York Region

Stouffville Road “Schedule C” Municipal Class Environmental Assessment – Environmental Study Report

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Date: November, 2017
Project Number: 60322289
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Executive Summary

Introduction

The Regional Municipality of York (hereafter “York Region” or “the Region”) retained AECOM Canada Ltd. (hereafter “AECOM”) to conduct a Municipal Class Environmental Assessment (MCEA) for improvements to Stouffville Road, between Yonge Street and Highway 404, in the Town of Richmond Hill, including the potential jog elimination at Yonge Street. The Stouffville Road MCEA (hereafter the “Project”) is classified as a Schedule C project in the Municipal Engineers Association (MEA) MCEA (October 2000, as amended in 2007, 2011 and 2015) (MEA 2000) process, where Project activities are subject to the full environmental assessment (EA) planning process of the MCEA.

Background

By the year 2041, York Region is projected to grow to 1.8 million people and 900,000 jobs. Therefore, road improvements will be required to increase capacity and improve connectivity on the existing road network and are important parts of planning for the Region’s future.

Over the last decade there has been a change in thinking about the function of roads from planning streets primarily to serve the single occupant motorist to planning streets that build greater mobility for all road users including transit users, pedestrians and cyclists, and integrates with the natural heritage system. Consequently, planning and designing streets within the Region has become more complex since more modes are required to be accommodated within constrained rights-of-way (ROW), and they need to be accommodated in a way that enhances the natural heritage system.

The importance of street design on communities is reflected in provincial policy documents such as Places to Grow, the Big Move and Regional policy documents such as Vision 2051 and the Regional Official Plan. Nevertheless, existing road design guidelines have not adequately responded to this shift in policy direction and the complexity in road design. Streets should accommodate and promote the activities of multiple modes of transportation in a manner that is safe and addresses the requirements of provincial legislation such as the Accessibility for Ontarians with Disabilities Act (AODA). A context sensitive approach will help the Region contribute to building streets that build communities and designing streets that are safe, clean and beautiful, and integrated with the natural heritage system.
Purpose of the Project

The Study was primarily driven by projected growth within York Region by 2031 (and beyond) which poses increased network capacity needs within the Region. York Region’s 2016 Transportation Master Plan identified the need for capacity improvements along Stouffville Road to accommodate anticipated growth and to improve overall network connectivity within the Region.

The proposed West Gormley Secondary Plan and the new Gormley GO Station on Stouffville Road are expected to be large traffic generators that will further strain the existing two-lane facility.

Study Area

The Study Area includes approximately 4.8 kilometres (km) of Stouffville Road, from Yonge Street to Highway 404. The jog elimination review at Yonge Street includes approximately 500 metres (m) of Jefferson Sideroad. The Study Area is shown on Figure ES1.

Transportation Traffic Analysis

The Traffic Analysis conducted for the Project confirms that by the horizon years of 2021 and 2031, the traffic volumes will exceed available capacity of the road network. With the Gormley GO Station that opened in 2016 and the proposed West Gormley Secondary Plan expected to add an additional 2,000 homes to the community, the existing two-lane road will not have enough capacity to accommodate the projected growth.

The results of the intersection analysis for existing conditions suggest that most of the intersections in the Study Area operate at an acceptable level of service, with the exception of the AM peak hour at the intersection of Stouffville Road and Leslie Street west.

Following the analysis of existing traffic, the intersections in the Study Area were examined under future conditions for 2021 and 2031. The intersections in the Study Area are expected to experience congestion by 2021, with the exception of Yonge Street at Jefferson Sideroad and Stouffville Road at Gormley GO Station. There are multiple critical movements at other intersections in the Study Area that are expected to have high volume-to-capacity ratios and high delays.
Figure ES1: Study Area
It is expected that the level of service at the intersections in the Study Area will continue to erode over time. By 2031 the intersections will have a lack of capacity for both through and turning traffic, with the exception of Yonge Street at Jefferson Sideroad and Stouffville Road at Gormley GO Station. The number of turn lanes in the design for the Gormley GO Station intersection is expected to help manage the traffic flow and level of service at the intersection.

This Project provides an opportunity to improve Stouffville Road to accommodate existing and future traffic demand, and to provide better connectivity for the overall regional road network. The proximity of the new GO Station also provides an opportunity to review sustainable transportation (cyclists, pedestrians, transit, etc.) options for this corridor.

**Problem / Opportunity Statement**

Considering the vision and plans for the Region coupled with the results of the Transportation Traffic Analysis conducted for the Project, during Phase 1 of the Study process the Project Team identified the following problem and opportunity statement:

**Problem:** Transportation analysis confirms that by 2021 the traffic volumes will exceed available capacity of the road network. With the opening of Gormley GO Station in 2016 and the proposed West Gormley Secondary Plan expected to add an additional 2000 homes to the community, the existing two-lane Stouffville Road will not have enough capacity to accommodate the projected growth.

**Opportunity:** There is an opportunity to improve Stouffville Road to accommodate the existing and future traffic demand, and provide better connectivity for the overall regional road network. The proximity of the new GO Station also provides an opportunity to review sustainable transportation (cyclists, pedestrians, transit, etc.) options for this corridor.

**Alternative Solutions**

For the purposes of the Stouffville Road MCEA, Phase 2 of the Study process included the development of planning alternative solutions to the undertaking:

1. **Do Nothing** – Assumes no improvements will be made beyond those already planned and approved.

2. **Operational Improvements** – Includes the implementation of additional turn lanes, traffic signal co-ordination, etc.
3. **Transportation Demand Management (TDM)** – Includes measures to reduce vehicle volumes by using bike lanes, promoting transit, encouraging flexible work hours, etc.

4. **Widen Stouffville Road and Eliminate Jog** – Includes widening Stouffville Road to provide additional traffic lanes to increase capacity, eliminating the jog at Yonge Street, operational improvements and TDM.

5. **Widen Stouffville Road and Maintain Jog** – Includes widening Stouffville Road to provide additional traffic lanes to increase capacity, operational improvements and TDM.

The above identified alternative solutions were screened against the problem and opportunity statement identified above. The evaluation of alternative solutions was comprised of a two-step process. First, Operational Improvements (#2) and TDM (#3) were screened out because it was determined that these solutions, by themselves will not address Project needs as identified in the problem and opportunity statement. Next, the remaining alternative solutions, i.e., Do Nothing, Widen Stouffville Road and Eliminate Jog and Widen Stouffville Road and Maintain Jog, were carried forward for further assessment and were evaluated against criteria developed for the Project in order to determine the preferred recommended solution for the Project.

Through the evaluation, it was determined that “Do Nothing” does not address the problem and opportunity statement and “Widen Stouffville Road and Maintain Jog” only partially addresses the problem and opportunity statement identified for the Project. “Widen Stouffville Road and Eliminate Jog” was identified as the preferred recommended solution as it addresses the problem and opportunity statement identified for the Project and satisfies the transportation planning and engineering and socio-economic criteria. While this solution has the potential to impact archeological and cultural resources and natural environment, this solution also provides some opportunity for the enhancement and protection of the natural environment.

**Alternative Design Concepts**

The next step in the process, Phase 3, was to identify the alignment (design concept) for the preferred solution of widening Stouffville Road and eliminating the jog at the Yonge Street intersection. The evaluation of design concepts followed a two-step process:

- **Step 1**: Choosing the preferred alignment for widening Stouffville Road.
- **Step 2**: Choosing the preferred alignment for the proposed jog elimination.
Step 1: Evaluation of Potential Alignment for Widening Stouffville Road

For the purpose of evaluating the preferred alignment for widening Stouffville Road from Yonge Street to Highway 404, this length of roadway was divided into three segments. The segments took into account the existing conditions, available property and constraints.

1. **Segment 1:** Stouffville Road from Yonge Street to 500 m west of Bayview Avenue.

2. **Segment 2:** Stouffville Road from 500 m west of Bayview Avenue to 850 m east of Bayview Avenue.

3. **Segment 3:** Stouffville Road from 850 m east of Bayview Avenue to 100 m west of Highway 404.

The three options for widening considered were: Widen North, Widen South or Widen About Centreline. Following the identification of the three road segments, each segment was evaluated against selected project criteria for the purpose of identifying the preferred widening alignment for each road segment. The criteria chosen to evaluate the most preferred alignment for widening with a jog elimination include the following:

<table>
<thead>
<tr>
<th>Category and Sub-category</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Engineering</td>
<td>Traffic impacts during construction</td>
</tr>
<tr>
<td>Transportation Engineering</td>
<td>Impacts to access/egress to adjacent properties</td>
</tr>
<tr>
<td>Transportation Engineering</td>
<td>Complexities of vertical roadway geometry (e.g., flatter vertical slopes, cuts/fills)</td>
</tr>
<tr>
<td>Transportation Engineering</td>
<td>Complexities of horizontal roadway geometry (e.g., smoother and fewer curves).</td>
</tr>
<tr>
<td>Transportation Engineering</td>
<td>Potential impacts on utility infrastructure (e.g., hydro lines, gas mains, pipelines)</td>
</tr>
<tr>
<td>Transportation Engineering</td>
<td>Complexity of construction</td>
</tr>
<tr>
<td>Transportation Engineering</td>
<td>Impacts pedestrian, cyclists and associated geometric design standards.</td>
</tr>
<tr>
<td>Natural Environment – Terrestrial</td>
<td>Potential impacts to ESAs including the Oak Ridges Moraine, Areas of Natural of Scientific Interest, Provincially Significant Wetlands, Significant Woodlands, etc.</td>
</tr>
<tr>
<td>Natural Environment – Terrestrial</td>
<td>Potential impacts to terrestrial species (Non-Species at Risk) and habitat</td>
</tr>
<tr>
<td>Natural Environment – Aquatic</td>
<td>Potential impacts to aquatic species and habitat</td>
</tr>
<tr>
<td>Natural Environment – Aquatic</td>
<td>Potential impacts to watercourse crossings</td>
</tr>
<tr>
<td>Natural Environment – Aquatic</td>
<td>Potential impacts to groundwater resources</td>
</tr>
<tr>
<td>Natural Environment – Aquatic</td>
<td>Potential impacts on stormwater quality and quantity</td>
</tr>
</tbody>
</table>
A summary of the evaluation (at the category level) for each road segment is provided below.

**Segment 1 – Summary Evaluation**

For this segment of Stouffville Road, widening to the south is preferred in all but one category. Widening to the south has lower potential impacts on utility infrastructure and property access and acquisition and also poses less construction staging constraints and complexities. Widening to the south also has few potential impacts on built heritage resources and cultural heritage landscapes.

<table>
<thead>
<tr>
<th>Summary</th>
<th>Widen North</th>
<th>Widen South</th>
<th>Widen about Centreline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Engineering</td>
<td>Not preferred</td>
<td>Preferred</td>
<td>Less Preferred</td>
</tr>
<tr>
<td>Natural Environment</td>
<td>Preferred</td>
<td>Not Preferred</td>
<td>Less Preferred</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>Not Preferred</td>
<td>Preferred</td>
<td>Less Preferred</td>
</tr>
<tr>
<td>Archaeology and Culture</td>
<td>Not Preferred</td>
<td>Preferred</td>
<td>Less Preferred</td>
</tr>
<tr>
<td>Costs</td>
<td>Not Preferred</td>
<td>Preferred</td>
<td>Less Preferred</td>
</tr>
</tbody>
</table>

**Segment 2 – Summary Evaluation**

For this segment of Stouffville Road, widening about centreline is preferred as it is associated with fewer construction complexities, poses the least impact from a
socio-economic perspective, is associated with fewer impacts to the intersection at Stouffville Road and Bayview Avenue and poses lower potential impacts to capital costs by making use of the 2002 upgrades to the intersection thus reducing throw away costs.

<table>
<thead>
<tr>
<th>Summary</th>
<th>Widen North</th>
<th>Widen South</th>
<th>Widen about Centreline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Engineering</td>
<td>Not Preferred</td>
<td>Less Preferred</td>
<td>Preferred</td>
</tr>
<tr>
<td>Natural Environment</td>
<td>Not Preferred</td>
<td>Preferred</td>
<td>Less Preferred</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>Not Preferred</td>
<td>Less Preferred</td>
<td>Preferred</td>
</tr>
<tr>
<td>Archaeology and Culture</td>
<td>No Preference</td>
<td>No Preference</td>
<td>No Preference</td>
</tr>
<tr>
<td>Costs</td>
<td>Not Preferred</td>
<td>Less Preferred</td>
<td>Preferred</td>
</tr>
</tbody>
</table>

Segment 3 – Summary Evaluation

For this segment of Stouffville Road, widening to the north is preferred in most categories as capital costs would be less, there would be less potential impacts on residents, local businesses and property access and it would have the least potential impacts on built heritage and cultural heritage landscapes.

<table>
<thead>
<tr>
<th>Summary</th>
<th>Widen North</th>
<th>Widen South</th>
<th>Widen about Centreline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Engineering</td>
<td>Preferred</td>
<td>Not Preferred</td>
<td>Less Preferred</td>
</tr>
<tr>
<td>Natural Environment</td>
<td>No Preference</td>
<td>No Preference</td>
<td>No Preference</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>Preferred</td>
<td>Not Preferred</td>
<td>Less Preferred</td>
</tr>
<tr>
<td>Archaeology and Culture</td>
<td>Preferred</td>
<td>Not Preferred</td>
<td>Less Preferred</td>
</tr>
<tr>
<td>Costs</td>
<td>Preferred</td>
<td>Not Preferred</td>
<td>Less Preferred</td>
</tr>
</tbody>
</table>

Step 2: Evaluation of the Alignments for Eliminating the Jog

Five potential (preliminary) jog elimination corridor options were proposed at Open House #2 once the solution was identified as “widening Stouffville road and eliminating the jog” (see Figure ES2).

Following public and agency consultations along with additional field reconnaissance suggested the screening out of two of the five options (Option 3 – blue and Option 5 – purple) from further evaluation. As such, Options 1, 2 and 4 were deemed viable alternative design concepts for eliminating the jog at Yonge Street and Stouffville Road.
Prior to the evaluation and the identification of a preferred alignment, Options 1, 2 and 4 were further optimized. The alignments were adjusted to avoid property impacts (where possible) and for better horizontal road geometry. Given the similarities between Options 1 and 4, the optimization of these two alignments resulted in the development of a combined option which provided better overall horizontal geometry (hereafter referred to as the “Northern Option”). Therefore the outcome of the optimization exercise / refinement process resulted in two final potential alignments, i.e., a “Northern Option” (a combination of the former Options 1 and 4) and a “Southern Option” (formerly Option 2).

Following the optimization process, the Northern and Southern Options were evaluated against the project criteria described above for the purpose of identifying the preferred alignment for the elimination of the jog.

**Figure ES2: Potential Jog Elimination Corridor Options**

**Summary of the Evaluation of the Jog Elimination**

Both options are associated with conflicting environmental, socio-economic, archeological and cultural heritage impacts. The Northern Option is associated with higher capital costs due to the construction of the proposed bridge west of Yonge Street.

Based on the evaluation, further discussions with key stakeholders and field reconnaissance on the property southeast of Yonge Street and Stouffville Road, the
Project Team identified the northern alignment as the recommended preferred alignment for the elimination of the jog as there is a greater opportunity to mitigate the impacts associated with it.

<table>
<thead>
<tr>
<th>Evaluation Category</th>
<th>Northern Option</th>
<th>Southern Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Engineering</td>
<td>Preferred</td>
<td>Not Preferred</td>
</tr>
<tr>
<td>Natural Environment</td>
<td>Preferred</td>
<td>Not Preferred</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>Preferred</td>
<td>Not Preferred</td>
</tr>
<tr>
<td>Archaeology and Culture</td>
<td>Preferred</td>
<td>Not Preferred</td>
</tr>
<tr>
<td>Costs</td>
<td>Not Preferred</td>
<td>Preferred</td>
</tr>
</tbody>
</table>

**Recommended Preferred Design Concept**

The recommended preferred design for Stouffville Road and the potential jog elimination considered transportation facilities for all road users (motorists, transit, cyclists, pedestrians) and potential impacts to natural social and cultural features and cost. The preferred design was selected, developed, and refined through extensive consultation with agencies, stakeholders and the public. The recommended preferred design concept is shown in Figure ES3 and Appendix M.

The recommended design includes widening Stouffville Road to a 5-lane cross section (two lanes in each direction plus a continuous centre turning lane to facilitate access to adjacent driveways and crossing streets). A 3 m wide multi-use path will be installed on the north side of the road between Yonge Street and Gormley GO Station. West of Yonge Street, it is proposed to install 2.1 m wide sidewalks on both sides of the road. Full illumination is recommended throughout the corridor.

The proposed design accommodates a posted speed of 50 km/h west of Yonge Street within the jog elimination and 60 km/h from Yonge Street to Highway 404. Vertical grades have been adjusted at some locations to improve available sight distance and to maintain a maximum grade of 6%. The vertical alignment was also established with regard for the adjacent residential driveways crossing the corridor.

It is recognized that Stouffville Road is situated within a sensitive natural setting. The preferred design includes narrow lane widths and an urban cross-section to reduce the road footprint. In addition, a number of wildlife eco-passages are proposed throughout the corridor to facilitate the safe movement of small animals across the road. As part of the jog elimination, it is proposed to construct a new bridge west of Yonge Street. A new retaining wall will also be required along the north portion of the existing kettle lake.
Figure ES3: Recommended Preferred Design Concept
The preferred design will add approximately 7.2 hectares (ha) of impervious area and will cause a minor increase in the overall imperviousness of the road corridor. However, with the conversion of the existing rural cross-section to an urban cross-section with a storm sewer network for the minor system, existing drainage patterns will generally be maintained.

**Potential Environmental Effects, Mitigation Measures and Monitoring**

The implementation of the Project has the potential to create positive and negative effects. Avoidance of negative effects has been a key consideration throughout Phases 1, 2 and 3 of the Project and has been discussed with agencies, stakeholders and the public.

Effects can be generally divided into two main categories: construction related effects (which are temporary in nature) and effects related to the operation and maintenance of the Project (effects that are permanent). Negative effects (also referred to as impacts) caused by the Project are avoided to the extent possible; however, in cases where negative effects cannot be fully avoided, mitigation measures will be required during construction, operation and maintenance of the Project.

Effects of the Project on the key features listed below were assessed along with proposed mitigation measures to reduce any potential impacts:

- Traffic and Transportation;
- Natural Environment;
- Socio-Economic Environment; and
- Cultural Environment.

As part of the MCEA process, this ESR is to be filed and placed on the public record for at least 30 calendar days for review by the public and review agencies. Following this review period, provided that no Part II Orders are received, the Region may proceed to Phase 5 of the MCEA process – design and construction. Property acquisition and utility relocation will then be scheduled, followed by construction.

This ESR identifies specific items to be reviewed and confirmed during the detailed design and construction phases of this Project. Some of these commitments will address specific concerns raised by property owners and review agencies during the EA process.
Communication and Consultation

As part of the MCEA planning process, several steps have been undertaken to inform the government agencies, Indigenous communities, affected landowners, the local community and the general public of the Project and to solicit comments at key stages of the study process. Methods included the following:

- A mailing list was set up and contact information was collected through the Project Manager, Notice of Commencement responses and the Open House sign-in sheet;
- Advertising was used to inform people about Phase 1, 2 and 3 activities and consultation opportunities;
- Project webpage was created to provide useful information about the Project, including invitations to consultation opportunities;
- A newsletter was distributed to property owners and interested parties to keep them abreast of Project findings and milestones;
- An online survey was conducted to seek feedback from residents, property owners and commuters of Stouffville Road;
- Roadside signs were installed along Stouffville Road within the Study Area providing Project information;
- Key stakeholders were identified for individual meetings to advise and provide feedback to the Project Team; and
- Three Public Open Houses were held at a location near the Project Study Area, giving community members an opportunity to discuss the Project with the team and provide comments.

All comments received during the course of the Project were considered and addressed to the extent possible by the Project Team. There were no known outstanding comments at the time of the ESR filing for the 30 day review period, during which the public, and other interested stakeholders have an opportunity to comment on the Project.