



City of Richmond

Report to Committee

To: Public Works and Transportation Committee
From: Lloyd Bie, P.Eng.
 Director, Transportation
Re: **Pedestrian Safety at Intersections**

Date: June 28, 2019
File: 10-6450-09-01/2019-
 Vol 01

Staff Recommendation

That the report titled "Pedestrian Safety at Intersections" dated June 28, 2019 from the Director, Transportation be received for information.


 Lloyd Bie, P.Eng.
 Director, Transportation
 (604-276-4131)

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
RCMP Community Bylaws	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 	APPROVED BY CAO 

Staff Report

Origin

At the March 20, 2019 Public Works and Transportation Committee meeting, the following referral was carried:

That staff examine pedestrian safety practices at intersections and report back.

This report responds to the referral.

Analysis

Current Pedestrian Safety Initiatives

The City undertakes a number of engineering, education and enforcement activities to promote pedestrian safety, particularly at intersections, which are summarized below.

Infrastructure

In addition to securing new pedestrian facilities as part of the development application process, the City has several annual capital programs that support the provision of a safe pedestrian environment as summarized in Table 1.

Table 1: Annual Capital Programs related to Pedestrian Facilities

Program	Scope	Criteria
Special Crosswalk Program	Implement new traffic control standards at existing crosswalks on arterial roads	Develop prioritized list based on: <ul style="list-style-type: none"> Public requests Locations with four lane roads Locations with high pedestrian activities
Accessible Pedestrian Signal Program	Installation of accessible devices at existing signalized intersections	Target to outfit all City-owned traffic signals with accessible pedestrian signal devices by 2020
Arterial Roadway Improvement Program	Implement pedestrian and traffic safety improvements along arterial roads and intersections	Develop prioritized list based on: <ul style="list-style-type: none"> Public requests Locations with high pedestrian activities (e.g., schools, neighbourhood service centres, bus stops, recreational service centres, shopping/retail areas) Gap in an otherwise continuous facility
Neighbourhood Walkway Improvement Program	Construction of new and/or enhancement of existing walkways and sidewalks on local roads	
Active Transportation Improvement Program	Implement cycling and rolling improvements including multi-use pathways	Build-out of the cycling network plans identified in the <i>City Centre Area Plan</i> and the <i>Official Community Plan</i>
Traffic Signal Program	Installation of new or upgrade of existing traffic signals including pedestrian signals	Developed prioritized list based on: <ul style="list-style-type: none"> Public requests Safer management of pedestrian, cyclist and motorist movements

Beyond the annual programs, pedestrian facilities may be provided via stand-alone capital projects (e.g., multi-use pathway on River Drive between Van Horne Way and No. 4 Road, forthcoming multi-use pathway on Cambie Road between River Road and No. 3 Road as part of the River Parkway project).

To support the identification and implementation of pedestrian safety improvements, the City has an on-going partnership with ICBC through its Road Safety Improvement Program, which provides cost-share funding for infrastructure and studies. As reported to Council in June 2019, the City and ICBC recently completed a Network Screening Study that identified high crash locations and road safety countermeasures that will also increase pedestrian safety at intersections.

Education and Enforcement

To date in 2019, Richmond RCMP have engaged in multiple efforts to enhance pedestrian safety including:

- *Pedestrian Safety Campaigns*: primarily held each Fall-Winter, the campaigns are led by the Road Safety Unit and Community Policing Section in partnership with ICBC and volunteers and focus on educating pedestrians on the importance of visibility, using designated crosswalks and obeying traffic signals.
- *Enforcement of Motor Vehicle Act Infractions*: for both pedestrians and drivers by frontline RCMP members, including the Road Safety Unit.
- *Media Engagement*: conducted seven pro-active social media outreaches and seven conventional media press releases, all regarding various road safety issues, for a total of 14 separate media messages regarding road safety as well as a Letter to the Editor of the *Richmond News* by the OIC (Officer in Charge) addressing intersection violations (published March 10, 2019).
- *Responses to Public Concerns*: with respect to specific locations, the Road Safety Unit conducts assessments, tasks members to conduct problem-solving projects to address the concern, and deploys community policing volunteers to conduct “Intersection Watch” actions.
- *City Advisory Committees*: engagement with RCMP partners to address pedestrian safety concerns at the Traffic Safety Advisory Committee (TSAC) and the Richmond Intercultural Advisory Committee. TSAC was formed in 1997 as a co-operative partnership between City staff, community groups and other agencies that seek to enhance traffic and pedestrian safety in Richmond.
- *City of Richmond Transportation Department*: information sharing with the Department, including addressing specific locations of concern, locations of serious motor vehicle collisions and brainstorming to improve intersection safety.
- *Province of BC*: engagement with the Ministry of Transportation and Infrastructure to address specific locations of concern as well as the roll-out of the new Intersection Safety Cameras. The Province has 140 Intersection Safety Cameras that are currently equipped with red-light cameras; nine of these are in Richmond. Of these nine intersections, the camera at

the Garden City Road-Cambie Road location will be upgraded to facilitate automated speed enforcement. In addition, all of the cameras will be updated to be fully active (24 hours per day seven days per week) for automated red-light enforcement.

In addition, Community Bylaws provides education and enforcement of Traffic Bylaw infractions (e.g., parking too close to a crosswalk) and regularly patrol school zones. The City has produced and distributed various pedestrian safety brochures that are also available on the City's website (e.g., *What to do at Special Crosswalks*, *Important Road Safety Tips for Scooter Users*, *Traffic Safety around Schools and Playgrounds*).

New Pedestrian Safety Initiatives

Staff keep abreast of best practices to improve pedestrian safety, particularly evidence-based measures that have demonstrated effectiveness in reducing collisions. As an example, a relatively new initiative implemented by the City is the Leading Pedestrian Interval at selected intersections (e.g., Garden City Road-Lansdowne Road) whereby pedestrians are provided with priority to start crossing the intersection prior to motorists receiving a green light. Studies have documented that this advance phase for pedestrians reduces conflicts with turning motorists thereby decreasing collision rates.

The City is also increasing the use of in-street mounted signage in school zones and other locations in Richmond, which have been effective in moderating motorist speeds particularly near schools (Figure 1).



Figure 1: In-Street Pedestrian Zone Markers on Railway Avenue (near Homma Elementary School)

At the March 20, 2019 Public Works and Transportation Committee meeting that prompted the referral stated in the Origin section of this report, a delegation commented on pedestrian safety practices in Hawaii whereby pedestrians utilize flags to alert drivers of their presence.

In contrast to the pedestrian safety measures utilized by the City, there is no evidence that pedestrians using flags to draw the attention of motorists when in a crosswalk decrease rates of traffic crashes. The concept has been piloted in several Canadian and U.S. cities of various sizes (e.g., Halifax, West Vancouver, Seattle, Berkeley); however, most of the projects removed the

flags at the end of the pilot or did not replace them upon loss or theft. Results indicated low usage by pedestrians and no pattern of increased driver compliance at crosswalks. The Richmond RCMP Road Safety Unit does not believe this concept to be a viable method to improve pedestrian safety in Richmond.

As part of the annual pedestrian safety campaigns led by Richmond RCMP, the City provides funding support for the distribution of reflective arm bands and similar items to increase the visibility of pedestrians, particularly at night. Users typically attach these items permanently to their clothing or bags, thus offering on-going conspicuousness.

Staff will continue to investigate and pilot new pedestrian safety initiatives in Richmond. Identified improvements include re-programming pedestrian signals to give priority to pedestrians (e.g., shorter wait time) and reviewing road design standards (e.g., modify channelized right-turn lanes) to reduce motorist speeds. In concert with the provision and upgrade of pedestrian infrastructure, a key on-going complementary tool to increase pedestrian safety at intersections is increased enforcement to ensure driver compliance with regulations.

Financial Impact

None.

Conclusion

Through the development application and annual capital budget processes, the City is continually expanding and upgrading the pedestrian network to improve the walkability of the community. Well-designed infrastructure together with education and enforcement will ensure that the pedestrian environment is safe, appealing and accessible.



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