

# US 85/C-470 Interchange Reconstruction

## INTRODUCTION

Douglas County is requesting support to obtain additional funding to complete the second phase of the US 85 (Santa Fe Drive)/C-470 Interchange Reconstruction Project located in the southwest [Denver metropolitan area](#). An additional [\\$23 million](#) is required in order to complete the final construction phase of this [\\$56 million](#) project. This interchange is located near the jurisdictional boundary of three Colorado counties (Arapahoe, Douglas, and Jefferson Counties), and it is a regional priority project for both the Colorado Department of Transportation (CDOT) and Denver Regional Council of Governments (DRCOG). The first phase is anticipated to begin construction in the spring of 2010.

The process for addressing safety concerns and transportation operational and capacity inadequacies along the US 85 and C-470 Corridors began several years earlier. Planned improvements include the following:

- Expansion of US 85 from four to six thru lanes approaching the US 85/C-470 Interchange from both directions
- The C-470 Corridor is planned for future widening from a four-lane facility to a six-lane or eight-lane facility, including a major resurfacing project and improvements to the existing multi-modal (bicycle/pedestrian) facilities
- The C-470 Environmental Assessment (EA), signed in February 2006, allows for a tolling component
- In the near future, the Denver Regional Transportation District (RTD) has plans to extend the Southwest Light Rail (which is a part of FasTracks) along both the US 85 and C-470 Corridors. This planned RTD extension passes through this interchange and will extend east approximately one-and-a-half miles to the proposed RTD Light Rail Station/Transit Oriented Development (TOD)—which will be located adjacent to the existing C-470/Lucent Boulevard Interchange
- RTD staff has determined that the proposed interchange reconstruction is compatible with its light rail extension project

## PROJECT PURPOSE AND NEED

The current need for improving the US 85/C-470 Interchange is based on the following:

- Existing congestion persists during the AM and PM peak traffic periods, increasing the frequency of accidents
- The existing and projected future traffic demands require additional capacity along both of these corridors
- Existing operational and design deficiencies reduce safety, requiring improvements to correct them

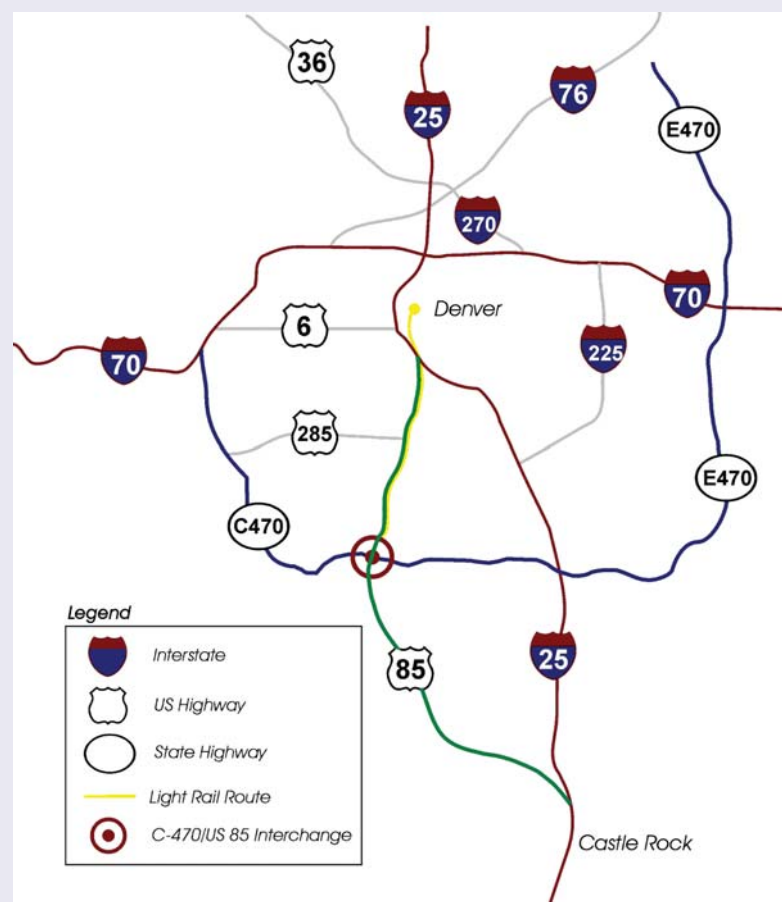
US 85 and C-470 are both regionally significant transportation corridors that provide essential mobility to the Denver metropolitan area.

US 85 is a major regional arterial highway that links Colorado Springs, Castle Rock, and numerous southwest Denver suburbs such as Littleton, Centennial, and Highlands Ranch, with downtown Denver businesses, the US 85 commercial and industrial areas, and other destinations. US 85 also serves as an alternate route for Interstate 25, each running north-south through the heart of metropolitan Denver.

C-470 serves as a vital east-west regional loop around the southwest portion of the metropolitan area, providing direct access and connectivity to the two major interstate highways in Colorado. C-470 provides access to I-25, the I-70 Mountain Corridor, and the E-470 Toll Road (that connects directly to I-76 and the Denver International Airport); and it is also a critical link to existing and future RTD light rail stations and TODs.



The above photo of the existing US 85/C-470 Interchange is taken looking northeast with C-470 running from left to right and US 85 running from top to bottom. It also shows the BNSF and Union Pacific railroads that both run adjacent to and east of US 85.



The vicinity map shown above identifies the location of the US 85/C-470 Interchange relative to the major highway network in the Denver metropolitan area.

# US 85/C-470 Interchange Reconstruction

## PHASE I PROJECT UPDATE

On September 26, 2008, the Federal Highway Administration, (FHWA) concurred with CDOT's Compelling Argument to separate out part of the US 85/C-470 Interchange Reconstruction Improvements from the C-470 Corridor EA. This set in motion the ability to advance the construction of the Phase I improvements.

The Phase I improvements include constructing a southbound US 85 to eastbound C-470 flyover ramp, and providing a much needed continuous auxiliary lane (truck climbing lane) for eastbound C-470 between the US 85 and Lucent Boulevard interchanges. Both northbound and southbound US 85 traffic entering eastbound C-470 will no longer be forced to merge onto the steep grade section of existing eastbound C-470.

Final design for the Phase I improvements commenced in June 2009, and the construction bid documents will be finalized and ready for bid in early January 2010.

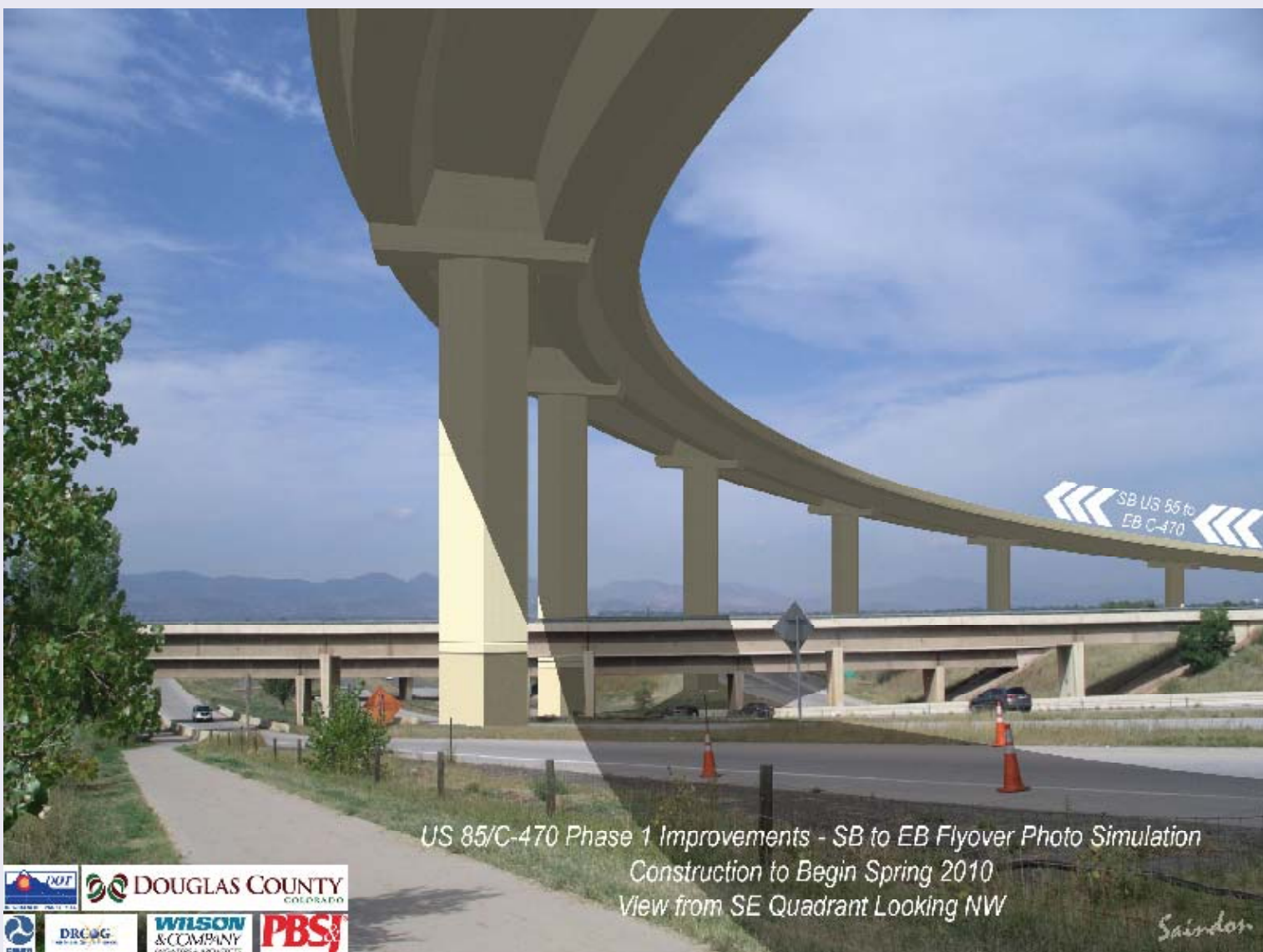
The US 85/C-470 Interchange (Phase I) construction cost is estimated to be [\\$25.5 million](#). Full funding needed to construct the Phase I improvements was identified on October 21, 2009, as the DRCOG Board of Directors selected this regionally significant project to receive [\\$9.3 million](#) of combined DRCOG STP-Metro and ARRA funds. Additionally, CDOT and Douglas County both stepped forward with [\\$2 million](#) each to help bridge the funding gap that is necessary to construct the Phase I improvements. Approximately [\\$9.3 million](#) in unspent previous highway authorizations/earmarks and [\\$2.8 million](#) in local match have been set aside to fund the Phase I improvements.

With the additional \$2 million from Douglas County, the County's total contribution equals \$5.5 million for improving this regional transportation project, whereas about twenty-two percent of the traffic that passes through this interchange have their origins or destinations in Douglas County.

Below is a photo simulation of the proposed southbound US 85 to eastbound C-470 flyover ramp. The proposed flyover ramp will cross over County Line Road, US 85, C-470, the BNSF and Union Pacific railroad tracks, Erickson Boulevard, the C-470 multi-modal trail, and the High Line Canal; and it will cross under the proposed RTD Southwest Light Rail Extension. Additionally, the proposed flyover ramp will provide a more gradual roadway grade for the heavy volume of truck and commuter traffic. The proposed southbound US 85 to eastbound C-470 flyover ramp will eliminate more than 15,000 vehicles per day from having to negotiate three existing signalized intersections to complete the eastbound on-ramp movement.

## ADDITIONAL FUNDING REQUIRED TO COMPLETE PHASE II

The total project cost for an improved interchange at US 85 (Santa Fe Drive)/C-470 is estimated at [\\$56 million](#). Approximately [\\$23 million](#) is still needed to complete the remaining interchange improvements. The proposed Phase II improvements will include widening and reconstructing US 85 from four to six lanes starting from the north end of the Phase I project limits (from the entrance of the southbound US 85 to eastbound C-470 flyover ramp) to approximately 600 feet south of Blakeland Drive (the point where the BNSF and Union Pacific railroads cross over US 85). It will also include replacing the existing deficient bridge that carries US 85 over C-470, and rebuilding the remaining C-470 on-ramps and off-ramps. Attached are conceptual drawings that illustrate the proposed construction phases for the US 85/C-470 Interchange, and an additional drawing that shows future mainline C-470 Improvements.



US 85/C-470 Phase 1 Improvements - SB to EB Flyover Photo Simulation  
Construction to Begin Spring 2010  
View from SE Quadrant Looking NW



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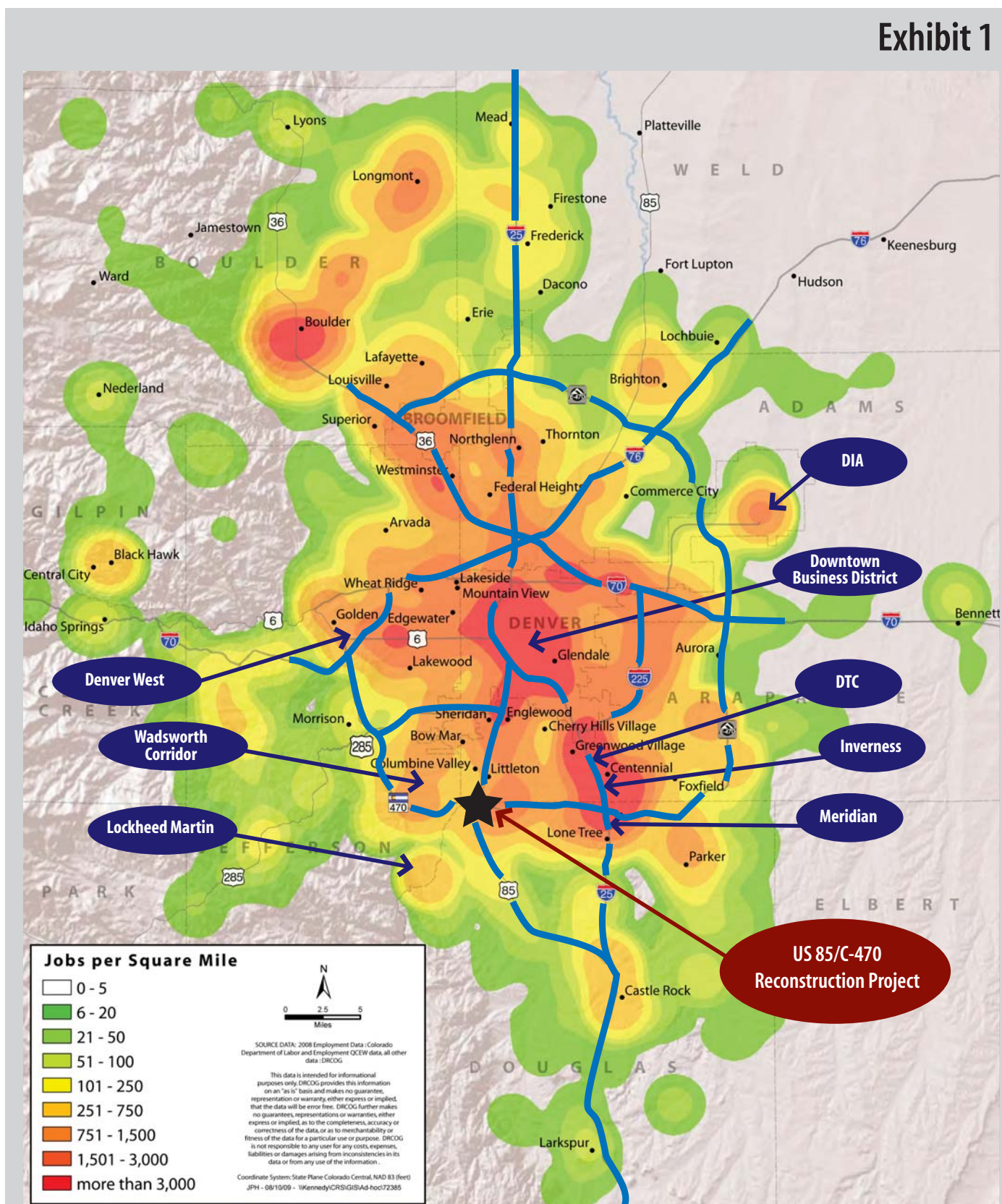
# US 85/C-470 Interchange Reconstruction

## WHY CONTINUE TO INVEST?

Investing in the US 85/C-470 Interchange Reconstruction Project provides significant regional benefits:

- National and Regional Significance:** This interchange is a critical link along both the US 85 and C-470 Corridors. US 85 serves as an essential alternate route to I-25 for defense purposes. The US 85 Corridor is the only viable alternative north/south US highway should I-25 become unavailable—which is crucial when incidents occur on I-25 and require interstate traffic to be detoured to US 85. C-470 serves as a regional highway that provides access to the I-70 corridor and the significant tourist industry in the Rocky Mountain region. Travelers along I-70 that have destinations along the I-70 Mountain Corridor can utilize C-470 to bypass downtown Denver, reducing congestion and improving mobility in the Denver Metropolitan Area.

- Multi-Modal Transportation System Impacts:** Based on the recent voter approval of RTD FaTracks that includes the extension of the Southwest Light Rail Corridor, the US 85 and C-470 corridors are integral facilities that provide essential access to both the existing and proposed light rail stations/TODs.
- Local Significance:** US 85 serves as a major north-south corridor providing a parallel highway route to I-25. The accompanying map (Exhibit 1) illustrates the correlation of employment density and the major highway corridors in the Denver area. The US 85/C-470 Interchange provides a crucial link to numerous major employment centers including Lockheed Martin's Deer Creek Canyon and Waterton Canyon facilities, as well as numerous other commercial and industrial businesses located along the US 85 Corridor. These businesses and commuters rely on this interchange to operate safely and efficiently.



Graphic courtesy of DRCOG

- This illustrates the correlation of employment density and the major highway corridors in the Denver metro area.
- The US 85/C-470 Interchange is a critical link to several major employment centers.

The southbound to eastbound flyover will carry approximately 15,000 Average Daily Traffic peak hour by 2035.

This will improve operations and safety at County Line Road and ramp intersections with Santa Fe Drive.

To: Downtown Denver  
Downtown Littleton  
RTD Light Rail Stations

### PHASE I IMPROVEMENTS

- Construct southbound to eastbound flyover
- Reconstruct eastbound on-ramp
- Construct auxiliary lane to Lucent Blvd

To: I-70 Mountain Corridor  
Denver West  
Lockheed Martin

County Line Rd

Continuous auxiliary lane will be carried from US 85 to Lucent Blvd. providing safety and operational improvements to C-470.

Chatfield State Park

To: DIA  
E-470  
I-25  
DTC  
Meridian  
Inverness

US85 / Santa Fe Drive

Erickson Blvd

Plaza Dr

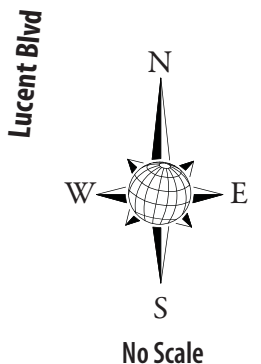
C 470

Flyover and eastbound diamond ramp merge prior to C-470 merge. Providing safety and operational improvements to C-470.

Future Light Rail Station /  
Transit Oriented Development

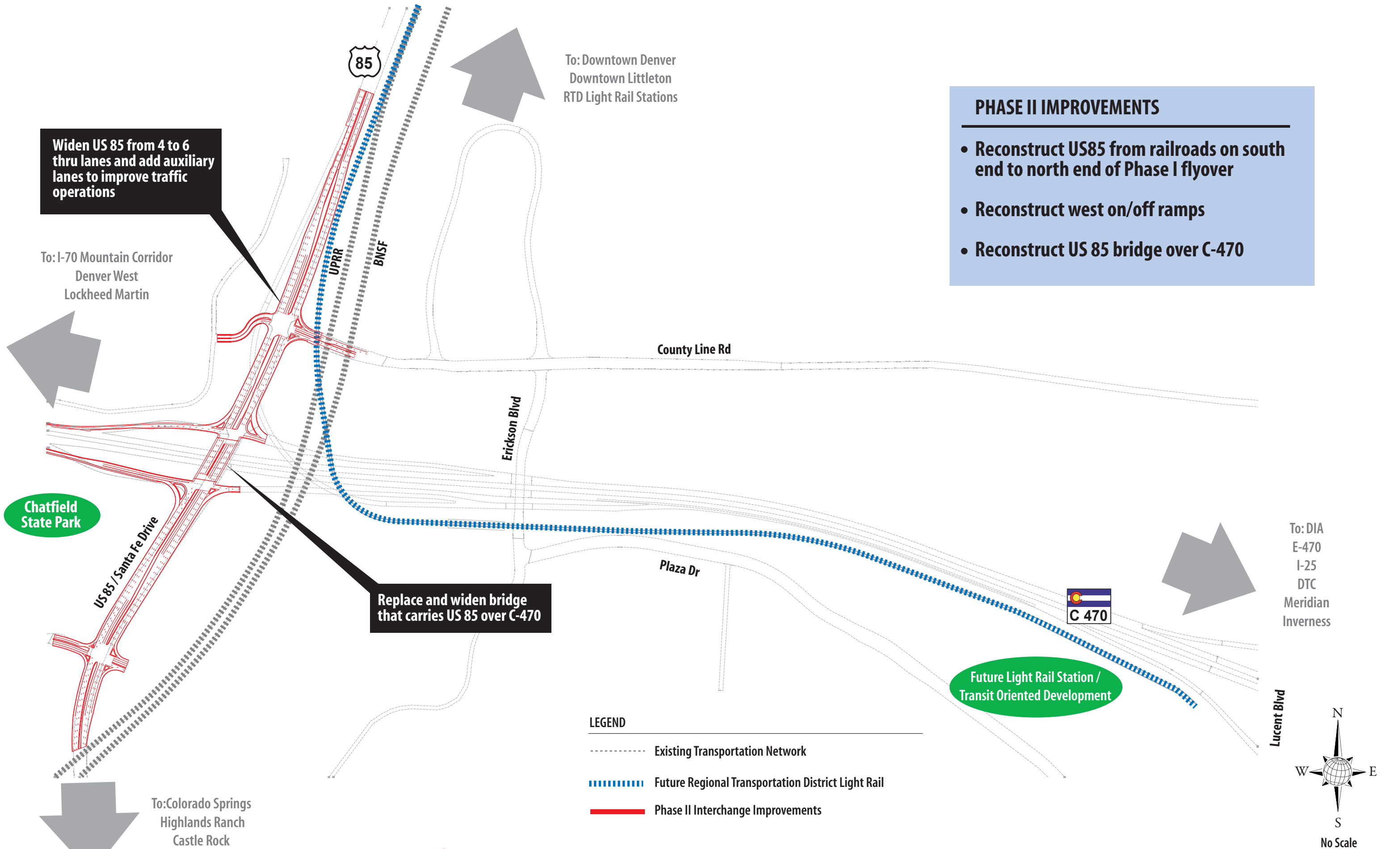
#### LEGEND

- Existing Transportation Network
- Future Regional Transportation District Light Rail
- Phase I Interchange Improvements



To: Colorado Springs  
Highlands Ranch  
Castle Rock





**Widen US 85 from 4 to 6 thru lanes and add auxiliary lanes to improve traffic operations**

To: I-70 Mountain Corridor  
Denver West  
Lockheed Martin

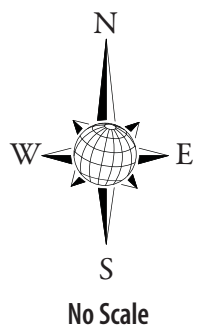
To: Downtown Denver  
Downtown Littleton  
RTD Light Rail Stations

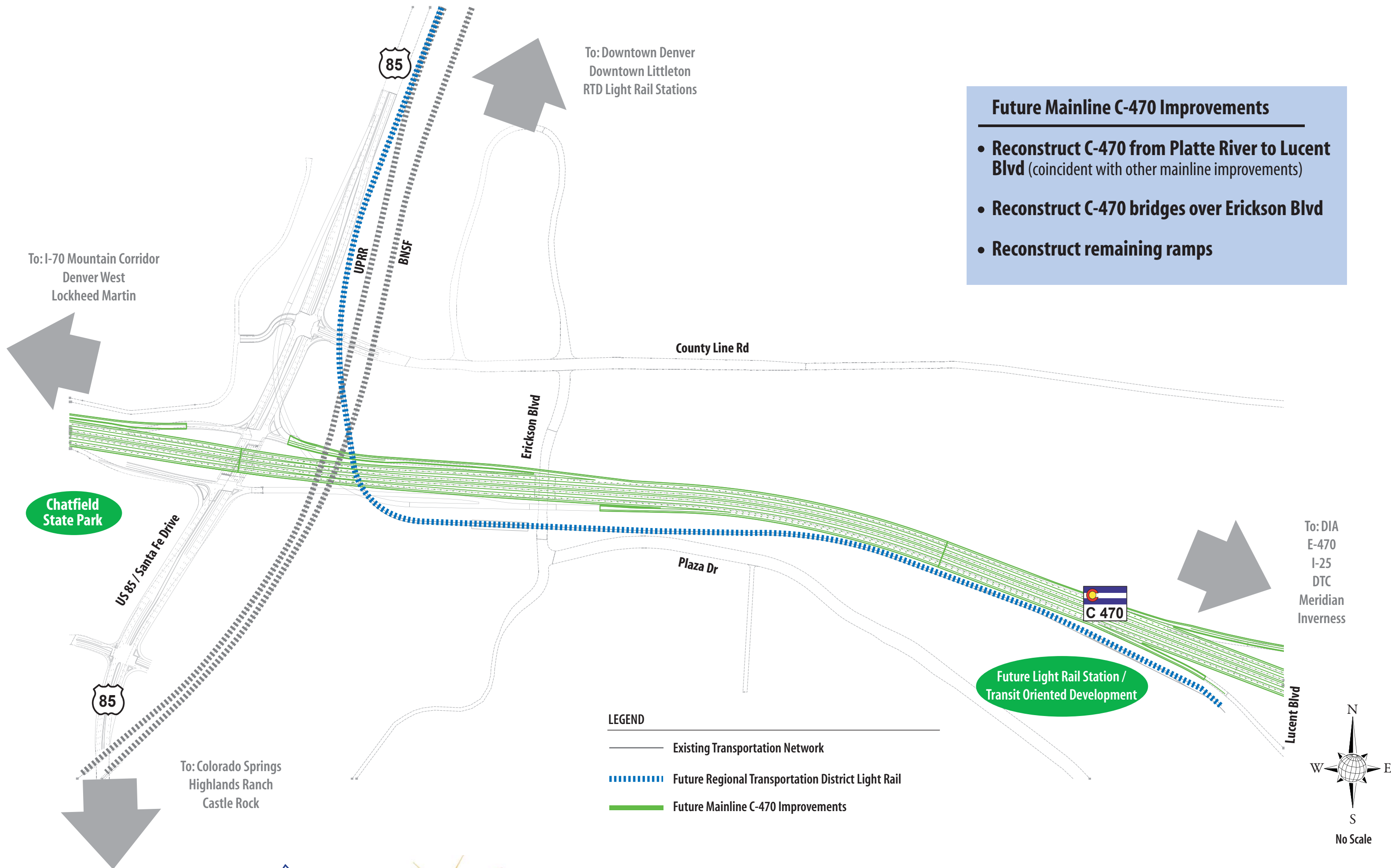
**Replace and widen bridge that carries US 85 over C-470**

- PHASE II IMPROVEMENTS**
- Reconstruct US85 from railroads on south end to north end of Phase I flyover
  - Reconstruct west on/off ramps
  - Reconstruct US 85 bridge over C-470

- LEGEND**
- Existing Transportation Network
  - Future Regional Transportation District Light Rail
  - Phase II Interchange Improvements

To: DIA  
E-470  
I-25  
DTC  
Meridian  
Inverness





- Future Mainline C-470 Improvements**
- Reconstruct C-470 from Platte River to Lucent Blvd (coincident with other mainline improvements)
  - Reconstruct C-470 bridges over Erickson Blvd
  - Reconstruct remaining ramps

**LEGEND**

- Existing Transportation Network
- Future Regional Transportation District Light Rail
- Future Mainline C-470 Improvements

