Welcome

to
Public Information Centre No. 2
for the
Ward Street Widening
Class Environmental
Assessment (EA)

Thursday, May 31, 2018 4:00 pm to 7:00 pm Chemong Public School

Please sign in and let any of the Project Team Members know if you have any questions at all.



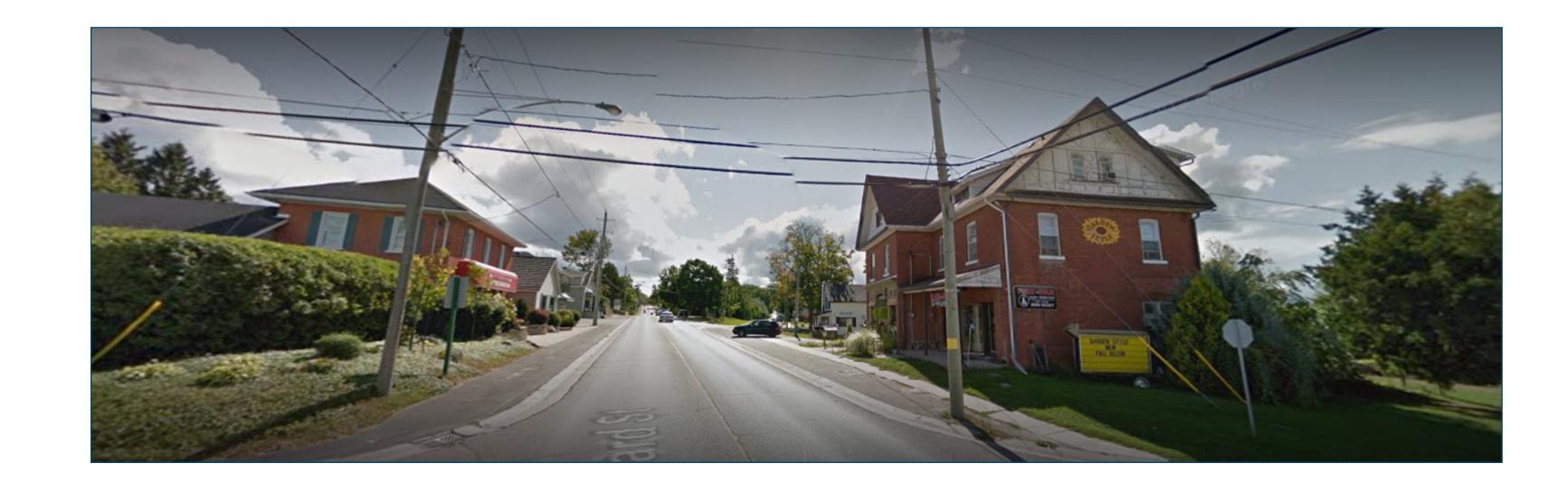


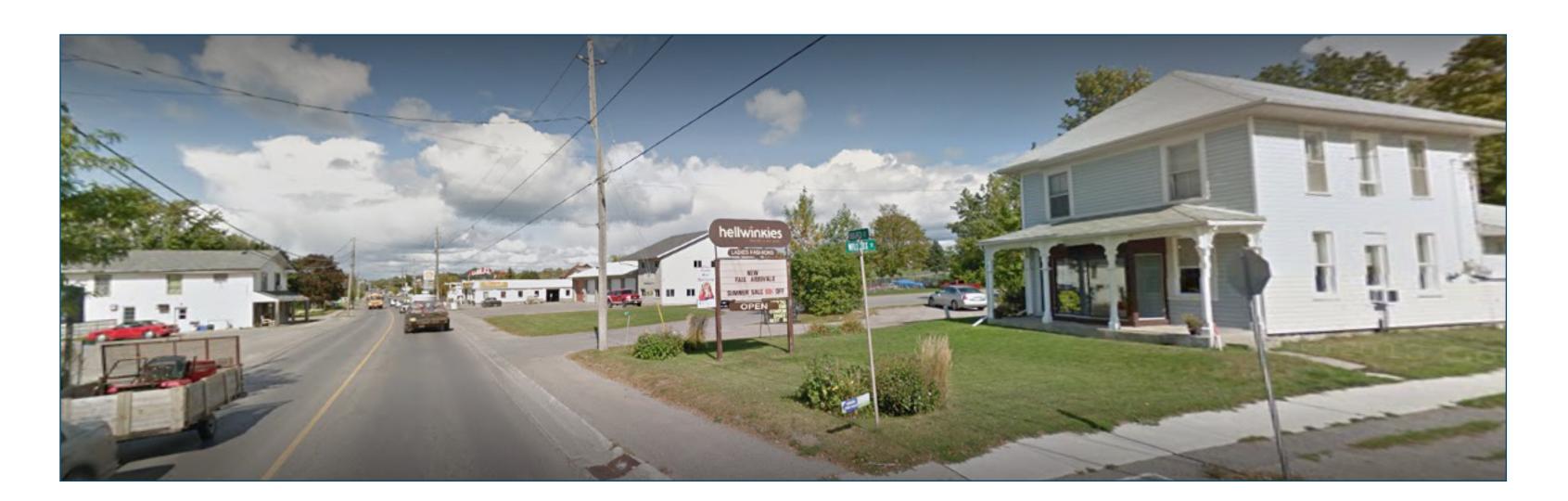
Welcome

Thank you for coming to the second Public Information Centre for the Ward Street project.

This meeting will provide an update on the progress since the first public meeting in September 2017. The purpose of this meeting is to summarize the alternatives, present the evaluation criteria and the process used to evaluate the alternatives, to present the preferred alternative and obtain feedback from the public.

Please take your time to review the displays and information. Members of the Project Team are on hand to answer your questions.







Study Background

Ward Street is a two lane arterial road that serves a dual function. Ward Street is the "main street" in the settlement area of Bridgenorth, providing access to homes and businesses. Ward Street is also a major arterial link in the County road network, providing connectivity from the City of Peterborough to northern portions of the County.

Traffic volume has steadily increased on Ward Street. Current traffic data suggest that Ward Street is approaching the capacity for a two-lane road, during peak periods and summer months. This high traffic volume combined with the large number of turning movements into and out of the side streets and commercial areas creates significant delays and increases the potential for accidents.

Over the period of 2031 (horizon year of this study) it is expected that Ward Street will reach capacity resulting in further delays to through traffic and congestion in the corridor.

Competing with the need for additional traffic capacity in the corridor are the needs of local residents for enhanced pedestrian connectivity. The Township of Selwyn completed a Community Improvement Plan (CIP) in 2012 which identified streetscape improvements for Bridgenorth including sidewalks on both sides, enhanced boulevard and plants and streetscaping features.



Project Limits

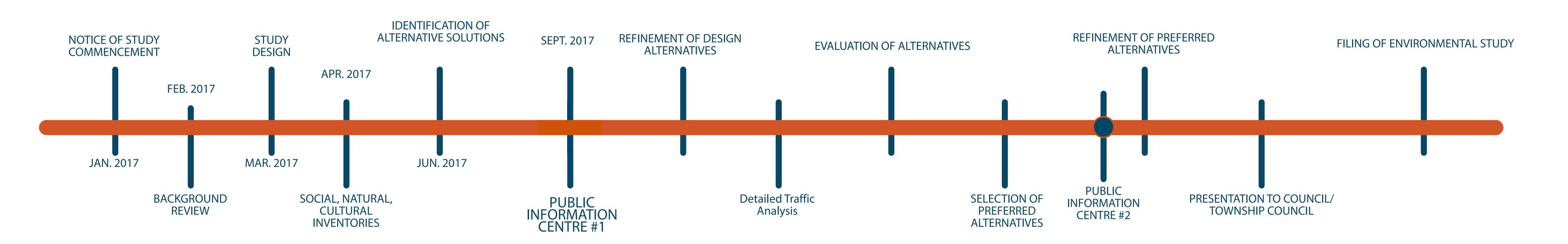
The Ward Street Widening Class EA includes Ward Street from Champlain Road north to the James A. Gifford Causeway and encompasses the majority of downtown Bridgenorth. The project limits are shown on the map below.





Study Timeline

The Ward Street Widening EA was initiated in January 2017 and the first public meeting was held in September 2017. The overall study timeline is outlined below:



Following Public Information Centre #1, the following milestones have been completed:

- Detailed Traffic Analysis of Alternatives
- Evaluation of Alternatives
- Selection of Preferred Alternative
- Preparation of Preliminary Design Plans



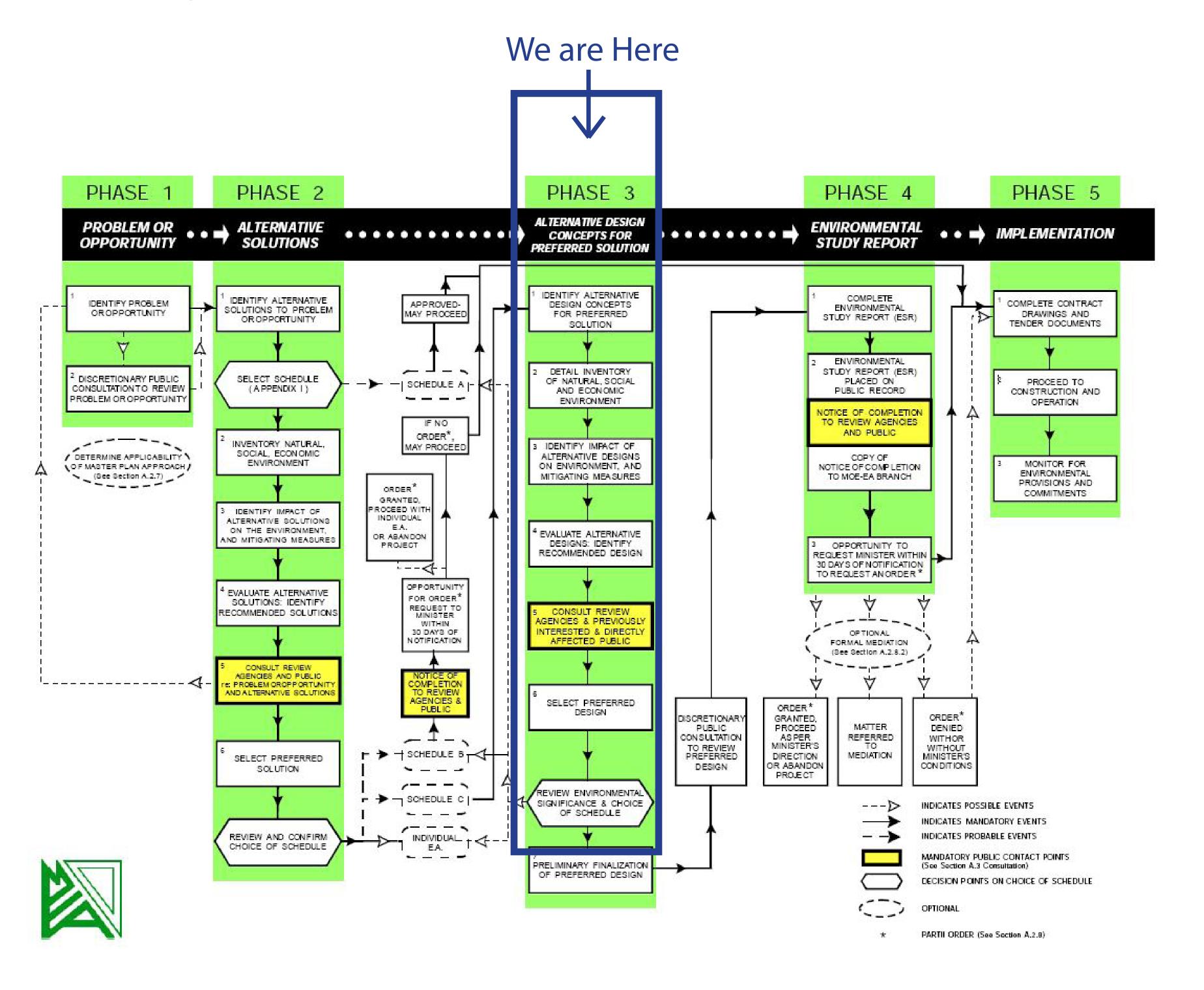
Environmental Assessment Process

The Ward Street Widening project is following the Municipal Class Environmental Assessment (Class EA) Process as a Schedule "C" Project.

Schedule "C" projects must complete all 5 phases of the Class EA process as outlined in the flow chart. The project is currently in Phase 3 of the EA process.

The study will result in an Environmental Study Report (ESR) which includes a recommended solution.

Upon completion of this current study phase (Phase 4), the County and Township will be able to move into Phase 5 of the EA process.



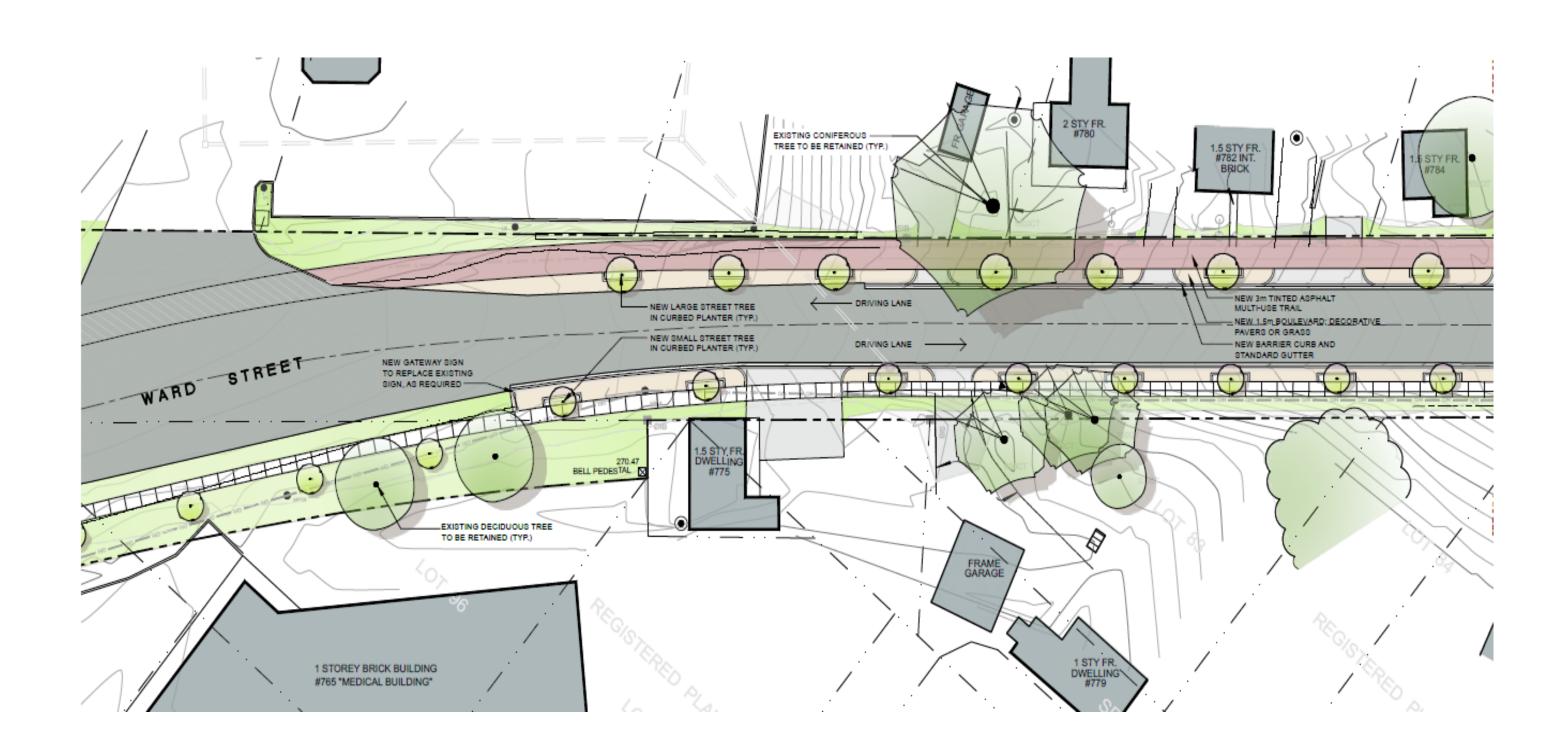


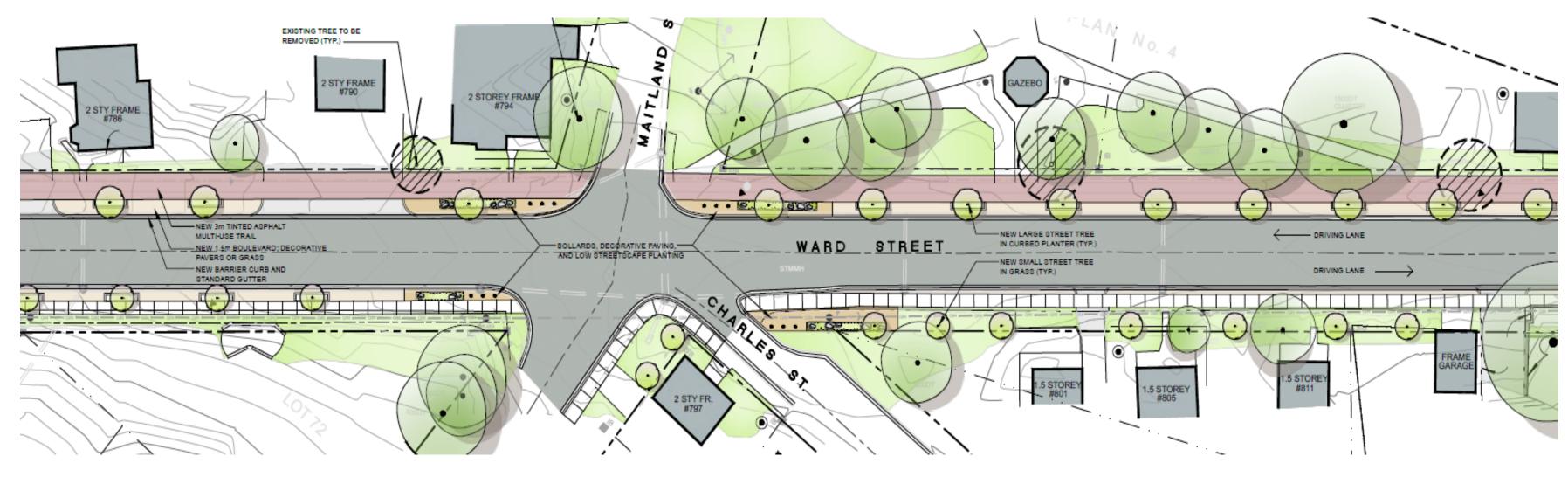


Study Objectives

The County and Township have identified the following objectives for this study:

- Provide additional traffic capacity to improve levels of service and reduce collision potential in the corridor
- Improve traffic flow and access to side streets and commercial properties
- Provide enhanced pedestrian facilities on both sides of Ward Street for the full length of the corridor
- Provide space to accommodate improvements outlined in the Selwyn CIP to improve streetscape and built-form of the corridor







Study Steps

The Ward Street EA Study includes the following steps:

- 1. Study Commencement
 - Define Problem Statement
 - Study Design Available on County website
- 2. Information Gathering & Generation of Alternatives
 - Background Review
 - **Environmental Inventories**
 - Development of Design Alternatives
 - PIC #1
- 3. Analysis & Evaluation of Alternatives
 - Coarse Screening of Alternatives
 - Develop Evaluation Criteria

We are Here

- Evaluate Alternatives Identify Preferred Alternative
- 4. Recommended Plan & Documentation
 - Refine Preferred Alternative
 - Council Endorsement of Recommended Plan
 - File Environmental Study Report (ESR)
- 5. Construction (Phase 5)

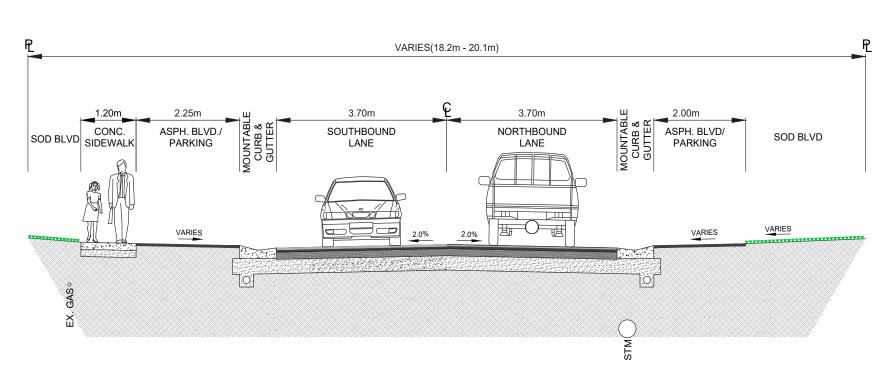




Alternative Solutions

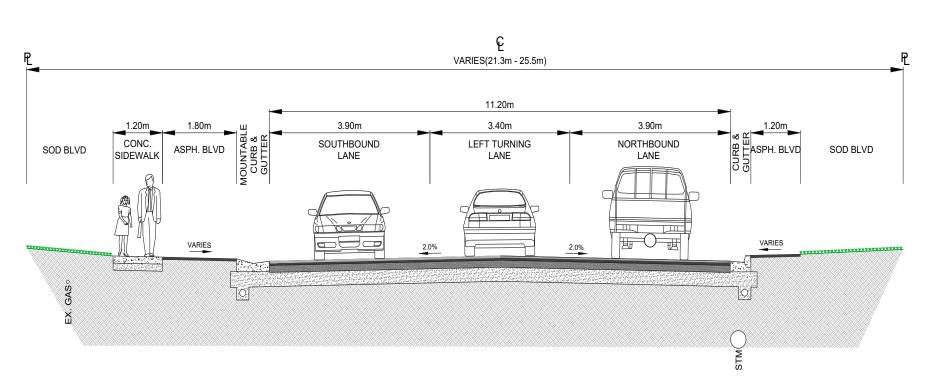
Alternative 1 Do Nothing

No change to existing Ward Street corridor



EXISTING WARD STREET CROSS SECTION FROM CHAMPLAIN RD. TO GORE ST.

- TWO 3.7m LANES SOUTHBOUND AND NORTHBOUND LANES
- EXISTING ASPHALT BOULEVARD PARKING BOTH SIDES
- EXISTING 1.2m CONCRETE SIDEWALK ON WEST SIDE ONLY



EXISTING WARD STREET CROSS SECTION FROM GORE ST. TO JAMES A. GIFFORD CAUSEWAY

- THREE LANES SOUTHBOUND(3.9m), NORTHBOUND(3.9m) AND TURNING(3.4m) LANES
- EXISTING ASPHALT BOULEVARD ON BOTH SIDES
- EXISTING 1.2m CONCRETE SIDEWALK ON WEST SIDE ONLY

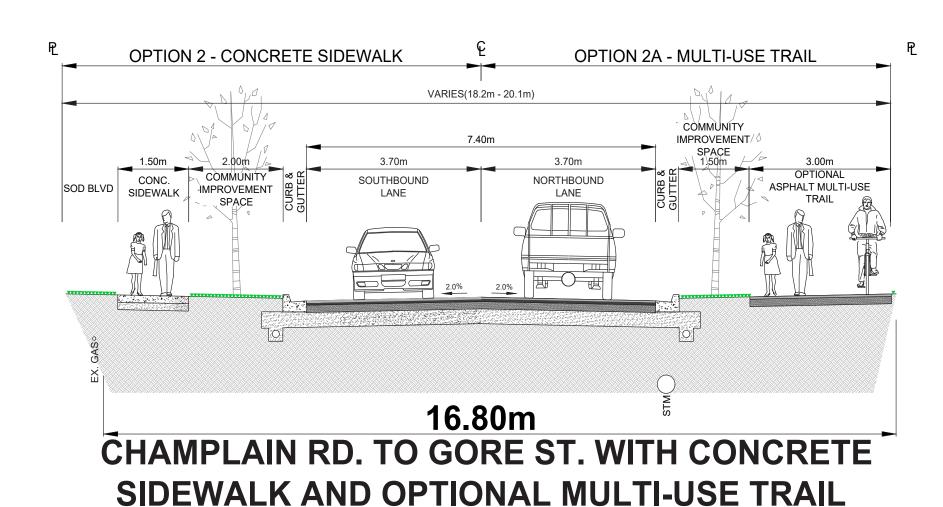
Alternative 2

Rehabilitate Existing Road & Incorporate CIP

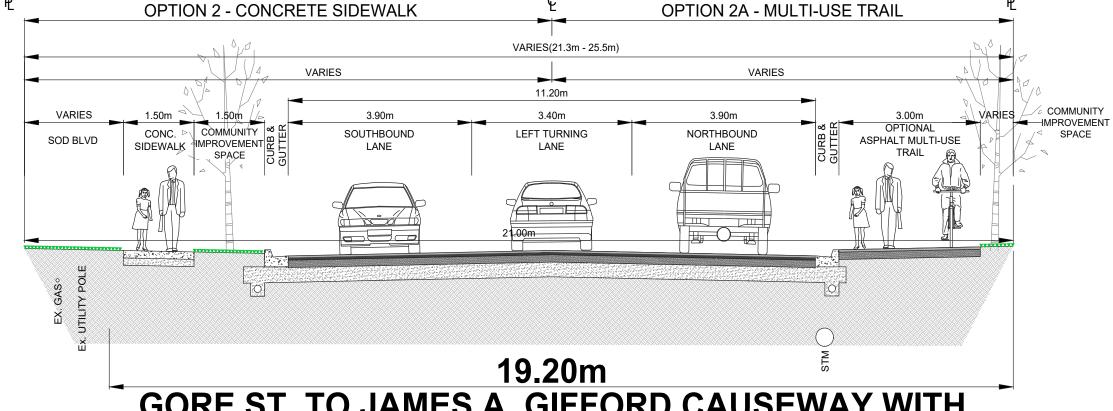
- No widening or additional lanes
- Existing pavement would be rehabilitated
- CIP elements would be constructed including sidewalks and streetscaping

Alternative 2A

Rehabilitate Road; Incorporate CIP & Multi-Use Trail



- TWO 3.7m LANES SOUTHBOUND AND NORTHBOUND LANES
- COMMUNITY IMPROVEMENT SPACE ON BOTH SIDES
- NO ON STREET PARKING BOULEVARD
- NEW ASPHALT, CURB & STORM SEWER
- OPTION 2 NEW 1.5m CONCRETE SIDEWALK ON BOTH SIDES
- OPTION 2A 3.0m ASPHALT MULTI-USE TRAIL ON WEST SIDE & 1.5m CONCRETE SIDEWALK ON EAST SIDE



GORE ST. TO JAMES A. GIFFORD CAUSEWAY WITH CONCRETE SIDEWALK AND OPTIONAL MULTI-USE TRAIL

- THREE LANES SOUTHBOUND(3.9m), NORTHBOUND(3.9m) AND TURNING(3.4m) LANES
- COMMUNITY IMPROVEMENT SPACE ON BOTH SIDES
- NEW ASPHALT, CURB & STORM SEWER
- ALTERNATIVE 2 NEW 1.5m CONCRETE SIDEWALK ON BOTH SIDES
- ALTERNATIVE 2A 3.0m ASPHALT MULTI-USE TRAIL ON WEST SIDE & 1.5m CONCRETE SIDEWALK ON EAST SIDE







Alternative Solutions

Alternative 3

Three Lane Cross Section with CIP

- Reconstruct Ward Street from Champlain Road to Gore Street to provide 3-lane cross section throughout study area
- Incorporate elements of CIP

Alternative 3A

Three Lane Cross Section with CIP & MUP

Alternative 4

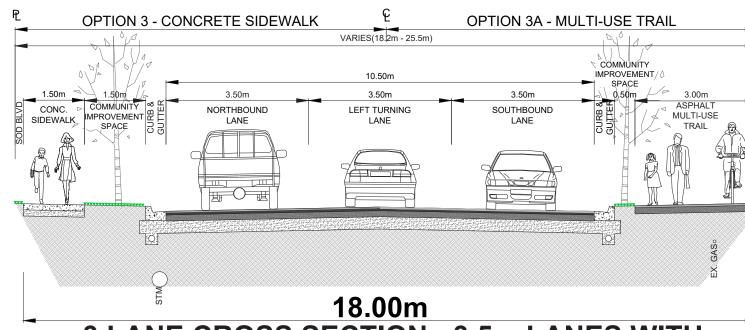
Four-Lane Cross Section

- Reconstruct entire corridor from Champlain Road to Causeway to provide 4 lanes (2 in each direction)
- Provide limited CIP elements (reduced space due to road widening)

Alternative 5

Five-Lane Cross Section

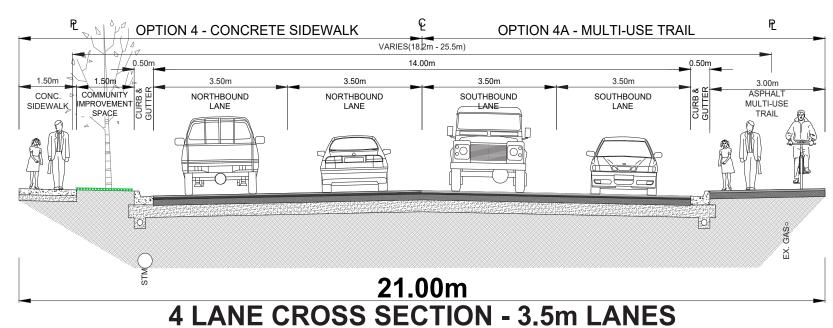
- Reconstruct entire corridor from Champlain Road to Causeway to provide 5 lane cross section (2 through lanes and centre turn lane)
- Insufficient space for sidewalks or CIP elements



3 LANE CROSS SECTION - 3.5m LANES WITH CONCRETE SIDEWALK AND OPTIONAL MULTI-USE TRAIL WITH COMMUNITY IMPROVEMENT SPACE ON BOTH SIDES

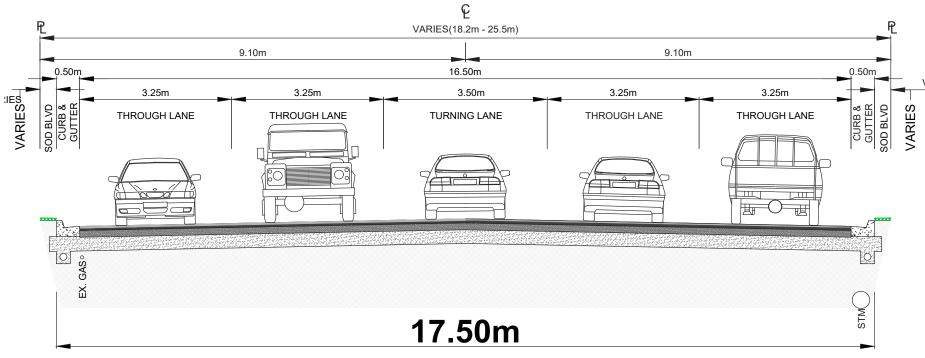
THREE 3.5m LANES - SOUTHBOUND, NORTHBOUND AND TURNING LANES
COMMUNITY IMPROVEMENT SPACE ON BOTH SIDES
NEW ASPHALT, CURB & STORM SEWER
NO ON STREET PARKING
ALTERNATIVE 3 - NEW 1.5m CONCRETE SIDEWALK ON BOTH SIDES

ALTERNATIVE 3A - 3.0m ASPHALT MULTI-USE TRAIL ON WEST SIDE & 1.5m CONCRETE
SIDEWALK ON EAST SIDE



WITH CONCRETE SIDEWALK AND MULTI-USE TRAIL WITH COMMUNITY IMPROVEMENT SPACE ON BOTH SIDES

- FOUR 3.5m LANES TWO SOUTHBOUND & TWO NORTHBOUND LANES
- COMMUNITY IMPROVEMENT SPACE ON BOTH SIDES
- NO ON STREET PARKING
- NO ON STREET PARKING
- ALTERNATIVE 4 NEW 1.5m CONCRETE SIDEWALK ON BOTH SIDES
- ALTERNATIVE 4A 3.0m ASPHALT MULTI-USE TRAIL ON WEST SIDE & 1.5m CONCRETE



5 LANE CROSS SECTION - 3.25m THROUGH LANES

- FIVE 3.25m LANES TWO SOUTHBOUND LANES, TWO NORTHBOUND LANES & ONE TWO-WAY LEFT TURN
- INSUFFICIENT SPACE FOR SIDEWALKS OR MOLT
- EXTENSIVE PROPERTY ACQUISITION REQUIRED







Class Environmental Assessment

Evaluation of Alternatives

The long list of alternatives were evaluated in two phases:

Phase 1 - Coarse Screening

All alternatives were coarse screened to provide a short list which would be carried forward for detailed evaluation. Alternatives were screened out if they:

- Failed to address the problem/opportunities statement
- Resulted in significant negative impacts that could not be mitigated
- Could not be reasonably constructed due to constraints
- Were not consistent with County or Township Master Plans & Policies

Phase 2 - Detailed Evaluation

The short listed alternatives were carried forward for detailed evaluation using the evaluation criteria presented on the following slides. The evaluation was completed by the technical advisory committee (TAC).



Coarse Screening

The following alternatives were removed from further consideration during coarse screening:

Alternative 1

This alternative did not provide any measureable benefit and did not satisfy any of the project criteria.

Alternatives 2, 3, 4

These alternatives did not provide a cycling facility, and were therefore not consistent with the County's Active Tranportation Master Plan (ATMP) or the Township's Community Improvement Plan (CIP).

Alternative 5

This alternative cannot be reasonably constructed within the Ward Street Right-of-Way without significant property impacts.

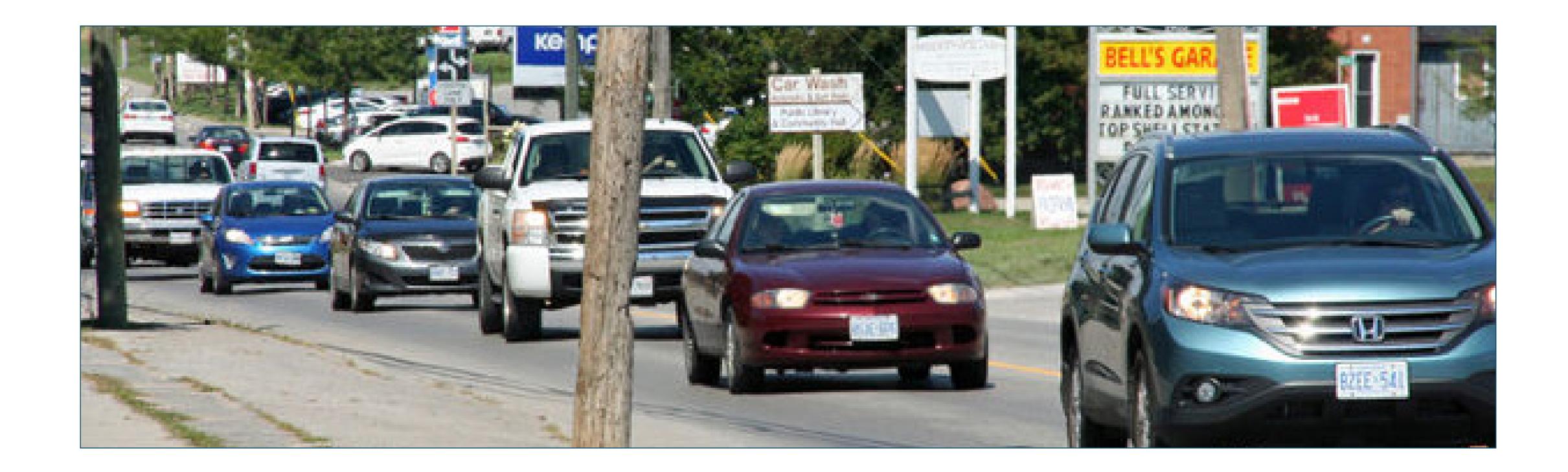
Alternatives 2A, 3A, and 4A were carried forward for detailed evaluation.



Traffic Analysis

Improving corridor capacity and levels of service is one of the primary objectives for this study. A comprehensive traffic forecasting and analysis program has been completed as part of the study. The traffic analysis included the following:

- Identify peak traffic volumes and turning movements for Ward Street for 2017 (current conditions).
- Forecast future traffic volumes and turning movements for the corridor to 2031 (study horizon).
- Analyze the corridor to determine capacity and levels of service for 2017 and 2031 to identify deficiencies.
- Analyze various design alternatives to determine which alternative best addresses capacity issues.

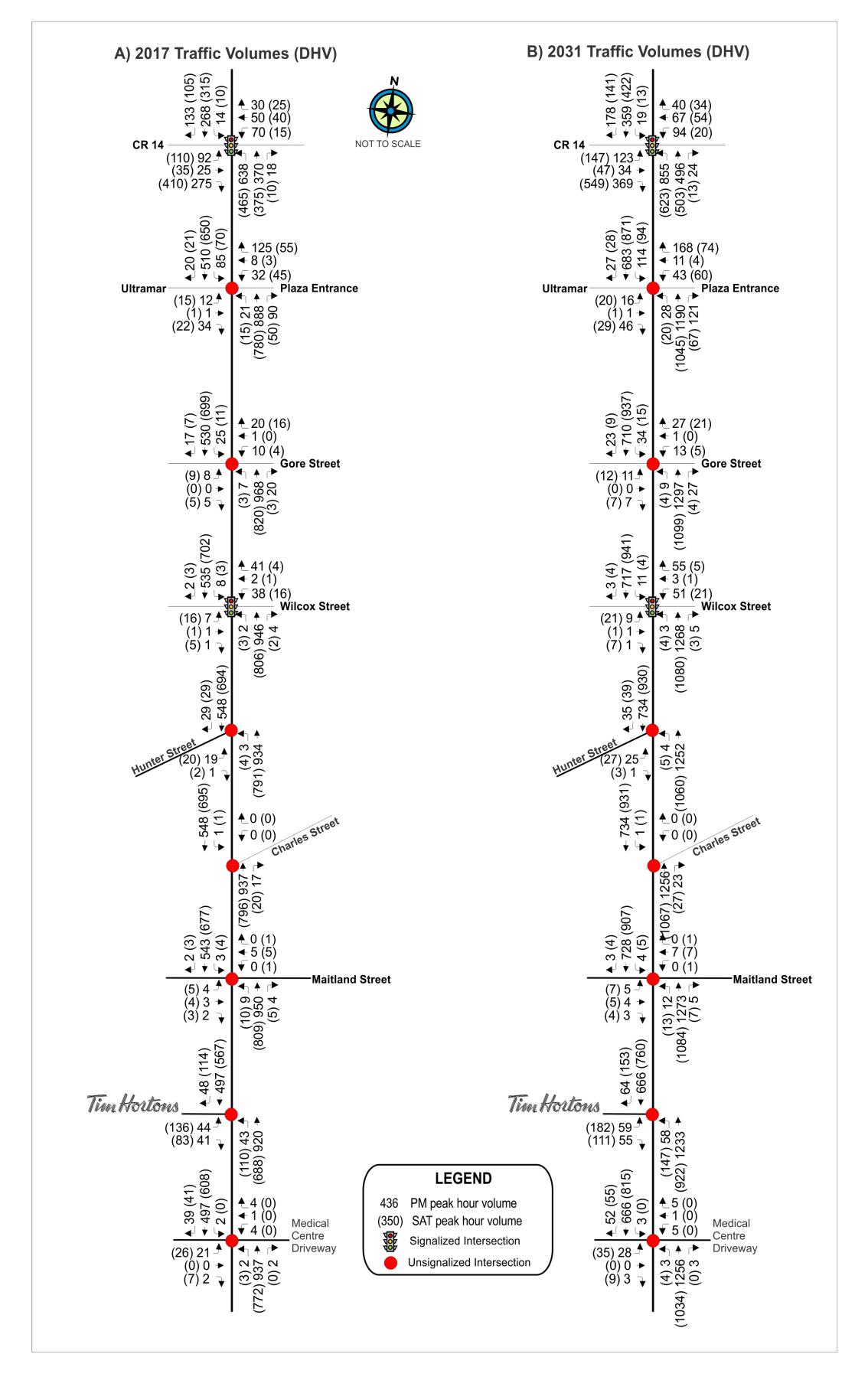




2017/2031 Traffic Forecasts

- The diagram at right shows the 2017 and 2031 traffic volumes for the corridor including turning movements at intersections.
- 2013 summer peak hour periods (weekday p.m. and Saturday) were selected as the base year, based on the data available.
- A traffic count program was completed in the spring of 2017 to collect additional data.
- An annual growth rate was calculated based on the data from the County's 2031 traffic model.
- The background data was expanded at the annual growth rate to provide 2017 summer p.m. and Saturday peak hour volumes.
- The 2017 data was similarly expanded to produce 2031 summer p.m. and Saturday peak hour volumes.

2017 and 2031 Traffic Volumes









Traffic Analysis

- A traffic model of the Ward Street corridor was created using Synchro Traffic Analysis software.
- The model was used to analyze the operation and capacity at key intersections within the corridor, as shown below:



- The results were presented at PIC #1 and showed that by 2031 the existing corridor would function at poor levels of service, below County standards.
- The model was then used to analyze the following alternatives:
 - Alternative 2A Existing Cross Section With CIP & MUP
 - Alternative 3A Three-Lane Cross Section with CIP & MUP
 - Alternative 4A Four-Lane Cross Section with CIP & MUP





Traffic Analysis Results

- The results of the analysis are presented in the table below:
- The results showed that none of the cross section alternatives could provide sufficient capacity by 2031.
- An alternative means was required to provide capacity in the corridor.

Impact of Gifford Causeway Link on Ward Street Intersections

No Causeway Link													
		2017 Existing			2031 Existing			2031 3-Lanes			2031 4-Lanes		
		LoS-Delay	v/c	95 th Q	LoS-Delay	V/c	95 th Q	LoS-Delay	v/c	95 th Q	LoS-Delay	v/c	95 th Q
Commercial Driveways &	EB	F - 66.3	0.46	2.0	F-4071	8.04	9.6	F - 4071	8.04	9.6	F - 319.3	1.21	5.7
Ward St (PM)	WB	F - 148.1	1.07	8.8	F - 1278	3.54	23.9	F - 1278	3.54	23.9	F - 955.9	2.87	22.3
	NB L	A - 8.6	0.02	0.1	A - 9.2	0.03	0.1	A - 9.2	0.03	0.1	A - 9.3	0.03	0.1
	SB L	B - 10.9	0.13	0.4	B - 14.0	0.23	0.9	B - 14.0	0.23	0.9	B - 14.1	0.23	0.9
Wilcox St &	EB	C - 27.4	0.05	5.0	C - 29.6	0.07	5.5	C - 29.6	0.07	5.5	B - 19.3	0.05	4.4
Ward St (PM)	WB	C - 21.5	0.36	17.6	C - 27.4	0.53	21.1	C - 27.4	0.53	21.1	B - 16.4	0.39	16.8
	NB L							A - 3.7	0.01	0.8			
	NB	A - 9.2	0.68	118.7	B - 18.7	0.88	#282.2	B - 18.5	0.87	#280.7	A - 6.9	0.55	57.7
	SB L							A - 7.2	0.11	2.7			
	SB	A - 5.2	0.39	45.2	A - 6.2	0.51	78.0	A - 5.9	0.49	74.3	A - 5.1	0.32	27.2
	Avg	A - 8.6			B - 14.9			B - 14.7			A - 6.8		
Tims Ent &	EB L	E - 43.5	0.48	2.3	F - 193	1.05	6.3	F - 193	1.05	6.3	F - 152.5	0.95	5.7
Ward St (AM)	EB R	C-18.3	0.31	1.3	D-31.8	0.52	2.8	D-31.8	0.52	2.8	C - 16.3	0.31	1.3
	NB L	B - 10.1	0.09	0.3	B - 11.8	0.13	0.4	B - 11.8	0.13	0.4	B - 11.9	0.13	0.4

Causeway Link Sensitivity Analysis (Existing Configurations)													
		2	017 Existin	g	2031 No Causeway Link			2031 Ward Street Retain 50%			2031 Ward Street Retain 60%		
		LoS-Delay	v/c	95 th Q	LoS-Delay	v/c	95 th Q	LoS-Delay	V/C	95 th Q	LoS-Delay	V/C	95 th Q
Commercial Driveways &	EB	F - 66.3	0.46	2.0	F-4071	8.04	9.6	F - 75.9	0.58	2.8	F - 269.1	1.11	5.3
Ward St (PM)	WB	F - 148.1	1.07	8.8	F - 1278	3.54	23.9	F - 558.1	2.12	33.6	F - 891.9	2.84	39.4
	NB L	A - 8.6	0.02	0.1	A - 9.2	0.03	0.1	A - 7.9	0.02	0.1	A - 8.1	0.02	0.1
	SB L	B - 10.9	0.13	0.4	B - 14.0	0.23	0.9	B - 10.0	0.19	0.7	B - 10.8	0.22	0.8
Wilcox St &	EB	C - 27.4	0.05	5.0	C - 29.6	0.07	5.5	B - 17.4	0.05	4.2	C - 20.8	0.05	4.8
Ward St (PM)	WB	C - 21.5	0.36	17.6	C - 27.4	0.53	21.1	B - 14.7	0.37	15.5	B - 17.3	0.39	18.2
	NB	A - 9.2	0.68	118.7	B - 18.7	0.88	#282.2	A - 8.3	0.54	65.6	A - 8.9	0.61	89.7
	SB	A - 5.2	0.39	45.2	A - 6.2	0.51	78.0	A - 6.2	0.34.	34.1	A - 6.1	0.38	41.9
	Avg	A - 8.6			B - 14.9			A - 8.2			B - 8.7		
Tims Ent &	EBL	E - 43.5	0.48	2.3	F - 193	1.05	6.3	D - 28.7	0.70	1.6	D - 30.9	0.39	1.7
Ward St (AM)	EBR	C - 18.3	0.31	1.3	D-31.8	0.52	2.8	B - 13.7	0.24	0.9	C - 15.5	0.27	1.1
	NB L	B - 10.1	0.09	0.3	B - 11.8	0.13	0.4	A - 9.1	0.07	0.2	A - 9.5	0.08	0.3

- The analysis was expanded to evaluate the impact that the Causeway Link would have on capacity in Ward Street.
- The analysis showed that the Causeway Link is an effective means of providing new road capacity in the Ward Street corridor.
- With the construction of the Causeway Link, the existing Ward Street lane configuration could provide better levels of service than if Ward Street were widened.





Evaluation Criteria

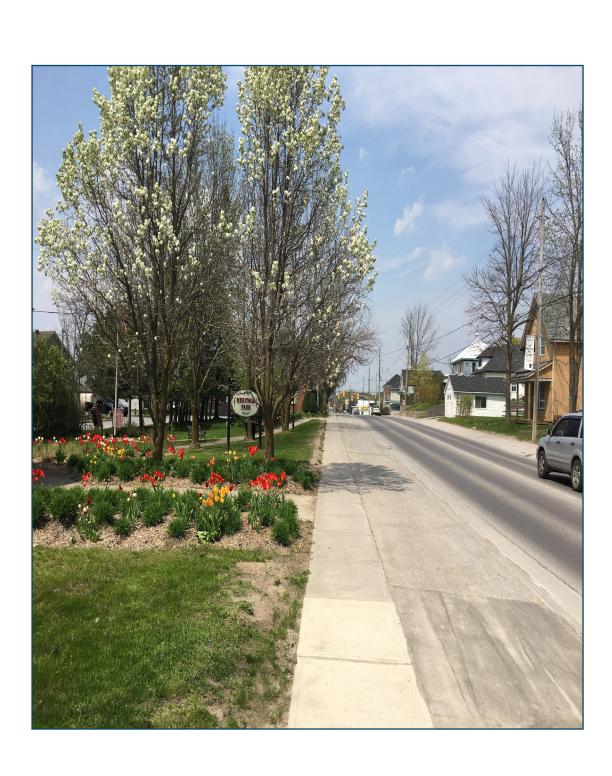
Alternatives 2A, 3A, and 4A were evaluated against the following criteria:

Natural Environment

- Stormwater quantity controls
- Impact on habitat and species at risk
- Air quality and noise levels
- Loss of green space/disturbance to vegetation

Social/Cultural

- Impact to public spaces
- Impacts to heritage features/buildings
- Property impacts during and after construction
- Impacts of construction phasing/timing
- Impact to local economy



Economic

- Capital cost of improvements
- Property acquisition costs
- Utility relocation costs



Technical

- Parking function
- Improvement in traffic capacity
- Pedestrian facilities
- Cycling facilities







Evaluation Results

The results of the evaluation process are summarized in the table below.

varu Str	eer widening	g EA - Evaluation and Scoring									
						Alte	rnative 2A	Alter	native 3A	Alternative 4A	
						Rehabilitate Wa	ard with CIP and MUP	3-Lane Cross Sec	tion with CIP & MUP	4-Lane Cross Se	ction with CIP & MUI
Category	Criteria	Description	Measurement	Weighting in Category	Overall Weighting	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Natural Environment	Stormwater Quantity Controls	Increase in runoff quantity related to impervious area. Alternatives with larger impervious areas (pavement) will be ranked less favourably than those that provide green space to mitigate runoff volumes and quality.	Hectares of impervious area	25%	3.75	3	3.75	2	2.50	1	1.25
	Impact on Habitat and Species at Risk	Measures the impact to species at risk of development in the corridor.	Number of SAR affected.	25%	3.75	3	3.75	3	3.75	3	3.75
	Air Quality and Noise Levels	Alternatives that reduce congestion and traffic volume in the corridor will be ranked higher. Similarly alternatives that replace vehicle trips with pedestrian/cycling trips will receive a higher ranking.	Relative ranking	25%	3.75	3	3.75	3	3.75	2	2.50
	Loss of green space/disturbance to vegetation	Measures the quantity of vegetation and green space that are lost due to construction, measured by area. Also considers the loss of mature trees. Alternatives that preserve green space and mature trees are preferred.	Hectares of green space/Number of mature trees	25%	3.75	3	3.75	2	2.50	1	1.25
		Overall Category		100%	15		15.00		12.50		8.75
Socio- Economic	Impact to Public Realm Space	Relative measure of the extent and quality of CIP measures that can be implemented. Alternatives that allow for full CIP will be ranked highest; those with no CIP measures lowest.	Relative ranking	30%	7.5	3	7.50	2	5.00	2	5.00
	Impacts to Heritage Features/ Buildings	Based on the scale of impacts to natural heritage features, measured by the number and severity of impacts.	Number of heritage properties/structures affected	10%	2.5	3	2.50	3	2.50	3	2.50
_	Property impacts during and after construction	Relative measure of the quantity and extent of property effects. Alternatives with significant property impacts will be ranked lower than those with fewer/minor impacts.	Number of properties affected	15%	3.75	2	2.50	1	1.25	O	0.00
	Impacts of Construction Phasing/Timing	Measures the scale and duration of construction impacts including delay to motorists, disruption to traffic flow and access to businesses and homes. Alternatives with more significant impacts will be ranked lower.	Relative ranking based on scale and duration of construction	15%	3.75	3	3.75	2	2.50	1	1.25
	Impact to Local Economy	Relative ranking based on anticipated effect the corridor will have on commercial and tourism behviour in the hamlet. Factors considered include traffic function, walkability and appearance of the corridor.	Relative	30%	7.5	3	7.50	3	7.50	2	5.00
		Overall Category		100%	25		23.75		18.75		13.75
Financial	Capital Cost of Improvements	Measures the estimated capital cost of each alternative; alternatives with higher costs will receive a lower relative ranking.	Dollars	50%	12.5	3	12.50	2	8.33	1	4.17
	Property acquisition costs	Measures the estimated property acquisition costs of each alternative; alternatives with high costs will receive a lower relative ranking.	Dollars	20%	5	3	5.00	2	3.33	1	1.67
	Utility Relocation Costs	Measures the estimated utility relocation costs of each alternative; higher alternatives will receive a lower relative ranking.	Dollars	30%	7.5	3	7.50	2	5.00	1	2.50
		Overall Category		100%	25		25.00		16.67		8.33
Traffic and Transportation	Parking Function	Measures the estimated number of parking spaces provided by each alternative.	Number of spaces	10%	3.50	О	0.00	О	0.00	O	0.00
	Improvement in Traffic Capacity	Measures how effective the alternative is at reducing congestion and improving traffic function in the corridor based on output of Traffic Analysis. Alternatives with higher LOS levels are preferred.	LOS / Avg. Delay	40%	14.00	1	4.67	2	9.33	3	14.00
	Pedestrian Facilities	Measures the degree to which the alternative provides for improvements to pedestrian movement and safety in the corridor. Alternatives that provide continuous sidewalk throughout with a buffer between sidewalk and road will be ranked highest.	Relative ranking based on extent of pedestrian facilities and size of buffer from road	30%	10.50	3	10.50	3	10.50	2	7.00
	Cycling Facilities	Measures the degree to which the alternative provides for improvements to cycling movement in the corridor. Alternatives that provide continuous connection for cyclists will be rated highest.	Relative ranking based on extent of cycling facilities	20%	7.00	3	7.00	3	7.00	3	7.00
		Overall Category		100%	35.00		22.17		26.83		28.00

^{*} All alternatives were evaluated assuming the Causeway Llink would be constructed

The evaluation indicated that Alternative 2A is the preferred solution.

Class Environmental Assessment Ward Street Widening





Preferred Alternative

- Through the evaluation process, Alternative 2A was identified as the preferred alternative.
- Alternative 2A maintains the existing lane configuration but adds new sidewalk, multi-use pathway, and streetscaping improvements.
- Alternative 2A, in conjunction with the construction of the Causeway Link, will best satisfy the project objectives:
 - It will provide additional capacity in the Ward Street corridor.
 - It will improve pedestrian and active transportation facilities in the corridor.
 - It will maximize the space available for streetscape improvements per the Township CIP.

Preliminary design plans for the preferred alternative including proposed streetscaping are presented on the following slides.



Next Steps

Following this public meeting the study team will:

- Review all comments and suggestions from the stakeholders
- Finalize the Preferred Alternative
- Present plans to Township council seeking endorsement
- Present plans to County council for approval
- Prepare the Environmental Study Report (ESR)

Future Activities

- Plan for and complete the detailed design of Ward Street
- Implement the project subject to County capital plans

How can you comment and/ or stay involved in the project?

- Fill in a comment sheet and leave it in the comment box, or email comments directly to project contacts identified in the comment sheet
- Comments should be provided by June 14, 2018

Thank you for coming!



