

7.0 Safety Assessment

7.1 PRELIMINARY SAFETY REVIEW

The Canadian Highways Institute Ltd., under the direction of Dr. John Morrall, P.Eng., was commissioned to undertake a preliminary review of the functional plan related to the Gaetz Avenue Development Setback Study. The safety review formed an integral part of the functional design process.

A preliminary safety review is similar to, but less thorough than a full safety audit. The preliminary safety review involved a field visit of the study area and the review of existing collision data and the functional design of Gaetz Avenue. The main objective was to identify the safety related issues with the existing condition and comment on how the proposed changes to Gaetz Avenue will improve deficiencies. The Gaetz Avenue corridor, including all intersections and service roads between 19th Street and 37 Street, as well as between 67 Street and Highway 11A, were examined.

Some of the highlights of the safety review are as follows.

Existing conditions that are predominate on Gaetz Avenue are lack of vehicle storage at intersections between service roads and the main Gaetz Avenue corridor, and poor sight lines for vehicles entering to and from Gaetz Avenue.

The collision assessment concluded that congestion on Gaetz Avenue leads to a poor level of service creating traffic backups. This condition combined with anxious drivers faced with many distractions increase the potential for collisions.

Gateway treatments such as pavement markings, rumble strips, advanced warning flash, landscape plantings, and entry signs will enable road users to identify definite boundaries between provincial highway and urban arterial environments.

The upgrade of the Gaetz Avenue corridor involving the removal of service road and service road intersections will reduce the number of vehicle path conflicts and thus collisions. Bulbing of service road intersections will increase the throat length and queue length storage for vehicles entering on Gaetz Avenue as well as facilitate safe movements of service and supply vehicles to adjacent businesses.

Mid block accesses have the potential to create problems between slow moving vehicles entering or exiting the block and vehicles moving at higher speeds on Gaetz Avenue. The inclusion of a third lane will provide some relief by providing a pseudo-auxiliary lane to accommodate the mixture of these traffic movements.

In some cases there is not enough separation between opposite left turning bays to accommodate standard TAC transition tapers for deceleration. Left turn installations such as these should be considered on an individual basis with considerable discussion as they

represent a compromise to the accepted standards and have the potential of setting precedence at other locations throughout the city. The compromised turn bay taper may cause some vehicle deceleration to occur in the through lanes on Gaetz Avenue reducing capacity and moderately increasing accident risk. Deceleration on the through lanes of Gaetz Avenue will be most prominent when the left turn bays are nearly full of vehicles. As traffic increases along Gaetz Avenue it may be necessary in some situations to consider closure of the slotted left turn lanes.

Safe conditions for vulnerable road users (VRU) such as pedestrians and cyclists involve implementation of curb cuts and ramps in strategic positions as well as providing clearly marked cross walks at bulbing locations and new access points. Utilizing a 6 meter buffer between the parking area on the service roads and the adjacent cross walk should improve sight lines for VRU's. It is suggested in the safety review that traffic control devices including regulatory signs, such as stop and dismount at cross walks as well as advisory of shared pathways be used. The implementation of a 3.0 meter walkway/pathway will provide a route for VRU's away from the main carriageway of the Gaetz Avenue corridor.

A full version of the Preliminary Safety Review of the Gaetz Avenue Development Setback Study can be found in Appendix 'B'.