

Adelaide-Churchill Neighbourhood Traffic Review

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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 June of 2015 to identify traffic concerns and potential solutions within the Adelaide-Churchill 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 December 2015.

A summary of recommended improvements for the Adelaide-Churchill 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 Adelaide-Churchill Traffic Management Plan is illustrated in Exhibit ES-1.

Table ES-1: Adelaide-Churchill Neighbourhood Recommended Improvements

Item	Location Recommendation		Reason
1	Wilson Crescent & MacKenzie Crescent / Brown Crescent	Zebra crosswalk & curb extensions on west side	Improve pedestrian safety (school route) & reduce speed
2	Ruth Street & Cairns Avenue	Standard crosswalk	Improve pedestrian safety (school route)
3	Ruth Street & McKinnon Avenue	"No Parking" signs at 10m on all corners	Enhance visibility
4	Haultain Avenue & Cascade Street	Standard crosswalk & curb extensions (north side)	Improve pedestrian safety (connects to park pathway) & reduce speed
5	Haultain Avenue - either side of Churchill Park	"Playground Ahead" signs	Improve pedestrian safety (near park)
6	Haultain Avenue between Cascade Street & Ruth Street	Forward peak hour speed data to Saskatoon Police Service to consider enforcement	Reduce speed
7	Cairns Avenue & Munroe Avenue	Zebra crosswalk (north side)	Improve pedestrian safety in front of school (currently standard crosswalk)
8	McKinnon Avenue & Isabella Street	Upgrade yield signs & stop signs	Improve intersection safety & driver compliance
9	Haultain Avenue between Isabella Street & St. Phillips School	Sidewalk on east side (110m)	Improve pedestrian safety & connectivity
10	MacKenzie Crescent at walkway	Parking restrictions on both sides of walkway (approximately 5m on either side)	Improve pedestrian safety & enhance visibility
11	MacKenzie Crescent before curve (northbound & southbound) near walkway	Pedestrian crosswalk ahead signs	Improve pedestrian safety (school route)
12	Walkway between MacKenzie Crescent & Hugh Cairns School	CPTED review to determine if walkway lighting is warranted	Pedestrian safety
13	Cairns Avenue & Cascade Street	Collect traffic data in spring 2016	Determine pedestrian safety improvements (school route)
14	Back lane east of Clarence Avenue - Wilson Crescent to Ruth Street	20kph speed signs	Reduce speed
15	Back lane north of Circle Drive east of Calder Court	20kph speed signs	Reduce speed
16	Back lane between Ferguson Avenue & Calder Avenue	20kph speed signs	Reduce speed

Table ES-1 Continued

Item	Location	Recommendation	Reason				
	Clarence Avenue & Glasgow Street (also included in Avalon Neighbourhood Traffic Management Plan)						
17	Wilson Crescent	Additional school zone signs on overhead posts	Reduce speed & ensure driver awareness of school zone				
18	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)				
19	Southwest corner (on Clarence Avenue)	Install sidewalk up to bus stop	Improve pedestrian safety & connectivity				
20	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.				
21	Between Circle Drive overpass & Glasgow Street	Speed display board (facing northbound traffic)	Reduce speed				
22	Between Glasgow Street & the south side of Circle Drive overpass	Reduce 60kph speed limit to 50kph	Reduce speed				
23	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)				



LEGEND

- **EXISTING STOP SIGN**
- EXISTING YIELD SIGN

BUS ROUTE

SCHOOL ZONE

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 Adelaide-Churchill.

The Adelaide-Churchill neighbourhood is located on the east side of the South Saskatchewan River and is bound by Circle Drive to the south, Cumberland Avenue to the east, Taylor Street to the north, and Clarence Avenue to the west. The area use is mostly residential, with elementary schools on Cairns Avenue (Hugh Cairns School) and Taylor Street (St. Philip School); and the Alerces Spanish Immersion Preschool on Clarence Avenue.

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 June 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 Adelaide-Churchill, 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:

- Clarence Avenue:
 - Speeding (especially northbound)
 - o Increased traffic (especially at 4pm)
 - Increased traffic due to church, Stonebridge developments, overpass, condos, etc.
- Clarence Avenue & Taylor Street:
 - o Speeding to get through intersection before light turns yellow/red

Clarence Avenue & Calder Crescent:

- o long waits to get onto Clarence Ave
- o difficult to make left-turn southbound from Calder Crescent
- turning from Clarence Avenue northbound onto Calder Crescent is also a concern because the lane ends and drivers get into shared Right Turn/Thru lane not paying attention to drivers turning right nearly rear ending them
- o speeding downhill from overpass
- o concerns for southbound left-turn from Clarence Avenue onto Calder Crescent because through drivers must weave around
- drivers accelerating and need to change lane to get around left-turn and then right-turn from Glasgow Street
- o race to get into through lane
- o bus stop on north side of Calder Crescent, when bus is stopped, forces all through traffic going north to stop until bus leaves stop

Wilson Crescent:

- higher traffic volumes since Circle Drive South and Preston Avenue overpass opened,
 especially during peak hours
- o speeding, especially 6-9pm
- School zones on Wilson Crescent and Haultain Avenue cause traffic to use back streets
- Ruth Street traffic has increased since Clarence Avenue/Circle Drive overpass
- Cumberland Avenue between Ruth Street & Wilson Crescent speeding around curve
- McKinnon Avenue speeding and high traffic during peak hours to avoid Clarence Avenue
- Ferguson Avenue shortcutting (and speeding) to avoid signals at Wilson Crescent & Clarence Avenue
- MacKenzie Crescent speeding around curve
- Taylor Street speeding, tailgating, passing on right
- Haultain Avenue:
 - o shortcut to avoid Clarence Avenue
 - o speeding
 - between Wilson Crescent to Ruth Street addition of yield signs at uncontrolled intersections and traffic signals at Wilson Crescent & Clarence Avenue resulted in thoroughfare & speeding for those wanting to avoid Clarence Avenue

- Back lane east of Clarence Avenue between Wilson Crescent & Ruth Street traffic has been steadily increasing in the back lane due to St. Martin Church traffic, users of Churchill Park, and the new condominium development at McKinnon Avenue and Ruth Street
- Back lane between Brown Crescent & MacLean Crescent residents using back lanes to get to Calder Avenue from Clarence Ave & speeding
- Back lane behind Ferguson Avenue speeding

Proposed solutions identified by residents:

- Clarence Avenue:
 - widen road one block north of Circle Drive to add lanes.
 - there's a wide center boulevard from Wilson Crescent south to Calder so use it to add more lanes
 - o install speed bumps
 - police stationed between Wilson Crescent to Calder Crescent to ticket particularly 1am
 and 2am
 - Students jaywalking midblock at Aden Bowman Collegiate (Clarence Avenue south of Taylor Street)
- Clarence Avenue & Glasgow Street:
 - close off left-turn (onto Glasgow Street)
 - make Glasgow Street a one-way street
 - o make it a zipper merge at Glasgow Street
 - extend barrier
 - o drop speed from 60kph to 50kph limit south of Glasgow Street
 - o merge sign is needed near Glasgow Street
 - median obstructing vehicles left/right from Clarence Ave into Glasgow Street
 - o shorten median a bit to create a right-turn bay
- Wilson Crescent:
 - start the school zone at the curve
 - o enforcement needed
 - traffic calming
 - o speed display board
 - restrict access to Preston Avenue so driver's don't shortcut
 - o police stationed to ticket between Brown and Clarence Ave particularly 1am and 2am

- Cumberland Avenue install speed bumps
- Ferguson Avenue install speed bumps
- Haultain Avenue:
 - o alternate direction of yield signs
 - o install speed bumps
 - o install speed display board
 - o bulb out curb to reduce speeding
 - o forced right turn at Ruth Street or Wilson Crescent
- Back lane east of Clarence Avenue between Wilson Crescent and Ruth Street:
 - pavement or speed humps to reduce speed
 - o install 20kph speed signs
- Back lane between Calder Avenue & Clarence Avenue install barrier to prevent shortcutting
- Implement 40kph limit in residential areas

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:

"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:

- Clarence Avenue:
 - o near Wilson Crescent there are no children around to indicate it's a school zone
 - o drivers passing on right when vehicles are turning left, can't see pedestrian crossing
 - o students jaywalking in front of Aden Bowman Collegiate to Churchill Shopping Centre:
 - parents parking in lot across the street to pick up so kids cross midblock
 - some drivers refuse to slow down for kids crossing at midblock
 - issues with proximity of traffic signals at Clarence Avenue & Taylor Street
- Wilson Crescent & MacLean Crescent crosswalk on west side comes up quick
- Wilson Crescent & Cairns Avenue rubber curbing not working; active pedestrian corridor needed
- Ruth Street at Haultain Avenue & Cairns Avenue children crossing to get to Hugh Cairns
 School and St. Phillip School; there are no safely marked crosswalks
- MacKenzie Crescent pedestrian safety concerns near walkway that connects to park
- Cairns Avenue & Munroe Avenue many pedestrians in front of school install standard or zebra crosswalk
- Cairns Avenue & MacKenzie Crescent many pedestrians (school route)
- Haultain Avenue at St. Philips School (north of Isabella Street) need sidewalk

Proposed solutions identified by residents:

- Schools should be involved in Silhouette for Safety program (school zone signs in middle of street) for better signage
- Clarence Avenue at Aden Bowman Collegiate (students jaywalking):
 - o install chain-link fence to restrict mid-block crossing to Mac's store
 - o install midblock crossing, pedestrian device, or zebra crosswalk
 - o principal to be on watch for jaywalking
- Clarence Avenue & Cascade Street install active pedestrian corridor
- Wilson Crescent & MacLean Crescent:
 - o pedestrian activated device at MacLean (west leg) with existing zebra
 - crosswalk is half block away from back alley that lots of children use to get to school, this should be moved to the back alley or one added at Mackenzie Crescent/Brown Crescent

- Wilson Crescent & Cairns Avenue –active pedestrian corridor needed
- Ruth Street at Haultain Avenue & Cairns Avenue install overhead lighting, marked crosswalks and lane restricting concrete markers similar to Wilson Crescent
- Cairns Avenue & Munroe Avenue install standard or zebra crosswalk
- Cairns Avenue & MacKenzie Crescent standard crosswalk of zebra crosswalk
- Haultain Avenue lit crosswalks to get to the park

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:

Haultain Avenue & Adelaide Street – dangerous intersection

Proposed solutions identified by residents:

Install stop signs instead of yield signs on Clarence Avenue

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:

- Clarence Avenue can't see backing out of driveway due to parked cars
- Ruth Street between Clarence Avenue & Haultain Avenue parking on north side makes it difficult to see
- Back lane east of Clarence Ave between Wilson Crescent & Ruth Street parking within lane

Proposed solutions identified by residents:

- MacKenzie Crescent remove parking on curves and at MacKenzie Crescent & Cairns
 Avenue to improve visibility
- Clarence Avenue add angle parking and bus parking at back of Aden Bowman Collegiate

2.5 Concern 5 - Maintenance

Condition of the streets in Adelaide-Churchill 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:

- Clarence Avenue:
 - designated snow route where are residents supposed to park when there's snow clearing?
 - trees block school zone signs/difficult to see
 - o snowbanks piled up in winter
 - o snow clearing is less than Ruth Street; Clarence Avenue should be higher priority
- Trees obstructing drivers view:
 - Haultain Avenue & Wilson Crescent
 - o Ruth Street & Haultain Avenue
 - Ruth Street & McKinnon Avenue

2.6 Concern 6 - Major Intersections

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 & Taylor Street southbound queue due to left-turn into mall
- Clarence Avenue & Wilson Crescent:
 - o southbound through geometry is confusing
 - o not stopping for right turn on red
 - o vehicle detection for east/west signal timing (too fast)
 - o new lane design is better than one shared through/left-turn and one right turn, but not good enough
 - o takes long time to get green phase northbound
- Clarence Avenue & Circle Drive overpass drivers don't yield coming from Clarence Avenue to Circle Drive on ramp (top of overpass)

Proposed solutions identified by residents:

- Clarence Avenue & Taylor Street solution may be to restrict left-turn into mall
- Clarence Avenue & Wilson Crescent:
 - o pedestrian signal may help
 - synchronize signals with Ruth Street at 3pm
- Clarence Avenue & Ruth Street restrict right turn on red (northbound) so there are gaps in traffic to allow residents to back out of driveways

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:
 - o Intersection turning moving counts
 - Pedestrian counts
 - Daily and weekly traffic counts
 - 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**.

City of Saskatoon

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

	Classifications						
Characteristics	Back Lanes		Locals		Collectors		
	Residential	Commercial	Residential	Commercial	Residential	Commercial	
Traffic function	Access function only (traffic on movement not a consideration)		Access primary function (traffic movement secondary consideration)		Traffic movement and land access of equal importance		
Average Daily Traffic (vehicles per day)	<500	<1,000	<1,000	<5,000	<5,000	8,000-10,000	
Typical Speed Limits (kph)	20		50		50		
Transit Service	Not po	ermitted	Generally avoided		Perr	Permitted	
Cyclist	No restrictions or special facilities		No restrictions or special facilities			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 Adelaide-Churchill 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	Ruth Street & Wilson Crescent	lane	<50	NA
Back Lane	Ferguson Avenue & Calder Crescent	lane	<50	NA
Haultain Avenue	Cascade Street & Bute Street		598	49.4
Haultain Avenue	Hilliard Street & Adelaide Street		315	45.4
McKinnon Avenue	Taylor Street & Isabella Street	local	858	46.8
Mackenzie Crescent	curve and Wilson Crescent		225	39.9
Ferguson Avenue	Wilson Crescent & Glasgow Street		329	47.2
Cumberland Avenue	McLorg Street & Hanson Street		1,780	51.9
Wilson Crescent	Haultain Avenue & Cairns Avenue	collector	4,391	51.4
Wilson Crescent	Brown Crescent & Cumberland Avenue		3,915	52.5
Clarence Avenue	Adelaide Street & Hilliard Street	arterial	10,549	54.9
Clarence Avenue	Bute Street & Cascade Street	ai teriai	11,713	53.5

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	Average Daily Traffic (vpd)	# of Collisions within most recent 12 months	% of Traffic from minor street	Traffic Signals or all-way-stop within 200m	All-Way Stop Warranted
Clarence Avenue & Calder Crescent	2,097	21,220	1	2%	290	
Wilson Crescent & Cairns Avenue	498	5,200	0	9%	360	
Wilson Crescent & Mackenzie Crescent/Brown Crescent	476	4,930	0	9%	NA	All-Way Stop Not Warranted
Cairns Avenue & Munroe Avenue	115	1,150	0	9%	NA	
Cairns Avenue & Mackenzie Crescent	117	1,180	0	19%	NA	

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
Clarence Avenue & Calder Crescent	0	
Wilson Crescent & Cairns Avenue	47	
Wilson Crescent & Maclean Crescent (west leg)	3	
Wilson Crescent & Mackenzie Crescent / Brown Crescent	22	
Wilson Crescent & back lane between Maclean Crescent (east) & Maclean Crescent (west)	3	
Mackenzie Crescent & walkway connecting to Hugh Cairns School (north of Wilson Crescent)	9	Pedestrian Device Not Warranted
Cairns Avenue & Munroe Avenue	177	
Cairns Avenue & Mackenzie Crescent	27	
Clarence Avenue & Cascade Street	13	
Ruth Street & Cairns Avenue	17	
Ruth Street & Haultain Avenue	18	
Clarence Avenue & Glasgow Street	21	

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
- Clarence Avenue & Isabella Street
- Cumberland Avenue & Ruth Street
- McKinnon Avenue & Isabella Street

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
Clarence Avenue & Wilson Crescent	Additional school zone signs on overhead posts	Reduce speed & ensure driver awareness of school zone (based on approval of the Avalon Neighbourhood Traffic Plan)
Clarence Avenue between Circle Drive overpass & Glasgow Street	Speed display board (facing northbound traffic)	Reduce speed (based on approval of the Avalon 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 Avalon Neighbourhood Traffic Plan)
Wilson Crescent & MacKenzie Crescent / Brown Crescent	Curb extensions on west side	Reduce speed (pedestrian crossing & school route)
Haultain Avenue & Cascade Street	Curb extensions (north side)	Reduce speed (pedestrian crossing & park)
Haultain Avenue between Cascade Street & Ruth Street	Forward peak hour speed data to Saskatoon Police Service to consider enforcement	Reduce speed
Back lane east of Clarence Avenue - Wilson Crescent to Ruth Street	20kph speed signs	Reduce speed
Back lane north of Circle Drive east of Calder Court	20kph speed signs	Reduce speed
Back lane between Ferguson Avenue & Calder Avenue	20kph speed signs	Reduce speed

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 & MacKenzie Crescent / Brown Crescent	Zebra crosswalk	Improve pedestrian safety (school route)
Ruth Street & Cairns Avenue	Standard crosswalk	Improve pedestrian safety (school route)
Haultain Avenue & Cascade Street	Standard crosswalk (north side)	Improve pedestrian safety (connects to park pathway)
Haultain Avenue - either side of Churchill Park	"Playground Ahead" signs	Improve pedestrian safety (near park)
Cairns Avenue & Munroe Avenue	Zebra crosswalk (north side)	Improve pedestrian safety in front of school (currently standard crosswalk)
Haultain Avenue between Isabella Street & St. Phillips School	Sidewalk on east side (110m)	Improve pedestrian safety & connectivity
Cairns Avenue & Cascade Street	Collect traffic data in spring 2016	Determine pedestrian safety improvements (school route)
MacKenzie Crescent before curve (northbound & southbound) near walkway	Pedestrian crosswalk ahead signs	Improve pedestrian safety (school route)
Walkway between MacKenzie Crescent & Hugh Cairns School	CPTED review to determine if lighting is warranted	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 Avalon Neighbourhood Traffic Plan)
Clarence Avenue & Glasgow Street	Install sidewalk on southwest corner up to bus stop	Improve pedestrian safety & connectivity (based on approval of the Avalon Neighbourhood Traffic Plan)

It should be noted that jaywalking across Clarence Avenue between Aden Bowman Collegiate and the commercial area to the east is still being reviewed by the Administration.

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: Intersection Safety Improvements

Location	Recommended Improvement	Justification
McKinnon Avenue & Isabella Street	Upgrade yield signs & stop signs	Improve intersection safety & driver compliance
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 Avalon Neighbourhood Traffic Plan)

4.5 Parking Improvements

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

Table 4-4: Recommended Parking Improvements

Location	Recommended Improvement	Justification
Ruth Street & McKinnon Avenue	"No Parking" signs at 10m on all corners	Enhance visibility
MacKenzie Crescent at walkway	Parking restrictions on both sides of walkway (approximately 5m on either side)	Improve pedestrian safety & enhance visibility

4.6 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 re-occurring theme 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 4-1: 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
- 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 4-5**.

Table 4-5: 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 presented to the Avalon neighbourhood (on the east side of Clarence Avenue) in January 2016. 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.

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

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 Adelaide-Churchill 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 Cost Estimate
- Table 5-4: Parking Signs Cost Estimate
- Table 5-5: Sidewalk Installation Cost Estimate
- Table 5-6: Clarence Avenue Improvements Cost Estimate
- Table 5-7: Clarence Avenue Geometric Improvements Cost Estimate
- Table 5-8: Total Cost Estimate

Table 5-1: Speeding & Shortcutting Improvements Cost Estimate

	Device		timate	
Location	(# of Devices)	Temporary ¹	Permanent	Time Frame
Haultain Avenue between Cascade Street to Ruth Street	Forward peak hour speed data to Saskatoon Police Service to consider enforcement (NA)	\$0	NA	
Wilson Crescent & MacKenzie Crescent / Brown Crescent	Curb extensions (2)	\$1,000	\$135,000	
Haultain Avenue & Cascade Street	Curb extensions (2)	\$1,000	\$90,000	1 to 5 years (traffic
Back lane east of Clarence Avenue - Wilson Crescent to Ruth Street	20kph speed signs (4)	\$1,000	NA	calming devices will be installed temporarily until proven effective)
Back lane north of Circle Drive east of Calder Court	20kph speed signs (2)	\$500	NA	
Back lane between Ferguson Avenue & Calder Avenue	20kph speed signs (2)	\$500	NA	
	Totals	\$4,000	\$225,000	

Note 1: Includes all signs and pavement markings

Table 5-2: Pedestrian Safety Improvements Cost Estimate

Location	Device	Cost Estimate	Time Frame
Wilson Crescent & MacKenzie Crescent / Brown Crescent	Zebra crosswalk	\$750	
Ruth Street & Cairns Avenue	Standard crosswalk	\$600	
Haultain Avenue & Cascade Street	Standard crosswalk	\$600	
Haultain Avenue - either side of Churchill Park	"Playground Ahead" signs	\$500	
Cairns Avenue & Munroe Avenue	Zebra crosswalk	\$250	
Cairns Avenue & Cascade Street	3-day traffic volume & speed count & pedestrian count	\$650	1 to 2 years
MacKenzie Crescent before curve (northbound & southbound) near walkway	"Crosswalk Ahead" signs	\$500	
Walkway between MacKenzie Crescent & Hugh Cairns School	CPTED review	\$250	
	Total	\$4,100	

Table 5-3: Intersection Safety Cost Estimate

Location	Device	Number of Signs	Cost Estimate	Time Frame
McKinnon Avenue & Isabella Street	Stop signs	2	\$500	445 200000
	Totals	2	\$500	1 to 2 years

Table 5-4: Parking Signs Cost Estimate

Location	Device	Number of Signs	Cost Estimate	Time Frame
Ruth Street & McKinnon Avenue	"No Parking" signs	4	\$1,000	
MacKenzie Crescent at walkway	"No Parking" signs	2	\$500	1 to 2 years
	Totals	6	\$1,500	

Table 5-5: Sidewalk Installation Cost Estimate

Location	Length (m)	Cost Estimate	Time Frame	
Haultain Avenue - Isabella Street to St. Phillips School	110	\$48,400	1 to 5 years (depending on available funding)	
Totals	110	\$48,400	on available funding)	

Table 5-6: 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	44-2
Clarence Avenue & Wilson Crescent	School zone signs	\$500	NA	1 to 2 years (permanent speed display board will depend on locations
Between Circle Drive overpass & Glasgow Street	Speed display board	\$0	\$5,000	selected citywide)
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, sidewalk).

Table 5-7: Clarence Avenue Geometric Improvements Cost Estimate

Location	Device	Permanent (traffic calming devices & sidewalk)	Time Frame
Between Glasgow Street & Wilson Crescent	Geometric improvements	\$190,000	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 5-8**.

Table 5-8: Total Cost Estimate

Category	Signing, Temporary Traffic Calming & Traffic Counts	Permanent
Speeding/Shortcutting	\$4,000	\$225,000
Pedestrian Safety	\$4,100	NA
Intersection Safety	\$500	NA
Parking Signs	\$1,500	NA
Sidewalk	NA	\$48,400
Clarence Avenue	\$850	\$6,900
Totals	\$10,950	\$280,300

The total cost estimate for the signage and temporary traffic calming to be installed in 2016 is \$10,950. The total cost estimate for the installation of future permanent devices, including sidewalks (which does not include the geometric improvements on Clarence Avenue), is \$280,300. It should be noted, the Clarence Avenue Improvements shown in Table 5-6 are based on the approval of the Avalon 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 5-9**.

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

City of Saskatoon



LEGEND

- **EXISTING STOP SIGN**
- EXISTING YIELD SIGN

BUS ROUTE

SCHOOL ZONE

Exhibit 5-1





Table 5-9: Adelaide-Churchill Neighbourhood Recommended Improvements

Item	Location	Recommendation	Reason
1	Wilson Crescent & MacKenzie Crescent / Brown Crescent	Zebra crosswalk & curb extensions on west side	Improve pedestrian safety (school route) & reduce speed
2	Ruth Street & Cairns Avenue	Standard crosswalk	Improve pedestrian safety (school route)
3	Ruth Street & McKinnon Avenue	"No Parking" signs at 10m on all corners	Enhance visibility
4	Haultain Avenue & Cascade Street	Standard crosswalk & curb extensions (north side)	Improve pedestrian safety (connects to park pathway) & reduce speed
5	Haultain Avenue - either side of Churchill Park	"Playground Ahead" signs	Improve pedestrian safety (near park)
6	Haultain Avenue between Cascade Street & Ruth Street	Forward peak hour speed data to Saskatoon Police Service to consider enforcement	Reduce speed
7	Cairns Avenue & Munroe Avenue	Zebra crosswalk (north side)	Improve pedestrian safety in front of school (currently standard crosswalk)
8	McKinnon Avenue & Isabella Street	Upgrade yield signs & stop signs	Improve intersection safety & driver compliance
9	Haultain Avenue between Isabella Street & St. Phillips School	Sidewalk on east side (110m)	Improve pedestrian safety & connectivity
10	MacKenzie Crescent at walkway	Parking restrictions on both sides of walkway (approximately 5m on either side)	Improve pedestrian safety & enhance visibility
11	MacKenzie Crescent before curve (northbound & southbound) near walkway	Pedestrian crosswalk ahead signs	Improve pedestrian safety (school route)
12	Walkway between MacKenzie Crescent & Hugh Cairns School	CPTED review to determine if walkway lighting is warranted	Pedestrian safety
13	Cairns Avenue & Cascade Street	Collect traffic data in spring 2016	Determine pedestrian safety improvements (school route)
14	Back lane east of Clarence Avenue - Wilson Crescent to Ruth Street	20kph speed signs	Reduce speed
15	Back lane north of Circle Drive east of Calder Court	20kph speed signs	Reduce speed
16	Back lane between Ferguson Avenue & Calder Avenue	20kph speed signs	Reduce speed

Table 5-9 Continued

Item	Location	Recommendation	Reason			
	Clarence Avenue & Glasgow Street (also included in Avalon Neighbourhood Traffic Management Plan)					
17	Wilson Crescent	Additional school zone signs on overhead posts	Reduce speed & ensure driver awareness of school zone			
18	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)			
19	Southwest corner (on Clarence Avenue)	Install sidewalk up to bus stop	Improve pedestrian safety & connectivity			
20	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.			
21	Between Circle Drive overpass & Glasgow Street	Speed display board (facing northbound traffic)	Reduce speed			
22	Between Glasgow Street & the south side of Circle Drive overpass	Reduce 60kph speed limit to 50kph	Reduce speed			
23 Between Glasgow Street & Addition		Geometric Improvements - Additional through lane northbound	Increase capacity on Clarence Avenue in northbound direction (i.e. increasing from one lane to two through lanes)			

APPENDIX A: MEETING MINUTES

Adelaide-Churchill Neighbourhood Traffic Review Thursday, June 11, 2015, 7:00 – 9:00 P.M. Hugh Cairns 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

Councillor Loewen attended.

<u>Presentation from Transportation Division – Adelaide-Churchill Neighbourhood Traffic</u> Review

(Presented by Justine Nyen – Transportation Engineer)

Presentation Outline:

- Neighbourhood Review Process
- Timeline for Adelaide-Churchill Review
- Sources of Information
- Concerns Received/Past Studies
- 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 Adelaide-Churchill, Meadowgreen, Mount Royal, Montgomery Place, Confederation Park, Avalon, Greystone Heights, Lakeview

Timeline for Adelaide-Churchill Review:

- **Stage 1** Identify issues & possible solutions through community consultation (June 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:

- Past Studies (speed studies, traffic volumes counts, intersection reviews, pedestrian crossings)
- Collision Analysis
- Feedback from Public Consultation
- Traffic Counts & Assessments

Concerns Received/Past Studies:

- Stop & Yield Retrofit Program yield signs installed fall 2013
- Preston Ave Corridor Study traffic signals proposed at Adelaide St; geometric improvements proposed at Taylor St; improvements made when funding becomes available
- Wilson Cres higher traffic volumes since Circle Drive South and overpass at Clarence; speeding; crosswalk on west side of MacLean Cres comes up quick; start the school zone at the curve; pedestrian activated device at MacLean (west leg) with existing zebra; crosswalk at MacLean is half block away from back alley that lots of children use to get to school, this should be moved to the back alley or one added at Mackenzie/Brown Cres
- Ruth St at Cairns Ave & Haultain Ave children crossing to get to Hugh Cairns School and St. Phillip School; there are no safely marked crosswalks; install overhead lighting, marked crosswalks and lane restricting concrete markers similar to Wilson Cres; traffic has increased since Clarence/Circle Dr overpass; parking on north side of Ruth St between Clarence & Haultain makes it difficult to see
- Haultain Ave btw Wilson & Ruth speeding; addition of yield signs at uncontrolled intersections and traffic signals at Wilson & Clarence resulted in thoroughfare for those wanting to avoid Clarence Ave; install speed bumps; speed display boards; or lit crosswalks to get to the park
- Clarence Ave & Calder Cres long waits to get onto Clarence Ave; traffic has increased on Clarence since overpass, Stonebridge & CDS; turning from Clarence Ave northbound onto Calder is also a concern because the lane ends and drivers get into shared RT/thru lane not paying attention to drivers turning right nearly rear ending them; speeding downhill from overpass; bus stop on north side of Calder, when bus stopped, forces all through traffic going north to stop until bus leaves stop; concerns for southbound left turn from Clarence onto Calder because through drivers must weave around; there's a wide center boulevard from Wilson Cres south to Calder so use it to add more lanes; install speed display board
- Clarence Ave midblock crossing at Aden Bowman; traffic increase since Stonebridge; snow clearing is less than Ruth St, Clarence should be higher priority
- McKinnon Ave speeding and high traffic during peak hours to avoid Clarence Ave
- Cumberland Ave btw Ruth & Wilson speeding around curve; install speed bumps; speeding & shortcut btw 1st St & 7th St to Preston Ave & Market Mall because drivers don't like to use Louise Ave due to the curve and school zone
- MacKenzie Cres pedestrian safety concerns near walkway that connects to park; speeding; remove parking on curves and at MacKenzie & Cairns to improve visibility
- Back lane east of Clarence Ave (between Wilson & Ruth) Traffic has been steadily increasing in the back lane due to St. Martin Church traffic, users of Churchill Park, and the new condominium development at McKinnon and Ruth Street.

- Sharrows added to Cumberland & Preston Ave, or dedicated bike lane or boulevard
- Taylor St speeding, tailgating, passing on right

Traffic Calming Devices (Examples of devices used in Saskatoon):

- 1. Speed Display Boards
- 2. Raised Median Island narrows road; provides center refuge for pedestrians
- 3. Curb Extensions narrows road
- 4. Roundabouts
- 5. Diverter used to address high traffic volumes
- 6. Right-in/right-out island used to address high traffic volumes
- 7. Directional Closure restrict movements onto the street from one direction
- 8. Raised median through intersection restrict movements
- 9. Full closure

Pedestrian Devices:

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

Questions for Saskatoon Police Services

Resident: Pedestrian crossing signals – do you have to wait for light to go green to proceed? Or is it after pedestrian has crossed?

Police: Cannot proceed until light is green.

Resident: flashing red? Can't you go ahead?

Police: Yes after coming to a complete stop.

Resident: Do you have to stop anywhere for pedestrians?

Police: At any intersection.

Resident: When will police start enforcing cyclists?

Police: We do enforce the downtown area, the areas where there are more cyclists.

Resident: I've been stopped by police on my bike. I know they enforce.

Resident: What are the rules for Broadway Bridge?

Police: Cyclist is allowed to be on the sidewalk of bridges. Have to dismount once they're of the bridge if they want to stay on the sidewalk.

Resident: Is the enforcement for slow driving?

Police: Our focus is driver's going too fast.

Resident: Kids on side streets ride their bikes on sidewalks all the time. Use judgement there. Should provide enforcement for right on a red light.

 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 Adelaide-Churchill and potential solutions

Group 1: Olanre Akindipe (City facilitator)

- 1. Clarence Ave & Wilson Cres southbound through geometry is confusing; speeding on Clarence Ave; should be 50kph to Circle Drive for consistency; pedestrian signal may help
- 2. Alley east of Clarence Ave lots of traffic; pavement? Or speed humps to reduce speed
- 3. Clarence Ave & Cascade St install active pedestrian corridor
- 4. Speeding on Haultain Ave between Wilson & Ruth St
- 5. Sidewalk at St Philips School on Haultain Ave needs work
- 6. Haultain Ave & Wilson Cres; Ruth St & Haultain Ave; Ruth St & McKinnon Ave visibility issues
- 7. Northbound on Clarence Ave at Circle Dr merge sign is needed
- 8. Haultain Ave bulb out to reduce speeding

Group 2: Justine Nyen (City facilitator)

- 1. Haultain Ave between Taylor St & Ruth St (also south of Ruth St) increase traffic (going to store on Taylor); road is in rough shape; dangerous at Adelaide St; traffic signal at Clarence Ave & Wilson Cres has made traffic increase; traffic calming (maybe forced turn) at Ruth Street or Wilson Cres would help
- 2. McKinnon Ave shortcut to avoid Clarence Ave; dangerous at Adelaide St
- 3. Throughout neighbourhood turning off Clarence to Cumberland Ave or Taylor Street—going through neighbourhood side streets; install stop signs instead of yields; speed bumps; increased traffic due to church, Stonebridge developments, overpass, condos etc
- 4. Clarence Ave increased traffic, especially at 4pm; can't see backing out of driveway; widen road 1 block north of Circle Drive to add lanes; designated snow route where are residents supposed to park when there's snow clearing? Schools should be involved in Silhouette for Safety program (school zone signs n middle of street) for better signage; trees block school zone signs/difficult to see and there are no children around to indicate it's a school zone
- 5. Wilson Cres increased traffic, especially during peak hours; vehicle noise; many new families with children live nearby; Preston Avenue overpass has added to shortcutting; 6-9pm is a raceway; enforcement needed; traffic calming

- or speed display board may help; restrict access to Preston Ave so driver's don't shortcut
- 6. Aden Bowman Collegiate (midblock on Clarence Ave south of Taylor St) –add angle parking and bus parking at back; install chain-link fence to restrict midblock crossing to Mac's store; some of group was in support of midblock crossing; install pedestrian device or zebra crosswalk; there's compliance when principal is watching; parents parking in lot across the street; some drivers refuse to slow down for kids crossing at midblock; issues with proximity of traffic signals at Clarence Ave & Taylor St; southbound queue for left turn into mall; solution may be to restrict left turn into mall; speeding northbound to get through intersection before light turns yellow/red
- 7. Clarence Ave & Calder Cres rear ends turning left southbound; drivers accelerating and need to change lane to get around left turn and then right turn from Glasgow St; race to get into through lane; close off left turn or make it a one-way street; difficult to make left turn southbound from Calder Cres; snowbanks piled up in winter; make it a zipper merge
- 8. Clarence Ave & Wilson Cres not stopping for right turn on red
- 9. Bike education for teenagers
- 10. City expanding on other side of railways
- 11. Ruth St & Clarence Ave restrict right turn on red so there are gaps in traffic to allow residents to back out of driveways
- 12. Brown & MacLean Cres residents using back lanes to get to Calder Cres -> Clarence Ave speeding through back lanes

Group 3: Mariniel Flores (City facilitator)

- 1. Doesn't agree with minimum cycling speeds
- 2. Not in favour of potential fire hall and cell tower at Clarence Ave & Wilson (no more loss of public space)
- 3. Median obstructing vehicles left/right from Clarence Ave into Glasgow St; shorten median a bit a create a right turning bay
- 4. School zones on Wilson Cres and Haultain Ave cause traffic to use back streets; implement 40kph limit
- High traffic volumes on Clarence Ave, make it hard to get out of driveway due to queuing vehicles at Clarence & Ruth St; improve signal timing coordination (particularly at Wilson & Clarence – takes long time to get green phase northbound)
- Many pedestrians using Clarence Ave & Cascade St need active pedestrian corridor
- 7. Speeding on Ferguson Ave to Glasgow St and alley because vehicles avoid Wilson Cres & Clarence Ave; install speed bumps
- 8. Wilson Cres & Cairns Ave rubber curbing not working; active pedestrian corridor needed
- 9. When designing curb extensions, consider blind user groups
- 10. Want cycling route; multi-use pathway north of Circle Dr (in back alley way)

- 11. High traffic volumes at Wilson Cres & Preston Ave and hard to make turning movement- improvements needed (ie. maybe traffic signals with appropriate timing)
- 12. Speeding police stationed at Clarence Ave (Wilson Cres to Calder Cres) to ticket and Wilson Cres (Brown to Clarence Ave) particularly 1am and 2am
- 13. Speeding Circle Dr S, south of Calder Cres drop speed from 60kph to 50kph limit (odd because northbound is 60kph to 50kph)
- 14. Lane assignment problem at Wilson Cres & Clarence Ave better than one shared through/left turn and one right turn, but not good enough
- 15.20kph speed sign on Ferguson Ave alley too high to see; lower the sign (change to one-way south the north)
- 16. Many pedestrians at Munroe Ave in front of school and MacKenzie Cres & Cairns Ave standard crosswalk of zebra crosswalk
- 17. Stop/yield retrofit is good
- 18. Want to widen Preston Ave to alleviate congestion on Clarence Ave for Stonebridge vehicles going northbound; take out Preston Ave boulevard

Group 4: Angela Gardiner (City facilitator)

- 1. Clarence Avenue & Calder Cres/Glasgow St dropped lane northbound causes last minute lane change; extend barrier
- Clarence Ave & Wilson Cres vehicle detection for east/west signal timing (too fast)
- 3. Clarence Ave & Cascade St pedestrian crossing; passing on right
- 4. Clarence Ave synchronize signals (Ruth and Wilson) at 3pm; issues backing out of driveways; speeding northbound; passing on right when vehicles turning right
- 5. Circle Dr & Clarence Ave overpass drivers don't yield coming from Clarence Ave to Circle Dr on ramp (top of overpass)
- 6. Haultain Ave speeding; alternate direction of yield signs
- 7. Ferguson Ave shortcutting to avoid signals at Wilson & Clarence
- 8. Back lane east of Clarence Ave between Wilson Cres & Ruth St speeding; increased traffic; parking in lane; maybe consider paving the lane behind condos

Next Steps

- 1. Continue monitoring traffic issues in your neighbourhood
- 2. Mail-in or email comments no later than July 11/15
- 3. Additional public input via City on-line Community Engagement webpage no later than July 11/15

http://shapingsaskatoon.ca/discussions/adelaide-churchill-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

Question & Answer

Councillor Loewen: proposal made by fire department to move fire hall on Taylor Street. No plan in place yet. Minimum standard for response times. City-wide review to eliminate need for new facilities by relocating existing. If you're anticipating to see what's proposed we can add it to the Shaping Saskatoon page.

Resident: Collect traffic data in the fall. Less traffic when's school are out, people are on holidays etc.

Resident: If speeding is a concern, why not just use speed bumps?

City: We've received negative feedback in the past when we installed these. Shakes houses, creates noise, increase emergency response times. Can't incorporate everything. Traffic calming will be temporary at first so we can assess.

Resident: Lives on Clarence Ave. The back lane between Ferguson Ave. There's 20kph speed sign. What if dog, kid, someone get hit.

City: We'll look into quick fixes, such as tree trimming to improve visibility. Also enforcement if you contact police.

Resident: Parking on back lane, difficult to back out of driveway.

City: Police will provide enforcement. You can provide detailed information, license plate number etc. They'll pay a visit to the driver's home.

Resident: Cell phone tower proposed in the area. There are so many children, schools, may be at risk. Health concerns. Fire trucks going by. These should be in commercial areas.

Councillor: Cell tower – in the process of finding locations. It's regulated by federal government. Ability to use public right-of-way. City offers opinion but has no authority. City has never been successful in compliance with federal government. Consultation with community. Decision with Transport Canada. There's one just south in Stonebridge. No way to protect city by putting fire halls in commercial areas due to time requirements for response times. No definitive answer on location yet.

Resident: What the budget? Besides collecting data and making proposals.

City: Quick items, typically included in annual budget (ie. signs, temporary traffic calming). We're in the process of getting funding for permanent stuff. Putting budgets together right now.

Resident: All solutions are band-aids to the major issue. Since the Wal-Mart overpass was built it has increased traffic. These meetings are to fix problems caused by the overpass.

City: Clarence Ave is, and always was, an arterial, designed to carry 18,000 to 25,000 vehicles per day. Volumes measured are within the typical range. When we're planning the road network, we start with freeways, to arterials, to collectors, to locals and so on. Clarence Ave is intended to move traffic through. There have been impacts due to Stonebridge. Hopefully the additional access from Stonebridge being built to access the freeway will alleviate the issues. Expected to be built at the end of next year.

Resident: Way to open/widen Clarence Ave to alleviate bottleneck? Or on Preston?

City: we can take a look but speeds may go up.

Resident: Haultain Ave. I bought there to be on a quiet street. New church, condos, caused increase in traffic. It's a shortcut between Wilson and Taylor St.

City: Yes. And we've heard about this area tonight.

List of Representatives

Mitch Riabko, Kathy Dahl – Great Works Consulting, Facilitators

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

Justine Nyen – City of Saskatoon, Transportation & Utilities, Transportation Engineer

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

Olanre Akindipe – City of Saskatoon, Transportation & Utilities, Transportation Engineer

Adelaide-Churchill Neighbourhood Traffic Review Tuesday, December 15, 2015, 7:00 – 9:00 P.M. Hugh Cairns 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 – Adelaide-Churchill Neighbourhood Traffic</u> Review

(Presented by Justine Nyen – Transportation Engineer)

Presentation Outline:

- Neighbourhood Traffic Management Program Rationale
- 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:

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

What We Heard:

- A. Speeding/Traffic Volumes:
- Clarence Ave
- Wilson Cres

- Haultain Ave
- McKinnon Ave
- Cumberland Ave
- MacKenzie Cres
- Ferguson Cres
- Back lanes:
 - east of Clarence Ave between Wilson & Ruth St (St. Martin's Church)
 - between Brown & MacLean Cres to get to Calder Cres & then onto Clarence Ave
 - near Ferguson Ave

B. Pedestrian Safety:

- Clarence Ave students crossing midblock at Aden Bowman to Mac's store
- Clarence & Cascade
- Wilson Cres- MacLean Cres, back lane between MacLean Cres & MacLean Cres, MacKenzie/Brown, Cairns
- Ruth St at Cairns Ave & Haultain Ave children crossing/school route
- MacKenzie Cres walkway that connects to park
- Cairns Ave in front of school; crossings at Munroe & MacKenzie

C. Intersection Safety:

- Clarence & Calder long waits to get onto Clarence; concerns due to left lane ending drivers getting over into thru lane when vehicle in front may be turning right onto Calder; speeding downhill from overpass; bus stop
- Clarence Ave & Taylor southbound queue due to left turn into mall
- Clarence Ave & Wilson Cres southbound through geometry is confusing; drivers not stopping for right on red, vehicle detection needed for east/west signal timing (phase is too fast); takes long time to get green phase northbound
- Clarence & Circle Dr off ramp drivers don't yield

D. Parking:

- Ruth St parking on north side makes it difficult to see
- MacKenzie Cres near walkway

What We Did:

- Collected Data:
 - Past studies
 - Comments from initial meeting
 - Resident responses (phone calls, emails, letters)
 - Recorded comments from Shaping Saskatoon discussions
 - 11 Intersection / Pedestrian counts
 - 10 7 day traffic count (24 hour) & Average Speed measurements
 - 2 Back lane counts
 - Collision history
- Field Reviews
- Assessed the Issues
- Generated proposed recommendations

What We Propose:

- · Speed limit signs
- Parking restrictions
- · Back lane restriction
- Sidewalk installation
- Stop signs
- Speed display board
- Standard crosswalk
- Zebra crosswalk
- 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 Adelaide-Churchill and potential solutions

Group 1: David LeBoutillier (City facilitator)

Location	Recommendation	Reason	Comments
Clarence Ave & Glasgow St	Move bus stop a few metres south to allow vehicle clearance in left lane	Improve traffic flow	Ok. Maybe both sides.
Clarence Ave & Taylor	Add location to major intersection review priority list	Address southbound queue due to driveway (into mall) 45m south of intersection	access to the mall issues; restrict westbound left turns; Aden Bowman Collegiate needs a midblock crosswalk; bus stop should be moved north of Taylor St; educating students has already been tried
Clarence Ave between Circle Dr overpass & Glasgow St	Speed display board (facing northbound traffic)	Reduce speed	Install for southbound as well.
Clarence Ave - Glagow St to 2805 Clarence Ave	Add through lane northbound (additional 100m)	Improve traffic flow	No. Need other solutions.
Ruth St & McKinnon Ave	Parking restrictions 10m on northwest corner	Enhance visibility	Not sure why northwest corner. Add restrictions on south side by condo.
McKinnon Ave & Isabella St	Upgrade yield signs & stop signs	Improve intersection safety	Re-think orientation of signs.
Back lane between 2813 & 2903 Calder Ave	Install bollards	Reduce shortcutting in back lane	Ok, but what about lane east of this to Clarence Ave? Install 20kph signs.

Additional Concerns:

Location	Comments
Cairns Ave & Cascade St	Install standard crosswalk & curb extensions

Group 2: Shirley Matt (City facilitator)

	Location	Recommendation	Reason	Comments

Clarence Ave & Glasgow St	Move bus stop a few metres south to allow vehicle clearance in left lane	Improve traffic flow	Confusion with drivers if it's moved up. Confusion with pedestrian crossing and waiting for bus.
Clarence Ave between Circle Dr overpass & Glasgow St	Speed display board (facing northbound traffic)	Reduce speed	Install for southbound traffic as well.
Clarence Ave - Glasgow St to 2805 Clarence Ave	Add through lane northbound (additional 100m)	Improve traffic flow	Ok but needs more analysis.
Ruth St & McKinnon Ave	Parking restrictions 10m on northwest corner	Enhance visibility	Add parking restrictions on every corner
Back lane between 2813 & 2903 Calder Ave	Install bollards	Reduce shortcutting in back lane	Difficult to comment. Should be decided on by the residents on Calder Cres.

Additional concerns:

Location	Comments
Ruth St & Haultain Ave	Hedges & parking on northwest corner
Clarence Ave - in front of Aden Bowman Collegiate	Students jaywalking to Mac's store; doors do not align with crosswalk
Lane between Wilson Cres & Glasgow St	Install "Local Traffic Only" sign or 20kph speed signs
School sites	Idling in front of schools; should have a City Policy to address this
Clarence Ave & Wilson Cres	mailbox south of Wilson Cres causes visibility issues; not enogh green time for Wilson Cres, especially for westbound; school signs missing for northbound/southbound

Group 3: Justine Nyen (City facilitator)

Location	Recommendation	Reason	Comments
Clarence Ave & Glasgow St	Move bus stop a few metres south to allow vehicle clearance in left lane	Improve traffic flow	Likely not going to help.
Clarence Ave & Taylor	Add location to major intersection review priority list	Address southbound queue due to driveway (into mall) 45m south of intersection	Left turn arrows for northbound & southbound needed; southbound left turn into mall is causing queues
Clarence Ave - Glasgow St to City Limits (south of Cartwright St)	Reduce 60kph speed limit to 50kph (section south of Circle Dr overpass will be based on approval from Stonebridge)	Reduce speed	Wait until Stonebridge neighbourhood traffic review to implement speed reduction all at once.
Ruth St & McKinnon Ave	Parking restrictions 10m on northwest corner	Enhance visibility	Look at northeast corner as well. Perhaps parking enforcement instead.

Haultain Ave & Cascade St	Standard crosswalk & curb extensions (north side)	Improve pedestrian safety (connects to park pathway) & reduce speed	Install playground signs (for northbound - install south of Cascade St; for southbound - install north of Bute St). Police to enforce speeding during peak hours
MacKenzie Cres at walkway	Parking restrictions on both sides of walkway (approximately 5m on either side)	Improve pedestrian safety & enhance visibility	Street light needed and along walkway.

Additional concerns:

Location	Comments		
MacKenzie Cres	Snow is being pushed onto sidewalk		
Back lane north of Circle Dr east of Calder Crt	Speeding; install 20kph signs		
Cairns Ave (southbound before MacKenzie Cres)	Trees blocking 30kph sign		
Clarence Ave & Wilson Cres	Review parking restrictions on Clarence Ave to improve traffic flow		
Parking program near schools	Implement cost-sharing program to allow public to park in residential driveways during major events at schools		
Clarence Ave & Calder Cres	pedestrian safety concerns; drivers passing on right when a pedestrian is crossing; drivers not stopping for pedestrians		
Back lane north of Circle Dr at east end Install posts so drivers can't shortcut through			

Next Steps

- 1. Mail-in or email comments no later than Jan 15/16
- 2. Additional public input via City on-line Community Engagement webpage no later than Jan 15/16

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

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

Q&A

Resident: Why were there no recommendations to address the Aden Bowman Collegiate pedestrian crossing on Clarence Ave?

City: A study was completed and a letter was sent to the Principal. At this point in time the City does not support implementation of a midblock crossing. Working with the school to address the issues. Next steps, if required, may be to install a fence or median to encourage students to cross at Taylor St. A rough design of this is in the works.

Resident: Will this be part of the Taylor St/Clarence Ave major intersection review?

City: If a median is proposed this may affect traffic patterns so there's potential to include it as part of the major intersection review process.

Resident: With the additional 100 students enrolling this past year and excess traffic on Clarence Ave this issue needs to be addressed.

Councillor Loewen: Let's discuss the Aden Bowman crossing at the end of the meeting for those that are interested. This will likely need to be addressed outside of the neighbourhood review.

Resident: Circle Dr off ramp – issues with the left turn and not knowing when drivers are turning or continuing through. Also issues with the northbound exit from the mall on Clarence Ave.

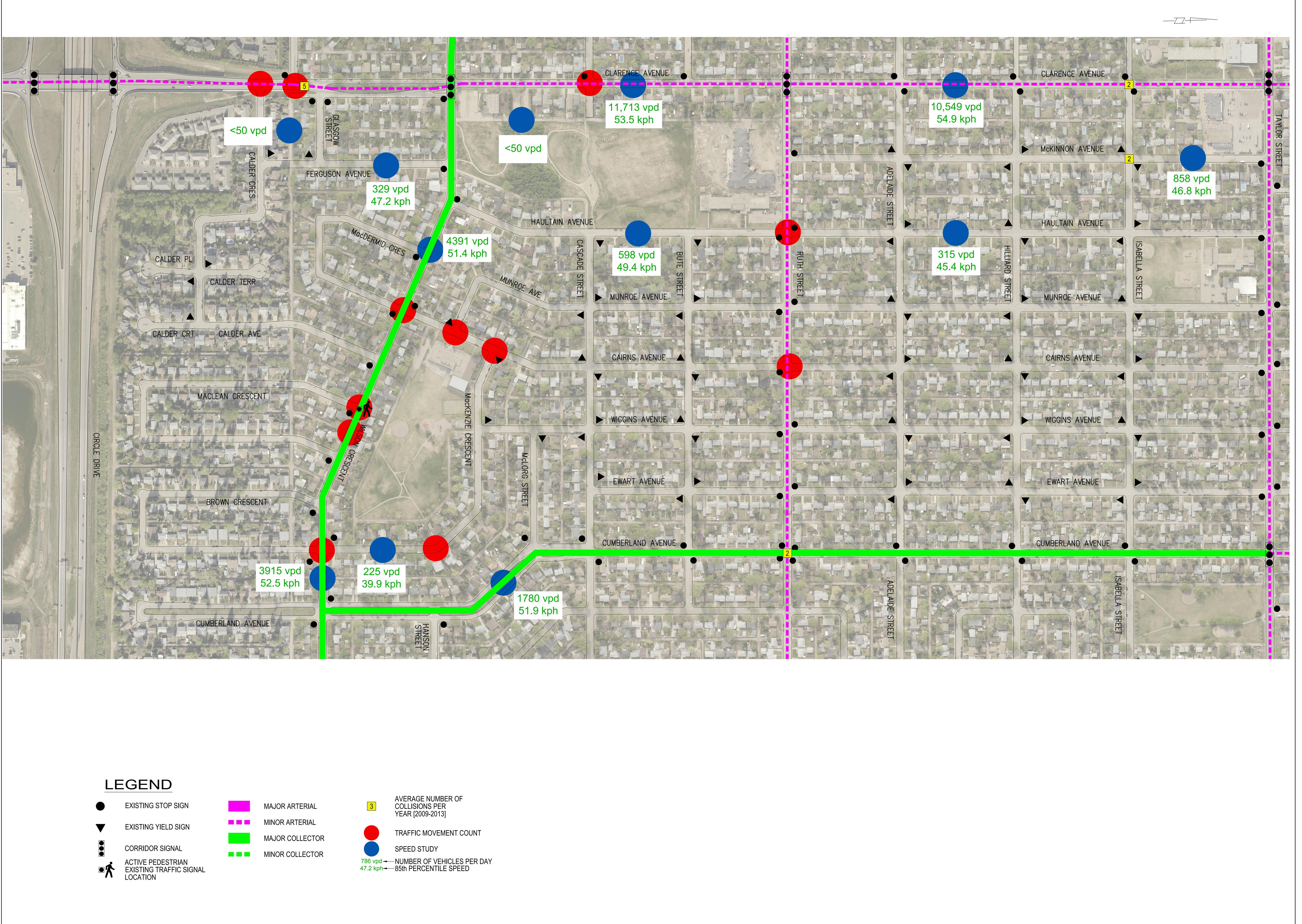
Councillor Loewen: Received a few questions about the location of the new fire hall. There was a proposal to build at Clarence Ave & Wilson Cres. No decision has been made at this point. To be determined. As information comes in it will be shared with public. Locations are typically selected according to travel distances. The new fire hall will service Stonebridge as well. It was initially proposed along Melville St but is no longer an option.

List of Representatives

Mitch Riabko, Kathy Dahl – Great Works Consulting, Facilitators

Justine Nyen, Shirley Matt, David LeBoutillier – City of Saskatoon, Transportation & Utilities

APPENDIX B: TRAFFIC DATA COLLECTION



ADELAIDE CHURCHILL TRAFFIC DATA 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
Clarence Avenue & Calder Crescent	2% (no)	No	Conditions NOT met.
Wilson Crescent & Cairns Avenue	9% (no)	No	Conditions NOT met.
Wilson Crescent & MacKenzie Crescent / Brown Crescent	9% (n)	No	Conditions NOT met.
Cairns Avenue & Munroe Avenue	9% (no)	No	Conditions NOT met.
Cairns Avenue & MacKenzie Crescent	19% (no)	No	Conditions NOT met.

Conditions not met. No need to proceed to Step 2.

APPENDIX D: PEDESTRIAN DEVICE ASSESSMENTS

Appendix D: Pedestrian Actuated Signal Warrant

Clarence Avenue & Calder Crescent:

Prepared By:	Justine	Date:	Jul 13/15		
Location & Roadway Classification:	Clarence Ave & Calder Cres				
Date of Count:	Day of wk: Tues	Mth, Day, Yr:	Jun 23/15		
Weather:	fair				
Traffic Control Devices:	stop sign				
Current Pedestrian Control:	none				
Other Notes:					
Number of travel lar	nes passing through the crosswalk(s) <u>* 5</u>	_ lanes		
Is there a physical n	nedian in this crosswalk(s)?	У	(y or n)		
Speed limit (or 85th	percentile speed)	F 60	km/h		
□ 85th percentile (check one)			- '		
□ Posted	, ,				
		•			
Distance to nearest	protected crosswalk	300	m		
Location:	Wilson Cre		_		
Type:	TS				
Is the orientation of	this crosswalk(s) N-S?	r n	(y or n)		
Duration of pedestri	ian count	5	_ hrs		
Elementary	: Total Wa	rranted PC Points:		or	/ period
High School	: High	est PC point value:		at	
Adult	: Active Po	ed Corridor Points:			
Senior		ated Signal Points:	31		
Vehicles passing through					
crosswalk(s)	• ***				

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the South Crosswalk **

Time		Vehic	le Counts					Pedestria	ian Counts			
(15						North C	rosswalk			South C	osswalk	
minute	SB	WB	NB	EB	Child	Teen	Adult	Senior/	Senior /	Adult	Teen	Child
intervals)					Cilliu	F	Auuit	Impaired	Impaired	Auuit	F	F
7:00												
7:15												
7:30												
7:45			4.40				•	•		•	•	•
8:00	201	14	146									
8:15 8:30	196 199	8 9	184 202									
8:45	225	8	193						•			
9:00	223	0	193									
9:15												
9:30												
9:45					-				•			
AM Totals	821	39	725									
11:30	149	8	174									
11:45	158	5	164									
12:00	173	2	176									
12:15	167	5	186									
12:30	156	9	173									
12:45	184	5	171									
13:00	152	8	172									
13:15	178	3	159									
Noon Totals	1,317	45	1,375									
14:00												
14:15												
14:30												
14:45												
15:00	169	7	213									
15:15	200	5	228									
15:30	210	5	226									
15:45	213	7	260									
16:00	197	4	264									
16:15	182	3	249									
16:30	204	4	302									
16:45	215	4	275									
17:00												
17:15												
17:30												
17:45												
18:00 18:15												
18:15												
18:45												
19:00												
19:00												
19:15												
19:45												
20:00												
20:15												
20:30												
20:45												
PM Totals	1,590	39	2,017									
Totals	3,728	123	4,117									
			, , - = -			North Cr	osswalk =			South Cro	osswalk =	
										Journ of		

Wilson Crescent & Cairns Avenue:

Location & Roadway Classification:	Wilson Cres & Cairns Ave			
Date of Count:	Day of wk: Wed	Mth, Day, Yr: Jun 24/15		
Weather:	fair			
Traffic Control Devices:	stop sign			
Current Pedestrian Control:	zebra			
Other Notes:				
Number of travel la	nes passing through the crosswalk(s)	lanes		
Is there a physical n	nedian in this crosswalk(s)?	n (y or n)		
Speed limit (or 85th		50 km/h		
•	ercentile (check one)			
☐ Posted	Limit			
Distance to nearest	protected crosswalk	360 m		
Location:	Clarence Ave			
Туре:	TS			
Is the orientation of	this crosswalk(s) N-S?	<u>y</u> (y or n)		
Duration of pedestr	ian count	<u>5</u> hrs		
Elementary	: 47 Total Warra	inted PC Points:	or	/ period
High School		PC point value: 3,915	at	/ periou
Adult	8	Corridor Points:		
Senior	: Pedestrian Actuate	d Signal Points: 36		
Vehicles passing through	1 2,031	-		
crosswalk(s)	2,031 :			

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the East Crosswalk **

Time		Vehicl	e Counts		Pedestrian Counts							
(15						West Cr	osswalk			East Cr	osswalk	
minute	SB	WB	NB	EB	Child	Teen	Adult	Senior /	Senior / Impaired	Adult	Teen	Child
intervals) 7:00					_			Impaired	impaired			
7:15												
7:30												
7:45												
8:00	12	48	1	25	1							
8:15	9	33	1	32								
8:30	7	58	1	42	2							2
8:45	11	53	2	60	1							5
9:00												
9:15												
9:30 9:45											_	
AM Totals	39	192	5	159	4							7
11:30	39 7	40	1	39	4							2
11:45	11	34	2	54								7
12:00	14	34	_	55								2
12:15	7	30		41								3
12:30	4	38		49								1
12:45	8	42		36								
13:00	2	31		24								1
13:15		28		33								1
Noon Totals	53	277	3	331								17
14:00												
14:15												
14:30 14:45												
15:00	5	53	1	57								
15:15	4	46	4	85								
15:30	17	59	-	58	2							9
15:45	27	38	1	61								4
16:00	13	43	1	69	1							
16:15	3	33		64	1							
16:30	11	35		68								2
16:45	9	38	2	67								
17:00												
17:15												
17:30												
17:45												
18:00 18:15												
18:15												
18:45												
19:00												
19:15												
19:30												
19:45												
20:00												
20:15												
20:30												
20:45	0.0	0:-		# 00								
PM Totals	89	345	9	529	4							15
Totals	181	814	17	1,019	8	TATE OF C				EC		39
						west Cr	osswalk =	8		East Cro	osswalk =	39

Wilson Crescent & MacLean Crescent (west leg):

Date of Count: Weather: Traffic Control Devices: Current Pedestrian Control: Other Notes: Number of travel lanes passing through the crosswalk(s) Is there a physical median in this crosswalk(s)? Mth, Day, Yr: Sep2-3/15 fair stop sign ped corridor & zebra		
Traffic Control Devices: Current Pedestrian Control: Other Notes: Number of travel lanes passing through the crosswalk(s) 2 lanes		
Current Pedestrian Control: ped corridor & zebra Other Notes: Number of travel lanes passing through the crosswalk(s) 2 lanes		
Other Notes: Number of travel lanes passing through the crosswalk(s) 2 lanes		
Number of travel lanes passing through the crosswalk(s) 2 lanes		
· · · · · · · · · · · · · · · · · · ·		
Is there a physical median in this crosswalk(s)?		
is there a physical median in this crosswant(s).		
Speed limit (or 85th percentile speed) 50 km/h		
☐ 85th percentile (check one)		
☐ Posted Limit		
Distance to nearest protected crosswalk Location: Clarence Ave There are Tree and Tree are		
Type: TS		
Is the orientation of this crosswalk(s) N-S?		
Duration of pedestrian count 5 hrs		
Elementary: 3 Total Warranted PC Points:	or / j	period
High School: Highest PC point value: 432	at	
Adult: Active Ped Corridor Points:		
Senior: Pedestrian Actuated Signal Points: 28		
Vehicles passing through crosswalk(s): 1,670		

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the East Crosswalk **

Time		Vehicl	e Counts		Pedestrian Counts							
(15						West Cr	osswalk			East Cr	osswalk	
minute	SB	WB	NB	EB	Child	Teen	Adult	Senior /	Senior /	Adult	Teen	Child
7:00					l'	reen	raure	Impaired	Impaired	r	r	r Cilita
7:00					-							
7:13					-							
7:45					-							
8:00		47	2	33	-							
8:15		46	3	29								
8:30		50	2	32								
8:45		60	3	33								1
9:00												
9:15												
9:30												
9:45												
AM Totals		203	10	127								1
11:30		31	5	29								
11:45		39	3	37								
12:00		37	1	30								
12:15		25	1	33								
12:30		26	2	39								
12:45		30	1	31								
13:00 13:15		38	2	21								
Noon Totals		27	1	36 256								
14:00		253	16	256								
14:00												
14:30												
14:45												
15:00		37	1	42								
15:15		56	_	53								
15:30		57	4	54								
15:45		49	2	56								
16:00		29	3	55								
16:15		36	5	50								
16:30		36	1	69								1
16:45		47	4	59								1
17:00												
17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
18:45 19:00												
19:15												
19:13												
19:45												
20:00												
20:15												
20:30												
20:45												
PM Totals		347	20	438								2
Totals		803	46	821								3
						West Cr	osswalk =			East Cro	osswalk =	3

Wilson Crescent & MacKenzie Crescent / Brown Crescent:

Location & Roadway Classification:	Wilson Cres & Mackenzie/Brown			
Date of Count:	Day of wk: Wed	Mth, Day, Yr: June 24/15		
Weather:	fair			
Traffic Control Devices:	stop sign			
Current Pedestrian Control:	none			
Other Notes:				
	nes passing through the crosswalk(s)	2 lanes		
Is there a physical m	nedian in this crosswalk(s)?	n (y or n)		
Speed limit (or 85th □ 85th po □ Posted	ercentile (check one)	<u></u>		
Distance to nearest Location: Type:	protected crosswalk NA	m		
Is the orientation of	this crosswalk(s) N-S?	y (y or n)		
Duration of pedestri	an count	5 hrs		
Elementary: High School: Adult: Senior:	Highest I Active Ped Co	nted PC Points: PC point value: 1,848 porridor Points: Signal Points: 32	or at	/ period
Vehicles passing through crosswalk(s):	1.818	-		

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the West Crosswalk **

Time		Vehicl	e Counts		Pedestrian Counts							
(15						West Cr	osswalk			East Cr	osswalk	
minute	SB	WB	NB	EB	Child	Teen	Adult	Senior /	Senior /	Adult	Teen	Child
intervals)					r	r	r	Impaired	Impaired	r	7	Ciriu
7:00												
7:15									•			
7:30 7:45												
	2	20	0	22							_	
8:00 8:15	2	39	8	32								
8:30	6	31 46	3 4	30 28	1							
8:45	14	47	2	39	2				•			
9:00	14	47		39					_			
9:15												
9:30												
9:45												
AM Totals	23	163	17	129	3							
11:30	5	41	1	42	2							1
11:45	3	32	3	40								
12:00	5	39	4	48								
12:15	6	25	2	31								
12:30	3	36	2	37								
12:45	4	40	2	34								
13:00	2	30	3	25								2
13:15	2	39	2	32								_
Noon Totals	30	282	19	289	2							3
14:00												
14:15												
14:30												
14:45												
15:00	1	40	2	36								
15:15	5	51	3	61	1							2
15:30	14	54	6	46	1							
15:45	14	38	2	57	7							
16:00	1	42	3	61	1							
16:15	5	42	2	62	1							1
16:30	1	51	3	57								
16:45	4	39	2	61								
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												
20:30												
PM Totals	45	357	23	441	11							3
Totals	98	802	59	859	16							6
Totals	70	002	33	039	10	West Cr	osswalk =	16		Fact Cu	osswalk =	6
						west cr	JoSWalk =	10		East Cr	JSSWalk =	O

Wilson Crescent & back lane between MacLean Crescent (east) & MacLean Crescent (west):

Location & Roadway Classification:	Wilson Cres & lane (between MacLean	& MacLean) - collector & lane		
Date of Count:	Day of wk: Wed-Thurs	Mth, Day, Yr: Sep 2-3/15		
Weather:	fair			
Traffic Control Devices:	stop sign			
Current Pedestrian Control:	none			
Other Notes:	<u>*</u>			
		_		
Number of travel la	nes passing through the crosswalk(s)	2 lanes		
Is there a physical r	nedian in this crosswalk(s)?	<u>n</u> (y or n)		
Speed limit (or 85th	n percentile speed)	▶ 50 km/h		
<u>-</u>	ercentile (check one)			
□ Posted				
		F		
Distance to nearest	protected crosswalk	590 m		
Location:	Clarence Ave			
Туре:	TS			
Is the orientation of	this crosswalk(s) N-S?	y (y or n)		
Duration of pedestr	ian count	5 hrs		
Elementary	: 3 Total War	ranted PC Points:	or	/ period
High School	: Highe	st PC point value: 222	at	, .
Adult	: Active Ped	Corridor Points:		
Senior	: Pedestrian Actuat	ed Signal Points: 28		
Vehicles passing through	1 1,611			
crosswalk(s)	1,011 :			

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the East Crosswalk **

Time		Vehicl	e Counts		Pedestrian Counts							
(15						West Cr	osswalk			East Cr	osswalk	
minute	SB	WB	NB	EB	Child	Teen	Adult	Senior /	Senior /	Adult	Teen	Child
intervals)					Cillia	recii	Auuit	Impaired	Impaired	Auuit	recii	Ciliu
7:00												
7:15												
7:30												
7:45			_									
8:00		45	1	34								1
8:15		48		31								
8:30		47		30								
8:45		58		32								
9:00												
9:15												
9:30 9:45												
AM Totals		100	1	127								1
11:30		198	1									1
11:30		31 39		30 36					-			
12:00		37		28								
12:00		25	1	30					_			
12:13		28	1	36	-				_			
12:45		27	1	31								1
13:00		38	1	24								
13:15		28		34					-			
Noon Totals		253	2	249								1
14:00		233		247								-
14:15												
14:30												
14:45												
15:00		38		43								
15:15		58		52								
15:30		56		56	1							
15:45	1	47	1	57								
16:00		31		51								
16:15		35		50								
16:30		36		68								
16:45		47		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	1	348	1	431	1							
Totals	1	799	4	807	1							2
						West Cr	osswalk =	1		East Cro	osswalk =	2

MacKenzie Crescent & walkway connection to Hugh Cairns School (north of Wilson Crescent):

Location & Roadway Classification:	MacKenzie & curve (midblock)			
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:				
	nes passing through the crosswalk(s) nedian in this crosswalk(s)?	lanes		
Speed limit (or 85th ☐ 85th pe ☐ Posted	ercentile (check one)	<u>* 50</u> km/h		
Distance to nearest p Location: Type:	•	m		
Is the orientation of	this crosswalk(s) N-S?	n (y or n)		
Duration of pedestri	an count	5 hrs		
Elementary: High School: Adult:	Highest I	ated PC Points: PC point value: Orridor Points:	or at	/ period
Senior: Vehicles passing through crosswalk(s):	Pedestrian Actuated			

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the North Crosswalk **

(15 minute intervals) SB intervals) 7:00 7:15 7:30 7:45 8:00 1 8:15 3 8:30 8 8:45 4 9:00 9:15 9:30 9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:45 3 13:00 1 13:15 Noon Totals Noon Totals 20 14:00 14:15 14:30 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:45 18:00 18:15 18:30 18:45	5	WB	1 8 3 4 16 3 2 2 4 5 3 1	EB	2 2 2	North Cr	Adult	Senior / Impaired	Senior / Impaired	South Cr Adult	Teen	Child
T:00	5	WB	1 8 3 4 16 3 2 2 4 5 3 1	EB	2	Teen	Adult	Senior / Impaired	Senior / Impaired	Adult	Teen	
7:00 7:15 7:30 7:45 8:00 1 8:15 3 8:30 8 8:45 4 9:00 9:15 9:30 9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 Noon Totals 20 14:00 14:15 14:30 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:45 18:00 18:15 18:30	5		16 3 2 2 4 5 3 1		2				Impaired			
7:15 7:30 7:45 8:00 1 8:15 3 8:30 8:45 4 9:00 9:15 9:30 9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 Noon Totals 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 17:45 17:30 17:45 18:00 18:15 18:30	5		16 3 2 2 4 5 3 1		2							1
7:30 7:45 8:00 1 8:15 3 8:30 8 8:45 4 9:00 9:15 9:30 9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 Noon Totals 20 14:00 14:15 14:30 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:45 18:00 18:15 18:30 18:15	5		16 3 2 2 4 5 3 1		2							1
7:45 8:00 1 8:15 3 8:30 8 8:45 4 9:00 9:15 9:30 9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 1 Noon Totals 20 14:00 1 14:15 1 14:30 1 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:45 4 17:00 17:45 18:00 18:15 18:30 1	5		16 3 2 2 4 5 3 1		2							1
8:00 1 8:15 3 8:30 8 8:45 4 9:00 9:15 9:30 9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 1 Noon Totals 20 14:00 1 14:15 1 14:30 1 14:45 1 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:45 18:00 18:15 18:30 1	5		16 3 2 2 4 5 3 1		2							1
8:15 3 8:30 8 8:45 4 9:00 9:15 9:30 9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 1 Noon Totals 20 14:00 1 14:15 1 14:30 1 14:45 1 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:45 18:00 18:15 18:30 1	5		16 3 2 2 4 5 3 1		2							1
8:45 4 9:00 9:15 9:30 9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 1 Noon Totals 20 14:00 14:15 14:30 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:30	5		16 3 2 2 4 5 3		2							1
9:00 9:15 9:30 9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 Noon Totals 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30	5		16 3 2 2 4 5 3		2							1
9:15 9:30 9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 1 Noon Totals 20 14:00 1 14:15 1 14:30 1 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30			3 2 2 4 5 3		2							1
9:30 9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 Noon Totals 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30			3 2 2 4 5 3		2							1
9:45 AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 1 Noon Totals 20 14:00 1 14:15 1 14:30 1 14:45 1 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 1			3 2 2 4 5 3		2							1
AM Totals 16 11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 1 Noon Totals 20 14:00 1 14:15 1 14:30 1 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:45 18:00 18:15 18:30			3 2 2 4 5 3		2							1
11:30 3 11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 20 14:00 1 14:15 1 14:30 1 14:45 1 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:30			3 2 2 4 5 3		2							1
11:45 2 12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 20 14:00 14:15 14:30 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:15			2 2 4 5 3 1									1
12:00 2 12:15 4 12:30 5 12:45 3 13:00 1 13:15 1 Noon Totals 20 14:00 1 14:15 1 14:30 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 1			2 4 5 3 1									1
12:15 4 12:30 5 12:45 3 13:00 1 13:15 20 14:00 1 14:15 1 14:30 1 14:45 1 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:15			4 5 3 1									1
12:30 5 12:45 3 13:00 1 13:15 20 14:00 1 14:15 1 14:30 1 14:45 1 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:15			5 3 1									
12:45 3 13:00 1 13:15 20 14:00 14:15 14:30 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 17:15 17:30 17:45 18:00 18:15 18:30			3									
13:00 1 13:15 20 14:00 14:15 14:30 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:30			1		2				-			
13:15 Noon Totals 20 14:00 14:15 14:30 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:30					2					r		7
Noon Totals 20 14:00)		20		2							
14:00 14:15 14:30 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:30			20		<u> </u>							1
14:15 14:30 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30	\mp											1
14:30 14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:30												
14:45 15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 4 17:15 17:30 17:45 18:00 18:15 18:30												
15:00 2 15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 4 17:15 17:30 17:45 18:00 18:15 18:30												
15:15 3 15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 4 17:15 17:30 17:45 18:00 18:15 18:30			2									1
15:30 11 15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30			3									
15:45 7 16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30			11									
16:00 3 16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:30			7		1							
16:15 3 16:30 3 16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30 18:30			3		1							
16:45 4 17:00 17:15 17:30 17:45 18:00 18:15 18:30			3									
17:00 17:15 17:30 17:45 18:00 18:15 18:30			3									
17:15 17:30 17:45 18:00 18:15 18:30			4									1
17:30 17:45 18:00 18:15 18:30												
17:45 18:00 18:15 18:30												
18:00 18:15 18:30												
18:15 18:30	$-\!\!\!\!+$											
18:30												
18:45	-+											
19:00 19:15	\rightarrow											
19:15												
19:45	+											
20:00	\rightarrow											
20:15	1											
20:30	+											
20:45	+											
PM Totals 36			36		2							2
Totals 72			30		6							3
			72			North Cr		6		South Cro	osswalk =	3

Cairns Avenue & Munroe Avenue:

Location & Roadway Classification:	Cairns Ave & Munroe Ave - local-local			
Date of Count:	Day of wk: Wed	Mth, Day, Yr: Sep 9/15		
Weather:	fair			
Traffic Control Devices:	yield 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	percentile speed)	™ 30 km/h		
• _	ercentile (check one)			
□ Posted	` ,			
Distance to nearest	protected crosswalk	80 m		
Location:	Wilson Cres			
Туре:	stop sign			
Is the orientation of	this crosswalk(s) N-S?	n (y or n)		
		(/ 0.1.1/		
Duration of pedestri	ian count	5 hrs		
_				
Elementary		anted PC Points:	or	/ period
High School		PC point value: 5,100	at	
Adult		Corridor Points:		
Senior		ed Signal Points: 15		
Vehicles passing through	416			
crosswalk(s)	:			

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the North Crosswalk **

Time		Vehicl	e Counts					Pedestria	strian Counts			
(15						North Cı	rosswalk			South Cr	osswalk	
minute	SB	WB	NB	EB	Child	Teen	Adult	Senior / Impaired	Senior / Impaired	Adult	Teen	Child
intervals) 7:00								impaireu	impaired		_	7
7:15					-							
7:30												
7:45												
8:00	14		9	5	9							
8:15	6		6	1	4							
8:30	6		17	3	10							
8:45	11		31	2	28							
9:00												
9:15												
9:30												
9:45	27		(2)	11	F1							
AM Totals 11:30	37 11		63 5	11 1	51 3							
11:30	5		14	1	14				_			
12:00	3		4	1	2							
12:15	3		3	2	3							
12:30	7		9	2	9							
12:45	6		6	1	7							
13:00	6		5									2
13:15	1		3		2							
Noon Totals	42		49	7	40							2
14:00												
14:15												
14:30												
14:45			4.0									
15:00	2		13	2	4							2
15:15 15:30	5 21		28 25	2 6	3 44							3 1
15:30	16		15	2	15							1
16:00	3		12	1	5							
16:15	7		7	4	4							
16:30	7		7	-	3							
16:45	9		14	1	2							
17:00												
17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
18:45 19:00												
19:00												
19:13												
19:45												
20:00												
20:15												
20:30												
20:45												
PM Totals	70		121	16	80							4
Totals	149		233	34	171							6
						North Cr	osswalk =	171		South Cro	osswalk =	6

Cairns Avenue & MacKenzie Crescent:

Location & Roadway Classification:	Cairns & MacKenzie - local-local			
Date of Count:	Day of wk: Wed	Mth, Day, Yr: Sep 9/15		
Weather:	fair			
Traffic Control Devices:	yield sign			
Current Pedestrian Control:	none			
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	percentile speed)	▼ 30 km/h		
-	ercentile (check one)	,		
□ Posted				
_ I oscu	Limit			
Distance to nearest	protected crosswalk	150 m		
	Wilson Cres			
Type:	Stop sign			
Is the orientation of	this crosswalk(s) N-S?	<u>n</u> (y or n)		
Duration of pedestr	ian count	5 hrs		
Elementary	: 27 Total Warı	ranted PC Points:	or	/ period
High School		st PC point value: 1,118	at	/ period
Adult	9	Corridor Points:	at	
Senior				
Vehicles passing through	•	on organit i viitoi		
crosswalk(s)				
2. 335Wain(5)	=			

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the South Crosswalk **

Time		Vehic	le 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					-	7 0022	110010	Impaired	Impaired	F	7001	· ·
7:00												
7:13												
7:45												
8:00	14	1	10		1							
8:15	3	8	5									
8:30	10	3	14									3
8:45	21	4	23		1							
9:00												
9:15												
9:30												
9:45												
AM Totals	48	16	52		2							3
11:30	4	8	3									
11:45	4	3	10		2							
12:00	4	2	3									
12:15	1	2	5		-							
12:30	6	4	9									2
12:45 13:00	6 3	5 3	7 5									
13:00	1	1	2									
Noon Totals	29	28	44		2							2
14:00	23	20	44									
14:15												
14:30												
14:45												
15:00	4	2	9									2
15:15	6	3	19									10
15:30	25	11	22									3
15:45	9	7	13									1
16:00	2	3	12									
16:15	11	3	8		2							
16:30	4	3	6									
16:45	6	4	14									
17:00												
17:15												
17:30												
17:45 18:00												
18:00												
18:30												
18:45												
19:00												
19:15												
19:30												
19:45												
20:00												
20:15												
20:30												
20:45												
PM Totals	67	36	103		2							16
Totals	144	80	199		6							21
						North Cr	osswalk =	6		South Cro	sswalk =	21

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 **

(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			Noi tii C	osswain			Journ G	JJJ Wain	
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

Ruth Street & Cairns Avenue:

Location & Roadway Classification:	Ruth & Cairns - collector & local			
Date of Count:	Day of wk: Tues	Mth, Day, Yr: Dec 1/15		
Weather:	fair			
Traffic Control Devices:	stop signs			
Current Pedestrian Control:	none			
Other Notes:				
Number of travel la	nes passing through the crosswalk(s)	lanes		
Is there a physical n	nedian in this crosswalk(s)?	n (y or n)		
Speed limit (or 85th	percentile speed)	5 0 km/h		
-	ercentile (check one)			
☐ Posted				
		•		
	protected crosswalk	290 m		
	Cumberland Ave			
Type:	4-way stop			
Is the orientation of	this crosswalk(s) N-S?	y (y or n)		
Duration of pedestr	ian count	<u>5</u> hrs		
Elementary	: 13 Total Warr	anted PC Points:	or	/ period
High School	: Highes	t PC point value: 906	at	
Adult	: Active Ped	Corridor Points:		
Senior	: Pedestrian Actuate	ed Signal Points: 23		
Vehicles passing through crosswalk(s)	2.469			

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the East Crosswalk **

Time		Vehicl	e Counts					Pedestria	an Counts			
(15						West Cr	osswalk			East Cro	osswalk	
minute	SB	WB	NB	EB	Child	Teen	Adult	Senior /	Senior /	Adult	Teen	Child
intervals) 7:00					, C.1.14	7 0 0 12	-	Impaired	Impaired		7	, C.1.144
7:00												
7:13												
7:45					-							
8:00	3	45	8	62								
8:15	<u> </u>	57	9	69	2							
8:30	5	85	11	66								1
8:45	4	60	11	56								1
9:00												
9:15												
9:30												
9:45												
AM Totals	12	247	39	253	2							2
11:30	3	42	6	43								
11:45	2	39	4	61								
12:00	2	33		55								1
12:15	2	42	3	60	1							1
12:30	5	45	4	58	ļ				_			
12:45 13:00	2	47 42	3 5	43							_	
13:00	2	36		55 57				•				1
Noon Totals	17	326	1 26	432	1							3
14:00	1/	320	20	432	1							J
14:15												
14:30												
14:45												
15:00	4	42	7	51					•			
15:15	2	66	3	67								2
15:30	6	80	6	78								
15:45	5	65	6	71								
16:00	1	57	5	70								1
16:15		51	6	69	1							
16:30		43	11	80								1
16:45	2	73	7	83								
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	20	477	51	569	1							4
Totals	49	1,050	116	1,254	4							9
						West Cr	osswalk =	4		East Cro	osswalk =	9

Ruth Street & Haultain Avenue:

Location & Roadway Classification:	Ruth St E (Arterial) & Haultain Ave	(Local)			
Date of Count:	Day of wk: Monday & Tuesday	Mth, Day, Yr:	Monday, March 17	, 2014 & Tuesday, March 1	.8
Weather:	Cool, clear and a bit of snow/ice of	on the ground			
Traffic Control Devices:	Two-way Stop on Haultain Ave giv	ing right of way to Ruth S	t E		_
Current Pedestrian Control:	Standard Crosswalk				_
Other Notes:					_
Number of travel la	nes passing through the crosswa	lk(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)	50	km/h		
	protected crosswalk Ruth St E & McKinnon Ave S Standard crosswalk with one-way	115	m		
Is the orientation of	this crosswalk(s) N-S?	У	(y or n)		
Duration of pedestri	an count	5	hrs		
Elementary High School Adult	: Н	Warranted PC Points: lighest PC point value: e Ped Corridor Points:	792	or at	/ period
Senior Vehicles passing through crosswalk(s):	1.929	ctuated Signal Points:	16		

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the West Crosswalk **

Time	Vehicle Counts							Pedestria	rian Counts			
(15						West Cr	osswalk			East Cr	osswalk	
minute	SB	WB	NB	EB	Child	Teen	Adult	Senior/	Senior /	Adult	Teen	Child
intervals)					Cilliu	reen	Auuit	Impaired	Impaired	Auuit	reen	Cilliu
7:00												
7:15												
7:30												
7:45												
8:00	3	40	1	56								1
8:15		39	3	51						,		
8:30		61	1	54	1							1
8:45	3	48	3	64	1						•	
9:00										,		
9:15										,		
9:30										,		
9:45	•	400	0	005	0							0
AM Totals	6	188	8	225	2					_		2
11:30 11:45		25	1	36			2	•			_	
	2	35	2	52		<u> </u>				_		
12:00		47 26	3	48			2					
12:15			1	45		<u> </u>				4	_	
12:30 12:45	2	39	2	39			2			1		
13:00	1	41	1	54						,		
13:00	1	38	2	50			•			1		
Noon Totals	5	21 272	10	45 369						2		
14:00	<u> </u>	212	10	309						<u> </u>		
14:00												
14:15									_	_		
14:45						•						
15:00	1	32	1	49					_			1
15:15	3	42	1	61			1					_
15:30	1	38	2	62			_					
15:45	1	47		46	4							
16:00	2	41	3	58	-					•		
16:15	4	39	6	63								
16:30	4	46	3	71								
16:45	-	44	5	71								
17:00				, 1								
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	16	329	20	481	4							1
Totals	27	789	38	1,075	6		7			2		3
						West Cr	osswalk =	13		East Cro	osswalk =	5

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) 3 lanes		
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?	<u>n</u> (y or n)		
Duration of pedestr	ion count	5 hrs		
Duration of pedestr	ian count	5IIIS		
Elementary	: Total Wa	rranted PC Points:	or	/ period
High School		est PC point value: 3,878	at	, ,
Adult		d Corridor Points:		
Senior	: Pedestrian Actua	ited Signal Points: 31		
Vehicles passing through	¹ 8,254			
crosswalk(s)	6,23 4 :			

ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED

**Install device at the South Crosswalk **

Time		Vehicl	e Counts					Pedestria	an Counts			
(15						North C	rosswalk			South Cr	osswalk	
minute	SB	WB	NB	EB	Child	Teen	Adult	Senior/	Senior /	Adult	Teen	Child
intervals)					Cilliu	reen	Auuit	Impaired	Impaired	Auuit	reen	Cilliu
7:00					_							
7:15												
7:30												
7:45												
8:00	167		157	41								
8:15	190		173	41	_		_				_	
8:30	164		225	34		_					_	
8:45 9:00	164		186	39							_	
9:00					-							
9:15												
9:30					-				_			
AM Totals	685		741	155								
11:30	116		182	31						1		
11:30	119		171	28	-					1		
12:00	159		171	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	1,077		1,555	250						3		
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	1.005		2.205	201						1.7		
PM Totals	1,385		2,295	301						17		
Totals	3,169		4,391	694		NI II C	1			20		
						North Cr	osswalk =	1		South Cro	osswalk =	20

Appendix D: Pedestrian Corridor Warrant

Clarence Avenue & Calder Crescent:

Time	Vehicle	Counts		Tot	Pedo al Both Si	estrian Co ides	unts	Factore	d Counts	P.C. Warrant	Periods Wrnt'd	Points o Wrnt'd
(15 minute intervals)	15 min.	30 min.	Child	Teen	Adult	Senior / Impaired	Total	15 min.		Points	(1=Yes)	
7:00						Impaneu						
7:15												
7:30												
7:45												
8:00	361	361										
8:15	388	749										
8:30	410	798										
8:45	426	836										
9:00		426										
9:15												
9:30												
9:45												
AM Totals	1,585											
11:30	331											
11:45	327	658										
12:00	351	678										
12:15	358	709										
12:30	338	696										
12:45	360	698										
13:00	332	692										
13:15	340	672										
Noon Totals	2,737											
14:00												
14:15												
14:30												
14:45												
15:00	389	389										
15:15	433	822										
15:30	441	874										
15:45	480	921										
16:00	465	945										
16:15	434	899										
16:30	510	944										
16:45	494	1,004										
17:00		494										
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	3,646											
Totals	7,968											
			#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
					h Crosswa							
					h Crosswa							

SUMMARY

Wilson Crescent & Cairns Avenue:

Time (15 minute	Vehicle	Counts		Tot	Pedo al Both Si	estrian Co ides	unts	Factore	d Counts	P.C. Warrant		Points of Wrnt'd
intervals)	15 min.	30 min.	Child	Teen	Adult	Senior / Impaired	Total	1	30 min.	1		Periods
7:00						Impaneu						
7:15												
7:30												
7:45												
8:00	86	86	1				1	1	1	86		
8:15	75	161	1				1	1	1	161		
			4				4	1				
8:30	108	183	4				4	4	4	732		
8:45	126	234	6				6	6	10	2,340		
9:00		126							6	756		
9:15												
9:30												
9:45												
AM Totals	395		11				11					
11:30	87		2				2	2				
11:45	101	188	7				7	7	9	1,692		
12:00	103	204	2				2	2	9	1,836		
12:15	78	181	3				3	3	5	905		
12:30	91	169	1				1	1	4	676		
12:45	86	177							1	177		
13:00	57	143	1				1	1	1	143		
	61		1				1	1	2			
13:15		118						1		236		
Noon Totals	664		17				17					
14:00												
14:15												
14:30												
14:45												
15:00	116	116										
15:15	139	255										
15:30	134	273	11				11	11	11	3,003		
15:45	127	261	4				4	4	15	3,915		
16:00	126	253	1				1	1	5	1,265		
16:15	100	226	1				1	1	2	452		
16:30	114	214	2				2	2	3	642		
16:45	116	230							2	460		
	110									400		
17:00		116										
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	6=-											
PM Totals	972		19				19					
Totals	2,031		47				47					
			100%				100%					
				Wes	t Crosswa	lk=	8					
				East	Crosswa	lk =	39	<<< instal	l crosswall	c on this sid	de of the in	nt.

SUMMARY

Total Warranted PC Points: or / period Highest PC point value: 3,915 at

Average PC point value: 1,298
No. of periods warranted:

Wilson Crescent & MacLean Crescent (west leg):

Time	Vehicle	Counts				estrian Co	unts		1.0	P.C.	Periods	
(15 minute intervals)					al Both Si	des Senior/			d Counts			II .
	15 min.	30 min.	Child	Teen	Adult	Impaired	Total	15 min.	30 min.	Points	(1=Yes)	Period
7:00												
7:15												
7:30												
7:45												
8:00	82	82										
8:15	78	160										-
8:30 8:45	96	162 180	1				1	1	1	180		-
9:00	90	96	1				1	1	1	96		
9:15		90								90		
9:30												-
9:45												
AM Totals	340		1				1					
11:30	65											
11:45	79	144										
12:00	68	147										
12:15	59	127										
12:30	67	126										
12:45	62	129										
13:00	61	123										
13:15	64	125										
Noon Totals	525											
14:00												
14:15												
14:30												
14:45												
15:00	80	80										
15:15	109	189										
15:30	115	224										
15:45	107	222										
16:00	87 91	194										
16:15 16:30	106	178 197	1				1	1	1	197		
16:45	110	216	1				1	1	2	432		
17:00	110	110	1						1	110		-
17:15		110								110		-
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	067											
PM Totals	805		2				2					
Totals	1,670		3				3					
			100%	•			100%					
					t Crosswa : Crosswa		3		l crosswall			

SUMMARY

Total Warranted PC Points: or / period Highest PC point value: 432 at

Average PC point value: 68
No. of periods warranted:

Wilson Crescent & MacKenzie Crescent / Brown Crescent:

Time (15 minute	Vehicle	Counts		Tot	Pede al Both Si	estrian Co ides	unts	Factore	d Counts	P.C. Warrant	Periods Wrnt'd	Points o Wrnt'd
intervals)	15 min.	30 min.	Child	Teen	Adult	Senior / Impaired	Total		30 min.	1 1	(1=Yes)	
7:00												
7:15												
7:30												
7:45												
8:00	81	81										
8:15	65	146										
8:30	84	149	1				1	1	1	149		
8:45	102	186	2				2	2	3	558		
9:00		102							2	204		
9:15												
9:30												
9:45												
AM Totals	332		3				3					
11:30	89		3				3	3				
11:45	78	167							3	501		
12:00	96	174										
12:15	64	160										
12:30	78	142										
12:45	80	158										
13:00	60	140	2				2	2	2	280		
13:15	75	135							2	270		
Noon Totals	620		5				5					
14:00												
14:15												
14:30												
14:45												
15:00	79	79										
15:15	120	199	3				3	3	3	597		
15:30	120	240	1				1	1	4	960		
15:45	111	231	7				7	7	8	1,848		
16:00	107	218	1				1	1	8	1,744		
16:15	111	218	2				2	2	3	654		
16:30	112	223							2	446		
16:45	106	218										
17:00		106										
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	866		14				14					
			22				22					
Totals	1,818				l .	1		II				
Totals	1,818		100%				100%					

SUMMARY

6

Total Warranted PC Points: or / period Highest PC point value: 1,848 at

East Crosswalk =

Average PC point value: No. of periods warranted:

Wilson Crescent & back lane between MacLean Crescent (east) & MacLean Crescent (west):

(15 minute intervals) 7:00 7:15 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45 15:00	Vehicle	Counts		Tot	Pedotal Both Si	estrian Co ides	unts	Factored	l Counts	P.C. Warrant		Points of Wrnt'd
7:00 7:15 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	15 min.	30 min.	Child	Teen	Adult	Senior / Impaired	Total		30 min.		(1=Yes)	
7:15 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45						ппрапец					,	
7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45												
7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45												
8:15 8:30 8:45 9:00 9:15 9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45												
8:15 8:30 8:45 9:00 9:15 9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	80	80	1				1	1	1	80		
8:30 8:45 9:00 9:15 9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	79	159							1	159		
8:45 9:00 9:15 9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	77	156										
9:00 9:15 9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	90	167										
9:15 9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45		90										
9:30 9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45												
9:45 AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45												
AM Totals 11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45												
11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	326		1				1					
11:45 12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	61		1									
12:00 12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	75	136								\vdash		
12:15 12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	65	140								\vdash		
12:30 12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	56	121								\vdash		
12:45 13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	64	120										-
13:00 13:15 Noon Totals 14:00 14:15 14:30 14:45	59	123	1				1	1	1	122		
13:15 Noon Totals 14:00 14:15 14:30 14:45			1				1	1	1	123		
14:00 14:15 14:30 14:45	62 62	121							1	121		
14:00 14:15 14:30 14:45		124	1				1					
14:15 14:30 14:45	504		1				1					
14:30 14:45												
14:45												
15:00												
	81	81										
15:15	110	191										
15:30	112	222	1				1	1	1	222		
15:45	106	218							1	218		
16:00	82	188										
16:15	85	167										
16:30	104	189										
16:45	101	205										
17:00		101										
17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
18:45												
19:00												
19:15												
19:30												
19:45						Ì						
20:00						İ						
20:15						İ						
20:30					<u> </u>							
20:45												
PM Totals												
Totals	781		1				1					
- 0 0.0115	781 1.611		1 3				1 3					
	781 1,611		3				3					
				Wes	t Crosswa	ılk=						

SUMMARY

Total Warranted PC Points: / period or Highest PC point value: 222

Average PC point value: $No.\,of\,periods\,warranted:$

MacKenzie Crescent & walkway connection to Hugh Cairns School (north of Wilson Crescent):

Time	Vehicle	Counts		Tot	Pederal Both Si	estrian Co	unts	Factore	d Counts	P.C. Warrant		Points o
(15 minute intervals)	15 min.	30 min.	Child	Teen	Adult	Senior /	Total		30 min.			Periods
7:00	10 111111	JU MIM	Ciniu	I cen	liuuit	Impaired	Total	10 111111		Tomes	(1 103)	Crious
7:15								-				
7:30												
7:45												
8:00	2	2										
8:15	11	13										
8:30	11	22										
8:45	8	19	2				2	2	2	38		
9:00		8							2	16		
9:15												
9:30												
9:45												
AM Totals	32		2				2					
11:30	6											
11:45	4	10										
12:00	4	8	1				1	1	1	8		
12:15	8	12							1	12		
12:30	10	18	2				2	2	2	36		
12:45	6	16							2	32		
13:00	2	8										
13:15		2										
Noon Totals	40		3				3					
14:00												
14:15												
14:30												
14:45												
15:00	4	4	1				1	1	1	4		
15:15	6	10							1	10		
15:30 15:45	22	28 36	1				1	1	1	36		
16:00	14 6	20	1				1	1	2	40		
16:15	6	12	1				1	1	1	12		
16:30	6	12							1	12		
16:45	8	14	1				1	1	1	14		
17:00	0	8	1					1	1	8		
17:15		- 6							1	0		
17:30								-				
17:45												
18:00												
18:15												
18:30												
18:45												
19:00												
19:15												
19:30						Ì						
19:45						Ì						
20:00												
20:15												
20:30												
20:45												
PM Totals	72		4				4					
Totals	144		9				9					
			100%				100%					
				Nort	h Crosswa	alk =	6	<<< instal	l crosswall	on this sid	de of the in	nt.
				Sout	h Crosswa	alk =	3					

SUMMARY

Total Warranted PC Points: or / period Highest PC point value: 40 at Average PC point value: 18

No. of periods warranted:

Cairns Avenue & Munroe Avenue:

Time	Vehicle	Counts		Tot	Pedo al Both Si	estrian Co ides	unts	Factoro	d Counte	P.C. Warrant	Periods Wrnt'd	Points o Wrnt'd
(15 minute intervals)	15 min.	30 min.	Child	Teen	Adult	Senior /	Total	15 min.		Points	(1=Yes)	
7:00	10 111111		Cilita	reen	Tidate	Impaired	Tour	10 111111	JO IIIII	Tomes	(1-103)	rerrous
7:15												
7:30												
7:45												
8:00	28	28	9				9	9	9	252		
8:15	13	41	4				4	4	13	533		
8:30	26	39	10				10	10	14	546		
8:45	44	70	28				28	28	38	2,660		
9:00		44	20				20	20	28	1,232		
9:15									20	1,232		
9:30												
9:45												
AM Totals	111		51				51					
11:30	17		3				3	3				
11:45	20	37	14				14	14	17	629		
	7	27	2				2	2		432		
12:00 12:15	8	15	3				3	3	16 5	75		
12:15		26	9				9	9		312		
	18								12			
12:45	13	31	7				7	7	16	496		
13:00	11	24	2				2	2	9	216		
13:15	4	15	2				2	2	4	60		
Noon Totals	98		42				42					
14:00												
14:15												
14:30												
14:45												
15:00	15	15	4				4	4	4	60		
15:15	35	50	6				6	6	10	500		
15:30	52	87	45				45	45	51	4,437		
15:45	33	85	15				15	15	60	5,100		
16:00	16	49	5				5	5	20	980		
16:15	18	34	4				4	4	9	306		
16:30	14	32	3				3	3	7	224		
16:45	24	38	2				2	2	5	190		
17:00		24							2	48		
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	207		84				84					
Totals	416		177				177					
			100%				100%					
				Nort	h Crosswa	alk =	171	<<< instal	l crosswall	on this sid	le of the ir	nt.
				Sout	h Crosswa	alk =	6]				

SUMMARY

Total Warranted PC Points: or / period Highest PC point value: 5,100 at

Average PC point value: No. of periods warranted:

Cairns Avenue & MacKenzie Crescent:

Time	Vehicle	Counts		Tot	Pede al Both Si	estrian Co ides	unts	Factored	1 Counts	P.C. Warrant	Periods Wrnt'd	II .
(15 minute intervals)	15 min.	30 min.	Child	Teen	Adult	Senior / Impaired	Total		30 min.	Points	(1=Yes)	
7:00						ішрапец					,	
7:15												
7:30												
7:45												
8:00	25	25	1				1	1	1	25		
8:15	16	41	-						1	41		
8:30	27	43	3				3	3	3	129		
8:45	48	75	1				1	1	4	300		
9:00	40	48	1						1	48		
9:15		40							1	40		
9:30												
9:45	116		-				-					
AM Totals	116		5				5					
11:30	15											
11:45	17	32	2				2	2	2	64		
12:00	9	26							2	52		
12:15	8	17										
12:30	19	27	2				2	2	2	54		
12:45	18	37							2	74		
13:00	11	29										
13:15	4	15										
Noon Totals	101		4				4					
14:00												
14:15												
14:30												
14:45												
15:00	15	15	2				2	2	2	30		
15:15	28	43	10				10	10	12	516		
15:30	58	86	3				3	3	13	1,118		
	29		1				1	1	4			
15:45		87	1				1	1		348		
16:00	17	46	2						1	46		
16:15	22	39	2				2	2	2	78		
16:30	13	35							2	70		
16:45	24	37										
17:00		24										
17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
18:45												
19:00												
19:15												
19:30												
19:45						Ì						
20:00												
20:15												
20:30												
20:45												
PM Totals	206		18				18					
Totals	423		27				27					
10015	443		100%				100%					
			100%0	More	h Crosswa	 	6					

SUMMARY

Average PC point value: No. of periods warranted:

Clarence Avenue & Cascade Street:

Time	Vehicle	Counts		То	Pederal Both S	estrian Co	unts	Factore	d Counts	P.C. Warrant		Points of Wrnt'd
(15 minute intervals)	15 min.	30 min.	Child	Teen	Adult	Senior /	Total	1	30 min.	Points		Periods
7:00	13 11111.	JO IIIII.	Cilita	reen	nuure	Impaired	Total	13 11111.	JO IIIII.	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		253										
9:15												
9:30												
9:45												
AM Totals	985		3				3					
11:30	222		1				1	1			427 458 428 428 584 1,192 1,172 555 3,560 1,865	
11:45	205	427							1	427		
12:00	253	458										
12:15	220	473										
12:30	237	457										
12:45	221	458	1				1	1	1	458		
13:00	207	428							1	428		
13:15	205	412										
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%					
					h Crosswa							
				Sout	h Crosswa	alk =	13	<<< instal	l crosswall	c on this sid	de of the ir	nt.

SUMMARY

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

Average PC point value: 883
No. of periods warranted:

Ruth Street & Cairns Avenue:

Time Vehicle C	Counts		Tot	Pedo al Both Si	estrian Co ides	unts	Factored	d Counts	P.C. Warrant	Periods Wrnt'd	Points o Wrnt'd
41-3	30 min.	Child	Teen	Adult	Senior / Impaired	Total		30 min.	Points	(1=Yes)	
7:00					ппрапса						
7:15											
7:30											
7:45											
8:00 118	118										
8:15 135	253	2				2	2	2	506		
8:30 167	302	1				1	1	3	906		
8:45 131	298	1				1	1	2	596		
9:00	131							1	131		
9:15											
9:30											
9:45											
Totals 551		4				4					
11:30 94						-					
11:45 106	200								\vdash		
12:00 90	196	1				1	1	1	196		
		2				2	2				
	197							3	591		
12:30 112	219							2	438		
12:45 93	205								\vdash		
13:00 104	197										
13:15 95	199	1				1	1	1	199		
on Totals 801		4				4					
14:00											
14:15											
14:30											
14:45											
15:00 104	104										
15:15 138	242	2				2	2	2	484		
15:30 170	308							2	616		
15:45 147	317										
16:00 133	280	1				1	1	1	280		
16:15 126	259	1				1	1	2	518		
16:30 134	260	1				1	1	2	520		
16:45 165	299							1	299		
17:00	165										
17:15											
17:30											
17:45											
18:00											
18:15											
18:30											
18:45											
19:00											
19:15											
19:30									\vdash		
19:45						-					
20:00						-			\vdash		
20:15									\vdash		
									\vdash		
20:30						-			\vdash		
20:45		-									
M Totals 1,117		5				5					
Totals 2,469		13				13	-				
		100%			11	100%					
								_			
			100%	Wes	West Crosswa	West Crosswalk = East Crosswalk =	West Crosswalk = 4	West Crosswalk = 4	West Crosswalk = 4	West Crosswalk = 4	West Crosswalk = 4

SUMMARY

Total Warranted PC Points: or / period Highest PC point value: 906 at Average PC point value: 419

No. of periods warranted:

Ruth Street & Haultain Avenue:

Time (15 minute	Vehicle	Counts		Tot	Pedo al Both Si	estrian Co ides	unts	Factored	d Counts	P.C. Warrant	Periods Wrnt'd	Points o Wrnt'd
intervals)	15 min.	30 min.	Child	Teen	Adult	Senior / Impaired	Total		30 min.	1 1	(1=Yes)	
7:00												
7:15												
7:30												
7:45												
8:00	100	100	1				1	1	1	100		
8:15	93	193							1	193		
8:30	116	209	2				2	2	2	418		
8:45	118	234	1				1	1	3	702		
9:00	110	118						1	1	118		
9:15										110		
9:30												
9:45												
AM Totals	427		4				4					
			4		2		_	1				
11:30	62	154			2		2	1	4	151		
11:45	89	151			_			-	1	151		
12:00	98	187			2		2	1	1	187		
12:15	72	170							1	170		
12:30	82	154			3		3	1.5	1.5	231		
12:45	96	178						-	1.5	267		
13:00	89	185										
13:15	68	157			1		1	0.5	0.5	79		
Noon Totals	656				8		8					
14:00												
14:15												
14:30												
14:45												
15:00	83	83	1				1	1	1	83		
15:15	106	189			1		1	0.5	1.5	284		
15:30	103	209							0.5	105		
15:45	94	197	4				4	4	4	788		
16:00	104	198							4	792		
16:15	112	216										
16:30	124	236										
16:45	120	244										
17:00		120										
17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
18:45												
19:00												
19:15												
19:30												
19:45												
20:00												
20:00								1				
		 						-				
20:30								-				
20:45	046				1							
PM Totals	846		5		1		6					
Totals	1,929		9		9		18	-				
			50%		50%		100%	-				
					t Crosswa			_∥ <<< instal	ı crosswall	k on this sid	te of the ir	it.

SUMMARY

5

East Crosswalk =

Total Warranted PC Points: or / period Highest PC point value: 792 at Average PC point value: 311

No. of periods warranted:

Clarence Avenue & Glasgow Street:

(15 minute intervals)				Tot	al Both Si	ides		Factoro	d Counts	Warrant	Wrnt'd	Points of
ll ll	15 min.	30 min.	Child	Teen	Adult	Senior / Impaired	Total		30 min.	Points		Periods
7:00						ппрапец					,	
7:15												
7:30												
7:45												
8:00	365	365										
8:15	404	769										
8:30	423	827										
8:45	389	812										
9:00		389										
9:15												
9:30												
9:45												
AM Totals	1,581											
11:30	329				1		1	0.5				
11:45	318	647			1		1	0.5	0.5	324		
12:00	370	688							0.5	324		
12:15	338	708										
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			1		1	0.5	0.5	340		
13:15	326	648			1		1	0.5	0.5	324		
Noon Totals	2,692	046			4		4	0.5	0.5	324		
14:00	2,092				4		4					
14:00												
14:30												
14:45 15:00	200	200			1		1	0.5	0.5	200		
15:15	399	399			2		2	0.5	0.5	200		
	475	874							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												
19:30												
19:45												
20:00												
20:15												
20:30												
20:45												
PM Totals	3,981				17		17					
Totals	8,254				21		21					
					100%		100%					
					h Crosswa		1					
				Sout	h Crosswa	alk =	20	<<< instal	l crosswall	on this sid	le of the ir	nt.

SUMMARY

Total Warranted PC Points: or / period Highest PC point value: 3,878 at 1,186

Average PC point value: No. of periods warranted:

APPENDIX E: COLLISION ANALYSIS

Clasence Avenue Clasgova Street J11-55 12 4 4 0 vee 2	Street 1	Street 2	Ugrid	All Collisions (2009-2013)	All collisions - 2013	Right Angle, LT Turn, RT Turn only (2009-2013)	Right Angle, LT Turn, RT Turn only (2013)	Collector or Arterial	Average (2009- 2013)
Comberland Avenue	Clarence Avenue	Glasgow Street	J12-19	23	5	9	3	yes	5
McKinnon Avenue	Clarence Avenue	Isabella Street	J11-35	12	4	4	0	yes	2
Taylor Street Munroe Avenue Adelaide Steet J11-23	Cumberland Avenue	Ruth Street	J11-1	9	5	7	3	yes	2
Munroe Avenue	McKinnon Avenue	Isabella Street	J11-29	8	3	4	2	no	2
Clarence Avenue	Taylor Street	Munroe Avenue	J10-23	7	0	1	0	yes	1
Clarence Avenue	Munroe Avenue	Adelaide Street	J11-23	6	0	6	0	no	1
Cairns Avenue	Clarence Avenue	Adelaide Street	J11-31	6	2	3	2	yes	1
Taylor Street	Clarence Avenue	Cascade Street	J12-23	6	1	1	0	yes	1
Taylor Street Wiggins Avenue J10-14 5 1 2 0 yes 1 1 Curherland Avenue Isabella Street J11-55 5 1 2 3 1 yes 1 1 Ruft Street Hauttain Avenue J11-55 5 1 1 2 0 0 yes 1 1 McKinnon Avenue Hauttain Avenue J11-55 5 1 1 2 0 0 yes 1 1 McKinnon Avenue Adelside Street J11-56 4 0 0 4 4 0 0 no 1 1 Curherland Avenue Isabella Street J11-15 4 1 1 3 1 1 no 1 1 Curherland Avenue Adelside Street J11-15 4 1 1 3 1 1 no 1 1 1 Curherland Avenue Hilliard Street J11-15 4 0 0 2 0 0 yes 1 1 McKinnon Avenue Isabella Street J11-15 4 0 0 2 0 0 yes 1 1 McKinnon Avenue Isabella Street J11-15 4 0 0 0 2 0 0 yes 1 1 Munroe Avenue Isabella Street J11-15 4 0 0 0 0 0 0 no 1 1 Munroe Avenue Isabella Street J11-26 3 0 0 0 0 0 no 1 1 Munroe Avenue Isabella Street J11-26 3 1 1 0 0 0 0 0 no 1 1 Munroe Avenue Isabella Street J11-26 3 1 1 0 0 0 0 0 0 no 1 1 1 0 yes 1 1 1 1 0 0 yes 1 1 1 1 0 0 yes 1 1 1 1 0 0 yes 1 1 1 1 0 0 yes 1 1 1 1 0 0 yes 1 1 1 1 1 0 0 yes 1 1 1 1 1 0 0 yes 1 1 1 1 1 0 0 yes 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Cairns Avenue	Hilliard Street	J11-18	5	1	4	1	no	1
Cumberland Avenue Isabella Street J11-46 5 2 3 1 yes 1 Ruth Street Haultain Avenue J11-55 5 1 2 0 yes 1 Haultain Avenue Adelaide Street J11-56 4 0 3 0 no 1 Caims Avenue Adelaide Street J11-56 4 0 4 0 no 1 Adelaide Street J11-56 4 0 2 0 yes 1 McKinnon Avenue Hillard Street J11-56 4 0 2 0 yes 1 Multinore Avenue Isabella Street J11-24 3 0 0 0 no 1 1 0 yes 1 Cairns Avenue Isabella Street J11-20 3 1 1 1 0 yes 1 Cairns Avenue Hillard Street J11-20 3 1 1 0 yes <td>Taylor Street</td> <td>Cairns Avenue</td> <td>J10-84</td> <td>5</td> <td>1</td> <td>1</td> <td>1</td> <td>yes</td> <td>1</td>	Taylor Street	Cairns Avenue	J10-84	5	1	1	1	yes	1
Ruth Street	Taylor Street	Wiggins Avenue	J10-14	5	1	2	0	yes	1
McKinnon Avenue	Cumberland Avenue	Isabella Street	J11-46	5	2	3	1	yes	1
Hauttain Avenue Isabella Street J11-26 4 0 4 0 no 1	Ruth Street	Haultain Avenue	J11-55	5	1	2	0	yes	1
Cairns Avenue Adelaide Street J11-15 4 1 3 1 no 1 Cumberland Avenue Adelaide Street J11-56 4 0 2 0 yes 1 Munroe Avenue Isabella Street J11-24 3 0 2 0 no 1 Munroe Avenue Isabella Street J11-20 3 1 3 1 no 1 Cairns Avenue Isabella Street J11-20 3 1 1 0 yes 1 Clarence Avenue Calder Crescent J13-20 3 0 1 0 yes 1 Clarence Avenue Calder Crescent K12-6 3 1 1 1 yes 1 Cumberland Avenue Morans Street K12-6 3 1 1 1 yes 1 Ruth Street Cairns Avenue J11-57 3 0 2 0 yes 1 Haultain Avenue	McKinnon Avenue	Adelaide Street	J11-68	4	0	3	0	no	1
Cumberland Avenue Adelaide Street J11-56 4 0 2 0 yes 1 McKinnon Avenue Isliliand Street J11-28 3 0	Haultain Avenue	Isabella Street	J11-26	4	0	4	0	no	1
McKinnon Avenue Hilliard Street J11-28 3 0 0 0 no 1 Munroe Avenue Isabella Street J11-24 3 0 2 0 no 1 Cairns Avenue Isabella Street J11-20 3 1 3 1 no 1 Taylor Street Ewart Avenue J10-70 3 1 1 0 yes 1 Claronce Avenue Calder Crescent J13-20 3 0 1 0 yes 1 Cumberland Avenue Hanson Street K12-6 3 0 1 0 yes 1 Rub Street Caims Avenue J11-57 3 0 2 0 yes 1 Hauthain Avenue Adelaids Street J11-40 3 0 0 0 yes 1 Hauthain Avenue Bute Street J12-15 2 0 1 0 no 0 Wilsgard Avenue	Cairns Avenue	Adelaide Street	J11-15	4	1	3	1	no	1
McKinnon Avenue Hilliard Street J11-28 3 0 0 0 no 1 Munroe Avenue Isabella Street J11-24 3 0 2 0 no 1 Cairns Avenue Isabella Street J11-20 3 1 3 1 no 1 Taylor Street Ewart Avenue J10-70 3 1 1 0 yes 1 Claronce Avenue Calder Crescent J13-20 3 0 1 0 yes 1 Cumberland Avenue Hanson Street K12-6 3 0 1 0 yes 1 Rub Street Caims Avenue J11-57 3 0 2 0 yes 1 Hauthain Avenue Adelaids Street J11-40 3 0 0 0 yes 1 Hauthain Avenue Bute Street J12-15 2 0 1 0 no 0 Wilsgard Avenue		Adelaide Street		4	0	2	0	ves	1
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APPENDIX F: DECISION MATRIX

Decision Matrix – Recommendations proposed at December 15, 2015 meeting

Item	Location	Recommendation	Reason	Group 1	Group 2	Group 3	Decision
1	Clarence Avenue & Glasgow Street	Move bus stop a few metres south to allow vehicle clearance in left lane	Improve traffic flow	Ok. Maybe both sides.	Confusion with drivers if it's moved up. Confusion with pedestrian crossing and waiting for bus.	Likely not going to help.	Carried. Also included in Avalon plan.
2	Clarence Avenue & Taylor Street	Add location to major intersection review priority list	Address southbound queue due to driveway (into mall) 45m south of intersection	access to the mall issues; restrict westbound left turns; Aden Bowman Collegiate needs a midblock crosswalk; bus stop should be moved north of Taylor Street; educating students has already been tried		Left-turn arrows for northbound & southbound needed; southbound left-turn into mall is causing queues	Documented for further consideration as part of Intersection Improvements.
3	Clarence Avenue between Circle Drive overpass & Glasgow Street	Speed display board (facing northbound traffic)	Reduce speed	Install for southbound as well.	Install for southbound traffic as well.		Carried. Also included in Avalon plan.
4	Clarence Avenue - Glasgow Street to 2805 Clarence Avenue	Add through lane northbound (additional 100m)	Improve traffic flow	No. Need other solutions.	Ok but needs more analysis; Glasgow Street & Ferguson Avenue left-turn		Revised. Added through lane will extend all the way to Wilson Crescent. Recommendations were shown at Avalon neighbourhood traffic meeting and general support was received. Also included in Avalon plan.
5	Back lane east of Clarence Avenue - Wilson Crescent to Ruth Street	20kph signs	Reduce speed				Carried.
6	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	Not sure.		Wait until Stonebridge neighbourhood traffic review to implement speed reduction all at once.	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.
7	Wilson Crescent & MacKenzie Crescent/Brown Crescent	Zebra crosswalk & curb extensions on west side	Improve pedestrian safety (school route)				Carried.
8	Ruth Street & Cairns Avenue	Standard crosswalk	Improve pedestrian safety (school route)				Carried.
9	Ruth Street & McKinnon Avenue	Parking restrictions 10m on northwest corner	Enhance visibility	Not sure why northwest corner. Add restrictions on south side by condo.	Add parking restrictions on every corner	Look at northeast corner as well. Perhaps parking enforcement instead.	Carried. Add "No Parking" signs at 10m on all corners.
10	Haultain Avenue & Cascade Street	Standard crosswalk & curb extensions (north side)	Improve pedestrian safety (connects to park pathway) & reduce speed			Install playground signs (for northbound - install south of Cascade Street; for southbound - install north of Bute Street). Police to enforce speeding during peak hours	Carried. Install playground signs. Speed study indicated the 85th percentile speed was 49.4kph. This is typically not high enough for further recommendations. However, peak hours for speeding will be reviewed and information will be forwarded to Saskatoon Police Service for further consideration.
11	Cairns Avenue & Munroe Avenue	Zebra crosswalk (north side)	Improve pedestrian safety in front of school (currently standard crosswalk)				Carried.
12	McKinnon Avenue & Isabella Street	Upgrade yield signs & stop signs	Improve intersection safety	Re-think orientation of signs.			Carried.
13	Haultain Avenue - Isabella Street to St. Phillips School	Sidewalk on east side (110m)	Improve pedestrian safety & connectivity				Carried.
14	MacKenzie Crescent at walkway	Parking restrictions on both sides of walkway (approximately 5m on either side)	Improve pedestrian safety & enhance visibility			Street light needed and along walkway.	Carried. Location will undergo a CPTED review to determine if lighting in walkway is needed.
15	MacKenzie Crescent before curve (northbound & southbound) near walkway	Pedestrian crosswalk ahead signs	Improve pedestrian safety (school route)				Carried. Consideration for added lighting in along walkway because it connects to a park/school. This may need to come from a separate Division as it is not traffic safety-related.
16	Back lane between 2813 & 2903 Calder Avenue	Install bollards	Reduce shortcutting in back lane	Ok, but what about lane east of this to Clarence Avenue? Install 20kph signs.	Difficult to comment. Should be decided on by the residents on Calder Crescent.		Removed. Issues will be addressed through a separate study. Survey will be sent to residents to determine next steps. If support is shown from residents then lane restrictions will be installed temporarily in spring 2016.

Decision Matrix – Additional Issues raised at December 15, 2015 meeting

Item	Location	Comment	Decision	
1	Circle Drive off ramp & Clarence Avenue	Issues with left-turn; drivers don't know when southbound driver is about to turn or continue through	Documented for further consideration as part of Intersection Improvements.	
2	Clarence Avenue mall exit	Issues when trying to exit northbound	Private property	
3	MacKenzie Crescent	Snow is being pushed onto sidewalk	Forward comments to Public Works for consideration.	
4	Back lane north of Circle Drive east of Calder Court	Speeding; install 20kph signs	Carried.	
5	Cairns Avenue (southbound before MacKenzie Crescent)	Trees blocking 30kph sign	No issues noted during site check. Signs were visible.	
6	Clarence Avenue & Wilson Crescent	Review parking restrictions on Clarence Avenue to improve traffic flow; Mailbox south of Wilson Crescent causes visibility issues; not enough green time for Wilson Crescent, especially for westbound; school signs missing for northbound/southbound	Documented for further consideration as part of Intersection Improvements.	
7	Parking program near schools Implement cost-sharing program to allow public to park in residential driveways during major events at schools		Comments documented for further consideration under city-wide initiatives.	
8	Clarence Avenue & Calder Crescent	Pedestrian safety concerns; drivers passing on right when a pedestrian is crossing; drivers not stopping for pedestrians	Pedestrian study indicated zero pedestrians crossed during peak hours. Therefore no improvements recommended.	
9	Back lane north of Circle Drive at east end Install posts so drivers can't shortcut through park		This is outside of the Adelaide-Churchill neighbourhood boundary. It will be documented with the Nutana Park concerns and addressed as part of their neighbourhood traffic review.	
10	Ruth Street & Haultain Avenue	Hedges & parking on northwest corner	Site check determined trees had already been trimmed (privately-owned).	
11	Clarence Avenue - in front of Aden Bowman Collegiate	Students jaywalking to Mac's store; doors do not align with crosswalk	Being addressed through separate study in accordance with the School Division.	
12	Lane between Wilson Crescent & Glasgow Street	Install "Local Traffic Only" sign or 20kph speed signs	This is a public lane. 20kph signs are already installed.	
13	School sites	Idling in front of schools; should have a City Policy to address this	Comments documented for further consideration under city-wide initiatives.	
14	Cairns Avenue & Cascade Street	Install standard crosswalk & curb extensions	Collect traffic data in spring 2016 to determine if crosswalk & curb extensions are needed	
15	Back lane between Ferguson Avenue & Calder Avenue	Install 20kph speed signs	Carried.	
16	Glasgow Street & Clarence Avenue (southwest corner on Clarence Avenue) Install sidewalk up to bus stop		Carried. Included in Avalon review neighbourhood traffic review.	
17	Glasgow Street & Clarence Avenue	Review signage at or near intersection	Carried. Included in Avalon review neighbourhood traffic review.	
18	Clarence Avenue near Wilson Crescent	Install additional school zone signs on signal overheads	Carried. Included in Avalon review neighbourhood traffic review.	