



City of Port Moody

Report/Recommendation to Council

Date: September 1, 2021
Submitted by: Engineering and Operations Department – Infrastructure Engineering Services
Division
Subject: Pedestrian Crossing Time Study

Purpose

To seek endorsement for staff to continue with a plan to implement new pedestrian crossing clearance times, based on slower average pedestrian crossing speeds, for traffic signals in Port Moody.

Recommended Resolution(s)

THAT the new pedestrian crossing clearance times be implemented for the 15 identified traffic signals as outlined and recommended in the report dated September 1, 2021 from the Engineering and Operations Department – Infrastructure Engineering Services Division regarding Pedestrian Crossing Time Study.

Background

When designing signalized intersections, guidelines for the walking speed of pedestrians help determine how much time should be allocated to cross the street. The Transportation Association of Canada (TAC) released the updated 2021 Manual of Uniform Traffic Control Devices for Canada (MUTCDC) in June 2021. The updated manual includes new, slower recommended pedestrian walking speed guidance for signalized intersections. The new proposed walking speed guidance is as follows:

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

The traffic signals in Port Moody currently are coordinated using use a faster walking speed of 1.2 m/s, which is consistent with previous TAC guidance. This faster speed results in shorter

crossing times being provided for all pedestrians, and poses a challenge for seniors and mobility- or visually-impaired users. Using a slower walking speed would help remove physical barriers, improve comfort, and ultimately make the community more walkable. A study was initiated to review impacts to each intersection and respective turning movements based on the new walking speed guidelines, and provide recommendations on implementation.

While staff is responsible for the development and implementation of traffic signal timing plans, the proposed changes will have a city-wide impact and cause some increased delays. This report seeks Council endorsement to proceed with the work outlined in the Pedestrian Crossing Time Study.

Discussion

Staff completed a study of Pedestrian Crossing Time, the findings of which are included as **Attachment 1**. In this study, 15 intersections were selected, generally along St. Johns Street / Barnet Highway and Ioco Road, based on average daily traffic volume and pedestrians throughout the week and in response to requests for additional pedestrian clearance times.

In addition, staff reviewed the impact of providing a Leading Pedestrian Interval (LPI), also known as Advance Walk, at several intersections. LPIs enable pedestrians to enter intersections earlier by delaying the associated vehicle green phase, usually by about five (5) seconds. By delaying vehicle movement, pedestrians are able to enter the crossing safely and emphasize their presence, becoming more visible during turning movements. LPIs have been shown to improve safety for pedestrians in several cities, including Vancouver, Surrey, and New York.

Traffic Implications:

Increasing pedestrian crossing times would result in several intersections and their respective turning movements experiencing increased delays for vehicles. The following intersections are expected to have noticeable changes in terms of delays in the morning and afternoon peak periods:

- Dewdney Trunk Road at Barnet Highway: westbound left-turn movement;
- Barnet Highway at Ioco Road: westbound through movement (AM) and northbound right-turn movement;
- Albert Street/Barnet Highway at St. Johns Street: westbound through movement (PM);
- Moray Street at St. Johns Street: westbound left-turn movement (PM) and eastbound through movement (PM); and
- Ungless Way/Heritage Mountain Blvd at Ioco Road: eastbound left-turn movement (PM).

Overall, across the remaining intersections, the increased delays are expected to be moderate, ranging from 10 seconds to 30 seconds. Several turning movements are expected to see improvement or better performance, such as decreased waiting time. Staff would monitor the effects of these changes and make minor adjustments as necessary, consistent with normal practice.

At its July 26, 2021 meeting, the Transportation Committee received a presentation from the Infrastructure Engineering Services Division regarding this study. The Committee passed the following resolution:

TC21/022

THAT the Transportation Committee endorse an increase to pedestrian clearance times for the 15 identified traffic signals in the City, based on updated Transportation Association of Canada guidelines, to improve accessibility as outlined in the memorandum from the Engineering and Operations – Infrastructure Engineering Services Division, regarding Traffic Signal Pedestrian Clearance Time Review;

AND THAT the Transportation Committee support further staff review of the remaining traffic signals for future consideration of increased pedestrian clearance times, based on updated Transportation Association of Canada guidelines be undertaken.

Increasing pedestrian crossing times, adding leading pedestrian intervals, and retaining automated pedestrian push-buttons on a permanent basis support the City's Master Transportation Plan goals of making walking a great transportation choice by creating safe, comfortable and complete streets, and balancing the needs of an efficient transportation system with the health and safety of Port Moody residents.

Other Option(s)

That the report dated September 1, 2021 from Engineering and Operations Department – Infrastructure Engineering Services Division regarding Pedestrian Crossing Time Study be received for information.

If Council approves this option, the extent of vehicle traffic impacts outlined in this report would be reduced; however, the pedestrian crossing times at the 15 traffic signals would not be updated to follow current Transportation Association of Canada guidelines, and the City would not be addressing received complaints of insufficient crossing time at certain intersections.

Financial Implications

Traffic signal modifications for the new pedestrian crossing speeds will require traffic controller and signal timing plan updates with an estimated cost of \$15,000. Implementing and monitoring these changes would be completed within existing traffic safety budgets.

Communications and Civic Engagement Initiatives

No communications or civic engagement are required at this time.

Council Strategic Plan Objectives

Supporting the requests for the implementation of new pedestrian crossing times in Port Moody aligns with the 2019–2022 Council Strategic Plan Objective of providing people with a variety of options to move through and around Port Moody safely and efficiently.

Attachment(s)

1. Memo – Pedestrian Crossing Time Study Findings.

Report Author

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Report Approval Details

Document Title:	Pedestrian Crossing Time Study.docx
Attachments:	- Attachment 1 - Memo - Pedestrian Crossing Time Study Findings.pdf
Final Approval Date:	Oct 4, 2021

This report and all of its attachments were approved and signed as outlined below:

Stephen Judd, Manager of Infrastructure Engineering Services - Oct 1, 2021 - 9:39 AM

Jeff Moi, General Manager of Engineering and Operations - Oct 4, 2021 - 9:01 AM

Dorothy Shermer, Corporate Officer - Oct 4, 2021 - 9:53 AM

Natasha Vander Wal for Rosemary Lodge, Manager of Communications and Engagement - Oct 4, 2021 - 11:46 AM

Paul Rockwood, General Manager of Finance and Technology - Oct 4, 2021 - 12:02 PM

Tim Savoie, City Manager - Oct 4, 2021 - 1:05 PM