



Regional Vision Zero Working Group

October 14, 2025

Agenda

1. Welcome and introductions.
2. 2024 crash data trends.
3. Scoping the “minor update” to *Taking Action on Regional Vision Zero*.
4. Speed management continued: City of Boulder citywide speed limit study.
5. Update on the Regional Vision Zero Quick-Build Toolkit.
6. Review of new safety literature.
7. News and updates.

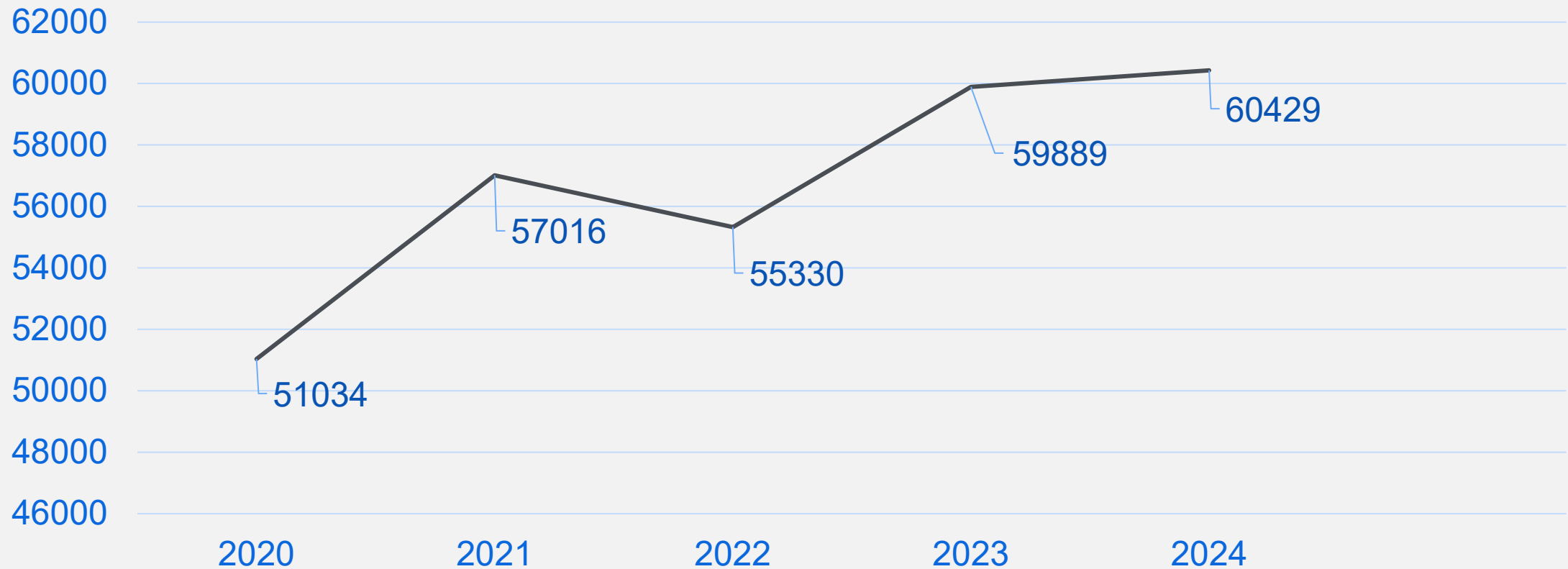




2024 regional crash data trends

Five years of total crashes in the Denver region

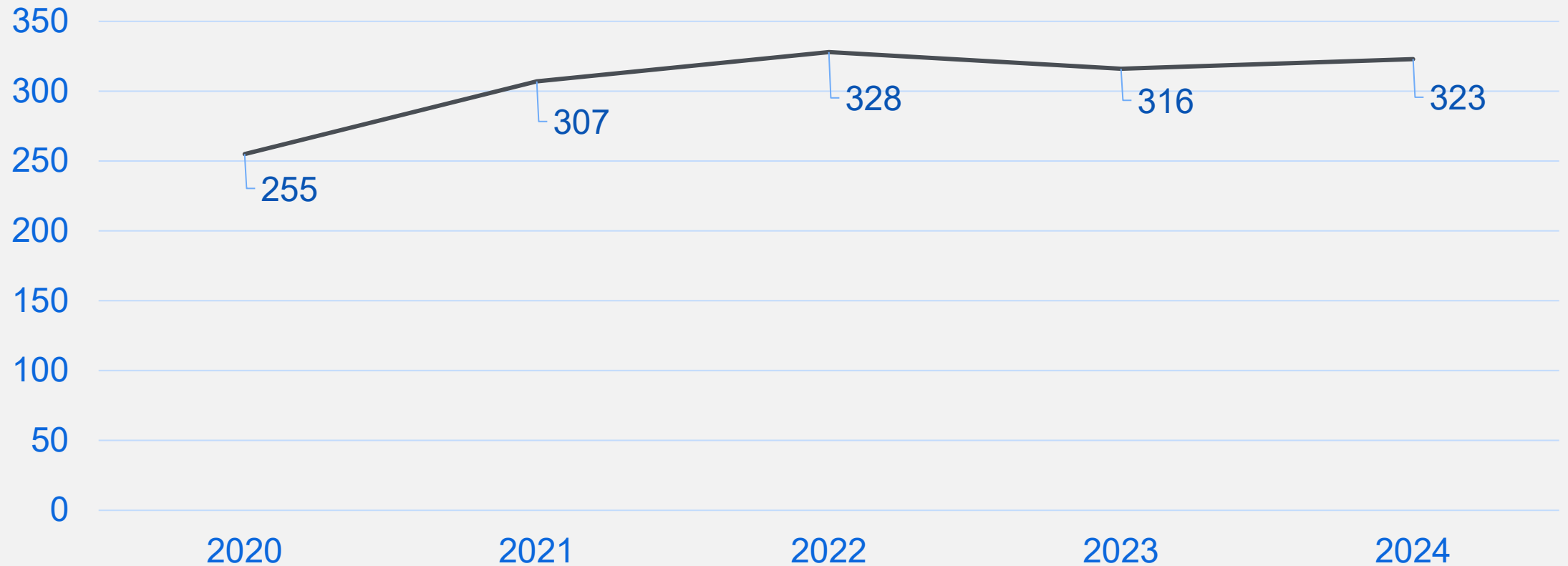
Total number of crashes in the Denver region



- Number of crashes calculated from DRCOG crash data within the DRCOG modeling boundary, which slightly exceeds the council of governments boundary.

Five years of fatal crashes in the Denver region

Number of fatal crashes in the Denver region



- Number of crashes within the DRCOG modeling boundary, which slightly exceeds the council of governments boundary.

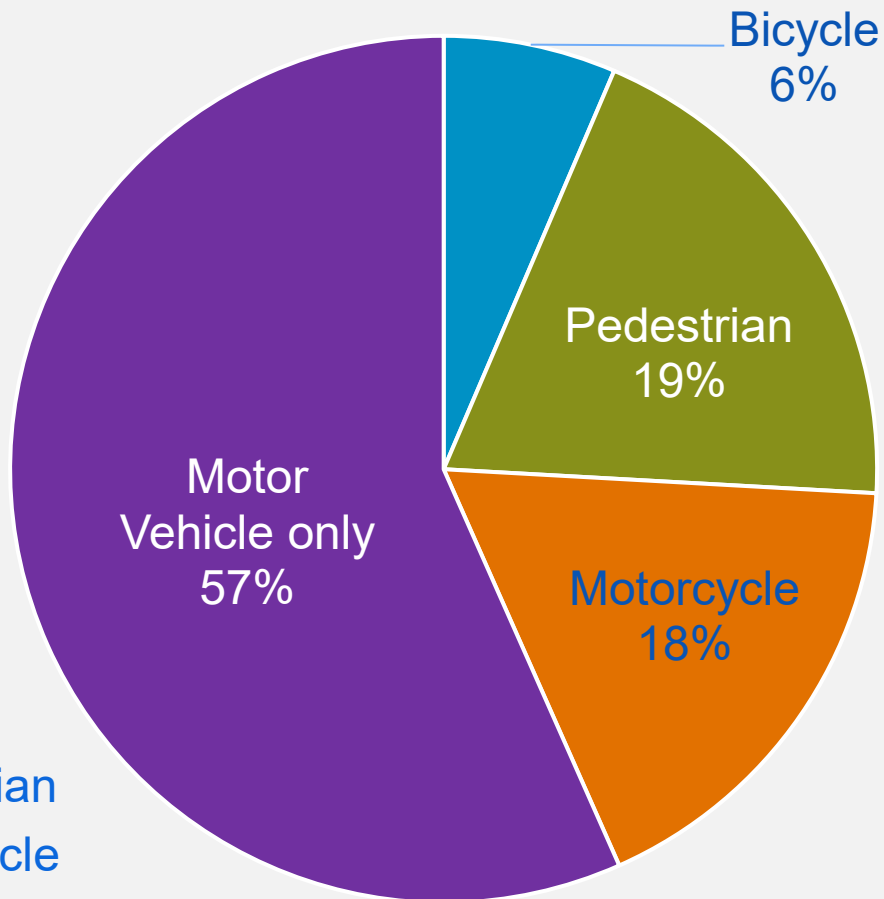
Fatal and serious injury crashes 2023 to 2024

Roadway users	2023	2024	Change
Bicycle	144	160	11% increase
Pedestrian	435	380	13% decrease
Motorcycle	391	455	16% increase
Motor Vehicle only	1267	1198	5% decrease
Total	2237	2193	2% decrease

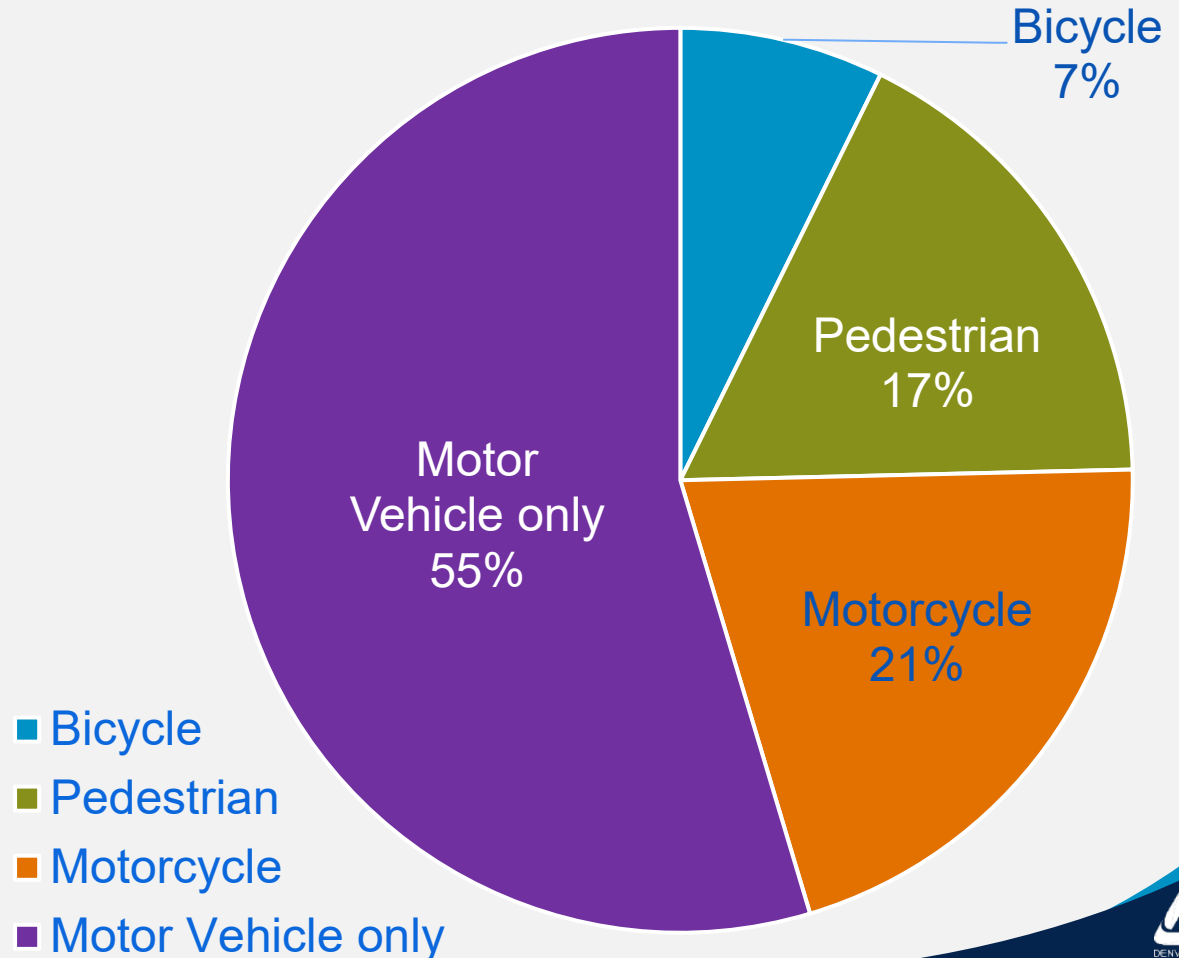
- Number of crashes calculated from DRCOG crash data within the DRCOG modeling boundary, which slightly exceeds the council of governments boundary.

Roadway user fatal and serious injury crashes 2023 to 2024

2023



2024



Five most common consolidated crash types in 2024 for fatal and serious injury crashes

Fatal and serious injury crash types	Percent
Pedestrian	16%
Collision with object	16%
Broadside	15%
Approach turn	15%
Rear-end	10%

- Percent of crashes is calculated from DRCOG crash data within the DRCOG modeling boundary, which slightly exceeds the council of governments boundary.

What is coming next

- 2024 crash data to be published on Regional Data Catalog.
- DRCOG Crash Data Dashboard update.
- Minor update to *Taking Action on Regional Vision Zero*.



Scoping the “minor update” to *Taking Action on Regional Vision Zero*

Taking Action on Regional Vision Zero (2024)

- Regional plan for improving transportation safety.
- Adopted in 2020,
- Updated in 2024 with new action items.
- Used 2013-2017 crash data.
- 2024 Board of Directors Resolution formally established goal of zero traffic fatalities by 2040, zero serious injuries by 2045.

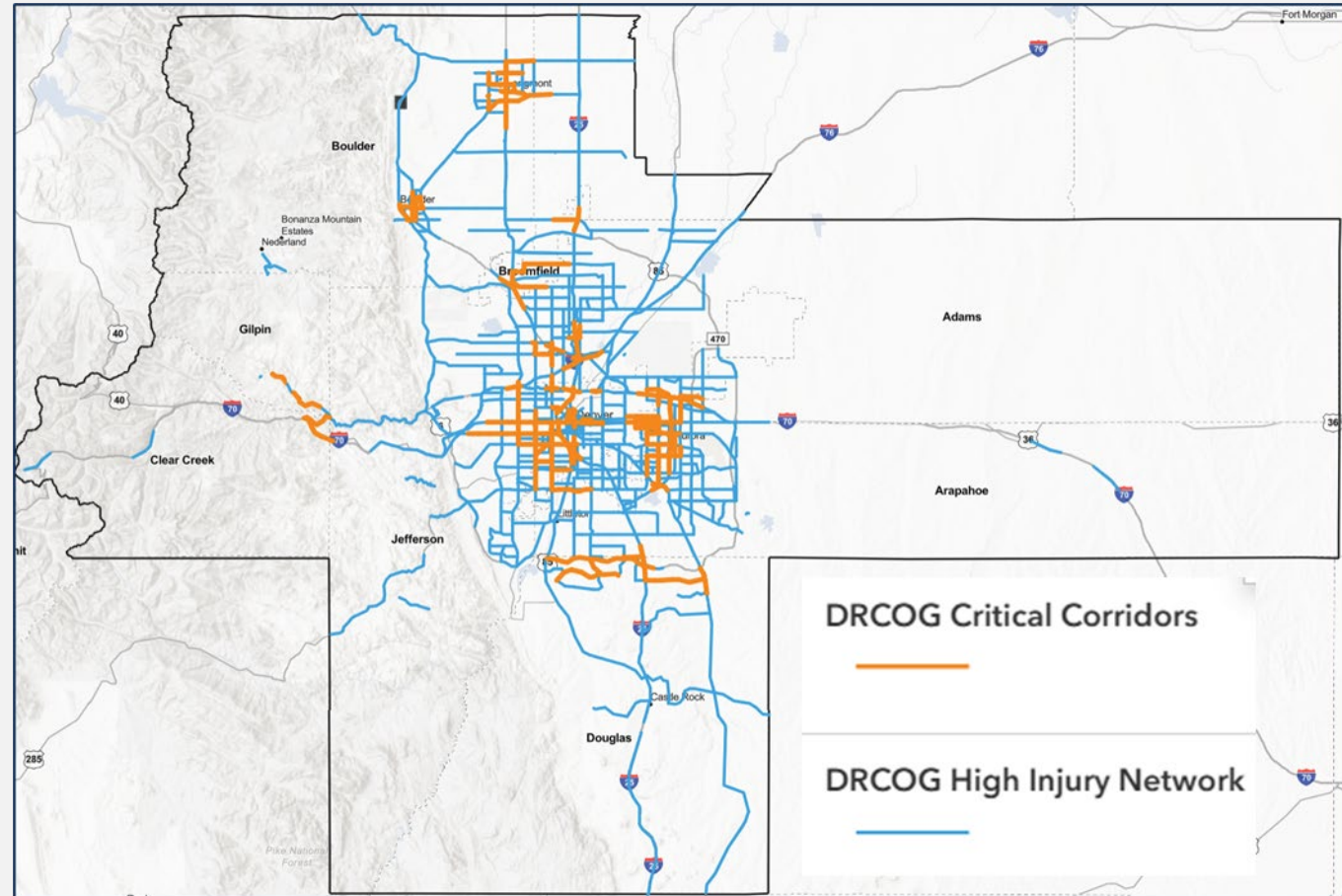
Taking Action on

regional vision
Zero
SAFER STREETS FOR METRO DENVER



Components of the regional safety plan

- **Regional High Injury Network (HIN):** the 9% of roads that account for 75% of fatal and serious injury crashes in the region.



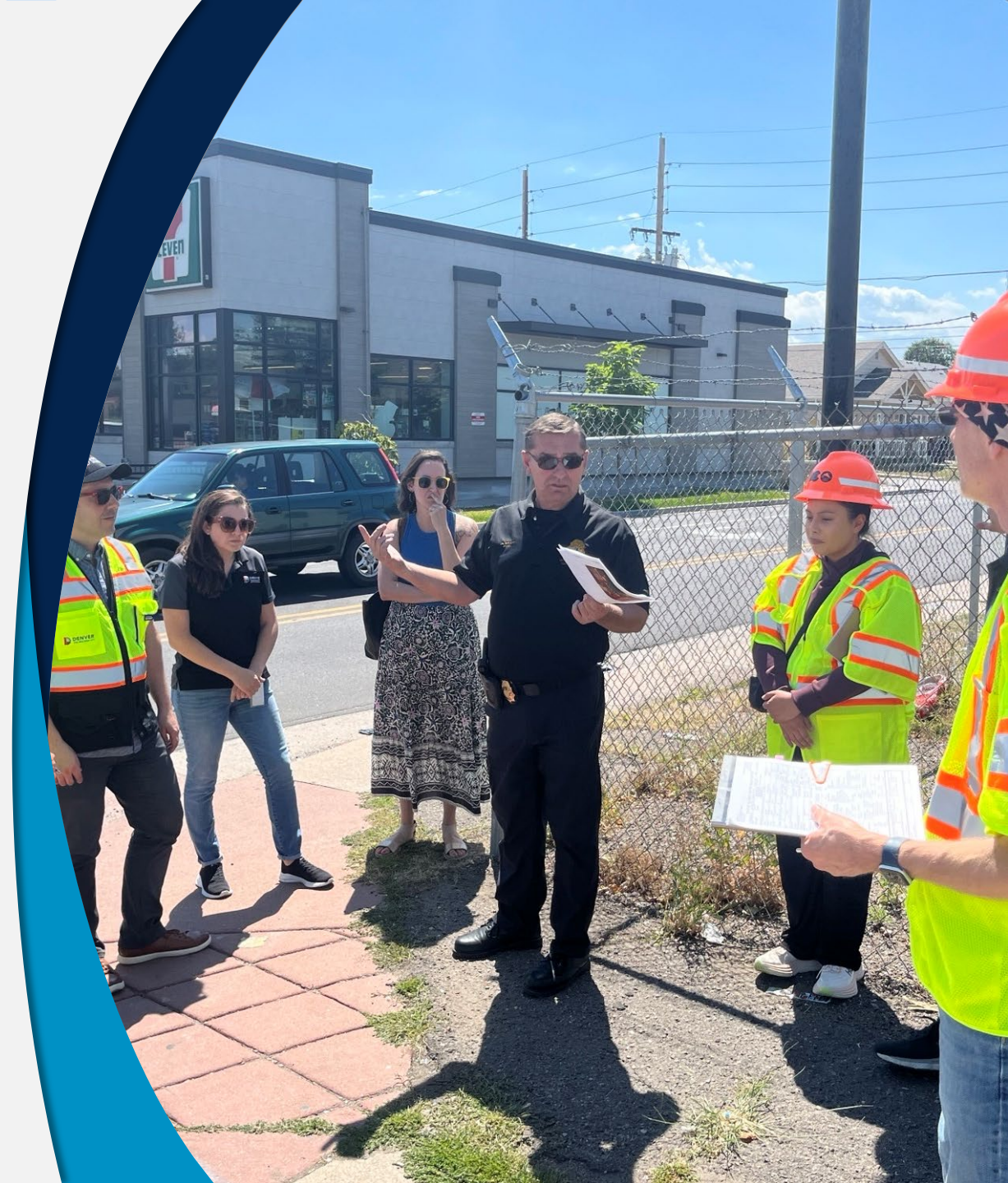
Components of the regional safety plan (cont.)

- **Regional Crash Profiles:** the crash types, conditions, factors that account for the most fatal and serious injuries in each of the four Area Types (urban, suburban, rural, interstate).
- **Countermeasures** for each of the Regional Crash Profiles.
- **Action items and strategies** for DRCOG.

Crash profiles	Percent of fatal and severe injury crashes in suburban/compact community areas	Percent of fatal crashes in suburban/compact community areas
Failed to yield right-of-way and turning conflicts	47%	33%
Pedestrian-involved	16%	25%
Rear end and stopped or slowing vehicles	19%	9%

Who is it used by, why is it used?

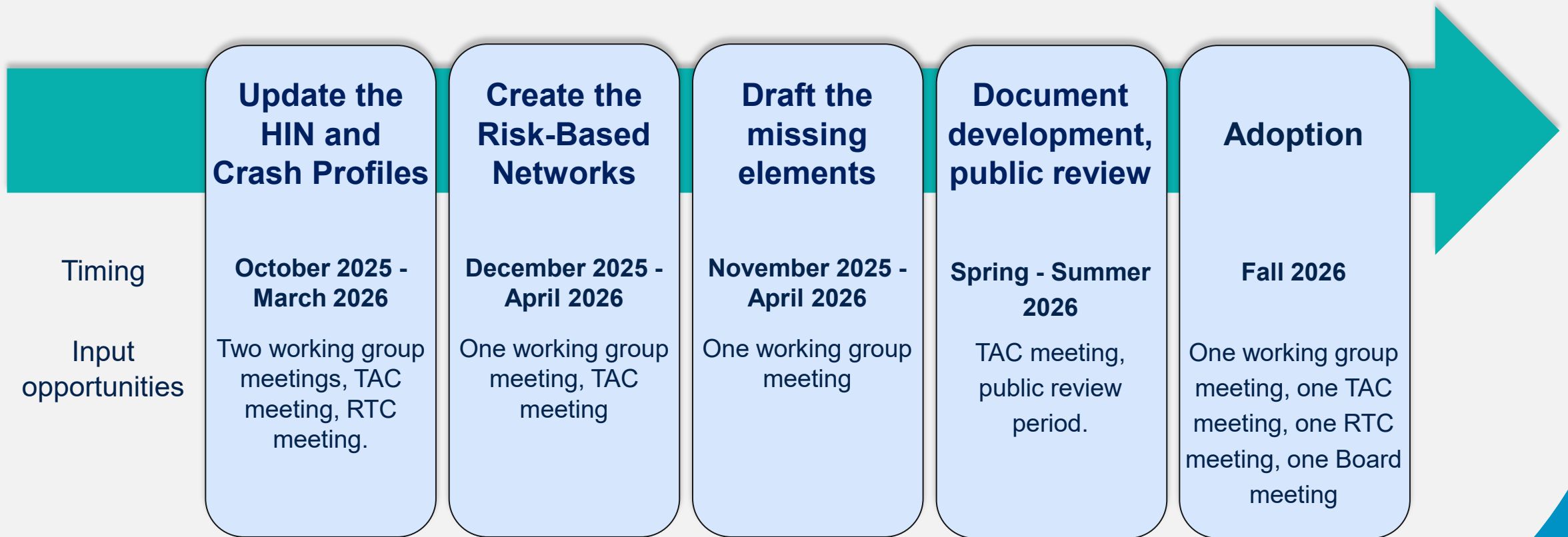
- Regional HIN is used by DRCOG staff to prioritize projects for funding.
- Action items are used to guide DRCOG's safety work.
- Plan is used by cities, counties that lack their own safety plan to apply for SS4A funding.
- Serves as a template or reference when developing local safety plans.
- Other uses?



Proposed scope of a “minor update” to the plan

- **Update the HIN and Regional Crash Profiles** with more recent crash data (2020-2024).
- **Add proactive, risk-based network(s)** to the plan.
- **Add “missing” elements:** Vision Zero target adopted in 2024, policy and process review (identified as missing by USDOT in 2025), description of how progress will be measured.

Schedule for the “minor update”



We need your input on the methodology for creating the HIN

High Injury Network (HIN) or similar networks are tools to prioritize roadways for safety interventions.

Options we have considered:

- Prioritize corridors using Level of Service of Safety (LOSS) rather than crash frequency (i.e., typical High Injury Network (HIN))?
- Prioritize corridors using crash rate rather than crash frequency?
- Take a more proactive, risk-based approach to prioritizing corridors?

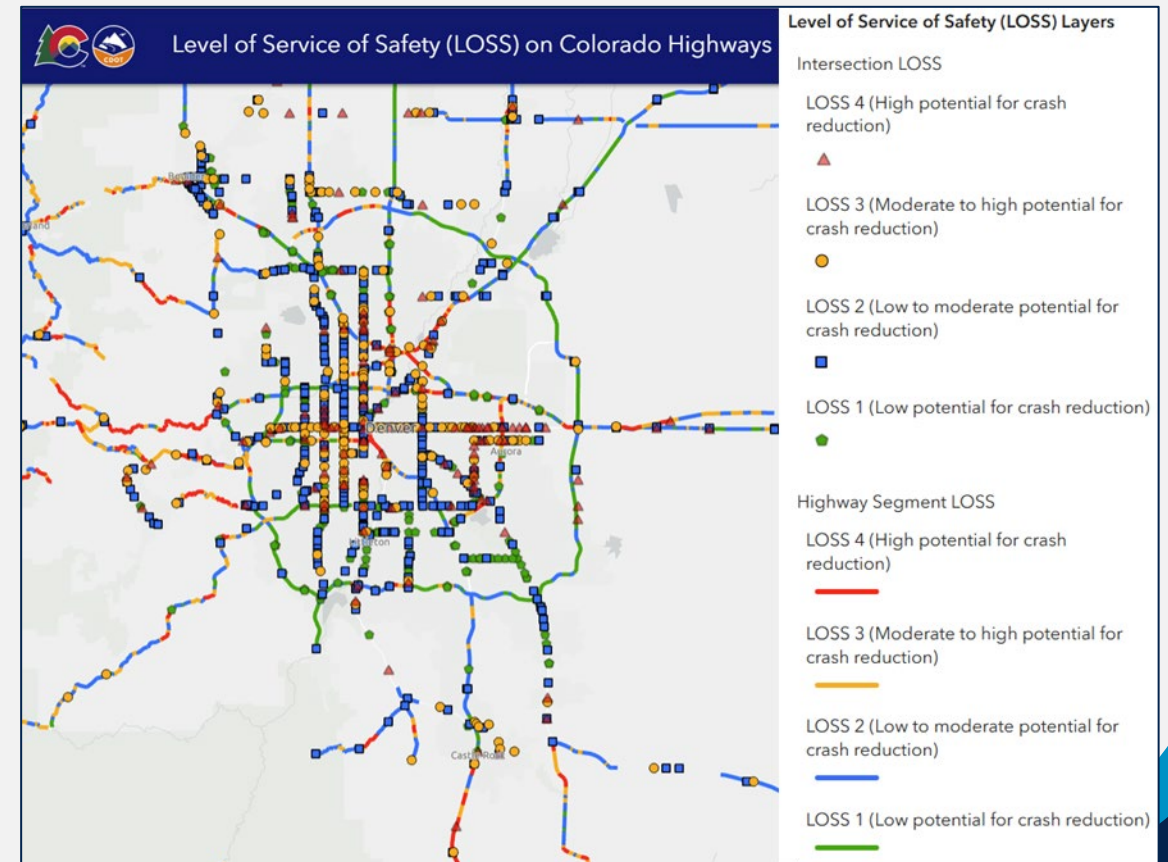
Whether to use LOSS rather than crash frequency (i.e., typical High Injury Network)?

Why: Focus on corridors with the highest potential for crash reduction.

Decision: Sticking with typical HIN.

Reasons:

1. Lack of data.
2. It can reduce the focus on high-injury roads if similar roads also have poor crash history.
3. It is more challenging to communicate to the public, elected officials.



Whether to prioritize corridors using crash rate rather than crash frequency?

Why: Roads with higher traffic volume typically have more crashes.

Decision: Sticking with crash frequency.

Reasons:

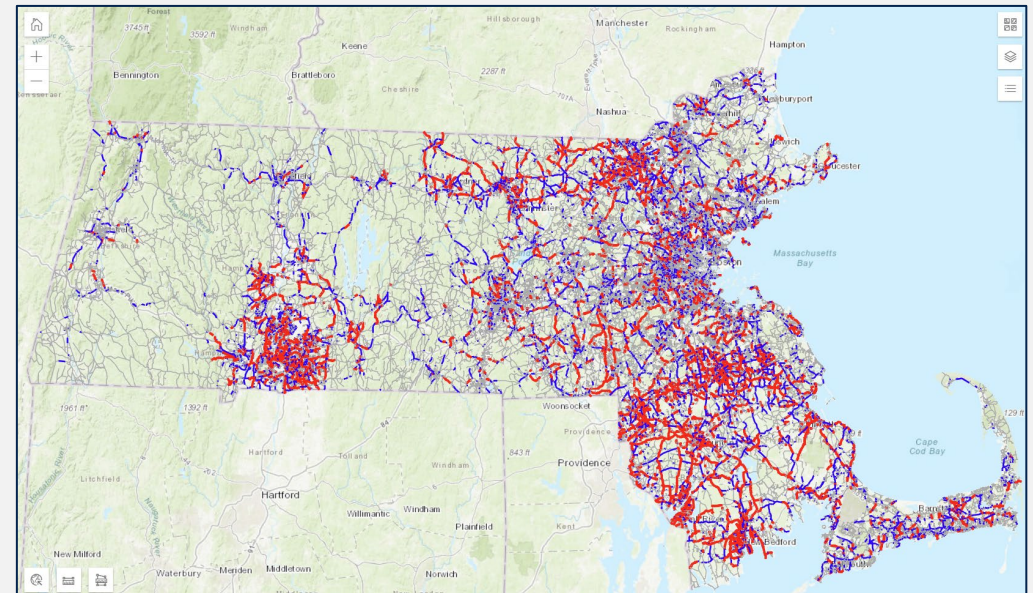
1. Lack of widespread, accurate traffic volume data.
2. While this metric can facilitate comparisons between similar road types (similar to LOSS), the region's goal is not to reduce fatalities per vehicle mile but to reduce fatalities overall.

Whether to take a more proactive, risk-based approach to prioritizing corridors?

Why: Don't wait for a crash to occur to make safety improvements, especially if known risk factors exist.

Decision: Create the typical HIN *and* risk-based networks for the region's top Crash Profiles (i.e., crash types) to facilitate systemic projects.

Example map that ranks corridors based on their risk for lane departure crashes.



Source: Massachusetts
Department of Transportation

Discussion and Mentimeter survey

- Questions? Comments?
- We need additional input from you! Go to **menti.com** and use code **9738 8992**.





Speed management continued: City of Boulder citywide speed limit study



Update on the Regional Vision Zero Quick-Build (Quick Win) Toolkit

Scope of the Toolkit

A “kit of parts:”

- Part I - Introduction.
- Part II - Quick-build safety treatments toolbox.
- Part III - Quick-build materials and public art considerations.
- Part IV - Lessons learned: why communities succeed.
- Part V - Quick-build process.
- Part VI - Quick-build example image library.
- Part VII - Before/after evaluation template.
- Part VIII - Standard detail examples.

Ways you can help

- Send me pictures of quick-build improvements in your community. Looking for urban, suburban, and rural settings. Any type of treatment that isn't concrete or is a creative retrofit. (krush@drcog.org)
- Let me know what materials your agency uses, what have worked and what haven't. (Paint, pavement markings, flex posts, QWICK KURB, rubber curbs, etc.)
- Review and provide comments on the forthcoming draft documents.





Review of new safety literature

NCHRP 1135: A Guide to Applying the Safe System Approach to Transportation Planning, Design, and Operations (2025)

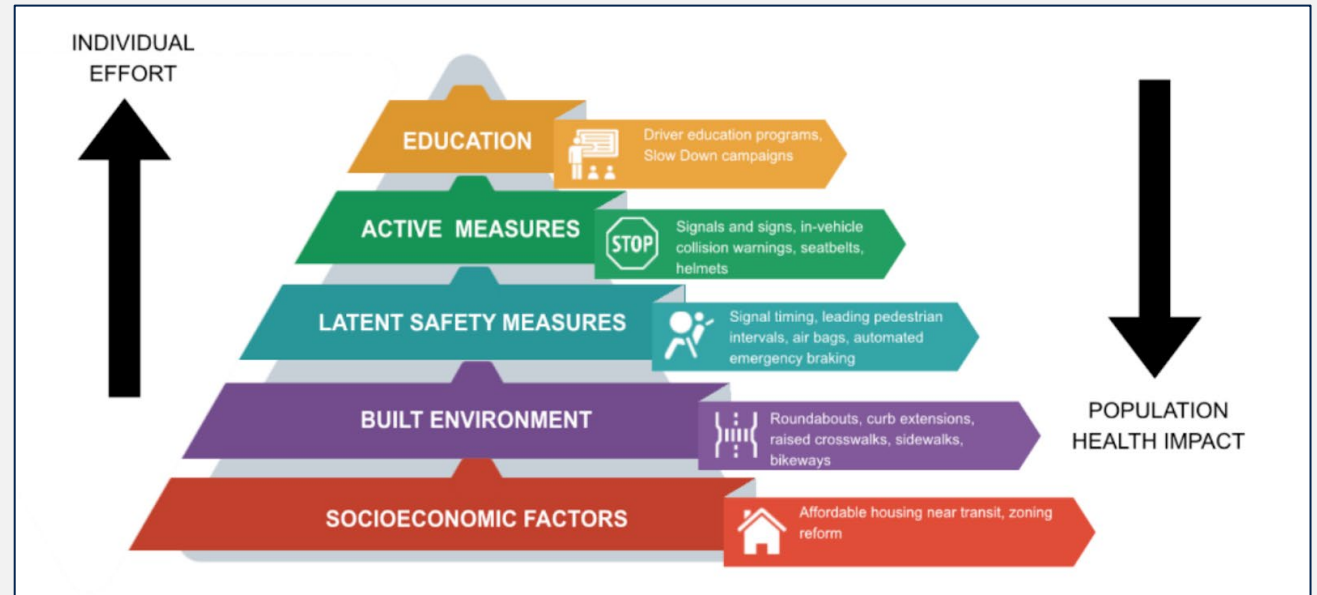
- ✓ Take the Safe System Strategy Self-Assessment tool in Appendix G.
- ✓ Give copies of the introduction and subject-matter chapters to relevant managers and leadership.



NCHRP 1135: policy ideas

- Policy includes development codes, laws (state and local), and standards.
- Focus less on policies that rely on individual road users to adopt safe behaviors.
- Instead **focus on proactively improving safety** at a population level.

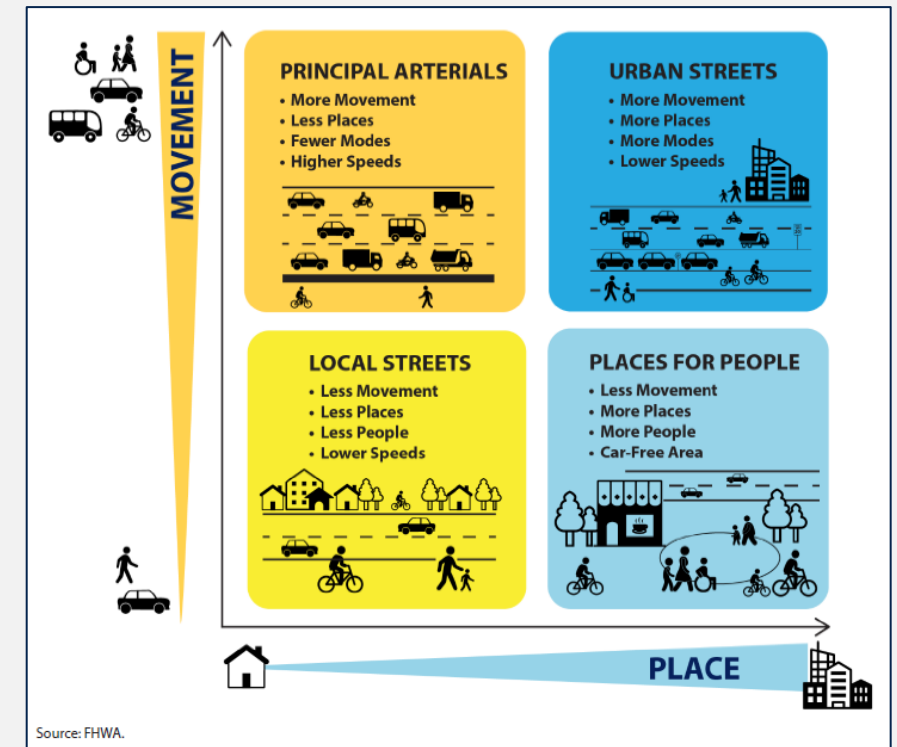
The Safe Systems Pyramid



Source: Image by Michelle Lieberman of UC Davis. Adapted from Eder, D. et. al (2023).

NCHRP 1135: planning ideas

- Simulate the safety effects of long-range plans.
- Clearly **define the functionality of roads** (i.e., access function or mobility/movement function).
- **Align land use and roadway purposes.**
 - Avoid having destinations along busy/fast arterial roads.
 - Manage access on major arterial roads designated to move large volumes of motor traffic.
- **Replace travel forecasting** (“predict and provide”) with backcasting (“decide and provide”).



NCHRP 1135: design ideas

- In a Safe System, road users' safety provides the foundation of all design decisions rather than efficiently moving cars.
- Institute **self-enforcing roads**.
- **Design around human tolerances** to crash forces.
- **Physically separate** fast-moving motor vehicles from each other and from vulnerable road users (in time and/or space).
- Examples: installing break-away poles, converting signalized intersections to roundabouts, installing access management (right-in/right-out), etc.

NCHRP 1135: operations and maintenance ideas

- **Routinely update signal timing** to promote safe speeds, separate users of different mass and speed in time.
- Keep a **robust asset inventory** and **manage assets**. Includes bridges, pavement, signs, signals, markings, vegetation, etc.
- Have design standards and maintenance plans for new roadway safety elements.
- Provide a list for checking additional assets as part of regular maintenance.
- Factor crash risk into maintenance priorities.

NCHRP 1135: law enforcement ideas

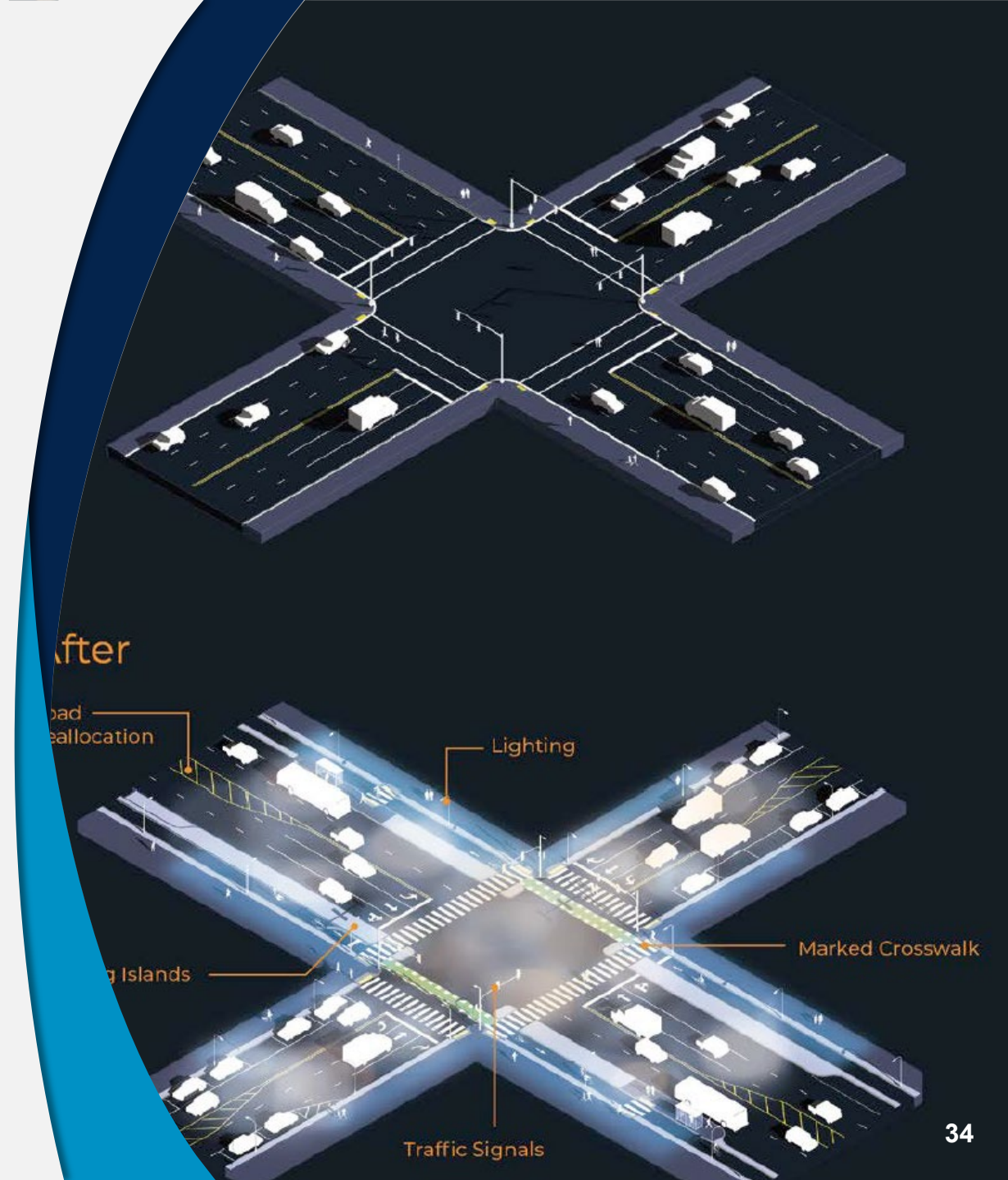
- Officers: observe, document, and **share risk patterns** with engineers and planners on a regular basis.
- **Collaboratively investigate serious crashes**. Example: Rapid Response Teams that include officers, engineers, planners, community partners.
- Renew attention to **accurate and thorough crash reporting**.
- Implement **automated enforcement**.
- State, Courts: 1) require ignition interlocks for all DUI convictions, 2) pair license revocation/suspension for DUI and DWAI with impounding the vehicle, 3) use speed governors or ISA technology.

NCHRP 1135: post-crash response ideas

- Post-crash response is the end and the beginning of the line.
- Invest in **automatic crash notification** and communication systems.
- Strengthen **pre-hospital care** functions.
- Enhance safety investments via research and **sharing of trauma and road safety data**.

NCHRP 1157: Strategies to Improve Pedestrian Safety at Night (2025)

- Resource to help transportation professionals address pedestrian fatalities, especially at night.
- Strategies cover safe roadway users, roadway design, vehicles, and post-crash care.
- 62% of fatal and serious-injury pedestrian crashes in the Denver region occurred in dawn, dusk, or dark conditions (2019-2023).



Doğan, E. (2025). **Systematic review of pedestrian safety at roundabouts.** *Journal of Safety Research*

Highlights:

- Further research should be conducted on pedestrian safety at roundabouts.
- Disabled road users tend to prefer routes without roundabouts.
- Roundabouts with multiple lanes negatively impact elderly and disabled individuals.





News and updates



**Next meeting –
December 9**

Thank you

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