# Strategies to Coordinate Zero Deaths Efforts for State and Local Agencies







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### 16. Abstract

Vision Zero is a strategy to eliminate all traffic fatalities and serious injuries, while increasing safe, healthy, equitable mobility for all. At the time of this report, more than 40 communities across the United States have committed to the Vision Zero strategy.

The Federal Highway Administration (FHWA) Office of Safety promotes effective safety partnerships as a way to advance zero deaths efforts. To support this effort, FHWA sponsored Vision Zero workshops and webinars in Texas, Florida, and Colorado where State, regional, and local stakeholders gathered to discuss safety priorities and strategies to achieve their shared goal of zero deaths.

The robust discussions and suggestions of these State-based workshops and webinars, together with additional information from other State, regional, and local agencies, became the basis for developing this document. The document is designed to help other State and local agencies foster and build stronger relationships that support coordinated zero deaths efforts. The document describes work toward the Safe System Approach for reaching the zero deaths goal, including managing speed for safety, strengthening safety culture, and leveraging data and community input to prioritize changes. It does not duplicate materials that go into greater depth on these topics; rather, it references current strategies and offers new strategies as a way to boost coordination efforts.

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# **ACRONYMS**

ASE Automated Speed Enforcement

CDOT Colorado Department of Transportation

DOT Department of Transportation

DRCOG Denver Regional Council of Governments

FDOT Florida Department of Transportation

FHWA Federal Highway Administration

HIN High-Injury Network

MGL Massachusetts General Law

MPO Metropolitan Planning Organization

MUTCD Manual on Uniform Traffic Control Devices

NACTO National Association of City Transportation Officials

NTSB National Transportation Safety Board

ODOT Oregon Department of Transportation

PBOT Portland (Oregon) Bureau of Transportation

SHSP Strategic Highway Safety Plan

RCW Revised Code of Washington

TxDOT Texas Department of Transportation

WSDOT Washington State Department of Transportation

# 1. Introduction

### The Need for Vision Zero

In 2018, 36,560 people were killed in traffic crashes on the Nation's roadways. In a concerted effort to reduce fatalities, most State Departments of Transportation (DOTs) have adopted a zero deaths vision or approach in their Strategic Highway Safety Plans (SHSPs). In addition, many communities have committed to Vision Zero, a strategy to eliminate traffic deaths and serious injuries at regional and local levels.

Vision Zero is based on the Safe System Approach (Figure 1), which acknowledges that

roadway users make mistakes and that transportation agencies should design road systems and adopt related policies to ensure those mistakes do not result in serious injuries or fatalities.

In the U.S., zero deaths initiatives are often referred to as Vision Zero, Toward Zero Deaths, or Road to Zero.
Regardless of the title, each initiative advocates for agencies to align with the Safe System Approach. The great success of these efforts is in forging multidisciplinary partnerships among various



Figure 1. Safe System Approach (Source: FHWA).

Federal, State, regional, and local stakeholders.

# FHWA's Vision Zero Commitment

The primary safety goal of the Federal Highway Administration (FHWA) is to reduce transportation-related fatalities and serious injuries across the transportation system, and for this reason it fully supports the vision of zero deaths. Additional information and resources relating to FHWA's zero deaths program can be found on the FHWA Zero Deaths website.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> https://safety.fhwa.dot.gov/zerodeaths/

# **Background**

The growing number of communities that are integrating zero deaths vision and strategies into their traffic safety efforts has renewed coordination and collaboration opportunities at the State and local levels.

As a way to advance zero deaths efforts, FHWA supports initiatives that develop effective safety partnerships. During 2018 and 2019, FHWA sponsored Vision Zero workshops and webinars in Texas, Florida, and Colorado, where State, regional, and local stakeholders gathered to discuss safety priorities and strategies to achieve their shared goal of zero deaths. The workshops charged more than 200 participants with identifying opportunities for increased coordination and progress toward zero deaths - the shared goal of safety for all.

# **Report Purpose**

This document aims to highlight strategies that can assist States and local communities in coordinating their zero deaths efforts and employing a Safe System Approach.

This document does not duplicate materials that go into greater depth on these topics; rather, it references current strategies and offers new strategies as a way to boost coordination efforts.

Many strategies offered in this document are from the FHWA-sponsored workshops and webinars in Texas, Florida, and Colorado. During these workshops, practitioners shared initiatives and activities that exemplify coordination and collaboration resulting from the common zero deaths goals. They also discussed advancing a Safe System Approach as critical to reach the zero deaths goal, particularly through managing speed for safety, strengthening safety culture, and leveraging data and community input to prioritize changes. This document also includes coordination and collaboration strategies that other State, regional, and local agencies have implemented in their efforts to reach zero deaths goal.

# **Report Organization**

This document involves three stand-alone sections that describe State-led, region-led, and community-led efforts, respectively. Each section focuses on the three areas of speed management, safety culture and data and prioritization. It is noted that speed management is a key element of the Safe System Approach while the safety culture and data and prioritization are the essentials of a Safe System Approach. This format can help agency staff at each level see specific examples applicable to their agency.

# 2. State-led Opportunities

State DOTs regularly coordinate with regional and local agencies on many issues, including transportation safety. The Safe System Approach is based on shared responsibility and provides even more opportunities for collaboration with the potential to reduce the severity of traffic crashes. A major avenue for collaboration is within the State's Highway Safety Improvement Program (HSIP), which requires each State to develop a SHSP<sup>2</sup>, a comprehensive framework for reducing fatalities and serious injuries on all public roads. A SHSP identifies a State's key safety needs and guides investment decisions toward strategies and countermeasures with the most potential to save lives and prevent injuries.

A common element among many State SHSPs and HSIPs, including being a core element of the Safe System Approach is creating safe speeds for a specific road context. Managing speed helps prevent crashes and reduce the severity of crashes that do happen. This is critical for all road users as human bodies have limited tolerance to crash impacts. It is particularly critical for people who walk and bike because motor vehicle speed is a significant determinant of whether a person struck will survive (Figure 2).



Figure 2. Vehicle speed comparison to chance of pedestrian injury and fatality (Source: DRCOG).

<sup>&</sup>lt;sup>2</sup> https://safety.fhwa.dot.gov/shsp/

# **Speed Management**

According to the National Highway Traffic Safety Administration, for more than two decades, speeding has been involved in approximately one-third of all motor vehicle deaths in the U.S.<sup>3</sup> In 2018, crashes in which at least one driver was speeding resulted in 9,378 fatalities, which is 26 percent of total traffic fatalities for the year.<sup>4</sup>

A State DOT manages speeds in various ways, most commonly by how it designs roads, how it sets speed limits, and what policies and enforcement strategies it uses. Speed management offers valuable opportunities for stronger State and local coordination because decisions about roads and enforcement are usually controlled at the State level.

The following are examples of States demonstrating leadership and further coordination and collaboration, particularly with local agencies, to realize the shared goal of zero deaths.

### **EMPOWER LOCAL AUTHORITIES TO SET SPEED LIMITS**

A National Transportation Safety Board (NTSB) report, <u>Reducing Speeding-Related Crashes</u> <u>Involving Passenger Vehicles</u>, describes that localities are stressing the importance of lowering speed limits to minimize injury risk for vulnerable users. The report recommends that the FHWA revise Section 2B.13 of the Manual on Uniform Traffic Control Devices (MUTCD) to, at a minimum, incorporate the Safe System Approach for urban roads to strengthen protection for vulnerable road users. The NTSB concludes that expert systems such as USLIMITS2 can improve the setting of speed limits by allowing traffic engineers to systematically incorporate crash statistics and other factors in addition to the 85th percentile speed and to validate their engineering studies.<sup>5</sup>

Answering NTSB's call, the National Association of City Transportation Officials (NACTO) developed an innovative, tested, and proven framework for setting safe speed limits for city streets. City Limits outlines how to use a Safe System Approach to set speed limits in urban environments, in contrast to legacy methods (e.g., the 85th percentile) that often result in speeds that are inappropriately fast for urban environments. City Limits also provides several examples of State legislation granting cities the flexibility to set safer speed limits as described below:

<sup>&</sup>lt;sup>3</sup> https://www.nhtsa.gov/risky-driving/speeding

<sup>&</sup>lt;sup>4</sup> National Center for Statistics and Analysis. (2020, April) Speeding: 2018 data (Traffic Safety Facts. DOT HS 812 932). National Highway Traffic Safety Administration.

<sup>&</sup>lt;sup>5</sup> https://www.ntsb.gov/safety/safety-studies/Documents/SS1701.pdf

<sup>&</sup>lt;sup>6</sup> https://nacto.org/safespeeds/

- Minnesota Statute, Section 169.14, Subdivision 5h, Speed limits on city streets<sup>7</sup> allows cities
  - to establish speed limits for city streets under the city's jurisdiction. This subdivision does not apply to town roads, county highways, or trunk highways in the city. The statute requires the speed limit changes to be implemented in a consistent and understandable manner along with installation of appropriate signs to display the speed limit.
- Washington State Revised Code of Washington (RCW) 46.61.4158 allows local agencies to establish or alter maximum limits on local streets. Whenever local authorities in their respective jurisdictions determine on the basis of an engineering and traffic investigation that the maximum speed permitted is greater or less than is reasonable and safe under the conditions found to exist upon a highway or part of a highway, the local authority may determine and declare a reasonable and safe maximum limit.
- Massachusetts General Law (MGL) Chapter 90
  Section 17C<sup>9</sup> allows cities and towns to reduce
  the statutory speed limit from 30 mph to 25 mph
  in thickly settled or business district. The MGL c.
  90 § 17C defines a thickly settled or business
  district as "the territory contiguous to any way
  which is built up with structures devoted to
  business, or the territory contiguous to any way
  where dwelling houses are situated at such
  distances as will average less than two hundred
  feet between them for a distance of a quarter of a



Figure 3. City of Boston speed limit reduction outreach (Source: City of Boston).

mile or over." It is noted that statutory speed limits only exist in the absence of special speed regulations. If a special speed regulation exists, that posted speed limit will always

<sup>&</sup>lt;sup>7</sup> https://www.revisor.mn.gov/statutes/cite/169.14

https://app.leg.wa.gov/RCW/default.aspx?cite=46.61.415#:~:text=RCW%2046.61.,establish%20or%20alter%20maximum%20limits.

<sup>&</sup>lt;sup>9</sup> https://www.mass.gov/info-details/speed-limits-in-thickly-settled-or-business-districts#overview-

supersede a statutory speed limit within a thickly settled or business district. Municipalities have the option to opt-in to MGL c. 90  $\S$  17C on a city- or town-wide basis or on a street-by-street basis. Once a municipality has opted-in to MGL c. 90  $\S$  17C, it is required to notify Massachusetts DOT.

• New York State Assembly Bill 10144/Senate Bill 7892<sup>10</sup> amended Section 1642 of the Vehicle and Traffic Law to allow a city with over one million residents to establish speed limits of 25 mph on streets that are not part of the State highway system after a period of public comment. This was followed by New York City Local Law 54 of 2014, which amended Section 19-177 of the New York City Administrative Code to reduce the official citywide speed limit from 30 mph to 25 mph (Figure 3).

### PRIORITIZE EFFECTIVE COUNTERMEASURES TO MANAGE SPEED

As the 2017 NTSB report showed in its 2015 analysis of speeding-related fatal crashes in cities, an estimated "49 percent of these fatal crashes occurred on State-operated roads." State-maintained roads often pass through local jurisdictions that have no direct authority to adjust their speed limits or redesign roads to encourage slower travel. State and local authorities can collaborate on effective countermeasures to manage speed and address the disproportionate problem of unsafe speeds on State-owned roads within local communities. Recognizing the high proportion of traffic deaths and injuries related to speed, States could consider leveraging their systems and funding toward addressing unsafe speeds on State-owned roads. States could also better support programs, as well as design and policy changes, on all public roads.

States could allow local agencies to use Automated Speed Enforcement (ASE) (Figure 4) to encourage safe behaviors. Multiple entities recommended ASE, particularly the NTSB in their 2017 report and the Governors Highway Safety Association in their report Speeding Away from Zero: Rethinking a Forgotten Traffic Safety Challenge. <sup>12</sup> In many cases, however, allowing local agencies to use ASE requires a change in State law. The Governors Highway Safety Association focuses on States' opportunities to address excessive vehicle speed as a persistent contributor to motor fatalities.

<sup>&</sup>lt;sup>10</sup> https://www.nysenate.gov/legislation/bills/2013/S7892

<sup>&</sup>lt;sup>11</sup> https://www.ntsb.gov/safety/safety-studies/Documents/SS1701.pdf, page 28

<sup>12</sup> https://www.ghsa.org/sites/default/files/2019-09/FINAL GHSASpeeding19 REV.pdf



Figure 4. Automated Speed Enforcement (ASE) signage (Source: Insurance Institute for Highway Safety).

For example, the New York State Legislature permitted New York City to use ASE, starting in 140 school zones in 2014 and subsequently expanded. The cameras are a proven effective deterrent to speeding. In the program's first two years, the number of speeding violations issued decreased by 63 percent, injuries were down 17 percent, and fatalities were down 55 percent.<sup>13</sup>

### INSTITUTIONALIZE BEST PRACTICES TO MANAGE SPEED AND IMPROVE SAFETY

State DOTs can analyze approaches to managing speed for safety, both in their work and as a part of their SHSP updates. If warranted by the State's data, SHSPs could elevate this issue and give it the same attention as other safety areas, such as intersection and roadway departure crashes, alcohol impairment, and seatbelt usage. For example, the Washington State Department of Transportation (WSDOT) has increased attention to speed management by convening a work group that involves State, local, and tribal partners to develop a speed-management policy and guidelines focused on safety. "The policy will emphasize lower operating speeds on State routes, city streets, county roads, and tribal roads based on context and compatible with the needs of all types of users. Key factors to consider when setting operating speeds include high densities of older adults, transit users, youth, people who walk

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<sup>&</sup>lt;sup>13</sup> https://www1.nyc.gov/html/dot/downloads/pdf/speed-camera-report-june2018.pdf, page2 and 11

or ride bicycles—particularly those who are most reliant on active transportation and transit due to income or disability—and land use."<sup>14</sup>

### SUPPORT CONTEXT-SENSITIVE DESIGN APPLICATIONS TO IMPROVE SAFETY

Streets can be redesigned to reduce speeding and other dangerous driving habits and encourage multimodal usage, a practical approach toward creating a community where crashes are preventable and deaths and serious injuries have been eliminated.

An example is the Florida Department of Transportation (FDOT) <u>Context Classification</u> toward a context-sensitive system of Complete Streets.<sup>15</sup> The system defines and describes context classifications from C1 (rural) to C6 (dense urban setting). Through a <u>webinar series</u>, <u>FDOT</u> provides training and case studies for Complete Streets and Context Classification.<sup>16</sup> <u>The FDOT</u> <u>2019 Design Manual</u> offers designers more flexibility, though its practices need to become more common and accepted.<sup>17</sup>

States can encourage context-sensitive street design, especially by recognizing that some traditional design standards do not meet cities' safety needs. For instance, many cities embrace the NACTO <u>Urban Street Design Guide</u>, which emphasizes city street design as a unique practice with its own design goals, parameters, and tools.<sup>18</sup> The guide is endorsed by dozens of U.S. cities and several States.<sup>19</sup>

# **Safety Culture**

A Safe System Approach needs to be supported by a strong safety culture. Changing culture is often cited as key to transforming traffic safety. This starts internally with the agencies charged to lead. All agencies can—and must—be strong leaders in this respect. A zero deaths vision requires "a shift in culture both within transportation agencies and other organizations, as well as within communities. Everyone must accept that fatalities are unacceptable and preventable."<sup>20</sup>

The Safe System Approach is established in some parts of the world and is improving safety for all road users. States leadership should build on the positive outcomes to educate stakeholders about the Safe System Approach and the value of integrating it into planning, programming,

<sup>&</sup>lt;sup>14</sup> http://wtsc.wa.gov/wp-content/uploads/dlm uploads/2019/10/TargetZero2019Lo-RES.pdf, page 199

<sup>&</sup>lt;sup>15</sup> https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/roadway/completestreets/files/fdotcontext-classification.pdf?sfvrsn=12be90da 2

<sup>&</sup>lt;sup>16</sup> http://www.flcompletestreets.com/CSIWebinars.shtm

<sup>&</sup>lt;sup>17</sup> https://www.fdot.gov/roadway/fdm/default.shtm

<sup>&</sup>lt;sup>18</sup> https://nacto.org/publication/urban-street-design-guide/

<sup>&</sup>lt;sup>19</sup> https://nacto.org/publication/urban-street-design-guide/endorsement-campaign/

<sup>&</sup>lt;sup>20</sup> https://safety.fhwa.dot.gov/zerodeaths and https://www.mdt.mt.gov/research/projects/trafficsafety-primer.shtml

funding, implementing, and evaluating transportation safety efforts. The following are examples of how States can support a strong safety culture.

# TAKE A LEADING, VISIBLE ROLE IN ADVANCING THE VISION ZERO GOAL AND SAFE SYSTEM APPROACH

In Washington, WSDOT dedicated a full SHSP chapter to explain the approach, share examples, and present Washington State's plans to advance the Safe System Approach: "The Safe Systems Approach chapter explores the influence of roadway design on traffic safety, attempting to prevent crashes through design and roadway modifications for all users."<sup>21</sup>

### EMPHASIZE THE HUMAN ASPECTS OF TRAFFIC SAFETY EFFORTS AND RESULTS

It is important to help all traffic safety stakeholders recognize and value their work in people's lives; it is often the difference between life and death. Agencies should cooperate to find opportunities to ensure that the human aspect of traffic safety work remains in focus and is not allowed to fade into the background. State and local agencies have an essential role in communicating the human aspect of traffic safety to internal staff and setting the tone publicly and with partner agencies:

- In FDOT District 7, the District Secretary shares a biweekly report recognizing the individuals who died on roads in his district, humanizing the losses and helping traffic safety practitioners understand the urgent value of their work. This effort to humanize the work of traffic safety is a worthwhile practice for others at the local and State levels to replicate.
- The CDOT displays the current number of fatalities for the year on roadside message boards. As described on the <u>CDOT safety web portal</u>, the aim is that "this weekly memorial will be a wake-up call for everyone to drive more safely. Remember: It's a person, not a number."<sup>22</sup>

### COLLABORATE ON DIVERSE TRANSPORTATION NEEDS, NOT JUST HIGHWAYS

Essential to safety culture is willingness to modernize and embrace change. This is evident even in the language we use. For instance, States have traditionally referred to their work as focusing on "highways," even when meaning to include other roads. While not intentional, this terminology may not seem to give proper credence to local and county roads, and all road users. Ensuring that language, plans, actions, and decisions fully encompass all parts of a State, including local communities, helps show solidarity toward safety for all. For example, CDOT, in updating the 2014–2019 SHSP, explicitly retitled it the Strategic Transportation Safety Plan. The title change is accompanied by strategies that center safety for all modes on all roads, not just to

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<sup>&</sup>lt;sup>21</sup> http://targetzero.com/wp-content/uploads/2020/03/TargetZero2019 Lo-Res.pdf, page 2

<sup>22</sup> https://www.codot.gov/safety

move vehicles on highways. It emphasizes collaboration on Vision Zero, including its vision and mission.

### **FACILITATE LOCAL SAFETY MEETINGS**

Not all local agencies have opportunities to engage with each other. States could facilitate this type of communication and collaboration by bringing together local agencies (along with others interested in learning more) to work toward Vision Zero, encourage peer information exchange, and identify opportunity areas for greater collaboration that will lead to improvements. This would also allow for State leaders to hear from local leaders about areas for improvement in traffic safety coordination. Local leaders often express interest in smaller informal gatherings, which allow for more candid discussions and problem solving. For instance, Vision Zero leaders from several Florida communities (including municipalities and metropolitan planning organizations) recognized the similarities of their work and have organized small meetings to discuss their efforts, share successes and challenges, and work together toward their shared Vision Zero goals. This includes sharing strategies for collaborating with the State on mutual areas of interest.

PROVIDE TRAINING ON VISION ZERO AND SAFE SYSTEM APPROACH TO TRAFFIC SAFETY State DOTs could provide in-person or virtual meetings intended for both State-level staff (including not only transportation, but also public health, law enforcement, and policy) and local agency staff.

The CDOT delivers Whole System, Whole Safety workshops to the state transportation commission, local agencies, metropolitan planning organizations, and others.<sup>23</sup> The training takes a systematic approach to safety—to help agencies and other stakeholders see their respective contributions to, responsibilities for, and influences on transportation safety.

### **Data and Prioritization**

The Safe System Approach to road safety involves collecting data on where and how crashes happen, examining additional inputs—such as the demographics of impacted communities; comprehensive injury data from medical institutions; transportation attitudes (which modes of transportation are more vulnerable); traffic volume; data from traffic cameras for identifying near misses—and then prioritizing programs and projects accordingly. States and local agencies should work together to develop a project prioritization approach that addresses equity and regional and local high-injury networks (HINs). Coordination between state and local agencies can also help organizations identify innovative safety improvements and local matching funds to leverage state funding.

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<sup>23</sup> https://www.codot.gov/safety/assets/wsws-fact-sheet.pdf

### ALIGN FUNDING AND POLICY WITH SAFETY GOALS

It is more common now for States to organize programs around safety outcomes. With data and local coordination, states can create performance-driven transportation programs. State DOTs could weight project funding selections in favor of projects that align public safety with policy goals as described in the <u>Prioritizing Projects Based on Outcomes</u> white paper from the Governors' Institute on Community Design, a Smart Growth America program.<sup>24</sup> The conclusion of the white paper includes profiles of Virginia, Hawaii, and Tennessee initiatives. It provides an overview of how the States have implemented new programs to evaluate, score, and rank projects for funding based on Statewide goals. This resource also describes work to develop performance measures to evaluate *all* projects (not just safety projects) consistently.

Similarly, CDOT adopted a goal to reduce vehicle crashes by 2,500 by June 30, 2020, and by 7,500 by June 30, 2022. To achieve this aggressive goal, CDOT has increased Strategic Safety Program funding for safety improvements, including increasing Traffic Incident Management miles covered. The Strategic Safety Program is funding the DOT set-aside specifically for safety improvements related to roadway assets, including cable guard rail, 6-inch reflective striping, and rumble strips. Penalty funds from the Highway Safety Improvement Program finance the program.

### COORDINATE ON DATA COLLECTION, SHARING, ANALYSIS, AND USE

According to the American Public Health Association, "poor transportation decisions can harm health and are not always fair across all communities." As data are essential for decision-making, State DOTs could fund efforts to identify and address gaps in traffic safety and road data to effectively and efficiently prioritize safety efforts. State DOTs could facilitate discussions between stakeholders at various governmental levels to reveal opportunities for improving data collection, sharing, analysis, and use. In an effort to bridge the gap among potential partners, the American Public Health Association shares ways for States, regional planning organizations, and localities to coordinate on transportation and health. <sup>26</sup>

For example, the WSDOT Traffic Records Committee is a partnership of Federal, State, and local stakeholders in transportation, law enforcement, criminal justice, and health. The committee was created to encourage collaboration and improve the State's traffic records system. The WSDOT is also developing an ongoing inventory system that provides comprehensive information about road systems. Traffic Records Committee goals include removing barriers to

<sup>&</sup>lt;sup>24</sup> https://smartgrowthamerica.org/app/uploads/2019/03/Prioritizing-projects-based-on-outcome FINAL.pdf

<sup>&</sup>lt;sup>25</sup> https://www.apha.org/topics-and-issues/transportation

<sup>&</sup>lt;sup>26</sup> https://www.apha.org/topics-and-issues/transportation

data sharing and integration; providing quality data, analysis, and tools to customers; and sustaining close collaboration and acquired knowledge within the committee.<sup>27</sup>

USE DATA TO UNDERSTAND INEQUITIES AND ADVANCE EQUITABLE TRAFFIC SAFETY OUTCOMES As part of their Vision Zero work, many local communities are addressing situations in which some parts of the communities are more negatively affected by traffic crashes than others. As described in section 4, localities have done significant work to overlay HINs with health and equity data. The <a href="State of Washington's 2019 Target Zero Plan">State of Washington's 2019 Target Zero Plan</a> includes focus areas and actions to promote equity in traffic safety outcomes. It acknowledges that "many of the approaches that transportation agencies can take to increase active transportation, reduce crash potential, and improve connectivity can also advance health equity if improvements are prioritized to specific communities, including low-income, the elderly, rural residents, workers, students, and youth." Examples of strategies designated in the Washington plan include providing traffic safety agencies and partners with training on cultural competence, multicultural engagement, and multicultural communications; identifying and recruiting ambassadors who represent their communities and can assist State agencies overcome language or cultural barriers; and engaging in open, deliberate dialogue about inclusion to turn intention for equitable outcomes into action.

<sup>&</sup>lt;sup>27</sup> http://wtsc.wa.gov/wp-content/uploads/dlm uploads/2019/10/TargetZero2019Lo-RES.pdf, page 168

<sup>&</sup>lt;sup>28</sup> http://targetzero.com/wp-content/uploads/2020/03/TargetZero2019 Lo-Res.pdf, page 220

# 3. Region-led Opportunities

Given the breadth of planning and programming decisions Metropolitan Planning Organizations (MPOs) make, they play an important role in safety, especially because they connect State and local agencies. There are approximately 400 MPOs in the U.S. representing urbanized areas with populations of 50,000 or more as defined by the Census Bureau. The MPOs are uniquely positioned to help lead regional planning, funding, and policy toward realizing the zero deaths vision. The MPOs also analyze data and convene safety initiatives to inform safety studies either regionally or for local public agencies. The following are examples of how MPOs can become leaders to support coordination.

# **Speed Management**

### SUPPORT LOCAL AND STATE EFFORTS TO REDUCE SPEED

While most MPOs do not manage speed directly, their activities do overlap with key priority areas for zero deaths efforts. For instance, MPOs provide local and State agencies with data that could include speed related information. MPOs often engage in policy and legislative actions and could elevate safety-focused efforts to a higher priority region-wide. MPOs also play a significant role in funding decisions.

Hillsborough MPO (Florida) developed the <u>Speed Management Action Plan</u>, which analyzed data to identify where high-speed roads are most unsafe. The MPO found that 75 percent of the most severe crashes in the county occur on roads with posted speeds of 40 mph or higher. The MPO is focusing on speed, aggressive driving, and safe lighting. This systemic focus on safety can be adopted for better regional coordination and support the areas' localities.

# **Safety Culture**

A safety culture is essential for efforts to achieve zero deaths goals. The MPOs should encourage and assist locals in building and sustaining a safety culture within their organizations as well as among road users.

### **BUILD CAPACITY AND BRING AWARENESS**

The MPOs often provide training and technical assistance and can use these opportunities to emphasize a safety-first approach in policy setting, planning, programming, and project development. The MPOs can also bring awareness of safety issues, needs, challenges, and opportunities, and use their facilitation role to encourage collaboration and coordination among technical and policy stakeholders. For example, the Broward County MPO conducts walking audits with local stakeholders to increase their involvement in planning. Since a part of the walking audits is to identify safety issues that need immediate attention, the walking audits also keep stakeholders engaged in safety and encourage partnerships.

The MPOs can leverage their role as transportation planning organizations to facilitate the connection between transportation planning and safety. The FHWA report <u>Building Links to Improve Safety: How Safety and Transportation Planning Practitioners Work Together</u> describes ways transportation planners and safety practitioners can link transportation planning and safety planning to address safety challenges.<sup>29</sup> The MPOs could also be role models to show the importance of a safety culture, which helps with implementing Vision Zero and Safe System Approach.

### SHARE SAFETY RESOURCES WITH LOCAL JURISDICTIONS

The MPOs often have access to safety information and other materials that they can share with local practitioners. Examples of safety materials include the <u>FHWA Office of Safety Proven</u> Safety Countermeasures, <sup>30</sup> Transportation Safety Planning and the Zero Deaths Vision: A Guide for Metropolitan Planning Organizations and Local Communities, <sup>31</sup> and the NACTO <u>Urban Street Design Guide</u>. <sup>32</sup>

The MPOs also develop specific resources particularly for local agencies. For example, the Indianapolis MPO is developing a Vision Zero toolkit to assist local jurisdictions in their Vision Zero efforts. Also, the Denver Regional Council of Governments (DRCOG) is developing another toolkit to help local jurisdictions in Colorado in the local safety plan development process.

### **Data and Prioritization**

Safety performance management is part of the Transportation Performance Management program. The Safety Performance Management Final Rule establishes five performance measures, including the number and rate of fatalities and serious injuries.<sup>33</sup> The rule also sets out the process for State DOTs and MPOs to establish and report their safety targets. The MPOs are vital to coordination with state and local partners toward these performance measures.

### SET REGIONAL TRAFFIC SAFETY GOALS, THEN MEASURE AND REPORT PROGRESS

Increasing the safety of the transportation system for motorized and nonmotorized users is an area some MPOs consider when developing their long-range transportation plans. This work includes MPO leadership to develop measurable goals to guide long-range transportation planning. Forward Pinellas, the Pinellas County, Florida, MPO, embeds safety in its long-range transportation plan and commits its assistance to FDOT in improving the safety of Florida's

<sup>&</sup>lt;sup>29</sup> https://safety.fhwa.dot.gov/tsp/fhwasa16116/

<sup>30</sup> https://safety.fhwa.dot.gov/provencountermeasures/

<sup>31</sup> https://safety.fhwa.dot.gov/tsp/fhwasa18024/

<sup>32</sup> https://nacto.org/publication/urban-street-design-guide/

<sup>33</sup> https://www.fhwa.dot.gov/tpm/

surface transportation system by "achieving a 5 percent annual reduction in the rate of fatalities and serious injuries." Forward Pinellas then reports findings in its annual Traffic Crash Trends and Conditions Report. 35

An important component of the Vision Zero action plan is tracking progress toward implementing strategies and ultimately shifting the severe and fatal crash trends down to zero. For example, the Hillsborough MPO reports quarterly the progress and accomplishments of its Vision Zero program (Figure 5).



Figure 5. Plan Hillsborough quarterly report (Source: Hillsborough MPO).

The DRCOG is developing a <u>Regional Vision Zero plan</u> that defines necessary action initiatives, and in many cases, sub-actions, as well as the regional partners that need to be involved or take responsibility. The DRCOG is partnering with CDOT on multiple action initiatives, many overlapping with strategies listed in CDOT's Strategic Transportation Safety Plan (Figure 6). The DRCOG is also conducting a regional HIN analysis and building regional crash profiles to prioritize focus areas (including an interactive map) and identify priority countermeasures.

<sup>34</sup> https://forwardpinellas.org/wp-content/uploads/2016/08/2040-LRTP.pdf, page 5

<sup>35</sup> https://forwardpinellas.org/wp-content/uploads/2020/02/Advantage-Pinellas2045-FullAppendices.pdf

<sup>&</sup>lt;sup>36</sup> https://drcog.org/sites/default/files/Taking Action on Regional Vision Zero ADOPTED 061620.pdf

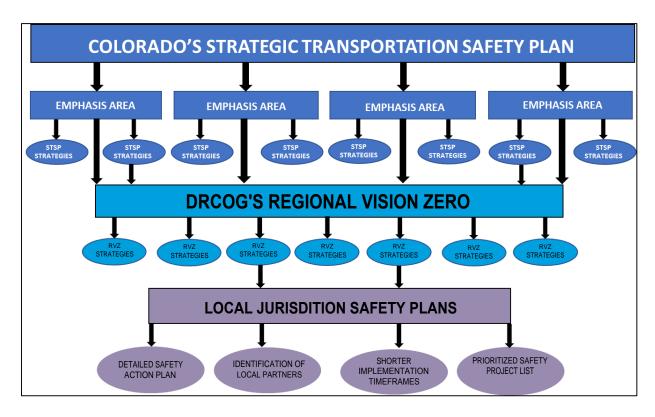


Figure 6. Denver Regional Council of Governments Regional Vision Zero Coordination (Source: DRCOG).

### HELP BRIDGE DATA GAPS BETWEEN STATE AND LOCAL AGENCIES

State DOTs and regional agency coordination can improve data access and analysis.<sup>37</sup> By developing regional crash-data maps, MPOs can help local and State agencies assess locations with safety concerns and develop profiles to focus safety efforts. For example, the North Jersey Transportation Planning Authority conducts data analyses to identify safety priorities for each county within its region. County transportation agencies review the maps to identify locations with safety issues that may be candidates for safety projects.

### PRIORITIZE SAFETY IN PLANNING AND FUNDING EFFORTS

In terms of setting policies, planning, and implementation, MPOs could work with localities to use data, targets, and metrics to ensure safety is prioritized regionally. Regarding planning, MPOs have opportunities to incorporate safety into each step of the performance-based transportation planning process. Typical steps are public engagement, multidisciplinary coordination, data collection and analysis, goal and objective identification, performance measure and target setting, project prioritization, monitoring, and evaluation. Other planning processes and plans that should address safety are bicycles and pedestrians, regions, corridors, freight, and transit. Examples of safety prioritization include the following:

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<sup>37</sup> https://safety.fhwa.dot.gov/local\_rural/training/fhwasa10027/

- The Alamo-area MPO uses evidence-based target setting to encourage performance-based transportation planning, including safety goals, as described in the 2016 FHWA MPO Guidebook for Using Safety as a Project Prioritization Factor.<sup>38</sup> Their Pedestrian Safety Action Plan includes prioritization criteria, implementation, and measurement to accommodate walking as a mainstream, rather than alternative, transportation activity.<sup>39</sup> The City of San Antonio Vision Zero Program<sup>40</sup> and the MPO both refer to this action plan to make walking safer.
- The Atlanta Regional Commission develops crash profiles that identify high crash severity by victim type or location, including corridor, intersection, and pedestrian and bicycle locations. The commission also developed a multifaceted approach to maximize Federal dollars for active transportation and focus spending on safety. The resulting <a href="Transportation Improvement Program">Transportation Improvement Program</a> includes quantitative measures of safety and equity for road asset management. The approach and importance of safety are documented in the <a href="Transportation Improvement Program Project Evaluation Framework">Transportation Improvement Program Project Evaluation Framework</a>.
- The Hillsborough MPO used <u>scenario planning</u><sup>43</sup> in its <u>2040 Long Range Plan</u><sup>44</sup> to examine how different levels of financial investment would affect performance on key measures, including transit, pedestrian, and bicycle level of service and vehicle, bicycle, and pedestrian crashes.

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<sup>38</sup> www.fhwa.dot.gov/planning/transportation safety planning/publications/mpo guidebook/fhwahep16090.pdf

<sup>39</sup> http://www.alamoareampo.org/Bike-Ped/docs/PedestrianSafetyActionPlan.pdf

<sup>&</sup>lt;sup>40</sup> https://www.sanantonio.gov/portals/0/files/tci/VisionZeroE-Brochure.pdf

<sup>&</sup>lt;sup>41</sup> http://documents.atlantaregional.com/transportation/projsolicitation/2017/project eval documentation.pdf

<sup>42</sup> https://documents.atlantaregional.com/transportation/projsolicitation/2017/project\_eval\_documentation.pdf

<sup>&</sup>lt;sup>43</sup>https://www.fhwa.dot.gov/planning/scenario and visualization/scenario planning/scenario planning guideboo k/fhwahep16068.pdf

<sup>44</sup> http://www.planhillsborough.org/imagine2040/

# 4. Community-led Opportunities

States and their local communities are intricately connected and depend upon one another to advance safety goals. As part of their Vision Zero work, many local communities are recognizing the interconnectivity of road safety issues and striving to collaborate more effectively with State agencies. Sometimes local agencies can make policy and design changes more quickly than States. The following are examples of local communities supporting strong collaboration, particularly with State agencies, toward the shared goal of zero deaths.

# **Speed Management**

Local communities increasingly recognize the importance of managing speed for safety and are sharpening their focus on proven countermeasures to do so. As discussed in section 2, local community efforts are often regulated by State controls, though there are ways to have local communities more involved.

### MEASURE AND SHARE SPEEDING-RELATED DATA TO MAKE POLICY AND DESIGN CHANGE

By assessing which serious crashes are related to speed, localities can document and advocate for safety improvements, including at the State level. As described in section 2, States are increasingly being asked to update their approach to speed management to reflect best practices. The following are examples of how local communities can document and present data to showcase issues and suggest solutions based on proven countermeasures that help States make these changes.

The City and County of Denver, Colorado, acknowledged speeding as a significant safety problem and prioritized managing speed for safety in its Vision Zero Action Plan. The city collected 72-hour speed data on 37 corridors, mostly along HIN (Figure 7). The study included a comparison of speed limit change based on the conventional (85th percentile) approach and the context-sensitive (50th percentile) approach. The study results led to the implementation of street design changes along the City's HIN, including upgrading pedestrian countdown signals, adding leading pedestrian intervals, and modifying late-night signal timing. A comparison of crash data two years prior (November 2015–2017) and two years after (November 2017–2019) showed a total crash reduction of almost 17 percent (923 crashes before compared to 768 after). Crashes in which someone was killed or seriously injured were reduced by 47 percent (34 compared to 18 after). No fatalities were reported after the improvements were made compared to eight in the two years prior.<sup>45</sup> The CDOT and the City of Denver coordinating on Federal Boulevard safety improvements was critical to this initiative's success.<sup>46</sup>

<sup>45</sup> https://www.denvergov.org/content/denvergov/en/vision-zero/2019-report.html

<sup>46</sup> https://www.codot.gov/projects/federal-boulevard

The City of Boston evaluated the effects of lowering the default speed limit on city streets.<sup>47</sup> Effective January 9, 2017, the default speed limit on City of Boston streets was reduced from 30 mph to 25 mph. The city's move came after the Massachusetts legislature in 2016 amended State law to allow cities and towns to lower speed limits from 30 mph to 25 mph on municipal roads in densely populated areas or business districts. Vehicle speeds were collected at sites in Boston where the speed limit was lowered and at control sites in Providence, Rhode Island, where the speed limit remained unchanged, before and after the speed limit change in Boston. The study sites in both Boston and Providence included arterials, collectors, and local roads. The speed limit reduction was associated with a 0.3 percent reduction in mean speeds and reductions of 2.9 percent, 8.5 percent, and 29.3 percent in the odds of vehicles exceeding 25 mph, 30 mph, and 35 mph, respectively (Figure 7).

Portland, Oregon, pursued an administrative rule in 2015 with



Figure 7. Boston speed limit evaluation results (Source: Insurance Institute for Highway Safety).

Oregon DOT (ODOT) to allow the city to use alternatives to the 85th percentile methodology, and it won permission in 2016.<sup>48</sup> Since adopting Vision Zero, the Portland Bureau of Transportation (PBOT) has proactively worked with ODOT to put this new authority into practice and pursue lower speed limits, especially on roads identified in the city's HIN. The PBOT worked with ODOT to create a process in which PBOT submits a formal request—an Alternate Speed Zone Investigation—to lower the speed limit for a street in question, which ODOT reviews. The investigation method includes information on the street context, including

<sup>47</sup> https://www.iihs.org/topics/bibliography/ref/2168

<sup>48</sup> https://visionzeronetwork.org/project/taming-speed-for-safety-portland-case-study/

land use, facilities for people walking and bicycling, crash history—and recommends speeds to protect people walking and bicycling based on a decision matrix. Using this process, Portland has successfully lowered speed limits on more than 100 streets since August 2017.<sup>49</sup> These streets include various types such as collectors, neighborhood greenways, and streets within business districts.

# **Safety Culture**

As described in section 2, the shift toward safety culture starts internally, with the agencies leading traffic safety work. This is of course true at the local level as well, and the Vision Zero approach being embraced by a growing number of local communities emphasizes the many ways local communities can champion culture change.

### CONVENE PEER NETWORKS AND COORDINATE ON IMPROVEMENTS STATEWIDE

Collaborating with peers in other local communities on similar issues can inspire innovative ways to achieve Vision Zero goals, not just in individual places but also Statewide. Recognizing that most communities face similar challenges and opportunities for improvement, there is benefit in making more systemic safety changes at the State level.

For example, the <u>California City Transportation Initiative</u> is a coalition of California's largest cities dedicated to safe, sustainable, and equitable transportation outcomes.<sup>50</sup> Coalition cities met regularly to discuss shared goals and communicate in a unified voice with State-level leaders, promoting policy-level changes to make Vision Zero a reality in California. Areas of collaboration, to date, have included policy education on speed management, improving crash data, and funding priorities.

### INCLUDE STATE AGENCY STAFF AND POLICYMAKERS IN LOCAL VISION ZERO PLANNING

For localities, working with State staff could lead to mutual understanding of the challenges localities face (ranging from specific issues on State-owned roads to broader policy goals) while raising awareness of State resources that may be available. As described in the <u>Vision Zero Action Plan resource</u>, States can be key to local Vision Zero success,<sup>51</sup> whereas local agency involvement can improve the State SHSP outcomes. Many Vision Zero local communities are finding that engaging State and regional agencies in Vision Zero task forces and developing Vision Zero action plans can result in the State's participation and understanding—and ultimately deliver greater safety results. For example, Austin's coordination of city, region, and State stakeholders helped it develop and implement a <u>Pedestrian Safety Action Plan</u>.<sup>52</sup> The plan

<sup>&</sup>lt;sup>49</sup> https://www.portland.gov/transportation/vision-zero/speed-limits

<sup>50</sup> https://nacto.org/program/cacti/

<sup>51</sup> https://visionzeronetwork.org/wp-content/uploads/2017/12/VZN ActionPlan FINAL.pdf

<sup>&</sup>lt;sup>52</sup> http://www.austintexas.gov/sites/default/files/files/Transportation/Pedestrian Safety Action Plan 1-11-18.pdf, page 55

analyzed Texas Department of Transportation (TxDOT) crash data to create a holistic framework for improving pedestrian safety citywide. The collaboration also enlisted Texas A&M's Transportation Institute to complete the Pedestrian and Bicycle Crash Prediction Tool analysis, further strengthening the plan and the commitment to implementation. As noted in the plan, "Coordinating pedestrian safety improvements with transportation partners also demanded that staff hold one-on-one meetings with TxDOT, Capital Metropolitan Transportation Authority, Capital Area MPO, and a multitude of other City departments."

### HELP HUMANIZE TRAFFIC SAFETY ISSUES AND SUPPORT COMMUNITY-BASED ADVOCACY

Communities have many opportunities to lead advocacy for road safety. For example, the City of San Francisco committed funding to support training, including in media engagement and public speaking, for members of the regional Families for Safe Streets group. Families for Safe Streets works on behalf of loved ones injured and killed in crashes and those directly affected by their loss. The group has become a powerful voice for safety Statewide.

### **Data and Prioritization**

### COLLABORATE ON SAFETY IMPROVEMENTS TO STATE-OWNED ROADS

In developing HINs and prioritizing safety improvements, locals could highlight areas of concern on State-owned roads and collaborate with State partners to address them. Safety improvements may be quick-build pilot projects or longer-term efforts that take significant planning and funding. Regardless, the analysis stage should not overlook State-owned roads with high incidence of serious crashes. The key is to acknowledge problem areas and collaborate to address them, even when this is complicated by having State-owned roads running through a city. For examples:

- The <u>City of Los Angeles' Vision Zero</u> work overlays its HIN with data from the city's Community Health and Equity Index, which combines data on demographics, socioeconomic status, health conditions, land use, transportation, food environment, crime, and pollution into a single lens through which to compare health conditions citywide. Analysis showed that 49 percent of HINs in the City of Los Angeles are within the most vulnerable communities.<sup>53</sup> Such data help the city prioritize safety resources toward those areas.
- The <u>Austin Pedestrian Safety Action Plan</u> describes coordination between the Austin Transportation Department and TxDOT on a pedestrian-focused road safety audit of a frequent-crash location on an Austin highway. Between 2007 and 2016, there were 10 pedestrian fatalities on a short stretch of I-35.<sup>54</sup> City and State agencies worked together

<sup>53</sup> http://visionzeronetwork.org/wp-content/uploads/2017/05/VisionZero Equity.pdf, page 5

<sup>&</sup>lt;sup>54</sup> https://www.austintexas.gov/sites/default/files/files/Transportation/Pedestrian Safety Action Plan 1-11-18.pdf, page 43

- on education and pedestrian safety improvements, including stencils pointing pedestrians to the nearest overpass and underpass. The process brought together multiple agencies and stakeholders to tackle the complex problem of pedestrian safety on highways, and the Austin Transportation Department is coordinating with TxDOT to conduct more road safety audits at other frequent-crash locations.
- The City of Fort Collins evaluated more than 250 intersections using a Highway Safety
  Manual statistical review and CDOT Safety Performance Functions to identify locations
  that have a higher than expected crash frequency. The city then aligned the evaluation
  with \$4 million in safety funds to supplement Federal funding for intersections along
  U.S. Route 287.

### USE PUBLIC HEALTH TOOLS TO ADVANCE SAFETY PLANNING EFFORTS

The public health sector, with its commitment to research, evaluation, equity, and a populationlevel approach to analyzing traffic collisions, brings a necessary perspective to Vision Zero efforts. By integrating public health in Vision Zero efforts, many communities are bridging the gap between potential partners and building connections between transportation policy, safety projects, and health outcomes.<sup>55</sup> For example, Chicago is aligning its Vision Zero effort with its citywide public health plan, and New York engaged public health agencies to identify research and evaluation topics to better understand how best to implement Vision Zero. In another example, San Francisco is using hospital data to better inform safety decision-making as a part of its Vision Zero effort. A collaboration between the San Francisco Department of Public Health and the Zuckerberg San Francisco General Hospital found that over one-quarter of pedestrians and bicyclists transported to the hospital by ambulance with serious injuries from traffic collisions were not accounted for in police collision reports, the basis for State collision reporting. That underreporting also left out significant numbers of crash victims who were African American. 56 The San Francisco Municipal Transportation Agency is working with the San Francisco Department of Public Health to improve data collection and analysis at the local level, providing an opportunity to inform and correct State data collection and policy.

https://visionzeronetwork.org/project/the-central-role-of-public-health-in-vision-zero/https://visionzeronetwork.org/project/the-central-role-of-public-health-in-vision-zero/

<sup>&</sup>lt;sup>56</sup> http://visionzeronetwork.org/wp-content/uploads/2016/04/Public-Health-Case-Study-.pdf

# 5. Conclusion

As this document demonstrates, opportunities exist to systemically improve road safety across the U.S. Whether referred to as Vision Zero, Toward Zero Deaths, Road to Zero, or another safety-focused effort, strong coordination and collaboration between various governmental levels—Federal, State, regional, and local entities—is key to advancing the goal of achieving zero deaths.

This document provides examples of State and local governments recognizing and improving upon their coordination and effectiveness. This collaboration is central to developing and implementing successful Vision Zero initiatives. Thus, it is important that entities recognize and improve upon the unintentional, though sometimes difficult to avoid, reality that they work in institutional silos that could slow progress. One defining characteristic of the Safe System Approach, which underpins Vision Zero, is the acknowledgement that responsibility for safety within the transportation system is shared by road users *and* system designers, including engineers and planners, as well as others who influence policy, including public health leaders, law enforcement officers, and elected officials. This recognition entails acknowledging the benefit of breaking down silos between stakeholders to unite action and responsibility behind the shared goal of safety.

This document highlights strong interest in strengthened collaboration between various stakeholders, particularly those at the State and local levels. While it does not cover every opportunity for improvement, it highlights some particularly timely and beneficial areas of strengthened collaboration toward zero deaths. An overarching theme is the need for more consistent and in-depth communication between State and local leaders, including regular discussions and problem-solving initiatives among partners.

Another priority is to bring a Safe System Approach to State and local coordination efforts, as this document highlights, particularly related to managing speed for safety, developing a strong safety culture, and leveraging data to prioritize safety. There is potential in these three areas for more regular and in-depth communication between State and local safety leaders about opportunities and challenges, potentially leading to greater understanding and willingness to partner for change.

Speed management is a key opportunity area, given that this is fundamental to Safe System effectiveness. Yet State and local authorities often approach speed management differently, reflecting different experiences and perspectives. As this document reinforces, local communities are increasingly prioritizing speed-management strategies in their Vision Zero efforts. Localities should make States aware of specific local needs regarding speed

management, given that States focus on a broader variety of environments (State highways, rural areas, etc.). As understanding of and commitment to the Safe System Approach grows across the country, alignment between State and local communities can help each effectively leverage speed-management strategies for safety.

Similarly, State and local coordination will be critical to develop and institutionalize strong safety cultures at all levels. A core message of this document is the imperative to focus initially and purposefully on internal culture at the agencies leading, or partnering on, traffic safety efforts. It will be key to build common understanding of and investment in the Safe System Approach among the core group of influential individuals designing, shaping, and evaluating the transportation system. This strong safety culture should be shared externally with other key stakeholders and the general public. This work will be more effective and long-lasting if the State and local partners are aligned consistently with their internal safety culture goals and messaging.

Finally, leveraging data to prioritize safety underlies all of these efforts. As shared throughout this document, data are increasingly used to focus resources on the most important areas of traffic safety. If the goals and strategies for collection, analysis, and usage of data are consistent between State and local safety leaders, then data will be more effective in building safe transportation systems.

In conclusion, as a growing number of communities across the U.S. embrace zero deaths strategies, collaboration across the local and State levels is not simply advisable—it is critical. This entails facilitating more regular communication and problem-solving efforts between State and local traffic safety stakeholders and focusing on critical areas for improvement, including speed management, building safety culture, and leveraging data to prioritize safety. The ambitious and important goal of safe transportation for all road users is shared across different levels of government, and that shared goal will be advanced through communication and collaboration. While work to develop and sustain these strong partnerships takes time, there are no shortcuts to achieving the worthwhile shared goal of safety for all on our roads.