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The Regional Municipality of Durham Report

To:	Planning and Economic Development Committee
From:	Commissioner of Planning and Economic Development
Report:	#2024-P-12
Date:	June 4, 2024

Subject:

Ontario Northlander Station Strategic Case, in Beaverton (Township of Brock)

Recommendation:

That the Planning and Economic Development Committee recommends to Regional Council:

A) That the Ontario Northlander Station Strategic Case in Beaverton prepared by WSP Inc. on behalf of the Region be endorsed, and that staff be directed to engage with the Ontario Ministry of Transportation, Ontario Northland and Township of Brock Council and staff, to further develop the station concept and service;

B) That Regional staff be directed to develop a satisfactory financing and implementation proposal with the Township of Brock, Ontario Ministry of Transportation, and Ontario Northland, for a new Beaverton Ontario Northland station, and report back in the fall of 2024 with a recommended proposal for Finance and Administrative Committee's endorsement, prior to proceeding to Regional Council for approval.

C) That a copy of this report be provided to the Ontario Ministry of Transportation, Ontario Northland and the Township of Brock.

Report:

1. Purpose

1.1 This report summarizes the work undertaken by the Planning Division's

Transportation Planning staff in coordination with Township of Brock staff, to develop a strategic case and identify possible station locations for a new passenger rail station in Beaverton as part of the Ontario government's re-launch of the Ontario Northlander rail service from Toronto to Cochrane. The strategic case also serves to highlight the benefits of enhancing inter-regional connectivity of an Ontario Northlander station in Beaverton, which was not considered as part of the Metrolinx Initial Business Case process.

2. Background

2.1 The following provides a brief history of passenger railway service in Beaverton:

a. In 1906, the Canadian Northern Railway reached Beaverton, with a passenger station at the end of King Street West. The new station gave Beaverton a quicker way to reach Toronto as well as northern Ontario.
b. From 1978 to 1990, the Ontario Northland Transportation Commission (Ontario Northland) and VIA Rail (which was formed in 1977) jointly operated the Toronto to Kapuskasing route, called the "Northland" route, which provided service to Beaverton daily in each direction of travel. During this period of operation, the Beaverton station building was not properly maintained. Unfortunately, it was allowed to deteriorate to an unsafe condition and was boarded up in the early 1980s. A temporary shelter was subsequently constructed by VIA Rail adjacent to the station.
c. In 1990, passenger rail service to Beaverton was discontinued and the temporary shelter was removed. The former Beaverton station building was demolished a few years later.
d. In 2012, Ontario Northland discontinued the Northlander route from Toronto to Cochrane. It was replaced with bus service operated by Ontario Northland on Highways 11 and 400.
e. In May 2021 the Provincial government announced plans to reinstate the former "Northlander" route, referred to as the Northeastern Passenger Rail Service, from Toronto to Cochrane on the Canadian National Railway (CNR) Bala line, which bisects Beaverton.

2.2 In May 2021, an Initial Business Case (IBC) was prepared by Metrolinx on behalf of Ontario Northland. Although the IBC noted that the capital investment and operational costs well exceeded the economic benefits resulting from the project, there are strategic benefits to providing the service that improve transportation connectivity/reliability, quality of life, support regional development and promote a sustainable environment. It was also announced that $5 million was committed to

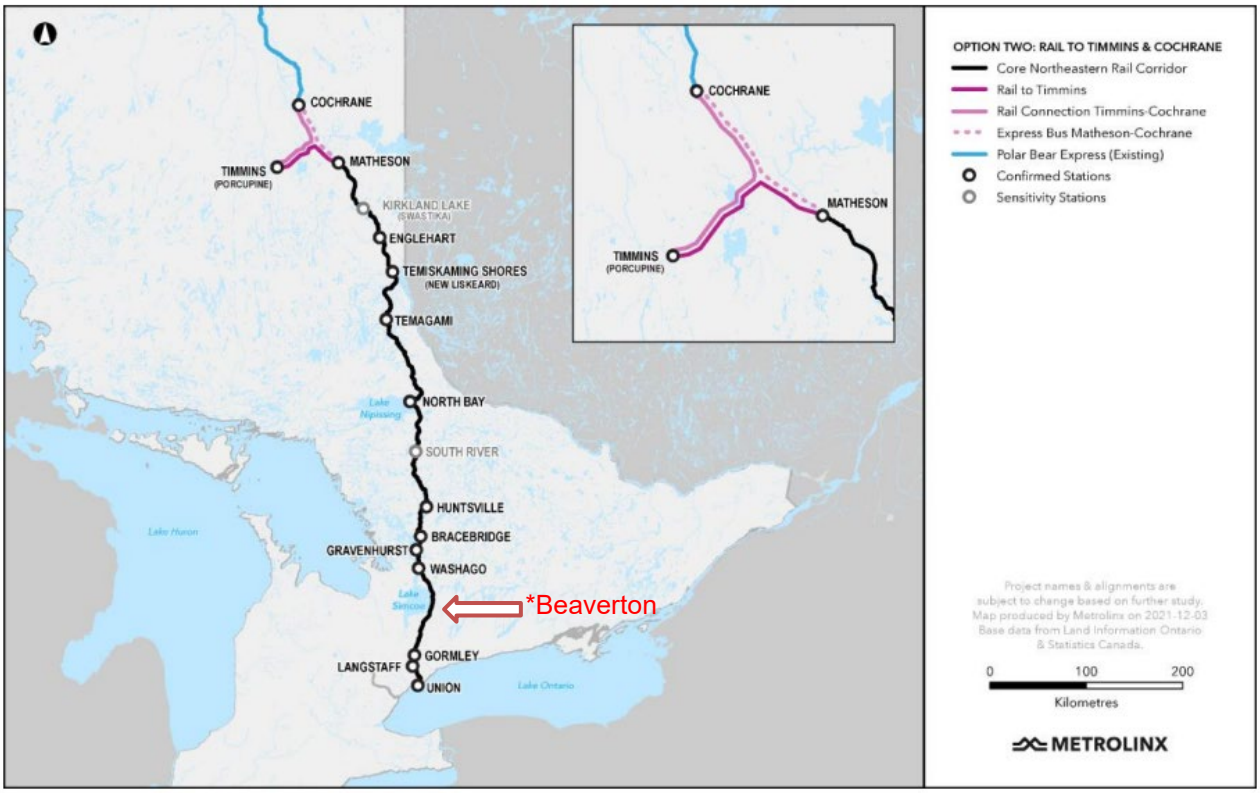
support planning and design work to reinstate the passenger route.

2.3 In April 2022, an Updated IBC was released with a recommended service option for the Northeastern Passenger Rail Service. The province announced $75 million of committed funding to restore the service. This funding was also reflected in the 2022 Ontario Budget, and is for all required capital items (e.g., trains, passing track and stations).

2.4 On December 15, 2022, the Provincial government announced the purchase of three new trainsets from Siemens Mobility Limited for the return of the Northlander service. Ontario Northland is moving forward to implement next steps, including detailed design and engineering, environmental assessment, Indigenous and municipal engagement, and procurement and construction related to station and track improvements.

2.5 As identified in the Updated IBC, the preferred route – from Toronto to Timmins with a rail connection to Cochrane – includes 16 stops, 13 of which were serviced by the former Northlander prior to the discontinuation of service in 2012. To accommodate a launch of service in the mid-2020s, additional stops along the route are being considered as part of Ontario Northland's longer-term operational plan (See Figure 1). Due to the lack of a functioning station stop, a stop in Beaverton was not included/considered as part of the Metrolinx updated IBC process.

Figure 1: Northeastern Passenger Rail Service IBC Preferred Service Option



Source: Updated IBC, Metrolinx, 2022

3. Opportunity for Beaverton, Township of Brock

3.1 In 2023, the Region retained WSP Inc. in consultation with the Township of Brock and Durham's Rapid Transit Office to develop a strategic case to identify the benefits of a new station in Beaverton. The work included analyzing the context and opportunities for a new passenger rail station, as well as provided a preliminary assessment of several potential station sites within Beaverton.

3.2 WSP Inc. analyzed and explored three areas of Beaverton. Figure 2 identifies the general areas explored for potential station locations, while Attachment #1 provides more detailed information on the station site locations alternatives that were evaluated.

Figure 2: Areas Explored for a new Station in Beaverton

Source: Beaverton Station Strategic Case, 2024

3.3 Durham Region and Township of Brock staff reviewed the evaluation, and Sites 1B and 2A were selected as the preferred options to recommend to MTO to carry forward for further review. Two conceptual designs were progressed for the two locations and are included in Attachment #2 and #3.

3.4 Infrastructure requirements for a Beaverton Ontario Northlander station are based on a typical base station layout as noted in the Northeastern Passenger Rail Service IBC and include:

- A single 50 metre side-rail platform;
- Heated station shelter;
- Passenger information displays;
- CCTV monitoring; and
- 10-20 parking spaces, including accessible stalls.

3.5 Based on a review of the IBC and complementary Canadian business cases alongside professional experience, WSP estimates the capital cost for such a facility ranges between $1-3M, excluding parking facilities. Costs are preliminary estimates and will vary depending on context.

3.6 A high-level assessment of the site locations was developed as part of the concept plans. The focus was to provide a qualitative comparison between the designated sites. A detailed site assessment, to include engineering and environmental considerations would be required if further evaluation of the sites moves forward. The criteria for the evaluation and summary are:

- Property suitability;
- Forecasted population and employment;
- Existing road network and integration;
- Connectivity and pedestrian walkability;
- Strategic opportunities; and
- Costs.

3.7 A new Beaverton Ontario Northlander station would improve inter-regional mobility and access to an additional 26,000 residents and 5,400 jobs within a 20 km radius (15-minute drive) currently and 53,000 residents and 12,000 jobs by 2051, including:

a. Reducing transit travel time to Union Station by 66% from approximately 5.5 hours to 1.75 hours;
b. Improving transportation connections for people and moving goods more efficiently by connecting Downtown Beaverton and surrounding northern York and Durham regions to Richmond Hill and Downtown Toronto with daily rail service;
c. Providing greater travel time certainty and increasing access to recreational properties and tourism opportunities near southeast Lake Simcoe for GTA residents; and
d. Expanding access to jobs, shopping, health services, and entertainment for northern York and Durham Region residents.

3.8 It is recommended that the Ontario Northlander Station Strategic Case for Beaverton, Township of Brock be endorsed, and that staff be directed to engage with the Ontario Ministry of Transportation, Ontario Northland and Township of Brock Council and staff, to further develop the station concept and service.

3.9 It is also recommended that Regional staff in coordination with the Township of Brock engage with MTO and Ontario Northland to discuss a financial and implementation proposal for a preliminary estimate of a $1M to $3M station facility.

4. Relationship to Strategic Plan

4.1 This report aligns with the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Goal 1, Environmental Sustainability: Objective 1.5: Expand sustainable and active transportation.

b. Goal 2, Community Vitality: Objective 2.5: Build a healthy, inclusive, age-friendly community.

c. Goal 3, Economic Prosperity: Objective 3.3: Enhance communication and transportation networks to better connect people and move goods more efficiently.

5. Conclusion

5.1 A new Ontario Northlander train station at Beaverton will help to achieve the Region's and the Township of Brock strategic and economic goals of expanding transportation options for residents and businesses, including the potential to enhance tourism in Brock and surrounding areas, and to help support the revitalization efforts in central Beaverton.

5.2 A new station also supports Regional Council's transportation objectives which call for strengthening the bond between land-use and transportation, elevating the role of integrated public transit, promoting sustainable travel choices, and investing strategically in the transportation system.

6. Attachments

Attachment #1: Station Site Areas Explored

Attachment #2: Preferred Option Site – 1B (Victoria/Ethel Park), Site Layout 1 &2

Attachment #3: Preferred Option Site – 2A (Simcoe/Main), Site Layout 1 & 2

Attachment #4 Beaverton Station Strategic Case

Respectfully submitted,

Original signed by

Brian Bridgeman, MCIP, RPP, PLE
Commissioner of Planning and
Economic Development

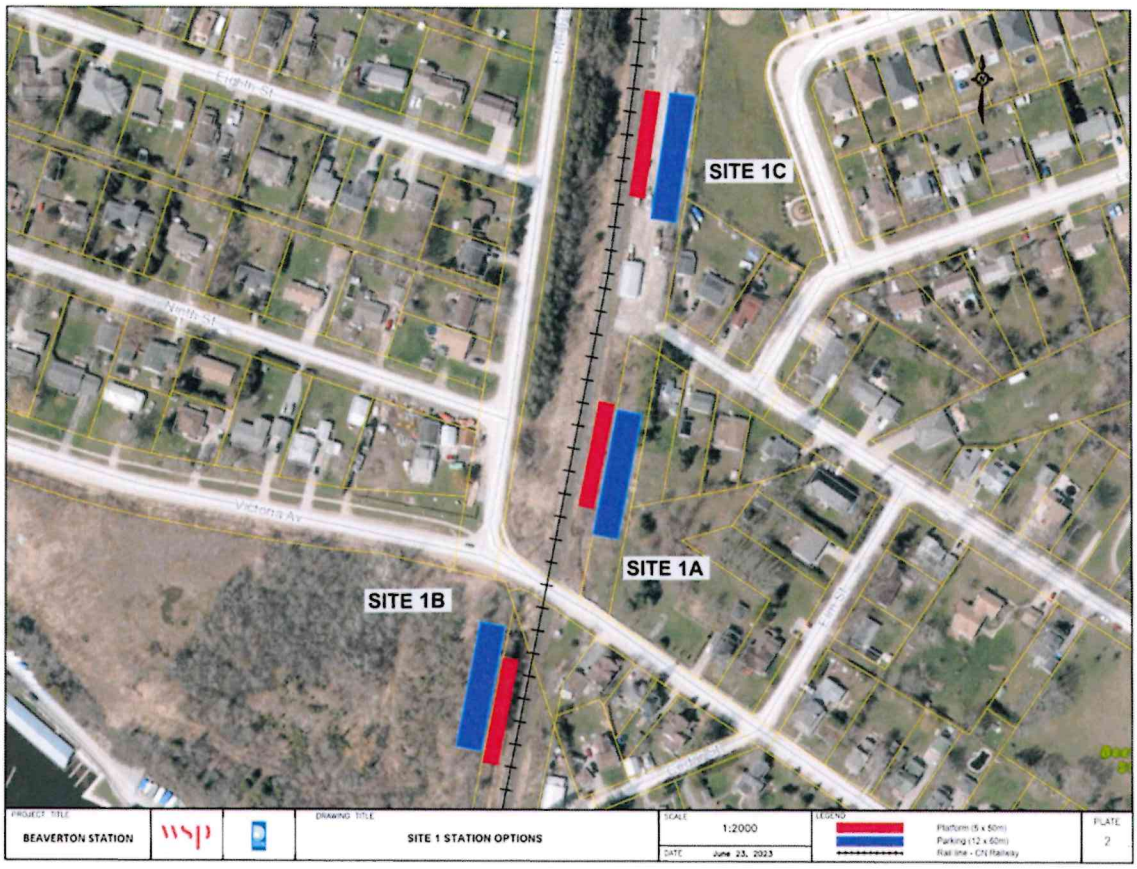
Recommended for Presentation to Committee

Original signed by

Nancy Taylor for
Elaine C. Baxter-Trahair
Chief Administrative Officer

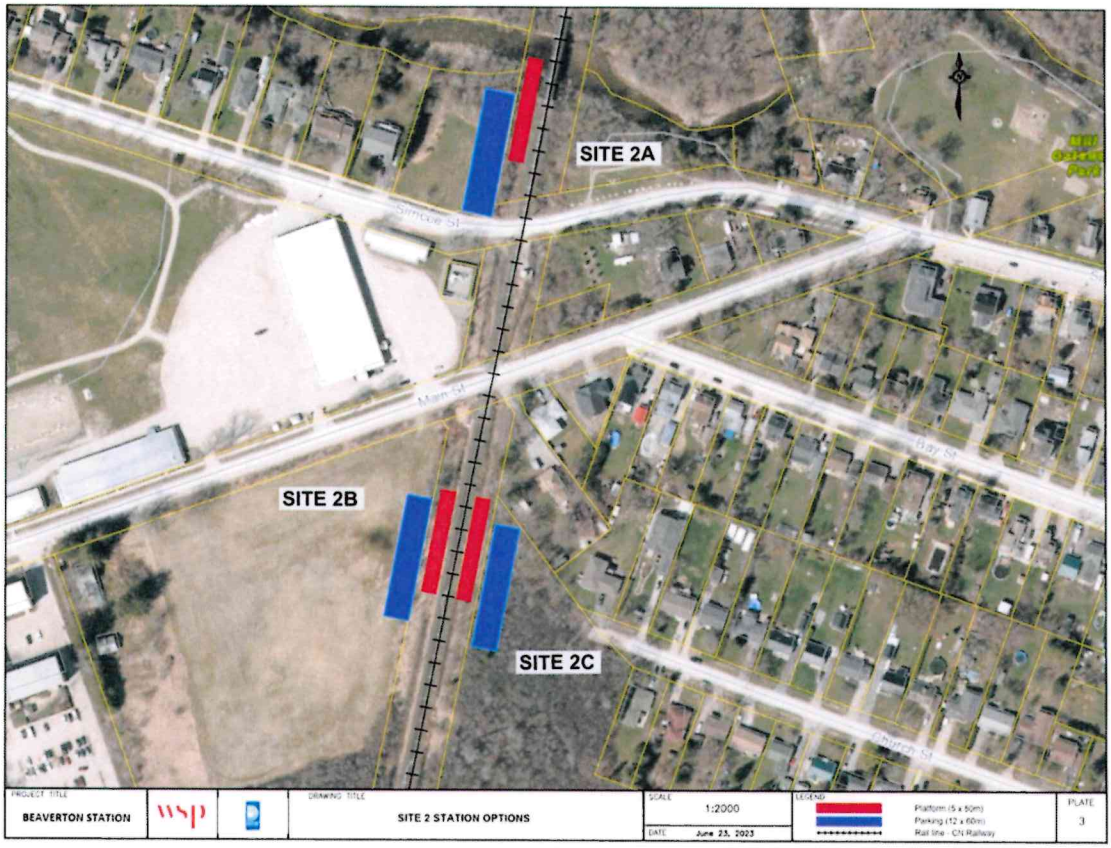
Attachment #1: Station Site Areas Explored

Figure 3: Site One Station Options



Source: Beaverton Station Strategic Case, 2024

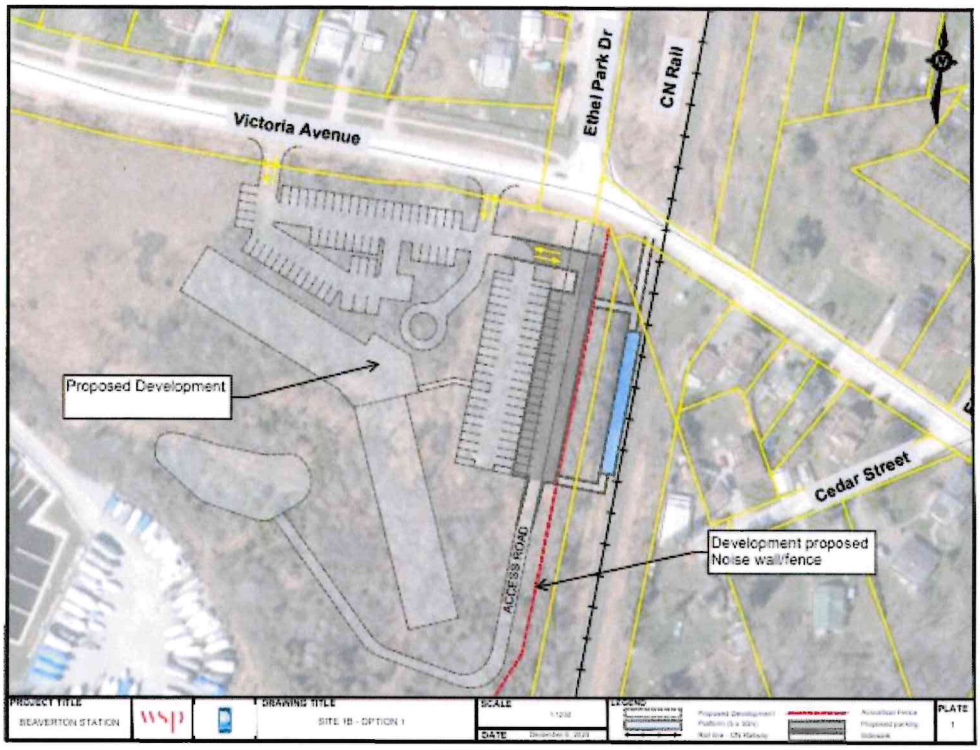
Figure 4: Site Two Station Options

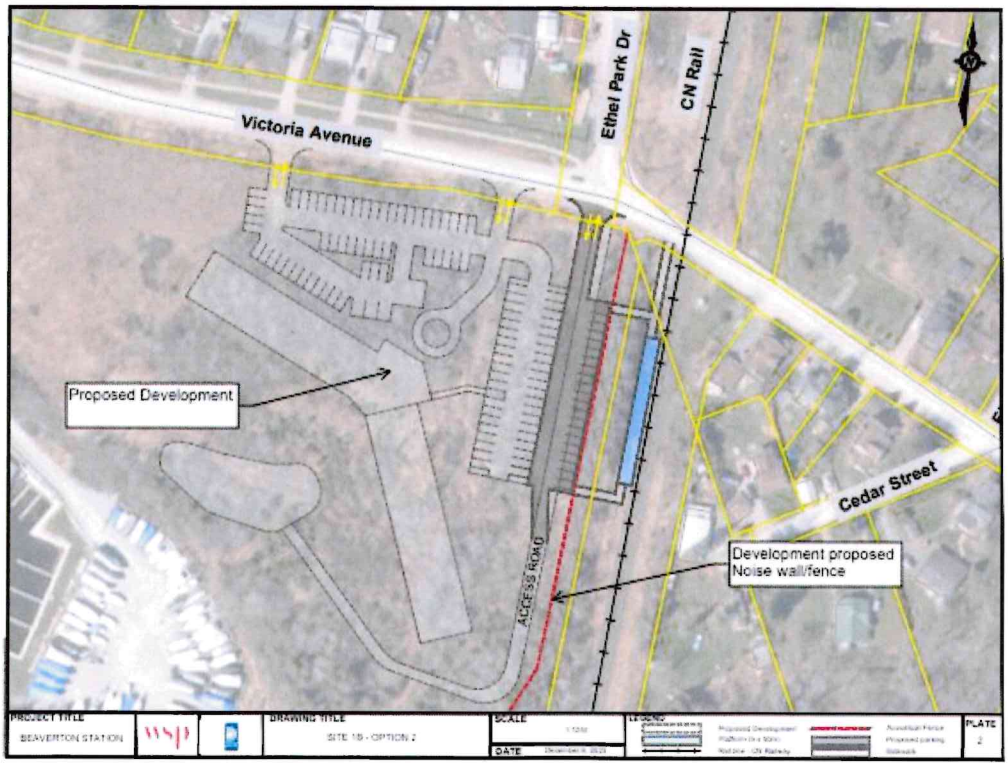


Source: Beaverton Station Strategic Case, 2024

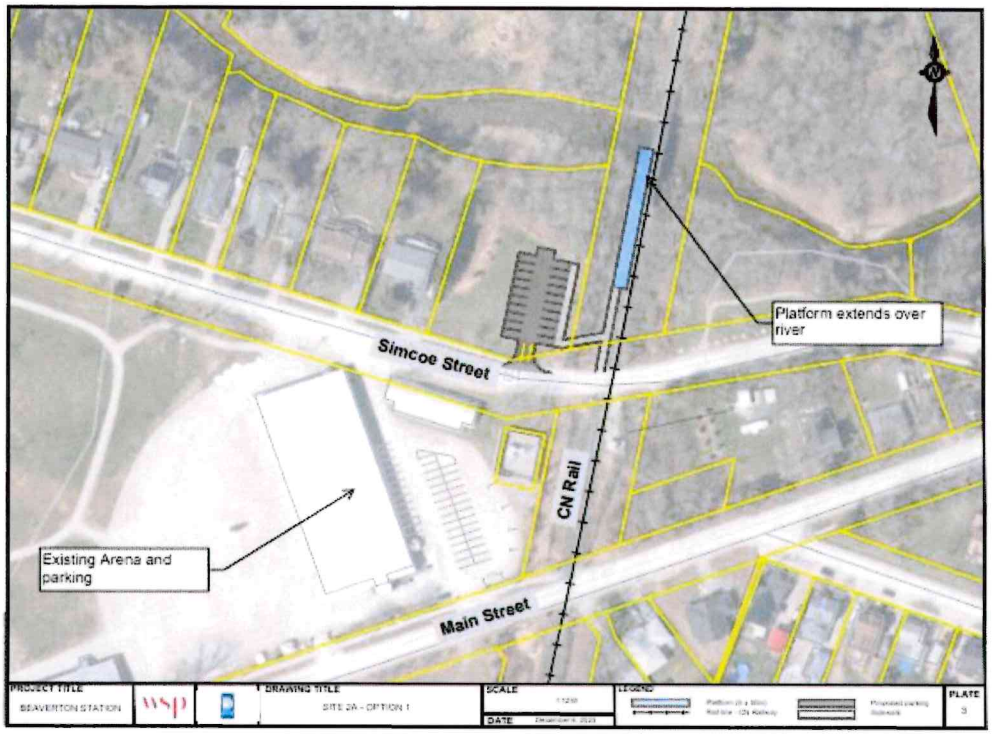
Figure 5: Site Three Station Option

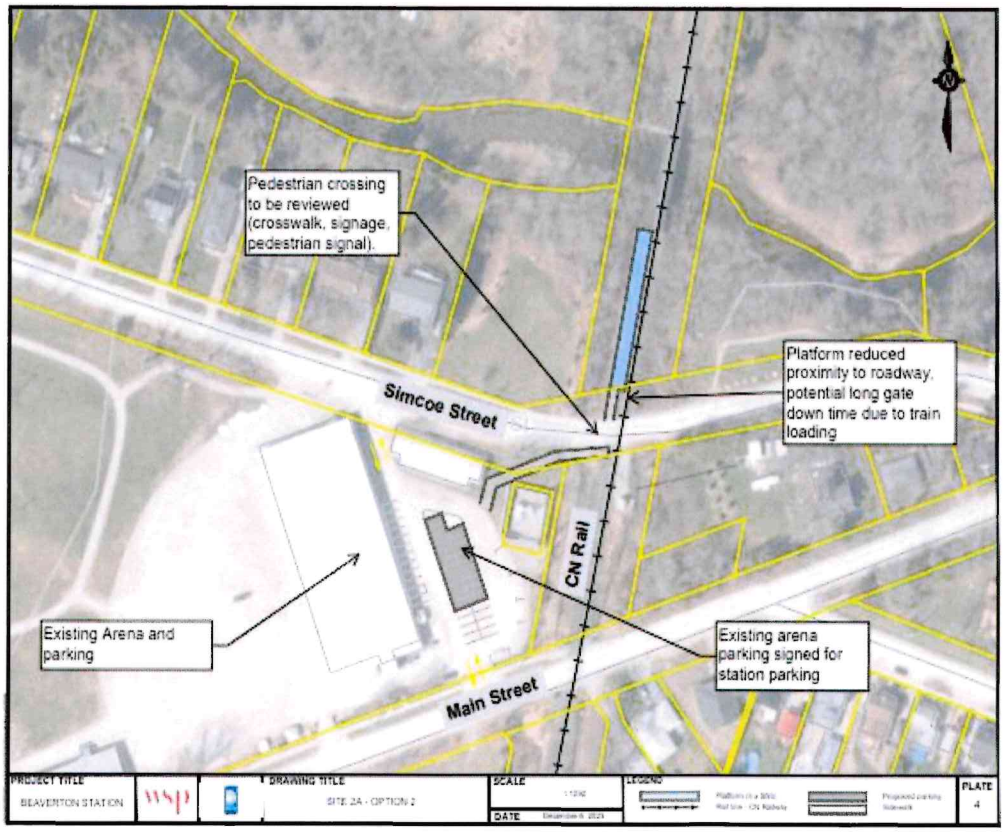
Attachment #2: Preferred Option Site – 1B (Victoria/Ethel Park), Site Layout 1 & 2





Attachment #3: Preferred Option Site – 2A (Simcoe/Main), Site Layout 1 &2





Attachment 4

Regional Municipality of Durham

Beaverton Station Strategic Case

Final | February 2024

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1 Introduction

Beaverton (population 3,300) is a community in Brock Township in the Regional Municipality of Durham, located near the east shore of Lake Simcoe. From 1906 to 1990, rail service linked the community to Toronto and northern Ontario along the CNR Bala Line, with a station in the heart of community's core. Following the decommissioning of Beaverton station in 1990, Ontario Northland trains continued to pass through Beaverton until 2012, when service along the line was discontinued.

The Province of Ontario has announced its intention to restore rail service along the Northeastern Rail corridor route, previously operated by Ontario Northland. Daily ridership for reinstated service along the Toronto to North Bay segment is projected at 120 to 130 on opening day, growing to between 150 to 170 by 2041. The current reinstatement scheme, however, does not include a stop between Richmond Hill and Washago, a distance of 110km.

This report presents a strategic case for an additional rail station in Beaverton along Ontario Northland's reinstated route. The narrative is organized around seven sections including the Introduction. The second section presents the context and the opportunities provided by the reinstated rail service in relation to the proposed rail station and highlights the Case for Change; the third chapter defines the scenarios for assessing a rail station; the fourth, details the strategic case for a rail station in Beaverton. The fifth section provides a preliminary assessment of the candidate station sites. The final section summarizes the analysis and concludes the report.

2 Context

2.1 Rail Network

The Northeastern Rail corridor, travelling between Toronto Union and its northern termini at Timmins and Cochrane is approximately 460 miles (740 km) long. The corridor is primarily used for freight, with limited passenger rail services. CN operates freight rail services on the Newmarket and Bala Subdivisions. Passenger rail operates along the southern portion of the corridor, with GO Transit operating its Richmond Hill Line between Gormley and Union Station and VIA operating along the corridor between Union Station and Washago.

The hamlet of Beaverton is located along a portion of the corridor known as the Bala Subdivision, which is owned by CN Rail.

2.1.1 VIA Rail

VIA Rail is an independent non-agent Canadian Crown Corporation that operates 12,500 km of intercity passenger rail serving over 400 communities nation-wide. At present, VIA Rail's trans-continental "Canadian" service currently operates through Beaverton without stopping (**Figure 1**). Passenger trains travel through the community twice a week, with days differing based on direction.

Figure 1: VIA Rail Route Map

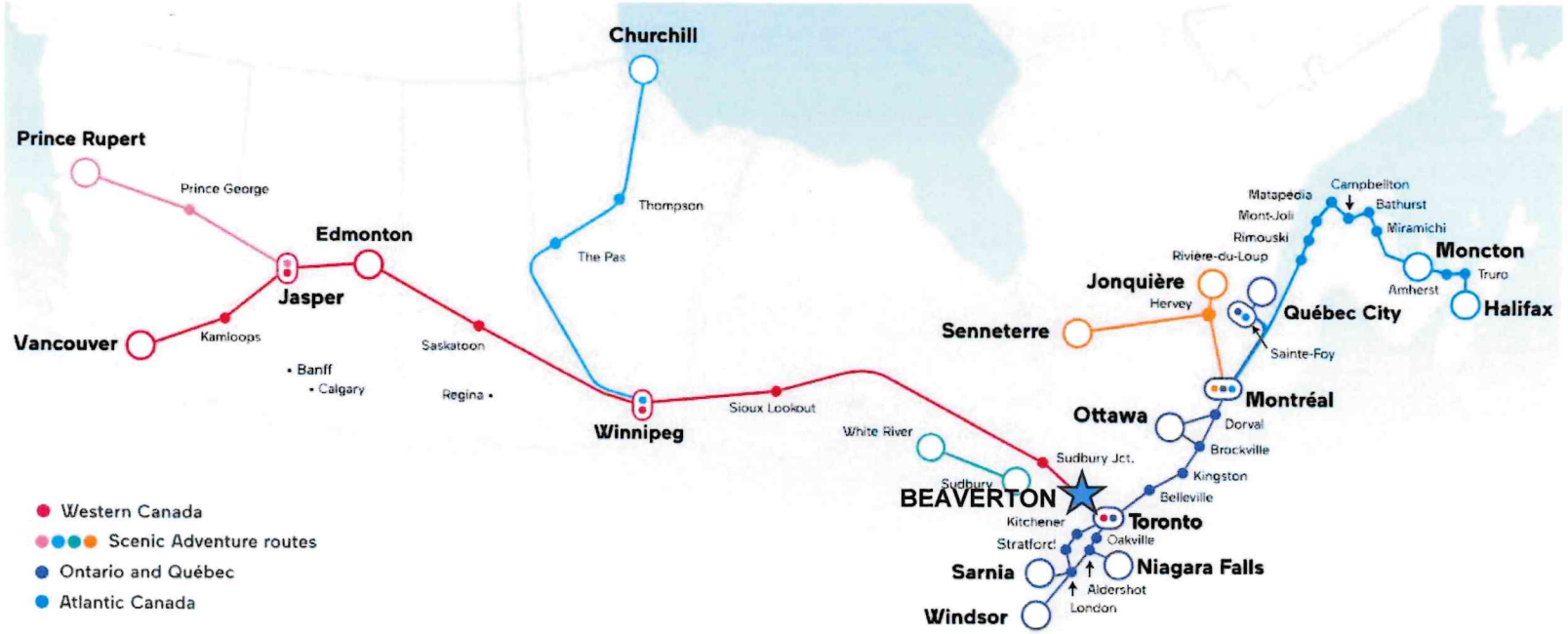


Image Source: VIA Rail (February, 2024)

2.1.2 Ontario Northland

Ontario Northland is a Provincial agency providing motor coach, passenger rail, and rail freight services to, from, and within Northern Ontario, connecting Toronto to cities and First Nations communities in the north. Until 2012, Ontario Northland operated daily rail service that passed through Beaverton, though trains have not stopped in the community since 1990. The historic rail station, pictured in **Figure 2**, was located on King St West, on lands currently owned by CN. The station house and associated infrastructure have been demolished and are no longer located on the former site. Ontario Northland buses do not route through the Beaverton area, and instead use Highway 400 via Barrie to connect Toronto to Northern Ontario communities.

Figure 2: Historic Beaverton Station and Station Site

Source: Ross Gray Collection (Toronto Railway Heritage Association)

In May 2021, an Initial Business Case (IBC) was published by Metrolinx on behalf of Ontario Northland that established the need for rail service between Toronto and Northern Ontario (the *Northeastern Passenger Rail Service*). Four strategic benefits were identified that support the reinstatement of rail service. These include:

1. Improving transportation connectivity and accessibility of urban centres in Northern Ontario;
2. Improving the quality of life and opportunities for local residents; and,
3. Supporting regional development, and
4. Promoting a sustainable environment.

The recommended service option, as displayed in **Figure 3**, was highlighted in an updated IBC published in April 2022. This recommendation has been supported by the Provincial government with $75 million of committed funding for service restoration.

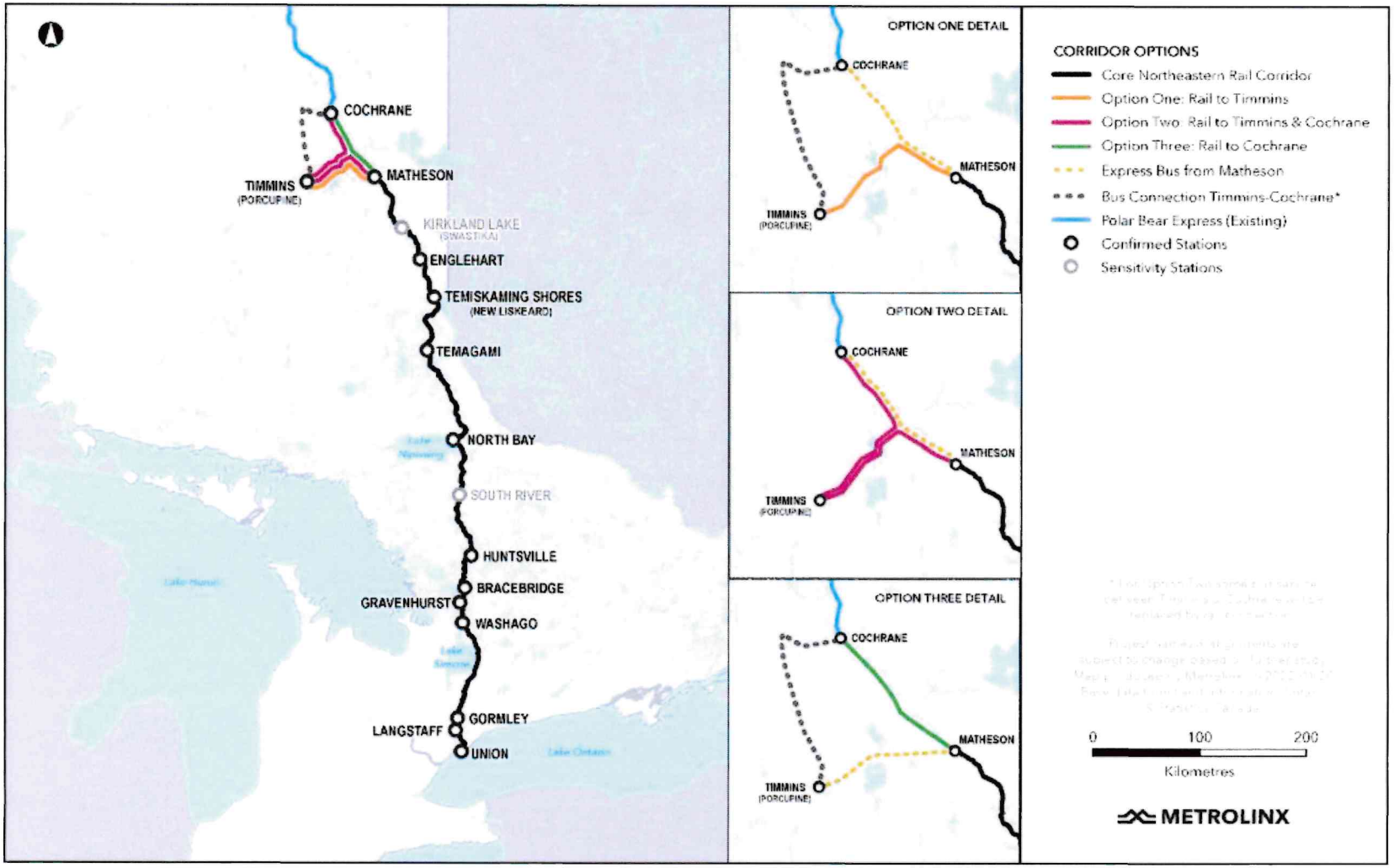
The service recommendation identifies four to seven trains per direction per week, based on seasonal demand, from Toronto to Timmins with additional rail connectivity to Cochrane. Ridership by rail over the entire route is estimated at 39,000 – 60,000 passengers per year by 2041 (approximately 165 passengers per day OR 80 passengers per train trip, assuming 7 train trips per week per direction). Line ridership between Toronto and North Bay is estimated at 28,000 – 31,000 passengers per year by 2041 (approximately 120 passengers per day). The route includes three stations within the GTHA at Union Station (Toronto), Langstaff (Richmond Hill), and Gormley (Richmond Hill), with the next stop at Washago (Township of Severn) in Simcoe County.

No station-stop is currently identified for Beaverton, as Ontario's Ministry of Transportation (MTO) recommended locations based on stations that were in service when the rail line was last operational. The distance between the Gormley and Washago Stations is approximately 110 km, with Beaverton roughly halfway between them. Critically, without a stop in Beaverton, Northern Durham and York Region as well as portions of Kawartha Lakes remain unserved by the Provincial investment.

As further expanded upon in **Section 2**, a significant number of Beaverton residents can be served through revived rail service both under existing and future conditions. Within the immediate Beaverton area, a station would serve 6,100 residents and 1,900 jobs at present, and 7,700 residents and 3,000 jobs by 2051. Revived rail service in Beaverton has the potential to provide a range of opportunities for the community, northern Durham Region and adjacent areas. Within a 20km radius around Beaverton, a rail station can service 26,000 residents and 5,370 jobs at present, and 53,000 residents and 12,000 jobs by 2051. A rail station in Beaverton allows

for higher-order transit to serve the area, providing north Durham, north York Region and western Kawartha Lakes residents with improved access to Toronto and promoting tourism to the region.

Figure 3: IBC Preferred Service Option



2.2 Existing Context

2.2.1 Demographics and Land Use

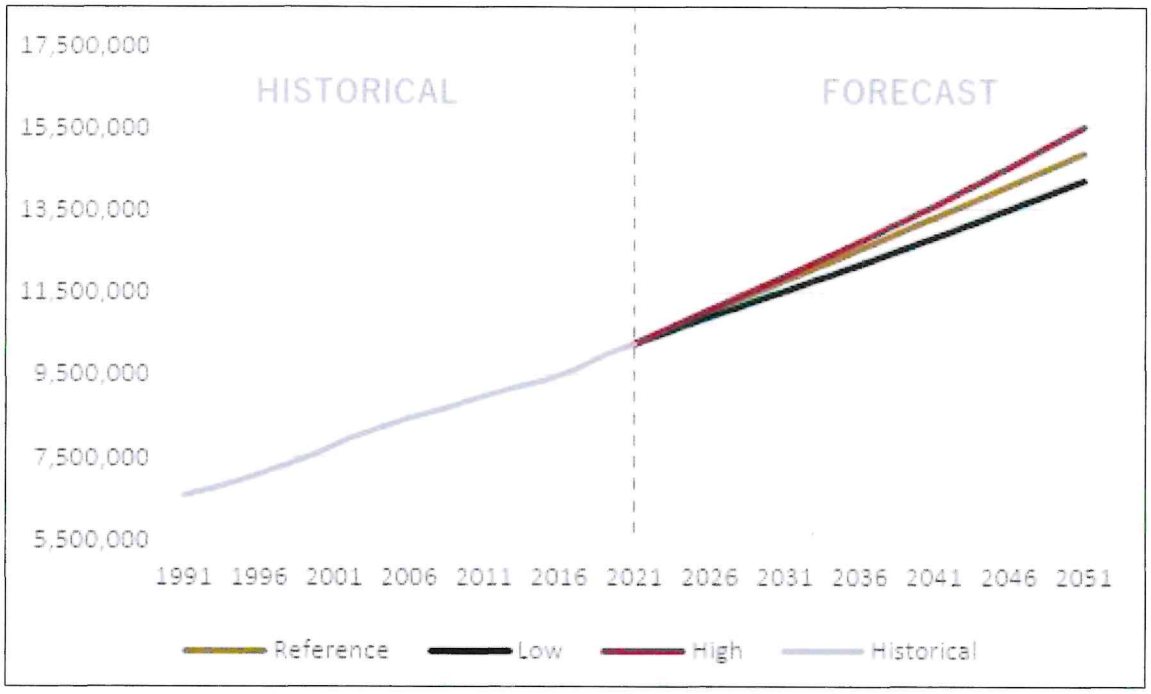
Greater Golden Horseshoe

The Greater Toronto and Hamilton Region (GTHA) is Canada's most populous urban area. In 2021 the GTHA supported a population of nearly 7.7M people and 3.8M jobs[1]. The Greater Golden Horseshoe (GGH), which includes the GTHA, had a population of 10.2M in 2021, representing over 20% of Canada's population, and supported 4.8M jobs.

The GGH area has seen sustained rapid growth over the past 35 years, with overall growth averaging 2.1% annually. Going forward, projections prepared by Hemson Consulting anticipate an additional 4.6M people and 2.2M jobs by 2051 for a total of 14.9M people **(Figure 4)** and 7.0M jobs.

[1] Greater Golden Horseshoe: Growth Forecasts to 2051. *Hemson Consulting* (August, 2020).

Figure 4: GGH Reference, High, and Low Population 1991-2051

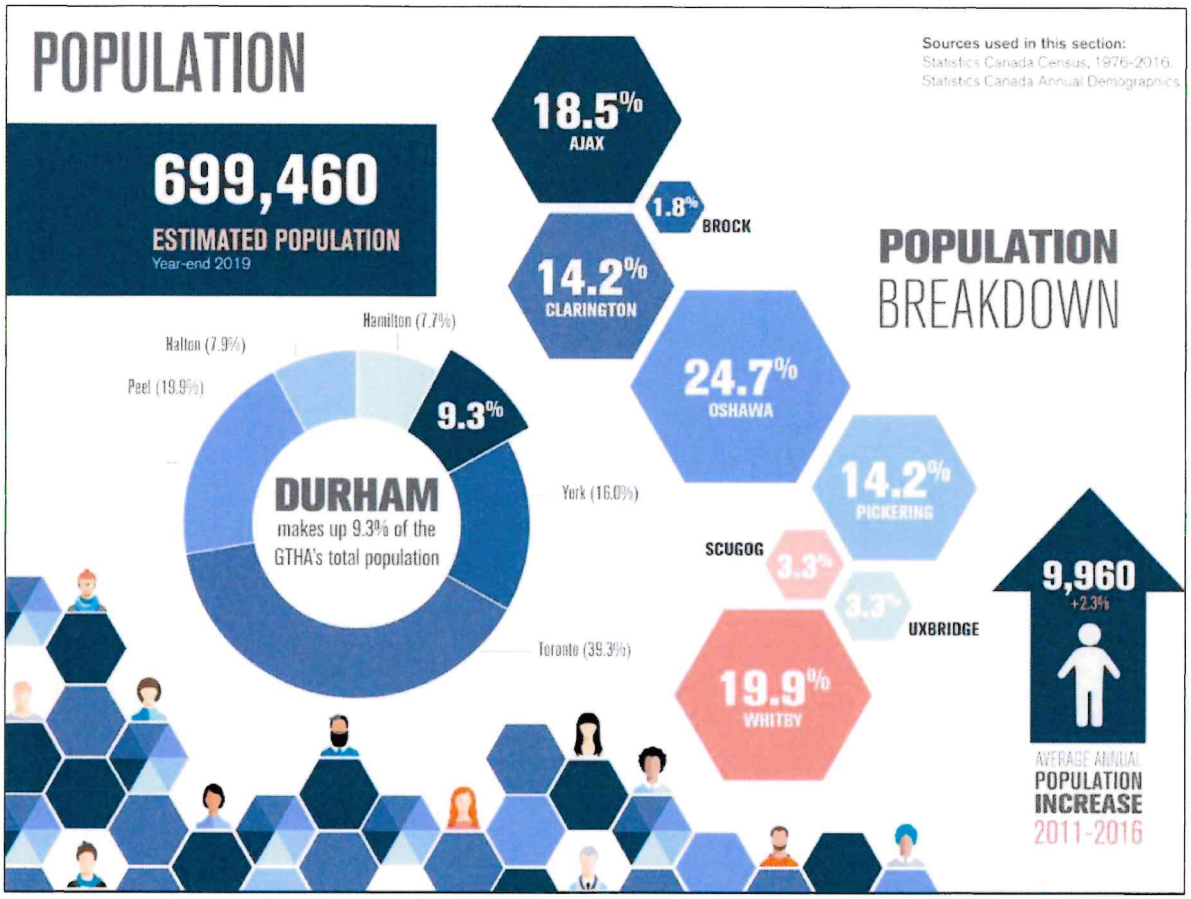


Source: Hemson Consulting

Durham Region

As shown in **Figure 5,** Durham Region represents 9.3% of the GTHA's overall population and supported a 2019 population of approximately 700,000.

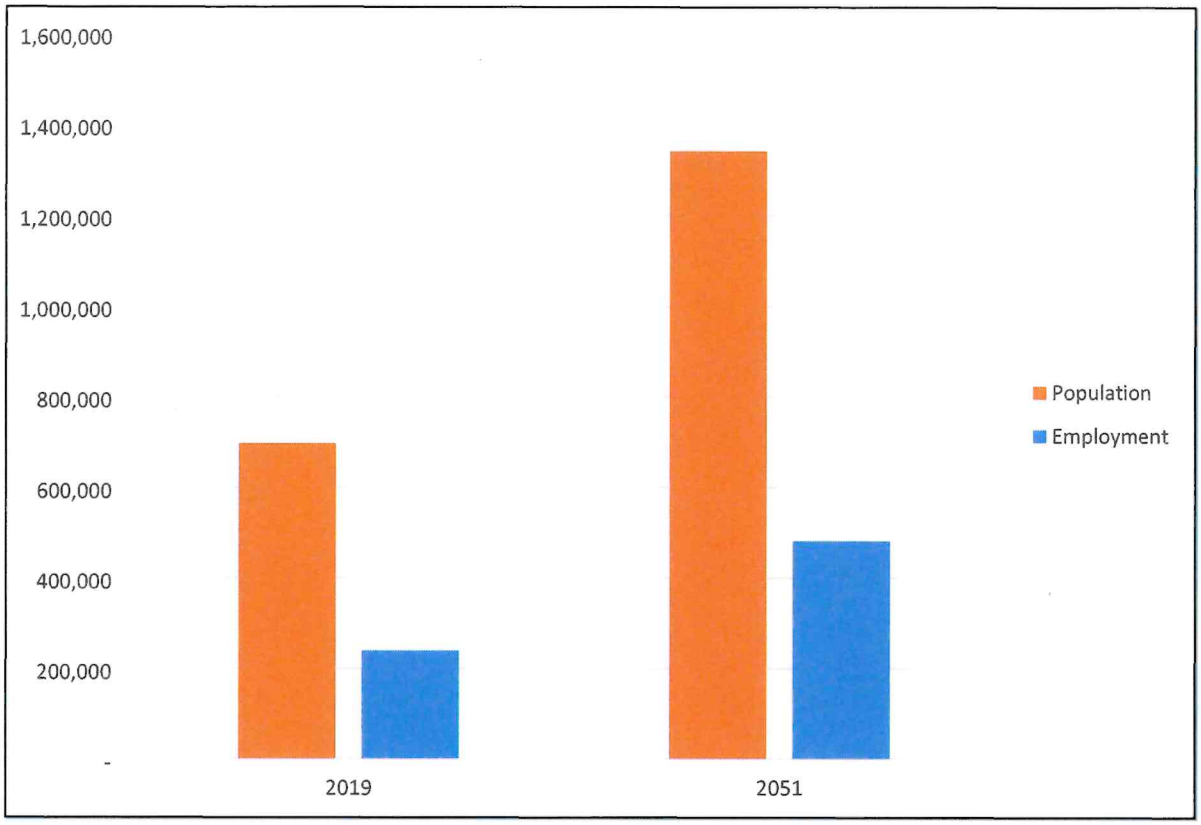
Figure 5: Region of Durham Population Breakdown



Source: Durham Region Profile Infographic Summary

The Region has grown appreciably faster than the overall GGH over the past 35 years, with growth rates averaging 3.3% annually. Under a high growth scenario, population and employment is projected to continue to grow by 2.9% and 3.5% annually, respectively, resulting in 1.3M people and 480,000 jobs by 2051, which is a near doubling of existing population and employment as shown in **Figure 6.**

Figure 6: Durham Region Population and Employment Growth Projections to 2051



Brock Township and Beaverton

In 2021, Brock Township had a population 12,600 and an employment base of 3,700 jobs. Approximately 26% of the Township's population is located in Beaverton, which in 2021 housed 3,300 people. The Township skews toward an older demographic, with 22% of the population aged 65 years or older (compared to 17.4% in the GTA). The average age of Brock residents is 44, compared to 40.7 in the GTA.

In 2020, 44% of the Township's population lived in rural areas and 56% lived in one of the three urban townships: Beaverton, Cannington and Sunderland[2]. Out of the three, Beaverton has the highest population share. A preliminary review of the Brock Township's Official Plan (OP) was

conducted to understand the land use planning context and population projections. The following key takeaways were identified[2]:

- → The majority of the population is expected to remain in the Township's urban areas;
- → Majority of the development will occur within urban areas, with some extension to rural areas. Rural shoreline residential areas and hamlets will have minimal growth;
- → The continuation of commercial and employment opportunities within urban communities such as Beaverton are supported; and,
- → Transportation investments will be planned for when such investments are supportive of economic growth.

According to projections noted in Durham Region's *Growth Management Study (2022)* prepared by Watson & Associates[3], Brock Township's 2051 trendline population is estimated to grow to 20,900, a growth of 8,300 from 2021, while employment is estimated to grow to 7,400, a growth of 3,700 from 2021.

Long-range population and employment growth in the Beaverton area are displayed in **Figure 7** and **Figure 8.** As displayed, growth in Brock Township is mainly restricted to urban areas (such as Beaverton) because of its location in the Greenbelt; additionally, significant growth is identified for areas immediately outside Brock Township, beyond the Greenbelt.

[2] Official Plan Section 1-3 (townshipofbrock.ca)
[3] Durham Region Growth Management Study (GMS) – Phase 2 (Area Municipal Growth Allocations and Land Needs, 2051)

Figure 7: Population Growth to 2051 in Beaverton and Surrounding Areas

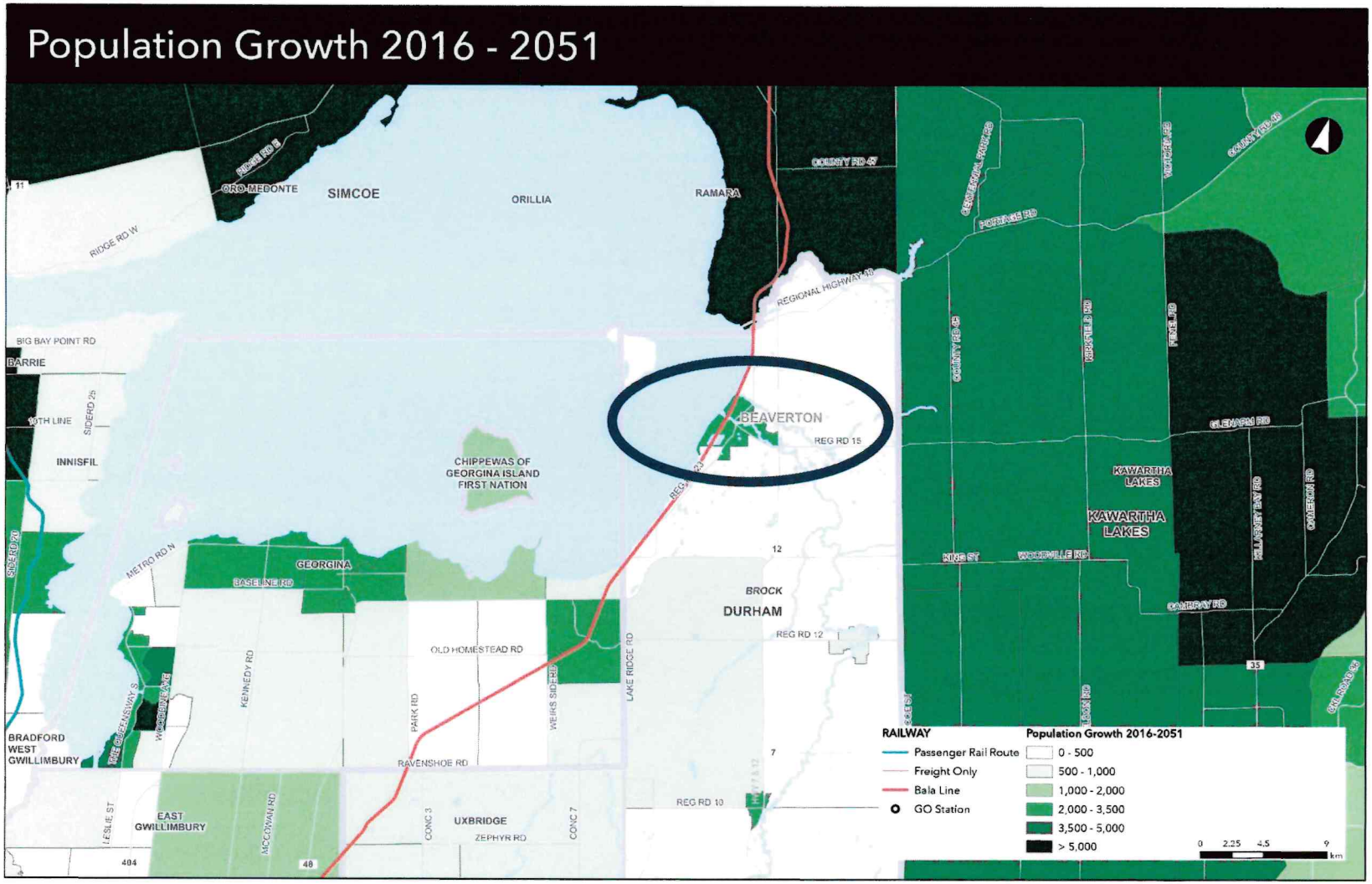
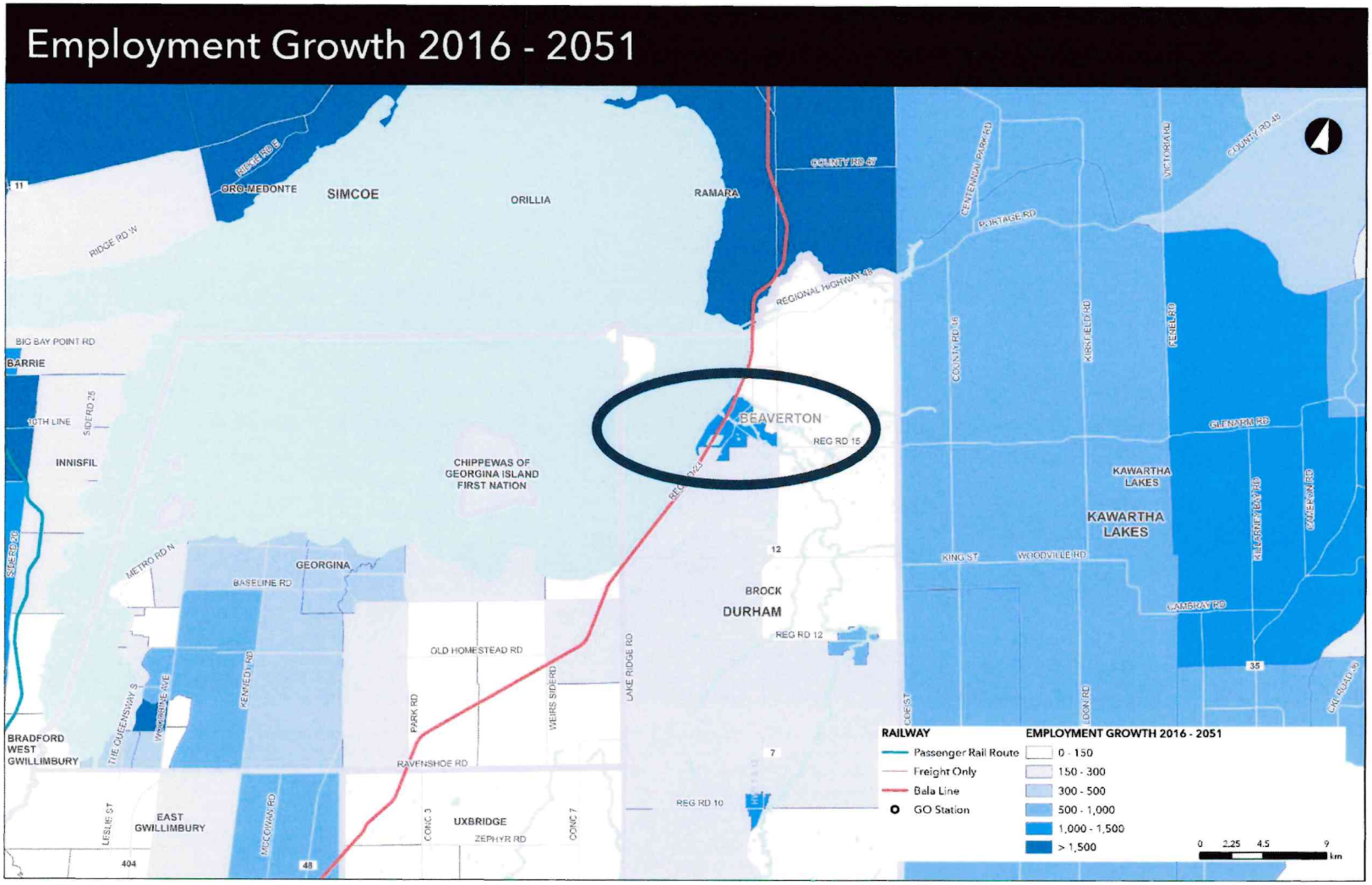


Figure 8: Employment Growth to 2051 in Beaverton and Surrounding Areas



Population and Employment within the Proposed Station's Travelshed

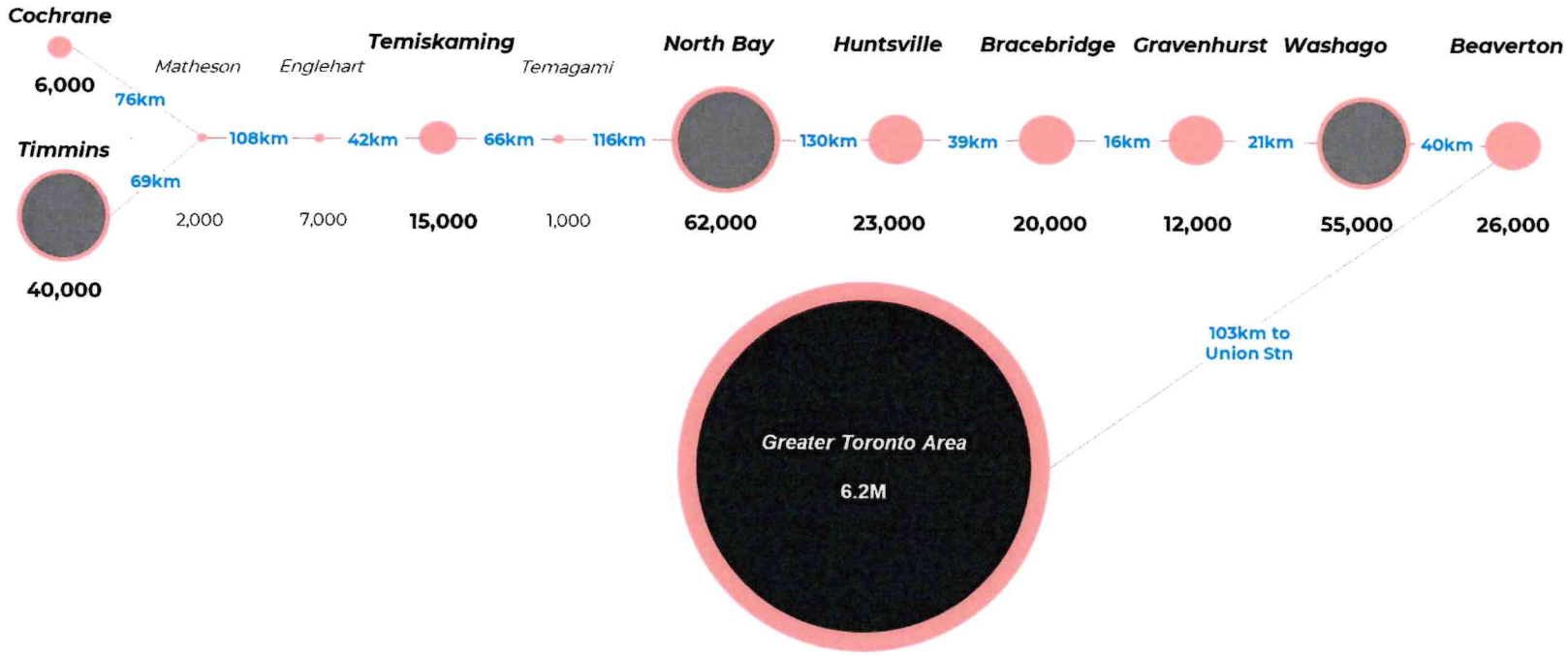
As presented in **Table 1,** a station at Beaverton would serve 6,100 residents and 1,900 jobs in the immediate Beaverton area and 26,000 residents and 5,400 jobs within a 20 km (15-minute drive) radius. By 2051, a station at Beaverton would serve 7,700 residents and 3,000 jobs within Beaverton, and 53,000 residents and 12,000 jobs within a 20 km radius.

Table 1. Existing and future population and jobs within the travelshed

	Current	Future	% Growth (from Current)
Residents (Immediate Beaverton area)	6,100	7,700	26%
Jobs (Immediate Beaverton area)	1,900	3,000	58%
Residents (20km radius around Beaverton)	26,000	53,000	104%
Jobs (20km radius around Beaverton)	5,400	12,000	122%

Figure 9 displays stations along the Northlander Corridor and their corresponding 2021 populations within a 20 km (15-minute drive) radius. A station at Beaverton would provide greater levels of population access than most stations along the corridor, including existing stations at Huntsville, Bracebridge, and Gravenhurst. Indeed, Beaverton would rank as the station with the fourth highest population catchment along the line.

Figure 9: Stations and Populations along the Northlander Corridor (2021)[4]



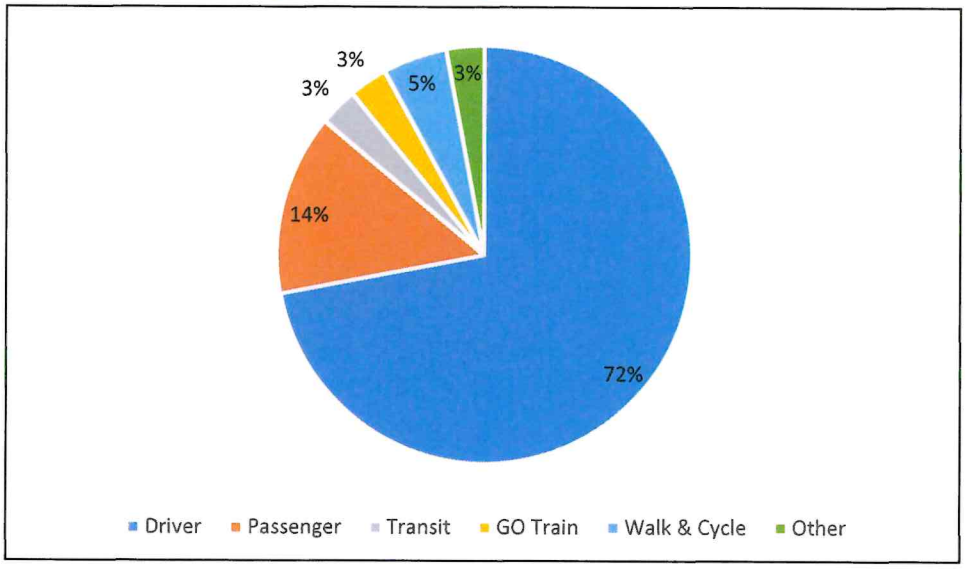
[4] Census Profile, 2021 Census of Population (statcan.gc.ca)

2.2.2 Transportation Network

Durham Region

According to the 2016 *Transportation Tomorrow Survey,* 1,143,100 trips were taken on average each weekday in Durham Region. 86% were taken in private vehicles (driver and passenger trips), 6% on transit (Durham Region Transit and GO Transit), and 5% by active modes of transportation **(Figure 10).**

Figure 10. Daily Trips by Mode (Region of Durham)



Source: TTS 2016

Significant improvements to the transit network are planned for southern Durham Region, as noted in Metrolinx's 2041 Regional Transportation Plan and MTO's 2051 Greater Golden Horseshoe Plan. These include:

- → 15-minute service on the Lakeshore East GO Rail line between Union Station and Oshawa;
- → Two-way, all-day service along a Lakeshore East GO Rail extension between Oshawa GO and Bowmanville GO;
- → A new 36 km Durham-Scarborough BRT along Highway 2 (including dedicated transit lanes); and,
- → A new BRT or cable car route along Simcoe Street between Oshawa GO and Highway 407.

Durham's Transportation Master Plan (2017) notes a 12% transit mode share target by 2031 and focuses on expanding the current transit system and road networks to better serve residents. The plan highlights the on-demand transit services now being offered in the region's rural areas and

identifies 'other transit spines', which are major roads through more rural areas of the region. These corridors are to be served by a combination of Durham Regional Transit and GO Bus services.

The Transportation Master Plan also highlights existing cycling routes within northern Durham. At present, there is an Existing Regional Trail Network running through Brock Township and Beaverton. This regional trail generally runs north-south and connects to the Townships of Uxbridge and Scugog.

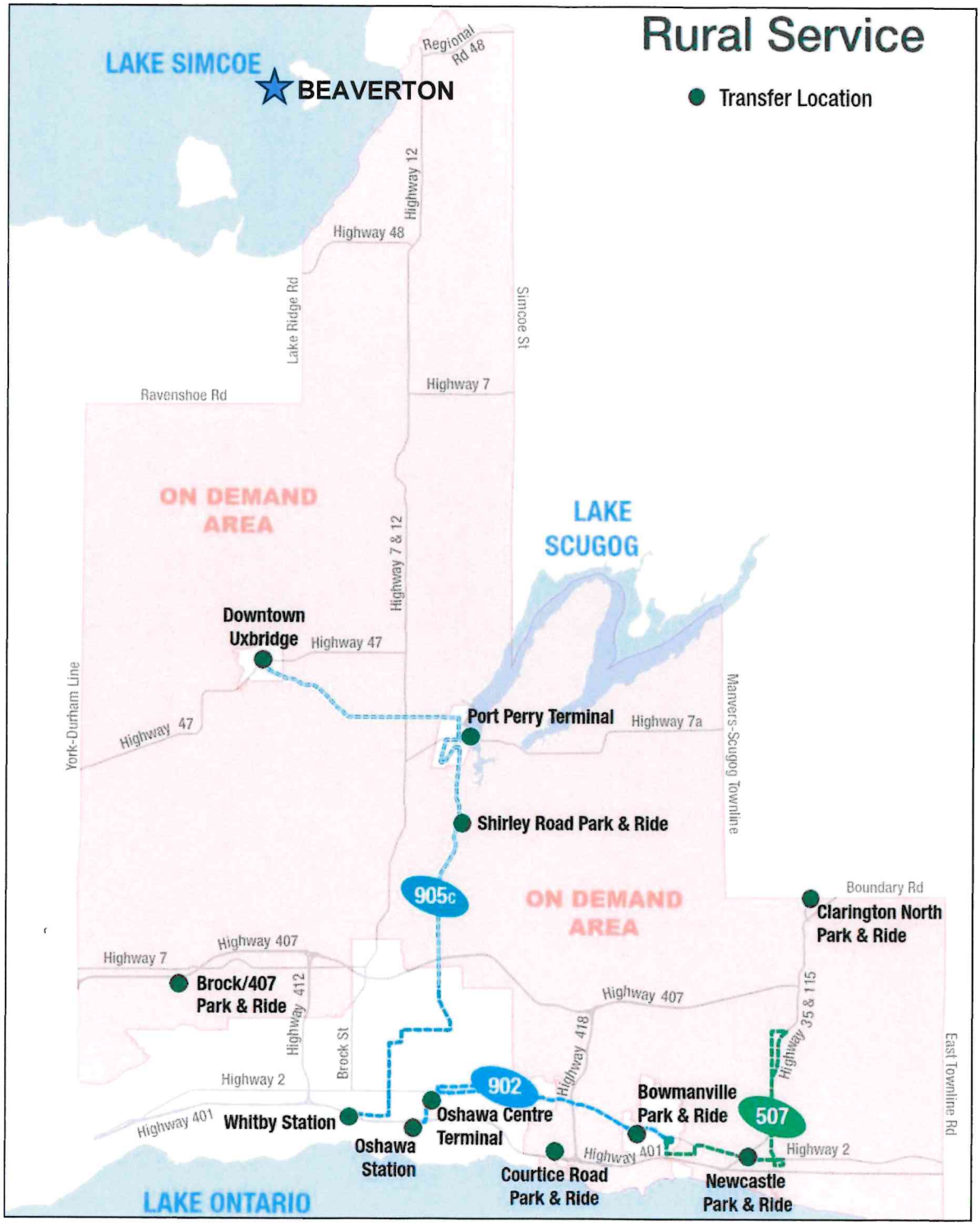
Beaverton and the Brock Township

Vehicle travel within Beaverton is currently accommodated by municipal, regional, and provincial roadways, namely Durham Regional Roads 15 and 23. Highways 7, 12, and 48 serve Brock Township, providing both internal and external connections.

Local transit in Brock Township is provided by Durham Region Transit, which provides an 'On-Demand' service to the Township, including Beaverton. The service covers most of North Durham Region and provides connections to arterial transit routes at designated transfer locations, as shown in **Figure 11.**

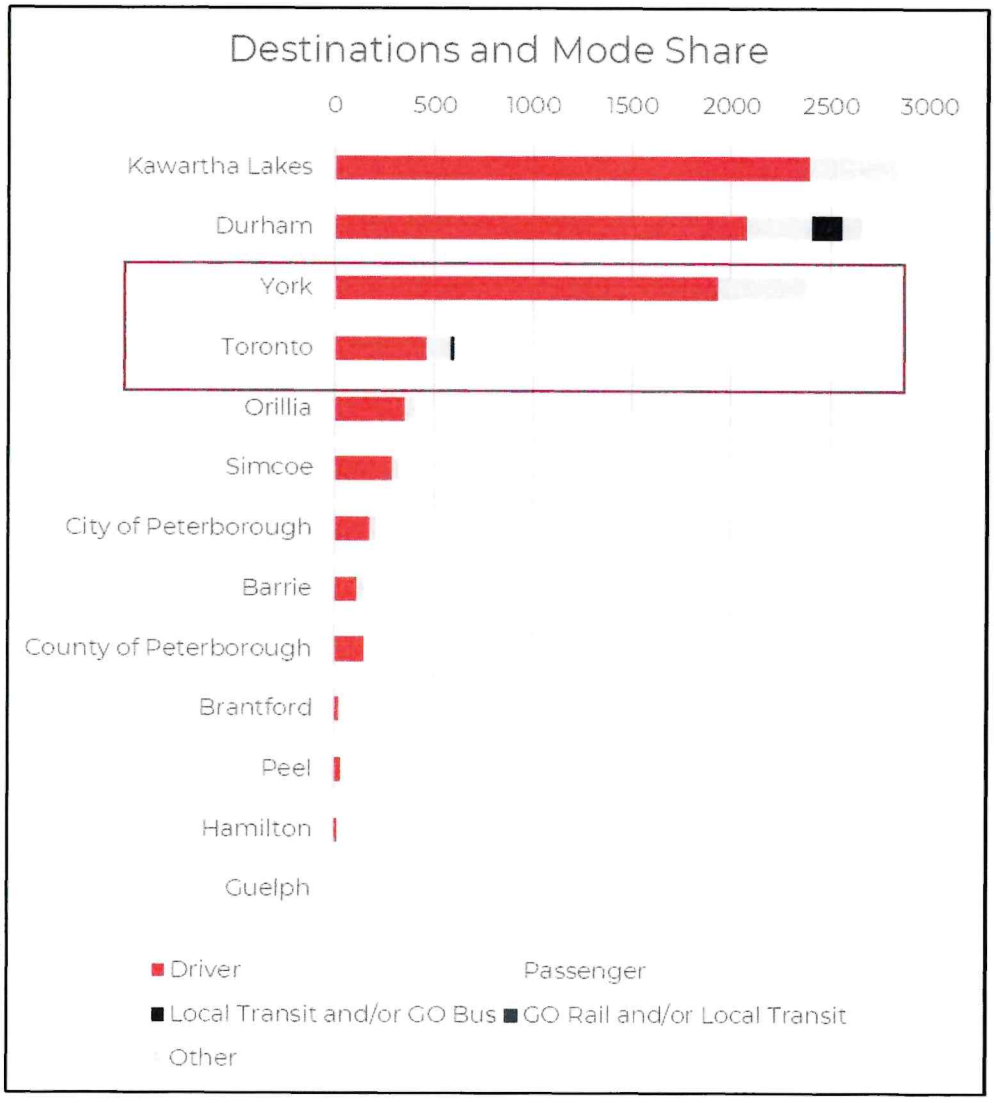
The On-Demand service is currently the *only* public transit offering in Beaverton. In the 2010s, Brock Township was served by Durham Regional Transit Route #601, which connected Beaverton, Sunderland, Cannington and Uxbridge, but this route failed to attract significant ridership and was discontinued. In addition, Beaverton was formerly served by GO Bus Route #81 as part of GO Transit's Lakeshore East network. This route served Whitby, Port Perry, Beaverton, and other hamlets within Brock Township along Highway 12; however, this service was discontinued in 2023. The current nearest fixed-route transit service is 35 kilometers south in the Township of Uxbridge, which is served by both GO Transit and Durham Regional Transit bus networks. The Whitby GO station is the nearest Durham GO Rail station, 65 kilometers from Beaverton and 38 kilometers from the southern edge of the Brock Township.

Figure 11: Durham Region Transit On-Demand Service



In 2016, approximately 16,000 trips originated in Brock Township each day between all modes of travel. Nearly 50% of trips were destined for locations outside Brock, with over 3,000 daily trips (19%) destined to Toronto or York Region, locations that could be – theoretically – accessible by a reinstated Ontario Northland rail service (**Figure 12).** The vast majority of these trips were accommodated by private automobiles due, in part, to a lack of other transportation options.

Figure 12: Brock Township External Trip Destinations and Mode Shares



Source: TTS 2016

2.3 Opportunity Statement

The Government of Ontario has committed to investigating the reinstatement of rail service along the Northeastern Rail Corridor. The current service proposal will result in trains running through – but not stopping in – the southeast Lake Simcoe Area, which misses a key travelshed for the reinstated line. A new rail station in Beaverton will provide a direct, safe, reliable, and resilient inter-community transportation link for the underserved southeast Lake Simcoe area; connecting the area to the Toronto region as well as Northern Ontario.

Leveraging the proposed Provincial investment, a new rail station in Beaverton would provide daily non-auto travel choices for area residents to access jobs and services in York Region and central Toronto as well as increased regional accessibility for visitors and tourists to the region, supporting local economic development.

2.4 Case for Change

Table 2 provides a summary of key drivers for change, which are used to guide the strategic evaluation.

Table 2. Summary of Key Drivers

Driver	How does this Driver influence the problem/opportunity?	What is the impact of not addressing the problem/opportunity?
Planned Reinstatement of Rail Service along the Northeastern Rail Corridor	a) The Provincial Government is investigating the possibility of reinstating rail service along the Northeastern Rail corridor; connecting Toronto and the GTA to Northern Ontario. b) No stations have been considered between York Region and Washago, rendering the rail line of limited use to residents and visitors of the southeast Lake Simcoe area, an area with a population roughly equivalent or larger to that of other population centres served by reinstated rail service, such as Huntsville or Bracebridge. c) The reinstated route provides an opportunity to connect an underserved area with limited public transit connections to the broader GTA.	a) The southeast Lake Simcoe area remains disconnected from regional rail services b) The Provincial investment will not be able to be leveraged for the benefit of Durham Region and surrounding municipalities located immediately adjacent to the corridor
Demographics, Land Use, and Economic Activity	a) Durham Region's population and employment is set to double by 2051. b) A station at Beaverton would serve 26,000 residents and 5,370 jobs within a 20 km radius (15-minute drive); by 2051 the station would serve 53,000 residents and 12,000 jobs (150% growth from current) c) Brock Township's population skews older than the GTA average. As the population ages, residents may be less willing or able to drive to access services, especially for longer-distance trips to the GTA. d) Beaverton is the largest community in Brock Township and was historically served by rail prior to station decommissioning in 1990. Brock Township is intent on revitalizing Downtown Beaverton, which could be aided by reinstated rail service.	a) Growing population in the southeast Lake Simcoe area will not be supported by rail service bisecting the area. b) Inadequate transportation connections may reduce the opportunity to support population and economic growth in the area. c) Access to vital services remains limited for area residents.

Driver	How does this Driver influence the problem/opportunity?	What is the impact of not addressing the problem/opportunity?
	e) Sustainable tourism development could be bolstered by daily rail service connecting the GTA to the Beaverton area, bolstering local economic activity. f) Reliable access to intercity transportation could make residential development more attractive in Beaverton, leading to further aggregation of population in the Town.	
Travel Behaviour	a) Auto-oriented culture and reliance on the private vehicle. b) Currently no direct transit services are provided to connect Brock Township with major trip attractors in York Region and/or Downtown Toronto. c) Providing additional travel options expands opportunities for those without access to an automobile to reach the GTA. Vital trip purposes accommodated by the opportunity can include trips to visit family and social visits; tourism, shopping and entertainment; access to specialized services such as medical, educational, or government; and business and work-related activities. This access can be vital to sustaining the needs of the most vulnerable members of the community, allowing residents to "age-in-place".	a) Brock Township and surroundings will remain virtually inaccessible by modes other than the automobile. b) Residents without access to an automobile will struggle to access vital services in the GTA.
Transport Infrastructure and Technology	a) All travel to the Beaverton area, including transit, uses the existing roadway network. There is an existing rail corridor connecting Beaverton to the GTA and northern Ontario that is used for freight rail traffic. The province is investigating reinstating rail service along the corridor, which would travel through Beaverton. There is an opportunity to leverage existing infrastructure (and	a) The roadway network will remain the only practical link for passengers to/from the Beaverton area. b) Residents will have limited options for alternate travel arrangements if there are roadway disruptions, such as congestion or closures due to

Driver	How does this Driver influence the problem/opportunity?	What is the impact of not addressing the problem/opportunity?
	the Province's service investment) to, once again, provide rail service to Beaverton.	collisions, construction, or inclement weather.
Transport Service Provision	a) On-demand transit service, operated by DRT, is the only public transit offering in Beaverton. Transfers to fixed-route services are provided at designated transfer locations such as Port Parry and Uxbridge. b) Beaverton was formerly served by GO Bus Route #81, which connected to the Lakeshore East line at Whitby GO. c) Newmarket GO is the nearest GO Rail station, 61 km from Beaverton.	a) Limited mobility choices for modes other than driving. b) Limited connectivity to core GTA restricts connectivity and accessibility for those without access to an automobile.
Government Policy and Planning	a) The 2019 Ontario Budget identified a government priority to improve transportation in Northern Ontario, including exploring options to reinstate passenger rail in the north (via Beaverton). b) Ontario's Climate Change Strategy sets out a transformative change to reduce GHG emissions by 80% below 1990 levels by 2050; mode shift to more sustainable travel options is critical to achieving the target. c) Provincial and regional growth policies support intensification near transit and the development of complete communities.	a) Alternative transportation options would need to be pursued to provide basic connectivity to area residents. b) Inability to support a 'complete community' model for Beaverton, where community growth is focused around a central rail station.

3 Option Development and Description

The core objective of this strategic case is to assess the performance of a new rail station at Beaverton along a reinstated Ontario Northland rail line. To accomplish this objective, a station-stop at Beaverton was tested against a business-as-usual (BAU) scenario at the 2024 (opening day) and 2041 horizons, in alignment with *Northeast Rail Corridor Initial Business Case (2022)*.

The Region of Durham's variant of the GTA4 travel demand model was used to assess high level impacts of the improvement scenarios and generate comparative results in relation to connectivity, ridership, and trip distribution. Travel time savings, vehicle kilometres travelled, and GHG emissions reduction were additionally tested but results were found to be inconclusive.

To directly juxtapose findings against the original IBC (which did not assume a station-stop in Beaverton), a secondary method was employed that leveraged established relationships between the rail corridor's travelshed population and line ridership projections as noted in the IBC for the North Bay to GTA segment. Revised line ridership outputs were calculated to reflect the addition of a new travelshed population near Beaverton.

Analysis specifications are included in **Appendix A.**

3.1 Demographic Projections and Background Network Assumptions

2024 (opening day) and 2041 (mature) scenarios were developed in order to test the impact of a new station in Beaverton.

Within Durham Region, 2024 land use for the Regional Model was generated by linearly referencing 2016 and 2033 population and employment provided by Region of Durham. 2033 land use was expanded to a 2041 trendline using municipal land use forecasts noted in the *Durham Region Growth Management Study (2022),* prepared by Watson & Associates. Outside Durham Region, 2024 and 2041 land use was built-off 2016 population and employment gathered from the *Transportation Tomorrow Survey (TTS),* which was expanded to 2041 based on publicly available growth forecasts.

No background network changes were assumed for the 2024 horizon. The 2041 horizon assumed the full implementation of the GO Rail Expansion Program, including 15 minute all-day service over core segments of the GO network, and the extension of the Yonge Subway (Line #1) to Richmond Hill Centre / Langstaff GO.

3.2 Business as Usual (BAU)

2024 and 2041 BAU scenarios assume daily passenger rail service along the Northeastern Rail corridor. Trains are assumed to make all station stops along the corridor as noted in the *Northeastern Passenger Rail Service Initial Business Case (2022)*, prepared by Metrolinx. Critically, **no station-stop is assumed at Beaverton.** One daily inbound train is assumed in the AM peak period travelling from northern Ontario to Toronto Union, while one daily outbound train is assumed in the PM peak period. Overall corridor speeds were based-off of generalized travel times provided in the IBC as well as published VIA Rail travel times between Washago Station and Union Station, which use the same corridor.

3.3 Beaverton Station Scenarios

The effects of a station-stop in central Beaverton were assessed under three scenarios:

1. 2024 – Trendline growth
2. 2041 – Trendline growth
3. 2041 – Focused growth

Population demographics for 2024 and 2041 trendline growth scenarios did not differ from those developed for the respective BAU scenarios. The 2041 focused growth scenario altered the distribution of new residential growth in Brock Township so that an additional 25% was distributed to Traffic Area Zones (TAZs) within 1.5km of central Beaverton, with total growth in Brock Township remaining constant.

All improvement scenarios assume the same service frequencies and background network improvements identified in the Business-as-Usual scope.

A summary of scenarios tested in the evaluation is presented in **Table 3.**

Table 3: Scenario Descriptions

Scenario	Horizon	Description	Land-Use	Population		Employment	
				Beaverton Area	**Broader Drive Area Catchment (20 km)**	**Beaverton Area**	**Broader Drive Area Catchment (20 km)**
1 (BAU-2024)	2024	No Station	Trendline	N/A	N/A	N/A	N/A
2	2024	Station	Trendline	5,000	31,000	1,600	6,100
3 (BAU-2041)	2041	No Station	Trendline	N/A	N/A	N/A	N/A
4	2041	Station	Trendline	6,400	42,200	2,500	9,500
5	2041	Station	Focused growth near Beaverton	6,800	42,200	2,500	9,500

4 Strategic Case

The Strategic Case highlights *why* an additional rail station at Beaverton should be developed alongside the reinstatement of rail service on the Northeast rail corridor. The section reports the impacts of improvement scenarios described in **Section 3** and explores the strategic alignments with planned rail service reinstatement and existing policies.

4.1 Impact Assessment

Impacts of an additional Ontario Northland rail station in Beaverton are presented in relation to the improvement scenarios discussed in **Section 3**. Connectivity, ridership, and trip distribution are assessed. While vehicle travel distance (vehicle KM travelled), and vehicle travel time (vehicle hours travelled) were assessed, results were inconclusive due to an overall limited number of vehicle trips avoided.

4.1.1 Connectivity

The current Ontario Northlands reinstatement scheme envisions no stops between Richmond Hill and Washago, a distance of 110 km. As noted in **Section 2**, a new station at Beaverton would provide an access point for through rail services, connecting the southeast Lake Simcoe area to York Region and Toronto, effectively providing rail connectivity to an additional 26,000 residents and 5,370 jobs that are within a 20 km radius / 15 minute drive of Beaverton.

Travel time between key activity pairs in the system is a universally accepted measure of connectivity. **Figure 13** displays transit travel times between Beaverton and the Greater Toronto Area with and without a station along a reinstated Ontario Northland rail service in place. **Table 4** presents the changes in in-vehicle travel times from Beaverton to Langstaff GO and Union station.

Figure 13: Comparative In-Vehicle Transit Travel Times (Beaverton to GTA)

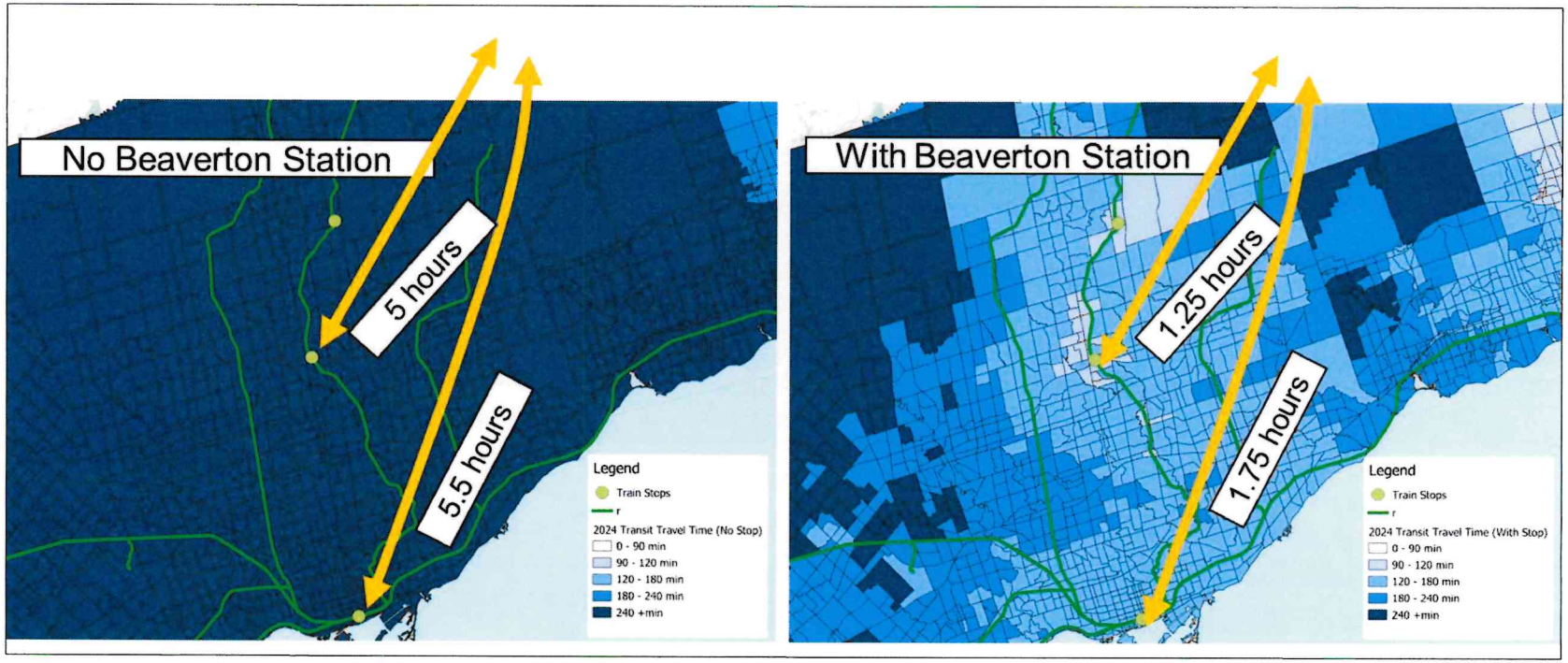


Table 4: In-Vehicle Transit Travel Times to Richmond Hill Centre and Union Station

	No Station	Station in Beaverton	Travel Time Reduction
Beaverton to Langstaff GO	297 minutes	80 minutes	73%
Beaverton to Union Station	328 minutes	112 minutes	66%

A new station in Beaverton reduces transit travel time to Union Station by 66% from approximately 5.5 hours to 1.75 hours. A new station renders Beaverton and surrounding areas accessible by transit from the GTA, providing access to vital services, cultural locations, hospitals, and shopping in York Region and central Toronto.

4.1.2 Ridership

Average weekday passenger activity (boardings and alightings) at the proposed Beaverton station, as determined through Durham Region's Transportation Planning Model, is reported in **Table 5.** The impact of a new station at Beaverton is evaluated at opening day (2024) and at the 2041 horizon, in line with the Provincial IBC. Of note, given the stochasticity in the model as a function of travel behavior it is fair to assume a 10% variation around the average point forecasts presented in the table.

Table 5: Average Weekday Activities at Beaverton Station (Durham Region Model)

Scenario	Daily station activity*
Scenario 1: 2024 Trendline Growth – No Station	-
Scenario 2: 2024 Trendline Growth – With Beaverton Station	50
Scenario 3: 2041 Trendline Growth – No Station	-
Scenario 4: 2041 Trendline Growth – With Beaverton Station	120
Scenario 5: 2041 Focused Land-Use – With Beaverton Station	130

Note: *rounded to nearest 10

50 daily boardings and alightings are projected at the station on opening day. By 2041, when operation is mature, the model anticipates 120 to 130 daily boardings and alightings at the station, depending on the land-use scheme advanced within Beaverton. The significant growth in rider volumes between 2024 and 2041 is partly attributable to public transit network improvements in York Region, specifically the opening of the Yonge Street North Subway extension, which will directly serve Langstaff GO station.

Secondarily, a more rudimentary method was developed that directly integrates ridership projections from the IBC. This method leveraged the established relationship between travelshed population and line ridership projections from the IBC noted for the North Bay to GTA segment (excluding populations within the existing GO Rail service area). Revised line ridership outputs were calculated to reflect the addition of a new travelshed population near Beaverton. The results of the scaled IBC population expansion model are presented in **Table 6.**

Table 6: Average Weekday Activities at Beaverton Station (IBC Population Expansion Method)

Scenario	Daily station activity
Scenario 1: 2024 Trendline Growth – No Station	-
Scenario 2: 2024 Trendline Growth – With Beaverton Station	21 – 23
Scenario 3: 2041 Trendline Growth – No Station	-
Scenario 4: 2041 Trendline Growth – With Beaverton Station	33 – 37
Scenario 5: 2041 Focused Land-Use – With Beaverton Station	33 – 37

According to the population expansion method, an additional 21 to 23 daily boardings and alightings are projected at Beaverton station on opening day, with 33 to 37 anticipated in 2041 (regardless of land-use near the station). Unlike the Durham Region Model, which is robust in nature and integrates geographic proximity and overall weighted attractiveness of destinations into trip distribution and mode choice outputs, the population expansion model is static and is not sensitive to destination proximity. It would render the same ridership outputs regardless of *where* the additional population is placed between the GTA and North Bay.

Table 6 presents ridership projections at Beaverton within the context of total projected ridership for the Ontario Northland rail corridor, sourced from the Initial Business Case. As noted, a stop at Beaverton would lead to significant relative increases in ridership along the rail line, with

growth over baseline conditions in the 18 to 22% range according to the population expansion model and 42 to 87% range according to Durham Region's Transportation Planning Model. This results in an additional 5,000 to 5,500 trips annually in 2024 and 8,000 to 8,900 trips annually in 2041 according to the population expansion model. By contrast, the Durham Region model anticipates an additional 12,000 trips in 2024 and 28,800 to 31,200 trips in 2041.

Table 7: Beaverton Ridership relative to Projected Line Ridership

Scenario	2024	2041
Daily Line Ridership (Union – North Bay, excluding Beaverton)*	120	150
Beaverton Daily Ridership Projection (Durham Region Transportation Planning Model)	+50 (+42%) *Total Ridership: 170*	+120 to 130 (+80 to 87%) *Total Ridership: 270 to 280*
Beaverton Daily Ridership Projection (Population Expansion Model)	+21 to 23 (+18%) *Total Ridership: ~140*	+33 to 37 (+22%) *Total Ridership: ~185*

*Note: *Daily line estimates from the IBC*

4.1.3 Trip Distribution

The Durham Region Transportation Planning Model was deployed to evaluate the distribution of trips originating in Beaverton heading southbound to the GTA. As displayed in **Table 8,** in 2024, a total of 22 trips are projected to leave Beaverton daily, travelling southbound to the GTA. 6 trips (26%) are destined for Langstaff GO while 16 (74%) are destined for Union Station. Travel patterns are projected to be different by 2041, largely spurred by the completion of the Yonge North Subway Extension to Langstaff GO station in Richmond Hill. In 2041, 60 trips are projected to leave Beaverton daily, with 43 (72%) disembarking at Langstaff GO and 17 (28%) destined for Union Station. Zero trips originating in Beaverton are projected to be destined for Gormley GO in either analysis horizon year.

Table 8: SB Distribution of Trips Originating at Beaverton

Destination	2024	2041
Gormley GO	0 (0%)	0 (0%)
Langstaff GO	6 (26%)	43 (72%)
Union Station	16 (74%)	17 (28%)
TOTAL	**22 (100%)**	**60 (100%)**

As Beaverton is near the northern extent of the model, the tool could not be used to project and distribute northbound trips.

4.2 Strategic Alignment with Rail Service Reinstatement

A station in Beaverton clearly aligns with *strategic guideposts* for Ontario Northland service reinstatement as noted in the Initial Business Case, as documented in **Table 9.**

Table 9: Beaverton Station Alignment with Ontario Northland Rail Reinstatement Strategic Objectives

Strategic Guideposts Noted in the IBC	New Station in Beaverton
Improve Transportation Connectivity and Accessibility to Urban Centres	a) Connects Downtown Beaverton and surrounding northern York and Durham regions to Richmond Hill and Downtown Toronto with daily rail service, enhancing transportation options for 26,000 people that live within a 15 minute drive of the station b) Rail is resilient to congestion and disruptions on the road network, which provide greater travel time certainty.
Improve Quality of Life and Opportunities for Local Residents	a) Provides expanded access to jobs, shopping, health services, and entertainment for northern York and Durham Region residents. b) Higher proportion of residents over 65 relative to the GTA as a whole. As the population ages, residents may be less willing or able to drive to access services.

Strategic Guideposts Noted in the IBC	New Station in Beaverton
Support Regional Development	a) Increased access to tourism services near southeast Lake Simcoe for GTA residents.
Promote a Sustainable Environment	b) Shift a proportion of regional trips that would otherwise be taken by automobile to rail, reducing overall vehicle km travelled.

4.3 Strategic Alignment with Provincial, Regional and Municipal Plans

Reinstated rail service to Beaverton leverages existing and planned transportation investments to improve intercity multimodal transportation to the southeast Lake Simcoe area. Reinstated rail service leverages Beaverton's historic role as a rail-stop community, once again embracing this key aspect of its local identity. In-so-doing, a station in Beaverton not only significantly enhances multimodal connectivity for local area residents, it also provides opportunities for sustainable tourism development and economic development.

Revived rail service to Beaverton aligns with Provincial, Regional, and Municipal plans and policies as discussed below. From a provincial lens, revived rail service helps build sense of place, sustainable tourism development, and the achievement of complete communities through leveraging existing multimodal transportation infrastructure, all of which are noted as priorities in Provincial land-use and transportation strategic planning documents. Details are noted in **Table 10.**

Table 10: Strategic Alignment with Provincial Plans and Policies

Policy Document	Strategic Alignment
Provincial Policy Statement (2020)	Reinstated rail service to Beaverton aligns with the following Provincial planning policies: • Efficient use should be made of **existing and planned transportation infrastructure** • Provide for an efficient **multimodal transportation system** • Provide opportunities for **sustainable tourism development** • Promote opportunities for **economic development** and community investment-readiness

Policy Document	Strategic Alignment
	• Encourage a **sense of place** by conserving features that help **define character.** A new station at Beaverton supports the following guiding principles:
A Place to Grow (2020)	• Support the achievement of complete communities that are designed to support healthy and active living; • Improve integration of land-use planning with planning and investment in infrastructure and public service facilities, including integrated service delivery through community hubs, by all levels of government.
Greenbelt Plan (2017)	The Greenbelt Plan supports protecting agricultural land, social and economic development, climate change resilience and mitigation, and natural heritage and resource protection. Beaverton is classified as a Town/Village settlement area within the Greenbelt and are constrained to policies related to the development of community hubs. Relevant policies include: • Supporting the rural economy, the environment, and diverse land use • Aim towards the achievement of complete communities • Facilitate access to locations served by a range of transportation options, including transit
Connecting the GGH (MTO, 2022)	MTO's 30 year vision is "of a connected transportation system that provides safe, efficient, and convenient options for people and businesses and supports the well-being and economic prosperity of the region into the future." The vision is focused around four pillars, two of which are supported by revived rail service to Beaverton. These include: "getting people moving on a connected transit system" and "supporting a more sustainable and resilient region."
2041 Regional Transportation Plan (Metrolinx)	Metrolinx's 2041 RTP presents the following vision for the broader region: *"The GTHA will have a sustainable transportation system that is aligned with land use, and supports healthy and complete communities. The system will provide safe, convenient and reliable connections, and support a high quality of life, a*

Policy Document	Strategic Alignment
	prosperous and competitive economy, and a protected environment." A reinstated station at Beaverton aligns with 2 of the 3 overarching goals in the RTP including *Strong Connections* and *Sustainable and Healthy Communities.* Additionally, rail service to Beaverton helps advance the strategy of *Integrating Transportation and Land Use*, by facilitating the development of a complete community near rail.

Additionally, revived rail service to Beaverton supports broad visions and goals advanced by Durham Region and Brock Township including encouraging intensification in existing built-up areas and revitalizing Downtown Beaverton. Details are included in **Table 11.**

Table 11: Strategic Alignment with Durham Region and Brock Township Plans and Policies

Policy Document	Strategic Alignment
Durham Region Official Plan (2020)	Rail service to Beaverton supports the following broad goals and directions: • Goal 1.2.1 (c): To develop the Region to its economic potential and increase job opportunities for its residents; • Goal 1.2.1 (e): To create healthy and complete, sustainable communities within livable urban environments • Direction 1.3.1 (g): Creating urban areas that are people-oriented and support active transportation; • Direction 1.3.1 (k): Improving transportation linkages both within the Region and between the Region and adjacent areas; • Direction 1.3.1 (l): Developing the Region in a fiscally responsible manner; and, • Direction 1.3.1 (m): Coordinating and managing the development of the Region in a manner that is consistent with provincial planning policies.
Durham Region Transportation Master Plan (2017)	Reinstated rail service to Beaverton aligns with the following directions noted in the TMP: • Direction 1: Strengthen the bond between land use and transportation • Direction 2: Elevate the role of integrated public transit

Policy Document	Strategic Alignment
	• Direction 5: Promote sustainable travel choices Direction 7: Invest strategically in the transportation system A new station at Beaverton supports three pillars of economic development noted in the Plan:
Growing North Durham Rural Economic Development Plan (2023)	• **People:** entrepreneurship, retaining skilled workforce, fostering the innovation economy • **Places:** Showcase North Durham as a candidate for investment and support downtown revitalizations • **Prosperity:** Support retention and expansion of existing businesses

Brock Township Official Plan (2007)	Beaverton rail service supports the following OP strategies:
	
	• Enhancing quality of life through:
	  • Encouraging **intensification of existing built-up areas**
	  • Ensuring the community is fully accessible, vibrant, environmentally responsible, innovative and creative
	  • Providing **efficient and cost-effective transportation**
	• Developing a dynamic and diversified economy through:
	  • Focusing the majority of new business and job creation in **Beaverton**, Cannington and Sunderland
	  • Encouraging the creation of additional employment opportunities
	  • Ensuring **appropriate infrastructure** is available to serve community needs

Downtown Community Improvement Plan (2013)	**Downtown Beaverton** is identified for revitalization in alignment with four pillars: • Physical improvements • Leadership and management • Marketing and promotion • Economic development Rail service reinstatement to Beaverton can provide a catalyst to support broader revitalization initiatives in central Beaverton.
Brock Tourism Plan (2019)	The Plan presents existing tourism trends in the Township and targets the following four key market profiles:

Policy Document	Strategic Alignment
	• Nature lovers, • Family memory builders, • Sports lovers, and • Mellow vacationers The Plan outlines specific action items to cultivate and support tourism by informing, educating, and supporting local attractions within the Township. The Township's goals for tourism can be supported (and enhanced) through additional transportation infrastructure, especially train services from the GTA that could be packaged as an attraction in-and-of itself.

5 Site Options Evaluation

Providing a station-stop in Beaverton would require the reinstatement of station infrastructure in the local area. Infrastructure requirements at Beaverton are based on "typical" or base station provisions as noted in the *Northeastern Passenger Rail Service Initial Business Case* and include:

- → A single 50 metre side-rail platform;
- → Heated station shelter;
- → Passenger information displays; and,
- → CCTV monitoring;
- → 10-20 parking spaces, including accessible stalls.

Ticketing infrastructure will not be provided at stations. Passengers would need to purchase tickets on-board or online prior to boarding the trains.

Based on a review of the IBC and complementary Canadian business cases alongside professional experience, WSP estimates the capital cost for such a facility ranging between $1-3M, excluding parking facilities. Costs are rudimentary estimates and will vary depending on context.

Durham Region identified three (3) potential site locations **(Figure 14)** for evaluation and concept development. The site concepts were developed based on the following specifications: 50 metre rail platform, 10-20 parking spaces and associated access.

The rail platform will be located within the rail corridor lands with parking generally located adjacent to the rail corridor. Where possible the rail platform has been located at least 30 metres away from the edge of at-grade crossing roads to avoid a gate-down closure of the road while the trains are in the station. A further rail operation study of operations and crossings should be undertaken to support the site assessment. Site Concepts are included in **Appendix B.**

5.1 Option Development

Station site alternatives are as follows:

Site 1

Site 1 is located near the intersection of Victoria Avenue and Ethel Park Drive, with Victoria Avenue crossing the rail corridor with an at-grade crossing. Three (3) concepts were developed for Site 1.

Site 1A is located north of Victoria Avenue on the east side of the rail corridor. Parking would be located on private property that is currently maintained but does not include buildings or structures. Access would be provided via a direct connection to Victoria Avenue.

Site 1B is located south of Victoria Avenue on the west side of the rail corridor. Parking would be located on private property that is currently subject to a draft approved subdivision with additional site plan approvals required. Access would be provided via a direct connection to Victoria Avenue.

Site 1C is located north of King Street West on the east side of the rail corridor on CN property near the former Beaverton Station (decommissioned). Parking would be located on CN property due to the corridor widening. Access could be provided via a new connection to Pollock Avenue or via King Street.

Site 2

Site 2 is located west of the intersection of Simcoe Street and Main Street, with both crossing the rail corridor with an at-grade crossing. Three (3) concepts were developed for Site 2.

Site 2A is located north of Simcoe Street on the west side of the rail corridor. Parking would be located on public property that is currently maintained and generally level but grades down adjacent to Beaver River. The platform would need some structural support to maintain clearance from the road. Access would be provided via a direct connection to Simcoe Street.

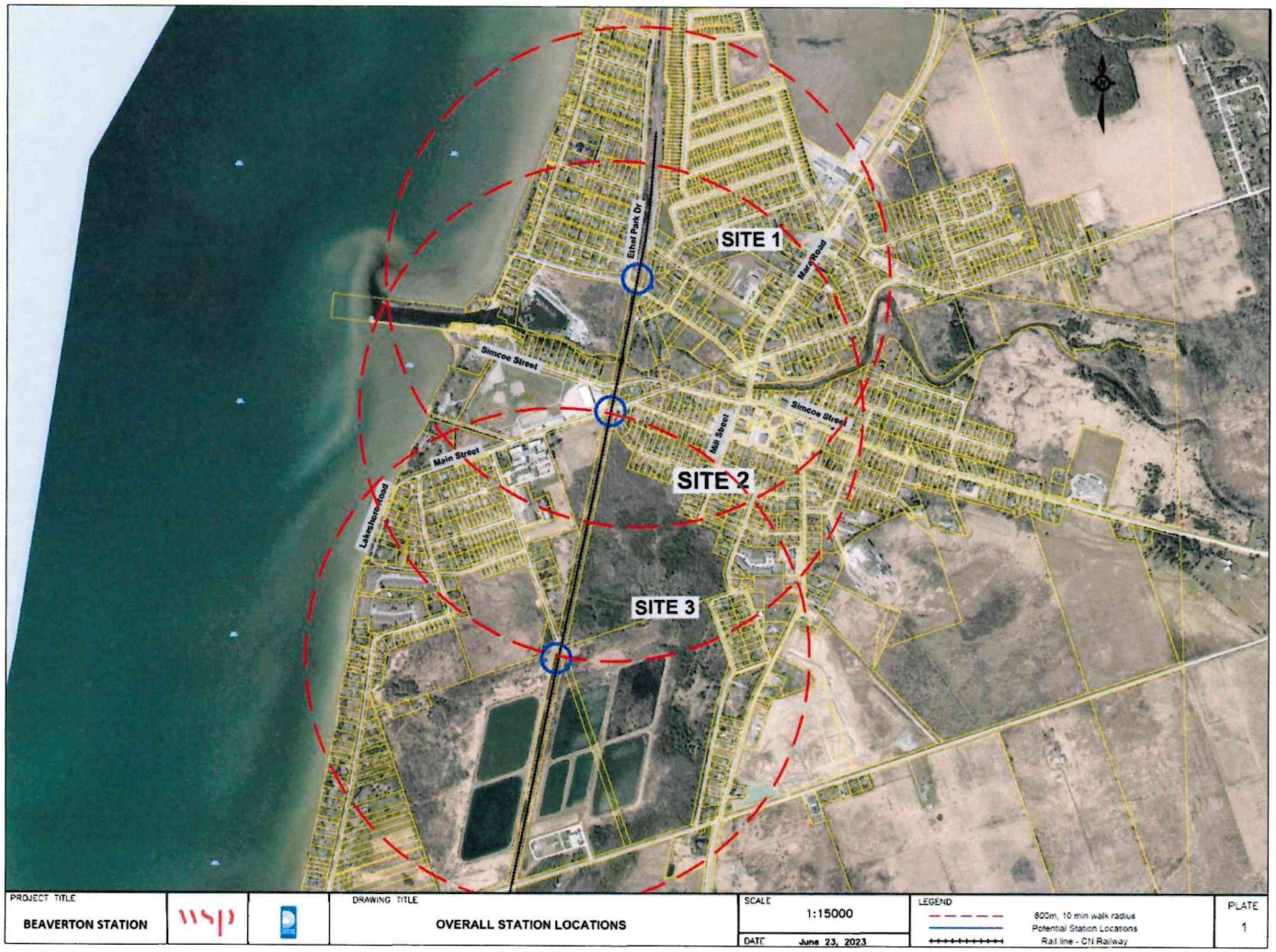
Site 2B is located south of Main Street on the west side of the rail corridor. Parking would be located on private property that is currently subject to a draft approved subdivision. Access would be provided via a direct connection to Main Street or internal connection to the proposed development.

Site 2C is located south of Main Street on the east side of the rail corridor. Parking would be located on private property that is currently under a development application. Access would be provided via a direct connection to Church Street.

Site 3

Site 3 is located south of Nine Mile Road, with no at-grade crossing. One (1) concept was developed for Site 3. Parking would be located on public property that is currently maintained and generally level. Access would be provided via a direct connection to Nine Mile Road

Figure 14: Beaverton Station Site Alternatives



5.2 Methodology and Assessment

A high-level assessment of the site locations was developed as part of the concept plans. The focus of this exercise was to provide a qualitative comparison between the designated sites. A detailed site assessment is recommended if further evaluation of the sites is required. The criteria for the evaluation and summary can be found in **Table 12.**

Criteria

1. Property suitability
2. Forecasted population and employment
3. Existing road network and integration
4. Connectivity and pedestrian walkability
5. Strategic opportunities
6. Costs

Durham Region reviewed the evaluation and in consultation with staff from the Township of Brock, Site 1B and Site 2A were selected as the preferred options to carry forward. Two (2) conceptual designs were progressed for the two locations and are included, alongside site location maps in **Appendix B.**

Discussions and agreement with CN Rail would be needed to confirm the rail operation, site concepts, platforms, and access connections. A detailed assessment for each site including environmental, engineering and costing is recommended in order to further develop and confirm the concepts and progress the site selection.

Table 12: Qualitative Comparison Between Designated Sites

○ Least Preferred ◔ Less Preferred ◑ Moderately Preferred ◕ More Preferred ● Most Preferred

Site	Property Suitability	Forecasted Population and Employment	Existing Road Network and Integration	Connectivity and Pedestrian Walkability	Strategic Opportunities	Costs
1A	◑ → Proximity to Harbour Area → Private property → Lot appears maintained, some trees on site → Some grading may be required → Walking distance to Regional Centre → Immediately adjacent to existing residential properties	● → 2051 Population = 1002 → 2051 Employment = 447	◑ → Access to Victoria Avenue (local road), with connection to Mara Road (Regional Road) → At-grade rail crossing, good site access to east and west	◕ → Adjacent to existing residential development, proximity to new residential development east of the railway → Vehicle access to local roads, with good connectivity to the main road network → At-grade crossing provides the pedestrian connection to east and west lands → Primarily residential destinations within close proximity → Harbour Area and Regional Centre easily accessible for pedestrians	◕ → Pathway connecting platform with King Street and Victoria Avenue to improve pedestrian connection and access	◑ → Road access from adjacent road → Some tree removal → Parking located on private property
1B	◕ → Proximity to Harbour Area → Private Property → Treed lot, fill/grading required → Planned development on site lands → Walking distance to Regional Centre	● → 2051 Population = 1002 → 2051 Employment = 447	◑ → Access to Victoria Avenue (local road), with connection to Mara Road (Regional Road) → At-grade rail crossing, good site access to east and west	◕ → Adjacent to existing residential development, proximity to new residential development west of the railway → Vehicle access to local roads, with good connectivity to the main road network	◕ → Pathway connecting platform with Victoria Avenue and Simcoe Street, with the bridge over the river to create pedestrian connection between areas north and south of the river → Potential reconfiguration of draft plan of subdivision / concept to integrate station design	◑ → Road access from the adjacent road → Parking located on private property → Tree removal and grading needed for parking

Site	Property Suitability	Forecasted Population and Employment	Existing Road Network and Integration	Connectivity and Pedestrian Walkability	Strategic Opportunities	Costs
				→ At-grade crossing provides the pedestrian connection to east and west lands → Primarily residential destinations within close proximity → Harbour Area and Regional Centre easily accessible for pedestrians		
1C	→ Located near the site of the former Beaverton Station → Private Property (CN) → Active CN Rail yard / storage area → Potential soil contamination → Lot is clear and level – no vegetation → Walking distance to Regional Centre → Immediately adjacent to existing residential properties	→ 2051 Population = 1002 → 2051 Employment = 447	→ New Connection needed to the local road network (Pollock Avenue, Lakeland Crescent, King Street West), with a connection to Mara Road (Regional Road) → Proximity to at-grade rail crossing (approx 500m distance), primarily eastern site access	→ Adjacent to new residential development, proximity to existing residential development east of the railway → Vehicle access off local roads, no direct access from main roads → Lack of at-grade crossing limits pedestrian connection to west lands → Primarily residential destinations within close proximity → Harbour Area and Regional Centre within reasonable distance for pedestrians	→ Pathway connecting platform with Victoria Avenue, King Street and Pollock Avenue to improve pedestrian connection and access → Pedestrian bridge over rail corridor at station connecting east and west areas → Potential parking east of CN lands adjacent to Pollock Ave	→ Short drive/access road needed → Parking located on CN property → Requires purchase / lease agreement with CN
2A	→ Proximity to Regional Centre → Located within the Waterfront Plan Area → Property owned by Municipality	→ 2051 Population = 907 → 2051 Employment = 404	→ Access to Simcoe Street (local road), with connection to Regional Road 15 (Simcoe Street) → At-grade rail crossing, good site access to east and west	→ Adjacent to the community centre / arena, park lands and trails → Vehicle access to local roads, with good connectivity to main road network	→ Pathway connecting platform with Victoria Avenue and Simcoe Street, extension of platform to bridge over the river to create pedestrian connection between areas north and south of the river → Shared parking with future Waterfront Plan	→ Road access from adjacent road → Parking located on Municipal property → Some tree removal

Site	Property Suitability	Forecasted Population and Employment	Existing Road Network and Integration	Connectivity and Pedestrian Walkability	Strategic Opportunities	Costs
	→ Lot appears generally clear and grades to river → Some trees along rail corridor → Platform area will need structural/bridge support			→ At-grade crossing provides the pedestrian connection to east and west lands. → Mix of residential, commercial and open spaces in close proximity → Regional Centre and future Waterfront Plan immediately accessible for pedestrians		→ Platform will need structural/bridge support
2B	→ Proximity to Regional Centre → Proximity to Waterfront Plan Area → Private Property → Planned development on site lands; nearing final approval → Lot appears generally clear and level	→ 2051 Population = 907 → 2051 Employment = 404	→ Access to Main Street (local road), with connection to Regional Road 15 (Simcoe Street) via Main Street → At-grade rail crossing, good site access to east and west	→ Adjacent to the community centre / arena, park lands and trails → Vehicle access to local roads, with good connectivity to the main road network → At-grade crossing provides a pedestrian connection to east and west lands → Mix of residential, commercial and open space in close proximity → Regional Centre and future Waterfront Plan close proximity for pedestrians	→ Pathway connecting platform with Main Street and future development to improve pedestrian connection and access → Conversion of storm pond area in future development to utilize space for parking (i.e.,storm tank system) → Potential reconfiguration of draft plan of subdivision / concept to integrate station design	→ Road access from adjacent road → Parking located on private property → Potential SWM pond conversion to tank system to allow surface parking
2C	→ Proximity to Regional Centre → Proximity to Waterfront Plan Area → Private Property → Planned development on site lands	→ 2051 Population = 907 → 2051 Employment = 404	→ New Connection needed to Church Street (local road), with connection to Regional Road 15 (Simcoe Street) → Proximity to at-grade rail crossing (approx 850m distance), primarily eastern site access	→ Adjacent to community centre / arena, park lands and trails → Vehicle access to local roads, with good connectivity to main road network	→ Pathway connecting platform with Main Street and Church Street / future development to improve pedestrian connection and access → Potential reconfiguration of draft plan of subdivision / concept to integrate station design	→ Short drive/access road needed → Parking located on private property → Tree removal and grading needed for parking

Site	Property Suitability	Forecasted Population and Employment	Existing Road Network and Integration	Connectivity and Pedestrian Walkability	Strategic Opportunities	Costs
	→ Treed lot, fill/grading required → Immediately adjacent to existing residential properties			→ At-grade crossing provides a pedestrian connection to east and west lands → Mix of residential, commercial and open spaces in close proximity → Regional Centre and future Waterfront Plan close proximity for pedestrians		
3	→ Connection to Beaver River Wetlands Trail → Property owned by Region → Lot appears generally clear and level → Adjacent to Durham Water Treatment Facility	→ 2051 Population = 371 → 2051 Employment = 165	→ Access to 9 Mile Road (local road), with connection to Regional Road 15 (Simcoe Street) via Main Street → Access to Regional Roads via at-grade rail crossing located approx 1km distance → Currently a dead-end road, the proposed development road network will connect to Cedar Beach Road to west	→ Pedestrian connection to Wetlands Trail → Isolated access to the main road network, limited pedestrian access → No nearby pedestrian crossing of the rail corridor → New residential development proposed	→ Pedestrian bridge over rail corridor at station connecting east and west future residential areas, and better connection to Regional Centre	→ Road access from adjacent road → Parking located on Region property

6 Conclusion

The Government of Ontario is investigating the feasibility of reinstating rail service along the Northeastern Rail corridor between Toronto and Northern Ontario. While the reinstated rail line would travel through northern Durham Region and the community of Beaverton, no station-stop is currently being considered in that location. This report provides a high-level strategic case for constructing an additional rail station in Beaverton in the event that rail service is reinstated along the corridor.

As part of this strategic case, the impacts of a station-stop in Beaverton were tested against a business-as-usual (BAU) scenario. The modelling results indicated a significant expansion in ridership relative to baseline conditions, with Beaverton station activity increasing overall line ridership between 18 and 42% in 2024 and 22 and 87% in 2041, depending on the modeling projection method employed.

Based on the analysis conducted in this strategic case, the following benefits were concluded for a rail station in Beaverton:

- Access to an additional 26,000 residents and 5,4000 jobs within a 20 km radius (15 minute drive) currently and 53,000 residents and 12,000 jobs by 2051;
- Reduced transit travel time to Union Station by 66% from approximately 5.5 hours to 1.75 hours, rendering Beaverton and surrounding areas accessible by transit from the central GTA, providing access to vital services, cultural locations, hospitals, and shopping in York Region and central Toronto.
- Strong alignment with all strategic guideposts outlined in the Northeastern Passenger Rail Service Initial Business Case;
- Supports Provincial land-use and transportation strategic objectives by making use of existing and planned transportation infrastructure to support the development of complete communities, promoting economic and sustainable tourist development, and connecting communities;
- Supports the Region of Durham's transportation directions that call for strengthening the bond between land-use and transportation, elevating the role of integrated public transit, promoting sustainable travel choices, and investing strategically in the transportation system;
- Strong alignment with Township of Brock Official Plan that calls for enhancing quality of life through intensification of existing built-up areas; ensuring the community is fully accessible, vibrant and innovative; and developing a dynamic and diversified economy by ensuring appropriate infrastructure is available to serve community needs; and,
- Supports stated revitalization efforts in central Beaverton, the Township of Brock's largest community hamlet.

A high-level station feasibility evaluation was conducted to compare three candidate sites (and subvariants) in the Beaverton area according to property suitability, forecasted population and employment, existing road network integration, connectivity and pedestrian walkability, strategic opportunities, and order-of-magnitude costs. Two conceptual designs were progressed upon recommendation from Durham Region in consultation with Brock Township.

Next steps include engaging in discussions with the Province around integrating a new station into planning work for Ontario Northland reinstatement, discussions with relevant stakeholders, and solidifying a location for the station in Beaverton.

Appendix A –
Analysis Specifications

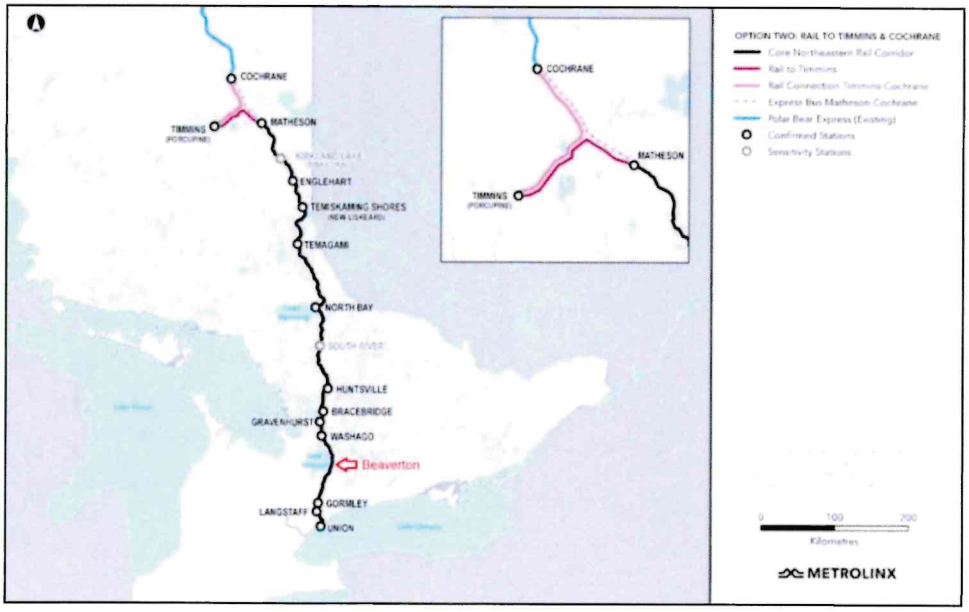
Beaverton Rail Station Analysis Specification

Overview

Durham Region initiated a strategic study that is evaluating the possibility of adding a passenger rail station in the hamlet of Beaverton along the CN Bala corridor. A reinstated station in Beaverton would serve planned recommissioned daily Ontario Northland service between Toronto-Union and Northern Ontario. A new station may also serve existing VIA Rail transcontinental service currently operating on the Bala corridor through the hamlet several times each week.

The recommended service option, as displayed in Figure 1, was highlighted in an updated Initial Business Case prepared by Metrolinx and published in April 2022. This recommendation has been supported by the Provincial government with $75 million of committed funding for service restoration.

Figure 1: IBC Preferred Service Option



Line ridership by rail is estimated at 39,000 – 60,000 passengers per year by 2041 (approximately 165 passengers per day OR 80 passengers per train trip, assuming 7 train trips per week per direction). The route includes three stations within the GTHA at Union Station (Toronto), Langstaff (Richmond Hill), and Gormley (Richmond Hill), with the next stop at Washago (Township of Severn) in Simcoe County. No station is identified for Beaverton. The distance between the Gormley and Washago Stations is approximately 110 km, with Beaverton roughly halfway between them.

Modelling travel choices for residents and travellers to and from Beaverton requires the use of a travel demand model, the likes of which are available to the Region of Durham (RoD). Ridership forecasts are limited to six discrete scenarios explained in the sub-section below. Forecasts generated by the travel demand model are then contrasted with changes in annual ridership projection developed according to a series of regression models that can be recreated based on published annual line ridership projections available in the Initial Business Case.

Analytical requirements

This study offers a clean slate to develop a vision, identify objectives that are tailored to the vision, and develop accounts that measure how each objective is met. Five different accounts are developed to measure the efficacy of a proposed station at Beaverton, specifically:

- Ridership
- Travel time savings
- Vehicle Kilometer reduction
- GHG emissions reduction
- Accessibility and connectivity

Each of the above accounts are elaborated upon in subsequent sections with their analytical requirements and basis for development. A two-stage process is employed to develop ridership projections:

Stage 1: Generate Projected Travel Demand

Six scenarios are coded into Durham Region's Transportation Planning Model (GTA4) and evaluated against the five accounts.

- Scenario 0: 2024 Horizon Base Case that includes a reinstated Ontario Northlands service WITHOUT a station in Beaverton
- Scenario 1: 2024 Horizon + station stop in Beaverton
- Scenario 2: 2041 Horizon (Trendline Growth) Base Case that includes a reinstated Ontario Northlands service WITHOUT a station in Beaverton
- Scenario 3: 2041 Horizon (Trendline Growth) + station stop in Beaverton
- Scenario 4: 2041 Horizon (Focused Growth) Base Case that includes a reinstated Ontario Northlands service WITHOUT a station in Beaverton
- Scenario 5: 2041 Horizon (Focused Growth) + station stop in Beaverton

All scenarios assume 1 inbound train in the AM peak period and 1 outbound train in the PM peak period daily.

Stage 2: Harmonize Ridership Projections with Established IBC Method

To align the methodology in this study with the methodology used in the Ontario Northlands Initial Business Case, a series of regression models are recreated from annual

line ridership results published in the IBC relative to population. The IBC projected 2024 and 2041 annual line ridership for six servicing scenarios each with three northern terminus variants (North Bay, Timmins, and Cochrane) for a total of 24 scenarios altogether. This assignment will recreate those models and deploy them to output annual line ridership projections (and deltas) that incorporate the population of the proposed Beaverton station catchment for the various servicing scenarios. These outputs will then be used to both harmonize scenario ridership projections developed in Stage 1 and determine ridership ranges based on variations in servicing.

Ridership

Ridership is a fundamental account as it influences the rest of the design inputs and is typically the most zoomed in on factor for transportation investments. Unlike traditional transit services in the RoD, forecasting ridership at a proposed station in Beaverton presents some unique challenges. These challenges range from the theoretical (mode choice nest the Ontario Northland service belongs to, alternative specific constant that was used to account for unincluded attributes etc.) to the more practical such as the inclusion of visitor demand as well as the potential for travel to points north (beyond the model extents). Transparency and reproducibility are key when dealing with transit forecasting exercises and hence the RoD's variant of the GTA4 model (Durham Region Transportation Planning Model) was used to estimate boarding and alighting activity at the proposed Beaverton Station. The assumptions that were used in the RoD model for the purpose of forecasting ridership are shown below:

1. No station capacity constraint and costs were implemented in the model to reduce any impedance faced by *drive-access-transit* users.

2. Train frequency is assumed as 1 inbound train per day in the AM peak hour, and 1 outbound train per day in the PM peak hour, based-off the Northeastern Passenger Rail Service Initial Business Case (April 2022), prepared by Metrolinx.

3. Ontario Northlands overall corridor speeds were based-off of generalized travel times provided in the Northeastern Passenger Rail Service IBC as well as published VIA Rail travel times between Washago Station and Union Station, which use the same corridor.

4. Standard GO Rail distance-based fares were assumed.

5. Ridership estimates were developed at the daily level.

6. The 2024 and 2041 horizons were used for modeling purposes in line with the IBC, which represent opening day conditions and mature conditions, respectively.

7. Within Durham Region, 2024 land use for the RoD model was generated by linearly referencing 2016 and 2032 population and employment provided by Region of Durham. 2032 land use was expanded to a 2041 trendline using municipal land use

forecasts prepared by *Hemson Consulting* in 2016[1]. The 2041 focused growth scenario altered the distribution of new residential growth in Brock Township so that an additional 25% was distributed to TAZs within 1.5km of central Beaverton, with total growth in Brock Township remaining unchanged.

8. Outside Durham Region, 2041 land use was built-off 2016 population and employment gathered from the Transportation Tomorrow Survey (TTS), which was expanded to 2041 based on publicly available growth forecasts prepared by *Hemson Consulting.*

9. GO Rail improvements planned for 2041 were incorporated in the 2041 network, which included any improvements noted in Metrolinx's 2041 Regional Transportation Plan.

Travel time savings (VHT)

Travel time savings are generated for all users from the RoD model and assume peak period travel conditions. The savings are segmented by commuter versus others, including RoD residents vs non-residents.

Vehicle kilometers travelled (VKT)

Like travel time savings, VKTs are tabulated across commuters, non-mandatory travel, residents, and non-residents. Total VKT savings are identified across scenarios. Zones with highest VKT savings are identified for ensuring logical patterns.

GHG emissions reduction

Any changes in emissions are primarily due to a change in VKT for travellers in the RoD model in each of the six scenarios. Given the need to only develop order of magnitude estimates, emissions were calculated as a function of GHG factors the team had developed for the Region of York.

Accessibility and connectivity

Accessibility is measured across several population segments and geographic regions for each of the six scenarios. Of special interest was the evaluation of how access to jobs and points-of-interest improved with the addition of a station at Beaverton.

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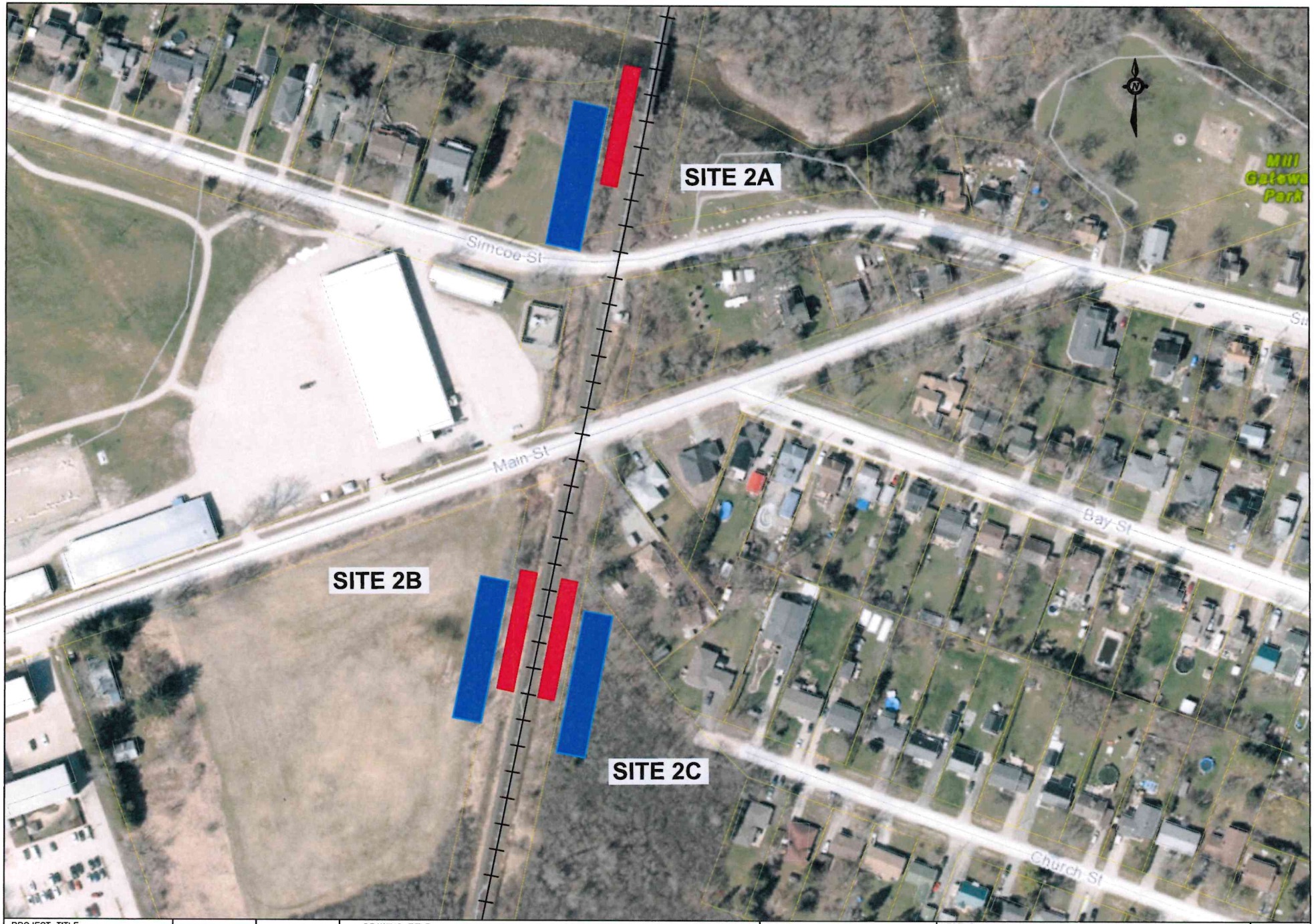
[1] Metrolinx GGH Transportation Model: Land Use Forecast for Durham Region. *Hemson Consulting* (November, 2016).

Appendix B –

Station Site Locations and Concepts

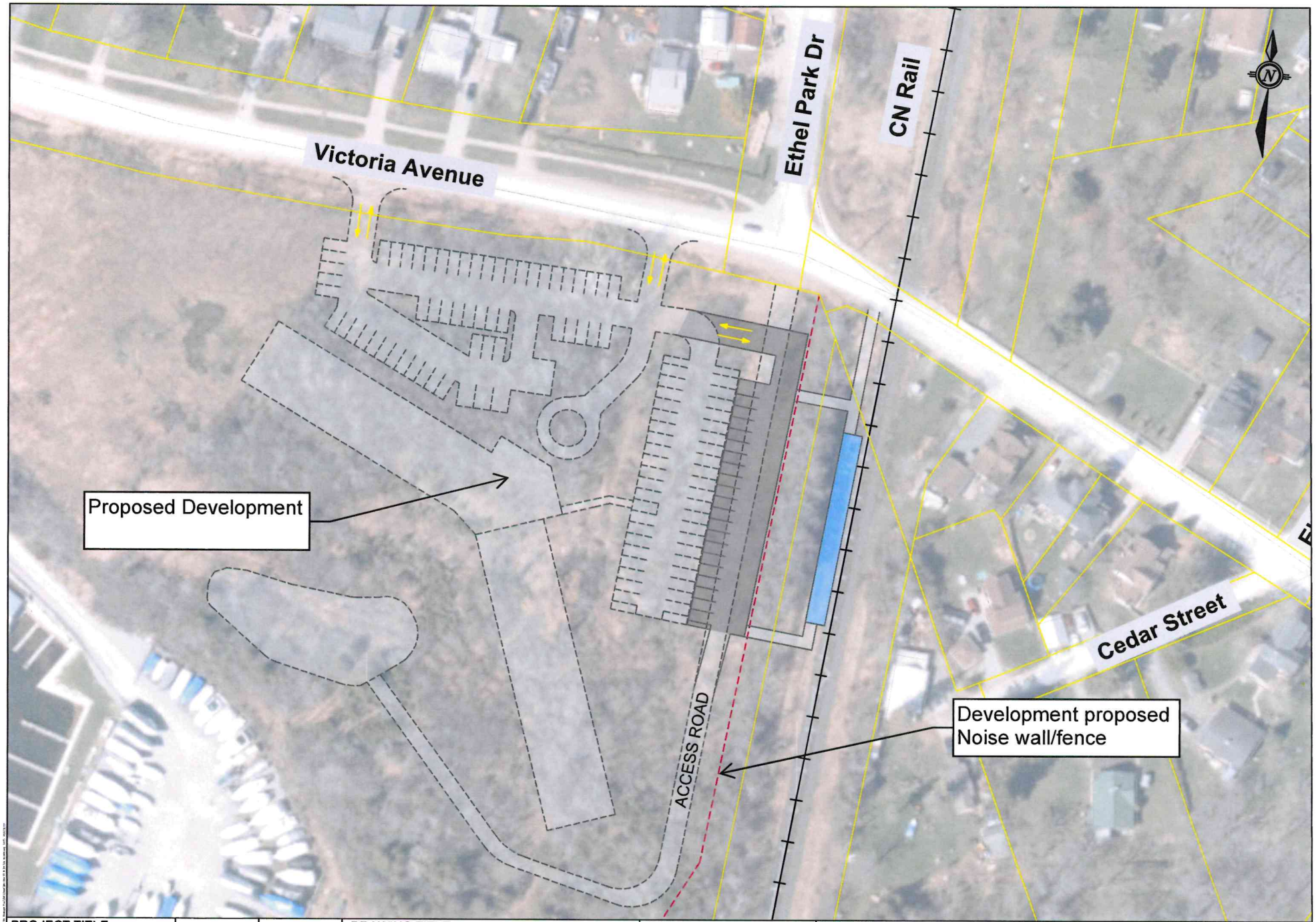
PROJECT TITLE **BEAVERTON STATION**	wsp		DRAWING TITLE **OVERALL STATION LOCATIONS**	SCALE 1:15000 DATE June 23, 2023	LEGEND 800m, 10 min walk radius Potential Station Locations Rail line - CN Railway	PLATE 1

PROJECT TITLE			DRAWING TITLE	SCALE	LEGEND	PLATE
BEAVERTON STATION	wsp		**SITE 1 STATION OPTIONS**	1:2000	Platform (5 x 50m) Parking (12 x 60m) Rail line - CN Railway	2
				DATE **June 23, 2023**		

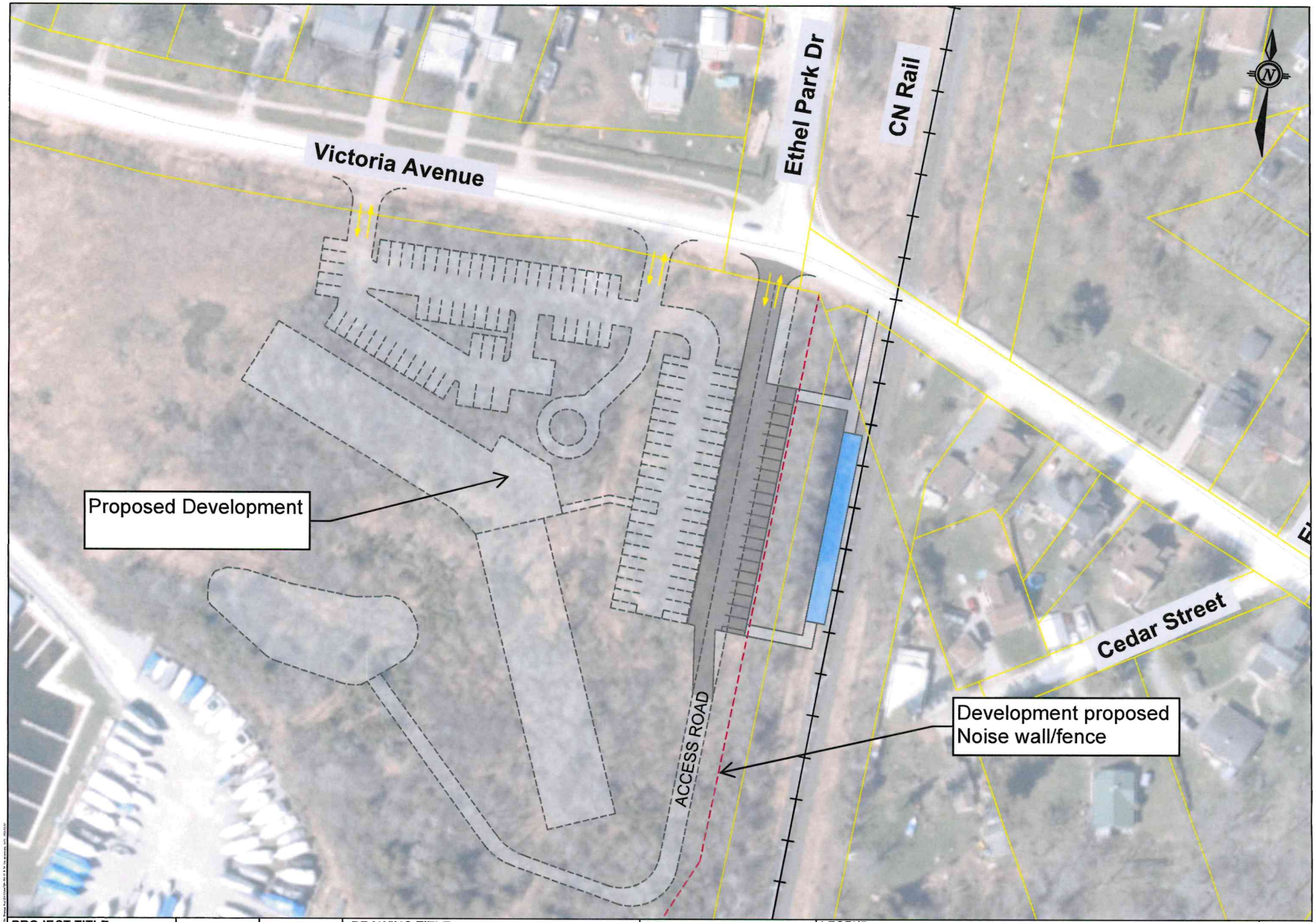


PROJECT TITLE			DRAWING TITLE	SCALE	LEGEND	PLATE
BEAVERTON STATION	wsp		SITE 2 STATION OPTIONS	1:2000	Platform (5 x 50m) Parking (12 x 60m) Rail line - CN Railway	3
				DATE June 23, 2023		

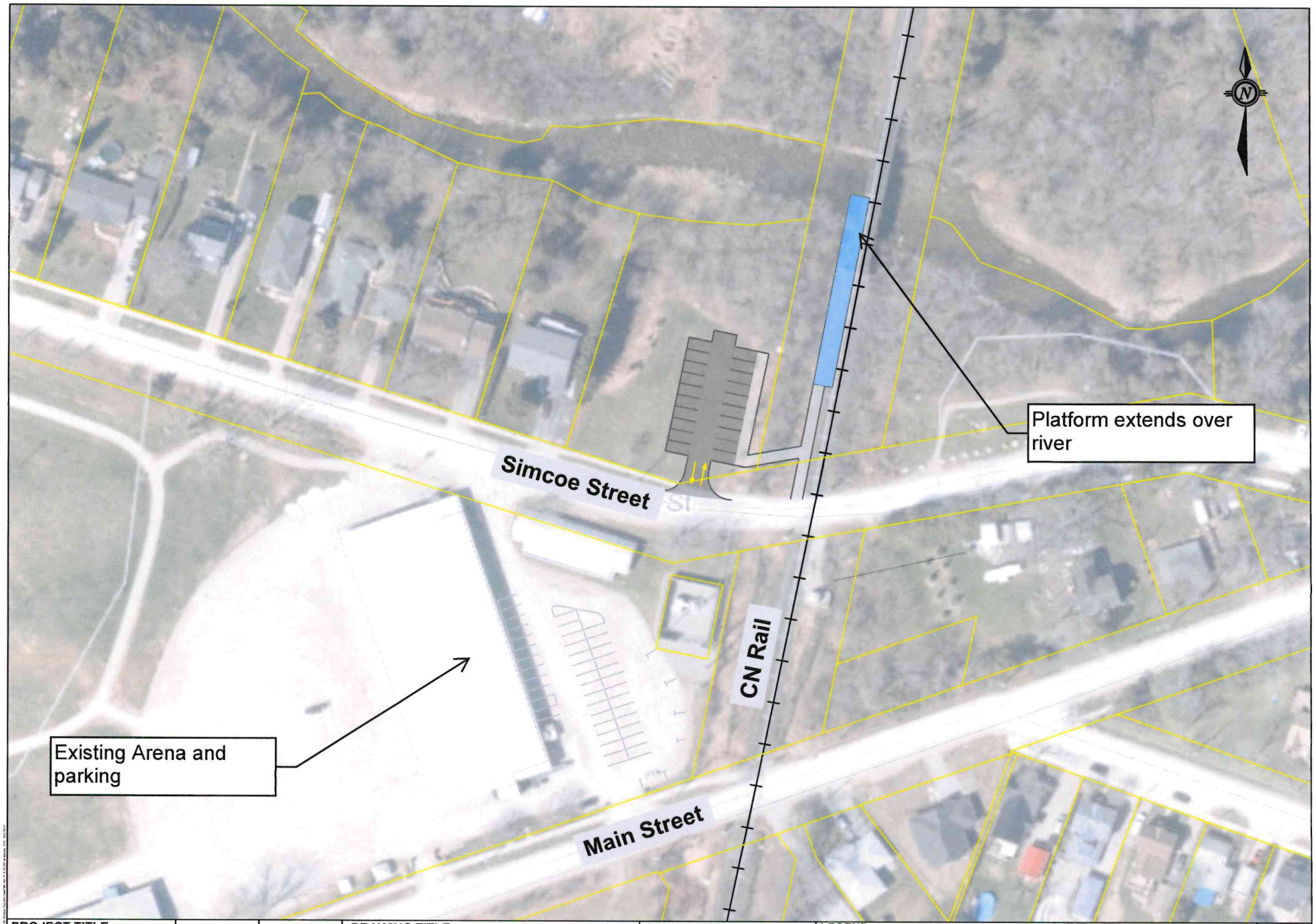
PROJECT TITLE			DRAWING TITLE	SCALE	LEGEND	PLATE
BEAVERTON STATION	wsp		**SITE 3 STATION OPTION**	1:2000	Platform (5 x 50m) Parking (12 x 60m) Rail line - CN Railway	4
				DATE **June 23, 2023**		



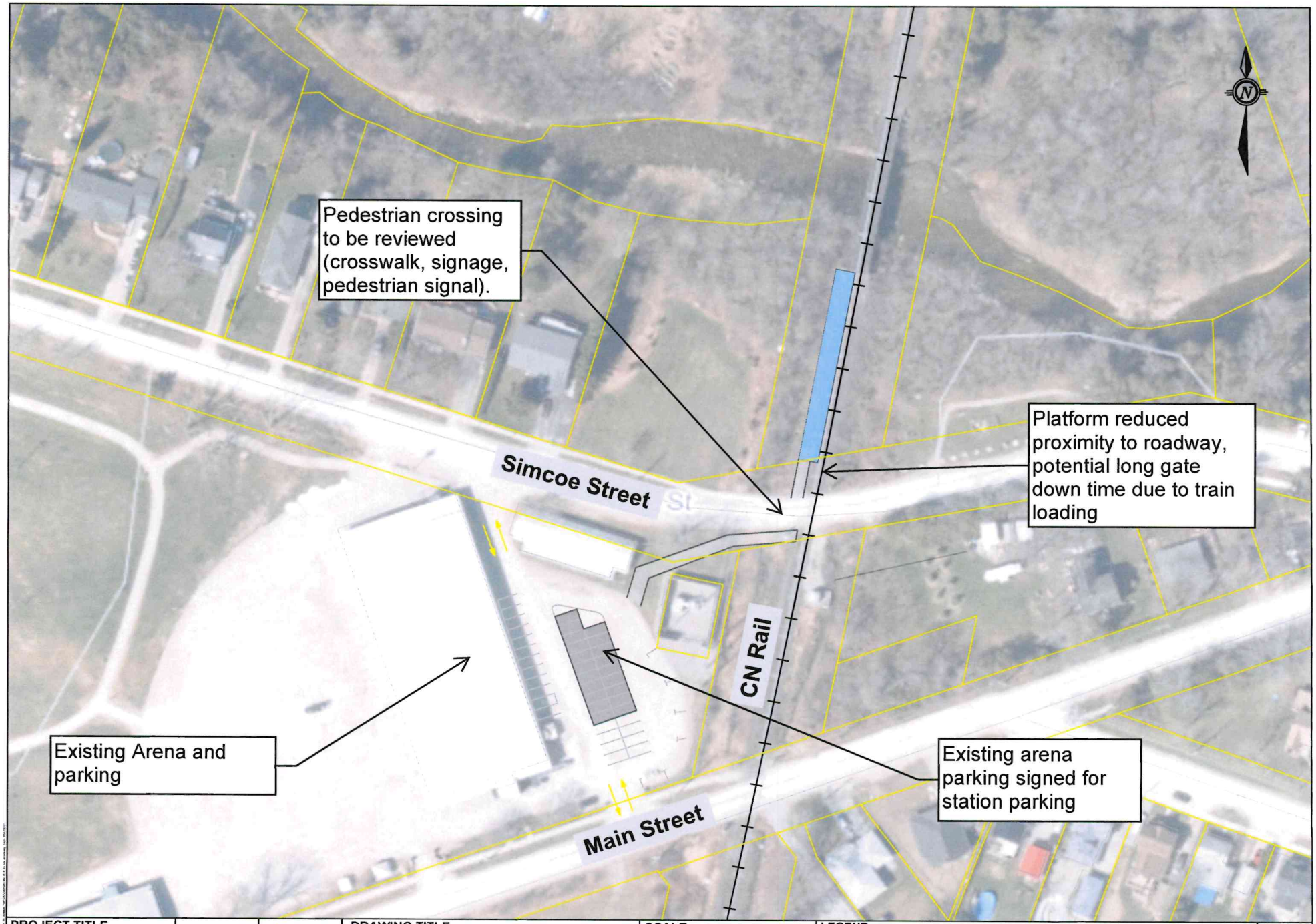
PROJECT TITLE		DRAWING TITLE	SCALE	LEGEND			PLATE
BEAVERTON STATION	wsp	SITE 1B - OPTION 1	1:1250	Proposed Development	Acoustical Fence		1
			DATE December 6, 2023	Platform (5 x 50m)	Proposed parking		
				Rail line - CN Railway	Sidewalk		



PROJECT TITLE BEAVERTON STATION	wsp		**DRAWING TITLE** SITE 1B - OPTION 2	**SCALE** 1:1250 **DATE** December 6, 2023	**LEGEND** Proposed Development Platform (5 x 50m) Rail line - CN Railway Acoustical Fence Proposed parking Sidewalk	**PLATE** 2



PROJECT TITLE			DRAWING TITLE	SCALE	LEGEND				PLATE
BEAVERTON STATION	wsp		SITE 2A - OPTION 1	1:1250	Platform (5 x 50m)	Proposed parking			3
				DATE December 6, 2023	Rail line - CN Railway	Sidewalk			



PROJECT TITLE	DRAWING TITLE	SCALE	LEGEND	PLATE
BEAVERTON STATION	SITE 2A - OPTION 2	1:1250	Platform (5 x 50m) / Rail line - CN Railway / Proposed parking / Sidewalk	4
		DATE December 6, 2023		