

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: MAY 6, 2010

SUBJECT: SCARBOROUGH RAPID TRANSIT
TRANSIT PROJECT ASSESSMENT STUDY
RECOMMENDATIONS

ACTION ITEM

RECOMMENDATION

It is recommended that the Commission:

1. Approve the recommendation, of the joint City/TTC Scarborough Rapid Transit (RT) Transit Project Assessment Study, as described in the attached "Scarborough Rapid Transit, Draft Environmental Project Report, Executive Summary", for:
 - a. Conversion of the existing Scarborough RT line (Kennedy Station to McCowan Station) to use Transit City Light Rail Transit (LRT) vehicles;
 - b. Extension of the Scarborough RT from McCowan Road to Malvern Town Centre, including the alignment, stations, passenger pick-up and drop-off facilities and bus terminals;
 - c. A non-revenue service connection to the proposed Sheppard East Maintenance and Storage Facility, via Progress Avenue and Sheppard Avenue East;
 - d. Protection for the future Bellamy Maintenance and Storage Facility;
 - e. An amendment to the approved Scarborough-Malvern LRT Environmental Project Report (EPR) to provide an underground connection to Kennedy Station, via a portal located immediately west of Midland Avenue; and
 - f. An amendment to the Eglinton Crosstown LRT EPR to provide an underground connection to Kennedy Station, via a portal located immediately east of Lonview Road.
2. Note that eight public consultation open houses and one community meeting were held.
3. Forward this report to the Toronto Executive Committee for consideration at its meeting on May 17, 2010, and City Council at its meeting on June 8, 2010 recommending that City Council approve the recommendations of the SRT Transit Project Assessment Study and authorize staff to submit the EPR to the Ministry of the Environment.
4. Forward this report to Metrolinx and the Ontario Ministry of Transportation and the Ontario Ministry of the Environment, for information.

FUNDING

Funding is included in the Scarborough RT, Eglinton Crosstown LRT and Scarborough-Malvern LRT projects outlined under Transit City approved priority projects in the TTC 2010-2014 Capital Program, as amended by the Commission on October 29, 2009 and adopted by City of Toronto Council on December 8, 2009. Project commitment approval of \$217.447 million was included for the Scarborough RT and \$131.268 million for the Eglinton Crosstown LRT, to cover expenditures to the end of 2010 for these approved lines; and \$1.363 million for the Scarborough-Malvern LRT for expenditures to 2009 for this unapproved line.

In its March 25, 2010 Provincial Budget, the Province deferred \$4 billion in expenditures over the next five years to phase the construction of transit projects. It is anticipated that there will be some impacts on the implementation timing of lines not currently under construction; however the details of this announcement will require further discussion and clarification from Metrolinx.

BACKGROUND

The Scarborough RT began operation in 1985 from Kennedy Station to McCowan Station. The existing Mark 1 vehicles are no longer available and will reach the end of their economic life in 2015. There is also inadequate fleet capacity to meet current demand.

At its meeting of August 30, 2006, the Commission approved replacement of the existing Mark 1 vehicles with their successor – the Mark II vehicles. During 2009, a life cycle cost analysis was performed, which led to the decision to use Transit City LRT technology on the Scarborough RT, allowing for a common fleet. Accordingly, the existing Scarborough RT line must be modified to accommodate the new, larger LRT vehicles.

At its meeting of March 21, 2007, the Commission endorsed the *Toronto Transit City Light Rail Plan* as the basis for rapid transit expansion in the City of Toronto. This plan included the extension of the Scarborough RT and seven new LRT lines, forming a network of fast, reliable, environmentally-sustainable light rail transit throughout the City.

On June 15, 2007, the Province of Ontario announced the *MoveOntario 2020* rapid transit plan for the Greater Toronto and Hamilton area (GTHA). *MoveOntario 2020* includes the TTC-City of Toronto *Transit Light Rail Plan*, which includes the Scarborough RT (from Kennedy Station to Malvern), Eglinton Crosstown LRT, and Scarborough-Malvern LRT lines. In the spring of 2009, the Province announced funding for four Transit City projects including the Scarborough RT conversion and extension project. The Scarborough RT is included as a priority project in the *Metrolinx Big Move Transit Plan* for the GTHA.

In early 2008, the City of Toronto and Toronto Transit Commission initiated preliminary planning for a Transit Project Assessment Study for the Scarborough RT line. The Transit Project Assessment is conducted in accordance with the Transit Projects Regulation of the *Environmental Assessment Act* (EA). Under this Regulation, transit projects, such as the Scarborough RT, are exempt from the requirements under Part II of the *Act*. The new regulation has created a process which allows for a Provincial assessment of potential environmental impacts to be completed and approved within six months.

In addition to the 11.4 kilometre Scarborough RT line, the scope of the Scarborough RT Transit Project Assessment also addresses Kennedy Station improvements, including the alignments of the Scarborough-Malvern LRT and Eglinton Crosstown LRT lines into Kennedy Station. The Commission approved the recommendations for the Scarborough-Malvern LRT Transit Project Assessment at its meeting of August 26, 2009 and for the Eglinton Crosstown LRT Transit Project Assessment at its meeting of November 17, 2009. Both of these Studies excluded the alignments into Kennedy Station, pending the results of the Scarborough RT Transit Project Assessment.

This report provides a summary of the public consultation process, results of the Scarborough RT Transit Project Assessment Study, and the rationale supporting the various elements of the recommended preferred design for the Scarborough RT from Kennedy Station to Malvern Town Centre, the Eglinton Crosstown LRT from Birchmount Road to Kennedy Station and the Scarborough-Malvern LRT from Midland Avenue to Kennedy Station.

DISCUSSION

Purpose

The overall objective of the Transit City program is to provide excellent, reliable, high-capacity, environmentally-sustainable transit service, thereby reducing auto dependency, while supporting other important City objectives related to creating a more liveable, attractive, and sustainable city.

In support of this broader objective, the specific purpose of the Scarborough RT project is to:

1. Provide rapid transit into north-east Scarborough;
2. Support local population and employment growth;
3. Accommodate future increase in ridership;
4. Minimize adverse environmental and community effects;

5. Connect the Scarborough RT to the approved Sheppard East LRT;
6. Provide rapid transit into Centennial College; and
7. Achieve reasonable costs.

The Scarborough RT will include the following new connections to TTC and GO Transit services:

1. Kennedy Station (Bloor-Danforth Subway, Scarborough-Malvern LRT, Eglinton Crosstown LRT, GO Stouffville Line); and
2. Sheppard East Station (Sheppard East LRT).

Ridership

Current/future capacity/demand for the Scarborough RT, passengers per hour, per direction (pphpd) into Kennedy Station is as follows:

	<u>Current</u>
Capacity	3,800 pphpd
Ridership	4,200 (with overcrowding)
Demand	5,000
	<u>2031</u>
Capacity	12,000-14,000
Demand	10,000

Phased Project Implementation

Due to funding constraints, the extension of the Scarborough RT into Malvern will be undertaken in two phases. During Phase 1, the Scarborough RT will be extended from McCowan Station to Sheppard Avenue, which will include a bus terminal to serve feeder bus routes. Phase 2 will extend from Sheppard Avenue to Malvern Town Centre and will be implemented when funding becomes available.

Study Area

The study area for the Scarborough RT Transit Project Assessment includes:

1. The Eglinton Avenue corridor from Kennedy Station to Birchmount Road (Eglinton Crosstown LRT);

2. The Eglinton Avenue corridor from Kennedy Station to Midland Avenue (Scarborough-Malvern LRT);
3. The existing Kennedy Station lands;
4. A corridor around the existing Scarborough RT alignment from Kennedy Station to McCowan Station; and
5. An area bounded by McCowan Road, Ellesmere Road, Neilson Road, the CP-Agincourt Subdivision, and Markham Road (Scarborough RT extension to Malvern).

The Process to Date

The process, to date, has involved a number of study phases to develop a preferred Scarborough RT alignment and to assess the impacts of its construction and operation including:

1. Data collection and analysis on transportation facilities, the natural environment, and the social environment was completed for the study area.
2. For those areas where issues had been identified (including interchanges with Scarborough-Malvern LRT and Eglinton Crosstown LRT lines at Kennedy Station, network and alignment alternatives for the Scarborough RT extension from McCowan Station to Malvern Town Centre, connection to the proposed Sheppard East Maintenance and Storage Facility and bus terminal location at Sheppard East Station) alternative solutions were developed and analyzed. The preferred options were incorporated into the preferred project design.
3. Environmental issues were identified and alternative methods were selected for the alignment to minimize and/or mitigate adverse impacts.
4. At the beginning of the process, various agencies and stakeholder groups were canvassed to determine interest in the project. Meetings were held with City of Toronto departments and key stakeholders including: the Ministry of the Environment, GO Transit, Hydro One, Metrolinx, the Ministry of Transportation, the Toronto and Region Conservation Authority, the Toronto Catholic District School Board and the Toronto District School Board.
5. A comprehensive public consultation program was developed to allow the general public to review the proposed project, provide comments and outline any objections. Since April 2008, eight public consultation open houses and one community meeting (total attendance of 1,375 persons) have been conducted. Information was posted on the City and TTC websites. Opportunities were provided for the public to comment verbally, by email or by fax. A summary of responses prepared for all concerns and comments will be included in the EPR.

6. To date, this process has resulted in the development of a preferred design for Kennedy Station, requirements for the conversion of the existing Scarborough RT to use Transit City LRT technology and the preferred alignment and associated facilities for the extension of the Scarborough RT from McCowan Station to Malvern Town Centre.

Preferred Design

Overview

As shown in Exhibit 1, the Preferred Design for the 11.4 kilometre Scarborough RT line includes modifications to the existing 6.5 kilometre Scarborough RT (from Kennedy Station to McCowan Station) for conversion to Transit City LRT vehicles technology and a 4.9 kilometre extension of the Scarborough RT from McCowan Station to Malvern Town Centre. The entire alignment will be within a dedicated, fully-segregated right-of-way, which is generally at-surface or elevated between Kennedy Station and Milner Avenue, and is underground between Milner Avenue and Malvern Town Centre. Portals (transition from elevated to underground section) will be located immediately south of the Progress/Milner intersection and immediately west of Malvern Town Centre.

The Scarborough RT project includes the following key design components:

1. A complete reconstruction of the Scarborough RT connection at Kennedy Station, that will provide a more convenient transfer from the Scarborough RT to the Bloor-Danforth subway and will make provisions for the future Eglinton Crosstown and Scarborough-Malvern LRT lines;
2. Modifications to the existing Scarborough RT stations to accommodate the longer, low-floor LRT vehicles (including lengthening platforms, adjustments to track levels and/or roof levels and conversion to overhead power distribution): Lawrence East, Ellesmere, Midland, Scarborough Centre and McCowan Stations;
3. Extension of the Scarborough RT from McCowan Station to Malvern Town Centre, with stations at Centennial College (Exhibit 2), Sheppard Avenue (Exhibit 3) and Malvern Town Centre;
4. Protection for future Scarborough RT stations at Bellamy Road and Brimley Road;
5. Bus terminals and passenger pick-up and drop-off facilities at Sheppard Avenue and Malvern Town Centre;

6. Provision of a surface non-revenue service connection from Sheppard Avenue to Milner Avenue, along Progress Avenue and from Milner Avenue to Centennial College along an elevated structure (over Highway 401);
7. Supporting structures including traction power substations, an emergency exit building and ventilation shafts in the 1.6 kilometre underground section, from Milner Avenue to south of Malvern Town Centre.

Maintenance and Storage Facility

Scarborough RT vehicles will initially operate from the proposed Sheppard East Maintenance and Storage facility. However, as full build-out of the Transit City network approaches, the Sheppard East Maintenance and Storage Facility will be unable to accommodate the additional fleet. The Bellamy Maintenance and Storage Facility continues to be a possible option for a future location. As such, the Scarborough RT Transit Project Assessment will reference the potential future requirement for this location.

Sheppard East Maintenance and Storage Facility Non-Revenue Service Connection

The non-revenue service connection to the proposed Sheppard East Maintenance and Storage Facility (located at Conlins Road) will run at-surface in a dedicated centre median right-of-way on Progress Avenue, from Milner Avenue to Sheppard Avenue East. At Sheppard Avenue, the Scarborough RT trains will use the Sheppard East LRT right-of-way between Progress Avenue and Conlins Road for access to the Maintenance and Storage Facility. Scarborough RT vehicles will typically use the non-revenue service connection on Progress Avenue in the shoulders of the peak periods, when service ramps up and down, and during the late night and early morning time periods for service start-up and shut-down.

Commuter Facilities

For the stations on the existing Scarborough RT line, existing commuter facilities (parking, bus terminals and lay-bys, passenger pick-up and drop-off facilities) will be retained. The preferred design will include a new 7 bay bus terminal at Sheppard Avenue and a new 11 bay bus terminal at Malvern Town Centre. Once the Scarborough RT is extended to Malvern Town Centre, the feeder bus routes serving the Sheppard bus terminal will be reviewed. Passenger pick-up and drop-off facilities will also be provided at Sheppard Avenue and Malvern Town Centre.

Ancillary Facilities

An emergency exit building (for the evacuation of Scarborough RT passengers in the event of an emergency) is proposed along the underground segment.

The existing traction power substations at Kennedy, Lawrence East, Ellesmere, Scarborough Centre and McCowan Stations will remain part of each station, but will undergo changes to accommodate the new vehicle requirements. New substations are proposed at Centennial College, Sheppard Avenue and Malvern Town Centre.

The locations of the emergency exit building and the traction power substations will be subject to further review and refinement during detailed design.

Eglinton Crosstown LRT and Scarborough-Malvern LRT Connections to Kennedy Station

The Scarborough RT Transit Project Assessment also addressed the alignment of the Eglinton Crosstown LRT from Birchmount Road to Kennedy Station and the Scarborough-Malvern LRT from Midland Avenue to Kennedy Station (see Exhibit 4). The preferred design for the Eglinton Crosstown LRT includes a surface stop at Ionview Road, with a portal structure immediately east of the intersection. As shown in Exhibit 5, the Eglinton Crosstown LRT will operate underground into Kennedy Station at the same level as the existing Bloor-Danforth subway station platform. The Scarborough-Malvern LRT will include a surface stop at Midland Avenue, with a portal located west of Midland Avenue to an underground platform immediately east of the GO Rail line. Scarborough-Malvern LRT passengers will transfer to the Scarborough RT, Eglinton Crosstown LRT and Bloor-Danforth subway platforms via a pedestrian tunnel under the GO rail corridor.

Property Requirements

As of April 15, 2010, the following permanent property requirements have been identified:

1. Full acquisition of 2 to 8 properties; and
2. Partial acquisition on 170 to 190 properties.

Temporary property requirements for construction of the Scarborough RT will be confirmed during design.

Subject to approval of the recommendations included in the EPR report by City Council, the City of Toronto will acquire privately-owned properties by negotiation or expropriation, as required.

Schedule

The Transit Project Assessment process will be completed in fall 2010.

Construction of Sheppard East Station will be coordinated with the Sheppard East LRT, currently under construction and scheduled to be completed in 2013.

The March 2010 Provincial Budget announced the phasing of funding for the Transit City projects. The commitment of \$8.15 billion was maintained, but the funds will be distributed over a longer period of time. Specific impacts on Transit City projects are not known at this time. Staff will report back at a future Commission Meeting when the impact of the Provincial Budget is known.

Notwithstanding, investigations are underway to determine if the schedule for implementation of Phase 1 of the Scarborough RT project can be accelerated so that the line is operational for the Pan Am Games, in the summer of 2015.

Transit Project Assessment Process

Under the Transit Projects Regulation of the *Environmental Assessment Act*, transit projects, such as the Scarborough RT, are exempt from the requirements under Part II of the *Act*. The new regulation has created a process which allows for a Provincial assessment of potential environmental impacts to be completed and the report to gain approval within six months.

The preliminary planning has been completed for the project and the Transit Project Assessment Process Notice of Commencement was issued on April 6, 2010. Public consultation has been included throughout the process. The attached report, entitled "Scarborough RT, Transit Project Assessment, Draft Environmental Project Report Executive Summary" provides additional details on:

1. The process followed to develop the project;
2. The rationale for the design elements selected for the Scarborough RT conversion and extension; and,
3. A summary of the environmental impacts of the project and net effects following proposed mitigation measures.

Complete details on the Scarborough RT line, including plans of the 11.4 kilometre corridor from Kennedy Station to Malvern Town Centre, will be contained in the project's

Environmental Project Report, which will be finalized in spring 2010. The EPR will be placed on the public record for the mandatory 30-day review period in summer 2010.

JUSTIFICATION

The Scarborough RT project is a component of the *Toronto Transit City Light Rail Plan*, the Province's *MoveOntario 2020* Plan and Metrolinx Regional Transportation Plan.

The existing Mark I vehicles are nearing the end of their economic life and as such, modifications to the existing Scarborough RT line (Kennedy Station to McCowan Station) are required to accommodate the larger Transit City LRT vehicles.

The extension of the Scarborough RT from McCowan Road to Malvern will provide excellent, reliable, high-capacity, environmentally-sustainable transit service thereby, reducing auto dependency in the corridor and creating a more liveable, attractive, and sustainable city.

April 16, 2010
55-21-21

Attachments: Exhibits 1 to 5
Draft Environmental Project Report – Executive Summary

Exhibit 1 - SRT Plan

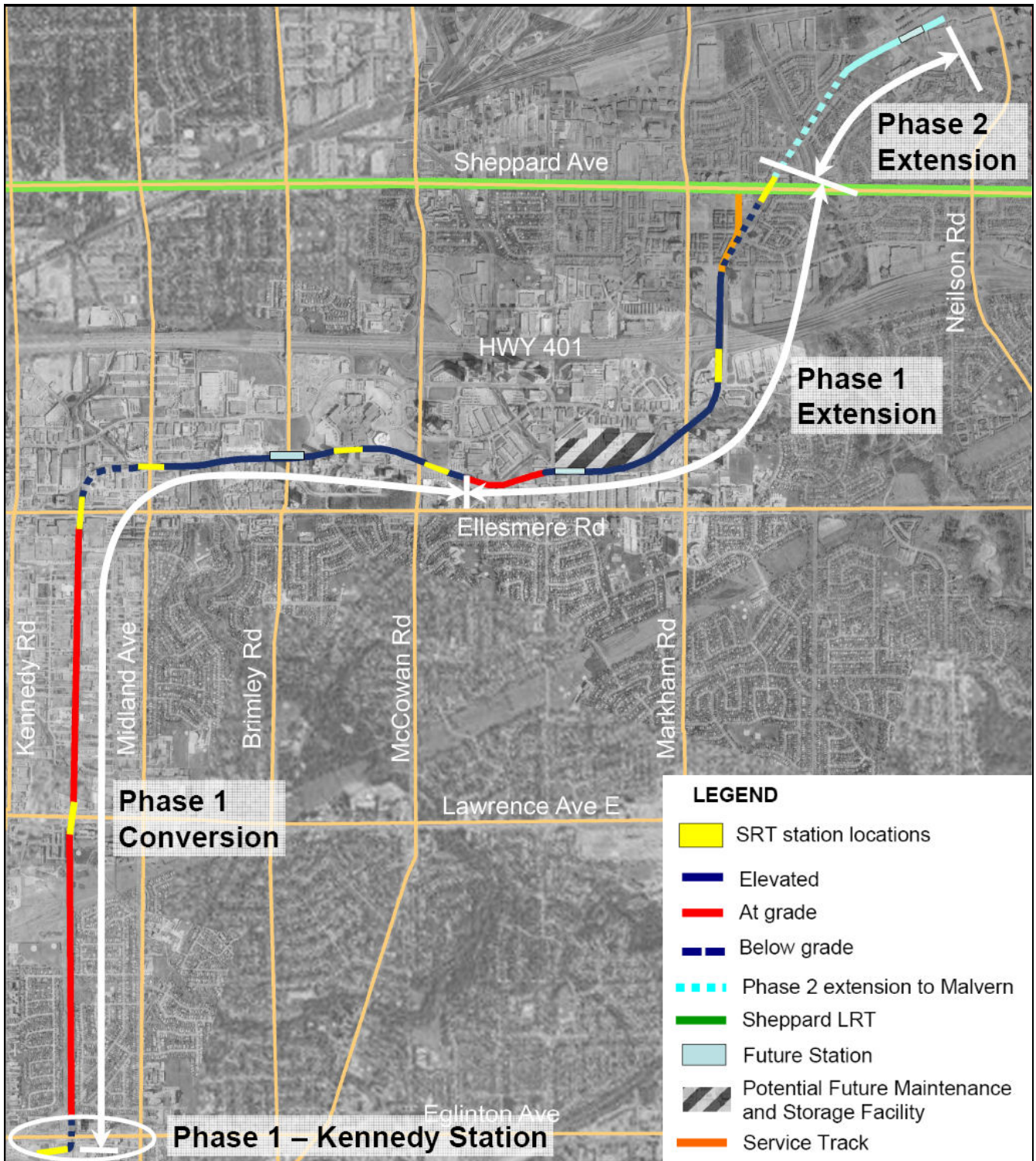


Exhibit 2 – SRT Extension – Station at Centennial College



Exhibit 3 – SRT Extension – Station at Sheppard Avenue

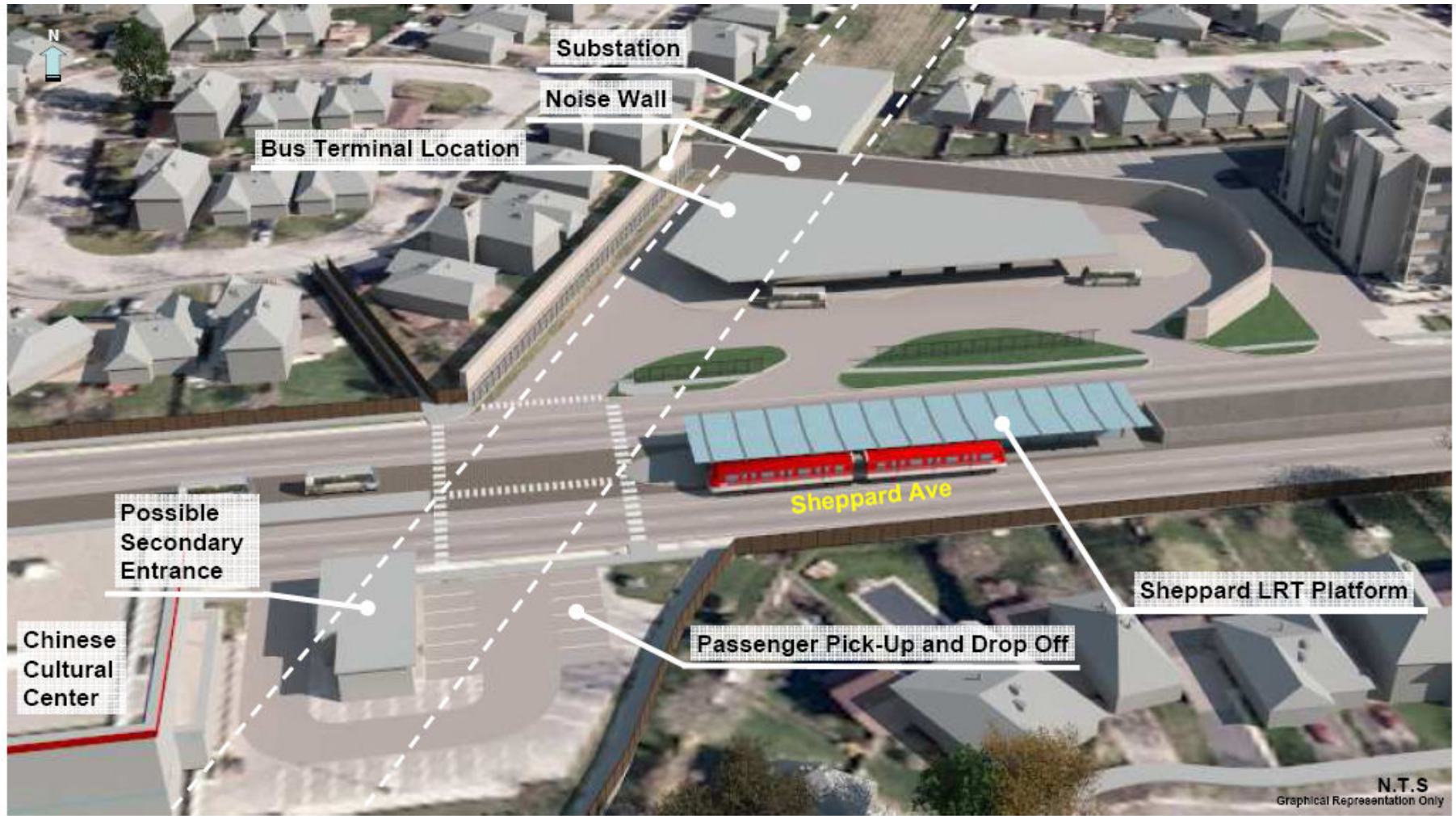


Exhibit 4- Kennedy Station Improvements – Plan

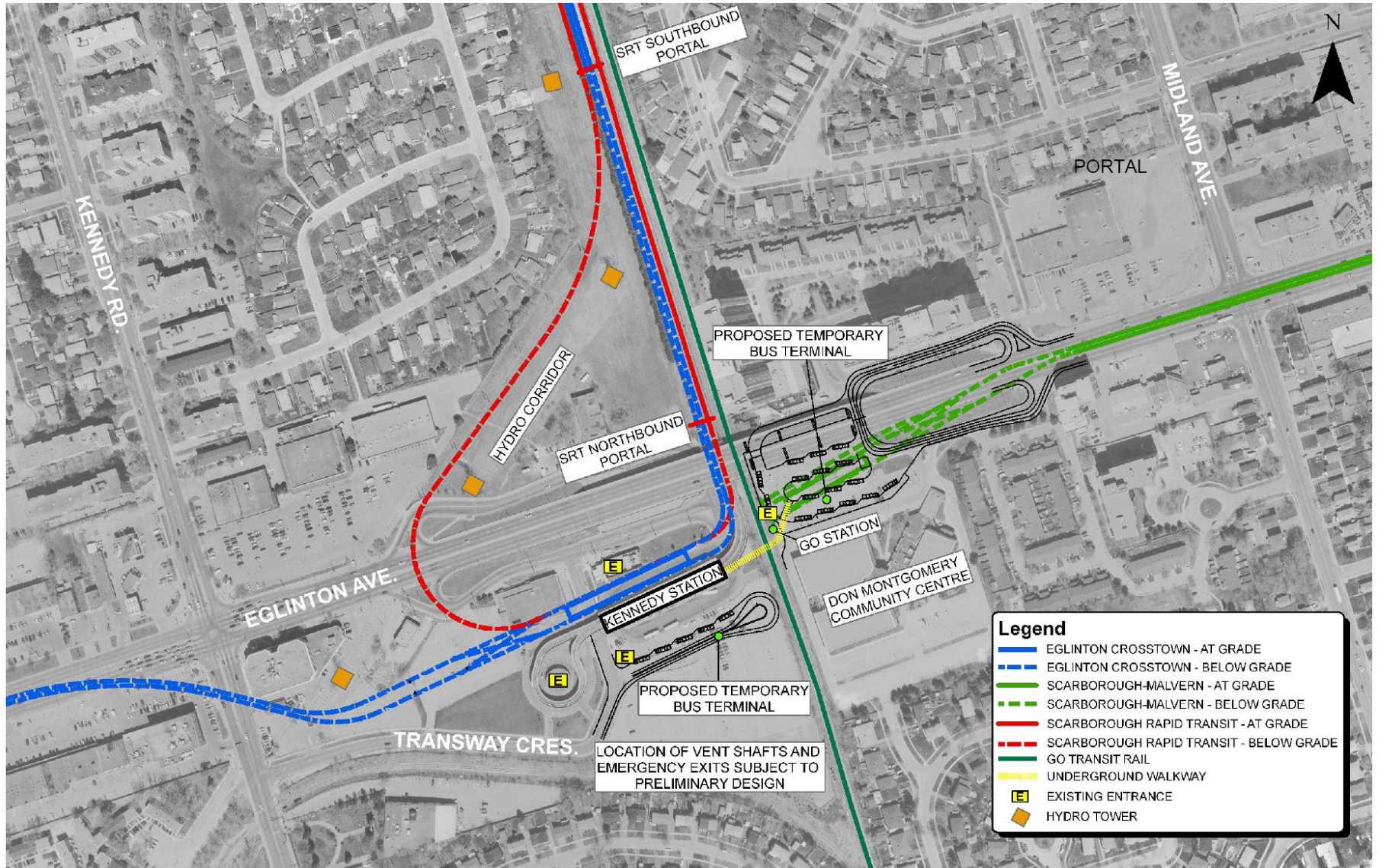


Exhibit 5 – Kennedy Station Improvements – Cross-Section

