May 11, 2021

Stephanie Pollack
Acting Administrator (HOA-1)
Federal Highway Administration
1200 New Jersey Avenue, S.E.
Washington, DC 20590

RE: National Standards for Traffic Control Devices: Manual on Uniform Traffic Control Devices for Streets and Highways; Revision

Dear Acting Administrator Pollack:

I am second year law student at the University of Iowa College of Law. I am writing today to provide comment on the Federal Highway Administration's *National Standards for Traffic Control Devices; the Manual on Uniform Traffic Control Devices for Streets and Highways; Revision*.[1] In the notice to provide comment, the Federal Highway Administration stated that its basis and purpose for the MUTCD update was in part to ". . . ultimately improve and promote the *safe* and efficient utilization of roads that are open to public travel."[2] There is currently a pedestrian safety crisis in the United States.[3] A substantial number of these accidents occur in locations that have similar physical features;[4] the Revised MUTCD misses simple changes that can affect substantial increases in safety for pedestrians. In particular, by making slight changes to sections 3C.04, and 3C.05, the Federal Highway Administration can make the public highways safer for more of their users. As the Secretary Buttigeg stated, "Roads aren't only for vehicles. We have to make sure that pedestrians and individuals, bicyclists, and

[1] U.S. Department of Transportation Federal Highway Administration, National Standards for Traffic Control Devices; the Manual on Uniform Traffic Control Devices for Streets and Highways; Revision, 23 CFR 470 (2021).
[2] *Id.* (emphasis added).
[3] ANGIE SCHMITT, RIGHT OF WAY RACE, CLASS, AND THE SILENT EPIDEMIC OF PEDESTRIAN DEATHS IN AMERICA 19–21 ISLAND PRESS 2020.
[4] (*Id.* at 22–23)

businesses can all coexist on the same roadway."[5] Making these changes to the MUTCD can help reach this goal. For these reasons I suggest that you make these revisions to the MUTCD:

- Mark out new crosswalks in the middle of block on arterial roads to give pedestrians more opportunities to cross the street safely.
- Changes the warrants for putting in pedestrian activated traffic signals to include one about suburban arterial roads with blocks that are half a mile long and have high levels of commercial land use along them.

A. The Basis for Proposed Revisions to the MUTCD

"The Increase of Pedestrian Fatalities"

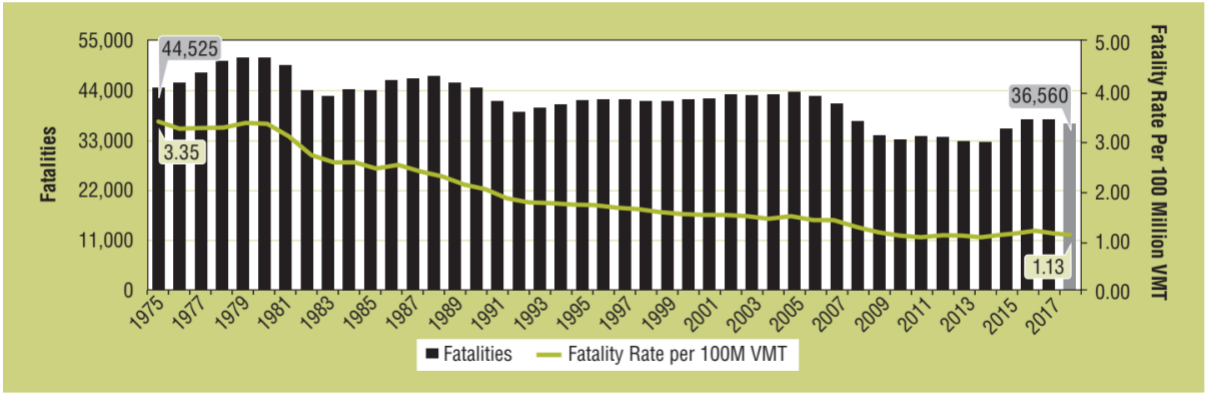
I. Increased Safety for Vehicle Drivers and Passengers

The Federal Department of Transportation has consistently improved safety for drivers in the United States, and there is good news for traffic deaths in the United States. According to the International Transport Forum 2019 report on the United States, the annual road fatalities between 2000 and 2017 fell by 12%.[6] Furthermore, when accounting for vehicle kilometers travelled the International Transport Forum 2019 reports a 24% decrease of road fatalities in the United States.[7] A decrease is also noted in the National Highway Traffic Safety Administration 2018 report, which noted a 3.4 percent decrease in road fatalities per 100 million Vehicle Miles Travelled between 2017 and 2018; it also noted that between 2017 and 2018 overall VMT

[5] (Secretary Pete Buttigieg (@SecretaryPete), TWITTER (Feb. 08, 2021, 2:23 PM), https://twitter.com/secretarypete/status/1358874001184030730).
[6] INTERNATIONAL TRANSPORT FORUM, ROAD SAFETY ANNUAL REPORT 2019, USA 2 (2021).
[7] *Id*.

increased by .3 percent from 3212 billion to 3223 billion.[8] This decrease in fatalities per 100 million VMT continues a downward trend since 1975.[9]

Figure 1
Fatalities and Fatality Rate per 100 Million VMT, by Year, 1975-2018



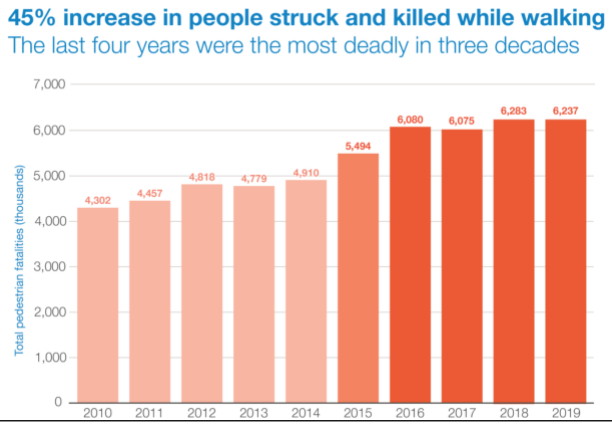
Sources: FARS 1975-2017 Final File, 2018 ARF; 1975-2017 VMT – Federal Highway Administration's (FHWA) Annual Highway Statistics; 2018 VMT – FHWA's June 2019 TVT

This downward trend is in part due to safety programs like increased seat belt use, reductions in impaired driving[10] as well as improvements to vehicles like air bags and stability control.[11] The percentage of passenger car occupant fatalities decreased from 39 percent of fatalities to 34 percent, and the percentage of light-truck occupant fatalities decreased from thirty percent to 27 percent.[12]

The DOT has done tremendous work improving safety and saving lives in one of the most dangerous yet routine activities we participate in on a day-to-day basis. However, not everything within these numbers is good news, for while the occupants of vehicles are dying less, pedestrian deaths have become a higher proportion of overall vehicular crashes. Between 2009 and 2018 the proportion of nonoccupant fatalities increased from 14 percent to 20

[8] NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, 2018 FATAL MOTOR VEHICLE CRASHES: OVERVIEW 2 (2019).
[9] *Id*.
[10] *Id*. at 1. ("all vehicle types saw a reduction in alcohol impaired drivers involved in fatal crashes from 2017 to 2018, dropping 20.5%").
[11] *Id*.
[12] *Id*. at 2.

percent.[13] In just measuring pedestrian deaths, there has been a 45 percent increase between 2010 and 2019,[14] and the last four years have been the most dangerous years since 1990.[15] In 2019, 6,237 traffic crashes had one or more pedestrian fatalities, which is more than 17 people dying per day.[16]



Dangerous by Design 2021, Smart Growth America, https://smartgrowthamerica.org/dangerous-by-design/ (last visited March 2021)

II. Pedestrian Crash Fatalities: Random Acts of God?

The general perception of traffic crashes is that there is no systematic rhyme or reason for why they occurred. They are random acts that rely heavily on the circumstances of the driver(s) and/or pedestrians. In actuality, this is not the case. "Pedestrian deaths are part of a systematic problem with systematic causes."[17] Many of the locations where pedestrian fatalities occur due to an automobile crash have similar structural features, and the victims often share identifying markers with one another.

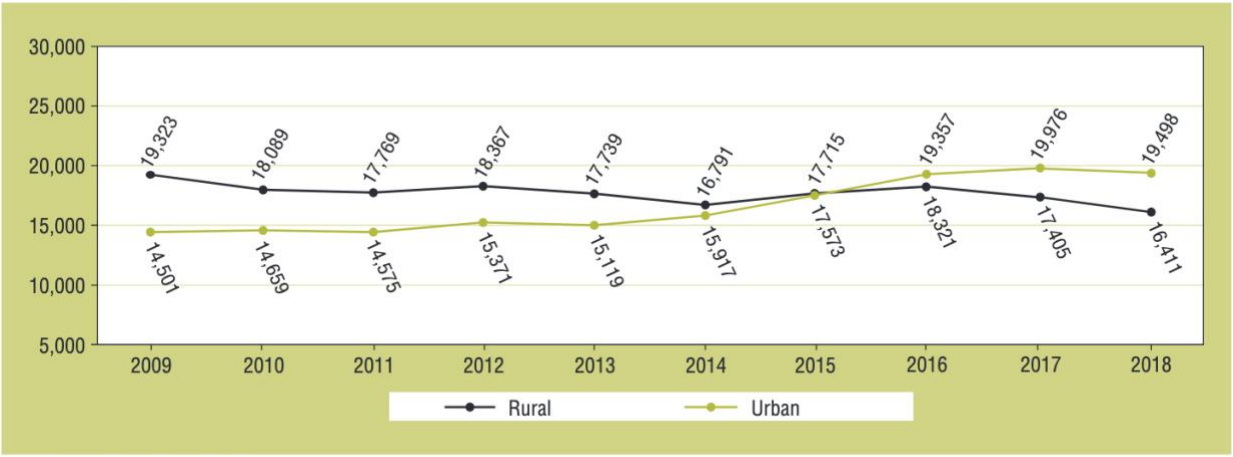
---

[13] *Id.*
[14] *Dangerous by Design 2021*, Smart Growth America, https://smartgrowthamerica.org/dangerous-by-design/ (last visited March 2021).
[15] *Id.*
[16] *Id.*
[17] *Supra* note 3 at 15.

Since 2016 urban fatalities have occurred at higher rates than rural fatalities, and pedestrian fatalities in urban areas have increased 62 percent since 2010.[18] This is in part due to urban population increasing 13 percent between 2009 and 2018 (numbers for 2019 are not available yet) and the Urban VMT have increased 15 percent since 2010, so we have a greater population in urban environments driving more miles.[19] These increases in population and in miles travelled do not tell the whole picture for increased pedestrian fatalities, for even within the urban landscape pedestrian fatalities occur along roads with similar structural features. Pedestrian fatalities tend to be prevalent on suburban arterial roads; they are wide multi-lane roads with high speeds and traffic volumes."[20] These roads also tend to have land uses that generate pedestrian traffic like commercial lots and residential destinations.[21]

[18] NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, 2019 FATAL MOTOR VEHICLE CRASHES: OVERVIEW 7 (2020).
[19] *Id*.
[20] *Supra* note, 3 at 29–30; THEODORE J. MANSFIELD ET AL., THE EFFECTS OF ROADWAY AND BUILT ENVIRONMENT CHARACTERISTICS ON PEDESTRIAN FATALITY RISK: A NATIONAL ASSESSMENT AT THE NEIGHBORHOOD SCALE. ACCIDENT ANALYSIS AND PREVENTION, 121, 166–176.
[21] Robert J. Schneider ET AL., *United States Fatal Pedestrian Crash Hot Spots Locations and Characteristics*, 14 THE J. OF TRANSP. AND LAND USE 1, 2 (2021) citing THEODORE J. MANSFIELD ET AL., THE EFFECTS OF ROADWAY AND BUILT ENVIRONMENT CHARACTERISTICS ON PEDESTRIAN FATALITY RISK: A NATIONAL ASSESSMENT AT THE NEIGHBORHOOD SCALE. ACCIDENT ANALYSIS AND PREVENTION, 121, 166–176.

Fatalities by Land Use, 2009-2018



Source: FARS 2009-2017 Final File, 2018 ARF
Note: This figure excludes unknown land use.

(NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, 2019 FATAL MOTOR VEHICLE CRASHES: OVERVIEW 7 (2020).

They also tend to occur at mid-block locations rather than in intersections.[22] The fact that 73 percent of pedestrian fatalities occurred outside intersections may indicate jaywalking is involved in the crash. This should not be viewed only as the actions of the pedestrian for not using a crosswalk. The Federal Highway Administration conducted a study where they were able to predict–with 90 percent accuracy–where pedestrians would jay walk simply by using environmental factors. Other studies have shown that environmental factors like distance to the nearest crosswalk can also influence a person's choice to jaywalk.[23] Often where the fatalities occur crosswalks are a half mile apart from one another.[24] Finally, the majority of these crashes occurred between 6 and 8:59 p.m. when there are low levels of light and it is difficult for drivers to see the pedestrians.[25]

---

[22] *Supra* note 17 at 24; *supra* note 21 at 3;National Highway Traffic Safety Administration, Traffic Safety Facts 2017 Data, Pedestrians, 2 https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812681#:~:text=In%202017%20there%20were%205%2C977%20pedestrians%20killed%20(Table%201)%20in,almost%20115%20people%20a%20week)

[23] Brian Mullen, ET AL,. *Jaywalking as a Function of Model Behavior*, 16 PERSONALITY AND SOC. PSYCH. 320, 320–30 (1990).

[24] *Supra* note 3 at 78–79.

[25] *Supra* note 8 at 7.

Not only do the locations of pedestrian fatalities share similar features to each other, but the people who are most often struck and killed in these automobile crashes share similar characteristics. Pedestrian deaths predominately affect poor communities.[26] This is because poorer neighborhoods are less likely to have sidewalks, marked crosswalks, or streets designed to support slower speeds.[27]

Given the history of racial discrimination in the United States, this also means that people of color are more likely to be struck and killed while walking. Pedestrians, who are struck and killed, are predominately older as well, so they tend to have more difficulty seeing, hearing or moving. Moving is key because pedestrian crosswalk signals are timed to impede traffic as little as possible. This means that pedestrians often have to wait two minutes if they want to walk with the signal,[28] and the signal length is timed to the speed of a healthy adult male.[29]

A natural response to pedestrian fatalities is to blame the pedestrian, particularly when they were jaywalking when the crash occurs.[30] While discussing the increasing pedestrian safety when they try to access transit, the Federal Highway Administration notes that "Pedestrians take the most direct routes possible to minimize the distance and time they must walk to reach their destination," and if they are running late they may take riskier actions they normally would not, like jaywalking.[31] The Federal Highway Administration acknowledges that pedestrians take risky actions for logical reasons and provides guides for transit agencies to address these problems. In

---

[26] *Supra* note 14
[27] *Id*.
[28] *Supra* note 3 at 104–06.
[29] DAVID PRYTHERCH, LAW ENGINEERING AND THE AMERICAN RIGHT OF WAY: IMAGINING A MORE JUST STREET 119 PALGRAVE MACMILLAN 2018.
[30] *see generally*, Tara Goddard et al,. *Does News Coverage of Traffic Crashes Affect Perceived Blame and Preferred Solutions? Evidence From an Experiment*, 3 Transportation Research Interdisciplinary Perspectives 1 2019. (Showing that how journalists describe a vehicular crash affects how readers perceive blame).
[31] Federal Highway Administration, Chapter 4: Actions to Increase the Safety of Pedestrians Accessing Transit in Pedestrian Safety Guide for Transit Agencies https://safety.fhwa.dot.gov/ped_bike/ped_transit/ped_transguide/ch4.cfm#c

the same manner, the FHA ought to address these known habits through how this public right of way is signed in accordance with the MUTCD.

B. Suggested Revisions to Proposed MUTCD Revisions

These systematic features of pedestrian deaths can be changed through revisions with the MUTCD that address the underlying causes of the steady rise in Pedestrian fatalities. The changes suggested below are meant to address the problems of visibility and the great distance between marked cross walks at intersections causing pedestrians to make the logical choice to cross mid-block.

I. Pedestrian Crossing Signs:

The purpose of the subsection is to alert drivers that there may be unexpected entries into the roadway or unexpected shared usage by pedestrians and others. Changes to 3C.01 could provide more opportunities for pedestrians to cross the street on arterial suburban roads by creating more marked crosswalks,[32] but simply putting in these crosswalks will not increase pedestrian safety nor driver safety if drivers are not prepared for pedestrians. It will decrease pedestrian jaywalking, but not necessarily pedestrian fatalities. To help these added crosswalks work, additional signage should be included to warn drivers that pedestrians are entering the roadway.

The ideal signage for pedestrian safety would be to put in pedestrian activated traffic signals. These would regulate traffic to stop whenever a pedestrian needs to cross the street at mid-block crosswalks. Portland, Oregon designated portions of the city as pedestrian districts and made it mandatory to have pedestrian activated traffic signals every 530 feet.[33] In a similar

[32] *See infra* section Changes to 3C.01
[33] *Supra* note 3 at 110–11.

fashion, the MUTCD could change warrant factors in section 4C for installing a pedestrian activated signal to include suburban arterial roads with high commercial use and blocks that are larger than a quarter mile as these are typically the roads that are hotspots for pedestrian fatalities. Worrying about pedestrian usage levels as a warrant for a pedestrian activated signal is not a good threshold requirement because not putting in the crosswalk or signal actually encourages people not to walk. Seattle, Washington began to put in mid-block intersections and pedestrian usage subsequently increased[34] Finally, having pedestrian activated signals would also reduce deaths caused by poor lighting as the signal would be more likely to get drivers to notice someone will be crossing the street.

II. Changes to 3C.04

The current proposed language for Section 3C.04 Basic Crosswalks reads: "Standard: Crosswalk markings shall be provided at non-intersection crosswalk locations." The Federal Highway Administration should add language to this standard that makes marked crosswalks mandatory on suburban arterial roads at non-intersection locations when the intersections are a half of a mile or more apart from one another. This would provide more locations for pedestrians to cross safely. While it is standard practice to not add a crosswalk unless there are at least ninety-three pedestrian who need to cross per hour, Seattle has shown that by putting in new crosswalk in places where this standard is not met actually induces more pedestrian foot traffic. Seattle put in a mid-block cross walk for a 6 lane arterial road after measuring pedestrian activity and finding it did not reach the MUTCD threshold minimum. After

[34] *See infra* section Changes to 3C.04

installing the crosswalk, they remeasured and found that pedestrian traffic now met the ninety-three per hour minimum threshold.[35] A possible revision could read:

"Crosswalk markings shall be provided at non-intersection crosswalk locations, and they shall be used in the middle of city blocks on suburban arterial roads when other legal crosswalks at intersections are half of a mile or more apart from one another."

C. Conclusion:

At some point everyone is a pedestrian and may be faced with the choice to walk a quarter mile down to the intersection and marked cross walk or to run across a multi-lane arterial road. We all want to minimize the distance and time we walk to get to our destinations, and many of us do choose or would choose to cross mid-block on busy arterial roads. Pedestrian deaths are not an inevitable part of city life based on cars. Zero pedestrians and cyclists were killed in Oslo, Norway last year.[36] Norway achieved this by making a concerted national effort to end accidents that could be avoided by building infrastructure. The Federal Highway Administration can put pressure from the top down on states and cities to build and rebuild infrastructure that is safer for pedestrians because any pedestrian death is needless.

---

[35] *Supra* note 3 at 110–11.

[36] Adele Peters, *Zero Bikers or Pedestrians were Killed by Cars in Oslo Last Year: What Can the U.S. Learn From Success?* FAST COMPANY, (Jan 09, 2020) https://www.fastcompany.com/90449478/zero-bikers-or-pedestrians-were-killed-by-cars-in-oslo-last-year-what-can-the-u-s-learn-from-its-success.