

COMMITTEE OF THE WHOLE – FEBRUARY 1, 2011

407 TRANSITWAY - ENVIRONMENTAL PROJECT REPORT MINISTRY OF TRANSPORTATION CITY WIDE

Recommendation

The Commissioner of Engineering and Public Works recommends that this report be received for information purposes.

Contribution to Sustainability

The proposed 407 Transitway contributes to sustainability by providing a higher order transit facility along the Highway 407 corridor that will support compact urban form in the City and offer an alternative mode of transportation to the single occupant vehicle. In addition, the establishment of the 407 Transitway will greatly improve connectivity between various modes of transit within the City including the Hwy 7 Bus Rapid Transitway, YRT/Viva, Spadina Subway Extension, Go Barrie line and the future Yonge Street Subway extension.

Economic Impact

There are no immediate economic impacts associated with this report.

Communications Plan

The Ministry of Transportation will be advised of any resolution passed by Council with respect to this report.

Purpose

The purpose of this report is to provide Council with an overview of the recommendations of the recently completed 407 Transitway Environmental Project Report including the recommended transitway corridor alignment and the three stations within the City.

Background - Analysis and Options

In November 2005, the Government of Ontario released the Proposed Growth Plan for the Greater Golden Horseshoe which incorporates the province's vision for managing growth and developing stronger communities in the Greater Golden Horseshoe. Based on this plan, the Hwy 407 Transitway was proposed as the spine of the Greater Golden Horseshoe inter-regional transit system. The 407 Transitway is a 160 km long corridor extending from Burlington to Pickering, with multiple stations and connections with a multitude of other inter-regional and municipal transit routes.

In 2007, the Ministry of Transportation of Ontario (MTO) initiated a Planning and Preliminary Design and Environmental Assessment (EA) study for the Central Section of the 407 Transitway from east of Highway 400 to Kennedy Road, a distance of 23 kilometers. This segment is located within the City of Vaughan and Towns of Richmond Hill and Markham in York Region as shown on Attachment No. 1. This segment has been selected as the priority section of the overall corridor from Burlington to Highway 35/115, because it:

- supports and connects the newly developed Markham, Richmond Hill/ Langstaff and Vaughan Metropolitan Centre (Urban Growth Centres);

- provides connections with three GO rail lines; Barrie , Richmond Hill and Stouffville;
- attracts higher potential ridership and therefore a higher chance for early success;
- has high walk-in potential given the land use at Bayview, Leslie, Warden, Kennedy and the 404 Business Park;
- is long enough to make it a viable, stand alone section;
- connects with YRT, Viva and the future Spadina and Yonge Subways; and
- can connect with Highways 400 and 404.

The scope of the study included the planning and preliminary design of the 407 Transitway, maintenance facilities and stations to accommodate an initial bus service with provision for future conversion to Light Rail Transit (LRT), including local bus access to and egress from the stations, platforms, access to and from the adjacent arterial road, parking, passenger pick-up and drop-off (PPUDO), buildings, shelters and other miscellaneous amenities.

The primary objectives of this study were to:

- Enhance east-west cross-regional mobility for medium to longer distance trips greater than 10-15 kilometers;
- Offer a safe, high speed, more efficient way of moving people between GTA population and employment zones, north or south of the corridor;
- Improve connectivity and integration with the regional transportation network by promoting gateway opportunities with modal interchange facilities;
- Enhance the ability to increase capacity to meet additional travel demand; and,
- Maximize the utilization of the protected Highway 407 Corridor.

As noted above, the study area extends for 23 kilometers through York Region along the Highway 407 corridor from east of Highway 400 in the City of Vaughan, through the Town of Richmond Hill, to Kennedy Road in the Town of Markham. The area is located within the Parkway Belt West Plan limits, a multi-purpose corridor providing rights-of-way for freeways, regional transit, electric power transmission lines, utilities and public open space.

407 Transitway- Environmental Assessment and Public Consultation Process

The 407 Transitway study was carried out under the new Transit Project Assessment Process, which was approved by the province in June 2008. This assessment process provides a framework for an accelerated and focused analysis for completing the assessment of the potential environmental impacts of a transit project. Proponents of a transit study must complete the prescribed steps of the transit project assessment process within six months. Once the proponent has completed and finalized the Environmental Project Report, the proponent must issue a Notice of Completion and make the Environmental Project Report available for review and comment by interested persons and the public for 30 calendar days. Objections to a transit project assessment must be submitted to the Ministry of the Environment within the 30 day review period. The Minister can only take action if the objection identifies an issue that was not considered in the Environmental Project Report which has the potential for negative impacts on a matter of provincial importance that relates to the natural environment or has cultural heritage value or interest. It is important to note that Ontario Regulation 231/08 exempts proponents of all public transit projects from the requirements under Part II of the Environmental assessment Act (Bump Up) when the proponent completes the prescribed steps of the transit project assessment process within the specified time frames.

As part of the 407 Transitway project process, two rounds of public consultation were completed. Notification of many of the activities/opportunities was provided through advertisements in local newspapers.

Five notices were placed in the local newspapers including:

- Notice of Study Commencement on June 21, 2007 under MTO's Class Environmental Assessment for Provincial Transportation Facilities process as a Group "A" project;
- Notice of Public Information Centre #1 in May 2009;
- Notice of Public Information Centre #2 in June 2010;
- Notice of Commencement of Transit Project Assessment Process on August 26, 2010; and,
- Notice of Completion on December 23, 2010.

As part of the Study, a Technical Resource Group (TRG) was established to provide technical expertise and input to planning and preliminary design of the transitway at several key milestones during the study. The TRG included representatives from Toronto Regional Conservation Authority, 407 ETR, Toronto Transit Commission, affected provincial agencies, Region of York, and staff from the local municipalities including Vaughan. A total of six TRG meetings occurred throughout the study. In addition, the 407 Transitway project team made presentations to Vaughan Council on the progress of the study in May 2009 and June 2010.

407 Transitway – Environmental Project Report

The 407 Transitway study was undertaken to develop the technically preferred alignment of the runningway, and the location of the associated stations and operation and maintenance facilities for a Bus Rapid Transit system. The 407 Transitway Environmental Project Report (EPR) was completed and filed for public review on December 23, 2010. The following highlights the key components of the preferred transitway route and station locations within Vaughan as presented in the final EPR.

Transitway Technology

Five candidate technology alternatives were considered in developing a response to the need for inter-regional rapid transit in the ultimate 160 kilometer Highway 407 Corridor including:

1. Bus Rapid Transit (BRT);
2. Light Rail Transit (LRT);
3. Automated Guideway Transit (AGT);
4. Heavy Rail Transit (e.g. subway); and,
5. Commuter Rail.

Each of the above candidate technologies was evaluated against four major criteria reflecting the near and long term needs and objectives for the Highway 407 Corridor. These included:

- transit service quality encompassing capacity required, user convenience and comfort, service speed and reliability and network connectivity/interlining;
- planning considerations addressing infrastructure integration and the system's support of Provincial growth and planning policies;
- environmental compatibility covering effects on the natural and socio-economic environment and energy consumption; and
- implementation considerations including right-of-way property needs, cost-effectiveness and implementation staging.

From the evaluation and based on the detailed analysis, BRT was identified as the recommended and preferred technology for the 407 Transitway. Following the selection of the preferred Alternatives to the Undertaking, the next step was the process to develop and examine terminus locations and alignments.

Station Locations

The rationale to determine the number and location of stations was based on the role and function of the 407 Transitway as a regional transit service with maximum speed serving average trip distances of five to ten kilometers, and the role and function of each station.

The characteristics for the candidate stations included strategic trip generation locations, such as the future multimodal hubs, proximity to urban centers or areas of existing and/or future high population density, and locations where important park and ride access demand is expected. These criteria were used to determine that a seven station scenario for this 23 kilometers section of the transitway was optimum. The location of the seven stations and their basic characteristics are listed below:

1. Jane Station – Major Gateway at the interchange of the future TTC Spadina Subway Extension's 407 Station, GO Transit and YRT/Viva bus services.
2. GO Barrie (Concord) Station – Intermodal Station at the crossing with the GO Barrie regional commuter rail line.
3. Bathurst Station – Important connection to YRT/Viva services, and park and ride opportunity (no transitway park and ride will be available at the Yonge Station).
4. Yonge Station – Richmond Hill-Langstaff Gateway at the interchange of the future TTC Yonge Subway Extension Richmond Hill Centre Station, major YRT/Viva and GO Transit bus terminal and GO Transit Richmond Hill regional commuter rail Station, will serve the planned high density Gateway development.
5. Leslie Station – Will serve Beaver Creek Business Park and crossing with potential future north-south York Region rapid transit line.
6. Woodbine/Rodick Station – To serve Markham Centre (west) and the growing 404 Business District.
7. Kennedy Station – Intermodal Station at the interchange of a major YRT/Viva bus terminal; GO Transit Stouffville regional commuter rail Unionville Station. Will serve the planned high density Markham Centre (east).

The two stations located in Vaughan are the Jane Station at the Hwy 407 Spadina Subway Station and the GO Barrie (Concord) Station located at Hwy 7 and Centre Street. The particulars of each of these two stations together with the neighbouring Bathurst Street Station in Richmond Hill are overviewed below.

Jane Station (Spadina Subway Extension)

The Jane Station is a multimodal facility and a major Gateway at the interchange of the future Spadina Subway Extension's 407 Station, GO Transit and YRT/Viva bus services.

The Jane Station will be integrated with the Spadina Subway Extension's 407 Station located south west of the intersection of Highway 407 and Jane Street as shown on Attachment No. 4. The Jane Station is the terminal station at the west end of the central section of the 407 Transitway. Provisions for the Jane Station ground facilities were included in the design of the Toronto-York Spadina Subway Extension project. The facility was developed primarily as an intermodal hub allowing for passenger transfer between the subway, the transitway, the bus service and private auto users.

GO Barrie Station (Concord)

GO Barrie Station is an intermodal station at the crossing with the GO Barrie regional commuter rail line located in a parcel of land encompassed by the GO Transit Railway to the west, Highway 7 to the north and Highway 407 to the south, as illustrated in Attachment No.5.

Based on the evaluation of alternatives, the preferred transitway/GO Rail platform configuration is immediately adjacent to the existing rail right-of-way south of Highway 7 and includes the following design elements:

- Minimizes the walking distances for passengers transferring between the transitway and the potential GO Rail platform, the seamless north-south to east-west connectivity is essential at this node;
- Places PPUDO and park-and-ride facilities conveniently close to platform access for both transit systems;
- Provides a reasonable parking capacity (680 spaces) without intruding into the West Don River flood plain;
- Allows most of the natural riverbank vegetation and the adjacent woodlot to be preserved;
- Requires a support facility layout that minimizes effects on natural vegetation;
- Permits mitigation of noise and visual effects on the residential community west of the GO Line;
- Preserves access from the residential areas to the valley lands by means of defined walkways through the station support facilities;
- Provides improved access to the Marita Paine Park Trail via the new river crossing.

The main function of the GO Barrie (Concord) Station will be to provide park-and-ride and PPUDO facilities for commuters from the surrounding residential communities located to the north and west of the station site in addition to local walk in access. A canopy provides weather protection for part of the transit plaza and the circulation to the GO Transit platform. The at-grade inter-modal station accommodates the basic station services and other station elements; ticketing, offices, storage, and other facilities etc. which are conveniently located near the main entrance of the station. The station facility was designed to accommodate a central entrance type platform serviced from the main entrance/vertical access from the inter-modal station. During the Detailed Design Stage, the surface facility at this station will be reviewed with the other transit agencies to confirm requirements and preferences.

Under the new Vaughan Official Plan, the lands encompassing the station site are designated as a local center and community areas on the City's Structural Plan. It is further designated mid-rise mixed use on the Landuse Plan. The north part of the Station site is within the Concord Centre area which will be subject to the preparation of a future secondary plan.

Bathurst Station

The Bathurst Station is situated on the land located inside the jug handle road connecting Highway 7 and Bathurst Street in the Town of Richmond Hill as illustrated in Attachment 6. The Bathurst Station's primary function is to serve as a park and ride facility for the Vaughan and Richmond Hill residential growth areas both north and south of Highway 407. This station is an important connection to YRT/Viva services, and park and ride opportunity since no transitway park and ride facility will be available at the neighbouring Yonge Station. The commuter parking lot is expected to accommodate a total of approximately 822 parking spaces.

Pedestrian access from YRT/Viva services to the transitway station will be via an at-grade signal-controlled crossing of the ramp at Highway 7. The station was designed to accommodate an end entrance type platform serviced from the main entrance located on the north side of Highway 7 directly adjacent to the parking, PPUDO and bus facilities. Basic station services and other station elements like ticketing, offices, storage, other facilities etc. will be located near the main entrance. The proposed pedestrian overpass will be connected to the eastbound and westbound platforms located at the 407 Transitway level by means of vertical circulation (stairs and elevators) designed to accommodate the requirements of universal accessibility.

407 Transitway Alignment

Generally, the alignment of the transitway runs parallel to the Highway 407 right-of-way, except in specific locations such as the Yonge and Kennedy Stations where the alignment deviates from Highway 407 to provide optimum connectivity to the future mobility hubs of Richmond Hill and Markham Centres. The alignment of the 407 Transitway through Vaughan is shown on Attachment No's 2 and 3. The vertical alignment of the Transitway follows the existing ground wherever possible; however, due to the significant number of road and rail crossings, the profile includes cut and fill sections at the approaches to the grade separation structures. All York Region north-south arterial roads cross over Highway 407. Consequently, to maintain a smooth profile minimizing earthworks and providing a comfortable ride, the runningway essentially follows the profile of Highway 407 at the road crossings. The alignment of the transitway has been designed for a BRT design speed of 110 kilometres per hour (100 kilometres per hour posted operational speed). If the transitway service is converted to rail-based service in the future, the geometric alignment will correspond to a rail design speed of 90 to 100 kilometres per hour depending on the adopted super-elevation. Although pedestrian activity will not be allowed on the runningway, the posted operational speed in all station areas will be reduced to 60 kilometres per hour due mainly to safety concerns.

Transitway Implementation

The Metrolinx Regional Transportation Plan identifies the 407 Transitway as a project that will be implemented in the 16 to 25 year time horizon.

Concord West Resident's Concerns

Residents of the Concord West community have expressed objections and concerns to the location and layout of the proposed Go Barrie (Concord) Station. These concerns have been documented by the residents and submitted to the MTO for consideration in the 407 Transitway EA.

On January 10, 2011, Staff together with Councillor Racco and Regional Councillor Schulte met with three representatives from the community to discuss the specifics of their concerns. Based on this meeting, it is staff's understanding that their key issues concerning the Go Barrie (Concord) Station relate to:

- Establishing pedestrian access to the adjacent Don River valley lands and associated Bartley Smith greenway/Langstaff Ecopark located east of the rail tracks;
- impacts to the social and natural environments of the community and surrounding area; and
- A Blanding Turtle, which is regulated under the provincial *Endangered Species Act*, was reportedly sighted in the vicinity of the proposed station location. The residents are concerned that the proposed station may impact the natural habitat of this endangered species.

In addition, the Concord West residents expressed a preference for the proposed transit station to be situated on the north side of Highway 7.

The completed 407 Transitway Environmental Project Report acknowledges these concerns and provides a detailed response.

Regional Implications

Region of York staff has advised that they do not have any major issue with respect to the recommendations of the 407 Transitway EA but did identify a few technical issues with respect to the preferred 407 Transitway which can be addressed through the subsequent detailed design process.

Relationship to Vaughan Vision 2020/Strategic Plan

This report is consistent with the priorities previously set by Council Vaughan Vision 2020 strategic initiatives:

- To enhance and ensure community safety, health and wellness;
- To lead and promote environmental sustainability;
- To plan and manage growth and economic vitality.

This report is therefore consistent with the priorities previously set by Council.

Conclusion

On December 23, 2010, the Ministry of Transportation issued the completed 407 Transitway Environmental Project Report (EPR) for the 30-day public review period. The final 407 Transitway EPR identifies the preferred alignment and preliminary station design for the Central Section of the 407 Transitway from east of Highway 400 to Kennedy Road, a distance of 23 kilometers. Comments on the completed EPR were accepted by MTO up until January 24, 2011.

Staff has reviewed the technical aspects of the EPR as it relates to the portion of the transitway within Vaughan and is generally satisfied with its recommendations. MTO has committed in the EPR to consult with the public, property owners and stakeholder agencies including Vaughan during the detailed design stage of the 407 Transitway runningway, stations, and the maintenance and storage facilities.

According to the Metrolinx Regional Transportation Plan, the 407 Transitway project is expected to be implemented in the 16 to 25 year time horizon.

Attachments

1. Key Plan of Study Area
2. Figure 5-5-Segment A -Preferred Route
3. Figure 5-8-Segment B -Preferred Route
4. 407 Transitway – Jane Station (Spadina Subway) Site Plan (Plate 35)
5. 407 Transitway – Go Barrie (Concord) Station (Plate 37)
6. 407 Transitway – Bathurst Station (Plate 39)

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Respectfully submitted,

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Commissioner of Engineering
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Director of Development/
Transportation Engineering

Attachment 1

Key Plan of the Study Area



Figure 5.5: Segment A - Preferred Route

Figure 5-5: Segment A - Preferred Route

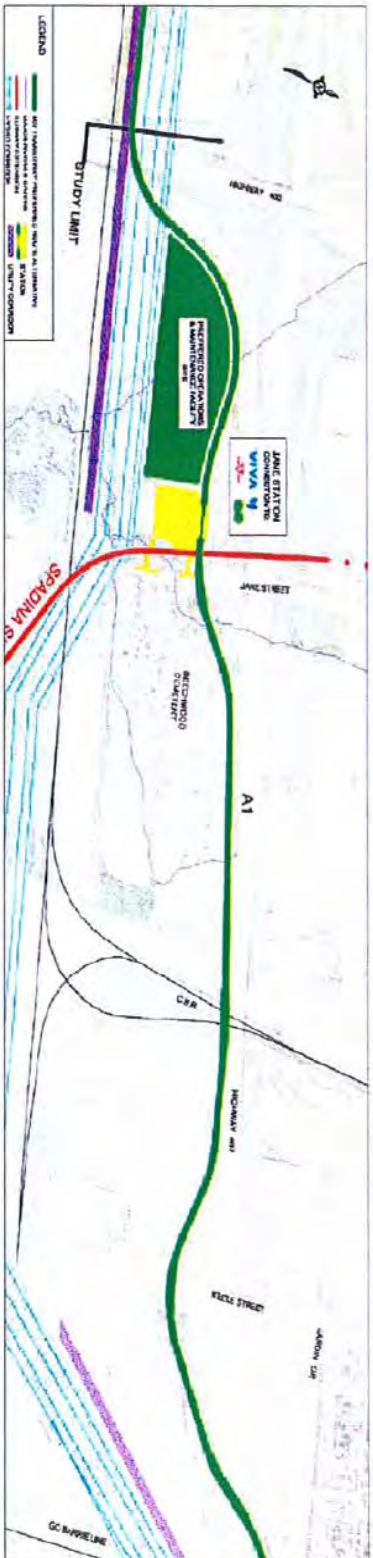
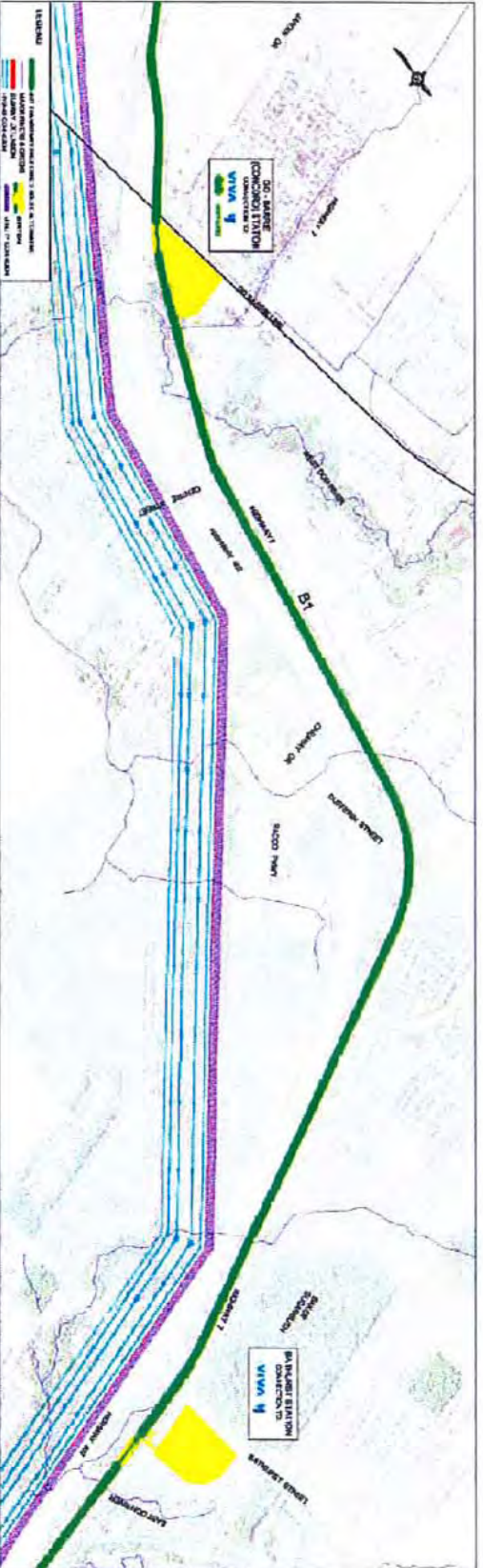


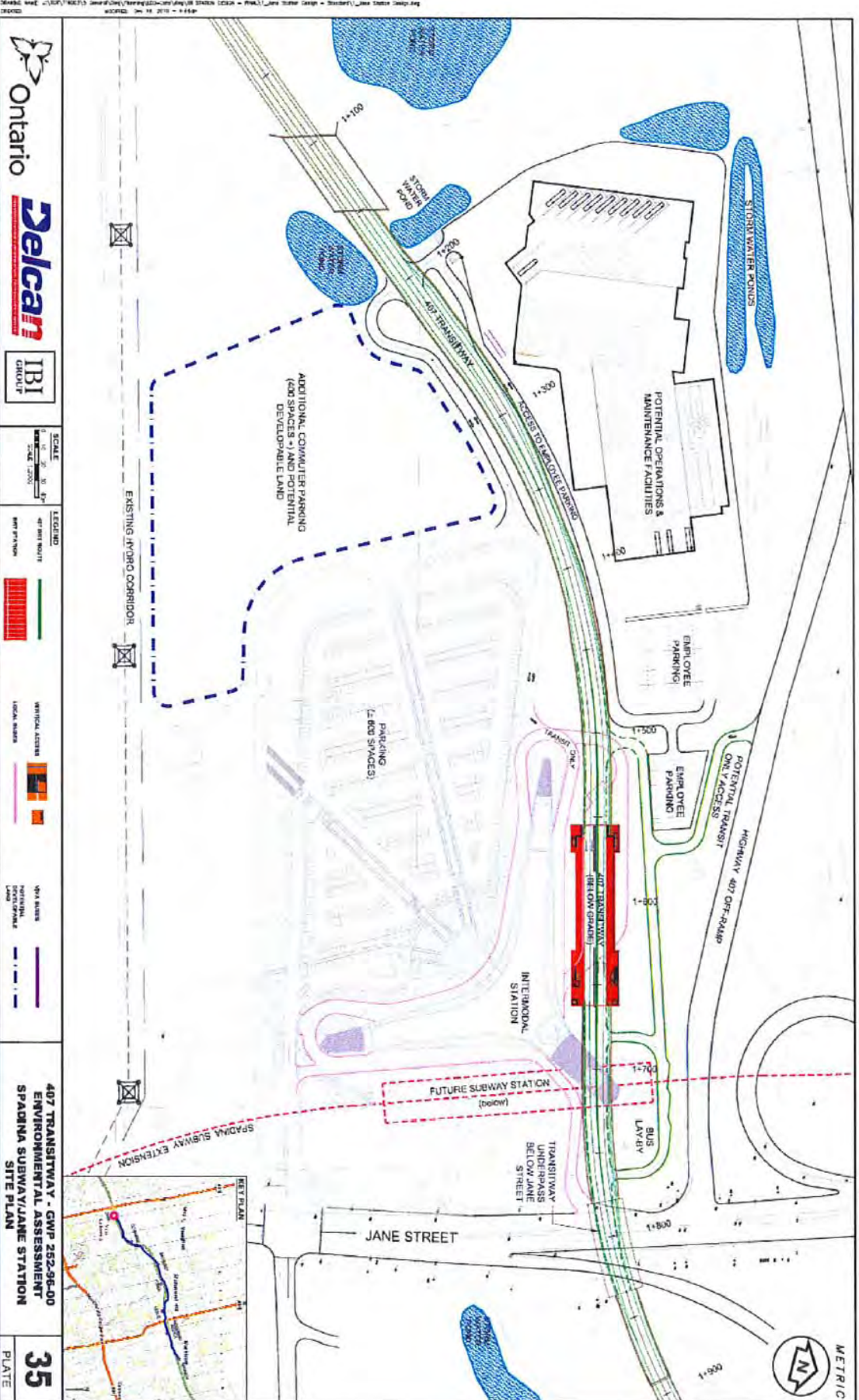
Figure 5.8: Segment B - Preferred Route

Figure 5-8: Segment B - Preferred Route



407 Transitway - Spadina Subway/Jane Station Site Plan

Attachment 4



407 TRANSITWAY - GWP 252-96-00
 ENVIRONMENTAL ASSESSMENT
 SPADINA SUBWAY/JANE STATION
 SITE PLAN

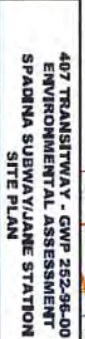
35
 PLATE

Ontario
Delcan
 IBI GROUP

SCALE
 1" = 100'
 1:1250

LEGEND

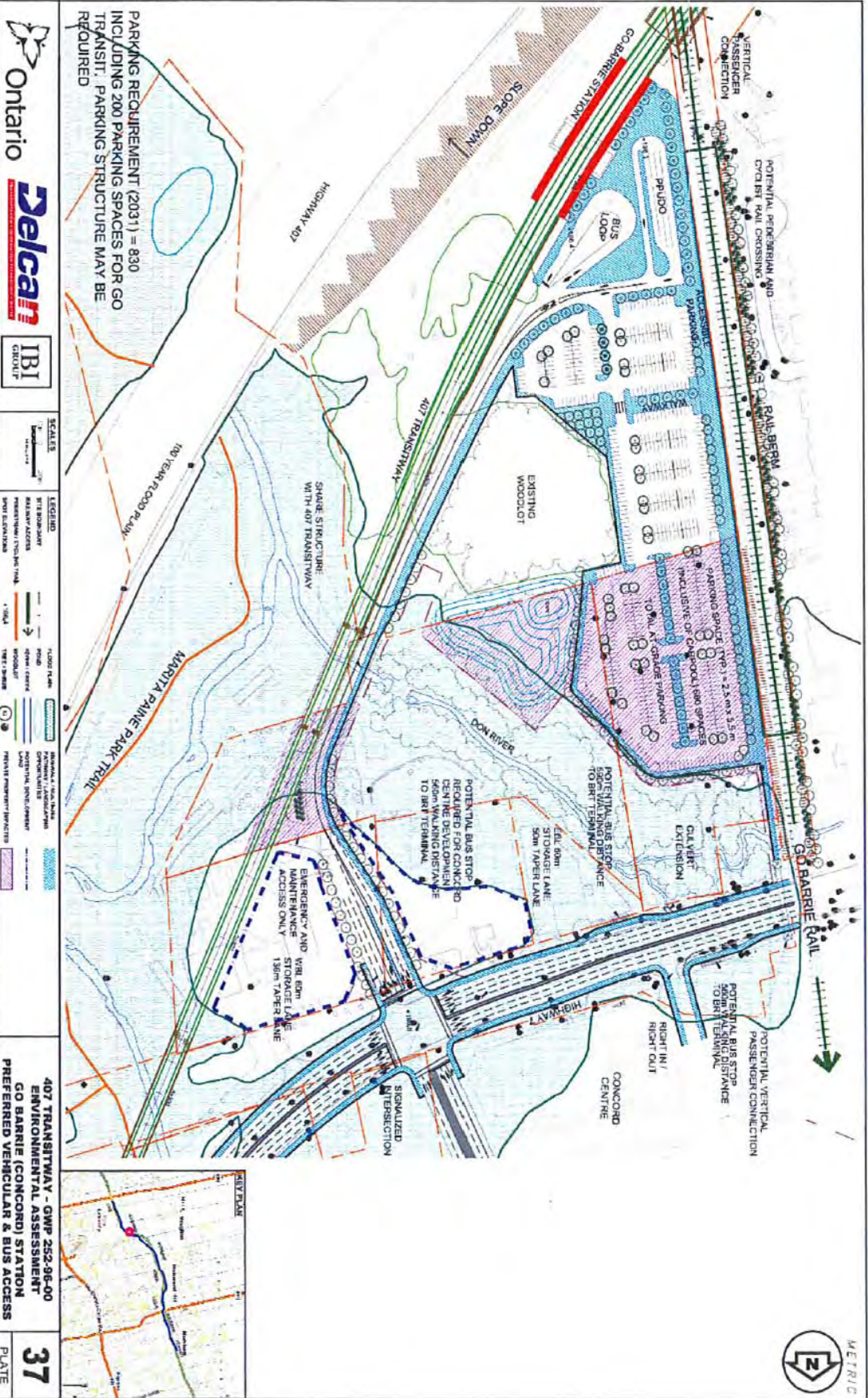
- EXISTING AVIARIO CORRIDOR
- VERTICAL ACCESS
- UTILITY ACCESS
- UTILITY LINE
- UTILITY TRENCH
- UTILITY DUCT



35
 PLATE

Attachment 5

407 Transitway - GO BARRIE(CONCORD) Station Site Plan



PARKING REQUIREMENT (2031) = 830 INCLUDING 200 PARKING SPACES FOR GO TRANSIT. PARKING STRUCTURE MAY BE REQUIRED



LEGEND

STATION BUILDING	PROPOSED	EXISTING
EXISTING WOODLOT	CONCORD CENTRE	CONCORD CENTRE
EXISTING ROAD	PROPOSED ROAD	PROPOSED ROAD
EXISTING RAIL	PROPOSED RAIL	PROPOSED RAIL
EXISTING TRAIL	PROPOSED TRAIL	PROPOSED TRAIL
EXISTING WATERWAY	PROPOSED WATERWAY	PROPOSED WATERWAY
EXISTING UTILITIES	PROPOSED UTILITIES	PROPOSED UTILITIES
EXISTING VEGETATION	PROPOSED VEGETATION	PROPOSED VEGETATION

407 TRANSITWAY - GWP 252-96-00 ENVIRONMENTAL ASSESSMENT GO BARRIE (CONCORD) STATION PREFERRED VEHICULAR & BUS ACCESS

