

TESTIMONY OF

Trooper Jacob Jones

Good morning, Chairman Clemens and members of the Senate Transportation Committee. My name is Jacob Jones, and I am a trooper with the North Dakota Highway Patrol and have been employed as such since 2011. My primary duties as a trooper have been traffic enforcement and crash reconstruction. I am here today on behalf of the North Dakota Highway Patrol in support of Senate Bill 2168, regarding the increase in penalties for those violating our state's speeding statutes by 21 or more miles per hour over the posted limit.

As a crash reconstruction analyst, I generally have the benefit of having the facts and evidence laid out before me, well after the fact, of someone being seriously injured or killed in a crash. I can sort through the evidence and generally determine vehicle speeds, drivers' actions and reactions and possibly how the crash could have been avoided or not avoided. A theme that I often see is that the circumstances surrounding crashes play out in mere seconds or fractions of a second. Poor decisions may have been made well before that but when a hazard presents itself, drivers are forced to make split second decisions. Annually, over 100 billion dollars is spent worldwide on developing and implementing automotive safety systems to protect us behind the wheel when we overdrive our skill level or vehicle capabilities. Driving a vehicle is hands down one of the most dangerous things most of us do every day. Many of us have been in a crash before or statistically will be at some point in our lives. Every time we drive down main street, a state highway, or the interstate, we are no more than a few feet away from tragedy, but we get used to it and we get complacent with our driving habits. Simply ride along with any law enforcement agency in the state for a few days and you will more than likely get to see the aftermath of a crash firsthand.

We have all been taught from a young age that speeding is dangerous. In grade school we are taught not to run in the halls, in middle school we go through driver's education and learn the dangers of speeding. Some of us may have jobs that require us to take defensive driving from time to time. Even though we all know that speed kills, 34% of fatal crashes in 2020 involved speed/aggressive driving (2020 ND Crash Summary). Most likely that number is under-reported due to crashes like single vehicle rollovers not being fully reconstructed and speed never being determined. Those 33 fatal crashes involved obvious speed or aggressive driving where an officer at the scene marked it on the initial State Crash report or possibly provided a supplement after an investigation was complete. That number is no doubt much higher.

When presented with a hazard there are several steps to avoiding the hazard. You have to see the hazard, you have to understand that it is a hazard, you have to make a decision on how to avoid the hazard, you have to make a physical movement (like moving your foot to the brake and

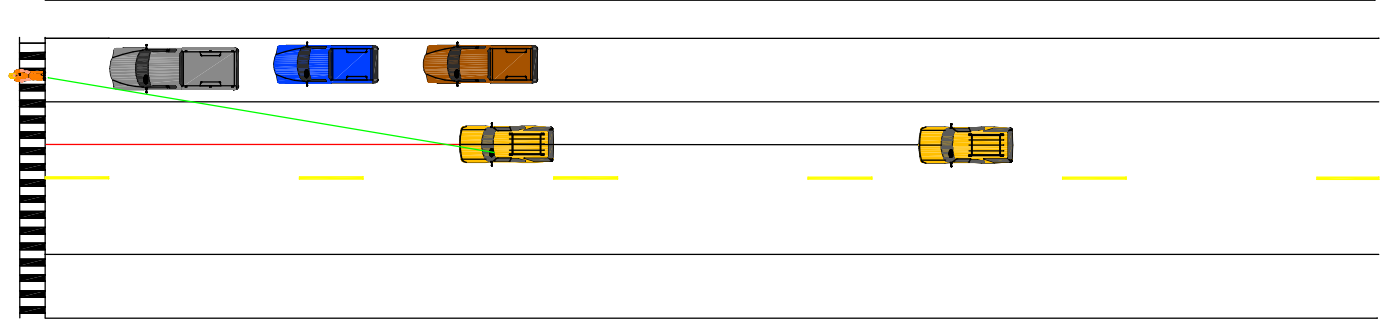
pressing it). All other distractions aside, that is a lot to figure out in short time. Usually, our brains can sort through all this information in about 1 to 2 seconds from first seeing a hazard to slamming on the brakes and getting pitched forward in your seat. The relationship between speed and stopping distance is not linear, it is exponential. This means that the faster you go the more distance is required to perceive, react and avoid a hazard; not to mention the increased distance required to physically stop the vehicle. In other words, each mph you go faster, the rate that you pay in stopping distance increases.

Obviously, any degree of speeding over the engineered speed limit is dangerous, but today I will show you an example of why going 21 mph over the speed limit is extremely dangerous. I will use a relatable example of a pedestrian stepping into a crosswalk in city limits. Picture Main street downtown Bismarck where the speed limit is 25 mph. You are driving down the road passing numerous vehicles parked along the right-hand curb. You are coming up to an intersection with a crosswalk. The last vehicle on your right is parked the required 10 feet from the crosswalk. You're scanning for pedestrians, but the parked vehicles make it difficult to see the corner where one could be standing. Suddenly you see someone walking out into the crosswalk. You are about 65 feet or 3.5 vehicle lengths from the crosswalk. You react quickly because you are expecting the hazard. You can perceive the hazard and react to it in 1 second (covering 36 feet in that one second). You take 29 feet to brake the vehicle to a stop. You avoid the pedestrian by being able to stop before the crosswalk. I provided a diagram as a part of this testimony for visual purposes. Imagine the same scenario but with a driver (not you of course) traveling 21 mph over the posted 25 mph limit, moving along at 46 mph. The pedestrian steps out, only this time the driver covers 67 feet during that 1 second of perception reaction time and strikes the pedestrian at a full 46 mph because their foot is most likely just beginning to touch the surface of the brake pedal. It should be mentioned that any speed above 25 mph the pedestrian will be struck at various speeds below 46 mph.

I used this example because it shows how dangerous speeding is at any level. However, at 21 mph over the speed limit, there are circumstances where a driver doesn't even have a chance to reduce the speed of the vehicle where a lawful driver could completely avoid a crash. While we can't prevent every driver from making dangerous decisions, if this bill became a law and deterred even some drivers from speeding then it would be worthwhile. Thank you for your time and I would be happy to answer any questions.

25 mph (36 fps)
65 feet to impact
PRT 1.0 seconds
PRT Dist. 36 feet
Stop Dist. 29 feet
Total stop = 65 feet

137 foot gap
GAP 3.8 sec.



46 mph (67 fps)
65 feet to impact
PRT 1.0 seconds
PRT Dist. 67 feet
Stop Dist. 100 feet
Total stop = 167 feet

If this crash was somehow avoided and witnesses by law enforcement, current fine would be \$28 for the speed offense. This bill would increase that fine to \$56.

199 foot gap
GAP 5.5 sec.

