform configuration.

A station featuring island platforms straddling Walkers Line was originally identified and explored as it provided greater operational flexibility under various service scenarios; however, this configuration would require additional impacts and a wider rail bridge over Walkers Line to accommodate diverging tracks. The site and general station configuration would be the same between the island and side platform alternatives. To avoid the expense of making modifications to the existing structure, while maintaining the flexibility of the island platforms, two alternative sites within the immediate vicinity were examined – one to the east and one to the west. Figure C-1 illustrates the locations of the alternative platforms.

Figure C 1: Location of alternative Walkers Line station platforms



1.2 Island Platform Alternate A - Walkers Line Central

1.2.1 Station Location and Context

The Walkers Line Central option is located immediately west of the existing Walkers Line grade separation structure.

The existing land uses around the Walkers Line Central station location under an island platform configuration match those around the side platform option.

1.2.2 Surrounding Transportation Infrastructure

The surrounding transportation infrastructure around the Walkers Line Central station location matches those around the IBC option.

1.2.3 Strategic

Given the close proximity of the platform locations being considered, as well as the similarities in land use and a shared policy framework, it is expected that the strategic case for a station at Walkers Line Central would remain consistent with most components of the strategic case for the preferred side platform option.

1.2.4 Deliverability and Operations

The station site is located to maximize visibility and connectivity from the Walkers Line/Fairview Street intersection. The east end of the platforms are located immediately west of the Walkers Line grade separation.

To accommodate the platforms, the rail corridor would need to be widened through this area, impacting approximately 3,500-4,000 sq. m of property. On the north side of the rail corridor, the developments are set back such that there do not appear to be any direct impacts to buildings as a result of widening the rail corridor. On the south side, widening the corridor to accommodate the proposed station would likely impact several developments. A retaining wall or crash wall might also be required to provide protection for properties along the south side of the corridor, which would need to be confirmed through design development.

The existing Walkers Line and Tuck Creek bridges would also need to be widened to accommodate the platforms and any future fourth track. The required bridge widenings are approximately 6.2m on the north side and 10.3m on the south side. Widening of the Walkers Line bridge could impact the available roadway clearance, potentially requiring localized re-grading to ensure adequate structural clearance at the bridge. This should be confirmed during a more detailed design phase of the project.

1.3 Island Platform Alternate B - Walkers Line West

1.3.1 Station Location and Context

The Walkers Line West option is located approximately 300m west of the existing Walkers Line grade separation structure.

The existing land uses around the Walkers Line West station location are similar to those around the IBC's side platform option. With the relocation to the west, the Walkers Line station is closer to Burlington Mall (approximately 900m away), and could improve connectivity to this destination.

1.3.2 Surrounding Transportation Infrastructure

The surrounding transportation infrastructure around the Walkers Line West station location is similar to those around the preferred side platform option.

1.3.3 Strategic

Given the close proximity of the platform locations being considered, as well as the similarities in land use and a shared policy framework, it is expected that the strategic case for a station at Walkers Line West would remain consistent with most components of the strategic case for the preferred side platform option. Station access is one criterion within the strategic case that varies, and is therefore considered below.

Station Access

A platform shifted west to eliminate the need to modify the Walkers Line grade separation structure would be located mid-block at a distance of more than 300 m from Walkers Line. In order to facilitate access from buses operating along Fairview Street and the residential neighbourhood to the south, a station at this location would require access from south of the rail corridor. This could occur at the west end of the platform from Woodview Road.

The station's location would not allow for direct access to the 15A and 15B Appleby Walkers buses, which provide peak service between Appleby GO station and the Burlington Carpool Lot at Dundas Street and Hwy 407. Riders transferring to or from this local bus route would be required to walk 300 m to the intersection, unless the buses were rerouted into the station site, but station facilities and access would be constrained, and less visible.

1.3.4 Deliverability and Operations

The station's location is determined by the minimum separation distance from the Walkers Line rail structure required to ensure that no modifications to the structure would be needed. This places the platform approximately 300 m to the west at Woodview Road/Harrington Court. The platforms would be on a section of track with an approximate 0.5° (0°30'00") curve.

To accommodate island platforms, the rail corridor would need to be widened through this area, impacting approximately 4,500-5,000 sq. m of property. Developments on the north side of the rail corridor, accessed from Harrington Court, are set back sufficiently far such that there do not appear to be any direct building impacts or additional protection requirements (e.g. crash walls) as a result of the proposed rail corridor widening. On the south side, widening the corridor would likely impact a single-storey commercial building on the east side of Woodview Road, as well as the rear circulation for the plaza on the west side of Woodview Road, which includes a pharmacy, a grocery store, and an LCBO. A retaining wall or crash wall might also be required to provide protection for properties along the south side of the corridor, which would need to be confirmed through design development.

In addition to impacts on adjacent properties, widening the rail corridor will impact Tuck Creek and the naturalized area along the north side of the corridor. The existing structure over Tuck Creek would require widening to accommodate the proposed track realignment.

1.4 Island Platform Alternate C - Walkers Line East

1.4.1 Station Location and Context

The Walkers Line East option is located approximately 300m east of the existing Walkers Line grade separation.

The existing land uses around the Walkers Line East station location are similar to those around the preferred side platform option.

1.4.2 Surrounding Transportation Infrastructure

The surrounding transportation infrastructure around the Walkers Line East station location is similar to those around the IBC's side platform option.

1.4.3 Strategic

Given the close proximity of the platform locations being considered, as well as the similarities in land use and a shared policy framework, it is expected that the strategic case for a station at Walkers Line East would remain consistent with most components of the strategic case for the preferred side platform option. Station access is one criterion within the strategic case that varies, and is therefore considered below.

Station Access

A station located east of Walkers Line to avoid impacting the bridge would be located mid-block at a distance of more than 300 m from Walkers line. A station at this location would likely require access from south of the rail corridor in order to provide access to riders transferring from Burlington Transit buses operating along Fairview Street. This access would also serve riders who live in the residential neighbourhood to the south.

The station's location 300 m east of Walkers Line would not facilitate direct connections to the 25 Walkers and 51 Burling North bus services, which provide regular and late-night service, respectively. Riders transferring to these local routes would be required to walk 300 m to the intersection of Walkers Line and Fairview Street, unless the buses were rerouted into the station site.

1.4.4 Deliverability and Operations

The station's location is determined by the minimum separation distance from the Walkers Line rail structure required to ensure that no modifications to the structure would be needed. This places the platform approximately 300 m east of Walkers Line rail structure, on a straight tangent section of track. Widening of the rail corridor through this area would be required to accommodate the proposed platforms, with an estimated 4,000-4,500 sq. m of property impacted. On the north side of the rail corridor, the developments are set back such that there do not appear to be any direct impacts to buildings as a result of widening the rail corridor. On the south side, widening the corridor to accommodate the proposed station would likely impact several developments, including direct impacts on at least one building. A retaining wall or crash wall might also be required to provide protection for properties along the south side of the corridor (to be confirmed in preliminary design).

In addition to impacts on adjacent properties, a station at this location may also trigger the need to widen the structure over Shoreacres Creek, located approximately 750 m east of Walkers Line.

1.5 Recommendations

While Island Platform Alternate B and Island Platform Alternate C reduce the need for modifications to the bridge over Walkers Line, both locations come with additional challenges, including potential impacts to station access, natural features, and corridor protection requirements. In both options, the station is shifted away from Walkers Line where there is less visibility and where transfers to local transit routes would be more difficult. Depending on available properties available to provide southern access, connections between bus services along Fairview Street might be complicated.

A platform location across or directly adjacent to Walkers Line is preferred for its ability to create a more visible station with more direct access to both Walkers Line and Fairview Street. The platform's location at the intersection facilitates access to uses on either side of Walkers Line over the longer term, supporting the development of a higher density, mixed use node at the intersection of Walkers Line and Fairview Street. It also protects for the opportunity to establish more direct connectivity to future frequent transit service along Walkers Line.

The new operating pattern identified for the Lakeshore West corridor also allows for the use of side platforms, which provides the benefits of a platform located immediately adjacent to Walkers Line while limiting the impacts on the corridor or bridge structure.