



July 22, 2021

Secretary Pete Buttigieg  
U.S. Department of Transportation  
1200 New Jersey Avenue SE  
West Building Ground Floor, Room W12-140  
Washington, DC 20590-0001

**Re: Request for Information on Transportation Equity Data, Docket No. DOT-OST-2021-0056, 86 Fed. Reg. 28189**

Dear Secretary Buttigieg,

The Self-Driving Coalition for Safer Streets (“the Coalition”), an organization of leading autonomous vehicle companies, welcomes the opportunity to provide these comments in response to the Department of Transportation’s (“DOT”) Request for Information on Transportation Equity published in the Federal Register on May 25, 2021.

**Background on Coalition**

The Self-Driving Coalition is comprised of the world’s leading technology, ridesharing, trucking, and automotive companies and is dedicated to the safe and swift deployment of fully autonomous vehicles. Members include Argo AI, Aurora, Cruise, Embark, Ford, Kodiak, Lyft, Motional, Nuro, TuSimple, Uber, Volvo Cars, Waymo, and Zoox.<sup>1</sup> Our mission is to advance and promote the benefits of fully autonomous vehicles (*i.e.*, vehicles equipped with an automated driving system designed to function without a human driver as a level 4 or 5 system under SAE J3016) and support the safe and rapid deployment of these innovative and potentially life-saving technologies.

The United States is home to millions of individuals—including seniors and those with visual or mobility impairments—who would benefit greatly from the increased safety and mobility that fully autonomous vehicles (“AVs”) would provide. Likewise, AVs have the potential to connect underserved communities to resources and jobs previously unavailable to them. Moreover, self-driving technology has the potential to usher in a new era of mobility, with incredible opportunities to make America’s transportation system safer, more efficient, and better connected.

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<sup>1</sup> See SELF-DRIVING COAL. FOR SAFER STS., <https://www.selfdrivingcoalition.org/> (last visited July 22, 2021).



## **I. AVs Will Improve Transportation Safety**

AVs represent an opportunity to reduce the estimated 94% of all crashes that are due to human error, including reckless, drunk, and distracted driving.<sup>2</sup> Those crashes, and the injuries and deaths they cause, are not evenly distributed across economic and racial groups. A June 2021 analysis by the Governors Highway Safety Association highlighted the significant differences in traffic deaths by race and ethnicity, with deaths among American Indian/Alaska Natives and Black populations all higher than the national average.<sup>3</sup> The analysis also shows that pedestrian deaths were higher than the national average for American Indian/Alaska Native, Black, and Hispanic individuals.<sup>4</sup> The problem has recently been exacerbated, with the National Highway Traffic Safety Administration's ("NHTSA") 2020 early estimates showing traffic fatalities of Black people up 23% over 2019, while American Indian deaths rose 11%.<sup>5</sup>

Census tracts within metropolitan areas with low per capita income had more than double the pedestrian fatalities than those with high income.<sup>6</sup> Both of these patterns are echoed in a 2017 City of Chicago report showing that Black residents and those with a high level of economic hardship were overall more likely to die in a traffic crash.<sup>7</sup> By reducing crashes across the board AVs can reduce these inequalities and improve the quality of life for countless communities.

## **II. The Deployment of AVs Will Better Connect Underserved Communities to Resources and Jobs**

The widespread deployment of AVs will help connect communities and individuals to the resources and jobs they need to thrive. Specifically, AVs may allow individuals who previously had low or no access to a personal vehicle or transit system the freedom to move through the world or enable goods and services to be more easily brought to them.

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<sup>2</sup> Press Release, U.S. DOT Releases 2016 Fatal Traffic Crash Data (Oct. 6, 2017), <https://www.nhtsa.gov/press-releases/usdot-releases-2016-fatal-traffic-crash-data> (noting that human choices are linked to 94% of serious crashes).

<sup>3</sup> GOVERNORS HIGHWAY SAFETY ASS'N, AN ANALYSIS OF TRAFFIC FATALITIES BY RACE AND ETHNICITY 8 (2021), <https://www.ghsa.org/sites/default/files/2021-06/An%20Analysis%20of%20Traffic%20Fatalities%20by%20Race%20and%20Ethnicity.pdf>.

<sup>4</sup> *Id.* at 14.

<sup>5</sup> NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., DOT HS 813 118, EARLY ESTIMATES OF MOTOR VEHICLE TRAFFIC FATALITIES AND FATALITY RATE BY SUB-CATEGORIES IN 2020 8 (2021), <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813118>.

<sup>6</sup> GOVERNING, AMERICA'S POOR NEIGHBORHOODS PLAGUED BY PEDESTRIAN DEATHS 2 (2014), [http://media.navigatore.com/documents/Governing\\_Pedestrian\\_Fatalities\\_Report.pdf](http://media.navigatore.com/documents/Governing_Pedestrian_Fatalities_Report.pdf).

<sup>7</sup> VISION ZERO CHI., ACTION PLAN 2017-2019 17, [https://visionzerochicago.org/wp-content/uploads/2016/05/17\\_0612-VZ-Action-Plan\\_FOR-WEB.pdf](https://visionzerochicago.org/wp-content/uploads/2016/05/17_0612-VZ-Action-Plan_FOR-WEB.pdf).



### A. *Transit and Food Deserts*

AVs can provide vital connections to transit deserts, areas with high demand but low supply of transportation.<sup>8</sup> Access to transportation and average length of commute are connected to upward mobility,<sup>9</sup> and studies have found links between public transit access, income, and unemployment.<sup>10</sup> AVs have the potential to shrink or eliminate gaps in transportation access by improving integration with mass transit, whether by providing both first mile/last mile connections to transit, servicing direct trips to workplaces and elsewhere, or by generally creating a greater supply that helps free up other transportation options (conventional or AV) to build those linkages. Through all of these means, AVs will further connect Americans with a variety of key features of their community, improving access and quality of life.

Access to food is another area of inequality that AVs have the potential to help alleviate. Transit deserts often overlap with food deserts, which are defined as areas with high poverty (20% or greater) and low access to food (at least 33% of people living more than 1 mile from a grocery store or supermarket).<sup>11</sup> A 2017 report by the U.S. Department of Agriculture’s (“USDA”) Economic Research Service (“ERS”) estimates that 54 million individuals, or 17.1 percent of the total U.S. population, had limited access to a supermarket or grocery store between 0.5 and 10 miles from their home.<sup>12</sup> The COVID-19 pandemic has increased overall food insecurity (the lack of access to food due to financial constraints) across the nation, with projections suggesting that up to 42 million (1 in 8) people in the U.S. may experience food insecurity in 2021.<sup>13</sup>

AVs may be especially useful for improving access to food as they can both bring people to previously inaccessible or difficult to access supermarkets and grocery stores, and also bring the food directly to their door. AV companies are already standing up to use their vehicles to do so, such as with Cruise delivering over 1 million meals to food-insecure families in San Francisco, TuSimple utilizing automated trucks to deliver more than 3.5 million pounds of food (2.7 million meals) for food banks in Arizona, and Nuro vehicles helping the Houston Food Bank

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<sup>8</sup> *Frequently Asked Questions*, TRANSIT DESERT RSCH., <http://www.transitdeserts.org/faq.html> (last visited July 22, 2021).

<sup>9</sup> Mikayla Bouchard, *Transportation Emerges as Crucial to Escaping Poverty*, N.Y. TIMES (May 7, 2015), <https://www.nytimes.com/2015/05/07/upshot/transportation-emerges-as-crucial-to-escaping-poverty.html>.

<sup>10</sup> Gillian D. White, *Stranded: How America’s Failing Public Transp. Increases Inequality*, ATL. MONTHLY (May 16, 2015), <https://www.theatlantic.com/business/archive/2015/05/stranded-how-americas-failing-public-transportation-increases-inequality/393419/>.

<sup>11</sup> Michele Ver Ploeg, et al., *Mapping Food Deserts in the United States* (Dec. 1, 2011), <https://www.ers.usda.gov/amber-waves/2011/december/data-feature-mapping-food-deserts-in-the-us/>.

<sup>12</sup> ECON. RSCH. SERV., U.S. DEP’T OF AGRIC., EIB-165, LOW-INCOME AND LOW-SUPERMARKET-ACCESS CENSUS TRACTS, 2010-2015 12 (2017), <https://www.ers.usda.gov/webdocs/publications/82101/eib-165.pdf?v=3395.3>.

<sup>13</sup> FEEDING AM., THE IMPACT OF THE CORONAVIRUS ON FOOD INSECURITY IN 2020 & 2021 1 (2021), [https://www.feedingamerica.org/sites/default/files/2021-03/National%20Projections%20Brief\\_3.9.2021\\_0.pdf](https://www.feedingamerica.org/sites/default/files/2021-03/National%20Projections%20Brief_3.9.2021_0.pdf).



keep people fed in Texas. With wider deployment AVs could help improve access to fresh food for 14 million low-income households, roughly 70% of the total low-income population living in food deserts.<sup>14</sup> And here also, just the addition of safe and affordable options into the transportation ecosystem helps free up capacity to execute on these trips.

### ***B. People with Disabilities***

AV deployment offers people with disabilities a new option to connect with the world around them. The U.S. Department of Transportation's own studies put the number of Americans with travel-limiting disabilities at 25.5 million.<sup>15</sup> These difficulties are often due to a lack of accessible or convenient public transportation or an inability to operate their own vehicle, as is the case for the over 7.6 million Americans over the age of 16 who have significant vision loss.<sup>16</sup> This lack of transportation has an employment impact as well - overall only 17.5% of people with disabilities are employed, compared to 65% of people without a disability.<sup>17</sup>

AVs have the potential to allow people with disabilities greater freedom to move about the world on their own schedule. Mobility as a Service ("MaaS") offerings such as AVs can help improve transportation for individuals who would have trouble driving on their own. For low vision individuals, companies like Lyft, through a partnership with Aptiv and the National Federation of the Blind have worked to create Braille guides for AV riders. Likewise, in Arizona, Waymo has highlighted the use of its AVs by vision impaired people of all ages.

### ***C. Seniors***

Older populations are yet another group who will benefit from the deployment of AVs. The number of Americans over the age of 65 grew by 34% between 2010 and 2020,<sup>18</sup> with 2019 estimates putting their total population at 46.2 million (10.6 million in rural areas alone).<sup>19</sup> By 2030, that number will grow to more than 70 million, or roughly 20% of the population.<sup>20</sup> While transportation challenges can vary greatly between individuals, roughly 600,000 older adults a

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<sup>14</sup> Sola Lawal, *Serving America's Food Deserts*, MEDIUM.COM (July 15, 2020), <https://medium.com/nuro/serving-americas-food-deserts-a7442e922053>.

<sup>15</sup> *Accessibility*, U.S. DEP'T OF TRANSP. (July 29, 2020) <https://www.transportation.gov/accessibility>.

<sup>16</sup> *Blindness Statistics*, NAT'L FED'N OF THE BLIND, <https://nfb.org/resources/blindness-statistics> (last visited July 22, 2021).

<sup>17</sup> Econ. News Release, U.S. Bureau of Labor Stat., *Persons with a Disability: Labor Force Characteristics Summary* (Feb. 24, 2021), <https://www.bls.gov/news.release/disabl.nr0.htm>.

<sup>18</sup> Press Release, U.S. Census Bureau, *65 and Older Population Grows Rapidly as Baby Boomers Age* (June 25, 2020), <https://www.census.gov/newsroom/press-releases/2020/65-older-population-grows.html>.

<sup>19</sup> AMY SYMENS SMITH AND EDWARD TREVELYAN, U.S. CENSUS BUREAU, *ACS-41, THE OLDER POPULATION IN RURAL AMERICA: 2012-2016* (2019), <https://www.census.gov/library/publications/2019/acs/acs-41.html>.

<sup>20</sup> Dabid Dudley, *The Driverless Car is (Almost) Here*, AARP THE MAG. (Dec.2014/Jan. 2015), <http://www.aarp.org/home-family/personal-technology/info-2014/google-self-driving-car.html>.



year give up driving, with many more changing their driving habits as they age.<sup>21</sup> Studies have shown that older Americans without access to a car make 15% fewer trips to the doctor and 65% fewer trips to visit friends and family.<sup>22</sup>

Yet again, AVs are well positioned to assist older Americans as they navigate the world. As more people “age in place” by staying in their own homes and communities, on-demand AVs could carry them to doctor appointments and shopping trips, and help them visit friends and family.<sup>23</sup> AVs can also provide similar connections to the residents of retirement communities. AVs can keep millions of older Americans connected to their families and communities and allow them to retain their independence without risking their safety.

#### ***D. Rural Communities***

AVs are also a useful tool in rural communities, which face many of the same problems as urban and suburban ones, with the added issue of individuals often having to travel much farther to take care of their needs. Rural areas are threatened by food deserts while also facing motor vehicle death rates 3 to 10 times higher than other areas.<sup>24</sup> NHTSA’s early estimates project an 11% increase in rural road deaths in 2020,<sup>25</sup> while 2017 numbers show more than half of all passenger vehicle occupant deaths occur on rural roads.<sup>26</sup> Additionally, the over 10 million people over 65 who live in rural areas face diminishing transportation options as they age in place. In rural areas, AVs are positioned to provide the same safety and mobility improvements as they will elsewhere and improve the quality of life for residents across the country.

### **III. AV Deployment Will Stimulate the Economy for All**

Just as they can improve the quality of life for individuals and communities across the nation, AVs have significant economic promise that will touch all of our lives. Estimates indicate that economy-wide AV trucking adoption alone would raise earnings of all US workers by between \$203 and \$267 a year, while creating 26,400 to 35,100 jobs a year, depending on

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<sup>21</sup> *Transportation*, NATIONAL ASS’N OF AREA AGENCIES ON AGING, <https://www.n4a.org/transportation> (last visited July 22, 2021).

<sup>22</sup> TRANSP. FOR AM., AGING IN PLACE, STUCK WITHOUT OPTIONS: FIXING THE MOBILITY CRISIS THREATENING THE BABY BOOM GENERATION (2011), <https://t4america.org/docs/SeniorsMobilityCrisis.pdf>.

<sup>23</sup> Dudley, *supra* note 21.

<sup>24</sup> *Passenger Vehicle Occupant (PVO) Deaths and Seat Belt Use among Rural Americans*, CTR. FOR DISEASE CONTROL (Sept. 20, 2017), <https://www.cdc.gov/ruralhealth/motorvehicle/policybrief.html>.

<sup>25</sup> NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 5 at 1.

<sup>26</sup> *Id.*



how quickly it can be adopted.<sup>27</sup> Other projections indicate the adoption of AVs would increase access to jobs within a metropolitan area by 45% by 2040.<sup>28</sup> For consumers AVs have the potential to dramatically reduce the cost of deliveries - with some pilots costing only \$5.95 per grocery delivery, down from \$20-30 in added costs for existing delivery services.<sup>29</sup> Transportation costs are the second-largest expense for most households, and AV transportation can reduce average household costs by as much as \$5,600 per person.<sup>30</sup> By creating jobs, reducing costs, and connecting more people to employment the economic benefit of AVs will be significant.

### Conclusion

Automated vehicles represent a significant opportunity to help alleviate transportation equity issues across the nation. AVs can improve the lives of underserved communities, people with disabilities, and the elderly by providing safe and reliable transportation to jobs, healthcare, food, and loved ones. They will lower costs, raise annual earnings, and create new jobs. Any discussion or solution to transportation equity issues should include AVs and how they can be utilized to improve the quality of life for us all. Thank you for your consideration, and we look forward to continuing to engage with the Department on these important issues.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ariel S. Wolf". The signature is fluid and cursive, with a long tail on the final letter.

Ariel S. Wolf  
General Counsel  
Self-Driving Coalition for Safer Streets

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<sup>27</sup> U.S. DEP'T OF TRANSP., FWHA-JPO-21-847, MACROECONOMIC IMPACTS OF AUTOMATED DRIVING SYSTEMS IN LONG-HAUL TRUCKING (2021),

[https://rosap.ntl.bts.gov/pdfjs/web/viewer.html?file=https://rosap.ntl.bts.gov/view/dot/54596/dot\\_54596\\_DS1.pdf](https://rosap.ntl.bts.gov/pdfjs/web/viewer.html?file=https://rosap.ntl.bts.gov/view/dot/54596/dot_54596_DS1.pdf).

<sup>28</sup> RICHARD EZIKE ET. AL., WHERE ARE SELF-DRIVING CARS TAKING US? 6 (2019),

<https://ucsusa.org/sites/default/files/attach/2019/02/Where-Are-Self-Driving-Cars-Taking-Us-web.pdf>.

<sup>29</sup> STEER, ECONOMIC IMPACTS OF AUTONOMOUS DELIVERY SERVICES IN THE U.S. xi (2020),

[https://www.steergroup.com/sites/default/files/2020-09/200910\\_%20Nuro\\_Final\\_Report\\_Public.pdf](https://www.steergroup.com/sites/default/files/2020-09/200910_%20Nuro_Final_Report_Public.pdf).

<sup>30</sup> SAFE, FOSTERING ECONOMIC OPPORTUNITY THROUGH AUTONOMOUS VEHICLE TECHNOLOGY (Jul 16, 2020)

<https://secureenergy.org/fostering-economic-opportunity-through-autonomous-vehicle-technology-2/>.