

Transportation Response to
Regular Meeting of Council
2025 January 28

ISC: UNRESTRICTED
C2025-0059

Crosswalk Improvements

SUMMARY

This Council Backgrounder provides information and answers in response to the Administrative Inquiry regarding crosswalk improvements received on December 17, 2024. Crosswalk enhancements occur through many programs including new development, major capital programs and ongoing operations or maintenance activities. As such, total investment across the corporation is difficult to precisely quantify but has consistently exceeded \$3M per year between the Mobility Safety capital program, the Accessibility Improvement capital program and ongoing traffic signals work. An additional \$10M would be feasible for Mobility to implement in 2025 and 2026 to advance identified enhancements to crosswalks in school and playground zones, as well as in new and actively developing communities.

ADMINISTRATIVE INQUIRY

Councillor offices receive numerous requests for crosswalk improvements of all kinds. Often the costs associated with them are not evident to the public as we prioritize projects. To help the public better understand the cost of implementation compared to available budget, could administration please compile:

1. Number of intersections improvements completed annually, city-wide 2019-2024
2. Cost of typical interventions of crosswalk improvements including:
 1. Improved paint
 2. Curb extensions, temporary and permanent
 3. Flashing overhead lights or rectangular rapid flashing beacons (RRFB)
 4. New traffic signals
3. Total annual city-wide budget for crosswalk improvement 2019-2024
4. The outstanding count of intersections identified for safety improvements that are waiting on future budget funding, and (if available) total cost of planned interventions

RESPONSE FROM ADMINISTRATION

Mobility Operations is primarily responsible for the initial approvals and ongoing maintenance of existing crosswalk enhancements. Crosswalk enhancements are typically delivered through operational programs based on ongoing monitoring of the network or made by request. Additionally, new capital programs may be implemented where there are opportunities to introduce new crossings or upgrade existing ones to current standards.

The City of Calgary determines which type of crosswalk treatment is appropriate for a specific location based on the Transportation Association of Canada's (TAC) Pedestrian Crossing Control Guide (3rd Edition). This guide drives consistency on how pedestrian crossing controls are implemented across Canada. It encourages a holistic perspective to pedestrian crossing control by incorporating both numeric criteria and qualitative engineering judgement into a systematic approach. This approach supports decision-making, implementation, monitoring and evaluation and provides the flexibility needed to address unique local conditions. Several types of crosswalks are included, and additional information is available at www.calgary.ca/bike-walk-roll/crosswalk-signals.html

To determine the appropriate treatment for a specific location, evaluations consider many factors, including:

- Pedestrian crossing volumes
- Pedestrian demographics
- Proximity to the nearest traffic control device (traffic light, overhead flasher, rectangular rapid flashing beacon, etc.) to ensure adequate spacing between devices
- Crossing distance (number of traffic lanes), speed limit, and traffic volumes

When a location is requested to be reviewed for an overhead pedestrian flasher, rectangular rapid flashing beacon, or traffic signal (either by the public, the ward office or as part of a comprehensive corridor review), the Mobility Operations team uses existing traffic and pedestrian count data. If recent data is not available, new traffic and pedestrian counts are requested and the team uses these counts to conduct the reviews.

More information on pedestrian crossings and traffic signals, and how to request them can be found here:

<https://www.calgary.ca/bike-walk-roll/request-crosswalk.html>

<https://www.calgary.ca/roads/traffic-signals.html>

INTERSECTION IMPROVEMENTS IN RECENT YEARS

Crosswalk enhancements at intersections vary depending on the situation and may range from pavement marking to signage improvements to pedestrian activated devices such as overhead flashers, RRFBs to physical changes such as curb extensions or median treatments to traffic signals. Recent additions to crosswalk enhancements for the years 2019 to 2024 are provided below in Table 1.

Table 1: Number of crosswalk improvements completed annually by Mobility Operations, city-wide 2019-2024:

Total Inventory by Asset Type	2019	2020	2021	2022	2023	2024	Average Annual Increase
Traffic Signal	1,108	1,139	1,162	1,189	1,215	1,233	25
Pedestrian Overhead Flashers	244	250	248	247	251	253	2
Pedestrian RRFBs	150	165	174	189	196	222	14
In-Street School Pedestrian Signs	0	26	26	26	26	360	72
Ladder Crosswalks	1,414	1,541	1,563	1607	1683	1699	57
Locations with Temporary Curb Extensions	126	158	176	236	309	389	53

COST OF TYPICAL CROSSWALK IMPROVEMENTS

Average cost of crosswalk improvements for the requested enhancements are as follows (figures are not inclusive of operational/maintenance costs):

1. Improved paint: \$2,500 (durable ladder crosswalks) or \$1,000 (to refresh)
2. Curb extensions: \$8,000 (temporary) or \$80,000 (permanent, often requiring drainage changes)
3. Flashing overhead lights: \$175,500 or \$65,000 (RRFB)
4. New traffic signals: \$350,000
5. Streetlighting Improvements: \$15,000 (per pole)
6. Crossing signage and labour: \$4,500, inclusion of crossing signage reflective sleeves would be an additional \$500

TOTAL ANNUAL CITY-WIDE BUDGET FOR CROSSWALK IMPROVEMENTS 2019-2024

There are many funding streams that contribute directly or in part to the implementation of crosswalk improvements, with examples below:

- New permanent curb and media extensions: Approximately 20 per year (under Mobility Safety Improvements) at an average annual investment of \$1.6M (additional locations are implemented through other programs, such as Mainstreets, 5A, and others)
- New and upgraded marked and signed crosswalks: Traffic Control and Parking installed 90 in 2024, at an approximate total cost of \$225K
- RRFBs: Installed at 26 locations in 2024 to support the 5A bikeway/pathway program and additional sites at a cost of approximately \$1.69M
- Ongoing retrofit of existing pedestrian overhead flashers to include side beacons
- Accessibility improvements including wheelchair ramps, curb extensions, audible pedestrian signals at traffic signals and missing links

It is important to note that many of the initial installation costs are built into individual capital project costs across the corporation and are, therefore, difficult to calculate the total city-wide budget.

FUTURE BUDGET FUNDING

All intersections that have been identified as warranting overhead flashers, RRFBs and traffic signals are currently fully funded with existing capital. Crosswalk enhancements identified for safety improvements are prioritized within existing budgets and investments are being made ahead of schedule within the Mobility Safety and Accessibility Improvements programs.

Although The City has been making continuous investments in crosswalk enhancements, there are ongoing opportunities to continue to improve safety city-wide. Immediately applicable investments that could be explored include:

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- Crosswalk enhancements on higher risk arterial corridors (four lanes and 50-60km/h speed limits)
 - Priority crossings to support Active and Safe Routes to School

- Top priority intersections identified through the Calgary Advanced Network Screening work (nearing completion)

The above efforts could be advanced in 2025 and 2026 with a total investment of \$10M over the two years.

Longer term, there are several unfunded opportunities related to the Pedestrian Strategy, the Neighbourhood Streets Policy, and Active and Safe Routes to School. These would benefit from additional capital investments to improve mobility safety for all users, and specifically for vulnerable pedestrians. If desired, Council could allocate funding to one or more of these safety-enhancing programs to accelerate the goal of improving pedestrian safety.

Submitted by Troy McLeod, P.Eng., Director of Mobility