



Town of Oakville Pedestrian Safety Program

FINAL REPORT

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September 2017

Project Number

161520

September 2017

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Town of Oakville Pedestrian Safety Program

Final Report

List of Revisions

Version	Date	Description
1	17 August 2017	Draft for Client Comments
2	15 September 2017	Final Draft for Client Comments
3	19 September 2017	Final for Submission

Signatures



Signature

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Executive Summary

Purpose and Objectives

The purpose of the **Pedestrian Safety Program** is to systematically and proactively address pedestrian safety issues in the Town of Oakville. This is an important undertaking, especially given the population growth projected for the town and the municipality's focus on promoting active transportation as a preferred mode of travel. The town's initiative to develop the Program comes at a very exciting time in which many jurisdictions, nationally and internationally, are investing in advancing the safe and equitable accommodation of pedestrians of all ages and physical capabilities within their transportation systems.

The objectives of the Pedestrian Safety Program are to:

- ▶ Assess Oakville's existing pedestrian safety initiatives and provide recommendations of strategies Oakville can implement to enhance pedestrian safety. This task also develops retrofit criteria to prioritize the implementation of accessible pedestrian signals (APS) at signalized intersections.
- ▶ Recommend guidance for the warrant, selection, and prioritization of pedestrian crossing treatments that include pedestrian crossovers (PXOs) and pedestrian signals (PS).
- ▶ Identify candidate locations for pedestrian crossing treatments and apply the PXO selection criteria and prioritization criteria.
- ▶ Develop a PXO implementation plan for Oakville that recommends the top 5-10 candidate crossing control locations and complementary public education campaigns for implementation in year 2018.

Basis

The key knowledge used as the foundation for the study is based on findings from a literature review, jurisdictional interviews, and extensive stakeholder engagement. A **literature review** was conducted to identify and summarize current best practises from key transportation agencies and peer municipalities regarding pedestrian crossing control guidance, pedestrian and active transportation master plans, and pedestrian safety programs. **Jurisdictional interviews** were conducted to obtain a comprehensive understanding of the issues, limitations, and successes associated with the implementation of pedestrian crossing control and pedestrian safety programs. **Community and stakeholder engagement** was a critical component of developing the pedestrian safety program. Over 330 people were engaged through surveys, pop-up consultations, and stakeholder sessions to identify pedestrian safety issues, concerns and potential solutions.

Pedestrian Safety Initiatives

One of the goals of the Town of Oakville Active Transportation Master Plan is to *“recommend actions to improve conditions for active transportation, particularly walking and cycling in Oakville, for people of all ages by providing a convenient and continuous Town-wide pedestrian and cycling network that minimizes risk to users and is integrated with other facilities (regional, bordering municipalities, transit, end of trip, etc.).”* Building on that goal, this safety program lays out the following four Guiding Principles to help with the development and identification of initiatives to enhance pedestrian safety:

- ▶ Reduce collision risk and severity
- ▶ Enhance connectivity
- ▶ Enhance accessibility
- ▶ Enhance system maintenance

Engineering, education, and encouragement strategies that are expected to enhance pedestrian safety in Oakville were then developed based on these guiding principles.

Pedestrian Crossing Treatments

Changes to the Ontario *Highway Traffic Act* (HTA) concerning pedestrian crossing control came into effect on January 1, 2016. According to Ontario Regulation 402/15 passed under the HTA, drivers must now stop and yield the entire roadway to pedestrians and school crossing guards before proceeding at pedestrian crossovers and school crossings. The new regulation also enables the use of new pedestrian crossover (PXO) devices.

This new suite of PXO devices, called Level 2 PXOs, are introduced and described in the June 2016 edition of the Ministry of Transportation of Ontario (MTO) Ontario Traffic Manual (OTM) *Book 15 – Pedestrian Crossing Treatments*. The devices are distinctly defined by the prescribed use of a different set of regulatory signs, warning signs, pavement markings, and in some cases, rapid rectangular flashing beacons (RRFBs). These new crossing control treatments fill a critical gap in the options previously available to practitioners to provide safe pedestrian crossing opportunities. This program recommends the town adopt the use of Level 2 PXOs and provides treatment system assessment and selection criteria specifically adjusted to reflect the unique characteristics for the town of Oakville.

Pedestrian Crossing Treatment Prioritization

Adopting the use and implementation of PXOs results in the identification of hundreds of sites that are candidates for pedestrian crossing treatment installations. The cost of all new treatments identified for implementation is much greater than can be funded in any given year from the town’s budget.

Criteria and weighting factors were developed for prioritizing pedestrian crossing treatments in Oakville. Through consultation with the town and published guidance, criterion to quantify pedestrian connectivity, demand, and safety at candidate locations were developed. A Geographic Information System (GIS) based analysis was then used to efficiently assign a score and rank to each location identified as a candidate crossing location.

Pedestrian Crossing Treatment Implementation Plan

An implementation plan for installation of pedestrian crossing treatments at the highest priority locations for year 2018 which considers budget availability, estimated treatment costs, opportunity to coordinate with other planned infrastructure projects, and spatial diversity to promote public education town-wide was developed.

In addition, public awareness, communication, and education strategies are incorporated into the implementation plan to educate the public and ensure that the benefits of PXO treatments are realized. They will be used to educate the public on how to interact with PXOs that will be installed through the Town of Oakville as part of this PXO implementation plan. It is important that education targets both pedestrians and drivers. Specific public education campaigns recommended for use in the PXO implementation plan are based on input received through the community engagement program.

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1 Introduction

The purpose of the **Pedestrian Safety Program** is to systematically and proactively address pedestrian safety issues in the Town of Oakville. This is an important undertaking, especially given the population growth projected for the town and the municipality's focus on promoting active transportation as a preferred mode of travel.

A key component of this program is to identify pedestrian crossing treatments for locations that do not meet warrant criteria for traffic calming or all way stop control but which experience higher pedestrian activity that might require designated pedestrian crossings. Historically, the Town of Oakville has only implemented traffic calming treatments at locations where speeding is prevalent. However, the town wishes to identify and propose treatments for locations that do not require traffic calming or all-way stop control, but are on desire lines for pedestrian crossings. Changes to the Ontario *Highway Traffic Act* (HTA) concerning pedestrian crossing control came into effect on January 1, 2016. According to Ontario Regulation 402/15 passed under the HTA, drivers must now stop and yield the entire roadway to pedestrians and school crossing guards before proceeding at pedestrian crossovers and school crossings. The new regulation also provides a new suite of pedestrian crossing control treatments called pedestrian crossovers (PXO) devices as an available treatment to provide safe and effective pedestrian crossing locations.

1.1 Program Objectives and Scope

The objectives of the Pedestrian Safety Program are to:

- ▶ Assess Oakville's existing pedestrian safety initiatives and provide recommendations of strategies Oakville can implement to enhance pedestrian safety. Complete specific initiatives that include:
 - Develop retrofit criteria to prioritize the implementation of accessible pedestrian signals (APS) at signalized intersections.
 - Complete an intersection pedestrian safety review at Speers Road and Kerr Street.
- ▶ Recommend guidance for the warrant, selection, and prioritization of pedestrian crossing treatments that include pedestrian crossovers (PXOs) and pedestrian signals (PS).
- ▶ Identify candidate locations for pedestrian crossing treatments and apply the PXO selection criteria and prioritization criteria.
- ▶ Develop a PXO implementation plan for Oakville that recommends the top 5-10 candidate crossing control locations and complementary public education campaigns for implementation in year 2018.

1.2 Approach

The key knowledge used as the foundation for the study is based on findings from a literature review, jurisdictional interviews, and extensive stakeholder engagement.

- ▶ **Literature Review:** A literature review was conducted to identify and summarize current best practises from key transportation agencies and peer municipalities regarding pedestrian crossing control guidance, pedestrian and active transportation master plans, and pedestrian safety programs. The findings of the literature review are summarized in **Appendix A**.
- ▶ **Jurisdictional Interviews:** Jurisdictional interviews were conducted to obtain a comprehensive understanding of the issues, limitations, and successes associated with the implementation of pedestrian crossing control and pedestrian safety programs. A complete summary of the jurisdictional interviews is provided in **Appendix B**.
- ▶ **Stakeholder Engagement:** Community and stakeholder engagement was a critical component of developing the pedestrian safety program. Over 330 people were engaged through surveys, pop-up consultations, and stakeholder sessions to identify pedestrian safety issues, concerns and potential solutions. **Appendix C** provides a summary of the engagement activities undertaken to inform the program and the feedback received.

1.3 Report Organization

This report is organized into the following six chapters to address the study objectives:

- ▶ **Chapter 1 – Introduction** discusses project objectives and important terminology used in the report.
- ▶ **Chapter 2 – Pedestrian Safety Considerations** details pedestrian characteristics and needs and how to properly accommodate them at intersections, midblock locations, sidewalks and roundabouts.
- ▶ **Chapter 3 – Pedestrian Safety Initiatives** outlines existing pedestrian safety initiatives in Oakville and provides recommendations to enhance pedestrian safety. In addition, retrofit criteria for accessible pedestrian signals are provided and recommendations from the intersection pedestrian safety review at Kerr Street and Speers Road are summarized.
- ▶ **Chapter 4 – Pedestrian Crossing Treatments** recommends guidance for the preliminary assessment, selection, and system design of pedestrian crossing treatments in Oakville. Pedestrian crossing treatments include pedestrian signals (PS) and pedestrian crossovers (PXO). Treatment cost estimates are also provided.

- ▶ **Chapter 5 – Pedestrian Crossing Treatment Prioritization Criteria** details the prioritization criteria and how they were applied to candidate crossing locations identified in Oakville.
- ▶ **Chapter 6 – Pedestrian Crossing Treatment Implementation Plan** recommends pedestrian crossing treatments to be implemented at candidate crossing locations and public education campaigns to accompany new PXO implementations to ensure they are effective.

2 Pedestrians in Planning, Design, and Operation of the Road System

This chapter discusses best practices and leading technical knowledge regarding the consideration of pedestrians in the planning, design, and operation of the road system. Walking is a vital activity which provides several benefits to individuals and society. Some of these benefits include improved health, reduced emissions, and an increase in the overall quality of life of people. Having a connected and comprehensive pedestrian network is a fundamental part of making walking a convenient and attractive transportation choice.

2.1 Pedestrian Safety

Motor vehicle collisions involving pedestrians are a serious public health problem in Canada. Between 2005 and 2009, approximately 13 percent of road fatalities and about 7 percent of injured victims were pedestrians. This proportion increased to 16 percent and 14 percent respectively by 2014 (Transport Canada, 2016).

Based on an analysis of Transport Canada data (Transport Canada, 2015), during the 5-year period from 2009 to 2013, pedestrians age 65 and older accounted for approximately one-third of pedestrian fatalities in Canada. Pedestrians age 45-54 accounted for approximately 14 percent followed by those age 55-64 accounting for around 12 percent of pedestrian fatalities in the country (see **Figure 2.1**). While comparable exposure information is not available, Statistics Canada reports that in 2014, people age 65 and older accounted for 15 percent of Canada's population. People between the ages of 45 and 54 accounted for 15 percent, and people ages 55-64 accounted for 13 percent.

In Oakville, in the 5-year period between 2011 and 2015, pedestrian collisions have accounted for 2.4 percent of all motor vehicle collisions. Including roads under the town and regional authority, there were 146 collisions involving pedestrians during this period (103 on town roads and 43 on regional roads). On average, there were 29 pedestrian collisions per year with the highest year of pedestrian collisions occurring in 2012 (33 collisions).

Most of the pedestrian collisions in Oakville (87 percent of the collisions) have resulted in injury, 8 percent have resulted in property damage only, and the remaining 5 percent were non-reportable or classified as "other". Oakville has not experienced any fatal collisions involving pedestrians during this five-year period (2011-2015). Most of these collisions (66 percent) have taken place at intersections, or have been identified as being intersection related, which is similar to the statistics reported by other jurisdictions.

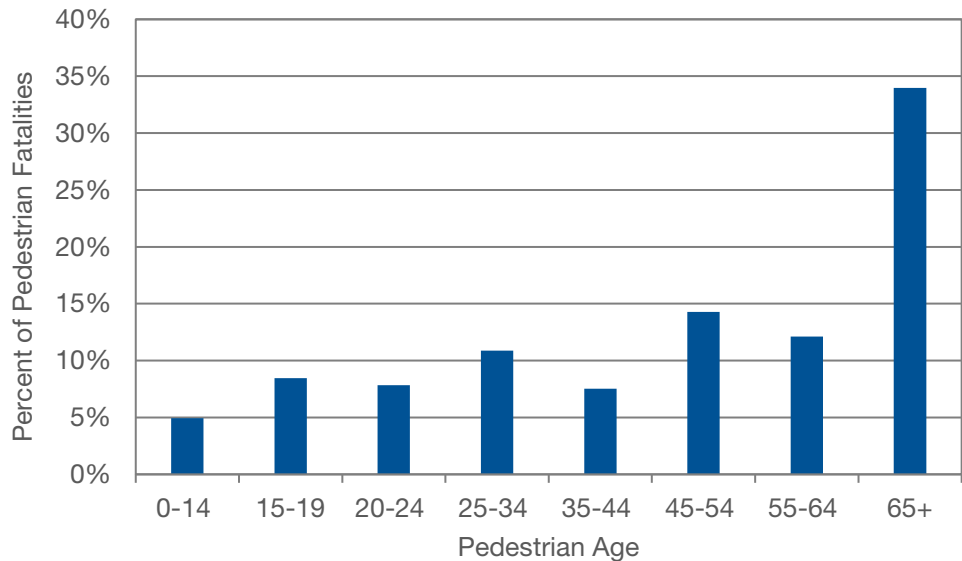
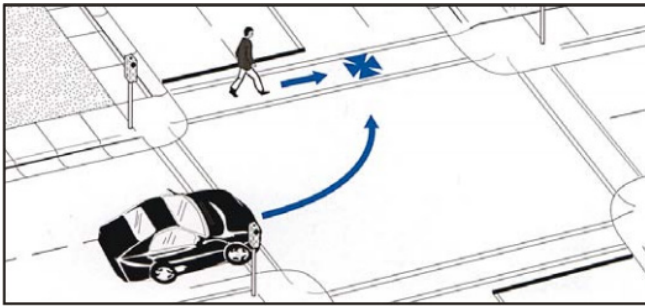


FIGURE 2.1 PERCENT OF PEDESTRIAN FACILITIES BY AGE CATEGORY, 2009-2013

(Source: Based on analysis of Transport Canada (2015))

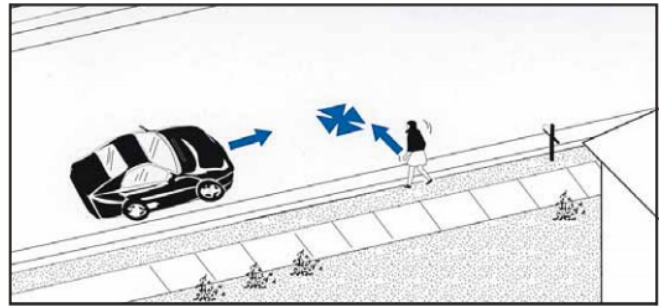
In nearly 50 percent of the pedestrian collisions the pedestrian was crossing a facility with the right-of-way when the collision occurred. Twenty percent of collisions occurred when the pedestrian was crossing without the right-of-way. Further, in another 9 percent of the collisions, the pedestrian was crossing at a marked crosswalk or a pedestrian crossover facility when hit by a vehicle. There were also instances where the pedestrian was hit while walking on the side of the road or sidewalk (10 percent), or when running into traffic (8 percent).

This is consistent with research reported by the U.S. Federal Highway Administration (FHWA) on common types of collisions involving pedestrians, where they state that, for the most part, vehicle-pedestrian collisions can be classified into the six types shown in **Figure 2.2** (FHWA, 2006). Most of these collision configurations can be mitigated through a combination of engineering and education strategies that address the specific characteristics of each configuration. For example, walking along the road commonly occurs due to a lack of sidewalks, or because of inadequate infrastructure or poor sidewalk maintenance, particularly in winter months. In these cases, pedestrians are forced to share the road with motor vehicles, therefore, increasing their collision risk. Similarly, collisions involving midblock dashes may be attributed to lack of adequate crossing opportunities for pedestrians, or lack of education about safe pedestrian behaviour.

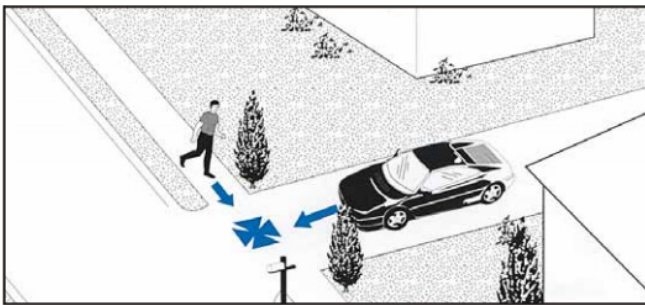


Vehicle turn/merge

Pedestrian and vehicle collide while vehicle is in the process of turning or has just completed a turn

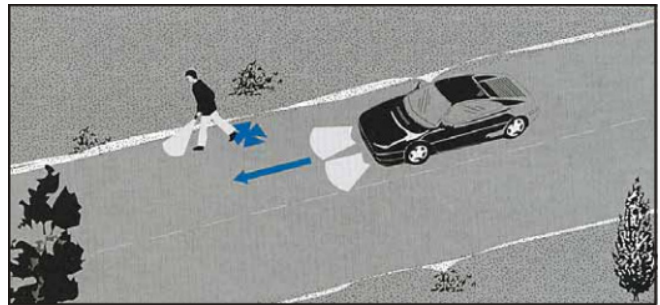


Midblock Pedestrian struck while crossing at midblock



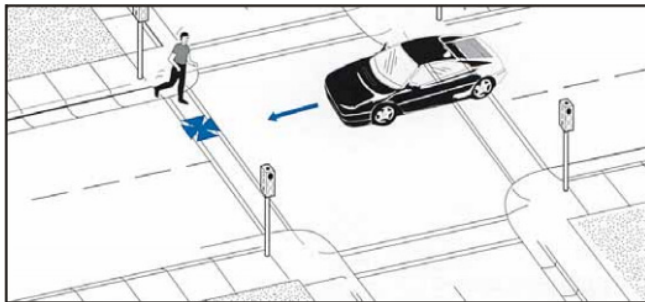
Not in roadway

These include parking lots, driveways, private roads, sidewalks, service stations, yards, etc.

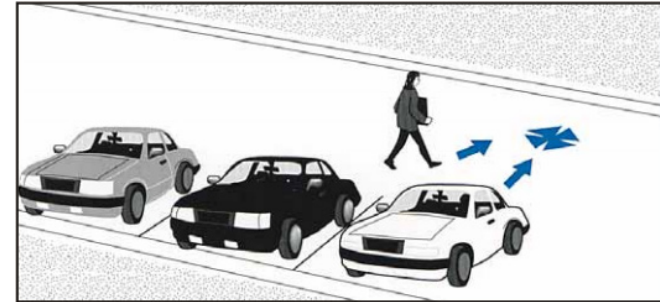


Walking along road

Pedestrian struck while walking or running along a road without a sidewalk



Intersection Pedestrian struck while crossing at an intersection



Backing vehicle

Vehicle backing up – different locations

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 Lura Consulting

Adapted from: FHWA (2006).
Course Material on Bicycle and Pedestrian Transportation.

Vehicle-Pedestrian Collision Types

2.2 Pedestrian Characteristics and Needs

There has been much research regarding the safe accommodation of pedestrians in urban areas. Much of the literature indicates that there is a variety of risk factors that influence pedestrian safety. Examples include: road geometry, vehicle operating speeds and volumes, roadway lighting, driver or pedestrian distraction, and others. The task of safely accommodating pedestrians of all ages and abilities is significant due to the various characteristics and needs of different types of pedestrians.

According to the U.S. Department for Health and Human Services, children are particularly vulnerable to serious injuries in motor vehicle collisions because they are exposed to traffic hazards that exceed their cognitive, developmental, behavioral, physical, and sensory abilities. Children have difficulty judging speed, spatial relations, and distance. Their auditory and visual acuity, depth perception, and proper scanning ability develop gradually and do not fully mature until at least age 10. Even children above this age are easily distracted and may not always behave as drivers expect. Further, according to the Institute of Transportation Engineers (ITE), children's concept of safety is not well developed, their knowledge of safe crossing conditions and ability to properly judge traffic gaps is poor, they have limited understanding about traffic control devices, and have difficulty correctly perceiving the direction of sound and the speed of a vehicle (ITE, 2016).

At the other end of the spectrum, as people age, their visual, mental, and physical capabilities diminish. With respect to vision, people can experience reductions in acuity, contrast sensitivity, and visual field. They can also experience restrictions in visual attention, increased sensitivity to glare, decreased dark adaptation, and decreased motion sensitivity. With respect to mental capabilities, people can experience a reduction in their selective attention, divided attention, perception and reaction time, and their working memory. The aging process can also result in reduced strength, flexibility, and range of motion in the legs, and the neck and upper torso.

Age can also increase the incidence of disability. According to Statistics Canada (2014), in 2007 people age 65 and older accounted for 13 percent of Canada's total population. Statistics Canada also estimates that almost 30 percent of Canada's population will be 60 years of age and older by the year 2030, using a medium growth scenario, which combines assumptions of fertility and immigration similar to recent years along with a moderate growth in life expectancy. Disability and age can be reflected in the speed at which people walk, and since pedestrian walking speed is a key input for many transportation engineering applications such as traffic signal timing, it is important to understand this unique characteristic, and properly design for it.

In 2013, the Transportation Association of Canada (TAC) approved the following recommendation to modify the design walking speed for traffic signal timing.

Crossing time should be determined using a pedestrian walking speed ranging from 0.8 m/s to 1.0 m/s, depending on the volume of older pedestrians and people with impairments at the site, as follows:

- ▶ 0.8 m/s walking speed should be used in cases where at least 20 percent of pedestrians crossing the signalized intersection use assistive devices for mobility. An assistive device is defined as any non-motorized device that assists a pedestrian in the walking task (e.g., walkers, canes and manual wheel chairs). This walking speed applies to all types of signalized crossings (whether the crossing is equipped with accessible pedestrian signals or not).
- ▶ 0.9 m/s walking speed should be used in cases where at least 20 percent of pedestrians crossing the signalized intersection are older pedestrians (65 years of age or older).
- ▶ 1.0 m/s walking speed should be used to accommodate the general population.

Practitioners should use standard practice in their own jurisdictions, and engineering judgment to determine whether the above walking speeds are to be used to calculate only the pedestrian clearance interval or the crossing time at the intersection.

This recommendation was based on an extensive study conducted by TAC, which found that while there are no significant differences between the walking speed of pedestrians in summer and winter in Canada, there are significant differences associated with age. In all situations, older pedestrians were found to walk slower than younger pedestrians regardless of season, and using a walking speed design value of 1.2 m/s excluded approximately one-third of older pedestrians and about 90 percent of pedestrians who use assistive devices such as walkers or canes for mobility (Montufar, Rempel, & Klassen, 2012).

The needs of pedestrians are similar to the needs of any other users of the transportation system. Pedestrians require the provision of a safe, reliable, equitable, comfortable, and convenient transportation system that allows for good mobility and accessibility. This applies to all pedestrians, including those with physical disabilities. Measures for providing pedestrian accessibility to persons with disabilities include: accessible pedestrian signals, fixed roadway lighting, curbs, curb ramps, islands, audible signals, and other way finding cues.

The following sections summarize existing knowledge regarding the safe accommodation of pedestrians in different types of physical environments.

2.3 Accommodating Pedestrians on Sidewalks



According to NACTO (2013), sidewalks are essential elements of urban street design. They promote pedestrian movement and access, enhance connectivity and promote walking. The planning and design of urban sidewalks is necessary for the equitable and safe movement of pedestrians within a transportation network. Further, the proper maintenance, particularly during winter months, is essential to preserve their purpose and protect pedestrians, particularly those with mobility impairments.

The following elements are necessary when providing sidewalks (NACTO, 2013 and AASHTO, 2004):

- ▶ Adequate width of travel – The TAC *Geometric Design Guide for Canadian Roads* states that a minimum width of 1.5 meters is required. However, the width of a sidewalk must take into consideration the volumes and types of pedestrians using the facility. When sidewalks are directly adjacent to moving traffic, the desired minimum should be increased. Sidewalk design should go beyond the recommended minimum in terms of width for pedestrians to feel safe, particularly along facilities with high vehicular speeds and volumes.
- ▶ Wide buffer zone between pedestrians and vehicles – This space is used for snow storage and for placement of underground utilities. A minimum of 1.5 meters is recommended for buffer space.
- ▶ Curbing
- ▶ Gentle cross-slope (2 percent or less)
- ▶ Adequate sight distances around corners and at driveways
- ▶ Offset to walls and other structures
- ▶ A clear path of travel free of street furniture
- ▶ Sidewalk continuity
- ▶ Ramps at corners

2.4 Accommodating Pedestrians at Intersections

Intersections account for the most serious conflicts between pedestrians and other road users, and as such, they must be responsive to the needs of pedestrians. When designing and operating intersections with pedestrians in mind, it is important to follow these guiding principles (AASHTO, 2004):

- ▶ **Clarity:** Motorists should always know when there are pedestrians present, and it should always be obvious to pedestrians where to cross.
- ▶ **Visibility:** The location and illumination of a crosswalk allow for pedestrians to see other road users and be seen by them.
- ▶ **Delay:** As much as possible, try to reduce delay for pedestrians waiting to cross at an intersection.
- ▶ **Adequate Crossing Time:** Ensure that the design speed used for signal timing or the time allotted for pedestrians to cross an unsignalized intersection is sufficient for all ages and abilities.
- ▶ **Limit Exposure:** When the distance to cross is short or is divided into shorter segments with raised medians, the number of conflict points with other road users, decrease.
- ▶ **Clear Crossings:** A crosswalk should always be barrier-free and accessible to all pedestrians.

Pedestrian visibility or conspicuity can be increased at intersections by doing the following: (1) providing painted crosswalks in the roadway; (2) moving pedestrians out from behind parked cars through the introduction of curb extensions; (3) improving both horizontal and vertical sight distances through the removal of curb side features such as landscaping, parked vehicles, utility poles, traffic control devices, and other street furniture; and (4) improving intersection lighting.

Curb radius has increased over time at certain locations to accommodate the turning needs of larger vehicles such as trucks or buses. This, however, results in longer crossing distances for pedestrians, thereby increasing their exposure to vehicular traffic. This is particularly a problem for pedestrians who require more time to cross an intersection. Smaller radii can have traffic-calming effects, slowing driver speed at turns and giving pedestrians the opportunity to begin a crossing before the vehicle turns. For pedestrians who have vision impairments, the intersection with a smaller curb radius provides a more audible distinction between perpendicular and parallel traffic flows.

2.5 Accommodating Pedestrians at Midblock Locations



Midblock crossing can help supplement the crossing needs in areas where intersections are spaced too far apart. They are also beneficial at locations where there are strong pedestrian desire lines but no crossing opportunities. When providing for the safe accommodation of pedestrians, it is important to remember that pedestrian behaviour indicates that people routinely cross at midblock locations. In many situations, pedestrians travel along the path of least resistance (i.e., they will rarely go out of their way to cross at an intersection unless they are rewarded with a better alternative).

Midblock crossings can be effective in the following situations (AASHTO, 2004):

- ▶ There is a clear pedestrian desire line.
- ▶ Where a new development is anticipated to generate new pedestrian desire lines.
- ▶ The adjacent intersections are too far from the location where the pedestrian desire line exists. This distance may be anywhere between 150 and over 200 meters, depending on jurisdictional preference.
- ▶ The safety and capacity of adjacent intersections are such that it is difficult to cross the street at the intersection.
- ▶ The vehicular capacity of the roadway may not be significantly reduced by the midblock crossing.
- ▶ Adequate sight distance is available for both pedestrians and drivers.

Medians or refuge islands are a common feature for midblock crossings, in conjunction with the appropriate crossing control device. A median or refuge island is a raised area separating the two traffic directions. Its main benefit is allowing pedestrians to focus only on one traffic direction at a time. These are discussed further in Section 4.3.

2.6 Accommodating Pedestrians at Roundabouts

Compared to conventional intersections, pedestrian crossings at roundabouts are characterized by shorter crossing distances (i.e., two staged crossings which allow pedestrians to look for traffic in one direction at a time), the ability for drivers to see pedestrians in a clear line of sight, and lower traffic speeds. Because of one-way traffic flow and the elimination of turning movements, the number of conflict points is reduced compared to standard signalized intersections.

A challenge of roundabout design is to provide adequate access for all pedestrians including blind and low vision users. Sighted pedestrians determine a safe crossing gap by visually assessing the flow of traffic. The *Guide for Planning, Operation, and Design of Pedestrian Facilities* (AASHTO, 2004) indicates that “there is some concern that it is difficult for pedestrians with vision impairments to obtain cues concerning gap availability for crossing near roundabouts” (p. 79). Further, the literature states that a visually impaired pedestrian with good travel skills must be able to arrive at an unfamiliar intersection and cross it with pre-existing skills and without special, intersection-specific training.

Although pedestrian crossings at roundabouts do provide safety and convenience, two design elements that can affect driver behaviour are the number of lanes and the directional side of the site (entry lanes versus exit lanes). Research has found that more lanes result in a higher number of vehicles not yielding to crossing/waiting pedestrians. Similarly, motorists are less likely to yield to a pedestrian on the exit side compared to the entry side of the roundabout.

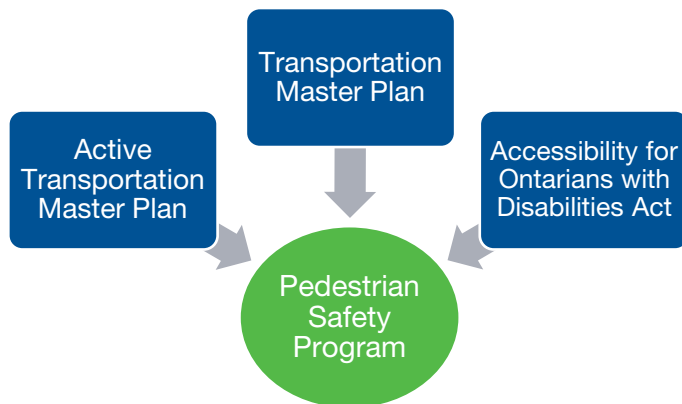
3 Pedestrian Safety Initiatives

This chapter outlines the town’s existing safety initiatives and recommends strategies to enhance pedestrian safety. In addition, two pedestrian safety enhancements are presented that include criteria for retrofitting signalized intersections with accessible pedestrian signals and a pedestrian safety review at the intersection of Speers Road and Kerr Street.

These pedestrian safety initiatives contain recommendations for a system that is safe, efficient, and accessible are one of the outcomes of the town’s commitment to improving pedestrian safety.

3.1 Existing Pedestrian Safety Initiatives

The Town of Oakville has several guiding documents that steer planning and development activities, including pedestrian accommodation. The *Accessibility for Ontarians with Disabilities Act* (AODA), which came into law in June 2005, aims to identify, remove, and prevent barriers for people with disabilities. The town’s Transportation Master Plan outlines a practical,



sustainable long-term strategy to guide the town’s transportation system to 2031. The plan recognizes the importance of pedestrian integration and recommends a comprehensive walkability review and plan to address sidewalk and pathway design for pedestrians with accessibility needs. The Active Transportation Master Plan sets out short, medium and long-term actions and recommendations to establish and support a desired level of walking (and cycling) for residents of Oakville. More specifically, Active Transportation Master Plan presents the following vision:

“That the Town of Oakville is a pedestrian and cycling supportive community that encourages active transportation for both utilitarian and recreational travel through:

- ▶ *Ensuring that every street accommodates pedestrians and cyclists;*
- ▶ *Established promotional and educational policies and programs including a coordinated marketing strategy to encourage active transportation year-round;*
- ▶ *A Town-wide visible and connected active transportation network of on-road and off-road facilities designed with safety in mind that are comfortable, convenient, and accommodate the needs of existing and future users; and*
- ▶ *Approved Official Plan policies and associated strategies which recognize that great places require pedestrian and cycling friendly*

land development and streetscape design that supports the Town of Oakville's vision to become the most livable Town in Canada."

The pedestrian safety initiatives contained in this document was developed with that vision in mind, including strategies that address engineering, education, and encouragement opportunities.

3.1.1 Plans

There are two planning documents of importance to this project:

- ▶ **Active Transportation Master Plan:** This plan sets out short, mid, and long-term actions and recommendations to establish and support a desired level of cycling and walking for residents of Oakville. Pedestrian safety related actions described in the Plan, which is currently being updated, include:
 - Encourage more schools to participate in the Active and Sustainable School Transportation program
 - Establish a Road and Trail Safety Ambassador program
 - Seek new ways to develop and deliver bicycle and pedestrian safety education initiatives
 - Partner with the Halton Region Police Service to ensure the guidelines and by-laws that support active transportation are being respected
 - Include pedestrian and cycling safety material in training programs for driver examiners, police recruits, fleet/transit operators, and other officials
 - Consider a pilot project of pedestrian priority phases
 - Develop town walkability guidelines and incorporate walkability audits into transportation and traffic studies
 - Plan and retrofit infrastructure that promotes accessibility for all ages and abilities

- ▶ **Transportation Master Plan, Switching Gears:** This plan outlines a practical, sustainable long-term strategy to guide the town's transportation system to 2031. The plan incorporates the town's Active Transportation Master Plan implementation plan and strategy. The plan recognizes the importance of pedestrian integration and recommends a comprehensive walkability review and plan to address sidewalk and pathway design for pedestrians with accessibility needs (under the AODA).

3.1.2 Programs

The town currently administers three programs of importance to this project:

- ▶ **Traffic Calming:** The town's *Traffic Calming Policy* was first approved in 2003 and subsequently replaced in 2009 by the *Traffic Calming Process for Retrofit Situations*. In 2016, Town Council approved the *Traffic Calming Process Update* (Oakville Engineering and Construction Department, 2016). The updated guideline provides a comprehensive process that addresses vehicle speed issues on the town's local and collector road system. As part of the process, the town has developed a toolbox of measures including the following treatments:
 - Passive Treatments – line markings, signage, and radar speed display signs (RSDS);
 - Physical Treatments – raised crosswalks, curb extensions, roundabouts, raised medians, speed cushions, and chicanes.

This program involves two phases. [Phase 1, Project Screening to Identify Potential Problem Condition](#), investigates whether a site meets traffic calming criteria. If the site does meet the warrant criteria, then RSDS are installed as the first measure to address the speeding concern. After one year, if the problem persists, town staff investigate and implement additional passive measures. If the problem persists after two years, Phase 2 is initiated. [Phase 2, Identification and Evaluation of Alternatives](#), ranks the priority of locations for traffic calming and evaluates physical treatment alternatives. The priority ranking criteria includes pedestrian generators, number of driveways, number of sidewalks, and collision history.

The town has implemented passive measures liberally on various local and collector roadways throughout the municipality. The physical traffic calming treatments implemented to date have consisted primarily of speed cushions and flexible bollards for two-lane roadways, and raised barrier medians for three-lane roadways. Examples of these treatments are illustrated in **Figure 3.1**.



Westoak Trails Boulevard (facing west, east of St. Joan of Arc Catholic Elementary School)



Kingsway Drive (facing west, west of St. Luke Catholic Elementary School)

FIGURE 3.1 EXAMPLES OF TRAFFIC CALMING IN OAKVILLE

(Source: Google Streetview (2016))

- ▶ **Pedestrian Crossover Conversion Program:** This program was implemented in 2006 to convert the existing network of pedestrian crossovers (PXOs) to Pedestrian Signals (PSs). The town initiated this Program because the red signal display provides definitive direction to drivers to stop, thereby ensuring a much higher level of compliance for vehicles stopping and yielding the right of way to pedestrians, as opposed to the flashing amber signal provided by the PXOs (Oakville Engineering and Construction Department, 2016). Conversions are being completed based on a priority ranking system that considers adult pedestrian crossing volume, children pedestrian crossing volume, vehicular volume, presence of crossing guards, and collision history. To date, 13 of the original 15 PXO locations have been converted to IPS or full traffic signal control. Of the remaining two PXO locations, one has been removed with the installation of an

all-way stop in the immediate vicinity, and the other is anticipated to be converted to IPS in 2017. This program was developed prior to the new suite of PXO treatments (Level 2 Type B, C, and D PXOs) identified in the most recent edition of Ministry of Transportation of Ontario (MTO) Ontario Traffic Manual (OTM) *Book 15 – Pedestrian Crossing Treatments*. The PXOs being replaced are Level 1 Type A.

- ▶ **Active and Sustainable School Transportation:** The Town of Oakville is a member of the Halton Region Active and Sustainable School Transportation (ASST) Collaborative Working Group (HUB). The purpose of this working group is to collaboratively work together with other HUB members (including Region of Halton, Town of Halton Hills, City of Burlington, Town of Milton, Halton District School Board, and Halton Catholic District School Board) in promoting, delivering, and sustaining ASST initiatives. Specific goals of the HUB are to: (1) create awareness in families about the benefits of using active/sustainable transportation to and from school; (2) promote active transportation to and from school; (3) use School Travel Planning processes to address traffic and active transportation issues at specific schools; and (4) provide tools to parents that will assist them to choose active transportation for their children.

3.1.3 Policies and Practices

There are at least 10 existing town policies and practices associated with pedestrian safety and crossing control of relevance to this project. Each is discussed below.

- ▶ **Pedestrian Crossing Treatments:** Pedestrian crossing treatments at controlled pedestrian crossings are provided based on the complexity of the roadway environment. The warrant criteria that the town applies to implement pedestrian crossing treatments are:
 - Full Traffic Signals – The town’s traffic signal justification criteria are generally consistent with OTM *Book 12 – Traffic Signals* and industry standard practice.
 - Pedestrian Signals (PS) – The town currently installs intersection pedestrian signals (IPS) and midblock pedestrian signals (MPS) where warranted in accordance with its Pedestrian Signal Warrant (Oakville Engineering and Construction Department, 2013). This warrant is based on OTM Book 12 methodologies with modifications to vehicle and pedestrian warrant thresholds and minimum spacing between devices.
 - Pedestrian Crossovers (PXO) – Currently, no warrant for PXO installation exists.
 - Stop Controlled or Yield Controlled Intersections – The town’s warrant for all-way stop control is based on minimum vehicular hazards, sight lines, geometric design, and collision history. The

general basis for the warrant thresholds for both forms of traffic control is consistent with OTM *Book 5 – Regulatory Signs*.

- Supervised School Crossing – The school crossing guard warrant is based on vehicular volume, pedestrian volume, and collisions history. The warrant is applicable for locations where grades K to 6 children cross the road.
- ▶ **Town By-law Number 1982-082** designates pedestrian crossover locations within the municipality. This definition of pedestrian crossovers is also referenced in By-law 1984-001. The by-laws reference the old definition provided in the HTA as follows:

“pedestrian crossovers” means any portion of a roadway, designated by by-law of a municipality, at any intersection or elsewhere, distinctly indicated for pedestrian crossing by signs on the highway and lines or other markings on the surface of the roadway as prescribed by the regulations.

As of January 2016, new rules state that drivers (including cyclists) must stop and yield the whole roadway at all pedestrian crossovers. The definition of pedestrian crossover in the amended HTA (2016) has been revised to remove mention of a designated by-law. The definition now included is:

“pedestrian crossover” means any portion of a roadway distinctly indicated for pedestrian crossing by signs on the highway and lines or other markings on the surface of the roadway as prescribed by the regulations.

By-Law Number 1982-082 is no longer required as it is no longer necessary to designate pedestrian crossover locations by by-law. The definition of pedestrian crossover should be updated in other town by-laws.

- ▶ **Pedestrian Countdown Signals (PCS):** These signals inform pedestrians of the time remaining to complete the crossing. The TAC *Pedestrian Crossing Control Guide* (2012) describes the general benefits of PCS to include: (1) better information for pedestrians regarding the amount of time left to cross the street; and (2) better accommodation of mobility-challenged pedestrians. General disadvantages include: (1) provision of an accurate countdown for actuated phases; and (2) potential increase in collisions or conflicts due to drivers ‘racing the phase termination’. In Oakville, new traffic signals installed since 2008 have been equipped with PCS. Each year, these devices are also installed at select crosswalks at existing signalized intersections with higher observed pedestrian crossing volumes.
- ▶ **Accessible Pedestrian Signals (APS):** These devices communicate information about pedestrian signal timing in non-visual formats such as audible tones or speech messages. The purpose of APS is to assist pedestrians with visual impairment cross the road at intersections with traffic signals. In Oakville, APSs are installed at

select locations through coordination with the Canadian National Institute for the Blind (CNIB). Part of the scope of work of this project is to better define and prioritize these locations as presented in Section 3.3 and detailed in **Appendix D**.

- ▶ **Pedestrian Walking Speed:** The pedestrian walking speed is used to calculate the walking time used in determining the minimum walk times and pedestrian signal display calculations at signalized intersections. Currently, the town uses an average speed of 1.1 metres per second at most locations. At crossings near schools, recreation and seniors' centres, a walking speed of 1.0 metres per second is assumed.
- ▶ **Speed Limit Review:** This town-initiated project (Oakville Engineering and Construction Department, 2016) concluded that the posted speed limit of 50 km/h should remain the default limit within Oakville. Historically, roadways posted at 40 km/h were limited to locations primarily adjacent to elementary schools. Due to this review, the town has expanded the potential use of 40 km/h zones to the following heavy pedestrian traffic areas:
 - Secondary schools
 - Community centres and libraries
 - Senior centres
 - Public libraries
 - Private schools
 - Parks (adjacent to elementary school zones)
- ▶ **Sidewalk Facility Design:** Proper and adequate facility design plays an important role in pedestrian safety. The town requires sidewalks to be a minimum width of 1.5 m (when offset from the property line by at least 500 mm) and increased to 2.0 m if no property line offset can be provided (Town of Oakville, 2016). Sidewalks are required to be constructed on the roadways as described in **Table 3.1**.

TABLE 3.1 TOWN OF OAKVILLE SIDEWALK LOCATION CRITERIA

Road Type	Sidewalk Location	Exceptions to Rule
Cul-de-sac	Not required	One side if walkway link
Local (<100 units)	One side only	
Local (>100 units)	Both sides of street	
Collector/arterial	Both sides of street	
Industrial/local	Not required	One side if walkway link
Industrial/collector	One side only	
Industrial arterial	One side only	Both sides if ROW \geq 30 m

Source: Town of Oakville, Development Engineering Procedures and Guidelines

- ▶ **Accessibility:** The town ensures compliance with the AODA through its *Guidelines for Design of Accessible Facilities*, the *Accessibility Plan*, *Transit Accessibility Plan*, and other initiatives.
- ▶ **Snow Clearing Policy:** Sidewalks are cleared after snow accumulates more than five centimetres and roads are cleared. Sidewalks located on primary and secondary roads with schools are plowed first, followed by residential sidewalks. Salting and sanding is carried out on primary and secondary sidewalks when extremely slippery conditions are present.
- ▶ **North Oakville Traffic Calming Guidelines:** These guidelines are intended to encourage walking and cycling by creating more livable neighbourhoods through street network design in new communities' north of Dundas Street. The following traffic calming guidelines are to be applied in new developments (Oakville Engineering and Construction Department, 2016):
 - Curb extensions will be used at intersections with long straight roadways
 - Chicanes will be used in midblock sections with long, straight, and uninterrupted sections of a roadway
 - Traffic circles or mini-roundabouts may be used in lieu of curb extensions at intersections
 - Curb extensions may be used at locations other than at intersections, where a high number of pedestrians may cross to utilize parks or other major pedestrian generators
 - Raised centre medians will only be used in unique cases such as opposite a left turn lane

3.2 Recommendations for Pedestrian Safety Enhancements

3.2.1 Guiding Principles for Enhanced Pedestrian Safety

One of the goals of the Town of Oakville Active Transportation Master Plan is to *“recommend actions to improve conditions for active transportation, particularly walking and cycling in Oakville, for people of all ages by providing a convenient and continuous Town-wide pedestrian and cycling network that minimizes risk to users and is integrated with other facilities (regional, bordering municipalities, transit, end of trip, etc.).”* Building on that goal, this safety program lays out the following four Guiding Principles, shown in **Figure 3.2**, to help with the development and identification of initiatives to enhance pedestrian safety:

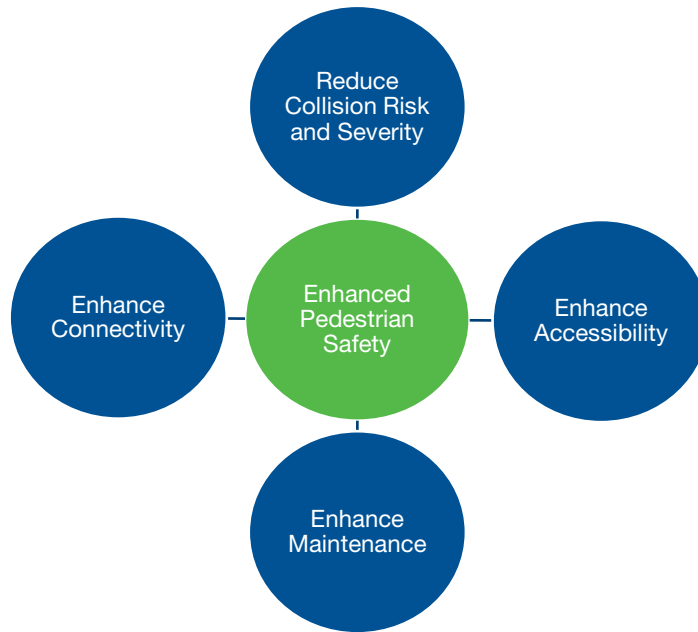


FIGURE 3.2 GUIDING PRINCIPLES FOR PEDESTRIAN SAFETY

- ▶ **Reduce Collision Risk and Severity:** Walking should be safe for people of all ages and abilities, including seniors, children, and people with disabilities. Infrastructure deficiencies such as fragmented infrastructure, uncomfortable environments, and challenging street crossings can result in increased risk of falling, or becoming involved in a collision. These types of conditions can directly influence mode choice.

Reduction in collision risk and severity should always be a key objective when planning and designing for pedestrians. It is fundamental that the road system protect pedestrians by achieving a high level of compliance from drivers, bicyclists and pedestrians themselves, and by minimizing pedestrian exposure to vehicular traffic. Pedestrian infrastructure, including pedestrian crossing control devices should not violate driver expectation so that drivers can respond to situations correctly and quickly.

- ▶ **Enhance Connectivity:** Having a pedestrian network which is fully connected is a fundamental part of making walking more convenient. Many residents enjoy walking for both recreation and transportation purposes, therefore, providing convenient connections between walking facilities is very important to ensure their safety.

In the provision of safe pedestrian mobility and accessibility, there should always be sidewalk continuity and effective crossing opportunities to ensure system connectivity for pedestrians, while considering driver workload and expectation, proximity to other crossings, and the safety of pedestrians. Providing effective system connectivity involves understanding and monitoring of pedestrian desire lines, which evolve as a function of land use, the location of

pedestrian generators and attractors, and proximity to existing crossing facilities.

A more integrated and connected network can significantly improve the ease of movement around the community, making travel on foot a more attractive alternative to driving. Part of this integration includes providing safe crossing opportunities to ensure system continuity.

- ▶ **Enhance Accessibility:** The equitable accommodation of pedestrians is a critical issue in transportation engineering and planning. With an aging population and the associated disability rates, accessible transportation will continue to become an issue of significant importance. Changes in the demographics should always be explicitly considered to ensure the accessibility of all road users. Pedestrian facilities should be designed and operated with explicit consideration of the physical and mental characteristics of pedestrians using the system, recognizing the limitations of older people, children, and people with disabilities.
- ▶ **Enhance System Maintenance:** Ongoing rehabilitation and maintenance of pedestrian infrastructure should be equally as important as its implementation. A safe transportation system must not only be properly planned and designed, but should also be properly maintained thorough an annual maintenance program.

Maintenance-related issues such as irregular surfaces, debris on sidewalks, inadequate snow removal, water accumulation due to drainage problems, and others, can pose safety hazards for pedestrians, particularly the elderly and those with disabilities. Sidewalk and crosswalk maintenance is particularly important in winter cities. Snow and ice that remains on sidewalks is hazardous for everyone, but especially for people with limited mobility who may be severely injured from a fall on ice or snow. Practices that are focused on the safe accommodation of pedestrians through the year must become part of the jurisdiction's general customer service culture and approach.

3.2.2 Strategies for Enhanced Pedestrian Safety

This section presents recommended strategies that are expected to enhance pedestrian safety in Oakville. These strategies are grouped into three categories (engineering, education, and encouragement) and are shown in **Table 3.2**, **Table 3.3** and **Table 3.4**. The tables also identify which guiding principles are expected to be met by the given strategy.

TABLE 3.2 ENGINEERING STRATEGIES THAT ENHANCE PEDESTRIAN SAFETY

Strategy	Reduces Risk and Severity	Enhances Connectivity	Enhances Accessibility	Enhances Maintenance	Part of ATMP	Existing or In-progress
Continue to conduct a road safety review program to evaluate the safety and operations of locations with high frequency of collisions or conflicts involving pedestrians.	✓					✓
Consult and identify the benefits of pedestrian priority phases with City of Toronto staff, and consider a pilot project within the Town of Oakville in partnership with Halton Region.	✓				✓	
Develop and implement a collision information system which is housed within the town itself and is customized to meet the town's needs. This system should be capable of automatically accepting collision data from e-Collision or any other similar system as needed.	✓					✓
Re-evaluate signal timing practices to ensure that seniors and people with disabilities have enough time to cross at intersections.	✓		✓			
Continue to implement street lighting strategies that ensure street lighting is appropriate for pedestrian needs.	✓					✓
Enhance implementation strategy to eliminate gaps in the sidewalk network on all roads.	✓	✓	✓	✓		
Implement a program to identify and continuously update locations that may create pedestrian desire lines. This would assist with the definition of sites that would require improved connectivity.	✓	✓	✓			
Adopt and implement pedestrian crossing control treatments identified in OTM Book 15.	✓	✓				
Investigate opportunities to work with transit to maximize connectivity between the pedestrian and transit networks.		✓	✓			
Implement wayfinding information for better system performance, which would not only assist residents but also visitors. This could include information kiosks for pedestrians, showing information such as distances to key locations.		✓				

TABLE 3.2 ENGINEERING STRATEGIES THAT ENHANCE PEDESTRIAN SAFETY

Strategy	Reduces Risk and Severity	Enhances Connectivity	Enhances Accessibility	Enhances Maintenance	Part of ATMP	Existing or In-progress
Ensure accessible detours are provided for pedestrians during construction and maintenance of infrastructure that interrupts pedestrian access and mobility.	✓	✓	✓			
Develop an implementation strategy for accessible pedestrian signals (APS), including tactile surfaces, to assist blind, visually impaired or deaf-blind users to safely cross at signalized intersections.			✓			
Test and implement advanced technologies for automatic pedestrian detection at signalized intersections or midblock crossings.			✓			
Ensure safe pedestrian access to bus stops. Integrating pedestrian accessibility with transit planning is essential as every transit trip starts with a walking trip.	✓	✓	✓			
Maintain and update the GIS-based Network Management Tool developed as part of the ATMP and use this tool to assist in asset planning and management.		✓	✓	✓		
Develop the capability to use GIS to incorporate collision data, traffic data and road inventory data for better road safety analysis in the future.	✓			✓		
Continue development of sidewalk inventory and condition assessment program. This allows for continual updating of sidewalk information (e.g., width, condition, adjacent road classification, pedestrian volume, adjacent land use) .	✓	✓	✓	✓		✓
Continue sidewalk maintenance prioritization program.	✓		✓	✓		✓
Review and update current sidewalk snow removal requirements as per provincial maintenance standards. Consider prioritization of snow removal for sidewalks based on demand, according to pedestrian volumes and surrounding land uses. Further, consider decoupling snow removal practices for sidewalks from snow removal for streets given the different needs of each.	✓		✓	✓		✓
Develop a program for the installation of pedestrian countdown signals to assist pedestrians when crossing at signalized intersections.			✓			

TABLE 3.2 ENGINEERING STRATEGIES THAT ENHANCE PEDESTRIAN SAFETY

Strategy	Reduces Risk and Severity	Enhances Connectivity	Enhances Accessibility	Enhances Maintenance	Part of ATMP	Existing or In-progress
Implement a pedestrian traffic monitoring program to assist in determining pedestrian volumes throughout the network.	✓			✓		
Develop design guidelines for the separation of pedestrian and turning vehicles at intersections with turning controls such as <i>no right turn on red</i> , <i>red turn arrows</i> , and <i>leading pedestrian interval</i> (advance green light for pedestrians).	✓					
Apply Crime Prevention Through Environmental Design (CPTED) practices to ensure principles are followed in active transportation facility design.			✓			
Continue to address personal safety concerns on existing underpasses with lighting improvements and/or design enhancements.	✓		✓			✓

TABLE 3.3 EDUCATION STRATEGIES THAT ENHANCE PEDESTRIAN SAFETY

Strategy	Reduces Risk and Severity	Enhances Connectivity	Enhances Accessibility	Enhances Maintenance	Part of ATMP	Existing or In-progress
Include pedestrian safety material in training programs for driver examiners, police recruits, fleet/transit operators and other officials.	✓				✓	
Focus behaviour outreach efforts in high collision locations by developing comprehensive education programs for the identified locations, demographics, and behaviours causing safety concerns.	✓					
Promote public awareness of automated enforcement programs through direct community outreach and digital media.	✓					
<p>Develop an annual campaign to raise awareness about pedestrian safety issues for all road users (i.e., drivers, bicyclists and pedestrians). This campaign could address issues such as distracted walking, jaywalking, nighttime walking, etc. This could be based on the following City of Toronto campaigns:</p> <ul style="list-style-type: none"> ▶ "Stay Focused Stay Safe" – A campaign by the Toronto Transit Commission which addresses various pedestrian safety issues such as jaywalking and night time visibility. ▶ "Step Up Be Safe" – An education and enforcement campaign which coincides with Daylight Savings Time, focuses on motorists, cyclists and pedestrians who commit offences near pedestrian crossovers, crosswalks, intersections, school zones and crossing areas frequented by seniors. ▶ School Zone Safety Strategy – A plan for improving safety around schools which includes engineering, education and enforcement components 	✓					✓
Develop a continuing mobility education program for older drivers to communicate new regulations.	✓		✓			
Continue to work with CNIB and similar organizations to exchange information about the needs of pedestrians with disabilities from a pedestrian perspective.	✓		✓			✓

TABLE 3.3 EDUCATION STRATEGIES THAT ENHANCE PEDESTRIAN SAFETY

Strategy	Reduces Risk and Severity	Enhances Connectivity	Enhances Accessibility	Enhances Maintenance	Part of ATMP	Existing or In-progress
Introduce a pedestrian crossing enforcement strategy, targeted at pedestrians who cross the road in contravention of applicable by-laws, as a supplement to education and awareness countermeasures. This strategy could be implemented jointly with the Police Department.	✓					
Provide every Grade 6 student in Oakville with pedestrian safety messaging on an annual basis to prepare primary school students for independent travel to junior high school.	✓					

TABLE 3.4 ENCOURAGEMENT STRATEGIES THAT ENHANCE PEDESTRIAN SAFETY

Strategy	Reduces Risk and Severity	Enhances Connectivity	Enhances Accessibility	Enhances Maintenance	Part of ATMP	Existing or In-progress
Encourage more schools in Oakville to participate in the Active and Sustainable School Transportation program. This program could also be enhanced by introducing engineering collaboration with schools through: (1) walkabouts at every school with parents, police, teachers, and City staff to review identified safety concerns; and (2) communication with the community through the school newsletter about the advantages and disadvantages of perceived solutions to traffic concerns.	✓				✓	✓
Establish a Road and Trail Safety Ambassador program, based on existing programs in other jurisdictions such as the City of Toronto	✓				✓	
Provide public grit (sand and/or salt) boxes at various locations (close to steep inclines and in areas where there are many seniors and persons with disabilities) for residents to use in winter to make sidewalks less slippery.	✓		✓	✓		
Develop a Walking Account to better monitor pedestrian exposure and evaluate the state of pedestrian safety in the town	✓		✓			

3.2.3 Implications for Oakville

Implementing the recommended strategies from Section 3.2.2 would require the town of Oakville to modify these existing pedestrian safety initiatives (detailed in Section 3.1):

- ▶ **Sidewalk Facility Design:** The town requires sidewalks to be a minimum width of 1.5 m (when offset from the property line by at least 500 mm) and increased to 2.0 m if no property line offset can be provided. Sidewalks are also required to be constructed on the roadways as described in the town's sidewalk location criteria.

The town should consider updating this practice to include issues beyond those specifically associated with the design of these facilities. This should address the overall issue of provision of sidewalks for safe pedestrian accommodation. The following items should be considered:

- Guidance on elimination of gaps in the sidewalk network on all roads.
 - Guidance on cross-sectional elements of sidewalks (e.g., buffered facilities vs back of curb)
 - Safe pedestrian accessibility to bus stops through sidewalk construction in areas where bus stops are located
- ▶ **Pedestrian Countdown Signals (PCS):** Oakville has been installing PCS with new traffic signals, and retrofitting intersections as part of the LED signal maintenance through the annual capital program.

The town should consider accelerating this program so that town residents may benefit from it sooner. The town could set an annual target for implementation of these devices so that all traffic signals in Oakville are equipped with countdown devices in the next few years. In addition to the previous modifications, the Town of Oakville may also benefit from implementing the following new policies to facilitate the implementation of some of the recommended strategies from Section 3.2.2.

- ▶ **Street Lighting:** A street lighting strategy could ensure that lighting is appropriate for pedestrian needs. Such a strategy would also promote consistent infrastructure development.
- ▶ **Road Safety Reviews:** As a proactive way of addressing pedestrian safety issues, the town should consider implementing a standard practice on road safety reviews, which would specify when to call for a road safety audit. For example, for all capital roadwork, for all intersection roadwork, for pavement rehabilitation and major maintenance projects, for work zones, etc. This would ensure that the safety needs of pedestrians are addressed at all times, and that pedestrian safety is always considered.
- ▶ **Temporary Traffic Control:** The town should consider implementing a standard practice that specifically addresses the accommodation

of pedestrians in construction zones. This would not only be intended to protect all workers, but also vulnerable road users in areas where the town may be conducting work that disrupts the flow of traffic.

3.3 Retrofit Criteria for Accessible Pedestrian Signals at Signalized Intersections

Accessible Pedestrian Signals (APS) are devices that use audible, tactile, vibro-tactile, and visible methods to communicate pedestrian signal timing information that is accessible to all pedestrians, including people who are blind, visually impaired or deaf-blind. The purpose of APS is to assist pedestrians with visual impairment cross the road at intersections with traffic signals by informing them they have the right-of-way to cross and in which direction to cross.

The legal requirements for APS in Ontario as prescribed in the Integrated Accessibility Standards under the AODA (2005), O.Reg. 191/11 which state:

“Where a new traffic control signal system with pedestrian control signal heads is being installed at an intersection or an existing traffic control signal system with pedestrian signal heads is being replaced at an intersection, the pedestrian signals must be accessible. Accessible pedestrian control signals must meet the following requirements:

- ▶ *They must have a locator tone that is distinct from a walk indicator tone.*
- ▶ *They must be installed within 1,500 mm of the edge of the curb.*
- ▶ *They must be mounted at a maximum of 1,100 mm above ground level.*
- ▶ *They must have tactile arrows that align with the direction of crossing.*
- ▶ *They must include both manual and automatic activation features.*
- ▶ *They must include both audible and vibro-tactile walk indicators”.*

The town complies with the AODA requirements by installing APS at all new traffic control signals and retrofitting traffic signal controls as part of scheduled major capital works projects. The town is responsible for approximately 147 existing signalized intersections. Through the current process, the town has installed APS at 12 signalized intersections (all intersection approach legs) and has partially installed APS at an additional 20 signalized intersections (at least one intersection approach leg). Although there is no deadline for network wide implementation of APS, every traffic control signal in the town will eventually be updated with APS as part of major capital works projects at intersections.

In addition to the AODA requirements for installation, the town has proactively initiated a retrofit program to install additional APS at intersections based on available capital funding. This program to install

additional APS shows the town's commitment to accessibility issues and is consistent with other efforts to improve walkability within the town.

Currently, retrofitted APS installation locations are based on a first come, first serve basis, prioritizing by order of locations that are identified either by the public or through consultation with the Canadian National Institute for the Blind (CNIB). It is the town's preference to establish criteria to assist in ranking and prioritizing retrofits at future locations.

Table 3.5 illustrates intersection scoring criteria developed based on guidance by the Transportation Association of Canada (2008) which can be applied by the town at each candidate intersection for ranking purposes. Locations with a higher score are a more likely candidate for proactively retrofitting with APS. In addition to applying the criteria, the town should consult with the CNIB and the Accessibility Advisory Committee to help prioritize candidate sites to be retrofitted with APS.

Appendix D details the development of these retrofit criteria for accessible pedestrian signals.

3.4 Intersection Pedestrian Safety Review: Speers Road and Kerr Street

A component of the PSP was to conduct a review for the intersection of Speers Road and Kerr Street to identify potential pedestrian-related safety issues and countermeasures. This review was specifically requested due to community concerns regarding pedestrian safety at the intersection. **Appendix E** presents the results of the full safety review.

The major pedestrian safety issues identified at the intersection are:

- ▶ Long exposure for pedestrians to cross Speers Road on the east leg of the intersection.
- ▶ Pedestrian/vehicle conflicts due to right turn and left turn conflicts with vehicles when pedestrians are crossing Speers Road.
- ▶ Accessibility for all pedestrians.

Table 3.6 summarizes modifications provided in **Appendix E** that are recommended to address the pedestrian safety issues at the intersection of Speers Road and Kerr Street.

TABLE 3.5 ACCESSIBLE PEDESTRIAN SIGNAL LOCATION SCORING CRITERIA

Criteria	Variable	Score Criteria	Intersection Score
Pedestrian Crossing Demand	1 – 20 pedestrian crossings per day	1	
	21 – 50 pedestrian crossings per day	2	
	51 or more pedestrian crossings per day	3	
Crossing Environment	Alternative accessible crossing within 100 metres	1	
	Alternative accessible crossing within 100 – 300 metres	2	
	No alternative accessible crossings within 300 metres	3	
Traffic Conditions	Location has favourable traffic conditions ¹	1	
	Location has one unfavourable traffic condition ¹	2	
	Location has > 1 unfavourable traffic conditions ¹	3	
Crossing Width	Crossing width is < 16 metres	1	
	Crossing width is 16 to 24 metres	2	
	Crossing width is > 24 metres	3	
Other Factors	Location has favourable physical factors ²	1	
	Location has one unfavourable physical factors ²	2	
	Location has > 1 unfavourable physical factors ²	3	

¹ Unfavourable traffic conditions defined as traffic that is either very light (traffic sounds are absent), erratic in flow (e.g., pronounced platooning), or sufficiently heavy that traffic tends to back-up through the intersection.

² Unfavourable physical factors include complex phasing, high ambient noise, heavy right turn volumes, mid-block crossings, leading pedestrian indicators, T-intersections, offset/skewed intersections, right turn signals, or more than four intersection legs.

TABLE 3.6 SUMMARY OF RECOMMENDED INTERSECTION MODIFICATIONS

Issues	Recommendations
<p>Long exposure for pedestrians to cross Speers Road on the east leg of the intersection</p>	<p>Modify minimum Flashing Don't Walk (FDW) times so that pedestrians can complete the crossing at a walking speed of 1.0 m/s.</p> <p>Maintain a minimum walk time of at least 7 seconds and consider increasing to minimum of 10 seconds to provide additional comfort for pedestrians.</p> <p>Relocate pedestrian push buttons so that they are within 1.5 metres from the edge of curb (at the beginning of crossing) and upgrade to fully accessible signals.</p> <p>Reduce the curb radii at the southeast and northwest intersection corners.</p>
<p>Pedestrian/vehicle conflicts due to right turn and left turn conflicts with vehicles when pedestrians are crossing Speers Road</p>	<p>Install ladder crosswalk markings at all intersection legs to increase the drivers' awareness of the potential for pedestrians.</p> <p>Reduce the curb radii at the southeast and northwest intersection corners.</p> <p>Install No Right Turn on Red sign (Rb-79) for vehicles approaching the intersection from the north and south on Kerr Street.</p>
<p>Accessibility for all pedestrians</p>	<p>Relocate pedestrian push buttons so that they are within 1.5 metres from the edge of curb (at the beginning of crossing) and upgrade to fully accessible signals.</p> <p>Install tactile walking surface indicators at the curb ramps for all intersection corners.</p>

4 Pedestrian Crossing Treatments

This chapter recommends guidance for the preliminary assessment, selection, and system design of pedestrian crossing treatments in Oakville. A pedestrian crossing treatment system is a combination of components which form a single strategy to facilitate the crossing of pedestrians. Components may include signs, signals, and pavement markings (as defined in OTM Books 5, 6, 11, and 12) and other elements, such as geometric features, auxiliary aids, and the use of school crossing guards.

The HTA (2016) provides the legal framework for which pedestrian crossing treatments can be provided in Ontario. The act defines two categories of crossing treatments:

- ▶ **Controlled:** A crossing that is supported by one of the three control measures; stop/yield signs, pedestrian crossovers (PXOs), pedestrian signals (PS) or traffic signals. At controlled crossings vehicles are required to stop or yield to pedestrians.
- ▶ **Uncontrolled:** All other crossings including unmarked crossings at intersections, marked crossings but unsigned or unsignalized, school crossings when the adult school crossing guard is not present. Pedestrians must yield to traffic and wait for a safe gap sufficient for them to cross the roadway, prior to attempting to enter the roadway. Pedestrians do not have the right-of-way at uncontrolled crossings.

This program focuses on controlled pedestrian crossing treatments. The purpose of providing pedestrian crossing treatments as a traffic control device is to establish the right-of-way for pedestrians. This priority helps to encourage pedestrians to cross at controlled locations, and limits the number of locations where pedestrian crossings occur. A connected, safe, and convenient network of pedestrian facilities helps contribute to a more sustainable and healthier community.

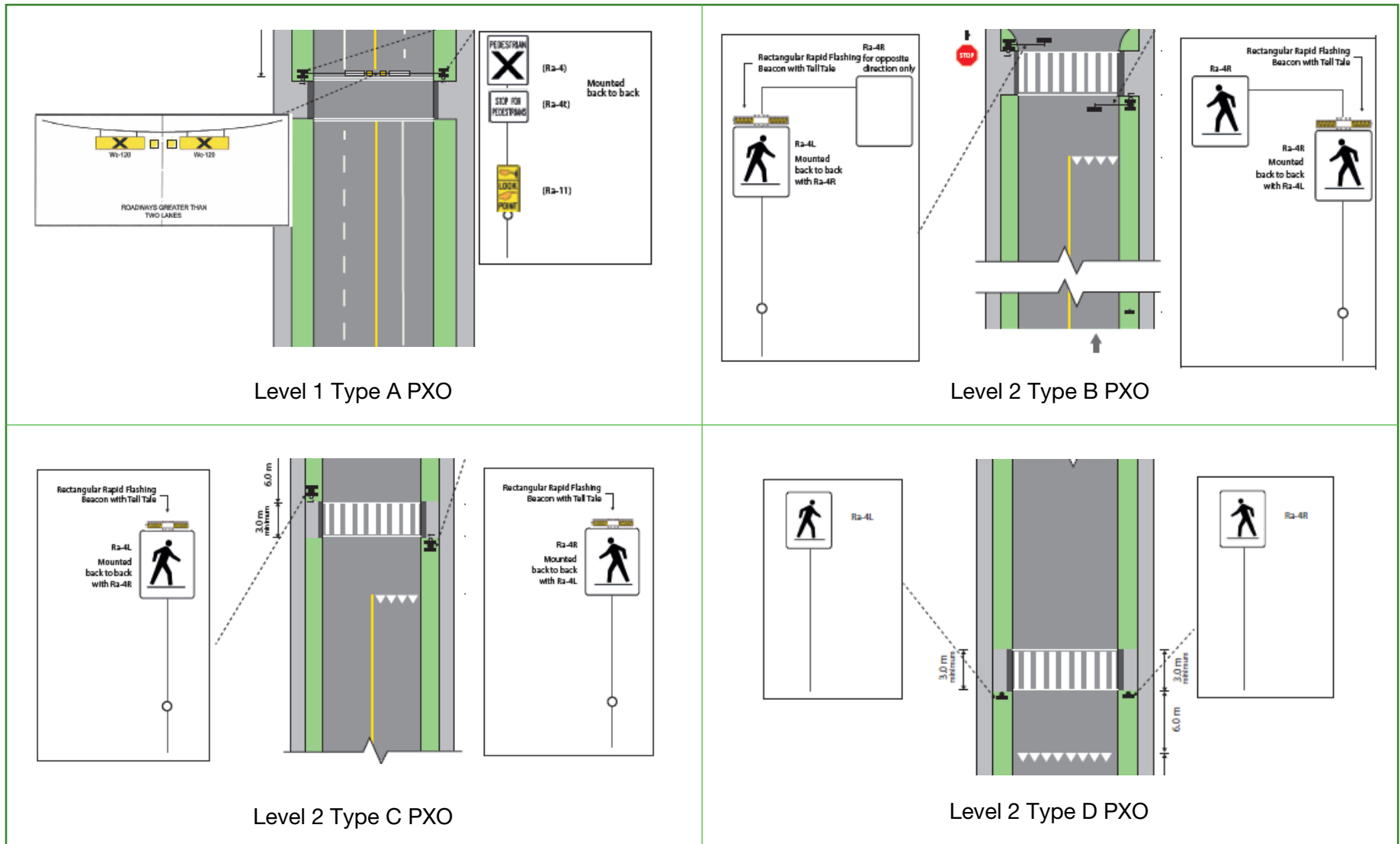
Warrants and application of controlled crossings are described in the OTM *Book 15 – Pedestrian Crossing Treatments* (MTO, 2016). The general components and physical appearance of each PXO are illustrated in **Figure 4.1**. **Figure 4.2** illustrates PXOs recently installed in jurisdictions throughout Ontario.

TABLE 4.1 PEDESTRIAN CROSSING TREATMENT SYSTEMS

<p>Full traffic signals alternate the right-of-way between conflicting streams of vehicular traffic, or conflicting movements between vehicular traffic and pedestrians crossing a road for all approaches of an intersection by displaying instructions through light-emitted indications using standard colour and signal as regulated in the HTA. Traffic is alternately directed to stop and proceed through a sequence of indications in each cycle.</p>
<p>Pedestrian signals (PS) are traffic control signal systems that are dedicated primarily to providing traffic gaps for pedestrian right-of-way installed as pedestrian signals at intersections (IPS) or mid-block (MPS).</p>
<p>Level 1 Type A PXO is distinctly defined by the use of regulatory and warning signs, flashing amber beacons, and pavement markings prescribed and illustrated by Ontario Regulation 402/15. This treatment system uses internally illuminated overhead warning signs.</p>
<p>Level 2 Type B PXO is distinctly defined by the prescribed use of regulatory and warning signs, rapid rectangular flashing beacons (RRFB) and pavement markings prescribed and illustrated by Ontario Regulation 402/15. The system uses both the side mounted and over-head regulatory signs.</p>
<p>Level 2 Type C PXO is distinctly defined by the prescribed use of regulatory and warning signs, RRFB and pavement markings prescribed and illustrated by Ontario Regulation 402/15. The system uses only side mounted regulatory signs.</p>
<p>Level 2 Type D PXO is distinctly defined by the prescribed use of regulatory and warning signs, and pavement markings prescribed and illustrated by Ontario Regulation 402/15. The system uses only side mounted regulatory signs and does not require flashing beacons.</p>
<p>STOP controlled intersections use STOP / All-Way STOP signs as a form of traffic control to assign and regulate right-of-way at intersections with the potential for conflict. Vehicles approaching a STOP in advance of a crosswalk are required to stop at the stop bar, thereby, yielding to vehicular traffic and pedestrians whose arrival preceded theirs before proceeding.</p>
<p>YIELD controlled intersections use YIELD signs as a form of traffic control to assign and regulate right-of-way at intersections with the potential for conflict. Vehicles approaching a YIELD sign in advance of a crosswalk on an intersection are required to slow down or stop when necessary to yield the right-of-way to pedestrians before entering the crosswalk.</p>
<p>Supervised school crossings are locations close to schools where school children have to cross on route between home and school. School crossings are supervised by school crossing guards during specified hours and during regular school periods.</p>

This Chapter provides recommendations related to these pedestrian crossing treatment systems

Adapted from Ministry of Transportation Ontario. (2016). *OTM Book 15: Pedestrian Crossing Treatments*



Adapted from: Ministry of Transportation Ontario. (2016). *OTM Book 15: Pedestrian Crossing Treatments*.

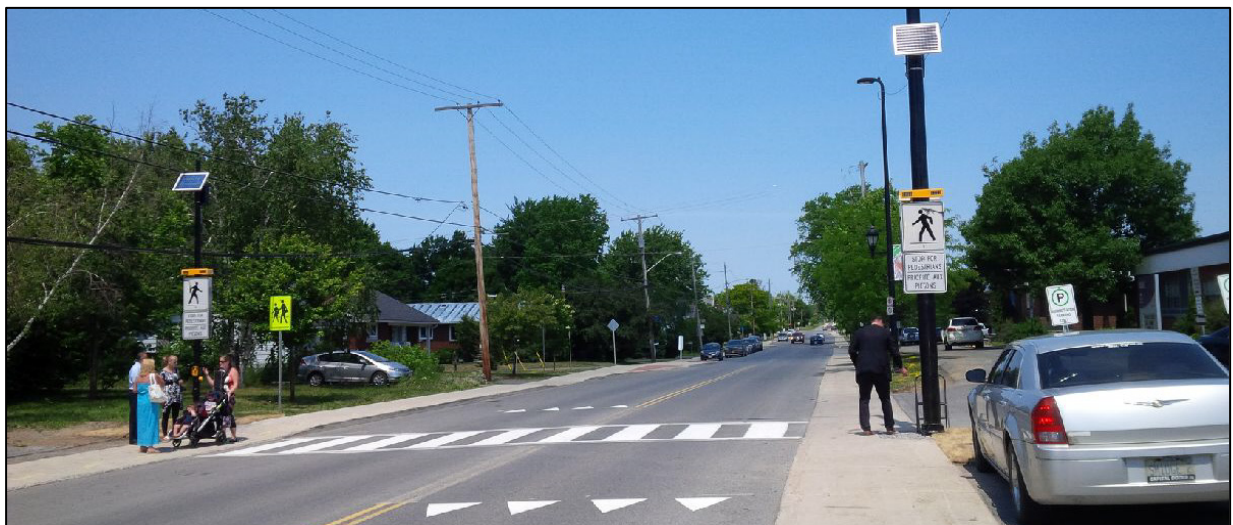
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Pedestrian Crossover Treatments

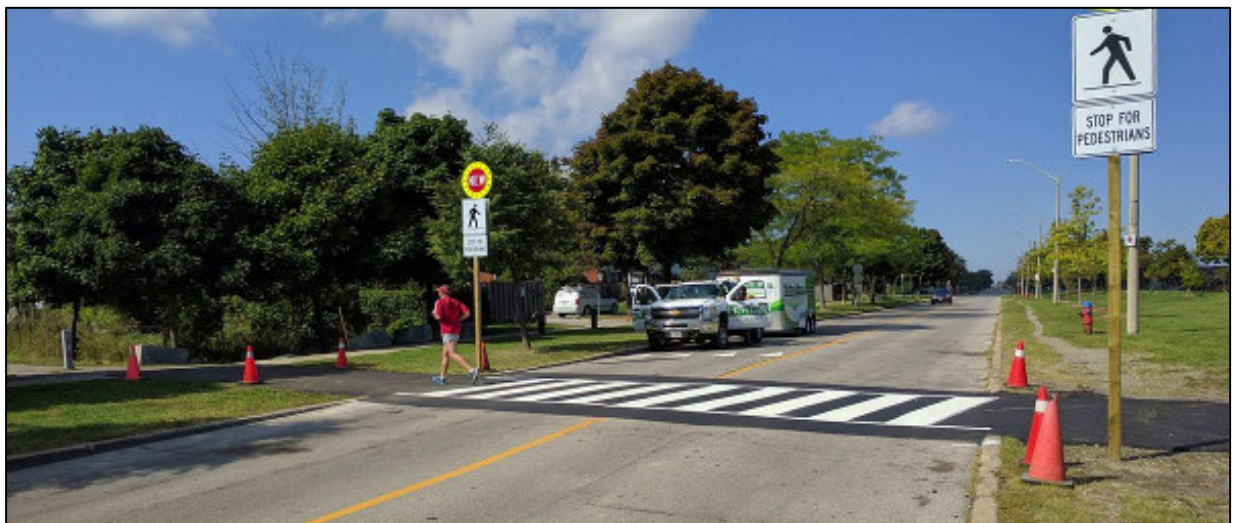
Level 2 Type B PXO in Milton



Level 2 Type C PXO in Ottawa



Level 2 Type D PXO in Hamilton



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Example Pedestrian Crossover Treatment Installations

4.1 Existing Guidance for Pedestrian Crossing Treatments in Oakville

Pedestrian crossing treatment guidance exists for pedestrian signals only. This guidance is defined as follows:

- ▶ **Pedestrian Signals (PS):** The town currently installs PSs where warranted by the town developed Pedestrian Signal Warrant (Oakville Engineering and Construction Department, 2013). This warrant is based on OTM Book 12 methodologies with modifications to vehicle and pedestrian warrant thresholds and minimum spacing between devices. The vehicle and pedestrian thresholds are modified to warrant the installation of pedestrian signals at lower pedestrian and vehicle volumes. These were modified to increase the likelihood that a treatment device could be installed since no lower order pedestrian crossing treatments are permitted in the town.
- ▶ **Pedestrian Crossovers (PXOs):** Currently, no warrant for PXOs exists in Oakville.

4.2 Recommended Guidance for Pedestrian Crossing Treatment in Oakville

It is recommended the town adopt the general justification, treatment system selection, and treatment system design described by OTM Book 15 (2016) and incorporate modifications described in this section to account for the unique local conditions in Oakville.

OTM Book 15 references the TAC *Pedestrian Crossing Control Guide* (Transportation Association of Canada, 2012) which states the following guiding principles to guide the provision of crossing treatments:

- ▶ **Safety:** This is the key objective in providing pedestrian crossing control and other supporting facilities and devices. It is fundamental that the road system protect pedestrians and other vulnerable road users by achieving a high level of compliance from drivers, bicyclists, and pedestrians and by minimizing pedestrian exposure to traffic.
- ▶ **Delay:** Delay experienced by pedestrians attempting to cross the road should be carefully managed. As pedestrian delay increases, the likelihood of pedestrians making risky or non-compliant crossings also increases. This reduces the efficiency and safety of the crossing for both pedestrians and motorists.
- ▶ **Equity:** The demographics of the pedestrian population as well as the mix of road users at different time periods should be considered, and crossing treatment systems should be designed accordingly. As the population changes, a “design pedestrian” should be considered to ensure the accessibility of all road users and not only those with good visual, mental, and physical capabilities.

- ▶ **Expectancy:** The presence of a pedestrian crossing system should not violate driver expectancy, thereby increasing the likelihood of drivers responding to situations correctly and quickly. The crossing location and any waiting or crossing pedestrian should be clearly visible. If driver expectancy is not met, driver workload and visual limitations may result in drivers not noticing a pedestrian until it is too late. The positive guidance approach should be used in design, considering driver limitations and expectations. This approach has four traits:
 - Primacy – Signs are placed according to the importance of their information, and in such a way as to present the driver with information when and where it is essential;
 - Spreading – Information is given in small amounts to reduce the information load on the driver;
 - Coding – Colour and shape coding of traffic signs; and
 - Redundancy – Information is repeated.
- ▶ **Consistency:** The road authorities' approach to pedestrian crossing facilities and control should be consistent and uniform across the transportation system. Consistency helps ensure that installations and devices are recognized, comprehended, and used effectively by all road users. The pedestrian crossing control devices – or combinations of devices where single, simple treatments may be insufficient or unsafe – should be designed according to the four traits of positive guidance noted above.
- ▶ **Connectivity:** Effective crossing opportunities should be provided to ensure system connectivity for pedestrians, while considering driver workload and expectation, proximity to other crossings, and the safety of pedestrians. Facilitating connectivity between crosswalks and sidewalks, and/or trail networks involves understanding and monitoring pedestrian desire lines, which evolve as a function of land use, the location of pedestrian generators and attractors, and proximity to existing crossing facilities. When alternatives to pedestrian desire lines are required due to other factors, these facilities should be simple, convenient, and clearly marked, and should effectively channel pedestrians so that they modify their natural choice with the shortest possible deviation.
- ▶ **Pragmatism:** The professional should consider the practical issues or consequences associated with the provision of pedestrian crossing control. The pragmatic selection of pedestrian crossing control devices involves consideration of costs, effectiveness of the device in local conditions, ease of installation and maintenance of the device (particularly in winter, when maintenance due to snow and ice can be challenging). The professional must realize that when a device is provided it should be functional year-round, unless it is intended to be used only temporarily.

OTM Book 15 incorporates current best practices in Ontario and is heavily influenced by the guidance provided in the TAC *Pedestrian Crossing Control Guide* (2012). In addition to these guiding principles, the development of OTM Book 15 considered consistency with other OTM Books, as well as the latest research involving pedestrian crossing control.

To support an efficient and consistent deployment of treatment systems, the book provides a Decision Support Tool (DST) to assist in the process. The DST includes two components: (1) Preliminary Assessment and (2) Pedestrian Crossing Selection. The preliminary assessment is used to check whether a pedestrian crossing control is a candidate site and then the pedestrian crossing selection assists practitioners to choose a pedestrian crossing treatment system for the site. Using this guidance as a foundation, the following sections provide recommendations specific for Oakville, considering the unique priorities, values, and conditions in the town.

4.2.1 Preliminary Pedestrian Crossing Treatment Assessment

The preliminary assessment framework shown in **Figure 4.3** is used to check whether a certain location is a candidate for the installation of a pedestrian crossing control treatment of any type. The preliminary assessment involves the following steps:

Step 1: Check whether a full traffic signal or pedestrian signal is warranted based on Oakville warrant methodologies for these devices.

Step 2: If a traffic signal is not warranted, use the flow chart conditions identified in **Figure 4.3** to assist in checking whether a PXO is warranted for the site.

The preliminary assessment for PXOs is based on the following three factors:

- ▶ **Pedestrian Volumes:** If the 8-hour pedestrian volumes are greater than 100 then the location is a candidate for a PXO. Assisted pedestrians, which include children under 12, seniors and those disabled with or without assistance, will count as two persons in the assessment.
- ▶ **Vehicular Volumes:** If the 8-hour vehicular volumes are greater than 750 then the location is a candidate for a PXO.
- ▶ **System Connectivity:** Providing proper connectivity between origins and destinations allow pedestrians for simple and convenient access to facilities with the shortest possible deviation. If the distance is more than 100 metres to the nearest traffic control device then the location is a candidate for a PXO.

Wherever possible, pedestrians should be encouraged to use locations with pedestrian crossing control. However, under certain circumstances, pedestrians may cross at sites which are not candidate sites for pedestrian crossing control (e.g., due to low vehicular and/or pedestrian traffic volumes) and there is no alternative, convenient crossing location available.

Accommodating pedestrians at these locations must then be evaluated carefully for alternative, uncontrolled crossing treatment options. Uncontrolled pedestrian crossings are locations where pedestrian crossing activity takes place without traffic control measures which require drivers to yield the right-of-way to pedestrians. Modifications to the roadway environment, such as curb extensions, raised pedestrian refuge islands, speed tables may be provided at uncontrolled crossing locations to aid road users. Chapter 7 of OTM Book 15 provides additional information on uncontrolled pedestrian crossing locations.

4.2.2 Pedestrian Crossover Selection

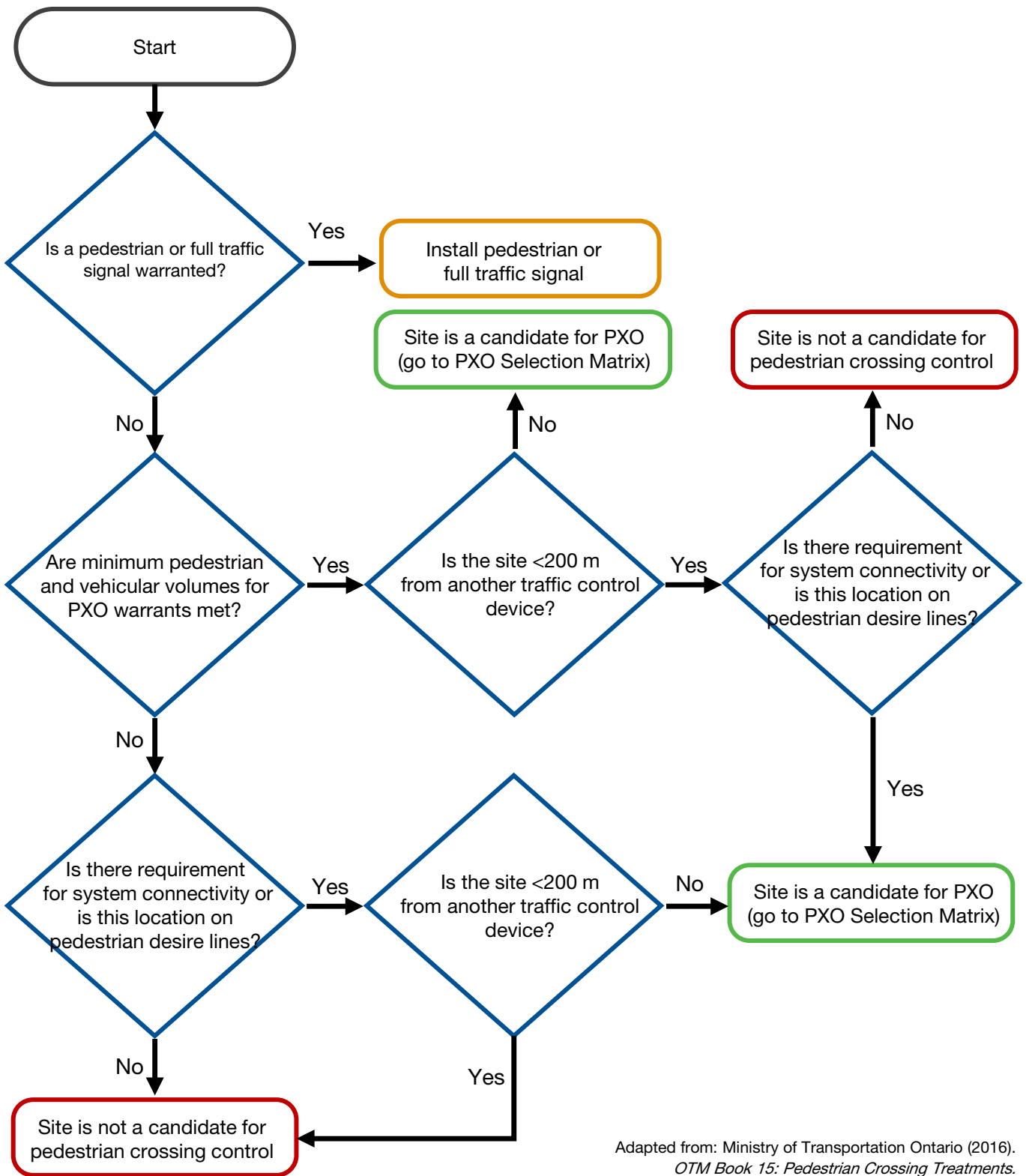
The second component of the Decision Support Tool provides guidance for pedestrian crossover selection to assist practitioners to identify which treatment system is applicable to the site based on its traffic and geometric characteristics.

The matrix uses four criteria to select the appropriate PXO for a site, according to research conducted by Zegeer et al. (2005) and adopted by TAC (2012).

- ▶ **Traffic Volume:** There is a statistically significant relationship between pedestrian collision rate and traffic volume. Specifically, collision rates at locations with marked crosswalks increase significantly at locations with traffic volumes greater than approximately 9000 vehicles per day. This suggests the need to enhance the marked crosswalks at these locations with additional treatments to improve pedestrian safety.

There is also a relationship between traffic volume and crossing opportunities (i.e., gaps), which in turn are related to pedestrian delay. For a given cross-section, approach speed, and pedestrian walking speed, higher traffic volumes decrease the available crossing opportunities, which increases pedestrian delay. Therefore, by including traffic volume as a variable within the Treatment System Matrix, delay considerations are also integrated.

- ▶ **Crossing Distance:** Crossing distance (expressed in terms of number of lanes) has an impact on the likelihood of a pedestrian collision, particularly on roads with higher traffic volumes. Essentially, the wider the crossing distance, the more difficult it is for pedestrians to safely cross the street. A concern with wider cross-sections is the multi-threat situations that are created by multilane roads. In these situations, pedestrians face the possibility of a collision more than once as the pedestrian crosses the street. Multiple-threat collisions typically occur when the driver and pedestrian fail to see each other because of the sight obstruction created by a vehicle that has already stopped for the pedestrian in another lane.



Adapted from: Ministry of Transportation Ontario (2016).
OTM Book 15: Pedestrian Crossing Treatments.

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Decision Support Tool – Preliminary Assessment

- ▶ **Presence of Raised Median:** Due to an increase in the likelihood of pedestrian collisions, marked crosswalks alone are insufficient when they are installed on road cross-sections with four or more lanes without a raised median and with traffic volumes greater than 12,000 vehicles per day. Similarly, marked crosswalks alone are insufficient when they are installed on road cross-sections with four or more lanes with a raised median and with traffic volumes greater than 15,000 vehicles per day. These findings indicate the need to enhance the marked crosswalks with additional treatments to improve pedestrian safety under these conditions.
- ▶ **Posted Speed:** Unlike the previous three variables, Zegeer et al. (2005) find no statistically significant relationship that demonstrates an increase in the likelihood of pedestrian collisions as speed limit increases. However, speed limit is included in the Treatment System Matrix because of its influence on: (1) the speed at which a vehicle impacts a pedestrian, which has a known influence on the severity of the collision; and (2) its relationship with stopping sight distance, which impacts both safety and driver expectancy. Regarding severity, Zegeer et al. indicate that sites with speed limits of approximately 60 km/h (35 mph) and more are associated with a higher percentage (43 percent) of collisions resulting in fatalities or serious or incapacitating injuries than sites with lower speed limits (23 percent).

The selection of an appropriate PXO treatment (i.e., Level 1 Type B, C, or D) is determined based on the Pedestrian Crossover Selection Matrix as shown in **Figure 4.4**. Based on the history of the town's Pedestrian Crossover Conversion Program, new Level 1 Type A PXO's are not included in the selection matrix. Implementation of PXOs is subject to the following restrictions:

- ▶ Application of PXOs is limited to road segments with a posted speed limit of 60 km/h or less
- ▶ A PXO can be installed on roadways with a maximum of 4 lanes.
- ▶ A PXO must not be used where the road volume exceeds 35,000 AADT (Average Annual Daily Traffic).
- ▶ PXOs should not be installed within 100m of other signal-protected pedestrian crossings, although there are some exceptions.

Two-way Vehicular Volume			Posted Speed Limit (km/h)	Total Number of Lanes for the Roadway Cross Section ¹			
Time Period	Lower Bound	Upper Bound		1 or 2 lanes	3 lanes	4 lanes w/raised refuge	4 lanes w/o raised refuge
8 hour	750	2,250	≤ 50	Level 2 Type D	Level 2 Type C ³	Level 2 Type D ²	Level 2 Type B
4 hour	395	1,185	60	Level 2 Type C	Level 2 Type B	Level 2 Type C ²	Level 2 Type B
8 hour	2,250	4,500	≤ 50	Level 2 Type D	Level 2 Type B	Level 2 Type D ²	Level 2 Type B
4 hour	1,185	2,370	60	Level 2 Type C	Level 2 Type B	Level 2 Type C ²	Level 2 Type B
8 hour	4,500	6,000	≤ 50	Level 2 Type C	Level 2 Type B	Level 2 Type C ²	Level 2 Type B
4 hour	2,370	3,155	60	Level 2 Type B	Level 2 Type B	Level 2 Type C ²	Level 2 Type B
8 hour	6,000	7,500	≤ 50	Level 2 Type B	Level 2 Type B	Level 2 Type C ²	
4 hour	3,155	3,950	60	Level 2 Type B	Level 2 Type B		
8 hour	7,500	17,500	≤ 50	Level 2 Type B	Level 2 Type B		
4 hour	3,950	9,215	60	Level 2 Type B			

Approaches to roundabouts should be considered as separate roadways.

¹The total number of lanes is representative of crossing distance. The width of these lanes is assumed to be between 3.0 m and 3.75 m according to MTO Geometric Design Standards for Ontario Highways (Chapter D.2). A cross sectional feature (e.g., bike lane or on-street parking) may extend the average crossing distance beyond this range of lane widths.

²Use two sets of side mounted signs for each direction (one on the right side and one on the median)

³Use Level 2 Type B PXO up to 3 lanes total, cross section one-way.

The hatched cells in this table show that a Level 2 PXO is not recommended for sites with these traffic and geometric conditions. Generally a traffic signal is warranted for such conditions.

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Decision Support Tool – PXO Selection Matrix

4.2.3 Pedestrian Crossover System Design

One of the purposes of OTM Book 15 is to promote uniformity in the design, application and operation of PXO systems across Ontario. For each pedestrian treatment system, a detailed list of required, desirable, and optional components are provided. Practitioners should review Book 15, Chapter 6 – Pedestrian Crossing Facility Design for detailed information on the design components for each PXO. The Book also provides typical layouts for PXOs in a multitude of conditions. The layouts are not to be used standalone and should be used in conjunction with the knowledge in the entire manual.

Installation of each PXO must include at a minimum the following:

- ▶ **Pavement Markings** – This may include standard crosswalk markings, stop line, advanced stop bar, and yield to pedestrian line. Crosswalks must be marked for all types of controlled pedestrian crossing treatments.
- ▶ **Curb Ramps** – Curb ramps provide access for people using wheelchairs or scooters at crossings where there is an elevation change between the sidewalk and the street level crossing.
- ▶ **Signage** – Mandatory warning and regulatory signage for PXOs is specified by Ontario Regulation 402/15.
- ▶ **Illumination** – Adequate lighting must be provided to enhance the safety of pedestrians.
- ▶ **Sight Distance** – Adequate sight distance for both motorists and pedestrians must be provided.

4.2.4 Exceptions to OTM Book 15

The recommended guidance for pedestrian crossing treatments in Oakville incorporate the following exceptions to the guidance OTM Book 15:

- ▶ The town has developed their own warrants for full traffic signals and pedestrian signals which should be evaluated in place of justifications provided in OTM books.
- ▶ The town has been actively removing existing installations of Level 1 Type A PXOs over the last several years as part of the Pedestrian Crossover Conversion Program. Providing new installations of this treatment may result in frustration and negative public perception following years of removing the devices. In instances that the Book 15 Pedestrian Crossover Selection Matrix recommends use of Level 1 Type A PXO the town should upgrade to a pedestrian signal.
- ▶ OTM Book 15 provides recommended and desirable components for each treatment system. The desirable components are generally considered to provide safety benefits in most cases when they are

implemented. The town should consider implementing the desirable components of PXOs for all implementations unless there is reason why only the recommended components should be implemented.

4.2.5 Comparison to Existing Guidance

Figure 4.5 illustrates the comparison between the pedestrian and vehicular volume thresholds provided in OTM Book 15 and those provided in the Town of Oakville Pedestrian Signal Warrant (Oakville Engineering and Construction Department, 2013).

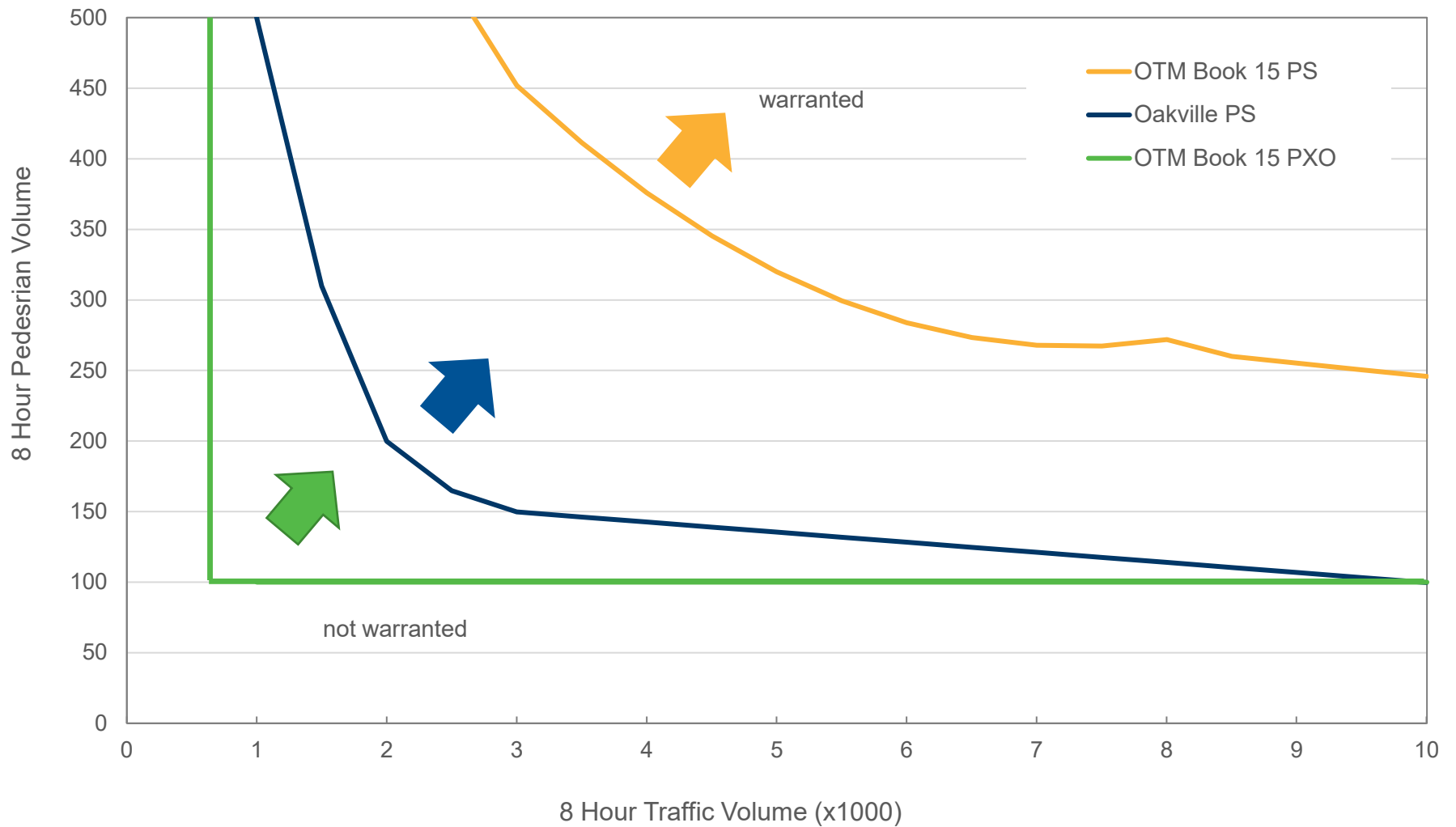
The town warrant was modified to lower the necessary pedestrian and vehicular volumes that warrant a pedestrian signal. This was developed at the time because there were no additional treatment systems available. Inclusion of the PXOs as a pedestrian crossing treatment for the town provides a cost-effective, proven tool to provide pedestrian crossing opportunities and increase network connectivity.

4.3 Raised Refuges

A raised refuge is a raised, protected area in the centre of the road that physically separates the directional flow of traffic at midblock or intersection locations. A raised refuge assists pedestrians by providing a safe “refuge” in the centre of the road, thereby reducing crossing distance between safe points and allowing pedestrians to cross one direction of traffic at a time. The following types of raised refuges, as illustrated in **Figure 4.6**, can assist pedestrians:

- ▶ **Pedestrian Refuge Islands:** These are constructed specifically to assist pedestrian crossings by improving pedestrian safety and encouraging pedestrian crossing opportunities. The refuge island should ideally be at least 12 metres long to appear significant to motorists (NACTO, 2013). A majority of the existing pedestrian refuge islands in the town were completed as part of the Midblock Trail Crossing Enhancement Program.
- ▶ **Raised Centre Medians:** Continuous raised centre medians are frequently used on multilane, wide, higher speed, or higher volume roadways to separate opposing directions of vehicular traffic and have additional benefit of providing a pedestrian refuge.

Raised centre medians may also be installed as a traffic calming measure. They are currently an approved tool in the town’s Toolbox of Measures for Traffic Calming (Oakville Engineering and Construction Department, 2016) and as part of this program, have been installed at numerous locations. In these instances, their primary purpose is to help slow vehicle speeds and not necessarily assist with pedestrian crossings.



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Volume Warrants for Pedestrian Crossing Treatments

Pedestrian refuge island on Grand
Oak Trail



Continuous raised centre median with
crosswalk on Ceremonial Road



Raised centre median installed as traffic
calming measure on Old Abbey Lane



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Pedestrian Refuge Island and Raised Centre Medians

Raised refuges should be a minimum of 1.8 metres wide to provide space for a wheelchair or more than one pedestrian to wait. Where practical, and in areas of higher pedestrian volumes, a 2.4 to 3.0 metre refuge width should be provided to accommodate groups of pedestrians, bicycles, and mobility aids such as wheelchairs and scooters (AASHTO, 2004). Design of refuges must be AODA compliant. It is desirable to have the crosswalk “cut through” the refuge, negating the need for ramps. At intersections, it is desirable to have a “nose” which extends past the crosswalk. The nose protects people waiting on the refuge and slows turning drivers.

OTM Book 15 states that a raised refuge is a desirable component for all pedestrian signal, Level 2 Type C PXO, and Level 2 Type D PXO locations. Specifically, raised refuges are highly desirable at the following locations:

- ▶ Complex or irregularly shaped intersections where they could provide a pedestrian with the opportunity to rest and become oriented to the flow of oncoming traffic (AASHTO, 2004).
- ▶ Pedestrian crossing locations near pedestrian generators with a higher volume of vulnerable pedestrians such as schools, hospitals, health clinics, or senior facilities (MTO, 2016).

4.4 Typical Costs for Treatments

Based on the jurisdictional interviews and recent costs of treatments in Oakville, the approximate installation costs provided in **Table 4.2** can be anticipated.

TABLE 4.2 CROSSING TREATMENT INSTALLATION COSTS

Treatment	Approximate Installation Cost	Median Cost Used in Analysis
Pedestrian Signal	\$75,000	\$75,000
Level 2 Type B PXO	\$23,500 to \$28,500	\$26,000
Level 2 Type C PXO	\$14,500 to \$17,500	\$16,000
Level 2 Type D PXO	\$2,000 to \$5,500	\$4,000
Pedestrian Refuge Island	\$10,000 to \$30,000	\$20,000

5 Pedestrian Crossing Treatment Prioritization Criteria

OTM Book 15 (2016) is quite comprehensive in describing where, how, and why to provide pedestrian crossing control, however, it does not provide prioritization criteria to assist a jurisdiction in selecting initial locations. Although no prioritization criteria specifically for pedestrian crossing control is published at either a provincial or national level there are several sources that describe the prioritization of pedestrian infrastructure in general, such as:

- ▶ NCHRP Report 803: *Pedestrian and Bicycle Transportation Along Existing Roads – ActiveTrans Priority Tool Guidebook* (2015); and
- ▶ FHWA – *Recommended Guidelines/Priorities for Sidewalks and Walkways* (n.d.).

There is no consensus on a single method to select which criteria to use when developing priorities. Rather, the criteria and methodology should balance the unique needs of the town and the availability of existing data to quantify criteria. This section presents a methodology for objectively prioritizing candidate sites. These priorities are intended to provide a framework to order projects based on clear criteria that will guide capital and investment planning.

5.1 Identification of Candidate Crossing Locations

An initial list of 334 candidate crossing locations were identified based on the presence of past collisions involving pedestrians (144 locations), existing school crossing guard locations (24 locations), and community requests at key stakeholder workshops and public consultation pop-up events (166 locations).

The candidate crossing locations were reviewed to remove 34 duplicate locations (e.g., identified by request and collisions) and 68 locations that are already at controlled intersections (e.g., all-way stop control or traffic signals). In addition, 17 locations on regional roadways and 42 sites located within 100 metres of an existing controlled crossing location were removed from the candidate crossing locations. Candidate crossings that are between 100 and 200 metres are kept in the analysis for this initial step. This resulted in a total of 173 candidate locations on town roadways carried forward for prioritization analysis. **Table 5.1** summarizes how the 173 candidate crossing locations were determined.

TABLE 5.1 CANDIDATE CROSSING LOCATION IDENTIFICATION PROCESS

	Number of Locations
Collision Locations	144
Requested Locations	166
School Crossing Guard Locations	24
Initial Candidate Crossing Locations	334
Duplicates Removed	-34
Existing Crossings Removed	-68
Remaining Locations	232
Halton Region Jurisdiction	-17
Within 100 metres of Existing Crossing	-42
Candidate Crossing Locations	173

5.2 Oakville Prioritization Criteria

This section describes the criteria and weighting factors developed for prioritizing pedestrian crossing control in Oakville. Through consultation with the town, the following three key categories were identified as critical to the prioritization evaluation:

- ▶ **Connectivity:** Effective crossing opportunities should be provided to ensure system connectivity for pedestrians. Facilitating connectivity between crosswalks and sidewalks, and/or trail networks involves understanding pedestrian desire lines, which evolve as a function of land use, the location of pedestrian generators and attractors, and proximity to existing crossing facilities.
- ▶ **Demand:** Pedestrian volumes are included in the preliminary assessment for the need to provide pedestrian crossing control. The minimum volumes trigger the need to provide crossing control, however higher pedestrian volumes and expected use of a crossing can increase the priority of the crossing location.
- ▶ **Safety:** It is fundamental that the road system protect pedestrians and other vulnerable road users by achieving a high level of compliance from drivers, bicyclists, and pedestrians and by minimizing pedestrian exposure to traffic.

Each of these three categories (connectivity, demand, and safety) is quantified using the criteria and weighting factors described in **Table 5.2**.

These criteria were selected through consultation with the town and based on the availability of datasets.

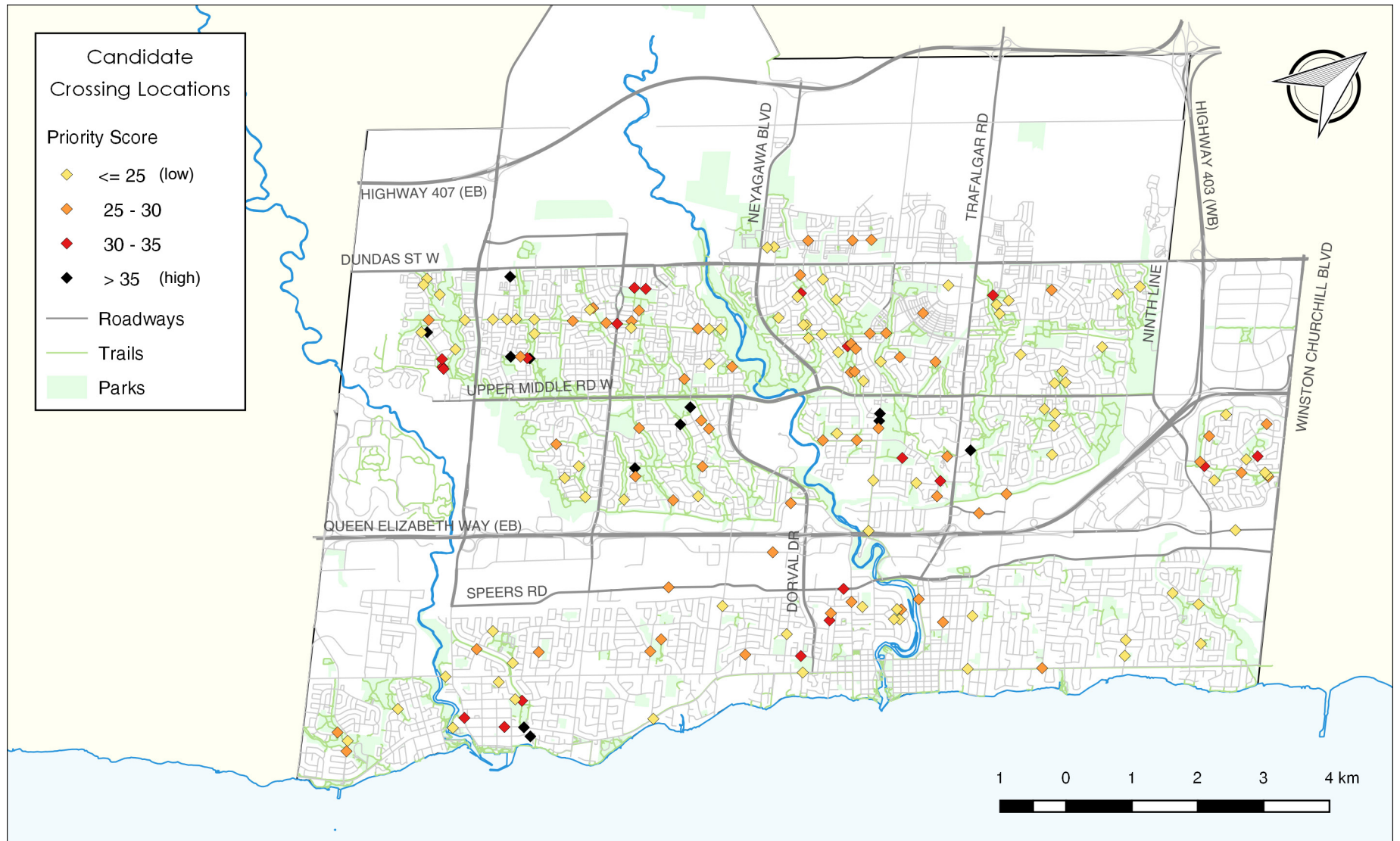
TABLE 5.2 PRIORITY CRITERIA AND WEIGHTING

Criterion	Maximum Score
Connectivity	
Proximity to senior facilities and medical centres	15
Proximity to elementary and middle school	10
Proximity to high school or post secondary institution	5
Transit route or proximity to a transit stop	5
Proximity to major pedestrian facility	5
Multi-use trail or major trail facility crossing	5
Proximity to nearest controlled crossing location (all-way stop, traffic signal, or other PXO)	5
Total Crossing Control Connectivity	50
Demand	
Community request	5
Land use	5
Total Crossing Control Demand	10
Safety	
Pedestrian Collision History	5
Road class	5
Posted speed limit	5
Total Crossing Control Safety	15
Total Connectivity, Demand, and Safety	75

Appendix F provides a more detailed explanation of the criteria and associated weighting.

5.3 Application of Prioritization Criteria

A Geographic Information System (GIS)-based analysis was used to efficiently assign a score to each location identified as a candidate crossing location. **Figure 5.1** illustrates the locations of the 173 candidate crossings and their respective priority score (a high score indicates that a candidate site is a higher priority, while a low score indicates that a candidate site is a lower priority). **Appendix G** provides a complete list of the candidate crossing locations and scores for each priority criterion. **Appendix H** lists candidate crossing locations on regional roadways to provide to Halton Region for their consideration. **Appendix I** lists locations within 100 metres of an existing controlled crossing to help the town in identifying existing locations that may require pedestrian crossing enhancements.



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Pedestrian Crossing Prioritization

Figure 5.1

6 Pedestrian Crossing Treatment Implementation Plan

This chapter presents an implementation plan for installation of pedestrian crossing treatments at the highest priority locations while considering budget availability, estimated treatment costs, opportunity to coordinate with other planned infrastructure projects, and spatial diversity to promote public education town-wide. In addition, public education strategies are incorporated into the implementation plan to educate the public and ensure that the benefits of PXO treatments are realized.

6.1 Public Education Components

Public awareness, communication, and education strategies play an important role in the implementation of new road safety infrastructure. They will be used to educate the public on how to interact with PXOs that will be installed through the Town of Oakville as part of this PXO implementation plan. It is important that education targets both pedestrians and drivers. Specific public education campaigns recommended for use in the PXO implementation plan are based on input received through the community engagement program and include:

- ▶ **Creation of an Oakville-Specific Safe Streets Brand/Identify:** Creation of a recognizable Oakville-specific brand/identifier for safe streets (e.g., Vision Zero branding) is recommended to help visually establish pedestrian and road safety as a priority in the town. The message of the brand/identifier should be safety for all, with messaging targeted at both pedestrians and drivers. It should be easily recognizable and clearly articulate that road safety is the responsibility of everyone. It should be used on all pedestrian safety related information, materials, and campaigns.
- ▶ **Annual Educational Campaign Blitz:** Delivering a branded campaign through a short-term outreach blitz is recommended on an annual basis to inform residents about safety information and provide an annual reminder. This could be carried out in conjunction with Road Safety Week or extend for an entire month. Annual education campaigns could have a different focus each year, such as senior and youth pedestrian safety, etc. Key components of the education blitz include:
 - Communication and social media efforts to create Town-wide awareness and buzz about the campaign. Partnerships with complimentary organizations (e.g. Halton Police, CAA, MTO) should be explored to expand the reach of the initiative.
 - “Pop-up” outreach activities at busy locations in the town (e.g. community centres, farmers markets, etc.) to offer direct interactions with residents. This would provide an opportunity to talk to residents about road and pedestrian safety, explain the

new PXOs, and answer any questions. Giveaway items for residents could include reflective arm bands, reflectors, etc.

- Demonstration days at new PXOs to highlight how they work and the proper way for pedestrians and drivers to use them. These types of demonstrations could leverage local media coverage and partners (e.g. Halton Police) to help inform more people.
- ▶ **Temporary Signage/Prompts at New PXOs:** As new PXOs are installed, temporary signage should also be installed to inform residents about them and how to use them. “New” signs should be included to indicate that something has changed and temporary informational boards should be put in place to visually explain how the new PXOs function.
- ▶ **Ongoing Communication and Information:** A dedicated location for information and resources about pedestrian safety in combination with active pushing of information to residents is recommended. Specific components to achieve this include:
 - Creating a dedicated pedestrian and road safety webpage on the town’s website to be a “landing spot” for information about safety, the PXOs, and educational campaigns.
 - Use of the towns’ established Twitter and Facebook accounts are recommended to share ongoing information about pedestrian and road safety to leverage the established universe of followers. Frequency of postings could be 1-2 per month throughout the year and much more frequent during annual blitzes.
 - Communicating through established town communication channels to share information and updates. To leverage the reach of the town’s communication channels, it is recommended to utilize existing newsletters, such as Town of Oakville Newsletter, Oakville Public Library Newsletter, Let’s Talk Oakville, and BIA newsletters and websites.
- ▶ **Additional Communication Tools:** As additional resources to help inform and educate the public, use of infographics, brochures, and YouTube videos is recommended to reach different audiences through a variety of formats. These formats were identified as preferred through the community engagement program. Information to be presented could include introduction of the new PXOs, proper rules for crossing streets, how to properly abide by traffic signal count-down timers. These all emerged as areas of interest to residents that they need/would like more information about.

6.2 Preliminary Treatment Selection

The cost of pedestrian crossing treatments at each candidate crossing location must be determined to estimate an annual program budget. The cost estimate of PXO treatments and pedestrian signals are provided in Section 0. This section describes the preliminary selection of pedestrian

crossing treatments that may be required at each candidate crossing location.

The DST Preliminary Assessment (**Figure 4.3**) is the first step in determining the need for a PXO. Typically, at this first step, pedestrian and vehicle volume counts would be conducted to confirm that minimum warrant thresholds are met. At the system-wide level, this is an onerous task to complete for all 173 candidate crossing locations. Therefore, the preliminary treatment selection assumes that the pedestrian volumes at each location exceed the minimum warrant criteria of 100 pedestrians in the peak 8-hour period (Section 4.2.1) and that minimum vehicular volumes are met. Prior to implementing any pedestrian crossing treatment, pedestrian and vehicle volume data should be collected to verify that the candidate crossing location exceeds these criteria.

The second step is to apply the DST Pedestrian Crossover Selection Matrix (**Figure 4.4**) to each location. As described in Section 4.2.2, the four criteria used to select the appropriate PXO treatment are traffic volume, crossing distance, presence of a refuge island, and posted speed limit. The following details how each criterion was measured or determined:

- ▶ **Traffic Volume:** The 8-hour traffic volumes at each site were determined from the 2015 Traffic Volumes Map published in the *2015 Road System Report* (Oakville, 2015). The traffic volume map provides average daily traffic (ADT) volume estimates from counts collected between 2010 and 2014. The 8-hour traffic volumes were determined by dividing the ADT by 2 as recommended in Section 5.1.2 of OTM Book 15 (MTO, 2016, p. 27). Candidate crossing locations with less than the minimum 8-hour traffic volume of 750 are still included in the analysis because traffic volumes may have grown since the traffic count was conducted.
- ▶ **Crossing Distance:** The crossing distance of each crossing is represented by the number of vehicle travel lanes a pedestrian must cross. Travel lane width typically ranges between 3 and 3.75 meters. For the purposes of this analysis, only the number of travel lanes were counted at each location using Google Maps (2016).
- ▶ **Presence of Raised Median:** The presence of a raised median was determined through review of each candidate location on Google Maps (2016).
- ▶ **Posted Speed:** The posted speed limit was given in the Road Segments Shapefile provided by Oakville.

Some candidate locations have traffic volumes that exceed the maximum warrant criteria for PXOs (i.e., locations with an 8-hour traffic volume greater than 17,500 vehicles). These locations may warrant a pedestrian signal or traffic signal if minimum pedestrian volumes are met.

Oakville's pedestrian signal (PS) warrant (Oakville, 2013) requires pedestrian volumes, vehicles volumes, and the distance to the nearest traffic signal, PS,

or control sign to determine if a PS is warranted at a location. In the absence of pedestrian volume data, the volume warrant criteria cannot be determined. However, the distance to the nearest traffic signal, PS, or control sign can be measured and candidate within the minimum distance thresholds (160 meters for roadways with a maximum posted speed limit of 50 km/h and 215 meters for roadways with a posted speed limit of 60 km/h) can be identified. These potential PS locations are not removed from the candidate location list because they may still be warranted if they are deemed to be on pedestrian desire lines or provide system connectivity.

Traffic signals are not included as part of this treatment selection. In general, traffic signals are implemented to assign right of way. Oakville's traffic signal warrant should be applied to each location prior to implementation of a pedestrian crossing treatment.

6.3 Additional Location Selection Considerations

The methodology described in Section 5.2 is critical for providing a prioritization score and ranking all candidate crossing locations. Although these criteria are critical for developing an objective and quantifiable priority list, there are other factors that are considered when finalizing the selection of locations, including:

- ▶ **Coordination with Other Planned Roadway Projects:** Candidate sites that are within the construction limits of future planned roadway projects should be coordinated to minimize construction time and best incorporate modifications at the design stage of the planned roadway project.
- ▶ **Exact Crossing Location:** Candidate sites for crossing control were identified through a variety of measures (e.g., collision history, community request, school crossing guard location). The prioritization score will help to identify that the general location is a candidate for pedestrian crossing control, however, it does not mean the exact location identified as a candidate site is the optimum crossing location. Site investigation of each individual site will be necessary to identify the most ideal location along the roadway based on review of likely pedestrian desire lines.
- ▶ **Cost of Controlled Crossing Type:** Due to installation cost, the town could install approximately six PXO Type D treatments for the price of one PXO Type B treatment. Pedestrian signals may be up to five times more expensive than PXO Type B treatments. There is a need to balance the implementation of higher prioritized locations with the ability to maximize the number of locations where new treatments can be installed.
- ▶ **Geographic Distribution:** As PXO's are a new device to both motorists and pedestrians, there will be a need for education to become familiar with the desired behaviour at crossing locations. Providing geographic distribution of initial installation locations can help ensure that a maximum number of pedestrians and motorists

are exposed to the treatments when education programs are in place during initial stages of implementation.

- ▶ **Specific Site Installation Costs:** Each crossing location must include appropriate pavement markings, curb ramps, signage, illumination, and adequate sight distance. There will be unique physical limitations at each site that impact the cost and ability to provide these requirements. These costs can greatly impact the installation cost at individual sites and may impact their prioritization, or even the ability to install a crossing at a specific site.
- ▶ **Existing Crossing Control in Close Proximity:** Crossing locations that are within 100 metres of existing crossing control are provided in a separate list in **Appendix I**. These crossings that also have a high priority score may help identify existing crossings that require enhancements to make the crossing more attractive to pedestrians.

6.4 Year 2018 Implementation Plan

Based on initial discussions with town staff, it is anticipated that the annual budget for the Pedestrian Safety Program will be approximately \$200,000. This is funding to commit to program initiatives in 2018 that include implementing pedestrian crossing treatments and delivering PXO public education campaigns.

Application of the implementation criteria resulted in the selection of 10 PXO treatments for implementation in 2018. Candidate crossing locations were selected based on their prioritization score and the additional location selection criteria discussed in Section 6.3. **Appendix J** provides additional information for each of these locations. For an approximate budget of \$180,000, it is expected that PXOs could be implemented at the following locations, as identified in **Figure 6.1**:

- ▶ COLONEL WILLIAM PARKWAY at STOCKSBRIDGE AVENUE (Map ID 6)
- ▶ WESTOAK TRAILS BOULEVARD at East Fourteen Mile Creek Trail West Bank (East of ASHMORE DRIVE) (Map ID 21)
- ▶ PILGRIMS WAY at GLEN ABBEY TRAIL (east of PINEWAY COURT) (Map ID 55)
- ▶ PILGRIMS WAY at Taplow Creek Trail West Side (east of WINDRUSH DRIVE) (Map ID 57)
- ▶ MUNN'S AVENUE at Munn's Creek Trail West Bank (north of RIMMINGTON DRIVE) (Map ID 81)
- ▶ LAKESHORE ROAD W at Bronte Athletic Park Walk (Map ID 95)
- ▶ ELM ROAD at SIXTH LINE (Map ID 103)
- ▶ 1300 WHITE OAKS BOULEVARD (Map ID 126)
- ▶ STEWART STREET at MAURICE DRIVE (Map ID 133)

- ▶ SIR DAVID DRIVE at Clearview Park Walk (north of GREENWOOD CRESCENT) (Map ID 163)

It is noted that the exact location and configuration of the proposed pedestrian crossing treatments will be verified and defined through further detailed field studies and design.

For an approximate budget of \$20,000, the following public education strategies could be implemented:

- ▶ Brand/Identify and Communication Materials (Brand/Identity, Brochures, Videos)
- ▶ Public Education Campaign (Blitz, Outreach, Demonstrations)
- ▶ Informational Signage (Temporary Signage at PXOs)
- ▶ Ongoing Communication and Advertising (Website Updates, Social Media and Communications Management)

Implementation of the above-noted pedestrian crossing treatments and PXO public education strategies are subject to further detailed cost estimating and budget approval.

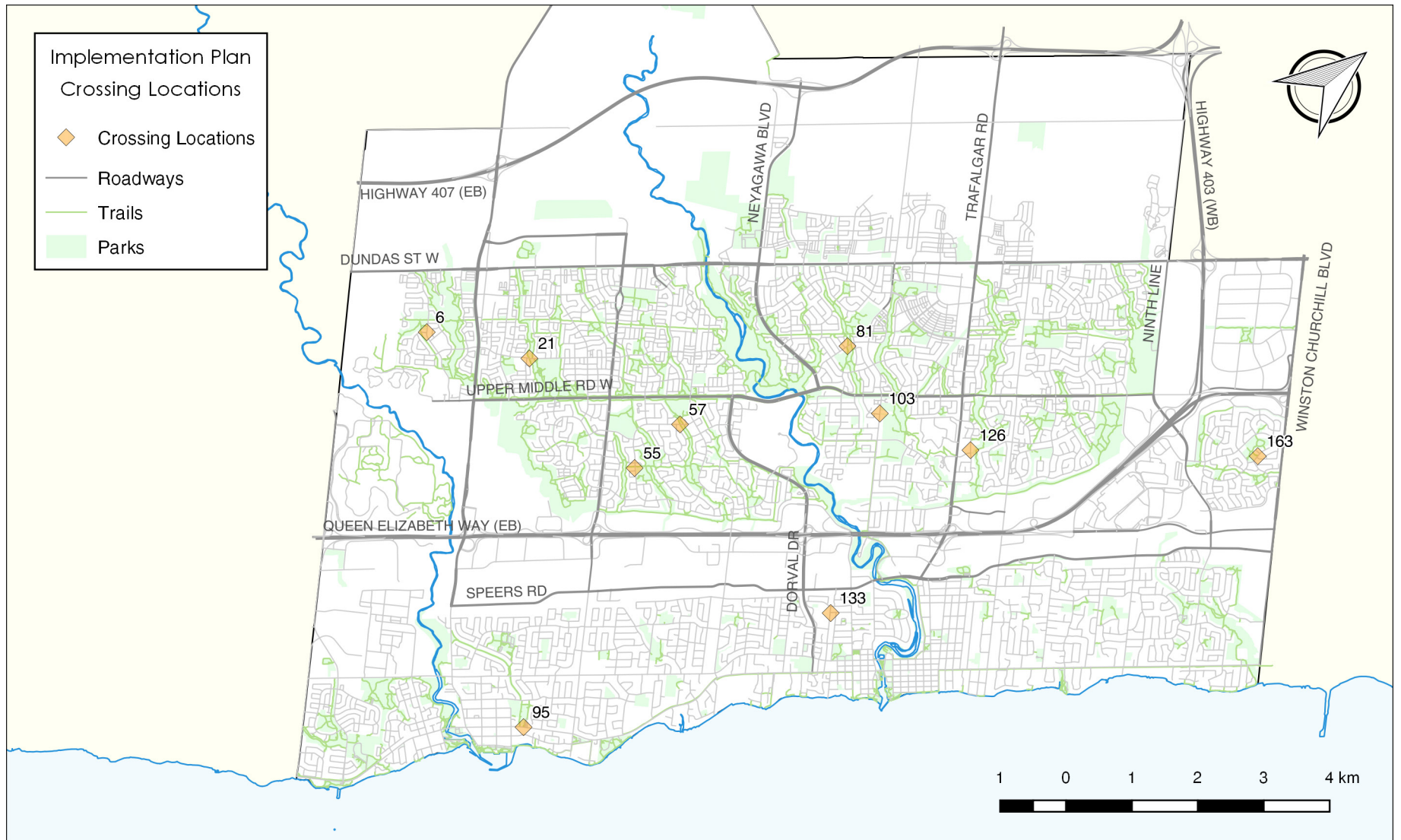
In addition, the town should identify the 2019 Implementation Plan sites and conduct pedestrian and vehicle volume counts to confirm sites and determine the appropriate crossing control type.

6.5 Implementation Plan for Future Years

Beyond 2018, the town can use the list of prioritized locations (**Appendix G**) and profiles of candidate locations (**Appendix J**) to systematically identify and review candidate crossing locations to evaluate each year. The exact location and configuration of the proposed pedestrian crossing treatments will be verified and defined through further detailed field studies and design as explained below.

The Implementation Plan for future years would be identified by completing the following tasks:

1. Evaluate prioritization score for any new candidate sites that may have been identified by recent community requests or pedestrian collision incidents. (see Section 5.1 and 5.2)
2. Review list of top 30 ranked locations and update prioritization score at each location based on any changes to scoring criterion (e.g., implementation of nearby PXO, new transit route, change in roadway posted speed limit). (see Section 5.2)
3. Review and update preliminary treatment selection for top 30 ranked locations. (see Section 6.2)



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Pedestrian Crossing Implementation Plan Map

4. Apply additional location selection considerations to identify initial list of locations for implementation plan. (see Section 6.3)
5. Conduct pedestrian volume and vehicle volume counts to confirm that minimum warrant thresholds are met and appropriate pedestrian crossing control is selected.

Implementation of the pedestrian crossing treatments and public education strategies in future years will be subject to further detailed cost estimating and budget approval.

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Appendix A

Literature Review

A.1 Overview

Over 30 documents were reviewed as part of the literature review. The following sections provide a summary of findings relating to:

- ▶ Pedestrian crossing control guidance;
- ▶ Pedestrian crossing control treatment performance;
- ▶ Pedestrian transportation master plans; and
- ▶ Pedestrian safety plans.

A.2 Pedestrian Crossing Control

Pedestrian crossing control is an important issue for the safe and efficient accommodation of pedestrians within the transportation system. In the last 10 years, there have been three important changes to the way in which pedestrians are accommodated in Ontario:

- ▶ New crosswalk rules came into effect in January 2016 requiring that drivers and cyclists stop and yield the entire roadway to pedestrians at PXOs. These are part of the *Making Ontario Roads Safer Act*.
- ▶ OTM Book 15 was updated in 2016. This update incorporates four different PXO treatments, whereas the previous edition only included one (the town only has installations of this one type of PXO). These new treatments give pedestrians priority to cross the road right-of-way under a greater number of conditions and provide a cost-effective solution to increase pedestrian safety and crossing opportunities.
- ▶ Rectangular Rapid Flashing Beacons (RRFBs) have recently been introduced in various North American jurisdictions to increase conspicuity of signs and markings at pedestrian crossings, thereby improving pedestrian safety at crosswalks in a cost-effective way. These devices are included in the most recent edition of OTM Book 15 as PXO components and are being incorporated into the forthcoming update to the TAC *Pedestrian Crossing Control Guide*.

The following two sections address guidance for pedestrian crossing control at the national and provincial level as well as research from across North America.

A.2.1 National and Provincial Guidance

OTM Book 15 – Pedestrian Crossing Treatments (Ministry of Transportation Ontario, 2016) provides practical guidance and application information on the planning, design, and operation of pedestrian roadway crossing treatments for transportation practitioners to promote uniformity of approaches across Ontario. OTM Book 15 provides a similar Decision Support Tool to that in the TAC *Pedestrian Crossing Control Guide* consisting of: (1) preliminary assessment to identify whether a location is a candidate for pedestrian crossing control; and (2) treatment selection guidance.

The following treatment systems are included in the recently updated OTM Book 15:

- ▶ Traffic Signal Systems – These systems include full traffic signals, Intersection Pedestrian Signals (IPS), and Midblock Pedestrian Signals (MPS). Warrants for these devices are discussed in OTM Book 12.
- ▶ Pedestrian Crossovers (PXOs) – These systems provide protected crossing opportunities by requiring motorists to yield to pedestrians within the crosswalk. They comprise Level 1 Type A, Level 2 Type B, Level 2 Type C, and Level 2 Type D.
- ▶ Stop Controlled or Yield Controlled Intersections – The selection of these devices is based on guidelines provided in OTM Book 5.

The OTM Book 15 pedestrian crossover selection matrix indicates the type of treatment system to use at a given site based on average daily traffic, speed limit, number of lanes, and presence of a raised median.

The **Ontario Highway Traffic Act** (HTA) (2016) defines the rules of the road, including conditions under which pedestrians can cross a road and walk within the roadway. As of January 2016, new rules state that drivers (including cyclists) must stop and yield the whole roadway at all pedestrian crossovers. The definition of pedestrian crossover has been revised to remove mention of a designated by-law. The old definition included in the HTA was:

“pedestrian crossover” means any portion of a roadway, designated by by-law of a municipality, at an intersection or elsewhere, distinctly indicated for pedestrian crossing by signs on the highway and lines or other markings on the surface of the roadway as prescribed by the regulations.

The definition now included in the HTA is:

“pedestrian crossover” means any portion of a roadway distinctly indicated for pedestrian crossing by signs on the highway and lines or other markings on the surface of the roadway as prescribed by the regulations.

The TAC **Pedestrian Crossing Control Guide** (Transportation Association of Canada, 2012) is the current national document for providing information and guidance in the field of pedestrian crossing control in Canada. The document introduces a set of guiding principles to aid practitioners in the decision-making process associated with the selection and provision of pedestrian crossing control. These principles are intended to help ensure a comprehensive, holistic approach to pedestrian mobility, safety, and accessibility is followed in the planning, design, operations, and maintenance of road networks.

The *Pedestrian Crossing Control Guide* provides a Decision Support Tool consisting of: (1) preliminary assessment to identify whether a location is a candidate for pedestrian crossing control; and (2) treatment selection guidance. The treatment selection matrix indicates the type of treatment system to use at a given site based on average daily traffic, speed limit, number of lanes, and presence of a raised median. The following treatment systems are included:

- ▶ Traffic Signal Systems (TS) – These systems provide pedestrian crossing opportunities using pedestrian half signals or full traffic signals.
- ▶ Overhead Flashing Beacon System (OF) – These systems use flashing overhead lights which are activated by a pedestrian. These systems are similar to a Level 1 Type A PXO described in OTM Book 15.
- ▶ Ground Mounted Systems – These are the most basic of all systems, comprising a crosswalk with side-mounted signs (GM1) or a crosswalk with overhead mounted signs (GM2). The GM1 system is similar to a Level 2 Type D PXO described in OTM Book 15.

TAC is currently undertaking a project to update the *Pedestrian Crossing Control Guide* with anticipated publication of the updated Guide in early 2018. The primary purpose of the update is to develop a warrant and guidance for the implementation of rectangular rapid flashing beacons (RRFBs) into the treatment selection matrix. The RRFB has been approved as a traffic control device by TAC's Chief Engineers Council and will be included in the Manual of Uniform Traffic Control Devices for Canada.

The **U.S. Federal Highway Administration** (2008) gave interim approval to allow the use of RRFBs as warning beacons to supplement standard pedestrian crossing warning signs in July 2008. Following extensive evaluation, the FHWA concluded that RRFBs offer significant potential safety and cost benefits, because they achieve very high rates of compliance at a very low relative cost in comparison to other more restrictive devices that provide comparable results (such as full midblock signalization). The interim approval allows for their usage to supplement standard pedestrian crossing warning signs and markings at either a pedestrian or school crossing; where the crosswalk approach is not controlled by a yield sign, stop sign, or traffic-

control signal (this prohibition is applicable to a crosswalk at a roundabout). Since this approval, RRFBs have been installed in cities across the U.S.

The U.S. Federal Highway Administration (2009) provided interpretation of the RRFB interim approval to permit their use mounted overhead across the centre of the approach lanes on a roadway. They reference human factors studies that have shown the more centrally a traffic control device is placed in the road user's attention window, the higher percentage of correct action by road users is obtained. An overhead mounting of a critical warning sign, directly over the approaching lanes, can be highly advisable when adequate visibility of a roadside sign cannot be achieved.

OTM Book 12 – Traffic Signals (Ministry of Transportation Ontario, 2001) states that pedestrian crossovers should not be installed on roadways with the following characteristics:

- ▶ Posted speed limits over 60 km/h
- ▶ Roadway average daily traffic volume exceeding 35,000 vehicles
- ▶ More than four lanes of two-way traffic or three lanes of one-way traffic
- ▶ Heavy volumes of turning traffic
- ▶ Within 200 metres of other signal-protected pedestrian crossings

A.2.2 Published Literature on Treatment Performance

The following summarizes findings from published literature on pedestrian crossing control treatments.

- ▶ Ge and Halpin (2016) evaluated driver yielding compliance at a midblock location along an arterial roadway in Port Moody, BC. The corridor was experiencing pedestrian safety concerns due to high traffic volumes, on-street parking, long pedestrian crossing distance, and multiple business accesses. Yielding compliance at a comparison GM1 crossing located approximately 500 metres away indicated driver yielding compliance of 72%, while the GM1 with RRFB location illustrated 100% driver yielding compliance (n = 50).
- ▶ The City of Calgary (Mishra, Iwaskow, & Domarad, 2015) conducted an extensive pilot project evaluating the effectiveness of RRFBs. As of 2015 the City had installed RRFBs at 25 locations and intend to continue installations at additional locations in future years. Before-after study results indicated that the devices improved motorist yielding behaviour in all cases to between 90% and 100%. Motorist yielding behaviour to pedestrians at the GM1 treatment locations were already high (mid 70% to 90% in most cases) and experienced a consistent increase to over 90% (and up to 100% in some cases) with the installation of RRFBs at the same locations. The study locations included two freeway interchange ramps, four multi-lane arterials with medians, and two collector roads.

- ▶ Lacoste (2015) evaluated driver yielding compliance for over 1600 motorist observations at 16 crosswalks with GM1 systems and four locations with OF systems in Winnipeg. Eight crosswalk sites on four-lane divided roadways (four with GM1 systems and four with OF systems) were evaluated to investigate the effect of crossing control treatment. An additional 12 crosswalk sites on two-lane undivided roadways were evaluated to investigate the effect of each of the primary variables in the *Pedestrian Crossing Control Guide* (number of lanes, speed, and vehicular volume). The research found:
 - Evaluation of crossing control treatments found that motorist yielding compliance was higher for OF systems (90% on average) than GM1 systems (60% on average).
 - Evaluation of seasonality found that motorist yielding compliance was lower at GM1 systems in winter compared to summer (54% and 64%), however, yielding compliance at OF systems remained relatively consistent regardless of season (89% and 91%). The author speculates that this may be due to the presence of snowbanks which may hinder the ability of a driver to detect a pedestrian at a GM1 system but do not impact the visibility of flashing lights at an OF system.
 - Evaluation of site characteristics found that driver yielding compliance was affected by the number of lanes for the facility where the pedestrian was crossing. Average motorist yielding compliance rates for GM1 systems on two-lane undivided roadways and four-lane divided roadways were 75% and 64%, respectively. However, the evaluation was inconclusive on the effect of speed limit, and vehicular volume. Past research by others has shown that these variables all have an impact on pedestrian safety.
- ▶ Overhead flashing beacons were evaluated at 12 different installation sites throughout Fredericton, NB to quantify driver and pedestrian compliance at these facilities (Opus International, 2012). The study team selected OF locations that captured a diverse range of pedestrian and traffic volumes, pedestrian demographics, crossing widths, and adjacent development (i.e., commercial versus residential). Drivers were observed to yield for 128 of the 156 observed pedestrian calls (across all 12 installation sites), representing an 82% compliance rate. The authors anecdotally observed that driver compliance was highest at OF locations on low volume residential corridors (as opposed to high volume traffic areas).
- ▶ Taylor (2009) evaluated motorist compliance benefits of additional side-mounted flashing beacons at OF locations by actuating the flashing beacons at a known minimum distance from the crosswalk, in both the before (no side-mounts) and after (with side-mounts) condition. Four of the five sites had a speed limit of 50 km/h and the fifth site had a speed limit of 60 km/h. Four of the five sites had a four-lane cross-section and a fifth site had a three-lane cross-

section. At each of the five sites 50 'before' and 50 'after' motorist observations were conducted for a total of 250 before and 250 after observations. During the before observations with no additional side-mounted beacons the motorist yielding rate was 89%. This increased to 93% in the after condition with side-mounted beacons. One location showed a large increase in compliance while the others showed either relatively small increases or essentially no change.

- ▶ Numerous studies evaluating RRFBs across the U.S. have illustrated the success of these devices to improve yielding rates. Most of these studies report yielding rates ranging from 60% up to high 90%. Some of these studies include:
 - FHWA (2016) *Tech Brief: Comparison of Driver Yielding for Rectangular Rapid-Flashing Beacons used Above and Below Pedestrian Crossing Signs*
 - FHWA (2015) *Tech Brief: Impacts of LED Brightness, Flash Pattern, and Location for Illuminated Pedestrian Traffic Control Device*
 - FHWA (Schroeder, et al., 2015) *Accelerating Roundabouts in the United States: Volume I of VII - Evaluation of RRFB at Multilane Roundabouts*
 - FHWA (Fitzpatrick, et al., 2015) *Investigating Improvements to Pedestrian Crossings with an Emphasis on the Rectangular Rapid-Flashing Beacon*
 - FHWA (Shurbutt & Van Houten, 2010) *Effects of Yellow Rectangular Rapid-Flashing Beacons on Yielding at Multilane Uncontrolled Crosswalks*

A.3 Pedestrian and Active Transportation Master Plans

An extensive search of pedestrian and active transportation master plans was completed as part of the literature review. The search revealed that many jurisdictions have recently developed these plans and they often contain similar content. The plans discussed in this section were selected to provide a cross-section of local jurisdictions and leading Canadian and International plans. Plans from the following jurisdictions were included:

Ontario:

- ▶ Halton Region
- ▶ Peel Region
- ▶ Waterloo Region
- ▶ City of Hamilton
- ▶ City of Ottawa
- ▶ Town of Ajax

Canada (outside Ontario):

- ▶ City of Calgary
- ▶ City of Winnipeg
- ▶ City of Saskatoon

International:

- ▶ Chicago
- ▶ Minneapolis
- ▶ Melbourne

The following list provides key pedestrian accommodation strategies contained in these plans. These strategies have been grouped into the following categories: Education, Encouragement, Engineering, Enforcement, and Evaluation.

A.3.1 Education

- ▶ Develop website that provides pedestrian information on issues such as collision statistics and key messages like seat belt use and impaired driving.
- ▶ Develop a School Zone Traffic Safety Outreach Program for schools with the goal of educating children on safe walking and cycling.
- ▶ Focus behaviour outreach efforts in high collision locations by developing comprehensive education programs for the identified locations, demographics, and behaviours causing safety concerns.
- ▶ Implement Safe Routes to School Programs. The lessons from these programs can also be transferred to developing Safe Routes to Parks and Safe Routes for Seniors programs.
- ▶ Promote public awareness of automated enforcement programs through direct community outreach and digital media.
- ▶ Develop a continuing mobility education program for older drivers to communicate new regulations.
- ▶ Develop and distribute a mobility education curriculum that teaches students how to ride a bike and be a pedestrian.
- ▶ Develop and distribute an informational packet on what to do if involved in a pedestrian collision.
- ▶ Educate the public about pedestrian safety and traffic laws through sources such as press releases, school traffic safety education programs, driver education programs, and public media campaigns.
- ▶ Conduct targeted communication and engagement with vulnerable and under-represented groups to identify unique needs.

A.3.2 Encouragement

- ▶ Develop a School Child Safety Patrol Program to assist younger children in crossing the street near schools.
- ▶ Develop an Adult School Crossing Guard Program to assist younger children in crossing the street near schools.
- ▶ Develop a snow shovelling program to assist seniors and persons with disabilities clear snow from private driveways and walkways.
- ▶ Provide public grit (sand and/or salt) boxes at various locations (close to steep inclines and in areas where there are many seniors and persons with disabilities) for residents to use in winter to make sidewalks less slippery.

A.3.3 Engineering

- ▶ Install rectangular rapid flashing beacons to make crossing more visible where pedestrians enter the roadway.
- ▶ Update the pedestrian crossing warrant system to better determine where and what pedestrian crossing control treatment type to install.
- ▶ Reduce the speed limit to 40 km/h on roads in residential areas to reduce the number and severity of collisions.
- ▶ Design neighbourhood streets for slow, local traffic.
- ▶ Undertake pedestrian safety studies to understand the specifics behind the main source of road safety issues for these users system wide.
- ▶ Undertake road safety audits or in-service road safety reviews to review the safety and operations of high collision pedestrian facilities and implement countermeasures at these locations.
- ▶ Install crosswalk enhancements such as APS, pedestrian countdown timers, and zebra pavement markings.
- ▶ Develop design guidelines for the separation of pedestrian and turning vehicles at intersections with turning controls such as *no right turn on red*, *red turn arrows*, and *leading pedestrian interval* (advance green light for pedestrians).
- ▶ Research, develop, and implement a design standards tool-box of pedestrian safety solutions such as smart right turns, pedestrian refuge islands, and raised crossings.
- ▶ Support research programs to further understand pedestrian safety concerns and innovative responses.
- ▶ Implement a community-wide marked crosswalk policy and implement pedestrian crossovers.
- ▶ Implement safety improvements for seniors at specific intersections by reducing crossing distance or increasing crossing time.
- ▶ Improve collision data collection and sharing to ensure timely access to pedestrian collision information and trends.
- ▶ Develop a database of all controlled and uncontrolled crosswalk locations and create a plan to improve crosswalks that require additional pedestrian safety tools.
- ▶ Identify locations where a road diet would be appropriate based on traffic volume, existing street configuration, overall connectivity of the roadway, and land uses.
- ▶ Evaluate the surrounding pedestrian infrastructure when new medical facilities or senior centres are constructed.
- ▶ Provide sidewalks on both sides of the street in urbanized areas as collisions are more likely to occur on streets without sidewalks.

- ▶ Provide a buffer between pedestrians and moving traffic, such as through a landscaped boulevard, on-street parking, bicycle lanes, or extra sidewalk width.
- ▶ Develop a prioritization program to address sidewalk deficiencies (gaps in existing network, sidewalks in poor condition).
- ▶ Provide street crossings at regular intervals so that pedestrians do not have to walk more than 100 metres out of their way to take advantage of crossing locations.
- ▶ Implement street lighting policies to ensure lighting appropriate for pedestrian needs.
- ▶ Implement shared space pedestrian zones with speed limits reduced to 10 km/h which allow pedestrians and drivers to share the road.
- ▶ Widen sidewalks in areas of high pedestrian use around busy transit stops and stations.
- ▶ Reduce conflicts on multi-use pathways between people using different forms of active transportation and locations where pathways intersect with the street network.
- ▶ Apply Crime Prevention Through Environmental Design (CPTED) practices to ensure principles are followed in active transportation facility design.
- ▶ Continue to address personal safety concerns on existing underpasses with lighting improvements and/or design enhancements.
- ▶ Review and update current sidewalk snow removal requirements.
- ▶ Regularly inspect crosswalks to ensure they are well maintained, marked and painted to enhance visibility, safety and accessibility.
- ▶ Ensure accessible detours are provided for pedestrians during construction and maintenance.
- ▶ Seek opportunities to implement new sidewalks in conjunction with ongoing projects, plans or developments.

A.3.4 Enforcement

- ▶ Develop a Selective Traffic Enforcement Program (STEP) that targets enforcement of road rules.
- ▶ Conduct crosswalk “stings”, where police officers, behaving in accordance with traffic laws, provide education, warnings, and citations to motorists who violate traffic laws.
- ▶ Add pedestrian safety enforcement to regional police operations.
- ▶ Compile an annual report that tracks the level of pedestrian safety enforcements.
- ▶ Educate officers on what constitutes a pedestrian safety violation at traffic signals and techniques for enforcement.

- ▶ Consider automated enforcement along high collision corridors and intersections.
- ▶ Evaluate the effectiveness of intersection safety cameras on pedestrian safety.
- ▶ Use cameras to enforce speed limits in close proximity to schools and parks, if allowed.

A.3.5 Evaluation

- ▶ Develop an annual road safety report which monitors road safety and provides a variety of collision statistics and trends.
- ▶ Develop evaluation criteria to monitor and measure the effectiveness of public outreach programs.
- ▶ Establish performance measures to gauge the success of integrating pedestrian safety enforcement.
- ▶ Develop a monitoring program to evaluate various traffic calming solutions.

A.4 Pedestrian Safety Programs

An extensive search of pedestrian safety programs and road safety initiatives was completed as part of this task. The plans discussed in this section were selected to provide a cross-section of local jurisdictions and leading Canadian and International plans.

Ontario:

- ▶ City of Ottawa
- ▶ City of London
- ▶ City of Hamilton
- ▶ City of Toronto

Canada (outside Ontario):

- ▶ City of Vancouver
- ▶ City of Calgary
- ▶ City of Halifax

International:

- ▶ Queens, New York
- ▶ London, England
- ▶ New South Wales, Australia

Table A.1 to **Table A.10** present specific details about the plans in each of these cities.

TABLE A.1 OTTAWA PEDESTRIAN SAFETY EVALUATION PROGRAM

Program Name	Pedestrian Safety Evaluation Program
Jurisdiction	City of Ottawa
Objective(s)	To develop a customized process that combines traffic engineering with public engagement, for prioritizing, and programming road safety improvements for pedestrians crossing roadways at signalized and non-signalized intersections within the City of Ottawa.
Key Pedestrian Related Activities	<p>The Pedestrian Safety Evaluation Program was launched as a three-year pilot project, during which a total of approximately 23 intersections were reviewed from a pedestrian safety perspective.</p> <p>The Pedestrian Safety Evaluation Program enhanced the processes used for selecting candidate intersections for detailed pedestrian safety analysis and for selecting appropriate and cost-effective countermeasures to be implemented. The program included:</p> <ul style="list-style-type: none"> ▶ Improving the understanding of the relationship of pedestrian needs and safety issues in the context of signalized and non-signalized intersections ▶ Developing an overall approach to prioritizing and programming road safety improvements for pedestrians crossing roadways ▶ Providing a community-based tool for proactive input to the identification of intersections requiring detailed study ▶ Setting up a defined and documented ongoing process to build and maintain a five-year program, thereby increasing overall safety for pedestrians within the City ▶ Creating a dedicated team of City staff with resources to carry out the necessary data collection, collation, analysis, and community consultation ▶ Developing technical tools for prioritizing intersections and identifying countermeasures to improve pedestrian safety ▶ Providing related technical and user guide documentation. <p>As part of the program, the City developed a Field Guide and Workbook which outlined pedestrian safety review field assessment procedures to be used in carrying out road safety reviews at crosswalks. Additionally, a Countermeasure Handbook was also developed to assist in determining appropriate intersection crosswalk safety upgrades.</p>
Target Audience	General public, government officials, engineering staff
Strategies	Engineering, enforcement, policy
Link	http://app06.ottawa.ca/calendar/ottawa/citycouncil/trc/2010/04-07/10-ACS2010-COS-PWS-0001_EN.htm

TABLE A.2 LONDON ROAD SAFETY STRATEGY

Program Name	City of London Road Safety Strategy 2014-2019
Jurisdiction	City of London
Objective(s)	To implement programs that will result in a 10% reduction in fatal and injury collisions by 2019.
Key Pedestrian Related Activities	<p>The Strategy targets collision reductions in six main areas; intersections, distracted and aggressive driving, young drivers, pedestrians, cyclists, and red light running. For each target area they developed countermeasures, identified through a comprehensive evaluation process and review of collision history. The action plans targeted to improve pedestrian safety include:</p> <ul style="list-style-type: none"> ▶ Construct new pedestrian refuge islands where needed based on City’s criteria ▶ Implement pedestrian collision data improvement program to share London Health Sciences Centre data on pedestrian injuries ▶ Enhance pedestrian safety by expanding and upgrading pedestrian facilities based on recent guidelines (OTM Book 15, TAC <i>Pedestrian Crossing Control Guide</i>, AODA) ▶ Introduce pedestrian crossing enforcement strategy, targeted at pedestrians who cross the road in contravention of applicable by-laws, as a supplement to education and awareness countermeasures ▶ Implement Safe Routes to School Program and review local issues around schools ▶ Continue the engineering collaboration with schools (1) through the walkabout at every school with parents, police, teachers, and City staff to review identified safety concerns; and (2) the dissemination through the school newsletter of the pros and cons of perceived solutions to traffic concerns ▶ Implement Active and Safe Routes to School community partnerships to provide a comprehensive strategy for active transportation to schools
Findings	The Strategy reports that collisions involving vulnerable road users represent less than 5% of all collisions recorded in the City of London. However, the severity of these collisions is significant, with over 90% resulting in a collision causing personal injury or death.
Strategies	Engineering, enforcement, education, empathy
Link	https://www.london.ca/residents/Roads-Transportation/Road-Safety/Documents/city-of-london-road-safety-web.pdf

TABLE A.3 HAMILTON STRATEGIC ROAD SAFETY PROGRAM

Program Name	Hamilton Strategic Road Safety Program
Jurisdiction	City of Hamilton
Objective(s)	To make roadways within the City of Hamilton the safest throughout North America and to address safety for all road users, including vulnerable road users such as seniors and children.
Key Pedestrian Related Activities	<p>Pedestrian initiatives to be completed in 2016 are:</p> <ul style="list-style-type: none"> ▶ School zone safety program to provide designated safe routes to school. ▶ Upgrading and replacement of old school zone flashers so that they can be integrated into the new TMC for control monitoring and remote programming operations. ▶ School zone signing and flasher installation at new locations. ▶ Implement speed limit reduction to 40 km/h primarily in School Safety Zones. ▶ Permanent construction of traffic calming measures ▶ Research and purchase new collision software which includes analytical collision reporting tools, and GIS based mapping. ▶ Install ladder crosswalks to increase crossing location visibility. <p>Additionally, a new Pedestrian Crossover program will be implemented. As part of this, staff will develop a Communication Plan that will include educational and marketing materials prior to installation of any new pedestrian crossovers. In 2016, staff will continue to work with municipal partners and community groups to raise awareness of existing regulations. Staff will develop a Communication Plan that will include educational and marketing materials prior to installation of any new pedestrian crossovers. It is anticipated that an initial pilot project of three to five (3-5) PXO crossings will be implemented in 2016. There will be an Education Program associated with the installation of these pedestrian priority crossings. In 2017 a full rollout of PXO crossings will implemented at candidate locations.</p>
Strategies	Engineering, education, encouragement
Link	http://hamilton.siretechnologies.com/sirepub/cache/2/a4qselfcoe5ic5a01xmfxydi/13111308262016032021884.PDF

TABLE A.4 TORONTO ROAD SAFETY PLAN

Program Name	Road Safety Plan 2017-2021
Jurisdiction	City of Toronto
Objective(s)	To reduce fatal and serious injury collisions with a particular emphasis on vulnerable road users.
Key Pedestrian Related Activities	<p>Selected initiatives aimed at pedestrians include:</p> <ul style="list-style-type: none"> ▶ Geometric Safety Improvement Program – Proactively identifies and implements safety enhancements ▶ Accessible Pedestrian Signals (APS) – Installation of tactile surfaces and signal heads that emit an audible tone at signalized intersections to assist blind, visually impaired or deaf-blind in safely crossing roadways ▶ "Missing Links" Program (Annual sidewalks capital program) – A capital program for the construction of new sidewalks at locations where facilities are missing ▶ Pedestrian Countdown Signals – Installation of pedestrian signal heads that displays time remaining for pedestrians to safely complete their crossing at signalized intersections ▶ Zebra Crossing Pavement Markings – Installation of broader, striped pedestrian crossing pavement markings at signalized intersections to increase the visibility of the pedestrians to drivers ▶ Leading Pedestrian Intervals – Implementation of a traffic signal control feature which displays the pedestrian "Walk" signal before the green signal for drivers, giving pedestrians a head start into the intersection to increase their visibility to drivers ▶ Pedestrian Crossover (PXO) Enhancements – Implementation of various upgrades at PXOs, including zebra crossing pavement markings, amber beacons, reflectors, pushbuttons and additional signs ▶ "March Break March Safe" – An annual March Break pedestrian safety campaign designed to promote public awareness of pedestrian safety ▶ "Stay Focused Stay Safe" – A campaign by the Toronto Transit Commission which addresses various pedestrian safety issues such as jaywalking and night time visibility ▶ "Step Up Be Safe" – An education and enforcement campaign which coincides with Daylight Savings Time, focuses on motorists, cyclists and pedestrians who commit offences near pedestrian crossovers, crosswalks, intersections, school zones and crossing areas frequented by seniors ▶ School Zone Safety Strategy – A plan for improving safety around schools which includes engineering, education and enforcement components

Program Name	Road Safety Plan 2017-2021
Jurisdiction	City of Toronto
	<ul style="list-style-type: none"> ▶ School "Watch Your Speed" Pilot Program – Pilot program using permanent speed display signs to address speeding issues in school zones ▶ CAA School Safety Patrol Program – A program developed to protect and educate elementary school children on safe road-crossing practices ▶ "Youth in Control" (YIC) Leadership Program – A high school peer leadership program which focuses on safer partying and safer driving ▶ Cycling and Pedestrian Safety Curriculum Support – Classroom skill building activities developed for schools who participate in active transportation and intended to raise awareness and recognize situations where injuries to pedestrians and non-motorized wheeled travel can be reduced ▶ "At Home Alone" – A family workshop for parents and children that helps prepare children to travel to and from school safely as well as being at home alone safely ▶ School Travel Planning – A pilot initiative (involving 10 Toronto schools) to implement active school travel using a planning model consisting of local stakeholder engagement, travel surveys and risk assessments ▶ Toronto Seniors Strategy – A plan for implementing various improvements focused on senior mobility and safety needs, such as extended pedestrian crossing times at traffic control signals ▶ Lower Walking Speeds at Traffic Signals – Improved standards for traffic signal timing that allows lower walking speeds to be used to provide more pedestrian walking time ▶ Midblock Pedestrian Crossing – Installation of pedestrian traffic signals and pedestrian crossovers (PXO) at mid-block locations to provide protected crossing opportunities for pedestrians ▶ Priority Snow Removal – Increased priority for snow removal on roads and sidewalks near areas with high older adult trip generation rates as well as school zones. Keeping facilities clear of snow reduces the likelihood of weather related collisions. ▶ YouTube Seniors Pedestrian Safety Video – YouTube video aimed at reducing pedestrian collisions by reminding pedestrians, especially seniors to cross at designated crosswalks and traffic lights, and make sure drivers can see you when you cross
Strategies	Engineering, education, enforcement
Link	http://www.toronto.ca/legdocs/mmis/2016/pw/bgrd/backgroundfile-93990.pdf

TABLE A.5 VANCOUVER PEDESTRIAN SAFETY STUDY

Program Name	Pedestrian Safety Study
Jurisdiction	City of Vancouver
Objective(s)	To gain a better understanding of the effectiveness of existing pedestrian safety treatments, and identify opportunities to improve pedestrian safety through engineering, enforcement and education measures throughout the City.
Key Pedestrian Related Activities	<p>This study involved an in-depth analysis of collisions involving pedestrians to examine where collisions were occurring, when they took place, who was involved, and how the collision occurred. It provides a ‘toolbox’ of engineering, education and enforcement measures that can be considered to address identified pedestrian safety issues. The following education and encouragement actions are described:</p> <ul style="list-style-type: none"> ▶ Individualised marketing to promote safer walking at night and during adverse weather conditions by distributing reflective materials ▶ Educational walks and talks to educate seniors on minimizing risks when walking ▶ Safe routes to school programs to increase active transportation and traffic safety awareness among children ▶ Safe routes for seniors program to identify and address infrastructure issues as well as educating seniors about safety issues and organize group walks ▶ Targeted road safety awareness campaigns to those areas identified in the collision analysis. For example, high collision arterials, slow down for seniors, target distracted driving, remind road users that collisions are more likely during winter and adverse conditions.
Findings	<p>Based on the analysis of six years of pedestrian collision data they report:</p> <ul style="list-style-type: none"> ▶ Nearly half of all pedestrian collisions occurred between November and February. Most of the collision increase in these months can be attributed to the increase in nighttime collisions as a result of longer nights. ▶ Young adults aged 20 to 29 are the most likely to be involved in a collision ▶ A significant number of pedestrian collisions occurred in the Downtown core and along Primary Arterial streets ▶ Approximately 75% of all collisions were located at intersections and majority of these were at signalized intersections ▶ Three quarters of all pedestrian collisions took place where a pedestrian was attempting to cross the street at an intersection ▶ The vast majority of collisions at intersections involved drivers failing to yield to pedestrians when pedestrians had the right-of-way
Link	http://vancouver.ca/files/cov/pedestrian-safety-study-2012-final-report.pdf

TABLE A.6 CALGARY SAFER MOBILITY PLAN

Program Name	Calgary Safer Mobility Plan 2013-2017
Jurisdiction	City of Calgary
Objective(s)	To reduce the vulnerable road user collision rate by 12 percent based on a three-year rolling average (The baseline vulnerable road user casualty collision rate is 51.2 per 100,000 population). By improving the safety of these users it will encourage the use of these transportation modes.
Key Pedestrian Related Activities	<p>The current activities include:</p> <ul style="list-style-type: none"> ▶ Network screening process which encompasses collisions involving pedestrians and cyclists ▶ Widespread implementation of countermeasures to improve pedestrian and cyclist safety including dedicated facilities (cycle tracks), countdown timers, pedestrian corridors, road diets, etc. ▶ Pilot implementations of new and innovative countermeasures including rapid rectangular flashing beacons (RRFBs), “shark tooth” advance pedestrian crosswalk markings, pedestrian scramble phasing, etc. ▶ <i>2011 Complete Streets Guide</i> aiming to increase the attractiveness, convenience, and safety of all modes by creating multi-modal streets that emphasize walking cycling and transit, and incorporate green infrastructure and accessibility <p>Proposed actions to further develop a comprehensive Vulnerable Road User Safety Plan include:</p> <ul style="list-style-type: none"> ▶ Monitoring of bicycle safety at cycle tracks ▶ Including bicyclists on existing pedestrian corridor signals ▶ The use of half signals to help pedestrian cross busy roadways ▶ Research for potential use of HAWK beacons and other pedestrian crossing control enhancements ▶ Conducting studies to review the safety of vulnerable road users near schools/within school zones and near bus stops ▶ Integration of community traffic calming measures into the Vulnerable Road User Safety Plan
Strategies	Engineering, education, enforcement
Link	http://www.calgary.ca/Transportation/Roads/Documents/Traffic/Traffic-safety-programs/Calgary-safer-mobility-plan.pdf?noredirect=1

TABLE A.7 HALIFAX PEDESTRIAN SAFETY ACTION PLAN

Program Name	Pedestrian Safety Action Plan 2016/2017
Jurisdiction	City of Halifax
Objective(s)	To examine trends in vehicle-pedestrian collisions and characteristics of the resulting injuries; safety initiatives carried out by respective government agencies; and action items to be continued in future years.
Key Pedestrian Related Activities	<p>Programs recently completed or planned include:</p> <ul style="list-style-type: none"> ▶ Conducted Crosswalk Safety Awareness Day in November ▶ Continued Halifax Regional Police (HRP) focus on monthly traffic safety themes. The months of February, April and November specifically focused on crosswalk safety ▶ Carried out targeted education/enforcement around schools in September ▶ Increased contributions to social media and local media outlets on safety issues ▶ Continued traffic monitoring to identify key areas for targeted enforcement ▶ HRP provided monthly vehicle-pedestrian collision reports to Traffic Management for analysis ▶ Traffic staff conducted site assessments of all collision locations to identify any engineering measures that may be appropriate. Collision information for the past four years has been compiled and assessed to provide statistics in an effort to identify patterns or trends. ▶ HRP initiated a new electronic motor vehicle collision reporting software. The new e-collision application is scheduled to go live in Spring 2016. ▶ Continued collaboration of traffic data collection and sharing by Traffic Management and HRP ▶ Collaborated with community groups and crosswalk safety advocates in the placement of crosswalk flags and on-going collaboration with the Crosswalk Safety Advisory Committee ▶ Continued on-going Police/Traffic Management meetings with focus on traffic safety ▶ Participated in public open houses and conferences related to pedestrian and traffic safety
Findings	Evaluation of available data and findings from site assessments indicate that many issues surrounding vehicle-pedestrian collisions are not engineering related and may be more appropriately addressed through on-going targeted education and enforcement.
Strategies	Engineering, education, enforcement, engagement, evaluation
Link	http://www.halifax.ca/council/agendasc/documents/160510ca1422.pdf

TABLE A.8 NEW YORK PEDESTRIAN SAFETY ACTION PLAN

Program Name	Pedestrian Safety Action Plan 2016/2017
Jurisdiction	Queens, New York
Objective(s)	To identify: (1) the conditions and characteristics of pedestrian fatalities and severe injuries; (2) identify the corridors, intersections, and areas that disproportionately account for pedestrian fatalities and severe injuries; and (3) strategically prioritize these locations for safety interventions.
Key Pedestrian Related Activities	<p>The plan identified priority corridors, intersections, and areas to focus countermeasure efforts. To determine the priority locations, a ranking system was developed to identify locations where 50% of killed or severely injured (KSI) collisions occur. For example, the 47 Priority Corridors identified represent 50% of the total pedestrian KSI collisions but only 6% of the total street network. The plan identifies the following actions:</p> <ul style="list-style-type: none"> ▶ Add exclusive pedestrian crossing time to all feasible Priority Intersections ▶ Install expanded speed limit signage on all Priority Corridors ▶ Encourage community input and engagement at Priority Corridors, Intersections, and Areas ▶ Install additional lighting under elevated trains and at other key transit stops ▶ Proactively design for pedestrian safety in high population growth areas ▶ Implement the majority of speed cameras at Priority Corridors, Intersections, and Areas ▶ Focus enforcement and deploy dedicated resources to Queens NYPD precincts that overlap substantially with Priority Areas ▶ Prioritize targeted enforcement at Priority Corridors ▶ Target child and senior safety education ▶ Launch multilingual public information campaigns in Priority Areas
Findings	<ul style="list-style-type: none"> ▶ 61% of the borough’s pedestrian fatalities occur on arterial roadways, although they comprise just 11% of the total street network ▶ 16% of all pedestrian fatalities occurred overnight (12–6AM), though less than 4% of pedestrian activity takes place during these hours ▶ Seniors (aged 65 and older) represent just 13% of the Queens population but 35% of its pedestrian fatalities ▶ Dangerous driver choices are the primary cause or a contributing factor in three out of four pedestrian fatalities in Queens
Strategies	Engineering, education, enforcement
Link	http://www.nyc.gov/html/dot/downloads/pdf/ped-safety-action-plan-queens.pdf

TABLE A.9 LONDON (UK) PEDESTRIAN SAFETY ACTION PLAN

Program Name	Pedestrian Safety Action Plan
Jurisdiction	Transport for London, UK
Objective(s)	To focus on improving pedestrian safety for those at highest risk, to better identify interventions and focus resources in order to gain the greatest improvements to pedestrian safety.
Key Pedestrian Related Activities	<p>The following actions are included as part of the plan:</p> <ul style="list-style-type: none"> ▶ Produce the first Pedestrian Design Guidance (PDG) for London, to support the planning and design of safe and comfortable walking environments ▶ Implement APS with pedestrian countdown timers ▶ Identify locations as candidates for ‘town centre pedestrian safety pilots’ through discussion with the boroughs and other stakeholders. The pilots will aim to deliver an integrated package of road safety measures in town centres that have a relatively high pedestrian safety risk. ▶ Monitor collisions and casualties across London to identify where these occur, the contributory factors involved and potential measures that could be introduced to improve road safety ▶ Undertake systematic before and after performance monitoring/analysis to identify any safety anomalies that need to be addressed ▶ Trial bus driver awareness systems to alert bus drivers to the presence of pedestrians near the vehicle ▶ Encourage London boroughs to deliver more 30 km/h roadways ▶ Crack down on speeding vehicles by upgrading intersection safety cameras to reduce speeding and red light running ▶ Continue with enforcement activities on two days per month ▶ Provide every Grade 6 pupil in London with pedestrian safety messaging on an annual basis to prepare primary school pupils for independent travel to junior high ▶ Promote the Junior Travel Ambassador (JTA) program to all schools in London and work with borough officers to encourage take-up. The JTA scheme promotes pedestrian safety, as well as other active and independent travel messages. ▶ Continue to work with the police to drive improvements in data quality to ensure more accurate collection of data on pedestrian KSIs and to better inform future research into vulnerable road user KSIs ▶ Conduct a vulnerable road user in-depth injury study to better understand the nature of serious injury casualties among pedestrians
Strategies	Engineering, encouragement, education, enforcement, evaluation
Link	http://content.tfl.gov.uk/pedestrian-safety-action-plan.pdf

TABLE A.10 NEW SOUTH WALES PEDESTRIAN SAFETY ACTION PLAN

Program Name	Pedestrian Safety Action Plan 2014-2016
Jurisdiction	Transport for New South Wales, Australia
Objective(s)	To reduce fatalities and serious injuries by at least 30 per cent. Focus on improving pedestrian safety for those at highest risk, to better identify interventions and focus resources in order to gain the greatest improvements to pedestrian safety.
Key Pedestrian Related Activities	<p>Specific activities include:</p> <ul style="list-style-type: none"> ▶ Evaluate existing 40km/h high pedestrian activity areas ▶ Continue the targeted roll-out of red-light speed cameras to improve safety at signalised intersections ▶ Implement shared zones using the revised policy and guidelines across the network where appropriate ▶ Investigate additional offset pedestrian crossings at appropriate locations ▶ Review existing pedestrian safety treatments to ensure they are delivering the expected road safety outcomes ▶ Review and develop policy to improve pedestrian safety at signalised intersections, including: continued roll-out of red turn arrows, extended walk time phasing and appropriate use of left turn on red lights signs ▶ Investigate the benefits of amending signal hierarchy on some roads with default green for pedestrians and activated road sensors for vehicles, particularly in areas of high pedestrian activity areas and with increased likelihood of impaired and at-risk pedestrians ▶ Develop a guideline for pedestrian safety assessments ▶ Undertake research into shared path safety and develop policy and guidelines ▶ Develop appropriate communications for drivers, bicycle riders and pedestrians on key issues including road rules awareness, road user interaction messaging, crossing safely at different crossing types, benefits of lower speed limits for pedestrians ▶ Continue the work of the school based road safety education programs to educate children (pre-school to Year 12) on safe road use ▶ Work with local governments to develop localised road safety programs for their community, including for older road users and people with disabilities, such as the visually impaired ▶ Establish forums to provide local government with guidance on road safety measures (including pedestrian safety) and knowledge sharing among road safety professionals
Strategies	Engineering, encouragement, education, enforcement, evaluation
Link	http://roadsafety.transport.nsw.gov.au/downloads/ped-safety-plan.pdf

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Appendix B

Jurisdictional Interviews

B.1 Overview

Jurisdictional interviews were conducted to obtain a comprehensive understanding regarding the use of pedestrian crossovers, as well as pedestrian safety programs in effect. The interviews were used to augment the findings from the literature review and improve understanding of the individual experiences of the jurisdictions concerning pedestrian programs. In particular, the interviews were intended to reveal important information about lessons learned from various undertakings.

Through consultation with the Town of Oakville, the following 10 Canadian jurisdictions were selected for interviews:

Within Ontario:

- ▶ City of Brampton
- ▶ Town of Milton
- ▶ Region of Halton
- ▶ City of Hamilton
- ▶ City of Ottawa
- ▶ City of St. Catharines
- ▶ City of Toronto
- ▶ Region of Waterloo

Other Canadian Jurisdictions:

- ▶ City of Calgary
- ▶ City of Halifax

Initial contact was made via email, and the interviews were conducted by phone.

B.2 Pedestrian Crossovers

The eight Ontario jurisdictions selected for these interviews were specifically asked questions regarding pedestrian crossovers. This topic was not discussed with jurisdictions outside Ontario given that PXOs are only used in this province.

Based on the interviews, the following approximate installation costs can be expected:

- ▶ PXO D – between \$2,000 and \$5,500
- ▶ PXO C – between \$14,500 and \$17,500
- ▶ PXO B – between \$23,500 and \$28,500

Table B.1 to Table B.8 summarize the information provided by each jurisdiction in response to the following queries:

- ▶ Has the jurisdiction adopted the new OTM Book 15 recommended practices to select locations to install PXOs, which crossing control treatments have/will be implemented, and progress on implementation;
- ▶ In-house or published criteria developed to prioritize locations to implement PXOs;
- ▶ Any modifications or revisions to by-laws that was required prior to implementing PXOs; and
- ▶ Public education plans or current practices as it relates to PXOs.

TABLE B.1 PEDESTRIAN CROSSOVERS: CITY OF BRAMPTON

OTM Book 15	▶ Brampton will be reporting to council this fall and proposing to trial Level 2 Type D crossings in 2017.
Prioritization of Locations	▶ Proposing to select initial locations on low volume roadways near schools.
Revision to By-laws	▶ Potential requirement to change parking by-laws as PXOs require No Parking restriction in advance and after crossing.
Public Education	▶ Will be developing public education campaign and implementing in winter 2016.

TABLE B.2 PEDESTRIAN CROSSOVERS: TOWN OF MILTON

OTM Book 15	<ul style="list-style-type: none"> ▶ Milton has adopted OTM Book 15 and will install Level 2 Type B, C, and D PXOs where recommended. ▶ In instances where Level 1 Type A PXO are recommended, the policy is to upgrade to IPS. ▶ The town has recently implemented Level 2 Type B, C, and D.
Prioritization of Locations	▶ No published criteria. Rule of thumb is to prioritize locations with higher collision history, close proximity to schools and senior centres.
Revision to By-laws	▶ No change to by-laws was required.
Public Education	<ul style="list-style-type: none"> ▶ Prepared press release and local newspaper published article. ▶ Sent out a memo with infographic to schools to educate parents and children. ▶ Information on town website, http://www.milton.ca/en/live/pedestriancrossovers.asp

TABLE B.3 PEDESTRIAN CROSSOVERS: REGION OF HALTON

OTM Book 15	▶ As a general rule, the Region of Halton follows the OTM Book series. However, the Region is only responsible for arterial roadways, and as such the guidance provided in OTM Book 15 for PXOs is generally not applicable to the Regional roadways (high speed and high traffic volume).
Prioritization of Locations	▶ Not applicable
Revision to By-laws	▶ Not applicable
Public Education	▶ Not applicable

TABLE B.4 PEDESTRIAN CROSSOVERS: CITY OF HAMILTON

OTM Book 15	<ul style="list-style-type: none">▶ Hamilton has adopted OTM Book 15 and will install Level 2 Type B, C, and D PXOs where recommended.▶ In instances where Level 1 Type A PXO are recommended, the policy is to upgrade to IPS.▶ The City has recently implemented Level 2 Type B, C, and D.
Prioritization of Locations	<ul style="list-style-type: none">▶ Initial locations selected based on political sensitivity, known areas of concern for pedestrian crossing opportunities and safety, and existing planned construction projects.▶ Developing prioritization criteria for city-wide implementation. Draft criteria include collision history, proximity to schools, parks, truck routes.
Revision to By-laws	<ul style="list-style-type: none">▶ No change to by-laws was required.
Public Education	<ul style="list-style-type: none">▶ Created postcards and large roll up banners distributed at local community centres, schools, and libraries.▶ Organizing communications and education campaign that will involve newspaper ads, radio ads, billboards on buses, and benches.

TABLE B.5 PEDESTRIAN CROSSOVERS: CITY OF OTTAWA

<p>OTM Book 15</p>	<ul style="list-style-type: none"> ▶ Ottawa has adopted OTM Book 15 and will install Level 2 Type B, C, and D PXOs where recommended. ▶ In instances where Level 1 Type A PXO are recommended, the policy is to upgrade to IPS. ▶ The City has recently implemented Level 2 Type B, C, and D as part of a 3-year pilot project. It is estimated that 180 locations will be fitted with the new treatments during the pilot project. As part of the implementation strategy, all roundabouts will have PXOs installed consistently giving pedestrians the right-of-way in the roundabout environment.
<p>Prioritization of Locations</p>	<ul style="list-style-type: none"> ▶ Single lane roundabouts. ▶ Geographic distribution across city wards.
<p>Revision to By-laws</p>	<ul style="list-style-type: none"> ▶ Potential requirement to change parking by-laws as PXOs require No Parking restrictions on the approach to and following PXOs.
<p>Public Education</p>	<ul style="list-style-type: none"> ▶ Largest public communication event in recent years. ▶ Created and distributed a series of infographics at community meetings, http://ottawa.ca/en/news/ottawas-first-pedestrian-crossovers-open-today ▶ Information on City website, http://ottawa.ca/en/residents/transportation-and-parking/road-safety/pedestrian-crossovers ▶ Social media blast on twitter, facebook, youtube, and Instagram. ▶ Advertised on digital billboards, bus interiors, bus shelters, radio, and local newspapers. ▶ Developed youtube video, https://www.youtube.com/watch?v=8Vb_-qaw0bM

TABLE B.6 PEDESTRIAN CROSSOVERS: CITY OF ST. CATHARINES

OTM Book 15	<ul style="list-style-type: none">▶ The City will be meeting soon with the Niagara Region.▶ Their intention is to implement OTM Book 15 recommendations but will remain consistent with the Region.▶ Final decision has not yet been made but it is likely that IPS will be installed instead of Level 1 Type A PXO.
Prioritization of Locations	<ul style="list-style-type: none">▶ Initial locations will be selected to ensure the greatest success and obedience of devices.▶ Likely to select locations with higher volumes of pedestrians, low speeds, and smaller cross-sections.
Revision to By-laws	<ul style="list-style-type: none">▶ Do not believe any change to by-laws will be required.
Public Education	<ul style="list-style-type: none">▶ Will be undertaking extensive public education but this has not yet been programmed.

TABLE B.7 PEDESTRIAN CROSSOVERS: CITY OF TORONTO

OTM Book 15	<ul style="list-style-type: none">▶ Currently the City of Toronto only installs Level 1, Type A PXOs. It is anticipated that a decision regarding the new OTM Book 15 and the use of Level 2 PXOs will occur in 2017.▶ The city has had concerns from the visually impaired community that they do not feel safe at these crossings since the onus is still on the pedestrian to make sure that motorists yielding. The City has concerns that there is shared responsibility for the pedestrian to make that decision. City is not sure that PXO is not entirely accessible due to this.
Prioritization of Locations	<ul style="list-style-type: none">▶ Generally, installation of Type A PXOs is based on community request. If warranted, new PXOs are installed on a first requested basis.
Revision to By-laws	<ul style="list-style-type: none">▶ Dependent on outcome of decision which will occur in 2017.
Public Education	<ul style="list-style-type: none">▶ Dependent on outcome of decision which will occur in 2017.

TABLE B.8 PEDESTRIAN CROSSOVERS: REGION OF WATERLOO

OTM Book 15	<ul style="list-style-type: none">▶ Waterloo Region has adopted OTM Book 15 and will install Level 2 Type B, C, and D PXOs where recommended.▶ In instances where Level 1 Type A PXO are recommended, the policy is to upgrade to IPS.
Prioritization of Locations	<ul style="list-style-type: none">▶ Initial priority is for locations in close proximity to schools and at single lane roundabouts.▶ Future locations will be prioritized based on collision frequency.
Revision to By-laws	<ul style="list-style-type: none">▶ No change to by-laws was required.
Public Education	<ul style="list-style-type: none">▶ Developing educational infographics and brochure.

B.3 Pedestrian Safety Programs

Although not all jurisdictions have developed specific pedestrian safety plans, there are a number of pedestrian-related strategies that each municipality has implemented.

B.3.1 Education

Pedestrian education strategies currently implemented by the jurisdictions interviewed include:

- ▶ Webpage on the municipality's website that provides pedestrian and driver safety tips.
- ▶ Deployment of traffic engineering staff at community events and public engagement sessions.
- ▶ "Be Safe, Be Seen" initiative that encourages pedestrians to be more visible and the distribution of reflective wrist bands.
- ▶ Pedestrian Safety coordinator that speaks regularly at community events.
- ▶ Pedestrian safety walkabout reviews with community groups.
- ▶ Outreach at schools to talk to children about walking safely and how to cross the street.
- ▶ "Walk your bike" and pathway etiquette campaigns to decrease people cycling on sidewalks.
- ▶ Videos illustrating safety tips that can be shown in schools.
- ▶ Back to school safety campaign with "follow these safety tips" ads in newspaper, radio.

Key strategies for successful educational campaigns include:

- ▶ Partnering with media to help get the message out about why pedestrian safety is important for all road users. A strong vocal minority often complains of a "war on the car" but everyone is a pedestrian at some point during their day.
- ▶ Developing key messaging and continuing to reinforce the message.

B.3.2 Encouragement

Pedestrian encouragement strategies currently implemented by the jurisdictions interviewed include:

- ▶ Walk to school days.
- ▶ School zone safety program to provide designated safe routes to school.

B.3.3 Engineering

Engineering strategies currently implemented by the jurisdictions interviewed include:

- ▶ Pedestrian safety evaluation program to prioritize and program road safety improvements for pedestrians crossing roadways at signalized and non-signalized intersections.
- ▶ Evaluation of existing conditions at locations scheduled for major rehab roadwork to incorporate pedestrian improvements into future plans.
- ▶ School safety review reports that take a proactive look at infrastructure around school and examine enhancements that can be made.
- ▶ Neighbourhood traffic management calming guide.
- ▶ Windrow clearing program to assist individuals unable to remove windrows after snow plowing.
- ▶ High priority snow clearing around bus shelters.

B.3.4 Enforcement

Enforcement strategies currently implemented by the jurisdictions interviewed include:

- ▶ Selective Targeted Enforcement Program (STEP), which involves targeted enforcement of specific issues each month; (e.g., pedestrian safety in construction zones).
- ▶ School zone enforcement initiatives on walk to school days.
- ▶ Enforcement blitzes at new PXO locations.

B.3.5 Age-Friendly

Age-friendly initiatives currently implemented by the jurisdictions interviewed include:

- ▶ Targeted sidewalk maintenance and repairs to prevent slips, trips, and falls.
- ▶ Educational material distributed at seniors' complexes describing safe walking practices.
- ▶ Senior council meetings to address specific concerns, which the municipality would reactively address.

Appendix C

Community Engagement Summary Report

Pedestrian Safety Program for the Town of Oakville



Prepared by Lura Consulting
January 2017

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Introduction

The Town of Oakville's Transportation Master Plan *Switching Gears* articulates a multi-modal transportation strategy to accommodate planned growth within Oakville. The town is developing a Pedestrian Safety Program (PSP) that aligns with the goals of this document. The program seeks to systematically and proactively address pedestrian safety issues across the town by identifying and proposing treatments for locations that do not require traffic calming or all-way stop control, but are in the desire lines for pedestrian crossings. The initiative supports a shift to transportation modes that are safer, more efficient and accessible.

Community and stakeholder engagement is a critical component of developing the PSP to capture public and stakeholder pedestrian safety issues, concerns, and potential solutions. This report provides a summary of the engagement activities undertaken to inform the program and the feedback received.

Engagement Program

Communication

The town's established Twitter (@townofOakville) and Facebook accounts were used to promote the project and encourage participation in the survey (see below). Information on the program and calls to participate were also shared via the Town of Oakville's e-Newsletter and on the town's Engagement Hub.



Surveys

A survey was delivered to collect information from community members to inform the development of the PSP. The survey asked respondents open-ended questions to identify barriers to walking as a mode of transportation. The online survey also included an interactive mapping tool to collect feedback on specific locations around Oakville that would benefit from safety treatments. In addition, the survey captured preferred communication mechanisms for receiving information on walkability and pedestrian safety in the future.

The survey was delivered through a combination of online and in-person efforts. It was administered through Survey Monkey and hosted on the Town of Oakville's Communication Hub. In-person surveys were conducted through Pop-up Community Engagement events at various locations in Oakville (see below). The online survey mirrored that of the in-person surveys, collecting the same type of input. A copy of the survey can be found in Appendix A.

The survey ran from October 26 to December 9, 2016. A total of 319 surveys were completed, providing a statistical accuracy of +/- 5.5%, 19 times out of 20.

Pop-Up Consultations

As part of the engagement program, pop-up community consultations were designed and implemented to engage a broad and diverse spectrum of residents at locations they already visit, rather than asking them to come to a public meeting at a set time. Popular or highly frequented locations and events within the town were selected as engagement sites, including the following locations/activities:

- Oakville Farmer's Market (Morning – Saturday, October 29)
- Oakville Tree Lighting Ceremony (Evening – Friday, November 18)
- Oakville Santa Clause Parade (Morning – Saturday, November 19)
- Iroquois Ridge Community Centre (Evening – Thursday, November 24)
- Glenn Abbey Community Centre (Evening – Wednesday, November 30)
- Queen Elizabeth Park Community & Cultural Centre (Evening – Thursday, December 7)

Engagement activities facilitated by Lura and town staff were used during the pop-up events to encourage participation and capture feedback from the community. A large format map was used to capture people's attention, encourage discussion, and allow interactive documentation of locations that could benefit from pedestrian safety treatments. People were encouraged to provide input through the survey if they were interested in providing more feedback. Individuals interested in providing feedback but unable to participate on the spot were provided a card with a link to the electronic version of the survey hosted on the town's Engagement Hub, which included an online mapping tool to replicate the large map at events. Residents were also provided with a pair of Town of Oakville "tech" gloves as an incentive to encourage participation.



Stakeholder Session

A Stakeholder Engagement Session was carried out on December 9, 2016. Stakeholders with an interest in pedestrian safety were invited to attend the session to solicit more in-depth feedback and expertise. The session sought input on the challenges surrounding walkability in Oakville, potential solutions, identification of high priority intersections in need of safety improvements, and effective public communication and education mechanisms.



People Engaged in the Program

In total, 333 people were engaged in the conversation on pedestrian safety in Oakville. The following table provides a breakdown of the engagement activities and number of people that participated.

Date	Pop-Up Location	Number of Participants
October 29, 2016	Oakville Farmer's Market	22
November 18, 2016	Tree Lighting Ceremony	42
November 19, 2016	Oakville Santa Clause Parade	30
November 24, 2016	Iroquois Ridge Community Centre	24
November 30, 2016	Glen Abbey Community Centre	17
December 7, 2016	Queen Elizabeth Park Community & Cultural Centre	3
Oct. 26 – Dec. 9, 2016	Online Surveys	187
December 9, 2016	Stakeholder Session	14
Total		333*

*The number of participants is based on people who provided written feedback and does not take into consideration additional conversations had regarding pedestrian safety in Oakville.

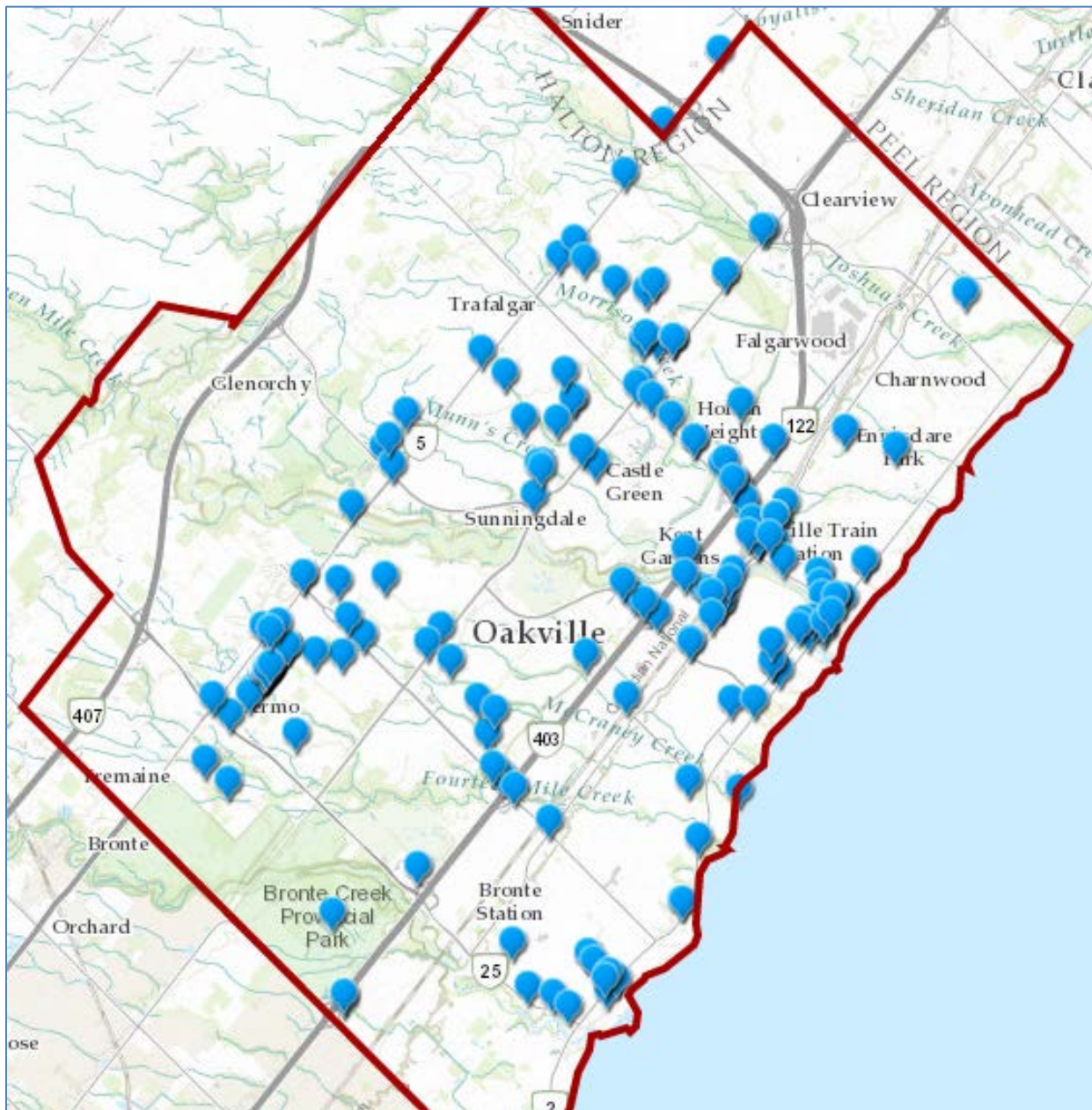
Summary of Feedback – What We Heard

Community Consultations

The following information is based on feedback received at the pop-up engagement events and from the online and in-person surveys. Detailed survey responses are provided in Appendix B.

Intersections or Areas of Concern

More than one hundred locations were identified via the surveys and at pop-ups as potential areas that could use improvement. An overview map of all flagged locations is provided below; a more detailed version can be viewed at the following [link](#).



The following locations were repeatedly flagged by respondents. A full list of locations can also be found in Appendix C.

- **Pine Glen Road** – Respondents indicated that Pine Glen between Falling Green Drive and Kwinter Road felt unsafe due to speeding vehicles and a lack of defined crosswalks. Crosswalks were requested at Forest Trail Public School, Postmaster Road, and Bronte Road.
- **Trafalgar Road** – Specific problem areas include:
 - Around the GO Transit Station;
 - At Upper Middle Road;
 - At Lakeshore Road; and
 - At Dundas Street.
- **QEW** – Need for safe crossings or pedestrian bridge over the QEW. One respondent indicated that a pedestrian connection to the Ford plant would make walking/biking to the plant much more realistic/safer.
- **Bronte Road** – Bronte Road was flagged at numerous locations as unsafe due to speeds, lack of crossings and sidewalks (to sports complex), and inadequate lighting.

A number of other concerns were expressed by residents during the engagement program that were not related to a specific geographic location. These included:

- Unsafe crossings and speeding in school zones came up consistently at pop-ups and on the survey. Feedback received included:
 - No safe place to cross the street;
 - Drivers do not stopping at crossings or stop signs; and
 - High speeds in school zones and on side streets;
- Cars not stopping at stop signs, crossings;
- Incomplete or disconnected sidewalks;
- Poor lighting (sidewalks and trails); and
- Turning vehicles do not check for pedestrians/cyclists.

Walking Frequency, Barriers, and Motivators

The majority of survey respondents indicated that they walk daily or weekly for recreational purposes (76%) or to run errands (51%); however, only 28% walk as *part* of their commute and 22% walk as their main mode of transportation.

The top barriers identified by respondents that prevent them from walking more frequently included:

- 62% indicated that distance to their destination prevents them from walking as a mode of transportation;
- 36% indicated that there are faster options;
- 25% indicated that dangerous conditions (i.e. traffic and road conditions) prevent them from walking more often; and

- Inadequate lighting, lack of rest stations/benches, condition of sidewalks, and unpleasant environments were also listed as reasons.

Respondents indicated that the following would make walking more pleasant:

- 48% indicated that more or improved sidewalks and paths would improve walkability in Oakville;
- Approximately 40% indicated that enhanced road crossings and traffic calming would make walking more pleasant; and
- Improved lighting, improved winter maintenance of sidewalks, lower speed limits and more signage (e.g. for drivers to watch for pedestrians at crossings, or to advise cyclists that riding on sidewalks is prohibited) were also listed.

Respondents consider the following to be the greatest benefits of improving walkability in Oakville:

- More healthy and active people (57%);
- More vibrant and active streets (49%); and
- Less cars on the road (45%).

Safety of the Pedestrian Environment

Survey respondents were asked to rank the pedestrian environments in Oakville from 1-5 (where 1 is not safe and 5 is very safe). In general, respondents feel relatively safe. Of the respondents, the ranking was as follows:

- 1 – 3%
- 2 – 12%
- 3 – 31%
- 4 – 34%
- 5 – 19%

Respondents were asked if they have ever felt unsafe or experienced an unsafe situation as a pedestrian in Oakville. About half of respondents shared a story of an unsafe experience, ranging from pedestrian environment design to dangerous drivers. The majority of experiences related to:

- Drivers turning on red lights;
- Drivers not stopping at stop and yield signs;
- Speeding;
- Lack of pedestrian crossings;
- Winter walking conditions;
- Lack of sidewalks;
- Lighting conditions;
- Coyotes; and
- Children and walking to school.

Communication Preferences

Residents (62%) trust their municipality the most for information related to transportation choices and pedestrian safety. Also, to a lesser degree, family, neighbours, and the internet were other trusted sources of information, with approximately 35% of residents expressing trust for each of these.

Residents prefer to receive information about transportation choices and pedestrian safety through the following channels:

- Email Update/Newsletters (29%);
- Dedicated website/online resources (27%);
- Roadside signage (24%);
- Newspaper (18%); and
- Other, including brochures in the foyers of Community Centres and YouTube videos.

Residents indicated that they would prefer to learn about walkability and pedestrian safety in Oakville through the following mechanisms:

- Dedicated website/online resources (47%);
- Signage (45%); and
- Education and awareness campaigns (40%).

Stakeholder Engagement

During the Stakeholder Engagement Session, participants were asked how to best communicate with and educate people on pedestrian safety in Oakville. Key theme areas used to guide the discussion included: mechanisms currently in place to educate the public on pedestrian safety, what is the “must-have” information, what communication mechanisms work best in Oakville, and how existing initiatives can be leveraged. The full Stakeholder Engagement Session Summary can be found in Appendix D.

Challenges and Solutions

Main challenges identified included:

- Pedestrian behaviour – J-walking, crossing at walkabouts, own role in safety;
- Driver behaviour – speed, respect (or lack thereof) for pedestrians;
- Confusion surrounding countdown signals for both pedestrians and drivers;
- Diversity of pedestrians and drivers – ages, cultural backgrounds, languages, abilities;
- Distance between controlled crossing locations/desire to cross mid-block;
- Pedestrian safety in public and private realms (e.g. parking lots); and
- Pedestrian friendliness in construction zones.

Potential solutions identified included:

- Enforcement programs (e.g. J-walking);
- Review of current posted speed limits;
- Education programs targeting drivers and pedestrians;

- Built environment improvements – rest areas, street lighting, etc.;
- Active and safe routes to school;
- Pedestrian priority signals (e.g. “head start” to pedestrians); and
- Improved signage (e.g. “Watch for Seniors” signage).

Information and Education

Current mechanisms in place to educate the public on pedestrian safety included:

- Existing signage;
- School safety information and Elmer the Safety Elephant;
- Town website and resources on cycling and walking;
- MTO education and resources;
- CAA driver and pedestrian safety training and road safety resources; and
- Safety oriented organizations, such as Parachute.

Stakeholders indicated that a mutual respect between drivers and pedestrians is needed. Must-have information for drivers includes education on the new crosswalk laws (i.e. where the pedestrians need to be before the car can proceed). Must-have information for pedestrians included:

- How to use countdown timers properly;
- How new crosswalks work;
- Proper clothing to wear at night; and
- Problem-specific targeted information (e.g. texting while walking).

Several suggestions were provided for education and outreach approaches that would work well in Oakville. It was noted different target audiences require different modes of communication and should be very specific with the messaging (e.g. “wear something reflective when walking at night”). Specific suggestions included:

- In-school pedestrian safety programs delivered by police officers;
- Blitzes delivered over the long-term to encourage behaviour change, like RIDE programs;
- Online and social media campaigns and ongoing communication;
- Face-to-face engagement and education;
- Brochure/information sent directly to homes with details about crosswalks, timings, etc.;
- Local Councillor newsletters and other communications.

Stakeholders also suggested several existing initiatives that could be leveraged or learned from. These included:

- Police safety village;
- School bus safety programs;
- MTO driver training program; and
- Insurance Corporation of British Columbia (ICBC) safety initiatives.

Appendix A – Pedestrian Safety Survey



1. Do you live in Oakville? YES NO

2. When you travel around Oakville what modes of transportation do you typically use?

	Always	Frequently	Occasionally	Rarely	Never
Walk					
Bicycle					
Transit (Go, Oakville or Other)					
Carpool					
Drive vehicle by yourself					
Other:					

3. How frequently do you walk outdoors within the Town of Oakville to carry out the following tasks or activities?

	Daily	Weekly	Monthly	Rarely	Never
Recreation/Pleasure					
Errands					
As <i>part</i> of your commute to work/school					
As your full commute to work/school					
Other:					

4. How frequently do you walk as a mode of transportation to get from one destination to another (e.g. to work/school, to connect with transit or to run errands)?

- a) Daily b) Weekly c) Monthly d) Rarely e) Never f) Do not know

5. What, if anything, prevents or discourages you from walking more frequently?

- a. Destinations are too far to walk
- b. Faster Options
- c. Too much effort
- d. Too much to carry to/from destination
- e. Dangerous conditions (e.g. traffic and road conditions)
- f. Seasonal variations (e.g. hot summers, cold winters)
- g. Variations in weather conditions (e.g. rain)
- h. Physically unable or difficult to do so
- i. Other: _____

6. What, if anything, would make walking more pleasant?

- a. More/improved signage
- b. More/improved sidewalks and paths
- c. Enhanced road crossings
- d. Traffic calming/control
- e. More on-street amenities/street furniture
- f. Other: _____

7. How much time would you consider acceptable to spend walking to get to destination (e.g. work, school, errands)?

- a) Less than 5 minutes
- b) 5 to 15 minutes
- c) 15 to 30 minutes
- d) More than 30 minutes

Pedestrian Safety

2. As a pedestrian, have you ever felt unsafe or experienced an unsafe situation? Please explain.

3. Please rank on a scale from 1 to 5 how safe you consider the pedestrian environment in Oakville based on your experiences getting around Town, where 1 is not safe and 5 is very safe.

1 2 3 4 5

4. On the map below, please identify any specific locations in Oakville that you believe may pose a safety concern to pedestrians and add a note in the comment box about what the safety concern is. [Go to Map/Boards]



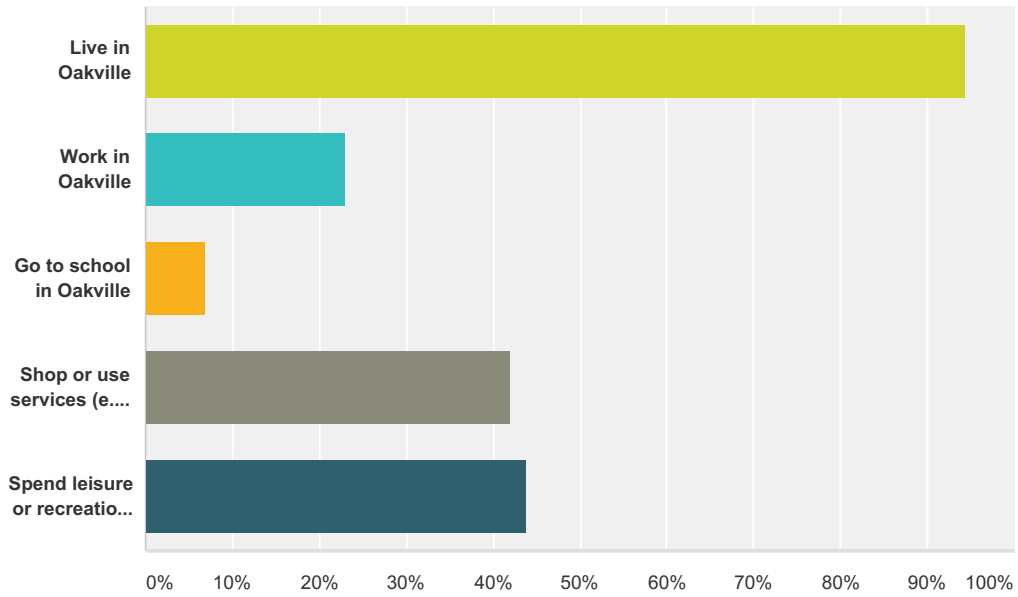
Appendix B – Detailed Survey Responses



Improving Pedestrian Safety in Oakville

Q1 Do you...

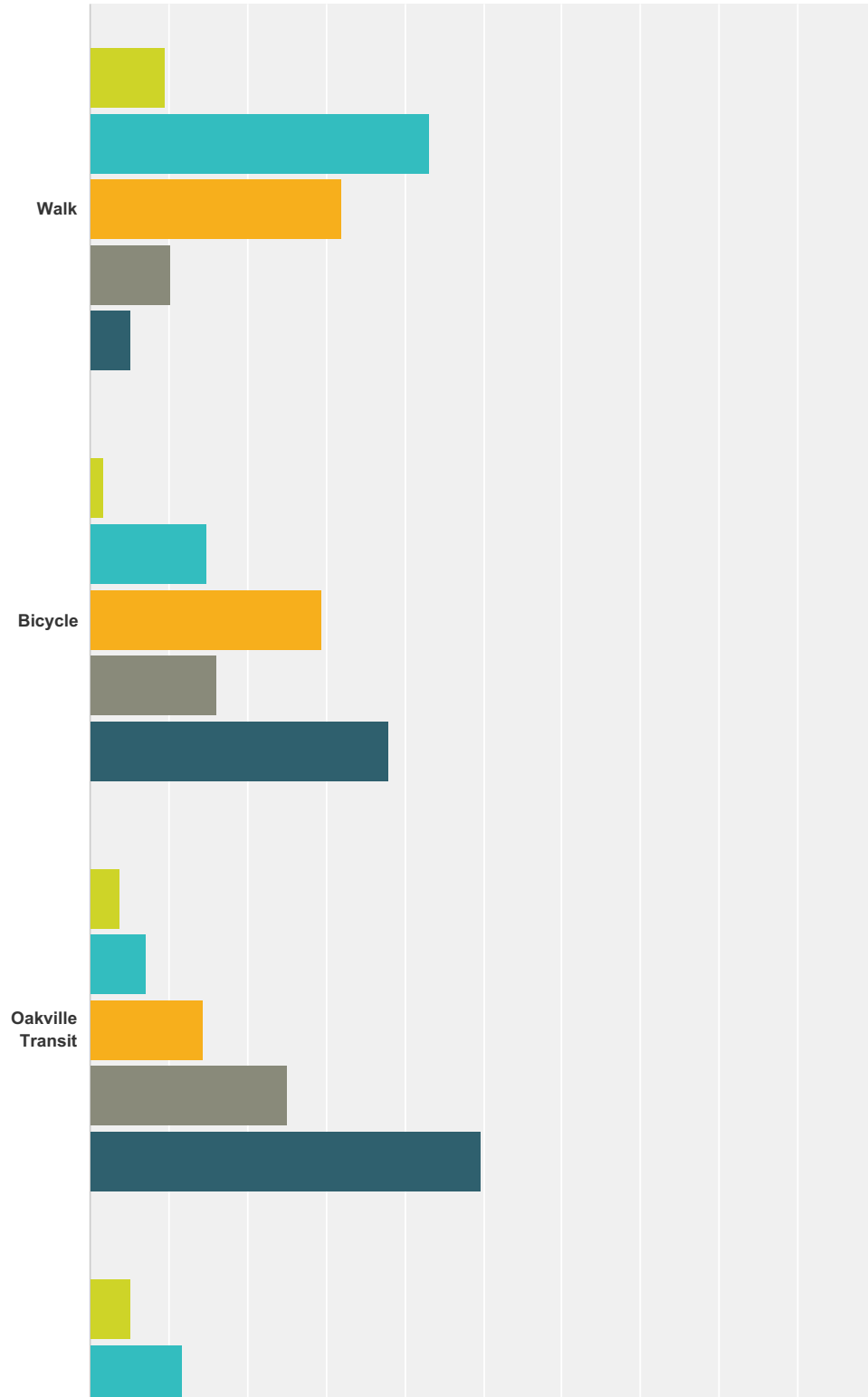
Answered: 288 Skipped: 4



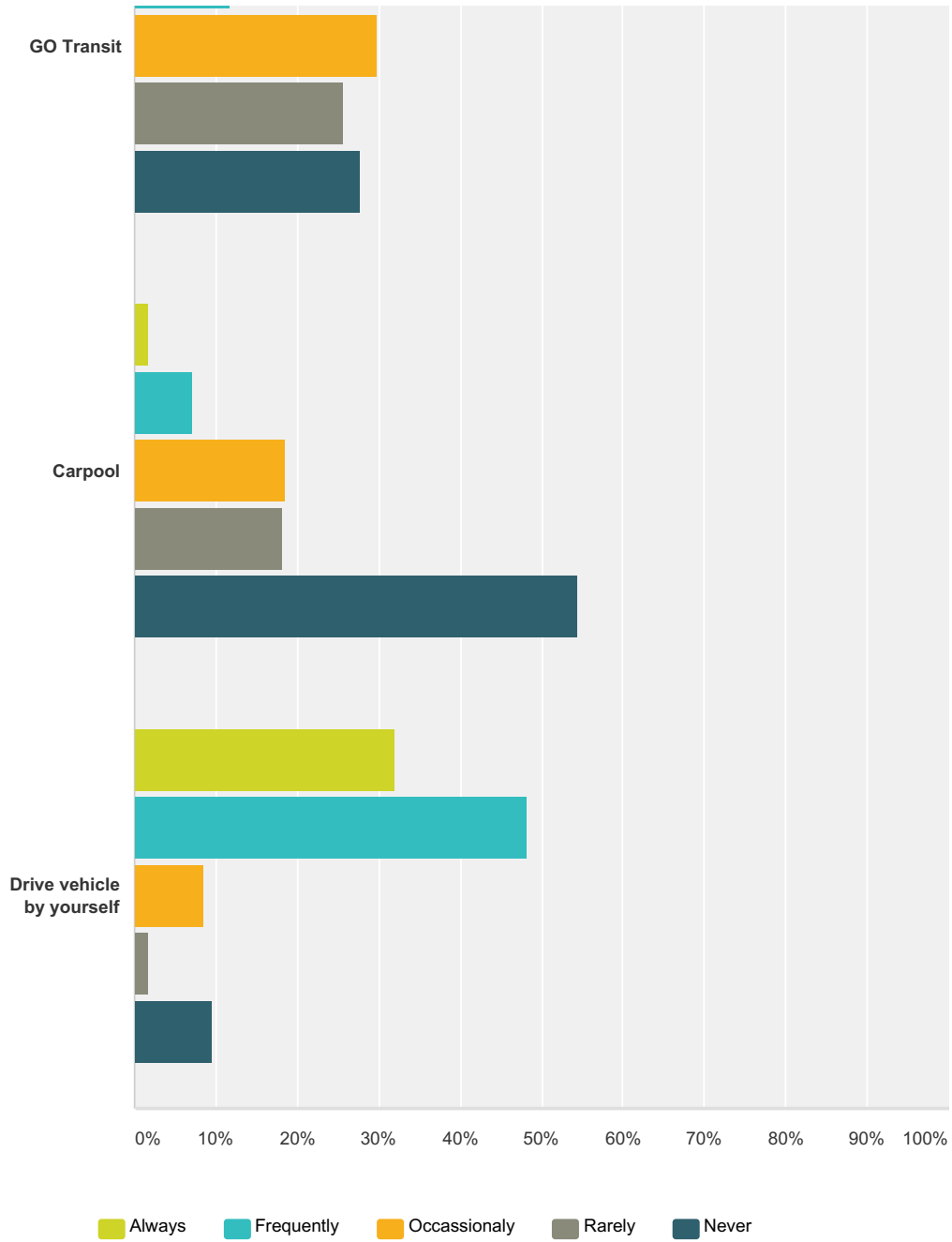
Answer Choices	Responses
Live in Oakville	94.44% 272
Work in Oakville	22.92% 66
Go to school in Oakville	6.94% 20
Shop or use services (e.g. doctors office, dry cleaning, etc.) in Oakville	42.01% 121
Spend leisure or recreation time in Oakville	43.75% 126
Total Respondents: 288	

Q2 When you travel around Oakville what modes of transportation do you typically use? Please indicate beside each one of the following how frequently you use it as a travel mode.

Answered: 292 Skipped: 0



Improving Pedestrian Safety in Oakville



	Always	Frequently	Occasionaly	Rarely	Never	Total
Walk	9.59% 28	43.15% 126	31.85% 93	10.27% 30	5.14% 15	292
Bicycle	1.71% 5	14.73% 43	29.45% 86	16.10% 47	38.01% 111	292
Oakville Transit	3.77% 11	7.19% 21	14.38% 42	25.00% 73	49.66% 145	292
GO Transit	5.14% 15	11.64% 34	29.79% 87	25.68% 75	27.74% 81	292
Carpool	1.71% 5	7.19% 21	18.49% 54	18.15% 53	54.45% 159	292

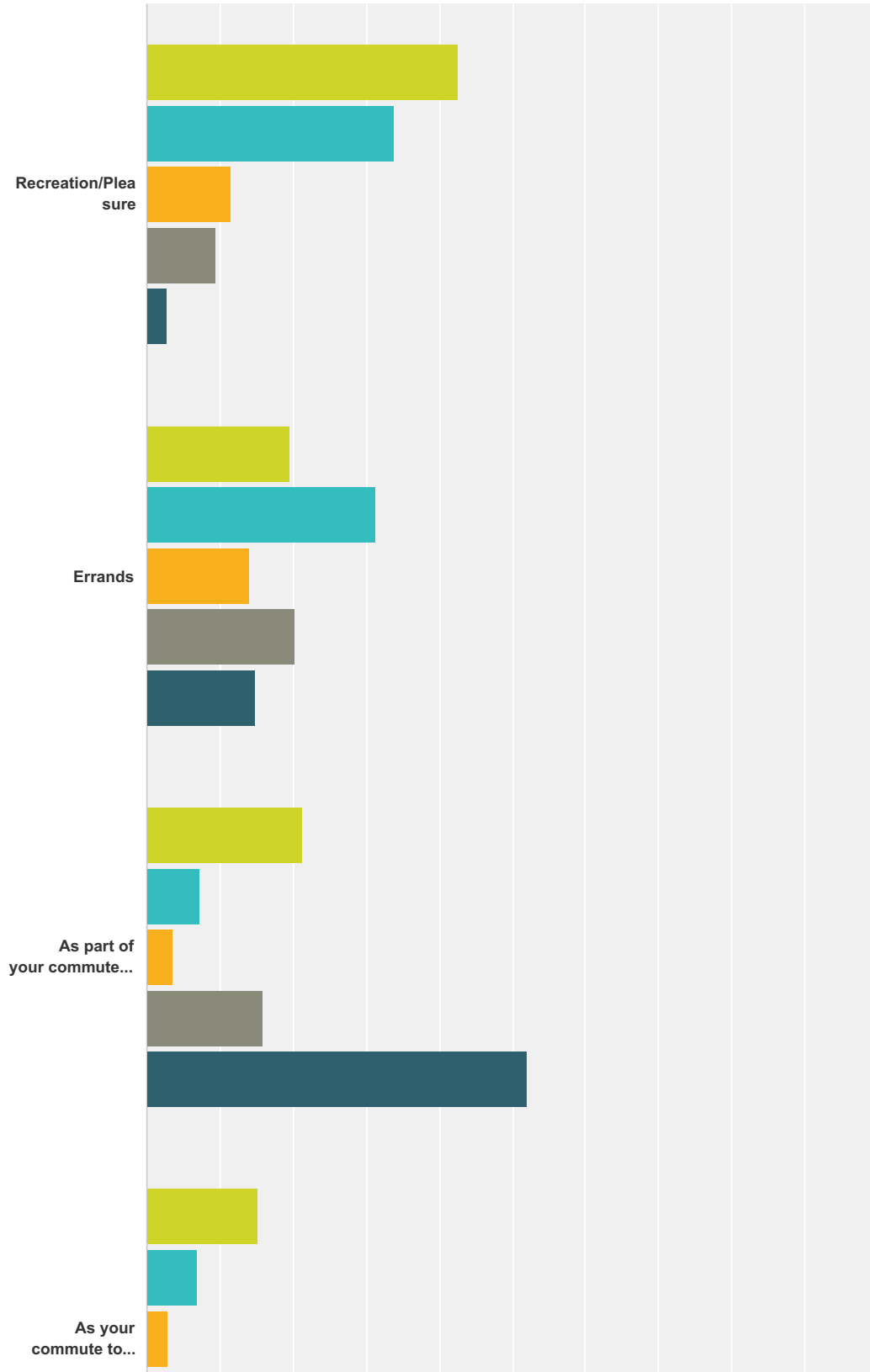
Improving Pedestrian Safety in Oakville

Drive vehicle by yourself	31.85% 93	48.29% 141	8.56% 25	1.71% 5	9.59% 28	292
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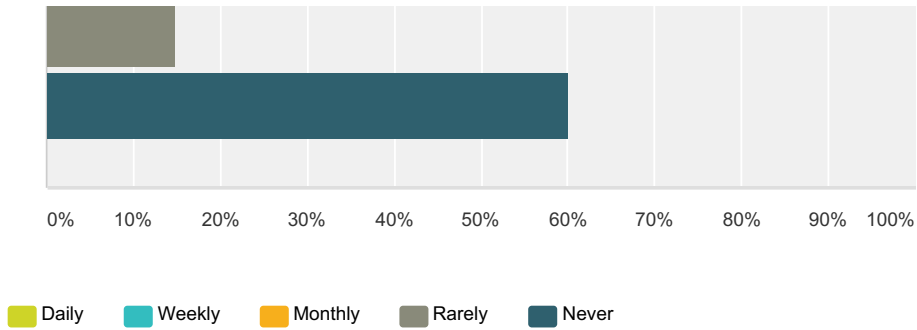
#	Other (please specify)	Date
1	drive with family	12/6/2016 11:12 AM
2	Rollerskate	11/29/2016 4:02 PM
3	B	11/28/2016 8:05 PM
4	N/A	11/25/2016 8:57 AM
5	Always: passenger in a car.	11/22/2016 3:45 PM
6	taxi	11/19/2016 4:15 PM
7	I also exercise outside (running).	11/17/2016 8:54 PM
8	Kick-scooter	11/16/2016 4:06 PM
9	I am often driven by someone else	11/14/2016 11:10 AM
10	Travel with spouse and combine stops. I don't consider that carpooling.	11/14/2016 11:10 AM
11	I don't use GO transit for travel within Oakville. I use it for travel to and from my office in Toronto.	11/11/2016 8:34 AM
12	Also gets lift from family	11/10/2016 11:41 PM
13	Drive with spouse	11/10/2016 6:00 PM
14	More frequent with 2 people	11/4/2016 12:29 PM

Q3 How frequently do you walk outdoors within the Town of Oakville to carry out the following tasks or activities?

Answered: 287 Skipped: 5



Improving Pedestrian Safety in Oakville

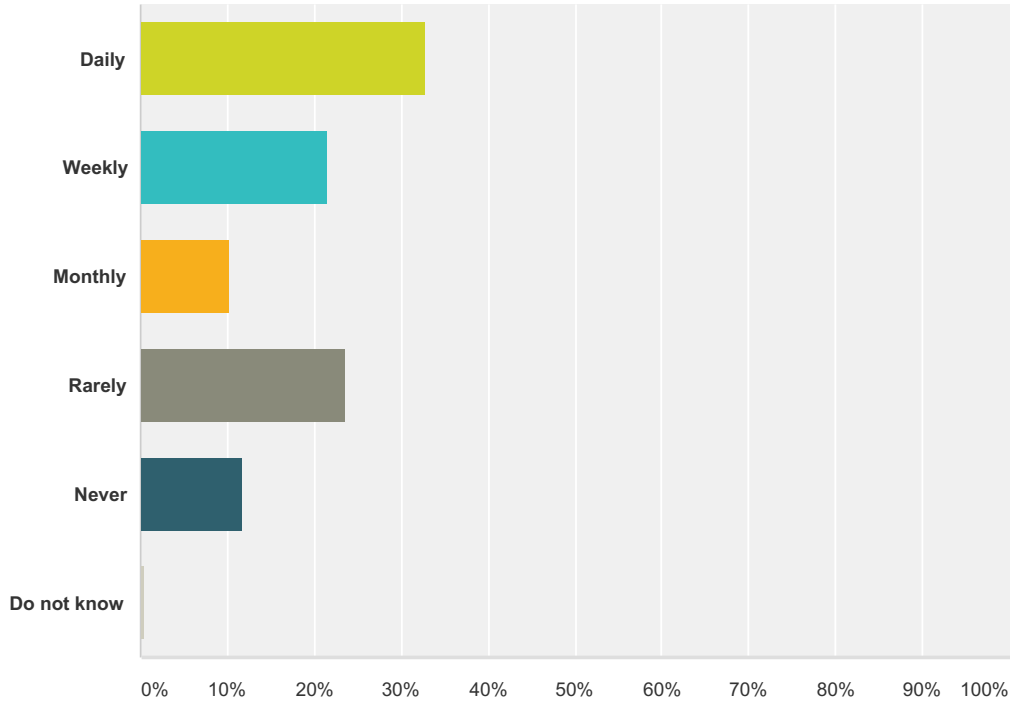


	Daily	Weekly	Monthly	Rarely	Never	Total
Recreation/Pleasure	42.51% 122	33.80% 97	11.50% 33	9.41% 27	2.79% 8	287
Errands	19.65% 56	31.23% 89	14.04% 40	20.35% 58	14.74% 42	285
As part of your commute to work/school	21.30% 59	7.22% 20	3.61% 10	15.88% 44	51.99% 144	277
As your commute to work/school	15.22% 42	6.88% 19	2.90% 8	14.86% 41	60.14% 166	276

#	Other (please specify)	Date
1	Visiting others - weekly	12/8/2016 4:02 PM
2	Walk around downtown core Toronto	11/29/2016 4:35 PM
3	Work at home; commute does not apply	11/29/2016 11:25 AM
4	Use school bus	11/28/2016 9:00 PM
5	I dont work or go to school so the last 2questions don't apply	11/28/2016 7:57 AM
6	I work in downtown oakville and walk each lunchtime and then walk my dog at home during the week and by the lake at the weekend.	11/23/2016 11:27 AM
7	Bus	11/22/2016 3:46 PM
8	Daily: Kids to school.	11/22/2016 1:46 PM
9	visit family members; on the way to transit for church	11/19/2016 4:20 PM
10	I walk my daughter to school daily	11/18/2016 12:22 PM
11	Walk the dog	11/11/2016 5:55 PM
12	I dont work	11/11/2016 10:57 AM
13	Walk to child's school	11/11/2016 8:13 AM
14	as part of commute to gym and community centre	11/10/2016 5:29 PM
15	Knee surgery has not allowed me to walk very far.	11/8/2016 3:21 PM

Q4 How frequently do you walk as a mode of transportation to get from one destination to another (e.g. to work/school, to connect with transit or to run errands)?

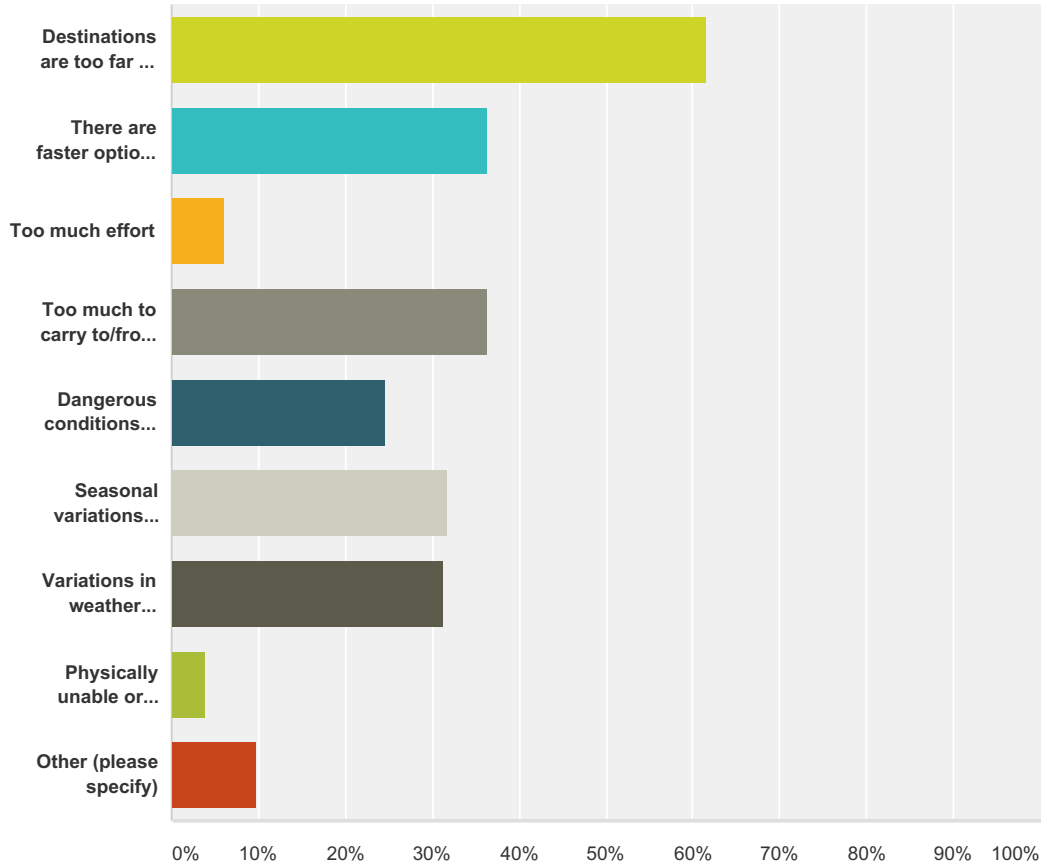
Answered: 284 Skipped: 8



Answer Choices	Responses
Daily	32.75% 93
Weekly	21.48% 61
Monthly	10.21% 29
Rarely	23.59% 67
Never	11.62% 33
Do not know	0.35% 1
Total	284

Q5 What, if anything, prevents or discourages you from walking more frequently?

Answered: 284 Skipped: 8



Answer Choices	Responses
Destinations are too far to walk	61.62% 175
There are faster options than walking	36.27% 103
Too much effort	5.99% 17
Too much to carry to/from destination	36.27% 103
Dangerous conditions (e.g. traffic and road conditions)	24.65% 70
Seasonal variations (e.g. hot summers, cold winters)	31.69% 90
Variations in weather conditions (e.g. rain)	31.34% 89
Physically unable or difficult to do so	3.87% 11
Other (please specify)	9.86% 28
Total Respondents: 284	

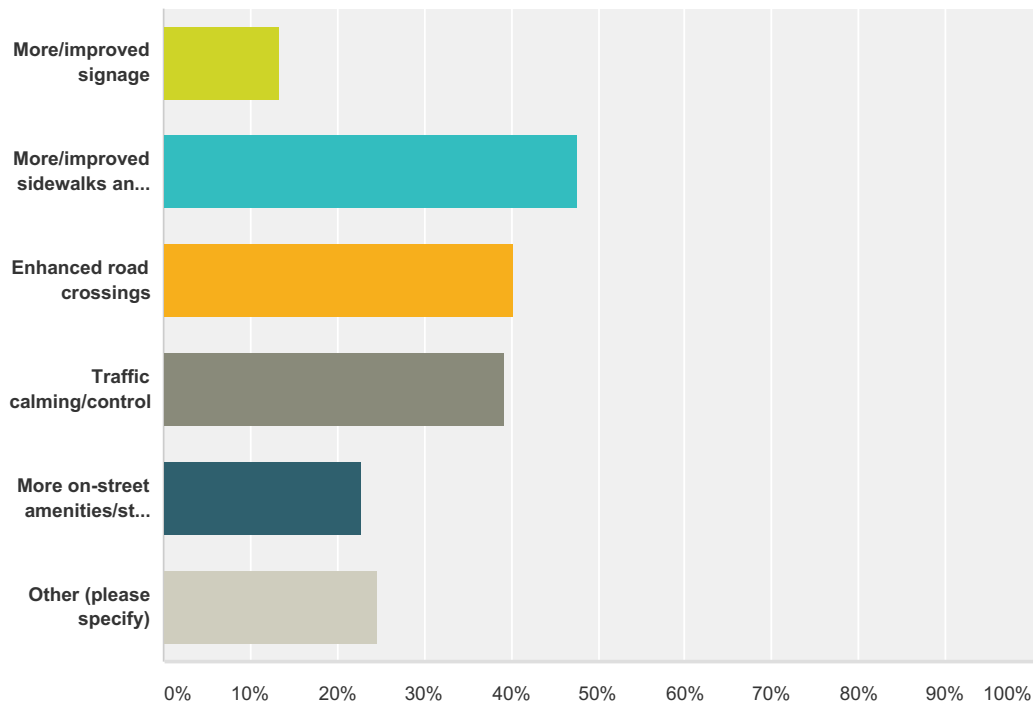
#	Other (please specify)	Date
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Improving Pedestrian Safety in Oakville

1	coyotes, lighting, lack of trails like in waterfront toronto, lack of 911 stations with security cameras, help line	12/9/2016 7:14 PM
2	inaccessible on foot	12/8/2016 4:02 PM
3	Time	12/6/2016 5:51 PM
4	bus route cancellations	12/6/2016 11:23 AM
5	TIME	11/29/2016 4:29 PM
6	lazy	11/29/2016 3:43 PM
7	I walk a lot but I get nervous with my son walking to school because of the way people drive. As a result, I still walk with him to school even though he is in grade 5.	11/27/2016 6:11 PM
8	Looking forward to Trafalgar and QEW construction being done. How about pedestrian access from base of 6th Line, west parallel to QEW, onto top of Kerr St / N. Service Road.	11/27/2016 1:28 PM
9	Bikes travelling at speeds in as high as 35KMP	11/27/2016 8:30 AM
10	when benches are removed in winter, it's very difficult. I am a senior and need to sit frequently as I shop and bank downtown.	11/23/2016 7:29 PM
11	Nothing.	11/22/2016 10:16 AM
12	Biking is faster and way more efficient.	11/19/2016 9:43 PM
13	Lack of sidewalks	11/18/2016 4:59 PM
14	No shade on sidewalks	11/18/2016 1:09 PM
15	Very limited crossings over Sixteen Mile Creek.	11/16/2016 4:10 PM
16	My neighbourhood is under construction and there are no finished trails or through paths.	11/16/2016 2:46 PM
17	I walk in Oakville for recreation. I do not work in Oakville and drive to work.	11/11/2016 11:27 PM
18	Bicycles and skateboards on sidewalks	11/11/2016 7:57 AM
19	too many bicycles using sidewalks	11/10/2016 10:45 PM
20	no issues prevent me from walking daily	11/10/2016 7:29 PM
21	when the sidewalks are not cleared or salted(slippery)	11/10/2016 5:30 PM
22	poorly uncleared /icy sidewalks in winter	11/10/2016 5:29 PM
23	Drive - Own Car	11/10/2016 5:00 PM
24	Dangerous condition of sidewalks and pedestrian crossings	11/10/2016 4:33 PM
25	Some places are very unpleasant to navigate on foot (e.g. Trafalgar Road has sidewalks but to cross QEW one must navigate a number of on/off ramps without lights	11/10/2016 2:12 PM
26	nothing, walker / hike in a week	11/4/2016 12:30 PM
27	Lighting = lack of \$ beggars / solicitors	11/4/2016 12:25 PM
28	finegory.czarnota@gamil.com	11/4/2016 12:09 PM

Q6 What, if anything, would make walking more pleasant?

Answered: 263 Skipped: 29



Answer Choices	Responses
More/improved signage	13.31% 35
More/improved sidewalks and paths	47.53% 125
Enhanced road crossings	40.30% 106
Traffic calming/control	39.16% 103
More on-street amenities/street furniture	22.81% 60
Other (please specify)	24.71% 65
Total Respondents: 263	

#	Other (please specify)	Date
1	better lighting, conditioned paths with railings like Burlington LaSalle park, security cameras and 911 stations	12/9/2016 7:14 PM
2	make stores etc closer	12/9/2016 10:35 AM
3	no answer	12/8/2016 3:29 PM
4	when I have more time (work a lot)	12/6/2016 11:26 AM
5	nothing	12/6/2016 11:09 AM
6	cross walks, reminders to drivers making right hand turns to check blind spot	12/6/2016 10:26 AM
7	Access from backyard to fail system (gates are not allowed)	11/29/2016 4:45 PM
8	heated sidewalks	11/29/2016 4:09 PM

Improving Pedestrian Safety in Oakville

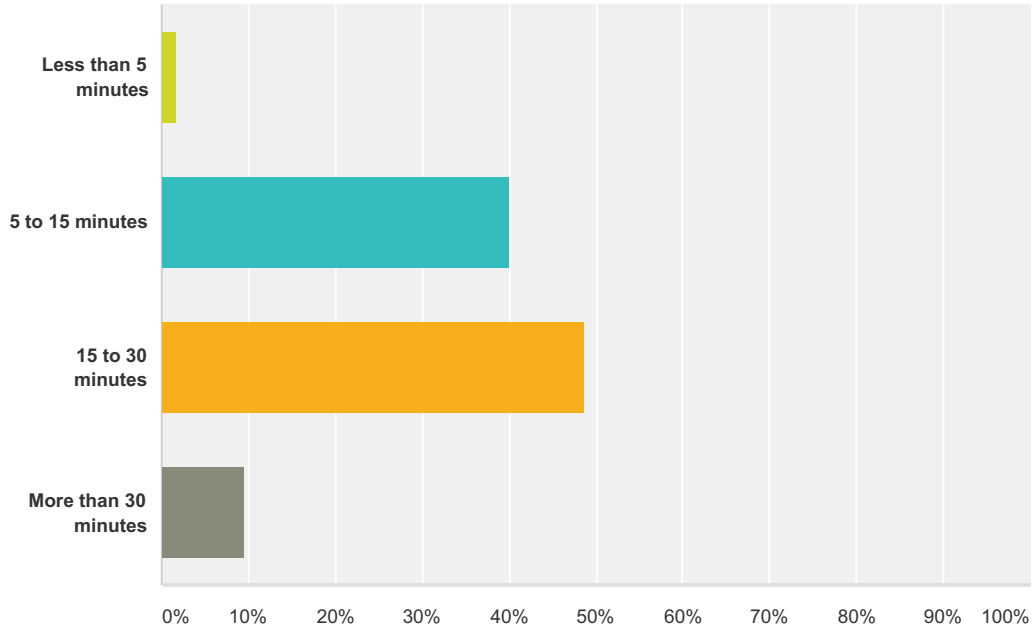
9	More garbage cans available	11/29/2016 3:53 PM
10	Provide safe road crossings at all access points to QEW on Trafalgar Road	11/29/2016 11:25 AM
11	Having to push a wheelchair has helped me to discover that 'bike paths' are far better for this than sidewalks. And the person in the wheelchair says the sidewalks are far too bumpy, and she can feel every seam between blocks.	11/27/2016 1:28 PM
12	Signs that let cyclist know there is a Town of Oakville by-law that states riding on the sidewalks is prohibited	11/27/2016 8:30 AM
13	Happy with current conditions	11/25/2016 8:59 AM
14	I need the benches to be out in all seasons!	11/23/2016 7:29 PM
15	Would love to walk over the QEW on Trfalgar Rd but it is terifying to be a pedestrian on that piece of road..even the new wider sidewalks won't convince me. How about some type of dedicated overhead walking path as well?	11/23/2016 11:27 AM
16	Better police presence in high traffic areas	11/23/2016 10:05 AM
17	More crossing guards!!	11/22/2016 4:01 PM
18	Things being closer.	11/22/2016 3:39 PM
19	Weather.	11/22/2016 1:48 PM
20	Synchronized traffic lights.	11/22/2016 9:38 AM
21	Timing issues.	11/22/2016 9:35 AM
22	Nothing.	11/22/2016 9:27 AM
23	nothing	11/22/2016 9:22 AM
24	Narrower streets	11/19/2016 9:43 PM
25	anything that would make it safer, including lighting. New lights do not illuminate as broad an area as the old ones, making safety an issue after dark.	11/19/2016 4:20 PM
26	Increased walkable design ex. Amenities close to housing.	11/18/2016 4:10 PM
27	Nothing	11/18/2016 12:40 PM
28	better lighting at night - too dark to walk on some sts	11/17/2016 7:28 PM
29	More neighbourhoods designed with "walk to" destinations and close to home amenities	11/17/2016 3:23 PM
30	Sidewalks at all retail entrances (e.g longos)	11/17/2016 12:24 PM
31	Less construction blocking pathways	11/17/2016 8:52 AM
32	Too many intersections where pedestrians have to push a button to cross and wait a long time. Lights should change automatically or quicker for pedestrians. Often feel cars always have priority over pedestrians	11/16/2016 10:14 PM
33	None	11/16/2016 7:30 PM
34	Pedestrian crossing for Sixteen Mile Creek at QEW.	11/16/2016 4:10 PM
35	less bikes and scooters on sidewalks	11/16/2016 3:53 PM
36	More stores and services within the immediate neighbourhood.	11/16/2016 2:46 PM
37	Mandatory testing for elderly drivers that are a hazard to pedestrians	11/15/2016 11:39 PM
38	More shopping and restaurants within residential neighbourhoods.	11/15/2016 6:55 PM
39	additional street lighting and lit paths	11/15/2016 4:10 PM
40	Nothing	11/14/2016 10:57 AM
41	definitely more shade at the pedestrian paths right where people walk, not only at the side	11/14/2016 10:51 AM

Improving Pedestrian Safety in Oakville

42	Improved sidewalk clearance in winter months. Suggest homeowners are responsible for clearing sidewalks within 24h of snowfall, rather than waiting for city services. They are clearing their driveways for their cars anyway. Such a by-law would allow the town to send a clear message that you value active transportation. Similarly, can the town consider establishing regulations about residents piling leaves at the side of the road for collection (e.g. no more than 24h before scheduled collection). The leaves take over 1/2 of the sidewalk and 1/2 of the road, making it challenging for both pedestrians AND cyclists (who have to move into centre of roadway). Some piles have been left for >1 week already, and are getting munched up into a pulp by cars driving over them, which will make it difficult for leaf collection to remove anyway. Can residents keep the piles on their lawns until just before collection, in the same way that the town does not allow garbage bins to be left at curbside for prolonged periods of time	11/13/2016 8:05 PM
43	Driver education so that motorists would be aware that they need to stop for pedestrian crossings for pedestrians	11/12/2016 2:37 PM
44	Pedestrians and bikers do not follow traffic regulation resulting in risk and danger to others.	11/11/2016 11:27 PM
45	Complete the lakeside trail	11/11/2016 3:27 PM
46	Pedestrian lights that always change when the traffic lights do, so you know when you reach an intersection if it's safe to cross. Sometimes pedestrian lights always show the "no crossing" hand until someone pushes the pedestrian crossing button, even when it would be perfectly safe to cross the street.	11/11/2016 10:22 AM
47	educate and enforce no bikes/skateboard bylaws	11/11/2016 7:57 AM
48	LOWER SPEED LIMITS	11/11/2016 6:40 AM
49	less bicycles using sidewalks	11/10/2016 10:45 PM
50	Traffic lights have to be changed iz	11/10/2016 8:43 PM
51	twenty years younger might help! Non-arthritis hips!	11/10/2016 5:51 PM
52	to educate car drivers on pedestrian rights of way at intersections	11/10/2016 5:47 PM
53	Clearing of snow and ice from sidewalks	11/10/2016 5:29 PM
54	Better traffic light co-ordination. "Walk" should always be displayed when the traffic light is green. Often, if a pedestrian does not push the crossing request button, the pedestrian light will show "Don't Walk". This is very confusing to older pedestrians of which there are many.	11/10/2016 4:33 PM
55	Fast moving sidewalks like at the airport.	11/10/2016 4:15 PM
56	it should not be up to a driver's judgment when to stop. There should always be clear and unmistakable signals so that it is completely safe for a pedestrian to move into the roadway. For example, too many drivers are oblivious to the rule of stopping on Lakeshore when a ped. is crossing in a marked area.	11/10/2016 2:12 PM
57	safer pedestrian crossings	11/10/2016 2:02 PM
58	More alert drivers!	11/7/2016 8:55 AM
59	-	11/4/2016 12:36 PM
60	No Bicycles on sidewalks	11/4/2016 12:32 PM
61	Lives in area of Market	11/4/2016 12:30 PM
62	Make drivers more aware of pedestrians	11/4/2016 12:28 PM
63	None	11/4/2016 12:23 PM
64	Construction Management	11/4/2016 12:21 PM
65	no bikes or sidewalks	11/4/2016 12:09 PM

Q7 How much time would you consider acceptable to spend walking to get to destination (e.g. work, school, errands)?

Answered: 284 Skipped: 8



Answer Choices	Responses
Less than 5 minutes	1.76% 5
5 to 15 minutes	40.14% 114
15 to 30 minutes	48.59% 138
More than 30 minutes	9.51% 27
Total	284

Improving Pedestrian Safety in Oakville

Q8 As a pedestrian, have you ever felt unsafe or experienced an unsafe situation? Please explain.

Answered: 216 Skipped: 76

#	Responses	Date
1	Yes, on Bronte Road north of Lake Shore	12/15/2016 9:42 AM
2	There are numerous intersections that are poorly lit, mainly away from the main roads. In winter, it's already dark outside during rush hour, which makes crossing streets at those intersections more dangerous. This is compounded by an increased number of cars in Oakville. In my opinion, there should be a rule that requires all intersections to have a light post at each of its corners, so that the crossing areas are properly lit. Intersections are by far the most dangerous areas for pedestrians and cyclists. There should also be more enforcement of the rule that requires motorists to wait until pedestrians completely cross the the street.	12/9/2016 8:31 PM
3	1) Yes, I have seen coyotes and feel that better street lighting to simulate daylight conditions (like in Finland) would make it easier for safety, security and deter wildlife from coming close to people. 2) Recently read in the paper that a lady was accosted on a walking path near 3rd Line and Kings College and therefore see the need for better lighting 3) Please consider the use of solar powered lighting to enhance walkways, trails 4) Please increase the "911" accessibility via pull - stations on light posts or other economical means 5) Please see the recent example of solar / blue light for walking and cycle paths in Poland	12/9/2016 7:21 PM
4	Not really. Some of the walking paths can be improved.	12/9/2016 11:45 AM
5	Crossing street with children before and after school. Car went through the intersection even though we were crossing with the crossing guard. Has happened more than once. We could have been hit by the car on one instance. People are in a rush and don't pay attention or fail to make a complete stop and roll through the intersections despite children crossing. This has happened at heritage way and kings college in front of st. Bernadette school and heritage way and merchant's gate, in front of heritage glen public school.	12/9/2016 11:31 AM
6	yes, Winter plowing on Dorval drive at QEW blocked sidewalks such that travel was only possible on Dorval drive roadway. Current standards on Dundas (ie at Trafalgar for example) street permit 8+ lanes at crossing - this is too wide to traverse safely and within the crosswalk signal times.	12/9/2016 10:43 AM
7	dfsdfs	12/8/2016 10:04 PM
8	Yes, I would like to walk more to the Oakville GO station however I live north of the QEW and feel very unsafe and uncomfortable taking the path under the highway at Sixth Line. There are limited pedestrians, the path is well away from the roads, very loud from highway traffic, and along side the ravine to the creek. It takes a few minutes to leave sixth line and appear on the other side, and even then it is near a graveyard. As a woman I feel unsafe and uncomfortable walking there alone. Cyclists have almost hit me coming around the corner, I never run into other pedestrians and it's very creepy. It is the main reason I do not walk to the GO station.	12/8/2016 7:38 PM
9	No	12/8/2016 4:11 PM
10	Many street don't light street lights for pedestrians and forest paths are mostly unlit.	12/8/2016 4:04 PM
11	Rarely in Oakville. In Toronto all the time!	12/8/2016 3:41 PM
12	NA	12/8/2016 3:37 PM
13	Yes, I find that people often speed down residential roads or fail to stop at the line at a stop sign	12/8/2016 3:31 PM
14	No	12/8/2016 3:29 PM
15	New plaza at Neyagawa and Dundas is 10 minutes walk away from my house but I feel unsafe crossing Dundas on foot, especially in winter in the evening in the darkness. Also crossing Trafalgar at McCraney and White Oaks blvd, feel unsafe as drivers making a right turn on the red light sometimes miss the pedestrian on the corner waiting for the signal.	12/7/2016 7:57 AM
16	n/a	12/6/2016 11:28 AM
17	Never. I keep my eyes and ears open. I am alert. Focus on road safety. Make eye contact with drivers and all is well.	12/6/2016 11:27 AM
18	Yes, speeding is a problem in this City and the lack of obedience to signs (traffic signs) and speed limits.	12/6/2016 11:24 AM

Improving Pedestrian Safety in Oakville

19	Not really. But the crossing on Bronte and Dundas does not flash for pedestrians long enough. Its always a run across.	12/6/2016 11:19 AM
20	no	12/6/2016 11:16 AM
21	Witnessed a car not stop at Bishop and Pilgrims Way several times at night. Witnessed cars downtown Oakville not stop or slow when people are on crosswalk.	12/6/2016 11:15 AM
22	yes - regularly! People don't stop at stop signs. Same issue on my bike. Speeding is also a problem.	12/6/2016 11:10 AM
23	no	12/6/2016 11:07 AM
24	No.	12/6/2016 10:59 AM
25	No.	12/6/2016 10:41 AM
26	Crossing an intersection with right hand turning drivers who aren't checking blind spot.	12/6/2016 10:27 AM
27	I walk with my three young children to school every week day, approximately 15-20 minutes (at a child's walking speed) each way. We try to walk to and from school as much as we can to minimize traffic around the school, as well as to minimize car use and increase our daily physical activity. Our route to St. Mary Elementary School takes us across Colonel William Parkway in north Oakville. At the point where we enter onto Colonel William Parkway from the trail system there is no cross walk. In order to use a cross walk we have to back track significantly or go past the school to the next cross walk. To cross at Stocksbridge or Dewsbury is risky in the before and after school hours due to the volume of traffic at these times, as well as the speed, and the fact that the road curves, making it difficult to see whether any vehicles are coming. Well-meaning drivers sometimes stop to let us across, but the risk of a collision is high due to other cars coming around the curve and having to slow suddenly for a stopped car. We see many families making this risky crossing at these intersections, on their way to and from school, as well as to the bus stop on Stocksbridge. We enjoy our daily walk to and from school, except for this panicky road crossing, which is definitely an unsafe situation.	12/2/2016 11:16 AM
28	Yes. Cars pulling out of the driveways in the dark.	11/29/2016 8:34 PM
29	No.	11/29/2016 4:47 PM
30	Yes, the speed is way too high.	11/29/2016 4:46 PM
31	Yes crossing, cars don't stop at crossing signs.	11/29/2016 4:43 PM
32	Cars turning not paying attention to pedestrian signals.	11/29/2016 4:38 PM
33	Kestell and Coronation Dr. cars go way to fast	11/29/2016 4:37 PM
34	Pretty careful and have young children.	11/29/2016 4:35 PM
35	Drivers not stopping at stop signs.	11/29/2016 4:31 PM
36	No.	11/29/2016 4:29 PM
37	No.	11/29/2016 4:28 PM
38	Yes bad driving and speeding.	11/29/2016 4:27 PM
39	When construction took place 1-2 years Upper Middle/ Ford Drive - there were no sidewalks and it felt very dangerous to travel in that area to work.	11/29/2016 4:26 PM
40	No. I feel car faster.	11/29/2016 4:24 PM
41	Yes I am so scared to walk beside the road, if there are no sidewalks.	11/29/2016 4:23 PM
42	Crosswalk.	11/29/2016 4:22 PM
43	No.	11/29/2016 4:10 PM
44	No.	11/29/2016 4:09 PM
45	No.	11/29/2016 4:04 PM
46	Cars don't make the full 3 second stop or they don't stop at all.	11/29/2016 4:03 PM
47	No.	11/29/2016 4:02 PM
48	No side walk.	11/29/2016 4:01 PM
49	No.	11/29/2016 4:00 PM
50	No.	11/29/2016 3:59 PM

Improving Pedestrian Safety in Oakville

51	Yes, cars running stops or exiting parking or passing to close to bikes.	11/29/2016 3:58 PM
52	no.	11/29/2016 3:52 PM
53	Yes, motorists don't often obey 'stop' signs.	11/29/2016 3:50 PM
54	No.	11/29/2016 3:43 PM
55	There are only two safe crossings on Trafalgar Road over the QEW (of seven). Cars are not required to stop at all of the crossings, and even if they are, they are not watching for pedestrians. You basically have to keep looking and dart across the crossings at present.	11/29/2016 12:00 PM
56	No. We are from Germany. It's much much worse there. Cars never stop for pedestrians there??	11/28/2016 9:02 PM
57	Yes, there is no sidewalk for Maplehurst Avenue. It's a busy road and it narrows at the Bridge Rd crossing, making it very dangerous for pedestrians, school children on their way to school, dogwalkers, joggers etc.	11/28/2016 8:27 PM
58	No	11/28/2016 8:08 PM
59	Walking or biking down Ford drive between Upper Middle and Royal Windsor is very dangerous. Also along The Canadian Road between the Ford plant and QEW is dangerous. A pedestrian bridge between Falgarwood and the Ford plant would make walking/biking to the Ford plant much more realistic/safer. See image. http://imgur.com/a/pdp3Z	11/28/2016 4:33 PM
60	Concerns sometimes with excessive traffic speed.	11/28/2016 12:27 PM
61	My mother finds the sloping curbs (for wheelchairs etc) too steep especially in the winter.	11/28/2016 8:00 AM
62	All the time! At least 2-3 times a week we witness drivers rolling through stop signs, looking side to side to check for traffic while moving instead of looking forward, in the direction their car is going, for pedestrians crossing. We have had to stop in our tracks and even get off the road because drivers are coming toward us without actually looking in our direction. And it is almost daily that we see drivers running red lights or accelerating through caution lights, or turning into a pedestrian crosswalk--when there is a clear walk signal--and not even looking for pedestrians. It is so dangerous that, as I said earlier in this survey, I cannot allow my son to walk to school on his own. We have had way too many close calls over the years. A few years ago, a minivan was racing to make the light and turned into the intersection without looking and came within a couple of feet of hitting my son who was crossing completely legally with a clear walk signal. Speeding is another issue. Cars frequently drive at high speed on our street--Marine Drive--and also on the streets behind my son's school. (Eastview Public School) Lastly,.I have to say that it makes us feel like pedestrians are second-class when we have to push a button to get a walk signal. Sometimes we just make it to the intersection in time for the green light but the walk signal does not come on because we didn't quite make it in time to push the button. I have always told my sons they cannot cross without a walk signal, so we have to wait for an entire cycle of traffic lights to cross. And this is at an intersection frequently used by pedestrians--Lakeshore and East Street in Bronte.	11/27/2016 6:25 PM
63	No	11/27/2016 11:41 AM
64	Yes, every days when I walk on the sidewalks. The Town of Oakville has a by-law that states that cycling on the sidewalks is prohibited by they do nothing to enforce it.	11/27/2016 11:03 AM
65	Cars ignoring crosswalks Cars running red lights Car s speeding in residential areas	11/25/2016 10:15 AM
66	Yes and no. I walk quite a bit within my area. I, personally, have never felt unsafe until I read the recent article in the Oakville Beaver regarding a runner robbed at gunpoint in my area. Other than this, I have never felt unsafe.	11/25/2016 9:01 AM
67	I often find drivers do not watch for pedestrians when making a left or right hand turn.	11/23/2016 7:30 PM
68	1. Walking on Trafalgar Road on the QEW overpass. 2. Crossing Lakeshore Rd in downtown Oakville with people running red lights, driving in front of you while you're in the middle of crossing the street. And drivers not paying attention (therefore not seeing you) and turning at intersections while you have the right of way and are starting to cross the street.	11/23/2016 11:33 AM
69	Yes - in my neighbourhood there are several 4-way stops, and drivers frequently run straight through them or "roll through" them without coming to a complete stop. They don't even have time to stop and watch if pedestrians are walking or jogging through the intersection. It is very dangerous. There is no enforcement by police. Speeding is also a major concern as drivers go far too fast in residential areas on a regular basis.	11/23/2016 10:13 AM
70	Yes sometimes traffic lights e.g., YMCA of Oakville do not function properly.	11/22/2016 4:04 PM
71	Yes, not enough crossing guards in South East Oakville (Morrison).	11/22/2016 4:02 PM
72	No.	11/22/2016 4:00 PM
73	No.	11/22/2016 3:57 PM

Improving Pedestrian Safety in Oakville

74	No, walking has been safe for me.	11/22/2016 3:56 PM
75	Yes, on certain crosswalks vehicles are very unaware of people.	11/22/2016 3:54 PM
76	Somewhat, cars coming when children play outside.	11/22/2016 3:47 PM
77	Yes because of bad drivers.	11/22/2016 3:44 PM
78	Yes, crossing at stop signs, cars don't stop for pedestrians or they stop to far after the line. Hard to cross with out stop sign.	11/22/2016 3:43 PM
79	Yes, when biking to school a car ran a red light and almost hit me.	11/22/2016 3:41 PM
80	No sidewalks.	11/22/2016 3:39 PM
81	Yes - crossing Lakeshore (@ Down) cars don't stop. Cross walk on Robinson, lights don't alway work and cars often don't stop.	11/22/2016 3:38 PM
82	Not have.	11/22/2016 3:36 PM
83	No.	11/22/2016 1:50 PM
84	Never.	11/22/2016 1:49 PM
85	People in a hurry.	11/22/2016 1:47 PM
86	No.	11/22/2016 1:46 PM
87	Yes, speeding drivers on Arbourview drive!	11/22/2016 1:42 PM
88	No.	11/22/2016 1:40 PM
89	Street Crossing.	11/22/2016 1:38 PM
90	No.	11/22/2016 1:35 PM
91	Crossing at intersections with the light, many cars turning right don't expect pedestrians and tend to do a rolling stop and continue to turn right.	11/22/2016 1:03 PM
92	No	11/22/2016 11:30 AM
93	No.	11/22/2016 10:27 AM
94	No, not really I am comfortable with walking around.	11/22/2016 10:26 AM
95	To many fast cars.	11/22/2016 10:24 AM
96	Sometimes when I am crossing the road a car will go to turn and narrowly miss hitting me.	11/22/2016 10:23 AM
97	No.	11/22/2016 10:22 AM
98	Yes, there are some crosswalk intersections that I call "Rollaway Alley". No one stops properly for pedestrians.	11/22/2016 10:20 AM
99	No.	11/22/2016 10:18 AM
100	No.	11/22/2016 10:16 AM
101	no.	11/22/2016 10:05 AM
102	no.	11/22/2016 10:04 AM
103	no.	11/22/2016 10:03 AM
104	No.	11/22/2016 9:39 AM
105	No.	11/22/2016 9:36 AM
106	No.	11/22/2016 9:34 AM
107	No.	11/22/2016 9:33 AM
108	No.	11/22/2016 9:32 AM
109	Yes.	11/22/2016 9:31 AM
110	No.	11/22/2016 9:27 AM
111	No.	11/22/2016 9:25 AM
112	No.	11/22/2016 9:22 AM

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113	-Crosswalk too long -Hidden driveways	11/19/2016 9:46 PM
114	I often feel unsafe as a pedestrian. At the corner of Lakeshore and Trafalgar, for example, visibility can be an issue with sidewalk clutter (signboards for real estate, and planters with tall plants that block views and access to ramps at corners). Drivers frequently chatter away on their hand held phones and ignore pedestrians. Many people in a hurry drive quite aggressively. For that matter, some pedestrians also seem to ignore the traffic lights and behave as though there were no large and dangerous machines driven by potentially equally busy and distracted drivers around them. Sandwich boards are a plague all along downtown sidewalks; there needs to be a bylaw controlling who may place them and limiting where they may be placed, with meaningful penalties for businesses who ignore public safety to make a buck. These are obstacles to public access on the sidewalks. Signs blown down by a somewhat gusty wind are a tripping hazard and difficult to see. A sandwich board placed for visibility to drivers endangers and impedes pedestrians and blocks accessibility. For example, a friend of mine tripped on an upright signboard on a sidewalk in a European city. The crowd was so thick she didn't see the board until she was swept into it by the flow of the pedestrian traffic. She spent weeks in hospital in that city; it took surgery with plates and screws to put her femur back together, and months of rehab after she returned home. Please don't wait until something like this happens here; anyone from children to seniors is at risk from a fall; and this risk is easy to mitigate. Same goes for fancy planters with protruding branches - especially as these may be at eye level and difficult to avoid when being swept along by a crowd (and it is wrong anyway to assume every person walking can see well to avoid sharp objects at eye level.) These are very localized but are examples of common hazards in an area that is aiming for pedestrian friendliness. When I have occasion to walk in other parts of town, it can be dangerous as well, especially with wide and over-busy roads and short crossing signal times, inadequate lighting at night, and again, aggressive or distracted drivers. I have even heard of someone being hit while waiting at a bus stop on Trafalgar Road not long ago. Not reassuring.	11/19/2016 5:05 PM
115	My residence is located on Pine Glen Rd between postmaster and Grand Oak Trail.. it is located in the middle of a 750m stretch of the road with no stop signs or traffic calming tools which makes the road very dangerous for pedestrians and cyclist.. So many pedestrians cross to Milstone Park north of pine Glen and the trails south of it and a stop sign in that spot will make it so much safer to walk and cycle there. Schools have been in for only two months and twice already there has been cars that kept going despite the flashing red lights and the bus` stop sign! aside from the speeding that`s happening very often, one distracted driver going over 60km can injure pedestrians badly or even kill them.. this part of the road must be treated the same way as the previous portion of Pine Glen from Third Line to Postmaster, where there are 3 stop signs on a 950 meters stretch!	11/18/2016 2:02 PM
116	Yes. I walk my dog daily and kids to/from school. Traffic can be very busy/fast on Pine Glen now that it runs directly to Bronte Rd.	11/18/2016 1:15 PM
117	Cannot cross to safely use trails, too many cars and driving way too fast. Your studies indicate average speed of 58, 2 km lower than highest 5, you have created a park and trail and expect us to safely use it while crossing a highway with small children. Very frustrated. People are also always blowing the school bus stop signs.	11/18/2016 12:58 PM
118	No	11/18/2016 12:40 PM
119	Off my street along Pine Glenn Road (intersection with Kwinter Road), vehicles frequently speed violating the speed limit for that road and risking the lives of pedestrians.	11/18/2016 10:51 AM
120	Absolutely. Too many speeders on quiet residential streets.	11/18/2016 10:43 AM
121	Pine Glen road between Bronte and Postmaster has a problem with speeding because there is no stop sign. This area has several school bus stops as well as Millstone Park. Please please put a stop sign or other traffic calming measures before a child is hurt. Police often have speed traps here, this is a known issue There is also a consistent problem of fast cars not stopping for school buses!	11/18/2016 10:29 AM
122	Yes. Too much traffic moving too fast for area so close to school with busses and waking children	11/18/2016 10:25 AM
123	Pine Glen road has become a HIGH VOLUME HIGHWAY with very few stop signs to deter vehicle volume growth. Vehicles travel at SPEEDS higher that the posted limit regularly and pass stopped school buses. Driving commuters using Dundas St. travelling West now use Postmaster and Pine Glen Rd. as a short cut - turning left on Postmaster and right on Pine Glen gets them to Bronte faster than simply taking a left on Bronte Road from Dundas. Given this fact Pine Glen has become an annoying, loud, dangerous street to pedestrians not to mention that it has seriously lowered the quality of life in the Upper Westmount Neighbourhood. Children are put at risk as there are very few stops signs that exist on Pine Glen Rd. from Postmaster to Bronte. There are parks, paths and schools on Pine Glen Rd. that increase the risk due to the fact there is a high volume of pedestrians, including children, walking to get to each destination. Our community - has communicated our concerns to David Gittings, Allan Elgar, Roger Lapworth, Dan Cozzi, Dragana Crkvenjas as well as others and the solution offered has been to set up Radar speed monitors. THIS IS NOT A SOLUTION. WE ARE ASKING FOR MULTIPLE STOP SIGNS ALONG PINE GLEN ROAD AND A CROSS WALK TO CURB THE VOLUME OF CARS AND TO SLOW THEM DOWN. WE BELIEVE THIS WILL MAKE IT SAFER AND A MORE ENJOYABLE RESIDENTIAL COMMUNITY. We are in the midst of organizing and mobilizing our community in order to more clearly communicate our objectives and to garner results that have not been forthcoming from those we have addressed.	11/18/2016 10:17 AM

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124	Yes! Our home is on Kwinter Road south of Pine Glen. Since Pine Glen has opened up to Bronte it has become a highway. Millstone park is a 4 minute walk and due to the busyness of Pine Glen I don't feel safe letting my kids (7&10) cross. When I cross with them we are often waiting up to 5 minutes. We also walk or bike daily to Emily Carr School. We must go through the 4 way stop at Pine Glen and Postmaster. Not only is there a lot of traffic, there are a lot of cars in a hurry, impatient and trying to avoid the 4 way by taking other streets (Falling Green and Crestmont) Cars are often scooting across Pine Glen on these streets to get where they are going faster. There are cars and kids everywhere. It's a very dangerous time.	11/18/2016 10:07 AM
125	Speeding cars along Pine Glen between Postmaster and Grand Oak	11/18/2016 9:30 AM
126	There are unsafe conditions in Upper Westmount on Pine Glen. Traffic calming is needed here.	11/18/2016 9:00 AM
127	Every single day, I feel unsafe crossing Pine Glen Road near Millstone Drive to walk my young children to the bus stop. Cars speed and disregard the bus/road signs. Something has to be done to calm the traffic in this area on Pine Glen Road between Postmaster and Grand Oak.	11/18/2016 8:28 AM
128	I live on Pine Glen Rd between postmaster and Grand Oak Trail.. My residence is located in the middle of a 750m stretch of the road with no stop signs or traffic calming tools which makes the road very dangerous for pedestrians and cyclist.. So many pedestrians cross to Milstone Park north of pine Glen and the trails south of it and a stop sign in that spot will make it so much safer to walk and cycle there.	11/18/2016 12:04 AM
129	I've had many situations where drivers simply do not make their first stop behind the pedestrian crossing lines, a few situations that I've escaped from being run over and have seen many, but many people doing rolling stops which can be barely considered rolling stops (which are illegal by the way). I have never seen any police cars neither traffic officers in the neighbourhood and all my attempts to reach out have been shut down. Lately, and clearly reportedly by many neighbours and myself, we're having serious issues at Pine Glen Rd, west of Postmaster. In its whole extension there isn't one pedestrian crossing line, neither in front of Millstone Park, which is an obvious thing. Nobody living south of Pine Glen feels safe to cross it and my daughter does it every day when coming back from school. On top, we hear traffic authorities talking about average speeds and awaiting survey results to take action. I couldn't feel more frustrated. First, averages in cases as such, do not apply. We need just one car to run over a person. Lastly, why wait a year for a result for something pretty obvious, a park requires proper pedestrian access, and perhaps an elevated crossing (just go to Burlington and you will see many there...). Why wait?	11/17/2016 9:14 PM
130	Yes. I pick my children up everyday from the bus stop and the road we cross (Pine Glen) is very busy and many people speed down this road. I am very concerned when crossing the street to get my children or when they play in the park with the drivers speeding down the street.	11/17/2016 7:43 PM
131	Traffic is unsafe in my neighbourhood on Pine Glen Road between Third Line and Grand Oak Trail on a daily basis. There are no stops on this stretch of road and cars consistently speed down this stretch as a means of avoiding driving on Dundas Street. It is particularly dangerous when I walk my children to their bus stop on Pine Glen Road where cars not only speed but often disregard the bus signals and speed past. This issue has been raised with both the city and the police, and nothing has been done to rectify this situation. Something needs to be done before a child is hurt as a result of speeding cars.	11/17/2016 7:24 PM
132	Yes, high traffic volume, speeding, cannot safely walk across the road with kids. Cars often go past bus stop sign.	11/17/2016 7:20 PM
133	Yes, with drivers travelling too fast and being aggressive or intolerant. Perhaps there should be more visible (marked cars) police presence in the downtown area.	11/17/2016 11:10 AM
134	My son goes to school at Oodenawi Public School. He is usually on a school bus but sometimes I need to drop him off late or pick him up early due to doctor's appointment etc. The intersection of 16 Mile drive and George Savage is absolutely unsafe for pedestrians. I believe the town considers these streets unassumed roads yet the town allows the school to open on these unassumed roads and let children and their parents walk on these streets with constructions trucks etc driving around the school zone. The town will not provide crossing guards because of these unassumed roads. I have seen MANY occasions where young children are absolutely unsafe in this area as pedestrians. The lack of sidewalk and incomplete sidewalks are often causing the children to walk on construction sites. I have seen parents, constructions workers, school bus drivers having disagreements. PLEASE PLEASE PLEASE consider a solution for this. Children 13 and under should be able to walk around the school zone safely!	11/17/2016 9:01 AM
135	Yes, increasingly so. Cars are driving faster and more recklessly even in side streets. My husband was almost hit by a car going through a stop sign. Drivers seem to be frantic especially as they try to navigate through the side streets to get around closed streets like Trafalgar. Cycling in our neighbourhood has become much more dangerous this year and there are practically no offroad cycle paths in SE Oakville.	11/16/2016 10:20 PM

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136	<p>only a couple of times but really unnerving - i've had cars honk at me as i'm about to cross at a light with the walk signal, when i stop out of concern they make their turn - bastards many cars, when turning right from a side street onto a busy street, don't stop at the proper location. instead they go most of the way through the pedestrian lane so they can see traffic better, only then do they sometimes look out for a pedestrian. really bad when there's also street parking obstructing the driver's view. Really bad on Kerr st with the cars on the side roads as they approach Kerr. again, on cars doing right hand turns, i've been close to being hit as i start to cross with the walk signal as the drivers are still looking to their left. really bad at SE corner of kerr/speers. i've always feel unsafe when crossing kerr st on the west side of rebecca going south. eastbound cars wanting to turn right onto kerr on a red light don't seem to be aware that a person may be crossing as they again don't stop until they're partway through the pedestrian lane. and they're often going pretty fast. often as i'm approaching an intersection on foot the light changes before i've had a chance to push the walk button. i will often cross anyways cuz (especially if it's cold/rainy) i know i have plenty of time... but i have been honked at, yelled at, given the finger. Seems to me the cars are more focused on the pedestrian signals, than on the pedestrians. There should always be a walk signal on a green light if only for a few seconds. I think most pedestrians are under the impression that the flashing don't walk signal and countdown is to let you know how much time you have to cross. Yet the primary benefit seems to be for cars to know when to speed up before the light turns amber - lol generally speaking, i think many intersections with lights have been designed to get as many cars through as possible and pedestrians are a secondary priority. i hate having to wait for all the left hand turns from people in warm cars before i can cross, especially in below zero and rainy weather.</p>	11/16/2016 4:31 PM
137	<p>Yes. Walking along Kerr Street north of the railway tracks, south of the QEW where this is no sidewalk, only paved shoulder of road. Yes. Crossing the QEW on Trafalgar Road bridge in the winter where snow has been piled onto sidewalk making conditions wet and slippery while trying to cross the on-ramps to the QEW (drivers are accelerating and are not paying attention to pedestrians). Yes. Attempting to cross Lakeshore Road in Downtown Oakville at a marked crossing (unsignalized). Drivers would rather swerve to avoid you in the crosswalk rather than slow down to let you finish crossing (whatever happened to pedestrians having the right-of-way?).</p>	11/16/2016 4:18 PM
138	<p>Crossing Dundas is a challenge sometimes. Drivers are always driving much faster than the posted speed limit and you often have to walk a long distance to an intersection with streetlights. Would you consider building pedestrian overpasses in strategic locations?</p>	11/16/2016 2:52 PM
139	<p>Yes at crosswalks especially at Third Line/Upper Middle area!!! Many people turning left or right do not pay attention to the walk signal at the cross walks and it is very dangerous there especially at night time.</p>	11/16/2016 11:03 AM
140	<p>There are quite a few trails around Oakville that come to a large road crossing area, but there is no crosswalk.</p>	11/16/2016 10:08 AM
141	<p>People walk around plugged in....texting....listening to headphones....oblivious</p>	11/16/2016 9:59 AM
142	<p>We live in river oaks area and once it is dark walking feels very unsafe due to lack of street lights and incredibly dark trails.</p>	11/16/2016 2:10 AM
143	<p>Yes, I have witnessed on multiple occasions close calls with cars plowing into pedestrians on crosswalks crossing legally on the green light. In all those occasions, the drivers were confused elderly drivers that didn't seem to understand where the pedestrians came from as they were focused only on car traffic. I have also witnessed cars driving through red lights due to distracted driving. I am constantly seeking to make eye contact with the drivers before crossing a street for fear they will not see me and hit me</p>	11/15/2016 11:46 PM
144	<p>The concern is the area around the newly renovated Oakville Arena and new Trafalgar Park Community Centre on Rebecca. The concern is for the increase in future traffic and the requirement of signals at Brock and Rebecca to allow for safe crossing and accessibility from Fortinos. for the residence that use Brock street and the increase in traffic from the community centre.</p>	11/15/2016 9:55 PM
145	<p>Before the red light was installed on Kingsway Drive, in front of James W Hill public school, drivers would routinely speed through the flashing crosswalk. Thank you for installing it and thank you for keeping Colleen, our crossing guard!!! The parents and students of James W Hill thank you!</p>	11/15/2016 9:45 PM
146	<p>No</p>	11/15/2016 6:56 PM
147	<p>Crossing Abbeywood (between Third Line & Pilgrims Way). Low visibility and distance between major intersections is too far.</p>	11/15/2016 10:08 AM
148	<p>My residential street has seen increased traffic and traffic speeds as houses are developed around us. Motorists rarely stop at the stop sign beside our house. Winter conditions have caused speeding motorists to slide onto my front lawn. The end of our street flows into a shopping center - this intersection has regular accidents so extreme caution is taken using this intersection and I don't feel safe letting my kids cross alone. Trafalgar and Upper Middle is nearby and friends live on the opposite side - I don't feel safe letting my kids walk/bike to visit their friend alone. The trails are beautiful and peaceful. The roads are hazardous.</p>	11/15/2016 9:04 AM
149	<p>I live in south west Oakville. Other than a few major intersections, unsafe situations are infrequent in our area. However, this perception is demographic driven. If I was a senior, or an individual with a physical disability or a youngster heading to school, I would likely have a very different perspective.</p>	11/14/2016 6:19 PM

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150	No	11/14/2016 3:57 PM
151	Yes, by the Trafalgar Park arena. The speed that car travel on Rebecca seems higher than 50km.	11/14/2016 3:30 PM
152	Some areas (Reynolds) have sidewalks too narrow and too close to traffic! Same area has narrow roadway as well. Even my street area (Maple -between Allan and Reynolds) has cars 'racing' to catch light on Reynolds light red at Cornwall. Speeds by cars 'obsessed' with getting a stop light in time (Allan and Cornwall) is dangerous and normal crossing of a roadway resulted in running to beat a car racing to get the light; maybe requires 'calming' strips	11/14/2016 12:08 PM
153	Using the Trafalgar QEW bridge can be very dangerous. In particular crossing the ramps for the QEW as drivers usually do not stop for pedestrians. It is also difficult for pedestrians, and drivers, to see each other. More visible warning signs and marked crosswalks are needed (but not separate lights!) Even better would be to complete the proposed pedestrian/cycling bridge over QEW.	11/14/2016 11:30 AM
154	Yes I live across from the Oakville Arena on Rebecca street and I find that the speed of traffic is faster than the legal limit. This may be due to the stretch of road from Maurice to Kerr without any traffic signal. It is also quite dangerous to cross the street at Brock and Rebecca for the bus stops located there. It is quite a distance to cross at Kerr or Maurice, if you wanted to do it safely with traffic signals. I also find side walk on the south side of Rebecca, from Brant to Kerr to be narrow and has a number of obstacles such as electrical poles and signs.	11/14/2016 11:23 AM
155	Too small of a separation between road and sidewalk, the cars beside sidewalk run too fast.	11/14/2016 10:58 AM
156	Many streets in Oakville only have pedestrian sidewalks on one side of the road. Not convenient to keep crossing the road to walk where a sidewalk is available, so we often walk along the side of the road. Consider neighbourhoods close to downtown Oakville, where it would be otherwise a very walkable area (lots of businesses and services in close, walkable proximity, as well as lakefront). Between Dingle park and Lakeside park, there is no protected pedestrian walkway. Many people walk here - so there is obviously a demand - but must resort to walking along the road. Signage to Slow Down are not always effective. This is an easy opportunity for the town to improve pedestrian safety and encourage active behaviour in a very popular and well-used area. See also earlier comment about winter sidewalk clearance. Sidewalks are very rarely cleared by homeowners after snowfall (although most are very quick to clear their driveways). The city is quick to clear roadways, but may take 1-2 days before the town service gets to all sidewalks in all neighbourhoods. As a pedestrian, if I'm walking to the GO station on the morning after a major snowfall, I'm left to walk on the roads instead of the sidewalk. Even without snowy, icy conditions, the town should not believe that this is acceptable practice. As a pedestrian, it's difficult to watch homeowners clearing their driveways to get their own cars out, but don't take the time to clear the sidewalks as well. Generally, Oakville is still a very car-centric community and will always be. But the town can very easily take actions to promote pedestrianism and other active transportation methods, especially if it states that active transportation is an important initiative.	11/13/2016 8:37 PM
157	The cars are too fast. Cars do not stop for pedestrians to cross intersections at STOP sign. Sidewalks seem too narrow to walk sometimes besides busy roads	11/12/2016 5:33 PM
158	Crossing at Pedestrian cross walks, cars often don't stop!	11/12/2016 2:43 PM
159	Yes, pedestrians and those on bikes often do not follow safe practices, rules of the road and very often do not follow traffic signals. This is very obvious at Trafalgar and Lakeshore for pedestrians and any red light for bikers. This well known unsafe practice places everyone at risk. Further, there is no enforcement effort for pedestrians or bikers not following the rules of the road so this activity is not expected to change. Shame!!!!	11/11/2016 11:36 PM
160	At intersections where drivers are turning right, looking left and rolling to make the turn without checking blind spot. Entering in an intersections with no check of pedestrian presences in crosswalks.	11/11/2016 7:46 PM
161	No	11/11/2016 6:42 PM
162	No	11/11/2016 3:28 PM
163	I never have, but I live close to the downtown and that area has plenty of sidewalks and pedestrian crossings. I suspect there are other areas where walking is more treacherous.	11/11/2016 10:25 AM
164	At night, walking the dog, in neighbourhoods without sidewalks. Concern is with car drivers seeing me.	11/11/2016 8:37 AM
165	I only feel unsafe when it comes to crossing the Lynnwood/Trafalgar intersection. There is no pedestrian crossing and sometimes I have to stay in the middle of the road for traffic to clear on the other side. Since there is a bus-stop in that area, there really should be a pedestrian crossing. Having to toddle in between traffic with groceries is not a safe situation at all.	11/11/2016 8:24 AM
166	Yes, cars don't stop at intersections or stop signs. Speeding on main streets. Crossing areas not marked well and cars don't stop. Areas without sidewalks.	11/11/2016 8:09 AM
167	see previous comments about bikes and skateboards	11/11/2016 7:58 AM

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168	IN GENERAL, TOO MANY MOTORISTS FAIL TO EXTEND COURTESY TO PEDESTRIANS, BELIEVING THEY OWN THE ROAD. WITH THE INCREASE IN THE VOLUME OF TRAFFIC OVER THE YEARS, THE PROBLEM HAS BEEN EXACERBATED.	11/11/2016 6:51 AM
169	yes 1) at road intersections; several near-misses over the years; road crossing requires very careful measures 2) lakeshore road where the sidewalk wanders tight the the road edge and there are no curbs 3) my daughter was hit by a car while she was walking on the sidewalk - the car driver was backing out from her driveway and did not check for clearance and struck my daughter and her dog 4) speers road and kerr street intersection 5) yada yada yada	11/10/2016 11:20 PM
170	Frequently experience aggressive drivers at crosswalks and bicycles on sidewalks.	11/10/2016 10:48 PM
171	Yes. Traffic lights say yes WALK so feel cars should not be permitted to turn whilst the WALK Sign is on.	11/10/2016 8:46 PM
172	Some sidewalks, for example, Reynolds St. are quite narrow and there is no buffer between the sidewalk and the road. Traffic tends to travel at higher speeds leaving the pedestrian feeling quite exposed. When the roads are wet, pedestrians can be sprayed by cars driving through puddles (which arise from poor road surfaces), which very much reduces the pleasure of walking. In the winter, many sidewalks in SE Oakville are not plowed at all or many days after a snowfall. This coupled with residents clearing snow from their driveways onto the sidewalks makes for hazardous walking conditions in winter. Major intersections, for example, Cornwall and Trafalgar Rds, can present significant challenges to a pedestrian trying to cross in the allotted time or trying to avoid drivers making left or right turns. Many drivers approach stop signs at excessive speed, relying on their brakes to stop in time, even when there is a pedestrian already crossing the intersection. It leaves the pedestrian feeling quite exposed.	11/10/2016 8:33 PM
173	no	11/10/2016 8:22 PM
174	I have found drivers quite respectful of my walking routines. Often they will yield right of way in the downtown core where I live.	11/10/2016 7:31 PM
175	I was about to step off sidewalk to cross Trafalgar at Sumner. A bicyclist coming down Trafalgar on his phone, on the sidewalk nearly hit me. He did not see me until the last minute and then, when I gave him what for, complained that Trafalgar was too dangerous for him to ride on the road. At Randall and Dunn, the westbound traffic rarely comes to a complete stop and since there are two lanes, as a pedestrian I have to be sure the driver in the far lane sees me.	11/10/2016 7:21 PM
176	Pedestrian crossings are inconsistent with their signage. Some will allow a person to cross during each light cycle, others will only allow a pedestrian to cross if the button is pressed.	11/10/2016 7:20 PM
177	I am very careful to cross at lights. I check cars in all directions and cars that are turning. As a senior I can't run across anymore so I make sure I have lots of time to get through the intersection especially if it is 4 lanes or more.	11/10/2016 7:11 PM
178	I live across the street from Iroquois Ridge High school. To access the Iroquois Ridge Community Centre, Library and Oakville Transit bus stop I need to walk on the sidewalk adjacent to the high school. I am shocked by the lack of maintenance of the sidewalks approaching the school, community centre and bus stop during the winter season. The sidewalks are deep in snow, icy and infrequently cleared. The sidewalks are simply hazardous to anyone walking even to the corner mail box.	11/10/2016 6:51 PM
179	This year I have experienced more car drivers not paying attention at intersections.....either by not stopping or not noticing that there are pedestrians crossing the road. Some drivers don't even stop at Stop signs any more. At traffic lights there are more and more drivers not paying attention when turning left or rightDorval/Speers Road intersection is particularly problematic as some drivers are so concerned about getting into or out of the traffic that they don't pay attention to pedestrians who might be crossing the road using the walk signals. As a pedestrian I always walk quickly across the road so as not to hold up drivers waiting to turn, but some drivers don't acknowledge that as a pedestrian I have the right of way when I have a walk signal. There are small children on our local streets and I am concerned that there are a small number of drivers who use the streets as if they were racetracks. By driving up and down various streets revving engines and pulling away as fast as possible, they are a hazard to children or elderly people who may not be able to walk quickly.	11/10/2016 6:20 PM
180	There are no sidewalks locally and several blind curves. High school students take the bends very fast	11/10/2016 6:13 PM
181	I have not felt unsafe as a pedestrian - however as a driver I have seen pedestrians do some dangerous things - at night wearing dark clothing and crossing roads without looking at whether traffic is approaching. I find it especially difficult to see pedestrians when they are wearing dark clothing and would advise that when walking at night please wear white or a reflective band back and front of your clothing.	11/10/2016 5:56 PM
182	When the sidewalks are not cleared and not salted. I get scared, and have chosen to take public transportation instead, but even the walk to the bus-stop can at times be extremely dangerous.	11/10/2016 5:34 PM
183	No. I find Oakville to be an extremely safe community in most all respects.	11/10/2016 5:08 PM
184	Not Applicable - drive car	11/10/2016 5:02 PM
185	yes - crossing over the bridge over QEW. Needs better pedestrian crossings at the turnoffs.	11/10/2016 4:58 PM

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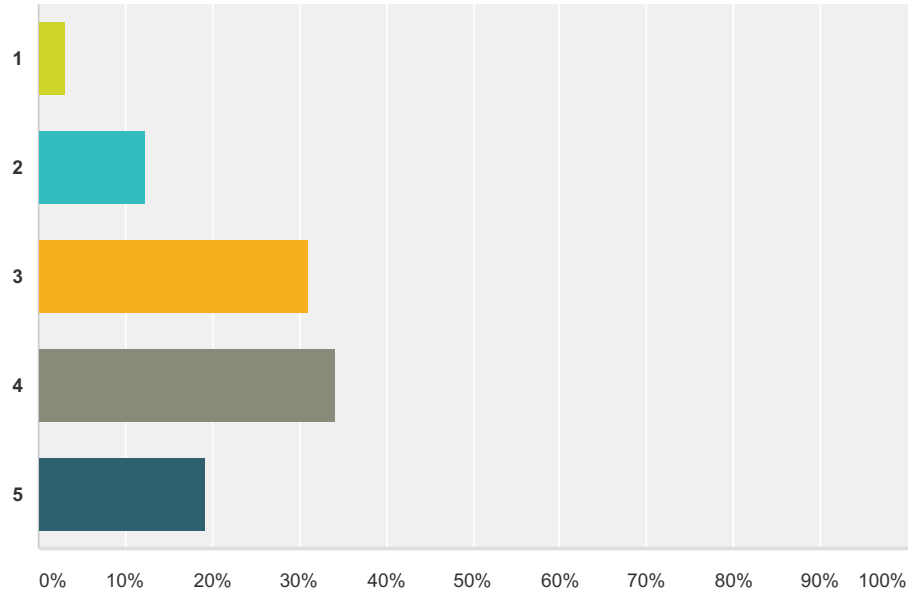
186	Yes. As previously stated in this survey. Uneven sidewalks and crossings. Confusing/unhelpful signage at traffic lights.	11/10/2016 4:35 PM
187	Yes. Countless times after we've activated the cross walk at Lakeshore and Westminster Drive, cars have disregarded the signal and created unsafe situations. After the first couple of times, we have waited, often having to go through to a second entire cycle to have cars stop in both directions. We have lived in that neighbourhood for 14 years, and from pushing a stroller in the past to walking our dogs each day now, we've had a number of close calls. The other intersection of concern is Kerr and Speers Road. It is very odd that while the speed limit is too high for it to be safe for a crossing guard, students are expected to cross safely with no human or technological supports. This is a concern for families living near Oakwood PS, a very short walk from the community just north of Speers Road.	11/10/2016 4:30 PM
188	Yes, there are many streets in SE Oakville without sidewalks. For instance, on Balsam Street close to New Central Public School, there are no sidewalks on the majority of the road. So dangerous to walk or ride to the school.	11/10/2016 4:21 PM
189	No.	11/10/2016 4:16 PM
190	Quite often in order to get the mail I have to peer around parked cars before I can cross the street. Often there are cars speeding on the residential streets. Often cars don't stop at stop signs.	11/10/2016 3:20 PM
191	At large intersections with multi lanes, the crossing time is insufficient and you end up having to hurry to make it across in time.	11/10/2016 2:18 PM
192	Generally, Oakville is well supplied with sidewalks, and it is easy to get around by walking. Some exceptions exist - e.g. Trafalgar Road across the QEW where one must navigate several on/off ramps, and South Service Road where the sidewalk ends (one must walk on the right side and attempt to get as far into the grass or gravel as possible). On Lakeshore Road downtown, drivers are supposed to stop if they see a pedestrian move into the marked crossings - but they don't always stop! I generally prefer to go to an intersection with lights, just to be sure.	11/10/2016 2:17 PM
193	Yes, even on my own street. There are no sidewalks and we are on a thorough fare street near 2 schools (SMLS and Linbrook). Cars move very quickly on curving street where there should be reduced speeds. Especially at night there is very little street lighting where pedestrians can be seen. I was recently in Toronto on residential street with sidewalks (Forest Hill area). The posted speed was 30 km/hr. What a great idea. Dump trucks roll down our street with school children trying to get to school on the side of the road and trucks nearly loose their load on blind curves with the sun in their eyes.	11/10/2016 2:15 PM
194	never	11/10/2016 2:13 PM
195	Rush hour on Kerr is a dangerous situation. Particularly the intersection at Kerr and Speers	11/10/2016 2:07 PM
196	Yes, cars don't pay attention to cross walk signals and speed through intersections regardless of signals.	11/10/2016 2:03 PM
197	On the path by the lake at Water's Edge, the bicycles sometimes move very quickly and don't use a bell or horn to notify you of their approach. I walk my 2 large dogs there almost daily and my dogs, which are on leashes, and I have almost been hit many times by uncaring cyclists. There is now a sign that shows 'shared pathway' but I think it would be far more effective for all if it said that walkers keep to the right and cyclists keep to the left (or vise versa). Many dog walkers allow their pets off-leash in park areas. Many people are frightened of dogs and it doesn't matter if is small and old dog or not, it is something that stops seniors from enjoying our beautiful parks. More signage and enforcement by fines would help this problem a great deal.	11/10/2016 8:38 AM
198	No	11/8/2016 3:49 PM
199	Trying to cross White Oaks and Trafalgar. Pedestrian light does not give sufficient time.	11/8/2016 3:14 PM
200	Yes today Nov 07 2016 at the lights going south down Trafalgar on the west side walk at the intersection of trafalger rd and Iroquois rd the road was ripped down 4inches and no signs for a drop off my wife almost flipped her power chair over and could not get back up the other side which forced her onto the busy street maybe a tempory ramp at both sides or a sign saying closed to disabled people due to the 4inch drop off would of been nice my wife has bad sight when looking down to the ground due to a bad car accident but can see ahead fine she had traveled this route for 10 years and didn't see the drop we are a little disiponted in the town or Oakville for the lack of thinking about disabled people that travel this route	11/7/2016 2:38 PM
201	Frequently drivers making a turn don't look and don't appear to see a pedestrian or cyclist on bike path. I have had several close calls.	11/7/2016 8:55 AM
202	Yes, speeding traffic on downtown Oakville/ side streets.	11/4/2016 12:37 PM
203	Safe: community has no crime issues	11/4/2016 12:36 PM
204	Navy @ Lakeshore - right hand turns on red lights = dangerous	11/4/2016 12:35 PM
205	Felt unsafe when cycles are being ridden on sidewalks	11/4/2016 12:33 PM
206	Not in Oakville	11/4/2016 12:31 PM

Improving Pedestrian Safety in Oakville

207	Yes, cars not paying attention to pedestrians on main roads lie Trafalgar	11/4/2016 12:28 PM
208	No	11/4/2016 12:27 PM
209	No, I'm extremely careful.	11/4/2016 12:26 PM
210	NO	11/4/2016 12:24 PM
211	no	11/4/2016 12:23 PM
212	Yes, due to poor lighting on side streets.	11/4/2016 12:22 PM
213	Yes, crossing a car busy intersection, feeling that vehicles aren't looking for pedestrian (Dundas and Bridgeway)	11/4/2016 12:20 PM
214	Yes, walk on Trafalgar - Cars are no expecting pedestrians to move to watch for cars. Cars drive too fast. Add traffic calming to Trafalgar	11/4/2016 12:18 PM
215	Close encounter with bikes on sidewalks	11/4/2016 12:10 PM
216	Every day I have to cross Rebecca St at Brock street to take my dog to Trafalgar Park. The cars go by so fast, I have to run a cross with my dog to make it. It's very difficult and I fear I will get hit. It would be great to have a cross walk and traffic speed limit signs. Once the senior Centre is built, there will be more cars and more people, so this would be helpful to the pedestrians.	11/2/2016 7:02 AM

Q9 Please rank on a scale from 1 to 5 how safe you consider the pedestrian environment in Oakville based on your experiences getting around town, where 1 is not safe and 5 is very safe.

Answered: 251 Skipped: 41



Answer Choices	Responses	
1	3.19%	8
2	12.35%	31
3	31.08%	78
4	34.26%	86
5	19.12%	48
Total		251

Improving Pedestrian Safety in Oakville

Q10 Please identify any specific locations in Oakville that you believe may pose a safety concern to pedestrians on the following map. On the map, click on the location, add you comment to the box, and then click "Report It".

Answered: 90 Skipped: 202

#	Responses	Date
1	Bronte - at West River and Lakeshore parking lot could use more lighting Bronte - trail under Lakeshore at West River	12/9/2016 7:21 PM
2	Heritage way and kings college Heritage way and merchants gate	12/9/2016 11:31 AM
3	dundas + third line; dundas and traf, uppermiddle rd at third line.	12/9/2016 10:43 AM
4	sffsdfs	12/8/2016 10:04 PM
5	Dundas and Bronte intersection - very very busy	12/6/2016 11:27 AM
6	Postmaster and Fiddlers Way (even when speed limit is 50km/h)	12/6/2016 11:24 AM
7	Feedback "F" on map - November 30	12/6/2016 11:15 AM
8	Feedback "D" on map - November 30	12/6/2016 11:10 AM
9	#2	11/29/2016 4:47 PM
10	8th Line and Upper Middle	11/29/2016 4:46 PM
11	Wembley Road and Glenashton NEEDS a crossing sign.	11/29/2016 4:43 PM
12	Joshua Creek Public School - Arrowhead - Dundas and Prince Michael	11/29/2016 4:38 PM
13	#4 and #10	11/29/2016 4:37 PM
14	Sixteen Mile and Preserve. Preserve area around schools!	11/29/2016 4:31 PM
15	Trafalgar from Cornwall to Dundas. Construction areas.	11/29/2016 4:26 PM
16	Carberry way/ Grand Oak Trails.	11/29/2016 4:22 PM
17	?	11/29/2016 4:00 PM
18	Holy Trinity and 6th Line	11/29/2016 3:53 PM
19	Using the east/west cross walk on the south side of UpperMiddle at Trafalgar is not safe. The town has a bus shelter on the west side of this intersection covered in advertising that creates a blind spot for pedestrians and motorists. The town should remove all bus shelters in the town that are between the sidewalk and the curb move them to the property side of the sidewalk.	11/27/2016 11:03 AM
20	Crosswalk in general, especially in school areas. Speeding on north/south roads like Trafalgar. Red light running everywhere	11/25/2016 10:15 AM
21	Kerr Street	11/24/2016 10:54 AM
22	Trafalgar + QEW, Ford Dr. + S of F Upper Middle.	11/22/2016 3:57 PM
23	Front of Loyola High school, Go Station, Cross traffic with trails at Proudfoot.	11/22/2016 3:47 PM
24	Never	11/22/2016 3:41 PM
25	Southview/ Wildwood, went to AWS. Not stopping to new.	11/22/2016 1:35 PM
26	6th Line/ Cilham, rolling stop signs!	11/22/2016 10:20 AM
27	No.	11/22/2016 10:18 AM
28	No.	11/22/2016 10:16 AM

Improving Pedestrian Safety in Oakville

29	no.	11/22/2016 10:05 AM
30	no.	11/22/2016 10:04 AM
31	no.	11/22/2016 10:03 AM
32	Fourth line - No bike lanes.	11/22/2016 9:39 AM
33	Third line and West Oak Trails.	11/22/2016 9:36 AM
34	No.	11/22/2016 9:34 AM
35	No.	11/22/2016 9:33 AM
36	No.	11/22/2016 9:32 AM
37	School buses not stopping at stop signs.	11/22/2016 9:31 AM
38	No.	11/22/2016 9:27 AM
39	Grand Blvd. traffic lights are out!	11/22/2016 9:25 AM
40	Trafalgar at Lakeshore. See note on map.	11/19/2016 5:05 PM
41	On Pine Glen between Bronte and Postmaster.	11/18/2016 5:18 PM
42	Pine Glen between Postmaster and Bronte Rd.	11/18/2016 1:15 PM
43	<p>Pine Glen road has become a HIGH VOLUME HIGHWAY with very few stop signs to deter vehicle volume growth. Vehicles travel at SPEEDS higher than the posted limit regularly and pass stopped school buses. Driving commuters using Dundas St. travelling West now use Postmaster and Pine Glen Rd. as a short cut - turning left on Postmaster and right on Pine Glen gets them to Bronte faster than simply taking a left on Bronte Road from Dundas. Given this fact Pine Glen has become an annoying, loud, dangerous street to pedestrians not to mention that it has seriously lowered the quality of life in the Upper Westmount Neighbourhood. Children are put at risk as there are very few stop signs that exist on Pine Glen Rd. from Postmaster to Bronte. There are parks, paths and schools on Pine Glen Rd. that increase the risk due to the fact there is a high volume of pedestrians, including children, walking to get to each destination. Our community - has communicated our concerns to David Gittings, Allan Elgar, Roger Lapworth, Dan Cozzi, Dragana Crkvenjas as well as others and the solution offered has been to set up Radar speed monitors. THIS IS NOT A SOLUTION. WE ARE ASKING FOR MULTIPLE STOP SIGNS ALONG PINE GLEN ROAD AND A CROSS WALK TO CURB THE VOLUME OF CARS AND TO SLOW THEM DOWN. WE BELIEVE THIS WILL MAKE IT SAFER AND A MORE ENJOYABLE RESIDENTIAL COMMUNITY. We are in the midst of organizing and mobilizing our community in order to more clearly communicate our objectives and to garner results that have not been forthcoming from those we have addressed.</p>	11/18/2016 10:17 AM
44	Pine Glen between Postmaster and Grand Oak	11/18/2016 9:30 AM
45	Pine Glen Rd from Postmaster to Grand Oak Trail. A stop sign on Millstone Park and Falling Green needs to be installed to help calm the traffic and the speeding cars	11/18/2016 12:04 AM
46	<p>we're having serious issues at Pine Glen Rd, west of Postmaster. In its whole extension there isn't one pedestrian crossing line, neither in front of Millstone Park, which is an obvious thing. Nobody living south of Pine Glen feels safe to cross it and my daughter does it every day when coming back from school. On top, we hear traffic authorities talking about average speeds and awaiting survey results to take action. I couldn't feel more frustrated. First, averages in cases as such, do not apply. We need just one car to run over a person. Lastly, why wait a year for a result for something pretty obvious, a park requires proper pedestrian access, and perhaps an elevated crossing (just go to Burlington and you will see many there...). Why wait?</p>	11/17/2016 9:14 PM
47	<p>Maple grove and Cornwall intersection. I see cars run red lights almost on a daily basis. Trafalgar and Cornwall/Speers. The amount of traffic and no one respects the lights. People (cars) sit in the middle of the intersection and block. There is no way for people to cross safely.</p>	11/17/2016 8:23 AM
48	I can't figure out how to add comments!!	11/16/2016 10:20 PM
49	Dundas and Preserve Drive	11/16/2016 2:52 PM
50	Rebecca street between Kerr Street and Brock Street.	11/14/2016 3:30 PM
51	See above	11/14/2016 12:08 PM
52	Map function did not work on iPad. Tried to identify Trafalgar QEW crossing.	11/14/2016 11:30 AM
53	I've mentioned the areas above. I found the map option did not work.	11/14/2016 11:23 AM

Improving Pedestrian Safety in Oakville

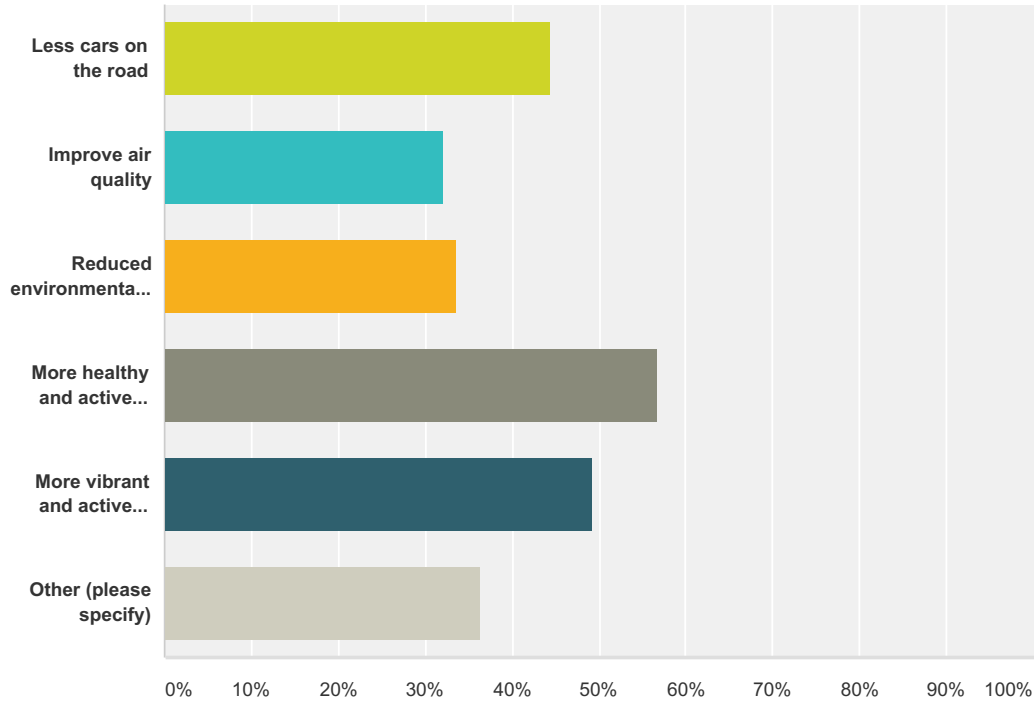
54	Map wont' work - won't allow me to click on a location. When I click "Submit Report", nothing happens (progress bars appear but am not able to move beyond this). Some specific examples: No sidewalk on WEST side of Allan Street, from Macdonald to south of Sumner, and btwn Randall and Church. No sidewalk on Allan Street (EITHER side) south of Robinson. No sidewalk on EITHER side of Front Street between Thomas Street to Dunn	11/13/2016 8:37 PM
55	Lakeshore Drive between Alan and Navy Street.	11/12/2016 2:43 PM
56	At Lakeshore and Trafalgar pedestrians walk across on red lights placing everyone at risk. This is very well known and there is no enforcement of traffic regulation. Shame!!!!	11/11/2016 11:36 PM
57	Downtown Around Go Station	11/11/2016 7:46 PM
58	Sometimes holes in the pathways behind my house can be quite deep especially after a lot of rain. I find if I call 311 and explain it is quite often dealt with quickly.	11/11/2016 1:50 PM
59	Generally, neighbourhoods without sidewalks.	11/11/2016 8:37 AM
60	I reported the area I commented on above.	11/11/2016 8:24 AM
61	ALL MAJOR INTERSECTION POSE A POTENTIAL PROBLEM FOR PEDESTRIANS, PARTICULARLY THOSE GOVERNED BY STOP SIGNS.	11/11/2016 6:51 AM
62	i tried to submit several key locations; perhaps I did it wrong and I think only one was recorded (lakeshore btwn 3rd and 4th) here is another: morden and lakeshore: location of pedestrian accident : car driver exits the driveway (backwards) and hits pedestrian with dog sept.2015 and another : Speers Road and Kerr Street and another : Rebecca and Kerr Street (amazing to me that I see near misses and feel unsafe in that area considering its home to the Dog Guides Training Facility .. this/that area should be 'exemplary' in terms of pedestrian access, mobility and safety	11/10/2016 11:20 PM
63	McCraney and Trafalgar. Leigh land and Trafalgar.	11/10/2016 8:46 PM
64	See locations above. Sorry I could not figure out how to use the map.	11/10/2016 7:21 PM
65	Rebecca and Warminster..... with 3 schools within a short walking distance we have A LOT of pedestrian traffic The walk light does not seem to work all the time.	11/10/2016 7:11 PM
66	I live across the street from Iroquois Ridge High school. To access the Iroquois Ridge Community Centre, Library and Oakville Transit bus stop I need to walk on the sidewalk adjacent to the high school. I am shocked by the lack of maintenance of the sidewalks approaching the school, community centre and bus stop during the winter season. The sidewalks are deep in snow, icy and infrequently cleared. The sidewalks are simply hazardous to anyone walking even to the corner mail box.	11/10/2016 6:51 PM
67	Speers and Dorval	11/10/2016 6:20 PM
68	Impossible to add	11/10/2016 6:13 PM
69	Downtown roadworks make it very dangerous to be a pedestrian.	11/10/2016 5:56 PM
70	bridge over QEW.	11/10/2016 4:58 PM
71	Lakeshore/Navy Church/Thomas	11/10/2016 4:35 PM
72	Balsam Road - majority of the street does not have a sidewalk and it is in a school district of New Central Public School	11/10/2016 4:21 PM
73	Click didn't work so here are my issues..corner of Douglas and Allan, cars don't stop at sign. Crossing Allan at the curling club to get mail there are no sidewalks. Speeding on Douglas by trucks and cars.	11/10/2016 3:20 PM
74	Downtown. Oncoming traffic is visibility impaired by trucks parked in centre	11/10/2016 2:07 PM
75	Trafalgar Road & Iroquois Shore Road Marine Drive Third Line & Lakeshore	11/10/2016 2:03 PM
76	Lakeshore Rd. and East Ave. should have a Voice Crossing in addition to a numbered countdown.	11/10/2016 8:38 AM
77	Cannot qualify it now but often see people with walkers or wheelchairs who are trying to navigate some intersections; ie North Service Rd. And Dorval.	11/8/2016 3:49 PM
78	Trafalgar rd in general bikes on sidewalks going way too fast across intersections and cars going way too fast around corners not looking	11/7/2016 2:38 PM
79	Monastery at Dorval.	11/7/2016 8:55 AM
80	#1	11/4/2016 12:37 PM
81	Jeffwand - jeff1ward@hotmail.com	11/4/2016 12:36 PM

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82	Lakeshore @ Navy Lakeshore @ George Lakeshore @ Allan I was hit by a vehicle - did not stop at a red light	11/4/2016 12:35 PM
83	Downtown Streets	11/4/2016 12:33 PM
84	Good connection: outside of street and sidewalks. Transit = no bus route on Lakeshore - would use if available. Senior Mondays are a plus	11/4/2016 12:31 PM
85	#6, difficult to cross due to left turning cars	11/4/2016 12:23 PM
86	#4 Bridge crossing is unsafe due to construction. Better construction management #5 Cyclists on sidewalks on Lakeshore	11/4/2016 12:22 PM
87	#7 Sidewalk fragmented in this area	11/4/2016 12:20 PM
88	#3 Traffic calming on Trafalgar	11/4/2016 12:18 PM
89	#2 Set of stairs that is concerning when going down b/c there is always cyclists there	11/4/2016 12:10 PM
90	Trevor Drive	11/1/2016 8:53 AM

Q11 What would you consider to be the greatest benefits of improving walkability in Oakville?

Answered: 146 Skipped: 146



Answer Choices	Responses
Less cars on the road	44.52% 65
Improve air quality	32.19% 47
Reduced environmental impacts	33.56% 49
More healthy and active people	56.85% 83
More vibrant and active streets	49.32% 72
Other (please specify)	36.30% 53
Total Respondents: 146	

#	Other (please specify)	Date
1	NA	12/15/2016 9:42 AM
2	Make downtown Bronte village a pedestrian zone between Bronte Road and Nelson street as a test	12/9/2016 7:26 PM
3	allow more stores to be built in more local areas. Current major malls are on the outskirts of town ie burloak, winston churchill, oakville place - must have a car to get there.	12/9/2016 10:50 AM
4	NA	12/8/2016 4:11 PM
5	NA	12/8/2016 4:04 PM
6	NA	12/8/2016 3:41 PM
7	NA	12/8/2016 3:38 PM

Improving Pedestrian Safety in Oakville

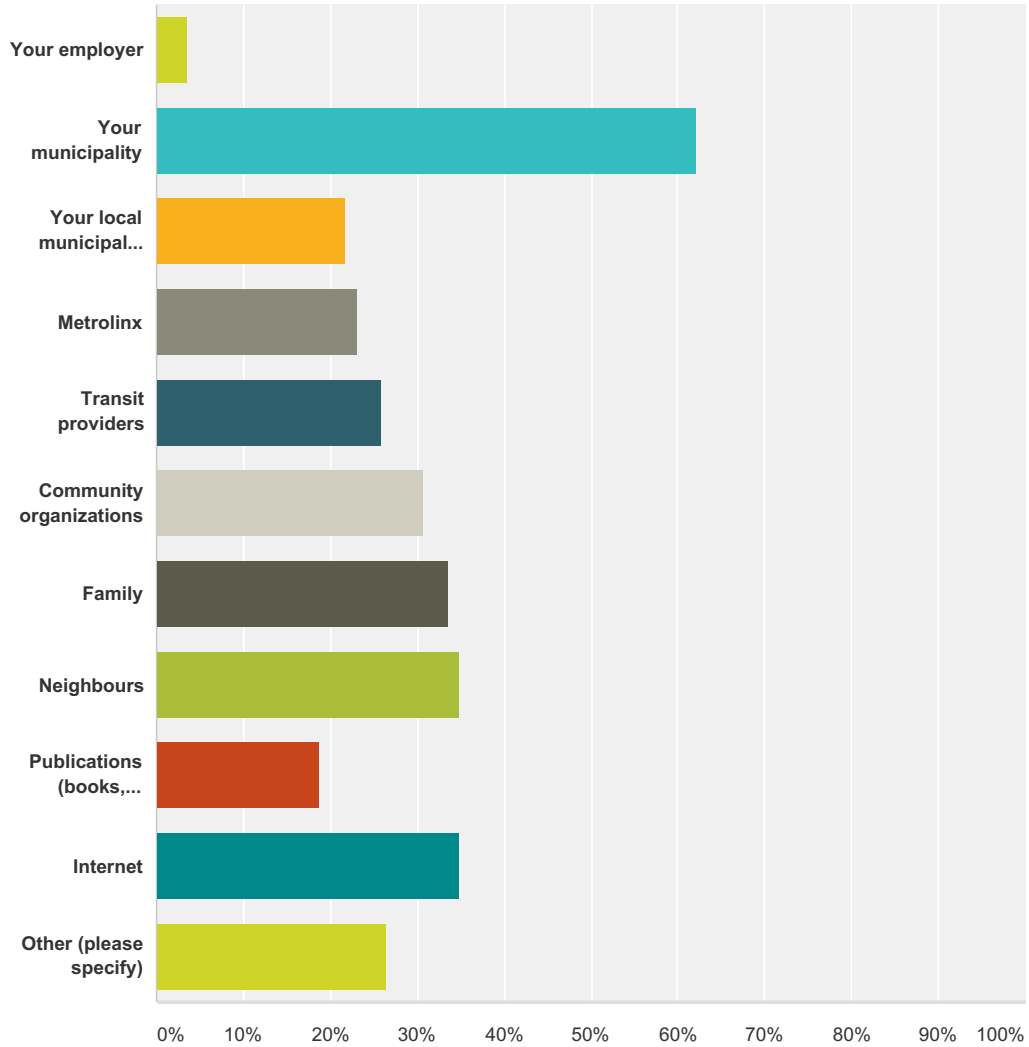
8	na	12/8/2016 3:32 PM
9	na	12/8/2016 3:29 PM
10	Speeding	11/28/2016 12:30 PM
11	How about putting people first? This city is all about cars and it's very frustrating for pedestrians. Why can't cyclists and pedestrians take priority over cars?	11/27/2016 6:34 PM
12	Better mix of residential and small business. Recently went for a walk, pushing someone in a wheelchair, in Waterdown. Small stores were accessible with regards to distance (and store set-up). Local woodland trails were easily accessible also (might be an issue of local topography).	11/27/2016 1:39 PM
13	More safety guard put in place (traffic calming in residential areas)	11/23/2016 11:03 AM
14	-	11/22/2016 9:23 AM
15	less cost to infrastructure in the long run, including especially hospitals and healthcare in the long term; a change of mindset	11/19/2016 5:16 PM
16	pedestrians safety	11/18/2016 2:04 PM
17	Safety	11/18/2016 10:26 AM
18	More enjoyment of residential areas. Less stress incurred from vehicle noise. Reduced anger at government inaction.	11/18/2016 10:20 AM
19	Safety, for God sakes.	11/17/2016 9:17 PM
20	lower speed limits in children dense residential areas.	11/17/2016 7:22 PM
21	Roads need to be safer - too many people running red lights or blocking intersections	11/17/2016 8:26 AM
22	Kids can play safely out in the streets	11/16/2016 11:13 PM
23	Improve the sense of community	11/16/2016 3:00 PM
24	Safer pedestrian crossings especially at highway on-ramps	11/15/2016 11:49 PM
25	Get rid of truck traffic on roads like Rebecca Street	11/14/2016 11:46 PM
26	The more people walk, the greater the sense of community.	11/14/2016 6:22 PM
27	Better and more mutual respect between pedestrians, cyclists, drivers	11/13/2016 8:39 PM
28	pedestrians and bikes following traffic regulations	11/11/2016 11:40 PM
29	Increased pedestrian safety as a whole.	11/11/2016 7:50 PM
30	Doesn't need major improvement	11/11/2016 3:34 PM
31	provide true evidence of our 'most liveable town' (leadership)	11/10/2016 11:26 PM
32	When WALK sign is on cars should not be permitted to turn.	11/10/2016 8:51 PM
33	More attention to good sidewalks, their placement and maintenance	11/10/2016 8:39 PM
34	First line should read: "Fewer cars on the road"	11/10/2016 7:28 PM
35	Fewer falls and injuries to pedestrians - decrease town liability	11/10/2016 6:55 PM
36	Getting to know people in your neighbourhood	11/10/2016 6:03 PM
37	Fix cracks, potholes, uneven surfaces	11/10/2016 4:41 PM
38	I don't think walkability needs improving and think you should spend our money elsewhere.	11/10/2016 4:17 PM
39	-	11/4/2016 12:37 PM
40	-	11/4/2016 12:36 PM
41	-	11/4/2016 12:35 PM
42	-	11/4/2016 12:33 PM
43	-	11/4/2016 12:31 PM
44	-	11/4/2016 12:28 PM
45	-	11/4/2016 12:27 PM

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46	-	11/4/2016 12:26 PM
47	-	11/4/2016 12:24 PM
48	-	11/4/2016 12:24 PM
49	-	11/4/2016 12:22 PM
50	-	11/4/2016 12:20 PM
51	-	11/4/2016 12:18 PM
52	n/a	11/4/2016 12:11 PM
53	Speed control, limited use of residential streets during rush hours	11/1/2016 8:55 AM

Q12 What sources do you trust to provide information related to transportation choices and pedestrian safety?

Answered: 143 Skipped: 149



Answer Choices	Responses
Your employer	3.50% 5
Your municipality	62.24% 89
Your local municipal Councillor	21.68% 31
Metrolinx	23.08% 33
Transit providers	25.87% 37
Community organizations	30.77% 44
Family	33.57% 48
Neighbours	34.97% 50

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Publications (books, magazines, journals)	18.88%	27
Internet	34.97%	50
Other (please specify)	26.57%	38
Total Respondents: 143		

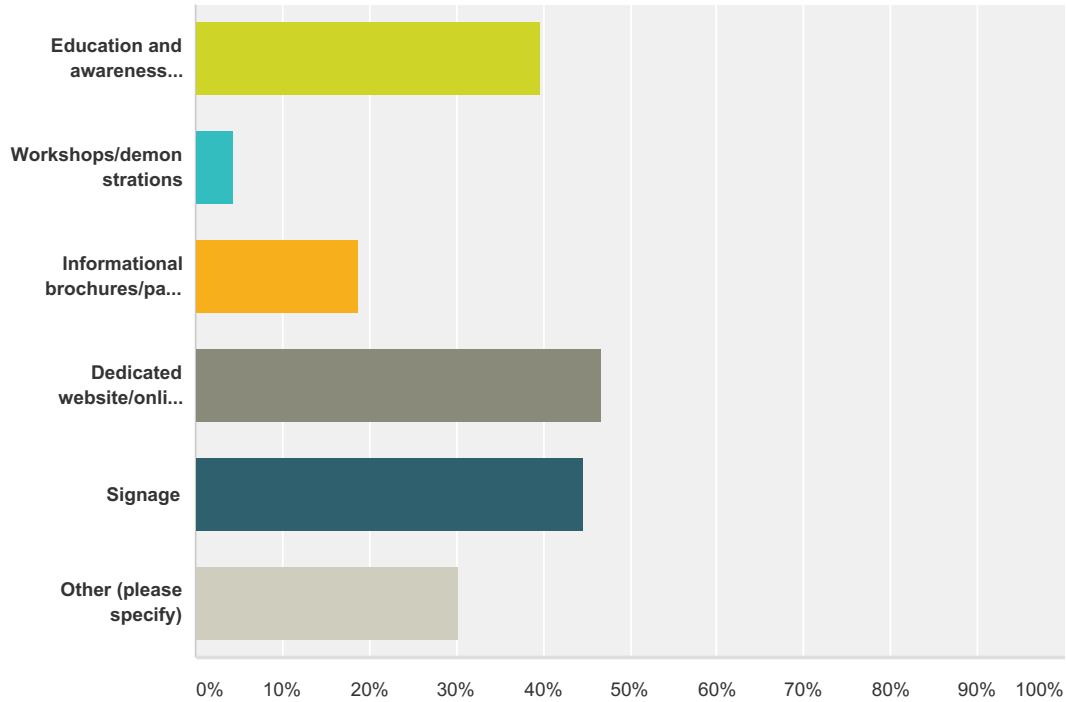
#	Other (please specify)	Date
1	NA	12/15/2016 9:42 AM
2	NA	12/8/2016 4:11 PM
3	NA	12/8/2016 4:04 PM
4	NA	12/8/2016 3:41 PM
5	NA	12/8/2016 3:38 PM
6	na	12/8/2016 3:32 PM
7	na	12/8/2016 3:29 PM
8	I'm not sure what kind of information you mean. I don't even know who to trust about any of this since the Town keeps going through exercises like this survey but appears to take little action on the results.	11/27/2016 6:34 PM
9	-	11/22/2016 9:23 AM
10	I think politicians will ignore it, as they do it today.	11/17/2016 9:17 PM
11	Nobody is telling us about pedestrian safety. A campaign should be targeting the drivers not the pedestrians. We find out what we need to know from our own experiences.	11/16/2016 10:24 PM
12	the local police force	11/15/2016 11:49 PM
13	None of the listed communicate well	11/15/2016 10:01 PM
14	Oakville Beaver	11/14/2016 6:22 PM
15	police	11/14/2016 11:26 AM
16	there is nothing to provide.	11/11/2016 11:40 PM
17	HRPS safety initiatives and public education / educated enforcement.	11/11/2016 7:50 PM
18	my local councillor never 'connects' with me or my neighbours so I don;t ever expect to get info from that source [I rely on these Town emails I get .. thanks for your emails]	11/10/2016 11:26 PM
19	I do not have ab answer to this question	11/10/2016 8:51 PM
20	CBC Radio	11/10/2016 7:28 PM
21	The town of Oakville	11/10/2016 6:55 PM
22	Seniors services	11/10/2016 6:04 PM
23	Not sure I understand the question.	11/10/2016 4:41 PM
24	friends	11/10/2016 2:05 PM
25	-	11/4/2016 12:37 PM
26	-	11/4/2016 12:36 PM
27	-	11/4/2016 12:35 PM
28	-	11/4/2016 12:33 PM
29	-	11/4/2016 12:31 PM
30	-	11/4/2016 12:28 PM
31	-	11/4/2016 12:27 PM
32	-	11/4/2016 12:26 PM
33	-	11/4/2016 12:24 PM

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34	-	11/4/2016 12:24 PM
35	-	11/4/2016 12:22 PM
36	-	11/4/2016 12:20 PM
37	-	11/4/2016 12:18 PM
38	n/a	11/4/2016 12:11 PM

Q13 How would you prefer to learn about walkability and pedestrian safety in Oakville?

Answered: 139 Skipped: 153



Answer Choices

Responses

Answer Choice	Percentage	Count
Education and awareness campaigns (e.g. community outreach, media coverage)	39.57%	55
Workshops/demonstrations	4.32%	6
Informational brochures/pamphlets	18.71%	26
Dedicated website/online resources	46.76%	65
Signage	44.60%	62
Other (please specify)	30.22%	42

Total Respondents: 139

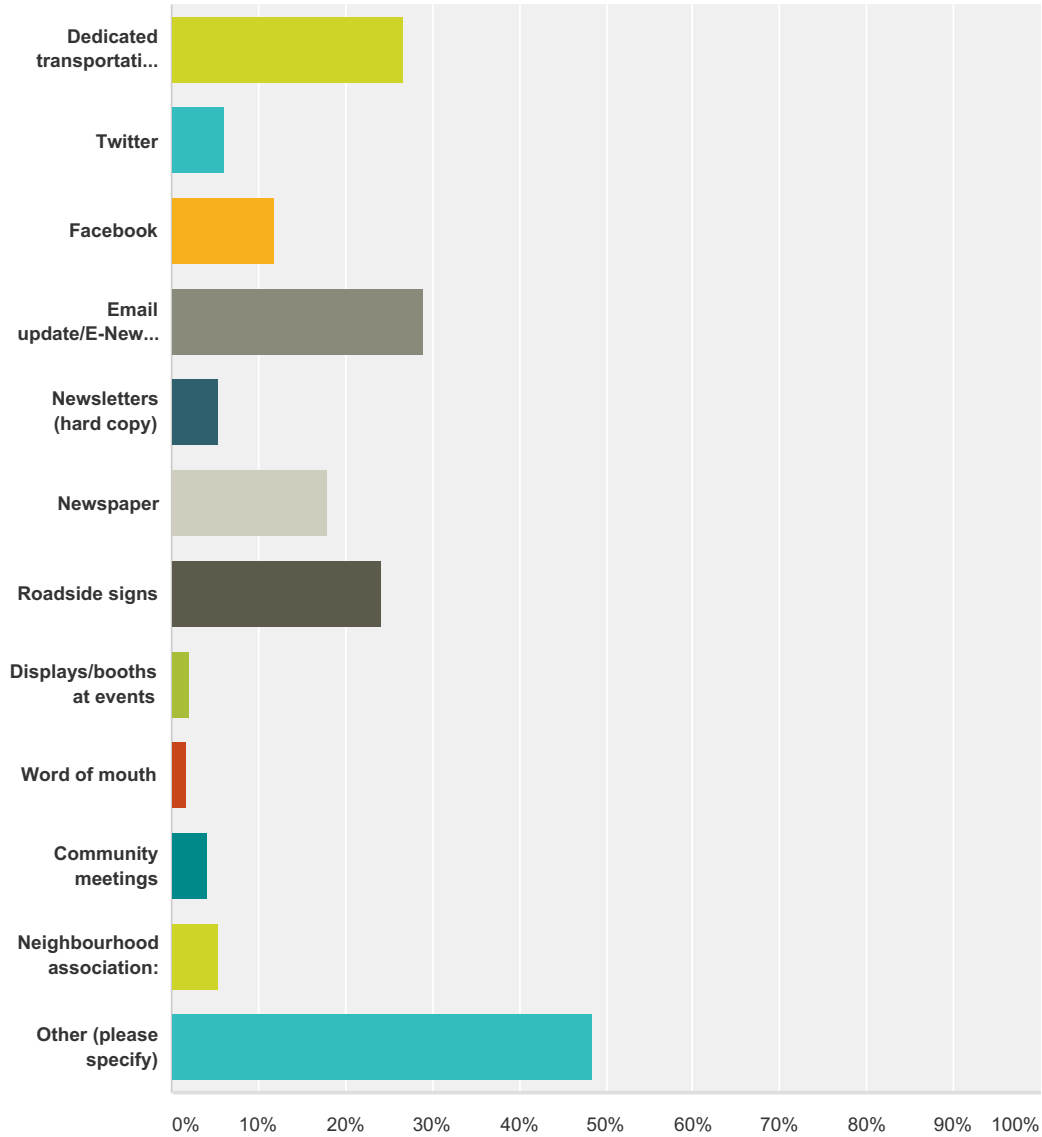
#	Other (please specify)	Date
1	NA	12/15/2016 9:42 AM
2	Youtube - can do a walkthrough to show people features and safety measures on the trails	12/9/2016 7:26 PM
3	NA	12/8/2016 4:11 PM
4	NA	12/8/2016 4:04 PM
5	NA	12/8/2016 3:41 PM
6	NA	12/8/2016 3:38 PM
7	na	12/8/2016 3:32 PM

Improving Pedestrian Safety in Oakville

8	na	12/8/2016 3:29 PM
9	Is it really necessary to learn about it?	11/28/2016 8:10 PM
10	Signage, brochures in foyer of community centres? i.e. IRCC, etc.	11/27/2016 1:39 PM
11	-	11/22/2016 9:23 AM
12	I would like to see traffic calming measures in this area	11/18/2016 10:30 AM
13	Bad behaviours need high ticket, more policing, education will never work alone.	11/17/2016 9:17 PM
14	Events like Fire Safety Week, teaching kids more awareness regarding riding their bikes safely in the streets, road rules with demos etc.	11/16/2016 11:13 PM
15	More fines and surveillance of bad drivers. Don't need more words, we need action	11/16/2016 10:24 PM
16	Mandatory workshops for elderly drivers	11/15/2016 11:49 PM
17	social media	11/15/2016 4:12 PM
18	Any low cost options	11/11/2016 11:40 PM
19	Internet	11/11/2016 3:34 PM
20	I don't know that I need to "learn" anything about this at all, least of all from these sources. One knows what one needs to know by observing whether there are sidewalks, their width and the speed of surrounding traffic to know if one can walk or if it is safe or not to walk.	11/11/2016 8:41 AM
21	for 'me' these info emails are great .. for others and the public good then I wold have checked off some other items above that lend themselves well to public awareness campaigns and local site-specific info like signs	11/10/2016 11:26 PM
22	Same as above coordinate walkers with cars.no answe	11/10/2016 8:51 PM
23	Personal experience	11/10/2016 6:15 PM
24	Email	11/10/2016 6:04 PM
25	Not sure I understand the question.	11/10/2016 4:41 PM
26	No time to pay attention to any of the above	11/10/2016 4:26 PM
27	I don't want to learn about this.	11/10/2016 4:17 PM
28	Town of Oakville website	11/10/2016 2:20 PM
29	stronger discipline for offenders who run lights, turn on a walk signal etc.	11/10/2016 2:05 PM
30	-	11/4/2016 12:37 PM
31	-	11/4/2016 12:36 PM
32	-	11/4/2016 12:35 PM
33	-	11/4/2016 12:33 PM
34	-	11/4/2016 12:31 PM
35	-	11/4/2016 12:28 PM
36	-	11/4/2016 12:27 PM
37	-	11/4/2016 12:26 PM
38	-	11/4/2016 12:24 PM
39	-	11/4/2016 12:24 PM
40	-	11/4/2016 12:20 PM
41	-	11/4/2016 12:18 PM
42	n/a	11/4/2016 12:11 PM

Q14 What is your preferred way to receive information about transportation and pedestrian safety related issues? Please select your top three. Please choose your top three preferences.

Answered: 235 Skipped: 57



Answer Choices

Responses

Answer Choices	Percentage	Count
Dedicated transportation website/online resources	26.81%	63
Twitter	5.96%	14
Facebook	11.91%	28
Email update/E-Newsletters	28.94%	68
Newsletters (hard copy)	5.53%	13

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Newspaper	17.87%	42
Roadside signs	24.26%	57
Displays/booths at events	2.13%	5
Word of mouth	1.70%	4
Community meetings	4.26%	10
Neighbourhood association:	5.53%	13
Other (please specify)	48.51%	114

Total Respondents: 235

#	Other (please specify)	Date
1	NA	12/15/2016 9:42 AM
2	NA	12/8/2016 4:11 PM
3	NA	12/8/2016 4:04 PM
4	NA	12/8/2016 3:41 PM
5	NA	12/8/2016 3:38 PM
6	na	12/8/2016 3:32 PM
7	na	12/8/2016 3:29 PM
8	N/A	12/6/2016 11:29 AM
9	N/A	12/6/2016 11:27 AM
10	N/A	12/6/2016 11:24 AM
11	N/A	12/6/2016 11:21 AM
12	N/A	12/6/2016 11:17 AM
13	N/A	12/6/2016 11:15 AM
14	N/A	12/6/2016 11:11 AM
15	N/A	12/6/2016 11:07 AM
16	N/A	12/6/2016 10:59 AM
17	N/A	12/6/2016 10:42 AM
18	N/A	12/6/2016 10:32 AM
19	-	11/29/2016 4:47 PM
20	-	11/29/2016 4:46 PM
21	-	11/29/2016 4:45 PM
22	-	11/29/2016 4:43 PM
23	-	11/29/2016 4:38 PM
24	-	11/29/2016 4:37 PM
25	-	11/29/2016 4:35 PM
26	-	11/29/2016 4:31 PM
27	-	11/29/2016 4:30 PM
28	-	11/29/2016 4:29 PM
29	-	11/29/2016 4:28 PM
30	-	11/29/2016 4:26 PM

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31	-	11/29/2016 4:24 PM
32	-	11/29/2016 4:23 PM
33	-	11/29/2016 4:22 PM
34	-	11/29/2016 4:10 PM
35	-	11/29/2016 4:09 PM
36	-	11/29/2016 4:07 PM
37	-	11/29/2016 4:05 PM
38	-	11/29/2016 4:04 PM
39	-	11/29/2016 4:03 PM
40	-	11/29/2016 4:02 PM
41	-	11/29/2016 4:01 PM
42	-	11/29/2016 4:00 PM
43	-	11/29/2016 3:59 PM
44	-	11/29/2016 3:58 PM
45	-	11/29/2016 3:54 PM
46	-	11/29/2016 3:53 PM
47	-	11/29/2016 3:52 PM
48	-	11/29/2016 3:50 PM
49	-	11/29/2016 3:43 PM
50	-	11/22/2016 4:04 PM
51	-	11/22/2016 4:02 PM
52	-	11/22/2016 4:00 PM
53	-	11/22/2016 3:57 PM
54	-	11/22/2016 3:56 PM
55	-	11/22/2016 3:54 PM
56	-	11/22/2016 3:47 PM
57	-	11/22/2016 3:45 PM
58	-	11/22/2016 3:44 PM
59	-	11/22/2016 3:43 PM
60	-	11/22/2016 3:41 PM
61	-	11/22/2016 3:39 PM
62	-	11/22/2016 3:38 PM
63	-	11/22/2016 3:36 PM
64	-	11/22/2016 1:50 PM
65	-	11/22/2016 1:49 PM
66	-	11/22/2016 1:48 PM
67	-	11/22/2016 1:46 PM
68	-	11/22/2016 1:42 PM
69	-	11/22/2016 1:40 PM
70	-	11/22/2016 1:39 PM
71	-	11/22/2016 1:37 PM

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72	-	11/22/2016 1:36 PM
73	-	11/22/2016 1:35 PM
74	-	11/22/2016 10:27 AM
75	-	11/22/2016 10:26 AM
76	-	11/22/2016 10:24 AM
77	-	11/22/2016 10:23 AM
78	-	11/22/2016 10:22 AM
79	-	11/22/2016 10:21 AM
80	-	11/22/2016 10:18 AM
81	-	11/22/2016 10:17 AM
82	-	11/22/2016 10:05 AM
83	-	11/22/2016 10:04 AM
84	-	11/22/2016 10:03 AM
85	-	11/22/2016 9:39 AM
86	-	11/22/2016 9:36 AM
87	-	11/22/2016 9:35 AM
88	-	11/22/2016 9:34 AM
89	-	11/22/2016 9:32 AM
90	-	11/22/2016 9:31 AM
91	-	11/22/2016 9:27 AM
92	-	11/22/2016 9:26 AM
93	-	11/22/2016 9:23 AM
94	Need info for and stricter policing of drivers	11/16/2016 10:24 PM
95	include in quarterly area published updates	11/15/2016 10:01 PM
96	Through school communication	11/15/2016 10:09 AM
97	no road signs, there are more than enough road signs. But there is not enforcement of traffic regulation on pedestrians or bikers.	11/11/2016 11:40 PM
98	Phone app	11/11/2016 10:35 AM
99	These questions seem a little silly. We are talking about a fairly fundamental issue, pedestrian comfort and safety. You are being overly detailed.	11/10/2016 4:41 PM
100	I don't want to receive information about this.	11/10/2016 4:17 PM
101	-	11/4/2016 12:37 PM
102	-	11/4/2016 12:36 PM
103	-	11/4/2016 12:35 PM
104	-	11/4/2016 12:33 PM
105	-	11/4/2016 12:31 PM
106	-	11/4/2016 12:28 PM
107	-	11/4/2016 12:27 PM
108	-	11/4/2016 12:26 PM
109	-	11/4/2016 12:24 PM
110	-	11/4/2016 12:24 PM

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111	-	11/4/2016 12:22 PM
112	-	11/4/2016 12:20 PM
113	-	11/4/2016 12:18 PM
114	n/a	11/4/2016 12:11 PM

Improving Pedestrian Safety in Oakville

Q15 Do you have any other feedback you would like to share?

Answered: 31 Skipped: 261

#	Responses	Date
1	NO	12/15/2016 9:42 AM
2	I love Oakville and have lived here for over 18 years. I look forward to living an active life and being comfortable walking and cycling more that I do now. Your efforts toward making Oakville more Livable are really appreciated. We will all be healthier and happier !!	12/9/2016 7:26 PM
3	planners need to reserve areas for stores, prior to homes going, to head off nimbyism. After 15yrs living here, the stores etc do not meet my needs. I would rather drive to Burlington, than to do the drive from one end of Oakville to the other. Essentially the malls is Oakville are at the borders of the neighbouring municipalities. My guess is that in 50years, the need for a car will be slightly reduced in Oakville.	12/9/2016 10:50 AM
4	All construction areas are dangerous for pedestrians.	11/29/2016 4:26 PM
5	Please please make the parking lot at the central library and the centennial pool free of charge all the time!!! Many have a membership for the pool but have to pay for parking. It would also prevent people from parking in the neighborhoods and walk into downtown. This parking lot is empty while the neighborhood streets are packed! PLEASE	11/28/2016 9:06 PM
6	I have written to councillors, the police, and the mayor about the traffic in Bronte. I also filled out a survey similar to this in the past. Yet nothing changes. There doesn't seem to be any movement on improving the situation for pedestrians in this area, even though it has been designated as an area to be revitalized. Revitalization includes making the area safer and more pleasant for pedestrians. Lakeshore Road in Bronte is a terrible place to walk. There is too much congestion. Drivers speed and seem to have little regard for pedestrians. Something needs to be done to educate drivers about paying attention to pedestrians, slowing down, stopping when required to, and ceding the right of way to pedestrians at 4-way stops and at crossings with walk signals.	11/27/2016 6:34 PM
7	Once upon a time, there was a small open-air mall just east of 8th Line, on the south side of Grand Blvd. It's forced demise and subsequent departure was a sad thing to witness. It was part of what made this neighbourhood more walkable, more senior-friendly, more accessible, etc.	11/27/2016 1:39 PM
8	Add more dedicated bike lanes too	11/27/2016 11:43 AM
9	I think Oakville is a great town to work and live in! I'm already pleased with the current pedestrian safety measures in place, and am looking forward to any improvements!	11/25/2016 9:04 AM
10	I am a senior citizen. I live in an apartment building. The talk throughout the building is "what are we going to do when they take the benches in for the winter?" Many of my neighbours do not ever walk downtown once the benches are gone. I still walk but I frequently lean against store windows and walls to catch my breath and rest my legs frequently I sit wherever I find something flat. e.g. doorsteps, cement blocks, some bus stops etc. etc. Benches are a "lifesaver" to seniors.	11/23/2016 7:42 PM
11	I love to walk and will continue to do so. Hopefully you can improve things...thanks for asking!	11/23/2016 11:35 AM
12	It would be nice to see more done in residential areas where speeding and dangerous driving is a regular problem. Pedestrians don't feel safe when people go through stop signs and don't watch for pedestrians on a regular basis.	11/23/2016 11:03 AM
13	no	11/22/2016 11:31 AM
14	Thanks for the opportunity to share this information. Please do find new ways of "doing" transportation overall, and take the long view. Everything we do now, however local, spreads out and makes a difference. A sea change in society's attitude can be accomplished but it will take time, and persistence, and people with courage and foresight and care for the local and global community (including the environment and the creatures we share it with.) Thanks for having the courage and offering residents the chance to share in the vision for the solutions.	11/19/2016 5:16 PM
15	Why is the town taking more than a year to take actions that in some cases are very clear and do not require engineering expertise to be solved? I.e. a pedestrian crossing and a stop sign in front of a park? It doesn't solve the bad behaviour of drivers, but it certainly put extra limits.	11/17/2016 9:17 PM
16	I moved to Oakville 3 years ago from the High Park neighbourhood in Toronto. While I love my new home, I really miss being able to walk or cycle to local shops and restaurants. Because of distance, dangerous roads, and lack of frequent and easy public transit options, I'm forced to drive everywhere.	11/16/2016 3:00 PM

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17	It's a long shot - a large project, but I wonder how nice it would be to turn a part of Downtown Oakville into a pedestrian only area, and encourage shops/street vendors/etc. Look at many cities in Europe as an example.	11/16/2016 10:10 AM
18	The map option did not work	11/14/2016 11:26 AM
19	Enforcement on pedestrians and bikers of the same rules automobile drivers are expected to follow. If this is not done there is clearly no interest in improving walkability etc.	11/11/2016 11:40 PM
20	You should state the current transportation and safety records for Oakville based on defined criteria and measured against other comparable towns. This would help understand if this is a problem that needs attention and its priority versus other Town issues.	11/11/2016 3:34 PM
21	To be honest I'm pretty lazy and am in the habit of driving everywhere. I don't work so I don't drive that often and the stores that I prefer to use are quite far from my home.	11/11/2016 11:08 AM
22	Walkability is a huge factor when it comes to enjoying a community. I hate needing to drive to do shopping or run errands, so I almost always choose stores and places close to my home. It's something to keep in mind as Oakville plans for growth. Many people, especially young people, seek out walkable neighbourhoods. So ensuring amenities are incorporated into neighbourhoods, rather than located in outlying areas, goes a long way toward creating a vibrant and sought after place to live.	11/11/2016 10:35 AM
23	Unable to access the link to your map. It opened but stayed on the edge of the page to the right.	11/10/2016 11:59 PM
24	keep up the good work .. i look forward to the 'action' and 'results' that will follow from your study	11/10/2016 11:26 PM
25	No	11/10/2016 8:51 PM
26	I must admit to being skeptical about any real improvements occurring. The cost would be high and I believe that pedestrians rank at the bottom of the totem pole.	11/10/2016 8:39 PM
27	Reynolds St. sidewalks are almost too narrow for wheelchairs. Now that the hospital is gone, there's less of a problem but we still have retirement and long term care residents who need to use that sidewalk.	11/10/2016 7:28 PM
28	Stop people on the street and ask them. Get out of your offices and get to know what the people say.	11/10/2016 4:41 PM
29	Walking is safe in Oakville. Biking is not safe. More dedicated bike lanes, signage and trails are needed.	11/10/2016 4:26 PM
30	No	11/10/2016 4:23 PM
31	-	11/4/2016 12:18 PM

Appendix C – Full List of Locations Identified for Potential Improvements



Appendix B – Full List of Locations Identified for Potential Improvements

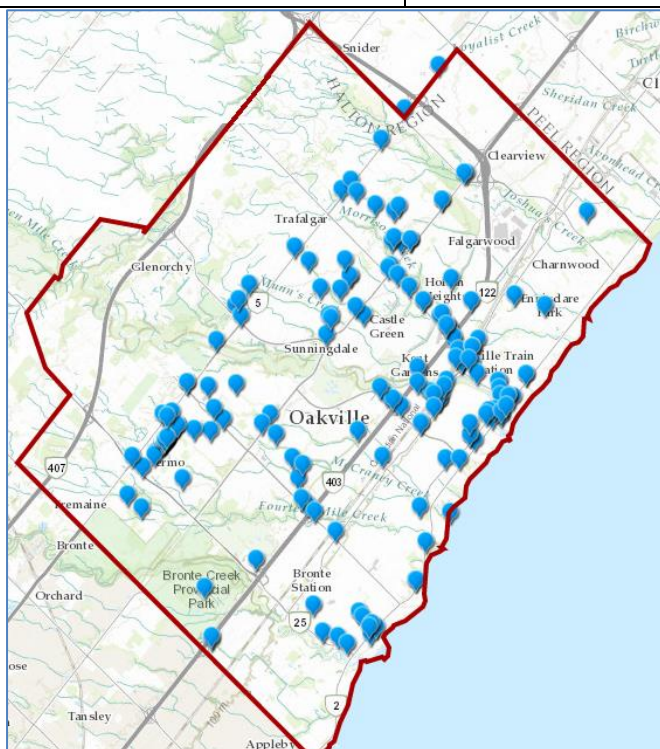
Intersection Street 1	Intersection Street 2	Notes
Allen Street	Macdonald to south of Sumner & b/w Randall and Church	No sidewalk on WEST side of Allan Street, from Macdonald to south of Sumner, and btwn Randall and Church.
Allen Street	Robinson	No sidewalk on EITHER side south of Robinson. No sidewalk on EITHER side of Front Street between Thomas Street to Dunn - south
Allen Street	Cornwall	Whole Foods Traffic
Allen Street	Cornwall	Distracted Drivers
Allen Street	Douglas	Speeding and cars do not stop at stop sign
Bishop Gate	Pilgrim Way	Cars are not slowing or stopping - need traffic calming or flashing light
Bond	Kerr St	lighting required
Canadian Road	b/w the Ford Plant and QEW	Dangerous - a pedestrian bridge between Falgarwood and the Ford plant would make walking/biking to the plant much more realistic/safer
Carberry Way	Grand Oak Trails	Construction area
Colonel William Parkway		Nowhere to cross Pkwy from the trail system. To get to St Mary Elementary School have to go out of way to next crosswalk. Stocksbridge and Dewsbury are risky due to high volume of cars and speeding - near St Mary Elementary School
Colonel William Pkwy, 3-way stop at Liptay		Traffic does not stop, speeding, rolling stop - need flashing light or traffic calming
Cornwall	Maple Grove	
Coronation Park		Poor access, Lakeshore and Sandwell Drive
Dorval (#2)	Sixth Line & North Service Road	Pedestrian bridge needed
Dundas	Bronte Intersection	
Dundas	Bronte	
Dundas	Third Line	

Dundas	Prince Micheal	
Dundas	Preserve Drive	
Dundas St W.	Third Line	No walking sidewalk, plowing. Cars not paying attention.
Dundas St W.	Winston Park Dr. and	NEEDS a crossing sign - Joshua Creek Public School
Eighth Line	QEW	Pedestrian bridge needed
Eighth Line (#10)	Kestell	Traffic light alignment needed
Fiddlers Way	Post Masters	Speeding issue - makes it dangerous for children
Ford Drive	b/w Upper Middle and Royal Windsor	Dangerous
Glenashton	Wembley Road	Three schools within walking distance. Walk light is not always operational
Glenashton	Glen Blvd	Cars speeding
Glenashton Dr	Grovsenor	poor sidewalk maintenance in winter - Iroquois Ridge Highschool
Grand Blvd		
Grant Blvd		Traffic calming zone - near park space
Heritage Way	Merchants Gate	
Heritage Way	Kings College	
Holy Trinity	Sixth Line	
Kerr St	Sheppard	RR
Kestell	Coronation	Speeding vehicles
Lake Shore	Bronte Road	Unsafe - north
Lakeshore	Bronte at West River	Parking lot there could use more lighting. Trail under Lake Shore at West River.
Lakeshore	Third Line	
Lakeshore	George	
Lakeshore	Balsam Dr	Dangerous X-walk
Lakeshore	East Ave	Should have audible crosswalk and numbered countdown
Lakeshore	b/w Third & Fourth	
Lakeshore	Morden	
Lakeshore	Navy	
Lakeshore	Allan	
Lakeshore	b/w First St. and Howard Ave.	Cyclists on sidewalks
Lakeshore	b/w Alan & Navy Street	

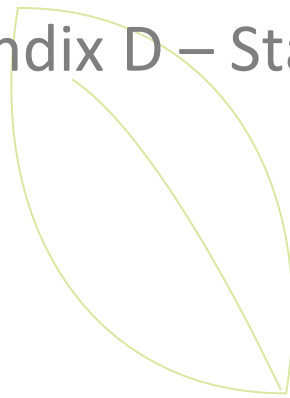
Maplehurst Avenue		No sidewalk. When it narrows at the Bridge Road crossing it is very dangerous for pedestrians. Used by joggers, school kids, dogwalkers
Monastery	Dorval	
Morrison Road		More crosswalks (near school) X3
Nichols Drive	North Ridge Trail	Speed trailer or 4-way stop sign. Curve in road makes visibility difficult. People crossing road cannot see or be seen by cars
North Service Rd	Bronte	No sidewalks in this area - east
Nottingham Gate	Fourth Line	x6 There are no safe crossings on Trafalgar over the QEW. Cars are not required to stop at all crossings. Unsafe crossing over bridge. Provide safe crossings at all access points to the QEW on Trafalgar. - Loyola Highschool
Pilgrim Wood school - on Pilgrims way		Needs a crosswalk
Pine Glen		x3 Unsafe - between Bronte and Postmaster
Pine Glen Road		x3. Speed trailers are not the answer, requesting multiple stop signs along Pine Glen and a cross walk to curb/slow the volume of cars. - between Grand Oak and Postmaster
Pine Glen Road	Kwinter	x4 speeding - south
Pine Glen Road	Upper Westmount	
Pine Glen Road	Millstone Drive	
Pine Glen Road	b/w Third Line and Grand Oak	
Pine Glen Road	Bronte Rd	X - Walk
Pine Glen Road	Postmaster Dr	X-Walk Needed, Pine Glen + Falling Green
Pine Glen Road	Oakhaven	Needs a crosswalk - - Forest Trail Public School (french immersion)
Pine Glen Road	Kwinter Rd.	X-Walk
Post Corners School south of Glen Ashton and Windfield		Speeding - traffic calming measures
Postmaster	Fiddlers Way	
Rebecca	Kerr St	Crossing Bridge #4, from construction
Rebecca	Warminster	

Rebecca	b/w Kerr St and Brock St	
Reynolds Street		Too narrow, unsafe
Robinson Street	George	Speeding traffic, do not stop for pedestrians
Sixteen Mile Creek	Preserve	Needs photo radar/speed control measures
Sixteen Mile Creek	QEW	Need a crosswalk because students are crossing mid-block - high school
Sixteen Mile Creek	Randall Street	
Speers Rd	Dorval	
Speers Rd	Queen Mary St.	Pedestrian safety (#2)
Speers Rd	St. Augustine	Needs a crosswalk
Speers Rd	Kerr St	
Sunflower Cres	Sixth line	high need for crossing guard - still under construction. Speed trailers needed by school - Oodenami Public School,
Trafalgar Road	Dundas	
Trafalgar Road	Dundas	From Cornwall
Trafalgar Road	Upper Middle	Using the east/west cross walk on the south side of Upper Middle at Trafalgar is not safe. The town has a bus shelter on the west side of this intersection covered in advertising that creates a blind spot for pedestrians and motorists. The town should remove all bus shelters in the town that are between the sidewalk and the curb move them to the property side of the sidewalk.
Trafalgar Road	QEW	
Trafalgar Road	Lakeshore	Traffic lights are out
Trafalgar Road	McCraney	
Trafalgar Road	Leigh Land	
Trafalgar Road	Iroquois Shore Road	
Trafalgar Road	Lakeshore	Input from Survey #1
Trafalgar Road	Upper Middle	east-west pedestrian crossing area - blind spot created by bus shelter-south side
Trafalgar Road	White Oaks	Audible signal no longer working - north of Cenntenial
Trafalgar Road	Cornwall Rd.	Traffic Calming (#3)

Trafalgar Road	Sheridan College	Needs improved lighting
Trafalgar Road	Cornwall and Cross	Around Go Station
Trafalgar Road	Cornwall and Cross	Cars are rushing and driving to fast around GO station
Trafalgar Road	Eigth Line	Left turn cars (#6)
b/w Sixteen Mile and Trafalgar	Robinson Street	Robinson St. traffic
Trevor Drive		
Upper Middle Road	Third Line	No sidewalks to sports complex - in and around this area
Upper Middle Road	8th Line	Turning cars not looking for pedestrians
Upper Middle Road	Westoak trails	
Upper Middle Road	Ninth & Ford	No sidewalks
Upper Middle Road	Bloomfield	Signal too short for pedestrians to cross.
Upper Middle Road	8th Line	mid-block crosswalk by bus stop - kids cross there to go to school, not safe
Upper Middle Road	6th Line	Sunshine in eyes of drivers makes it hard to see pedestrians - north
Wycroft Rd.	Kerr St	Sidewalk ends (#7)



Appendix D – Stakeholder Session Summary Report



Pedestrian Safety Plan for the Town of Oakville



Prepared by Lura Consulting for:
The Town of Oakville
December 2016

Introduction and Background

The Town of Oakville is developing a Pedestrian Safety program that will work to promote more active modes of transportation across the Town in a safe manner. The program will focus around safe pedestrian crossing locations that do not meet criteria for traffic calming but experience high pedestrian activity. The program will explore ways to raise public awareness on the benefits of active transportation methods that are safe, efficient and accessible.

The Pedestrian Safety Program will support the existing Transportation Master Plan objectives of creating a more sustainable, multi-modal transportation system in Oakville.

This document is a summary of the Stakeholder Session hosted to provide insight into the Pedestrian Safety program.

Session Details and Objectives

Date: December 9, 2016

Time: 1:00pm – 3:00pm

Location: Trafalgar Room, Oakville Town Hall

The **objectives** of the Stakeholder Session were to:

- Introduce the Town of Oakville’s Pedestrian Safety Program initiative;
- Provide an overview of the project and outline the objectives and process to develop the program;
- Seek input on challenges Oakville faces related to pedestrian safety;
- Identify specific locations that would benefit from pedestrian safety treatments; and
- Explore communication and education mechanisms to encourage pedestrian safety.

Session Participants

Agency	Name
Town of Oakville	Martin Maguire Nicole Wolfe Joanne Phoenix Janis Olbina Chris Clapham Dragana Crkvenjas
Town of Halton Hills	Dan Ridgway A. Spolett
Resident of Oakville	Jim Douglas
Halton Region Health	Kendra Willard
Amica at Oakville	Kathleen Febbraro
Halton District School Board	Suzanne Berwell
Amica at Bronte, resident representative	A.H. McCallum
Halton Healthcare	Emma Murphy

Consulting Team	
Jeff Garkowski, Lura Consulting	Gene Chartier, Paradigm Transportation Solutions
Niki Angelis, Lura Consulting	Josée Dumont, Paradigm Transportation Solutions
Liz Garkowski, Lura Consulting	Graham Vincent, Graham Vincent Consulting

Session Overview

Welcome and Introductions

Dragana Crkvenjas, Town of Oakville, welcomed participants to the Stakeholder Session for the Pedestrian Safety Program. She thanked everyone for their time and participation and provided a brief overview of the purpose of the meeting.

Jeff Garkowski, Lura Consulting, facilitated a round of introductions and reviewed the meeting objectives and agenda. He also introduced Lura's role in the project as the community engagement facilitator.

Overview Presentation

Gene Chartier, Paradigm Transportation Solutions, reviewed current pedestrian safety in Oakville and statistics on different types of collisions that have happened over the past several years involving pedestrians. He explained the purpose of this study, which is to proactively review and address pedestrian safety issues and to look for ways to improve current pedestrian safety measures in the Town. Gene highlighted that the intent of this initiative is to develop a realistic action plan that the Town can implement moving forward.

Current pedestrian safety measures that the Town of Oakville employs were reviewed, including traffic calming measures, pedestrian crossover conversion program, and other various crossing methods. Current examples and best practices being used in other municipalities were also discussed. An overview of the multiple types and styles of pedestrian crossings was provided along with the decision criteria for each of these types.

The program will be looking at the four key pillars for accommodating pedestrians, which include reducing collisions, improving accessibility, improving connectivity, and improving maintenance.

Questions and Comments

A summary of the Question and Answer period following the presentation is provided below. Questions are noted with **Q**, responses are noted by **A**, and comments are noted by **C**.

C: Concern was expressed about the lack of knowledge pertaining to pedestrian countdown timers; it was noted that vehicles often use them as an indicator to speed up to cross the intersection instead of slowing down.

A: The Town is committed to the use of countdown timers as they are beneficial for pedestrian safety. Education for drivers around the use of these timers is something to consider.

Q: Are there differences in the timer operations based on if they are located on a regional or local municipal road?

A: Different types of intersections can employ different operations for the signals, including pedestrian countdown timers. They can even be programmed differently depending on the time of day (i.e. peak versus off-peak hours). Therefore they don't necessarily operate in the same way all of the time.

Q: In the analysis of accidents and injury severity, are the age groups of the pedestrians involved considered?

A: That level of detail is not something that is provided.

Q: In terms of the specific locations of accidents, could age groups be considered in locations/circumstances where there could be a higher aged population (i.e. near retirement homes)?

A: That could be looked into. A higher ranking for a pedestrian crossing could be provided depending on the people most likely to be using it based on location.

Q: How do crossing times get calculated and do they factor in different abilities of those crossing the road?

A: Time of crossing is calculated by average walk speed. That speed can differ by location (i.e. if we know there is a school or retirement residence nearby) and can be adjusted accordingly.

C: Speed limits for vehicular traffic should be considered from a pedestrian point of view. The speed on Bronte Road is too fast when you consider it passes a Seniors Residence.

C: Seniors should be educated about pedestrian safety. The Town should work with retirement homes to set up educational workshops.

Q: Is the Trip Generation Manual updated on a regular basis?

A: Yes. This is a common book for new developments and will therefore get updated every couple of years.

C: Concern was expressed that too much blame is being placed on the pedestrian in terms of their safety. Safety is everyone's responsibility with built environment also playing a factor.

C: Concern was expressed that the plan will take time to implement and interim measures should be taken. It was suggested that "Watch for Seniors" signage should be placed at appropriate locations in Oakville.

Q: Are there penalties for driving through a pedestrian crosswalk when the lights are flashing?

A: This issue is difficult to enforce. Education should also be put in place for drivers on how to approach these crosswalks.

Activity One – Identifying Pedestrian Safety Challenges and Potential Solutions

A group discussion was held with the participants in an open forum format to identify the current pedestrian safety challenges in Oakville as well as potential solutions. Feedback was captured on a



chart as it was being discussed. A summary of this feedback is included below.

Challenges

- J-walking is common
- Addressing the needs of different pedestrian age groups
- Confusion surrounding countdown signals
- Light signal timing not considering groups of children trying to cross the street at the same time (i.e. walking school bus programs)
- Cultural diversity and language barriers
- Speed of vehicular traffic
- Distance between controlled crossing locations/desire to cross mid-block – does not consider the handicaps of others and aging population
- Pedestrians not recognizing their own role in safety (i.e. wearing bright or reflective colours when walking at night, texting, earphones, etc.)
- Pedestrian friendliness in construction zones
- Pedestrian safety across public and private realms (i.e. crossing a parking lot to access a store)
- Public realm features
- Lack of respect for pedestrians on the part of drivers
- Unclear penalties for pedestrian cross-walks
- Pedestrians crossing at roundabouts

Solutions

- Enforcement programs for J-walking
- Active and safe routes to school
- Identification of school routes/large volumes of people/busy routes
- Education programs for seniors
- Review of current posted speed limits
- More rest areas along pedestrian routes – assist with mobility challenges
- Pedestrian signals – leading signals/allowing pedestrian “head start”
- Education of pedestrians and drivers on how to ensure safety
- Extra street lighting
- Making reflective accessories available to the public
- Improvements to the built environment
- “Watch for Seniors” signage

Activity Two – Identifying High Priority Areas

Participants broke out into small groups to identify high priority areas for pedestrian safety on a map of Oakville. Dots were placed on the maps as well as sticky notes to highlight these areas and to capture feedback.

The following areas were identified as high priority areas:

Street/Intersection	Safety Concern/Suggestion
QEW and Trafalgar Road	Alternative to Trafalgar for pedestrian crossing required or

	improved pedestrian safety measures on Trafalgar (x2)
QEW	Crossing needed between Third Line and Dorval Drive (cross from North Service Rd. to South Service Rd.)
Between Kerr Road and Sixth Line, just north of QEW	Missing pedestrian link across ravine
Oakville Harbour	Missing pedestrian link to cross at mouth of harbour
Bronte Harbour	Missing pedestrian link to cross from Bronte Road to West River Street
Bronte Road	Pedestrian crossing needed near Amica retirement residence on Bronte Road
Bronte Road and Marine Drive	Improved crosswalk
Spears Road and Kerr Street	Improve pedestrian crossings
Third Line and Dundas Street West (x3)	Improve pedestrian crossings
Great Lake Boulevard	Crossing needed between Buena Vista and Summerset Ct.
Lake Shore Road West and Westminister	Crossing needed to Bronte Athletic Park
Rebecca Street and Suffolk Avenue/Burton Road	Pedestrian crosswalk needed
Rebecca Street and Brock Street	Crossing to Trafalgar Park
Trafalgar Road	Crossing near GO Station
Trafalgar Road and Cornwall Road	Improve pedestrian crossings
Trafalgar Road and Iroquois Shore Road	Improve pedestrian crossings
Trafalgar Road and Ceremonial Road	Improve pedestrian crossings
Trafalgar Road and Lynwood Drive	Pedestrian crosswalk needed
Wycroft Road	Crossing needed between Fourth Line and Dorval Dr.
Upper Middle Road East	Pedestrian crossing to connect Morrison Valley North and South
Glenashton Drive	Crossing at Morrison Valley
Sixth Line and Elm Road	Crosswalk needed
Central Park Drive and Gatwick	Crossing to Memorial Park
Pine Glen Road	Crossing between Grand Oak Tr. and Postmaster
Lake Shore Road East, west of Winston Churchill Boulevard	Crossing between parks
Reynolds Street	Crossing needed by Hospital
McCraney Street East	Crossing at Oakville Park
Sixth Line	Crossing in front of Holy Trinity S.S.
Upper Middle and Nottinghill Gate	Improve pedestrian crossings



Activity Three – Information and Education

Participants came back as a group to discuss how to best communicate with and educate people on pedestrian safety in Oakville. Key theme areas used to guide the discussion included: mechanisms currently in place to educate the public on pedestrian safety, the “must-have” information people need, communication mechanisms that work best in Oakville, and existing initiatives that can be leveraged.

A summary of the discussion is provided below.

What mechanisms are currently in place to educate the public on pedestrian safety?

- Existing signage
- Education that focuses on safe routes to and from school
- Cycle walk map/website (cycling safety)
- Communication hubs
- Safety elephant (past)
- MTO promotion of reflective patches for pedestrians walking at night.
- MTO pedestrian safety included as part of driver training
- CAA – driver and pedestrian safety training and road safety website
- Safety oriented organizations (i.e. Parachute)

What is the must-have information people need about pedestrian safety?

- Mutual respect between drivers and pedestrians
- Pedestrians:
 - Count down timers – how to use them properly
 - Clothing (i.e. not to wear dark colours at night, etc.)
 - New crosswalks – how they work
 - Targeted information (i.e. texting while walking)
- Drivers:
 - Education about new law on crosswalks (i.e. where the pedestrians need to be before the car can proceed)

What communication mechanisms work best in Oakville?

- Police officer initiated pedestrian safety programs in schools

- Brochure/information sent directly to homes with details about crosswalks, timings, etc.
- Local Councillors (newsletters, etc.)
- Different target audiences require different modes of communication and should be very specific with the message (i.e. “wear something reflective when walking at night”) – key messages that are catchy
 - Face-to-face
 - Online
 - Social media
- Blitzes –focus on long term to encourage behaviour change (e.g. RIDE programs around the holidays)

Are there existing initiatives that can be leveraged?

- Police safety village/school bus safety programs to add on with pedestrian safety
- MTO driver training programs
- Existing e-newsletters to help get information out
- Insurance Corporation of British Columbia (ICBC) safety initiatives
- Leveraging partnerships to achieve shared objectives– e.g. Hospitals and Health Care companies that invest money in bike shares because it is mutually beneficial
- Municipal websites – details on where to find the information can be publicized in local newspaper as well

Wrap-Up and Next Steps

Participants were thanked for their time and efforts in attending the first meeting. Jeff reviewed the next steps, noting that the project team will continue to seek input on the Pedestrian Safety program as it develops. He also noted that the summary for this stakeholder session will be circulated among those who attended.

Appendix D

Retrofit Criteria for Accessible Pedestrian Signals at Signalized Intersections

D.1 Introduction

Accessible Pedestrian Signals (APS) are devices that use audible, tactile, vibro-tactile, and visible methods to communicate pedestrian signal timing information that is accessible to all pedestrians, including people who are blind, visually impaired or deaf-blind. The purpose of APS is to assist pedestrians with visual impairment cross the road at intersections with traffic signals by informing them they have the right-of-way to cross and in which direction to cross.

The legal requirements for APS in Ontario as prescribed in the Integrated Accessibility Standards under the *Accessibility for Ontarians with Disabilities Act* (AODA) (2005), O.Reg. 191/11 which state:

“Where a new traffic control signal system with pedestrian control signal heads is being installed at an intersection or an existing traffic control signal system with pedestrian signal heads is being replaced at an intersection, the pedestrian signals must be accessible. Accessible pedestrian control signals must meet the following requirements:

- ▶ *They must have a locator tone that is distinct from a walk indicator tone.*
- ▶ *They must be installed within 1,500 mm of the edge of the curb.*
- ▶ *They must be mounted at a maximum of 1,100 mm above ground level.*
- ▶ *They must have tactile arrows that align with the direction of crossing.*
- ▶ *They must include both manual and automatic activation features.*
- ▶ *They must include both audible and vibro-tactile walk indicators”.*

An example of a tactile arrow is shown in the image to the right. The button and arrow point in the direction of the pedestrian crossing and are raised so that they can be identified by touch.

The raised arrow on the APS pushbutton vibrates during the WALK interval when activated (after holding button for three seconds). Pedestrians can stand beside the pushbutton with their hand on the arrow while waiting to cross. When the arrow begins vibrating, they will check for traffic and begin their crossing. Without specific training on the



example APS pushbutton

device, blind pedestrians may not find or use the vibro-tactile indication, particularly if it is not located on the actual pushbutton.

D.2 Installation Criteria

The town complies with the AODA requirements by installing APS at all new traffic control signals and retrofitting traffic signal controls as part of scheduled major capital works projects. The town is responsible for approximately 147 existing signalized intersections. Through the current process, the town has installed APS at 12 signalized intersections (all intersection approach legs) and has partially installed APS at an additional 20 signalized intersections (at least one intersection approach leg). Although there is no deadline for network wide implementation of APS, every traffic control signal in the town will eventually be updated with APS as part of major capital works projects at intersections.

In addition to the AODA requirements for installation, the town has proactively initiated a retrofit program to install additional APS at intersections based on available capital funding. This program to install additional APS shows the town's commitment to accessibility issues and is consistent with other efforts to improve walkability within the town.

Currently, retrofitted APS installation locations are based on a first come, first serve basis, prioritizing by order of locations that are identified either by the public or through consultation with the Canadian National Institute for the Blind (CNIB). It is the town's preference to establish criteria to assist in ranking and prioritizing retrofits at future locations.

The jurisdictional interviews conducted as part of this project (**Appendix B**) revealed that most jurisdictions receive only a few requests for APS installations each year and these requests are generally accommodated as they are received. When there are multiple requests, jurisdictions consult with groups such as the CNIB, local Accessibility Coordinator, or Mayors' Advisory Committee on Accessibility to help prioritize.

TAC (2008) shows a prioritization process which establishes factors for ranking candidate sites to be retrofitted with APS. The following criteria are considered in the guide:

- ▶ **Anticipated Level of Use:** An estimate of the number of people with visual and physical impairments who will use the facility. Surrogate measures for this are proximity to facilities and services which serve these users, major transit transfer points, and high pedestrian volume locations. Higher priority locations for installation of APS have a higher volume of visually impaired pedestrian crossings.
- ▶ **Proximity to Alternative Crossings:** An audible pedestrian signal is most needed where there is no appropriate crossing site nearby. Higher priority locations for installation of APS have no alternative, appropriate crossing sites within 300 metres.

- ▶ **Traffic Conditions:** Traffic that is either very light (traffic sounds are absent), erratic in flow (e.g., pronounced platooning), or sufficiently heavy that traffic tends to back-up through the intersection make it difficult for visually impaired pedestrians to pick up audible cues as to the signal phase. Higher priority locations for installation of APS have one or more of the above-noted traffic conditions.
- ▶ **Width of Crossing:** Wider streets are more difficult for visually impaired pedestrians to cross as there is a higher probability of veering off course. Higher priority locations for installation of APS have crossing widths greater than 24 metres.
- ▶ **Other Factors:** The physical environment of the crossing site may present challenges caused by complex phasing, high ambient noise, heavy right turn volumes, mid-block crossing, leading pedestrian indicator, T-intersection, offset/skewed intersection, right turn signals, or more than four intersection legs. Higher priority locations for installation of APS have one or more of the above-noted conditions.

Table D.1 illustrates intersection scoring criteria developed based on the TAC guidance, which can be applied by the town at each candidate intersection for ranking purposes. Locations with a higher score are a more likely candidate for proactively retrofitting with APS. In addition to applying the criteria, the town should consult with the CNIB and the Accessibility Advisory Committee to help prioritize candidate sites to be retrofitted with APS.

TABLE D.1 ACCESSIBLE PEDESTRIAN SIGNAL LOCATION SCORING CRITERIA

Criteria	Variable	Score Criteria	Intersection Score
Pedestrian Crossing Demand	1 – 20 pedestrian crossings per day	1	
	21 – 50 pedestrian crossings per day	2	
	51 or more pedestrian crossings per day	3	
Crossing Environment	Alternative accessible crossing within 100 metres	1	
	Alternative accessible crossing within 100 – 300 metres	2	
	No alternative accessible crossings within 300 metres	3	
Traffic Conditions	Location has favourable traffic conditions ¹	1	
	Location has one unfavourable traffic condition ¹	2	
	Location has > 1 unfavourable traffic conditions ¹	3	
Crossing Width	Crossing width is < 16 metres	1	
	Crossing width is 16 to 24 metres	2	
	Crossing width is > 24 metres	3	
Other Factors	Location has favourable physical factors ²	1	
	Location has one unfavourable physical factors ²	2	
	Location has > 1 unfavourable physical factors ²	3	
Total Location Score			

¹ unfavourable traffic conditions defined as traffic that is either very light (traffic sounds are absent), erratic in flow (e.g., pronounced platooning), or sufficiently heavy that traffic tends to back-up through the intersection.

² unfavourable physical factors include complex phasing, high ambient noise, heavy right turn volumes, mid-block crossings, leading pedestrian indicators, T-intersections, offset/skewed intersections, right turn signals, or more than four intersection legs.

Appendix E

Intersection Pedestrian Safety Review: Speers Road and Kerr Street

E.1 Overview

This Pedestrian Intersection Safety Review forms part of the **Pedestrian Safety Program** project initiated by the Town of Oakville. This review was specifically requested due to community concerns regarding pedestrian safety at the Kerr Street and Speers Road intersection. Specific community concerns are related to:

- ▶ Pedestrian crossing time to cross Speers Road on the east leg of the intersection.
- ▶ Pedestrian/vehicle conflicts due to right turn and left turn conflicts with vehicles when pedestrians are crossing Speers Road.

E.2 Intersection Characteristics

This section provides an overview of the traffic and pedestrian characteristics currently operating at the Speers and Kerr intersection.

E.2.1 Roadway Characteristics

Kerr Street is a north-south multi-purpose arterial road with a four-lane undivided urban cross-section and a speed limit of 50 km/h. Parking is generally permitted in the curb lanes to the south of the intersection. The most recent traffic count in the intersection vicinity indicates an average daily traffic volume of 12,000 (Town of Oakville, 2015a)

Speers Road is an east-west multi-purpose arterial road with a four-lane undivided urban cross-section and a speed limit of 60 km/h. Parking is generally not permitted anywhere in the vicinity of the intersection. The most recent traffic count in the intersection vicinity indicates an average daily traffic volume of 14,200 to the west of the intersection and 25,900 to the east of the intersection (Town of Oakville, 2015a).

Figure E.1 illustrates the intersection and the turning lane assignments on approach to the intersection.



Paradigm Transportation Solutions Limited
MORR Transportation Consulting
Accessibility Experts
Lura Consulting

Speers and Kerr Intersection Overview

E.2.2 Collision History

The intersection has experienced the following collision history:

- ▶ **Pedestrian Collisions:** During the 5-year period between 2011 and 2015 no pedestrian-related collisions occurred at the intersection. However, there were three pedestrian injury collisions which occurred midblock within a 200-metre distance of the intersection (one on Kerr Street north of the intersection, one on Kerr Street south of the intersection, and one on Speers Road west of the intersection). These collisions occurred where pedestrians were crossing without the right-of-way.
- ▶ **Vehicular Collisions:** Based on an analysis of the vehicle collision database conducted by the town, this intersection was identified as having the 9th highest potential for safety improvement (Town of Oakville, 2015a). No further analysis of the vehicular collisions was undertaken as part of this work.

E.2.3 Traffic Operations and Volumes

During the PM peak hour, the intersection operates at a Level of Service D, which represents an average delay to vehicles of between 36 and 55 seconds. (Town of Oakville, 2015a). Six transit routes (routes 4, 10, 15, 17, 18, and 28) travel through the intersection and four of the six routes complete turning movements at the intersection. There are no heavy truck prohibitions or restrictions in place on either street. Additionally, there are no turning movement restrictions such as “no right turn on red”.

Figure E.2 illustrates the pedestrian count volumes (from town counts conducted in 2014) and the vehicular turning movement volumes during the AM and PM peak period (from town counts conducted in 2016).

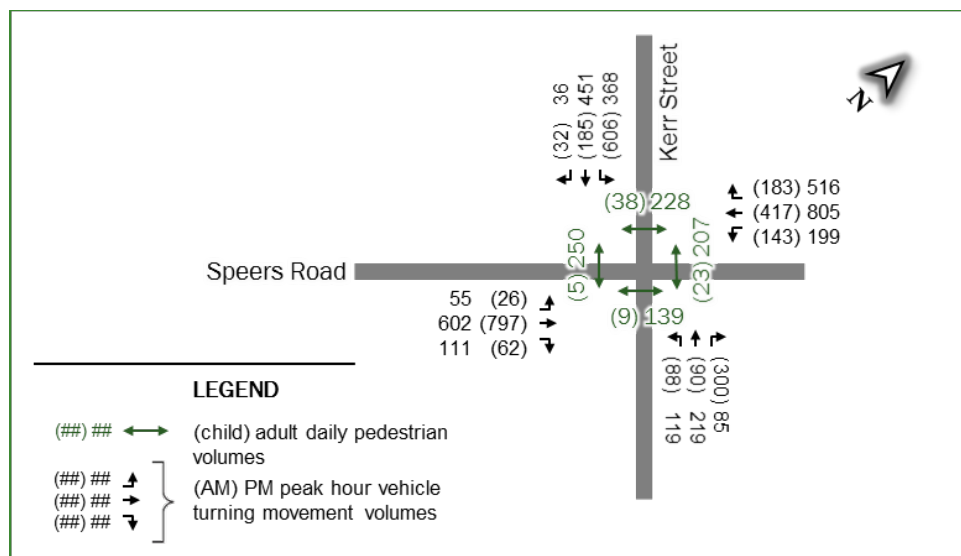
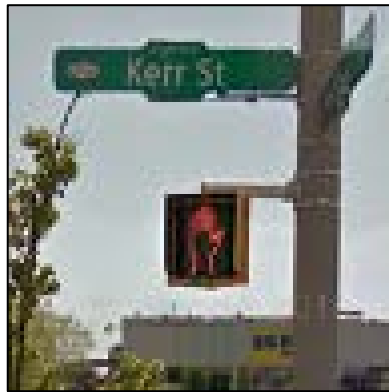


FIGURE E.2 VEHICULAR AND PEDESTRIAN VOLUMES

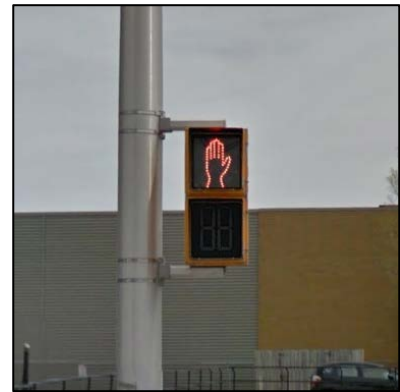
E.2.4 Pedestrian Signal Timing

The time required for pedestrians to safely cross the street is accommodated in the pedestrian walk interval (walk) and pedestrian clearance interval, or “flashing don’t walk” (FDW) times. The pedestrian walk and FDW intervals are provided every signal phase for pedestrians crossing Kerr Street east/west across the north and south approach legs. For pedestrians crossing Speers Road north/south (across the east and west approach legs), the pedestrian walk and FDW intervals are only provided when a pedestrian calls them by activating the pedestrian push button.

Pedestrian signal indications are provided for pedestrians crossing Kerr Street east/west. Pedestrian signal indications are shown by means of two symbols: the *walking pedestrian* indication for the walk interval; and the *hand* indication for the FDW interval. A variable lens is used to display both symbols from a common lens (**Figure E.3a**). In addition to the display for the *walking pedestrian* indication and the *hand* indication, a second lens provides a pedestrian countdown signal for pedestrians crossing Speers Road north/south (**Figure E.3b**). The pedestrian countdown signal provides a numeric countdown informing pedestrians of the time remaining to complete the crossing.



a) Pedestrian Signal Indication



b) With Countdown

FIGURE E.3 PEDESTRIAN SIGNAL HEADS IN OAKVILLE

Table E.1 summarizes the amount of time that is currently provided at the intersection (crossing time is only provided for the Speers Road crossings when a pedestrian activates the push button).

TABLE E.1 PEDESTRIAN SIGNAL TIMING INTERVALS

Approach Leg	Crossing Distance (m)	Walk Time (s)	FDW Time (s)
Kerr Street			
North	16	7	14
South	17	7	14
Speers Road			
East	31	14	25
West	18	14	25

The pedestrian walk interval should allow time for pedestrians to notice the change of the signal indication and initiate the crossing. The minimum acceptable walk interval is typically 7 to 10 s (OTM Book 12). All approach legs at this intersection provide 7 or more seconds of walk time. Analysis of the signal timing plan from 2015 revealed that at that time the town provided 7 seconds of walk time on all approach legs. This was recently extended to 14 seconds for pedestrians crossing Speers Road to accommodate citizen requests for additional crossing time.

The FDW time provides a clearance period for pedestrians that began their crossing at the end of the walk interval to safely complete their crossing. The pedestrian crossing distance, W_c , should be measured from curb to curb along the centreline of the crosswalk. The FDW may or may not include the vehicular amber and all-red clearance intervals (OTM Book 12). A disadvantage to including the amber and all-red times is the potential for conflicts between pedestrians still in the crosswalk and turning vehicles which are trying to clear the intersection. All approach legs at this intersection do not include the amber and all-red clearance interval in the FDW time.

E.3 Intersection Modifications

Table E.2 lists each of the identified issues and potential modifications to mitigate the issues. The following sections describe each of the modifications.

TABLE E.2 INTERSECTION ISSUES AND MODIFICATIONS

Issues	Modifications
Long exposure for pedestrians to cross Speers Road on the east leg of the intersection	Pedestrian signal timing Pedestrian pushbutton locations Reduced curb radii
Pedestrian/vehicle conflicts due to right turn and left turn conflicts with vehicles when pedestrians are crossing Speers Road.	High visibility pavement markings Reduced curb radii No right turn on red
Accessibility for all pedestrians.	Pedestrian pushbutton locations Tactile walking surface indicators

E.3.1 Pedestrian Signal Timing

OTM Book 12 – Traffic Signals states that a normal walking speed (W_s) of 1.25 m/s can initially be assumed for calculations but that a time of 1.0 m/s can be used at crossings frequented by young children, seniors, and disabled persons. The update to the Canadian MUTCDC recommends the following regarding pedestrian walking speed for traffic operations and safety in Canada, based on research by Montufar et al. (2012):

- ▶ Use 0.8 m/s walking speed in cases where at least 20 percent of pedestrians crossing the signalized intersection use assistive devices for mobility (possibly near hospitals or nursing homes).
- ▶ Use 0.9 m/s walking speed in cases where at least 20 percent of pedestrians crossing the signalized intersection are older pedestrians (65 years of age or older).
- ▶ Use 1.0 m/s walking speed to accommodate the general population.

The FDW interval can then be calculated as the length (m) of crosswalk from curb to curb along the centreline of the crosswalk divided by walking speed (m/s). **Table E.3** illustrates the minimum pedestrian signal timing intervals that should be provided with the current crossing distances at the intersection using a walking speed of 1.0 m/s.

Recommendations:

- ▶ Maintain a minimum walk time of at least 7 seconds. Based on community requests regarding insufficient crossing time, consider increasing to minimum of 10 seconds to provide additional comfort for pedestrians.
- ▶ Modify minimum Flashing Don't Walk (FDW) times according to **Table E.3** so that pedestrians can complete the crossing task at a walking speed of 1.0 m/s.

TABLE E.3 MINIMUM PEDESTRIAN SIGNAL TIMING INTERVALS

Approach Leg	Crossing Distance (m)	Walk Time (s)	FDW Time (s)	Minimum Total Time (s)	Current Total Time (s)*
Kerr Street					
North	16	7	16	23	21
South	17	7	17	24	21
Speers Road					
East	31	7	31	38	39
West	18	7	18	25	39

* The recommended pedestrian signal timing intervals results in only minor modifications to the total pedestrian signal time. The primary change is a redistribution of time between the walk and FDW phases.

E.3.2 Pedestrian Pushbutton Locations



Pushbutton pole (Fort Erie, ON)



APS (Kerr & Speers, Oakville)

Pushbuttons should be designed and installed to maximize convenience, conspicuity, and communication for pedestrians.

Some of the existing pushbutton locations at the intersection (e.g., NW corner, SE corner) are located farther than 3.0 m from the intersection and are not easy to locate by a pedestrian. AODA Regulation 413/2 requires that accessible pedestrian signal (APS) push-buttons to be located within 1.5 m of the curb.

It is critical that pedestrians push the button and activate the pedestrian signal timing at this intersection as sufficient crossing time is not provided unless a pedestrian activates the button. The top image to the left provides an example of a pole installed specifically to mount the pushbutton so that it is closer to the crossing and more conspicuous.

To comply with new AODA standards for APS, the buttons should use audible, tactile, vibro-tactile, and visible methods to communicate pedestrian signal timing information that is accessible to all pedestrians, including people who are blind, visually impaired or deaf-blind. An example of an APS is shown in the bottom image to the left.

According to AODA standards, “Accessible pedestrian control signals must meet the following requirements:

- ▶ *They must have a locator tone that is distinct from a walk indicator tone.*
- ▶ *They must be installed within 1,500 mm of the edge of the curb.*
- ▶ *They must be mounted at a maximum of 1,100 mm above ground level.*
- ▶ *They must have tactile arrows that align with the direction of crossing.*
- ▶ *They must include both manual and automatic activation features.*
- ▶ *They must include both audible and vibro-tactile walk indicators”.*

Recommendation: Relocate pedestrian push buttons so that they are within 1.5 metres from the edge of curb (at the beginning of crossing) and upgrade to fully accessible signals. This will help to make the intersection more accessible as well as increase the probability that a pedestrian uses the pushbutton to call the pedestrian phase.

E.3.3 Tactile Walking Surface Indicators

Tactile walking surface indicators (TWSI) comprise small domes with flattened tops that are inset into the sidewalk curb at the transition from sidewalk to street. They provide the cue to pedestrians with visual impairments that they are transitioning to the street. They also act as warnings and directional cues at curb edges within sidewalk slopes. Ontario's AODA standards require the tactile walking surface indicators at



Image source: Halton Region Active Transportation Master Plan (2015)

the bottom of the curb ramp. These are further described in the Oakville Universal Design Standards for Town Facilities (Town of Oakville, 2015b).

Recommendation:

- ▶ Install tactile walking surface indicators at the curb ramps for all intersection corners. This will help to make the intersection more accessible.

E.3.4 High Visibility Pavement Markings

Standard crosswalk markings (twin parallel lines) are currently provided at all crossing legs of the intersection. These are the standard markings used at all signal controlled crossing locations in Ontario.

Ladder crosswalk markings are high visibility pavement markings that incorporate longitudinal stripes to enhance the delineation of pedestrian crosswalks. The contrast of these markings provides enhanced visibility of the crosswalk and thereby increases drivers' awareness of potential conflicts (Fitzpatrick, Chrysler, Iragavarapu, & Park, 2010). OTM Book 15 states that ladder crosswalks may be considered at locations where there is a high potential for vehicle-pedestrian conflict. The image below illustrates ladder crosswalks at a signalized intersection in Toronto.



Recommendation:

- ▶ Install ladder crosswalk markings at all intersection legs to increase the drivers' awareness of the potential for pedestrians. High visibility pavement markings help to increase the conspicuity of the crosswalk and the potential for pedestrians.

E.3.5 Reduced Curb Radii

The curb radii at the southeast and northwest corners of the intersections are large to accommodate the turning needs of larger vehicles such as trucks or buses. However, this results in higher vehicle turning speeds and longer crossing distances for pedestrians, thereby increasing their exposure to vehicular traffic and the time necessary for them to complete the crossing. This is particularly a problem for pedestrians who require more time to cross an intersection such as elderly pedestrians and people with disabilities.

Benefits to pedestrians of reduced curb radii include:

- ▶ Reduced crossing distance and time for pedestrians;
- ▶ Improved sightlines between motorists and pedestrians;
- ▶ Improved directness in crossing alignment; and
- ▶ Reduced speed of turning vehicles.

Recommendation:

- ▶ Reduce the curb radii at the southeast and northwest intersection corners. On the east approach, reducing the curb radius and relocating the crosswalk could reduce the crossing distance by up to 7 metres. This would help improve pedestrian safety by reducing crossing distance and time, thereby reducing exposure, and decreasing turning vehicle speeds. It would also help to improve intersection operations by reducing the required pedestrian clearance time.

E.3.6 No Right Turn on Red

The town has received specific community concerns regarding pedestrian/vehicle conflicts due to right turn conflicts with vehicles when pedestrians are crossing Speers Road. Prohibiting Right Turn on Red (RTOR) is a simple, low cost measure to benefit pedestrians with minimal impact on traffic. While the law requires motorists to come to a full stop and yield to cross-street traffic and pedestrians prior to turning right on red, motorists may not fully comply, especially at intersections with wide turning radii. Motorists are often intent on looking for traffic approaching on their left that they may not be alert to pedestrians approaching from the right.

Recommendation:

- ▶ Install No Right Turn on Red sign (Rb-79) for vehicles approaching the intersection from the north and south on Kerr Street.

Appendix F

Detailed Priority Criteria and Weighting

Table F.1 provides an explanation of the criteria and associated weighting. The distances shown in the table are based on likely walking thresholds as described in OTM Book 15 which states that “most people are willing to walk 5 to 10 minutes at a comfortable pace to reach a destination, with walking trips averaging a distance of 0.4 km.”

TABLE F.1 DETAILED PRIORITY CRITERIA AND WEIGHTING

Data Field	Categories	Score	Data Source and Rationale
Connectivity			
Proximity to senior facilities and major medical centres	Adjacent to senior facility	15	Scored based on buffer from hospitals, senior community centres, and senior residences identified using the Oakville Community Services Database (<i>Town_Facilities_Seniors.shp</i>). As people age, their visual, mental, and physical capabilities diminish, and the incidence of disability can also increase. Aging can also result in reduced strength, flexibility, and range of motion and older pedestrians are at increased risk of serious injury or fatality as a result of a collision.
	≤ 100 m from facility	12	
	101 – 200 m from facility	9	
	201 – 300 m from facility	6	
	301 – 400 m from facility	3	
> 400 m from facility	0		
Proximity to elementary and middle schools	Adjacent to school	10	Scored based on buffer from elementary and middle schools (<i>School_Lands.shp</i>). OTM Book 15 states “Children have difficulty judging speed, spatial relations, and distance as compared to adults. Their auditory and visual acuity, depth perception and proper scanning ability develop gradually and do not fully mature until at least age 10. Even children above this age are easily distracted and may not always behave as drivers expect”.
	≤ 100 m from school	8	
	101 – 200 m from school	6	
	201 – 300 m from school	4	
	301 – 400 m from school	2	
	> 400 m from school	0	
No	0		
Proximity to high schools and post secondary institutions	Adjacent to school	5	Scored based on buffer from high schools and post secondary institutions (<i>School_Lands.shp</i>). High schools and post secondary institutions are major attractors/generators of pedestrian trips. They are scored lower than elementary and middle schools because the students generally have a better understanding of how to safely cross roadways.
	≤ 100 m from school	4	
	101 – 200 m from school	3	
	201 – 300 m from school	2	
	301 – 400 m from school	1	
> 400 m from school	0		

TABLE F.1 DETAILED PRIORITY CRITERIA AND WEIGHTING

Data Field	Categories	Score	Data Source and Rationale
Transit route or proximity to transit stop	On transit route	5	Scored based on transit route and buffer from transit stops (<i>Bus_routes.shp</i> and <i>Transit_Stops.shp</i>).
	Not on transit route but ≤ 100 m from bus stop	4	
	Not on a transit route and 101 – 200 m from bus stop	3	Every transit trip begins and ends with a walking trip to/from the transit stop. It is essential to provide good connectivity to the transit network to encourage safe and efficient transit use.
	Not on a transit route and 201 – 300 m from bus stop	2	
	Not on a transit route and 301 – 400 m from bus stop	1	
	Not on a transit route and > 400 m from bus stop	0	
Proximity to major pedestrian facilities	Adjacent to facility	5	Scored based on buffer from town facilities which include libraries, community centres, soccer pitches, field hockey, baseball and softball fields, leash free dog parks, pools, splash pads, skateboard parks, and playgrounds (<i>Town_Facilities.shp</i>).
	≤ 100 m from facility	4	
	101 – 200 m from facility	3	
	201 – 300 m from facility	2	These types of facilities often attract/generate pedestrian trips.
	301 – 400 m from facility	1	
	> 400 m from facility	0	
Multi-use trail or major trail facility crossing	Yes	5	Scored based on trail network (<i>Trails.shp</i>).
	No	0	Users of these facilities are often unwilling to detour out of their way to the nearest controlled crossing location so it is beneficial to provide direct trail connectivity.
Proximity to nearest controlled crossing opportunity	> 300 m	5	Scored based on buffers from signalized intersections, 4-way stops, and existing PXOs (<i>All_Way_Stops.shp</i> and <i>Transport_signal.shp</i>).
	251 – 300 m	3	
	201 – 250 m	1	
	≤ 200 m	0	OTM Book 15 states that sites that are greater than 200 m from the closest traffic control device are candidates for pedestrian crossing control. Sites less than 200 m from another traffic control device should only be installed if the location is on a pedestrian desire line.
Demand			
Community request	Identified by community	5	Based on locations identified by the town and residents (<i>All_Request_Locations.shp</i>).
	Not identified	0	

TABLE F.1 DETAILED PRIORITY CRITERIA AND WEIGHTING

Data Field	Categories	Score	Data Source and Rationale
Land use (Livable Oakville Plan)	Low density residential	1	Scored based on highest value of adjacent land use (<i>Zoning_ByLaw_201414.shp</i>).
	Medium density residential	4	
	High density residential	5	
	Neighbourhood commercial	3	Pedestrian volumes are not readily available throughout the network. The land use serves as a surrogate measure of expected pedestrian use in the area.
	Community commercial	3	
	Core commercial	5	
	Institutional	5	
	Office employment	4	
	Business employment	4	
	Business commercial	3	
	Growth area	3	
Safety			
Pedestrian collision history (5 years)	≥ 1 pedestrian collisions	5	Scored based on historical pedestrian collision locations (<i>Ped_Collisions_Halton.shp</i> and <i>Ped_Collisions_Oakville.shp</i>). Locations that have experienced past collisions trigger the evaluation of a site and may increase the need to provide safer crossing opportunities.
Road Class	Multi-purpose arterial/major arterial	5	Scored based on the road class identified in the roads shapefile (<i>Road_Segments.shp</i>).
	Minor arterial	4	
	Major collector/commercial collector/industrial arterial	3	Road class is used as a surrogate measure for both traffic volume and crossing distance. For a given cross-section, approach speed, and pedestrian walking speed, higher traffic volumes decrease the available crossing opportunities, which increases pedestrian delay. Crossing distance (expressed in terms of number of lanes) has an impact on the likelihood of a pedestrian collision, particularly on roads with higher traffic volumes. The wider the crossing distance, the more difficult it is for pedestrians to safely cross the street. A concern with wider cross-sections is the multi-threat situations that are created by multilane roads.
	Minor collector	2	
	Local	1	
Posted speed limit	60 km/h	5	Scored based on posted speed limit in roads shapefile (<i>Road_Segments.shp</i>).
	50 km/h	3	Vehicle speed influences collision severity, so it is additionally critical to provide safe crossing opportunities on higher speed roadways.
	40 km/h	1	

Appendix G

Prioritization of Candidate Crossing Locations on Oakville Roadways

This Appendix comprises **Table G.1**, which presents the prioritization score, and **Figure G.1**, which illustrates the location of each candidate crossing location in Oakville. This information should be used in conjunction with the guidance provided in this entire report. Although this prioritization score is critical for developing an objective and quantifiable initial priority list, there are other factors that are considered when finalizing the selection of locations (e.g., coordination with other planned roadway projects, site investigation to select exact crossing location, and site-specific installation costs). Additionally, it must be recognized that the prioritized scores will change in future years as Oakville grows and the transportation network changes (e.g., implementation of new nearby PXOs, new transit routes, changes in roadway characteristics, changes to surrounding built environment).

TABLE G.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity						Demand		Safety			
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
1	95	LAKESHORE RD W/Bronte Athletic Park Walk	Midblock	42	12	4	0	5	4	0	0	5	5	0	4	3
2	99	2170 Marine Drive	Midblock	41	15	0	0	3	1	0	5	5	5	0	4	3
3	21	WESTOAK TRAILS BLVD/East Fourteen Mile Creek Trail West Bank (east of ASHMORE DR)	Midblock	39	0	8	2	5	3	5	5	5	0	0	3	3
3	53	1400 Block NOTTINGHILL GATE	Midblock	39	9	2	5	4	4	0	0	5	3	0	4	3
3	103	ELM RD/SIXTH LINE	At Intersection	39	0	8	4	5	3	0	3	5	4	0	4	3
6	17	CALLOWAY DR/WESTOAK TRAILS BLVD	At Intersection	37	3	8	0	5	4	5	0	5	1	0	3	3
6	108	1400 Block SIXTH LINE	Midblock	37	0	6	4	5	3	0	3	0	4	5	4	3

TABLE G.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity						Demand		Safety			
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
8	6	COLONEL WILLIAM PKY/STOCKSBRIDGE AVE	At Intersection	36	0	6	0	5	3	5	5	5	1	0	3	3
8	8	2500 Block GRAND OAK TRAIL	Midblock	36	0	10	0	2	2	5	3	5	3	0	3	3
8	55	PILGRIMS WAY/Glen Abbey Trail (east of PINEWAY CRT)	Midblock	36	0	10	0	0	3	5	5	5	4	0	3	1
8	57	PILGRIMS WAY/Taplow Creek Trail West Side (east of WINDRUSH DR)	Midblock	36	9	0	2	5	3	5	1	5	0	0	3	3
8	126	1300 Block WHITE OAKS BLVD	Midblock	36	9	0	2	5	3	0	1	5	5	0	3	3
13	81	MUNN'S AVE/Munn's Creek Trail West Bank (north of RIMMINGTON DR)	Midblock	35	0	6	0	5	3	5	5	5	1	0	2	3
14	20	2200 Block ASHMORE DR	TWSC	34	0	8	2	5	2	0	5	0	1	5	3	3
14	49	RIVER GLEN BLVD/Shannon Creek Trail	Midblock	34	0	10	0	5	4	5	0	5	1	0	3	1
14	90	LAKESHORE RD W (east of Nelson St)	Midblock	34	6	4	0	5	3	0	0	0	4	5	4	3
14	127	MCCRAINEY ST/SEWELL DR	At Intersection	34	6	4	1	5	0	5	1	5	1	0	3	3
18	25	PINE GLEN RD/NEWCASTLE CRES	At Intersection	33	6	4	0	5	3	0	1	5	3	0	3	3
18	77	SOVEREIGN ST/BRONTE RD	At Intersection	33	12	0	0	5	0	0	0	5	4	0	4	3
18	87	HIXON ST/Donovan Bailey Park Walk	Midblock	33	0	10	0	1	4	5	5	5	1	0	1	1
21	11	COLONEL WILLIAM PKY/Colonel William Pond Walk	Midblock	32	0	4	0	5	5	5	1	5	1	0	3	3
21	12	COLONEL WILLIAM PKY/Colonel Williams Trail	Midblock	32	0	4	0	5	4	5	3	5	0	0	3	3
21	28	THIRD LINE/Crosstown Heritage Trail	Midblock	32	3	4	0	5	1	5	0	5	0	0	4	5

TABLE G.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity						Demand		Safety			
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
21	101	Morrison Valley North Trail East Bank	Midblock	32	3	0	0	5	4	5	0	5	4	0	3	3
21	117	1200 Block MONTCLAIR DR	Midblock	32	0	10	5	3	4	0	0	0	3	5	1	1
21	129	100 Block SPEERS RD	Midblock	32	0	8	0	5	1	0	0	0	3	5	5	5
21	135	200 Block MAURICE DR	Midblock	32	0	8	0	5	2	0	3	0	4	5	2	3
21	139	200 Block REBECCA ST	Midblock	32	0	4	5	5	3	0	0	5	3	0	4	3
21	163	SIR DAVID DR/Clearview Park Walk (north of GREENWOOD CRES)	At Intersection	32	0	6	0	2	4	5	5	5	1	0	1	3
30	9	Colonel William Pond Walk	Midblock	31	0	6	0	5	3	5	0	5	1	0	3	3
30	27	PINE GLEN RD/NEWCASTLE CRES	TWSC	31	0	8	0	5	4	0	0	0	3	5	3	3
30	158	WYNTEN WAY/Avonhead Ridge Trail	Midblock	31	0	6	0	5	3	5	3	5	0	0	1	3
33	24	KINGSRIDGE DR/McCraney Creek Trail	Midblock	30	0	10	0	2	2	5	3	5	1	0	1	1
33	54	Sixteen Mile Creek Heritage Trail West Bank	Midblock	30	0	4	0	5	4	5	0	5	1	0	3	3
33	59	Pilgrims Way & Cottonwood Crescent	Midblock	30	0	10	0	1	4	0	5	0	4	0	3	3
33	82	Munn's Creek Trail East Bank	Midblock	30	0	4	0	5	3	5	3	5	0	0	2	3
33	92	GATWICK DR/PARKHAVEN BLVD	TWSC	30	6	4	0	3	2	0	0	0	4	5	3	3
33	97	RIVER OAKS BLVD E/Pelee Woods Park Walk	At Intersection	30	0	4	0	5	4	5	1	5	1	0	2	3
33	130	QUEENS AVE/PARKHILL RD	TWSC	30	9	4	0	3	1	0	3	0	1	5	1	3
33	133	STEWART ST/MAURICE DR	Midblock	30	0	10	0	5	2	0	5	0	3	0	2	3
33	144	400 Block IROQUOIS SHORE RD	Midblock	30	0	8	0	5	0	0	0	0	4	5	5	3

TABLE G.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity							Demand		Safety		
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
42	32	HERITAGE WAY/Glen Abbey Trail	Midblock	29	0	2	0	5	1	5	5	5	0	0	3	3
42	62	1200 Block HEDGESTONE CRES	Midblock	29	9	0	2	3	2	0	0	0	4	5	1	3
42	69	MONASTERY DR/Glen Oak Creek Trail	Midblock	29	6	0	0	5	1	5	0	5	1	0	3	3
42	72	NOTTINGHILL GATE/Glen Abbey Trail	Midblock	29	0	2	0	1	4	5	5	5	0	0	4	3
42	88	RIVER OAKS BLVD W/Munn's Creek Trail West Bank	Midblock	29	0	6	0	5	3	5	0	5	0	0	2	3
42	89	Munn's Creek Trail East Bank	Midblock	29	0	6	0	5	3	5	0	5	0	0	2	3
42	104	MCCRANEY ST W/Oakdale Park Walk	Midblock	29	0	2	1	2	3	5	5	5	1	0	2	3
42	110	MILLER RD/SIXTH LINE	TWSC	29	0	4	4	5	3	0	0	0	1	5	4	3
42	123	College Park Walk	Midblock	29	0	2	5	3	0	5	0	5	5	0	1	3
42	150	TRAFALGAR RD/Sixteen Mile Creek Heritage Trail East Bank	Midblock	29	6	6	0	3	1	0	0	0	1	5	4	3
42	152	200 Block ALLAN ST	Midblock	29	9	4	0	2	2	0	3	0	1	5	2	1
42	157	KINGSWAY DR/Avonhead Ridge Trail	Midblock	29	0	4	0	4	4	5	1	5	0	0	3	3
54	4	COLONEL WILLIAM PKY/Crosstown Heritage Trail	Midblock	28	0	2	0	5	4	5	1	5	0	0	3	3
54	35	2200 Block FOURTH LINE	Midblock	28	0	4	0	1	4	5	5	5	0	0	1	3
54	39	Sixteen Mile Dr/George Savage Ave	At Intersection	28	0	10	0	1	0	0	5	5	1	0	3	3
54	42	McCraney Creek Trail East Side	Midblock	28	0	0	4	5	3	5	0	5	0	0	3	3
54	65	BRIDGE RD/Donovan Bailey Park Walk	Midblock	28	0	6	0	5	2	5	0	5	0	0	2	3

TABLE G.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity							Demand		Safety		
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
54	73	PILGRIMS WAY/McCraney Creek Trail East Side	Midblock	28	0	0	0	5	2	5	5	5	0	0	3	3
54	96	1000 Block SPEERS RD	Midblock	28	0	2	0	5	1	0	5	0	0	5	5	5
54	102	200 Block NORTH SERVICE RD W	Midblock	28	0	0	0	5	3	0	1	0	5	5	4	5
54	105	RIVER OAKS BLVD/MEADOWLAND DR	At Intersection	28	0	4	0	5	3	5	0	5	1	0	2	3
54	106	WOOD PL/Brook Valley Park Walk Access	Midblock	28	0	8	0	2	2	5	1	5	1	0	1	3
54	115	SALCOME DR/North Ridge Park Walk	Midblock	28	0	6	0	3	4	5	0	5	1	0	1	3
54	120	BURTON RD/REBECCA ST	At Intersection	28	0	4	1	5	0	0	5	5	1	0	4	3
54	137	400 Block KERR ST	Midblock	28	0	6	0	5	3	0	0	0	4	5	2	3
54	145	EIGHTH LINE/Morrison-Wedgewood Channel Walk	Midblock	28	0	6	0	5	0	5	0	5	0	0	4	3
68	19	Westoak Trails Blvd & St. Joan of Arc Catholic Elementary School	Midblock	27	0	10	1	5	3	0	3	0	1	0	3	1
68	22	POSTMASTER DR/Crosstown Heritage Trail	Midblock	27	0	6	0	3	2	5	0	5	0	0	3	3
68	29	WEEPING WILLOW DR/Pine Glen Park Access	At Intersection	27	3	6	0	2	3	0	3	5	1	0	1	3
68	30	WEST HAM RD/LIVERPOOL ST	At Intersection	27	3	2	0	2	2	5	3	5	1	0	1	3
68	41	SANDPIPER RD/Glen Oak Creek Trail East Bank	Midblock	27	0	6	1	3	2	5	0	5	1	0	1	3
68	43	CREEK PATH AVE/Sheldon Creek Trail North Side	Midblock	27	0	0	0	4	2	5	5	5	1	0	2	3
68	45	GROVEHILL RD/Shannon Creek Trail	Midblock	27	0	6	0	3	3	5	1	5	0	0	1	3
68	86	MUNN'S AVE/Crosstown Heritage Trail	Midblock	27	0	6	2	2	3	5	0	5	0	0	1	3

TABLE G.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity						Demand		Safety			
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
68	98	MCCRANEY ST W/Sixteen Mile Creek Heritage Trail East Bank	Midblock	27	0	8	0	2	3	5	1	5	0	0	0	3
68	113	300 Block WYECROFT RD	Midblock	27	0	0	0	5	0	0	5	5	4	0	5	3
68	164	WYNTEN WAY/Avonhead Ridge Trail	Midblock	27	0	4	0	1	2	5	5	5	1	0	1	3
79	26	PARKGLEN AVE/Crosstown Heritage Trail	Midblock	26	0	6	0	3	2	5	1	5	0	0	1	3
79	48	Sixteen Mile Dr/Preserve Dr	At Intersection	26	0	6	0	1	2	0	5	5	1	0	3	3
79	50	BUENA VISTA CRT/GREAT LAKES BLVD	At Intersection	26	0	0	0	5	4	0	5	5	1	0	3	3
79	60	Sixteen Mile Dr/Colton Way	At Intersection	26	0	6	0	0	3	0	5	5	1	0	3	3
79	78	300 Block STANFIELD DR	Midblock	26	0	8	0	1	4	0	3	5	1	0	1	3
79	83	SIXTH LINE/Crosstown Heritage Trail	Midblock	26	0	0	3	3	3	5	0	5	0	0	4	3
79	84	MARGOT ST/MADDEN BLVD	At Intersection	26	0	4	0	3	3	5	1	5	1	0	1	3
79	107	PRINCE MICHAEL/CRAIGLEITH	Midblock	26	0	4	0	2	1	0	3	5	5	0	3	3
79	148	NORTH FORSTER PARK DR/Forster Park Walk	Midblock	26	0	4	0	0	4	5	3	5	1	0	1	3
79	156	1300 Block WINTERBOURNE DR	Midblock	26	0	2	0	1	3	5	5	5	1	0	1	3
79	159	WILL SCARLETT DR/Kingsway Park Access	Midblock	26	0	4	0	3	3	5	1	5	1	0	1	3
79	162	LAKESHORE/MORRISON	TWSC	26	0	6	0	0	2	0	5	0	1	5	4	3
79	167	DOGWOOD CRES/Jonathan Park Walk	At Intersection	26	0	0	0	3	3	5	5	5	1	0	1	3
92	1	COLONEL WILLIAM PKY/Fourteen Mile Creek Trail	Midblock	25	0	0	0	5	0	5	0	5	4	0	3	3

TABLE G.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity							Demand		Safety		
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
92	10	RICHVIEW BLVD/Fourteen Mile Creek Trail West Bank	Midblock	25	0	6	0	2	1	5	0	5	0	0	3	3
92	47	GREAT LAKES BLVD/Creek Path Pond Walk	Midblock	25	0	0	0	5	4	0	5	5	0	0	3	3
92	52	LEVANNA LANE/Neyagawa Park Walk Access	Midblock	25	0	2	0	3	4	5	1	5	1	0	1	3
92	61	REBECCA ST/Bronte Creek Heritage Trail	Midblock	25	0	0	0	5	2	5	0	5	1	0	4	3
92	63	VANGUARD CRES/BRIDGE RD	At Intersection	25	0	0	0	5	3	5	1	5	1	0	2	3
92	80	PILGRIMS WAY/RUSHBROOKE DR	TWSC	25	0	6	0	5	2	0	0	0	1	5	3	3
92	100	Oxford Avenue & Oakdale Drive	Midblock	25	0	10	0	5	4	0	0	0	1	0	2	3
92	111	NICHOLS DR/Postridge Park Access	Midblock	25	3	0	0	3	3	5	1	5	1	0	1	3
92	116	SIXTH/SEWELL	TWSC	25	0	0	1	5	1	0	5	0	1	5	4	3
92	142	LAKESHORE RD W/HOLYROOD AVE	Midblock	25	0	2	5	2	3	0	0	5	1	0	4	3
92	160	Wynten Way & Gable Drive	Midblock	25	0	6	0	5	4	0	5	0	1	0	1	3
92	166	Avonhead Ridge Trail	Midblock	25	0	0	0	2	3	5	5	5	1	0	1	3
92	170	2300 Block ROYAL WINDSOR DR	Midblock	25	0	0	0	5	0	0	5	0	0	5	5	5
92	172	FORD DR/South Joshua's Creek Heritage Trail	Midblock	25	0	0	0	5	2	5	0	5	1	0	4	3
92	173	DIGBIE RD/CHEVERIE ST	At Intersection	25	0	0	0	2	3	5	5	5	1	0	1	3
108	3	2300 Block CHATEAU COMMON	Midblock	24	0	2	0	2	2	5	1	5	4	0	0	3
108	5	STOCKSBRIDGE AVE/Colonel Williams Trail	Midblock	24	0	4	0	4	2	0	5	5	0	0	1	3
108	36	RIDGE LANDING/Crosstown Heritage Trail	Midblock	24	0	2	0	1	2	5	5	5	0	0	1	3

TABLE G.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity						Demand		Safety			
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
108	37	BRAYS LANE/Brays Trail	Midblock	24	0	6	0	3	1	5	0	5	0	0	1	3
108	56	RIVER GLEN BLVD/Munn's Creek Trail East Bank	Midblock	24	0	2	0	5	1	5	0	5	0	0	3	3
108	67	Shannon Creek Trail East Side	Midblock	24	0	0	0	5	0	5	5	5	0	0	1	3
108	75	LAKESHORE RD W/Bronte Creek Trail	Midblock	24	6	0	0	5	0	0	1	0	0	5	4	3
108	85	Hixon Street & Vance Drive	Midblock	24	0	10	0	1	3	0	5	0	1	0	1	3
108	136	Bayshire Drive & St. Marguerite Catholic Elementary School	Midblock	24	0	10	0	2	3	0	3	0	1	0	2	3
108	143	Grosvenor Street & Kimberley Drive	Midblock	24	0	8	0	5	4	0	1	0	1	0	2	3
118	2	COLONEL WILLIAM PKY/STALYBRIDGE DR	At Intersection	23	0	0	0	5	0	5	1	5	1	0	3	3
118	7	VALLEYRIDGE DR/Crosstown Heritage Trail	Midblock	23	0	0	0	3	2	5	3	5	0	0	2	3
118	51	River Glen Boulevard & Our Lady of Peace School Catholic Elementary School	Midblock	23	0	10	0	5	3	0	0	0	1	0	3	1
118	66	TOWNE BLVD/Shannon Creek Trail West Side	Midblock	23	0	0	0	5	0	5	3	5	1	0	1	3
118	68	HOWELL RD/Harman Gate Park Walk	Midblock	23	0	0	1	1	2	5	5	5	0	0	1	3
118	79	Munn's Avenue & River Oaks Public School	Midblock	23	0	10	0	5	4	0	0	0	1	0	2	1
118	93	RIVER OAKS BLVD E/Nipegon Trail North Bank	Midblock	23	0	2	0	5	1	5	0	5	0	0	2	3
118	112	PONDVIEW PL/Morrison Valley North Trail Access	Midblock	23	0	0	0	1	2	5	5	5	1	0	1	3
118	114	STEPHENS CRES/FOURTH LINE	TWSC	23	0	6	0	4	2	0	0	0	1	5	2	3

TABLE G.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS

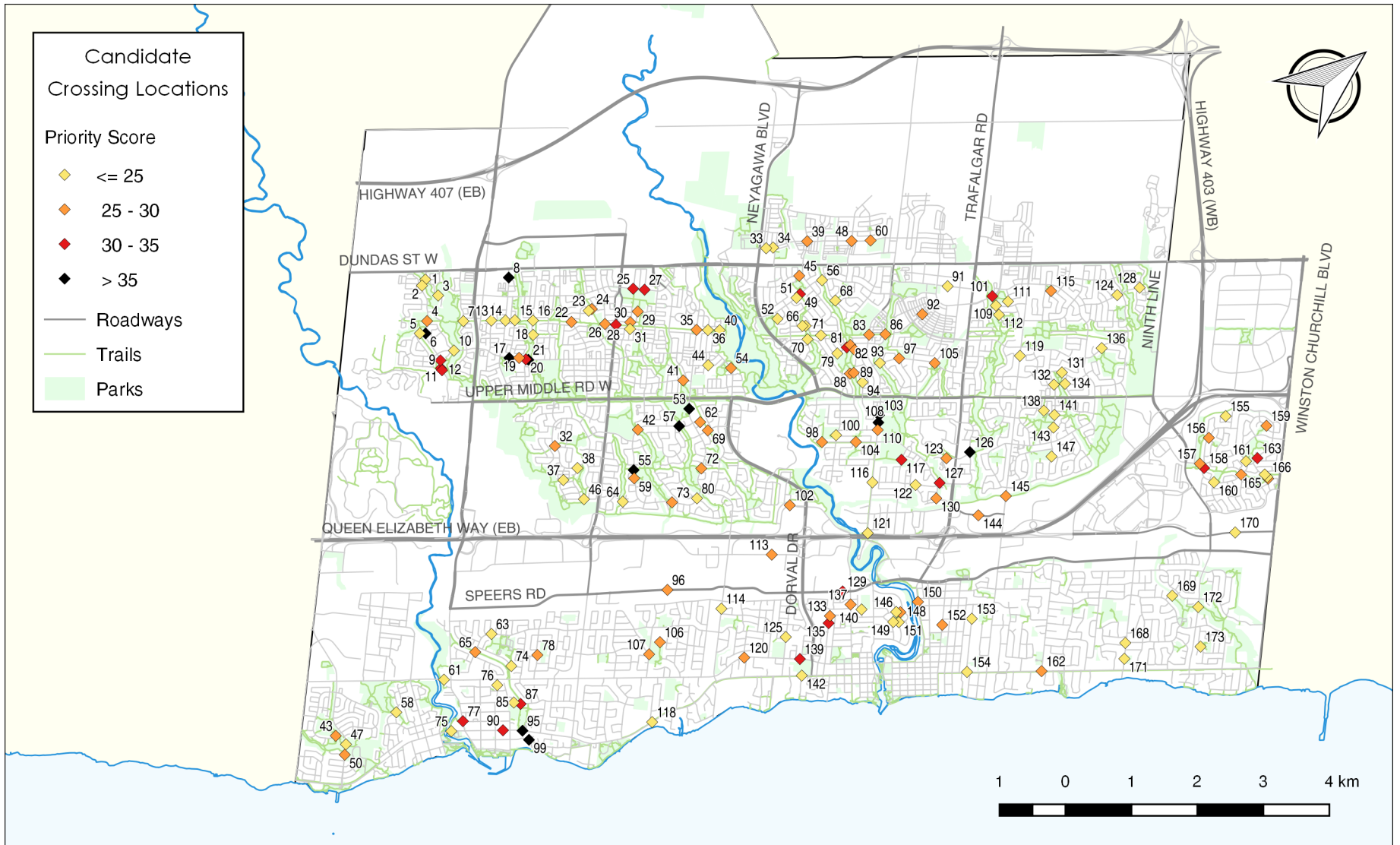
Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity							Demand		Safety		
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
118	125	Morden Road & St. James School	Midblock	23	0	10	1	3	3	0	0	0	1	0	2	3
118	132	Valleybrook Park Access	Midblock	23	0	0	0	3	3	5	1	5	1	0	2	3
118	134	CREEKSIDE DR/CREEKSIDE DR	At Intersection	23	0	0	0	2	3	5	3	5	1	0	1	3
118	138	Lancaster Drive & Sheridan Public School	Midblock	23	0	8	0	5	3	0	3	0	0	0	1	3
118	146	NORTH FORSTER PARK DR/Forster Park Walk	At Intersection	23	0	2	0	1	4	5	1	5	1	0	1	3
118	147	Grosvenor Street & Grange Road	Midblock	23	0	10	0	2	4	0	1	0	1	0	2	3
118	161	WYNTEN WAY/Clearview Park Walk	Midblock	23	0	6	0	3	4	0	0	5	1	0	1	3
118	169	BROOKMILL RD/Joshua Valley Park Walk	Midblock	23	0	0	0	3	0	5	5	5	1	0	1	3
135	14	GRAND OAK TRAIL/Crosstown Heritage Trail	Midblock	22	0	0	0	1	0	5	5	5	0	0	3	3
135	18	ADIRONDAK TRAIL/East Fourteen Mile Creek Trail East Bank Access	Midblock	22	0	0	0	1	3	5	3	5	1	0	1	3
135	64	ABBEYWOOD DR/Glen Abbey Trail East Side	Midblock	22	0	0	0	5	0	5	1	5	0	0	3	3
135	71	MCDOWELL AVE/Crosstown Heritage Trail	Midblock	22	0	2	0	5	1	5	0	5	0	0	1	3
135	94	2000 Block ELM RD	Midblock	22	0	4	0	3	4	0	1	0	1	5	1	3
135	109	RAVINEVIEW WAY/Postridge Park Access	Midblock	22	0	0	0	2	4	5	1	5	1	0	1	3
135	151	OAKWOOD CRES/Forster Park Walk	At Intersection	22	0	2	0	0	4	5	1	5	1	0	1	3
142	15	CALLOWAY DR/Crosstown Heritage Trail	Midblock	21	0	0	0	1	1	5	5	5	0	0	1	3
142	34	Sixteen Mile Dr/Gladeside Ave	At Intersection	21	0	0	0	1	1	0	5	5	3	0	3	3
142	38	Heritage Way & White Lane	Midblock	21	0	8	0	5	1	0	0	0	1	0	3	3

TABLE G.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity						Demand		Safety			
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
142	40	SHELTERED OAK CRT/Crosstown Heritage Trail	Midblock	21	0	0	0	1	1	5	5	5	0	0	1	3
142	46	BRAYS LANE/Langtry Park Walk	Midblock	21	0	0	0	2	2	5	3	5	0	0	1	3
142	70	RIVER OAKS BLVD/WINDING WOODS DR	At Intersection	21	0	0	0	5	0	5	0	5	1	0	2	3
142	76	200 Block VILMA DR	Midblock	21	0	4	0	3	4	0	0	0	1	5	1	3
142	119	2000 Block EIGHTH LINE	Midblock	21	0	0	1	5	2	0	0	0	1	5	4	3
142	131	VALLEYBROOK DR/PINEVIEW DR	At Intersection	21	0	0	1	1	4	5	0	5	1	0	1	3
142	141	Grosvenor Street & Lancaster Drive	Midblock	21	0	6	0	5	3	0	3	0	1	0	2	1
142	171	100 Block MAPLE GROVE DR	Midblock	21	0	0	0	0	5	0	5	0	1	5	2	3
153	23	Kingsridge Drive & Pope John Paul II Catholic Elementary School	Midblock	20	0	8	0	2	2	0	3	0	1	0	1	3
153	33	Sixteen Mile Dr/Robert Brown Blvd	At Intersection	20	0	0	0	2	1	0	3	5	3	0	3	3
153	91	100 Block HAYS BLVD	Midblock	20	3	0	0	3	0	0	0	0	3	5	3	3
153	121	NORTH SERVICE RD E/Sixteen Mile Creek Heritage Trail East Bank	Midblock	20	0	0	0	2	0	5	3	5	0	0	2	3
153	122	Sewell Drive & Queens Avenue	Midblock	20	0	10	1	1	3	0	0	0	1	0	1	3
153	149	SOUTH FORSTER PARK DR/Forster Park Walk	Midblock	20	0	0	0	1	4	5	0	5	1	0	1	3
153	165	JONATHAN DR/SYCAMORE ST	At Intersection	20	0	0	0	2	3	0	5	5	1	0	1	3
160	44	Westview Terrace & Mother Teresa Catholic Elementary School	Midblock	19	0	8	0	3	2	0	0	0	4	0	1	1
160	74	YOLANDA DR/Donovan Bailey Park Walk Access	Midblock	19	0	0	0	2	2	5	0	5	1	0	1	3

TABLE G.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity						Demand		Safety			
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
160	118	LAKESHORE RD/SANDWELL DR	At Intersection	19	0	0	1	0	0	0	5	5	1	0	4	3
160	128	1500 Block ARROWHEAD RD	Midblock	19	0	2	0	0	2	0	5	0	1	5	1	3
160	140	Bartos Drive & Oakwood Public School	Midblock	19	0	10	0	3	3	0	0	0	1	0	1	1
160	154	Lakeshore Road East & Balsam Drive	Midblock	19	0	6	0	0	2	0	3	0	1	0	4	3
166	16	Crosstown Heritage Trail	Midblock	18	0	0	0	1	2	5	1	5	0	0	1	3
166	31	PINECLIFF RD/GROUSE LANE	At Intersection	18	0	0	0	2	2	0	1	5	4	0	1	3
166	58	CHALMERS ST/Chalmers Park Walk	Midblock	18	0	0	0	0	2	5	1	5	1	0	1	3
169	124	Arrowhead Road & Bon Echo Drive	Midblock	17	0	8	0	0	3	0	0	0	1	0	2	3
170	13	BARONWOOD DR/Crosstown Heritage Trail	Midblock	16	0	0	0	2	0	5	0	5	0	0	1	3
171	153	200 Block BALSAM DR	Midblock	15	0	0	0	1	3	0	1	0	1	5	1	3
171	168	Maple Grove Drive & Elmhurst Avenue	Midblock	15	0	2	0	0	2	0	5	0	1	0	2	3
173	155	2600 Block HARDY CRES	Midblock	13	0	0	0	1	1	0	1	0	1	5	1	3



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Map of Candidate Crossing Locations

Appendix H

Prioritization of Candidate Crossing Locations on Halton Region Roadways

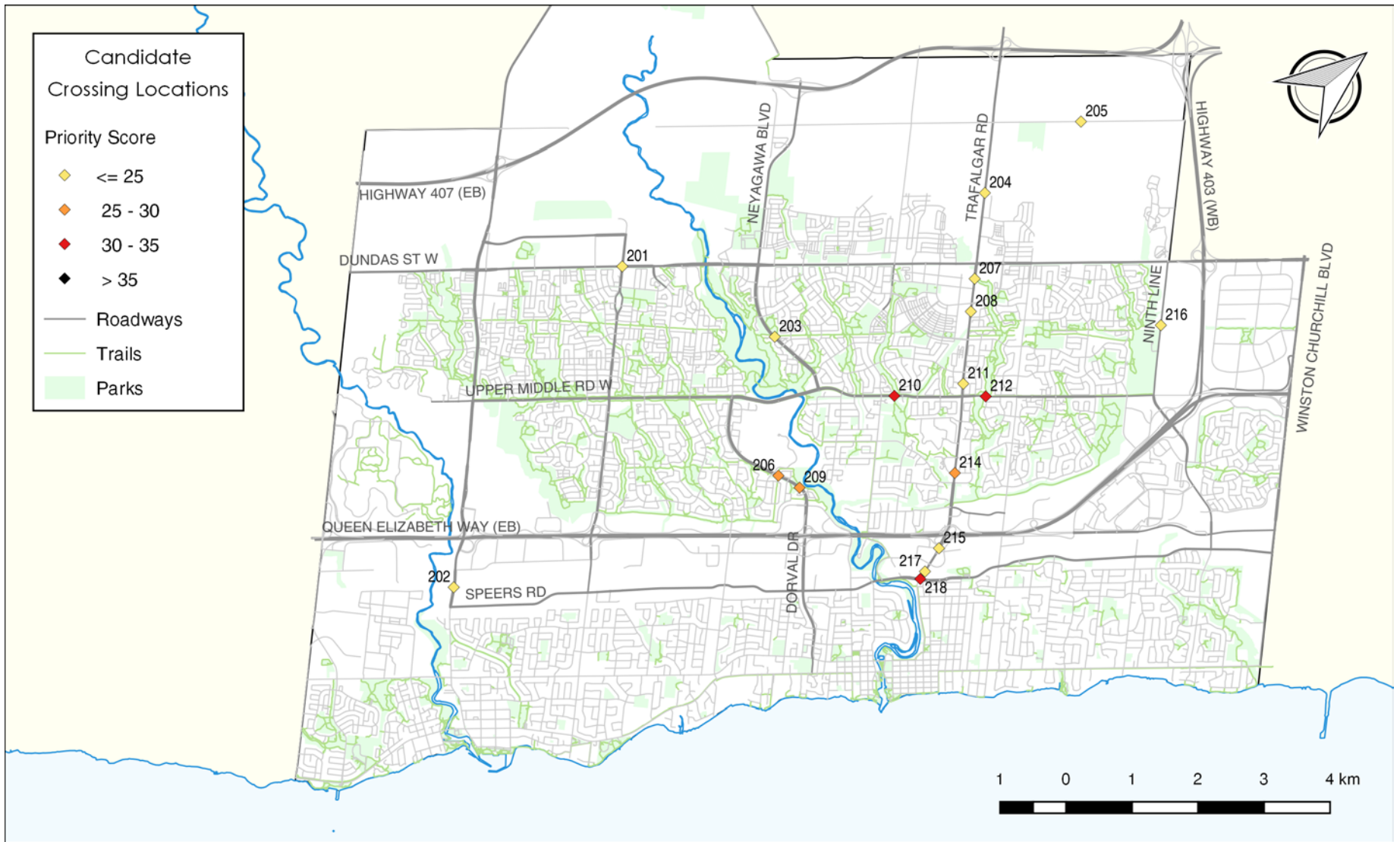
This Appendix comprises **Table H.1**, which presents the prioritization score, and **Figure H.1**, which reveals the location of each candidate crossing location that falls under Halton Region jurisdiction. This information should be used in conjunction with the guidance provided in this entire report. Although this prioritization score is critical for developing an objective and quantifiable initial priority list, there are other factors that are considered when finalizing the selection of locations (e.g., coordination with other planned roadway projects, site investigation to select exact crossing location, and site-specific installation costs). Additionally, it must be recognized that the prioritized scores will change in future years as Oakville grows and the transportation network changes (e.g., implementation of new nearby PXOs, new transit routes, changes in roadway characteristics, changes to surrounding built environment).

TABLE H.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS ON HALTON REGION ROADWAYS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity						Demand		Safety			
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
1	210	UPPER MIDDLE RD E/McCrane Valley Trail	Midblock	35	0	6	1	5	3	5	0	5	0	0	5	5
2	212	UPPER MIDDLE RD E/Interprovincial Pipeline Trail	Midblock	32	0	0	0	5	1	5	5	5	1	0	5	5
2	218	TRAFALGAR RD/CORNWALL RD	At Intersection	32	9	0	0	5	0	0	0	5	3	0	5	5
4	206	Wildwoods Park Trail	Midblock	29	0	2	0	5	2	5	0	5	0	0	5	5
5	209	DORVAL DR/Wildwoods Park Trail	Midblock	28	0	0	0	5	3	5	0	5	0	0	5	5
6	214	LYNNWOOD DR/TRAFALGAR RD	Midblock	27	0	0	2	5	0	0	0	5	5	0	5	5
7	201	THIRD LINE/DUNDAS ST W	At Intersection	25	9	0	0	5	1	0	0	5	0	0	5	0

TABLE H.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS ON HALTON REGION ROADWAYS

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity							Demand		Safety		
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
7	203	NEYAGAWA BLVD/Crosstown Trail	Midblock	25	0	0	0	2	3	5	0	5	0	0	5	5
9	217	400 Block TRAFALGAR RD	Midblock	24	6	0	0	5	0	0	0	5	0	0	5	3
10	202	600 Block BRONTE RD	Midblock	23	0	0	0	5	0	0	3	0	0	5	5	5
10	208	2300 Block TRAFALGAR RD	Midblock	23	0	0	0	5	0	0	0	0	3	5	5	5
12	216	2100 Block NINTH LINE	Midblock	22	0	0	0	0	0	0	5	0	4	5	5	3
13	211	200 Block OLD ORCHARD CIR	Midblock	21	0	0	0	5	0	0	0	0	1	5	5	5
14	207	2600 Block TRAFALGAR RD	Midblock	20	0	0	0	5	0	0	0	0	0	5	5	5
15	204	3200 Block TRAFALGAR RD	Midblock	18	0	0	0	0	0	0	5	0	0	5	5	3
15	215	ARGUS RD/TRAFALGAR RD	TWSC	18	0	0	0	5	0	0	0	0	0	5	5	3
17	205	400 Block BURNHAMTHORPE RD E	Midblock	17	0	0	0	0	0	0	5	0	0	5	2	5



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Map of Candidate Crossing Locations on Halton Region Roadways

Appendix I

Pedestrian Crossing Improvement Locations Near Existing Crossing Control

This Appendix comprises **Table I.1**, which presents the prioritization score and **Figure I.1**, which reveals the location of candidate pedestrian crossing improvement sites that are within 100 metres of an existing crossing control location. These sites are not likely to have PXOs implemented but may be candidates for other pedestrian safety improvements.

TABLE I.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS NEAR EXISTING CROSSING CONTROL

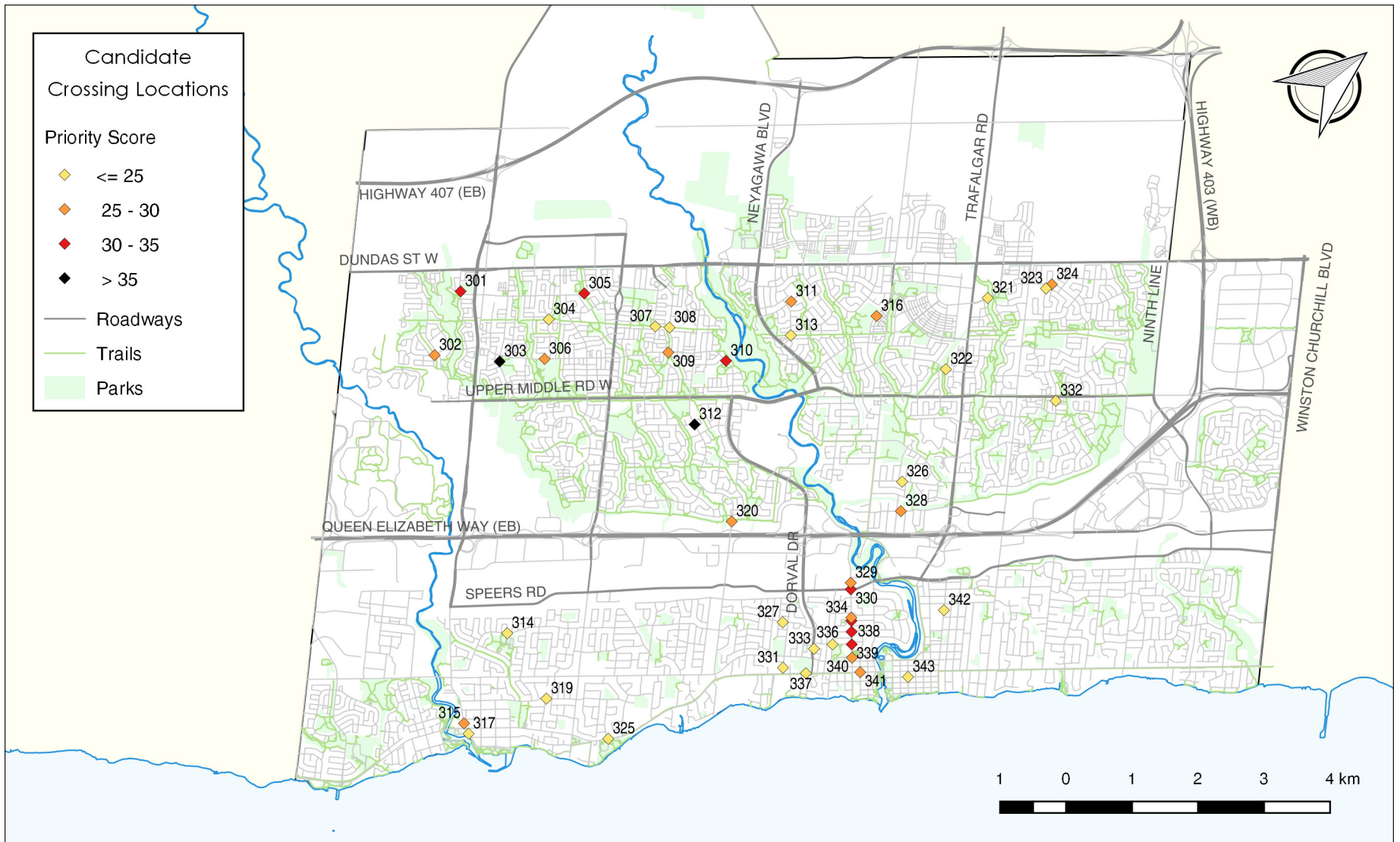
Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity						Demand		Safety			
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
1	303	GRAND OAK TRAIL/APPALACHAIN DR	At Intersection	42	6	8	0	4	4	5	0	5	4	0	3	3
2	312	NOTTINGHILL GATE (between Hedgestone Cres)	Midblock	38	12	0	2	5	3	0	0	0	4	5	4	3
3	339	KERR ST/DEANE AVE	TWSC	34	12	0	0	5	3	0	0	0	4	5	2	3
4	338	HERALD AVE/KERR ST	TWSC	33	9	2	0	5	3	0	0	0	4	5	2	3
5	305	PINE GLEN RD/McCraney Creek Trail	Midblock	32	0	6	0	5	4	5	0	5	1	0	3	3
5	310	2000 Block WESTOAK TRAILS BLVD	Midblock	32	0	6	0	5	4	5	0	5	1	0	3	3
5	335	WASHINGTON AVE/KERR ST	TWSC	32	6	4	0	5	3	0	0	0	4	5	2	3
8	301	2500 Block VALLEYRIDGE DR	Midblock	31	0	10	0	2	4	0	0	5	4	0	3	3
8	330	KERR ST/KERR ST	At Intersection	31	0	6	0	5	2	0	0	5	3	0	5	5
10	315	100 Block BRONTE RD	Midblock	30	9	0	0	5	0	0	0	0	4	5	4	3

TABLE I.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS NEAR EXISTING CROSSING CONTROL

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity						Demand		Safety			
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
11	324	NORTH RIDGE/FELHABER	TWSC	29	0	8	0	5	4	0	0	0	1	5	3	3
11	329	500 Block KERR ST	Midblock	29	0	6	0	5	2	0	0	0	3	5	5	3
11	334	300 Block KERR ST	Midblock	29	3	4	0	5	3	0	0	0	4	5	2	3
14	302	STOCKSBRIDGE AVE/Colonel Williams Trail	Midblock	28	0	8	0	4	2	5	0	5	0	0	1	3
14	316	THE GREENERY/SIXTH LINE	At Intersection	28	0	2	4	3	3	0	0	5	4	0	4	3
14	341	LAKESHORE RD W/WILSON ST	TWSC	28	6	0	0	2	3	0	0	0	5	5	4	3
17	306	HILLMOUNT DR/WESTOAK TRAILS BLVD	At Intersection	27	0	2	5	5	3	0	0	5	1	0	3	3
17	311	RIVER GLEN BLVD/MARLATT DR	TWSC	27	0	8	0	5	2	0	0	0	1	5	3	3
17	320	NOTTINGHILL GATE/Indian Ridge Trail	Midblock	27	0	2	0	5	1	5	0	5	0	0	4	5
17	340	100 Block KERR ST	Midblock	27	6	0	0	4	3	0	0	0	4	5	2	3
21	309	WESTOAK TRAILS BLVD/Glen Oak Creek Trail West Bank	Midblock	26	0	0	0	5	4	5	0	5	1	0	3	3
21	328	100 Block LEIGHLAND AVE	Midblock	26	0	6	0	5	2	0	0	0	1	5	4	3
23	314	2200 Block BRIDGE RD	Midblock	25	0	0	0	5	4	5	0	5	1	0	2	3
23	331	100 Block MORDEN RD	Midblock	25	0	6	3	3	2	0	0	0	1	5	2	3
25	321	POSTRIDGE DR/Morrison Valley North Trail West Bank	Midblock	24	0	0	0	5	3	5	0	5	0	0	3	3
25	322	RIVER OAKS BLVD E/Vineland Woods	Midblock	24	0	0	0	5	3	5	0	5	1	0	2	3
25	323	CORONATION DR/North Ridge Park Walk	Midblock	24	0	6	0	4	4	0	0	5	1	0	1	3

TABLE I.1 PRIORITIZATION SCORE FOR CANDIDATE CROSSING LOCATIONS NEAR EXISTING CROSSING CONTROL

Rank	Map ID	Location	Control	TOTAL SCORE	Connectivity							Demand		Safety		
					Prox Senior	Prox Elementary	Prox Secondary	Prox Transit	Prox Major Ped	Is Trail	Prox Exist Xing	Community Request	Land Use	Collision History	Road Class	Speed Limit
25	327	300 Block WILDWOOD DR	Midblock	24	0	6	0	5	2	0	0	0	1	5	2	3
25	333	DORVAL DR/NA	Midblock	24	0	2	3	3	2	0	0	0	1	5	5	3
30	308	PROUDFOOT TRAIL/Crosstown Heritage Trail	Midblock	23	0	0	0	5	1	5	0	5	0	0	4	3
31	317	70 BRONTE RD	Midblock	22	3	0	0	4	1	0	0	0	4	5	2	3
31	337	200 Block LAKESHORE RD W	Midblock	22	0	0	5	2	3	0	0	0	0	5	4	3
31	342	300 Block ALLAN ST	Midblock	22	6	4	0	3	0	0	0	0	1	5	2	1
31	343	ROBINSON/GEORGE	At Intersection	22	0	0	0	2	5	0	0	5	5	0	2	3
35	326	100 Block SEWELL DR	Midblock	21	0	6	2	0	3	0	0	0	1	5	1	3
36	313	MOWAT AVE/Crosstown Heritage Trail	Midblock	20	0	0	0	5	1	5	0	5	0	0	1	3
36	319	SOLINGATE DR/HIXON ST	At Intersection	20	0	10	0	1	1	0	0	5	1	0	1	1
36	336	FELAN AVE/DEANE AVE	TWSC	20	3	0	1	2	4	0	0	0	1	5	1	3
39	304	STRATUS DR/Crosstown Heritage Trail	Midblock	19	0	0	0	1	4	5	0	5	0	0	1	3
39	307	OAKHAVEN DR/Crosstown Heritage Trail	Midblock	19	0	2	0	2	1	5	0	5	0	0	1	3
39	332	1500 Block GROSVENOR ST	Midblock	19	0	4	0	4	2	0	0	0	1	5	2	1
42	325	1400 Block LAKESHORE RD W	Midblock	17	0	0	0	0	4	0	0	5	1	0	4	3



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Map of Candidate Crossing Locations Near Existing Crossing Control

Appendix J


Profiles of Candidate Pedestrian Crossing Locations on Oakville Roadways

This Appendix provides a half-page profile of each candidate crossing location described in **Appendix G**. **Figure J-1** provides a legend of the information contained in the profiles. This material should be read in conjunction with Section 6 – Pedestrian Crossing Treatment Implementation Plan. The exact location and configuration of the proposed pedestrian crossing treatments will be verified and defined through further detailed field studies and design. Implementation will be subject to further detailed cost estimating and budget approval.

Recommended PXO Treatment indicates the PXO treatment selected and the estimated cost (Section 4.4). This is a preliminary estimate only and would need to be verified and updated as part of the annual implementation plan prior to installation.

PXO Treatment Rationale reveals the data collected to apply the PXO treatment selection criteria described in Section 4.2 of this report.

Priority Score Rationale indicates how the proposed location scored the connectivity, demand, and safety priority criteria described in Section 5 and summarized in Appendix F of this report.

LAKESHORE RD W/Bronte Athletic Park Walk		Map ID: 95
PXO Priority Score Rationale		
Connectivity	Senior Facility	12 /15
	School, Elementary	4 /10
	School, Secondary	0 /5
	Transt Service	5 /5
	Major Pedestrian Facility	4 /5
	Trail Intersection	0 /5
Dmd	Existing Crossing	0 /5
	Community Request	5 /5
	Land-Use Type	5 /5
Safety	Collision Location	0 /5
	Road Classification	4 /5
	Speed Limit	3 /5
	T Transit Service	42 /75
PXO Treatment Rationale		
Traffic count year:		2014
Daily traffic volume:		12,800
8-hr traffic volume:		6,400
Speed limit:		50 km/h
Raised refuge present:		no
<u># of Lanes</u>		
Existing Crossing		2
Parking:		1
Bike:		2
Recommended PXO Treatment		
PXO type:		Level 2 Type B
Cost estimate:		\$28,500.00
Candidate Crossing Location		
		


Candidate Location reveals a 2017, Google satellite image of the proposed pedestrian crossing treatment.

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Description of Proposed Pedestrian Crossing Location Profiles

COLONEL WILLIAM PKY/Fourteen Mile Creek Trail Map ID: 1


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	0	/10	Daily traffic volume:	3,800
	School, Secondary	0	/5	8-hr traffic volume:	1,900
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	0	/5	Raised refuge present:	no
Dmd	Trail Intersection	5	/5	<u># of Lanes</u>	
	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
Safety	Land-Use Type	4	/5	Bike:	2
	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		25	/75		



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COLONEL WILLIAM PKY/STALYBRIDGE DR Map ID: 2


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	0	/10	Daily traffic volume:	3,800
	School, Secondary	0	/5	8-hr traffic volume:	1,900
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	0	/5	Raised refuge present:	no
Dmd	Trail Intersection	5	/5	<u># of Lanes</u>	
	Existing Crossing	1	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
Safety	Land-Use Type	1	/5	Bike:	0
	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		23	/75		



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2300 CHATEAU COMMON Map ID: 3


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	2	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	2	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	1	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	4	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	0	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		24	/75		



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COLONEL WILLIAM PKY/Crosstown Heritage Trail Map ID: 4


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2012
	School, Elementary	2	/10	Daily traffic volume:	3,200
	School, Secondary	0	/5	8-hr traffic volume:	1,600
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	4	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	1	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	2
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		28	/75		



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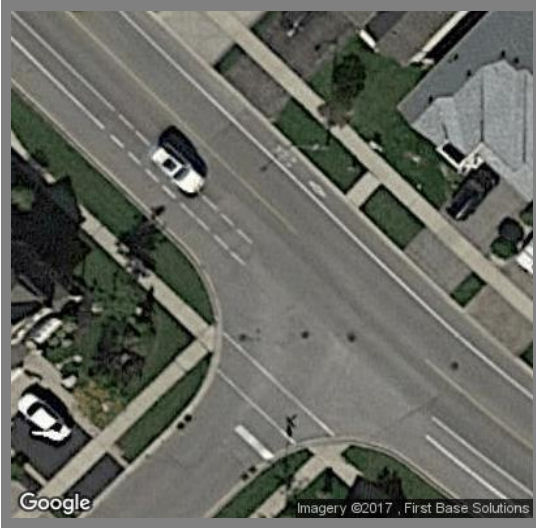
STOCKSBRIDGE AVE/Colonel Williams Trail Map ID: 5

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	4	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	4	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	5	/5	Traffic:	2
Dmd	Community Request	5	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		24	/75		




COLONEL WILLIAM PKY/STOCKSBRIDGE AVE Map ID: 6


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2012
	School, Elementary	6	/10	Daily traffic volume:	3,200
	School, Secondary	0	/5	8-hr traffic volume:	1,600
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
	Existing Crossing	5	/5	Traffic:	2
Dmd	Community Request	5	/5	Parking:	1
	Land-Use Type	1	/5	Bike:	2
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		36	/75		



VALLEYRIDGE DR/Crosstown Heritage Trail Map ID: 7

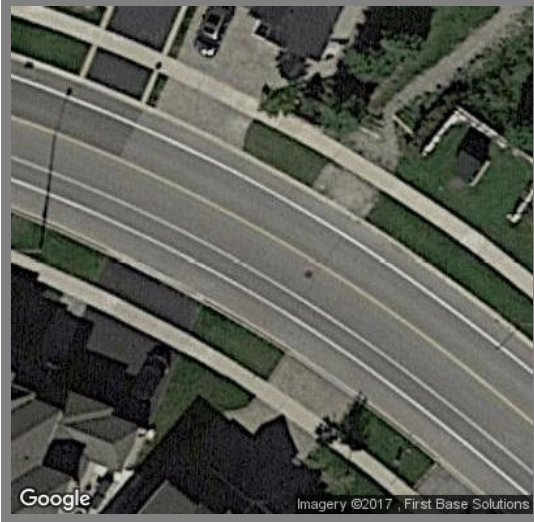
PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	0	/10	
	School, Secondary	0	/5	
	Transit Service	3	/5	
	Major Pedestrian Facility	2	/5	
	Trail Intersection	5	/5	
Dmd	Existing Crossing	3	/5	
	Community Request	5	/5	
Safety	Land-Use Type	0	/5	
	Collision Location	0	/5	
	Road Classification	2	/5	
	Speed Limit	3	/5	
TOTAL Score		23	/75	
		PXO Treatment Rationale		
		Traffic count year:	no count	
		Daily traffic volume:		
		8-hr traffic volume:		
		Speed limit:	50 km/h	
		Raised refuge present:	no	
		<u># of Lanes</u>		
		Traffic:	2	
		Parking:	0	
		Bike:	0	
		Recommended PXO Treatment		
		PXO type:	Level 2 Type D	
		Cost estimate:	\$24,000.00	

2500 GRAND OAK TRAIL Map ID: 8

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	10	/10	
	School, Secondary	0	/5	
	Transit Service	2	/5	
	Major Pedestrian Facility	2	/5	
	Trail Intersection	5	/5	
Dmd	Existing Crossing	3	/5	
	Community Request	5	/5	
Safety	Land-Use Type	3	/5	
	Collision Location	0	/5	
	Road Classification	3	/5	
	Speed Limit	3	/5	
TOTAL Score		36	/75	
		PXO Treatment Rationale		
		Traffic count year:	2014	
		Daily traffic volume:	900	
		8-hr traffic volume:	450	
		Speed limit:	50 km/h	
		Raised refuge present:	no	
		<u># of Lanes</u>		
		Traffic:	3	
		Parking:	0	
		Bike:	2	
		Recommended PXO Treatment		
		PXO type:	Level 2 Type C	
		Cost estimate:	\$36,000.00	


Colonel William Pond Walk Map ID: 9

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	6	/10	Daily traffic volume:	3,900
	School, Secondary	0	/5	8-hr traffic volume:	1,950
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
Dmd	Trail Intersection	5	/5	<u># of Lanes</u>	
	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
Safety	Land-Use Type	1	/5	Bike:	2
	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		31	/75		




RICHVIEW BLVD/Fourteen Mile Creek Trail West Bank Map ID: 10


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	6	/10	Daily traffic volume:	4,400
	School, Secondary	0	/5	8-hr traffic volume:	2,200
	Transit Service	2	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	1	/5	Raised refuge present:	no
Dmd	Trail Intersection	5	/5	<u># of Lanes</u>	
	Existing Crossing	0	/5	Traffic:	3
	Community Request	5	/5	Parking:	0
Safety	Land-Use Type	0	/5	Bike:	0
	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type C
	Speed Limit	3	/5	Cost estimate:	\$36,000.00
TOTAL Score		25	/75		





COLONEL WILLIAM PKY/Colonel William Pond Walk Map ID: 11


PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	2014				
	School, Elementary	4 /10	Daily traffic volume:	3,900				
	School, Secondary	0 /5	8-hr traffic volume:	1,950				
	Transit Service	5 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	5 /5	Raised refuge present:	no				
	Trail Intersection	5 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	1 /5	Traffic:	2				
	Community Request	5 /5	Parking:	1				
	Land-Use Type	1 /5	Bike:	2				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	3 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score		32 /75						


COLONEL WILLIAM PKY/Colonel Williams Trail Map ID: 12

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	2014				
	School, Elementary	4 /10	Daily traffic volume:	3,900				
	School, Secondary	0 /5	8-hr traffic volume:	1,950				
	Transit Service	5 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	4 /5	Raised refuge present:	no				
	Trail Intersection	5 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	3 /5	Traffic:	2				
	Community Request	5 /5	Parking:	1				
	Land-Use Type	0 /5	Bike:	2				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	3 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score		32 /75						


BARONWOOD DR/Crosstown Heritage Trail			Map ID: 13	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	0 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	2 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	0 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	0 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 16 /75				
			Candidate Crossing Location	
				

GRAND OAK TRAIL/Crosstown Heritage Trail			Map ID: 14	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: 2014	
	School, Elementary	0 /10	Daily traffic volume: 2,300	
	School, Secondary	0 /5	8-hr traffic volume: 1,150	
	Transit Service	1 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	0 /5	Raised refuge present: yes	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	5 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 2	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	3 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$4,000.00	
TOTAL Score 22 /75				
			Candidate Crossing Location	
				

CALLOWAY DR/Crosstown Heritage Trail			Map ID: 15	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	0 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	1 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	1 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	5 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 21 /75				
			Candidate Crossing Location	
				


Crosstown Heritage Trail			Map ID: 16	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	0 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	1 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	2 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	1 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 18 /75				
			Candidate Crossing Location	
				

CALLOWAY DR/WESTOAK TRAILS BLVD			Map ID: 17	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	3 /15	Traffic count year: 2014	
	School, Elementary	8 /10	Daily traffic volume: 6,400	
	School, Secondary	0 /5	8-hr traffic volume: 3,200	
	Transit Service	5 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	4 /5	Raised refuge present: yes	
Dmd	Trail Intersection	5 /5	<u># of Lanes</u>	
	Existing Crossing	0 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
Safety	Land-Use Type	1 /5	Bike: 2	
	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	3 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$4,000.00	
TOTAL Score		37 /75		




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ADIRONDAK TRAIL/East Fourteen Mile Creek Trail East Bank Access			Map ID: 18	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	0 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	1 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: no	
Dmd	Trail Intersection	5 /5	<u># of Lanes</u>	
	Existing Crossing	3 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
Safety	Land-Use Type	1 /5	Bike: 0	
	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score		22 /75		




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Westoak Trails Blvd & St. Joan of Arc Catholic Elementary School			Map ID: 19	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: 2014	
	School, Elementary	10 /10	Daily traffic volume: 6,400	
	School, Secondary	1 /5	8-hr traffic volume: 3,200	
	Transit Service	5 /5	Speed limit: 40 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	3 /5	Traffic: 3	
	Community Request	0 /5	Parking: 0	
Safety	Land-Use Type	1 /5	Bike: 2	
	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	3 /5	PXO type: Level 2 Type B	
	Speed Limit	1 /5	Cost estimate: \$26,000.00	
TOTAL Score		27 /75		

Candidate Crossing Location	
	

2200 ASHMORE DR			Map ID: 20	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: 2014	
	School, Elementary	8 /10	Daily traffic volume: 6,400	
	School, Secondary	2 /5	8-hr traffic volume: 3,200	
	Transit Service	5 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	2 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	5 /5	Traffic: 3	
	Community Request	0 /5	Parking: 0	
Safety	Land-Use Type	1 /5	Bike: 2	
	Collision Location	5 /5	Recommended PXO Treatment	
	Road Classification	3 /5	PXO type: Level 2 Type B	
	Speed Limit	3 /5	Cost estimate: \$26,000.00	
TOTAL Score		34 /75		

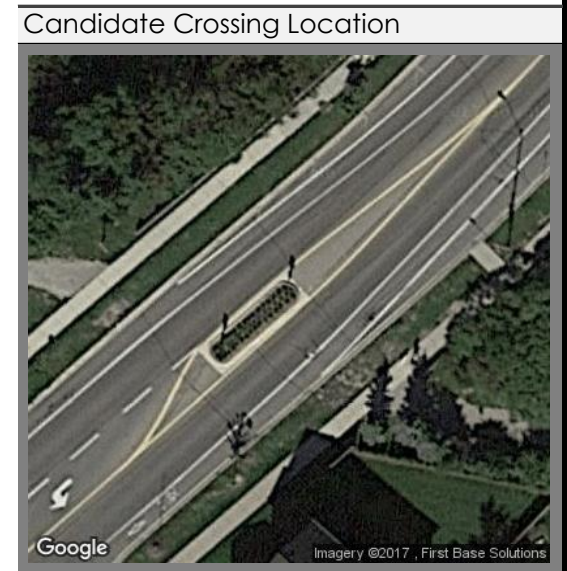
Candidate Crossing Location	
	

WESTOAK TRAILS BLVD/East Fourteen Mile Creek Trail West Bank (east of ASHMORE DR) Map ID: 21

PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	8 /10
	School, Secondary	2 /5
	Transit Service	5 /5
	Major Pedestrian Facility	3 /5
	Trail Intersection	5 /5
	Existing Crossing	5 /5
Dmd	Community Request	5 /5
	Land-Use Type	0 /5
Safety	Collision Location	0 /5
	Road Classification	3 /5
	Speed Limit	3 /5
TOTAL Score		39 /75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	6,400
8-hr traffic volume:	3,200
Speed limit:	50 km/h
Raised refuge present:	yes
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	2

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$4,000.00



POSTMASTER DR/Crosstown Heritage Trail Map ID: 22

PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	6 /10
	School, Secondary	0 /5
	Transit Service	3 /5
	Major Pedestrian Facility	2 /5
	Trail Intersection	5 /5
	Existing Crossing	0 /5
Dmd	Community Request	5 /5
	Land-Use Type	0 /5
Safety	Collision Location	0 /5
	Road Classification	3 /5
	Speed Limit	3 /5
TOTAL Score		27 /75


PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	4,800
8-hr traffic volume:	2,400
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	1
Bike:	2

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00




Kingsridge Drive & Pope John Paul II Catholic Elementary School Map ID: 23

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	8	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	2	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	3	/5	Traffic:	2
Dmd	Community Request	0	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		20	/75		




KINGSRIDGE DR/McCraney Creek Trail Map ID: 24


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	10	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	2	/5	Speed limit:	40 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
	Existing Crossing	3	/5	Traffic:	2
Dmd	Community Request	5	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	1	/5	Cost estimate:	\$24,000.00
TOTAL Score		30	/75		

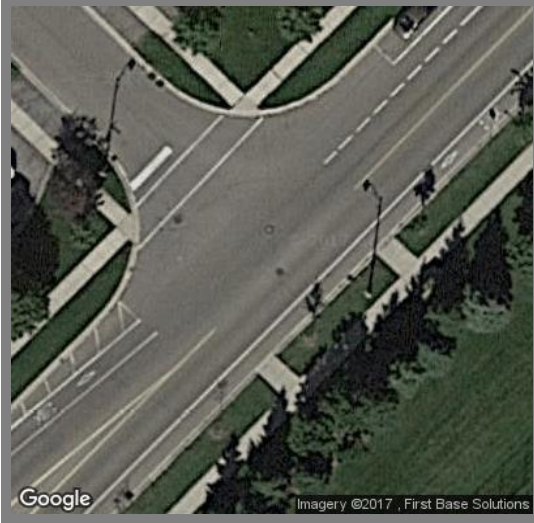


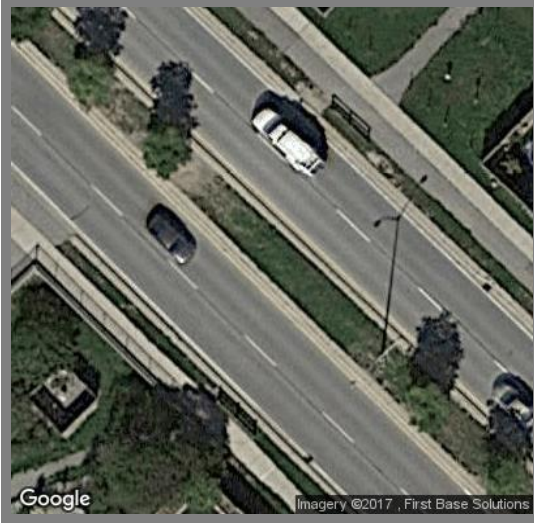
PINE GLEN RD/NEWCASTLE CRES Map ID: 25

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	6 /15	Traffic count year:	2013				
	School, Elementary	4 /10	Daily traffic volume:	4,100				
	School, Secondary	0 /5	8-hr traffic volume:	2,050				
	Transit Service	5 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	3 /5	Raised refuge present:	no				
	Trail Intersection	0 /5	<u># of Lanes</u>					
	Existing Crossing	1 /5	Traffic:	2				
Dmd	Community Request	5 /5	Parking:	0				
	Land-Use Type	3 /5	Bike:	2				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	3 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score		33 /75						

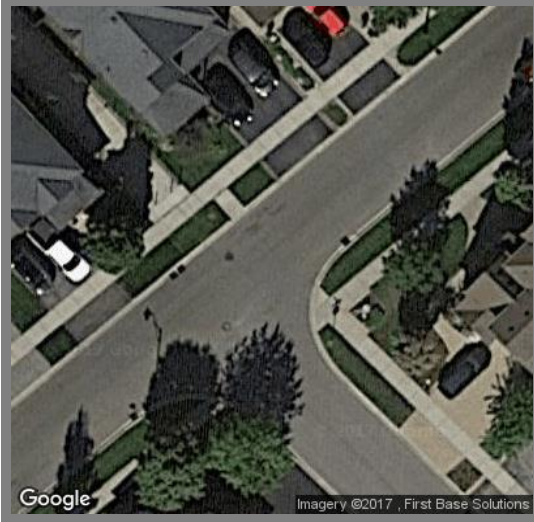
PARKGLEN AVE/Crosstown Heritage Trail Map ID: 26

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	no count				
	School, Elementary	6 /10	Daily traffic volume:					
	School, Secondary	0 /5	8-hr traffic volume:					
	Transit Service	3 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	2 /5	Raised refuge present:	no				
	Trail Intersection	5 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	1 /5	Traffic:	2				
	Community Request	5 /5	Parking:	0				
Safety	Land-Use Type	0 /5	Bike:	0				
	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	1 /5	PXO type:	Level 2 Type D				
Speed Limit	3 /5	Cost estimate:	\$24,000.00					
TOTAL Score		26 /75						

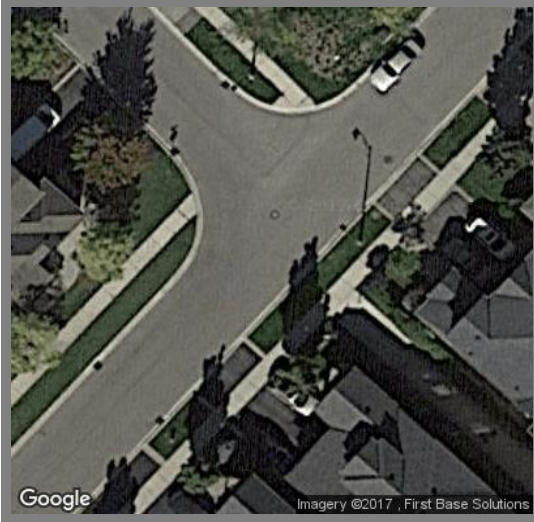
PINE GLEN RD/NEWCASTLE CRES			Map ID: 27
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	0 /15	Traffic count year: 2013
	School, Elementary	8 /10	Daily traffic volume: 4,100
	School, Secondary	0 /5	8-hr traffic volume: 2,050
	Transit Service	5 /5	Speed limit: 50 km/h
	Major Pedestrian Facility	4 /5	Raised refuge present: no
	Trail Intersection	0 /5	<u># of Lanes</u>
	Existing Crossing	0 /5	Traffic: 2
Dmd	Community Request	0 /5	Parking: 0
	Land-Use Type	3 /5	Bike: 2
Safety	Collision Location	5 /5	Recommended PXO Treatment
	Road Classification	3 /5	PXO type: Level 2 Type D
	Speed Limit	3 /5	Cost estimate: \$24,000.00
TOTAL Score		31 /75	
			Candidate Crossing Location
			

THIRD LINE/Crosstown Heritage Trail			Map ID: 28
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	3 /15	Traffic count year: 2014
	School, Elementary	4 /10	Daily traffic volume: 22,500
	School, Secondary	0 /5	8-hr traffic volume: 11,250
	Transit Service	5 /5	Speed limit: 60 km/h
	Major Pedestrian Facility	1 /5	Raised refuge present: yes
	Trail Intersection	5 /5	<u># of Lanes</u>
	Existing Crossing	0 /5	Traffic: 4
Dmd	Community Request	5 /5	Parking: 0
	Land-Use Type	0 /5	Bike: 0
Safety	Collision Location	0 /5	Recommended PXO Treatment
	Road Classification	4 /5	PXO type: Pedestrian Signal
	Speed Limit	5 /5	Cost estimate: \$75,000.00
TOTAL Score		32 /75	*within 215 m of existing crossing control
			Candidate Crossing Location
			


WEEPING WILLOW DR/Pine Glen Park Access Map ID: 29

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	3 /15	Traffic count year:	no count				
	School, Elementary	6 /10	Daily traffic volume:					
	School, Secondary	0 /5	8-hr traffic volume:					
	Transit Service	2 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	3 /5	Raised refuge present:	no				
	Trail Intersection	0 /5	<u># of Lanes</u>					
	Existing Crossing	3 /5	Traffic:	2				
Dmd	Community Request	5 /5	Parking:	0				
	Land-Use Type	1 /5	Bike:	0				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	1 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score 27 /75								


WEST HAM RD/LIVERPOOL ST Map ID: 30

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	3 /15	Traffic count year:	no count				
	School, Elementary	2 /10	Daily traffic volume:					
	School, Secondary	0 /5	8-hr traffic volume:					
	Transit Service	2 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	2 /5	Raised refuge present:	no				
	Trail Intersection	5 /5	<u># of Lanes</u>					
	Existing Crossing	3 /5	Traffic:	2				
Dmd	Community Request	5 /5	Parking:	0				
	Land-Use Type	1 /5	Bike:	0				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	1 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score 27 /75								

PINECLIFF RD/GROUSE LANE Map ID: 31


PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	no count				
	School, Elementary	0 /10	Daily traffic volume:					
	School, Secondary	0 /5	8-hr traffic volume:					
	Transit Service	2 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	2 /5	Raised refuge present:	no				
	Trail Intersection	0 /5	<u># of Lanes</u>					
	Existing Crossing	1 /5	Traffic:	2				
Dmd	Community Request	5 /5	Parking:	0				
	Land-Use Type	4 /5	Bike:	0				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	1 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score		18 /75						


HERITAGE WAY/Glen Abbey Trail Map ID: 32

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	2014				
	School, Elementary	2 /10	Daily traffic volume:	2,000				
	School, Secondary	0 /5	8-hr traffic volume:	1,000				
	Transit Service	5 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	1 /5	Raised refuge present:	no				
	Trail Intersection	5 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	5 /5	Traffic:	2				
	Community Request	5 /5	Parking:	2				
Safety	Land-Use Type	0 /5	Bike:	2				
	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	3 /5	PXO type:	Level 2 Type D				
Speed Limit	3 /5	Cost estimate:	\$24,000.00					
TOTAL Score		29 /75						


Sixteen Mile Dr/Robert Brown Blvd			Map ID: 33	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	0 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	2 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	1 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
	Existing Crossing	3 /5	Traffic: 2	
Dmd	Community Request	5 /5	Parking: 2	
	Land-Use Type	3 /5	Bike: #N/A	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	3 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 20 /75				
			Candidate Crossing Location	

Sixteen Mile Dr/Gladeside Ave			Map ID: 34	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	0 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	1 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	1 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
	Existing Crossing	5 /5	Traffic: 2	
Dmd	Community Request	5 /5	Parking: 2	
	Land-Use Type	3 /5	Bike: #N/A	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	3 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 21 /75				
			Candidate Crossing Location	


2200 FOURTH LINE			Map ID: 35	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	4 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	1 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	4 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	5 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 28 /75				
			Candidate Crossing Location	
				

RIDGE LANDING/Crosstown Heritage Trail			Map ID: 36	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	2 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	1 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	2 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	5 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 24 /75				
			Candidate Crossing Location	
				

BRAYS LANE/Brays Trail Map ID: 37

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	6	/10	
	School, Secondary	0	/5	
	Transit Service	3	/5	
	Major Pedestrian Facility	1	/5	
	Trail Intersection	5	/5	
Dmd	Existing Crossing	0	/5	
	Community Request	5	/5	
Safety	Land-Use Type	0	/5	
	Collision Location	0	/5	
	Road Classification	1	/5	
	Speed Limit	3	/5	
TOTAL Score		24	/75	
		PXO Treatment Rationale		
		Traffic count year:	no count	
		Daily traffic volume:		
		8-hr traffic volume:		
		Speed limit:	50 km/h	
		Raised refuge present:	no	
		<u># of Lanes</u>		
		Traffic:	2	
		Parking:	0	
		Bike:	0	
		Recommended PXO Treatment		
		PXO type:	Level 2 Type D	
		Cost estimate:	\$24,000.00	

Heritage Way & White Lane Map ID: 38

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	8	/10	
	School, Secondary	0	/5	
	Transit Service	5	/5	
	Major Pedestrian Facility	1	/5	
	Trail Intersection	0	/5	
Dmd	Existing Crossing	0	/5	
	Community Request	0	/5	
Safety	Land-Use Type	1	/5	
	Collision Location	0	/5	
	Road Classification	3	/5	
	Speed Limit	3	/5	
TOTAL Score		21	/75	
		PXO Treatment Rationale		
		Traffic count year:	2014	
		Daily traffic volume:	2,500	
		8-hr traffic volume:	1,250	
		Speed limit:	50 km/h	
		Raised refuge present:	no	
		<u># of Lanes</u>		
		Traffic:	2	
		Parking:	2	
		Bike:	2	
		Recommended PXO Treatment		
		PXO type:	Level 2 Type D	
		Cost estimate:	\$24,000.00	

Sixteen Mile Dr/George Savage Ave			Map ID: 39	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	10 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	1 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	0 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	5 /5	Traffic: 2	
	Community Request	5 /5	Parking: 1	
	Land-Use Type	1 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	3 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score		28 /75	Candidate Crossing Location	

SHELTERED OAK CRT/Crosstown Heritage Trail			Map ID: 40	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	0 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	1 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	1 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	5 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score		21 /75	Candidate Crossing Location	

SANDPIPER RD/Glen Oak Creek Trail East Bank Map ID: 41

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	6	/10
	School, Secondary	1	/5
	Transit Service	3	/5
	Major Pedestrian Facility	2	/5
	Trail Intersection	5	/5
Dmd	Existing Crossing	0	/5
	Community Request	5	/5
	Land-Use Type	1	/5
Safety	Collision Location	0	/5
	Road Classification	1	/5
	Speed Limit	3	/5
TOTAL Score		27	/75

PXO Treatment Rationale	
Traffic count year:	no count
Daily traffic volume:	
8-hr traffic volume:	
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00

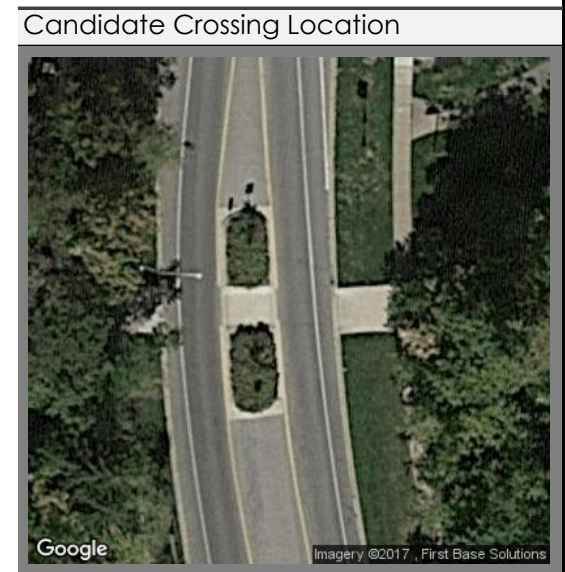



McCraney Creek Trail East Side Map ID: 42


PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	0	/10
	School, Secondary	4	/5
	Transit Service	5	/5
	Major Pedestrian Facility	3	/5
	Trail Intersection	5	/5
Dmd	Existing Crossing	0	/5
	Community Request	5	/5
	Land-Use Type	0	/5
Safety	Collision Location	0	/5
	Road Classification	3	/5
	Speed Limit	3	/5
TOTAL Score		28	/75


PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	4,300
8-hr traffic volume:	2,150
Speed limit:	50 km/h
Raised refuge present:	yes
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	2

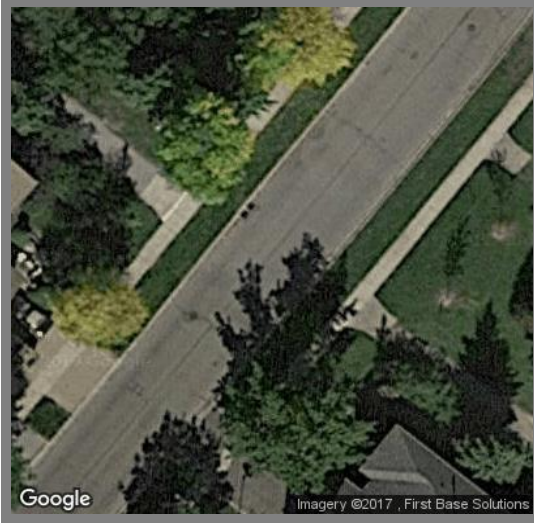
Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$4,000.00



CREEK PATH AVE/Sheldon Creek Trail North Side			Map ID: 43	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	0 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	4 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	2 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	5 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	1 /5	Bike: 2	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	2 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 27 /75				
			Candidate Crossing Location	
				


Westview Terrace & Mother Teresa Catholic Elementary School			Map ID: 44	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	8 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	3 /5	Speed limit: 40 km/h	
	Major Pedestrian Facility	2 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	0 /5	Traffic: 2	
	Community Request	0 /5	Parking: 0	
Safety	Land-Use Type	4 /5	Bike: 0	
	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	1 /5	Cost estimate: \$24,000.00	
TOTAL Score 19 /75				
			Candidate Crossing Location	
				

GROVEHILL RD/Shannon Creek Trail			Map ID: 45	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	6 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	3 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	1 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 27 /75				
			Candidate Crossing Location	
				

BRAYS LANE/Langtry Park Walk			Map ID: 46	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	0 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	2 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	2 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	3 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 21 /75				
			Candidate Crossing Location	
				

GREAT LAKES BLVD/Creek Path Pond Walk Map ID: 47


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	0	/10	Daily traffic volume:	2,300
	School, Secondary	0	/5	8-hr traffic volume:	1,150
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	4	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	5	/5	Traffic:	2
	Community Request	5	/5	Parking:	1
	Land-Use Type	0	/5	Bike:	2
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		25	/75		



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Sixteen Mile Dr/Preserve Dr Map ID: 48

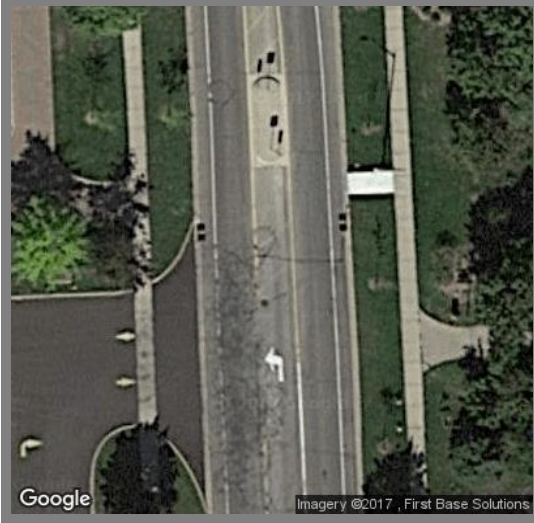
PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	6	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	1	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	5	/5	Traffic:	2
	Community Request	5	/5	Parking:	#N/A
	Land-Use Type	1	/5	Bike:	#N/A
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		26	/75		



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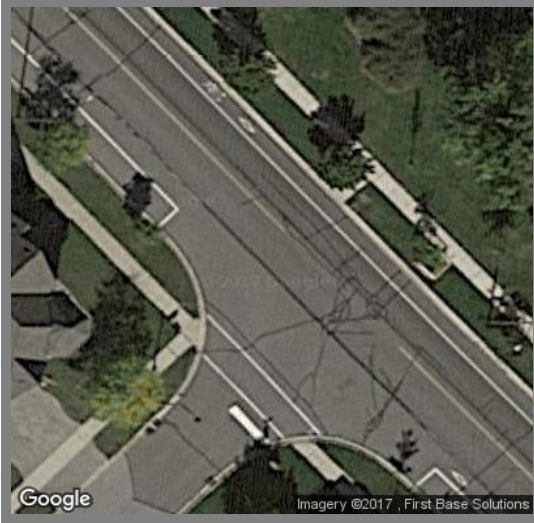
RIVER GLEN BLVD/Shannon Creek Trail Map ID: 49

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2013
	School, Elementary	10	/10	Daily traffic volume:	3,700
	School, Secondary	0	/5	8-hr traffic volume:	1,850
	Transit Service	5	/5	Speed limit:	40 km/h
	Major Pedestrian Facility	4	/5	Raised refuge present:	yes
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	2
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	1	/5	Cost estimate:	\$4,000.00
TOTAL Score		34	/75		



BUENA VISTA CRT/GREAT LAKES BLVD Map ID: 50

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2013
	School, Elementary	0	/10	Daily traffic volume:	2,300
	School, Secondary	0	/5	8-hr traffic volume:	1,150
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	4	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	5	/5	Traffic:	2
	Community Request	5	/5	Parking:	1
	Land-Use Type	1	/5	Bike:	2
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		26	/75		



River Glen Boulevard & Our Lady of Peace School Catholic Elementary School Map ID: 51

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	10	/10
	School, Secondary	0	/5
	Transit Service	5	/5
	Major Pedestrian Facility	3	/5
	Trail Intersection	0	/5
Dmd	Existing Crossing	0	/5
	Community Request	0	/5
Safety	Land-Use Type	1	/5
	Collision Location	0	/5
	Road Classification	3	/5
	Speed Limit	1	/5
TOTAL Score		23	/75

PXO Treatment Rationale	
Traffic count year:	2013
Daily traffic volume:	3,700
8-hr traffic volume:	1,850
Speed limit:	40 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	2

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00




LEVANNA LANE/Neyagawa Park Walk Access Map ID: 52


PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	2	/10
	School, Secondary	0	/5
	Transit Service	3	/5
	Major Pedestrian Facility	4	/5
	Trail Intersection	5	/5
Dmd	Existing Crossing	1	/5
	Community Request	5	/5
Safety	Land-Use Type	1	/5
	Collision Location	0	/5
	Road Classification	1	/5
	Speed Limit	3	/5
TOTAL Score		25	/75

PXO Treatment Rationale	
Traffic count year:	no count
Daily traffic volume:	
8-hr traffic volume:	
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



1400 NOTTINGHILL GATE			Map ID: 53
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	9 /15	Traffic count year: 2014
	School, Elementary	2 /10	Daily traffic volume: 7,900
	School, Secondary	5 /5	8-hr traffic volume: 3,950
	Transit Service	4 /5	Speed limit: 50 km/h
	Major Pedestrian Facility	4 /5	Raised refuge present: no
	Trail Intersection	0 /5	<u># of Lanes</u>
Dmd	Community Request	5 /5	Traffic: 3
	Land-Use Type	3 /5	Parking: 0
Safety	Collision Location	0 /5	Bike: 2
	Road Classification	4 /5	
	Speed Limit	3 /5	
TOTAL Score 39 /75			Recommended PXO Treatment
			PXO type: Level 2 Type B
			Cost estimate: \$26,000.00
			Candidate Crossing Location
			

Sixteen Mile Creek Heritage Trail West Bank			Map ID: 54
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	0 /15	Traffic count year: 2013
	School, Elementary	4 /10	Daily traffic volume: 7,600
	School, Secondary	0 /5	8-hr traffic volume: 3,800
	Transit Service	5 /5	Speed limit: 50 km/h
	Major Pedestrian Facility	4 /5	Raised refuge present: no
	Trail Intersection	5 /5	<u># of Lanes</u>
Dmd	Community Request	5 /5	Traffic: 2
	Land-Use Type	1 /5	Parking: 2
Safety	Collision Location	0 /5	Bike: 2
	Road Classification	3 /5	
	Speed Limit	3 /5	
TOTAL Score 30 /75			Recommended PXO Treatment
			PXO type: Level 2 Type D
			Cost estimate: \$24,000.00
			Candidate Crossing Location
			

PILGRIMS WAY/Glen Abbey Trail (east of PINEWAY CRT)

Map ID: 55

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	10	/10
	School, Secondary	0	/5
	Transit Service	0	/5
	Major Pedestrian Facility	3	/5
	Trail Intersection	5	/5
	Existing Crossing	5	/5
Dmd	Community Request	5	/5
	Land-Use Type	4	/5
Safety	Collision Location	0	/5
	Road Classification	3	/5
	Speed Limit	1	/5
TOTAL Score		36	/75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	4,300
8-hr traffic volume:	2,150
Speed limit:	40 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	2

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



RIVER GLEN BLVD/Munn's Creek Trail East Bank

Map ID: 56

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	2	/10
	School, Secondary	0	/5
	Transit Service	5	/5
	Major Pedestrian Facility	1	/5
	Trail Intersection	5	/5
	Existing Crossing	0	/5
Dmd	Community Request	5	/5
	Land-Use Type	0	/5
Safety	Collision Location	0	/5
	Road Classification	3	/5
	Speed Limit	3	/5
TOTAL Score		24	/75

PXO Treatment Rationale	
Traffic count year:	2013
Daily traffic volume:	3,700
8-hr traffic volume:	1,850
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	2

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



PILGRIMS WAY/Taplow Creek Trail West Side (east of WINDRUSH DR)			Map ID: 57	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	9 /15	Traffic count year: 2013	
	School, Elementary	0 /10	Daily traffic volume: 4,600	
	School, Secondary	2 /5	8-hr traffic volume: 2,300	
	Transit Service	5 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: yes	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	1 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
Safety	Land-Use Type	0 /5	Bike: 2	
	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	3 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$4,000.00	
TOTAL Score		36 /75		

CHALMERS ST/Chalmers Park Walk			Map ID: 58	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	0 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	0 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	2 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	1 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
Safety	Land-Use Type	1 /5	Bike: 0	
	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score		18 /75		

Pilgrims Way & Cottonwood Crescent Map ID: 59

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	10	/10
	School, Secondary	0	/5
	Transit Service	1	/5
	Major Pedestrian Facility	4	/5
	Trail Intersection	0	/5
	Existing Crossing	5	/5
Dmd	Community Request	0	/5
	Land-Use Type	4	/5
Safety	Collision Location	0	/5
	Road Classification	3	/5
	Speed Limit	3	/5
TOTAL Score		30	/75

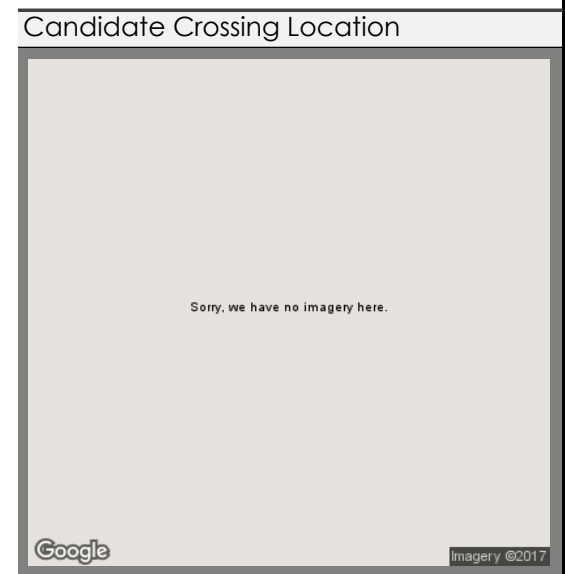
PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	4,300
8-hr traffic volume:	2,150
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	3
Parking:	0
Bike:	2
Recommended PXO Treatment	
PXO type:	Level 2 Type C
Cost estimate:	\$36,000.00



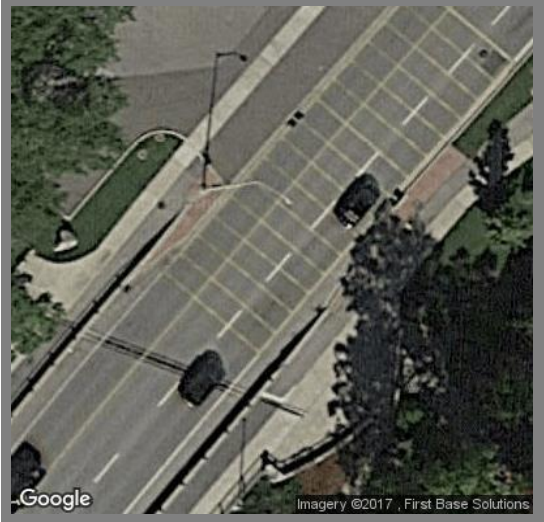
Sixteen Mile Dr/Colton Way Map ID: 60

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	6	/10
	School, Secondary	0	/5
	Transit Service	0	/5
	Major Pedestrian Facility	3	/5
	Trail Intersection	0	/5
	Existing Crossing	5	/5
Dmd	Community Request	5	/5
	Land-Use Type	1	/5
Safety	Collision Location	0	/5
	Road Classification	3	/5
	Speed Limit	3	/5
TOTAL Score		26	/75


PXO Treatment Rationale	
Traffic count year:	no count
Daily traffic volume:	
8-hr traffic volume:	
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0
Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00




REBECCA ST/Bronte Creek Heritage Trail Map ID: 61

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	2014				
	School, Elementary	0 /10	Daily traffic volume:	16,600				
	School, Secondary	0 /5	8-hr traffic volume:	8,300				
	Transit Service	5 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	2 /5	Raised refuge present:	no				
	Trail Intersection	5 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	0 /5	Traffic:	3				
	Community Request	5 /5	Parking:	0				
Safety	Land-Use Type	1 /5	Bike:	0				
	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	4 /5	PXO type:	Level 2 Type B				
	Speed Limit	3 /5	Cost estimate:	\$26,000.00				
TOTAL Score		25 /75						

1200 HEDGESTONE CRES Map ID: 62


PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	9 /15	Traffic count year:	no count				
	School, Elementary	0 /10	Daily traffic volume:					
	School, Secondary	2 /5	8-hr traffic volume:					
	Transit Service	3 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	2 /5	Raised refuge present:	no				
	Trail Intersection	0 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	0 /5	Traffic:	2				
	Community Request	0 /5	Parking:	0				
Safety	Land-Use Type	4 /5	Bike:	0				
	Collision Location	5 /5	Recommended PXO Treatment					
	Road Classification	1 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score		29 /75						

VANGUARD CRES/BRIDGE RD Map ID: 63

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	0	/10	
	School, Secondary	0	/5	
	Transit Service	5	/5	
	Major Pedestrian Facility	3	/5	
	Trail Intersection	5	/5	
Dmd	Existing Crossing	1	/5	
	Community Request	5	/5	
Safety	Land-Use Type	1	/5	
	Collision Location	0	/5	
	Road Classification	2	/5	
	Speed Limit	3	/5	
TOTAL Score		25	/75	

PXO Treatment Rationale		Recommended PXO Treatment	
Traffic count year:	no count	PXO type:	Level 2 Type D
Daily traffic volume:		Cost estimate:	\$24,000.00
8-hr traffic volume:			
Speed limit:	50 km/h		
Raised refuge present:	no		
<u># of Lanes</u>			
Traffic:	2		
Parking:	0		
Bike:	0		


ABBEYWOOD DR/Glen Abbey Trail East Side Map ID: 64

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	0	/10	
	School, Secondary	0	/5	
	Transit Service	5	/5	
	Major Pedestrian Facility	0	/5	
	Trail Intersection	5	/5	
Dmd	Existing Crossing	1	/5	
	Community Request	5	/5	
Safety	Land-Use Type	0	/5	
	Collision Location	0	/5	
	Road Classification	3	/5	
	Speed Limit	3	/5	
TOTAL Score		22	/75	

PXO Treatment Rationale		Recommended PXO Treatment	
Traffic count year:	2014	PXO type:	Level 2 Type D
Daily traffic volume:	6,500	Cost estimate:	\$24,000.00
8-hr traffic volume:	3,250		
Speed limit:	50 km/h		
Raised refuge present:	no		
<u># of Lanes</u>			
Traffic:	2		
Parking:	2		
Bike:	2		

BRIDGE RD/Donovan Bailey Park Walk Map ID: 65


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	6	/10	Daily traffic volume:	1,800
	School, Secondary	0	/5	8-hr traffic volume:	900
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	2	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		28	/75		



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TOWNE BLVD/Shannon Creek Trail West Side Map ID: 66


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	0	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	0	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	3	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		23	/75		



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Shannon Creek Trail East Side Map ID: 67

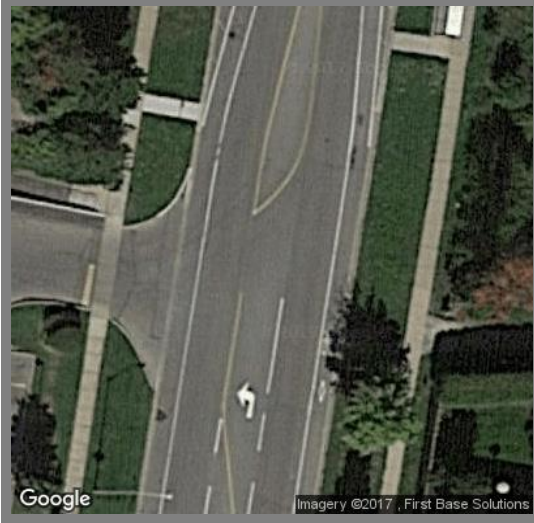
PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	0	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	0	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	5	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		24	/75		




HOWELL RD/Harman Gate Park Walk Map ID: 68

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	0	/10	Daily traffic volume:	
	School, Secondary	1	/5	8-hr traffic volume:	
	Transit Service	1	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	5	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		23	/75		




MONASTERY DR/Glen Oak Creek Trail			Map ID: 69
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	6 /15	Traffic count year: 2014
	School, Elementary	0 /10	Daily traffic volume: 7,300
	School, Secondary	0 /5	8-hr traffic volume: 3,650
	Transit Service	5 /5	Speed limit: 50 km/h
	Major Pedestrian Facility	1 /5	Raised refuge present: no
Dmd	Trail Intersection	5 /5	<u># of Lanes</u>
	Existing Crossing	0 /5	Traffic: 3
	Community Request	5 /5	Parking: 0
Safety	Land-Use Type	1 /5	Bike: 2
	Collision Location	0 /5	
	Road Classification	3 /5	
	Speed Limit	3 /5	
TOTAL Score 29 /75			Recommended PXO Treatment
			PXO type: Level 2 Type B
			Cost estimate: \$26,000.00
			Candidate Crossing Location
			

RIVER OAKS BLVD/WINDING WOODS DR			Map ID: 70
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	0 /15	Traffic count year: 2013
	School, Elementary	0 /10	Daily traffic volume: 1,500
	School, Secondary	0 /5	8-hr traffic volume: 750
	Transit Service	5 /5	Speed limit: 50 km/h
	Major Pedestrian Facility	0 /5	Raised refuge present: no
Dmd	Trail Intersection	5 /5	<u># of Lanes</u>
	Existing Crossing	0 /5	Traffic: 2
	Community Request	5 /5	Parking: 0
Safety	Land-Use Type	1 /5	Bike: 2
	Collision Location	0 /5	
	Road Classification	2 /5	
	Speed Limit	3 /5	
TOTAL Score 21 /75			Recommended PXO Treatment
			PXO type: Level 2 Type D
			Cost estimate: \$24,000.00
			Candidate Crossing Location
			


MCDOWELL AVE/Crosstown Heritage Trail Map ID: 71

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	2	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	1	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		22	/75		




NOTTINGHILL GATE/Glen Abbey Trail Map ID: 72

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	2	/10	Daily traffic volume:	8,000
	School, Secondary	0	/5	8-hr traffic volume:	4,000
	Transit Service	1	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	4	/5	Raised refuge present:	yes
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	5	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	2
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	4	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$4,000.00
TOTAL Score		29	/75		




PILGRIMS WAY/McCraney Creek Trail East Side Map ID: 73

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2012
	School, Elementary	0	/10	Daily traffic volume:	5,900
	School, Secondary	0	/5	8-hr traffic volume:	2,950
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	yes
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	5	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	2
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$4,000.00
TOTAL Score		28	/75		




YOLANDA DR/Donovan Bailey Park Walk Access Map ID: 74

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	0	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	2	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		19	/75		



LAKESHORE RD W/Bronte Creek Trail Map ID: 75


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	6	/15	Traffic count year:	2013
	School, Elementary	0	/10	Daily traffic volume:	11,100
	School, Secondary	0	/5	8-hr traffic volume:	5,550
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	0	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	1	/5	Traffic:	5
Dmd	Community Request	0	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	0
Safety	Collision Location	5	/5	Recommended PXO Treatment	
	Road Classification	4	/5	PXO type:	Pedestrian Signal
	Speed Limit	3	/5	Cost estimate:	\$95,000.00
TOTAL Score		24	<i>/75</i>		



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200 VILMA DR Map ID: 76

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	4	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	3	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	4	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	0	/5	Traffic:	2
Dmd	Community Request	0	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	5	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		21	<i>/75</i>		




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SOVEREIGN ST/BRONTE RD Map ID: 77


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location																				
Connectivity	Senior Facility	12	/15																					
	School, Elementary	0	/10																					
	School, Secondary	0	/5																					
	Transit Service	5	/5																					
	Major Pedestrian Facility	0	/5																					
	Trail Intersection	0	/5																					
	Existing Crossing	0	/5																					
Dmd	Community Request	5	/5																					
	Land-Use Type	4	/5																					
Safety	Collision Location	0	/5																					
	Road Classification	4	/5																					
	Speed Limit	3	/5																					
TOTAL Score		33	/75																					
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #e0e0e0;">PXO Treatment Rationale</th> </tr> </thead> <tbody> <tr> <td>Traffic count year:</td> <td>2013</td> </tr> <tr> <td>Daily traffic volume:</td> <td>10,300</td> </tr> <tr> <td>8-hr traffic volume:</td> <td>5,150</td> </tr> <tr> <td>Speed limit:</td> <td>50 km/h</td> </tr> <tr> <td>Raised refuge present:</td> <td>no</td> </tr> <tr> <td colspan="2" style="text-align: center;"><u># of Lanes</u></td> </tr> <tr> <td>Traffic:</td> <td>3</td> </tr> <tr> <td>Parking:</td> <td>0</td> </tr> <tr> <td>Bike:</td> <td>0</td> </tr> </tbody> </table>		PXO Treatment Rationale		Traffic count year:	2013	Daily traffic volume:	10,300	8-hr traffic volume:	5,150	Speed limit:	50 km/h	Raised refuge present:	no	<u># of Lanes</u>		Traffic:	3	Parking:	0	Bike:	0	
PXO Treatment Rationale																								
Traffic count year:	2013																							
Daily traffic volume:	10,300																							
8-hr traffic volume:	5,150																							
Speed limit:	50 km/h																							
Raised refuge present:	no																							
<u># of Lanes</u>																								
Traffic:	3																							
Parking:	0																							
Bike:	0																							
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #e0e0e0;">Recommended PXO Treatment</th> </tr> </thead> <tbody> <tr> <td>PXO type:</td> <td>Level 2 Type B</td> </tr> <tr> <td>Cost estimate:</td> <td>\$26,000.00</td> </tr> </tbody> </table>		Recommended PXO Treatment		PXO type:	Level 2 Type B	Cost estimate:	\$26,000.00															
Recommended PXO Treatment																								
PXO type:	Level 2 Type B																							
Cost estimate:	\$26,000.00																							

300 STANFIELD DR Map ID: 78

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location																				
Connectivity	Senior Facility	0	/15																					
	School, Elementary	8	/10																					
	School, Secondary	0	/5																					
	Transit Service	1	/5																					
	Major Pedestrian Facility	4	/5																					
	Trail Intersection	0	/5																					
	Existing Crossing	3	/5																					
Dmd	Community Request	5	/5																					
	Land-Use Type	1	/5																					
Safety	Collision Location	0	/5																					
	Road Classification	1	/5																					
	Speed Limit	3	/5																					
TOTAL Score		26	/75																					
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #e0e0e0;">PXO Treatment Rationale</th> </tr> </thead> <tbody> <tr> <td>Traffic count year:</td> <td>no count</td> </tr> <tr> <td>Daily traffic volume:</td> <td></td> </tr> <tr> <td>8-hr traffic volume:</td> <td></td> </tr> <tr> <td>Speed limit:</td> <td>50 km/h</td> </tr> <tr> <td>Raised refuge present:</td> <td>no</td> </tr> <tr> <td colspan="2" style="text-align: center;"><u># of Lanes</u></td> </tr> <tr> <td>Traffic:</td> <td>2</td> </tr> <tr> <td>Parking:</td> <td>0</td> </tr> <tr> <td>Bike:</td> <td>0</td> </tr> </tbody> </table>		PXO Treatment Rationale		Traffic count year:	no count	Daily traffic volume:		8-hr traffic volume:		Speed limit:	50 km/h	Raised refuge present:	no	<u># of Lanes</u>		Traffic:	2	Parking:	0	Bike:	0	
PXO Treatment Rationale																								
Traffic count year:	no count																							
Daily traffic volume:																								
8-hr traffic volume:																								
Speed limit:	50 km/h																							
Raised refuge present:	no																							
<u># of Lanes</u>																								
Traffic:	2																							
Parking:	0																							
Bike:	0																							
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #e0e0e0;">Recommended PXO Treatment</th> </tr> </thead> <tbody> <tr> <td>PXO type:</td> <td>Level 2 Type D</td> </tr> <tr> <td>Cost estimate:</td> <td>\$24,000.00</td> </tr> </tbody> </table>		Recommended PXO Treatment		PXO type:	Level 2 Type D	Cost estimate:	\$24,000.00															
Recommended PXO Treatment																								
PXO type:	Level 2 Type D																							
Cost estimate:	\$24,000.00																							


Munn's Avenue & River Oaks Public School Map ID: 79

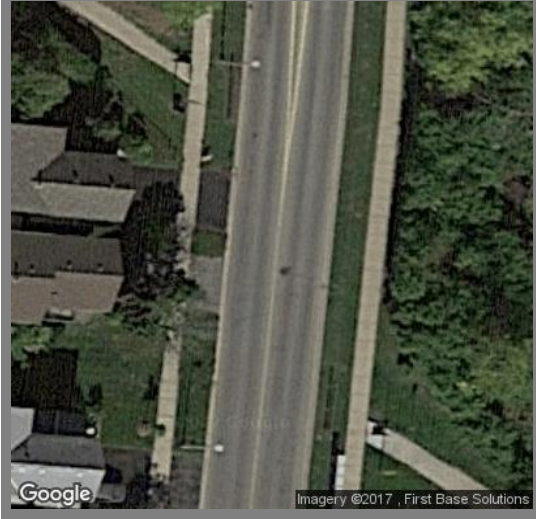
PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	10	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	5	/5	Speed limit:	40 km/h
	Major Pedestrian Facility	4	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	0	/5	Parking:	0
Safety	Land-Use Type	1	/5	Bike:	0
	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	2	/5	PXO type:	Level 2 Type D
	Speed Limit	1	/5	Cost estimate:	\$24,000.00
TOTAL Score		23	/75		




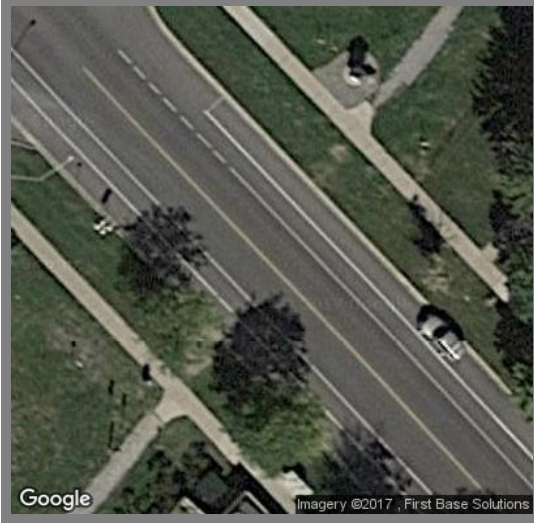
PILGRIMS WAY/RUSHBROOKE DR Map ID: 80

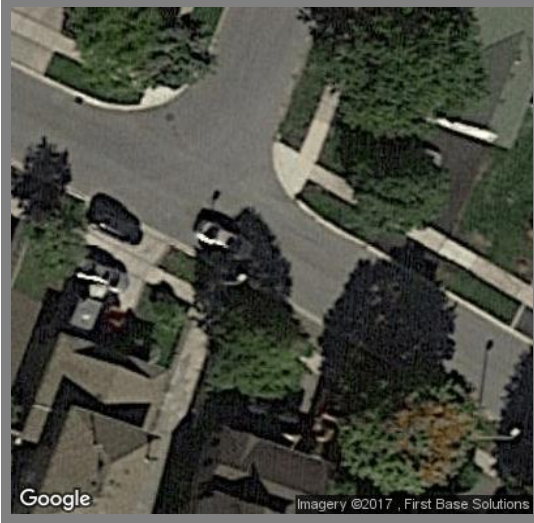
PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2012
	School, Elementary	6	/10	Daily traffic volume:	5,900
	School, Secondary	0	/5	8-hr traffic volume:	2,950
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	0	/5	Parking:	0
Safety	Land-Use Type	1	/5	Bike:	2
	Collision Location	5	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		25	/75		



MUNN'S AVE/Munn's Creek Trail West Bank (north of RIMMINGTON DR)			Map ID: 81	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	6 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	5 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: yes	
	Trail Intersection	5 /5	<u># of Lanes</u>	
	Existing Crossing	5 /5	Traffic: 2	
Dmd	Community Request	5 /5	Parking: 0	
	Land-Use Type	1 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	2 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$4,000.00	
TOTAL Score		35 /75	<div style="background-color: #e0e0e0; padding: 2px;">Candidate Crossing Location</div> 	

Munn's Creek Trail East Bank			Map ID: 82	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: 2014	
	School, Elementary	4 /10	Daily traffic volume: 2,600	
	School, Secondary	0 /5	8-hr traffic volume: 1,300	
	Transit Service	5 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: yes	
	Trail Intersection	5 /5	<u># of Lanes</u>	
	Existing Crossing	3 /5	Traffic: 2	
Dmd	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	2 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$4,000.00	
TOTAL Score		30 /75	<div style="background-color: #e0e0e0; padding: 2px;">Candidate Crossing Location</div> 	


SIXTH LINE/Crosstown Heritage Trail			Map ID: 83	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: 2013	
	School, Elementary	0 /10	Daily traffic volume: 11,300	
	School, Secondary	3 /5	8-hr traffic volume: 5,650	
	Transit Service	3 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	0 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	4 /5	PXO type: Level 2 Type C	Candidate Crossing Location
	Speed Limit	3 /5	Cost estimate: \$36,000.00	
TOTAL Score		26 /75		

MARGOT ST/MADDEN BLVD			Map ID: 84	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	4 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	3 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	1 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
Safety	Land-Use Type	1 /5	Bike: 0	
	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	Candidate Crossing Location
Speed Limit	3 /5	Cost estimate: \$24,000.00		
TOTAL Score		26 /75		

Hixon Street & Vance Drive

Map ID: 85

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	10	/10	Daily traffic volume:	1,400
	School, Secondary	0	/5	8-hr traffic volume:	700
	Transit Service	1	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	5	/5	Traffic:	2
Dmd	Community Request	0	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		24	/75		




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MUNN'S AVE/Crosstown Heritage Trail

Map ID: 86


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	6	/10	Daily traffic volume:	
	School, Secondary	2	/5	8-hr traffic volume:	
	Transit Service	2	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
Safety	Land-Use Type	0	/5	Bike:	0
	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		27	/75		



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HIXON ST/Donovan Bailey Park Walk Map ID: 87


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	10	/10	Daily traffic volume:	1,400
	School, Secondary	0	/5	8-hr traffic volume:	700
	Transit Service	1	/5	Speed limit:	40 km/h
	Major Pedestrian Facility	4	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	5	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	1	/5	Cost estimate:	\$24,000.00
TOTAL Score		33	/75		




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RIVER OAKS BLVD W/Munn's Creek Trail West Bank Map ID: 88


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	6	/10	Daily traffic volume:	3,300
	School, Secondary	0	/5	8-hr traffic volume:	1,650
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	yes
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
Safety	Land-Use Type	0	/5	Bike:	0
	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	2	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$4,000.00
TOTAL Score		29	/75		





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Munn's Creek Trail East Bank			Map ID: 89	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: 2014	
	School, Elementary	6 /10	Daily traffic volume: 3,300	
	School, Secondary	0 /5	8-hr traffic volume: 1,650	
	Transit Service	5 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	0 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 2	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	2 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 29 /75				
			Candidate Crossing Location	
				

LAKESHORE RD W (east of Nelson St)			Map ID: 90	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	6 /15	Traffic count year: 2014	
	School, Elementary	4 /10	Daily traffic volume: 12,800	
	School, Secondary	0 /5	8-hr traffic volume: 6,400	
	Transit Service	5 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	0 /5	Traffic: 3	
	Community Request	0 /5	Parking: 0	
	Land-Use Type	4 /5	Bike: 2	
Safety	Collision Location	5 /5	Recommended PXO Treatment	
	Road Classification	4 /5	PXO type: Level 2 Type B	
	Speed Limit	3 /5	Cost estimate: \$26,000.00	
TOTAL Score 34 /75				
			Candidate Crossing Location	
				

100 HAYS BLVD			Map ID: 91
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	3 /15	Traffic count year: no count
	School, Elementary	0 /10	Daily traffic volume:
	School, Secondary	0 /5	8-hr traffic volume:
	Transit Service	3 /5	Speed limit: 50 km/h
	Major Pedestrian Facility	0 /5	Raised refuge present: no
	Trail Intersection	0 /5	<u># of Lanes</u>
	Existing Crossing	0 /5	Traffic: 2
Dmd	Community Request	0 /5	Parking: 0
	Land-Use Type	3 /5	Bike: 0
Safety	Collision Location	5 /5	Recommended PXO Treatment
	Road Classification	3 /5	PXO type: Level 2 Type D
	Speed Limit	3 /5	Cost estimate: \$24,000.00
TOTAL Score		20 /75	
			Candidate Crossing Location
			

GATWICK DR/PARKHAVEN BLVD			Map ID: 92
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	6 /15	Traffic count year: no count
	School, Elementary	4 /10	Daily traffic volume:
	School, Secondary	0 /5	8-hr traffic volume:
	Transit Service	3 /5	Speed limit: 50 km/h
	Major Pedestrian Facility	2 /5	Raised refuge present: no
	Trail Intersection	0 /5	<u># of Lanes</u>
	Existing Crossing	0 /5	Traffic: 3
Dmd	Community Request	0 /5	Parking: 0
	Land-Use Type	4 /5	Bike: 0
Safety	Collision Location	5 /5	Recommended PXO Treatment
	Road Classification	3 /5	PXO type: Level 2 Type C
	Speed Limit	3 /5	Cost estimate: \$36,000.00
TOTAL Score		30 /75	
			Candidate Crossing Location
			

RIVER OAKS BLVD E/Nipegon Trail North Bank			Map ID: 93	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: 2014	
	School, Elementary	2 /10	Daily traffic volume: 2,400	
	School, Secondary	0 /5	8-hr traffic volume: 1,200	
	Transit Service	5 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	1 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	0 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	0 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	2 /5	PXO type: Level 2 Type D	Candidate Crossing Location
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score		23 /75		

2000 ELM RD			Map ID: 94	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	4 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	3 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	4 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	1 /5	Traffic: 2	
	Community Request	0 /5	Parking: 0	
Safety	Land-Use Type	1 /5	Bike: 0	
	Collision Location	5 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	Candidate Crossing Location
Speed Limit	3 /5	Cost estimate: \$24,000.00		
TOTAL Score		22 /75		

LAKESHORE RD W/Bronte Athletic Park Walk Map ID: 95

PXO Priority Score Rationale			
Connectivity	Senior Facility	12	/15
	School, Elementary	4	/10
	School, Secondary	0	/5
	Transit Service	5	/5
	Major Pedestrian Facility	4	/5
	Trail Intersection	0	/5
	Existing Crossing	0	/5
Dmd	Community Request	5	/5
	Land-Use Type	5	/5
Safety	Collision Location	0	/5
	Road Classification	4	/5
	Speed Limit	3	/5
TOTAL Score		42	/75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	12,800
8-hr traffic volume:	6,400
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	1
Bike:	2

Recommended PXO Treatment	
PXO type:	Level 2 Type B
Cost estimate:	\$26,000.00



1000 SPEERS RD Map ID: 96

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	2	/10
	School, Secondary	0	/5
	Transit Service	5	/5
	Major Pedestrian Facility	1	/5
	Trail Intersection	0	/5
Dmd	Existing Crossing	5	/5
	Community Request	0	/5
Safety	Land-Use Type	0	/5
	Collision Location	5	/5
	Road Classification	5	/5
	Speed Limit	5	/5
TOTAL Score		28	/75

PXO Treatment Rationale	
Traffic count year:	2012
Daily traffic volume:	17,100
8-hr traffic volume:	8,550
Speed limit:	60 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	4
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Pedestrian Signal
Cost estimate:	\$95,000.00



RIVER OAKS BLVD E/Pelee Woods Park Walk Map ID: 97

PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	4 /10
	School, Secondary	0 /5
	Transit Service	5 /5
	Major Pedestrian Facility	4 /5
	Trail Intersection	5 /5
Dmd	Existing Crossing	1 /5
	Community Request	5 /5
Safety	Land-Use Type	1 /5
	Collision Location	0 /5
	Road Classification	2 /5
	Speed Limit	3 /5
TOTAL Score		30 /75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	2,400
8-hr traffic volume:	1,200
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	2

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



MCCRANEY ST W/Sixteen Mile Creek Heritage Trail East Bank Map ID: 98

PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	8 /10
	School, Secondary	0 /5
	Transit Service	2 /5
	Major Pedestrian Facility	3 /5
	Trail Intersection	5 /5
Dmd	Existing Crossing	1 /5
	Community Request	5 /5
Safety	Land-Use Type	0 /5
	Collision Location	0 /5
	Road Classification	0 /5
	Speed Limit	3 /5
TOTAL Score		27 /75

PXO Treatment Rationale	
Traffic count year:	no count
Daily traffic volume:	
8-hr traffic volume:	
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



2170 MARINE DR Map ID: 99

PXO Priority Score Rationale			
Connectivity	Senior Facility	15	/15
	School, Elementary	0	/10
	School, Secondary	0	/5
	Transit Service	3	/5
	Major Pedestrian Facility	1	/5
	Trail Intersection	0	/5
	Existing Crossing	5	/5
Dmd	Community Request	5	/5
	Land-Use Type	5	/5
Safety	Collision Location	0	/5
	Road Classification	4	/5
	Speed Limit	3	/5
TOTAL Score		41	/75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	3,300
8-hr traffic volume:	1,650
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	3
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type C
Cost estimate:	\$36,000.00



Oxford Avenue & Oakdale Drive Map ID: 100

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	10	/10
	School, Secondary	0	/5
	Transit Service	5	/5
	Major Pedestrian Facility	4	/5
	Trail Intersection	0	/5
Dmd	Existing Crossing	0	/5
	Community Request	0	/5
Safety	Land-Use Type	1	/5
	Collision Location	0	/5
	Road Classification	2	/5
Speed Limit		3	/5
TOTAL Score		25	/75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	3,900
8-hr traffic volume:	1,950
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



Morrison Valley North Trail East Bank Map ID: 101

PXO Priority Score Rationale			
Connectivity	Senior Facility	3	/15
	School, Elementary	0	/10
	School, Secondary	0	/5
	Transit Service	5	/5
	Major Pedestrian Facility	4	/5
	Trail Intersection	5	/5
Dmd	Existing Crossing	0	/5
	Community Request	5	/5
	Land-Use Type	4	/5
Safety	Collision Location	0	/5
	Road Classification	3	/5
	Speed Limit	3	/5
TOTAL Score		32	/75

PXO Treatment Rationale	
Traffic count year:	2013
Daily traffic volume:	5,900
8-hr traffic volume:	2,950
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	4
Parking:	0
Bike:	0
Recommended PXO Treatment	
PXO type:	Level 2 Type B
Cost estimate:	\$26,000.00



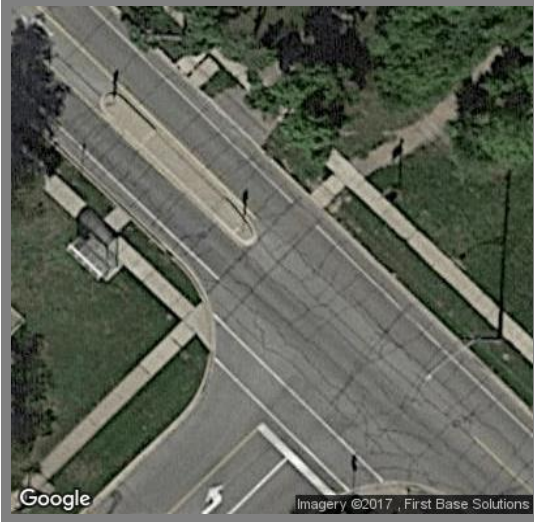
200 NORTH SERVICE RD W Map ID: 102

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	0	/10
	School, Secondary	0	/5
	Transit Service	5	/5
	Major Pedestrian Facility	3	/5
	Trail Intersection	0	/5
Dmd	Existing Crossing	1	/5
	Community Request	0	/5
	Land-Use Type	5	/5
Safety	Collision Location	5	/5
	Road Classification	4	/5
	Speed Limit	5	/5
TOTAL Score		28	/75


PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	8,100
8-hr traffic volume:	4,050
Speed limit:	60 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	5
Parking:	0
Bike:	0
Recommended PXO Treatment	
PXO type:	Pedestrian Signal
Cost estimate:	\$95,000.00



ELM RD/SIXTH LINE Map ID: 103


PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	2014				
	School, Elementary	8 /10	Daily traffic volume:	9,800				
	School, Secondary	4 /5	8-hr traffic volume:	4,900				
	Transit Service	5 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	3 /5	Raised refuge present:	yes				
	Trail Intersection	0 /5	<u># of Lanes</u>					
Dmd	Community Request	5 /5	Traffic:	2				
	Land-Use Type	4 /5	Parking:	0				
Safety	Collision Location	0 /5	Bike:	2				
	Road Classification	4 /5	Recommended PXO Treatment					
	Speed Limit	3 /5	PXO type:	Level 2 Type C				
TOTAL Score 39 /75			Cost estimate:	\$16,000.00				

MCCRANEY ST W/Oakdale Park Walk Map ID: 104

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	2014				
	School, Elementary	2 /10	Daily traffic volume:	1,900				
	School, Secondary	1 /5	8-hr traffic volume:	950				
	Transit Service	2 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	3 /5	Raised refuge present:	no				
	Trail Intersection	5 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	5 /5	Traffic:	2				
	Community Request	5 /5	Parking:	0				
Safety	Land-Use Type	1 /5	Bike:	0				
	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	2 /5	PXO type:	Level 2 Type D				
Speed Limit	3 /5	Cost estimate:	\$24,000.00					
TOTAL Score 29 /75								

RIVER OAKS BLVD/MEADOWLAND DR Map ID: 105


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	4	/10	Daily traffic volume:	3,200
	School, Secondary	0	/5	8-hr traffic volume:	1,600
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	2
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	2	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		28	/75		



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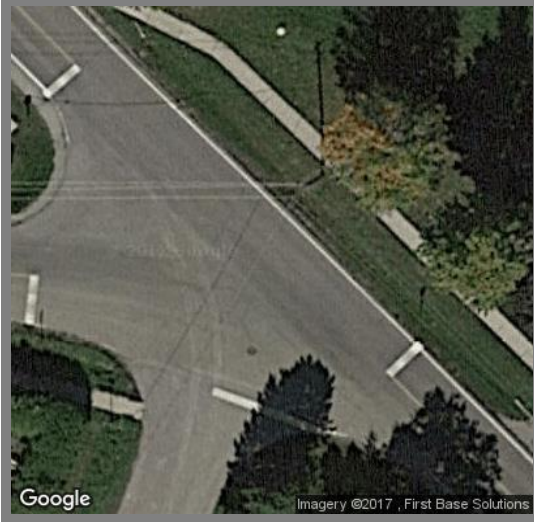
WOOD PL/Brook Valley Park Walk Access Map ID: 106

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	8	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	2	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	1	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		28	/75		

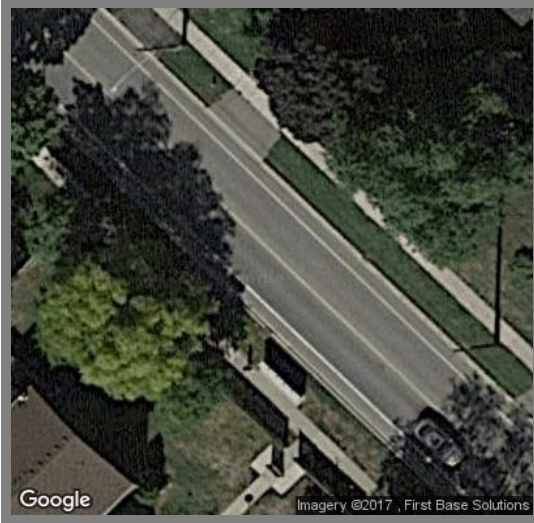


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PRINCE MICHAEL/CRAIGLEITH Map ID: 107

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	no count				
	School, Elementary	4 /10	Daily traffic volume:					
	School, Secondary	0 /5	8-hr traffic volume:					
	Transit Service	2 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	1 /5	Raised refuge present:	no				
	Trail Intersection	0 /5	<u># of Lanes</u>					
	Existing Crossing	3 /5	Traffic:	2				
Dmd	Community Request	5 /5	Parking:	0				
	Land-Use Type	5 /5	Bike:	0				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	3 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score		26 /75						

1400 SIXTH LINE Map ID: 108

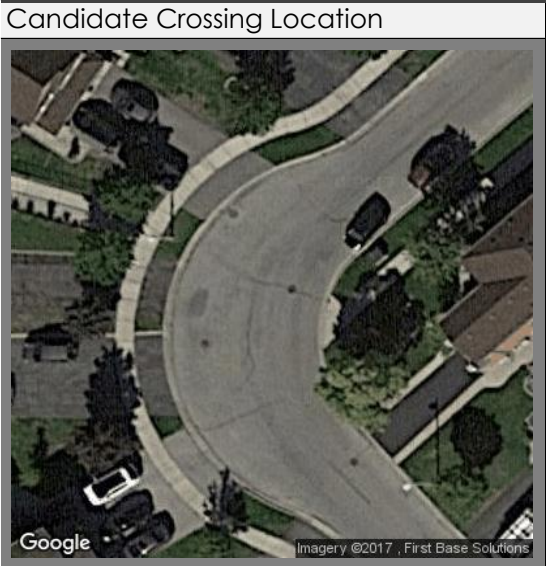
PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	2014				
	School, Elementary	6 /10	Daily traffic volume:	10,500				
	School, Secondary	4 /5	8-hr traffic volume:	5,250				
	Transit Service	5 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	3 /5	Raised refuge present:	no				
	Trail Intersection	0 /5	<u># of Lanes</u>					
	Existing Crossing	3 /5	Traffic:	2				
Dmd	Community Request	0 /5	Parking:	0				
	Land-Use Type	4 /5	Bike:	2				
Safety	Collision Location	5 /5	Recommended PXO Treatment					
	Road Classification	4 /5	PXO type:	Level 2 Type C				
	Speed Limit	3 /5	Cost estimate:	\$36,000.00				
TOTAL Score		37 /75						

RAVINEVIEW WAY/Postridge Park Access Map ID: 109

PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	0 /10
	School, Secondary	0 /5
	Transit Service	2 /5
	Major Pedestrian Facility	4 /5
	Trail Intersection	5 /5
Dmd	Existing Crossing	1 /5
	Community Request	5 /5
	Land-Use Type	1 /5
Safety	Collision Location	0 /5
	Road Classification	1 /5
	Speed Limit	3 /5
TOTAL Score		22 /75

PXO Treatment Rationale	
Traffic count year:	no count
Daily traffic volume:	
8-hr traffic volume:	
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00

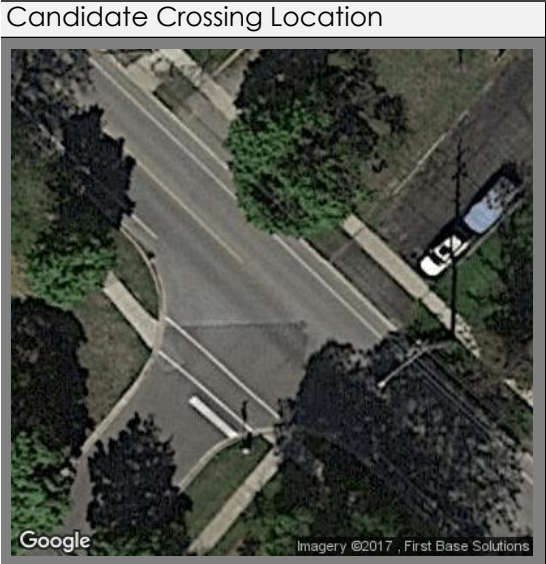


MILLER RD/SIXTH LINE Map ID: 110

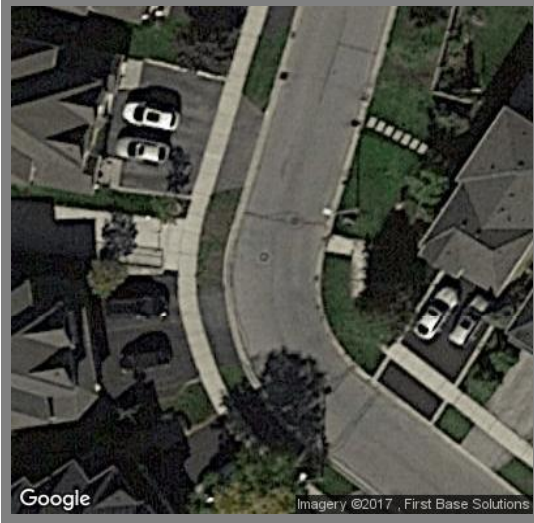
PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	4 /10
	School, Secondary	4 /5
	Transit Service	5 /5
	Major Pedestrian Facility	3 /5
	Trail Intersection	0 /5
Dmd	Existing Crossing	0 /5
	Community Request	0 /5
Safety	Land-Use Type	1 /5
	Collision Location	5 /5
	Road Classification	4 /5
	Speed Limit	3 /5
TOTAL Score		29 /75

PXO Treatment Rationale	
Traffic count year:	no count
Daily traffic volume:	
8-hr traffic volume:	
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

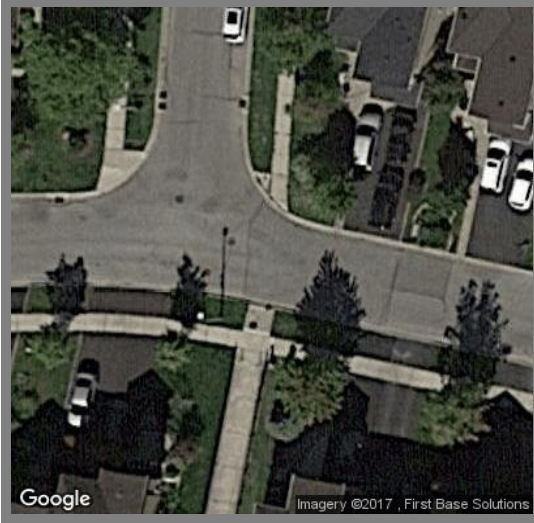
Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00




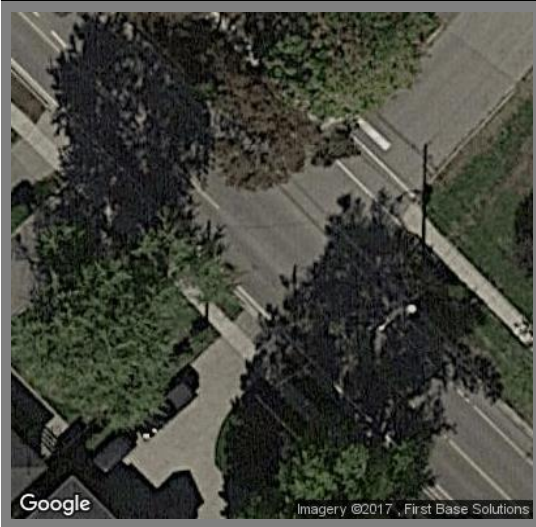
NICHOLS DR/Postridge Park Access Map ID: 111

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	3 /15	Traffic count year:	no count				
	School, Elementary	0 /10	Daily traffic volume:					
	School, Secondary	0 /5	8-hr traffic volume:					
	Transit Service	3 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	3 /5	Raised refuge present:	no				
	Trail Intersection	5 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	1 /5	Traffic:	2				
	Community Request	5 /5	Parking:	0				
	Land-Use Type	1 /5	Bike:	0				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	1 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score 25 /75								

PONDVIEW PL/Morrison Valley North Trail Access Map ID: 112

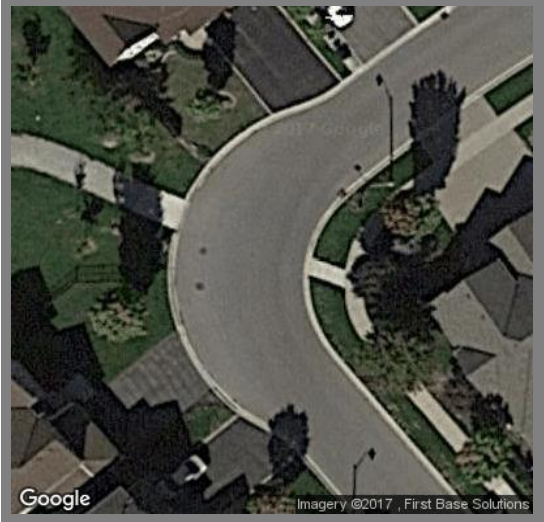
PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	no count				
	School, Elementary	0 /10	Daily traffic volume:					
	School, Secondary	0 /5	8-hr traffic volume:					
	Transit Service	1 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	2 /5	Raised refuge present:	no				
	Trail Intersection	5 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	5 /5	Traffic:	2				
	Community Request	5 /5	Parking:	0				
	Land-Use Type	1 /5	Bike:	0				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	1 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score 23 /75								

300 WYECROFT RD			Map ID: 113
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	0 /15	Traffic count year: 2014
	School, Elementary	0 /10	Daily traffic volume: 8,900
	School, Secondary	0 /5	8-hr traffic volume: 4,450
	Transit Service	5 /5	Speed limit: 50 km/h
	Major Pedestrian Facility	0 /5	Raised refuge present: no
	Trail Intersection	0 /5	<u># of Lanes</u>
Dmd	Existing Crossing	5 /5	Traffic: 3
	Community Request	5 /5	Parking: 0
Safety	Land-Use Type	4 /5	Bike: 0
	Collision Location	0 /5	Recommended PXO Treatment
	Road Classification	5 /5	PXO type: Level 2 Type B
	Speed Limit	3 /5	Cost estimate: \$26,000.00
	TOTAL Score	27 /75	
			Candidate Crossing Location
			

STEPHENS CRES/FOURTH LINE			Map ID: 114
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	0 /15	Traffic count year: 2013
	School, Elementary	6 /10	Daily traffic volume: 6,100
	School, Secondary	0 /5	8-hr traffic volume: 3,050
	Transit Service	4 /5	Speed limit: 50 km/h
	Major Pedestrian Facility	2 /5	Raised refuge present: no
	Trail Intersection	0 /5	<u># of Lanes</u>
Dmd	Existing Crossing	0 /5	Traffic: 2
	Community Request	0 /5	Parking: 0
Safety	Land-Use Type	1 /5	Bike: 0
	Collision Location	5 /5	Recommended PXO Treatment
	Road Classification	2 /5	PXO type: Level 2 Type D
	Speed Limit	3 /5	Cost estimate: \$24,000.00
	TOTAL Score	23 /75	
			Candidate Crossing Location
			


SALCOME DR/North Ridge Park Walk Map ID: 115

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	6	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	3	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	4	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	1
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		28	/75		

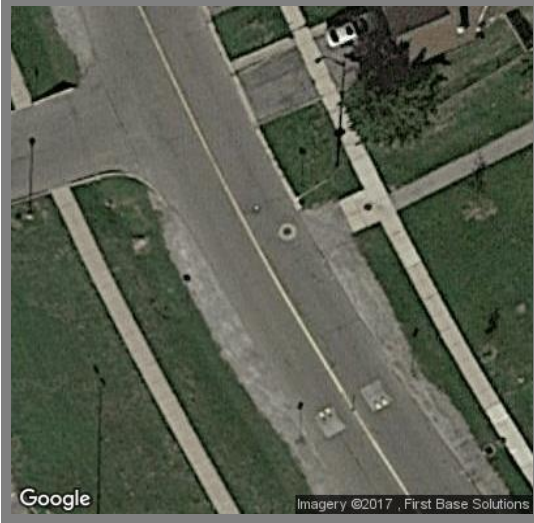


SIXTH/SEWELL Map ID: 116


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	0	/10	Daily traffic volume:	8,800
	School, Secondary	1	/5	8-hr traffic volume:	4,400
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	1	/5	Raised refuge present:	no
	Existing Crossing	5	/5	<u># of Lanes</u>	
Dmd	Community Request	0	/5	Traffic:	2
	Land-Use Type	1	/5	Parking:	0
Safety	Collision Location	5	/5	Bike:	2
	Road Classification	4	/5	Recommended PXO Treatment	
	Speed Limit	3	/5	PXO type:	Level 2 Type D
TOTAL Score		25	/75	Cost estimate:	\$24,000.00





1200 MONTCLAIR DR Map ID: 117

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	no count			Google <small>Imagery ©2017, First Base Solutions</small>	
	School, Elementary	10 /10	Daily traffic volume:					
	School, Secondary	5 /5	8-hr traffic volume:					
	Transit Service	3 /5	Speed limit:	40 km/h				
	Major Pedestrian Facility	4 /5	Raised refuge present:	no				
	Trail Intersection	0 /5	<u># of Lanes</u>					
	Existing Crossing	0 /5	Traffic:	2				
Dmd	Community Request	0 /5	Parking:	0				
	Land-Use Type	3 /5	Bike:	0				
Safety	Collision Location	5 /5	Recommended PXO Treatment					
	Road Classification	1 /5	PXO type:	Level 2 Type D				
	Speed Limit	1 /5	Cost estimate:	\$24,000.00				
TOTAL Score		32 /75						

LAKESHORE RD/SANDWELL DR Map ID: 118

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	2013			Google <small>Imagery ©2017, First Base Solutions</small>	
	School, Elementary	0 /10	Daily traffic volume:	11,200				
	School, Secondary	1 /5	8-hr traffic volume:	5,600				
	Transit Service	0 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	0 /5	Raised refuge present:	no				
	Trail Intersection	0 /5	<u># of Lanes</u>					
	Existing Crossing	5 /5	Traffic:	2				
Dmd	Community Request	5 /5	Parking:	0				
	Land-Use Type	1 /5	Bike:	0				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	4 /5	PXO type:	Level 2 Type C				
	Speed Limit	3 /5	Cost estimate:	\$36,000.00				
TOTAL Score		19 /75						

2000 EIGHTH LINE			Map ID: 119	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: 2012	
	School, Elementary	0 /10	Daily traffic volume: 10,100	
	School, Secondary	1 /5	8-hr traffic volume: 5,050	
	Transit Service	5 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	2 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	0 /5	Traffic: 2	
	Community Request	0 /5	Parking: 2	
Safety	Land-Use Type	1 /5	Bike: 2	
	Collision Location	5 /5	Recommended PXO Treatment	
	Road Classification	4 /5	PXO type: Level 2 Type C	
	Speed Limit	3 /5	Cost estimate: \$36,000.00	
TOTAL Score 21 /75				
			Candidate Crossing Location	
				

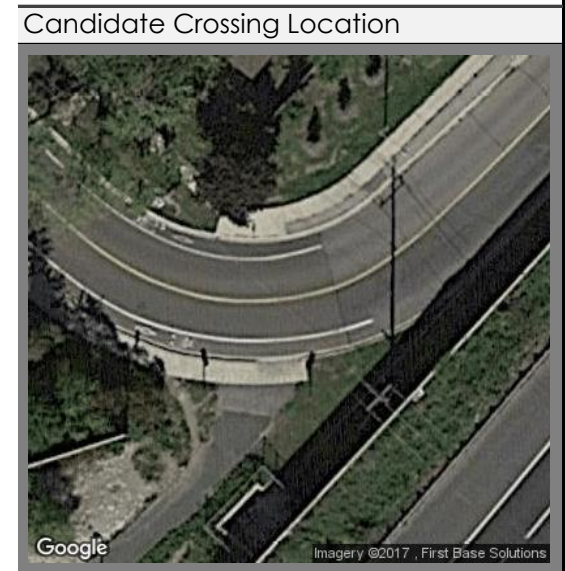
BURTON RD/REBECCA ST			Map ID: 120	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: 2014	
	School, Elementary	4 /10	Daily traffic volume: 11,000	
	School, Secondary	1 /5	8-hr traffic volume: 5,500	
	Transit Service	5 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	0 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	5 /5	Traffic: 3	
	Community Request	5 /5	Parking: 0	
Safety	Land-Use Type	1 /5	Bike: 0	
	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	4 /5	PXO type: Level 2 Type B	
	Speed Limit	3 /5	Cost estimate: \$26,000.00	
TOTAL Score 28 /75				
			Candidate Crossing Location	
				

NORTH SERVICE RD E/Sixteen Mile Creek Heritage Trail East Bank Map ID: 121

PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	0 /10
	School, Secondary	0 /5
	Transit Service	2 /5
	Major Pedestrian Facility	0 /5
	Trail Intersection	5 /5
Dmd	Existing Crossing	3 /5
	Community Request	5 /5
Safety	Land-Use Type	0 /5
	Collision Location	0 /5
	Road Classification	2 /5
	Speed Limit	3 /5
TOTAL Score		20 /75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	2,200
8-hr traffic volume:	1,100
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	2

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



Sewell Drive & Queens Avenue Map ID: 122

PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	10 /10
	School, Secondary	1 /5
	Transit Service	1 /5
	Major Pedestrian Facility	3 /5
	Trail Intersection	0 /5
Dmd	Existing Crossing	0 /5
	Community Request	0 /5
Safety	Land-Use Type	1 /5
	Collision Location	0 /5
	Road Classification	1 /5
Speed Limit		3 /5
TOTAL Score		20 /75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	1,500
8-hr traffic volume:	750
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0


Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



College Park Walk

Map ID: 123

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	2	/10	Daily traffic volume:	
	School, Secondary	5	/5	8-hr traffic volume:	
	Transit Service	3	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	0	/5	Raised refuge present:	yes
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	5	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$4,000.00
TOTAL Score		29	/75		




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Arrowhead Road & Bon Echo Drive


Map ID: 124

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	8	/10	Daily traffic volume:	2,100
	School, Secondary	0	/5	8-hr traffic volume:	1,050
	Transit Service	0	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	0	/5	Parking:	0
Safety	Land-Use Type	1	/5	Bike:	0
	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	2	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		17	/75		




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Morden Road & St. James School			Map ID: 125	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: 2014	
	School, Elementary	10 /10	Daily traffic volume: 1,200	
	School, Secondary	1 /5	8-hr traffic volume: 600	
	Transit Service	3 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
	Existing Crossing	0 /5	Traffic: 3	
Dmd	Community Request	0 /5	Parking: 0	
	Land-Use Type	1 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	2 /5	PXO type: Level 2 Type C	
	Speed Limit	3 /5	Cost estimate: \$36,000.00	
TOTAL Score 23 /75				
			Candidate Crossing Location	
				

1300 WHITE OAKS BLVD			Map ID: 126	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	9 /15	Traffic count year: 2010	
	School, Elementary	0 /10	Daily traffic volume: 7,400	
	School, Secondary	2 /5	8-hr traffic volume: 3,700	
	Transit Service	5 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	3 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
	Existing Crossing	1 /5	Traffic: 2	
Dmd	Community Request	5 /5	Parking: 2	
	Land-Use Type	5 /5	Bike: 2	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	3 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 36 /75				
			Candidate Crossing Location	
				

MCCRAINEY ST/SEWELL DR Map ID: 127

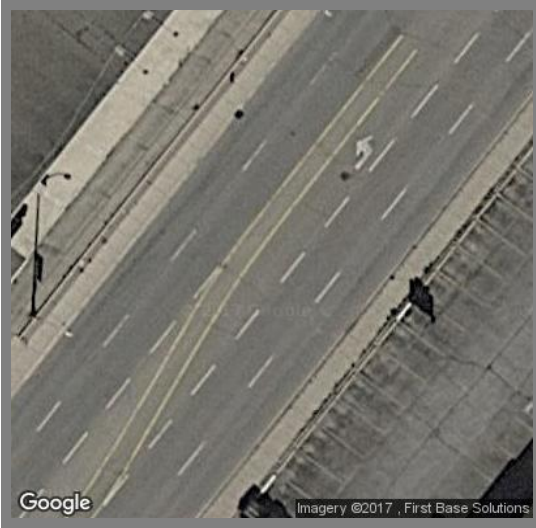
PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	6 /15	Traffic count year:	2012				
	School, Elementary	4 /10	Daily traffic volume:	5,700				
	School, Secondary	1 /5	8-hr traffic volume:	2,850				
	Transit Service	5 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	0 /5	Raised refuge present:	no				
	Trail Intersection	5 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	1 /5	Traffic:	4				
	Community Request	5 /5	Parking:	0				
	Land-Use Type	1 /5	Bike:	0				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	3 /5	PXO type:	Level 2 Type B				
	Speed Limit	3 /5	Cost estimate:	\$26,000.00				
TOTAL Score		34 /75						

1500 ARROWHEAD RD Map ID: 128

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	2014				
	School, Elementary	2 /10	Daily traffic volume:	1,500				
	School, Secondary	0 /5	8-hr traffic volume:	750				
	Transit Service	0 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	2 /5	Raised refuge present:	no				
	Trail Intersection	0 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	5 /5	Traffic:	2				
	Community Request	0 /5	Parking:	0				
	Land-Use Type	1 /5	Bike:	0				
Safety	Collision Location	5 /5	Recommended PXO Treatment					
	Road Classification	1 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score		19 /75						

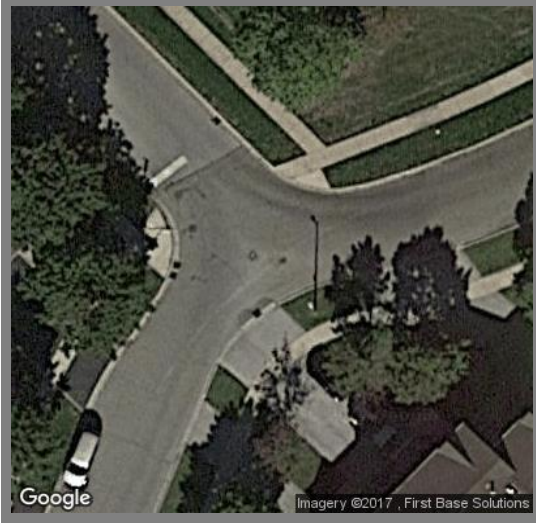
100 SPEERS RD Map ID: 129


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2012
	School, Elementary	8	/10	Daily traffic volume:	14,200
	School, Secondary	0	/5	8-hr traffic volume:	7,100
	Transit Service	5	/5	Speed limit:	60 km/h
	Major Pedestrian Facility	1	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	0	/5	Traffic:	5
Dmd	Community Request	0	/5	Parking:	0
	Land-Use Type	3	/5	Bike:	0
Safety	Collision Location	5	/5	Recommended PXO Treatment	
	Road Classification	5	/5	PXO type:	Pedestrian Signal
	Speed Limit	5	/5	Cost estimate:	\$95,000.00
TOTAL Score		32	/75	*within 215 m of existing crossing control	




QUEENS AVE/PARKHILL RD Map ID: 130


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	9	/15	Traffic count year:	no count
	School, Elementary	4	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	3	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	1	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	3	/5	Traffic:	2
Dmd	Community Request	0	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	5	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		30	/75		




VALLEYBROOK DR/PINEVIEW DR			Map ID: 131
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	0 /15	Traffic count year: no count
	School, Elementary	0 /10	Daily traffic volume:
	School, Secondary	1 /5	8-hr traffic volume:
	Transit Service	1 /5	Speed limit: 50 km/h
	Major Pedestrian Facility	4 /5	Raised refuge present: no
Dmd	Trail Intersection	5 /5	<u># of Lanes</u>
	Existing Crossing	0 /5	Traffic: 2
	Community Request	5 /5	Parking: 0
Safety	Land-Use Type	1 /5	Bike: 0
	Collision Location	0 /5	Recommended PXO Treatment
	Road Classification	1 /5	PXO type: Level 2 Type D
	Speed Limit	3 /5	Cost estimate: \$24,000.00
TOTAL Score 21 /75			
			Candidate Crossing Location
			

Valleybrook Park Access			Map ID: 132
PXO Priority Score Rationale			PXO Treatment Rationale
Connectivity	Senior Facility	0 /15	Traffic count year: 2014
	School, Elementary	0 /10	Daily traffic volume: 2,900
	School, Secondary	0 /5	8-hr traffic volume: 1,450
	Transit Service	3 /5	Speed limit: 50 km/h
	Major Pedestrian Facility	3 /5	Raised refuge present: no
Dmd	Trail Intersection	5 /5	<u># of Lanes</u>
	Existing Crossing	1 /5	Traffic: 2
	Community Request	5 /5	Parking: 0
Safety	Land-Use Type	1 /5	Bike: 0
	Collision Location	0 /5	Recommended PXO Treatment
	Road Classification	2 /5	PXO type: Level 2 Type D
	Speed Limit	3 /5	Cost estimate: \$24,000.00
TOTAL Score 23 /75			
			Candidate Crossing Location
			

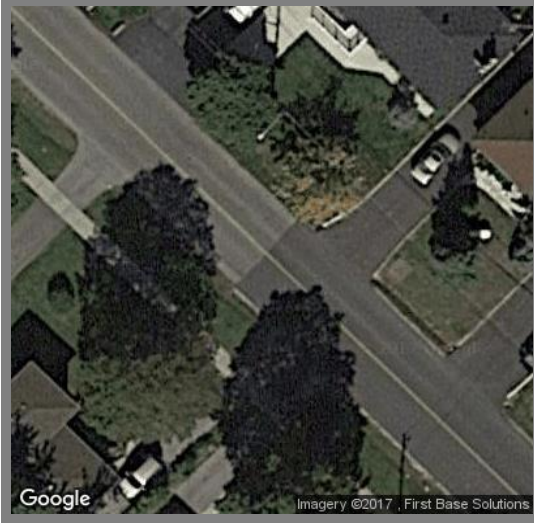
STEWART ST/MAURICE DR Map ID: 133

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	10	/10	
	School, Secondary	0	/5	
	Transit Service	5	/5	
	Major Pedestrian Facility	2	/5	
	Trail Intersection	0	/5	
	Existing Crossing	5	/5	
Dmd	Community Request	0	/5	
	Land-Use Type	3	/5	
Safety	Collision Location	0	/5	
	Road Classification	2	/5	
	Speed Limit	3	/5	
TOTAL Score		30	/75	
		PXO Treatment Rationale		
		Traffic count year:	no count	
		Daily traffic volume:		
		8-hr traffic volume:		
		Speed limit:	50 km/h	
		Raised refuge present:	no	
		<u># of Lanes</u>		
		Traffic:	2	
		Parking:	0	
		Bike:	0	
		Recommended PXO Treatment		
		PXO type:	Level 2 Type D	
		Cost estimate:	\$24,000.00	


CREEKSIDE DR/CREEKSIDE DR Map ID: 134

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	0	/10	
	School, Secondary	0	/5	
	Transit Service	2	/5	
	Major Pedestrian Facility	3	/5	
	Trail Intersection	5	/5	
	Existing Crossing	3	/5	
Dmd	Community Request	5	/5	
	Land-Use Type	1	/5	
Safety	Collision Location	0	/5	
	Road Classification	1	/5	
	Speed Limit	3	/5	
TOTAL Score		23	/75	
		PXO Treatment Rationale		
		Traffic count year:	no count	
		Daily traffic volume:		
		8-hr traffic volume:		
		Speed limit:	50 km/h	
		Raised refuge present:	no	
		<u># of Lanes</u>		
		Traffic:	2	
		Parking:	0	
		Bike:	0	
		Recommended PXO Treatment		
		PXO type:	Level 2 Type D	
		Cost estimate:	\$24,000.00	

200 MAURICE DR Map ID: 135


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	8	/10	
	School, Secondary	0	/5	
	Transit Service	5	/5	
	Major Pedestrian Facility	2	/5	
	Trail Intersection	0	/5	
	Existing Crossing	3	/5	
Dmd	Community Request	0	/5	
	Land-Use Type	4	/5	
Safety	Collision Location	5	/5	
	Road Classification	2	/5	
	Speed Limit	3	/5	
TOTAL Score		32	/75	
		PXO Treatment Rationale		
		Traffic count year:	no count	
		Daily traffic volume:		
		8-hr traffic volume:		
		Speed limit:	50 km/h	
		Raised refuge present:	no	
		<u># of Lanes</u>		
		Traffic:	2	
		Parking:	0	
		Bike:	0	
		Recommended PXO Treatment		
		PXO type:	Level 2 Type D	
		Cost estimate:	\$24,000.00	

Bayshire Drive & St. Marguerite Catholic Elementary School Map ID: 136

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	10	/10	
	School, Secondary	0	/5	
	Transit Service	2	/5	
	Major Pedestrian Facility	3	/5	
	Trail Intersection	0	/5	
	Existing Crossing	3	/5	
Dmd	Community Request	0	/5	
	Land-Use Type	1	/5	
Safety	Collision Location	0	/5	
	Road Classification	2	/5	
	Speed Limit	3	/5	
TOTAL Score		24	/75	
		PXO Treatment Rationale		
		Traffic count year:	2012	
		Daily traffic volume:	1,200	
		8-hr traffic volume:	600	
		Speed limit:	50 km/h	
		Raised refuge present:	no	
		<u># of Lanes</u>		
		Traffic:	2	
		Parking:	0	
		Bike:	2	
		Recommended PXO Treatment		
		PXO type:	Level 2 Type D	
		Cost estimate:	\$24,000.00	

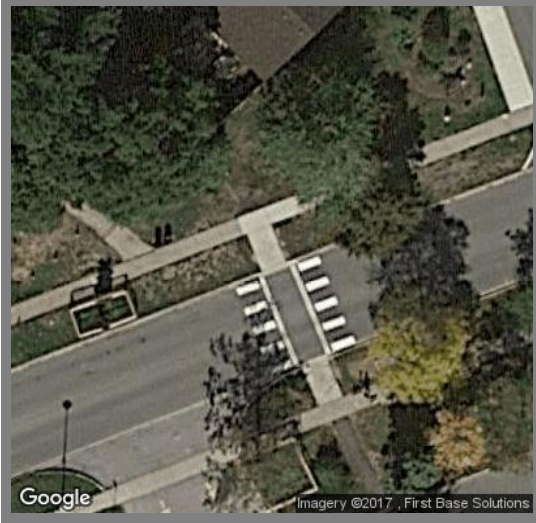
400 KERR ST Map ID: 137

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2012
	School, Elementary	6	/10	Daily traffic volume:	11,800
	School, Secondary	0	/5	8-hr traffic volume:	5,900
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	0	/5	Traffic:	2
Dmd	Community Request	0	/5	Parking:	1
	Land-Use Type	4	/5	Bike:	0
Safety	Collision Location	5	/5	Recommended PXO Treatment	
	Road Classification	2	/5	PXO type:	Level 2 Type C
	Speed Limit	3	/5	Cost estimate:	\$36,000.00
TOTAL Score		28	<i>/75</i>		




Lancaster Drive & Sheridan Public School Map ID: 138

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	8	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	3	/5	Traffic:	2
Dmd	Community Request	0	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		23	<i>/75</i>		




200 REBECCA ST Map ID: 139

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2014
	School, Elementary	4	/10	Daily traffic volume:	11,600
	School, Secondary	5	/5	8-hr traffic volume:	5,800
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	yes
	Trail Intersection	0	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	3
	Community Request	5	/5	Parking:	0
	Land-Use Type	3	/5	Bike:	2
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	4	/5	PXO type:	Level 2 Type B
	Speed Limit	3	/5	Cost estimate:	\$26,000.00
TOTAL Score		32	/75		



Bartos Drive & Oakwood Public School Map ID: 140

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	10	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	3	/5	Speed limit:	40 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	0	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	1	/5	Cost estimate:	\$24,000.00
TOTAL Score		19	/75		



Grosvenor Street & Lancaster Drive Map ID: 141

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	6	/10
	School, Secondary	0	/5
	Transit Service	5	/5
	Major Pedestrian Facility	3	/5
	Trail Intersection	0	/5
	Existing Crossing	3	/5
Dmd	Community Request	0	/5
	Land-Use Type	1	/5
Safety	Collision Location	0	/5
	Road Classification	2	/5
	Speed Limit	1	/5
TOTAL Score		21	/75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	3,500
8-hr traffic volume:	1,750
Speed limit:	40 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



LAKESHORE RD W/HOLYROOD AVE Map ID: 142

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	2	/10
	School, Secondary	5	/5
	Transit Service	2	/5
	Major Pedestrian Facility	3	/5
	Trail Intersection	0	/5
	Existing Crossing	0	/5
Dmd	Community Request	5	/5
	Land-Use Type	1	/5
Safety	Collision Location	0	/5
	Road Classification	4	/5
	Speed Limit	3	/5
TOTAL Score		25	/75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	13,700
8-hr traffic volume:	6,850
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type B
Cost estimate:	\$26,000.00



Grosvenor Street & Kimberley Drive Map ID: 143

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	8	/10
	School, Secondary	0	/5
	Transit Service	5	/5
	Major Pedestrian Facility	4	/5
	Trail Intersection	0	/5
	Existing Crossing	1	/5
Dmd	Community Request	0	/5
	Land-Use Type	1	/5
Safety	Collision Location	0	/5
	Road Classification	2	/5
	Speed Limit	3	/5
TOTAL Score		24	/75

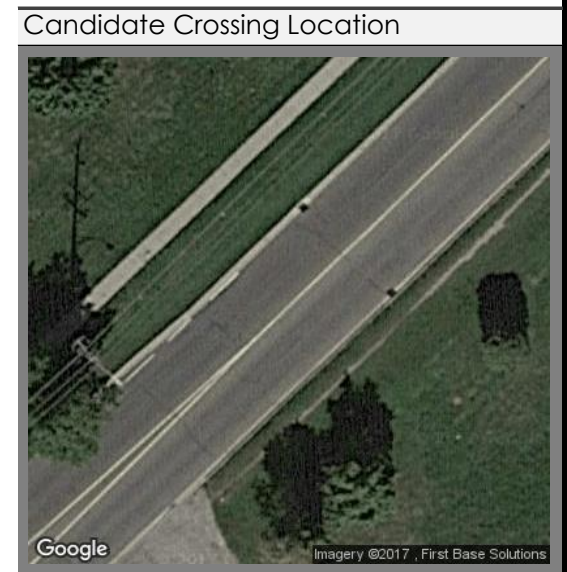
PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	3,500
8-hr traffic volume:	1,750
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	2
Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



400 IROQUOIS SHORE RD Map ID: 144

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	8	/10
	School, Secondary	0	/5
	Transit Service	5	/5
	Major Pedestrian Facility	0	/5
	Trail Intersection	0	/5
	Existing Crossing	0	/5
Dmd	Community Request	0	/5
	Land-Use Type	4	/5
Safety	Collision Location	5	/5
	Road Classification	5	/5
	Speed Limit	3	/5
TOTAL Score		30	/75

PXO Treatment Rationale	
Traffic count year:	2013
Daily traffic volume:	10,900
8-hr traffic volume:	5,450
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0
Recommended PXO Treatment	
PXO type:	Level 2 Type C
Cost estimate:	\$36,000.00



EIGHTH LINE/Morrison-Wedgewood Channel Walk Map ID: 145

PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	6 /10
	School, Secondary	0 /5
	Transit Service	5 /5
	Major Pedestrian Facility	0 /5
	Trail Intersection	5 /5
Dmd	Existing Crossing	0 /5
	Community Request	5 /5
	Land-Use Type	0 /5
Safety	Collision Location	0 /5
	Road Classification	4 /5
	Speed Limit	3 /5
TOTAL Score		28 /75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	13,000
8-hr traffic volume:	6,500
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type B
Cost estimate:	\$26,000.00




NORTH FORSTER PARK DR/Forster Park Walk Map ID: 146


PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	2 /10
	School, Secondary	0 /5
	Transit Service	1 /5
	Major Pedestrian Facility	4 /5
	Trail Intersection	5 /5
Dmd	Existing Crossing	1 /5
	Community Request	5 /5
	Land-Use Type	1 /5
Safety	Collision Location	0 /5
	Road Classification	1 /5
	Speed Limit	3 /5
TOTAL Score		23 /75

PXO Treatment Rationale	
Traffic count year:	no count
Daily traffic volume:	
8-hr traffic volume:	
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



Grosvenor Street & Grange Road			Map ID: 147	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	10 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	2 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	4 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
	Existing Crossing	1 /5	Traffic: 2	
Dmd	Community Request	0 /5	Parking: 0	
	Land-Use Type	1 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	2 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 23 /75				
Candidate Crossing Location				
				

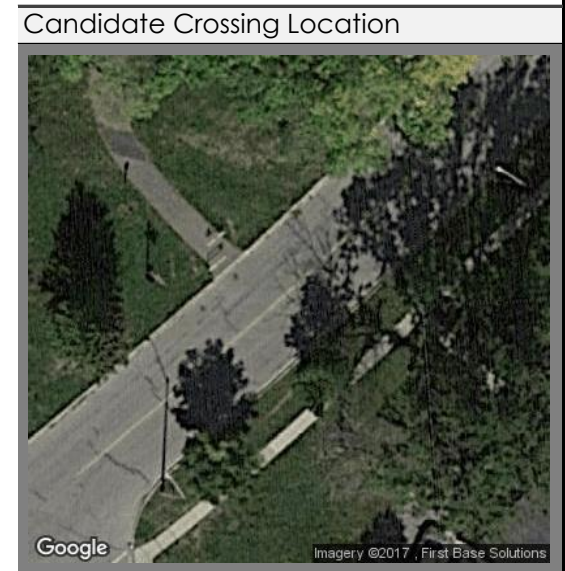
NORTH FORSTER PARK DR/Forster Park Walk			Map ID: 148	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	4 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	0 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	4 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
	Existing Crossing	3 /5	Traffic: 2	
Dmd	Community Request	5 /5	Parking: 0	
	Land-Use Type	1 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 26 /75				
Candidate Crossing Location				
				

SOUTH FORSTER PARK DR/Forster Park Walk Map ID: 149

PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	0 /10
	School, Secondary	0 /5
	Transit Service	1 /5
	Major Pedestrian Facility	4 /5
	Trail Intersection	5 /5
Dmd	Existing Crossing	0 /5
	Community Request	5 /5
	Land-Use Type	1 /5
Safety	Collision Location	0 /5
	Road Classification	1 /5
	Speed Limit	3 /5
TOTAL Score		20 /75

PXO Treatment Rationale	
Traffic count year:	no count
Daily traffic volume:	
8-hr traffic volume:	
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00

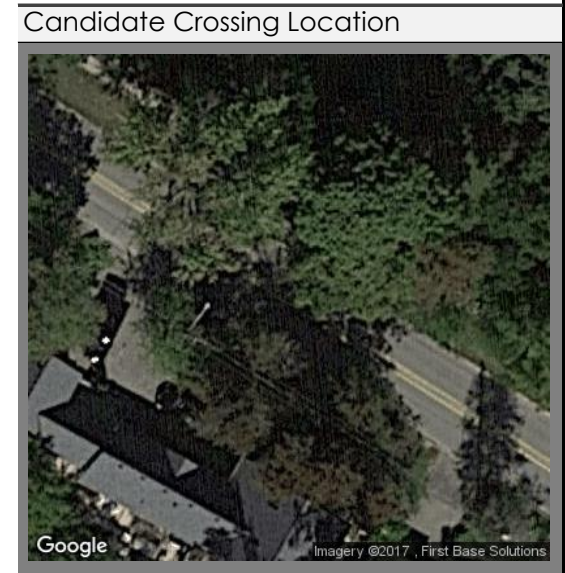



TRAFALGAR RD/Sixteen Mile Creek Heritage Trail East Bank Map ID: 150


PXO Priority Score Rationale		
Connectivity	Senior Facility	6 /15
	School, Elementary	6 /10
	School, Secondary	0 /5
	Transit Service	3 /5
	Major Pedestrian Facility	1 /5
	Trail Intersection	0 /5
Dmd	Existing Crossing	0 /5
	Community Request	0 /5
	Land-Use Type	1 /5
Safety	Collision Location	5 /5
	Road Classification	4 /5
	Speed Limit	3 /5
TOTAL Score		29 /75

PXO Treatment Rationale	
Traffic count year:	2014
Daily traffic volume:	15,100
8-hr traffic volume:	7,550
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type B
Cost estimate:	\$26,000.00




OAKWOOD CRES/Forster Park Walk			Map ID: 151	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	2 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	0 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	4 /5	Raised refuge present: no	
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	1 /5	Traffic: 2	
	Community Request	5 /5	Parking: 0	
	Land-Use Type	1 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score		22 /75		
			Candidate Crossing Location	
				

200 ALLAN ST			Map ID: 152	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	9 /15	Traffic count year: 2014	
	School, Elementary	4 /10	Daily traffic volume: 4,200	
	School, Secondary	0 /5	8-hr traffic volume: 2,100	
	Transit Service	2 /5	Speed limit: 40 km/h	
	Major Pedestrian Facility	2 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	3 /5	Traffic: 2	
	Community Request	0 /5	Parking: 0	
	Land-Use Type	1 /5	Bike: 0	
Safety	Collision Location	5 /5	Recommended PXO Treatment	
	Road Classification	2 /5	PXO type: Level 2 Type D	
	Speed Limit	1 /5	Cost estimate: \$24,000.00	
TOTAL Score		29 /75		
			Candidate Crossing Location	
				

200 BALSAM DR Map ID: 153


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	0	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	1	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	1	/5	Traffic:	2
Dmd	Community Request	0	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	5	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		15	/75		



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Lakeshore Road East & Balsam Drive Map ID: 154


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2013
	School, Elementary	6	/10	Daily traffic volume:	13,000
	School, Secondary	0	/5	8-hr traffic volume:	6,500
	Transit Service	0	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	3	/5	Traffic:	3
Dmd	Community Request	0	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	4	/5	PXO type:	Level 2 Type B
	Speed Limit	3	/5	Cost estimate:	\$26,000.00
TOTAL Score		19	/75		



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2600 HARDY CRES Map ID: 155


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	0	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	1	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	1	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
	Existing Crossing	1	/5	Traffic:	2
Dmd	Community Request	0	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	5	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		13	/75		



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1300 WINTERBOURNE DR Map ID: 156


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	2	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	1	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
	Existing Crossing	5	/5	Traffic:	2
Dmd	Community Request	5	/5	Parking:	0
	Land-Use Type	1	/5	Bike:	0
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		26	/75		



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KINGSWAY DR/Avonhead Ridge Trail Map ID: 157


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2013
	School, Elementary	4	/10	Daily traffic volume:	3,800
	School, Secondary	0	/5	8-hr traffic volume:	1,900
	Transit Service	4	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	4	/5	Raised refuge present:	yes
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	1	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	2
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	3	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$4,000.00
TOTAL Score		29	/75		



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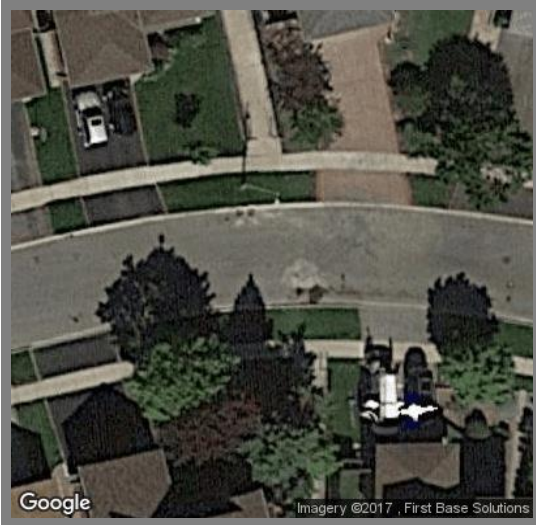
WYNTEN WAY/Avonhead Ridge Trail Map ID: 158

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	6	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	3	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
	Land-Use Type	0	/5	Bike:	2
Safety	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		31	/75		





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WILL SCARLETT DR/Kingsway Park Access Map ID: 159

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	no count			<small>Google Imagery ©2017, First Base Solutions</small>	
	School, Elementary	4 /10	Daily traffic volume:					
	School, Secondary	0 /5	8-hr traffic volume:					
	Transit Service	3 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	3 /5	Raised refuge present:	no				
	Trail Intersection	5 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	1 /5	Traffic:	2				
	Community Request	5 /5	Parking:	0				
	Land-Use Type	1 /5	Bike:	0				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	1 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score		26 /75						

Wynten Way & Gable Drive Map ID: 160

PXO Priority Score Rationale			PXO Treatment Rationale			Candidate Crossing Location		
Connectivity	Senior Facility	0 /15	Traffic count year:	no count			<small>Google Imagery ©2017, First Base Solutions</small>	
	School, Elementary	6 /10	Daily traffic volume:					
	School, Secondary	0 /5	8-hr traffic volume:					
	Transit Service	5 /5	Speed limit:	50 km/h				
	Major Pedestrian Facility	4 /5	Raised refuge present:	no				
	Trail Intersection	0 /5	<u># of Lanes</u>					
Dmd	Existing Crossing	5 /5	Traffic:	2				
	Community Request	0 /5	Parking:	0				
	Land-Use Type	1 /5	Bike:	0				
Safety	Collision Location	0 /5	Recommended PXO Treatment					
	Road Classification	1 /5	PXO type:	Level 2 Type D				
	Speed Limit	3 /5	Cost estimate:	\$24,000.00				
TOTAL Score		25 /75						

WYNTEN WAY/Clearview Park Walk			Map ID: 161	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: no count	
	School, Elementary	6 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	3 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	4 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
	Existing Crossing	0 /5	Traffic: 2	
Dmd	Community Request	5 /5	Parking: 0	
	Land-Use Type	1 /5	Bike: 0	
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type: Level 2 Type D	
	Speed Limit	3 /5	Cost estimate: \$24,000.00	
TOTAL Score 23 /75				
			Candidate Crossing Location	
				

LAKESHORE/MORRISON			Map ID: 162	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year: 2013	
	School, Elementary	6 /10	Daily traffic volume: 12,500	
	School, Secondary	0 /5	8-hr traffic volume: 6,250	
	Transit Service	0 /5	Speed limit: 50 km/h	
	Major Pedestrian Facility	2 /5	Raised refuge present: no	
	Trail Intersection	0 /5	<u># of Lanes</u>	
	Existing Crossing	5 /5	Traffic: 3	
Dmd	Community Request	0 /5	Parking: 0	
	Land-Use Type	1 /5	Bike: 0	
Safety	Collision Location	5 /5	Recommended PXO Treatment	
	Road Classification	4 /5	PXO type: Level 2 Type B	
	Speed Limit	3 /5	Cost estimate: \$26,000.00	
TOTAL Score 26 /75				
			Candidate Crossing Location	
				

SIR DAVID DR/Clearview Park Walk (north of GREENWOOD CRES) Map ID: 163

PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	6 /10
	School, Secondary	0 /5
	Transit Service	2 /5
	Major Pedestrian Facility	4 /5
	Trail Intersection	5 /5
Dmd	Existing Crossing	5 /5
	Community Request	5 /5
Safety	Land-Use Type	1 /5
	Collision Location	0 /5
	Road Classification	1 /5
	Speed Limit	3 /5
TOTAL Score		32 /75

PXO Treatment Rationale	
Traffic count year:	no count
Daily traffic volume:	
8-hr traffic volume:	
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	1
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



WYNTEN WAY/Avonhead Ridge Trail Map ID: 164

PXO Priority Score Rationale		
Connectivity	Senior Facility	0 /15
	School, Elementary	4 /10
	School, Secondary	0 /5
	Transit Service	1 /5
	Major Pedestrian Facility	2 /5
	Trail Intersection	5 /5
Dmd	Existing Crossing	5 /5
	Community Request	5 /5
Safety	Land-Use Type	1 /5
	Collision Location	0 /5
	Road Classification	1 /5
	Speed Limit	3 /5
TOTAL Score		27 /75


PXO Treatment Rationale	
Traffic count year:	no count
Daily traffic volume:	
8-hr traffic volume:	
Speed limit:	50 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	2

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$24,000.00



JONATHAN DR/SYCAMORE ST Map ID: 165

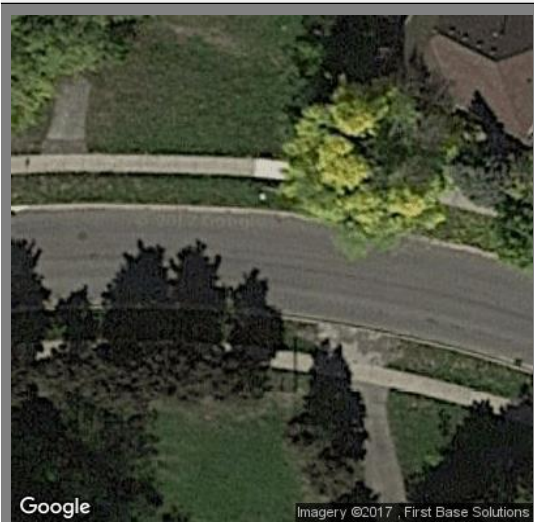
PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	0	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	2	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	5	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
Safety	Land-Use Type	1	/5	Bike:	0
	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		20	/75		



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Avonhead Ridge Trail Map ID: 166

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	no count
	School, Elementary	0	/10	Daily traffic volume:	
	School, Secondary	0	/5	8-hr traffic volume:	
	Transit Service	2	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	3	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	5	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
Safety	Land-Use Type	1	/5	Bike:	0
	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	1	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		25	/75		




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DOGWOOD CRES/Jonathan Park Walk Map ID: 167

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	0	/10	
	School, Secondary	0	/5	
	Transit Service	3	/5	
	Major Pedestrian Facility	3	/5	
	Trail Intersection	5	/5	
Dmd	Existing Crossing	5	/5	
	Community Request	5	/5	
Safety	Land-Use Type	1	/5	
	Collision Location	0	/5	
	Road Classification	1	/5	
		Speed Limit	3 /5	
TOTAL Score		26	/75	

PXO Treatment Rationale		Recommended PXO Treatment	
Traffic count year:	no count	PXO type:	Level 2 Type D
Daily traffic volume:		Cost estimate:	\$24,000.00
8-hr traffic volume:			
Speed limit:	50 km/h		
Raised refuge present:	no		
<u># of Lanes</u>			
Traffic:	2		
Parking:	0		
Bike:	0		

Maple Grove Drive & Elmhurst Avenue Map ID: 168

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location
Connectivity	Senior Facility	0	/15	
	School, Elementary	2	/10	
	School, Secondary	0	/5	
	Transit Service	0	/5	
	Major Pedestrian Facility	2	/5	
	Trail Intersection	0	/5	
Dmd	Existing Crossing	5	/5	
	Community Request	0	/5	
Safety	Land-Use Type	1	/5	
	Collision Location	0	/5	
	Road Classification	2	/5	
		Speed Limit	3 /5	
TOTAL Score		15	/75	

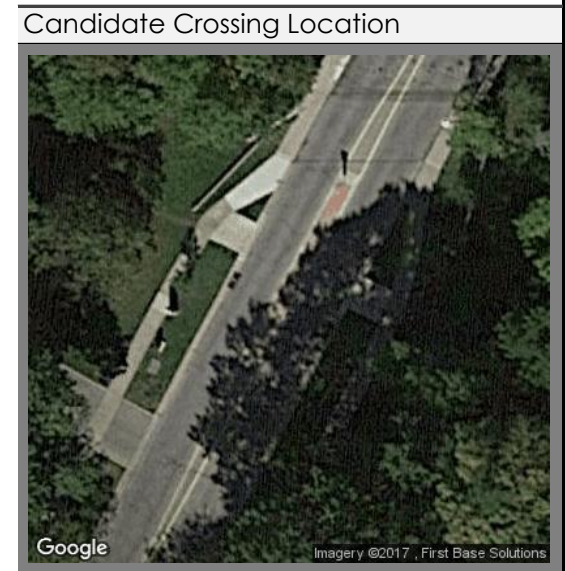
PXO Treatment Rationale		Recommended PXO Treatment	
Traffic count year:	2013	PXO type:	Level 2 Type D
Daily traffic volume:	2,600	Cost estimate:	\$24,000.00
8-hr traffic volume:	1,300		
Speed limit:	50 km/h		
Raised refuge present:	no		
<u># of Lanes</u>			
Traffic:	2		
Parking:	0		
Bike:	0		

BROOKMILL RD/Joshua Valley Park Walk Map ID: 169

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	0	/10
	School, Secondary	0	/5
	Transit Service	3	/5
	Major Pedestrian Facility	0	/5
	Trail Intersection	5	/5
Dmd	Existing Crossing	5	/5
	Community Request	5	/5
	Land-Use Type	1	/5
Safety	Collision Location	0	/5
	Road Classification	1	/5
	Speed Limit	3	/5
TOTAL Score		23	/75

PXO Treatment Rationale	
Traffic count year:	no count
Daily traffic volume:	
8-hr traffic volume:	
Speed limit:	50 km/h
Raised refuge present:	yes
<u># of Lanes</u>	
Traffic:	2
Parking:	0
Bike:	0

Recommended PXO Treatment	
PXO type:	Level 2 Type D
Cost estimate:	\$4,000.00



2300 ROYAL WINDSOR DR Map ID: 170

PXO Priority Score Rationale			
Connectivity	Senior Facility	0	/15
	School, Elementary	0	/10
	School, Secondary	0	/5
	Transit Service	5	/5
	Major Pedestrian Facility	0	/5
	Trail Intersection	0	/5
Dmd	Existing Crossing	5	/5
	Community Request	0	/5
	Land-Use Type	0	/5
Safety	Collision Location	5	/5
	Road Classification	5	/5
	Speed Limit	5	/5
TOTAL Score		25	/75


PXO Treatment Rationale	
Traffic count year:	2012
Daily traffic volume:	2,600
8-hr traffic volume:	1,300
Speed limit:	60 km/h
Raised refuge present:	no
<u># of Lanes</u>	
Traffic:	4
Parking:	0
Bike:	2

Recommended PXO Treatment	
PXO type:	Level 2 Type B
Cost estimate:	\$26,000.00



100 MAPLE GROVE DR Map ID: 171


PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2013
	School, Elementary	0	/10	Daily traffic volume:	2,600
	School, Secondary	0	/5	8-hr traffic volume:	1,300
	Transit Service	0	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	5	/5	Raised refuge present:	no
	Trail Intersection	0	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	5	/5	Traffic:	2
	Community Request	0	/5	Parking:	0
Safety	Land-Use Type	1	/5	Bike:	0
	Collision Location	5	/5	Recommended PXO Treatment	
	Road Classification	2	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		21	/75		



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FORD DR/South Joshua's Creek Heritage Trail Map ID: 172

PXO Priority Score Rationale		PXO Treatment Rationale		Candidate Crossing Location	
Connectivity	Senior Facility	0	/15	Traffic count year:	2013
	School, Elementary	0	/10	Daily traffic volume:	5,500
	School, Secondary	0	/5	8-hr traffic volume:	2,750
	Transit Service	5	/5	Speed limit:	50 km/h
	Major Pedestrian Facility	2	/5	Raised refuge present:	no
	Trail Intersection	5	/5	<u># of Lanes</u>	
Dmd	Existing Crossing	0	/5	Traffic:	2
	Community Request	5	/5	Parking:	0
Safety	Land-Use Type	1	/5	Bike:	0
	Collision Location	0	/5	Recommended PXO Treatment	
	Road Classification	4	/5	PXO type:	Level 2 Type D
	Speed Limit	3	/5	Cost estimate:	\$24,000.00
TOTAL Score		25	/75		



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DIGBIE RD/CHEVERIE ST			Map ID: 173	
PXO Priority Score Rationale			PXO Treatment Rationale	
Connectivity	Senior Facility	0 /15	Traffic count year:	no count
	School, Elementary	0 /10	Daily traffic volume:	
	School, Secondary	0 /5	8-hr traffic volume:	
	Transit Service	2 /5	Speed limit:	50 km/h
	Major Pedestrian Facility	3 /5	Raised refuge present:	no
	Trail Intersection	5 /5	<u># of Lanes</u>	
Dmd	Existing Crossing	5 /5	Traffic:	2
	Community Request	5 /5	Parking:	0
	Land-Use Type	1 /5	Bike:	0
Safety	Collision Location	0 /5	Recommended PXO Treatment	
	Road Classification	1 /5	PXO type:	Level 2 Type D
	Speed Limit	3 /5	Cost estimate:	\$24,000.00
TOTAL Score 25 /75				
			Candidate Crossing Location	
			