

**SH 7**

*Cherryvale Rd. to 75th St.*

**State Highway 7 (Cherryvale Road to 75th Street)  
Environmental Assessment and  
Draft Section 4(f) Evaluation  
Boulder County, Colorado**



**U.S. Department of Transportation  
Federal Highway Administration**



**Colorado Department of Transportation**

**May 2008**

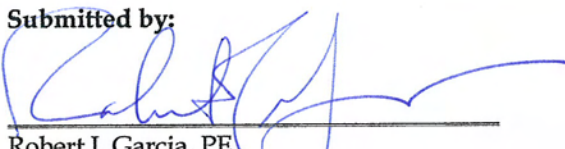
CDOT No. STA 0072-013  
State Highway 7  
(Cherryvale Road to 75<sup>th</sup> Street)  
Environmental Assessment and  
Draft Section 4(f) Evaluation  
Boulder County, Colorado

Submitted Pursuant to  
42 USC 4332(2)(c), 49 USC 303, 23 USC 138

by the  
US DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

and  
THE COLORADO DEPARTMENT OF TRANSPORTATION

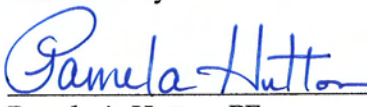
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5/27/08

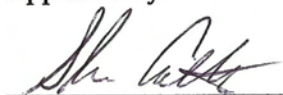
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### **Environmental Assessment Availability**

Copies of the Environmental Assessment and 4(f) Evaluation are available in hard copy format for public review at the locations listed below and/or by request from CDOT Region 4. Plans of the Preferred Alternative are located in Appendix B:

- CDOT Headquarters  
Public Information Office  
4201 East Arkansas Avenue  
Denver, CO 80222  
(303) 757-9228
  
  - CDOT Region 4 Headquarters  
1420 2<sup>nd</sup> Street  
Greeley, CO 80634  
(970) 350-2170
  
  - CDOT Region 4, Boulder Residency  
1050 Lee Hill Road  
Boulder, CO 80302  
(303) 546-5660
  
  - CDOT Environmental Programs Branch  
4201 East Arkansas Avenue  
Denver, CO 80222  
(303) 757-9259
  
  - FHWA Colorado Division Office  
12300 W. Dakota Ave., Suite 180  
Lakewood, CO 80228  
(720) 963-3000
  
  - Boulder County Transportation Dept.  
Courthouse Annex  
2045 13th Street  
Boulder, CO 80302  
(303) 441-3900
  
  - Boulder Public Library  
1000 Canyon Blvd.  
Boulder, CO. 80302  
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## List of Acronyms

|                       |  |
|-----------------------|--|
| <b>AASHTO</b>         | American Association of State Highway and Transportation Officials |
| <b>ACHP</b>           | Advisory Council on Historic Preservation                          |
| <b>ADA</b>            | Americans with Disabilities Act                                    |
| <b>AMI</b>            | Area Median Income   |
| <b>APCD</b>           | Air Pollution Control Division                                     |
| <b>APE</b>            | Area of Potential Effect   |
| <b>ASTM</b>           | American Society for Testing and Materials                         |
| <b>BMP</b>            | Best Management Practice   |
| <b>BNSF</b>           | Burlington Northern Santa Fe                                       |
| <b>BVCP</b>           | Boulder Valley Comprehensive Plan                                  |
| <b>BVSD</b>           | Boulder Valley School District                                     |
| <b>CBP</b>            | Colorado Butterfly Plant   |
| <b>CDBG</b>           | Community Development Block Grant                                  |
| <b>CDOT</b>           | Colorado Department of Transportation                              |
| <b>CDOW</b>           | Colorado Division of Wildlife                                      |
| <b>CDPHE</b>          | Colorado Department of Public Health and Environment               |
| <b>CDPS</b>           | Colorado Discharge Permit System                                   |
| <b>CNHP</b>           | Colorado Natural Heritage Program                                  |
| <b>CO</b>             | Carbon Monoxide  |
| <b>CO<sub>2</sub></b> | Carbon Dioxide   |
| <b>CWA</b>            | Clean Water Act  |
| <b>dB(A)</b>          | A-weighted decibels  |
| <b>DE</b>             | Diesel Exhaust   |
| <b>DOLA</b>           | Colorado Department of Local Affairs                               |
| <b>DOT</b>            | US Department of Transportation                                    |
| <b>DRCOG</b>          | Denver Regional Council of Governments                             |
| <b>EA</b>             | Environmental Assessment   |
| <b>EIS</b>            | Environmental Impact Statement                                     |
| <b>EMS</b>            | Emergency Medical Services   |
| <b>EPA</b>            | US Environmental Protection Agency                                 |
| <b>ERM</b>            | EnviroClean Rocky Mountain   |
| <b>ESA</b>            | Endangered Species Act   |
| <b>FEMA</b>           | Federal Emergency Management Agency                                |
| <b>FHWA</b>           | Federal Highway Administration                                     |
| <b>FIRM</b>           | Flood Insurance Rate Map   |
| <b>GIS</b>            | Geographic Information System                                      |

|                         |  |
|-------------------------|--|
| <b>HAP</b>              | Hazardous Air Pollutants   |
| <b>HCM</b>              | Highway Capacity Manual  |
| <b>HUD</b>              | US Department of Housing and Urban Development   |
| <b>IRIS</b>             | Integrated Risk Information System   |
| <b>Leq</b>              | The energy equivalent of steady-state sound level, over a period of time (usually an hour) |
| <b>LOS</b>              | Level of Service   |
| <b>LUST</b>             | Leaking Underground Storage Tank   |
| <b>MBTA</b>             | Migratory Bird Treaty Act  |
| <b>MIS</b>              | Major Investment Study   |
| <b>MP</b>               | Milepost   |
| <b>MS4</b>              | Municipal Separate Storm Sewer System  |
| <b>MSAT</b>             | Mobile Source Air Toxics   |
| <b>NAAQS</b>            | National Ambient Air Quality Standards   |
| <b>NAC</b>              | Noise Abatement Criteria   |
| <b>NAICS</b>            | North American Industry Classification System  |
| <b>NDIS</b>             | Natural Diversity Information source   |
| <b>NEPA</b>             | National Environmental Policy Act  |
| <b>NLEF</b>             | National Low Emission Vehicle  |
| <b>NO<sub>2</sub></b>   | Nitrogen Oxide   |
| <b>NOX</b>              | Nitrogen Oxides  |
| <b>NPDES</b>            | National Pollutant Discharge Elimination System  |
| <b>NRCS</b>             | Natural Resources Conservation Service   |
| <b>NRHP</b>             | National Register of Historic Places   |
| <b>O<sub>3</sub></b>    | Ozone  |
| <b>OAHP</b>             | Office of Archaeology and Historic Preservation  |
| <b>OMB</b>              | Office of Management and Budget  |
| <b>Pb</b>               | Lead   |
| <b>PM<sub>10</sub></b>  | Particulate Matter Less Than 10 Microns in Diameter  |
| <b>PM<sub>2.5</sub></b> | Particulate Matter Less Than 2.5 Microns in Diameter                                       |
| <b>PMJM</b>             | Preble's Meadow Jumping Mouse  |
| <b>R-A</b>              | Regional Highway   |
| <b>RFG</b>              | Reformulated Gasoline  |
| <b>RTD</b>              | Regional Transportation District   |
| <b>RTP</b>              | Regional Transportation Plan   |
| <b>RTTF</b>             | Regional Transportation Task Force   |
| <b>SH</b>               | State Highway  |
| <b>SHPO</b>             | State Historic Preservation Officer  |
| <b>SIP</b>              | State Implementation Plan  |

|                       |   |
|-----------------------|---|
| <b>SO<sub>2</sub></b> | Sulfur Dioxide                                    |
| <b>SRHP</b>           | State Register of Historic Places                 |
| <b>STIP</b>           | Colorado State Transportation Improvement Program |
| <b>SWMP</b>           | Stormwater Management Plan                        |
| <b>TCM</b>            | Transportation Control Measure                    |
| <b>TIP</b>            | Transportation Improvement Plan                   |
| <b>TSS</b>            | Total Suspended Solids                            |
| <b>US</b>             | United States                                     |
| <b>ULTO</b>           | Ute Ladies'-Tresses Orchid                        |
| <b>UNCC</b>           | Utility Notification Center of Colorado           |
| <b>USACE</b>          | US Army Corps of Engineers                        |
| <b>USFWS</b>          | US Fish and Wildlife Service                      |
| <b>USGS</b>           | US Geological Survey                              |
| <b>UST</b>            | Underground Storage Tank                          |
| <b>VMT</b>            | Vehicle miles traveled                            |
| <b>VOC</b>            | Volatile Organic Compounds                        |
| <b>VoTec</b>          | Vocational and Technical Education Center         |
| <b>VPD</b>            | Vehicles Per Day                                  |
| <b>WQCD</b>           | Water Quality Control Division                    |
| <b>WQCV</b>           | Water Quality Capture Volume                      |

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## **Executive Summary**

This Environmental Assessment (EA) evaluates the environmental, social, and economic impact of the proposed action for State Highway (SH) 7 between Cherryvale Road and 75<sup>th</sup> Street (approximately 2.2 miles). For this study, the lead federal agency is the Federal Highway Administration (FHWA) and the Colorado Department of Transportation (CDOT) is the applicant.

This EA evaluates the impacts of the Preferred Alternative. This is compared against the No-Action Alternative.

This Executive Summary highlights the major findings of this EA related to:

- Purpose and Need
- Alternatives Evaluated
- Environmental Consequences
- Section 4(f)
- Public Participation

### **Purpose and Need**

The primary purposes of improvements to SH 7 (Cherryvale Road to 75<sup>th</sup> Street) are to reduce congestion and enhance safety. The improvements are also intended to improve mobility for multiple modes of transportation. Refer to **Figure 1-1** and **Figure 1-2** for project location and study area.

Weekday daily traffic volumes on SH 7 range from near 19,300 vehicles per day (vpd) at the east end of the project near 75<sup>th</sup> Street to 25,000 vpd at the west end near Cherryvale Road. Traffic volumes are projected to increase in the future due to population and employment growth in the surrounding communities. The daily traffic forecast of 23,100 in 2030 is anticipated to result in two to three congested hours in each peak period. As traffic volumes increase, the two-lane corridor segments are anticipated to experience increasing congestion and will approach level of service (LOS) F during the peak hours. (Six levels of service are defined from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS E is generally considered to correspond to maximum capacity.) See **Figure 1-3**.

Traffic accidents related to substandard roadway conditions are occurring within the study area. Approach grades to Hoover Hill, in the middle of the project (adjacent to Legion Park) are steep and the sight distance over the hill is substandard. Existing paved shoulders are two to three feet in width. The roadway section provides little

room to pass an incapacitated vehicle or to easily maneuver past a turning vehicle. Right- and left-turn lanes are substandard or non-existent.

Existing conditions in the study area reduce the desirability for multiple modes of transportation. Buses utilize the same lanes as general traffic, and congestion along the corridor creates a reduced level of service for transit operation. Transit stops are on gravel shoulders or dirt areas adjacent to the highway. Sidewalk facilities exist along the north side of SH 7 between Cherryvale Road and 63<sup>rd</sup> Street. Within the study area, there are no other sidewalks, pedestrian facilities, or bike lanes.

### **Alternatives Evaluated**

A wide range of alternatives was developed and evaluated during the EA process. The public and local, state and federal agencies were involved during the alternatives development and evaluation. Alternatives evaluated included a wide range of roadway build options, multimodal enhancements, intersection enhancements, and congestion management options. Alternatives were also evaluated for the Burlington Northern Santa Fe (BNSF) railroad alignment that crosses SH 7, because the Preferred Alternative requires the reconstruction of the BNSF railroad bridge over SH 7.

The reasonable alternatives evaluated in detail are the No-Action Alternative and Alternative 2 - the Preferred Alternative. The No-Action Alternative includes intersection improvements at the 75<sup>th</sup> Street intersection, including four through lanes of traffic along SH 7 with on-street bike lanes and sidewalks. In addition, the City of Boulder has funding for intersection improvements for transit operations along SH 7 from Cherryvale Road to east of 63<sup>rd</sup> Street. The US 36 Environmental Impact Statement (EIS) is evaluating highway and Bus Rapid Transit transportation improvements between Denver and Boulder. In addition, the Regional Transportation District (RTD) is evaluating commuter rail along the BNSF railroad corridor as part of a separate NEPA study. This corridor crosses SH 7. To support the commuter rail service, a potential park-n-Ride is being considered in the vicinity of the SH 7 and 63<sup>rd</sup> Street intersection.

The Preferred Alternative (Alternative 2) provides two through lanes in each direction on the east and west ends of the project. The two through lanes in each direction narrow to one through lane in each direction between Westview Drive and east of the railroad bridge. The proposed improvements feature curb and gutter with storm sewer for the west portion of the project and shoulders and roadside ditches for the east portion of the project.

The Preferred Alternative includes right- and left-turn lanes, improved shoulders, and improved sight distance. It also includes a sidewalk on the south side of SH 7 from 63<sup>rd</sup> Street to Westview Drive and a multi-use path on the north side for the entire length of the alignments which would replace the existing sidewalk facility between Cherryvale

Road and 63<sup>rd</sup> Street. Additionally, bicycle facilities are included by the use of the ten-foot shoulder or five-foot on-street bicycle lanes.

The BNSF railroad alternative evaluated in this document has a temporary offset alignment to the east of the existing railroad alignment during the reconstruction of the railroad bridge over SH 7.

### **Environmental Consequences**

- The mobile home park at the southwest corner of SH 7 and 63<sup>rd</sup> Street has a high proportion of low-income and minority residents. The Preferred Alternative would require the removal of one mobile home and relocate SH 7 55 feet closer to the mobile homes.
- The Preferred Alternative would require the relocation of three business structures and one residence. It would require approximately 6.6 acres of right-of-way from 27 owners within the study area.
- Traffic congestion would improve with the Preferred Alternative and would result in 2030 intersection LOS B for the 63<sup>rd</sup> Street and BVSD signalized intersections. This compares to LOS D in 2030 for the No-Action Alternative. The Preferred Alternative results in a road segment LOS E (between BVSD and 75<sup>th</sup> Street) in the 2030 forecast. (Six levels of service are defined from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS E is generally considered to correspond to maximum capacity.)
- The Preferred Alternative would improve safety by enhancing vertical geometry, improving drainage, improving sight distance, providing clear zones for vehicle recovery, providing required auxiliary lanes, consolidating and controlling access and providing refuge for stalled vehicles.
- The Preferred Alternative would result in two residences experiencing noise levels above the Noise Abatement Criteria (NAC) in 2030.
- The Preferred Alternative would result in a permanent loss of approximately 0.309 acre of non-jurisdictional wetlands and 0.013 acre of jurisdictional wetlands.
- There would be no direct impacts to any federally listed wildlife or plant species.
- The addition of impervious area and a storm sewer system would cause storm flows to reach the outfalls more rapidly and would result in larger quantities of sediment and pollutants to enter the surrounding surface waters.



- Impacts to two historic properties would occur. Twenty feet of the Cottonwood Ditch #2 would be removed and placed in a subsurface siphon pipe. The widening of SH 7 would require the removal of approximately 25 to 35 feet of existing track of the BNSF railroad on the north side of SH 7 that would ultimately be on the newly constructed railroad bridge.
- One of the right-of-way acquisitions is a noted hazardous materials concern.
- At Legion Park, a resource protected by Section 4(f) of the DOT Act, impacts consist of grading the side slope in the area where the road is lowered and removing approximately ten trees. This would require a temporary easement. The Preferred Alternative would consolidate two adjacent park accesses into one access.
- Short- and long-term changes to the existing visual corridor would occur.
- The Preferred Alternative would result in conversion of approximately 5.0 acres of Prime farmland.
- The Preferred Alternative would require the relocation of existing utilities.

Mitigation measures include:

- Following the Municipal Separate Storm Sewer System (MS4) requirements for water quality.
- Purchasing credits at one of the three wetland mitigation banks within the primary service area for wetlands impacted by the Preferred Alternative.
- Following CDOT procedures concerning hazardous waste issues to determine project mitigation requirements.

#### **Section 4(f)**

Eight Section 4(f) properties will be impacted by the project: Cottonwood Ditch #2, the BNSF railroad, the Enterprise Ditch, Legion Park, the Butler/Smith Property, the Gas Station and Small House, the Harburg House, Barn and Gazebo and the DeBacker-Tenenbaum House. Cottonwood Ditch #2 and the BNSF railroad will be adversely effected and result in a Section 4(f) use. The impacts to the Enterprise Ditch are considered *de minimis* impacts and do not result in an adverse effect. The impacts to Legion Park, the Butler/Smith Property, the Gas Station and Small House, the Harburg House, Barn and Gazebo and the DeBacker-Tenenbaum House are considered *de minimis* impacts since they are considered temporary in nature.

### **Public Participation**

Prior to this EA, two public open houses were held in July 2001, and February 2002, as part of the SH 7 Cherryvale Road to North 75<sup>th</sup> Street Improvement Assessment Study. A total of 135 people attended these two meetings. A total of 87 written comments and two e-mails were received.

Two public meetings were held during the course of the development of the EA, on June 17 and November 9, 2004. These meetings were advertised through postcards to adjacent property owners, advertisements in the *Boulder Daily Camera*, and signs placed at the major intersections. There were 71 people in attendance at the June meeting and 82 people in attendance at the November meeting. Meetings were also held with local, state and federal agencies throughout the EA process.

Once this EA has been completed and signed, a 30-day public and agency comment period will begin. During this period a public hearing will be held to explain the proposed action to agencies and the public, and to obtain their input. Any comments received during the comment period will be addressed in the Decision Document.

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