
TO: GENERAL COMMITTEE

SUBJECT: HARVIE ROAD / BIG BAY POINT ROAD / HIGHWAY 400
TRANSPORTATION IMPROVEMENTS (BRYNE DRIVE TO BAYVIEW DRIVE)
MUNICIPAL CLASS EA, PHASES 1 AND 2

**PREPARED BY AND
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**GENERAL MANAGER
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GENERAL MANAGER OF INFRASTRUCTURE, DEVELOPMENT & CULTURE

**CHIEF ADMINISTRATIVE
OFFICER APPROVAL:** R. J. FORWARD, MBA, M.Sc., P. Eng. *R. Forward*
ACTING CHIEF ADMINISTRATIVE OFFICER

RECOMMENDED MOTION

1. That the Preferred Alternative for the Municipal Class Environmental Assessment for Harvie Road/Big Bay Point Road/Highway 400 from east of the future alignment of Bryne Drive to west of Bayview Drive, Phases 1 and 2 be adopted as outlined in Staff Report ENG005-12 and as follows:
 - a) That the proposed structure crossing Highway 400 will have six (6) through lanes and one (1) turning lane, for a total of seven (7) lanes;
 - b) That Harvie Road/Big Bay Point Road be constructed with three (3) through lanes in each direction, for a total of six (6) lanes, including a new crossing at Highway 400 plus operational improvements at intersections; and
 - c) That property be protected for a future potential highway interchange and refined as part of phases 3 and 4 of the Harvie Road / Big Bay Point Road / Highway 400 Class EA.
2. That in accordance with the requirements for a Schedule "C" Class EA study, the Engineering Department continues with Phases 3 and 4 of the Class EA process which includes the development and evaluation of alternative designs, a second Public Information Centre, and the recommendation to Council for a preferred design for transportation improvements at Harvie Road/Big Bay Point Road/Highway 400.

PURPOSE & BACKGROUND

3. In 2005, the Ontario Ministry of Transportation (MTO) completed a Provincial Environmental Assessment for the Highway 400 which concluded that the highway will be widened to eight (8) lanes from the City's south limits to Essa Road, ten (10) lanes from Essa Road to Bayfield Street, and eight (8) lanes from Bayfield Street to the City's north limits.
4. The City of Barrie completed Phases 1 and 2 of a Municipal Class Environmental Assessment (Class EA) for Harvie Road / Big Bay Point Road / Highway 400 as part of a larger EA that examined all of the Highway 400 Crossings in Barrie. The Council, as per Motion 05-G-343, approved seven lanes crossing under/over Highway 400 connecting Harvie Road to Big Bay Point Road.

5. In 2006, the Harvie Road/Big Bay Point Road Interchange Feasibility Study was conducted by TSH (now Aecom) for the developer of Park Place with input from the City of Barrie and the Ministry of Transportation (MTO). The feasibility of providing a new interchange on Highway 400 at the Harvie Road/Big Bay Point Road crossing was reviewed. This report was never finalized, but the draft report suggested that a new interchange on Highway 400 was feasible and examined several different interchange configurations.
6. Other class EA's affecting the planning of the Harvie Road/Big Bay Point/Highway 400 EA are as follows:
 - (a) The Bryne Drive Master Plan (MP), completed in December 2005, identified the potential for an interchange in the study area and noted that the proposed interchange will affect the proposed alignment of Bryne Drive. The Bryne Drive MP is currently being updated and is examining an alignment farther west. The preferred alternative, approved by Council by Motion 06-G-005 in December 2005, is a five lane roadway.
 - (b) A Class EA has been completed for Harvie Road, between Bryne Drive and Essa Road, and the preferred design alternative, approved by Council by Motion 02-G-534, is a four lane roadway with operational improvements.
 - (c) A Class EA was completed for Whiskey Creek in October 2009. The preferred alternative called for regional storm conveyance under Highway 400, Bryne Drive, and Harvie Road and was approved by Council by Motion 09-G-418.
7. In October 2009, Morrison Hershfield was retained by the City of Barrie to revisit Phase 2 of the Municipal Class EA process to consider a highway interchange alternative in the vicinity of where the extension of Harvie Road / Big Bay Point Road crosses Highway 400. In 2010, extensive macro and micro transportation modelling was undertaken in support of the PIC held in November 2010. Much of 2011 was spent addressing the numerous comments received, including those from the MTO. The comments and responses can be reviewed in Tables 6-1 and 6-2 of the Class EA report.
8. As part of the Class EA process, the public and review agencies were notified of the undertaking of the Class EA Study and were invited to attend the PIC. The PIC was advertised twice in the local newspaper. A notice that included a comment sheet was mailed to the property owners/residents in the area of the proposed works.
9. As per the requirements of the Class EA process, a Public Information Centre (PIC) was held on Wednesday, November 17, 2010, at City Hall in the Sir Robert Barrie Room from 4:00 p.m. to 7:00 p.m. The public was provided with information regarding the alternatives, and was allowed the opportunity to provide comments and express concerns regarding the study.
10. Interested parties were given the opportunity to complete and submit the comment sheet to the Engineering Department. Respondents were asked to comment on the alternatives and to list concerns regarding the study.
11. The following alternatives were presented at the PIC (please see Class EA document for additional information).

Alternative 1 - "Do Nothing"

The "Do Nothing" option corresponds to maintaining the existing conditions. Under this option, no improvements or changes to the road system would be made to solve the identified problem and, as such, the problem would remain and, in fact, worsen as traffic volumes continue to increase over time.

Alternative 2 - Highway Crossing

Three (3) lanes per direction crossing Highway 400 with additional turning lanes (no access onto or from Highway 400).

Alternative 3 - Highway Interchange

Three (3) lanes per direction crossing Highway 400 with additional turning lanes (access onto and from Highway 400).

12. A PDF version of the Phase 1 and 2 Class EA Report is available online by doing a keyword search on the City of Barrie web page (www.barrie.ca) for "class EA" and clicking on the first check marked result then scrolling down to the Harvie Road/Big Bay Point Road/Highway 400 Class EA section. A hard copy of the report is available in the Councillor's Lounge.

ANALYSIS

13. Over 70% of the public, who ranked the alternatives, ranked the interchange the highest, but many of the respondents expressed concern regarding the potential increase of traffic in the residential area as a result of an interchange or crossing. Other general concerns included the increase in noise and impacts to adjacent woodlots/natural environment. For a summary of the major concerns raised from the PIC, and the City's response to those concerns, please see attached Table 1. A summary of all concerns, including the Engineering Department's response to each concern, is located, in detail, in the Class EA Document.
14. The City of Barrie currently has two major Highway 400 interchanges in the south end of Barrie; namely Mapleview Drive and Essa Road. Both Mapleview Drive and Essa Road are currently experiencing east/west delays during the peak hours, particularly in the area of the Highway 400 ramp terminals. As developments expand and traffic volumes increase, delays on Mapleview Drive and Essa Road will continue to increase and eventually may affect the mainline operation of Highway 400. To address this, both the off-ramps at Mapleview Drive and Highway 400 have been widened to four (4) lanes. Also, additional turning lanes are being provided on Mapleview Drive. The Essa Road EA has been endorsed by Council. Interim improvements east of the northbound off-ramp and west of the southbound off-ramp, including the widening/lengthening of the off-ramps to three (3) lanes, is anticipated to start construction in 2014 (the southbound off-ramp at Essa Road was recently widened to three (3) lanes but is proposed to be lengthened).
15. Even with the substantial transportation improvements proposed at Essa Road/Highway 400 and currently being completed at Mapleview Drive/Highway 400, there will not be enough east/west capacity crossing Highway 400 to service the proposed development in the south end of Barrie. The 2005 Highway 400 Crossing EA also identifies the need for a highway crossing connecting Salem Road to Lockhart Road. A new highway interchange is also being considered at Highway 400 and McKay Road (10th Line) as part of the update to the Multi Modal Active Transportation Master Plan being undertaken as part of the Growth Studies.
16. The EMME/3 (macro) and Aimsun (micro) transportation modeling, completed as part of the Harvie Road/Big Bay Point Road/Highway 400 EA, accounted for intensification and annexation interims of population and employment but did not consider transportation improvements outside of this EA study area. This EA is assessing the need for transportation improvements in the area of Harvie Road, Big Bay Point Road and Highway 400. The macro and micro transportation modeling, that was completed as part of Phases 1 and 2 of the Harvie Road/Big Bay Point Road/Highway 400 EA, is being updated as part of the annexation update to the Multi Modal Active Transportation Master Plan and will be used in phases 3 and 4 of this EA.
17. The variables that could affect the need and opportunity for an interchange include (to be accounted for in Phases 3 and 4 of the Harvie Road/ Big Bay Point Road/ Highway 400 EA):
 - a) The number of future lanes planned for Highway 400. This is currently being reexamined as part of the Simcoe Area Transportation Study by the MTO;

- b) Future plans for changes at the adjacent Essa Road and Mapleview Road interchanges that could affect the weaving distances and other operational issues with the alignment of a new intermediate interchange at Harvie Road/Big Bay Point Road;
 - c) The alignment of the Highway 400 centerline that is presently identified to be shifted to the west (7.5 m +/-) in the previous MTO Highway 400 Planning and Preliminary Design Study; and,
 - d) Possible changes in land use including the Service Centre and other lands to be developed and redeveloped in the area.
18. Comments and responses, received from the PIC, were considered in the development of the preferred alternative between Bayview Drive and the future Bryne Drive. The alternatives have been evaluated based on the physical, social/cultural, natural and economic environments, and the Engineering Department is recommending a highway crossing and continued land protection for a highway interchange (see attached Figure 1). The land required for a highway interchange will be further defined in Phases 3 and 4 of this Class EA process.
19. Bike lanes, transit and pedestrian linkages will be examined in the next phase of the Class EA. An Active Transportation Plan is being developed as part of the Multi Modal Active Transportation Master Plan being completed as part of the Growth Studies.

ENVIRONMENTAL MATTERS

20. This project has followed the guidelines for a Municipal Class Environmental Assessment and the physical, natural, social, cultural and economic environmental matters have been considered in the development of the recommendations. The Class EA Report discusses how environmental matters have been considered in the development of the recommended alternative. The ranking and scoring process considered all natural, social and economic environmental matters.

ALTERNATIVES

21. The following alternative is available for consideration by General Committee:

Alternative #1 General Committee could alter the proposed recommendations by selecting another Preferred Alternative.

This is not recommended because the Preferred Alternative solution provides for transportation improvements which minimize the effects to the physical, natural, social, cultural and economic (financial) environments and protects for a possible highway interchange in the future.

FINANCIAL

22. Costs of the alternatives that have been considered are estimated and based on current construction costs. The estimated costs are based on the full reconstruction of the approach roads. The costs of the alternatives are as follows (including land costs):

Alternative 2 – Highway Crossing \$15.2 million

Alternative 3 – Highway Interchange \$30.1 million

Development charges or developer contributions will fund approximately 50% of the costs for these transportation improvements. Additional funding will come from area developers negotiated as part of development approval and/or from trigger agreements between the City and developers such as Park Place. Some of the required lands may be acquired as part of the development process.

23. Funding for the completion of the Class EA processes for Harvie Road / Big Bay Point Road / Highway 400 is included as a carryover in the 2012-2021 Capital Plan. In the 2012-2021 Capital Plan there is currently \$1,852,200 funding for design in 2013 and \$5,450,000 funding starting in 2015 for Utilities and Property for transportation improvements on Harvie Road and Big Bay Point Road between Bryne Drive and Fairview Road for the Highway Crossing. Costs will be further refined in Phase 3 & 4 of the Class EA process.

LINKAGE TO 2010 – 2014 COUNCIL STRATEGIC PLAN

24. The recommendations, included in this staff report, support the following goals identified in the 2010-2014 City Council Strategic Plan:
- Manage Growth and Protect the Environment
25. This Class EA Study demonstrates good, long range transportation planning. Good transportation linkages are critical in planning for, and accommodating, future growth in the City of Barrie.

Table 1 – Summary of Major Comments and Responses

Comment/Concern	Response
Increased traffic on Harvie Road will negatively impact local residents.	The Preferred Alternative Solution is for a crossing (Alternative 2) and continued land protection for a highway interchange. Phases 3 and 4 of this Class EA will examine what traffic, pedestrian and parking improvements/restrictions are required for the proposed transportation improvements.
Is there a need for the proposed transportation improvements?	The need for transportation improvements, connecting Harvie Road to Big Bay Road, was confirmed in the 1999 Transportation Master Plan. Even with the substantial transportation improvements currently underway at Mapleview and the proposed construction to start in 2014 at Essa Road, there will not be enough east/west capacity crossing Highway 400 to service the proposed development in the south end of Barrie. The 2005 Highway 400 Crossing EA also identified the need for a highway crossing connecting Harvie Road to Big Bay Point Road.
Negative Impact on wildlife.	The alignment of Harvie Road is proposed to shift slightly to the north to minimize impacts to the sensitive areas around the creeks. A detailed review will be undertaken in Phases 3 and 4 of the Class EA to assess design alternatives including a tree inventory, existing conditions assessment and an environmental impact assessment.
Negative impacts to the Highway 400 Service Centre.	The access to the Service Centre, shown on Alternative 3, is per the agreement that the MTO and Host-Kilmer have regarding the lease, operation and development of the Service Centre site. The need for an interchange will be further assessed as part of the update to the Transportation Master Plan being undertaken as part of the Annexation Study.
Negative impacts from construction.	In accordance with the City's Policy for minimizing construction impacts, one lane of traffic in each direction will be maintained on Harvie Road/Big Bay Point Road during the construction, where possible. Other key issues during construction are maintaining open access and having sufficient sign visibility so customers/residents know how to access the properties during construction. The City of Barrie will notify local property owners of what to expect in terms of duration of construction and any foreseeable disruptions.
We need to do something that will relieve the intersections at Mapleview Drive, Highway 400 and Essa Road.	Both the northbound and southbound off-ramps at Mapleview and Highway 400 have been widened to four (4) lanes. Also additional turning lanes are being provided on Mapleview Drive, between Bayview Drive and Barrievue Drive, in part, to accommodate the first phase of the Park Place development. The southbound off-ramp at Essa Road has been widened to three (3) lanes. The Essa Road EA has been endorsed by Council. Interim improvements, east of the northbound off-ramp and west of the southbound off-ramp including additional widening of the off-ramps, are anticipated to start construction in 2014 subject to available budgets.
In determining your duty to consult, you may wish to contact the First Nations in the vicinity of your area of interest to advise them of your intentions.	The First Nations, in the vicinity of this Class EA, have been contacted and their comments considered in the development of the preferred alternative. They will be also be contacted during the next phases of this Class EA and their comments considered in the development of the preferred design alternative.
Transportation improvements should consider active transportation components.	Bike routes, transit and pedestrian linkages will be examined in the next phase of the Class EA, and the City agrees that these elements are very important. An active transportation plan is being developed as part of the Annexation Study.
Weaving analysis is required to assess the safety of the interchange alternative.	Section 5.4 of the Class EA report addresses the weaving issue, but this issue will be examined in greater detail in Phases 3 and 4 of this Class EA or in a broader transportation planning study such as the Simcoe Area Transportation Study.
This EA does not consider intensification nor annexation plans of the City.	The EMME/3 (macro) and Aimsun (micro) transportation modeling, completed as part this EA, accounted for intensification and annexation interims of population and employment but did not consider transportation improvements outside of this EA study area. This EA is assessing the need for transportation improvements in the area of Harvie Road, Big Bay Point Road and Highway 400. The macro and micro transportation modeling, that was completed as part of this study, is being updated as part of the annexation update to the Transportation Master Plan and will be used in the next phases of this EA.
What is the horizon year of this EA?	The EA is based on the horizon year 2031.
Has this EA completed the 20 year assessment for transportation improvements at Essa Road?	The 20 Year Essa Road Assessment is being completed as part of the annexation studies.

Figure 1

