

# **Acknowledgements**

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# **Introduction**

The US 50 Corridor from Pueblo, Colorado, to the Kansas State Line is a 150-mile transportation facility (US 50) that complements Interstate 70 to the north and US 160 to the south, and links the Port-to-Plains Corridor along State Highway 287 on the east and Interstate 25 on the west. As part of this regional transportation system, US 50 holds the possibility of delivering alternative routes for other congested corridors such as I-70, and ultimately the national transportation network.

US 50 traverses an agricultural community experiencing economic and population decline. With limited transportation dollars, US 50 has not ranked high in transportation investment funding as compared to other major corridors in the state. Some sections of US 50 have not had major reconstruction since 1936. Even though the corridor has not ranked high for investment, US 50 does have safety and mobility issues that need to be addressed.

This study is the culmination of a public involvement process to determine transportation needs for US 50, as defined by the citizens who live and work along the corridor. Over the course of this study, representatives from the Colorado Department of Transportation (CDOT) and their Project Team have met with residents, business leaders, and elected officials along the US 50 Corridor to identify community needs and expectations for improvements to the corridor. The purpose of the public involvement process was to identify corridors that best meet the community's transportation needs, and to establish a community-based vision for the improvements.

US 50 is vital to the Lower Arkansas Valley. and will continue to foster growth for the surrounding area for many years to come. Because of this, CDOT, working with the communities located around the corridor, developed this Corridor Selection Study. This is the first step in competing for Strategic Investment Plan funding, which identifies priority improvements that need to be completed in response to current and anticipated growth for Colorado. In order for this corridor to be considered for funding, the improvements must be regionally significant, supplement the State Transportation Plan, and have local and regional support. Although US 50 has not ranked high in the past for investment funding as compared to other major corridors in the state, it is likely that this corridor can compete for Strategic Improvement Plan funds in the future. The Strategic Improvement Plan funds are just one of the sources of available funding.

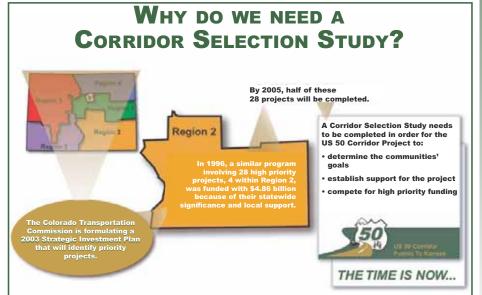
This report summarizes the process for developing and analyzing corridors that will improve US 50 based on current conditions, anticipated future demand, and the public involvement process.

The development of corridors resulted in three possibilities: relocating the corridor to the north or south (North Corridor and South Corridor), or expanding and improving the current corridor (Existing Corridor). These corridors were evaluated based on a selection criteria process that involved citizens in and around the communities of Pueblo, Fowler, Manzanola, Rocky Ford, Swink, La Junta, Las Animas, Lamar, Granada, and Holly, all of which are located along the 150-mile corridor.

The basis for determining the selection criteria was established from the public involvement process, analysis of existing conditions, and future traffic needs.

Comments from the public involvement process indicated that the majority of citizens support the Existing Corridor due to the direct access it provides to each of the communities.

Knowing that the overwhelming public choice was the Existing Corridor, the Project Team developed three alternatives for improving the Existing Corridor. This resulted in three possible alternatives: relocating the existing corridor to the north or south (North Around-Town and South Around-Town), or expanding and improving the current corridor (Through-Town).







# **US 50 History**

US 50 stretches from Ocean City, Maryland, to San Francisco, California, passing through twelve states including Colorado. At 3,073 miles long, US 50 has the distinction of being one of the last transcontinental highways that remains intact. In southeastern Colorado US 50 traverses the Lower Arkansas Valley, east of Interstate 25 stretching to the Kansas State Line.

In 1997, Time Magazine called Highway 50 "the Backbone of America." This historic route has played a key role in the development of the western United States. Along the route are some of the country's most magnificent landscapes: the Appalachian, Rocky, and Sierra Nevada Mountains; the deserts of Utah and Nevada; and the endless farmlands of the Great Plains. It follows the path of pioneers along the Santa Fe Trail and the route of the Pony Express, and has been instrumental in developing the Lower Arkansas Valley.

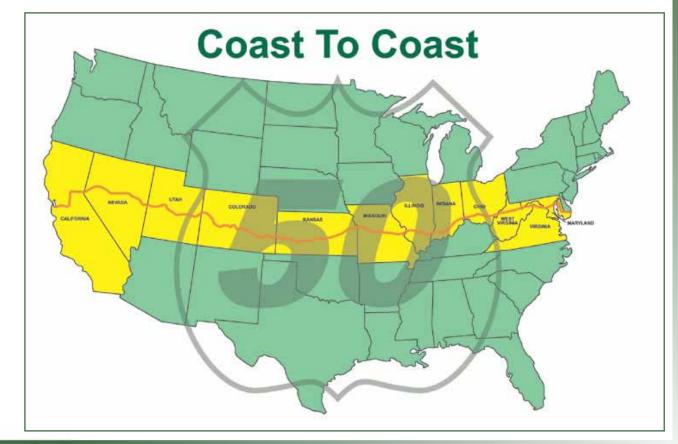
The primitive beginnings of the Highway 50 route through Colorado began in 1821 with Captain William Becknell's Santa Fe Trail.

By the late 1900's, the automobile era and interest in road construction began. On July 11, 1916, Congress passed the Federal-Aid Road Act, which required cooperation between states in building highways and improving interstate travel. About the same time, Congress passed another bill calling for uniform danger and information signs. This meant that interstate connecting highways were required to have the same route number. With this, in March of 1931, the state highway commissioners of Kansas announced their plans to inaugurate a hard-surface Highway 50 through their state to connect to the Santa Fe Trail at the Kansas State Line.

Responding to their request, the Highway 50 Association was organized in Salida, Colorado, and Colorado Highway 50 was built

The US 50 Corridor from Pueblo, Colorado, to the Kansas State Line is an 150-mile transportation facility that complements Interstate 70 to the north and US 160 to the south, and links the Ports-to-Plains Corridor along SH 287 in the east and Interstate 25 on the west. As part of this regional

transportation system, US 50 holds the possibility of complementing the region's economy grounded in ranching, agriculture, recreation, and tourism. Used on a daily basis by the local citizens to transport goods and commuting, US 50 serves a vital role in the region.







# **US 50 Conditions**

#### **EXISTING CONDITIONS**

#### **Existing Traffic Conditions**

US 50 is the primary truck route connecting the Front Range cities of Pueblo and Colorado Springs to southeast Colorado and Kansas. The following sections summarize the traffic conditions including traffic operations, regional mobility, accident analysis, and safety benefits (US 50 Corridor, Pueblo to Kansas, Existing Conditions Report, dated May 2003).

#### **Existing Corridor Traffic Characteristics**

- US 50 is classified as a Federal-Aid Primary (FAP) highway and is designated on the National Highway System.
- The 1999 estimated Average Daily Traffic (ADT) volume over the entire segment ranges from approximately 3,000 to 19,000.
- The 1999 average percentage of trucks over the entire corridor is nearly 16 percent with peak truck percentages exceeding 25 percent north of Lamar, on US 287.
- The corridor is comprised of 96 miles (63 percent) of two-lane highways and 56 miles (37 percent) of four-lane highways.
- Rocky Ford and Lamar have at-grade railroad crossings.
- Large farm equipment is prevalent on the roadway during the summer months.
- From 1995-2000, the average historical traffic growth rate was 2.8 percent per year for the corridor. This traffic growth rate is nearly three times the 10-year census population growth rate.

#### **Existing Highway Levels of Service**

The existing traffic operations were evaluated along the corridor. The Level of Service (LOS) analysis evaluated both the two- and four-lane highway segments for traffic volumes, access points, free flow speed, lateral clearance, shoulder widths, directional distribution, percentage of no-passing zones, and median areas.

The results of the two-lane traffic analysis determined that overall the LOS is acceptable (LOS of D or better) with average travel speed varying below the posted speed limit. The longest two-lane highway segment with the poorest LOS performance lies between Las Animas and the junction of US 50/287. This 23.5-mile long segment of highway has a Percent-Time-Spent-Following (PTSF) value of 68.1 percent and a LOS rating D.

Similarly, the four-lane sections of US 50 had acceptable LOS performance levels.

#### **Regional Transportation Characteristics**

In June 1998, the Transportation Equity Act for the 21st Century (TEA-21) was enacted and authorized highway, safety, transit, and other surface transportation programs for the six-year period from 1998 to 2003. TEA-21 designated the Ports-to-Plains Corridor as the 43rd "High Priority Corridors" on the National Highway System. The importance of the Ports-to-Plains Corridor from the Mexican border to Denver, Colorado, is related to its potential to serve international trade and promote economic development with the implementation of the North American Free Trade Agreement (NAFTA). This treaty has dramatically increased the volume and value of trade between these North American Countries, with the majority of Mexico's trade passing through the Texas ports of entry (Ports-to-Plains Feasibility Study, June 2001. Wilbur Smith Associates Team.)

US 50 serves as a vital connection to the Colorado Front Range cities of Pueblo and Colorado Springs for the southeastern plains communities, as well as cities in Kansas to the Ports-to-Plains Corridor.

#### **Corridor Travel Time Analysis**

A planning level travel time analysis was completed for the 150-mile corridor to evaluate overall travel efficiency. The analysis evaluated corridor mobility by determining the reduction in efficiency caused by speed reduction zones and traffic signal delay. Speed reduction areas were determined where the posted speed limit is below 65 mph. Exhibit 1 graphically shows the 11 speed reduction zones and their locations along the corridor. The miles of highways with reduced speeds comprise 18 percent of the total length of the corridor, adding an additional delay to regional travel time.

In-addition to speed reduction delays, vehicles stopped at traffic signals will increase corridor travel times. Delay from the thirteen traffic signals can increase the travel time up to an hour and a half.

Exhibit 1 - US 50 Speed Reduction Zones

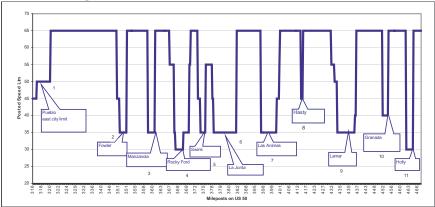
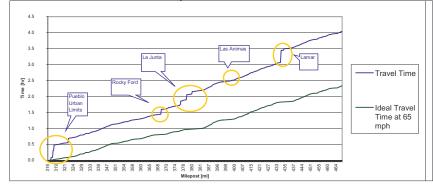






Exhibit 2 is an ideal travel time line based on 65 mph. The ideal time to traverse the corridor is approximately 2 hours and 15 minutes. The graphic also depicts the corridor travel times, assuming that the traveler had to stop at each signal location. Corridor delay is greatest in the towns where the travel time line appears as a vertical line. The delay caused by the traffic signals and speed reduction zones can increase the total travel time to nearly four hours. These system delays can reduce corridor travel speed by 42 percent to an average speed of 38 mph. The delay from the two railroad crossings can further increase travel time, but was not included in the analysis.





#### **Corridor-Wide Accident History**

From October 1, 1995, to September 30, 2000, approximately 2,015 accidents were recorded along the corridor with an average between two to three accidents per mile per year. From a yearly perspective, the accident frequency on US 50 has remained relatively stable over the five-year period examined. Overall, the accident rates for the US 50 Corridor when compared to other similar highway segments is similar.

Accident distribution along the corridor forms a predictable pattern. Crashes are more densely concentrated in the urban areas, chiefly associated with more intersections and increased traffic volumes. Exhibit 3 and Exhibit 4 depict specific roadway segments through the towns of Rocky Ford, Las Animas, Lamar, and Granada with five-year injury and accident rates are higher than the corresponding State averages.

Exhibit 3 - Injury Accident Rates

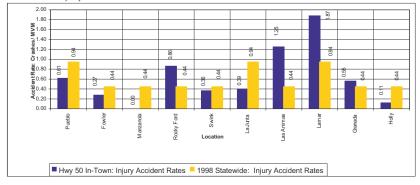
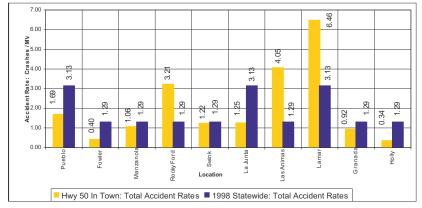


Exhibit 4 - Total Accident Rates





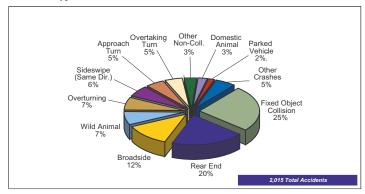




#### **Accident Type and Distribution**

The types of accidents occurring along the corridor have been graphically shown in Exhibit 5. The predominant and secondary accident types are the fixed object type (25 percent) and rear-end (20 percent). Approximately 95 percent of the fixed objects collisions are of the single vehicles running-off-the-road, with the majority (58 percent) running off to the right.

Exhibit 5 - Type & Distribution of Accidents



#### **Accident Prone Locations**

The CDOT Corridor Safety Assessment Report (Safety Assessment Report, US 50 Corridor, Pueblo to Kansas, CDOT Region 2, January 2003), identified accident prone locations. Eighteen accident prone non-intersection related roadway segments (totaling over 41 miles in length) with recommended improvements were identified. Additionally, the study identified 20 accident prone intersection locations. A benefit cost analysis was completed for each intersection using the appropriate accident reduction countermeasures.

#### Safety Benefits of Widening US 50

The Safety Assessment Report evaluated the safety benefits of upgrading the two-lane roadway segments of US 50 to four lanes with a divided median. The analysis, based on safety performance models developed by CDOT, determined that a 37 percent reduction in total accident frequency and 33 percent reduction in severe accident frequency (injury and fatal) can be obtained by widening the two-lane segments of US 50.

#### Existing Rights-of-Way

#### **Highway Rights-of-Way**

The existing right-of-way width along the US 50 Corridor was obtained using the CDOT "as-built" plans. The right-of-way width varies throughout the corridor from 60 feet to 300 feet.

#### Railroad Rights-of-Way

The existing US 50 Corridor project right-of-way crosses, encroaches on, or now has title to railroad right-of-way. Union Pacific Railroad and Burlington Northern Santa Fe Railway both currently operate within the corridor.

#### **Existing Access Conditions**

The existing US 50 Corridor from Pueblo, Colorado, to the Kansas State Line, is characterized by four highway categories throughout the project. The categories are assigned to each state highway segment pursuant to the requirements of Access Code, and summarized in Exhibit 6.

Exhibit 6 - Access Descriptions

Mile Post		Category	Physical Description of Category Segment		
From	То	Category	Physical Description of Category Segment		
316.001	329.334	EX	I-25 Interchange to Junction SH 96		
329.334	350.710	R-A	Junction SH 96 to Cranston Ave. (CRLL3) in Fowler		
350.710	351.321	NR-A	Cranston Ave. (CR LL3) in Fowler to 781' West of CRLL4 & CRLL3.5		
351.321	359.308	R-A	781' West of CRLL4 & CR LL3.5 to CR 11.10		
359.308	360.013	N-A	CR 11.10 to 1315' West of Catlin Canal Str L-21-K		
360.013	368.047	R-A	1315' West of Catlin Canal Str L-21-K to 174' East of CR 18.9		
368.047	369.238	NR-A	174' East of CR 18.9 to Railroad Ave. in Rocky Ford		
369.238	374.349	R-A	Railroad Ave. in Rocky Ford to Reynolds Ave. in Swink		
374.349	374.839	NR-A	Reynolds Ave. in Swink to 433' West of Swink Dr.		
374.839	376.952	R-A	433' West of Swink Dr. to Crooked Arroyo Strs M-22-K & M-22-A WB in La Junta		
376.952	380.861	NR-A	Crooked Arroyo Strs M-22-K & M-22-A WB in La Junta to Malouff Ave. in La Junta		
380.861	398.007	R-A	Malouff Ave. in La Junta to Oak Ave. in Las Animas		
398.007	399.940	NR-A	Oak Ave. in Las Animas to Arkansas River Strs L-24-D EB & L-24-a WB		
399.940	434.117	R-A	Arkansas River Strs L-24-D EB & L-24-a WB to Arkansas River Strs L-26-H EB & L-26-BW WB		
434.117	436.232	NR-B	Arkansas River Strs L-26-H EB & L-26-BW WB to 2365' West of CR 9		
436.232	452.559	R-A	2365' West of CR 9 to Inge St. in Granada		
452.559	452.964	NR-B	Inge St. in Granada to Hoisington St. in Granada		
452.964	462.740	R-A	Hoisington St. in Granada to 11th Street in Holly		
462.740	463.506	NR-A	11th Street in Holly to Junction SH 89		
463.506	467.583	R-A	Junction SH 89 to CR 39 at the Colorado-Kansas State Line		

Access Category Classifications along the US 50 Corridor Project:

- EX Expressway, Major Bypass
- R-A Rural Regional Highway
- NR-A Non-Rural Region Highway
- NR-B Non-Rural Arterial







CDOT records reflect the following permitted accesses:

- Pueblo County 223 Permitted Accesses
- Otero County 84 Permitted Accesses
- Bent County 17 Permitted Accesses
- Prowers County 70 Permitted Access (25 within Lamar)

According to CDOT, some permitted accesses were never built or may no longer be in use by the permit holder.

#### Existing Roadway

#### **Typical Roadway Sections**

The existing typical sections along the US 50 Corridor study area consist of rural and urban sections that vary greatly. These sections include two-lane highways, four-lane divided and undivided highways, and one-way pairs. Much of the rural areas consist of a two-lane highways with paved shoulders. The widths of the shoulders vary from 2 feet to 10 feet. The remaining rural sections are comprised of four-lane highways, divided and undivided. The divided sections typically have paved shoulders with a 16-foot to 50-foot median. These medians are a combination of grass, pavement, or concrete barriers down the middle. Most have left turn lanes where needed. Some portions of the undivided sections have curb and gutter, as well as shoulders and usually painted median which varies from 4 feet to 6 feet. The urban areas, with reduced speed limits, contain most of the same sections as the rural areas. Many of the two-lane and four-lane undivided sections, as they go through towns, have a middle turn lane. This turn lane is painted and varies from 12 feet to 16 feet. There are, however, some four-lane undivided urban sections that do not provide a turn lane but maintain the same 4-foot to 6-foot painted median as in the rural sections. Additional urban sections include a one-way pair, two lanes in each direction, and a four-lane divided highway with frontage roads on one side and both sides.

#### **Horizontal & Vertical Geometry**

The majority of the existing horizontal curves was found to be deficient using the non-superelevated assumption. The analysis reveals that 209 curves failed to meet the existing design speed, with a total of 213 failing to meet the future design speed criteria.

#### **Existing Structures**

#### **Structure Data**

Along US 50 between Pueblo, Colorado, to the Kansas State Line, there are a total of 94 structures that are either on or over US 50, as summarized in Exhibit 7.

Exhibit 7 - Bridge Structures within the US 50 Corridor Study Area

minore, Bridge structures within the cost					
Bridges on US 50	85				
- Over Other Roads	5				
- Over Railroads	4				
- Over Channels	74				
- Over Pedestrian Facilities	1*				

Bridges Over US 50	9
- Other Roads	4
- Railroads	4
- Pedestrian Facilities	1

<sup>\*</sup> One was closed in 2002.

#### **Structure Condition**

The bridge over the Huerfano River, just east of Boone, is the oldest structure on the corridor. Built in 1921, this structure is one of only two concrete arch bridges, and is listed on the National Register of Historic Places (NRHP). One other bridge is eligible for NRHP listing, with 22 others which are potentially eligible.



Historic Bridge over the Huerfano River







Eight of the structures currently have recommendations for major repair. Seven structures need rehabilitation due to general deterioration or inadequate strength. One needs to be replaced due to capacity or geometry. The estimated total cost for the recommended repairs is \$5.5 million. Only four of the 94 structures are currently eligible for federal funding using Federal Highway Administration's 10-year rule. None of the bridges are posted for load restriction.

Based on a CDOT bridge database, the condition ratings of the bridge components in the corridor can be summarized as follows in Exhibit 8.

Exhibit 8 - Structures Condition Rating

		COMPONENTS					
Rating	Description	Deck	Superstructure	Substructure	Channel	Culvert	
9	Excellent	0	0	0	0	0	
8	Very Good	7	12	7	40	3	
7	Good	15	29	28	21	12	
6	Satisfactory	39	23	25	11	4	
5	Fair	11	11	13	1	0	
4	Poor	3	0	2	2	0	
3 or below	Serious to Failed	0	0	0	0	0	
N	Not Applicable	19	19	19	19	75	

Generally, the bridges are in satisfactory condition. The majority of the bridges' components are rated a 6 (satisfactory) or higher. The lowest rating of all structural components on the US 50 Corridor is 4 (poor), with only four bridges that have components rated this low.

The appraisal rating of a bridge evaluates it in relation to a new bridge built to current standards. Exhibit 9 summarizes the appraisal ratings of the structures within the corridor.

Exhibit 9 - Structure Component Appraisal Rating

			Сомронент				
Rating	Description	Structural	Deck Geometry	Under- Clearance	Bridge Posting	Waterway Adequacy	Apr. Roadway Alignment
N	Not Applicable	0	20	76	0	19	0
9	Superior to Present Criteria	0	11	0	0	16	0
8	Equal to Present Criteria	8	3	2	1	54	85
7	Better than Min. Criteria	31	12	0	0	1	1
6	Equal to Min. Criteria	21	1	5	1	3	6
5	Tolerable	29	5	2	92	0	2
4	Barely Tolerable	2	36	3	0	0	0
3	Intolerable (Corrective Action)	0	2	6	0	1	0
2	Intolerable (Replace)	0	4	0	0	0	0

Generally, the bridges are rated from fair to good. One exception is deck geometry, which indicates that the roadway and shoulders are probably narrower than current roadway practice incorporates.

There are four structures in the corridor that are considered "structurally deficient," which indicates that the structure is weight restricted due to condition, in need of rehabilitation, or closed. Nine bridges are classified as "functionally obsolete," which means that the bridge may be structurally sound but does not meet current standards due to inadequacies in deck geometry, clearances, or approach roadway alignment.

#### **Existing Drainage**

Within the US Highway 50 Corridor there are 79 different drainage structures listed on the CDOT Field Log of Structures as crossing creeks, rivers, streams, or irrigation canals. Each structure location was visited and photographed during the fall of 2000 or spring of 2001. Sixty-six CDOT structure records were retrieved and reviewed.

Thirty-three locations were identified where future highway construction or improvements may cause or exacerbate the encroachment onto known floodplains of the Arkansas River or its tributaries. The majority of identified locations and associated issues will require additional detailed study to support the design of any future improvements.







US Highway 50 crosses numerous major and minor irrigation canals and ditches throughout the corridor. Site visits and interviews with irrigation company personnel were conducted for each of the following irrigation facilities:

Excelsior Ditch

• Lamar Canal

• Oxford Farmers Ditch

• Otero Ditch

- Catlin Canal
- · Rocky Ford Ditch
- Rocky Ford Highline Canal
- · Las Animas Consolidated Canal
- Manyal Canal
- X-Y Canal

In general, existing irrigation crossing sites and structures are adequate for current operations. However, changes in highway alignment or alterations of existing crossings of any of the irrigation canals or ditches would require coordination with the affected irrigation company.

Exhibit 10 - Drainage Issues

Corridor Section	Number of Drainage Issues		
Pueblo to Nepsta Rd.	9		
Nepsta Rd. to La Junta	13		
La Junta to McClave Junction	7		
McClave Junction to the Kansas Border	10		



Existina Irrigation Issues along US 50

#### **Existing Utilities**

There are 67 separate utility companies or facility owners along the 150 miles of the US 50 Corridor study area. Of these, 38 entities own the water, sanitation, and some electric utilities.

Within the 10 municipalities located along the study area, many of the water associations are classified along with the municipalities. Qwest and CenturyTel have several private easements in the study area. The telephone and fiber optic lines are mostly in highway right-of-way, and have numerous crossings along the entire corridor, which will require field locates and potholing prior to final design.

There are several irrigation ditches located along the corridor that were discussed in the drainage section. Coordination with all utilities will be important during future study.

#### Future Traffic Conditions

Historical traffic trends along US 50 were used as the basis for future traffic forecasts. The planning horizon for the future conditions analysis is the year 2025. Based on the overall historical traffic growth trend, the existing traffic volumes will double by the year 2025.

#### **Future Highway Levels of Service (LOS)**

Given future traffic volumes, the US 50 study area was evaluated to determine future highway LOS based on the roadway capacity of the corridor without improvements to the two- and four-lane segments.

The analysis revealed that the four-lane sections of US 50 would operate at acceptable levels and all of the two-lane sections of the corridor would operate at unacceptable levels service, except a

short section from Holly, Colorado, to the Kansas State Line. Exhibit 11 details the future areas of unacceptable LOS.

For the two-lane facility, a desirable LOS for the future condition is LOS B-C. At this condition, traffic flow is stable with a 65 or less percent-time-spent-following (PTSF). The LOS analysis revealed that 95 percent of the total two-lane highway segments would operate at LOS D. At this LOS passing becomes extremely difficult. Passing demand is high, but passing capacity approaches zero. Future traffic flow conditions are projected to average a 71 PTSF.

#### **Regional Transportation Needs**

In addition to the need for increased safety, the future regional transportation needs of the corridor include improved mobility and travel efficiency. As Southeastern Colorado continues to grow, additional demands will be placed on US 50.

Within the next 10 to 20 years, the Ports-to-Plains Trade Corridor will experience an estimated 4,000 additional trucks per day. This soaring increase in truck traffic will have a noticeable impact on east/west mobility in the US 50 Corridor. After improvements, the US 50 Corridor will be an alternate route for I-70 to the Front Range cities.

The need to use US 50 as a principle transportation corridor has been recognized by Kansas Department of Transportation (KDOT). In the future KDOT plans to improve US 50 across their state.

Increasing the transportation demands on US 50 without consideration to maintaining or improving mobility will degrade the service currently provided by this corridor. In addition to the many safety problems identified in the Safety Assessment Report, the future traffic operations of the two-lane roadway segments will compromise the needs of the corridor and the communities it serves.

Exhibit 11- Future Areas of Unacceptable LOS









# **Economic Conditions**

This section of the report describes the economic environment of the four county region traversed by US 50 from Pueblo, Colorado, to the Kansas State Line. The information presented here provides a baseline data set to be used to analyze the potential economic effects of constructing a four-lane controlled access corridor the length of the US 50 study area.

#### **Regional Description**

The study area consists of four counties along US 50. US 50 roughly follows the course of the Arkansas River and a portion of the historic Santa Fe Trail, an important trade route in the 19th Century. The Arkansas River also marked the southern border of the United States until 1846. The Lower Arkansas Valley has a longstanding agricultural base made possible by abundant irrigation water from the river and fertile soil in the valley. (Major agricultural products include sorghum, winter wheat, corn, and beef production.) Changes in the agriculture market and sale of water rights to urban areas along the Colorado Front Range

have contributed to a slow decline of the role of agriculture in the region. A multi-year drought beginning in 1998 has also taken its toll on the area, leaving many area producers in a precarious condition. The entire state of Colorado was declared a disaster area, losing 50 percent of 2002's winter wheat crop, the largest loss since 1969.

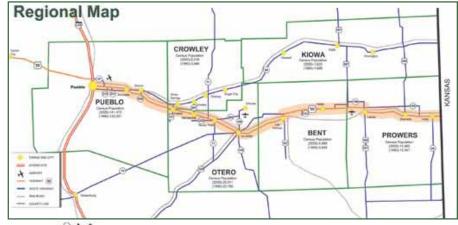
While most of the tourism-related activity in the region is related to serving automobile travelers passing through the area, Bent's Old Fort National Historical Site, John Martin Reservoir State Park, Koshare Indian Museum, and Boggsville Historic Site each draw significant number of visitors. Growth in the prison industry, both in government and private contractor jobs, has become a significant component of the regional economy. There are two colleges in the region, Lamar Community College and Otero Junior College. Additionally, the growth of housing and services for workers commuting from the western portions of the region to Pueblo, Canon City, and to some extent Colorado Springs, contributes to the economic environment.

While several communities continue to act as regional centers for services, other smaller communities have emerged as bedroom communities for larger cities. Other communities still remain in relative economic decline and, while continuing to see agriculture as a major component, seek new avenues for economic development to complement the historic base. In general, the regional economy remains stagnant, along with the rest of the state.

Exhibit 12 presents a summary of socioeconomic data for the four county region as available from the 2000 US Census, the Bureau of Economic Analysis and the Colorado Department of Local Affairs. The table is followed by a series of graphs presenting the data from the table.

Exhibit 12 - Economic Overview by County

	Bent	Otero	Prowers	Pueblo	
Population					
1990	5,048	20,185	13,347	123,051	
2000	5,998	20,311	14,483	141,472	
2025 (estimates)	6,679	23,166	17,012	191,942	
Percent Worked in County of Residence	70.3%	84.0%	93.4%	89.7%	
Per Capita Personal Income	\$16,984	\$22,003	\$23,355	\$22,174	
State Rank	60	39	31	37	
Percent State Average (\$32,434)	52%	68%	72%	68%	
Average Annual Growth 1990-2000	1.6%	4.7%	4.2%	4.4%	
Total Employment					
1991	2,099	9,692	6,922	54,892	
2000	2,560	10,548	8,470	70,273	
2025 (estimates)	2,795	15,574	11,362	114,427	
Unemployment Rate			_		
2000	7.8%	11.2%	6.3%	9.3%	
2025	5.8%	8.4%	4.7%	7.0%	
Total Taxable Assessed Value 2000	\$49,531	\$94,515	\$88,050	\$895,220	
Mill Levy 2000	30.089	19.692	25.67	28.289	
State Sales Tax Paid 2000	\$408,135	\$3,822,296	\$3,446,070	\$38,246,934	
Sales Tax Rate 2000	1.0	1.0	1.0	1.0	
Retail Sales 2000 (\$000)	\$30,224	\$317,186	\$399,907	\$2,323,671	



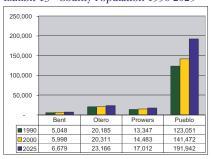




#### **Population**

The population counts from the 2000 US Census show a wide diversity across the region. Bent is the smallest, with 5,998 residents. Otero and Prowers Counties, with the larger communities of La Junta and Lamar anchoring the population base, have 20,311 and 14,483 residents, respectively. Pueblo County contains the City of Pueblo, a metropolitan area of 102,000, and has a total population of 141,472 residents.

Exhibit 13 - County Population 1990-2025



The population of the State of Colorado grew at an annual rate of 2.7 percent from 1990 to 2000 and is projected to grow 1.6 percent annually from 2000 to 2025. In contrast, much of the study area has grown at a slower rate than the State as a whole and is projected to continue that trend during the current slowing economy and throughout the planning period. The trend will be accentuated in the region due to a lack of economic diversity. Only Pueblo (1.2 percent) is expected to sustain an annual growth rate exceeding 1.0 percent.

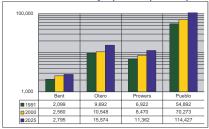
Exhibit 14 - Average Annual Population Growth Rates 1990-2025

County	1990-2000	2000-2025			
Bent	1.8%	0.6%			
Otero	0.1%	0.6%			
Prowers	1.0%	0.7%			
Pueblo	1.5%	1.2%			

#### **Employment**

Total employment figures similarly reflect a diverse picture across the region as shown in the graph below. In 2000, Bent County had relatively small employment base with 2,560 employed workers. Otero and Prowers had 10,548 and 8,470 employed workers, respectively. Pueblo, with its much larger population base, had 70,273 employed workers.

Exhibit 15 - Total Employment by County



Employment growth rates over the past decade and projected to 2025 indicate a relatively measured growth in employment.

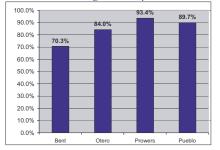
Exhibit 16 - Average Annual Employment Growth Rates 1990-2025

County	1990-2000	2000-2025		
Bent	2.0%	0.4%		
Otero	0.8%	1.6%		
Prowers	2.0%	1.2%		
Pueblo	2.5%	2.0%		
(Colorado)	2.7%	1.6%		

#### **Commuting Patterns**

Exhibit 17 represents the percentage of workers who work in the county of residence. This information begins to show us which counties serve the region as employment centers. Prowers (93.4 percent), Pueblo (89.7 percent), and Otero (84.0 percent) have the most workers living and working in the same county. In contrast, Bent (70.3) percent) has the fewest workers living and working in the same county. Workers throughout the region routinely travel to Otero, Prowers, and Pueblo Counties for employment, with additional commuting for some to Colorado Springs, a larger city north of Pueblo, or Fremont County, west of Pueblo and the location of numerous state and federal correctional facilities. Exhibit 19, Year 2000 Census Results for Commute Trip Origins and Destinations, on the following page summarizes this trend.

Exhibit 17 - Working in County of Residence



#### <u>Unemployment</u>

Current Department of Local Affairs estimates of unemployment indicate a generally higher level of unemployment across the study area than the State as a whole. The State unemployment rate was 5.9 percent for 2002 and is projected at 4.8 percent for 2025. For the current year (2002) the unemployment rate ranges from 6.3 percent in Prowers County to 11.2 percent in Otero County. The employment situation is projected to improve slightly by 2025, but reflects a struggling regional economy.

Exhibit 18 - County Unemployment Rates

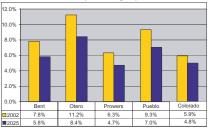
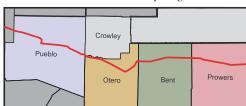






Exhibit 19 - Year 2000 Census Results for Commute Trip Origins and Destinations

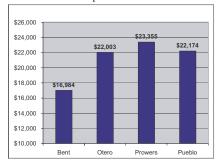


PUEBL	-0		OTERO		BENT		PROWERS
Daily Work Trip	s		Internal 6,893		Internal 1,517		Internal 6,136
Eastbound	2	90					
		0		0			
		23		23		23	
				248	_		
				144		144	<b>→</b>
					_	267	$\rightarrow$
Eastbound Totals	3	13		415		434	
Westbound						119	
				12	<b>—</b>	12	
		17	_	17		17	
			1	296			
	,	21		21			
2	4	99	_				
Westbound Totals	5	37		346		148	
Total Commuters	8	50		761		582	
Total Trips A.M. & P.M.	1,7	00		1,522		1,164	

#### Per Capita Income

Per capita income also reflects low income in the region relative to Colorado as a whole. The State average income is \$32,434. All counties in the study area are significantly below that amount. Bent County ranks 60<sup>th</sup> in the state with only 52 percent of the statewide average per capita personal income. Otero ranks 39<sup>th</sup> with 68 percent of the statewide average. Prowers ranks 31<sup>st</sup> with 72 percent of the statewide average. Pueblo ranks 37<sup>th</sup> with 68 percent of the statewide average.

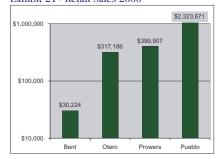
Exhibit 20 - Per Capita Income 2000



#### **Retail Sales**

In the following graph, retail sales can be compared for counties across the study area. Total retail sales range from \$30.22 million in Bent County to \$2.3 billion in Pueblo County.

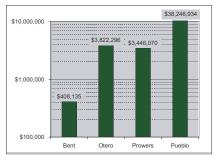
Exhibit 21 - Retail Sales 2000



#### **State Sales Tax**

The following graph shows state sales tax paid in each county in 2000. Receipts range from \$408,135 in Bent County to \$38.2 million in Pueblo County. All counties have a 1.0 percent local tax rate.

Exhibit 22 - State Sales Tax Paid 2000









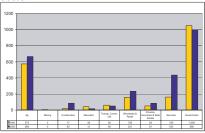
#### **County Employment by Sector**

This section shows employment in each county by industrial sector for 1991 and 2000 as reported by the Colorado Department of Local Affairs. This information provides detail on employment trends across the region during the last decade as well as a comparative analysis of the relative importance of commercial activity within each individual county.

#### **Bent County**

Government and Agriculture are the largest employers in Bent County and have remained steady through the last decade. The Services sector has seen significant recent growth and is largely the result of new employment at the Fort Lyons Correctional Facility. The lower level of other commercial activities is consistent with the county's rural agricultural base. Many services are typically obtained in neighboring counties.

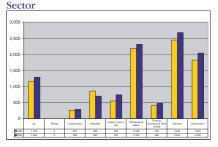
Exhibit 23 - Bent County Employment by Sector



#### **Otero County**

The leading sectors in Otero County are Services, Wholesale & Retail, and Government. Agriculture is a close fourth in number of jobs. Together, these industries provide a more diverse and stable economy and anchor the City of La Junta as one of the region's primary centers, the largest between Lamar and Pueblo.

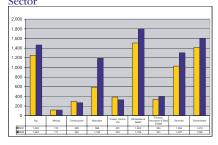
Exhibit 24 - Otero County Employment by



#### **Prowers County**

Prowers County, with Lamar as the county seat, also has a diversified economy, adding Manufacturing to its Wholesale & Retail, Government, Agriculture, and Services industries. Manufacturing doubled in size from 1991 to 2000 with the addition of several medium-sized employers. This regional center is the largest on Colorado's eastern plains, providing services and shopping to the agricultural community and other residents, including from western Kansas.

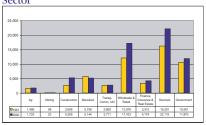
Exhibit 25 - Prowers County Employment by



#### **Pueblo County**

Pueblo County anchors the western end of the study area, with the city of Pueblo as the county seat and one of Colorado's major urban areas along the Front Range. Services, Wholesale & Retail, and Government sectors dominate the local economy. Services and Wholesale & Retail grew significantly during the 1990's. The city attracts workers and business from throughout the region.

Exhibit 26 - Pueblo County Employment by









# **Corridors**

In order to identify possible corridors for US 50, a 1,000-foot wide section was selected, identifying potential relocation of the corridor. The public process resulted in three corridors for the 150 miles from Pueblo, Colorado, to the Kansas State Line. The corridors include:

- 1) Existing US 50, known as the "Existing Corridor";
- A new north location using some of the existing corridor, known as the "North Corridor":
- The "South Corridor" located several miles south of the existing corridor in places and utilizing part of the existing location in other areas.

As part of the Existing Corridor, where US 50 passes through communities, a 300-foot wide area was defined to identify specific improvements to the current alignment or possible relocation of the existing roadway using local bypasses either to the north or south. The North and South Corridors were also defined using 300-foot wide areas to identify alignments.

The North, South, and Existing Corridor segments that do not go through local towns and communities should be constructed as a rural expressway with posted speed limits of 65 mph. The expressway would provide two through lanes totaling 300 feet wide, separated by a 100-foot grassed median. At selected locations, interchanges, overpasses, and at-grade intersections would be provided. The at-grade crossings would allow safe passage for all vehicle types including large trucks and farm equipment. Turning movements including crossing US 50 or U-turns would be allowed using the 100-foot wide median and acceleration and deceleration lanes would provide safe mobility of vehicles at the at-grade crossings. Minimum spacing for interchanges or atgrade crossings is generally assumed to be in the one to three mile range.

For the Existing Corridor segment options that go through local communities and towns, typical sections ranging from 100 to 140 feet would be used. Two through lanes in each direction would be separated by either a barrier wall or a raised median, with general requirements of intersection access to US 50 at one-half mile spacing or interchanges at no less than one mile spacing.

US 50 Development of Corridors

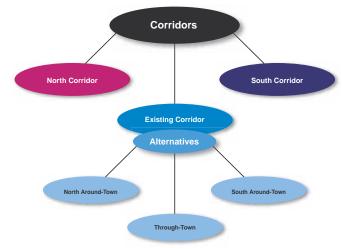


Exhibit 27 - US 50 Corridor Project View







#### **EXISTING CORRIDOR**

The Existing Corridor provides possible alignment options for the communities located along the corridor. These options were developed to reduce the impacts of regionally bypassing the towns of Fowler, Manzanola, Rocky Ford, Swink, La Junta, Las Animas, Granada, and Holly. resulted in possible alternatives of relocating the existing corridor to the north or south (around town), or expanding and improving the current corridor (through-town), which minimize disruption and economic impacts to the communities. In some cases because the options will deviate from the existing corridor, particularly within the north and south options, some of the options will not be located within the existing right-ofway. The city of Lamar was not included in the alternatives analysis. The City of Lamar is currently working on improving Highway 287 and will include the US 50 Corridor in all appropriate studies.

In addition to reducing the impacts to the communities along the corridor, just east of Pueblo, realignment options were developed to explore ways to minimize impacts to residential areas and to explore the option of servicing the Pueblo Airport via the US 50 Corridor.

The Existing Corridor is strongly supported by the local communities and has been refined to reflect the input received from extensive coordination with the public and local government representatives.

#### East Pueblo

US 50 Alternative - Starting at the west end and working east, the Existing Corridor alternative actually begins on US 47. Just east of the Troy Avenue interchange, the corridor continues in an easterly direction past the Neilson Avenue interchange for approximately one mile before curving in a southeasterly direction to intersect with a possible interchange or overpass at the proposed William White Road extension. The corridor continues in a southeasterly direction and joins the existing alignment of US 50 approximately one mile east of the US 50 / US 47 interchange. The corridor continues east along the existing US 50 alignment to the US 50 / SH 96 interchange.

Around Airport Alternative - This corridor option also begins at US 47, then it continues easterly and swings around the northern boundary of the Pueblo Airport and ties back in to the existing US 50 at least one mile west of the US 50 /SH 96 interchange.

#### Pueblo to Fowler

US 50 Alternative - The Existing Corridor generally follows the existing US 50 alignment eastward to Fowler.

Near US 50 Alternative - This option provides an alternative corridor approximately 1000 feet south of existing US 50 to avoid homes bordering the corridor. At the Huerfano River the corridor crosses over to the north side of the existing US 50 before tying into the existing US 50 approximately 2.5 miles east of the river. The option picks up again with a southern shift of the corridor from CR 723 eastward to CR 2 before coming back into existing US 50.

#### Fowler

Through-Town Alternative - Existing Corridor concepts through the town of Fowler include using the existing US 50 alignment, a Santa Fe Avenue alignment bordering the south side of the BNSF railroad, bordering the north side of the railroad, and a one-way pair scenario that utilizes both existing US 50 and Santa Fe Avenue.

North Around-Town Alternative - This short alternative of US 50 begins at the west end in the vicinity of the Pueblo/Otero County Line. The corridor crosses over US 50 and the BNSF Railroad, and borders the north side of the Otero Canal. The corridor then continues in a southeasterly direction crossing back over US 50 and the BNSF Railroad near CR 3.5 and ties back into existing US 50. As with all of the around town bypass options, direct access is provided into the community's business district.

South Around Town Alternative - This corridor begins on the west end at the same location as the North Option and heads south with a basic course that follows the southern boundary of the Oxford Farmers Ditch. As the corridor crosses over CR 3 with a potential interchange approximately 1.3 miles south of existing US 50, it continues back in a northeasterly direction still bordering the canal and ties back into the existing US 50 near CR 3.5.

#### Fowler to Manzanola

US 50 Alternative - This option holds the south right-of-way line for the BNSF Railroad eastward into Manzanola.

Near US 50 Alignment - From CR 8 eastward to CR 11 into Manzanola, this concept pulls to the south of existing US 50 by approximately 800 feet.

#### Manzanola

Through-Town Alternative - Existing Corridor concepts through the town of Fowler include using the existing US 50 alignment, a corridor bordering the south side of the BNSF Railroad, and a one-way pair scenario that utilizes both existing US 50 and the corridor bordering the south side of the BNSF Railroad.

North Around-Town Alternative - This short corridor crosses in a northeasterly direction over US 50 and the BNSF Railroad and borders the boundary of the flood plain near South Park Street and curves south to border the north boundary of the BNSF Railroad before it ties back into existing US 50 at CR 13.

South Around-Town Alternative - This corridor begins approximately one-half mile west of CR 11 heading in a southerly direction south of CR JJ and then ties back into US 50 in the vicinity of CR 12.

#### Manzanola to Rocky Ford

US 50 Alternative - This option holds the north right-of-way line for the BNSF Railroad and continues east into Rocky Ford.

Near US 50 Alternative - Between CR 13 and CR 17.5, corridor swings approximately 800 feet north of existing US 50.







#### Rocky Ford

Through-Town Alternative - Existing Corridor options through the town of Rocky Ford include using the existing US 50 one-way pair, using the existing westbound lanes of the one-way pair and locating the eastbound lanes on the Elm Street alignment, using the existing US 50 westbound corridor as a two-way facility, using the existing US 50 eastbound corridor as a two-way facility, and a corridor bordering the north side of the BNSF Railroad.

North Around-Town Alternative - This concept begins to deviate from the existing US 50 alignment approximately 1500 feet west of CR 17.5. The North Corridor borders the south side of CR GG to CR 19 before curving back in a southeasterly direction to border the east side of CR 20 and tie back into US 50 in the vicinity of CR 21, or continue south to connect with the Swink South Around Town.

South Around-Town Alternative - This concept heads south along the east side of CR 17.5 for approximately two miles before curving east in the vicinity of the Rocky Ford Highline Canal at CR 18 and CR DD. The concept then borders the south side of CR DD and crosses over to the north side of CR DD and ties back into existing US 50 approximately 4000 feet east of CR 22 or connect with the Swink Around Town South Alternative.

#### Rocky Ford to Swink

US 50 Alternative - This option holds the north right-of way line of the BNSF Railroad eastward into Swink.

Near US 50 Alternative - Between CR 22.75 and CR 24 the corridor swings approximately 1200 feet south of existing US 50.

#### Swink

Through-Town Alternative - Existing Corridor options through the Town of Swink include a concept bordering the north side of the BNSF Railroad and one that stays on the existing US 50 alignment.

North Around-Town Alignment - This concept begins just west of the railroad underpass crossing A Street approximately 1500 feet north of existing US 50. The concept continues eastward and would either connect to the La Junta North Around Town or cross back over US 50 and the BNSF Railroad approximately 3000 feet east of CR 25. After this crossing, the concept could either connect back into existing US 50 or continue on to the South Around Town options for La Junta.

South Around-Town Alternative - This concept heads in a southerly direction just east of CR 24 crossing over CR CC before curving east and crossing over Columbia Avenue approximately 3000 feet south of existing US 50. The concept continues eastward until it connects back into US 50 or to another corridor option for La Junta.

#### Swink to La Junta

Due to the close proximity between these two communities, options include staying on the existing US 50 alignment or connecting options between towns. All mixing and matching options of concepts between Swink and La Junta are possible.

#### La Junta

Through-Town Alternative - Existing Corridor options through La Junta include an upgraded arterial with limited access on US 50 or a concept that involves the construction of a high speed limited access facility with interchanges on the existing US 50 alignment. The high speed option eliminates the current curved section south of the pickle factory. Instead, the concept parallels the BNSF Railroad on the north side of the pickle factory.

North Around-Town Alternative - This concept pulls the corridor in a northeasterly direction in the vicinity of CR 25. The corridor crosses over the Arkansas River and travels east along the north side of the creek before crossing back over the creek just east of State Road 109. The concept connects back into the existing US 50 approximately one mile east of CR 31.

South Around-Town Alternative concepts were developed for a south option. The first alternative is a concept that begins on the west end approximately one mile west of CR 27. This concept proceeded in a southeasterly direction crossing just east of the CR 27 / West 6th Street intersection and over Bellevue Avenue approximately two miles south of existing US 50. At this point, the concept continues back in the northeasterly direction crossing CR AA approximately onehalf mile east of CR 31. The concept ties back into existing US 50 approximately one mile east of CR 31. The other south option is a concept that is consistent with the City of La Junta's Comprehensive Plan. This concept begins on the west end approximately one and a half miles west of CR 27 in a southerly direction to just south of SR 10. At this point, the concept curves to a southeasterly direction crossing over US 350 and SR 109.

The point where the concept crosses over SR 109 is approximately 3.5 miles south of existing US 50. The concept then curves north and connects back with the existing US 50 corridor approximately one mile east of CR 31.

#### La Junta to Las Animas

The concept for this segment stays on the existing US 50 corridor.

#### Las Animas

Through-Town Alternative - Existing Corridor options through the city of Las Animas include using the existing US 50 corridor and an option that borders the south side of the BNSF Railroad and curving north just west of the prison and crossing over the Arkansas River to connect with existing US 50.

North Around-Town Alternative - The concept pulls off of the existing US 50 corridor in the vicinity of CR 8.5. The concept borders the southern boundary of the Arkansas River bed and then crosses over the river just east of the existing US 50 crossing. The concept crosses over the to the north side of existing US 50 and ties back in to the existing corridor approximately one-half mile east of CR 11.

South Around-Town Alternative - This concept travels eastward one block south of  $11^{\rm th}$  Street and then curves north around the east side of the prison crossing over the Arkansas River and connecting into existing US 50.







#### Las Animas to Lamar

The concept for this segment stays on the existing US 50 Corridor and would connect to the alternatives proposed in the Lamar Bypass Study.

#### Lamar to Granada

The concept for this segment stays on the existing US 50 Corridor.

#### Granada

Through-Town Alternative - The through-town concept stays on the existing US 50 Corridor.

North Around-Town Alternative - This concept crosses over the BNSF Railroad (just west of the Wolf Creek crossing) and then crosses over Wolf Creek and Main Street approximately 2500 feet north of existing US 50. The corridor then heads south crossing over both the railroad and US 50 before connecting back into existing US 50 approximately 8000 feet east of Main Street.

South Around-Town Alternative - The south option begins at CR 23.5 and heads in a southeasterly direction crossing over Amache Road and curving east to cross over Main Street approximately 3500 feet south of existing US 50. The concept continues in a northeasterly direction crossing back over Amache Road and connecting back into existing US 50 approximately one mile east of Main Street.

#### Granada to Holly

The concept for this segment stays on the existing US 50 Corridor.

#### Holl

Through-Town Alternative - The throughtown concept stays on the existing US 50 alignment.

North Around Town Alternative - This concept begins approximately 3000 feet west of CR 34 heading in a northeasterly direction crossing over CR FF and CR 34. The corridor then curves east to cross over 8th Street approximately 3200 feet north of existing US 50 on the north side of Holly Ditch. The corridor follows Holly Ditch in a southeasterly direction crossing over North 1st Street and connecting back into existing US 50 approximately 2000 feet east of North 1st Street.

South Around-Town Option - This concept begins at CR 34 and heads in a southeasterly direction over the BNSF Railroad then curving back north over North 1st Street approximately 2600 feet south of existing US 50. The corridor connects back into existing US 50 approximately 3500 feet east of North 1st Street.

#### Holly to Kansas State Line

The concept for this segment stays on the existing US 50 Corridor.

#### NORTH CORRIDOR

The North Corridor begins on the west end at the US 50 / SH 96 interchange and utilizes the SH 96 corridor to just east of Fowler and south of Olney Springs. The North Corridor then takes off on a new alignment in a southeasterly direction bordering the north side of the Arkansas River until it connects with SH 266 north of Swink. The corridor continues east on SH 266 until it runs into SH 194 and connects back into the existing US 50 Corridor on the north side of Las Animas.

The North Corridor picks up again in Lamar on SH 196. The corridor follows SH 196 eastward and ties back into existing US 50 east of Granada.

#### **SOUTH CORRIDOR**

The South Corridor begins on the west end in Avondale at the junction of US 50 and US 50B. The corridor begins in a southeasterly direction basically following a power line corridor located three to four miles south and parallel of the existing US 50 Corridor. Then the corridor reaches La Junta the concept heads in a northeasterly direction, still south and parallel of US 50. The corridor then crosses US 50 and connects back into the Existing Corridor at the SH 194 / US 50 intersection.

The South Corridor picks up again approximately four miles west of Granada. The corridor bypasses Granada crossing approximately one mile north of town and then connects back into existing US 50 approximately three miles east of Granada.







# **Public Involvement**

The public participation process involved dozens of meetings with more than 1,000 citizens who live and work along the 150-mile US 50 Corridor between Pueblo, Colorado, and the Kansas State Line. The US 50 public involvement program proved to be valuable for gathering information about each community and the importance of the region. The public involvement process looked for ways to improve the corridor for safety and mobility from a local and regional perspective based on feedback from citizens who live and work along the corridor.

During the last three years, beginning January 2000, representatives from the Colorado Department of Transportation (CDOT) and consultants from URS Corporation and Wilson & Company, known as the Project Team, met with residents, business leaders, and elected officials along the US 50 Corridor to identify each community's needs and expectations for improvements to the corridor. These meetings included coffee klatches, workshops, fairs, and a series of four open house meetings. The Project Team encouraged the public to participate in this process to facilitate the selection of the most appropriate alternatives for the Lower Arkansas Valley region. The Project Team's objective was to work with citizens to establish community support for the project and reach a consensus on corridors for improvements to US 50 throughout the Lower Arkansas Valley region and within the individual communities. Initially, designers introduced a general concept of the project including corridor options. As the public process continued, comments and suggestions were incorporated into the concepts. The result was a selection of corridors that met community, regional, and state needs.

CDOT encouraged all interested citizens to get involved by attending meetings, sharing local insight, and offering opinions on what they want for the US 50 Corridor.

# "Coffee Klatches" The Project Begins...

#### January 2000

The initial public involvement program began by meeting with the communities informally to learn about concerns and challenges. Specifically, the Project Team met with city councils, county commissioners, and residents, usually over coffee.

At the beginning of the process, the original study area included US 50 from Pueblo to La Junta. However, after meeting with the communities from Avondale to La Junta, it was clear that the corridor study area needed to be expanded to the Kansas State Line. This study area change was driven by the fact that the Lower Arkansas Valley Region and its individual communities functions as a group and are interdependent on one another.

The Project Team visited with the county commissioners of Bent and Prowers County, where the suggestion to extend the study area was validated.

Based on these comments, the Project Team approached CDOT to have the corridor study area increased. After a lengthy process and an update to the Transportation Improvement Program, the study area was extended to include the corridor from Pueblo, Colorado, to the Kansas State Line.

After the project was redefined to its existing limits, an educational and communication campaign was developed to set expectations

and context the project. This required an information exchange between the citizens, their leaders, and the Project Team. The Project Team encountered significant skepticism about "promises made and not kept" and "studies that never accomplished anything." The campaign included a goal to gain the trust of the citizens by striving for an open, responsive dialog to ensure that their issues and concerns were heard and addressed. Finally, the educational program needed to convey the funding constraints faced by CDOT in providing transportation improvements, and how the Project Team intended to proceed.

#### Action 22

In an effort to understand regional issues and concerns, the Project Team engaged Action 22, a voluntary membership organization represented by individuals, businesses, counties and city governments in 22 southern Colorado counties. Action 22 was supportive of CDOT's efforts in addressing the US 50 Corridor, and in response developed a steering committee to provide CDOT with a sounding board for regional issues. Action 22 was a beneficial partner to the Project Team in understanding the local communities' values and needs, while having a regional perspective. In exchange, Action 22 became a resource within the communities to encourage a single voice and

vision for US 50, while ensuring that the local needs were met. The Project Team met with the Action 22 steering committee periodically prior to and after general public meetings to gather input and the teams presentations and for community debrief. Action 22 with the Project Team also coordinated with the Santa Fe Chapter of the US 50 Coalition in Kansas. Action 22 has publicly supported the US 50 project by passing a resolution on January 17, 2002.

#### Open House Meetings- 1<sup>st</sup> Series The Time Is Now...

#### June 2001

Following the Coffee Klatches, the first series of open house meetings was held June 18-21, 2001. The meetings took place on four consecutive nights in Lamar, Las Animas, La Junta, and Pueblo. The meetings included a presentation followed by a question / answer and discussion period. Ninety-five citizens were present, providing 65 written comment forms. Attendance by city was as follows: Lamar (14), Las Animas (18), La Junta (45), and Pueblo (18).







The first series of public open houses along the US 50 Corridor introduced the concept of The Time is Now ..., which focused on the development of an overall common vision for US 50, a definition of needs and alternative solutions. It was also used to gain general information on a regional level that affects Southeastern Colorado. The Project Team shared with the communities the existing funding scenarios and the success of the initial Strategic Investment Plan. The Project Team demonstrated what it would take to have the US 50 Plan considered for the 2003 Strategic Investment Plan. They stressed that regardless of whether the US 50 project qualified for the Strategic Investment Plan funds, the need for a community-supported, organized improvement plan was required.

Public comment suggested that the citizens were interested in safety and economic development. Many had questions about current conditions and changing from a two-lane highway to a four-lane highway.

#### Fairs

#### Summer 2001

In the Summer of 2001, the Project Team staffed booths at fairs in Bent, Prowers, and Otero Counties, as well as the Colorado State Fair. Fair goers were told about the plans for US 50 and asked to complete a questionnaire describing their top three priorities for the corridor. Additionally, they were asked to rate several factors for importance, including safety, economic development, environmental resources, capacity, and speed. The information gathered from these surveys was used to answer questions about topics of concern.

# Open House Meetings- 2<sup>nd</sup> Series Building Trust...

#### October 2001

A few months later, the Project Team returned to the Lower Arkansas Valley to answer questions from the first series of public meetings and to further discuss the process for developing alternative solutions for improvements to the corridor. The plan began with identifying existing conditions, future needs and the desires of the communities for improvements to the US 50 Corridor. This series of meetings was held October 1- 4, 2001, in Lamar, La Junta, Fowler, and Las Animas. Attendance was similar to the first meeting held in the summer with 100 citizens and total of 53 written comments. Attendance by city was as follows: Lamar (19), La Junta (39), Fowler (24), and Las Animas (18).

The meetings focused on gathering additional information in order to develop alternatives for the US 50 Corridor from Pueblo to the Kansas State Line. A summarization of the content and public feedback from the first set of meetings was presented using display boards, as were answers to a number of questions posed by the public regarding traffic counts (including the truck traffic), CDOT's existing right-of-way, accident history, speed zones, location of two-lane and four-lane sections, and traffic characteristics. An interactive discussion facilitated by the Project Team encouraged attendees to elaborate on the general issue of safety and economic development voiced at the summer meetings. Some citizens expressed an interest in North and South Corridors to serve the state, while maintaining the existing US 50 Corridor for their local needs. The Project Team demonstrated that they were listening and were learning about the importance of US 50 within these communities by sharing and responding.

Advance notice of the public meeting was accomplished using a newsletter that was mailed to approximately 17,800 households located along the corridor and an email was sent out to 43 participants who had requested to be notified of upcoming events. Advertisements for the meeting also were posted in the La Junta Tribune, Bent County Democrat, Fowler Tribune, Pueblo Chieftain, Rocky Ford Daily Gazette, and the Lamar Daily News. A press release was sent to all print, broadcast and radio along the corridor.

Radio shows proved to be a successful part of the public involvement program for the US 50 Corridor. Radio shows were used to inform the public about upcoming meetings and to answer questions. For the second series of public meetings the Project Team was available for two radio interviews.

Lamar radio station KLMR interviewed Project Team members in a live show in late September, 2001. La Junta radio stations KBLJ hosted Project Team members for a live call-in show in early October, 2001.

#### Open House Meetings- 3<sup>rd</sup> Series To Bypass or Not to Bypass? February 2002

In a continuation of the US 50 public involvement program, the US 50 Project Team hosted the third series of public meetings February 25-28, 2002. The meetings took place in Lamar, Las Animas, La Junta, and Fowler. Total attendance for this series of meetings was 451: Lamar (61), Las Animas (69), La Junta (216), and Fowler (105).

Attendance at these meetings was significantly higher than previous meetings due to an extensive campaign to notify the public in advance of the meeting. The open house meetings were advertised and promoted to the public using several methods of communication, including direct mail, print advertising, press releases, and radio shows. Postcards were mailed to 774 households along the corridor using the in-house database, and print advertising was placed in the La Junta Tribune, Lamar Daily News, Rocky Ford Daily Gazette, Bent County Democrat, Fowler Tribune, and the Pueblo Chieftain. Handouts also were provided at church services in Rocky Ford, La Junta, and Fowler by Catholic priest Father Farley. A press release was sent to print, broadcast, and radio along the corridor.

These meetings incorporated the concepts of North and South Corridors as introduced by the citizens in the previous set of meetings. The development of these alternatives resulted in three corridors: one to the north or south of the existing corridor (North Corridor and South Corridor), and / or the use of the existing corridor (Existing Corridor).

Using the pubic involvement process to identify corridors, citizens gained an understanding of the issues associated with widening the existing highway through their communities.





The citizens became more aware of the local benefits of an improved corridor and moved closer to a regional perspective. While there was some residual interest in North and South Corridors, the Existing Corridor was the preferred. In addition, three of the community councils passed resolutions favoring the Existing Corridor.

At each meeting, display boards depicting aerial views of the entire region and close-up views of the areas in and around the town hosting the meeting were used for comments from the public. The display boards illustrated three corridors for an improved US 50: 1) a North Corridor; 2) a South Corridor; and 3) an Existing Corridor. In addition to presenting these, public meetings were used to address concerns raised in previous meetings.

As was done in the past, radio was used to notify the public of upcoming meetings about the US 50 Corridor. Some of the interviews were live and others were prerecorded. When possible, the Project Team made themselves available for comment, via radio on the day following the public meetings.

Lamar radio stations KVAY and KLMR/KSNZ interviewed Project Team members in a live call-in show in February, 2002. La Junta radio station KBLI hosted Project Team members for a live show at Otero Junior College.

#### Community Workshops Getting the Local Perspective -The Community Drives the Bus...

Between March 2002 and December 2002, the US 50 Project Team worked with community and business leaders along US 50 to refine the corridors for local communities. essentially what the local communities wanted to protect or enhance. This required each city to appoint representatives from their community to view sample corridors and provide the Project Team members with their local knowledge and understanding of particular community issues and resources. The community workshops included all of the communities located along the corridor, except Lamar who is conducting their own environmental assessment.

Each community workshop meeting began with the Project Team providing an overview of the project, the progress to date, and the order and timing of future actions. This discussion was followed by an informal presentation of various corridors prepared by the Project Team. The group headed out into the field to view community resources and issues and evaluate alternative options that would best suit the community and the region. This included modifications to the current corridor as well as a change in the location of the corridor. Following the field work, the Project Team, working with the community representatives, sketched up new ideas, and further refined the corridors.

These hand-on community workshops provided an opportunity for the Project Team to meet with the citizens in their "backyard" environment. It was also a conducive environment for the Project Team to develop relationships with the stakeholders and to gather a deeper understanding of specific community needs. In some instances following the field workshop, a separate public meeting was held in the evening. The meetings were coordinated by each community and were held for the purpose of providing an opportunity for the public to express their opinions and ideas about the corridors to the Project Team.

#### Open House Meetings- 4th Series The Matrix Revealed...

#### January 2003

The fourth series of open house meetings took place in early 2003, with communities located along the corridor, excluding Lamar who is conducting their own environmental assessment. The meetings were held January 13-16, 2003, and January 21, 2003. Two meetings were held each day, one during the midday and the other in the evening. The meetings were held in Granada and Holly on the first day, then Las Animas and La Junta, Swink and Rocky Ford, Manzanola and Fowler, and wrapped up in Pueblo the following week on January 21, 2003. In all, 338 citizens participated: Granada (21), Holly (24), Las Animas (42), La Junta (66), Swink (17), Rocky Ford (53), Manzanola (22), Fowler (76), and Pueblo (17).







These meetings were used to present and obtain feedback on refined corridors for US 50. These alternatives were derived from opinions solicited at previous meetings and the community workshops in 2002. Citizens reacted to the refined alternatives by providing feedback on the various segments shown, with some offering specific comments on land use in certain areas.

These meetings were also used to share the evaluation matrix which was based on public acceptance, utilization of existing infrastructure / right-of-way, ability to phase construction to match funding, consistency / conformity with local and regional plans, maintenance of traffic during construction, potential impacts to the built environment, and to meet local mobility needs and future flexibility. The evaluation criteria was derived from the public's input, comments, and expressed desires, as well as CDOT's guidelines and responsibilities.

La Junta radio station KBLJ's news director Pat McGee interviewed Project Team members on a live show in January, 2003.

### Speakers Bureau and Community Outreach

In addition to the series of open house meetings and community workshops, the Project Team established a speakers bureau to respond to citizen requests for information about the project. The speakers bureau was also available to present at city council and county commissioner meetings as well as various other civic organizations, including Club 20 and the Lions Club of Springfield.

The Project Team also established a relationship with the Kansas Department of Transportation (KDOT). Representatives from KDOT attended some of the public meetings and provided input into the process of selecting alternatives.

In addition, resolutions were passed by La Junta, Las Animas, and Rocky Ford endorsing the improvements to the Existing Corridor.

#### Buy-In

At the conclusion of this last set of open houses, the public demonstrated their understanding of the process and their ownership in the common vision they developed for the corridor. This was confirmed by the communities' continued involvement in the meetings and comments received. It was also observed through the actions of the community bus tour participants walking their neighbors through the presentation boards. They pointed out how their community's issues drove the development of corridor location options and how they participated in their development. The Pueblo Area Council of Governments (PACOG), South Eastern Transportation Planning Regions, and the Central Front Range Transportation Planning Region also believe in this vision for US 50. They have demonstrated this by requesting the inclusion of US 50 in the 2003 Strategic Development Plan.

The North and South Corridors were eliminated primarily because of the public's overwhelming support of the Existing Corridor, with alternatives going north, south, or through town.

During the public involvement process, the Project Team shared with the citizens the need to continue this process of selecting alternatives, and the need to carry forward the developed alternatives into the environmental phase of the planning process.

The final determination on a location has not been made and will require continued community support and the involvement of state and federal agencies.

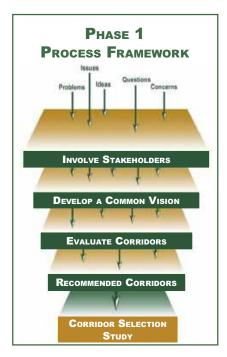




# **Corridor Screening**

#### **DETERMINING THE CRITERIA**

Following the public involvement process, which identified three possible corridors, the Project Team developed criteria for evaluating and comparing the corridors. The screening criteria was based on issues that will influence the development and selection of a corridor to be studied during the next phase of planning. Traffic and safety criteria were not used as these issues did not significantly highlight differences between alternatives.



#### CRITERIA DESCRIPTION

Screening criteria for the corridor alternatives are described as follows.

#### **Public Acceptance**

Public opinion on whether citizens would like to upgrade the existing US 50 Corridor, with some variations away from the existing alignment, or construct a new high speed east-west corridor several miles away from the current alignment.

#### <u>Utilization of Existing Infrastructure</u> / Right-of-Way

A comparison between the corridor options of how many miles of existing CDOT right-ofway can be utilized to build improvements.

#### Ability to Phase Construction and **Use Improvements to Match Funding**

If the corridor is constructed or upgraded in segments, based on available funding, can segments of the corridor be constructed in stages that will allow for utilization of the unimproved existing facility.

#### Consistency / Conformity with Local / Regional Plans

Is the corridor location consistent with comprehensive plans and resolutions adopted by various communities and counties in the Lower Arkansas Valley.

#### **Maintenance of Traffic During**

#### **Construction**

The ability to maintain adequate traffic flow on the existing facility while constructing proposed improvements.

#### Potential Economic Benefit to **Local Communities**

### Comparing the corridors to determine if the

location and improvements might better serve local communities bordering US 50.

#### Minimize Potential Impacts to Built Environment (Business / Residential)

Does the location of the corridor minimize the potential for relocation of businesses and homes.

#### **Meets Local Mobility Needs**

The ability of the corridor to serve the mobility needs of local residents traveling from one community to another along the 150-mile study area.

#### **Future Flexibility**

The ability of the corridor to accommodate future improvements, beyond 2025 traffic projections, without further disruption to surrounding properties.

#### **EVALUATION OF REGIONAL CORRIDORS**

Because this Corridor Selection Study is precursory to the next planning phase of the US 50 study, the three corridors were evaluated, based on the screening criteria previously discussed, to arrive at a recommended corridor develop alignment alternatives from and carry into the environmental documentation phase. The alternatives depicted in the Corridors section of this report were not evaluated because they were developed to refine the Existing Corridor based on identification of community resources. Because this study does not address environmental documentation, the no-action alternative will be evaluated in the next phase of planning.

The results of the evaluation are described below and have been graphically depicted in the Evaluation Matrix to the right.

#### **EVALUATION MATRIX** Evaluation Corridors Criteria South Public Acceptance Utilization of Existing Infrastructure/Right-of-Way Ability to Phase Construction to Match Funding. Consistency Conformity with Local/Regional Plans Maintenance of Traffic During Construction Potential Economic Benefit to Local Communities Minimize Potential Impacts to Built Environment (Business/Residential) Meets Local Mobility Needs Future Flexibility Scale the existing US 50 corridor best meets the needs of







#### **Public Acceptance**

The public involvement process, which included a series of public meetings, took place over a three-year period. These meetings were used to introduce the three corridors to the public for review and comment. During the public process approximately 1000 citizens who live and work along the corridor were involved in the selection of the options. Overwhelmingly, the citizens including civic organizations, supported the selection of the Existing Corridor with possible local alternatives.

### <u>Utilization of Existing Infrastructure / Right-of-Way</u>

Locating improvements on the existing US 50 Corridor could utilize as much as 150 miles of existing right-of-way. If around town bypasses were constructed, as much as 16 miles of right-of-way would not be used for improvements.

The North Corridor is on the existing US 50 Corridor from Pueblo to Avondale and from east of Granada to the Kansas State Line.

The South Corridor uses the existing US 50 Corridor from Pueblo to Avondale and from Las Animas to the Kansas State Line except for a short 9-mile segment around Granada. No existing CDOT right-of-way is available to use between Avondale and Las Animas and the nine-mile segment around Granada.

#### Ability to Phase Construction and Use Improvements to Match Funding

Constructing improvements in segments along the Existing Corridor could be easily accommodated. New segments of roadway could be improved or around town alternatives could be constructed to tie back into the existing facility and utilized by users

as soon as they are completed. This would not be the case for most of the South Corridor. The longest segment of nearly 40 miles would have to be funded and constructed as one package of improvements in order for it to connect with existing US 50 to be utilized. It may be possible to fund and build some segments of the North Corridor, in places such as the US 96 section between Avondale and Fowler, but an upgraded connecting roadway between Fowler the North Corridor would also have to be constructed as a whole package to provide connectivity to US 50.

### <u>Consistency / Conformity with Local / Regional Plans</u>

The existing regional plans for Lamar, La Junta, and Las Animas were considered in the development of concepts.

#### Maintenance of Traffic During Construction

Since the South Corridor would mostly be on new alignment with little or no interference from existing traffic, it would have the least impact. The North Corridor may have a little more traffic to contend with where construction would take place on existing corridors. However, these are low volume facilities. The Existing Corridor would be the most difficult of the three corridors, but it too could be constructed without much disruption of local traffic patterns.

In the rural segments between towns, two new lanes of the new facility would be constructed while maintaining traffic on the existing lanes. When the two new lanes are complete, two-way traffic would be moved to those lanes while the remaining lanes are constructed. If around-town alternatives are not selected, constructing improvements through town could cause more disruption of traffic flow.

### Potential Economic Benefit to Local Communities

The potential economic benefits and impacts that would likely occur with construction of a relocated corridor from Pueblo, Colorado, to the Kansas State Line was studied as part of this Corridor Selection Study. For purposes of this study, it was assumed that the North or South Corridor would be four-lanes with controlled access, would be constructed the length of the corridor, and would parallel US 50 at a distance of up to 12 miles. A specific alignment was not identified. The scope of the economic analysis precluded examining in detail the specific impacts on communities and individual businesses until more specific corridor alignments have been chosen. However, the purpose was to examine the potential for economic impacts, examine potential mitigation activities, and to recommend the economic advisability of proceeding with the construction of a North or South Corridor.

Although there are no similar regional corridor projects to that of the US 50 project, more than 25 bypass studies throughout eight states and Canada were used for the assessment and review of this project. No case studies on recent similar projects were identified in Colorado. The US 24 bypass of Limon was considered, but rejected because it was built in the 1960's and a case study was not done. Therefore, data on the effects of the Limon bypass are unavailable and many persons living in Limon in the 1960's may have moved away or are no longer living.

Benefits and adverse impacts of the Existing Corridor alternatives may be similar to those of the North or South Corridors. However, we anticipate economic impacts associated with the North or South Corridors would generally be more adverse, with fewer beneficial effects.

### Minimize Potential Impacts to Built Environment (Business / Residential)

Since both the North and South Corridors would primarily be constructed away from established residential communities and business centers, the impacts would be less than construction of improvements on the Existing Corridor, where construction might involve minimal relocations between towns. If around-town alternatives were selected for construction, those segments too would involve minimal relocations, but more than the North and South Corridor options.

#### **Meets Local Mobility Needs**

The Existing Corridor would be the best alignment due to its current direct connections to all of the significant size communities in the valley. Even if around-town alternatives were constructed as part of the Existing Corridor alternative, each one would provide close and local direct access to each community from the new facility. Both the North and South Corridors would require upgraded connector roadways, sometimes as long as five miles away to access the new high speed facility.

#### **Future Flexibility**

All of the corridors would have flexibility for future expansion beyond current future projections with the exception of some of the Existing Corridor through-town alternatives. Expansion would probably require additional relocations and more disruption of communities. However, if around-town alternatives were the selected, expandability would, in most cases, be easily accommodated due to the wider 300-foot right-of-way footprint proposed for a bypass alignment.







# **Conclusions**

US 50 serves a vital role for the communities located along the 150-mile corridor stretching from Pueblo, Colorado to the Kansas State Line, through Southeastern Colorado. The purpose of this Corridor Selection Study was to summarize the process used for developing and analyzing corridor options for improving the mobility and safety of US 50. The corridor options were based on existing conditions and feedback from citizens who live and work along US 50.

The public involvement process which included a series of pubic meetings, community workshops, and a speaker's bureau took place over a period of three years, beginning in early 2000. At the conclusion of the public involvement process, citizens as well as communities had clearly chosen the Existing Corridor as the corridor that met their needs. The communities have come together and developed this common vision, supported by CDOT, which links them in a safe and efficient transportation system while providing state and regional mobility.

#### Next Steps: What and Why Now?

The next steps or phases for this project involve the environmental investigations and processes. We are proposing the development of a Tiered Environmental Impact Statement (Tiered EIS) for the following reasons:

- The length of the Corridor.
- The uncertain funding streams.
- Need to identify and address major environmental concerns with coordinating agencies for the entire corridor.
- Potential environmental streamlining opportunities with other agencies.
- The need to develop a corridor-level location decision and approach to facilitate long term planning.

A Tiered EIS needs to be initiated now in order to:

- Identify and coordinate the development of potential long-term strategies for managing environmental issues along the Lower Arkansas Valley.
- •Identify and prioritize segments of independent utility based on need to match future funding streams.
- Select and implement Tier 2 safety and capacity improvements.
- Maintain the momentum of the public support garnered through the first phase of the study, build on the trust and partnerships established with the communities, refine their vision and implement the ultimate plan. "Do something."
- Provide a framework for the communities' future development and economic growth.
   A definitive corridor location is needed to plan local roadway improvements and networks.

CDOT believes US 50 is a vital link in the regional and statewide transportation network, and proposes the development of a Tiered Environmental Impact Statement to address long-term transportation and environmental issues related to this corridor.



# Appendix

# Click here to view the Corridor Alternatives

.pdf format (file size 8 MB)

(due to file size, download time will be 10 minutes at 56.6 Kbps)