



CDOT Transportation Legislation Review Committee Update

August 21, 2023



COLORADO
Department of Transportation

CDOT Presenters

- Shoshana Lew, Executive Director
- John Lorme, Director of the Division of Maintenance and Operations
- Keith Stefanik, Chief Engineer
- Ryan Noles, Bus Rapid Transit Program Manager, CDOT Region 1
- Emily Haddaway, CDOT Legislative Liaison



- Intro from CDOT Director Shoshana Lew
- CDOT 2023 Maintenance and Operations Update
- Bus Rapid Transit (BRT) Program Overview
- Advancing Traffic Safety Presentation
- Q&A



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Department of Transportation

Division of Maintenance and Operations
Transportation Legislation Review Committee
August 2023



Winter Season 22/23 Review

Record Winter Season

This season ranked #2 of the last 50 season
Wolf Creek Pass – 500+ inches
Steamboat Springs – 400+ inches

Significant Storms

This season CDOT Winter Operations Team managed
34 storm events
1300 employees supported

Miles and Miles

CDOT Operators plowed over 6.5M lane miles with a
relatively new crop of operators.
That's the equivalent of circling the earth more than
261 times, – while reducing the accident rate

Avalanche Mitigation

CDOT safely conducted - triggered 488 avalanches in
highway paths of which 203 hit the road

Incident Management

Total Incidents: 11,863 - 15% increase from last winter
Total Closures: 2,485 - 9% decrease from last winter
EJMT Operations Center (opened)

Winter OPS





227 Maintenance Patrols

Staffed with 1600 Plow Operators
Operating 900 snowplows (24/7)

Recruitment Efforts

TMI Vacancy Rate Aug 1, 2022 (37%)
TMI Vacancy Rate Jan 1, 2023 (24%)
TMI Vacancy Rate May 1, 2023 (18%)

ELDT (CDL) Licensure Efforts

March 2022 – April 2023 over 200 plow operators
Graduation Rate 94%
Retention Rate 90%

Winter Operations Training

Qualified 15 Howitzer Crews
Training 1200 operators (advanced plow operations)

Augmentation

Continual rotations along I-70 Mtn corridor
Extended Incident Response Teams West (I-70)
Front Range Response Team (20 Plows)

Staffing



#highwaymaintainer



Winter Season 22/23

Budget
\$273M

**Snow
Ice**

\$84.5M

Maintenance
Contingency
+\$12M
+19.6M

Traffic
\$71.7M

**Roadway
Surface**
\$38M

**Roadside
Facilities**
\$22.6M

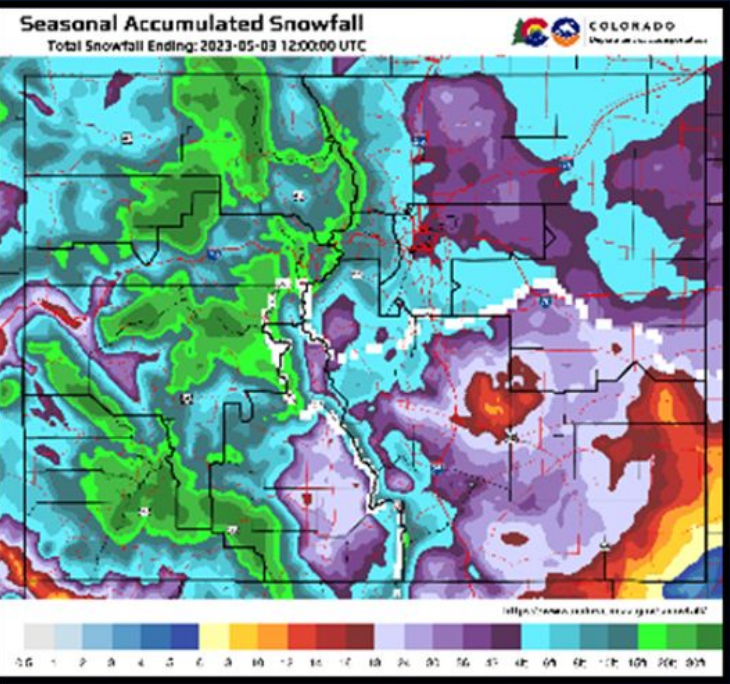
**Roadside
Appearance**
\$10.6M

**Planning
Training**
\$16.3M

**Structure
Maintenance**
\$5.6M

**Equipment
Buildings
Grounds**
\$18.2M

Tunnels
\$5.5M





Post Winter Repairs (\$25M/\$10M)

Maintenance Paving Projects

US 40 North Berthoud Pass (Winter Park)
I-70 EJMT (mm 215-223)
I-70 Vail Pass (mm 190 – 203)

Statewide Efforts

9 Major Paving Projects
60 Minor Paving Projects
36 Major Chip Seal Projects

EJMT Projects

Tunnel ITS Project – New Cameras/VMS
New Operations Center
New Maintenance Facility
New Approach Barriers (face lift)

Flood Repairs/Maintenance

Culvert Replacement (C0131)
Culvert Replacement (C017)
Culvert Replacement (C0151)

EV Vehicles - Chargers

35 EV (Level 3) installs (nonpublic)
50 New EV Pick Ups





Staffing Strategy



Staffing Efforts #1 priority

326 Maintainer Positions Vacant (July 1, 2022)
200 Maintainer Positions Vacant (July 1, 2023)



Professional Development

Rapid Promotional Opportunities
Leadership Courses - Maintenance Manager
Heavy Equipment Training and College \$



Recruitment Efforts

Statewide Career Fairs (w/ Toys)
Focusing on 18-21 High School Grads
Second Chance Programs



Salary Increase(s)

\$39k (2019) to \$51k (2023) Starting Salary (+31%)
5% ATB (23) and 3% Annual Salary Increases (21/22)
Specialty Skills Pay (up to 300 monthly)



New Training Programs

Entry Level Trainee Programs (and apprenticeships)
CDL Qualification Course - 92% Retention Rate
Cross Training within CDOT Staff Positions



Housing Programs

Employee Housing (Single Family/Condos)
Mobile Home Rental Pads
Increased Housing Stipends (\$500-\$2k monthly)



Bonus and Augmentation Programs

Seasonal Performance (Snow) Bonus (FY22 and 23 Only)
Shifting Resources (Augmentation Programs)
Improved Equipment



Housing Stipend Program



Lack of housing affordability and availability directly affects maintenance levels of service and emergency response operations.

CDOT's essential workforce is required to live within 30 minutes of their duty stations.

Typically, CDOT's entry level maintainers can't afford to rent or buy homes within the 30-minute requirement.

Housing Stipend Data

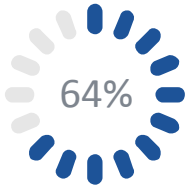
Essential Employee Vacancy Rate



Housing Stipends Areas Traditionally 40-70% Vacancy Rates

- ✓ I-70 from EJMT to Glenwood 50% Vacancy Rate
- ✓ CO82 (Glenwood – Aspen) 100% Vacancy Rate
- ✓ Denver/Boulder Metro 30% Vacancy Rates

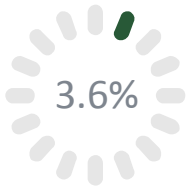
Highway and Traffic Maintainer Positions



1208/773 positions are authorized a housing stipend

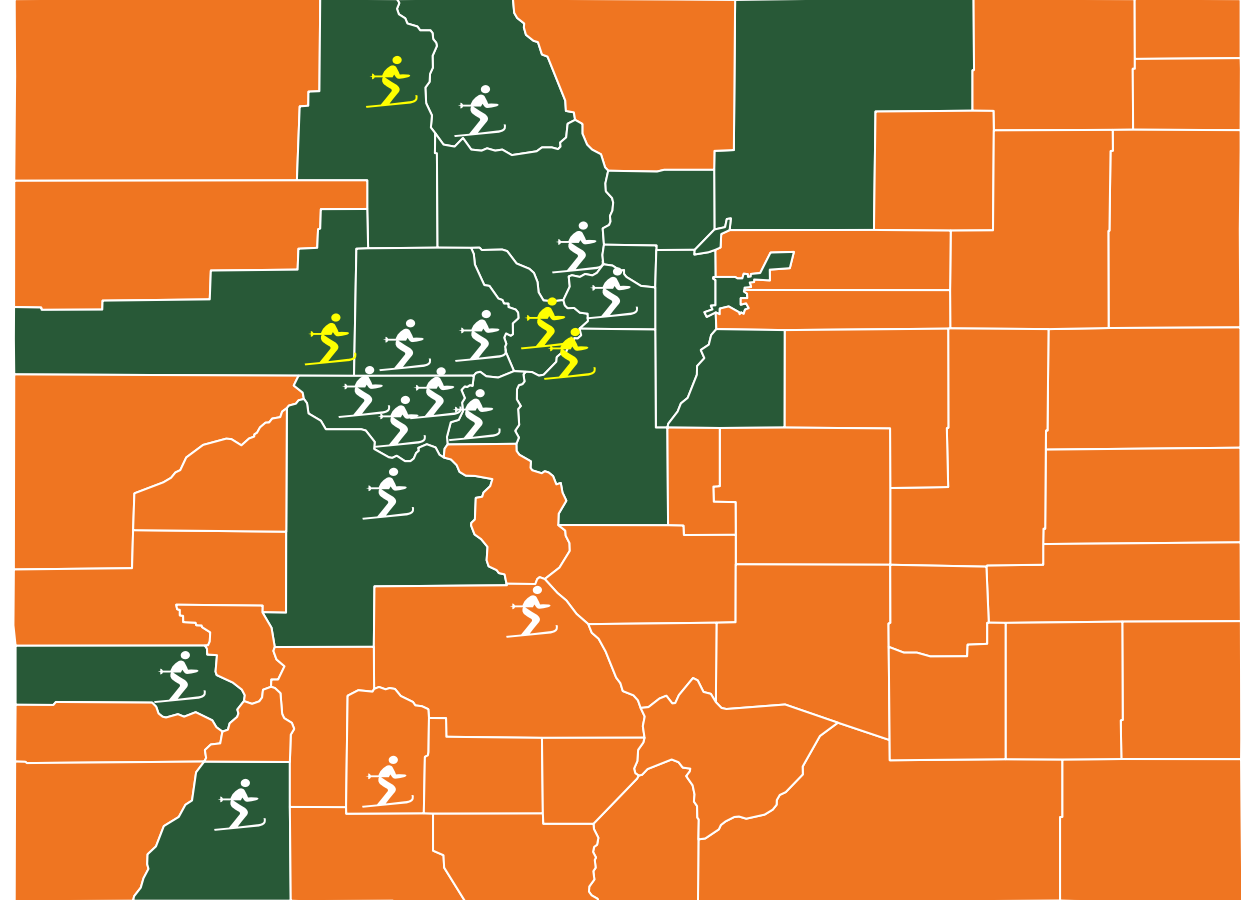
- ✓ \$500 – 172
- ✓ \$1000 – 420
- ✓ \$2000 – 181

Budget Impacts



Housing Stipends account for under 4% of the total MLOS Budget

- ✓ \$868k Monthly
- ✓ \$10.4 Million Annually



- Counties with housing stipends
- Counties w/o housing stipends
- Major Ski Resorts/Communities



Employee Housing Programs

*In relation to the the national avg 2022



Housing Cost

+21%



Cost of Living

+12%

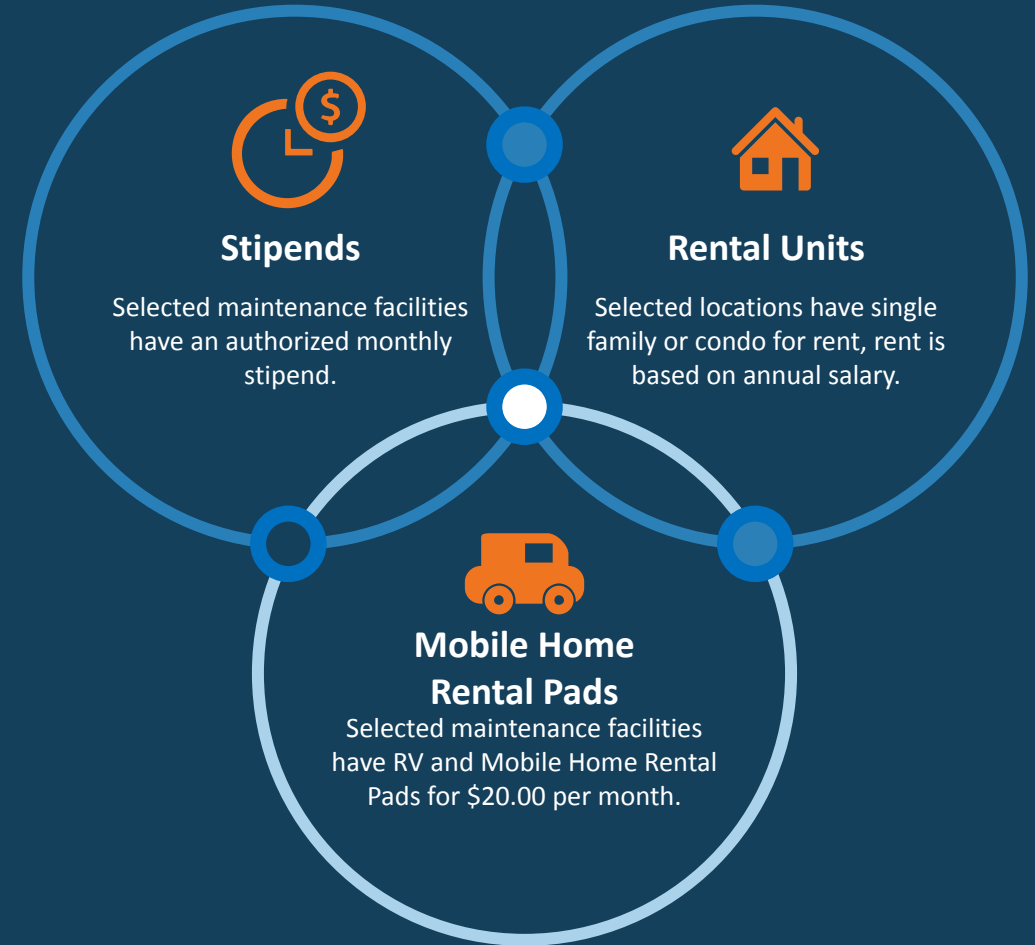


Unemployment Rate

3%

We have a no fail mission!

As such housing programs have become part of CDOT's employment and retention strategy.



Available and affordable housing that fits a range of household types and lifestyles is essential to attracting, retaining, and developing a diverse, productive workforce.



Ski Country Employee Housing



Project Overview

Current Employee Housing Projects



PROJECT FRISCO
Condo

Preliminary Stakeholder

Town of Frisco

Budget (\$6.25M)

Fully Funded

Ground Breaking

June 23

Tentative Completion

October 24



PROJECT FAIRPLAY
Single Family Homes

Preliminary Stakeholder

Town of Fairplay

Budget (\$6.5M)

Fully Funded

Ground Breaking

June 23

Tentative Completion

December 23



PROJECT BASALT
Single Family Homes

Preliminary Stakeholder

Eagle County

Budget (\$7M)

October 23

Ground Breaking

TBD 24

Tentative Completion

TBD 25



PROJECT STEAMBOAT
Condo

Preliminary Stakeholder

Town of Steamboat

Budget Land Swap

DTB 23

Ground Breaking

TBD 24

Tentative Completion

TBD 25



Fairplay Housing

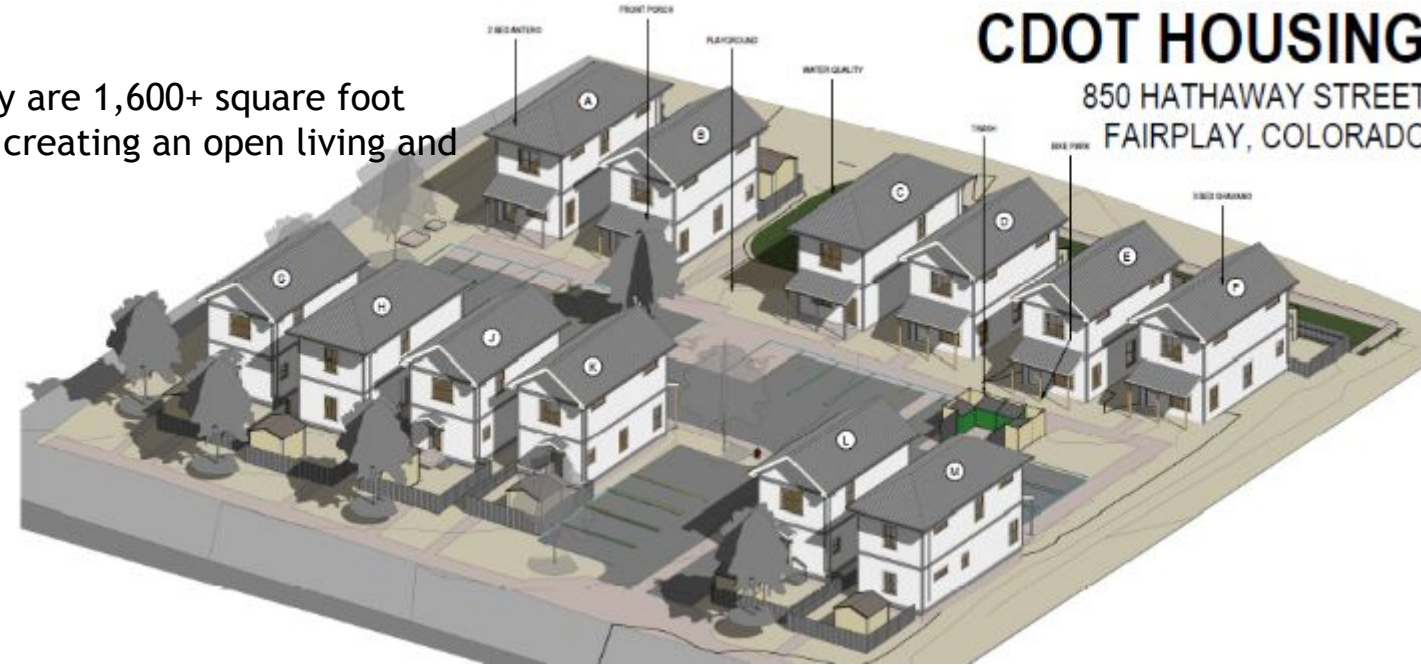
Single Family Homes

12 Single Family Homes 3 BED · 2.5 BATH · 1600 SQFT

These homes are constructed by Fading West in Buena Vista. They are 1,600+ square foot homes. All bedrooms and full bathrooms are on the second floor, creating an open living and dining room on the first floor.

Employee Homes includes:

- 30-year, no-fade exterior
- Stainless appliances
- 16'x8' upper balcony off the primary bedroom
- Durable, easy-to-care quartz countertops
- Luxury vinyl plank flooring that is waterproof, scratch, stain, and dent resistant
- Cove radiant heating
- Fenced backyard with storage shed





Frisco Housing

22 Condo Units for the Town of Frisco and CDOT

- CDOT has been implementing solutions to the employee housing challenges in Summit County for many years, this employee housing project is just one of our solutions. Located in beautiful downtown Frisco Colorado this employee housing complex will house 22 CDOT and the Town of Frisco (essential) employees and their families.





P3 Owned Office Space/Leased Apartments

- 19 units, 16 will be two-bed, two-bath units and three will be one-bed, one-bath units
- Iron Mountain Hot Springs construct a three-story, mixed-use building just east of Iron Mountain Hot Springs and immediately south of Interstate 70 on CDOT Property
- The approximately 28,500 square foot building (9,500 square feet per floor) house Colorado Department of Transportation (CDOT) and Colorado State Patrol (CSP) offices on the first floor and 19 residential units spread across the top two floors.
- CDOT owns the bottom floor and Iron Mountain Hot Springs, LLC will own the top two floors. CDOT has 5 units reserved for long term employee lease.





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Department of Transportation
Division of Maintenance & Operations

Thanks for listening!





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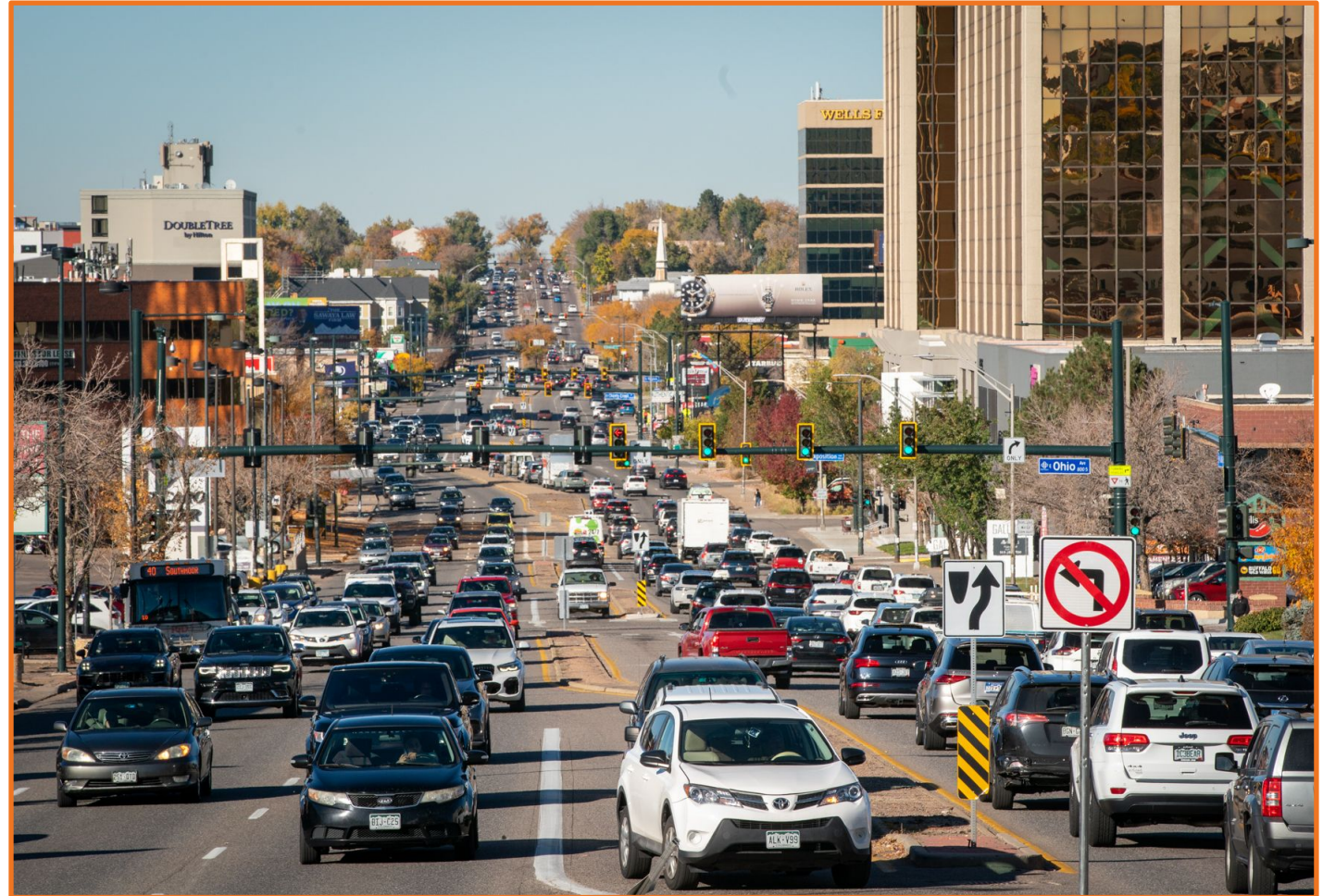
Department of Transportation

Bus Rapid Transit (BRT) Program Overview

Transportation Legislation Review Committee

August 21, 2023

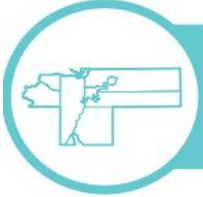
- Senate Bill 260
 - GHG Pollution Reduction
 - 10 Year Plan: BRT in Region 1
 - Reduce delay for passengers
 - Make transit more viable for commuting and daily trips
- Improve Coloradans transportation options
- Improve movement of people across system



Colorado Blvd. 10/28/22 (Credit: Hart Van Denburg/CPR News)



10 Year Plan Regions 1 and 4



CENTRAL PROJECTS

Highway & Transit– Region 1

	Project Type	Total Est. Project Cost	Total Strategic Funding	Other Funding	Funded FY 19-22	Funded FY 23-26	Planned FY 27+	Project Status	Planning Project ID
I-270	I-270 Improvements and Congestion Relief from I-76 to I-70	\$600 M	\$200 M	✓	\$30 M	\$144.5 M	\$25.5 M		0002
CO 7	CO 7 Priority Intersection Improvements	\$20 M	\$20 M				\$20 M		2586, 2641
	I-25 and CO 7 Interchange Mobility Hub	\$14 M	\$14 M		\$14 M				2694
	Regionwide Arterial BRT and Transit Improvements	TBD	\$170 M		\$3 M	\$72 M	\$95 M		2638



NORTHEAST PROJECTS

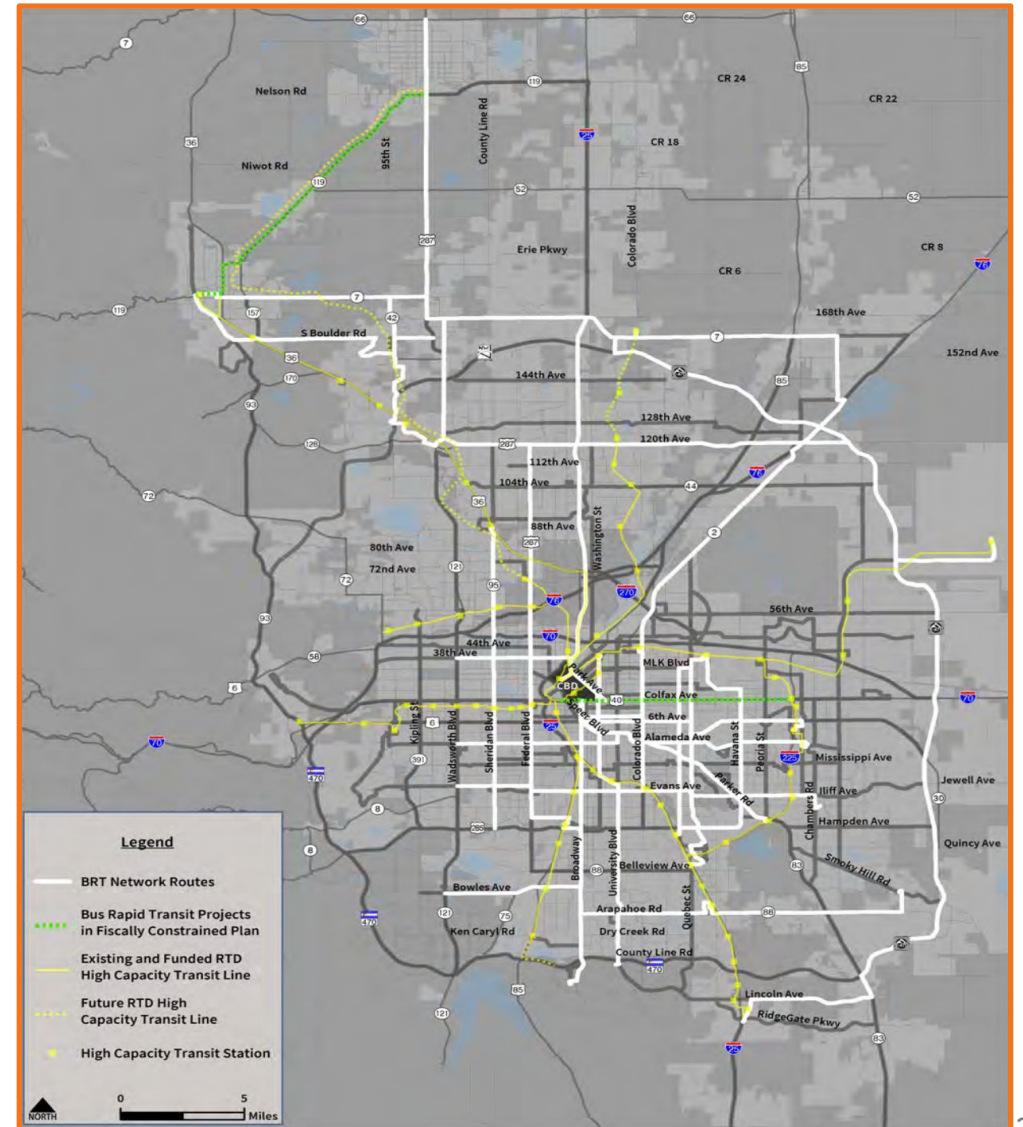
Highway & Transit– Region 4

	Project Type	Total Est. Project Cost	Total Strategic Funding	Other Funding	Funded FY 19-22	Funded FY 23-26	Planned FY 27+	Project Status	Planning Project ID
CO 7	CO 7 Corridor Improvements	\$106 M	\$15.3 M	✓	\$13.44 M	\$1.86 M			2596
CO 119	CO 119 Bus Rapid Transit Enhancements	\$350 M	\$24.88 M	✓		\$24.88 M			2601
	CO 119 Bus Rapid Transit, Safety and Mobility Improvements	\$40 M	\$40 M		\$40 M				0057

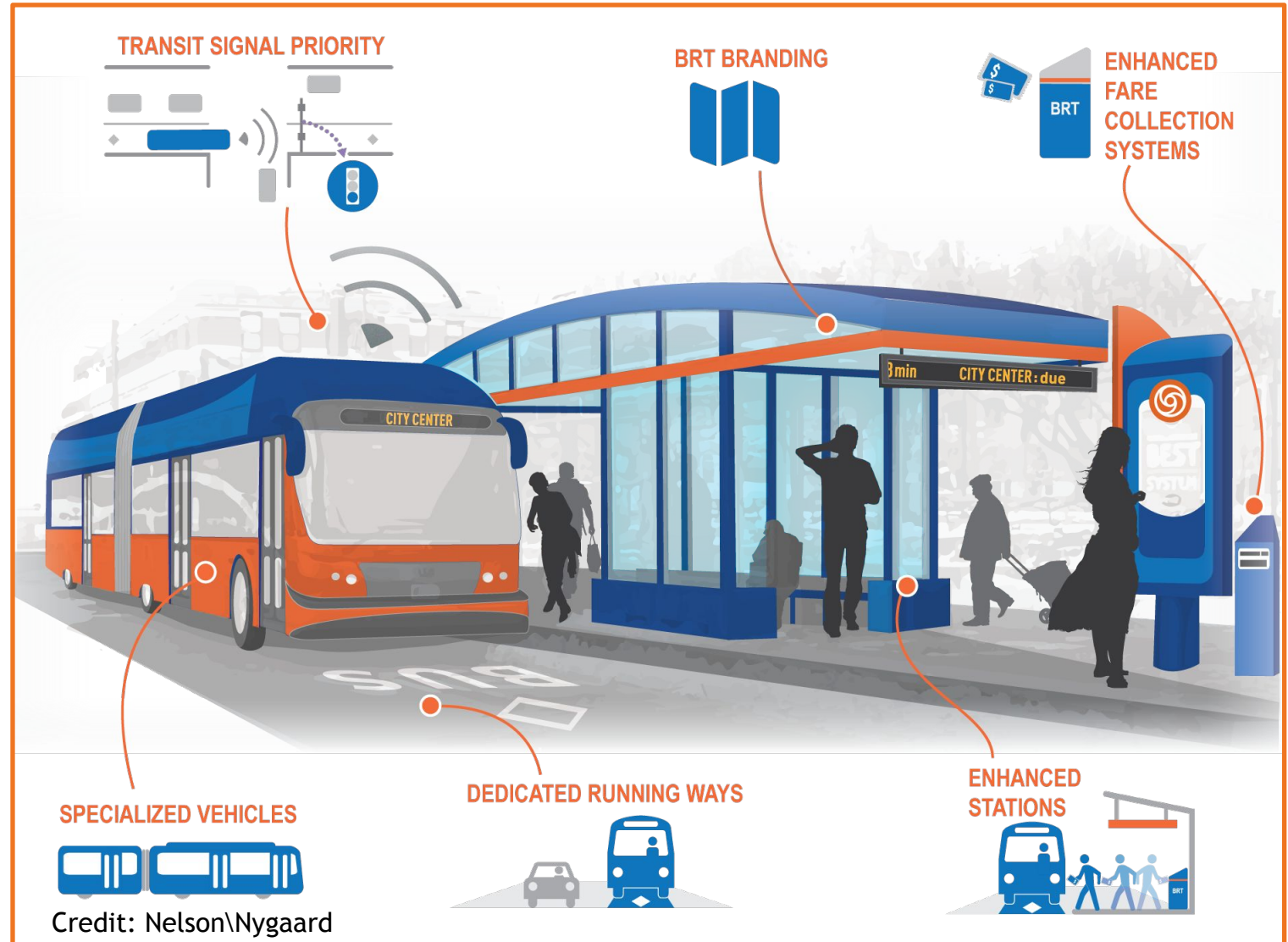


Regional BRT Planning

- RTD BRT Feasibility Study
 - Identified 29 potential BRT lines on arterials and interstate freeways
- DRCOG Metro Vision 2050 and Denver Moves Transit
 - Federal Blvd. and Colorado Blvd.
- 2 are moving toward implementation
 - East Colfax Ave. (Denver and Aurora)
 - CO 119 (Boulder and Longmont)



- Rapid service with higher frequency (5 - 15 min)
- Rail-like operation
 - Dedicated lanes and/or signal priority
- Stations instead of stops
 - Sidewalk improvements
 - Station amenities
- Community improvement
 - Better experience than local bus service





Regional BRT Implementation Timeline

Regional BRT Corridors Implementation Timeline (Phase 1: BRT Open for Service by 2030)							
BRT Corridor	2023	2024	2025	2026	2027	2028	2029
East Colfax Ave.	Design		Construction				
CO-119 (Diagonal Highway)	Design		Construction				
Federal Blvd.	NEPA and Preliminary Design		Design		Construction		
	Secure Funding		Finalize Funding				
Colorado Blvd.	Corridor Study/Conceptual Design						
	NEPA and Preliminary Design		Design		Construction		
	Secure Funding		Finalize Funding				
East Colfax Ave. Extension (I-225 to E-470)	Corridor Study/Conceptual Design						
	NEPA and Preliminary Design		Design		Construction		
	Secure Funding		Finalize Funding				

• Phase 2 BRT corridors include: Speer Blvd./Leetsdale Dr./Parker Rd. (CO 83), Alameda Ave. (CO 26), Broadway/Lincoln St., I-25 North, and CO-119 Extension



Federal Blvd. BRT Project



- Project Area
 - Wagon Road Park and Ride to Englewood Station
 - Core service: 120th Ave. in Westminster to Dartmouth Ave. in S. Denver
- Project Status
 - Consultant under contract, NEPA and Preliminary Design beginning in August



Colorado Blvd. BRT Project

- Project Area

- I-70 to I-25, potential north and south expansion
 - Core service: 40th and Colorado Station (A-Line) to Colorado Station (E and H Lines)

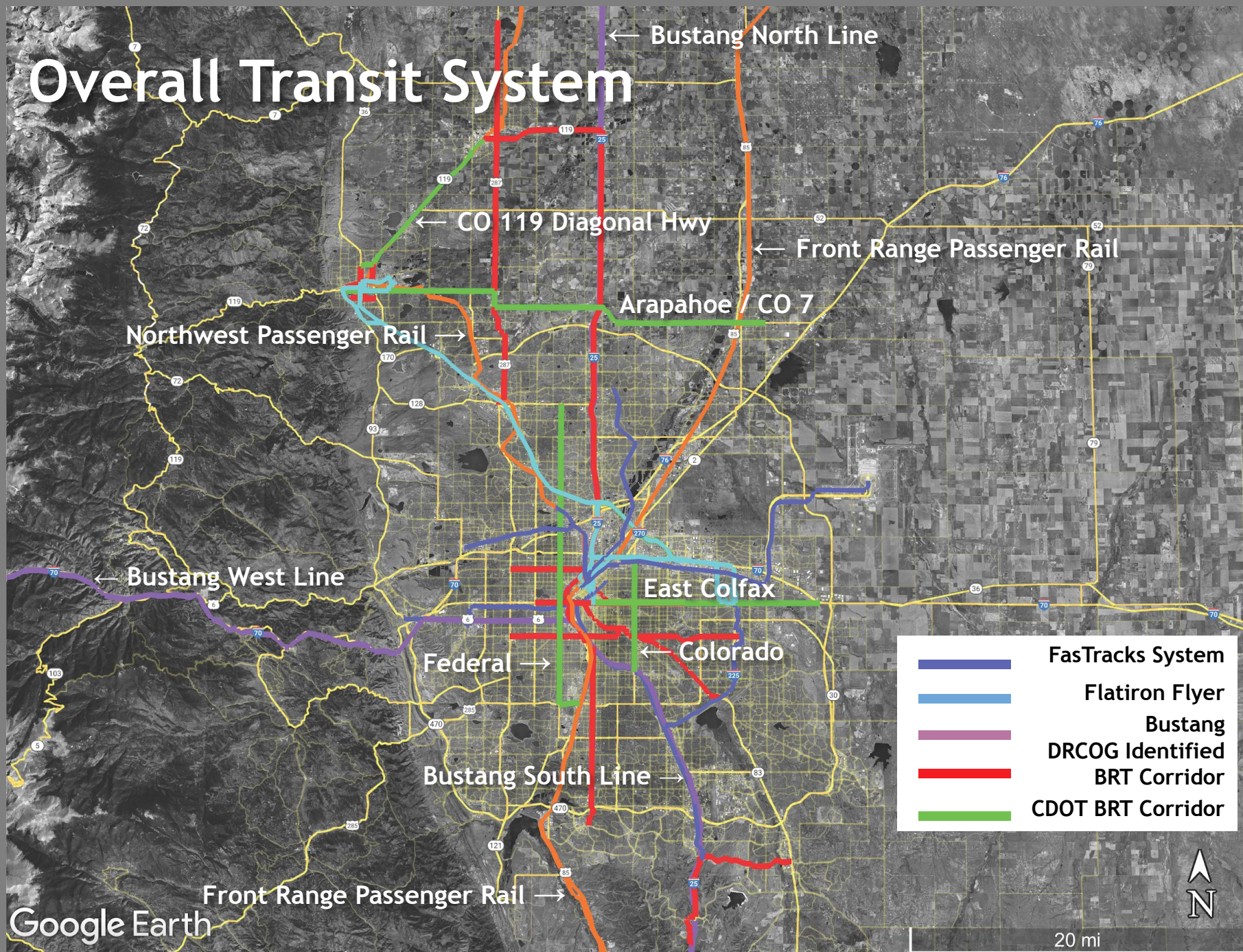
- Project Status

- Corridor study starting in August
 - Identify pedestrian and bicycle improvements
 - Develop foundation for BRT design and community engagement



Southbound bus stop at Colorado Blvd. and Martin Luther King Jr. Blvd.

Overall Transit System





Advancing Transportation Safety and Traffic Safety Trends



COLORADO
State Patrol
Department of Public Safety



Advancing Transportation Safety (ATS)

#1

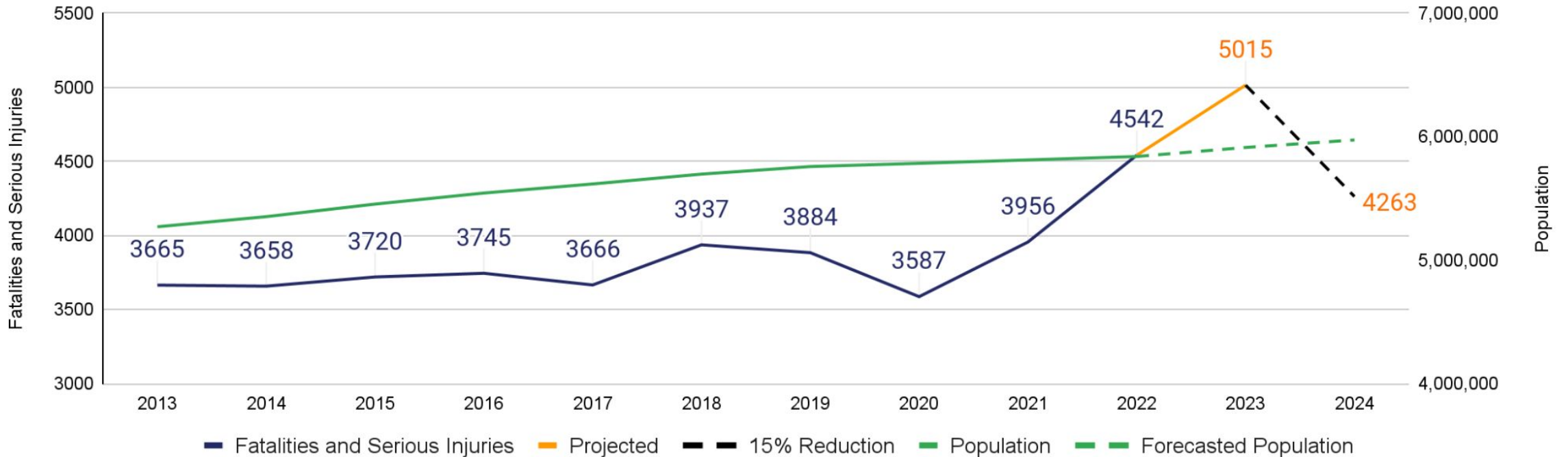


Advance the safety of Colorado's Transportation System so all travelers arrive safely at their destination

Advancing Transportation Safety

In an effort to protect the traveling public in Colorado, the Colorado State Patrol and the Colorado Department of Transportation will reduce the percentage of fatal and serious injury crashes by 15% compared to the same month in fiscal year 2023.

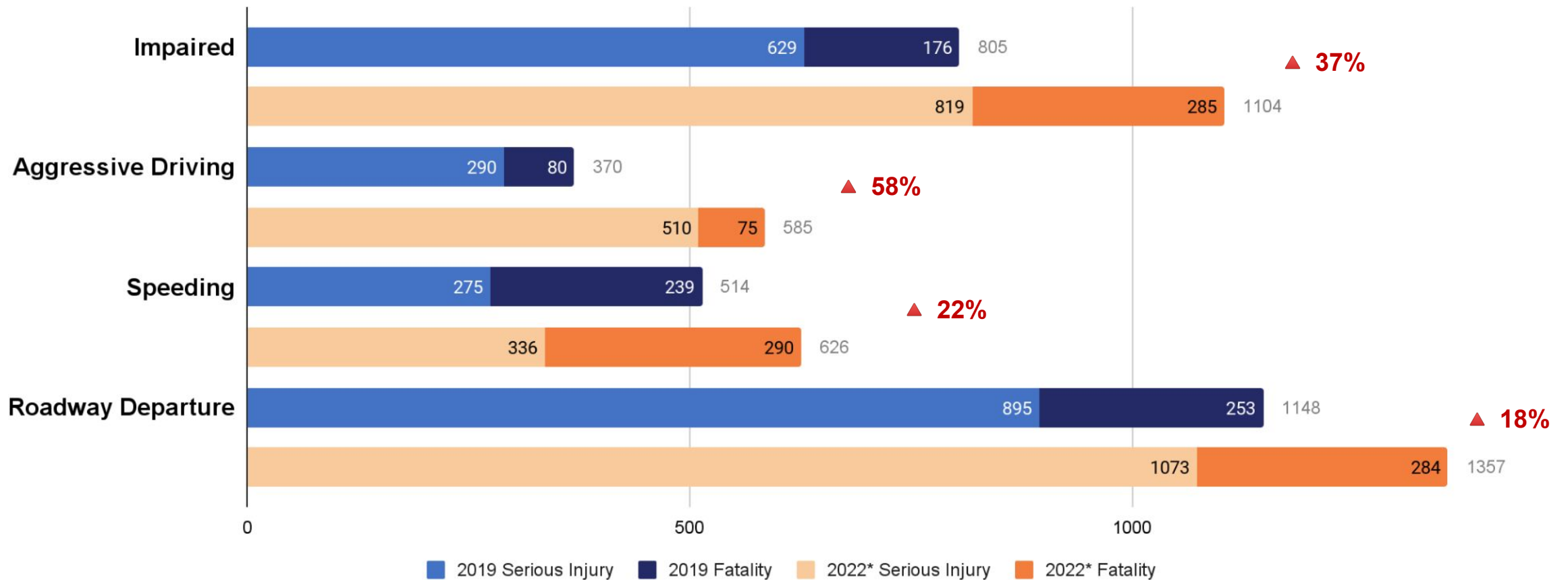
Colorado Traffic Fatalities and Serious Injuries by Fiscal Year



Note: Fiscal Year 2023 traffic fatalities and serious injuries is a forecast and will be finalized on June 30, 2023.



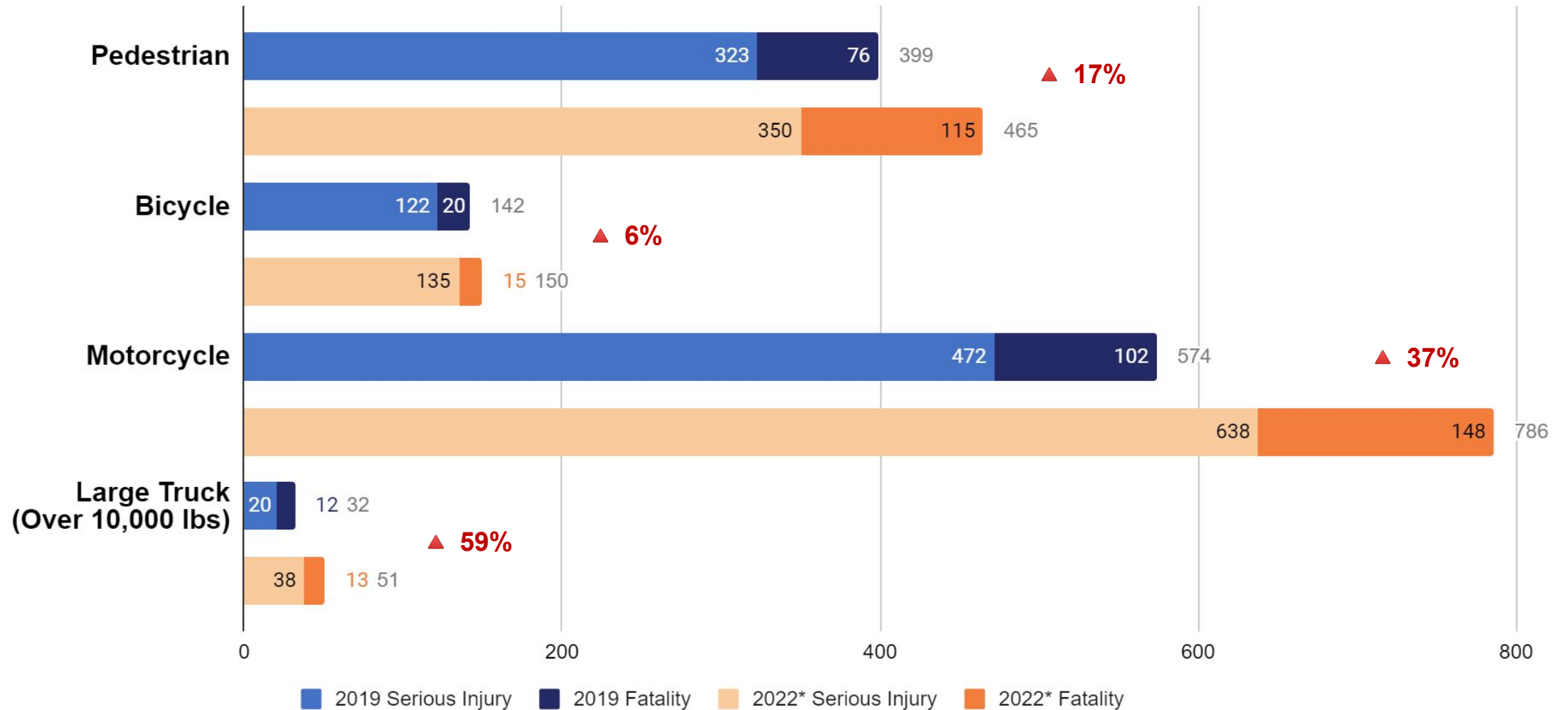
Focused Causal Factors (Serious Injuries and Fatalities)



*Note: 2022 data is considered preliminary.



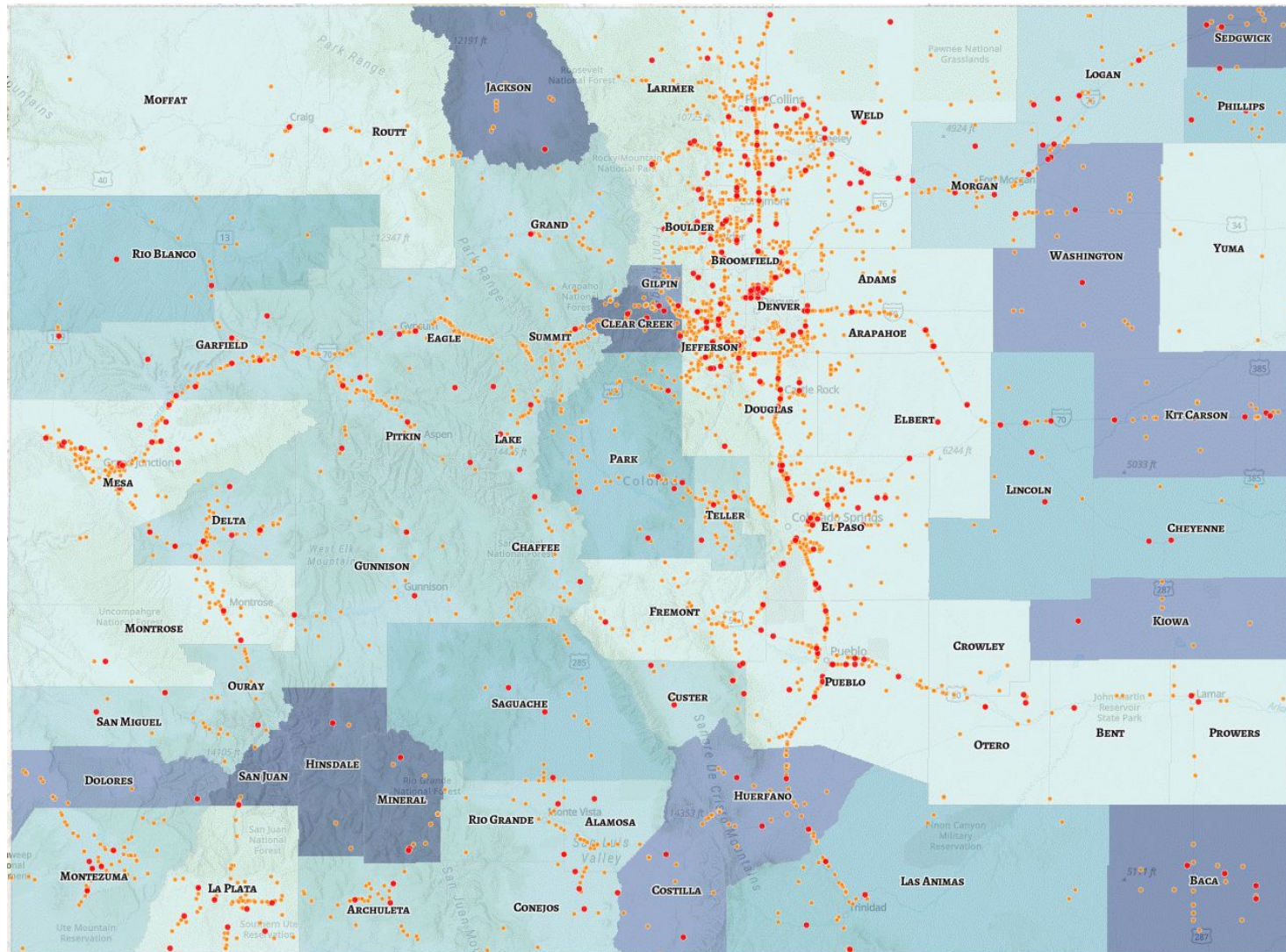
Travel Mode Type



*Note: 2022 data is considered preliminary.



2022 CSP Fatal and Injury Crashes



- Rural counties typically have higher crash rates, meaning that the number of fatal and injury crashes per 10,000 population is higher in rural counties than urban ones in general.
- An argument can be made that higher rural rates are, in part, the result of very low populations in relation to number of crashes.
- Major highways may contribute to the crash count in some low population counties, adding traffic volume without a corresponding boost in population to offset the rate.
- Crashes appear somewhat random with regard to space and time.



Advancing Transportation Safety Overview



Emphasis Areas developed as a hybrid between the STSP emphasis areas and the FHWA's Safe Systems Approach.

Safety Culture

- ✓ Legislation & Policy
- ✓ Data Management
- ✓ EDI (Equity, Diversity, Inclusion)
- ✓ Funding

Safe People

- ✓ Bicyclists & Pedestrians
- ✓ Motorcyclists
- ✓ Young Drivers
- ✓ Elderly Drivers
- ✓ Work Zones
- ✓ First Responders

Safe Roads

- ✓ Infrastructure
- ✓ Speed
- ✓ Intersections
- ✓ Roadway Departures
- ✓ Access Management
- ✓ Maintenance

Safe Driving

- ✓ Impaired Driving
- ✓ Distracted Driving
- ✓ Aggressive Driving
- ✓ Occupant Protection
- ✓ Speeding

Post Crash Care

- ✓ First Responders
- ✓ TIM (Traffic Incident Management)



Advancing Transportation Safety: Safe Roads

Core Safety (~425 Projects)

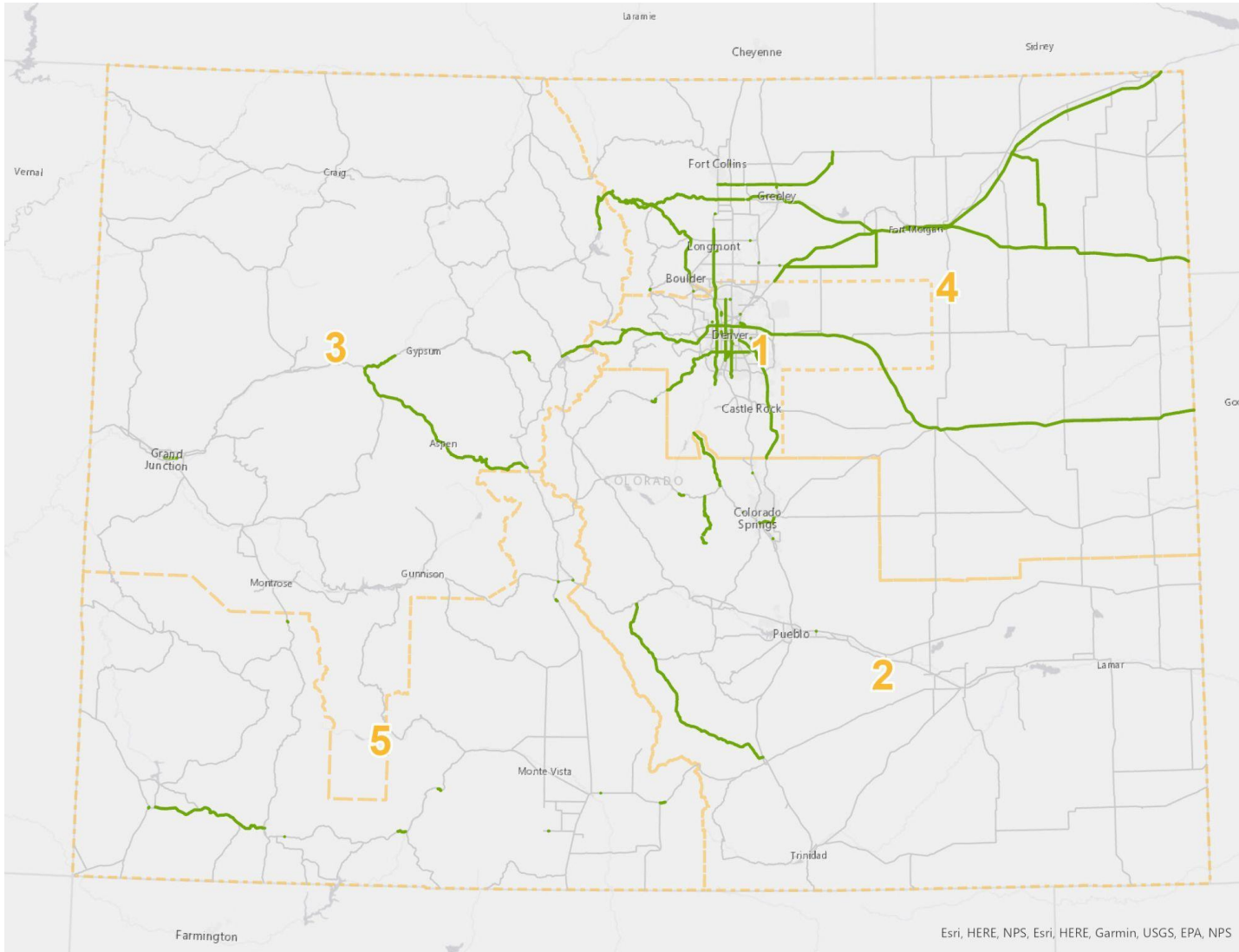
Shovel Ready (~29 Projects)

Immediate Action (~ 38 Projects)

Region	Project Description/Location	Primary Pattern	Secondary Pattern	Other Pattern or comment	Safety Bucket
Region 2	US 85 & Carson Blvd Continuous Green intersection	Broadside	Approach Turn		Shovel Ready for 2024
Region 2	US 50 & CO 231 Intersection Improvements	Pedestrian or Bikes	Approach Turn		Immediate action 2023
Region 2	Center Line Rumble Strips - complete all two lane hihgways in R2	Head On	Aggressive Driving		Core Safety Projects
Region 4	US 36 Barrier (Guardrail replacement)	Roadway Departure	Pattern	Replacing very substandard guardrail	Shovel Ready for 2024
Region 4	CO 392 & WCR 35	Intersection Improvement	Broadside		Core Safety Projects
Region 4	Longmont Bike/Ped Safety	Pedestrian or Bikes	Intersection Impro...	4 intersections identified in bike/ped study	Core Safety Projects
Region 4	FY 23 ADA	Pedestrian or Bikes	Pattern		Shovel Ready for 2024
Region 4	US 40/US 34 Rumblestrips	Head On	Roadway Departure	Centerline rumblestrips	Core Safety Projects
Region 4	CO 93/CO 170 Park n Ride ped crossing and signal improvements	Pedestrian or Bikes	Approach Turn	FYA at intersection, RRFB at trailhead/PNR	Immediate action 2023



Advancing Transportation Safety: Safe Roads

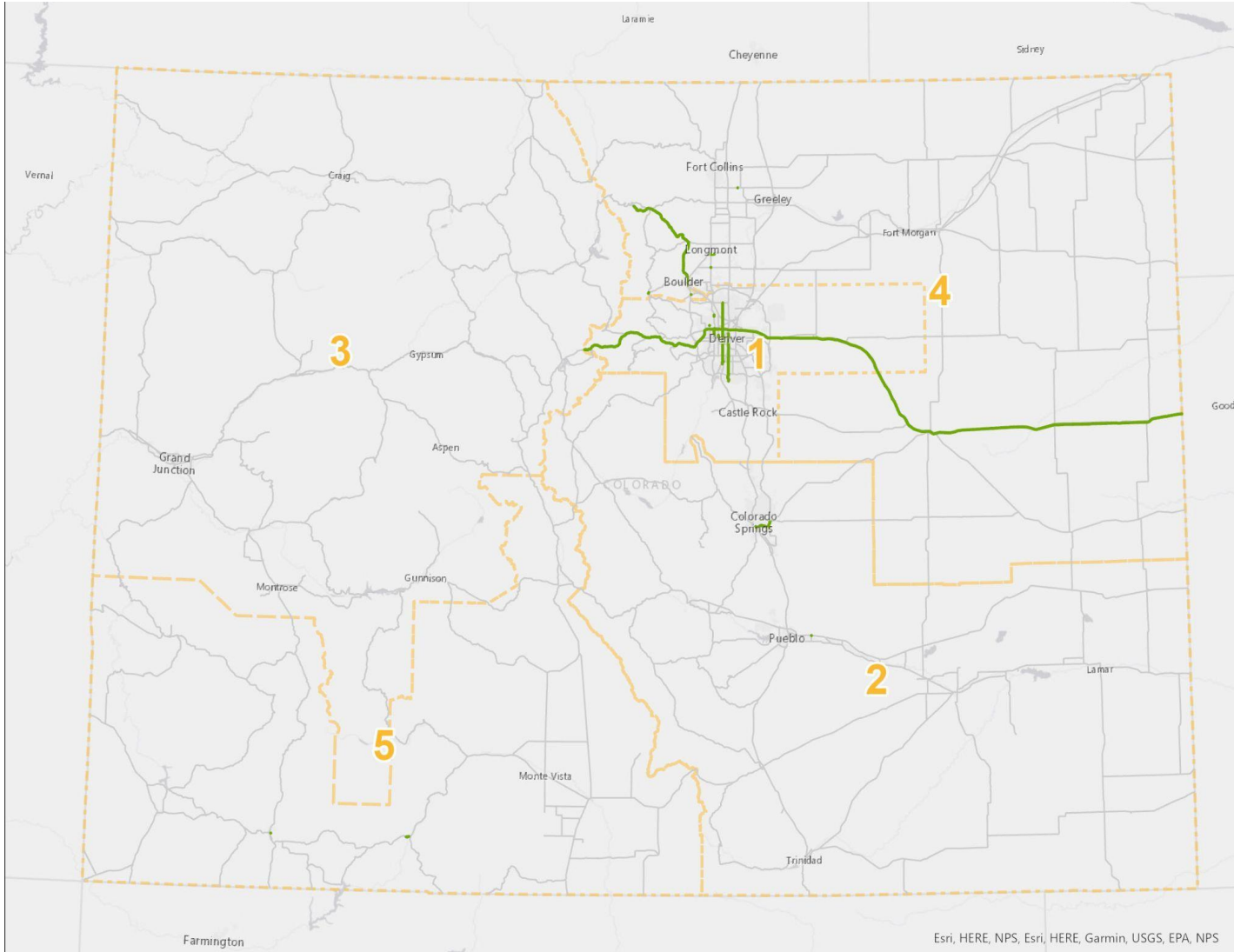


Regional Project Examples

- I-70 Median Cable Rail
- Center Rumble Stripes on 2-Lane HWY
- ADA Projects
- MLOS Flashing Stop Signs
- MLOS Flashing Yellow Arrows
- Ped Yield Signs on Roundabouts
- Snow Proof Signals
- Signal Control Upgrade
- Guardrail Safety Improvements
- LIDAR Detection Technology
- Pilot: Automated Road Closure Gate
- Regionwide Cable Rail Gap Project
- Pike/Ped Safety Improvements



Advancing Transportation Safety: Safe People



Project Highlights

- I-70 Resurfacing (Multi Use Path at Silver Plume)
- Longmont Bike/Ped Safety Improvements
- ADA Projects
- Ped Yield Signs on Roundabouts
- Pike/Ped Safety Improvements
- Pagosa Spring Roadway Diet
- US 24 Colorado Springs Ped Improvements
- LIDAR Detection Technology



Advancing Transportation Safety: Safe Driving

Highway Safety Office New Programs/Initiatives

- Family, Career and Community Leaders of America National Summit Support
- Alliance Highway Safety Marketing for Statewide Events - Rural Population Outreach
- 2nd Annual Colorado Traffic Safety Summit - August 7-9, 2023
- Law Enforcement Education Events to foster Community Engagement and Support
- Uber, Lyft and National Road Safety Foundation Grants
- Drug Impaired Driving Roadside Cognitive Testing Research



Advancing Transportation Safety: Post Crash Care

Improve TIM Program Delivery

Improve Colorado's Traffic Incident Management (TIM) program delivery by developing TIM plans in 6 jurisdictions with high rates of traffic-related serious injuries and fatalities by June 30, 2024.

→ TIM National Unified Goal Objectives:

- Improve Responder Safety
- Enhance Safe, Quick Clearance of Traffic Incidents
- Prompt, Reliable, Interoperable Communications

Save Lives

- Deaths and Injuries
- Responders Struck
- Secondary Crashes
- Motorists, passengers, VRU

Save Time

- Delays
- Travel Time Reliability
- Quality of Life

Save Money

- Congestion
- Lost Productivity
- Wasted Fuel
- Air Quality
- Freight & Commerce



CDOT Lead WIG Strategies

- Engage with a broad range of Colorado communities by delivering 30 traffic safety outreach events focused on impaired driving and speeding by June 30, 2024.
- Increase the number of paid media impressions for impaired driving and vulnerable road user public awareness campaigns from 109,474,890 in fiscal year 2023 to 125,896,123 by June 30, 2024.
- Increase the funds awarded to install or upgrade guardrail devices at strategic locations to be compliant with the Manual for Assessing Safety Hardware from \$11 million in fiscal year 2023 to \$21 million by June 30, 2024.
- Increase the number of speed feedback devices on strategic corridors from 64 to 84 by June 30, 2024.



DPS Lead WIG Strategies

- The Colorado State Patrol will increase the enforcement of dangerous driving activities related to impairment and speeding, based on data-driven strategies and locations, in an effort to have a 1:1 ratio of proactive enforcement stops initiated for speeding and impairment which cause 30.8% of fatal and injury crashes by 3%, from 51,150 in FY 22-23 to 52,685, by June 30, 2024.
- To reduce the number of speeding and impaired driving crashes, the Colorado State Patrol will increase the number of proactive data-driven surge enforcement events by 10% from 140 to 154, by June 30, 2024.
- Increase the number of traditional media impressions related to excessive speed and impaired driving from 18.7 million to 19.7 million (5% increase) by June 30, 2024.



COLORADO

Department of Transportation

Q&A

Thank you! For questions or comments, please contact:

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