

TESTIMONY OF

Trooper Jacob Jones

Good morning, Chairman Ruby and members of the House Transportation Committee. My name is Jacob Jones, and I am a trooper with the North Dakota Highway Patrol where I have been employed 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 have the facts and evidence of someone being seriously injured or killed in a crash laid out before me well after the fact. 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. The circumstances causing a crash 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.

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; and
- you have to make a physical movement such as 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, for each mile per hour you go faster, the rate that must be paid in stopping distance increases.

I provided an attachment to my written testimony showing an example of a vehicle going 21 mph over a 65-mph speed limit. This example involves a bit of math, acceleration rates, deceleration rates, and human reaction time etc. Without taking too much time and going too far in depth, the point of the example is this: if a driver pulls out in front of an approaching vehicle that is traveling at the 65-mph speed limit, no crash occurs. However, if the same driver pulls out in front of a vehicle going 21 mph over the posted speed limit at the assumed space of five seconds away, the speeding vehicle strikes the other vehicle at 46 mph after the driver reacts and tries braking to

avoid it. The 21 mph over the posted speed limit by the driver caused this situation to go from a non-event to a likely fatal crash.

The faster a vehicle travels, the more energy it possesses. The more energy a vehicle possesses the more severe the damage and injuries to the vehicles and people involved in the collision. We look at energy units as foot-pounds of energy. All of us can agree that firearms can cause severe injury. A bullet fired from a 9mm handgun possess about 400 foot-pounds of energy when it leaves the barrel of the gun. A 5,000 lb. vehicle traveling only 5 mph possesses 10 times as much energy as that small bullet. At 25 mph that same vehicle possesses over 100,000 foot-pounds of energy. We are all literally driving bullets around when you consider the energy involved. No doubt that auto manufacturers and safety experts are saving lives with advances in automated safety systems in vehicles. As speed increases the energy increases exponentially. When a driver chooses to drive 21 mph over the speed limit the energy increases significantly. If a driver goes 21 mph over a 25-mph speed limit, they more than double their kinetic energy which means the severity of the crash more than doubles. I have attached some sheets that detail the levels of kinetic energy at different travel speeds.

Does this high rate of excessive speed happen often? In 2022, the ND Highway Patrol issued 29,644 speed-related citations which includes the speed brackets and within construction and school zones. Approximately 92% of those citations were for motorists speeding 20 mph or less over the posted speed limit. The fine increase proposed by SB 2168 would affect only the remaining 8%.

2022 Statistics

- 21-25 mph over posted: 1,494 citations (about 5%) 5 points (defensive driving in lieu of points available)
- 26-35 mph over posted: 738 citations (about 2.4%) 9 points
- 36-45 mph over posted: 125 citations (about 0.4%) 12 points
- 46+ mph over posted: 19 citations (about 0.06%) 15 points

Total of 2,376 citations

2022 Statistics:

21+ by Speed Zone (percentage of the 2,376 citations above for going 21+ over limit)

- 70 mph + zone: 25%
- Greater than 55 mph but less than 70 mph: 25%
- 55 mph and less zone: 50%

Feb. 2023 (through 2/27)

- 21-25 mph and over: 73 citations
- 26-35 mph over: 52 citations
- 36-45 mph over: 5 citations
- 46+ mph over: 1 citation

I want to be clear that speeding over the posted limit at any rate is dangerous and deprives not only the driver, but other motorists of the time and distance required to avoid a crash. I believe that drivers who chose to drive 21+ mph over the scientifically determined speed limit are driving at an

egregious level that is dangerous. Passage of this bill would be a great step in holding that small percentage of violators accountable for their irresponsible choices and hopefully add a level of deterrence to enhance safety to our roadways. This concludes my testimony, and I would be happy to answer any questions.