



COLORADO

Department of Transportation

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TO: THE TRANSPORTATION COMMISSION
FROM: REBECCA WHITE - DIRECTOR, DIVISION OF TRANSPORTATION DEVELOPMENT
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DATE: NOVEMBER 18, 2020
RE: POLICY DIRECTIVE 14.0 - SUMMARY OF PROPOSED CHANGES FOR ADOPTION

Purpose

This memorandum provides a summary of proposed changes to Policy Directive 14 (PD-14) following several Transportation Commission workshops in which the Commission reviewed and provided feedback on each goal area and the related performance metrics. Staff incorporated Commission feedback and is submitting a revised Policy Directive 14 with the revised goal areas and performance objectives for adoption at the November 2020 Transportation Commission meeting.

Action

Using the framework and alignment of priorities discussed at the January 2020 Transportation Commission workshop, and the review of proposed changes provided at the August through October 2020 Transportation Commission workshops, Staff has developed an updated Policy Directive with new goal areas, objectives, and performance targets for review and adoption by the Transportation Commission at the November 2020 Meeting. *(See Attachment A for the updated Policy Directive 14 for adoption.)*

Background

Earlier this year, staff presented a framework for annual review of Policy Directive 14, which incorporates goals from the Department's Wildly Important Goals (WIGs), the Transportation Commission Principles, the Governor's "Bold Four" Goals, and objectives required under the Fixing America's Surface Transportation (FAST) Act of 2015.



This framework creates a cadence of review of the objectives within the policy directive, allowing for continuous improvement of the main goals for the Department, informing funding decisions and projects, and measuring success of these initiatives. Using this framework, and input provided by the Transportation Commission at prior Commission workshops, Staff has developed a proposed Policy Directive 14 for review alongside this summary of the changes below.



Details

At Transportation Commission workshops in August, September, and October of 2020, Staff reviewed various proposed changes to PD-14, including:

- refreshed goal areas aligned with CDOT planning/budget structures and processes;
- objective areas with specified performance targets; and
- refinements in regard to CDOT's role in delivering these objectives.

As PD-14 guides Statewide Transportation Plan goal areas and performance objectives, the objectives and goal statements for the three goal areas align with the most current Statewide Transportation Plan (2045). Staff integrated feedback from the Commission in aligning the objectives with other guiding policies such as the Greenhouse Gas Pollution Reduction Roadmap and HB19-1261 ("*Climate Action Plan to Reduce Pollution*").

Attachment A is an updated version of PD-14, incorporating the changes outlined below, as well as several corrections to the technical language, definitions, and authority policies included within the document. The proposed changes—demonstrated below for each of the three goal areas—include the following:

(1) Safety Goal Area:

The goal statement for the Safety goal area is: *The future of Colorado is zero deaths and serious injuries so all people using any transportation mode arrive at their destination safely.* The metrics associated with the objectives in the Safety goal area are outlined below, based on a planning horizon of 2021-24, and full detail for Safety metrics and objectives is included in *Attachment A*.

a) Highway Safety Measures:

- Vehicle crash rate per 100 million vehicle miles traveled
- Traffic fatality rate per 100 million vehicle miles traveled
- Traffic serious injury rate per 100 million vehicle miles traveled
- Traffic fatalities and serious injuries involving vulnerable users (pedestrians and bicyclists)

b) Employee Safety Measures:

- On-the-Job injuries
- Vehicle crashes involving CDOT Employees

(2) Asset Management Goal Area:

The goal statement for the Asset Management goal area is: *Maintain a high-quality transportation network by working to maintain a state of good repair for all assets and a highly traversable road network.* The objectives in this goal area are intended to be achieved or maintained over the first ten years of the planning horizon (2021-30). The highway pavement, bridge, and maintenance metrics from the Asset Management goal area are outlined below, and full detail for Asset Management metrics and objectives is included in *Attachment A*.

a) Highway Pavement Measures:

- Pavement condition of the Interstate System
- Pavement condition of the National Highway System (NHS), excluding Interstates
- Pavement condition of the state highway system

b) Bridges Measures:

- Bridge deck area of the National Highway System in good condition
- Bridge deck area of the National Highway System in poor condition
- Bridge deck area of the state highway system in good condition
- Bridge deck area of the state highway system in poor condition
- Bridge lead measures, risk measures, and freight movement measures

c) Maintenance Measures:

- Overall Maintenance Levels of Service (MLOS) for the state highway system



- Level of Service (LOS) for snow and ice removal
- d) Other Highway Assets Measures and Transit Assets Measures:
- Asset Management program measures for other highway assets (measures for buildings, Intelligent Transportation Systems (ITS) equipment, fleet, culverts, geohazards, tunnels, traffic signals, walls, and rest areas) are outlined in Appendix A of PD-14.
 - Transit asset measures related to revenue vehicles and facilities are detailed in Appendix B of PD-14.

(3) Mobility Goal Area:

The goal statement for the Mobility goal area is: *Reduce travel time lost to congestion and improve connectivity across all modes with a focus on environmental impact, operations, and transportation choice statewide.* The objectives in this goal area are intended to be achieved in the planning horizon 2021-30. These measures are outlined below, and full detail for Mobility metrics and objectives is included in *Attachment A*.

- a) Reliability and Congestion Measures:
- Incident Clearance Time for highways covered by Safety Patrol and Heavy Tow Vehicles
 - Operations Levels of Service (OLOS) of the state highway system
 - Vehicle Miles Traveled (VMT) and Vehicle Miles Traveled per capita (VMT/capita)
- b) Environmental Impact Measures:
- Greenhouse gas (GHG) pollution from the transportation section (in Carbon Dioxide equivalents)
 - Zero emission vehicle (ZEV) registrations
 - Percent and quantity of state transit fleet that are zero-emission vehicles
 - Percent of state highway miles within a thirty-mile buffer of direct-current (DC) fast-charging stations
 - Percent of Scenic and Historic Byways classified as electrified byways
- c) Multimodal Options Measures:
- Percent of Coloradans commuting to work with multimodal options, including telecommuting
 - Bustang bus service ridership
 - Unlinked transit passenger trips for Colorado small urban and rural transit agencies

Next Steps

- Consideration of PD-14 performance results in preparation for FY 2022 annual budget process - November and December 2020
- Presentation of performance data for all PD-14 objectives for FY 2020 - July and August 2021

Attachments

- Attachment A: Policy Directive 14 - Policy Guiding Statewide Plan Goals & Objectives
- Attachment B: Policy Directive 14 Briefing Presentation



COLORADO DEPARTMENT OF TRANSPORTATION		<input checked="" type="checkbox"/> POLICY DIRECTIVE <input type="checkbox"/> PROCEDURAL DIRECTIVE
Subject		
Policy Guiding Statewide Plan Goals & Objectives		14.0
Effective	Supersedes	Originating Office
11/19/2020	10/19/2017	Division of Transportation Development

I. PURPOSE

This Policy Directive provides performance goals and objectives to measure the success of the Department’s efforts to improve in the following key areas:

- Safety,
- Asset Management, and
- Mobility.

The performance objectives and targets in these goal areas will help implement the Statewide Transportation Plan by focusing transportation investments in the Statewide Transportation Improvement Program (STIP) and the annual budget. The Transportation Commission will revise this Policy Directive, as needed, with updated performance objectives or targets.

II. AUTHORITY

- 23 United States Code (U.S.C.) 134, 135 and 450, PL 114-94 (“Fixing America’s Surface Transportation Act” or “FAST Act”)
- 23 Code of Federal Regulations (C.F.R.) Part 420 (Planning & Research Program Administration), 450 (Planning Assistance and Standards), and 490 (National Performance Management Measures)
- § 43-1-106(8)(a), C.R.S. Transportation Commission
- § 43-1-1103, C.R.S. Transportation planning
- Transportation Commission Rules Governing the Statewide Transportation Planning Process and Transportation Planning Regions (2 CCR 601-22; effective September 14, 2018)

III. APPLICABILITY

This Policy Directive applies to all CDOT Divisions and Regions.

IV. DEFINITIONS

“Carbon Dioxide Equivalents (CO_{2e})” means the number of metric tons of CO₂ emissions with the same global warming potential as one metric ton of another greenhouse gas, and are calculated using Equation A-1 in 40 C.F.R. Part 98.

“Colorado DOT Transit Asset Management Group Plan” (Group TAM Plan) is the CDOT-sponsored asset management plan, required by the FTA’s Transit Asset Management (TAM) Rule, for 49 U.S.C. Chapter 53 funding recipients and subrecipients that own, operate, or

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manage capital assets in the provision of public transportation. The Group TAM Plan is a tool for guiding the prioritization of pass-through funds. Approximately 53 small urban and rural transportation providers participate in the current Group TAM Plan to maintain and/or improve the State of Good Repair (SGR) of transit assets.

“Drivability Life” is an indication in years of how long a highway will have acceptable driving conditions based on an assessment of smoothness, pavement distress, and safety. Drivability Life implements traffic based highway categories, and associated category drivability condition standards and allowed pavement treatments. Unacceptable driving condition is specific to each traffic based highway category and means drivers must reduce speeds to compensate for poor conditions, navigate around damaged pavement, or endure intolerably rough rides. The Risk-Based Asset Management Plan identifies three categories of Drivability Life: High (greater than 10 years of Drivability Life remaining); Moderate (4-10 years); and Low (3 or fewer years).

“Greenhouse Gas Emissions” in the scope of this directive refer to pollution from the transportation sector (though these emissions are not exclusive to this sector), and may refer to both start emissions and running exhaust emissions from vehicle tailpipes. These emissions are calculated and expressed in terms of CO₂e. Greenhouse gas or GHG included in this equivalency encompasses carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and other fluorinated greenhouse gases.

“Geohazards” are geologic hazards that affect the transportation system and include debris flow, embankment distress, landslides, rock fall, rockslides, and sinkholes.

“National Highway System” (NHS) is a federally designated system of roadways important to the nation's economy, defense, and mobility. The NHS includes Interstate highways as well as other roadways. Not all NHS roadways are part of the state highway system.

“Maintenance Levels of Service” (MLOS) is a qualitative measure describing operational conditions on the roadway. Overall, Maintenance Levels of Service is a combined grade for nine maintenance program areas. For snow and ice control, the LOS B level includes maintaining high levels of mobility as much as possible, and proactive avalanche control.

“Operations Levels of Service” (OLOS) is a qualitative measure describing operational conditions on the state highway system that is utilized to demonstrate travel-time reliability on the roadway. This measure is calculated during AM and PM weekday peak periods, then aggregated and reported monthly to track year-to-date performance. Operations Levels of Service are travel-time multipliers equated to a grading system of A through F. For example, an OLOS grade of C or better means that the time required to plan for a trip is 1.5 times the free-flow travel time, or less.

“Performance Measures” are the ways that direction towards a goal is measured.

“Performance Objectives” are the specific targets for a performance measure that an organization intends to meet to make progress towards a goal.

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“Revenue Service Miles” are the miles operated by transit vehicles when such vehicles are used for providing public transportation and there is an expectation of carrying passengers.

“Serious Injuries” are evident incapacitating injuries that prevent injured persons from walking, driving, or normally continuing the activities they were capable of performing before they were injured in traffic crashes.

“State of Good Repair” (SGR), as defined by the Federal Transit Administration (FTA), is the condition in which a capital asset is able to operate at a full level of performance.

“Telecommuting” is working at home or at an alternate location and communicating with the usual place of work using electronic or other means, instead of physically traveling to a more distant work site, as defined by the Transportation Research Board.

“Transit Economic Requirements Model” (TERM) is the FTA’s 5-point scale for subrecipients/transit providers to assess the condition of their transit facilities. A facility assessed below 3.0 is considered to be out of, or beyond, a state of good repair and should be prioritized for repair or replacement.

“Unlinked Passenger Trips” also referred to as ‘boardings,’ are a measurement of the number of passengers who board public transit vehicles. A passenger is counted each time they board a transit vehicle no matter how many vehicles they use from their origin to their destination.

“Vehicle Miles Traveled” (VMT) are a measurement of miles traveled by vehicles obtained by multiplying the Annual Average Daily Traffic (AADT) count by the length of the roadway segment.

“Vulnerable Users” are pedestrians and bicyclists.

“Zero-Emission Vehicles” are vehicles that produce zero or near-zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas under any possible operational modes or conditions.

V. POLICY

1. Policy. It shall be the policy of CDOT that the Statewide Transportation Plan and statewide performance objectives stated herein will guide distribution of financial resources to meet or make progress toward objectives in three goal areas: safety, asset management, and mobility. The Transportation Commission should direct financial resources toward achieving the safety objectives within the first 4 years of the planning horizon (2021-2024), the asset management objectives within the first 10 years (2021-2030), and the mobility objectives within the first 10 years (2021-2030). Projects should be selected to support the goals and objectives and will be included in the Statewide Transportation Improvement Program (STIP). These performance objectives will guide annual budget decisions. Prior to funding new initiatives, the Transportation Commission will direct funds toward achieving the objectives in each area while recognizing constraints on some funding sources.

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2. Goals. PD 14.0 goals guides the implementation of the multimodal Statewide Transportation Plan and the performance objectives that measure attainment of these goals. The goals are:

- SAFETY – The future of Colorado is zero deaths and serious injuries so all people using any transportation mode arrive at their destination safely.
- ASSET MANAGEMENT – Maintain a high-quality transportation network by working to maintain a state of good repair for all assets and a highly traversable road network.
- MOBILITY – Reduce travel time lost to congestion and improve connectivity across all modes with a focus on environmental impact, operations, and transportation choice statewide.

Goals for PD 14.0 and 2045 Statewide Transportation Plan are in alignment with and complement the national goals for surface transportation in the Fixing America’s Surface Transportation (FAST) Act of 2015.

3. Performance Measures and Objectives. Performance measures describe how CDOT will evaluate statewide success, and performance objectives establish statewide achievement levels that are used to direct investment decisions during the different planning horizons for each goal area. Within CDOT’s Annual Budget, the budget categories that fund programs within the goal areas are the following: Construction, Maintenance & Operations, Multimodal Programs, Sub-allocated Programs, and Other Programs. Explanations of how the objectives will be measured are listed below with the appropriate goals.

a) SAFETY:

The highway safety objectives are aligned with the objectives of the 2020-23 Colorado Strategic Transportation Safety Plan (STSP), an extensive and cooperative planning effort by a multidisciplinary partnership of public agencies, private sector organizations, and advocacy groups representing transportation and safety interests statewide. This collaborative and data-driven process identifies achievable highway safety objectives for the planning horizon of 2021-24. These objectives (with the exception of objectives related to employee safety) apply to *all* roads in the State.

(1) Highway Safety

MEASURES:

- Vehicle crash rate per 100 million vehicle miles traveled (VMT)
- Traffic fatality rate per 100 million vehicle miles traveled (VMT)
- Traffic serious injury rate per 100 million vehicle miles traveled (VMT)
- Traffic fatalities and serious injuries involving vulnerable users (pedestrians and bicyclists)

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OBJECTIVES:

- Reduce the rate of vehicle crashes per 100 million VMT by eight percent (8%) over the next four years from current levels.
- Reduce the rate of traffic-related fatalities per 100 million VMT by fifteen percent (15%) over the next four years from current levels.
- Reduce the rate of traffic-related serious injuries per 100 million VMT by fifteen percent (15%) over the next four years from current levels.
- Reduce traffic-related fatalities and serious injuries involving vulnerable users (pedestrians and bicyclists) by fifteen percent (15%) over the next four years from current levels.

ASPIRATIONAL OBJECTIVES:

- Reduce traffic-related fatalities and serious injuries to zero for all users of Colorado’s multimodal transportation system.

(2) Employee Safety

MEASURES:

- On-the-Job injuries
- Vehicle crashes involving CDOT Employees

OBJECTIVES:

- CDOT is committed to ensuring a safe and healthy work environment for all of its employees through its fundamental mission of “Excellence in Safety.” CDOT also is committed to reducing on-the-job injuries and vehicle incidents involving CDOT employees.

(3) Safety Goal Area Considerations

- The safety goal area and objectives are aligned with the Colorado Strategic Transportation Safety Plan (STSP). Additionally, CDOT and the Transportation Commission support implementation of the STSP Tier 1 strategies. (See Appendix C for explanation of the Tier 1 strategies.)
- In addition to the statewide (all roads) metrics, Staff will provide annually to the Transportation Commission additional highway safety data. Examples include:
 - Urban and rural safety data
 - Safety data on the state highway system
 - Safety data for freight transportation
- CDOT and the Transportation Commission provide the lead on transportation safety efforts in Colorado.

b) ASSET MANAGEMENT:

The asset management objectives for highway related assets are intended to be achieved or maintained over the first ten years of the planning horizon (2021-30). The

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objectives identified align with the Department’s Risk-Based Asset Management Plan, a federally-required plan that outlines risk-mitigation, identifies performance gaps, and lists a financial plan over the planning horizon. Additionally, the objectives related to highway asset management are used to help determine funding levels for each of the twelve assets within CDOT’s asset management program.

The majority of transit assets in Colorado are not owned, operated, or maintained by CDOT. Rather, CDOT passes through federal and state funds to assist subrecipients with transit asset acquisition, construction, and refurbishment projects. Thus, it is the Department’s responsibility to oversee subrecipients’ participation in the required planning and reporting processes, to guide the prioritization of pass-through funds to maintain and/or improve the state of good repair of transit assets, and to fulfill annual reporting and targeting requirements.

Performance measures and objectives for transit assets were established by the Federal Transit Administration (FTA) in its 2016 Transportation Asset Management (TAM) Rule and incorporated into the 2018 Group TAM Plan. As required, the Group TAM Plan covered a four-year planning horizon and will be updated no later than the fall of 2022. The TAM Rule also outlined annual reporting requirements about the state of good repair of transit assets and requires CDOT, as the Group TAM Plan sponsor, to set annual performance targets across several asset class types. See Appendix B for a more detailed discussion of this process.

The CDOT-owned Bustang and Bustang Outrider fleet vehicles (operated by subrecipients/contractors) are not subject to the TAM Rule reporting requirements but Staff will use the FTA performance measures for consistency in tracking and reporting.

(1) Highway Pavement

MEASURES:

- Pavement condition of the Interstate System
- Pavement condition of the National Highway System (NHS), excluding Interstates
- Pavement condition of the state highway system

OBJECTIVES:

- Achieve or maintain eighty percent (80%) high or moderate Drivability Life for Interstates based on condition standards and treatments set for traffic volume categories.
- Achieve or maintain eighty percent (80%) high or moderate Drivability Life for the National Highway System, excluding Interstates, based on condition standards and treatments set for traffic volume categories.
- Achieve or maintain eighty percent (80%) high or moderate Drivability Life for the state highway system based on condition standards and treatments set for traffic volume categories.

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(2) Bridges

MEASURES:

- Bridge deck area on the National Highway System in good condition
- Bridge deck area on the National Highway System in poor condition
- Bridge deck area on the state highway system in good condition
- Bridge deck area on the state highway system in poor condition
- Asset management program metrics related to bridge lead metrics, risk metrics, and freight movement metrics (See Appendix A for additional bridge metrics)

OBJECTIVES:

- Achieve or maintain the percent of National Highway System total bridge deck area in good condition at or above forty percent (40%).
- Achieve or maintain the percent of National Highway System total bridge deck area in poor condition below ten percent (10%).
- Achieve or maintain the percent of state highway system total bridge deck area in good condition at or above forty percent (40%).
- Achieve or maintain the percent of state highway system total bridge deck area in poor condition below ten percent (10%).
- Meet asset management program objectives related to bridge lead, risk and freight movement metrics (See Appendix A for additional bridge objectives).

(3) Maintenance

MEASURES:

- Overall Maintenance Levels of Service (MLOS) for the state highway system
- Level of Service (LOS) for snow and ice removal

OBJECTIVES:

- Achieve or maintain an overall MLOS B minus grade for the state highway system.
- Achieve or maintain a LOS B grade for snow and ice removal.

(4) Other Highway Assets

MEASURES:

- Asset management program metrics for other highway assets (See Appendix A for metrics for buildings, Intelligent Transportation Systems (ITS) equipment, fleet, culverts, geohazards, tunnels, traffic signals, walls, and rest areas)

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OBJECTIVES:

- Meet or maintain asset management program objectives related to other highway assets (See Appendix A for buildings, ITS equipment, fleet, culverts, Geohazards, tunnels, traffic signals, walls, and rest areas objectives).

(5) Transit Assets: Small Urban & Rural Agency Assets

MEASURES:

- Rolling Stock: Percentage of revenue vehicles within an asset class that have either met or exceeded their useful life benchmark (ULB).
- Facilities: Percentage of facilities within an asset class rated below a 3.0 on the FTA TERM 5-point scale.

OBJECTIVES:

- Achieve or maintain performance of rolling stock and facilities to less than or equal to the percent performance calculated by the FTA for report year 2019. See Table 2 in Appendix B.

(6) Transit Assets: Bustang & Bustang Outrider Assets

MEASURES:

- Rolling Stock: Percentage of revenue vehicles within an asset class that have either met or exceeded their useful life benchmark (ULB).

OBJECTIVES:

- Achieve or maintain performance in each asset class that have either met or exceeded their ULB at no more than ten percent (10%).

c) MOBILITY:

The mobility goal area is intended to be achieved in the planning horizon from 2021 to 2030. A portion of the objectives within the goal area are aligned with the Greenhouse Gas Pollution Reduction Roadmap, detailing early action steps the state can take toward meeting near-term greenhouse pollution reduction targets, and HB19-1261 – *Climate Action Plan to Reduce Pollution*, statutorily required goals to reduce 2050 greenhouse gas pollution by ninety percent (90%) from 2005 levels. Some objectives within the goal area help increase reliability of the state highway system and increase the use of multimodal travel statewide.

(1) Reliability and Congestion

MEASURES:

- Operations Levels of Service (OLOS)
- Incident Clearance Time
- Vehicle Miles Traveled (VMT) and Vehicle Miles Traveled per Capita

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OBJECTIVES:

- Achieve or maintain an Operations Levels of Service (OLOS) grade of C or better for eighty percent (80%) or greater of the state highway system.
- Achieve or maintain an annual average incident clearance time of twenty (20) minutes or less for highways covered by CDOT Safety Patrol and Heavy Tow vehicles.
- Manage congestion on our roads by reducing Vehicle Miles Traveled (VMT) and VMT per capita by ten percent (10%) on or before 2030, relative to current levels.

(2) Environmental Impact

MEASURES:

- Greenhouse gas (GHG) pollution from the transportation sector (in Carbon Dioxide Equivalents - CO₂e)
- Zero-emission vehicle (ZEV) registrations
- Percent and quantity of state transit fleet that are zero-emission vehicles
- Percent of state highway miles within a thirty-mile buffer of direct-current (DC) fast-charging stations
- Percent of Scenic and Historic Byways classified as electrified byways

OBJECTIVES:

- CDOT will work collaboratively with other state agencies and local partners to reduce statewide GHG pollution from the transportation sector by twenty-six percent (26%) by 2025, fifty percent (50%) by 2030, and ninety percent (90%) by 2050 relative to 2005 statewide GHG pollution levels.¹
- Collaborate with other state agencies to increase electric vehicle registrations to support a future fleet of at least nine-hundred forty thousand (940,000) light-duty zero-emission vehicles by 2030.²
- Work with other state departments, transit agencies, and electric utilities to meet the transit vehicle goals specified the state's 2020 Electric Vehicle Plan to convert the state transit fleet to one-hundred percent (100%) zero-emission vehicles by 2050, with an interim target of at least one-thousand (1,000) zero-emission vehicles by 2030.³
- Collaborate with other state agencies, local governments, and private companies to increase the percentage of total state highway miles within a thirty-mile travel buffer of direct-current (DC) fast-charging stations from forty percent (40%) in fiscal year 2020 to one-hundred percent (100%) by 2030.⁴
- Coordinate with other state agencies, the Colorado Scenic & Historic Byways Commission, local governments, and individual site hosts to increase the number of Colorado Scenic & Historic Byways classified as electrified byways from three (3) currently to twenty-six (26) by the end of fiscal year 2025.⁵

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OBJECTIVE NOTES:

1. CDOT will focus on the transportation greenhouse gas reduction elements of the Greenhouse Gas Pollution Reduction Roadmap, specifically vehicle electrification, VMT reduction, and the closer integration of greenhouse gas reduction measures and considerations in the planning, environmental, construction, and maintenance/operations elements of the project lifecycle. Other state agencies will simultaneously work to tackle issues related to the electricity generation, buildings, oil & gas, and agricultural sectors for a holistic statewide approach.
2. The Colorado Energy Office (CEO) will lead this effort in collaboration with CDOT, Colorado Department of Public Health and Environment (CDPHE), Colorado Department of Revenue (DOR), and other key stakeholder agencies while also coordinating with automakers, dealerships, utilities, nonprofit entities, and the general public to achieve this ambitious target by 2030. CDOT’s role is to support and amplify this work, not to lead it.
3. CDOT is uniquely positioned to provide unified leadership in the transit electrification space given its statewide perspective and access to state, federal, and Volkswagen Settlement grant funding. CDOT will work to educate transit agencies on their options, support their fleet transition planning, and offset some of the incremental costs of going zero-emission. However, agencies themselves will play the central role in adopting new vehicle options when and where they make sense for their organizations and their riders.
4. CEO will lead this effort to ensure that sufficient public charging infrastructure is available through a combination of public and private investments. The State of Colorado does not intend to own or operate its own charging sites (beyond those at public facilities) but can provide grant support to ensure coverage in areas of the state that are not yet economically advantageous for private companies to serve. CDOT provides support for this effort through mapping, modeling, and data analysis that helps to identify prime locations while also funding limited infrastructure buildout along scenic byways, state parks, and other key areas of the rural charging network.
5. CDOT will play a coordinating role between the CEO, the Colorado Tourism Office, and the Scenic & Historic Byways Commission to educate individual byway groups on the benefits and opportunities associated with electric vehicle charging infrastructure while directing them to existing state grant and utility incentive programs to help facilitate this emerging market.

(3) Multimodal Options

MEASURES:

- Percentage of Coloradans commuting to work with multimodal options, including telecommuting
- Bustang bus service ridership

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- Unlinked transit passenger trips for Colorado small urban and rural transit agencies

OBJECTIVES:

- Increase the percentage of Coloradans commuting to work using multimodal options, including those using telecommuting options, to thirty-five percent (35%) in 2030.
- Restore Bustang (I-25 and I-70 corridors) bus service ridership to pre-COVID-19 levels by the end of FY 2020-21 and grow it five percent (5%) per year thereafter. A pre-COVID-19 level is defined as June 2021 ridership being equivalent to June 2019 ridership, knowing that an equivalent annual number is not attainable while COVID-19 is currently affecting service. June 2019 ridership was 19,189 passengers for the month, with a FY 2018-19 total annual ridership of 238,000 riders.
- Increase unlinked passenger trips from small urban and rural transit agencies proportional to population growth levels from 2019 levels.

(4) Mobility Goal Area Considerations

- Staff will provide additional data for the mobility objectives when updates to PD 14.0 objectives are presented annually to the Transportation Commission. Examples include:
 - Operations Levels of Service (OLOS) grades in rural areas.
 - Operations Levels of Service (OLOS) grades in urban areas.
 - Operations Levels of Service (OLOS) grades for Colorado Freight Corridors.
- CDOT and the Transportation Commission will coordinate and collaborate with internal and external CDOT partners in efforts to achieve mobility goals in Colorado. Through this collaborative approach, CDOT will take actions to fulfill the goals outlined within the Administration’s Greenhouse Gas Pollution Reduction Roadmap.
- VMT, GHG pollution levels, EV adoption, and multimodal options objectives will be aligned with the goals outlined in the Administration’s Greenhouse Gas Pollution Reduction Roadmap and HB19-1261 (Climate Action Plan to Reduce Pollution).

VI. DOCUMENTS REFERENCED IN THIS POLICY DIRECTIVE

Appendix “A” CDOT Asset Management Metrics and Performance Targets

Appendix “B” CDOT Transit Asset Management

Appendix “C” Strategic Transportation Safety Plan (STSP) Tier 1 Strategies

[Administration’s Greenhouse Gas Pollution Reduction Roadmap](#)

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[CDOT’s Risk-Based Asset Management Plan](#)

[CDOT Transit Asset Management Group Plan](#)

[Colorado Strategic Transportation Safety Plan \(STSP\)](#)

[HB19-1261 \(Climate Action Plan to Reduce Pollution\)](#)

[Statewide Transportation Plan \(2045\)](#)

VII. IMPLEMENTATION PLAN

The Division of Transportation Development, with the Division of Accounting and Finance, the Division of Maintenance and Operations, and the Office of Innovative Mobility, and in collaboration with other CDOT Divisions and CDOT Regions, will implement this Policy Directive. The Transportation Commission will direct funds to budget categories to support accomplishment of the objectives. The Division of Transportation Development will report annually on performance of the transportation system to track progress toward objectives, before the submission of the Department’s annual budget. At a minimum, the Division of Transportation Development will review and update or reaffirm this Policy Directive with each Plan update cycle in collaboration with the Office of Policy and Government Relations, Division of Accounting and Finance, Division of Maintenance and Operations, Office of Innovative Mobility and other CDOT Divisions and CDOT Regions.

The Office of Policy and Government Relations shall post this Policy Directive on CDOT’s intranet as well as on public announcements.

VIII. REVIEW DATE

This directive shall be reviewed on or before December 2022.

SECRETARY, TRANSPORTATION COMMISSION

Date of Approval

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**Appendix “A”
CDOT Asset Management Metrics and Performance Targets**

Asset	Objective	Objective Target	2019 Performance
Pavement	Achieve or maintain 80% high or moderate Drivability Life for Interstates based on condition standards and treatments set for traffic volume categories	80%	88.3%
	Achieve or maintain 80% high or moderate Drivability Life for the National Highway System, excluding Interstates, based on condition standards and treatments set for traffic volume categories	80%	84.0%
	Achieve or maintain 80% high or moderate Drivability Life for the state highway system based on condition standards and treatments set for traffic volume categories	80%	80.4%
Bridge Asset Condition	Achieve or maintain the percent of National Highway System total bridge deck area in good condition at or above 40%	40%	46.4%
	Achieve or maintain the percent of National Highway System total bridge deck area in poor condition below 10%	10%	6.1%
	Achieve or maintain the percent of state highway system total bridge deck area in good condition at or above 40%	40%	46.4%
	Achieve or maintain the percent of state highway system total bridge deck area in poor condition below 10%	10%	6.3%
Bridge Lead, Risk, and Freight Metrics	Percentage of expansion joints in fair, poor, or severe condition (by length) on CDOT-owned bridges	26% or less	37.6%
	Percentage of CDOT-owned bridge deck area that is unsealed or otherwise unprotected	35% or less	36.8%
	Percentage of CDOT-owned bridges over waterways that are scour critical	5.0%	6.2%
	Percentage of bridge crossings over Interstates, U.S. Routes and Colorado state highways with a vertical clearance less than the statutory maximum vehicle height of 14 feet-6 inches	1.0%	2.1%
	Percentage of bridge crossings over Interstates, U.S. Routes and Colorado state highways with a vertical clearance less than the minimum design requirement of 16 feet-6 inches	18.0%	20.3%
	Percentage of CDOT-owned bridges with a load restriction	0.9%	2.2%
MLOS	Achieve or maintain an overall MLOS B minus grade for the state highway system	B-	B
	Achieve or maintain a LOS B grade for snow and ice removal	B	B
Buildings	Achieve or maintain an average statewide letter grade for CDOT-owned buildings at or above 85% C or better	85%	80%
ITS	Maintain or decrease the average percent useful life of ITS equipment at or below 90%	90%	82%
Fleet	Maintain or decrease the average percent useful life of CDOT fleet vehicles at or below 75%	75%	69%
Culverts	Maintain or decrease the percent of culverts in poor condition (have a culvert rating of 4 or less) at or below 5%	5%	5.2%
Geohazards	Achieve or maintain the percent of geohazard segments at or above risk grade B at or above 85%	85%	77%
Tunnels	Achieve or maintain the percent of network tunnel length with all elements in equal or better condition that 2.5 weighted condition index at or above 75%	75%	91%
Traffic Signals	Maintain or decrease the percent of signal infrastructure in severe condition at or below 2%	2%	7%
Walls	Maintain or decrease the percent of CDOT-owned walls, by square foot, in poor condition (have a rating of 4 or less) at or below 2.5%	2.5%	4.2%
Rest Areas	Achieve or maintain an average statewide letter grade for CDOT rest areas at or above 90% C or better	90%	61%

Subject	Number
Policy Guiding Statewide Plan Goals and Objectives	14.0

Appendix “B” CDOT Transit Asset Management

The Federal Transit Administration’s (FTA) October 1, 2016 Transit Asset Management (TAM) Rule established new asset management planning and reporting requirements for 49 U.S.C. Chapter 53 funding recipients and subrecipients that own, operate, or manage capital assets in the provision of public transportation. The TAM Rule requires transit providers to develop a TAM Plan to prioritize and guide investments in transit assets to keep the transit system in a State of Good Repair (SGR), and requires Departments of Transportation (DOTs) to sponsor a Group Plan for all Tier II transit providers (those without fixed-guideway and/or with less than 100 vehicles operating during peak service) who wish to participate. The Colorado DOT Transit Asset Management Group Plan (Group TAM Plan) was completed in the Fall of 2018 and covered a four-year planning horizon. The Group TAM Plan included a capital asset inventory of over \$500 million and a prioritized project list of vehicle, equipment, and facilities projects of over \$118 million through 2022.

The TAM Rule also outlined annual reporting and targeting requirements about the SGR of transit assets. It requires transit providers to report to FTA the number and type of active assets in each asset class every year. Once reporting is finalized, FTA calculates the percentage performance for the report year¹ and then CDOT, as the Group TAM Plan sponsor, sets realistic and achievable performance targets for each asset class for the next report year.

All active transit assets are required to be reported to FTA, regardless of the original funding source. There are 24 possible rolling stock asset class vehicle types, though the small urban and rural fleet currently includes just 11 of those vehicle types. It has been CDOT practice for nearly four years to prioritize pass-through funds to vehicle/project types that fall within six rolling stock asset classes, to vehicles with Americans with Disabilities Act (ADA) accessibility. In 2019, those vehicles made up around 93% of the rolling stock fleet, as emphasized in Table 1.

For the purposes of annual reporting, FTA defined equipment as non-revenue vehicles, narrowing down the types of reportable equipment to just two asset classes. Because of the practice of prioritizing pass-through funds towards ADA-compliant vehicles, CDOT has not awarded any pass-through funds for that type of equipment project in the last several years. As such, for PD 14.0 reporting purposes, Staff will focus rolling stock performance reporting on the six rolling stock asset classes—over-the-road-bus, bus, cutaway, minivan, aerial tramway, and van—and the two facilities asset classes, since those are the asset categories and classes that are impacted by CDOT’s pass-through funds. Additional asset classes may be added in future PD-14 revisions if Staff believes that to be beneficial or necessary. Table 2 shows the performance measured by FTA in report year 2019², which Staff will use as baseline performance for annual reporting to the Transportation Commission.

¹ The FTA report year for CDOT and the small urban and rural agencies runs January 1 through December 31.

² State FY 2019-20

**Appendix “B”
CDOT Transit Asset Management**

Table 1. Small Urban & Rural Transit Assets: Number of Assets per Asset Class, Report Year 2019		
Asset Category	Asset Class	# of Assets
Rolling Stock	AB – Articulated Bus	1
	AO – Automobile	48
	BR – Over-the-road Bus	41
	BU – Bus	444
	CU – Cutaway	317
	MV – Minivan	142
	OR – Other	24
	SB – School Bus	1
	SV – Sports Utility Vehicle	10
	TR – Aerial Tramway	68
	VN – Van	144
Equipment	Automobiles	43
	Trucks and Other Rubber Tire Vehicles	41
Facilities	Passenger/Parking Facilities	43
	Administrative/Maintenance Facilities	46

Table 2. Small Urban & Rural Transit Assets: Percent of Asset Class Beyond SGR, Report Year 2019		
Asset Category	Asset Class	Performance (%)
Rolling Stock	BR – Over-the-road Bus	17.95%
	BU – Bus	24.81%
	CU – Cutaway	24.61%
	MV – Minivan	23.85%
	TR – Aerial Tramway	83.82%
	VN – Van	13.79%
Facilities	Passenger/Parking Facilities	2.78%
	Administrative/Maintenance Facilities	8.89%

Subject	Number
Policy Guiding Statewide Plan Goals and Objectives	14.0

Appendix “C”
Strategic Transportation Safety Plan (STSP) Tier 1 Strategies (Continued)

- I. Prioritize Safety in Transportation Planning, Facility Design, and Project Selection**
Review policies and processes of roadway planning, design, and project selection to determine what role safety plays in decision-making. This includes updating existing planning and design guidelines and standards to integrate enhanced safety measures. *CDOT and CSP will lead implementation with support from CDPHE.*
- J. Educate Decision-Makers on the Effectiveness of Occupant Protection Laws**
Research and document the benefits of occupant protection laws, such as seatbelt use, helmet use, and restrictions on personal device use. Using available data, this strategy aims to educate legislators, commissioners, and other decision-makers on the benefits of such laws to aid in the development of new policies. *CDOT will lead implementation with support from CDPHE, CSP, and CDOR.*
- K. Increase Requirements for New and Renewal Driver Licensing**
Expand the graduated driver licensing (GDL) system to increase education and practice requirements for new drivers to obtain a license, and develop appropriate testing requirements to verify driver competency with increased age. *CDOR will lead implementation with support from CSP and CDPHE.*
- L. Establish a Framework for Streamlining Data Management**
Improve data gathering, reporting, storage, linkage, processing, analyses, and dissemination throughout the state for traffic records databases following the FHWA measures of quality: timeliness, accuracy, completeness, uniformity, integration, and accessibility. The databases will provide more uniform confidence in crash mitigation for agencies at both the state and local level. *CDOT will lead the implementation with support from Statewide Traffic Records Advisory Committee (STRAC), CSP, and CDPHE, as directed by the newly formed leadership group that will be a liaison between the Executive Directors of the partner agencies and STRAC.*
- M. Prioritize and Promote Proven Safety Toolbox Strategies**
Educate state and local traffic engineers on existing, known, and, effective safety toolbox strategies in transportation facility design, construction, and operation. This strategy will promote inclusion of proven strategies in design practices and development of Local Road Safety Plans by local agencies. *CDOT will lead implementation with support from CSP.*
- N. Implement Systemic Infrastructure Safety Improvement Strategies**
Build on existing safety implementation projects and programs. Identify and implement the most effective wide-scale systemic safety mitigation strategies in conjunction with implementing hot-spot improvement projects. Examples of these strategies include, but are not limited to, rumble strips, median barriers, and fully protected left-turn phasing. *CDOT will lead implementation with support from local city and county transportation departments as well as CDOT Region Traffic Engineers.*
- O. Increase Education On and Implementation of Data-Driven and Automated Enforcement**
Increase implementation of data-driven enforcement for speeding and red-light running at high-crash locations. Educate decision-makers on the effectiveness of automated enforcement as a safety enhancement rather than as a revenue generator. *CDOT will lead implementation with support CSP.*



COLORADO

Department of Transportation

Policy Directive 14: Proposed Goal Areas, Objectives, & Targets

November 18, 2020



Policy Directive 14.0 Overall Summary

Contents of Policy Directive

In total, there are eight sections (and three appendices) in Policy Directive 14.0. The sections outlined *below* contain the performance metrics and objectives:

V. Policy

- Goal Areas & Goal Statements
- Performance Measures & Objectives
- Key Considerations & Alignment with Other Documents

Appendices

- "A" Asset Management Objectives for all 12 assets
- "B" Transit Asset Management Objectives

COLORADO DEPARTMENT OF TRANSPORTATION		<input checked="" type="checkbox"/> POLICY DIRECTIVE <input type="checkbox"/> PROCEDURAL DIRECTIVE
Subject		
Policy Guiding Statewide Plan Goals & Objectives		14.0
Effective	Supersedes	Originating Office
11/19/2020	10/19/2017	Division of Transportation Development

I. PURPOSE

This Policy Directive provides performance goals and objectives to measure the success of the Department's efforts to improve in the following key areas:

- Safety,
- Asset Management, and
- Mobility.

The performance objectives and targets in these goal areas will help implement the Statewide Transportation Plan by focusing transportation investments in the Statewide Transportation Improvement Program (STIP) and the annual budget. The Transportation Commission will revise this Policy Directive, as needed, with updated performance objectives or targets.

II. AUTHORITY

- 23 United States Code (U.S.C.) 134, 135 and 450, PL 114-94 ("Fixing America's Surface Transportation Act" or "FAST Act")
- 23 Code of Federal Regulations (C.F.R.) Part 420 (Planning & Research Program Administration), 450 (Planning Assistance and Standards), and 490 (National Performance Management Measures)
- § 43-1-106(8)(a), C.R.S. Transportation Commission
- § 43-1-1103, C.R.S. Transportation planning
- Transportation Commission Rules Governing the Statewide Transportation Planning Process and Transportation Planning Regions (2 CCR 601-22; effective September 14, 2018)

III. APPLICABILITY

This Policy Directive applies to all CDOT Divisions and Regions.

IV. DEFINITIONS

"Carbon Dioxide Equivalents (CO₂e)" means the number of metric tons of CO₂ emissions with the same global warming potential as one metric ton of another greenhouse gas, and are calculated using Equation A-1 in 40 C.F.R. Part 98.

"Colorado DOT Transit Asset Management Group Plan" (Group TAM Plan) is the CDOT-sponsored asset management plan, required by the FTA's Transit Asset Management (TAM) Rule, for 49 U.S.C. Chapter 53 funding recipients and subrecipients that own, operate, or



PD-14 Goal Areas and Objectives

Alignment with Budget/Planning Structure & Objective Topics

Safety

The future of Colorado is zero deaths and serious injuries so all people using any transportation mode arrive at their destination safely.

Objective Areas

- Vehicle Crashes
- Fatalities
- Serious Injuries
- Vulnerable Users
- Employee Safety

Asset Management

Maintain a high-quality transportation network by working to maintain a state of good repair for all assets and a highly traversable road network.

- Bridges
- Pavement Condition
- Maintenance Levels of Service
- Transit Assets
- Other Assets

Mobility

Reduce travel time lost to congestion and improve connectivity across all modes with a focus on environmental impact, operations, and transportation choice statewide.

- Reliability & Congestion
- Environmental Impact
- Multimodal Options



Safety Goal Area Objectives & Targets

SAFETY - *The future of Colorado is zero deaths and serious injuries so all people using any transportation mode arrive at their destination safely.*

SAFETY OBJECTIVES & TARGETS

Reduce the vehicle crash rate per 100 million vehicle miles traveled by 8% over the next four years.

Reduce rate of traffic-related **fatalities** per 100 million vehicle miles traveled by 15% over the next four years, with an aspirational goal of zero.

Reduce the rate of traffic-related **serious injuries** per 100 million vehicle miles traveled by 15% over the next four years, with an aspirational goal of zero.

Reduce the number of traffic fatalities and serious injuries involving **vulnerable users** (pedestrians and bicyclists) by 15% over the next four years, with an aspirational goal of zero.

The Colorado Department of Transportation is committed to ensure a safe and healthy work environment for all of its employees through its fundamental mission of 'Excellence in Safety'. The Department is also committed to reducing on the job injuries and vehicle incidents involving CDOT Employees.

Safety goal area, objectives, and targets will align with Colorado Strategic Transportation Safety Plan (STSP).



Asset Management Goal Area Objectives & Targets

ASSET MANAGEMENT - Maintain a high-quality transportation network by working to maintain a state of good repair for all assets and a highly traversable road network.

PAVEMENT CONDITION OBJECTIVES & TARGETS

Achieve or maintain eighty percent (80%) high or moderate **Drivability Life** for Interstates based on condition standards and treatments set for traffic volume categories.

Achieve or maintain eighty percent (80%) high or moderate **Drivability Life** for the National Highway System, excluding Interstates, based on condition standards and treatments set for traffic volume categories.

Achieve or maintain eighty percent (80%) high or moderate **Drivability Life** for the state highway system based on condition standards and treatments set for traffic volume categories.

BRIDGE CONDITION OBJECTIVES & TARGETS

Achieve or maintain the percent of National Highway System total bridge deck area in good condition at or above forty percent (40%).

Achieve or maintain the percent of National Highway System total bridge deck area in poor condition below ten percent (10%).

Achieve or maintain the percent of state highway system total bridge deck area in good condition at or above forty percent (40%).

Achieve or maintain the percent of state highway system total bridge deck area in poor condition below ten percent (10%).

The full list of Asset Management Objectives is available in Policy Directive 14.0, Appendices A & B.



Mobility Goal Area Objectives & Targets

MOBILITY - Reduce travel time lost to congestion and improve connectivity across all modes with a focus on environmental impact, operations, and transportation choice statewide.

RELIABILITY & CONGESTION OBJECTIVES & TARGETS

Achieve an annual Incident Clearance Time of 20 minutes or less for highways covered by Safety Patrol and Heavy Tow Vehicles.

Achieve an Operations Levels of Service (OLOS) grade C or better for 80% of the state highway system.

Manage congestion on our roads by reducing both Vehicle Miles Traveled (VMT) and VMT per capita by 10 percent by 2030, relative to current levels.

MULTIMODAL OPTIONS OBJECTIVES & TARGETS

Increase the percent of Coloradans commuting to work using multimodal options, including those using telecommuting options, to 35% in 2030.

Restore **Bustang (I-25 & I-70) bus service ridership** to pre-COVID-19 levels by end of FY 2020-21 and grow it by 5% per year thereafter. Pre-COVID-19 level is defined as June 2021 ridership being equivalent to June 2019 ridership (19,189 passengers), with FY 2018-19 total annual ridership of 238,000.

Increase **unlinked passenger trips** from small urban and rural transit agencies proportional to population growth from 2019 levels.



Mobility Goal Area Objectives & Targets

MOBILITY - Reduce travel time lost to congestion and improve connectivity across all modes with a focus on environmental impact, operations, and transportation choice statewide.

ENVIRONMENTAL IMPACT OBJECTIVES & TARGETS

CDOT will work collaboratively with other state agencies and local partners to **reduce statewide GHG pollution** from the transportation sector by 26% by 2025, 50% by 2030, and 90% by 2050 relative to 2005 statewide GHG pollution levels.¹

Collaborate with other state agencies to **increase electric vehicle registrations** to support a future fleet of at least 940,000 light-duty EVs by 2030.²

Work with other state departments, transit agencies, and electric utilities to meet the transit vehicle goals specified in its 2020 Electric Vehicle Plan to **convert the state transit fleet to 100% ZEV** by 2050, with an interim target of at least 1,000 ZEV by 2030.³

Collaborate with other state agencies, local governments, and private companies to **increase the percentage of total state highway miles within a 30-mile travel buffer of DC fast-charging stations** from 40 percent in fiscal year 2020 to 100 percent by 2030.⁴

Coordinate with other state agencies, the Colorado Scenic & Historic Byways Commission, local governments, and individual site hosts to **increase the number of Colorado Scenic & Historic Byways classified as electrified byways** from 3 today to 26 by the end of fiscal year 2025.⁵



Next Steps

- Proposed Objectives for Commission Review - *August through September 2020*
- Adoption of Revised PD-14 with new objectives and goal areas - *November 2020*
- Report objectives results for 2020 - *Summer 2021*
- Evaluation of PD-14 Goals and Objectives and Refresh of PD (if necessary) - *August 2021*
- Consideration of PD-14 objective performance in preparation for FY 2023 annual budget process - *Fall 2021*





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Questions?

