



TO: GENERAL COMMITTEE


SUBJECT: BAYVIEW DRIVE & BIG BAY POINT ROAD CLASS EA PHASES 3 AND 4

WARD: 8

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CHIEF ADMINISTRATIVE OFFICER APPROVAL: C. LADD 
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RECOMMENDED MOTION

1. That the preferred design alternative for the Municipal Class Environmental Assessment for Bayview Drive and Big Bay Point Road, Phases 3 and 4 as outlined in Staff Report ENG012-16 be approved.
2. That in accordance with the requirements of the Municipal Class Environmental Assessment process, the Engineering Department publish a Notice of Completion for the Bayview Drive and Big Bay Point Road Municipal Class Environmental Assessment Phases 3 and 4 Environmental Study Report.
3. That based on the successful conclusion of this Municipal Class Environmental Assessment process and available budgets being approved through the capital planning process:
 - a) The Engineering Department proceed with the implementation of the preferred alternative solution for sanitary servicing and stormwater management;
 - b) The staff in the Legal Services Department complete the proposed property acquisitions necessary for the preferred design alternative identified in the Bayview Drive and Big Bay Point Road Municipal Class Environmental Assessment Phases 3 and 4 Environmental Study Report and in the associated linkage project Harvie Road/Big Bay Point Road/Highway 400 overpass Municipal Class Environmental Assessment Phases 3 and 4 Environmental Study Report;
 - c) The Director of Legal Services be authorized to commence expropriation proceedings against the required properties where negotiated agreements are not in place by October 31, 2017;
 - d) The Corporation of the City of Barrie make an application to City Council, as approving authority, for approval to expropriate the required interests in land and that the City Clerk be authorized to execute the necessary forms of application;
 - e) The "Notice of Application for Approval to Expropriate" be served and published and that any requests for inquiries received, pursuant to the "Notice of Application for Approval to Expropriate" be forwarded to the Chief Inquiring Officer and the Chief Inquiring Officer be requested to report to Council with respect to any such request; and

- f) The Director of Legal Services be delegated authority to settle the expropriations or any negotiated agreements in an amount up to the maximum amount budgeted for property acquisition and that the City Clerk be authorized to execute all associated and required documents in a form approved by the Director of Legal Services.

PURPOSE and BACKGROUND

4. This Staff Report presents the Preferred Design Alternative to address active transportation issues on Bayview Drive (between Little Avenue to Big Bay Point Road) and Big Bay Point Road (between Bayview Drive to Huronia Road).
5. On December 2, 2013, City Council adopted motion 13-G-289 regarding Growth Management Update: Infrastructure Master Plans and Fiscal Impact Analysis as follows:

"That the six Infrastructure Master Plans (Water Supply, Water Storage and Distribution, Wastewater Treatment, Wastewater Collection, Drainage and Stormwater Management, and Multi-Modal Active Transportation) related to growth from 2012-2031 be approved so that staff may complete the public consultation process in accordance with the Municipal Class Environmental Assessment process."
6. The preferred alternative solution from Phase 1 and 2 of the Class Environmental Assessment (Class EA) process completed as part of the Multi-Modal Active Transportation Master Plan (MMATMP) endorsed by Council, recommended transportation improvements including bike lanes and sidewalk improvements on Bayview Drive (Little Avenue to Big Bay Point Road) and Big Bay Point Road (Bayview Drive to Huronia Road).
7. Completion of Phase 3 and 4 of the Class EA process developed alternative design concepts for the preferred solution identified in the MMATMP and documented the process and methodology employed throughout the study to prepare the Environmental Study Report (ESR).
8. The Big Bay Point Road (between Bayview Drive to Huronia Road) project proposes transportation improvements with linkages to the Harvie Road overpass, Bryne Drive (Caplan Avenue to Essa Road), Harvie Road (Essa Road to Bryne Drive) and Essa Road (Coughlin Road to Mapleview Drive). See Appendix "A" for a map of the study area.
9. In coordination with the need to reconstruct Bayview Drive (between Little Avenue to Big Bay Point Road) a new 400 mm watermain will be constructed as identified in the Water Distribution and Storage Master Plan.
10. Bayview Drive (Little Avenue to Big Bay Point Road) and Big Bay Point Road (Bayview Drive to Huronia Road) are existing rural road sections and will be converted to urbanized road section complete with storm sewer, curb and gutter as part of the proposed road improvements. In coordination with the ESR a Stormwater Management Analysis was undertaken to evaluate the Stormwater Management approaches for the design alternatives.
11. The preferred design alternative proposes implementation of Low Impact Development (LID) within the existing road allowance as part of the Stormwater Management approach supported by the Lake Simcoe Region Conservation Authority.
12. The preferred design alternative for the Bayview Drive and Big Bay Point Road Class EA Phases 3 and 4 ESR and the associated linkage project Harvie Road/Big Bay Point Road/Highway 400 overpass Class EA Phases 3 and 4 ESR identifies the required property acquisition for daylighting triangles, right turn lanes and ROW width. See Appendix "B" for property area requirements.

13. The second Public Information Center (PIC) associated with Phase 3 & 4 of the Class EA was held on Wednesday, March 2, 2016, 4:00 pm to 7:00 pm at Southshore Community Centre from 4:00 p.m. to 7:00 p.m. The PIC information was also presented at a Town Hall Meeting on Wednesday March 30, 2016 at the Allandale Recreation Centre. The public was invited to attend the PIC's to review and provide comments on the proposed design alternative solutions. Comments and responses received from the PIC's were considered in the development of the preferred design alternative solution.

Bayview Drive Improvements

Alternative 1 - 3-lane cross section with bicycle lanes with sidewalk only on west side

This alternative widens Bayview Drive to 3 lanes of vehicular traffic from Big Bay Point Road to Little Avenue. Regular bike lanes are recommended along the entire length of road with a sidewalk proposed along the west side only.

Alternative 2 – 3-lane cross section with bicycle lanes, sidewalks on both sides and some reduced features

This alternative is similar to Alternative 1 except with reduced vehicular lane, bike lane and boulevard widths. In this alternative, the centre line of the road is shifted to the west to allow sidewalks on both sides.

Alternative 3 - 5-lane concept for consideration of future growth

The MMATMP identifies a potential need for additional capacity on Bayview Drive beyond 2031.

Big Bay Point Road Improvements

Alternative A – 7-lane cross section with buffered bicycle lanes

This alternative incorporates the recommended improvements based on the MMATMP with Big Bay Point Road widened to 7 lanes of vehicular traffic from Bayview Drive to Huronia Road. A raised centre median is proposed with left turn lanes provided at intersections. Buffered bicycle lanes and sidewalks are proposed on both sides throughout the entire length of road. This option includes widening on both sides of the road and requires removal of the existing rail line spur abutting Big Bay Point Road to the north.

Alternative B – 7-lane cross section with buffered bicycle lanes and some reduced features

This alternative assumes that the rail line spur abutting Big Bay Point Road to the north will remain and thus all proposed widening to incorporate the proposed 7-lane cross section with buffered bicycle lanes will occur to the south. In recognition of this and to reduce property impacts to the south, Alternative B considers reduced bike lane and boulevard widths and no provision of a sidewalk on the north side of Big Bay Point Road.

Alternative C – 5-lane cross section with buffered bicycle lanes

This alternative includes widening Big Bay Point Road to 5-lanes with a continuous centre turn lane and buffered bicycle lanes. This alternative assumes that the rail line spur abutting Big Bay Point Road to the north will remain and thus all proposed widening will occur to the south. Sidewalks are proposed on both sides of the road.

Alternative D – 5-lane cross section with buffered bicycle lanes and some reduced features

This alternative is similar to Alternative C but includes reduced boulevard widths and no provision of a sidewalk on the north side of the road.

ANALYSIS

14. The Bayview Drive & Big Bay Point ESR presents the recommended transportation improvements required to accommodate active transportation. The transportation improvements include the addition of vehicular lanes, two way left turning lanes, bike lanes/buffered bike lanes, sidewalks on one side of the street. Other recommended infrastructure improvements include updated drainage system, implementation of LID and new watermain on Bayview Drive.
15. Comments received throughout the Class EA process, along with the Engineering Department's responses to the comments, are summarized in the ESR which is available in the Councillors' Lounge for review and on the City of Barrie website at www.barrie.ca/eastudies. Areas of major concern include:
- Proximity of vehicular lanes and sidewalks to property
 - Raised median with 7-lane options will negatively impact driveway operations
 - Loss of property will negatively impact parking supply and driveway operations
 - Traffic volumes related to safety of adding bicycle lanes
 - Property acquisition to south of Big Bay Point Road when rail corridor sits unused
 - Access to loading dock to 130 Big Bay Point Road requires backing into property

See Appendix "C" for responses to major concerns.

16. Eleven (11) people signed the attendance register at the second PIC held on Wednesday March 2, 2016. Twenty-six (26) comment sheets/responses were received with twelve (12) preferred rankings provided for Bayview Drive improvements and seventeen (17) preferred rankings provided for Big Bay Point Road as follows:

Bayview Drive Improvements

Option	# of Responses Received	Preferred Ranking
Alternative 1	7	1
Alternative 2	1	3
Alternative 3	4	2

Big Bay Point Road

Option	# of Responses Received	Preferred Ranking
Alternative A	8	1
Alternative B	1	4
Alternative C	2	3
Alternative D	6	2

17. The design alternatives were evaluated in consideration of comments received to determine the best design alternative based on the evaluation criteria. The evaluation criteria used for the design alternatives can be found in the ESR. The preferred design alternative is a combination of the design alternatives presented at the second PIC. For a summary and cross sections of the preferred design alternative by street see Appendix "D" and "E". The preferred design alternative is summarized below; please refer to the drawings in the ESR for more detail.
18. The preferred design alternative has minimized property impacts along Bayview Drive by incorporating sidewalks on west side only with reduced width.

19. The preferred design alternative has minimized driveway and tree impacts along the study area by incorporating a reduced sidewalk to 1.8 m, which still exceeds minimum permitted (1.5 m) under the Accessibility for Ontarians with Disabilities Act.

20. **Summary of the Preferred Design Alternative:**

Bayview Drive Improvements:

- 2 vehicle lanes - one north and one south 3.5 m
- Continuous two way left turning lane 4.2 m
- 1.5 m bike lanes on both sides of the street
- Variable boulevard widths west side (2.5 m to 3.0 m), east side (2.8 m to 6.2 m)
- 1.8 m sidewalk on west side only
- 14.2 m pavement width and variable right of way width (26 m +/-)
- Some additional property required for daylighting triangles at intersections and east side at Little Avenue and west side at Big Bay Point Road for right hand turn lane. Also sidewalk on east side from Little Avenue to west entrance of 177 Bayview Drive.

Big Bay Point Road Improvements:

- 4 vehicle lanes – two north and two south 3.5 m wide
- Continuous two way left turning lane 4.2 m wide
- 1.5 m bike lanes both sides of the street with 0.5 m buffer
- Variable boulevard widths north side (3.0 m to 3.6 m), south side (1.75 m to 2.9 m)
- 1.8 m sidewalk on south side only
- 22.2 m pavement width and variable right of way width (30 m +/-)
- Some additional property required for daylighting triangles at intersections, frontage of 130 Big Bay Point Road and side yard of 373 Huronia Road.

21. The following preliminary cost estimate for the preferred design alternative is based on full reconstruction of existing roads including new watermain (Bayview Drive only), storm sewers (with LID's), land acquisition, 15% utility relocation cost, 10% for engineering design and in-house costs, 10% construction contract administration and 25% for construction contingency.

Cross Section	Total Cost (\$)
Bayview Drive – Little Avenue to Big Bay Point Road	12,915,000
Big Bay Point Road – Huronia Road to Bayview Drive	12,545,000
Total	25,460,000

Both of these projects are development charges eligible and are included in the Development Charges Background Report.

22. The existing Wastewater Collection Master Plan did not identify any capacity issues in the area. The existing infrastructure is circa 1970 to 1990 and rated good to very good. Structural and conveyance requirements will be reviewed at detail design for any required improvements.
23. The traffic volumes to warrant a 7-lane cross section recommended in the MMATMP on Big Bay Point Road will not occur until the widening of Highway 400 and the subsequent interchange construction at Harvie Road and Big Bay Point Road. The widening associated with the interchange is not anticipated within the 2031 study horizon. Therefore, the preliminary cost estimate for the 5-lane cross section preferred design alternative is significantly lower than the 7-lane cross section included for consideration in the 2017-2021 Capital Plan.

24. Staff are recommending that the preferred design alternative be adopted by Council at this time, in order that a Notice of Completion can be filed as required as part of the Class EA process. The Notice of Completion is the final point in the public process where the public can express their concerns if they feel issues raised through the Class EA process have not been sufficiently addressed. If there are no Part II requests received, Phases 3 and 4 of the Class EA process can be considered complete and the City can proceed with the implementation of the preferred design alternative. This implementation would include the property acquisition, utility relocations, detailed design phases and construction of the infrastructure.
25. This project coordinates with other transportation, watermain, sanitary and storm renewal projects and active transportation capital projects planned for Bayview Drive and Big Bay Point Road in the Study Area.

ENVIRONMENTAL MATTERS

26. This project has followed the guidelines for a Municipal Class EA, and physical, natural, social, cultural/heritage and economic environmental matters have been considered in the development of the recommendations. The ESR discusses how environmental matters have been considered in the development of the recommended preferred design alternative. The evaluation process considered criteria for natural, social, cultural/heritage and economic environmental matters and physical environment criteria such as traffic, pedestrians, cyclists, transit, property, noise, utilities, municipal services and driveway grades/operations.

ALTERNATIVES

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

Alternative #1

General Committee could alter the proposed recommendation by selecting another design alternative.

This Alternative is not recommended because the preferred design alternative provides for transportation improvements which minimize the effects to the physical, natural, social, cultural/heritage and economic (financial) environments.

FINANCIAL

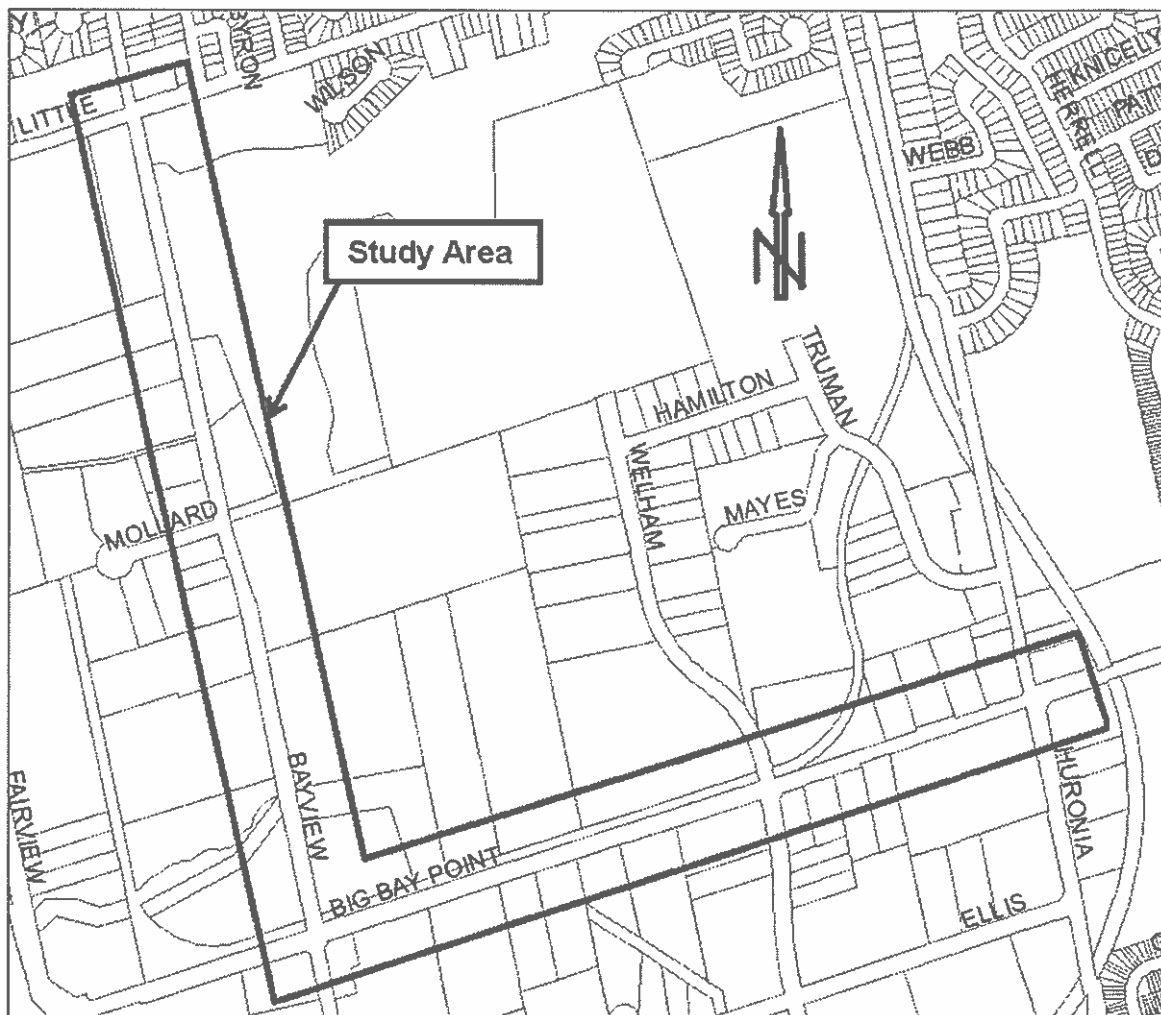
28. The 2016 - 2020 Capital Plan includes funding of \$8,727,000 for the Bayview Drive Improvements, \$12,407,000 for Big Bay Point Road improvements forecasted for design and construction. These projects have been included for consideration as part of the 2017 - 2026 capital plan process.
29. The Engineering Department requested additional funds of \$381,150 requested through the November 28, 2016 Capital Status Report (FIN012-16) for project management services to assist in advancing the design of the following projects:
 - Harvie Road Right of Way Expansion
 - Bryne Drive Right of Way Expansion
 - Essa Road Right of Way Expansion
 - Big Bay Point Road Right of Way Expansion
 - Bayview Drive Right of Way Expansion
30. The preferred design alternative will increase the operational unit costs for the increase in asphalt width (3.2 m on Bayview Drive and 14.6 m on Big Bay Point Road) relating to the addition of vehicular and bike lanes and for new sidewalks required along Bayview Drive (east side 1427 m / west side 70 m) and along Big Bay Point Road (south side 1195 m).

LINKAGE TO 2014 – 2018 COUNCIL STRATEGIC PLAN

31. The recommendation(s) included in this Staff Report support the following goals identified in the 2014-2018 Strategic Plan:
 - Responsible Spending
 - Well Planned Transportation
32. The preferred alternative solution from Phase 1 & 2 of the Class EA process completed as part of the MMATMP endorsed by Council, recommended transportation improvements including bike lanes and sidewalk improvements on Bayview Drive and Big Bay Point Road.
33. The implementation of the preferred alternatives, urbanization, drainage and watermain replacement provides a cost effective approach to this work avoiding throwaway costs of a piece meal approach.
34. This Class EA completes Phase 3 & 4 of process and implementation of the preferred design alternative provides necessary linkages within the City's transportation system and specifically for this area including the Harvie Road/Big Bay Point Road/Highway 400 overpass. The preferred design alternative will also provide key elements for active transportation such as bicycle lanes and sidewalks in consideration of Innisdale Secondary School and Allandale Recreation Centre. This linkage is also critical in planning for, and accommodating, future growth in the City of Barrie.

APPENDIX "A"

Map of Study Area



APPENDIX "B"

Property Requirement Cost Summary

Land Use	Bayview Drive		Big Bay Point Road	
	Area - m ²	Cost -\$	Area - m ²	Cost -\$
Residential	292	78,800	0	0
Commercial /Institutional	13	4,875	147	55,125
Industrial	1,182	254,100	339	72,900
Total	1,487	337,775	486	128,025

Note: These cost estimates include property only and do not account for the extra costs generally incurred.

APPENDIX "C"

Summary of Major Concerns and Responses

Concern	Preferred Design Alternative Solution
Proximity of vehicular lanes and sidewalks to property line given already minimal setbacks.	The Preferred Design Alternatives for Big Bay Point Road and Bayview Drive will maintain a 0.5 metre setback from property line to sidewalk, as is consistent with City of Barrie standards. Boulevard widths have been maximized to the extent possible to increase distance between edge of road and property line. The Preferred Design Alternatives have sought to minimize impacts to adjacent property, with limited property acquisition required. The use of retaining walls will be considered at detail design to minimize property acquisition.
Raised median with 7-lane options will negatively impact driveway operations by restricting turning movements. Also undesirable with respect to emergency response services.	The Preferred Design Alternative is alternative D (5-lane cross section) for Big Bay Point Road and does not include a raised centre median. Thus access to adjacent properties will not be restricted. The Preferred Design Alternative includes a continuous two-way left turn lane that will ultimately improve access to adjacent properties. With respect to emergency response services, the proposed improvements will result in a wider cross-section that will facilitate the movements of emergency vehicles.
Loss of property will negatively impact parking supply and driveway operations (i.e. shipping & receiving areas)	The Preferred Design Alternatives is Alternative D (a 5-lane cross section) for Big Bay Point Road and Alternative 1 (a 3-lane cross section) for Bayview Drive. Minor property acquisition is required at intersections to establish daylight triangles. Additional property will also be required to accommodate the provision of additional turn lanes at the intersections of Bayview Drive with Big Bay Point Road and Little Avenue; however, the property taking will in these areas will not impact parking areas.
Property acquisition to the south of Big Bay Point Road when rail corridor sits unused	The Preferred Design Alternative 5-lane for Big Bay Point Road respects the existing rail corridor to the north and does not require any property acquisition to the south. With the exception of minor property requirements required at intersections to establish appropriate daylight triangles, the Preferred Design Alternative will be constructed within the existing right-of-way. It is noted that the property requirements for the daylight triangles are consistent for all of the alternatives considered.
Access to loading docks requires trucks to stop on shoulder of Big Bay Point Road prior to backing into property, blocking traffic in both directions. Road widening and increased traffic will make this worse.	The Preferred Design Alternatives is Alternative D (a 5-lane cross section) for Big Bay Point Road and includes the following mitigating measures <ul style="list-style-type: none"> • No sidewalk on north side, 5 lanes with painted bicycle lanes and a two way left hand turn lane (no raised median) • Removal of open ditches adjacent to road platform creating a level boulevard to property line • Relocation of overhead hydro/utility poles on north side of road from Huronia Road

APPENDIX "D"

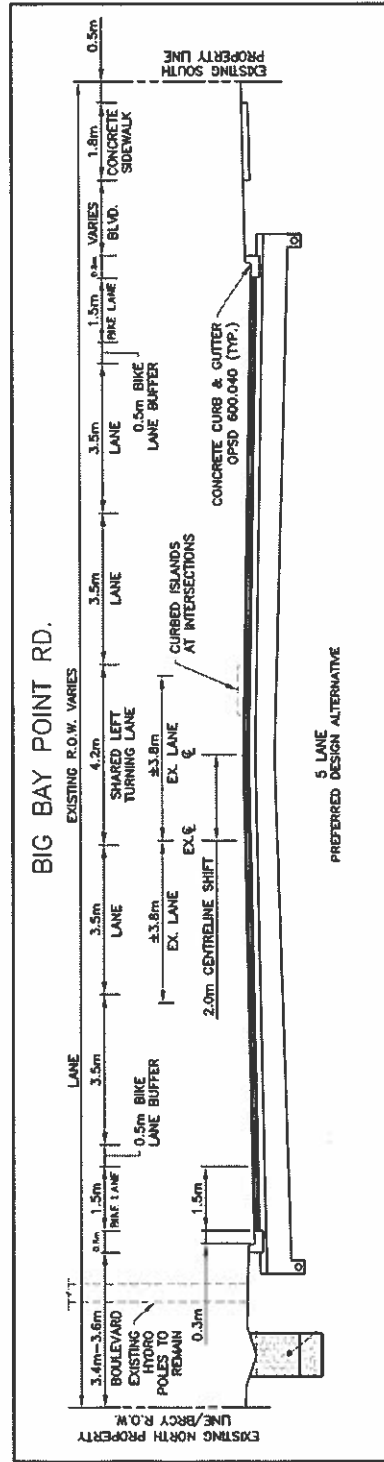
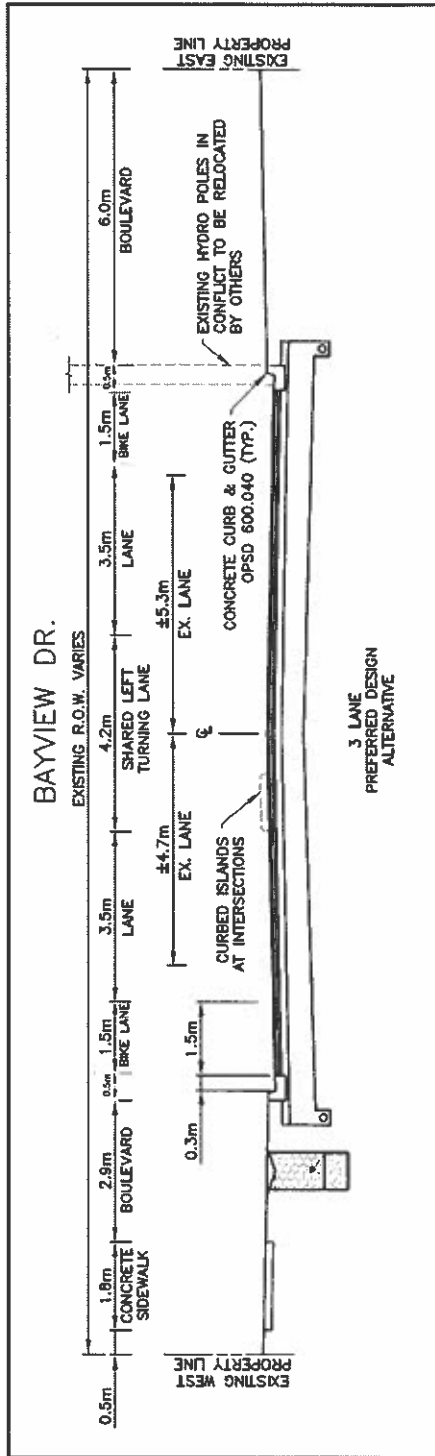
Preferred Design Alternative Summary

Preferred Design Alternative	Number of Through Lanes	Lane Width (meters)	Continuous Two Way Left Turning Lane (meters)	Boulevard Width (meters)	Bicycle Lane Width (meters)	Sidewalk Width (meters)	Median at Intersection	Pavement Width (meters)	Intersection Improvements
Bayview Drive (Little Avenue to Big Bay Point Road)	2	3.5	4.2	West Side - varies (2.5 to 3.0) East Side - varies (2.8 to 6.2)	1.5 - Both sides	1.8 - West side only	Curb medians at intersections only	14.2	Daylighting at Intersections, right turn lane on to Little Avenue, sidewalk on east side from Little Avenue to west entrance of 177 Bayview Drive and right turn lane on to Big Bay Point Road
Big Bay Point Road (Bayview Drive to Huronia Road)	4	3.5	4.2	North Side - varies (3.0 to 3.6) South Side - varies (1.75 to 2.9)	1.5 with 0.5 Buffer - Both sides	1.8 South side only	Curb medians at intersections only	22.2	Daylighting at Intersections and right turn lane on to Huronia Road

Notes: See drawings for property requirements. All dimensions to be confirmed at Detail Design.

APPENDIX "E"

Preferred Design Alternative Segment Cross Sections



Note: All dimensions to be confirmed at Detail Design