



**HIGHWAY 7 CORRIDOR & VAUGHAN NORTH-SOUTH LINK
PUBLIC TRANSIT IMPROVEMENTS ENVIRONMENTAL ASSESSMENT**

COMPLIANCE MONITORING PROGRAM

August 2008

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1.0 Background and Purpose of the Program

The Ministry of the Environment (MOE) approved York Region's Environmental Assessment (EA) of the Highway 7 Corridor and Vaughan N-S Link Public Transit Improvements in November 2006 subject to a number of conditions. One of these conditions was the requirement that the Region prepare and submit to the Director for review, comment and placement on the public record, an Environmental Assessment Compliance Monitoring Program (CMP).

The purpose of the CMP is to enable the monitoring of the Region's fulfillment of the provisions of the EA for:

- Mitigation measures,
- Built-in attributes to reduce environmental effects,
- Public and aboriginal community consultation,
- Additional studies and work to be carried out,
- Conditions of approval (provided in Appendix A), and
- All other commitments made during the preparation and review of the EA.

The CMP describes the actions required to address York Region's commitments, provide the indicators to be used to verify compliance and the schedule to be followed for completion of the commitments. Following review of the (Draft) CMP and any amendments required by the MOE, the Region will submit the CMP to the Director of the Environmental Assessment and Approvals Branch (EAAB) for placement on the public record, along with a declaration that the CMP is intended to fulfill Condition 3 of the EA approval.

The requirement to submit an Annual Compliance Report (ACR) describing the results of the CMP is incorporated in the CMP along with the timing of the ACR submissions. The ACR documentation will be made available to the MOE, or its' designate upon request, in a timely manner during an on-site inspection or audit.

This CMP is structured to identify the parties responsible, provide the program scope and actions required during each phase, outline the consultation methods to be used and the schedule to be followed for both the actions to confirm compliance and the submission of the reports.

1.1 Project implementation phasing

York Region has subdivided the Project into separate segments for phased implementation. These include:

- H1:** Rapid transit infrastructure between Highway 50 and Pine Valley Drive
- H2:** Rapid transit infrastructure between Pine Valley Drive and Yonge Street
- H3:** Rapid transit infrastructure between Yonge Street and Markham Centre
- H4:** Rapid transit infrastructure between the Markham Centre and Cornell Terminal
- V1:** Rapid transit infrastructure between Steeles Ave and Vaughan Corporate Centre, including the Toronto-York Spadina Subway Extension (see section 1.2)
- W1:** Road capacity improvements along Highway 7 between Woodbine Avenue and Sciberras Road.

(see also rapid transit network map in section 4.3 of Appendix B)

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Design and construction of rapid transit infrastructure (H1, H2, H3 and H4) are dependent on future funding from senior levels of government. Consequently, the Region does not have control over the timing of the various stages and is unable to provide a definitive schedule at this time. A proposed schedule, subject to funding, is provided below.

The preliminary design for segments H2 and H3 is scheduled to be completed in 2008, leading to the tendering of a detail design / build contract in 2009. The estimated construction timing for segments H2 and H3 is within the 2013 period (as identified in section 4.3 of the April 2008 York Region Rapid Transit Steering Committee report, included as supplemental information in Appendix B).

Design of segments H1 and H4 has not commenced. The estimated construction timing for segments H1 and H4 is currently scheduled beyond 2013.

The schedule for design and construction of segment V1 is described in section 1.2.

Design and construction of segment W1 will be funded through the Region's 10 Year Roads Construction Program. The design work has commenced in late 2007 and construction tender is currently scheduled for 2008 with completion in 2009.

1.2 Vaughan N-S Link segment of the undertaking is not included in this CMP

Since approval of the EA in November 2006, the V1 segment of the undertaking (Vaughan North-South Link from Steeles Avenue to Vaughan Corporate Centre) is now being planned as part of the Toronto – York Spadina Subway Extension from Downsview station to the Vaughan Corporate Centre. The project lead for design, construction and operations of the subway extension is the Toronto Transit Commission (TTC). The TTC has prepared a separate CMP for the Spadina Subway Extension Project. The combination of the CMP prepared for the subway project together with this CMP prepared for the remainder of the undertaking (H1, H2, H3, H4 and W1) is intended to fulfill the requirements of EA condition of approval 3.0.

1.3 Modified alignment required at IBM / Cederland Avenue

During the design and implementation of the project, it may become necessary to modify the undertaking approved in the EA, and a process for addressing modifications is included in section 6.0 of this CMP. At this time, a required modification to the transitway alignment and station location in the area of the IBM campus in Markham has been identified and is described briefly in this CMP as supplemental information.

During the EA, extensive discussions were held with IBM to develop an alignment that would optimize transit service to their Markham campus. At that time, IBM identified concerns with direct impact to their lands. The EA proposed that further consultation be undertaken prior to proceeding with project design to determine whether the transitway alignment and station could be integrated within the IBM lands as envisioned in the EA.

The additional consultation with IBM has now taken place. During the consultation, it was determined that IBM was unable to integrate the transitway and station with the long range planning for their campus, and a local modification to the approved undertaking is required (the segment of the undertaking affected by the modification is shown on figure 9-60 in the EA).

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In January 2008, Regional Council endorsed a modified alignment along Cederland Drive and Warden Avenue as a local refinement to the undertaking approved in the EA. The January 2008 report to the York Region Rapid Transit Steering Committee is included in Appendix C and provides additional background information related to the development of the alignment and station modification and consultation with affected stakeholders.

An amendment report will be prepared and submitted for approval following the process described in section 6.0 of this CMP.

1.4 Cornell Terminal site plan is evolving post EA approval

During the conduct of the EA, land use planning in the eastern area of Markham had not progressed sufficiently to identify a specific site for a transit terminal facility. The EA identified the need for a transit terminal generally along the south side of Highway 7 between Bur Oak Avenue and the new Markham Bypass (now known as the Donald Cousens Parkway), to be identified in conjunction with future development planning (see note on figure 9-77 of the EA).

Since approval of the EA, progress has been made in the development of what is now known as the Cornell Transit Terminal, and a brief reference is provided in this CMP as supplemental information (see the January 2008 report to the York Region Rapid Transit Steering Committee, provided in Appendix D).

Once the Cornell Terminal site plan is complete, it will be documented in the ACR.

2.0 Monitoring of Conditions of Approval

Table 2-1 lists the conditions of approval set out by the MOE in their notice of decision dated November 9, 2006 (a copy of which is provided in Appendix A) as well as a general template to identify who will be responsible for complying with each condition, at what stage the condition will be addressed and a description of how it has been addressed (to be populated by the Environmental Compliance Manager (ECM) during annual reporting).

Table 2.1 Monitoring of Conditions of Approval			
MOE Condition of EAA approval	Responsible person / agency	Stage condition will be addressed	Status and description of how the condition has been addressed
1.0 General Conditions 1.1 The Proponent shall comply with all the provisions of the EA submitted to the MOE which are hereby incorporated by reference except as provided in these conditions and as provided in any other approvals or permits that may be issued.	York Region - (more specific information to be added by ECM with annual compliance reporting for all cells in this column).	Design, Construction and Operation as specified	Specific information to be added by ECM with annual compliance reporting (for all cells in this column).. <ul style="list-style-type: none"> • Status ongoing. • This condition will be addressed once all commitments have been met.

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Table 2.1 Monitoring of Conditions of Approval			
MOE Condition of EAA approval	Responsible person / agency	Stage condition will be addressed	Status and description of how the condition has been addressed
1.2 These proposed conditions do not prevent more restrictive conditions being imposed under other statutes.	York Region	As applicable	<ul style="list-style-type: none"> • More restrictive conditions imposed under other statutes is not foreseen at this time. • As applicable, the condition will be tracked in the ACR's.
2.0 Public Record			
2.1 Where a document is required for the Public Record, it shall be provided to the Director for filing with the Public Record maintained for this undertaking. Additional copies of such documents will be provided by the Proponent for public access at: (a) The Regional Director's Office; (b) The Clerks offices of the Regional Municipality of York; (c) The Town of Richmond Hill; (d) The Town of Markham; and (e) The City of Vaughan; (f) Richmond Hill Central Library; (g) Unionville Library; and (h) Ansely Grove Library. These documents may also be provided through other means as considered appropriate by the Proponent and acceptable to the Director.	York Region	Design, Construction and Operation as specified	<ul style="list-style-type: none"> • Ongoing. • Condition will be addressed as specified. • To be completed with the filing of the last ACR.
3.0 Compliance Monitoring and Reporting			
3.1 The Proponent shall prepare and submit to the Director for review, comment and for placement on the Public Record an Environmental Assessment CMP as committed to in section 11.4 of the EA. The CMP shall be submitted no later than one year from the date of approval of the undertaking, or 60 days before the commencement of construction, whichever is earlier. A statement must accompany the CMP when submitted to the Director indicating that it is intended to fulfill this condition. The CMP, as may be amended by the Director, shall be carried out by the Proponent.	York Region	Design stage (Timing as specified in condition 3.1)	<ul style="list-style-type: none"> • Pending submission of the CMP. • Condition will be addressed with the approval of this CMP.
3.2 The Proponent shall provide a copy of the CMP to those agencies, affected stakeholders and/or members of the public who expressed an interest in the activity being addressed or being involved in the subsequent work no later than one year from the date of approval of the undertaking, or 60 days before the commencement of construction, whichever is earlier. If the Director amends the CMP, the Proponent shall ensure that the amended copy of the CMP is provided to those agencies, affected stakeholders and/or members of the public who expressed an interest in the activity being addressed or being involved in a timely manner.	York Region	Design stage (Timing as specified in condition 3.1)	<ul style="list-style-type: none"> • Pending submission of CMP. • Condition will be addressed with the approval of this CMP and circulation to affected/interested stakeholders.

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Table 2.1 Monitoring of Conditions of Approval			
MOE Condition of EAA approval	Responsible person / agency	Stage condition will be addressed	Status and description of how the condition has been addressed
3.3 The Proponent shall prepare a CMP in order to provide a framework for the monitoring of the Proponent's fulfillment of the conditions of approval as set out in this Notice of Approval, and the fulfillment of the provisions of the EA for mitigation measures, built-in attributes to reduce environmental effects, public and Aboriginal community consultation, additional studies and work to be carried out, and for all other commitments made during the preparation of the EA and the subsequent review of the EA.	York Region	Design, Construction and Operation as specified	<ul style="list-style-type: none"> • Ongoing. • Condition will be addressed with submission of the CMP for approval and as carried out by the Proponent until the final ACR.
3.4 The CMP shall at a minimum: a) set out the purpose, method and frequency of activities to fulfill compliance; b) provide a framework for recording and documenting results through the ACR; c) describe the actions required to address the commitments; d) provide an implementation schedule for when commitments shall be completed; e) provide indicators of compliance; and f) include, but not be limited to, a consideration of the commitments outlined in Tables 10.4-1 to 10.4-4 and Tables 11.3-1 to 11.4-2 in the EA, and Proponent's letter and attachments dated May 5,2006 (included in Appendix E).	York Region	Design stage	<ul style="list-style-type: none"> • Pending submission of the CMP. • Condition will be addressed with the approval of this CMP.
3.6 The Proponent shall prepare an ACR which describes the results of the CMP and shall do so annually. 3.7 The Proponent shall submit each ACR to the Director for review and comment and for placement on the Public Record. 3.8 The timing for the submission of the ACRs shall be set out in the CMP, including the timing for submission of the first ACR. 3.9 The Proponent shall submit ACRs until all applicable conditions of approval and commitments of the EA are satisfied or until the Director notifies the Proponent that no further reports are warranted. 3.10 When all conditions have been satisfied, the Proponent shall indicate in the ACR that this is its final submission.	York Region	Design, Construction and Operation as specified	<ul style="list-style-type: none"> • Ongoing. • Conditions will be addressed with the submission of ACR's until all conditions are satisfied.
4.0 Transit Technology 4.1 The Proponent shall prepare a TCP that identifies how, when and if the undertaking will convert from a Bus Rapid Transit System (BRT) to a Light Rail Rapid Transit (LRT).	York Region	Prior to conversion from BRT to LRT technology as required	<ul style="list-style-type: none"> • Not applicable at this time. • Timing for technology review identified in 2012 (EA Section 5.2.2.3) • Status to be updated in the ACR.

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Table 2.1 Monitoring of Conditions of Approval			
MOE Condition of EAA approval	Responsible person / agency	Stage condition will be addressed	Status and description of how the condition has been addressed
4.2 The Proponent shall submit copies of the final TCP to the Regional Director for review and comment and to the Director for placement in the Public Record file.	York Region	Prior to conversion from BRT to LRT technology as required	<ul style="list-style-type: none"> Not applicable at this time. Status pending as per condition 4.1.
4.3 The Proponent shall notify the Director and Regional Director 30 days before the technology conversion is to occur.			
4.4 The TCP shall include an implementation schedule.	York Region	Prior to conversion from BRT to LRT technology as required	<ul style="list-style-type: none"> Not applicable at this time. Status pending as per conditions 4.1.
4.5 The TCP shall include information about ridership levels and compatibility of the corridor with other transit systems.			
4.6 Further to Section 5.2.2.3 of the EA, which outlines that converting from BRT to LRT is dependent on other transit initiatives being developed, a copy of the TCP shall be provided to the City of Toronto, the Toronto Transit Commission, the Town of Richmond Hill, the City of Vaughan, and the Town of Markham for review and comment. The Proponent shall provide these stakeholders a minimum 30-day comment period.			
5.0 Air Quality	York Region	Design stage	<ul style="list-style-type: none"> Ongoing. Conditions will be addressed with the submission of Air Quality Assessment Report.
5.1 The Proponent shall prepare a comprehensive Air Quality Assessment Report to address the air quality impacts of the Region's transportation projects. The study area for the air quality report will be determined by the Proponent in consultation with the Regional Director.			
5.2 Copies of the Air Quality Assessment Report shall be submitted to the Regional Director for review and comment and to the Director for placement in the Public Record file.			
5.3 The Air Quality Assessment Report shall be submitted to the Regional Director prior to any construction beginning on the undertaking, including site preparation.			
5.4 The Air Quality Assessment Report shall, at a minimum, include the following: a) A comparison of predicted contaminant concentrations with all available Ontario Regulation 419/05 Air Pollution - Local Air Quality Regulation Schedule 3 standards, ministry's ambient air quality criteria and proposed Canada Wide Standards for: Carbon Monoxide (CO), Nitrogen Oxides (NOx), Particulate Matter - Total Suspended Particulates (TSP) as well as PM10 and PM2.5, and selected Volatile Organic Compounds (VOCs); b) Assessment of the study area, as determined in condition 5.1, consisting of a comparison between the background contaminant concentration levels and anticipated contaminant concentration levels resulting from the project, including future traffic volumes;	York Region	Design stage	<ul style="list-style-type: none"> Ongoing. Conditions will be addressed with the submission of Air Quality Assessment Report.

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Table 2.1 Monitoring of Conditions of Approval			
MOE Condition of EAA approval	Responsible person / agency	Stage condition will be addressed	Status and description of how the condition has been addressed
<p>c) A broad-based air quality impact mitigation plan which will assist in reducing contaminant concentrations that exceed appropriate criteria/standards expected to result from construction/implementation of the project;</p> <p>d) Development of project contaminant emission rates using a base year and future years as required</p> <p>e) Use of appropriate Emission and Dispersion Models (e.g. Mobile 6, US EPA CAL3QHCR, AERMOD);</p> <p>f) Use of five years of meteorological data (including surface and upper air data);</p> <p>g) Definition of roadway links as necessary;</p> <p>h) Calculation of predicted contaminant concentrations at nearby sensitive receptors;</p> <p>i) Traffic volume data</p> <p>j) Detailed presentation of predicted data (including model input data); and,</p> <p>k) Presentation of conclusions and recommendations.</p>			
<p>6.0 Complaints Protocol</p> <p>6.1 Prior to construction the Proponent shall prepare a Complaints Protocol on how it will deal with and respond to inquiries and complaints received during the construction and operation of the undertaking. The Proponent shall submit the protocol to the Regional Director, District Manager, Town of Markham, Town of Richmond Hill and the City of Vaughan for review and comment. The Complaints Protocol shall be placed on the Public Record.</p>	York Region	Design	<ul style="list-style-type: none"> Status pending submission prior to construction.
<p>7.0 Amending the Design of the Undertaking</p> <p>7.1 If the Proponent determines that there is a minor modification and that modification does not alter the expected net effects of the undertaking, the procedure set out in section 11.5 in the EA applies to this modification.</p> <p>7.2 Notwithstanding condition 7.1, section 11.5 of the EA does not apply where there is a change to the undertaking within the meaning of section 12 of the EAA.</p> <p>7.3 The Proponent shall consult with EAAB to determine the appropriate steps if there is uncertainty as to application of conditions of approval 7.1 or 7.2.</p>	York Region	Design	<ul style="list-style-type: none"> Status pending See sections 1.3 and 6.0 of this CMP

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Table 2.1 Monitoring of Conditions of Approval			
MOE Condition of EAA approval	Responsible person / agency	Stage condition will be addressed	Status and description of how the condition has been addressed
8.0 Selection of the optimum location for the subway alignment (not applicable for the undertaking covered under this CMP)	York Region	Design stage	<ul style="list-style-type: none"> Completed. Subway Alignment Report was approved by the Minister of the Environment on April 4, 2008 (see CMP prepared by TTC / York Region for the Spadina Subway Extension)
9.1 If a Stage 2 archaeological assessment is required to be prepared and aboriginal archaeological resources are encountered during the preparation of that Assessment, the Proponent shall provide a copy of that assessment to the Huron-Wendat First Nation of Wendake, Quebec and any additional relevant First Nations as identified by the archaeologist, based on the findings of that assessment.	York Region	Design	<ul style="list-style-type: none"> Pending a Stage II Archaeological Assessment and any subsequent Archaeological Assessment.
9.2 The Proponent shall provide the Huron-Wendat First Nation of Wendake, Quebec and any other relevant First Nation as warranted by the Stage 2 findings with 30 days to provide comments on the Stage 2 Assessment and the opportunity to reasonably participate in the Stage 3 Archaeological Assessment if the Stage 3 Archaeological Assessment is required in relation to aboriginal archaeological resources.			

3.0 Compliance Management and Responsibilities

The Project will progress from the design phase (preliminary and detailed) through the construction phase and then to on-going operation. For each phase, York Region will appoint an Environmental Compliance Manager (ECM).

3.1 Role of the Environmental Compliance Manager

In general, the ECM will verify that the requirements of the CMP are being followed and commitments are being met by the responsible parties during each phase of the project. In order to avoid actual or perceived conflicts of interest and to ensure objectivity in the monitoring process, a person independent of the actual construction or operation of the project works or services will be appointed to the ECM position. This may include York Region staff (including staff of the York Region Rapid Transit Corporation) designated as the ECM or private consultant staff not otherwise associated with the Project implementation. The ECM will have the authority to act on behalf of the Region in carrying out its duties.

Specifically, in each phase, the ECM will:

- Prepare an inventory and monitor the project requirements/activities which contribute to the fulfillment of the requirements of the CMP, EA Conditions of Approval and all other EA commitments.

- Review the deliverables or output of these relevant activities to confirm that the specific commitments listed in this CMP have been met in a manner satisfactory to affected stakeholders.
- Maintain records of the monitoring program tasks highlighting changes to the Project and any non-compliance of commitments.
- Review the contract drawings and specifications to confirm that all applicable environmental requirements have been incorporated.
- Document the net effect of changes to the Project, if any, and consult the MOE as required.
- Prepare notices of non-compliance including action required.
- Carry-out audits to verify that all non-compliances have been addressed appropriately such that commitments have been met.
- Consolidate documentation of monitoring activities and summarize Proponent's and Contractor's performance on an annual basis.
- Prepare and Submit an ACR to MOE as required by the Conditions of Approval.

3.2 Responsible Parties in each Phase

York Region, as proponent, is ultimately responsible for ensuring that all conditions of approval and project commitments have been satisfied.

3.2.1 Design Phase (Preliminary and Detailed)

York Region may decide to implement the project using the design-build delivery method. During the preliminary design phase, all design-related commitments to be fulfilled by the Proponent will be carried out by the preliminary design consultant and reviewed by York Region staff.

Following the execution of a contract for final design and construction, the design-build contractor will be responsible for all further actions to meet design-related commitments during its completion of the detailed design. Design solutions developed, including mitigation and consultation procedures followed will be subject to review and approval by York Region staff.

The contract provisions will include a copy of the CMP and special contract provisions will be added to ensure commitments outlined in the CMP are fulfilled, including commitments to further studies and consultation as applicable.

The ECM will verify compliance and prepare/submit ACRs.

3.2.2 Construction Phase

The Contractor will be responsible for meeting CMP requirements during construction. In accordance with stipulated contracting arrangements, the party contracted to carry out the construction will be required to meet all commitments related to the mitigation of construction effects while the Region or its consultants will monitor the contractor's actions.

The ECM will verify compliance and prepare/submit ACRs.

3.2.3 Operation and Maintenance Phase

Once construction is complete and rapid transit service operations commence on the project, York Region will assume responsibility for monitoring the effects of operations and maintenance in accordance with the CMP requirements.

The ECM will verify compliance and prepare/submit ACRs.

4.0 Program Scope (nature of commitments to be monitored)

The CMP has been developed to encompass the range of commitments to be monitored as identified in both the approved EA Report, the Proponent's letter to the MOE and attachments dated May 5, 2006 (see Appendix E) and the EA Conditions of Approval (Appendix A). In general terms, the nature of the commitments to be monitored is summarized below by phase of implementation with specific actions required for each commitment tabulated in more detail in Section 5 of this CMP.

4.1 Design Phase

- Ability of infrastructure design to maximize safety for vehicles and pedestrians and of streetscaping plan to enhance corridor and community environment;
- Application of design standards that permit future conversion to LRT technology;
- Effectiveness of infrastructure design and service plans in enhancing connectivity to local and inter-regional transit services;
- Simulation of intersection performance to verify transit service reliability and effects on general traffic;
- Stage 2 Archaeological Assessment;
- Inclusion of measures to mitigate construction effects on residences, businesses, road traffic and pedestrians in contract specifications;
- Opportunities to obtain input from affected communities, First Nations and heritage associations
- Inclusion of built-in attributes to mitigate adverse effects in design solutions;
- Adoption of design solutions that mitigate effects on surface water quality and quantity and aquatic habitat at watercourse crossings;
- Procedures to obtain regulatory approvals and input from municipal departments.

4.2 Construction Phase

- Contractor compliance with the measures stipulated in the technical specifications and contract conditions to mitigate construction effects on the natural environmental features within the influence of the works;
- Contractor compliance with the measures stipulated in the technical specifications and contract conditions to mitigate construction effects on community activities such as pedestrian and vehicular circulation, access and ambient noise and air quality levels;
- Compliance, by all parties to construction contracts responsible for public safety and construction management and administration, with the procedures established to manage and mitigate effects on the natural or social environment of accidents or incidents during construction activities;

4.3 Operations and Maintenance Phase

- Compliance, by all agencies responsible for design and operation, with the procedures established to manage and monitor the effectiveness of design attributes and built-in measures in mitigating any adverse effects of operations and maintenance on the natural and social environment;
- Compliance, by all agencies responsible for safety and operation and maintenance, with the procedures established to manage and mitigate effects on the natural or social environment of accidents or incidents during operation and maintenance activities.

5.0 Actions Required to Address Commitments

The CMP includes the actions tabulated below during each phase to monitor specific environmental compliance activities and provide verification that commitments made in the EA have been met. The commitments listed represent minimum monitoring requirements that may be expanded as necessary to include additional environmental elements if further impacts are identified during and after implementation of the undertaking. The structure of the tables will be used as the format to facilitate recording of the status of the monitoring activities in annual reports (ACRs) submitted during the program.

The ACR will document any additional commitments and changes to commitments or monitoring activities as outlined in the EA if any are identified through additional studies and consultation to be carried out during the design phase.

5.1 Monitoring during Design

During the design phase, commitments made in the EA for the inclusion of built-in attributes and mitigation measures, the obtaining of regulatory agency approvals and permits and consultation with affected stakeholders will be monitored. The monitoring activities will be integrated with the design schedule for each segment to ensure timely verification that the commitments have been met by appropriate design solutions before construction activities commence. In addition, environmental protection measures will be stipulated in all appropriate construction specifications

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that will form the contractual basis for carrying out the works. **Table 5.1** outlines the monitoring to take place during the design phase.

Table 5.1 Monitoring during Design					
I.D. #	Environmental Element	Mitigation Measure/Commitment to be Monitored	Responsible person / agency	Status and Description of how commitment has been addressed during design	Requirements at Construction Stage of Project
		<p>The Proponent shall comply with all the provisions of the EA submitted to the MOE which are hereby incorporated by reference except as provided in these conditions and as provided in any other approvals or permits that may be issued.</p> <p>This also includes the summaries of commitments for additional work, built in attributes and monitoring identified in Tables 10.4-1 to 10.4-4 and Tables 11.3-1 to 11.4-2 of the EA and Proponent's letter and attachments dated May 5, 2006.</p>			
1	Fisheries and Aquatic Habitat				
1.1		<p>EA Reference - Chapter 11, Table 11.3-1, Appendix D</p> <p>All culverts/ bridge modifications regarding potential Harmful Alterations, Disruption or Destruction of fish habitat, compensation under the Fisheries Act and identification of additional watercourses during the detailed design phase will be reviewed and approved by TRCA to ensure the compliance to their requirements.</p>	York Region and/or Designate (design consultant, contractor etc.) - specific information regarding who is responsible for the various monitoring activities to be added by ECM with annual compliance reporting for all cells in this column.	<p>Specific information to be added by ECM during annual compliance reporting for all cells in this column.</p> <p>Where appropriate, recommendations for future studies and/or additional work will be added by the ECM, including the sequence of how recommendations of additional work will be implemented during design and construction.</p>	Requirements at the construction stage are still pending and will be determined by the Region and ECM. (Specific information to be added by ECM with annual compliance reporting for all cells in this column).
1.2		<p>Chapter 11, Table 11.3-1, Appendix D</p> <p>For the proposed crossing at Rouge River between Town Centre Boulevard and Warden Avenue, a meander belt analysis will be carried out and a 100-year erosion limit will be determined during the preliminary & detailed design phases to meet TRCA's approval in determining the sizing of the bridge span.</p>			
1.3		<p>Chapter 11, Table 11.3-1, Appendix D</p> <p>Discussion with TRCA carried out to determine if a HADD will occur at one culvert extension, and if so, to secure a Fisheries Act authorization.</p>			

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Table 5.1 Monitoring during Design					
I.D. #	Environmental Element	Mitigation Measure/Commitment to be Monitored	Responsible person / agency	Status and Description of how commitment has been addressed during design	Requirements at Construction Stage of Project
1.4		Chapter 11, Table 11.3-1, Appendix D Any proposed in-stream work and site-specific mitigation measures carried out as outlined in Table 7 of the Natural Science Report			
3.1	Vegetation and Wetlands	Chapter 11, Table 11.3-1, Appendix D Edge Management Plan and Tree Preservation Plans will be prepared during the detailed design to mitigate impacts to adjacent natural features, as well as the preparation of detailed compensation and restoration plans to strive to provide for a net improvement to existing condition. TRCA guidelines for Forest Edge Management Plans and Post-Construction Restoration will be followed.			
4	Groundwater Resources				
4.1		Chapter 11, Table 11.3-1, Appendix D In the event the shallow or upward groundwater movement becomes an issue due to the construction of subway during the detailed design stage, TRCA's hydrogeologist will be consulted.			To be addressed during design and construction of the Spadina Subway Extension, covered under a separate CMP.
4.2		Chapter 11, Table 11.3-1, Appendix D For wells that remain in use, if any, a well inspection will be conducted prior to construction to establish baseline conditions and to confirm the relationship of the widened roadway to existing active water well will not have an adverse affect on water quality. If it does, a contingency plan will be developed. In the event that wells are required to be closed, closure will proceed in accordance with O.Reg.903 of the Ontario Water Resource Act. If the widened roadway has adverse effects on the active well on water quality, a contingency plan will be developed.			
4.3		Chapter 11, Table 11.3-1, Appendix D For subway extension, a subsurface investigation will be conducted during preliminary and detail design to identify			To be addressed during design and construction of the Spadina Subway Extension, covered under a separate CMP.

**Highway 7 Corridor Public Transit Improvements EA
Compliance Monitoring Program**

Table 5.1 Monitoring during Design					
I.D. #	Environmental Element	Mitigation Measure/Commitment to be Monitored	Responsible person / agency	Status and Description of how commitment has been addressed during design	Requirements at Construction Stage of Project
		groundwater and soil conditions. Impact assessment and mitigation measures will be performed at that time to address any issues related to groundwater quality and quantity			
5	Surface Water Resources				
5.1		Sect. 9.6, Chapter 11, Table 11.3-1, Appendix D & G A detailed Storm Water Management Plan (SWMP) will be developed in accordance with the MOE's <i>Stormwater Management Planning and Design Manual (2003)</i> and <i>Guidelines for Evaluating Construction Activities Impacting on Water Resources</i> . This SWMP will outline monitoring & maintenance commitments for SWM facilities constructed as part of this undertaking.			
5.2		Chapter 11, Table 11.3-1, Appendix D & G Water quality controls up to the MOE water quality guideline of Enhanced Level (80% total suspended solids removal) required for areas where an increase in impervious surface is observed.			
5.3		Chapter 11, Table 11.3-1, Section 9.6 An Erosion and Sediment Control Plan developed to manage the flow of sediment into storm sewers and watercourses and to monitor erosion and sedimentation control measures during construction.			
7	Contaminated Soil				
7.1		Chapter 11, Table 11.3-1, Proponent Response to Government Review Team Comments, Appendix F In the event contaminated sites are identified after construction activities begin, the contingency plan prepared to outline the steps that will be taken to ensure that contaminant release will be minimized and appropriate clean-up will occur. The site clean-up procedure of the plan compliance with the <i>MOE's Brownfield's</i> legislation and the <i>Record of Site Condition Regulation</i> (O.Reg. 153/04)			

**Highway 7 Corridor Public Transit Improvements EA
Compliance Monitoring Program**

Table 5.1 Monitoring during Design					
I.D. #	Environmental Element	Mitigation Measure/Commitment to be Monitored	Responsible person / agency	Status and Description of how commitment has been addressed during design	Requirements at Construction Stage of Project
7.2		Chapter 11, Table 11.3-1, Proponent Response to Government Review Team Comments, Appendix F Health Canada's Federal Contaminated Site Risk Assessment in Canada will be obtained.			
9.1	Effects on Businesses and Other Land Uses	Section 9.1.8, Chapter 11, Table 11.3-1 The parking need assessment and management study developed.			
10.1	Archaeological Resources	Table 11.3-1 and proponent Response to Government Review Team Comments, Appendix J. Completion of a Stage 2 Archaeological Assessment and procedure for continued consultation with the Ministry of Culture. Records of consultation with First Nations.			
12.1	Agriculture	A policy to protect agriculture lands during construction will be developed during the detailed design phase.			
13	Others				
13.1	MTO	Section 9.1.5 MTO will be consulted and their approval will be sought in any modifications to the CAH bridges, and the grade separated option (C-B2) through Hwy 404 interchange when required.			
13.2		Section 9.1.5 The Highway 427 Extension Preliminary Study will be obtained during detailed design once they are finalized. MTO will be consulted in the design of Highway 7 structure over Highway 427.			
13.3	Public	Public concerns/ complaints will be address through public consultation centres during detailed design phase. As well, public relation stuff will address complaints regarding construction and operations of the transitway. The received concerns/ complaints will be circulated to appropriate department for action.			
13.4	Markham CPAC	Section 13.9.4 During the preliminary and detailed design phases, the Cycling and Pedestrian Advisory Committee (CPAC) will be consulted regarding the cyclist and pedestrian treatments.			

**Highway 7 Corridor Public Transit Improvements EA
Compliance Monitoring Program**

Table 5.1 Monitoring during Design					
I.D. #	Environmental Element	Mitigation Measure/Commitment to be Monitored	Responsible person / agency	Status and Description of how commitment has been addressed during design	Requirements at Construction Stage of Project
13	Community vistas and street and neighbourhood aesthetics	Sections 9.6 and 10.4.2, and Proponent's Response to Government Review Team Comments Development of a comprehensive streetscaping plan to mitigate adverse effects on residential and pedestrian environment.			
14	Traffic and Pedestrian circulation and access during construction	Section 9.6 and Proponent's Response to Gov't Review Team Comments Development of a comprehensive Construction and Traffic Management Plan including consultation with school board officials to ensure safe, uninterrupted access to schools affected by the works.			
15	Safety of traffic and pedestrian circulation and access during rapid transit operations	Section 9.6 and Government Review Team Comment response Infrastructure design features, built-in safety measures and operating procedures adopted in the preparation of the detailed design solution. Analysis of the need for speed limit reductions to address safety concerns. Inclusion of numerical countdown pedestrian lights in detailed design.			
17	Interface with MTO future 407 Transitway undertaking	Proponent's Response to Government Review Team Comments Consultation with MTO staff during the detailed design and construction phase to provide coordination and ensure protection for appropriate interface between projects.			

5.2 Construction Monitoring

During the construction of the project, the Region will carry out the monitoring activities as noted in **Table 5.2**, to measure the effects of transitway construction activities on the elements of the environment listed.

5.3 Operations and Maintenance Monitoring

The Program includes regular monitoring activities as well as development of procedures to be adopted in the event that adverse effects are identified between regular inspections. Monitoring activities during rapid transit operations will encompass the monitoring described in **Table 5.3**.

**Highway 7 Corridor Public Transit Improvements EA
Compliance Monitoring Program**

**Table 5.2
Construction Monitoring**

Construction and Compliance Monitoring		Construction Monitoring						
Environmental Effect	Purpose of Monitoring	Monitoring Method	Monitoring Frequency	Changes to Mitigation Protection and/or Monitoring	Agency Responses and Dates	New Mitigation Protection and/or Monitoring	Date of Permit Approval or Authorization	Record of Compliance (ECM Signature and Date)
				Specific information to be added by ECM with annual compliance reporting (for all cells in these columns).				
Noise generated by construction activities	To ensure noise levels comply with Municipal by-laws and construction equipment complies with NPC-115 noise emission standards.	Site measurements of levels produced by representative equipment/activities	At time of introduction of equipment/ activities producing significant noise level with potential to disturb sensitive areas.					
Effect of construction activities on air quality(dust, odour.)	To confirm that local air quality is not being adversely affected by construction activity	Regular inspections of site dust control measures and of construction vehicle exhaust emissions	Monthly during construction seasons.					
Condition of heritage homes adjacent to transitway alignment	To determine if any damage/deterioration is due to construction activity	Pre-construction inspection to obtain baseline condition and monitoring during nearby construction	As required by construction schedule for work adjacent to heritage features.					
Effect of construction on water quality and quantity in watercourses	To confirm that water quality is not being adversely affected by construction activity	Monitor sediment accumulation after rain events during construction to ensure that the proposed mitigation measures in the Erosion and Sediment Control Plan have been satisfied.	After first significant rain event					
Effect of construction on boulevard trees	To ensure the survival of boulevard trees	Inspection of protective measures and monitoring of work methods near trees	Prior to commencement of work and bi-weekly during work activities.					

Highway 7 Corridor Public Transit Improvements EA
Compliance Monitoring Program

Table 5.3 Operations and Maintenance Monitoring								
Construction and Compliance Monitoring			Operations and Maintenance Monitoring					
Environmental Effect	Purpose of Monitoring	Monitoring Method	Monitoring Frequency	Changes to Mitigation Protection and/or Monitoring	Agency Responses and Dates	New Mitigation Protection and/or Monitoring	Date of Permit Approval or Authorization	Record of Compliance (ECM Signature and Date)
Noise generated by operation and maintenance activities	To ensure noise levels comply with Municipal by-laws	Pass-by and idling measurements of levels produced by representative vehicles /activities	Initially after revenue service is introduced and in response to concerns or after any major increase in service frequency.					
Effect of rapid transit operations on local air quality (pollutants, odour,)	To confirm that local air quality is not being adversely affected by transit vehicle activity at terminals/facilities	Regular inspections of measures and of transit vehicle exhaust emissions	Initially after facilities are placed into service and at five-year intervals during vehicle life.					
Effect of rapid transit operations on GHGs emitted per commuting person-trips	To assess the effectiveness of improved public transit as a commuting choice in reducing GHG emissions in the corridor.	Ridership growth surveys and transit mode split data analysis to derive GHG emission reductions	Findings to be included in the Annual Compliance Reports					
Condition of heritage homes adjacent to transitway alignment	To determine if any damage/deterioration is due to vibrations produced by transit vehicles	Post-construction inspection to obtain baseline condition and monitoring during pass-by operations	Initially after revenue service is introduced and in response to concerns or after any major increase in service frequency.					
Traffic Operation	To confirm that the traffic operation is not adversely affected	Post-construction traffic study	Initially after revenue service is introduced and at a regular interval afterward					
Effect of snow and ice removal on water quality in corridor watercourses	To confirm that water quality is not being adversely affected by transitway and vehicle maintenance activities	Monitor sediment accumulation in storm water management facilities.	During major storm events up to five times per year					

Specific information to be added by ECM with annual compliance reporting (for all cells in these columns).

**Highway 7 Corridor Public Transit Improvements EA
Compliance Monitoring Program**

**Table 5.3
Operations and Maintenance Monitoring**

Environmental Effect	Construction and Compliance Monitoring		Operations and Maintenance Monitoring			Date of Permit Approval or Authorization	Record of Compliance (ECM Signature and Date)
	Purpose of Monitoring	Monitoring Method	Monitoring Frequency	Changes to Mitigation Protection and/or Monitoring	Agency Responses and Dates		
Effect of operations and maintenance on boulevard trees	To ensure the survival of boulevard trees	Inspection of protective measures and monitoring of work methods near trees	Annually				
Effect of operations of RT on intersection operation and access to minor side streets and properties along Yonge St. using U-turns	To ensure acceptable level of service at intersections and accessibility to minor side streets and properties along Yonge Street	Monitor intersection performance and conflict potentials. Prohibit Right Turns On Red movements from the side street at these locations if necessary	Initially after introduction of RT service and during the Region's regular assessment of intersection performance.				
Effect of RT operation and intersections on traffic infiltration through neighbourhood roads	To identify any increase in the use of neighbourhood roads by non-resident traffic as an alternative to left turn access restrictions.	"Before and after" traffic volume observations on affected roadways to determine any change in infiltration levels.	Before commencement of construction and six months after introduction of RT service.				
Increased mobility choice due to rapid transit service introduction and local transit connectivity	To verify the convenience of the inter-connection between rapid transit service and reconfigured local feeder services.	Review of effectiveness of local service plans in terms of growth of transfers and response to customer requests/complaints	After six months of RT service and annually thereafter.				
Effect of RT operations on public safety in the right-of-way and in station zones	To confirm the effectiveness of safety measures incorporated in the transit infrastructure design and pedestrian access facilities	Review of accident reports and statistics to establish whether cause is transit related	In response to specific incidents as required and in Annual Compliance Reports				

Highway 7 Corridor Public Transit Improvements EA
Compliance Monitoring Program

Table 5.3
Operations and Maintenance Monitoring

Construction and Compliance Monitoring		Operations and Maintenance Monitoring				Record of Compliance (ECM Signature and Date)		
Environmental Effect	Purpose of Monitoring	Monitoring Method	Monitoring Frequency	Changes to Mitigation Protection and/or Monitoring	Agency Responses and Dates		New Mitigation Protection and/or Monitoring	Date of Permit Approval or Authorization
Streetscaping, neighbourhood aesthetics and community vistas	To confirm that landscaping, station and transitway features continue to enhance the community environment in the corridor.	Inspection of landscaping by Region arborist and streetscaping features by maintenance personnel	Twice annually or in response to specific complaints about plant health, graffiti, cleanliness.					
Provision of median crossing for Emergency Response Services vehicles	To ensure the operation of the ERS vehicles.	Obtain feedback from ERS staff on performance of access provisions.	Initially after completion of access facilities and through regular consultation with the emergency services.					
Utilization of Community Facilities	To confirm that rapid transit is increasing usage of facilities due to improved access.	Obtain registration data from facilities served (up to three).	Review registration data annually for a period of 5 years after start-up					
Change in existing land use patterns to transit-oriented development may not be attainable or may be inappropriate	To confirm that municipal development approvals and zoning are realizing the benefit of improved transit and encouraging development compatible with existing neighbourhoods.	Monitor re-development activity to control overall increase in and type of development density.	Review municipal data on redevelopment/development levels annually for a period of 10 years after start-up					
Effect of an increase in business activity on the urban form	To determine whether business activity along the corridor increases and whether resulting intensification meets urban form objectives.	Monitor business activity, urban form and economic conditions in the corridor.	Review building applications and permits and economic influences annually for 10 years after start-up					

6.0 Modifying the Design of the Undertaking

In the event that there is a minor change to the design of the undertaking which does not adversely impact the expected net environmental effects of the undertaking, these changes will be considered minor and documented in the annual compliance report.

In the event that there is a change to the design of the undertaking that results in a material increase in the expected net environmental effects of the undertaking, a process for modifying the design of the undertaking is presented in this section as follows:

- Notify the Director of the MOE EAAB of the details of the required modification;
- Consult directly with affected stakeholders and agencies on the nature of the modification giving consideration to all concerns of the public and affected agencies;
- Submit an amendment report to the MOE;
- Make the amendment report available for public review for a period of 30 days;
- Notify affected stakeholders and agencies by mailing a notice for the 30 day review;
- Summarize comments received from agencies and the public; and
- Obtain approval of the amendment report from the MOE EAAB.

The amendment report will generally include a detailed description of the proposed modification to the undertaking, rationale for the modification, alternatives to the modification, advantages and disadvantages, change in net effects and results of consultation with affected stakeholders.

In the event that it is unclear whether the modification to the design of the undertaking is minor or material, the Proponent will consult with the MOE.

As noted in Section 1.3, a required modification to the transitway alignment and station location in the area of the IBM campus in Markham has been identified. The modified alignment is a local refinement to the undertaking approved in the EA and an amendment report will be submitted specifically documenting the design modification.

7.0 Consultation

7.1 Community Consultation

Community consultation activities will be undertaken by the Region and/or designate and will comprise the following during the phases indicated. A Community Relations Officer (Region staff or designate) will be provided during consultation activities.

7.1.1 Design Phase

- One "Open House" format public consultation opportunity on completion of the preliminary design development work for each segment of the transitway planned for construction as a stand-alone component of the project implementation. The open house will take place at a location near the limits of the segment to be implemented and

the design solution presented and modified as necessary to address public comment, will be the basis for the detailed design.

7.1.2 Construction Phase

- One "Open House" format public information centre prior to commencement of construction to present the construction staging and methods to be adopted including temporary works and methods to maintain traffic and pedestrian access and circulation, protect the existing natural and built environment and minimize noise, vibration and air pollution during construction.
- Availability of a "Community Relations Officer" throughout the construction period to provide information to, consult with and respond to complaints from, property and business owners and the general public. This Officer will prepare a protocol for dealing with and responding to inquiries and complaints during the construction and subsequent operation. The protocol will be submitted to the MOE for placement on the Public Record prior to commencement of construction.

7.1.3 Operations and Maintenance Phase

- York Region Transit consults on a regularly basis with the public through Open Houses at which they provide information on planned system expansion and modifications and respond to questions and complaints concerning existing operations. These forums will provide the opportunity to inform the public of the results of monitoring of EA commitments as well as to obtain feedback from the public on the effectiveness of environmental mitigation measures incorporated into the design and operations of the undertaking.
- At any time during operation of the undertaking, the public will have the opportunity to lodge complaints or make inquiries by contacting York Region Transit's Customer Service Representative by telephone or their e-mail contact service using the information provided on their website www.yrt.ca.

7.2 First Nations Consultation

7.2.1 Archaeological Assessment

The findings of the Stage 2 Assessment and any subsequent assessments will be circulated to all affected stakeholders and First Nations that have asked to be kept informed of the outcome of any archaeological investigations during the design and construction phases.

The Region and/or designate will consult and respond to First Nations concerns regarding its findings on the Stage 2 Archaeological Assessment. The Region and/or designate will obtain any necessary approvals and conduct any additional studies that may be required as a result of the findings and recommendations of the Stage 2 Assessment.

7.2.2 Notices of Consultation Opportunities

Notices of public consultation opportunities will be sent to First Nations that wish to be kept informed of the implementation of the undertaking.

Should First Nations wish to be kept informed of the study and any additional work the Region will consult and notify First Nations in the manner in which they wish to be notified and/or consulted. This could vary from sending notices to attending meetings.

8.0 Program Schedule

The CMP will be conducted during the implementation of all segments of the EA Undertaking. A preliminary schedule for each segment was provided in section 1.1. Rapid transit operations will commence immediately after testing and commissioning of the systems and facilities.

CMP activities programmed for each phase will be carried out throughout the implementation of the project and will continue during operations and maintenance until it can be verified that all commitments relating to operational effects have been met. It is anticipated that a stable operating environment will be reached within three years of the commencement date by which time monitoring activities will have confirmed compliance and as such, will no longer be necessary.

Any commitments or conditions which require monitoring beyond the expected three year period will be verified at the appropriate time period during operations and the status of compliance will be recorded in the ACR.

9.0 Submission and Circulation of the CMP

In order to fulfill the Condition of Approval requiring submission of a CMP, this document is submitted to the Director of the Environmental Assessment and Approvals Branch (EAAB) of the Ministry of the Environment for review and approval. Following approval it will be provided to the Director for filing with the Public record maintained for the undertaking. Additional copies will be provided by the Proponent for public access as specified in condition of approval 2.1.

Accompanying the CMP submitted to the Director will be a statement indicating that the CMP is intended to fulfill Condition 3 of the Conditions of Approval.

The CMP will be made available to agencies, affected stakeholders and/or members of the public who expressed an interest in activities being addressed in the CMP or being involved in subsequent work.

Copies of the CMP will be provided to those agencies/interested groups identified in Table 11.3-1 of the EA. A notice will be sent to all other agencies involved during the EA and to other stakeholders who identified an interest by providing comments during public review of the EA or EA review. The notice will advise that the CMP is available on the Region's website or hard

copy on request. A copy of the stakeholder list will be provided to MOE for the public record submission of the CMP and subsequent ACR's.

The CMP will be available for public information on the Proponent's website at www.vivayork.ca.

10.0 Annual Compliance Report (ACR)

The ECM will prepare an Annual Compliance Report (ACR) which describes the results of the Compliance Monitoring Program during the year preceding the submission of each ACR. A copy of the ACR will be submitted to the Directors of the Environmental Assessment and Approvals Branch and Central Region for placement on the Public Record.

The first ACR will be submitted in June 2009 with subsequent submissions in December of each year thereafter until the construction of the undertaking is complete and the rapid transit service has been operated for at least three years after the last segment is constructed.

The ACR's may include adjustments to Tables 5.1, 5.2 or 5.3 of the CMP to accommodate any additional environmental effects or EA commitments which may have been inadvertently missed or which were revised and need to be monitored for compliance.

11.0 Other Documents required by the Conditions of Approval

In parallel with the implementation of the CMP, the following other documents will be prepared and submitted at the appropriate time, as required by the Conditions of Approval of the EA. The compliance with these requirements will be monitored and verified by the ECM during the course of the CMP and recorded, when appropriate, in the ACR.

11.1 Ridership Monitoring Program

York Region will prepare the results of its Ridership Monitoring Program as committed in Section 5.2.2.3 of the EA and EAA Condition 4.1. The Ridership Monitoring Program will be provided to the City of Toronto, GO Transit, Ministry of Transportation, TTC, the Towns of Markham and Richmond Hill and the City of Vaughan for review.

11.2 Technology Conversion Plan

A Technology Conversion Plan will be prepared to identify when and if conversion from a bus rapid transit (BRT) system to a Light Rail Transit (LRT) system will occur. If conversion is found to be required prior to 2021, the Plan will include an implementation schedule.

The Ridership Program and Technology Conversion Plan will be placed on the public record file at the EAAB and the MOE's Central Regional Office. A copy of these documents will also be provided to the City of Toronto, TTC, GO Transit, the Ministry of Transportation, the Towns of Markham and Richmond Hill and the City of Vaughan for review.

11.3 Complaints Protocol

Prior to construction, the Region will prepare a protocol on how it will deal with and respond to inquiries and complaints received during the construction and operation of the undertaking. The protocol will be submitted to the Central Region Director for placement on the Public Record.

Appendix A

Notice of Approval for the Highway 7 Corridor and Vaughan N-S Link Public Transit Improvements Environmental Assessment – November 2006

ENVIRONMENTAL ASSESSMENT ACT

SECTION 9

NOTICE OF APPROVAL TO PROCEED WITH THE UNDERTAKING

RE: Highway 7 Corridor Vaughan North-South Link Public Transit Improvements
Environmental Assessment

Proponent: The Regional Municipality of York

EA File No.: EA02-06-02

TAKE NOTICE that the period for requiring a hearing, provided for in the Notice of Completion of the Review for the above noted undertaking, expired on August 25, 2006. I received one submission before the expiration date requesting that I refer the application for a hearing and decision by the Environmental Review Tribunal.

I consider a hearing to be unnecessary in this case. Having considered the purpose of the Act, the approved Terms of Reference, the Environmental Assessment, the Ministry review of the Environmental Assessment and submissions received, I hereby give approval to proceed with the undertaking, subject to conditions set out below.

REASONS:

My reasons for giving approval are:

1. On the basis of the proponent's Environmental Assessment and the Review, the proponent's conclusion that, on balance, the advantages of this undertaking outweigh its disadvantages appears to be valid.
2. The alternative method for implementing the undertaking was identified as having advantages over the other alternatives considered.
3. On the basis of the proponent's Environmental Assessment, the Review and the conditions of approval, the construction, operation and maintenance of the undertaking will be consistent with the purpose of the Act (section 2).
4. The Government Review Team has indicated no concerns that can not be addressed through these conditions of approval. The public review of the Environmental Assessment did not identify any concerns which can not be addressed through these conditions of approval.

5. The issues and concerns raised in the submissions received after the Notice of Completion of the Review was published are being dealt with through conditions where appropriate. I am not aware of any outstanding issues with respect to this undertaking which suggest that a hearing should be required.

CONDITIONS

DEFINITIONS

“ACR” means an annual compliance report

“CMP” means the compliance monitoring program

“Director” refers to the Director of the EAAB.

“District Manager” refers to the District Manager of the MOE's York-Durham Office.

“EA” refers to the document titled “Highway 7 Corridor Vaughan North-South Link Public Transit Improvements Environmental Assessment Report”, dated August, 2005, and Appendices Volume 1 and 2 dated August, 2005, and the responses from the Regional Municipality of York dated May 5, 2006

“EAAB” refers to the Environmental Assessment and Approvals Branch of the MOE.

“MOE” refers to the Ontario Ministry of the Environment.

“Proponent” refers to The Regional Municipality of York.

“Public Record” refers to the MOE's and Proponent's public file maintained for the undertaking in accordance with section 30 of the *Environmental Assessment Act* (EAA).

“Regional Director” refers to the Director of the MOE's Central Regional Office.

“TCP” means the technology conversion plan

1.0 GENERAL CONDITIONS

- 1.1 The Proponent shall comply with all the provisions of the EA submitted to the MOE which are hereby incorporated by reference except as provided in these conditions and as provided in any other approvals or permits that may be issued.
- 1.2 These proposed conditions do not prevent more restrictive conditions being imposed under other statutes.

2.0 PUBLIC RECORD

2.1 Where a document is required for the Public Record, it shall be provided to the Director for filing with the Public Record maintained for this undertaking. Additional copies of such documents will be provided by the Proponent for public access at:

- (a) The Regional Director's Office;
- (b) The Clerk's offices of the Regional Municipality of York;
- (c) The Town of Richmond Hill;
- (d) The Town of Markham; and
- (e) The City of Vaughan;
- (f) Richmond Hill Central Library;
- (g) Unionville Library; and
- (h) Ansely Grove Library.

These documents may also be provided through other means as considered appropriate by the Proponent and acceptable to the Director.

3.0 COMPLIANCE MONITORING AND REPORTING

Submission of Compliance Monitoring Program (CMP):

- 3.1 The Proponent shall prepare and submit to the Director for review, comment and for placement on the Public Record an Environmental Assessment CMP as committed to in section 11.4 of the EA. The CMP shall be submitted no later than one year from the date of approval of the undertaking, or 60 days before the commencement of construction, whichever is earlier. A statement must accompany the CMP when submitted to the Director indicating that it is intended to fulfill this condition. The CMP, as may be amended by the Director, shall be carried out by the Proponent.
- 3.2 The Proponent shall provide a copy of the CMP to those agencies, affected stakeholders and/or members of the public who expressed an interest in the activity being addressed or being involved in the subsequent work no later than one year from the date of approval of the undertaking, or 60 days before the commencement of construction, whichever is earlier. If the Director amends the CMP, the Proponent shall ensure that the amended copy of the CMP is provided to those agencies, affected stakeholders and/or members of the public who expressed an interest in the activity being addressed or being involved in a timely manner.

Purpose of CMP:

- 3.3 The Proponent shall prepare a CMP in order to provide a framework for the monitoring of the Proponent's fulfillment of the conditions of approval as set out in this Notice of Approval, and the fulfillment of the provisions of the EA for

mitigation measures, built-in attributes to reduce environmental effects, public and Aboriginal community consultation, additional studies and work to be carried out, and for all other commitments made during the preparation of the EA and the subsequent review of the EA.

- 3.4 The CMP shall at a minimum:
- a) set out the purpose, method and frequency of activities to fulfill compliance;
 - b) provide a framework for recording and documenting results through the ACR;
 - c) describe the actions required to address the commitments;
 - d) provide an implementation schedule for when commitments shall be completed;
 - e) provide indicators of compliance; and
 - f) include, but not be limited to, a consideration of the commitments outlined Tables 10.4-1 to 10.4-4 and Tables 11.3-1 to 11.4-2 in the EA, and Proponent's letter and attachments dated May 5, 2006.

Submission of ACR:

- 3.6 The Proponent shall prepare an ACR which describes the results of the CMP and shall do so annually.
- 3.7 The Proponent shall submit each ACR to the Director for review and comment and for placement on the Public Record.
- 3.8 The timing for the submission of the ACRs shall be set out in the CMP, including the timing for submission of the first ACR.
- 3.9 The Proponent shall submit ACRs until all applicable conditions of approval and commitments of the EA are satisfied or until the Director notifies the Proponent that no further reports are warranted.
- 3.10 When all conditions have been satisfied, the Proponent shall indicate in the ACR that this is its final submission.

4.0 TRANSIT TECHNOLOGY

Purpose of the Technology Conversion Plan:

- 4.1 The Proponent shall prepare a TCP that identifies how, when and if the undertaking will convert from a Bus Rapid Transit System (BRT) to a Light Rail Rapid Transit (LRT).

Submission of the TCP:

- 4.2 The Proponent shall submit copies of the final TCP to the Regional Director for review and comment and to the Director for placement in the Public Record file.
- 4.3 The Proponent shall notify the Director and Regional Director 30 days before the technology conversion is to occur.

Requirements of the TCP:

- 4.4 The TCP shall include an implementation schedule.
- 4.5 The TCP shall include information about ridership levels and compatibility of the corridor with other transit systems.
- 4.6 Further to Section 5.2.2.3 of the EA, which outlines that converting from BRT to LRT is dependent on other transit initiatives being developed, a copy of the TCP shall be provided to the City of Toronto, the Toronto Transit Commission, the Town of Richmond Hill, the City of Vaughan, and the Town of Markham for review and comment. The Proponent shall provide these stakeholders a minimum 30-day comment period.

5.0 AIR QUALITY

Purpose of the Air Quality Report:

- 5.1 The Proponent shall prepare a comprehensive Air Quality Assessment Report to address the air quality impacts of the Region's transportation projects. The study area for the air quality report will be determined by the Proponent in consultation with the Regional Director.

Submission of the Air Quality Assessment Report:

- 5.2 Copies of the Air Quality Assessment Report shall be submitted to the Regional Director for review and comment and to the Director for placement in the Public Record file.
- 5.3 The Air Quality Assessment Report shall be submitted to the Regional Director prior to any construction beginning on the undertaking, including site preparation.

Requirements of the Air Quality Report:

- 5.4 The Air Quality Assessment Report shall, at a minimum, include the following:
 - a) A comparison of predicted contaminant concentrations with all available Ontario Regulation 419/05 Air Pollution – Local Air Quality Regulation Schedule 3 standards, ministry's ambient air quality criteria and proposed Canada Wide

Standards for: Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Particulate Matter - Total Suspended Particulates (TSP) as well as PM₁₀ and PM_{2.5}, and selected Volatile Organic Compounds (VOCs);

- b) Assessment of the study area, as determined in condition 5.1, consisting of a comparison between the background contaminant concentration levels and anticipated contaminant concentration levels resulting from the project, including future traffic volumes;
- c) A broad-based air quality impact mitigation plan which will assist in reducing contaminant concentrations that exceed appropriate criteria/standards expected to result from construction/implementation of the project;
- d) Development of project contaminant emission rates using a base year and future years as required;
- e) Use of appropriate Emission and Dispersion Models (e.g. Mobile 6, US EPA CAL3QHCR, Aermoc);
- f) Use of five years of meteorological data (including surface and upper air data);
- g) Definition of roadway links as necessary;
- h) Calculation of predicted contaminant concentrations at nearby sensitive receptors;
- i) Traffic volume data;
- j) Detailed presentation of predicted data (including model input data); and,
- k) Presentation of conclusions and recommendations.

6.0 COMPLAINTS PROTOCOL

- 6.1 Prior to construction the Proponent shall prepare a Complaints Protocol on how it will deal with and respond to inquiries and complaints received during the construction and operation of the undertaking. The Proponent shall submit the protocol to the Regional Director, District Manager, Town of Markham, Town of Richmond Hill and the City of Vaughan for review and comment. The Complaints Protocol shall be placed on the Public Record.

7.0 AMENDING THE DESIGN OF THE UNDERTAKING

- 7.1 If the Proponent determines that there is a minor modification and that modification does not alter the expected net effects of the undertaking, the procedure set out in section 11.5 in the EA applies to this modification.

7.2 Notwithstanding condition 7.1, section 11.5 of the EA does not apply where there is a change to the undertaking within the meaning of section 12 of the *Environmental Assessment Act*.

7.3 The Proponent shall consult with EAAB to determine the appropriate steps if there is uncertainty as to application of conditions of approval 7.1 or 7.2.

8.0 SELECTION OF THE OPTIMUM LOCATION FOR THE ALIGNMENT

8.1 For the purpose of selecting the optimum location for the alignment of the subway connection to the City of Toronto and Toronto Transit Commission's Spadina Subway alignment the Proponent shall follow a public process to determine the amended location for the alignment of the subway undertaking south of Highway 407 required to tie into the Toronto Transit Commission's station and rail track alignment at the York Region transit terminal site on Steeles Avenue. This process, at a minimum, shall include:

- a) A description of the local existing built and natural environment through which the alignment must pass to achieve the tie-in. Sensitive natural features and constraints on the design, such as the Black Creek and groundwater conditions, will be identified and documented in detail.
- b) An analysis and evaluation of subway horizontal and vertical alignment options, both above and below ground, through the approximately 800 metre tie-in zone. The evaluation will use the methodology adopted for the EA, measuring the alternatives against the primary objectives and goals and highlighting the advantages and disadvantages of each option.
- c) Identification of a preferred location for the future Highway 407 Station on the subway alignment and accommodation of surface facilities associated with this station to achieve intermodal transfer.
- d) Finalization of the preferred functional design for the Highway 7 terminal station and associated surface facilities based on the City of Vaughan's current Vaughan Corporate Centre planning and including relocation of the surface rapid transit station on Highway 7 at Jane Street.
- e) Assessment of the effects of construction of the alignment works and operation of subway service on the environment and description of proposed mitigation and monitoring measures.
- f) Assessment of the effects of construction and operation of Highway 407 and Highway 7 station facilities on the surrounding environment.

- g) Meetings with a Technical Advisory Committee (TAC) to obtain input and acceptance of recommendations by the key stakeholders. The composition of the TAC will be confined to municipal representatives from Vaughan only, given that the supplementary work relates only to the Vaughan North-South Link.
 - h) Public consultation opportunity to obtain comment on the evaluation of alternatives and the recommended preferred design.
 - i) Responses to public, stakeholder and government review team comments during review of the supplemental work.
- 8.2 The Proponent shall submit to the Minister a Subway Alignment Selection Report that identifies the optimum location for the alignment of the subway undertaking south of Highway 407. The Report shall summarize the public process carried out by the Proponent for the selection of the final location of the subway alignment and it shall document the assessment carried out, the consultation undertaken with the public and agencies and the commitments made by the Proponent in regard to the selection of the final location.
- 8.3 The Proponent shall place the Report, within 30 days of its completion on the Public Record for a minimum 30 day period.
- 8.4 The Proponent shall not proceed with the construction the subway undertaking unless the Minister, having considered the Report, any public comments regarding the Report and the public interest, approves its construction.

9.0 CONSULTATION ON ARCHAEOLOGICAL ASSESSMENTS

- 9.1 If a Stage 2 archaeological assessment is required to be prepared and aboriginal archaeological resources are encountered during the preparation of that Assessment, the Proponent shall provide a copy of that assessment to the Huron-Wendat First Nation of Wendake, Quebec and any additional relevant First Nations as identified by the archaeologist, based on the findings of that assessment.
- 9.2 The Proponent shall provide the Huron-Wendat First Nation of Wendake, Quebec and any other relevant First Nation as warranted by the Stage 2 findings with 30 days to provide comments on the Stage 2 Assessment and the opportunity to reasonably participate in the Stage 3 Archaeological Assessment if the Stage 3 Archaeological Assessment is required in relation to aboriginal archaeological resources.
-

Dated the 9th day of NOVEMBER 2006 at TORONTO.



Minister of the Environment
135 St. Clair Avenue West, 12th Floor
Toronto, Ontario
M4V 1P5

Approved by O.C. No. _____

Date O.C. Approved _____

Appendix B

April 2008 York Region Rapid Transit Steering Committee Report
(Re: rapid transit network configuration update)

5

RAPID TRANSIT NETWORK PLAN PRINCIPLES, METROLINX BUSINESS CASE, AND ALTERNATIVE FINANCE AND PROCUREMENT ANALYSIS UPDATE

The Rapid Transit Public/Private Partnership Steering Committee recommends the adoption of the recommendations contained in the following report, April 4, 2008, from the Vice-President, York Region Rapid Transit Corporation:

1. RECOMMENDATIONS

It is recommended that:

1. Council endorse the rapid transit network principles.
2. Staff report back on the progress of the Metrolinx business case and Infrastructure Ontario Alternative Finance and Procurement analysis.

2. PURPOSE

The purpose of this report is to inform Council as to the status of the update to the draft 2007 Rapid Transit Network Configuration Plan, the status of the alternative finance procurement (AFP) process now underway with Metrolinx and Infrastructure Ontario, and network plan principles that have been developed to form the foundation of our 2008 Network Update report.

3. BACKGROUND

This report was referred forward by Committee in February to the next Committee meeting. The report tabled at February Committee is superseded by this report, which has been updated to reflect recent developments.

The 2003 York Region Network report documented the analysis that was used to determine the rapid transit configuration that would most efficiently serve York Region's ongoing growth and development. The analysis built on a series of Regional policies, including the 2002 Transportation Master Plan, Centres and Corridors Study, and Rapid Transit Plan and recommended a three phase strategy for implementation of the system. The rapid transit corridors and alignments were detailed in subsequent environmental assessments (EA's).

The EA's contemplated the potential for conversion of the bus rapid transit (BRT) system to a fixed-guideway technology, such as light rail transit (LRT), once ridership reached

levels capable of supporting the capital and operating costs of a fixed-guideway system. The 2003 report assumed that subway technology on the Vaughan North-South Link (Spadina line) would extend to York University by 2021. This segment was identified for a potential ultimate extension to Vaughan Corporate Center (VCC), a commitment that has since been made by the province, TTC and York Region. The 2003 report recognized the Region's long-term plan for extension of the Yonge subway to Langstaff, and considered alternatives with and without the extension. The report advised that an update to the report prior to 2011 would be important to confirm ridership growth and timing for the Yonge Street Subway extension.

In June 2007, staff undertook to update the draft network plan to reflect the findings of the MoveOntario 2020 announcement, including the impact of potentially earlier timing for the Yonge Street subway extension to Richmond Hill, and the effect of the Toronto Transit City light rail plan. In addition, staff undertook to update the plan to reflect the findings of the 2006 Transportation Tomorrow Survey results, which became available last fall.

4. ANALYSIS AND OPTIONS

4.1 THE 2008 RAPID TRANSIT NETWORK PLAN IS NEARING COMPLETION

The network modelling is now complete with 2011, 2021 and 2031 ridership completed based on the 2006 Transportation Tomorrow Survey. The most current 40% Regional growth scenario has been developed and provided by the Long Range Planning Branch and are included in the final modelling.

4.2 NETWORK PLAN PRINCIPLES

Eight rapid transit principles have been identified to guide the implementation of the rapid transit network

Eight rapid transit network principles have been developed to form the foundation of our 2008 Network Update report as follows:

1. Strategically locate the rapid transit network in the heart of York Region's urban centres and corridors.

This first principle locates the Rapid Transit network in the heart of the Region's Centres and Corridors strategy. The Rapid Transit network is the infrastructure backbone supporting the transformation of York Region into a mature urban area by concentrating growth and development within designated urban areas and along the Rapid Transit corridors that connect them.



2. Choosing the right technology at the right time for the right cost.

Phase 1, *Quick Start*, was our early action plan to build ridership and public support. It is a proven success and now needs to be evolved to ensure that momentum is not lost.

Phase 2 includes 67 km of segregated BRT Rapidways, designed to not preclude future conversion to LRT when warranted. Phase 2 also includes the extensions of the TTC Yonge-University-Spadina subway line to Highway 7 to both Richmond Hill Center and Vaughan Corporate Centre.

Phase 3 will consider evolving technologies to significantly increase passenger capacity as population, employment and system ridership continue to grow.

3. Connect inter-regional rapid transit systems.

Viva Phase 2 will provide convenient links with all of the north/south GO Rail lines crossing Highway 7, the inter-regional proposed 407 Transitway, the TTC subway, Brampton's Acceleride, Durham Region Transit and the City of Toronto's proposed Transit City LRT plans.

4. Deliver great rapid transit intermodal terminals.

The planned terminals for Phase 2 include a Highway 50 Terminal, Vaughan Corporate Centre, Jane/407, Steeles West Station, Concord, Richmond Hill Centre, Unionville GO Station, Cornell Terminal, Bernard, Green Lane and Main Street Newmarket.

Phase 2 Terminals	Transit Service Provider					
	Viva / YRT	TTC	GO Transit	Brampton Transit	Durham Transit	Private Operator
Richmond Hill Centre	•		•			•
Vaughan Corporate Centre	•		•	•		
Highway 50 Terminal	•	•	•	•		•
Jane/407	•	•	•	•		•
Steeles West Station	•	•				•
Concord	•		•			•
Unionville GO Station	•		•		•	•
Cornell Terminal	•				•	•
Bernard	•					
Green Lane	•		•			•
Main Street Newmarket	•		•			

These terminals will play a major role in improving overall transit attraction and travel time savings for passengers. They will also provide significant opportunities to deliver high order transit-oriented development within York Region.

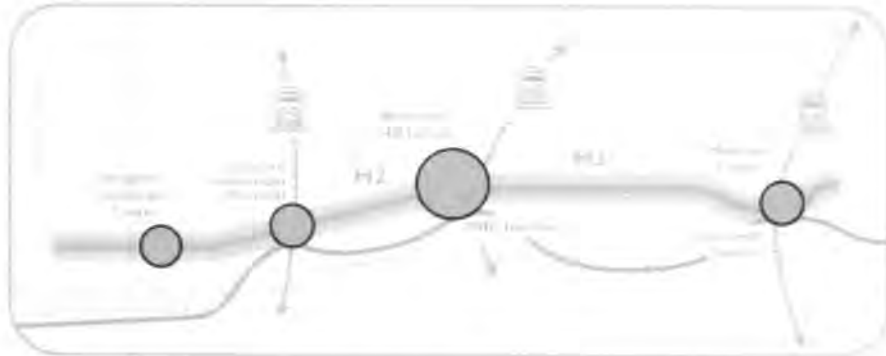
5. Bring the Spadina and Yonge subways to Highway 7.

There is a solid business case for extending the TTC Spadina and Yonge Street subway lines to Vaughan Corporate Center and Richmond Hill Center. The Yonge extension alone is projected to carry 27,000,000 trips annually in 2021.



6. Strengthen Viva's core and then extend it.

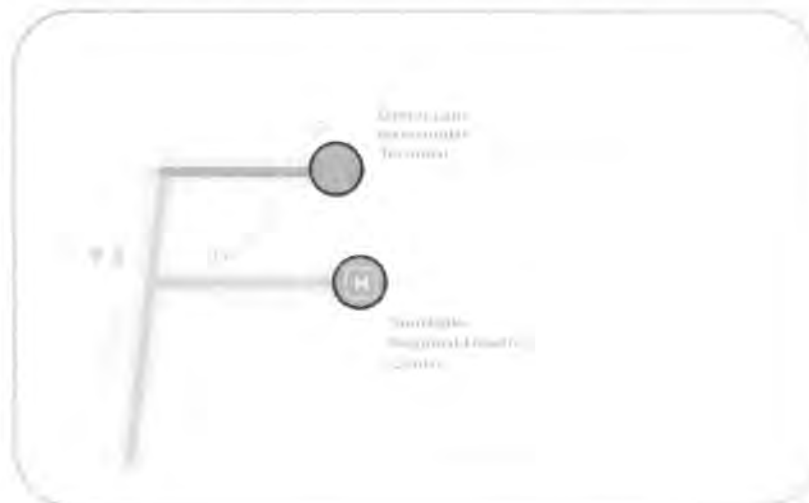
At the core of the rapid transit system are the Highway 7 and Yonge Street corridors, which converge at the Richmond Hill Center terminal. The south Yonge Street segment (Highway 7 to Finch Avenue) alone is used by 70% of all Viva Passengers. Highway 7 provides the critical connections between the Regional growth centers of Vaughan, Richmond Hill and Markham. North Yonge provides the critical connection with Newmarket.



7. Address significant pressures along the corridors.

The Y3 segment (north Yonge Street, from Mulock Drive to Green Lane, Green Lane to the GO Transit station, and Davis Drive from Yonge Street to Southlake Regional Health Centre) is critical to support the intensification intended by the Places to Grow plan and the designation of Newmarket Center as an Urban Growth Centre. In addition, it provides key support to the continued development of the Southlake Regional Health Centre providing services not only to York Region residents, but also residents in adjoining Regions.

The implementation of the BRT Rapidways will improve inter-regional travel and connectivity by providing convenient connections to GO Rail and GO bus routes serving northern York Region, Barrie, Durham Region and Simcoe County.



8. Embrace all modes of transportation movement.

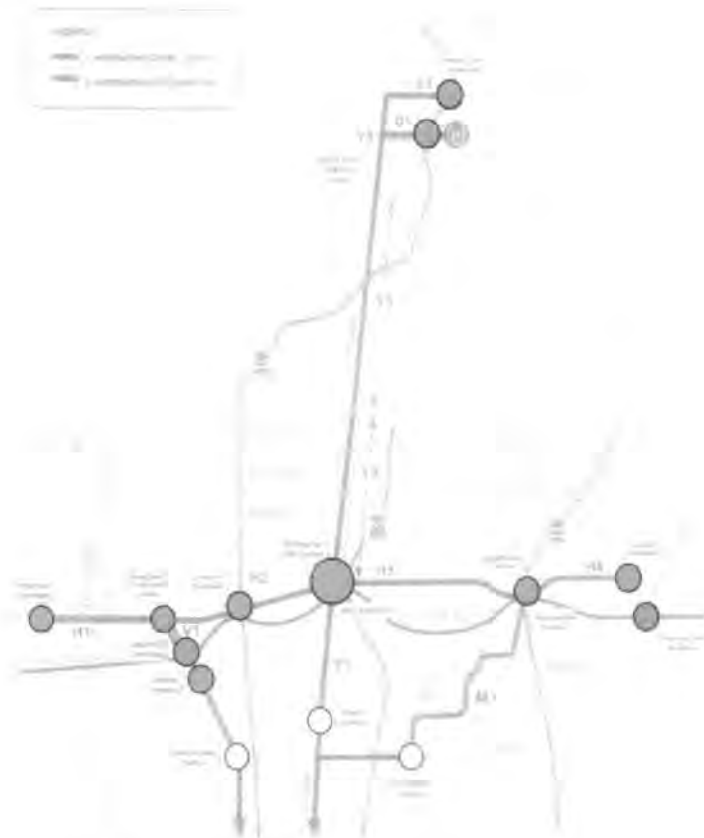
York Region has been active in promoting transportation demand management through such initiatives as the establishment of the Smart Commute program. Metrolinx is now responsible for the coordination of the transportation management associations that have been formed in the GTA over the past five years. Opportunities to strengthen the travel demand management programs of Smart Commute 404/7, North Toronto, Vaughan, and Central York will be the subject of future Metrolinx and York Region reports. The Region is nearing completion of the Pedestrian and Cycling Master Plan and opportunities to incorporate this mode of travel in the design of the rapid transit system are being evaluated.

4.3 RAPID TRANSIT CONSTRUCTION TIMING

The timing for the construction of the York Region network plan has been updated

In October 2007 Metrolinx requested the Region to provide our timing to construct the rapid transit network. Based on the foregoing principles and armed with our emerging draft network modelling updates the following base map for Viva Phase 2 was developed.

Viva Phase 2 now includes the extension of the Spadina Subway and Yonge University lines north to the Vaughan Corporate Centre and Highway 7 in Richmond Hill, respectively. Viva Phase 2 also includes the development of the balance of the rapid transit system as bus rapid transit.

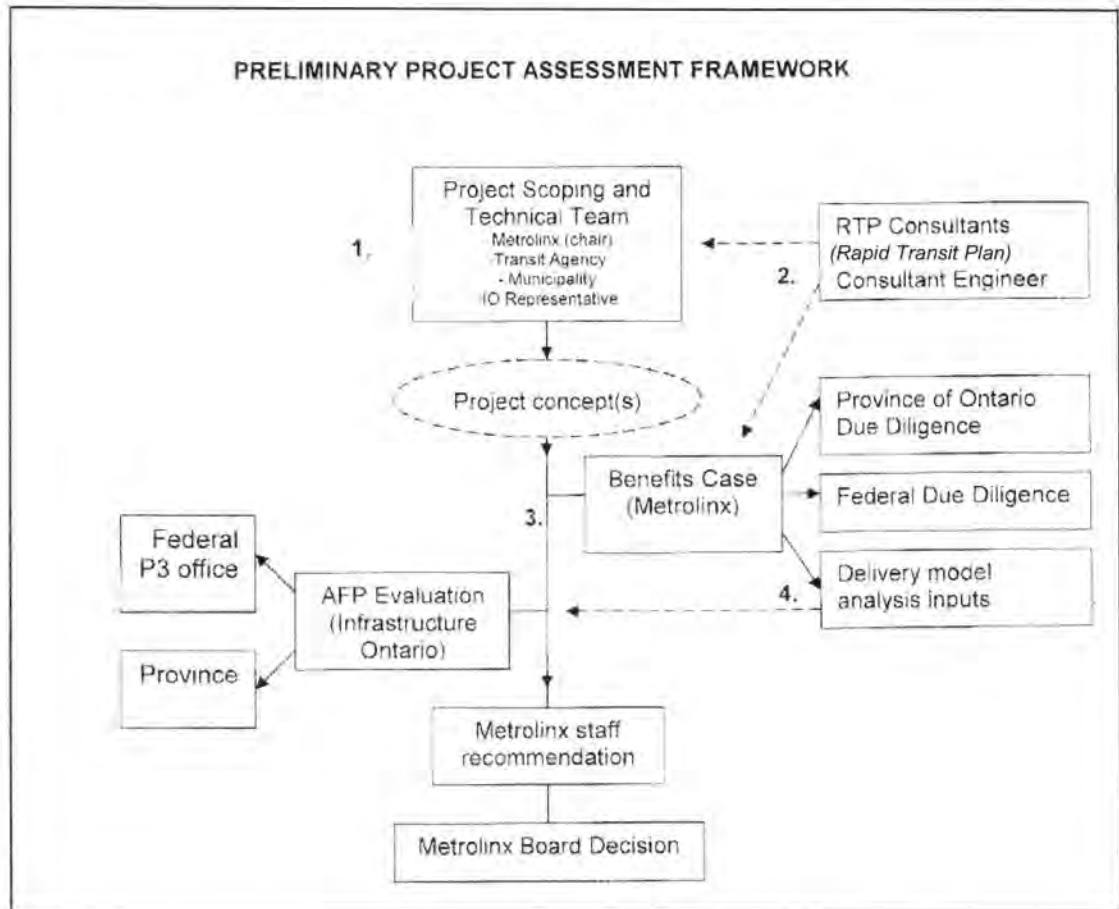


4.4 NETWORK ALTERNATIVE FINANCE ANALYSIS

Staff are working with Metrolinx and Infrastructure Ontario on the alternative finance and procurement evaluation for the Yonge Street Subway and the entire Viva BRT network

In order to move from being one of the 52 potential candidate projects for MoveOntario 2020 funding to a capitalized project, the Region's subway and BRT project must be evaluated through the project assessment framework shown in Figure 1 below.

Figure 1



Metrolinx, as part of its comprehensive project implementation framework, is working in partnership with Infrastructure Ontario and municipal stakeholders to undertake a benefits case analysis for bus rapid transit that will include an AFP evaluation.

York Region was successful in having both the Yonge Street subway and the entire surface BRT network included in the first round of evaluations. Three meetings have now been held with the working group and staff are in the process of submitting the comprehensive data needed to support the AFP analysis.

The first step in the benefits case analysis is the development of three rapid transit network scenarios. The preferred option will advance for AFP analysis. The three scenarios being evaluated for the benefits case are described below.

Each scenario has different ridership and cost implications. BRT solutions will consider costs to construct, operate and maintain the network. The benefits case analysis will

incorporate ridership projections based on respective scenario assumptions that are captured in each of the scenario descriptions for BRT below.

- Base Scenario – Phase 1 BRT operating in mixed traffic on all segments, except Yonge Street south of Highway 7. BRT in segregated rapidway on segment Y1 by 2011 and the Spadina Subway by 2015.
- Moderate Scenario – BRT in segregated rapidways on all network segments by 2015, and mixed traffic Y1 transit priority treatments by 2011. The Yonge Street Subway extension to Richmond Hill Centre by 2016 and the Spadina Subway by 2015.
- Bold Scenario – BRT in segregated rapidways on all network segments except for mixed traffic on Y1. HOV services on Davis Drive and Green Lane. LRT from Vaughan Corporate Centre to Markham Centre on Highway 7, and LRT from Richmond Hill Centre (Hwy 7) to Newmarket (Green Lane) by 2015. Two grade separations (Yonge Street in Richmond Hill and Hwy 7 at Hwy 404) post 2025. Yonge Street Subway extension (four stations) to Richmond Hill Centre by 2016 and the Spadina Subway by 2015.

The three scenarios for the Yonge Subway business case analysis are as follows:

- Base Scenario – BRT in segregated rapidways on all network segments and the Spadina Subway extension.
- Moderate Scenario – BRT in segregated rapidways on all network segments by 2015, and mixed traffic Y1 transit priority treatments by 2011. The Yonge Street Subway extension to Richmond Hill Centre by 2016 and the Spadina Subway by 2015.
- Bold Scenario – Yonge Street Subway extension to Richmond Hill Centre (six stations) by 2016. BRT in segregated rapidways on all network segments and improved Y1 transit priority treatments by 2011. Two grade separations (Yonge Street in Richmond Hill and Hwy 7 at Hwy 404) post 2025.

It is anticipated that the AFP process will be completed in late spring/early summer and the results will be reported back to Council at that time.

5. FINANCIAL IMPLICATIONS

The costs associated with supporting this effort are largely accommodated by the efforts of YRRTC senior and Regional staff; however, support to generate all of the required data is being supplied by YC2002 as a contingency task under the Y2/H3 work program.

The March 25, 2008 provincial budget announcement committed funding for all Metrolinx Stage 1 and Stage 2 “Quick Win” projects, including \$100 million for preliminary engineering, vehicles and intelligent transportation system for the Highway 7 Rapidway from Pine Valley Drive to Kennedy Road and the Yonge Street Rapidway from Richmond Hill Centre to Newmarket.

Metrolinx has also been tasked with determining the net requirement for the operating costs associated with all of these projects and staff will report back on this activity in future reports.

6. LOCAL MUNICIPAL IMPACT

The deployment of the rapid transit network to serve York Region municipalities is critical to the realization of the Regional and Provincial growth objectives. The funding of the rapid transit network will assure the local municipalities and their constituents that growth will be accompanied by a robust rapid transit network and at the same time meet the intensification targets set out in the Places to Grow Act.

7. CONCLUSION

The network modelling is now complete with 2011, 2021 and 2031 ridership completed based on the 2006 Transportation Tomorrow Survey. The most current 40% Regional growth scenario has been developed and provided by the Long Range Planning Branch and is included in the final modelling.

Eight rapid transit network principles have been developed to form the foundation of the 2008 Network Plan. This report seeks Council endorsement of the rapid transit network principles.

Staff is working with Metrolinx and Infrastructure Ontario on the AFP evaluation analysis of candidate projects. York Region was successful in having both the Yonge Street subway and the entire surface BRT network included in the first round of AFP evaluations. Three working group meetings have been held to date.

This report describes the three alternative network scenarios – base, moderate and bold for both the BRT and subway business case analysis. It is anticipated that the AFP

process will be completed in late spring/early summer and the results will be reported back to Council.

Staff will report back on the progress of the Metrolinx business case and Infrastructure Ontario Alternative Finance and Procurement analysis.

For additional information, please contact Mary-Frances Turner, Vice-President, York Region Rapid Transit Corporation at (905) 886-6767 ext. 2226.

The Senior Management Group has reviewed this report.

Appendix C

January 2008 York Region Rapid Transit Steering Committee Report
(Re: modified alignment near Highway 7 and Warden Avenue)

3

TOWN CENTRE / CEDARLAND RAPIDWAY ALIGNMENT TOWN OF MARKHAM

The Rapid Transit Public/Private Partnership Steering Committee recommends the adoption of the recommendations contained in the following report, January 9, 2008, from the Vice-President, York Region Rapid Transit Corporation:

1. RECOMMENDATIONS

It is recommended that:

1. Council endorse the modified alignment for the rapid transit system along Cedarland Drive and Warden Avenue as a local refinement to the alignment presented in the Highway 7 Corridor Transit Environmental Assessment.
2. Council authorize staff to submit the modified alignment to the Ministry of the Environment for approval.

2. PURPOSE

The purpose of this report is to seek Council approval to modify the approved Highway 7 Corridor Public Transit Improvements Environmental Assessment alignment of the rapid transit system along Cedarland Drive and Warden Avenue through the IBM lands.

3. BACKGROUND

The Highway 7 alignment is approved. The Environmental Assessment (EA) for the Highway 7 rapid transit corridor was completed in August 2005 and submitted to the Minister for approval. The EA was approved by the Minister in November 2006.

The preferred alignment for the rapid transit system, as described in the approved EA, shows an alignment for the rapidways leaving Highway 7 at the Town Centre Boulevard intersection and travelling southward on Town Centre Boulevard, passing through the IBM lands, crossing the Rouge River valley on a new bridge and aligning with the Civic Mall across Warden Avenue in the Markham Centre downtown master plan (*see Council Attachment 1*).

This alignment was considered, on balance, to be the alignment that offered “the greatest long term benefit in support of both existing commercial and planned residential development in this local area”.

The EA contemplated further consultation with IBM

Extensive discussions were held with local area stakeholders during the EA process and in particular with IBM. Ultimately, the EA was submitted with an alignment through the IBM alignment campus with IBM's concurrence that they would be able to further consider the transit ROW once funding was secured. IBM indicated that they would be "in a better position to confirm their long term land needs and determine if they could accommodate the rapid transit right of way".

The EA proposed to consult with IBM "prior to commencing preliminary and detailed designs to determine whether a right of way and station can be integrated within their property". If a resolution with IBM could not be reached, a modified alignment would be required. This consultation has now taken place.

Council authorized preliminary engineering to commence on Highway 7

At its meeting on June 21, 2007, Council authorized the York Region Rapid Transit Corporation (YRRTC) to commence the preliminary engineering (PE) work on the Highway 7 corridor from Richmond Hill Centre Terminal to Kennedy Road. At the same time, design work was also commenced on a section of the Highway 7 rapid transit corridor through the heart of the Markham downtown plan, along the proposed Civic Mall from Warden Avenue to Birchmount Road.

This project was identified for early funding in order to be operational in at least this section, to coincide with the occupancy of the residential buildings planned and currently under construction adjacent to the corridor. Occupancy of the first buildings along the north side of the Civic Mall is expected to commence in late summer/early fall of 2008, with occupancies continuing in subsequent phases of the building programme into early 2009.

Some funding for Highway 7 has been recommended by Metrolinx (GTTA)

In the Fall of 2007, the Region was requested to submit its priority transit projects to the Greater Toronto Transportation Authority (now Metrolinx) for consideration under the proposed "Quick-Wins" projects programme. As part of the submission, the Highway 7 rapid transit corridor from Pine Valley Drive to Kennedy Road was identified for consideration.

In its report of November 23, 2007, Metrolinx recommended that the Highway 7 project, amongst other transit projects in York Region, be qualified as a category 1 project under the MoveOntario 2020 programme. Further analysis and screening is required as part of the programme, and by Spring 2008, Metrolinx will be in a position to confirm if full capitalization will be recommended. In light of the anticipated securing of funding and commencement of the PE effort, staff initiated discussions with IBM representatives to review and confirm the recommended alignment.

Meetings were held with IBM representatives

Over the past several months meetings were held with IBM representatives to discuss the proposed alignment and seek IBM's endorsement. Regional staff was joined on most occasions by senior Town of Markham staff. IBM retained independent traffic consultants to help them understand the issues and impacts on their property and to make recommendations.

Senior IBM officials advised that they were unable to support the alignment of the rapidway through the IBM campus. The main reasons cited were the preservation of and the security of its property.

IBM requested that the Region identify an alternative alignment and expressed their support for the rapid transit system. In addition IBM acknowledged the benefits to their staff from the rapid transit service and pledged their cooperation in identifying and securing an alternative alignment.

4. ANALYSIS AND OPTIONS

Staff re-examined alternative alignments

In anticipation of further consultation with IBM, staff undertook a review of the alternative alignments identified in the EA. The EA considered four alternatives in addition to the preferred alignment along Town Centre Boulevard. Three of the alignments considered Warden Avenue as the north-south route connecting Highway 7 to the Enterprise Civic Mall. The fourth alternative examined taking the rapidways further across Highway 7 to a proposed Birchmount Road intersection, taking the rapidways south along Birchmount Road to connect to the Civic Mall. This alternative was quickly discarded because of the indeterminate timing to acquire the land to extend Birchmount Road northward from the south side of the Rouge Valley to Highway 7, and the potentially high cost of bridging the valley. The Warden Avenue alignments (Highway 7 – Enterprise Drive) were further reviewed to assess their functional feasibility and potential property impacts. Although a Warden Avenue alignment was identified as a fall-back to the preferred route in the EA, each of the three alternatives had serious functional and/or property impacts.

A modified Town Centre Blvd. alignment along Cedarland was identified

Through the re-examination process staff identified a modification of the preferred Town Centre alignment not specifically addressed in the original EA, but combining a number of advantages of the five alternatives.

The modified alignment retains the preferred routing from Highway 7 south along Town Centre Boulevard to Cedarland Drive. However, instead of continuing southward through the IBM property, the alignment turns eastward, in segregated rapidways, along the south half of the existing Cedarland ROW, then turns southward and travels along the west side

of Warden Avenue, crossing the Rouge River and turning eastward through a “jug handle” arrangement to align with the Civic Mall, where it continues as per the approved EA to the Unionville GO station and out to Kennedy Road. The proposed modified alignment is shown on *Council Attachment 2*.

A rapid transit station is located near the intersection of Cedarland and Warden Avenue to serve IBM, the southern phases of the Liberty project and the proposed land uses and development densities along the east side of Warden Avenue.

The modified alignment has been reviewed by the Town of Markham

The Cedarland alignment modification has been reviewed by Markham staff. Staff received Markham’s comments on the proposed alignment and has made adjustments to the plan and layout to reflect the Town’s comments. Staff also presented the proposed Cedarland alignment to Markham’s Development Services Committee for comment. There was general consensus that the Cedarland alignment was a workable alternative.

Staff has consulted with area stakeholders

The proposed alignment modification has also been presented to area stakeholders, including Liberty Development whose property abuts Cedarland Drive and to Toronto Region Conservation Authority (TRCA). Preliminary feedback from Liberty Development indicates support for the proposed modification.

Staff has been working with TRCA staff to assess the impact of crossing the Rouge River by extending the existing bridge structure to accommodate the rapidways. TRCA staff has indicated that they believe this alternative is feasible and represents a better alternative to a separate crossing. Staff continue to work with the TRCA to establish the appropriate design criteria for the bridge extension crossing. Staff will be contacting two adjacent landowners on smaller land holdings on the west side of Town Centre Boulevard to secure their support.

The modified alignment was presented to IBM

The alignment modification has been tabled with IBM and presented internally to senior staff. Rapid transit staff has received written confirmation that IBM is prepared to work with the Region to secure the Cedarland Drive alignment.

IBM identified two technical issues remaining to be resolved, namely: to preserve the existing “right-in” movement into their property from the southbound lanes of Warden Avenue at their private driveway access location, and to provide a fully functioning “left turn” movement into their property from westbound Cedarland Drive at Town Centre Boulevard. Staff is currently preparing revised drawings to address the two issues for further review with IBM.

The modified alignment will need to be submitted to MOE

The modified alignment for the rapid transit system along Cedarland Drive and Warden Avenue is a local refinement to the alignment that was presented in the Highway 7

Corridor Transit EA. The modified alignment will be submitted to MOE, along with a rationale for the modification and the results of our consultation with affected stakeholders.

Local modifications and refinements to a project during the post EA design phase can be somewhat common and an expeditious MOE review and approval process is expected, particularly in light of general agreement from directly affected stakeholders.

5. FINANCIAL IMPLICATIONS

The proposed alignment along Cedarland Drive is expected to have a comparable or reduced capital construction cost impact compared to the preferred alignment through IBM. The acceptance of the modified alignment will have no effect on the cost for the PE effort as authorized by Council for the Highway 7 (H3) segment from Kennedy to Richmond Hill terminal. Staff will report back on any land arrangements required to implement the alternative alignment.

6. LOCAL MUNICIPAL IMPACT

The proposed Cedarland Drive alignment preserves the advantages of the original EA alignment by continuing to serve the existing employment and future planned development uses and densities along the Town Centre corridor. The proposed alignment continues to support the urban transformation, streetscape and building placements planned and currently being developed along the public rights-of-way.

The modified alignment has the added advantage of moving the intermediate station to the Cedarland Drive and Warden Avenue intersection, where it will serve the development uses and densities planned in the Liberty south precinct, as well as the developments being planned along the east side of Warden Avenue. Also, the modified alignment has the added advantage of reducing the potential environmental impact on the Rouge Valley by eliminating a separate crossing and consolidating the crossing with the existing Warden Avenue bridge.

7. CONCLUSION

Council previously authorized the commencement of the PE effort on the Highway 7 rapidway corridor from Kennedy Road to Richmond Hill Centre Terminal. The approved EA for this corridor established a preferred alignment for the rapidways through the IBM lands to connect Highway 7 to the Civic Mall within the Markham Centre downtown plan. IBM has confirmed that it does not support the alignment through its private property for security reasons.

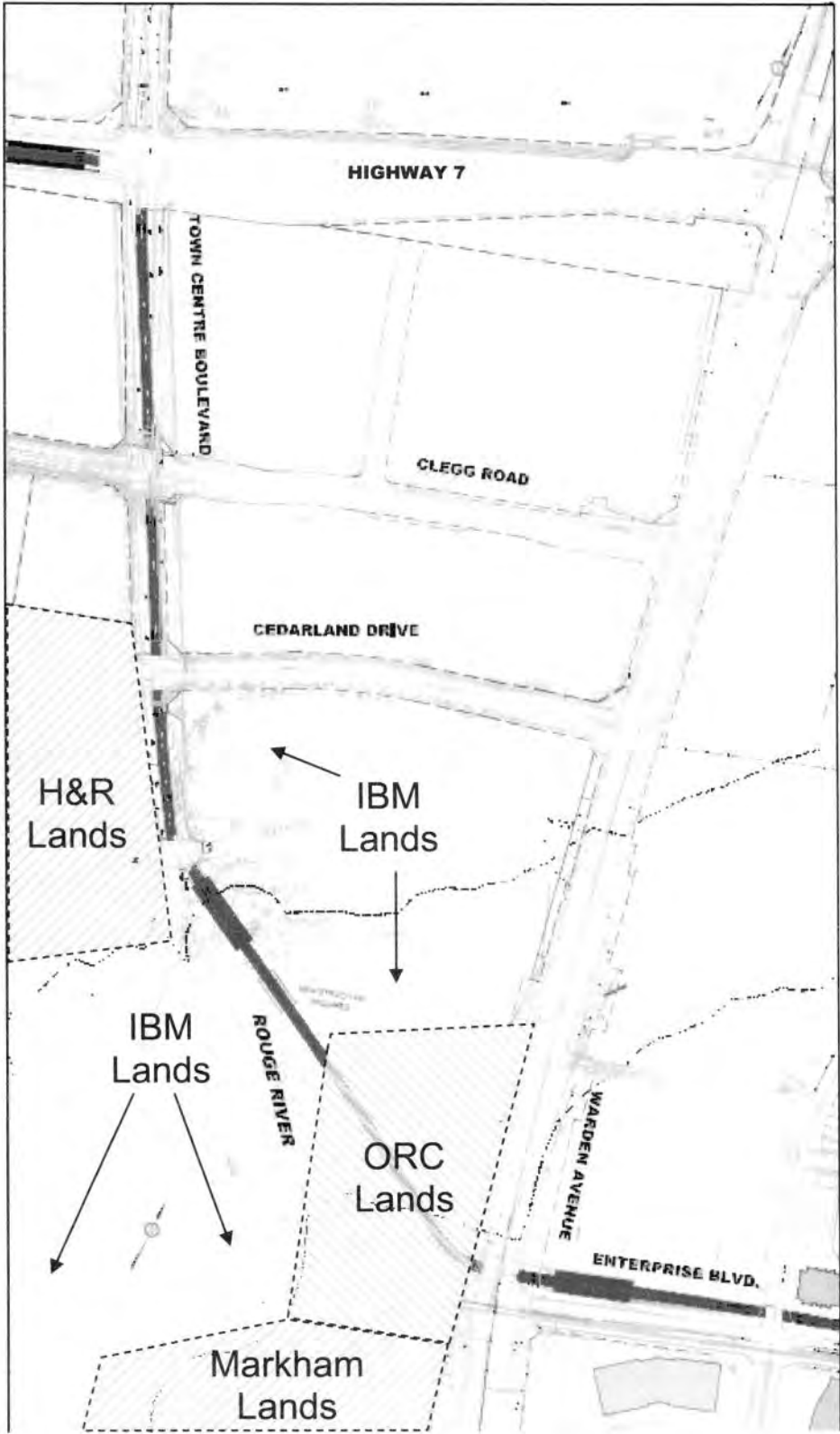
Staff has identified a modification of this alignment along Cedarland Drive and Warden Avenue that preserves the advantages of the preferred route. Staff has consulted area stakeholders, including area landowners, IBM, TRCA and the Town of Markham, and has received positive support for the modified alignment, subject to some technical fine-tuning.

This report seeks endorsement of the modified alignment that has been developed in consultation with affected stakeholders, and also seeks authorization to submit the modified alignment to MOE for approval. Timely resolution of this issue is essential in order to complete the PE work and be in a position to capitalize and construct the rapidways in the earliest timeframe.

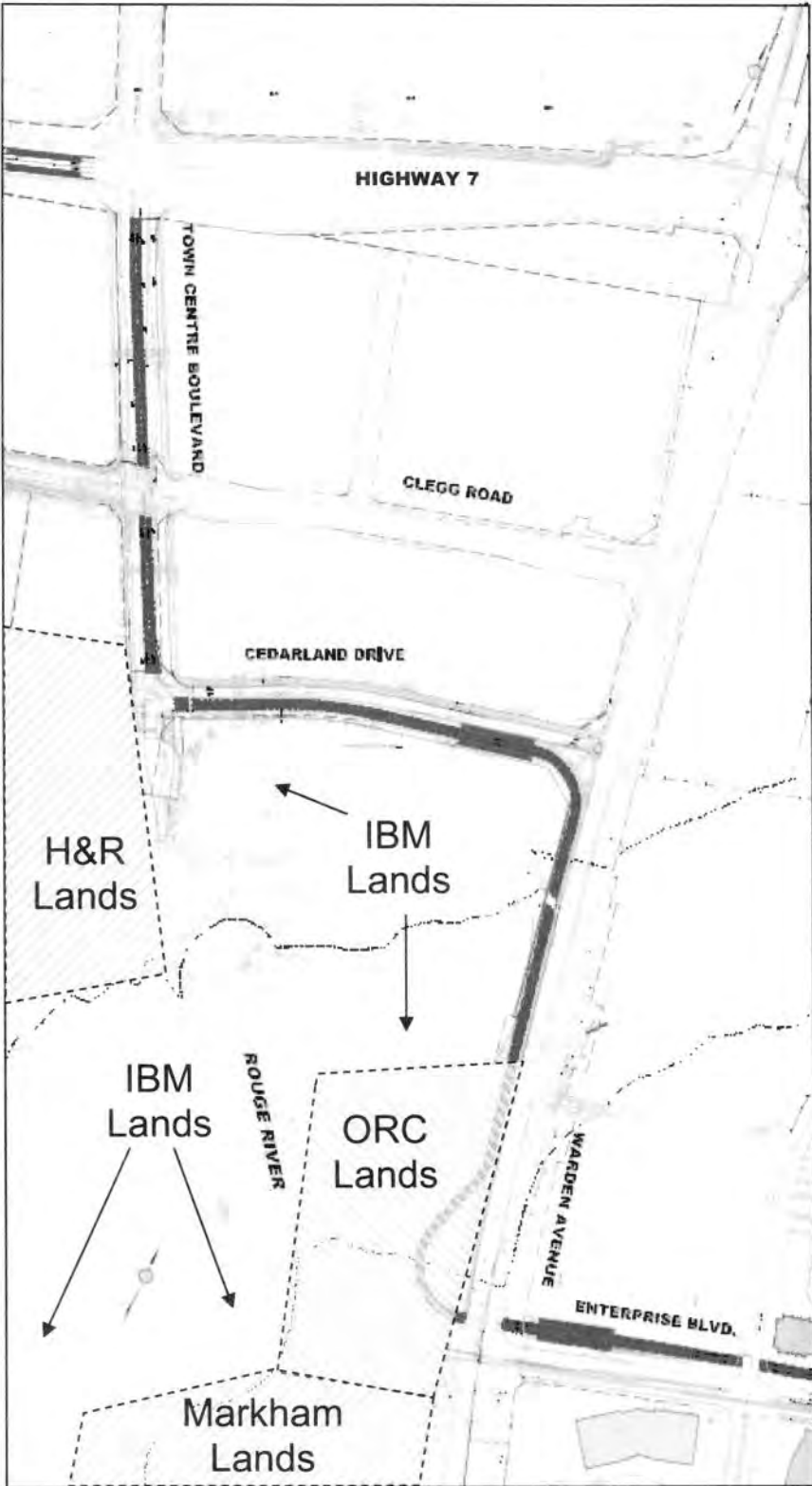
The Senior Management Group has reviewed this report.

(The two attachments referred to in this clause are attached to this report.)

Approved EA



Alternative Alignment



Appendix D

January 2008 York Region Rapid Transit Steering Committee Report
(Re: Cornell Terminal site plan)

6

AWARD OF CORNELL TERMINAL SITE PLAN

The Rapid Transit Public/Private Partnership Steering Committee recommends the adoption of the recommendations contained in the following report, January 9, 2008, from the Vice-President, York Region Rapid Transit Corporation:

1. RECOMMENDATIONS

It is recommended that:

1. Council authorize the award of contract for the Cornell Terminal site plan to York Consortium 2002.
2. Council authorize the Regional Chair and Clerk to execute a contract with York Consortium 2002 for the amount of \$295,767 (net of GST), on a cost-plus-fee basis, for the Cornell Terminal work, in a form acceptable to staff and legal counsel.
3. Council authorize staff to commence work immediately with the Owner's Engineer to develop the balance of the scope of work for the Cornell Terminal, including preliminary engineering, final design and construction, and to seek a business proposal from York Consortium 2002 to undertake this work, and that staff report back to Committee and Council on the outcome of those negotiations and funding sources.

2. PURPOSE

The purpose of this report is to seek authority to award and execute a contract to York Consortium 2002 (YC2002) for development of the Cornell Terminal site plan (*see Attachment 1*), and to authorize staff to commence work on developing the balance of the work programme for the Cornell Terminal.

3. BACKGROUND

Staff provided Committee and Council with a detailed Cornell Terminal update in September 2007. The major findings of the report included that:

- Cornell Terminal has been recommended for early funding under MoveOntario 2020.
- The Greater Toronto Transportation Authority (now Metrolinx), recommended the Cornell Terminal as a "Quick-Wins" project and assigned a budget of \$5.6 million.
- Provincial funding would include bringing Viva service eastward from McCowan Road, including development of Viva stops along Highway 7, to Markham Stouffville Hospital, and construction of terminal facilities on the lands identified south of Highway 7.

- Staff is working on a consolidated Cornell Terminal budget for all of the elements of the Cornell terminal project.

To qualify as a Quick-Wins project, Cornell Terminal had to meet the following criteria:

- Estimated completion within two years, assuming a project start-date in 2007-2008.
- Visible, tangible benefit for the consumer.
- Cross-boundary or regionally significant in terms of benefit.
- Low risk path to implementation.
- Relatively moderate cost.

Viva service into East Markham will have two routes; one to serve the Markham Stouffville Hospital and other generators along the Church St corridor, and a 'direct' route operating along Hwy 7. Both services access the Cornell Terminal.

The Cornell Terminal project is being delivered in three stages; Stage 1 included the construction of the Church Street bus shelter, platform, and Intelligent Transportation System (ITS), as well as ITS installations at Highway 48 and Wooten Way. Council endorsed the construction of the Stage 1 work program on October 18, 2007. These three stops will be operational by January 27, 2008.

The remaining components of the project will be delivered in two stages to ensure the work is defined and undertaken in a timely fashion. The full scope of work includes the construction of the Bur Oak and Galsworthy stops on Highway 7, the preliminary engineering (PE), final design and construction of the Terminal.

4. ANALYSIS AND OPTIONS

The award process outlined in the agreements with YC2002 has been followed

In the August 2007, the Master Agreement and Go Forward Business Arrangements were executed by York Region, York Region Rapid Transit Corporation (YRRTC) and YC2002.

The Master Agreement outlines a process to contract for future phases of work related to the York Region Rapid Transit system. A closed-envelope proposal process was initiated to receive proposals from both the Region's Owners Engineer (OE) and YC2002. Proposals were formally received and opened on December 18, 2007. Using pre-defined criteria, an evaluation team reviewed the proposals and entered into negotiations with YC2002 to reconcile differences in the level of scope between what was requested and what was proposed.

The owners engineer and YC proposals were within 3.5% of each other

The YC2002 proposal of \$295,767 is well within the allowable 8.5% cost differential permissible between the OE shadow bid submission of \$285,060. All work program differences have been reconciled to the satisfaction of the rapid transit team and it is therefore recommended that YC2002 be awarded the Cornell site plan contract.

5. FINANCIAL IMPLICATIONS

The costs for proceeding with this work are covered in various announcements - the March 2007 Federal Flow announcement, and the Metrolinx Quick- Wins. Staff is working closely with all funding partners to secure the announcements in formal agreements.

The preliminary engineering (PE), inclusive of the work to site plan application readiness, for Cornell Terminal is to be funded 100% from Quick-Wins Tranche 1, which has been approved by the Province. As such, the cost of the associated PE/site plan work is a fully recoverable.

The Cornell site plan works are identified in the approved 2008 capital budget.

6. LOCAL MUNICIPAL IMPACT

Incepted and designed by Andres Duany in the early 90's and implemented carefully by the Town of Markham, Cornell is a leading North American example of new urbanism. The design and unfolding of its central core on Highway 7 will link the Cornell neighbourhoods north and south of Highway 7 in conjunction with the Cornell Terminal. The rapid transit facilities will link the Cornell community with the York Region, neighbouring Durham Region and connect to GO Transit 407 services.

7. CONCLUSION

The timely design and construction of the Cornell Terminal is underway with the opening of the Markham Stouffville station in January. The award of the site plan design contract to York Consortium 2002 will allow the Region to meet the Quick-Wins criteria of being under construction in 2008. Subsequent work programs leading to engineering, final design and construction will be the subject of further reports to Council.

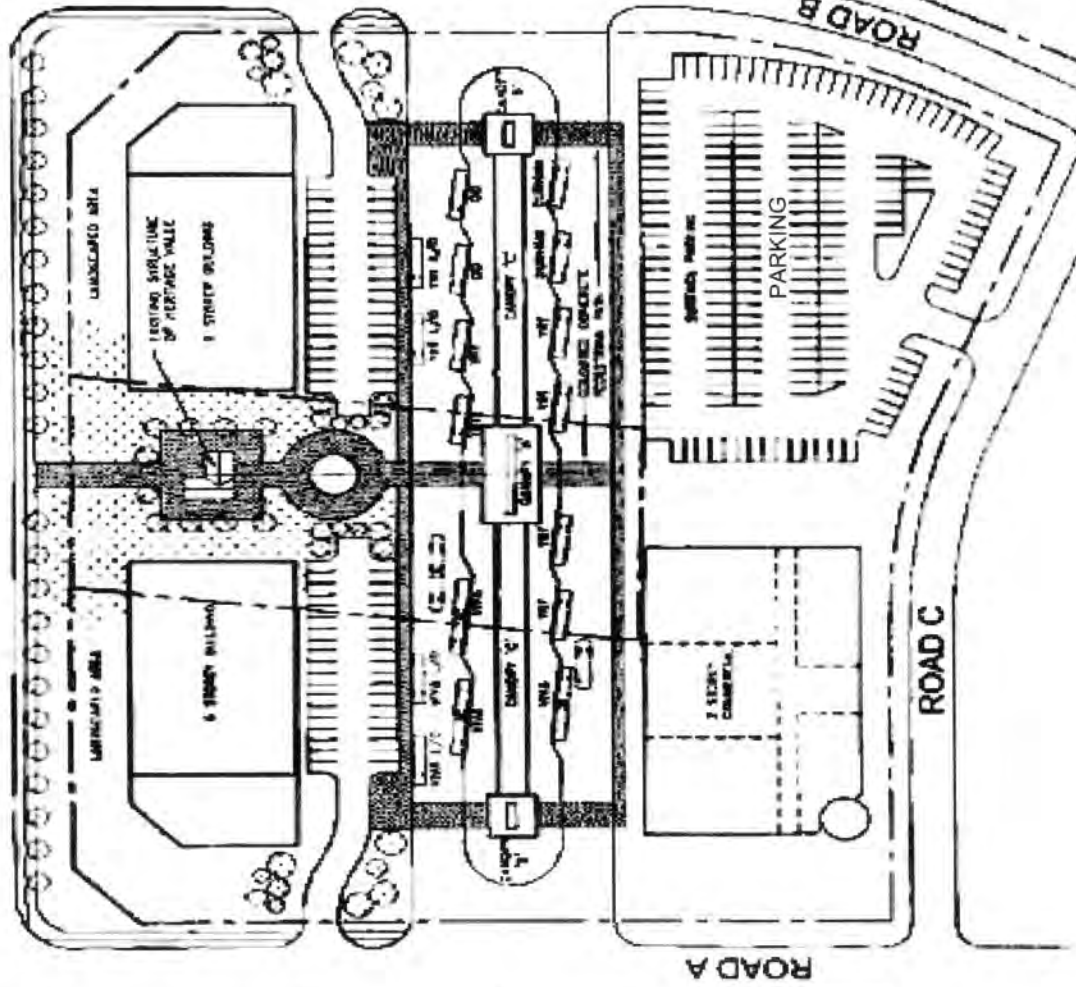
The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the agenda for the January 17, 2008 Committee meeting.)

Cornell Terminal Layout

HIGHWAY 7

Donald Cousens Parkway



EXISTING METAL STRUCTURE

PARKING

ROAD UP - ROAD ON

ROAD FOR VISITOR TRAFFIC



Appendix E

May 5, 2006 Proponent's letter to the MOE (Response to comments received during review of the EA)

May 5, 2006

Ms. Gemma Connolly
Special Project Officer
Environmental Assessment & Approvals Branch
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, ON M4V 1L5

Dear Ms. Connolly:

**Re: Environmental Assessment Review
Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements
The Regional Municipality of York**

As you know, the Regional Municipality of York, the proponent, has submitted the Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements Environmental Assessment (EA) to the Ministry of the Environment (MOE) for formal review as required under the *Ontario Environmental Assessment Act* (EAA). The EA was available for public and agency review from September 2 to October 26, 2005. Since then, we have been working to address comments received from the public and agencies regarding the EA.

Attached please find two tables which summarize the public and agency comments received and the proponents responses (*Attachments 1 and 2*) as well as several related attachments addressing specific comments received (*Attachments 3 through 8*).

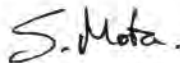
Further to our meeting on December 22, 2005, we have also prepared supplementary information (*Attachments 9 and 10*) to address issues raised regarding the ultimate subway technology for the Vaughan N-S Link component of the undertaking.

A full list of attachments is presented below. We trust this information will allow the MOE to proceed with finalizing the EA Review and make it available to the public as soon as possible so that the review process may proceed to a final decision expeditiously.

Further to our correspondence dated December 13, 2005 in which we requested a time-out in the review process to address public and agency comments received, we hereby request that the process proceed.

If you have any questions or require additional information, please contact me immediately.

Sincerely,



Steve Mota, P.Eng.
Program Manager, Transportation Engineering

SCM/gr

- Attachments -
1. GRT comment / response table following final EA submission
 2. Public comment / response table following final EA submission
 3. Revised Table 8.3-9 (see GRT comment / response table item 14 h)
 4. Revised Table 10.4-2 (see GRT comment / response table item 5 h)
 5. Revised Figure 9-60 (see GRT comment / response table item 14 f)
 6. Noise and Vibration supplemental information (see GRT comment/response table item 4)
 7. SWM supplemental information (see GRT comment / response table item 14 j)
 8. Assessment of Hwy 404 Crossing Options (see GRT comment / response table item 1 c)
 9. Subway technology for the Vaughan N-S Link supplemental information (see GRT comment / response table item 5 j, k and l)
 10. Revised Figure 12-4 (see GRT comment / response table item 5 j, k and l)
 11. CD with electronic copy of all attachments noted above

Copy to: Loy Cheah, Manager, Transportation Planning
Paul May, Director, Infrastructure Planning
Mary-Frances Turner, Vice President, Rapidco
Lynton Erskine, Delcan

**ACTION FOR COMMENTS RECEIVED FROM THE GOVERNMENT REVIEW TEAM ON THE
HIGHWAY 7 CORRIDOR AND VAUGHAN NORTH-SOUTH LINK PUBLIC TRANSIT IMPROVEMENTS
ENVIRONMENTAL ASSESSMENT FINAL REPORT**

Representative	Name	#	Comment	Response
Ministry of the Environment – Technical Support	Mr. Ernie Hartl, Supervisor – Air, Pesticides and Environmental Planning Central Region	1	<p>a. Section 8.3.2 – In this section, Alternative B1 is identified as preferred, noting that this alternative will attract the highest ridership on east-west Hwy 7 service, contradicting the evaluation findings in Table 8.3-1 which indicate that this alternative "circuitous route to York U for trips from the east reduces Hwy 7 service daily boardings by 7-10%". Clarification should be obtained to ensure that the increased capital costs and increased potential for environmental impacts associated with the selection of Alternative B1 are justified based on the broader goals and objectives of this undertaking.</p> <p>b. Section 8.3.4.2 – The alternative alignments under consideration were evaluated using an analysis of the advantages and disadvantages of the various options (Table 8.3-4). This approach is not consistent with the approach used for the evaluation of other segments which consider a broader range of environmental features (Tables 8.3-3 and 8.3-5). As the EA is seeking two alternative alignments in this section, an evaluation method as included under Tables 8.3-3 and 8.3-5 is recommended as it includes a broader discussion of environmental impacts that is included in the advantages/disadvantages table. The general comments provided in Chapter 10 of the EA are not sufficient, as they do not specifically discuss the Hwy 404 area under Goal C2, natural environment.</p> <p>c. Section 8.3.4.2 – Figure 8.3-13 identifies three local alignment options for alternative C-B2, which is the alternative for which approval is also being sought (as a contingency if the preferred alternative, C-B1, cannot provide the necessary level of service). Recognizing that this may be a highly urban area, the lack of an evaluation table does not allow us to determine if there are any natural features which could be impacted by the selection of one alignment over another. It is recommended that the Region identify the preferred alignment that this EA will be seeking approval for and discuss any potential environmental impacts.</p> <p>d. Section 8.3.5.2 – The text in this section indicates that the "civic mall easement" is the preferred route alignment for this segment, while the accompanying table (Table 8.3-6) highlights the "Enterprise Drive Option" as being preferred over the "Civic Corridor Option". Clarification is recommended.</p> <p>e. Section 12.5 – Central Region has received information from the TTC</p>	<p>a. Section 8.3.2.4 of the EA report indicates that the preferred alternative is a combination of Alternative B1 and continuation of the partially-segregated Phase 1 Keele St service. This combination has the highest potential to attract ridership to both major destinations, Vaughan Corporate Centre (VCC) and York University, thus overcoming the primary disadvantage of Alternative B1 alone while gaining some of the benefits of Alternative B2.</p> <p>b. The alternative methods of crossing the Hwy 404 interchange were not considered a comparison of alignments within a segment of the route but an evaluation of the advantages and disadvantages of local design solutions to achieve a segregated right-of-way through the existing interchange. As noted in Section 8.3.4.2 of the EA report, the preferred initial strategy (option C-B1) is to avoid environmental impacts and significant capital costs by operating the rapid transit in mixed traffic through the existing underpass on Hwy 7, basically a "do nothing" approach between the inner traffic signals at the interchange.</p> <p>c. The EA is seeking approval of Option C-B2, as an ultimate solution for phased implementation if Option C-B1 becomes unreliable. This option will focus on maintaining the transitway within the Hwy 7 right-of-way by modifying the lane arrangements or span of the existing Hwy 404 underpass as the preferred design solution. A table assessing the potential effects of the variations of alternative C-B2 is included as supplementary information.</p> <p>d. The highlighting in Table 8.3.6 of the EA report was inadvertently placed in the incorrect column. As stated in the text, the Civic Mall easement is the preferred option.</p> <p>e. The EA amendment will assess the effects of subway construction</p>

Representative	Name	#	Comment	Response
Ministry of the Environment – Air Quality	Mr. Ernie Hartt, Supervisor – Air, Pesticides and Environmental Planning Central Region	2	<p>indicating the preferred alignment for the Spadina Subway Extension has been selected as the diagonal alignment at Steeles Ave. The result of the selection of this alignment is that the future works for the station at Hwy 407 would be located to the north of the future Hwy 407 rapid transit r.o.w. and would be constructed under the Hwy 407 ramps without directly impacting the Black Creek meander belt, reducing potential impacts to the watercourse. This section identifies that York Region is proposing to prepare an addendum upon final approval of TTC's EA to consider the extent of potential environmental impacts, including those on Black Creek, for the alignment recommended by the TTC. As indicated in Table 12.6-3, this amendment will include a detailed analysis of both subway tunnel and station construction methods and associated mitigation measures for the section from Hwy 407 to Steeles Ave. Central Region recommends this type of analysis be undertaken in the EA amendment for the entire subway length from Hwy 7 to Steeles Ave to ensure a consistent level of environmental impact assessment for the entire subway component of this undertaking.</p> <p><i>Mitigation and Monitoring</i></p> <p>f. With respect to environmental commitments and monitoring, the revision to Chapter 12 provides a more substantial level of detail than provided for in the draft EA document, and this information will provide greater direction to the Region in the development of the Monitoring Program. APEP is encouraged by the outline of construction and operations monitoring and the commitment to establish an independent Environmental Compliance Manager.</p> <p>g. It is important to note that these commitments should be identified as minimum monitoring requirements, and that monitoring of additional environmental elements may be included in the Monitoring Program if further environmental impacts are identified. APEP encourages the Region to prepare an Annual Monitoring Program Report, outlining the results of the Monitoring Program and how any environmental impacts experienced have been addressed.</p>	<p>and operation of any components developed in more detail than in this EA between Hwy 407 and the limit of the TTC EA undertaking at Steeles Ave.</p> <p>f. Comment noted (refer to Section 11.3 of the EA report for Environmental Commitments and Section 11.4 for Monitoring).</p> <p>g. Comment noted for consideration during development of the detailed Monitoring Program as noted in Section 11.4.1 of the EA report.</p>
			<p>To a large degree, the comments are intended to reflect how effectively York Region and Senes have revised the EA report and Air Quality (AQ) appendix in line with Technical Support's July 29/05 comments that were provided to the Region with respect to the draft EA report. Technical Support (TS) continues to have some outstanding concerns with the August 2005 documents that require further attention with particular regard to: the incorporation of the Senes AQ Impact Assessment into the EA report with respect to "Future" cases, and the approach taken by Senes in their AQ Impact Assessment.</p>	

Representative	Name	#	Comment	Response
			<p><i>Lack of Detail in EA Report on AQ Impacts of the Project (Future Cases)</i></p> <p>a. The details on the AQ impacts relating to the "Future Base Case" and the "Future BRT Case" have not been included in the body of the EA report in support of the brief summary statements made in Table 10.4-3 of the EA report. This approach is not considered appropriate by TS. It has consistently been TS's position that any evaluation of AQ impacts of a project such as this EA report should constitute the primary focus of the EA report as it relates to AQ. In the EA report, the Region continues to make the discussion of existing conditions the primary focus (Section 6.6.1) and has relied solely on referring the reader to the Senes AQ Impact Assessment when it comes to the Future Cases. This definitely detracts from the stand-alone nature of the EA report as a means of supporting decisions on the impact of the project with respect to AQ. It remains TS's position that York Region should further revise the EA report accordingly to resolve this issue.</p> <p><i>Focus of EA Report and Senes Report on Particulate Matter Emissions</i></p> <p>b. TSP "was not assessed because the larger particles only affect visibility, while the PM₁₀ has been associated with health impacts". Since TSP is a parameter regulated by the MOE, TS might have wished to see some further discussion of TSP and its role in defining existing AQ, however TS does acknowledge that it is not a health based parameter and agree to its being excluded from further discussion. PM_{2.5} is included in the "Existing Conditions" discussion and has been discretely inserted into the text/discussions of the "Existing Base case", "Future base Case" and "Future BRT Case". However, overall PM emissions as discussed in the August 2005 AQ Impact Assessment continue to focus on PM₁₀ as is demonstrated by Tables 3.2, 3.3 and 3.4 as well as Table 5.1 and 5.2, none of which have been revised to include PM_{2.5}. Figures 5.1 and 5.6 also focus on PM₁₀. TS feels that the adjustments made by York Region and Senes to include PM_{2.5} are inadequate and continues to recommend that PM_{2.5} be fully incorporated into all aspects of the AQ Impact Assessment.</p> <p><i>Comparison of Existing AQ Data with MOE AAQC Values</i></p> <p>d. Overall, some inaccuracies remain in the MOE AAQC's which have been included in the assessment of historical and measured data that appears in Section 6.6.1.3 of the EA report and in Section 2.3 of the Senes AQ report. However, TS does not require further clarification of these inaccuracies.</p> <p>e. TS acknowledges that Senes has reviewed the historical and monitored data bases in some detail and found them to be accurate and not in need of further adjustments or changes.</p> <p>f. TS is in agreement with the comments in the preamble to Tables 6.6-6</p>	<p>a. The results of the AQ assessment are summarized in Chapter 10 (Table 10.4-3) of the EA report consistent with the summary of other potential environmental effects. The EA document references Appendix L which provides the detailed AQ assessment. The Proponent does not believe that a revision to the EA document is warranted.</p> <p>b. Comment noted.</p> <p>c. As noted in the Senes AQ Impact Assessment, there is little information about PM_{2.5} emissions from vehicles and roadways, and therefore the ratio method of PM₁₀ to PM_{2.5} was used in order to calculate the values for PM_{2.5}.</p> <p>Note in the Terms of Reference it says that respirable particulate matter (PM_{2.5}) will also be assessed in comparison with the proposed Canada Wide Std of 30 ug/m³.</p> <p>d. Comment noted.</p> <p>e. Comment noted.</p> <p>f. Comment noted.</p>

Representative	Name	#	Comment	Response
			<p>and 6.6-7 of the EA report and Tables 2.6 and 2.8 of the Senes report that reflect PM as being the most significant parameter of concern with respect to both historical data and measured ambient monitoring data. The concerns identified with respect to PM (ie, PM₁₀ and PM_{2.5}) are to be dealt with in comments which follow in terms of dispersion modeling and mitigation.</p> <p><i>Development of Vehicle Emissions Data</i></p> <p>g. TS acknowledges that their concerns identified in the Vehicle Emissions data/discussion have been reviewed by York Region and dealt with satisfactorily. TS is in agreement that no further action is required on these concerns at this time.</p> <p><i>Dispersion Modeling/Assessment of Air Quality</i></p> <p>h. TS still has some concerns with respect to the representation of the project measurement/monitoring locations and the accuracy of the measurement/monitoring data collected during the somewhat limited program. TS however do not feel such concerns are significant and acknowledge that they will not change the overall conclusions of the AQ Impact Assessment.</p> <p><i>Matching of Alternatives Assessed in EA Report with Those Screened in the Senes Report</i></p> <p>i. The July 2004 Senes Report and the draft EA report did not clearly match-up in terms of the evaluation of alternatives noted in Section 8 of the EA report and the preliminary screening of alternatives dealt with in Section 3 of the Senes Report. To clarify this issue Senes removed Section 3 from their report. In order to clear up this matter, TS requests that York Region confirm that Senes' approach on screening with respect to AQ did not provide any different result on selection of the preferred alternative from that shown in Section 8 of the final EA report.</p> <p><i>Identification of Mitigation Measures</i></p> <p>j. Section 9.1.1 of the EA report contains a statement noting the intent to plant trees as part of the landscaping plan and that "trees also act as a solid body for air pollutants to settle on and therefore reduce negative effects in the atmosphere". TS would identify such efforts as tree planting as a factor in such mitigation and requests that they be considered by York Region and the appropriate revisions reflected in Table 10.4-3.</p> <p>k. Before any specific comment can be made on the implication of the landscaping plan, it is necessary to look at the AQ related statements in Table 10.4-3. The statement as noted under Proposed Mitigation Measures – Potential Residual Effects, suggests a 3.6% (it actually appears to be 1.6%) improvements (or decrease) in PM₁₀ concentrations "when comparing 2021 (future) forecasts with ("Future</p>	<p>g. Comment noted.</p> <p>h. Comment noted.</p> <p>i. The assessment of the effects of route segment alternatives on air quality, while a factor in the evaluation of natural environmental effects, did not provide any different result in the selection of the preferred alternatives from that shown in Section 8 of the EA report.</p> <p>j. A conceptual streetscape plan is identified in Section 9.1.1 of the EA report. A detailed streetscape plan will be developed during detailed design. It is acknowledged that tree planting provides an additional built-in positive effect on air quality. Tree planting will be considered further in the development in the detailed streetscape plan.</p> <p>k. The increase in PM (2001-2021) without the project is due solely to an increase in traffic volume. Without a change in the public's attitude toward the use of single-occupancy vehicles this increase is unavoidable. The introduction of the BRT system will slow this increase. The EA report's presentation of effects in 2021 is a true reflection of the conditions with and without the undertaking</p>

Representative	Name	#	Comment	Response
			<p>BRT Case") and without ("Future Base Case") proposed rapid transit. The major difficulty that TS has with the conclusion on future PM₁₀ concentrations (as noted above) is that it does not include consideration of Table 3.2, the existing base case pollutant concentration estimates. It is TS's opinion to include consideration of the fact that PM₁₀ emissions will increase markedly from the existing base case to the future base case. As a result there will be a 38% increase in PM₁₀ initially and it will decrease 1.6% with inclusion of BRT. For York Region to then conclude that the focus should be only on 2021 is misleading and not something we can easily agree to. At the very least TS feels that this change over the period 2001 to 2021 could be characterized in terms of BRT "slowing" the increase but it should in TS's opinion include consideration of "Further Mitigation" based on significant initial increase in PM₁₀ concentrations.</p> <p>l. The reference for the statement in k above is data noted as being available in Tables 4.3 and 4.4 of the Senes Report, when in fact it should be Tables 3.3 and 3.4.</p> <p>m. In light of comments b and c, it is TS's opinion that the issue of PM_{2.5} concentrations also needs further review and as such, Table 10.4-3 should be modified to include consideration of PM_{2.5} as well as PM₁₀. <i>Monitoring of Construction PM Emissions</i></p> <p>n. Table 10.4-3 of the EA report includes comments on "Degradation of air quality during construction: which indicates that "some PM emissions locally" are expected but no "Monitoring" is recommended. This information raises some concern with TS about its compatibility with information provided in Section 11.4.1 of the EA report, which does indicate that "Monitoring" will be done in the form of regular inspections of dust and vehicular emissions control. Table 11.4-1 of the EA report does provide some qualitative comment on "Monitoring" associated with "effect of construction activities on air quality (dust, odour)." TS strongly in favour of the need to do such monitoring and requests that York Region clarify what appears to be contrary statements in table 10.4-3 that no "Monitoring" is recommended. <i>Senes Project Description</i></p> <p>o. The content of Section 1.1 of the Senes report has been reasonably clarified with the addition of explanatory paragraph. <i>Executive Summaries</i></p> <p>p. Both the EA report and the Senes report executive summaries need further review in order to substantiate that they are compatible with changes to the bodies of the reports as may occur in terms of addressing the comments provided by TS and noted in the memo. <i>Overall Assessment of Air Quality</i></p>	<p>operating as a mature alternative transportation mode. The purpose of this undertaking is to provide an efficient alternative travel mode with the potential to reduce the growth in private automobile use and the consequent traffic volumes generated. Further mitigation to address the natural growth in trip-making in the Region's major corridors is beyond the scope of this EA.</p> <p>l. Comment noted. Table 10.4-3 of the EA report should refer to Tables 3.3 and 3.4 of the Senes AQ report, and not Tables 4.3 and 4.4.</p> <p>m. There will be a net positive effect to the environment from PM_{2.5} and PM₁₀, therefore no further mitigation is required.</p> <p>n. Table 10.4-3 of the EA report was intended to indicate that no specific monitoring program beyond that normally required by the construction contract conditions is recommended. The Region will enforce the requirements of the standard contract conditions as described in Section 11.4.1 of the EA report.</p> <p>o. Comment noted.</p> <p>p. There are no changes proposed to the main EA report to address comments provided by TS. Clarification will be provided as appropriate.</p>

Representative	Name	#	Comment	Response
Ministry of the Environment – Water Resources	Ms. Ellen Schmarje, Water Resources Supervisor, Unit, Central Region – Technical Support Section	3	<p>q. The Overall Assessment as noted in Section 8 of the Senes report and quoted in the EA report needs further review in order to substantiate that they are compatible with changes to the bodies of the reports as may occur in terms of addressing the comments provided by TS and noted in the memo.</p> <p>a. In reference to the definitions of "Insignificant" and "Significant" in Section 10.1: Assessment Methodology, an effect that is temporary or short term in duration may be considered significant as the release of suspended solids to a watercourse can potentially cause a permanent loss of critical or productive aquatic habitat.</p> <p>b. The Proponent should note that Section 53 (OWRA) approvals from the MOE will be required for the new and expanded storm sewers and end-of-pipe stormwater management facilities prior to the construction phase (Section 11.2: Project Implementation Plan).</p> <p>c. A permit to take water must be obtained for all dewatering activities in excess of 50,000 L/day. The permit must be obtained prior to the commencement of any construction related activities requiring groundwater dewatering (Section 11.2: Project Implementation Plan).</p> <p>d. Table 11.3 indicates that "in the event a shallow or upward groundwater movement becomes an issue due to construction of the subway during the detailed design stage, TRCA's hydrogeologist will be consulted." It is important to note, that any groundwater issues (including dewatering or water quality issues) related to the proposed undertaking must be dealt directly with the MOE, which may consult with TRCA if necessary.</p> <p>e. No major outstanding surface water or groundwater issues were identified regarding the preferred alternative. Additional input during the detailed design phase may be required to ensure that monitoring, mitigation and contingency plans adequately assess any adverse impacts to the natural environment and/or sufficiently protect the natural environment.</p>	<p>q. There are no changes proposed to the main EA report to address comments provided by TS. Clarification will be provided as appropriate.</p> <p>a. Comment noted. As described in Section 10.1 of the EA report, the definition of significant effect includes a permanent loss of critical or productive aquatic habitat, regardless of the duration of the original net effect that precipitates the permanent effect.</p> <p>b. Comment noted and will be carried forward for consideration during detailed design. Section 11.2.1 of the EA report identifies examples of other approvals that may be required during the detailed design phase, but is not intended as a complete list of all post EA approvals that will be required.</p> <p>c. Comment noted and will be considered during both the preparation of the EA amendment for the southern portion and during detailed design of the entire undertaking.</p> <p>d. Comment noted. The MOE and TRCA will be consulted accordingly during detailed design.</p> <p>e. Comment noted. The MOE will be consulted during development of the detailed Monitoring Program as appropriate.</p>
Ministry of the Environment – Air and Noise Unit	Mr. Denton Miller	4	<p>Noise</p> <p>a. With respect to Section 5 of Appendix K, there were several errors noted in the assessment of the 2021 baseline, BRT and LRT noise calculations. Some of the errors cancelled other errors and it is unlikely that the actual impact will change the overall conclusions drawn in Appendix K. Nonetheless the errors should be corrected.</p> <p><i>Surface Type Used in Stimson Calculations</i></p> <p>b. The majority of the calculations in Appendix K are based on absorptive ground surfaces. Based on drawings submitted with the proposal, it is</p>	<p>Please refer to the attached Noise and Vibration Supplementary Information package for revised tables and appendices to Appendix K – Noise and Vibration impact Assessment, of the EA report.</p> <p>a. Refer to responses below. As shown in the revised data attached, the conclusions drawn in the original report are still valid.</p> <p>b. In all cases where noise monitoring was conducted (receptors) the intermediate surface was covered by grass and therefore it was</p>

Representative	Name	#	Comment	Response
			<p>the Air and Noise Unit's opinion that ground absorption was used incorrectly in the assessment of the roadway. The Proponent should revise the subject calculations accordingly or clarify why this approach was used.</p> <p><i>Daytime and Nighttime Receiver Heights Used in Stamson Calculations</i></p> <p>c. The receiver heights used in the assessment of the receptors are not consistent with Section 5.5.4 of the MOE's publication ornament where it is stated that for the purposes of assessing the noise impact on single family dwellings and townhouse units, the following receiver heights are used: 1.5 m for defining the outdoor living area, and 4.5 m for defining a 2nd storey window. The proponent should revise the subject calculations accordingly or clarify why this approach is used.</p> <p><i>Nighttime Receiver Source Distances Used in Stamson Calculations</i></p> <p>d. When homes are backing onto the subject roadway, the daytime source receiver distance should not be equal to the nighttime source receiver distance. The daytime distances should address the sound levels in the outdoor living area (backyard), and the nighttime distance should address the sound levels at the plane of a bedroom window. In the majority of cases the two distances should differ by 3m. This was not the case in the assessments in Appendix K. The Proponent should revise the subject calculations accordingly or clarify why this approach was used.</p> <p><i>Percent Traffic Split of Provincial Roadways that should be used in Stamson Calculations</i></p> <p>e. The recommended day-night traffic volume ratios are 85%-15% for provincial roads. Hwy 7 is a provincial roadway. Clarification is required as to why the appropriate traffic split was not used in the assessment or the calculations should be adjusted accordingly.</p> <p><i>Designation of Buses in Stamson Calculations</i></p> <p>f. As noted in the MOE's publication ornament, buses are considered to be medium trucks; hence the percentage of medium trucks should not</p>	<p>determined that an absorptive designation was appropriate. ORNAMENT Technical Document (MOE 1989), states that "Soft ground surfaces such as ploughed fields, or ground covered with grass, shrubs, or other forms of vegetation are considered to be sound absorptive". This is also reflected in the monitoring results. The predicted sound levels for existing conditions (2002) (section 4.0 in Appendix K) closely resemble the measured sound levels. To be consistent in the modeling approach, the absorptive surface was also used in the prediction of noise level for future cases. However, in light of the above comment b, the noise modeling was revised using a reflective ground surface. The predicted sound levels were found to be still within the range of the measured results in most instances. Therefore, all scenarios have been revised using a reflective ground surface and are attached for review.</p> <p>c. The purpose of Section 4.3 in Appendix K is to compare the predicted sound level (from traffic) with the existing sound levels using noise monitoring data collected at specific receptors along the route. For this purpose only, the actual height of the microphone of the noise monitoring equipment was used for a direct comparison with the traffic passby at each specific receptor location. However, for predicting future noise impact the noise modeling was carried out using 1.5 m for outdoor living area and 4.5 m for a 2nd story window.</p> <p>d. The shorter of the two horizontal distances was conservatively used for both daytime and nighttime. In any case, the 3 m difference does not result in a significant/noticeable difference in the predicted sound levels. However, the nighttime receptor distances used in the revised model have been changed to reflect the 3 m difference. Refer to the attached STAMSON sheets.</p> <p>e. The 90%-10% day-night traffic volume ratio used in the modeling was derived from traffic count data and adopted as an appropriate representation of conditions on Highway 7 in the study area.</p> <p>f. The added bus transit traffic was treated as an RT/Custom source for the STAMSON modeling, that is, a separate source from the</p>

Representative	Name	#	Comment	Response
			<p>be the same in Appendices K-D (Predicted 2021 Baseline Traffic Noise Levels) and K-E (Sound Levels Due to Added Bus Transit Traffic). The Proponent should revise the subject calculations accordingly or clarify why this approach was used.</p> <p>AADT Inconsistencies</p> <p>g. Section 5.2 of Appendix K (Scenario 2 – Bus Transit Option), states that "Scenario 2 predicts the sound levels on the same road segments for the same year (2021), but with the added influence of the bus transit traffic". However the AADT in Appendix K-E (54,144; Sound Levels Due to Added Bus Transit Traffic) is lower than the AADT in Appendix K-D (54,528; Predicted 2021 Baseline Traffic Noise Levels). The proponent should revise the subject calculations accordingly or clarify why this approach was used.</p> <p>Distances in Stimson Calculations</p> <p>h. Some of the distances in the assessment of the proposal are not correct. For example, the distance to the centre of the eastbound segment of the roadway is 28.6 m. This is clearly not correct when assessed against Figure 9.7 of the EA report. The proponent should revise the subject calculations accordingly or clarify why this approach was used.</p> <p>LRT Assessment</p> <p>i. The above concerns are for the most part also applicable to the assessment of the proposed LRT. The Proponent should revise the subject calculations accordingly or clarify why this approach was used. Preferred Assessment Methodology</p> <p>j. The preferred assessment would see the dedicated bus lanes and the LRT, defined as separate segments in Stimson. This approach would simplify the Proponent's assessment and our review of the undertaking.</p> <p>Vibration</p> <p>Reference Vibration Value</p> <p>k. Confirm that the reference value for the vibration calculations in Section 6.1 of Appendix K is 1 micro-metre per second. If correct, please provide a detailed sample calculation of the results noted in Table 6.1. If incorrect please comment on the use of an appropriate reference value and the impact it will have on the calculations and the subsequent conclusions.</p>	<p>regular traffic. Also, the traffic volume of bus transit was not included in the AADT volume for the regular traffic. Hence the percentage of medium trucks is indeed the same in Appendices K-D and K-E.</p> <p>The actual noise level for the bus transit was provided by the manufacturer.</p> <p>g. The data used were generated by the travel demand modeling with the model calibrated against York Region's most recent AADT counts for Highway 7. The AADT figure for the "with BRT" scenario represents general traffic only and does not include the BRT vehicles themselves. The modeling projects a minor reduction in auto vehicle use after BRT implementation however the overall person-capacity of the roadway is increased by the carrying capacity of the BRT service.</p> <p>h. The distances have been revised to reflect those shown in the figures in Chapter 9 of the EA report. Refer to the attached STAMSON sheets.</p> <p>i. The distances have been revised to reflect those shown in the figures in Chapter 9 of the EA report. Refer to the attached STAMSON sheets.</p> <p>j. The recommended assessment methodology as suggested by the MOE was used in the study submitted. The bus transit and LRT were treated as a separate segment in the Stimson modeling. Please refer to Appendix K-E and Appendix K-F.</p> <p>k. This issue had been previously responded to and discussed with Mr. Denton Miller of the MOE Noise Unit in June 2005. Please see the revised Table 6.1 attached.</p>

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Ministry of the Environment	Ms. Gemma Connolly, Special Project Officer	5	<p>CEAA Approval</p> <p>a. Page 1-1 identifies that approval under the Canadian Environmental Assessment Act is being sought through an integral parallel process. No federal trigger was identified by CEAA through their review of the provincial EA. Therefore, EAAB is unaware of any coordinated and/or concurrent federal approval process.</p> <p><i>Chapter 8 Evaluation Local Alignment Options</i></p> <p>b. It is difficult to follow the evaluation methodology used to select the preferred local alignment options. This analysis is identified in Tables 8.3.-3 to 8.3-7.</p> <p>c. Table 8.3-5 identifies Option C3-4 as the preferred option and Option C3-3 as the next preferred. It is unclear how these options were ranked and evaluated.</p>	<p>a. Given that federal funding has not yet been approved, it is anticipated that the only likely trigger will be the DFO's approval of the major river crossings. The Region expects that this local approval will be obtained through DFO's delegation of authority to the TRCA.</p> <p>b. Generally, where applicable, these options were evaluated using the major objectives adopted for the primary route alternatives analysis. In some cases, such as the Markham Centre/Enterprise Dr area, more specific local factors were used to compare options.</p> <p>c. The table presents the basis for the evaluation of the options by listing the key attributes or effects of each option in terms of the goals and primary objectives adopted for evaluation of the larger route segments along the corridor. Each option's performance against the goals was assessed by evaluating the individual attributes/effects to identify the preferred option in terms of each of the five main objectives. Options C3-3 and C3-4 were selected from this initial screening. The relative merits of these two options were discussed in the text supporting the evaluation table in Section 8.1.5.1. This comparison indicates that Option C3-4 is cost-effective and would provide the most convenient access to rapid transit for several trip types and destinations. At the same time the design of the new Rouge crossing to meet TRCA requirements will mitigate adverse effects on the natural environment.</p> <p>d. In Table 8.3-6, the Enterprise Drive option was inadvertently highlighted as the "Technically Preferred Option". The qualitative rankings shown against each indicator were assessed collectively with implicit weighting and found to support the conclusion in the text that the Civic Mall Option best met the objectives for improved transit service through the planned Markham Centre.</p> <p>e. Each check mark in Table 8.3-7 indicates the alignment alternative (Option C-C1 or C-C2) that is preferred in terms of the individual planning criteria noted in the table. For some criteria, both options were considered to be equally responsive and thus both were checked. Again, these responses were assessed collectively leading to the recommendation of the northern alignment stated in the text.</p> <p>f. The alternative methods of crossing the Hwy 404 interchange were not considered a comparison of alignments within a segment of the route but an evaluation of the advantages and disadvantages of</p>

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			<p>undertaking.</p> <p><i>Intermodal Stations</i></p> <p>g. The York Region intermodal terminal and Richmond Hill intermodal terminal are discussed as part of the undertaking on page 9-2. These stations are not supposed to be part of this EA approval and should not be described as part of the approved undertaking.</p> <p><i>Missing Information</i></p> <p>h. Please provide the missing information in Table 10.4-2 on page 10-9.</p> <p><i>Effects and Mitigation</i></p> <p>i. On Table 10.4-2 some issues are evaluated as "Significant" after mitigation, yet monitoring is not recommended. Could you please justify why monitoring will not occur?</p> <p><i>Vaughan North-South Link Ultimate Conversion to Subway Technology</i></p> <p>j. Page 6 of the terms of reference allowed the Region to assess the environmental effects of a subway extension between the VCC to York University. This assessment was contingent upon the Spadina Subway being extended from Downsview Station to York U in the City of</p>	<p>local design solutions to achieve a segregated right-of-way through the existing interchange. As noted in Section 8.3.4.2 of the EA report, the preferred strategy (option C-B1) is to avoid environmental impacts and significant capital costs by operating the rapid transit in mixed traffic through the existing underpass on Hwy 7, basically a "do nothing" solution. The Region is seeking approval of Option C-B2, as the preferred ultimate solution for phased implementation if Option C-B1 becomes unreliable. This option will focus on maintaining the transitway within the Hwy 7 right-of-way by modifying the lane arrangements or span of the existing Hwy 404 underpass as the preferred design solution. A supplementary table assessing the potential effects of the three variations of alternative C-B2 is attached.</p> <p>Option C-B2, grade separated right-of-way, will be the Region's preferred ultimate option if and when required to traverse the Hwy 404 interchange without congestion delays. Option C-B1, operation of the transitway in mixed traffic, will be used until such time congestion problems trigger the need for the grade separation Option C-B2. Improvements to the road system, currently planned by the municipalities will also influence the timing of and need for the ultimate grade separated right-of-way (C-B2).</p> <p>g. Comment noted. These terminals were mentioned as examples of associated facilities in the context of inter-connectivity with other modes.</p> <p>h. A completed page 10-9 of Table 10.4-2 from the EA report is provided as supplementary information.</p> <p>i. The issues identified as significant after mitigation are those concerning intersection levels of service analyzed as near or at capacity. The anticipated traffic volumes with or without the undertaking are such that monitoring will not lead to any further mitigation options.</p> <p>Refer to the detailed supplementary information provided for the Vaughan North-South Link</p> <p>j. The extension of subway technology from York University to VCC was contingent on the extension from Downsview Station to York University being completed. The Region's EA for the extension into York Region is contingent on approval of the EA for the portion</p>

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City of Vaughan	Mr. Roy McQuillan, Manager of Corporate Policy	6	<p>Toronto.</p> <p>k. Chapter 12 identifies that the logical northern limit of the Spadina subway extension would be the VCC. As a result, a major component of the analysis would have built upon the conclusions and recommendations of the City's Spadina Subway Extension EA Study, which is still ongoing. Without the conclusions of the City's study, it is difficult to determine whether or not the protection of Alignment A-1 would be feasible and should be considered as part of this EA approval.</p> <p>l. Section 12.5 also defers most of the effects assessment of Alignment A-1 to be done as part of an amendment to the EA. It may be premature to protect a r.o.w. without having the benefits of what types of effects are anticipated to occur. EAAB would like the opportunity to meet with the Region and the City to discuss this component of the EA.</p> <p>Committee Report Recommendations (a through d):</p> <p>a. The MOE be advised that the City of Vaughan supports the approval of the Hwy 7 EA as submitted by the Region of York.</p> <p>b. The Region of York be advised that the report entitled "Design Concept for Avenue 7 including Rapid Transit Through the Vaughan Corporate Centre" also forms part of the City's comments on the Hwy 7 EA report and that the recommendation contained in that report be implemented as requested.</p> <p>c. The Region of York be requested to proceed with the amendment to the subway extension component of this EA (Vaughan North-South Link Ultimate Conversion to Subway Technology) at first opportunity, once the TTC Spadina Subway EA is approved, in order to finalize the subway alignment north of Steeles Ave.</p> <p>d. The Region of York be advised that the City of Vaughan is currently completing a number of land use studies along Hwy 7 and along the Vaughan North-South Link. It is requested that the Region of York work with the City in refining the transitway and boulevard treatments in response to the land use and design policies that may result from the studies in order to optimize the attractiveness of the urban environment and support the Region's and the City's development objectives; and that such consultation take place during the detailed design phase for the transitway and associated road allowances.</p> <p><i>The Undertaking – Implications for the City of Vaughan</i></p> <p>e. The introduction of a rapid transit service will be a major catalyst in the transformation of the current Hwy 7 and Centre and Bathurst Streets</p>	<p>within the City of Toronto.</p> <p>k. The Terms of Reference for the City's EA identify the Region-owned land north of Steeles as the northern limit of all alignment options to be analyzed in their EA. Only the orientation of the alignment at this limit is not specified. Chapter 12 of the Region's EA describes the rationale for selecting Alignment A-1 to access the VCC and identifies the potential zone where A-1 may have to be modified to link with the range of alignments being considered by the City's EA south of Steeles Ave.. The EA commits the Region to develop and assess the effects of any modification through this zone in an amendment carried out after the City's EA is approved. (Refer to detailed supplementary information)</p> <p>l. Refer to the detailed supplementary information.</p>
				<p>a. Comment noted.</p> <p>b. Comment noted and information will be carried forward for consideration during development of a detailed streetscape plan (refer to Section 9.1.1) at the time of detailed design. The Proponent will commit to consult the local municipalities during development of the detailed streetscape plan.</p> <p>c. Detailed comment noted. As noted on Figure 12-4 and described in Section 12.5 of the EA report, the final alignment of the subway from Hwy 407 to Steeles Ave will be determined following completion of the Toronto/TTC EA Study (Spadina Subway Extension from Downsview Station to Steeles Ave).</p> <p>d. Detailed comment noted. York Region will work with the local municipalities, including the City of Vaughan, during detailed design and development of a detailed streetscape plan to incorporate recommendations from adjacent land use planning studies where feasible.</p> <p>e. Detailed comment noted.</p>

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			<p>from a Provincial highway to an urban arterial road. The City is looking to build on and support this initiative through the Centre St Study and the Hwy 7 Futures Study.</p> <p>f. Generally, the impacts were positive or could be mitigated to a minimal level of significance. Given the diversity of the corridor and the form of the transitway, there will be impacts on traffic operations and urban design.</p> <p><i>Urban Design</i></p> <p>g. The plan shown in the EA for the Corporate Centre does not reflect the City's ultimate preference as illustrated in the report to Committee of the Whole on October 11, 2005. The plan currently shows minimal landscaping. The recommendations contained in this report should reaffirm the City's desire to see the streetscaping/transitway plan revised either by amendment to the EA or at the time of detailed design to reflect the City's ultimate intentions. It is noted that the subway extension portion of the EA deals specifically with this issue by stating that "Transit intermodal facilities will be developed in consultation with Vaughan as part of the introduction of a comprehensive landscaping and streetscaping plan for the VCC and station precinct". These measures will need to be taken into account in the original transitway design.</p> <p>h. In addition, the plan shows a "VCC Transit Square Concept" at the northwest corner of the intersection of Millway Ave and Hwy 7, which is identified as a transit terminal facility in Section 12 of the EA report. It is recognized that there will be the need for some surface intermodal facilities at a future subway terminal station. However, there is minimal information available on the facility identified in the EA study. It will have to be addressed further with the City in accordance with the statement quoted above, including the basis for the selection of this location.</p> <p>i. The study acknowledges that there are areas that have insufficient road allowance width to permit significant landscaping. An example is the section of Hwy 7 between Martin Grove and Pine Valley Dr. For such areas, the plan suggests that redevelopment be monitored and that property be acquired through redevelopment. An alternative would be to incorporate sufficient setbacks to allow for landscaping to be provided on the private lands between road allowance and the building.</p> <p>j. The City is currently conducting several land use studies in areas that will be directly affected by the transitway. These include the Hwy 7 Futures Study and the Steeles Ave Corridor Study-Jane St to Keele St.</p>	<p>f. Detailed comment noted. As noted in Table 11.4-2 of the EA report, the Region is committed to monitoring traffic operations after implementation of the undertaking. In addition, a detailed traffic management plan will be developed prior to commencing construction (Section 11.2.2.1).</p> <p>g. As described in Section 9.1.1 of the EA report, a conceptual streetscape plan has been developed as part of this EA and will provide the basis for the detailed streetscape design. The Region will commit to working with the local municipalities during detailed design to incorporate streetscape elements recommended through other studies where feasible.</p> <p>h. The intention in showing a concept for the surface intermodal facilities is to identify the need for an efficient means of transferring passengers from feeder bus services to the rapid transit service. The concept, while not intended to be a detailed design is representative of the extent of surface facilities and indicative of the opportunities for integration of these facilities into the urban design of the transportation node. It also provides a basis for assessment of any potential effects on the surrounding built or natural environment. The location of the typical concept was based on the recommendations of the draft report on the City of Vaughan's study of streetscaping for the VCC.</p> <p>i. Comment noted. The Region will work with the local municipalities to secure the required r.o.w. and setbacks through the development approval process.</p> <p>j. Comment noted. York Region will work with the local municipalities, including the City of Vaughan, during detailed design and development of a detailed streetscape plan to</p>

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			<p>Both studies are nearing conclusion. Each will have land use and urban design implications for these areas. In order to optimize the opportunities for aesthetic improvements along Hwy 7 and in the Vaughan North-South Link, the outcomes of these studies should be taken into account during the detailed design of the transitway and the surrounding road allowance. Improving the urban and aesthetic environment will support both the Region's and City's development objectives and improve the chances of their being achieved. A recommendation has been included requesting that the Region work with the City during the detailed design phase for the transitway to take into account the results of these studies.</p> <p><i>Road Operations</i></p> <p>The introduction of the centre median will have a number of effects, which include:</p> <p>k. A prohibition on left turns in and out from driveways and minor roads due to the transitway – The EA indicates that alternative access can be obtained by way of another site or an adjacent roadway. Users will have to adapt and find alternative routes. The introduction of U-turns at signalized intersections is also provided. The impact of the introduction of U-turns to accommodate left-in and left-out turns – in some instances there might be conflicts between U-turns and right turn movements onto Hwy 7 from side streets when the traffic signal is red. It may be necessary to restrict right turns on red lights from side streets. This should be monitored and measures taken to reduce any potential conflicts. It is noted that some of the intersections with four lane road sections may not permit U-turns by large trucks. Restrictions may have to be imposed where warranted.</p> <p>l. Pedestrian crossings given the additional road width in some areas – Given the introduction of the transitway and the station facilities, there is a substantial increase in the paved portion of the road allowance, especially at major intersections. Some pedestrians may not be able to cross in one signal phase. The transitway will have pedestrian refuge areas built into the design to allow them to wait at mid-crossing. A further alternative would be to have a two-stage crossing system to accommodate heavier traffic. Before proceeding to a two-stage system, monitoring should occur under operating conditions to determine if it is warranted.</p> <p>m. The potential for traffic infiltration in some areas – Traffic infiltration has been identified as a possible problem in certain neighbourhoods, resulting from drivers trying to avoid Hwy 7. This may increase as a result of the constraints introduced by the transitway. The following neighbourhoods may be affected: Monsheeh Dr, Willis Rd/Chancellor</p>	<p>incorporate recommendations from adjacent land use planning studies where feasible.</p> <p>k. Detailed comment noted. The Region will consult with the local municipalities during development of the detailed Traffic Management Plan (as described in Section 11.2.2.1 of the EA report).</p> <p>l. Detailed comment noted and will be carried forward for consideration of the detailed Traffic Management Plan (Section 11.2.2.1). Traffic Operation Monitoring (noted in Table 11.4-2) will include consideration of effects on pedestrians.</p> <p>m. Detailed comment noted. York Region will work with the municipalities during monitoring of traffic operations after implementation of the transitway to address issues/concerns including traffic infiltration.</p>

Representative	Name	#	Comment	Response
			<p>Dr, New Westminster Dr, and Beverly Glen Blvd. The EA recommends that these neighbourhoods be monitored before and after the implementation of the transitway to determine if additional mitigation measures are required.</p> <p><i>Vaughan North-South Link Ultimate Conversion to Subway Technology</i></p> <p>n. The EA study confirmed the alignment selected through the Higher Order Transit Corridor Protection Study, which was incorporated into OPA 529, subject to consideration of the results of TTC's current EA process.</p> <p>o. This EA is seeking the approval of this alignment with the option to finalize the portion south of Hwy 407 to tie into the alignment that may ultimately be chosen through the TTC's EA process for the Spadina Subway Extension. No change to the alignment to the north of Hwy 407 is proposed.</p> <p>p. The recommendations of this portion of the EA study should be supported. Putting in place the EA approvals for a subway extension from Steeles Ave to the Corporate Centre is a welcomed initiative for a number of reasons. It will clearly establish a commitment to the development concepts that are being put forward in City, Regional and Provincial planning documents in the interim it will inform investment decisions by both the public and private sectors; it will allow for the necessary property protection; and the project will be design-ready so that the next steps in the process can take place quickly once financing has been committed.</p> <p>q. There is a level of uncertainty surrounding the alignment between Steeles Ave and Hwy 407 as a result of the TTC's Spadina Subway Extension EA. This is unavoidable due to the timing of the two processes. Of primary concern is maintaining the Millway Ave alignment through the Corporate Centre in order to ensure that the Hwy 7 station can be built at its planned location and so property protection and acquisition can continue. The TTC has demonstrated that the three alignment alternatives currently under consideration in the Spadina EA will all work in the context of the City's objectives for the Corporate Centre. All three can provide for the location of an additional station at the planned Hwy 407 Transitway, on the west side of Jane St, south of the highway.</p> <p>r. In order to overcome this issue, the EA recommends that additional studies take place when the preferred designs for the inter-related facilities have received EA approval. These studies would form the basis for an EA amendment. It is critical that none of the EA processes be slowed. Approval of this portion of the EA on the basis of the planned amendment should be supported. In addition, the Region of</p>	<p>n. Comment noted.</p> <p>o. Comment noted. Refer to Section 12.5 and Figure 12-4 of the EA report.</p> <p>p. Comment noted.</p> <p>q. Comment noted.</p> <p>r. Detailed comment noted. As noted on Figure 12-4 and described in Section 12.5 of the EA report, the final alignment of the subway from Hwy 407 to Steeles Ave will be determined following completion of the Toronto/TTC EA Study (Spadina Subway Extension from Downsview Station to Steeles Ave).</p>

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Ontario Secretariat for Aboriginal Affairs (OSAA)	Mr. Richard Saunders, Director Negotiations Branch	7	<p>York should be requested to initiate the amending report shortly after the approval of the TTC's EA. Failure to proceed expeditiously with the amendment to the EA may be interpreted as a lack of commitment to the project, possibly altering investment decisions and compromising the preservation of r.o.w.</p> <p>s. The implementation of the YRTP will be a positive step in the evolution of the Region of York and the affected local municipalities. The plan will promote the transformation of southern York Region into a more urban place by shaping the style and intensity of development in the affected corridors, supporting economic development, increasing public mobility and improving environmental quality by offering an alternative to the private automobile. For these reasons the approval of the EA should be supported.</p> <p>a. In Section 14.2-Stakeholder Consultation of the EA Report, the Proponent indicates that they have followed OSAA's recommendations as outlined in correspondence dated July 28, 2005. This table indicates the responses and requests for information from the various First Nations contacted by the Proponent.</p> <p>b. OSAA recommends that the Proponent continue to contact the relevant First Nations and that follow-up contact be made with all the identified First Nations and Aboriginal organizations.</p> <p>c. The Crown has a duty to consult with Aboriginal peoples where its actions may adversely affect established or asserted Aboriginal or treaty rights. OSAA recommends that MOE consult their legal branch for advice on whether the Crown has any constitutional or other legal obligations to consult Aboriginal peoples in these circumstances.</p>	<p>s. Comment noted.</p> <p>a. Comment noted.</p> <p>b. Comment noted. The Proponent will continue to consult First Nations based on their identified interests/concerns and specific request for additional involvement (as an example, any First Nation that identifies an interest in archaeological findings will be forwarded any future archaeological reports prepared during detailed design).</p> <p>c.</p>
Health Canada	Ms. Carolyn Dunn, Environmental Assessment Officer	8	<p>These comments are in regards to the responses to Health Canada comments on the draft EA report dated July 8, 2005.</p> <p>a. Section 6.2.5 – A contingency plan for managing effects to drinking water wells needs to be developed as part of the environmental assessment, rather than later in the process. Furthermore, no responses were provided related to the identification of municipal drinking water intakes; this is required as part of the assessment.</p> <p>b. Appendix K – it is crucial that construction noise be included in the EA. This is standard practice in EA, to consider the effects of all phases of the project. The changes in the acoustic environment during construction constitute an important potential effect to human health.</p> <p>c. Appendix L – In order to fully protect human health, ozone must be included in the air quality assessment of the EA. The reference for</p>	<p>a. As noted in Table 11.3-1 (I.D.#4), the Proponent has committed to preparing a contingency plan to address potential effects to water wells during detailed design of the undertaking. Identification of wells and municipal drinking water intakes will be undertaken during detailed design.</p> <p>b. As noted in Table 11.4-1 (Construction Monitoring), the Proponent has committed to monitoring noise generated by construction activities to ensure compliance with Municipal By-Laws.</p> <p>c. As noted in Table 10.4-3, there is a net positive effect on all air pollutants assessed related to the proposed undertaking.</p>

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Ministry of Transportation (MTO)	Mr. Robb Minnes, Project Manager	9	<p>odour and formaldehyde in Section 4.2 of the air quality assessment should be provided in the EA (not referenced on the internet).</p> <p>The notes below are items that the MTO raised on the draft EA report and how they have been addressed in the final EA report.</p> <p><i>GO BRT and Hwy 407 Transitway</i></p> <p>a. MTO indicated that the references in the EA to the relationship between the GO BRT project and the 407 Transitway were confusing. While not a critical issue, it would have been preferred if section 1.3g had included the following clarification: "The initial phase of the GO BRT project, as supported by MTO, consists of buses running in mixed traffic on existing road facilities including section of Hwy 407. The 407 Transitway, which has been planned and is being protected by MTO, is designed as a fully grade separated transit facility supporting bus or LRT technologies. It will run adjacent to, but outside of the Hwy 407 r.o.w. between Burlington and Oshawa".</p> <p>b. MTO had also requested that where the EA discusses Hwy 7 or Vaughan north-south transit service interface with Hwy 407 transit service, it should address both shorter term interface with GO BRT mixed traffic service on Hwy 407 as well as longer term interface with the grade separated 407 Transitway service. This has been done.</p> <p><i>Plans and Figures</i></p> <p>c. All of the plans referring to "407 Transitway" have been changed to "Future 407 Transitway" except Figures 8.3-1 through 8.3-17.</p> <p>d. The proposed sidewalk on the south side of Hwy 7, shown on Figures 9-43 and 9-44 has been deleted as requested.</p> <p><i>Structures</i></p> <p>e. Section 9.1.5 identifies work required to accommodate the transit corridor where it crosses CAH designations including lane width and sidewalk reductions as well as structure modifications. Pursuant to the MTO's request, the introduction to Section 9.1.5 now indicates that the identified modifications within the CAH must be reviewed and approved by the Ministry. Further, the CAH modifications are now identified throughout this section.</p> <p>f. The Final EA document is acceptable to the MTO.</p>	<p>a. Comment noted. The undertaking for the 407 Transitway will be defined through a separate EA by the MTO.</p> <p>b. Comment noted.</p> <p>c. Comment noted.</p> <p>d. Comment noted.</p> <p>e. Comment noted.</p> <p>f. Comment noted.</p>
Town of Markham	Mr. Arup Mukherjee	10	<p>General Committee Report re. Hwy 7 EA</p> <p>a. Recommendations include that Council endorse the findings of the Environmental Study Report for the Hwy 7 rapid transit project, and that staff continue to work with Regional and YRTP staff to finalize the design for the rapid transit facility.</p> <p>b. Based on the above endorsement, staff has worked with the Proponents for the Liberty development to secure and protect sufficient r.o.w. along Town Centre Blvd for the rapid transit proposal. It is</p>	<p>a. Comment noted. York Region will continue to work with local municipalities including the Town of Markham, during detailed design and implementation of the undertaking.</p> <p>b. Comment noted. The Region will work with the local municipalities to secure the required r.o.w.</p>

Representative	Name	#	Comment	Response
City of Toronto	Mr. Rod. McPhail	11	<p>recognized that further consultation will be required with IBM to secure the remaining r.o.w. for this option. Letter dated December 6, 2005 Hwy 7 EA</p> <p>a. The EA report indicates that, in the absence of an approved alignment for the Spadina Subway extension between Downsview Station and Steeles Ave, the study could not come to any conclusions regarding a recommended alignment and preferred design for a further extension of the Spadina Subway north of Steeles Ave. The EA report proposes, in spite of the lack of a recommended alignment or preferred design, that a subway extension from the potential Steeles Station to Vaughan Corporate Centre (VCC) be approved. The EA report recommends, however that in order to follow through on a subway extension, an amendment (or addendum) to the EA will be completed. This amendment would use the approved alignment from the TTC/City EA, once MOE approval is received, as a starting point to develop and assess alternative design concepts for the subway extension between Steeles Ave and VCC. Chapter 12 of the EA report contains a description of the components of the amendment report. EA Consultation</p> <p>b. Both the Hwy 7 EA and the Spadina Subway Extension EA had a TAC with staff representatives from York Region, City of Vaughan, YRT, City of Toronto and TTC.</p> <p>c. In addition to attending TTC/City EA TAC meetings for the Spadina Subway extension EA, York Region, YRT and City of Vaughan representatives have met with TAC staff regarding proposed Steeles Ave station options and subway design requirements to extend the subway beyond the proposed Steeles Ave station. The outcome of this work was the development and evaluation of concepts for the proposed Steeles Ave station, subway alignment, and ancillary facilities. The preferred concept for the Steeles Ave station, and the subway alignment in its vicinity, will be put forward to the MOE upon Toronto City Council approval of the Spadina Subway Extension EA findings and the completion of the EA report (early 2006). The preferred alignment (N-3 on attached figure) was identified through the TTC/City EA study process and was evaluated by the TAC during the summer of 2005. This alignment is not consistent with the preferred alignment A-1 shown in the Hwy 7 EA. Timing of Evaluation/Selection of Alignments</p> <p>d. The draft Hwy 7 EA was circulated for review in April 2005. At that time the TTC/City Spadina Subway Extension EA study was finalizing the selection of a preferred route, which was shown at public meetings in</p>	<p>Throughout the Region's EA Study process, York Region, TTC and City of Toronto staff have participated in a reciprocal manner on the respective Technical Advisory Committees for the Spadina Subway Extension, both in Toronto and York Region. The confirmation of subway alignment recommended in prior studies relating to property protection for the VCC and the identification of the extent and scope of the tie-in alignment to be addressed in the addendum resulted from close collaboration with TTC staff and their consultant.</p> <p>This consultation has ensured that the alignment for the portion of the subway extension north of Hwy 407, for which approval is sought in the Region's EA is compatible with all alignment options from which the TTC/City of Toronto EA's preferred alignment will be selected. Also, the discussions and exchange of information form the basis of the description of components that are required to be addressed in the proposed addendum for the portion south of Highway 407 where the tie-in to the TTC's preferred alignment would be achieved.</p> <p>A revised Figure 12-4 is included in the supplementary information regarding the Vaughan North-South Link and includes the preferred alignment identified in the TTC Spadina Extension EA (The preferred TTC EA alignment had not been confirmed at the time the Region's Hwy 7 and VNSL EA was being completed for formal submission).</p>

Representative	Name	#	Comment	Response
			<p>May 2005. The City's review of the draft EA, noting no substantial comments, was based on their understanding that the component of the study dealing with the subway would be updated to reflect current work from the TTC/City study prior to York Region submitting its final EA report. In particular that Chapter 12 would be reworked to reflect the TTC/City EA work.</p> <p>e. York Region changed the final version of Chapter 12 quite substantially from the draft EA. However, the evaluation of alignment options relies almost entirely on alignments generated based on the 1993 TTC EA for the subway extension. While the recommended A-1 alignment, for which approval is requested, is similar to one of the alignments evaluated in the more recent TTC/City EA (as far as the tail track north of Steeles Ave), it is not the preferred alignment that has been put forward to Toronto City Council for approval. The preferred alignment from the TTC/City EA was not evaluated in the Hwy 7 EA, even though that alignment was identified prior to the Region finalizing its EA report in August 2005.</p> <p>Amendment to Hwy 7 EA</p> <p>f. The City of Toronto and TTC suggest that an addendum to the Hwy 7 EA, reflecting the preferred alignment to Steeles West Station, would be an appropriate venue to address the concerns that they have, assuming that an addendum is completed prior to the City and TTC considering a further extension of the Spadina Subway for approval through the City's and TTC's planning and approval processes.</p>	
Region of Peel	Sabbir Saiyed, Principal Transportation Planner	12	<p>a. The Region of Peel Official Plan places a strong emphasis on the increased use of sustainable transportation modes such as transit, cycling and walking. Peel Region recently adopted the following transportation vision to focus efforts in achieving a desired future transportation system: "Peel Region will have a safe, convenient, efficient, multi-modal, sustainable and integrated transportation system that supports a vibrant economy, respects the natural and urban environment, meets the diverse needs of residents and contributes to a higher quality of life".</p> <p>b. The Region of Peel supports a balanced transportation system that promotes both roads and transit. The Region encourages improved accessibility by road and public transit to major nodes and corridors. On page E-7, it is stated that the preferred alternative will be able to meet long-term growth needs and planning objectives. They suggest that the current EA should take into consideration the needs to move automobile and truck traffic safely and efficiently on the Hwy 7 corridor and examine an alternative that supports all modes of transportation. Thus, a balanced alternative needs to be investigated further.</p>	<p>a. Comment noted.</p> <p>b. Comment noted. A wide range of alternatives to the undertaking were included in the assessment (refer to Chapter 3 of the EA report) to address the purpose of the undertaking as approved by the Minister of the Environment. The purpose of the undertaking is summarized in Section E.2 of the EA report. The preferred alternative to the undertaking (described in Section 3.1.5) includes all components of the "current commitments" (described in Section 3.1.2), including all York Region Transportation Master Plan improvements. The Transportation Master Plan includes a multi-</p>

Representative	Name	#	Comment	Response
			<p>c. Local public transit along Hwy 7 (Regional Rd 107) in Peel Region is operated by the City of Brampton. Therefore in order to improve future transit services on the Hwy 7 corridor, it is important to coordinate transit improvements in close partnership with the City of Brampton and Peel Region.</p> <p>d. A station should be considered in the vicinity of Hwy 7 and Hwy 50. Schedule A of the City of Brampton Official Plan designates this area as a "Primary Office Node". Since this area will be a major trip generator, a station is justified at this location. Section 4.3.4.12 of the Peel Region's Long Range Transportation Plan (LRTP) supports this position by directing the Region to "support gateways and interconnections between the local bus network and future transitways, especially at Regional urban Nodes".</p> <p>e. A reference is made regarding Hwy 427 on page 9-8 as: "Between Hwy 50 and Hwy 27, the existing Hwy 7 alignment would shift to the north up to 6.7 m to incorporate the MTO's future Hwy 427 extension allowing Hwy 7 to be widened on the north side only". This should be discussed with Peel Region and MTO before proceeding further.</p> <p>f. To ensure that there will be good connectivity between Peel and York Regions, the EA study area (page 2-1) should include areas west of Hwy 50 along Hwy 7 in Peel.</p> <p>g. The Region of Peel LRTP has the following policies regarding transit improvements and promotion: LRTP Policy 4.3.4.4: Support fare integration and service coordination of inter-regional and local transit, especially at transfer points within Peel, with services in neighbouring municipalities and with GO Transit. LRTP Policy 4.3.4.9: Work with all levels of government to advance inter-regional transit plans including rapid transit, commuter rail, GTA transit corridors and GTA transportation centres. To make transit an attractive alternative between York and Peel Regions, Viva and the City of Brampton – AccelERide – transit initiative should commit to plan and implement seamless travel between York and Peel with better fare integration and hassle-free transfer service.</p> <p>h. The pedestrian environment is not adequately addressed at the boundary of Peel/York Region. The EA study indicates that Hwy 7 may be perceived as a highway-like road, which in turn with the introduction of transit service vehicles could create an unfriendly environment for pedestrians" (page 10-5). In order to attract transit users, it is important</p>	<p>modal approach to address travel demand and goods movement to 2031.</p> <p>c. The Region of Peel has been included in the Technical Advisory Committee and the Government Review Team for this formal EA submission. York Region will work with Peel to integrate any future Hwy 7 transit improvements west of Hwy 50 with the York Region undertaking defined in this EA.</p> <p>d. As noted in Figures 9-1 and 9-2, a transit stop has been proposed at Hwy 50 which is the planned terminus of rapid transit service as defined through this EA. Should rapid transit service be planned west of Hwy 50 into Peel Region, York Region will work with Peel Region to integrate services appropriately.</p> <p>e. MTO will be consulted during detailed design as it relates to any work within their jurisdiction, including widening of the existing Hwy 7 structure over Hwy 427.</p> <p>f. The study area for this EA extends from the York/Peel boundary (Hwy 50) to the York/Durham boundary. Should Peel Region or Brampton choose to define transit improvements west of Hwy 50, York Region will work with the neighbouring jurisdiction to integrate services accordingly.</p> <p>g. Comments noted. The undertaking defined in this EA includes rapid transit service as far west as the York/Peel boundary. Should Peel Region or the City of Brampton choose to plan additional service within their municipal boundary, York Region will work with the neighbouring jurisdiction to integrate services accordingly. Transit fare integration is outside the scope of this EA.</p> <p>h. As shown on Figure 9-2, sidewalks are planned for both sides of Hwy 7 as far west as the York/Peel boundary (Hwy 50). A conceptual streetscape plan is described in Section 9.1.1 of the EA report. A detailed streetscape plan will be developed during detailed design. Page 10-5 (Table 10.4-2) identifies potential</p>

Representative	Name	#	Comment	Response
Durham Region	Mr. Ramesh Jagannathan, Manager Transportation Planning and Research	13	<p>to provide a safe, comfortable and attractive pedestrian environment. An unfriendly pedestrian environment can be a barrier for commuters to choose transit as their preferred mode of transportation. Therefore, more effort should be taken to ensure the pedestrian friendliness of the project.</p> <p>i. On page E-5, the description of route alternatives is provided for Segment A: between Hwy 50 and Hwy 400. It is mentioned that "...the only feasible route alternative is to locate the transitway in the median of the existing Hwy 7 cross-section...". The above statement needs to be discussed further and coordinated with Peel Region and the City of Brampton for further service integration.</p> <p>a. As noted in the EA report, the preferred option proposes buses operating in mixed traffic between the York-Durham Line and Reesor Rd, until such time as an extension of the transitway is warranted. Durham Region supports the wording that has been added to Section 8.3.6.1 since the draft EA report, which states that additional r.o.w. east of Reesor Rd should be acquired through the site plan process for adjacent development, in order to accommodate dedicated transit lanes in the long-term.</p> <p>b. The Region will assume local transit services from the area municipalities on January 1, 2006. Accordingly, Durham Region Transit is committed to working with York Region Transit to coordinate future transit service delivery.</p> <p>c. The preferred option (Option 9-1.1) proposes a future transit station at Hwy 7 and the York-Durham Line. Durham Region note that this station has been detailed further, since the Draft EA report in the preferred alignment drawing (i.e. Figure 9-81). Durham Region suggests that additional wording be added in Section 8.3.6, noting that this station could potentially be moved to an easterly location in the future urban area of Seaton. This would provide a more direct connection with Durham Region Transit services. Please note that the proposed Draft Central Pickering Development Plan for the Seaton urban area identifies a future transit station (referred to as a Transit Interchange) at Hwy 407 and Sideline 26.</p> <p>d. The choice of Hwy 7 for rapid transit services, over Hwy 407, is understandable given York Region's focus on intra-regional urban transit services. The Hwy 407 Transitway, however, is more significant from an inter-regional point of view. As such, rapid transit service on Hwy 7 should be treated and designed to be complementary with future Hwy 407 Transitway services, rather than competitive.</p>	<p>Environmental Effects. The table also identifies the Built-in Positive Attributes of the undertaking (i.e. Design transitway to facilitate safe pedestrian road crossings with median refuge. Improved streetscaping in order to create a friendlier pedestrian environment).</p> <p>i. Chapter 5 of the EA report includes screening of route alternatives for Segment A (York/Peel boundary to Hwy 400) and includes the consideration of six different routes (Steeles Ave, Hwy 407, Hwy 7, Langstaff Rd, Rutherford Rd and Major Mackenzie Dr). See Table 5.1-1 (Preliminary Screening of Route Options) and Table 5.3-1 (Analysis of Alternative Routes and Technology Combinations).</p> <p>a. Comment noted.</p> <p>b. Comment noted.</p> <p>c. Comment noted. York Region Transit will work with Durham Region Transit to ensure coordinated service at the boundary between the two jurisdictions.</p> <p>d. Comment noted. As noted in this comment and described in the Region's Transportation Master Plan and in various sections of the EA report, the undertaking is a key component of the York Region Rapid Transit Plan, which focuses on intra-regional urban rapid transit, with connections to inter-regional services (such as GO Rail and 407 Transitway) and other neighbouring rapid transit (TTC etc...).</p>

Representative	Name	#	Comment	Response
Toronto and Region Conservation Authority	Ms. Beth Williston	14	<p>a. TRCA recognizes that the Preferred Design requires a new crossing of the Rouge River (see figure 9-60). Staff met on site with York Region and Rouge Park representatives to discuss the implications of this crossing on November 18, 2005. Further to this meeting, staff completed its review of the document and advises that TRCA has no objection to the proposed crossing, as its impact to the placement and function of the transitway is now understood.</p> <p>b. Table 8.3-9 should be revised in order to clearly distinguish this alternative as preferable to the others, particularly as it will have the greatest negative impact on the natural environment.</p> <p>c. Any new crossing of a valley or stream corridor has a significant impact on the ecological function of the system. In accordance with TRCA's Valley and Stream Corridor Management Program as well as Rouge Park programs and policies, valley and stream crossings must be minimized in order to preserve the environmental integrity of the system. To this end, TRCA is advising that any future crossings of the Rouge River and its tributaries in this area are of significant concern. TRCA and Rouge Park will require that future Environmental Assessment or Planning Act applications in this area be developed such that no new crossings of the Rouge River, Apple Creek or Beaver Creek are approved.</p> <p>d. TRCA requests that York Region commit to restoring the surrounding valley land and floodplain as part of a compensation plan to address the impacts associated with this new crossing. This process would include the acquisition of the flood plain property west of Warden Avenue and south of Cedarland Drive for this purpose. A restoration plan should be prepared in consultation with TRCA staff to ensure that Terrestrial Natural Heritage objectives are met to maximize the ecological benefit to this area. Notwithstanding the above, additional compensation may be required when this project moves to detailed design.</p> <p>Please note that other outstanding TRCA concerns are provided below:</p> <p>e. The sentence in the third paragraph on page E-7 that ends "... to preserve the aquatic habitat" should be revised to read "... to preserve the aquatic and terrestrial habitat".</p> <p>f. It should be noted on Page 9-16 that the minimum crossing opening for Local Alignment C3-4 to satisfy geomorphic requirements is expected to be approximately 80 to 120 metres, and may be greater depending on site conditions. Additionally, the conceptual crossing structure</p>	<p>a. TRCA agreement in principle to the proposed Rouge River crossing is noted.</p> <p>b. A revised Table 8.3-9 is included in the attached supplemental information to TRCA. The table is revised to include more of the detailed information as presented in Table 8.3-5 and wording as summarized in the text of section 8.3.5.1 that better distinguishes the preferred alignment alternative.</p> <p>c. Comment noted for future Environmental Assessment or Planning Act applications in this area.</p> <p>d. The Region will work with TRCA to develop a compensation plan during detailed design that satisfies the agencies requirements. As noted in section 11.2.1, the requirement for TRCA permits are identified as part of post-EA approval activities.</p> <p>e. Comment noted.</p> <p>f. Section 9.1.5 (27) indicates that a meander belt analysis and a 100 year erosion limit will be determined during preliminary and detailed design to determine the sizing of the bridge span for the planned Rouge River crossing. Figure 9-60 also indicates that the</p>

Representative	#	Name	Comment	Response
			<p>profile and dimensions should be removed from Fig 9-60 to ensure that the EA is not misinterpreted to read that a 30 metre crossing may be permitted.</p> <p>g. Table 8.2-1 has been revised to include an indicator under Objective C4 for "extent of channel realignment", but not for impacts to restriction of channel plan form as per previous comments. Staff considers the extension of existing watercourse crossings to be potentially detrimental to physical processes in the watercourse, as this will impede natural plan form migration by confining additional channel length in structures that are of insufficient width to allow full meander bend development and evolution. Table 8.2-1 and 10.4-3 should be revised so that this issue is reflected in the evaluation.</p> <p>h. The number of new and widened watercourse crossings associated with each alternative route should be included in Table 8.3-2, as per evaluation tables in other sections.</p> <p>i. The transitway station on Fig 9-60 should be removed from the Rouge Valley corridor and regional floodplain. The note provided does not sufficiently indicate that the station location must be outside the valley corridor and floodplain.</p> <p>j. The Stormwater Management Preliminary Assessment provided in Appendix G is not sufficient to confirm that an effective stormwater management system for the transitway can be provided, and therefore the "insignificant" level of impact to water quality assumed in Table 10.4-3 cannot be confirmed. The material provided in Appendix G does not confirm the locations and availability of land for stormwater</p>	<p>sizing of the structure will be determined during the design phase. A revised figure 9-60 is attached and has been revised to delete the reference to a 30 metre structure span.</p> <p>g. The indicator "extent of channel realignment" has been considered a measure of any additional restriction of channel plan form due to the channel having to be re-aligned locally at existing crossings to follow the increment of increase in length of existing crossings to structures. Generally, this increase is under 5 metres at the entrance and exit of culverts and bridges which at present, have a length suitable for crossing a 5-7 lane roadway.</p> <p>The Region agrees that the textual assessment of effects preceding Table 10.4-3 should include recognition that the extension of existing crossings with insufficient width to allow full meander development will introduce a moderately significant effect on natural plan form migration at existing crossing entrances and exits. This will be addressed further during the TRCA permit approval stage in the development of a compensation plan to maximize ecological benefit.</p> <p>h. The three alternatives for Segment B East (refer to page 8-10 of the EA report) have the following new/widened watercourse crossings.</p> <p>Alternative B4 – No new or widened crossings required.</p> <p>Alternative B5 – New crossings include: Westminster Creek east of Dufferin Street; West Don River east of Dufferin Street, west of Bathurst Street and east of Bathurst Street; Widened structures at Hwy 7 over East Don River.</p> <p>Alternative B6 – No new crossings or widened crossings required.</p> <p>With the inadvertent omission of listing the watercourse crossings from Table 8.3-2 in the EA report, the selection of Alternative B6 as the Technically Preferred Alternative does not change.</p> <p>i. During detailed design, the Region will refine the station location and design solution to meet TRCA requirements for protection of the valley corridor and flood plain based on a detailed survey of site conditions.</p> <p>j. The Proponent will commit to working with the TRCA during preliminary and detailed design to ensure that the stormwater management plan provides a net improvement in water quality of the receiving watercourse. Opportunities to include treatment for this undertaking with broader infrastructure initiatives will be reviewed during the design phase. The proponent agrees that</p>

Representative	Name	#	Comment	Response
			<p>management measures and for many segments of the transitway no stormwater management measure are proposed. The consultant presents an argument to explain the latter in Appendix G as follows: "The existing roadway runoff has a greater impact on the downstream watercourses that the potential increase in runoff due to the proposed transitway. Stormwater management in urbanized areas should therefore be developed as part of an initiative to provide treatment on a watershed basis rather than trying to manage the incremental change resulting from the proposed transitway. This type of initiative would be separate from the current environmental assessment for the Hwy 7 Corridor Public Transit Improvements."</p> <p>This rationale does not justify that lack of proposed treatment for portions of the transitway, as it is the objective of the TRCA to obtain a net benefit in water quality treatment for all new transportation infrastructure projects. Deferring the fulfillment of treatment of this objective to large scale initiatives for urban stormwater retrofit, as the consultant suggests, is not acceptable, as it has been shown to be significantly more difficult and costly to provide stormwater treatment in a retrofit context than incrementally during the design and construction of new infrastructure. Therefore, the Proponent should demonstrate that stormwater measures for the transitway can be provided that will provide a net improvement in water quality in the receiving watercourses. The appendix should be revised to address stormwater management for all sections of transitway that will be service by each measure. It may be useful for the consultant to review the recent EA report for the Markham Bypass (southern portion) being prepared by the Regional Municipality of York, as it contains an appendix that addresses stormwater to a comparable level of detail as is expected in the response to the above comments.</p> <p>k. Suitable information has not been provided to confirm that impacts to terrestrial passage at stream crossings will be "insignificant", after mitigation, as indicated on Table 10.4-3 under objective C2. In particular, the extension of existing crossings may significantly reduce the potential for wildlife use and these effects cannot be entirely mitigated with the types of measures proposed, particularly as the option of "increasing vertical and horizontal clearances" is not available for the extension of existing crossings. In the absence of additional information, the level of significance after mitigation for this item should be ranked as at least "moderately significant".</p> <p>l. The monitoring frequency in Table 11.4-1 for "effect of construction on water quality and quantity in watercourses" should be revised to indicate that monitoring should occur after every major storm event.</p>	<p>deferring the fulfillment of treatment of this objective is not acceptable. Additional information regarding the Stormwater Management Preliminary Assessment is included as supplementary information with this response to TRCA.</p> <p>k. Culverts/bridges that will not be replaced for transitway insertion in the roadway cross-section will be investigated further during detail design to formulate site-specific retrofit opportunities to enhance wildlife passage. The culvert extensions required are not expected to significantly impede or improve wildlife passage under Highway 7. As suggested by TRCA, the level of significance after mitigation can be considered to be moderate in the absence of additional information to be provided during the design and permit approval phase of the project.</p> <p>l. Comment noted and will be carried forward to the design and construction phase of the project.</p>

Representative	Name	#	Comment	Response
			<p>m. The discussion of water quality and quantity monitoring in Table 11.4-2 is not satisfactory as the monitoring methods and frequency are not appropriate for the monitoring purposes. Specifically, monitoring of sediment accumulation in stormwater management facilities will not indicate the effect of snow and ice removal in corridor watercourses. It is recommended that separate monitoring items be developed for sediment accumulation, stormwater management facilities and impacts of snow and ice removal. Water quality impacts of snow and ice removal, as well as regular transit operations, should be monitored by measuring chlorides, suspended sediment, and other water quality parameters, at the outlets of the various stormwater management facilities during both storm and snowmelt events. The accumulation of sediment in stormwater management facilities should be monitored by measuring the accumulation at a reasonable interval based on the expected sediment loading and storage capacity of the facility. Table 11.4-2 should be revised accordingly.</p> <p>n. It has been correctly identified that all culvert and bridge extensions or widenings may result in the Harmful Alteration, Disruption or Destruction of fish habitat and that compensation under the Fisheries Act may be required. At the detailed design stage, TRCA ecology staff will review all culvert/bridge modifications, and will require that:</p> <ul style="list-style-type: none"> a) Any potential impacts are mitigated whenever possible; b) Effective sediment and erosion controls are provided; and c) There will be a net benefit to the aquatic and floodplain system. <p>Please note that it is possible that additional watercourses may be identified during detailed design stage, and that a TRCA permit and review under Fisheries Act, along with all other applicable legislation may apply.</p> <p>o. Note that the tributary at station 541+300 (approx.) is being relocated to the east. Please contact Leslie Piercey for more information.</p> <p>p. Impacts to groundwater resources will need to be addressed in greater detail, particularly in terms of construction related impacts from any required dewatering. Studies will be required to identify quantities, durations and zones of influence associated with aquifer depressurization or dewatering, along with any other environmental impacts that may be anticipated. Mitigation plans will be needed to protect any associated natural heritage features and groundwater related resources. Areas of particular concern have been identified within the EA report (between Hwy 400 and Jane St, and Hwy 404 and McCowan Rd), however, groundwater resources and the features dependent on them will need to be identified and protected throughout</p>	<p>m. The Region will develop a detailed monitoring program covering all aspects noted during detailed design in consultation with TRCA. All required measurements, specifically to assess the effect of the transitway insertion, will be included in the monitoring program.</p> <p>n. Comment noted to be carried forward to the detailed design phase (as noted in section 11.2.1, the requirement for TRCA permits are identified as part of post-EA approval activities).</p> <p>o. Comment noted to be carried forward to the detailed design phase (as noted in section 11.2.1, the requirement for TRCA permits are identified as part of post-EA approval activities).</p> <p>p. Comment noted. The impacts on groundwater resources and the features affected by them, throughout the entire Highway 7 Corridor, will be identified during the detailed design phase when the extent of any dewatering is known. Mitigation plans will be developed to provide the necessary protection for natural heritage features and groundwater related resources in consultation with TRCA and other appropriate authorities.</p>

Representative	Name	#	Comment	Response
			<p>the entire corridor during the detailed design phase.</p> <p>q. Please note that the area identified for the Vaughan North-South Link (between Hwy 400 and Jane St) is an area of shallow or upward groundwater movement. This is an issue that will need to be addressed by TRCA's hydrogeologist at the detailed design phase.</p>	<p>q. Comment noted. TRCA's hydrogeologist will be contacted during the detailed design phase.</p>

**ACTION FOR COMMENTS RECEIVED FROM THE PUBLIC ON THE
HIGHWAY 7 CORRIDOR AND VAUGHAN NORTH-SOUTH LINK PUBLIC TRANSIT IMPROVEMENTS
ENVIRONMENTAL ASSESSMENT FINAL REPORT**

Representative	Name	#	Comment	Response
	Mr. Jeff Stone	1	<p>a. Section 6.1.1.5 – To the locations of the additional terminals add the following: Promenade; Southwest of Bathurst and Centre; Vaughan Mills; Southwest of Jane and Rutherford; and York University; Southwest of Keele and Steeles. Section 6.1.2.5</p> <p>b. Add to the Bathurst St Station "for Hwy 7 West" or future GO Transitway.</p> <p>c. Yonge and Centre Station was omitted. Was the level unacceptable?</p> <p>d. Where are the ratios of traffic at Laidlaw Blvd?</p> <p>e. Section 6.1.2.6 – Add "High traffic volume on Beverly Glen" and "There is a threat of neighbourhood traffic infiltration" to the Wiltshire Neighbourhood.</p> <p>f. Section 6.3.3.1 – Under the City of Vaughan, note that Thornhill is divided in half at Yonge St between Vaughan and Markham, not Vaughan and Richmond Hill. Note that Thornhill is not in Richmond Hill as it is entirely below Hwy 7.</p> <p>g. Section 6.3.3.2 – Add the future areas at Bathurst and Centre/Promenade.</p> <p>h. Section 6.4.1.1 – Under Thornhill (Yonge St and Centre St), add that Yonge and Centre is an epicentre.</p> <p>i. Section 7.2 – Add "Proximity to development and origin-destination node/traffic generators".</p> <p>j. Section 7.3 – Add "intrusion into land uses" and "Public comfort stations/commercial land uses nearby".</p> <p>k. Figures 8.3-7, 8.3-9 and 8.3-10 – Add transit station at Bathurst and Hwy 7 West (Connection to GO/407 Transitway).</p> <p>l. Page 8.3.20 – The best choice for Hospital Complex as midpoint in the area, therefore is most accessible.</p> <p>m. Table 8.3-2 – Why was B6 chosen when B-3 has 11 most responsive and B5 and B6 have only 8 criteriae?</p> <p>n. Table 8.3-2 – Why was B6 chosen when B-4 has 3 least responsive and B4 and B6 have no criteriae?</p>	<p>a. Comment noted.</p> <p>b. Comment noted.</p> <p>c. Both Yonge St and Centre St are included in the listings of level of service in Section 6.1.2.5 of the EA report.</p> <p>d. Existing traffic at the Laidlaw Blvd. intersection is operating at an acceptable level hence it does not appear in the listing of intersections at or near unacceptable levels of service.</p> <p>e. Comment noted</p> <p>f. Inadvertant error acknowledged. Reference to Richmond Hill is incorrect.</p> <p>g. Comment noted.</p> <p>h. Comment noted.</p> <p>i. Comment noted.</p> <p>j. Comment noted.</p> <p>k. Comment noted. Potential station at Bathurst St and Hwy 7 identified in Section 8.3.3 of the EA report.</p> <p>l. Comment noted.</p> <p>m. B3 is an alternative to B1 and B2 and does not correspond with the section of route containing B6.</p> <p>n. B6 was assessed as having greater potential for the development of transit supportive land uses with convenient access to the stations while having no adverse effects that could not be</p>

Representative	Name	#	Comment	Response
			<p>o. Page 9.1 – GO stations in Woodbridge near Hwy 7 and Islington in Kleinberg are not shown in the plan. Figure 9-25</p> <p>p. One bus terminal is shown on the North side, but two terminals are shown on the Spadina Extension EA plan.</p> <p>q. Add one terminal on the south side of Steeles Ave (i.e. permanent for TTC routes S. of Steeles Ave).</p> <p>r. Figure 9-35 – Add a second gap on Centre St to adequately serve retailers or some stores will die. Figure 9-36</p> <p>s. The station site west of Promenade loop is on a slope and could pose stopping problems.</p> <p>t. The right turn lane should be extended south of Centre St to the condo building entrance for flow.</p> <p>u. Add a one to two lane northbound road versus three lanes shown in both directions on future plans.</p> <p>v. Note the northbound station north of Atkinson poses a problem for the retail strip plaza vehicle access.</p> <p>w. Note the southbound station south of Atkinson poses a problem for school and community centre access.</p> <p>x. Section 12 – A1 Station Site: The advantages are it is a better choice as it is under Steeles completely; lesser capital cost as no expropriation needed nor use of vacant land; better service to York University and has least effect on future development; and central location as perpendicular site allows access to all terminals. The disadvantage is that this location poses higher noise and vibration problems.</p> <p>y. Page 12-4 – Add "Possible 2nd bus terminal" on the north side. Note that non-TTC routes can be accommodated by one terminal until Spadina is extended north.</p> <p>z. In general, the EA omits reference to other potential east-west or north-south arterial corridors for rapid transit in future in south York Region.</p>	<p>mitigated.</p> <p>o. Stations on potential future GO services are not shown in the figure.</p> <p>p. The figure shows only the Region-owned land designated for future transit terminal use. Any additional terminal facilities required are part of the undertaking for the Spadina Subway Extension EA.</p> <p>q. Terminals on the south side of Steeles Ave are not part of the undertaking for this EA but may be included in the City of Toronto/TTC's Spadina Subway extension EA.</p> <p>r. As shown in Figure 9-35 of the EA report, a full movement intersection (signalized) has been shown conceptually providing access to the lands north of Centre St between Vaughan Blvd and New Westminster Dr.</p> <p>s. A station at the location shown will meet design standards.</p> <p>t. The extent of turning lanes will be determined after further analysis of needs during the detailed design phase.</p> <p>u. Bathurst St will retain the existing two lanes in each direction, with the additional lanes being dedicated to rapid transit.</p> <p>v. Access to the plaza on the east side of Bathurst St will be possible by making either a U-turn SB at the Atkinson Ave intersection followed by a right-turn into the plaza, or a left turn into Atkinson Ave and a second left-turn into the southern entrance to the plaza.</p> <p>w. Access to the community centre and school will be possible through the signalized intersection at New Westminster Dr.</p> <p>x. Comment noted.</p> <p>y. Overall terminal requirements at the Steeles Ave subway station are being defined by the Spadina Subway Extension EA. The station site will be addressed as part of the Spadina EA.</p> <p>z. The modeling of future rapid transit ridership has assumed enhanced transit service on parallel arterial routes in both the east-west and north-south directions.</p>

Representative	Name	#	Comment	Response
Borden Ladner Gervais LLP	Mr. Stephen Waque	2	<p>a. Counsel for property owners whose lands are located on the north side of Centre St, between New Westminster Dr and Dufferin St. It appears to their client that the analysis being undertaken is still defective in that it fails to recognize and implement the policies set out in City of Vaughan OPA 672. In particular, policies numbered 8 and 9 in that OPA. The lawyers would appreciate specific acknowledgement of their client's concerns and a specific response indicating how the Proponent will address them.</p> <p>The following are the excerpts from the City of Vaughan OPA 672: <i>OPA 672 – Section 8</i> notes that amending OPA#210, Section 2.2.3.6, General Commercial Areas, by adding the following paragraph to subsection b): "Council consideration should be given to broadening the permitted retail and service commercial uses within an implementing zoning by-law and definitions to allow a greater range of commercial uses which reflect evolving consumer needs without imposing negative impacts on neighbouring residential areas." <i>OPA 672 – Section 9</i> notes that amending OPA#210, Section 2.3.6 by adding the following paragraph: "That the Region of York recognize the importance of maintaining full movement access to the existing commercial centres on the north side of Centre St between Vaughan Blvd and New Westminster Dr, and reflect this in the planning for any transit facilities in the Centre St Corridor between Bathurst and Dufferin St."</p>	<p>a. As shown on Figure 9-35 of the EA report, a full movement intersection (signalized) has been shown conceptually providing access to the lands north of Centre St between Vaughan Blvd and New Westminster Dr. As noted on Figure 9-35, the final location of the full movement intersection will be determined during detailed design and in consultation with affected property owners.</p>
	Mr. Lloyd Helferty	3	<p>a. The entire length of the proposed transitway should include, for both environmental and health reasons, the accommodation of additional space along the transitway corridor for safe and "continuous" passage of non-motorized vehicles, particularly bicycles, foot traffic and other human-powered or small-capacity vehicles (e.g. scooters or segways). The path would be a positive environmental benefit to the users of the traffic corridor because the users of the transit corridor could choose, on those days which have appropriate weather for alternate modes of travel, to safely use a pathway instead of a private vehicle or public transit (which itself uses internal combustion technology and is beneficial in reducing emissions but does not eliminate them). A pathway along the transit route could significantly reduce both the traffic congestion along the corridor as well as reducing the emissions that would otherwise have resulted from elimination of the use of an additional vehicle on the road.</p> <p>"Continuous" meaning the pathway should not be broken along any section because of incompleteness or obstruction (such as highway</p>	<p>a. Detailed comment noted and will be carried forward for consideration during development of the detailed streetscape plan (Section 9.1.1 of the EA report describes the conceptual streetscape plan). As identified on Figures 9.1-2 to 9.1-10, a 2.0 m sidewalk is proposed along each side of the transitway/road corridor for pedestrians. As shown on Figures 13.9-3 to 13.9-5, a 3.0 m bicycle path is proposed from Warden Ave to east of Sciberas Rd and has been developed in consultation with the local municipality. The local municipality has jurisdiction over bike paths. At the time of detailed streetscape design, York Region will continue to work with local municipalities to incorporate additional streetscape facilities and bicycle access to stations where feasible.</p>

Representative	Name	#	Comment	Response
	Mr. James Puddy	4	<p>bridges), and should allow the passage of small/light vehicles without the users of such a path having to resort to simultaneous use of the same roadway as heavy vehicles.</p> <p>a. Mr. Puddy mailed letters concerning the meetings at Markville on September 19, 2003 and September 17, 2004 and had no replies. He went to the Markham Town Centre to review the EA report and noticed that there were eighty replies from the total of twelve meetings and did not see his letter of September 19, 2003, although his letter of September 17, 2004 was recorded. The following are his comments on the EA report:</p> <p>b. The transit lane should be in the curb lanes with the transit stops at the far side of the traffic control intersections.</p> <p>c. The transit lanes should run straight along the corridor with a subway or overpass at the GO crossing and not detoured up and down to the GO station where the trains operate approximately two hours each direction on working days.</p> <p>d. The raised transit lanes will separate the corridor into a north and south side of the community requiring at each traffic control intersection numerous traffic light functions such as through, right, left and U-turns.</p> <p>e. Comments b through d will increase gridlock, pollution, safety and will affect the community environment (surroundings). <i>Comments from PCC#4, September 17, 2004</i></p> <p>f. Mr. Puddy spoke to a representative of Lynton Erskine at the Markville Mall presentation on September 17, 2004. He does not consider the present plan will enhance the quality of life in the Hwy 7 Corridor.</p> <p>g. The transit lanes should be in the curb lane of Hwy 7 corridor with stops</p>	<p>a. It appears that the Rapid Transit Program Office inadvertently omitted to acknowledge receipt of Mr. Puddy's letters and respond to the comments contained in them. However, the comments were taken into consideration in evaluating alternatives and developing the preferred design for the undertaking. The responses below indicate how his comments were addressed in the EA report.</p> <p>b. Curb side transit lanes were considered in the EA report (refer to Section 5.4.1, Alternative Locations within a Road r.o.w.). Table 5.4-1 provides an evaluation of the alternative locations for the transit lanes, with a median transitway identified as the preferred location. The typical station layout includes far side stops at intersections with traffic and pedestrian control signals (refer to Figure 7.3-1).</p> <p>c. Alternative routes and alignments were considered and evaluated in the EA (refer to Section 5.3.1, Analysis and Evaluation of Alternative Technology/Route Combinations and Section 8.3, Development of Segment Alignment Alternatives). In addition to inter-connectivity with GO Rail services, the routing selected serves the planned mixed-use Markham Centre where significant transit-supportive development is planned.</p> <p>d. As noted in Section 9.1.1 of the EA, a streetscape concept has been developed in consultation with local municipalities to be a catalyst for transit-oriented development and attract transit ridership by creating a pedestrian friendly environment. The effect on traffic operations was considered in the evaluation of options to locate a transitway in a roadway (refer to Table 5.4-1) and the analysis of traffic conditions during operation of the transit service (refer to Chapter 10). In addition, traffic operations will be monitored during rapid transit operations as noted in Table 11.4-2.</p> <p>e. Environmental criteria for assessing the effects of the undertaking on congestion, pollution and safety are included in Section 10.4 - Analysis of Environmental Effects and Mitigation, of the EA report.</p> <p>f. Protecting and enhancing the social environment in the corridor was a key objective in the development of the undertaking (refer to Chapter 1 and Chapter 10, Table 10.4-2).</p> <p>g. Curb side transit lanes were considered in the EA report (refer to</p>

Representative	Name	#	Comment	Response
			<p>at the far side of intersections.</p> <p>h. The level crossing on Hwy 7 in Unionville should have an underpass allowing safe passage for GO trains and Hwy 7 traffic which was done at Finch Ave, west of Leslie St.</p> <p>i. The transit line in the middle of Hwy 7 corridor with its left and U-turns at intersections are not safe and convenient for pedestrians or vehicles contributing to gridlock and pollution. The transit line should not be detoured off the Hwy 7 corridor to the GO station for four trains each way on working days.</p> <p>j. The primary purpose of what used to be a provincial highway was for the movement of goods, people and services and should be the main function of this arterial road serving a commercial area. <i>Comments from PCC#3, September 19, 2003</i></p> <p>k. The preferred plan for enhancing the quality of life in the Hwy 7 corridor is similar to the Spadina Ave transit in Toronto and Mr. Puddy does not consider that the Toronto system meets any of our criteria for the proposed plan.</p> <p>l. Mr. Puddy suggests that the preferred plan for all purposes would be better located in either the hydro or 407 corridors.</p> <p>m. The rapid transit line in the centre of the Hwy 7 corridor would not contribute to the safety and convenience of pedestrians or other users. The detouring of the transit line off the corridor to connect with the GO station for only 10 trains on working days.</p> <p>n. The transit line should be built in the curb lanes and an underpass built at the Hwy 7 corridor and the GO level crossing which would allow passengers to transfer to the GO trains and provide a safe Hwy 7 corridor by eliminating a level crossing.</p>	<p>Section 5.4.1, Alternative Locations within a Road r.o.w.). Table 5.4-1 provides an evaluation of the alternative locations for the transit lanes, with a median station layout identified as the preferred location. The typical station layout includes far side stops at intersections with traffic and pedestrian control signals (refer to Figure 7.3-1).</p> <p>h. Comment noted. Refer to Figure 9-63 of the EA report which shows a proposed underpass for the transitway crossing of the GO Stouffville line.</p> <p>i. Refer to responses c and d above.</p> <p>j. The purpose of the undertaking is presented in Section 1.2.2 of the EA report. The existing Social Environment is described in Section 6.3 and includes a wide range of adjacent land uses.</p> <p>k. Comment noted. Analysis and Evaluation of Alternatives to the Undertaking is provided in Chapter 3 of the EA report.</p> <p>l. Alternative alignments (including Hwy 407 and sections of hydro corridors) were considered in the EA (refer to Section 5.1, Rapid Transit Corridors).</p> <p>m. Alternative alignments (including Hwy 407 and sections of hydro corridors) were considered in the EA (refer to Section 5.1, Rapid Transit Corridors).</p> <p>n. Alternative alignments (including Hwy 407 and sections of hydro corridors) were considered in the EA (refer to Section 5.1, Rapid Transit Corridors).</p>
Ms. Gloria Boxen	5		<p>a. Ms. Boxen welcomes the Region's decision to improve transit but is concerned about the Region's inability to address land use planning where it works against good transit and community development and when it doesn't dare to hope that people will get out of their cars and walk.</p>	<p>a. Approval of site plan development is a local municipal jurisdiction and subject to the Ontario Planning Act, as well as conformance with land use as provided in the York Region Official Plan. The Region is also undertaking a Centres and Corridors Study to facilitate development of both the Regional Centres and Corridors with more intensive development supporting transit ridership (the Region's planning initiatives are briefly described in Section 12.1.1</p>

Representative	Name	#	Comment	Response
			<p>b. The evaluation and comments provided are based on the following principles: 1) Efficient use of resources, existing infrastructure, land, energy, and most direct route to service the most people and destinations, with least environmental impacts; 2) Promotes health, reduces air, water and soil pollution by reducing the use and need for private vehicles, and promotes walking and cycling; 3) Other environmental concerns – Decreases the need for paved and other impervious surfaces and reduces flood potential. Increases vegetation to reduce runoff, provide shade, filter pollutants, and absorb CO2. reduces greenhouse gas emissions and moderated the effects of climate change; 4) Promotes community health – stops and terminals are located near centres of activity. Accessible to all residents in geographical sense and to those with physical handicaps. Inclusive of residents regardless of age and economical status; and 5) Convenience.</p> <p><i>Current Events</i></p> <p>c. Ms. Boxen presumes that the study does not include the impacts of the construction of the additional lanes on Hwy 407 in the central portion that are exempt from environmental assessment. These impacts should be added to those calculated for any added lanes to Hwy 7.</p> <p>d. Does the study take into account today's world? The world has changed since the study commenced. Gas prices have gone from cheap to a point where people are actively looking for other means of transportation such as walking and cycling, as well as transit.</p> <p>e. Price volatility has mirrored the weather's volatility. Scientists have predicted the weather extremes and severity would increase with increased greenhouse gases and climate change.</p> <p>f. Decreasing the permeable surfaces through increased road pavement and loss of greenspace helps to increase the risk of flooding. If we are to implement infrastructure changes to accommodate rapid transit, they must be taken from existing paved surfaces or be in the form of rail. In August there was local flooding in basements in Thornhill and North York. Finch Avenue near Jane Street was washed out at Black Creek. Look again at the calculated impacts of increased river crossings and determine if they are realistic in view of what happened in August.</p> <p><i>Road Capacity</i></p> <p>g. Four lanes of road at capacity is not a signal to add additional lanes of road. Rather they are an indicator for increasing road efficiency by adding more public transit, separated bike lanes and sheltered</p>	<p>of the EA report).</p> <p>b. Comment noted. Many of the factors noted here have been included throughout the EA (Chapter 5 - Alternative Methods of Improving Public Transit, Chapter 7 – Planning and Design Parameters, Chapter 8 – Development and Selection of Preferred Design, and Chapter 10 – Assessment of the Undertaking).</p> <p>c. The widening of Hwy 407 is not included as part of the proposed undertaking and not under the jurisdiction of York Region.</p> <p>d. Comment noted. The undertaking will have a positive effect on improving mobility as noted in Table 10.4-1 of the EA report.</p> <p>e. Comment noted. As noted in Table 10.4-3 of the EA report, the recommended undertaking will have a net positive effect on local and Regional Air Quality.</p> <p>f. Comment noted. As noted in Table 11.3-1 (I.D. #5.1) of the EA report, the Proponent will develop a detailed storm water management plan during the detailed design phase of the proposed undertaking.</p> <p>g. Comment noted. The recommended undertaking is predominately transit related infrastructure (as described in Chapters 9 and 12 of the EA report). Proposed road widening from Lunar Crescent</p>

Representative	Name	#	Comment	Response
			<p>sidewalks. This is the point at which travel demand is high enough to support these alternative modes of transportation and opportunity to reduce car dependency. If instead road capacity is increased by adding more lanes, induced traffic demand results as it becomes initially easier to drive to further destinations, perhaps permanently changing travel patterns. Time, not distance, determines how far we go. If travel distances double, traffic volumes double. The above principles are achieved by focusing on people, not cars and to move people and goods, not cars and trucks.</p> <p><i>Infrastructure</i></p> <p>h. First build infrastructure that promotes convenience and safety for pedestrians and cyclists. Provide covered, separated bikeways and sidewalks along major arteries to allow the option of walking and cycling for commuting and doing errands. Provide covered bike lockers for bicycle storage near transit stations and bike racks on transit.</p> <p><i>Land Use and Development</i></p> <p>i. Reducing of car use and dependency is achieved by land use that promotes walking and cycling. Compact, mixed-use development reduces car needs. Six to ten lanes of traffic and buildings opening onto parking lots rather than streets works against reducing car dependency and safety for pedestrians and cyclists. Researchers are examining the connection between community design, physical exercise and transit use, and are finding that pedestrian friendly environments promote walking and the use of transit. Examine land use and transportation through the eyes of children.</p> <p><i>Conclusion</i></p> <p>j. Expensive infrastructure for rapid transit is unnecessary to get people out of cars and onto buses. For example, the Yonge GO Bus has been well used for decades. When high demand transit is established, then concentrate on rapid transit with its own r.o.w. Transit is well used when there is connectivity to the surrounding community. Unless it is a subway, transit on its own r.o.w. is isolating. With people now actively looking for options to driving, it is an opportune time to present residents with a convenient system of public transit that provides excellent service.</p>	<p>(east of Woodbine Ave) to east of Sciberras Rd is presented in Chapter 13 of the EA report. The Region's Transportation Master Plan (June 2002) includes a multi-modal strategy for dealing with travel demand in York Region to 2031, including significant planned transit infrastructure as well as road improvements.</p> <p>h. Safety and convenient access/mobility were important criteria used in the development of the undertaking (see Tables 10.4-2 and 10.4-4 of the EA report). Figures 9.1-2 to 9.1-10 present typical cross-sections for the transitway that include pedestrian sidewalks on each side of the r.o.w. A conceptual streetscape plan is described in Section 9.1.1 – Transitway Elements. During the development of a detailed streetscape plan and transit station design, specific features such as bicycle storage will be considered.</p> <p>i. As described in Section 9.1.1 – Transitway Elements, a streetscape plan has been developed for the transitway that would be a catalyst for transit-oriented development and attract transit ridership. In addition, as described in Section 12.1.1, York Region is undertaking a number of land use planning initiatives to facilitate development of both the Regional Centres and Corridors with more intensive development supporting transit ridership.</p> <p>j. The analysis and evaluation of Alternatives to the Undertaking is presented in Chapter 3 of the EA report and includes consideration of local transit service improvements and GO Transit improvements. York Region Rapid Transit Corridor Initiatives was selected as the preferred alternative as described in Table 3.2-1 of the EA report.</p>

Representative	Name	#	Comment	Response
			<p><i>Recommendation</i></p> <p>k. It is imperative that we reduce pollution and car use in the GTA for health and safety of our children and unborn grandchildren. Change the streetscape first. Along Hwy 7, add continuous sidewalks and separated, covered bike paths, street-facing buildings with bike racks, litter receptacles, shade trees and benches. The lanes are too wide – they encourage speeding. Take the room for the bike lanes from the existing roadways. Place a treed median down the centre of Hwy 7. Once transit ridership is sufficiently high, examine other infrastructure changes. Implement changes with little disruption of the environment as possible. Perhaps, opportunities for environmental rehabilitation will emerge. Examine Portland Oregon's rapid transit system. It goes from being on its own surface r.o.w. in the suburbs, to a subway, to a system in mixed traffic stopping at ordinary street corners, to a track on its own city street. It is connected in the city to the street and pedestrians.</p> <p><i>Other comments</i></p> <p>l. When rapid transit is implemented on Hwy 7, there should still be a good local Hwy 7 bus service accessible to all residents. For example, there should be stops at Hunter's Point, west of Yonge St and Silver Linden, east of Yonge St.</p> <p>m. Parking at the Bathurst connection ramp represents the loss of more pervious surface close to the East Don River. A good transit system should require only as bare minimum of commuter parking.</p> <p>n. Vaughan Link to Spadina Subway – ensure that Black Creek is minimally avoided, keeping in mind the August flooding.</p>	<p>k. Chapter 1 of the EA report sets out the fundamental objectives of the undertaking which encompass many of the recommendations of Ms Boxen. As described in Chapter 9, the recommended undertaking includes a streetscape plan that will attract transit ridership within a pedestrian friendly corridor. As noted in Table 10.4-3, the recommended undertaking will have a net positive effect on local and Regional Air Quality. The expected environmental effects and mitigation are identified in Tables 10.4-1 to 10.4-4 in the EA report.</p> <p>l. Detailed comment noted. As noted in Table 10.4-1, compatibility with proposed local transit network will be monitored.</p> <p>m. The bus platforms and parking facilities (shown on Figure 9-40) at the Bathurst St Connector Rd are identified as future 407 Transitway Facilities and are not part of the recommended undertaking. These facilities will be planned and assessed under a future EA for that undertaking.</p> <p>n. Minimizing adverse effects on aquatic ecosystems is included in the assessment Table 12.6-3 (Goal C1) in the EA report.</p>

Table 8.3-9
Synopsis of Primary Route Alternative Evaluation Findings for Segment C

Objectives and Goals	Alternative C1 Hwy 7 between Woodbine Ave. and Kennedy Rd.		Alternative C2 Woodbine Ave., Yorktech Dr. to Markham Centre & Kennedy Rd. to Hwy 7		Alternative C3 Hwy 7 from Woodbine Ave. to S. Town Centre Blvd. to Markham Centre & Kennedy Rd. to Hwy 7	
IMPROVE MOBILITY						
Maximize inter-regional and local transit connectivity	3	3	3	3	3	3
Maintain flexibility to expand network	3	3	3	3	3	3
Alignment geometry that maximizes speed & ride comfort & minimizes safety risks & maintenance costs	3	3	3	3	3	3
Increase attractiveness of rapid transit service	3	3	3	3	3	3
Station locations that maximize ridership potential of rapid transit service	3	3	3	3	3	3
Maximize convenience of access to rapid transit system	3	3	3	3	3	3
PROTECT AND ENHANCE SOCIAL ENVIRONMENT						
Minimize adverse effects on and maximize benefits for communities in corridor	3	3	3	3	3	3
Maintain or improve road traffic and pedestrian circulation	3	3	3	3	3	3
Maintain a high level of public safety and security in corridor	3	3	3	3	3	3
Minimize adverse noise and vibration effects	3	3	3	3	3	3
Minimize adverse effects on cultural resources	3	3	3	3	3	3
Minimize disruption of community vistas and adverse effects on street and neighbourhood aesthetics	3	3	3	3	3	3
PROTECT NATURAL ENVIRONMENT						
Minimize adverse effects on Aquatic Ecosystems	3	3	3	3	3	3
Minimize adverse effects on Terrestrial Ecosystems	3	3	3	3	3	3
Minimize adverse effects on corridor hydrogeological, geological, hydrological and geomorphic conditions	3	3	3	3	3	3
PROMOTE SMART GROWTH ECONOMIC DEVELOPMENT						
Support Regional and Municipal Planning Policies and approved urban structure	3	3	3	3	3	3
Provide convenient access to social and community facilities in corridor	3	3	3	3	3	3
Minimize adverse effects on business activities in corridor	3	3	3	3	3	3
Protect provisions for goods movement in corridor	3	3	3	3	3	3
Promote transit-oriented development	3	3	3	3	3	3
MAXIMIZE COST-EFFECTIVENESS OF RAPID TRANSIT						
Minimize capital cost of vehicles, facilities and systems required	3	3	3	3	3	3
Minimize cost effects of adjacent properties to implement facilities	3	3	3	3	3	3
Minimize adverse effects of alignment characteristics on operating and maintenance costs	3	3	3	3	3	3

LEGEND: Least Responsive ○ 1 2 3 Most Responsive

TOD - Transit-oriented Development O&M - Operation and Maintenance

NOTE: The above indicators were presented to the public at Open House #2. Certain indicators shown in the response of the three alignments options in meeting the goal, particularly effects on air quality. Detailed evaluations can be found in Appendix M Tables 11 to 15.

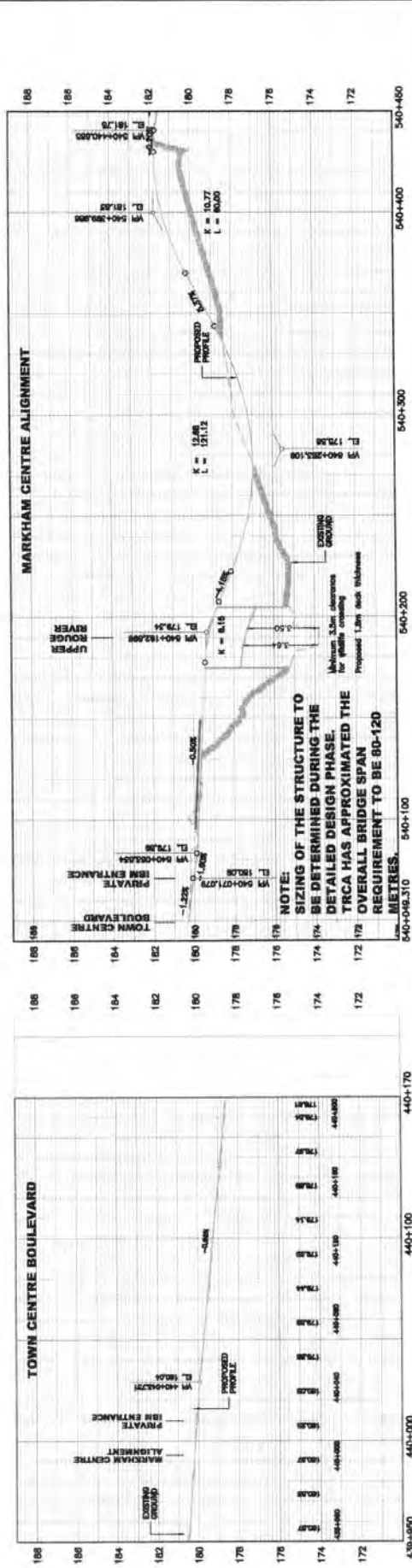
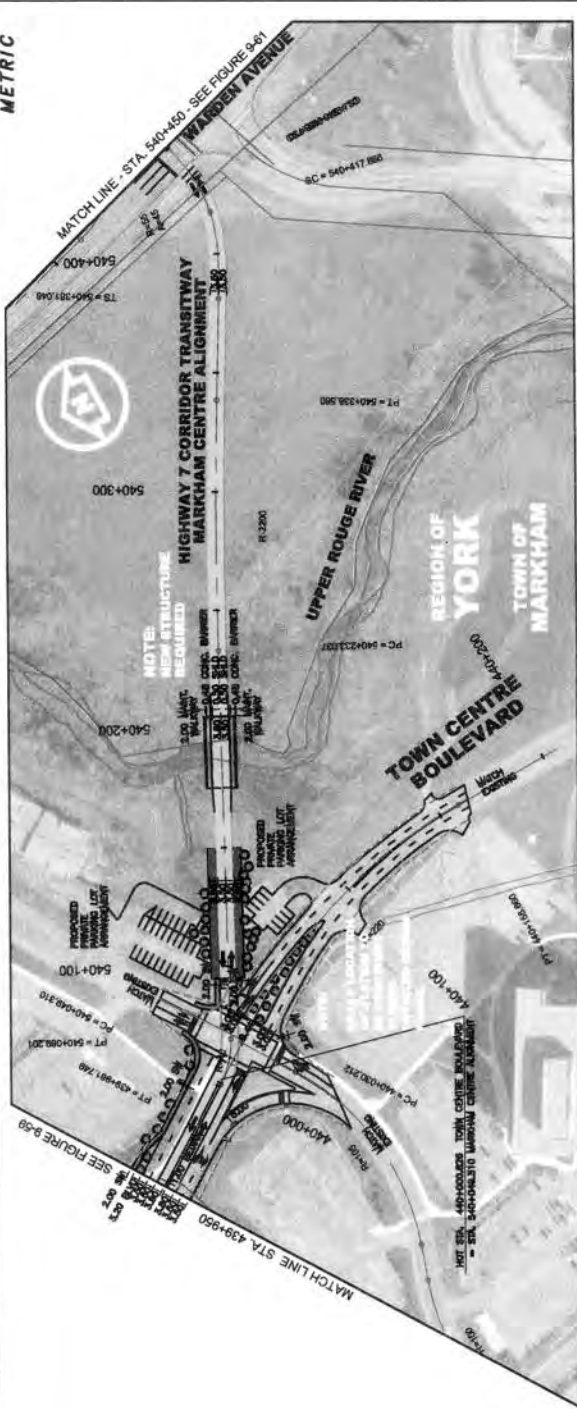
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Table 10.4.2
Effects and Mitigation for Social Environment

GOAL	Environmental Value/ Criterion	Environmental Issues/Concerns	Project Phase			Location	Potential Environment Effects	Proposed Mitigation Measures			Level of Significance after Mitigation	Monitoring and Recommendation	
			P	C	O			Built-In Positive Attributes and/or Mitigations	Potential Residual Effects	Further Mitigation			
E2 Cont'd	Maintain or improve road traffic and pedestrian circulation (cont'd)	Reduction in main street intersection capacities due to rapid transit operations (cont'd)	OBJECTIVE B: To protect and enhance the social environment in the corridor										
			✓			Central Bathurst Streets	Transit vehicles are required to negotiate an EBL or SBR in the dedicated transit ROW	EBL, NBL & SBT for general traffic has been permitted during a 10-second transit phase. All the left turn lanes operate under protected-permissive phases as the transit phase operate under an exclusive phase.	EBL, NBL & SBT will approach capacity in the PM peak hour	None expected	Moderately Significant	None required	
			✓			Worth Boulevard/Fleming Road (Bathurst Street)	Requirement for transit to transition to mixed-traffic complicates the intersection operation	A ten second transit phase will be provided. SBT will be permitted during this transit phase	NBT will operate at capacity and SBT will approach capacity. Additional green time is required in the N-S direction	Split phasing should be considered during the detailed design stage	Significant	Monitoring required for split phasing	
			✓			Bathurst Street Connection Road	Requirement for transit to transition to mixed-traffic complicates the intersection operation	Three SB left turn lanes will be provided, one for an exclusive SB transit left turn lane, two for SB general left turn traffic. A dual EB left turn lane will be provided	No capacity constraints	None expected	Positive effect	None required	
			✓			Hunter's Point Drive	Requirement for transit to transition to mixed-traffic complicates the intersection operation	A ten second transit phase will be provided. EBT will be permitted during this transit phase	No capacity constraints	None expected	Positive effect	None required	
			✓			Yonge Street Connection Road	Accessing the Richmond Hill Centre Intermodal Station complicates the intersection operation	WB & SB right transit movements will operate in mixed traffic utilizing the existing channelized right turn lanes. EB & SB left transit movements will remain in the dedicated transit lanes. EB left transit & general traffic movements will operate together. Similarly, SB left transit & general traffic movements will operate together. Signal priority will likely be implemented to detect buses in the transway & activate the appropriate phases to avoid long delays & prevent the buses from doubling up.	EBL and WBT will approach capacity during the PM peak hour.	None expected	Positive effect	Monitoring required for signal priority	
			✓			Red Maple Road	Requirement of mixed-traffic transition complicates the intersection operation	An advance EB through phase will be implemented into the signal timing to permit the WB transit vehicle to transition to mixed traffic. The EB left will operate as protected only	The intersection will operate at an acceptable LOS during the AM peak hour with the WB through approaching capacity. The WBT will operate at capacity in the PM peak hour.	None expected	Moderately Significant	Review potential to provide a dual eastbound left turn lane during the Preliminary & Detailed Design Phases.	
			✓			Silver Linden Drive	EBL and WBT will operate at capacity or approach capacity in the PM peak hour.	None required	Intersection will continue to operate at capacity	None required	Moderately Significant	None required.	
			Bayview Avenue Connection Ramp	Requirement for transit to transition to mixed-traffic complicates the intersection operation	A ten second transit phase will be provided	EBT will approach capacity in the AM peak hour	The implementation of a dual EB left turn and/or split phasing for pedestrians should be considered during detailed design phase.	Moderately Significant	Evaluate option of implementing a dual eastbound left turn lane and/or review opportunity to provide split phasing for pedestrian.				
			South Park Drive/Chalmers Road	Requirement for transit to transition to mixed-traffic complicates the intersection operation	A ten second transit phase will be provided.	E-W phase will operate at capacity during the PM peak hour. The EBL & WBT will operate at capacity.	Pedestrian split phasing should be considered	Moderately Significant	Monitoring required for pedestrian split phasing				

Notes:
P – Pre construction, C – Construction, O – Operation

METRIC



LOCAL ROUTE OPTION FOR THE HIGHWAY 7 CORRIDOR

EXISTING ROADWAYS

EXISTING RIGHT OF WAY

PROPOSED RIGHT OF WAY BY OTHERS

PROPOSED SIDEWALK

PROPOSED LANDSCAPE

PROPOSED RIGHT OF WAY

STATIONS

TRANSITWAY

PROPOSED TRAFFIC LANES

9-60

FIGURE

10m 0 20m

1" = 10m

1" = 20m

SCALES

**HIGHWAY 7 CORRIDOR AND VAUGHAN
NORTH-SOUTH LINK PUBLIC TRANSIT
IMPROVEMENTS ENVIRONMENTAL ASSESSMENT**

**NOISE AND VIBRATION IMPACT ASSESSMENT
SUPPLEMENTARY INFORMATION**

The vibration levels reported in the table below are referenced to 1 micro inch/sec.

$$\text{Vibration Level} = 20 * \log (V/V_{\text{ref}}), \text{ dB and } V_{\text{ref}} = 1 \text{ micro inch/sec.}$$

TABLE 6.1
VIBRATION IMPACT EVALUATION FOR LIGHT-RAIL VEHICLES

Condition	Continuous Track	Cross Over joints
Receptor @ 10 m from track centerline	77 dB	77 dB
Speed adjustment for 37.5 mph	-2.5	-2.5
Vehicles with soft suspension and resilient wheels	0	0
Cross-overs	0	+10
Floating Slab for cross-overs	0	-15
High resilient fasteners	-5	-5
Overall Level @ 10 metre	69.5 dB re. 1 micro inch/sec	64.5 dB re. 1 micro inch/sec
Vibration Velocity, inch/sec @ 10 metres	$10^{(69.5/20)} * 10^{-6} = 0.00299$	$10^{(64.5/20)} * 10^{-6} = 0.00168$
Final Vibration Velocity @ 10 metres	$0.00299 * 25.4 = 0.076 \text{ mm/sec}$	$0.00168 * 25.4 = 0.043 \text{ mm/sec}$

The following revised tables reflect the new modeling results and shall replace the corresponding tables in Appendix K of the 2005 EA report. Note that sections from Centre Street to Langstaff Road as well as Warden Avenue to Kennedy Road on Highway 7 are not part of the selected preferred route and are therefore not shown in all of the following revised tables.

**TABLE 4.3
PREDICTED EXISTING (2002) DAYTIME AND NIGHTTIME TRAFFIC NOISE LEVELS**

Section		Predicted Sound Level (dBA)		Closest Receptor Distance (m)	
From	To	Daytime	Nighttime	Eastbound	Westbound
Highway 7 Alignment					
Martin Grove Road	Kipling Avenue	65	60	23.75	15
Pine Valley Drive	Whitmore Road	70	62	24.25	15
Baview Avenue	Leslie Street	72	65	35.75	25.25
Woodbine Avenue	Rodick Road	69	62	40.75	30.25
Warden Avenue	Kennedy Road	74	67		15
McCowan Road	Laidlaw Blvd.	64	58		15
Ninth Line	Markham Bypass	63	56		40
				Northbound	Southbound
Keele Street Alignment					
Highway 7	Highway 407	72	65		28.5
Centre Street Alignment					
Bathurst Street	Dufferin Street	67	60		18
Bathurst Street Alignment					
Centre Street	Highway 7	66	59	17.25	27.75
Town Centre Boulevard South Alignment					
Town Centre Blvd. South	Main Street Unionville	59	52		147
Kennedy Road Alignment					
Main Street Unionville	Kennedy Road	60	54		21

Note:

- 1) Modeling with reflective surface.
- 2) All nighttime receptor distance used in the model is 3 m more than the daytime distance.

**TABLE 4.5
COMPARISON OF MEASURED WITH PREDICTED TRAFFIC NOISE LEVELS**

Location	Address	Monitoring Date	Measured Equivalent Daytime (16 hr) and Nighttimes (8 hr) L _{eq} Sound Level		Predicted Leq Sound Levels from AADT Traffic Volumes	
			(dBA)		(dBA)	
			Day	Night	Day	Night
1	83 Button Road	Nov 14	62.5	60.1	65	60
		Nov 15	62.7	58.9		
		Nov 16	61.6	60.9		
2	59 Ambassador Court	Oct 11	65.4	61.3	70	62
		Oct 12	63.6	60.9		
		Oct 13	63.5	61.4		
3	7651 Keele Street	Nov 6	67.9	65.3	72	65
		Nov 7	71.3	64.8		
		Nov 8	67.6	61.7		
5	364 Highway 7	Nov 6	60.1	57.4	72	65
		Nov 7	60.7	55.0		
		Nov 8	57.3	53.9		
		Nov 9	57.2	57.7		
6	2 Montgomery Court	Sep 12	62.3	58	69	62
		Sep 13	60.9	57		
		Sep 14	60.1	58.9		
8	10 Gladiator Road	Sep 12	64.8	59.5	64	58
		Sep 13	63.7	58.2		
		Sep 14	62.5	60.4		
9	6921 Highway 7	Nov 7	61.3	53.3	63	56
		Nov 8	59.4	54.0		
		Nov 9	58.1	57.4		
10	154 Thornway Avenue	Oct 11	66	62.9	67	60
		Oct 12	61.2	57.6		
		Oct 13	59.9	63.6		
11	79 Chilmar Crescent	Oct 11	61.8	61.3	66	59
		Oct 12	62.7	62.8		
		Oct 13	63.4	62.4		
12	Future Markham Centre	Dec 6	50	45	59	52
		Dec 7	48	47		
		Dec 8	52	N/A		
13	231 Valentina Drive	Nov 6	55.7	51.6	60	54
		Nov 7	67.0	53.1		
		Nov 8	55.7	48.7		
		Nov 9	55.6	51.8		

Note: N/A- not available

- 1) The receptor distance is the same as shown in Table 4.3.
- 2) Reflective surface was used in the noise modeling

TABLE 5.2
SOUND LEVELS PREDICTED BASED ON ESTIMATED 2021 AADT VOLUMES
FOR ALL ROAD SEGMENTS (BASELINE TRAFFIC ONLY-WITHOUT TRANSIT PROJECT)

	Locations		Predicted Sound Level
			2021
1	83 Button Road	Day	66
		Night	68
2	59 Ambassador Court	Day	67
		Night	67
3	7651 Keele Street	Day	72
		Night	65
5	364 Highway 7	Day	72
		Night	65
6	2 Montgomery Court	Day	70
		Night	63
8	10 Gladiator Road	Day	64
		Night	67
9	6921 Highway 7	Day	65
		Night	58
10	154 Thornway Avenue	Day	68
		Night	61
11	79 Chilmar Crescent	Day	63
		Night	64
12	Future Markham Centre	Day	69
		Night	62
13	231 Valentina Drive	Day	63
		Night	66

Note:

1) Receptor distance is the same as shown in Table 4.3. Except for Receptor Location 12 at Future Markham Centre, the receptor distance is assumed to be 22 m to the middle of the 4-lane road.

2) Reflective surface was used in the noise modeling

**TABLE 5.3-1
PEAK HOUR YRTP TRANSIT VEHICLE VOLUMES**

Road Segment	Eastbound Buses	Westbound Buses	Eastbound LRT	Westbound LRT
PEAK HOUR (7-10 a.m., 4-7 p.m., and 6-7 a.m.)				
Entire Highway 7 Corridor and All Diversions from Highway 7	30	30	10	10
OFF-PEAK HOUR (10 a.m. – 4 p.m., and 7 p.m. - 1 a.m.)				
Entire Highway 7 Corridor and All Diversions from Highway 7	4	4	4	4

Note: There will be no transit service between 1 a.m. and 6 a.m.

**TABLE 5.3-2
SUMMARY OF TRANSIT VOLUMES FOR ALL ROAD SEGMENTS FOR 2021**

Locations		BRT		LRT	
		EB/NB	WB/SB	EB/NB	WB/SB
Entire Highway 7 Corridor and All Diversions from Highway 7	Day	220	220	100	100
	Night	38	38	18	18

Note: Day = 7 a.m. to 11 p.m., Night = 11 p.m. to 7 a.m.

EB – eastbound, WB-westbound, NB-northbound, SB-southbound

**TABLE 5.4
PREDICTED AADT VOLUMES FOR KEY ROAD SEGMENTS
FOR 2021 (BASELINE TRAFFIC ONLY - WITH TRANSIT PROJECT)**

Section		2021 AADT Baseline	
From	To		
Highway 7 Alignment			
Martin Grove Road	Kipling Avenue	Day	48730
		Night	5414
Pine Valley Drive	Whitmore Road	Day	43900
		Night	4878
Bayview Avenue	Leslie Street	Day	53756
		Night	5973
Woodbine Avenue	Rodick Road	Day	52463
		Night	5829
McCowan Road	Laidlaw Blvd.	Day	35003
		Night	3889
Ninth Line	Markham Bypass	Day	11146
		Night	1238
Keele Street Alignment			
Highway 7	Highway 407	Day	31874
		Night	3542
Centre Street Alignment			
Bathurst Street	Dufferin Street	Day	29310
		Night	3257
Bathurst Street Alignment			
Centre Street	Highway 7	Day	37848
		Night	4205
Town Centre Boulevard South Alignment			
Town Centre Blvd. South	Main Street Unionville	Day	38416
		Night	4268
Kennedy Road Alignment			
Main Street Unionville	Highway 7	Day	47884
		Night	5320

Note: 1) Directional split is 50/50.

Note:

Table 5.7 entitled "Predicted 2021 AADT Volumes For All Road Segments On Highway 7 (Baseline Traffic Plus LRT)" in the Appendix K of the August 2005 EA report should be removed. The information intended to be displayed in the original Table 5.7 is now shown in Tables 5.3-1, 5.3-2 and 5.4.

**TABLE 5.5
SOUND LEVELS PREDICTED BASED ON 2021 AADT VOLUMES
FOR ALL ROAD SEGMENTS (BASELINE TRAFFIC PLUS BUS TRANSIT)**

Section			Predicted Sound Level	Closest Receptor Distance (m)	
From	To		(dBA)	Eastbound	Westbound
Highway 7 Alignment					
Martin Grove Road	Kipling Avenue	Day	65	35.35	15
		Night	67		
Pine Valley Drive	Whitmore Road	Day	67	35.85	15
		Night	67		
Bayview Avenue	Leslie Street	Day	72	47.35	25.25
		Night	65		
Woodbine Avenue	Rodick Road	Day	70	48.85	26.75
		Night	64		
McCowan Road	Laidlaw Blvd.	Day	61	15	24.6
		Night	65		
Ninth Line	Markham Bypass	Day	64	33	51.6
		Night	57		
Centre Street Alignment					
Bathurst Street	Dufferin Street	Day	68	15	31.85
		Night	61		
				Northbound	Southbound
Keele Street Alignment					
Highway 7	Highway 407	Day	70	21.5	40.1
		Night	63		
Bathurst Street Alignment					
Centre Street	Highway 7	Day	63	15	30.6
		Night	64		
Town Centre Boulevard South Alignment*					
Town Centre Blvd. South	Main Street Unionville	Day	69	18.5	25.5
		Night	62		
Kennedy Road Alignment					
Main Street Unionville	Highway 7	Day	61	15	33
		Night	61		

Note: Reflective surface was used in the noise modeling

*It is assumed that all transit traffic will be at about 15 m from the closest receptor. Assuming the future Enterprise Drive is a 4-lane road, the distance for non-transit traffic is assumed to be 18.5 m and 25.5 m.

**TABLE 5.6
COMPARISON OF 2021 BASELINE SOUND LEVELS
WITH BUS TRANSIT (BRT) SOUND LEVELS**

Section			Predicted 2021 sound level without transit project	Predicted 2021 baseline plus bus transit sound level
From	To			
dBA				
Highway 7 Alignment				
Martin Grove Road	Kipling Avenue	Day	66	65
		Night	68	67
Pine Valley Drive	Whitmore Road	Day	67	67
		Night	67	67
Bayview Avenue	Leslie Street	Day	72	72
		Night	65	65
Woodbine Avenue	Rodick Road	Day	70	70
		Night	63	64
McCowan Road	Laidlaw Blvd.	Day	64	61
		Night	67	65
Ninth Line	Markham Bypass	Day	65	64
		Night	58	57
Keele Street Alignment				
Highway 7	Highway 407	Day	72	70
		Night	65	63
Centre Street Alignment				
Bathurst Street	Dufferin Street	Day	68	68
		Night	61	61
Bathurst Street Alignment				
Centre Street	Highway 7	Day	63	63
		Night	64	64
Town Centre Boulevard South Alignment				
Town Centre Blvd. South	Main Street Unionville	Day	69	69
		Night	62	62
Kennedy Road Alignment				
Main Street Unionville	Highway 7	Day	63	61
		Night	66	61

Notes: The closest receptor distances are shown in Table 5.5

TABLE 5.8
SOUND LEVELS PREDICTED BASED ON THE 2021 AADT VOLUMES
FOR ALL ROAD SEGMENTS (BASELINE PLUS LRT)

Section		Predicted Sound Level (dBA)	
		Daytime	Nighttime
From	To		
Highway 7 Alignment			
Martin Grove Road	Kipling Avenue	65	67
Pine Valley Drive	Whitmore Road	66	67
Baview Avenue	Leslie Street	72	65
Woodbine Avenue	Rodick Road	70	64
McCowan Road	Laidlaw Blvd.	61	64
Ninth Line	Markham Bypass	63	57
Keele Street Alignment			
Highway 7	Highway 407	69	63
Centre Street Alignment			
Bathurst Street	Dufferin Street	68	61
Bathurst Street Alignment			
Centre Street	Highway 7	63	64
Town Centre Boulevard South Alignment*			
Town Centre Blvd. South	Main Street Unionville	69	62
Kennedy Road Alignment			
Main Street Unionville	Kennedy Road	61	61

Note:

1) The closest receptor distances are shown in Table 5.5

2) Reflective surface was used in the noise modeling

*It is assumed that all transit traffic will be at about 15 m from the closest receptor. The distance for non-transit traffic is assumed to be 18.5 m and 25.5 m.

**TABLE 5.9
COMPARISON OF 2021 BASELINE SOUND LEVELS WITH LRT TRANSIT
SOUND LEVELS**

Section			Predicted 2021 sound level – without transit project	Predicted 2021 baseline plus LRT sound level
From	To			
Highway 7 Alignment				
Martin Grove Road	Kipling Avenue	Day	66	65
		Night	68	67
Pine Valley Drive	Whitmore Road	Day	67	66
		Night	67	67
Bayview Avenue	Leslie Street	Day	72	72
		Night	65	65
Woodbine Avenue	Rodick Road	Day	70	70
		Night	63	64
McCowan Road	Laidlaw Blvd.	Day	64	61
		Night	67	64
Ninth Line	Markham Bypass	Day	65	63
		Night	58	57
Keele Street Alignment				
Highway 7	Highway 407	Day	72	69
		Night	65	63
Centre Street Alignment				
Bathurst Street	Dufferin Street	Day	68	68
		Night	61	61
Bathurst Street Alignment				
Centre Street	Highway 7	Day	63	63
		Night	64	64
Town Centre Boulevard South Alignment				
Town Centre Blvd. South	Main Street Unionville	Day	69	69
		Night	62	62
Kennedy Road Alignment				
Main Street Unionville	Highway 7	Day	63	61
		Night	66	61

Note: The closest receptor distances are shown in Table 5.5

APENDIX B

**STAMSON DATA SHEETS
PREDICTED EXISTING (2002)
TRAFFIC SOUND LEVELS**

(NOT INCLUDED WITH THE CMP)

Stormwater Management Assessment - Supplementary Information

The following is supplementary information to Appendix G – Storm Water Management Preliminary Assessment.

- Revise section 2.0 to read "Selection of Storm Water Management Alternatives"
- Add the following section to the end of Section 2.0 Selection of Storm Water Management Alternatives, on page 4:

2.6 Oil/Grit Separator

Oil/grit separators are used to trap and retain oil and sediment in detention chambers. These are flow through systems with no attenuation of flow. Oil/grit separators are used to provide stand alone water quality treatment for small sites or as a pre-treatment device for runoff contributing to another facility such as a constructed wetland or infiltration basin. Oil/grit separators can also be sized to protect the receiving water from spills.

Oil/grit separators are typically used for areas <2 ha and are suitable for commercial and industrial areas as well as large parking areas and transit facilities. Recent roadway widenings have included oil/grit separators as part of the treatment chain for traffic runoff. Regular maintenance is required to remove accumulated sediment and oil.

- Add the following bullet to the discussion on page 5 of the report under Section 4 – Screening:
 - oil/grit separator to be used for water quality treatment at maintenance facilities and where no other method is available.

Assessment of Highway 404 Crossing

ASSESSMENT OF EFFECT ON THE ENVIRONMENT								
GOAL	Environmental Value Criterion	Project Activity/ Issue	C-B2 Option 1 (median over existing Highway 7)	C-B2 Option 2 (median under existing Highway 7)	C-B2 Option 3 (Elevated transitway north of existing Highway 7)	C-B2 Option 4 (Elevated transitway north of existing Highway 7 and over Allstate Pkwy)	C-B2 Option 5 (Elevated transitway south of existing Highway 7)	C-B2 Option 6 (Lengthening span/ lane re-arrangement through existing Highway 404 bridges)
OBJECTIVE A: To improve mobility by providing a fast, convenient, reliable and efficient rapid transit service								
A1	Maintain speed and ride comfort and minimize safety risks and maintenance costs with an optimized alignment geometry	Alignment geometry	Improved travel time will attract ridership. Vertical alignment geometry will maintain acceptable ride comfort. Safety barriers will be incorporated where required.	Improved travel time will attract ridership. Horizontal and vertical alignment geometry will maintain acceptable ride comfort. Safety barriers will be incorporated where required.	Improved travel time will attract ridership. Horizontal and vertical alignment geometry will maintain acceptable ride comfort. Safety barriers will be incorporated where required.	Improved travel time will attract ridership. Horizontal and vertical alignment geometry will maintain acceptable ride comfort. Safety barriers will be incorporated where required.	Improved travel time will attract ridership. Horizontal and vertical alignment geometry will maintain acceptable ride comfort. Safety barriers will be incorporated where required.	Improved travel time will attract ridership. Existing straight horizontal Hwy 7 alignment will maximize ride comfort. Safety barriers will be incorporated where required.
OBJECTIVE B: To protect and enhance the social environment in the corridor								
B1	Maintain or improve road traffic and pedestrian circulation	Reduction in main street intersection capacities due to rapid transit operations - Hwy 404 ramps Widening or construction of new structures resulting in major temporary disruption to highway traffic during construction	No reduction due to grade separation of transitway at ramp intersections. Construction along Hwy 7 and over Hwy 404 will cause some delay to general traffic. Mitigation in the form of traffic accommodation plans and temporary works will be developed. Potential residual effects include a reduction in transit and general traffic speed through construction. Existing access will remain.	No reduction due to grade separation of transitway at ramp intersections. Complex construction along Hwy 7 will cause significant delay to general traffic. Mitigation in the form of extensive traffic accommodation plans and temporary works will be developed. Potential residual effects include a reduction in transit and general traffic speed through construction. Existing access will remain.	No reduction due to grade separation of transitway at ramp intersections. Construction over Hwy 404 and into Hwy 7 median will cause moderate delay to general traffic. Mitigation in the form of limited traffic accommodation plans and temporary works will be developed. Potential residual effects include a reduction in transit and general traffic speed, through construction. Existing access will remain.	No reduction due to grade separation of transitway at ramp intersections. Construction over Hwy 404 and into Hwy 7 median will cause moderate delay to general traffic. Mitigation in the form of local traffic accommodation plans and temporary works will be developed. Potential residual effects include a reduction in transit and general traffic speed, through construction. Existing access will remain.	No reduction due to grade separation of transitway at ramp intersections. Construction over Hwy 404 and into Hwy 7 median will cause moderate delay to general traffic. Mitigation in the form of local traffic accommodation plans and temporary works will be developed. Potential residual effects include a reduction in transit and general traffic speed, through construction. Existing access will remain.	Reduction in ramp access capacity will only occur if transit priority is used to recover transit schedule. Monitor queuing on off-ramps and on Highway 7 to assess need for improvements in signal timing. Construction under Hwy 404 and alongside Hwy 7 will cause some delay to general traffic. Mitigation in the form of local traffic accommodation plans and temporary works will be developed. Potential residual effects include a reduction in transit and general traffic speed, through construction. If removed, existing sidewalks will be relocated to restore access.
B2	Maintain a high level of public safety and security in corridor	Access for emergency vehicles	Elevated transitway will not restrict access for emergency vehicles and can also be used by them.	Elevated transitway will not restrict access for emergency vehicles and can also be used by them.	Elevated transitway will not restrict access for emergency vehicles and can also be used by them.	Elevated transitway will not restrict access for emergency vehicles and can also be used by them.	Elevated transitway will not restrict access for emergency vehicles and can also be used by them.	At-grade dedicated transit lanes will not restrict access for emergency vehicles and can also be used by them.
B3	Minimize adverse noise and vibration effects	Noise effect for BRT and LRT due to insertion of transitway into Hwy 404 interchange	No adverse effects Underground transitway along existing Hwy 7 median is remote from any sensitive receptors.	No adverse effects Underground transitway along existing Hwy 7 median is remote from any sensitive receptors.	No adverse effects Elevated transitway along north side of existing Hwy 7 is remote from any sensitive receptors.	No adverse effects Elevated transitway along north side of existing Hwy 7 is remote from any sensitive receptors.	No adverse effects Elevated transitway along north side of existing Hwy 7 is remote from any sensitive receptors.	No adverse effects Underground transitway along existing Hwy 7 median is remote from any sensitive receptors.
Vibration effect of BRT and LRT due to insertion of transitway into Hwy 404 interchange								
			No sensitive receptors within influence of vibration from alignment option	No sensitive receptors within influence of vibration from alignment option	No sensitive receptors within influence of vibration from alignment option	No sensitive receptors within influence of vibration from alignment option	No sensitive receptors within influence of vibration from alignment option	No sensitive receptors within influence of vibration from alignment option in Hwy 7 median

Assessment of Highway 404 Crossing

ASSESSMENT OF EFFECT ON THE ENVIRONMENT

GOAL	Environmental Value/ Criterion	Project Activity/ Issue	C-B2 Option 1 (median over existing Highway 7)	C-B2 Option 2 (median under existing Highway 7)	C-B2 Option 3 (Elevated transitway north of existing Highway 7)	C-B2 Option 4 (Elevated transitway north of existing Highway 7 and over Alstate Pkwy)	C-B2 Option 5 (Elevated transitway south of existing Highway 7)	C-B2 Option 6 (Lengthening span/ lane re-arrangement through existing Highway 404 bridges)
B4	Minimize disruption of community visits and adverse effects on street and neighbourhood aesthetics	Visual Effects Introduction of a segregated transitway may reduce the visual aesthetics of the interchange area	Introduction of a transit underpass will have minimal effect on the visual aesthetics of the interchange area A landscaping plan to reinstale existing landscaping level will be implemented in the interchange area	Introduction of a transit underpass will have minimal effect on the visual aesthetics of the interchange area A landscaping plan to reinstale existing landscaping level will be implemented in the interchange area	If necessary in the future, an elevated transitway through the interchange could adversely affect visits in the area. Design can be made visually acceptable in the interchange environment. Adjacent land uses from which visits may be degraded are remote. Overall height of the interchange works would be increased to that of the neighbouring Hwy 407 interchange. A landscaping plan to reinstale the existing landscaping level can be implemented in the interchange area	If necessary in the future, an elevated transitway through the interchange could adversely affect visits in the area. Design can be made visually acceptable in the interchange environment. Adjacent land uses from which visits may be degraded are largely remote. Overall height of the interchange works would be increased to that of the neighbouring Highway 407 interchange. A landscaping plan to reinstale the existing landscaping level can be implemented in the interchange area	If necessary in the future, an elevated transitway through the interchange could adversely affect visits in the area. Design can be made visually acceptable in the interchange environment. Adjacent land uses from which visits may be degraded are remote. Overall height of the interchange works would be increased to that of the neighbouring Highway 407 interchange. A landscaping plan to reinstale the existing landscaping level can be implemented in the interchange area	Widening of the Hwy 404 underpass roadway will have minimal effect on the visual aesthetics of the interchange area A landscaping plan to reinstale existing landscaping level can be implemented in the interchange area
		Landscaping Species may not survive in winter months	Appropriate species will be chosen for both winter and other months to maintain greenery throughout corridor. The health of landscaping will be monitored regularly	Appropriate species will be chosen for both winter and other months to maintain greenery throughout corridor. The health of landscaping will be monitored regularly	Appropriate species will be chosen for both winter and other months to maintain greenery throughout corridor. The health of landscaping will be monitored regularly	Appropriate species will be chosen for both winter and other months to maintain greenery throughout corridor. The health of landscaping will be monitored regularly	Appropriate species will be chosen for both winter and other months to maintain greenery throughout corridor. The health of landscaping will be monitored regularly	Appropriate species will be chosen for both winter and other months to maintain greenery throughout corridor. The health of landscaping will be monitored regularly

OBJECTIVE C: To protect and enhance the natural environment in the corridor

C1	Minimize adverse effects on Aquatic Ecosystems	Fuel spills, due to accidents during construction rehabiling and operation, entering the watercourses Sediment laden stormwater entering watercourses during construction Sediment laden stormwater entering watercourses during operation Loss of site-specific habitat and resulting fish mortality Baseflow alterations New impervious surfaces can lead to change in the frequency, magnitude and duration of flows	Risk can be mitigated by not refuelling within 10 m of a watercourse, and having an Emergency Response Plan for spills at accidents. Potential residual effects may involve short term population decline, and some contaminants within stormwater system. This alignment does not cross any watercourses. An erosion and sedimentation control plan will be developed. A Detailed Stormwater Management Plan will be developed during design phase. The facilities will be cleaned out as required. Sediment accumulation in stormwater management facilities will be monitored. Alignment does not cross any watercourse.	Risk can be mitigated by not refuelling within 10 m of a watercourse, and having an Emergency Response Plan for spills at accidents. Potential residual effects may involve short term population decline, and some contaminants within stormwater system. This alignment does not cross any watercourses. An erosion and sedimentation control plan will be developed. A Detailed Stormwater Management Plan will be developed during design phase. The facilities will be cleaned out as required. Sediment accumulation in stormwater management facilities will be monitored. Alignment does not cross any watercourse.	Risk can be mitigated by not refuelling within 10 m of a watercourse, and having an Emergency Response Plan for spills at accidents. Potential residual effects may involve short term population decline, and some contaminants within stormwater system. This alignment does not cross any watercourses. An erosion and sedimentation control plan will be developed. A Detailed Stormwater Management Plan will be developed during design phase. The facilities will be cleaned out as required. Sediment accumulation in stormwater management facilities will be monitored. Alignment does not cross any watercourse.	Risk can be mitigated by not refuelling within 10 m of a watercourse, and having an Emergency Response Plan for spills at accidents. Potential residual effects may involve short term population decline, and some contaminants within stormwater system. This alignment does not cross any watercourses. An erosion and sedimentation control plan will be developed. A Detailed Stormwater Management Plan will be developed during design phase. The facilities will be cleaned out as required. Sediment accumulation in stormwater management facilities will be monitored. Alignment does not cross any watercourse.	Risk can be mitigated by not refuelling within 10 m of a watercourse, and having an Emergency Response Plan for spills at accidents. Potential residual effects may involve short term population decline, and some contaminants within stormwater system. This alignment does not cross any watercourses. An erosion and sedimentation control plan will be developed. A Detailed Stormwater Management Plan will be developed during design phase. The facilities will be cleaned out as required. Sediment accumulation in stormwater management facilities will be monitored. Alignment does not cross any watercourse.	Risk can be mitigated by not refuelling within 10 m of a watercourse, and having an Emergency Response Plan for spills at accidents. Potential residual effects may involve short term population decline, and some contaminants within stormwater system. This alignment does not cross any watercourses. An erosion and sedimentation control plan will be developed. A Detailed Stormwater Management Plan will be developed during design phase. The facilities will be cleaned out as required. Sediment accumulation in stormwater management facilities will be monitored. Alignment does not cross any watercourse.	Risk can be mitigated by not refuelling within 10 m of a watercourse, and having an Emergency Response Plan for spills at accidents. Potential residual effects may involve short term population decline, and some contaminants within stormwater system. This alignment does not cross any watercourses. An erosion and sedimentation control plan will be developed. A Detailed Stormwater Management Plan will be developed during design phase. The facilities will be cleaned out as required. Sediment accumulation in stormwater management facilities will be monitored. Alignment does not cross any watercourse.
			Possible mitigation includes the reduction in area of impervious surfaces to the extent possible, and the use of stormwater management practices that encourage infiltration and recharge of groundwater. Post-construction inspection of stormwater management facilities to evaluate their effectiveness and on-going maintenance as required are recommended.	Possible mitigation includes the reduction in area of impervious surfaces to the extent possible, and the use of stormwater management practices that encourage infiltration and recharge of groundwater. Post-construction inspection of stormwater management facilities to evaluate their effectiveness and on-going maintenance as required are recommended.	Possible mitigation includes the reduction in area of impervious surfaces to the extent possible, and the use of stormwater management practices that encourage infiltration and recharge of groundwater. Post-construction inspection of stormwater management facilities to evaluate their effectiveness and on-going maintenance as required are recommended.	Possible mitigation includes the reduction in area of impervious surfaces to the extent possible, and the use of stormwater management practices that encourage infiltration and recharge of groundwater. Post-construction inspection of stormwater management facilities to evaluate their effectiveness and on-going maintenance as required are recommended.	Possible mitigation includes the reduction in area of impervious surfaces to the extent possible, and the use of stormwater management practices that encourage infiltration and recharge of groundwater. Post-construction inspection of stormwater management facilities to evaluate their effectiveness and on-going maintenance as required are recommended.	Possible mitigation includes the reduction in area of impervious surfaces to the extent possible, and the use of stormwater management practices that encourage infiltration and recharge of groundwater. Post-construction inspection of stormwater management facilities to evaluate their effectiveness and on-going maintenance as required are recommended.	

Assessment of Highway 404 Crossing

ASSESSMENT OF EFFECT ON THE ENVIRONMENT								
GOAL	Environmental Value/ Criterion	Project Activity/ Issue	C-B2 Option 1 (median over existing Highway 7)	C-B2 Option 2 (median under existing Highway 7)	C-B2 Option 3 (Elevated transitway north of existing Highway 7)	C-B2 Option 4 (Elevated transitway north of existing Highway 7 and over Alisiate Pkwy)	C-B2 Option 5 (Elevated transitway south of existing Highway 7)	C-B2 Option 6 (Lengthening span/ lane re-arrangement through existing Highway 404 bridges)
C3	Improve regional air quality and minimize adverse local effects	Degradation of existing local and regional air quality when compared to MOE standards Increase in Greenhouse Gas emissions (GHG) Degradation of air quality during construction Some dust may be created during the construction period	Situation expected to be unchanged or marginally better than 2001 Improved travel time could attract more trips to transit thus reducing GHG emissions The law requires that all possible pollutant emission mitigation steps possible be taken during construction activities. Some PM emissions locally are potential residual effects. Regular inspection of site dust and construction vehicle exhaust emissions during construction in compliance with MOE's standards and municipal by-laws is recommended.	Situation expected to be unchanged or marginally better than 2001 Improved travel time could attract more trips to transit thus reducing GHG emissions The law requires that all possible pollutant emission mitigation steps possible be taken during construction activities. Some PM emissions locally are potential residual effects. Regular inspection of site dust and construction vehicle exhaust emissions during construction in compliance with MOE's standards and municipal by-laws is recommended.	Situation expected to be unchanged or marginally better than 2001 Improved travel time could attract more trips to transit thus reducing GHG emissions The law requires that all possible pollutant emission mitigation steps possible be taken during construction activities. Some PM emissions locally are potential residual effects. Regular inspection of site dust and construction vehicle exhaust emissions during construction in compliance with MOE's standards and municipal by-laws is recommended.	Situation expected to be unchanged or marginally better than 2001 Improved travel time could attract more trips to transit thus reducing GHG emissions The law requires that all possible pollutant emission mitigation steps possible be taken during construction activities. Some PM emissions locally are potential residual effects. Regular inspection of site dust and construction vehicle exhaust emissions during construction in compliance with MOE's standards and municipal by-laws is recommended.	Situation expected to be unchanged or marginally better than 2001 Improved travel time could attract more trips to transit thus reducing GHG emissions The law requires that all possible pollutant emission mitigation steps possible be taken during construction activities. Some PM emissions locally are potential residual effects. Regular inspection of site dust and construction vehicle exhaust emissions during construction in compliance with MOE's standards and municipal by-laws is recommended.	Improved travel time could attract more trips to transit thus reducing GHG emissions The law requires that all possible pollutant emission mitigation steps possible be taken during construction activities. Some PM emissions locally are potential residual effects. Regular inspection of site dust and construction vehicle exhaust emissions during construction in compliance with MOE's standards and municipal by-laws is recommended.
C4	Minimize adverse effects on corridor hydro-geological and hydrological conditions	Increased pavement, decreased infiltration Underground construction could affect groundwater resources if significant dewatering is required	Very minor increase in quantity of surface runoff and minor decrease in quantity of groundwater. Storm water management facilities such as grassed swales and storm water ponds can be introduced. Potential residual effects may include minor increase in peak stream flows and minor decrease in groundwater. No residual effects are anticipated. Dewatering and any aquifer depressurization to allow underground transitway construction will be minimized by confining dewatering activities to the 400 m length through the interchange. An on-going program to monitor groundwater conditions will be conducted during construction.	Minor increase in quantity of surface runoff and minor decrease in quantity of groundwater. Storm water management facilities such as grassed swales and storm water ponds can be introduced. Potential residual effects may include minor increase in peak stream flows and minor decrease in groundwater. No significant dewatering is required for bridge foundation construction.	Minor increase in quantity of surface runoff and minor decrease in quantity of groundwater. Storm water management facilities such as grassed swales and storm water ponds can be introduced. Potential residual effects may include minor increase in peak stream flows and minor decrease in groundwater. No significant dewatering is required for bridge foundation construction.	Minor increase in quantity of surface runoff and minor decrease in quantity of groundwater. Storm water management facilities such as grassed swales and storm water ponds can be introduced. Potential residual effects may include minor increase in peak stream flows and minor decrease in groundwater. No significant dewatering is required for bridge foundation construction.	Minor increase in quantity of surface runoff and minor decrease in quantity of groundwater. Storm water management facilities such as grassed swales and storm water ponds can be introduced. Potential residual effects may include minor increase in peak stream flows and minor decrease in groundwater. No significant dewatering is required for bridge foundation construction.	Minor increase in quantity of surface runoff and minor decrease in quantity of groundwater. Storm water management facilities such as grassed swales and storm water ponds can be introduced. Potential residual effects may include minor increase in peak stream flows and minor decrease in groundwater. No significant dewatering is required for bridge foundation construction.
								PREFERRED OPTION

From the above assessment of potential effects, crossing the Highway 404 interchange in dedicated lanes developed using Option 6 is the preferred method to achieve the desired ultimate performance and reliability for rapid transit in this segment should the initial mixed traffic operation become problematic in the future