EX29.1

ATTACHMENT 1

NEW SMARTTRACK/GO RER STATIONS TECHNICAL & PLANNING UPDATE

1. Introduction

Attachment 1 provides a general overview and status of planning and design for the new SmartTrack and GO RER stations in Toronto. The information provided includes the guiding principles and a summary of public and stakeholder consultation, as well as the local area context, key design challenges and state of design for each station. Each station section includes details and graphics on the station design evolution, a summary of public and stakeholder input, and matters that require further feasibility analysis and technical work to advance design.

2. Overview of New Stations Planning and Design Process

The City is working in partnership with Metrolinx and the Toronto Transit Commission (TTC) to plan eight new SmartTrack/GO RER stations within Toronto. These new stations build upon Metrolinx's Regional Express Rail (RER) program, which includes increased service on five of the existing GO Rail Corridors. As shown in Figure 1, six new SmartTrack stations are being planned along the Kitchener, Lakeshore East and Stouffville Rail Corridors at the following locations:

- Finch Avenue East, between Kennedy Road and Midland Avenue
- Lawrence Avenue East, between Kennedy Road and Midland Avenue
- Gerrard Street East at Carlaw Avenue
- East Harbour, between the Don River and Eastern Avenue
- King Street West, at Liberty Village
- St. Clair Avenue West, between Weston Road and Old Weston Road

In addition, Metrolinx is planning two new GO RER stations in Toronto along the Barrie Rail Corridor at the following locations:

- Spadina Avenue at Front Street
- Bloor Street West, between Lansdowne Avenue and Symington Avenue

An Initial Business Case (IBC) analysis was developed for each station as part of Metrolinx's New Stations Analysis process in 2016. Each business case included an assessment of potential costs and benefits of each station from a strategic, financial, economic, and deliverability perspective, and a preliminary concept for each station (see EX16.1 Developing Toronto's Transit Network Plan to 2031). The Metrolinx Initial Business Cases provided the starting place for the planning and design discussions and technical work that has followed.

During 2016 and early 2017, staff from the City of Toronto, TTC, and Metrolinx held a series of workshops to identify station requirements and opportunities. Station concepts developed as part of Metrolinx's initial business case process were the basis for review.

Figure 1. Proposed New SmartTrack/GO RER Stations in Toronto

This review process included a wide variety of considerations, such as:

- Platform and station access locations
- Connectivity with the TTC transit network
- Accessible transit pick up/drop off
- Pedestrian and cyclist access and local circulation
- Partnerships and property impacts for station elements and opportunities for integrated station and adjacent development

The review process also includes coordination with related studies and potential infrastructure improvements, for example:

- East Harbour Station with the Unilever Precinct Planning Study;

- East Harbour and Gerrard-Carlaw Stations with the Relief Line Project Assessment;
- St. Clair-Old Weston Station with St. Clair Transportation Master Plan
- Bloor-Lansdowne Station and King-Liberty with West Toronto Railpath extensions;
- Lawrence-Kennedy and Finch-Kennedy stations with the Scarborough Subway Extension and Scarborough transit network plan; and
- Rail Deck Park at Spadina-Front Station.

Refined Functional Designs were prepared for each station to reflect the discussions and the planning/technical work in order to provide further guidance to the design process.

Concurrent with the design process, a Transit Project Assessment Process (TPAP) under Ontario Regulation 231/08 will be undertaken to assess the potential environmental effects of each of the new stations. The TPAP will document:

- Existing environmental conditions will be determined and the significance of specific features will be evaluated.
- Potential impacts of the project on these features will be identified and documented; and
- Appropriate mitigation measures, monitoring strategies and future studies will be recommended.

Public and stakeholder consultation is an important component of both the design process and TPAP.

3. Guiding Principles for Planning New Stations

Station Access

The City encourages the use of alternative modes of mobility, including transit and active transportation by integrating pedestrian and cycling infrastructure into the design of transit facilities and mobility hubs, streets, neighbourhoods, and major destinations. The City of Toronto has several policies and plans that support a policy of increasing the proportion of trips made by walking, cycling, and transit and reduce the demand for vehicular travel. These policies and plans include the Official Plan as well as the *Complete Streets Guidelines*, the *Cycling Master Plan*, the PATH *Pedestrian Master Plan*, *and Design Guidelines for 'Greening' Surface Parking Lots*.

Pedestrian connections are of paramount importance for all rapid transit stations, recognizing that the vast majority of transit riders will enter the station as pedestrians, even if they arrive to the station area by some other means. Therefore, it is important to ensure station entrances are designed to be attractive, safe and comfortable to encourage travellers to use transit.

To enhance the sense of safety and belonging for transit users, stations need to be designed to have a recognizable main entrance and presence on a main street. Main entrances should be important civic places and be seen as part of the public realm. While being recognizable, all entrances must also be respectful of the local context. Integrating station entrances with private development will also improve connectivity and station access to surrounding developments. In cases where a main entrance might be integrated with private development, strong signage and other wayfinding tools will be used to ensure that the station remains a recognizable part of the public realm. Such a main entrance may form part of a Privately Owned Public Space (POPS).

Integration of local transit and cycling networks with rapid transit stations is also critical to make transit an attractive choice over private automobiles. In particular, the seamless integration of local TTC routes (buses and streetcars) and the overall TTC network (stations) with new SmartTrack and GO RER stations is essential for making SmartTrack and GO RER a viable transit choice for most Torontonians.

Currently, TTC operates high-frequency service intersecting all planned station sites. Quick, convenient, and comfortable transfers are required at these stations. TTC has also identified opportunities for local route changes and additions to improve connectivity to several stations.

At most existing GO Rail stations, off-street purpose-built Passenger Pick-up and Drop-off (PPUDO) facilities are provided to incent passengers to be brought to the station in an automobile driven by someone else. TTC also provides formal PPUDO facilities at a number of rapid transit stations, primarily at terminal stations. Formal off-street PPUDO facilities typically include a large area to accommodate vehicle circulation and queuing.

PPUDO facilities can play an important role for those who have mobility challenges, can be used by taxis and ridesharing services, and can incent some people to use transit that otherwise would not. At the same time, formal PPUDOs are typically very large and use the most important locations, directly adjacent to station entrances.

City Planning is not supportive of including conventional multi-lane PPUDOs as part of any new SmartTrack or GO RER station. Stations will be designed to accommodate accessible loading and unloading areas for TTC Wheel-Trans and other paratransit providers within close proximity to station entrances.

City Planning supports provisions of these activities within a public right-of-way, or integrated with adjacent development. Solutions could include lay-bys or the identification of areas where the slowing of traffic will not impact other uses or surrounding neighbourhoods. Further work will be required to determine suitable approaches for passenger pick-up and drop-off for each station to take into account the potential for interference with transit operations and general traffic flows, as well as potential impacts on surrounding neighbourhoods.

Commuter Parking

Commuter parking is not recommended at any new SmartTrack or GO RER stations in Toronto. While it may incent some people to use transit who otherwise would not, the impact that commuter parking has on station design creates barriers for many other potential riders. At parking rates common in the Toronto region, commuter parking would likely need to be subsidized by the City. Focusing station design on connections to local transit routes, pedestrian facilities and cycling facilities, is a much wiser economic investment.

Commuter parking is only effective during peak commuting times. Access to a parking lot enables some people to choose transit for their daily commute from a station that they can drive to. On the other hand, a station designed around parking facilities is essentially inaccessible once the parking lot is full. It would not be realistic to provide surface parking for all of the riders required to justify investing in the transit infrastructure to begin with.

The cost of providing commuter parking is high. These include ongoing operations and maintenance costs, like snow clearing, cash paid annually to the City in lieu of property tax, capital construction costs and land acquisition. It is estimated that each surface parking spot in Toronto costs around $560/year to operate and maintain[1].

The Toronto Parking Authority is currently required to remit payment to the City in lieu of property tax, representing the opportunity cost of providing the parking instead of another land use. Cash-in-lieu of property tax varies in value depending on location and permitted land use.

The full cost of providing commuter parking must also consider the capital construction costs to build the parking lot and property acquisition costs. The capital construction cost is currently estimated at approximately $10,000 to 15,000/at-grade parking spot[2]. Land acquisition costs vary by area and permitted land use.

Daily rates for parking currently charged at TTC lots range from $3/day to $7/day. Most parking at GO Rail commuter lots is free. While it would is possible to recover operations and maintenance costs alone from charging fee in this existing TTC range, the operating costs do not consider cash-in-lieu of property tax, capital construction costs or land acquisition. The break-even position would need to be calculated on a site-specific basis, but it is likely that the costs that would need to be charged would significantly reduce the attractiveness of the parking in the first place. In other words, the City would need to subsidize commuter parking for it to be attractive to transit users. More detailed, site-specific analysis is required to determine what the most appropriate parking rate would be.

[1] Per TTC 2016 figures, which include TPA costs, ground rent licence fees, realty tax, security, credit card fees and utilities.
[2] Per TTC and TPA figures for at-grade parking lots.

Subsidizing commuter parking lots is further complicated by the observation that the majority of cars using TTC parking studied were registered outside of Toronto[3]. This means that should the City choose to subsidize commuter parking, Toronto taxpayers would be subsidizing not only the transit fare but also the parking rates paid by users from outside the jurisdiction.

The position that commuter parking should not be provided at SmartTrack stations is consistent with the planning policies of the City and Province, including the City's Official Plan, the Ministry of Transportation's Transit-Supportive Guidelines, and Metrolinx's Mobility Hub Guidelines.

Transit-Supportive Land Uses

City Planning has started working on a Station Area Planning initiative in order to support effective integration of the new stations into the existing and planned local context. Station Area Planning will help to ensure that the station areas mature in a way that is supportive of the significant public investments being made in rapid transit improvements. The intention of Station Area Planning is to capitalize on the public investment in transit infrastructure to support city-building goals, as well as maximize local access to the proposed new stations. Station Area Planning is generally focused on the area within approximately 800 metres of a station.

Each station area will evolve and develop differently, given the location, context, and market conditions. Through employment lands policies and appropriate incentives, the City will pursue ways to encourage and implement higher density employment uses such as office development in these areas to ensure that employment concentrations can be distributed across the city. In addition, the opportunity to increase employment and ridership on higher order transit can be achieved through a provincial regulation on conditional zoning to allow the City to require and secure employment uses. At the same time, City staff are mindful of the potential for increased pressure for conversion of employment areas to residential uses.

The initial phase of Station Area Planning now underway consists of gathering a detailed understanding of station area conditions and identifying opportunities and constraints. This includes a real estate market scan to provide a high level analysis of the benefits rapid transit can have on real estate markets within and in proximity to the station areas. Consideration is also being given to identifying opportunities for partnerships and joint development in station areas. The first phase of work will also include a comparative policy and gap analysis.

The first phase of work will provide a foundation for prioritizing future planning work and identifying next steps. Station Area Plans will be developed in consultation with the local community to articulate a vision, provide guidance for transit-supportive city building and identify the potential opportunities.

[3] Survey conducted in May 2016 of 75 Billy Bishop Lot at Wilson station found 67% of cars came from non-Toronto residences.

4. Public and Stakeholder Consultation

Public and stakeholder engagement for new SmartTrack/RER stations is being conducted in coordination with Metrolinx. A strong online presence, stakeholder engagement and public meetings provide information about the six new SmartTrack stations and two GO RER stations and help initiate a public dialogue about the planning for the stations and surrounding area.

The City's project website has been established at www.smarttrack.to. It includes specific web pages with information on each station. Information on the new stations work is also available on the Metrolinx website www.metrolinx.com/newstations. On-line engagement is a very effective way to obtain informed input from a wide range of interested residents and business.

Community consultation is focussed primarily on outreach to local residents and stakeholders. Stakeholder Advisory Groups have been established through discussions with local City Councillors. Stakeholder Advisory Groups include representatives of the following:

- Resident associations
- Business associations (including Business Improvement Areas)
- Local institutions and organizations
- Other organized professional and interest groups
- Individual residents, business owners and land owners

The project team is also pursuing on-going opportunities to team up with other local consultations being held on various related projects, such as Rail Deck Park, St. Clair Transportation Master Plan and the Unilever Precinct Planning Study.

The first round of public and stakeholder meetings for the new SmartTrack/GO RER stations was held during September/October 2017 as outlined in Table 1 below. Approximately 500 people participated in these meetings.

The following provides highlights of the key themes which emerged from this round of consultation:

- Participants were supportive of the new stations, noting that they will benefit communities, increase access to developing areas and employment lands, and give neighborhoods an economic boost.
- Connections to stations must be accessible and transfers with other transit services must be convenient. There is concern about distances between some of the stations and the existing transit network. Some participants voiced a desire for weather protected walkways rather than open sidewalk connections.
- Noise and vibration are major concerns for many people, particularly with regard to train bells, diesel train engine pollution and construction.

- Community impacts and integration must be considered in the development of the new station. This includes understanding nearby future development plans, ensuring traffic and congestion impact around stations is mitigated, and finding opportunities to integrate with and expand existing pathways.
- People near downtown station locations emphasized the need for more pedestrian and cycle infrastructure around station area. In Scarborough, parking was considered necessary by many participants.
- Passenger pick-up and drop-off areas should be factored in for the stations, especially for passengers with accessible needs.
- Safety at stations is very important, including the provision of adequate lighting, security cameras and visibility on pedestrian walkways and in tunnels.
- Fare integration and system integration between the GO and TTC networks are essential to the success of SmartTrack. Transfers between the two networks should be seamless.

The next round of public engagement is planned for early 2018 to review environmental studies and updated station work.

Table 1. Consultation Program Overview

Date	Meeting	Location
Stakeholder Advisory Group (SAG) Meetings		
Sept. 20	City-Wide Interests	Toronto Reference Library
Sept. 26	St. Clair-Old Weston Station	Blessed Pope Paul VI Catholic School
Sept. 28	Lawrence-Kennedy and Finch-Kennedy Stations	Scarborough Civic Centre
Oct. 5	Spadina-Front, King-Liberty, Bloor-Lansdowne, and St. Clair-Old Weston Station	Gladstone Hotel
Oct. 18	East Harbour Station*	Jimmie Simpson Recreation Centre
Public Information Centre (PIC) Meetings		
Sept. 28	East Harbour*	Ralph Thornton Community Centre
Oct. 10	Focus on east stations	Scarborough Civic Centre
Oct. 11	Focus on central stations	Riverdale Collegiate Institute
Oct. 12	Focus on west stations	New Horizons Tower
Other Meetings		
Oct. 19	Finch-Kennedy, set up by Councillor Karygiannis	North American Muslim Foundation
Dec.	St. Clair-Old Weston Station, set up by Councillor Palacio	TBD

** Consultation on the East Harbour SmartTrack Station is being coordinated with consultation on the Unilever Precinct Planning Study and the First Gulf development applications. An introductory public meeting was also held on May 16, 2017.*

5. Proposed New SmartTrack and GO RER Stations

5.1 St. Clair-Old Weston SmartTrack Station

Station Context

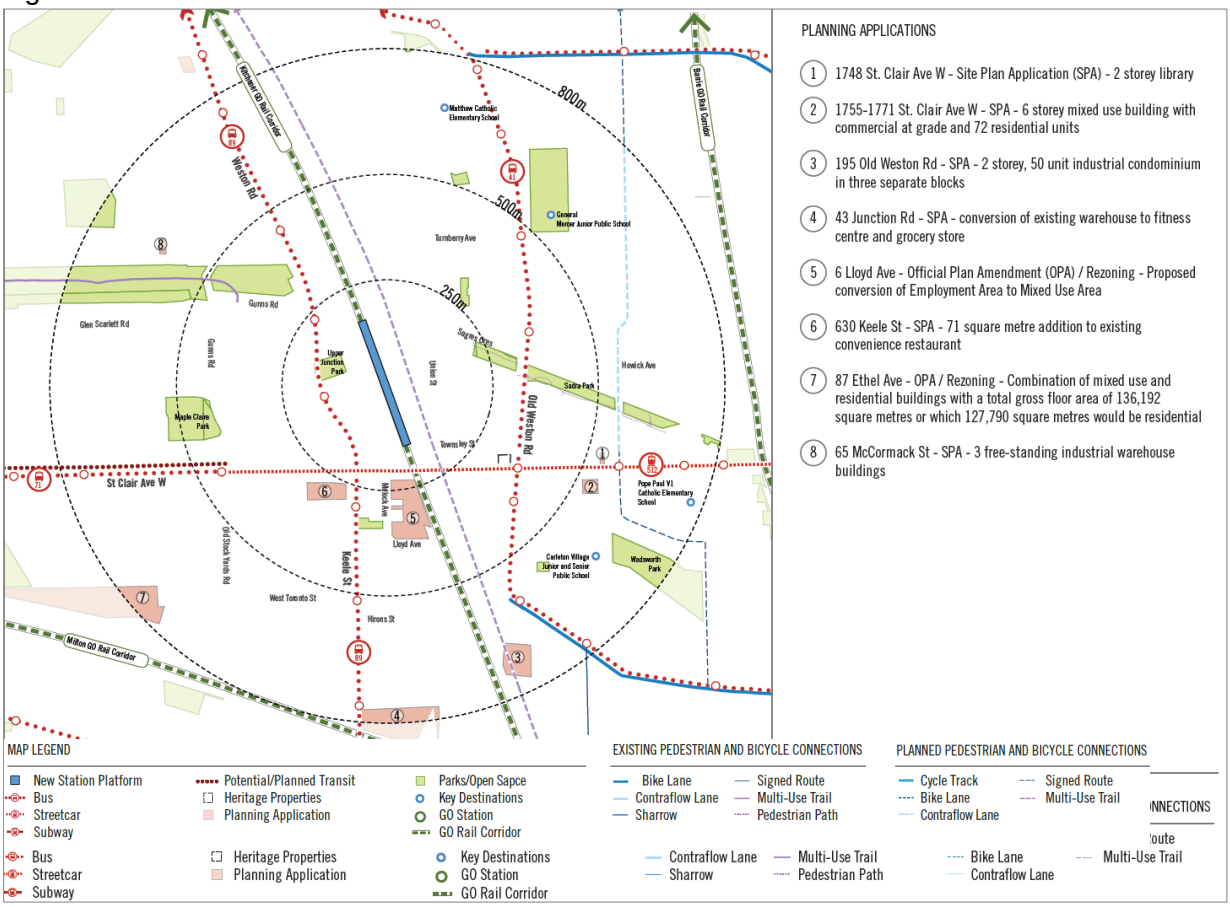
The St. Clair-Old Weston SmartTrack station, on the Kitchener GO rail corridor, is located in an employment and commercial district, just north of St. Clair Avenue West, near the western end of the 512 St. Clair streetcar line. With the exception of a new townhouse development west of the station site, the station's immediate surroundings consist primarily of big-box retail developments, industrial buildings, warehouses, and parking lots. Surrounding this predominantly commercial area is a ring of established residential neighbourhoods. While much of the area has remained stable over the last 15 years, the development of the Stockyards large-format retail shopping centre has significantly expanded the retail offerings west of the station.

The location for St. Clair-Old Weston station was selected based on its potential to connect with existing transit along St. Clair Avenue West and support general policy objectives of Toronto's Official Plan such as promoting intensification along designated Avenues. The location is constrained by steep track grades south of St. Clair Avenue West and overhead Hydro lines to the north.

This station will serve as an important point of transfer within the transit network including with the 512 St. Clair streetcar and the 41 Keele, 89 Weston, 127 Davenport, and 168 Symington buses. Approximately 10,000 surface transit riders currently pass this station location each day.

Map 2, Urban Structure of the City's Official Plan identifies much of St. Clair Avenue West as *Avenues,* the nearby exceptions being the portion between Old Weston Rd and the rail corridor and the south side of St. Clair Avenue West between the rail corridor and Keele St. Significant portions of the area around the station are identified as *Employment Areas* on Map 2. The land use designations (Map 17 of the Official Plan) are predominantly *Employment Areas*; however, there are significant *Mixed-Use Areas* as well. The remaining area is largely *Neighbourhoods*. Figure 2 provides an illustration of the station area, including current planning applications.

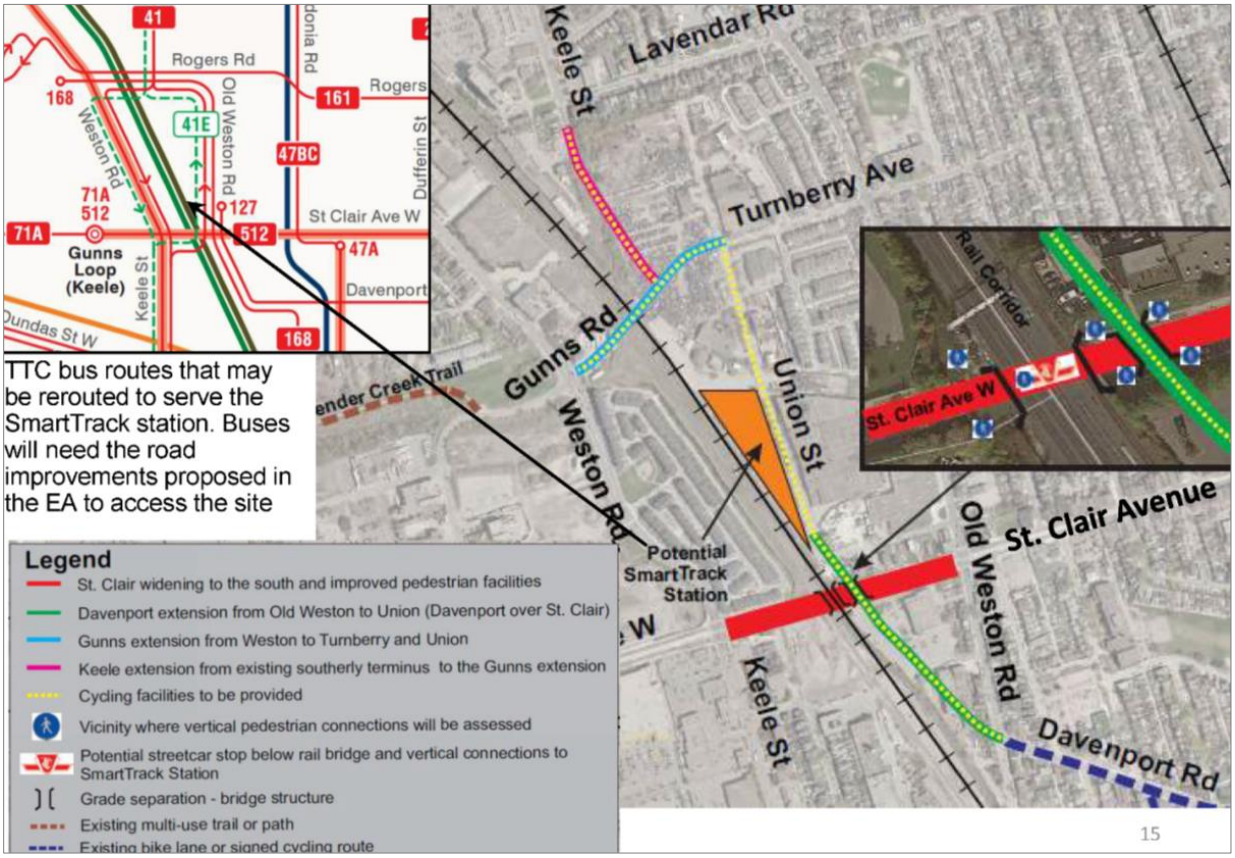
Figure 2. St. Clair-Old Weston Station Area Conditions



Key Design Challenges

- This station will require a well-designed, high-quality entrance at St. Clair Avenue West for passengers transferring from streetcars and buses as well as access from the north.
- Station design is being coordinated with the St. Clair Avenue West Area - Transportation Master Plan (TMP). Figure 3 illustrates the options being assessed by the TMP.
- Access to the station should focus on pedestrians, cyclists and connecting transit services. Care will be needed in planning for a fully accessible station.
- Adequate and convenient bicycle parking facilities are required at the station.
- An accessible loading and unloading area is required in close proximity to the station entrance for use by TTC Wheel-Trans service.
- A high-quality connection for passengers transferring between the station and streetcars and buses on St. Clair Avenue West, Weston Road/Keele Street and Old Weston Road is required.

Figure 3. St. Clair Avenue West Area - Transportation Master Plan Options



Initial Business Case

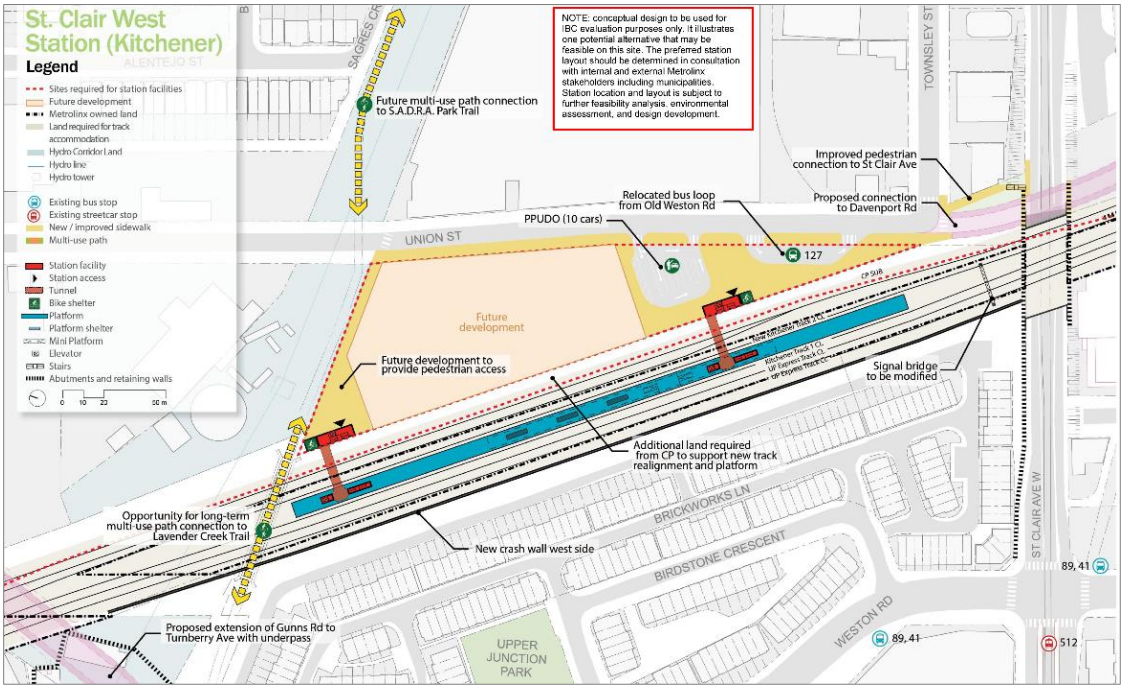
The Metrolinx Initial Business Case (IBC) concept, April 2016, is shown in Figure 4. The IBC concept included the following key station features and elements:

- A single centre platform, two station buildings, two platform access points, a small (10-car) Passenger Pick-Up and Drop-Off (PPUDO) facility, bus loop, and bicycle parking.
- Due to constraints further south along the rail corridor, the station's platform is positioned with its southern extent approximately 60 metres north of St. Clair Avenue West. Pedestrians on St. Clair Avenue West and 512 St. Clair streetcar passengers can access the station via a staircase and pedestrian connection at the corner of Union and Townsley Streets.
- The station will require the realignment of existing CP tracks and the consequent widening of the rail bridge across St. Clair Avenue West.
- The main station building and the platform's primary access point are located near the southern end of the station platform, west of Union Street. A small bus loop will be served by TTC bus route #127, slightly rerouted from its current bus loop location on Old Weston Road. The station's primary entrance has been positioned between both the PPUDO facility and relocated bus loop, in order to facilitate access using both modes. A pedestrian walkway and small plaza has

been provided to connect Union Street to the station entrance. Access to the platform is by pedestrian tunnel.

- The secondary station building/entrance is located at the northern end of the platform, with a pedestrian connection east to Union Street. Access is again provided via pedestrian tunnel. While in the short term no access will be provided to the platform from the west side of the rail corridor, over the longer term an opportunity exists to extend the S.A.D.R.A. Park Trail west along the Hydro corridor, connecting to the station's secondary entrance and ultimately extending beneath the rail corridor west to the Lavender Creek Trail.

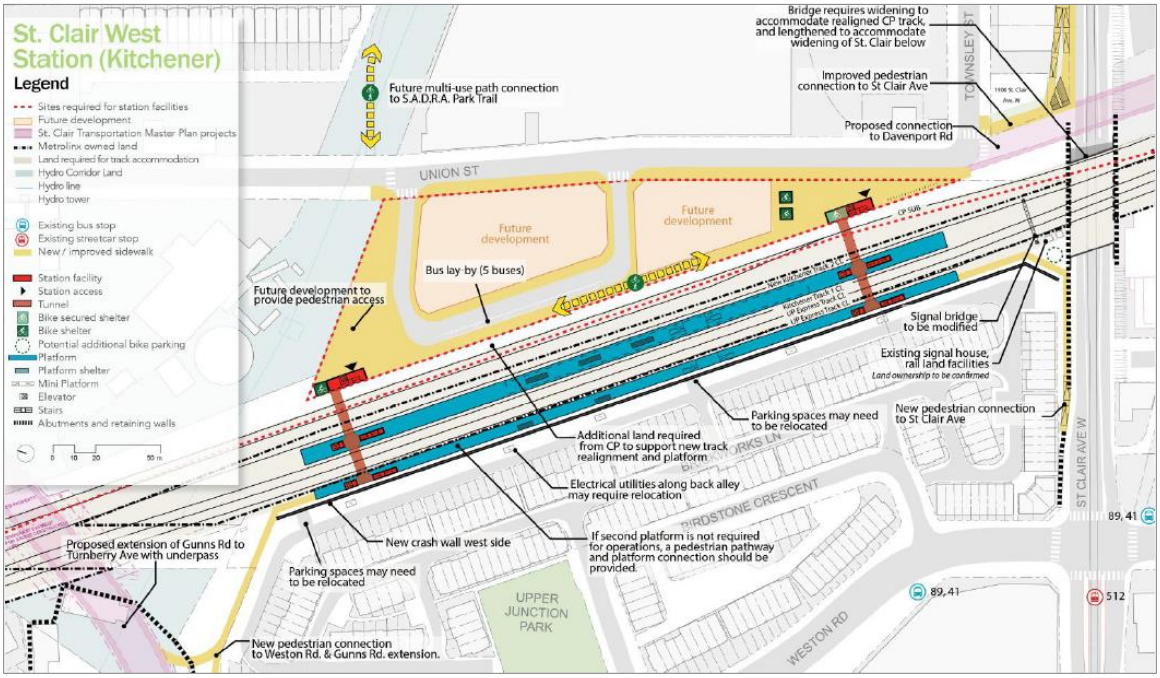
Figure 4. St. Clair-Old Weston Station IBC Concept



Refined Functional Design

Following a series of workshops with the City, TTC and Metrolinx staff, a Refined Functional Design, as illustrated in Figure 5, was prepared in June 2017 to provide general guidance for further station design.

Figure 5. St. Clair-Old Weston Station Refined Functional Design



The Refined Functional Design included the following key station features and elements outlined below:

<u>Coordination with the St. Clair Avenue West Avenue TMP</u>

The TMP includes the development and feasibility evaluation of alternative methods of alleviating traffic congestion on St. Clair Avenue and increasing traffic capacity in the vicinity of the station site, including local intersection improvements, widening of the rail underpass, road extensions and additional connections, including:

- Davenport Road extension north across St. Clair Avenue (via new bridge) to intersect with Union Street and Townsley Street.
- Gunns Road extension east to intersect with Union Street at Turnberry Avenue, which itself will be intersected by an extension of Keele Street.
- The existing Davenport bike lane will continue along Union Street in front of the station.
- A multi-use path extension will connect Union Street to S.A.D.R.A. Park Trail.

<u>Station Amenities</u>

Station Buildings/ Entrances	• Given the urban condition, station buildings at St. Clair Station are conceived primarily as entrances providing access to tunnels, with minimal additional amenities, pending further evaluation of operational and passenger needs. • Given the location of the platform and the significant grade difference, entrances are set back from St. Clair Avenue and streetcar stops. As such, the station must find creative ways to establish a clear front door and high visibility onto St. Clair Avenue, and ensure that the civic nature of the station is emphasized.

	• The south station entrance area will be located just north of St. Clair Avenue at the south end of the platform. • The north station entrance area should be situated just south of the hydro corridor near the northern end of the platform.
Station Circulation	• Staircases should be designed as the primary access between station levels. Elevators must accompany all staircases.
Bicycle Facilities	• At least 64 total bicycle parking spaces to be provided. • Additional bicycle parking facilities should be explored adjacent to each entrance
Landscaping & Streetscaping	• The primary station entrance should include a generous front entrance plaza, with landscaping, tree planting and amenities to create a high-quality public gathering place. • The station should feature a high-quality, highly visible access from St. Clair Avenue, east of the corridor to the primary station entrance. This access should be treated as a Gateway from St. Clair Avenue. The access will include a stair and an accessible ramp. • To make the streetcar connection as direct and pleasant as possible, a pedestrian path needs to be provided, linking the intersection of St. Clair and Weston Road, up the embankment to the west platform (or multiuse path).
Other	• A pathway should be provided that links intersection of Gunns Road and Weston Road to the western side platform (or multiuse path).

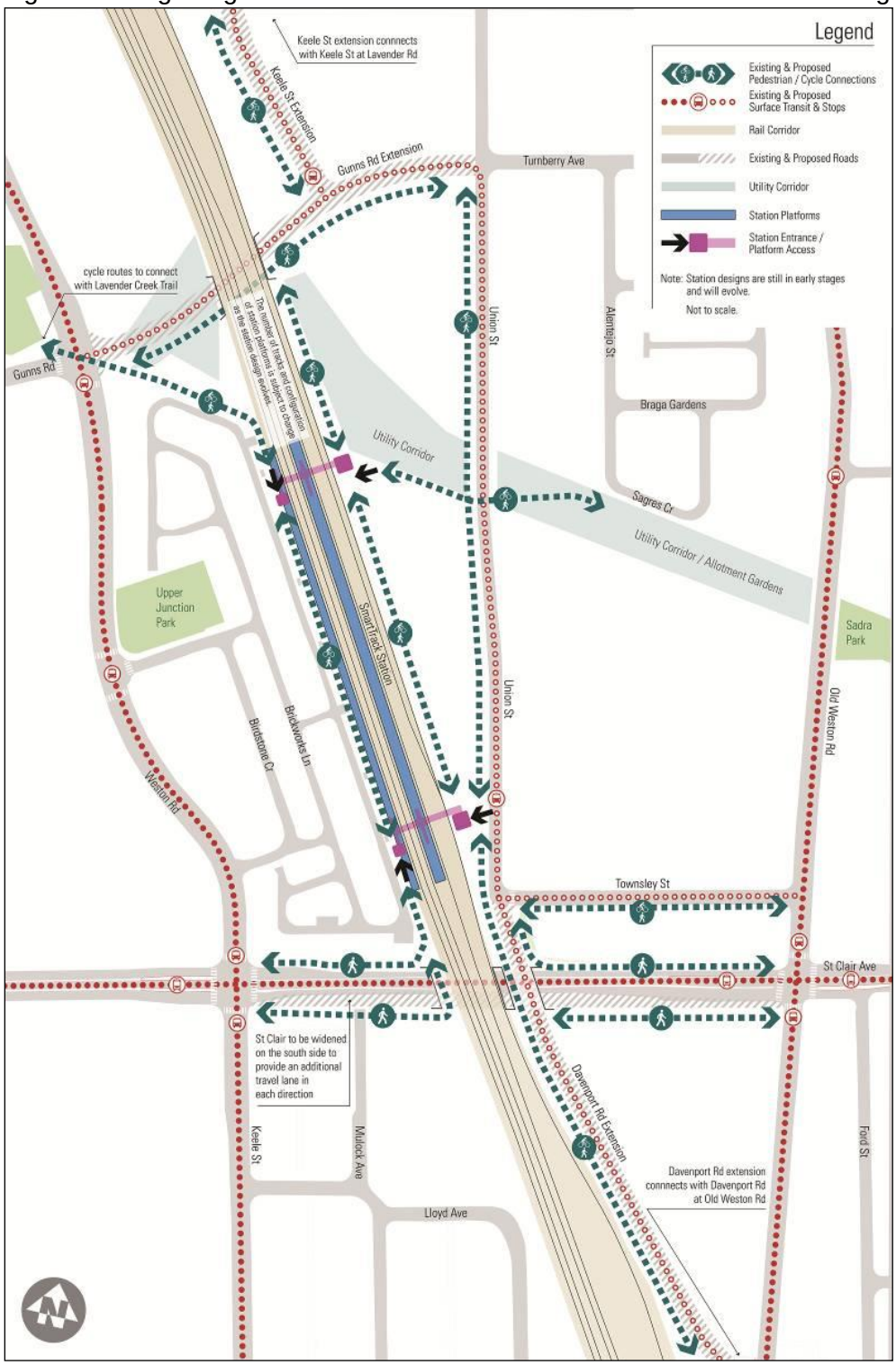
Passenger Access

Transit Access	• Place a high priority on transit access. Several TTC transit routes serve the station area. • Station design must ensure a high-quality access for customers between the station and the St Clair streetcar stops at Old Weston Road, and at Keele Street/Weston Road. • Provide a bus transfer area and station access for Wheel Trans. • This is an urban station and should not feature suburban-style bus loops.
Pedestrian Access	• Pedestrians should access the primary station entrance via sidewalks on Townsley Street and the Davenport extension, or via the Gateway to St. Clair Avenue.
Connections to Cycling Network	• There are currently limited cycling lanes and trails in the area, with no direct cycling connections to the station site. • The City of Toronto's Ten Year Cycling Network Plan (2016) has included a future extension of the West Toronto Railpath along east side of the Kitchener GO corridor. The station concept can be modified to incorporate the trail. In particular, the station entrances on the east side of the tracks can be pulled away from the corridor and the tunnels slightly extended to allow the trail to pass through unimpeded.

Emerging Station Concept

Figure 6 illustrates how the station access is planned to be integrated with the surrounding area and provides guidance for further design refinements.

Figure 6. Integrating the St. Clair-Old Weston Station within the Surrounding Area



The St. Clair-Old Weston SmartTrack Station will anchor a re-emerging employment area, which will have improved connections to the city, thanks to planned improvements to Davenport Road, Keele Street, Gunns Road and a widening of St. Clair Avenue

West. Expansion of the St. Clair underpass will facilitate excellent connections between SmartTrack and the 512 Streetcar. Pedestrians and cyclists headed elsewhere on the GO network will be able to access the station from both sides thanks to public realm improvements and tunnel connections.

Building upon the refined functional design, the key station features and elements include:

- Pedestrian and cycling access to the station will be provided from both sides of the rail corridor through public realm enhancements and tunnel connections.
- The station will have good linkages with surrounding roadways such as St. Clair Avenue West, Union Street, Townsley Street, Weston Road, Old Weston Road, as well as planned road extensions of Keele Street, Davenport Road, and Gunns Road.
- Connections are planned with local transit routes to provide good station access for transferring passengers, including the 512 St Clair Streetcar and expanded bus service along Union Street.
- Station planning and design is being integrated with the St. Clair Transportation Master Plan (TMP) projects, which includes road improvements for the area, such as widening of St. Clair Avenue West, and extensions of Keele Street, Davenport Road, and Gunns Road. This will allow for coordination of design and construction of the station and TMP projects.

Public and Stakeholder Input

The St Clair-Old Weston Station was considered at stakeholder meetings on September 26 and October 5 and a public meeting on October 12. People were asked to contribute their suggestions and ideas, in particular, on the role of new stations in the future transit network, the issues or challenges may be encountered with the introduction of the new stations, and how the stations that can best be integrated into existing communities. Key messages heard included:

- The community welcomes new transit initiatives that will give the area an economic boost.
- Promote a variety of transit connections from the community to the station
- Concerns were raised about the quality of connection between streetcar and station
- Helps address long-standing traffic issues
- Will promote more businesses and development in the area
- Concerns about duration of construction activity
- Ensure good connections to the cycling network are considered
- Desire to encourage people to walk, cycle or take transit to the station
- The Davenport Village area is growing with high residential developments and this must be considered in transit planning.

Further Design and Technical Considerations

- Coordination of station design and construction with TMP
- Pedestrian access – stairs, tunnel
- TMP road extensions – EA status and intersection with station planning
- TTC access and bus bays, on-site versus on-street PPUDO
- Facilitating access to both sides of rail corridor for community investment and cohesion – larger neighbourhood connectivity
- Widening of the rail bridge over St. Clair and St. Clair underpass
- Opportunities for public realm improvements/investment

5.2 King-Liberty SmartTrack Station

Station Context

The King-Liberty SmartTrack Station is proposed to be located on the Kitchener GO rail corridor, just north of King Street West, east of Dufferin Street. The proposed station platform will extend approximately from the south side of the King Street West rail bridge to the western edge of 99 Sudbury Street. The site is located at King Street West along a busy transportation corridor and within a high-density urban area.

This station will provide access to a rapidly-growing area of the city containing a mix of residential and employment uses. In addition, it will facilitate transfer from other transit routes including the 501 Queen and 504 King streetcars. The 63 Ossington and 29 Dufferin buses provide north-south service nearby. Approximately 16,000 surface transit riders pass this station location each day.

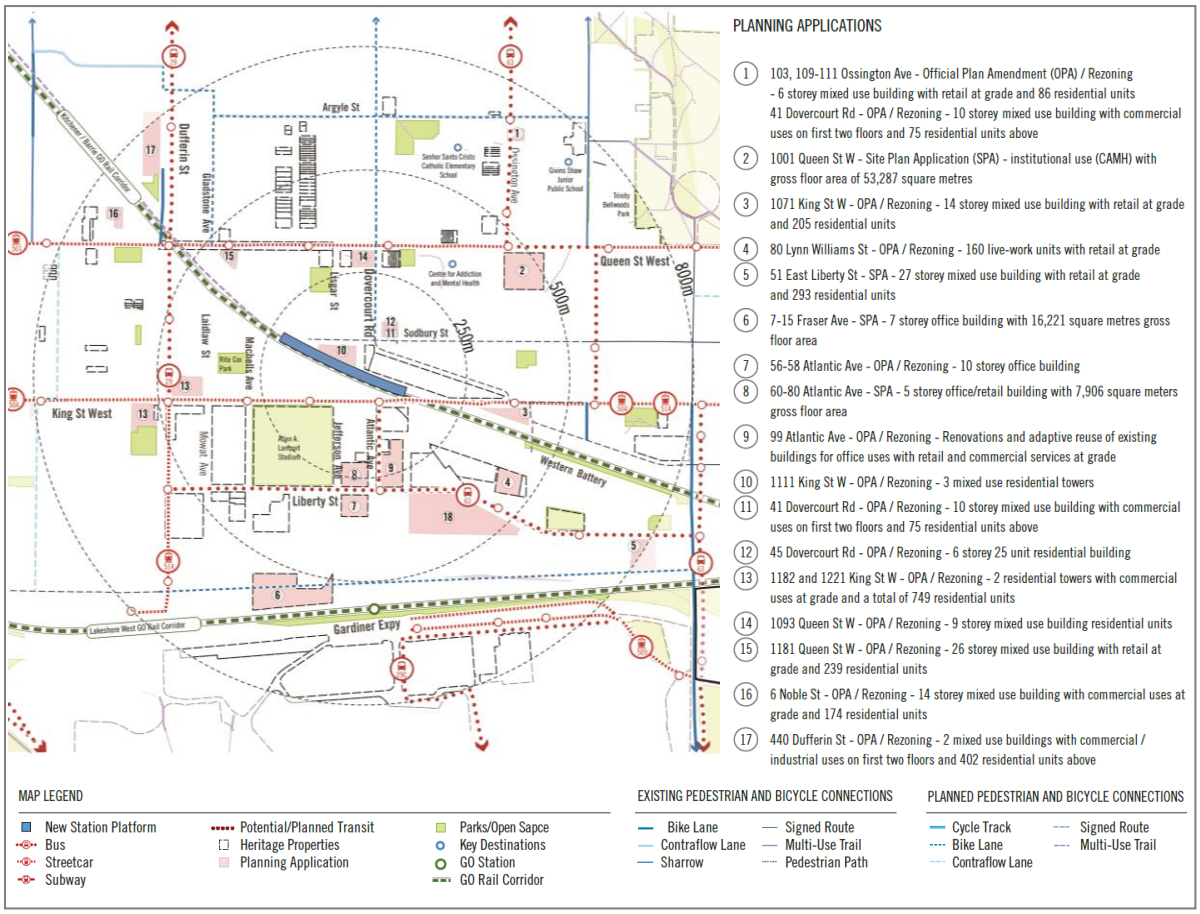
The most significant technical challenge for this station is the limited land availability for station facilities within the rail corridor.

King-Liberty is located in a rapidly-intensifying area of high-density residential and employment uses. The area around the station has been seeing significant growth and redevelopment activity. The station area comprises a mix of high-rise, mid-rise, townhouse, and employment uses on sites once occupied by surface parking and light industrial buildings.

The City's Official Plan identifies the lands within proximity to King-Liberty Station as *Avenue*s and *Employment Areas* as shown on Map 2, Urban Structure. Official Plan Map 18 designates the immediately surrounding lands primarily as *Employment Areas and Regeneration Areas as well as Neighbourhoods*. Map 4 of the Official Plan (Higher Order Transit Corridors) identifies King-Liberty Station at King West as part of a Higher Order Transit Corridor and identifies a GO Rail Station at this location as an "expansion element".

Figure 7 provides an illustration of the station area, including current planning applications.

Figure 7. King-Liberty Station Area Conditions



Key Design Challenges

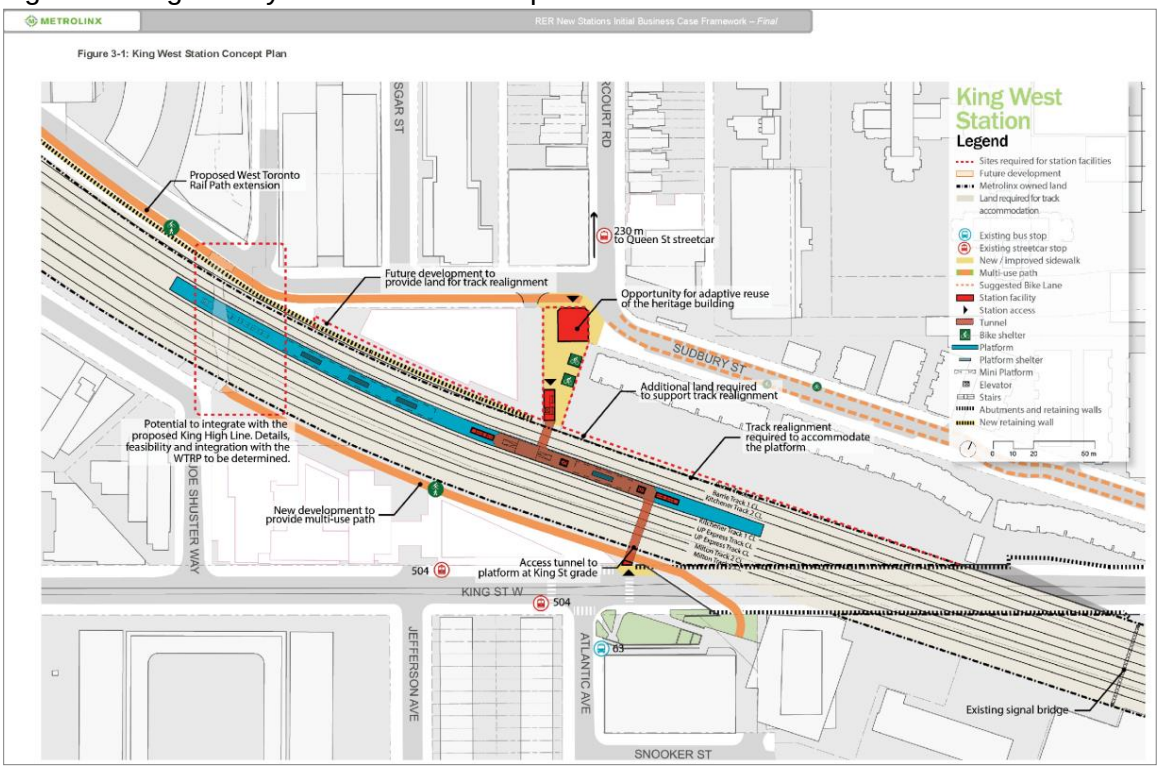
- This station will require a well-designed, high-quality entrance at King Street West for passengers transferring to and from streetcars, as well as access from the north. Further analysis of traffic operations and pedestrian movements will be required.
- Access to the station should focus on pedestrians, cyclists and connecting transit services. Care will be needed in planning for a fully accessible station; however, a conventional GO multi-lane PPUDO facility is not supported by City Planning.
- Adequate and convenient bicycle parking facilities will be needed at the station.
- An accessible loading and unloading area will need to be provided in close proximity to the station entrance, with space for TTC Wheel-Trans use.
- The station concept needs to improve pedestrian and cycling connectivity between Liberty Village, the Queen West Triangle, and King Street West Communities, and integrate with the West Toronto Railpath and planned and approved area pedestrian bridges.
- Additional consideration should be made for an over-rail corridor access (King High Line) to allow pedestrians and cyclists to cross the rail corridor and provide additional access the station.

- There are potential requirements for noise walls and drainage to mitigate environmental impacts which will require further evaluation as part of the environmental assessment process.
- Liberty Village is a highly sensitive area with respect to heritage resources and contains structures with heritage status. The rail bridge is a Heritage Bridge, which will need to be carefully reviewed as part of the design process to ensure compatibility and any impacts will need to be mitigated. Removal of any original heritage fabric will need to be carried out carefully. 55 Sudbury (a potential station entrance) is a registered heritage building protected under the *Heritage Act*.
- The Garrison Commons Secondary Plan, which includes the area for King-Liberty Station, is currently under review. There is an opportunity to consider the parks, public realm and pedestrian and cyclist connections within the station area further through the Secondary Plan update.

Initial Business Case

The Metrolinx Initial Business Case (IBC) concept, April 2016, is shown in Figure 8.

Figure 8. King-Liberty Station IBC Concept



The IBC concept included the following key station features and elements:

- A single centre platform, two station buildings (one an adaptively reused heritage structure), platform access through a single below-platform tunnel, and bicycle parking. The station is designed primarily to support walk-up and cycling access from the north, south, east, and west.

- Due to significant rail infrastructure and adjacent development activity, the design and construction of a potential new station at King West will be constrained. Any station in the area will have an urban format and design with limited passenger facilities.
- The primary station entrance, at the intersection of Dovercourt Road and Sudbury Street, provides the station with a clear address and an attractive and visible presence for users accessing the station from the north, east, and west.
- The station's secondary entrance (at King Street West and Atlantic Avenues) supports walk-up access to the station from the south, and provides a direct connection to the TTC's 504 King streetcar, helping to alleviate pressure and overcrowding on that route. This secondary entrance provides at-grade access to the station's below-platform tunnel, with an entrance located beside the King Street bridge abutment.
- The configuration of two station entrances linked by a single tunnel below the platform will facilitate the creation of a fare-free north-south connection across the rail corridor. This tunnel will act as an important new pedestrian link between Liberty Village and the West Queen West Triangle. Both entrances will be accessible, and together provide easy access to the station from all directions. The plan is heavily integrated into the existing and planned active transportation network in the surrounding area, in order to provide good station access to residents in high-density neighbourhoods both north and south of the station area. For users arriving from the north, the station concept preserves for a future extension of the West Toronto Railpath, which will terminate at the station's front entrance on Sudbury Street. The concept also preserves for a connection between the station and the proposed "King High Line" multi-use path, linking the West Toronto Railpath southeast to Liberty Village.

Refined Functional Design

Following a series of workshops with the City, TTC and Metrolinx staff, a Refined Functional Design, as illustrated in Figure 9, was prepared in June 2017 to provide general guidance for further station design. Figure 11 illustrates potential access from the south side of King Street West.

Figure 9. King-Liberty Station Refined Functional Design

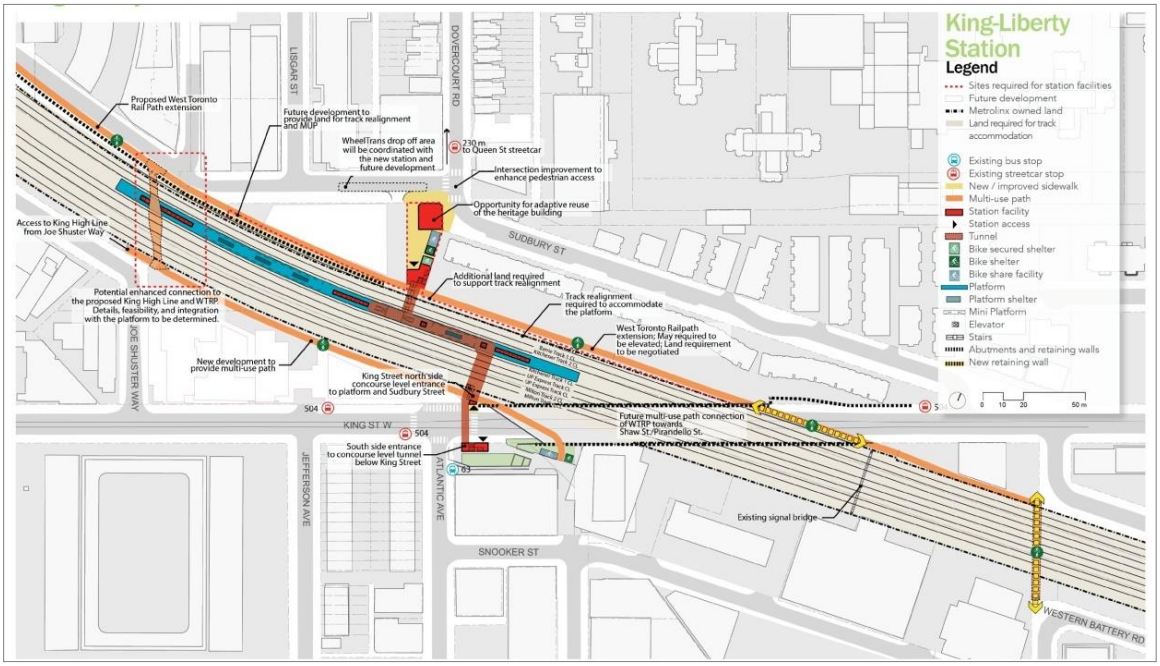
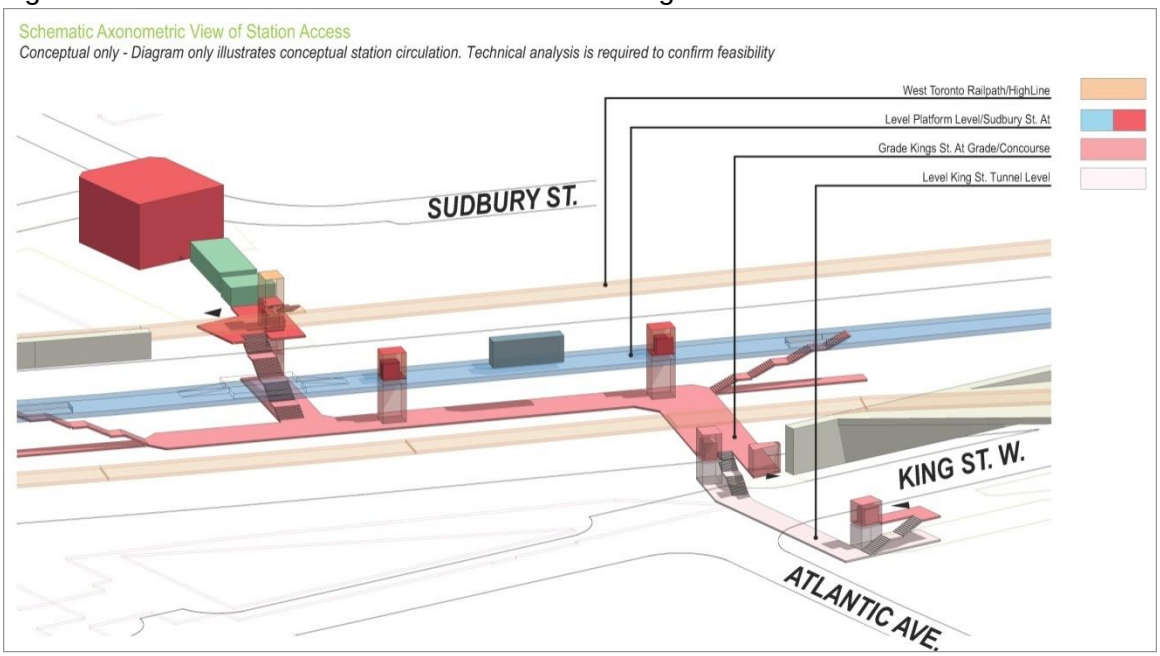


Figure 10. Potential Access from South Side of King Street West



The Refined Function Design included the following key station features and elements:

Station Amenities

Station Entrances	• Given the highly constrained area, a station entrance has been identified off the intersection of Sudbury Street and Dovercourt Road at 55 Sudbury St. The entrance area should include a generous entrance plaza. • A second entrance area is required south of the corridor. It has been proposed as an entrance integrated into the bridge abutment east of the King Street underpass just west of the rail corridor, adjacent to 1100 King Street West. King Street entrances are anticipated to be used by pedestrians and cyclists, and should be designed to provide high quality access for passengers transferring from the 504 King streetcar or 63 bus. • Platform access is proposed to be provided directly from the developer-proposed King High Line bridge. This access is anticipated to be used by pedestrians and cyclists coming from the north, south and west of the station.
Station Circulation	• Staircases should be designed as the primary access between station levels. Elevators should accompany all staircases for accessibility. • A tunnel, crossing below the rail corridor and under the platform, will connect the station entrances on either side of the rail corridor with the vertical circulation to the platform level. • The station will facilitate neighbourhood connectivity across the rail corridor.
Bicycle Facilities	• At least 64 bicycle parking spaces to be provided • Additional bicycle parking facilities should be explored adjacent to each entrance.
Landscaping & Streetscaping	• The primary station entrance should include a generous front entrance plaza, with landscaping, tree planting and amenities to create a high quality public gathering place. • The southern station entrance area and associated landscaping and signage should provide a visible and public presence along King Street.

Passenger Access

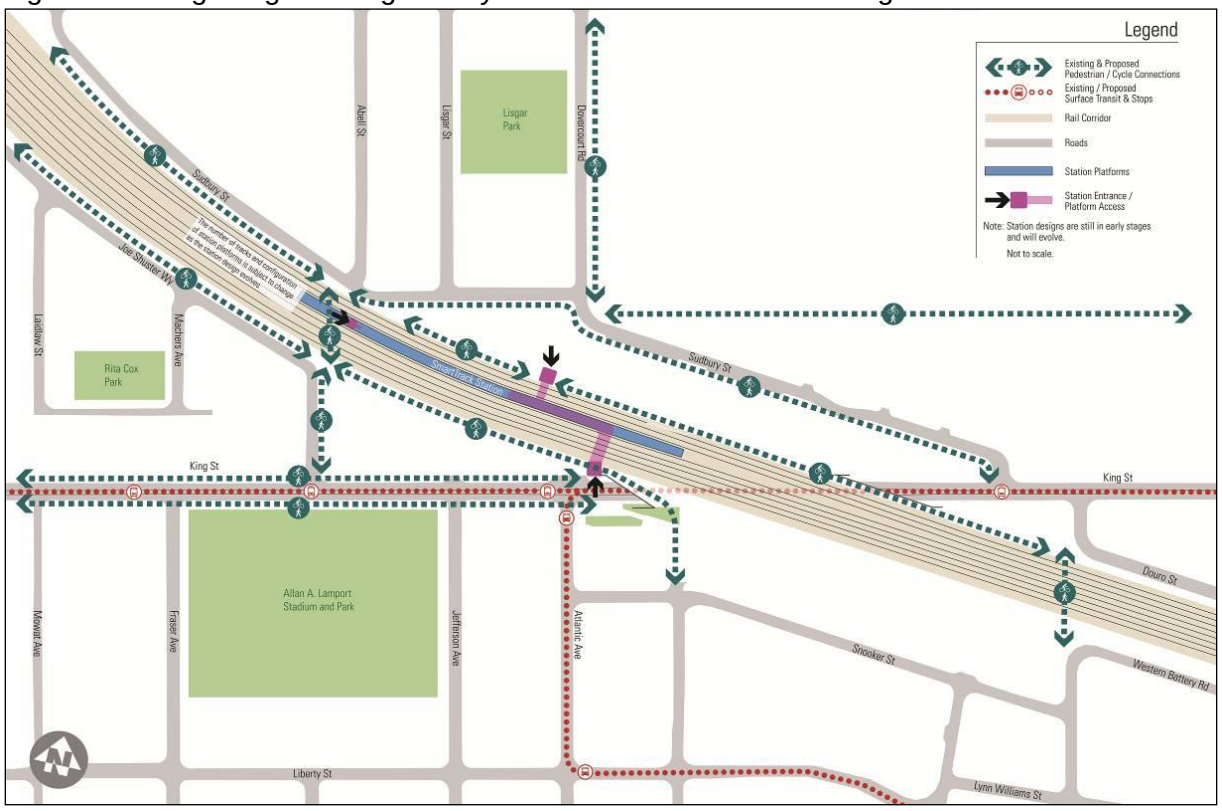
Transit Access	• King Street West accommodates one of the most heavily used streetcar lines in Toronto. The 504 King streetcar operates at 10-minute frequency or better throughout the day, serving nearby stops at Atlantic Avenue (eastbound) and Jefferson Avenue (westbound). The station is also in close proximity to the 501 Queen streetcar and the 63 Ossington bus. • The station should provide a high-quality access for customers between the new station and the streetcar stops on King at Atlantic, and the bus stops on Atlantic at King. • Provide station access for Wheel Trans.

Pedestrian Access	• Pedestrians should access the station entrance areas via sidewalks on the existing street network on both sides of the rail corridor. • The King High Line bridge should be incorporated into the station design to better integrate the communities on both sides of the tracks and facilitate a convenient access point for passengers to the west and north of the station. • Access from Joe Shuster Way via the King High Line bridge is identified as an important linkage.
Connections to Cycling Network	• The proposed West Toronto Railpath (WTRP) extension should be integrated into the station design and include to the ability for its route to pass through the station and continue eastward. The technical feasibility of an elevated pathway on the north side of the corridor should be explored.

Emerging Station Concept

Figure 11 illustrates how the station access is planned to be integrated with the surrounding area and provides guidance for further design refinements.

Figure 11. Integrating the King-Liberty Station within the Surrounding Area



This station will be a focal point for a dense urban neighbourhood that has developed over the past 15 years, providing local residents fast and frequent transit access to downtown Toronto. The station itself will bridge the divide between the north and south sides of the rail corridor, by completing missing links in the pedestrian and cycling networks. Pedestrians and cyclists will also be able to use these links to access the

station itself. Enhanced connections to the existing Exhibition GO Station are also planned to provide an important link between SmartTrack and the Lakeshore West GO Rail Corridor.

Building upon the refined functional design, the key station features and elements include:

- Pedestrian and cycling access to the station will be provided from both sides of the rail corridor through public realm enhancements and tunnel connections. Enhancements being explored include an extension of the planned West Toronto Railpath and a new overpass of the rail corridor (King Highline). It will also be important to have excellent connections between this station and the Exhibition GO Station.
- The station will have good linkages with surrounding roadways including King Street West and Sudbury Street.
- Connections are planned with local transit routes to provide good station access for transferring passengers, including the 504 King and 501 Queen streetcars.

Public and Stakeholder Input

The King-Liberty SmartTrack Station was considered at a stakeholder meeting on October 5 and at a public meeting on October 12. Key messages heard included:

- Participants feel that the area is already congested, and traffic could increase around the station location, especially during special events
- Concerns about safety for pedestrians and cyclists on the street. Ensure safe pedestrian access to station from both ends of station platforms and consider widening sidewalks and adding directional signage.
- The community is a hub for entertainment and employment, and large events attract thousands of people at once. This should be considered as the station is planned.
- Connectivity in the community needs improvement, there is a desire for more pedestrian and cycle paths and links – both within Liberty Village, and extending beyond and across the rail corridor.
- The station provides a variety of transit connections from the community to the station and will help expand the existing cycle network for the community.

Further Design and Technical Considerations

- Liberty Village is a sensitive area with respect to heritage resources and contains structures with heritage status. The rail bridge is a Heritage Bridge, which will need to be carefully reviewed as part of the design process to ensure compatibility and any impacts will need to be mitigated. Removal of any original heritage fabric will need to be carried out carefully.

- An extension of the tunnel south under King Street should be assessed for feasibility, particularly as it relates to the presence of subsurface infrastructure, drainage and hydrology beneath King Street.
- Sudbury and Dovercourt is a problematic intersection that should be redesigned to increase the level of safety for pedestrians and cyclists. The normalization of the curved T-intersection should be reviewed and considered for safe pedestrian crossing to the station entrance. Traffic (east/southbound) along Sudbury Street is very heavy in morning peak period; this can be addressed with turn restrictions to prevent through traffic from using this street as a bypass from King Street West congestion.
- There are potential requirements for noise walls and drainage to mitigate environmental impacts which will require further evaluation as part of the environmental assessment process.

5.3 East Harbour SmartTrack Station

Station Context

The East Harbour SmartTrack Station is proposed to be located immediately east of the Downtown on the Lakeshore East and Stouffville GO rail corridors, spanning both sides of the Don River. The proposed station platforms will extend approximately from the west side of the Don River rail bridge at the Lower Don Trail to just south of the Eastern Avenue rail bridge. The station is located within the Unilever Precinct of the South of Eastern Employment Area.

Although the site is not directly serviced by local or rapid transit today, East Harbour will become a significant interchange station, providing connections with the planned Relief Line and Broadview streetcar extension. The station will be the most direct rapid transit gateway in the network to the future development planned in the Port Lands.

In terms of the policy context, the City's Official Plan shows the East Harbour station area as *Employment Areas* on Map 2, Urban Structure and the land use designation on Map 18 of the Official Plan is *Employment Areas*.

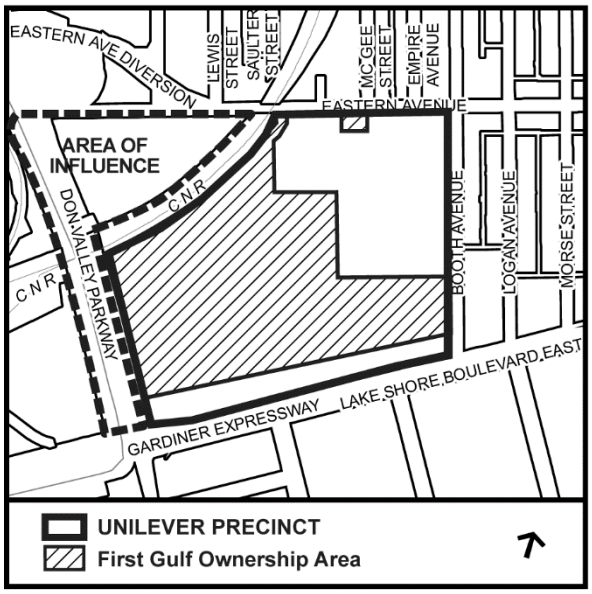
The proposed station area, along with the South of Eastern Employment Area more broadly, is within the Lower Don River flood plain and Special Policy Area (SPA). Provincial approval is required for changes in land use policy, designations or boundaries in SPAs. The Province has not issued a decision on the 2002 City of Toronto Official Plan SPA policies, a matter which continues to be subject to an Ontario Municipal Board appeal. The SPA policies of the former City of Toronto Official Plan with respect to the Lower Don remain in effect.

Official Plan Amendment (OPA) No. 231, arising from the recent Municipal Comprehensive Review of Employment Lands reaffirmed the appropriateness of continued employment uses within the Unilever Precinct, retaining employment land use designations in its entirety. It also introduced Site and Area Specific Policy (SASP) 426

for a portion of the Unilever Precinct south of the rail corridor. Among other things, the SASP calls for a broad variety of non-residential land uses in a comprehensively planned employment area. The Ministry of Municipal Affairs has withheld its decision on OPA 231 SASPs within the Lower Don SPA. Portions of OPA 231 are subject to ongoing Ontario Municipal Board appeals.

In terms of the development context, the East Harbour SmartTrack Station is at the northerly edge of the Unilever Precinct, a 25 hectare (62 acre) block bounded by Eastern Avenue, Booth Avenue, Lake Shore Boulevard, Don Roadway and Don Valley Parkway, in which the largest landowner is First Gulf, as shown in Figure 12.

Figure 12. Unilever Precinct Boundaries showing land owned by First Gulf



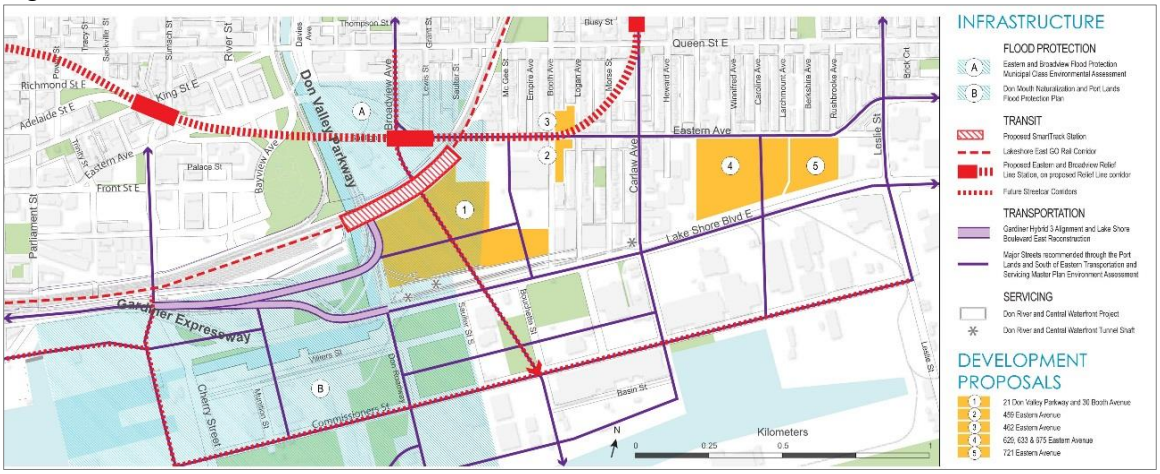
East Harbour Station will unlock transportation access to the Unilever Precinct, a significant redevelopment opportunity site that is being planned to accommodate major employment growth over the next 20-30 years. First Gulf has filed applications for an Official Plan Amendment to accommodate approximately 50,000 jobs within the precinct, as well as rezoning and subdivision applications for lands within the precinct directly under their ownership.

First Gulf submitted rezoning and subdivision applications for a new major employment node focused on office employment, with a substantial retail component, in December of 2016. These applications also completed the 2015 OPA submission. A partial resubmission with an updated Master Plan was provided in September of 2017, reorienting the street grid and building fabric from the 2016 radial plan (which included a significant proposed station canopy stretching south along Broadview) to a more Broadview-centric design with building frontage and address along the streets. The SmartTrack Station is proposed to be fronted along its southerly edge with retail and active uses, to have a prominent civic design, and to face onto a plaza.

Concurrent with the consideration of First Gulf's applications, the City Planning Division is conducting the Unilever Precinct Planning Study to comprehensively consider and consult on First Gulf's vision while also applying a city-building lens to six key areas of focus: planning for jobs, infrastructure coordination, transportation and transit, public realm and heritage, sustainability and built form. The Precinct Planning Study is integrally linked with SmartTrack Station Planning and review of First Gulf's applications. Further information on the Precinct Planning Study, and First Gulf's applications, can be viewed at www.toronto.ca/unileverprecinct.

Figure 13 provides an illustration of the station area context, including infrastructure development and current planning applications.

Figure 13. East Harbour Station Area Context



City of Toronto, Unilever Precinct Planning Study, May 2017

Key Design Challenges

- Design and construction of various infrastructure projects in the lower Don area must be coordinated (including flood protection, Gardiner Expressway rehabilitation, Broadview Avenue road and streetcar extension).
- The geometry of the rail corridor at this location involving the construction of a station on a super-elevated curve.
- Planning and design of the East Harbour Station must be integrated with the overall comprehensive employment Precinct planning, including station location.
- This station will require a well-designed, high-quality entrance(s) at Broadview Avenue for passengers transferring from the future streetcar line. Main entrances on Broadview Avenue both north and south of the rail corridor should be generous and clearly accessible from the public realm. The station will also need to incorporate strong access connections to the future Relief Line station proposed at Eastern Avenue and Broadview Avenue. Access should also be provided at the west end of the station across the river to the Lower Don Trail.
- Access to the station should focus on pedestrians, cyclists and connecting transit services. No commuter parking spaces should be included as part of the station (none are contemplated in the station concept). Care will be needed in planning

for a fully accessible station; however, a conventional GO multi-lane PPUDO facility is not supported by City Planning.
- Adequate and convenient bicycle parking facilities will be needed at the station, as well as connectivity to the surrounding cycling infrastructure network.
- An accessible loading and unloading area will need to be provided in close proximity to the station entrance, with space for TTC Wheel-Trans use.
- Depending on the timing and phasing of implementation of the Broadview Avenue streetcar extension and surrounding development, a temporary loop may be required at this station site. Ultimately, the Broadview Avenue streetcar is envisioned to terminate at an off-street loop at Commissioners Street.
- The proposed west station access at the Lower Don Trail is an important pedestrian and cycling connection to link the new West Don Lands community to the station, and will allow users of the multi-use path to connect across the river. Lighting, orientation and design of this connection should achieve design excellence and promote comfortable usage year-round in all conditions.

Initial Business Case

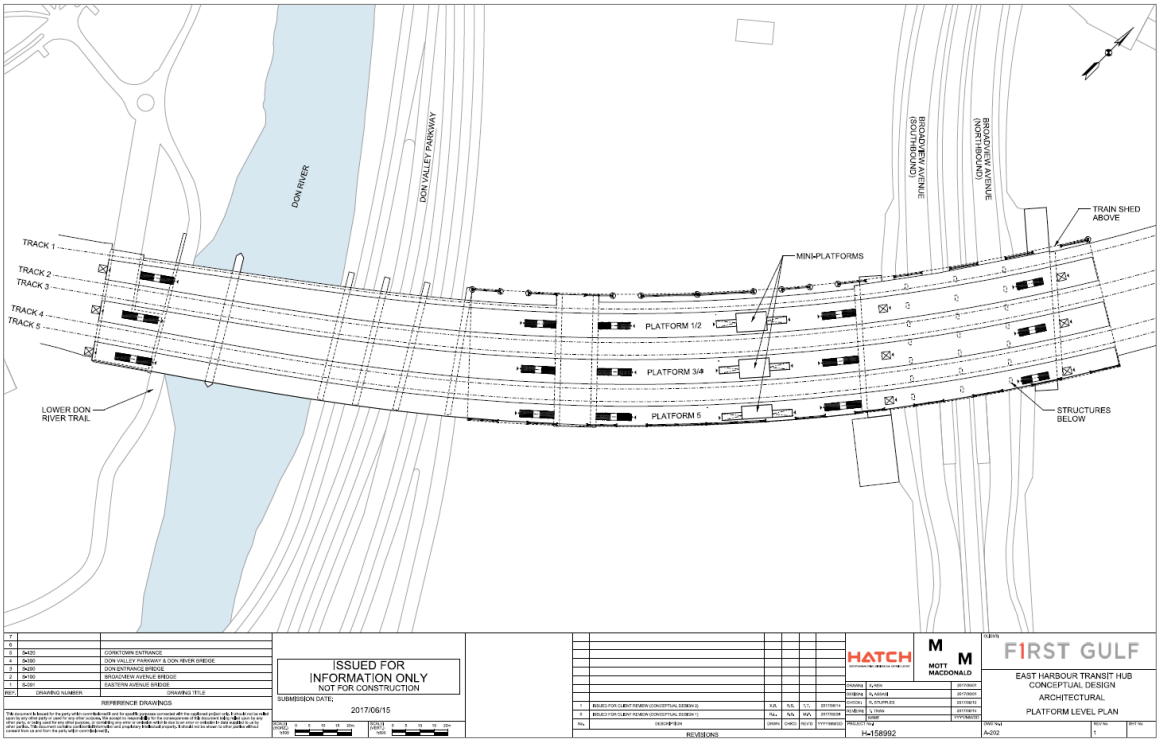
An Initial Business Case process was undertaken in 2016/2017 that considered the Strategic, Financial, Economic and Deliverability/Operations cases for East Harbour station. Several station locations were considered in the "Downtown East" cluster between Union Station and Gerrard/Carlaw SmartTrack station.

The IBC process indicated that the East Harbour station location would perform well in the Strategic, Financial, and Economic Cases. A station at East Harbour would increase ridership by 16 million per year, provide a positive net present value over 60 years, and increase the benefit-cost ratio for the RER program. Challenges are acknowledged with the Deliverability and Operations Case, noting the complexity of constructing the station in this location on the Don River Bridge where the tracks curve. The IBC did not consider these challenges insurmountable.

The initial concept plan as approved by the Metrolinx Board in June 2016 for a station location spanning the Don River and extending east to Eastern Avenue is shown in Figure 14. The key station elements and features in the conceptual design included:

- Entrances from both sides of Broadview Avenue, between the Don River and Broadview Avenue, and the west side of the Don River
- Pedestrian/cyclist connection across the Don Roadway along the south side of the station, connecting to the Lower Don Trail on the west side of the river
- Pedestrian connections to future Relief Line station at Eastern & Broadview Avenues, future Broadview streetcar platforms, and development sites
- An architecturally-designed trainshed covering all platforms and tracks

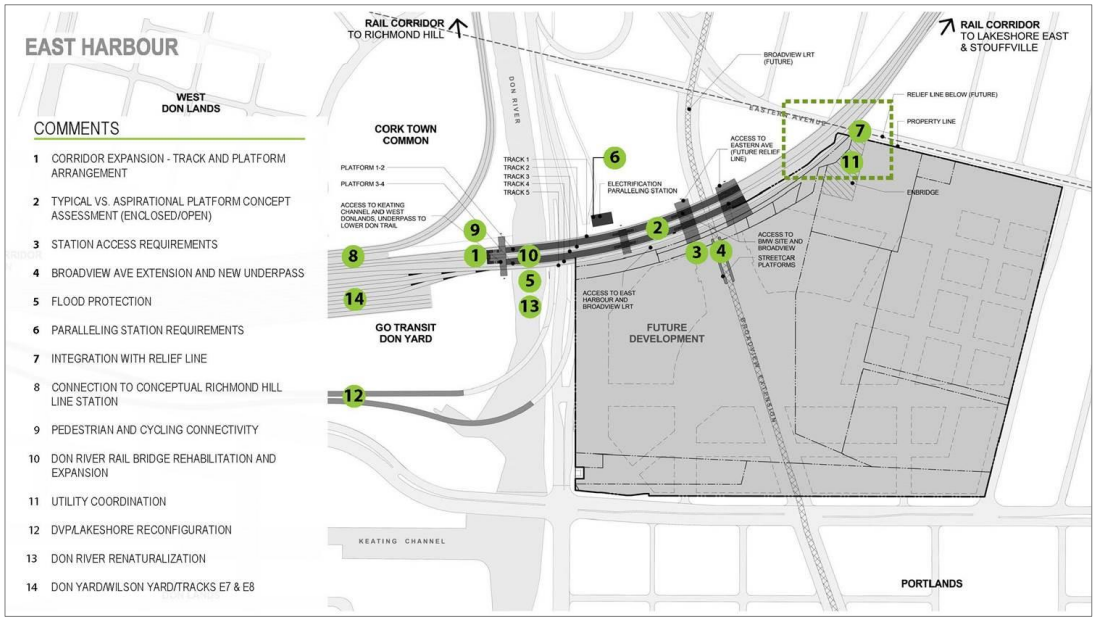
Figure 14. East Harbour Station Initial Concept



Refined Functional Design

Following a series of workshops involving the City, TTC, Metrolinx and First Gulf, a Refined Functional, as illustrated in Figure 15, was prepared in June 2017 to provide general guidance for station design.

Figure 15**.** Refined Functional Design for East Harbour Station



Metrolinx/4Transit, July 2017

The Refined Functional Design included the following key station features and elements:

Coordination with Other Projects

Gardiner Expressway Rehabilitation	• Confirmation of the extent of widening underway to allow the City to advance design work on the Gardiner Expressway connection. • City is finalizing the design of the Gardiner/DVP connection configuration and will provide confirmation about avoiding existing bridge piers.
Don River Rail Bridge Expansion	• Initial work to focus on confirming track and platform requirements and compatibility with existing structures. • Don River rail bridge to be rehabilitated and expanded as required; full replacement will only be considered if rehabilitation is not feasible. • Staging of rail bridge work is critical to the implementation.
Broadview Avenue Extension	• A new underpass of the rail corridor is required for the Broadview Avenue Extension. The new underpass will accommodate a road with streetcar tracks in the center lanes, separated bike lanes and sidewalks. Structural requirements and clearances for streetcar operation will be critical factors in the underpass design.
Flood Protection	• Flood protection/hydraulic connection of the areas north and south of the embankment will need to be confirmed and will affect when this structure can be put in place.
GO Corridor Electrification	• Paralleling station has been sited to the north of the rail corridor – this location is critical to serving the Union Station Rail Corridor and its eastern approaches. • Road access to paralleling station for servicing/maintenance. • Consideration of building the paralleling station into the flood protection landform to reduce its impact on usable area, or relocating the paralleling station further east. • Connections between the Overhead Contact System (OCS) and paralleling station are to be developed.
Relief Line Project Assessment	• A Relief Line station has been approved under Eastern Avenue at Broadview. Connectivity between the two transit facilities will be developed allowing for transit integration. Separate fare and access control will be maintained. The physical separation of the entrance will be determined in conjunction with the TTC design team. • Entrance is far enough removed from the site that direct influence on station elements will be minimal, although preferred entrance locations for the Relief Line Station will need to be coordinated once that work begins.

Station Amenities

Station Buildings/ Entrances	• Fully accessible main station entrances adjacent to Broadview Avenue (main side being on east or west side will depend in part on the Relief Line connection and preference for connection into the proposed development). • A second fully accessible entrance will be provided at the west end of the station, west of the Don River (this entrance will provide access to the West Don Lands neighbourhood north of the rail corridor and future Keating Precinct to the south); connections will need to consider the conceptual Richmond Hill Line station located to the northwest. • A third entrance will be provided midway between Broadview Avenue and the Don Valley Parking, where First Gulf's master plan proposes a plaza adjacent to the Soap Factory building. • Full platform enclosure (trainshed) will be assessed, applying Metrolinx's Design Excellence lens to the architecture, and lessons learned from other stations to overcome ventilation challenges for continued diesel train operations.
Station Circulation	• Staircases should be designed as the primary access between station levels and platforms. • Elevators must accompany all staircases for accessibility.
Bicycle Facilities	• Opportunities to include bicycle parking facilities within the station building will be explored with Metrolinx as the design of the station is developed in greater detail. • Bicycle parking facilities adjacent to the station and serving the station and future commercial development are being considered through First Gulf's East Harbour master plan
Landscaping & Streetscaping	• Generous station plazas located at entrances between the station and future development sites within the Unilever Precinct are being considered through the Unilever Precinct Planning Study and First Gulf's East Harbour master plan. • Streetscaping and public realm treatment of Broadview Avenue and other streets that may be developed to connect with the station will be considered through the Unilever Precinct Planning Study and First Gulf's East Harbour master plan.

Passenger Access

Transit Access	• The station will form part of an important transit hub providing interchange opportunities with the future Broadview & Eastern Relief Line station and the Broadview streetcar extension. • Station design must provide or protect for direct, high-quality transfer facilities with the future Relief Line station and Broadview streetcar extension; adequate capacity must be planned for as high transfer volumes are anticipated to occur at this station. • Station access for Wheel Trans will be considered as part of the development of the street network through the Unilever Precinct Planning Study and First Gulf's East Harbour master plan. • No regular bus service is planned to connect with the station.

Pedestrian Access	• The primary pedestrian access for the station will be from the public sidewalks of the Broadview Avenue extension; other key pedestrian accesses will be from the Lower Don Trail and proposed Soap Factory building plaza of First Gulf's master plan. • A network of PATH connections complementary to the public sidewalks is anticipated to provide weather-protected pedestrian routes within the East Harbour development, and should also connect to the station.
Connections to Cycling Network	• Cycling facilities in the area currently include the Martin Goodman Trail along Lake Shore Boulevard and the Lower Don Trail on the west side of the Don River. On-street bike lanes are provided further to the east on Eastern Avenue. • The City of Toronto's Ten Year Cycling Network Plan (2016) has included an aspiration to connect the Richmond/Adelaide cycle tracks to bike lanes on Eastern Avenue. Installing bike lanes on the Eastern Avenue flyover is a particular challenge to implement. • The Port Lands and South of Eastern Transportation and Servicing Master Plan (TSMP) includes bike lanes on the Broadview Avenue extension, Eastern Avenue, and other new major streets in the Unilever Precinct. • To provide additional cycling connectivity in the area, a separate pedestrian/cycle bridge, south of the rail bridge, crossing the Don River will be provided. This would partly overcome the challenge of making a connection on the Eastern Avenue flyover.

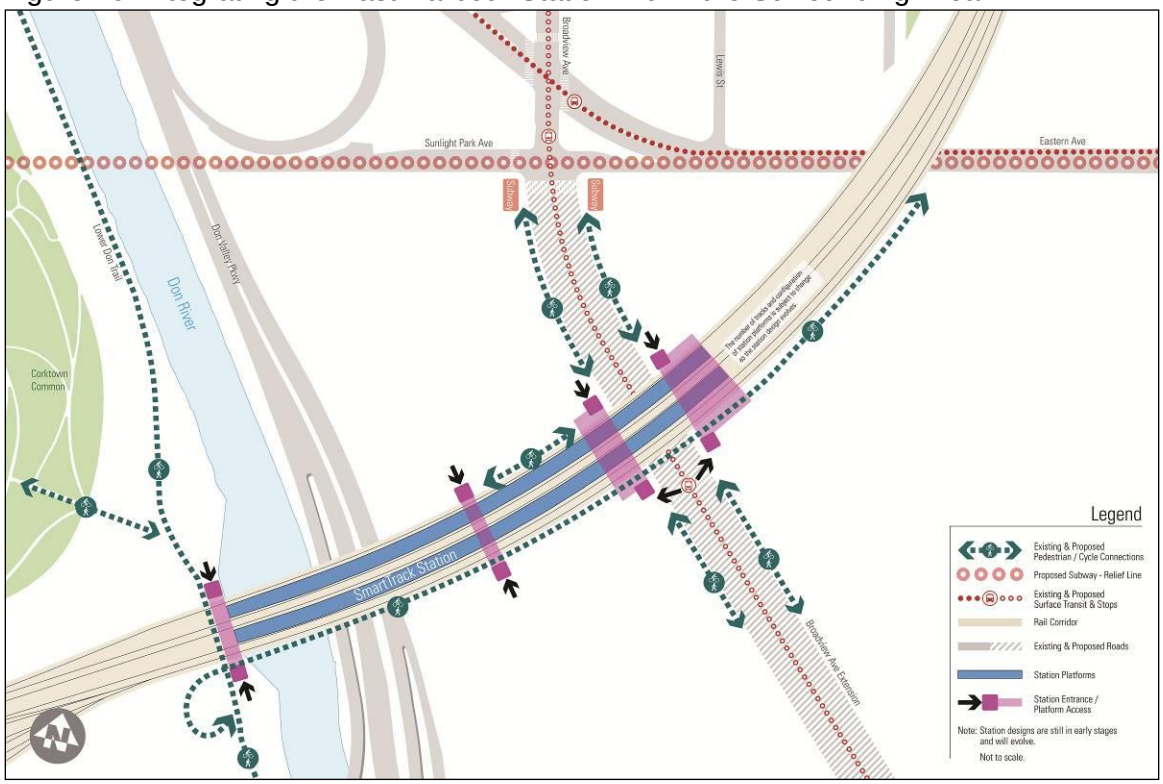
Emerging Station Concept

The East Harbour SmartTrack Station on the Lakeshore East/Stouffville GO Rail Corridors will span the Don River, providing a new pedestrian and cycling connections between two important emerging districts, the Unilever Precinct on the east side of the river, and the West Don Lands/Keating Precinct on the west side. Planning and design of the station is being integrated with the Unilever Precinct Planning Study. The station will provide rapid transit access to serve an emerging major employment node for 50,000+ new jobs on the adjacent lands.

The main station entrance will be in the heart of the planned employment node, where an extension of Broadview Avenue will enhance access to the Unilever Precinct and the Port Lands, including an extension of the Broadview Streetcar. The design of the station is planned to integrate well with the arrangement of streets, blocks, public realm, open spaces, buildings, land uses, and travel patterns being planned, including excellent connections to the planned Relief Line subway station at Broadview Avenue and Eastern Avenue.

Figure 16 illustrates how the station access is planned to be integrated with the surrounding area and provides guidance for further design refinements.

Figure 16**.** Integrating the East Harbour Station within the Surrounding Area



Building upon the refined functional design, the key station features and elements include:

- Station with two island platforms and five tracks (including a bypass track for express trains) spanning the Don River and elevated above the surrounding lands.
- Station entrances at ground level from the future Broadview Avenue extension, between the Don River and Broadview Avenue, and on the west side of the Don River at the Lower Don Trail.
- Pedestrian and cycling access to the station will be provided from both sides of the rail corridor through public realm enhancements and tunnel connections.
- A pedestrian and cycling path crossing the Don River adjacent to the station
- Connections are planned to provide good station access for transferring passengers from the Relief Line and Broadview streetcar extension.

Public and Stakeholder Input

The East Harbour Station conceptual design was presented to the public at a SmartTrack public information centre on October 11. Information about the station was also provided at integrated Unilever Precinct Planning Study/East Harbour Station public meetings on May 16, 2017 and September 28, 2017, a Stakeholder Advisory Committee meeting on October 18, 2017, and a walking tour of the Unilever

Precinct/East Harbour Station area on October 21, 2017. Key messages heard included:

- The station must be open before jobs are located in the Unilever Precinct.
- The western entrance must provide good, safe, accessible connections to the West Don Lands and Keating Precinct.
- The pedestrian/bicycle connection across the river is important.
- Need to provide bicycle parking facilities at the station.
- Connect the station to the precinct with a PATH system.
- The station must be accessible for the mobility impaired.
- The station should be covered to reduce noise from trains pulling in/out.
- The Union Pearson Express should be extended to this station.
- Limit the transfer distance between the SmartTrack station and Relief Line TTC station. There is a desire for protected pedestrian pathways.
- Encourage more safety and security precautions, especially as new pedestrian and bicycle paths are created.
- There were suggestions to consider where the Unilever employees commuting to this area are coming from and plan regional and local service around ridership.

Further Design and Technical Considerations

Current design and technical work related to East Harbour Station is examining the:

- Preferred construction method for widening the rail bridge over the Don River, and determining the need to lengthen the bridge (by moving the eastern abutment) to accommodate changes to the Gardiner Expressway/Don Valley Parkway ramp configuration to support changes to the Don Roadway road configuration
- Protection required for a future underground connection to the Relief Line station through the main entrance of the SmartTrack station, and connectivity to future development on the First Gulf development site
- Design of the underpass for the Broadview Avenue extension through the GO rail corridor, and preferred method of connection to the Broadview streetcar platforms
- Location of the electrical paralleling station needed to serve electric trains on the corridors that was originally proposed north of the rail corridor, but in potential conflict with flood protection works and land use vision around the station
- Design of the pedestrian/cycling connection across the Don River along the south side of the station, and preferred method of attaching this structure to the station
- Design of the western station entrance connection to the Lower Don Trail in anticipation of regular flooding events occurring in the area, and the nature of the connectivity to the West Don Lands and Keating Precinct

- Design of the architectural trainshed or canopies over the station platforms, taking into consideration the need to accommodate ventilation for diesel train operations

Other related initiatives are also underway to facilitate the design and construction of East Harbour station, including:

- Broadview-Eastern Flood Protection EA by the Toronto Region Conservation Authority (TRCA), which is examining the preferred flood protection solution for lands between Eastern Avenue and the Lakeshore East GO corridor. This EA is proceeding in tandem with the SmartTrack station design.
- Broadview Municipal Class Roads EA by the City of Toronto Transportation Services, which is examining the preferred design for the Broadview Avenue extension and streetcar extension identified in the Port Lands and South of Eastern Transportation and Servicing Master Plan (TSMP) EA. Work on this EA is anticipated to commence in December 2017 or January 2018, and will be feeding information as required into the design of the SmartTrack station.
- Relief Line Project Assessment by the City of Toronto and TTC, which has identified a Council-endorsed preferred Pape-Carlaw-Eastern-Queen alignment for the subway line, as well as station locations including the Broadview & Eastern location adjacent to East Harbour. The TPAP process will commence in 2018 and detailed design will be complete by 2019.

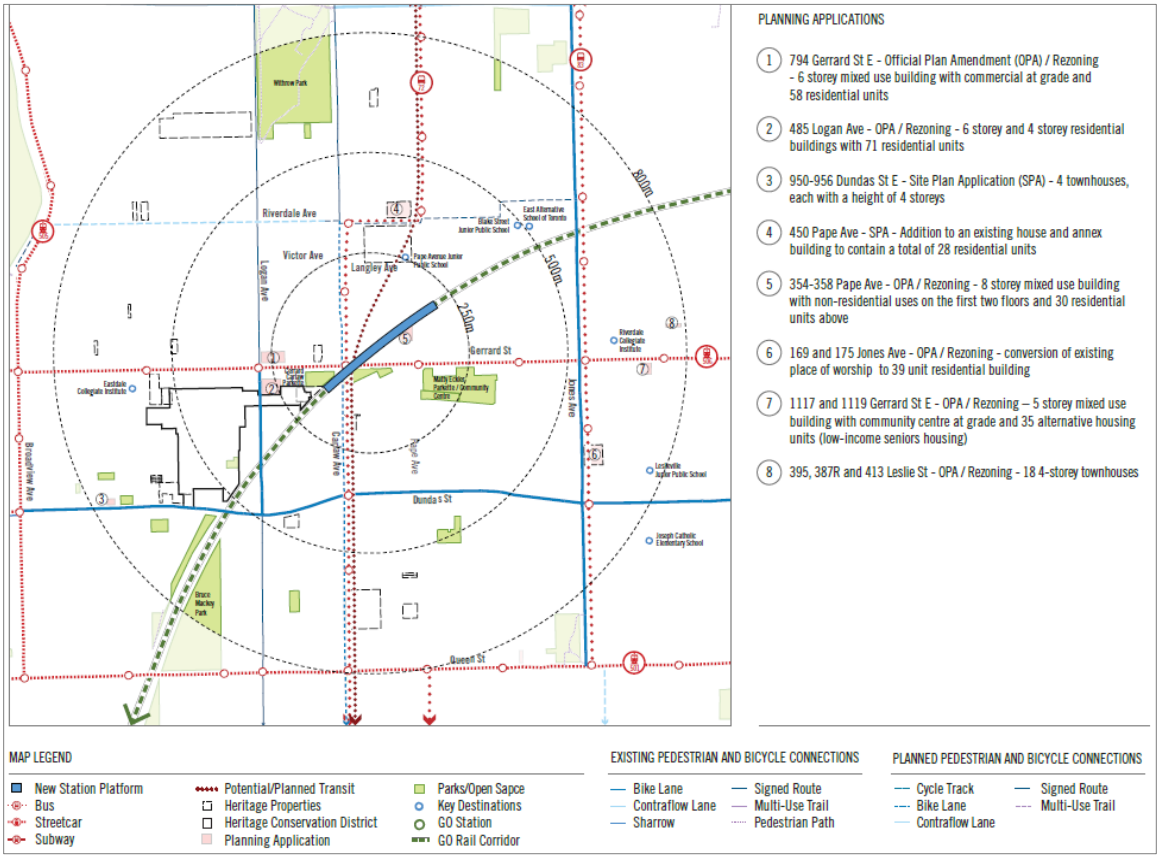
5.4 Gerrard-Carlaw SmartTrack Station

Station Context

The Gerrard-Carlaw SmartTrack Station is proposed to be located near the intersection of Gerrard Street East and Carlaw Avenue, near the Riverdale and Leslieville areas of Toronto's east end. These neighbourhoods are predominantly composed of low and medium density housing. The area in the vicinity of the station contains mainly commercial and residential uses. Gerrard Street is designated as an "Avenue" in the Toronto Official Plan and serves as a local "main street" for the neighbourhood, with both small-scale storefronts and larger shopping centres. Currently, the surrounding density is relatively low; however, this area has been identified as one where more intensive development would be desirable. The area just south of the rail line between Carlaw Avenue and Logan Avenue is designated for employment land uses. The station area is currently served by streetcars on Gerrard Street, as well as buses on Carlaw Avenue.

Figure 17 provides an illustration of the station area, including current planning applications.

Figure 17. Gerrard-Carlaw Station Area Conditions



Key Design Challenges

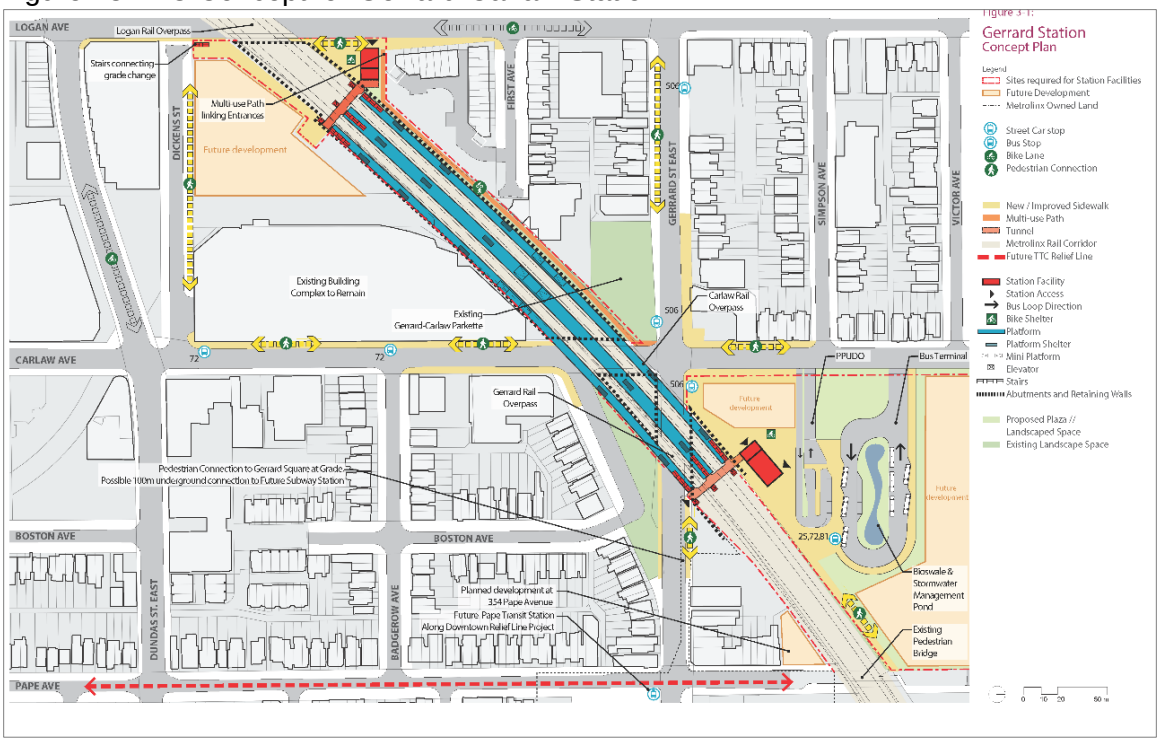
- The station should be located in close proximity to both Pape Avenue and Carlaw Avenue, to best serve the local community, improve neighbourhood connections over the rail corridor, reflect redevelopment potential, and provide interconnection with the Relief Line. This requires a shift in the station location from the concept plan developed as part of Metrolinx's initial business case process. Further analysis is needed to determine potential impacts of this shift on Gerrard Square.
- This station will require well-designed, high-quality access at each of the surrounding major roadways and should include consideration for accessible ramp connections, enhancement of pedestrian underpass connections, indoor bike parking, and improved pedestrian bridge connections. The station will also need to incorporate strong access connections to the future Relief Line station.
- Access to the station should focus on pedestrians, cyclists and connecting transit services. Care will be needed in planning for a fully accessible station; however, a conventional GO multi-lane PPUDO facility is not supported by City Planning. The accommodation for informal passenger pick-up and drop-off needs to be studied further to ensure that this activity does not interfere with transit or traffic operations in the area and considers the impact of traffic infiltration into the neighbourhood.
- Adequate and convenient bicycle parking facilities will be needed at the station.

- Access to the station for TTC Wheel-Trans service will be needed.
- Currently the station location is not directly served by any direct connection to cycle lanes or paths; however, the City's 10 Year Cycle Plan indicates a planned route along Carlaw Avenue.

Initial Business Case

The Metrolinx Initial Business Case (IBC) concept plan, April 2016, is shown in Figure 18.

Figure 18. IBC Concept for Gerrard-Carlaw Station



The IBC concept included the following key station features and elements:

- Two side platforms and one centre platform, a public plaza, a main station building off Carlaw Avenue, two pedestrian tunnels connecting to four station access points, a bus loop, a passenger pick-up and drop-off area (PPUDO), bicycle parking, and three sites for future development. The northeast quadrant of the Gerrard Street and Carlaw Avenue intersection will provide the main point of access for transit in this station location.
- The Gerrard and Carlaw overpasses will have to be substantially widened in order to accommodate the new platforms and realigned tracks, the Logan overpass will need some widening, and the Dundas overpass will need very little or no widening.
- It is recognized that the 120-metre-long pedestrian tunnel between Gerrard station and a Relief Line station under Pape Avenue is longer than preferred

and that a shorter connection would increase the attractiveness of the combined station as an interchange station.

- The location of this station is constrained by narrow corridor width near and east of Pape Avenue and limited ability to expand the corridor due to the high-rise residential building northeast of the Pape Avenue pedestrian bridge, the Gerrard Square mall, and the planned redevelopment of 354 Pape Avenue. An improved connection could be provided if the station were shifted to straddle Pape Avenue and the rail corridor were expanded south.

Refined Functional Design

Following a series of workshops with the City, TTC and Metrolinx staff, a Refined Functional Design, as illustrated in Figure 19 and Figure 20, was prepared in June 2017 to provide general guidance for station design.

Figure 19. Refined Interim Concept Plan

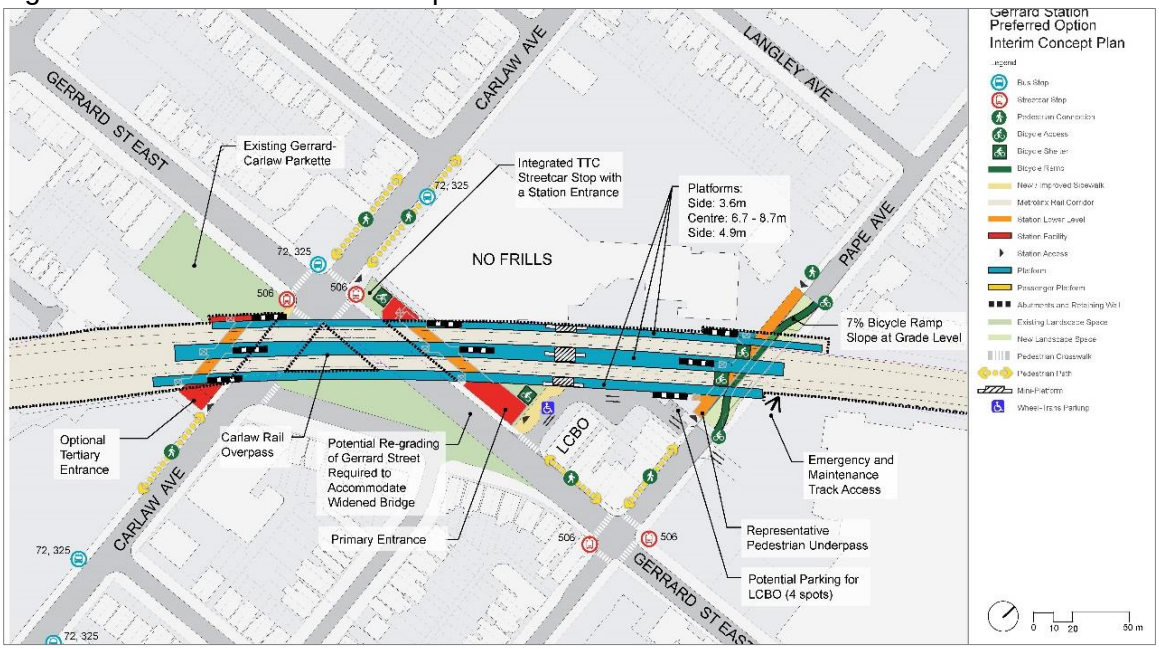
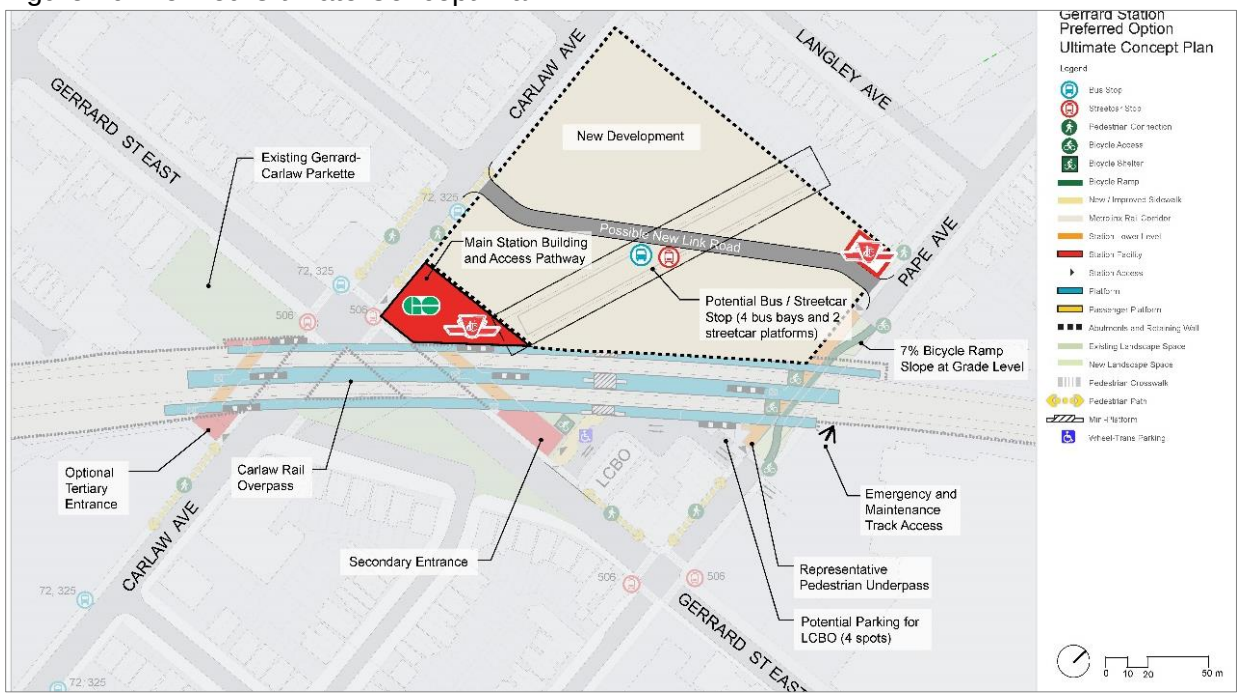


Figure 20**.** Refined Ultimate Concept Plan



The Refined Function Design included the following key station features and elements:

Station Amenities

Station Buildings/ Entrances	• There should be a station presence at the corner of Gerrard Street East and Carlaw Avenue. This should provide access to the station, act as a "front" to be used for wayfinding, and allow for potential integration with a future Gerrard Relief Line Station, as well as other transportation modes. • The need for a third station entrance on Carlaw Avenue at the western extent of the platforms should be considered to promote better connectivity to the residential and employment area to the south.
Station Circulation	• The Pape Avenue overpass replacement should allow all users (including those with mobility challenges) to directly access station platforms. • The redesigned underpass in the refined concept will have stairs and a walkway for pedestrians, including a switchback ramp with a 7% slope for cyclists. The facility will be accessible by means of this ramp or platform elevators. This underpass will provide a barrier-free connection with adjacent neighborhoods and will be an important pedestrian and cyclist link across the rail corridor. • Inclusion of a third station entrance may be desired to allow for easier access to properties located further away from the main access points. • In the refined concept, a third access point from Carlaw Avenue south of Gerrard Street East is provided through a station access tunnel and associated building south of the rail corridor. Inclusion of a station entrance at this location is optional but would facilitate transfers to and from TTC Routes 72, 325, and 506.

	• At the Gerrard Street entrance, the southern side platform is at grade and can be accessed directly from the station building. Elevators provide accessibility to the centre and northern island platforms. As shown in the concept, this access point would not be accessible through the Gerrard-Carlaw Parkette but would instead serve to enhance connectivity to the commercial area to the south.
Bicycle Facilities	• At least 64 total bicycle parking spaces to be provided • Additional bicycle parking facilities should be explored adjacent to each entrance.

Passenger Access

Transit Access	• The station should be designed as a transit hub where GO Rail, streetcar, buses and subway services all connect directly within the station limits to facilitate transfers between routes. • Consideration should be given to ensuring that any planned routes or future service expansions can be accommodated. • Once the refined Relief Line alignment and location of the Gerrard Relief Line Station has been determined, the Gerrard-Carlaw SmartTrack Station design should be modified to maximize integration with the Relief Line Station.
Connections to Cycling Network	• In the City of Toronto Cycling Network Plan, Carlaw Avenue and Riverdale Avenue are identified for planned future cycling infrastructure. Carlaw Avenue is planned to be fitted with either a cycle track or bike lane while Riverdale Avenue is identified as a future quiet street route. • In the refined station concept the underground bike parking on Pape Avenue can be easily accessed by either route. Additionally, covered bike parking at the corner of Gerrard Street East and Carlaw Avenue would directly connect to the higher-order planned infrastructure. • The Pape Avenue pedestrian connection is a key connection in the neighbourhood. This link will likely need to be reconstructed to accommodate cyclists more comfortably than the current bridge, which has no dedicated cycling facilities.
Vehicular Access	• Passenger pick-up and drop-off functions should be considered and addressed through on-street measures where possible; however, a dedicated layby feature has not been provided in the refined concept.
Accessible Loading and Unloading	• Access for one loading bay for a TTC Wheel-Trans or similar accessible vehicle should be provided near the main station building.

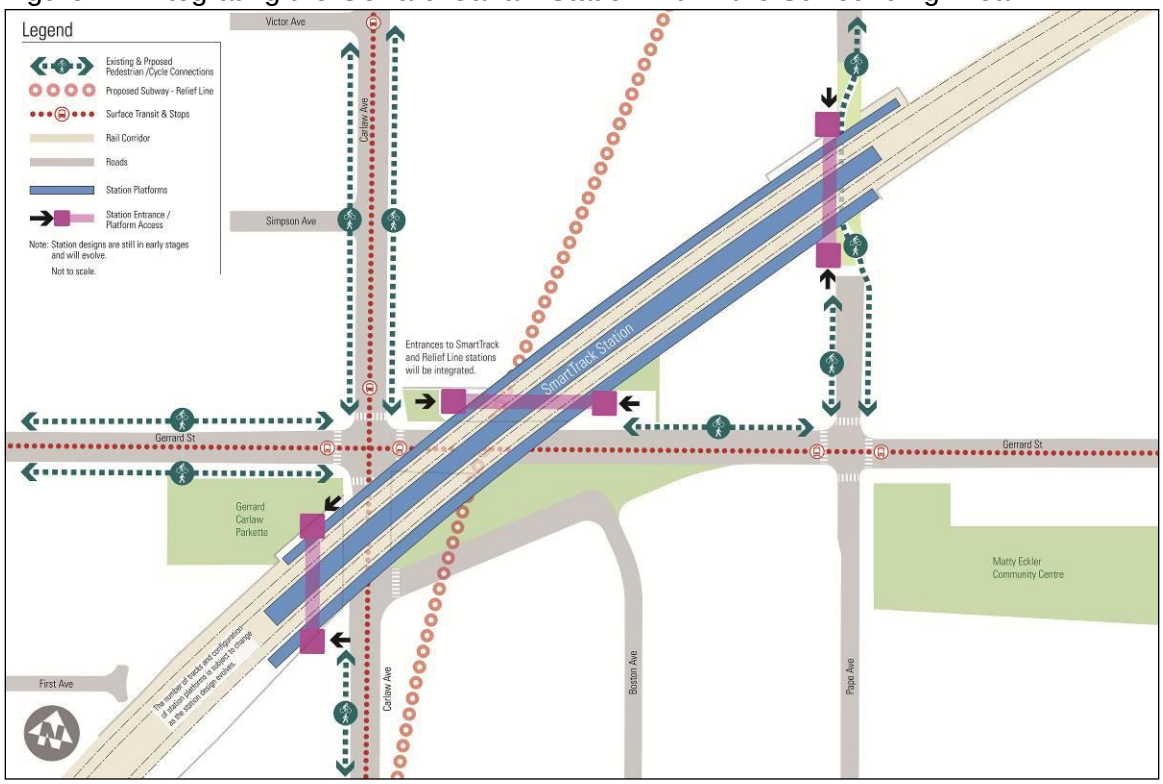
Emerging Station Concept

This new SmartTrack station on the Lakeshore East/Stouffville GO Rail Corridor, located in the heart of historic Leslieville, is being planned and designed as an interchange station with the proposed Relief Line subway, including shared entrances and direct connections between these two rapid transit lines. A well-connected interchange station will provide transit riders with options to access their destinations in downtown and to the north and east. The main station access is planned to be located at the intersection of Gerrard Street East and Carlaw Avenue. There are plans for

additional entrances on both sides of the corridor, north and south of Gerrard to provide an important linkage to the Carlaw-Dundas area which has been transforming into a vibrant mid-use creative and cultural hub.

Figure 21 illustrates how the station access is planned to be integrated with the surrounding area and provides guidance for further design refinements.

Figure 21. Integrating the Gerrard-Carlaw Station within the Surrounding Area



- Pedestrian and cycling access to the station will be provided from both sides of the rail corridor through public realm enhancements and tunnel connections. Enhancements being explored include improvements to the pedestrian and cycling network associated with the station to make it easier to cross the rail corridor, including an improved bridge.
- The station will have good linkages with surrounding roadways including Carlaw Street and Gerrard Street East.
- Connections are planned with local transit routes to provide good station access for transferring passengers, including the 506 Carlton and 505 Dundas Streetcars and the 72 Pape Bus.

Public and Stakeholder Input

The Gerrard-Carlaw Station was considered at a public meeting on October 11. A Stakeholder Advisory Group meeting is planned for Nov 15. Key messages heard included:

- Concern was heard about the number of local stops on the regional line, and the time this will add to passenger travel.
- There were concerns over the impact on local business during construction, and a desire for mitigation efforts and community benefit.
- The noise and negative impact on quality of life for residents from frequent trains running through the community was raised.
- There is a desire for separate services for urban and regional commuters, as the train may be full by the time it reaches the station.

Further Design and Technical Considerations

- Determine feasibility of a future Route 505 streetcar extension and termination loop on the current LCBO site
- Connectivity between the future Gerrard Relief Line Station and Gerrard SmartTrack Station
- Third southern station access point.
- Impacts on bordering properties due to construction of the Pape Avenue pedestrian underpass and restriction of access to Pape Avenue
- Minimizing impacts on the Gerrard Square Mall loading facilities by refining the alignment of the track and platforms.
- Replacement of the existing Pape Avenue pedestrian bridge may need to be undertaken to accommodate the Metrolinx electrification project.

5.5 Lawrence-Kennedy SmartTrack Station

Station Context

The Lawrence-Kennedy station is proposed to be located on the Stouffville GO Corridor at Lawrence Avenue East, between Kennedy Road and Midland Avenue. The surrounding area consists of medium- and high-density neighbourhoods, and a mix of industrial, office, and residential uses with a range of densities, as well as several parcels of vacant land. The surrounding Dorset Park area is predominantly low-rise, with a cluster of mid- and high-rise buildings east of the station site. While concentrated commercial and retail uses exist along nearby arterial roads including Kennedy Road and Midland Avenue, much of the surrounding area has been dedicated to transportation infrastructure and utility uses, including the Gatineau Hydro Corridor 400 metres south of the site. Wide streets and large separations between uses and destinations result in an unfriendly pedestrian environment in the station's vicinity.

The Lawrence-Kennedy station was selected to provide a direct connection with existing local transit services on Lawrence Avenue East, as well as to serve existing employment areas and emerging mixed-use corridors designated in the City's Official Plan.

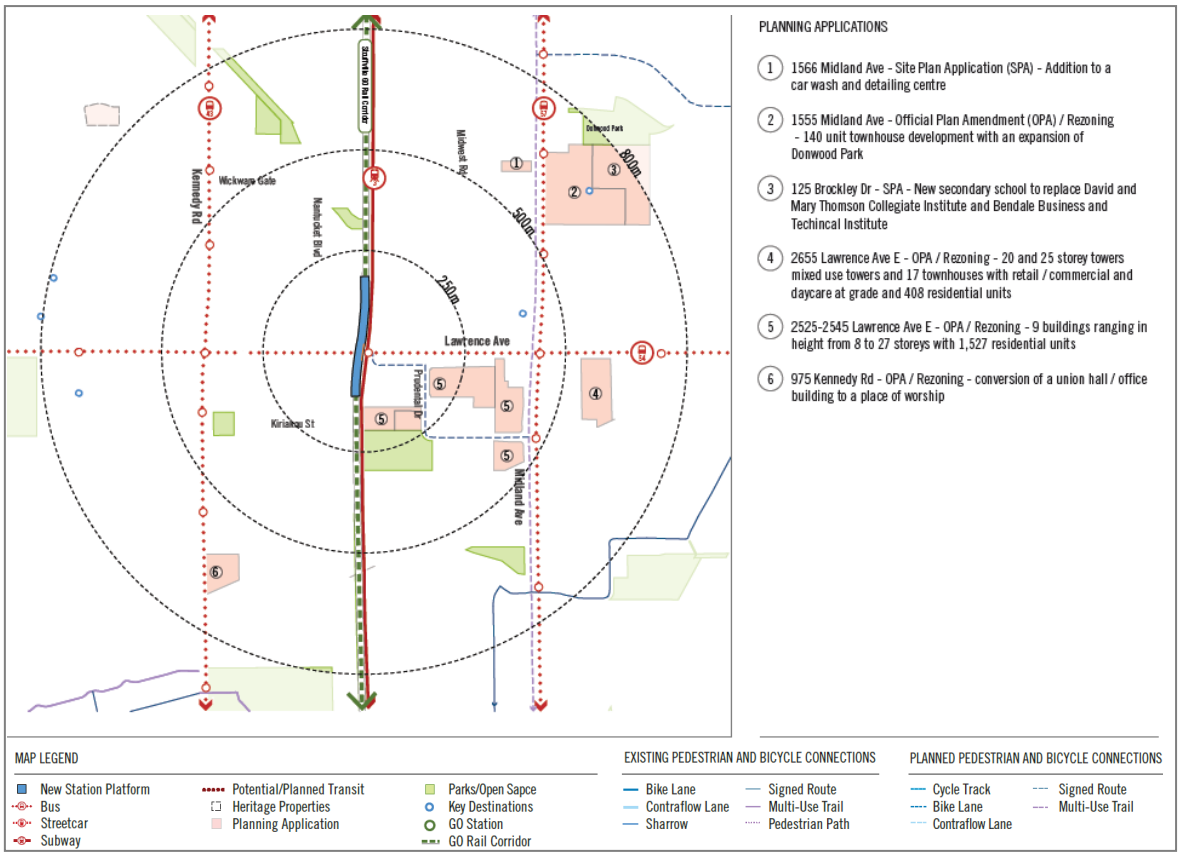
This area is currently served by Line 3 Scarborough, which operates at 4-5 minute headways during the peak period. This station will provide an important rapid transit

connection for local residents and employees, as well as a north-south interchange for the busy surface 54 Lawrence bus route serving the area. There are approximately 7,500 all day boardings at the Line 3 Lawrence-Kennedy station and approximately 10,500 surface transit riders pass this station location each day.

The City's Official Plan identifies the lands within proximity to Lawrence-Kennedy Station as Avenues and Employment Areas as shown as shown on Map 2, Urban Structure. The land use designations within the station area are generally a combination of Mixed Use Areas, Apartment Neighbourhoods, and Employment Areas on Official Plan Map 20.

Figure 22 provides an illustration of the station area, including current planning applications.

Figure 22. Lawrence-Kennedy Station Area Conditions



Key Design Challenges

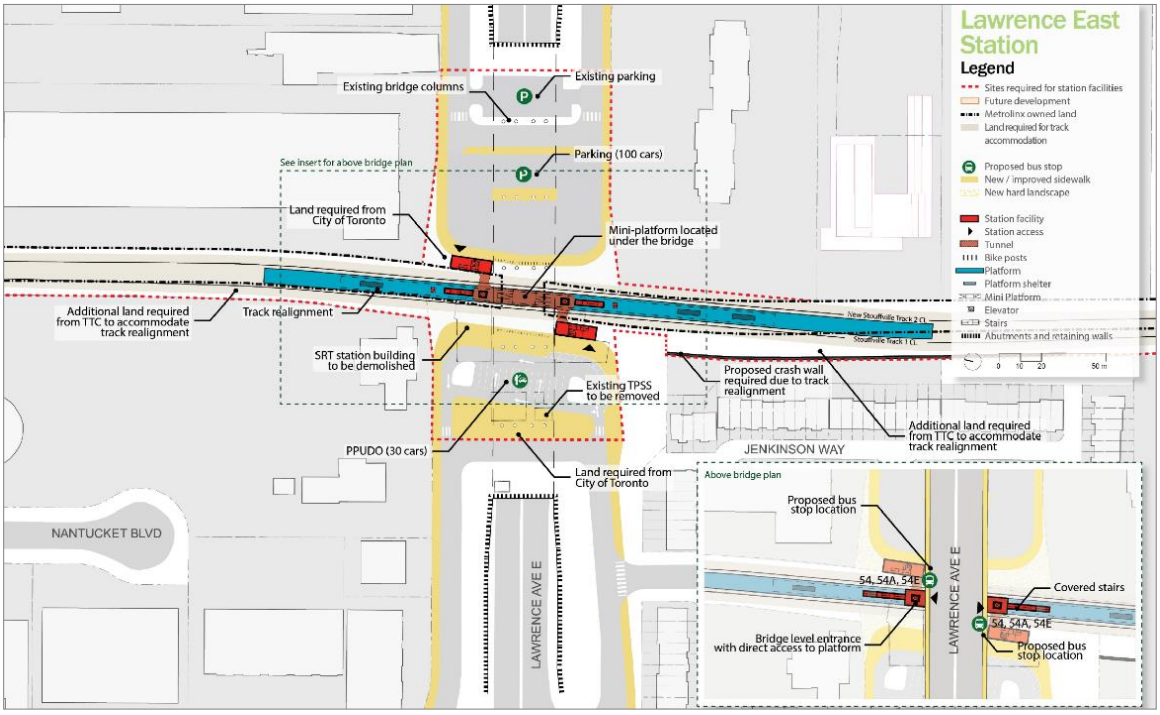
- Construction phasing will need to be coordinated with the construction of the Scarborough Subway Extension and the decommissioning of the Lawrence SRT station.

- This station will require a well-designed, high-quality entrance at Lawrence Avenue East for passengers transferring from the busy 54 Lawrence East high volume buses, in particular to resolve issues related to the grade separation.
- Adequate and convenient bicycle parking facilities will be needed at the station.
- An accessible loading and unloading area needs to be provided in close proximity to the station entrance.

Initial Business Case

The Metrolinx Initial Business Case (IBC) concept plan, April 2016, is shown below in Figure 23.

Figure 23. Lawrence-Kennedy Station IBC Concept



The IBC concept included the following key station features and elements:

- A single centre platform, two station buildings, two platform access points, and Passenger Pick-Up and Drop-Off (PPUDO) and surface parking facilities.
- The rail track and station platform have been aligned to allow the platform to be as straight as possible, given the constraints of the rail corridor.
- The placement of the station's entrances and mini-platform allow an improved, more direct transfer to be made between Lawrence Avenue TTC bus services and the proposed station. Access will be facilitated from atop the Lawrence Avenue road bridge down to the station's central platform via new elevators/stairs. TTC bus stops currently located east and west of the road bridge footings will be relocated onto the bridge itself. The mini-platform itself is positioned directly between the two sets of elevators/stairs, minimizing travel

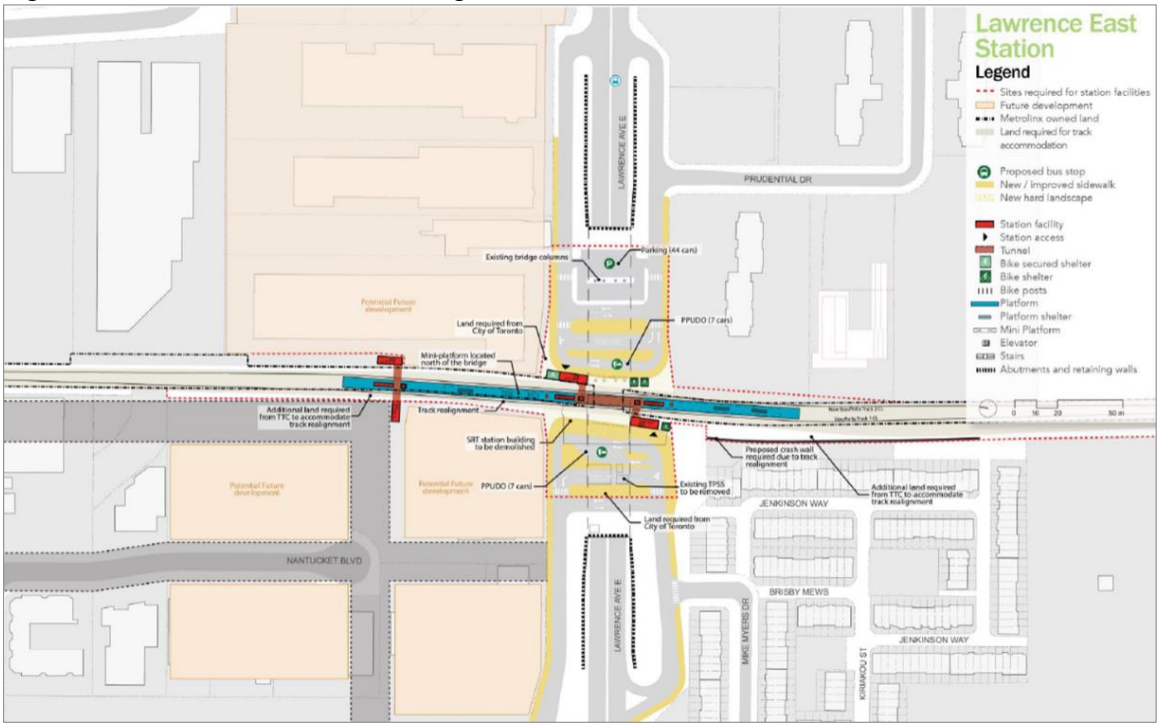
distances for passengers with mobility needs. All station entrances will be accessible.

- Both ground-level station buildings (east and west) are positioned so as to be highly visible for drivers approaching the station from either direction along Lawrence Avenue. The combination of these repositioned ground-level station buildings and the bridge-top access structures will significantly improve the station's overall visibility for users.
- The SRT station's existing levels of surface parking will be maintained in the new station, and not expanded. A moderate PPUDO facility, accommodating 30 cars, is proposed for the west side of the rail corridor.
- The station's conceptual design is predicated on the removal of the existing SRT station facilities and track.

Refined Functional Design

Following a series of workshops with the City, TTC and Metrolinx staff, a Refined Functional Design, as illustrated in Figure 24, was prepared in June 2017 to provide general guidance for further station design.

Figure 24. Refined Functional Design



The Refined Function Design included the following key station features and elements:

- Overall coordination with the Scarborough Subway Extension project, to ensure Line 3 (SRT) remains operational until the Line 2 extension from Kennedy Station to Scarborough Centre is built.

Station Amenities

Station Buildings/ Entrances	• A primary station entrance area should be provided at Lawrence Avenue, with access points above and below the overpass. This entrance area is expected to handle the majority of passengers, including passenger transfer between bus stops. • A secondary entrance area should be provided near the northern end of the platform.
Station Circulation	• Staircases/escalators should be designed as the primary access between station levels. Elevators should accompany all staircases/escalators. • A tunnel, crossing below the rail corridor and under the platform, will connect the station entrances on either side of the rail corridor with the vertical circulation to the platform level.
Bicycle Facilities	• At least 64 total bicycle parking spaces to be provided • Additional bicycle parking facilities should be explored adjacent to each entrance.
Landscaping & Streetscaping	• Maximize the space in front of the PPUDO lay-by, to form an enhanced plaza that includes seating, landscaping, and lighting. • Shade tolerant planting should be considered below the overpass. • The northern station entrance area and associated landscaping and signage should provide a visible and public presence in the evolving neighbourhoods in the vicinity.

Passenger Access

Transit Access	• The 54 Lawrence East bus is a high volume east-west surface transit route serving the Lawrence East corridor, and it will be important to ensure that surface transit riders have a high-quality connection to the station.
Bus Stops	• Relocated TTC bus stops onto the apex of the bridge to provide the optimal arrangement for facilitating efficient vertical and direct transit connections • Space must be allocated for two 18-metre articulated buses to stop on both sides of the bridge at the same time, including generous sidewalk space and weather protection for waiting passengers adjacent to bus stops.
Pedestrian Access	• Pedestrians should access the station entrance areas via sidewalks on the existing street network on both sides of the rail corridor. • A pedestrian pathway should be considered along the west side of the rail corridor, from the Lawrence Avenue station entrance northward.
Connections to Cycling Network	• There are currently no direct cycling network connections to the station site. The nearest connection to a multi-use trail is 900 m south east from the station. • Midland Avenue is identified as a “corridor where future study may be considered as part of City of Toronto 10 Year Cycling Network Plan. If a facility is constructed on this road in the future, it should be connected directly to the station by means of off-street multi-use paths or on-street dedicated facilities.

Vehicular Access	• Vehicles can access Lawrence-Kennedy Station via the existing service access points on Lawrence Avenue entrance area, at the beginning of the overpass. • Vehicular access to the north entrance area will be determined based upon the configuration of future street network.
Passenger Pick-up and Drop-off (PPUDO)	• The Concept Design has provided for two lanes for PPUDO– one as a layby area and one for free movement. • The station should provide a PPUDO area for motorists at the main entrance under the bridge.
Parking	• The Design Concept has preserved 44 of the 100 parking spaces in the existing SRT lot. • The parking area should focus on priority users, including accessible parking, car share, and carpooling. • Accessible Loading & Unloading / Wheel Trans layby must be provided adjacent to station entrance area under the Lawrence Avenue overpass.

Emerging Station Concept

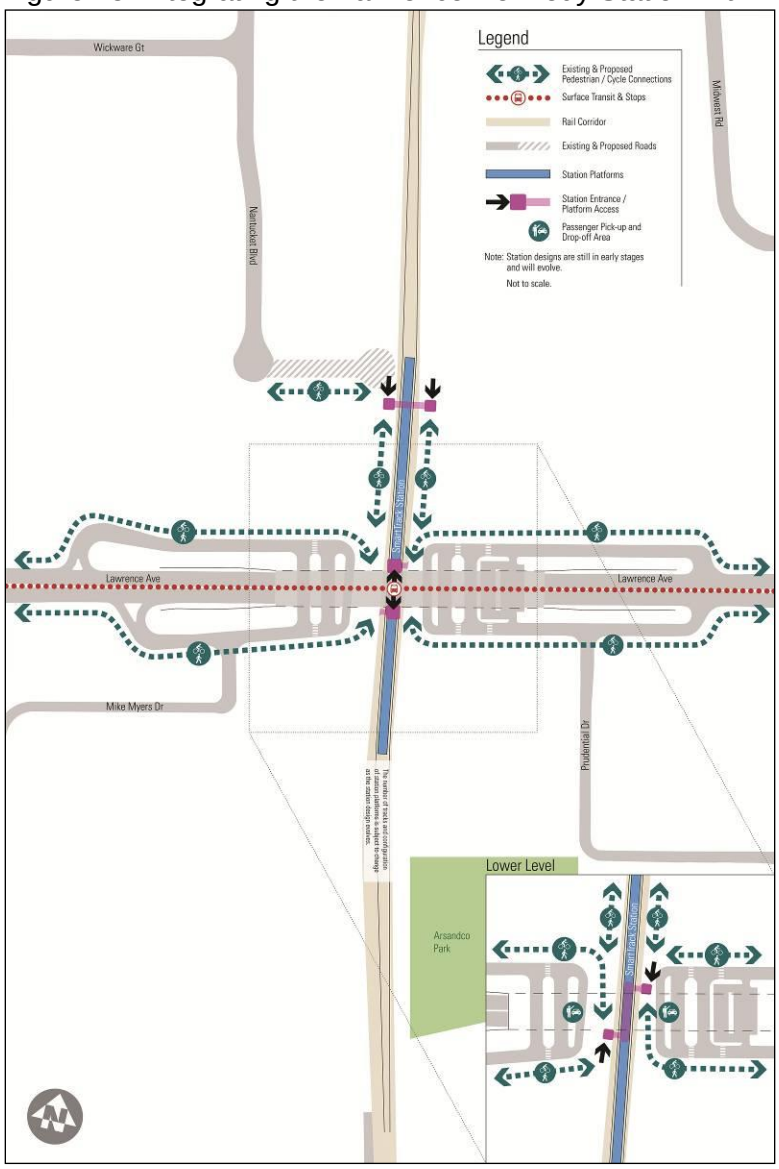
This new SmartTrack station on the Stouffville GO Rail Corridor will replace the existing Lawrence East Station on TTC's Line 3, providing critical access to downtown and the rapid transit network for transit riders in the busy Lawrence East corridor. The station is planned to straddle Lawrence Avenue East and provide enhanced connections with buses, using stairs and escalators or elevators. There will be new bus stops located on the bridge deck directly above the new station island platform. Pedestrian and cycling access to the station will also be provided to existing neighbourhoods to the south of the new station, and new local streets are being planned to unlock the potential of the quadrant to the north-west of the station.

Figure 25 illustrates how the station access is planned to be integrated with the surrounding area and provides guidance for further design refinements.

Building upon the refined functional design, the key station features and elements include:

- Pedestrian and cycling access to the station will be provided from both sides of the rail corridor through public realm enhancements and new connections.
- The station will have good linkages with Lawrence Avenue East.
- Connections are planned with local transit routes to provide good station access for transferring passengers, including the 54 Lawrence East, 57 Midland, and 43 Kennedy Buses.

Figure 25. Integrating the Lawrence-Kennedy Station within the Surrounding Area



Public and Stakeholder Input

The Lawrence-Kennedy Station was considered at a stakeholder meeting on September 28 and at a public meeting on October 10. Key messages heard included:

- Promotes a variety of transit connections from the community to the station
- Ensure good connections to the cycling network are considered
- Will promote more businesses and development in the area
- Concerns about increased train traffic along the corridor
- Concerns about the number of existing at-grade rail crossings which will contribute to increased traffic conditions and pedestrian safety
- Requirement for fare integration
- Request for more commuter parking at this station

- Many were opposed to the removal of parking spaces and the limited passenger drop-off area. Access by car is understood to be important in this area.
- Community supported bicycle path connection along Midland Avenue.
- Concerns were raised regarding impacts on small businesses, congestion and increased noise levels due to construction.
- There is a desire for multiple points of entry to the station.
- There is desire for increased surface transportation options to the station.

Design Refinements since Public Consultation

Since public consultation was undertaken in September and October, further refinements have been explored for this station concept to ensure that it can be implemented while maintaining the continued operation of the TTC Line 3 (Scarborough RT). The City and TTC have committed to maintaining Line 3 operations until the opening of the Line 2 Extension to Scarborough Centre (Scarborough Subway Extension).

Design refinements focus on fitting the station into the available space east of the existing Lawrence East Station on Line 3, while maintaining the integrity of the preferred concept including direct access from the Lawrence Avenue East overpass to the Lawrence-Kennedy platforms for transferring bus passengers. Refinements require the implementation of side platforms rather than an island platform, and the provision of direct connections to both side platforms. Tunnels beneath the tracks will also be required to allow access to both platforms for people either walking into the station at ground-level, or transferring from Line 3 (while it remains in operation until the opening of Line 2 extension).

Further Design and Technical Considerations

- A bridge condition assessment should be undertaken to determine whether the additional facilities and pedestrian area widening at the apex of the Lawrence Avenue overpass will necessitate structural reinforcement.
- A Traffic Impact Assessment to determine the potential for traffic impacts caused by buses stopping on the Lawrence Avenue overpass.

5.6 Finch-Kennedy SmartTrack Station

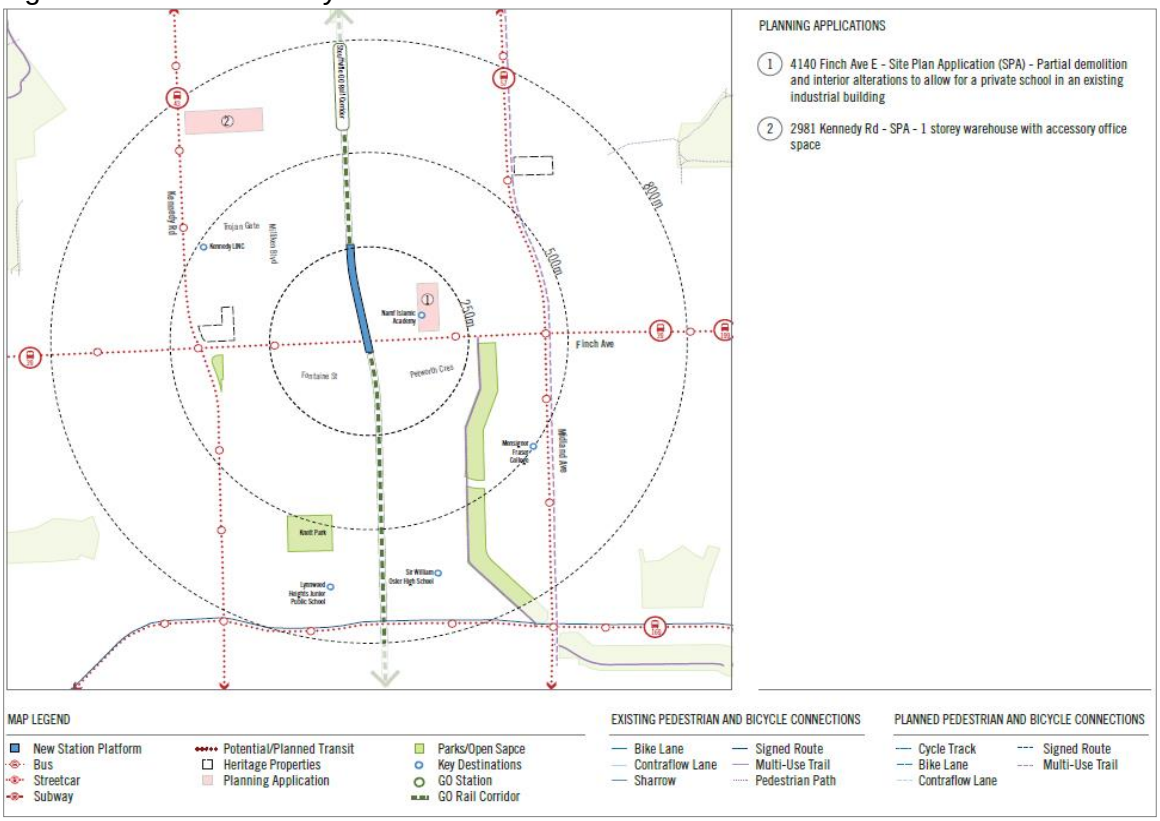
Station Context

The Finch-Kennedy station is proposed to be located on the Stouffville Corridor at Finch Ave East, between Kennedy Road and Midland Avenue. This potential new station is adjacent to the Milliken suburban neighbourhoods of Port Royal, Rosewood, Bridlewood and L'Amoreaux. The potential site will be located on lands currently used for low-density, car-oriented industrial and commercial buildings, located far from the road and offering free parking. This area was developed over 30 years ago when agriculture left the area and was replaced by the development of single detached homes and low-

density employment areas. The demographic is made up of new immigrants, particularly of Chinese descent, and is home to one of many “Chinatowns” in Toronto.

Finch-Kennedy Station will serve as an important point of transfer within the transit network by providing connections with 39 Finch East and 199 Finch Rocket bus routes. Approximately 14,000 surface transit riders pass this station location each day. Planning Context Map 2, Urban Structure, of the City's Official Plan identifies the lands adjacent to this station as Employment Areas and the land use designation on Official Plan Map 19 are generally Employment Areas and Neighbourhoods. Figure 26 provides an illustration of the station area, including current planning applications.

Figure 26. Finch-Kennedy Station Area Conditions



Key Design Challenges

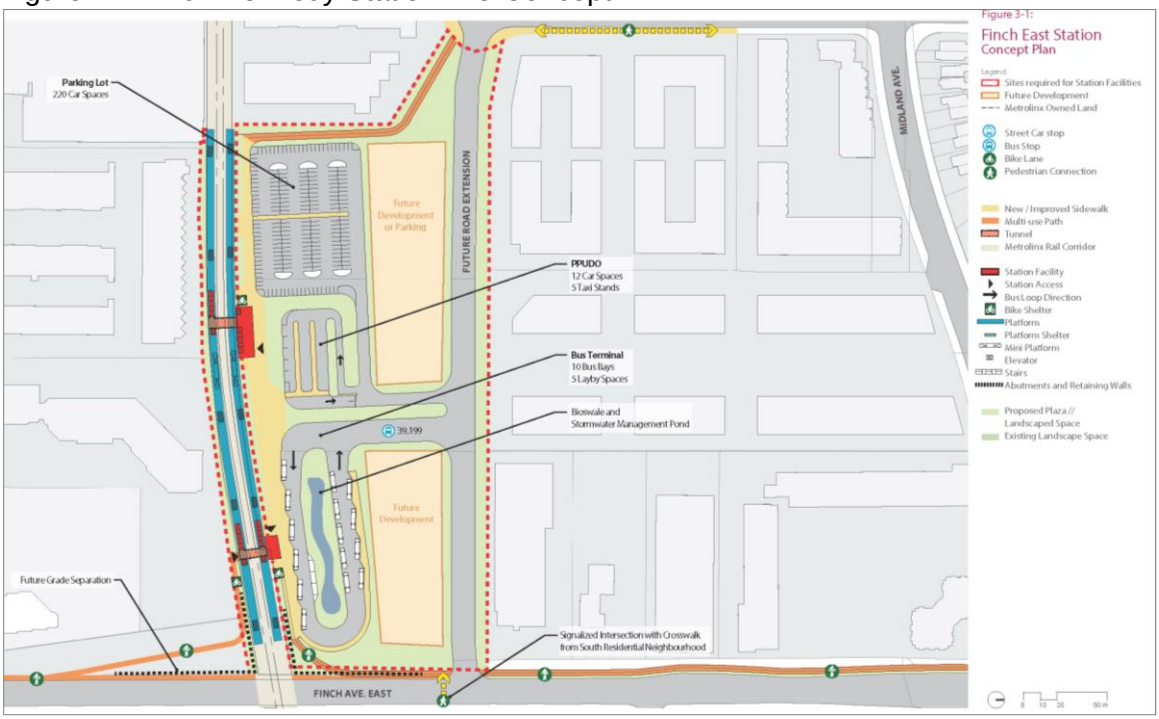
- A grade separation is required between the Stouffville GO Corridor and Finch Avenue East for the implementation of Regional Express Rail in the area of Finch East Station. Station design will need to be coordinated with this grade separation work.
- This station will require a well-designed, high-quality entrance at Finch Avenue East for passengers transferring from buses, in particular to resolve issues related to the grade separation.

- An accessible loading and unloading area needs to be provided in close proximity to the station entrance. TTC Wheel-Trans will use this area or a bus bay in an off-street bus terminal, if provided.
- Access to the station should focus on pedestrians, cyclists and connecting transit services. No commuter parking spaces should be included as part of the station (Metrolinx station concept included 220 parking spaces). Care will be needed in planning for a fully accessible station; however, a conventional GO multi-lane PPUDO facility is not supported by City Planning.
- Adequate and convenient bicycle parking facilities will be needed at the station.
- Direct connections for passengers transferring from surface transit along Finch Avenue East needs to be a key consideration for this station.
- The need for and location of an access road for this station needs further consideration.

Initial Business Case

The Metrolinx Initial Business Case (IBC) concept plan, May 2016, is shown below.

Figure 27. Finch-Kennedy Station IBC Concept



The IBC concept included the following key station features and elements:

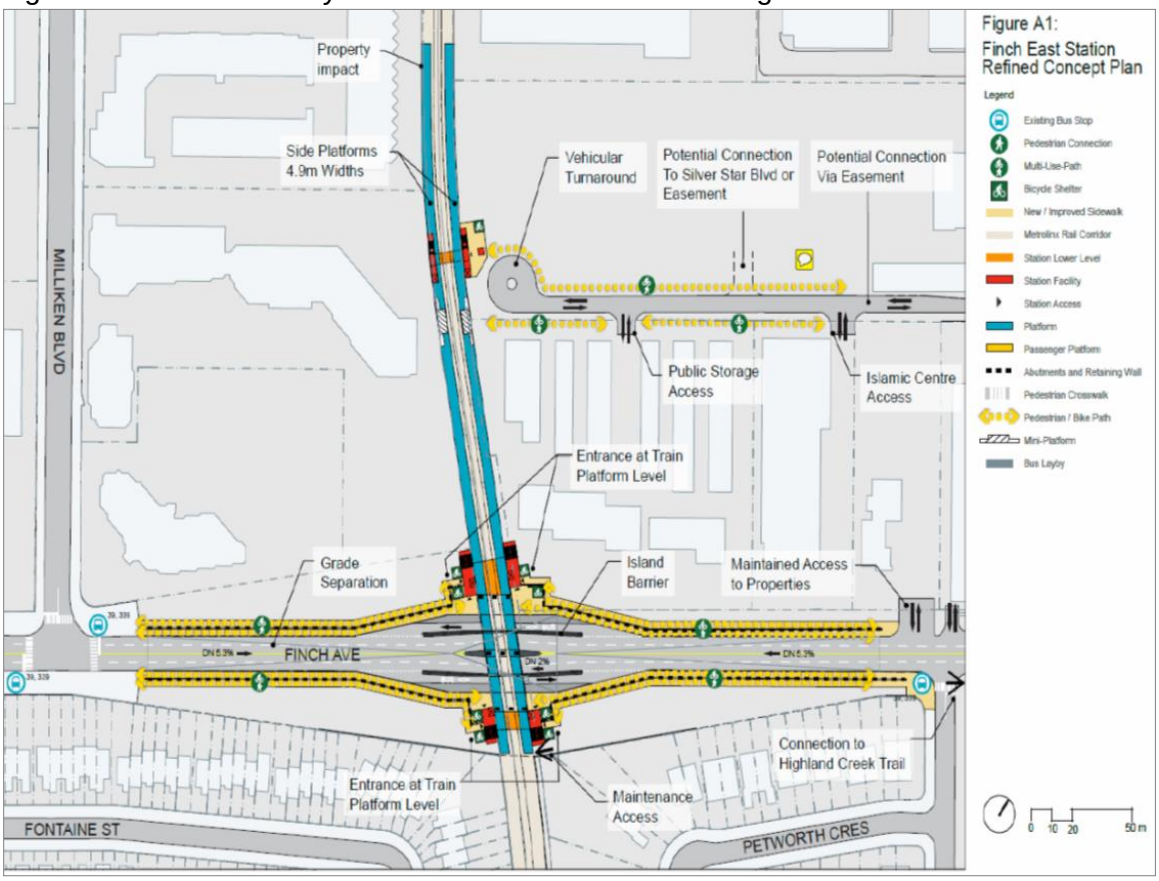
- Two side platforms, a main station building, three platform access points, bicycle parking, a parking lot (220 spaces), pick-up / drop-off area (PPUDO), a 10-bay bus terminal, a new public street, and two future development sites.
- The station has been located on the north side of Finch Avenue to avoid impacting the established residential neighbourhood to the south.

- At this station site, Finch Avenue will be the main point of access for vehicles, transit, pedestrians and cyclists. It is the busiest vehicular corridor in the area and the Finch East bus corridor is the busiest outside of downtown Toronto (north of Bloor Street).
- A new public street connecting Finch Avenue to Silver Star Boulevard will provide access to the station site.
- A parking lot with 220 spots, with the potential for additional parking at the future development site on the northeast corner of the station site.
- The station will be accessible from the northeast, southeast and southwest, with opportunity to be accessed from the northwest if future demand and redevelopment occurs.

Refined Functional Design

Following a series of workshops with the City, TTC and Metrolinx staff, a Refined Functional Design, as illustrated in Figure 28, was prepared in June 2017 to provide general guidance for further station design.

Figure 28: Finch-Kennedy Station Refined Functional Design



The Refined Function Design included the following key station features and elements:

Station Amenities

Station Buildings/ Entrances	• Highly visible station building oriented to face Finch Avenue East. • Secondary Entrance north of Finch Avenue East to provide direct access to the mini-platform and passenger pick-up and drop-off.
Station Circulation	• Direct pedestrian connections are proposed between the station and both sides of Finch Avenue, where bus riders will board and alight beneath the rail structure. • Through the use of the station platforms on the rail overpass, pedestrians and dismounted cyclists will be able to use the station as a means of crossing Finch Avenue East.
Bicycle Facilities	• At least 64 total bicycle parking spaces to be provided • Additional bicycle parking facilities should be explored adjacent to each entrance.

Passenger Access

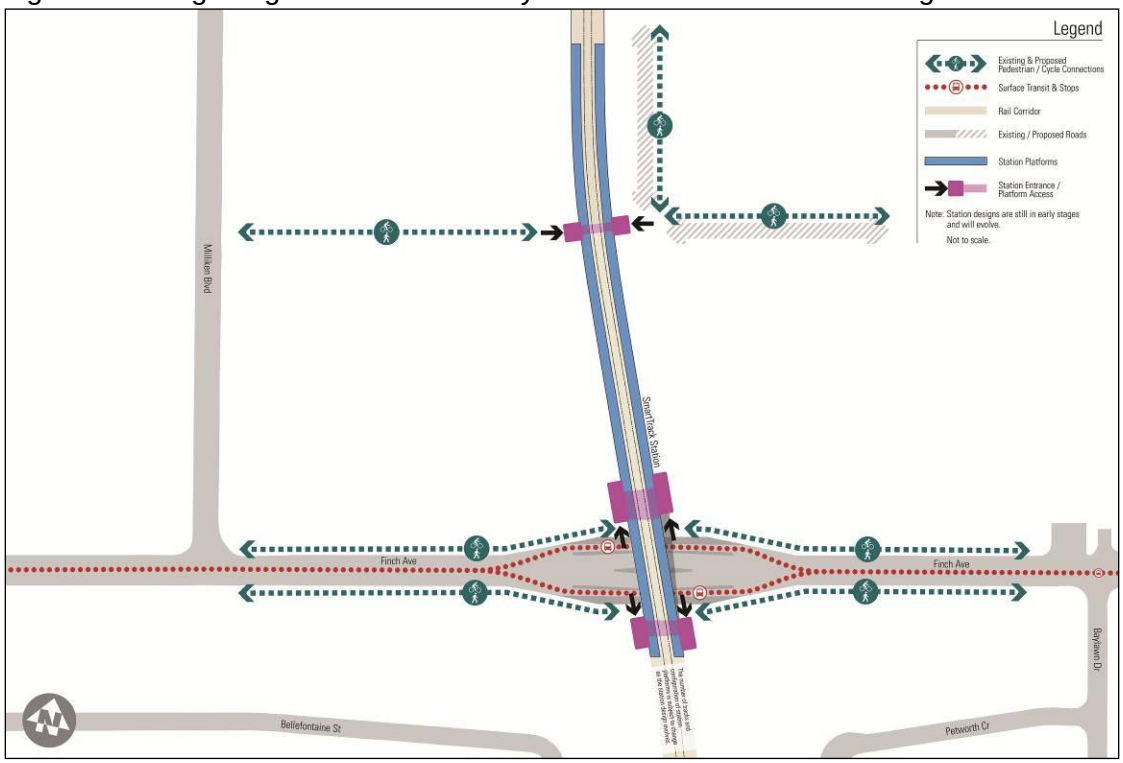
Transit Access	• Place a high priority on transit access. The station design includes a protected bus area underneath the rail overpass for direct passenger transfers.
Pedestrian Access	• Station buildings should provide access from all four walking paths along Finch Avenue East without requiring the use of stairs or elevators. • Multi-use paths are proposed to connect both levels of the station directly with Finch Avenue East.
Connections to Cycling Network	• The Highland Creek Trail is the only existing cycling facility near the station site. To connect this trail with Finch East Station, multi-use paths should extend between the station and the intersection of the trail with Finch Avenue East. • Midland Avenue is identified as a corridor where future study may be considered as part of City of Toronto 10 Year Cycling Network Plan. If a facility is constructed on this road in the future, it should be connected directly to the station by means of off-street multi-use paths or on-street dedicated facilities.
Vehicular Access	• A pick-up and drop-off area will be provided near the northern station entrance to allow for direct access to the mini-platforms.
Accessible Loading and Unloading	• Access for one loading bay for a TTC Wheel-Trans or similar accessible vehicle should be provided near the mini-platform or station buildings.

Emerging Station Concept

This SmartTrack station will provide a critical rapid transit link to downtown Toronto and the rest of the GO RER network for one of the busiest local bus corridors in Ontario. Finch Avenue East is planned to dip below the existing rail corridor, where stairs and escalators/elevators will offer direct access to the station platform above. New local streets being planned for the quadrant north-east of the new station will provide barrier-free access to the platforms and improve access to the surrounding employment area.

Figure 29 illustrates how the station access is planned to be integrated with the surrounding area and provides guidance for further design refinements.

Figure 29. Integrating the Finch-Kennedy Station within the Surrounding Area



Building upon the refined functional design, the key station features and elements include:

- Pedestrian and cycling access to the station will be provided from both sides of the rail corridor through public realm enhancements and tunnel connections.
- The station will have good linkages with Finch Avenue East.
- Connections are planned with local transit routes to provide good station access for transferring passengers, including the 39 Finch East and 199 Finch Rocket buses.

Public and Stakeholder Input

The Finch-Kennedy Station was considered at a stakeholder meeting on September 28 and two public meetings: one on October 10, and a second held by Councillor Karygiannis on October 19. Key messages heard included:

- Requirement for a large commuter parking facility to access the station
- Promotes a variety of transit connections from the community to the station
- Ensure good connections to the cycling network are considered
- Will promote more businesses in the area

- Concerns about increased train traffic along the corridor
- Concerns about the number of existing at-grade rail crossings which will contribute to increased traffic conditions and pedestrian safety
- Requirement for fare integration
- General support for the location of the station north of Finch Avenue and away from the stable residential neighbourhood to the south.

Finch-Kennedy Station Commuter Parking Update

As noted in Section 3 of this Attachment, commuter parking is not recommended at any new SmartTrack or GO RER station in Toronto.

On October 19, Councillor Karygiannis held a Town Hall meeting where City staff shared the emerging Finch-Kennedy station concept and responded to questions from the community. A consistent message from community members present was that commuter parking should be included in the station concept, similar to the lot included in the original Metrolinx IBC concept. It should be noted that while 220 parking spots may provide the opportunity for some people to use the station who would otherwise not choose to, they represent a small fraction of the people who are expected to board at this station after transferring from TTC buses.

Based on assumptions made in the Metrolinx IBC, property acquisition costs would be approximately $6 - $8 million. Based on data from Toronto Parking Authority and TTC, the construction costs of a 220 space parking lot would be approximately $2.2 - $3.3 million, and annual operating and maintenance costs would be approximately $125 000. These costs do not include station redesign costs to include a new parking facility with appropriate access (e.g., new streets, signals), or the long-term resurfacing costs associated with commuter parking lots.

In addition to costs associated with construction of the commuter parking lot and land acquisition, the provision of a parking lot would represent an opportunity cost because the most attractive land for private development would be directly adjacent to the station itself.

Further Design and Technical Considerations

- Details of the Finch Avenue grade separation
- Location of the future access road to the northern station entrance
- Identify direct connections to the commercial development west of the station and to the stable neighbourhoods south of Finch Avenue East

5.7 Bloor-Lansdowne GO RER Station

Station Context

The Bloor-Lansdowne GO RER Station will be located in a mixed-use area characterized by many low-density industrial buildings — some vacant or for lease, some converted to creative spaces and studios, and others home to recreational and commercial uses such as gyms and automobile repair shops. The area also contains a variety of residential housing types, from semi-detached houses to townhouses to mid- and high-rise apartment buildings. Over the last 15 years, the area has been slowly losing its industrial character, with the clearing of several large industrial properties and the construction of new housing in their place.

The location for the Bloor-Lansdowne Station was selected based on policy direction in the City's Official Plan Map 4, Higher Order Transit, which calls for a new GO RER station at this location. This station has the potential to complement existing transit service in an emerging high-density residential and mixed-use area as shown in Official Plan Map 17. Due to the planned Davenport Diamond grade separation, the anticipated track gradient north of Bloor Street West restricts the location of the station to the south side.

The Bloor-Lansdowne Station will be situated on the Barrie GO rail corridor, south of Bloor Street West. At this location, the rail corridor currently consists of one track, with plans for a second track.

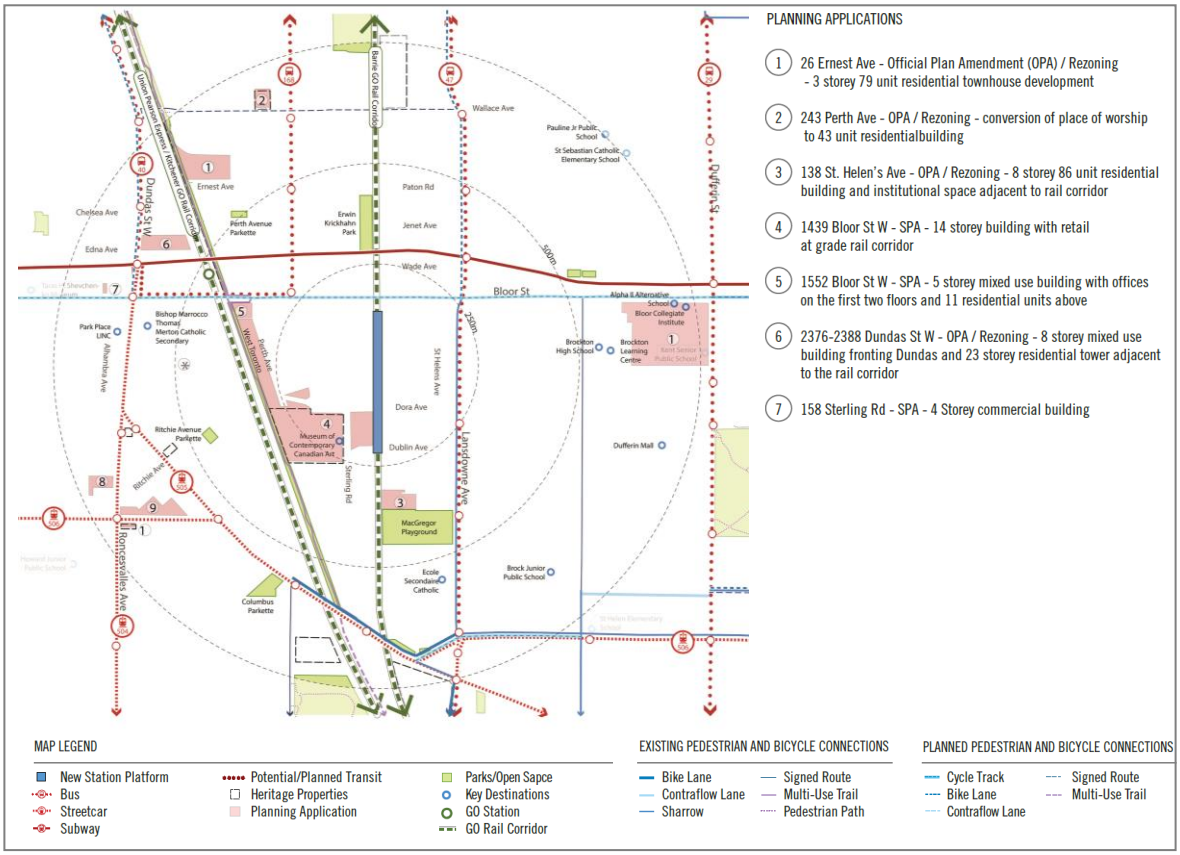
Figure 30 below provides an illustration of the station area, including current planning applications.

Key Design Challenges

- This station will require a well-designed, high-quality access at Bloor Street West.
- Access to the station should focus on pedestrians, cyclists and connecting transit services. The accommodation for informal passenger pick-up and drop-off needs to be studied further to ensure that this activity does not interfere with transit or traffic operations in the area. An accessible loading and unloading area will need to be provided in close proximity to the station entrance and for TTC Wheel-Trans.
- Adequate and convenient bicycle parking facilities will be needed at the station.
- The station design should consider the Metrolinx EA for the Davenport Diamond Grade Separation project, which begins just north of Bloor Street West. The Davenport Diamond Grade Separation EA included a provision for a multi-use trail along the east side of the rail corridor north of Bloor Street West. There is an opportunity to extend the trail south of Bloor Street West.
- The Bloor Street West rail bridge may require widening to accommodate track geometry and multi-use trail crossing of Bloor.
- Requirement for an accessible, weather-protected pedestrian link between the Bloor-Lansdowne GO RER Station and the Lansdowne Subway Station.
- Further analysis and coordination with adjacent landowners is required to confirm the desirability and feasibility of additional access points.
- Further analysis of the need for noise walls is required.

- Further analysis is required regarding potential environmental contamination of lands adjacent to the station location; remediation may be required.

Figure 30. Bloor-Lansdowne Station Area Conditions



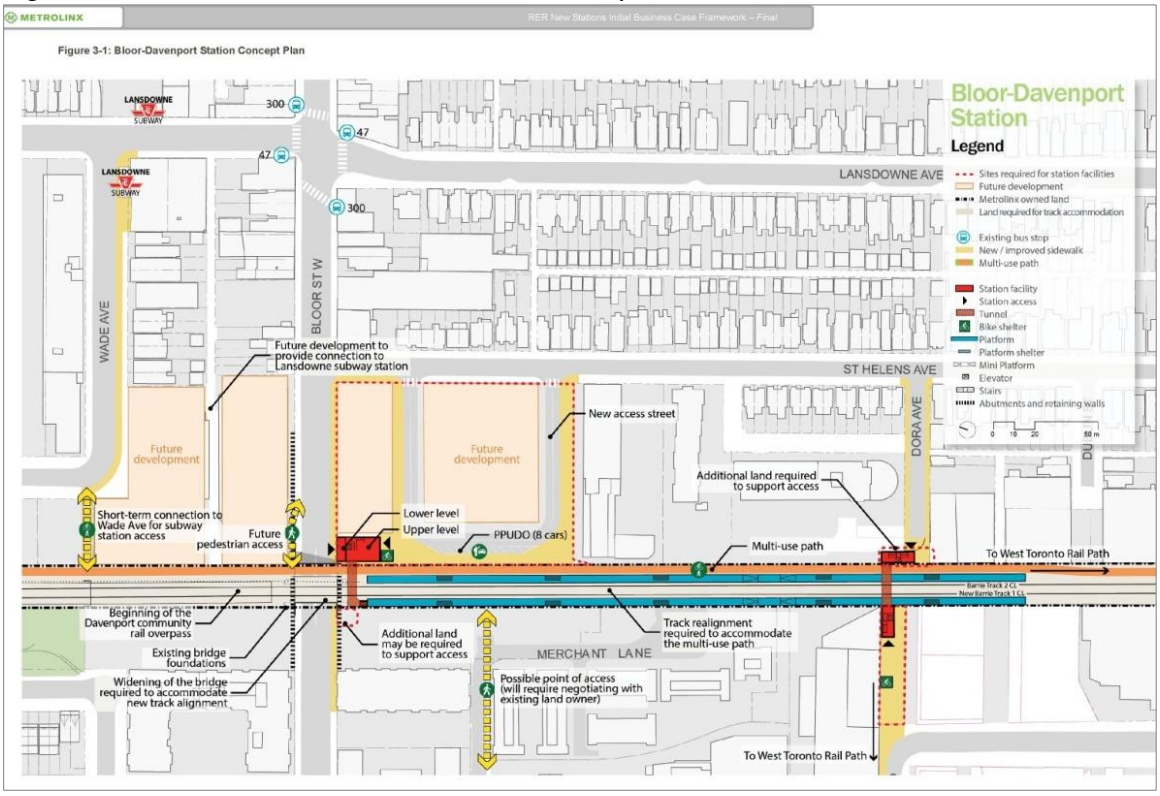
Initial Business Case

The Metrolinx Initial Business Case (IBC) concept plan, April 2016, is shown in Figure 31. The IBC concept included the following key station features and elements:

- Two edge platforms, three station buildings, two platform access points (with the potential for a third), two bicycle parking areas, a small 8-car Passenger Pick-Up and Drop-Off (PPUDO) facility, and integration with a proposed multi-use path to provide interim access to Lansdowne subway station.
- The Bloor-Davenport station would require a shift of the rail line to the west, within the rail corridor, to accommodate a proposed multi-use pathway and station platforms.
- The primary station entrance building has been located so as to be highly visible from Bloor Street West. This entrance will be contained in a two-storey building that provides convenient walk-up access to pedestrians. The building's upper level connects to a proposed new access street off St. Helens Avenue, as well as PPUDO and bicycle parking facilities and the eastern (northbound) platform.

- The station's secondary entrance, located at the western end of Dora Avenue, provides access to both platforms through a pedestrian tunnel. By linking both sides of the rail corridor, a station entrance at this location would help to connect the station to a proposed extension of the West Toronto Railpath.
- Tertiary access to the western platform may be possible from Merchant Lane and Bloor Street West.
- The majority of station users will arrive either by active transportation (walking or cycling) or by transfers from other public transit routes.
- A key element of the station's conceptual design is its integration with a multi-use path that links the station to both the Davenport neighbourhood to the north and the West Toronto Railpath to the south.
- The station's primary entrance would lie within 250 m of the existing TTC Lansdowne subway station. Short-term/interim connectivity between the two stations would be provided along Wade Avenue through a mid-block connection to the proposed multi-use path.

Figure 31. Bloor-Lansdowne Station IBC Concept



Refined Functional Design

Following a series of workshops, a Refined Functional Design (Figure 32 and Figure 33) was prepared in June 2017 to provide general guidance for further station design.

Figure 32. Bloor-Lansdowne Refined Function Design

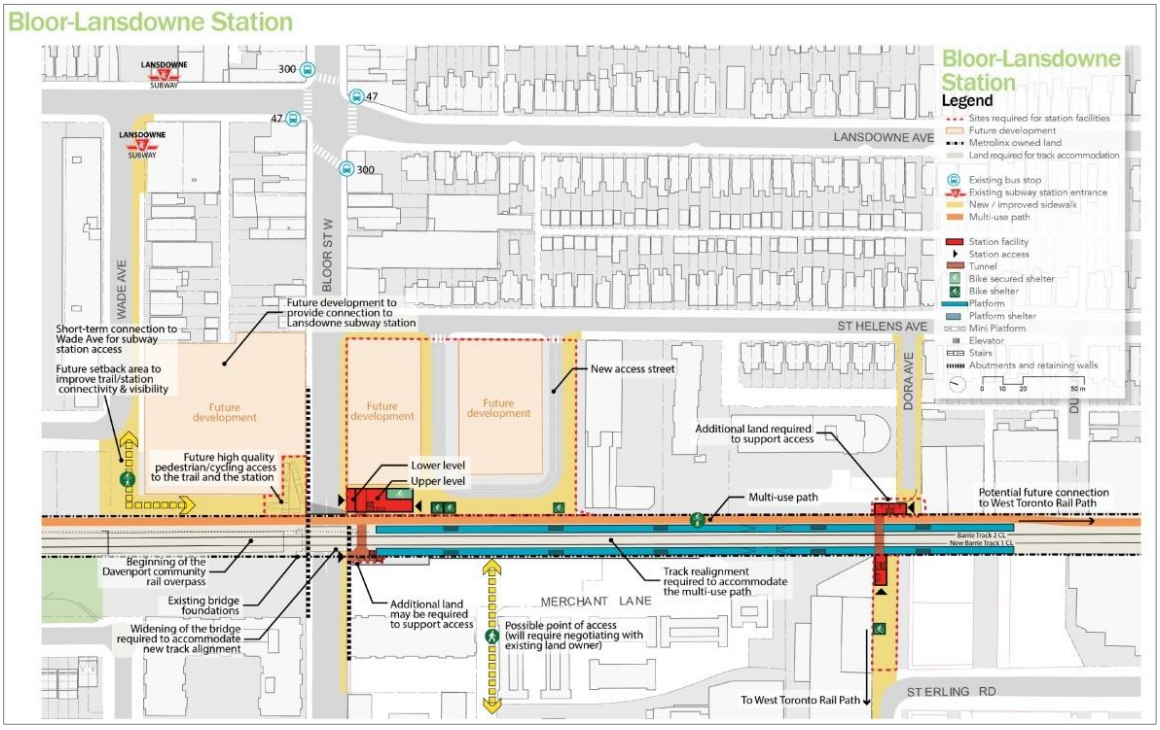
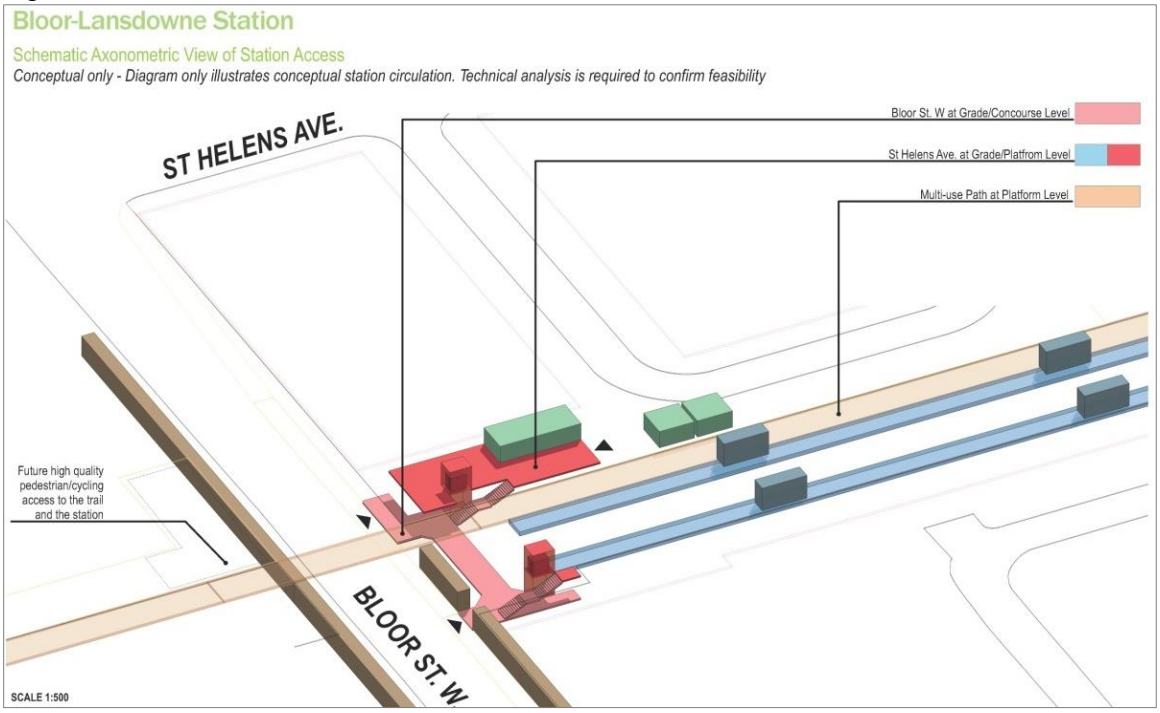


Figure 33. Bloor-Lansdowne Station Schematic View of Access



The Refined Function Design included the following key station features and elements:

Station Amenities

Station Buildings/ Entrances	• The grade differential between track level and Bloor Street below the overpass poses challenges to developing prominent street presence. There are opportunities to redevelopment around the station to mitigate this constraint and create clear lines of sight, along with landscaping to improve the pedestrian experience.
	  • A primary station entrance area should be situated at the north end of the platform. This entrance is expected to handle the majority of passengers, and should be considered the main station entrance.
	  • The PPUDO lay-bys and Wheel Trans will be adjacent to the upper level of this station building and will incorporate covered and secured bicycle parking.
	  • Another entrance should be considered on the west side of the rail corridor across from the two storey entrance structure.
	  • A secondary entrance area should be situated near the southern end of the platform.

Station Circulation	• Staircases should be designed as the primary access between station levels. An elevator should accompany all staircases. • Tunnels beneath the rail corridor will connect the station entrances on opposite sides of the rail corridor with the vertical circulation to access the platform level. The station should facilitate neighbourhood connectivity across the rail corridor for pedestrians and cyclists. • Opportunity to include an entrance on the north side of Bloor Street, to provide connections from street to track level.
Bicycle Facilities	• At least 64 total bicycle parking spaces to be provided • Opportunity for additional covered parking at the south entrance area on the west side of the rail corridor to facilitate access from cyclists arriving from the West Toronto Railpath.
Landscaping & Streetscaping	• The primary station entrance should include a generous front entrance plaza, with sufficient landscaping and amenities to create a high quality public gathering place adjacent to the new street.

Passenger Access

Transit Access	• Place a high priority on transit access, as both TTC local and rapid transit serve the station area. It is estimated that approximately 50% of passengers exiting GO trains will transfer to a subway or bus. • The Line 2 (Bloor-Danforth) subway runs parallel to Bloor Street West and stops at Lansdowne station, just northeast of the proposed station location. The station should feature a high quality access from Wade Ave. to the primary station entrance via the multi-use path to facilitate transfers from Lansdowne subway to the GO RER station.
Pedestrian Access	• Pedestrians should access the primary station entrance via sidewalks on Bloor Street or the new access street, or via the multi-use pathway and a mid-block connection from Wade Avenue. From the south,

	pedestrians will use the existing street grids. Stairs/elevators and tunnels will allow passengers to access the opposite platform.
Connections to Cycling Network	• The area currently has limited active transportation infrastructure, with no direct cycling connections to the station site. However, an indirect connection may be possible between a new station and the West Toronto Railpath (400 m to the west). • A direct connection to the proposed multi-use pathway (through the Davenport Diamond Grade Separation EA) should be considered an essential part of overall station connectivity.
Vehicular Access	• Vehicular access must be included for both Passenger Pick-up and Drop-off and Wheel Trans. However, Bloor-Lansdowne is an urbanized station and should not feature suburban-style PPUDO

Emerging Station Concept

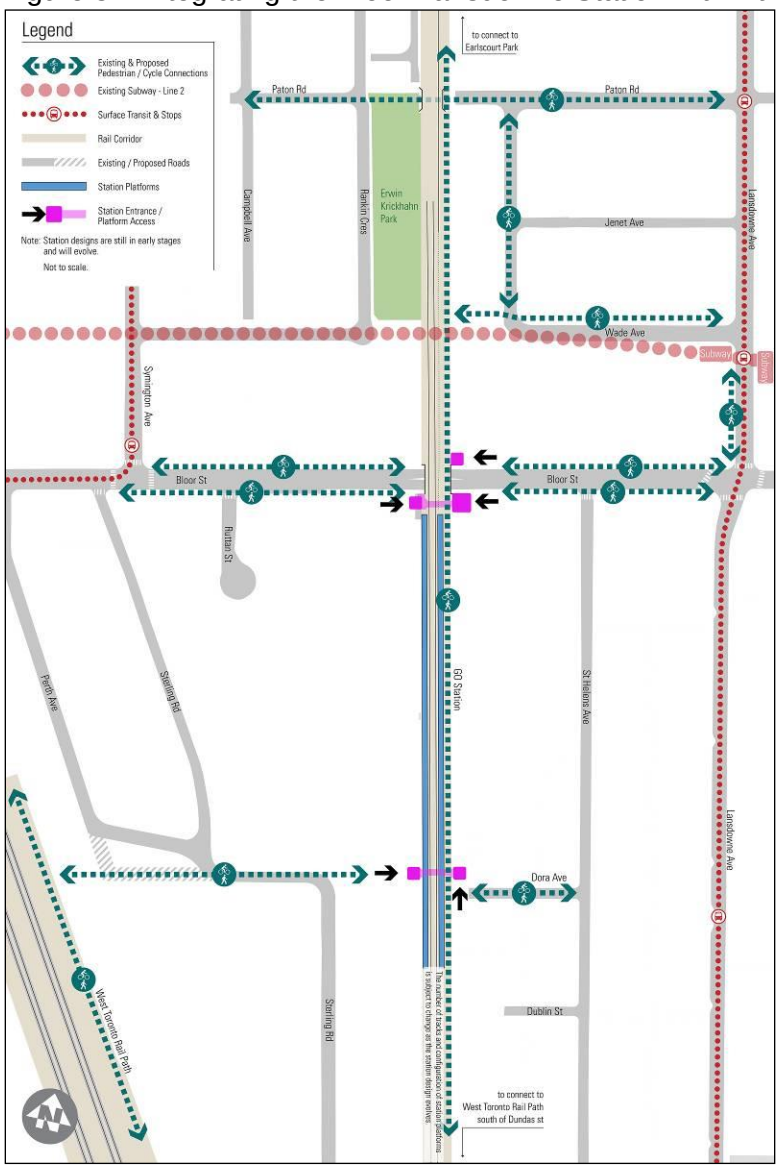
This new GO RER station on the Barrie GO Rail Corridor will provide a critical link between GO RER and the TTC Line 2 subway at Lansdowne station. An extension of the Barrie Corridor multi-use path will connect it to the popular West Toronto Railpath – providing an important new link in Toronto's cycling network. This station will also be accessible from existing neighbourhoods on both the east and west, providing a link across the rail corridor.

Figure 34 illustrates how the station access is planned to be integrated with the surrounding area and provides guidance for further design refinements.

Building upon the refined functional design, the key station features and elements include:

- Pedestrian and cycling access to the station will be provided from both sides of the rail corridor through public realm enhancements and tunnel enhancements.
- The station will have good linkages with surrounding roadways including Bloor Street West, Lansdowne Avenue, and Sterling Road, as well as the West Toronto Railpath on the Kitchener GO Rail Corridor.
- Connections are planned with local transit routes to provide good station access for transferring passengers, including the 47 Lansdowne bus.

Figure 34. Integrating the Bloor-Lansdowne Station within the Surrounding Area



Public and Stakeholder Input

The Bloor-Lansdowne Station was considered at a stakeholder meeting on October 5 and at a public meeting on October 12. Key messages heard included:

- There is a strong desire for a dedicated and climate controlled pedestrian path to improve passenger accessibility, safety and comfort between this GO RER station and the Lansdowne Subway Station.
- Concerns about noise pollution from trains.
- Fare integration and system integration between GO RER and TTC is essential to the success of SmartTrack and GO RER. Transfers between the two networks should be seamless.
- Station should have passenger pick-up and drop-off area.

- Integrate safe well-lit pedestrian walkways and bike routes into the station.
- Participants expressed that this community has a high level of pedestrian and cycling traffic and connections is desired.
- Residents encouraged expanded service to be electrified. Frequent service using diesel trains would not be desirable.

Further Design and Technical Considerations

- The rail overpass over Bloor Street must be widened to provide space for the new sets of tracks. The bridge must also accommodate the multi-use path for pedestrian and cyclist access.
- Further analysis of the need for noise walls is required.
- Consideration of multiuse path continuing south of the station.

5.8 Spadina-Front GO RER Station

Station Context

The Spadina station is located within the Bathurst North Yard, a railyard currently used for berthing GO trains. Surrounding the railyard are a wide variety of uses and densities, ranging from 40-storey residential towers at CityPlace to the south, to the Fort York National Historic Site (and its Heritage Conservation District) to the west, to the Victorian-era Draper Street Heritage Conservation District and surface parking lots to the north and downtown Toronto and the Rogers Centre to the east.

The station's immediate surroundings have been transformed over the last 25 years, beginning with the Kings Regeneration Initiative in the 1990s, from mostly vacant employment and rail lands into one of the densest residential neighbourhoods in Canada. The station's surroundings are now characterized by creative industry employment in formerly industrial buildings, retail and entertainment uses (including restaurants and nightclubs), public services and amenities, parks, and a wide range of housing forms.

The location for Spadina was selected because of its potential to alleviate congestion at Union Station, to serve rapidly intensifying employment districts west of downtown Toronto, and to support existing and emerging high-density residential and mixed-use development within the Toronto Downtown Urban Growth Centre, as outlined in the Growth Plan for the Greater Golden Horseshoe.

Map 2, Urban Structure, of the City's Official Plan identifies Spadina-Front as the *Downtown and Central Waterfront*. The land use designations (Map 18 of the Official Plan) are predominantly *Mixed Use* and *Regeneration Areas*.

Figure 35 provides an illustration of the station area, including current planning applications.

Figure 35. Spadina-Front Station Area Conditions

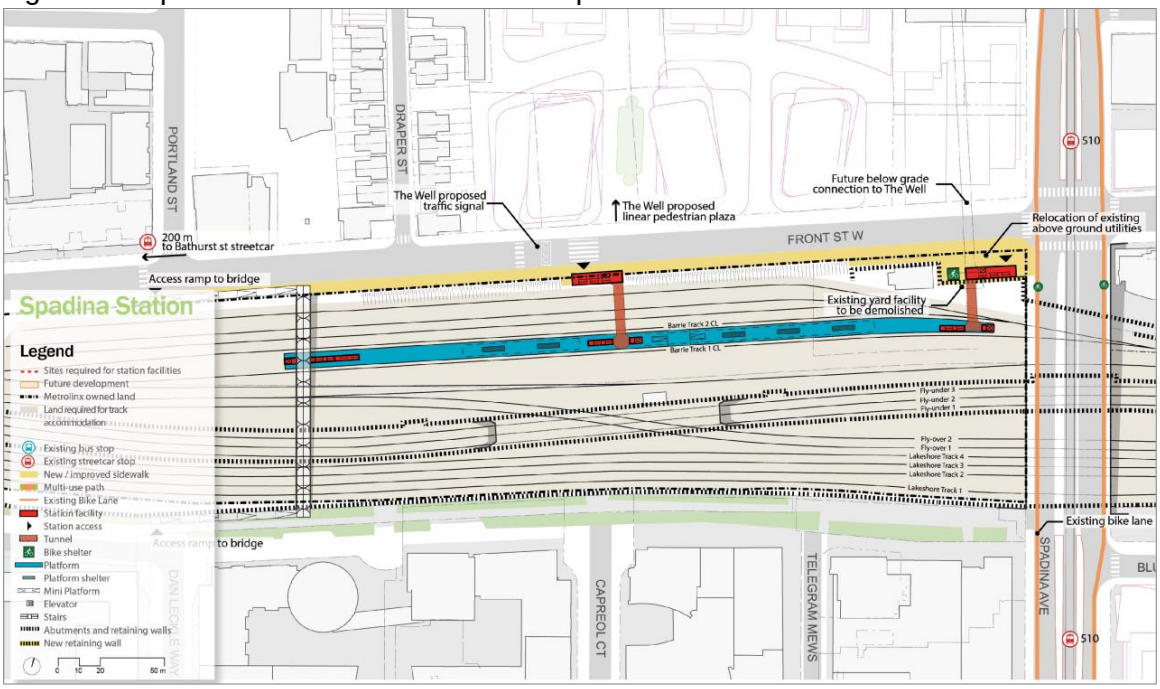
Key Design Challenges

- This station will require a well-designed, high-quality access at Front Street. The proposed Rail Deck Park between Bathurst Street and Blue Jays Way presents an opportunity for station access directly from street level and will require further analysis.
- Access to the station should focus on pedestrians, cyclists and connecting transit services. No commuter parking spaces should be included as part of the station (no spaces are included in the Metrolinx station concept). Care will be needed in planning for a fully accessible station; however, a conventional GO multi-lane PPUDO facility is not supported by City Planning.
- Adequate and convenient bicycle parking facilities will be needed at the station.
- An accessible loading and unloading area will be provided in close proximity to the station entrance. TTC Wheel-Trans will use this area for customer pick-up and drop-off.

Initial Business Case

The Metrolinx Initial Business Case (IBC) concept plan, April 2016, is shown in Figure 36.

Figure 36. Spadina-Front Station IBC Concept



The IBC concept included the following key station features and elements:

- A single centre platform, two station buildings, two platform access points (with the potential for a third), and bicycle parking.

- The primary station entrance, at the southwest corner of Spadina Avenue and Front Street West, provides the station with a highly visible presence along Spadina Avenue, which also facilitates transfers between the station and the TTC's 510 Spadina streetcar route.
- The primary entrance building will also have the potential to accommodate a future below-grade connection to a significant planned mixed-use development to the immediate north, known as "The Well."
- The station's secondary entrance along Front Street West has been aligned with a north-south linear pedestrian plaza also proposed as part of The Well development.
- An opportunity may exist to provide a tertiary entrance to the station platform descending from the existing Puente de Luz pedestrian bridge across the rail corridor.
- Due to the dense downtown characteristics of the surrounding area, it has been assumed that no parking facilities will be required, and that the majority of station users will arrive either by active transportation (walking or cycling) or by transfers from other public transit routes.

Refined Functional Design

Following a series of workshops with the City, TTC and Metrolinx staff, a Refined Functional Design, as illustrated in Figure 37 and Figure 38, was prepared in June 2017 to provide general guidance for further station design.

Figure 37. Spadina-Front Station Refined Functional Design (Not Reflecting Rail Deck Park)

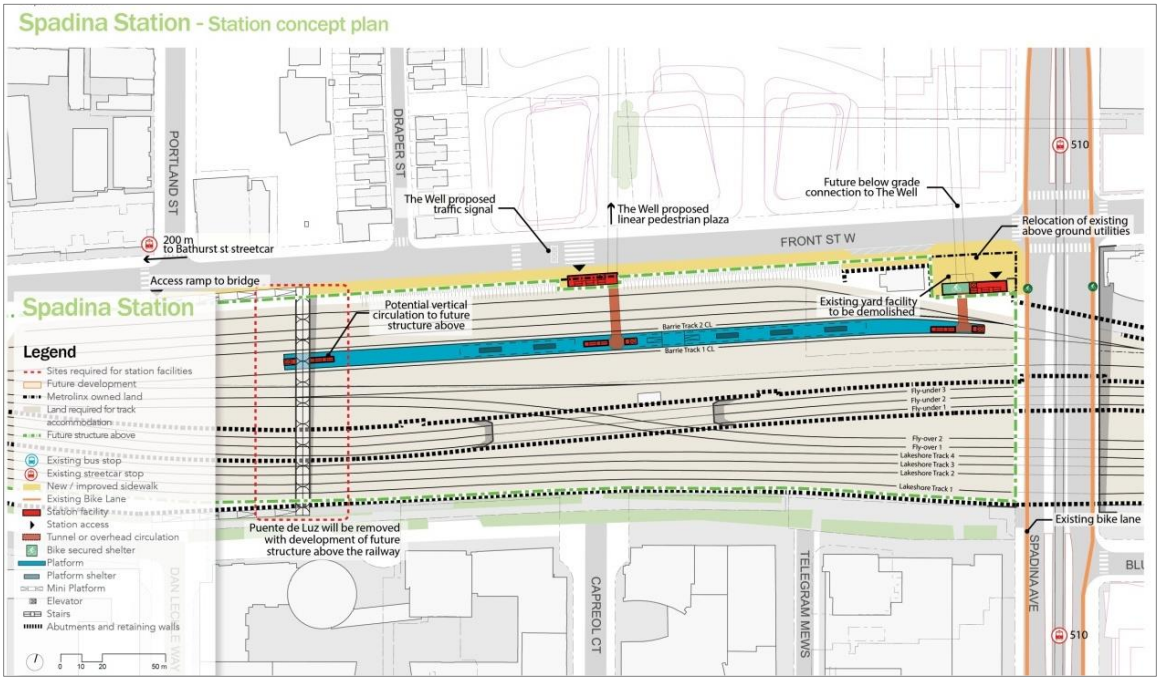
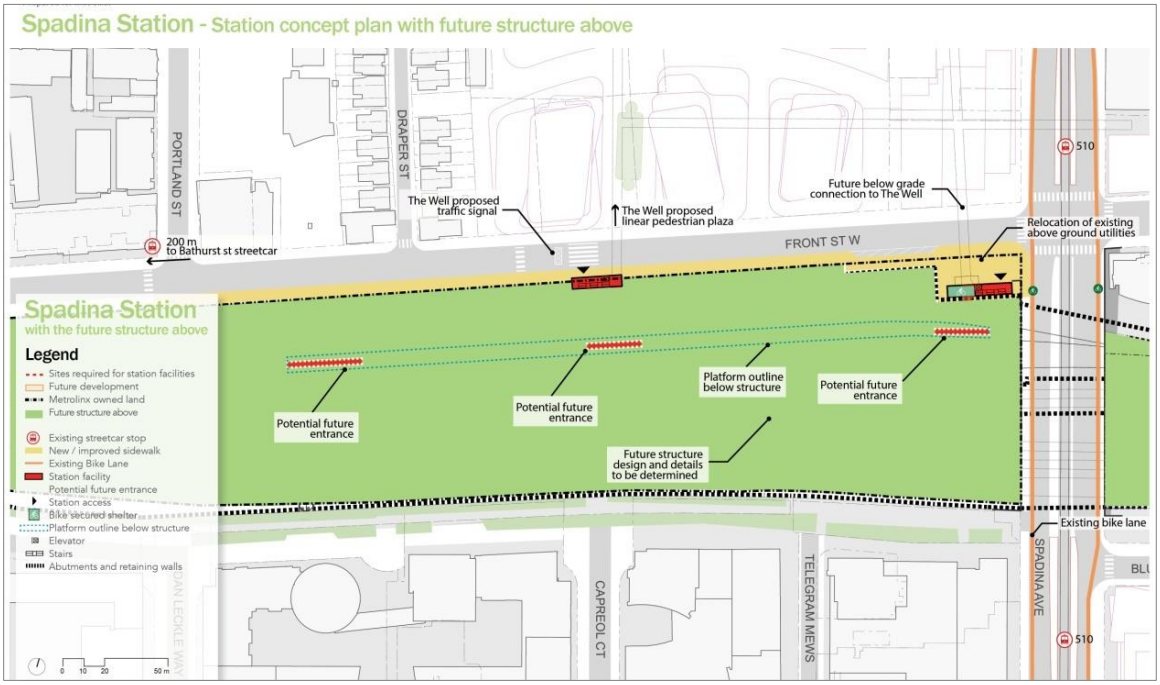


Figure 38. Spadina-Front Station Refined Functional Design (Reflecting Rail Deck Park)



The Refined Function Design included the following key station features and elements:

- Close collaboration and coordination with Rail Deck Park project to ensure the planning and design work aligns with that of the station.
- TTC may introduce surface transit line on Front Street West in the future as part of network expansion.
- Developers of The Well proposal north of the station, will coordinate to align future PATH and underground connections with station entrances.

Station Amenities

Station Entrances	• The main station entrance is located at the southwest corner of Front Street and Spadina Avenue. • A secondary entrance is proposed near the middle of the platform, aligned with a north-south linear pedestrian plaza proposed as part of The Well development. The exact location of this entrance structure should continue to be determined based on conversations with The Well developer and City of Toronto's Rail Deck Park design team.
Station Circulation	• Staircases should be designed as the primary access between station levels. Elevators should accompany all staircases. • Tunnels or overhead walkways, will connect the station entrances along Front Street with the vertical circulation to the platform level.
Bicycle Facilities	• At least 64 total bicycle parking spaces to be provided • Additional bicycle parking facilities should be explored adjacent to each entrance.

Landscaping & Streetscaping	• The primary entrance at Spadina and Front should be maximized to the greatest extent possible and form an enhanced plaza. The plaza should include seating, tree planting, landscaping, lighting and be highly visible and inviting. • The west station entrance and associated landscaping and signage will provide a visible and public presence in the evolving neighbourhoods in the vicinity.

Passenger Access

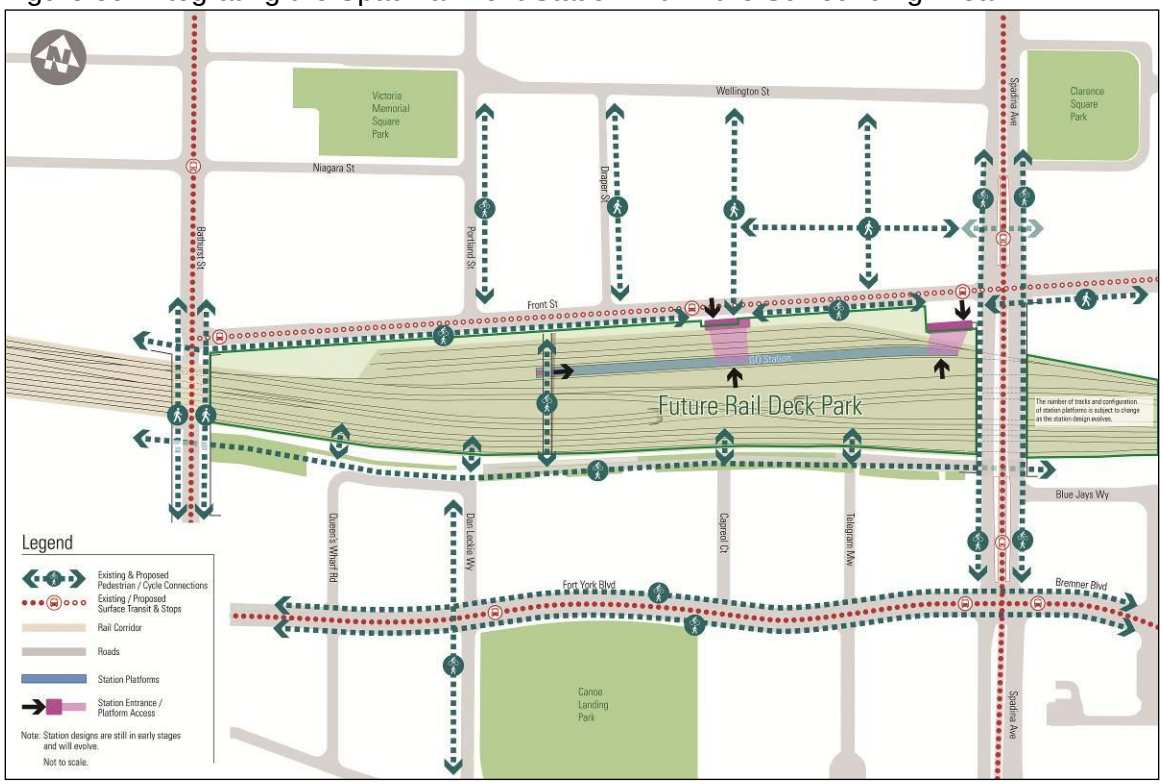
Transit Access	• Priority should be given to creating high-quality access for customers between the new GO RER station and the streetcar stops on Spadina at Front, about 70m away from the main station entrance. • The main station entrance will be located at the southwest corner of Spadina and Front. This will provide a highly visible presence for those transferring between modes. • Future bus and streetcar stops for eastbound and westbound service on Front west of Spadina must be considered and protected for.
Pedestrian Access	• From the north side of the station, pedestrians will access the entrances via sidewalks in the existing street network. • From the south of the station, pedestrians will access the entrances via existing Bathurst bridge (via Front Street), Puente de Luz, and Spadina bridge. Overbuild development such as Rail Deck Park could also provide access across the corridor following the removal of Puente de Luz. • A new, high-quality pedestrian sidewalk will need to be constructed on the south side of Front Street from Puente de Luz bridge to Spadina Avenue.
Connections to Cycling Network	• There are limited designated cycling lanes in the immediate area. However, sharrows on Spadina Avenue provide a connection to designated cycling lanes nearby

Emerging Station Concept

This station is expected to be a busy destination, surrounded by existing and proposed office and residential towers. Planning and design of the station is being coordinated with the City's proposed Rail Deck Park to be built above the rail corridor, with station access from the park above to the station platforms below. The main station entrance is planned for the intersection of Spadina Avenue and Front Street West.

Figure 39 illustrates how the station access is planned to be integrated with the surrounding area and provides guidance for further design refinements.

Figure 39. Integrating the Spadina-Front Station within the Surrounding Area



The Refined Function Design includes the following key station features and elements:

- Pedestrian and cycling access to the station will be provided from both sides of the rail corridor through public realm enhancements, including Rail Deck Park.
- The station will have linkages with surrounding roadways including Front Street, Spadina Avenue, and Bathurst Street.
- Connections are planned with local transit routes to provide good station access for transferring passengers, including the 510 Spadina streetcar.

Public and Stakeholder Input

The Spadina-Front Station was considered at a stakeholder meeting on October 5 and at a public meeting on October 12. Key messages heard included:

- The construction of this station should not be delayed by the proposed Rail Deck Park development.
- There is a desire for the train on this line to pass through Union Station and continue east rather than turning back.

Further Design and Technical Considerations

- Ongoing coordination with the City of Toronto and/or other potential developers of projects above the rail corridor to ensure that station service expansion is protected for and development designs are mutually supportive.
- Detailed examination of train storage capacity across the network and operational impact of alternate storage locations.
- Performance functioning and requirements review of existing service buildings on site.
- Evaluation of the two potential platform configurations (north or south of track B1) and follow-on design implications such as tunnel length.