



Est. 1873

REPORT TO MAYOR AND COUNCIL

PRESENTED:	SEPTEMBER 12, 2016 - REGULAR AFTERNOON MEETING	REPORT:	16-85
FROM:	ENGINEERING DIVISION	FILE:	5460-13-20
SUBJECT:	RAINBOW CROSSWALK AT GLOVER AND MAVIS IN FORT LANGLEY		

RECOMMENDATION:

That Council authorize staff to refer the concept of installing rainbow-coloured crosswalks at the intersection of Glover Road and Mavis Avenue in Fort Langley to the Business Improvement Association (BIA) and the Heritage Advisory Committee (HAC) for their input; and direct staff to include related costs in the 2017 Budget for Council's consideration and subsequent implementation.

EXECUTIVE SUMMARY:

At its July 11, 2016 Regular Evening Meeting, Council referred a delegation requesting a rainbow coloured crosswalk at the intersection of Glover Road and Mavis Avenue in Fort Langley to staff for a report. The Township's Signed and Marked Crosswalks Policy refers to Transportation Association of Canada's (TAC) guidelines that require standardization and uniformity using solid white lines extending entirely across the pavement at a minimum width of 2.5 metres to define a crosswalk.

A rainbow crosswalk is not specifically referenced in the TAC Guidelines; however, there are no prohibitions regarding such installations and Township's Policy provides flexibility for the Municipal Engineer to determine design based on applicable standards, as well as local considerations including determination of best public interest as articulated by Council. In this light, the Township has implemented variations in crosswalk markings in areas using textured surfaces, brick patterns, and different colours between two solid white lines. Crosswalk markings are not painted, due to issues with durability and safety related to lack of friction and slippery surface. Rather, spray-on or torched-on markings are used with coloured thermoplastic products which have the benefits of durability, reflectivity and a higher friction coefficient for increased traction.

The Fort Langley Business Improvement Association (BIA) is typically consulted on beautification projects such as street furniture, streetlight standards and sidewalk patterns and colours. Downtown Fort Langley, including the intersection of Glover Road at Mavis Avenue, is within a Heritage Conservation Area and part of a streetscape program, which do not consider or address rainbow crosswalks. The Heritage Advisory Committee (HAC) is typically consulted on items that affect the aesthetics and heritage character of the community. Referrals are recommended to BIA and HAC.

Road improvements are planned at the subject intersection. Accordingly, installation of permanent crosswalk markings, particularly having higher costs, should be deferred until after construction works have been completed and the pavement restored. The cost of installing a rainbow crosswalk at all four legs of the intersection is estimated at \$50,000 compared to \$5,000 for a typical intersection. There would also be similar ongoing maintenance costs every three to five years. Should Council wish to proceed with the installation, necessary funding would be included in the 2107 Budget.

PURPOSE:

To respond to Council's direction and provide Council with information regarding the potential installation of rainbow coloured crosswalks in Fort Langley.

BACKGROUND/HISTORY:

At its July 11, 2016 Regular Evening Meeting, Council passed the following resolution:

“That the request to have a rainbow crosswalk at the intersection of Glover Road and Mavis Avenue in Fort Langley be referred to staff for a report.”

DISCUSSION/ANALYSIS:

As requested, staff is able to provide Council with the following information in order to ensure all implications are adequately considered by Council prior to implementation. The information below relates to applicable policies, legislative requirements, design guidelines, current Township practices, planned future intersection and road modifications, heritage considerations and financial implications, as discussed in more detail below.

Applicable Policies:

The Signed and Marked Crosswalks Policy (No. 05-101), approved by Council, defines the conditions under which the Township may provide crosswalks and the required type and standard. Section 3.2 of the Policy (Attachment A) states: *“All signed and marked crosswalks shall be painted or laid with thermos-plastic material and signed in accordance with the Transportation Association of Canada’s (TAC) Pedestrian Crossing Control Manual, or as directed by the Municipal Engineer.”*

The TAC Pedestrian Crossing Control Manual augments the Transportation Association of Canada Manual of Uniform Traffic Control Devices (MUTCD) with respect to crosswalks and provides standards that promote uniformity. Both guidelines indicate that pavement markings must be similar for all categories of crosswalks, crosswalk lines must be normal solid white lines extending entirely across the pavement and the crosswalk must be a minimum of 2.5 metres wide. Solid white lines are typically used to define the crosswalk at intersections and with white “zebra” markings used at mid-block or school crossings.

There are no specific references to rainbow coloured crosswalks in the TAC Guidelines, which form the basis of Township’s Policy. Having said that, there are no prohibitions regarding such installations and Township’s Policy provides flexibility for the Municipal Engineer to determine design based on applicable and relevant standards, as well as local considerations including determination of best public interest as articulated by Council.

Legislative Framework:

The BC Motor Vehicle Act defines a crosswalk as:

- (a) a portion of the roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by signs or by lines or other markings on the surface, or
- (b) the portion of a highway at an intersection that is included within the connection of the lateral lines of the sidewalks on the opposite sides of the highway, or within the extension of the lateral lines of the sidewalk on one side of the highway, measured from the curbs, or in the absence of curbs, from the edges of the roadway;

Based on the BC Motor Vehicle Act, Township’s Policy, the TAC MUTCD and Pedestrian Crossing Control Manual, at a minimum two solid white lines extending entirely across the pavement at a width of 2.5 metres must be provided to legally constitute a crosswalk. A rainbow crosswalk would not meet the TAC guidelines in terms of providing consistency at similar types of crosswalks. However, it is common practice in beautification areas or town centres to provide crosswalks that have a textured surface, brick pattern, or a different colour between the two solid white lines.

Current Practice:

The Township follows TAC MUTCD and Pedestrian Crossing Control Manual guidelines for the installation of road markings and signage for pedestrian crossings by using either solid white lines or Zebra Markings. The Township currently does not “paint” crosswalks due to safety and durability issues. Installing paint at intersections can create slippery conditions for pedestrians, cyclist, and vehicles creating a safety concern. In addition, painted crosswalks are not durable and have to be repainted repeatedly. Painted crosswalk lines would deteriorate significantly in a three to four month time period as compared to three to five years for thermoplastic line markings. Accordingly, the Township has, over the past several years, used a spray-on or torched-on white thermoplastic product which has benefits in terms of durability, reflectivity and a higher friction coefficient for more traction, particularly when wet.

The Township has installed crosswalks that differ from the typical white line installation through the use of either textured or coloured pavement. Examples include the intersections of 200 Street at 40 Avenue, 41 Avenue, and 42 Avenue where the crosswalk has a grey wooden plank design between the two white lines.

The Township has also used a street print product in areas such as Fraser Highway in Aldergrove and the existing crosswalks in Fort Langley. The crosswalks in Aldergrove were originally constructed using stamped and colored pavement. Over time, the markings faded and were replaced with a street print product which is torched onto the pavement. The product has proven to be durable with the appropriate reflectivity and increased friction coefficient.

Community and Heritage Implications:

Rainbow crosswalks have been installed in several municipalities across Canada including the Lower Mainland. Examples of British Columbia municipalities that have either installed or approved rainbow crosswalks include Vancouver, Victoria, Maple Ridge, New Westminster, Nanaimo, Kelowna, and Prince Rupert. Some of these installations are permanent while others were installed on a temporary basis for special events.

An aspect to consider prior to installation is consultation with community groups and associations. Concerns have been raised in some municipalities with respect to the additional cost and resources allocated to the crosswalks and safety as it is inconsistent with a typical crosswalk. The installation of a non-standard crosswalk may also lead to requests for other specialized types of crosswalks throughout the Township.

The Fort Langley Business Improvement Association (BIA) is typically consulted during the selection of items such as street furniture, streetlight colors and standards and sidewalk patterns and colours. It is recommended that the installation of a rainbow crosswalk at the intersection of Glover Road and Mavis Avenue be referred to the BIA for their input.

The Fort Langley Community Plan designates part of the downtown Fort Langley, including the intersection of Glover Road at Mavis Avenue, as a Heritage Conservation Area (HCA). The HCA is meant to protect the character of downtown Fort Langley by encouraging new developments and alterations that complement and enhance building with heritage value and the heritage character of the area. In 2001, the Township also completed a Fort Langley Streetscape Program which includes the Glover Road at Mavis Avenue intersection. Neither the HCA nor the Streetscape program addresses or considers the installation of rainbow crosswalks. It is recommended that installation of a rainbow crosswalk at the intersection of Glover Road and Mavis Avenue be referred to Heritage Advisory Committee (HAC) for input.

Future Road Conditions:

The existing intersection of Glover Road and Mavis Avenue is controlled with a pedestrian traffic signal with pedestrian crossings on all four legs. Due to recent construction activity in the area, the existing pavement is in poor condition and is not suitable for the installation of permanent pavement markings with higher installation costs. In addition, the Township has been working with CN Rail and Transport Canada to modify and convert the intersection to a full traffic signal, which would have future construction impact at the intersection. It is therefore recommended that the installation of permanent crosswalk markings be deferred until after the road structure has been repaired and the full traffic signal installed. This work is currently anticipated to be completed in the summer of 2017.

Financial Implications:

As the intersection of Glover Road at Mavis Avenue has four pedestrian crossings, in order to provide consistency and minimize confusion for pedestrians, cyclists and motorists, all four legs should be marked in a similar manner. Other lower mainland municipalities have utilized colored thermoplastic materials torched onto the pavement for the installation of permanent rainbow crosswalk markings.

The estimated cost for the installation of a rainbow crosswalk across one leg of the intersection is estimated \$12,000 to \$13,000. However, this would create inconsistency with the other three legs of the intersection. The cost of installing rainbow crosswalks on all four legs of the intersection is estimated at approximately \$50,000. Alternatively, another location in Fort Langley, such as the mid-block crossing of Glover Road near Mary Street could be considered as this would only require marking one crossing at an estimated cost of \$12,000.

A further consideration for a rainbow crosswalk would be the increased ongoing maintenance costs. The thermoplastic crosswalks at an intersection typically cost \$5,000 to install and would have an ongoing maintenance cost of \$5,000 every three to five years for replacement. A thermoplastic rainbow crosswalk would cost \$50,000 to install and would have an ongoing maintenance cost of \$50,000 every three to five years to replace.

If Council were to endorse installation of a rainbow crosswalk, funding could be included in the 2017 Budget for consideration. Funding would also have to be included in future operating budgets for ongoing maintenance and replacement costs.

Respectfully submitted,

Paul Cordeiro
MANAGER, TRANSPORTATION ENGINEERING
for
ENGINEERING DIVISION



COUNCIL POLICY

Subject: Signed and Marked Crosswalks

Policy No:	05-101
Previous Policy No:	05-705
Approved by Council:	1998-09-21
Revised by Council:	2002-09-09
Revised by Council:	2016-05-30

1. Purpose

- 1.1. To define conditions under which the Township may provide crosswalks.

2. Background

- 2.1. Township of Langley Highway and Traffic Bylaw No. 4758 (and amendments thereto), provides authority for the Municipal Engineer to place or erect applicable traffic control devices.

3. Policy

- 3.1. The Municipal Engineer may provide for the installation of a crosswalk where in their opinion, the crosswalk is warranted for the safety of pedestrians and:
 - 3.1.1. The crossing shall be evaluated using the warrants and procedures found in the Transportation Association of Canada (TAC) "Pedestrian Crossing Control Manual" March 1998 edition.
 - 3.1.2. The crossing is at an intersection where all approaches are controlled by stop signs; or
 - 3.1.3. The crossing is at a signalized intersection; or
 - 3.1.4. The crossing is at a location where a demonstrated need can be shown, vehicle and pedestrian volumes are high, a facility can be provided without compromising pedestrian safety and the location meets Township criteria for such a facility; or
 - 3.1.5. The crossing is at a location that does not compromise traffic flow, operation or vehicular safety.
- 3.2. All signed and marked crosswalks shall be painted or laid with thermo-plastic material and signed in accordance with the Transportation Association of Canada's *Pedestrian Crossing Control Manual*, or as directed by the Municipal Engineer.