



CDOT Region 2 Shoulder Bypass Lane Town of Blue River Preliminary Design

COLORADO Department of Transportation



Design Philosophy

GOAL: Create a win-win situation with a design that provides the Town of Blue River with safety and operational benefits year-round, yet still achieves CDOT's goal to allow an area for trucks and passenger vehicles to chain-up when the Chain Law is in effect, providing enough space to meet the demand we see in the corridor.





What is a Shoulder Bypass Lane?

A shoulder bypass lane delivers several benefits:

- Functions as a type of auxiliary lane that maintains the southbound through traffic movement on CO 9 when vehicles stop and wait for on-coming traffic to clear before turning left on Whispering Pines
- During Chain Law events, the additional shoulder width allows a safe area for southbound vehicles to mount tire traction devices before starting the climb over Hoosier pass.
- Additional shoulder width provides a safe area for Summit Stage to stop and drop off passengers.
- Pavement improvements are kept within the existing Right of Way

Example of a shoulder bypass lane on CO 86 in Douglas County.



- The roadway pavement will be widened by approximately 21 feet and will shift the centerline alignment of CO 9 to the east by approximately 6 feet, keeping all pavement within the existing right of way
- Existing utility easements will be maintained on both sides of CO 9 with only minor grading changes
- Existing historic drainage improvements will be maintained
- Advance warning and changeable signs will be used to inform drivers when the shoulder bypass lane is being used for chain-up operations



Proposed Shoulder Bypass Lane Typical Section



NO lighting improvements are being designed or installed by this project



- Landscaping/tree planting on private property would be accomplished outside the permanent easement on private property under a temporary construction easement with the permission of the property owner. Landscape maintenance to be addressed as design proceeds.
- Landscaping will include native seeding and stabilizing all disturbed areas within the project limits



- Shoulder bypass lanes are infrequently used by CDOT, but are considered when larger-scale roadway widening is not an option
- Signing directly adjacent to the shoulder bypass lane must be able to change when the Chain Law is in effect. This will be accomplished using a changeable sign panel.
- Permanent advance warning signs will be placed along CO 9 that are consistent with chain stations statewide, to be activated only when the Chain Law is in effect
- The shoulder bypass lane will provide an additional 3-foot buffer between the bypass lane and the southbound through lane of CO 9 for additional safety
- Variable speed limit signs will be installed to automatically reduce the posted speed limit when the Chain Law is in effect





Signing and Striping Plan





Signing and Striping





Signing and Striping





Advance Signing Plan































Enhanced Safety

- Allowing southbound traffic to safely get around left turning vehicles reduces the potential for rear-end crashes
- Left turning traffic can safely wait for the suitable gaps in on-coming traffic to make the left turn, reducing the potential for approach turn crashes
- During Chain Law events, the bypass lane becomes a safe area for trucks and passenger vehicles to chain up
- 3-foot buffer separation between the shoulder bypass lane and the through traffic lane provide additional safety



Enhanced Safety



- Reducing the posted speed from 50 MPH to 40 MPH while vehicles are using the shoulder as a chain-up station
- Extending the standard spacing for variable speed limit signs from ½ mile to a full mile in each direction from the bypass lane creates a longer reduced speed zone during Chain Law events
- Placement of radar feedback signs to increase compliance with posted speed limits
- A dedicated chain up area and enhanced fines for violators improves voluntary compliance with the Chain Law reducing the risk of traffic impacts resulting from "spun out" trucks and crashes on Hoosier Pass





CDOT's Environmental Ethics Statement: CDOT will support and enhance efforts to protect the environment and quality of life for all of Colorado's citizens in the pursuit of providing the best transportation systems and services possible.

This project will be cleared using a NEPA Categorical Exclusion process, which considers the following:

Cultural Resources	Environmental Policy & Biological Resources	Water Quality	Landscape Architecture
HistoryPaleontologyArcheologyAir	 Wildlife Wetlands Sustainability Sections 4f and 6f 	 Wet Weather Monitoring Public Outreach and Education Storm Water Management Plan (SWMP)/Pollution Prevention during Construction 	 Visual Resources Landscape Design Roadside Resiliency/Pollinator Program

For more information on the NEPA Categorical Exclusion process, visit https://www.codot.gov/programs/environmental/nepa-program



Contact Information

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Questions