

Safety Assessment and Access Management Policies: Case Studies as Evidence for a Safety Conscious Planning and Design Approach

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ABSTRACT

This paper presents the methodology used for the development of a proactive safety program for the Regional Municipality of Durham, Ontario, Canada (“Durham”) commencing with a network screening of sites with potential for safety improvements and progressing into a detailed safety assessment comprising of office and site investigations. Two case studies were assessed in terms of safety and their relationships with access management.

iTRANS Consulting Inc. and Durham identified site-specific safety-related issues that resulted from existing traffic movements and mix, traffic operations, road geometry and adjacent land-use, and proposed potential alternative measures to prevent collisions in the future. The case studies demonstrate a higher occurrence of collisions at access points, specifically those that are not in compliance with Durham’s Draft Access Management Policies, 2001. There are direct costs related to non-compliance with access policies.

These costs can be attributed to the property damage, hospital costs, and lost employment productivity from vehicle collisions. Furthermore, for more serious collisions, there are quality of life costs that relate to injuries, permanent disabilities and loss of life. Often the benefits of safety related improvements are substantially higher than their capital and operating costs of implementation. For all communities, there are opportunities for safety related benefits through a proactive approach by the enforcement of access management policies at an early stage in the planning and design processes in order to prevent future development resistance against policy implementation, and while there are roadway and land-use planning opportunities before construction.