

New Decision Process for Example Locations

Preliminary Assessment Decision Point		Clarence Avenue & 14 th Street Pedestrian Crossing East-West direction	Preston Avenue & East Drive Pedestrian Crossing East-West direction
Traffic Signal Warrant	Points	31	42
	Warranted (Y/N)	No	No
Average Hourly Pedestrian Volume ≥ 15 EAU ¹ s AND vehicular volume ≥ 1,500 veh/day?	Average Hourly Pedestrian Volume	12 EAU	4 EAU
	Vehicular Volume	14,400	16,700
	Answer (Y/N)	No	No
Is this site > 200 metres from the nearest traffic control device?	Distance from the nearest traffic control device	220 m	375 m
	Answer (Y/N)	Yes	Yes
Is average hourly latent pedestrian crossing demand ≥ 15 EAUs OR is there requirement for system connectivity?	Latent pedestrian crossing demand ²	~ 10 EAU	~4 EAU
	Required connection?	14 th Street is identified as a proposed All Ages and Abilities route in the Active Transportation Master Plan	The distance between the traffic signals at Arlington Avenue and Louise Street suggests that an additional pedestrian crossing would be desirable. East Drive is most evenly spaced between Arlington Avenue and Louise Street and has an existing ground-mounted pedestrian device. Enhancing the crossing would meet pedestrian and driver expectation and enhance compliance.
	Answer (Y/N)	Yes	Yes
Treatment Selection	Table-1 in Pedestrian Crossing Guide	Overhead Flashing (OF) device	RRFB or OF

¹ EAU – Equivalent Adult Units to account for pedestrian age and physical ability. Adults – 1.0 EAU; Children ≤ 12 years – 2.0 EAUs; Older pedestrians ≥ 65 years – 1.5 EAUs; Pedestrian with impairment – 2.0 EAUs.

² Latent crossing demand estimated using the Institute of Traffic Engineers Trip Generation Manual 10th Edition and the mode split identified in the Active Transportation Master Plan Discussion Paper #1.

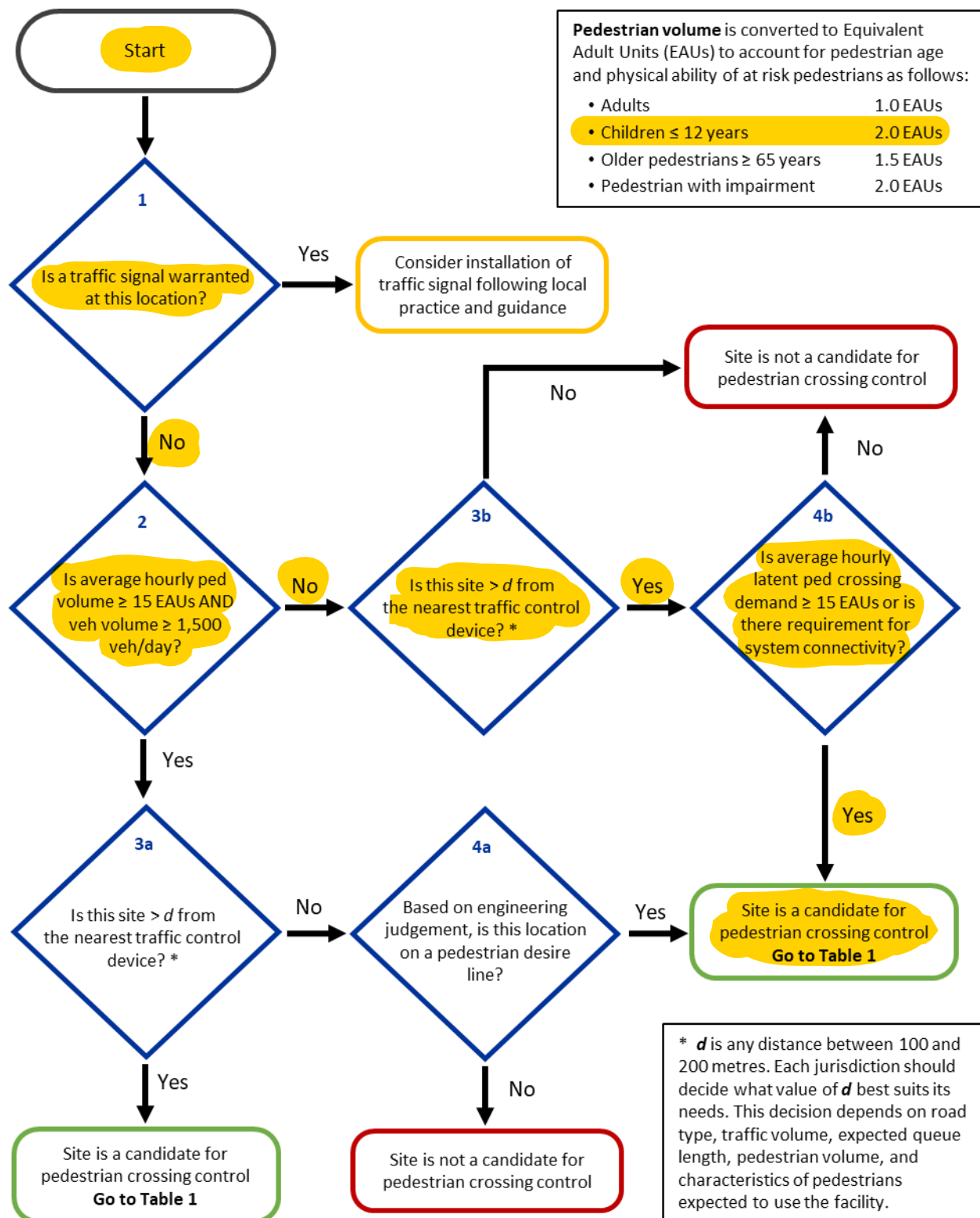


Figure 8: Decision Support Tool – Preliminary Assessment

City of Saskatoon Canadian Matrix Traffic Signal Warrant Analysis

Main Street (name)	Clarence Avenue	Direction (EW or NS)	NS	Comments
Side Street (name)	14th Street	Direction (EW or NS)	EW	
Quadrant / Int #				
CHECK SHEET				

for Warrant Calculation Results, please hit 'Page Down'

Road Authority:	City of Saskatoon
City:	Saskatoon
Analysis Date:	2018 Jul 30, Mon
Count Date:	2018 Jan 23, Tue
Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
Clarence Avenue NB			1			1		220	2
Clarence Avenue SB			1			1		220	2
14th Street WB					1				
14th Street EB					1				

Are the 14th Street WB right turns significantly impeded by through movements? (y/n) n
 Are the 14th Street EB right turns significantly impeded by through movements? (y/n) n

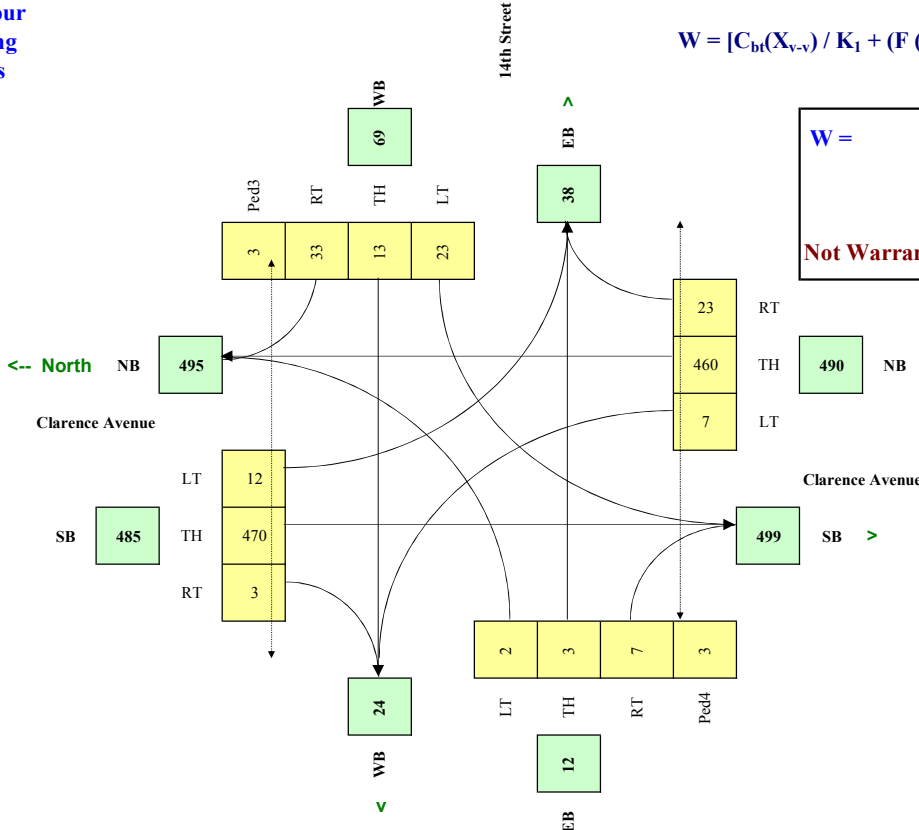
Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	y
Metro Area Population	(#)	210,000
Central Business District	(y/n)	n

Other input					
		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Clarence Avenue	NS	50	2.0%	y	0.0
14th Street	EW		2.0%	n	

Set Peak Hours													Ped1	Ped2	Ped3	Ped4
								WB		EB			NS	NS	EW	EW
								Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
16	37	3	2	9	4	4	0	0								
8:00 - 9:00	4	602	22	13	373	5	22	18	41	3	5	7	2	7	3	2
11:30 - 12:30	8	391	29	9	415	2	15	7	24	0	3	5	7	13	4	7
12:30 - 13:30	8	426	14	8	375	2	12	10	20	1	2	3	8	3	2	3
15:00-16:00	6	451	21	12	514	4	25	16	37	3	2	9	4	4	0	0
16:00-17:00	9	439	30	19	626	3	38	13	39	1	6	9	9	3	6	4
Total (6-hour peak)	41	2,760	137	73	2,817	20	137	80	198	11	20	42	34	34	15	16
Average (6-hour peak)	7	460	23	12	470	3	23	13	33	2	3	7	6	6	3	3

Average 6-hour Peak Turning Movements

$$W = [C_{bt}(X_{v-v}) / K_1 + (F(X_{v-p})L) / K_2] \times C_i$$



W =	31	26	5
		<i>Veh</i>	<i>Ped</i>
Not Warranted - Vs<75			

RESET SHEET

LEGEND

EXISTING TRAFFIC SIGNAL :



EXISTING PEDESTRIAN ACTUATED SIGNAL LOCATION



EXISTING PEDESTRIAN CROSSWALK:



POTENTIAL CROSSING LOCATIONS:



SELECTED CROSSING LOCATION:



PEDESTRIAN ATTRACTIONS:

(HIGH) (MED) (LOW)

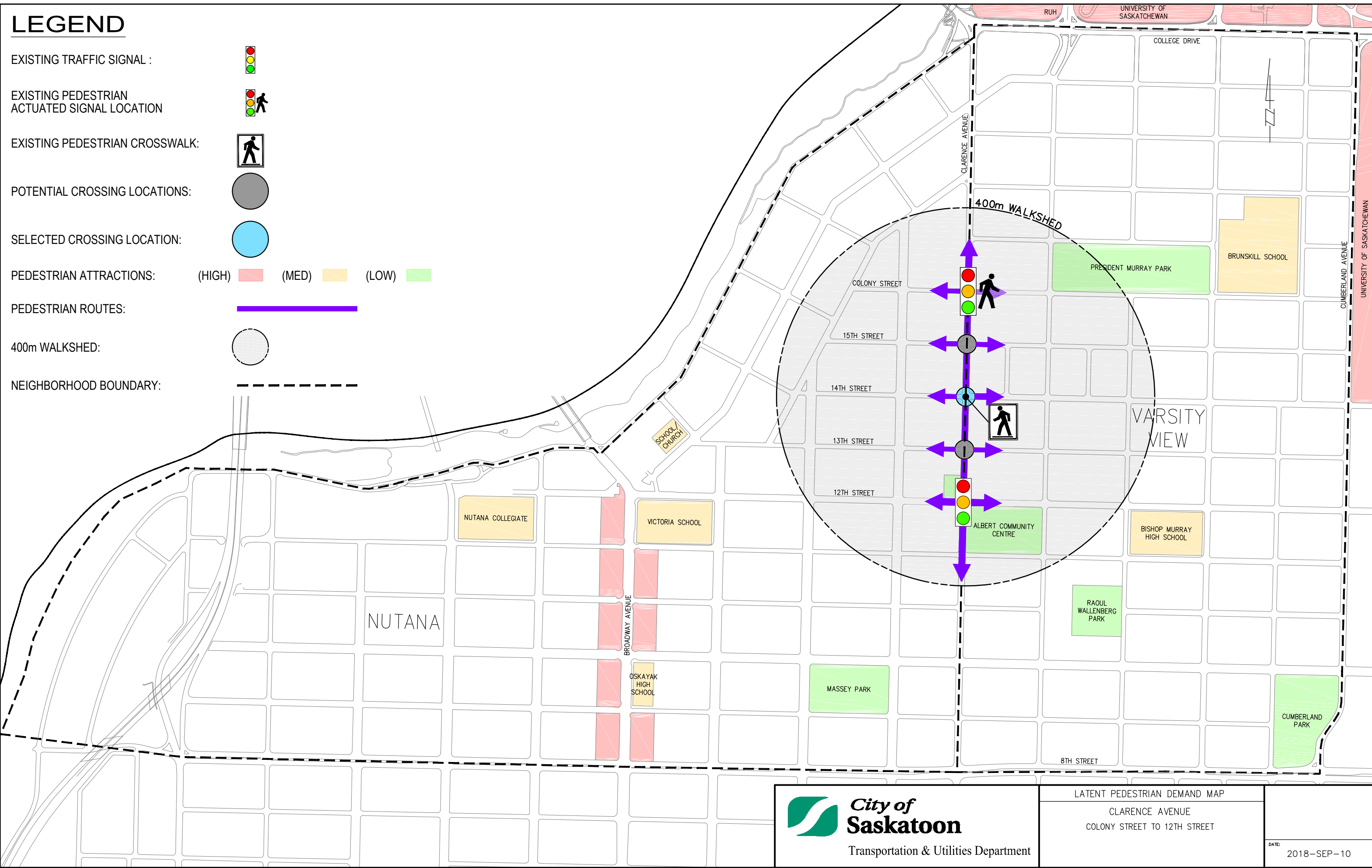
PEDESTRIAN ROUTES:



400m WALKSHED:



NEIGHBORHOOD BOUNDARY:



City of Saskatoon Canadian Matrix Traffic Signal Warrant Analysis

Main Street (name)	Preston Avenue	Direction (EW or NS)	NS	Comments APC is warranted and new data is requested for full signal warrant calculations
Side Street (name)	East Drive	Direction (EW or NS)	EW	
Quadrant / Int #				
CHECK SHEET				

for Warrant Calculation Results, please hit 'Page Down'

Road Authority:	City of Saskatoon
City:	Saskatoon
Analysis Date:	2018 May 02, Wed
Count Date:	2017 Sep 26, Tue
Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
Preston Avenue NB						1		380	1
Preston Avenue SB			1					295	1
East Drive WB					1				
East Drive EB									

Are the East Drive WB right turns significantly impeded by through movements? (y/n)

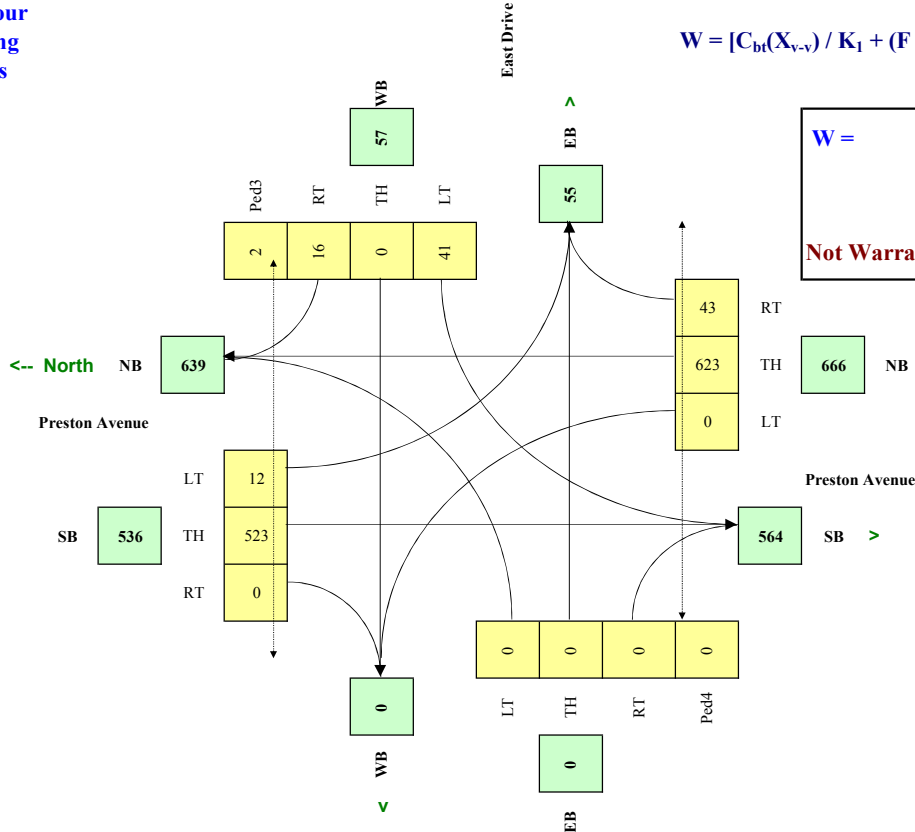
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Demographics		
Elem. School/Mobility Challenged	(y/n)	y
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	y
Metro Area Population	(#)	210,000
Central Business District	(y/n)	n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Preston Avenue	NS	50	2.0%	y	6.0
East Drive	EW		2.0%	y	

Set Peak Hours													Ped1	Ped2	Ped3	Ped4
	NB			SB			WB			EB			NS	NS	EW	EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
7:00 - 8:00	0	410	23	3	259	0	46	0	16	0	0	0		9	2	0
8:00 - 9:00	0	745	57	22	484	0	52	0	24	0	0	0		7	7	0
11:30-12:30	0	542	35	7	515	0	14	0	15	0	0	0		5	0	0
12:30-13:30	0	555	23	3	507	0	31	0	11	0	0	0		3	0	0
15:00-16:00	0	749	61	18	690	0	50	0	14	0	0	0		20	1	0
16:00-17:00	0	735	59	21	685	0	50	0	17	0	0	0		3	0	0
Total (6-hour peak)	0	3,736	258	74	3,140	0	243	0	97	0	0	0	0	47	10	0
Average (6-hour peak)	0	623	43	12	523	0	41	0	16	0	0	0	0	8	2	0

Average 6-hour Peak Turning Movements



$$W = [C_{bt}(X_{v-v}) / K_1 + (F(X_{v-p})L) / K_2] \times C_i$$

W =	42	40	2
		Veh	Ped

Not Warranted - Vs<75

RESET SHEET

LEGEND

EXISTING TRAFFIC SIGNAL :



EXISTING PEDESTRIAN CROSSWALK:



POTENTIAL CROSSING LOCATIONS:



SELECTED CROSSING LOCATION:



PEDESTRIAN ATTRACTIONS:

(HIGH) (MED) (LOW)

PEDESTRIAN ROUTES:



400m WALKSHED:



NEIGHBORHOOD BOUNDARY:

