

# Emergency Streets

## Addressing the Public Health Emergency on US Streets & Roadways

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## Addressing the Public Health Emergency on US Streets & Roadways

Traffic violence<sup>1</sup> is outstripping local, regional, and federal efforts to reduce injuries and deaths. Despite a renewed awareness of the issue in federal and state traffic planning, people are being killed on America's roadways in mounting numbers, **over 40,000 people every year**—comparable to other public health crises such as gun suicides<sup>2</sup> and drug overdoses,<sup>3</sup> albeit with less public discussion.

The scope and persistence of the problem warrants systemwide, coordinated and streamlined governmental action—akin to an epidemiological response to a public health emergency.<sup>4</sup> The authors assert that a uniform framework to enable Emergency Streets at regional and local levels is essential to recast traffic violence as an ongoing public health crisis that can be ameliorated systemwide,<sup>5</sup> **not an inevitable series of isolated events.**

There's no NARCAN for traffic deaths. There's no race to develop a vaccine. What can and should government agencies do?

### Problem statement

America's longstanding traffic violence problem touches every community, and yet is so ubiquitous as to be nearly invisible to everyday drivers.<sup>6</sup> Coinciding with the development of the U.S. Interstate Highway system and subsequent shift to widespread private automobile ownership and use, 50 years ago driving was indeed more deadly, on a per capita basis, than in recent years (about 25 deaths/10,000 in 1970 vs about 11/10,000 in 2020).<sup>7,8</sup> This harm reduction reflects decades of joint efforts by regulatory authorities and automakers to protect motor vehicle occupants,<sup>9</sup> although more vulnerable road users such as pedestrians and cyclists are paying an ever more disproportionate burden of our traffic violence problem.<sup>10</sup>

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- 1 This paper largely focuses on the tens of thousands of fatal motor vehicle crashes on US roadways every year. These preventable deaths deserve highlighting and action, although the total number of crashes, over 5 million annually, imposes even more staggering numbers and costs in non-fatal traffic-related injuries (nearly 2.25 million per year), property damage, and other losses.
  - 2 <https://publichealth.jhu.edu/2023/cdc-provisional-data-gun-suicides-reach-all-time-high-in-2022-gun-homicides-down-slightly-from-2021> (almost 27,000 gun suicides in 2022, an 87% increase over 2013 for children and teens, citing data from the CDC WONDER database); US Gun Violence in 2021: An Accounting of a Public Health Crisis, Davis, A., Kim, R., & Crifasi, C. K. (2023). A Year in Review: 2021 Gun Deaths in the U.S. Johns Hopkins Center for Gun Violence Solutions. Johns Hopkins Bloomberg School of Public Health.
  - 3 Hedegaard H, Miniño AM, Spencer MR, Warner M. Drug overdose deaths in the United States, 1999–2020, at Figure 1, note 4. NCHS Data Brief, no 428. Hyattsville, MD: National Center for Health Statistics. 2021. DOI: <https://dx.doi.org/10.15620/cdc:112340external> (The number of drug overdose deaths in 2020 was 91,799, a steep increase largely due to non-methadone drugs such as fentanyl.)
  - 4 Yellman MA, Sauber-Schatz EK. Motor Vehicle Crash Deaths — United States and 28 Other High-Income Countries, 2015 and 2019. MMWR Morb Mortal Wkly Rep 2022;71:837–843. DOI: <http://dx.doi.org/10.15585/mmwr.mm7126a1> (“Motor vehicle crash deaths and injuries are a public health problem, but one with proven solutions. Increased and proactive implementation of proven road safety strategies, especially those addressing leading risk factors, could have an immediate effect. The United States could further reduce motor vehicle crash deaths and injuries by broadly embracing and applying the Safe System approach.”)
  - 5 [https://safety.fhwa.dot.gov/zerodeaths/docs/FHWA\\_SafeSystem\\_Brochure\\_V9\\_508\\_200717.pdf](https://safety.fhwa.dot.gov/zerodeaths/docs/FHWA_SafeSystem_Brochure_V9_508_200717.pdf)
  - 6 This condition persists despite the fact that recent sharp increases in deaths are reversing prior decades of safety gains.
  - 7 See, e.g., [https://en.wikipedia.org/wiki/Motor\\_vehicle\\_fatality\\_rate\\_in\\_U.S.\\_by\\_year](https://en.wikipedia.org/wiki/Motor_vehicle_fatality_rate_in_U.S._by_year) and <https://injuryfacts.nsc.org/motor-vehicle/historical-fatality-trends/deaths-and-rates/>, and sources cited therein; accessed 11/15/2023; Blincoe, L., Miller, T., Wang, J.-S., Swedler, D., Coughlin, T., Lawrence, B., Guo, F., Klauer, S., & Dingus, T. (2023, February). The economic and societal impact of motor vehicle crashes, 2019 (Revised) (Report No. DOT HS 813 403) at 31, Table 2-1. National Highway Traffic Safety Administration.
  - 8 Ian Savage, Comparing the fatality risks in United States transportation across modes and over time, Research in Transportation Economics, Volume 43, Issue 1, 2013, pp. 9-22, ISSN 0739-8859, <https://doi.org/10.1016/j.retrec.2012.12.011>. (<https://www.sciencedirect.com/science/article/pii/S0739885912002156>)
  - 9 See, e.g., <https://www.iihs.org/topics/vehicle-size-and-weight>
  - 10 Stewart, T. (2023, April). Overview of motor vehicle traffic crashes in 2021, Figure 6 (Report No. DOT HS 813 435). National Highway Traffic Safety Administration.

Such modest improvements in traffic safety here pale in comparison to those made in almost every other developed nation in the world.<sup>11</sup> From 2015-2019, US traffic death rates largely stagnated, even though many other high-income countries over the same time period realized substantial improvements in traffic safety,<sup>12</sup> and despite experiencing far lower death rates to start with.<sup>13</sup> Ten-year data regularly gathered by the National Highway Traffic Safety Administration (NHTSA) illustrated a gloomier ten-year trend from 2012 to 2021, revealing that over that time period, fatal traffic crashes in the US increased by a shocking 27%.<sup>14</sup>

The change from 2020 to 2021 was especially alarming: a 10.5% increase in overall fatal crashes,<sup>15</sup> and a 12.5% increase in pedestrian traffic deaths in the course of one year.<sup>16</sup> Vulnerable road users, including pedestrians, have long borne the disproportional burden of traffic-related fatalities; 2021 and 2022 were especially bad years.<sup>17,18</sup> Although drivers and passengers are safer than they used to be, the last few years have seen unprecedented dangers for other road users,<sup>19</sup> portending worrisome new trends, with poorer people, and people of color, at even greater risk.<sup>20</sup> See figures below.

***What is wrong here? This is madness.***

- 11 See, e.g., <https://www.bloomberg.com/news/features/2022-11-03/why-us-traffic-safety-fell-so-far-behind-other-countries> (accessed 11/15/2023) (“Until relatively recently, traveling in the US wasn’t notably more dangerous than doing so in other developed nations...But in the last 30 years, the US has not kept pace with tumbling traffic death rates in Europe, east Asia and Canada.”)
- 12 Yellman MA, Sauber-Schatz EK. Motor Vehicle Crash Deaths — United States and 28 Other High-Income Countries, 2015 and 2019. *MMWR Morb Mortal Wkly Rep* 2022;71:837–843. DOI: <http://dx.doi.org/10.15585/mmwr.mm7126a1> (“From 2015 to 2019, the U.S. population-based [traffic] death rate increased nominally by 0.1%, whereas the average percent change of the other high-income countries was –10.4%.”)
- 13 Ibid. at Figure 1. Of course, much of the less developed world is experiencing the same abysmal traffic safety outcomes as we did decades ago. The global traffic violence problem sparked an unusual UN General Assembly declaration for a “Decade of Action for Road Safety” in March 2010. This effort was not effective. As succinctly stated in the World Health Organization’s 2018 assessment of the Decade of Action, “the problem is getting worse.” Global status report on road safety 2018. Geneva: World Health Organization; 2018. License: CC BYNC-SA 3.0 IGO at p. vii. The UN has launched a second Decade of Climate Action for the years 2021-2030, with largely the same emphasis and programming. See <https://www.who.int/teams/social-determinants-of-health/safety-and-mobility/decade-of-action-for-road-safety-2021-2030>.
- 14 National Center for Statistics and Analysis. (2023, October). Summary of motor vehicle traffic crashes: 2021 data (Traffic Safety Facts. Report No. DOT HS 813 515). National Highway Traffic Safety Administration.
- 15 National Center for Statistics and Analysis. (2022, April). Early estimate of motor vehicle traffic fatalities in 2021 (Crash Stats Brief Statistical Summary. Report No. DOT HS 813 283). National Highway Traffic Safety Administration. (“This...represents the highest number of fatalities since 2005 and the **highest annual percentage increase in the recorded history** of data in the Fatality Analysis Reporting System (FARS).”(emphasis added))
- 16 See Yellman MA, et al., fn 12 (“This translates to one person killed every 12 minutes and an estimated 5 people injured every minute in traffic crashes in 2021...On average, a pedestrian was killed every 71 minutes and injured every 9 minutes in traffic crashes in 2021.”); <https://www.transportation.gov/NRSS/SafetyProblem> (“[T]his threat to our safety is getting worse.”)
- 17 [https://explore.dot.gov/views/DV\\_FARS\\_PD/Home?%3Aembed=y&%3AisGuestRedirectFromVizportal=y%3AshowAppBanner&%3Adisplay\\_count=n&%3AshowVizHome=n&%3Aorigin=viz\\_share\\_link&%3Atoolbar=no&%3A%3Aembed=yes](https://explore.dot.gov/views/DV_FARS_PD/Home?%3Aembed=y&%3AisGuestRedirectFromVizportal=y%3AshowAppBanner&%3Adisplay_count=n&%3AshowVizHome=n&%3Aorigin=viz_share_link&%3Atoolbar=no&%3A%3Aembed=yes) and [https://explore.dot.gov/views/DV\\_FARS\\_PC/Home?%3Aembed=y&%3AisGuestRedirectFromVizportal=y%3AshowAppBanner&%3Adisplay\\_count=n&%3AshowVizHome=n&%3Aorigin=viz\\_share\\_link&%3Atoolbar=no&%3A%3Aembed=yes](https://explore.dot.gov/views/DV_FARS_PC/Home?%3Aembed=y&%3AisGuestRedirectFromVizportal=y%3AshowAppBanner&%3Adisplay_count=n&%3AshowVizHome=n&%3Aorigin=viz_share_link&%3Atoolbar=no&%3A%3Aembed=yes). Both updated April 7, 2023.
- 18 National Center for Statistics and Analysis. (2023, April). Early estimate of motor vehicle traffic fatalities in 2022 (CrashStats Brief Statistical Summary. Report No. DOT HS 813 428). National Highway Traffic Safety Administration. Preliminary count of 42,795 traffic deaths in 2022; noting 42,939 fatalities in 2021.
- 19 See <https://www.nhtsa.gov/press-releases/nhtsa-estimates-traffic-deaths-2022-third-quarter>, January 9, 2023 (Noting a slight decrease in overall road fatalities, but increases over 2021 for cyclist, pedestrian, and motorcyclist deaths.)
- 20 Smart Growth America and National Complete Streets Coalition, *Dangerous by Design 2022, 2023* available at <https://smartgrowthamerica.org/dangerous-by-design/>.

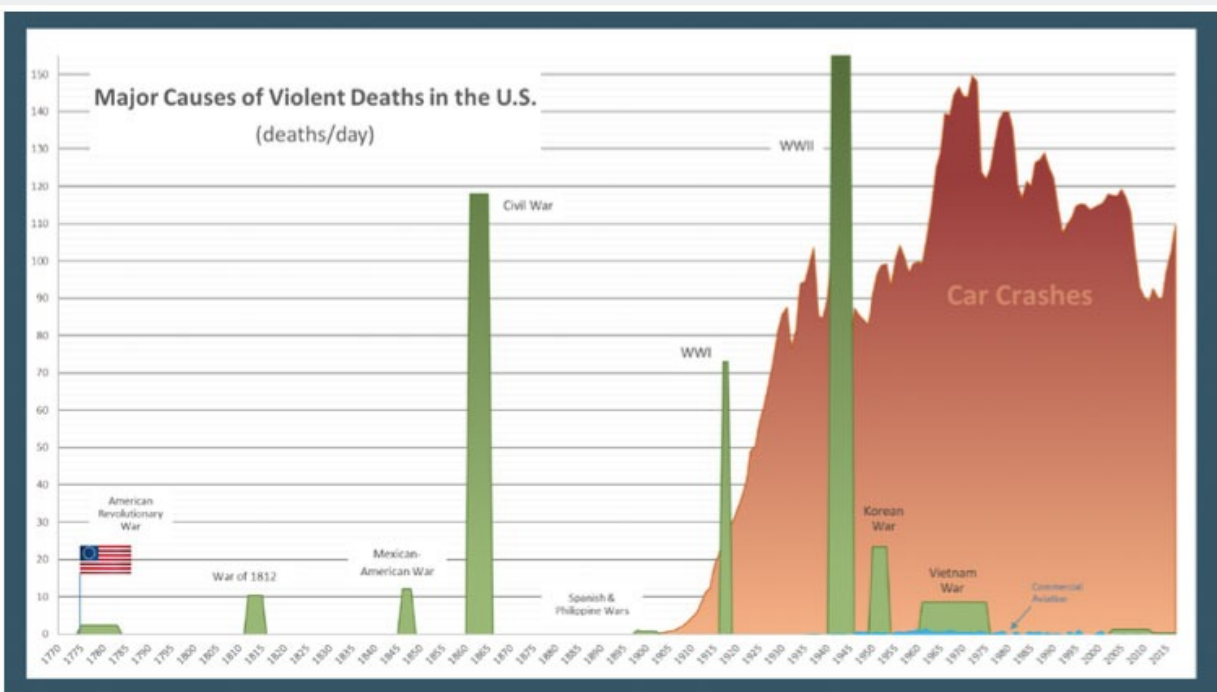


Chart: created by David Agnew ~2017 for company Next Maneuvers, Inc.

### Pedestrian traffic deaths are rising sharply

From 2011 through 2021, annual U.S. pedestrian traffic fatalities increased by 77%, from 4,302 to an estimated 7,624. In 2021 pedestrians represented nearly 18% of all traffic deaths.

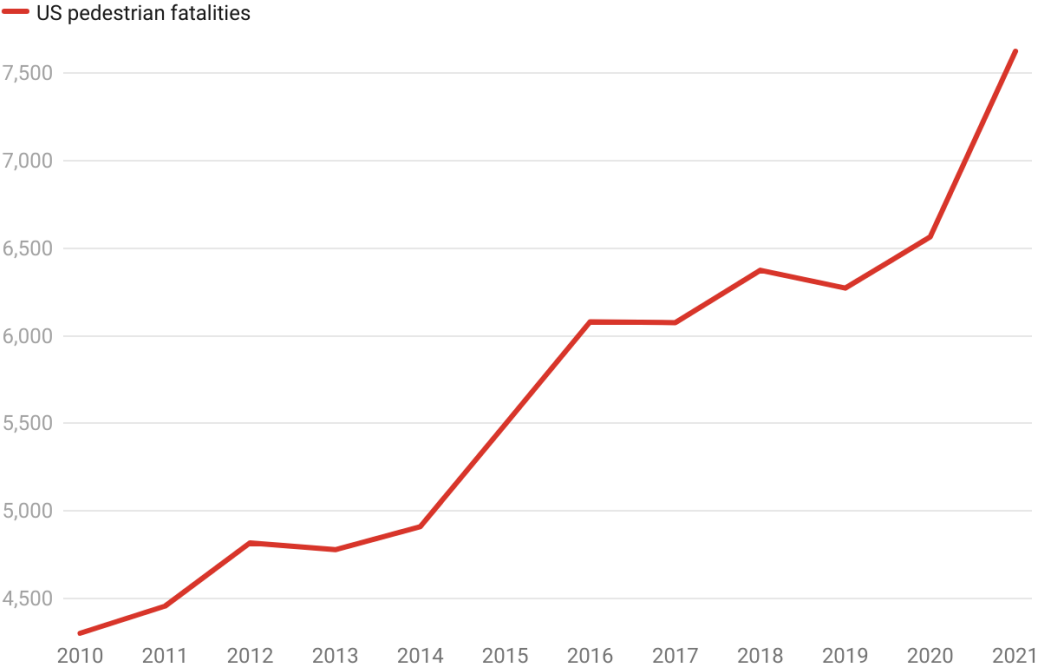


Chart: The Conversation, CC BY-ND • Source: Governors Highway Safety Association • Created with Datawrapper

Experts agree that traffic crashes are generally preventable; they are not “accidents” but the predictable result of predictable human error.<sup>21</sup> Actuaries in the auto insurance industry know this well. In fact, “[a]mple opportunities for progress and proven strategies that can save lives, prevent injuries, and avert medical costs exist.”<sup>22</sup>

What are those costs? The steady state of traffic fatalities indicates that our roadways will claim about a million lives in the first quarter of this century alone (first two decades: 757,379; through 2022: 843,113).<sup>23</sup> While ancillary costs are difficult to measure, reasonable estimates of the total cost of traffic violence in this country suggest a price well over three hundred billion dollars, each year, every year.<sup>24</sup>

***This is a costly public health emergency.***

Decades of data illustrate several commonalities among driver mistakes that lead to our outsize death rates. Among the most common are distracted or impaired driving, not wearing seatbelts, and speedy driving.<sup>25</sup> Among possible corrective actions, driving more slowly has the broadest applicability to ameliorate crashes, because it can be effective independent of the other identified risky behaviors. Slower-speed driving reduces both the risk of crashes occurring in the first place (because drivers have more reaction time) and the severity of crashes that do occur (because lower speed crashes cause less damage).<sup>26</sup> This is not to say that excessive speed is the main culprit in the >40,000 road fatalities that has become the new normal. However, if “normal” driving happened more slowly everywhere, more drivers would avoid collisions entirely, and those who do crash would cause and suffer less damage than they do now.

Governmental responses to the crisis, discussed further below, have failed to stem the tide of death on our roadways. They’ve failed to inculcate a sense of urgency requiring a response by every driver on the road. **Reframing the problem as a public health matter**, for which the heaviest and speediest users bear greater personal responsibility to ameliorate, has potential to shock the system and foment change.

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21 See, e.g., <https://www.roadpeace.org/get-involved/crash-not-accident/> and <https://www.portland.gov/transportation/vision-zero/news/2023/3/23/why-we-say-crash-not-accident>

22 [https://www.cdc.gov/mmwr/volumes/71/wr/mm7126a1.htm?s\\_cid=mm7126a1\\_w](https://www.cdc.gov/mmwr/volumes/71/wr/mm7126a1.htm?s_cid=mm7126a1_w)

23 This number ignores other repercussions of our overreliance on motor vehicles that reduce human life expectancy, such as health implications of poor air quality and sedentary habits, housing and land use inequities and inefficiencies, or lifelong consequences of non-fatal road injuries.

24 Blincoe, L., Miller, T., Wang, J.-S., Swedler, D., Coughlin, T., Lawrence, B., Guo, F., Klauer, S., & Dingus, T. (2023, February). *The economic and societal impact of motor vehicle crashes, 2019 (Revised)* (Report No. DOT HS 813 403). National Highway Traffic Safety Administration. (“In 2019 the total economic cost of motor vehicle crashes in the United States was \$340 billion. This represents the present value of lifetime economic costs for 36,500 fatalities, 4.5 million nonfatal injuries, and 23 million damaged vehicles....When...quality-of-life valuations are considered, the total value of societal harm from motor vehicle crashes in 2019 was \$1.37 trillion.”) Some estimates are much higher, with the National Safety Council most recently estimating costs in the \$450 billion range. See <https://www.nsc.org/newsroom/motor-vehicle-deaths-2020-estimated-to-be-highest> (\$474 billion) and <https://injuryfacts.nsc.org/all-injuries/costs/guide-to-calculating-costs/data-details/> (suggesting \$455 billion) (accessed 11/17/2023). In 2020, the US Department of Transportation, relying on 2010 data, estimated the annual cost at \$242 billion. <https://www.transportation.gov/research-and-technology/state-state-crash-data-and-economic-cost-index>

25 National Center for Statistics and Analysis. (2023, October). Summary of motor vehicle traffic crashes: 2021 data (Traffic Safety Facts. Report No. DOT HS 813 515). National Highway Traffic Safety Administration at 5. (“Driver behavior such as driving while alcohol-impaired and speeding, as well as whether passenger vehicle occupants are wearing seat belts, are important areas of interest.”)

26 Federal Highway Administration flyer FHWA-SA-20-015 (“Reducing speeds can accommodate human injury tolerances in three ways: reducing impact forces, providing additional time for drivers to stop, and improving visibility.”) available at [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjJ-viBtuWCAxXOCjQIHdbSBvQQFn0ECBQQAQ&url=https%3A%2F%2Fsafety.fhwa.dot.gov%2Fzerodeaths%2Fdocs%2FFHWA\\_SafeSystem\\_Brochure\\_V9\\_508\\_200717.pdf&usq=AOvVaw1Gs7d2NlsS56ND6BLNayDm&opi=89978449](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjJ-viBtuWCAxXOCjQIHdbSBvQQFn0ECBQQAQ&url=https%3A%2F%2Fsafety.fhwa.dot.gov%2Fzerodeaths%2Fdocs%2FFHWA_SafeSystem_Brochure_V9_508_200717.pdf&usq=AOvVaw1Gs7d2NlsS56ND6BLNayDm&opi=89978449)

Honest reckoning with the problem must acknowledge myriad contributing factors, many of which will take years or decades to correct. However, reducing speeds at which motor vehicle crashes occur is certain to improve outcomes<sup>27</sup> immediately, while other appropriate countermeasures are incorporated. The approach known as Emergency Streets is a smart path to that speed reduction, elevating driver awareness of the connection between speed and fatalities and normalizing slower, safer driving.

### **How Emergency Street zones work**

Similar to how school or roadway work zones operate, immediately following any fatal traffic crash, the permissible driving speed on all roadways within a half-mile radius of the crash site would be reduced by 20 miles per hour below the posted speed limit (or as low as 20mph), for two weeks.

Rather than serving as a catch-all preventive measure for avoiding crashes (which is what school and work zones are), Emergency Streets is instead an exercise in targeted, curative driver training, where all road users are alerted to a catastrophic failure of the system (e.g., street design, favoring travel at high speeds, resulting in death); they are conditioned to react by driving more conservatively.<sup>28</sup> At the same time, locals on the affected roadway experience a reduction in speed-related stress, while regular travelers through the crash site will experience negligibly different travel times, despite slowing down, albeit briefly, along their regular travel route.

***Emergency Streets promotes a shift in attitudes about acceptable driving speeds.***

Emergency Streets response does not vary when a crash is still under investigation; whether the victim was inside or outside a vehicle; whether the victim contributed to the cause of the crash; whether the victim was a driver, child in the backseat, or cyclist on the roadway. The basic fact, that someone was killed while using our transport network, is all that is required to initiate an Emergency Streets response. It alerts road users of the incident and prompts a change in driver behavior.

When implemented systemwide—that is, across municipalities and roadways nationwide—Emergency Streets dictates a routine and calibrated response to a demonstrated failure of our transport system, compelling all private drivers in the vicinity of a deadly crash to adjust their driving behavior for a mandated period of time. It instigates a cultural shift in expectations of how swiftly people can or should be traveling on a roadway where someone has recently perished, both directly (when a driver observing the lower speed limit is in front of them) and indirectly (when they encounter other drivers going conspicuously slower than usual). Emergency Streets also acts to highlight the ubiquity and proximity of fatal road casualties, because it is **designed to make an impression upon all road users in a certain area** for weeks, not minutes.

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27 OECD/International Transport Forum, Speed and Crash Risk, 2018. (“To reduce road trauma, governments need to take actions that will reduce the speed on roads...For individuals, the risks of a severe crash might seem small, but from a societal point of view there are substantial safety gains from reducing mean speeds on roads.”)(Estimating that every 1% increase in average speed results in a 2% increase in all injury crashes, a 3% rise in fatal and severe crashes and 4% more fatal crashes.) Available at <https://www.itf-oecd.org/sites/default/files/docs/speed-crash-risk.pdf> ; Governors Highway Safety Ass'n report, Speeding Away from Zero: Rethinking a Forgotten Traffic Safety Challenge, 2019 (“The traffic safety community often aspires to work towards zero road fatalities, but there is no way we will approach zero unless we join forces to prioritize the prevention of speeding-related crashes.”) Available at [https://www.ghsa.org/sites/default/files/2019-09/FINAL\\_GHSASpeeding19\\_REV.pdf](https://www.ghsa.org/sites/default/files/2019-09/FINAL_GHSASpeeding19_REV.pdf)

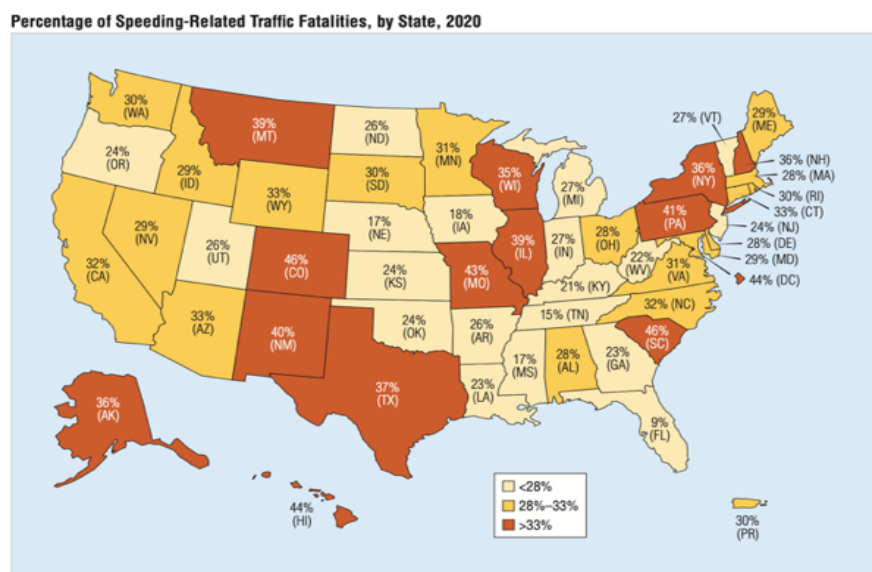
28 Emergency Streets jurisdictions might opt to exempt professional drivers, such as bus drivers and delivery vehicles, from these restrictions, recognizing that these drivers are far less likely to be involved in fatal crash incidents, and to minimize potential economic impacts. In general, however, the expected impacts of a limited-time, limited-area motor vehicle slowdown are minimal.

## What Emergency Streets does

One of the reasons that the level of traffic violence is viewed as “one of those things” is that our response tends to treat traffic crashes as singular interruptions of the normal routine, where other road users are temporarily delayed or rerouted, and remnants of the crash are removed from the roadway as expeditiously as possible.<sup>29</sup> Unless there is unusual news or media coverage of the crash, drivers encountering the site a few hours or days later likely have no idea of the mayhem that has just occurred there. Rather than sweep the detritus of fatal traffic crashes to the margins of our roads (and out of the minds of anyone but the people involved in the crash), Emergency Streets names the crisis for what it is, and incorporates temporary speed reductions as an element of the response effort.<sup>30</sup>

## Why this matters

Road safety advocates have voiced frustration at our metastasizing traffic violence epidemic, particularly our collective failure to curb entirely preventable speed-related crashes. To correct the problem, decision makers must “unwind the deeply embedded, invisible yet powerful emphasis on speed, which is incompatible with safety.”<sup>31</sup> See figure below.



Source: FARS 2020 ARF

Chart: Smart Growth America and National Complete Streets Coalition, Dangerous by Design 2022, 2023 available at <https://smartgrowthamerica.org/dangerous-by-design/>.

Emergency Streets is like on-the-job retraining for dangerous drivers. Driving fast (not just exceeding a speed limit) is a habit unique to the driving task: people are intoxicated, or distracted, or feeling time pressure, say, across multiple settings every day. But only behind a wheel do they operate a motor vehicle faster than would be efficient (say, between red lights) or prudent (say, in poor visibility conditions) or legal (faster than the posted limit). Unlearning ingrained driving habits, such as going faster than one should, can only happen in practice. If public messaging campaigns and caution signage were effective, we would see different and better behavior among drivers around all types of decisions, like using seat belts or judging when one is too impaired to drive.

29 See USDOT FHWA summary of state “driver removal/quick clearance laws,” available at [https://ops.fhwa.dot.gov/publications/fhwahop09005/driv\\_removal.htm](https://ops.fhwa.dot.gov/publications/fhwahop09005/driv_removal.htm). As of 2008, about half of states had enacted some form of law “to expedite removal of damaged or disabled vehicles from the travel lanes to enhance the overall level of safety on the roadway and reduce [crash-related] congestion and delay.”

30 Makes a bold statement for advancing a Safe System approach: Soames Job, R. F., Truong, J., & Sakashita, C. (2022). The ultimate safe system: Redefining the safe system approach for road safety. *Sustainability (Basel, Switzerland)*, 14(5), 2978. <https://doi.org/10.3390/su14052978>

31 Smart Growth America and National Complete Streets Coalition, Dangerous by Design 2022, 2023 available at <https://smartgrowthamerica.org/dangerous-by-design/>.

Our spiraling epidemic of road violence is, if nothing else, a testament to the ineffectiveness of prior crash prevention educational efforts, which generally appeal to drivers to use better judgment. The protocols are not designed to be optional; they assert corrective control over speed after a fatal crash.

### **Limitations of fragmented approaches**

The fragmented nature of motor vehicle crash response stymies our ability to learn from our failures. For one thing, there is no particularly forceful leadership at the federal, state, or local levels of government to guide a response to the traffic violence problem. Crash response, investigative, and prosecutorial efforts are fractured among dozens of potential jurisdictions, depending on the location and severity of a crash. Various federal agencies collect, retain, and report data on traffic crashes on US roadways, including the Federal Highway Administration, the National Highway Transportation Safety Agency, the National Transportation Safety Board, and the CDC's National Center for Injury Prevention and Control and National Center for Health Statistics. None of these agencies have taken the helm of responding to our road violence epidemic, however.<sup>32</sup>

Every state in the union has its own department of transportation, as do numerous (but not all) counties, cities, and regional partnership districts. State, city, and county police agencies develop their own strategies and protocols for responding to fatal and serious injury crashes; are consistently overwhelmed by the sheer volume of crashes; and generally have no incentive or directive to share information with one another, or even with other crash response teams within their own organizations. Local prosecutors have broad discretion to publicize or withhold information arising from crash investigations, whether or not to prosecute people responsible for a crash, whether a fatal crash case is “worth” the effort to pursue a conviction, and the terms of any plea deal to avoid trial in the event of a driver's misjudgment causing the death of another.<sup>33</sup>

Emergency Streets does not disrupt law enforcement efforts to investigate and prosecute people at fault for fatal road crashes, and does not expose personal medical information or potential civil or criminal culpability. It does, however, institute a uniform and proven countermeasure: reducing driving speeds. Emergency Streets complements, and does not interfere with, all other ongoing strategies to improve roadway safety. Most current thinking about Vision Zero and a Safe Systems Approach in the US explicitly supports reigning in excessive driving speeds. But where we have attempted these same strategies for years without success, Emergency Streets offers a fresh, targeted approach to reducing traffic violence through speed reduction. A standardized response to fatal crashes like Emergency Streets can help **sidestep some of the existing bureaucratic and cultural barriers to slower, safer driving**, without compromising other public priorities.

***Emergency Streets road users will have had two weeks to:***

- learn that their travel time is not much different, even if they slow down for a mile or two.***
- experience the context of their daily travel at a slower and more contemplative speed.***
- provide other users of the road, including vulnerable ones, two weeks of an aggressive driving truce.***
- embody, not just imagine, better versions of their driving selves.***

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32 States defer to federal standards for “safety” and roadworthiness of vehicles, which are largely focused on protecting vehicle occupants, exacerbating systemic failures to protect people outside of vehicles in a crash. 49 USC 301 *et seq.*

33 Crash reports and investigations are largely hidden from public view, to preserve evidence and the legal processes, and to preserve the privacy of victims' health information, which stymies public awareness of the causes, investigative and prosecutorial outcomes, and preventive measures appropriate to address traffic violence.



## How Emergency Streets differs

Emergency Streets reacts to a demonstrated transport system failure with a compulsory, corrective response: all motor vehicle drivers in the vicinity must slow down for a period of time before being allowed to resume regular driving. In the meantime, they have had two weeks of training in what regular driving speeds and behavior should be.

Emergency Streets also differs from many prior efforts to address traffic violence. It promotes habits to avoid crashes, rather than being preoccupied with mitigating crash damage. The auto industry's focus on engineering to protect vehicle occupants in the event of a crash include countermeasures like seat restraint systems, airbags, crumple zones to absorb crash impacts, reinforcing vehicle impact zones, changing cabin geometries to avoid chest- or leg-crushing injuries, and alarms prompting vehicle occupants to engage their seat belts.

These efforts to protect occupants are integral to the vehicle, yet in some cases heighten the risk of injury to road users outside the vehicle, and (with the exception of obeying the seat belt alert) are not things that the driver can opt out of. In fact, they may induce less careful driving, because drivers understand that they and their passengers are less likely to be badly injured in even a high-speed crash.<sup>34</sup>

Technology developed only in the last decade for avoiding crashes (the same decade where US roads became deadlier instead of safer for unprotected road users) is still erratic, and often optional or costs extra at the point of sale. Some automated crash avoidance technology like speed governors, lane drift alarms, or blind spot alerts can be turned off by a driver. As a society, we appear to be reluctant to incentivize or require automotive technology or design to protect pedestrians or other road users. In the meantime, every new highway-rated vehicle sold in the US is capable of exceeding the highest speed limit in the nation, by extraordinary margins. We leave the decision to not use such power in the hands of drivers who have demonstrated poor judgment in this regard.

We know that reducing speed is the medicine that this public health emergency requires. Implementing Emergency Streets following a fatal crash is an innovative, symbolically powerful method to administer a dose of effective medicine.

***Emergency Streets forces everyone to confront the reality of traffic violence.  
It could be the one thing that ends up bending the curve. If we don't try, we'll never know.***

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34 Peterson, S., Hoffer, G., & Millner, E. (1995). Are Drivers of Air-Bag-Equipped Cars More Aggressive? A Test of the Offsetting Behavior Hypothesis. *The Journal of Law & Economics*, 38(2), 251–264. <http://www.jstor.org/stable/725685>. Also see study here: <https://www.purdue.edu/uns/html4ever/2006/060927ManneringOffset.html>

## Tab A: Social, psychological perspectives and sensing inconvenience

Emergency Streets helps overcome individualism, otherism, and fatalism—three prevalent American mindsets, all of which derail social progress on any number of fronts, including climate response, gun violence, and traffic safety.<sup>35</sup> One objection, that ES will be seen as an inconvenience to drivers, misses the thrust of its message and purpose. Aside from requiring slower, and hence safer, driving, ES allows reflection and caution in the wake of a catastrophe that would otherwise be unknown to most drivers.

ES provides a needed opportunity to shift the perspective of drivers as a group, and change how they relate to an emerging public health crisis.<sup>36</sup> It is a big ask. That motorists, the principal users of the existing transport system, will experience discomfort is an objection lacking merit: it is necessary and a deliberate characteristic of ES, if they are to moderate their own behavior in the long run. To date, most motorists have ignored their impact (literal and figurative) on other users of the roadways they share.

Research from sociology, anthropology, and psychology suggest that external change in road use can help drivers understand their own connection to the issue. For example, most drivers report that they are primarily concerned with protecting themselves and their loved ones when behind the wheel. Outside of the driving task, most research subjects tend to be more open-minded and more likely to consider “bigger than self” problems, such as avoiding harming their neighbors.<sup>37</sup> Social psychological work on human value systems suggests that value judgments are like muscles which can be built up, or left to atrophy. Existing culture, with a focus on individual prosperity provides a disservice in this respect. The more that we can appeal to **people’s values that are pro-social, rather than self-interested, the better.**

ES can be seen as sidestepping the systemic entrenchment issue by requiring heightened care wherever and whenever the transport system has failed by killing someone.<sup>38</sup> When implemented as a matter of course in response to a fatal crash, the cause of the inconvenience is the person (usually a driver) who made the fatal mistake(s). ES is not intended to be ubiquitous, or punitive, but because these crash responses happen systemwide, its effects should be felt by a majority of everyday drivers prompting better awareness and individual reckoning. The systemic nature of the problem is both the problem and the germ of the solution.

The US developed a transportation system that moved discrete numbers of people longer distances than other countries could 50 years ago. It has confronted real engineering challenges while scaling that system up humanely. The US is now in a position where it needs to either reconfigure its streets, roadways and highways to accommodate a greater share of travelers who are vulnerable, or restrict the market-based evolution of the motor vehicle designs and consequent roadway geometry to accommodate smaller, less dangerous vehicles. Neither choice is palatable.

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<sup>35</sup> Explains why narrower policies like ES is appropriate in a uniquely American cultural context: Kasser, T., & Linn, S. (2016).

Growing up under corporate capitalism: The problem of marketing to children, with suggestions for policy solutions. *Social Issues and Policy Review*, 10(1), 122-150. <https://doi.org/10.1111/sipr.12020>

<sup>36</sup> Employs Roger’s diffusion and illustrates how to apply the theory to interventions. Dearing, J. W. (2009). Applying diffusion of innovation theory to intervention development: Research on Social Work Practice, 19(5), 503-518. <https://doi.org/10.1177/1049731509335569>

<sup>37</sup> Lajeunesse, Seth, Stephen Heiny, Wes Kumfer, Nancy Pullen-Seufert, Luke Morin, Sydney Nicolla, Teresa Tackett, and Lucinda Austin. "Shaping the narrative around traffic injury." (2020). [https://www.roadsafety.unc.edu/docs/CSCRS\\_R29\\_FGuide.pdf](https://www.roadsafety.unc.edu/docs/CSCRS_R29_FGuide.pdf)

<sup>38</sup> Illustrates how policy experiments, even ones not entirely popular at the time of their conception, often shift public attitudes and come to seem normal, desirable, expected after some time. Soss, J., & Schram, S. F. (2007). A public transformed? welfare reform as policy feedback. *The American Political Science Review*, 101(1), 111-127. <https://doi.org/10.1017/S0003055407070049>

## Tab B: On enforcement

In our dozens of conversations with people about Emergency Streets, a common question that arises is: how will you make the drivers slow down? Won't this take a lot of enforcement?

We think the focus should be on awareness, not enforcement, which would be perceived as punitive. Even imperfect compliance (e.g., slowing down by less than 20 mph, but still under the posted speed limit) would be preferable to the status quo, allowing drivers to carry on as usual in ignorance of the recent fatal crash. Further, traffic enforcement is not likely to be worth the financial and social costs in this case.

Traffic enforcement issues, particularly intersecting with racial and economic disparities in policing, are a major focus of the renewed public interest in general law enforcement matters in the US. There is ample evidence that traffic enforcement efforts are disproportionately applied against people of color, frequently for nuisance or non-dangerous infractions, and that they can escalate to uses of force out of proportion to the level of the offense that led to the traffic stop in the first place.<sup>39</sup> Further, because pedestrian traffic fatalities are more concentrated lower-income areas and communities of color, any enforcement efforts around ES would also likely be directed more heavily in those areas, exacerbating current problems of inequitable law enforcement. Automated speed detection and enforcement has promise for removing intentional discrimination or unconscious human bias from the equation, but poses some of the same location-based difficulties because drivers in high-risk areas are more likely to be poor or the member of a racial minority.

Emergency Streets is compatible with small-scale, mobile tactical urbanism tools that some cities and towns have developed as part of general traffic calming or speed management efforts. An Emergency Streets jurisdiction may choose to deploy:

- temporary speed humps,
- mobile speed detection signs,
- temporary barriers to protect a bike lane,
- narrow travel lanes,
- temporary striping to test out a chicane,
- prominent lighting (e.g., mini LED lights) from dusk to dawn,
- temporary bollards to create a neckdown, and the like.

Visible redesigns would be primarily self-enforcing, and add visibility to both the problem (a fatal crash) and potential solution (changing the roadway to operate more slowly). ES can help change public expectations and mindsets<sup>40</sup> for how street and roads should function. Such strategies are more compatible with the High Visibility Enforcement approach advocated by NHTSA, which in contrast, emphasizes driver education and voluntary compliance.<sup>41</sup>

Finally, traffic enforcement predominantly responds to one-off situations, or briefly prompts better compliance by happenstance drivers. It does little to prevent crashes systemwide. Developing better infrastructure and road design affects every user of the roadway, all the time, not just when enforcement (i.e., police officers) are on the job. ES is method to **raise awareness and urgency around a serious public safety problem**, recognizing that longer-term planning and road redesigns remain a necessary part of the solution.

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<sup>39</sup> Smart Growth America and National Complete Streets Coalition, *Dangerous by Design 2022, 2023* available at <https://smartgrowthamerica.org/dangerous-by-design/>.

<sup>40</sup> Giancarlo Parady, Makoto Chikaraishi, Yuki Oyama. *A Walker's paradise ain't a driver's hell: Evaluating the causal effect of temporary road pedestrianization on traffic conditions of surrounding roads* (2023, unpublished manuscript). Available from: [gtroncoso@ut.t.u-tokyo.ac.jp](mailto:gtroncoso@ut.t.u-tokyo.ac.jp)

<sup>41</sup> <https://www.nhtsa.gov/enforcement-justice-services/high-visibility-enforcement-hve-toolkit>

### **Tab C: Administering ES only with a post fatal crash**

Working to change things only after a fatal crash is challenging because it's similar to "closing the barn door after the horse escapes." Proverbial horses are fleeing barns all over the U.S. and national efforts so far have been stymied by too many opportunities for catastrophic outcomes (KSIs, Killed and Severe Injury crashes) such that everyone needs to be on high alert at all times.

Consequently, no one is on high enough alert all of the time to prevent most of these catastrophes that keep happening.

The post-fatal-crash-slowdown provides an opportunity to stop arguing about where and when to require more careful driving. Right here, and right now, after they died. ES allows inconvenienced drivers to explain why they cannot slow down for a few days when someone just died here.

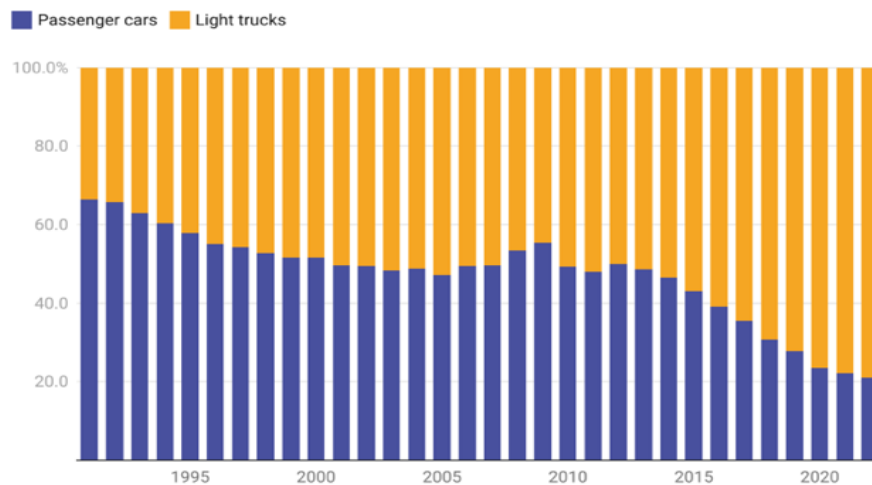
## Tab D: Traffic safety overlapping with climate policy

Climate policy overlaps closely with policies that prize safety because innovations in one domain have ripple effects to the other. The most direct link involves doing more with less, or finding simpler, more efficient ways to do the same thing. In the context of transport safety, because most travel in urban areas involves short trips (i.e., less than four miles), there's opportunity to match the needs of most travel (and travelers) with the types of vehicles that are most efficient and appropriate for that trip (i.e., bicycles or short-range vehicles, also referred to as near cars).

Making more use of short-range vehicles involves making a travel choice that is likely less polluting and less resource-intensive, especially relative to most current sports utility vehicles (SUVs). Where people are discouraged from using lower-impact, short-range vehicles (i.e., by choosing full-sized cars instead of short-range vehicles or bikes), they often cite personal safety or comfort (or, avoiding discomfort from feeling at-risk) as a rationale. Concerted efforts to make roadways safer, more inviting, and easier to use for pedestrians, cyclists, and other users in smaller, slower vehicles promotes both safety goals and larger efforts to turn the tide of unnecessarily large, heavy vehicles on our local streets and roadways as revealed in the below figure.

### Most new vehicle sales and leases in the US are light trucks

Light trucks, including vans, minivans, sport utility vehicles and pickup trucks, have increased their share of the new vehicle market from 33% in 1990 to 78% in 2022.



New car sales and leases in millions

Chart: The Conversation, CC BY-ND • Source: USDOT • Created with Datawrapper

The more time-competitive and safer that bikes, short range vehicles, and bus travel become, the more likely people are to use the latter; in this way, efforts to slow vehicles down in urban areas to protect cyclists and pedestrians, or prioritizing travel through safety initiatives like leading pedestrian intervals at traffic signals, contributes to a better environmental outcome. It reduces incentives to drive a personal vehicle that is overkill for the trip. Reducing parking availability or increasing the price of parking or driving (by tollways) are typically framed as environmental initiatives, but to the extent that they encourage carpooling or discourage driving, they contribute to an overall balancing of travel modes that enhances safety for everyone.

A common root to problems that vex both traffic safety and environmental advocates can be described as this: we have built our roads and cities to prioritize mobility (i.e., getting around as easily and quickly as we can, to provide and procure the more and more stuff), rather than prioritizing access for people, for whatever it is they want to do. This lens necessarily preoccupies us with things and possessions, not human activity and thriving.

Many of the problems plaguing society lie at the feet of how past urban transport planning practices have instilled mindsets of faster travel in urban areas and unrestrained growth. We've failed to reconsider the idea that more of any good thing equals better. More roads, better factories, bigger houses, mechanized production that works around the clock, giant crop yields, six-lane highways, shopping malls, supermarkets, faster cars, jumbo jets, gee whiz!

In our current transport system mindset, consider the traffic engineers' predilection to mostly ensure throughput of vehicles. A key measure for performance of an urban intersection is how many cars passed through during a given red-light cycle. From a perspective of traffic optimization, environmental protection, and safety, a preferred stance would measure the flow of individuals (not just counts of motor vehicles), including cyclists, walkers, and people in multi-passenger buses.

Intersections that carry only single-passenger vehicles would be identified as needing intervention rather than working properly, the lack of pedestrians serving as a canary in the coal mine. Each perspective has a rationale for being a preferred key performance indicator, but the **latter carries ancillary environmental and personal safety benefits as well.**

Unthinking the "more is better" or "faster is better" paradigm requires effort and can reveal which "problems" are actually symptomatic of a system gone wrong (i.e., traffic congestion; medical systems strained by obesity, inactivity, air quality woes, roads and bridges damaged by ever heavier cargo loads). Urban transport infrastructure is at the core of all of these. A remedy lies in stimulating a market for short-range vehicles (via street design modifications like those that maybe furthered by ES) and ensuring that the existing pavement in cities can be put to better environmental use. Environmental efforts, transport reform advocates, and safety engineers are pulling in the same direction.

## Tab E: Efficacy of past interventions and the value of future research

Other interventions, if adopted systemwide, might move the death numbers in a better direction. Additionally, international, global, national, regional, and aspirational efforts are also underway. They've been underway for decades. **Matters are not improving.**

We know we do not have our fingers on the magic levers to make change happen, now or over the long term. No one does. Emergency Streets does not complicate or supersede any of them. It's a new, inexpensive, no-build countermeasure.

Do we need more data? Do we need more time to study the factors involved? Shall we "try" this or that?

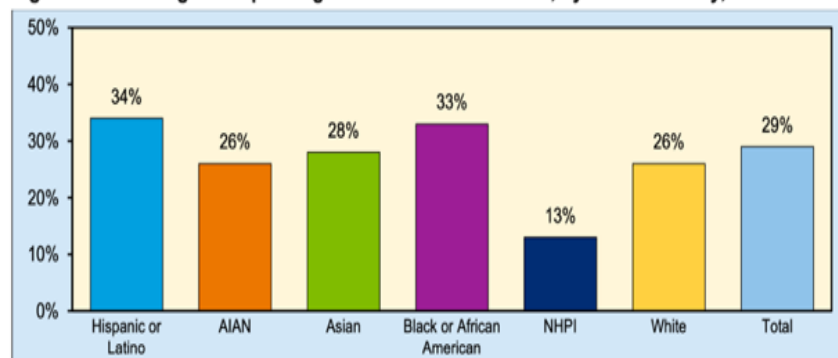
Transport planning has always been a data-intensive profession. Since smart phones became ubiquitous and cities adopted open data portals, the field has never had as much information from so many sources (smart phone apps, routing software, e-scooters and more). Similarly, we've never had as much information on the principal conditions that lead to death. Still, however, we know speed kills and is a primary factor affecting death. If the problem is speed, address speed.

Entire academic laboratories have formed to study detailed threads of inquiry about traffic safety. They've studied data, for decades, to better meet the safety needs of travelers. Technologies are often seen as a remedy. Such advances are easy to be attracted to because as new forms of technology and mobility technology emerge, for some, it allows glimpses of optimism. But how are travelers moving about, do they feel safe and what is the role of the built environment as well as aligned industries to supporting this task. Safety is at stake.

The overall decline in safety confirms Smeed's Law. Smeed, from United Kingdom's Road Research Laboratory, found that initially, with the early introduction of motor vehicles, traffic deaths tend to rise as more people buy cars. However, eventually deaths rise to an unacceptable level and safety becomes a concern for the public, policymakers and manufacturers. **We are at that point.**

As manufacturers produce safer vehicles, cities improve roads and drivers become more adept, fatalities tend to decline, that is, if people are in cars – not for other road users. Over the past 50 years cars have become much safer, from seat belts to air bags to third break lights, to the point that people inside of a car can survive crashes at very high speeds. Outside of vehicles, though, humans are more vulnerable than ever and the condition has outsize implications for different segments of the population, see below figure.

Figure 3. Percentages of Speeding-Related Traffic Fatalities, by Race-Ethnicity, 2020



Source: FARS 2020 Final File

Understanding how and why other street users, vehicles or other, undermine users' comfort levels is an issue of rising importance. For many people, a fear a crash prevents them from walking or cycling. As SUVs have gained in popularity, they have also increased in size which makes them more dangerous than smaller cars. New and real-time tools prescribe everything from routes for drivers and steps for pedestrians and all of this data can be linked to understand stronger relations between transport services and how they are used.

Being able to detect where drivers encroach on cyclist's space or act aggressively toward pedestrians can fill this important gap in knowledge. Video footage, matched with specialized software, can be used to analyze to assess where people walk, stop, and interact with others. It can also be used to measure cases where near misses between street users almost result in death. Many firms are working on projects to allow transport scientists to measure things like near-miss collisions and crowdsourced data, such as bikemaps.org, which collects data on collision and near collisions in cities worldwide, giving planners a better sense as to where the problems need to be addressed.

The Tab on "enforcement" describes treatments that could accompany ES and have impact. They include common treatments for intersections<sup>42</sup> but go beyond such measures (e.g., engineers argue that dropping the speed limits without changing design is unlikely to have an effect; it is a countermeasure effort requiring contextualized application).<sup>43</sup>

Either way, users of existing and emerging transport modes, are diverging in their need to be vigilant while using roadways and streets. Operating a device like an e-bicycle or scooter requires a degree of vigilance from the rider not demanded by larger modes, which are protected through design and their own bulk. The imminent prospects for further technological advances—notably autonomous vehicles—will demand minimal attention from those using them. But for those outside of vehicles, it demands higher levels of user attention. Understanding how users of these new human-sized and human-directed modes of transport respond is essential for the safety of both users and others in the environment. Eye-tracking research, for example, has the potential to offer valuable insights in this realm in terms of where riders are comfortable or fearful.

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<sup>42</sup> Sanders, R., Schultheiss, B., Judelman, B., Burchfield, R., Nordback, K., Gelinne, D., ... & Koonce, P. (2020). *Guidance to Improve Pedestrian and Bicyclist Safety at Intersections* (No. Project 15-63).

<sup>43</sup> <https://www.iihs.org/news/detail/lowering-speed-limits-makes-seattle-streets-safer>



## **Tab F: Post-ES assessment**

What did community experience in the wake of ES? What was learned? In terms of assessment, a preferred method would rely on a between-within design to uncover the “impact” of ES at the community level.

This might include measuring (via repeated survey or repeated interviews with more than 12 people per community, which appears to be the consensus around when we can expect “saturation” of material and the constructs of the ES aims.

### **How has the way people perceived travel time shifted before and after ES implementation both within Boulder and between Boulder and a matched community?**

Survey: include a discrete choice item about whether people’s travel time increased a lot, a little, stayed about the same, decreased a little, or decreased a lot.

Interview: could ask something like “generally speaking, do you think it takes more time, about the same of time, or less time to get to where you need and want to go?” Response. Follow up: “What makes you say more time/same time/less time?”

### **To what extent had people adopted a “more contemplative speed?” or reflected upon their driving selves over the course of the ES project vis-à-vis a “before” period and a matched community?**

Survey: I’d lean toward creating a 3-5 item construct measuring something like “more thoughtful driving self.” Example items might be placed on a frequency or agreement Likert scale, e.g., All items could begin with: “When I’m driving...I find myself paying close attention to who is sharing the road with me” (frequency or agreement); “I am very aware of my surroundings”; “I am often using my phone” (reverse coded), etc.

Interview: “How would you describe your ‘driving style?’ Prompt (if needed): “Are you generally looking to get places quickly, to take your time, to be mindful of others on the road?”

### **How have operating speeds within and outside of “ES-influence zones” shifted over time?**

Survey: Work with City of Boulder and matched community staff to gather pre-during-post operating speed data at select locations.

Interviews: with city staff to provide detail on the more procedural questions you have (i.e., what street design treatments were implemented? How were those specific design treatments arrived at? if more resources were brought to the matter, what were they used for?).

## Tab G: Open letter

Dear [City Manager],

Almost no member of this community has been untouched by traffic violence; if you aren't yourself a survivor of a motor vehicle crash, you probably know someone who was, or someone who didn't survive. Until the recent epidemic of opioid and other drug overdoses, motor vehicle crashes were far and away the most common cause of unintentional death in the United States. More than 40,000 people perish on public roadways each year. Experts project worsening trends, despite laudable [initiatives](#) to [stem](#) the problem.

Street safety is a chronic public crisis that touches every community. Yet, there's no race to develop a vaccine. There's no Narcan for traffic deaths. An *effective cavalry is not on the way*. Instead, as an American society, we have **become numb to the costs of our transport practices**—the lives lost, the economic and social system costs.

You are, intentionally or not, on the front lines of overcoming the apathy and responding to the emerging crisis. Our communities can stem further death by adopting a collective, systemic, and preventive response. At a minimum, the [EMERGENCY STREETS](#) (ES) initiative, which your community can adopt, resets our expectations about how our streets and roads should function. It has been vetted and has accompanying model enabling legislation. Furthermore, ES will retrain a generation of professionals who can implement a more forgiving transport system. We urge you to adopt the initiative by signing your name below. By doing so, you will empower leaders of our public spaces to experiment with new approaches and shape mindsets for future generations.

Kevin J. Krizek, Professor of Environmental Design, University of Colorado Boulder  
Tila Duhaime, Transportation Advisory Board, City of Boulder  
{your name here (not now, but soon), and affiliation, optional}?

## Tab H: One-page description for ‘Safer Driving Norms for [City Name]’

### Purpose:

Address the rising number of [traffic-related](#) deaths (40,000+/year).  
Reframe traffic injuries/deaths as a systemic public health crisis.  
Provide a uniform, visible law enforcement response after a fatal crash.

### Rationale:

NHTSA reports crash-related [costs](#) in hundreds of billions annually, with expected rise in fatalities.

### Goals:

Transform public streets for safer transportation.  
Boost public awareness of traffic violence.  
Ensure a united emergency response from local/regional governments.  
Promote smaller, safer local vehicles.  
Generate sustainable revenue for the campaign.  
Expedite safety reforms in transportation planning.

### Strategy:

Post-fatal crash: speed limit on affected streets within a half-mile of crash site are lowered by 20 mph for a month (e.g., like for a construction or school zone).  
Community gets [removable traffic tools](#) for street redesign.  
Sites marking fatal crash locations are tagged "EMERGENCY STREET: FATAL CRASH AREA"

### Implementation:

State-backed model language for local application (see included Tab).  
Local government heads oversee roll-out (e.g., city manager's office, see included Tab).  
Use precedents: municipalities' low-speed zones, vehicle regulations based on size/weight.

### Evaluation:

Continuous third-party review and public information drive.  
Adjust [interventions](#) if prior ones fail (e.g., lane size, vehicle restrictions).

### Federal Role:

Guide state responses to this public health crisis.  
Drive both national safety and environmental goals.  
Spur automotive/micromobility innovation.

### Impact:

Enlighten all road users about their effects on safety.  
Address public street crises, emphasizing safety over speed.  
Boost demand for smaller, secure vehicles.

### Counter-resistance:

Highlight local, state, and federal government's role to preserve life against rising road fatalities.  
Weigh objections against the loss of human life.

**Contact:** Kevin J. Krizek, [kjkrizek@gmail.com](mailto:kjkrizek@gmail.com) | Tila Duhaime, [tilatila2@gmail.com](mailto:tilatila2@gmail.com)

## Tab I: Model enabling legislation

An Act to Address Colorado's Public Health Crisis by Obliging Slower Driving Speeds, and to Enhance Driver Due Care Following Fatal Traffic Crashes

Amend Colorado Revised Statutes to add Section 42-4-18

(1)(a) If a motor vehicle crash resulting in a person's death occurs on a state highway, the department of transportation may designate a portion of the highway not exceeding three miles before and after the location of the crash as an emergency highway zone, reducing the applicable speed limit by 20 miles per hour, for up to and including ten days immediately after the victim's death. Any person who commits certain violations listed in [section 42-4-1701\(4\)](#) in an emergency highway zone that is designated pursuant to this section is subject to the increased penalties and surcharges imposed by [section 42-4-1701\(4\)\(d\)](#).

(b) If a motor vehicle crash resulting in a person's death occurs on a roadway that is not a state highway, the public entity entrusted with law enforcement or public safety may designate a portion of the roadway not exceeding one-half mile before and after the location of the crash as an emergency street zone, with a maximum motor vehicle speed of 20 miles per hour, for up to and including ten days immediately after the victim's death. A person who commits certain violations listed in [section 42-4-1701\(4\)](#) in an emergency street zone that is designated pursuant to this section is subject to the increased penalties and surcharges imposed by [section 42-4-1701\(4\)\(d\)](#).

(c) A county or municipality may adopt an ordinance requiring emergency street zones as described in this section, or further regulating motor vehicle speeds and movements to enhance public safety, in response to a fatality incurred on the roads within the jurisdiction of the county or municipality, without requiring an engineering or traffic survey.

(2) The department of transportation or other relevant public entity shall designate an emergency zone or street by placing an appropriate mobile messaging board or sign in a conspicuous place before the area where the fatal crash occurred. Such sign shall notify the public that increased penalties for certain traffic violations are in effect in such zone. The department of transportation or other public entity shall erect or place a second sign indicating the end of such zone. An emergency zone begins at the location of the sign indicating that increased penalties are in effect and ends at the location of the sign indicating the end of the zone.

(3) Signs used for designating the beginning and end of an emergency street or highway zone shall conform to department of transportation requirements. The department of transportation or other public entity may display such signs on any fixed, variable, or movable stand.

(4) Drivers of vehicles in service for public conveyance or the maintenance or enforcement of public health and safety, including, without limitation, on-duty law enforcement, fire, or emergency first-responder vehicles; public transportation vehicles on an active service route; ambulances, whether publicly or privately owned, shall not be subject to the speed restrictions in this section if reasonably necessary in the execution of their duties.

Amend CRS [section 42-4-1701\(4\)\(d\)](#) to read:

The penalty and surcharge imposed for any moving traffic violation under subparagraph (I) of paragraph (a) of this subsection (4) are doubled if the violation occurs within a school zone pursuant to section 42-4-615 OR AN EMERGENCY HIGHWAY OR EMERGENCY STREET ZONE PURSUANT TO SECTION 42-4-618.

## Tab J: Example profile and tasks for ES, Vision Zero coordinator

ES need not compete with a municipality's ongoing traffic safety countermeasures; for those with an established Vision Zero or Street Safety program and staffing, the tasks involved in implementing ES would be readily incorporated. First responders to a crash site already follow traffic incident management protocols; where a fatality has occurred,<sup>44</sup> this protocol can incorporate notification of the ES coordinator to initiate installation of the ES countermeasures as an element of securing the scene.

In a place where ES measures have been adopted (see model enabling legislation), the ES/Vision Zero coordinator would supervise deployment of these elements:

- temporary speed limit signage for motor vehicle traffic in all directions on roadways of a similar type (arterial, interurban highway, etc.) within ½ mile radius of the crash site
- potential temporary road markings, including tape or stencils, with Emergency Street messaging
- public notification via standard social media and news channels of the change in road operations
- where a municipality has determined that ES should receive dedicated enforcement resources, the coordinator will oversee scheduling and placement of the desired enforcement mechanism.
- two weeks after implementation of the ES protocol, the coordinator would direct staff to remove the equipment and/or markings, scheduling road workers as needed and handling redeployment of the equipment to a new location or storage.

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<sup>44</sup> Roughly 60% of fatal motor vehicle crash victims die at the scene; about 40% succumb to their injuries within 3 days. In the latter case, the treating hospital would be responsible for notifying police and/or the ES coordinator. <https://www.transportation.gov/NRSS/PostCrashCare>

## **Tab K: Who ES has been discussed with**

ES has been socialized to the below individuals. The predominant reaction is that the initiative meets a growing need, is feasible, and ideologically sound. Implementation details largely depend on community politics, recognizing ES provides a template.

### ***...Awareness***

The Honorable Jane Lubchenco, Deputy Director for Climate and Environment, Office of Science and Technology Policy, Executive Office of the President

Randa Radwan, Senior Advisor for Safety and Mobility, U.S. Department of Transportation

Gretchen Goldman, Director, Climate Change Research and Technology, U.S. Dept. of Transportation

Jared Polis, Governor, State of Colorado

John Hickenlooper, Senator, State of Colorado

### ***...Development / Advisors***

David Levinson, Professor, University of Sydney and the 'Transportist'

Rebecca Sanders, Founder and Principal Investigator, Safe Streets Research & Consulting

Seth LaJeunesse, Senior Research Associate, Univ of North Carolina Highway Safety Research Center

Meredith Glaser, Executive Director, Urban Cycling Institute, University of Amsterdam

Ryan Schuchard, Boulder (Colorado) City Council

### ***...Socialization, Vetting, Feedback, Concept Testing***

Brian Vogt, CEO, Denver Botanic Garden

Jim Hemphill, Sr. Program Manager III, Mobility Safety Strategy, National Safety Council

Bill Nesper, Executive Director, League of American Cyclists

Becky Naumann, Lead Health Scientist, Applied Sciences Branch, Div Inj Prev, Centers for Disease Control

Cyclists for Community, Boulder County based advocacy organization

Kyle Wagenschutz, City Thread

Zoe Kircos, City Thread

Mark Chung, National Safety Council

Brian Taylor, Professor of Urban Planning, UCLA

Josh Sperling, National Renewable Energy Lab

Dave Snyder, Senior Director for Infrastructure, People for Bikes

Rob Cappucci, Director of Advocacy and Industry Partnerships, SRAM

Melissa Faith Hart, Founder and CEO, e-BodyGuard Corp.

Jeff Wood, the Overhead Wire

Jill Locantore, Denver Streets Partnership

William Shutkin, Shutkin Sustainable Living

Ross Corotis, Emeritus Professor of Civil Eng, former Dean, College of Engineering, Univ of Colorado

Lisa Schulte Moore, Professor, Natural Resource Ecology, Iowa State University, MacArthur fellow

Karen Trapenberg Frick, Associate Professor, University of California Berkeley, City/Regional Planning

Andres Sevtsuk, Associate Professor, Urban Studies and Planning, MIT

Rebecca Davies, City Ratings Program Director, People for Bikes

Marc Schlossberg, Co-Director, Sustainable Cities Institute, Professor, University of Oregon

Alicia Karspeck, Founder and Executive Director, [C]Worthy

Denise Smith, Chief Operating Officer, Hummingbird Firm

Alessandro Rigolon, Associate Professor, University of Utah

Krista Nordback, Univ of North Carolina Highway Safety Research Center

David Lawrence, Senior Scientist, National Center for Atmospheric Research

Deborah Salon, Associate Professor, Arizona State University

Megan Myerson, Associate Professor, Univ of Penn

Asha Weinstein, Professor, San Jose State University

David King, Associate Professor, Arizona State University  
Gregor Henze, Professor, Renewable and Sustainable Energy Institute, Univ of Colorado Boulder  
Marya Morris, Independent Planning Consultant  
Steven Phillips, Computer scientist for open-source machine-learning tools  
Cindy Christian, Managing Editor, Bricks Meet Click  
Dan Sturges, Co-founder, Smart Access Mobility (SAM)  
Steven Porder, Associate Provost of Sustainability, Brown University  
Marcel deLange, Program in Environmental Design, Univ of Colorado Boulder  
Marleen Seckendorf, Douglas County Public Schools  
Jota Samper, Assistant Professor, Program in Environmental Design, Univ of Colorado Boulder  
David Hemsli, Founder and Creative Director, Hemisphere Creative Arts  
Wes Marshall, Professor, University of Colorado Denver  
*Pls forgive us if you are not yet on this list; initiative is growing fast, contributions are welcome.*

## Tab L: Bios of co-founders



Tila Duhaime practiced intellectual property law in New York City before pivoting to community organizing and advocacy work for transit and vulnerable road users, with particular focus on school-aged children and cyclists. Over the past 17 years she has worked with various transportation nonprofits on safer road and urban design strategy, and served on numerous governmental advisory boards to advance these efforts. She lives in Boulder, Colorado and cycles extensively with her husband and son.



Dr. Kevin J. Krizek is Professor of Environmental Design at the University of Colorado Boulder and former Senior Advisor in the Office of the Under Secretary of State for Economic Growth, Energy and the Environment (U.S. Department of State). He analyzes urban settings, how services are accessed, and the role of government. His recent [book](#) carefully articulates a reformist urban transport planning agenda for cities grounded in accessibility, sustainability, and social justice. Other perspectives been shared in his TED talk, nationally published essays ([1](#), [2](#), [3](#)) and *The End of Traffic and the Future of Transport*. He's been a visiting professor in the Netherlands and was awarded a U.S.-Italy Fulbright Scholarship. At the Department of State, Krizek advanced global infrastructure initiatives to spur clean energy form, digital security and smart cities.