



## Section 5

# IMPROVING ROADWAY SAFETY

Successful improvement of roadway safety requires collaborative efforts from numerous departments within the City, the community, and individuals. In order to systematically reduce the number and severity of crashes, there must be a commitment and focus to address specific safety concerns that are identified through data. Roadway safety is complex, and both big and small initiatives are important.

## VISION ZERO ACTION PLAN

The City adopted a Vision Zero (VZ) Action Plan in the spring of 2023. The overarching emphasis in the plan is on the safety of vulnerable road users. It outlines an approach that uses the Safer Systems Principles from the Federal Highway Administration (FHWA). See *Figure 51*.

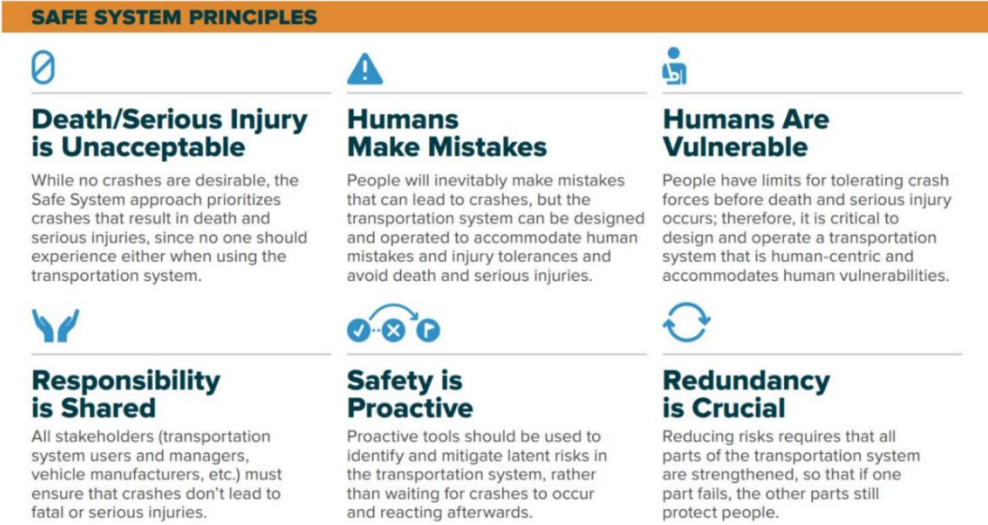


Figure 51. Safe System Principles from FHWA

The Vision Zero plan is intentionally high-level and provides a framework of guiding strategies and actions. The listed “supporting actions” (on page 30 in the report) with their corresponding sub actions are shown below.

1. Support mode shift
  - 1.1 Continue fare-less transit and implement Transit Master Plan.
  - 1.2 Prioritize investments in trails.
  - 1.3 Evaluate night-time transit hours and transit stop amenities.
2. Prioritize safer streets and multi-modal places.
  - 2.1 Implement geometric intersection treatments with proven safety benefits.
  - 2.2 Implement signal and/or operational modifications that are proven to reduce severe crashes.
  - 2.3 Evaluate all bus stop locations for installation of pedestrian crossings.
3. Promote a culture of traffic safety.
  - 3.1 Work with agencies and organizations to promote traffic safety.
  - 3.2 Work with the media to more accurately report crashes.
  - 3.3 Pair roadway design changes with communication on why changes are needed (Vision Zero signage)
  - 3.4 Engage City staff in training and conversations on Vision Zero.
  - 3.5 Support establishment of a victim’s advocacy organization.



- 3.6 Incorporate safety features in City fleet vehicles and expand training.
- 3.7 Fill current vacancies to fully staff Traffic Enforcement Unit
- 4. Increase data transparency and partnership.
  - 4.1 Expand the current group of safety stakeholders into interdisciplinary VZ task force.
  - 4.2 Work with CDOT and Larimer County for better region-wide crash data
  - 4.3 Convene rapid response meetings after all severe crashes.
  - 4.4 Partner with medical and substance abuse organization to share data and strategies.
  - 4.5 Provide a dashboard with accessible data about crashes on the City's website.
  - 4.6 Advocate for policies regulating automated vehicles that advance VZ goals.
  - 4.7 Incorporate growth projections and anticipated development into safety planning
- 5. Center equity
  - 5.1 Pilot a diversion program with education to encourage safe behaviors over punitive measures.
  - 5.2 Engage youth to raise awareness of VZ.
  - 5.3 Expand use of automated traffic enforcement.
  - 5.4 Provide opportunities for community input on VZ initiatives.

This Annual Roadway Safety Report provides the analysis and identifies next steps to support some of the actions above.

## IDENTIFIED SAFETY PRIORITY ACTIONS

This report has detailed the data-driven evaluation of transportation safety in Fort Collins. Coupling that with the guidance from the Vision Zero Action Plan, areas of opportunity for safety improvements can be determined. **Table 18** lists specific priorities for safety-based action items. It provides a 'roadmap' of which topics and locations are recommended for further evaluation, and the identification of actionable strategies to reduce the number and severity of crashes. Each priority is aligned with one of the Vision Zero supporting actions.

As the information is put to use, additional analysis may be needed and helpful, and the priority list can be refined throughout the year.

Table 18. List of Priorities for Safety Based Action Items

Item Priority	Concern / Topic	Action / Locations	Considerations	Supporting Action from VZ Plan
1. Engineering High Priority	Top 10 intersections with high excess crash costs, increasing crash trends, and/or identified opportunities. (Shaded darker blue in Table 12.)	Comprehensive, detailed safety audits 1. Boardwalk / Harmony 2. JFK / Harmony 3. College / Mulberry 4. Shields / Plum 5. Lemay / Riverside 6. College / Kensington 7. Lemay / Carpenter 8. College / Columbia 9. Timberline / Custer 10. College / Bristlecone	Full safety audit including data collection, crash review, operations evaluation, field visit etc.  Consider all available strategies including low cost improvement, signal timing, geometrics, capital project potential, safety grant opportunities etc.	2.1
2. Process/ Policy Priority	Incorporate safety elements into ongoing capital projects	Review and provide input to all capital projects with a lens of safety for all modes. Complete safety audit for all capital projects.  Consider HIN and include safety as an element as projects are prioritized in Capital Improvement Program.	Consider how to elevate safety considerations in project decisions.  Utilize Interactive Highway Safety Design Model (IHSDM) to compare alternatives.	2.1



Table 18 Continued. List of Priorities for Safety Based Action Items

	Item Priority	Concern / Topic	Action / Locations	Considerations	Supporting Action from VZ Plan
Active Mode Recommendations	3. Ongoing	Bicycle Crashes	Review all locations with multiple bicycle crashes (see <b>Tables 8 and 14</b> ). Focus on intersection improvements to reduce conflicts / bicycle crashes.	Conflicts with turning vehicles (both approach turns and right hook).	2.1
	4. Ongoing	Pedestrian Crashes – especially Fatalities	Review all locations with multiple pedestrian crashes (see <b>Tables 9 and 14</b> ) for trends or countermeasures  Consider how environmental factors and behavior contributes to midblock and nighttime crashes – look for opportunities to reduce these occurrences.	5 of the 6 fatal crashes occurred at non-intersection locations with pedestrians that entered the roadway without the right-of-way	2.1
	5. Medium Priority	Additional 15 intersection reviews (Shaded lighter blue in Table 12.)	Per <b>Table 12</b> complete a higher-level review of crash data at intersections ranked shaded lighter blue.	Look for crash patterns, low-cost improvements (i.e., striping changes)	2.1, 2.2
	6. Operational Priority	Approach Turn Crashes	Locations with a high number of approach turn crashes, and a statistical pattern of more AT crashes than expected. <ol style="list-style-type: none"> <li>1. Shields / Prospect</li> <li>2. College / Troutman</li> <li>3. Shields / Horsetooth</li> <li>4. Lemay / Drake</li> <li>5. Shields / Drake</li> <li>6. Timberline / Drake</li> <li>7. Lemay / Riverside</li> <li>8. College / Mason Palmer</li> </ol>	Review each location individually and/or consider a citywide review of permissive / protected left turn phasing.  Prioritize projects requiring longer mast arms for four-section heads.	2.2
	7. High Priority	Red Light Running /Right Angle Crashes	Review locations with statistical pattern of higher-than-expected red light running patterns and right angle crashes. <ol style="list-style-type: none"> <li>1. College / Kensington</li> <li>2. College / Columbia</li> <li>3. Taft Hill / Prospect</li> <li>4. College Cherry</li> <li>5. Remington / Mulberry</li> <li>6. Shields / Mulberry</li> <li>7. Howes / LaPorte</li> </ol>	Review visibility of signal heads, signal timing progression / offsets regarding arrival of platoon, etc.	2.2
	8. Medium Priority	Non-Intersection Crashes	Review locations with clusters of crashes related to driveways / access locations. <ol style="list-style-type: none"> <li>1. College N of Vine</li> <li>2. Magnolia E of Lemay</li> <li>3. Lemay at Prospect</li> <li>4. Eliz. W of Taft Hill</li> <li>5. Elizabeth at City Park</li> <li>6. College N of Rutgers</li> <li>7. Willox E of College</li> </ol>	Changes in striping, access control and work with businesses on queuing impacts on arterials.	2.1



Table 18 Continued. List of Priorities for Safety Based Action Items

Item Priority	Concern / Topic	Action / Locations	Considerations	Supporting Action from VZ Plan
9. Education Priority	Education	<p>Continue and enhance education and communication campaign to elevate transportation safety as community priority.</p> <p>Consider creation of a core team of safety champions.</p> <p>Partner with Poudre School District on some type of transportation safety training / outreach to all students and parents every year.</p>	<p>Messaging could include education for young drivers, discouraging bicyclists traveling against traffic, pedestrian safety, etc.</p> <p>Consider a traffic safety week in mid-August to coincide with CSU and PSD efforts.</p>	3.1,
10. Ongoing	Enforcement	Continue to partner with Police Services on ways to work together – identifying locations for enforcement, additional red light cameras etc.		5.3
11. Medium Priority	Policies / Programs / Standards	<p>Explore how a transportation safety standard could be added to LCUASS which would provide strength to addressing safety concerns in development review.</p> <p>Continue work with FCMoves on how to integrate operations, safety data and improvement strategies during planning projects. Support efforts to improve comfort/mobility and reduce number/severity of crashes for all modes.</p>		2.1
12. Ongoing Priority	Data	Continue to work on data quality control and improving crash data especially with implementation of new statewide crash form DR3447. (See discussion in Section 6)	<p>Coordination with Police Services on data entry training.</p> <p>Create arterial location designation in database.</p>	4.2, 4.5

## TRACKING AND MEASURING SAFETY IMPROVEMENTS

A key component to a safety toolbox is the ongoing monitoring and continuous safety evaluation of the City’s transportation system. In addition to annual data gathering and review shown earlier in this report, monitoring specific efforts/initiatives for their effectiveness and impact on safety can inform future actions and projects. Fort Collins has a long history of implementing safety improvement projects. Significant strides have been made toward a safer transportation system.

### Recent Project Evaluations

**Table 19** shows the net change in crashes and crash costs for locations where recent safety improvement projects were completed. Where possible three years of before and after data were used, however, 2020 was excluded due to the unusual nature of travel during the COVID pandemic so that, in some cases, only two years of after data were available.



Table 19. Monitoring Safety from Recent Improvements

Facility ID	North - South Street	East - West Street	Before Time Period	PDO Crashes/Year Before	FI Crashes/Year Before	Project Completed	After Time Period	PDO Crashes/Year After	FI Crashes/Year After	Δ Crash Cost/Year
16	College	Horsetooth	2015-2017	42.3	17.7	Capital Project 2018	2019, 2021-2022	20.6	5.0	-\$2,981,800
34	College	Tribby	2017-2019	23	9.7	Protected Lefts 2020	2021-2022	6.3	4	-\$1,424,600
23	College	Monroe	2015-2017	26	6.7	Capital Project 2018	2019, 2021-2022	10	2.7	-\$1,052,800
239	Snow Mesa	Harmony	2015-2017	14	7	Protected Lefts 2018	2019, 2021-2022	9	3	-\$916,400
117	Shields	Mulberry	2017-2019	12	5	Photo Radar 2020	2021-2022	6	3	-\$501,600
1	Boardwalk	Harmony	2016-2018	28.7	8	Protected Lefts 2019	2021-2022	13	7	-\$408,280
119	Shields	Prospect	2017-2019	16.3	8.3	Capital Project 2017	2021-2022	15	6.5	-\$400,600
180	City Park	Mulberry	2015-2017	4	0.33	Road Diet 2018	2019, 2021-2022	0.3	0	-\$116,368

Δ: Change in

PDO: Property Damage Only

FI: Fatal / Injury