

January 16, 2024

Mayor and Council, City of Burnaby Submitted electronically

Dear Mayor Hurley and Council:

Re: Support for Motion: Improving Traffic Safety

Please accept this letter as support from Fraser Health's Medical Health Officer for Burnaby for the motion brought forward by Councillor Gu and Councillor Santiago to increase the presence of intersection safety cameras in Burnaby and explore the feasibility of additional pedestrian safety measures, such as prohibiting drivers from making right turns at red lights at high pedestrian crash locations. These measures are an opportunity to reduce speeding and red-light violations at high-risk intersections in our community, prevent road crashes and create safer streets for people of all ages and abilities. Fraser Health Population and Public Health thanks the City of Burnaby for undertaking the 2022 Burnaby Road Safety Network Screening, and supports the City's aim to advance a *Vision Zero* mindset to eliminate all serious injuries and fatalities from its transportation system¹.

In recent years, an average of over 250 people have died and over 3,000 have been hospitalized annually due to road crashes in BC,² costing the province \$312 million per year according to an analysis of 2018 data.³ In the Fraser Health region, an average of 72 people were killed, and 810 were hospitalized, in road crashes each year over the five-year period 2015-2019.⁴ In 2016, the Office of the Provincial Health Officer released a report on motor vehicle crash fatalities, stating that these highly preventable deaths are "unacceptable" and due to systemic failures in the road system.⁵

Prohibiting drivers from making right turns on red lights can reduce pedestrian injuries and deaths at high-risk intersections. As part of Fraser Health's Population and Public Health's ongoing commitment to enhancing road safety and protecting vulnerable road users, we strongly support the initiative to explore the feasibility of prohibiting right turns on red lights at appropriate high pedestrian crash intersections. Research shows that permitting drivers to make right turns on red can lead to increased conflicts between turning vehicles and pedestrians crossing the street.^{6,7,8} By eliminating this maneuver at suitable intersections with high foot traffic and coupling it with Leading Pedestrian Intervals (pedestrians have a 3-7 second head start over drivers) to reduce conflicts during the green light phase, we can significantly improve the safety and well-being of all road users.⁹ If prohibiting right turns on red lights is implemented, we recommend completing an evaluation to assess its effectiveness.

Speed is a factor in most motor vehicle related injuries and deaths. Exceeding the speed limit has been shown by a large body of research to be the top contributing factor in fatal motor vehicle crashes,^{10,11} and excessive speed is consistently reported as a leading contributing cause at police-attended fatal road crashes in BC.¹² As well, drivers who run red lights contribute to serious crashes that are strongly associated with serious injury and death.^{13,14,15}

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Automated speed enforcement (ASE) is a highly proven road safety measure. Well-studied programs, including those with intersection safety cameras, have brought substantial reductions in speeding, collisions, injuries and deaths.^{16,17,18,19} BC's intersection safety camera program currently consists of 140 cameras province-wide, with only 35 of these issuing tickets for speed. There are twelve intersection safety cameras that are operating in Burnaby, of which only three capture and issue violations for speed.²⁰ Given the evidence, we expect that additional intersection safety cameras could yield significant safety benefits. Well-signed fixed cameras could also be considered at locations without signalized intersections, such as in school zones and on active transportation corridors where physical separation of vulnerable users from motor vehicle traffic is not possible. Automated camera-based safety enforcement is resource-efficient and objective, system installation and operation doesn't burden municipal resources as the program is managed by ICBC and the Province, and it doesn't require active police monitoring.²¹

Support for ASE in BC is strong. A 2018 survey of British Columbians reported that over two-thirds (68%) of residents approved of speed-on-green intersection cameras (28% disapproved, 3% unsure), and 75% were more likely to support ASE if locations for ASE were selected based on where crashes and injuries occur more often (18% just as likely to support, 5% less likely to support).²² More recently, a similar survey in 2023 found persistent levels of support: 79% of respondents in the Fraser Health region agreed that "It is important to respect speed limits because it makes travel safer for everyone" (13% neutral, 8% disagreed), and 58% of respondents approved of speed-on-green enforcement at intersections (20% neutral, 22% disapproved).

Evidence shows that specific programmatic elements promote public support and safety benefits of ASE. Research on programs from other provinces in Canada, Australia and the UK has found that there are key characteristics of ASE programs that support program success.^{23,24} These critical elements are:

- 1) No surprises: Provide clear warnings to motorists as they near a location with ASE. This is typically achieved using clearly visible signage. The goal is to decrease speeds, not to collect revenue.
- Revenue transparency: When violations occur (which should become less common over time in a successful program), ensure and demonstrate that revenue from fines is dedicated to improving road safety.
- 3) **Camera effectiveness:** Select ASE sites based on data including known injury risk, clearly communicate the rationale for site choices, and publicly share data on program impacts.
- 4) **Community engagement:** Provide community members with opportunities to request new sites for ASE and publicize the documented benefits.

With awareness that the Province already operates an intersection safety camera program across BC, local governments requesting further intersection safety cameras should consider how they can enhance use of the critical elements to ensure public support and realize the potential of ASE to reduce injuries and save lives.

Expanding intersection safety cameras is an important tool in making our communities safer and more livable by reducing red light violations and speeding through intersections. Furthermore, exploring other measures to improve pedestrian safety, such as prohibiting right turns on red lights and Leading Pedestrian Intervals at appropriate high pedestrian crash locations, can significantly contribute to

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creating a safer and more walkable environment. Fraser Health Population and Public Health strongly supports data-driven application of these measures. We are committed to collaboration with the City of Burnaby and partners to expand proven and effective road safety measures and hope your deliberation will yield a positive outcome for road safety. We look forward to continued work with the City of Burnaby to build safer, more active, and healthier communities. Sincerely,

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- ² British Columbia Injury Research and Prevention Unit (BCIRPU) (2022), "Human Cost of Injury," Report.
- ³ BCIRPU (2022), "Cost by Cause of Injury," Report.
- ⁴ Injury Data Online Tool (iDOT) (2023), Injury-Related Deaths and Injury Hospitalizations, Data Tool.
- ⁵ BC Provincial Health Officer (2016), "Where the Rubber Meets the Road: Reducing the Impact of Motor Vehicle Crashes on Health and Well-being in BC," <u>PHO Annual Report</u>.
- ⁶ Zador, P. L. (1984). Right-turn-on-red laws and motor vehicle crashes: A review of the literature. Accident Analysis & Prevention, 16(4), 241-245.
- ⁷ Joshua Wolfgram, P. E., PTOE, R. M., Robin Fish, P. E., PTOE, R., & Rahul Jain, P. E. (2022). Analysis of Expanded No Turn on Red Applications in Washington, DC, USA. Institute of Transportation Engineers. ITE Journal, 92(5), 40-44.
- ⁸ Government of British Columbia (2018), "B.C.. Community Road Safety Toolkit Module 2", Report
- ⁹ Government of British Columbia (2018), "B.C.. Community Road Safety Toolkit Module 1", <u>Report</u>
- ¹⁰ Global Road Safety Partnership (2008), "Speed Management: A Road Safety Manual for Decision-makers and Practitioners."
- ¹¹ Rune Elvik (2012), "Speed Limits, Enforcement, and Health Consequences," Annual Review of Public Health 33: 225-38.
- ¹² Insurance Corporation of British Columbia (2023), "Quick Statistics Contributing Factors," Data.
- ¹³ RA Retting, RG Ulmer, AF Williams (1999), "Prevalence and characteristics of red light running crashes in the United States," Accident Analysis & Prevention, 31(6), 687-694.
- ¹⁴ J Bonneson & K Zimmerman (2004), "Red-light-running handbook: An engineer's guide to reducing red-light-related crashes." Texas Transportation Institute, Texas A & M University System. <u>Document</u>.
- ¹⁵ EG Cohn, S Kakar, C Perkins, R Steinbach & P Edwards (2020), "Red light camera interventions for reducing traffic violations and traffic crashes: A systematic review," *Campbell Systematic Reviews*, 16(2), e1091.
- ¹⁶ Cecelia Wilson, et al. (2010), "Speed Cameras for the Prevention of Road Traffic Injuries and Deaths," Cochrane Database of Systematic Reviews 10.
- ¹⁷ Larry Decina, et al. (2007), "Automated Enforcement: A Compendium of Worldwide Evaluations of Results," Presentation.
- ¹⁸ Libby Thomas, et al. (2008), "Safety Effects of Automated Speed Enforcement Programs: Critical Review of International Literature," Transportation Research Record: Journal of the Transportation Research Board 2078: 117-26.
- ¹⁹ Transport for New South Wales (2021), "Speed Camera Programs: 2020 Annual Review," Report.
- ²⁰ RoadSafetyBC (2023), "Intersection safety cameras in Burnaby," Website.
- ²¹ National Academies of Sciences, Engineering, and Medicine (2019), "Pedestrian safety relative to traffic-speed management." Washington, DC: The National Academies Press. <u>https://doi.org/10.17226/25618</u>. P 2.
- ²² M. Denise Beaton, et al. (2022), "Critical Elements of Public Acceptance and Support for Automated Speed Enforcement in British Columbia, Canada," *Journal of Transport & Health* 26: 101461.
- ²³ Transport for NSW (2022). "NSW Automated Enforcement Strategy for Road Safety". <u>Report</u>
- ²⁴ Transport for New South Wales (2012), "A Way Forward for Speed Cameras in NSW: The NSW Speed Camera Strategy."

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¹ City of Burnaby (2022), "Burnaby Community Safety Plan", Report