



ALAN WILSON
ATTORNEY GENERAL

August 6, 2015

Warren V. Ganjehsani, Esquire
General Counsel
South Carolina Department of Public Safety
Post Office Box 1993
Blythewood, South Carolina 29016

Dear Mr. Ganjehsani:

You have requested the opinion of this Office regarding the permissibility of Delphi Automotive (“Delphi”) conducting a one-day demonstration drive of an autonomous motor vehicle through South Carolina as part of a cross-county drive from California to New York. Specifically you ask “whether any provision of Title 56 of the [South Carolina] Code of Laws would prohibit Delphi’s proposed operation” You have also provided a copy of a letter sent by Delphi to the South Carolina Highway Patrol, describing the procedure for the demonstration drive as follows:

[p]lease note that our demonstration vehicle will not be marked specifically in anyway, but will have much of the scanning equipment attached to its roof. A driver will be in front of the wheel at all times and in a position to immediately assume full control of the vehicle should any unforeseen situation occur. Our drivers have been trained and approved in accordance with the autonomous vehicle laws of California and Nevada.

Our research shows that Delphi conducted its nine day, cross-county demonstration drive beginning on March 22, 2015. As such, we will opine generally on the legality of autonomous motor vehicle testing in South Carolina under the current posture of the law.

Background

An autonomous, or self-driving, motor vehicle has been defined as one installed with autonomous technology with the capability to drive the motor vehicle without the active control or monitoring of a human operator. See Cal. Vehicle Code §38750(a)(1)-(2)(A) (2015); Fla. Stat. § 316.003(90) (2015); Mich. Comp. Laws § 257.2b (2014); Nev. Rev. Stat. §§ 482A.025, 482A.030 (2013); D.C. Code § 50-2351 (2013). An overview of the national landscape of autonomous vehicle testing, and in particular the federal and state regulation of the same, serves as a useful foundation for this opinion.

Currently, no federal regulations concerning the testing or general public operation of autonomous motor vehicles are in place. However, in May of 2013, the U.S. Department of

Transportation's National Highway Transportation Safety Administration ("NHTSA") issued a "Preliminary Statement of Policy Concerning Automated Vehicles" ("Preliminary Statement") "[t]o help states implement [autonomous] technology safely so that its full benefits can be realized." See Nat'l Highway Traffic Safety Admin., U.S. Dep't of Transp., Preliminary Statement of Policy Concerning Automated Vehicles, 1 (2013), available at http://www.nhtsa.gov/staticfiles/rulemaking/pdf/Automated_Vehicles_Policy.pdf; see also News Release, NHTSA 14-13, 2013 WL 2355041, U.S. Department of Transportation Releases Policy on Automated Vehicle Development, NHTSA (May 30, 2013). The Preliminary Statement, while non-binding, includes the NHTSA's plans for research on related safety issues and recommendations to states on autonomous motor vehicle testing, licensing, and regulation. Nat'l Highway Traffic Safety Admin., U.S. Dep't of Transp., Preliminary Statement of Policy Concerning Automated Vehicles (2013).

The NHTSA directs the recommendations made in its Preliminary Statement to state drafters of legislation and regulations governing the licensing, testing, and operation of self-driving vehicles on public roads; further, it provides the belief that states are "well suited to address issues such as licensing, driver training, and conditions for operation related to specific types of vehicles" but that it has "considerable concerns . . . about detailed state regulation on safety of self-driving vehicles." *Id.* at 10. Accordingly, the NHTSA makes the recommendation that states should not, at this time, permit the operation of self-driving vehicles for purposes other than testing. *Id.*

For safe testing, the Preliminary Statement follows with recommendations with various subparts, all made under the assumption that "the human driver of the vehicle will be employed by, or otherwise the agent of, a business or some other institution engaged in the testing and will only be using the self-driving vehicle in that capacity." *Id.* at 1, 10-14. Among other recommendations, the NHTSA suggests that states: (1) require specific driver's license endorsements, or separate driver's licenses for operators of autonomous vehicles after training or other procedure ensuring the driver understands how to operate a self-driving vehicle; (2) all in an effort to minimize risks to others, require businesses conducting the tests to have a licensed operator seated in the driver's seat with the ability to immediately assume control over the vehicle during the testing on public roads, certify that the vehicle has already been operated for a certain number of miles in self-driving mode and in traffic and environmental conditions similar to those in which it would be tested on public roads, that data from these earlier tests should be submitted to the state, that plans should be submitted demonstrating the testing entity's efforts to minimize risks to others, and require businesses that test autonomous vehicles to report information about crashes, near-crashes involving vehicles, and instances in which the vehicle prompt their human operators to assume control because of the failure of the automated system to function properly; and (3) not permit the operation of autonomous motor vehicles for any purpose other than testing at this time. *Id.* at 11-14; see also William J. Kohler & Alex Colbert-Taylor, Current Law and Potential Legal Issues Pertaining to Automated, Autonomous and Connected Vehicles, 31 Santa Clara High Tech. L.J. 99, 108-111 (2015) (providing a detailed summary of the recommendations included in the NHTSA's Preliminary Statement).

The Preliminary Statement also makes recommendations in regards to the "Basic Principles for Testing of Self-Driving Vehicles," cautioning that states should not develop their

own detailed safety regulations due to the rapid evolution and wide variations in self-driving technologies. Nat'l Highway Traffic Safety Admin., U.S. Dep't of Transp., Preliminary Statement of Policy Concerning Automated Vehicles, 12-14 (2013). The vehicle safety standards recommended include: (1) ensuring that “the Process for Transitioning from Self-Driving Mode to Driver Control is Safe, Simple, and Timely;” (2) having “the Capability of Detecting, Recording, and Informing the Driver that the System of Automated Technologies has Malfunctioned;” (3) ensuring that “Installation and Operation of any Self-Driving Vehicle Technologies Does not Disable any Federally Required Safety Features or Systems;” and (4) “Record[ing] Information about the Status of the Automated Control Technologies in the Event of a Crash or Loss of Vehicle Control.” Id.

The NHTSA's Preliminary Statement highlights the benefits of autonomous motor vehicles. Id. at 1. The focus centers on “the enormous safety potential of these new technologies” but also notes the advantages benefiting the environment, the economy, and overall mobility. Id. To help ensure advancement of autonomous vehicle technology, the Preliminary Statement advises that “all interested parties need to work cooperatively.” Id.

To date, we are aware of five states that have enacted legislation authorizing the testing of autonomous motor vehicles. Nevada was the first state to do so in May of 2012; thereafter, California, Florida, the District of Columbia, and most recently in January 2014, Michigan, have passed similar laws. See Nev. Rev. Stat. § 482A.025 et seq. (2013); Cal. Vehicle Code § 38750 (2015); Cal. Code Regs. tit. 13 §§ 227.00-.52 (2014); Fla. Stat. §§ 316.85- 316.86, 319.145 (2014); D.C. Code § 50-2351- § 50-2354 (2013); Mich. Comp. Laws § 257, Ch. VI et seq. (2014). Even though three of the five states passed legislation prior to the NHTSA's Preliminary Statement, all laws generally follow the recommendations made in the Preliminary Statement. All five states require licensing of the vehicle's human operator¹ and prior approval from the state authorizing the testing company to drive an automated vehicle on public roads². Stipulations for insurance,³ safety mechanisms,⁴ and a human operator during testing procedures⁵ have also been implemented. Some states have chosen to address liability for autonomous technology defects,⁶ and future non-testing operation and regulatory action^{7, 8}.

¹ Nev. Rev. Stat. § 482A.200; Cal. Code Regs. tit. 13, § 227.20; Fla. Stat. §§ 316.85- 316.86 (2014); D.C. Code § 50-2351-§50-2352 (2013); Mich. Comp. Laws § 257.665, Ch. VI (2014).

² Nev. Rev. Stat. § 482A.200; Cal. Code Regs. tit. 13, § 227.04, § 227.28; Fla. Stat. § 316.86 (2014); D.C. Code § 50-2351-§50-2354 (2013); Mich. Comp. Laws § 257.665, Ch. VI (2014).

³ Nev. Rev. Stat. § 482A.060; Cal. Code Regs. tit. 13, § 227.08; Fla. Stat. § 316.86 (2014); Mich. Comp. Laws § 257.665(1), Ch. VI (2014).

⁴ Nev. Rev. Stat. § 482A.080(2)(a)-(c); Cal. Code § 38750(c); Fla. Stat. § 319.145 (2014); D.C. Code § 50-2352 (2013); Mich. Comp. Laws § 257.665(2)(b), Ch. VI (2014).

⁵ Nev. Rev. Stat. § 482A.070; Cal. Code § 38750(b)(1)-(2); Fla. Stat. §§ 316.85(2)- 316.86(1) (2014); D.C. Code § §50-2352(2) (2013); Mich. Comp. Laws § 257.665(2)(b)-(c), Ch. VI (2014).

⁶ Nev. Rev. Stat. § 482A.090; Cal. Code Regs. tit. 13, § 227.36; Fla. Stat. § 316.86(2) (2014); D.C. Code § 50-2353(a) (2013); Mich. Comp. Laws § 600.2949b (2014).

⁷ Nev. Rev. Stat. § 482A.100; Cal. Veh. Code § 38750(c)-(d); Vehicles with Autonomous Technology Act, ch. 2012-111, §§ 1(2), 5(3), [2012] Fla. Laws 1223.

⁸ For a detailed description of the legislation that each of the five states that currently have autonomous vehicle legislation have enacted, see William J. Kohler & Alex Colbert-Taylor, Current Law and Potential Legal Issues Pertaining to Automated, Autonomous and Connected Vehicles, 31 Santa Clara High Tech. L.J. 99, 111-120 (2015).

Law/Analysis

As you note in your opinion request, a bill was introduced in the South Carolina General Assembly in 2013 related to the testing of autonomous motor vehicles. See H.R. 4015, 120th Gen. Assem., Reg. Sess. (S.C. 2013). However, to date, nothing on the subject has been enacted. Thus, reviewing the law as it currently stands, it is our belief that South Carolina law does not prohibit, nor does it expressly authorize, the testing of autonomous motor vehicles on our public roads. As such, the most prudent course of action would have been to await the General Assembly's enactment of legislation on the subject prior to the testing, or operation of any kind, of autonomous motor vehicles in our State. However, from the perspective of an autonomous motor vehicle being tested by a licensed driver engaged and behind the wheel at all times, as is recommended by the NHTSA's Preliminary Statement and which was followed by Delphi during its recent demonstration drive, we believe an autonomous motor vehicle would classify as a motor vehicle and its test driver would classify as a driver, as defined by the South Carolina Code. Therefore, under the aforementioned testing conditions, it is our opinion that the testing conducted in our State was permissible so long as the various requirements imposed on drivers and motor vehicles operating on our State's highways were complied with.

For purposes of Title 56 governing motor vehicles, unless otherwise defined, the term "motor vehicle" is defined as "[e]very vehicle which is self-propelled and every vehicle which is propelled by electric power obtained from overhead trolley wires, but not operated upon rails." S.C. Code Ann. § 56-1-10(7) (Supp. 2014). For purposes of Chapter 3 of Title 56, concerning Motor Vehicle Registration and Licensing, S.C. Code Ann. § 56-3-20(2) (2006) defines the term "motor vehicle" as "[e]very vehicle which is self-propelled, except mopeds, and every vehicle which is propelled by electric power obtained from overhead trolley wires, but not operated upon rails." The same definition is provided by S.C. Code Ann. § 56-5-130 (2006) for purposes of Chapter 5 of Title 56 – the Uniform Act Regulating Traffic on Highways. Because an autonomous motor vehicle is self-propelled, it is our opinion that it would fall within each of these definitions. Furthermore, for purposes of Title 56, unless otherwise defined, S.C. Code Ann. § 56-1-10(1) (Supp. 2014) defines "driver" as "every person who *drives or* is in *actual physical control* of a vehicle. (emphasis added). The same definition is provided in S.C. Code Ann. § 56-5-400 (2006), for purposes of the Uniform Act Regulating Traffic on Highways. As the definition of "driver" specifies that one can be classified as a driver if driving *or* if in actual physical control of the vehicle, it follows that the act of driving itself is not the only way by which to classify as a "driver." One in "actual physical control" of the vehicle also meets the definition's requirements. With a driver engaged behind the wheel at all times ready to switch the controls from self-driving mode to driver control if necessary, it is our opinion that the test driver of an autonomous motor vehicle would have "actual physical control" of the vehicle for purposes of the term "driver", within Title 56 of the South Carolina Code.

Looking to the requirements imposed on "drivers" and "motor vehicles" operated on our State's highways, S.C. Code Ann. § 56-3-110 (2006) establishes motor vehicle licensing and registration requirements, stating: "[e]very motor vehicle . . . driven, operated or moved upon a highway in this State shall be registered and licensed in accordance with the provisions of this chapter." However, there are certain exemptions from the registration and licensing

requirements, including an exemption for nonresidents contained in S.C. Code Ann. § 56-3-150(A) (2006 & Supp. 2014). Such provision provides that:

[a] foreign privately owned and operated passenger vehicle of a nonresident, otherwise subject to registration and license as provided by this chapter, may be operated within this State without being registered and licensed pursuant to this chapter, subject to the conditions that at all times when operated in this State the vehicle:

- (1) is duly registered or licensed in the state, territory, district, or country of residence of the owner, and
- (2) has displayed on it a valid registration card and registration or license plate or plates.

S.C. Code Ann. § 56-3-150(A) (2006 & Supp. 2014).

Furthermore, Section 56-1-20 requires that all drivers in our State possess a valid motor vehicle driver's license. See S.C. Code Ann. § 56-1-20 (2006 & Supp. 2014) ("No person, except those expressly exempted in this article shall drive any motor vehicle upon a highway in this State unless such person has a valid motor vehicle driver's license issued to him under the provisions of this article."). A nonresident of the State, however, who is at least 16 years of age and who has in his immediate possession a valid operator's or chauffer's license issued to him in his home state or country, is exempt from this requirement. S.C. Code Ann. § 56-1-30(2) (2006 & Supp. 2014).

S.C. Code Ann. § 56-5-4410 (2006) prohibits any person from driving or moving a vehicle on a highway in an unsafe condition or that does not have the proper equipment required by Title 56, Article 35, Chapter 5, including, but not limited to, lights, breaks, steering, horns; mirrors, tires, or mufflers. See, e.g., S.C. Code Ann. §§ 56-5-4450 (lights); 56-5-4850 (breaks); 56-5-4950 (horns); 56-5-4990 (mirrors); 56-5-5020 (mufflers); 56-5-5040 (tires).

Finally, we note that S.C. Code Ann. § 56-10-10 *et seq.* (2006 & Supp. 2014) requires that liability insurance, or other type of approved security, be maintained for all motor vehicles required to be registered.

Pursuant to the requirements described above, for any vehicle to be operated upon the highways of this State, including an autonomous motor vehicle operated for testing purposes with a driver engaged behind its wheel, such vehicle must meet the various requirements for motor vehicles and drivers operating on our State's highways. This includes being properly registered, licensed, equipped, and insured, or otherwise exempt from such requirements, if applicable.

In regards to Delphi's demonstration drive, it appears the driver would have classified as a nonresident and the vehicle would have therefore classified as a vehicle of a nonresident, making the driver and motor vehicle exempt from South Carolina's licensing and registration

requirements if the requirements for exemption, as described above, were satisfied. It also appears the autonomous motor vehicle used during Delphi's demonstration drive was driven through California and Nevada, both of which have autonomous motor vehicle laws. As such, and as the letter sent by Delphi to the South Carolina Highway Patrol notes, the demonstration drivers were trained and licensed according to the Nevada and California autonomous motor vehicle laws. In addition to special driver's license certification, compliance with these laws would also necessitate submitting proof of insurance for \$5,000,000 prior to testing. Assuming the autonomous vehicle used during the demonstration drive was also properly registered and was safely equipped, it is our opinion that the one day demonstrative drive through South Carolina was permissible. But, as noted above, the most prudent course of action would have been to await legislative action on the subject of autonomous motor vehicle testing and operation.

In reaching this conclusion, we are in no way recommending that the South Carolina Department of Motor Vehicles should begin providing licensing and registration to autonomous motor vehicles for testing purposes without legislation in place governing the subject. Delphi's demonstration drive illustrates that autonomous motor vehicle technology is ahead of the law in place on the subject in South Carolina at this time. To ensure public safety while also encouraging research and innovation for motor vehicle autonomy, we strongly encourage legislation closely following the recommendations provided by the NHTSA's Preliminary Statement be enacted prior to the licensing and registration of autonomous motor vehicles for testing purposes in South Carolina.

Conclusion

Currently, South Carolina law neither prohibits nor expressly authorizes the testing of autonomous motor vehicles on public roads in our State. However, if a licensed driver is seated and engaged behind the wheel ready to take control of vehicle, we believe an autonomous motor vehicle would classify as a motor vehicle and its test driver would classify as a driver, as defined by Title 56 of the South Carolina Code. Therefore, under such procedures, it is our opinion that a court would likely find that testing of an autonomous motor vehicle could be conducted in our State so long as the various requirements imposed on drivers and motor vehicles operating on our State's highways are complied with. This would include proper licensing of the driver and vehicle, registration, equipment, and insurance, or classifying for an exemption from such requirements eligible for exemption, such as the non-resident exemptions from licensing and registration which appear to have been applicable to the Delphi demonstration vehicle and its driver, as discussed above. While reaching this conclusion, the most prudent course of action would have been to await the General Assembly's enactment of legislation on the subject prior to the testing of an autonomous motor vehicle in our State.

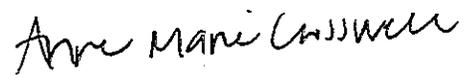
Prior to issuing licenses and registration to autonomous motor vehicles for testing purposes in our State, we stress the importance of legislation closely following the recommendations provided by the NHTSA's Preliminary Statement to ensure the safety of South Carolina citizens and help see that the potential benefits hoped to be derived from autonomous motor vehicle testing are realized.

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Very truly yours,



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