McNabb Street and Algoma Avenue Class Environmental Assessment

City of Sault Ste. Marie

Public Information Centre

March 21st, 2017

3:00 pm – 7:00 pm

CIMA+

Partners in excellence

Purpose of Public Information Centre

You are invited to:

- **Review project information on display**
  - Study Process
  - Study Area
  - Background
  - Existing Conditions
  - Traffic Safety Concerns
  - Approach to Considering Improvements
  - Alternative Solutions
  - Evaluation of Alternative Solutions
  - Preliminary Preferred Solution
  - Next Steps
- **Ask questions to the Project Team**
- **Fill out and submit a comment sheet**

Process

- The Class EA is being completed in accordance with the Municipal Engineers Association Municipal Class Environmental Assessment (October 2000, as amended in 2007 and 2011).
- The Municipal Class EA is a planning and design process approved by the Ministry of Environment and Climate Change to meet the requirements of the Environmental Assessment Act.
- This study follows the Class EA process for **Schedule B** projects.

Background Studies
September 2016

Study Commencement and PIC
March 2017

We are here

Phase 1
Problem and/or Opportunity

Phase 2
Alternative Solutions

Implementation
Design and Construction*

* Dependent on City of Sault Ste. Marie budget

Study Area

The intersection of St. Georges Avenue East and McNabb Street has had a number of accidents and near misses over the years, largely due to drivers losing control in the eastbound direction as they approach Algoma Avenue.

Existing Conditions

Existing Transportation Network

- Unposted speed limit of 50 km/h
- 3-lane cross section with a centre left-turn lane on St. Georges Avenue
- 4-lane cross section on McNabb Street
- The intersection of St. Georges Avenue and McNabb Street is a “Y-shaped” intersection, with a channelization island at the centre
- Sharp curve at intersection of St. Georges Avenue and McNabb Street
- Pedestrian signal located at St. Georges Avenue and McNabb Street

Traffic Collision History

Collision Detail Reports between 2010 and 2015 indicate the following:

- Ten (10) collisions at the intersection of McNabb Street and Algoma Avenue
- Nine (9) collisions at the intersection of McNabb Street and St. Georges Avenue
- One (1) fatal collision involving an impaired driver at McNabb Street & Algoma Avenue, in August 2013
- Single Motor Vehicle (SMV) collisions were the most frequent collision impact type (32%)
  - All SMV collisions occurred in the eastbound direction

Geometric Safety Concerns

- Alignment of the east end of the sharp curve can result in errant eastbound vehicles running off the road towards the southeast corner of the intersection
- Sight lines are restricted at the private accesses located within the curve, on the north side of McNabb Street/St. Georges Avenue, west of Algoma Avenue
- Eastbound drivers exiting the residential section of McNabb may also experience difficulty due to the angle of the intersection creating a ‘blind spot’ in the rear-view mirrors

Restricted Sightlines Around Sharp Turn
St. Georges Avenue & McNabb Street, Eastbound View

Hazard for Westbound Drivers Turning Left into Residential Area
McNabb Street & Algoma Avenue, Westbound View

Approach to Considering Improvements

The following modifications were deemed as critical in order to improve the unsafe conditions identified in the study area:

- **Enlarge traffic island**
  - Remove McNabb Street eastbound channel to avoid blind spot for merging traffic
  - Narrow McNabb Street to provide better direction to drivers
- **Relocate transition from 4-lane to 3-lane roadway to east of Algoma Avenue**
  - Reduced pavement width at the sharp curve is expected to reduce eastbound speeds
  - Northern shift of curb line changes the trajectory of eastbound vehicles directing them away from the house located at the corner of McNabb Street and Algoma Avenue which has been hit by vehicles in the past
- **Simplify McNabb Street and St. Georges Avenue intersection**
  - “T-intersection” is preferable over the existing “Y-shaped” intersection as it improves visibility for drivers entering and exiting the McNabb Street residential area

Evaluation Criteria

Five (5) alternative solutions including “Do Nothing” are being considered to best address the required safety improvements to the Study Area. The following criteria were used to evaluate each option.

Economic

- Capital Costs

Traffic Safety

- Forced Turning Movements
- Pedestrian Safety
- Centre Medians

Traffic Operations

- Opposing Left Turn Conflicts

Infrastructure Planning

- Flexibility for Future Cycle Lane Implementation
- Compliance with Road Design Standard

Environmental

- Environmental Impact

Social

- Property Impacts

Alternative Solution #2

McNABB STREET CLASS EA
IMPROVEMENT FUNCTIONAL DESIGN

SCALE : 0 5 10 20 30
Metric 1:1000

Rb-25 Rb-41 Rb-42 RIGHT LANE MUST EXIT Rb-17 STOP Rc-1 Wa-33L Wa-9 NO PASSING HERE TO CROSSING Rg-10 Wc-27R Rg-5R Rg-5L

Jan. 12, 2017

Alternative Solution #3

McNABB STREET CLASS EA
IMPROVEMENT FUNCTIONAL DESIGN

SCALE : 0 5 10 20 30
Metric 1:1000

Rb-25 Rb-41 Rb-42 Rb-27 Ra-1 Wc-33L Wa-9 Ra-10 Wc-27R Ra-5R Ra-5L

Jan. 12, 2017

Alternative Solution #4

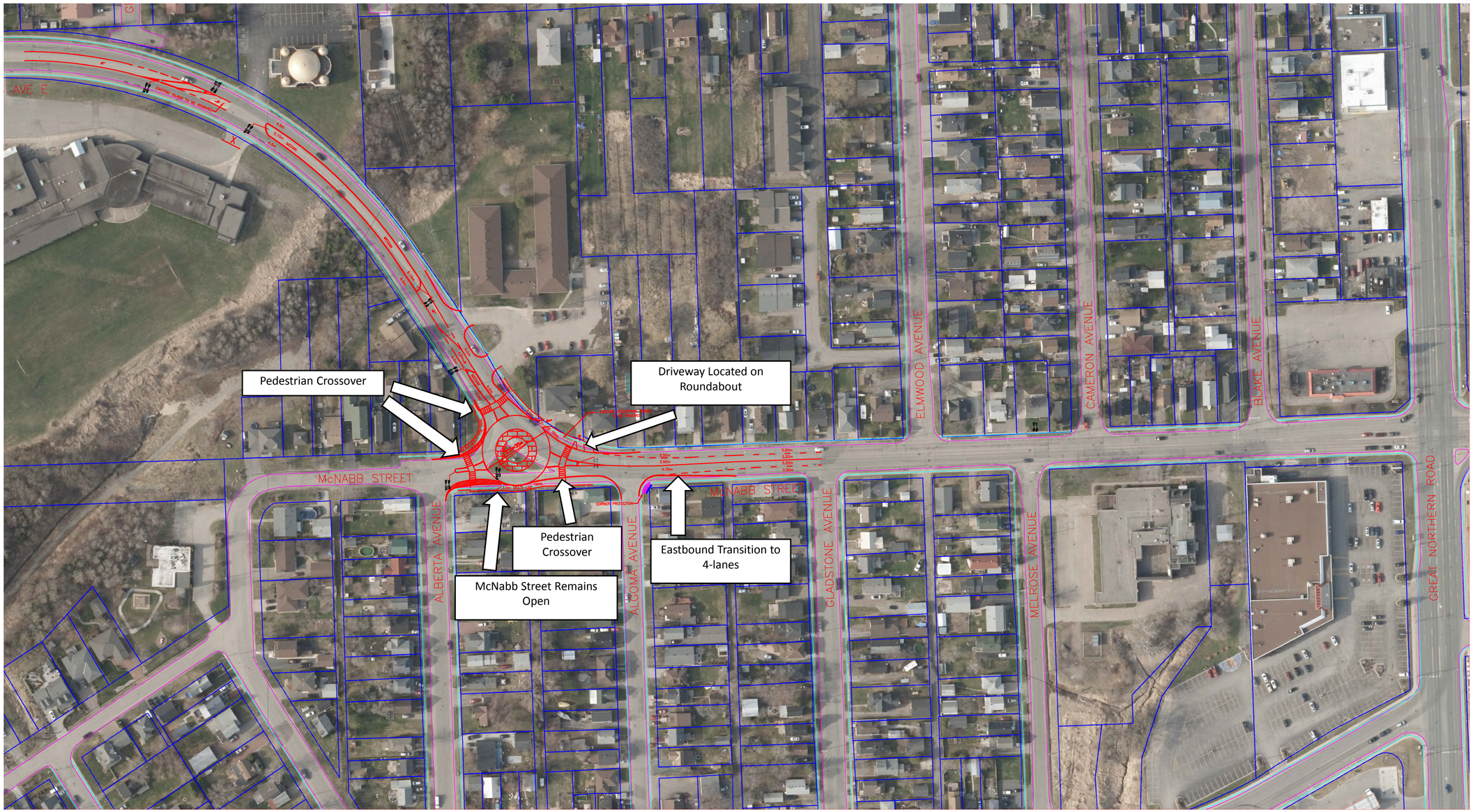
McNABB STREET CLASS EA
IMPROVEMENT FUNCTIONAL DESIGN

SCALE : 0 5 10 20 30
Metric 1:1000

Rb-25 Rb-41 Rb-42 THROUGH TRAFFIC KEEP RIGHT Rb-27 STOP Ra-1 Wa-33L RIGHT LANE MUST EXIT Rb-17 Wa-9 PED CROSSING HERE TO CROSSING Ra-10 Wc-27R Ra-5R Rc-5L

Jan. 12, 2017

Alternative Solution #5



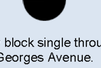
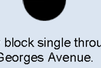
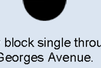
McNABB STREET CLASS EA
IMPROVEMENT FUNCTIONAL DESIGN

SCALE : 0 5 10 20 30
Metric 1:1000

Rb-25 Wa-33L Rb-21 Wa-33LR Wa-123R Ra-2

Jan. 12, 2017

Evaluation of Alternative Solutions

Technical Criteria	Alternative Solution #1 - Do Nothing	Alternative Solution #2	Alternative Solution #3	Alternative Solution #4	Alternative Solution #5
Economic					
Capital Costs	 No impact	 Total construction cost: $446,923	 Total construction cost: $345,692	 Total construction cost: $353,200	 Total construction cost: $794,232
Traffic Safety					
Lane Merges	 No forced turning movements or lane merges.	 Westbound curb lane on McNabb Street becomes right turn only onto Blake Avenue.	 Westbound left lane on McNabb Street becomes left turn only onto Gladstone Avenue.	 Westbound curb lane on McNabb Street becomes right turn only onto Elmwood Avenue.	 No forced turning movements or lane merges..
Pedestrian Safety	 Pedestrian crossing provided at St. Georges Avenue and McNabb Street.	 Pedestrian crossing with refuge island provided on St. George Avenue.	 Pedestrian crossing with refuge island provided on St. George Avenue.	 Pedestrian crossing with refuge island provided on St. George Avenue.	 Pedestrian crossing with refuge island provided on St. George Avenue. Pedestrian crossing provided at roundabout legs and multiuse trail adjacent to roadway. Lower traffic speeds.
Centre Medians (Length)	 5 m	 147 m	 161 m	 147 m	 172 m
Traffic Operations					
Transit Operations (#3 Second Line Route)	 Bus service may block single through lane on St. Georges Avenue.	 Bus service may block single through lane on St. Georges Avenue.	 Bus service may block single through lane on St. Georges Avenue.	 Bus service may block single through lane on St. Georges Avenue.	 Bus service may block single through lane on St. Georges Avenue.
Opposing Left Turn Conflicts	 No opposing left turn conflicts.	 Potential for opposing left turn conflicts due to frequent driveways.	 Potential for opposing left turn conflicts due to frequent driveways.	 Low potential for opposing left turn conflicts due to frequent driveways.	 Low potential for opposing left turn conflicts due to frequent driveways.
Infrastructure Planning					
Flexibility for Future Cycle Lane Implementation	 Flexibility to accommodate cycle lanes in the future.	 Low flexibility to accommodate cycle lanes in the future.	 Moderate flexibility to accommodate cycle lanes in the future.	 Moderate flexibility to accommodate cycle lanes in the future.	 Moderate flexibility to accommodate cycle lanes in the future.
Compliance with Road Design Standards (50 km/h Design Speed)	 Curve radius: 86 m Crossfall: 2%[1] Design Speed: 49 km/h	 Curve radius: 88 m Crossfall: 2% Design Speed: 49 km/h	 Curve radius: 88 m Crossfall: 2% Design Speed: 49 km/h	 Curve radius: 88 m Crossfall: 2% Design Speed: 49 km/h	 Roundabout diameter: 35 m Crossfall: -2% Entry Speed: 30 km/h

[1] Estimate

Very Low Impact (Most Positive)	**Fairly Low Impact**	**Medium/Ambivalent Impact**	**Fairly High Impact**	**Very High Impact (Least Positive)**

Evaluation of Alternative Solutions (continued)

Technical Criteria	Alternative Solution #1 - Do Nothing	Alternative Solution #2	Alternative Solution #3	Alternative Solution #4	Alternative Solution #5
Environmental					
Environmental Impact	No environmental impacts.	Provides opportunity for greenery in medians and green space.	Provides opportunity for greenery in medians and green space.	Provides opportunity for greenery in medians and green space.	Provides opportunity for greenery in centre of roundabout.
Social					
Property Impacts	No driveway alignment required.	Requires driveway realignment for residence on north side of McNabb Street at Algoma Avenue.	Requires driveway realignment for residence on north side of McNabb Street at Algoma Avenue.	Requires driveway realignment for residence on north side of McNabb Street at Algoma Avenue.	Driveway located on roundabout.
Summary					
Overall Findings	No associated construction costs. No forced turning movements or lane merges.. Does not address need for traffic safety improvements. No driveway impacts.	High construction cost. One right turn only lane on McNabb Street. Moderate improvements to traffic safety provided through medians. Potential for opposing left turn conflicts. Moderately compliant with road design standards. One driveway realignment.	Moderate construction cost. One left turn only lane on McNabb Street. Improvements to traffic safety provided through medians. Potential for opposing left turn conflicts. Moderately compliant with road design standards. One driveway realignment.	Moderate construction cost. One right turn only lane on McNabb Street. Moderate improvements to traffic safety provided through medians. Low potential for opposing left turn conflicts. Moderately compliant with road design standards. One driveway realignment.	Very high construction cost. No forced turning movements or lane merges. Significant improvements to traffic safety provided though medians, pedestrians crossing, multiuse trail and lower travel speeds. Low potential for opposing left turn conflicts. Not compliant with road design standards. Driveway located on roundabout.
Recommendation	Not Preferred	Not Preferred	Not Preferred	**Preferred**	Not Preferred

Very Low Impact (Most Positive)	**Fairly Low Impact**	**Medium/Ambivalent Impact**	**Fairly High Impact**	**Very High Impact (Least Positive)**

Preliminary Preferred Solution

Option 4 is identified as the preliminary preferred solution.

- Safety concerns at the corner of McNabb Street and Algoma Avenue are adequately addressed and visibility is improved with build-out of traffic island
- Traffic island provides opportunity for green space
- Trajectory of eastbound vehicles is directed away from house on south side of McNabb Street
- Transition from 4-lane to 3-lane roadway is relocated east of Algoma Avenue
- Westbound curb lane on McNabb Street is a right turn only lane onto Elmwood Avenue (signage required)
- Moderate construction costs
- Requires driveway realignment for residence on north side of McNabb Street at Algoma Avenue

Next Steps

Following this Public Information Centre, the Project Team will:

- Review input and comments received
- Refine evaluation and finalize Preferred Solution
- Document Study in Project File Report
- File Project File Report on public record for 30 day review
- Proceed to detailed design and construction

Please share your comments with either Project Manager by April 4th, 2017.

Don Elliott, P.Eng
Director of Engineering
City of Sault Ste. Marie
99 Foster Drive
Sault Ste. Marie, ON P6A 1X6
Tel: 705-759-5329
Fax: 705-541-7165
Email: d.elliott@cityssm.on.ca

Stephen Keen, P.Eng
Project Manager
CIMA Canada Inc. (CIMA+)
3027 Harvester Road, Suite 400
Burlington, ON L7N 3G7
Tel: 289-288-0287 ext. 6834
Fax: 289-288-0285
Email: stephen.keen@cima.ca

With the exception of personal information, all comments will become part of the public record.