THE CITY OF Red Deer

**CORPORATE ADMINISTRATIVE POLICY**

**6402-CA**

# Pedestrian Crossings

## Purpose:

1 To provide direction to Administration when determining the appropriate Pedestrian Crossing Control Device for a particular location.

## Policy Statement(s):

2 The City installs Pedestrian Crossing Control Devices and Crosswalks to enhance operational and/or safety service levels at locations where an evaluation indicates that the devices are appropriate, and beneficial.

3 Administration uses the Decision Support Tool – Preliminary Assessment (Appendix A) as the initial step in evaluating the need for a Pedestrian Crossing Control Device(s) at a particular location.

4 Once the need for a Pedestrian Crossing Control Device has been confirmed, Administration uses the Decision Support Tool – Treatment Selection Matrix (Appendix B) to determine what type of Pedestrian Crossing Control Device(s) is warranted.

5 Decision Support Tools, developed based on the Transportation Association of Canada (TAC) Pedestrian Crossing Control Guide 2012, are an important part of the decision-making process but are not intended to be a substitute for good engineering judgment, consultation, a professional review of industry standards, road function/classification, local conditions, and/or a review of best practices. The fact that thresholds for a particular device or decision are or are not met using the tools, is not conclusive justification for the installation or lack of installation of the device.

6 Crosswalk signs, pavement markings, signals, or flashing beacons are designed and installed according to the recommendations in the Manual of Uniform Traffic Control Devices for Canada (MUTCDC) as well as other formally adopted publications from TAC.

7 Midblock Crossings are generally avoided and pedestrians are channelized to the nearest intersection or other safer location. Midblock Crossings may be an appropriate treatment when there is a sufficiently long distance separating the nearest intersections or where there is an identified need to provide an enhanced crossing for a Pedestrian Corridor or System Connectivity.

8 Where Midblock Crossings have been determined to not be appropriate, signage and/or physical barriers are used to guide pedestrians to the appropriate crossing location.

9 Devices that provide enhanced safety for pedestrian crossing, such as, bulb-out curb extensions, Raised Refuge, and/or Zebra Style Markings are considered methods that may provide an acceptable level of service and safety at midblock locations, locations within one block radius of school facilities, and locations where seniors or persons with impaired mobility frequently cross.

10 Zebra Style Markings are considered at roundabouts.

11 In locations where there is a channelized right-turn movement at a signalized intersection, the pedestrian crossing within the right-turn bay may be marked with pavement markings only, if it is determined that a sign could contribute to motorist confusion, and detract from overall safety.

**Definitions:**

12 Crosswalk: That area of the roadway where pedestrians have the right of way for crossing, including:
(1) that part of a roadway at an intersection, included within the connection of the lateral line of the sidewalks, on opposite sides of the highway measured from the curbs or, in the absence of curbs, from the edges of the roadway; or
(2) any part of a roadway at an intersection, or elsewhere distinctly indicated for pedestrian crossing by signs, or by lines, or by other markings on the road surface.

13 Marked Crosswalk: Any portion of a roadway clearly indicated for pedestrian crossing by lines or other markings on the surface.

14 Marking: Marks placed on the road surface with paint or other materials to guide road users.

15 Midblock Crossing: A marked crosswalk that is not located at an intersection.

16 Pedestrian Corridor: Pedestrian facilities (sidewalks or trails) that connect significant pedestrian traffic generators. Pedestrian corridors are the infrastructure that accommodates Pedestrian Desire Lines.

17 Pedestrian Crossing Control Devices: Traffic control devices that are intended to facilitate safe roadway crossing for pedestrians.

18 Pedestrian Desire Lines: Preferred pedestrian travel routes based on convenience of movement between significant pedestrian traffic generators located in the area. Desire Lines often do not conform strictly to pedestrian facilities (for example, worn pathways on turf or grass are often caused by desire lines), and site characteristics may require somewhat indirect accommodation via pedestrian corridors.

19 Raised Refuge: A raised median or island, not smaller than 2 meters wide that can serve as a refuge for pedestrians when crossing a road.

20 System Connectivity: Pedestrian infrastructure, such as trails or pathways intersecting both sides of a roadway at an intersection or midblock.

21 Traffic Generators: Include commercial centres, retail areas, coliseums, schools, parks, recreation facilities, hospitals, care homes, convenience stores, movie theatres, etc.

22 Unmarked Crosswalk: A portion of a roadway ordinarily included within the extension or connection of curb lines and edges of the roadway at intersections.

23 Zebra Style Marking: Markings comprised of longitudinal stripes used to increase visibility for approaching drivers.

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**References/Links:**

1 PS-A-2.2 Integrated & Accessible Transportation

2 TAC Canadian Traffic Signal Warrant Matrix Procedure – 2005

3 TAC Geometric Design Guide for Canadian Roads - 1999

4 TAC Manual of Uniform Traffic Control Devices for Canada, Fifth Edition – 2014

5 TAC Pedestrian Crossing Control Guide – 2012

6 Traffic Safety Act, RSA 200 cT-6

7 Use of Highway and Rules of the Road Regulation, Alta Reg 304/2002

**Scope/Application:**

1 This policy applies to all City employees involved in the determination, and placement of pedestrian crossing control devices.

**Authority/Responsibility to Implement:**

1 Engineering Services Manager

**Inquiries/Contact Person:**

1 Engineering Services Manager

**Policy Monitoring and Evaluation:**

1 The Engineering Services Manager will evaluate this policy one year from the date of approval and every three years after that, with revisions made as required.

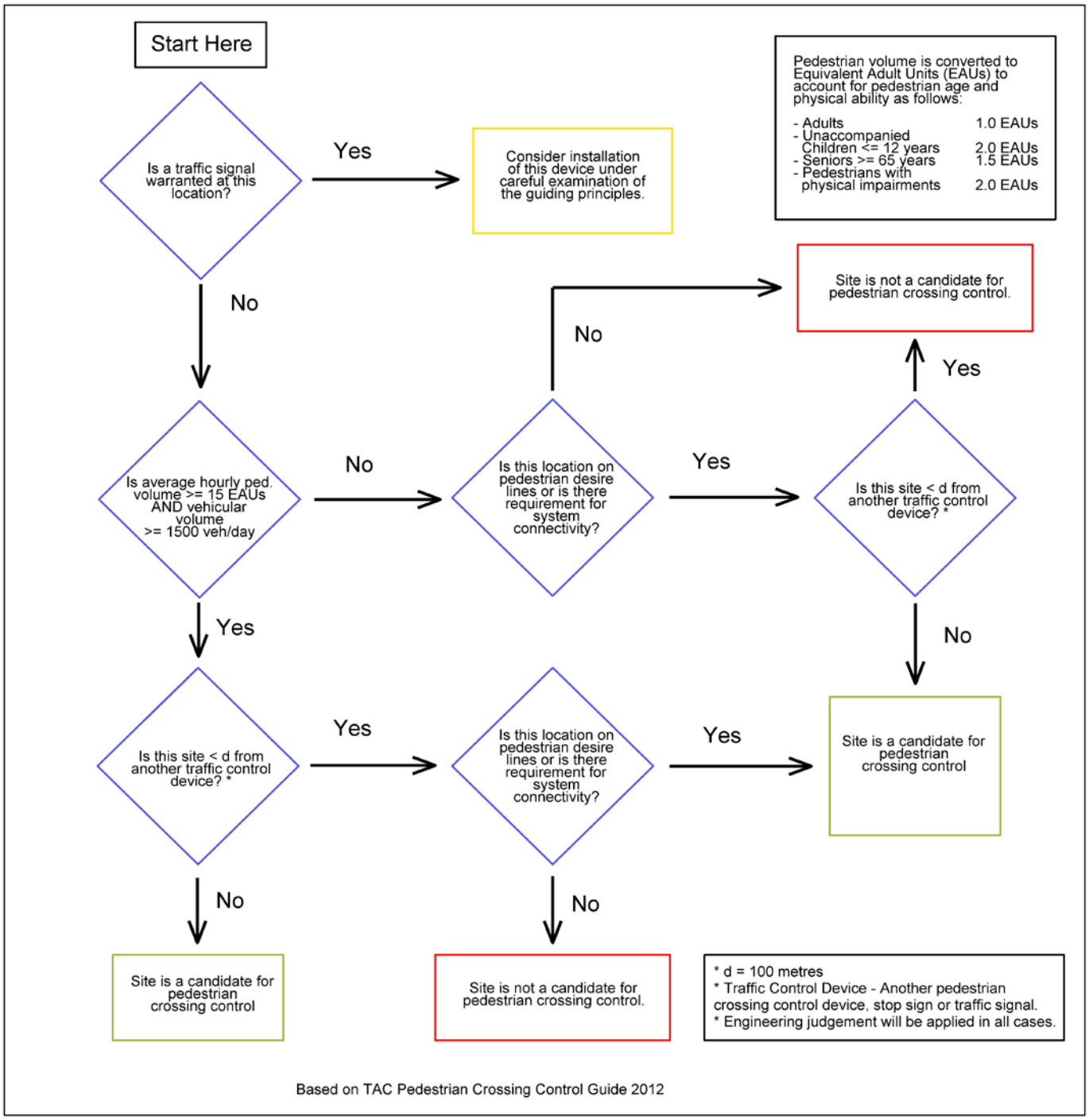
**Document History:**

| Date: | Approved/Reviewed By: | Title: |
|---|---|---|
| December 9, 2015 | "Craig Curtis" | City Manager |

**Administration Revisions:**

| Date: | Description: |
|---|---|
| July 25, 2017 | Converted to newest format. |

## Appendix A: Decision Support Tool – Preliminary Assessment



## Appendix B: Decision Support Tool - Treatment Selection Matrix

| Average Daily Traffic | Speed Limit | Total Number of Travel Lanes at Crosswalk | | | |
|---|---|---|---|---|---|
| (veh/day) | (km/h) | 1 or 2 lanes | 3 lanes | 4 - 6 lanes with raised refuge | 4 lanes without raised refuge |
| | | | | | |
| 1,500 < ADT ≤ 4,500 | ≤50 | GM1 | GM1 | GM1 | GM2 |
| | 60 | GM2 | GM2 | OF | OF |
| | 70 | GM2 | GM2 | OF | OF |
| 4,500 < ADT ≤ 9,000 | ≤50 | GM1 | GM1 | GM1 | GM2 |
| | 60 | GM2 | GM2 | OF | TS |
| | 70 | OF | OF | OF | TS |
| 9,000 < ADT ≤ 12,000 | ≤50 | GM1 | GM2 | OF | OF |
| | 60 | OF | OF | OF | TS |
| | 70 | OF | OF | TS | TS |
| 12,000 < ADT ≤ 15,000 | ≤50 | GM2 | OF | OF | OF |
| | 60 | OF | OF | TS | TS |
| | 70 | OF | TS | TS | TS |
| >15,000 | ≤50 | OF | OF | OF | TS |
| | 60 | OF | TS | TS | TS |
| | 70 | OF | TS | TS | TS |

- This Decision Support Tool – Treatment Selection Matrix is based on the "*TAC Pedestrian Crossing Control Guide - 2012*"
- **GM1** – Marked Crosswalk with signs (RA-4) mounted on signposts on both sides of the road.
- **GM2** – Marked Crosswalk with signs (RA-4) mounted on overhead poles on both sides of the road.
- **OF** – Special Crosswalk with overhead mounted signs (RA-5) with activated flashing amber beacons, and side mounted signs (RA-4). Installation of an OF treatment can negatively affect operations when there is high pedestrian demand. In these cases, administration could upgrade the treatment to a TS treatment.
- **RRFB** - TAC approved rectangular rapid flashing beacons (RRFB) as a traffic control device in 2014, and will include them in the next Manual of Uniform Traffic Control Devices for Canada (MUTCDC). Administration will consider using RRFB as an alternative treatment or additional treatment, based on individual site evaluation.

- **TS** – Either a Half Signal (TS1), utilizing traffic signal heads to control the vehicular traffic on the main roadway, and pedestrian signal heads (on one or both legs of the signalized roadway) to communicate to pedestrians when it is safe to cross the roadway; or a Full Signal (TS2), utilizing traffic signal, and pedestrian signals for all legs of an intersection.
- If the roadway has more than four lanes without a refuge, or more than six lanes with a refuge, then administration should consider a TS.
- If the treatment selection matrix suggests a TS treatment, a TS1 should be the default treatment. However, administration should upgrade to a TS2 treatment if the location is projected to warrant a full signal within 3-5 years, based on estimated growth rates.