

Avalon Neighbourhood Traffic Review

Authorization

Prepared By:



Justine Nyen, P.Eng.

Transportation Engineer

Checked By:



Shirley Matt, P.Eng.

Senior Transportation Engineer

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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 revised program involves additional community and stakeholder consultation that provides the environment for neighbourhood residents and City staff to work together in developing solutions that address traffic concerns. The process is outlined in the *Traffic Calming Guidelines and Tools*, City of Saskatoon, 2013.

A public meeting was held in April of 2015 to identify traffic concerns and potential solutions within the Avalon 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 Management Plan was developed and presented to the community at a follow-up meeting held in October 2015. An additional follow-up meeting was held in January 2016 to go through the outstanding issues.

A summary of recommended improvements for the Avalon 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 Management 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 for these neighbourhoods ranges from 1 to 5 years.

The resulting proposed Avalon Traffic Management Plan is illustrated in **Exhibit ES-1**.

Table ES-1: Avalon Neighbourhood Recommended Improvements

Item	Location	Recommendation	Reason	
1	Various locations	Yield signs at all uncontrolled intersections	Improve safety and enhance driver compliance at uncontrolled intersections	
2	Back lane between Clarence Avenue & McAskill Crescent	20kph speed signs	Reduce speed	
3	Wilson Crescent (school zone)	Forward peak hour speed data to Saskatoon Police Service to consider enforcement during school hours	Reduce speed during school hours	
4	Wilson Crescent (west of Broadway Avenue)	Install sidewalk on north side beside John Lake Park	Improve pedestrian safety & connectivity	
5	Forward peak hour speed d Cascade Street Saskatoon Police Service consider enforcement		Reduce speed	
Glasgow Street				
6	West of Clarence Avenue	"Traffic-Calmed Neighbourhood" sign (facing westbound)	Discourage shortcutting traffic	
7	Between Clarence Avenue & Mendel Crescent (in front of 917 & 919 Glasgow Street)	Pinch point (westbound yields)	Reduce speed & discourage shortcutting traffic	
8	Turner Avenue	Median island (east side), curb extension (northeast corner) & remove standard crosswalk (west side)	Reduce speed & improve pedestrian safety, proximity to nearby driveway	
9	Mendel Crescent (west)	Zebra crosswalk (west side)	Improve pedestrian safety near park	
10	Between MacEachern Avenue & Mendel Crescent (across from 711 Glasgow Street)	Pinch point (eastbound yields)	Reduce speed & discourage shortcutting traffic	
11	MacEachern Avenue	Curb extensions (northeast & southeast corners) & zebra crosswalk (east side)	Reduce speed & improve pedestrian safety near park	

Table ES-1 Continued

Item	Location	Recommendation	Reason			
	Clarence Avenue & Glasgow Street (also included in Adelaide-Churchill Neighbourhood Traffic Management Plan)					
12	Wilson Crescent	Additional school zone signs on overhead posts	Reduce speed & ensure driver awareness of school zone			
13	Southeast corner (on Clarence Avenue)	Move bus stop a few metres south	Improve traffic flow (allows vehicle to pass in inside lane while bus is stopped) & improve pedestrian safety (enhances crosswalk visibility)			
14	Southwest corner (on Clarence Avenue)	Sidewalk (up to bus stop)	Improve pedestrian safety & connectivity			
15	Entire intersection and surrounding area	Review signage at or near intersection	Reduce visual clutter, eliminate confusion, & determine if "Do Not Block Intersection" sign is necessary.			
16	Between Circle Drive overpass & Glasgow Street	Speed display board (facing northbound traffic)	Reduce speed			
17	Between Glasgow Street & the south side of Circle Drive overpass	Reduce 60kph speed limit to 50kph	Reduce speed			
18	Between Glasgow Street & Wilson Crescent	Geometric Improvements - Additional through lane northbound	Increase capacity on Clarence Avenue in northbound direction (i.e. increasing from one lane to two through lanes)			

Exhibit ES-1

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1 INTRODUCTION

As the City of Saskatoon continues to grow many neighbourhoods face growing issues such as pedestrian safety, cut-through traffic, and increased speeds on local roads within neighbourhoods. In August 2013, City Council adopted the City of Saskatoon Traffic Guidelines and Tools that outlined 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 that were developed by the Administration and residents in collaborative fashion. Accordingly, this report provides the traffic management plan for Avalon.

The Avalon neighbourhood is located on the east side of the South Saskatchewan River and is bound by Circle Drive to the south and west, Clarence Avenue to the east, and Ruth Street to the north. The area use is mostly residential, with elementary schools on Broadway Avenue (John Lake School) and Wilson Crescent (Georges Vanier School).

The development and implementation of the traffic management plan includes four stages:

- **Stage 1** Identify existing problems, concerns and possible solutions through the initial neighbourhood consultation and the Shaping Saskatoon Website.
- 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 present the study findings and recommendations.

2 IDENTIFYING ISSUES, CONCERNS, AND POSSIBLE SOLUTIONS

A public meeting was held in April of 2015 to identify traffic concerns within the 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 with the neighbourhood 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). In the case of Avalon, the bordering arterial streets (Taylor Street, Clarence Avenue) are designated to accommodate larger traffic volumes.

As speeding often accompanies shortcutting, these concerns have been grouped into one category.

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

- Glasgow Street speeding, shortcutting and increased traffic due to traffic signals at Wilson
 Crescent & Clarence Avenue, school zones on Wilson Crescent and Clarence Avenue,
 congestion on Clarence Avenue, overpass on Circle Drive south, dog park, and big box stores
 in Stonebridge.
- Melrose Avenue
- Back lane by Turner Avenue shortcutting
- Glasgow Street & Broadway Avenue entrance to dog park is very busy at all times.
 Spinning tires and speeding. Late night driving back and forth along the side road.
- Clarence Avenue speeding, drivers are accelerating southbound towards Circle Drive
- McAskill Crescent congestion on Clarence Avenue causes shortcutting
- Broadway Avenue between Wilson Crescent & Glasgow Street speeding and high traffic since Stonebridge opened

Wilson Crescent:

- Speeding (especially after school hours)
- Speeding between Clarence Avenue & Broadway Avenue (especially since traffic signals were installed)
- o Driving through median island and curb extensions in front of school
- Drivers are now using Wilson Crescent as a means of 'beating' the traffic on Clarence
 Avenue
- Heavy traffic especially during peak commute times
- Ruth Street heavy traffic especially during peak commute times
- Albert Avenue speeding; cars ending up on front lawn near Bute Street
- Back lanes:
 - o 900 Glasgow Street speeding
 - West of Clarence Avenue between Glasgow Street & Wilson Crescent (2700 block) shortcutting, speeding
- General:
 - o Buses speeding

Proposed solutions identified by residents:

- Glasgow Street:
 - Police enforcement
 - o Install speed bumps or indents
 - Implement reduced speed limit (i.e. 30 or 40kph)
 - o Install traffic calming near Avalon Park
 - Narrow road for entire length of park
 - o Narrow corner at 400 block
 - Close Glasgow Street at McConnell Avenue
 - Shut down Turner Avenue to prevent shortcuts
 - Install speed display boards in both directions
 - Glasgow Street & Broadway Avenue install gate that closes entrance to the road by the dog park at certain times, like 11pm or midnight.
 - o Implement dog park in Stonebridge to reduce traffic volumes

- Clarence Avenue:
 - Reduce speed limit to 50kph between Glasgow Street and the Circle Drive overpass, or all the way to south City Limits
 - School Zone needs to be marked better
- Clarence Avenue & Glasgow Street install traffic signals to lessen shortcutting on McAskill
 Crescent
- Broadway Avenue between Wilson Crescent & Glasgow Street implement 30kph speed zone
- Wilson Crescent:
 - Implement 30kph speed zone near Broadway Avenue
 - Install speed humps in front of school, close to Clarence Avenue, or at the "triangle" portion of Albert Avenue
- Back lanes install 20kph speed signs
- Cascade Street speeding & increased traffic volumes
- General:
 - Implement a reduced speed zone near parks
 - Tell bus drivers to slow down
 - o Install zig zag berms to slow traffic, especially on local street to maintain speed

2.2 Concern 2 - Pedestrian Safety

It is important to address pedestrian safety concerns to support active transportation. 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:

City of Saskatoon

"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:

Glasgow Street:

- Improve crossing at MacEachern Avenue
- o Improve crossing at Glasgow Street & Turner Avenue; can't see kids crossing
- Kids are crossing at midblock
- Existing crosswalks go into driveways
- o Broadway Avenue crosswalk is marked but not observed

Clarence Avenue & Glasgow Street:

- Drivers stopping over crosswalk
- o Difficult to cross, especially at 8am and 5pm
- Drivers don't stop for pedestrians
- o Lots of pedestrians due to bus stop
- Install traffic signals to improve pedestrian crossing safety (pedestrians cross to get to Stonebridge shopping area)
- Clarence Avenue & Cascade Street pedestrian crossing to park
- Wilson Crescent:
 - Crosswalk installed with sign on concrete median island in front of 823/825 Wilson
 Crescent is difficult to see in summer when sun in setting. Vehicles hit the sign throughout the summer.
 - o Lack of sidewalk around John Lake Park

• General:

 Missing sidewalks, especially in winter (i.e. Ruth Street / Broadway Avenue and stretches to Victoria Avenue) Proposed solutions identified by residents:

- Glasgow Street & Broadway Avenue pedestrian flags are attached to pedestrian signs to signal to drivers presence of a crosswalk
- Glasgow Street & Turner Avenue move crosswalk to see pedestrians better (maybe to other side of the intersection); remove crosswalk because no cars stop and it's very dangerous for kids as they get a false sense of security
- Signs needed around parks/playgrounds such as "Watch for Children at Play"
- Clarence Avenue & Glasgow Street:
 - o Install "Do Not Block Crosswalk" sign
 - o Install pedestrian signals, pedestrian device, or flashing yellow lights
- Wilson Crescent:
 - In front of 823/825 Wilson Crescent install a sign that is more resilient than steel (or less costly) and an alternative to the square curbing (i.e. median island) to address sun glare and vehicles hitting sign on median.

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 volume, collision history, and must have a balanced volume from each leg to operate sufficiently.

Neighbourhood concerns regarding traffic controls were at the following locations:

- Glasgow Street no traffic controls facing traffic on Glasgow Street causes speeding
- Glasgow Street & Broadway Avenue very busy into dog park at all times, not just evenings and weekends (south side of intersection)
- Clarence Avenue & Glasgow Street near impossible to turn left
- Broadway Avenue & Glasgow Street rolling through stop sign
- Broadway Avenue & Ruth Street not stopping at four-way stop; drivers not stopping when turning right onto Broadway Avenue; rolling through stop signs has already been enforced but as soon as police are gone it continues

- McConnell Avenue drivers entering "triangle" portion near Glasgow Street from wrong direction.
- All uncontrolled intersections confusion

Proposed solutions identified by residents:

- Glasgow Street & Turner Avenue install three-way stop
- Glasgow Street & Broadway Avenue install four-way stop
- Clarence Avenue & Glasgow Street install traffic signals because there is enough traffic
 that require a left-turn to head towards 8th Street (this would be a short light so as not to
 restrict traffic for very long for people travelling on Clarence Avenue)
- Broadway Avenue & Ruth Street install traffic signals
- Cascade Street & Dufferin Avenue change yield signs to stop signs
- Stop & Yield Retrofit Program:
 - Install yield signs that alternate at all uncontrolled intersections like in other neighborhoods
 - o Yield signs for north/south traffic at William Avenue & Bute Street
 - o Yield signs at McAskill Crescent and McConnell Avenue as they enter Glasgow Street

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 crossing.

Neighbourhood concerns regarding parking were at the following locations:

- Wilson Crescent parents parking in front of school is a concern
- Ruth Street large vehicles parked on the north side are too close to the intersection; if a
 bus parks there for any length of time it's impossible to see past it.
- McAskill Crescent van parked near alley
- General parking on the wrong side of the street

2.5 Concern 5 – Maintenance

Condition of the streets in Avalon was identified as a concern (i.e. snow clearing, potholes, tree trimming, and temporary traffic calming devices).

In addition, street signs requiring maintenance (i.e. knocked over, obstructed by trees, damaged) were also identified as a concern.

Neighbourhood concerns regarding maintenance were:

- Heavy trucks are impacting the quality of the streets
- Lanes are muddy and can't be used
- Hedges throughout the neighbourhood at intersections obstructs drivers view
- Terrible amount of dust raised as buses drive along the curb when they are leaving their stop, covers the front of houses and cars quite heavily.

Neighbourhood solutions regarding maintenance were:

- Grade and maintain back lanes
- Clean and water down curb lanes along bus routes on a regular basis

2.6 Concern 6 - 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:

- Clarence Avenue:
 - Congested between the Circle Drive overpass and Wilson Crescent (heading northbound).
- Clarence Avenue at Glasgow Street:
 - o Traffic is using two lanes before they pass the intersection
 - Intersection lacks signage and pavement markings
 - Bus stop on east side causes traffic to back up coming over overpass northbound
 - o Drivers race each other to get into lane
 - Not uncommon to have six to seven vehicles lined up to turn left onto Glasgow Street

- Clarence Avenue & Circle Drive overpass (north side):
 - Jersey barrier obstructs drivers view when turning right onto Clarence Avenue from Circle Drive ramp looking southbound
 - o Collisions coming from ramp (westbound to southbound); need better light timing
- Clarence Avenue & Wilson Crescent southbound buses block through (curb lane) causing drivers to pass in left-turn lane

Proposed solutions identified by residents:

- Clarence Avenue & Glasgow Street:
 - o Install pavement markings on Glasgow Street to delineate left-turn and right-turn lane.
 - Install barrier on Clarence Avenue for southbound direction to delineate the right-turn lane and to protect right turns from Glasgow Street onto Clarence Avenue.
- Clarence Avenue & Wilson Crescent add more green time
- Clarence Avenue:
 - Change to two lanes northbound between Circle Drive and Wilson Crescent
 - Remove the school zone near Wilson Crescent. Children are never seen near Clarence Avenue here.

3 ASSESSMENT

3.1 Methodology

Stage 2 of the plan development included developing a draft traffic management 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:
 - Intersection turning moving counts
 - Pedestrian counts
 - Daily and weekly traffic counts
 - o Average speed measurements
- 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 volumes (peak hours, daily, and weekly), travel speed, and pedestrian movements. A map of the traffic data collection is shown in **Appendix B**.

3.2 Travel Volumes and Travel Speeds

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

	Classifications					
Characteristics	Back Lanes		Locals		Collectors	
	Residential	Commercial	Residential	Commercial	Residential	Commercial
Traffic function	movem	ion only (traffic nent not a deration)	movemen	y function (traffic it secondary leration)		ment and land ual importance
Average Daily Traffic (vehicles per day)	<500	<1,000	<1,000	<5,000	<5,000	8,000-10,000
Typical Speed 20 Limits (kph)		20	50		50	
Transit Service	Not p	ermitted	Generally avoided		Permitted	
Cyclist	Cyclist No restrictions or special facilities			ons or special ilities		ons or special ilities
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			or restriction on ide only		ons other than k hour	

Travel speeds were measured to determine the 85th percentile speed, which is the speed at which 85 percent of vehicles are travelling at or below. The speed limit in the Avalon neighbourhood is 50kph, except for school zones where the speed limit is 30kph from September and June, 8:00am to 5:00pm, excluding weekends.

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 (2015)

Street	Between	Class	Average Daily Traffic (vpd)	Speed (kph)
Back Lane west of Clarence Avenue	Glasgow Street & Wilson Crescent	Wilson Crescent		NA
Back lane east of Clarence Avenue (at T-intersection)	Glasgow Street & Wilson Crescent	lane	<100	NA
Glasgow Street	Mendel Crescent (west) & Maceachern Avenue		3,421	47.4
Glasgow Street	Turner Avenue & Mendel Crescent (east)		3,669	54.2
Melrose Avenue	Melrose Avenue Glasgow Street & Young Crescent (north)		415	49.5
McAskill Crescent	Turner Avenue & Wilson Crescent (east)		206	37.3
Cascade Street	Mills Crescent & Mills Crescent		842	53.5
Wilson Crescent	cent Albert Avenue & Albert Avenue		2,307	49.4
Wilson Crescent	Clare Crescent & Clare Crescent (school zone)	collector	2,003	school= 38.1, regular= 44.8
Clarence Avenue	Circle Drive overpass & Glasgow Street	major arterial	14,140	60.4

3.3 Traffic Control Assessments

Yield, stop, and all-way stop controls need to the 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 or 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 200m.

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

Table 3-3: All-Way Stop Assessments

Location	Peak Hour Count (greater than 600)	Average Daily Traffic (greater than 6,000vpd)	# of Collisions within most recent 12 months (5 or more)	All-Way Stop Warranted	
Glasgow Street & Broadway Avenue	327 (no)	3,360 vpd (no)	0 (no)	All-Way Stop Not	
Glasgow Street & Turner Avenue	391 (no)	3,990 vpd (no)	0 (no)	All-Way Stop Not Warranted	

Details of the all-way stop assessments are provided in **Appendix C**.

3.4 Pedestrian Assessments

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

In addition, if a pedestrian actuated crosswalk is not warranted, a standard marked pedestrian crosswalk, or a zebra crosswalk (i.e. striped) may be considered. A summary of the pedestrian studies are provided in **Table 3-4**.

Table 3-4: Pedestrian Assessment

Location	Number of Pedestrians Crossing During Peak Hours	Results
Glasgow Street & Broadway Avenue	14	
Glasgow Street & Turner Avenue	11	Pedestrian Device Not
Clarence Avenue & Glasgow Street	21	Warranted
Clarence Avenue & Cascade Street	15	

Details of the pedestrian actuated signal and active pedestrian corridor assessments are provided in **Appendix D**.

3.5 Collision Analysis

The most recently available five year collision statistics (2009 to 2013) were 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. These include:

- Clarence Avenue & Glasgow Street
- Ruth Street & Isabella Street
- Ruth Street & Wilson Crescent
- Ruth Street & Melrose Avenue
- Wilson Crescent & Broadway Avenue

Details of the collision analysis are provided Appendix E.

4 PLAN DEVELOPMENT

4.1 Methodology

Stage 3 of the 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 management 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 Speeding and Shortcutting Improvements

Location	Recommended Improvement	Justification
Back lane between Clarence Avenue & McAskill Crescent	20kph speed signs	Reduce speed
Wilson Crescent (school zone)	Speed enforcement during school hours	Reduce speed during school hours; improve pedestrian safety
Cascade Street	Forward peak hour speed data to Saskatoon Police Service to consider enforcement	Reduce speed
Glasgow Street & MacEachern Avenue	Curb extensions (northeast & southeast corners)	Reduce speed at pedestrian crossing near park
Glasgow Street between MacEachern Avenue & Mendel Crescent (across from 711 Glasgow Street)	Pinch point (eastbound yields)	Reduce speed & discourage shortcutting traffic
Glasgow Street & Turner Avenue	Median island (east side) & curb extension (northeast corner)	Reduce speed at pedestrian crossing
Glasgow Street between Clarence Avenue & Mendel Crescent (in front of 917 & 919 Glasgow Street)	Pinch point (westbound yields)	Reduce speed & discourage shortcutting traffic
Glasgow Street west of Clarence Avenue	"Traffic-Calmed Neighbourhood" sign (facing westbound)	Discourage shortcutting traffic
Clarence Avenue & Wilson Crescent	Additional school zone signs on signal overheads	Reduce speed & ensure driver awareness of school zone (based on approval of the Adelaide-Churchill Neighbourhood Traffic Plan)
Clarence Avenue between Circle Drive overpass & Glasgow Street	Speed display board (facing northbound traffic)	Reduce speed (based on approval of the Adelaide-Churchill Neighbourhood Traffic Plan)
Clarence Avenue between Glasgow Street & the south side of Circle Drive overpass	Reduce 60kph speed limit to 50kph	Reduce speed (based on approval of the Adelaide-Churchill Neighbourhood Traffic Plan)

Of note in the above table is the inclusion of pinch points. A pinch point is a physical restriction, typically curbing, that forces drivers in one direction to yield to oncoming traffic prior to passing around the physical restriction. The intent is to slow traffic and to also make the route less attractive to shortcutting traffic. This traffic calming measure is included in the Saskatoon

Neighbourhood Traffic Calming Guidelines, and is also physically installed at one location on Saskatchewan Crescent beneath the Senator Sid Buckwold Bridge as depicted in **Exhibit 4-1**.



Exhibit 4-1: Existing Pinch Point beneath Senator Sid Buckwold Bridge (looking west)

The implementation plan for the pinch points is as follows:

- 1. May, 2016 Data collection on Glasgow & Wilson, speed and daily traffic
- 2. June, 2016 Install curb extensions, pinch points, and signage (temporary condition)
- 3. September, 2016 and Spring, 2017 Data collection on Glasgow & Wilson, speed and daily traffic
- 4. Spring, 2017 Effectiveness review
- 5. Summer, 2017 Consult with neighbourhood
- 6. Summer, 2018 Request funding for permanent construction if found to be effective

The above implementation plan is contingent on Council approval in April of 2016 to proceed with the temporary installation, and subsequent Council approval to make restrictions permanent if deemed effective.

4.3 Pedestrian Safety

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

Table 4-2: Recommended Pedestrian Safety Improvements

Location	Recommended Improvement	Justification
Wilson Crescent (west of Broadway Avenue)	Sidewalk on north side beside John Lake Park	Improve pedestrian safety & connectivity
Glasgow Street & MacEachern Avenue	Zebra crosswalk (east side)	Improve pedestrian safety near park
Glasgow Street & Mendel Crescent	Zebra crosswalk (west side)	Improve pedestrian safety near park
Glasgow Street & Turner Avenue	Remove standard crosswalk (west side)	Improve pedestrian safety (crosswalk at Mendel Crescent is 65m west)
Clarence Avenue & Glasgow Street	Move bus stop on southeast corner a few metres south	Improve pedestrian safety by enhancing crosswalk visibility (based on approval of the Adelaide-Churchill Neighbourhood Traffic Plan)
Clarence Avenue & Glasgow Street	Sidewalk on southwest corner (up to bus stop)	Improve pedestrian safety & connectivity (based on approval of the Adelaide-Churchill Neighbourhood Traffic Plan)

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 Traffic Control Improvements

Location	Recommended Improvement	Justification
Various locations	Yield signs at all uncontrolled intersections	Improve safety and enhance driver compliance at uncontrolled intersections
Clarence Avenue & Glasgow Street	Review signage at or near intersection	Reduce visual clutter, eliminate confusion, & determine if "Do Not Block Intersection" sign is necessary (based on approval of the Adelaide-Churchill Neighbourhood Traffic Plan)

4.5 Clarence Avenue Improvements

Typically the mandate for the Neighbourhood Traffic Management Reviews is to focus on neighbourhood streets such as local roads and collector roads. As almost all neighbourhoods are bound by arterial streets, such as Clarence Avenue, it is not uncommon to have residents raise issues regarding these streets. However, arterial streets are much more complex than local or collector streets due to larger traffic volumes, different types of drivers (commuters), coordinated traffic signals, transit accommodation, and potentially many commercial accesses. Also arterial streets are typically on the border between neighbourhoods; therefore the concerns and opinions of the residents on all sides should be taken into consideration.

The section of Clarence Avenue between the Circle Drive South overpass and Ruth Street borders two neighbourhoods that took part on the 2015 neighbourhood traffic reviews, Avalon (west of Clarence Avenue) and Adelaide-Churchill (east of Clarence Avenue). During the consultation for these reviews, a common issue emerged among residents of both neighbourhoods: traffic conditions on Clarence Avenue between the Circle Drive South overpass and Wilson Crescent, particularly the intersection of Clarence Avenue and Glasgow Street.

A common request from residents was to provide two northbound lanes on Clarence Avenue. Transportation reviewed the feasibility of providing two lanes northbound on Clarence Avenue between the Circle Drive South interchange and Wilson Crescent. Currently there are two northbound lanes between the Circle Drive South interchange and Glasgow Street, with the west northbound lane being a forced drop via a 'must turn left' lane. The inclusion of this dedicated left-turn lane only promotes the left onto Glasgow Street as it may be difficult to merge right and continue north on Clarence Avenue. By providing two lanes northbound it is expected that the impetus to turn left will be reduced. Also, it should be noted that if two lanes are provided northbound, it will still be possible to turn left onto Glasgow Street, however this turn will not be from a left-turn only lane. This would have potentially increased the possibility of rear-end collisions, however, this risk is mitigated by the lowering of the speed limit from 60kph to 50kph, as well as the inclusion of a speed display board. The proposed change to Clarence Avenue is illustrated in Exhibit 4-2.





Exhibit 4-2: Clarence Avenue proposed Changes

The implementation plan for the proposed changes to Clarence Avenue is as follows:

- 1. May, 2016 Staff begin 2017 budget planning
- 2. August, 2016 Install speed reader board
- 3. September, 2016 Move 50kph zone further south
- 4. December, 2016 2017 Budget Council Meeting to approve funding for changes
- 5. Winter / Spring, 2017 Detailed design & retain contractor (subject to funding approval)
- 6. Summer, 2017 Complete geometric changes (subject to funding approval)

The above implementation plan is contingent on Council approval in April of 2016 of the NTR, and subsequent Council approvals for funding.

Also, it is important to note that the above changes cannot be made on a temporary basis.

The Clarence Avenue improvements are summarized in **Table 4-4**.

Table 4-4: Clarence Avenue Improvements

Location	Recommended Improvement	Justification
Clarence Avenue between Glasgow Street & Wilson Crescent	Add through lane northbound	Improve traffic flow (based on approval of the Adelaide-Churchill Neighbourhood Traffic Plan)

The above recommendation was also presented to the Adelaide-Churchill neighbourhood (on the east side of Clarence Avenue) in December 2015. Complete details of the design were not completed in time to reveal at the time of the follow up consultation; however general support for the added lane on Clarence Avenue was received.

These recommendations will be added to the priority list of city wide improvements on arterial streets until funding becomes available.

4.6 Follow Up Consultation – Presentation of Traffic Management Plan

The initial recommended improvements were presented at a follow-up public meeting in December 2015. Meeting minutes are provided in **Appendix A.** Recommended improvements that were not supported by the residents were eliminated or altered accordingly.

On January 14, 2016 the City of Saskatoon Transportation division (Transportation) met with the residents of Avalon in a third public meeting of the Neighbourhood Traffic Review (NTR) process. Meeting notes are provided in **Appendix A**. Typically the NTR process includes two public meetings, but occasionally a third public meeting is required to revisit and discuss outstanding traffic and pedestrian safety issues remaining from the second public meeting. In this case, there were two outstanding issues left unresolved, including:

- 1. Traffic calming on Glasgow Street, and
- 2. Geometric changes to Clarence Avenue.

Recommendations to address these issues were discussed previously, and a copy of the memorandum provided to the residents in March of 2016 is included in **Appendix F**.

A decision matrix detailing the list of recommended improvements presented at the follow-up meetings are included in **Appendix G**. A decision matrix for additional comments received after the draft traffic plan is also included in **Appendix G**.

The recommendations were circulated to the Civic Divisions (including Saskatoon Police Service, Saskatoon Light & Power, Saskatoon Fire Department, Environmental Services, and Transit) to gather comments and concerns. General support was received.

5 RECOMMENDED PLAN & COST ESTIMATES

Stage 4, the last stage of the process, is to install the recommended improvements for the Avalon neighbourhood within the specified timeframe. The timeframe depends upon the complexity and cost of the solution. A short-term time frame is defined by implementing the improvements within 1 to 2 years; medium-term is 3 to 5 years; and long-term is 5 years plus.

The placement of signage will be completed short-term (1 to 2 years).

Major intersection reviews are based on the number of other locations to be reviewed city wide and the availability of funding. The timeline for review will be medium-term (3 to 5 years).

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

- Table 5-1: Speeding & Shortcutting Improvements Cost Estimate
- Table 5-2: Pedestrian Safety Improvements Cost Estimate
- **Table 5-3:** Intersection Safety Improvements Cost Estimate
- Table 5-4: Sidewalk Cost Estimate
- Table 5-5: Clarence Avenue Improvements Cost Estimate
- Table 5-6: Clarence Avenue Improvements Cost Estimate
- Table 5-7: Total Cost Estimate

Table 5-1: Speeding & Shortcutting Improvements Cost Estimate

	Device	Cost Estimate		
Location	(# of Devices)	Temporary ¹	Permanent	Time Frame
Back lane between Clarence Avenue & McAskill Crescent	20kph speed signs (2)	\$500	NA	
Wilson Crescent (school zone)	Speed enforcement during school hours (NA)	\$0	NA	
Cascade Street	Forward peak hour speed data to Saskatoon Police Service to consider enforcement (NA)	\$0	NA	
Glasgow Street & MacEachern Avenue	Curb extension (2)	\$1,000	\$90,000	
Glasgow Street between MacEachern Avenue & Mendel Crescent (across from 711 Glasgow Street)	Pinch point (1)	\$500	\$45,000	1 to 5 years (traffic calming devices will be installed temporarily until
Glasgow Street & Turner Avenue	Median island (1)	\$500	\$5,000	proven effective)
Glasgow Street & Turner Avenue	Curb extension (1)	\$500	\$45,000	
Glasgow Street between Clarence Avenue & Mendel Crescent (in front of 917 & 919 Glasgow Street)	Pinch point (1)	\$500	\$45,000	
Glasgow Street west of Clarence Avenue	"Traffic-Calmed Neighbourhood" sign (1)	\$250	NA	
	Totals	\$3,750	\$230,000	

Table 5-2: Pedestrian Safety Improvements Cost Estimate

Location	Device	Cost Estimate	Time Frame
Glasgow Street & MacEachern Avenue	Zebra crosswalk	\$250	
Glasgow Street & Mendel Crescent	Zebra crosswalk	\$250	1 to 2 years
	Total	\$500	

Table 5-3: Intersection Safety Improvements Cost Estimate

Location	Device	Number of Signs	Cost Estimate	Time Frame
Various locations	Yield sign	35	\$8,750	1 to 2 years
	Totals	2	\$8,750	1 to 2 years

Table 5-4: Sidewalk Cost Estimate

Location	Length (m)	Cost Estimate	Time Frame
Wilson Crescent (beside John Lake Park)	250	\$110,000	1 to 5 years
Total=	250	\$110,000	(depending on available funding)

Table 5-5: Clarence Avenue Improvements Cost Estimate

		Cost Estimate		
Location	Device	Signs & pavement markings	Permanent devices	Time Frame
Clarence Avenue & Glasgow Street	Move bus stop signs	\$200	NA	
Clarence Avenue & Glasgow Street	Sidewalk	NA	\$8,800	
Clarence Avenue & Glasgow Street	Signage review	\$500	NA	
Clarence Avenue & Wilson Crescent	School zone signs	\$500	NA	1 to 5 years (permanent speed
Clarence Avenue between Circle Drive overpass & Glasgow Street	Speed display board	\$0	\$5,000	display board will depend on locations selected city-wide)
Clarence Avenue between Glasgow Street & south side of Circle Drive overpass	50kph speed signs	\$500	NA	
	Totals	\$1,700	\$13,800	

Costs for the Clarence Avenue improvements will be shared with the Avalon neighbourhood, as these recommendations are also included in the Avalon neighbourhood traffic management plan. Therefore half of the cost estimate for the Clarence Avenue improvements, to be added to the total cost estimate shown in **Table 5-7**, is **\$850** for signs & pavement markings and **\$6,900** for permanent devices (i.e. speed display board).

Table 5-6: Clarence Avenue Improvements Cost Estimate

Location	Device	Permanent (traffic calming devices & sidewalk)	Time Frame
Between Glasgow Street & Wilson Crescent	t & Geometric \$190,000 improvements		1 to 5 years
	Total	\$190,000	(depending on available funding)

The geometric improvements (i.e. widening the roadway to add a through lane northbound) on Clarence Avenue will be funded through the major intersection and corridor improvements and will therefore, not be added to the total cost estimate in **Table 5-7**.

Table 5-7: Total Cost Estimate

Category	Signing, Temporary Traffic Calming & Traffic Counts	Permanent
Speeding/Shortcutting	\$3,750	\$230,000
Pedestrian Safety	\$500	NA
Intersection Safety	\$8,750	NA
Sidewalk	NA	\$110,000
Clarence Avenue	\$850	\$6,900
Totals	\$13,850	\$346,900

The total cost estimate for the signage and temporary traffic calming to be installed in 2016 is \$13,850. The total cost estimate for the installation of future permanent devices, including sidewalks (which does not include the geometric improvements on Clarence Avenue), is \$346,900. It should be noted, the Clarence Avenue Improvements shown in Table 5-6 are based on the approval of the Adelaide-Churchill Neighbourhood Traffic Management Plan, and will be funded through major intersection and corridor improvements projects.

Resulting from the plan development process, the recommended improvements, including the location, type of improvement, and schedule for implementation are summarized in **Table 5-8**.

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

Table 5-8: Avalon Neighbourhood Recommended Improvements

Item	Location	Recommendation	Reason
1	Various locations	Yield signs at all uncontrolled intersections	Improve safety and enhance driver compliance at uncontrolled intersections
2	Back lane between Clarence Avenue & McAskill Crescent	20kph speed signs	Reduce speed
3	Wilson Crescent (school zone)	Forward peak hour speed data to Saskatoon Police Service to consider enforcement during school hours	Reduce speed during school hours
4	Wilson Crescent (west of Broadway Avenue)	Install sidewalk on north side beside John Lake Park	Improve pedestrian safety & connectivity
5	Cascade Street	Forward peak hour speed data to Saskatoon Police Service to consider enforcement	Reduce speed
Glasgo	w Street		
6	West of Clarence Avenue	"Traffic-Calmed Neighbourhood" sign (facing westbound)	Discourage shortcutting traffic
7	Between Clarence Avenue & Mendel Crescent (in front of 917 & 919 Glasgow Street)	Pinch point (westbound yields)	Reduce speed & discourage shortcutting traffic
8	Turner Avenue	Median island (east side), curb extension (northeast corner) & remove standard crosswalk (west side)	Reduce speed & improve pedestrian safety, proximity to nearby driveway
9	Mendel Crescent (west)	Zebra crosswalk (west side)	Improve pedestrian safety near park
10	Between MacEachern Avenue & Mendel Crescent (across from 711 Glasgow Street)	Pinch point (eastbound yields)	Reduce speed & discourage shortcutting traffic
11	MacEachern Avenue	Curb extensions (northeast & southeast corners) & zebra crosswalk (east side)	Reduce speed & improve pedestrian safety near park

Table 5-8 Continued

Item	Location	Recommendation	Reason									
	Clarence Avenue & Glasgow Street (also included in Adelaide-Churchill Neighbourhood Traffic Management Plan)											
12	Wilson Crescent	Additional school zone signs on overhead posts	Reduce speed & ensure driver awareness of school zone									
13	Southeast corner (on Clarence Avenue)	Move bus stop a few metres south	Improve traffic flow (allows vehicle to pass in inside lane while bus is stopped) & improve pedestrian safety (enhances crosswalk visibility)									
14	Southwest corner (on Clarence Avenue)	Sidewalk (up to bus stop)	Improve pedestrian safety & connectivity									
15	Entire intersection and surrounding area	Review signage at or near intersection	Reduce visual clutter, eliminate confusion, & determine if "Do Not Block Intersection" sign is necessary.									
16	Between Circle Drive overpass & Glasgow Street	Speed display board (facing northbound traffic)	Reduce speed									
17	Between Glasgow Street & the south side of Circle Drive overpass	Reduce 60kph speed limit to 50kph	Reduce speed									
18	Between Glasgow Street & Wilson Crescent	Geometric Improvements - Additional through lane northbound	Increase capacity on Clarence Avenue in northbound direction (i.e. increasing from one lane to two through lanes)									

Exhibit 5-1

APPENDIX A: MEETING MINUTES

Avalon Neighbourhood Traffic Review Thursday, April 2016, 7:00 – 9:00 P.M. John Lake School

Facilitators:

Mitch Riabko & Kathy Dahl (Great Works Consulting)

<u>Agenda</u>

- Welcome & introductions
- Presentation from the Transportation Division
- Small group discussions
- Small group discussion report back to large group
- Next Steps
- Question / Answers

<u>Presentation from Transportation Division – Avalon Neighbourhood Traffic Review</u> (Presented by Justine Nyen – Traffic Engineer & Jay Magus - Traffic Engineering Manager)

Presentation Outline:

- Neighbourhood Review Process
- Timeline for Avalon Review
- Sources of Information
- Past Studies
- Concerns Received
- Description of Traffic Calming & Pedestrian Safety Devices

Neighbourhood Review Process:

- **August 2013** New process; neighbourhood review vs issue by issue; eight neighbourhoods reviewed per year
- Mandate Reduce & calm traffic, improve safety within neighbourhoods
- 2014 Varsity View, Nutana, Brevoort Park, Haultain, Holliston, City Park, Westmount, Hudson Bay Park, Caswell Hill
- **2015** Avalon, Meadowgreen, Adelaide-Churchill, Montgomery Place, Lakeview, Confederation Park, Greystone Heights, Mount Royal

Timeline for Avalon Review:

- Stage 1 Identify issues & possible solutions through community consultation (April to fall 2015)
- Stage 2 Develop a draft traffic plan (fall 2015)
- Stage 3 Present draft traffic plan to community for feedback (fall 2015)
- Stage 4 Implement the changes over time

Sources of Information:

Present:

- Past Studies
- Collision Analysis
- Concerns received since August 2013:
 - Community Engagement Online Tool
 - Phone calls and emails received by the Transportation Division

Future:

- Feedback from public consultation (meetings, correspondence, Shaping Saskatoon discussion)
- Traffic Counts & Assessments

Past Studies:

- Glasgow Street speeding, pedestrian safety, high traffic volumes; installed crosswalks at Turner Ave, Mendel Cres, & Maceachern Ave; traffic calming installed at Maceachern Ave; temporary speed display board installed in fall 2014
- Broadway Avenue & Wilson Crescent installed 4-way stop
- Clarence Avenue & Cascade Street removed temporary curb extensions

Concerns Received:

- Wilson Crescent speeding
- Back lane 2700 block of Clarence Avenue speeding; high traffic volumes
- Glasgow St speeding; high traffic volumes

Glasgow St discussions:

- Options will be presented at follow up meeting to reduce traffic volumes on Glasgow St
- Example shown to remove northbound left turn at Clarence Ave & Glasgow St

Traffic Calming Devices:

- 1. Speed Display Boards
- 2. Raised Median Island narrows focus of the driver to slow down
- 3. Curb Extensions visual scope for the driver to see pedestrians
- 4. Roundabouts
- 5. Speed humps
- 6. Raised crosswalks
- 7. Diverter
- 8. Right-in/right-out island
- 9. Directional Closure restrict movements onto the street from one direction
- 10. Raised median through intersection
- 11. Full closure

Pedestrian Devices:

- 1. Standard crosswalk
- 2. Zebra crosswalk (striped pavement markings)
- 3. Active pedestrian corridor (flashing yellow lights)
- 4. Pedestrian-activated signals

Saskatoon Police Services - Unable to attend

• Saskatoon Police Services: 306-975-8300 <u>OR</u> 306-975-8068 to report a traffic complaint or a concern.

Small Group Discussions

 Breakout into small groups to discuss traffic concerns in Avalon and potential solutions

Group 1: Justine Nyen (City Facilitator)

- Glasgow St speeding; implement 40kph speed limit; more enforcement; install traffic calming near park; high collisions in spring due to sun glare
- Glasgow St & Turner Ave can't see kids crossing; kids are crossing at midblock; shortcutting in lane by Turner Ave; move crosswalk to see pedestrians better (maybe to other side of intersections); existing crosswalk goes into driveway; install 3-way stop
- Glasgow St & Broadway Ave install 4-way stop; very busy traffic into dog park at all times, not just evenings and weekends
- Clarence Ave & Glasgow St blocking left turn doesn't solve speeding issues; right turn is difficult to get onto Clarence Ave because drivers split into 2 lanes before intersection (southbound) and also accelerating to 60kph speed limit; move 50kph speed limit all the way to Circle Dr; left turns are near impossible; pedestrian safety concerns (especially at 8am and 5pm); left turning drivers on Clarence Ave onto Glasgow St are blocking crosswalk; install "No stopping on/blocking crosswalk" sign; congestion getting onto Clarence Ave causes shortcutting onto McAskill Cres
- Back lane 900 Glasgow St speeding; install 20kph speed signs
- Hedges throughout neighbourhood at intersections obstruct drivers view
- Clarence Ave & Wilson Cres southbound buses block through (curb) lane causing drivers to pass in left turn lane

Group 2: Goran Lazic (City Facilitator)

- Glasgow St has right-of-way (no traffic controls facing traffic on Glasgow St)
 causing speeding; driving on wrong side at 400 block; narrow corner at 400
 block; traffic volumes increased substantially since big box stores opened south
 of Circle Dr; dog park drives traffic from Stonebridge; Stonebridge should have
 their own dog park/school; close Glasgow St at McConell Ave
- Glasgow St & Clarence Ave eastbound left turn onto Clarence Ave northbound; pedestrian issues / low compliance; bus stop at corner; pedestrian signals; sidewalk on west side to signal for safer pedestrian crossing
- Signs needed around parks/playgrounds; "Watch for children at play"
- Reduced speed around parks (30kph)
- Glasgow St & Broadway Ave install 4-way stop
- Clarence Ave & Wilson Cres southbound queue past Cascade St; causes traffic to shortcut through neighbourhood; add more green time

- Clarence Ave & Cascade St pedestrian safety concern to access park; improvements needed
- Lorne Ave & Ruth St difficult to tell who has right-of-way at 4-way stop; install traffic signals

Group 3: Shirley Matt (City Facilitator)

- Broadway Ave between Wilson Cres & Glasgow St speeding; rolling through stop sign and speeding up after school zone
- Glasgow St between Clarence Ave & Broadway Ave speeding; shortcutting due to school zones on Wilson Cres
- Wilson Cres speeding (especially after school hours)
- Cascade St speeding; increased traffic volumes
- Uncontrolled intersections confusion
- Broadway Ave & Ruth St traffic lights needed
- Lorne Ave & Ruth St traffic coming / going to downtown causes congestion into neighbourhood
- Clarence Ave & Circle Dr collisions coming from ramp (westbound to southbound); need better timing for lights
- Clarence Ave northbound towards Wilson Cres drivers race each other to get into lane
- Clarence Ave & Glasgow St dangerous for pedestrians; busy street; drivers going fast and will not stop; bus stop in area; install pedestrian device; southbound – right turn only to Glasgow St – problem is traffic is using two lanes before they pass the intersections; install barrier to delineate right lane and to protect right turns from Glasgow St onto Clarence
- Missing sidewalks and ramps throughout neighbourhood (ie. Broadway Ave & Wilson Cres northeast corner)
- Parents parking on Wilson Cres in front of school is concern

Group 4: Ellen Pearson (City Facilitator)

- Bute St & Albert Ave speeding; cars ending up in front yard (blowing stop sign at Cascade St & Albert Ave)
- Wilson Cres & Broadway Ave not stopping at 4-way stop; cars not coming to complete stop turning right onto Broadway Ave
- Lorne Ave & Ruth St need traffic signals, not just 4-way stop; high traffic volumes from Prairieland
- Wilson Cres between Clarence Ave & Broadway Ave speeding, expecially traffic signals installed at Wilson & Clarence; lots of collisions; driving through median island curb extensions in front of school; speeding occurring all times of day, even in school zone; implement 30kph speed zone on Wilson Cres by Broadway Ave; install speed humps
- Clarence Ave & Glasgow St crosswalk is dangerous; install flashing yellow pedestrian lights; lots of pedestrians due to bus stop; lacks signage and pavement markings; traffic turning left onto Glasgow St is often to dog park; implement dog park in Stonebridge to lessen traffic coming into Avalon

- Clarence Ave poorly marked school zone (Spanish school where kids take the bus, they don't walk) – St Martins
- Photo radar needed at Clarence Ave & 3rd St and Taylor St; police presence needed
- Speed humps work!!
- Zig zag berms are effective at slowing traffic, especially on local streets to maintain speed
- Garbage collection should all be in back lanes; heavy trucks are impacting the quality of the streets; grade and maintain back lanes/grading but not backfilling; lanes are muddy and can't be used
- Students jaywalking near Aden Bowman
- Glasgow St shortcutting to avoid Clarence Ave and 3 school zones; crosswalk to Avalon Park is marked but not observed; solution: in Seattle pedestrian flags area attached to pedestrian signs to signal to drivers
- Speeding is utmost concern and not paying attention to traffic signage
- Install alternating yield signs at uncontrolled intersections
- Dufferin Ave & Cascade St change yield sign to stop sign

Group 5: Jay Magus (City Facilitator)

- Wilson Cres & Clarence Ave traffic signal has moved traffic to Glasgow St (6-9am, 3-6pm, 7-9pm, after 11pm)
- Glasgow St & Melrose Ave speeding
- Glasgow St no left onto Glasgow St (from Clarence Ave); too easy to access neighbourhood; install traffic calming; install 4-way stop at Broadway Ave; improve crosswalk at Turner Ave (issue in median island); install speed display board in both directions; resident living on Mendel Cres was concerned about proposed left turn restriction at Glasgow St & Clarence Ave because they'd need to drive to Wilson Cres->Broadway Ave->the to Mendel Cres; improve pedestrian crossing at Maceachern Ave; install speed bumps or indents; reduced speed zone near park
- Speed display boards how does it log pedestrians and cyclists; issues with accuracy
- Shortcutting to access traffic signals at Wilson Cres & Clarence Ave (eastbound on Glasgow St ->Tuner Ave->McAskill Cres->Wilson Cres)
- Collisions in winter
- Clarence Ave –change to 2 lanes northbound between Circle Drive and Wilson Cres; remove school zone to maintain traffic flow; jersey barrier obstructs drivers view when turning right onto Clarence Ave from Circle Dr ramp looking southbound
- Stop & Yield Retrofit Program install alternating yield signs
- Back lane west of Clarence Ave between Glasgow St & Wilson Cres shortcutting; speeding
- Concerned about time of study and completion
- Cascade St quieter street

Next Steps – Jay Magus

(Presented by Jay Magus - Traffic Engineering Manager)

- 1. Continue monitoring traffic issues in your neighbourhood
- 2. Mail-in or email comments no later than May 16/15
- 3. Additional public input via City on-line Community Engagement webpage no later than May 16/15

http://shapingsaskatoon.ca/discussions/avalon-neighbourhood-traffic-review-meeting

- 4. Traffic count data collection spring/summer 2015
- 5. City review of public input and data collected from traffic studies and prepare draft Traffic Plan
- 6. Follow-up public input meeting to provide input on draft
- 7. Determine revisions and finalize Traffic Plan
- 8. Present Traffic Plan to City Council for approval

Large Group Discussion – Resident Questions/Comments

Resident: When will the recommendations in the traffic plan be installed?

City: There are short term and long term measures. Short term include signs and temporary traffic calming. These are usually installed within a year of the plan being approved (ie. spring / summer 2016). Long term measures, such as permanent traffic calming may take longer, approximately 5 years, after the temporary measures have been assessed.

Resident: A lot of the traffic on Glasgow St are residents from Stonebridge going to the dog park. Will there be a dog park in Stonebridge?

Councillor Loewen: A dog park wasn't included in the planning stage for Stonebridge, so we'll need to find space. Best case scenario, yes, there will be a dog park eventually, but it won't be as big as the park in Avalon.

Resident: What are the traffic volumes required to install traffic signals?

City: There is no easy answer for this. Traffic signal warrants are based on a number of factors, not just traffic volumes. Number of lanes, distance to nearest traffic signals, structures etc.

Resident: Has Lorne Avenue & Ruth St been assessed to determine if traffic signals can be installed?

City: Yes, Lorne Ave & Ruth St it's on the threshold for traffic signals. However there are a number of challenges at this location due to overhead structures. At this time, traffic signals aren't recommended.

Resident: There seems to be a consensus of speeding on Glasgow St (also Clarence Ave). Send police cars out to enforce, the non-visible kind.

City: We can send this as information.

Contact Police Services to request enforcement: 306-975-8300 OR 306-975-8068

Resident: Lorne Ave & Ruth St – Prairieland events cause high traffic and snow blocks one full lane. Snow should be pushed onto sidewalk.

City: Comments will be forwarded to the Public Works Division to follow-up.

Resident: In other neighbourhoods they've installed yield signs that alternate at all uncontrolled intersections. Can we get this in Avalon?

City: The yield signs are part of the Stop & Yield Retrofit Program. We'll follow-up to determine if Avalon was included in the program.

City followed up: **Avalon is included on the list for the Stop & Yield Program.** As such, yield signs will be installed at all uncontrolled intersections in Avalon. Letters will be sent to residents prior to the installation. We intend to complete the sign installations prior to the next Avalon traffic meeting (ie. fall 2015).

Resident: Glasgow St & Broadway Ave (dog park access) – put up stop signs

City: We need to follow up with a study and abide by our stop and yield Policy (Policy C07-007) to implement signs. Stop signs are not to be used as a speed deterrent / traffic calming.

Resident: When are the counts conducted?

City: Traffic counts will be in the next couple months (spring / summer)

Resident: No one likes speed humps, but they work.

City: We've installed them in the past (Wilson Cres near the park) but received complaints after. Fire Services requested we don't install speed humps because they damage their vehicles. They're noisy for residents living near them.

Resident: When will a speed display board be installed on Glasgow St?

City: A speed display board will be installed on Glasgow St in May. (may need to collect speed and traffic volume data prior to installation. This may affect timeline.)

Resident: Can the board be installed in both directions?

City: We will try to install the board in both directions, however there are a number of challenges – can't be shaded, need something to attach board to (ie. power pole). Notifications will be sent to residents on Glasgow St prior to installation.

Resident: Was the speed display board on Glasgow St effective last fall?

City: Yes. Speed studies measured before and after showed a reduction.

Resident: How does the City prioritize traffic improvements?

City: Comes down to funding. We have a list of corridor improvements (major roadways –arterials, collectors), major intersection improvements, and recommendations from neighbourhood traffic reviews. Generally recommendations from the neighbourhood reviews are low cost.

Resident: Buses speed. Please tell transit drivers to slow down.

City: We'll pass on the information to Transit Services.

http://shapingsaskatoon.ca/discussions/varsity-view-neighbourhood-traffic-review

List of Representatives

Mitch Riabko, Kathy Dahl – Great Works Consulting, Facilitators

Angela Gardiner – City of Saskatoon, Transportation & Utilities, Transportation Director

Jay Magus – City of Saskatoon, Transportation & Utilities, Engineering Manager

Shirley Matt – City of Saskatoon, Transportation & Utilities, Traffic Management Supervisor

Justine Nyen – City of Saskatoon, Transportation & Utilities, Traffic Management

Mariniel Flores – City of Saskatoon, Transportation & Utilities, Infrastructure Engineer

Goran Lazic – City of Saskatoon, Transportation & Utilities, Traffic Operations Engineer

Marina Melchiorre – City of Saskatoon, Transportation & Utilities, Traffic Engineer

David LeBoutillier – City of Saskatoon, Transportation & Utilities, Traffic Engineer

Mark Emmons – City of Saskatoon, Planning & Development, Planner – Neighbourhood Planning

Konrad Andre – City of Saskatoon Planning & Development, Senior Planner

Ellen Pearson – City of Saskatoon Planning & Development, Planner

Avalon Neighbourhood Traffic Review Thursday, October 29, 2015, 7:00 – 9:00 P.M. George Vanier School

Facilitators:

Mitch Riabko & Kathy Dahl (Great Works Consulting)

Agenda

- Welcome & introductions
- Presentation from the Transportation Division
- Small group discussions
- Small group discussion report back to large group
- Next Steps
- Question / Answers

<u>Presentation from Transportation Division – Avalon Neighbourhood Traffic Review</u> (Presented by Justine Nyen – 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
- August 2013 changes to program
 - Neighbourhood-wide review
 - More community / stakeholder feedback
 - Efficient use of staff resources

How We Got Here:

- April 2015 Initial Traffic Meeting
- April to October 2015 gather feedback, conduct traffic studies, collect data, develop traffic plan
- October 2015 Follow Up Traffic Meeting display proposed traffic plan and gather feedback

What We Heard:

- A. Speeding/Traffic Volumes:
- Glasgow St
- Melrose Ave
- Clarence Ave

- Broadway Ave
- Wilson Cres
- Cascade St
- Albert Ave
- Back lanes (adjacent to Clarence Ave, Wilson Cres, & Glasgow St)

B. Pedestrian Safety:

- Glasgow St:
 - MacEachern Ave
 - Turner Ave
 - o Broadway Ave
- Clarence Ave:
 - Glasgow St
 - Cascade St
- Missing sidewalks near John Lake Park

C. Intersection Safety:

- Glasgow St & Clarence Ave
- Glasgow St & Broadway Ave
- Ruth St & Broadway Ave
- Broadway Ave & Wilson Cres
- Ruth St & Wilson Cres
- Uncontrolled intersections

What We Did:

- Collected Data:
 - Past studies
 - Comments from initial meeting
 - Resident responses (phone calls, emails, letters)
 - Recorded comments from Shaping Saskatoon discussions
 - 5 Intersection / Pedestrian counts
 - 9 7 day traffic count (24 hour) & Average Speed measurements
 - 1 back lane traffic volume count
 - Collision history
- Field Reviews
- Assessed the Issues
- Generated proposed recommendations

What We Propose:

- · Yield signs at all uncontrolled intersections
- Zebra crosswalks
- 20kph speed signs
- · Additional school zone signs
- Speed display board
- Speed enforcement
- Speed limit reduction
- Hazard boards
- Traffic calming (curb extensions and median islands)

- Sidewalk
- Glasgow St & Clarence Ave modifications (median closure to restrict left turns; curb extension to increase pedestrian safety)

Clarence Ave & Glasgow St modifications:

- Recommendation in traffic plan show a median closure to restrict left turns
- Issue is high traffic volumes (shortcutting on Glasgow St)
- Closure is estimated to reduce approximately 1,600 vehicles per day on Glasgow St
- Traffic is expected to continue north on Clarence Ave, but there is a chance of rerouting through neighbourhood on other streets such as Wilson Cres.
- Closure would be installed temporarily to assess impact on adjacent streets

Q&A

Resident: What are you doing to move traffic from the south (via Circle Dr etc)? Traffic on Clarence Ave started because of Stonebridge and all of the development on the south end.

City: Clarence Ave, Preston Ave and so on are arterial roadway, made to move traffic. There are no plans for additional routes and bigger roads at this time.

• Saskatoon Police Services: 306-975-8300 <u>OR</u> 306-975-8068 to report a traffic complaint or a concern.

Small Group Discussions

 Breakout into small groups to discuss traffic concerns in Avalon and potential solutions

Group 1: Justine Nyen (City facilitator)

- Item #6 –Clarence Ave & Glasgow St median closure group was not in support; closure will re-route traffic onto Wilson Cres; don't want to traffic re-route by school
 - Consider what's causing the shortcutting onto Glasgow St:
 - Lack of guide signs, northbound traffic gets "caught" in left turn lane because it's too congested to change lanes
 - Drivers avoiding school zones on Clarence Ave
 - Funneling into one lane from 2 lanes coming over the overpass is backed up
 - Icy conditions downhill coming over overpass
 - Consider alternating stop signs on Glasgow St
 - Perhaps temporary roundabouts on Glasgow St to make route "less attractive" and slow speeds
 - Remove school zone on Clarence Ave to ease congestion
 - Continue 2 lanes on Clarence Ave to resolve congestion
- Item #7 Clarence Ave & Glasgow St curb extension concerns for turning right from Glasgow St because drivers will need to turn into driving lane. Already congested so it will be difficult to find gaps in traffic. Maybe try the curb extension on the north side.
- Broadway Ave & Wilson Cres add hazard boards

 Wilson Cres – additional school zone sign needed; no sign so drivers don't know it's a school zone (west of Broadway Ave)

Group 2: Mariniel Flores (City facilitator)

- Item #1 Yield signs at uncontrolled intersections 6 no, 4 neutral
- Item #2 Glasgow St & MacEachern Ave zebra crosswalk there's already one there; speed bumps or little rumble strips instead
- Clarence Ave & Glasgow St:
 - Maybe a bus bay
 - Not in favour of median closure
 - Consider double lane on Clarence Ave
 - Move crosswalk to north side
 - Install traffic signals
- Clarence Ave & Glasgow St speed display board install permanent
- Ruth St & Wilson Cres maybe 4-way stop after bridge is built
- Clarence Ave speed limit reduction to 50kph at overpass 5 were in favour to Circle Dr overpass, 5 wanted it reduced all the way to Cartwright St.
- Broadway Ave & Glasgow St all-way stop or different orientation of stop signs
- Broadway Ave & Wilson Cres adjust timing to make all directions equal priority
- Glasgow St west of Broadway Ave install directional closure (maybe McConnell Ave)
- Victoria Ave dedicated bike/pedestrian lane route all the way to River Landing
- Clarence Ave dedicated bike/pedestrian lane route all the way to River Landing
- Clarence Ave & Cascade St better signage to improve pedestrian safety or curb extension

Group 3: Shirley Matt (City facilitator)

- Item #1 yield signs at uncontrolled intersections reasonable as long as to the east side of the neighbourhood
- Item #2 Glasgow St & MacEachern Ave zebra crosswalk should have traffic calming also
- Item #3 Glasgow St & Turner Ave zebra crosswalk, curb extension, & median island dependent on Clarence / Glasgow; maybe remove median island
- Item #6 Glasgow St & Clarence Ave median closure 9 against, 2 for.
- Item #7 Glasgow St & Clarence Ave curb extension on southwest corner 5 against, 4 for, 2 undecided; median island on northeast corner
- Item #10 Additional school zone signs on Clarence Ave near Wilson Cres in support of sign on median
- Item #12 Speed enforcement on Wilson Cres in school zone in support but extend zone to Clarence Ave
- Item #14 add hazard boards at Ruth St & Wilson Cres Maybe add flashing light
- Other:
 - Cascade St needs maintenance
 - Clarence Ave / Glasgow St more needs to be done Glasgow St; 4-way stop at Broadway Ave / Glasgow St

Group 4: David LeBoutillier (City facilitator)

- Glasgow St:
 - Broadway Ave 4-way stop needed
 - Flip yield signs along Glasgow St
 - o More enforcement needed
 - Re-think Glasgow St as collector with bulbing etc (half table was in support)
 - Truck traffic is a concern
- Item #2 Glasgow St & MacEachern Ave zebra crosswalk probably not enough; consider curb extensions; it's a pathway to a park
- Item #3 Glasgow St & Turner Ave concern that Turner Ave becomes more important if Clarence Ave northbound left turn is closed; maybe close Turner Ave
- Item #6 Glasgow St & Clarence Ave median closure not so quick; need to understand issues; install 2 through lanes on Clarence Ave all the way to Wilson Cres; crosswalk improvements needed, perhaps try bulbing & steps along Glasgow St first; watch Turner Ave and maybe close; keep left turns
- Item #7 Glasgow St & Clarence Ave curb extension on southwest corner not sure this will work. No clear option
- Item #10 Additional school zone signs on Clarence Ave near Wilson Cres yes northbound sign needs to go back
- Item #11 speed display board on Clarence Ave (northbound after overpass) boards may encourage speed
- Item #12 Speed enforcement on Wilson Cres in school zone photo radar/portable
 purchase devices and move them around
- Consider creating a park speed zone to extend the hours of day

Group 5: Jay Magus (City facilitator)

- Item #1 Supported; can you also implement on Cascade Street?
- Item #2 Glasgow St & MacEachern Ave zebra crosswalk Supported
- Item #3 Glasgow St & Turner Ave Supported; however there are issues properly locating the crosswalk as it currently guides pedestrians to a driveway; finding space for curb extensions might be difficult.
- Item #4 Supported
- Item #5 Supported
- Item #6 Glasgow St & Clarence Ave median closure not supported; will force
 more traffic to Turner Avenue and Mcaskill Crescent; traffic should not have been
 counted in the summer as school is out; one issue is that 2 lanes of northbound
 traffic on Clarence Avenue is needed so drivers do not feel like they have to turn left;
 look at other ways to deter traffic on Glasgow Street including bulbing, stop signs,
 and speed bumps.
- Item #7 Glasgow St & Clarence Ave curb extension on southwest corner move to northwest corner
- Items #8 and 9 supported
- Item #10 Additional school zone signs on Clarence Ave near Wilson Cres supported, but also asked if school zone can be removed
- Item #11 to #15 supported
- Why was no calming on Wilson Crescent identified?

Next Steps

- 1. Mail-in or email comments no later than Nov 29/15
- 2. Additional public input via City on-line Community Engagement webpage no later than Nov 29/15

http://shapingsaskatoon.ca/discussions/avalon-neighbourhood-traffic-review-meeting

- 3. Additional consultation if required
- 4. Present traffic plan to City Council for approval
- 5. What happens after City Council approval? Implementation begins. Signs and temporary traffic calming will be installed as early as next spring (2016)
- 6. What if I don't agree? Request time to speak at City Council meeting

Q&A

Resident: Clarence Ave should be 2 lanes to Wilson Cres (either direction).

Resident: Do you think it's beneficial to have resident's address?

City: Like the idea of community-based decisions not one street vs. another.

Resident: The representation of the community at this meeting is very small (approximately 65 attendees).

Resident: People in my group were in favour of the median closure (Clarence Ave & Glasgow St). We don't think much traffic will turn down Wilson Cres.

Resident: Disagree. Need more study on who is taking Glasgow St (residential, shortcutting, where are they going – downtown, Avalon shopping centre, dog park etc)

City – In my opinion, traffic is going downtown, from Broadway Ave.

Resident: Has the City changed the design of streets to carry the volumes? Perhaps change Glasgow St from local to feeder street.

City: Coming from the City of Calgary, they have changed roadways from residential as development infills. It has been done. Changes over time.

Resident: Would you consider re-classifying the road to a collector?

City: No. At this point it is all residential.

Resident: Cars are stopping on the crosswalk at Clarence Ave & Glasgow St. Install "Do Not Block Crosswalk" sign.

Resident: Cascade St is a racetrack. Lots of young kids in the area.

City: According to the speed study, traffic calming is not warranted. We would consider alternating yield signs as part of the Traffic Control Retrofit because it's a local street with intersecting local streets. This wasn't previously recommended because there are already signs.

Resident: But if enough residents identify it as a concern, then would you implement something?

City: Yes. Not exact science. Community feedback is definitely a factor.

Councillor Loewen: There's been a lot of attention in the media this past week on the neighbourhood traffic reviews. I'm looking forward to a Council discussion on revisions to the procedure.

Facilitator: Sounds like there wasn't consensus on the recommendations for Glasgow St. We may require an additional meeting to discuss the outstanding issues. This will likely take place in the next 2-3 months.

List of Representatives

Mitch Riabko, Kathy Dahl – Great Works Consulting, Facilitators Jay Magus, Shirley Matt, Justine Nyen, Mariniel Flores, David LeBoutillier – City of Saskatoon, Transportation & Utilities Attendees: Jay Magus Time: 7:00 – 9:00 PM Location: John Lake School

Meeting began at 7:00pm.

- 1. Can we get a transit stop lay-by for northbound bus traffic on Clarence Avenue across from Glasgow Avenue?
- 2. There is a 'used car lot' on that side of Clarence Avenue.
- 3. At the park on Glasgow Street, the issue remains how to cross road the safely.
- 4. At any new traffic calming measures the speed will be maintained up to the measures.
- 5. May be better to move the traffic calming measures closer to the beginning of the park.
- 6. Can we get a curb extension at McGilp View, Mendel Cres, and MacEachern Avenue as well?
- 7. At Clarence Avenue / Glasgow Street can we get a pedestrian light? Jay responded that a device was not warranted in accordance with the City Policy and Guidelines on Pedestrian Crossings.
- 8. How wide will the pinch points be? Will a large truck and trailer be able to pass by? Jay responded the pinch points will impede half the road, so yes a large truck will be able to pass.
- 9. Can we get a 30kph speed limit by the park all year round? Jay responded that Calgary has a 30kph speed limit at parks and schools, 24 x 7 x 365. Jay noted that another neighbourhood may be bringing a petition to City Council requesting a 40kph speed limit, neighbourhood wide.
- 10. Wilson Crescent has 2 pedestrian devices between Preston Avenue and Clarence Avenue, why can't we have pedestrian devices on Glasgow Avenue?
- 11. A comment made that a 40kph speed limit is ridiculous, 30kph would work in a residential area.
- 12. Jay noted that he will revisit the intersection of Glasgow Street / Clarence Avenue for pedestrian safety.
- 13. Why can we not get a 4-way stop at Broadway Avenue / Glasgow Street? Jay responded that installing a 4-way stop when it is not warranted may create a more unsafe condition, as drivers may be used to no opposing traffic and eventually disregard the 4-way stop.
- 14. Why can we not get a 3-way stop at Turner Avenue or Mendel Crescent? Jay responded for the same reasons as he just stated.
- 15. Jay noted that the overall plan recommendations include moving the 50kph speed limit further south on Clarence Avenue and installing a speed reader board on Clarence Avenue.
- 16. It was noted that despite there not being enough pedestrian activity at Glasgow Street / Clarence Avenue someone is going to get hit first, so put a light in.
- 17. Jay noted that he will review the pedestrian crossing at Glasgow Street / Clarence Avenue intersection again and communicate with the Community Association and Council.
- 18. An individual noted they were against the pinch points but liked push button pedestrian lights such as 37th Street.
- 19. Why not speed bumps? Jay noted that we do have two locations in the City where these have been installed, and the issues are noise complaints from area residents, and emergency and transit departments are not in favour.
- 20. At Glasgow Street / Clarence Avenue more visibility is required for pedestrians.

- 21. At pinch point #4, is there enough room if you are turning right (coming from Mendel)? Jay noted that there will be enough room and as a driver entering the road it is your responsibility to enter only if it safe to do so.
- 22. It was suggested to move crosswalk #3, it solves one issue, but a neighbour will lose parking. (814 Glasgow Street). Jay responded that he will review.
- 23. Can the City install traffic signals at the intersection of Glasgow Street / Clarence Avenue? Jay responded that this would just increase traffic on Glasgow Street.
- 24. Jay noted that this presentation will be on-line, and the implementation plan will be included. Jay reiterated that data collection will be completed in May & September of 2016, and again in Spring of 2017.
- 25. It was suggested that the pinch points will impede traffic. Jay commented that it is a trade off between a longer travel time for local residents versus making the travel time long enough so short-cutting traffic is not attractive.
- 26. Why do we have to wait until September to move the speed limit signs? Jay responded that it does take time to make changes as there is plan preparation, utility clearances, and then the 'Sign Shop' has to schedule it. Jay responded that he will try complete this sooner.
- 27. It was suggested that Glasgow Street was not well represented at the October 29, 2015 meeting, and there was no other way to vote to close the left turns at Glasgow Street / Clarence Avenue.

 Would it be possible to vote again using Survey Monkey to survey the entire neighbourhood? Jay responded that it would be difficult as there is no data base with everyone's e-mail address.
- 28. It would be better to have a pedestrian activated light at Glasgow Street / Clarence Avenue, at what point does safety take priority? Jay reiterated again that he will revisit the issue.
- 29. The two lanes heading north on Clarence Avenue is acceptable, have you considered two lanes for the southbound traffic as well?
- 30. The proposed changes to Clarence Avenue will help a lot. If Glasgow Street at Clarence Avenue is closed traffic will simply divert to another route.
- 31. There is zero enforcement of speeding along Glasgow Street.
- 32. At Clarence Avenue / Glasgow Street, at 8am and 5pm vehicles sit waiting to turn left, and block the crosswalk. It was suggested that a sign 'Do Not Block Crosswalk' be installed further south as you approach the intersection.
- 33. At Clarence Avenue / Glasgow Street it was suggested to perhaps move the crosswalk north of the intersection. Or perhaps put in two crosswalks. Jay noted that if a pedestrian crossing device is installed then it would only be installed on one side.
- 34. At Turner Avenue / Glasgow Street the crosswalk ends at a residential driveway. If the crosswalk is at Mendel Crescent only one parking stall is affected. It used to be there, and why did it move? Jay responded that he will review why it was moved.
- 35. In the morning one resident uses Glasgow Street and Clarence Avenue to get to work in the morning, and in the evening uses Lorne and Ruth to get home.
- 36. The pinch points need to be visible, as the sun will blind some drivers. Strobe lights are needed at crosswalks.
- 37. The police are requested to do more enforcement.

- 38. A vote via show of hands was held: Proposal is 2 lanes for Clarence Avenue northbound.
 - a. 2 against
 - b. 43 for
- 39. A vote via show of hands was held: Proposal is a installing the pinch points for a trial period.
 - a. 11 against
 - b. 31 for
- 40. Jay clarified the following:
 - a. He will revisit the intersection of Glasgow Street / Clarence Avenue for pedestrian accommodation
 - b. He will revisit the alignment of the intersection of Glasgow Street / Clarence Avenue (consider including a curb extension on the south side of the intersection)
 - c. There is support for 2 lanes southbound on Clarence Avenue
 - d. He will revisit additional bulbing at MacEachern Avenue.
 - e. There is support for the pinch points in a temporary condition as a trial project.
- 41. A resident noted the police informed him that there are only two police cars available for patrol on the east side of the river.
- 42. An issue at Glasgow Street / Clarence Avenue for pedestrians is that vehicles driving southbound intending to turn right onto Circle Drive change lanes in the middle of the intersection.
- 43. It was noted that there are 3-4 crosswalks along Glasgow Street. Will the data collection include pedestrian counts? Jay responded that only the vehicle traffic would be counted.
- 44. Can the bus stop on Clarence Avenue be reshaped and a specific spot for the bus made?
- 45. A resident presented an option for Clarence Avenue that included removing the entire boulevard, developing a protected lane in front of the houses on Clarence Avenue between Glasgow Street and Wilson Crescent, developing 3 lanes southbound and 2 northbound. He noted he gave this design to the City 10 years ago, and also presented to City Council on the design. Jay responded that he had received a copy of the proposal and had prepared review comments that he would provide with the resident post meeting. Jay also noted that the focus of the neighbourhood traffic reviews are local streets in neighbourhoods not arterials.
- 46. Jay noted that there is a process in place to assess major intersections as well as corridors that is different than the neighbourhood traffic reviews. Jay noted that currently this segment of Clarence Avenue is not on the radar for assessment and review.
- 47. There is difficulty entering Clarence Avenue from Glasgow Street as the southbound traffic on Clarence Avenue changes lanes in the middle of the intersection in their preparation to turn right and enter Circle Drive.
- 48. Over the past five years traffic has been increasing on Clarence Avenue. Do you have recent counts for Clarence Avenue? Jay noted that he will provide this information.
- 49. I was not able to attend the October 29th meeting. How was the voting done regarding the Glasgow Street / Clarence Avenue intersection at the October 29th meeting? I have small children, I live on Glasgow Street, and I want to slow traffic down. Why didn't we close it off? Jay noted that at the October 29th meeting everyone broke up into small groups to discuss the proposed

recommendations. After the small group sessions are complete the City Staff quickly meet to discuss any major topics. Of course at this meeting the potential partial closure of Glasgow Street at Clarence Avenue was a major topic. Each City Staff noted that there was lack of support for the proposed closure at the table. Each City Staff then 'reported back' to the larger group on what their table had said. There was no show of hands taken with the larger group as it was clear to City Staff that the proposed partial closure was not supported.

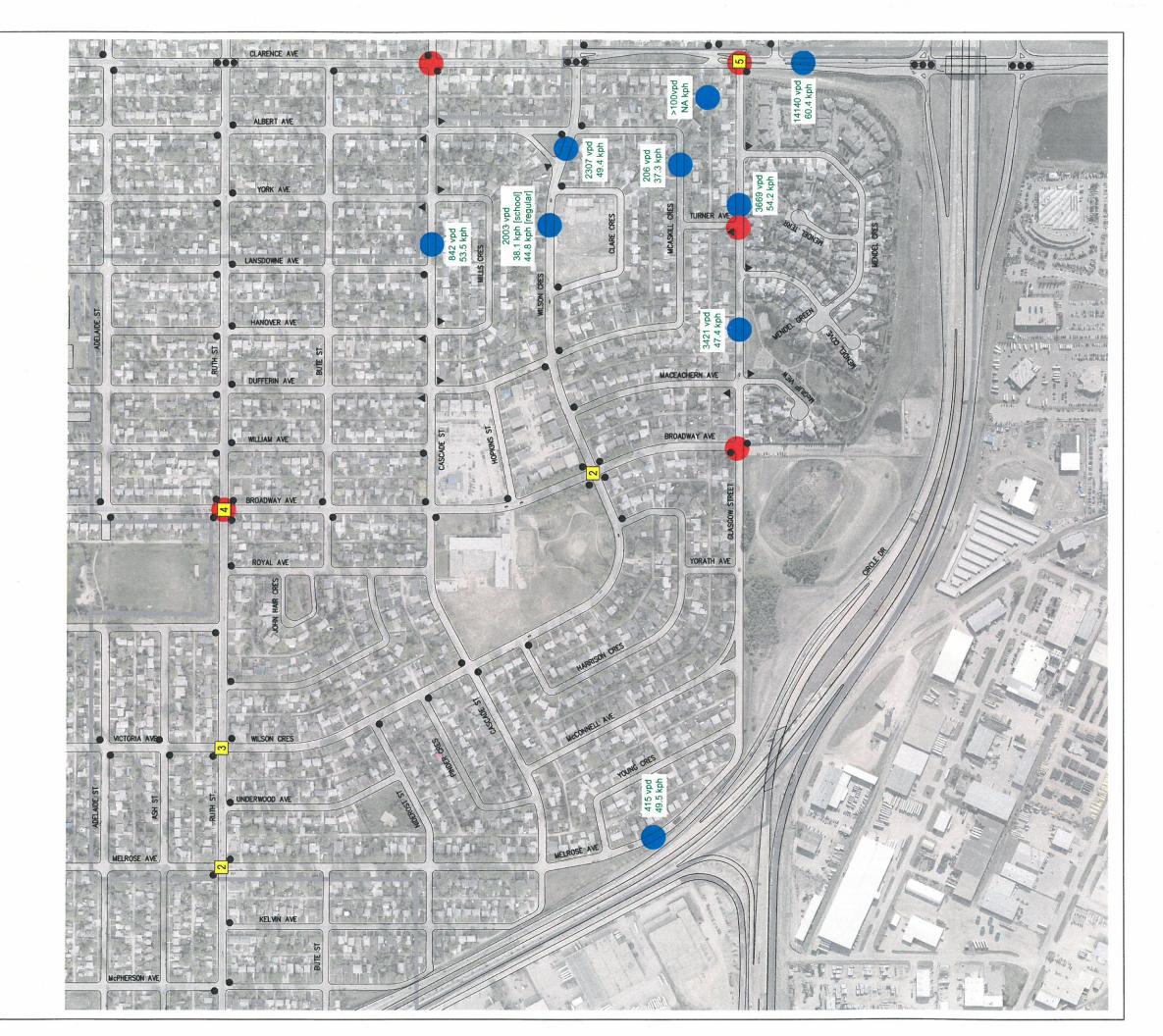
- 50. A vote via show of hands was held: Proposal is no left turns at the Glasgow Street / Clarence Avenue intersection (restricting the turns and reducing traffic on Glasgow Street):
 - a. 24 against
 - b. 18 for
- 51. Councillor Loewen noted that the pinch points on Glasgow Street would be temporary in nature and an evaluation would occur. She considers the traffic calming a live issue
- 52. Used to use Wilson Crescent to access Clarence Avenue but the traffic signal cycle is too long, so I now use Broadway Avenue and Ruth Street.
- 53. Convenience should be balanced against safety.
- 54. I was against the partial closure of Glasgow Street at Clarence Avenue because there was no second lane extension of Clarence Avenue.
- 55. What is Glasgow classified as? Jay responded that it is classified as a local road.
- 56. Jay was asked for comments on the proposed redesign of Clarence Avenue that would remove the boulevard, etc. Jay responded that the justification would need to be proven through traffic analysis and collision analysis. The City now has a process to do this outside of the neighbourhood traffic reviews through the major intersection reviews.
- 57. If Glasgow Street is a local road why can't we have alternating Stop and Yield signs? Jay responded that he would review this.
- 58. Has the High Collision sign, or Red Light Camera at 51st Street / Warman Road improved the safety?

 Jay responded that he did not have the stats in front of him, but typically you would see a reduction in right-angle collisions and maybe an increase in rear-end collisions. As right-angle collisions cause more injuries and more serious injuries to drivers, there is benefit gained by lowering these types of accidents.
- 59. Is it possible to install a photo radar camera along Glasgow Street? Jay responded that this is a 2 year pilot project sponsored by SGI. At the end of the 2 year pilot project the City can decide how to proceed.

Meeting adjourned at 9:00pm.

APPENDIX B: TRAFFIC DATA COLLECTION

City of Saskatoon



APPENDIX C: ALL-WAY STOP ASSESSMENTS

All-way Stop Assessment (Policy C07-007 – Traffic Control – Use of Stop & Yield Signs)

Step 1:

The following conditions must be met for all-way stop control to be considered:

- i) The combined volume of traffic entering the intersection over the five peak hour periods from the minor street must be at least 25% of the total volume for a three-way stop control, and at least 35% of the total volume for a four-way stop control.
- ii) There can be no all-way stop control and traffic signal within 200 metres of the proposed intersection being considered for all-way stop control on either of the intersecting streets.

Location	Condition 1: % of Traffic from minor street	Condition 2: Traffic Signals or all-way stop within 200m	All-Way Stop Warrant
Glasgow Street & Broadway Avenue	40% - Condition met	No – Condition met	Conditions met. Continue to Step 2
Glasgow Street & Turner Avenue	5% - Condition NOT met	No – Condition met	Conditions NOT met.

Provided the above criteria are met, the following conditions, singly or in combination, may warrant the installation of all-way stop signs:

- i) 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.
- ii) When the total number of vehicles entering the intersection from all approaches averages at least 600 per hour for the peak hour or the total intersection entering volume exceeds 6,000 vehicles per day.
- iii) The average delay per vehicle to the minor street traffic must be 30 seconds or greater during the peak hour.
- iv) As an interim measure to control traffic while arrangements are being made for the installation of traffic signals.

Location	Criteria 1: 5 or more collisions in most recent 12 months	Criteria 2: total number of vehicles entering the intersection from all approaches averages at least 600 per hour for the peak hour	Criteria 3: total intersection entering volume exceeds 6,000 vehicles per day	Results	
Glasgow Street & Broadway Avenue	0 – Condition NOT met	327 – Condition NOT met	3,360 – Condition NOT met	Four-way stop NOT warranted.	

APPENDIX D: PEDESTRIAN DEVICE ASSESSMENTS

Appendix D: Pedestrian Actuated Signal Warrant

Glasgow Street & Broadway Avenue:

Location & Roadway Classification:	Broadway & Glasgow			
Date of Count:	Day of wk: Tues	Mth, Day, Yr: Jun 2/15		
Weather:	fair			
Traffic Control Devices:	stop sign			
Current Pedestrian Control:	none			
Other Notes:				
Number of travel lar	nes passing through the crosswalk(s)	lanes		
Is there a physical m	nedian in this crosswalk(s)?	n (y or n)		
<u>-</u>	ercentile (check one)	<u>50</u> km/h		
☐ Posted	Limit			
Distance to nearest p Location: Type:	•	m		
Is the orientation of	this crosswalk(s) N-S?	y (y or n)		
Duration of pedestri	an count	<u>5</u> hrs		
Elementary: High School:	Highes	anted PC Points: t PC point value: 704	or at	/ period
Adult: Senior: Vehicles passing through crosswalk(s):	Pedestrian Actuato	Corridor Points: ed Signal Points: 30		

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the East Crosswalk **

(Note: Standard and Zebra crosswalks can be installed on both sides if pedestrian volumes are approximately equal.)

Time		Vehicl	e Counts		Pedestrian Counts							
(15					West Crosswalk East Crosswalk				osswalk			
minute	SB	WB	NB	EB	Child	Teen	Adult	Senior /	Senior /	Adult	Teen	Child
intervals)				<u> </u>	r	r	r	Impaired	Impaired	ridare	r	Carre
7:00												
7:15									_			
7:30						_	<u> </u>	•			_	
7:45				_		•	•	•				
8:00	8	14	19	1	3		<u> </u>					
8:15	12	12	16	2								
8:30	8	22	32	1								
8:45 9:00	6	22	31								•	
9:00					-							
9:13												
9:30												
AM Totals	34	70	98	4	3							
11:30	5	15	26	5	2							
11:45	5	13	27	4								
12:00	2	23	23	4								
12:15	8	20	18	7	-							1
12:30	8	17	23	9								1
12:45	4	19	27	J								
13:00	5	11	20	1								1
13:15	2	21	18	2								-
Noon Totals	39	139	182	25	2							3
14:00	- 0,	107	102		_							
14:15												
14:30												
14:45												
15:00	3	22	18	5	1							
15:15	5	17	43	2								
15:30	7	26	30	3								
15:45	4	36	37	2								1
16:00	15	26	27	5								
16:15	10	24	41	3	1							1
16:30	8	29	54	7								2
16:45	3	30	42	3								
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20:15												
20:30												
20:45		0.10	000	6.0								
PM Totals	55	210	292	30	2							4
Totals	128	419	572	59	7							7
						West Cr	osswalk =	7		East Cro	osswalk =	7

Glasgow Street & Turner Avenue:

Location & Roadway Classification:	Glasgow & Turner			
Date of Count:	Day of wk: Wed	Mth, Day, Yr: June 3/15		
Weather:	fair			
Traffic Control Devices:	stop sign			
Current Pedestrian Control:	standard			
Other Notes:				
Number of travel la	nes passing through the crosswalk(s)	2 lanes		
Is there a physical n	nedian in this crosswalk(s)?	n (y or n)		
Speed limit (or 85th □ 85th p □ Posted	ercentile (check one)	<u>50</u> km/h		
Distance to nearest Location: Type:	none	m		
Is the orientation of	this crosswalk(s) N-S?	y (y or n)		
Duration of pedestri	ian count	<u>5</u> hrs		
Elementary	: 11 Total Warr	anted PC Points:	or	/ period
High School	: Highes	t PC point value: 696	at	
Adult	: Active Ped	Corridor Points:		
Senior	: Pedestrian Actuate	ed Signal Points: 30		
Vehicles passing through crosswalk(s):	1487			

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the East Crosswalk **

 $(Note: Standard\ and\ Zebra\ crosswalks\ can\ be\ installed\ on\ both\ sides\ if\ pedestrian\ volumes\ are\ approximately\ equal.)$

minute SB	Time		Vehic	le Counts		Pedestrian Counts							
Child Teen Adult Impaired Impaired Adult Teen Child Impaired Impaired Adult Teen Child Impaired Impaired Impaired Adult Teen Child Impaired Impai	(15						West Cr	osswalk			East Cr	osswalk	
Totals		SB	WB	NB	EB	Child	Teen	Adult		Senior /	Adult	Teen	Child
7-15 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-45 7-30 7-30 7-45 7-30 7-30 7-45 7-30 7-								<u> </u>	Impaired	Impaired			
7-30 R-00 5 13 2 24 R-01 5 4 32 34 R-03 4 37 30 1 R-05 5 2 34 29 R-09 9-15 R-09 9-15 R-09 9-15 R-09 9-15 R-09 1 16 117 1 R-09 1 145						-							
7-45 8-90 5 13 24											•		
8:00						-					_		
8:15		5	13		24	-					7		
8.45													
9.00 9.15 9.30 9.45 AM Totals 15 116 11:30 2 35 26 11:45 5 33 2 1 12:00 1 45 32 12:15 1 37 26 12:31 334 30 1 1 12:30 3 34 30 1 1 12:30 1 31 1 20 13:15 2 24 20 13:15 2 24 20 13:15 2 24 20 14:15 14:30 14:45 15:00 3 50 3 40 14:45 15:00 1 41 15:00 1 41 15:00 1 41 15:00 1 41 15:00 1 41 15:00 1 41 15:45 1 7 5 8 3 3 1 1 16:45 1 7 5 8 3 3 1 1 16:45 1 7 16:30 1 7						1							
9:15 9:30 9:45 116 117 1 118	8:45	2	34		29								
930 945 16													
945 AM Totals 15													
AM Totals 15 116 117 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1													
11:30													
11:45 5 33 2 1						1		_					
12:00													
12:15 1 37 26													
12:30 3 34 34 30 1										_			
12:45											_		
13:00						1		•			,		
13:15												_	1
Noon Totals													
14:10 14:15 14:30 14:45 15:00 3 50 34 2 15:00 3 50 34 2 15:15 11 43 33 15:30 5 44 36 36 15:45 7 55 49 49 40 41 41 32 40 41						1							1
14:15 14:30 14:45 15:00 3 50 34 2 15:15 11 43 33 15:30 5 44 36 15:48 7 55 49 16:00 1 41 32 16:15 7 58 32 16:30 4 67 41 16:45 3 3 54 17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:45 19:00 19:15 19:30 19:45 20:00 20:15 20:30 20:45 PM Totals 41 41 412 290 3 Totals 75 796 616 5		19	200		209	1							1
14:45 14:45 15:00 3 50 34 2 15:15 11 43 33 15:15 11 43 33 15:15 11 43 33 15:15 11 43 33 1 15:15 14 14 36 15:15 14 14 14 32 16:15 7 58 32 16:15 7 58 32 16:15 16:30 4 67 41 14 14 14 16:45 3 54 33 1 17:15													
14:45 5:00 3 50 34 2 15:00 3 50 34 2 15:15 11 43 33 15:30 5 44 36 15:45 7 55 49 16:00 1 41 32 16:15 7 58 32 16:30 4 67 41 16:45 3 54 33 17:00 1 17:30 1 17:45 1 18:00 1 18:15 1 18:30 1 19:30 1 19:45 2 20:00 1 20:30 2 20:45 7 76 616 5 7 10:40 1 10:41 1 10:42 1 10:41 1 10:41 1 10:41 1 10:41 1 10:42 1 10:42 1 10:42 1 10:43 1 10:44 1 10:45 1 <td></td>													
15:00													
15:15		3	50		34	2							2
15:30													_
15:45													2
16:00 1 41 32 16:15 7 58 32 16:30 4 67 41 16:45 3 54 33 17:00 1 1 17:15 1 1 17:30 1 1 17:45 1 1 18:00 1 1 18:15 1 1 18:30 1 1 19:45 1 1 19:30 1 1 19:45 1 1 20:00 20:15 1 20:30 20:45 1 PM Totals 41 412 290 3 Totals 75 796 616 5													
16:30 4 67 41 1 16:45 3 54 33 1 17:00 17:15 17:15 17:30 17:30 17:45 17:30 17:45 18:10 18:15 18:15 18:30 18:15 18:30 18:45 18:45 18:45 19:00 19:15 19:15 19:30 19:45 19:30 19:45<													1
16:45 3 54 33 1 17:00 17:15 17:30 17:45 17:45 17:45 18:00 18:00 18:15 18:30 18:30 18:45 19:00 19:15 19:15 19:30 19:15 19:30 19:45 19:45 19:45 19:20:00 19:15 19:45	16:15	7	58		32								
17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:45 19:00 19:15 19:30 19:45 20:00 20:15 20:30 20:45 PM Totals 41 412 290 3 Totals 75 796 616 5			67		41								
17:15 17:30 17:45 18:00 18:15 18:30 18:45 19:00 19:15 19:30 19:45 19:45 20:00 20:15 20:30 20:45 PM Totals 41 412 290 3 Totals 75 796 616 5		3	54		33	1							
17:30 17:45 18:00 18:15 18:30 18:45 19:00 19:15 19:30 19:45 20:00 19:45 20:30 20:45 PM Totals 41 412 290 3 Totals 75 796 616 5													
17:45 18:00 18:15 18:30 18:45 19:00 19:15 19:30 19:45 19:45 20:00 19:15 20:30 19:45 20:45 19:41 41 412 290 3 3 Totals 75 796 616 5													
18:00 18:15 18:30 18:45 19:00 19:15 19:30 19:45 20:00 19:45 20:15 19:20:30 20:45 19:41 41 412 290 3 Totals 75 796 616 5													
18:15 <													
18:30 <													
18:45 <td></td>													
19:00 19:15 19:30 19:45 20:00 19:45 20:15 19:45 20:15 19:45 20:15 19:45 20:15 19:45 20:15 19:45 20:30 19:45 20:45 19:45 PM Totals 41 41 412 290 3 Totals 75 796 616													
19:15 19:30 19:45 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>													
19:30 19:45 20:00 19:45 20:15 19:45 20:15 19:45 20:30 19:45 20:45 19:45 PM Totals 41 412 290 3 Totals 75 796 616 5													
19:45													
20:00 0 <td></td>													
20:15													
20:30 20:45 PM Totals 41 412 290 3 Totals 75 796 616 5													
20:45 9 9 3 9 9 3 9 <td></td>													
PM Totals 41 412 290 3 Totals 75 796 616 5													
Totals 75 796 616 5		41	412		290	3							5
													6
West Grosswalk - 5 East Grosswalk -							West Cr	osswalk =	5		East Cro	osswalk =	6

Clarence Avenue & Glasgow Street:

Location & Roadway Classification:	Clarence & Glasgow								
Date of Count:	Day of wk: Tues	Mth, Day, Yr: June 2/15							
Weather:	fair								
Traffic Control Devices:	stop sign								
Current Pedestrian Control:	zebra								
Other Notes:									
Number of travel la	nes passing through the crosswalk(s	a) Ianes							
Is there a physical r	nedian in this crosswalk(s)?	y (y or n)							
Speed limit (or 85th	percentile speed)	<u></u>							
□ 85th p □	ercentile (check one)								
☐ Posted	Limit								
Distance to nearest	protected crosswalk	2 50 m							
Location:	Wilson Cres								
Type:	TS								
Is the orientation of	this crosswalk(s) N-S?	(y or n)							
		.							
Duration of pedestr	ian count	5 hrs							
Elementary	· Total Wa	rranted PC Points:	or	/ period					
High School		est PC point value: 3,878	at	/ periou					
Adult		ed Corridor Points:	ut						
Senior		ated Signal Points: 31							
Vehicles passing through	1	-							
crosswalk(s)	8.254								

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the South Crosswalk **

 $(Note: Standard\ and\ Zebra\ crosswalks\ can\ be\ installed\ on\ both\ sides\ if\ pedestrian\ volumes\ are\ approximately\ equal.)$

Time	Vehicle Counts			Pedestrian Counts								
(15						North C	rosswalk			South Cr	osswalk	
minute	SB	WB	NB	EB	Child	Teen	Adult	Senior /	Senior /	Adult	Teen	Child
intervals) 7:00					•		<u> </u>	Impaired	Impaired	•		
7:15 7:30												
7:30												
8:00	167		157	41	-							
8:15	167 190		157 173	41 41								
8:30	164		225	34								
8:45	164		186	39								
9:00	104		100	33								
9:15												
9:30												
9:45									_			
AM Totals	685		741	155								
11:30	116		182	31						1		
11:45	119		171	28						_		
12:00	159		179	32								
12:15	131		178	29								
12:30	130		167	35						1		
12:45	151		172	34						1		
13:00	142		157	23								
13:15	151		149	26			1					
Noon Totals	1,099		1,355	238						3		
14:00												
14:15												
14:30												
14:45												
15:00	159		207	33						1		
15:15	176		261	38						2		
15:30	211		212	32						1		
15:45	167		283	47						3		
16:00	161		317	44						3		
16:15	175		312	38								
16:30	163		361	33						2		
16:45	173		342	36						5		
17:00												
17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
18:45												
19:00												
19:15												
19:30												
19:45												
20:00												
20:15												
20:30												
20:45	4.00=		0.00=	001						4-		
PM Totals	1,385		2,295	301						17		
Totals	3,169		4,391	694			1			20		
						North Cr	osswalk =	1		South Cro	sswalk =	20

Clarence Avenue & Cascade Street:

Location & Roadway Classification:	Clarence Ave & Cascade St - arterial	& local			
Date of Count:	Day of wk: Wed-Thurs	Mth, Day, Yr:	Oct 28-29/15		
Weather:	fair				
Traffic Control Devices:	stop sign				
Current Pedestrian Control:	zebra				
Other Notes:					
Number of travel la	nes passing through the crosswalk	(s) <u>F</u> 2	_ lanes		
Is there a physical n	nedian in this crosswalk(s)?	r n	_ (y or n)		
Speed limit (or 85th ☐ 85th p ☐ Posted	ercentile (check one)	50	_ km/h		
Distance to nearest Location: Type:	Wilson Cres	210	_ m		
Is the orientation of	this crosswalk(s) N-S?	r n	(y or n)		
Duration of pedestri	an count	5	hrs		
Elementary High School Adult Senior	: Hig	Varranted PC Points: hest PC point value: Ped Corridor Points: uated Signal Points:	3,560	or at	/ period
Vehicles passing through crosswalk(s):	5.136	uateu Sigilai Follits:	21		

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the South Crosswalk **

 $(Note: Standard\ and\ Zebra\ crosswalks\ can\ be\ installed\ on\ both\ sides\ if\ pedestrian\ volumes\ are\ approximately\ equal.)$

(15 minute intervals) 7:00 7:15 7:30	SB	WB	NB			North C	roccwallz			South Cr	osswalk		
7:00 7:15 7:30	SB	WB	NB		North Crosswalk				South Crosswalk				
7:00 7:15 7:30				EB	Child	Teen	Adult	Senior /	Senior /	Adult	Teen	Child	
7:15 7:30				l I	CITIC	r	raure	Impaired	Impaired	raure	70011	Cilita	
7:30													
					_								
7:45					•								
8:00	100	1	102	10									
8:15	123	1	113	11								2	
8:30	118		144	9								1	
8:45	123		116	14									
9:00													
9:15													
9:30													
9:45													
AM Totals	464	2	475	44								3	
11:30	82	1	132	7								1	
11:45	98		102	5									
12:00	119	1	121	12									
12:15	107	1	103	9									
12:30	111	1	112	13									
12:45	94		111	16								1	
13:00	99		95	13	-								
13:15	105		93	7									
Noon Totals	815	4	869	82								2	
14:00	010		007	02									
14:15													
14:30													
14:45													
15:00	99		128	14									
15:15	112	1	156	8									
15:15		1										1	
15:45	169 132	1	134	4								1	
		1	137	19									
16:00	145		145	7								1	
16:15	128	_	124	6									
16:30	167	1	154	17									
16:45	178	2	182	11								5	
17:00													
17:15													
17:30													
17:45													
18:00													
18:15													
18:30													
18:45													
19:00													
19:15													
19:30													
19:45													
20:00													
20:15													
20:30													
20:45													
PM Totals	1,130	5	1,160	86								8	
Totals	2,409	11	2,504	212								13	
	,		,			North Cr	osswalk =			South Cro	osswalk =	13	

Appendix D: Pedestrian Corridor Warrant

Glasgow Street & Broadway Avenue:

Time	Vehicle	Counts				estrian Co	unts		10	P.C.		Points of
(15 minute intervals)					al Both Si	des Senior/				Warrant		Wrnt'd
intervals)	15 min.	30 min.	Child	Teen	Adult	Impaired	Total	15 min.	30 min.	Points	(1=Yes)	Periods
7:00												
7:15												
7:30												
7:45							_		_			
8:00	42	42	3				3	3	3	126		
8:15	42	84							3	252		
8:30	63	105										
8:45 9:00	59	122 59										-
9:15		39										
9:30												
9:45												
AM Totals	206		3				3					
11:30	51		2				2	2				
11:45	49	100							2	200		
12:00	52	101										
12:15	46	98	1				1	1	1	98		
12:30	57	103	1				1	1	2	206		
12:45	50	107							1	107		
13:00	37	87	1				1	1	1	87		
13:15	43	80							1	80		
Noon Totals	385		5				5					
14:00												
14:15												
14:30												
14:45												
15:00	48	48	1				1	1	1	48		
15:15	67	115							1	115		
15:30 15:45	66 79	133 145	1				1	1	1	145		
16:00	73	152	1					1	1	152		
16:15	78	151	2				2	2	2	302		
16:30	98	176	2				2	2	4	704		
16:45	78	176							2	352		
17:00		78										
17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
18:45												
19:00												
19:15												
19:30												
19:45												
20:00												
20:15												
20:30 20:45												
PM Totals	587		6				6					
Totals	1,178		14				14					
10413	1,110		100%				100%					
			10070	Wes	t Crosswa	lk =	7					
					Crosswa		7	1				

SUMMARY

Total Warranted PC Points: or / period Highest PC point value: 704 at Average PC point value: 198

Average PC point value: No. of periods warranted:

Glasgow Street & Turner Avenue

Time	Vehicle	Counts		Tot	Pedotal Both Si	estrian Co ides	unts	Factore	d Counts	P.C. Warrant		Points of Wrnt'd
(15 minute intervals)	15 min.	30 min.	Child	Teen	Adult	Senior /	Total		30 min.			
7:00	13 11111.	JO IIIII.	Cilita	reen	Tiduit	Impaired	1041	13 mm.	JO IIIII.	Tomes	(1-103)	rerious
7:15												
7:30												
7:45												
8:00	42	42										
8:15	70	112										
8:30	71	141	1				1	1	1	141		
8:45	65	136	1					1	1	136		
9:00	05	65								130		
9:15		0.5										
9:30								-				
9:45	240		1				1					
AM Totals	248		1				1					
11:30	63											
11:45	59	122										
12:00	78	137										<u> </u>
12:15	64	142										
12:30	67	131	1				1	1	1	131		
12:45	67	134	1				1	1	2	268		
13:00	52	119							1	119		
13:15	46	98										
Noon Totals	496		2				2					
14:00												
14:15												
14:30												
14:45												
15:00	87	87	4				4	4	4	348		
15:15	87	174						· ·	4	696		
15:30	85	172	2				2	2	2	344		
15:45	111	196							2	392		
16:00	74	185	1				1	1	1	185		
16:15	97	171	1				1	1	1	171		-
	112	209							1	1/1		<u> </u>
16:30			1				1	1	4	202		
16:45	90	202	1				1	1	1	202		
17:00		90							1	90		
17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
18:45												
19:00												
19:15												
19:30												
19:45												
20:00												
20:15												
20:30												
20:45												
PM Totals	743		8				8					
Totals	1,487		11				11					
- 200	,	'	100% 100%				1					
			West Crosswalk = 5				1					
				East Crosswalk = 6				<<< inctal	l crosswall	c on this sid	le of the in	nt
	East Cl USSWalk – U					IIIstai	. CI OJJ VV dil		ac or the H			

SUMMARY

Total Warranted PC Points: or / period Highest PC point value: 696 at

Highest PC point value: 696
Average PC point value: 215
No. of periods warranted:

Clarence Avenue & Glasgow Street:

Time	Vehicle	Counts		Tot	Pede al Both Si	estrian Co	unts	Factored Counts		P.C. Warrant		Points o Wrnt'd
(15 minute intervals)	15 min.	30 min.	Child	Teen	Adult	Senior /	Total		30 min.	Points	(1=Yes)	
7:00						Impaired					(= ===)	
7:15												
7:30												
7:45												
8:00	365	365										
8:15	404	769										
8:30	423	827										
8:45	389	812										
9:00	303	389										
9:15		303										
9:30								-				
9:45								-				
AM Totals	1,581											
	329				1		1	0.5				
11:30					1		1	0.5	0.5	224		
11:45	318	647						-	0.5	324		
12:00	370	688						-		-		
12:15	338	708						0.5	0.5	225		
12:30	332	670			1		1	0.5	0.5	335		
12:45	357	689			1		1	0.5	1	689		
13:00	322	679							0.5	340		
13:15	326	648			1		1	0.5	0.5	324		
Noon Totals	2,692				4		4					
14:00												
14:15												
14:30												
14:45												
15:00	399	399			1		1	0.5	0.5	200		
15:15	475	874			2		2	1	1.5	1,311		
15:30	455	930			1		1	0.5	1.5	1,395		
15:45	497	952			3		3	1.5	2	1,904		
16:00	522	1,019			3		3	1.5	3	3,057		
16:15	525	1,047							1.5	1,571		
16:30	557	1,082			2		2	1	1	1,082		
16:45	551	1,108			5		5	2.5	3.5	3,878		
17:00		551							2.5	1,378		
17:15										,		
17:30												
17:45												
18:00												
18:15												
18:30								-				
18:45												
19:00												
19:15							-					
19:15							-	-				
								-				
19:45								-				
20:00								-				
20:15												
20:30								-				
20:45	0.001				4=		4=					
PM Totals	3,981				17		17					
Totals	8,254				21		21					
					100%		100%					
		- 11			h Crosswa		1	II .				

SUMMARY

Total Warranted PC Points: or / period Highest PC point value: 3,878 at

Average PC point value: 1,186
No. of periods warranted:

Clarence Avenue & Cascade Street:

Time	Vehicle	Counts		Tot	Pederal Both Si	estrian Co ides	unts	Factore	d Counts	P.C. Warrant	Periods Wrnt'd	Points of Wrnt'd
(15 minute intervals)	15 min.	30 min.	Child	Teen	Adult	Senior /	Total		30 min.		(1=Yes)	
7:00	10 111111	50 mm	Cilita	Teen	Traure	Impaired	Total	10 111111	50 mm	Tomes	(1-103)	rerious
7:15												
7:30												
7:45												
8:00	213	213										
8:15	248	461	2				2	2	2	922		
8:30	271	519	1				1	1	3	1,557		
8:45	253	524							1	524		
9:00	233	253								324		
9:15		233										
9:30												
9:45												
AM Totals	985		3				3					
11:30	222		1				1	1				
11:30	205	427	1				1		1	427		
12:00	253	427 458							1	427		
										$\vdash \vdash \vdash$		
12:15	220	473								$\mid \mid$		
12:30	237	457	1				4		4	450		
12:45	221	458	1				1	1	1	458		
13:00	207	428							1	428		
13:15	205	412	0				0					
Noon Totals	1,770		2				2					
14:00												
14:15												
14:30												
14:45												
15:00	241	241										
15:15	277	518										
15:30	307	584	1				1	1	1	584		
15:45	289	596	1				1	1	2	1,192		
16:00	297	586	1				1	1	2	1,172		
16:15	258	555							1	555		
16:30	339	597										
16:45	373	712	5				5	5	5	3,560		
17:00		373							5	1,865		
17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
18:45												
19:00												
19:15												
19:30												
19:45												
20:00												
20:15												
20:30												
20:45												
PM Totals	2,381		8				8					
Totals	5,136		13				13					
		·	100%				100%	1				
				Nort	h Crosswa	alk =	-	1				
					h Crosswa		13	<<< instal	l crosswall	on this sic	le of the i	nt

SUMMARY

Total Warranted PC Points: or / period Highest PC point value: 3,560 at

Average PC point value: 3,560

No. of periods warranted:

APPENDIX E: COLLISION ANALYSIS

Street 1	Street 2	Ugrid	All collisions (2009- 2013)	All collisions - 2013	Right Angle, Left Turn & Right Turn only	Right Angle, Left Turn & Right Turn only - 2013	Average (2009- 2013)
Otroot 1	Glasgow Street	J12-	2010)		oy	2010	
Clarence Avenue	(north&south)	19/100	23	5	9	3	5
Ruth Street	Broadway Avenue	H11-24	22	7	11	4	4
Ruth Street	Wilson Crescent	G11-4	14	3	12	3	3
Ruth Street	Melrose Avenue	G11-12	11	2	5	0	2
Wilson Crescent	Broadway Avenue	H12-7	10	2	9	2	2
Ruth Street	Lansdowne Avenue	H11-8	6	1	3	0	1
Clarence Avenue	Cascade Street	J12-23	6	1	1	0	1
Cascade Street	Dufferin Avenue	H12-18	5	1	5	1	1
Ruth Street	Dufferin Avenue	H11-16	4	1	2	1	1
Cascade Street	Broadway Avenue	H12-9	4	0	2	0	1
Broadway Avenue	Glasgow Street	H12-29	4	1	1	0	1
Cascade Street	Albert Avenue	H12-1	3	0	2	0	1
Melrose Avenue	Young Crescent (north)	G12-6	3	0	0	0	1
Wilson Crescent	Harrison Crescent (west)	G12-1	3	0	0	0	1
Broadway Avenue	Hopkins Street	H12-59	3	0	0	0	1
Lansdowne Avenue	Bute Street	H12-41	2	0	2	0	0
York Avenue	Bute Street	H12-4	2	0	2	0	0
Ruth Street	William Avenue	H11-19	2	0	2	0	0
Ruth Street	Albert Avenue	H11-1	2	1	2	1	0
Melrose Avenue	Niderost Street	G12-8	2	0	1	0	0
Glasgow Street	Turner Avenue	H12-83	2	0	1	0	0
Albert Avenue	Bute Street	H12-2	2	0	1	0	0
Ruth Street	McPherson Avenue	G11-18	2	1	1	0	0
Wilson Crescent	Cascade Street	G12-2	2	0	1	0	0
Glasgow Street	MacEachern Avenue	H12-81	2	1	0	0	0
	Mendel Crescent						
Glasgow Street	(east)	H12-84	2	1	0	0	0
Ruth Street	Kelvin Avenue	G11-79	2	0	0	0	0
Ruth Street	Norman Crescent	G11-83	2	1	0	0	0
Ruth Street	York Avenue	H11-4	2	0	0	0	0
Wilson Crescent	MacEachern Avenue	H12-33	2	0	0	0	0
Dufferin Avenue	Bute Street	H12-27	1	0	1	0	0
Kelvin Avenue	Bute Street	G12-28	1	0	0	0	0
Kelvin Avenue	Niderost Street	G12-26	1	0	0	0	0
Melrose Avenue	Bute Street	G12-40	1	0	0	0	0
Melrose Avenue	Young Crescent (south)	G12-67	1	1	0	0	0
Glasgow Street	Mendel Crescent (west)	H12-82	1	0	0	0	0
Turner Avenue	McAskill Crescent	H12-74	1	0	0	0	0
Albert Avenue	Albert Avenue	H12-66	1	0	0	0	0
Ruth Street	Royal Avenue	H11-33	1	1	0	0	0
Wilson Crescent	Albert Avenue	H12-38	1	0	0	0	0
Wilson Crescent	Clare Crescent (east)	H12-51	1	1	0	0	0
Wilson Crescent	Niderost Street	G12-3	1	0	0	0	0
Cascade Street	William Avenue	H12-5	1	0	0	0	0
Cascade Street	Hanover Avenue	H12-63	1	0	0	0	0
Clarence Avenue	Bute Street	J12-24	1	0	0	0	0

APPENDIX F: MARCH 2016 MEMORANDUM – 3RD PUBLIC MEETING OUTCOME

Date: March 13, 2016

File: n/a

To: Avalon Community Association

Councillor M. Loewen

From: Jay Magus, P.Eng., Engineering Manager, Transportation

Justine Nyen, P.Eng., Transportation Engineer

Re: Avalon Neighbourhood Traffic Review Follow Up

Background

On January 14, 2016 the City of Saskatoon Transportation division (Transportation) met with the residents of Avalon in a third public meeting of the Neighbourhood Traffic Review (NTR) process. Typically the NTR process includes two public meetings, but occasionally a third public meeting is required to revisit and discuss outstanding traffic and pedestrian safety issues remaining from the second public meeting. In this case, there were two outstanding issues left unresolved, including:

- 1. Traffic calming on Glasgow Street, and
- 2. Geometric changes to Clarence Avenue.

Transportation is in the process of finalizing the Avalon NTR technical report and the required accompanying formal council report. The intent is for the Standing Policy of Transportation Committee (SPCT) of Council to receive these reports at their meeting on April 11, 2016 at 9am. It is expected that the report will then proceed to City Council at their meeting on April 25th for discussion and approval. For clarity, final approval of the NTR lies with City Council. If this process is delayed for whatever reason, at a minimum the approval process will be extended one month as the SPCT and Council meetings occur once a month.

The purpose of this memorandum is provide the residents and area councillor the outcome of the third public meeting by indicating the proposed recommendations that will be provided by Transportation for the two specific issues described above. Also, information will be provided in response to other issues raised at the January 14, 2016 public meeting.

Recommendations – Speeding and Shortcutting

In general terms the residents of Avalon were unsatisfied at the proposed traffic calming measures to address speeding and short-cutting along Glasgow Street at the second NTR public meeting held on October 29, 2015. A recommendation by Transportation at this meeting was to not allow northbound left turns from Clarence Avenue to Glasgow Street, nor allow eastbound left turns from Glasgow Street to Clarence Avenue. This would significantly reduce short-cutting, however this proposal did not receive support, and accordingly Transportation agreed to revisit this issue. As a result of the discussion at the third public meeting, the following recommendations to address speeding and shortcutting will be included in the Avalon NTR provided to Council for their consideration.

Table 1: Speeding and Shortcutting Proposed Recommendations

Location	Recommended Improvement	Justification
Glasgow Street & MacEachern Avenue	Curb extensions (northeast & southeast corners)	Reduce speed at pedestrian crossing near park
Glasgow Street between MacEachern Avenue & Mendel Crescent (across from 711 Glasgow Street)	Pinch point (eastbound yields)	Reduce speed & discourage shortcutting traffic
Glasgow Street & Turner Avenue	Median island (east side) & curb extension (northeast corner)	Reduce speed at pedestrian crossing
Glasgow Street between Clarence Avenue & Mendel Crescent (in front of 917 & 919 Glasgow Street)	Pinch point (westbound yields)	Reduce speed & discourage shortcutting traffic
Glasgow Street west of Clarence Avenue	"Traffic-Calmed Neighbourhood" sign (facing westbound)	Discourage shortcutting traffic
Clarence Avenue between Circle Drive overpass & Glasgow Street	Speed display board (facing northbound traffic)	Reduce speed (based on approval of the Adelaide- Churchill Neighbourhood Traffic Plan)
Clarence Avenue between Glasgow Street & the south side of Circle Drive overpass	Reduce 60kph speed limit to 50kph	Reduce speed (based on approval of the Adelaide-Churchill Neighbourhood Traffic Plan)

Of note in the above table is the inclusion of pinch points. A pinch point is a physical restriction, typically curbing, that forces drivers in one direction to yield to oncoming traffic prior to passing around the physical restriction. The intent is to slow traffic and to also make the route less attractive to short-cutting traffic. This traffic calming measure is

included in the Saskatoon Neighbourhood Traffic Calming Guidelines, and is also physically installed at one location on Saskatchewan Crescent beneath the Senator Sid Buckwold Bridge as depicted in **Exhibit 1** below.



Exhibit 1: Looking West beneath the Senator Sid Buckwold Bridge

The implementation plan for the pinch points is as follows:

- 1. May Data collection on Glasgow & Wilson, speed and daily traffic
- 2. June Install curb extensions, pinch points, and signage (temporary condition)
- September and Spring 2017 Data collection on Glasgow & Wilson, speed and daily traffic
- 4. Spring 2017 Effectiveness review
- 5. Summer 2017 Consult with neighbourhood
- 6. Summer 2018 Request funding for permanent construction if found to be effective

The above implementation plan is contingent on Council approval in April of 2016 to proceed with the temporary installation, and subsequent Council approval to make restrictions permanent if deemed effective.

Recommendations – Pedestrian Safety

At the second NTR public meeting on October 29, 2016 the residents also requested that Transportation revisit some of the pedestrian safety recommendations. As a result of the discussion at the third public meeting, the following recommendations to address pedestrian safety will be included in the Avalon NTR provided to Council for their consideration.

Table 2: Pedestrian Safety Proposed Recommendations

Location	Recommended Improvement	Justification
Glasgow Street & MacEachern Avenue	Zebra crosswalk (east side)	Improve pedestrian safety near park
Glasgow Street & Mendel Crescent	Zebra crosswalk (west side)	Improve pedestrian safety near park
Glasgow Street & Turner Avenue	Zebra crosswalk (west side)	Improve pedestrian safety
Clarence Avenue & Glasgow Street	Move bus stop on southeast corner a few metres south	Improve pedestrian safety by enhancing crosswalk visibility (based on approval of the Adelaide-Churchill Neighbourhood Traffic Plan)
Clarence Avenue & Glasgow Street	Sidewalk on southwest corner (up to bus stop)	Improve pedestrian safety & connectivity (based on approval of the Adelaide-Churchill Neighbourhood Traffic Plan)

<u>Recommendations – Clarence Avenue</u>

As a result of not proceeding with restricting left-turns at the intersection of Clarence Avenue and Glasgow Street the residents asked Transportation to review the feasibility of providing two lanes northbound on Clarence Avenue between the Circle Drive South interchange and Wilson Cresent. Currently there are two northbound lanes between the Circle Drive South interchange and Glasgow Street, with the west northbound lane being a forced drop via a 'must turn left' lane. The inclusion of this dedicated left-turn lane only promotes the left onto Glasgow Street as it may be difficult to merge right and continue north on Clarence Avenue. By providing two lanes northbound it is expected that the impetus to turn left will be reduced. Also, it should be noted that if two lanes are provided northbound, it will still be possible to turn left onto Glasgow Street, however this turn will not be from a left-turn only lane. This would have potentially increased the possibility of rear-end collisions, however, this risk is mitigated by the lowering of the speed limit from 60kph to 50kph, as well as the inclusion of a speed display board. The proposed change to Clarence Avenue is illustrated in **Exhibit 2**.

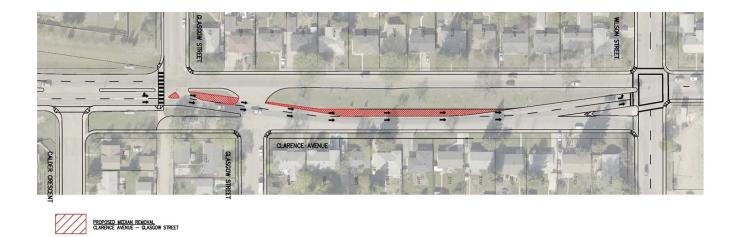


Exhibit 2: Proposed change to Clarence Avenue

The implementation plan for the proposed changes to Clarence Avenue is as follows:

- 1. May Staff begin 2017 budget planning
- 2. August Install speed reader board
- 3. September Move 50kph zone further south
- 4. December 2017 Budget Council Meeting to approve funding for changes
- 5. Winter / Spring (2017) Detailed design & retain contractor (subject to funding approval)
- 6. Summer (2017) Complete geometric changes (subject to funding approval)

The above implementation plan is contingent on Council approval in April of 2016 of the NTR, and subsequent Council approvals for funding.

Not Recommended

At the third public meeting on January 14, 2016 there were several issues raised by residents that Transportation is not providing a recommendation to address. These issues and justification to leave as is are provided in **Table 3**.

Table 3: Issue Discussion

Location	Concern	Recommendation
Clarence Avenue & Glasgow Street	Can we get a Transit stop lay-by for northbound across from Glasgow Street? Or can the bus stop be reshaped and a specific spot be made?	Widening to two lanes will allow passing lane. No further recommendations.
Clarence Avenue & Glasgow Street	Pedestrian safety remains a concern. Request pedestrian activated device despite it not meeting warrant criteria. Or what other safety improvements can be made? Visibility improvements required. Re-visit alignment (consideration for curb extension on south side). Issues with drivers coming southbound intending to turn right onto Circle Drive and changing lanes in the middle of the intersection. Visibility improvements required.	Traffic calming devices such as curb extensions are not recommended on arterial roadways, as these roadways are designed to carry large traffic volumes. The pedestrian warrant was re-visited and pedestrian volumes do not support the installation of a pedestrian activated device. However, the intersection will be re-evaluated after the changes on Clarence Avenue (i.e. added through lane northbound) are implemented.
Clarence Avenue & Glasgow Street	At 8am & 5pm vehicles sit waiting to turn left, and block the crosswalk. Install a "Do Not Block Crosswalk" sign further south as you approach to intersection.	Visual clutter caused by too many signs at or near the intersection was identified as a concern. The sign will be included in the overall intersection signage review and installed if deemed necessary. Furthermore, the added northbound through lane should improve congestion at the intersection. Recommendation will be changed accordingly.
Along Glasgow Street	There is zero enforcement on Glasgow Street	Peak hour data will be shared with Saskatoon Police Service to consider enforcement when spring speed studies are completed.
Along Glasgow Street	Why can't we have alternating stop & yield signs?	As per Council Policy C07-007, stop or yield signs are not to be used as a speed control device & not to face to the higher volume roadway. Doing so may cause increased safety risks (i.e. drivers rolling through unwarranted stop/yields)
Broadway Avenue & Glasgow Street	Install a four-way stop	Four-way stop study was reviewed and warrant criteria was not met. However, the traffic volumes were higher on Broadway Avenue. As per Council Policy C07-007, Use of Traffic Controls, stop signs are not to be used to stop priority traffic over minor traffic. Therefore the two-way stop facing Broadway Avenue will be reoriented to face Glasgow Street. This will be added to the final recommendations.

<u>Closing</u>

Please do not hesitate to contact Jay Magus at 306-975-3171 or jay.magus@saskatoon.ca for any feedback or questions you may have.

APPENDIX G: DECISION MATRIX

Decision Matrix – Recommendations proposed at October 29, 2015 meeting

Item	Location	Recommendation	Reason	Justine's Group	Mariniel's Group	Shirley's Group	Dave's Group	Jay's Group	Decision
1	Various locations	Yield signs at all uncontrolled intersections	Improve safety and enhance driver compliance at uncontrolled intersections	Yields signs should face traffic at William Avenue & Bute Street. Also issues with speeding on Albert Avenue as is, so yield signs should face north-south in that section (ie. Albert Avenue & Bute Street)	6 No, 4 Neutral			In support. Also consider alternating on Cascade Street	Carried. Cascade Street already has signs, therefore will remain as is. Majority of groups showed support. Ensure yield signs are facing north-south at William Avenue/Bute Street & Albert Avenue/Bute Street
2	Glasgow Street & MacEachern Avenue	Zebra crosswalk	Improve pedestrian safety		Already a zebra crosswalk there; speed bumps or little rumble strips instead on Glasgow Street	Should also have traffic calming.	Needs more. Curb extensions to slow speeds. It's a path to a park.		Carried.
3	Glasgow Street & Turner Avenue	Zebra crosswalk, curb extension and median island	Improve pedestrian safety & reduce speed		Yes. Also install speed bumps/rumble strips	Depends on Glasgow Street/Clarence Avenue. Perhaps remove median island.		There may not be room due to driveways; check crosswalk going into driveway	Carried. Crosswalk will remain in same location (90 degrees, going into driveway) as per City of Saskatoon standard.
4	Glasgow Street & Clarence Avenue	Move bus stop a few metres south to allow vehicle clearance in left lane	Improve traffic flow		Yes. Maybe a bus bay			Consider relocating crosswalk as it is in the middle of the left turning storage lane.	Carried. Should be noted that existing location is very close to pedestrian crosswalk and therefore should be moved to improve visibility of pedestrians using the crosswalk also.
5	Glasgow Street & Clarence Avenue (southwest corner on Clarence Avenue)	Install sidewalk up to bus stop	Improve pedestrian safety & connectivity						Carried.
6	Glasgow Street & Clarence Avenue	Median closure (restrict left-turns)	Reduce traffic volumes (ie. shortcutting) on Glasgow Street	Will re-route traffic onto Wilson Crescent by school; understand the cause of the shortcutting onto Glasgow Street - drivers get "stuck" in left lane, avoiding school zones on Clarence Avenue, congestion caused by funnelling into one lane, bus stop also causes backlog; icy conditions coming down hill on Clarence Avenue from overpass; Solutions - continue 2 through lanes northbound on Clarence Avenue to Wilson Crescent, remove school zone on Clarence to improve traffic flow	Not in support. 7 in support of 2 lanes on Clarence Avenue, 3 not.	9 not in support. 2 in support.	not in support right now; need to take time to understand; concerned that Turner Avenue becomes more important if Clarence Avenue northbound left-turn closes. Maybe close Turner Avenue; re-think Glasgow Street as collector with bulbing and so on (half of group was in support); continue 2 lanes on Clarence Avenue to Wilson Crescent; try bulbing and steps along Glasgow Street first, watch Turner Avenue & then maybe consider closure.	Not in support. 8 against, 3 for. Suggestions include providing 2 lanes on Clarence Avenue until Wilson Crescent, looking at other ways to make Glasgow Street less attractive to drivers.	Removed. Revisions needed.

7	Glasgow Street & Clarence Avenue	Curb extension on southwest corner (Clarence Avenue)	Improve pedestrian safety	Turning right will be difficult; perhaps move the curb extension to the north side	Not in support. Move crosswalk to north leg instead.	5 not in support. 4 in support. Median island on northeast corner due to right turns from Glasgow Street	Not sure if this will work.	Not in support. Suggest moving to northwest corner instead.	Removed. Revisions needed.
8	Glasgow Street & Clarence Avenue	Remove or eliminate unnecessary signs	Reduce visual clutter					In support. Consider removing school zone.	Carried.
9	Back lane between Clarence Avenue & McAskill Crescent	20kph speed signs	Reduce speed in back lane						Carried.
10	Clarence Avenue near Wilson Crescent	Install additional school zone signs	Ensure driver awareness of school zone	Not doing 30kph speed limit		In support. Add sign on median.			Carried. School zone signs will be added on signal overheads at Wilson Crescent.
11	Clarence Avenue between Circle Drive overpass & Glasgow Street	Speed display board (facing northbound traffic)	Reduce speed		Install permanent		Some observations that speed display boards encourage speeding.		Carried.
12	Wilson Crescent (school zone)	Speed enforcement during school hours	Reduce speed during school hours; improve pedestrian safety			In support. Extend zone to Clarence Avenue	Portable photo radar. Move one around.		Carried.
13	Wilson Crescent (west of Broadway Avenue)	Install sidewalk on north side beside John Lake Park	Improve pedestrian safety & connectivity						Carried.
14	Ruth Street & Wilson Crescent	Add hazard boards to stop signs	Enhance visibility of stop signs & driver compliance		Four-way stop after bridge is built	Maybe add flashing light			Removed. Hazard boards already installed.
15	Clarence Avenue - Glasgow Street to City Limits (south of Cartwright Street)	Reduce 60kph speed limit to 50kph (section south of Circle Drive overpass will be based on approval from Stonebridge)	Reduce speed		In support. 5 in support of 50kph to Circle Drive overpass, 5 in support of 50kph all the way to Cartwright Street				Changed to extend only to south side of Circle Drive overpass. Remainder of Clarence Avenue speed limit (between overpass and south city limits) will be reviewed during Stonebridge Neighbourhood Traffic Review in 2016. Also included in Avalon plan.

Decision Matrix - Additional Issues raised at October 29, 2015 meeting

Item	Location	Concern	Recommendation
1	Clarence Avenue & Cascade Street	Pedestrian Safety; better signage to improve pedestrian safety or curb extension	Pedestrian study indicated devices not warranted. Traffic calming devices are not recommended on arterial roadways. No further recommendations.
2	Cascade Street	Speeding; needs maintenance	Speed study indicated 54.0kph therefore peak hour data will be sent to Saskatoon Police Service to consider enforcement; forward comments to Roadway Preservation coordinator for further consideration
3	Near parks	Implement 30kph speed limit	Comments will be documented as part of city wide review
4	Broadway Avenue & Wilson Crescent	Add hazard boards	There are already hazard boards installed
5	Wilson Crescent & Clarence Avenue	adjust signals timing to make all directions equal priority	Comments will be documented as part of major intersection reviews.
6	Victoria Avenue	Dedicated bike/pedestrian route all the way to River Landing	Comments will be documented as part of the Active Transportation Plan.
7	Clarence Avenue	Dedicated bike/pedestrian route all the way to River Landing	Comments will be documented as part of the Active Transportation Plan.
8	Cascade Street & Dufferin Avenue	look at yield signs	Site check determined trees were trimmed.

Issues to be addressed at Follow-Up Meeting

Item	Location	Concern	
1	Clarence Avenue	Remove school zone because it's causing congestion & shortcutting onto Glasgow St	
2	Glasgow Street & Clarence Avenue	Drivers turning left onto Clarence are blocking curb lane so drivers can't turn right. Install pavement markings to mark the lanes allowing driver's to pass on the right.	
3	Glasgow Street & Clarence Avenue	Drivers stopping on crosswalk. Install "Do Not Block Crosswalk" sign.	
4	Glasgow Street & Clarence Avenue	Install traffic signals	
5	Broadway Avenue & Glasgow Street	Alter direction of stop signs or four-way stop	
6	Glasgow Street west of Broadway Avenue	Directional closure (McConnell Ave maybe)	
7	Glasgow Street	install yield signs (facing east-west) along Glasgow St; police enforcement	

Decision Matrix – January 14, 2016 meeting

Items Proposed:

Clare	Clarence Avenue			
Item	Location	Recommendation	Comments	Decision
1	Between Glasgow Street & Wilson Crescent	Increase capacity of Clarence Avenue by adding through lane northbound (ie. changing from one lane to two lanes)	Was an additional through lane for southbound also considered?	Carried. The additional lane northbound is, in part, to address shortcutting on Glasgow Street. Shortcutting on Glasgow Street is not caused by drivers coming in the southbound direction on Clarence Avenue. Furthermore, pedestrian safety was identified as a concern so adding more lanes for southbound will increase the risk for pedestrians crossing.

Glasg	Glasgow Street			
Item	Location	Recommendation	Comments	Decision
1	Maceachern Avenue	Zebra crosswalk	Crossing safely near the park remains an issue. Can a curb extension be added as well?	Zebra crosswalk recommended at Maceachern Avenue (west side of park) & existing median island. Add curb extension on northeast & southeast corners to further narrow roadway. Existing standard crosswalk at Mendel Crescent (east side of park). Upgrade standard crosswalk at Mendel Crescent to zebra. Crosswalk will remain in existing location (at 90 degree angle into driveway. It is not an accepted practice within the City of Saskatoon to install crosswalks on angles). Curb extension is not necessary with proposed pinch point west of the intersection.
2	North of Avalon Park (between Maceachern Avenue & Mendel Crescent)	Pinch point (eastbound yields)	May be better to move the traffic calming measures closer to the beginning of the park (ie. eastward)	Pinch point will be shifted east; however driveways on the north side will be the deciding factor for exact location.
3	Turner Avenue	Median island with curb extension	Move the crosswalk due to driveways.	Crosswalk will remain in existing location (at 90 degree angle into driveway. It is not an accepted practice within the City of Saskatoon to install crosswalks on angles).
4	Between Clarence Avenue & Mendel Crescent	Pinch point (westbound yields)		Carried. Device will be shortened to allow more parking in front of 917 Glasgow Street.
5	West of Clarence Avenue	"Traffic-Calmed Neighbourhood" sign (facing westbound)		Carried.

Additional Items Raised:

Clarence Avenue			
Item	Location	Concern	Recommendation
1	Clarence Avenue & Glasgow Street	Can we get a Transit stop lay-by for northbound across from Glasgow Street? Or can the bus stop be reshaped and a specific spot be made?	Widening to two lanes will allow passing lane. No further recommendations.
2	Clarence Avenue & Glasgow Street	Pedestrian safety remains a concern. Request pedestrian activated device despite it not meeting warrant criteria. Or what other safety improvements can be made? Visibility improvements required. Re-visit alignment (consideration for curb extension on south side). Issues with drivers coming southbound intending to turn right onto Circle Drive and changing lanes in the middle of the intersection. Visibility improvements required. Re-visit alignment (consideration for curb extension on south side).	Traffic calming devices such as curb extensions are not recommended on arterial roadways, as these roadways are designed to carry large traffic volumes. The pedestrian warrant was re-visited and pedestrian volumes do not support the installation of a pedestrian activated device. However, the intersection will be re-evaluated after the changes on Clarence Avenue (ie. added through lane northbound) are implemented.
3	Clarence Avenue & Glasgow Street	At 8am & 5pm vehicles sit waiting to turn left, and block the crosswalk. Install a "Do Not Block Crosswalk" sign further south as you approach to intersection.	Visual clutter caused by too many signs at or near the intersection was identified as a concern. The sign will be included in the overall intersection signage review and installed if deemed necessary. Furthermore, the added northbound through lane should improve congestion at the intersection. Recommendation will be changed accordingly.

Gla	Glasgow Street			
Iten	Location	Comments	Recommendation	
1	Various	There is zero enforcement on Glasgow Street	Peak hour data will be shared with Saskatoon Police Service to consider enforcement when spring speed studies are completed.	
2	Various	If Glasgow Street is a local road why can't we have alternating stop & yield signs?	As per Policy C07-007, stop or yield signs are not to be used as a speed control device & not to face to the higher volume roadway. Doing so may cause increased safety risks (ie. drivers rolling through unwarranted stop/yields etc)	
6	Broadway Avenue	Install a four-way stop	Four-way stop study was reviewed and warrant criteria was not met. However, the traffic volumes were higher on Broadway Avenue. As per Policy C07-007, Use of Traffic Controls, stop signs are not to be used to stop priority traffic over minor traffic. Therefore the two-way stop facing Broadway Avenue may be reoriented to face Glasgow Street. This will be added to the final recommendations.	