Senate Fiscal Agency
P. O. Box 30036
Lansing, Michigan 48909-7536

BILL ANALYSIS

Telephone: (517) 373-5383
Fax: (517) 373-1986

Senate Bills 995 through 998 (as enacted) **PUBLIC ACTS 332-335 of 2016**
Sponsor: Senator Mike Kowall (S.B. 995 & 996)
Senator Rebekah Warren (S.B. 997)
Senator Ken Horn (S.B. 998)
Senate Committee: Economic Development and International Investment
House Committee: Communications and Technology

Date Completed: 2-3-17

RATIONALE

Public Acts 231 and 251 of 2013 amended the Michigan Vehicle Code and the Revised Judicature Act, respectively, to accommodate the emerging industry of automated vehicle technology. Specifically, Public Act 231 amended the Code to regulate the operation of vehicles with automated technology and allow automated vehicle technology to be tested under certain circumstances, among other things. Public Act 251 established related liability standards.

More recently, the provisions enacted in 2013 came to be viewed as out-of-date, as automated vehicle technology had advanced, and still is advancing, at a rapid pace. Reportedly, other states, and in some cases other countries, have updated automated vehicle technology laws or testing centers to encourage research and development. It was suggested that Michigan needed more relevant and contemporary automated vehicle regulations to compete with the other states and countries. Furthermore, some people believed that the automotive industry was waiting for Michigan to enact such regulatory changes. Thus, it was proposed that Michigan law be amended to encourage product and economic development in this State to enhance safety standards for Michigan residents and visitors regarding automated vehicles and transportation; and ease any perception of government interference with the technology's research and development.

CONTENT

Senate Bill 995 amended the Michigan Vehicle Code to do the following:

- **Allow an automated motor vehicle to be operated on a street or highway in Michigan.**
- **Allow an on-demand automated motor vehicle network to be operated on a highway, road, or street in Michigan.**
- **Prohibit a local unit of government from imposing a fee, registration, franchise, or regulation on an on-demand automated motor vehicle network through December 31, 2022.**
- **Specify that, when engaged, an automated driving system allowing for operation without a human operator is considered the driver or operator of a vehicle for purposes of determining conformance to traffic or motor vehicle laws and is deemed to electronically satisfy all physical acts required by a driver or operator of the vehicle.**
- **Allow an individual to use two-way communication devices to operate or program the operation of an automated motor vehicle while operating it without a human operator.**
- **Revise the circumstances that a manufacturer of automated driving systems or upfitter must ensure exist when researching or testing the operation of an automated motor vehicle or any automated technology or automated driving system installed in a vehicle on a highway or street.**

-- Allow a university researcher or an employee of the Michigan Department of Transportation (MDOT) or the Department of State who is engaged in research or testing of automated motor vehicles to operate them if the operation complies with generally the same circumstances as applicable to a manufacturer.
-- Provide that a manufacturer of automated technology, an automated driving system, or a motor vehicle is immune from liability that arises out of a modification made to certain automated vehicles or systems without the manufacturer's consent.
-- Create exceptions to distance restrictions for vehicles weighing a certain amount and for vehicles being delivered to a location if the vehicles are in a platoon.
-- Allow an individual to operate a platoon on a street or highway in Michigan if the individual files a plan for general platoon operations with the Michigan State Police (MSP) and MDOT before starting platoon operations.
-- Create the Michigan Council on Future Mobility within MDOT, and require the Council to provide annual policy recommendations.
-- Require the Secretary of State to create and maintain a computerized central file that provides an individual historical driving record for a natural person, instead of a person, with respect to certain criteria.

The bill also repealed Section 663 of the Code, which prohibited an individual from operating an automated motor vehicle on a highway or street in automatic mode, except as allowed for research or testing.

Senate Bill 996 amended the Michigan Vehicle Code to do the following:

-- Allow a motor vehicle manufacturer to participate in a SAVE project if it meets certain self-certification criteria.
-- Prescribe requirements, including the designation of a project's geographic boundaries and the maintenance of incident records, for a motor vehicle manufacturer that participates in a SAVE project.
-- Specify that an automated driving system or any remote or expert-controlled assist activity, when engaged, must be considered the driver or operator of the vehicle and deemed to satisfy electronically all physical acts required by a driver or operator of the vehicle.
-- Require a motor vehicle manufacturer to insure each vehicle in a participating fleet.
-- Require a motor vehicle manufacturer, for each SAVE project in which it participates, to assume liability for each incident in which an automated driving system is at fault while the system is in control of a vehicle in the participating fleet.

Senate Bill 997 amended the Michigan Vehicle Code to exclude a road that is under the control of a mobility research center from provisions of the Code that apply to private roads that are open to the general public, regardless of whether a private research entity or a corporation is using the road under an agreement with the mobility research center.

Senate Bill 998 amends the Revised Judicature Act to state that a motor vehicle mechanic or a motor vehicle repair facility that repairs an automated motor vehicle according to specifications from the manufacturer of the vehicle is not liable in a product liability action for damages resulting from the repairs.

Senate Bills 995, 996, and 997 took effect on December 9, 2016. Senate Bill 998 will take effect on March 9, 2017.

Senate Bill 995

Automated Motor Vehicle Operation

The bill allows an automated motor vehicle to be operated on a street or highway in Michigan.

The bill specifies that, when engaged, an automated driving system allowing for operation without a human operator is considered the driver or operator of a vehicle for purposes of determining

conformance to any applicable traffic or motor vehicle laws and is deemed to satisfy electronically all physical acts required by a driver or operator of the vehicle.

As amended by the bill, "automated motor vehicle" means a motor vehicle on which an automated driving system has been installed, either by a manufacturer of automated driving systems or an upfitter that enables the vehicle to be operated without any control or monitoring by a human operator. The term previously referred to automated technology, rather than automated driving systems.

The bill defines "automated driving system" as hardware and software that are collectively capable of performing all aspects of the dynamic driving task for a vehicle on a part-time or full-time basis without any supervision by a human operator. "Dynamic driving task" means all of the following, but does not include strategic aspects of a driving task:

-- Operational aspects, including steering, braking, accelerating, and monitoring the vehicle and the roadway.
-- Tactical aspects, including responding to events, determining when to change lanes, turning, using signals, and other related actions.

"Motor vehicle manufacturer" means a person that has manufactured and distributed motor vehicles in the United States that are certified to comply with all applicable Federal motor vehicle safety standards and that has submitted appropriate manufacturer identification information to the National Highway Traffic Safety Administration as provided under Federal rules. As used in Sections 2b, 665a, and 665b, the term also includes a person that satisfies all of the following:

-- The person has manufactured automated motor vehicles in the United States that are certified to comply with all applicable Federal motor vehicle safety standards.
-- The person has operated automated motor vehicles using a test driver and with an automated driving system engaged on public roads in the United States for at least 1.0 million miles.
-- The person has obtained an instrument of insurance, surety bond, or proof of self-insurance in the amount of at least $10.0 million, and has provided evidence of that insurance, surety bond, or self-insurance to the Department in a form and manner required by it.

(Section 2b defines terms used throughout the Code. Sections 665a and 665b were enacted by Senate Bills 995 and 996, respectively.)

On-Demand Automated Motor Vehicle Network

The bill allows an on-demand automated motor vehicle network to be operated on a highway, road, or street in Michigan.

Until December 31, 2022, the bill prohibits a local unit of government from imposing a local fee, registration, franchise, or regulation on an on-demand automated motor vehicle network. These provisions do not limit local authority, or State authority over roads and rights-of-way, with respect to communications networks or facilities.

The bill defines "on-demand automated motor vehicle network" as a digital network or software application used to connect passengers to automated motor vehicles, not including commercial motor vehicles, in participating fleets for transportation between points chosen by passengers, for transportation between locations chosen by the passenger when the automated motor vehicle is operated by the automated driving system.

The bill defines "participating fleet" as either of the following:

-- Vehicles equipped with automated driving systems that are operating on the public roads and highways of Michigan in a SAVE project as provided in Section 665b (Senate Bill 996).
-- Vehicles that are supplied or controlled by a motor vehicle manufacturer, and that are equipped with automated driving systems that are operating on the public roads and highways of Michigan in an on-demand automated motor vehicle network.

The bill defines "SAVE project" as an initiative that authorizes eligible motor vehicle manufacturers to make available to the public on-demand automated motor vehicle networks as provided in Section 665b.

Research & Testing

Previously, the Code required a manufacturer of automated technology to ensure that all of the following circumstances existed when researching or testing the operation of an automated motor vehicle or any automated technology installed in a motor vehicle on a highway or street:

-- The vehicle was operated only by an employee, contractor, or other person designated or otherwise authorized by that manufacturer of automated technology.
-- An individual was present in the vehicle while it was being operated on a highway or street in Michigan and that individual had the ability to monitor the vehicle's performance and, if necessary, take control of the vehicle's movements.
-- The individual operating the vehicle and the individual present in it were licensed to operate a motor vehicle in the United States.

Under the bill, instead, a manufacturer of automated driving systems or upfitter must ensure that all of the following circumstances exist when researching or testing the operation, including operation without a human operator, of an automated motor vehicle or any automated technology or automated driving system installed in a motor vehicle on a highway or street:

-- The vehicle is operated only by an employee, contractor, or other person designated or otherwise authorized by that manufacturer of automated driving systems or upfitter.
-- An individual operating the vehicle has the ability to monitor the vehicle's performance while it is being operated on a highway or street in the State and, if necessary, promptly take control of the vehicle's movements (or, if the individual does not, or is unable to, take control of the vehicle, it has the capability of achieving a minimum risk condition).
-- The individual operating the vehicle and the individual who is monitoring it may lawfully operate a motor vehicle in the United States.

Also, under the bill, a university researcher or an employee of MDOT or the Department of State who is engaged in research or testing of automated motor vehicles may operate an automated motor vehicle if the operation is in compliance with the circumstances described above, but is not subject to the requirement that the operator be an employee, contractor, or other person designated or otherwise authorized by the manufacturer or upfitter.

Previously, before beginning research or testing of an automated motor vehicle or any automated technology installed in a motor vehicle, the manufacturer of automated technology performing that research or testing had to submit proof satisfactory to the Secretary of State that the vehicle was insured under the Insurance Code. The bill instead provides that, before beginning research or testing on a highway or street in the State of an automated motor vehicle, technology that allows a motor vehicle to operate without a human operator, or any automated driving system installed in a motor vehicle, the manufacturer of automated driving systems or upfitter performing that research or testing must submit proof satisfactory to the Secretary of State that the vehicle is insured under the Insurance Code.

As amended by the bill, "upfitter" means a person that modifies a motor vehicle after it was manufactured by installing an automated driving system in the vehicle to convert it to an automated motor vehicle. The term includes a subcomponent system producer recognized by the Secretary of State that develops or produces automated driving systems. Previously, the term referred to "automated technology", rather than an automated driving system.

Communication Device Use During Automated Vehicle Operation

Subject to various exceptions, the Code prohibits a person from using a wireless two-way communication device to read, type, or send text messages while operating a motor vehicle, or

using a mobile telephone for voice communication while operating a commercial motor vehicle or a school bus.

One of the exceptions previously applied to an individual using such a device or mobile phone to operate or program the operation of an automated motor vehicle while testing it in compliance with Section 665, if the vehicle displayed a special plate issued under the Code. (Section 665 prescribes the rules and restrictions regarding research and testing of automated motor vehicles.) The bill instead allows an individual to use those devices to operate or program the operation of an automated motor vehicle while testing or operating it without a human operator.

In addition, under the bill, the prohibition against reading, typing, or texting does not apply to a person using an on-demand automated motor vehicle network.

Civil Liability

Under the bill, a manufacturer of automated driving technology, an automated driving system, or a motor vehicle is immune from liability that arises out of any modification made to a motor vehicle, an automated motor vehicle, an automated driving system, or automated driving technology by another person without the consent of the manufacturer, as provided in Section 2949b of the Revised Judicature Act (the section that Senate Bill 998 amends). Nothing in these provisions may supersede or otherwise affect the contractual obligations, if any, between a motor vehicle manufacturer and a manufacturer of automated driving systems or a manufacturer of automated driving technology.

Platoons

Under the Code, a person may not operate a motor vehicle with a gross weight, loaded or unloaded, in excess of 5,000 pounds outside the corporate limits of a city or village, within 500 feet of a similar vehicle moving in the same direction, except when overtaking and passing the vehicle. Additionally, a distance of at least 500 feet must be maintained between two or more driven vehicles being delivered from one place to another. The bill creates an exception to these provisions for a vehicle in a platoon.

The bill also requires the operator of a truck or truck tractor that is in a platoon, when traveling on a highway, to allow reasonable access for other vehicles to afford them safe movement among lanes to exit or enter the highway.

The bill allows a person to operate a platoon on a Michigan street or highway if the person files a plan for general platoon operations with the MSP and MDOT before starting platoon operations. If the MSP or MDOT does not reject the plan within 30 days after receiving it, the person may operate the platoon.

All of the following apply to a platoon:

-- Vehicles in a platoon may not be considered a combination of vehicles for the purposes of the Code.
-- The lead vehicle in a platoon may not be considered to draw the other vehicles.
-- If the platoon includes a commercial motor vehicle, an appropriately endorsed driver with a valid commercial driver license must be present behind the wheel of each commercial motor vehicle in the platoon.

The bill defines "platoon" as a group of individual motor vehicles that are traveling in a unified manner at electronically coordinated speeds.

Michigan Council on Future Mobility

The bill creates the Michigan Council on Future Mobility within MDOT. The Council must provide to the Governor, Legislature, Department of State, MDOT, Department of Insurance and Financial Services, Department of Technology, Management, and Budget, and MSP recommendations for

changes in State policy "to ensure that this state continues to be the world leader in autonomous, driverless, and connected vehicle technology".

The Council must consist of the following members, who must serve without compensation:

-- Eleven individuals appointed by the Governor who represent the interests of local government or are business, policy, research, or technological leaders in future mobility.
-- One individual appointed by the Governor who is representative of insurance interests.
-- Two State Senators appointed by the Senate Majority Leader to serve as nonvoting ex officio members, with one of the appointees being a member of the majority party and the other being a member of the minority party.
-- Two State Representatives appointed by the Speaker of the House to serve as nonvoting ex officio members, with one of the appointees being a member of the majority party and the other being a member of the minority party.
-- The Secretary of State or his or her designee.
-- The Director of MDOT or his or her designee.
-- The Director of the MSP or his or her designee.
-- The Director of the Department of Insurance and Financial Services or his or her designee.
-- The Director of the Department of Technology, Management, and Budget or his or her designee.

Other than the Senators and Representatives, the members are voting members. The Governor must designate one or more of the members to serve as chairperson, at the Governor's pleasure.

The Council must submit recommendations for statewide policy changes and updates by March 31, 2017, and continue to make recommendations annually, or more frequently in its discretion.

Secretary of State Driving Record File

Under the Code, the Secretary of State must create and maintain a computerized central file that provides an individual historical driving record for a person with respect to certain provisions. The bill refers to a "natural" person.

Senate Bill 996

The bill added Section 665b to the Michigan Vehicle Code to enact the following provisions. A motor vehicle manufacturer may participate in a SAVE project if it self-certifies to all of the following:

-- That it is a motor vehicle manufacturer.
-- That the participating fleet complies with all applicable State and Federal laws.
-- That each vehicle in the participating fleet is capable of being operated in compliance with applicable traffic and motor vehicle laws of the State.

The motor vehicle manufacturer also must certify that each vehicle in the participating fleet is owned or controlled by the motor vehicle manufacturer and equipped with an automated driving system, automatic crash notification technology, and a data recording system that has the capacity to record the automated driving system's status and other vehicle attributes, including speed, direction, and location, during a specified time period before a crash as determined by the motor vehicle manufacturer.

A person that is not a motor vehicle manufacturer may not participate in a SAVE project.

A motor vehicle manufacturer's eligibility to participate in a SAVE project is conditioned solely on meeting the requirements of Section 665b. A motor vehicle manufacturer must verify its satisfaction of the requirements using the self-certification described above.

A motor vehicle manufacturer that participates in a SAVE project may begin the SAVE project at any time after it notifies the Department of State that it has self-certified. The notification also

must set forth the geographical boundaries for the SAVE project. A motor vehicle manufacturer may make multiple notifications.

A motor vehicle manufacturer may participate in a SAVE project under any terms it deems appropriate as long as the terms are consistent with Section 665b and other applicable law.

A motor vehicle manufacturer that participates in a SAVE project must determine the geographical boundaries for the SAVE project, which may include any of the following:

-- A designated area within a municipality.
-- An area maintained by a regional authority.
-- A university campus.
-- A development catering to senior citizens.
-- A geographic or demographic area similar to the areas described above.

Public operation of a participating fleet must be confined to the boundaries selected by the motor vehicle manufacturer participating in the SAVE project.

For the duration of a SAVE project, the motor vehicle manufacturer must maintain incident records and provide periodic summaries related to the safety and efficacy of travel of the participating fleet to MDOT and the National Highway Traffic Safety Administration (NHTSA).

An individual who participates in a SAVE project will be deemed by his or her participation to have consented to the collection of the incident records and periodic summaries while he or she is in a vehicle that is part of the participating fleet and to the provision of the summaries to the Department and the NHTSA. Before beginning a SAVE project, and for the duration of the project, the motor vehicle manufacturer must make publicly available a privacy statement disclosing its data handling practices in connection with the applicable participating fleet.

When engaged, an automated driving system or any remote or expert-controlled assist activity must be considered the driver or operator of the vehicle for purposes of determining conformance to any applicable traffic or motor vehicle laws and deemed to satisfy electronically all physical acts required by a driver or operator of the vehicle.

A motor vehicle manufacturer must insure each vehicle in a participating fleet as required under the Vehicle Code and Chapter 31 of the Insurance Code (which governs no-fault insurance). For each SAVE project in which it participates, during the time that an automated driving system is in control of a vehicle in the participating fleet, a motor vehicle manufacturer must assume liability for each incident in which the automated driving system is at fault, subject to Chapter 31 of the Insurance Code.

Senate Bill 997

The Michigan Vehicle Code allows a county, city, township, or village to contract with a person who owns or is in charge of a private road that is open to the general public, at that person's request or with that person's consent, to enforce provisions of the Code on that private road. Subject to that provision and Section 906 of the Code, a peace officer may enter on a private road that is open to the general public to enforce provisions of the Code if signs meeting the requirements of the Michigan Manual of Uniform Traffic Control Devices are posted on the private road. The owner or person in charge of a private road open to the general public who enters into a contract as described above is responsible for the cost and the posting of signs.

(Section 906 allows a police officer to enter on a private road to enforce violations of the Code, notwithstanding any other provisions of law.)

The bill specifies that "private road that is open to the general public" does not include a road that is under the control of a mobility research center, regardless of whether a private research entity or a corporation is using the road under an agreement with the mobility research center.

(Senate Bill 995 defines "mobility research center" as a nonprofit entity that has the ability to receive and accept from any Federal, state, or municipal agency, foundation, public or private agency, entity, or individual a grant, contribution, or loan for or in aid of the planning, construction, operation, upgrade, or financing of a facility for testing advanced transportation systems, including connected or automated technology or automated motor vehicles to increase mobility options.)

Senate Bill 998

Under Section 2949b of the Revised Judicature Act, the manufacturer of a vehicle is not liable and must be dismissed from any action for alleged damages resulting from certain activities, including the conversion of the vehicle into an automated motor vehicle by another person, unless the defect from which the damages resulted was present in the vehicle when it was manufactured.

Also, a subcomponent system producer is not liable in a product liability action for damages resulting from the modification of equipment installed by the producer to convert a vehicle to an automated motor vehicle unless the defect from which the damages resulted was present in the equipment when it was installed by the producer.

The bill extends immunity to a motor vehicle mechanic and a motor vehicle repair facility that repairs an automated motor vehicle according to specifications from the manufacturer of the vehicle. "Motor vehicle mechanic" and "motor vehicle repair facility" means those terms as defined in the Motor Vehicle Service and Repair Act.

MCL 257.2b et al. (S.B. 995)
257.665b (S.B. 996)
257.2b et al. (S.B. 997)
600.2949b (S.B. 998)

ARGUMENTS

(Please note: The arguments contained in this analysis originate from sources outside the Senate Fiscal Agency. The Senate Fiscal Agency neither supports nor opposes legislation.)

Supporting Argument

According to an industry forecast report analyzing the global markets for automated motor vehicles through the year 2025, the automated motor vehicle industry is projected to grow at an estimated compound annual growth rate of 15.6% through that date to reach an approximate $41.7 billion value.[1] According to the research service BI Intelligence, there will be an estimated 10.0 million self-driving automobiles on roadways by 2020 (referring to vehicles with features allowing them to accelerate, brake, and steer with limited or no driver input, categorized as fully or semi-autonomous).[2]

Michigan is considered a leader in automotive research, development, and production due to its automotive history, location of the headquarters for each of the "Big Three" (General Motors, Ford Motor Company, and Fiat Chrysler Automobiles US), manufacturing capabilities, higher education institutions, research and development firms, and skilled workforce. Reportedly, between 64% and 75% of the world's automotive research and development is performed in Michigan. However, automated vehicle technology is rapidly altering the current automobile industry, and is believed by some to be a change as monumental as Henry Ford's assembly line. While Michigan has a proud automotive history and is a current industry leader, other states and countries are trying to capitalize on the emerging automated vehicle market. These states, such as California, Florida, Nevada, and Texas, are paving the way for future automated vehicle research and development

[1] "Global Autonomous Cars/Driverless Cars Market Analysis & Trends - Industry Forecast to 2025", researchandmarkets.com, July 2016, retrieved 1-17-2017, at: http://www.researchandmarkets.com/research/4n6m62/global_autonomous

[2] "10 Million Self-Driving Cars will be on the Road by 2020", businessinsider.com, 1-15-2016, retrieved 1-17-2017, at: http://www.businessinsider.com/report-10-million-self-driving-cars-will-be-on-the-road-by-2020-2015-5-6

through regulatory reform and the creation of new testing facilities to entice the industry to operate within their state. Countries such as China, Germany, Great Britain, and Japan also are pursuing a leadership position within the developing field by creating research and testing centers. At the same time, many of these competitors are apparently "stealing" Michigan workforce talent for their own research purposes.

The Michigan economy derives many benefits from the State's being one of the leaders in traditional automobile research, development, and production. For example, Ford employs 47,000 people in Michigan; has 13 major manufacturing facilities located throughout the State; and uses Michigan for its product development center, research and engineering, safety and emission labs, and two test tracks. In 2015 alone, Ford purchased over $16.0 billion worth of goods and services from Michigan-based suppliers. Nexteer Automotive, a steering supplier, has its headquarters located in Michigan and employs more than 5,000 people in the State. Nexteer also claims to have invested nearly $500.0 million in productive equipment within the State. General Motors has 53,000 Michigan employees, and invested $9.3 billion in Michigan facilities over the past few years while spending billions annually on Michigan products.

Michigan cannot afford to lose its leading position in the evolving automotive industry. As previously noted, there is strong competition to become the new leader in the future automated automobile industry. The former State laws regarding automated technology were outdated when compared to the laws of competitor states. Michigan is an ideal place to research and assess automated technology because of the four-season climate, which allows for testing in all weather conditions; proper testing sites, such as Mcity (located in Ann Arbor) and the Willow Run test site (a proposed 335-acre testing facility, to be operated by the American Center for Mobility); and existing automotive manufacturing infrastructure and innate automotive knowledge. It is important for the State to reduce regulatory barriers for the industry to capitalize on such qualities and allow realistic testing of automated technologies without government interruption. By removing overly restrictive regulations, the bills will create a more attractive environment for automated research and development firms. In turn, Michigan will be more competitive with other states and countries, and will be able to remain an automotive research, development, and production leader as the industry evolves.

Response: Michigan, other states, and interested countries have an important role in the development of automated vehicle technology. A patchwork of varying, and possibly conflicting, regulations could create an environment of uncertainty for manufacturers, however. States should keep their automated vehicle laws and regulations consistent with Federal recommendations.

Supporting Argument

The automated vehicle technology that is being developed goes well beyond the "driver-assist" features (such as blind spot sensors and emergency braking) that many vehicles already employ. The existing features either assist the driver, who remains in control of the vehicle, or require some engagement or monitoring by the driver. Fully automated vehicles, on the other hand, can drive themselves.

While current driver-assist enhancements or upgraded road features, such as new rumble strips or reflective materials, support operators in driving motor vehicles safely, there are still too many injuries and fatalities on roadways. According to MDOT, there are approximately 35,000 fatalities on roads across the United States; 963 fatalities occurred in Michigan in 2015, and 267 people died from driving-under-the influence related crashes during that year. The National Highway Traffic Safety Administration stated that there was a 7.2% increase in traffic crash fatalities in 2015 from 2014, breaking a 50-year declining trend. Apparently, 94% of traffic accidents are caused by human error. Organized automated vehicles could eliminate accidents caused by human error and, therefore, would have the potential to dramatically reduce roadway accidents and fatalities. By promoting the development of these vehicles and technologies, and giving MDOT the opportunity to study automated vehicle attributes and next-generation infrastructure to accommodate such vehicles, the bills will enhance safety on future Michigan roads.

Supporting Argument
There are approximately 47.0 million Americans at or above the age of 65, which should increase as the "Baby Boomer" generation continues to age.[3] According to the Insurance Institute for Highway Safety, fatal crash rates are highest among drivers 85 years of age or older. The Institute also reports that older Americans are keeping their licenses longer and driving more frequently than in the past to retain mobility. However, a reported 79% of seniors live in areas where mobility is limited. While there are places throughout the State, such as Detroit, that are attempting to restore or update their public transportation infrastructure, they have yet to do so. People require some form of basic transportation to complete everyday tasks, such as going to the grocery store, seeing the doctor, or visiting family and friends. Automated vehicles could provide mobility to people who may not be able to drive themselves or are located in areas with limited access to public transportation. By allowing broader testing of automated vehicles, the bills will expedite their development and eventual deployment to achieve increased mobility for the elderly and those unable to drive.

Supporting Argument
One of Michigan's primary automated vehicle testing facilities, Mcity, has limited testing capacity due to its 32-acre size. California currently has the largest secure automated vehicle testing facility in the nation called GoMentum Station, a 5,000-acre repurposed military base with varied terrain and infrastructure. Michigan needs to provide the automated vehicle industry with more testing and research space. The bills allow for the reconstruction of the Willow Run site, a former factory built by Henry Ford and used to build B-24 bombers during World War II, to accommodate automated vehicle technology research and testing. The site contains 335 acres and has been dormant for years. It has varied structures and infrastructure, such as double overpasses, already in place, making it an ideal facility to test automated technologies. Development of the site will enhance Michigan's efforts to remain the leader in automobile research and development.

Opposing Argument
The bills will create unsafe driving conditions for motorists, cyclists, and pedestrians by allowing unoccupied, automated vehicles on public roadways. The vehicles should not be viewed as infallible, as technical malfunctions or programming glitches could affect driving performance and create a hazardous situation. Google, for example, has had several accidents while testing its automated vehicles. The best chance of mitigating both human and machine-operated vehicular error is through the use of both types of operators. A professional driver riding inside an automated vehicle who has the ability to override any automatic operation can ensure that the vehicle remains safe on public roads among human-operated vehicles, while still allowing for proper testing as though the vehicle were unoccupied.

Legislative Analyst: Drew Krogulecki

FISCAL IMPACT

Senate Bill 995

The bill will have an indeterminate, though likely minimal, fiscal impact on State and local government.

The bill requires the creation of a council within the State Transportation Department to make policy recommendations to promote autonomous, driverless, and connected vehicle technology. The council members will serve without compensation. It is expected that the cost of administration of the council within the Department will be minimal.

Proof of insurance for vehicles with automated driving systems will have to be submitted to the Secretary of State. It is not anticipated that there will be additional expenditures for the Secretary of State to determine that the insurance is satisfactory.

The bill will not generate additional revenue for State or local government.

[3] Statistics gathered from www.census.gov, using 2015 estimates.

Senate Bill 996

The bill will have an indeterminate, though likely negligible, fiscal impact on the State and no fiscal impact on local government.

The bill allows motor vehicle manufacturers to self-certify the automated driving networks they wish to offer to the public. The Department of State will have to receive notification of self-certification, and of the geographical boundaries for the driving networks. The Department is not required to approve the certification, or otherwise spend time or resources to monitor or regulate the driving networks. The bill will not require expenditures or redirect revenue.

Senate Bills 997 and 998

The bills will have no fiscal impact on State or local government.

Fiscal Analyst: Ryan Bergan
Michael Siracuse