

Transportation Services – Scarborough District
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File: D17-8247717
Int: – Lawrence / Mossbank

TO: Councillor Paul Ainslie
Ward 43, Scarborough East

FROM: Marko A. Oinonen
Transportation Services, Scarborough District

DATE: November 7, 2017

RE: **Enquiry: Pedestrian Walk Times:
Lawrence Avenue East at Mossbank Drive**

Further to a request from an area resident, we have completed our review regarding the above noted issue. Based on our review, we have concluded that a minor change to the existing signal display walk times at this intersection is required at this time.

Our conclusions are based on a Pedestrian Classification study, using pedestrian volumes recorded over the morning and afternoon peak periods. The study was conducted on Thursday, September 28, 2017, from 10:30 a.m. to 12:30 p.m., and during the afternoon from 4:00 p.m. to 6:00 p.m., respectively.

Lawrence Avenue East between Scarborough Golf Club Road and Orton Park Road is classified as a major arterial road with a posted speed limit of 60 km/h. Mossbank Drive between Lawrence Avenue East and Scarborough Golf Club Road is classified as a collector road with a regulatory speed limit of 50 km/h. This "T-type" intersection is control by traffic control signals (TCS).

At all traffic control signals, pedestrian walk times are displayed based on careful consideration of the crossing distances. At some locations, the prevalence of certain demographics i.e., seniors and those using assistive mobility devices (as a percentage of the pedestrian road users), are factored and extra time is provided to allow for increased crossing comfort. In both of these scenarios, a minimum of 20% of the pedestrian traffic must be either considered to be seniors (persons that appear to be 65 years or older) or persons using assistive mobility devices. During the two hours of pedestrian crossing observations at TCS neither of these number thresholds were attained, therefore, increased walk times cannot be installed at this time.

However, a check of the existing crossing distances at this intersection shows that, likely as the result of the recent road/curb reconstruction along Lawrence Avenue East, the crossing is slightly larger than has been shown in our records. Therefore, by copy of this memorandum to staff at the Traffic Management Centre, we ask that the north/south pedestrian flashing don't walk time be increased by one additional second. With the addition of this additional time, the time being provided for pedestrians to cross Ellesmere Road at Neilson Road will be 1.0 meters per second; which is consistent with the established the City of Toronto's new pedestrian timing methodology.

The pedestrian timing methodology adopted by the City of Toronto dictates both the amount of Walk time and Flashing Don't Walk time for the longest east/west and north/south directions.

The details of our studies are outlined in the attached technical summary.

Should you have any questions or comments regarding our review, please call Allan Burrows, Supervisor, Traffic Operations, at 416-396-7147.

Marko A. Oinonen, B.A. Sc., DPA, P. Eng.
Manager, Traffic Operations
Transportation Services, Scarborough District

DBS:cr

- c. Hao Lee, Senior Engineer, Traffic Management Centre
Darryl Spencer, Transportation Engineer, Traffic Management Centre

TECHNICAL SUMMARY

Road Classification

Road	Classification	Typical Daily Vehicle Volume For Subject Road Classification	Recorded Daily Vehicle Volume For Subject Road
Mossbank Drive	Collector	Between 8,000 and 20,000 vehicles per day (vpd)	No Current Counts Available
Lawrence Avenue East	Major Arterial	Greater than 20,000 vehicles per day (vpd)	November 10, 2011 (28,548 vpd)

- As evidenced in the above-noted table, both Lawrence Avenue East is functioning within the anticipated daily vehicle volume for a major arterial road.
- The existing traffic volume on Lawrence Avenue East is not considered problematic at this time.

Pedestrian Crossing Distance

Pedestrian Crossing Time: New Pedestrian Crossing Methodology

Direction	Crossing Distance (m)	Existing Walk (sec.)	Existing FDW (sec.)
E/W – crossing Mossbank Drive (North Side)	13.4	7 (minimum)	11
N/S – crossing Lawrence Avenue East (West Side)	27.0	7 (minimum)	22*
N/S – crossing Lawrence Avenue East (East Side)	26.2	7 (minimum)	22

- Twenty-three* seconds is required to be displayed for the north-south Flashing "Don't Walk" duration. As, such by copy of this report to staff at the Traffic Management Centre, we are requesting one additional second needs to be added to the north-south Flashing "Don't Walk" display.
- The new pedestrian crossing time methodology provides for two walk speeds: 1.2 metres per second (mps) within Flashing "Don't Walk" duration and 1.0 mps within the combined "Walk" plus the Flashing "Don't Walk" duration. The intent of this methodology is to provide pedestrians with enough time to complete the crossing during the Flashing "Don't Walk" duration.
- This intersection is equipped with the "Flashing Count-Down Timer" display. In order to activate these pedestrian signal displays, pedestrians are required to press the curb side 'call button' that tells the site computer to allocate additional time for pedestrians. Failure to press the 'call button' will not cause the pedestrian displays to show (pedestrians are required to comply with the shown 'do not cross' red solid hand symbol), however, sidestreet vehicular signals will be displayed but they provide much less time.

TECHNICAL SUMMARY

Pedestrian Classification Study

Date: Thursday, September 28, 2017
 Time: 10:30 a.m. to 12:30 p.m.

Crossing Lawrence Avenue East 10:30 a.m. to 11:30 a.m.	Pedestrian Classification				
	Assisted Children	Unassisted Children	Youths & Adults	Seniors	Assistive Devices
East Side	11	2	20	4	0
West Side	7	0	11	1	0
Totals	18 (32 %)	2 (4 %)	31 (55 %)	5 (9 %)	0 (0 %)

Crossing Lawrence Avenue East 11:30 a.m. to 12:30 p.m.	Pedestrian Classification				
	Assisted Children	Unassisted Children	Youths & Adults	Seniors	Assistive Devices
East Side	2	0	11	3	0
West Side	1	0	6	0	0
Totals	3 (13 %)	0 (0 %)	17 (74 %)	3 (13 %)	0 (0 %)

- 79 pedestrians cross Lawrence Avenue East between 10:30 a.m. and 12:30 p.m.

Date: Thursday, September 28, 2017
 Time: 4:00 p.m. to 6:00 p.m.

Crossing Lawrence Avenue East 4:00 p.m. to 5:00 p.m.	Pedestrian Classification				
	Assisted Children	Unassisted Children	Youths & Adults	Seniors	Assistive Devices
East Side	9	3	21	2	1
West Side	6	3	13	1	0
Totals	15 (25 %)	6 (10 %)	34 (58 %)	3 (5 %)	1 (2 %)

TECHNICAL SUMMARY

Crossing Lawrence Avenue East 5:00 p.m. to 6:00 p.m.	Pedestrian Classification				
	Assisted Children	Unassisted Children	Youths & Adults	Seniors	Assistive Devices
East Side	3	3	21	4	2
West Side	2	1	12	2	0
Totals	5 (10 %)	4 (8 %)	33 (66 %)	6 (12 %)	2 (4 %)

- 109 pedestrians cross Lawrence Avenue East between 4:00 p.m. and 6:00 p.m.
- Pedestrians that activated the pedestrian push button had ample time to cross the intersection at a safe and comfortable speed.
- Several pedestrians did not begin to cross the intersection until the "Flashing Don't Walk" indicator started (they did not cross during the "Walk" cycle; but waited until the "Flashing Don't Walk" cycle" began).
- There were no pedestrian and motorist conflicts observed during our study.
- Pedestrians often ignored the "Flashing Don't Walk" indicator and crossed the intersection.

Toronto Police Service Collision Records

Five-year review period: January 1, 2012 to October 31, 2016

Five-Year Collision Information	Number of Reported Collisions				
	2012	2013	2014	2015	2016
Collisions Involving Pedestrians	0	0	1	0	0

- As shown above, the reported collision record at the above noted intersection is not indicative of a safety problem at this time.