

1612 K STREET NW, SUITE 308 WASHINGTON, DC 20006 202-822-1333 | 202-822-1334 fax

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June 7, 2023

The Honorable Ann Carlson Acting Administrator National Highway Traffic Safety Administration 1200 New Jersey Avenue, SE Washington, D.C. 20590

Re: Side Underride Guards; Advance Notice of Proposed Rulemaking; Docket No. NHTSA-2023-0012

Dear Acting Administrator Carlson:

Thank you for the opportunity to comment on the National Highway Traffic Safety Administration (NHTSA)'s Advanced Notice of Proposed Rulemaking (ANPRM) for side underride guards on large trucks. The League of American Bicyclists believes these guards are needed because 11 percent of bicyclists and 7 percent of pedestrian roadway fatalities occur in crashes with large trucks. From 2016-2020, 2,745 vulnerable road users died in crashes with large trucks.¹

Since 1880, the League of American Bicyclists has been people-powered, with a goal to make bicycling safer and easier as a means of transportation and recreation. Today, the League continues to improve lives and strengthen communities through bicycling. We are more than 200,000 members and supporters strong with more than 1,200 state and local advocacy groups and bike clubs as well as thousands of businesses, universities, and communities together leading the movement to create a Bicycle Friendly America for everyone. Improving truck safety is critical to improving bicyclists' safety.

We are dismayed by NHTSA's failure to include the 2,745 nonmotorized fatalities in its costbenefit analysis of large truck side underride guards, especially given the Administration's focus on reducing VRU fatalities through the National Roadway Safety Strategy. Similar to VRUs, NHTSA also did not consider how side underride guards may lower the fatalities of motorcyclists in crashes with trucks. Between 2016-2020, 1462 motorcyclists also died in crashes with large trucks.

https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2022-01/FMCSA%20Pocket%20Guide%202021.pdf 2022 version, Published December 2022-

https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2023-02/FMCSA%20Pocket%20Guide%202022-FINAL%205 08%20121922.pdf

¹ Federal Motor Carrier Safety Administration, 2021 2022 Pocket Guide to Large Truck and Bus Statististics. 2021 version published December 2021-

By not accounting for the lives of nonmotorized users, NHTSA is dismissing the most vulnerable of all road users and those with the highest likelihood of being killed in crashes with large trucks. In a 2014 letter from the National Transportation Safety Board (NTSB) to NHTSA about recommendations for truck safety regarding VRUs, the NTSB stated, "death rates of vulnerable road users involved in collisions with tractor-trailers were high: 152.8 per 1,000 involved pedestrians/cyclists and 119.5 per 1,000 involved motorcyclists. In comparison, death rates were 2.0 per 1,000 involved tractor trailer occupants and 10.9 per 1,000 involved passenger vehicle occupants."²

The NTSB's 2019 report on bicyclist safety referred back to the safety recommendations in that 2014 report regarding the importance of addressing vulnerable road users and truck safetynoting the status of response five years later was "Open: Unacceptable response." Today, nine full years after the NTSB first made recommendations to NHTSA regarding large trucks and VRUs' safety, the recommendation remains "Open- Unacceptable Response."³

The National Roadway Safety Strategy states that in meeting the goals of getting to zero fatalities, "The role of vehicle safety performance in avoiding or mitigating the harm of crashes cannot be overstated." Yet well-proven vehicle safety measures for large trucks and VRUs are not addressed in either this rule or the one on large truck automatic emergency braking.

If we look at the data from the 2014 NTSB study we can estimate that requiring side guards on tractor trailers would save between 20-28 lives of vulnerable road users. That study looked at tractor- trailer - VRU crashes during the years 2005-2009 looked at individual crash data and found:

- 55 percent of pedestrian fatalities and 48 percent of bicyclist fatalities from crashes with large trucks were with tractor trailers, and
- In crashes with tractor-trailers, 55 percent of bicyclist fatalities and 29 percent of pedestrian fatalities start with a side impact.⁴
- This resulted in 221 pedestrian fatalities (or 44/year) and 100 bicyclist fatalities (or 20/year) from tractor trailer crashes, where the first impact was with the side of the truck.
- A more recent study by the US DOT Volpe Center (Volpe), found that side guards are 55-75 percent effective in reducing bicyclist fatalities and 20-29 percent effective in reducing pedestrian fatalities.
- Using those numbers, side underride guards on tractor trailers that meet US DOT Volpe Standards for side guards could have saved between 20-28 vulnerable road users lives per year, during the 2005-2009 period.
- The study also identified an average of 56 motorcyclist fatalities a year due to side impact crashes with tractor trailer trucks.

Unfortunately, the NTSB study is almost 15 years old and we know VRU fatalities from large truck crashes have been increasing. During the five years covered by the NTSB study, there were

² Letter from NTSB to NHTSA on tractor trailers and cyclists and pedestrians. April 23, 2014 H-14- 001-007. <u>https://www.ntsb.gov/safety/safety-recs/RecLetters/H-14-001-007.pdf</u>

³ National Transportation Safety Board, Carol Query System of recommendations. <u>https://data.ntsb.gov/carol-main-public/basic-search</u>

⁴ Letter from NTSB to NHTSA on tractor trailers and cyclists and pedestrians. April 23, 2014 H-14- 001-007. https://www.ntsb.gov/safety/safety-recs/RecLetters/H-14-001-007.pdf

a total of 1,746 nonmotorized fatalities due to crashes with large trucks while the 2016-2020 period there were 2,745 fatalities - an almost 40 percent increase.

Serious Injuries

Between 2016-2021, the FARS database shows that crashes with large trucks resulted in 3,330 bicyclist injuries (396 incapacitated), 6,169 pedestrian injuries (1,402 incapacitated), and 4,532 other non-motorist injuries (303 incapacitated). Reports on sideguard effectiveness in reducing injuries vary with Volpe finding that 3-17 percent of bicyclists' serious injuries could be mitigated with Volpe compliant side guards. We request that NHTSA also look at the potential underreporting of serious injuries in FARS data - particularly before the 2019 federal definition was implemented.

The League of American Bicyclists requests that NHTSA reevaluate the cost-benefit analysis to include fatalities and serious injuries of vulnerable road users and motorcyclists in its rule making of side underride guards. In doing so, we ask that you also revisit the accuracy of FARS data for VRU- large truck crashes.

The League would also echo concerns of other commenters, and asks NHTSA to review their methodology to:

- Consider all large trucks, and not just tractor trailers. Side underride guards on single unit trucks would increase the lives saved of vulnerable road users and others.
- Review the metrics around vehicle speed to consider not just travel speed of the vehicle but the speed differential between a truck and a vehicle as included in NHTSA's 2018 simulations that demonstrate side guards would be effective up to 50 mph.⁵
- Include crashes that occur at an oblique angle, particularly those with a speed differential of >40 mph. In a majority of underride collisions, the passenger vehicle is moving in a forward orientation towards the semitrailer, making contact at an oblique angle. During an oblique impact with a side underride guard, the objective is to contain and redirect the impacting vehicle. The redirected vehicle has an exit velocity and, thus, not all of the energy of the vehicle must be dissipated by the guard.
- Include crashes that involve more than one truck and one passenger vehicle, rather than limit the data set to two-vehicle crashes. The 2012 Insurance Institute for Highway Safety's Large Truck Crash Causation Study (LTCCS) identified 73 cases in which the most severe injury to a passenger vehicle occupant was due to side underride. One quarter of these cases (18 of 73) involved more than two vehicles. ⁶
- Review the cost of including side underride guards to new trucks, which is less expensive than the cost of retrofitting trucks, and include the Utility Trailer option, and any other options, along with the AngelWing.

⁵ National Highway Traffic Safety Administration, *Computer Modeling and Evaluation Of Side Underride Protective Device Designs*, April 2018, <u>https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/13611_supd_report_041118_v4-tag.pdf</u>

⁶ Brumbelow, Matthew, Insurance Institute on Highway Safety, *Large Truck Crash Causation Study*, 2012. <u>https://www.iihs.org/topics/bibliography/ref/2025</u>

- Include aerodynamic fuel savings of side guards used to prevent VRU fatalities. The US DOT Volpe Center found that adding aero side guards can save 5 percent or more of fuel costs. That could offset the fuel consumption from added weight.
- Test how side underride guards may work with automatic emergency braking systems on other vehicles, especially given the recently announced Notice of Proposed Rulemaking on cars and light trucks. The IIHS Status Report Highway Loss Data Institute Safe passage New ratings address pedestrian crashes" found that "Autobrake systems that reliably detect large trucks could prevent underride crashes."⁷ This 2016 statement from Tesla regarding a fatal crash, also highlights the high ride height of the trailer combined with other factors as the cause of a crash.⁸ The presence of the physical barrier of the guard can make it easier for car automatic emergency braking systems to detect trucks and stop crashes before they happen.

Thank you for the opportunity to comment on this important ANPRM. We hope NHTSA will reconsider its cost-benefit analysis by including fatalities and serious injuries of vulnerable road users and motorcyclists, as well as the assumptions made around motor vehicle underrides. Please contact Caron Whitaker, <u>Caron@BikeLeague.org</u> with any questions

Sincerely,

Bill Regn

Bill Nesper Executive Director

⁷ IIHS Status Report Insurance Institute for Highway Safety | Highway Loss Data Institute Safe passage New ratings address pedestrian crashes Vol. 54, No. 2 February 21, 2019, pg. 6. https://www.iihs.org/api/datastoredocument/status-report/pdf/54/2

⁸ The Tesla Team, A Tragic Loss, June 30, 2016. https://www.tesla.com/blog/tragic-loss