

2017 HOUSE TRANSPORTATION

HB 1202

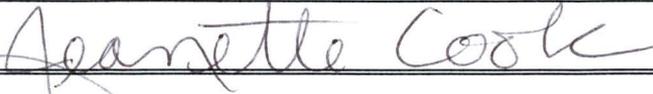
2017 HOUSE STANDING COMMITTEE MINUTES

Transportation Committee
Fort Totten Room, State Capitol

HB 1202
1/19/2017
#27132

- Subcommittee
 Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A bill relating to the operation and regulation of autonomous vehicles.

Minutes:

Attachments # 1-8

Representative Owens opened the hearing on HB 1202.

Chairman Ruby introduced HB 1202 and spoke to support it.

Chairman Ruby: This issue was discussed by this body last session. We had a bill that put in a lot of regulation to try to get ahead of some of the autonomous vehicle issues. At that point in time we didn't really have a good handle on what exactly was needed. We want to make sure that we foster this industry and allow it to grow. We also realized that there may be some regulation required at some point. The bill was changed to a study, but was not chosen to be studied in the last interim. We still don't really know what is required.

The Department of Transportation has drafted this bill, and we discussed some things that we would like to do, but are not pushing any specific legislation right now. This bill will give the Department of Transportation some authority to write administrative rules, if we need to do that in the next two years or more. There are many different levels of autonomy, many of them advanced, such as not needing a driver.

One of the first things that we may need is definitions. After that, we would potentially even have to make a rule that allows autonomous vehicles to be on the road. We want it clear that the legislative intent is that we want to maintain an environment in which this industry can be fostered and grow here in North Dakota. North Dakota would like the innovation, the testing, and technology when it is available and safe. We don't want any roadblocks to the types of things that could take place with this technology. There is amazing technology coming. At a convention in Denver we were told that every manufacturer has a division of autonomous technology going right now. We need to be ready for this, but we don't know what we need to be ready for. That is why we need to be somewhat general and allow the Department of Transportation to make some of the decisions as they go. If we just put in a number of regulations now, we may just have some unintended consequences in a negative fashion.

I sponsored this bill so we have some sort of foundation for the time that we need to put something in to statute.

Representative Jones: I understand at this time a driver is still required in an autonomous vehicle. How does the department director feel about this, when we are having him develop and implement this? Is he going to carry the preponderance of the liability?

Chairman Ruby: The liability is a big issue. The insurance companies are going to have a lot to say about this technology. The industry would love to see every state to have the same regulations. These are some of the questions that are going to need to be answered. I think that Department of Transportation needs to have the authority to promulgate some rules.

Grant Levi, Director with North Dakota Department of Transportation, spoke to support HB 1202 and provided written testimony. See attachment # 1.
19:43

Representative Paur: Is Chapter 39-06 the best place to put this bill?

Grant Levi: Our team believed it was. That chapter also deals with many of the driving rules and regulations in North Dakota.

Dave Blair, Central North American Trade Corridor and North Dakota Automated Vehicle Collaboration, spoke to support HB 1202. He submitted the "Proposal for Designation US. Route 83 in North Dakota as a 'USDOT' automated Vehicle Proving Ground", which was referred to in his testimony. See attachment #2, pages 1-11.

Dave Blair: We submitted an application to the US Department of Transportation and Secretary Foxx which would have designation for training purposes for autonomous vehicles. We haven't heard back yet about that, but expect it soon. There are many other states that have applied for this designation.

Dave Blair read written testimony, attachment #1, page 2, paragraphs 1-2. He also read a letter to Secretary Foxx from Ardell Geishel (unsure of name, inaudible), John Hoven, Heidi Heitkamp, and Kevin Cramer. 23:35 See attachment #3.
27:35

A letter was also provided from **Grant Levi, PE, Director of North Dakota Department of Transportation that was written to Secretary Foxx.** See attachment #4.

A letter was provided from **Alan Anderson, Commissioner of North Dakota Department of Commerce written to Secretary Foxx.** See attachment #5.

Dave Blair: We are in favor of HB 1202. We feel it could go a little further than what is being proposed, but we feel that there is enough forward movement so that we can work with the Department of Transportation and industry. It will be important in making North Dakota one of these designated states. We need to work quickly, so we don't get left behind. We are also trying to figure out how the drone industry and the autonomous vehicle industry can work together. Having land ports are part of strategy along the trade corridor. If we have

them every 150-200 miles, they could become a sort of distribution center where trucks could come and drop off freight. Drones could pick up freight and move it to destinations. We are trying to combine what industry is already moving forward with. It could give North Dakota an edge on the technology side of things and also encourage commerce.

30:40

Representative Nelson: Are you aware of any surveys of the general public about what their attitude would be about driving on a test road?

Dave Blair: No, but that would be part of our survey to see how the general public feels.

Arik Spencer, North Dakota Motor Carriers Association, spoke to support HB 1202. They feel that the bill is a good idea because it gives the Department of Transportation the ability to respond and take action as this evolves.

Marlo Anderson, Central North American Trade Corridor Association and the North Dakota Automated Vehicle Collaborative, spoke to support HB 1202. He has ridden in twenty-five autonomous vehicles in the past few years.

Marlo Anderson: If we want to put out a welcome sign to industry, I think that this bill will do that. North Dakota has become a leader in the world in drone technology. It is not just about the safety of autonomous vehicles, it is about the economic development and new industry in North Dakota.

Chairman Ruby: Have you seen a big difference in the autonomous vehicles in the last few years?

Marlo Anderson: Yes, a few years ago a vehicle still required someone to have the hands on the vehicle. In the last couple of weeks when I was in Las Vegas, there was a transport that was running totally autonomous.

36:40

There was no further support for HB 1202.

37:10

Levi Andrist introduced **Leighton Yates, Alliance of Automobile Manufacturers** to speak to oppose HB 1202 and provided written testimony. See Attachment #6, pages 1-3.

41:50

Dan Ruby: Do you feel like you will be willing to work with North Dakota Department of Transportation, and be a partner on this as they develop rules and regulations?

Leighton Yates: Yes, we would be more than happy to work with the committee and the Department of Transportation.

Chairman Ruby: Do you believe that an autonomous vehicle would be able to run our state roads without a driver, currently?

Leighton Yates: I don't know about without a driver. I do know that in the majority of the states these types of vehicles are able to run now. Sometime there are rules and regulations, which cause the testing to be moved to another state. We want to make sure that the technology will progress without legal barriers.

Chairman Ruby: Is Honda one of your partners?

Leighton Yates: No, they are not.

Chairman Ruby: They sent us an e-mail suggesting an amendment. It reads: "An individual may not operate or allow a vehicle, using autonomous as a means to eliminate a human operator, to be operated on a highway without approval by the Director. The director shall adopt rules to regulate the integration of advanced vehicle technology into the public highway system, limited to and consistent with the guidelines set forth in the model state policy of the US Department of Transportation Federal Automated Vehicle Policy."

Leighton Yates: I haven't seen it, but it seems to be in line with my testimony. I would like to look at it.

Tom Kelsch spoke on behalf of **General Motors** to express concern and opposition to HB 1202. Written testimony was provided. See attachment # 7.
48:45

Chairman Ruby: Would the suggested amendment be acceptable?

Tom Kelsch: We would need to see it and make suggestions. I feel that it is going in the right direction, but there are parts that may be ambiguous. It might be taking away current technology.

Chairman Ruby: We will look at the amendment. Our true intent is to foster autonomous vehicles.

Josh Fisher, Manager of State Affairs, Global Automakers, sent a letter in opposition to HB 1202. See attachment #8, pages 1-3.

There was no further testimony to oppose HB 1202.

Waylon Hedegaard, President of North Dakota AFL-CIO, spoke in a neutral capacity on HB 1202. I am a technophile. Autonomous driving technology is going to be the norm soon. The people that study this say we are facing a revolution in the next ten years in the transportation industry and delivery industry. There is a human cost to this. In the United States we are looking at losing 1.7 million delivery and transportation jobs. That will create a huge displaced workforce. In North Dakota that would be the equivalent to laying off the entire coal fired power industry. This will not just be limited to transportation. There are also fast food restaurants that are developing a nearly human free restaurant. Other industries are going to quickly automate. The people in the know are very concerned about how we are going to deal with massive displacement of the human workforce. I ask that you keep all of this in mind. This bill just deals with the first of them on a state and national level.

Chairman Ruby: I agree that automation is changing a lot of jobs that are out there.

There was no further testimony on HB 1202.
The hearing on HB 1202 was closed.

2017 HOUSE STANDING COMMITTEE MINUTES

Transportation Committee
Fort Totten Room, State Capitol

HB 1202 - 2
2/3/2017
#27889

- Subcommittee
 Conference Committee

Committee Clerk Signature

Jeanette Cook

Explanation or reason for introduction of bill/resolution:

A bill relating to the operation and regulation of autonomous vehicles.

Minutes:

Attachment #1

Chairman Ruby brought HB 1202 back before the committee and provided an amendment. See attachment #1. The amendment has been worked out with the industry and the Department of Transportation. They all approve it, and believe that this allows all the flexibility that they need to operate with the Department of Transportation having the ability to propagate rules when they need to. With the development of technology, we don't even know yet what we are going to have to do allow the technology to operate within the state. Our goal is to help it operate. Explanation of convoys of trucks driving together, at distances that are illegal as of today.

Representative Nelson: So, are you saying that we will allow these vehicles to operate so close together that other vehicles can't pull back in between them? I understand that we want to promote the industry, but allowing it to operate in a way that we wouldn't consider safe if it wasn't an autonomous vehicle, I have some issues with that.

Chairman Ruby: I think that they would only be allowed in certain places, or in instances where there are just being tested.

Representative Owens: I work in this area. Safety is always the utmost concern in the testing of the autonomous vehicles, especially at the Level 5, which are completely autonomous. The situation that Chairman Ruby described, would be traveling close together to benefit the drafting. But, they would not be so close together that another vehicle would not be able to pull in between. When another vehicle would pull in between, the radar system would take over and cause the trucks to separate even further until the obstruction between them is no longer there. Then they would come back closer together. That has been taken into consideration, but it is still in testing. In the situation where it has been tested it has been very promising.

Representative Paur: Didn't you say that this would allow the Department of Transportation to make rules as far as basing, and ect? On item two in the amendment, "the driver shall not promulgate rules regarding software requirements." Wouldn't that be exactly what ...

Representative Owens: Here they are talking about the government will not be able to design the equipment, hardware, or software, but the government can still write the rules that the software engineers have to design the software to obey. The Department of Transportation may have to adjust what is commonly referred to as what is considered a safe following distance from the car in front of you, to accommodate these automated systems. They will adjust the laws, and then the software developers will design the system so that it applies to those laws.

Vice Chairman Rick C. Becker moved a DO PASS on an amendment for HB 1202. See attachment #1.

Representative Jones seconded the motion.

A voice vote was taken. The motion carried.

Vice Chairman Rick C. Becker moved a DO PASS on HB 1202 as amended.

Representative Owens seconded the motion.

Representative Schobinger: I am going to have to vote against this. I don't really know what the director knows about insurance. Allowing him to set the rules for what is and what isn't required on these vehicles for insurance, looks like a lot of authority. I don't know if it is good, bad or indifferent, but I see that we have gone from allowing the director to set rules to integrating these, to specifically saying that he can set rules to as how they are insured. I think that is the insurance department's job.

Vice Chairman Rick C. Becker: The way that I read this is that I see 1C as being purely restrictive in nature, not expanding the ability of the Department of Transportation to do something that they can't already do.

Representative Schobinger: I am an insurance person, so I see things through that lens. I am just not sure what we are actually allowing the director to do.

Chairman Ruby: Rules are drafted through public input. The decision is made, and then it goes through the Administrative Rules process. I would guess that they have to be insured just like any other vehicle on the road. They may even require additional bonding; I don't know.

Representative Schobinger: In this area there are a lot of unknowns as far as liability is concerned. I don't know that the director will be qualified to know about this. I don't think that we are sure what the ramifications are at this point. To me that is giving the director a lot of authority.

A roll call vote was taken. Aye 8 Nay 3 Absent 3

The motion carried. Representative Owens will carry HB 1202.

February 3, 2017

2/3/17 DJP

PROPOSED AMENDMENTS TO HOUSE BILL NO. 1202

Page 1, replace lines 7 through 10 with:

- "1. Unless authorized by the director, an individual may not operate an automated driving system equipped vehicle on a highway in this state.
2. The director shall adopt rules to regulate the integration and testing of automated driving system equipped vehicles on the public highway system. The rules may not regulate more than the licensing, registration, inspection, and insurance of automated driving system equipped vehicles in this state. The rules may not govern the design, performance, hardware, or software requirement of an automated driving system equipped vehicle. The rules must provide:
 - a. An automated driving system equipped vehicle may be tested on public highways in this state; and
 - b. Subject to applicable federal and state laws and regulations, an automated driving system equipped vehicle may be operated on public highways in this state.
3. For purposes of this section, "automated driving system" means the hardware and software collectively capable of performing the entire dynamic driving task on a sustained basis, regardless of whether the driving task is limited to a specific operational design domain. This term specifically describes a level three, four, or five driving automation system as defined by the United States department of transportation guidelines."

Renumber accordingly

Date: 2-3-17
 Roll Call Vote #: 1

**2017 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 1202**

House Transportation Committee

Subcommittee

Amendment LC# or Description: 17-0711-01001

- Recommendation: Adopt Amendment
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar
 Other Actions: Reconsider _____

Motion Made By Becker Seconded By Jones

Representatives	Yes	No	Representatives	Yes	No
Chairman Dan Ruby			Rep. Gretchen Dobervich		
Vice Chair. Rick C. Becker			Rep. Marvin Nelson		
Rep. Bert Anderson					
Rep. Jim Grueneich					
Rep. Terry Jones					
Rep. Emily O'Brien					
Rep. Mark Owens					
Rep. Gary Paur					
Rep. Randy Schobinger					
Rep. Gary Sukut					
Rep. Robin Weisz					
Rep. Greg Westlind					

voice vote
Motion carried

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

Date: 2-3-17
 Roll Call Vote #: 2

**2017 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 1202**

House Transportation Committee

Subcommittee

Amendment LC# or Description: _____

Recommendation: Adopt Amendment
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar
 Other Actions: Reconsider _____

Motion Made By Becker Seconded By Owens

Representatives	Yes	No	Representatives	Yes	No
Chairman Dan Ruby	✓		Rep. Gretchen Dobervich	A	
Vice Chair. Rick C. Becker	✓		Rep. Marvin Nelson	✓	
Rep. Bert Anderson	A				
Rep. Jim Grueneich	✓				
Rep. Terry Jones	✓				
Rep. Emily O'Brien		✓			
Rep. Mark Owens	✓				
Rep. Gary Paur		✓			
Rep. Randy Schobinger		✓			
Rep. Gary Sukut	✓				
Rep. Robin Weisz	A				
Rep. Greg Westlind	✓				

Total (Yes) 8 No 3

Absent 3

Floor Assignment Owens

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

HB 1202: Transportation Committee (Rep. D. Ruby, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (8 YEAS, 3 NAYS, 3 ABSENT AND NOT VOTING). HB 1202 was placed on the Sixth order on the calendar.

Page 1, replace lines 7 through 10 with:

- "1. Unless authorized by the director, an individual may not operate an automated driving system equipped vehicle on a highway in this state.
2. The director shall adopt rules to regulate the integration and testing of automated driving system equipped vehicles on the public highway system. The rules may not regulate more than the licensing, registration, inspection, and insurance of automated driving system equipped vehicles in this state. The rules may not govern the design, performance, hardware, or software requirement of an automated driving system equipped vehicle. The rules must provide:
 - a. An automated driving system equipped vehicle may be tested on public highways in this state; and
 - b. Subject to applicable federal and state laws and regulations, an automated driving system equipped vehicle may be operated on public highways in this state.
3. For purposes of this section, "automated driving system" means the hardware and software collectively capable of performing the entire dynamic driving task on a sustained basis, regardless of whether the driving task is limited to a specific operational design domain. This term specifically describes a level three, four, or five driving automation system as defined by the United States department of transportation guidelines."

Renumber accordingly

2017 SENATE TRANSPORTATION

HB 1202

2017 SENATE STANDING COMMITTEE MINUTES

Transportation Committee
Lewis and Clark Room, State Capitol

HB 1202
3/23/2017
29583

- Subcommittee
 Conference Committee

Committee Clerk Signature

Mary Munder

Explanation or reason for introduction of bill/resolution:

Relating to the operation and regulation of autonomous vehicles.

Minutes:

Attachments # 1-4

Chairman Laffen: Opened the hearing on HB 1202. Attendance taken, Senator Campbell gone. Welcome Representative Dan Ruby.

Representative Dan Ruby: I introduced HB 1202 at the request of the DOT actually. Explanation given of an amendment passed out. **See attachment #1.** We need to keep this bill fluid and keep up with new advancements in the industry with the autonomous vehicles. Some of you already have some advancements, like in helping with parking, back up devices, etc.

Chairman Laffen: Are there uniform rules so every state doesn't have to go it alone?

Rep. Ruby: Yes, we do have to be careful with the guidelines and go along with them but not just to go along. If there is nothing we need to do through this study, then we don't need to do anything. I don't think we should do something just for the sake of doing it. It should be worthwhile and also protect the public.

Chairman Laffen: Questions? None. Thank you. Further testimony in favor of HB 1202.

Glenn Jackson, NDDOT: I did pass out written testimony. **See attachment #2.**

Chairman Laffen: The second half says you are good with the study.

Glenn: Yes. That's correct.

Senator Rust: You have a list of things that you may not regulate more on. What's in the other list?

Glenn: In the original bill we didn't include that language. It was very simple; the director could adopt rules. Once the bill passed the house we continued to discuss it with the

industries and their concern was that if we didn't specify that we were looking at just the things the department is concerned with, (public safety on the highway which is operators, vehicle licensing, insurance requirements, inspection of vehicles that have been modified,) if we went beyond that we would be getting into the performance of vehicles. We would be getting into the technology of the vehicles. Those are not things we do today. We don't get into the manufactures rules. Once that vehicle is at that certified level we can put it on the highway. All we are trying to do is make sure that we provide for public safety while enabling industry to test a technology on the highways and eventually actually operate that vehicle on the highway.

Senator Rust: So design performance, hardware, software, that's what is on the other list?

Glenn: Yes, that's correct.

Senator Rust: Anything in between?

Glenn: Not at this time. Through our conversations on the study that's what we would check, to see if there is anything in between.

Chairman Laffen: Questions? None. Thank you. Further testimony in favor of HB 1202.

(14:35) Leighton Yates, Alliance Automobile Manufactures: See attachment #3.

Chairman Laffen: Questions? None. Thanks for coming. Further testimony in favor? None. Opposition?

(17:39) Senator Ryan Taylor: I am actually lobbying for Uber, #499. I just want to introduce Carla. I think we have an opportunity in both these bills, HB 1202 and HB 1394 to not only support our commodity industries but also look to the future of how we embrace technology that can improve public safety, grow our economy, and provide jobs. We are supportive of the amendment.

(20:36) Carla Jacobs, Uber: See attachment #4.

Chairman Laffen: We won't be back here until 2019 and we tend to come back and tell them what's wrong, so our intent was to have somebody in charge of this before we get back.

Senator Rust: If you don't have the Department of Transportation, who kind of has oversight in this, who would you look to then? How would you feel about the general public being protected without some organization and who would that organization be?

Carla: There are many laws in place both at the federal and state level that govern motor vehicles and many of those are applicable to the technology that's been placed on roads today. We have self-driving in a few states already.

Senator Casper: I think the statistic on DUI arrest having gone down 16% in Fargo, is a pretty good stat for you to bring into legislatures and policy makers. Are you seeing anything

similar in operations with the regard to the AV vehicle Uber is operating in other states and I mean that in general performance and not just DUI's.

Carla: All the DUI's, citations, and arrests are all information they collect and put on record. At this time, we can see information from 2016 and some from 2015. We are also seeing a change in public reception. When people do go out on the town or out for a dinner, people turn to public transportation and the more it is used the better for the safety of the public and it is an improvement from drinking and driving. We see stats from the police department but do not track it. The pilot programs in Arizona and Pennsylvania are important to give the public the experience of what it will look like. Right now the cars all have a safety driver in the front seat, but they have an I-Pad in the back that is explaining what is going on and that it is safe. It is a step in the right direction.

Chairman Laffen: Questions? None. Thank you. Further testimony in opposition? None. Neutral testimony in HB 1202? None. **We will close the hearing on HB 1202.**

2017 SENATE STANDING COMMITTEE MINUTES

Transportation Committee
Lewis and Clark Room, State Capitol

HB 1202
3/23/2017
29627

- Subcommittee
 Conference Committee

Committee Clerk Signature *Mary Muxder*

Explanation or reason for introduction of bill/resolution:

Relating to the operation and regulation of autonomous vehicles.

Minutes:

Laffen Chairman: Called hearing on HB 1202 back to order. This is the bill we heard this morning that started to give DOT sort of control of all this. Everybody was in agreement with studying it. Any thoughts?

Senator Casper: I would move the proposed amendment to HB 1202.

Chairman Laffen: It is a hog house amendment, Ruby amendment.

Senator Nelson: Seconded.

Chairman Laffen: Discussion? This is a hog house amendment so everything in the bill is gone. The amendment will become the bill. It is essentially saying that DOT is going to study this issue of who should be controlling this and what the rules should be. There is room in this amendment to bring in data ownership.

Senator Nelson: In the amendment it says it will deal with insurance and you could extend just that definition to include the data.

Chairman Laffen: I would like to see the data ownership right behind that registration insurance data ownership and inspection. Senator Casper would that be all right?

Senator Casper: Yes, I am happy to withdraw my motion and make a new motion and add that to the Ruby amendment.

Discussion held on where to place the language in the amendment.

Chairman Laffen: As I read the amendment, it has 3 sentences. First sentence says we are going to study the system, second one says what the study should include, and third one says what it will report. In my mind what we want them to study should be in the middle sentence.

Senator Casper: We need to take time to figure out where we are going to place the new language.

Senator Rust: I think the same thing. We need some time to think this through.

Senator Casper: I move to withdraw my motion to move proposed amendment to engrossed HB 1202 which we are calling the Ruby amendment.

Senator Nelson: Seconded.

Chairman Laffen: That covers it for now. We will get back to this.

Chairman Laffen: Back to order.

Senator Casper: If you want to talk about adding the language, I don't see an issue as it was the agreement of the committee that's what we were looking to add from earlier. **So with that I would move amendment 17.0711.02001 that's proposed to engrossed HB 1202.**

Chairman Laffen: We have a motion for amendment 17.0711.02001. Second?

Senator Campbell: Seconded.

Chairman Laffen: Discussion? None

Roll Call taken: Yeas-6, Nays-0, Absent-0.

Chairman Laffen: Amendment passes. Your action on HB 1202?

Senator Casper: I move for a Do Pass on engrossed HB 1202 as amended.

Senator Campbell: Seconded.

Chairman Laffen: Discussion? None.

Roll Call: Yeas-6, Nays-0, Absent-0.

Senator Rust will carry the bill.

March 23, 2017

CJ
3/23-2017
1 of 1

PROPOSED AMENDMENTS TO ENGROSSED HOUSE BILL NO. 1202

Page 1, line 1, after "A BILL" replace the remainder of the bill with "for an Act to provide for a department of transportation study.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. DEPARTMENT OF TRANSPORTATION STUDY - REPORT TO LEGISLATIVE ASSEMBLY. The department of transportation, in collaboration and consultation with the autonomous vehicle technology industry, shall study the use of vehicles equipped with automated driving systems on the highways in this state and the data or information stored or gathered by the use of those vehicles. The study must include a review of current laws dealing with licensing, registration, insurance, data ownership and use, and inspection and how they should apply to vehicles equipped with automated driving systems. The department of transportation shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-sixth legislative assembly."

Renumber accordingly

Date: 3-23-17
Roll Call Vote #: 2

2017 SENATE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. "Enter Bill/Resolution No." HB1202

Senate Transportation Committee

Subcommittee

Amendment LC# or Description: _____

Recommendation: Adopt Amendment
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar

Other Actions: Reconsider _____

Motion Made By Casper Seconded By Campbell

Senators	Yes	No	Senators	Yes	No
Chairman Lonnie J. Laffen	✓		Senator Carolyn Nelson	✓	
Senator Tom Campbell	✓				
Senator David Rust	✓				
Senator David Clemens	✓				
Vice Chairman Jonathan Casper	✓				

Total (Yes) 6 No 0

Absent 0

Floor Assignment Rust

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

HB 1202, as engrossed: Transportation Committee (Sen. Laffen, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (6 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). Engrossed HB 1202 was placed on the Sixth order on the calendar.

Page 1, line 1, after "A BILL" replace the remainder of the bill with "for an Act to provide for a department of transportation study.

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Renumber accordingly

2017 TESTIMONY

HB 1202

HB 1202
1-19-17
#1

HOUSE TRANSPORTATION COMMITTEE
January 19th – 09:00 a.m. – Fort Totten Room

North Dakota Department of Transportation
Grant Levi, PE - Director

HB 1202

Mr. Chairman and members of the Committee, good morning, my name is Grant Levi, Director for the North Dakota Department of Transportation (DOT). The Department supports HB 1202.

The following is some background information:

- There have been industry standards adopted which recognize a range of autonomy for motor vehicles, ranging from level 0 to level 5, with level 0 requiring the human driver to control all aspects of driving and level 5 being fully autonomous without requiring any human intervention.
- Numerous commercially available vehicles have driver assistive systems for activities such as parking, lane control, and adaptive cruise control, among others; such features fall into levels 1 and 2.
- The department believes that up to level 4 autonomous vehicles would currently be permitted to use public highways in North Dakota, as long as a fully licensed driver is at the controls of the vehicle and ready to intervene at all times.

HB 1202 enables the Department to partner with industry to create rules that allow Level 5 autonomous vehicle technology on the public highways. We understand that in order to attract business which is our intent we need to limit the amount or rules and regulations. However, it is also necessary for the state to ensure the public highway system is safe. As a result, we will discuss with the industry how it is best to create rules that allows the industry to conduct research on emerging technology on public highways. The rules will adhere to existing state requirements such as insurance and operating requirements.

As the members of the committee are aware, adoption of administrative rules is governed by North Dakota Century Code 28-32, which requires legislative and public notice of proposed rules, prior to final adoption.

Other states such as California, Nevada, and Michigan have already adopted rules for the use of autonomous technology. They have found because of rapid advancement of technology they needed to modify their rules to adapt to that technology. This nimble ability to adjust rules has allowed these states to take advantage of the economic opportunities associated with being test beds for enabling industry to demonstrate integration of the technology into the public highway system. It is also for those reasons that we believe it is in the best interest of the legislative body to give the authority to the Department to use the administrative rules process.

We believe it is in the best interest of the state of North Dakota to create an environment which will safely allow the use of autonomous technology on the public highways in North Dakota. For your information we already have groups interested in deploying autonomous technology in the state. One such group is the Central North American Trade Corridor Association (CNATCA). This group's stated vision is "to embrace emerging technologies to facilitate better use of existing roadways as well as airspace." To that end, CNATCA submitted a proposal in response to the U.S. Department of Transportation's (USDOT) solicitation to designate "proving grounds, focused on the advancement of automated vehicle technology." CNATCA's proposal is to designate a freight-focused autonomous-vehicle corridor on US 83 between Bismarck and Minot. Through discussions of this proposal with CNATCA, the NDDOT provided a letter of support to USDOT.

Mr. Chairman, that concludes my testimony, I would be happy to answer any questions you may have.

Dave Blair

The "North Dakota Automated Vehicle Proving Ground"

HB1202
1-19-17
2
Pages 1.

Proposal for Designating U.S. Route 83 in North Dakota as a "USDOT Automated Vehicle Proving Ground"

Submitted by:

The North Dakota Automated Vehicle Collaborative
Peak Strategy Partners LLC

Directory of Contents

Introduction	2
Mandatory Criteria	3
<i>Designated Safety Officer</i>	3
<i>Commitment to Sharing</i>	4
Proposed Contributions	4
<i>Eligibility and Administration</i>	4
<i>Provision of Leadership</i>	5
<i>Proposed Contributions to the Community of Practice</i>	5
<i>Maintaining Working Relationships With Relevant Research Program Offices</i>	6
Commitment to Safety	7
<i>Demonstrated Capability to Control Risks</i>	7
<i>Demonstration of Specific Safety Considerations</i>	7
Research, Application, and Data Sharing	7
<i>Application of Mobility Solutions for the Broader Region</i>	7
<i>Research and Extension Resources Available for Activities and Programs</i>	8
<i>Education Program</i>	8
<i>Commitment to Sharing Data and Testing Results</i>	8
Demonstrated Investments	8
<i>Authorization to Address Regulatory Challenges</i>	8
<i>Testing Underway to Determine Automated Vehicle Technology Feasibility</i>	8
Readiness	9
<i>Open for Testing By January 1, 2018</i>	9
<i>Testing By Multiple Users; Generated Data is Open to the Public</i>	9
<i>Designated Point of Contact</i>	10
<i>Community Engagement</i>	10
Adherence to Laws, Regulation, and Federal Policy	10
<i>Adherence to All State and Local Laws and Federal Regulations</i>	10
<i>Adherence to NHTSA Primary Subject Areas</i>	10
Supporting Leaders and Organizations	11
<i>North Dakota Congressional Delegation:</i>	
<i>U.S. Senator Heidi Heitkamp; U.S. Senator John Hoeven; U.S. Congressman Kevin Cramer</i>	12
<i>North Dakota Department of Commerce</i>	14
<i>North Dakota Department of Transportation</i>	15

The "North Dakota Automated Vehicle Proving Ground"

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Introduction

U.S. Route 83 in North Dakota originates on the Canadian border. It travels south in a non-linear fashion through rural and urban areas – including through the middle of Bismarck, one of North Dakota’s major cities – and wide and narrow roads, replete with stoplights and cross-flowing traffic, before arriving at the border with South Dakota. It covers a total of 265 miles and serves as a major commercial thoroughfare for the western portion of the state.

The length, non-linearity, and mix of rural and urban features of U.S. Route 83 in North Dakota are characteristics unlike any other presented by existing autonomous vehicle testing routes and proving grounds in the country. These characteristics can be advantageous to the development and proving of safety enhancing automated vehicle technologies, as can North Dakota’s:

- Successful track record in testing, commercializing, and ensuring the safety and security of advanced robotic technologies at a federally designated proving ground (i.e. the Federal Aviation Administration (FAA)-approved Northern Plains Unmanned Aircraft Systems (UAS) Test Site¹ to advance aerial drones).² Transportation Secretary Anthony Foxx recognized the value of this test site and the overall leadership and value afforded by North Dakota when he commented, “North Dakota has really taken the lead in supporting the growing unmanned aircraft industry”;³
- Close relationship with its cross-border Canadian neighbors in Manitoba that can be leveraged to test connected technologies that can facilitate cross-border security and commerce;
- Four distinct seasons, including harsh winter weather conditions, that can help stress test automated vehicle sensor technologies, whose reliability in all situations is crucial to the overall safety of automated vehicles; and
- Thriving “high-tech talent,” as the New York Times stated. Amazon develops customer service software in North Dakota, and Microsoft, after purchasing a local software company for \$1.1 billion, is there as well. The area has “thousands of software engineers...itching to get into the next big thing.”⁴

The plethora of unique and advantageous characteristics for testing and proving automated vehicle technologies along U.S. Route 83 in North Dakota was recognized by the state’s Department of Transportation, who officially deemed it an “Autonomous Friendly Corridor” (see the section titled “Supporting Leaders and Organizations”)

Accordingly, the North Dakota Automated Vehicle Collaborative (NDAVC), comprised of statewide stakeholders and leaders, and Peak Strategy Partners LLC, a consultancy that

¹ Homepage of the Northern Plains USA Test Site. Accessed 17 December 2016. Available [Online]: <http://www.npuasts.com/>

² Hardy, Quentin. “A Silicon Valley for Drones, in North Dakota”. The New York Times. 25 December 2015. Available [Online]: <http://www.nytimes.com/2015/12/26/technology/a-silicon-valley-for-drones-in-north-dakota.html>

³ Federal Aviation Administration. “Press Release – FAA Announces First UAS Test Site Operational” 21 April 2014. Available [Online]: https://www.faa.gov/news/press_releases/news_story.cfm?newsId=16154

⁴ Hardy, Quentin. “A Silicon Valley for Drones, in North Dakota”. The New York Times. 25 December 2015. Available [Online]: <http://www.nytimes.com/2015/12/26/technology/a-silicon-valley-for-drones-in-north-dakota.html>

The "North Dakota Automated Vehicle Proving Ground"

specializes in autonomous vehicle technologies, policies, and deployment strategies⁵, are establishing Automated Vehicle Programs along this corridor. These Programs seek to leverage the corridor's resources to advance safety-enhancing automated vehicle technologies. Additional Programs seek to leverage various state-based industries – including UAS⁶, agriculture, mining, and emergency response – by facilitating the combination of multiple modes of autonomous land- and air-based vehicles – including trucks, aerial drones, and automated agricultural⁷, mining,⁸ and emergency equipment⁹ – to enhance roadway safety and commercial activities. The goal is that once proven in North Dakota, these technologies and platforms can be implemented throughout the entire length of U.S. Route 83 – one of the longest north-south U.S. Highways in the United States¹⁰ – as well as other regions across the country.

The NDAVC and Peak Strategy Partners (the "Applicants") cordially request the support of the United States Department of Transportation (USDOT) through the designation of U.S. Route 83 in North Dakota (the "North Dakota Automated Vehicle Proving Ground") as a "USDOT Automated Vehicle Proving Ground".

The material contained within this application supports this request, and follows the general format of the information requested within the Solicitation of Proposals (Docket No. DOT-OST-2016-0233) put forth by the Office of the Secretary, USDOT.

The Applicants are grateful for the opportunity to apply and look forward to a favorable response from the USDOT.

Mandatory Criteria

Designated Safety Officer

The following party will be responsible for the North Dakota Automated Vehicle Proving Ground's "Safety Management Plan" and will participate in the Community of Practice's regular quarterly meeting of Safety Officers:

Name: Mark Hanson
Title: Deputy Director, Driver and Vehicle Services
Organization: North Dakota Department of Transportation (NDDOT)
Address: 608 East Boulevard Avenue, Bismarck, ND. 58505-0700
Email: mnelson@nd.gov
Telephone: (701) 328-2581

Mark Nelson was appointed Deputy Director for Driver and Vehicle Services of the North Dakota Department of Transportation (NDDOT) in 2014. Mark oversees the Drivers License, Motor Vehicle, and Safety Divisions at the North Dakota Department of

⁵ Homepage of Peak Strategy Partners LLC. Accessed 17 December 2016. Available [Online]: <http://www.peakstrategypartners.com/>

⁶ Homepage of the Northern Plains UAS Test Site. Accessed 17 December 2016. Available [Online]: <http://www.npuasts.com/index.html>

⁷ Garvey, Scott. "Rise of the ag-robots". AGCanada.com. 2 December 2016. Available [Online]: <http://www.agcanada.com/2016/12/rise-of-the-ag-robots>

⁸ Topf, Andrew. "Canadian oil sands giant testing autonomous haul trucks". Mining.com. 6 November 2016. Available [Online]: <http://www.mining.com/canadian-oil-sands-giant-testing-autonomous-haul-trucks/>

⁹ Scott, Mark. "Europe's Emergency Workers Turn to Drones to Save Lives". The New York Times. 19 June 2016. Available [Online]: <http://www.nytimes.com/2016/06/20/technology/europe-emergency-drones.html>

¹⁰ "The U.S. Route 83 Travel Page". Accessed 17 December 2016. Available [Online]: <http://www.usroute83.com/>

The "North Dakota Automated Vehicle Proving Ground"

Transportation. Besides overseeing these three divisions, he focuses on public safety education and strives to provide a high level of customer service at the North Dakota Department of Transportation. Mark joined NDDOT to serve as Safety Division Director in 2009. Prior to joining the Department, he worked for the North Dakota Highway Patrol for more than 28 years during which time he was appointed Superintendent of the agency in 2007.¹¹

In addition to the Designated Safety Officer, the Applicants and Designated Safety Officer plan to establish a North Dakota Automated Vehicle Proving Ground Safety Committee comprised not just of the Designated Safety Officer but also other statewide parties with knowledge and expertise on vehicular laws, rules, safety, management, and education. Envisioned Committee members include but aren't limited to:

- The North Dakota Safety Council, a non-profit organization with more than 1,000 member companies that is focused on saving lives on roadways and elsewhere;
- The North Dakota Motor Carriers Association, the leading education and advocacy organization for the transportation industry in North Dakota; and
- The North Dakota Driver and Traffic Safety Education Association, which promotes safe habits, attitudes, knowledge and instructional tools to develop driving skills for teen drivers.

Commitment to Sharing

The Applicants and the Designated Safety Officer commit to sharing the approaches to safety and non-proprietary/non-confidential safety data generated through testing and operation at the North Dakota Automated Vehicle Proving Ground. They further commit to openly share best practices for the safe conduct of testing and operations as they are developed.

Proposed Contributions

Eligibility and Administration

Docket No. DOT-OST-2016-0233 states that eligible entities include "highway corridors" as well as "cities/urban corridors", among others. The North Dakota Automated Vehicle Proving Ground contains elements of both of these referenced entities.

As a highway corridor, U.S. Route 83 in North Dakota originates at the Canadian border, travels south past the Falkirk Mine near Falkirk until it hits Interstate 94, follows Interstate 94 eastward until just after the small town of McKinzie, whereupon it resumes its southward journey for approximately 68 miles until it hits the South Dakota border. Altogether, U.S. Route 83 in North Dakota covers a distance of 265 miles.

As a city/urban corridor, U.S. Route 83 in North Dakota travels through the heart of Bismarck just before it hits Interstate 94. This portion of the route is replete with traffic, stoplights, and other common features of city/urban corridors.

The entirety of the North Dakota Automated Vehicle Proving Ground was deemed it an "Autonomously Friendly Corridor" the North Dakota Department of Transportation. The Applicants are already working with other statewide organizations and leaders to

¹¹ Homepage of the North Dakota Department of Transportation. "Executive Office Biographies". Accessed 17 December 2016. Available [Online]: <https://www.dot.nd.gov/divisions/exec/executive-biographies.htm>

The “North Dakota Automated Vehicle Proving Ground”

investigate, design, and prepare for Established Automated Vehicle Programs along the North Dakota Automated Vehicle Proving Ground.

Provision of Leadership

As shown through the development and operation of the North Dakota FAA-approved Northern Plains UAS Test Site, which is supported by the North Dakota Department of Commerce that has impeccable governance and safety protocols, as well as the close relationship established with and value delivered to the FAA, including contributions to its “UAS Roadmap”¹², the State of North Dakota and the Applicants are capable and can be counted on to provide leadership in making national and regional contributions to the solution of both long-range and intermediate mobility challenges through the testing of automated vehicle technologies.

In addition to the track record of operation at the FAA-approved Northern Plains UAS Test Site, the capabilities and credentials of the Applicants and the State of North Dakota are further verified and supported by the array of statewide leaders and organizations who actively support the establishment of the North Dakota Automated Vehicle Proving Ground (see the section titled “Supporting Leaders and Organizations”).

Proposed Contributions to the Community of Practice

The North Dakota Automated Vehicle Proving Ground will contribute to the Community of Practice by facilitating the testing of automated vehicles in a variety of weather and roadway conditions. North Dakota’s distinct four seasons and famously harsh winters, and the North Dakota Automated Vehicle Proving Ground’s mix of urban and rural environments, provide the ideal landscape for testing and perfecting such technologies. Vehicles and technologies will be tested in proven not just in ideal weather conditions and straight, wide roadways, but on a mix of urban and rural roadways replete with turns, traffic, and stoplights. The flawless operation of automated technologies in these conditions is essential if automated vehicles are to be deemed safe and reliable. The diversity of testing conditions also means the data and testing results generated will be applicable to virtually any region throughout the country.

The North Dakota Automated Vehicle Proving Ground will also be the first multi-modal autonomous proving ground in the world. The explicit intent of the proving ground is not just to perfect automated ground vehicle and truck technologies, but also to leverage the work of the FAA-approved Northern Plains UAS Test Site, and engage with the FAA, USDOT, and other stakeholders to help originate enhanced safety and commercial models by integrating the operation of automated ground vehicles – particularly trucks – with aerial drones and automated equipment in other industries, including agriculture and mining.

Companies including Daimler¹³, Ford¹⁴, and Local Motors¹⁵ have undertaken investigations of, are investing in, or produced concept vehicles that demonstrate the

¹² Homepage of the Northern Plains USA Test Site. Accessed 17 December 2016. Available [Online]: <http://www.npuasts.com/>

¹³ Sloat, Sarah. Kopplin, Ilka. “Daimler to Work With Matternet to Develop Delivery Van Drones”. The Wall Street Journal. 7 September 2016. Available [Online]: <http://www.wsj.com/articles/daimler-to-work-with-matternet-to-develop-delivery-van-drones-1473260565>

¹⁴ “Ford Targets Drone-to-Vehicle Technology to Improve Emergency Services, Commercial Business Efficiency”. Ford Motor Company. 5 January 2016. Available [Online]: <https://media.ford.com/content/fordmedia/fna/us/en/news/2016/01/05/ford-targets-drone-to-vehicle-technology.html>

potential for drones to facilitate autonomous vehicles’ safety and productivity via broader connectivity and ability to identify and avoid potential road hazards that are beyond what the vehicle’s sensors can detect. However, none these or other companies have explored or modeled broader, systemic approaches to multi-modal autonomy, much less vetted and proven their concepts, and connected them with commercial markets. The North Dakota Automated Vehicle Proving Ground will facilitate this work, and its results will be broadly applicable to communities around the nation.

Also worth mentioning is the fact that the United States has approximately 167 international border crossings – approximately 119 with Canada and 48 with Mexico. Thus, the connected technologies that are demonstrated and perfected that help facilitate safe, secure, and efficient border crossings will have broad applicability across the U.S. The Applicants and the state have a very close working relationship with Canadian leaders in Manitoba, the province that U.S. Route 83 crosses into.

Finally, the design of Established Automated Vehicle Programs will be informed via direct engagement with stakeholders including but not limited to autonomous vehicle and truck manufacturers and operators, statewide and federal regulators, peripheral industry (i.e. UAS, agricultural, and mining, among others) stakeholders, NGOs, union members, regional leaders, and the public, among others. Such parties will be invited to join the Safety Committee and/or Working Group(s) that meet regularly to contribute and exchange ideas and knowledge pertaining to the development, advancement, use, safety, and impacts of the proven technologies, so as to maximize the relevancy and applicability of the North Dakota Automated Vehicle Proving Grounds’ efforts.

Maintaining Working Relationships With Relevant Research Program Offices

The Applicants are able and seeking to maintain working relationships with the USDOT’s relevant research program offices. They are committed to working with the USDOT to establish a collaborative relationship that is most conducive to the USDOT’s goals.

At a minimum, the Applicants envision inviting USDOT representatives to join the North Dakota Automated Vehicle Proving Ground’s Safety Committee and Working Group(s) and to participate in regular exchanges of ideas and knowledge of relevant topics. Additionally, the Applicants envision arranging at least one and possibly two invitation-only workshops – one in North Dakota and potentially another in Washington D.C. – in 2017. The purpose of these workshops will be to aggregate stakeholders (including the USDOT) and prompt dialogue whereby stakeholders’ collective input can be surfaced and debated in an effort to gain consensus on and optimize the North Dakota Automated Vehicle Proving Ground’s role in advancing the industry and its safety.

The Applicants would also welcome the opportunity to discuss and present on the North Dakota Automated Vehicle Proving Ground at any relevant USDOT-affiliated conferences and events, should the USDOT seek such participation.

Through these and other formats, the North Dakota Automated Vehicle Proving Ground will seek to establish joint research effort(s) with the USDOT in areas of mutual value, especially where the North Dakota Automated Vehicle Proving Ground can provide unique value to the USDOT and its goals. This could include but isn’t limited to joint

¹⁵ Krok, Andrew. “Local Motors’ 3D-printed car now has a drone, because autonomy”. Cnet. 4 November 2016. Available [Online]: <https://www.cnet.com/roadshow/news/local-motors-3d-printed-car-now-has-a-drone-because-autonomy/>

research on harsh weather sensor testing and performance evaluations on non-linear roadways, multi-modal autonomous vehicle synthesis and coordination, data transmission securitization between uni-modal and multi-modal autonomous vehicles, and connective technologies that foster the safe and secure flow of commerce across borders, among other potential joint research effort areas.

The Applicants, in coordination with the Designated Safety Officer, shall submit significant activity reports to the USDOT on a routine basis, including upon the advancement or completion of scheduled technological demonstrations and tests.

Commitment to Safety

Demonstrated Capability to Control Risks

The North Dakota Automated Vehicle Proving Ground's Designated Safety Officer shall, with the assistance of the Applicants and other North Dakota Automated Vehicle Proving Ground collaborators, identify relevant state and federal rules and statues that are applicable to automated vehicle testing on U.S. Route 83 in the state, investigate additional rules or statues to help ensure the safe testing of such vehicles, and commit to implementing robust safety precautions in the management of the North Dakota Automated Vehicle Proving Ground. The published Safety Management Plan will include this information and altogether contribute to the safety of the proving ground's tests and operations. The Safety Management Plan shall be finalized and published before the North Dakota Automated Vehicle Proving Ground commences operations (on or before January 1, 2018).

Demonstration of Specific Safety Considerations

During the course of the North Dakota Automated Vehicle Proving Ground's operation, the Applicants and the Designated Safety Officer shall meet all specific safety considerations, including safety of proving ground personnel, safety protocols when making use of public roads, and attention to safe design, deployment, and operation of automated devices. These specific safety considerations shall be articulated in advance of operation within the published Safety Management Plan. The Applicants have the track record to credibly make such a commitment, for the FAA-approved Northern Plains UAS Test Site is supported by the North Dakota Department of Commerce and has impeccable governance and safety protocols

Research, Application, and Data Sharing

Application of Mobility Solutions for the Broader Region

Broad applicability is ensured given that the automated vehicles will be tested in a variety of weather conditions, including four distinct seasons and North Dakota's famously harsh winters, and in a mix of urban and rural non-linear environments. Thus, the data and testing results generated through a North Dakota Automated Vehicle Proving Ground would be applicable to virtually any region throughout the country.

Additionally, the North Dakota Automated Vehicle Proving Ground will be the first multi-modal autonomous proving ground in the world. The intent is not just to help perfect automated ground vehicle and truck technologies, but also to leverage the work of the FAA-approved Northern Plains UAS Test Site, and engage with the FAA, USDOT, and other stakeholders, to help originate enhanced safety and commercial models by integrating the operation of automated ground vehicles and trucks with aerial drones and

The “North Dakota Automated Vehicle Proving Ground”

automated equipment in other industries, including agriculture and mining. These enhanced safety and commercial models will be broadly applicable to communities around the nation.

The connected technologies that are demonstrated and perfected that help facilitate safe, secure, and efficient border crossings will have broad applicability across the U.S., given the fact that the United States has approximately 167 international border crossings – 119 with Canada and 48 with Mexico.

The goal is that once proven the North Dakota Automated Vehicle Proving Ground, the variety of automated technologies can be deployed throughout the entire length of U.S. Route 83, and as well as other regions across the country. At that time, the Applicants commit to leveraging relationships with the leaders of the other states in which U.S. Route 83 travels, and to work with other regions around the country, to advance the technologies, platforms, and safety protocols for the purpose of broader, scaled technological testing and deployment.

Research and Extension Resources Available for Activities and Programs

The Applicants have received a significant amount of support for the North Dakota Automated Vehicle Proving Ground from a wide array of leaders. (For a partial list of supporters, see the section titled “Supporting Leaders and Organizations”.) This support includes facilitating the availability of research and extension resources to carry out activities and programs as they relate to automated vehicle advancements.

Education Program

The Working Group(s) that will assist in advancing the North Dakota Automated Vehicle Proving Ground shall address ways in which information and results it generates can be disseminated. The goal will be to maximize the support for the national deployment of automated vehicle technologies, and to enable the participants and the general public to learn at a faster rate and accelerate the pace of safe deployment.

The Applicants would also welcome the opportunity to discuss collaboration with other designated USDOT proving grounds and/or the USDOT itself on larger education program(s) that synthesizes the data and results multiple proving ground locations.

Commitment to Sharing Data and Testing Results

The Applicants and all those involved in operating or participating in the North Dakota Automated Vehicle Proving Ground commit to open data and sharing performance metrics and results of objective tests.

Demonstrated Investments

In facilitating automated vehicle testing, the Applicants have demonstrated commitment through the following:

Authorization to Address Regulatory Challenges

As indicated in the section titled “Supporting Leaders and Organizations”, the North Dakota Automated Vehicle Proving Ground shall have the authority and support to address regulatory challenges associated with higher levels of automation.

Testing Underway to Determine Automated Vehicle Technology Feasibility

The North Dakota Department of Commerce supported FAA-approved Northern Plains UAS Test Site was selected for the designation of FAA Test Site in December 2013. Its

The "North Dakota Automated Vehicle Proving Ground"

mission is to "collaborate with FAA and industry partners to develop equipment, systems, rules, and procedures to safely integrate unmanned aircraft into the NAS without negatively impacting existing general or commercial aviation."¹⁶

As such, for nearly three years, North Dakota has supported the FAA's rollout of its "UAS Roadmap" as well as detailed regulations for the use of unmanned systems in the United States. North Dakota plays a critical role in determining how to safely integrate UAS into the national airspace, and the Northern Plains UAS Test Site serves as an opportunity to enhance North Dakota's leadership position in the industry.¹⁷

The FAA-approved Northern Plains UAS Test Site offers multiple resources in order to facilitate this support and excel in this role, including:¹⁸

- Safety assured through mitigation, solid procedures, & operational restrictions;
- Diverse climate and open terrain;
- Committed leadership at all levels of state and federal government, including unified commitment from North Dakota and congressional leadership, local industry, and key business decision makers;
- Favorable business climate with funded incentives
- Strong relationship with GrandSky, a UAS Business and Aviation Park at Grand Forks Air Force Base.

The resources and efforts of the FAA-approved Northern Plains UAS Test Site have enabled it to make unparalleled contributions to autonomous and robotic aerial vehicle testing. Transportation Secretary Anthony Foxx recognized these contributions and the overall leadership and value afforded by the state when he commented, "North Dakota has really taken the lead in supporting the growing unmanned aircraft industry."¹⁹

The Applicants aim to leverage and build upon the successful track record of management and safety at the FAA-approved Northern Plains UAS Test Site and to apply the same high standards to initiate and operate the North Dakota Automated Vehicle Proving Ground.

Readiness

Open for Testing By January 1, 2018

The infrastructure of U.S. Route 83 in North Dakota is already conducive to automated vehicle testing. No additional infrastructure investments are required. Instead, the focus throughout 2017 shall be on programmatic develop, policy reviews, and stakeholder recruitment, all of which shall be complete and help facilitate testing at the North Dakota Automated Vehicle Proving Ground no later than January 1, 2018.

Testing By Multiple Users; Generated Data is Open to the Public

U.S. Route 83 in North Dakota is a public roadway and thus is openly accessible. The Applicants will work closely with any and all parties seeking to test automated vehicle

¹⁶ Homepage of the Northern Plains UAS Test Site. Accessed 17 December 2016. Available [Online]: <http://www.npuasts.com/>

¹⁷ "Northern Plains UAS Test Site." Website of the North Dakota State Government. Accessed 17 December 2016. Available [Online]: <http://www.business.nd.gov/aviation/NorthernPlainsUASTestSite/>

¹⁸ Ibid.

¹⁹ Federal Aviation Administration. "Press Release – FAA Announces First UAS Test Site Operational" 21 April 2014. Available [Online]: https://www.faa.gov/news/press_releases/news_story.cfm?newsId=16154

The “North Dakota Automated Vehicle Proving Ground”

technologies and equipment on this roadway to ensure they follow the published Safety Management Plan that covers North Dakota Automated Vehicle Proving Ground testing and operations, and that they’re briefed on and aware of all rules, statues, and safety precautions relevant to automated vehicle testing on U.S. Route 83.

Designated Point of Contact

Name: Matt Peak
Title: Managing Partner
Organization: Peak Strategy Partners LLC
Address: 712 West Main, Mandan ND 58554
Email: matt@peakstrategypartners.com
Telephone: (213) 327-8935

Community Engagement

As indicated in the “Supporting Leaders and Organizations” section, the Applicants have engaged a wide variety of affected communities and are actively working with these communities to address any concerns.

Additionally, the design of Established Automated Vehicle Programs will be informed via direct engagement with stakeholders including but not limited to autonomous vehicle and truck manufacturers and operators, statewide and federal regulators, peripheral industry (i.e. UAS, agricultural, and mining) stakeholders, NGOs, unions, regional leaders, the public, and others. Thus, affected communities are core to this engagement process.

These communities and parties will be invited to join Working Group(s) that meet regularly to contribute and exchange ideas and knowledge pertaining to the development, advancement, use, safety, and impacts of the proven technologies, so as to maximize the relevancy and applicability of the North Dakota Automated Vehicle Proving Ground’ efforts.

Adherence to Laws, Regulation, and Federal Policy

Adherence to All State and Local Laws and Federal Regulations

As indicated by the “Supporting Leaders and Organizations”, the Applicants have engaged and received support from the parties responsible for state and local laws.

Furthermore, as previously stated, the Designated Safety Officer shall, with the assistance of the Applicants and other collaborators, identify relevant state and federal rules and statues that are applicable to automated vehicle testing on U.S. Route 83 in North Dakota, investigate additional rules or statues to help ensure the safe testing of such vehicles, and commit to implementing robust safety precautions in the management of the North Dakota Automated Vehicle Proving Ground.

The published Safety Management Plan will include this information and altogether contribute to the safety of the Proving Ground’s tests and operations. The Safety Management Plan shall be finalized and published before the North Dakota Automated Vehicle Proving Ground commences operations (on or before January 1, 2018).

Adherence to NHTSA Primary Subject Areas

Given that U.S. Route 83 in North Dakota is a public road, the Applicants are designing the North Dakota Automated Vehicle Proving Ground and its Established Automated Vehicle Programs to adhere to the primary subject areas outlined in the National Highway Traffic Safety Administration’s (NHTSA) policy for automated vehicles (Federal

The “North Dakota Automated Vehicle Proving Ground”

Automated Vehicles Policy: Accelerating the Next Revolution in Roadway Safety) for the testing and deployment of L3-L5 systems on public roads.

Additionally, the Applicants, their collaborators, and the companies and organizations that participate in the Proving Ground shall aim to adhere to the best practices espoused within the Vehicle Performance Guidance for Automated Vehicles section of NHTSA's policy, and to share collected data in a way that “allows government, industry, and the public to increase their learning and understanding as technology evolves but protects legitimate privacy and competitive interests.”

The Applicants and their collaborators also seek to align with the Model State Policy framework and to work with the USDOT and other states to ensure the establishment of a consistent national framework rather than a patchwork of incompatible laws.

Supporting Leaders and Organizations

The following North Dakota state leaders are among many who are supporting this effort to designate U.S. Route 83 in North Dakota as a USDOT Automated Vehicle Proving Ground and have provided letters of support over the following pages:

- North Dakota Congressional Delegation:
 - U.S. Senator Heidi Heitkamp
 - U.S. Senator John Hoeven
 - U.S. Congressman Kevin Cramer
- North Dakota Department of Commerce
- North Dakota Department of Transportation

Additional supporters whose letters are not contained within this Proposal and instead will be mailed to the Secretary separately include but aren't limited to:

- Doug Burgum, Governor, North Dakota
- The Bismarck-Mandan Development Association
- The Central North American Trade Corridor Association (CNATCA)
- Emerging Prairie – North Dakota's Entrepreneurial Ecosystem
- North Dakota Motor Carriers Association
- North Dakota Safety Council

Congress of the United States
Washington, DC 20515

HB1202
1-19-17
#3

December 19, 2016

The Honorable Anthony Foxx
Secretary
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Foxx,

We write to express our support for the application for the designation of U.S. Route 83 in North Dakota as a United States Department of Transportation (USDOT) Automated Vehicle Proving Ground. U.S. Route 83 in North Dakota offers the ideal mix of rural and urban features and diverse weather conditions to foster the safe deployment of advanced automated vehicle technologies. Additionally, the state has attributes and resources that can prove beneficial to automated vehicle innovators seeking to perfect their technologies, foremost of which are the state's thriving high-tech community and aerial drone industry.

North Dakota is uniquely positioned to be at the forefront of the testing of autonomous vehicles as the state is already a leader in the testing and development of other technologies. The state is home to the Grand Sky Commercial Unmanned Aerial Systems (UAS) Business and Aviation Park in Grand Forks. Grand Sky is the nation's first UAS business and aviation park, hosting UAS industry leaders including Northrop Grumman and General Atomics. North Dakota is also home to the Northern Plains UAS Test Site, a FAA-designated site for testing, evaluation, research, development, training, flying, and operations of UAS with the goal of integrating these operations into civilian airspace alongside manned aviation. Grand Sky and the Northern Plains test site leverage the expertise found locally at the University of North Dakota, one of the nation's most respected schools for training pilots and unmanned aviation studies, as well as Grand Forks Air Force Base, home of the RQ-4 Global Hawk.

Now, North Dakota is poised to expand its efforts to include managing and advancing land-based automated vehicle testing along U.S. Route 83. The State is in an ideal position to help establish innovative approaches to combining multiple modes of autonomous and robotic vehicles, including automated vehicles and trucks, aerial drones, and agricultural and mining equipment such as autonomous tractors and haul trucks, to enhance roadway safety and commercial activities. In addition, as a safety precaution, current North Dakota law requires that all vehicles, including autonomous vehicles, have an operator physically present and in control of the vehicle at all times.

Accordingly, we support the effort put forth by North Dakota stakeholders to make research and extension resources available for the establishment and management of a USDOT Automated Vehicle Proving Ground. The autonomous vehicle industry is rapidly evolving, and it is essential that we do our due diligence to ensure that the development of these technologies is done in a manner that ensures public safety for all users of the road, including continuous outreach and consultation with industry leaders, the traveling public, and safety advocates, among others.



North Dakota Department of Transportation

Grant Levi, P.E.
Director

Doug Burgum
Governor

HB 1202
1-19-17
#4

December 16, 2016

The Honorable Anthony Foxx
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

DOCKET NO. DOT-OST-2016-0233, US 83 PROPOSAL FOR DESIGNATION AS
AUTOMATED VEHICLE PROVING GROUND PILOT

The North Dakota Department of Transportation supports the initiative being proposed by Central North American Trade Corridor Association (CNATCA) of testing Automated Vehicles on the US Highway 83 corridor from Bismarck to Minot, North Dakota.

US Highway 83 is an "Autonomous Friendly Corridor" which would give multiple road condition challenges that would be beneficial in a test environment. US Highway 83 would be an excellent place to test autonomous trucks due to the high volume of truck traffic associated with North Dakota's large agriculture and oil industries.

The North Dakota Department of Transportation would be a value added partner to CNATCA, through the testing process. The data collected through the testing process would be a great benefit not only to our state but to the promotion of the Automated Vehicles nationwide.

Thank you for your consideration of becoming a Designated State to test Automated Vehicles.

Handwritten signature of Grant N. Levi in blue ink.

GRANT N. LEVI, PE, DIRECTOR

17/sdz/sas

C: Justin Glasser, Tubular Transport & Logistics

608 East Boulevard Avenue • Bismarck, North Dakota 58505-0700

Information: 1-855-NDROADS (1-855-637-6237) • FAX: (701) 328-0310 • TTY: 711 • www.dot.nd.gov
Docket No.: DOT-OST-2016-0233 Peak Strategy Partners LLC



HB 1202
1-19-17
#5
Page 1

December 19, 2016

The Honorable Anthony Foxx
Secretary of Transportation
U.S. Department of Transportation
1200 new Jersey Avenue SE
Washington, DC 20590

DOCKET NO. DOT-OST-2016-0233, PROPOSAL FOR DESIGNATION AS AUTOMATED VEHICLE PROVING GROUNDS PILOT

I am writing this letter on behalf of the North Dakota Department of Commerce to express our support of North Dakota Automated Vehicle Collaborative and Peek Strategy Partners' application to be designated as a USDOT Automated Vehicle Proving Ground.

The North Dakota Department of Commerce will work closely with the automated vehicle proving grounds pilot along with the USDOT, private industry and others to safely test technologies that can lead to the safe deployment of automated vehicle technology into the highway transportation system. The State of North Dakota has already proven itself as a leader in the development and advancement of unmanned aircraft systems (UAS) through our designation from the Federal Aviation Administration as a UAS test site. Drawing upon this expertise, North Dakota is well positioned to implement an unmanned vehicle testing program on the U.S. Highway corridor between Minot and Bismarck, ND in a safe and results-oriented manner.

We are requesting the U.S. Department of Transportation provide favorable consideration to approve North Dakota Automated Vehicle Collaborative and Peek Strategy Partners' request to be designated as an Automated Vehicle Proving Grounds Pilot.

Best regards,

Alan Anderson
Commissioner
North Dakota Department of Commerce

We ask that you take the application for the designation of U.S. Route 83 in North Dakota into consideration when selecting sites for the USDOT Automated Vehicle Proving Grounds. We look forward to continuing working with you to create the right legal and regulatory framework for this important and exciting technology.

Sincerely,



JOHN HOEVEN
U.S. Senator



HEIDI HEITKAMP
U.S. Senator



KEVIN CRAMER
U.S. Congressman



HB 1202
1-19-17
#6
Page 1

January 19, 2017

Hon. Dan Ruby, Chair
House Committee on Transportation
600 East Boulevard Ave.
Bismarck, ND 58505

Re: House Bill 1202 – Operation and Regulation of Autonomous Vehicles

Dear Chairman Ruby,

On behalf of the Alliance of Automobile Manufacturers, I would like to thank you for the opportunity to express our concerns with House Bill 1202, which we feel would limit the development of a technology and safety advancement that is driving innovation in the auto industry. The Alliance is a trade association representing twelve of the world’s leading car and light truck manufacturers, including BMW Group, FCA US LLC, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of America, and Volvo Car USA. Together, Alliance members account for roughly 77% of the cars and light duty trucks sold throughout the United States each year.

As you may know, automakers are at the leading edge of safety and automated driving technology developments taking place across the United States. The next big leap forward lies in working to avoid the 94% of accidents attributed to human error¹ altogether through the continued development and deployment of SAE J3016² level 3-5 Automated Driving System (ADS)-equipped vehicles, or “highly automated vehicles,” as they are referred to by the National Highway Traffic Safety Administration (NHTSA) in its recently published *Federal Automated Vehicle Policy* (FAVP) guidance document.

The Alliance has urged policymakers to proceed cautiously in creating new and broad legal frameworks, as proposed by HB 1202 in its current form. It is because of these concerns that the Alliance forewarns the State when proposing premature regulations that would only inhibit vehicle innovation and delay attributable safety benefits. Also, it is not clear whether North Dakota intends to stay within the state-appropriate boundaries suggested by the *FAVP* or if it intends to regulate or certify anything related to vehicle performance. As it did during the 2015 legislative session, the Alliance encourages the State to heed NHTSA’s advice in this matter and to avoid regulating vehicle performance standards including safety design, testing and certification. Doing otherwise would contribute to a state level patchwork of regulation that could hinder the deployment of potentially life-saving technology.

The Alliance agrees with the U.S. Department of Transportation’s assessment of the roles of federal and state authorities with respect to regulating motor vehicles. As detailed in the *FAVP*, the oversight of system safety design, performance, testing, and certification is best left to one unified federal standard, while traditional registration, licensing, and insurance issues are best left to individual states.

¹ National Motor Vehicle Crash Causation Survey (NMVCCS)

² A cost- and license-free copy of SAE J3016:SEP2016 “(R) Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles” can be obtained here: http://standards.sae.org/j3016_201609/

The FAVP is explicitly intended as a voluntary guidance document where updates and adjustments are expected regularly. States should not attempt to “enforce” the guidance by implementing the FAVP as a permanent standard. Relatedly, the FAVP encourages states not to create patchworks of conflicting laws and regulations, but rather to work together with NHTSA to provide consistent policies, including standardization of interstate road infrastructure (traffic signals, lights, pavement markings, etc.) and maintenance. Efforts in this direction will prove beneficial to all stakeholders.

As North Dakota moves forward on an ADS policy framework, we suggest the following concepts be considered:

- **Use of SAE definitions exclusively – J3016:SEP2016**
 - This standard is being used throughout the world, including by NHTSA, which endorsed it in the Federal Automated Vehicles Policy. A license- and cost-free copy can be obtained here: http://standards.sae.org/j3016_201609/. SAE has agreed to make J3016 available on a cost- and license-free basis specifically to address transparency concerns from lawmakers and regulators who would otherwise be concerned about referencing a standard that must be purchased to read, and which is encumbered with licensing restrictions.

- **State preemption of local/municipal regulation**

- **Administrative Considerations**
 - Identify a lead agency responsible for oversight of ADS related issues in the state; look to address unnecessary barriers to safe testing, deployment and operation of ADS-equipped vehicles in the State.

- **Notice Disclosure of Testing and Deployment in State**
 - Each manufacturer or other entity testing ADS technology should provide notice to the designated lead agency that it plans to test and deploy ADS-equipped vehicles in the state.

- **Evidence of surety bond/proof of insurance**
 - Evidence of ability to satisfy a judgment or judgments for damages for personal injury, death, or property damage; suggest no less than \$10 million.

- **Testing and deployment by the Manufacturer or Other Entity**
 - Manufacturers or other entities must comply with Federal law and applicable NHTSA regulations before operating vehicles on public roadways, whether or not they are in testing or in “normal” operation. (*Note: Established vehicle manufacturers are exempt from compliance with federal motor vehicle safety standards (FMVSS) for test vehicles per the federal FAST Act³).
 - ADS-equipped vehicles used in testing must be operated solely by persons designated by the manufacturer or other entity, who have received training and instruction concerning the capabilities and limitations of such test vehicles. (*Note: occasionally test drivers are foreign corporate employees specially trained to test ADS-equipped vehicles who may not have a U.S. driver’s license. Consequently, test drivers should not be required to have a driver’s license issued by a US state.)
 - All crashes involving ADS-equipped vehicles must be reported in accordance with the State laws in which the crash occurred.
 - Allow testing and deployment without a human driver in the vehicle.

³ See Fixing America’s Surface Transportation (FAST) Act, Public Law 114–94, 24406 (2015)

- **Deployed Vehicles: Registration and Titling**
 - Regulations governing labeling and identification for ADS-equipped vehicles should be issued by NHTSA to maintain consistency across state lines. (Reference p 44 of FAVP)

- **Law Enforcement Considerations**
 - All crashes involving ADS-equipped test vehicles must be reported in accordance with the State law in which the crash occurred.
 - States should work together on standardization of distracted driving regulations, interstate road infrastructure and maintenance, including traffic signals, lights, and pavement markings.
 - Any distracted driving law should not apply when an ADS feature is engaged.

- **Manufacturer Liability**
 - A manufacturer of ADS-equipped vehicles, ADSs, or motor vehicles should be immune from liability that arises out of any modification made without the manufacturer's consent by another person to its ADS-equipped vehicles, ADSs, or motor vehicles.

In general, if a state does choose to take legislative or regulatory action with respect to ADSs, we recommend that such action should be premised on removing impediments to the safe testing and deployment of such vehicles. In many cases, such action could be relatively minor, for example by establishing commissions to develop state expertise about automated driving-related issues, prioritizing roadway maintenance, or directing state agencies to build automated driving considerations into planning efforts. In all cases, we recommend that states continue to exercise traditional authorities concerning licensing and registration, enacting and enforcing traffic laws, and regulating insurance and liability, as NHTSA suggests in the FAVP. Further, states should not seek to set vehicle design, performance, testing or certification requirements, which would conflict with NHTSA's traditional role and give rise to a patchwork of potentially conflicting state-specific requirements that would impede the deployment of ADS-equipped vehicles.

As we are seeing, vehicle technology is advancing rapidly and holds great promise for improvements in road safety and mobility. However, as NHTSA acknowledged in the FAVP, there are still many unknowns. As technology evolves, the "unknowns" of today will become the "knowns" of tomorrow. With this in mind, NHTSA deliberately avoided issuing rules and instead took an approach designed to facilitate learning. We appreciate this approach and agree with the agency that a consistent, national policy is in the best interests of all stakeholders. For states wishing to promote the deployment of ADS-equipped vehicles, the key is having the right policy, at the right time, in the right place. The Alliance believes that HB 1202 in its current form is overly broad, but that the suggestions above provide a starting point for developing a more practicable state policy. We would be happy to discuss each in further detail as the committee considers this legislation. Thank you for your consideration.

Sincerely,

Leighton Yates
 Manager, State Affairs

Cc: House Committee on Transportation

HB 1202

1-19-17

#7

General Motors Testimony on House Bill 1202

Chairman Ruby and Members of the House Transportation Committee.

My name is Thomas D. Kelsch and I am here today on behalf of General Motors to express both concern and opposition to HB 1202.

The Reasons for General Motor's concern and opposition are:

- The language is a significant impediment to the development and deployment of autonomous vehicles in the state of North Dakota and will likely act as a complete deterrent to developers.
- The requirement to obtain approval from the director prior to operating a vehicle with autonomous technology acts as a complete prohibition against the technology. Without further detail or direction and no framework for how approval would be obtained or what is required to obtain approval, developers would be unable to comply with the requirement.
- The requirement for approval to operate a vehicle "using autonomous technology" is vague and overly broad and the term "autonomous technology" is left completely undefined. As drafted this language might easily ensnare many existing technologies already deployed for sale to the public. SAE Standard J3016, the most commonly referenced source definition for autonomous vehicles, defines autonomous technology over a wide spectrum of technology in vehicles, including numerous driver assist and safety assist features common on vehicles today.
- This approach is inconsistent with the approach being applied in many other states that are instead opting for a developer self-certification pre-approval approach as encouraged by the NHTSA state guidance.
- The states should instead be attempting to identify and remove existing impediments under their state laws in order to welcome and encourage the development and growth of this new technology that offers great opportunity for the disabled, the environment, and transportation safety.
- Until these concerns are addressed General Motors would urge a "Do Not Pass" recommendation from this committee on HDB 1202.

January 19, 2017

The Honorable Dan Ruby
Chairman
House Transportation Committee
State Capitol
Bismarck, North Dakota 58505-0360

SUBJECT: HOUSE BILL 1202 - RELATING TO THE OPERATION AND REGULATION OF
AUTONOMOUS VEHICLES

Dear Representative Ruby:

Global Automakers, www.globalautomakers.org, represents international motor vehicle manufacturers, original equipment suppliers, and other automotive-related trade associations. We work with industry leaders, legislators, regulators, and other stakeholders in the United States. Our goal in North Dakota and elsewhere is to create public policy that improves motor vehicle safety, encourages technological innovation and protects our planet. Global Automakers is writing to inform you of our opposition to House Bill 1202.

The Association of Global Automakers represents international motor vehicle manufacturers, original equipment suppliers, and other automotive-related trade associations. We work with industry leaders, legislators, regulators, and other stakeholders in the United States. Our members have made, and continue to make, substantial investments in research and development on automated vehicle technologies, which have the potential to provide significant public benefits in terms of safety, mobility, congestion, and the environment.

Our Position

Global Automakers **opposes House Bill 1202** as introduced. House Bill 1202 grants the Department of Transportation with unlimited regulatory authority without establishing an appropriate framework for autonomous vehicle standards. The enactment of such legislation would create uncertainty for automotive manufacturers and others who are investing heavily in the technology as well as establish a patchwork of state laws that could slow the pace of innovation.

House Bill 1202 is not necessary to foster the development and testing of automated vehicles in North Dakota. Under current state law, North Dakota does not expressly prohibit the testing of levels four and five autonomous vehicles on public roads. Therefore, we think this bill unnecessarily creates the risk that North Dakota may erect counterproductive barriers to the testing and sale of automated vehicles, and that other states may follow suit.



Advancing Vehicle Automation Requires the Right Public Policy

In light of the tremendous societal benefits that vehicle automation can provide, Global Automakers believes that it is critically important that public policy supports and spurs advances in this lifesaving technology, and does not erect unnecessary barriers. This regulatory framework should have two components:

First, it should be flexible and allow manufacturers to develop, test, and market new systems that will provide broad societal benefits. A formal and overly-prescriptive program simply cannot keep up with the pace of innovation. House Bill 1202 provides no assurances that such an overly prescriptive program would not emerge.

Second, automated vehicle policy should be national in scope and allow manufacturers to build vehicles that can be tested, sold and operated in all fifty states. A patchwork of separate state laws establishing inconsistent design and performance criteria for automated vehicles would be unworkable. House Bill 1202 provides no assurances that performance criteria affecting the design of automated vehicle systems would not be created.

In September 2016, NHTSA issued its Federal Automated Vehicle Policy (the Policy) to serve as a framework to promote a national approach to ensure the continued advancement of automated vehicle technology. This Policy includes “Guidance” for the developers of automated vehicles, and is intended to provide a dynamic approach to these issues; issues we believe should be addressed at the federal level to provide greater regulatory certainty and consistency when designing vehicles for a national market. Global Automakers believes that NHTSA’s Federal Automated Vehicle Policy is an important first step toward a consistent national approach for this burgeoning technology. To support the continued deployment of this evolving technology, new approaches are needed as an alternative to the formal rulemaking process. The NHTSA Policy is intended to provide these additional safety assurances, recognizing that technology can advance more rapidly than regulation.

The Model State Policy seeks to provide guidance on how states may help support a uniform nationwide approach to automated vehicle policy. It identifies and defines the important roles that state governments should consider in addressing issues related to vehicle automation, as well as those areas that are not appropriate for state regulation. We strongly believe standards that impact the design and performance of motor vehicles is a federal responsibility while states maintain authority over issues such as driver licensing, vehicle registration and insurance.

HB 1202 is Unnecessary and Could Erect Barriers to Automated Vehicle Testing and Deployment

In our view, House Bill 1202 is unnecessary to promote the safe testing of automated vehicles in North Dakota. A law authorizing an open-ended rule may create unintended outcomes that impede testing. States such as Ohio and Virginia have demonstrated how to promote autonomous vehicle testing without



the need to enact new laws or rules. North Dakota should follow this example, using the Model State Policy as guidance without codifying its terms.

Sincerely,

A handwritten signature in black ink that reads "Josh Fisher".

Josh Fisher
Manager
State Government Affairs

HB 1202
2-3-17
#1

PROPOSED AMENDMENTS TO HOUSE BILL NO. 1202

Page 1, replace lines 7 through 10 with:

- "1. The director shall adopt rules to regulate the integration and testing of automated driving system vehicles into the public highway system. An individual may operate or allow a vehicle using an automated driving system as a means to eliminate the human operator to be operated on a highway with approval by the director. The rules shall be adopted as follows:

 - a. An automated driving system equipped vehicle may be tested on public highways in this state;
 - b. Subject to applicable federal and state laws and regulations, an automated driving system equipped vehicle may be operated on public highways in this state; and
 - c. The director may adopt rules only with respect to the licensing, registration, inspection, and insurance, as applicable, of automated driving system equipped test or deployed vehicles operated on public highways in this state.
2. The director shall not promulgate rules governing the design, performance, hardware, or software requirement of an automated driving system equipped vehicle.
3. For purposes of this section, "automated driving system" means the hardware and software that are collectively capable of performing the entire dynamic driving task on a sustained basis, regardless of whether it is limited to a specific operational design domain; this term is used specifically to describe a level 3, 4, or 5 driving automation system as defined by United States department of transportation guidelines."

Renumber accordingly

PROPOSED AMENDMENTS TO ENGROSSED HOUSE BILL NO. 1202

Page 1, line 1, after "A BILL" replace the remainder of the bill with "for an Act to provide for a department of transportation study.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. DEPARTMENT OF TRANSPORTATION STUDY - REPORT TO LEGISLATIVE ASSEMBLY. The department of transportation, in collaboration and consultation with the autonomous vehicle technology industry, shall study the use of automated driving system equipped vehicles on the highways in this state. The study must include a review of current laws dealing with licensing, registration, insurance, and inspection and how they should apply to automated driving system equipped vehicles. The department of transportation shall report its findings and recommendations together with any suggested changes to state statute to the sixty-sixth legislative assembly."

SENATE TRANSPORTATION COMMITTEE
March 23, 2017; 09:00 AM, Lewis & Clark Room

North Dakota Department of Transportation
Glenn Jackson, Director, Driver's License Division
HB 1202

Mr. Chairman and members of the Committee, good morning, my name is Glenn Jackson, Director, Driver's License Division for the North Dakota Department of Transportation (DOT). The Department supports HB 1202.

The following is some background information:

- There are industry standards which recognize a range of autonomy for motor vehicles, ranging from level 0 to level 5, with level 0 requiring the human driver to control all aspects of driving and level 5 being fully autonomous without requiring any human intervention.
- Numerous commercially available vehicles have driver assistive systems for activities such as parking, lane control, and adaptive cruise control, among others; such features fall into levels 1 and 2.
- The department believes that up to level 4 autonomous vehicles would currently be permitted to use public highways in North Dakota, as long as a fully licensed driver is at the controls of the vehicle and ready to intervene at all times.

Our intent with HB1202 was to provide a window of opportunity for the department to collaborate with industry in preparation of rules, while providing a means for testing to proceed prior to those rules completion. To that end, the department has been working with industry in an attempt to address any concerns they may have with HB1202. Since the bill passed the House, we have continued this collaboration with industry and have determined that we need additional time to clarify the statutory guidance we need to effectively support both the industry and public highway safety.

Other states such as California, Nevada, and Michigan have adopted rules for the use of autonomous technology. They have found because of rapid advancement of technology they needed to modify their rules to adapt to that technology. This nimble ability to adjust rules has allowed these states to take advantage of the economic opportunities associated with being test beds for enabling industry to demonstrate integration of the technology into the public highway system.

At this time we believe it is in the best interest of the state of North Dakota to conduct a comprehensive study with specific deliverables for the 66th legislative assembly to consider. This will provide both the industry and the department additional time to collaborate on specific needs.

Mr. Chairman, that concludes my testimony, I would be happy to answer any questions you may have.



attachment # 3 pg. 1
HB 1202 3.23.17

March 23, 2017

Hon. Lonnie J. Laffen, Chair
Senate Committee on Transportation
600 East Boulevard Ave.
Bismarck, ND 58505

Re: House Bill 1202 – Autonomous Vehicles

Dear Chairman Laffen,

On behalf of the Alliance of Automobile Manufacturers, I would like to thank you for the opportunity to provide comments on House Bill 1202. The Alliance is a trade association representing twelve of the world’s leading car and light truck manufacturers, including BMW Group, FCA US LLC, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of America, and Volvo Car USA. Together, Alliance members account for over 70% of the cars and light duty trucks sold throughout the United States each year.

As you may know, automakers are at the leading edge of safety and automated driving technology developments taking place across the United States. The next big leap forward lies in working to avoid the 94% of accidents attributed to human error altogether. This can be achieved through the continued development and deployment of Automated Driving System (ADS)-equipped vehicles, or “highly automated vehicles,” as they are referred to by the National Highway Traffic Safety Administration (NHTSA) in its recently published *Federal Automated Vehicle Policy (FAVP)* guidance document.

The Alliance has urged policymakers to proceed cautiously in creating new and broad legal frameworks that could inhibit vehicle innovation and delay attributable safety benefits. Additionally, we have recommended that states should concentrate on revising existing laws and regulations to comprehend ADS-equipped vehicles.

Furthermore, we have also worked closely with DOT Director Levi and his staff on this issue throughout the legislative session. It is our understanding that DOT has proposed an amendment that would direct the Department of Transportation to study ADS technology and review current laws in statute that could already be an impediment to the future of this life saving technology. The Alliance supports this amendment and asks that it be adopted by the committee. Alliance members will continue to work with and offer its expertise to the State as it works in the interim to further understand and prepare for the future of the auto industry.

Thank you again for the opportunity to comment on HB 1202 and express our support of the amendment proposed by the DOT. We would be happy to discuss the bill and amendment in further detail as the committee considers this legislation. Thank you for your time and consideration.

Sincerely,

Leighton Yates
Manager, State Government Affairs

**North Dakota Senate Transportation Committee
March 23, 2017 -- HB 1202
Uber Technologies Written Testimony**

Good morning Chairman Laffen and Members of the Transportation Committee, my name is Carla Jacobs. I am the head of Public Policy for Uber North Dakota. Thank you for the opportunity to testify today about Uber's work in self driving technology and the impact of HB 1202.

As you know from this committee's work in 2015, Uber is a ridesharing app that connects passengers with drivers at the push of a button. This technology has enabled Uber to improve mobility and the quality of life for people living in and around Fargo since the legislature passed ridesharing regulations in 2015 and in Bismark and Grand Forks more recently. In these cities, riders have access to safe and reliable transportation and drivers have access to flexible earning opportunities.

North Dakota was one of the first states to pass regulations for ridesharing and since that time many other states have taken this model as a starting point for their own state regulations. Today there are over 35 states with ridesharing regulations.

The progress we've made with ridesharing in the last few years is exciting, and we're proud to have helped transform transportation in North Dakota and across the country. And as we look forward to the future of transportation, we see that the next phase of transportation that will enable us to fast forward this progress.

Self-driving technology can bring numerous benefits to states across the country in the way of enhanced safety, congestion relief, and cleaner air. Most importantly, self-driving cars have incredible potential to reduce auto crashes and save lives. As you many know, each year more than 1.3 million lives are lost on the world's roads, including more than 40,000 in the US. And almost 94% of these deaths are due to human error according to the National Highway Traffic Safety Administration. The good news with self-driving is that unlike human drivers, computers do not suffer from fatigue or distraction.

Uber's investments in this transformative technology began two years ago in Pittsburgh, where we established our Advanced Technologies Group. Today Uber offers riders in Pittsburgh and Tempe, Arizona the ability to experience a ride in a self-driving vehicle with a safety driver.

Of course the success of self-driving cars will depend on the technology, and it's still very early. Today these cars struggle with bad weather and the unknown: new road construction or an accident. It's why they need safety drivers in all but the most controlled environments.

But computers can perceive better, calculate faster, and react earlier—which means that they can drive safer. And once we can show that a car can drive safer than a human being, then that technology should be deployed at scale to the benefit of people.

The approach of government will be crucial to allowing cities to realize the safety, environmental, and congestion benefits that self driving can bring.

For example, if you look at ridesharing regulations today you'll see vastly different reactions from city and state regulators. Many have welcomed ridesharing services with open arms -- like North Dakota-- and these places are seeing significant benefits in improved mobility, reduced congestion, and additional safe transportation options for residents and visitors. For example, in Fargo in 2016 the number of DUI arrests decreased 16 percent.

But unfortunately some places are pushing back hard on the next phase -- self driving. This is potentially because the future seems unknowable. And in some cases government has been slower to embrace the regulatory approach needed for new innovations to thrive or has created rules that will eventually result in roadblocks for innovation. In all cases, the result is the same - - preventing states, cities, and their residents from seeing these benefits and the positive impact they bring.

Many states are currently exploring how to regulate self driving technology and all are struggling with how to encourage innovation while protecting public safety and avoiding conflicts with federal guidance. Some have passed regulations while others have determined that regulations at this point in time could stifle advances in technology.

The bill before you today as drafted includes provisions that would impact the future of self driving technology in North Dakota by putting in place unnecessary and ambiguous restrictions. Specifically, the bill's broad prohibition of self driving without Department of Transportation (DOT) approval could prevent or delay North Dakota from realizing the benefits that self driving technology can bring. The legislation is placing full authority in ND DOT to determine what is acceptable or not. As Directors and administrations change, that approval could change, creating uncertainty for companies that are looking to bring the benefits of self driving to North Dakota. We don't believe that is the intent, but it could be the resulting impact.

In addition, it's likely that if this legislation were to pass, that other states would seek to replicate these policies. However, they may not be looking to embrace innovation and welcome technology like we've heard from DOT and instead use rulemaking to block self driving technology.

Lastly, there are a number of technical issues with the bill as drafted. The bill references federal "guideline" that were developed under the last Administration; it's not yet clear how the current administration will choose to act, and these "guidelines" could soon be out of date. It's also not clear whether the intent is to focus rules on technology that can operate only without a human driver or include technology that still needs monitoring. Lastly, it's not clear whether the bill seeks to create rules for testing but block the ability for full AV operation, or whether operation should be included in the rulemaking.

For these reasons we cannot support the language as drafted. However, we appreciate the openness from the Department to look at creative solutions and we support the proposed amendment being discussed today. We look forward to continuing to work with you and with NDDOT on self driving in way that encourages growing business, advancing technology and making life better, and safer, in North Dakota.



**Statement of
Ford Motor Company**

**State of North Dakota
Senate Committee on Transportation
Hearing on**

**“HB 1202 and HB 1394, Relating to the Operation and Regulation of Autonomous Vehicles and
Autonomous Vehicle Data Ownership, Respectively”**

March 23, 2017

Ford appreciates North Dakota’s interest in issues related to automated vehicles. As a general matter, we strongly believe that if a state wishes to pursue legislative or regulatory action with respect to such vehicles, that action should be premised upon removing impediments to their safe testing and deployment.

With respect to HB 1202, we are grateful for the attentiveness of the Legislature, Department of Transportation, and Department of Commerce to the views of Ford and other stakeholders. We support adoption of the amendment requiring that the Department of Transportation study automated vehicles and report back to the Legislature. We thank Senator Ruby, the Governor, and the Department of Transportation for their positive engagement on this matter and stand ready to provide our assistance moving forward.

Additionally, Ford regrets that it opposes HB 1394 in its current form. We believe there is no need at this time to address data sharing related to automated vehicles, particularly because these vehicles are not yet deployed, and data sharing could compromise sensitive intellectual property and other confidential business information. Instead, we feel it is more appropriate for auto insurers and automated vehicle developers to engage in discussions to improve their mutual understanding of the types of data generated by new technologies, the value of such data to adjusting insurance claims or properly pricing underwriting vehicles, and the feasibility and usefulness of sharing such data, as well as the implications for consumer privacy, vehicle security, and confidential business information raised in all cases. We would welcome your leadership in facilitating such cooperative conversations, which are critical to developing sound public policy.

Ford Motor Company believes automated vehicles have significant potential to improve safety and mobility. Our company, in partnership with ARGO AI, is hard at work to achieve the goal of deploying a Society of Automotive Engineers (SAE) Level Four vehicle without a steering wheel or accelerator and brake pedals for commercial applications in limited geo-fenced areas in 2021. This is challenging work, whose success can be aided by having the right policies in place to facilitate, rather than impede, innovation.

We are grateful for the opportunity to provide our views on HB 1202 and HB 1394 today. We hope to continue working collaboratively with the Legislature in helping craft reasonable policies that ensure a safe, competitive future for automated vehicles.