

# LAKERIDGE

## 2016 Neighbourhood Traffic Reviews

CITY OF SASKATOON

February 17, 2017

# Lakeridge Neighbourhood Traffic Review

February 17, 2017

Authorization

Prepared By:



Lanre Akindipe, P.Eng.  
Transportation Engineer

Checked By:



Jay Magus, P.Eng.  
Transportation Engineering Manager

## Acknowledgements

The completion of this review would not be possible without the contribution of the following organizations and individuals:

- Lakeridge residents
- Lakeridge Community Association
- Saskatoon Police Service
- Saskatoon Light & Power
- Saskatoon Fire Department
- City of Saskatoon Environmental Services
- City of Saskatoon Transit
- City of Saskatoon Planning & Development
- City of Saskatoon Roadways & Operations
- City of Saskatoon Community Standards
- City of Saskatoon Transportation
- Great Works Consulting
- Councillor Bev Dubois

## EXECUTIVE SUMMARY

The objective of the Neighbourhood Traffic Management Program is to address traffic concerns within neighbourhoods such as speeding, shortcutting, and pedestrian safety. The program was revised in August 2013 to address traffic concerns on a neighbourhood-wide basis. The program involves additional community and stakeholder consultation that provides opportunity for residents and City staff to work together in developing solutions that address traffic concerns within their neighbourhood. The process is outlined in the *Traffic Calming Guidelines and Tools*, City of Saskatoon, 2016.

A public meeting was held in May 2016 to identify traffic concerns and potential solutions within the Lakeridge neighbourhood. As a result of the meeting a number of traffic assessments were completed to confirm and quantify the concerns raised by the residents. Based on the residents input and the completed traffic assessments, a Traffic Plan was developed and presented to the community at a follow-up meeting held in November 2016.

A summary of recommended improvements for the Lakeridge neighbourhood are included in **Table ES-1**. The summary identifies the locations, the recommended improvement, and a schedule for implementation. The schedule to implement the Traffic Plan can vary depending on the complexity of the proposed improvement. According to the *Traffic Calming Guidelines and Tools* document, the time frame may range from short-term (1 to 2 year); medium-term (3 to 5 years) and long-term (5 years plus). Accordingly, the specific time frame to implement the improvements ranges from 1 to 5 years.

The Lakeridge Traffic Plan is illustrated in **Exhibit ES-1**.

**Table ES-1: Lakeridge Neighbourhood Recommended Improvements**

| <b>Item</b> | <b>Location</b>                             | <b>Recommendation</b>  | <b>Reason</b>   |
|-------------|---|--|---|
| 1           | Kingsmere Boulevard & Brightwater Cres      | Change yield sign to stop sign; "No Parking" sign 10m from the intersection; make temporary calming permanent  | Improve Safety  |
| 2           | Kingsmere Boulevard & Waterbury Road        | Install a 4 way stop at the intersection   | Improve visibility and safety                                 |
| 3           | Emmeline Road & Waterbury Road              | Install "No Parking" signs 10m from the intersection; tree trimming on the southeast corner  | Improve visibility and safety                                 |
| 4           | Emmeline Road & Swan Crescent (west)        | Install a median island  | Enhance visibility and reduce speeding                        |
| 5           | Emmeline Road (at midblock crosswalk)       | Install a median island; make temporary calming permanent  | Enhance visibility and reduce speeding                        |
| 6           | Emmeline Road & Swan Crescent (east)        | Install "No Parking" signs on Emmeline road 10m from the intersection on the southwest and southeast corners; "No Parking" sign on Emmeline road (at the crosswalk on the north side between the disabled persons loading zone and the 5min parking) | Enhance visibility  |
| 7           | Emmeline Road & Nemeiben Road               | Replace yield sign with a stop sign; Install "No Parking" signs 15m from the intersection on the southwest and southeast corners; tree trimming on the southwest corner  | Enhance visibility and improve safety                         |
| 8           | Nemeiben Road & Brudell Road                | Install a median island at the east side of the intersection on Nemeiben road; Add temporary curb extensions on the northeast & southeast corners  | Reduce speeding and improve safety                            |
| 9           | Nemeiben Road & Brabant Crescent            | Replace yield sign with a stop sign  | Improve safety  |
| 10          | Nemeiben Road & Anglin Place                | Replace yield sign with a stop sign  | Improve safety  |
| 11          | Nemeiben Road & Smoothstone Crescent (east) | Install a median island at the east side of the intersection on Nemeiben road; Add temporary curb extensions on the northeast & southeast corners; replace yield sign with a stop sign   | Reduce speeding and improve safety                            |
| 12          | Nemeiben Road & Waterbury Road              | Install a median island with enhanced stop sign  | Enhance visibility of stop sign and improve pedestrian safety |

Table ES-I Continued

| Item | Location   | Recommendation  | Reason   |
|------|--|---|--|
| 13   | Nemeiben Road & Smoothstone Crescent (west)                                  | Replace yield sign with a stop sign   | Improve safety                                     |
| 14   | Waterbury Road & Jan Crescent  | Tree trimming at the southwest corner   | Enhance visibility                                 |
| 15   | Weyakwin Drive & Nemeiben Road   | Install "No Parking" signs on Weyakwin Drive 10m from the intersection on the southwest and northeast corners; Tree trimming on the southwest and northeast corners                     | Enhance visibility and sightlines                  |
| 16   | Taylor Street & Weyakwin Drive   | Major Intersection Improvement; recent improvements   | Improve delays; enhance safety                     |
| 17   | Brudell Road & Franklin Crescent   | Install a median island at the south side of the intersection on Brudell road; Add temporary curb extensions on the southwest & southeast corners; replace yield sign with a stop sign  | Reduce speeding and improve safety                 |
| 18   | Brudell Road & Keller Crescent   | Install a median island at the south side of the intersection on Brudell road; Add temporary curb extensions on the southwest & southeast corners; replace yield sign with a stop sign. | Reduce speeding and improve safety                 |
| 19   | Brudell Road & Keller Crescent   | Tree trimming at the southeast corner   | Enhance visibility                                 |
| 20   | Swan Lane  | Install yield signs on Swan Lane  | To assign right of way to Traffic on Swan Crescent |
| 21   | All intersecting streets on Nemeiben Road, Waterbury road and Kingsmere Blvd | Change all yield signs to stop signs (15 signs total)   | Improve safety on bus route                        |
| 22   | Nemeiben Road - 35m east of Emmeline Road                                    | Temporary speed display board facing westbound traffic  | Reduce speed                                       |





**LEGEND**

- PROPOSED STOP SIGN
- EXISTING STOP SIGN
- ▲ EXISTING YIELD SIGN
- EXISTING BUS ROUTE
- EXISTING SCHOOL ZONE
- ⚡ EXISTING TRAFFIC SIGNAL

# LAKERIDGE TRAFFIC PLAN



## TABLE OF CONTENTS

|  |    |
|--|----|
| Executive Summary .....  | i  |
| TABLE OF CONTENTS .....  | v  |
| 1 Introduction .....   | 1  |
| 2 Stage 1: Identifying Issues, Concerns, and Possible Solutions..... | 2  |
| 2.1 Concern 1 – Speeding and Shortcutting.....                       | 2  |
| 2.2 Concern 2 – Pedestrian Safety.....                               | 3  |
| 2.3 Concern 3 – Traffic Control .....                                | 4  |
| 2.4 Concern 4 – Parking.....   | 5  |
| 2.5 Concern 5 – Major Intersections & Corridors .....                | 6  |
| 3 Stage 2: Development of Draft Traffic Plan.....                    | 7  |
| 3.1 Methodology .....  | 7  |
| 3.2 Traffic Volume and Speed Assessments.....                        | 7  |
| 3.3 Traffic Control Assessments .....                                | 9  |
| 3.4 Pedestrian Assessments.....                                      | 10 |
| 3.5 Traffic Signal Assessments.....                                  | 11 |
| 3.6 Collision Analysis .....   | 11 |
| 4 Stage 3: Presentation of Traffic Plan.....                         | 12 |
| 4.1 Methodology .....  | 12 |
| 4.2 Speeding and Shortcutting.....                                   | 12 |
| 4.3 Pedestrian Safety .....  | 13 |
| 4.4 Intersection Safety .....  | 14 |
| 4.5 Parking.....   | 15 |
| 4.6 Follow Up Consultation – Presentation of Traffic Plan.....       | 15 |
| 5 Stage 4: Implementation.....                                       | 16 |

APPENDIX A: PUBLIC MEETING #1 – MAY 26, 2016 MINUTES

APPENDIX B: TRAFFIC DATA COLLECTION

APPENDIX C: COLLISION ANALYSIS

APPENDIX D: PUBLIC MEETING #2 – NOVEMBER 17, 2016 MINUTES

APPENDIX E: DECISION MATRIX

APPENDIX F: ADDITIONAL CONCERNS RECEIVED AFTER PRESENTATION OF DRAFT PLAN

## LIST OF TABLES

|   |    |
|---|----|
| Table 3-1: City of Saskatoon Street Classifications and Characteristics.....        | 8  |
| Table 3-2: Speed Studies and Average Daily Traffic Counts (2016) .....              | 9  |
| Table 3-3: All-Way Stop Warrant Criteria.....                                       | 10 |
| Table 4-1: Recommended Improvements – Speeding and Shortcutting .....               | 13 |
| Table 4-2: Recommended Improvements - Pedestrian Safety.....                        | 13 |
| Table 4-3: Recommended Improvements – Intersection Safety .....                     | 14 |
| Table 4-4: Recommended Improvements – Parking.....                                  | 15 |
| Table 5-1: Signs, Pavement Markings & Temporary Traffic Calming Cost Estimate ..... | 17 |
| Table 5-2: Speed Enforcement & Speed Display Boards Cost Estimate .....             | 18 |
| Table 5-3: Permanent Traffic Calming Cost Estimate .....                            | 18 |
| Table 5-4: Total Cost Estimate.....   | 18 |
| Table 5-5: Lakeridge Neighbourhood Recommended Improvements .....                   | 20 |

## LIST OF EXHIBITS

|  |    |
|--|----|
| Exhibit 5-1: Recommended Lakeridge Traffic Plan..... | 22 |
|--|----|

## I INTRODUCTION

As the City of Saskatoon continues to grow, many neighbourhoods face issues such as pedestrian safety, cut-through traffic, and increased speeds. In August 2013, City Council adopted the City of Saskatoon *Traffic Guidelines and Tools* document that outlines a procedure for completing traffic reviews on a neighbourhood-wide basis. Prior to this, neighbourhood traffic issues were dealt with on a case-by-case basis with mixed results. Since 2013 the formal process has proven to be very successful in providing recommendations that improve neighbourhood traffic conditions and pedestrian safety. Recommendations are developed by the Administration and residents in a collaborative fashion. Accordingly, this report provides the Traffic Plan for the Lakeridge neighbourhood.

The Lakeridge neighbourhood is located on the east portion of Saskatoon and is bound by Highway 16 to the south, Boychuk Drive to the east, Weyakwin Drive to the west and Taylor Street to the north. The land use is mostly residential, with elementary schools (Saint Luke School and Lakeridge School) on Emmeline Road.

The neighbourhood traffic review includes four stages:

- **Stage 1** - Identify issues, concerns and possible solutions through the initial neighbourhood consultation and the Shaping Saskatoon online discussion.
- **Stage 2** - Develop a draft traffic plan based on resident's input and traffic assessments.
- **Stage 3** - Present the draft traffic plan to the neighbourhood at a follow-up meeting; circulate the plan to other civic divisions for feedback; make adjustments as needed; and present the plan to City Council for approval.
- **Stage 4** - Implement the proposed measures in specific time frame, short-term (1 to 2 years), medium-term (3 to 5 years) or long-term (5 years plus).

This report presents the study findings and recommendations.

## 2 STAGE 1: IDENTIFYING ISSUES, CONCERNS, AND POSSIBLE SOLUTIONS

A public meeting was held in May 2016 to identify traffic concerns within the Lakeridge neighbourhood. At the meeting, residents were given the opportunity to express their concerns and suggest possible solutions. The meeting minutes are provided in **Appendix A**.

The following pages summarize the concerns and suggested solutions identified during the initial consultation (including all correspondence and Shaping Saskatoon discussion comments received prior to the follow-up meeting) with the residents.

### 2.1 Concern 1 – Speeding and Shortcutting

Shortcutting occurs when non-local traffic passes through the neighbourhood on streets that are designed and intended for low volumes of traffic (i.e. local streets). As speeding often accompanies shortcutting, these concerns have been grouped into one category.

Neighbourhood concerns for speeding and shortcutting were at the following locations:

- Brudell Road
- Kingsmere Boulevard
- Nemeiben Road
- Emmeline Road (near midblock crosswalk)
- Waterbury Road
- Swan Crescent
- Brabant Crescent
- Franklin Place

Proposed solutions identified by residents:

- Emmeline Road:
  - Install an active pedestrian corridor
  - Have the school zone enforced all through the day
  - Traffic calming devices
  - Install speed enforcement camera
  - Better lane markings
  - Identify existing crosswalks



- Nemieben Road:
  - Install speed bumps between Waterbury Road and Boychuk Drive
  - Police enforcement
- Brudell Road - Install traffic calming devices
- Kingsmere Boulevard:
  - Install speed bumps
  - Police enforcement
  - Install traffic calming devices

## 2.2 Concern 2 – Pedestrian Safety

It is important to address pedestrian safety concerns to support active transportation as encouraging walking to nearby amenities, as opposed to driving, reduces traffic volumes.

Pedestrian crosswalks need to adhere to the City of Saskatoon Council Policy C07-018 *Traffic Control at Pedestrian Crossings*, November 15, 2004 which states the following:

“The installation of appropriate traffic controls at pedestrian crossings shall be based on warrants listed in the document entitled *Traffic Control at Pedestrian Crossings – 2004* approved by City Council in 2004.”

Neighbourhood concerns regarding pedestrian safety were at the following locations:

- Kingsmere Boulevard & Waterbury Road - pedestrian crossing at this location is difficult. It is not clearly visible.
- Emmeline Road (especially near midblock crosswalks):
  - Visibility concerns with crosswalks.
  - Vehicles do not stop to allow pedestrians to safely cross
  - There are still people making U turns in front of the schools
  - Bushes and trees obstruct vehicles from seeing pedestrians
- Kingsmere Boulevard & Lavalee Road - Visibility concerns at the North West corner obstructing vehicles from seeing pedestrians crossing.
- Weyakwin Drive & Taylor Street:
  - Unsafe for pedestrians to cross this intersection
  - Vehicles do not stop for pedestrians

- Weyakwin Drive & Nemeiben Road:
  - Trees makes visibility difficult and unsafe for pedestrians to cross.
  - Vehicles do not stop for pedestrians

Proposed solutions identified by residents:

- Install an active pedestrian corridor
- Install pedestrian actuated signal
- Have the school zone enforced all through the day
- Tree trimming at intersections to enhance visibility
- Restrict parking at intersections to enhance visibility
- Improve visibility of school zone signs
- Install curb extensions
- Install Traffic signal at Weyakwin Drive & Taylor Street with countdown timers for pedestrians

### 2.3 Concern 3 – Traffic Control

Traffic control signs are used in order to assign the right-of-way. City of Saskatoon Council Policy C07-007 *Traffic Control – Use of Stop and Yield Signs*, April 26, 2009 states that stop and yield signs are not to be used:

- As speed control devices;
- to stop priority traffic over minor traffic;
- on the same approach to an intersection where traffic signals are operational; or
- as a pedestrian crossing device.

An all-way stop must meet the conditions for traffic volumes, collision history, and must have a balanced volume from each leg to operate sufficiently.

Concerns regarding traffic control in the Lakeridge Neighbourhood were identified at the following locations:

- Weyakwin Drive & Nemeiben Road – Long delays in safely making an Westbound left turn and safety concerns
- Weyakwin Drive & Taylor Street – Traffic delays on Weyakwin Drive and safety concerns for pedestrians
- Emmeline Road & Nemeiben Road – Safety concerns and traffic delays on Emmeline Road
- Kingsmere Boulevard & Waterbury Road - Safety concerns

- Emmeline Road & Waterbury Road – Traffic delays and safety concerns
- Swan Crescent & Swan Lane – Safety concern; no right of way to traffic on Swan Crescent
- Brabant Crescent & Brabant Court - no right of way to traffic on Brabant Crescent
- Brabant Crescent & Brabant Terrace - no right of way to traffic on Brabant Crescent
- Brabant Crescent & Brabant Place - no right of way to traffic on Brabant Crescent
- Kingsmere Boulevard & Brightwater Crescent – Yield sign should be changed to a stop sign

Proposed solutions identified by residents:

- Weyakwin Drive & Nemeiben Road – Make the intersection a 3 – way stop
- Weyakwin Drive & Taylor Street – Install full traffic signals
- Emmeline Road & Nemeiben Road – Make the intersection a 3 – way stop
- Kingsmere Boulevard & Waterbury Road – Install a 4 – way stop
- Emmeline Road & Waterbury Road – Install a 3 – way stop
- Swan Crescent & Swan Lane – Install a yield or stop sign on Swan Lane
- Brabant Crescent & Brabant Court – Install a yield or stop sign on Brabant Court
- Brabant Crescent & Brabant Terrace – Install a yield or stop sign on Brabant Terrace
- Brabant Crescent & Brabant Place – Install a yield or stop sign on Brabant Place
- Kingsmere Boulevard & Brightwater Crescent – Stop sign should be installed on Brightwater Crescent
- Stop & Yield Retrofit Program:
  - Install yield signs to assign right of way to busier roads
  - Replace some yield signs with stop signs because people do not obey the yield signs

## 2.4 Concern 4 – Parking

Parking is allowed on all city streets unless signage is posted. According to City of Saskatoon Bylaw 7200, *The Traffic Bylaw*, December 16, 2013, vehicles are restricted from parking within 10 metres of an intersection and one metre of a driveway or back lane.

Neighbourhood concerns regarding parking were at the following locations:

- Emmeline Road & Waterbury Road – Parking too close to the intersection makes the intersection unsafe
- Weyakwin Drive & Nemeiben Road - Bushes and Parking obstructs sightlines (blind corner)
- Emmeline Road & Nemeiben Road – Southwest corner of the intersection is unsafe. Parked vehicles restrict visibility for turning vehicles
- Swan Crescent & Emmeline Road – Parking on crosswalks; Parking in a no stopping area

- Kingsmere Boulevard & Lavalee Road – Stop sign should be installed on Brightwater Crescent

Proposed solutions identified by residents:

- Emmeline Road & Waterbury Road – Install a “No Parking” sign at the intersection especially at the southeast corner and police enforcement.
- Weyakwin Drive & Nemeiben Road - Install a “No Parking” sign at the intersection
- Emmeline Road & Nemeiben Road – Install a “No Parking” sign at the intersection especially at the Southwest corner.
- Swan Crescent & Emmeline Road – Install a “No Parking” sign at the crosswalks and “no stopping area”. Also install a “No Parking” sign at the intersection.
- Kingsmere Boulevard & Lavalee Road – Install a “No Parking” sign about 15 meters to 20 meters away from the intersection.

## 2.5 Concern 5 – Major Intersections & Corridors

Major intersections include roadways with higher traffic volumes (i.e. arterials, collectors) or intersections with an existing traffic signal.

Neighbourhood concerns regarding major intersections were at the following locations:

- Taylor Street & Weyakwin Drive:
  - A very dangerous intersection; very unsafe
  - Too long delays for traffic on Weyakwin Drive
  - Unsafe for pedestrians to cross Taylor Street
- Boychuk Drive & Kingsmere Boulevard - Westbound left turning vehicles makes it difficult for eastbound traffic from Kingsmere Boulevard to find gaps to safely make a right turn

Proposed solutions identified by residents:

- Taylor Street & Weyakwin Drive - Install a traffic signal with countdown timers for pedestrians
- Boychuk Drive & Kingsmere Boulevard - Enforcement needed to make sure people adhere to traffic controls

## 3 STAGE 2: DEVELOPMENT OF DRAFT TRAFFIC PLAN

### 3.1 Methodology

Stage 2 of the neighbourhood traffic review included developing a draft Traffic Plan. This was completed through the following actions:

- Create a detailed list of all the issues provided by the residents.
- Collect historical traffic studies and information the City has on file for the neighbourhood.
- Prepare a data collection program that will provide the appropriate information needed to undertake the assessments.
- Complete the data collection, which may include:
  - Daily and weekly traffic counts
  - Speed measurements
  - Intersection turning movement counts
  - Pedestrian counts
  - Site observations
  - Collision analysis
- Assess the issues by using the information in reference with City policies, bylaws, and guidelines, transportation engineering design guidelines and technical documents, and professional engineering judgment.

The following sections provide details on the data collected for traffic volume and speed assessments, traffic control assessments, pedestrian crossing assessments, traffic signal assessments and collision analysis. A map of the traffic data collection is shown in **Appendix B**.

### 3.2 Traffic Volume and Speed Assessments

Traffic volumes and travel speeds were measured to assist in determining the need for traffic calming devices. In Saskatoon the neighbourhood streets are classified typically as either local or collector streets. Traffic volumes (referred to as Average Daily Traffic) on these streets should meet the City of Saskatoon guidelines shown in **Table 3-1**.



**Table 3-1: City of Saskatoon Street Classifications and Characteristics**

| Characteristics                          | Classifications   |            |  |                                   |  |                                   |
|--|---|------------|--|-----------------------------------|--|-----------------------------------|
|  | Back Lanes  |            | Locals   |                                   | Collectors   |                                   |
|  | Residential   | Commercial | Residential  | Commercial                        | Residential  | Commercial                        |
| Traffic function                         | Access function only (traffic movement not a consideration) |            | Access primary function (traffic movement secondary consideration) |                                   | Traffic movement and land access of equal importance |                                   |
| Average Daily Traffic (vehicles per day) | <500  | <1,000     | <1,000   | <5,000                            | <5,000   | 8,000-10,000                      |
| Typical Speed Limits (kph)               | 20  |            | 50   |                                   | 50   |                                   |
| Transit Service                          | Not permitted   |            | Generally avoided  |                                   | Permitted  |                                   |
| Cyclist                                  | No restrictions or special facilities                       |            | No restrictions or special facilities                              |                                   | No restrictions or special facilities                |                                   |
| Pedestrians                              | Permitted, no special facilities                            |            | Sidewalks on one or both sides                                     | Sidewalks provided where required | Typically sidewalks provided both sides              | Sidewalks provided where required |
| Parking                                  | Some restrictions   |            | No restrictions or restriction on one side only                    |                                   | Few restrictions other than peak hour                |                                   |

Travel speeds were measured to determine the 85<sup>th</sup> percentile speed, which is the speed at which 85 percent of vehicles are travelling at or below. The speed limit in the Lakeridge Village neighbourhood is 50kph, except for school zones where the speed limit will be 30kph from September and June, Monday to Friday, 8:00am to 5:00pm.

The speed studies and Average Daily Traffic (ADT) on streets where speeding was identified as an issue are summarized in **Table 3-2**.

**Table 3-2: Speed Studies and Average Daily Traffic Counts (2016)**

| Street              | Between                               | Class     | Average Daily Traffic (vehicles per day) | Speed (kph) |
|---------------------|---------------------------------------|-----------|--|-------------|
| Franklin Place      | Franklin Crescent & Franklin Crescent | Local     | 17                                       | 35          |
| Franklin Crescent   | Brudell Road & Brudell Road           |           | 82                                       | 30          |
| Brabant Crescent    | Nemeiben Road & Waterbury Road        |           | 320                                      | 49          |
| Emmeline Road       | Lavalee Road & Waterbury Road         |           | 630                                      | 42          |
| Brudell Road        | Taylor Street & Nemeiben Road         |           | 1050                                     | 52          |
| Waterbury Road      | Kingsmere Boulevard & Nemeiben Road   | Collector | 800                                      | 44          |
| Nemeiben Road       | Weyakwin Drive & Boychuk Drive        |           | 1550                                     | 63          |
| Kingsmere Boulevard | Weyakwin Drive & Boychuk Drive        |           | 3500                                     | 55          |
| Weyakwin Drive      | Kingsmere Boulevard & Taylor Street   |           | 2650                                     | 55          |

### 3.3 Traffic Control Assessments

Yield, stop, and all-way stop controls need to meet City of Saskatoon Council Policy C07-007 *Traffic Control – Use of Stop and Yield Signs*, January 26, 2009.

Turning movement counts were completed to determine the need for an all-way (i.e. three-way or four-way) stop control. Criteria outlined in Council Policy C07-007 that may warrant an all-way stop include:

- A peak hour count greater than 600 vehicles;
- an ADT greater than 6,000 vehicles per day; or
- when five or more collisions are reported in the last twelve month period and are of a type susceptible to correction by an all-way stop control.

Further conditions that must be met for an all-way stop to be warranted are:

1. Traffic entering the intersection from the minor street must be at least 35% for a four-way stop and 25% for a three-way stop.
2. No other all-way stop or traffic signals within 200 m.

Results of the studies are shown in **Table 3-3**.

**Table 3-3: All-Way Stop Warrant Criteria**

| Location                             | Criteria 1: Peak Hour Count (greater than 600) | Criteria 2: Average Daily Traffic (greater than 6,000vpd) | Criteria 3: Collisions within most recent 12 months (5 or more) | Results                       |
|--------------------------------------|--|---|---|-------------------------------|
| Kingsmere Boulevard & Waterbury Road | 425<br>(no)                                    | 4670<br>(no)  | 1<br>(no)   | All-Way Stop<br>Not Warranted |
| Nemeiben Road & Emmeline Road        | 276<br>(no)                                    | 2,870<br>(no)   | 0<br>(no)   | All-Way Stop<br>Not Warranted |
| Weyakwin Drive & Nemeiben Road       | 449<br>(no)                                    | 4,610<br>(no)   | 0<br>(no)   | All-Way Stop<br>Not Warranted |

Provided one of the above criteria are met, continue to Step 2 to check the condition requirements.

### 3.4 Pedestrian Assessments

Pedestrian assessments are conducted to determine the need for pedestrian actuated signalized crosswalks which are in adherence to the City of Saskatoon Council Policy C07-018 *Traffic Control at Pedestrian Crossings*, November 15, 2004. Devices include the pedestrian corridor (flashing yellow lights) or pedestrian-actuated signals. A warrant system assigns points for a variety of conditions including:

- Number of traffic lanes to be crossed;
- presence of a physical median;
- posted speed limit of the street;
- distance the crossing point is to the nearest protected crosswalk point; and
- number of pedestrian and vehicles at the location.

Pedestrian and traffic data is collected during the five peak hours of: 8:00am to 9:00am, 11:30am to 1:30pm, and 3:00pm to 5:00pm.

A standard pedestrian crosswalk or a zebra crosswalk (i.e. striped) may be considered when a signalized crosswalk is not warranted. In this neighbourhood, no pedestrian assessments were conducted.

### 3.5 Traffic Signal Assessments

Assessments are conducted to determine the need for traffic signals, in adherence to the Traffic Signal and Pedestrian Signal Head Warrant Handbook. A warrant system assigns points for a variety of conditions including:

- Number of traffic lanes;
- posted speed limit of the street;
- distance to the nearest traffic signal; and
- number of pedestrians and vehicles at the location.

Pedestrian and traffic data is collected during the five peak hours of: 8:00am to 9:00am, 11:30am to 1:30pm, and 4:00pm to 6:00pm.

If a traffic signal is not warranted, additional measures to improve safety (i.e. parking restrictions, oversized stop signs) may be considered. In this neighbourhood, no traffic signal assessments were conducted.

### 3.6 Collision Analysis

The most recently available five year collision data (2011 to 2015) was provided by SGI. High-collision locations, typically noted as the locations with an average of two or more collisions per year, were reviewed in more depth to identify trends and possible improvements. Locations with two or more collisions per year are:

- Nemeiben Road & Weyakwin Drive
- Taylor Street & Weyakwin Drive
- Emmeline Road & Nemeiben Road

Details of the collision analysis are provided in **Appendix C**.

## 4 STAGE 3: PRESENTATION OF TRAFFIC PLAN

### 4.1 Methodology

Stage 3 of the neighbourhood traffic review included finalizing the recommended plan. This was achieved by completing the following steps:

- Based on the assessments, prepare a plan that illustrates the appropriate recommended improvement
- Present the draft plan to the residents at a follow-up public meeting
- Circulate the draft plan to the civic divisions for comment
- Revise the draft plan based on feedback from the stakeholders
- Prepare a technical document summarizing the recommended plan and project process

The tables in the following sections provide the details of the recommended Traffic Plan, including the location, recommended improvement, and the justification of the recommended improvement.

### 4.2 Speeding and Shortcutting

As stated in Council Policy C07-007 *Traffic Control – Use of Stop and Yield Signs*, January 26, 2009, “stop signs are not to be used as speed control devices.”

The recommended improvements to address speeding and shortcutting are detailed in **Table 4-1**.



**Table 4-1: Recommended Improvements – Speeding and Shortcutting**

| Location                                    | Recommended Improvement   | Justification                       |
|---|---|-------------------------------------|
| Emmeline Road & Swan Crescent (west)        | Install a median island   | Reduce speed and enhance visibility |
| Emmeline Road (at midblock crosswalk)       | Install a median island; make temporary calming permanent   | Reduce speed and enhance visibility |
| Nemeiben Road & Brudell Road                | Install a median island at the east side of the intersection on Nemeiben Road; Add temporary curb extensions on the northeast & southeast corners.                                      | Reduce speed and improve safety     |
| Nemeiben Road & Smoothstone Crescent (east) | Install a median island at the east side of the intersection on Nemeiben Road; add temporary curb extensions on the northeast & southeast corners; replace yield sign with a stop sign. | Reduce speed and improve safety     |
| Brudell Road & Franklin Crescent            | Install a median island at the south side of the intersection on Brudell road; Add temporary curb extensions on the southwest & southeast corners; replace yield sign with a stop sign. | Reduce speed and improve safety     |
| Brudell Road & Keller Crescent              | Install a median island at the south side of the intersection on Brudell road; Add temporary curb extensions on the southwest & southeast corners; replace yield sign with a stop sign. | Reduce speed and improve safety     |
| Nemeiben Road - 35m east of Emmeline Road   | Temporary speed display board facing westbound traffic  | Reduce speed                        |

### 4.3 Pedestrian Safety

The recommended improvements to increase pedestrian safety are detailed in **Table 4-2**.

**Table 4-2: Recommended Improvements - Pedestrian Safety**

| Location                       | Recommended Improvement  | Justification   |
|--------------------------------|--|---|
| Emmeline Road & Nemeiben Road  | Replace yield sign with a stop sign; Install "No Parking" signs 15m from the intersection on the southwest and southeast corners; tree trimming on the southwest corner. | Enhance visibility and Improve pedestrian safety to cross Nemeiben Road |
| Nemeiben Road & Waterbury Road | Install a median island with enhanced stop sign.   | Enhance visibility of stop sign and improve pedestrian safety           |

## 4.4 Intersection Safety

The recommended improvements to intersections that will improve the level of safety by clearly identifying the right-of-way through traffic controls are provided in **Table 4-3**.

**Table 4-3: Recommended Improvements – Intersection Safety**

| Location  | Recommended Improvement                             | Justification                                      |
|---|---|--|
| All intersecting streets on Nemeiben Road, Waterbury road and Kingsmere Blvd. | Change all yield signs to stop signs (15 in total)  | Improve safety on bus route                        |
| Taylor Street & Weyakwin Drive  | Major Intersection Improvement; recent improvements | Improve delays; enhance safety                     |
| Kingsmere Boulevard & Waterbury Road  | Install a 4 way stop at the intersection            | Enhance visibility and safety                      |
| Waterbury Road & Jan Crescent   | Tree trimming at the southwest corner               | Enhance visibility and safety                      |
| Brudell Road & Keller Crescent  | Tree trimming at the southeast corner               | Enhance visibility and safety                      |
| Swan Lane   | Install Yield Signs on Swan Lane                    | To assign right of way to traffic on Swan Crescent |
| Nemeiben Road & Smoothstone Crescent (west)                                   | Replace yield sign with a stop sign.                | Improve safety                                     |
| Nemeiben Road & Anglin Place  | Replace yield sign with a stop sign.                | Improve safety                                     |
| Nemeiben Road & Brabant Crescent  | Replace yield sign with a stop sign.                | Improve safety                                     |

## 4.5 Parking

The recommended improvements to parking that will improve the level of safety are provided in **Table 4-4**.

**Table 4-4: Recommended Improvements – Parking**

| Location                               | Recommended Improvement   | Justification                     |
|--|---|-----------------------------------|
| Kingsmere Boulevard & Brightwater Cres | Change yield sign to stop sign; "No Parking" sign 10m from the intersection; make temporary calming permanent   | Improve visibility and safety     |
| Emmeline Road & Waterbury Road         | Install "No Parking" signs 10m from the intersection; tree trimming on the southeast corner.  | Improve visibility and safety     |
| Emmeline Road & Swan Crescent (east)   | Install "No Parking" signs on Emmeline road 10m from the intersection on the southwest and southeast corners; "No Parking" sign on Emmeline road (at the crosswalk on the north side between the disabled persons loading zone and the 5min parking). | Enhance visibility                |
| Weyakwin Drive & Nemeiben Road         | Install "No Parking" signs on Weyakwin Drive 10m from the intersection on the southwest and northeast corners; Tree trimming on the southwest and northeast corners.  | Enhance visibility and sightlines |

## 4.6 Follow Up Consultation – Presentation of Traffic Plan

The recommended improvements were presented to residents and stakeholders at a follow-up public meeting in November 2016. Meeting minutes are provided in **Appendix D**. Recommended improvements that were not supported were eliminated or altered accordingly.

A decision matrix detailing the list of recommended improvements presented at the follow-up meeting are included in **Appendix E**. Additional issues raised during the follow-up meeting were assessed and outlined in **Appendix F**. Recommendations were added to the list of improvements if necessary.

The revised list of recommendations was then circulated to the civic divisions (including Saskatoon Police Service, Saskatoon Light & Power, Saskatoon Fire Department, Environmental Services, Parking Services, Roadways & Operations and Transit) to gather comments and concerns. General support was received.

## 5 STAGE 4: IMPLEMENTATION

Stage 4, the final stage of the Neighbourhood Traffic Review, is to install the recommended improvements within the specified time frame. The time frame depends upon the complexity and cost of the solution. A short-term time frame is defined by implementing the improvements within short-term (1 to 2 years); medium-term (3 to 5 years); and long-term (5 years plus).

The placement of signs, pavement markings and temporary traffic calming will be completed short-term (1 to 2 years). Most often the installations take place in spring / summer of the following year. Therefore installations for Lakeridge are likely to take place in spring / summer 2017.

The estimated costs of the improvements included in the Neighbourhood Traffic Plan are outlined in the following tables:

- **Table 5-1:** Signs, Pavement Markings & Temporary Traffic Calming Cost Estimate
- **Table 5-2:** Speed Enforcement & Speed Display Boards Cost Estimate
- **Table 5-3:** Permanent Traffic Calming Cost Estimate
- **Table 5-4:** Total Cost Estimate

**Table 5-1: Signs, Pavement Markings & Temporary Traffic Calming Cost Estimate**

| Location  | Device (# of Devices) | Cost Estimate   | Timeframe    |
|---|-----------------------|-----------------|--------------|
| Kingsmere Boulevard & Brightwater Cres  | No Parking signs (2)  | \$500           | 1 to 2 years |
|   | Stop sign (1)         | \$250           |              |
| Kingsmere Boulevard & Waterbury Road  | Stop signs (6)        | \$1500          |              |
|   | Median islands (2)    | \$1000          |              |
| Emmeline Road & Waterbury Road  | No Parking signs (2)  | \$500           |              |
| Emmeline Road & Swan Crescent (east)  | No Parking signs (3)  | \$750           |              |
| Emmeline Road & Nemeiben Road   | No Parking signs (2)  | \$500           |              |
|   | Stop sign (1)         | \$250           |              |
| Emmeline Road & Swan Crescent (west)  | Median island (1)     | \$500           |              |
| Emmeline Road (at midblock crosswalk)   | Median island (1)     | \$500           |              |
| Nemeiben Road & Brudell Road  | Median island (1)     | \$500           |              |
|   | Curb extensions (2)   | \$1000          |              |
| Nemeiben Road & Brabant Crescent  | Stop sign (1)         | \$250           |              |
| Swan Lane   | Yield signs (2)       | \$500           |              |
| Nemeiben Road & Anglin Place  | Stop sign (1)         | \$250           |              |
| Nemeiben Road & Smoothstone Crescent (east)                                       | Median island (1)     | \$500           |              |
|   | Curb extensions (2)   | \$1000          |              |
|   | Stop sign (1)         | \$250           |              |
| Nemeiben Road & Waterbury Road  | Median islands (2)    | \$1000          |              |
|   | Stop signs (2)        | \$500           |              |
| Nemeiben Road & Smoothstone Crescent (west)                                       | Stop sign (1)         | \$250           |              |
| Waterbury Road & Jan Crescent   | Tree Trimming         | \$250           |              |
| Weyakwin Drive & Nemeiben Road  | No Parking signs (2)  | \$500           |              |
|   | Tree Trimming         | \$250           |              |
| Brudell Road & Franklin Crescent  | Median island (1)     | \$500           |              |
|   | Curb extensions (2)   | \$1000          |              |
|   | Stop sign (1)         | \$250           |              |
| Brudell Road & Keller Crescent  | Tree Trimming         | \$250           |              |
| All intersecting streets on Nemeiben Road, Waterbury Road and Kingsmere Boulevard | No Parking signs (15) | \$3750          |              |
| <b>Total</b>  |                       | <b>\$19,000</b> |              |

**Table 5-2: Speed Enforcement & Speed Display Boards Cost Estimate**

| Location                              | Device   | Cost Estimate  | Time Frame   |
|---------------------------------------|--|--|--------------|
| Nemeiben Road – east of Emmeline Road | Temporary speed display board;<br>Saskatoon Police Service enforcement | \$0 (funded through Speed Program)<br>\$0 (provided by Saskatoon Police Service) | 1 to 2 years |
| Kingsmere Boulevard                   | Saskatoon Police Service enforcement                                   | \$0 (provided by Saskatoon Police Service)                                       |              |
| <b>Total</b>                          |  | <b>\$0</b>   |              |

**Table 5-3: Permanent Traffic Calming Cost Estimate**

| Location                                   | Device (# of Devices) | Cost Estimate   | Time Frame   |
|--|-----------------------|-----------------|--------------|
| Kingsmere Boulevard & Brightwater Crescent | Curb extension (1)    | \$45,000        | 3 to 5 years |
| Emmeline Road (at midblock crosswalk)      | Curb extension (1)    | \$45,000        |              |
| <b>Total</b>                               |                       | <b>\$90,000</b> |              |

**Table 5-4: Total Cost Estimate**

| Category   | Time Frame                   |                               |
|--|------------------------------|-------------------------------|
|  | Short-Term<br>(1 to 2 years) | Medium-Term<br>(3 to 5 years) |
| Signs, Pavement Markings & Temporary Traffic Calming | \$19,000                     | NA                            |
| Speed Enforcement & Temporary Speed Display Boards   | \$0                          | NA                            |
| Pedestrian Safety Devices                            | NA                           | NA                            |
| Permanent Traffic Calming                            | NA                           | \$90,000                      |
| <b>Total</b>   | <b>\$19,000</b>              | <b>\$90,000</b>               |

The total cost estimate for short-term improvements (signs, pavement markings and temporary traffic calming) is **\$19,000**. The total cost estimate for long-term improvements (permanent traffic calming and pedestrian safety devices) is **\$90,000**.

Resulting from the Neighbourhood Traffic Review is a list of recommended improvements, including the location and justification as summarized in **Table 5-5**.

The resulting recommended Lakeridge Neighbourhood Traffic Plan is illustrated in **Exhibit 5-1**.

.

**Table 5-5: Lakeridge Neighbourhood Recommended Improvements**

| <b>Item</b> | <b>Location</b>                             | <b>Recommendation</b>  | <b>Reason</b>   |
|-------------|---|--|---|
| 1           | Kingsmere Boulevard & Brightwater Cres      | Change yield sign to stop sign; "No Parking" sign 10m from the intersection; make temporary calming permanent  | Improve Safety  |
| 2           | Kingsmere Boulevard & Waterbury Road        | Install a 4 way stop at the intersection   | Improve visibility and safety                                 |
| 3           | Emmeline Road & Waterbury Road              | Install "No Parking" signs 10m from the intersection; tree trimming on the southeast corner  | Improve visibility and safety                                 |
| 4           | Emmeline Road & Swan Crescent (west)        | Install a median island  | Enhance visibility and reduce speeding                        |
| 5           | Emmeline Road (at midblock crosswalk)       | Install a median island; make temporary calming permanent  | Enhance visibility and reduce speeding                        |
| 6           | Emmeline Road & Swan Crescent (east)        | Install "No Parking" signs on Emmeline road 10m from the intersection on the southwest and southeast corners; "No Parking" sign on Emmeline road (at the crosswalk on the north side between the disabled persons loading zone and the 5min parking) | Enhance visibility  |
| 7           | Emmeline Road & Nemeiben Road               | Replace yield sign with a stop sign; Install "No Parking" signs 15m from the intersection on the southwest and southeast corners; tree trimming on the southwest corner  | Enhance visibility and improve safety                         |
| 8           | Nemeiben Road & Brudell Road                | Install a median island at the east side of the intersection on Nemeiben road; Add temporary curb extensions on the northeast & southeast corners  | Reduce speeding and improve safety                            |
| 9           | Nemeiben Road & Brabant Crescent            | Replace yield sign with a stop sign  | Improve safety  |
| 10          | Nemeiben Road & Anglin Place                | Replace yield sign with a stop sign  | Improve safety  |
| 11          | Nemeiben Road & Smoothstone Crescent (east) | Install a median island at the east side of the intersection on Nemeiben road; Add temporary curb extensions on the northeast & southeast corners; replace yield sign with a stop sign   | Reduce speeding and improve safety                            |
| 12          | Nemeiben Road & Waterbury Road              | Install a median island with enhanced stop sign  | Enhance visibility of stop sign and improve pedestrian safety |



Table 5-5 Continued

| Item | Location   | Recommendation  | Reason   |
|------|--|---|--|
| 13   | Nemeiben Road & Smoothstone Crescent (west)                                  | Replace yield sign with a stop sign   | Improve safety                                     |
| 14   | Waterbury Road & Jan Crescent  | Tree trimming at the southwest corner   | Enhance visibility                                 |
| 15   | Weyakwin Drive & Nemeiben Road   | Install "No Parking" signs on Weyakwin Drive 10m from the intersection on the southwest and northeast corners; Tree trimming on the southwest and northeast corners                     | Enhance visibility and sightlines                  |
| 16   | Taylor Street & Weyakwin Drive   | Major Intersection Improvement; recent improvements   | Improve delays; enhance safety                     |
| 17   | Brudell Road & Franklin Crescent   | Install a median island at the south side of the intersection on Brudell road; Add temporary curb extensions on the southwest & southeast corners; replace yield sign with a stop sign  | Reduce speeding and improve safety                 |
| 18   | Brudell Road & Keller Crescent   | Install a median island at the south side of the intersection on Brudell road; Add temporary curb extensions on the southwest & southeast corners; replace yield sign with a stop sign. | Reduce speeding and improve safety                 |
| 19   | Brudell Road & Keller Crescent   | Tree trimming at the southeast corner   | Enhance visibility                                 |
| 20   | Swan Lane  | Install yield signs on Swan Lane  | To assign right of way to Traffic on Swan Crescent |
| 21   | All intersecting streets on Nemeiben Road, Waterbury road and Kingsmere Blvd | Change all yield signs to stop signs (15 signs total)   | Improve safety on bus route                        |
| 22   | Nemeiben Road - 35m east of Emmeline Road                                    | Temporary speed display board facing westbound traffic  | Reduce speed                                       |



Exhibit 5-1



**LEGEND**

- PROPOSED STOP SIGN
- EXISTING STOP SIGN
- ▲ EXISTING YIELD SIGN
- EXISTING BUS ROUTE
- EXISTING SCHOOL ZONE
- ⚡ EXISTING TRAFFIC SIGNAL

# LAKERIDGE TRAFFIC PLAN



APPENDIX A: PUBLIC MEETING #1 – MAY 26, 2016 MINUTES

**Lakeridge Neighbourhood Traffic Review**  
**Thursday, May 26, 2016, 7:00 PM – 9:00 PM**  
**Lakeridge School Gymnasium**

**Agenda**

1. Welcome & Introductions
2. Presentation from Transportation Division
3. Small Group Discussions & Report Back to Large Group
4. Next Steps
5. Large Group Discussion – Questions & Answers

**1. Welcome & Introductions**

(Presented by Mitch Riabko and Kathy Dahl, Facilitators)

**2. Presentation from Transportation Division – Lakeridge Neighbourhood Traffic Review**

(Presented by Lanre Akindipe, P.Eng, Transportation Engineer)

Presentation Outline

- Neighbourhood Traffic Review Process
- Lakeridge Review Schedule
- Sources of Information
- Past Concerns Received
- Description of Traffic Calming & Pedestrian Safety Devices
- Corridor Reviews & Major Intersection Reviews

Neighbourhood Traffic Review Process

- August 2013 – New process
- Mandate – Reduce and calm traffic, and improve safety within neighbourhoods
- 2014 – Reviewed 11 neighbourhoods
- 2015 – Reviewed 8 neighbourhoods
- 2016 – Sutherland, Willowgrove, Stonebridge, Hampton Village, Grosvenor Park, Parkridge, Silverspring, Lakeridge

Lakeridge Review Schedule

- Stage 1 – Identify issues & possible solutions through community consultation ( May to Fall 2016)
- Stage 2 – Develop a draft traffic plan
- Stage 3 – Present draft traffic plan to community for feedback (Fall 2016)
- Stage 4 – Implement changes over time (Beginning Spring 2017)

Sources of Information

- Past studies
- Collision Analysis
- Feedback from public consultation
- Traffic Counts & Assessments

#### Past Concerns Received

- Speeding and Pedestrian Safety – Weyakwin Drive, Brudell Road, Emmeline Road, Kingsmere Blvd, Waterbury Road, Intersection of Weyakwin Drive and Taylor Street.
- Safety & Visibility Concerns – Emmeline Road & Emmeline Terrace
- School Safety Concerns

#### Traffic Calming Devices

- Speed Display Board
- Curb Extension
- Raised Median Island
- Roundabout
- Diverter
- Right-In/Right-Out Island
- Directional Closure
- Raised Median Through Intersection
- Full Closure
- Pedestrian Devices
- Standard Crosswalk
- Zebra Crosswalk
- Active Pedestrian Corridor
- Pedestrian Actuated Signal

#### Corridor Reviews & Major Intersection Reviews

- Created to address issues at intersections along arterial streets as Neighbourhood Traffic Reviews addresses local and collector streets within neighbourhoods
- Recommendations will be identified and projects will be prioritized for funding approval
- Report will be presented to City Council

### 3. Small Group Discussions

Residents were divided into small groups to discuss traffic concerns in Sutherland and potential solutions

#### **Group 1: Mariniel Flores (City Facilitator)**

- Emmeline Road near midblock crosswalk:
  - Speeding and pedestrian safety issues (including school buses). Vehicles don't stop to allow pedestrians to cross and U-turns in the school zones.
  - Bushes are obstructing pedestrians

#### **Recommendations**

- Speed and Traffic volume studies are needed.
  - Suggesting an active pedestrian corridors
  - Having the school zone active 24 – 7.
- Weyakwin Drive and Nemeiben Road:
    - Bushes obstructing sightlines (blind corner)

**Recommendations**

- Parking restrictions on south east side.
- 3 Way stop suggested (only single stop right now).
- Emmeline Road and Nemeiben Road:
  - Sightline issues
  - Speeding issues

**Recommendations**

- Trees / Bushes need to be trimmed.
- 40km/hr in all residentials
- Maybe photo enforcement on Emmeline Road (expand program to include Emmeline road)
- Weyakwin Drive and Taylor Street:
  - Northbound have to creep out to see oncoming traffic (can't see up the hill; obstruction; visibility issues)
  - Cars don't stop for pedestrians
  - More traffic since Rosewood developed

**Recommendations**

- Speed signs, Full traffic signals, speed display boards or APS
- Restructure road not 4 – way stop.
- Kingsmere Boulevard:
  - Speeding (100km/h)

**Recommendation**

- Enforcement needed (7:30am – 8:30am) and (4pm – 6pm)

**Group 2: Shirley Matt (City Facilitator)**

- Weyakwin Drive and Taylor Street
  - Difficult to cross for Pedestrians.
  - Very Busy on Weyakwin Road during the peak AM and PM hours
  - Very difficult to make a left turn from Weyakwin Road to Taylor Street.

**Recommendations**

- Pedestrian actuated signal.
- Traffic signals.
- Emmeline Road and Nemeiben Road:
  - Lots of buses uses this intersection (school buses)
  - Speeding issues – Drivers take corner too fast
  - Southwest corner of this intersection is unsafe. Vehicles restrict visibility for turning vehicles.

**Recommendations**

- 3 Way Stop
- Speed bumps on Nemeiben Road (between Waterbury and Boychuk)

- Weyakwin Drive and Nemeiben Road:
  - The curve on Weyakwin makes it difficult to see when making a left turn.(blind corner)

**Recommendation**

- Parking restrictions

- Kingsmere Boulevard:
  - Speeding

**Recommendation**

- None

**Group 3: Justine Nyen (City Facilitator)**

- Speeding on Taylor Street
  - Police enforcement is not necessary
  - Drivers don't know that the speed limit is 50km/hr

**Recommendations**

- Education – people need to be educated more
- Install 50kph in both directions.

- Kingsmere Boulevard and Lavalae road
  - Pedestrian safety concerns – sight obstruction at the NW corner
  - Yield sign on Brightwater Crescent should be a stop sign
- Swan Crescent and Emmeline road
  - Parking in crosswalk
  - Parking in a no stopping area
  - Lots of illegal U turns
  - Speeding on Emmeline road especially during the summer months when schools are out of session
- Brabant Crescent
  - Speeding
- Boychuk Drive
  - Snow removal along Boychuk Drive
  - Moving the snow to a non school side and not unto sidewalk. It narrows the road to one.

**Recommendation**

- Pile the snow to the eastside in the parking lane and not sidewalk

- Taylor Street
  - Speeding
  - Noise – soundwall???
  - Too wide a street

- Keller Crescent and Brudell Road
  - Remove the island and make turn sharper
- Brudell Road
  - Speeding
  - High volume of traffic during the peak hours
- Franklin Place
  - Speeding

**Recommendation**

- Curb extension?
- Median islands?

#### **4. Next Steps**

(Presented by Mitch Riabko, Facilitator)

1. Continue monitoring traffic issues in your neighbourhood
2. Mail-in or email comments no later than June 24, 2016
3. Additional public input via City on-line Community Engagement webpage no later than June 24, 2016 at <http://shapingsaskatoon.ca/discussions/lakeridge-neighbourhood-traffic-review>
4. Traffic & pedestrian data collection, analysis
5. Develop recommendations and prepare draft Traffic Plan
6. Follow-up public input meeting to provide input on draft Traffic Plan
7. Determine revisions and finalize Traffic Plan
8. Present Traffic Plan to City Council for approval

#### **5. Large Group Discussion – Questions & Answers**

**Question/Comment 1:**

- Resident: How does the City determine the type of traffic control used at an intersection?
- City: We typically do a study which includes collecting traffic and pedestrian counts. A warrant system is the used to determine the need for a traffic control. A final decision of the control is based on factors which includes, warrant points, safety and engineering judgement based of field observation.

**List of Representatives**

- Mitch Riabko, Kathy Dahl – Great Works Consulting, Facilitators
- Lanre Akindipe – City of Saskatoon, Transportation & Utilities, Transportation Engineer
- Mariniel Flores – City of Saskatoon, Transportation & Utilities, Transportation Engineer
- Shirley Matt – City of Saskatoon, Transportation & Utilities, Senior Transportation Engineer
- Yang Li – City of Saskatoon, Transportation & Utilities, Transportation Engineer
- Justin Nyen – City of Saskatoon, Transportation & Utilities, Transportation Engineer



## APPENDIX B: TRAFFIC DATA COLLECTION







## APPENDIX C: COLLISION ANALYSIS

| Street 1       | Street 2       | Ugrid    | All Collisions<br>(2011 - 2015) | All Collisions<br>(2015) | Right Angle,<br>Left turn &<br>Right turn only<br>(2011 - 2015) | Right Angle,<br>Left turn &<br>Right turn<br>only (2015) | Average<br># of<br>Collisions<br>(2011 -<br>2015) |
|----------------|----------------|----------|---------------------------------|--------------------------|---|--|---|
| Weyakwin Drive | Taylor Street  | SKO11-2  | 21                              | 1                        | 15  | 0  | 4   |
| Nemeiben Road  | Weyakwin Drive | SKO12-11 | 4                               | 0                        | 3   | 0  | 1   |
| Emmeline Road  | Waterbury Road | SKO12-16 | 5                               | 1                        | 1   | 0  | 1   |
| Emmeline Road  | Nemeiben Road  | SKP12-9  | 1                               | 0                        | 1   | 0  | 0   |

APPENDIX D: PUBLIC MEETING #2 – NOVEMBER 17, 2016 MINUTES

**Lakeridge Neighbourhood Traffic Review Follow – Up Meeting**  
**Thursday, November 17, 2016, 7:00 PM – 9:00 PM**  
**Lakeridge School Library**

**Agenda**

1. Welcome & Introductions
2. Traffic Management Presentation from Transportation Division
3. Small Group Discussions & Report Back to Large Group
4. Next Steps
5. Large Group Discussion – Questions & Answers

**1. Welcome & Introductions**

(Presented by Mitch Riabko and Kathy Dahl, Facilitators)

**2. Presentation from Transportation Division – Lakeridge Neighbourhood Traffic Review**

(Presented by Lanre Akindipe, P.Eng, Transportation Engineer)

Presentation Outline

- Neighbourhood Traffic Management Program
- How We Got Here
- What We Heard
- What We Did
- What We Propose

Neighbourhood Traffic Management Program

- Address neighbourhood traffic issues:
  - Speeding concerns
  - Short-cutting concerns
  - Pedestrian safety
  - Intersection safety

How We Got Here

- May 2016 – Initial Traffic Meeting
- May to November 2016 – gather feedback, conduct traffic studies, collect data, develop traffic plan
- November 2016 – Follow Up Traffic Meeting - display proposed traffic plan and gather feedback

What We Heard

- A. Speeding / High Traffic Volume Concerns:
- Kingsmere Boulevard
  - Taylor Street
  - Nemeiben Road
  - Emmeline Road
  - Brudell Road

- Brabant Crescent
- Franklin Place / Crescent

B. Pedestrian Safety:

- Kingsmere Blvd & Lavalae Road
- Emmeline Road especially near mid-block crosswalk
- Taylor St & Weyakwin Dr

C. Intersection Safety:

- Taylor St & Weyakwin Dr
- Nemeiben Road & Emmeline Road
- Weyakwin Dr & Nemeiben Road
- Waterbury Road & Emmeline Road
- Kingsmere Blvd & Waterbury Road
- Kingsmere Blvd & Lavalae Road
- Emmeline Road & Swan Crescent

D. Parking:

- Emmeline Road & Swan Crescent
- Weyakwin Dr & Nemeiben Road
- Nemeiben Road & Emmeline Road

E. Other Issues:

- Snow removal
- Trees blocking signs & intersection
- Noise on Taylor Street
- School zone speed

What We Did

- Compiled Information received:
  - Past Studies
  - Comments from initial meeting
  - Resident responses (phone calls, emails, letters)
  - Comments from Shaping Saskatoon discussions
- Collected Data:
  - Traffic Studies
  - 4 Intersection / Pedestrian counts
  - 9 – 7 day traffic count (24 hour) & Average Speed measurements
  - ADT studies
  - Collision history
- Site visits / Field Reviews
- Assessed the issues
- Generated proposed recommendations

## What We Propose

- 4 - way stop - 1 location
- Traffic calming – 7 locations
- Parking restrictions – 5 locations
- Stop signs (intersecting streets on Kingsmere Blvd, Nemeiben Road and Waterbury Road)
- Speed display board

## Traffic Calming Devices

- Speed Display Board
- Curb Extension
- Raised Median Island

### 3. Small Group Discussions

Residents were divided into small groups to discuss traffic concerns in Lakeridge and potential solutions

#### **Group 1: Mariniel Flores (City Facilitator)**

- Mostly in favour of Recommendation

#### **Comments:**

- Extend recommendation #1 to about 15m – 25m of parking restriction
- Consider a 3 way stop for recommendation #3
- Curb extension preferred for recommendation #4
- In addition to recommendation #5, add reflective yellow paint on edge
- For recommendation #16, traffic usually back up near Weyakwin Dr at about 7:30a.m. requires grade separation or traffic signal.

#### **Other Comments:**

- No more curvy streets (e.g Weyakwin Dr near Nemeiben road)
- Curb extensions are generally preferred to median islands
- Really like the replacement of yield signs to stop signs
- At Boychuk Dr & Kingsmere Blvd, rosewood is growing and Westbound left turns makes it difficult for eastbound right turns to find gaps. Enforcement needed.
- Taylor Street 7 Weyakwin Drive is very icy during winter months, requires sanding.
- Sanding is also required at most crescents during winter months. To be forwarded to maintenance group.

#### **Group 2: Yang Li (City Facilitator)**

- Recommendation mostly accepted

#### **Comments:**

- Recommendation #3 – need parking space for school loading and unloading
- Recommendation #4 and #5 – will it be too narrow for buses?
- Not in favour of recommendation #11 – too many island or curb extension on Nemeiben road



- Recommendation #16 – install 4 way stop or traffic signals
- Recommendation #17 and #18 – bad winter condition, island or curb will make road worse. Clear snow more often if going with this recommendation.

**Other Comments:**

- Change School zone hours to 24 hours
- Install signs to remind westbound left turning traffic on Rosewood Blvd and Slimmon road to stay on left
- Install no u-turn sign in school zones.

**Group 3: Lanre Akindipe (City Facilitator)**

- Mostly in favour of Recommendation

**Comments:**

- Speed boards should be positioned facing eastbound traffic on Nemeiben road.
- There is a lot of speeding on Emmeline road (between Lavalee road and Nemeiben road)
- Recommendation #17 & #18 should be moved further north
- Pedestrian safety concerns at Weyakwin Dr 7 Nemeiben Road
- Stop signs needed at Swan lane
- Stop signs needed at Brabant crescent / court / terrace.
- Curb extension is needed for recommendation #17
- Taylor Street & Weyakwin Drive is very dangerous

**Other Comments:**

- Speeding on Boychuk Drive should be addressed.
- Snow clearing during winter especially with the recommended curb extensions.

**4. Next Steps**

(Presented by Lanre Akindipe, City of Saskatoon)

1. Send comments no later than **December 17, 2016**
2. Additional public input via Shaping Saskatoon no later than **December 17, 2016**  
<http://shapingsaskatoon.ca/discussions/lakeridge-neighbourhood-traffic-review>
3. Additional consultation if required
4. Present traffic plan to City Council for approval
5. What happens after City Council approval?
6. What if I don't agree?

## 5. Large Group Discussion – Questions & Answers

### Comments

- Keep left turning traffic coming out of Rosewood to their lanes so they don't make it difficult for eastbound right turn traffic to make their movement.
- There should be a one way in front of schools on Emmeline road. Parents should be talked to use one way and make a right turn at Emmeline road and Lavalee road.

### Question / Answer

**Question:** When will the interchange at Boychuk and Highway 16 be built? There is a need for two turning lanes from Hwy 16 to Boychuk

**Answer:** Interchange work starts in the spring of 2017. Consultant for the work should be hired soon.

**Question:** When will Zimmerman road be opened to Costco?

**Answer:** we will get back to you with this information. It will be posted on shaping Saskatoon discussion forum.

**Follow-up answer - Zimmerman Road from Highway 16 to Market Drive is now open. However, the segment of Zimmerman Road from Market Drive / Rosewood Blvd. to Meadows Blvd. is currently closed. This closed section is expected to be opened in early to mid-December.**

### **List of Representatives**

- Mitch Riabko, Kathy Dahl – Great Works Consulting, Facilitators
- Lanre Akindipe – City of Saskatoon, Transportation & Utilities, Transportation Engineer
- Mariniel Flores – City of Saskatoon, Transportation & Utilities, Transportation Engineer
- Yang Li – City of Saskatoon, Transportation & Utilities, Transportation Engineer

## APPENDIX E: DECISION MATRIX

**APPENDIX E - DECISION MATRIX**

| Item | Location                               | Recommendation  | Reason                                     | Group 1: Mariniel Flores   | Group 2: Yang Li  | Group 3: Lanre Akindipe | Decision   |
|------|--|---|--|--|---|-------------------------|--|
| 1    | Kingsmere Boulevard & Brightwater Cres | Change yield sign to stop sign; "No Parking" sign 10m from the intersection; make temporary bulbing permanent   | Improve Safety                             | support recommendation   |   |                         | Carried  |
| 2    | Kingsmere Boulevard & Waterbury Road   | Install a 4 way stop at the intersection  | Improve the efficiency of traffic movement | support recommendation   | Support recommendation  | Support recommendation  | A four way stop is not warranted at this intersection but it is recommended to enhance efficiency  |
| 3    | Emmeline Road & Waterbury Road         | Install "No Parking" signs 10m from the intersection; tree trimming on the southeast corner.  | Improve visibilty and safety               | Consider a 3 -way stop   | Need parking spaces for school loading and unloading  |                         | Carried  |
| 4    | Emmeline Road & Swan Crescent (west)   | Install a median island   | Enhance visibilty and reduce speeding      | A curb extension will be preferred   | Support recommendation but consideration should be given to school buses when installing the median island. |                         | A median island is recommended to narrow the road width to reduce speeding and also provide a safe refuge for pedestrians crossing           |
| 5    | Emmeline Road (at midblock crosswalk)  | install a median island; make temporary bulbing permanent   | Enhance visibilty and reduce speeding      | In addition to this recommendation, add reflective yellow paint on the edges | Support recommendation but consideration should be given to school buses when installing the median island. |                         | Buses will be put into consideration during the design of the median islands. This will also be monitored after the tempoarary installation. |
| 6    | Emmeline Road & Swan Crescent (east)   | Install "No Parking" signs on Emmeline road 10m from the intersection on the southwest and southeast corners; "No Parking" sign on Emmeline road (at the crosswalk on the north side between the disabled persons loading zone and the 5min parking). | Enhance visibilty                          |  |   |                         | Carried  |

|    |   |   |   |  |   |  |  |
|----|---|---|---|--|---|--|--|
| 7  | Emmeline Road & Nemeiben Road               | Replace yield sign with a stop sign; Install "No Parking" signs 15m from the intersection on the southwest and southeast corners; tree trimming on the southwest corner.                | Enhance visibility and improve safety                         |  |   |  | Carried  |
| 8  | Nemeiben Road & Brudell Road                | install a median island at the east side of the intersection on Nemeiben road; Add temporary curb extensions on the northeast & southeast corners.                                      | Reduce speeding and improve safety                            |  |   |  | Carried  |
| 9  | Nemeiben Road & Brabant Crescent            | Replace yield sign with a stop sign.  | Improve safety  |  |   |  | Carried  |
| 10 | Nemeiben Road & Anglin Place                | Replace yield sign with a stop sign.  | Improve safety  |  |   |  | Carried  |
| 11 | Nemeiben Road & Smoothstone Crescent (east) | install a median island at the east side of the intersection on Nemeiben road; Add temporary curb extensions on the northeast & southeast corners; replace yield sign with a stop sign. | Reduce speeding and improve safety                            |  | Not in favour. Too many islands or curbextension on Nemeiben Road |  | The speed results on Nemeiben Road was the highest in this neighbourhood and thus the additional traffic calming measures to help reduce speeding. |
| 12 | Nemeiben Road & Waterbury Road              | Install a median island with enhanced stop sign.  | Enhance visibility of stop sign and improve pedestrian safety |  |   |  | Carried  |
| 13 | Nemeiben Road & Smoothstone Crescent (west) | Replace yield sign with a stop sign.  | Improve safety  |  |   |  | Carried  |
| 14 | Waterbury Road & Jan Crescent               | Tree trimming at the southwest corner   | Enhance visibility  |  |   |  | Carried  |
| 15 | Weyakwin Drive & Nemeiben Road              | Install "No Parking" signs on Weyakwin Drive 10m from the intersection on the southwest and northeast corners; Tree trimming on the southwest and northeast corners.                    | Enhance visibility and sightlines                             |  |   |  | Carried  |

|    |   |   |                                    |   |  |   |  |
|----|---|---|------------------------------------|---|--|---|--|
| 16 | Taylor Street & Weyakwin Drive  | Major Intersection Improvement; recent improvements   | Improve delays; enhance safety     | Requires grade separation or a traffic signal | Install a four way stop or traffic signal  |   | This is an intersection out of the scope of this project but it will be included as part of the major intersection improvement program       |
| 17 | Brudell Road & Franklin Crescent  | install a median island at the south side of the intersection on Brudell road; Add temporary curb extensions on the southwest & southeast corners; replace yield sign with a stop sign. | Reduce speeding and improve safety |   | Winter conditions may make road worse. It will be beneficial if snow is cleared more often if these islands are installed. | This recommendation is supported but it should be moved further north. Curb extension is also needed. | The location was selected due to a lot of pedestrian activities  |
| 18 | Brudell Road & Franklin Crescent  | install a median island at the south side of the intersection on Brudell road; Add temporary curb extensions on the southwest & southeast corners; replace yield sign with a stop sign. | Reduce speeding and improve safety |   | Winter conditions may make road worse. It will be beneficial if snow is cleared more often if these islands are installed. | This recommendation is supported but it should be moved further north                                 | The location was selected due to a lot of pedestrian activities  |
| 19 | Brudell Road & Keller Crescent  | Tree trimming at the southeast corner   | Enhance visibility                 |   |  |   | Carried  |
| 20 | All intersecting streets on Nemeiben Road, Waterbury road and Kingsmere Blvd. | Change all yield signs to stop signs (15 signs total)   | improve safety on bus route        |   |  |   | Carried  |
| 21 | Nemeiben Road - 35m east of Emmeline Road                                     | Speed display board facing westbound traffic  | Reduce speed                       |   |  | Speed Boards should be positioned facing eastbound traffic on Nemeiben Road                           | Speed boards are typically not installed where there are obstructions like trees and they are installed at locations where they are visible. |

APPENDIX F: ADDITIONAL CONCERNS RECEIVED AFTER PRESENTATION OF DRAFT  
PLAN

APPENDIX H: ADDITIONAL CONCERNS

| Item | Location   | Comments   | Response   | Added to Final Recommendations |
|------|--|--|--|--------------------------------|
| 1    | Emmeline Road (between Lavalee Road and Nemeiben Road) | There is a lot of speeding on Emmeline Road (between Lavalee Road and Nemeiben Road)                                       | This location will be included in the lists of speed studies for 2017  |                                |
| 2    | Rosewood   | Install signs to remind westbound left turning traffic from Rosewood Boulevard and Slimmon Road to stay on their left lane | This will be forwarded to the Saskatoon Police Service and it will also be included in the Rosewood Neighbourhood Review |                                |
| 3    | Emmeline Road  | School zone signs should be in place 24 hours of the day   | This is a decision that will be decided by City Council  |                                |
| 4    | Brabant Crescent & Nemeiben Road                       | Install a stop sign at this intersection   | It will be included as part of the recommendations   | X                              |
| 5    | Swan Lane  | Install control signs at Swan lane   | It will be included as part of the recommendations   | X                              |
| 6    | Boychuk Drive  | There are lots of speeding on Boychuk Drive  | This will be forwarded to the Saskatoon Police Service   |                                |