

**Pedestrian Crossings / Lane Designations / Road
Alteration By-laws: Lawrence Avenue West / William R.
Allen Road and Yorkdale Road / William R. Allen Road**

Date:	June 6, 2011
To:	North York Community Council
From:	Director, Transportation Services Division, North York District
Wards:	Ward 15 – Eglinton-Lawrence
Reference Number:	<i>ny11095</i>

SUMMARY

As the Toronto Transit Commission (TTC) operates a transit service on Lawrence Avenue West, City Council approval of this report is required.

To obtain approval to reconfigure both the southbound off-ramp and northbound on-ramp at the intersections of Lawrence Avenue West and William R. Allen Road by:

- Eliminating the channelized right turn movements at both intersections;
- Modifying the radius (bump out) on the southeast corner of the Lawrence West TTC Station driveway; and
- Construction of two bump outs on the north side of Lawrence Avenue West at both the southbound off-ramp and northbound on-ramp intersections.

In addition to the above, approval to amend the existing traffic by-laws is required to allow:

- Pedestrian crossing on the west side of the Lawrence Avenue West and William R. Allen Road northbound ramp intersection;
- Pedestrian crossing on the west side of Lawrence Avenue West and William R. Allen Road southbound ramp intersection; and
- Lane designations on the William R. Allen Road and Lawrence Avenue West

A Road Alteration By-law for the removal of the channelized right-turn lanes and construction of the bump outs will also be required.

The reconfiguration of the Lawrence Avenue West and William R. Allen Road northbound on-ramp and southbound off-ramp intersections (removal of the channelized right turns), bump outs, lane designation and pedestrian crossing and amendments will improve traffic flow and pedestrian safety and accessibility at this location.

RECOMMENDATIONS

Transportation Services Division, North York District recommends that City Council:

1. Approve the deletion of the pedestrian crossing prohibition on Lawrence Avenue West, between a point 30.5 metres west of the west curb line of William R. Allen Road and a point 30.5 meters east of the east curb line of William R. Allen Road;
2. Approve the installation of a pedestrian crossing prohibition on Lawrence Avenue West at William R. Allen Road, between the east curb line of William R. Allen Road northbound on-ramp and a point 30.5 metres east of the east curb line of William R. Allen Road northbound on-ramp;
3. Approve the installation of a pedestrian crossing prohibition on Lawrence Avenue West at William R. Allen Road, between the east curb line of William R. Allen Road southbound off-ramp and a point 30.5 metres east of the east curb line of William R. Allen Road southbound off-ramp;
4. Approve the designation of the easterly southbound lane on the William R. Allen Road southbound off-ramp for left turns only, from Lawrence Avenue West to a point 200 metres north;
5. Approve the designation of the westerly southbound lane on the William R. Allen Road southbound off-ramp for right turns only, from Lawrence Avenue West to a point 200 metres north;
6. Approve the designation of the westerly northbound lane on the William R. Allen Road northbound off-ramp for left turns only, from Lawrence Avenue West to a point 100 metres south;
7. Approve the designation of the easterly northbound lane on the William R. Allen Road northbound off-ramp for right turns only, from Lawrence Avenue West to a point 100 metres south;
8. Approve the designation of the northerly westbound lane on Lawrence Avenue West for right turns only, from Shermount Avenue to William R. Allen Road northbound on-ramp; and

9. Approve this Division's request to direct the City's Legal Division to introduce the appropriate "Road Alteration By-Law" to permit the reconfiguration of the Lawrence Avenue West and William R. Allen Road northbound on-ramp and southbound off-ramp, and the geometric modification at the Lawrence Avenue West Bus Station driveway.

Financial Impact

All costs associated with the reconfiguration (removal of channelized right turns, bump outs, lane designations, pedestrian crossing) of the off-ramp and on-ramp at Lawrence Avenue West and William R. Allen Road are included within the Transportation Services 2011 Capital Budget. It should be noted that \$2.35 million dollars have been set aside for the construction and implementation of transportation road network improvements for Yorkdale Road / William R. Allen Road, Rane Avenue / William R. Allen Road and Lawrence Avenue West / William R. Allen Road.

Additional funds have been provided by Oxford Properties (Yorkdale Mall) in the amount of \$750,000.00 to be used for the reconfiguration of the Yorkdale Road /William R. Allen Road/Yorkdale Mall South Service Road and Yorkdale Park. Based on preliminary costs estimates, Transportation Services will be requesting that \$250,000.00 of the total funds provided be assigned to the roadwork.

ISSUE BACKGROUND

Transportation Services Division, North York District, at the request of the former Ward Councillor, on behalf of the residents of the area has undertaken a review of the existing traffic operations and geometry of the southbound off-ramp and northbound on-ramp at the intersection of William R. Allen Road and Lawrence Avenue West.

The residents' primary concerns were as follows:

- Motorists are currently using the existing William R. Allen Road southbound off-ramp gore to Lawrence Avenue West as two lanes, while the physical design consists of only one lane;
- Pedestrians have indicated that the existing crossing areas at the channelized right turns at the southbound off-ramp and northbound on-ramp are less than desirable and problematic; and
- Pedestrians have also indicated that there is no north/south crossing area at the intersection of Lawrence Avenue West and William R. Allen Road northbound on-ramp.

Therefore, in view of the above staff has undertaken a comprehensive review of the existing geometry and lane configurations, in order to determine the appropriate course of action.

COMMENTS

The William R. Allen Road and Lawrence Avenue West roadways are significant components of the transportation network providing connectivity to the immediate area and also the entire City. The William R. Allen Road was constructed over 40 years ago and has not seen any significant alterations or modification to its alignment. The current southbound vehicle volumes on the William R. Allen Road, north of Lawrence Avenue West are approximately 32,000 vehicles per day.

Lawrence Avenue West at the William R. Allen Road is a six-lane arterial roadway with a daily two-way traffic flow of approximately 38,000 vehicles and a speed limit of 50 km/h. The southbound William R. Allen Road segment between Yorkdale Road and Lawrence Avenue West consists of a four-lane cross section, of which the westerly curb lane is delineated for southbound right turns. The section south of Lawrence Avenue West is delineated as a two-lane cross section.

Southbound Off-ramp

The southbound William R. Allen Road to Lawrence Avenue West off-ramp consists of a single lane at the beginning of the off-ramp which branches into two lanes on the ramp approximately 60 metres north of Lawrence Avenue West. A channelized lane facilitates southbound right-turning traffic at Lawrence Avenue West. Pedestrians must wait for a gap in the southbound channelized right-turn lane to cross to/from the median island. Pedestrian crossings on Lawrence Avenue West are restricted to the west side of the intersection.

With regards to the residents concern about the existing geometry and lane configuration for the southbound off-ramp, we have reviewed the operation and have determined that the most appropriate action is to slightly widen the off-ramp to provide for two full width traffic lanes off of the southbound William R. Allen Road. A widening of approximately 1.5 metres will be required on the off-ramp itself to facilitate the appropriate lanes. In conjunction with the widening, the southbound traffic lanes on William R. Allen Road between Yorkdale Road and Lawrence Avenue West will be delineated to provide two southbound through lanes and two right turn lanes.

It should be noted that in addition to staff's observations and review of the existing geometry, a review of the Toronto Police Services collision data was conducted. This review has indicated that side swipe or rear end collisions are not prevalent at this location. This can be attributed to the fact that the majority of motorist that use this off-ramp are familiar with the behaviour of other drivers and as such are using caution when approaching the off-ramp.

In addition to the ramp widening, this Division also reviewed the feasibility of removing the southbound right turn channel and normalizing the intersection, thereby eliminating the need for pedestrians to cross the free flow channel.

Although the current southbound traffic is not controlled by the existing traffic control signals, given the high volume of traffic on Lawrence Avenue West and the high volume of pedestrian crossings, southbound motorists during the peak periods (7:00 a.m. to 7:00 p.m.) are not being provided the full benefit of the channelized right-turn lane.

The elimination of the southbound to westbound right turn channel will have little impact on the existing westbound right turn level of service, as our observations have indicated that motorists, particularly those that are destined to southbound Marlee Avenue, typically come to a full stop, thereby restricting the flow of traffic. Also our review has indicated that the high volume of pedestrians and restricted sight lines also impacts the effectiveness of the channelized right-turn lane.

It was also noted that the east/west pedestrian crossing on the south side of the intersection at the Lawrence Avenue West Bus Station driveway are required to cross at an unprotected right-turn channel. Currently, pedestrians can cross a portion of the intersection with the protection of the traffic control signal, however not for the full crossing distance. This has resulted in pedestrian confusion and disobedience of the walk display component of the traffic control signal. As such, staff are recommending that the right-turn channel be removed and the existing east/west crossing area be amended accordingly.

The above actions should address the pedestrian confusion and disobedience of the pedestrian signal as well as the residents' concerns. Specifically, that southbound motorists on William R. Allen Road are using the southbound through lane to leap frog ahead of the southbound right turn queue which results in driver aggression and potential sideswipes.

Northbound On-ramp

The northbound William R. Allen Road on-ramp consists of a single lane for eastbound left turning traffic which is separated by a large median island from the west bound right-turn channelized lane. Westbound right turn traffic travelling onto the northbound William R. Allen on-ramp must yield to pedestrians crossing the channelized lane.

Currently, the intersection of Lawrence Avenue West and William R. Allen Road northbound ramp is controlled by a traffic control signal. The traffic control signal provides east-west protected pedestrian crossing at the northbound ramp from the eastbound left-turning and northbound traffic. A channelized right-turn lane for westbound right-turning traffic does exist and provides access to northbound William R. Allen Road, with relative ease. However, this channelized right turn does not provide pedestrians with a protected crossing. A flashing beacon with a 'Yield to Pedestrians' warning sign is located at the westbound channelized right-turn lane to assist pedestrian crossings and minimize conflicts between pedestrians and westbound right turning vehicles.

During the busiest eight-hour period of a typical weekday, there are approximately 5,500 eastbound left-turning vehicles and 6,200 westbound right turning vehicles accessing the William R. Allen Road northbound on-ramp. Additionally there are approximately 550 pedestrians crossing the north leg of the intersection during this period.

This Division has received numerous requests in the past with regards to the safety of pedestrians crossing the north side at Lawrence Avenue West and W.R. Allen Road east ramp. We have reviewed several options, dual eastbound left turn lanes, extension of the existing westbound to northbound right turn lane, all indicating that vehicular access can be improved, however, the options would not result in improvement for pedestrians. Therefore, given that the overwhelming concern in this area is to improve pedestrian safety, this Division has reviewed the feasibility of removing the westbound to northbound right-turn channel.

The elimination of the northbound right turn channel will result in a controlled single crossing area for pedestrians, thereby minimizing their exposure to vehicular traffic and normalizing the intersection. In addition to the improved east/west pedestrian crossing, the proposed improvement will facilitate the implementation of a north/south pedestrian crossing at this point, which currently does not exist.

With regards to improvements to vehicular access, the removal of the right turn channel will result in the construction and dedication of a westbound right turn lane approximately 150 metres in length, from Shermount Avenue to the new access to the William R. Allen Road.

The geometric modifications at the William R. Allen Road ramps will improve traffic safety and congestion and also pedestrian safety at the northbound on-ramp. The installation of a pedestrian crosswalk across Lawrence Avenue West at William R. Allen Road northbound on-ramp will provide pedestrian accessibility to/from the Lawrence Avenue West TTC Subway station.

Yorkdale Road / William R. Allen Road

Yorkdale Road located around the north and east perimeter of Yorkdale Mall provides access to Dufferin Street and the William R. Allen Road. This roadway is classified as a minor arterial roadway and consists of a four lane cross section. It should be noted that the section of roadway which is relevant to this review is located at the southerly end of the roadway and essentially operates as a southbound on-ramp to William R. Allen Road. However, prior to accessing the William R. Allen Road, this section of roadway intersects with the Yorkdale Mall South Service Road.

The City of Toronto, North York Panel of the Committee of Adjustment in its decision of November 17, 2010 approved the construction/expansion of additional retail space at the southwest end of the existing mall. In doing so they have also imposed several conditions, pursuant to subsection 45(9) of the *Planning Act*, R.S.O. 1990, c. P.13 (the “**Act**”) specifically, that the maximum aggregate sum the Owner shall be required to pay

towards the design and construction of the Park Improvements and design and construction of the Road Improvements shall not exceed \$750,000.

As such and in view of the above, BA Consulting on behalf of Yorkdale Mall has provided the City with a preliminary design for reconfiguration of the above noted section of roadway. The reconfiguration of this section of roadway will result in the following modifications:

- Removal of the channelized right-turn lane and at the William R. Allen Road southbound on-ramp and Yorkdale Mall South Service Road;
- Removal of the raised centre median between the southbound right turn curb lane and southbound through lane;
- Construction of a municipal sidewalk on the west side of the roadway; and
- Reconfiguration of the northbound right turn channel at the existing traffic control signal.

The traffic impact study provided by BA Consulting has indicated that the total number of pedestrians and cyclists crossing Yorkdale Mall South Service Road on June 10, 2010 during the a.m., and p.m. peak periods were 690 and 47 respectively. On November 6, 2010 a mid-day study between 12:00 noon and 5:00 p.m. was conducted and indicated that a combined total of 189 crossings occurred. It was also noted that 60 percent of the pedestrian crossings were to and from the subway station. Therefore in view of the above, to eliminate the eastbound to southbound "free flow" movement an eastbound stop control should be implemented.

With regards to the reconfiguration of the existing northbound right-turn channel, Transportation Services Division staff has undertaken their own internal review. Our review has indicated that the pedestrians that utilize this junction have requested the City on several occasions to improve the pedestrian crossing and storage area.

Although our analysis has not indicated that there have been any incidents between pedestrians and motorists at this location, this Division has undertaken several minor signage and pavement marking improvements over the years in order to address the pedestrian crossing concerns. Ultimately it is has been our opinion that ideally it would be best to remove the right turn channel and normalize the intersection. This is however not achievable given the support column for the covered walkway that is located on the island. However, in light of the recent funding commitment by Yorkdale Mall, the City concurs with the proposed radius reduction and increased sidewalk storage area on the southeast corner of the intersection.

The above improvements will not only provide increased positive guidance for the motorists, but also improve pedestrian safety and the pedestrian environment.

It should be noted that TTC Staff have been consulted on all of the above roadway modifications and do not have any comments on the proposed changes.

The Ward Councillor supports the recommendations contained within this staff report.

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SIGNATURE

Myles Currie
Director

ATTACHMENTS

- Attachment 1: Map – Pedestrian Crossing Prohibition, Lawrence Avenue West at William R. Allen Road (East and West Intersections)
- Attachment 2: Road Alteration, Southbound Ramp and Intersection Modification, William R. Allen Road at Lawrence Avenue West (West Intersection)
- Attachment 3: Lane Designations, Southbound William R. Allen Road
- Attachment 4: Road Alteration, Northbound Ramp and Intersection Modification, William R. Allen Road at Lawrence Avenue West (East Intersection)
- Attachment 5: Road Alteration, Yorkdale Road/ William R. Allen on-ramp at Yorkdale Mall Service Road