

**THE CORPORATION OF THE CITY OF WINDSOR**  
**POLICY**

Service Area:	<b>Office of the City Engineer</b>	Policy No.:	
Department:	<b>Traffic Operations</b>	Approval Date:	<b>October 17, 2016</b>
Division:	Transportation Planning	Approved By:	<b>Council (CR645/2016)</b>
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Prepared By:	Jeff Hagan, Policy Analyst		Date: N/A
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**1. POLICY**

**1.1** This policy addresses parking, traffic and transportation issues involving school sites and surrounding neighbourhoods.

**2. PURPOSE**

**2.1** The purpose of this policy is to provide City Administration and the general public with a consistent approach to addressing parking, traffic and transportation issues involving school sites and surrounding neighbourhoods.

**3. SCOPE**

**3.1** This policy addresses new and existing elementary schools and high schools operated by public or separate school boards.

**3.2** This policy does not address private schools.

**3.3** This policy does not address post-secondary institutions or adult education centres.

**3.4** This policy does not address day care facilities, except when they are integral to an elementary or high school operated by a public or separate school board.

**4. RESPONSIBILITY**

**4.1** Council has ultimate authority to approve implementation and funding for school areas, school zones, on-street parking regulations, and other measures that are developed under this policy, and is responsible for approving amendments to this policy.

**4.2** Staff are responsible for carrying out this policy as follows:

**4.2.1** The City Engineer is the corporate lead for all Transportation and associated Public Safety programs.

- 4.2.2 The City Planner is the corporate lead for all Planning programs and provides approval authority for development applications for new and redeveloped schools.
- 4.2.3 The Executive Director of Operations provides strategic oversight and approval authority for this program.
- 4.2.4 The Manager of Transportation Planning is responsible for:
  - 4.2.4.1 Overseeing implementation of this policy,
  - 4.2.4.2 Bringing forward amendments to Parking By-law 9023 and Traffic By-law 9148 resulting from this policy before Council for approval,
  - 4.2.4.3 Recommending operating and capital budget expenditures related to this policy, and
  - 4.2.4.4 Recommending revisions to this policy to Council.

**5. GOVERNING RULES AND REGULATIONS**

5.1 The policy shall be carried out as described in Attachment 1.

**6. RECORDS, FORMS AND ATTACHMENTS**

6.1 Records for this policy shall be prepared and retained in accordance with Records Retention By-Law 21-2013, as amended.

6.2 Attachments:

- 6.2.1 Attachment 1: City of Windsor School Neighbourhood Policy – 2016, Opus International Consultants



*City of Windsor*

# **2016 School Neighbourhood Policy**





**OPUS**

*City of Windsor*

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# **2016 School Neighbourhood Policy**

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## **Executive Summary**

The Corporation of the City of Windsor (the City) commissioned Opus International Consultants (Opus) to develop a School Neighbourhood Policy to improve and enhance the accessibility and safety of City schools and their surrounding transportation networks through the use of proven practices. The policy will provide a consistent citywide approach that also encourages non-auto modes, promoting healthier and safer communities.

The policy development included undertaking an investigation into the existing practice and policy around school neighbourhood traffic and safety management. The investigation looked at the City's existing processes for identifying, prioritizing, and implementing safety mitigation measures around schools. It also reviewed Best Practice from other municipalities, as well as established guidelines including the Ontario Traffic Manual (OTM), and the Transportation Association of Canada (TAC).

The Best Practice Review covered a wide range of issues related to school site development and the implementation of school areas, zones, parking regulations, and the accommodation of non-auto and bus traffic, among others.

The School Neighbourhood Policy document provides guidelines based on observed best practices covering these five components discussed in greater detail in this report:

1. Infrastructure to Support Non-Auto Modes
  - Pedestrian Generator Sidewalk Policy
  - School Crossings
  - Cycling Network Infrastructure
  - Bike Parking
2. Establishing School Areas and Zones (where warranted)
  - School Zone Signs with reduced speed
  - School Area Signs
3. On-Street Traffic Safety and Operations
  - School Side – No Parking (to allow pick-up/drop-off activities)
  - Opposite Side – No Stopping (to discourage mid-block crossings)
4. On-Site Traffic Accommodation
  - Accommodate school traffic needs on-site for new development and whenever possible at existing sites
5. Supporting Education, Awareness and Enforcement
  - Develop neighbourhood specific traffic safety mapping
  - Support the Health Unit with Active and Safe Routes to Schools and similar programs
  - Continue current Enforcement practices



These guiding principles will be employed with engineering judgement when assessing existing and future school developments. In this way the accessibility and safety of the schools within the City limits and their surrounding transportation networks will be improved and enhanced, in a site-specific context approach, through the use of proven practices.

It is acknowledged that no individual component will resolve all of the transportation related challenges surrounding school sites, however incremental improvements toward the accessibility and safety of Windsor Schools that is supported by education, awareness and enforcement can lead to initiating the culture shift needed to support the overarching goal of a healthier and safer community.



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# City of Windsor

## School Neighbourhood Policy

### 1 Introduction

#### 1.1 Purpose of this Policy

The purpose of this document is to provide a high-level series of guiding principles, based on best practices, to assist the development and maintenance of transportation networks in the vicinity of school properties. This policy is designed to assist when assessing existing and future school developments to promote healthier, safer communities and should be supplemented by existing and future detailed procedures. It provides guidance for the application of best practice engineering principals and speaks to as many site-specific contexts as practicable. The application of this policy will be at the discretion of responsible engineers acting on behalf of the Corporation of the City of Windsor.

Key objectives of the policy include:

- Providing guidance regarding the implementation of school zones and areas in new and existing school areas,
- Implementing best practice for buses and other motor vehicles in the vicinity, and;
- Supporting bicycle and pedestrian traffic to promote healthier, safer school communities.

The policy document includes the following sections which provide guidance based on a best practices review and current knowledge of related documents, policies, and procedures impacting school properties within the City.

- **Relevant Manuals and Guides** – A brief summary of national and provincial guidance related to elements of a school zone, as well as regional or local legislative requirements.
- **Current Practice Affecting School Zones** – Existing ordinances and procedures related to school zones currently employed by the City are included in this section.
- **Opportunities for Improvement** – This section provides a brief summary of the gaps identified in current City procedures related to school zones as well as issues identified by the City during the review process.
- **School Zone Policy** – This section details the final school zone policy components as developed based on a review of best practices and other related research.

#### 1.2 Policy Development

The policy is designed to work in concert with existing relevant bylaws, statutes, policies, and procedures. As no encompassing school zone policy currently exists, this policy is designed to present a cohesive guide, drawing on and enhancing existing knowledge through the implementation of observed best practices. It is a guiding document and not intended as a substitute for sound engineering practice where such judgement is required. The bulk of the policy applies to existing schools with a section specifically included for guidance regarding the development of new schools.

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## 2 Relevant Manuals and Guides

There are several external manuals and guidelines available that contribute knowledge and best practice to facilitate the development of a school zone and area policy. These external sources are not produced or controlled by the City and are updated from time to time. To support the development of a final policy document that is easy to implement, makes decision-making more transparent, consistent and ensures the safety of students travelling to, from and around school properties, a thorough review of existing guidance was completed. A number of relevant manuals and guidelines that contribute to best practice and the policy are summarized below.

### 2.1 Ontario Highway Traffic Act

A formal document dealing directly with school areas and zones does not currently exist to provide guidance. The **Ontario Highway Traffic Act (HTA)** is used by the province of Ontario to legislate vehicle permits, licencing of vehicles, the rate of speed, rules of the road, various traffic offenses, and the classification of vehicles. In terms of how the HTA is relevant to school zones, it provides information on setting the rate of speed in a school zone, establishing the length of a school zones, school buses, and school crossings. The document also deals with speed rates in a school zone including:

- The HTA dictates that a council of a municipality may – in the way of a bylaw – elect a portion of a highway that is under its jurisdiction to be a school zone.
- The portion of highway designated a school zone must adjoin the entrance to or exit from the school and start/end within 150 meters along the highway in either direction beyond the property limits.
- The municipality can propose a lower speed limit than the existing limit. The HTA allows for this lower speed limit to be effective either at all times or only at certain times or days.

### 2.2 Ontario Traffic Manual

The Ministry of Transportation of Ontario (MTO) utilizes a guide called the **Ontario Traffic Manual (OTM)**. The OTM is made up of several books, four of which have material pertinent to the discussion of school zone safety; Books 5, 6, 11 and 15. The HTA defines a school zone as a section of roadway in the vicinity of a school with a mandatory 40 km/hr maximum speed limit. Table 1 summarizes the four relevant sections of the Manual.

Table 1 - Relevant Sections of the Ontario Traffic Manual

OTM Book	Content Relevant to Schools
Book 5	Book 5 is the Regulatory Signs portion of the OTM, and it lists several different signs that can be utilized in school zones, as well as guidelines for using these signs.
Book 6	Book 6 is the Warning Signs portion of the OTM, and provides the same type of information as Book 5, but for signs not already covered in Book 5.
Book 11	Book 11 is the Markings and Delineation book and discusses school crossings and provides figures displaying how school crossings should be installed. They also suggest that school crossing layouts can be supplemented with signs and/or pavement markings warning of the school crossing ahead.
Book 15	Book 15 covers Pedestrian Crossings and references the HTA which provides a new standard for school zone and school area signs to be implemented by 2015. The signs are the same as discussed in book 5 and 6, however they are to be yellow/green with a black legend and border instead of the existing blue with white legend and border. Book 15 also discusses other requirements for school crossings, crossing guards for instance

### 2.3 Manual of Uniform Traffic Control Devices for Canada

The *Manual of Uniform Traffic Control Devices for Canada (MUTCDC)*, published by the Transportation Association of Canada (TAC), provides guidelines for the design, sizing and application of devices to be used for traffic control. The devices shown in this guide are also intended to provide important information to drivers regarding speed regulations, potential hazards, and special zones. In specific relation to school zones, the MUTCDC lists appropriate signage to be displayed in school areas, as well as guidelines for recommended sign placement. However, the MUTCDC does not provide guidance on when and where school areas and zones should be established.

### 2.4 Ontario Traffic Conference School Crossing Guard Guide

The Ontario Traffic Conference *School Crossing Guard Guide* was developed to provide guidance for municipalities and townships throughout Ontario as an update to the *School Crossing Review 1992*. The document provides information related to school crossings including:

- Legislative authority,
- Roles and Definitions,
- Standard Equipment,
- Human Resources,
- School Crossing Warrants, and;
- Traffic Control Devices.

As stated in the guide itself, “It attempts to establish a logical process for the identification, justification, installation and operation of school crossings and school crossing guard programs”.

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## 2.5 Pedestrian Crossing Control Guide

The TAC published the *Pedestrian Crossing Control Guide* in 2012, and it provides guidelines for devices specifically used for pedestrian crossings. This particular guide is intended as a supplement to information that is presented in the MUTCDC. It includes a decision support tool to assist in assessing the need for pedestrian crossing control and in identifying the type of devices that would be most suitable in each situation.

While the Guide is meant for assessing pedestrian crossings in many environments beyond the specific cases associated with schools, the guide does include four different levels of crossing control with specific layouts for school areas. These four layouts, in addition to the Decision Support Tool, can be found in Appendix C.

## 2.6 School and Playground Areas and Zones: Guidelines for Application and Implementation

TAC also produced a set of guidelines in October of 2006 titled *School and Playground Areas and Zones: Guidelines for Application and Implementation*. TAC defines school zones versus school areas as follows:

- School Zone: A section of roadway adjacent to a school that is denoted by School Area signage and a reduced speed limit sign.
- School Area: A section of roadway adjacent to a school that is denoted by School Area signage only.

The manual includes a scoring matrix that can be used as a warrant for designating a segment of roadway as a school area or a school zone. The matrix considers a number of criteria and applies both a maximum point value to each criterion and a weighting factor to the sub-criterion within each. The main criterion are as follows:

- school type, such as elementary, middle or high school;
- road classification, such as local, collector or arterial;
- fencing present along the school boundary;
- property line separation, whether the school abuts the roadway, is within 50 m of the roadway or is more than 50 m from the roadway;
- school entrance, whether the primary, secondary or no entrance empty onto the street in question, and;
- the location and availability of sidewalks for entering and exiting students.

After a school zone or area has been recognized, the zone or area must then be clearly signed and marked. Please refer to Appendix B for more information.

## 2.7 Contrasting Best Practice Guidance

Overall, in terms of legislation, the Ontario Traffic Manual and the TAC guidelines have strong alignment and are similar in nature. For example, both guidelines suggest decreasing speed limits by no more than 20 km/hr at a

given time. School crosswalks are addressed the same way by both the OTM and TAC. There is also strong consistency in that the school zone boundaries be implemented adjacent to a school entrance and/or exit and that they lie outside the property limits. The methodology, however, for determining exactly where the school zones/area begins and ends is different between sources. In most cases, where methodologies conflict the OTM should be followed.

### **3 Current Practice Affecting School Neighbourhoods**

A singular, unifying policy that relates to the treatment of the transportation networks in school neighbourhoods has not yet been adopted by the City. It operates with some inter-related bylaws and engineering procedures that relate to the implementation of safety measures in the vicinity of schools. This section briefly highlights existing material and requirements that have the potential to affect the policy to be developed and should be considered to ensure alignment within the City's overall procedures.

#### **3.1 City of Windsor Official Plan**

The City of Windsor's Official Plan provides high level planning and development guidance for the City over a twenty year period. Any public works conducted within the City of Windsor is required to conform with the conditions set forth in the Official Plan. Several chapters and provisions within the plan provide guidance related to school zones and developments. Some sections are directly related, such as those addressing school area transportation and transportation plans, to more broadly related sections regarding community health and the development of safe, caring and diverse neighbourhoods. Some of the more prominent clauses related to school area transportation are as follows:

##### **SCHOOL AREA TRANSPORTATION**

7.2.2.26 Council and the School Boards shall promote a safe travel environment near schools by:

- (a) Ensuring that new elementary school locations are central to the area that they intend to serve to reduce the need for buses to transport students;
- (b) Ensuring that the location of new schools limits the need for children to cross Arterial Roads;
- (c) Encouraging the use of traffic calming near elementary schools constructed in new neighbourhoods;
- (d) Coordinating the location of new schools with transit.
- (e) Maintaining a policy for school areas that may include:
  - (i) Reduced speed limits in school zones;
  - (ii) No stopping areas near school crossings to ensure visibility of crossing guards and children;

- (iii) Appropriate parking and stopping restrictions along school frontages in consultation with the affected School Board and local residents. City of Windsor Official Plan1 Volume I 1 Infrastructure 7 - 10
- (f) Requiring all schools to provide adequate on-site parking and loading/unloading facilities.

### **SCHOOL ACTIVE TRANSPORTATION PLANS**

- 7.2.2.27 Council shall require that school boards implement active transportation plans for new or refurbished schools that include:
- (a) Safe walking routes including new sidewalk connections, street crossing improvements and other pedestrian infrastructure within the school property or municipal road allowance fronting the school property;
  - (b) Appropriate way finding signage where necessary; and
  - (c) Sufficient bicycle parking facilities for all students.

### **PEDESTRIAN MOVEMENT**

- 7.2.3.1 (c) Providing a walking environment within public rights-of-ways that encourages people to walk to work or school, for travel, exercise, recreation and social interaction.
- 7.2.5.2 Council shall require that the design of development proposals and infrastructure undertakings facilitate easy access to public transportation. In this regard, Council shall:
- (c) Require that sidewalks and other pedestrian facilities connect major traffic generators to public transportation services.

## **3.2 City of Windsor Development Manual**

The City of Windsor has produced and maintained a development manual to supplement the Official Plan. This manual is intended to provide additional information and specific details regarding any fees, drawings, and inspection processes for all developments within the City which fall under the scope of the manual. Generally, the manual will be most applicable leading up to and during the construction of new school developments or the reconstruction or modification of existing developments.

### 3.3 Standard Engineering Drawings

The City of Windsor provides a series of standard engineering design drawings on the City's website. These provide engineering specifications for specific site development components. Some of the more applicable standards include commercial drive standards, utility cross section, curb and gutter standards and sidewalk designs among others. The City's Engineering Department should be consulted before using any standard engineering drawings to ensure they are the latest version.

### 3.4 City of Windsor Bylaws

#### 3.4.1 Parking Bylaw 9023

Stopping and parking near schools can lead to significant safety concerns and is recognized as a current and challenging issue for the City of Windsor. Inappropriate stopping and parking by buses, passenger cars, or commercial vehicles may contribute to reduced visibility along the roads surrounding the school property. This has the potential to increase the risk for crashes involving pedestrians and bicyclists, as well as between vehicles generally. Inclusion of no parking or no stopping zones around school sites is supported by several studies, including one conducted by Pyta and McTiernan (Development of a Model for Improving Safety in School Zones, 2010). The study found that more than a quarter of child fatalities occurred when they emerged from behind a parked vehicle. An additional study cited by their report found that a 30% reduction in casualty crashes involving pedestrians was observed with the removal of on street parking (Update of Florida Crash Reduction Factors and Countermeasures to Improve the Development of District Safety Improvement Projects, 2005 & Guide to Road Safety Part 8: Treatment of Crash Locations, Austroads, 2009).

Parking Bylaw 9023 addresses some concerns where school bus loading zones and designated no parking areas are concerned. Table 2 provides excerpts of some of the relevant bylaws. Schedules to the ByLaw are also used to regulate location specific stopping and parking restrictions.

Table 2 - School Zone Related Bylaws

Number	Bylaw	Implication
10. (2) (e)	<i>When properly worded or marked signs have been erected and are on display, no person shall park a vehicle -.... on any highway along the curb adjacent to school premises between the hours of 8:00 a.m. and 5:00 p.m., except Saturdays, Sundays, or other school holidays</i>	<i>Currently restricts parking at curbside next to a school property when signed.</i>
10 (6)	<i>Unless otherwise permitted in this by law, no person shall stop or park a vehicle at any time.... (c) Within a school bus loading zone..."</i>	<i>Restricts stopping and parking within a school bus loading zone</i>
18. (2)	<i>Pursuant to subsection 10 of Section 175 of The Highway</i>	<i>Restricts parking, stopping</i>

Number	Bylaw	Implication
	<p><i>Traffic Act, R.S.O. 1990, Chapter H8, as amended, the portions of the highways set out in Schedule "BB" hereof are hereby designated:</i></p> <p><i>"SCHOOL BUS LOADING ZONES" When properly worded or marked signs have been erected and are on display, no person shall park, stop or stand a vehicle other than a school bus on the portions of the highways designated in Schedule "BB" (School Bus Loading Zones) hereof.</i></p>	<p><i>and standing within a school bus loading zone</i></p>

### 3.4.2 Zoning Bylaw 8600

The Zoning Bylaw provides detailed regulations for the development of various property types. Specifically, Section 13 covers institutional districts which include school area developments and buildings among others. The bylaw section includes guidance regarding lot, frontage, and building dimensions. Additionally, Section 25 pertains to parking area regulations for each development type including school areas. This includes guidance regarding the design and construction of access areas, collector aisles, parking aisles, and parking garages.

### 3.4.3 Traffic Bylaw 9148

This bylaw covers a wide range of transportation related issues. The bylaws regulate traffic operations including vehicular, pedestrian, and other non-motorized traffic. This includes pedestrian responsibilities when crossing the street and utilizing sidewalk facilities as well as specific locations identified as pedestrian crossovers. Other sections include regulations for bicycles and bicycle lanes. Lastly, the bylaw also identifies the speed limits set for streets within the jurisdiction of the City.

## 3.5 Bicycle Use Master Plan

The City's goal to promote healthy, connected neighborhoods and the various benefits associated with them should be supported by the provision of adequate and safe non-motorized paths. These facilities play a critical role in the development and maintenance of school communities. Installation of well-maintained sidewalks, bike paths and lanes, and safe crosswalks form the backbone of this component of the transportation network and work collaboratively to provide a connected and accessible means for individuals to travel to and from the school property.

The **Bicycle Use Master Plan (BUMP)** was completed in 2001 and reaffirmed the City's commitment to developing a safe, easily accessible cycling network. The Plan provides a 20 year development guide for the City's cycling network by providing design guidelines and educational and promotional strategies for raising public awareness around cycling. The document lists a series of 42 recommendations designed to improve cycling within the city. Some of the school area related recommendations include:



- 
- The completion of identified sections of the primary and secondary cycling networks
  - Construct every road as a bicycle friendly roadway
  - Develop safe cycling skills in children
  - Teach motorists how to more effectively share the road with cyclists
  - Increase the amount and quality of bicycle parking facilities

While the BUMP is more broadly focused, it's overarching goals and vision support the development of a safe and efficient alternative mode of transportation which can be used to supplement and improve transportation to and from school areas.

### 3.6 Pedestrian Generator Sidewalk Policy

The purpose of the **Pedestrian Generator Sidewalk Policy** is to provide pedestrian sidewalk facilities to increase the separation between pedestrians and vehicle traffic, expand alternative transportation opportunities, and improve the health and welfare of City residents. This is accomplished through the identification of applicable areas where sidewalks may be warranted and installed, improving connectivity and pedestrian access. While there are several types of pedestrian generator sidewalks, some definitions include sidewalks that are required on a school approach street or those requested by a School Board.

### 3.7 Bus Bays Policy

The City has adopted a bus bay construction policy which provides guidance regarding funding responsibility for school drop-off zone bus bays. Under the policy, the benefiting School Board is responsible for, at most, 50 percent of the associated costs of constructing the bus bay when constructed on the public right-of-way. If built on private property, the school is responsible for the lesser of either 50% of the total construction costs or 40% of the estimated construction costs of a bus bay located on the public right-of-way. For schools where a bus bay has already been installed in the public right of way, or at the construction of a new school building, the City will not provide funding assistance.

### 3.8 Traffic Calming Policy

The City's traffic calming policy addresses schools as part of the warrant study. The warrant process assesses a street's characteristics to determine if traffic calming measures are merited. Within the warrant calculations, roads are classified as either local or collector, and schools are included as pedestrian generators. The presence of schools within the street being considered is given 7.5 points and 5 points are given for school walk routes in the area for each adjacent school for a maximum of 15 points out of 100.

While a school's presence contributes to when traffic calming measures are considered, the traffic calming policy is anticipated to have limited influence on this policy.

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### 3.9 Crossing Guard Procedure

The procedure for establishing a crossing guard at a new location is currently guided by a formal process adopted by the City.

The procedure provides a clear definition of:

- the conditions of a site where a crossing guard is warranted;
- the review process for existing crossing guard placement; and
- the prioritization process of crossing guards within the road network.

Given that crossing guards are an augmentation to school zone traffic control, this warrant document will require review to ensure good alignment once a proposed School Neighbourhood policy has been developed.

### 3.10 City of Windsor Site Plan Review Manual

In addition to noting the conditions at existing schools, guidance regarding on site access requirements for new and redeveloped school sites was also considered. New schools will need to provide suitable access and crossing arrangements which align to the safety and sustainability goals of the City and best engineering practice.

Development of a *Site Plan Review Manual* for property owners and developers regarding developments within the city limits is currently underway. The document currently being drafted is intended as a more contextual document to provide general guidance to contractors and construction companies for the overall site plan review process. It will additionally provide some explanation as to why certain requests and requirements are made by the City. In regards to technical standards and information, the document will reference the City's existing Development Manual and other standard engineering drawings. Some general information provided regarding the review manual and the general review process includes the following:

- Specifics of the review process are left up to the discretion of each reviewing department and their respective engineering teams
- Additional studies (environmental, traffic impact, etc.) are requested as needed given the nature of each individual project
- The requirements for each review and any additional studies are handled on a case-by-case basis

In addition, the City and its reviewing engineers have the authority to offer recommendations to the project developer as well as imposing requirements/conditions that must be met before the site plan is approved. The various requirements are generally related to transportation and safety issues.

## 4 Policy Document Purpose

The City currently relies on a combination of a series of ordinances and guidance documents to govern the regulations associated with schools and their immediate surroundings. This has resulted in a series of gaps in the City's procedures, which this document is designed to address. This policy will build off existing policies and procedures, creating a more cohesive, unified policy that will improve and enhance the accessibility and safety of City schools and their surrounding transportation networks. Based on the review of existing procedures, ordinances, and other related guidance, several issues were identified which are currently not addressed in existing legislation and policy. This school neighbourhood policy has been developed to address these gaps including the following:

- Provide consistency regarding stopping and parking on roadways adjacent to schools. Historically, the city has tried to restrict parking based on school hours but has not received much public support for this approach.
  - Consistency across the municipality is important to reduce confusion when traveling through different school areas. Additionally, stopping and parking restrictions are designed to improve operations in the vicinity of the school property as well as the safety of students and other non-motorized users.
- Work towards appropriate speed limits near schools. The HTA does allow a municipality to reduce speed limits in school zones.
  - Having a consistent speed limit across the municipality in designated school zones reduces potential confusion when traveling in marked school zones. A lower operating speed has been shown to reduce the severity of collisions and provides additional time for drivers as well as non-motorized users to avoid potential collisions.
- Defined procedure defining warrants for school areas and zones, including their associated signing layouts.
  - The use of a defined warrant process for the assessment and implementation of school zones and areas helps to ensure that they are used only where appropriate and most effective.
- Encourage Active and Safe Routes to School Programs across the City.
  - The support and implementation of active and safe routes to schools, particularly when paired with a robust sidewalk and bike path network, promotes healthy travel options for all users while providing a safe and fun way for students to travel to school. An added benefit is the reduction of private vehicle pickups and drop offs at the school.

These opportunities were identified through a thorough review of existing policies and procedures. They represent areas where consistency was required throughout the City's jurisdiction (no stopping and parking zones) and issues not currently covered by existing ordinances and guidelines (school area/zone warrant process).

The following section provides information regarding the use of existing policies and sets standards to address existing gaps in the current procedures and guidance. These recommendations have also included a review of best practices employed by other municipalities across Canada.

## 5 School Traffic Policy

### 5.1 Scope of Policy

This section describes the policies for assessing and implementing safety mitigation at existing and future school sites. The purpose of this document is to provide policy level guidance regarding the development and operation of existing and future schools. Specifically, the policy applies to public elementary, middle, and high schools within the limits of the City of Windsor. It does not apply to other types of related institutions such as day cares and adult education centers. Additionally, private schools are not included under this policy.

Standards and procedures contained herein are derived from a review of school zone best practices and current procedures. These procedures discussed in this section have been chosen largely for their compatibility within existing administrative, budgeting, and jurisdictional context. This guide is designed to supplement existing policies with following sections providing guidance based on observed best practice for:

- The determination of school areas versus zones;
- Provisions for sidewalks and cycling facilities, and crosswalks;
- Stopping and parking near schools;
- Establishing bus loading and unloading zones, and;
- General guidelines for the development of new schools

### 5.2 Establishing School Areas & Zones

For clear terminology, the section of roadway between initial warning signs (that do not include speed reductions) in each direction is commonly referred to as a school area. Speeds are not necessarily reduced in school areas, though they may include segments within them where speed limits are reduced. These speed reduction areas are called school zones. The OTM Book 6 contains a series of warning and regulatory signs which can be used to inform motorists of the presence of a school along a section of roadway.

While the final determination will require sound engineering judgement, the *School Zone Input Worksheet* developed by the Transportation Association of Canada and detailed in the *School and Playground Areas and Zones: Guidelines for Application and Implementation* should be used as a guide for the selection of either a school area, zone, or some combination of the two. The worksheet focuses on six primary characteristics of the school or playground area, including:

1. **School Type:** Elementary, Middle/Junior High, High
2. **Road Classification:** Local, Collector, Arterial, Expressway/Freeway
3. **Fencing:** Fully-fenced, Partially-fenced, No fencing/Traversable
4. **Property Line Separation:** Abuts Road, Less than 50 meters, Greater than 50 meters
5. **Location of School Entrance in Relation to Road:** Main or Secondary on Roadway, where these adjoin a school entrance
6. **Location of Sidewalks:** None or Non-School Side of Roadway, School Side, Both Sides

A Maximum Point Value (MPV) is assigned to each criterion – reflecting its relative importance- and a Weighting Factor (WF) is applied to each sub-criteria – higher values indicated a greater need for an area or zone to be

established. Score for each criteria is calculated multiplying the MPV and WF. A total score is calculated by added all scores at the end. Using the total score, a School Zone Results Matrix can be used to determine whether a school area or zone is warranted. Scores are tallied in the worksheet shown in Figure 1.

INSTALLATION CRITERION	MAXIMUM POINT VALUE (MPV)	DESCRIPTION		WEIGHTING FACTOR (WF)	SCORE (MPV * WF)
School Type	40	Elementary		1.0	T =
		Middle / Junior High		0.4	
		High School		0.2	
Road Classification	20	Urban Land Use	Rural Land Use		C =
		Local		1.0	
		Minor Collector Collector	Local Collector	0.75	
		Major Collector / Minor Arterial	Arterial	0.5	
		Major Arterial / Expressway	Freeway	0.25	
Fencing	20	Fully Traversable		1.0	F =
		Partially Traversable		0.5	
		Non-Traversable		0.1	
Property Line Separation	10	Abuts Roadway		1.0	L =
		Within 50 metres		0.5	
		Further than 50 metres		0.0	
School Entrance	5	Main Entrance / Multiple Secondary Entrances		1.0	E =
		Secondary Entrance		0.6	
		None		0.0	
Sidewalks	5	None or Non-School Side		1.0	S =
		School Side		0.6	
		Both Sides		0.0	
<b>TOTAL SCORE (sum of T,C,F,L,E and S)</b>					

Figure 1 - School Zone Input Worksheet

The steps to determine if a school area or zone is warranted are as follows:

1. For each criteria – select the description that best represents the conditions of the subject roadway; multiply the associated WF by the MPV and enter the product in the field

TOTAL SCORE	AREA OR ZONE?
0 – 40	Nothing
41 – 64	SCHOOL AREA
65 – 80	SCHOOL AREA or SCHOOL ZONE*
81 – 100	SCHOOL ZONE

\*Local conditions must be considered in detail in order to determine the appropriate treatment. Wherever possible, mitigation measures should be explored that would reduce the score so that marginal school zones can be avoided. The reasons for the final decision should always be documented.

right column. In cases where multiple academic levels are held on the same property, i.e. a combination elementary/middle school, the more conservative category should be used. In this example the property would be treated as an elementary school.

2. Add up the scores entered for each criteria. Enter the sum at the bottom of the far right column.
3. Using the Worksheet Results Matrix (Figure 2), identify the need for a School Zone, a School Area or neither. Borderline cases should be carefully reviewed. In all cases, engineering judgment, local conditions and community input should be considered.
4. Review the feasibility of providing new facilities or improving existing ones to reduce the need for a zone.
5. For locations where a potential School Zone has been identified, carry out a speed survey to confirm operating speeds. If the 85<sup>th</sup> percentile speed is 40 km/h or lower at student pick-up and drop-off times, revise the recommendation to “School Area”
6. Identify, review and implement the signing and marking plan associated with the result.

**Figure 2 - School Zone Results Matrix**

Signing and marking for school zones and areas should be completed in accordance with the Ontario Traffic Manual. The beginning and end of school zones are to be clearly marked. The different requirements are as follows, with figures and additional guidance provided in Appendix B and the reference document, *Guidelines for School and Playground Zones and Areas*:

- For a School **AREA**
  - School Area Sign (WC-1) at the start
- For a School **ZONE**
  - School Area Sign (WC-1) at the start of the zone
  - RB-6/RB-6a displaying 40 km/hr when flashing
  - RB-1 at end of zone reinstating original speed limit
  - SCHOOL pavement markings

### 5.2.1 Establishing School Areas

In the event a school area is selected for use in the vicinity of the school site, boundaries denoted by appropriate signage must be selected. This should be done, at least in part, through the use of Table 4 of Book 6 of the OTM. This table identifies the appropriate distances for signage based on full stop condition requirements, based on the speed limit along the roadway. This information should be paired with the appropriate signage as identified in the OTM Book 6.

## 5.2.2 Establishing School Zones

The section of roadway between initial warning signs that indicate a speed reduction in each direction is commonly referred to as a school zone. According to the Ontario Highway Traffic Act (HTA), a school zone must adjoin the entrance to or exit from the school and start/end within 150 meters along the highway in either direction beyond the property limits. The TAC School and Playground Areas and Zones manual recommends that a WC-1 sign be used in conjunction with a Maximum Speed sign (RB-6 or RB-6a) to denote the start of a school zone.

If it is determined that a school zone is warranted, either alone or in concert with a school area, several factors must be taken into consideration. These factors include the spatial extent of the zone, appropriate signage, the selected speed reduction, and the duration of the reduction. When considering the implementation of a school zone, appropriate speed studies should be conducted to confirm its applicability. For example, if the operating speed in the area is already at or below 40 km/hr a school zone may not be effective.

Regarding the spatial extent of the reduced speed zone, a speed reduction within 150 meters of the school property line in either direction is required based on the Highway Traffic Act. This should be identified through the use of appropriate signing as determined by the OTM Book 5, specifically signs RB-6 or RB-6A. The speed limit should be reduced to a maximum of 40km/h in the school zone. Per the OTM and TAC guidelines, the speed limit should be reduced by no more than 20km/h in a single step. If further speed reductions are required the extent of the school zone should be reduced accordingly. The reduced speed zone should be in effect uniformly across the district between the hours of 7:00am – 9:30am and 2:00pm – 5:00pm during school days.

## 5.3 Vulnerable Road User Safety & Mobility

The following sections provide guidance regarding the operation and maintenance of the non-motorized portion of the network.

### 5.3.1 Providing for Non-motorized Users

The continuity and maintenance of the sidewalks and cycling facilities within the area around each school not exclusively serviced by buses should be ensured, with steps taken regularly to ensure students and other members of the public have a continuous path to the school. It is expected that this will be done in conjunction with the existing sidewalk policies employed by the city and supported by requests from the school administration.

An additional component to this policy is the enforcement of snow removal ordinances. When sidewalks are not properly maintained, particularly during the winter months, students and other pedestrians may be forced to walk in the roadway, increasing the potential for pedestrian or bicyclist involved crashes. Ensuring that all responsible property owners maintain clear and passable sidewalks is a crucial component in providing a safe means for students and the general public to travel to and from the school property.

Given the potential for the number of sidewalk requests or gaps to exceed available funds, a prioritization process is necessary. This process can be found in the City's existing Pedestrian Generator Sidewalk Policy. Detailed reviews of school walking routes, such as those carried out as part of the Active and Safe Routes to School program (see Section 5.3.3), can be used to provide pedestrian forecasts for evaluation of requests under the Pedestrian Generator Sidewalk Policy.



### 5.3.2 Crosswalks Near Schools

School crossings are pedestrian crossings that are located close to schools and are supervised by crossing guards. The City's existing Crossing Guard Procedure should be employed to define warranted crossing guard locations, crossing guard placement, and their prioritization across the network.

School crossing considerations include the warrant and location selection, identification of appropriate traffic controls, associated warning signage for motorists, and the necessity and warranting of crossing guards. In most cases, information and guidance contained in the HTA and OTM are sufficient to determine whether or not a pedestrian crossing is warranted at any given location. In the few instances where they may not provide sufficient guidance, the TAC Pedestrian Crossing Guide should be employed. Similarly, the OTM generally provides sufficient guidance regarding appropriate traffic controls, with the TAC Pedestrian Crossing Guide serving as a supplemental document when information is not available in the OTM. Lastly, the Ontario Traffic Council's *School Crossing Guard Guide* should be used to determine the necessity of a crossing guard at each pedestrian crossing.

The OTM offers a section in their pedestrian crossings book, Book 15 – Pedestrian Crossing Treatments, on Supervised School Crossings which includes numerous pedestrian crossing layouts. Signage and pavement markings used at school crossings should comply with the signs and pavement markings provided in the OTM, subject to the HTA.

### 5.3.3 Active & Safe Routes to Schools (ASRTS)

The Windsor Essex County Health Unit oversees the guidance and implementation of Active and Safe Routes to School (ASRTS) programs. To support and enhance the implementation of the non-motorized networks and pedestrian crosswalks, the Unit should continue existing programs and promote the implementation of such programs where they don't already exist. This is especially true for the school communities with younger students. These programs promote walking and biking to school while providing a safe way for students and parents to find paths to and from the school property. Programs and initiatives which fall under this category may vary widely depending on the needs and interest of the local community. Some examples from the Active and Safe Routes to School website as well as directly from other Canadian municipalities are included below:

- **International Walk to School Day/Month** – An international period of celebration of active and safe routes to school, supporting and promoting safe and healthy modes of transportation to school
- **Walk & Wheel on Wednesdays** – Selection and promotion of at least one day a week for families to bike or walk into school, adjusting their schedules and reducing congestion around the school property
- **iwalk-iwheel Club** – Supporting tools and activities to educated children and encourage participation, including membership cards, and classroom activities
- **Walking School Bus** – This program involved groups of children, supervised by adults, walking a route to school each day and making “stops” to pick up other children on the way, similar to a bus route. It provides a safe, healthy, and supervised means to promote and help children walk to school.
- **Idle Free School Zone** – These are zones where parents waiting to pick up or drop off children are asked to turn off their cars while they wait, saving fuel, reducing emissions, and helping to create a healthier environment around the school.

It is recommended that the Health Unit continue to promote the general program and provide general guidance and support for communities seeking to initiate these programs. These programs should consider pedestrian,



cycling, and other non-motorized users. This will help to ensure that school communities have access to the resources and guidance they need while allowing them to focus on the programs or approaches which are best suited for the communities they serve. Additionally, the ASRTS program and the City's existing Pedestrian Generator Sidewalk Policy may be used in concert to support the sidewalk warranting process.

## 5.4 Vehicular Traffic Safety & Operations

Given the nature of the typical school day, significant peaks in related traffic occur regularly around the beginning and end of the day. This may continue into the afternoon or evening depending on the various extracurricular activities or events which may take place on school property. When paired with the increase in pedestrian and bicycle traffic during the same period, maintaining a safe and efficient traffic flow in the vicinity of the school is of particular importance. Additionally, the existing Windsor Essex Student Transportation Services hazard definitions play a significant role in determining a student's eligibility for transportation services. Some considerations under existing policy include:

- Volume of traffic
- Number of travelled lanes of a road
- Posted speed limits
- Signalized intersections or crossing guards
- Physical barriers

Regulations related to the location and use of bus loading and unloading zones as well as stopping and parking areas in the immediate vicinity of the school are detailed in the following sections. Existing schools should work to accommodate their transportation needs on site wherever possible before implementing off-site treatments.

### 5.4.1 Establishing Bus Loading and Unloading Zones

Many students use the school bus system to travel to and from school, and loading/unloading zones can be areas of significant conflict and raise the potential for pedestrian crashes. To help alleviate the concerns around bus loading and unloading zones, they should be given priority over no parking zones. Applicable signage is addressed in the OTM Book 5, namely sign RB-89, the School Bus Loading sign which identifies the specific area designated for loading and unloading school buses. The length of the loading and unloading zone should be based in part on the number of buses expected to arrive each day. Areas in the immediate vicinity of the school not already designated as a bus loading or unloading zone should be regulated as described in the following section. Transit Windsor stops will be permitted adjacent to school properties.

### 5.4.2 Kiss & Ride Pick-Up/Drop-Off Areas

Kiss and ride programs may be implemented by individual schools based on local community needs and the available school property layout. Kiss and ride programs are designed to provide parents a designated pick-up/drop-off area to improve traffic flow during peak pick-up/drop-off periods. This requires a dedicated area, independent of the bus loading/unloading zones, for drivers to move through in a single queue to promote efficient traffic flow and most importantly student safety. In most cases, parent volunteers follow along the queue assisting students when exiting/entering the vehicle from the passenger side only. Parents remain in the vehicle and parking within the queue is strictly prohibited. This provides students with a safe, regulated, and monitored area to arrive at and depart from the school property. **Kiss and ride areas should be provided on school**

**property to help minimize negative impacts on the surrounding road network while helping to separate passenger car and school bus traffic.**

### 5.4.3 Stopping and Parking Near Schools

No stopping zones should be in effect on the side of the roadway opposite of the school property effective during school days only. This should be implemented where traffic conditions and road hierarchy permit. Exceptions to this policy may be made for existing stopping and parking policies or in areas where more stringent restrictions are required based on additional reviews. Further exceptions to the no stopping zones may be made at locations which meet the following conditions:

- Locations with residential properties opposite the school which have no off-street parking, or;
- Locations where commercial properties opposite the school are served by on-street metered parking spaces.

Additionally, no parking zones should be in effect on the side of the road adjacent to the school property effective all day during school days. This should be implemented where traffic conditions and road hierarchy permit. Exceptions to the no parking zones may be made at locations which meet the following conditions:

- Roads adjacent to school property where there is no pedestrian access,
- Where metered parking spaces exist, or;
- Roads that do not flank or front the school but where pedestrian access is provided.

It is critical for the City to provide educational information to the public, patrons, and school boards to support effective communication to their patrons regarding the safety and operational benefits of the No Stopping and No Parking zones around school properties. This should help to improve compliance rates and increase public support.

## 5.5 Guidelines for New Schools

New schools provide an opportunity for the City to provide input and preferred design criteria for the development. Toward this end, early cooperation between the school site developers, school boards, and the Planning Department is encouraged and in some cases required. New school developments should continue to include active transportation plans as required under the City's Official Plan. The policy discussed in this document may be used to help guide the development of any new or redeveloped school's active transportation plan as required under the City's Official Plan. Regarding the general aspects of the new school development, the policies laid out in the previous sections should be employed, to promote consistency between the school sites and ensure all applicable standards, bylaws, etc. are followed. To summarize, it is highly recommended that new school developments hold to the following standards:

- Implementation of a School Area or Zone where applicable with associated signing, pavement markings, etc.
  - Reduced School Zone speed to 40 km/hr effective between 7:00am – 9:30am and 2:00pm – 5:00pm during school days.
- Ensure sidewalk, bike lane, and path connectivity in the area around the school not already serviced by buses and ensure connectivity to school catchment area.
  - Maintain clear sidewalks and paths during the winter season.

- Review crosswalks plans near school and follow OTM guidelines.
- Bus Loading/Unloading Zones should be prioritized on the side of the roadway adjacent to the school over No Parking zones if on-site accommodation is not possible.
  - Effective all day during school days.
- When including a designated kiss and ride area, prioritize on-site locations to minimize negative impacts on the local road network.
- Support and enforce No Stopping zones on the side of the roadway opposite of the school effective during school days only. No Parking zones on the side of the road adjacent to the school property, effective at all times throughout the calendar year.
- Guidelines for New Schools: Accommodate pick-ups and drop-offs, including but not limited to Kiss and Ride areas, on property first, if this is not feasible apply the recommendations discussed previously.
  - Promote consideration and implementation of traffic calming measures in the vicinity of the school or park property

Schools may occasionally be located in areas where traffic calming is already implemented as part of the City's Traffic Calming Policy. In these instances, the design of the school development and adjacent traffic calming projects should be complimentary in nature. This will help to promote a common space where pedestrians and other non-motorized modes may interact safely in the vicinity of vehicular traffic with minimal risk.

## 5.6 Policy Implementation

Given the extensive reach of the recommendations adopted in this policy, an implementation period will be required. This may involve revisions to bylaws, design standards, procedures, applications and supporting documentation. As such, a period of time will be required to begin implementing the policy document and propagating these revisions through the affected documents and procedures. This will result in non-compliant properties being brought into compliance in steps over a period of time.

## 5.7 Policy Summary

The main policy components detailed in this document can be summarized as follows:

- School Zone or Area Warrants analysis: Utilize Transportation Association of Canada's *School and Playground Areas and Zones: Guidelines for Application and Implementation* based on the existing operating speeds.
- School Zone boundaries: Fall within 150 meters on either side of school property boundaries.
- School Area boundaries: Based on the roadway speed limit.
- School Zone and Area Signage: Follow Ontario Traffic Manual specified signage.
- Reduced Speed School Zone: reduce speed to 40 km/hr effective between 7:00am – 9:30am and 2:00pm – 5:00pm during school days (Mon-Fri, Sept. 1<sup>st</sup> to June 30<sup>th</sup>).
- Sidewalk and Bike Lane Provisions: work to provide connectivity within the area around the school not already serviced by buses and ensure connectivity to school catchment area. Additionally, strictly enforce snow removal by property owners along all sidewalks within this area.

- Crosswalks near schools: follow Ontario Traffic Manual guidelines.
- Stopping and Parking in School Zones: No Stopping zones on the side of the roadway opposite of the school effective all day during school days. No Parking zones on the side of the road adjacent to the school property, effective all day during school days.
- Bus Loading/Unloading Zones: Prioritized on the side of the roadway adjacent to the school over No Parking zones. Effective all day during school days.
- New and Existing Schools: Accommodate pick-ups and drop-offs and other transportation needs on property first, otherwise apply the previously discussed recommendations.

## 6 Appendix

### **Appendix A – School Area and Zone Layouts**

The following information comes from the Alberta Infrastructure and Transportation *Guidelines for School and Playground Zones and Areas*, Section D.3.2.3. It provides additional background, definition, and instruction regarding the *School Zone Input Worksheet*.

### **D3.2.3 Establishment of School Zones and Areas**

School Areas (warning signs) can be considered for roadways near Elementary and Middle schools, where there is a possibility of children entering the roadway. School Areas are generally discouraged for High Schools, Post Secondary Institutions and Pre-Schools, due to the widespread recognition of their limited effectiveness for these age groups.

School Zones (reduced speed limits near schools) are generally discouraged along "walk-to-school routes" away from the school vicinity, and on roadways where any of the following conditions exist:

- School is located on an arterial road or expressway / freeway;
- School grounds are fully fenced;
- School is located an appreciable distance from the roadway;
- The roadway does not have a school entrance; and
- The length of the school frontage is minimal (e.g. less than 50 metres).

The factors to be considered in the establishment of School Areas and Zones are:

- School Type
- Road Classification
- Fencing Characteristics
- Property Line Separation
- Location of School Entrance
- Location of Sidewalks


These criteria are described and illustrated as follows, along with some of the possible descriptions and how they influence the need for a school zone. These criteria are to be evaluated according to the procedure presented following the criteria descriptions.




The procedure is applicable for both residential and non-residential areas.

**FIGURE 2.3 SCHOOL CRITERIA DESCRIPTIONS**


**1. School Type**



Elementary



Middle/Jr.High

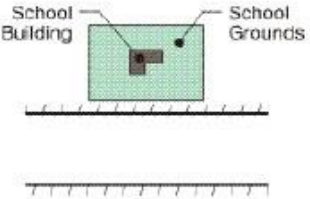


High

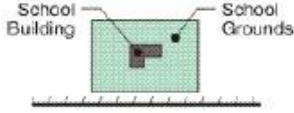
Children of Elementary school age, when without parental supervision, are typically considered to be the most vulnerable due to their limited abilities to understand and anticipate vehicular traffic movements and their tendency to accidentally enter the roadway. Children of high school age are typically better able to understand traffic and to control their own movements. School Zones or Areas are unnecessary at post-secondary institutions.

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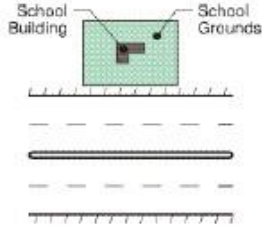
**2. Road Classification**



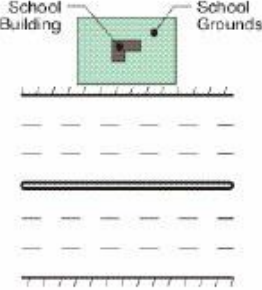
Local



Collector



Arterial



Expressway / Freeway

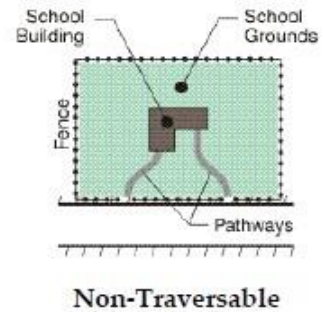
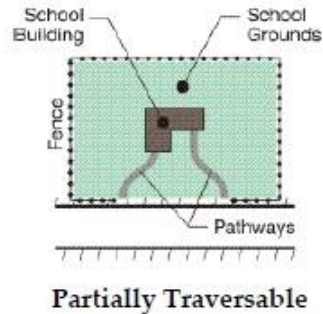
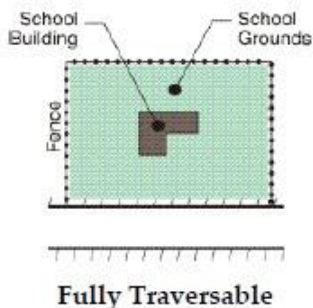
The design classification system used in the Geometric Design Guide for Canadian Roads (TAC 1999) separates roads on the basis of differences in land service and traffic service. The terms "rural" and "urban" refer to the predominant characteristics of the adjacent land use and not only to jurisdictional boundaries or features of typical cross sections. The road

classification criteria for the evaluation procedure that follows are consistent with the design classification system described in the Geometric Design Guide for Canadian Roads.

Arterial roads and expressways / freeways are typically multi-lane roads that carry high volumes of traffic, including trucks, and have posted speed limits of 50 km/h or greater. Collector roads are usually narrower and lower in traffic volumes, and provide direct frontage to developments including schools. Local roads are often still narrower, and are designed for lower speeds.

School Zones should be avoided on expressways / freeways and arterial roads. They can appear to motorists as contradicting the roadway function, and hence may be unexpected and disrespected. School Zones can sometimes appear to provide children and parents a false sense of security on a potentially hazardous roadway.

**3. Fencing**



Fencing can significantly reduce the need for a School Zone, acting as a physical barrier that can prevent errant movements onto the roadway.

The effectiveness of fencing depends on its traversability, i.e. how easily it can be bypassed or traversed.

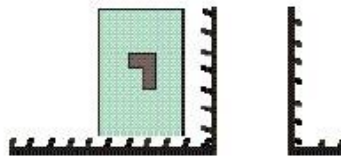
The traversability of fencing is governed by: extent of fencing between the roadway and the school, the effectiveness of the school's internal pathway system in guiding children to a safe opening in the fence, and the height and type of fencing. Post and cable type fencing or other low-height fencing, and fencing that contains openings or is easily damaged or mounted is more traversable.



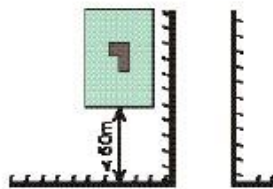
Fully traversable describes fencing that is absent or easily traversed. Partially traversable can describe fencing that is low-mounted or has several openings (or, for example, widely spaced trees). Non-traversable describes high-mounted fencing with limited openings at defined points.

Appendix A illustrates some examples of fencing related to schools.

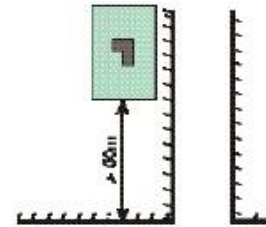
#### 4. Property Line Separation



Abuts Road



Less than 50 metres



Greater than 50 metres

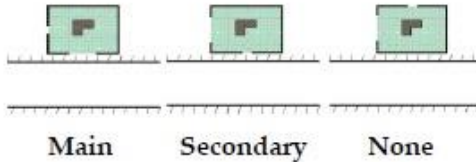
A school typically abuts at least one roadway. If the school is located near an intersection, it may also be located close to an intersecting roadway.

When the need for a school zone on the intersecting roadway is assessed, the separation between the property line of the school and the roadway should be considered. The separation influences the likelihood of children entering the roadway, particularly if it is unfenced.

A roadway that is separated from the school grounds by only a sidewalk or fence is said to abut the roadway. A school that is separated from the intersecting roadway may or may not be within 50 metres.

If it is located within 50 metres, there is a greater likelihood that children may enter the roadway. The school property line represents the most objective indication of the point where school activity involving children begins. If it is known that the property line is located well before the activity begins, then the latter can be used.

**5. School Entrance**



A school entrance can be a driveway to the school, the closest point along the road to the school's main door, or a designated on-street pick-up and drop-off area. The school entrance becomes a focal point of congestion and pedestrian activity, including vehicle turning movements at the driveway, manoeuvres within the parking lot, stoppages on the roadway and children crossing the road, particularly during pick-up and drop-off times. Where a school has multiple access points from the road, the activity is typically concentrated at one entrance, referred to as the main entrance. A secondary entrance, if it exists, typically has far less activity than the main entrance.

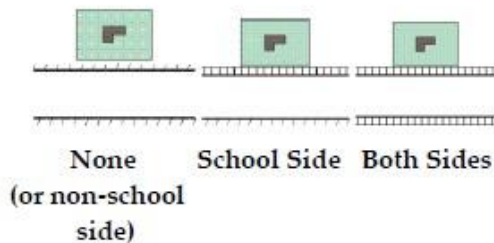
school grounds or opening in the fence and a defined crossing point on the roadway, or to provide a link to the surrounding sidewalk network further from the school grounds. If sidewalks are provided between the school and the roadway, children are less likely to walk in the roadway. In rural areas, while raised curb sidewalks are rarely provided, wide shoulders or unpaved pathways or walkways are assumed to serve the same function as a sidewalk (although shoulders are not provided for this purpose).

A procedure was developed to systematically consider these six criteria, in order to establish the need for a School Zone or School Area. The procedure assigns a Maximum Point Value (MPV) to each criterion, reflecting its relative importance. It also assigns a weighting factor (WF) to each selection, with the higher values indicating a greater need for an Area or Zone. The result of the scoring is a total score, out of 100.

The worksheet to be completed is shown in TABLE 2.1. The procedure is as follows:

1. For each criterion, select the description that best represents the conditions of the subject roadway. Multiply the associated weighting factor by the maximum point value and enter the product in the far right column.
2. Add up the scores entered for each criterion. Enter the sum at the bottom of the far right column.
3. Using the Worksheet Results Matrix (TABLE 2.2), identify the need for a School Zone, a School Area or neither. Borderline cases should be carefully reviewed. In all

**6. Location of Sidewalks**



The purpose of sidewalks is to provide safe conveyance of children between the

cases, engineering judgment, local conditions and community input should be considered.

4. Review the feasibility of providing new facilities or improving existing ones to reduce the need for a zone.
5. Identify, review and implement the signing and marking plan associated with the result.

### **Appendix B – School Area and Zone Layouts**

This section provides some typical examples regarding the installation of school area and zone layouts using OTM compliant signage. For more detailed guidance regarding school area and zone layouts refer to the OTM.

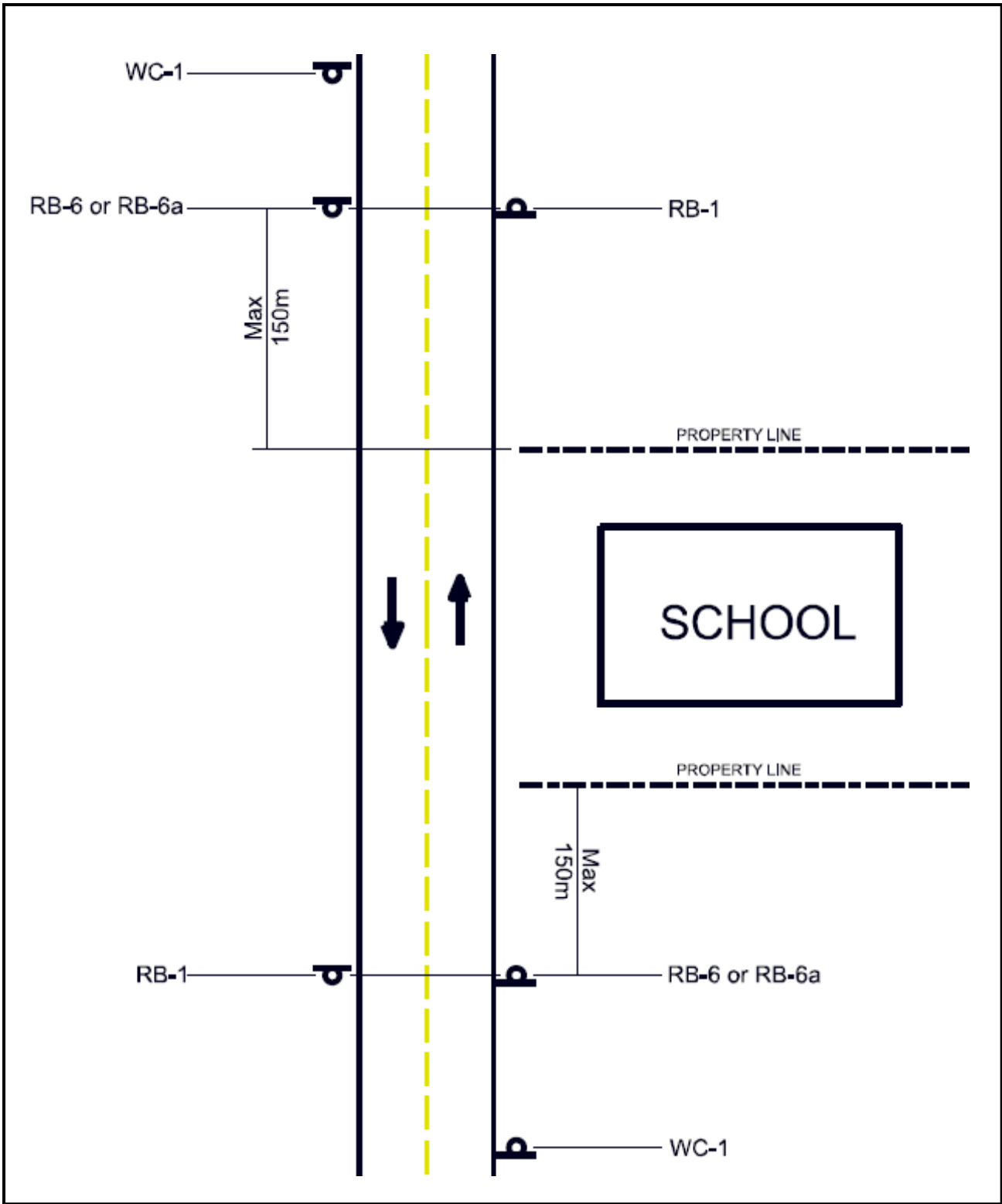


Figure 3 - Two-Lane School Zone Typical

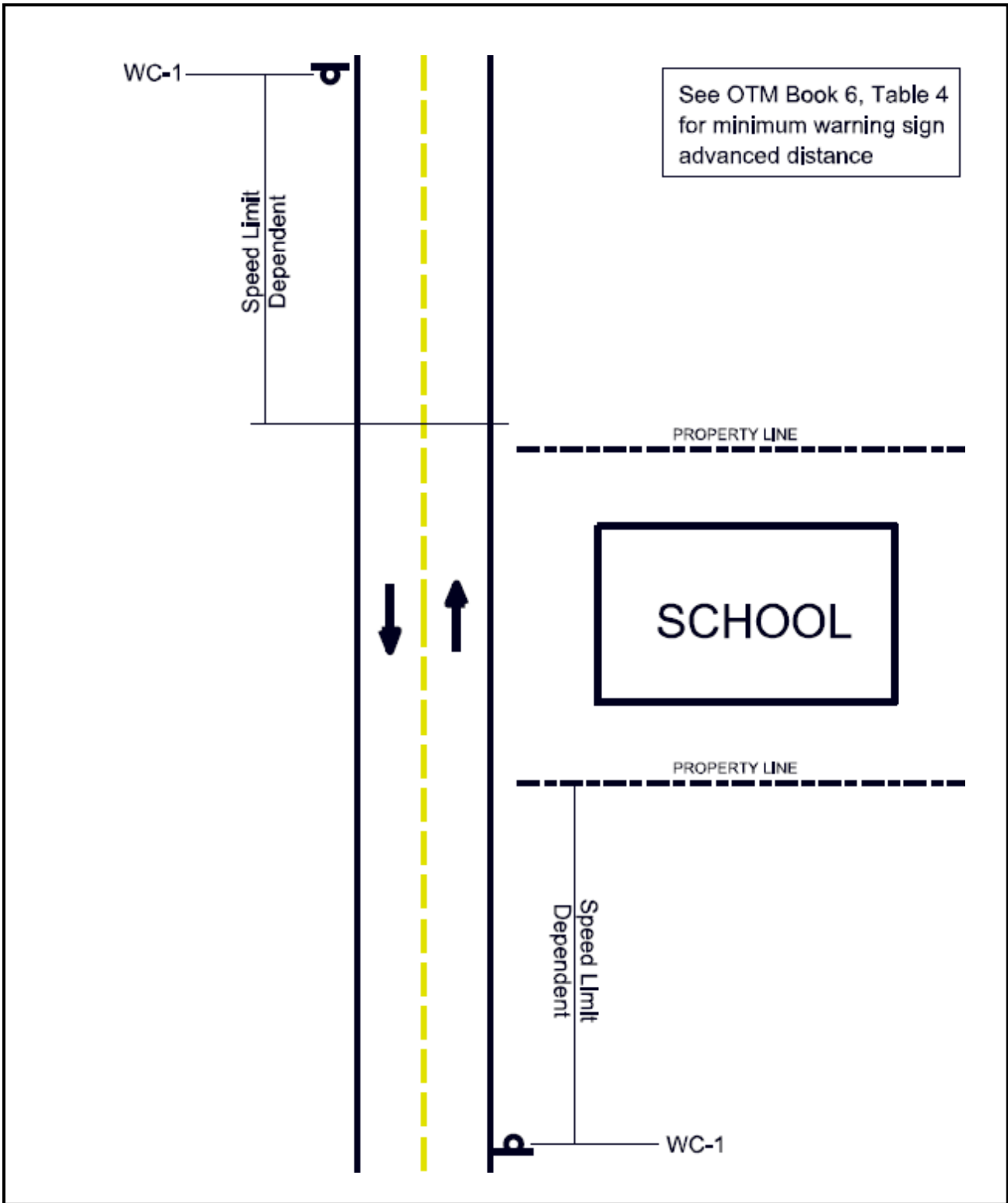


Figure 4 - Two-Lane School Area Typical

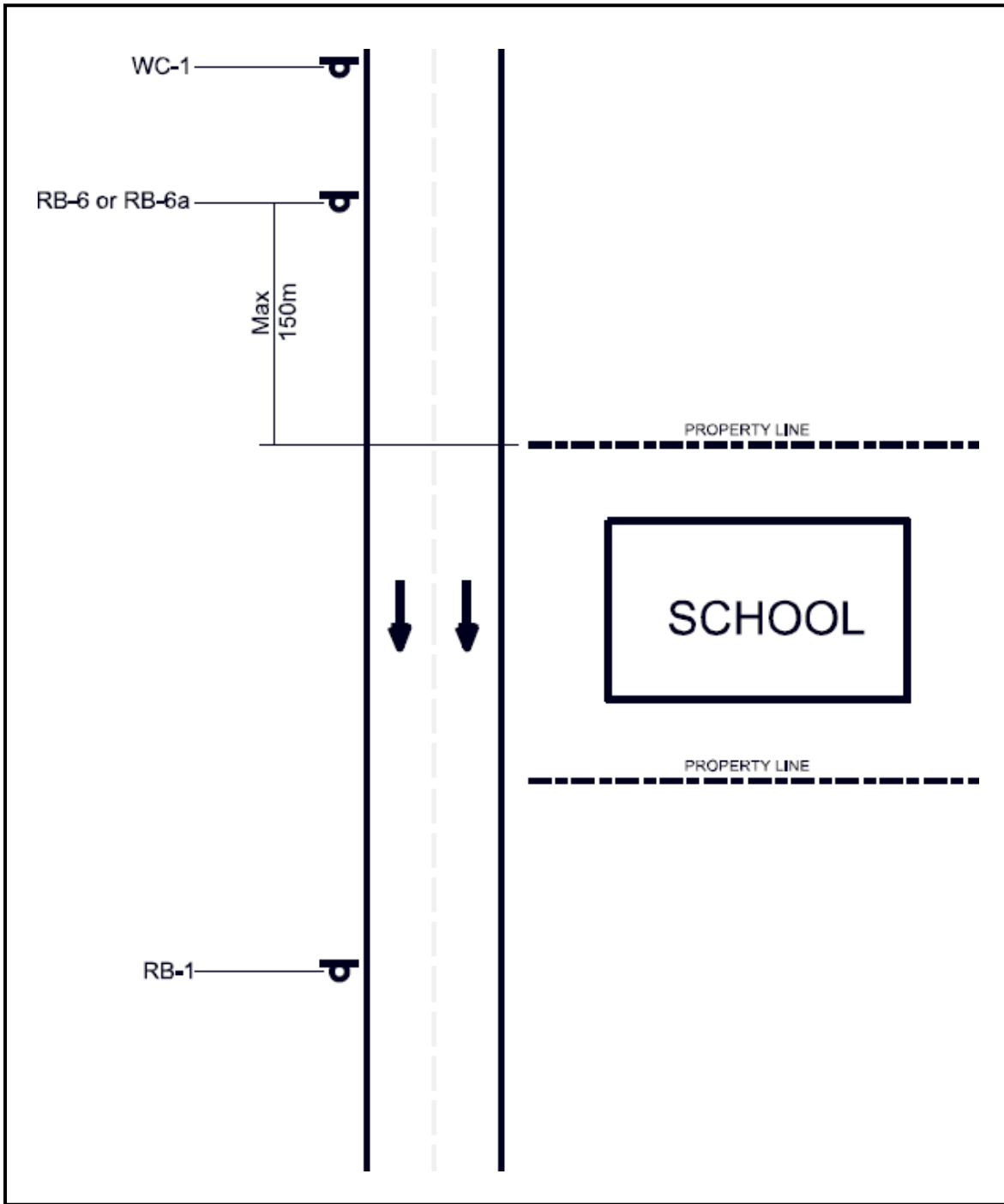


Figure 5 - One-way School Zone Typical



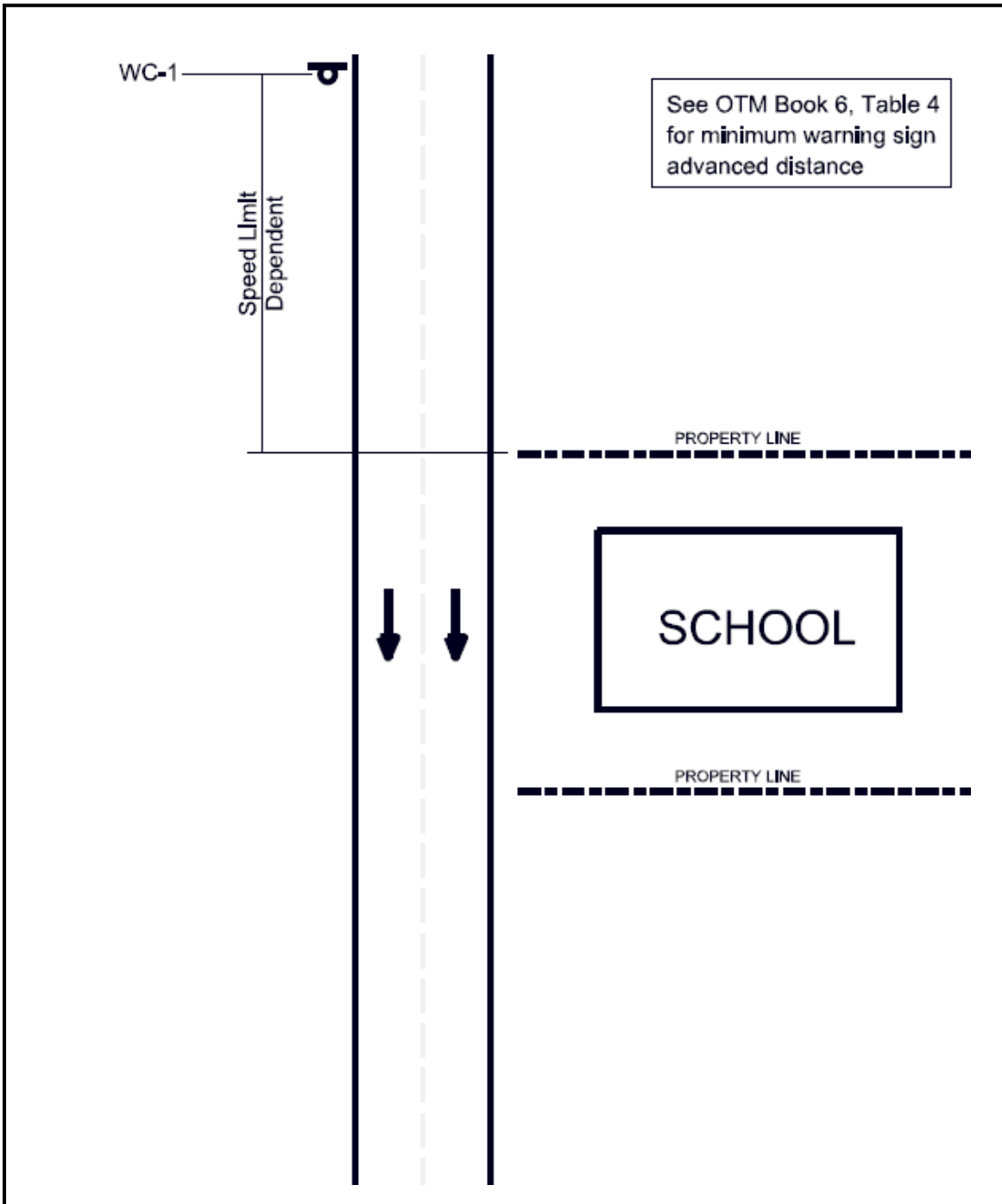


Figure 6 - One-way School Area Typical



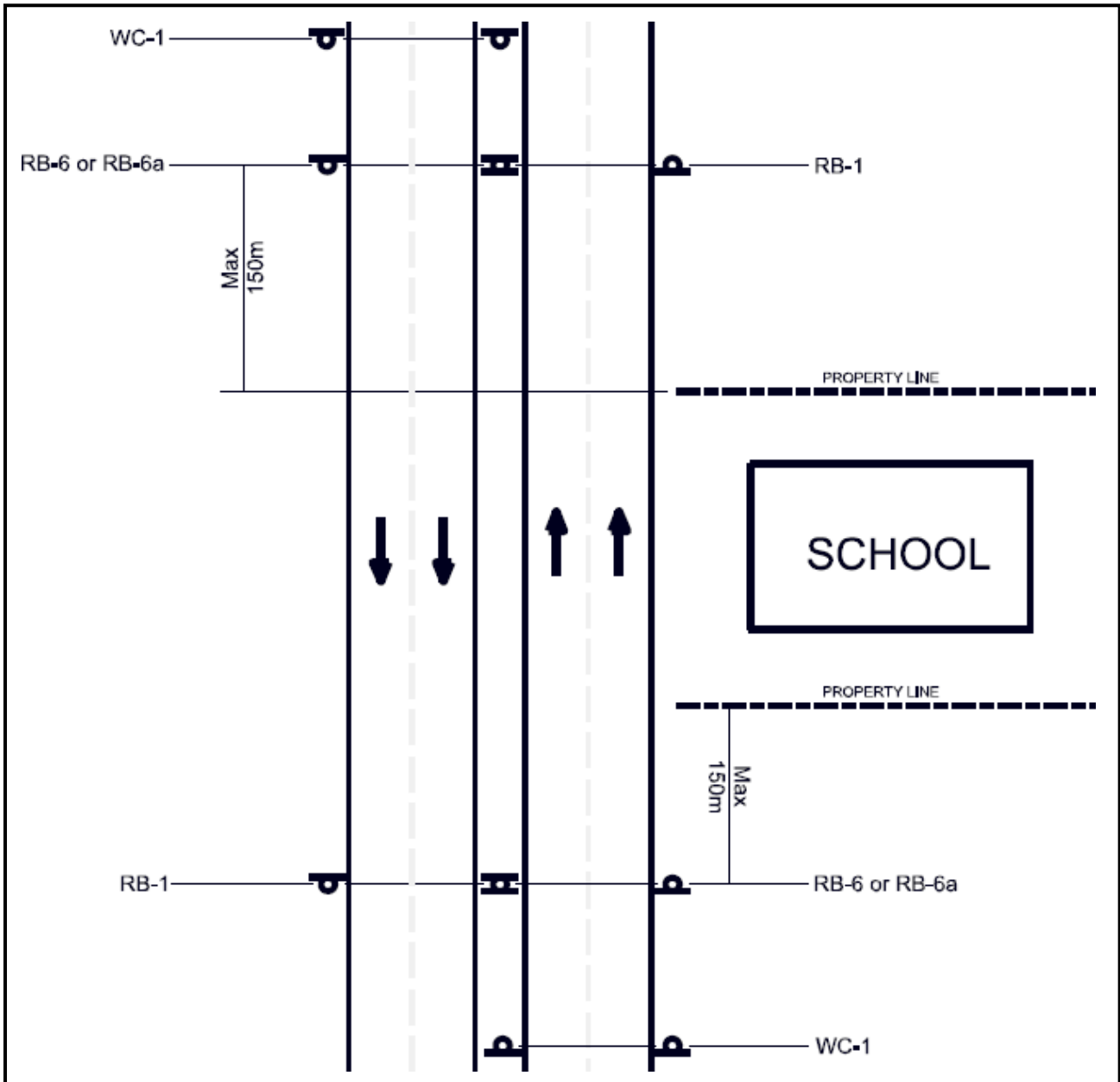


Figure 7 - Divided Highway School Zone Typical

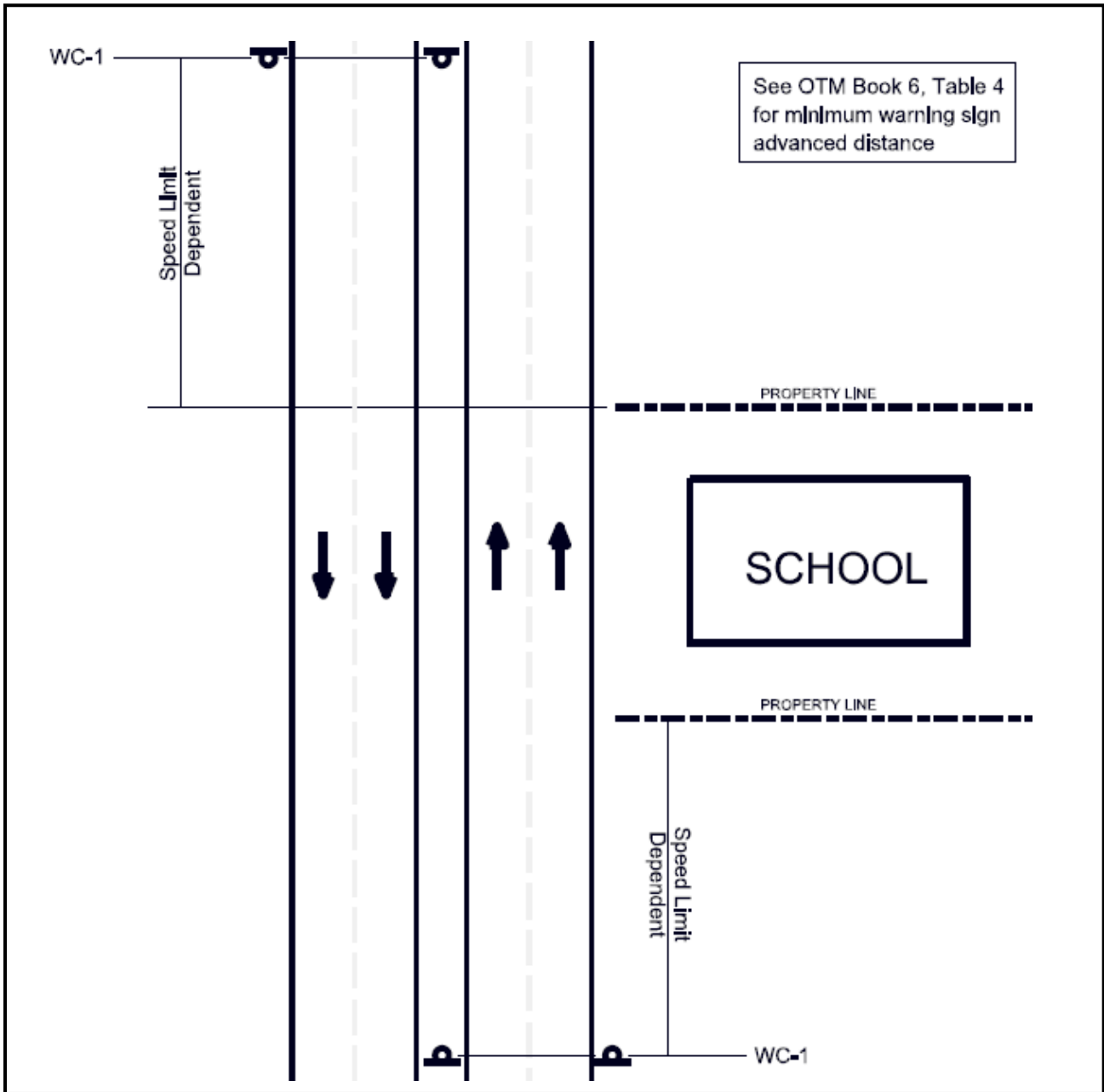


Figure 8 - Divided Highway School Area Typical

### Appendix C – OTM Book 5 & Book 15: Pedestrian Crossing Treatments

The OTM offers information regarding pedestrian crossing treatment in Books 5 and 15 on Supervised School Crossings. The layouts provided for pedestrian crossings do not specifically identify that they are suitable for school crossings and as such the OTM leaves school crossings insufficiently covered for the purposes of this policy. Opus recommends to follow OTM procedures and the City's Crossing Guard Warrants policy for Supervised School Crossings. TAC's Pedestrian Crossings Control Guide offers numerous layouts specific to school areas and Opus recommends using these where the OTM does not offer adequate guidance. Signage and pavement markings used at school crossings should comply with the signs and pavement markings provided in the OTM. Several example crossing templates from the OTM have been provided below. Refer to the OTM for additional details and specifications.

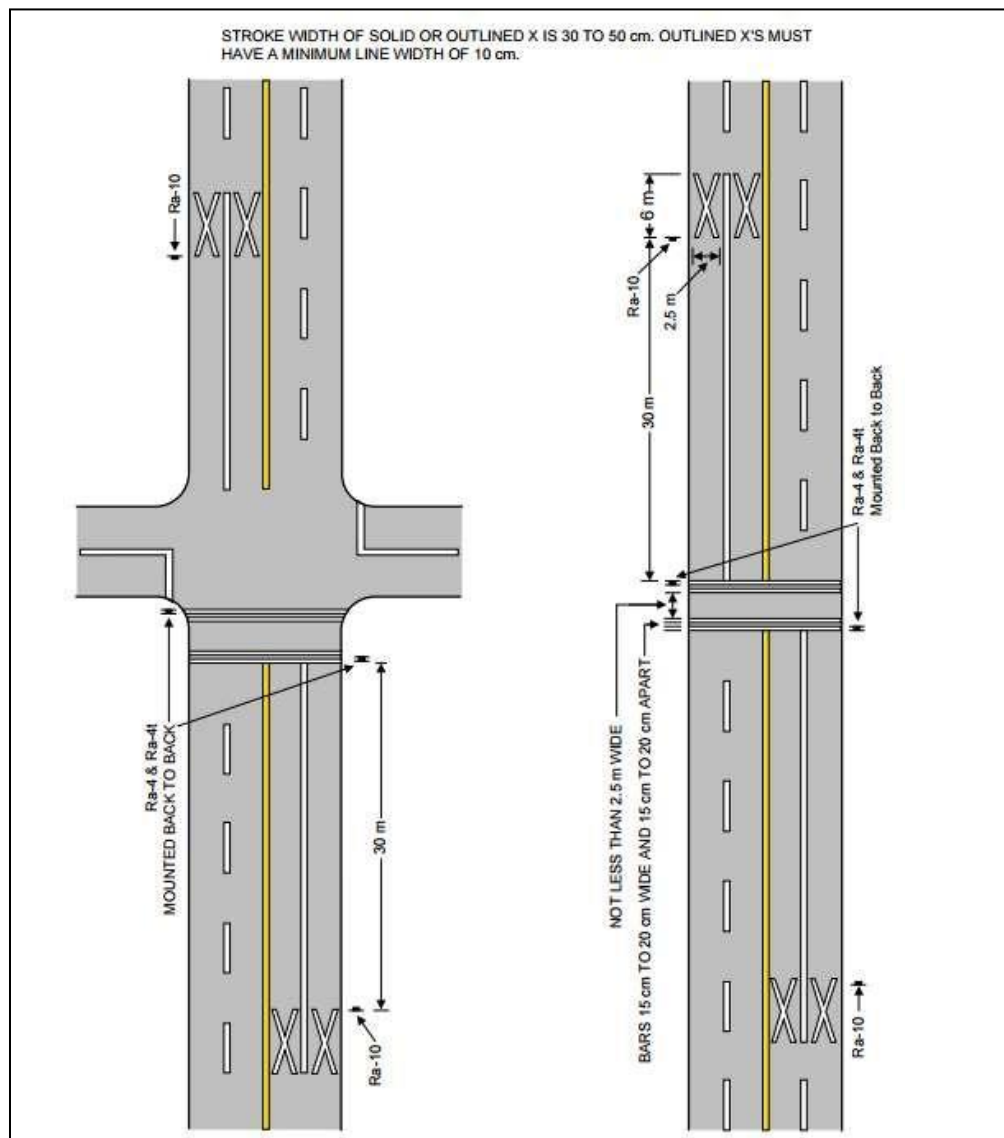


Figure 9 - Typical Signs and Markings for Pedestrian Crossovers (OTM Book 5, pg. 34)

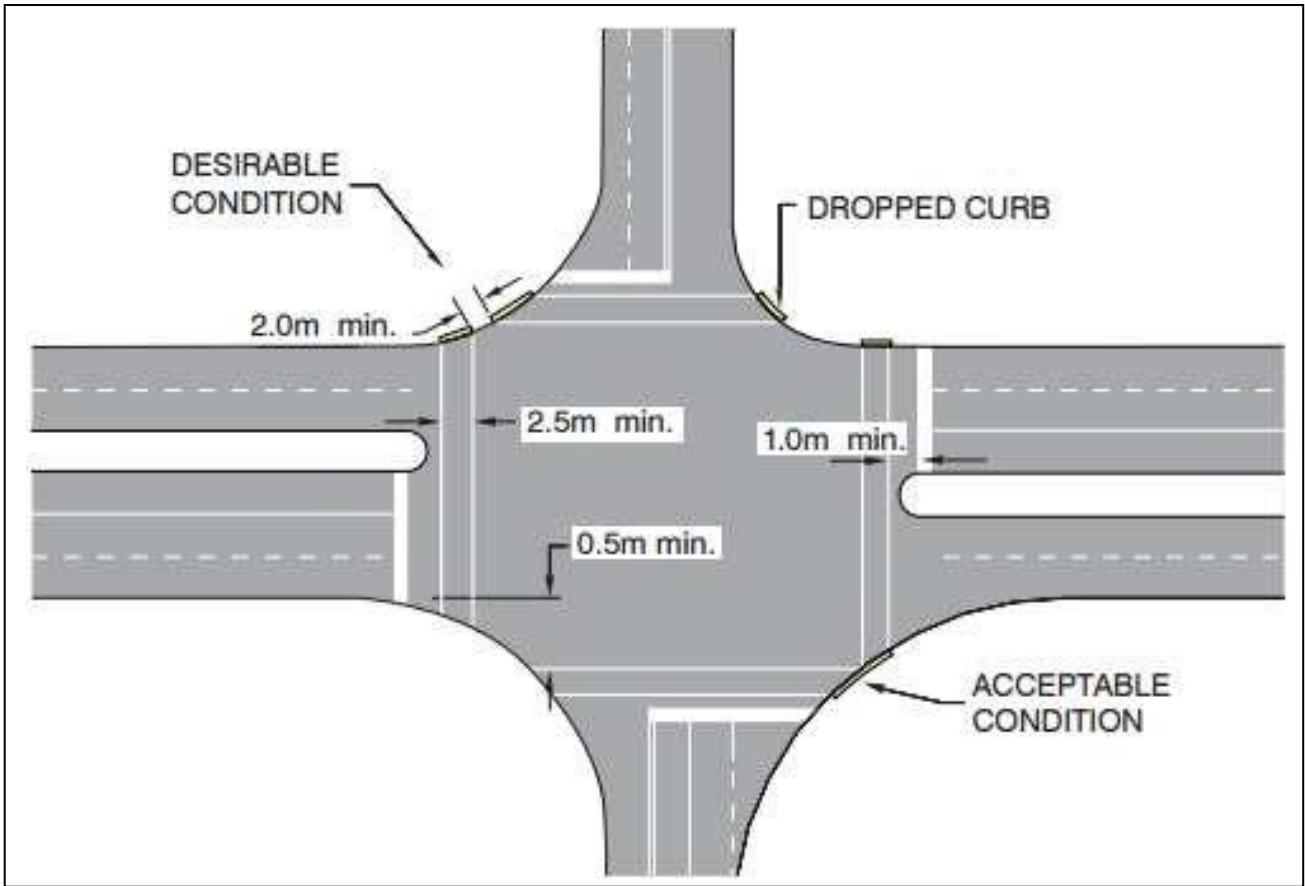


Figure 10 - Crosswalk Design (OTM Book 15, pg. 22)

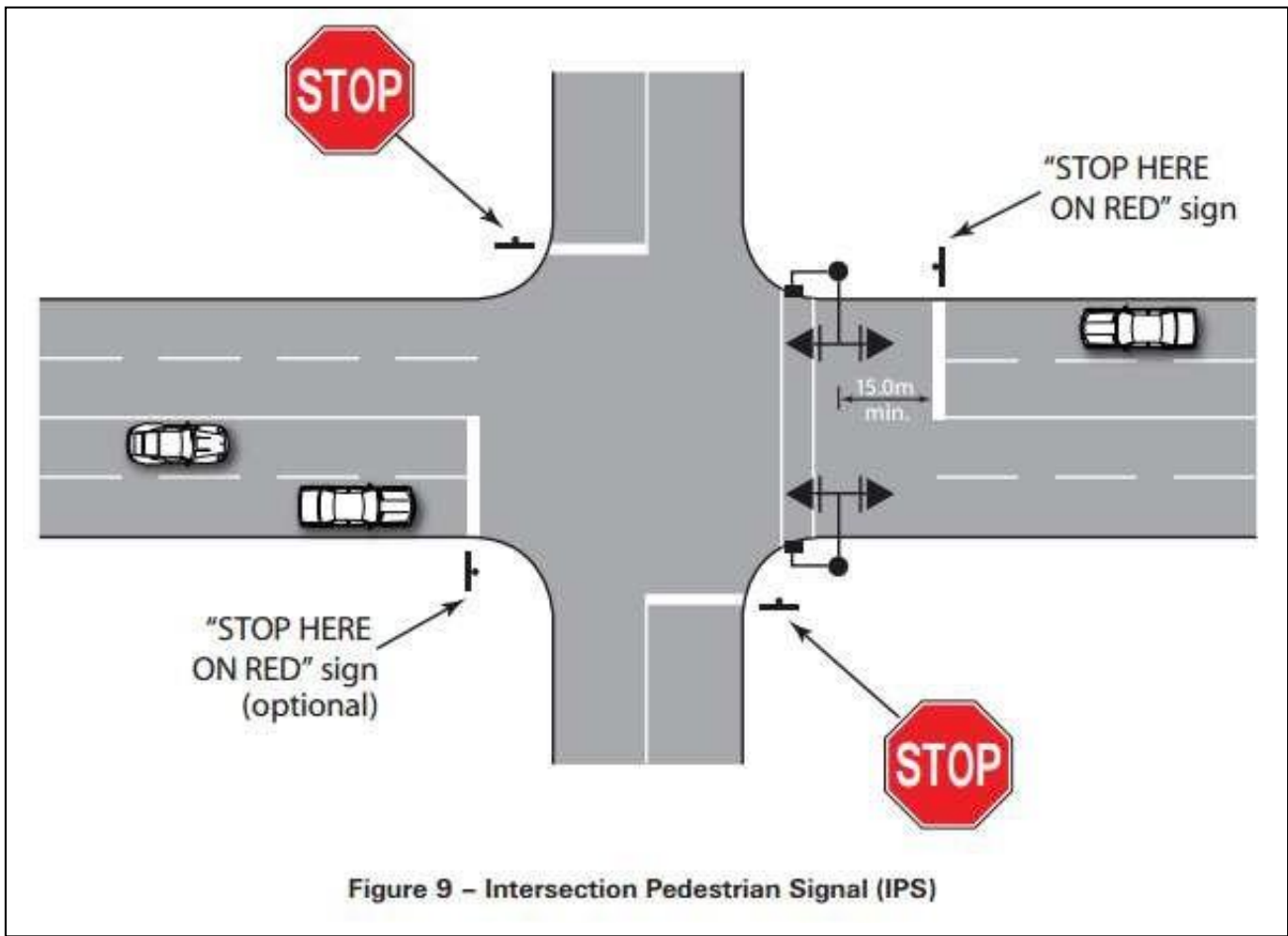


Figure 11 - Intersection Pedestrian Signal (OTM Book 15, pg. 27)

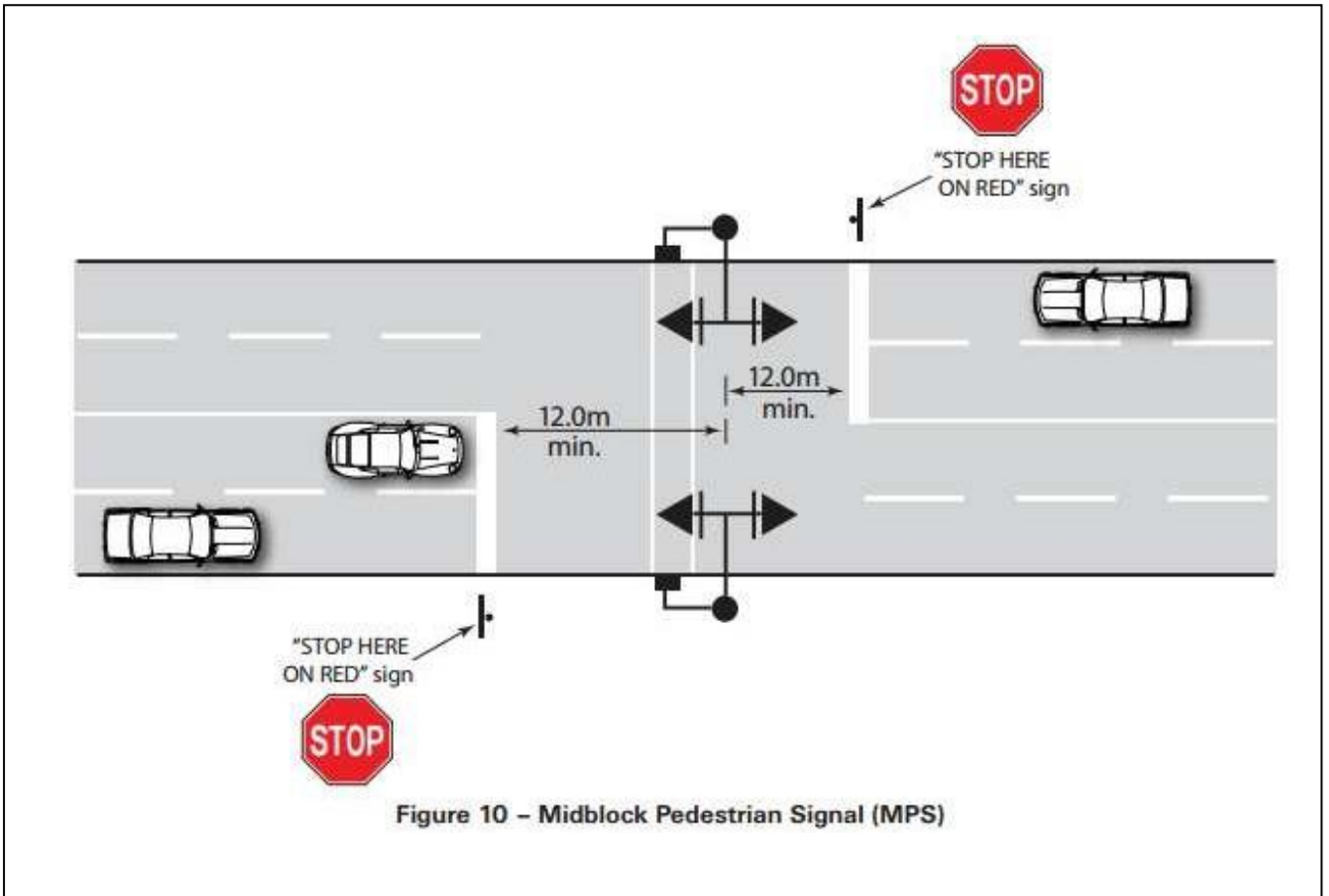


Figure 12 - Midblock Pedestrian Signal (OTM Book 15, pg. 28)



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