The City of BARRIE

STAFF REPORT ENG034-12
September 24, 2012.

File: T05-BA
Pending #:

TO:	**GENERAL COMMITTEE**
SUBJECT:	**BAYFIELD STREET TRANSPORTATION IMPROVEMENTS (GROVE STREET TO CUNDLES ROAD) MUNICIPAL CLASS EA, PHASES 3 & 4**
PREPARED BY AND KEY CONTACT:	**R. E. SCHEUNEMANN, P. Eng.** RS SS **INFRASTRUCTURE PLANNING ENGINEER (Ext. 4782)**
SUBMITTED BY:	**R. S. KAHLE, M. Eng., P. Eng.** **DIRECTOR OF ENGINEERING**
GENERAL MANAGER APPROVAL:	**R. W. MCARTHUR, P. Eng** RWM **GENERAL MANAGER OF INFRASTRUCTURE, DEVELOPMENT & CULTURE**
CHIEF ADMINISTRATIVE OFFICER APPROVAL:	**C. LADD** **CHIEF ADMINISTRATIVE OFFICER**

RECOMMENDED MOTION

1. That the Preferred Design Alternative for the Municipal Class Environmental Assessment for Bayfield Street (Class EA), from Grove Street to Cundles Road, Phases 3 & 4 be adopted as outlined in Staff Report ENG034-12.

2. That in accordance with the requirements of the Class EA process, the Engineering Department publish a Notice of Completion for the Bayfield Street Environmental Study Report.

PURPOSE & BACKGROUND

3. This staff report presents the recommended design alternative to address existing transportation issues on Bayfield Street (Grove Street to Cundles Road) and to accommodate future traffic growth to 2031.

4. In 1999 the City of Barrie Transportation Study identified the need for additional east-west vehicular capacity to meet existing and future traffic demands. Bayfield Street is an arterial route and the Average Daily Traffic (ADT) on Bayfield Street over Highway 400 was approximately 35,000 in 2010 (see Appendix "A" for overview of study area). This traffic volume is expected to increase by 32% by 2031.

5. Significant improvements on Bayfield Street are therefore required as currently the road generally exists as a five lane cross-section. The proposed road configuration to address the future traffic volumes is generally a six lane cross-section with both left and right turn lanes at strategic locations (see Appendix "B" for the Preferred Design Alternative).

6. A chronology of the Municipal Class Environmental Assessment (Class EA) process is provided in Appendix "C" and summarizes the various Public Information Centers (PIC) and various Motions from Council that have occurred throughout the process. Design alternatives were evaluated and modified to address the concerns from businesses and property owners and mitigate any impacts resulting from the proposed alternatives.

7. The existing Bayfield Street right-of-way is not sufficient to allow for the required road widenings and improvements proposed as part of the Design Alternatives. Additional property must therefore be acquired from properties fronting Bayfield Street. The process of acquiring property is through a combination of negotiated acquisition and expropriation as required.

ANALYSIS

8. The Bayfield Street Environmental Study Report (ESR) presents the recommended transportation improvements required to accommodate the 2031 traffic volumes. The transportation improvements include widening and realignment of the Highway 400 overpass to accommodate the proposed six through lane cross-section and includes additional turning lanes and ramp improvements. This is consistent with the Ministry of Transportations (MTO) Transportation Environmental Study Report (TESR) completed in 2004.

9. Comments received throughout the Class EA process, along with the Engineering Department's responses to the comments, are summarized in the Environmental Study Report (ESR) which is available in the Councillors' Lounge for review and major concerns and responses to those concerns are summarized in Appendix "D". Areas of major concern include:

    - Loss of full movement access to properties resulting from the implementation of the proposed median (medians would restrict access to right-in right-out only).
    - Loss of property.
    - Construction Impacts.

10. The proposed medians on Bayfield Street, between Grove Street and Cundles Road, would restrict the current full movement access to and from the existing residential and commercial businesses on both sides of Bayfield Street between Grove Street and Cundles Road. This was repeatedly raised as a major concern by many of the adjacent business and property owners. Medians reduce crashes and traffic delay. Driver safety is reduced when access is not properly designed. Good access is important to every business. Poorly designed entrances and exits not only present a traffic hazard, but also cause congestion that can create a negative image for the adjacent business. If a business location is difficult or unsafe to enter or exit, then customers may be dissuaded from visiting. Internal connections between businesses can allow customers to circulate without reentering a busy road. Raised medians reduce the number of collision over an undivided road or a road with a center turning lane. Additional safety justification details for medians can be reviewed in Appendix "E".

11. The Preferred Design Alternative has minimized property impacts on the east side of Highway 400 and on the south side of Bayfield Street by shifting the alignment of the road to the north. Property impacts throughout the study area have also been reduced from using reduced lane and boulevard widths.

12. Adverse impacts during construction can be minimized. Two key issues during construction are maintaining open access to businesses and residential properties and having sufficient sign visibility so customers know the business is open for business and know how to enter and exit the site during this period. When the road is scheduled for reconstruction, the City of Barrie will notify the adjacent businesses advising what to expect in terms of duration of construction and any foreseeable disruptions.

13. The MTO has been extensively consulted and is in support of the City of Barrie proceeding to the City of Barrie Council with the preferred design alternative recommendations on the condition that sidewalk widths over Highway 400 and MTO jurisdiction limits be reassessed/determined at detail design.

14. Twelve (12) people signed the attendance register at the second PIC. Twenty-four (24) comment sheets/responses were received pertaining to this Class EA. The comment sheet requested that the alternatives as described in Appendix "C" be ranked. Preferred rankings were received on 13 comment sheets and the results are as follows:

Alternative 1	28% ranked as preferred alternative
Alternative 2	36% ranked as preferred alternative
Alternative 3	36% ranked as preferred alternative
Alternative 4	0% ranked as preferred alternative

15. The design alternatives were evaluated in consideration of comments received to determine the best design alternative based on pre-determined criteria and the relative importance of the criteria. The Preferred Design Alternative is a combination of the design alternatives presented at the second PIC and developed in consideration of comments received. The scoring of the design alternatives can be found in the Environmental Study Report (ESR). For the Preferred Design Alternative see Appendix "B". The Preferred Design Alternative includes the following:

a) 1.5 m boulevards on both sides.
b) 1.5 m sidewalk on both sides with 2.0 m curb-faced sidewalk adjacent to 240 Bayfield and 336 Bayfield (to minimize property impacts) and 3.0 m curb face sidewalks over Highway 400.
c) A raised non-traversable median with left turn in opening to the Bayfield Mall and mid block between Ferris Lane and Cundles Road.
d) Right-in Right-Out at Glenwood Drive.
e) Three 3.3 m wide through lanes in each direction within Barrie. Three 3.75 m wide through lanes in each direction within the MTO corridor.

As part of the widening of Highway 400, the MTO proposed the following transportation improvements at the Bayfield interchange in the Highway 400 TESR:

a) Realignment of the North Bound off ramp.
b) Realignment of the South Bound off ramp and Coulter Street.

16. In accordance with the City's Policy for minimizing construction impacts on business, the contract documents will require that one lane of traffic in each direction be maintained during the construction, where possible.

17. The City will encourage property owners to negotiate cross-access easement agreements between private property owners, as identified in the ESR, to allow alternate access to properties on the north and south side of Bayfield Street, between Highway 400 and Cundles Road, to mitigate restricted access concerns resulting from the proposed median.

18. The following preliminary cost estimate for the Preferred Design Alternative is based on reconstructing existing roads.

Alternative	Gross Land Acquisition Costs ($ millions)	Construction Costs Hwy. 400 Corridor Including Structure ($ millions)	Road Costs ($ millions)	Total Cost ($ millions)
Preferred Design Alternative	$8.21	$26.0	$3.67	$37.88

Note 1: Cost does not include utility relocates or taxes. Cost also assumes road widening, not reconstruction.
Note 2: Please see Appendix "F" for costs associated with all of the Design Alternatives.
Note 3: Construction Costs Hwy. 400 Corridor include from just west of the southbound Highway 400 Off-ramp to just east of the northbound Highway 400 Off-ramp, including all ramps.
Note 4: Potential contaminated soil costs not included.
Note 5: Gas station tank relocation costs not included.

19. The Preferred Design Alternative includes the following additional life cycle costs which would become part of the City's asset inventory:

Asset Life Cycle Cost

Asset Type	Length (m)	Useful life (Years)	Annual Renewal Cost ($/year)
Roads – Arterial	1100	45	$26,000

Note 1: Renewal costs are based on 2012 dollars
Note 2: Replacement costs not included

20. Renewal costs are based on best practice lifecycle activities for roadways that are required in order to reach their maximum potential life. The total cost of lifecycle activities has been estimated, summed, and divided by the expected useful life to determine the average annual renewal cost. Additional investigation into the lifecycle costs, associated with various assets, is ongoing as part of the implementation of the Corporate Asset Management Strategy. Replacement costs are to ultimately replace the asset at the end of its lifecycle.

21. The additional operating costs, associated with the maintenance of extra road lanes and sidewalks, will be added to future business plans. Acceptance of the Preferred Design Alternative will increase future operating and maintenance funding requirements due to the addition of assets to the City's asset inventory. It is anticipated that the costs will be offset, in part, by property taxes collected from increased development in Barrie. The increases in service related costs, once the Preferred Design Alternative is implemented, will be approximately as follows:

	Lane Length (km)	Annual Operating Cost ($/year/km)	Annual Operating Cost ($/year)
Roads (e.g. Street Sweeping)	2.2	$4,848	$10,666
Winter Control	2.2	$4,082	$8,980
Total Service Delivery Costs			± $19,646

Note (1): Annual operating costs are derived from the 2011 cost estimates based on OMBI.
Note (2): Costs do not include potential additional cost from snow lift operation.

22. The 2012 Business Plan and the associated 2012-2020 Capital Plan does not currently include funds for the construction of any of the transportation improvements identified in the Bayfield ESR. Timing for the transportation improvements will be recommended in the Multi Model Active Transportation Plan currently underway and is expected to be completed by the end of 2012.

23. 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 detailed design phase and construction of the infrastructure. The detailed design and construction phases would then be considered in the City's capital planning process which is significant due the potential costs associated with the infrastructure. Long range planning for such financial impacts is beneficial. It allows the City to plan for this project in coordination with other capital, development, and utility projects that may occur in the area and impact land requirements or other road infrastructure. The Class EA process allows the public and other agencies to understand what is planned for the future in the area. If there are circumstances that arise in the future that would cause the City to need to reconsider the current Preferred Design Alternative, the City always has the option to make revisions and issue addenda to the ESR, following the process prescribed by the Class EA.

ENVIRONMENTAL MATTERS

24. This project has followed the guidelines for a Municipal Class Environmental Assessment, and physical, natural, social, cultural 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 alternative. The ranking and scoring process considered all natural, social and economic environmental matters, property, noise, pedestrian, cyclists etc.

ALTERNATIVES

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

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

This is not recommended because the Preferred Design Alternative provides for transportation improvements which minimize the effects to the physical, natural, social, cultural and economic (financial) environments.

FINANCIAL

26. There are no financial implications for the Corporation resulting from the proposed recommendation.

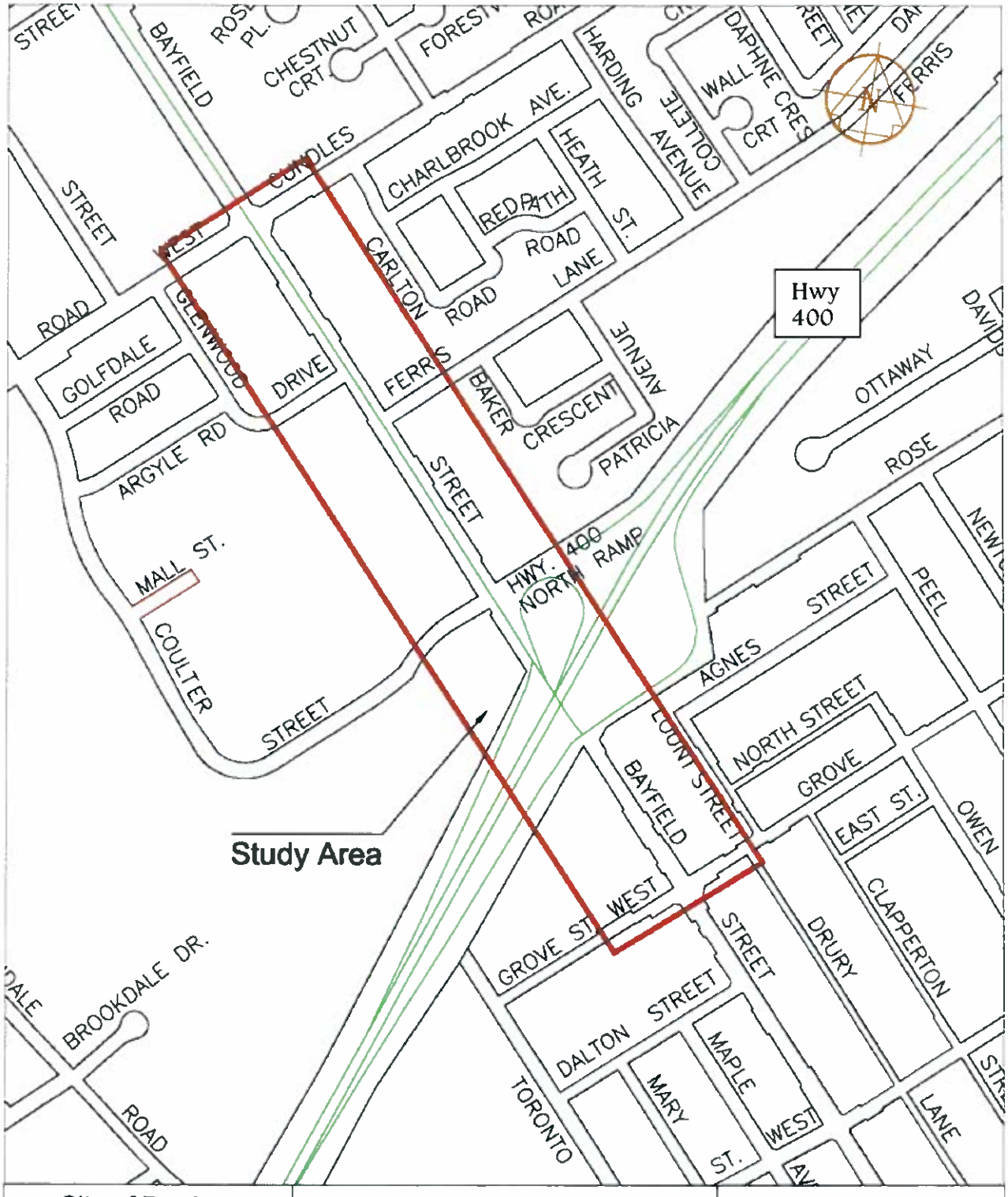
LINKAGE TO 2010 – 2014 COUNCIL STRATEGIC PLAN

27. 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

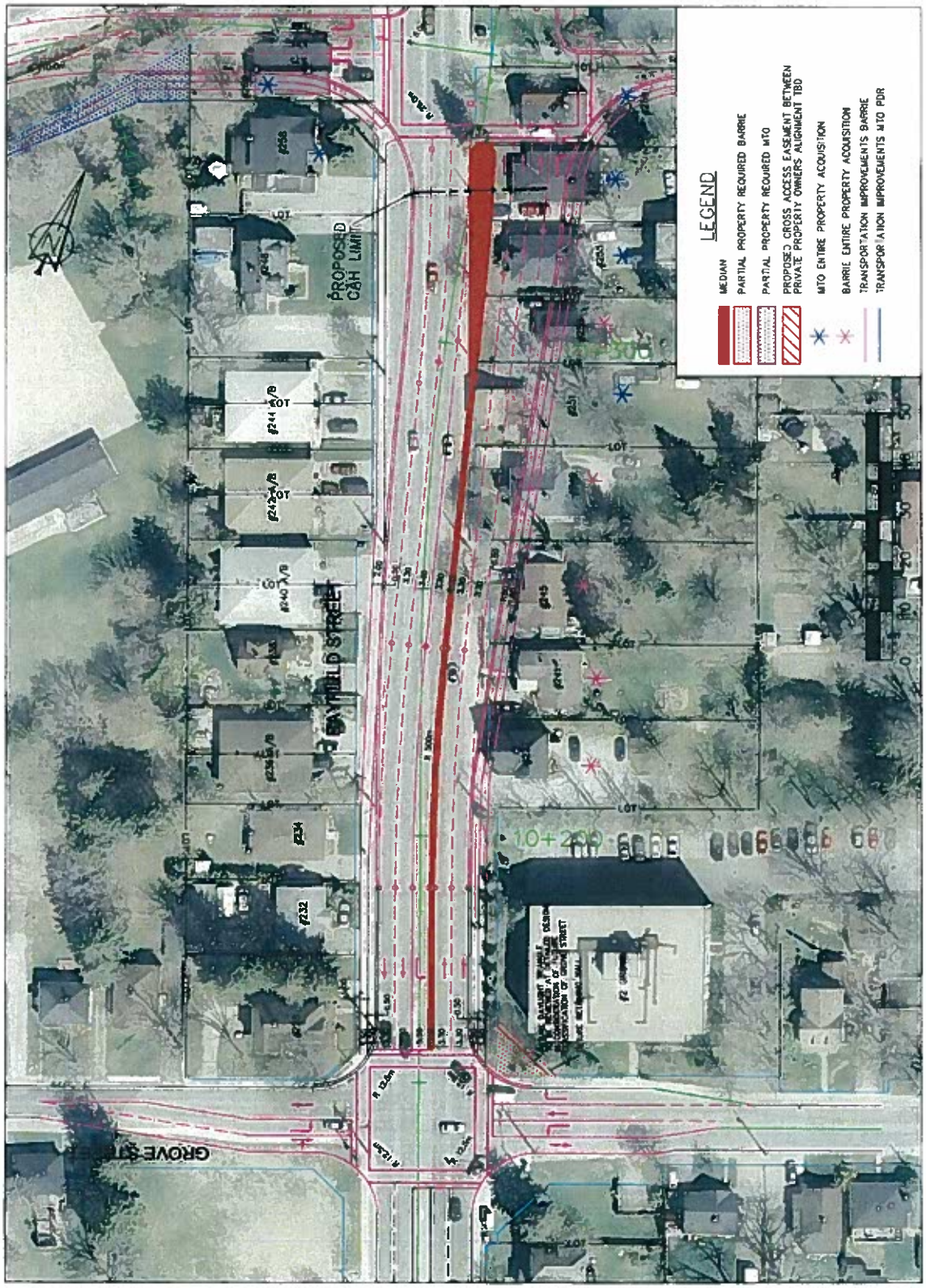
28. This Class EA Study for the widening of Bayfield Street demonstrates good, long range transportation planning. Good transportation linkages are critical in planning for, and accommodating, future growth in the City of Barrie.

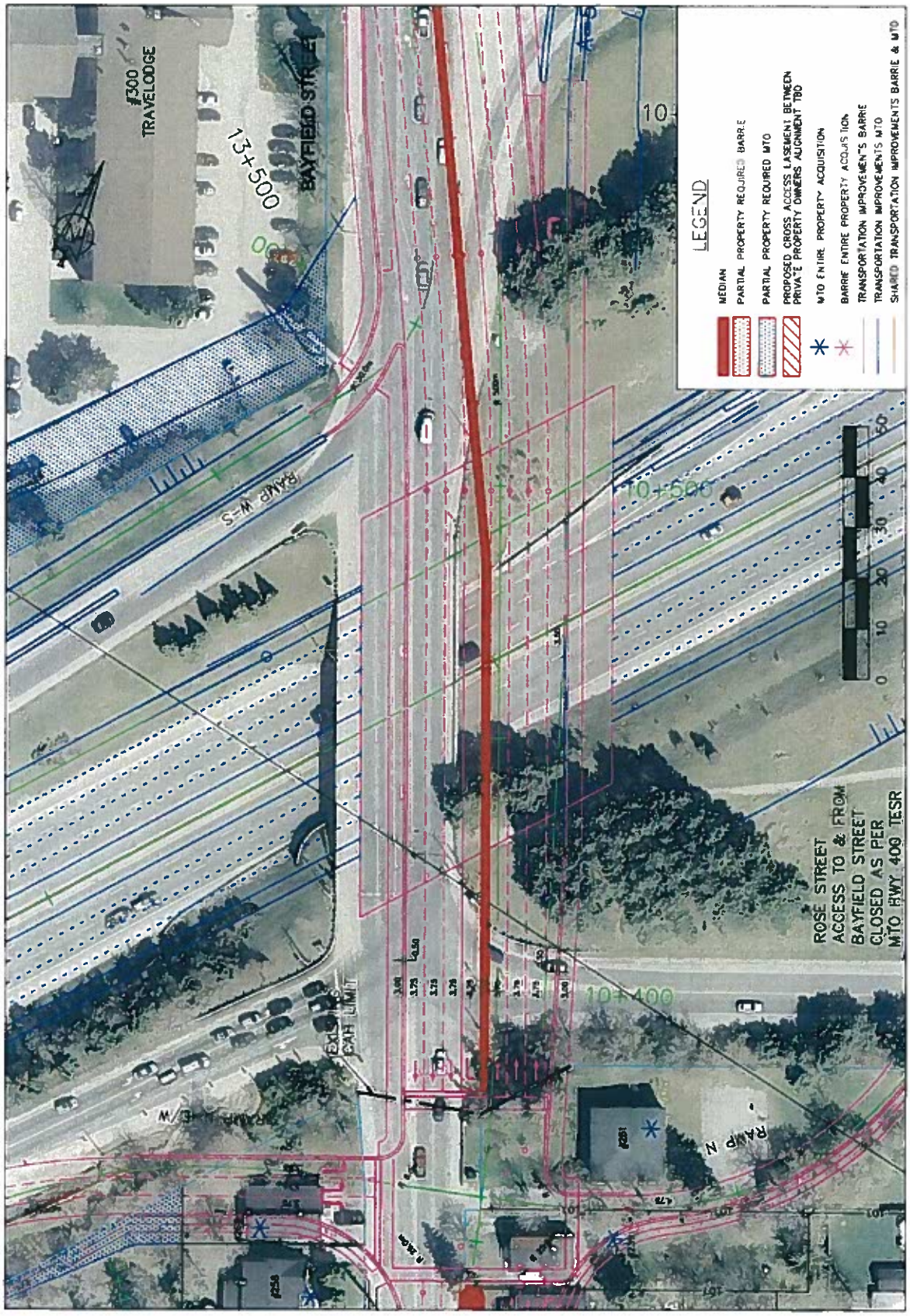
APPENDIX "A" – Study Area



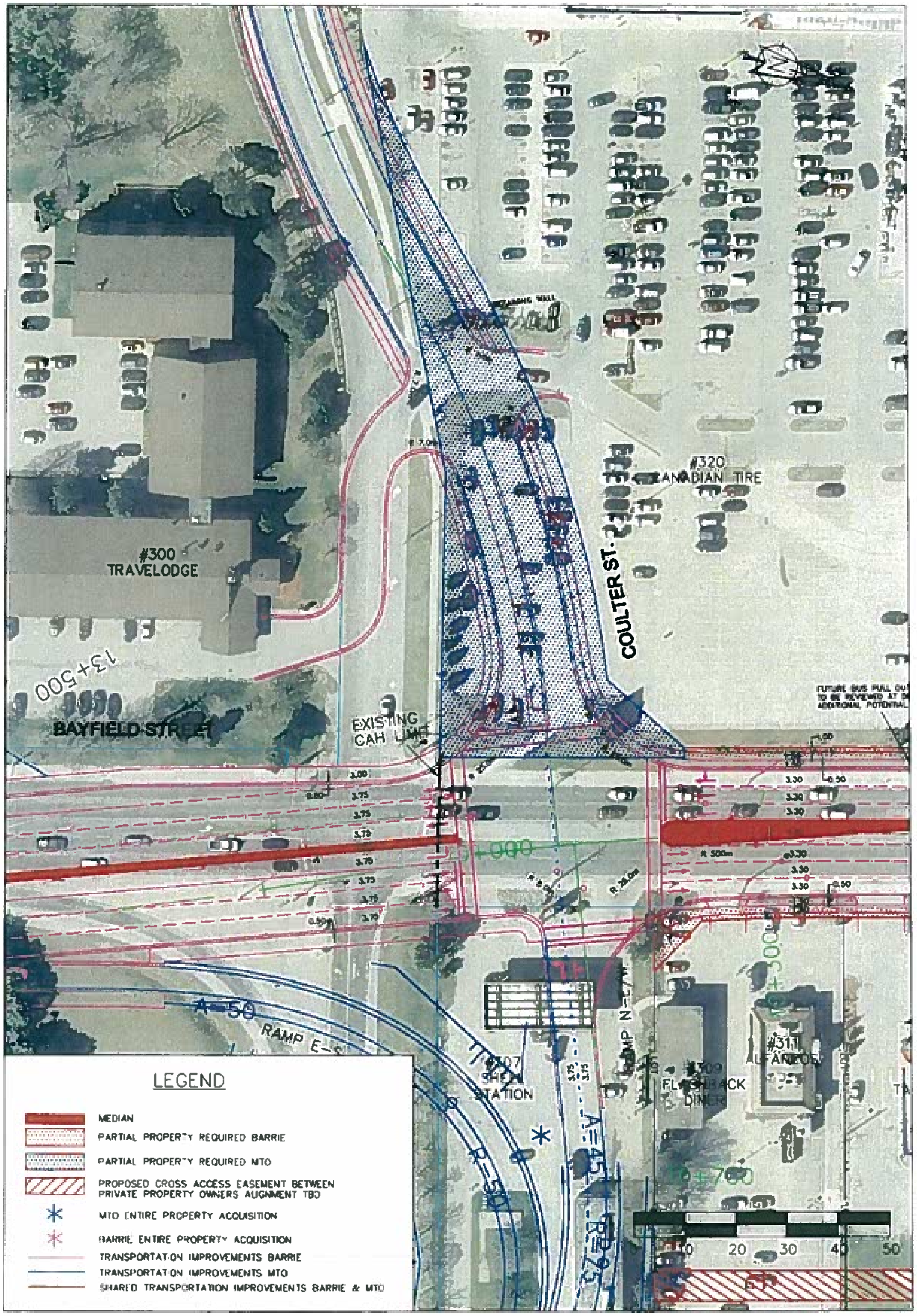
City of Barrie Engineering Department	Figure 1 **Study Area**	Scale: N.T.S. Date: December 15, 2008.

APPENDIX "B" – Preferred Design Alternative

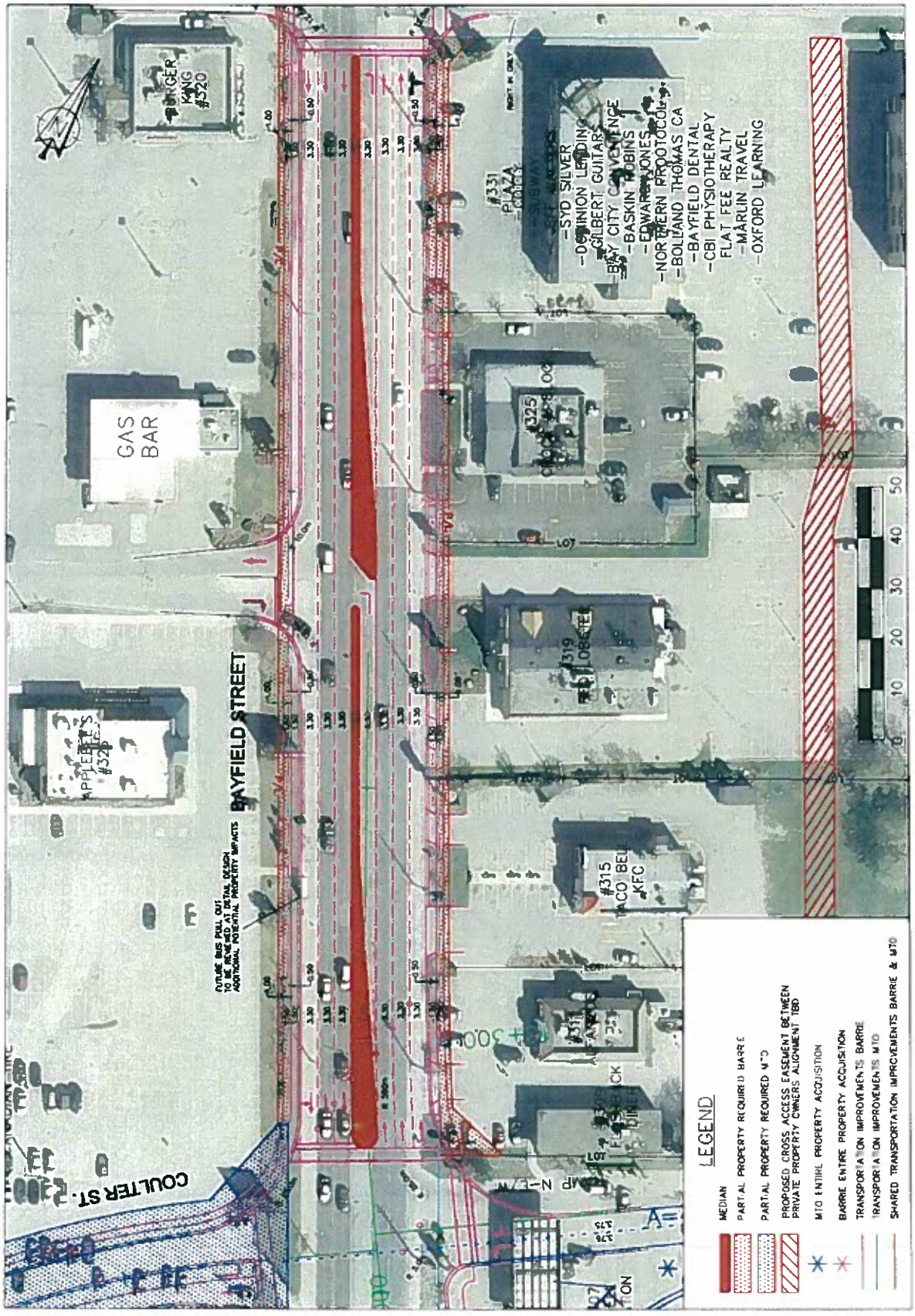


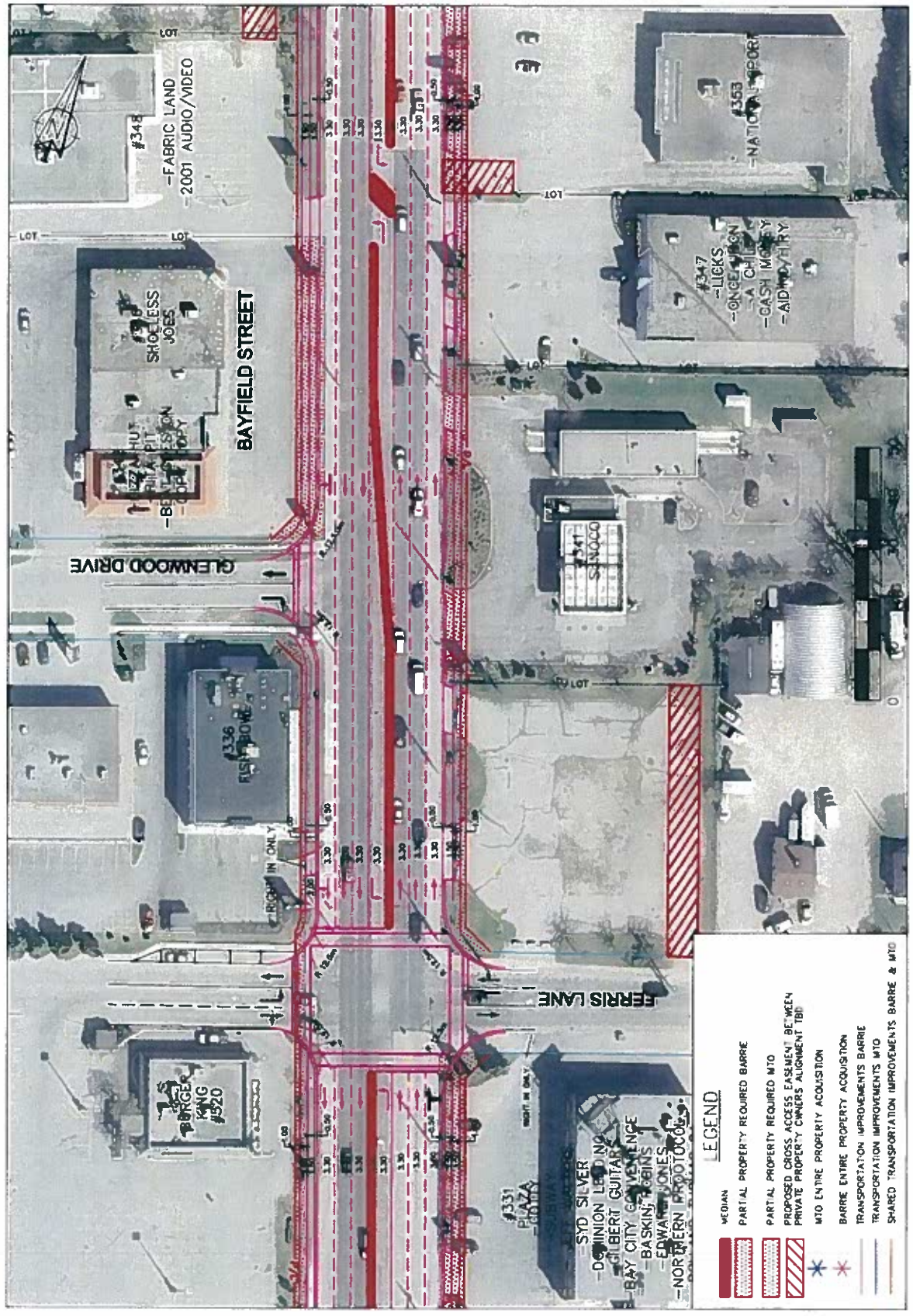

#300 TRAVELODGE
BAYFIELD STREET
13+500
10+500
10+400
RAMP W-S
RAMP N
EXISTING CAR LIMIT
ROSE STREET ACCESS TO & FROM BAYFIELD STREET CLOSED AS PER MTO HWY 400 TESR
LEGEND
MEDIAN
PARTIAL PROPERTY REQUIRED BARRIE
PARTIAL PROPERTY REQUIRED MTO
PROPOSED CROSS ACCESS EASEMENT BETWEEN PRIVATE PROPERTY OWNERS ALIGNMENT TBD
MTO ENTIRE PROPERTY ACQUISITION
BARRIE ENTIRE PROPERTY ACQUISITION
TRANSPORTATION IMPROVEMENTS BARRIE
TRANSPORTATION IMPROVEMENTS MTO
SHARED TRANSPORTATION IMPROVEMENTS BARRIE & MTO
0 10 20 30 40 50

2 OF 6


#320
CANADIAN TIRE
COULTER ST.
#300
TRAVELODGE
13+500
BAYFIELD STREET
EXISTING
CAH LIMIT
FUTURE BUS PULL OUT
TO BE REVIEWED AT
ADDITIONAL POTENTIAL
RAMP E-S
#307
SHELL
STATION
#309
FLASHBACK
DINER
#311
10+700
10 20 30 40 50
LEGEND
MEDIAN
PARTIAL PROPERTY REQUIRED BARRIE
PARTIAL PROPERTY REQUIRED MTO
PROPOSED CROSS ACCESS EASEMENT BETWEEN
PRIVATE PROPERTY OWNERS ALIGNMENT TBD
MTO ENTIRE PROPERTY ACQUISITION
BARRIE ENTIRE PROPERTY ACQUISITION
TRANSPORTATION IMPROVEMENTS BARRIE
TRANSPORTATION IMPROVEMENTS MTO
SHARED TRANSPORTATION IMPROVEMENTS BARRIE & MTO

3 OF 6


BAYFIELD STREET
COULTER ST.
GAS BAR
#331 PLAZA
-SYD SILVER
-DOMINION LENDING
-GILBERT GUITARS
-BAY CITY CONVENIENCE
-BASKIN ROBBINS
-EDWARD JONES
-NORTHERN PROTOCOL
-BOLLAND THOMAS CA
-BAYFIELD DENTAL
-CBI PHYSIOTHERAPY
FLAT FEE REALTY
-MARLIN TRAVEL
-OXFORD LEARNING
#325
#319
#315
TACO BELL
KFC
BURGER KING #320
APPLEBEE'S #32
FUTURE BUS PULL OUT TO BE REVIEWED AT DETAIL DESIGN ADDITIONAL POTENTIAL PROPERTY IMPACTS
LEGEND
MEDIAN
PARTIAL PROPERTY REQUIRED BARRIE
PARTIAL PROPERTY REQUIRED MTO
PROPOSED CROSS ACCESS EASEMENT BETWEEN PRIVATE PROPERTY OWNERS ALIGNMENT TBD
MTO ENTIRE PROPERTY ACQUISITION
BARRIE ENTIRE PROPERTY ACQUISITION
TRANSPORTATION IMPROVEMENTS BARRIE
TRANSPORTATION IMPROVEMENTS MTO
SHARED TRANSPORTATION IMPROVEMENTS BARRIE & MTO


BAYFIELD STREET
GLENWOOD DRIVE
FERRIS LANE
#348
-FABRIC LAND
-2001 AUDIO/VIDEO
#347
-LICKS
-CASH MONEY
#341
SUNOCO
#336
#331
PLAZA
-SYD SILVER
-DOMINION LENDING
-GILBERT GUITARS
-BAY CITY CONVENIENCE
-BASKIN-ROBBINS
-EDWARD JONES
-NORTHERN PROTOCOL
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PARTIAL PROPERTY REQUIRED BARRIE
PARTIAL PROPERTY REQUIRED MTO
PROPOSED CROSS ACCESS EASEMENT BETWEEN PRIVATE PROPERTY OWNERS ALIGNMENT TBD
MTO ENTIRE PROPERTY ACQUISITION
BARRIE ENTIRE PROPERTY ACQUISITION
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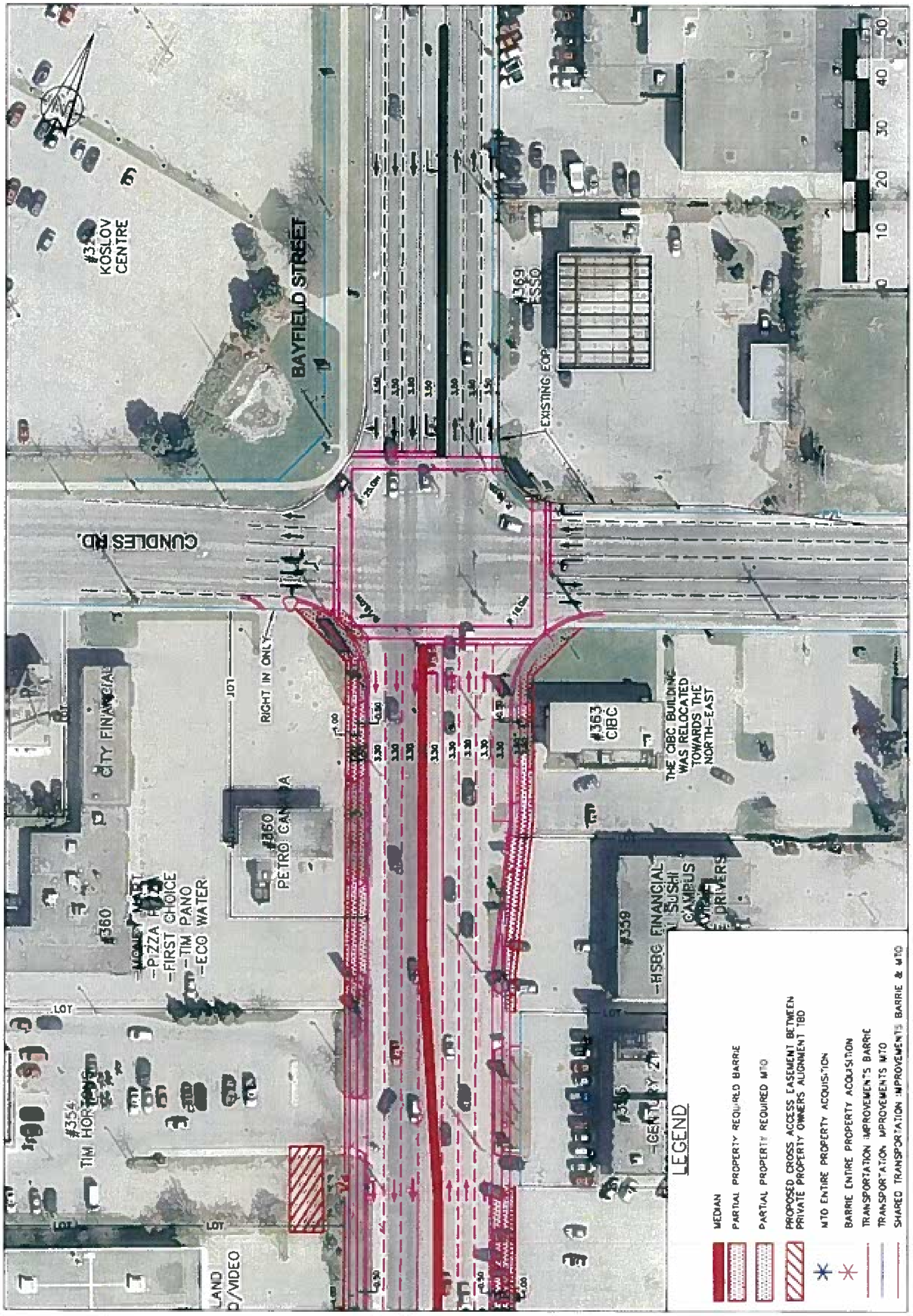
TRANSPORTATION IMPROVEMENTS MTO
SHARED TRANSPORTATION IMPROVEMENTS BARRIE & MTO

5 OF 6


BAYFIELD STREET
CUNDLES RD.
#354 KOSLOV CENTRE
#369 ESSO
EXISTING EOP
#363 CIBC
THE CIBC BUILDING WAS RELOCATED TOWARDS THE NORTH-EAST
RIGHT IN ONLY
CITY FINANCIAL
#360 PETRO CANADA
#360
-PIZZA
-FIRST CHOICE
-TIM PANO
-ECO WATER
#359
-HSBC FINANCIAL
#354 TIM HORTONS
LOT
LEGEND
MEDIAN
PARTIAL PROPERTY REQUIRED BARRIE
PARTIAL PROPERTY REQUIRED MTO
PROPOSED CROSS ACCESS EASEMENT BETWEEN PRIVATE PROPERTY OWNERS ALIGNMENT TBD
MTO ENTIRE PROPERTY ACQUISITION
BARRIE ENTIRE PROPERTY ACQUISITION
TRANSPORTATION IMPROVEMENTS BARRIE
TRANSPORTATION IMPROVEMENTS MTO
SHARED TRANSPORTATION IMPROVEMENTS BARRIE & MTO
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10
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6 OF 6

Appendix "C" – Class EA Background

1. The first Public Information Centre (PIC) for the Bayfield Street Class EA (from Grove Street to Cundles Road) Phase 1 & 2 was held on December 7th and 9th, 2004, to allow the public and applicable review agencies the opportunity to review the alternatives and ask any questions. Comment sheets containing the public/review agency comments and/or concerns from the first PIC were considered in the development of the Preferred Alternative Solution.

2. On June 20, 2005, Barrie Council, adopted 05-G-343 as follows:

   "That based on the "Municipal Class Environmental Assessment (Class EA) for Barrie Streets at Highway 400 Under/Overpasses and Interchanges", the following be endorsed as the preferred alternatives for Bayfield Street from Cundles Road to Grove Street:

   a) That the proposed structure over Highway 400 will have six (6) through lanes, one (1) turning lane, and one (1) speed change lane, for a total of eight (8) lanes on the structure;

   b) That Bayfield Street be widened by one (1) through lane in each direction, for a total of six (6) through lanes (three (3) in each direction) from Cundles Road to Grove Street, plus operational improvements at intersections; and

   c) Sidewalks are recommended on both sides of the structure and roadways.

3. In 2008 the City of Barrie retained AECOM Canada Ltd. to undertake Phases 3 and 4 of the Bayfield Municipal Class EA from Grove Street to Cundles Road.

4. The Phase 3 & 4 Public Information Centre (PIC) was held on Thursday, January 22, 2009, to receive comments regarding the proposed alternative design solutions presented in the draft Bayfield Street Transportation Improvements ESR. The following alternatives were presented at the PIC (see Appendix "F" for a table summarizing the design alternatives).

   Alternative 1

   Reconstruct to six (6) through lanes with continuous center turn lane, turning lanes at intersections and bridge improvements as appropriate, with standard boulevards and sidewalks in accordance with City of Barrie standard cross-section for 7 lanes of pavement, transitioning to four (4) through lanes and one turning lane north of Grove Street to match existing. Pavement width varies from 17.5 m at Grove Street to 25 m from Highway 400 northerly. Right-of-way width varies from 26.5 m minimum to 40 m maximum.

   Alternative 2

   Reconstruct to six (6) narrower through lanes with continuous center turn lane, turning lanes at intersections, and bridge improvements as appropriate, with 2.0 m curb faced sidewalk without boulevards, transitioning to four (4) through lanes and one turning lane north of Grove Street to match existing. Lane widths of 3.25 m, with a 4.0 m center turn lane from Highway 400 northerly and a 3.5 m wide center turn lane from Highway 400 to Grove Street. Pavement width varies from 16.5 m north of Grove Street to 23 m from Highway 400 north. Right-of-way width varies from 26.5 m minimum to 32.5 m maximum.

Alternative 3

Reconstruct to six (6) through lanes with turning lanes at intersections as appropriate, with a raised median and standard 1.5 m sidewalks with reduced boulevards, transitioning to four (4) through lanes and one turning lane north of Grove Street to match existing. Pavement width varies from 17.5 m to 25 m. Right-of-way width varies from 26.5 m minimum to 34 m maximum. With this alternative, "left outs" would be restricted from all driveways as a result of the raised median, and "left ins" would be permitted at major driveways.

Alternative 4

Reconstruct to six (6) through lanes with continuous center turn lane and turning lanes at intersections as appropriate, and standard sidewalks with reduced boulevards, transitioning to four (4) through lanes and one turning lane north of Grove Street to match existing. Pavement width varies from 17.5 m at Grove Street to 23.8 m from Highway 400 north. Right-of-way width varies from 26.5 m minimum to 35.8 m maximum.

5. An Open House was held on November 24, 2011 to give adjacent property owners, businesses and agencies the opportunity to provide comments on the preliminary preferred design alternative.

APPENDIX "D"

Table 1 – Summary of Major Comments and Responses

Comment/Concern	Response
Fire Department express concerns about crossing a raised median.	At detail design mountable median curbs will be considered in key locations in consultation with Barrie Fire.
Proposed medians will restrict access to and from adjacent properties.	Medians reduce crashes and traffic delay due to increased traffic volumes and number of lanes. Raised medians reduce the number of collisions over an undivided road or a road with a center turning lane. Poorly designed entrances and exits not only present a traffic hazard, but also cause congestion that can have a negative impact on business. If a business location is difficult or unsafe to enter or exit, then customers may be dissuaded from visiting. The proposed medians on Bayfield will reduce traffic congestion and allow for future growth in traffic/business. Traffic will find alternate routes of travel to access business on Bayfield Street where the medians restrict access. Proposed median openings and the associated proposed cross access easements (to be negotiated between property owners) will mitigate the impact of the proposed medians.
Time of proposed construction.	Neither Barrie nor MTO have any funds currently in their budgets to undertake detail design or construction. Once Funding is approved it will take at least 4 years before any construction is seen on Bayfield Street.
Impacts to adjacent property.	The preferred design alternative minimizes impacts to adjacent properties by reducing lane and boulevard widths and reducing the numbers of lanes from 7 to 5 immediately north of Grove Street.

APPENDIX "E" - Medians

The safety benefits of medians on urban roadways flow from several factors. The introduction of a median provides positive separation between opposing directions of vehicular traffic. This reduces the potential for head-on and sideswipe collisions. The presence of a median also serves an access control function reducing potential conflicts resulting from turning movements and allowing designers and traffic engineers to properly focus such activities at controlled locations with appropriate design features. Urban medians can also serve an important function in terms of accommodating pedestrian crossings at arterial intersections and if desired at designated mid-block and properly controlled crossing locations.

Table 15: Estimated total collisions/ kilometre/ year (42)

ADT	Collisions Per Kilometre Per Year		
	Undivided	TWLTL	Raised Median
10,000	30	24	20
20,000	78	37	34
30,000	118	57	48
40,000	157	70	53

Table 15 clearly shows that traffic volume is a primary determinant of collisions per kilometre per year: the number of collisions per kilometre per year was found to increase dramatically as the ADT increases. Again, in all traffic volume groupings, the raised median alternative provided superior safety performance, followed by the TWLTL and then the undivided roadway. Not surprisingly, the differences in safety performance become more significant as traffic volumes increase – with the raised median alternative having a 33% lower collision rate than an undivided facility at an ADT of 10,000, but a 67% lower collision rate at an ADT of 40,000.

TWLTL = Two Way Left Turn Lane

Excerpts taken from Chapter 8 of TAC, April 2010

NOTE: For additional information please see US Department of Transportation website on Safe Access is Good for Business at the following link:

http://ops.fhwa.dot.gov/publications/amprimer/access_mgmt_primer.htm

Appendix "F" – Design Alternatives Comparison Table

Design Alternatives	1	2	3	4	Preferred Alternative
Lane Width	3.5 m	3.25 m	3.5 m	3.3 m	3.3 m Barrie Jurisdiction 3.75 m MTO Jurisdiction
Boulevard Width	1.5 m	0.0 m	1.5 m	2.0 m	1.5 m Barrie Jurisdiction 0 m MTO Jurisdiction
Alignment Shift	No - Barrie Yes - MTO	No - Barrie Yes - MTO	No - Barrie Yes - MTO	No - Barrie Yes - MTO	No - Barrie Jurisdiction Yes - MTO Jurisdiction
Sidewalk Width	1.5 m	2.0 m	1.5 m	2.0 m	1.5 m Barrie Jurisdiction 3.0 m MTO Jurisdiction
Type of Sidewalk	Standard	Curb Faced	Standard	Standard	Standard & some Curb Face Barrie Curb Faced MTO
Median	Only At Intersections	No	4.0 m max West of Hwy 400	Only At Intersections	4.8 m max
Center Turn Lane	4.0 m	3.5 m	3.5 m East of Hwy 400	3.5 m	Some Left Turn In Openings in median west of Hwy 400
Bike Lanes	None	None	None	None	None
Pavement Width	25 m max	23 max	25 m max	23.8 m max	24.6 m Barrie Jurisdiction 27.75 m MTO Jurisdiction Additional property at some intersections to accommodate recommended turning lanes
ROW Width	varies 26.5 m to 40 m	Varies 26.5 m to 32.5 m	Varies 26.5 m to 34 m	Varies 26.5 m to 35.8 m	Varies 26.5 m to 33.6 m
Hwy 400 Interchange Cost	$26.0 Million	$26.0 Million	$26.0 Million	$26.0 Million	$26.0 Million
Bayfield Road Costs Outside of Interchange	$3.64 Million	$3.70 Million	$3.72 Million	$3.55 Million	$3.67 Million
Gross Land Cost	$9.77 Million	$7.94 Million	$8.31 Million	$8.74 Million	$8.21 Million
Total Cost[2]	$39.41 Million	$37.64 Million	$38.03 Million	$38.29 Million	$37.88 Million

Note (1) Land costs include those lands which may be acquired through development approval
Note (2) Utility relocation costs not included
Note (3) Potential contaminated soil costs not included
Note (4) Potential gas tank relocation costs not included