January 24, 2014

The Honourable Todd Stone
Minister of Transportation and Infrastructure
Room 306, Parliament Buildings
Victoria BC V8V 1X4

VIA EMAIL
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Dear Minister Stone:

Re: Public Consultation on Rural Highway Safety and Speed Review

The Office of the Provincial Health Officer is very interested in the reduction of death and disability as a result of motor vehicle crashes (MVCs) in this province. As a member of the steering committee for the British Columbia Road Safety Strategy led by the Minister of Justice, we are keen to participate in discussions related to road safety in general and related to specific issues such as speed. "Safe speed" is one of the four pillars of the Safe System approach to the reduction of MVC injury, disability and death. As such, we want to share our views with you regarding this important public health matter.

Motor vehicle related crashes cause painful tragedies to families and communities across the province and generate a large and preventable burden on the health care system. In BC speed was the top contributing factor (32 per cent) to MVC fatalities in 2012 and was consistently one of the top two factors from 2006 to 2012.

Research is conclusive that increased speeds cause larger numbers of road crashes, injuries and deaths, and one of the most effective and economical ways to reduce human harm from the road transport system is to reduce speeds. This is based on the principles of physics that both stopping distances and the amount of kinetic energy that must be dissipated in a crash are each a function of the square of the speed. This means that higher speeds produce both longer stopping distances and more kinetic energy released in a crash. The risk of involvement in a crash that will result in an injury increases exponentially with the speed of the vehicle, doubling with each five kilometers per hour in travel speeds above 60km/h.

In addition a great deal of evidence reveals that higher speeds cause more injuries and deaths than lower speeds. This is true of residential and highway roadways. In 2008 a review by the

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Organization for Economic Cooperation and Development of research regarding raising speed limits has shown an increase in the number of MVCs that involve injury, fatalities and property damage. The greatest increase among these effects was for MVCs involving fatalities at an increase of 26 per cent. With respect to highways, a study found that increasing US speed limits caused an additional 12,545 fatalities and 36,583 injuries during the period of 1995 to 2005, the period after the 55mph limit was repealed throughout much of that country. Research also shows that 90 per cent of pedestrians hit by vehicles survive when the speed is 30 km/h, but only 20 per cent survive when struck by a vehicle travelling 50 km/h.

We also must be aware of driver behaviour. According to a 2005 national survey, 71 per cent of Canadians reported that they speed "on occasion" or "frequently," and 61 per cent reported receiving at least one speeding ticket in their lives. According to the BC Office of the Superintendent of Motor Vehicles, police issue approximately 10,000 tickets per year for excessive speeding in BC. As we know, the number of persons caught for driving above the posted speed limit is only a small fraction of those driving above that limit. In BC males consistently have double to triple the fatality rate of females. Rates are higher in the 16-45 year old age group than the 46-75 year old age group. Forty per cent of all speed-related MVC fatalities in BC also have impairment (alcohol and/or drugs, both licit and illicit) as a contributing factor.

There has been a significant decrease in motor vehicle related fatalities and injuries since the province introduced changes in 2010 ranging from a driver distraction law, new measures for excessive speeders and a new program for impaired drivers. More recently, the government announced the BC Road Safety Strategy with the vision of working toward the elimination of deaths and serious injuries from road crashes – a goal which is increasingly being embraced by jurisdictions around the world, including in North America. The government is to be commended for these changes and it would be tragic if this momentum, and its associated gains to public safety, were to now be lost by increasing speed limits, without sound speed limit setting principles, appropriate stakeholder involvement and timely evaluation.

Great care can and must be taken in determining the speed limits on various roadways. There are many factors to consider such as the design of the roadway, local geography, season, visibility, weather conditions, lighting, types and proportionate mix of various motor vehicles, traffic volume, proximity to communities, use by vulnerable road users (such as cyclists, pedestrians, and motorcyclists), risk of wild animal encounters, frequency of crashes in an area, prevalence of impaired driving, level of safe driving practices including the wearing of seatbelts, levels of distracted driving, accessibility to emergency services, short response time, acute care trauma management capacity, and rehabilitation services). Rather than just looking at a particular percentile speed, crash history, road development and geometry, all of the above need to be considered in determining the appropriate maximum speed of any specific roadway. These analyses and the resultant decisions should, in our view, have local public health input, which generally appears to be missing. Determining appropriate speed limits is a weighty responsibility and should be shared by appropriate local stakeholders.

This group should also include emergency first-responders and emergency-room physicians who must deal with the aftermath of road crashes and for whom speed, death and injury numbers are not concepts but have real-world impacts.

While “Safe Speeds” is one of four pillars of the Safe System approach which has now been adopted by BC in the recently published British Columbia Road Safety Strategy -2015 and Beyond, the other three pillars, safe road users, safe vehicles and safe roadways also need to be considered when determining what speeds are safest in any particular area. Some examples include: considering modifications to infrastructure to reduce energy transfers that increase the risk of serious injuries and fatalities; ensuring that vehicles are equipped with appropriate tires for the driving conditions; catching and getting all impaired drivers and excessive speeders off the roads.

Ensuring that the determinations of specific roadway speed limits are transparent and that the five E’s (education [including training, publicity, and public engagement], engineering, enforcement, emergency response and acute trauma management, and economics [including incentives and disincentives]) are considered will be critical. It is well known that without adequate monitoring of motorist behaviour such as the wearing of seatbelts, prevalence of distracted or impaired driving, adherence to speed limits, as well as adequate and timely enforcement, adherence to the rules of the road is not what it should be to prevent needless injuries, disabilities and deaths.

There clearly needs to be a commitment to evaluation of any changes in roadway speed limits, so that if rates of MVCs increase in a particular area, there is timely and robust information to adjust the altered speed limits to a more appropriate level before serious injuries and deaths occur. This will require that some agency is clearly given the responsibility for the evaluation and subsequently for taking the appropriate action. This will also require more coordinated and timely data collection among enforcement, insurance and health agencies than currently available.

There should also be a component of the plan that looks at potential innovations in setting speed limits, such as utilizing variable and dynamic speed limits where appropriate. Ensuring increasing compliance with posted speed limits, especially in areas where risk is highest will also be critical. There has been interesting research using section control or point-to-point speed enforcement where average speed over a specific distance is assessed. A recent review of the literature on this method found that it resulted in increased compliance with posted speed limits, reduced speed, reduced levels of excessive speeding and decreased speed variability among vehicles. This technology not only decreased crash rates, but also decreased serious injuries and fatalities. Researchers found it had high levels of public acceptability. A pilot evaluation could be planned for a higher risk area where speed limits are changed (a before and after study).

Our office would be pleased to engage with your ministry as this process moves forward.

Sincerely,

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