

**Denver Regional Council of Governments**

# **2035 Metro Vision Regional Transportation Plan**

## **Appendix 1**

### **Denver Region Multimodal Corridor Visions**

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# 1. Introduction

## **A. Overview of Appendix**

This appendix provides detailed maps and corridor vision plan sheets describing the growth, development, and transportation visions for the 35 key multimodal corridors of the region.

Nine subarea exhibit maps (Exhibits 1- 9 at the end of this appendix) portray the 2035 Metro Vision transportation facilities integrated with growth and development elements such as the urban growth boundary/area and the location of urban centers.

Individual corridor vision plans for 15 multimodal major regional arterial corridors and 20 multimodal freeway/tollway corridors are presented in Section 4. Figure 1 depicts those corridors. Table 1 defines those corridors. The data for each corridor was originally included in the 2035 Metro Vision Regional Transportation Plan (2035 MVRTP) adopted in 2007. The data has been revised to be consistent with recent plan updates adopted in February 2011.

As shown in Table 1, four “more-generic” visions for other principal arterials and state highways in the region are presented in Section 5.

Strategies common to each of the corridors are not repeated on each corridor vision, but are presented separately in Section 2.

All major projects referred to in this appendix, if they are to be implemented with state or federal funds, must complete an environmental evaluation process (NEPA) and associated studies to determine specific design attributes and locations for improvements. Likewise, new interchange proposals on the state highway system must go through the CDOT 1601 Interchange Approval Process before they can be built.

Alignments and attributes of transportation facilities described in the corridor visions are only estimates at this time. The corridor visions will be updated periodically to be consistent with recently completed NEPA studies and amendments to regional facilities in the 2035 Metro Vision Regional Transportation Plan.

## **B. Implementation Priorities**

CDOT has requested that implementation priorities be identified for each of the corridor visions for approximately 10 years. There is limited funding available in the Fiscally Constrained 2035 RTP to accomplish most of the visions. This is particularly the case for capital projects through 2020. Each DRCOG TIP process is competitive in that DRCOG does not use the Fiscally Constrained 2035 RTP to set or lock in specific projects in advance (so submittals compete with each other). CDOT funding processes tend to either be management system driven (e.g., surface treatment) or competitive. RTD’s transit development program has limited funds available, and is competitive for those funds too. Identifying specific implementation priorities for 2020 is

imprecise. That said, DRCOG has identified capital projects it anticipates will be completed by 2020 for air quality modeling purposes (again, this is an estimate, not a commitment), identified certain improvements for the current TIP, and anticipated and recognized certain strategies as priorities for the short term. ***These are noted in italic type in the corridor visions, both individually and in common strategies.*** It is not expected that all these noted projects can or will be completed in the next 10 years.



**Table 1**  
**DRCOG 2035 MVRTP Key Multimodal Corridor Visions**

Corridor ID	Name	Limits	Other State Highways in Corridor
<b>Major Regional Arterials:</b>			
A-1	120th Ave (US-287/SH-128)	Wadsworth Blvd (SH 121) to E-470	
A-2	Arapahoe Rd (SH-88)	University Blvd to Buckley Rd	
A-3	Buckley Rd/Airport Blvd	Arapahoe Rd to 40th Ave/Pena Blvd	
A-4	Colorado/Vasquez (SH-2/6/85)	Hampden Ave to I-76	SH-265
A-5	East Colfax Ave (US-40)	I-25 to I-70	SH-30 (6th Ave)
A-6	Hampden Ave (US-285/SH-30)	Sheridan Blvd to Parker Road	
A-7	Parker Road (SH-83)	SH-86 to Havana St	
A-8	SH-157/SH-119	US-36 to vicinity of I-25	Ken Pratt Blvd
A-9	University Blvd (SH-177)	C-470 to Hampden Ave	
A-10	US-6	SH-58 to I-70	
A-11	US-85 North	I-76 to Weld County Road 10	SH-22, SH-2 (Sable), SH-44
A-12	US-85 (Santa Fe Drive)	Castle Rock to I-25/Denver	SH-75
A-13	US-285	Park County Line to SH-8	
A-14	US-287	US-36 to Larimer County Line	SH-42
A-15	Wadsworth Blvd (SH-121)	C-470 to US-36	SH-121 to Waterton, SH-95, SH-391
<b>Freeways/Tollways:</b>			
F-1	C-470	US-6 to I-25	
F-2	E-470 (toll)	I-25 (S) to I-25 (N)	SH-30 (6th Ave to Quincy)
F-3	I-25 South	El Paso County Line to C-470	
F-4	I-25 Southeast	C-470 to Broadway	
F-5	I-25 Central	Broadway to I-70	
F-6	I-25 North	I-70 to Weld Co. Road #38	SH-53
F-7	I-70 Mountains	Eisenhower Tunnel to C-470	SH/US-40 (frontage and Berthoud)
F-8	I-70 West	C-470 to I-25	
F-9	I-70 East	I-25 to E-470	
F-10	I-70 Plains	E-470 to Elbert County Line	SH/US-36
F-11	I-76	I-70 to Weld County Road 10	SH-2, SH-224
F-12	I-225	I-25 to I-70	
F-13	I-270	I-25 to I-70	SH-35
F-14	Northwest Parkway (toll)	96th St. to I-25	
F-15	Pena Blvd	I-70 to DIA	
F-16	SH-58	US-6 to I-70	
F-17	US-6	I-70 to I-25	US-40, SH-26
F-18	US-36	I-25 to Baseline Rd	
F-19	US-285	SH-8 to Sheridan Blvd	SH-8
F-20	Northwest/Jefferson Parkway(toll)	US-6 to Northwest Parkway	SH-72, SH-93, SH-128
<b>Other State Highways:</b>			
O-1	Mountain Roads		
O-2	Rural Plains Roads		
O-3	Urban Roads		
O-4	Suburban Transition Roads		

## **2. Common Strategies for All Corridor Visions in DRCOG Region**

The strategies listed below may be considered in nearly every corridor. They are listed in this section to avoid repetition in each relevant Corridor Vision.

### **A. Overall**

- *Coordinate land use and transportation decisions and implementation;*
- *Support urban centers and transit-oriented developments (TODs);*
- *Complete projects in an environmentally responsible manner;*
- *Maintain the existing infrastructure including pavement, subsurface, bridges, traffic management devices and facilities, communications networks, park-n-Ride lots, stations, rail lines, multipurpose trails (bike paths), and sidewalks;*
- *Implement safety improvements as stand-alone projects or within larger projects; and*
- *Conduct a regional vulnerability assessment to identify critical transportation system infrastructure; determine/deploy critical infrastructure protection as required.*

### **B. Transit Facilities and Services**

- *Implement security and safety features at transit stations, park-n-Ride lots, and on vehicles;*
- *Make modifications to bus routes per changing ridership demands;*
- *Implement timed-transfer points throughout the system;*
- *Provide pedestrian and bicycle connections between transit facilities and adjacent neighborhoods and developments;*
- *Provide bicycle accommodations at transit facilities and on transit vehicles;*
- *Construct transit-oriented developments (TODs) around appropriate stations and park-n-Ride lots;*
- *Increase RTD access-a-Ride ADA transit service as the fixed-route service expands; and*
- *Increase other specialized transit services to elderly, disabled, low-income, and rural residents.*

### **C. Travel Demand Management**

- *Baseline assumption: A regional program will facilitate and promote use of alternative travel modes, carpooling, teleworking, alternative work schedules, and efficient site development designs in all corridors.*

### **D. Physical Improvements as Part of Roadway Projects**

- *Construct improvements to current design standards;*
- *Improve ramp terminal and arterial intersections to serve future volumes (turn lanes);*

- *Provide acceleration/deceleration lanes in appropriate locations;*
- *Construct standard paved shoulders on freeways and non-urban arterials;*
- *Provide appropriate curb/gutter/sidewalk section on urban arterials;*
- *Provide appropriate space and/or treatments for on-street bicyclists;*
- *Provide applicable crosswalk markings and devices at locations with pedestrian activity;*
- *Provide bus lanes and pull-outs in appropriate locations;*
- *Install traffic signals as warranted; and*
- *Control arterial access per assigned state highway access category.*

## **E. System Management Strategies for Relevant Corridor**

### **Baseline Assumptions:**

- *Link together all traffic and transit operations centers and emergency management centers to support employment of an advanced transportation management system (ATMS) that includes incident management, regional traffic control, and multimodal coordination. Implement/use effective, reliable, and cost-efficient communications infrastructure to support both connectivity between operations centers and connectivity to field equipment from operations centers;*
- *Operate and maintain (CDOT) a regional advanced traveler information system (ATIS/511 service). Implement/use effective, reliable, and cost-efficient technology to both collect traveler information data and support traveler information dissemination to drivers in vehicles and travelers on transit.*
- *Develop, implement, and maintain a unified regional incident management plan.*

### **Freeways:**

- *Meter on-ramps to congested freeways; integrate ramp meters with adjacent arterial signals;*
- *Implement/operate full network surveillance; feed to regional ATIS;*
- *Operate incident detection where surveillance is deployed;*
- *Implement/use dynamic message signs (DMSs) to disseminate real-time traffic information, including real-time park-n-Ride parking occupancy and transit parking alternatives; from regional ATIS; and*
- *Prepare, implement, and maintain corridor incident management plans consistent with unified regional incident management plan; operate traffic-responsive signal control along key incident diversion routes.*

### **Tollways:**

- *Maintain/upgrade electronic toll collection;*
- *Implement/operate probe surveillance using toll tags; feed to regional ATIS;*
- *Implement/operate select (not full) surveillance; feed to regional ATIS;*

- Implement/use DMSs to disseminate real-time traffic information, including real-time park-n-Ride parking occupancy and transit parking alternatives; from regional ATIS;
- *Prepare, implement, and maintain corridor incident management plan consistent with unified regional incident management plans*; operate traffic-responsive signal control along key incident diversion routes; and
- *Operate tollway service patrol.*

**Arterials:**

- *Install signals as warrants are met, consistent with CDOT or city/county access management requirements or access management plans*;
- *Operate existing and new traffic signals using signal system(s) for surface street control*;
- *Update traffic signal timing/coordination plans on a regular basis*;
- Consider application of advanced signal control strategies where needed; *and*,
- *Implement/operate transit signal priority selectively at signalized intersections adjacent to park-n-Ride lots/stations, to favor key bus transfer points, and along heavily-used bus transit corridors.*

**Transit:**

- *Implement/operate transit security features at park-n-Ride lots/stations and on transit vehicles*;
- *Disseminate real-time transit vehicle arrival/departure information to transit patrons at park-n-Ride lots/stations and key transfer points and feed to regional ATIS and other available means*; and,
- Compile real-time parking space occupancy at park-n-Rides; feed to regional ATIS.

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### 3. List of Definitions in Corridor Visions

#### A. Corridor Congestion Measures –Table 1 (typically)

- **2006/Corridor.** Corridor measures for 2006 average weekday unless otherwise indicated (incidents).
- **2006/Region.** Measures based on entire regional roadway system. All reflect 2006 average weekday statistics unless otherwise indicated (incidents). All reflect averages except delay, which is the regional daily total for an average weekday in 2006.
- **2035 Corridor.** Corridor measures for 2035 based on forecasts (prepared in 2007).
- In text, **congestion** is described as ‘*very high, high, above average, average, below average, low, or none (no congestion)*’, based on comparison of value to regional value.

Source: DRCOG Congestion Management Process (CMP)

#### B. Existing Urbanization and Future 2035 UGB Projections - Table 2 (typically)

##### **Urban Development Type** (as of August 19, 2009)

- a. Residential subdivisions or groupings of 10 or more residential parcels with an average residential lot size **of less than 1 acre.**
- b. Commercial and industrial subdivisions.
- c. Commercial activity on isolated parcels, not within platted subdivisions, with more than 50 employees. Example: large agricultural-related sales or manufacturing operations in outlying areas.
- d. Includes enclaves of semi-urban and other development, smaller than 80 acres in total area that are surrounded by urban development. This includes rights-of-way, schools, and other tracts of land that are within separate filings, or not within a platted subdivision.
- e. Includes all of the area within a platted subdivision (that has been classified as urban), including rights-of way and utility easements, regardless of size, and parks, schools, protected open space and other undevelopable land, less than 160 acres (per individual parcel or tract). Does not include open space and other types of undevelopable land larger than 160 acres.
- f. Excludes enclaves of urban development smaller than 10 acres in total area that are surrounded by non-urban development.
- g. The determination of development type is based on an evaluation of each individual subdivision filing. (Note, however, that the application of provisioned, above, will generally result in a uniform classification over an entire multiple-filing subdivision.)

**Urban Growth Boundary (UGB).** Defines the area within which urban development is intended to occur, and beyond which urban development is not intended to occur.

**Urban Growth Area (UGA Communities).** A community that elects not to define an urban growth boundary establishing specifically where future development will occur. Instead, UGA communities

simply track the amount of development occurring within their jurisdiction to ensure that it does not exceed their individual growth allocation. UGA communities in the DRCOG region are Adams County, Arvada, Aurora, Castle Rock, Douglas County, Longmont, and Thornton. For further information on DRCOG’s policy for communities using an Urban Growth Area rather than an Urban Growth Boundary and other information on Urban Growth Boundaries, see *Metro Vision 2035—Growth and Development Supplement*.

**Approximate UGB for UGA Communities.** Similar to UGB, area allocated to certain local governments for urban development but not completely committed (platted) for urban development.

### **C. Urban Centers**

Concentrated urban areas more dense and mixed-in-use than surrounding areas; served by transit (rapid transit or bus); pedestrian- and bicycle-friendly; with employment, housing, and services nearby.

- **Mixed-use Center.** A type of urban center with high-intensity, pedestrian-oriented, mixed-use locations providing a range of retail, business, civic, and residential opportunities.
- **Activity Center.** A type of urban center, focused mostly on employment.
- **Regional Corridor.** Large, linear urban centers adjacent to major transportation corridors.

### **D. Environmental Justice Thresholds for Traffic Analysis Zones**

- **“Minority-concentrated”.** Having a percentage of minorities higher than the regional average of 28 percent. (2000 Census statistics).
- **“Low-income concentrated”.** Having an average per capita income of at or below \$15,000 per year. (2000 Census statistics)

### **E. Flood Hazard Areas**

- **FEMA Flood Zone A.** “Special Flood Hazard Areas” (SFHA), subject to inundation by the 100-year flood.
- **FEMA Flood Zone AE.** SFHA’s subject to inundation by 100-year flood determined in Flood Insurance Study.

### **F. Colorado State Access Code Highway Categories**

**F-W (Interstate System, Freeway Facilities)** – This category is appropriate for use on highways that have the capacity for high speed and relatively high traffic volumes over medium and long

distances in an efficient and safe manner. They provide for interstate, interregional, intraregional, intercity, and, in larger urban areas, intracity travel. Interstate freeways are typical of this category.

**E-X (Expressway, Major Bypass)** – This category is appropriate for use on highways that have the capacity for high speed and relatively high traffic volumes in an efficient and safe manner. They provide for interstate, interregional, intraregional, and intercity travel needs, and, to a lesser degree, some intracity travel needs. Direct access service to abutting land is subordinate to providing service to through traffic movements.

**R-A (Regional Highway – Rural)** – This category is appropriate for use on highways that have the capacity for medium to high speeds and relatively medium to high traffic volumes over medium and long distances in an efficient and safe manner. They provide for interregional, intraregional, and intercity travel needs. Direct access service to abutting land is subordinate to providing service to through traffic movements. This category is normally assigned to National Highway System routes, significant regional routes in rural areas, and other routes of regional or state significance.

**R-B (Rural Highway)** – This category is appropriate for use on highways that have the capacity for moderate to high travel speeds and low traffic volumes providing for local rural travel needs. Speed limits vary based on roadway design, location, and travel speeds. There is a reasonable balance between safety, direct access, and mobility needs within this category. This category may be assigned to low volume minor arterials, secondary collectors, and local highway sections that do not normally provide for significant regional, state, or interstate travel demands. These highways typically provide for rural transportation needs including farm to market and farm to farm, and may include high speed rural frontage roads.

**NR-A (Non-Rural Principal Highway)** – This category is appropriate for use on non-rural highways that have the capacity for medium to high speeds and provide for medium to high traffic volumes over medium and long distances in an efficient and safe manner. They provide for interregional, intraregional, intercity, and intracity travel needs in suburban and urban areas as well as serving as important major arterials in smaller cities and towns. Direct access service to abutting land is subordinate to providing service to through traffic movements. This category is normally assigned to National Highway System routes and other routes of regional or state significance.

**NR-B (Non-Rural Arterial)** – This category is appropriate for use on highways that have the capacity for moderate travel speeds and relatively moderate to high traffic volumes over medium and short travel distances providing for intercity, intracity, and intercommunity travel needs. These routes are generally not of regional, state, or national significance. This category is typically assigned within developed portions of cities and towns where there is established roadside development making the assignment of a higher functional category unrealistic. This category is also appropriate for short sections of regional highway passing through rural communities that may be located along routes of regional, state, and national significance where assignment to a higher category is unrealistic. While this category provides service to through traffic movements, it allows more direct access to occur.

**NR-C (Non-Rural Arterial)** –This category is appropriate for use on highways that have the capacity for low to moderate travel speeds and relatively moderate traffic volumes over medium and short travel distances providing for intercity, intracity, and intercommunity travel needs. These routes are not of regional, state, or national significance. This category is typically assigned where there is extensive established roadside development and street systems such as a ‘downtown’ area, making the assignment of a higher functional category unrealistic. This category provides a reasonable balance between direct access and mobility needs.

## **4. Individual Corridor Visions**

Following are the corridor visions for the 35 corridors listed in Table 1. The individual corridor visions present a vision statement, identify corridor goals/objectives, present a corridor context, discuss select environmental resources, and depict the strategies/projects that comprise the unconstrained vision necessary to influence and respond to future growth and development.

The corridors reflect a width that may include more than just the primary roadway in the title. They may include and reference closely parallel rapid transit lines, other state highways, pedestrian and bicycle facilities, freight facilities, and other significant features of the corridors. In the corridor context, corridor growth information is presented for a one-mile radius surrounding the primary roadway and the congestion information is presented for the primary roadway. Such information may be useful in defining the purpose and need for improvements. Major capacity and capital facilities are identified as well as unique management, operation, and transit service strategies and facilities. The transportation improvements and strategies described on the Corridor Vision Plan sheets will be used to help define future projects to be designed and constructed.

The corridor visions include a broad overview of selected environmental resources that could be impacted by any proposed transportation improvement. These environmental overviews are not intended to be a detailed discussion of specific environmental impacts—as this usually occurs in project development during the formal NEPA process—but are intended to introduce environmental considerations into the regional transportation planning process, and in so doing, more closely link the transportation planning and environmental processes.

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## **A-1. 120<sup>th</sup> Avenue (SH-128, US-287) Multimodal Corridor Vision: From SH-121 to E-470**

Relevant Studies: *120<sup>th</sup> Avenue Connection EA*—March 2005, *FONSI*—January 2006, EA Update—March 2008. Study Limits: SH-128/Wadsworth Parkway intersection to 120<sup>th</sup> Avenue/Teller Street intersection.

Website: <http://www.ci.broomfield.co.us/engineering/Transportation.shtml>

The transportation vision for the **120<sup>th</sup> Avenue Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. Bus service is provided along the corridor and will provide an important connection to the US-36 and North Metro tier 1 rail lines; and Brighton rail line and I-25 Bus/HOV lane in tier 2. Rocky Mountain Metropolitan Airport is located adjacent to the corridor (see Corridor Sub-Area Exhibit #2 and #8).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies; and
- Maintain or improve pavement to optimal condition.

### **Corridor Context**

The following statistics are reported for a 16.4-mile long corridor area encompassing 1.2 miles on both sides of 120<sup>th</sup> Avenue from SH-121 to E-470. The corridor is projected to experience moderate population and employment growth from 2005 to 2035. Projections indicate a population increase of 62 percent, a 98 percent increase in employment, and a 72 percent increase in households within the corridor. Travel demand is projected to increase 78 percent from 2005 to 2035. Congestion measures show the 120<sup>th</sup> Avenue corridor currently experiences an average level of congestion, which will grow substantially worse in 2035, as shown in the following table:

**Table 1. 120<sup>th</sup> Avenue Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.35	1.27	2.21
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	1-2	1	3
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	17%	18.5%	40%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	2,761	217,280	11,263
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	47	25.84	—

The 120<sup>th</sup> Avenue Connection Environmental Assessment also gives an overview of existing and future traffic conditions, including safety statistics, within its study area.

**Selected Environmental Resources:**

1. Land Use—Existing and Future

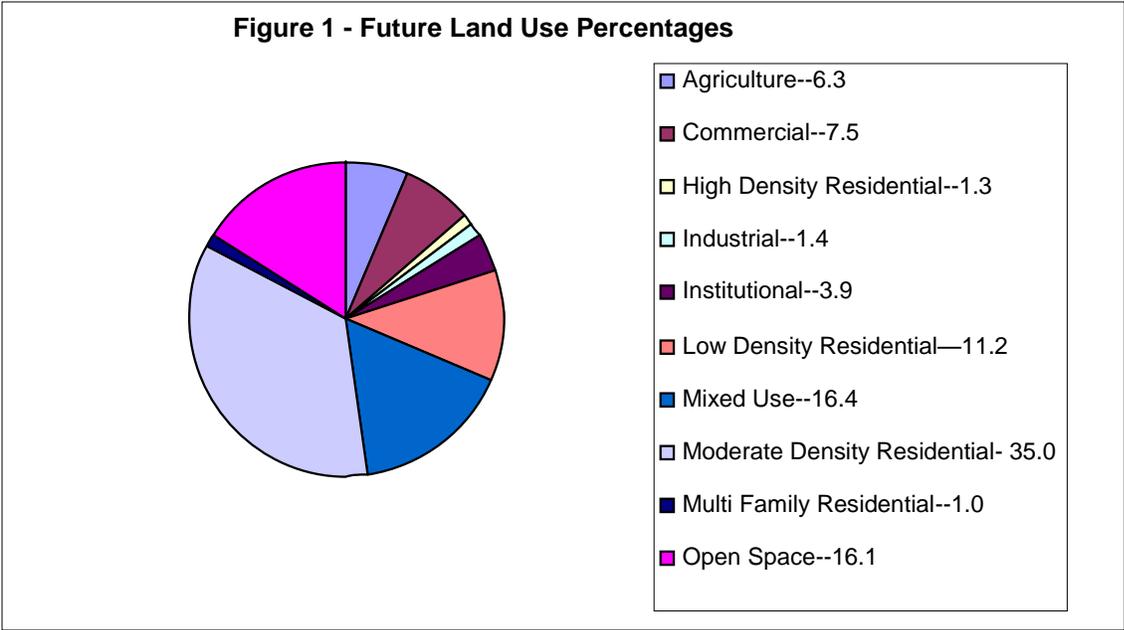
Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. 120<sup>th</sup> Avenue Corridor—Existing Urbanization and 2035 Future UGB Projections**

Development Type	Counties			Total
	Adams*	Broomfield	Jefferson	
Within UGB--Expected to be urbanized by 2035	13,120	4,184	501	17,805
-- <i>Currently Urbanized</i>	9,845	4,184	501	14,530
-- <i>Currently Non-Urbanized</i>	3,275	0	0	3,275
Not proposed to be urbanized by 2035 (outside UGB)	5,313	2	0	5,315
<b>Total Corridor Area</b>	<b>18,433</b>	<b>4,186</b>	<b>501</b>	<b>23,120</b>

\*Includes approximate UGB allocation of 1,311 acres to Adams County.

Figure 1 shows a diversity of future land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004. The corridor contains five urban centers: the Urban Transit Village and Original Broomfield TOD in Broomfield, the West 120<sup>th</sup> Avenue Activity Center in Westminster; the Eastlake mixed-use urban center in Thornton, and the Adams Crossing Activity Center in Brighton. The corridor adjoins the Westminster Promenade Activity Center in Westminster.



The *120<sup>th</sup> Avenue Connection Environmental Assessment* also gives an overview of both existing and future land use and potential impacts within its study area.

**2. Environmental Justice**

DRCOG’s assessment of Environmental Justice (EJ) areas, based on the 2000 Census, shows that of the 568 overall EJ zones in the DRCOG region, four fall within the corridor. The EJ zones in this corridor are all “minority-concentrated”. None of the zones in the corridor are considered “low-income concentrated”. The *120<sup>th</sup> Avenue Connection Environmental Assessment* also gives an overview of EJ areas and potential impacts within its study area.

**3. Parks and Recreation Areas**

Approximately 10.7 percent of the total acreage, or 2,475 out of 23,119 acres within the corridor, consists of parks and open space. Barr Lake State Park, a significant regional park, borders the eastern edge of the corridor. The *120<sup>th</sup> Avenue Connection Environmental Assessment* also gives an overview of existing parks and recreation areas and potential impacts within its study area.

**4. Hazardous Materials**

An analysis of sites contaminated with hazardous materials reveals some “hazardous waste sites” within the corridor. These consist predominantly of Underground Storage Tanks (USTs). The *120<sup>th</sup> Avenue Connection Environmental Assessment* also gives an overview of hazardous waste areas and potential impacts within its study area.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the Big Dry (west), South Platte Urban (central) and Beebe Draw (east) watersheds.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor. 68 transportation analysis zones (TAZs) include at least a portion of a flood hazard area.

The *120<sup>th</sup> Avenue Connection Environmental Assessment* also gives an overview of existing water resources and potential impacts within its study area.

## 6. Wildlife

The habitats of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern are within the corridor. These species include Preble's Meadow Jumping Mouse, the Whooping Crane, and the Bald Eagle. The *120<sup>th</sup> Avenue Connection Environmental Assessment* also gives an overview of wildlife habitat, including Threatened and Endangered Species, and potential impacts within its study area.

## 7. Historic and Archaeological Resources

There are no existing or potential historic districts within the corridor. The *120<sup>th</sup> Avenue Connection Environmental Assessment* also gives an overview of historic/archaeological districts and potential impacts within its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- *Widen 120<sup>th</sup> Avenue* between Vance Street/SH-128 extension in Broomfield and Huron Street, between Washington Street and the UPRR railroad tracks, *between Holly Street and Quebec Street*, and between US-85 and E-470;
- *Extend SH-128 as a new six-lane road between State Highway 121 and 120<sup>th</sup> Avenue. Construct new interchange access to US-36 from 120<sup>th</sup> Avenue. Grade separate with BNSF tracks;*
- *Reconstruct US 36 interchange at SH-121 (Wadsworth Interchange);*
- *Widen US-36, I-25, US-85, Wadsworth Boulevard, Quebec Street, and Buckley Road where they cross 120<sup>th</sup> Avenue; and*

- Construct a new grade-separated interchange at US-85; grade-separate from UP tracks.

### Transit

- *Construct or expand rapid transit stations near the crossing with the US-36, North Metro and Brighton rail lines and the US-36 and North I-25 bus HOV lanes. Provide associated feeder bus service.*

### Bicycle/Pedestrian

- Complete the 120<sup>th</sup> Avenue regional bicycle corridor; and
- Provide connections to the South Platte River Trail and the proposed Boulder/US-36 Bikeway.

### System Management

- *Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections as appropriate.* Implement appropriate transit operational improvements (e.g. queue jumps) at intersections near transit stations to accommodate feeder bus service and/or circulators;
- Upgrade signals at 120<sup>th</sup> Avenue railroad crossings and coordinate them with appropriate jurisdiction traffic signal systems;
- From Wadsworth Boulevard to Colorado Boulevard, operate corridor signals using traffic-responsive control; implement needed system detection;
- Implement full network surveillance from Colorado Boulevard to the west, and surveillance at key points to the east;
- From Wadsworth to I-25, implement/use DMSs to disseminate real-time traffic and route guidance (as US-36 incident diversion route) information, from regional ATIS;
- Develop Access Management Plan for new roadway section from Wadsworth to Vance, strictly regulating access from adjacent development;
- Adhere to NR-A access management category from Vance to I-25; consider access consolidation/driveway reconstruction and median treatment as feasible between Vance and Lowell; and
- Develop and/or adhere to Access Management Plans east of I-25, augmenting local requirements, to preserve major regional arterial function of road; consider access consolidation/driveway reconstruction and median treatment from I-25 to Colorado.

### Travel Demand Management

- *Use existing and new TMOs to facilitate subarea-specific TDM activities.*

### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along 120<sup>th</sup> Avenue with a potential for crash reductions.*

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## **A-2. Arapahoe Road (SH-88) Multimodal Corridor Vision: From University Boulevard to Buckley Road**

Relevant Studies: (1) (a) Arapahoe County *Arapahoe Road Corridor Study Environmental Overview* April 2007 (b) *Arapahoe Road Corridor Study—Alternatives Development and Analysis Report, June 2007* (c) *Final Corridor Study Report, November 2007* Study limits: I-25 to Parker Road.

Website: <http://arapahoecorridor.com>

The transportation vision is for the Arapahoe Road Corridor to serve as a multimodal major regional arterial facilitating longer distance regional trips. It will provide a balance of improved regional mobility, local accessibility, and enhanced safety, with minimal impact on neighborhoods and the environment. To the east of I-25, Arapahoe Road provides a critical east-west travel link since the closest parallel roadway to the north is over three miles away. Bus service is provided along the corridor and provides an important connection to the Southeast Corridor light rail line. Centennial Airport is located adjacent to Arapahoe Road and serves as an important reliever to Denver International Airport. (see Corridor Sub-Area Exhibit #4).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers, including transit, bicycle and pedestrian accommodations;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition.
- Avoid or minimize community and environmental impacts of improvements;
- Enhance corridor image and character through cohesive design; and,
- Accommodate and support previous and planned transportation and infrastructure improvements, and comprehensive land use and economic plans.

### **Corridor Context**

The following statistics are reported for a nine-mile long corridor area encompassing one mile on both sides of Arapahoe Road from University Boulevard to Buckley Road. The corridor is projected to experience population and employment growth from 2005 to 2035, especially east of I-25. Projections indicate a population increase of 19 percent, a 37 percent increase in employment, and a 28 percent increase in households within the corridor. Travel demand is projected to increase 30 percent from 2005 to 2035. The Arapahoe Road corridor currently

experiences an above average level of congestion, which will further deteriorate by 2035, as shown by the congestion measures in the following table:

**Table 1. Arapahoe Road Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.51	1.27	1.91
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	3	1	5
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	33%	18.5%	45%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	2,427	217,280	5,557
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	70	25	—

The *Arapahoe Road Corridor Alternatives Development and Analysis Report* provides a more detailed description of projected traffic and congestion within its study area.

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

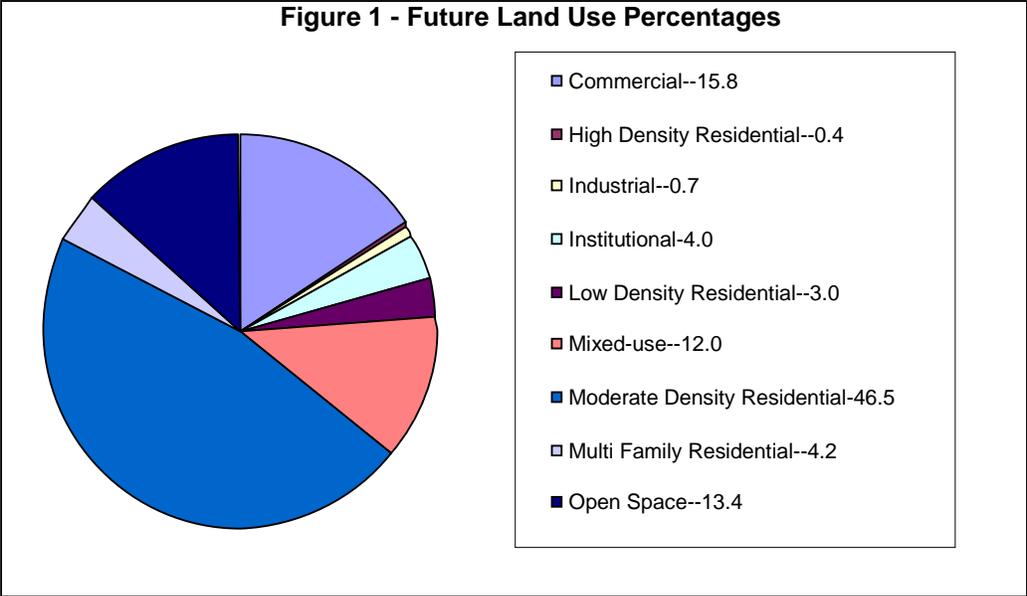
**Table 2. Arapahoe Road (SH-88) Corridor--Existing Urbanization and 2035 Future UGB Projections**

Development Type	County	Total
	Arapahoe*	
Within UGB--Expected to be urbanized by 2035 <i>--Currently Urbanized</i> <i>--Currently Non-Urbanized</i>	13,771	13,771
	13,459	13,459
	310	310
Not proposed to be urbanized by 2035 (outside UGB)	1,666	1,666
<b>Total Corridor Area</b>	<b>15,437</b>	<b>15,437</b>

\*Includes approximate UGB allocation of 212 acres to Aurora.

The area along Arapahoe Road between Quebec Street and Havana Street is identified as a regional corridor urban center.

Figure 1 shows predominately residential land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



2. Environmental Justice

DRCOG’s assessment of Environmental Justice (EJ) areas, based on the 2000 Census, shows that of the 568 overall EJ traffic analysis zones (TAZs) in the DRCOG region, seven fall within the corridor. The EJ zones in this corridor are all “minority-concentrated”. None of the zones in the corridor are “low-income concentrated”. The *Arapahoe Road Corridor Study Environmental Overview* provides a more detailed explanation and depiction of potentially-impacted EJ areas within its study area.

3. Parks and Recreation Areas

Approximately 7.8 percent of the total existing acreage, or 1,199 out of 15,438 acres within the corridor, consists of parks and open space. The *Arapahoe Road Corridor Study Environmental Overview* provides a more thorough description of potentially-impacted Section 4(f)/6(f) resources within its study area.

4. Hazardous Materials

An analysis of sites contaminated with hazardous materials reveals some hazardous waste sites within the corridor. These consist predominantly of Underground Storage Tanks (USTs), Leaking Underground Storage Tanks (LUSTs), and Small Quantity Generators (SQG’s). There are no National Priority List (NPL) sites. The *Arapahoe Road Corridor Study Environmental Overview* identifies specific sites with recognized or potential environmental contamination conditions and considers if there are any “fatal flaws” that would impact the alignment of potential improvements.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in Cherry Creek and South Platte Urban Watersheds.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, cross the corridor. 41 TAZs include at least a portion of a flood hazard area. The *Arapahoe Road Corridor Study Environmental Overview* provides a more detailed description of the potentially-impacted water resources within its study area.

## 6. Wildlife

The habitats of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern are within the corridor. These species include Preble's Meadow Jumping Mouse, the Whooping Crane, and the Black-tailed Prairie Dog. The *Arapahoe Road Corridor Study Environmental Overview* provides a more thorough description of affected wildlife habitats and appropriate mitigation and best management practices.

## 7. Historic and Archaeological Resources

No existing or potential historic and/or archaeological districts are within the corridor. The *Arapahoe Road Corridor Study Environmental Overview* identifies specific historic and archaeological resources in its broader study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Improve Arapahoe Road between I-25 and Potomac Street with grade separations and operational improvements;
- East of Parker Road, Arapahoe Road would be a 6-lane raised median roadway to Liverpool Street;
- Improve the partial-cloverleaf interchange at I-25;
- Widen Parker Road (SH-83), and Yosemite Street where they cross Arapahoe Road;
- Construct the following parallel and intersecting roadway improvements:
  - o Widen Broncos Parkway/Easter Avenue corridor to six lanes with added right turn lanes on Havana Street.
  - o Potential curvilinear realignment of Peoria/Easter and Havana/Easter intersections.

- Potential circulator roads, supplemental street network connections and associated access modifications.
- Reduce speed limit of the corridor to 40 miles per hour.
- Improve median sight distance.

### Transit

- Fixed route local service improvements to areas adjacent to Arapahoe Road;
- Potential call-in-ride expansion areas and service alignments

### Bicycle/Pedestrian

- Complete regional bicycle corridor components that cross Arapahoe Road, such as the missing link of the Cherry Creek Trail;
- Make improvements to the I-25 underpass to provide more comfortable facilities for walking and bicycling between the east and west sides of I-25; provide an east-west bicycle corridor connection parallel to Arapahoe Road east to Parker Road.

### System Management

- *Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes) at existing and future signalized intersection as appropriate.* Implement appropriate transit operational improvements (e.g. queue jumps) at intersections near rail stations to accommodate feeder bus service and/or circulators;
- Operate corridor signals using traffic-responsive signal control; implement needed system detection; and more frequent updates of signal timing and progression;
- Implement full network surveillance throughout entire corridor;
- Implement/use DMSs to disseminate real-time traffic and route guidance (as I-25 incident diversion route) information, from regional ATIS;
- Pursue access consolidation/driveway reconstruction/raised median implementation as feasible from University Boulevard to Quebec Street to regulate access to preserve major regional arterial function; and

### Travel Demand Management

- *Promote the use of alternative modes of travel through the South I-25 Urban Corridor Transportation Management Association;* and
- Utilize the full range of TDM strategies and options listed in the CDOT *TDM Toolkit* book.

### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along Arapahoe Road with a potential for crash reductions.*

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### A-3. Buckley Road/Airport Boulevard Multimodal Corridor Vision: From Arapahoe Road to Peña Boulevard

The transportation vision for the **Buckley Road/Airport Boulevard Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. Bus service is provided along the corridor and provides a connection to the East Corridor rapid transit line (tier 1) and the Alameda corridor (tier 2). Buckley Air Force Base is located adjacent to the corridor (see Corridor Sub-Area Exhibit #3 and #4).

#### Primary Goals/Objectives:

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region’s Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies; and
- Maintain or improve pavement to optimal condition.

#### Corridor Context

The following statistics are reported for a 12-mile long corridor area encompassing one mile on both sides of Buckley Road from Arapahoe Road to Pena Boulevard. The corridor is projected to experience population and employment growth from 2005 to 2035. Projections indicate a population increase of 28 percent, a 127 percent increase in employment, and a 36 percent increase in households within the corridor. Travel demand is projected to increase 64 percent in daily vehicle trips to and from the corridor from 2005 to 2035. As shown in the following table, congestion measures show the Buckley Road corridor currently experiences an average level of congestion, which will grow worse by 2035.

**Table 1. Buckley Road/Airport Boulevard Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.21	1.27	1.35
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	1	1	2
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	15%	18.5%	21%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	1,007	217,280	2,334
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	30	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

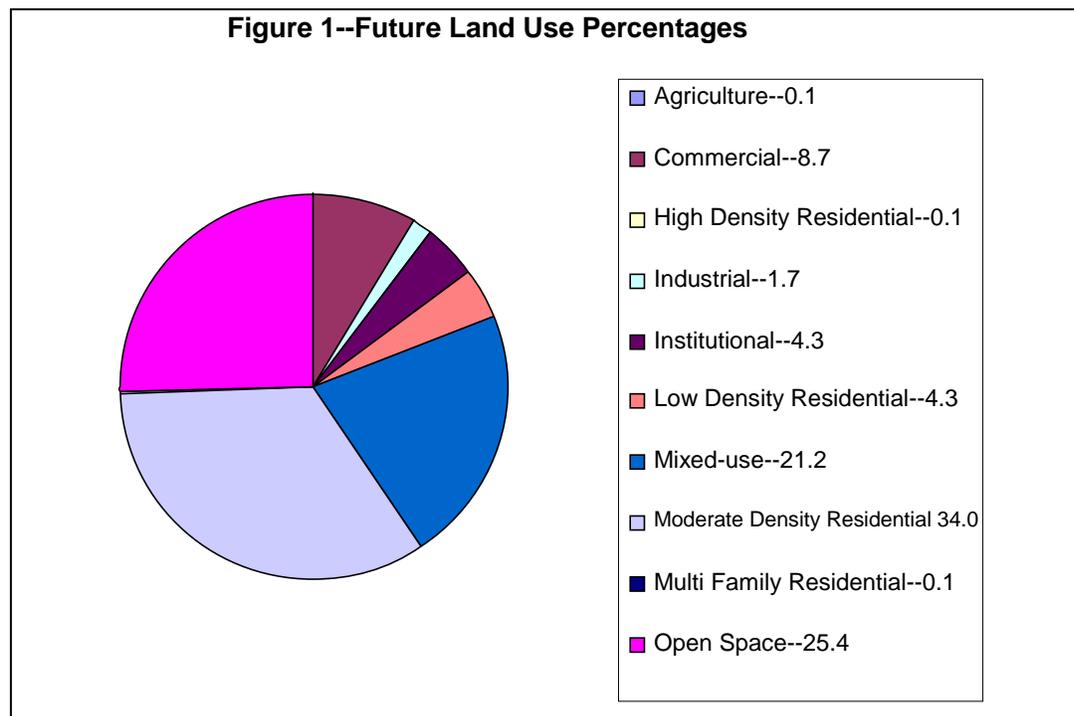
**Table 2. Buckley Road Corridor—Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties			Total
	Adams*	Arapahoe**	Denver	
Within UGB--Expected to be urbanized by 2035				
--Currently Urbanized	2,635	12,261	924	15,820
--Currently Non-Urbanized	2,207	11,693	382	14,282
	428	568	542	1,538
Not proposed to be urbanized by 2035 (outside UGB)	344	1,557	265	2,166
<b>Total Corridor Area</b>	<b>2,979</b>	<b>13,818</b>	<b>1,189</b>	<b>17,986</b>

\*Includes approximate UGB allocation of 409 acres to Aurora (Adams County).

\*\*Includes approximate UGB allocation of 565 acres to Aurora (Arapahoe County).

Figure 1 shows a diversity of future land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The corridor has two mixed-use urban centers: Peña and 40<sup>th</sup>, located in Denver, and the Airport Gateway, located in Aurora. Airport Gateway is located in the northeast quadrant of the I-70/Airport Boulevard interchange.

## 2. Environmental Justice

DRCOG's assessment of Environmental Justice (EJ) areas, based on the 2000 Census, shows that of the 568 overall EJ traffic analysis zones (TAZs) in the DRCOG region, 33 fall within the corridor. Of these zones, 29 are only "minority-concentrated", one is only "low-income concentrated", and three are both "minority-concentrated" and "low-income concentrated".

## 3. Parks and Recreation Areas

Approximately 9.7 percent of the total acreage, or 1,753 out of 17,994 acres within the corridor, consists of parks and open space. A significant park within the corridor is Cherry Creek State Park, off Parker Road at the southwest edge of the corridor.

## 4. Hazardous Materials

An analysis of sites contaminated with hazardous materials reveals some "hazardous waste sites" within the corridor. These consist predominantly of 87 Underground Storage Tanks (USTs).

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor crosses the Cherry Creek Watershed in the south and the South Platte Urban Watershed in the north.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations intersect the corridor. 50 TAZs include at least a portion of a flood hazard area.

## 6. Wildlife

The habitats of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern are within the corridor. These species include Preble's Meadow Jumping Mouse, the Whooping Crane, and the Black-tailed Prairie Dog. The corridor encompasses the habitat of the Ute-Ladies Tresses Orchid, and is part of the Shortgrass Prairie Initiative (SGPI), an area covering the eastern one-third of Colorado that is the habitat for approximately 40 likely threatened and endangered species. The SGPI is an interagency agreement between CDOT, FHWA, USFWS, CO DNR, CO DOW, and The Nature Conservancy

which aims to preserve the Central Short Grass Prairie eco-region of Colorado and mandates off-site mitigation in the form of habitat conservation.

## 7. Historic and Archaeological Resources

There are no existing or potential historic/archaeological districts within the corridor.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Highway Capacity and Major Capital Projects

- Widen I-70, Colfax Avenue, Smoky Hill Road, and 6<sup>th</sup> Avenue where they cross Buckley Road/Airport Boulevard; and
- Construct grade separated crossing for Airport Boulevard at UP railroad.

### Transit

- *Provide feeder bus service to the East Corridor rail transit station.*

### Bicycle/Pedestrian

- Complete connections of Toll Gate Creek Trail south of Quincy Avenue and associated bicycle improvements on Buckley Road.

### System Management

- *Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections. Implement appropriate transit operational improvements (e.g. queue jumps) at intersections near rail stations to accommodate feeder bus service;*
- Upgrade signals at Airport Boulevard railroad crossing and coordinate them with Aurora traffic signal system;
- Implement network surveillance at key points throughout corridor; and
- Continue to manage access per city requirements, regulating access from adjacent development to preserve major regional arterial function of the road.

### Travel Demand Management

- Form a transportation management organization associated with the Aurora City Centre area that could extend to include the Buckley Road corridor.

### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along Buckley Road and Airport Boulevard with a potential for crash reductions.*

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#### **A-4. Colorado/Vasquez Boulevard (SH-2/6/85) Multimodal Corridor Vision: From Hampden Avenue to I-76**

Relevant Studies: *Colorado Boulevard Multimodal Study*—September 2006. Study Limits: Hampden Avenue to I-70

The transportation vision for the **Colorado/Vasquez Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips and access to adjacent establishments in the most densely developed areas. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. This corridor also includes **Brighton Boulevard (SH-265)** from I-70 to US-6. The southern section of this corridor is primarily situated in a densely developed urban area with many different adjacent land uses. The northern section of the corridor travels through a heavy industrial area that contains freight railroad lines and several major freight transfer facilities. Bus service is provided along the corridor and provides an important connection to the East and Southeast Corridor rail lines (see Corridor Sub-Area Exhibit #1 and #2).

##### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies; and
- Maintain or improve pavement to optimal condition.

##### **Corridor Context**

The following statistics are reported for a 16.4-mile long corridor area encompassing one mile on both sides of Colorado/Vasquez Boulevard from Hampden Avenue to I-76. The corridor is projected to experience population and employment growth from 2005 to 2035. Projections indicate a population increase of 21 percent, a 22 percent increase in employment, and a 27 percent increase in households within the corridor. Travel demand is projected to increase 26 percent from 2005 to 2035. Congestion measures show the Colorado Boulevard corridor currently experiences a high level of congestion, which will further deteriorate, as shown in the following table:

**Table 1. Colorado/Vasquez Boulevard Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.72	1.27	2.06
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	2	1	3
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	33%	18.5%	46%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	6,522	217,280	10,773
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	124	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

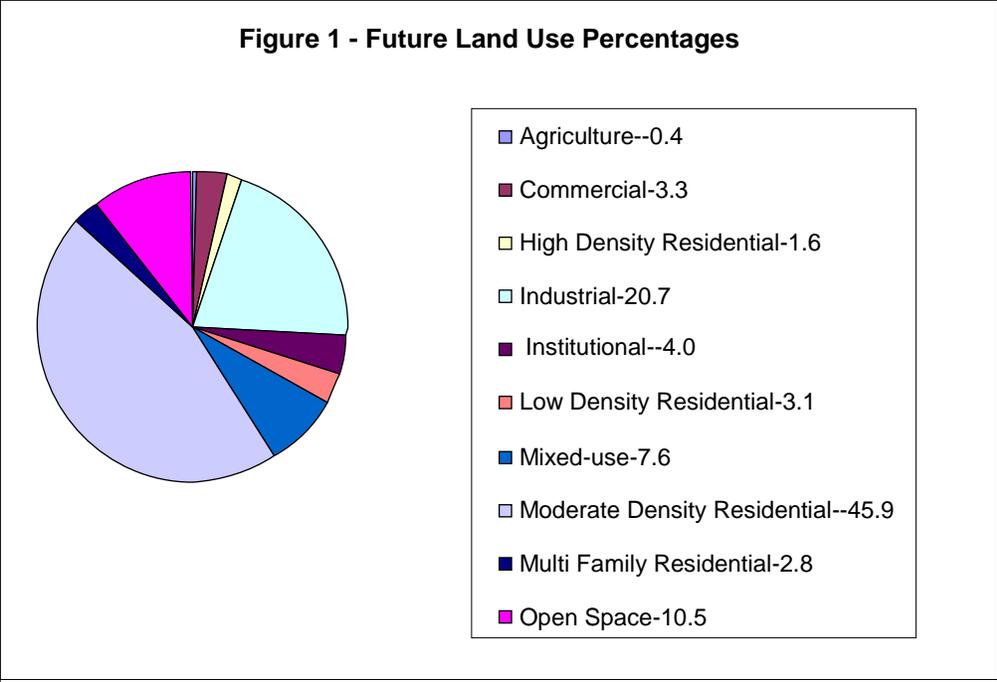
**Table 2. Colorado/Vasquez Boulevard Corridor—Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties			Total
	Adams*	Arapahoe	Denver	
Within UGB--Expected to be urbanized by 2035	5,270	931	11,100	17,301
-- <i>Currently Urbanized</i>	5,089	931	11,048	17,068
-- <i>Currently Non-Urbanized</i>	181	0	51	232
Not proposed to be urbanized by 2035 (outside UGB)	1,028	486	753	2,267
<b>Total Corridor Area</b>	<b>6,298</b>	<b>1,417</b>	<b>11,853</b>	<b>19,568</b>

\*Includes approximate UGB allocation of 101 acres to Adams County.

The corridor has six mixed-use urban centers and one activity center urban center. The largest urban center in the corridor is the East Colfax mixed-use center, located on Colfax Avenue, between Josephine Street and Colorado Boulevard.

Figure 1 shows predominately residential land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *Colorado Boulevard Multimodal Study* also gives a fairly detailed description of both existing and future land use in the corridor.

2. Environmental Justice

DRCOG’s assessment of Environmental Justice (EJ) areas, based on the 2000 Census, shows that of the 568 overall EJ traffic analysis zones (TAZs) in the DRCOG region, 54 fall within the corridor. Of these zones, 29 are both “low-income concentrated” and “minority-concentrated,” while 25 zones are only “minority-concentrated”.

3. Parks and Recreation Areas

Approximately 7.7 percent of the total acreage (1,511 out of 19,555 acres) within the corridor consists of parks and open space. A significant park within the corridor is City Park.

4. Hazardous Materials

An analysis of sites contaminated with hazardous materials reveals some “hazardous waste sites” within the corridor. These consist predominantly of Underground Storage Tanks (USTs).

5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the South Platte Urban Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor. 32 TAZs include at least a portion of a flood hazard area.

## 6. Wildlife

The habitats of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern are within the corridor. These species include Preble's Meadow Jumping Mouse, the Whooping Crane, and the Black-tailed Prairie Dog.

## 7. Historic and Archaeological Resources

Nine existing or potential historic districts are within the corridor. The notable ones are the City Park, High Line Canal, and the Denver Medical Depot.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Highway Capacity and Major Capital Projects

- Widen Vasquez Boulevard between SH-2 and I-76;
- Widen I-70, I-76, I-270, Hampden Avenue, Evans Avenue, Leetsdale Drive, 40<sup>th</sup> Avenue/Smith Road, 56<sup>th</sup> / 58th Avenue, and SH-2 where they cross or are adjacent to Colorado/Vasquez Boulevards;
- Construct ramps at I-76 and connection to the Colorado Boulevard extension to 88<sup>th</sup> Avenue; and
- Reconstruct the interchange at I-270; add the missing ramp allowing travel from northbound Vasquez Boulevard to eastbound I-270.

### Transit

- Provide high frequency bus transit service; and
- *Provide feeder bus service to the East Corridor rail transit stations.*

### Bicycle/Pedestrian

- Construct missing link of regional bicycle corridor in the vicinity of Dahlia Street, Evans Avenue, and I-25;
- Improve pedestrian and bicycle accommodations between I-70 and I-76; and

- Complete missing sidewalk segments along Colorado Boulevard between Hampden Avenue and I-70.

#### System Management

- *Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections as appropriate. Implement appropriate transit operational improvements (e.g. queue jumps) at intersections near rail stations to accommodate feeder bus service;*
- Improve traffic signals at 48<sup>th</sup> Avenue, 52<sup>nd</sup> Avenue, and I-70/Steele Circle;
- Operate corridor signals using traffic-responsive control; implement needed system detection;
- Implement full network surveillance throughout entire corridor; and
- Pursue access consolidation/driveway reconstruction/median implementation or improvement, as feasible throughout the corridor.

#### Travel Demand Management

- *Use existing Transportation Solutions (Cherry Creek) TMO to facilitate subarea-specific TDM activities.*

#### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along Colorado and Vasquez Boulevards and SH-265 with a potential for crash reductions.*

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## **A-5. East Colfax Avenue (US-40) Multimodal Corridor Vision: From I-25 to I-70**

Relevant Studies: *East Colfax Plan*—Adopted by the City of Denver, June 2004. Study Limits: Sherman Street to Colorado Boulevard. *Denver Strategic Transportation Plan, October 2008.*

Website: <http://www.denvergov.org/Default.aspx?alias=www.denvergov.org/EastColfax>

The transportation vision for the **East Colfax Avenue Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips and access to adjacent establishments in the most densely developed areas. Future improvements will primarily increase mobility as well as maintain system quality, improve safety, and improve pedestrian accommodations. Much of Colfax Avenue is situated in a densely developed urban area, including Downtown Denver and the Capitol Hill area. High frequency bus service is provided along the corridor. Enhanced transit service via bus rapid transit, trolley, or street rail facilities is envisioned (tier 2) between Downtown Denver and the expanding Fitzsimons campus. The eastern end of the corridor also includes **SH-30 (6<sup>th</sup> Avenue)** (see Corridor Sub-Area Exhibit #1 and #3).

### **Primary Goals/Objectives:**

- Implement design treatments and services to create a functional multimodal street;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies; and
- Maintain or improve pavement to optimal condition.

### **Corridor Context:**

The following statistics are reported for a 15.1-mile long corridor area encompassing one mile on both sides of East Colfax Avenue from I-25 to I-70. The corridor is projected to experience moderate population and employment growth from 2005 to 2035. Projections indicate a population increase of 35 percent, a 64 percent increase in employment, and a 42 percent increase in households within the corridor. Travel demand is projected to increase 57 percent from 2005 to 2035. The East Colfax Avenue corridor experiences an above average level of congestion, which will grow worse in 2035, as shown by the congestion measures in the following table:

**Table 1. East Colfax Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.57	1.27	2.19
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	1	1	4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	39%	18.5%	60%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	3,854	217,280	10,505
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	148	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

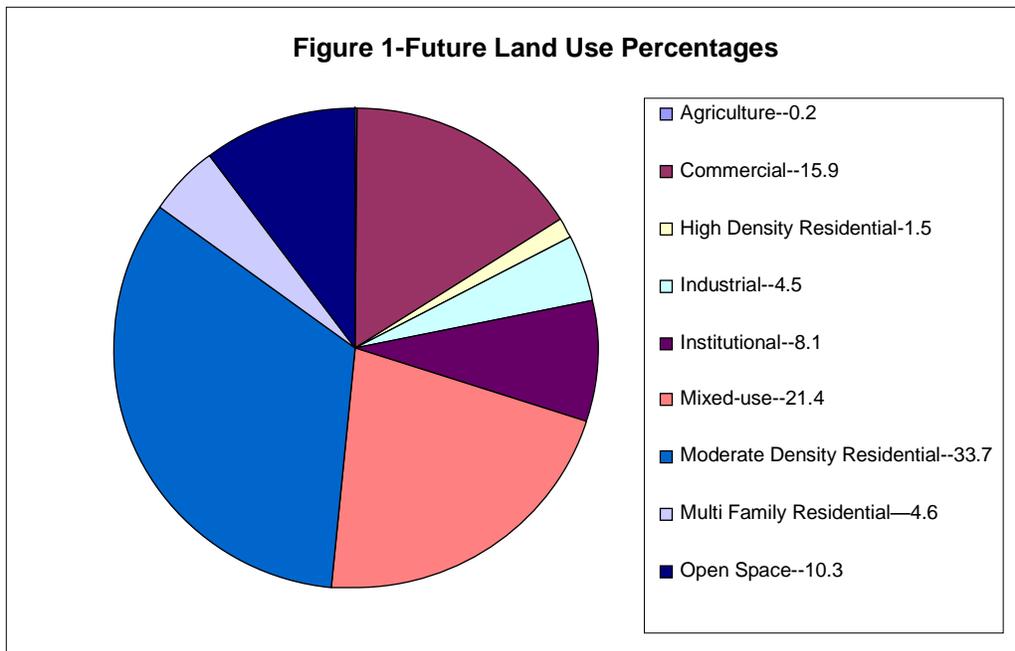
**Table 2. East Colfax Avenue Corridor—Existing Urbanization and 2035 Projected UGB**

Development Type	Counties			Total
	Adams*	Arapahoe **	Denver	
Within UGB--Expected to be urbanized by 2035	4,565	4,340	9,454	18,359
-- <i>Currently Urbanized</i>	4,310	3,483	9,240	17,033
-- <i>Currently Non-Urbanized</i>	255	857	213	1,325
Not proposed to be urbanized by 2035 (outside UGB)	779	1,060	464	2,303
<b>Total Corridor Area</b>	<b>5,344</b>	<b>5,400</b>	<b>9,918</b>	<b>20,662</b>

\*Includes approximate UGB allocation of 255 acres to Adams County.

\*\*Includes approximate UGB allocation of 853 acres to Arapahoe County.

The corridor has seven mixed-use urban centers and adjoins a regional corridor (E-470 from I-70 to just south of 6<sup>th</sup> Avenue Parkway). Figure 1 shows a diversity of future land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *East Colfax Corridor Plan* also depicts future land use within its study boundaries.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice (EJ) areas, based on the 2000 Census, shows that of the 568 overall EJ traffic analysis zones (TAZs) zones in the DRCOG region, 96 fall within the corridor. Of these zones, 39 zones are both “minority-concentrated” and “low-income concentrated” while 57 are only “minority-concentrated”.

## 3. Parks and Recreation Areas

Approximately 9 percent of the total acreage, or 2,865 out of 20,686 acres within the corridor, consists of parks and open space. A significant park within the corridor is City Park.

## 4. Hazardous Materials

An analysis of sites contaminated with hazardous materials reveals some “hazardous waste sites” within the corridor. These consist predominantly of Underground Storage Tanks (USTs).

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the South Platte Urban Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor. 68 TAZs include at least a portion of a flood hazard area.

## 6. Wildlife

The habitats of numerous Federal Threatened and Endangered Species and State of Colorado Species of Species of Special Concern are within the corridor. These species include Preble's Meadow Jumping Mouse, the Whooping Crane, and the Black-tailed Prairie Dog. The corridor encompasses the habitat of the Ute-Ladies Tresses Orchid, and is part of the Shortgrass Prairie Initiative (SGPI), an area covering the eastern one-third of Colorado that is the habitat for approximately 40 likely threatened and endangered species. The SGPI is an interagency agreement between CDOT, FHWA, USFWS, CO DNR, CO DOW, and The Nature Conservancy which aims to preserve the Central Short Grass Prairie eco-region of Colorado, and mandates off-site mitigation in the form of habitat conservation.

## 7. Historic and Archaeological Resources

Thirty-five existing or potential historic districts are within the corridor. The notable ones are the City Park, Cheesman Park-Congress Park, and the San Rafael Historic District.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Highway Capacity and Major Capital Projects

- Widen Colfax Avenue between Sable Boulevard and Airport Boulevard;
- *Reconstruct the Colfax Avenue interchanges at I-225 (jointly with 17<sup>th</sup> Avenue) and I-70 (jointly with Picadilly);*
- Major improvements to the intersections with Broadway/Lincoln, Colorado Boulevard, and Quebec Street;
- Widen I-225, Quebec Street, Yosemite Street, Tower Road, and Picadilly Road where they cross Colfax Avenue.

### Transit

- Construct transit upgrade along the East Colfax Avenue corridor (i.e., streetcar, bus rapid transit) from downtown Denver to I-225.

### Bicycle/Pedestrian

- Make sidewalk/streetscape improvements to enhance the pedestrian and bicycle environment along densely developed mixed-use segments of the corridor;
- Provide improved connections to the Toll Gate Creek Trail;
- Complete the regional bicycle corridor between Buckley Road and E-470; and
- Complete the community bicycle corridor from Lincoln Street to York Street.

### System Management

- *Implement intersection improvements (e.g. turn lanes) at existing and future signalized intersection as appropriate.* West of Airport Boulevard, implement appropriate transit operational improvements (e.g. queue jumps);
- Operate signals using traffic-responsive control; implement needed system detection;
- From downtown Denver to I-225, operate signals in a manner that supports the rapid transit line;
- Implement full network surveillance east to Airport Boulevard and surveillance at key points to the east; and
- Pursue access consolidation/driveway reconstruction from Peoria Street to Chambers Road. East of Chambers Road, adhere to access category NRA/RA to regulate access from adjacent development.

### Travel Demand Management

- Form new TMO in the Fitzsimons campus area and use the existing Downtown Denver Partnership TMO to facilitate sub-area-specific TDM activities.

### Preservation and Safety

- *Improve the traffic signals at intersections along East Colfax Avenue; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along East Colfax with a potential for crash reductions.*

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## **A-6. Hampden Avenue/Havana Street (US-285/SH-30) Multimodal Corridor Vision: Sheridan Boulevard to Parker Road**

Relevant Studies: Denver Strategic Transportation Plan, October 2008

The transportation vision for the **Hampden Avenue Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. This corridor traverses a developed urban area. Bus service is provided along the corridor and provides important connections to the Southwest and Southeast Corridor light rail stations. A future rapid transit line is envisioned (tier 2) between Wadsworth Boulevard and Santa Fe Drive (see Corridor Sub-Area Exhibit #4 and #6).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies; and
- Maintain or improve pavement to optimal condition.

### **Corridor Context**

The following statistics are reported for a 9.9-mile long corridor area encompassing one mile on both sides of Hampden Avenue/Havana Street from Lowell Boulevard to Parker Road. The corridor is projected to experience population and employment growth from 2005 to 2035. Projections indicate a population increase of 21 percent, a 26 percent increase in employment, and a 29 percent increase in households within the corridor. Travel demand is projected to increase 24 percent from 2005 to 2035. Congestion measures show the Hampden Avenue/Havana Street corridor currently experiences a high level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. Hampden Avenue Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.56	1.27	1.70
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	3	1	4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	33.5%	18.5%	40
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	3,597	217,280	5,613
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	112	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

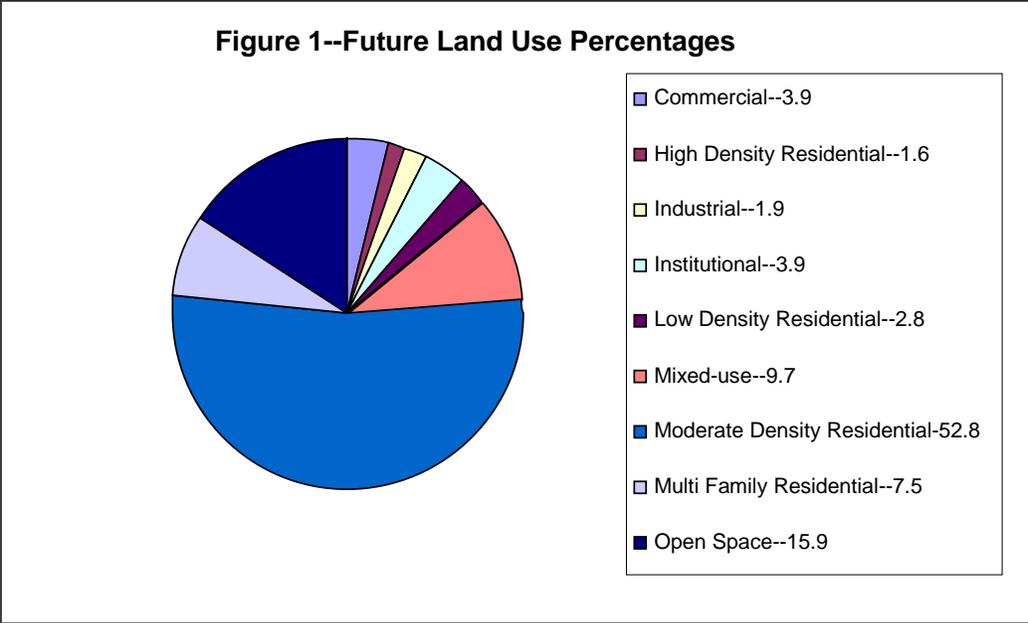
Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. Hampden Avenue/Havana Street Corridor—Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties			Total
	Arapahoe	Denver	Jefferson	
Within UGB--Expected to be urbanized by 2035	6,124	7,536	165	13,825
-- <i>Currently Urbanized</i>	6,114	7,004	165	13,283
-- <i>Currently Non-Urbanized</i>	10	533	0	543
Not proposed to be urbanized by 2035 (outside UGB)	2,096	353	0	2,449
<b>Total Corridor Area</b>	<b>8,220</b>	<b>7,889</b>	<b>165</b>	<b>16,274</b>

The corridor contains six urban centers. Four are mixed-use; the Englewood City Center, the Hampden Town Center, the Iliff Avenue Center, and the Southmoor Park TOD. Two are activity centers; Bear Valley, and Tamarac and Hampden. The corridor also adjoins two mixed-use urban centers; I-225/Parker Road and the Buckingham Center, and one regional corridor; I-25.

Figure 1 shows predominately residential land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 29 zones of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the one mile buffer. Of these 32 zones, 5 are both “minority-concentrated” and “low-income concentrated”, while 24 are only “minority-concentrated”.

3. Parks and Recreation Areas

Approximately 2,158 acres, or 13.2 percent of the total acreage of 16,257 within the corridor, consists of parks and open space. The most significant park/recreation area is Cherry Creek State Park on the southeast edge of the corridor.

4. Hazardous Materials

An initial analysis the corridor reveals no significant sites within the corridor. One hundred and ninety-one Underground Storage Tanks (USTs) lie within the corridor.

5. Water Resources

Three features of water resources are described here:

**Watersheds.** Most of the corridor lies in the South Platte Urban Watershed, with a small sliver on the southeast side of the corridor in the Cherry Creek Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—57 TAZs out of a total of 115 within the corridor include at least a portion of a flood hazard area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of Preble's Meadow Jumping Mouse, the Whooping Crane and Ute Ladies'- Tresses Orchid.

## 7. Historic and Archaeological Resources

There are three existing or historic districts within the corridor. They consist of the Highline Canal, Arapahoe Acres, and the Fort Logan Mental Health Center.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Highway Capacity and Major Capital Projects

- Widen Hampden Avenue between Lowell Boulevard and Sherman Street, between Colorado Boulevard and I-25, and between Dayton Street and Havana Street;
- Widen Havana Street from Hampden Avenue to Parker Road;
- Construct new Hampden Avenue interchanges at Lowell Boulevard (Knox Court), and Riverpoint Parkway (Brady Court);
- Reconstruct the Hampden Avenue interchanges at Sheridan Boulevard, at Federal Boulevard and replace bridge at Broadway; and
- Widen Federal Boulevard where it crosses Hampden Avenue.

### Transit

- Construct rapid transit rail along the Hampden Avenue corridor from Wadsworth Boulevard to Santa Fe Drive, connecting with the existing Southwest Corridor light rail line; and
- *Provide feeder bus connections to the Southwest Corridor and Southeast Corridor stations.*

### Bicycle/Pedestrian

- *Construct pedestrian improvements at key locations on Hampden Avenue or on parallel locations such as across Santa Fe Drive and the railroad tracks; and*
- *Provide improved connections to the Englewood and Hampden/I-25 light rail stations.*

### System Management

- *Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes) at existing signalized intersections as appropriate. Implement appropriate transit operational improvements (e.g. queue jumps) at intersections near rail stations to accommodate feeder bus service;*
- *Implement courtesy patrol west from Santa Fe Drive (with freeway segment farther west);*
- *Operate corridor signals using traffic-responsive control; implement needed system detection;*
- *Implement full network surveillance throughout entire corridor;*
- *Implement/use DMSs to disseminate real-time traffic and route guidance (as I-25 incident diversion route) information, from regional ATIS; and*
- *Consider access consolidation/driveway reconstruction and barrier median installation to attempt to improve access category to, or maintain it at, NRA.*

### Travel Demand Management

- *Implement TMO and associated services to the areas around the Englewood and Hampden/I-25 light rail stations.*

### Preservation and Safety

- *Upgrade the traffic signals at Hampden Avenue intersections; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along Hampden Avenue with a potential for crash reductions.*

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## **A-7. Parker Road (SH-83) Multimodal Corridor Vision (A-7): SH-86 to Havana Street**

Relevant Studies: (1) Colorado Department of Transportation *SH-83-86 Corridor Optimization Plan—September 2004*. (2) *Parker Road Corridor Study Final Report—July 2009*. Study

Limits: Hampden Avenue to E-470 Website:

<http://www.centennialcolorado.com/index.aspx?NID=739>

The transportation vision for the **SH-83 Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips. A new interchange at Arapahoe Road and future improvements as identified in the Parker Road Corridor Study will primarily increase mobility as well as maintain system quality and improve safety. The southern section of this corridor passes through rural/suburbanizing areas while the northern section is in a highly urbanized area. Bus service is provided along the corridor and will provide an important connection to the light rail station at I-225. A rapid transit connection to the Town of Parker is envisioned for preservation (tier 3) which may traverse a small portion this corridor south of E-470 (see Corridor Sub-Area Exhibit #4 and #5).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition;
- Maintain statewide transportation connections; and
- Implement design treatments and services to create a functional multimodal street in the higher density urban sections.

### **Corridor Context**

The following statistics are reported for a 21.3-mile long corridor area encompassing one mile on both sides of Parker Road from SH-86 to Havana Street. The corridor is projected to experience significant population and employment growth from 2005 to 2035. Projections indicate a population increase of 76 percent, a 50 percent increase in employment, and an 82 percent increase in households within the corridor. Travel demand is projected to increase 61 percent from 2005 to 2035. The *SH-83-86 Corridor Optimization Plan* also provides some further information on socioeconomic trends and projections in the corridor within its study limits.

Congestion measures show the Parker Road corridor currently experiences an average level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. Parker Road—Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.24	1.27	1.82
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	1-2	1	4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	18%	18.5%	42.5%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	2,225	217,280	13,947
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	73	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. Parker Road—Existing Urbanization and Projected 2035 UGB (acres)**

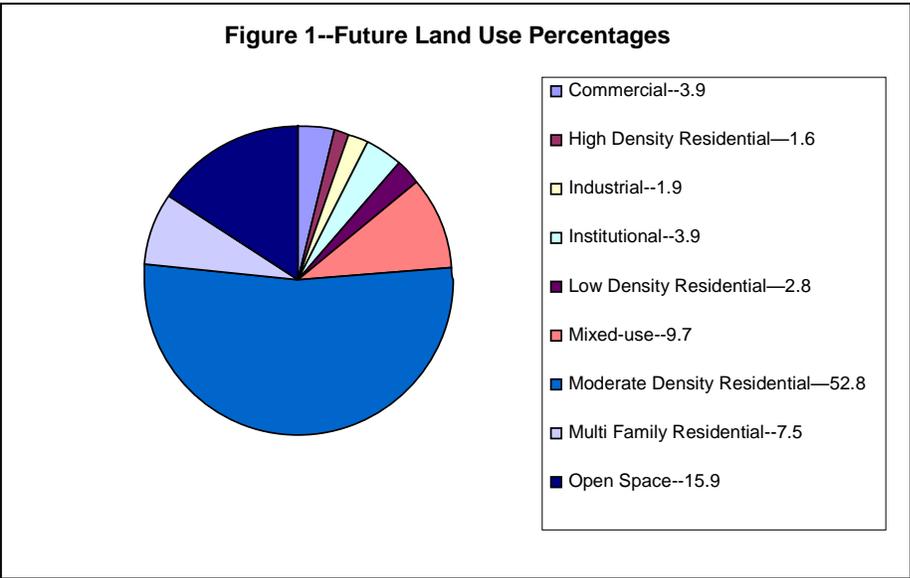
Development Type	Counties			Total
	Arapahoe*	Denver	Douglas**	
Within UGB--Expected to be urbanized by 2035	6,021	149	8,854	15,024
-- <i>Currently Urbanized</i>	5,317	77	7,313	12,707
-- <i>Currently Non-Urbanized</i>	705	72	1,540	2,317
Not proposed to be urbanized by 2035 (outside UGB)	4,249	24	7,967	12,240
<b>Total Corridor Area</b>	<b>10,270</b>	<b>173</b>	<b>16,821</b>	<b>27,264</b>

\*Includes approximate UGB allocation of 491 acres to Arapahoe County.

\*\*Includes approximate UGB allocation of 1,108 acres to Douglas County.

The corridor contains two urban centers. I-225/Parker Road is mixed-use and the Greater Downtown District in Parker is an activity center. It is adjacent to another mixed-use center, the Iliff Avenue Center in Aurora.

Figure 1 shows a diversity of land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that six zones of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the one mile buffer. All six of the EJ zones in this corridor are “minority-concentrated”. None of the zones in the corridor are “low-income concentrated”.

3. Parks and Recreation Areas

Approximately 5,955 acres, or 21.8 percent of the total acreage of 27,264 within the corridor, consists of parks and open space. The most significant park/recreation area is Cherry Creek State Park on the northwest edge of the corridor.

4. Hazardous Materials

An initial analysis the corridor reveals no significant sites within the corridor. Seventy Underground Storage Tanks (USTs) lie within the corridor.

5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the South Platte Urban Watershed and the Cherry Creek Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—17 TAZs out of a total of 98 within the corridor include at least a portion of a flood hazard area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of Preble's Meadow Jumping Mouse, the Whooping Crane and the Mexican Spotted Owl.

## 7. Historic and Archaeological Resources

There are no existing or potential historic/archaeological districts within the corridor.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Highway Capacity and Major Capital Projects

- Widen SH-83 between SH-86 and Bayou Gulch Road and between the Arapahoe County line and Hampden Avenue;
- Widen E-470, I-225, Arapahoe Road, SH-86, Bayou Gulch Road, Stroh Road, Hess Road, Lincoln Avenue, and Havana Street where they cross SH-83;
- Construct new interchanges at Quincy Avenue and at Orchard Road; and
- At-grade intersection improvements along SH-83

### Transit

- Preserve option for rapid transit connection from Southeast Corridor (Ridgegate or County Line) to Parker.

### Bicycle/Pedestrian

- Complete gaps in the Cherry Creek Trail system;
- *Improve connections to the I-225 light rail station;* and
- Improve sidewalks with corridor improvements along SH-83 .

### System Management

- *Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections as appropriate.* Implement appropriate transit

operational improvements (e.g. queue jumps) at intersections near rail stations to accommodate feeder bus service;

- Operate corridor signals using traffic-responsive control; implement needed system detection;
- Implement full network surveillance throughout the entire corridor;
- Implement/use DMSs to disseminate real-time traffic and route guidance (as I-25 incident diversion route) information, south of I-225. Also, for the southern segment use DMSs for travel weather advisories;
- North of I-225, pursue access consolidation/driveway reconstruction as feasible, consistent with desirable treatment for E-X, R-A, and NR-A access categories; and
- Develop (Douglas County) and/or adhere (Arapahoe County) to Access Management Plan, strictly regulating access from adjacent development.

#### Travel Demand Management

- Promote carpooling and vanpools for longer distance commuters.

#### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along SH-83 with a potential for crash reductions.*

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## **A-8. SH-157 (Foothills Parkway)/SH-119 (Longmont Diagonal-Ken Pratt Boulevard) Multimodal Corridor Vision: US-36 to vicinity of I-25**

Relevant Studies: (1) CDOT *SH-119/SH-52 Interchange 1601 Study*-2003. (2) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007. (3) Northwest Rail Final Environmental Evaluation—June 2010, Study Limits: DUS to Downtown Longmont.

The transportation vision for the **SH-157/SH-119 Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips. It provides a key connection between US-36, Boulder and Longmont. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. Bus service is provided along the corridor and there will be a rapid transit rail line parallel to SH-119 to Longmont (tier 1). Boulder Municipal Airport is located adjacent to SH-119. The BNSF railroad line immediately parallels much of the length of SH-119 (see Corridor Sub-Area Exhibit #9).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for all modes of travel;
- Support urban development within the Denver region’s Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Improve management of the existing facilities and travel demand;
- Encourage use of alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition;
- Maintain interregional transportation connections;
- Enhance intermodal (rail, bus, bicycle, pedestrian) connectivity; and
- Incorporate features for all travel modes in project design.

### **Corridor Context**

The following statistics are reported for a 17.9-mile long corridor area encompassing one mile on both sides of SH-157/SH-119 from US-36 to vicinity of I-25. The corridor is projected to experience population and employment growth from 2005 to 2035. Projections indicate a population increase of 34 percent, an 18 percent increase in employment, and a 42 percent increase in households within the corridor. Travel demand is projected to increase 29 percent from 2005 to 2035.

Congestion measures show the SH-157/SH-119 corridor currently experiences an above average level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. SH-157/SH-119 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.40	1.27	1.61
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	3	1	4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	27%	18.5%	36%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	2,928	217,280	6,285
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	34	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. SH-157 (Foothills Parkway)—Existing Urbanization and Projected 2035 UGB (acres)**

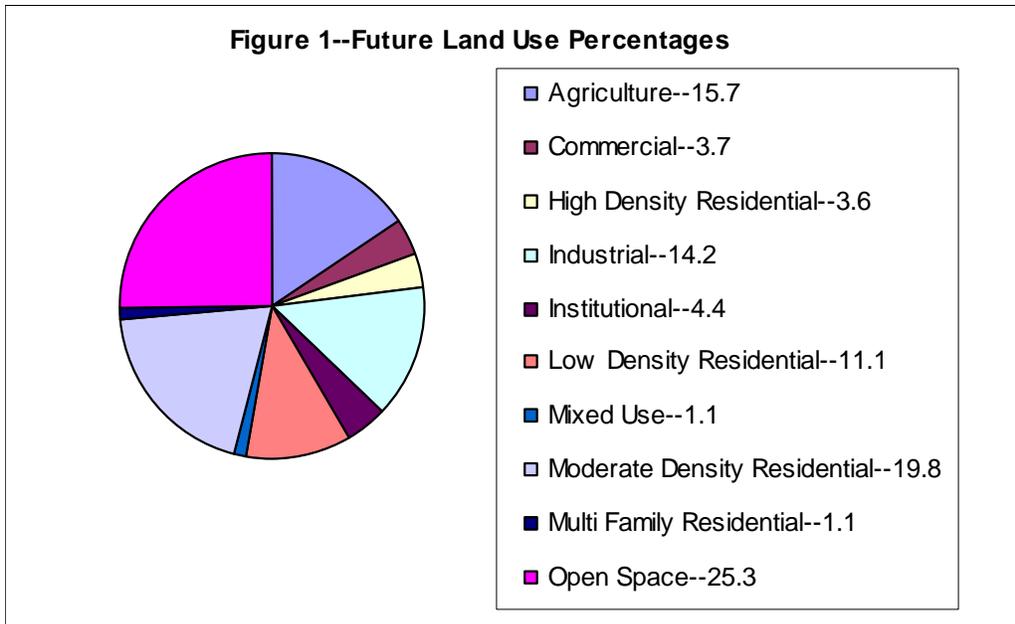
Development Type	County	Total**
	Boulder*	
Within UGB--Expected to be urbanized by 2035	14,487	14,487
-- <i>Currently Urbanized</i>	13,534	13,534
-- <i>Currently Non-Urbanized</i>	952	952
Not proposed to be urbanized by 2035 (outside UGB)	9,404	9,404
<b>Total Corridor Area</b>	<b>23,891</b>	<b>23,891</b>

\*Includes approximate UGB allocation of 540 acres to Boulder County.

\*\*Excludes portion of corridor that extends into Weld County.

The corridor contains five urban centers. One is mixed-use, the 28<sup>th</sup>/30<sup>th</sup> Street Boulder Valley Regional Center. Four are activity centers; Gunbarrel, Twin Peaks, Ken Pratt Extension, and CBD of Longmont.

Figure 1 shows a diversity of land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *FasTracks* PCEA also provides some more information on existing and anticipated land use surrounding the rail line.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 21 zones of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these 21 zones, 17 TAZs are only “minority-concentrated”, and 4 are both “minority-concentrated” and “low-income concentrated”.

## 3. Parks and Recreation Areas

Approximately 6,652 acres, or 27 percent of the total acreage of 24,910 within the corridor, consists of parks and open space. Some of the largest open space areas are the St. Vrain Greenway in Longmont, as well as the Van Vleet South Fee Property located in unincorporated Boulder County.

## 4. Hazardous Materials

An initial analysis the corridor reveals no significant sites within the corridor. One hundred and sixty-one Underground Storage Tanks (USTs) lie within the corridor.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the St. Vrain Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—106 TAZs out of a total of 166 within the corridor include at least a portion of a flood hazard area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of Preble's Meadow Jumping Mouse, the Burrowing Owl and the Mexican Spotted Owl.

## 7. Historic and Archaeological Resources

There are three existing historic districts within the corridor. They are the Niwot Historic District, the West Side and the East Side Historic Districts in Longmont.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Construct a new grade-separated interchange, at Mineral Road/SH-52;
- Reconstruct grade-separated interchanges at Table Mesa Drive/South Boulder Road and US-36; and
- *Construct multimodal operational improvements between Foothills Parkway and Hover Road.*

### Transit

- *Maintain existing high frequency bus transit service along the corridor;*
- *Construct the Northwest Rail commuter rail line from Denver Union Station to Boulder and along SH-119 from Boulder to downtown Longmont;*
- Tie to future commuter rail line connecting north to Larimer County and south to the North Metro commuter rail line; and
- *Construct three new commuter rail stations supported by local bus feeder service and appropriate parking.*

### Bicycle/Pedestrian

- *Complete improvements to the regional bicycle corridor along SH-119 (LoBo Regional Trail and SH-119 bikeway); and*
- Provide improved pedestrian and bicycle connections bus stops and transit stations.

### System Management

- *Implement intersection improvements (e.g., turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections as appropriate. Implement appropriate transit operational improvement treatments (e.g., queue jumps and transit signal priority) at intersections with significant transit service;*
- Upgrade signals at SH-119 and adjacent road railroad crossings and integrate them with Longmont, CDOT, and Boulder traffic signal systems;
- Operate corridor signals using traffic-responsive signal control; implement needed system detection including bicycle detection and dilemma-zone clearance;
- Implement full network surveillance throughout entire corridor;
- Implement/use DMSs to disseminate real-time traffic information on Diagonal, including real-time park-n-Ride parking occupancy and transit parking alternatives, from regional ATIS; and
- Develop an access management plan along the Diagonal, regulating access from adjacent development. Adhere to CDOT's access category "E-X" (Expressway) on SH-157 and on SH-119 east of US-287.

### Travel Demand Management

- *For SH-157, use East Boulder TMA program to provide technical support and targeted outreach, short-term subsidy of Eco Pass, technical assistance on telecommuting, and parking supply limitations on new development;*
- *For SH-119, provide local and regional travel demand services to be coordinated locally; and*
- Along SH-119, consider strategic open space purchases, transfers of development rights, rural preservation zoning/buy downs, or similar strategies to reduce development/traffic.

### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along SH-157/SH-119 with a potential for crash reductions.*

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## A-9. University Boulevard (SH-177) Multimodal Corridor Vision: C-470 to Hampden Avenue

The transportation vision for the **University Boulevard Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. This corridor traverses a developed urban area. Bus service is provided along the corridor and will connect with a rapid transit line envisioned parallel to C-470 (tier 2). (see Corridor Sub-Area Exhibit #6).

### Primary Goals/Objectives:

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies; and
- Maintain or improve pavement to optimal condition.

### Corridor Context

The following statistics are reported for a 6.3-mile long corridor area encompassing one mile on both sides of University Boulevard from C-470 to Hampden Avenue. The corridor is projected to experience population and employment growth from 2005 to 2035. Projections indicate a population increase of 10 percent, a 12 percent increase in employment, and a 17 percent increase in households within the corridor. Travel demand is projected to increase 12 percent from 2005 to 2035.

Congestion measures show the University Boulevard corridor currently experiences an above average level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. University Boulevard Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.51	1.27	1.62
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	2	1	3-4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	33%	18.5%	38%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	1,405	217,280	1,991
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	76	25	—

**Selected Environmental Resources:**

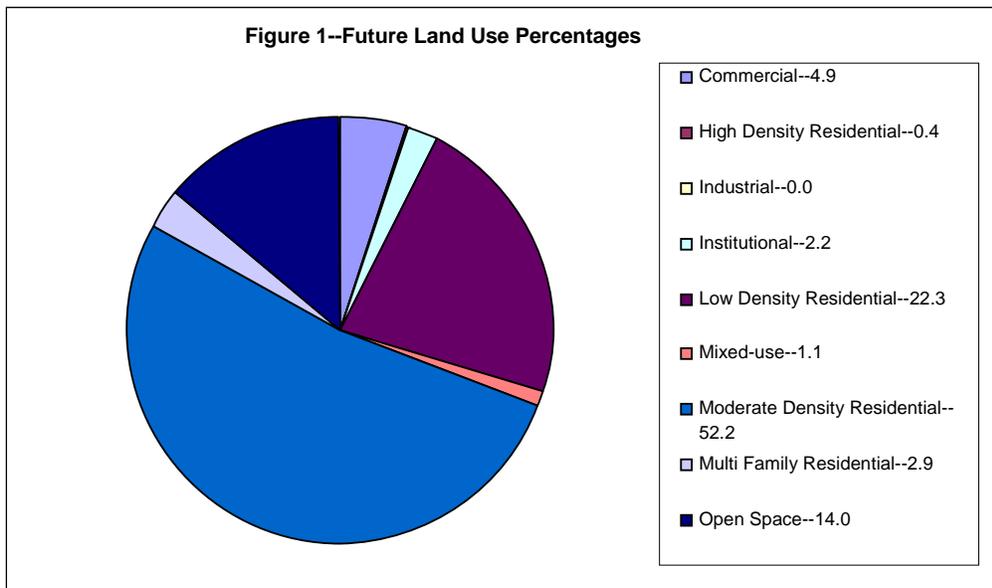
1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. University Boulevard —Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties			Total
	Arapahoe	Denver	Douglas	
Within UGB--Expected to be urbanized by 2035	5,754	472	1,252	7,478
-- <i>Currently Urbanized</i>	5,751	471	1,252	7,474
-- <i>Currently Non-Urbanized</i>	2	1	0	3
Not proposed to be urbanized by 2035 (outside UGB)	2,410	123	0	2,533
<b>Total Corridor Area</b>	<b>8,164</b>	<b>595</b>	<b>1,252</b>	<b>10,011</b>

Figure 1 shows predominately residential land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004. The corridor contains no urban centers.



2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that none of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor.

### 3. Parks and Recreation Areas

Approximately 639 acres, or 6.3 percent of the total acreage of 10,014 within the corridor, consists of parks and open space. Some of the largest open space areas are the Wellshire Golf Course in Denver and Cherry Knolls Park/Big Dry Creek and Dekoevend Park, both in Arapahoe County.

### 4. Hazardous Materials

An initial analysis the corridor reveals no significant sites within the corridor. Thirty-two Underground Storage Tanks (USTs) lie within the corridor.

### 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the South Platte Urban Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations intersect the corridor—36 TAZs out of a total of 44 within the corridor include at least a portion of a flood hazard area.

### 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Whooping Crane, the Preble's Meadow Jumping Mouse and the Common Shiner.

### 7. Historic and Archaeological Resources

There are two existing historic districts within the corridor. They are the High Line Canal and Arapahoe Acres.

#### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

#### Highway Capacity and Major Capital Projects

- Widen C-470 and County Line Road where they intersect with University Boulevard.

### Transit

- Provide feeder bus service to the C-470 rapid transit line.

### Bicycle/Pedestrian

- Complete gaps in sidewalk system north of Arapahoe Road;
- Improve pedestrian and bicycle crossing areas at the C-470 trail; and
- Complete the community bicycle corridor from Quincy Avenue to Arapahoe Road.

### System Management

- *Implement intersection improvements (e.g., turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections as appropriate.*
- Implement appropriate transit operational improvements (e.g. queue jumps) at intersections near rail stations to accommodate feeder bus service;
- Operate corridor signals using traffic-responsive control; implement needed system detection;
- Implement network surveillance at key points throughout entire corridor; and
- Pursue consolidation/driveway reconstruction as feasible, consistent with NRA access category.

### Travel Demand Management

- Use existing South I-25 Urban Corridor TMA/Southeast Business Partnership to facilitate subarea-specific TDM activities.

### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along University Boulevard with a potential for crash reductions.*

## **A-10. US-6 Multimodal Corridor Vision: SH-58 to I-70**

Relevant Studies: (1) *Northwest Corridor EIS Draft Materials*(EIS was cancelled in 2008). Study Limits (approximate): I-70/C-470 Interchange in Jefferson County to Northwest Parkway/US 36 Interchange in Broomfield County. (2) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program.

Website: <http://www.dot.state.co.us/NorthwestCorridorEIS/index.cfm>

The transportation vision for the **US-6 Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. Specific transportation improvements relating to the corridor's inclusion in a regional beltway transportation system will be determined by the ongoing Northwest Corridor EIS. Implementation of interchanges in the corridor is envisioned regardless of the EIS outcome. This corridor passes through the west side of Golden adjacent to the foothills. Maintaining pedestrian, bicycle, and wildlife crossing connections is envisioned as part of future roadway improvements. This corridor provides a key entryway to Clear Creek Canyon and access to the gaming area of Gilpin County. The West Corridor light rail line will be constructed to the Jefferson County Government Center (tier 1). Preservation for a rapid transit line is envisioned further west within or adjacent to the corridor (see Corridor Sub-Area Exhibit #7).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a four-mile long corridor area encompassing one mile on both sides of US-6 from SH-58 to I-70. The corridor is projected to experience population and employment growth from 2005 to 2035. Projections indicate a population increase of 22 percent, a 13 percent increase in employment, and a 31 percent increase in households within the corridor. Travel demand is projected to increase 15 percent from 2005 to 2035.

Congestion measures show the US-6 corridor currently experiences an above average level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. US-6 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.35	1.27	1.74
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	2-3	1	4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	25%	18.5%	41%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	495	217,280	1,535
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	58	25	—

**Selected Environmental Resources:**

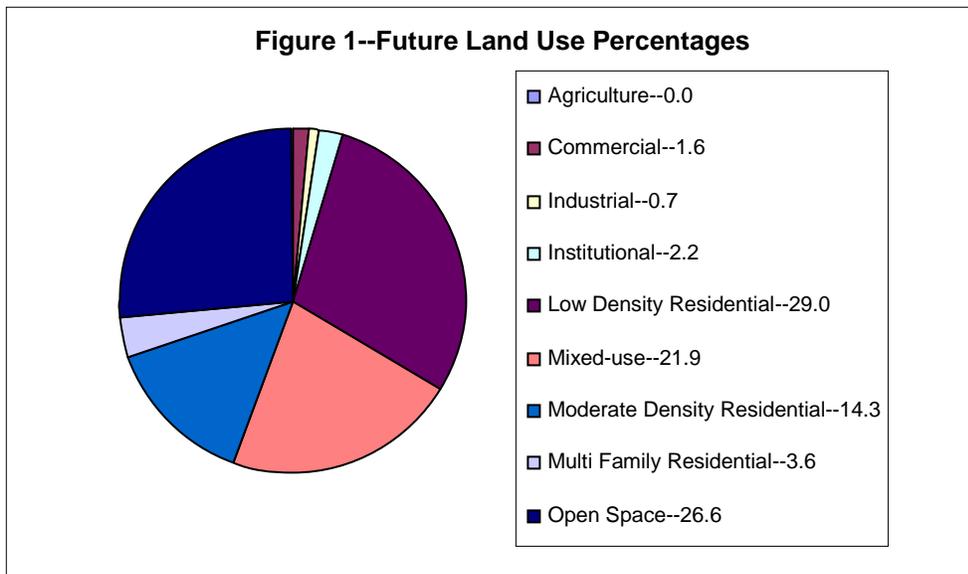
1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. US-6 —Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	County	Total
	Jefferson	
Within UGB--Expected to be urbanized by 2035	5,323	5,323
-- <i>Currently Urbanized</i>	4,939	4,939
-- <i>Currently Non-Urbanized</i>	384	384
Not proposed to be urbanized by 2035 (outside UGB)	1,798	1,798
<b>Total Corridor Area</b>	<b>7,121</b>	<b>7,121</b>

The corridor adjoins two urban centers: The Denver West/Colorado Mills Center activity center located partially in unincorporated Jefferson County and partially in Lakewood, and the downtown Golden mixed use center. Figure 1 shows predominately residential and mixed-use land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *FasTracks PCEA* also provides some more information on existing and anticipated land use surrounding the light rail line.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that four of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these four zones, two are “low-income concentrated” and two are “minority-concentrated”.

## 3. Parks and Recreation Areas

Approximately 2,079 acres, or 29 percent of the total acreage of 7,120 within the corridor, consists of parks and open space. Some of the largest parks are Windy Saddle Park, Mt. Galbraith Park and Apex Park.

## 4. Hazardous Materials

An initial analysis the corridor reveals no significant sites within the corridor. Sixty-five Underground Storage Tanks (USTs) lie within the corridor.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the Upper Clear Creek and the South Platte Urban Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor. 25 TAZs out of a total of 35 within the corridor include at least a portion of a flood hazard area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Whooping Crane, the Preble's Meadow Jumping Mouse and the Ute-Ladies' Tresses Orchid. Elk crossings are a significant safety issue for US 6.

## 7. Historic and Archaeological Resources

There are many historic districts within the corridor. They are the Camp George West Historic District, the Larian Trail Road Scenic Mountain Drive, the First Presbyterian Church of Golden, the Twelfth Street Historic Residential District, and the Washington Avenue Historic District. Recently added are the 6<sup>th</sup> and 9<sup>th</sup> Street District and the East Street District.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Highway Capacity and Major Capital Projects

- Construct new interchanges on US-6 at SH-58/SH-93, 19<sup>th</sup> Street, Heritage Road, Johnson Road, and Colfax Avenue;
- The nature/alignment of other future improvements in this corridor is not clearly defined at this time; and
- Widen SH-93 where it crosses US-6.

### Transit

- *Construct a light rail line that extends from downtown Denver to the Jefferson County Government Center, paralleling a portion of US-6;*
- *Construct a new light rail station with parking at the Jefferson County Government Center;*
- *Provide feeder bus service to the West Corridor light rail station; and*
- Preserve right-of-way for envisioned rapid transit line that would extend West Corridor to connect to Gold Line.

### Bicycle/Pedestrian

- Complete missing links of bicycle corridor parallel to US-6; and

- Provide pedestrian connections across US-6.

### System Management

- *Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes) at existing signalized intersections as appropriate.* Implement appropriate transit operational improvements (e.g. queue jumps) at intersections near rail stations to accommodate feeder bus service;
- Operate corridor signals using traffic-responsive control and implement needed system detection;
- Implement network surveillance at key points throughout entire corridor;
- Implement/use DMSs to disseminate real-time weather condition, closure information (e.g. Clear Creek Canyon) and park-n-Ride parking occupancy and transit parking alternatives, from regional ATIS; and
- Adhere to access category EX, strictly regulating access from adjacent development.

### Travel Demand Management

- Target efforts to increase transit use of the West Corridor light rail line.

### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along US-6 with a potential for crash reductions.*
- *Develop and implement strategies to further reduce vehicle/animal crashes.*

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## **A-11. US-85 North Multimodal Corridor Vision: I-76 to Weld County Road 10**

The transportation vision for the **US-85 North Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips and feeding statewide connections to the north. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. The corridor connects the city of Brighton with the larger Denver urban area. Bus service is provided in the corridor and a future rapid transit line is envisioned (tier 2). The corridor also includes the following state highways: **124<sup>th</sup> Avenue (SH-22)** from Brighton Road to Sable Boulevard, **Sable Boulevard (SH-2)** from I-76 to SH-7, and **104<sup>th</sup> Avenue (SH-44)** from Colorado Boulevard to SH-2 (see Corridor Sub-Area Exhibit #2).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 9.3 mile-long corridor area encompassing one mile on both sides of US-85 from I-76 to Weld County Road 10. The corridor is projected to experience significant population and employment growth from 2005 to 2035. Projections indicate a population increase of 166 percent, a 62 percent increase in employment, and a 191 percent increase in households within the corridor. Travel demand is projected to increase 95 percent from 2005 to 2035.

Congestion measures show the US-85 corridor currently experiences an above average level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. US-85 North Corridor Congestion Measures (I-76 to Weld County Road 10)**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.3	1.27	1.73
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	2	1	5
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	23%	18.5%	41%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	758	217,280	2,972
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	35	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. US-85 North —Existing Urbanization and Projected 2035 UGB (acres)**

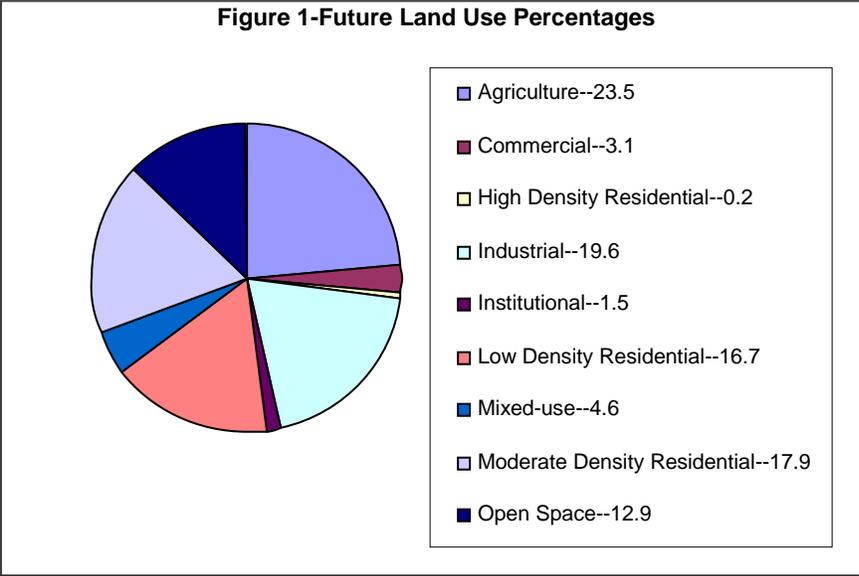
Development Type	County	Total**
	Adams*	
Within UGB--Expected to be urbanized by 2035	6,792	6,792
-- <i>Currently Urbanized</i>	4,801	4,801
-- <i>Currently Non-Urbanized</i>	1,990	1,990
Not proposed to be urbanized by 2035 (outside UGB)	6,161	6,161
<b>Total Corridor Area</b>	<b>12,953</b>	<b>12,953</b>

\*Includes approximate UGB allocation of 197 acres.

\*\*Excludes portion that extends into Weld County.

The corridor contains two urban centers, both in the city of Brighton: The Adams Crossing Activity Center located off E-470, and the Downtown Brighton Activity Center, located at the intersection of 160<sup>th</sup> Avenue and US 85.

Figure 1 shows predominately residential and mixed-used land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 17 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these zones, seven are only “minority-concentrated”, and ten zones are both “minority-concentrated” and “low-income concentrated”.

3. Parks and Recreation Areas

Approximately 692 acres, or 5 percent of the total acreage of 13,971 within the corridor, consists of parks and open space. Among the larger park areas within the corridor is a county-owned regional park on the west side of the corridor, north of 120<sup>th</sup> Avenue, and the municipally-owned Platte River Ranch Park in Brighton.

4. Hazardous Materials

An initial analysis the corridor reveals no significant sites within the corridor. Sixty-eight Underground Storage Tanks (USTs) lie within the corridor.

5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the South Platte Urban Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—24 TAZs out of a total of 47 within the corridor include at least a portion of a flood hazard area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble's Meadow Jumping Mouse, the Burrowing Owl and the Ute-Ladies' Tresses Orchid.

## 7. Historic and Archaeological Resources

There are no existing historic/archaeological districts within the corridor.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Highway Capacity and Major Capital Projects

- Widen US-85 between I-76 and the Weld County line;
- Construct new grade-separated interchanges on US-85 at 104<sup>th</sup>, 112<sup>th</sup>, 120<sup>th</sup>, 136<sup>th</sup>, 144<sup>th</sup>, and 168<sup>th</sup> Avenues and at Bromley Lane (many of these are envisioned to grade separate the UP tracks as well);
- Construct new interchange on US-85 at WCR 6;
- Reconstruct the US-85 interchange at SH-7;
- Widen Sable Blvd between 124<sup>th</sup> Ave and Bromley Lane;
- *Widen 104<sup>th</sup> Ave between Colorado Boulevard and SH-2;* and
- Widen SH-7 where it crosses US-85.

### Transit

- Provide commuter bus service between Denver and Greeley along US-85.

### Bicycle/Pedestrian

- Complete the South Platte River Trail from 120<sup>th</sup> Avenue to the Weld County Line.

## System Management

- *Implement intersection improvements (e.g., turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections as appropriate (in some instances, interim before interchange construction);*
- Implement appropriate transit operational improvement treatments e.g. queue jumps) at intersections near rail stations to accommodate feeder bus service;
- Upgrade signals at adjacent road railroad crossings and integrate them with CDOT traffic signal system (for interim period until new interchanges are constructed);
- Operate corridor signals using traffic-responsive control; implement needed system detection;
- Implement network surveillance at key points throughout entire corridor;
- Implement/use DMSs to disseminate real-time traffic information, including real-time park-n-Ride parking occupancy and transit parking alternatives, from regional ATIS; and
- Adhere to US-85 Access Management Plan, strictly regulating access from adjacent development. SH-2 is RB and NRC, SH-22 is NRB & NRC, and SH-44 is NRB.

## Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along US-85, SH-22, SH-2, and SH-44 with a potential for crash reductions.*

## Other

- Construct a freight railroad bypass to the east of Denver that would reduce the number of trains passing through the corridor.

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## **A-12. US-85 South (Santa Fe Drive) Multimodal Corridor Vision: Castle Rock to I-25/Denver**

Relevant Studies: (1) *South I-25 Corridor and US-85 Corridor FEIS/ROD*—Revised ROD signed—October 2002. Study Limits: I-25 (MP 178) to I-25 (MP 195)—(Covers Douglas County part of this corridor, (2) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program.

The transportation vision for the **US-85 South Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. The corridor also includes **Platte Canyon Road (SH-75)** from C-470 to US-85. The southern section of the corridor traverses a largely rural area between Castle Rock and Highlands Ranch. The northern section has a mix of suburban and industrial land uses. Bus/HOV lanes exist in the corridor, operating in the peak weekday travel periods. US-85 is paralleled by major freight railroad lines for the entire length. The Southwest light rail line and several transit stations with park-n-Ride lots are located in the corridor. An extension is planned to Lucent Boulevard and C-470. Intercity rail service is envisioned (tier 2) south to Castle Rock and Colorado Springs (see Corridor Sub-Area Exhibit #5 and #6).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition;
- Maintain statewide transportation connections; and
- Implement design treatments and services to create a functional multimodal street (especially within a 1-mile radius of rail transit stations).

### **Corridor Context**

The following statistics are reported for a 25.5-mile long corridor area encompassing one mile on both sides of US-85 from I-25 in Denver to the town of Castle Rock in Douglas County. The corridor is projected to experience significant population and employment growth from 2005 to 2035. Projections indicate a population increase of 51 percent, a 41 percent increase in employment, and a 61 percent increase in households within the corridor. Travel demand is projected to increase 44 percent from 2005 to 2035.

Congestion measures show the US-85 corridor currently experiences a high level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1: US-85 South Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.45	1.27	2.18
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	3-4	1	4-5
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	30%	18.5%	51%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	5,093	217,280	22,420
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	70	25	—

**Selected Environmental Resources:**

1. Land Use—Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

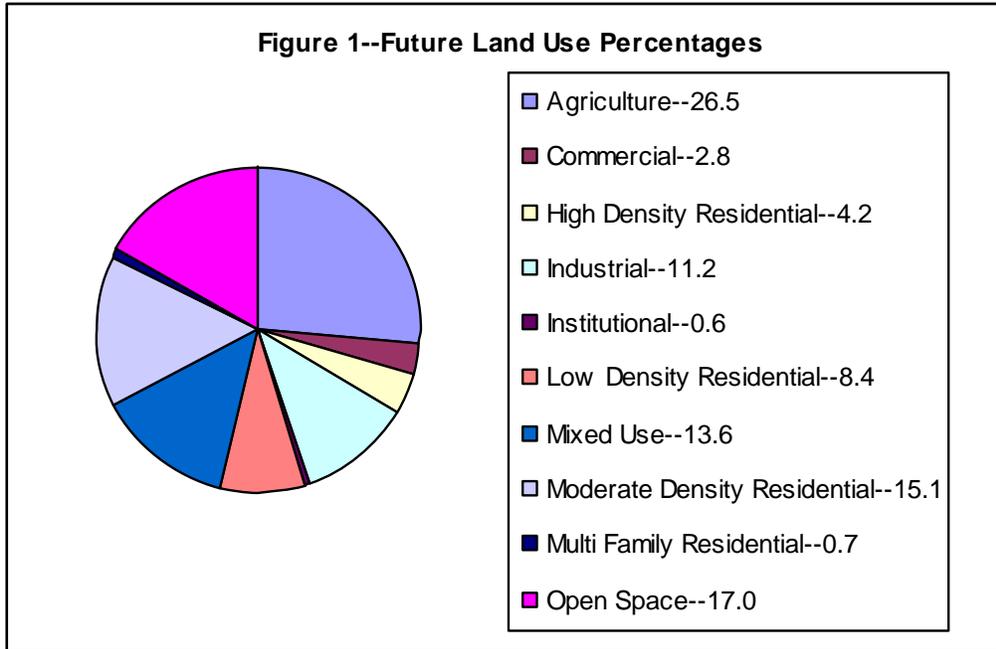
**Table 2. US-85 South —Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties				Total
	Arapahoe	Denver	Douglas*	Jefferson	
Within UGB--Expected to be urbanized by 2035	7,994	4,428	7,851		20,273
-- <i>Currently Urbanized</i>	7,621	4,392	6,768	0	18,781
-- <i>Currently Non-Urbanized</i>	303	36	1,082.5		1,422
Not proposed to be urbanized by 2035 (outside UGB)	1,476	152	13,219	15.5	14,863
<b>Total Corridor Area</b>	<b>9,470</b>	<b>4,580</b>	<b>21,070</b>	<b>16</b>	<b>35,136</b>

\*Includes approximate UGB allocation of 1,044 acres to Douglas County.

The corridor contains four mixed-use urban centers: Englewood City Center, located in Englewood; the Evans Station TOD, located in Denver; the Broadway Station TOD, located in Denver; and Alameda Station, located in Denver.

Figure 1 shows a diversity of land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *South I-25 Corridor and US-85 Corridor FEIS* provides a more thorough description of land use and zoning for the US-85 Corridor within its study area. The *FasTracks PCEA* also provides some more information on existing and anticipated land use surrounding the light rail line.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 27 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these zones, 17 are only “minority-concentrated”, and 10 zones are both “minority-concentrated” and “low-income concentrated”. The *South I-25 Corridor and US- 85 Corridor FEIS* provides a more thorough description of potentially affected EJ areas for the US-85 Corridor within its study area.

## 3. Parks and Recreation Areas

Approximately 7,496 acres, or 21.3 percent of the total acreage of 35,178 within the corridor, consists of parks and open space. Among the larger park areas within the corridor is Chatfield State Park on the west side of the corridor, Cherokee Ranch on the southeast side of the corridor and the Wildcat Mountain Reserve on the east side of the corridor. The *South I-25 Corridor and US-85 Corridor FEIS* provides a more thorough description of potentially affected parks and recreation areas for the US-85 Corridor within its study area.

## 4. Hazardous Materials

An initial analysis the corridor reveals no significant sites within the corridor. Four hundred and thirty-five Underground Storage Tanks (USTs) lie within the corridor. The *South I-25 Corridor*

and *US-85 Corridor FEIS* provides a more thorough description of potential hazardous waste sites within the US-85 Corridor within its study area.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the Chatfield Watershed in the South, and the South Platte Urban Watershed in the north.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations intersect the corridor—90 TAZs out of a total of 157 within the corridor include at least a portion of a flood hazard area.

The *South I-25 Corridor and US-85 Corridor FEIS* provides a more thorough description of potentially affected wetlands, floodplains, and other water resources for the US-85 corridor within its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble's Meadow Jumping Mouse, the Black-Tailed Prairie Dog and the Ute-Ladies' Tresses Orchid. The *South I-25 Corridor and US-85 Corridor FEIS* provides a more thorough description of potentially affected wildlife habitat areas (including Threatened and Endangered Species) for the US-85 Corridor within its study area.

## 7. Historic and Archaeological Resources

There are eight historic districts in the corridor. The largest ones are the Bear Canyon Agricultural District, the Cherokee Ranch/Charlford Castle, and Louviers Village. These are all located in Douglas County. The *South I-25 Corridor and US-85 Corridor FEIS* provides a more thorough description of potentially affected historic and archaeological resources for the US-85 Corridor within its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Highway Capacity and Major Capital Projects

- Widen US-85 between Bowles Avenue in Littleton and Meadows Parkway in Castle Rock;

- Widen Platte Canyon Road between C-470 and Bowles Avenue;
- Construct new grade-separated interchanges on US-85 at the North Meadows Drive extension and at Dartmouth Avenue;
- Construct intersection or interchange improvements adjacent to northern terminus of the corridor at Alameda Avenue and the crossing of the Consolidated Mainline Railroad;
- *Reconstruct US-85 (Santa Fe Drive) interchanges at C-470 and at I-25 (north end);* and
- Widen Alameda Avenue, Hampden Avenue, Mineral Avenue, C-470, and Highlands Ranch Parkway as they cross US-85; and
- Implement design treatments and services to create a functional multimodal street (especially within a one-mile radius of rail transit stations).

### Transit

- *Extend the existing Southwest light rail line to C-470;*
- *Expand the existing light rail station park-n-Ride at Englewood;* and
- Construct intercity rail line along a conceptual corridor paralleling US-85.

### Bicycle/Pedestrian

- Provide a bicycle facility along or parallel to US-85 in Douglas County; and
- Improve pedestrian crossings of Santa Fe Drive and the adjacent freight railroad line.

### System Management

- *Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections as appropriate.* Implement appropriate transit operational improvements (e.g. queue jumps) at intersections near rail stations to accommodate feeder bus service;
- Upgrade signals at adjacent road railroad crossings and integrate them with CDOT traffic signal system in Douglas County;
- Operate corridor signals using traffic-responsive control from Highlands Ranch Parkway north to I-25; implement needed detection. Consider possible HOV priority from Bowles north;
- Implement full network surveillance from Highlands Ranch Parkway north to I-25, and surveillance at key points to the south;
- Implement/use DMSs to disseminate real-time traffic and route guidance (as I-25 incident diversion route) information, from regional ATIS, including real-time park-n-Ride parking occupancy and transit parking alternatives in southern portion of corridor;
- Regulate access from adjacent development by developing an Access Management Plan from Sumner Street (Littleton) to C-470, and adhering to US-85 Access Management Plan south of C-470, EX access category from Sumner Street to Florida Avenue, and NRA access category further north to I-25; and
- Consider peak period lane restrictions on trucks from C-470 to the north.

### Travel Demand Management

- *Target efforts to increase transit use of the Southwest Corridor light rail line; and*
- *Targeted activities to increase car-and van-pooling from areas outside the immediate reach of rapid or intercity transit.*

### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along US-85 with a potential for crash reductions.*

### Other

- *Construct a freight railroad bypass to the east of Denver that would reduce the number of trains passing through the corridor.*

## **A-13. US-285 Multimodal Corridor Vision: Park County Line to SH-8**

Relevant Studies: (1) *US-285 Foxton Road to Bailey Environmental Assessment*. August 2004. Study Limits: US-285 in Bailey (MP 220.5) to Foxton Road near Conifer (MP 235.2). (2) *Jefferson County Conifer/285 Corridor Area Community Plan-Adopted September 2003*, Plan limits: US-285 within Jefferson County.

The transportation vision for the **US-285 Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips and feeding statewide connections to the west. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. The corridor serves a high amount of recreational weekend traffic and daily commuter traffic to and from the Denver urban area. It is located in a mountainous area with limited adjacent commercial and residential activity. Regional bus service is provided and park-n-Ride lots are located along the corridor (see Corridor Sub-Area Exhibit #6).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 19.9-mile long corridor area encompassing one mile on both sides of US-285 from the Park County line to State Highway 8 in Jefferson County. The corridor is projected to experience population and employment growth from 2005 to 2035. Projections indicate a population increase of 22 percent, a 30 percent increase in employment, and a 30 percent increase in households within the corridor. Travel demand is projected to increase 70 percent from 2005 to 2035.

Congestion measures show the US-285 corridor experiences an average level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. US-285 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.29	1.27	2.28
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	1	1	5
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	21%	18.5%	54%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	1,147	217,280	12,369
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	55	25	—

The *US-285 Foxton Road to Bailey EA* gives a more thorough description of both existing and future traffic volumes within its study area.

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. US-285 —Existing Urbanization and Projected 2035 UGB (acres)**

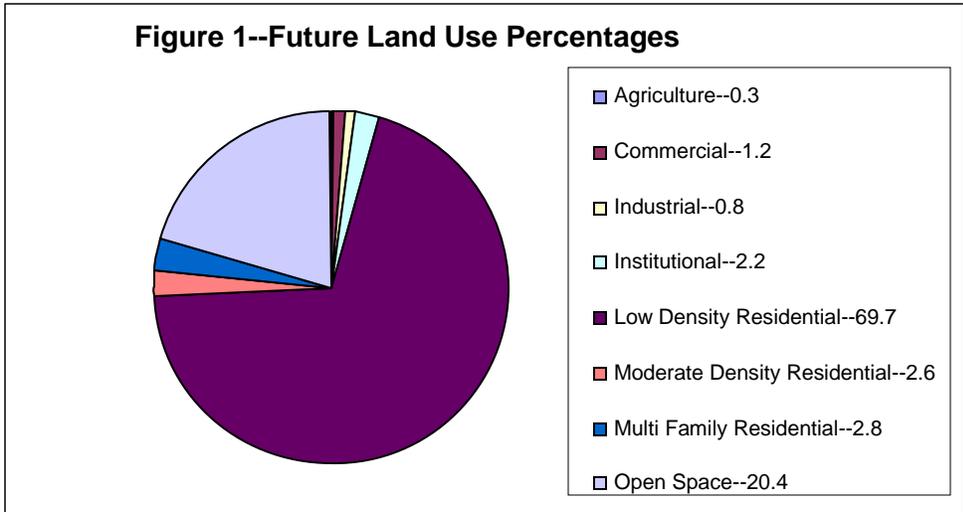
Development Type	County	Total**
	Jefferson*	
Within UGB--Expected to be urbanized by 2035	3,128.5	3,129
-- <i>Currently Urbanized</i>	2,574	2,574
-- <i>Currently Non-Urbanized</i>	554	554
Not proposed to be urbanized by 2035 (outside UGB)	22,071	22,071
<b>Total Corridor Area</b>	<b>25,200</b>	<b>25,200</b>

\*Includes approximate UGB allocation of 9 acres to Morrison (Jefferson County).

\*\*Excludes portion of corridor that extends into Park County.

The corridor contains no urban centers.

Figure 1 shows predominately residential land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *US-285 Foxton Road to Bailey EA* gives a more thorough description of both existing and future land use, as well as potential impacts, within its study area.

2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that none of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. The *US-285 Foxton Road to Bailey EA* gives a more thorough description of the environmental justice population and potential impacts, within its study area.

3. Parks and Recreation Areas

Approximately 2,153 acres, or 8.2 percent of the total acreage of 26,102 within the corridor, consists of parks and open space. Among the larger open space areas within the corridor are the Jefferson County open space in the northern part of the corridor, fronting US-285; Mount Falcon Park in the north, just off of Parmalee Gulch Road; and Meyer Ranch Park in the central part of the corridor, also fronting US-285. The *US-285 Foxton Road to Bailey EA* gives a more thorough description of existing parks and recreation areas and potential impacts, within its study area.

4. Hazardous Materials

An initial analysis the corridor reveals no significant sites within the corridor. Nineteen Underground Storage Tanks (USTs) lie within the corridor. The *US-285 Foxton Road to Bailey EA* gives a more thorough description of hazardous waste sites and potential impacts, within its study area.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the Upper South Platte Watershed in the southwest, and the Bear Creek Watershed in the northeast.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations intersect the corridor. 16 TAZs out of a total of 19 within the corridor include at least a portion of a flood hazard area.

The *US-285 Foxton Road to Bailey EA* gives a more thorough description of wetlands, floodplains, and other water resources, as well as potential impacts within its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Mexican Spotted Owl, the Common Shiner, and the Ute-Ladies' Tresses Orchid. The *US-285 Foxton Road to Bailey EA* gives a more thorough description of existing wildlife habitat, (including that of Threatened and Endangered Species), and potential impacts measures within its study area.

## 7. Historic and Archaeological Resources

There is one historic district in the corridor—the Midway House-Meyer Ranch-Broken Bar M Ranch in Conifer. The *US-285 Foxton Road to Bailey EA* gives a more thorough description of existing historic and archaeological properties and potential impacts within its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Highway Capacity and Major Capital Projects

- Widen US-285 between the Park County line and Richmond Hill Road; and
- Construct three new grade separations between Pine Junction and Richmond Hill Road.

### Transit

- Provide additional bus transit service as demand increases.

### Bicycle/Pedestrian

- Provide pedestrian and bicycle access between developments that do not have direct access to US-285.

### System Management

- Implement network surveillance at key points throughout entire corridor;
- Implement/use DMSs to display mountain travel weather advisories;
- Adhere to EX access category, strictly regulating access from adjacent development; and
- Construct frontage roads to serve local developments.

### Travel Demand Management

- Targeted activities to increase car-and van-pooling from areas outside the immediate reach of rapid or intercity transit.

### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along US-285 with a potential for crash reductions.*

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## **A-14. US-287 Multimodal Corridor Vision: US-36 to Larimer County Line**

The transportation vision for the **US-287 Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips and feeding statewide connections to the north. Future improvements will primarily improve mobility as well as maintain system quality and improve safety. The corridor also includes **SH-42** from US-287 to Arapahoe Road (SH-7). US-287 serves as a local Main Street as it passes through Longmont. Bus transit service is provided along the corridor and provides an important connection between Longmont and Denver, and between Erie and the US-36 Corridor. From Longmont north, a state intercity rail connection is envisioned (tier 2). The northern end of the corridor connects to the developing areas of Larimer County (see Corridor Sub-Area Exhibit #9).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private commercial and public transit vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle, use of public transit, and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain interregional transportation connections.

### **Corridor Context**

The following statistics are reported for a 24.2-mile long corridor area encompassing one mile on both sides of US-287 from US 36 to the Larimer County line. The corridor is projected to experience moderate population and employment growth from 2005 to 2035, especially in the northern section of this corridor. Projections indicate a population increase of 41 percent, a 44 percent increase in employment, and a 49 percent increase in households within the corridor. Travel demand is projected to increase 38 percent from 2005 to 2035.

Congestion measures show the US-287 corridor experiences an average level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. US-287 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.27	1.27	1.64
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	1	1	4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	19%	18.5%	36%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	2,332	217,280	8,473
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	60	25	—

**Selected Environmental Resources:**

1. Land Use—Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. US-287 —Existing Urbanization and Projected 2035 UGB (acres)**

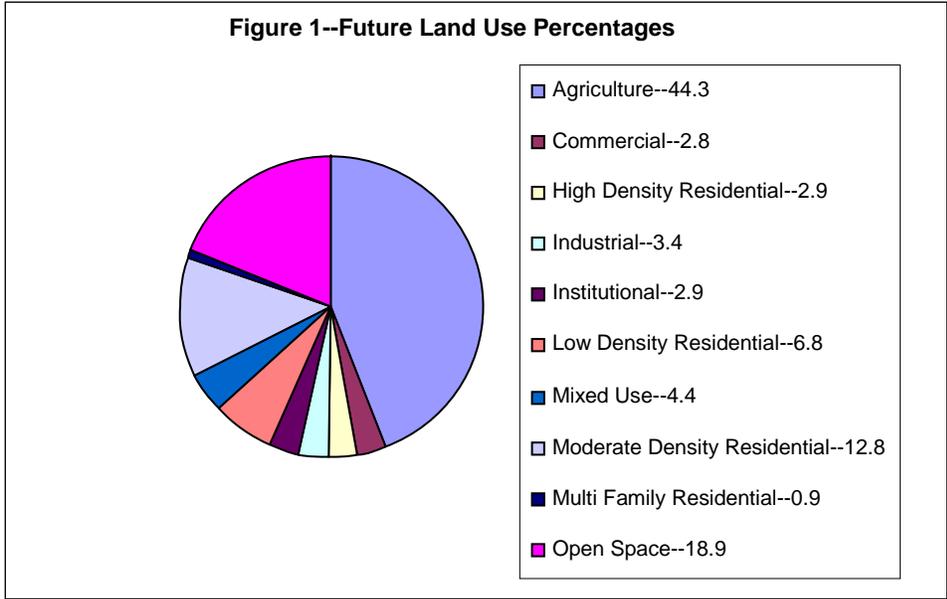
Development Type	Counties			Total**
	Boulder*	Broomfield	Jefferson	
Within UGB--Expected to be urbanized by 2035				
-- <i>Currently Urbanized</i>	11,850	3,106	176.5	15,133
-- <i>Currently Non-Urbanized</i>	10,093	3,092	176.5	13,361
	1,757	15	0	1,772
Not proposed to be urbanized by 2035 (outside UGB)	16,734	85	0	16,819
<b>Total Corridor Area</b>	<b>28,584</b>	<b>3,191</b>	<b>177</b>	<b>31,952</b>

\*Includes approximate UGB allocation of 1,146 acres to Boulder County (Erie, Lafayette, and Longmont)

\*\*Does not include portion of buffer that extends into Larimer County.

The corridor contains six urban centers: the Urban Transit Village mixed-use center and Original Broomfield TOD activity center in Broomfield; the Ken Pratt Extension activity center in Longmont; the CBD of Longmont; the North Main Street Activity Center in Longmont; and the SH66 Mixed-use Corridor activity center in Longmont.

Figure 1 shows predominately agricultural uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 25 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these 25 zones, four of these zones in the corridor are both “minority-concentrated” and “low-income concentrated”. Twenty-one are only “minority-concentrated”.

3. Parks and Recreation Areas

Approximately 11,568 acres, or 35 percent of the total acreage of 32,936 within the corridor, consist of parks and open space. Among the larger open space areas within the corridor are Ertl, Rock Creek Farm, and Yoakum, all in unincorporated Boulder County.

4. Hazardous Materials

An initial analysis the corridor reveals no significant sites within the corridor. One hundred forty-one Underground Storage Tanks (USTs) lie within the corridor.

5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the Big Dry Watershed in the South, and the St. Vrain Watershed in the north

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations intersect the corridor. 56 TAZs out of a total of 133 within the corridor include at least a portion of a flood hazard area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble's Meadow Jumping Mouse, the Northern Pocket Gopher, and the Ute-Ladies' Tresses Orchid.

## 7. Historic and Archaeological Resources

There are three historic districts in the corridor; the Lafayette Eligible Historic District in Lafayette, and the West Side and East Side Historic Districts in Longmont.

### Primary Strategies:

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen US-287 between Midway Boulevard and Empire Road/SH-42;
- *Widen Dillon Rd/144<sup>th</sup> Avenue, Arapahoe Road, Isabelle Road, Mineral Road (SH-52), and Ute Road (SH-66) where they cross US-287; and*
- Widen SH-42 between US-287 and Baseline Road.

### Transit

- *Provide feeder bus service to the US-36 and Longmont Diagonal rail transit stations and continuing service onto the US-36 BRT line; and*
- *Add additional local bus service between Erie and US-36 Corridor.*

### Bicycle/Pedestrian

- Complete gaps on the regional bicycle corridor along US-287 and the community corridor along SH-42.

### System Management

- *Implement intersection improvements on US-287 and SH-42 (e.g., turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections as*

*appropriate.* From SH-66 to SH-52, implement appropriate transit operational improvements (e.g., queue jumps) at intersections;

- Upgrade signals at US-287 railroad crossings and integrate them with Longmont and CDOT traffic signal systems;
- Operate corridor signals using traffic-responsive signal control; implement needed system detection including bicycle detection and dilemma-zone-clearance;
- Implement network surveillance at key points throughout entire corridor;
- North of Vermillion Road, and south of SH-119, adhere to NRA and RA access category requirements, regulating access from adjacent development. Raised median treatments may be necessary in some locations; and
- Pursue access consolidation/driveway reconstruction as feasible between Vermillion Road and SH-119.

#### Travel Demand Management

- Consider strategic open space purchases, transfers of development rights, rural preservation zoning/buy downs or similar strategies to reduce development/traffic north of Vermillion Road and between Plateau Road and SH-7.

#### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along US-287 with a potential for crash reductions.*

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## **A-15. Wadsworth Boulevard (SH-121) Multimodal Corridor Vision: C-470 to US-36**

Relevant Studies: (1) *Wadsworth/Grandview Railroad Separation Environmental Assessment/FONSI*—EA completed May 9, 2005, FONSI issued August 31, 2005. EA Limits: Wadsworth Bypass from 55<sup>th</sup> Avenue to 58<sup>th</sup> Avenue.

(2) *Wadsworth Boulevard Environmental Assessment* (EA completed June 2009, FONSI issued, March 2010), Study Limits: 3<sup>rd</sup> Avenue to 13<sup>th</sup> Avenue including US-6/Wadsworth Interchange.

Website: <http://www.dot.state.co.us/US6Wadsworth/index.cfm>

The transportation vision for the **Wadsworth Boulevard (SH-121) Corridor** is to serve as a multimodal major regional arterial facilitating longer distance regional trips and access to adjacent establishments in the most densely developed areas. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. Most of the corridor is situated in a densely developed urban and suburban area. High frequency bus service is provided and complemented by several park-n-Ride lots. Feeder service to the five rapid transit stations for lines crossing Wadsworth Boulevard will be provided. A rapid transit line along Wadsworth is also envisioned in tier 2. Rocky Mountain Metropolitan Airport is located adjacent to the northern end of the corridor. The corridor also includes **SH-121** from C-470 south to Waterton Road, **Sheridan Boulevard (SH-95)** from US-285 to US-36, and **Kipling Street (SH-391)** from US-285 to I-70 (see Corridor Sub-Area Exhibits #6, #7, and #8).

### Primary Goals/Objectives:

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies; and
- Maintain or improve pavement to optimal condition.

### Corridor Context

The following statistics are reported for a 25.6-mile long corridor area encompassing one mile on both sides of Wadsworth Boulevard from C-470 to US-36. Population and employment growth is expected in the corridor. The corridor is projected to experience population and employment growth from 2005 to 2035. Projections indicate a population increase of 20 percent, a 36 percent increase in employment, and a 28 percent increase in households within the corridor. Travel demand is projected to increase 27 percent from 2005 to 2035.

Congestion measures show the Wadsworth Boulevard corridor currently experiences a high level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. Wadsworth Boulevard (SH-121) Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.68	1.27	2.00
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	3	1	4-5
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	37%	18.5%	47%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	9,146	217,280	17,990
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	127	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. Wadsworth Boulevard —Existing Urbanization and Projected 2035 UGB (acres)**

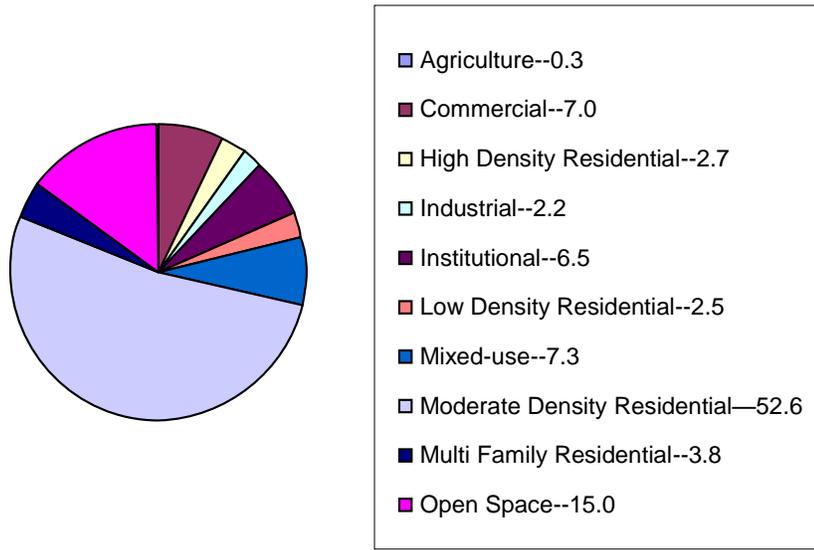
Development Type	Counties			Total
	Broomfield	Denver	Jefferson*	
Within UGB--Expected to be urbanized by 2035				
-- <i>Currently Urbanized</i>	2,439	1,629	27,232	31,300
-- <i>Currently Non-Urbanized</i>	2,439	1,625	26,708	30,772
	0	3	524	527
Not proposed to be urbanized by 2035 (outside UGB)	1	556	3,325	3,882
<b>Total Corridor Area</b>	<b>2,440</b>	<b>2,185</b>	<b>30,557</b>	<b>35,182</b>

\*Includes approximate UGB allocation of 123 acres to (Westminster) Jefferson County.

The corridor contains nine urban centers. Four are mixed-use: Olde Town/New Town in Arvada, Broomfield Urban Transit Village, Wadsworth Center, and Lakewood Center. Four are activity centers; Westminster Center, Westminster Promenade, Original Broomfield TOD, and Southwest Plaza in unincorporated Jefferson County. One is a regional corridor, the C-470 corridor.

Figure 1 shows predominately residential land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.

**Figure 1--Future Land Use Percentages**



The *Wadsworth/Grandview Railroad Separation Environmental Assessment* and the *Wadsworth Boulevard Environmental Assessment – “Summary of Existing Conditions”* report give a more detailed overview of existing and future land use as well as potential impacts within their respective study areas.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 31 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. All 31 zones are “minority-concentrated”. The *Wadsworth/Grandview Railroad Separation Environmental Assessment* gives a more detailed overview of EJ areas and potential impacts within its study area.

## 3. Parks and Recreation Areas

Approximately 4,614 acres, or 13.1 percent of the total acreage of 35,200 within the corridor, consists of parks and open space. Among the larger parks are Chatfield State Park and Robert F. Clement Park, both in unincorporated Jefferson County at the southern end of the corridor. Both the *Wadsworth/Grandview Railroad Separation Environmental Assessment* and the *Wadsworth Boulevard Environmental Assessment – “Summary of Existing Conditions”* report give a more detailed overview of existing park and recreation areas as well as potential impacts within their respective study areas.

## 4. Hazardous Materials

An initial analysis the corridor reveals no significant sites within the corridor. Three hundred Underground Storage Tanks (USTs) lie within the corridor. Both the *Wadsworth/Grandview Railroad Separation Environmental Assessment* and the *Wadsworth Boulevard Environmental Assessment – “Summary of Existing Conditions”* report give a more detailed overview of existing hazardous waste sites use as well as potential impacts within their respective study areas.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the Chatfield, South Platte Urban, and Big Dry watersheds.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations intersect the corridor—130 TAZs out of a total of 216 within the corridor include at least a portion of a flood hazard area. Both the *Wadsworth/Grandview Railroad Separation Environmental Assessment* and the *Wadsworth Boulevard Environmental Assessment – “Summary of Existing Conditions”* report give a more detailed overview of floodplains, wetlands, and other water resources, as well as potential impacts within their respective study areas.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Whooping Crane, Preble’s Meadow Jumping Mouse, and the Ute-Ladies’ Tresses Orchid. Both the *Wadsworth/Grandview Railroad Separation Environmental Assessment* and the *Wadsworth Boulevard Environmental Assessment – “Summary of Existing Conditions”* report give a more detailed overview of wildlife habitat, including those of Threatened and Endangered species, as well as potential impacts within their respective study areas.

## 7. Historic and Archaeological Resources

There are four historic districts in the corridor—the Stocke/Walter Addition, the Reno Park Addition, and the Arvada Downtown-Olde Town, all in Arvada, and the Jewish-Consumptives’ Relief Society in Lakewood. Both the *Wadsworth/Grandview Railroad Separation Environmental Assessment* and the *Wadsworth Boulevard Environmental Assessment – “Summary of Existing Conditions”* report give a more detailed overview of historical and archaeological resources, as well as potential impacts within their respective study areas.

## **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Highway Capacity and Major Capital Projects

- Widen Wadsworth Boulevard between C-470 and Ohio Avenue, between 14<sup>th</sup> Avenue and I-70, and between 92<sup>nd</sup> Avenue and 120<sup>th</sup> Avenue/SH-128;
- Widen Kipling Street between US-285 and I-70 to six through lanes;
- Widen Sheridan Boulevard between I-76 and US-36;
- *Reconstruct interchanges on Wadsworth Boulevard at US-285, US-6, and US-36;*
- *Reconstruct interchanges on Kipling Street at US-285, US-6, and I-70;*
- Reconstruct interchanges on Sheridan Boulevard at US-285, US-6, and US-36; and
- Improvements to C-470, US-285, I-70, I-76, US-36, Chatfield Avenue, Ken Caryl Avenue, Quincy Avenue, Alameda Avenue, and 100<sup>th</sup> Avenue where they cross the corridor.

### Transit

- Construct rapid transit line in the corridor between Bowles Avenue and US-36; and
- *Construct rapid transit stations in the corridor to serve the US-36 (rail and HOV), Gold Line, and West Corridor lines.*

### Bicycle/Pedestrian

- *Provide additional grade separated bicycle/pedestrian underpasses or overpass at high volume locations;*
- *Complete the regional bicycle corridor between US-36 and 72<sup>nd</sup> Avenue;*
- *Complete the community bicycle corridor from Quincy Avenue to Bowles Avenue; and*
- Complete the community bicycle corridor from Ken Caryl Avenue to C-470.

### System Management

- *Implement intersection improvements on SH-121, SH-95, and SH-391 (e.g., turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections as appropriate.*
- Implement appropriate transit operational improvements (e.g. queue jumps) at intersections near rail stations to accommodate feeder bus service and/or circulators;
- Operate corridor signals using traffic-responsive signal control; implement needed system detection;
- From Bowles Avenue to US-36, operate signals in a manner that supports the rapid transit line;

- Implement full network surveillance throughout entire corridor; and
- As feasible, pursue access consolidation, driveway reconstruction, raised median implementation, provision or extension of right turn acceleration/deceleration lanes, backstreet access between developments, etc. consistent with NRA access category.

#### Travel Demand Management

- *Target efforts to increase transit use of the Gold Line, US-36 rail/BRT, and West Corridor rapid transit lines.*

#### Preservation and Safety

- *Rebuild deficient traffic signals on SH-121, SH95 and SH-391; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along SH-121, SH-95, and SH-391 with a potential for crash reductions.*

## **F-1. C-470 Multimodal Corridor Vision: US-6 to I-25**

Relevant Studies: (1) *C-470 Corridor Environmental Assessment*—Prepared February 2006  
Study Limits: Kipling Parkway to I-25. (2) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program.  
(3) *Southeast Corridor Extension Environmental Evaluation*—March 2010. Study Limits: Lone Tree Station to south of RidgeGate Parkway

The transportation vision for the **C-470 Corridor** is to serve as a multimodal interstate freeway and rapid transit corridor serving regional and statewide trips. Future improvements will primarily increase mobility as well as maintain system quality and to improve safety. C-470 is a beltway facility in the southwest part of the area providing a connection between I-70 and I-25 for statewide trips while providing regional accessibility. The western segment traverses several open space areas and serves Red Rocks Park. The southern east-west segment serves a major regional shopping mall/district and is primarily situated in a suburban developed area. Bus service is provided along the corridor. Light rail transit will be constructed from US-85 Santa Fe to Lucent Boulevard (tier 1) and rapid transit is envisioned from Lucent Boulevard east to I-25 (tier 2). Preservation of right-of-way for transit west of US-85 is envisioned. Centennial Airport is located adjacent to the eastern end of the corridor. Significant population and employment growth surrounding the corridor area will cause increased traffic (see Corridor Sub-Area Exhibit #6).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 27-mile long corridor area encompassing one mile on both sides of C-470 from US-6 to I-25. The corridor is projected to experience moderate population and employment growth from 2005 to 2035. Projections indicate a population increase of 41 percent, a 70 percent increase in employment, and a 49 percent increase in households within the corridor. Travel demand is projected to increase 47 percent from 2005 to 2035. Significant population and employment growth surrounding the corridor area will cause increased traffic. The C-470 corridor currently experiences an above average level of

congestion, which will grow worse in 2035, as shown by the congestion measures in the following table:

**Table 1. C-470 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.44	1.27	2.93
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	1-2	1	3-4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	21%	18.5%	49%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	6,650	217,280	41,940
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	41	25	—

**Selected Environmental Resources:**

1. Land Use—Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

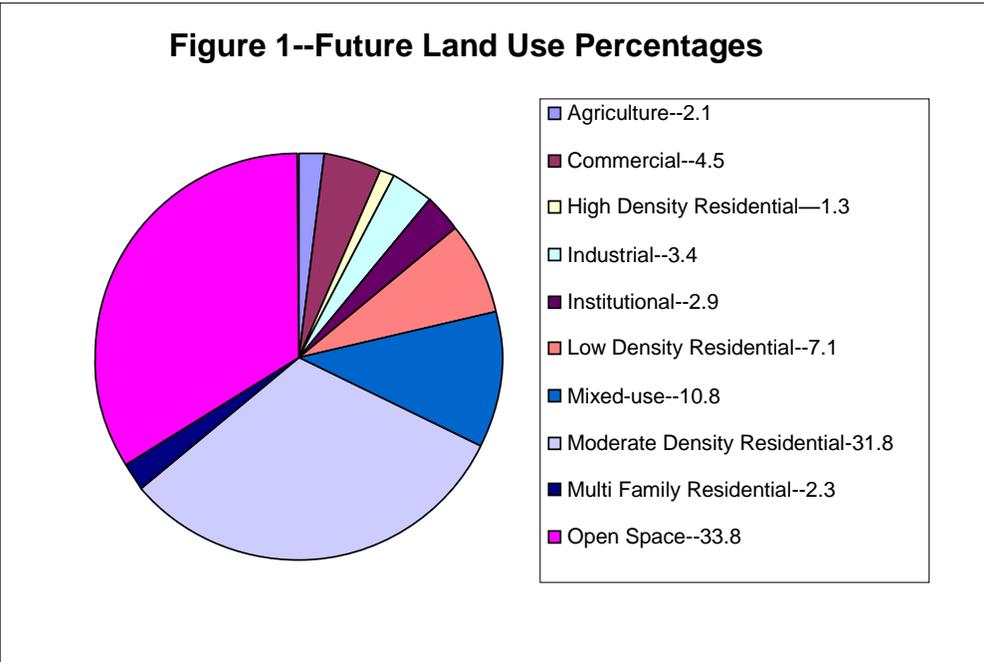
**Table 2. C-470 —Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties			Total
	Arapahoe	Douglas	Jefferson*	
Within UGB--Expected to be urbanized by 2035	4,284	8,250	10,432	22,966
-- <i>Currently Urbanized</i>	4,182	8,208	8,889	21,279
-- <i>Currently Non-Urbanized</i>	101	43	1,544	1,687
Not proposed to be urbanized by 2035 (outside UGB)	976	929	11,797	13,702
<b>Total Corridor Area</b>	<b>5,260</b>	<b>9,179</b>	<b>22,229</b>	<b>36,668</b>

\*Includes approximate UGB allocation of 171 acres to Golden, Morrison, and Jefferson County.

The corridor contains five urban centers. Two are mixed-use; the Highlands Ranch Town Center and the Lincoln Station TOD. Bowles is an activity center. The C-470 corridor is a regional corridor urban center. The C-470 corridor also intersects the I-25 Corridor regional corridor at its eastern extent.

Figure 1 shows a diversity of future land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004. The *C-470 Corridor Environmental Assessment* has an extensive discussion of land use within its study limits.



The *FasTracks* PCEA also provides some more information on existing and anticipated land use surrounding the light rail line.

2. Environmental Justice

DRCOG’s assessment of Environmental Justice (EJ) areas, based on the 2000 Census, shows that of the 568 overall EJ traffic analysis zones (TAZs) in the DRCOG region, two fall within the corridor. The EJ zones in this corridor all are “minority-concentrated”. None of the zones in the corridor are “low-income concentrated”. The *C-470 Corridor Environmental Assessment* has an extensive discussion of environmental justice in its study limits.

3. Parks and Recreation Areas

Approximately 30.7 percent of the total acreage, or 11,274 out of 36,754 acres within the corridor, consists of parks and open space. Much of the open space is part of the Ken Caryl Ranch, located in Jefferson County. Chatfield State Park lies on the southern part of the corridor. The *C-470 Corridor Environmental Assessment* has an extensive discussion of parks and recreation resources in its study limits.

4. Hazardous Materials

An analysis of sites contaminated with hazardous materials reveals some “hazardous waste sites” within the corridor. These consist predominantly of Underground Storage Tanks (USTs). The

*C-470 Corridor Environmental Assessment* has a detailed discussion of hazardous material sites in its study limits.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the South Platte Urban, Chatfield, and Bear Creek watersheds.

**Wetlands** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations bisect the corridor. 71 TAZs out of a total of 135 within the corridor) include at least a portion of a flood hazard area.

*The C-470 Corridor Environmental Assessment* has a detailed discussion and maps depicting floodplains and wetlands, as well as each alternatives' respective impacts on these resources in its study limits.

## 6. Wildlife

The habitats of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern are within the corridor. These species include Preble's Meadow Jumping Mouse, the Whooping Crane, and the Bald Eagle. The *C-470 Corridor Environmental Assessment* has a detailed discussion of wildlife habitat within its study limits.

## 7. Historic and Archaeological Resources

Three historic districts and one archaeological district, Ken-Caryl South Valley Archaeological District-South Ranch, are within the corridor. The *C-470 Corridor Environmental Assessment* provides a more detailed discussion of historic resources within its study limits.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen C-470 from Morrison Road to I-25;
- Construct new interchange at Colorado Boulevard;
- *Reconstruct the interchange at US-85 (Santa Fe Dr)*; and
- Widen Wadsworth Boulevard, Santa Fe Drive, Quincy Avenue, and *Alameda Avenue* where they cross C-470.

### Transit

- *Extend the existing Southwest Corridor light rail line to C-470/Lucent Boulevard;*
- *Construct a light rail station with parking at Lucent Boulevard;*
- *Construct rapid transit along C-470 from Lucent Boulevard to the Southeast light rail line at I-25;*
- *Preserve right-of-way for future rapid transit from US-6 to US-85; and*
- *Provide feeder bus service to West Corridor, Southwest Corridor, and I25 Corridor in interim.*

### Bicycle/Pedestrian

- *Complete 470 trail;*
- *Fix and maintain existing C-470 Trail within the corridor and construct more neighborhood connections; and*
- *Improve C-470 Trail crossings of the principal arterials in the corridor.*

### System Management

- *Implement courtesy patrol between US-6 and Wadsworth Boulevard (extending coverage to the entire corridor); and,*
- *Implement full network surveillance between US-6 and Santa Fe Drive (extending coverage to the entire corridor).*

### Travel Demand Management

- *Use DRCOG Ride Arrangers Program to focus TDM activities in high employment areas. Currently, there is no coverage by an existing TMO within the corridor.*

### Preservation and Safety

- *Install cable safety rail in median;*
- *Upgrade deficient signals at ramp intersections; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along C-470 with a potential for crash reductions.*

### Other

- *Additional capacity may warrant consideration as HOV/HOT managed lanes.*

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## **F-2. E- 470 Multimodal Corridor Vision: I-25 (S) to I-25 (N)**

Relevant Studies: (1) *I-76/E-470 Interchange—Project Feasibility Study Update—Interchange Management Plan—Funding Package—December 7, 1998*. Study Limits: I-76/E-470 Interchange in Adams County. (2) *E-470 Project Feasibility Study—October 27, 1998*. Study Limits: Proposed interchanges on E-470 between Washington Street and Colorado Boulevard in the City of Thornton. (3) *I-70/E-470 Interchange Environmental Assessment*. November 2006.

The transportation vision for the **E-470 Corridor** is to serve as a multimodal tollway corridor serving regional and statewide trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. E-470 provides an eastern beltway bypass around the urban core of the region and also serves DIA and Centennial Airport. A rapid transit line within the preserved transit right-of-way envelope may warrant long term consideration (tier 3). The corridor also includes **SH-30** from 6<sup>th</sup> Avenue to Quincy Avenue (see Corridor Sub-Area Exhibits #2, #3, and #4).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 47-mile long corridor area encompassing one mile on both sides of E-470 from I-25 South to I-25 North. The corridor is projected to experience significant population and employment growth from 2005 to 2035. Projections indicate a population increase of 365 percent, a 279 percent increase in employment, and a 400 percent increase in households within the corridor. Travel demand is projected to increase 251 percent from 2005 to 2035. Congestion measures show the E-470 corridor currently experiences no congestion, which will increase slightly in 2035, as shown in the following table:

**Table 1. E-470 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.00	1.27	1.04
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	0	1	0
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	0	18.5%	4%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	6.8	217,280	1,170
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	4	25	—

Both the *I-76/E-470 Interchange—Project Feasibility Study Update* and the *E-470 Project Feasibility Study*—provide existing and forecasted traffic conditions for their respective study areas.

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. E-470 —Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties				Total
	Adams*	Arapahoe**	Denver	Douglas***	
Within UGB--Expected to be urbanized by 2035	22,028	10,076	238	7,844	40,186
-- <i>Currently Urbanized</i>	4,684	6,822	137	6,484	18,127
-- <i>Currently Non-Urbanized</i>	17,343	3,254	101	1,361	22,059
Not proposed to be urbanized by 2035 (outside UGB)	12,543	8,031	2,219	1,589	24,382
<b>Total Corridor Area</b>	<b>34,571</b>	<b>18,107</b>	<b>2,457</b>	<b>9,433</b>	<b>64,568</b>

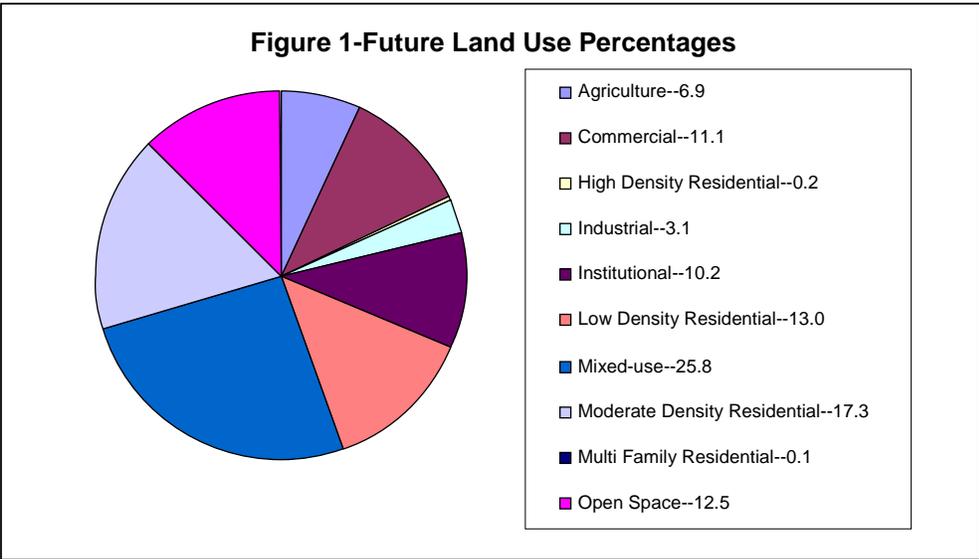
\*Includes approximate UGB allocation of 12,087 acres to Adams County.

\*\*Includes approximate UGB allocation of 2,740 acres to Arapahoe County.

\*\*\*Includes approximate UGB allocation of 639 acres to Douglas County.

Figure 1 shows a diversity of land uses (mixed-use and residential) are anticipated in the corridor, based on county and municipal land use plans—as of 2004.

The corridor contains ten urban centers. Three are mixed-use: 56<sup>th</sup> Avenue, Jewell Avenue, and Lincoln Station TOD. Five are activity centers: I-25/SH-7, Adams Crossing, Prairie Center, Smoky Hill, and I-25/Highway 7. Two regional corridors, E-470/I-70 and I-25.



Both the *I-76/E-470 Interchange—Project Feasibility Study Update* and the *E-470 Project Feasibility Study*—provide existing and forecasted land uses for their respective study areas.

2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that six zones of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the one mile buffer. Of these five zones, one zone is both “minority-concentrated” and “low-income concentrated”, while five zones are only “minority-concentrated”.

3. Parks and Recreation Areas

Approximately 3,824 acres, or 5.8 percent of the total acreage of 65,421 within the corridor, consists of parks and open space. The most significant parks/recreation areas are Barr Lake State Park on the northeastern section of the corridor and the Plains Conversation Center on the southwestern side.

4. Hazardous Materials

An initial analysis the corridor reveals no significant sites within the corridor. Thirty-five Underground Storage Tanks (USTs) lie within the corridor.

5. Water Resources

Three features of water resources are described here:

**Watersheds.** The southern section of the corridor lies in the South Platte Urban and the South Cherry Creek watersheds, while the northern section lies in the Big Dry Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations intersect the corridor—85 TAZs out of a total of 233 within the corridor include at least a portion of a flood hazard area. The *I-76/E-470 Interchange—Project Feasibility Study Update* also provides some existing and potential impacts to wetlands, floodplains, and other water resources within its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of Preble’s Meadow Jumping Mouse, the Black-tailed Prairie Dog and Ute Ladies’- Tresses Orchid.

## 7. Historic and Archaeological Resources

There are no existing or potential historic and/or archaeological districts within the corridor. The *I-76/E-470 Interchange—Project Feasibility Study Update* also provides some existing and potential impacts to historical sites within its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen E-470 between I-25 (south) and I-25 (north);
- Add missing movements to the interchange at I-76;
- Construct new interchanges at 48<sup>th</sup> Avenue, 88<sup>th</sup> Avenue, 112<sup>th</sup> Avenue, *Potomac Street*, and *Quebec Street*;
- Reconstruct the I-70/E-470 interchange to full freeway-to-freeway configuration; and
- Improvements to I-25 (north and south), I-70, Peña Boulevard, US-85, and seventeen principal arterials where they cross E-470.

### Transit

- Continue to reserve right-of-way to construct rapid transit in the E-470 corridor.

### Bicycle/Pedestrian

- Complete the E-470 Regional Bicycle Corridor.

### System Management

- Upgrade access classification on SH-30 from NRB to NRA between Picadilly and Yale and consolidate/manage access accordingly; and
- Use freeway DMSs to display DIA information and eastern plains road closures and travel weather advisories.

### Travel Demand Management

- Use DRCOG Ride Arrangers Program to focus TDM activities in high employment areas.

### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along E-470 and SH-30 with a potential for crash reductions.*

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### **F-3. I-25 South Multimodal Corridor Vision: El Paso County Line to C-470**

Relevant Studies: The *South I-25 Corridor and US-85 Corridor EIS*—May 2001. Study Limits: C-470 (I-25 MP 194) and south of Castle Rock (I-25 MP 178). *Southeast Corridor Extension Environmental Evaluation*—March 2010. Study Limits: Lone Tree Station to south of RidgeGate Parkway

The transportation vision for the **I-25 South Corridor** is to serve as a multimodal interstate freeway corridor serving regional and statewide trips. Future improvements will primarily improve mobility as well as maintain system quality and increase safety. I-25 serves as a multimodal interstate facility connecting to places outside of the Denver region while providing regional accessibility to communities and businesses in Douglas County. The corridor serves the southern edge of the Denver Tech Center corridor. The extension of the Southeast Corridor light rail line and associated transit stations will be constructed on the northern section of this corridor parallel to I-25 (tier 1). The BNSF and UP Railroad freight lines parallel the southern part of I-25 in this corridor and are envisioned to also provide intercity passenger service (tier 2). Significant population and employment growth surrounding the corridor area will cause increased traffic (see Corridor Sub-Area Exhibit #5).

#### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

#### **Corridor Context**

The following statistics are reported for a 31-mile long corridor area encompassing one mile on both sides of I-25 from the El Paso County line to C-470. The corridor is projected to experience significant population and employment growth from 2005 to 2035. Projections indicate a population increase of 157 percent, a 195 percent increase in employment, and a 177 percent increase in households within the corridor. Travel demand is projected to increase 96 percent from 2005 to 2035.

Congestion measures show the I-25 South corridor currently experiences a below average level of congestion, which will increase in 2035, as shown in the following table:

**Table 1. I-25 South Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.15	1.27	2.47
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	0-1	1	4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	11%	18.5%	54%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	2,132	217,280	34,376
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	62	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

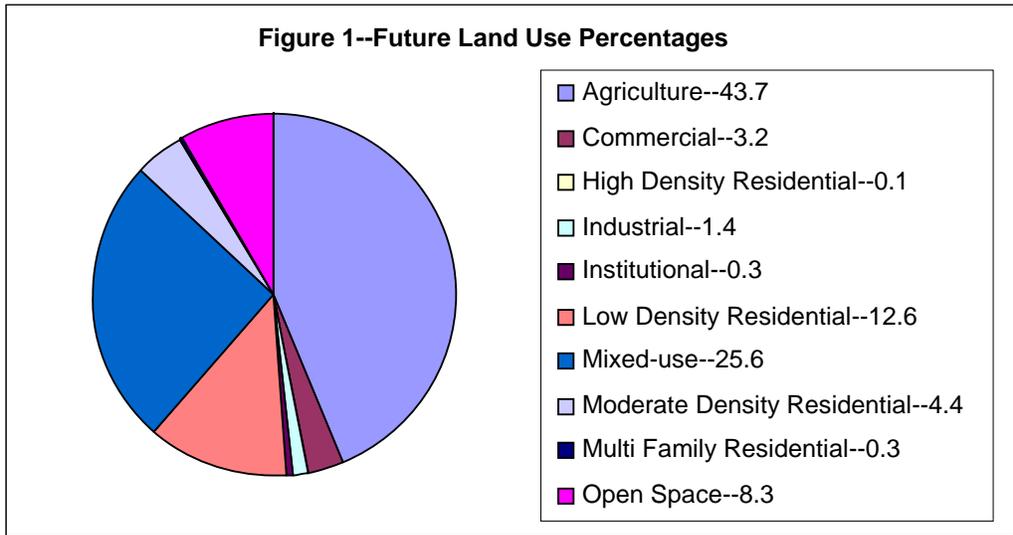
**Table 2. I-25 South —Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties		Total
	Arapahoe	Douglas*	
Within UGB--Expected to be urbanized by 2035	979	14,676	15,655
-- <i>Currently Urbanized</i>	957	9,814	10,771
-- <i>Currently Non-Urbanized</i>	22	4,862	4,884
Not proposed to be urbanized by 2035 (outside UGB)	18	26,037	26,055
<b>Total Corridor Area</b>	<b>997</b>	<b>40,713</b>	<b>41,710</b>

\*Includes approximate UGB allocation of 3,036 acres to Douglas County.

The corridor contains three urban centers. Lincoln Station TOD and RidgeGate City Center are mixed-use and the I-25 corridor is a regional corridor.

Figure 1 shows predominately agricultural uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *South I25 Corridor and US-85 EIS* provides additional information on the land use and zoning in the corridor area.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that one of the 568 overall EJ traffic analysis zones (TAZs) in the region falls within the corridor. This zone is “minority concentrated”. The *South I-25 Corridor and US-85 EIS* provides additional information on potential environmental justice impacts in the corridor area.

## 3. Parks and Recreation Areas

Approximately 12,181 acres, or 28.3 percent of the total acreage of 42,935.5 within the corridor, consists of parks and open space. Among the open space areas are Greenland Ranch, JA Ranch, and Douglas Heights Open Space, all in Douglas County. The *South I-25 Corridor and US-85 EIS* provides additional information on potential park and recreation area impacts in the corridor area.

## 4. Hazardous Materials

An initial analysis the corridor reveals no significant National Priority List (NPL) sites within the corridor. Sixty-five Underground Storage Tanks (USTs) lie within the corridor. The *South I25 Corridor and US-85 EIS* provides additional information on existing and potential hazardous waste sites in the corridor area.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the Chatfield Watershed in the south, the Cherry Creek Watershed in the central portion, and adjoins the South Platte Urban watershed in the north.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations intersect the corridor—38 TAZs out of a total of 102 within the corridor include at least a portion of a flood hazard area. The *South I-25 Corridor and US-85 EIS* provides additional information on potentially-impacted wetlands, watersheds, and floodplains in the corridor area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Whooping Crane, Preble's Meadow Jumping Mouse, and the Black-Tailed Prairie Dog. The *South I-25 Corridor and US-85 EIS* provides additional information on potentially-impacted wildlife habitat in the corridor area.

## 7. Historic and Archaeological Resources

There are no historic districts in the corridor. However, the *South I-25 Corridor and US-85 Corridor EIS* has identified some historic resources within its broader study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen I-25 between the El Paso County line and C-470 and associated frontage road and interchange modifications;
- *Construct new interchanges* at Douglas Lane (Crystal Valley/Dawson Ridge) and at Castlegate Drive; and
- Widen C-470/E-470 and Lincoln Avenue where they cross I-25.

### Transit

- *Extend the light rail line from the Lincoln station to south of Ridgeway Parkway with three additional stations;*

- *Provide feeder bus service to rail stations; and*
- Provide intercity bus service and (later) rail service between Castle Rock, Colorado Springs and the Denver area.

#### Bicycle/Pedestrian

- Provide convenient bicycle and pedestrian access to rail stations.

#### System Management

- Consider lane restrictions for slow moving vehicles in critical hill-climbing sections;
- Meter ramps at and north of Crystal Valley/Dawson Ridge; and,
- Implement weekday courtesy patrol from Castle Rock north; recreation-period courtesy patrol from Castle Rock to the south.

#### Travel Demand Management

- *Target efforts to increase transit use of the Southeast Corridor LRT line and extension;*
- *South I-25 Urban Corridor TMO facilitates subarea-specific TDM activities in southeast business district and Ridgeway; and*
- Targeted activities to increase car-and van-pooling from areas outside the immediate reach of rapid or intercity transit.

#### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along I-25 with a potential for crash reductions, including anti-icing treatments at sensitive locations.*
- Implement security infrastructure at Larkspur rest areas.

#### Other

- Construct a freight railroad bypass to the east of Denver that would reduce the number of trains passing through such communities as Castle Rock within the corridor.
- Additional capacity south of Castle Rock may warrant consideration as managed lanes.

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## **F-4. I-25 Southeast Multimodal Corridor Vision: C-470 to Broadway**

Relevant Studies: (1) *I-25 Valley Highway EIS*—November 2006, ROD signed July 5, 2007. Study Limits: Logan Street to US-6 (6<sup>th</sup> Avenue). (2) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program. (3) *Southeast Corridor Extension Environmental Evaluation*—March 2010. Study Limits: Lone Tree Station to south of RidgeGate Parkway

The transportation vision for the **I-25 Southeast Corridor** is to serve as a multimodal interstate freeway and rapid transit corridor serving regional and statewide trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. The corridor serves the Denver Tech Center area and adjacent major employment centers. The Southeast Corridor light rail line and associated transit stations recently opened in the corridor. Centennial Airport is located at the edge of the corridor (see Corridor Sub-Area Exhibit #4).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Accommodate growth in personal motor vehicle and freight travel;
- Serve the proposed Urban Centers in the corridor;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 12.6-mile long corridor area encompassing one mile on both sides of I-25 from the C-470 to Broadway. The corridor is projected to experience significant population and employment growth from 2005 to 2035, especially in the southern end of the corridor. Projections indicate a population increase of 58 percent, a 69 percent increase in employment, and a 61 percent increase in households within the corridor. Travel demand is projected to increase 57 percent from 2005 to 2035.

Congestion measures show the I-25 Southeast Corridor currently experiences an average level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. I-25 Southeast Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.15	1.27	3.16
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	1	1	5
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	14.5%	18.5%	66.5%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	2,368	217,280	51,743
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	157	25	—

**Selected Environmental Resources:**

1. Land Use—Existing and Future

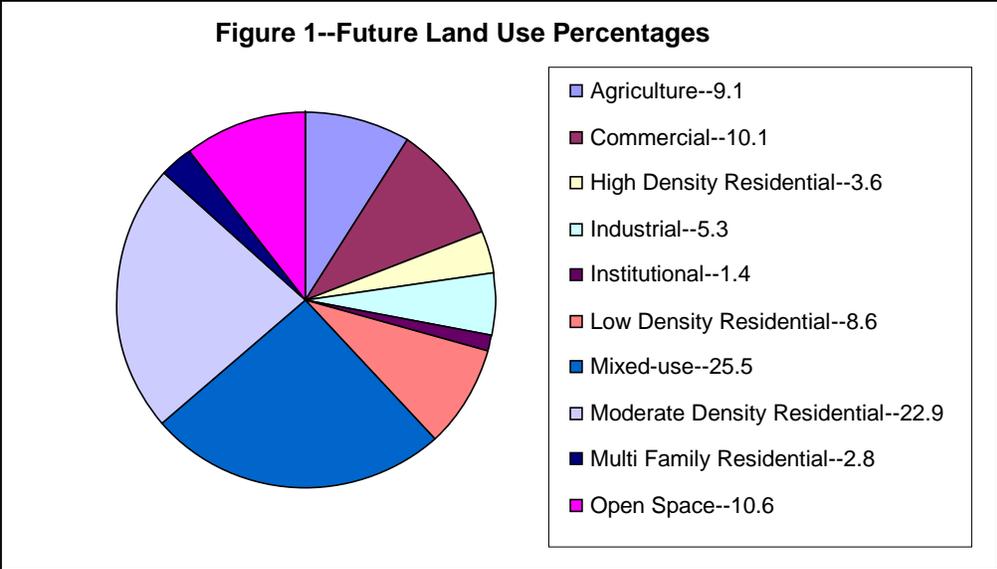
Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. I-25 Southeast —Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties			Total
	Arapahoe	Denver	Douglas	
Within UGB--Expected to be urbanized by 2035				
-- <i>Currently Urbanized</i>	6,050	12,409	1,004	19,463
-- <i>Currently Non-Urbanized</i>	6,028	12,282	5,850	24,160
	22	127	1,004	1,153
Not proposed to be urbanized by 2035 (outside UGB)	735	44	10	789
<b>Total Corridor Area</b>	<b>6,785</b>	<b>12,453</b>	<b>1,014</b>	<b>20,252</b>

The corridor contains twelve urban centers; eight are mixed-use, two are activity centers, and one, I-25, is a regional corridor. One mixed-use center, Evans Station TOD, is adjacent to the corridor.

Figure 1 shows a diversity of land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *Valley Highway EIS* provides additional information on both existing and future land use in its study area. The *FasTracks PCEA* also provides some more information on existing and anticipated land use surrounding the Southeast Light Rail line, which parallels the I-25 Southeast Corridor from C-470 to Broadway. The *FasTracks PCEA* also provides some more information on existing and anticipated land use surrounding the light rail line.

2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 19 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these 19 zones, 17 are only “minority-concentrated”, and 2 are both “minority-concentrated” and “low-income concentrated”. The *Valley Highway EIS* provides additional information on potential environmental justice impacts in its study area.

3. Parks and Recreation Areas

Approximately 819 acres, or 4.0 percent of the total acreage of 20,249 within the corridor, consists of parks and open space. The biggest park areas in the corridor are Washington Park and Bible Park, both in the City and County of Denver. The *Valley Highway EIS* provides additional information on potential park and recreation area impacts in its study area.

4. Hazardous Materials

An initial analysis of the corridor reveals no significant National Priority List (NPL) sites within the corridor. Four hundred and sixty-three Underground Storage Tanks (USTs) lie within the corridor. The *Valley Highway EIS* provides additional information on existing and potential hazardous waste sites in its study area.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the Cherry Creek Watershed in the southern portion, and the South Platte Urban Watershed in the north.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—97 TAZs out of a total of 237 within the corridor include at least a portion of a flood hazard area. The *Valley Highway EIS* provides additional information on potentially-impacted wetlands, watersheds, and floodplains in its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Whooping Crane, Preble's Meadow Jumping Mouse, and the Common Shiner. The *Valley Highway EIS* provides additional information on potentially-impacted wildlife habitat in the corridor area.

## 7. Historic and Archaeological Resources

There are seven historic districts within the corridor. Some of the larger ones include Washington Park, the South Side/Baker Historic District, and the High Line Canal. The *Valley Highway EIS* provides more information on potential historic and archaeological resources within its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Reconstruct and reconfigure the interchange at Arapahoe Road (*environmental study in short term*);
- Reconstruct interchanges at Belleview and at Orchard Road; and
- Widen C-470/ E-470, I-225, Broadway/Lincoln Street, Evans Avenue, Hampden Avenue Arapahoe Road, and Yosemite Street that cross I-25;

## Transit

*Target efforts to increase transit use of the Southeast Corridor LRT line.*

## Bicycle/Pedestrian

- Provide pedestrian overpass connections to several rail transit stations currently lacking them; and
- Construct missing link of regional bicycle corridor in the vicinity of Dahlia Street, Evans Avenue, and I-25.

## System Management

- Extend courtesy patrol hours of service and increase density of coverage;
- Operate traffic-responsive signal control in vicinity of special generators such as Coors Amphitheater.

## Travel Demand Management

- *South I-25 Urban Corridor TMA facilitates subarea-specific TDM activities.*

## Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along I-25 with a potential for crash reductions.*

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## **F-5. I-25 Central Multimodal Corridor Vision: Broadway to I-70**

Relevant Studies: (1) *I-25 Valley Highway EIS*—November 2006, ROD signed July 5, 2007. Study Limits: Logan Street to US-6 (6<sup>th</sup> Avenue). (2) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program. (3) *Central Corridor Extension Environmental Evaluation*—February 2010.

The transportation vision for the **I-25 Central Corridor** is to serve as a multimodal interstate freeway corridor serving regional and statewide trips. Future improvements will primarily increase mobility, maintain system quality and improve safety. The corridor serves the downtown Denver area and important statewide venues such as Coors Field, the Pepsi Center, Invesco Field at Mile High, the Denver Center for Performing Arts, and the State Capitol. The corridor includes parallel freight railroad lines. Bus service and park-n-Ride lots are provided and new rapid transit rail lines are planned north of downtown Denver. A rapid transit line presently exists parallel to I-25 to the south of downtown Denver. The corridor includes the North I-25 Express Lanes (managed lanes) from 20<sup>th</sup> Street to I-70. The South Platte River Trail parallels this segment of I-25. Significant population and employment growth surrounding the corridor area will cause increased traffic (see Corridor Sub-Area Exhibit #1).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for an 11-mile long corridor area encompassing one mile on both sides of I-25 from Broadway to I-70. The corridor is projected to experience moderate population and employment growth from 2005 to 2035. Projections indicate a population increase of 45 percent, a 56 percent increase in employment, and a 62 percent increase in households within the corridor. Travel demand is projected to increase 47 percent from 2005 to 2035.

Congestion measures show the I-25 Central corridor currently experiences a very high level of congestion, which will further deteriorate by 2035, as shown in the following table:

**Table 1. I-25 Central Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	2.43	1.27	4.08
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	5	1.35	4-5
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	56%	18.5%	69%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	19,825	217,280	61,534
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	150	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

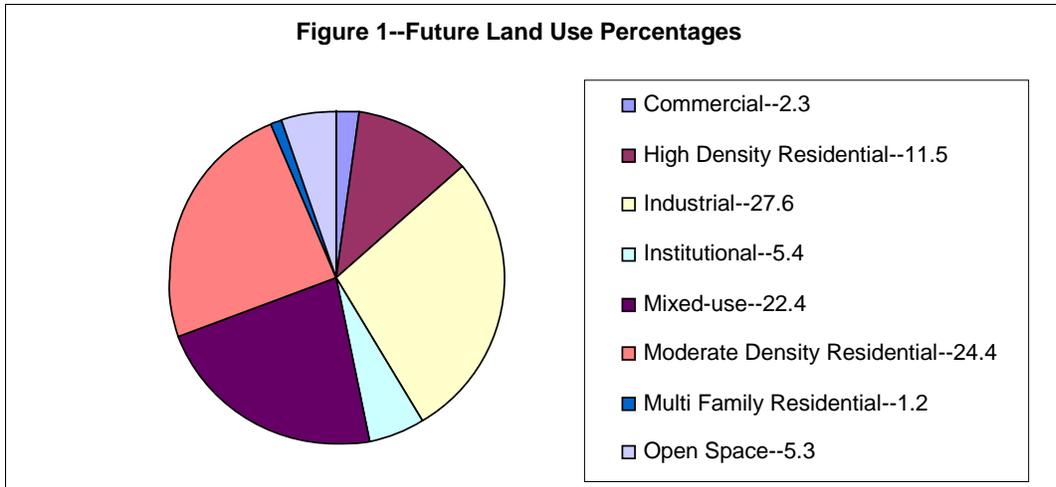
Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. I-25 Central—Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties		Total
	Adams	Denver	
Within UGB--Expected to be urbanized by 2035	147	10,456	10,603
-- <i>Currently Urbanized</i>	147	10,426	10,573
-- <i>Currently Non-Urbanized</i>	0	30	30
Not proposed to be urbanized by 2035 (outside UGB)	0	16	16
<b>Total Corridor Area</b>	<b>147</b>	<b>10,472</b>	<b>10,619</b>

The corridor contains eight urban centers; all are mixed-use urban centers.

Figure 1 shows a diversity of land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *Valley Highway EIS* provides additional information on both existing and future land use in its study area. The *FasTracks PCEA* also provides some more information on existing and anticipated land use surrounding the light rail line and bus/HOV/HOT lane.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 70 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these 70 zones, 40 are both “minority-concentrated” and “low-income concentrated” while 29 are only “minority” concentrated, and one zone is only “low-income concentrated”. The *Valley Highway EIS* provides additional information on potential environmental justice impacts in its study area.

## 3. Parks and Recreation Areas

Approximately 486.5 acres, or 4.6 percent of the total acreage of 10,616.5 within the corridor, consists of parks and open space. The biggest park areas in the corridor are Washington Park, Barnum South, and Vanderbilt, all in Denver. The *Valley Highway EIS* provides additional information on potential park and recreation area impacts in its study area.

## 4. Hazardous Materials

An initial analysis of the corridor reveals no significant National Priority List (NPL) sites within the corridor. Five hundred and thirty Underground Storage Tanks (USTs) lie within the corridor. The *Valley Highway EIS* provides additional information on existing and potential hazardous waste sites in its study area.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies entirely in the South Platte Urban Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, bisect the corridor—51 TAZs out of a total of 130 within the corridor include at least a portion of a flood hazard area. *The Valley Highway EIS* provides additional information on potentially-impacted wetlands, watersheds, and floodplains in its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Whooping Crane, Preble's Meadow Jumping Mouse, and the Common Shiner. *The Valley Highway EIS* provides additional information on potentially-impacted wildlife habitat in the corridor area.

## 7. Historic and Archaeological Resources

There are twenty-three historic districts in the corridor. Some of the larger ones are Curtis-Champa Streets Historic District, the Potter Highlands Historic District, and the South Side/Baker Historic District. *The Valley Highway EIS* has identified some historic resources within its study area.

### Primary Strategies:

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Reconstruct I-25 and the interchanges from Broadway to Alameda Avenue;
- Widen and reconstruct I-25 and balance lanes between Logan Street and 6<sup>th</sup> Avenue;
- Reconstruct I-25 interchange at US-6;
- Widen and reconstruct I-25, balance lanes, and reconfigure terminus of I-25 managed lanes between 6<sup>th</sup> Avenue and 38<sup>th</sup> Avenue;
- Reconstruct interchanges between US-6 and 38<sup>th</sup> Avenue; and Widen Broadway/Lincoln and Alameda Avenue where they cross I-25.

### Transit

- *Construct the portions of the Gold Line and West Corridor light rail lines;*
- *Extend the Central Corridor and construct the North Metro and East Corridor commuter rail lines that parallel and/or pass under I-25 on their approach to Denver Union Station; and*

- *Reconstruct the Denver Union Station to accommodate the additional proposed rapid transit rail lines.*

#### Bicycle/Pedestrian

- Provide improved pedestrian/bicycle crossings of I-25 and adjacent railroad tracks at key locations.

#### System Management

- *Implement operational improvements;*
- *Extend courtesy patrol hours of operation and increase density of coverage; and*
- *Continue/expand real-time parking space availability/event traffic control related to downtown venues and events.*
- *Vary tolls/occupancy requirements on HOT lane to maintain near-free-flow conditions for buses and HOVs, including during peak periods.*

#### Travel Demand Management

- *Target efforts to increase car- and vanpooling associated with the North I-25 Express lane; and*
- *Use Downtown Denver Partnership TMO to facilitate specific TDM activities in downtown area.*

#### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along I-25 with a potential for crash reductions; and*
- *Reconstruct several aging bridges.*

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## **F-6. I-25 North Multimodal Corridor Vision: I-70 to Weld County Road 38**

Relevant Studies: (1) *North I-25 EIS –Downtown Denver to Fort Collins*—(Release of draft - December 2008, with final EIS and ROD expected in 2011). (2) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program. (3) *North Metro FasTracks EIS*—( final EIS & ROD, April 2011)

The transportation vision for the **I-25 North Corridor** is to serve as a multimodal interstate freeway corridor serving regional and statewide trips. Future improvements will primarily increase mobility, maintain system quality and improve safety. The corridor also includes **SH-53** from 58<sup>th</sup> Avenue. to SH-224. I-25 serves as a multimodal interstate facility connecting to places outside of the Denver region while providing regional accessibility to communities and businesses in western Adams County. Rapid growth in Weld County is greatly contributing to traffic volumes in the corridor. The corridor includes a parallel freight railroad line. The corridor includes the North I-25 Express lanes (managed lanes) from I-70 to north of US-36. Bus service and park-n-Ride lots are provided and a rapid transit rail line is also planned (tier 1) and envisioned to be extended as an intercity corridor (tier 2). The bus/HOV lane may also be extended (perhaps as a managed lane) (tier 2). Significant population and employment growth is expected in the northern section of the corridor (see Corridor Sub-Area Exhibit #2).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region’s Urban Growth Boundary/Area;
- Accommodate growth in personal motor vehicle and freight travel;
- Serve the proposed Urban Centers in the corridor;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 15.4-mile long corridor area encompassing one mile on both sides of I-25 from I-70 to Weld County Road 38. The corridor is projected to experience moderate population and employment growth from 2005 to 2035, especially in the northern section of the corridor. Projections indicate a population increase of 46 percent, a 143 percent increase in employment, and a 54 percent increase in households within the corridor. Travel demand is projected to increase 103 percent from 2005 to 2035.

Congestion measures show the I-25 North corridor currently experiences a very high level of congestion, which will further deteriorate by 2035, as shown in the following table:

**Table 1. I-25 North Corridor Congestion Measures (I-76 to Weld County Road 38)**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.97	1.27	4.78
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	4	1	5
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	44%	18.5%	75%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	15,569	217,280	87,685
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	103	25	—

**Selected Environmental Resources:**

1. Land Use—Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. I-25 North—Existing Urbanization and Projected 2035 UGB (acres)**

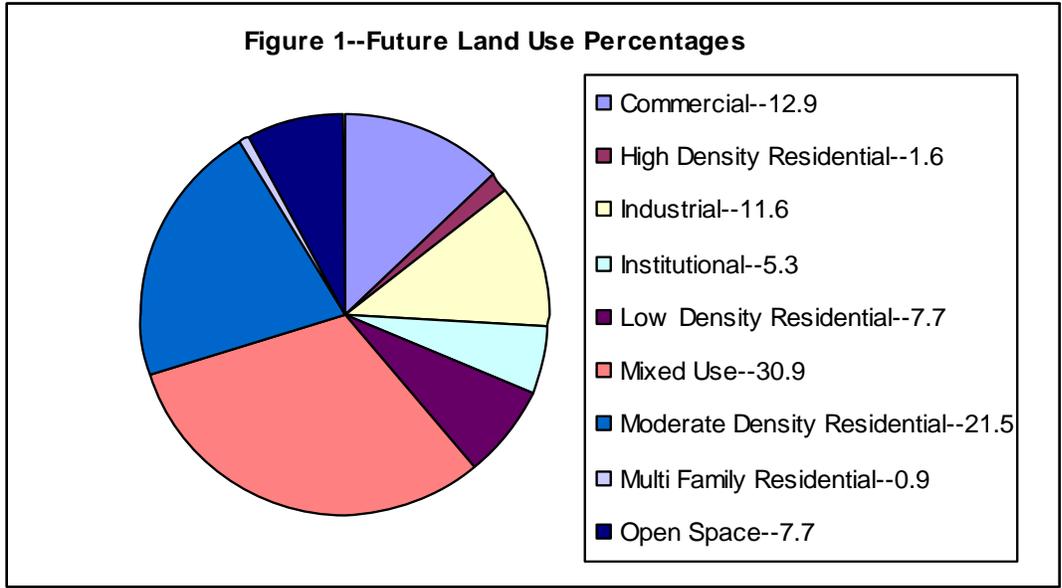
Development Type	Counties			Total**
	Adams*	Broomfield	Denver	
Within UGB--Expected to be urbanized by 2035	16,198	1,968	2,047	20,213
-- <i>Currently Urbanized</i>	13,579	224	2,047	15,850
-- <i>Currently Non-Urbanized</i>	2,619	1,745	0	4,364
Not proposed to be urbanized by 2035 (outside UGB)	1,207	2,048	0	3,255
<b>Total Corridor Area</b>	<b>17,405</b>	<b>4,016</b>	<b>2,047</b>	<b>23,468</b>

\*Includes approximate UGB allocation of 1,975 acres to Adams County.

\*\*Portion of corridor that crosses into Weld County excluded.

The corridor contains nine urban centers; four are mixed-use and five are activity centers.

Figure 1 shows a diversity of land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *FasTracks* PCEA also provides some more information on existing and anticipated land use surrounding the rail lines and the bus/HOV/HOT lane.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 59 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these zones, 26 are both “minority-concentrated” and “low-income” concentrated while 33 are only “minority-concentrated”.

## 3. Parks and Recreation Areas

Approximately 933.7 acres, or 3.7 percent of the total acreage of 25,505 within the corridor, consists of parks and open space. The biggest park/recreation areas in the corridor are Thorncreek Municipal Golf Course and Niver Creek Open Space in Thornton.

## 4. Hazardous Materials

An initial analysis the corridor reveals no significant National Priority List (NPL) sites within the corridor. Two hundred and ninety Underground Storage Tanks (USTs) lie within the corridor.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in 3 watersheds: the South Platte Urban in the south, the Big Dry in the center and the St. Vrain in the north.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—54 TAZs out of a total of 154 within the corridor include at least a portion of a flood hazard area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of Preble's Meadow Jumping Mouse, the Black-Tailed Prairie Dog, and the Ute-Ladies' Tresses Orchid.

## 7. Historic and Archaeological Resources

There are two historic districts in the corridor—the Garden Place National Register Eligible Historic District and the Globeville Eligible Historic District.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen I-25 from US-36 to Weld County Road 38, to include both new general purpose lanes and/or Bus/HOV/HOT lanes (tolled express lanes);
- Reconstruct interchange at Weld County Road 34;
- Construct new interchanges on I-25 at 128<sup>th</sup> Avenue and Sheridan Parkway (north of Weld County Road 4);
- *Reconstruct interchanges at SH-7, at Thornton Parkway and at US-36 ; and*
- Widen 120<sup>th</sup> Avenue, 144<sup>th</sup> Avenue, E-470 and SH-7 where they cross I-25.

### Transit

- *Construct a rail line east of and parallel to I-25, from Denver Union Station to 160<sup>th</sup> Avenue (North Metro FasTracks);*
- *Construct seven new rail stations with parking; expand and relocate the Commerce City park-n-Ride to serve rail;*
- Construct new park-n-Ride lots at 144<sup>th</sup> Avenue and at SH-7 to serve the bus/HOV/HOT lanes; and
- Construct intercity commuter rail service from the end of the North Metro corridor north to Longmont and Fort Collins.

### Bicycle/Pedestrian

- Complete regional bicycle corridor parallel to Huron Street; and
- Improve connections across or under I-25.

### System Management

- Build bus/HOV bypasses at select metered on-ramps;
- Extend courtesy patrol to SH-7; s/o 120<sup>th</sup>, extend hours of operation and density of coverage (more vehicles per mile);
- Use freeway DMSs to identify real-time comparative travel time for general purpose lanes and HOV/HOT lanes; and
- *Vary tolls (e.g. dynamic pricing)/occupancy requirements on HOT lane to maintain near-free-flow conditions for buses and HOVs, including during peak periods.*

### Travel Demand Management

- *Target efforts to increase car- and vanpooling associated with the North I-25 Express lane;*
- *TMO facilitates subarea-specific TDM activities; key geographic emphasis at designated urban forms and non-designated employment concentrations; and*
- Targeted TDM actions to increase car- and van-pooling associated with I-25 HOV lane.

### Preservation and Safety

- *Reconstruct several aging bridges; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along I-25 with a potential for crash reductions.*

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## **F-7. I-70 Mountain Multimodal Corridor Vision: Eisenhower Tunnel to C-470**

Relevant Studies: *I-70 West Mountain Corridor Draft PEIS*—Released December 2004; Revised Draft PEIS, September 2010; Record of Decision, June 2011  
Study Limits: C-470 to Glenwood Springs, CO (Garfield County).

Website: <http://www.i70mtncorridor.com/>

The transportation vision for the **I-70 Mountain Corridor** is to serve as a multimodal interstate freeway corridor serving regional and statewide trips. Future improvements will primarily increase mobility as well as maintain system quality and to improve safety. The corridor also includes **US-40** from Berthoud Pass to I-70. The corridor provides access to and from recreational areas in the mountains and also serves as a major cross-country travel and freight movement route. Public and private bus service is provided along with park-n-Ride lots and a carpool lot. An advanced guideway system (AGS) is currently being studied and focusing on alignment and technology, as part of the PEIS preferred alternative. Significant population and employment growth in the Denver area along with growth in the corridor and on the Western Slope will cause increased travel demands.

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Accommodate growth in personal and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition;
- Maintain statewide transportation connections; and
- Support tourism and recreational activities.

### **Corridor Context**

The following statistics are reported for a 45.8-mile corridor area encompassing one mile on both sides of I-70 from the Eisenhower Tunnel to C-470. The corridor is expected to experience moderate population and employment growth between 2005 and 2035. Projections indicate a population increase of 54 percent, a 21 percent increase in employment, and a 65 percent increase in households within the corridor. Travel demand is projected to increase 26 percent from 2005 to 2035.

Congestion measures show the I-70 Mountain corridor currently experiences a low level of congestion on an average weekday, which will increase by 2035, as shown in the following table:

**Table 1(a). I-70 Mountain Corridor Congestion Measures – Average weekday**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.01	1.27	2.14
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	0	1	3-4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	1%	18.5%	51%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	108	217,280	32,241
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	114	25	—

On an average weekend, congestion measures show the I-70 Mountain corridor experiences a very high level of congestion, which will further deteriorate by 2035, as shown in the following table.

**Table 1(b). I-70 Mountain Corridor Congestion Measures – Average weekend day: Eisenhower Tunnel to US-6**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	2.09	1.27	9.83
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	4-5	1	5
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	52%	18.5%	88.2%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	4,600	217,280	360,828
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	21	25	—

The *I-70 West Mountain Corridor Draft PEIS* provides more detailed information on both existing and future traffic and travel demand within its much broader study area.

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. I-70 Mountain Corridor—Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties			Total
	Clear Creek*	Gilpin	Jefferson**	
Within UGB--Expected to be urbanized by 2035	2,126		3,659	5,785
-- <i>Currently Urbanized</i>	1,262	0	3,234	4,496
-- <i>Currently Non-Urbanized</i>	864		425	1,289
Not proposed to be urbanized by 2035 (outside UGB)	39,425	772	13,290	53,487
<b>Total Corridor Area</b>	<b>41,551</b>	<b>772</b>	<b>16,949</b>	<b>59,272</b>

\*Includes approximate UGB allocation of 442 acres to Clear Creek County.

\*\*Includes approximate UGB allocation of 268 acres to Jefferson County.

The corridor contains one urban center; the Bergen Park Activity Center in Jefferson County.

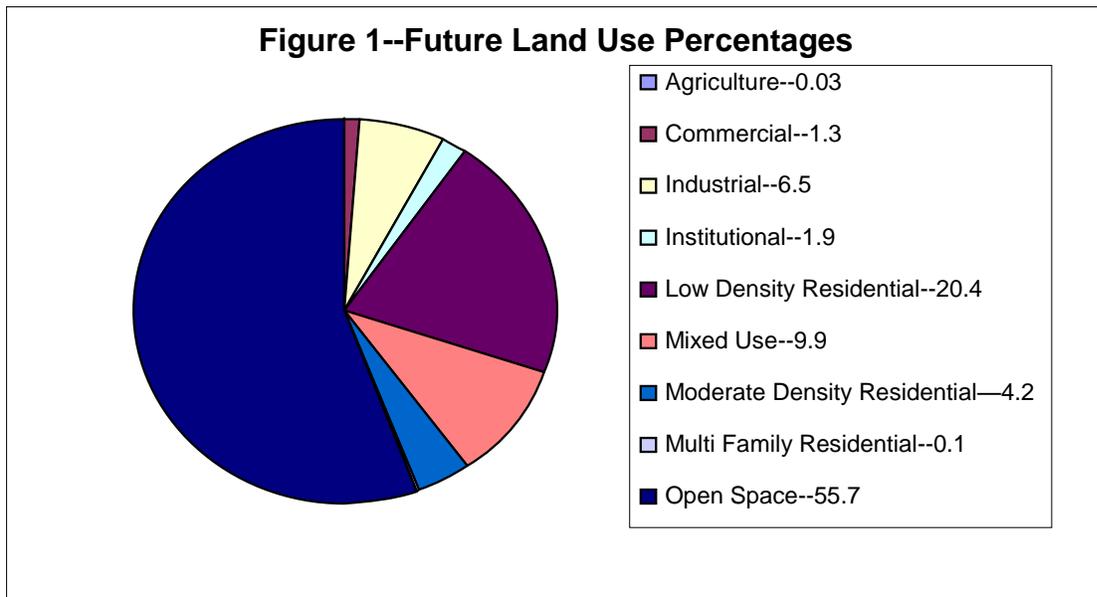


Figure 1 shows predominately open space land use are anticipated in the corridor, based on county and municipal land use plans—as of 2004.

The *I-70 West Mountain Corridor Draft PEIS* provides more detailed information on both existing and future land use within its study area.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that two of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Both of

these zones are “minority-concentrated”. The *I-70 West Mountain Corridor Draft PEIS* contains a more thorough discussion of potentially-impacted EJ communities.

### 3. Parks and Recreation Areas

Approximately 24,709 acres, or 40.9 percent of the total acreage of 60,408 within the corridor, consists of parks and open space. The biggest open space area is the Arapaho National Forest in Clear Creek County. *The I-70 West Mountain Corridor Draft PEIS* provides more detailed information on potentially impacted 4(f)/6(f) resources.

### 4. Hazardous Materials

An initial analysis the corridor reveals no significant National Priority List (NPL) sites within the corridor. Two hundred and ninety Underground Storage Tanks (USTs) lie within the corridor. *The I-70 West Mountain Corridor Draft PEIS* provides a more thorough discussion of NPL and hazardous waste sites within its broader study area.

### 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies mostly in the Upper Clear Creek Watershed, with the southeast portion in the Bear Creek Watershed, and the eastern portion in the South Platte Urban Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—15 TAZs out of a total of 28 within the corridor include at least a portion of a flood hazard area. *The I-70 West Mountain Corridor Draft PEIS* provides more detailed information on potentially impacted water resources.

### 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Whooping Crane, the Mexican Spotted Owl, and the Wolverine. *The I-70 West Mountain Corridor Draft PEIS* provides more detailed information on potentially impacted wildlife habitat areas.

### 7. Historic and Archaeological Resources

There are six historic districts in the corridor. The largest ones are Genesee Park in Jefferson County, and the Georgetown-Silver Plume Historic District. *The I-70 West Mountain Corridor Draft PEIS* provides more detailed information on potentially impacted historic and archaeological resources.

## **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen eastbound I-70 from Idaho Springs to Floyd Hill (including curve flattening east of widened tunnel)
- Implement other improvements recommended in Final PEIS and subsequent Tier 2 EISs (not currently specified); and
- Reconstruct the interchange where US-6 and the new Black Hawk Tunnel intersect with I-70.

### Transit

- Construct rapid transit paralleling I-70; and
- *Provide feeder bus service to the West Corridor end of line transit station.*

### Bicycle/Pedestrian

- Complete all sections of the regional bicycle corridor paralleling I-70.

### System Management

- *Operate probe surveillance;*
- *Operate full network surveillance;*
- *Implement ramp metering at spot locations;*
- *Implement additional chain-up stations;*
- *Provide "heavy tow" service for freight vehicles in travel lanes;*
- *Use freeway DMSs to display mountain travel and weather advisories; and*
- *Operate courtesy patrol on peak travel days.*

### Travel Demand Management

- Work with employers in the corridor and in Summit and Eagle Counties to facilitate car and van pooling.

### Preservation and Safety

- *Implement measures (including median treatments) to reduce the number and severity of traffic crashes at identified locations along I-70 and SH/US-40 with a potential for crash reductions;*
- *Enhance rockfall mitigation efforts; and*
- Improve emergency response facilities and services.

### Other

- Additional capacity, if proposed, may warrant consideration as managed lanes.

## **F-8. I-70 West Multimodal Corridor Vision: C-470 to I-25**

Relevant Studies: (1) *I-70/32<sup>nd</sup> Avenue Interchange EA/FONSI*—Signed February 2007. (2) *I-70/SH-58 Interchange Environmental Assessment*—June 2002, FONSI—Signed August 2004. (3) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program. (4) *Gold Line Final EIS and ROD*—Signed November 2009.

The transportation vision for the **I-70 West Corridor** is to serve as a multimodal interstate freeway and rapid transit corridor serving regional and statewide trips. Future improvements will primarily increase mobility, maintain system quality and improve safety. I-70 serves as a multimodal interstate facility connecting to places outside of the Denver region while providing regional accessibility to communities and businesses in the western suburbs of Denver. Thousands of tourists traveling between DIA and the mountains use I-70 in this section. A parallel rapid transit line is planned just to the north of I-70 (the Gold Line) (tier 1) and intercity rapid transit is envisioned heading into the mountains (tier 2). Significant population and employment growth surrounding the corridor area will cause increased traffic (see Corridor Sub-Area Exhibit #7).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Accommodate growth in personal motor vehicle and freight travel;
- Serve the Urban Centers in the corridor;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 13.9-mile long corridor area encompassing one mile on both sides of I-70 from C-470 to I-25. The corridor is expected to experience population and employment growth between 2005 and 2035. Projections indicate a population increase of 24 percent, a 28 percent increase in employment, and a 33 percent increase in households within the corridor. Travel demand is projected to increase 21 percent from 2005 to 2035.

Congestion measures show the I-70 West corridor currently experiences an average level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. I-70 West Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.28	1.27	2.30
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	0-1	1	4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	17%	18.5%	47%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	2,812	217,280	18,975
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	69	25	—

Both the *I-70/32<sup>nd</sup> Avenue Interchange EA* as well as the *I-70/SH-58 Interchange EA* give a more detailed overview of existing socioeconomic information and traffic in their respective study areas.

**Selected Environmental Resources:**

1. Land Use-Existing and Future

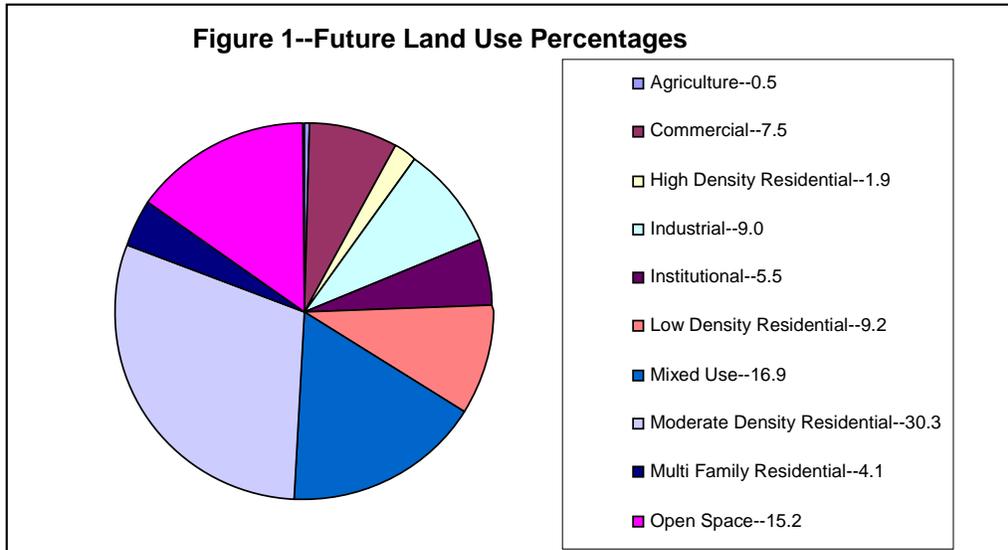
Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. I-70 West Corridor—Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties			Total
	Adams	Denver	Jefferson	
Within UGB--Expected to be urbanized by 2035				
-- <i>Currently Urbanized</i>	1,073	4,305	13,015	18,393
-- <i>Currently Non-Urbanized</i>	1,073	4,304	12,016	17,393
	0	1	998	999
Not proposed to be urbanized by 2035 (outside UGB)	37	209	1,310	1,556
<b>Total Corridor Area</b>	<b>1,110</b>	<b>4,514</b>	<b>14,325</b>	<b>19,949</b>

The corridor contains six urban centers; five are mixed-use, and one is an activity center.

Figure 1 shows predominately residential land uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



Both the *I-70/32<sup>nd</sup> Avenue Interchange EA* as well as the *I-70/SH-58 Interchange EA* give a more detailed overview of existing and future land use, as well as potential impacts, in their respective study areas. The *FasTracks PCEA* also provides some more information on existing and anticipated land use surrounding the rail line.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 47 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these 47, 15 zones are both “minority-concentrated” and “low-income concentrated” while 31 zones are only “minority-concentrated”, and one zone is only “low-income concentrated”. Both the *I-70/32<sup>nd</sup> Avenue Interchange EA* as well as the *I-70/SH-58 Interchange EA* give a more detailed overview of EJ areas, as well as potential impacts, in their respective study areas.

## 3. Parks and Recreation Areas

Approximately 1,427.8 acres, or 7.15 percent of the total acreage of 19,952 within the corridor, consists of parks and open space. The biggest open space areas are the William F. Hayden Green Mountain Park in Lakewood and the Willis Case Golf Course in Denver. Both the *I-70/32<sup>nd</sup> Avenue Interchange EA* as well as the *I-70/SH-58 Interchange EA* give a more detailed overview of existing park and recreation areas, as well as potential impacts, in their respective study areas.

## 4. Hazardous Materials

An initial analysis the corridor reveals no significant National Priority List (NPL) sites within the corridor. Three hundred and twenty-three Underground Storage Tanks (USTs) lie within the corridor. The West Corridor FEIS provides a more thorough discussion of NPL and hazardous waste sites within its broader study area. Both the *I-70/32<sup>nd</sup> Avenue Interchange EA* as well as

the *I-70/SH-58 Interchange EA* give a more detailed overview of hazardous waste sites, as well as potential impacts, in their respective study areas.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The western tip of the corridor crosses the Upper Clear Creek and Bear Creek Watersheds, but most of the corridor lies in the South Platte Urban Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—55 TAZs out of a total of 136 within the corridor include at least a portion of a flood hazard area. Both the *I-70/32<sup>nd</sup> Avenue Interchange EA* as well as the *I-70/SH-58 Interchange EA* give a more detailed overview of water resources, as well as potential impacts, in their respective study areas.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Whooping Crane, the Preble's Meadow Jumping Mouse, and the Ute-Ladies' Tresses Orchid. Both the *I-70/32<sup>nd</sup> Avenue Interchange EA* as well as the *I-70/SH-58 Interchange EA* give a more detailed overview of existing and wildlife habitat, including that of Threatened and Endangered Species, as well as potential impacts, in their respective study areas.

## 7. Historic and Archaeological Resources

There are ten historic districts in the corridor. The largest ones are the Stocke/Walter Addition, Reno Park Addition, and the Arvada Downtown/Olde Towne Arvada. Both the *I-70/32<sup>nd</sup> Avenue Interchange EA* as well as the *I-70/SH-58 Interchange EA* give a more detailed overview of historical and archaeological resources, as well as potential impacts, in their respective study areas.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen I-70 between C-470 and Wadsworth Boulevard;
- *Reconstruct the 32<sup>nd</sup> Avenue interchange;*
- Reconstruct interchanges at US-6, Colfax Avenue, Ward Road, and Kipling Street;

- Widen Federal Boulevard bridges over I-70 and the Sheridan Boulevard underpasses at I-70; and
- Widen I-76, Colfax Avenue, Kipling Street, and Wadsworth Boulevard where they cross I-70.

### Transit

- *Construct the Gold Line light rail line, north of and parallel to I-70, ending at Ward Road;*
- *Construct four new light rail stations with parking and expand the existing park-n-Ride at Olde Town Arvada to serve light rail; and*
- Construct rapid transit to the mountains paralleling I-70.

### Bicycle/Pedestrian

- Improve connections across or under I-70.

### System Management

- *Implement operational improvements as appropriate;*
- Extend courtesy patrol west to C-470; and
- *Use freeway DMSs to display mountain travel weather advisories.*

### Travel Demand Management

- *Target efforts to increase transit use of the Gold Line LRT line; and*
- Form one or more (Denver West? Arvada?) TMOs to facilitate subarea-specific TDM activities.

### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along I-70 with a potential for crash reductions; and*
- Rebuild deficient traffic signals at the I-70 ramps.

### Other

- Additional capacity may warrant consideration as HOV/HOT managed lanes.

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## **F-9. I-70 East Multimodal Corridor Vision: I-25 to E-470**

Relevant Studies: (1) CDOT-I-70 *East EIS* (Highway)—Limits: I-25 to Tower Road—Draft released November 2008. (2) RTD *East Corridor EIS* (Transit)—Limits: I-25 to DIA- ROD issued November 2009. (3) *I-70/E-470 Interchange Environmental Assessment/FONSI*—Released November 2006. (4) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program.

Website: <http://www.i-70east.com/>

The transportation vision for the **I-70 East Corridor** is to serve as a multimodal interstate freeway and rapid transit corridor serving regional and statewide trips. Future improvements will primarily increase mobility as well as maintain system quality, improve safety, and reduce environmental impact. Thousands of tourists traveling between DIA and the mountains use I-70 in this section. The corridor serves the Stapleton redevelopment area and leads to Peña Boulevard, which connects to Denver International Airport. Bus service with associated park-n-Ride lots are provided in the corridor. A parallel rapid transit line, the East Corridor line, is planned just to the south of I-70. A major freight railroad line is also parallel to I-70 and there is a large amount of industrial activities situated in the western section of this corridor. Significant population and employment growth surrounding the corridor area will cause increased traffic (see Corridor Sub-Area Exhibit #3).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the Urban Centers in the corridor;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 15.2-mile long corridor area encompassing one mile on both sides of I-70 from I-25 to E-470. The corridor is projected to experience significant population and employment growth from 2005 to 2035. Projections indicate a population increase of 105 percent, a 109 percent increase in employment, and a 144 percent increase in households within the corridor. Travel demand is projected to increase 131 percent from 2005 to 2035.

Congestion measures show the I-70 East corridor currently experiences a high level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1 : I-70 East Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	2.31	1.27	9.42
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	2	1	5
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	36%	18.5%	85%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	24,825	217,280	197,292
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	62	25	—

The *I-70/E-470 Interchange EA* gives a more detailed description of existing and future traffic conditions for its study area.

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

**Table 2. I-70 East Corridor—Existing Urbanization and Projected 2035 UGB (acres)**

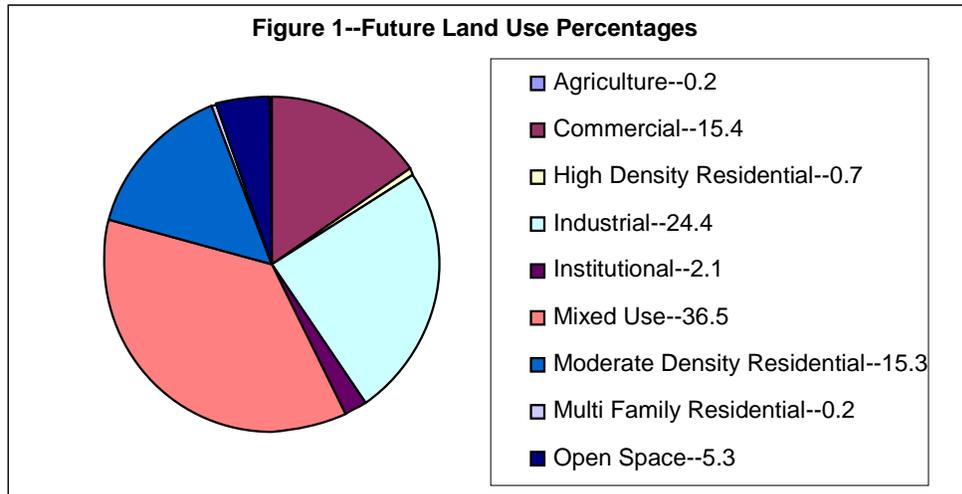
Development Type	Counties			Total
	Adams*	Arapahoe**	Denver	
Within UGB--Expected to be urbanized by 2035	7,217	1,100	11,570	19,887
-- <i>Currently Urbanized</i>	5,886	28	10,346	16,260
-- <i>Currently Non-Urbanized</i>	1,331	1,072	1,225	3,628
Not proposed to be urbanized by 2035 (outside UGB)	578	594	347	1,519
<b>Total Corridor Area</b>	<b>7,795</b>	<b>1,694</b>	<b>11,917</b>	<b>21,406</b>

\*Includes approximate UGB allocation of 1,312 acres to Adams County.

\*\*Includes approximate UGB allocation of 951 acres to Arapahoe County.

The corridor contains nine urban centers; six are mixed-use, two are activity centers, and one is a regional corridor (E-470/I-70).

Figure 1 shows predominately mixed-use and industrial uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *I-70/E-470 Interchange EA* gives a more detailed description of existing and future land use for its study area. The *FasTracks PCEA* also provides some more information on existing and anticipated land use surrounding the rail line.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 56 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Thirty-seven zones are both “minority-concentrated” and “low-income concentrated” eighteen of these zones are only “minority-concentrated”, and one zone is only “low-income concentrated”. The *I-70/E-470 Interchange EA* gives a more detailed description of EJ areas and potential impacts within its study area.

## 3. Parks and Recreation Areas

Approximately 467 acres, or 2.2 percent of the total acreage of 21,404 within the corridor, consists of parks and open space. The largest open space area is the Park Hill Golf Course in Denver. The *I-70/E-470 Interchange EA* gives a more detailed description of parks and recreation areas and potential impacts within its study area.

## 4. Hazardous Materials

An initial analysis the corridor reveals no significant National Priority List (NPL) sites within the corridor. Four hundred and forty-five Underground Storage Tanks (USTs) lie within the corridor. The *I-70/E-470 Interchange EA* gives a more detailed description of hazardous waste sites and potential impacts within its study area.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies entirely in the South Platte Urban Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—32 TAZs out of a total of 134 within the corridor include at least a portion of a flood hazard area. The *I-70/E-470 Interchange EA* gives a more detailed description of water resources and potential impacts within its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Whooping Crane, the Preble's Meadow Jumping Mouse, and the Ute-Ladies' Tresses Orchid. The *I-70/E-470 Interchange EA* gives a more detailed description of wildlife habitat areas, (including those of Threatened and Endangered Species), and potential impacts within its study area.

## 7. Historic and Archaeological Resources

There are five historic districts in the corridor. The largest ones are the Riverside Cemetery in Commerce City and the Denver Medical Depot—U.S. Air Force Accounting and Finance Center in Denver. The *I-70/E-470 Interchange EA* gives a more detailed description of historic/archaeological areas and potential impacts within its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Reconstruct the I-70 viaduct between Brighton Boulevard and Colorado Boulevard, interchange at York Street (*short term continue "band-aid" repairs*);
- Increase capacity on I-70 (or re-routing to I-270) via general purpose lanes and/or managed HOT lanes;
- *Construct a new interchange at Picadilly Road;*
- *Reconstruct interchanges at Vasquez Boulevard, Colorado Boulevard, Quebec Street, Havana Street/Central Park Boulevard, Peoria Street, Chambers Road, and E-470 (making it fully directional); and*

- Widen I-270, I-225, Peña Boulevard, E-470 Brighton Boulevard, Peoria Street, Chambers Road, Tower Road, and Picadilly Road where they cross or connect to I-70.

### Transit

- *Construct the East Corridor commuter rail line from Denver Union Station to DIA; In addition to DUS and DIA, construct five intermediate rail stations with parking.*

### Bicycle/Pedestrian

- Complete sections of the Sand Creek Trail to the south of I-70; and
- Improve connections across or under I-70, such as at Quebec Street and Highline Canal.

### System Management

- *Implement courtesy patrol east to E-470; expand hours of operation and increase density of service from I-25 to Peña Boulevard; and*
- *Use freeway DMSs to display DIA information and eastern plains road closure and travel weather advisories.*

### Travel Demand Management

- *Target efforts to increase transit use of the East Corridor rapid transit line;*
- *Stapleton TMO facilitates subarea-specific TDM activities; and*
- *Form additional TMO (Gateway? I-70/E-470?) to facilitate subarea-specific TDM activities.*

### Preservation and Safety

- *Improve traffic signals at the I-70 ramps at Peoria Street and Colorado Boulevard; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along I-70 with a potential for crash reductions.*

### Other

- *Additional capacity may warrant consideration as managed lanes.*

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## **F-10. I-70 Plains Multimodal Corridor Vision: E-470 to Elbert County Line**

Relevant Studies: *I-70/E-470 Interchange Environmental Assessment/FONSI*—Released November 2006

The transportation vision for the **I-70 Plains Corridor** is to serve as an interstate freeway corridor serving regional and statewide trips. Future improvements will primarily increase mobility as well as maintain system quality and increase safety. The corridor also includes **SH-36/SH-40** from Watkins to Deer Trail. The UPRR line parallels to the north of I-70. A new freight railroad bypass of Denver is planned to the east of Bennett. Population and employment growth surrounding the corridor area will cause increased traffic.

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Center at the west end of the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 38.9-mile corridor area encompassing one mile on both sides of I-70 from E-470 to the Elbert County line. The corridor is projected to experience significant population and employment growth from 2005 to 2035. Projections indicate a population increase of 643 percent, a 918 percent increase in employment, and a 694 percent increase in households within the corridor. Travel demand is projected to increase 1,284 percent from 2005 to 2035.

Congestion measures show the I-70 Plains corridor currently experiences no congestion, and is projected to increase somewhat by 2035, as shown in the following table:

**Table 1. I-70 Plains Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.0	1.27	1.13
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	0	1	0-1
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	0	18.5%	8%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	2	217,280	2,647
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	17	25	—

The *I-70/E-470 Interchange EA* gives a more detailed description of existing and future traffic conditions for its study area.

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and future urbanization projected within the corridor.

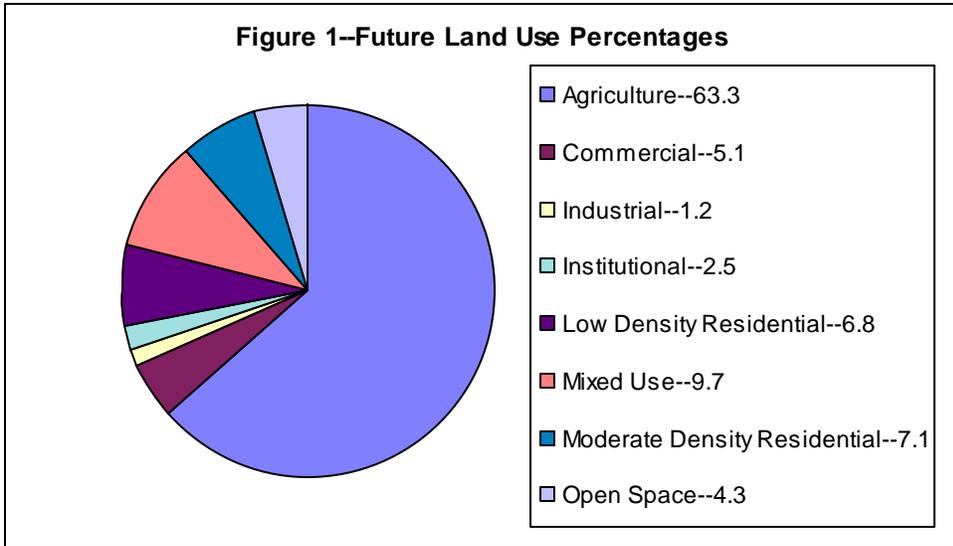
**Table 2. I-70 Plains Corridor—Existing Urbanization and Projected 2035 UGB (acres)**

Development Type	Counties		Total*
	Adams	Arapahoe	
Within UGB--Expected to be urbanized by 2035			
-- <i>Currently Urbanized</i>	3,084	4,153	7,237
-- <i>Currently Non-Urbanized</i>	1,058	1,521	2,579
	2,023	2,632	4,655
Not proposed to be urbanized by 2035 (outside UGB)	16,466	37,561	54,027
<b>Total Corridor Area</b>	<b>19,550</b>	<b>41,714</b>	<b>61,264</b>

\*Excludes portion of buffer that extends into Elbert County.

The corridor contains one regional corridor urban center—the I-70/E-470 regional corridor.

Figure 1 shows predominately agricultural uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *I-70/E-470 Interchange EA* gives a more detailed description of existing and future land use and potential impacts, for its study area.

2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that none of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. The *I-70/E-470 Interchange EA* gives a more detailed description of EJ areas and potential impacts in its study area.

3. Parks and Recreation Areas

Approximately 62 acres, less than 1 percent of the total acreage of 56,425 within the corridor, consists of parks and open space. The largest park area in the corridor is the Byers Park and Recreation District. The *I-70/E-470 Interchange EA* gives a more detailed description of existing parks and recreation areas and potential impacts for its study area.

4. Hazardous Materials

An initial analysis the corridor reveals no significant National Priority List (NPL) sites within the corridor. Thirty Underground Storage Tanks (USTs) lie within the corridor. The *I-70/E-470 Interchange EA* gives a more detailed description of existing hazardous waste sites and potential impacts for its study area.

5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the South Platte Urban Watershed on the west, and the East Plains Watershed on the East.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—21 TAZs out of a total of 39 within the corridor include at least a portion of a flood hazard area. The *I-70/E-470 Interchange EA* gives a more detailed description of water resources and potential impacts for its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Whooping Crane, the Preble's Meadow Jumping Mouse, and the Ute-Ladies' Tresses Orchid. The corridor also lies in the Shortgrass Prairie Initiative eco-region, an area covering the eastern one-third of Colorado that is the habitat for approximately 40 likely threatened and endangered species. The SGPI is an interagency agreement between CDOT, FHWA, USFWS, CO DNR, CO DOW, and The Nature Conservancy which aims to preserve the Central Short Grass Prairie eco-region of Colorado, and mandates off-site mitigation in the form of habitat conservation. The *I-70/E-470 Interchange EA* gives a more detailed description of existing wildlife habitat, including that of Threatened and Endangered Species, and potential impacts, for its study area.

## 7. Historic and Archaeological Resources

There are no historic districts in the corridor. The *I-70/E-470 Interchange EA* gives a more detailed description of existing historic and archaeological resources and potential impacts for its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen I-70 between E-470 and Manila Mile Road;
- Reconstruct interchanges at Monaghan Road and Kiowa-Bennett Road;
- Reconstruct the I-70/E-470 interchange (making it fully directional);
- Construct new interchanges at Harvest Mile Road, Quail Run Road; and
- Widen E-470, *Harvest Mile Road*, Monaghan Road, Watkins Road, and Quail Run Road where they cross I-70.

### Transit

- Construct new park-n-Ride lots along I-70 if RTD bus service is extended into the area.

### Bicycle/Pedestrian

- Provide an east-west bicycle corridor facility along or parallel to I-70.

### System Management

- On I-70 east of Bennett, implement/operate select (not full) surveillance and limited freeway DMSs;
- Integrate railroad crossing signals at high volume crossings with adjacent roadway traffic control signals; feed to regional ATIS; and
- *Use freeway DMSs to display eastern plains road closures and travel weather advisories; west of Monaghan.*

### Travel Demand Management

- Use DRCOG Ride Arrangers Program to focus TDM activities in high employment areas; and
- Targeted activities to increase carpooling and vanpooling from areas outside the immediate reach of rapid transit.

### Preservation and Safety

- Upgrade railroad crossing protection; and
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along I-70 and SH-36/SH-40 with a potential for crash reductions.*

### Other

- *Provide connections to proposed intermodal and freight rail facilities.*
- Additional capacity may warrant consideration as HOV/HOT managed lanes.

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## **F-11. I-76 Multimodal Corridor Vision: I-70 to Weld County Road 10**

Relevant Studies: *Colorado Boulevard/I-76 Interchange System Level Feasibility Study*, September 2001

The transportation vision for the **I-76 Corridor** is to serve as a multimodal interstate freeway connecting to places outside of the Denver region while providing regional accessibility to communities in western Adams County. Future improvements will primarily improve mobility as well as maintain system quality and improve safety. The corridor also includes **SH-2** from US-6/85 (Vasquez Boulevard) to I-76 and **SH-224** from Broadway to US-6/85. SH-2 and SH-224 primarily provide regional and local accessibility. The I-76 corridor includes nearby freight railroad lines and several important intermodal freight terminals. Bus service, park-n-Ride lots, and a bus/HOV lane are provided and a rapid transit rail line is also envisioned for a portion of the corridor (tier 2). Significant population and employment growth is expected in the northeast section of the corridor (see Corridor Sub-Area Exhibit # 2).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 25.1-mile long corridor area encompassing one mile on both sides of I-76 from I-70 to Weld County Road 10. The corridor is projected to experience significant population and employment growth from 2005 to 2035, especially in the northeast section of the corridor. Projections indicate a population increase of 126 percent, a 56 percent increase in employment, and a 141 percent increase in households within the corridor. Travel demand is projected to increase 77 percent from 2005 to 2035.

Congestion measures show the I-76 corridor currently experiences a low level of congestion, and is projected to increase somewhat by 2035, as shown in the following table:

**Table 1. I-76 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.06	1.27	1.61
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	0-1	1	2
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	4.5%	18.5%	26%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	623	217,280	10,834
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	30	25	—

**Selected Environmental Resources:**

1. Land Use—Existing and Future

Table 2 lists the existing urbanization and projected future urbanization in the corridor.

**Table 2. I-76 Corridor –Existing Urbanization and Future UGB**

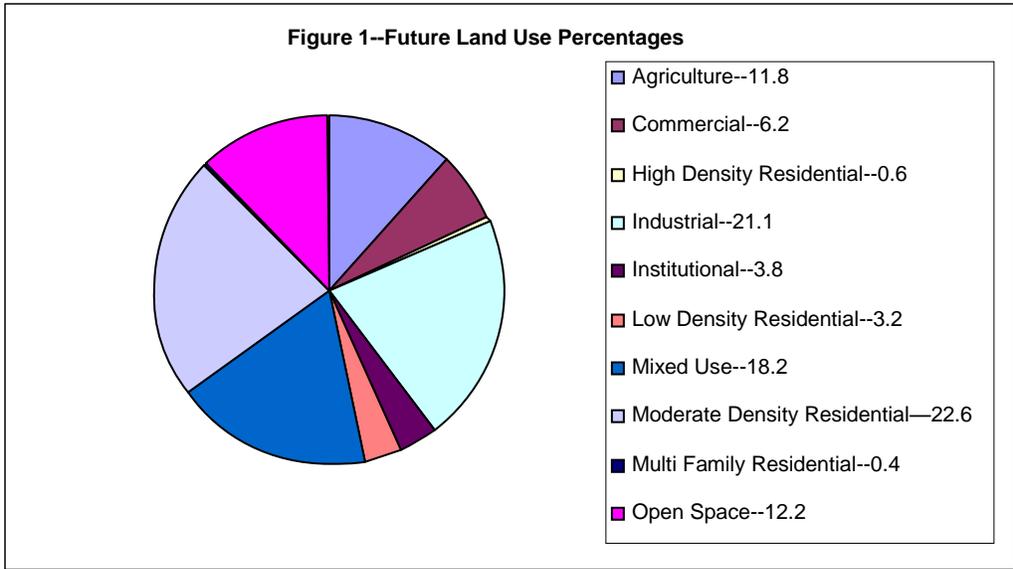
Development Type	Counties			Total**
	Adams*	Denver	Jefferson	
Within UGB--Expected to be urbanized by 2035	20,851	700	2,658	24,209
-- <i>Currently Urbanized</i>	16,466	700	2,658	19,824
-- <i>Currently Non-Urbanized</i>	4,385	0	0	4,385
Not proposed to be urbanized by 2035	8,545	181	0	8,726
<b>Total Corridor Area</b>	<b>29,396</b>	<b>881</b>	<b>2,658</b>	<b>32,935</b>

\*Includes 1,105 acres of approximate UGB allocated to Adams County.

\*\*Does not include portion of buffer that extends into Weld County.

The corridor contains three activity centers and one mixed-use urban center. The activity centers are Adams Crossing at 120<sup>th</sup> Avenue and I-76, Prairie Center at I-76 and Buckley Road, and Bromley Park at I-76 and 152<sup>nd</sup> Avenue/Bromley Lane. The mixed-use center is Olde Town/New Town, located at 58<sup>th</sup> Avenue and Wadsworth in Arvada.

Figure 1 shows predominately moderate density residential uses and mixed-uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 60 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these 60 zones, 35 are minority-concentrated, while 25 are both “low-income” and “minority-concentrated”.

3. Parks and Recreation Areas

Approximately 2,934 acres, or 8.6 percent of the total acreage of 34,049 within the corridor, consists of parks and open space. The largest park in the corridor is Barr Lake State Park in unincorporated Adams County.

4. Hazardous Materials

An initial analysis the corridor reveals no significant National Priority List (NPL) sites within the corridor. Two hundred and sixty Underground Storage Tanks (USTs) lie within the corridor.

5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the Beebe Draw and South Platte Urban watersheds.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—61 TAZs out of a total of 133 within the corridor include at least a portion of a flood hazard area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble's Meadow Jumping Mouse, the Common Shiner, and the Ute-Ladies' Tresses Orchid. Much of the corridor also lies in the Shortgrass Prairie Initiative eco-region, an area covering the eastern one-third of Colorado that is the habitat for approximately 40 likely threatened and endangered species. The SGPI is an interagency agreement between CDOT, FHWA, USFWS, CO DNR, CO DOW, and The Nature Conservancy which aims to preserve the Central Short Grass Prairie eco-region of Colorado, and mandates off-site mitigation in the form of habitat conservation.

## 7. Historic and Archaeological Resources

There are four historic districts in the corridor: Berkeley Lake Park; William H. Smiley Branch Library in Denver, and the Reno Park Addition; Arvada Downtown; Olde Towne Arvada, and Stocke/Walter Addition; all in Arvada.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen I-76 to from I-70 to US-85 (near 104<sup>th</sup> Avenue);
- Construct bus/HOV lanes on I-76/SH-224 from I-25 to US-6/85;
- Widen SH-2 from US-6/85 to I-76;
- Construct new I-76 interchange with Bridge Street (SH-7) and with Colorado/Vasquez Boulevard extension;
- Construct new ramps at E-470 interchange;
- Reconstruct/improve I-76 interchanges at SH-224, 88<sup>th</sup> Avenue, and 96<sup>th</sup> Avenue;
- Replace the SB US-85 ramp over I-76; and
- Improvements at several principal arterials (Sheridan Boulevard, Pecos Street, Washington Street, 88<sup>th</sup> Avenue, 96<sup>th</sup> Avenue, 104<sup>th</sup> Avenue, SH-2, Buckley Road, and Bromley Lane), two major regional arterials (Colorado Boulevard and 120<sup>th</sup> Avenue), E-470 and I-270 where they cross I-76.

### Transit

- Construct rapid transit rail along either BNSF (SH-2) or UPRR (US-85) rail corridors from I-25 to Vasquez Boulevard;

- Construct a new park-n-Ride lot at I-76 and Bromley Lane.

### Bicycle/Pedestrian

- Complete missing links of the Clear Creek trail near Pecos Street; and
- Improve pedestrian and bicycle connections to the Clear Creek Trail.

### System Management

- *Implement operational improvements;*
- Implement/operate select (not full) surveillance on I-76 from E-470 to county line; feed to regional ATIS;
- Build bus/HOV bypasses at select metered on-ramps;
- Build/operate information dissemination/route guidance between I-70 and I-270 to serve as detour to central I-70 and/or DIA; fed from regional ATIS;
- Upgrade railroad crossing signals and integrate them with SH-2 traffic signals at high-volume crossings;
- Upgrade access classification on SH-2 from NRC between Vasquez and Quebec and consolidate/manage access accordingly.

### Travel Demand Management

- Target efforts to increase car- and vanpooling associated with the I-76/SH-224 bus/HOV lane and rapid transit line.

### Preservation and Safety

- *Rebuild aging bridges; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along I-76, SH-2, and SH-224 with a potential for crash reductions.*

### Other

- Construct a freight railroad bypass to the east of Denver that would reduce the number of trains passing through the corridor
- Additional capacity may warrant consideration as managed lanes.

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## **F-12. I-225 Multimodal Corridor Vision: I-25 to I-70**

Relevant Studies: (1) CDOT *Environmental Assessment: I-225 Widening From North of Parker Road to North of 6<sup>th</sup> Avenue*, July 2000. (2) City of Aurora, *I-225/Colfax Interchange System Level Feasibility Study and Environmental Overview*, November 2002. (3) *I-225/Colfax Avenue Interchange Environmental Assessment*, October 2005, FONSI, April 2007. (4) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program. (5) *I-225 Corridor Environmental Evaluation*, October 2009

The transportation vision for the **I-225 Corridor** is to serve as a multimodal interstate freeway and rapid transit corridor serving regional and statewide trips. Future improvements will primarily increase mobility as well as maintain system quality and increase safety. I-225 is situated in a built up urban area serving a shopping mall district, the Fitzsimons campus and the Denver Tech Center. Southwest of Parker Road, light rail opened in 2006. Bus service is provided in the corridor along with park-n-Ride lots. The light rail line will be extended to parallel the entire length of I-225 (tier 1). Significant population and employment growth surrounding the corridor area will cause increased traffic (see Corridor Sub-Area Exhibits #3 and #4).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for an 11.8-mile long corridor area encompassing one mile on both sides of I-225 from I-25 to I-70. The corridor is projected to experience population and employment growth from 2005 to 2035. Projections indicate a population increase of 25 percent, a 95 percent increase in employment, and a 36 percent increase in households within the corridor. Travel demand is projected to increase 61 percent from 2005 to 2035. The *I-225 Widening EA* provides more detailed demographic analysis for its study area.

Congestion measures show the I-225 corridor currently experiences a very high level of congestion, which will further deteriorate by 2035, as shown in the following table:

**Table 1. I-225 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	2.13	1.27	4.02
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	3	1	5
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	40%	18.5%	68%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	10,656	217,280	48,223
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	91	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 2 lists the existing urbanization and projected future urbanization in the corridor.

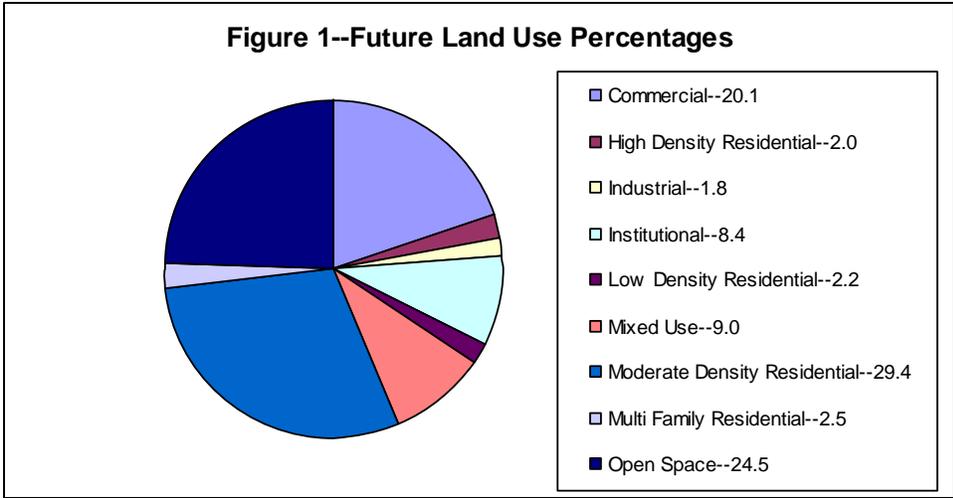
**Table 2. I-225 Corridor—Existing Urbanization and Future UGB**

Development Type	Counties			Total
	Adams	Arapahoe*	Denver	
Within UGB—Expected to be urbanized by 2035				
-- <i>Currently Urbanized</i>	2,606	8,533	3,561	14,700
-- <i>Currently Non-Urbanized</i>	2,606	8,078	3,309	13,993
	0	455	252	707
Not proposed to be urbanized by 2035 (outside UGB)	93	2,306	218	2,617
<b>Total Corridor Area</b>	<b>2,699</b>	<b>10,839</b>	<b>3,779</b>	<b>17,317</b>

\*Includes 29 acres of approximate UGB allocated to Aurora (Arapahoe County).

The corridor contains nine urban centers; seven are mixed-use, one is an activity center and one is a regional corridor. Some of the more significant urban centers are the I-25 regional corridor, located at the intersection of I-25 and Belleview Avenue in Denver, and the Fitzsimons Mixed-Use Center and the Aurora City Center in Aurora.

Figure 1 shows predominately moderate density residential and open space uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004. The *I-225/Colfax Avenue Interchange EA* provides more detailed information on existing and future land use within its study area.



The *FasTracks* PCEA also provides some more information on existing and anticipated land use surrounding the light rail line.

2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 57 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these 57 zones, 47 are only “minority-concentrated,” while ten are both “low-income” and “minority-concentrated”. The *I-225/Colfax Avenue Interchange EA* also provides an analysis of potentially impacted EJ Census tracts within its study area.

3. Parks and Recreation Areas

Approximately 3,563 acres, or 20.6 percent of the total acreage of 17,331 within the corridor, consists of parks and open space. The largest park/recreation areas in the corridor are Cherry Creek State Park in unincorporated Arapahoe County and Cherry Creek Spillway in Aurora. The *I-225/Colfax Avenue Interchange EA* provides further information on potentially-impacted parklands, recreational areas, and Section 4(f)/6(f) properties within its study area.

4. Hazardous Materials

An initial analysis the corridor reveals no significant National Priority List (NPL) sites within the corridor. One hundred and thirty five Underground Storage Tanks (USTs) lie within the corridor. The *I-225/Colfax Avenue Interchange EA* provides more detailed information on existing and potential hazardous materials as well as impacts within its study area.

5. Water Resources

Three features of water resources are described here:

**Watersheds.** While the southeast portion of the corridor lies in the Cherry Creek Watershed, most of the corridor lies in the South Platte Urban Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—39 TAZs out of a total of 137 within the corridor include at least a portion of a flood hazard area. The *I-225 Widening EA* provides more detailed information on potential wetlands and floodplains impacts within its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble's Meadow Jumping Mouse, the Black-Tailed Prairie Dog, and the Ute-Ladies' Tresses Orchid. The *I-225/Colfax Avenue Interchange EA* provides more detailed information on impacts to wildlife within its study area.

## 7. Historic and Archaeological Resources

There is one historic district in the corridor—the University of Colorado Health Sciences Center and Hospital at Fitzsimons in Aurora. The *I-225/Colfax Avenue Interchange EA* also provides some information on potentially-impacted historic and archaeological sites within its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- *Widen I-225 from I-25 to Yosemite street and from Parker Road to I-70 to eight lanes (short term to six lanes);*
- *Widen I-70, Colfax Ave, and DTC Boulevard where they cross I-225; and*
- *Study and construct improvements to the I-25/I-225 connection.*

### Transit

- *Construct the I-225 light rail line from the Nine Mile station as to join the East Corridor commuter rail line near I-70 at Peoria Street and Smith Road; and*
- *Construct five new light rail stations with parking and three stations without parking.*

### Bicycle/Pedestrian

- Improve connections across or under I-225.

### System Management

- Extend hours of operation of courtesy patrol; and
- *Use freeway DMSs to display DIA information.*

### Travel Demand Management

- Form a new Fitzsimons oriented TMO and use existing South I-25 Urban Corridor TMO to facilitate subarea-specific TDM activities.

### Preservation and Safety

- *Rebuild aging bridges; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along I-225 with a potential for crash reductions.*

### Other

- Additional capacity may warrant consideration as HOV/HOT managed lanes.

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## **F-13. I-270 Multimodal Corridor Vision: I-25 to I-70**

Relevant Studies: *System and Project Level Feasibility Study—SH- 35/Quebec Street: I-270 Eastbound Off-Ramp to I-270 Westbound On-Ramp—Interchange Modification and Public Access Connection*—Approved by Colorado Transportation Commission, October 2003

The transportation vision for the **I-270 Corridor** is to serve as a multimodal interstate freeway corridor serving regional and statewide trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. The corridor also includes **SH-35** (Quebec Street) from I-70 to 56<sup>th</sup> Avenue. I-270 is situated in a highly industrial area with significant truck traffic. It provides a key connection between I-25 and I-70 and can serve as a detour or bypass of I-70 when combined with I-76. Freight railroad lines travel through the corridor. Bus service is provided in the corridor (see Corridor Sub-Area Exhibit #2).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies; and
- Maintain or improve pavement to optimal condition.

### **Corridor Context**

The following statistics are reported for a 6.3-mile long corridor area encompassing one mile on both sides of I-270 from I-25 to I-70. The corridor is projected to experience significant population and employment growth from 2005 to 2035. Projections indicate a population increase of 60 percent, a 60 percent increase in employment, and a 99 percent increase in households within the corridor. Travel demand is projected to increase 59 percent from 2005 to 2035.

Congestion measures show the I-270 corridor currently experiences a high level of congestion, which will further deteriorate by 2035, as shown in the following table:

**Table 1. I-270 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.70	1.27	2.87
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	3	1	3-4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	36.5%	18.5%	47%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	2,789	217,280	10,807
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	47	25	—

**Selected Environmental Resources:**

1. Land Use—Existing and Future

Table 2 lists the existing urbanization and projected future urbanization in the corridor.

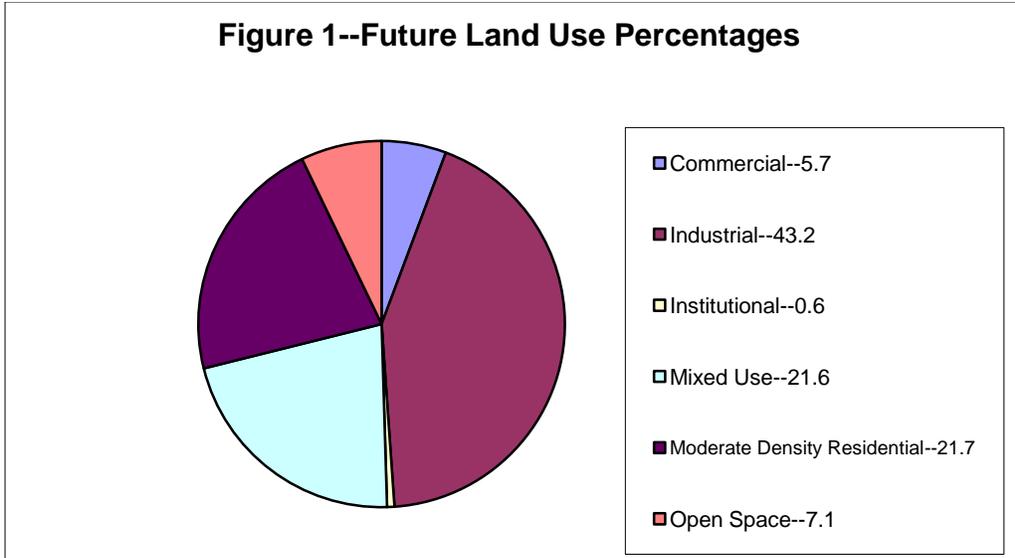
**Table 2. I-270 Corridor--Existing Urbanization and Future 2035 UGB Projections**

Development Type	Counties		Total
	Adams	Denver	
Within UGB--Expected to be urbanized by 2035 (acres)			
-- <i>Currently Urbanized</i>	6,750	2,848	9,598
-- <i>Currently Non-Urbanized</i>	6,689	2,095	8,784
	61	752	813
Not proposed to be urbanized by 2035 (outside UGB)	368	8	376
<b>Total Corridor Area</b>	<b>7,118</b>	<b>2,856</b>	<b>9,974</b>

The corridor contains two urban centers. The Stapleton Multi-Modal Station, located at the intersection of Central Park Boulevard and Smith Road, is a mixed-use center. Stapleton North Regional Center, located at the intersection of I-70 and Central Park Boulevard, is an activity center.

Figure 1 shows predominately industrial and moderate density residential uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.

**Figure 1--Future Land Use Percentages**



The *System and Project Level Feasibility Study—SH-35/Quebec Street* also provides an overview of existing land use within its study area.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 36 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these 36 zones, 11 are only “minority-concentrated”, 1 is “low-income concentrated”, and 24 are both “low-income” and “minority-concentrated”.

## 3. Parks and Recreation Areas

Approximately 371 acres, or 3.7 percent of the total acreage of 9,973 within the corridor, consists of parks and open space. The largest park/open space areas are municipal open space in Commerce City and the Rocky Mountain Arsenal located in Denver. The *System and Project Level Feasibility Study—SH-35/Quebec Street* also provides an overview of 4(f)/6(f) properties within its study area.

## 4. Hazardous Materials

An initial analysis the corridor reveals two National Priority List (NPL) sites within the corridor, the Sand Creek Industrial Site, at the intersection of 52<sup>nd</sup> Avenue and US-6, and the Woodbury Chemical Company, located at 54<sup>th</sup> Avenue and the UP railroad alignment. Two hundred and nine Underground Storage Tanks (USTs) lie within the corridor. The *System and Project Level Feasibility Study—SH- 35/Quebec Street* also provides an overview of potential hazardous waste sites within its study area.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies mostly in the South Platte Urban Watershed, but the southeast portion lies in the Cherry Creek Watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—27 TAZs out of a total of 65 within the corridor include at least a portion of a flood hazard area. The *System and Project Level Feasibility Study—SH- 35/Quebec Street* also provides an overview of floodplains and wetlands within its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble's Meadow Jumping Mouse, the Whooping Crane, and the Ute-Ladies' Tresses Orchid. The *System and Project Level Feasibility Study—SH- 35/Quebec Street* also provides an overview of wildlife habitat areas and potential impacts within its study area.

## 7. Historic and Archaeological Resources

There are no existing and/or proposed historic/archaeological sites in the corridor.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen I-270 between I-76 and I-70, including rebuilding aging bridges;
- Reconstruct the Vasquez interchange and add the missing ramp allowing travel from northbound Vasquez Boulevard to eastbound I-270; and
- Widen I-76, Vasquez Boulevard, 56<sup>th</sup> Avenue and Quebec Street where they cross I-270.

### Transit

- *Provide feeder bus service to the East Corridor rapid transit line.*

### Bicycle/Pedestrian

- Complete the parallel Sand Creek Trail; and

- Improve connections across or under I-270.

#### System Management

- Implement courtesy patrol; and
- Build/operate information dissemination/route guidance to serve as detour to central I-70; fed from regional ATIS.

#### Travel Demand Management

- Expand Stapleton TMO area to serve the Commerce City employment area.

#### Preservation and Safety

- *Rebuild aging bridges; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along I-270 and SH-35 with a potential for crash reductions.*

#### Other

- Additional capacity may warrant consideration as HOV/HOT managed lanes.

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## **F-14. Northwest Parkway Multimodal Corridor Vision: 96<sup>th</sup> St to I-25**

Relevant Studies: (1) *Northwest Parkway/I-25 Interchange Feasibility Study*, June 2000  
(2) *Northwest Parkway/US 287 Interchange Feasibility Study*, June 2000

The transportation vision for the **Northwest Parkway Corridor** is to serve as a multimodal tollway corridor serving regional and statewide trips. Future improvements will primarily maintain system quality as well as increase safety. The corridor provides a more direct connection between Boulder County and Denver International Airport. Preservation of right-of-way for a rapid transit line is envisioned along the length of the corridor (tier 3). Significant population and employment growth surrounding the corridor area is expected and will cause increased traffic (see Corridor Sub-Area Exhibit #9).

### **Primary Goals/Objectives:**

- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for an 8.1-mile long corridor area encompassing one mile on both sides of the Northwest Parkway from 96<sup>th</sup> Street to I-25. The corridor is projected to experience significant population and employment growth from 2005 to 2035. Projections indicate a population increase of 217 percent, a 398 percent increase in employment, and a 231 percent increase in households within the corridor. Travel demand is projected to increase 257 percent from 2005 to 2035. Both the *Northwest Parkway/I-25 Interchange Feasibility Study* and the *Northwest Parkway/US- 287 Interchange Feasibility Study* provide traffic projections through 2020 at their respective study areas.

Congestion measures show the Northwest Parkway corridor currently experiences no congestion, which will increase slightly by 2035, as shown in the following table:

**Table 1. Northwest Parkway Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.00	1.27	1.00
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	0	1	0
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	0	18.5%	0
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	0	217,280	1
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	3	25	—

**Selected Environmental Resources:**

1. Land Use—Existing and Future

Both the Northwest Parkway/I-25 Interchange Feasibility Study and the Northwest Parkway/US-287 Interchange Feasibility Study provide a description of existing land use at their respective study areas.

Table 2 lists the existing urbanization and projected future urbanization in the corridor.

**Table 2. Northwest Parkway Corridor--Existing Urbanization and Future 2035 UGB Projections (acres)**

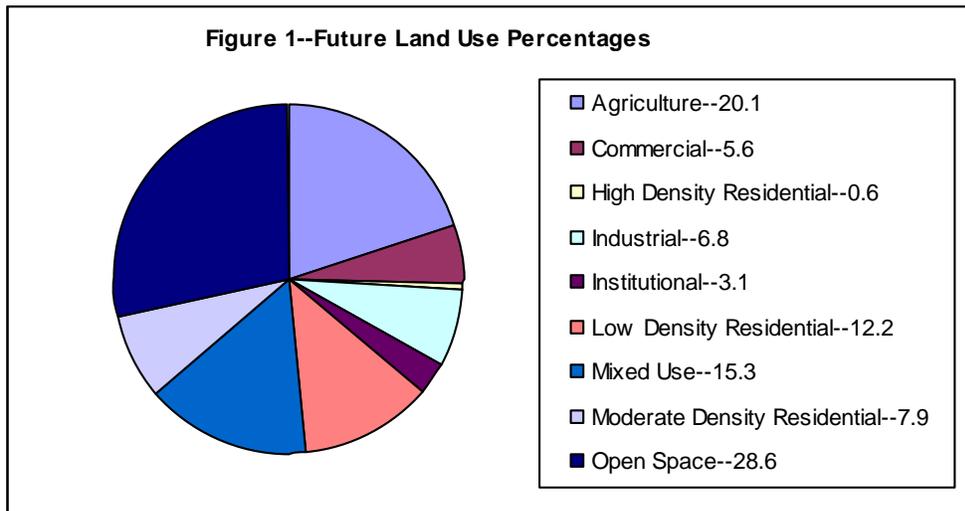
Development Type	Counties			Total
	Adams*	Boulder**	Broomfield	
Within UGB--Expected to be urbanized by 2035	910	2,217	3,074	6,201
-- <i>Currently Urbanized</i>	64	1,628	1,299	2,991
-- <i>Currently Non-Urbanized</i>	846	589	1,775	3,210
Not proposed to be urbanized by 2035 (outside UGB)	552	3,540	2,280	6,372
<b>Total Corridor Area</b>	<b>1,462</b>	<b>5,757</b>	<b>5,354</b>	<b>12,573</b>

\*Includes 846 acres of approximate UGB allocated to Thornton. (Adams County)

\*\*Includes 320 acres of approximate UGB allocated to Louisville/Lafayette (Boulder Co.)

The corridor contains three urban centers, the I-25/Highway 7 Activity Center, located at the intersection of I-25 and 160<sup>th</sup> Avenue in Thornton, and the I-25/SH-7 Activity Center and the Interlocken Loop Activity Center in Broomfield.

Figure 1 shows predominately industrial and moderate density residential uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that one of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. This zone is “minority-concentrated”.

## 3. Parks and Recreation Areas

Approximately 4,083.5 acres, or 32.5 percent of the total acreage of 12,543 within the corridor, consists of parks and open space. The largest park/open space areas are Rock Creek Farm and Ruth Roberts Park, both located in Boulder County.

## 4. Hazardous Materials

An initial analysis the corridor reveals no National Priority List (NPL) sites within the corridor. Eleven Underground Storage Tanks (USTs) lie within the corridor. Both the *Northwest Parkway/I-25 Interchange Feasibility Study* and the *Northwest Parkway/US- 287 Interchange Feasibility Study* provide an overview of potential hazardous material sites in their respective study areas.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the Big Dry and St. Vrain watersheds.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—14 TAZs out of a total of 64 within the

corridor include at least a portion of a flood hazard area. Both the *Northwest Parkway/I-25 Interchange Feasibility Study* and the *Northwest Parkway/US-287 Interchange Feasibility Study* provide an overview of wetlands and floodplains in their respective study areas.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble's Meadow Jumping Mouse, the Whooping Crane, and the Ute-Ladies' Tresses Orchid. Both the *Northwest Parkway/I-25 Interchange Feasibility Study* and the *Northwest Parkway/US-287 Interchange Feasibility Study* provide an overview of the Threatened and Endangered Species' habitats in their respective study areas.

## 7. Historic and Archaeological Resources

There are no existing and/or proposed historic/archaeological sites in the corridor. Both the *Northwest Parkway/I-25 Interchange Feasibility Study* and the *Northwest Parkway/US-287 Interchange Feasibility Study* provide an overview of the Threatened and Endangered Species' habitats in their respective study areas.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen I-25, US-287, 96<sup>th</sup> Street, Sheridan Parkway, and Huron Street where they cross Northwest Parkway.

### Transit

- Preserve right-of-way to construct rapid transit rail along Northwest Parkway; and
- Provide feeder bus service to the US-36 Corridor rapid transit lines.

### Bicycle/Pedestrian

- Complete regional and community bicycle corridor sections that cross or are parallel to the corridor. Improvements are based on local jurisdictions' decisions and costs.

### Travel Demand Management

- Utilize services of the 36 Commuting Solutions in the western end of the corridor.

### Preservation and Safety

- Implement measures to reduce the number and severity of traffic crashes at identified locations along Northwest Parkway with a potential for crash reductions.

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## **F-15. Peña Boulevard Multimodal Corridor Vision: I-70 to Denver International Airport (DIA)**

Relevant Studies: (1) CDOT *I-70 East EIS (Highway)*—Limits: Brighton Blvd to Tower Road (includes Peña Boulevard interchange)—Draft EIS released in October 2008, Final EIS to be released in 2012. (2) *Environmental Checklist for Peña Boulevard Widening—Jackson Gap to Gun Club Road*—Denver International Airport, July 2007. (3) RTD *East Corridor FEIS/ROD (Transit)*—Limits: DUS to DIA-Final EIS, ROD issued—November 2009. (4) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program. (5) Denver Strategic Transportation Plan (October 2008). (6) Denver Gateway Travel Shed Evaluation, April 2007. (7) Denver Moves: Making Bicycle and Pedestrian Connections (Draft 2011).

The transportation vision for the **Peña Boulevard Corridor** is to serve as a multimodal freeway and rapid transit corridor for regional and statewide trips, primarily to and from Denver International Airport. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. The southern section of this corridor will experience significant household and employment growth in the future. The eastern section near DIA will experience further growth in truck traffic associated with airport freight operations. Bus service is provided in the corridor along with extensive private bus and van service to tourist destinations and hotels. A commuter rail transit rail line will be built as part of the East Corridor (tier 1) (see Corridor Sub-Area Exhibit #3).

### **Primary Goals/Objectives:**

- Provide access for air travelers, air freight, and airport employees to Denver International Airport (DIA);
- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Ensure compliance with Federal Aviation Administration (FAA) Grant Assurances (including Airport Revenue Diversion provisions).

### **Corridor Context**

The following statistics are reported for an 11.5-mile long corridor area encompassing one mile on both sides of Peña Boulevard from I-70 to DIA. The corridor is projected to experience

significant population and employment growth from 2005 to 2035. Projections indicate a population increase of 150 percent, a 148 percent increase in employment, and a 219 percent increase in households within the corridor. Travel demand is projected to increase 192 percent from 2005 to 2035.

Congestion measures show the Peña Boulevard corridor currently experiences a low to moderate level of congestion, which will increase somewhat in 2035, as shown in the following table:

**Table 1. Peña Boulevard Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.12	1.27	1.31
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	0	1	2
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	10%	18.5%	22.5%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	540	217,280	2,656
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	12	25	—

**Selected Environmental Resources:**

1. Land Use—Existing and Future

Table 2 lists the existing urbanization and projected future urbanization in the corridor.

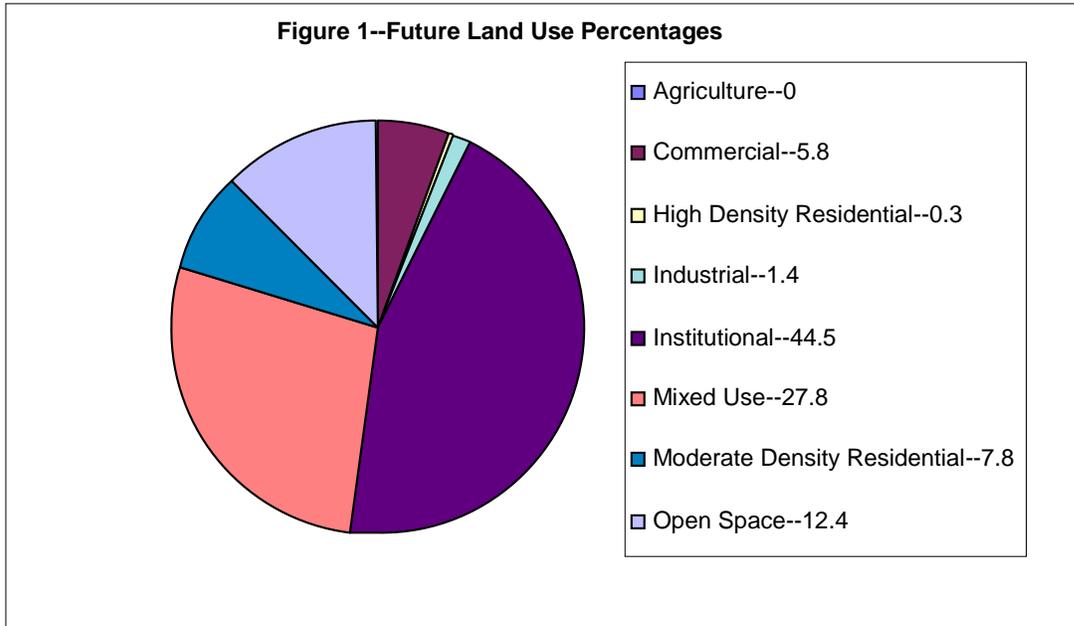
**Table 2. Peña Boulevard Corridor--Existing Urbanization and Future 2035 UGB Projections (acres)**

Development Type	Counties		Total
	Adams	Denver	
Within UGB--Expected to be urbanized by 2035	1,920	5,967	7,887
-- <i>Currently Urbanized</i>	1,900	2,808	4,708
-- <i>Currently Non-Urbanized</i>	19	3,158	3,177
Not proposed to be urbanized by 2035 (outside UGB)	2,938	5,834	8,772
<b>Total Corridor Area</b>	<b>4,858</b>	<b>11,801</b>	<b>16,659</b>

The corridor contains one activity center, the 64<sup>th</sup> and Telluride Station, located north of 58<sup>th</sup> Avenue between Peña Boulevard and Tower Road, in Denver. The corridor also contains two mixed-use urban centers; the Airport Gateway, located on the east side of Airport Boulevard and

north of I-70 in the City of Aurora; and Peña and 40<sup>th</sup>, located in the City of Denver, east of Airport Boulevard and north of the Airport Gateway Urban Center.

Figure 1 shows predominately institutional uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *FasTracks* PCEA also provides some more information on existing and anticipated land use surrounding the rail line.

The *Environmental Checklist for Peña Boulevard Widening* provides more detailed information on existing land use and potential impacts within its study area.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that eleven of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. All of these zones are “minority-concentrated” and none are “low-income concentrated”. The *Environmental Checklist for Peña Boulevard Widening* provides more detailed information on existing EJ areas and potential impacts within its study area.

## 3. Parks and Recreation Areas

Approximately 1,566 acres, or 9.4 percent of the total acreage of 16,658 within the corridor, consists of parks and open space. The largest park/open space is the Rocky Mountain Arsenal National Wildlife Refuge, located in Adams County. The *Environmental Checklist for Peña*

*Boulevard Widening* provides more detailed information on existing 4(f) areas and potential impacts within its study area.

#### 4. Hazardous Materials

An initial analysis the corridor reveals no National Priority List (NPL) sites within the corridor. Twenty-eight Underground Storage Tanks (USTs) lie within the corridor. The *Environmental Checklist for Peña Boulevard Widening* provides more detailed information on hazardous waste sites and potential impacts within its study area.

#### 5. Water Resources

Four features of water resources are described here:

**Watersheds.** The corridor lies in the South Platte Urban watersheds. First Creek, Second Creek, and the Derby Lateral of the Highline Canal cross the Pena Corridor.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—14 TAZs out of a total of 56 within the corridor include at least a portion of a flood hazard area. The *Environmental Checklist for Peña Boulevard Widening* provides more detailed information on wetlands, floodplains, and other water resources, as well as potential impacts within its study area.

**Drainage Facilities.** The Urban Drainage and Flood Control District has constructed several drainage detention facilities in the Pena Corridor.

#### 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble's Meadow Jumping Mouse, the Whooping Crane, and the Ute-Ladies' Tresses Orchid, the Burrowing Owl, and the Bald Eagle. Much of the corridor also lies in the Shortgrass Prairie Initiative eco-region, an area covering the eastern one-third of Colorado that is the habitat for approximately 40 likely threatened and endangered species. The SGPI is an interagency agreement between CDOT, FHWA, USFWS, CO DNR, CO DOW, and The Nature Conservancy which aims to preserve the Central Short Grass Prairie eco-region of Colorado, and mandates off-site mitigation in the form of habitat conservation. The *Environmental Checklist for Peña Boulevard Widening* provides more detailed information on Threatened and Endangered Species' wildlife habitat as well as potential impacts within its study area.

#### 7. Historic and Archaeological Resources

There are no existing and/or proposed historic/archaeological sites in the corridor. The *Environmental Checklist for Peña Boulevard Widening* provides more detailed information on potential impacts of historic and archaeological resources within its study area.

## **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects<sup>1</sup>

- *Widen Peña Boulevard between I-70 and the DIA terminal area and/or add frontage roads or collector/distributor roadways to access development;*
- *Add missing movement at Tower Road interchange; and*
- *Widen I-70, E-470, Green Valley Ranch Boulevard, 56<sup>th</sup> Avenue, Tower Road, and Picadilly Road where they cross Peña Boulevard.*

### Transit

- *Construct the East Corridor commuter rail line along Peña Boulevard to the DIA terminal.*

### Bicycle/Pedestrian

- *Make further improvements to the designated bicycle corridor along or parallel to Peña Boulevard. Provide future bicycle connections along First Creek and Second Creek which cross the Pena Corridor.*

### System Management

- *Use freeway and other DMSs to display airport parking and other status information.*

### Travel Demand Management

- *Form a TMO for the DIA or Gateway employment areas.*

### Preservation and Safety

- *Implement measures to reduce the number and severity of traffic crashes at identified locations along Peña Boulevard with a potential for crash reductions.*

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<sup>1</sup> Addition of missing movement at the Tower Road interchange and other non-airport access improvements to Pena Boulevard are subject to FAA Grant Assurances (including Airport Revenue Diversion provisions).

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## **F-16. SH-58 Multimodal Corridor Vision: US-6 to I-70**

Relevant Studies: *I-70/SH-58 Interchange Environmental Assessment*—June 2002.

The transportation vision for the **SH-58 Corridor** is to serve as a multimodal freeway corridor serving regional and statewide trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. SH-58 provides direct access to the Golden area and also leads to Clear Creek Canyon and the gaming district. Bus service is provided and the Gold Line rapid transit rail line would be extended to Golden in tier 2. A branch freight railroad line of the BNSF RR serves Golden and the Coors Brewery (see Corridor Sub-Area Exhibit #7).

### **Primary Goals/Objectives:**

- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 5.5-mile long corridor area encompassing one mile on both sides of SH-58 from US-6 to I-70. The corridor is projected to experience population and employment growth from 2005 to 2035. Projections indicate a population increase of 31 percent, a 21 percent increase in employment, and a 40 percent increase in households within the corridor. Travel demand is projected to increase 27 percent from 2005 to 2035.

Congestion measures show the SH-58 corridor currently experiences no congestion, which will increase very slightly in 2035, as shown in the following table:

**Table 1. SH-58 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.0	1.27	1.0
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	0	1	0
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	0	18.5%	0
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	1	217,280	2
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	18	25	—

**Selected Environmental Resources:**

1. Land Use-Existing and Future

The *I-70/SH-58 Interchange Environmental Assessment* gives an overview of the existing land use within its study area.

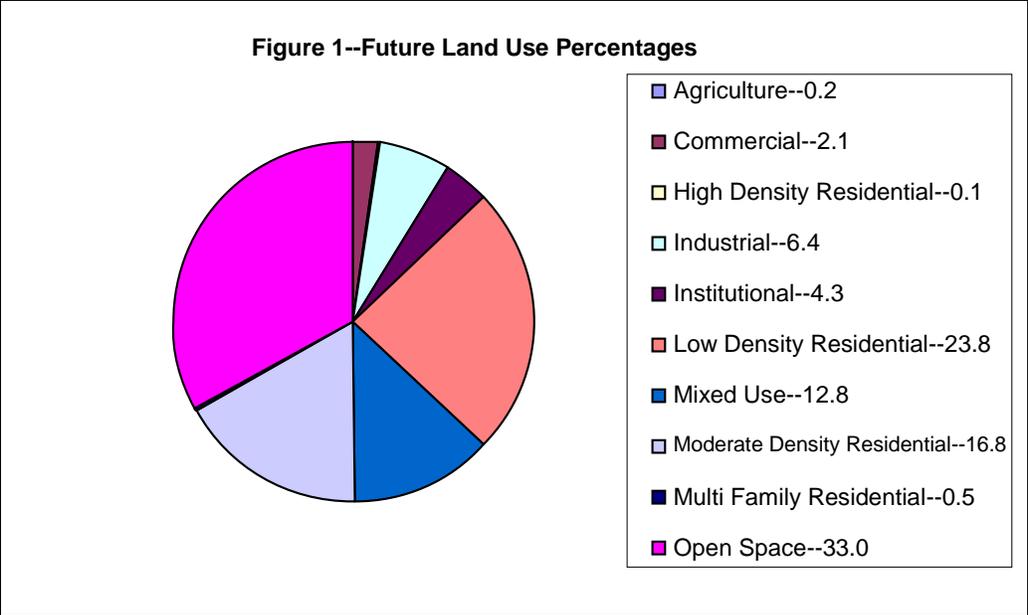
Table 2 lists the existing urbanization and projected future urbanization in the corridor.

**Table 2. SH-58 Corridor--Existing Urbanization and Future 2035 UGB Projections**

Development Type	Counties	Total
	Jefferson	
Within UGB--Expected to be urbanized by 2035 --Currently Urbanized --Currently Non-Urbanized	6,350	6,350
	6,025	6,025
	180	180
Not proposed to be urbanized by 2035 (outside UGB)	2,725	2,725
<b>Total Corridor Area</b>	<b>9,075</b>	<b>9,075</b>

The corridor contains one mixed-use center, Downtown Golden.

Figure 1 shows predominately residential and open space uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *I-70/SH-58 Interchange Environmental Assessment* gives an overview of the existing and future land use within its study area.

2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that two of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Both of these zones are “low-income concentrated”. The *I-70/SH-58 Interchange Environmental Assessment* gives an overview of the EJ sites and potential impacts within its study area.

3. Parks and Recreation Areas

Approximately 2,381 acres, or 26.2 percent of the total acreage of 9,075 within the corridor, consists of parks and open space. The largest park/open space areas are Mt. Galbraith Park and Windy Saddle Park, both in unincorporated Jefferson County. The *I-70/SH-58 Interchange Environmental Assessment* gives an overview of the parks and recreation areas and potential impacts within its study area.

4. Hazardous Materials

An initial analysis the corridor reveals no National Priority List (NPL) sites within the corridor. Sixty Underground Storage Tanks (USTs) lie within the corridor. The *I-70/SH-58 Interchange Environmental Assessment* gives an overview of the hazardous waste sites and potential impacts within its study area.

5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies in the South Platte Urban watershed on the east, and the Upper Clear Creek watershed on the west.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—22 TAZs out of a total of 33 within the corridor include at least a portion of a flood hazard area. The *I-70/SH-58 Interchange Environmental Assessment* gives an overview of these water resources and potential impacts within its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble’s Meadow Jumping Mouse, the Whooping Crane, and the Ute-Ladies’ Tresses Orchid. The *I-70/SH-58 Interchange Environmental Assessment* gives an overview of wildlife habitat and potential impacts to wildlife habitat within its study area.

## 7. Historic and Archaeological Resources

There are no existing and/or proposed historic/archaeological sites in the corridor. The *I-70/SH-58 Interchange Environmental Assessment* gives an overview of existing historic and archaeological resources and potential impacts to these properties within its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Construct a new interchange where SH-58 and US-6/SH-93 meet;
- *Construct a new interchange at Cabela Drive;* and
- Widen US-6/SH-93 intersection with SH-58.

### Transit

- Construct rapid transit parallel to SH-58 connecting Golden with the Ward Road station of the Gold Line; and
- *Provide interim feeder bus service to the Gold Line.*

### Bicycle/Pedestrian

- Complete gaps in the Clear Creek Trail.

### System Management

- Implement select (not full) surveillance and limited DMSs; feed to regional ATIS; and
- Use freeway DMSs to display real-time traffic information and real-time travel weather advisories for US-6 Clear Creek Canyon.

### Travel Demand Management

- Implement Golden's TDM Plan.

### Preservation and Safety

- *Rebuild aging bridges; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along SH-58 with a potential for crash reductions.*

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## F-17. US-6 Multimodal Corridor Vision: I-70 to I-25

Relevant Studies: (1) RTD *West Corridor FEIS*—Completed 2003. *ROD*- April 2004. Study Limits: US-6 from W. 6<sup>th</sup> Avenue/19<sup>th</sup> Street in Golden (just east) to just east of US-6/I-25 interchange. (2) *U.S. 6-Kalamath to I-70—Incident Management Program*, Final Report—June 2001. Study Limits: US-6/I-70 interchange to US-6/Kalamath Street intersection. (3) *I-25 Valley Highway EIS*—November 2006; *ROD* signed July 5, 2007. Study limits: Federal Boulevard to I-25. (4) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program. (5) *US-6/Wadsworth EA and FONSI*—March 2010

Website: [http://www.rtd-fastracks.com/wc\\_28](http://www.rtd-fastracks.com/wc_28)

The transportation vision for the **US-6 (6<sup>th</sup> Avenue Freeway) Corridor** is to serve as a multimodal freeway and rapid transit corridor serving regional and statewide trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. The corridor is situated in a densely developed urban corridor and serves the Federal Center area. Other state highways in this corridor include **SH-26** (Alameda Avenue) and **US-40** (West Colfax Avenue). US-6 provides a connection between the mountains (I-70) and the area south of downtown Denver. Bus service is provided in the corridor along with park-n-Ride lots. A parallel rapid transit line, the West Corridor is under construction and will be complete in 2013. (see Corridor Sub-Area Exhibit #7).

### Primary Goals/Objectives:

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### Corridor Context

The following statistics are reported for an 8.9-mile long corridor area encompassing one mile on both sides of US-6 from I-70 to I-25. The corridor is projected to experience moderate population and employment growth from 2005 to 2035. Projections indicate a population increase of 35 percent, a 25 percent increase in employment, and a 45 percent increase in households within the corridor. Travel demand is projected to increase 21 percent from 2005 to 2035.

Congestion measures show the US-6 corridor currently experiences an average level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. US-6 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.21	1.27	1.75
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	1	1	2-3
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	18.5%	18.5%	37%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	2,096	217,280	8,169
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	51	25	—

The *RTD West Corridor FEIS* provides more details on existing and future socioeconomic characteristics and traffic conditions for its study area.

The *U.S.-6—Kalamath to I-70 Incident Management Program—Final Report* provides more details on incidents and associated incident management strategies within its study area.

**Selected Environmental Resources:**

1. Land Use-Existing and Future

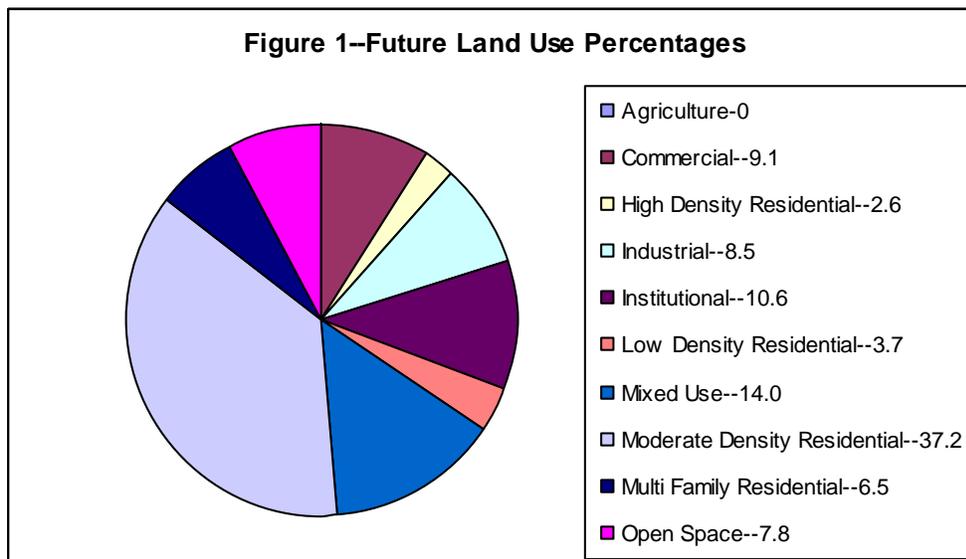
Table 2 lists the existing urbanization and projected future urbanization in the corridor.

**Table 2. US-6 Corridor--Existing Urbanization and Future 2035 UGB Projections (acres)**

Development Type	Counties		Total
	Denver	Jefferson	
Within UGB--Expected to be urbanized by 2035	3,733	9,562	13,295
-- <i>Currently Urbanized</i>	3,733	9,562	13,295
-- <i>Currently Non-Urbanized</i>	0	0	
Not proposed to be urbanized by 2035 (outside UGB)	0	138	138
<b>Total Corridor Area</b>	<b>3,733</b>	<b>9,700</b>	<b>13,433</b>

The corridor contains eight urban centers; seven are mixed-use and one is an activity center. The largest urban center is Union Center, located on the corner of US-6 and Union/Simms Street in Lakewood.

Figure 1 shows predominately residential uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *RTD West Corridor FEIS* provides more details on existing and future land use, as well as potential impacts for its study area. The *FasTracks PCEA* also provides some more information on existing and anticipated land use surrounding the light rail line.

## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 35 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these TAZs, 18 are both “low-income concentrated” and “minority-concentrated”, 16 TAZs are just “minority-concentrated”, and one zone is “low-income concentrated”. The *RTD West Corridor FEIS* provides more details on EJ areas and potential impacts, within its study area.

## 3. Parks and Recreation Areas

Approximately 6,233 acres, or 4.6 percent of the total acreage of 13,433 within the corridor, consists of parks and open space. The largest park/open space area is William F. Hayden Green Mountain Park in Lakewood. The *RTD West Corridor FEIS* provides more details on parks and recreational resources and potential impacts, within its study area.

## 4. Hazardous Materials

An initial analysis the corridor reveals no National Priority List (NPL) sites within the corridor. Two hundred and ninety-three Underground Storage Tanks (USTs) lie within the corridor. The *RTD West Corridor FEIS* provides more details on hazardous waste sites and potential impacts, within its study area.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor lies entirely in the South Platte Urban watershed.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—65 TAZs out of a total of 104 within the corridor include at least a portion of a flood hazard area. The *RTD West Corridor FEIS* provides more details on wetlands, floodplains, and other water resources, as well as potential impacts, within its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble's Meadow Jumping Mouse, the Whooping Crane, and the Black-Tailed Prairie Dog. The *RTD West Corridor FEIS* provides more details on wildlife habitat areas, including those of Threatened and Endangered Species, as well as potential impacts, within its study area.

## 7. Historic and Archaeological Resources

There are four existing and/or proposed historic/archaeological sites in the corridor. The largest historic district is the Camp George West Historic District located in unincorporated Jefferson County. The *RTD West Corridor FEIS* provides more details on historic and archaeological resources and potential impacts within its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Reconstruct US-6 between I-70 and I-25;
- Widen applicable segments of Alameda Avenue between Simms Street and Lincoln Avenue;
- *Reconstruct interchanges* at I-70, Simms Street, Kipling Street, *Wadsworth Boulevard*, Sheridan Boulevard, *Federal Boulevard*, and I-25;
- *Eliminate the Bryant Street interchange*; and
- Improvements at I-70, Kipling Street, Wadsworth Boulevard, Federal Boulevard, and I-25 where they cross US-6.

## Transit

- *Construct the West Corridor light rail line, parallel to US-6;*
- *Construct eleven new light rail stations, six with parking;*
- *Improve transit operational treatments on West Colfax Avenue; and*
- *Relocate the existing Cold Spring park-n-Ride to the Federal Center light rail station and increase parking capacity.*

## Bicycle/Pedestrian

- *Complete sections of the parallel regional bicycle corridor to the north of US-6 including linkage to C-470 trail;*
- *Improve connections across or under US-6;*
- *Improve bicycle trail on south side of 6th Avenue, from Indiana East to Simms/Union Boulevard; and*
- *Improve pedestrian connections along US 40 (Colfax) from I-70 to Rooney Road.*

## System Management

- *Implement operational improvements on US-6, ramp intersections, US-40, and SH-26;*
- *Use freeway traffic information dissemination devices to display mountain travel weather advisories;*
- *Operate traffic-responsive control on US-40 and SH-26 as incident diversion route to US-6; and*
- *Select network surveillance on US-40 and SH-26 to support incident diversion routing.*

## Travel Demand Management

- *Target efforts to increase transit use of the West Corridor LRT line; and*
- *Form one or two (Denver West/Mills? Union Center?) TMOs to facilitate subarea-specific TDM activities.*

## Preservation and Safety

- *Rebuild aging bridges;*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along US-6, SH-26, and US-40 with a potential for crash reductions; and*
- *Improve traffic signals at US-6 ramps, SH-26, and US-40.*

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## **F-18. US-36 Multimodal Corridor Vision: I-25 to Baseline Road**

Relevant Studies: (1) CDOT/RTD—*US 36 Final Environmental Impact Statement and Record of Decision*—December 2009. Study Limits: I-25 (Adams County) to Foothills Parkway/Table Mesa Drive—Boulder. (2) *FasTracks Programmatic Cumulative Effects Analysis (PCEA)*—August 2007, Study Limits: Entire extent of proposed FasTracks program.

Website: [www.us36eis.com](http://www.us36eis.com)

The transportation vision for the **US-36 Corridor** is primarily to serve as the key multimodal freeway and rapid transit corridor providing a connection between the Boulder and Denver urban areas. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. Extensive bus service is provided along the corridor and a parallel rapid transit rail line and HOV/HOT bus rapid transit facility is planned (tier 1). Rocky Mountain Regional Airport is adjacent to the corridor. The BNSF railroad line parallels much of the corridor (see Corridor Sub-Area Exhibit # 8 and #9).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies; and
- Maintain or improve pavement to optimal condition.

### **Corridor Context**

The following statistics are reported for a 19.7-mile long corridor area encompassing one mile on both sides of US-36 from I-25 to Baseline Road. The corridor is projected to experience moderate population and employment growth from 2005 to 2035. Projections indicate a population increase of 26 percent, a 63 percent increase in employment, and a 35 percent increase in households within the corridor. Travel demand is projected to increase 45 percent from 2005 to 2035.

Congestion measures show the US-36 corridor currently experiences an above average level of congestion, which will grow worse in 2035, as shown in the following table:

**Table 1. US 36 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.39	1.27	30.4
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	2-3	1	3-4
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	27%	18.5%	42%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	4,347	217,280	11,688
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	80	25	—

The *US-36 FEIS* gives more detailed information on existing and future socioeconomic information and traffic in its study area.

**Selected Environmental Resources:**

1. Land Use—Existing and Future

Table 2 lists the existing urbanization and projected future urbanization in the corridor.

**Table 2. US-36 Corridor--Existing Urbanization and Future 2035 UGB Projections (acres)**

Development Type	Counties				Total
	Adams*	Boulder**	Broomfield	Jefferson***	
Within UGB--Expected to be urbanized by 2035	6,405	7,105	4,210	4,353	22,073
-- <i>Currently Urbanized</i>	6,385	6,217	4,210	3,918	20,730
-- <i>Currently Non-Urbanized</i>	21	888	1	434	1,344
Not proposed to be urbanized by 2035 (outside UGB)	561	4,400	101	167	5,229
<b>Total Corridor Area</b>	<b>6,966</b>	<b>11,505</b>	<b>4,311</b>	<b>4,520</b>	<b>27,302</b>

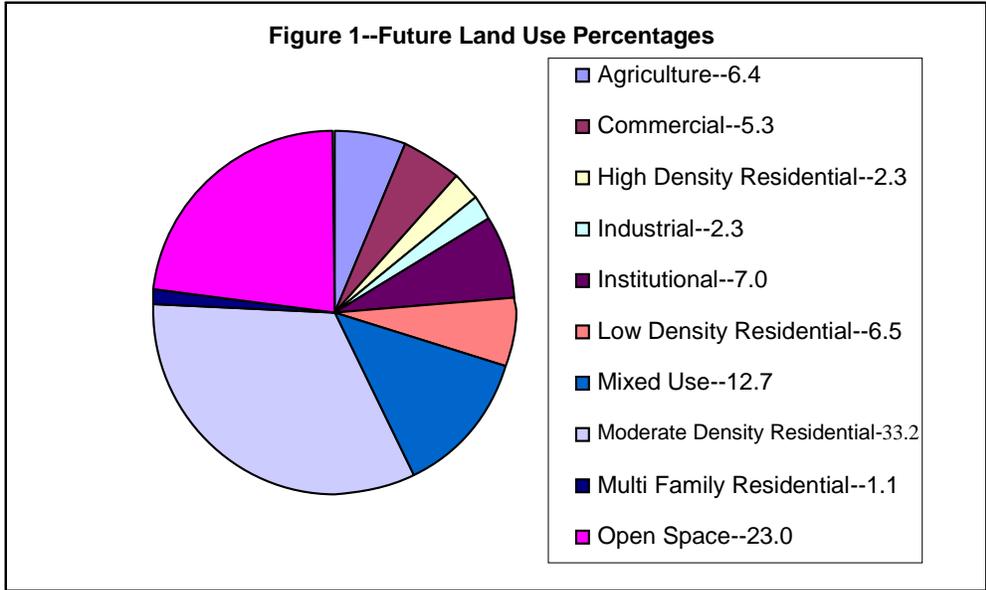
\*Adams--Includes approximate UGB allocation of 3 acres.

\*\*Boulder--Includes approximate UGB allocation of 116 acres.

\*\*\*Jefferson--Includes approximate UGB allocation of 104 acres

The corridor serves nine urban centers; three are mixed-use and six are activity centers. The largest urban center is the 28<sup>th</sup>/30<sup>th</sup> Street mixed-use center, also known as the Boulder Valley Regional Center (BVRC), located at the intersection of US-36 and Arapahoe Avenue in Boulder.

Figure 1 shows predominately residential and open space uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



The *US-36 FEIS* also gives an overview of the existing and future land use, as well as projected impacts within its study area. The *FasTracks* PCEA also provides some more information on existing and anticipated land use surrounding the rail line and bus/HOV/BRT lanes.

2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 38 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these 38 zones, eight zones are both “low-income concentrated” and “minority-concentrated”. Twenty-seven TAZs are only “minority-concentrated” and three TAZs are only “low-income concentrated”. The *US-36 FEIS* gives an overview of the EJ areas and potential impacts within its study area.

3. Parks and Recreation Areas

Approximately 5,681 acres, or 20.8 percent of the total acreage of 27,303 within the corridor, consists of parks and open space. The largest park/open space areas are Van Vleet South and Rock Creek Farm, both located in unincorporated Boulder County. The *US-36 FEIS* gives an overview of the existing and park/recreation areas and potential impacts within its study area.

4. Hazardous Materials

An initial analysis the corridor reveals no National Priority List (NPL) sites within the corridor. One hundred and sixty-five Underground Storage Tanks (USTs) lie within the corridor. The *US-36 FEIS* gives an overview of the existing hazardous waste sites and potential impacts within its study area.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor crosses the South Platte Urban Watershed on the east, the Big Dry Watershed in the Central, and the St. Vrain watershed on the west.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations intersect the corridor—101 TAZs out of a total of 181 within the corridor include at least a portion of a flood hazard area. The *US-36 FEIS* gives an overview of the existing wetlands, floodplains and other water resources, and potential impacts, within its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble's Meadow Jumping Mouse, the Whooping Crane, and the Black-Tailed Prairie Dog. The *US-36 DEIS* gives an overview of the existing wildlife habitat areas, including those of Threatened and Endangered Species, and potential impacts within its study area.

## 7. Historic and Archaeological Resources

One historical district, the Norlin Quadrangle Historic District, located in Boulder, is within the study area. The *US-36 FEIS* also gives an overview of the existing historic and archaeological areas and potential impacts within its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- *Widen US-36 (add HOV/HOT /BRT lane in each direction) from Table Mesa Drive (SH-157) to I-25;*
- *Reconstruct the interchanges at Table Mesa Drive/South Boulder Road/SH-157, McCaslin Boulevard, Interlocken Loop, Wadsworth Boulevard, and Sheridan Boulevard;*
- *Further reconstruct the interchange at US-36 and I-25;*
- *Add auxiliary lanes on both sides from Interlocken Loop to I-25; and*
- *Widen shoulders and improve SH-121/Wadsworth Boulevard, 96<sup>th</sup> Street, Church Ranch Road, Sheridan Boulevard, and Federal Boulevard where they cross US-36.*

## Transit

- *Construct the Northwest Rail commuter rail line parallel to US-36 from Denver Union Station to Boulder;*
- *Construct HOT/bus rapid transit (BRT) lanes along US-36 from Table Mesa interchange east to tie into I-25 Downtown Express lanes;*
- *Construct BRT station/ramp treatments; and*
- *Construct commuter rail stations supported by local bus feeder service and appropriate parking and expand existing park-n-Rides to serve as bus rapid transit stations.*

## Bicycle/Pedestrian

- *Construct regional bicycle facility parallel to US-36; and*
- *Improve pedestrian and bicycle facilities for crossing over or under US-36.*

## System Management

- *Extend courtesy patrol from 120<sup>th</sup> to Foothills Parkway;*
- *Build bus/HOV bypasses at all metered ramps used for access to the Bus/HOV/BRT facility;*
- *Implement transit signal priority (TSP) signal timing techniques at ramp intersections;*
- *Implement HOV/HOT managed lanes; and,*
- *Use freeway DMSs to display comparative real-time travel time for general purpose lanes and HOV/HOT lanes.*

## Travel Demand Management

- *36 Commuting Solutions and Boulder East Community Transportation Options facilitate subarea-specific TDM activities; and*
- *Target efforts to increase transit use of the US-36 rail and BRT rapid transit lines.*

## Preservation and Safety

- *Rebuild aging bridges; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along US-36 with a potential for crash reductions.*

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## **F-19. US-285 Multimodal Corridor Vision: SH-8 to Sheridan Boulevard**

The transportation vision for the **US-285 Corridor** is to serve as a multimodal freeway and rapid transit corridor serving regional and statewide trips. The corridor also includes **SH-8** from C-470 to Wadsworth Boulevard. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. US-285 provides a connection between the mountains and the southwest portion of the Denver area. The eastern segment is located in a densely developed urban area while the western segment passes through a major regional park and less developed suburban area. Bus service is provided in the corridor along with a park-n-Ride lot. A rapid transit line is envisioned (tier 2) along a segment of the corridor from Wadsworth Boulevard to the Southwest Corridor LRT line (see Corridor Sub-Area Exhibit #6).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

The following statistics are reported for a 9.7-mile long corridor area encompassing one mile on both sides of US-285 from SH-8 to Lowell Boulevard. The corridor is projected to experience population and employment growth from 2005 to 2035. Projections indicate a population increase of 19 percent, a 54 percent increase in employment, and a 26 percent increase in households within the corridor. Travel demand is projected to increase 41 percent from 2005 to 2035.

Congestion measures show the US-285 corridor currently experiences a below average level of congestion, as shown in the following table:

**Table 1. US-285 Corridor Congestion Measures**

Congestion Component	Congestion Measure	2006		2035
		Corridor	Region	Corridor
<b>RELIABILITY</b>	<b>Travel Time Variation</b> (ratio of peak hour to non-peak hour)	1.18	1.27	1.53
<b>DURATION</b>	<b>Daily Congestion</b> (hours per day)	0-1	1	2-3
<b>SEVERITY</b>	<b>% of Peak Travel Time in Delay</b>	12.5%	18.5%	29%
<b>DELAY</b>	<b>Vehicle Delay</b> (hours per day)	871	217,280	3,179
<b>INCIDENTS</b>	<b>Crashes per Mile</b> (2003 - average annual)	39	25	—

**Selected Environmental Resources:**

1. Land Use—Existing and Future

Table 2 lists the existing urbanization and projected future urbanization in the corridor.

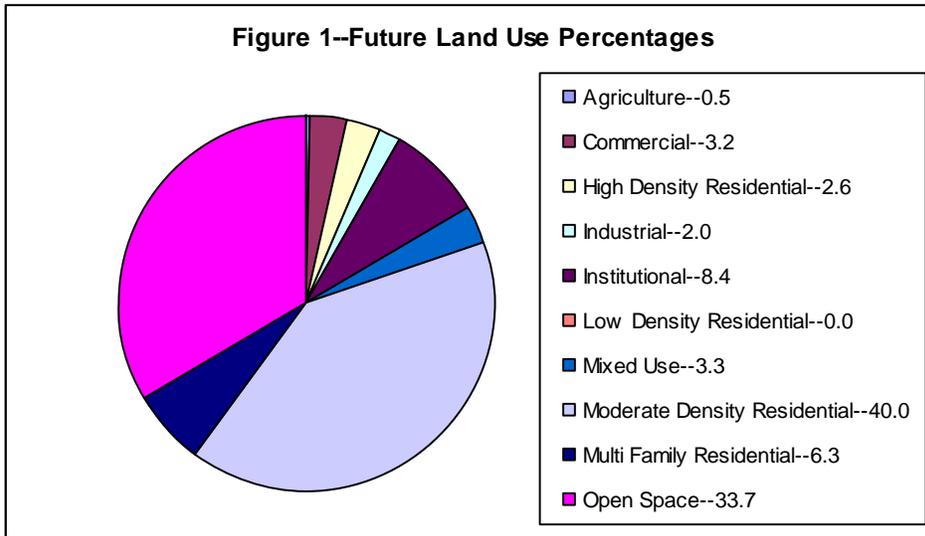
**Table 2. US-285 Corridor: Existing Urbanization and Future 2035 UGB Projections (acres)**

Development Type	Counties			Total
	Arapahoe	Denver	Jefferson*	
Within UGB--Expected to be urbanized by 2035	681	3,005	5,764	9,450
-- <i>Currently Urbanized</i>	679	2,695	4,596	7,970
-- <i>Currently Non-Urbanized</i>	2	310	1,168	1,480
Not proposed to be urbanized by 2035 (outside UGB)	87	0	4,347	4,434
<b>Total Corridor Area</b>	<b>768</b>	<b>3,005</b>	<b>10,111</b>	<b>13,884</b>

\*Includes approximate UGB allocation of 123 acres to Jefferson County.

The corridor contains two urban centers; both are activity centers. They are the Bear Valley Activity Center located at US-285 and Sheridan in Denver; and the Fehringer Ranch, located at the US-285/Kipling intersection in unincorporated Jefferson County.

Figure 1 shows predominately residential and open space uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



## 2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that 19 of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these 19 zones, 4 zones are both “low-income concentrated” and “minority-concentrated” and 15 TAZs are only “minority-concentrated”.

## 3. Parks and Recreation Areas

Approximately 3,362 acres, or 24.2 percent of the total acreage of 13,881 within the corridor, consists of parks and open space. The largest park/open space area is Bear Creek Lake Park, located in Lakewood.

## 4. Hazardous Materials

An initial analysis the corridor reveals no National Priority List (NPL) sites within the corridor. Fifty-five Underground Storage Tanks (USTs) lie within the corridor.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor crosses the Bear Creek Watershed on the west and the South Platte Urban Watershed on the east.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations, intersect the corridor—31 TAZs out of a total of 59 within the corridor include at least a portion of a flood hazard area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble’s Meadow Jumping Mouse, the Whooping Crane, and part of the winter range of the Bald Eagle.

## 7. Historic and Archaeological Resources

One historical district, the Fort Logan Mental Health Center located in Denver, is within the study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- Widen US-285 between Kipling Avenue and Lowell Boulevard;
- *Reconstruct the interchanges* at Kipling Street, and Sheridan Boulevard;
- Construct a new interchange at Lowell Boulevard/Knox Court and River Point Parkway;
- Significant operational improvements to interchanges at Federal Boulevard and at C-470; and
- Widen C-470, Kipling Street, and Wadsworth Boulevard where they cross US-285/Hampden Avenue.

### Transit

- Construct rapid transit rail paralleling US-285/Hampden Avenue from Wadsworth Boulevard to the existing Southwest light rail line.

### Bicycle/Pedestrian

- Improve pedestrian and bicycle facilities for crossing over or under US-285.

### System Management

- Implement courtesy patrol west to C-470;

- Add ITS elements such as cameras and variable message signs.

#### Travel Demand Management

- Targeted activities to increase carpooling and vanpooling.

#### Preservation and Safety

- *Rebuild aging bridges;*
- *Rebuild deficient traffic signals at the US-285 ramps; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations along US-285 and SH-8 with a potential for crash reductions.*

#### Other

- Additional capacity may warrant consideration as HOV/HOT managed lanes.

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## **F-20. Northwest/Jefferson Parkway Multimodal Corridor Vision: US-6 to Northwest Parkway**

Relevant Studies: (1) *Jefferson Parkway System Level Study*—July 2009. (2) *Northwest Corridor EIS*—Draft Materials (EIS was cancelled in 2008). Study Limits (approximate): I-70/C-470 Interchange in Jefferson County to Northwest Parkway/120th Street in Boulder County.

Website: <http://www.dot.state.co.us/NorthwestCorridorEIS/index.cfm>

The transportation vision for the **Northwest Corridor and Jefferson Parkway** is to serve as a multimodal access controlled highway and rapid transit corridor serving regional and statewide trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. This corridor also includes portions of **SH-72, SH-93, and SH-128**. Corridor improvements will enable the completion of a regional beltway transportation system, connecting the Northwest Parkway (96<sup>th</sup> Street) to the SH-58, I-70, or C-470 freeway systems. The corridor passes through major open space parcels. Bus service will be provided along the corridor and a rapid transit line is envisioned. Rocky Mountain Metropolitan Airport is located in the northern end of the corridor. Specific transportation improvements (classification, alignment, interchanges) are identified consistent with the Northwest Corridor EIS and the Jefferson Parkway System Level Study (see Corridor Sub-Area Exhibit #8).

### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

### **Corridor Context**

The following statistics are reported for a 19.6-mile long corridor area encompassing one mile on both sides of the proposed Northwest Corridor from US-6 to the existing Northwest Parkway. The proposed corridor is projected to experience significant population and employment growth from 2005 to 2035. Projections indicate a population increase of 69 percent, a 73 percent increase in employment, and an 83 percent increase in households within the corridor. Travel demand is projected to increase 51 percent from 2005 to 2035.

[As the Congestion Management System performance data only reports data for existing roadways, no Table 1 is provided here.]

**Selected Environmental Resources:**

1. Land Use-Existing and Future

Table 1 lists the existing urbanization and projected future urbanization in the corridor.

**Table 2. Northwest Corridor--Existing Urbanization and Future 2035 UGB Projections**

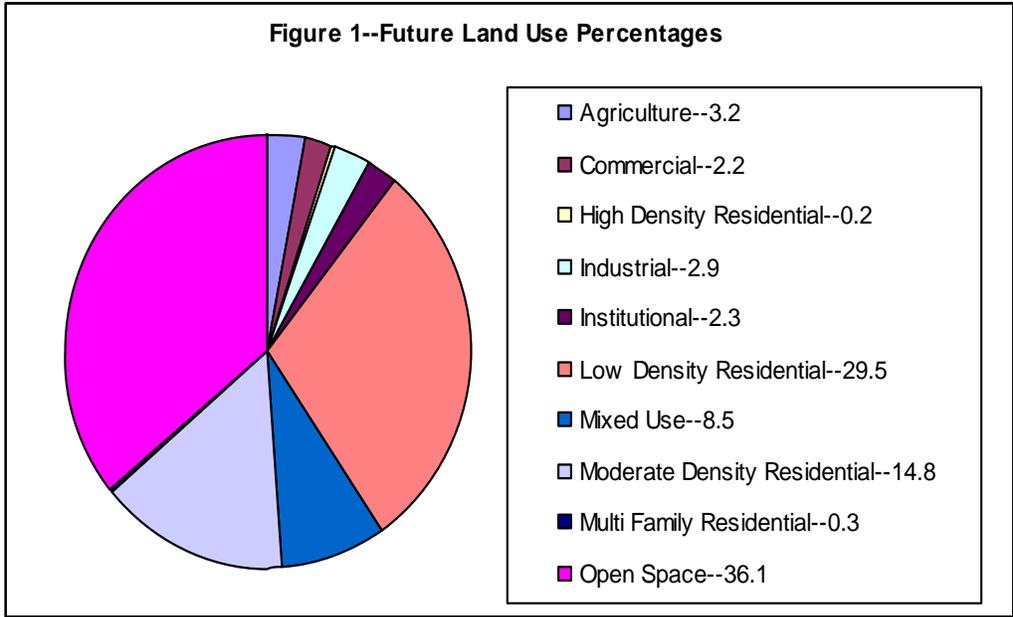
Development Type	Counties			Total
	Boulder*	Broomfield	Jefferson**	
Within UGB--Expected to be urbanized by 2035	1,160	2,326	9,492	12,978
-- <i>Currently Urbanized</i>	1,004	2,269	6,611	9,884
-- <i>Currently Non-Urbanized</i>	156	57	2,881	3,094
Not proposed to be urbanized by 2035 (outside UGB)	935	1,020	11,263	13,218
<b>Total Corridor Area</b>	<b>2,095</b>	<b>3,346</b>	<b>20,755</b>	<b>26,196</b>

\*Includes approximate UGB allocation of 81.5 acres to Boulder County.

\*\*Includes approximate UGB allocation of 130 acres to Jefferson County.

The corridor contains three urban centers; the Interlocken Loop Activity Center in Broomfield, Candelas Activity Center in Arvada and Downtown Golden, a mixed-use center.

Figure 1 shows predominately residential and open space uses are anticipated in the corridor, based on county and municipal land use plans—as of 2004.



2. Environmental Justice

DRCOG’s assessment of Environmental Justice areas for the DRCOG region shows that four of the 568 overall EJ traffic analysis zones (TAZs) in the region fall within the corridor. Of these four zones, two TAZs are only “minority-concentrated” and two are only “low-income-concentrated”. The Northwest Corridor EIS March 29, 2005 Technical Support Committee (TSC) Meeting Summary also provides some discussion on potential impacts to EJ areas within its study area.

3. Parks and Recreation Areas

Approximately 40.2 percent of the total existing acreage, or 10,532 out of 26,196 acres within the corridor, consists of parks and open space. The largest park/open space area is The Rocky Flats National Wildlife Refuge, located in Jefferson County. The Northwest Corridor EIS October 14, 2005 Technical Support Committee (TSC) Meeting Summary, (as well as others), also provides some discussion on potential impacts to park and recreation areas within its study area.

4. Hazardous Materials

An initial analysis the corridor reveals no National Priority List (NPL) sites within the corridor. Fifty-eight Underground Storage Tanks (USTs) lie within the corridor. The Northwest Corridor EIS March 29, 2005 Technical Support Committee Meeting Summary also provides some discussion on hazardous waste sites within its study area.

## 5. Water Resources

Three features of water resources are described here:

**Watersheds.** The corridor crosses four different watersheds (from south to north): the South Platte Urban, the Upper Clear Creek, the South Platte Urban (again), the Big Dry, and the St. Vrain.

**Wetlands.** Several different types of wetlands exist along the corridor.

**Flood Hazard Areas.** Several flood hazard areas, corresponding to FEMA Zones A and AE flood hazard zone designations intersect the corridor—41 TAZs out of a total of 83 within the corridor include at least a portion of a flood hazard area. The Northwest Corridor EIS September 28, 2004 Technical Support Committee (TSC) Meeting Summary also provides some discussion on potential impacts to wetlands and other water resources within its study area.

## 6. Wildlife

The corridor encompasses the habitat of numerous Federal Threatened and Endangered Species and State of Colorado Species of Special Concern. These species include the habitats of the Preble's Meadow Jumping Mouse, the Whooping Crane, and part of the winter range of the Bald Eagle. The Northwest Corridor EIS September 28, 2004 Technical Support Committee Meeting Summary also provides some discussion on potential impacts to wildlife habitat within its study area.

## 7. Historic and Archaeological Resources

Six historic districts are located within the study area. The largest historic district is the Churches Ranch—Long Lake Ranch Park, located in Arvada. The second largest is the Lariat Trail Scenic Mountain Drive/Lariat Loop Road/Lookout Mountain Road, located in Golden. The Northwest Corridor EIS October 14, 2005 Technical Support Committee (TSC) Meeting Summary, (as well as others), also provides some discussion on historic/archaeological resources and potential impacts within its study area.

### **Primary Strategies:**

Chapter 2 describes common strategies for all corridors. Strategies that are part of a project receiving federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes.

### Roadway Capacity and Major Capital Projects

- *Construct new access controlled Jefferson Parkway toll highway from SH-93 to SH-128;*
- *Widen portions of SH-93, SH-128, McIntyre Street, Indiana Street, and Interlocken Loop within the corridor area; Construct new interchanges along the Jefferson Parkway at Candelas Parkway, Indiana Street, SH-72 and SH-128/120<sup>th</sup> Avenue; and*
- *Construct new interchanges or grade separations along SH-93 as determined.*

### Transit

- *Preserve right-of-way for future rapid transit implementation in the corridor; and*
- *Provide feeder bus service to Gold Line and US-36 Corridor rapid transit lines.*

### Bicycle/Pedestrian

- Provide pedestrian connections across SH-93 in Golden;
- *Complete bicycle corridor shoulder improvements along SH-93; and*
- Consider new bicycle corridor along any new roadway that is constructed.

### System Management

- Construct hill-climbing lanes and shoulder improvements on existing arterials in the corridor;
- Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes) at existing signalized intersections as appropriate;
- Operate arterial corridor signals using traffic-responsive control; implement needed system detection;
- Implement network surveillance at key points throughout entire corridor;
- Implement/use DMSs to disseminate real-time weather condition and closure information from regional ATIS; and
- Adhere to access category E-X or F-W for new highway strictly regulating access from adjacent development.

### Travel Demand Management

- *36 Commuting Solutions TMO facilitates subarea specific TDM activities; and*
- *Target efforts to increase transit use of US-36, Gold Line, and West Corridor rapid transit lines.*

### Preservation and Safety

- *Make safety improvements along SH-93; and*
- *Implement measures to reduce the number and severity of traffic crashes at identified locations on corridor arterials with a potential for crash reductions.*

### Other

- Provide wildlife crossings where applicable; and
- New capacity may warrant consideration as toll facility or managed lanes.

- (intentionally blank)

## 5. Corridor Visions for Other State Highways in the DRCOG Region

The previous sections described the corridor visions for the Freeways and Major Regional Arterials. About 40 other state highways regionally classified as principal or minor arterials are located in the region. They fall into four categories of roadways that display typical characteristics, visions, and improvement strategies:

- Mountain Roads – located in mountainous terrain
- Rural Plains Roads – located outside of the DRCOG urban growth area
- Urban Roads – located primarily within the existing urbanized area
- Suburban Transition Roads – located in areas expected to urbanize in the future or serve as connectors between freestanding urban areas

Figure 1 displays the location of these roads. Note that strategies listed within each roadway category will not necessarily apply to every one of the roadways listed. Strategies that are part of a project receiving state or federal funding or subject to federal action must go through environmental (NEPA) analyses prior to final definition of specific project attributes. Likewise, new interchange proposals on the state highway system must go through the CDOT 1601 Interchange Approval Process before they can be built.

### **A. Mountain Roads**

The transportation vision for Mountain Roads is to provide access between the Denver urban area and communities in the mountainous area. Future improvements will primarily maintain system quality and improve safety, as well as increase mobility at spot locations. These roads serve daily commuters, delivery vehicles, and weekend recreational traffic (motor vehicles and bicycles). Some private or public bus service may be provided on portions of these roadways.

Other state highways identified as Mountain Roads:

- US-6; I-70/Kermits to SH-93/SH-58 (Clear Creek Canyon);
- US-36; Larimer County line to west edge of Lyons;
- US-40; Berthoud Pass to I-170;
- SH-119; US-6 to Nederland;
- SH-119; Nederland to Boulder (Boulder Canyon);
- US-6; Loveland Pass to I-70;
- SH-7; Larimer County line to Lyons (St. Vrain Creek);
- SH-46; SH-119 to Jefferson County line (Golden Gate Canyon);
- SH-72; SH-7 to SH-93;
- SH-74; Evergreen to Morrison;
- SH-103; Idaho Springs to Squaw Pass; and
- SH-5; Mt. Evans Highway.

### **Primary Goals/Objectives:**

- Maintain or improve pavement to optimal condition;
- Rehabilitate or replace deficient bridges;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Increase travel reliability and improve mobility for private and commercial vehicles;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Maintain statewide transportation connections; and
- Reduce motor vehicle crash rates.

### **Primary Strategies:**

- Implement intersection improvements (e.g., turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections;
- *Implement intersection improvements (e.g., turn lanes, acceleration/deceleration lanes, sight distance improvements) at unsignalized intersections as appropriate;*
- Add signals as warrants met, consistent with access management requirements;
- Construct passing/slow moving vehicle lanes;
- Add/improve shoulders;
- Add pullouts; and
- *Safety improvements such as curve flattening, lighting, guide rails, and rockfall mitigation.*

SH-119 southeast of Black Hawk and US-40 from Berthoud Pass to I-70 would also have the following strategies:

- Implement network surveillance at key points; and
- Implement/use VMSs to disseminate real-time traffic information.

SH-119 southeast of Black Hawk would also have the following strategy:

- *Add travel lanes.*

### **B. Rural Plains Roads (outside UGB)**

The transportation vision for Rural Plains Roads is to provide access between the Denver urban area and points outside of the Denver region. Some may also provide connections to freestanding communities through land outside of the Denver region's urban growth boundary/area. Future improvements will primarily maintain system quality as well as improve safety and increase mobility in selected areas.

Other state highways identified as Rural Plains Roads:

- US-36; Lyons (SH-66) to north Boulder;
- SH-52; SH-119 east to Weld County Road 21 (improvements primarily mobility);
- SH-66; Lyons (US-36) to Weld County Road 19;
- SH-79; Bennett to SH-52;
- SH-86; east Castle Rock to Elbert County line (improvements primarily mobility);
- SH-93; SH-72 to Boulder (SH-170);
- SH-83; Franktown (SH-86) to El Paso County line (includes mobility improvements of an operational nature per SH-83/SH-86 Corridor Optimization Study);
- SH-128; SH-93 to McCaslin Boulevard; and
- SH-170; Eldorado Springs to Superior.

**Primary Goals/Objectives:**

- Maintain or improve pavement to optimal condition;
- Rehabilitate or replace deficient bridges;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;
- Increase travel reliability and improve mobility for private and commercial vehicles;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers; and
- Maintain statewide transportation connections.

**Primary Strategies:**

- Implement intersection improvements (e.g., turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections;
- *Implement intersection improvements (e.g., turn lanes, acceleration/deceleration lanes, sight distance improvements) at unsignalized intersections as appropriate;*
- Add signals as warrants met, consistent with access management requirements;
- Add/improve shoulders;
- Implement network surveillance at key points;
- Implement/use VMSs to disseminate real-time traffic information;
- Upgrade signals at railroad crossing and integrate with CDOT traffic signal system; and
- Limited widening of roadways in specific segments.

### **C. Urban Roads**

The transportation vision for Urban Roads is to serve as multimodal arterials facilitating longer and medium distance regional trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. Most of these roads are served by bus transit routes.

Other state highways identified as Urban Roads:

- SH-7/SH-119 (Canyon Boulevard, Broadway, Arapahoe Avenue in Boulder);
- SH-7 (Arapahoe Road); US-36 to 55<sup>th</sup> Street;
- SH-7; downtown Brighton;
- US-36; downtown Lyons;
- US-36 (28<sup>th</sup> Street); Broadway in north Boulder to US-36 freeway;
- SH-74; I-70 to Evergreen;
- SH-88 (Federal Boulevard); Belleview Avenue to Colfax Avenue;
- US-287 (Federal Boulevard); Colfax Avenue to 120<sup>th</sup> Street;
- SH-93 (South Broadway in Boulder); SH-170 to Arapahoe Avenue;
- SH-83 (Leetsdale Drive/Parker Road); Colorado Boulevard to Havana Street;
- SH-30 (Havana Street); Parker Road to 6<sup>th</sup> Avenue;
- SH-88 (Belleview Avenue); Federal Boulevard to I-25;
- SH-7; downtown Lafayette;
- SH-8; C-470 to Wadsworth Boulevard; and
- SH-170; in Superior.

#### **Primary Goals/Objectives:**

- Increase travel reliability and improve mobility for private and commercial vehicles;
- Serve the proposed Urban Centers in the corridor;
- Accommodate growth in personal motor vehicle and freight travel;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies; and
- Maintain or improve pavement to optimal condition.

#### **Primary Strategies:**

- Operate existing and new traffic signals using signal system(s) for surface street control;
- Regularly update traffic signal timing/coordination plans;

- *Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections;*
- Add signals as warrants met, consistent with access management requirements;
- Implement network surveillance at key points;
- Implement appropriate transit operational improvements;
- Upgrade signals at railroad crossing and integrate with CDOT traffic signal system;
- *Widen selected roadway segments;*
- *Improve bicycle and pedestrian accommodations and facilities;*
- *Provide additional FastConnects bus transit service as demand increases; and*
- *Provide feeder bus connections to rapid transit stations.*

#### **D. Suburban Transition Roads**

The transportation vision for Suburban Transition Roads is to serve as multimodal arterials facilitating longer and medium distance regional trips. Future improvements will primarily increase mobility as well as maintain system quality and improve safety. Most of these roads are served by bus transit routes. Access controls and property setbacks will be implemented in currently rural areas to protect against expensive right-of-way takings needed for widening in the future.

Other state highways identified as Suburban Transition Roads:

- SH-7; 55<sup>th</sup> to US-287;
- SH-7; Lafayette to Brighton;
- SH-8; C-470 to Kipling;
- SH-66; 75<sup>th</sup> Street west of Longmont to Weld County line;
- SH-72 (Coal Creek Canyon Road, Indiana Street); SH-93 to 64<sup>th</sup> Avenue;
- SH-86; I-25 to east Castle Rock;
- SH-7; SH-2 to I-76;
- SH-8; US-285 to C-470; and
- SH-40; SH-26/I-70 to US-6.

#### **Primary Goals/Objectives:**

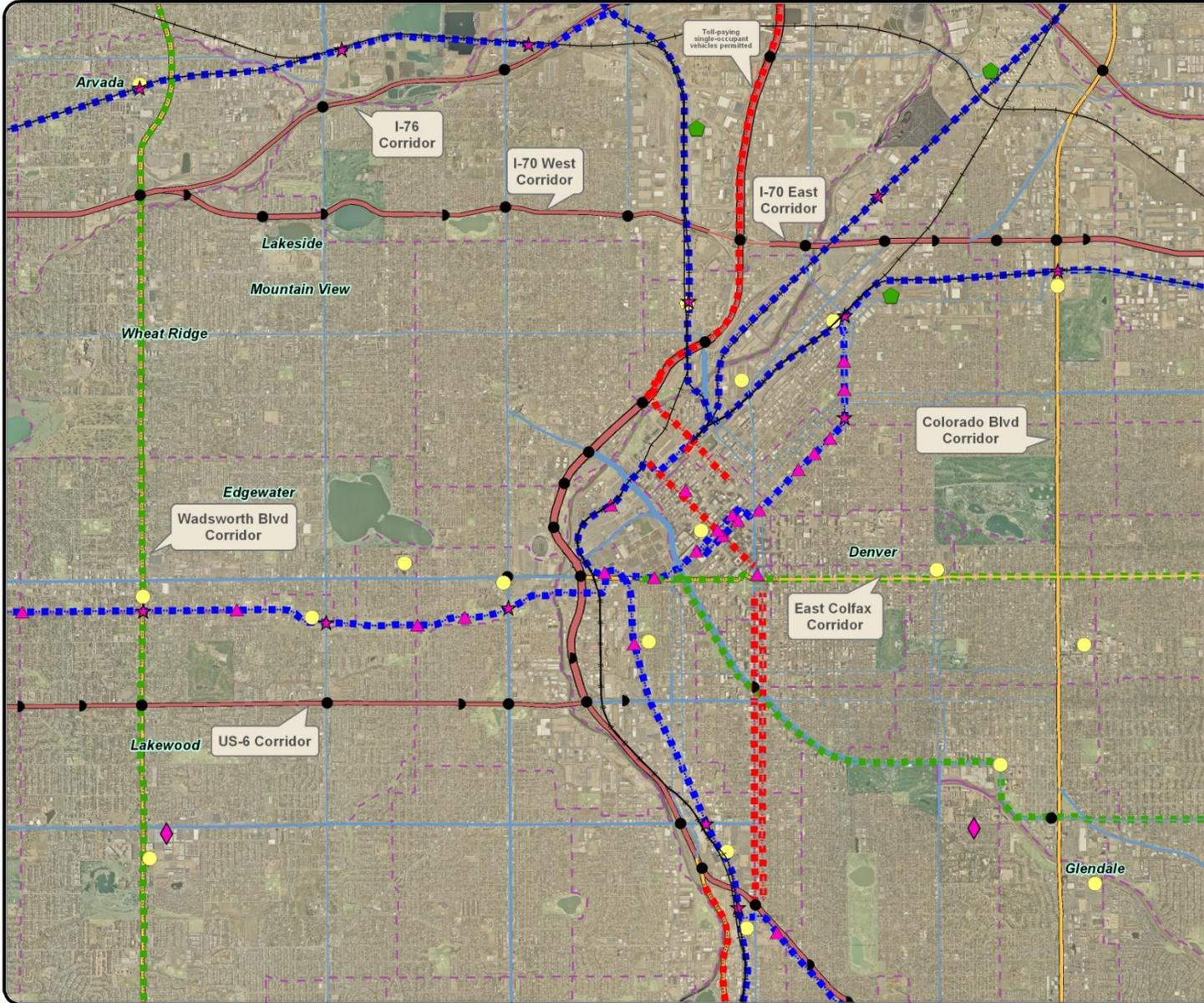
- Increase travel reliability and improve mobility for private and commercial vehicles;
- Support urban development within the Denver region's Urban Growth Boundary/Area;
- Serve the proposed Urban Centers in the corridor;
- Improve management of the existing facilities and travel demand;
- Provide alternative modes of transportation to travelers;
- Reduce motor vehicle crash rates;
- Eliminate design deficiencies;

- Maintain or improve pavement to optimal condition; and
- Maintain statewide transportation connections.

**Primary Strategies:**

- Operate existing and new traffic signals using signal system(s) for surface street control;
- Regularly update traffic signal timing/coordination plans;
- *Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes) at existing and future signalized intersections;*
- *Implement intersection improvements (e.g. turn lanes, acceleration/deceleration lanes, sight distance improvements) at unsignalized intersections as appropriate;*
- Add signals as warrants met, consistent with access management requirements;
- Implement network surveillance at key points;
- Implement/use VMSs to disseminate real-time traffic information;
- Implement appropriate transit operational improvements;
- Upgrade signals at railroad crossings and integrate with CDOT traffic signal system;
- *Widen selected roadway segments;*
- *Improve bicycle and pedestrian accommodations;*
- *Provide additional FastConnects bus transit service as demand increases; and*
- *Provide feeder bus connections to rapid transit stations.*

Exhibit 1  
**Central Metro Area  
 2035 Multimodal Corridors**



				Freeway
				Major Regional Arterial
				Principal Arterial

- Partial Interchange
- Full Interchange
- Regional Bicycle Corridor
- Rapid Transit Rail  
Existing & Tier I (FastTracks)
- Other Rapid Transit  
Bus/HOV or HOT Lane
- Transit Station With Parking
- Transit Station Without Parking
- Park-n-Ride Lot
- Freight Rail
- Major Freight Facility
- Regional Airport

- Urban Center
- 2030 Urban Growth Boundary/Area
- DRCOG Parks and Open Space  
(2004)

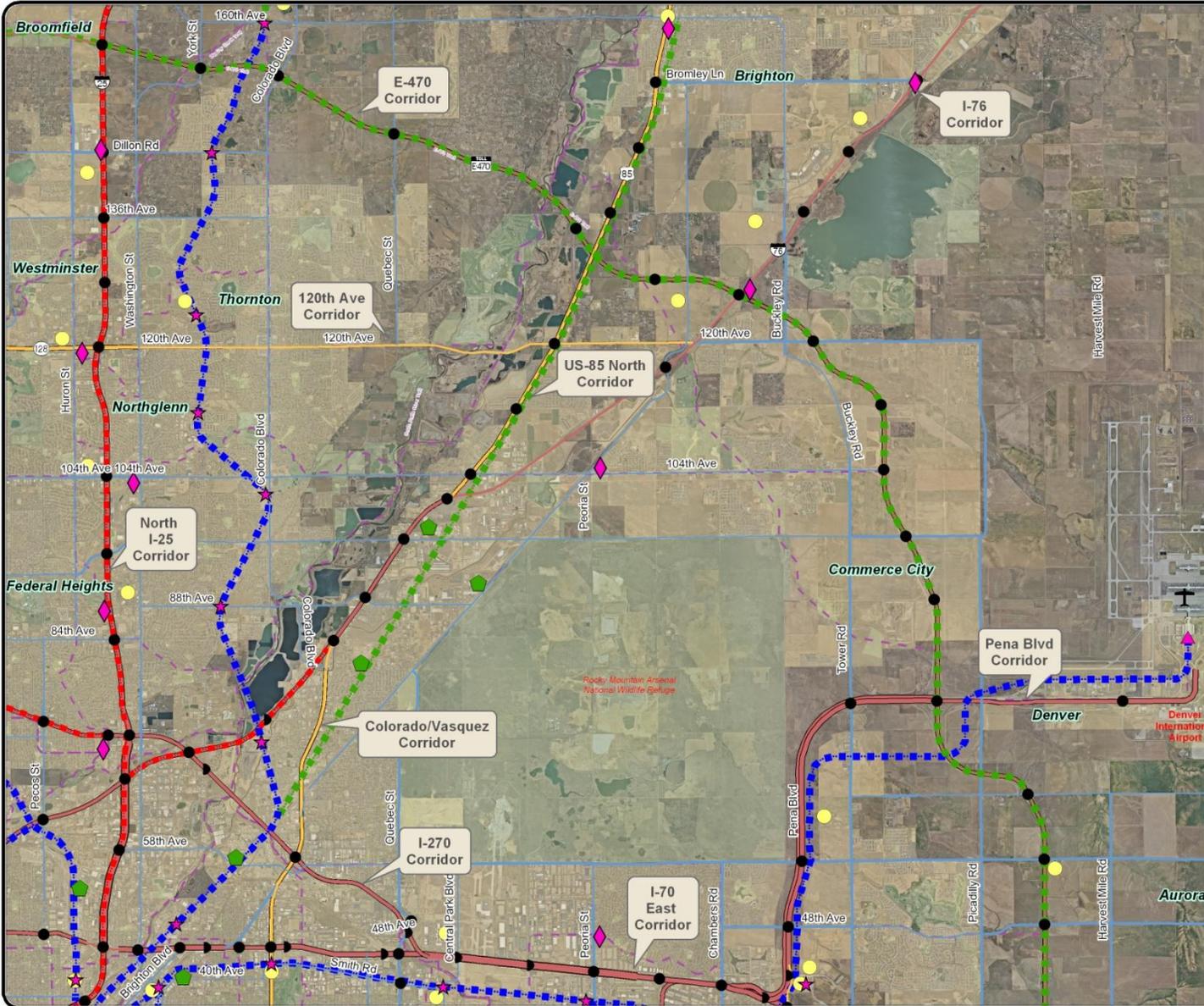
Note: Locations of future facilities are not confirmed at this time.

Number of lanes depicted is tentative. Future environmental studies will determine lanes and specific corridor attributes.

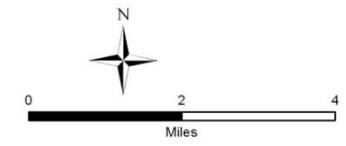
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Exhibit 2  
**Northeast Metro Area  
 2035 Multimodal Corridors**



- |                |                         |
|----------------|-------------------------|
| 10 8 6 4 Lanes | Freeway                 |
| 8 6 4 Lanes    | Major Regional Arterial |
| 8 6 4 2 Lanes  | Principal Arterial      |
- 
- ▶ Partial Interchange
  - Full Interchange
  - - - Regional Bicycle Corridor
  - Existing & Tier 1 (FasTracks) Rapid Transit Rail
  - Other Rapid Transit
  - Bus/HOV or HOT Lane
  - ★ Transit Station With Parking
  - ▲ Transit Station Without Parking
  - ◆ Park-n-Ride Lot
  - ⊥ Freight Rail
  - Major Freight Facility
  - ✈ Regional Airport
  - Urban Center
  - 2030 Urban Growth Boundary/Area
  - DRCOG Parks and Open Space (2004)



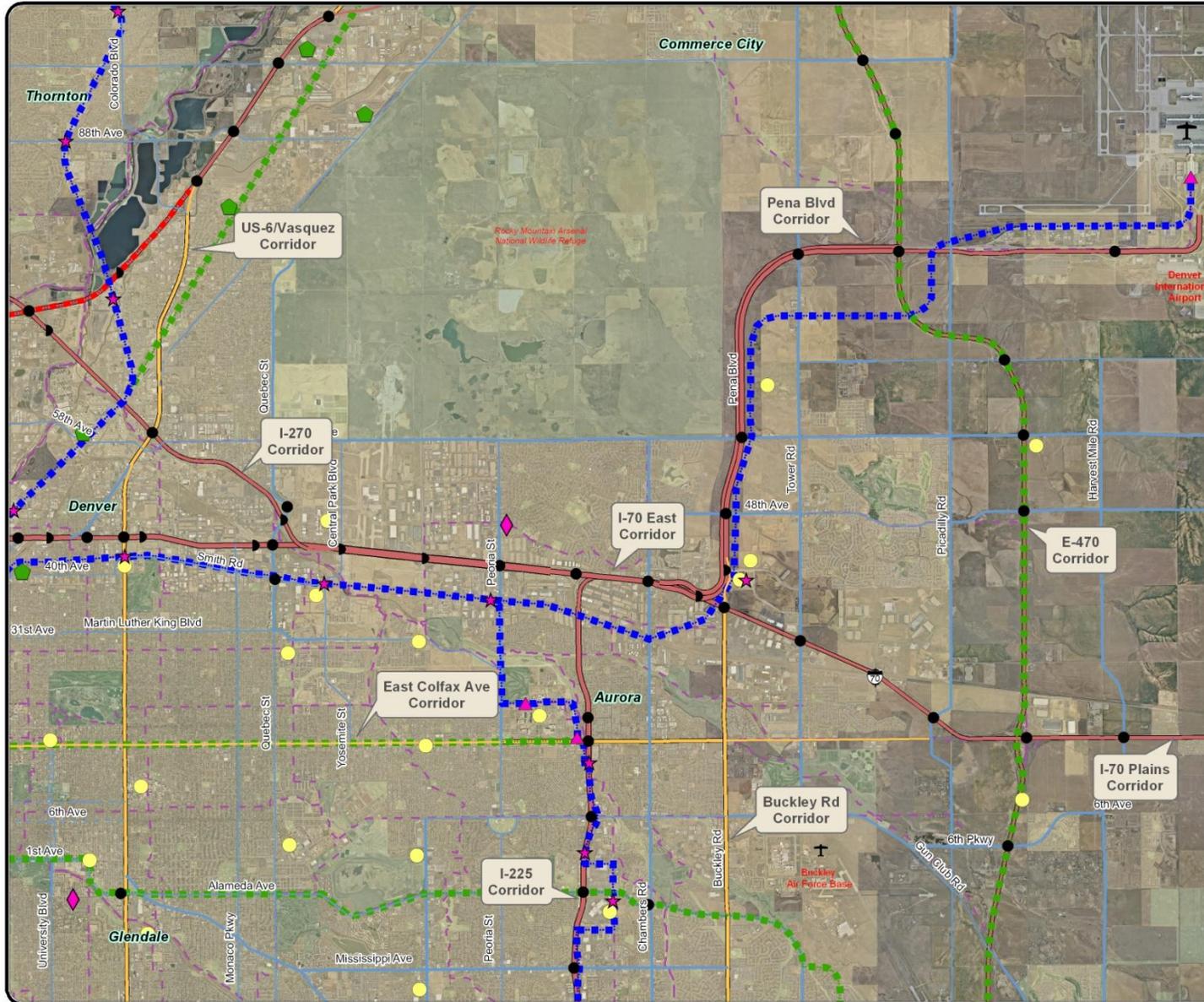
Note: Locations of future facilities are not confirmed at this time.

Number of lanes depicted is tentative. Future environmental studies will determine lanes and specific corridor attributes.

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Exhibit 3  
**East Metro Area  
 2035 Multimodal Corridors**



- |  |    |   |         |                         |                    |
|--|----|---|---------|-------------------------|--------------------|
|  | 10 | 8 | 6       | 4 Lanes                 | Freeway            |
|  | 8  | 6 | 4 Lanes | Major Regional Arterial |                    |
|  | 8  | 6 | 4       | 2 Lanes                 | Principal Arterial |
- 
- Partial Interchange
  - Full Interchange
  - Regional Bicycle Corridor
  - Rapid Transit Rail  
Existing & Tier 1 (FasTracks)
  - Other Rapid Transit  
Bus/HOV or HOT Lane
  - Transit Station With Parking
  - Transit Station Without Parking
  - Park-n-Ride Lot
  - Freight Rail
  - Major Freight Facility
  - Regional Airport
- 
- Urban Center
  - 2030 Urban Growth Boundary/Area
  - DRCOG Parks and Open Space  
(2004)



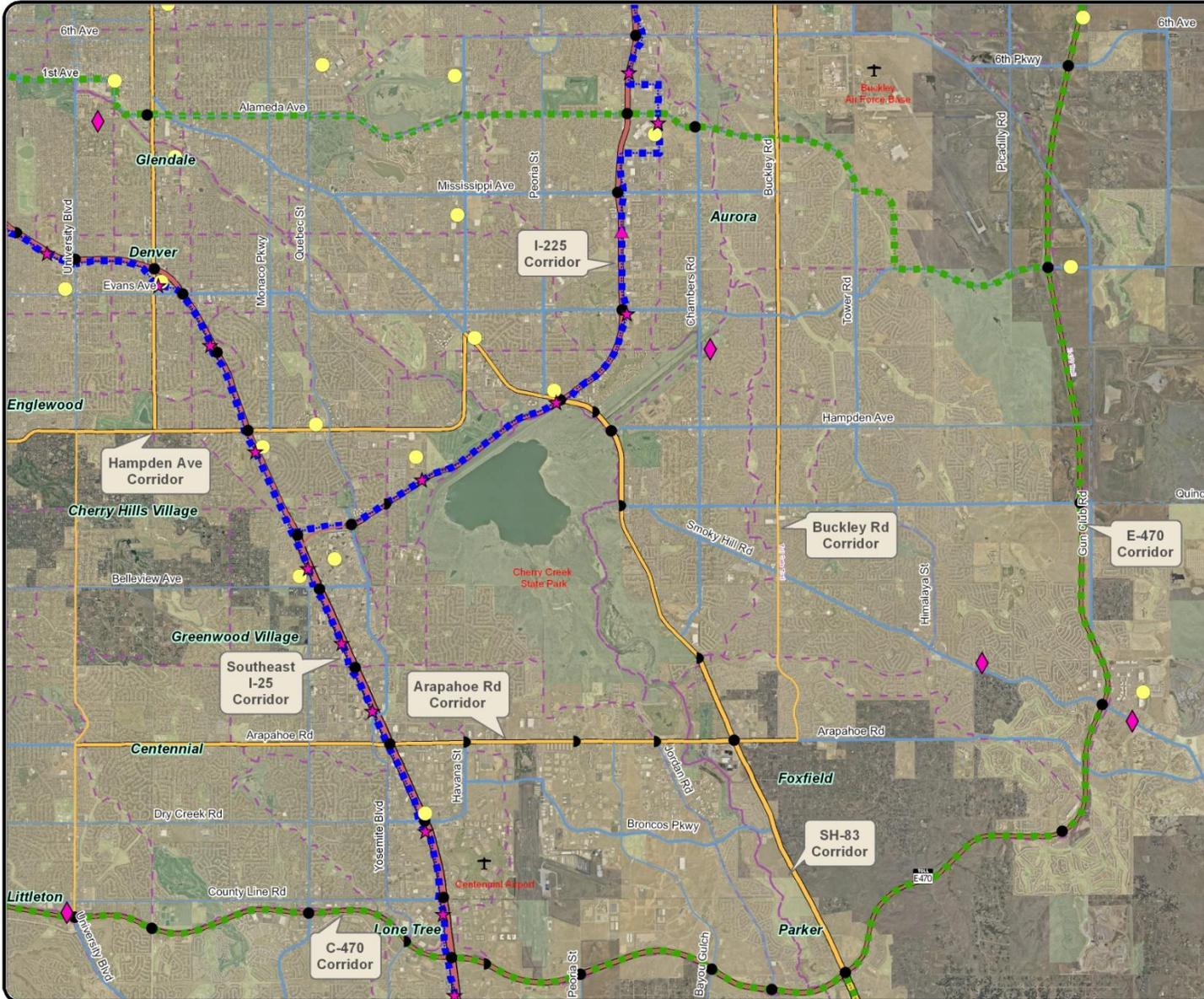
Note: Locations of future facilities are not confirmed at this time.

Number of lanes depicted is tentative. Future environmental studies will determine lanes and specific corridor attributes.

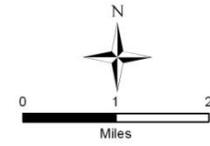
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Exhibit 4  
**Southeast Metro Area  
 2035 Multimodal Corridors**



- |  |    |  |   |  |         |  |         |                         |
|--|----|--|---|--|---------|--|---------|-------------------------|
|  | 10 |  | 8 |  | 6       |  | 4 Lanes | Freeway                 |
|  | 8  |  | 6 |  | 4 Lanes |  |         | Major Regional Arterial |
|  | 8  |  | 6 |  | 4       |  | 2 Lanes | Principal Arterial      |
- 
- Partial Interchange
  - Full Interchange
  - Regional Bicycle Corridor
  - Rapid Transit Rail  
Existing & Tier I (FasTracks)
  - Other Rapid Transit  
Bus/HOV or HOT Lane
  - Transit Station With Parking
  - Transit Station Without Parking
  - Park-n-Ride Lot
  - Freight Rail
  - Major Freight Facility
  - Regional Airport
  - Urban Center
  - 2030 Urban Growth Boundary/Area
  - DRCOG Parks and Open Space  
(2004)



Note: Locations of future facilities are not confirmed at this time.

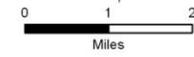
Number of lanes depicted is tentative. Future environmental studies will determine lanes and specific corridor attributes.

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Exhibit 5  
Northern Douglas County Area  
2035 Multimodal Corridors

- |  |          |                         |
|--|----------|-------------------------|
|  | 10 Lanes | Freeway                 |
|  | 8 Lanes  | Major Regional Arterial |
|  | 6 Lanes  | Major Regional Arterial |
|  | 4 Lanes  | Principal Arterial      |
|  | 2 Lanes  | Principal Arterial      |
- 
- Partial Interchange
  - Full Interchange
  - Regional Bicycle Corridor
  - Rapid Transit Rail  
Existing & Tier I (FasTracks)
  - Other Rapid Transit  
Bus/HOV or HOT Lane
  - Transit Station With Parking
  - Transit Station Without Parking
  - Park-n-Ride Lot
  - Freight Rail
  - Major Freight Facility
  - Regional Airport
- 
- Urban Center
  - 2030 Urban Growth Boundary/Area
  - DRCOG Parks and Open Space (2004)



Note: Locations of future facilities are not confirmed at this time.

Number of lanes depicted is tentative. Future environmental studies will determine lanes and specific corridor attributes.

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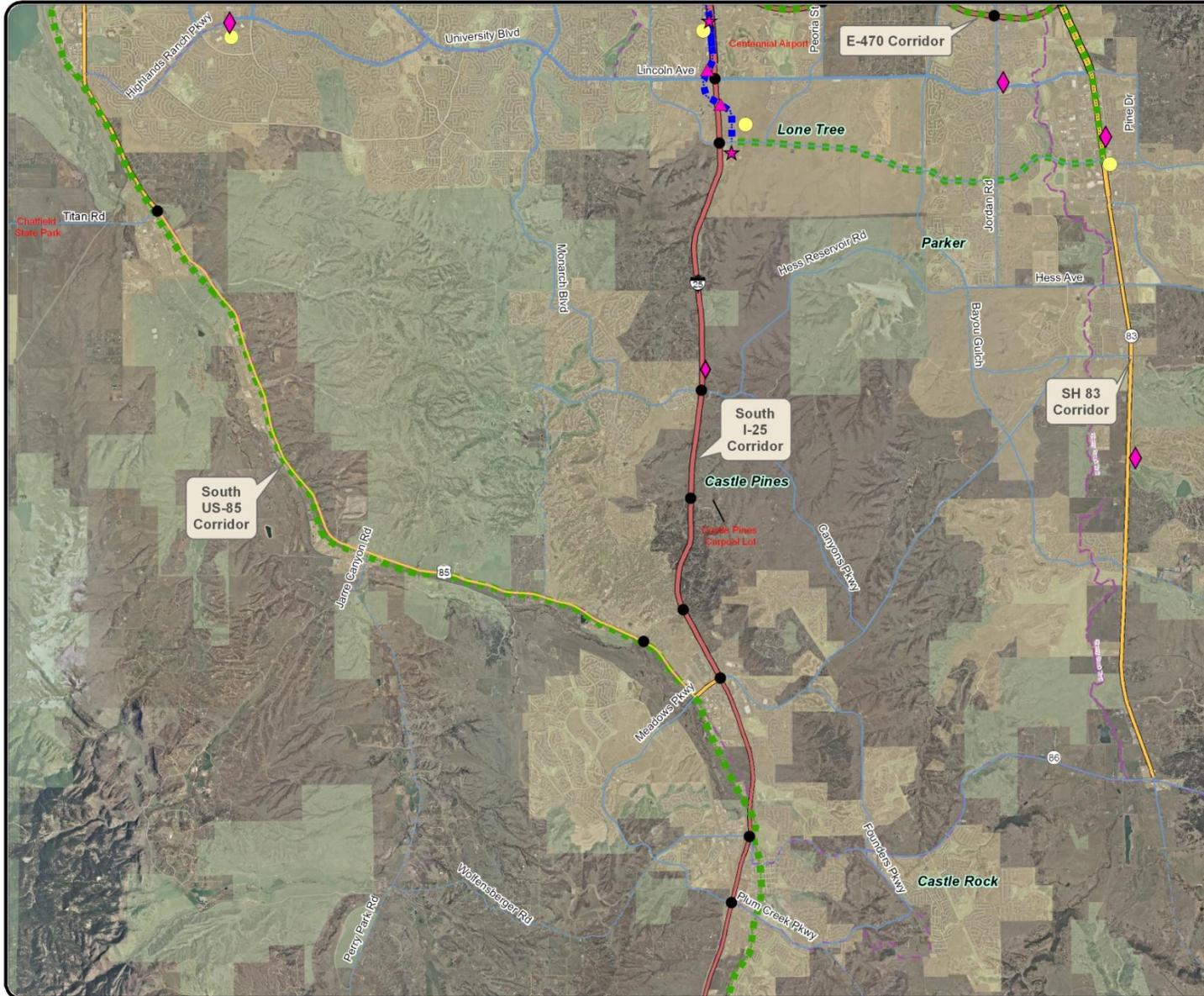
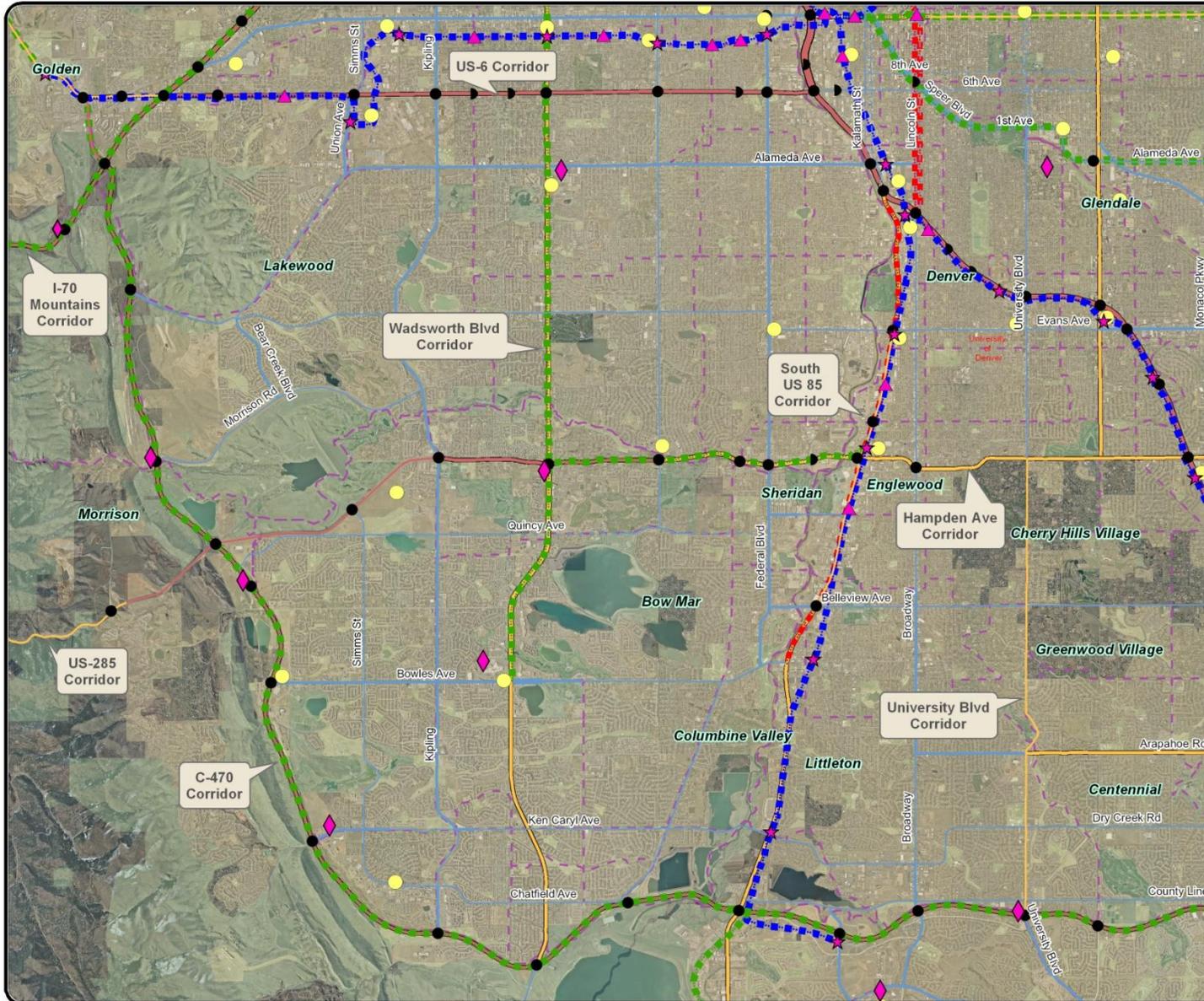
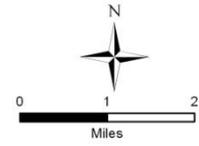




Exhibit 6  
**Southwest Metro Area  
 2035 Multimodal Corridors**



- |  |    |  |   |  |   |                         |   |                    |
|--|----|--|---|--|---|-------------------------|---|--------------------|
|  | 10 |  | 8 |  | 6 |                         | 4 | Freeway            |
|  | 8  |  | 6 |  | 4 | Major Regional Arterial |   |                    |
|  | 8  |  | 6 |  | 4 |                         | 2 | Principal Arterial |
- 
- Partial Interchange
  - Full Interchange
  - Regional Bicycle Corridor
  - Rapid Transit Rail  
Existing & Tier I (FasTracks)
  - Other Rapid Transit  
Bus/HOV or HOT Lane
  - Transit Station With Parking
  - Transit Station Without Parking
  - Park-n-Ride Lot
  - Freight Rail
  - Major Freight Facility
  - Regional Airport
  - Urban Center
  - 2030 Urban Growth Boundary/Area
  - DRCOG Parks and Open Space  
(2004)



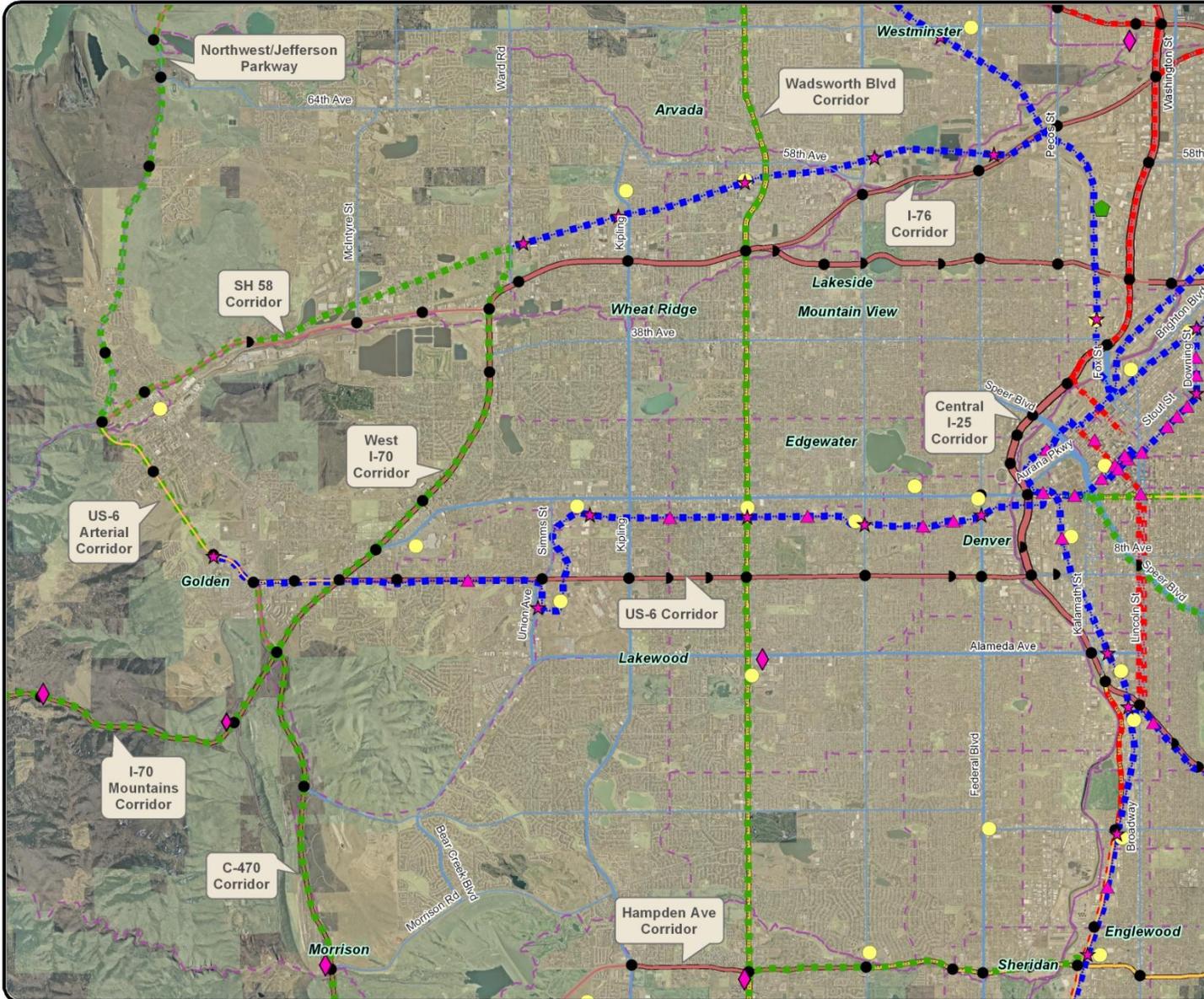
Note: Locations of future facilities are not confirmed at this time.

Number of lanes depicted is tentative. Future environmental studies will determine lanes and specific corridor attributes.

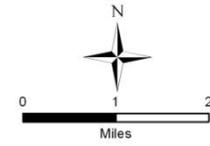
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Exhibit 7  
**West Metro Area  
 2035 Multimodal Corridors**



- 10 8 6 4 Lanes Freeway
- 8 6 4 Lanes Major Regional Arterial
- 8 6 4 2 Lanes Principal Arterial
- Partial Interchange
- Full Interchange
- Regional Bicycle Corridor
- Rapid Transit Rail (Existing & Tier I (FasTracks))
- Other Rapid Transit Bus/HOV/BRT Lane
- Transit Station With Parking
- Transit Station Without Parking
- Park-n-Ride Lot
- Freight Rail
- Major Freight Facility
- Regional Airport
- Urban Center
- 2030 Urban Growth Boundary/Area (2004)
- DRCOG Parks and Open Space



Note: Locations of future facilities are not confirmed at this time.

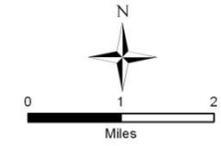
Number of lanes depicted is tentative. Future environmental studies will determine lanes and specific corridor attributes.

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Exhibit 8  
**Northwest Metro Area  
 2035 Multimodal Corridors**

- |  |                         |
|--|-------------------------|
|  | Freeway                 |
|  | Major Regional Arterial |
|  | Principal Arterial      |
- 
- Partial Interchange
  - Full Interchange
  - Regional Bicycle Corridor
  - Rapid Transit Rail  
Existing & Tier I (FasTracks)
  - Other Rapid Transit  
Bus/HOV or HOTLane
  - Transit Station With Parking
  - Transit Station Without Parking
  - Park-n-Ride Lot
  - Freight Rail
  - Major Freight Facility
  - Regional Airport
- 
- Urban Center
  - 2030 Urban Growth Boundary/Area
  - DRCOG Parks and Open Space (2004)



Note: Locations of future facilities are not confirmed at this time.

Number of lanes depicted is tentative. Future environmental studies will determine lanes and specific corridor attributes.

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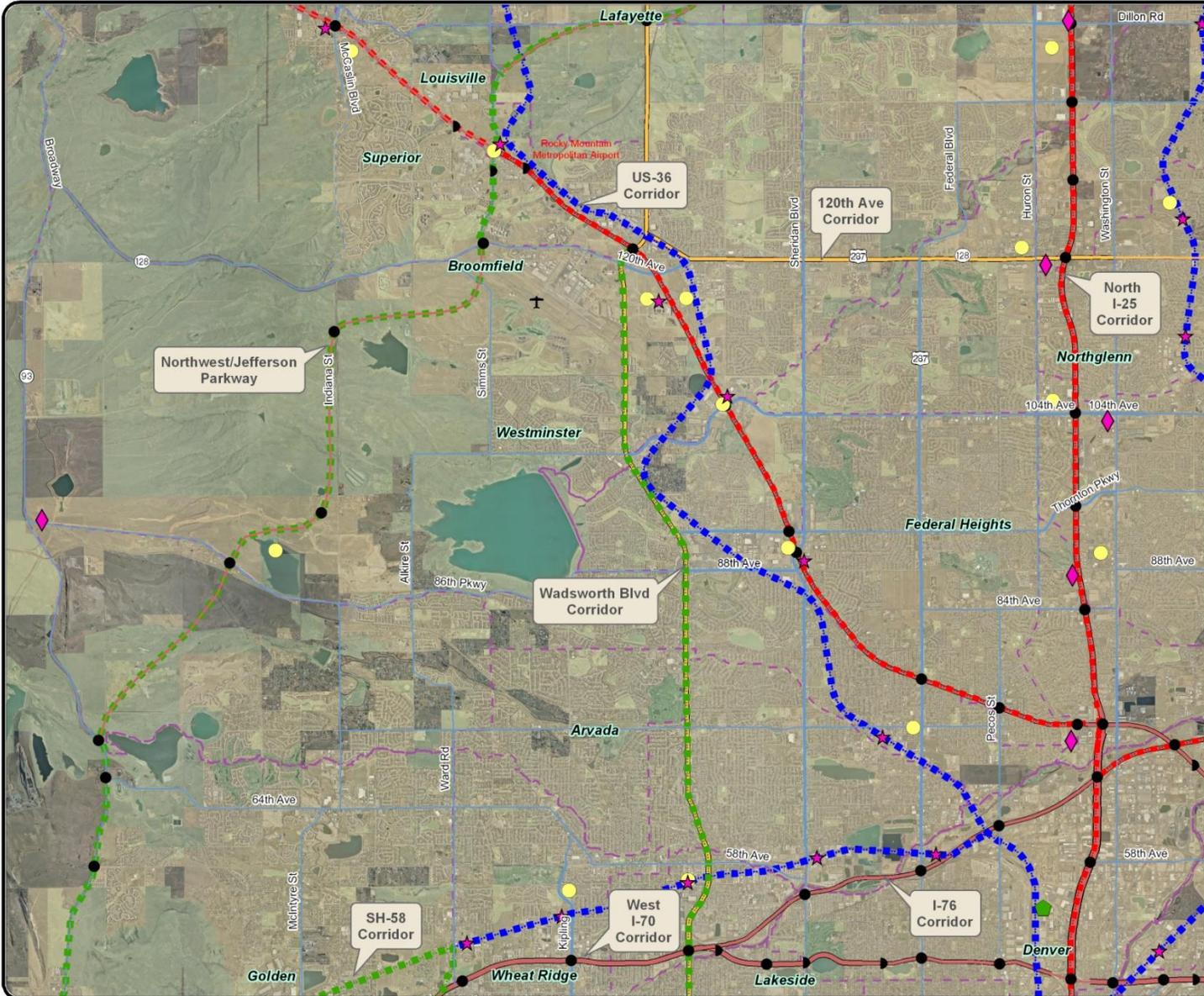
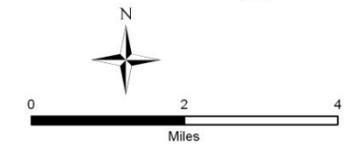




Exhibit 9  
**Boulder County Metro Area  
 2035 Multimodal Corridors**

- 10 8 6 4 Lanes Freeway
- 8 6 4 Lanes Major Regional Arterial
- 8 6 4 2 Lanes Principal Arterial

- Partial Interchange
- Full Interchange
- Regional Bicycle Corridor
- Rapid Transit Rail  
Existing & Tier 1 (FastTracks)
- Other Rapid Transit  
Bus/HOV or HOT Lane
- Transit Station With Parking
- Transit Station Without Parking
- Park-n-Ride Lot
- Freight Rail
- Major Freight Facility
- Regional Airport
- Urban Center
- 2030 Urban Growth Boundary/Area
- DRCOG Parks and Open Space  
(2004)



Note: Locations of future facilities are not confirmed at this time.

Number of lanes depicted is tentative. Future environmental studies will determine lanes and specific corridor attributes.

This map and the data it depicts are intended for informational purposes only. DRCOG provides this information on an "as is" basis and makes no representation or warranty that the data will be error free. DRCOG is not responsible to any user for any costs or damages arising from inconsistencies in its data.  
 MN 9-10-07 / Revised P.J. 8/11

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