SECTION 1

Purpose and Need

Introduction to the I-25 Corridor

Interstate 25, commonly referred to as I-25, is a major commercial corridor for interstate commerce among the states of New Mexico, Colorado, and Wyoming, as well as for international commerce among the United States, Mexico, and Canada (see Figure 1-1). It is the only highway that traverses all of Colorado's Front Range, connecting the more than 3 million residents of Denver, Colorado Springs, Pueblo, and several major cities in northern Colorado.

FIGURE 1-1
I-25 in the United States

Rapid population growth along Colorado's Front Range in the 1990s resulted in traffic levels that strained the capacity of I-25 and created noticeably longer travel times between Denver and Pueblo, through Colorado Springs. In 1997, a Colorado Department of Transportation (CDOT) study examined the transportation needs of the South Front Range Corridor, seeking to address this congestion problem of statewide importance. The *South Front Range Corridor Assessment Study* concluded that the most effective solution would be to address congestion within the urbanized areas, rather than between them.

The *South Front Range Corridor Assessment Study* determined that, between Monument and Colorado Springs, I-25 does not have enough capacity to accommodate the increased traffic demand that is projected over the next two decades. The study recommended further examination to identify appropriate capacity improvements for this segment of I-25 (see Figures 1-2 and 1-3).

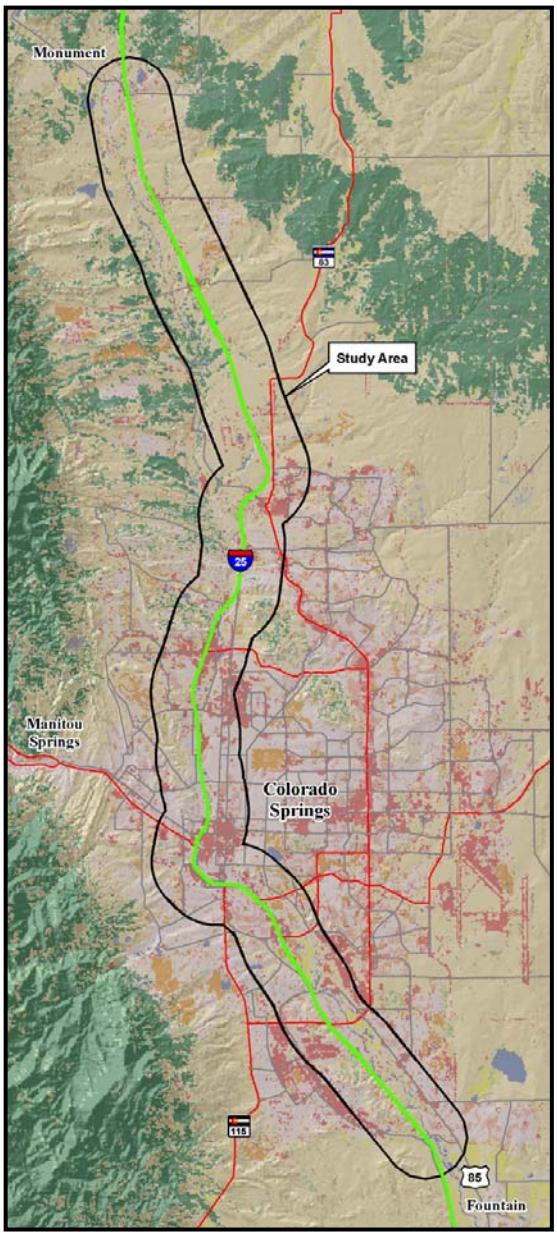


FIGURE 1-2
I-25 Corridor Environmental Assessment Study Area

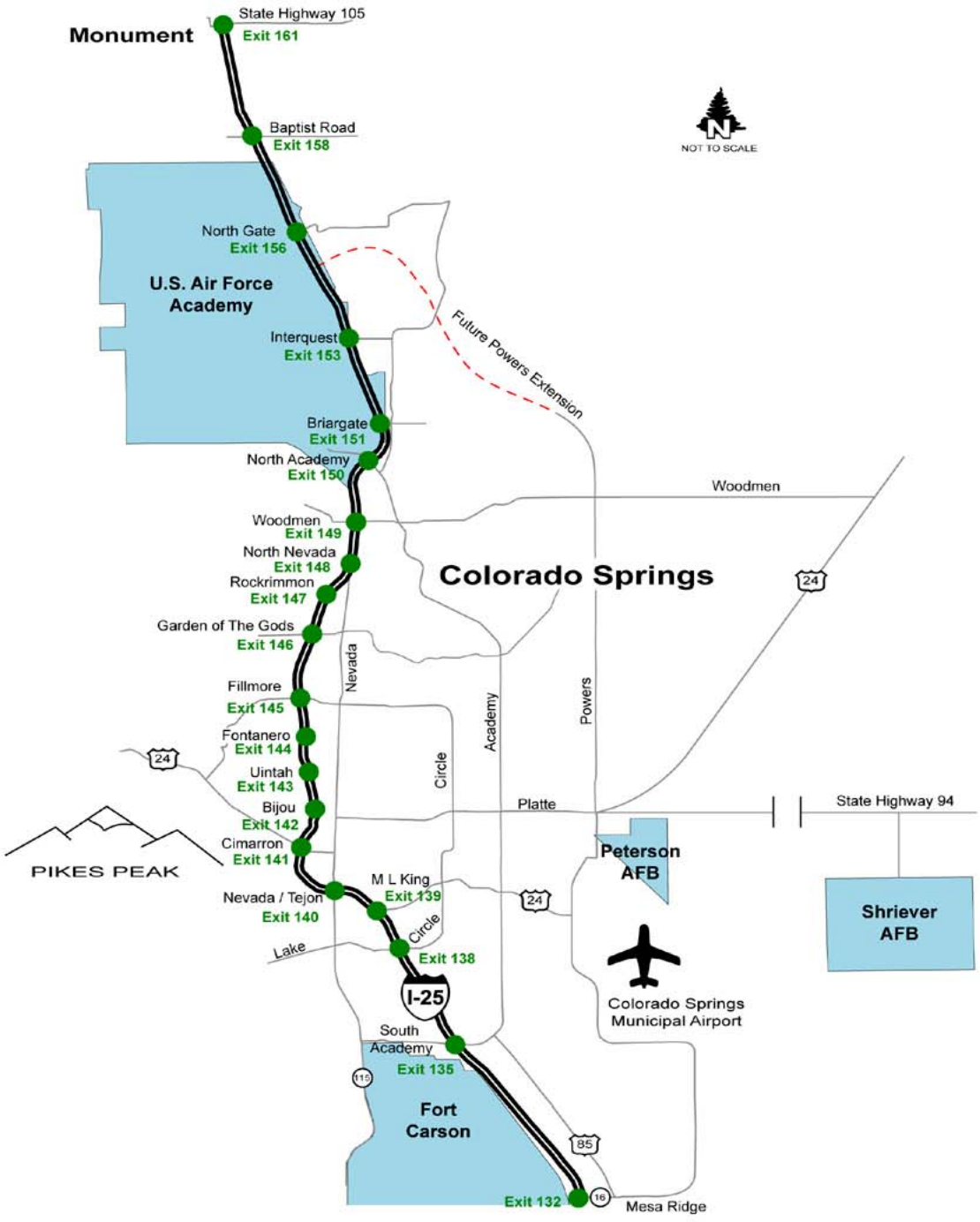


FIGURE 1-3
Interchange Locations in the I-25 Study Area

To address congestion within the Colorado Springs urbanized area, CDOT undertook the *I-25 Mode Feasibility Alternatives Analysis* as a first step in the development of this I-25 Environmental Assessment. The *I-25 Mode Feasibility Alternatives Analysis* began by considering all of I-25 within El Paso County, but quickly concluded that I-25 has adequate capacity for long-term demand south of Colorado Springs. Therefore the study area for potential capacity improvements was narrowed to the segment between State Highway 105 in Monument to State Highway 16. Ultimately, capacity improvements were proposed for the 26 miles of I-25 between SH 105 and South Academy Boulevard (See Table 1-1).

TABLE 1-1
Limits of Study Area and Recommended Improvements

Study Area total length between State Highway 105 (Monument) and State Highway 16	29 miles
Improvements ARE recommended between South Academy Boulevard and State Highway 105	26 miles
Improvements are NOT recommended between State Highway 16 and South Academy Boulevard	3 miles

Importance of I-25 to the Region

In addition to I-25's importance to interstate traffic and Colorado's intrastate mobility, the corridor serves critical functions at the regional and local levels. Within El Paso County, I-25 serves more than 517,000 residents and links the communities of Monument, Colorado Springs, and Fountain.

I-25 is El Paso County's only freeway and, due to a relative lack of alternative north-south routes, it is the region's most heavily traveled roadway. Figure 1-4 indicates that I-25 traffic is dominated by local trips through the congested central portion of Colorado Springs.

I-25 is truly the region's "Main Street." Mobility on the interstate is critical to key pillars of the region's economy: the military sector, civilian employment centers (including high-tech industries), and tourism. A brief discussion of the freeway's importance to the region's economy follows.

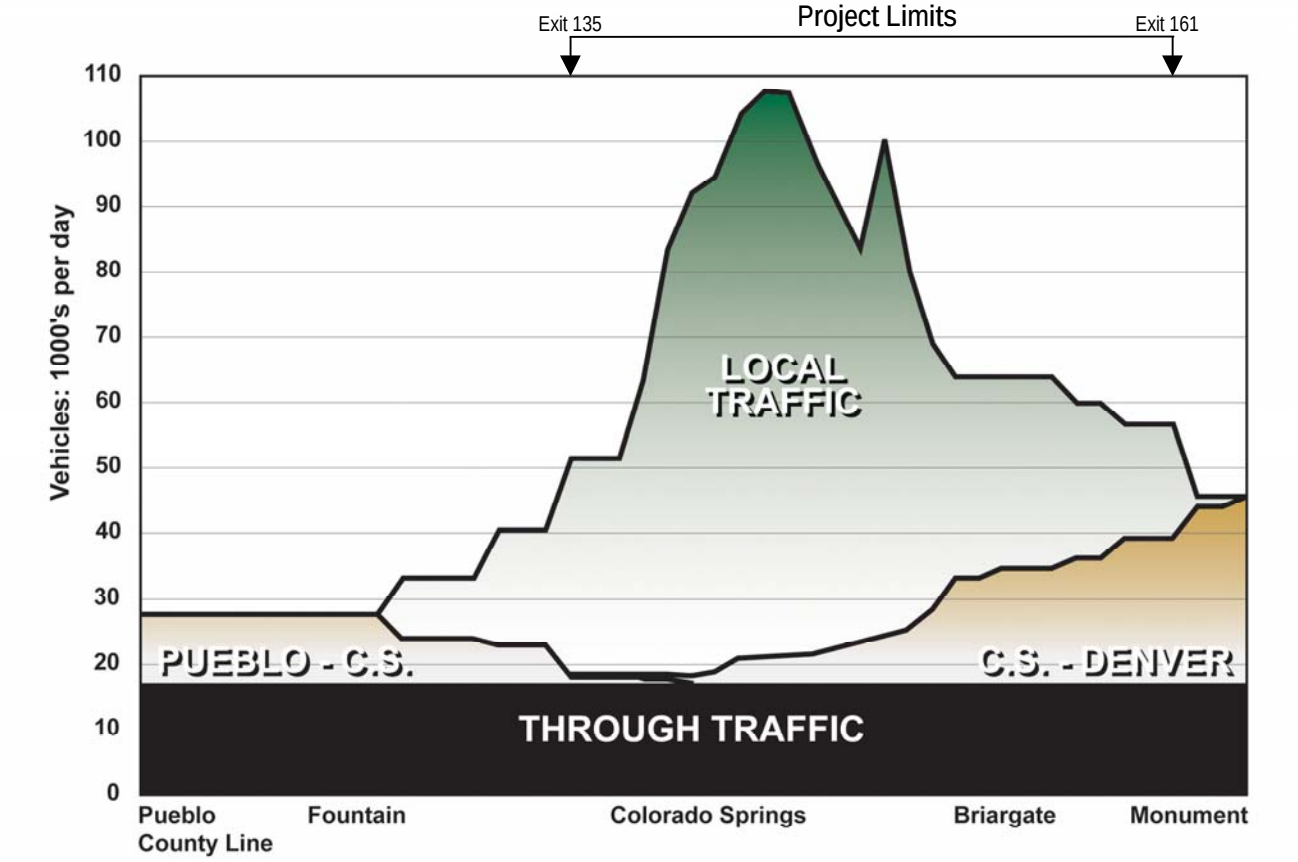
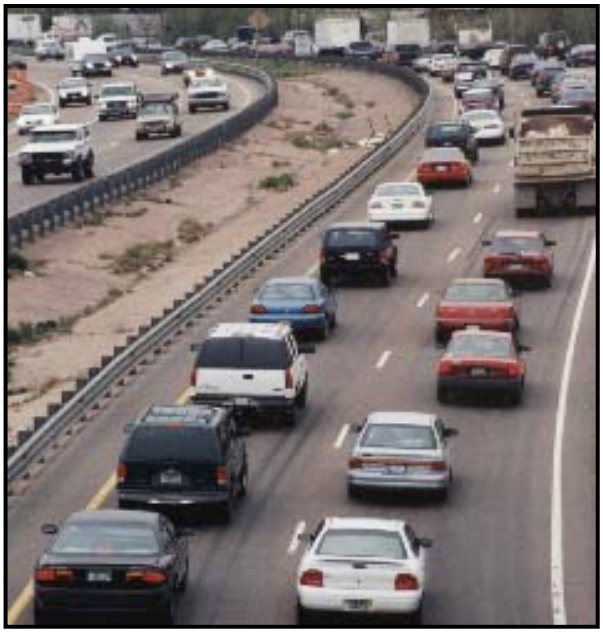


FIGURE 1-4
Estimated Traffic Composition on I-25 through El Paso County, Colorado, Year 1999

Two of the region's largest employers depend very heavily on their direct access to I-25: Fort Carson (U.S. Army post) and the U.S. Air Force Academy (USAFA). Several other bases in the urbanized area also benefit, although less directly: Peterson Air Force Base and Shriever Air Force Base. I-25 was built in the late 1950s and opened to traffic in 1960. It is part of the military's Strategic Highway Network, the roadway system designated for use by armed forces in case of a military emergency. Not only is I-25 a major conduit for supplies, but it is also an essential corridor for emergency mobilization of defense forces or evacuation of urban communities.

The civilian sector of the regional economy has two major concentrations served directly by I-25. The Colorado Springs Central Business District has I-25 access at three interchanges (Nevada/Tejon, Cimarron, and Bijou), while a major high-tech employment corridor has I-25 access at the Garden of the Gods Road Interchange. Other employment centers are found along the corridor, including the Chapel Hills Mall, a regional shopping center at the North Academy Boulevard Interchange.

I-25 also is a major conduit for tourism. The USAFA, Garden of the Gods, and U.S. Olympic Training Center are just a few of the local sites. In addition, I-25 intersects with east-west State Highway 24 for access to a major American landmark, Pikes Peak, as well as the historic Cripple Creek (Gold Rush) mining and gaming district, and the plentiful outdoor recreation opportunities in the Rocky Mountains.



Level of Service E traffic on I-25 in Colorado Springs

Purpose of the Proposed Action

The purpose of the proposed corridor improvement project is to relieve existing traffic congestion and address projected future congestion on I-25 within the Colorado Springs Urbanized Area.

Need for the Proposed Action

Interstate 25 is the only existing freeway and the primary north-south route serving the more than half-million residents of fast-growing El Paso County, including the Colorado Springs Urbanized Area. Peak-hour traffic conditions on I-25 in central Colorado Springs were unacceptably congested (Levels of Service E or F, in traffic engineering terms) on 99 percent of all normal weekdays in 1998. In other words, daily traffic demand now equals or exceeds the freeway's design capacity.

LEVEL OF SERVICE: A REPORT CARD FOR HIGHWAY OPERATION

Traffic engineers characterize highway operations in terms of the Level of Service (LOS) that motorists experience. In the nationally used *Highway Capacity Manual*, LOS is defined with a letter grading system (A through F) similar to traditional student grades used by educators:

LOS A describes free-flow conditions. A motorist's speed and maneuverability are unimpeded by other traffic on the road.

LOS B represents reasonably free flow, with free-flow speeds prevailing and maneuverability only slightly restricted.

LOS C still provides speeds at or near free flow, but maneuverability is noticeably restricted.

LOS D is the level at which speeds decline slightly due to traffic density, and room to maneuver is more noticeably restricted.

LOS E provides reduced speeds and offers little room to maneuver because vehicles are closely spaced. The roadway is at or near its capacity.

LOS F represents a breakdown in traffic flow in which traffic demand exceeds the roadway's capacity.

Projected regional population growth will add more than 200,000 new residents by the year 2025 (see Table 1-2). Without additional capacity, existing I-25 congestion will increase both in daily hours of duration and in total miles affected.

TABLE 1-2
Projected Population and Employment Growth in El Paso County

Year	Population	Employment
2000	510,000*	236,200
2025	718,800	326,200
Change	218,800	90,000
Percent Change	**43% increase**	**38% increase**

Source:
PPACG Destination 2025 Regional Transportation Plan
* (Projected prior to Census; Census count was 516,929)

The *I-25 Mode Feasibility Alternatives Analysis* indicated that on I-25 north of Bijou Street, current traffic conditions reach LOS E congestion for 4 hours daily: a 1-hour morning peak and a 3-hour afternoon peak. If I-25 capacity improvements are not made, traffic at the same location would reach LOS E or worse for 10 hours per day: a 2-hour morning peak and all afternoon (noon to 8:00 p.m.).

More recent traffic analyses prepared for this EA indicate that 12 miles of I-25 now routinely experience peak-period congestion. Under the 2025 No-Action Alternative, all 26 miles of the corridor would be congested (Level of Service E or F) in either the morning peak period or the evening peak period, or both.

The congestion indicators discussed above are based on examination of hourly traffic volumes. Figure 1-5 depicts year 2000 and projected 2025 all-day traffic volumes on I-25 for an average weekday on a segment-by-segment basis. The highest year 2000 segment volume was approximately 108,000.

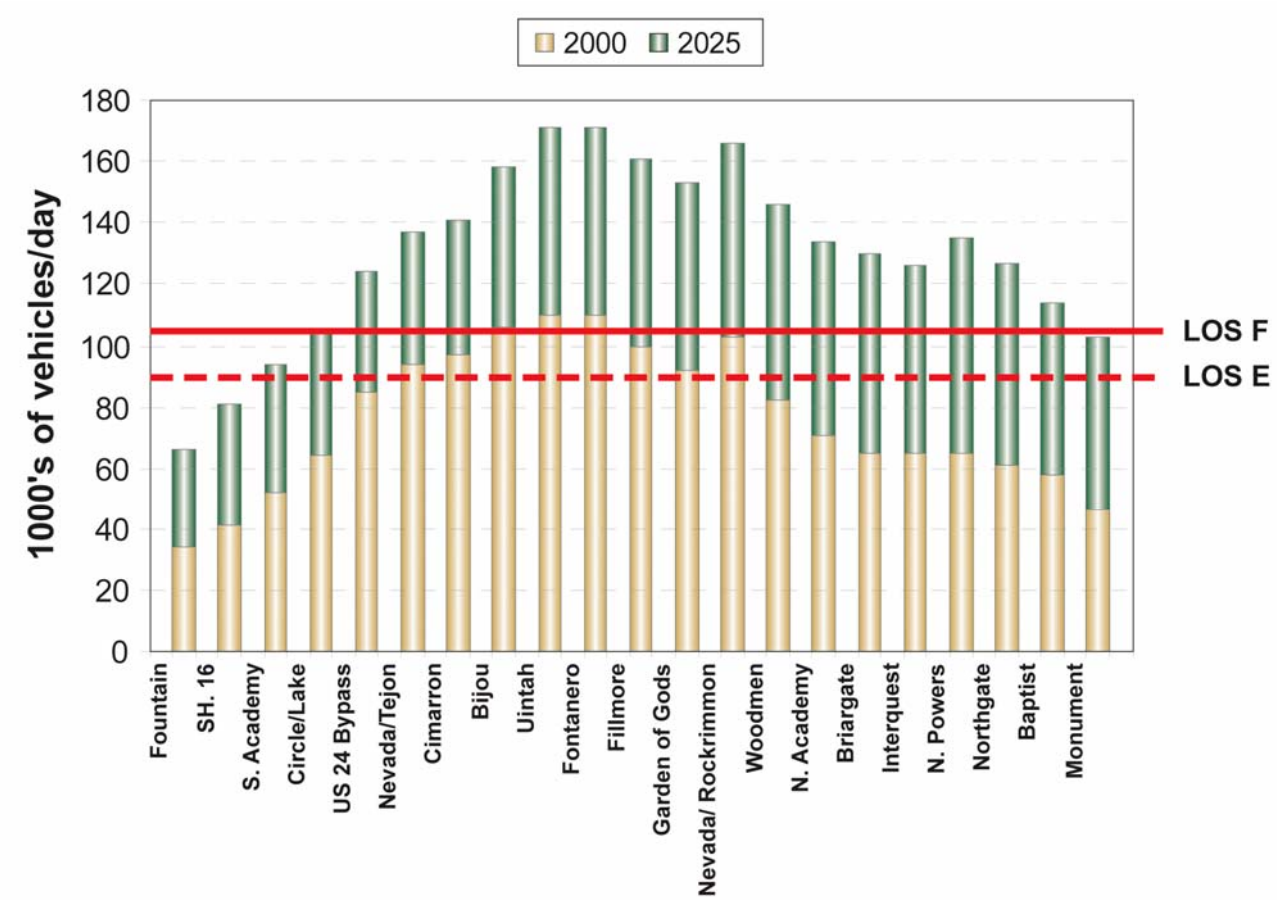


FIGURE 1-5
I-25 Weekday Traffic: Year 2000 and Projected Year 2025 Volumes by Location
(Note: Level of Service lines shown are for the existing four-lane freeway; traffic volumes are for mainline I-25 between interchanges)
Source: Colorado Department of Transportation

The highest one-day volume recorded on I-25 in Colorado Springs during 2002 was just over 120,000 vehicles. This is a reasonable indicator of the maximum daily volume that the existing roadway can carry in the future under the No-Action Alternative.

The projected traffic demand on the busiest segment of I-25 in the year 2025 is 171,000 vehicles per day, representing about a 60 percent increase over the corresponding highest volume in the year 2000. The existing capacity of I-25 is not adequate to meet this projected demand.

Roadway capacity is normally defined in terms of an hourly traffic volume, rather than as an all-day volume. Nevertheless, a general relationship between peak-period congestion and all-day volumes can be observed. Generally, peak-period LOS E congestion occurs on the existing four-lane I-25 on segments where volumes exceed 90,000 vehicles per day. I-25 segments with all-day volumes in excess of 106,000 vehicles routinely experience Level of Service F congestion during peak travel periods. Projected year 2025 volumes are thus well above the full capacity of the existing four-lane freeway.

For decades, the need for I-25 capacity improvement has routinely ranked as the public's number one transportation priority. It has also been reflected for years as a top priority in the region's long-range transportation plan. The need for improvements has become critical within the last few years, since travel demand on this 40-year-old highway now exceeds the facility's capacity.

In 1998, the need for corridor improvements was formally recognized by the Colorado General Assembly, which designated I-25 through Colorado Springs as a State Strategic Corridor. This designation reflects the vital importance of I-25 to statewide mobility and Colorado's economy.

Additional Considerations

Brief background information regarding safety projects in the I-25 corridor is provided here to facilitate a more comprehensive understanding of the project context. As noted above, the purpose and need for action in this EA focuses on relieving I-25 congestion. The proposed capacity improvement project is not a safety project, although it may have ancillary benefits for safety.

Safety Improvements

A motorist driving through Colorado Springs on I-25 at any time since 1997 would have noticed major construction activity and may have assumed that capacity improvements were underway. Actually, several major safety projects have been completed in the corridor, and several others are underway. The location of these projects is depicted in Figure 1-6.

The *I-25 Corridor Feasibility Study* completed in 1991 identified the looming need for I-25 capacity improvements. Given a lack of available funding at the time, the study recommended a three-phase approach to implementing overall corridor improvements:

1. Safety projects
2. Transportation system management
3. Capacity improvements

These recommended phases are described below.

First, the *I-25 Corridor Feasibility Study* identified critical safety deficiencies that urgently needed to be addressed. Both mainline design features and especially weaving issues at interchanges with substandard designs needed improvement for safety reasons. Since 1997, major reconstruction for safety purposes has occurred at the I-25's North Academy Interchange, the Circle Interchange, and the Bijou-to-Fillmore mainline including interchanges at Uintah Street and Fontanero Street. Due to serious weaving issues, the Bijou-to-Fillmore segment was designed with continuous acceleration/deceleration lanes.

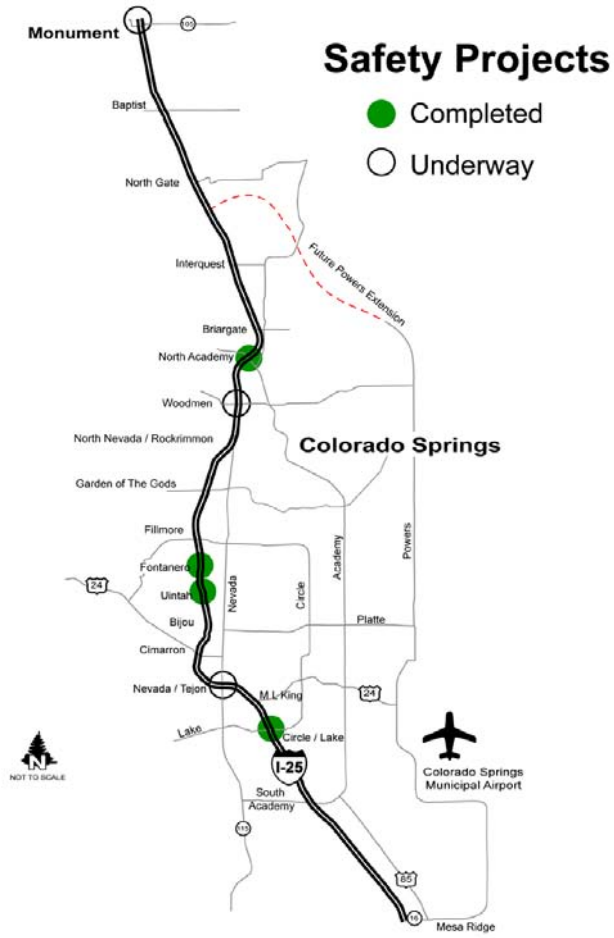


FIGURE 1-6
Location of I-25 Safety Projects

As shown in Figure 1-6, safety projects are currently underway at the Nevada/Tejon Interchange complex and the Woodmen Road Interchange. Outside of the study area for the Feasibility Study, reconstruction is underway at the State Highway 105 Interchange in Monument and has been completed at the Fountain Interchange (Exit 128).

Second, the *I-25 Corridor Feasibility Study* recommended that transportation system management (TSM) improvements be made to ensure the most effective use of the freeway's limited physical capacity. This phase also has been implemented, with provision of freeway surveillance cameras, variable message signs, and a Traffic Operations Center in Colorado Springs. An adopted Incident Management Program specifies roadway closure protocols and detour routes for use in minimizing the overall traffic delays resulting from traffic accidents or incidents on the freeway.

Third, the *I-25 Corridor Feasibility Study* recommended that capacity improvements be implemented. The type and extent of such improvements was discussed in that study, and is also examined in the current EA process. The I-25 corridor safety projects previously completed or now underway were designed to not preclude options for future capacity improvement.