

# APPENDIX A

## APPENDIX A: CONFORMITY DETERMINATION

**2035 REGIONAL TRANSPORTATION PLAN and  
FY 2008-2013 TRANSPORTATION IMPROVEMENT PROGRAM  
CONFORMITY DETERMINATION**

The Pikes Peak Area Council of Governments has been designated as the Metropolitan Planning Organization (MPO) for transportation planning in the Colorado Springs Urbanizing Area. One of the responsibilities of an MPO is making an air quality conformity determination for regional long-range transportation plans and transportation improvement programs.

The United States Environmental Protection Agency (EPA) and the United States Department of Transportation have jointly developed "Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act," commonly called the transportation conformity rule. Conformity ensures that transportation plans, programs, and projects will not produce new air quality violations, worsen existing violations, or delay timely attainment or maintenance of national ambient air quality standards. The conformity determinations of the *2030 Regional Transportation Plan* and the *FY 2008-2013 Transportation Improvement Program (TIP)* are based on these criteria.

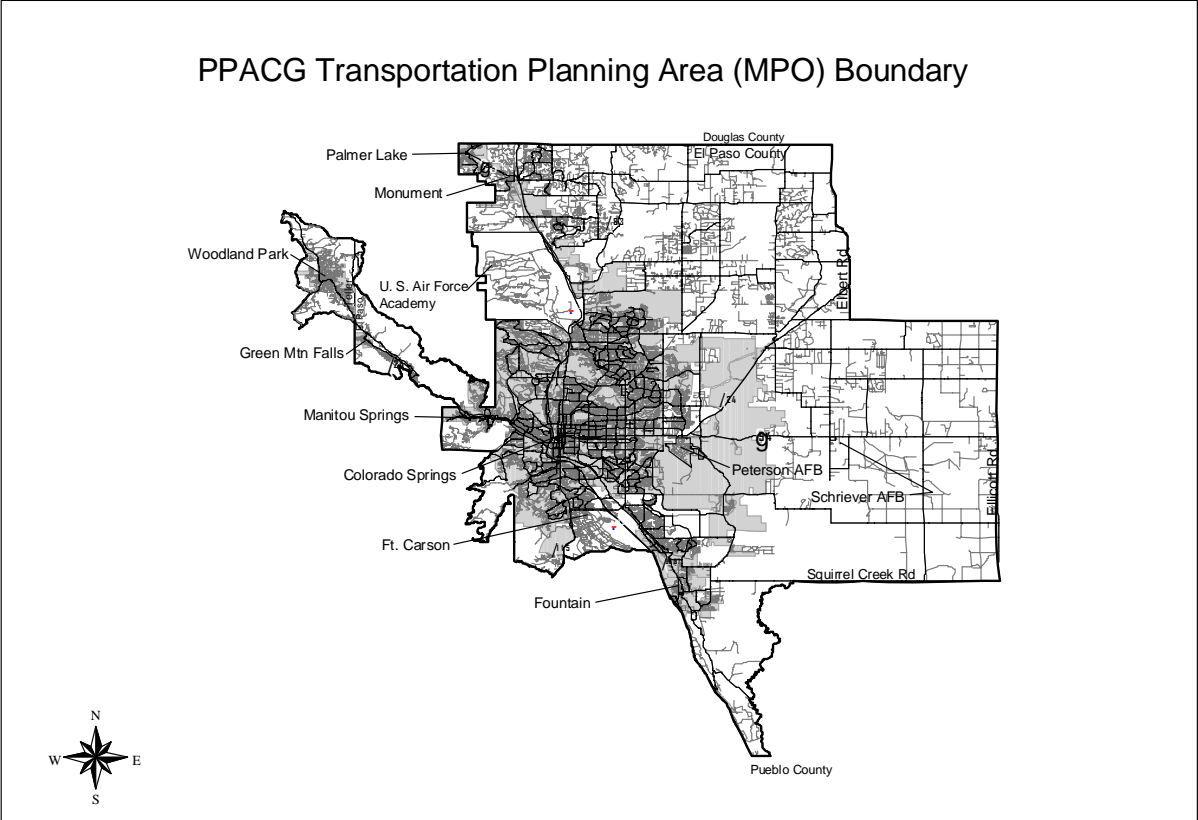
The EPA reclassified the Colorado Springs area as a maintenance area for carbon monoxide in October 1999. The maintenance area has been defined as the same as the transportation planning area shown in Figure 1.

**CONFORMITY CRITERIA**

The Clean Air Act Amendments of 1990 (CAAA) require all conformity determinations to be "based on the most recent estimates of emissions, and such estimates shall be based on the most recent population, employment, travel and congestion estimates as determined by the Metropolitan Planning Organization..."

Travel demand modeling for the metropolitan area is developed by PPACG using the best methodology available. The travel demand forecasts and the regional air quality analyses described herein are based on the population and employment forecasts developed by PPACG and documented in the "Small Area Forecast 2005-2035". The small area forecast was approved by the PPACG Board of Directors on July 11, 2007 and represents the most current forecasts for small area population and employment for this region. The base year for the forecast is 2005 and the forecasting methodology made use of the 2000 Census data.

FIGURE 1  
Colorado Springs Metropolitan Area



Projects identified in the *2008-2013 TIP* come from the approved, and conforming, *2035 Regional Transportation Plan*, the current long-range transportation plan. To determine whether the *2035 Plan* and the *2008-2013 TIP* are in conformity with the CAAA and the *Carbon Monoxide Maintenance Plan for the Colorado Springs Attainment/Maintenance Area*, the projects in the transportation plan and TIP must contribute, as a whole, to a reduction in future carbon monoxide emissions. The carbon monoxide emissions from on-road mobile sources in the future must be less than the carbon monoxide emissions budget established in the maintenance plan. The maintenance plan was amended in December 2003 to end the inspection and maintenance program and to revise the emissions budget from 270 to 531 tons/day using *Mobile 6*. The U.S. Environmental Protection Agency approved the *Maintenance Plan* revisions and new emissions budget on November 8, 2004.

In preparing model networks for travel demand forecasting, base year and analysis year scenarios were identified. The base year scenario for the *2035 Regional Transportation Plan* and the *2008-2013 TIP* consists of the transportation system and programs that existed at the end of 2005. The analysis year scenarios for 2015, 2025 and 2035 comprise the future transportation systems that will result from the implementation of the proposed TIP, the long-range transportation plan, and other expected regionally significant projects.

The analysis year scenarios include all of the projects in the base year scenario and new projects programmed for completion by the end of the analysis years 2015, 2025 and 2035. These projects are identified in the memo included in this appendix.

The transportation networks for the 2015, 2025 and 2035 analysis years were submitted to the Colorado Department of Public Health and Environment's Air Pollution Control Division (APCD) and the Colorado Department of Transportation for review of the transportation demand modeling and *Mobile 6* analysis. Required input for the *Mobile 6* model was provided by APCD except for the vehicle miles traveled (VMT) and average speed by roadway classification and land-use type provided by PPACG. The roadway functional classification for the transportation model is divided into seven categories: freeway, expressway, major arterial, minor arterial, collector, centroid connector, and ramps. Land-use used to be divided into five categories: central business district (CBD), CBD fringe, residential, outlying business district, and rural. An analysis by the APCD determined there were no differences in emissions based on area type in the Colorado Springs area and consequently this attribute was dropped from the transportation model networks.

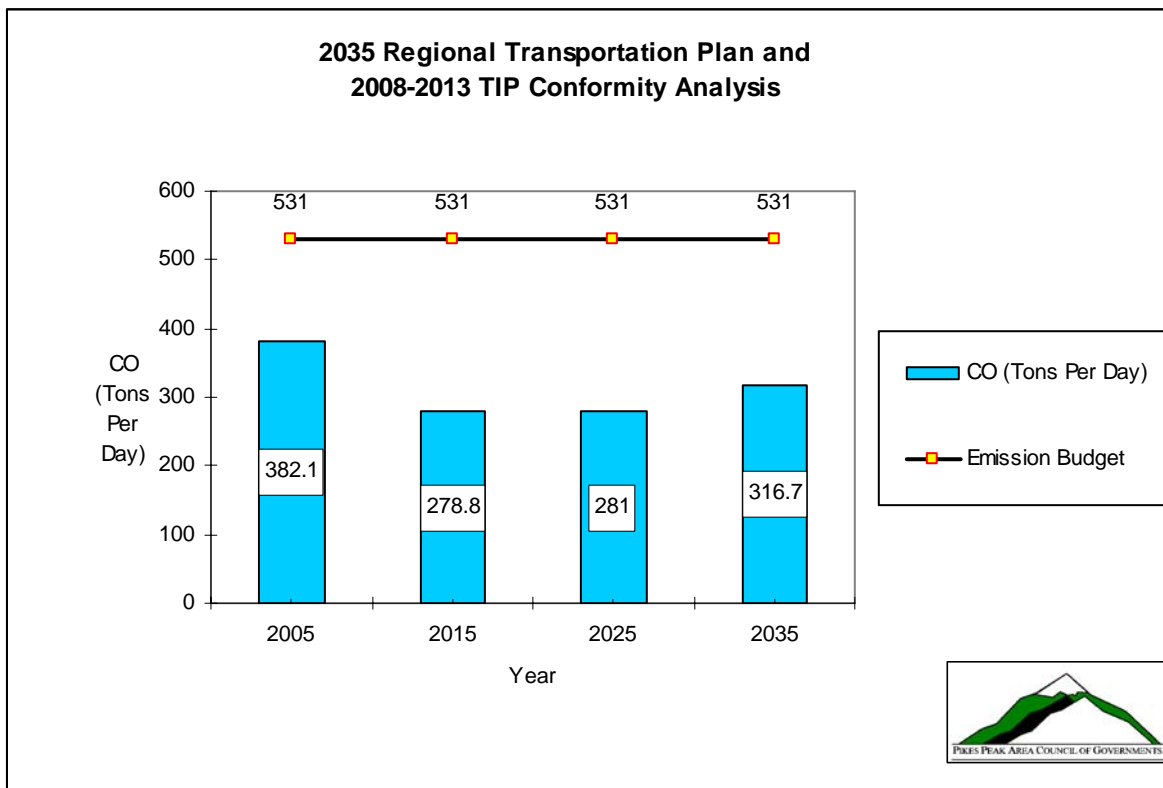
No credit is being taken for the inspection and maintenance program that ended in December 2006.

A summary of the analyses is shown in Table 1 and Figure 2. More detailed transportation and air emission modeling results are included at the end of this appendix.

TABLE 1  
 Summary of the 2035 Regional Transportation Plan and FY 2008-2013 TIP Mobile 6 Analyses

Year	VMT	CO Emissions
2005	11,820,546 VMT/day	382.1 tons/day
2015	15,389,916 VMT/day	278.8 tons/day
2025	18,704,576 VMT/day	281.0 tons/day
2035	22,091,367 VMT/day	316.7 tons/day

FIGURE 2  
 Carbon Monoxide Emissions 2005 - 2035



## CONCLUSION

The analysis indicates carbon monoxide emissions will be lower than the established emissions budget of 531 tons/day in each of the analysis years.

At its regular meeting on **DATE TO BE DETERMINED**, the Board of Directors of the Pikes Peak Area Council of Governments determined the *2035 Regional Transportation Plan* and the *FY 2008-2013 Transportation Improvement Program* do conform to the Clean Air Act Amendments of 1990 and the *Carbon Monoxide Maintenance Plan for the Colorado Springs Attainment/Maintenance Area*. A copy of the resolution can be found in Appendix H to the *2035 Regional Transportation Plan*.

MEMORANDUM

DATE: January 15, 2008

TO: Craig Casper, Transportation Director

FROM: Kenneth Prather, Transportation Planner

SUBJECT: Conformity Determination of the Draft 2035 Regional Transportation Plan and the Draft 2008-2013 TIP

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Enclosed are tables that provide VISUM and *Mobile 6* output for the years 2015, 2015, 2025 and 2035. As can be seen, carbon monoxide emissions in all years are lower than the to be approved emissions budget of 531 tons/day. Also enclosed is a checklist that lists major elements of the transportation conformity rule and indicates where they are addressed in the *FY 2008 through FY 2013 Transportation Improvement Program (2008-2013 TIP)*. When approved, the draft *2035 Regional Transportation Plan* and the draft *2008-2013 TIP* will be in conformity with the *Carbon Monoxide Maintenance Plan for the Colorado Springs Attainment/Maintenance Area* and the Clean Air Act Amendments of 1990.

The Transportation Advisory Committee with the U. S. Environmental Protection Agency (EPA) constitute the "conformity review team" that provides interagency consultation for PPACG's transportation plans and programs. The review team is responsible for reviewing, analyzing, and recommending approval of conformity assumptions and findings to PPACG's Board of Directors. CDOT has reviewed fiscal constraint and the transportation modeling and concurs with them. The APCD has reviewed the emission modeling and concurs with it.

The assumptions used for the conformity determination of the *2035 Regional Transportation Plan* and the *2008-2013 TIP* are as follows:

- Modeling: PPACG will use the commercial travel demand-modeling program VISUM to forecast traffic, and will use EPA's *Mobile 6.2* air emissions model to determine carbon monoxide emissions. The years 2015, 2015, 2025 and 2035 will be used as analysis years in the conformity determination. Listed below is the Mobile 6 control file for 2005.

\*\*\*\*\* Header Section \*\*\*\*\*  
MOBILE6 INPUT FILE

\*\*\*\*\* Run Section \*\*\*\*\*

RUN DATA

MIN/MAX TEMPERATURE: 26. 54.

FUEL RVP : 12.5

FUEL PROGRAM : 3

REG DIST : ..\Reg\_ELP.D

\*\*\*\*\* Scenario Section \*\*\*\*\*

SCENARIO REC : Colorado Springs 2005

CALENDAR YEAR : 2005

ALTITUDE : 2

SPEED VMT : speed.def

VMT BY HOUR : hour\_vmt.def

VMT BY FACILITY : fac\_vmt.def

VMT FRACTIONS :

0.4160 0.0883 0.2940 0.0893 0.0429 0.0203 0.0020 0.0016

0.0012 0.0045 0.0053 0.0058 0.0207 0.0033 0.0016 0.0032

END OF RUN

- Land Use: An analysis by the Air Pollution Control Division in 2007 showed no significant difference in daily emissions between splitting and not splitting the region into five land types as had been done previously. Consequently, land use types were not used in the development of PPACG's new travel demand model or the networks for the *2035 Regional Transportation Plan*. Future roads were identified by member entity planning staff to reflect known or potential development and land use changes. Centroid connectors were added or moved to reflect changes in developing TAZs.
- Population/Employment: Transportation analysis zone (TAZ) population and employment numbers through the year 2035 were approved by the PPACG Board of Directors on July 11, 2007. No changes have been made to them since then. These numbers include the expected growth in Fort Carson troops and families expected by 2010.
- Transit Operating Policies: The City of Colorado Springs converted from a hub-and-spoke transit route system to a multi-hub system in November 2005. However, PPACG's transportation demand model does not address transit so these changes are not part of the model input.



- Tolls: There are currently no toll facilities in the Colorado Springs urbanizing area but one has been proposed on the east side of Colorado Springs. Portions of Powers Blvd. in the model networks have been tolled to reflect this proposal. A toll of \$.21/mile, based on the current E-470 toll, and a value of time of \$14.60/hour from the 2005 TTI report, were used to create turn penalties for entering the tolled portions of the network.
- Observed speeds: PPACG's transportation model revised and calibrated in 2007. As part of this endeavor, speeds and number of lanes on all roads in the model were ground verified in 2006.
- Implementation and Effectiveness of Transportation Control Measures (TCMs): No credit is being taken for transportation control measures (TCMs) in PPACG's conformity analyses. There are no TCMs required by the *Carbon Monoxide Maintenance Plan for the Colorado Springs Attainment/Maintenance Area*.
- Implementation of Other Control Strategies: No credit is being taken for the inspection and maintenance program or other control strategies for any of the analysis years.
- Effectiveness of Control Strategies: There are no SIP control strategies.
- Vehicle Registration Data: The Colorado Air Pollution Control Division developed 2002 vehicle registration data for Colorado Springs from the inspection/maintenance program results.
- Ambient Temperatures: Minimum and maximum temperatures, 26<sup>o</sup> and 54<sup>o</sup> Fahrenheit respectively, used in the maintenance plan are the temperatures used in PPACG conformity determinations.
- Local Travel Activity Inputs: Speed and vehicle miles traveled (VMT) distributions by road classification, determined by the transportation model for each analysis year, are used in the *Mobile 6.2* model to calculate carbon monoxide emissions.

*Mobile 6.2* was used as the air emissions model for this conformity determination. Included in the air emissions modeling are emission credits for the fuel detergent program and the National Low Emission Vehicle Program for the years 2010 through 2035.

Listed below are the changes to the approved 2005 model network that have been made to develop the 2015, 2025 and 2035 model networks for the conformity determination of the draft *2035 Plan* and *2008-2013 TIP*. The projects are listed by the year they will be finished.

## **2010**

21<sup>st</sup> St.: changed functional class from collector to minor arterial from Broadway St. to Lower Gold Camp Rd., widened from two lanes to four lanes at 40 mph.

Academy Blvd.: widened to four lanes from SH 115 to B St. and modeled interchange improvements by adding ramps.

Akers Dr.: constructed 2-lane, 35 mph collector between Constitution Ave. and N. Carefree Cir.

Austin Bluffs Pkwy.: widened road to six lanes from Old Farm Dr. to Stetson Hills Blvd. and from Nevada Ave. to Mallow Rd.

Baptist Rd.: changed from a 2-lane minor arterial to a 4-lane principal arterial from Mitchell Ave. to Tari Dr.; represented I-25 interchange improvements by increasing ramps to two lanes and bridge width to four lanes.

Black Forest Rd.: widened from Woodmen Rd. north to Research Pkwy. as a 4-lane principal arterial.

Corporate Dr.: extended as 2-lane collector from north of I-25 to Nevada St.

County Line Road: increased speed to 45 mph from Vista Clara Lane to Furrow Road.

Cross Creek Ave.: constructed 4-lane minor arterial from Fountain Mesa Rd. to Mesa Ridge Pkwy. Installed signal at intersection of Cross Creek Ave. and Mesa Ridge Pkwy.

Dublin Blvd.: extended Dublin Blvd. from eastern terminus near Shimmering Creek Dr. to Marksheffel Rd. as a 6-lane principal arterial; signalized intersections with Shimmering Creek Dr., Peterson Rd. and Marksheffel Rd.

Gleneagle Dr.: constructed 2-lane minor arterial from Baptist Rd. to SH 105 (via Fairplay Dr. between Higby Rd. and SH 105); signalized intersection with Baptist Rd.

Grand Cordera: see Tutt Blvd.

Hodgen Rd.: constructed a 2-lane minor arterial from Roller Coaster Rd. to SH 83 and changed functional class from collector to minor arterial between SH 83 and Black Forest Rd. Signalized intersection of Hodgen Rd. with SH 83

I-25: widened to six through lanes from Fillmore St. to Academy Blvd.; reconstructed the Nevada Ave./Rockrimmon Blvd. interchange with signals at ramps and Rockrimmon Blvd. and Corporate Dr.; and added lanes to ramps on north side of Garden of the Gods Rd. to represent interchange improvements.

Jimmy Camp Rd.: extended as 2-lane collector north to Squirrel Creek Rd. at 25 mph and south to Wilson Rd. at 30 mph.

Leather Chaps Dr.: signalized intersections with Baptist Rd. and Jackson Creek Pkwy.

Marksheffel Road: widened to four lanes and reduce speed to 40 mph from Woodmen Rd. to Dublin Blvd.; signalized intersections with Dublin Blvd., Stetson Hills Blvd., Barnes Rd. and N. Carefree Cir.

Meridian Rd.: changed functional class from collector to minor arterial between Hodgen Rd. and Rex Rd.; widened to four lanes from Rex Rd. to US 24; widened to four lanes from US 24 to Falcon Hwy.

Nevada Ave.: widened to five (3 southbound and 2 northbound) lanes from Austin Bluffs Blvd. to I-25.

Northgate Rd.: widen to four lanes and straighten curves from I-25 to SH 83, change alignment to south on east half of road. Signalize intersection of new alignment with SH 83

Old Pueblo Hwy.: connected Old Pueblo Hwy. to US 85 south of Illinois Ave.; widened to four lanes from Link Rd. to US 85

Peterson Rd.: extended from current terminus north to Dublin Blvd. as 4-lane principal arterial; signalized intersection with N. Carefree Cir.

Powers Blvd.: constructed interchange with 2-lane ramps at Woodmen Rd.; signalized ramps on Woodmen Rd.

Research Pkwy.: signalized intersection of current terminus with centroid connector.

SH 16: widened to four lanes from I-25 to US 85 and added lanes to ramps at I-25 to represent interchange improvements.

Squirrel Creek Rd.: extended as 4-lane minor arterial at 35 mph from Link Rd. to Fountain Mesa Rd.

Stapleton Rd.: construct four lane principal arterial, 40 mph, from Eastonville Rd. to US-24.

Stetson Hills Blvd.: signalized intersection with Peterson Rd.

Struthers Rd.: widened to four lanes, 40 mph, from All Sky Dr. north to Baptist Rd. and changed location of intersection with Baptist Rd. to be the same as the Jackson Creek Pkwy. intersection.

Tejon St. - changed to two lanes (one lane each way) from Vermijo to I-25

Tutt Blvd. (renamed Grand Cordera from Research to Union): constructed 4-lane minor arterial, 40 mph, from Union Blvd. to Dublin Blvd. Signalized intersections with Dublin Blvd., Woodmen Rd., Research Pkwy. and Briargate Pkwy.

Union Blvd.: constructed an interchange at the intersection of Union Blvd. and Austin Bluffs Pkwy.; extended as 6-lane principal arterial at 35 mph from Powers Blvd. to Cordera, then four lanes from Cordera to Sorrento and then two lanes from Sorrento to Milam Rd. Signalized intersections with Austin Bluffs interchange ramps.

US 24: Signalized intersection with Constitution Ave., Marksheffel Rd., Garrett Rd., Falcon Hwy. and Meridian Rd.

US 85: widened to four lanes from Main St. to Academy Blvd.

Vollmer Rd.: upgraded to a 4-lane minor arterial at 45 mph between Black Forest Rd. and Research Pkwy.

Woodmen Rd.: widened to six lanes from I-25 to Stinson Dr. and from Lexington Dr. to Powers Blvd.; widened to four lanes from Powers Blvd. to US 24; constructed an interchange at Academy Blvd.

## **2015**

Airport Rd.: widened to 4 lanes and speed increased to 45 mph from Miller Rd. to Murray Blvd.

Austin Bluffs Pkwy.: widened road to six lanes from Mallow Rd. to Brenner Pl. and from Barnes Rd. to Old Farm Rd.; widened to four lanes from Woodmen Rd. to Meadow Ridge Dr.

Banning-Lewis Ranch Roads: constructed 6-lane, 45 mph principal arterial from Woodmen Rd. to Barnes Rd. between Marksheffel Rd. and Banning-Lewis Pkwy; constructed 6-lane, 45 mph principal arterial going west from Banning-Lewis Pkwy between Stetson Hills Blvd. and Barnes Rd. and then turning south to Barnes Rd. (see Colorado Springs Major Thoroughfare Plan).

Banning-Lewis Pkwy.: constructed 4-lane, 50 mph expressway between Woodmen Rd. and Barnes Rd.; signalized the intersections at Woodmen Rd., Stetson Hills Blvd., and Barnes Rd.

Barnes Rd.: extended from Marksheffel to Banning-Lewis Parkway as 6-lane principal arterial; signalized intersection at Banning-Lewis Pkwy.

Black Forest Rd.: extended from Dublin Blvd. to Woodmen Rd. as 4-lane principal arterial; widened from 4 to 6 lanes from Woodmen Rd. north to Briargate Pkwy.; changed from 2-lane minor arterial to 4-lane principal arterial from Briargate Pkwy. north to Old Ranch Rd.; reduced speed to 45 mph from Briargate Pkwy. to Baker Rd.; signalized intersections with Research Pkwy. and connector for zone 400.

Briargate Pkwy.: Briargate Pkwy.: extended from its current terminus to Black Forest Rd. as a 6-lane principal arterial at 35 mph; signalized intersections with Black Forest Rd. and connector for zone 650.

Centennial Blvd.: extended 4-lane minor arterial from Fillmore St. to Madison St. and 2-lane minor arterial from Madison St. to I-25; signalized intersection with connector for zone 62.

Cordera: see Tutt Blvd.

Drennan Rd.: changed to a 30 mph collector from Academy Blvd. to Hancock Expressway.

Dublin Blvd.: extended from Marksheffel Rd. to Banning-Lewis Pkwy. as a 6-lane principal arterial at 45 mph; signalized intersections at connectors for zones 399 and 639.

Fillmore St.: widened to six lanes from I-25 to Centennial Blvd.

Gleneagle Dr.: Signalized intersection with Higby Rd.

Hodgen Rd.: changed functional class from collector to minor arterial from Black Forest Rd. to Eastonville Rd. and reduced speed to 45 mph.

I-25: widened to six through lanes from Academy Blvd. to Northgate Rd.

Marksheffel Rd.: widened to four lanes from Dublin Blvd. to US 24 and reduced speed to 40 mph.

Mesa Ridge Pkwy: constructed 4-lane principal arterial at 45 mph from Powers Blvd. to Marksheffel Rd.; signalized intersection with connector from zone 341.

Michell Ave.: extended from current terminus south of Arnold Ave. to Baptist Rd. as a two-lane, 30 mph collector.

Milam Rd.: changed to 2-lane minor arterial from Old Ranch Rd to Shoup Rd.

Milton Proby Parkway: Constructed 4-lane, 55 mph expressway from Academy Blvd. to Powers Blvd.

Nevada Ave: widen northbound lanes to three from Austin Bluffs Blvd. to I-25.

North Carefree Cir.; widened to three lanes in both directions from Springs Ranch Dr. to Marksheffel Road.

Old Denver Hwy.: widened from to four lanes from Baptist Rd. to Sante Fe Dr.

Powers Blvd.: constructed interchange with 1-lane ramps at Airport Rd./Stewart Ave.; extended as a tolled 4-lane expressway from SH 83 to I-25 just south of Northgate Rd.; constructed tolled bridges at Old Ranch Rd., Briargate Pkwy., Union Blvd. and Research Pkwy.; signalized crossroads at all interchanges. Tolling represented by adding 52 second/mile turn penalty to enter tolled portions.

Research Pkwy.: constructed a 4-lane principal arterial from current terminus to Marksheffel Rd.

SH 83: widened to four lanes from Shoup Rd. to Northgate Rd.

Shoup Rd.: changed functional class from collector to minor arterial between Thiebaud Ln. and Vollmer Rd.; widened to four lanes and reduced speed to 40 mph from SH 83 to Howells Rd.

Stapleton Dr.: extended from Meridian Rd. to Curtis Rd. as a 4-lane principal arterial; signalized intersection with US 24.

Stetson Hills Blvd.: constructed 6-lane principal arterial from Marksheffel Rd. to Banning-Lewis Pkwy.; signalized intersection at Banning-Lewis Pkwy.

Vincent Dr.: extended Vincent Dr. as 2-lane minor arterial from Dublin Blvd to Nevada St. Installed signal at intersection of Vincent Dr. and Nevada St.

Vollmer Rd.: upgraded to a 4-lane minor arterial at 45 mph between Research Pkwy. and Briargate Pkwy./Stapleton Rd.

Woodmen Rd.: widened to six lanes from Powers Blvd. to Marksheffel Rd.

## 2020

Banning-Lewis Pkwy.: constructed 4-lane, 50 mph expressway between Barnes Rd. and N. Carefree Cir.; signalized the intersection at N. Carefree Cir.

Banning-Lewis Ranch Roads: constructed 6-lane, 45 mph principal arterials on the west side of Banning-Lewis Pkwy. from Barnes Rd. to N. Carefree Cir.; constructed 6-lane, 45 mph principal arterial from Dublin Blvd. to US 24 on the east side of Banning-Lewis Pkwy. (see Colorado Springs Major Thoroughfare Plan); signalized intersections.

Black Forest Rd.: widened to six lanes from Dublin Blvd. to Woodmen Rd.

Briargate Pkwy.: extended from Black Forest Rd. to Vollmer Rd. as a 6-lane principal arterial; signalized the intersection with Vollmer Rd.

Curtis Rd.: changed from 2-lane collector to 4-lane principal arterial from Judge Orr Rd. to SH 94.

Dublin Blvd.: extend from Banning-Lewis Pkwy. to US 24 as 6-lane, 45 mph principal arterial; signalized the intersection with the connector for zone 637.

Garrett Rd.: changed functional class from collector to minor arterial from US 24 to Curtis Rd.

Hancock Expwy.: realigned from Monica/Claredon east to Powers Blvd. (via new Chelton Rd. that extends south to Drennan Rd. with four lanes on each). Signalized the Chelton Rd./Hancock Expwy. Intersection.

I-25: widened to six through lanes from S. Academy Blvd. to US 24 and from Northgate Rd. to SH 105; added lanes to ramps at Cimarron interchange to represent interchange improvements. (Constructed one HOV lane in each direction from MLK Bypass to Briargate Pkwy. but no travel allowed on the lanes until 2035.)

Marksheffel Rd.: widened to four lanes from US 24 to Mesa Ridge Pkwy..

North Carefree Cir.; extended as 6-lane principal arterial from Marksheffel Rd. to a point half-way to US 24.

Old Ranch Rd.: widened to 4-lane, 40 mph minor arterial from existing 4-lane section at bridge over creek to SH 83.

Research Pkwy.: constructed a 6-lane principal arterial from Black Forest Rd. to the Woodmen Rd./Marksheffel Rd. intersection; signalized the intersection with Vollmer Rd.

Stapleton Rd.: see Briargate Pkwy.

Stetson Hills Blvd.: constructed 6-lane principal arterial from Banning-Lewis Pkwy. to US 24; signalized the intersection with the connector for zone 639.

US 24: widened to six lanes from I-25 to 8<sup>th</sup> St. and constructed an interchange with 2-lane ramps at 8<sup>th</sup> St.

Vollmer Rd.: changed functional class from collector to minor arterial from Briargate Pkwy./Stapleton Rd. to Hodgen Rd.

Wilson Rd.: constructed minor arterial from Link Rd. to Powers Blvd.

Woodmen Rd.: constructed an interchange with 1-lane ramps at Union Blvd.

## **2025**

Banning-Lewis Ranch Roads: constructed 6-lane, 45 mph principal arterials on the west side of Banning-Lewis Pkwy. from N. Carefree Cir. to south of US 94; constructed 6-lane, 45 mph principal arterials on the east side of Banning-Lewis Pkwy. from Stetson Hills Blvd. to N. Carefree Cir.; constructed 6-lane, 45 mph principal arterials on the east side of US 24 from Dublin Blvd. to Barnes Rd. (see Colorado Springs Major Thoroughfare Plan); signalized intersections.

Banning-Lewis Pkwy.: extended from North Carefree to SH 94 as a 50 mph expressway with a 2-lane ramp interchange at US 24; signalized Banning-Lewis Pkwy. at the interchange.

Barnes Rd.: extended from Banning-Lewis Parkway to US 24 as 6-lane, 40 mph principal arterial; signalized intersections with US 24.

Bradley Rd.: extended from Grinnel St. to Powers Blvd. as 4-lane, 45 mph principal arterial on the north side of the TOPS property.

Briargate Pkwy.: extended from Vollmer Rd. to Meridian Rd. as a 4-lane, 35 mph principal arterial and signalized the intersection with Meridian.

Bus Rapid Transit Route: constructed a BRT route from Woodmen Rd. to Vermijo Ave. on I-25, Cimarron St. and Nevada Ave. by subtracting vehicles from the model assignment. The assumption was four 50-passenger buses per hour at 75% capacity. This method was used because the model does not yet have transit capability.

I-25: added lanes to ramps at Fillmore St. and S. Academy Blvd. to represent interchange improvements

North Carefree Cir.: extended as 6-lane principal arterial from Banning-Lewis Pkwy. to US 24. Signalized intersection with US 24

Omaha Blvd.: deleted from Powers Blvd. to Paonia St. to remove connection to Powers Blvd.

Platte Ave.: widened to six lanes from Academy Blvd. to Powers Blvd.

Powers Blvd.: constructed interchanges with 1-lane ramps at Dublin Blvd., Stetson Hills Blvd., Barnes Rd., N. Carefree Cir., Constitution Ave., Palmer Park Blvd., Galley Rd., Aeroplaza Dr., Fountain Blvd., Astrozon Blvd., Hancock Ave. and Drennan Rd.; changed functional class to freeway from Barnes Rd. to Platte Ave.; removed the connection with S. Carefree Cir. and the signal on S. Carefree; signalized the cross streets at the new interchanges

US 24: constructed an interchange with 1-lane ramps at Academy Blvd.

## **2030**

Banning-Lewis Ranch Roads: constructed 6-lane, 45 mph principal arterials on the west side of Banning-Lewis Pkwy. from N. Carefree Cir. to Drennan Rd.; constructed 6-lane, 45 mph principal arterials on the east side of Banning-Lewis Pkwy. from N. Carefree Cir. to Drennan Rd. (see Colorado Springs Major Thoroughfare Plan); signalized intersections.

Banning-Lewis Pkwy.: extended from SH 94 to Bradley Rd. as 4-lane, 50 mph expressway; signalized intersections with SH 94 and Marksheffel Rd.  
Fontaine Blvd.: constructed 4-lane principal arterial from Marksheffel Rd. to future Meridian Rd. corridor; signalized intersections with Marksheffel Rd.  
Marksheffel Rd.: realigned to the west from about one mile south of the east entrance to Peterson AFB to Bradley Rd.  
Powers Blvd.: widened to six lanes from Bradley Rd. to SH 16.  
SH 94: widened to four lanes from US 24 to Enoch Rd.  
SH 115: widened to four lanes from Academy Blvd. to Rock Creek Rd.  
US 24: widened to six lanes from 8<sup>th</sup> St. to 21<sup>st</sup> St. and constructed an interchange with 2-lane ramps at 21<sup>st</sup> St. ; widened to four lanes from Garrett Rd. to Elbert Rd.

## **2035**

Banning-Lewis Ranch Roads: constructed 6-lane, 45 mph principal arterials on the east side of Banning-Lewis Pkwy. from N. Carefree Cir. to Drennan Rd. (see Colorado Springs Major Thoroughfare Plan); signalized intersections.  
Constitution Ave.: extended as a 4-lane, 35 mph principal arterial from Paseo Rd. to I-25 at the Fontanero St. interchange.  
I-25: added one HOV lane in each direction from MLK Bypass to Briargate Pkwy.  
SH 83: widened to four lanes from old Northgate Rd. north to County Line Rd.; signalized intersection with SH 105.  
SH 94: constructed interchange with 2-lane ramps at Marksheffel Rd.  
Union Blvd.: constructed interchanges with 1-lane ramps at Academy Blvd. and Fillmore St.; signalized Fillmore St. and Academy Blvd.  
US 24: widened to six lanes from 21<sup>st</sup> St. to east Manitou Ave. interchange; constructed an interchange with 2-lane ramps at 31<sup>st</sup> St.; constructed a 4-lane, 45 mph expressway bypass in Woodland Park.



Colorado Springs 2035 Regional Transportation Plan and 2008-2013 Transportation Improvement Program  
Data and Assumptions for Conformity Analysis  
15-Jan-08

	2005	2015	2025	2035
Population	536,330	686,960	786,127	896,964
Annual Growth Rate (from 2000 Pop.)		2.8%	2.3%	2.2%
Employment	322,769	427,866	514,155	597,954
Households	220,683	278,373	319,773	361,226
Persons/Households	2.4	2.5	2.5	2.5
<b>VMT by Roadway Type</b>				
Freeway	2,832,554	3,689,661	4,720,647	5,372,112
Expressway	2,026,173	2,764,429	3,185,245	3,890,872
Major Arterial	3,641,949	4,739,870	5,707,013	6,695,047
Minor Arterial	1,475,972	1,932,062	2,404,916	3,022,572
Collector	567,297	580,871	629,190	744,548
Ramp	246,714	318,713	418,501	480,685
Connector	1,029,886	1,364,311	1,639,063	1,885,531
Total	11,820,546	15,389,916	18,704,576	22,091,367
<b>Speed by Roadway Type</b>				
Freeway	61	61	60	60
Expressway	51	51	51	51
Major Arterial	44	44	44	44
Minor Arterial	39	39	39	39
Collector	31	31	31	31
Ramp	35	35	35	35
Connector	25	25	25	25
<b>Lane Miles by Roadway Type</b>				
Freeway	206	233	273	299
Expressway	302	355	374	426
Major Arterial	850	1000	1,248	1445
Minor Arterial	961	1064	1,078	1078
Collector	650	623	590	590
Connector	5805	5862	6,290	6294
Ramp	52	68	79	82
Carbon Monoxide (tons/day)	382.1	278.8	281.0	316.7
Carbon Monoxide (grams/mile)	29.3	16.4	13.6	13.0
Carbon Monoxide (grams/population)	646	368	324	320



Pikes Peak Area  
Council of Governments  
Communities Working Together



Pikes Peak Area Council of Governments

2008 – 2013 Transportation  
Improvement Program

**DRAFT**

January 24, 2008

DRAFT

FY 2008 Through FY 2013

TRANSPORTATION IMPROVEMENT PROGRAM

for the

Colorado Springs Urbanizing Area

**DATE TO BE DETERMINED**

Prepared by

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

in Cooperation with the

Colorado Department of Transportation

Federal Highway Administration

and

Federal Transit Administration

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## COMMONLY USED TRANSPORTATION TERMS AND ABBREVIATIONS

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway & Transportation Officials
ADA	Americans with Disabilities Act of 1991
APCD	Colorado Air Pollution Control Division
AQCC	Colorado Air Quality Control Commission
AQTC	PPACG's Air Quality Technical Committee
ATAC	Aviation Technical Advisory Committee
BTS	Bureau of Transportation Statistics
CAAA	Clean Air Act Amendment of 1990
CAC	PPACG's Community Advisory Committee
CBD	Central business district, a land use type used in modeling
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation and Air Quality Improvement
CMP	Congestion Management Program
CO	Carbon monoxide
CSDOT	Colorado Springs Department of Transportation
CTPP	Census Transportation Planning Package
DBE	Disadvantaged Business Enterprise
EMME/2	A travel demand model (for forecasting traffic)
EPA	United States Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FMVECP	Federal Motor Vehicle Emission Control Program
FR	Federal Register
FRA	Federal Railroad Association
FTA	Federal Transit Administration
FY	Fiscal Year
GIS	Geographic Information System
GPS	Global Positioning System
HOT	High Occupancy Toll
HOV	High Occupancy Vehicle
I/M	Vehicle inspection and maintenance program
ISTEA	Intermodal Surface Transportation Efficiency Act (1991)
ITS	Intelligent Transportation System
LRP	Long-range Plan
MOBILE 6	EPA approved model for forecasting pollutant emissions
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standard
NEPA	National Environmental Protection Act

NHS	National Highway System
OBD	Outlying business district, a land use type used in modeling
PMR-4	Planning and Management Region 4
PPACG	Pikes Peak Area Council of Governments
ROW	Right of Way
RTA	Rural Transportation Authority
RTDP	Rural Transit Development Plan
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SIP	State Implementation Plan (for air pollutants)
SOV	Single Occupant Vehicle
SPR	Statewide Planning and Research
SRP	Short-range Plan
STAC	Colorado's State Transportation Advisory Committee
STAS	PPACG's Specialized Transportation Advisory Subcommittee
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
TAC	PPACG'S Transportation Advisory Committee
TCD	Traffic Control Device
TCM	Transportation Control Measure
TDM	Transportation Demand Management
TDP	Transportation Development Plan
TEA-21	Transportation Equity Act for the 21 <sup>st</sup> Century (1998, replaced ISTEA)
TES	PPACG's Transportation Enhancement Subcommittee
TIGER	U.S. Census Bureau's <u>T</u> opologically <u>I</u> ntegrated <u>G</u> eographic <u>E</u> ncoding and <u>R</u> eferencing computer file
TIP	Transportation Improvement Program
TMA	Transportation Management Area (an MPO with a population over 200,000)
TRANPLAN	A travel demand model (for forecasting traffic)
TRB	Transportation Research Board
TSM	Transportation System Management
UPWP	Unified Planning Work Program
USDOT	United States Department of Transportation
VHT	Vehicle Hours Traveled
VISUMA	travel demand model (for forecasting traffic)
VMS	Variable Message Sign
VMT	Vehicle Miles Traveled

## EXECUTIVE SUMMARY

The Pikes Peak Area Council of Governments (PPACG) was designated by the Governor of the State of Colorado in April 1977 as the Metropolitan Planning Organization (MPO) for the Pikes Peak Region responsible for carrying out the transportation planning process. One of the primary responsibilities of a metropolitan planning organization is the development of a regional transportation improvement program. The *FY 2008 through FY 2013 Transportation Improvement Program (2008-2013 TIP)* contains over 60 transportation projects for which federal financial assistance in the federal fiscal year 2008 through fiscal year 2013 is being sought. All state, local and privately funded transportation projects that are expected to be completed within this time period and that have a regionally significant impact on air quality are also included. All projects that are to be implemented within the six years of the *2008-2013 TIP* are consistent with expected revenues totaling \$870,962,000.

The *2008-2013 TIP* was developed in cooperation with the Colorado Department of Transportation and transit users in accordance with 23 CFR 450.324 using the eight planning factors required by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and is consistent with the *2035 Regional Transportation Plan*, its congestion management program, and the *Carbon Monoxide Maintenance Plan For the Colorado Springs Attainment/Maintenance Area*. Over thirty public and 75 monthly committee meetings were held to provide citizens, local and state public agencies, representatives of transportation agencies, and other interested parties opportunities to assist in the development of, and provide comment on, the *2035 Regional Transportation Plan* and the *2008-2013 TIP* prior to its approval.

A determination was made that the projects identified in the *2008-2013 TIP* conform to the emissions budget identified in the *Carbon Monoxide Maintenance Plan For the Colorado Springs Attainment/Maintenance Area* as approved by the State of Colorado on February 15, 2004 and the U. S. Environmental Protection Agency (EPA) on October 7, 2004.

## INTRODUCTION

The Pikes Peak Area Council of Governments (PPACG) was designated by the Governor of the State of Colorado in April 1977 as the Metropolitan Planning Organization (MPO) for the Pikes Peak Region (Figure 1), responsible for carrying out the transportation planning process.

The *FY 2008 through FY 2013 Transportation Improvement Program (2008-2013 TIP)* includes all the transportation projects within the Colorado Springs Urbanizing Area for which federal or state funds will be used, as well as those of regional significance that are funded by local or private sources. The *2008-2013 TIP* identifies prioritized projects from the *2035 Regional Transportation Plan* that are to be implemented during the next six years. The *2008-2013 TIP* is fiscally constrained, meaning total annual project costs do not exceed anticipated revenues. The *2008-2013 TIP* discusses the project selection process and revenues, addresses consistency with other plans; verifies conformity with the Clean Air Act Amendments of 1990 (CAAA) and the state implementation plan (SIP), and lists the projects.

## TRANSPORTATION IMPROVEMENT PROGRAM DEVELOPMENT

Before a project can be considered for inclusion in a transportation improvement program, it must be shown to be consistent with the region's long-range transportation plan. If a potential project is consistent with the region's long-range transportation plan, it is submitted to PPACG by a local government after going through that entity's development and public processes.

The transportation improvement program is prepared by PPACG staff in cooperation with the Colorado Department of Transportation and transit operators in accordance with 23 CFR 450.324. It is based upon recommendations from these agencies as well recommendations from PPACG's Transportation Advisory Committee, Community Advisory Committee and Air Quality Technical Committee. The draft transportation improvement program is reviewed by each committee during its regularly scheduled monthly meetings during the transportation improvement program development process. The final draft transportation improvement program is then presented to the PPACG Board of Directors for review, approval and adoption.

The Transportation Advisory Committee is composed of staff representatives from all public agencies within the Colorado Springs Urbanizing Area which are involved in the construction, maintenance, operation, or planning of transportation facilities. Committee members include the Federal Highway Administration; the Federal Transit Administration; the Colorado Department of Transportation; the Colorado Air Pollution Control Division; El Paso and Teller



Counties; the Cities of Colorado Springs, Fountain, Manitou Springs, and Woodland Park; the Towns of Green Mountain Falls, Monument and Palmer Lake; Mountain Metropolitan Transit; and local military installations.

The Community Advisory Committee provides citizen input on the project selection process, the projects to be included in the transportation improvement program, and the public involvement process. The Committee is composed of citizen representatives of local governments and community groups as well as citizens-at-large.

The Air Quality Technical Committee reviews the transportation improvement program from a perspective of how the projects in it affect carbon monoxide emissions and air quality. The Committee, similar to the Transportation Advisory Committee, has members representing local counties, municipalities and military bases; the Colorado Department of Transportation; the Colorado Air Pollution Control Division; and Colorado Springs Utilities.

The PPACG Board of Directors considers the recommendations of PPACG's advisory committees. The Board comprises elected officials from each local government in the urbanizing area, representatives from the Colorado Transportation and Air Quality Control Commissions, and individuals representing public transportation and the local military bases. The public is provided opportunities to comment on the transportation improvement program prior to the Board taking final action.

After approval by PPACG, as the metropolitan planning organization, and the Governor, the Colorado Transportation Commission adopts the transportation improvement program into the statewide transportation improvement program (STIP).

After a transportation improvement program is adopted, it can be, and generally is, amended several times a year. There are several reasons for these modifications. Two of the more common include an addition or reduction in funding levels from federal, state, or local sources; or a change in the scope and/or costs of a project. These amendments are generally done on a monthly basis and can be brought forward by any member entity.

## **PROJECT PRIORITIZATION PROCESS**

SAFETEA-LU requires a transportation improvement program to include the following:

1. A priority list of projects and project segments to be carried out within each 3-year period after the initial adoption of the transportation improvement program; and
2. A financial plan that demonstrates how the transportation improvement program can be implemented, indicates public and private funding sources that are reasonably expected to be made available to carry out the plan, and recommends any innovative funding techniques to finance needed projects and programs, including value capture, tolls, and congestion pricing.

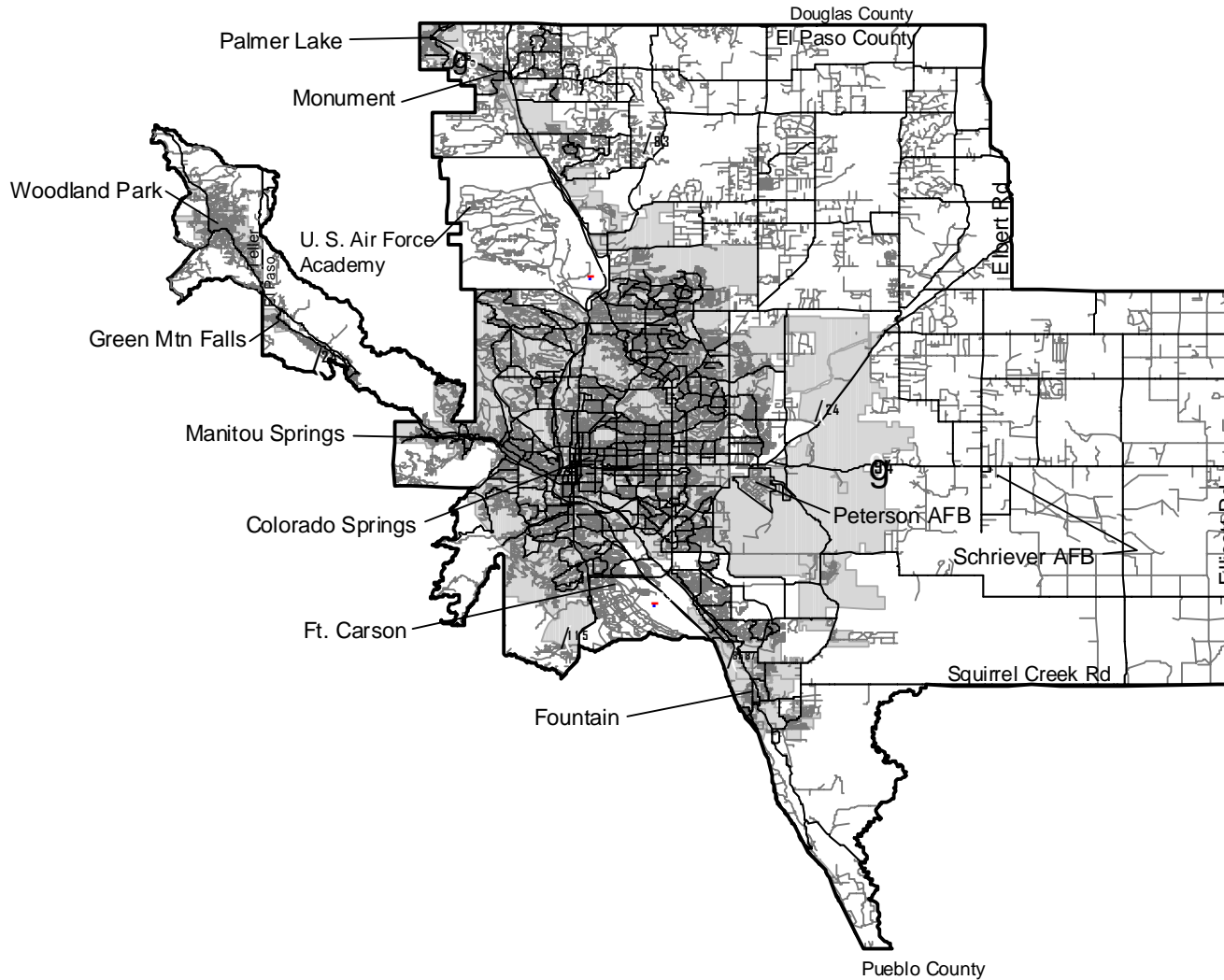
The metropolitan planning organization, in the development of its transportation plans and programs, is to facilitate the continuing, cooperative, and comprehensive planning process. In the development of its transportation plans and programs, SAFETEA-LU requires each metropolitan planning organization to, at a minimum, provide for consideration projects and programs that will accomplish the following:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users; transportation system for motorized and
4. Increase accessibility and mobility of people and freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation; and
8. Emphasize the preservation of the existing transportation system.

The *2008-2013 TIP* was developed as part of the *2035 Regional Transportation Plan*. Projects in the existing *2007-2012 TIP* were reviewed and found consistent with the vision, goals and objectives of the *2035 Regional Transportation Plan*. It was the stated desire of many members of the public as well as governmental staff to finish projects that had been started. This recommendation was adopted and the projects in the *2007-2012 TIP* were carried forward into the *2008-2013 TIP* and the *2035 Regional Transportation Plan*. It was realized very late in the process that the TIP is frequently amended, and if it remained part of the *2035 Plan*, then the plan would have to be amended also. Consequently, the *2008-2013 TIP* was removed from the plan and approved as a separate document.

Figure 1: Colorado Springs Urbanizing Area

## PPACG Transportation Planning Area (MPO) Boundary



## CONSISTENCY WITH OTHER PLANS

The transportation plans and programs of the metropolitan planning organization are to be consistent with one another and with other related plans. The following sections discuss other plans that the 2008-2013 *TIP* has used in its development or been compared with to ensure consistency.

### Bicycle and Pedestrian Facilities Plan

The *Regional Non-Motorized Transportation Plan* reflects current demand and the intermodal emphasis of the surface transportation legislation. The PPACG Transportation Enhancement Subcommittee, a subcommittee of the Transportation Advisory Committee, assisted with the development of this plan. It also reviews and prioritizes bicycle and pedestrian projects to be included in transportation improvement programs through the transportation enhancement process.

### Congestion Management Program

For those metropolitan planning organizations with a population greater than 200,000 that are classified as non-attainment or maintenance areas, SAFETEA-LU requires projects that significantly increase capacity for single-occupant vehicles to be included in an approved congestion management program. A congestion management program combines travel demand management, land use, and multimodal planning solutions to mitigate congestion. The congestion management program was updated and included in the *2035 Regional Transportation Plan*. Projects in the *2035 Regional Transportation Plan* and in the *2008-2013 TIP* were evaluated and selected using the congestion management program criteria.

### 2035 Regional Transportation Plan

Before a project can be considered for inclusion in a transportation improvement program, it must be shown to be consistent with the region's long-range transportation plan. The *2035 Regional Transportation Plan* is the current regional, long-range transportation plan for the Colorado Springs Urbanizing Area. The *2035 Regional Transportation Plan* describes strategies intended to meet the transportation needs of the Urbanizing Area for the next 27 years, and is the primary means for determining eligibility for federal funding.

The projects in the *2008-2013 TIP* were drawn from the *2035 Regional Transportation Plan* and/or are consistent with its goals and objectives.

## State Implementation Plan for Carbon Monoxide

Because the Colorado Springs Urbanizing Area is a maintenance area for carbon monoxide, the *2008-2013 TIP* must conform to the carbon monoxide maintenance plan and the Clean Air Act Amendments of 1990. No project in the *2008-2013 TIP* contradicts any requirements or commitments in the maintenance plan. Modeling indicates future transportation-related emissions will be less than the established emissions budget of 531 tons/day. There are no transportation control measures in the maintenance plan that are required to be in the *2008-2013 TIP*. Appendix A details the conformity determination analyses and Appendix B presents the resolution approving the conformity determination.

## Transportation Disadvantaged

The current *Specialized Transportation Plan for Persons with Disabilities and Elderly Persons* is included as an element of the *2035 Regional Transportation Plan*. It recommends an implementation program focusing on an accessible fixed-route transit system for transportation-disadvantaged persons who are able to use accessible buses. The plan further recommends improved coordination and gradual expansion of the existing private non-profit paratransit service for transportation-disadvantaged persons who are unable to use accessible fixed-route transit service.

In the adopted plan, demand/response paratransit service, similar to that currently operated under the City of Colorado Springs contract services program by private non-profit agencies, was found to be a necessity for serving the majority of transportation-disadvantaged persons who are unable to use accessible bus services. Many of the goals of the plan are now mandated by the Americans with Disabilities Act. Transit projects in the *2008-2013 TIP* are consistent with the goals of the *Specialized Transportation Plan for Persons with Disabilities and Elderly Persons*.

## Unified Planning Work Program

The Unified Planning Work Program (UPWP) presents two years of transportation planning activities proposed for the metropolitan planning region. The UPWP includes descriptions of specific work activities, their review processes, staffing needs, timelines, and expenditure and revenue estimates for the metropolitan planning organization. Planning activities requested for 49 USC 53 Section 5307 funding by the City of Colorado Springs are also included in the work program. The UPWP for FY 2008 and FY 2009, covering the period from October 1, 2007, through September 30, 2009, was approved by the PPACG Board of Directors on July 11, 2007.

## PUBLIC PARTICIPATION

Before a metropolitan planning organization can give final approval to a transportation improvement program, it must provide the opportunity for citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, and other interested parties to review and comment on the proposed program. PPACG's *Public Involvement Procedures* call for the development of a public participation plan for each long-range transportation plan and transportation improvement program that is developed. The *2008-2013 TIP* was developed in conjunction with the *2035 Regional Transportation Plan*. The *2035 Plan's* public participation plan was used for both documents. It describes the overall process that PPACG undertook to ensure that elected officials, staff from state and local air and transportation agencies, other agencies in the region, and the general public would have opportunities to be involved in the *2035 Plan's* and the *2008-2013 TIP's* preparation. That document is included as Appendix D to this document. Over thirty public and 75 monthly committee meetings held from January 2006 through February 2008 provided the public numerous opportunities to participate in the development and review of the *2008-2013 TIP* before it received final approval on **DATE TO BE DETERMINED**.

The availability of the draft *2008-2013 TIP* document for public review was advertised in local newspapers. Opportunities to participate in the development of the *2035 Plan* and the *2008-2013 TIP* were publicized via mass mailings to community groups, neighborhood organizations, economic development groups, civic clubs, educational facilities, and many other organizations and individuals on PPACG's mailing list. In addition, press releases were prepared and distributed to the local media announcing the availability of the *2035 Plan* and the *2008-2013 TIP* for review. Libraries and local government entities were used as depositories for the *2008-2013 TIP* document to assist PPACG in making it accessible to the public. The full *2008-2013 TIP* document was also provided to the public through the PPACG website where it could be viewed and downloaded in a standard PDF format. A 30-day comment period was provided. Comments were submitted in writing, from the PPACG website, or were made in person to the PPACG committees charged with reviewing the *2008-2013 TIP*. Comments received and PPACG's responses to them are provided in Appendix C. Before taking action on the *2008-2013 TIP*, PPACG advisory committees reviewed and considered all public comments.

### Environmental Justice

The framework for choosing regional transportation projects for inclusion in the *2008-2013 TIP* was established for the *2035 Regional Transportation Plan*. Because transportation issues and decisions can have profound inter-related

benefits and impacts on the regional community, the *2035 Regional Transportation Plan* vision, goals and objectives strived to measure and weigh the social, environmental, and economic effects.

A variety of public involvement techniques were used to ensure that the broadest possible input was received to aid in the development of the *2035 Regional Transportation Plan* and the *2008-2013 TIP*. Elected officials, local government staff, federal and state regulatory agency personnel, transit and specialized transportation providers, human service agencies, citizens representing all geographic areas of the region and community-based organizations are ongoing participants in PPACG's advisory and policy committees. For the development of the *2035 Regional Transportation Plan*, the input from a broad range of perspectives was sought and facilitated. The following audiences were specified for outreach:

- Businesses
- Faith-based organizations
- Citizen groups
- Civic organizations
- Disabled populations
- Emergency response organizations
- High school and college students
- Homeowners associations
- Human service agencies
- Low-income populations
- Media
- Military installations
- Minority populations
- Native Americans
- Neighborhood associations
- Parent teacher associations
- Private transportation providers
- Regulatory agencies
- School districts
- Senior populations and organizations
- Tourist organizations
- Users of all modes of transportation
- Youth service organizations

A mailing list was assembled to ensure that these audiences were notified of the plan development schedule, public participation opportunities, draft document availability, and public comment opportunities.

## REVENUE

The revenues identified in the *2008-2013 TIP* have been developed with the cooperation of state and local transportation officials. Factors used to aid forecasts include:

- The Pikes Peak region contains 14.54% of the state population
- The Pikes Peak region contains 2.97% of the state highway lane miles.
- The Pikes Peak region contains 2.20% of the state highway centerline miles.

- The PPACG and the CDOT have a signed Memorandum of Understanding which specifies that, for planning purposes, the PPACG is entitled to 9.48 +/- 1% of the statewide total allocation.

Revenues for projects listed in the *2008-2013 TIP* come from many sources, generally grouped as follows: federal highway and transit programs, state programs, local government programs, and private sources. Within these general programs are the following funding categories:

- **Strategic Corridor Projects (7<sup>th</sup> Pot).**
- **System Quality:** including surface treatment, bridge, maintenance, and transit capital.
- **Mobility:** including Congestion Relief, Transportation Enhancements, STP-Metro, and Congestion Mitigation and Air Quality Improvements (CMAQ).
- **Safety:** including rockfall, hazard elimination, hotspots, traffic signals, safety enhancements, and traffic operations.
- **Program Delivery:** including operations and maintenance, capital equipment, and property.
- **Regional Priorities Projects (RPP):** state highway projects sponsored by CDOT Region 2.
- **Public Transportation.**
- **Local/Private.**

While most projects identified in the *2008-2013 TIP* have federal funds associated with them, PPACG has included transportation projects with 100% local or private funding for information and air quality conformity analyses. Ratios used to match federal funds with local funds vary by the funding program:

- National Highway System is 82.79% federal and 17.21% local;
- Surface Transportation Program (STP) is 82.79% federal and 17.21% local;
- Congestion Mitigation and Air Quality Improvement (CMAQ) Program is variable and ranges from 80% to 100% federal;
- Interstate Maintenance funding is 91.21% federal and 8.79% local; and
- Most transit funding is 80% federal and 20% local.

In many cases, project sponsors provide more match than the federal minimum shown above. This amount is shown as overmatch in the project funding tables included herein.

#### Strategic Corridor Projects (7<sup>th</sup> Pot)

State Strategic Corridor, or 7<sup>th</sup> Pot, moneys are those funds designated for construction of 28 specific projects identified by the Colorado General Assembly and the Colorado Transportation Commission. Fourteen of these projects,



totaling \$1,991,863,000 have not been completed. Two of the four largest projects that have not been completed are within the PPACG region. The I-25 and Powers Boulevard corridors total \$384,866,000, or 19.3% of the remaining balance.

The 6-year statewide program is \$1,552,054,209. The Pikes Peak region is forecast to receive approximately \$88,322,853, or 5.6% of the statewide total. This number is highly dependent upon economic and political conditions.

### System Quality

This program includes funds necessary to maintain the transportation infrastructure. This generally refers to the traveling surface of roads, the costs to replace or repair bridges, purchase of transit equipment, and other general maintenance activities. The Colorado Department of Transportation has identified one bridge in the Colorado Springs Urbanizing Area that is structurally deficient and in need of repairs. The 6-year statewide program is \$1,805,210,904. Of this PPACG is forecast to receive \$60,874,312, or 3.4% of the statewide total.

### Mobility

This program includes funds to reduce congestion and facilitate travel throughout the region. It is within this category that PPACG has the most discretion to select projects. The 6-year statewide program is \$1,061,176,003. Of this PPACG is forecast to receive \$78,329,020 or 7.4% of the statewide total. Specific funding categories are detailed below.

1. The Congestion Mitigation and Air Quality Improvement (CMAQ) funding is for federally designated air quality non-attainment or maintenance regions. These funds can only be used on transportation projects that will reduce ozone, carbon monoxide, or particulate matter pollution. Projects funded under this program in the Colorado Springs Urbanizing Area must contribute to maintaining the federal air quality standard for carbon monoxide. CMAQ funds may not be used for projects that only increase capacity for single occupant vehicles. The 6-year statewide program is \$161,467,968. Of this PPACG is forecast to receive \$23,530,879 or 14.6% of the statewide total.
2. The 6-year statewide Transportation Enhancement program is \$65,572,309. Of this PPACG is forecast to receive \$4,868,745 or 7.4% of the statewide total. Transportation enhancement projects fall into the following federally defined categories:
  - a. Facilities for pedestrians and bicycles;

- b. Acquisition of scenic easements and scenic historic sites;
  - c. Scenic or historic highway programs;
  - d. Landscaping and other scenic beautification;
  - e. Historic preservation;
  - f. Rehabilitation and operation of historic transportation buildings, structures, or facilities;
  - g. Preservation of abandoned railway corridors;
  - h. Control and removal of outdoor advertising;
  - i. Archaeological planning and research; and
  - j. Mitigation of water pollution due to highway runoff.
3. The Surface Transportation Program-Metro funds are only distributable to urban areas with over 200,000 in population. They are for reconstruction, major widening, new construction, intersection improvements, safety, operational improvements, environmental clearances and preliminary engineering of eligible roads within the urbanizing area. These projects are proposed by local entity staffs, citizens or elected officials and are selected by the metropolitan planning organization, in consultation with the CDOT. The 6-year statewide program is \$213,589,371. Of this PPACG is forecast to receive \$37,461,439 or 17.5% of the statewide total.
  4. Congestion Relief is a new program of the Colorado Transportation Commission designed to relieve congestion on state highways that have a volume to capacity ratio greater than 0.85. The 6-year statewide program is \$49,444,058. Of this PPACG is forecast to receive \$3,969,369 or 8.0% of the statewide total.

### Safety Program

Funds in this area are to improve safety and eliminate hazards statewide. Funds are distributed in a grant program administered by the Colorado Department of Transportation (CDOT). After CDOT makes its selections, the approved projects are adopted into the transportation improvement program. The 6-year statewide program is \$625,519,197. Of this, PPACG is forecast to receive \$28,893,419 or 4.6% of the statewide total.

## Maintenance and Operations

These are state or local funds used to maintain (fill potholes, sand, plow, etc.) or operate (signals, traffic monitoring, variable message signs, etc.) roadways. The state and local governments anticipate \$248,401,000 being available within the PPACG region over the next six years. The 6-year statewide program is \$1,049,962,044. Of this PPACG is forecast to receive \$34,056,736 or 3.2% of the statewide total.

## Regional Priorities Program

These funds address primarily local projects on the state highway system. Typical projects include reconstruction, major widening, new construction, intersection improvements, safety, operational improvements, environmental clearances and preliminary engineering.

Projects are identified by local entity staff, elected officials and the Colorado Department of Transportation. The 6-year statewide program is \$201,587,053. Of this, PPACG is forecast to receive \$14,967,839 or 7.4% of the statewide total.

## Public Transportation

The Federal Transit Administration administers program funds authorized by several sections of public law including Sections 5307, 5309, 5310, 5313, 5316 and 5317 of Title 49 USC. The Section 5307 funds are available for public transportation capital projects and to finance the planning and improvement of equipment and facilities for use in public transportation, including the renovation and improvement of historic transportation facilities. For urbanized areas with a population of 200,000 or more, Section 5307 funds are apportioned and flow directly to a designated recipient. In the Colorado Springs Urbanizing Area, only the City of Colorado Springs is designated as a Section 5307 recipient.

Section 5309 transit funds are used for discretionary grants and loans for general purpose public transportation capital projects.

Section 5310 transit funds are allocated to the State and are distributed through a discretionary grant program. This category of funds is for projects meeting the special transportation needs of elderly persons and persons with disabilities. Eligible categories of projects include planning and capital. Eligible recipients include private non-profit organizations and public entities.

Section 5313 transit funds are used for a variety of purposes such as planning, technical studies and assistance, demonstrations, management training and cooperative research concerning public transportation.

The Job Access and Reverse Commute program (JARC) authorized under Section 5316 provides grants to communities for the purpose of filling gaps in employment transportation. The primary beneficiaries of this program are low-income families that otherwise would have a difficult time getting to jobs and related services, such as child care and training.

Section 5317 transit funds are used in the New Freedom Program to encourage services and facility improvements to address the transportation needs of persons with disabilities that go beyond those required by the Americans with Disabilities Act. The funds can be used for associated capital and operating costs.

Public transportation funds administered by the FTA are competitive grant funds. Proposed projects must be included in a transportation improvement program to be eligible. Once grants are awarded, projects and funding are amended in the transportation improvement program.

The *2008-2013 TIP* public participation process serves as public notice for the Federal Transit Administration's Sections 5307, 5309, 5310, 5313, 5316 and 5317 grants Program of Projects.

#### Local/Private

These funds include local member government funds, private developer funds and local ballot initiatives. Revenues from the Baptist Road Rural Transportation Authority (BRRTA) and the Pikes Peak Rural Transportation Authority (PPRTA) are included. The BRRTA provides a funding mechanism for the design and construction of improvements to Baptist Road. The PPRTA is a one percent sales tax to fund transportation and transit improvements. Fifty-five percent of the money will be used for a voter-approved list of capital projects, 35% will be used for additional maintenance (such as street overlays and pothole patching) and 10% will be used to expand the Mountain Metro bus system.

### **TRANSPORTATION IMPROVEMENT PROGRAM CONFORMITY**

The Colorado Springs Urbanizing Area has been designated as a maintenance area for carbon monoxide. As such, PPACG's transportation plans, programs, and projects must demonstrate conformity with the Clean Air Act Amendments of 1990 and with the *Carbon Monoxide Maintenance Plan for the Colorado*

*Springs Attainment/Maintenance Area* as revised in February 2004. Regulations developed by the Environmental Protection Agency (EPA) and the U.S. Department of Transportation define the process to determine conformity. Those regulations provide that conformity of the *2008-2013 TIP* can be demonstrated by the following:

1. If the transportation improvement program's projects do not interfere with the maintenance of the federal air quality standard for carbon monoxide;
2. If the carbon monoxide emissions from projects included in the transportation improvement program do not exceed the emissions budget of 531 tons/day; and
3. If the transportation improvement program provides for the expeditious implementation of transportation control measures in the applicable state implementation plan.

The applicable state implementation plan is the *Carbon Monoxide Maintenance Plan for the Colorado Springs Attainment/Maintenance Area*. There are no mandatory transportation control measures in the Maintenance Plan that must be included in the *2008-2013 TIP*.

Projects in the *2008-2013 TIP* were analyzed from a collective, regional perspective using the EPA's current air emissions modeling program, MOBILE 6.2. Certain transportation projects do not impact regional carbon monoxide emissions. These are air quality neutral projects that, because of their nature, will not affect the outcome of any emissions analyses. Types of projects that were not included in the MOBILE 6.2 emission analyses for this reason were safety-related improvements; planning and engineering studies; right-of-way acquisition; landscaping; sign removal; and noise barriers. Projects that were included in the analyses are presented in Appendix A.

The conformity analysis indicates the *2008-2013 TIP* meets the requirements of the Statewide and Metropolitan Planning Regulations, the Federal Transportation Conformity Regulation, and the Colorado Air Quality Control Commission's Conformity Regulation. It does conform to the requirements of the Clean Air Act Amendments and the emissions budget established in the maintenance plan. The PPACG resolution approving the conformity determination is in Appendix B.

## PROJECT FUNDING TABLES

The following project tables show the projects selected for the *2008-2013 TIP*, the cost of the projects, the category of funds the projects will receive, and the years they will receive the funds.

**PIKES PEAK AREA COUNCIL OF GOVERNMENTS**  
**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
(\$ in thousands)													
<b>Bridge</b>													
		Bridge Program Pool	CDOT	Bridges to be selected		Federal	0.000	0.000	0.000	0.000	0.000	1428.259	1428.259
						State	0.000	0.000	0.000	0.000	0.000	357.065	357.065
						Overmatch	0.000	0.000	0.000	0.000	0.000	0.000	0.000
						Total	0.000	0.000	0.000	0.000	0.000	1785.324	1785.324
102	PP5153	I-25 Bridges in the Pikes Peak TPR	CDOT	perform preliminary engineering of northbound bridge over Rock Creek		Federal	0	0	0	1395.056	1964.944	0.000	3360.000
						State	0	0	0	348.764	491.236	0.000	840.000
						Overmatch	0	0	0	0.000	0.000	0.000	0.000
						Total	0	0	0	1743.820	2456.180	0.000	4200.000
116	PP6509	Bridge on US 24 East (I-18-G)	CDOT	design bridge replacement south of Judge Orr Rd		Federal	385.056	0	391.318	0	454.389	0.000	1230.763
						State	96.264	0	97.830	0	113.597	0.000	307.691
						Overmatch	0.000	0	0.000	0	0.000	0.000	0.000
						Total	481.320	0	489.148	0	567.986	0.000	1538.454
<b>Bridge Totals</b>													
						Federal	385.056	0	391.318	1395.056	2419.333	1428.259	6019.022
						State	96.264	0	97.830	348.764	604.833	357.065	1504.756
						Overmatch	0	0	0	0	0	0	0.000
						Total	481.320	0	489.148	1743.820	3024.166	1785.324	7523.778
<b>CMAQ</b>													
306a	PP6449	Austin Bluffs/Union/Fillmore Corridor ITS Project	Colorado Springs	connect I-25 ITS to Academy Blvd ITS; extend Austin Bluffs ITS: I-25 to Academy; Union ITS: Austin Bluffs to Fillmore; Fillmore ITS: I-25 to Union		Federal	692.864	394.232	0	0	0	0	1087.096
						Local	144.029	81.951	0	0	0	0	225.980
						Overmatch	72.107	0.000	0	0	0	0	72.107
						Total	909.000	476.183	0	0	0	0	1385.183
306	PP6449	CMAQ Pool		projects to be determined		Federal	0	2834.263	2626.689	2790.194	2938.754	3083.430	14273.330
						Local	0	648.405	546.024	580.013	610.894	640.969	3026.305
						Overmatch	0	0.000	0.000	0.000	0.000	0.000	0.000
						Total	0	3482.668	3172.713	3370.207	3549.648	3724.399	17299.635
306d	PP6449	Interquest Corridor Project Phase II	Colorado Springs	coordinate traffic signal expansion along Powers Blvd. corridor to the completion of the I-25 north-south connection		Federal	1410.662	0	0	0	0	0	1410.662
						Local	293.242	0	0	0	0	0	293.242
						Overmatch	59.423	0	0	0	0	0	59.423
						Total	1763.327	0	0	0	0	0	1763.327

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
											(\$ in thousands)		
<b>CMAQ Continued</b>													
306g	PP6449	Pikes Peak Library District Bookmobile	Pikes Peak Library District	purchase and operate two bookmobiles		Federal	531.540	0	0	0	0	0	531.540
						Local	110.494	0	0	0	0	0	110.494
						Overmatch	0.000	0	0	0	0	0	0.000
						<b>Total</b>	<b>642.034</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>642.034</b>
306h	PP6449	Metro Rides	Colorado Springs	provide carpool, vanpool, and schoolpool programs		Federal	381.150	381.150	0	0	0	0	762.300
						Local	20.000	20.000	0	0	0	0	40.000
						Overmatch	0.000	0.000	0	0	0	0	0.000
						<b>Total</b>	<b>401.150</b>	<b>401.150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>802.300</b>
306b	PP6449	Woodland Park Express Service	Colorado Springs	provide transit bus service between Colorado Springs and Woodland Park		Federal	963.561	431.180	0	0	0	0	1394.741
						Local	200.301	89.632	0	0	0	0	289.932
						Overmatch	161.342	0.000	0	0	0	0	161.342
						<b>Total</b>	<b>1325.204</b>	<b>520.812</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1846.016</b>
<b>CMAQ Totals</b>						Federal	<b>3979.777</b>	<b>4040.825</b>	<b>2626.689</b>	<b>2790.194</b>	<b>2938.754</b>	<b>3083.430</b>	<b>19459.669</b>
						Local	<b>768.066</b>	<b>839.988</b>	<b>546.024</b>	<b>580.013</b>	<b>610.894</b>	<b>640.969</b>	<b>3985.954</b>
						Overmatch	<b>292.872</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>292.872</b>
						<b>Total</b>	<b>5040.715</b>	<b>4880.813</b>	<b>3172.713</b>	<b>3370.207</b>	<b>3549.648</b>	<b>3724.399</b>	<b>23738.495</b>
<b>Congestion Relief</b>													
310	PP6450	Congestion Relief Pool in PPACG	CDOT	SH 16 Improvements		Federal	563.925	592.534	522.852	0.000	559.601	570.247	2809.159
						Local	140.981	148.134	130.713	0.000	139.900	142.562	702.290
						Overmatch	0.000	0.000	0.000	457.920	0.000	0.000	457.920
						<b>Total</b>	<b>704.906</b>	<b>740.668</b>	<b>653.565</b>	<b>457.920</b>	<b>699.501</b>	<b>712.809</b>	<b>3969.369</b>
<b>Congestion Relief Totals</b>						Federal	<b>563.925</b>	<b>592.534</b>	<b>522.852</b>	<b>0.000</b>	<b>559.601</b>	<b>570.247</b>	<b>2809.159</b>
						Local	<b>140.981</b>	<b>148.134</b>	<b>130.713</b>	<b>0.000</b>	<b>139.900</b>	<b>142.562</b>	<b>702.290</b>
						Overmatch	<b>0</b>	<b>0</b>	<b>0</b>	<b>458</b>	<b>0</b>	<b>0</b>	<b>457.920</b>
						<b>Total</b>	<b>704.906</b>	<b>740.668</b>	<b>653.565</b>	<b>457.920</b>	<b>699.501</b>	<b>712.809</b>	<b>3969.369</b>



**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
											(\$ in thousands)		
<b>Enhancements</b>													
304	PP6156	Enhancement Pool		projects to be determined		Federal	0.530	629.989	660.337	660.598	660.718	660.825	3272.995
						Local	0.132	157.497	165.084	165.149	165.179	165.206	818.249
						Overmatch	0.000	0.000	0.000	0.000	0.000	0.000	0.000
						Total	0.662	787.486	825.421	825.747	825.897	826.031	4091.244
304a	PP6156	Airport Rd. Bicycle and Pedestrian Project	Colorado Springs	install designated bicycle lanes and construct new detached sidewalk and accessible curb ramps between Circle Dr and Chelton Rd		Federal	155.022	0	0	0	0	0	155.022
						Local	38.756	0	0	0	0	0	38.756
						Overmatch	39.223	0	0	0	0	0	39.223
						Total	233.000	0	0	0	0	0	233.000
304b	PP6156	Creekwalk Trail	Manitou Springs	extend Colorado Springs Midland Trail to the west and connect with multi-use systems		Federal	83.252	0	0	0	0	0	83.252
						Local	20.813	0	0	0	0	0	20.813
						Overmatch	8.135	0	0	0	0	0	8.135
						Total	112.200	0	0	0	0	0	112.200
304d	PP6156	Lake Avenue Sidewalk	Woodland Park	complete curb, gutter, sidewalk and drainage improvements		Federal	111.960	0	0	0	0	0	111.960
						Local	27.990	0	0	0	0	0	27.990
						Overmatch	12.999	0	0	0	0	0	12.999
						Total	152.949	0	0	0	0	0	152.949
304f	PP6156	Metro Route 3: Bus Stop Improvements	Colorado Springs	pedestrian and bicycle safety, access to the public transportation system: Downtown Terminal through Old Colorado City to Manitou Springs		Federal	178.945	0	0	0	0	0	178.945
						Local	44.736	0	0	0	0	0	44.736
						Overmatch	22.369	0	0	0	0	0	22.369
						Total	246.050	0	0	0	0	0	246.050
304e	PP6156	Sand Creek Trail: Barnes Rd. to Stetson Hills Blvd.	Colorado Springs	construct 1.1 mi. 12' concrete trail; construct three 8' concrete access trails from adjacent neighborhoods to Sand Creek Trail; build 2 ped. bridges		Federal	92.822	0	0	0	0	0	92.822
						Local	23.206	0	0	0	0	0	23.206
						Overmatch	54.958	0	0	0	0	0	54.958
						Total	170.985	0	0	0	0	0	170.985
<b>Enhancements Totals</b>													
						Federal	622.531	629.989	660.337	660.598	660.718	660.825	3894.996
						Local	155.633	157.497	165.084	165.149	165.179	165.206	973.749
						Overmatch	137.683	0	0	0	0	0	137.683
						Total	915.846	787.486	825.421	825.747	825.897	826.031	5006.428

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
											(\$ in thousands)		

**Hazard Elimination-Safety**

07-1	R26644	Hazard Elimination Safety (HES) Pool	Various entities	Hazard elimination (safety) projects in the Pikes Peak region		Federal	1652.180	1677.493	1379.244	1467.009	1546.540	1623.993	9346.459	
							State	0	0	0	0	0	0.000	
							Local	183.576	186.388	153.249	163.001	171.838	180.444	1038.495
							Total	1835.755	1863.881	1532.493	1630.010	1718.378	1804.437	10384.954

**Hazard Elimination-Safety Totals**

							Federal	1652.180	1677.493	1379.244	1467.009	1546.540	1623.993	9346.459
							State	0	0	0	0	0	0	0.000
							Local	183.576	186.388	153.249	163.001	171.838	180.444	1038.495
							Total	1835.755	1863.881	1532.493	1630.010	1718.378	1804.437	10384.954

**Local/Private**

LP13		Congestion/Incident Management Signal Improvement	PPRTA	Colorado Springs: install left-turn signal heads; add new traffic signal poles; upgrade signal controller; modify timing plans		Local/Private	224.000	224.000	224.000	224.000	224.000	0	1120.000	
							Total	224.000	224.000	224.000	224.000	224.000	0	1120.000
LP15		Stapleton/Judge Orr Extension	PPRTA	El Paso County: construct 4-lane principal arterial		Local/Private	1400.000	0	0	0	0	0	1400.000	
							Total	1400.000	0	0	0	0	0	1400.000
LP18		Fillmore Street Corridor	PPRTA	Colorado Springs: make transportation system management and intersection improvements between I-25 and Union Blvd		Local/Private	1500.000	3876.000	0	0	0	0	5376.000	
							Total	1500.000	3876.000	0	0	0	0	5376.000
LP19		Austin Bluffs Corridor Improvements	PPRTA	Colorado Springs: widen to a 6-lane principal arterial with median control and improved signal coordination		Local/Private	0	3059.840	0	0	0	0	3059.840	
							Total	0	3059.840	0	0	0	0	3059.840
LP41		Baptist Road Interchange	BRRTA	Monument: make capacity improvements east and west of I-25		Local/Private	7000.000	7000.000	7500.000	0	0	0	21500.000	
							Total	7000.000	7000.000	7500.000	0	0	0	21500.000
LP2		Cimarron Street Bridge	PPRTA	Colorado Springs: replace existing 4-lane bridge structure at Conejos Street		Local/Private	0	1000.000	4376.000	0	0	0	5376.000	
							Total	0	1000.000	4376.000	0	0	0	5376.000

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
											(\$ in thousands)		
<b>Local/Private Continued</b>													
LP20		Marksheffel Road Widening and Extension	PPRTA	El Paso County: perform transportation planning and engineering studies (PAFB Eastgate to Black Forest Road)		Local/Private	1525.000	4570.739	3333.333	3333.333	3333.333	0	16095.738
						Total	1525.000	4570.739	3333.333	3333.333	3333.333	0	16095.738
LP22		Roadway Safety and Traffic Operations	PPRTA	Colorado Springs: make intersection and corridor spot improvements to mitigate existing safety and traffic flow deficiencies		Local/Private	784.000	784.000	784.000	784.000	784.000	0	3920.000
						Total	784.000	784.000	784.000	784.000	784.000	0	3920.000
LP23		On-Street Bikeway Improvements	PPRTA	Colorado Springs: improve bike lanes, safety of crossing locations, signage, and access to off-street trail system		Local/Private	0	240.240	0	0	0	0	240.240
						Total	0	240.240	0	0	0	0	240.240
LP24		Austin Bluffs Bridge Widening	PPRTA	Colorado Springs: widen bridge from 49 feet to 150 feet at Cottonwood Creek		Local/Private	500.000	2076.000	0	0	0	0	2576.000
						Total	500.000	2076.000	0	0	0	0	2576.000
LP25		Vincent Drive Bridge	PPRTA	Colorado Springs: replace existing 2-lane functionally obsolete bridge structure at Cottonwood Creek		Local/Private	1500.000	4451.680	0	0	0	0	5951.680
						Total	1500.000	4451.680	0	0	0	0	5951.680
LP28		Hancock Avenue Bridge	PPRTA	Colorado Springs: replace existing 2-lane structurally deficient bridge at Templeton Gap Floodway		Local/Private	0	0	0	0	800.000	0	800.000
						Total	0	0	0	0	800.000	0	800.000
LP3		South Metro Accessibility, Phase 1	PPRTA	CS: design and construct expressway:Academy and Powers s/o Drennan - EPC: design and construction of improvements: Academy and Nevada		Local/Private	20892.158	3556.080	1891.333	1891.333	1891.333	0	30122.237
						Total	20892.158	3556.080	1891.333	1891.333	1891.333	0	30122.237
LP30		25th Street Bridge	PPRTA	Colorado Springs: replace existing 2-lane functionally obsolete bridge structure at Fountain Creek		Local/Private	0	0	0	0	392.000	0	392.000
						Total	0	0	0	0	392.000	0	392.000

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
											(\$ in thousands)		
<b>Local/Private Continued</b>													
LP35		Vincent Drive Extension	PPRTA	Colorado Springs: construct extension from Dublin Blvd. to Nevada Avenue including sidewalks and on-street bike lanes		Local/Private	1500.000	4232.160	0	0	0	0	5732.160
						Total	1500.000	4232.160	0	0	0	0	5732.160
LP37		Pikes Peak Greenway Improvements	PPRTA	Colorado Springs: reconstruct trails; improve Tejon boardwalk, Van Buren underpass, Van Buren boardwalk, and pedestrian and ADA ramps		Local/Private	310.000	310.000	0	0	0	0	620.000
						Total	310.000	310.000	0	0	0	0	620.000
LP5		Meridian Road Extension	PPRTA	El Paso County: construct 4-lane arterial transition between US 24 and Falcon Highway		Local/Private	420.000	0	0	0	0	0	420.000
						Total	420.000	0	0	0	0	0	420.000
LP7		County Line Road Upgrade	PPRTA	El Paso County: upgrade from 2-lane collector to 2-lane minor arterial between I-25 and Furrow Road		Local/Private	1100.000	685.500	0	0	0	0	1785.500
						Total	1100.000	685.500	0	0	0	0	1785.500
LP8		Meridian Road Widening	PPRTA	El Paso County: upgrade from 2-lane collector to 4-lane then 6-lane principal arterial from Rex Road to Woodmen Road		Local/Private	0	750.000	1753.575	1753.575	1753.575	0	6010.725
						Total	0	750.000	1753.575	1753.575	1753.575	0	6010.725
LP9		Hodgen Road Upgrade to Arterial	PPRTA	El Paso County: upgrade from 2-lane collector to 2-lane minor arterial from Roller Coaster Road to Eastonville Road		Local/Private	1001.385	0	0	0	0	0	1001.385
						Total	1001.385	0	0	0	0	0	1001.385
						<b>Local/Private Totals</b>							
						Local/Private	<b>39656.543</b>	<b>36816.239</b>	<b>19862.241</b>	<b>7986.241</b>	<b>9178.241</b>	<b>0.000</b>	<b>113499.505</b>
						Total	<b>39656.543</b>	<b>36816.239</b>	<b>19862.241</b>	<b>7986.241</b>	<b>9178.241</b>	<b>0.000</b>	<b>113499.505</b>
<b>Maintenance and Operations</b>													
		CDOT Maintenance and Operations	CDOT	maintenance and operations for projects in the Pikes Peak Region		State	8673.671	8913.443	8951.567	8600.615	9144.779	9328.891	53612.967
						Total	8673.671	8913.443	8951.567	8600.615	9144.779	9328.891	53612.967

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
											(\$ in thousands)		

**Maintenance and Operations (Continued)**

60		Maintenance and Operations	Local Entities	maintenance and operations for projects in the Pikes Peak Region		Local	41400.000	41400.000	41400.000	41400.000	41400.000	41400.000	248400.000
						Total	41400.000	41400.000	41400.000	41400.000	41400.000	41400.000	248400.000
07-11		Surface Treatment	CDOT	Surface treatment of I-25 in the COSMIX area and north of Northgate Rd., and US 24 from Circle Dr. to Powers Blvd.		Federal	5918.969	6214.828	5509.768	3958.671	5980.245	5449.554	33032.035
						State	1230.408	1291.910	1145.345	822.910	1243.145	1132.828	6866.546
						Total	7149.377	7506.738	6655.113	4781.581	7223.390	6582.382	39898.581

**Maintenance and Operations Totals**

Federal	5918.969	6214.828	5509.768	3958.671	5980.245	5449.554	33032.035
State	9904.079	10205.353	10096.912	9423.526	10387.924	10461.719	60479.512
Local	41400.000	41400.000	41400.000	41400.000	41400.000	41400.000	248400.000
<b>Total</b>	<b>57223.048</b>	<b>57820.181</b>	<b>57006.680</b>	<b>54782.196</b>	<b>57768.169</b>	<b>57311.273</b>	<b>341911.548</b>

**Metro**

305c	PP6726	Citywide Pedestrian Access/Mobility Improvements	Colorado Springs	construct transit waiting pads; install accessible curb ramps, sidewalks, pedestrian count-down signalheads, and Accessible Pedestrian Signals		Federal	0	0	0	0	65.300	8.734	74.034
						Local	0	0	0	0	13.574	1.816	15.390
						Overmatch	0	0	0	0	15.578	39.642	55.220
						Total	0	0	0	0	94.452	50.191	144.643
14	PP6065	Manitou Ave. Pedestrian and Drainage Improvements	Manitou Springs	improve drainage, road, intersections; widen walks; landscape; bumpouts & ramps; lighting, undergrounding, wayfinding		Federal	510.000	656.834	242.480	263.876	254.583	221.334	2149.107
						Local	106.016	136.540	50.406	54.853	52.922	46.009	446.746
						Overmatch	683.984	91.726	100.743	74.899	86.123	0	1037.474
						Total	1300.000	885.100	393.628	393.628	393.628	267.340	3633.324
302		Marksheffel Road: SH 94 to Mesa Ridge Parkway	El Paso County	expand 2-lane minor arterial to 4-lane principal arterial between SH 94 and Bradley; expand to 4-lane expressway between Bradley and Mesa Ridge		Federal	0	0	0	0	378.935	100.872	479.806
						Local	0	0	0	0	78.771	20.969	99.740
						Overmatch	0	0	0	0	44.583	100.872	145.455
						Total	0	0	0	0	502.289	222.712	725.001
		STP-Metro Pool	Various Entities	Projects to be determined		Federal	0	0	0	0	0	0	0.000
						Local	0	0	0	0	0	0	0.000
						Overmatch	0	0	0	0	0	0	0.000
						Total	0	0	0	0	0	0	0.000
303		N. Nevada Corridor: Fillmore to Austin Bluffs	Colorado Springs	provide environmental design, analysis and documentation		Federal	0	183.310	282.720	307.667	296.832	243.281	1313.810
						Local	0	38.106	58.770	63.956	61.704	50.572	273.109

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
											(\$ in thousands)		
						Overmatch	0	98.242	286.716	256.583	269.670	0	911.211
						Total	0	319.658	628.206	628.206	628.206	293.853	2498.129
<b>Metro (Continued)</b>													
305a	PP6726	Traffic Signal Upgrades Project	Colorado Springs	upgrade signal heads/sensors; reconstruct substandard installations; install signals, vehicle detection units, internally illuminated street name signs		Federal	0	219.972	155.569	169.296	163.334	136.848	845.018
						Local	0	45.727	32.339	35.192	33.953	28.447	175.658
						Overmatch	0	34.301	69.495	52.914	60.115	0	216.824
						Total	0	300.000	257.402	257.402	257.402	165.295	1237.501
305b	PP6726	Transit Planning and Administration	Colorado Springs	provide short-range and long-range planning for regional transit system		Federal	40.000	45.827	31.114	33.859	32.667	27.415	210.882
						Local	8.315	9.526	6.468	7.038	6.791	5.699	43.837
						Overmatch	4.317	10.436	17.169	13.852	15.293	0	61.066
						Total	52.632	65.789	54.750	54.750	54.750	33.114	315.785
108		Transit Vehicles for Elderly and Disabled	Various	provide specialized transportation services to elderly persons and persons with disabilities		Federal	100.000	91.656	62.227	0	0	21.244	275.127
						Local	20.788	19.053	12.936	0	0	4.416	57.192
						Overmatch	0.425	1.950	37.496	0	0	0	39.872
						Total	121.213	112.659	112.659	0	0	25.660	372.191
49	PP3470	Woodmen Rd. Corridor Powers to US 24	El Paso County	expand 2-lane major arterial to 4-lane then to 6-lane roadway from Powers Blvd to US 24		Federal	6266.000	2471.939	0	0	0	1405.886	10143.826
						Local	1302.547	513.855	0	0	0	292.249	2108.651
						Overmatch	3913.203	385.456	0	0	0	0	4298.659
						Total	11481.750	3371.250	0	0	0	1698.135	16551.135
12	PP543	Woodmen Rd. I-25 to Powers	Colorado Springs	design right-of-way and construction of 6-lane parkway (principal arterial) from I-25 to Powers Blvd.		Federal	2329.000	2404.458	3514.398	3824.508	3689.822	2982.139	18744.325
						Local	484.142	499.827	730.557	795.021	767.023	619.913	3896.483
						Overmatch	6000.000	10263.972	7410.055	7035.481	7198.165	0	37907.673
						Total	8813.142	13168.257	11655.010	11655.010	11655.010	3602.052	60548.481
<b>Metro Totals</b>													
						Federal	9245.000	6073.996	4288.507	4599.206	4881.473	5147.752	34235.934
						Local	1921.808	1262.634	891.475	956.062	1014.738	1070.090	7116.806
						Overmatch	10601.929	10886.083	7921.673	7433.728	7689.527	140.513	44673.453
						Total	21768.737	18222.713	13101.655	12988.996	13585.737	6358.356	86026.193

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
											(\$ in thousands)		
<b>Miscellaneous</b>													
20	PP6584	Arrival/Departure Airfield Control Group Facility for Peterson Air Force Base	CDOT	deployment facilities		Federal	8100.000	0	0	0	0	0	8100.000
						Total	8100.000	0	0	0	0	0	8100.000
						<b>Miscellaneous Totals</b>							
						Federal	<b>8100.000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8100.000</b>
						Total	<b>8100.000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8100.000</b>
<b>Planning</b>													
311a		23 U.S.C. Section 104 and Section 5303 Metropolitan Planning	PPACG	regional transportation planning		Federal	687.365	740.686	664.454	702.780	737.603	771.516	4304.404
						Local	142.886	153.970	138.124	146.091	153.330	160.379	894.780
						Total	830.251	894.656	802.578	848.871	890.933	931.895	5199.184
						<b>Planning Totals</b>							
						Federal	<b>687.365</b>	<b>740.686</b>	<b>664.454</b>	<b>702.780</b>	<b>737.603</b>	<b>771.516</b>	<b>4304.404</b>
						Local	<b>142.886</b>	<b>153.970</b>	<b>138.124</b>	<b>146.091</b>	<b>153.330</b>	<b>160.379</b>	<b>894.780</b>
						Total	<b>830.251</b>	<b>894.656</b>	<b>802.578</b>	<b>848.871</b>	<b>890.933</b>	<b>931.895</b>	<b>5199.184</b>
<b>Regional Priorities</b>													
07-18	SR26867	I-25: Northgate Rd. to El Paso County Line	CDOT	Construction of a chain-up station on I-25 south of Monument Hill		Federal	414.000	0	0	0	0	0	414.000
						State	86.000	0	0	0	0	0	86.000
						Total	500.000	0	0	0	0	0	500.000
109	PP6337	Powers Blvd.: Purchase Right-of-Way	CDOT	purchase right-of-way between Woodmen Road and Platte Avenue		Federal	828.000	414.000	828.000	0	413.950	413.950	2897.900
						State	172.000	86.000	172.000	0	86.050	86.050	602.100
						Total	1000.000	500.000	1000.000	0	500.000	500.000	3500.000
313	PP5078	SH 67 Corridor Improvements	CDOT	widen turn lanes; raise medians; improve drainage; construct sidewalks; resurface existing asphalt; signalize intersections		Federal	2866.000	0	0	0	0	0	2866.000
						State	596.000	0	0	0	0	0	596.000
						Total	3462.000	0	0	0	0	0	3462.000

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
										(\$ in thousands)			
<b>Regional Priorities (Continued)</b>													
312	PP5050	SH 115: Safety Improvements	CDOT	make safety and intersection improvements north of Rock Creek Rd		Federal	0	0	0	828.000	165.580	1655.800	2649.380
						State	0	0	0	172.000	34.420	344.200	550.620
						Total	0	0	0	1000.000	200.000	2000.000	3200.000
10	PP3350	US 24 West Corridor in Pikes Peak TPR	CDOT	perform environmental studies and safety improvements from 8th Street to the East US 24/Manitou Avenue interchange		Federal	1655.000	1242.000	0	414.000	165.580	165.580	3642.160
						State	344.000	258.000	0	86.000	34.420	34.420	756.840
						Total	1999.000	1500.000	0	500.000	200.000	200.000	4399.000
13	PP3352	US 24 East Corridor in Pikes Peak TPR	CDOT	perform scoping and corridor priority studies; provide designs for safety and capacity improvements		Federal	2070.000	0	828.000	414.000	2483.700	165.580	5961.280
						State	430.000	0	172.000	86.000	516.300	34.420	1238.720
						Local	6.000	0	0.000	0.000	0.000	0.000	6.000
						Total	2506.000	0	1000.000	500.000	3000.000	200.000	7206.000
<b>Regional Priorities Totals</b>						Federal	7833.000	1656.000	1656.000	1656.000	3228.810	2400.910	18430.720
						State	1628.000	344.000	344.000	344.000	671.190	499.090	3830.280
						Local	6.000	0	0	0	0	0	6.000
						Total	9467.000	2000.000	2000.000	2000.000	3900.000	2900.000	22267.000
<b>Rollover from Previous Years</b>													
116	PP6509	Bridge on US 24 East (I-18-G)	CDOT	design bridge replacement south of Judge Orr Rd		Federal (Bridges)	40.000	0	0	0	0	0.000	40.000
						State	10.000	0	0	0	0	0.000	10.000
						Overmatch	0.000	0	0	0	0	0.000	0.000
						Total	50.000	0	0	0	0	0.000	50.000
15	PP6053	City-wide Congestion Management	Colorado Springs	ITS on I-25, US 24 and SH 83		Federal (CMAQ)	378.366	0	0	0	0	0	378.366
						Local	78.653	0	0	0	0	0	78.653
						Overmatch	0.000	0	0	0	0	0	0.000
						Total	457.019	0	0	0	0	0	457.019
306e	PP6449	Falcon Area Park-and-Ride Facility	El Paso County	construct 200-plus space park-and-ride facility near the intersection of US 24 and Meridian Road		Federal (CMAQ)	1221.000	0	0	0	0	0	1221.000
						Local	262.625	0	0	0	0	0	262.625
						Overmatch	42.375	0	0	0	0	0	42.375
						Total	1526.000	0	0	0	0	0	1526.000



**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
											(\$ in thousands)		
<b>Rollover from Previous Years (Continued)</b>													
7	SP4027-2	I-25: SH 16 to Douglas County Line	CDOT	reconstruction, safety, capacity improvements and ITS		Fed Earmark	0	0	0	0	0	0	0
						State - RPP	0	0	0	0	0	0	0
						State - 1310	0	0	0	0	0	0	0
						State - SB1	752.000	0	0	0	0	0	752.000
						Reimburse	0	0	0	0	0	0	0
						Total	752.000	0	0	0	0	0	752.000
36b	PP6156	Manitou Springs Creekwalk Trail Phase One	Manitou Springs	Trail construction along Fountain Creek in Manitou Springs	15	Federal (Enh.)	121.000	0	0	0	0	0	121.000
						Local	30.250	0	0	0	0	0	30.250
						Overmatch	139.534	0	0	0	0	0	139.534
						Total	290.784	0	0	0	0	0	290.784
815	PP5715	Paradise Lodge Trail/US 24 Pedestrian Underpass	Woodland Park	Construct trail and pedestrian underpass under US 24		Federal (Enh.)	51.200	0	0	0	0	0	51.200
						Local	12.800	0	0	0	0	0	12.800
						Total	64.000	0	0	0	0	0	64.000
309	SP4020	Powers Blvd. in Colorado Springs	CDOT	construct 4-6 lane facility; from I-25 at Northgate Blvd to Exit 123; construction Briargate Pkwy to SH 83; environmental assessment from Woodmen Rd to SH 16		Fed Earmark	0	0	0	0	0	0	0
						RPP	44.000	0	0	0	0	0	44.000
						State	0	0	0	0	0	0	0
						State - SB1	1620.000	0	0	0	0	0	1620.000
						Local	0	0	0	0	0	0	0
						Overmatch	0	0	0	0	0	0	0
						Total	1664.000	0	0	0	0	0	1664.000
304e	PP6156	Sand Creek Trail: Barnes Rd. to Stetson Hills Blvd.	Colorado Springs	construct 1.1 mi. 12' concrete trail; construct three 8' concrete access trails from adjacent neighborhoods to Sand Creek Trail; build 2 ped. bridges	15	Federal (Enh.)	0	0	0	0	0	0	0.000
						Local	0	0	0	0	0	0	0.000
						Overmatch	85.000	0	0	0	0	0	85.000
						Total	85.000	0	0	0	0	0	85.000
						This project has additional funds shown in the Enhancement Section							
07-6	SR26646	SH 83 at Hodgen	CDOT	Installation of signals at the intersection.		Federal (Safety)	0	0	0	0	0	0	0
						State	286.000	0	0	0	0	0	286.000
						Local	25.600	0	0	0	0	0	25.600
						Overmatch	0	0	0	0	0	0	0
						Total	311.600	0	0	0	0	0	311.600
07-7	SR25317	SH 83 at Hodgen	CDOT	Installation of signals at the intersection.		Federal (Safety)	0	0	0	0	0	0	0
						State	50.000	0	0	0	0	0	50.000

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total	
							(\$ in thousands)							
							Overmatch	0	0	0	0	0	0	0
							Total	50.000	0	0	0	0	0	50.000
<b>Rollover from Previous Years (Continued)</b>														
302	PP5526	SH 83A/San Miguel Intersection Improvements	Colorado Springs			Federal (HES)	0	0	0	0	0	0	0	
							State	8.200	0	0	0	0	0	8.200
							Total	8.200	0	0	0	0	0	8.200
PP941	5	SH 94: Marksheffel to Enoch Rd.	CDOT Region 2	scoping, corridor priorities/improvements studies, safety improvement designs		Federal (RPP)	66.000	0	0	0	0	0	66.000	
							State	14.000	0	0	0	0	0	14.000
							Total	80.000	0	0	0	0	0	80.000
13	PP3352	US 24 East Corridor in Pikes Peak TPR	CDOT	perform scoping and corridor priority studies; provide designs for safety and capacity improvements		Federal (RPP)	68.715	0	0	0	0	0	68.715	
							State	14.284	0	0	0	0	0	14.284
							Total	82.999	0	0	0	0	0	82.999
10	PP3350	US 24 West Corridor in Pikes Peak TPR	CDOT	perform environmental studies and safety improvements from 8th Street to the East US 24/Manitou Avenue interchange		Federal (RPP)	120.046	0	0	0	0	0	120.046	
							State	24.954	0	0	0	0	0	24.954
							Total	145.000	0	0	0	0	0	145.000
							Other funds for this project are also included in the Regional Priorities section.							
36f	PP6156	Woodmen Road Bike Lanes	El Paso County	On street and shared path bike lanes from Templeton Gap to US 24 and trailhead connections to Rock Island and Sand Creek Trails		Federal (Enh.)	140.000	0	0	0	0	0	140.000	
							Local	35.000	0	0	0	0	0	35.000
							Total	175.000	0	0	0	0	0	175.000
12	SPP0543	Woodmen Rd.: I-25 to Powers	Colorado Springs	design right-of-way and construction of 6-lane parkway (principal arterial) from I-25 to Powers Blvd.		Federal (Metro)	4217.555	0	0	0	0	0	4217.555	
							Local	876.726	0	0	0	0	0	876.726
							Overmatch	16.664	0	0	0	0	0	16.664
							Total	5110.945	0	0	0	0	0	5110.945
49	PP3470	Woodmen Rd. Corridor Powers to US 24	El Paso County	expand 2-lane major arterial to 4-lane then to 6-lane roadway from Powers Blvd to US 24		Federal (Metro)	2980.997	0	0	0	0	0	2980.997	
							Local	712.735	0	0	0	0	0	712.735
							Overmatch	12700.000	0	0	0	0	0	12700.000
							Total	16393.732	0	0	0	0	0	16393.732
<b>Rollover Totals</b>														
							Federal	9448.879	0	0	0	0	0	9448.879
							State	2779.438	0	0	0	0	0	2779.438
							Local	15017.962	0	0	0	0	0	15017.962
							Total	27246.279	0	0	0	0	0	27246.279

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
											(\$ in thousands)		

**Safety Enhancements**

07-19	SR26648	I-25: Northgate Rd. to El Paso County Line	CDOT	Safety improvements		Federal	500.000	0	0	0	0	0	500.000
						State	0.000	0	0	0	0	0	0.000
						Total	500.000	0	0	0	0	0	500.000

**Safety Enhancement Totals**

Federal	500.000	0	0	0	0	0	500.000
State	0	0	0	0	0	0	0
Total	500.000	0	0	0	0	0	500.000

**Safe Routes to School**

		Safe Routes to School Pool	CDOT	Safe Routes to School Pool projects to be selected		Federal	184.643	231.344	207.088	219.119	230.018	240.633	1312.845
						State	0	0	0	0	0	0	0
						Local	0	0	0	0	0	0	0
						Overmatch	0	0	0	0	0	0	0
						Total	184.643	231.344	207.088	219.119	230.018	240.633	1312.845

**Safe Routes to Schools Totals**

Federal	184.643	231.344	207.088	219.119	230.018	240.633	1312.845
State	0.000	0	0	0	0	0	0
Local	0.000	0	0	0	0	0	0
Total	184.643	231.344	207.088	219.119	230.018	240.633	1312.845

**Strategic Projects**

7	SP4027-2	I-25: SH 16 to Douglas County Line	CDOT	reconstruction, safety, capacity improvements and ITS		Fed Earmark	1661.000	0	0	0	0	0	1661.000
						State - RPP	0	0	0	0	0	0	0
						State - 1310	0	0	0	0	0	0	0
						State - SB1	2000.000	0	0	0	0	0	2000.000
						Reimburse	1988.000	0	0	0	0	0	1988.000
						Total	5649.000	0	0	0	0	0	5649.000
309	SP4020	Powers Blvd. in Colorado Springs	CDOT	construct 4-6 lane facility: from I-25 at Northgate Blvd to Exit 123; construction Briargate Pkwy to SH 83; environmental assessment from Woodmen Rd to SH 16		Fed Earmark	4561.000	2561.000	0	0	0	0	7122.000
						State	578.000	320.000	0	0	0	0	898.000
						State - 7th Pot	0.000	0.000	0	0	0	0	0
						Local	385.213	320.000	0	0	0	0	705.213

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total	
							(\$ in thousands)							
						Overmatch	1372.000	1372.000	0	0	0	0	2744.000	
						Total	6896.213	4573.000	0	0	0	0	11469.213	
<b>Strategic Projects</b>														
		Strategic Projects (7th Pot) Pool	CDOT	Projects to be selected		Federal	0	0	0	0	0	0	0	
						State - 7th Pot	0	0	257.588	0	36053.551	38883.433	75194.572	
						Local	0	0	0	0	0	0	0	
						Overmatch	0	0	0	0	0	0	0	
						Total	0	0	257.588	0	36053.551	38883.433	75194.572	
						<b>Strategic Projects Totals</b>	<b>Federal</b>	<b>6222.000</b>	<b>2561.000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8783.000</b>	
							<b>State</b>	<b>2578.000</b>	<b>320.000</b>	<b>257.588</b>	<b>0</b>	<b>36053.551</b>	<b>38883.433</b>	<b>78092.572</b>
							<b>Local</b>	<b>385.213</b>	<b>320.000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>705.213</b>	
							<b>Overmatch</b>	<b>3360.000</b>	<b>1372.000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4732.000</b>	
							<b>Total</b>	<b>12545.213</b>	<b>4573.000</b>	<b>257.588</b>	<b>0</b>	<b>36053.551</b>	<b>38883.433</b>	<b>92312.785</b>
<b>Transit</b>														
53a	ST6740	Fixed Route Vehicles - USC Section 5309	Colorado Springs	capital improvements for transit services		Federal	386.250	397.838	422.189	422.189	422.189	0	2050.655	
						Local	96.563	99.460	105.547	105.547	105.547	0	512.664	
						Total	482.813	497.298	527.736	527.736	527.736	0	2563.319	
915	ST6741	Capital Improvements and Planning Efforts USC Section 5307	Colorado Springs	capital improvements and planning efforts for transit services.		Federal	4940.000	4705.640	4501.067	4501.067	4501.067	0	23148.841	
						Local	1235.000	1176.410	1125.267	1125.267	1125.267	0	5787.210	
						Total	6175.000	5882.050	5626.334	5626.334	5626.334	0	28936.051	
07-17		Fixed Route Vehicles - USC Section 5310	Disability Services Inc. (formerly Amblicab)	Purchase of two replacement vehicles in 2007 and in 2008.		Federal	102.400	0	0	0	0	0	102.400	
						Local	25.600	0	0	0	0	0	25.600	
						Total	128.000	0	0	0	0	0	128.000	
07-12		Fixed Route Vehicles - USC Section 5310	Silver Key	Purchase of replacement minivans, three in 2007 and four in 2008		Federal	110.400	0	0	0	0	0	110.400	
						Local	27.600	0	0	0	0	0	27.600	
						Total	138.000	0	0	0	0	0	138.000	
07-13		Fixed Route Vehicles - USC Section 5310	Resource Exchange	Purchase of two replacement vehicles.		Federal	38.400	0	0	0	0	0	38.400	
						Local	9.600	0	0	0	0	0	9.600	
						Total	48.000	0	0	0	0	0	48.000	

**DRAFT FY 2008 through FY 2013 Transportation Improvement Program Project Funding Tables**

TIP #	STIP #	Project Title	Project Sponsor	Description	Revised by Amendment	Funding Source	2008	2009	2010	2011	2012	2013	Total
											(\$ in thousands)		
<b>Transit (Continued)</b>													
07-16		Mobility Management Services for Pikes Peak Region USC Section 5310	PPACG	Develop a coordination program for human services and public transportation	15	Federal	64.000	0.000	0.000	0.000	0.000	0.000	64.000
						Local	16.000	0.000	0.000	0.000	0.000	0.000	16.000
						Overmatch	8.000	0.000	0.000	0.000	0.000	0.000	8.000
						Total	88.000	0	0	0	0	0	88.000
<b>Transit Totals</b>													
						Federal	5641.450	5103.478	4923.256	4923.256	4923.256	0	25514.696
						Local	1418.363	1275.870	1230.814	1230.814	1230.814	0	6386.674
						Total	7059.813	6379.348	6154.070	6154.070	6154.070	0	31901.370
<b>TOTAL - PIKES PEAK MPO</b>						Federal	51535.895	29522.173	22829.513	22371.890	28106.350	21377.119	175742.940
						State	14206.343	10869.353	10796.329	10116.290	47717.499	50201.307	143907.120
						Local	100571.552	94818.803	72439.397	60519.018	61754.461	43900.163	434003.394
						Total	166313.789	135210.328	106065.240	93007.197	137578.309	115478.589	753653.454

# APPENDIX C

## APPENDIX C: PUBLIC PARTICIPATION PLAN

# Pikes Peak Area Council of Governments Regional Transportation Planning Process Public Involvement Procedures

October 2005



**Pikes Peak Area Council of Governments  
Regional Transportation Planning Process  
Public Involvement Procedures**

**Prepared by**

**The Pikes Peak Area Council of Governments**

**In Cooperation with**

**City of Colorado Springs • City of Fountain  
City of Manitou Springs • City of Woodland Park  
Town of Green Mountain Falls • Town of Monument  
Town of Palmer Lake • El Paso County • Teller County  
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## **1.0 INTRODUCTION**

It is the goal of the Pikes Peak Area Council of Governments (PPACG) to provide a cooperative transportation planning process, one which empowers citizens to voice their ideas and opinions to help guide the decision makers in shaping the Pikes Peak Region's future. These public involvement procedures describe the framework for accomplishing the cooperative process among the participants in PPACG's transportation planning process: technical and citizen's advisory committees (see Figure 1, PPACG Program and Committee Structure), public agencies, elected officials and citizens in the Region.

PPACG is an organization of local governments serving El Paso, Park and Teller Counties since 1967. PPACG is the State and Federally recognized regional organization for planning and management of the Older Americans Act and for regional transportation planning. It is the designated lead agency for air quality planning and the water quality management-planning agency.

The Pikes Peak Area Council of Governments is the designated Metropolitan Planning Organization (MPO) for transportation planning in the Colorado Springs Metropolitan Planning Area (See Figure 2 PPACG Transportation Planning Area (MPO) Boundary). The PPACG Board of Directors is the decision-making body for transportation planning concerns in the metropolitan planning area. Both citizen and technical advisory committees support the PPACG Board of Directors in their deliberations with regard to transportation and air quality planning. A list of PPACG's member entities and descriptions of its advisory committees are included in Appendix A.

Federal Transportation legislation requires that the transportation planning process carried out by the MPO provide for public involvement in the development of its long-range transportation plan and transportation improvement program. MPO planning regulations developed by the U.S. Department of Transportation (Title 23 CFR 450.316 – see Appendix B) calls for a "pro-active public involvement process that provides complete information, timely public notice full public access to key decisions, and supports early and continuing involvement of the public in developing plans." PPACG has chosen to implement innovative approaches and elements to foster greater meaningful participation by stakeholders in the regional transportation planning process.

## 1.1 Purpose and Scope

The PPACG's public involvement procedures are to be used to guide the preparation of specific participation plans to engage the public in a meaningful way in PPACG's transportation and transportation-related air quality planning processes. These procedures are also intended to serve as an information resource to citizens who are interested in participating in the regional transportation planning process.

The following excerpt from Federal transportation law specifies the factors that an MPO must address in preparing the plans and programs required of it<sup>1</sup>:

The metropolitan planning process for a metropolitan area under this section shall provide for consideration of projects and strategies that will:

- A. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
- B. Increase the safety of the transportation system for motorized and non-motorized users;
- C. Increase the security of the transportation system for motorized and non-motorized users;
- D. Increase the accessibility and mobility of people and for freight;
- E. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- F. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- G. Promote efficient system management and operation; and
- H. Emphasize the preservation of the existing transportation system.

PPACG addresses these eight planning factors through the development of four primary products required of the transportation planning process:

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<sup>1</sup> 23 USC 134 (h)(1)(A-H). Statewide transportation planning is addressed in 23 USC 135 and includes factors consistent with metropolitan transportation planning factors.

- The Long-Range Regional Transportation Plan: The official multimodal transportation plan that is developed and adopted through the transportation planning process for the metropolitan planning area. It provides a vision for transportation in the metropolitan planning area, describes the existing transportation system and regional development patterns, and presents a comprehensive fiscally constrained plan of projects for improving regional mobility and accessibility through the 20 to 25-year planning period. Updated every four years, the regional transportation plan is developed through a coordinated and cooperative process that involves local, regional, state and federal agencies, elected officials, and citizens from all walks of life.
  
- Regional Transportation Improvement Program (TIP): The TIP is a staged, multiyear, multimodal program of transportation projects that is consistent with the regional transportation plan. PPACG's TIP is updated at least every four years or as needed to maintain concurrency with the regional transportation plan and Statewide Transportation Improvement Program. Projects must come from a fiscally constrained, conforming regional transportation plan.
  
- Public Involvement Procedures: PPACG has adopted and regularly updates its public involvement procedures as required by Federal regulation. This 2005 update was prepared based on PPACG committee input, public input, and Federal transportation legislation, SAFETEA-LU<sup>2</sup>, enacted August 10, 2005.
  
- Unified Planning Work Program (UPWP): A document that describes the transportation planning and transportation-related air quality planning activities to be undertaken in the metropolitan planning area financed with federal and/or state funds for the ensuing two years. The UPWP also contains assurances from the MPO that the regional transportation planning process meets all the requirements of federal law including Title VI of the Civil Rights Act and the Americans with Disabilities Act.

The public involvement procedures described in this document will be used as guidance in preparing specific public participation plans that delineate key decision points and describe public involvement activities for the development of the regional transportation plan and the transportation improvement program. The PPACG's Public Involvement

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<sup>2</sup> Safe, Accountable, Flexible, Efficient Transportation Equity Act—A Legacy for Users

Procedures will be maintained through the process described later in this section. The UPWP is updated every two years and reviewed through PPACG's committee structure, with opportunity for public involvement afforded at regular advisory committee and PPACG Board of Directors' meetings. The UPWP budgets funds for public involvement activities and ongoing regional communication.

Certain circumstances, such as a proposal of a new major transportation project or a significantly altered scope of an existing transportation project, major change in demographics of the Region, or certain legislative changes, may trigger the need to change or update the regional transportation plan, the transportation improvement program, or the public involvement procedures. These public involvement procedures also apply to the preparation of significant amendments to address these changes.

Federal planning regulations require that in non-attainment transportation management areas (TMA) an opportunity for at least one formal public meeting be provided annually to review planning assumptions and the plan development with interested parties and the general public (23 CFR 450.322(c)). PPACG will, to the extent possible, combine such a meeting with its other transportation planning and/or programming related public meeting functions. Planning assumption public meeting opportunities will be publicized and conducted in accordance with these public involvement procedures.

When significant updates to the public involvement procedures are contemplated, these public involvement procedures and Federal regulations will be used to guide this process. Minor administrative changes or changes triggered by Federal law or regulation may be made utilizing PPACG's committee review process with opportunity for public review and comment as specified in the PPACG's *Procedures And General Information For Regular Committee Meetings At The Pikes Peak Area Council Of Governments*, which is provided in Appendix D of this document.

These public involvement procedures may optionally be applied to other planning functions carried out by PPACG, taking into consideration other program requirements and needs, as appropriate. PPACG's Executive Director will determine the appropriateness of exercising this option.

The public involvement procedures herein satisfy the public participation requirements for most routine, traditional Federal Transit Administration Section 5307 grants if an opportunity for public hearing in which to obtain the view of citizens on the proposed program of projects is provided. However, this statement applies only to routine projects. Projects that require an

environmental assessment or an environmental impact statement will include additional public involvement as provided in joint Federal Highway Administration/Federal Transit Administration environmental regulations, Title 23 CFR 771.

## **1.2 Review and Approval**

**Note: Dates and other information in this section will be updated as appropriate.**

### Review of the 2002 Public Involvement Procedures

PPACG routinely performs a review of its Public Involvement Procedures following the completion of each regional transportation plan. Following the adoption of the 2030 Regional Transportation Plan and the 2005-2010 Transportation Improvement Program in October of 2004, PPACG Staff engaged the members of the Community Advisory Committee, the Transportation Advisory Committee, the Transportation Enhancement Subcommittee, and the Specialized Transportation Advisory Subcommittee in a discussion of successes and areas needing improvement relative to the plan development process. A brief summary of the key messages from that review are presented below:

- a. Start sooner, do more advance preparation, and provide timely turnaround of plan components, information, and plan-related documents.
- b. Provide better information regarding project linkages to vision, goals and objectives. Project applications need to address the established criteria.
- c. Facilitate clear and frequent communication between all committees, member entities, and public.
- d. Clarify what is to be included in the scope of the plan—develop a plan outline and describe scope of effort up front.
- e. Resolve PPACG and CDOT issues before meetings.
- f. Identify estimates of resources earlier in the process.
- g. Provide more contextual information in simple language for both committees and citizens.
- h. Use technology more as a tool for outreach. Visual imaging is a particularly effective tool.
- i. Simplify and clarify the process—from project submission and evaluation to the final review of the plan. Also, simplify information presented to the public—use fewer boards.
- j. Provide clear information and directions as to what is expected at public meetings.
- k. Get more information out to the public and do a survey to collect information from the public. Provide the public with information to take with them when they leave.
- l. Use other community activities as forums to present and gather information.

- m. Encourage more collaboration between [specialized] transportation providers, users, and public agencies.

These key messages were considered in this revision of the PPACG's Public Involvement Procedures. When developing specific public participation plans for preparation of regional transportation plans and/or transportation improvement programs, these key messages should be considered and addressed.

#### Public Involvement Procedures Adoption

Federal transportation regulations require that public involvement procedures, when initially adopted or revised be subject to a minimum public comment period of 45 days. The PPACG Board of Directors released these public involvement procedures on July 13, 2005. A public meeting was held August 4, 2005. The document was also distributed to the Penrose Public Library, East Library and Information Center, Kraemer Family Library (UCCS) and PPACG offices for public access. The document was posted on PPACG's website as an opportunity for review and comment. Meetings and public access locations were publicized through media releases. A final opportunity for public comment on the public involvement procedures was included as part of the public involvement procedures agenda item during the PPACG Board of Directors meeting on October 12, 2005.

Comments received during the public review of these public involvement procedures will be taken into consideration by PPACG Staff, advisory committees, and the PPACG Board of Directors and revisions made accordingly in order to produce the final document. The summarized comments and responses and how they were addressed will be documented in Appendix C of this document. The PPACG Board of Directors approved these public involvement procedures on October 12, 2005.

Figure 1

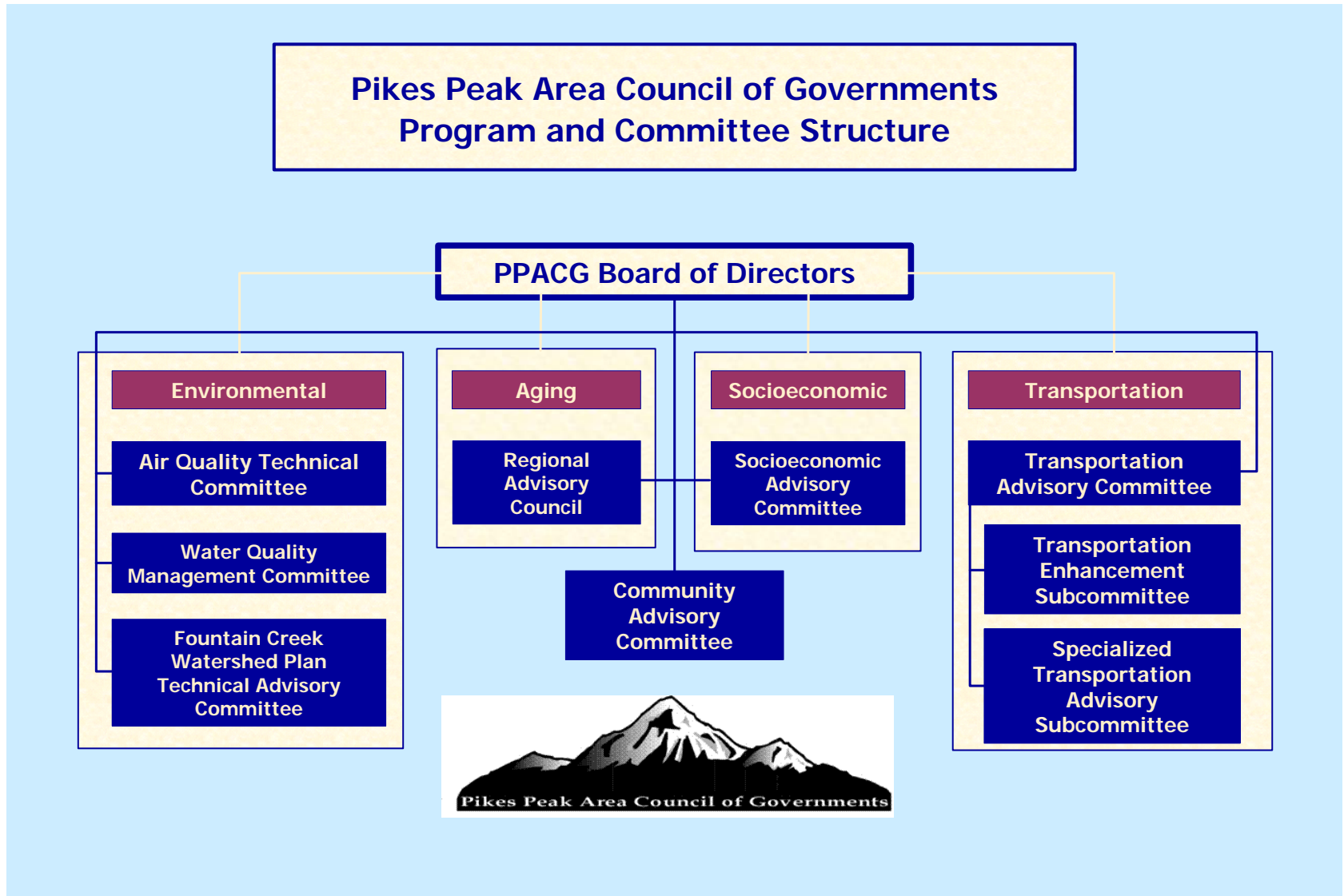
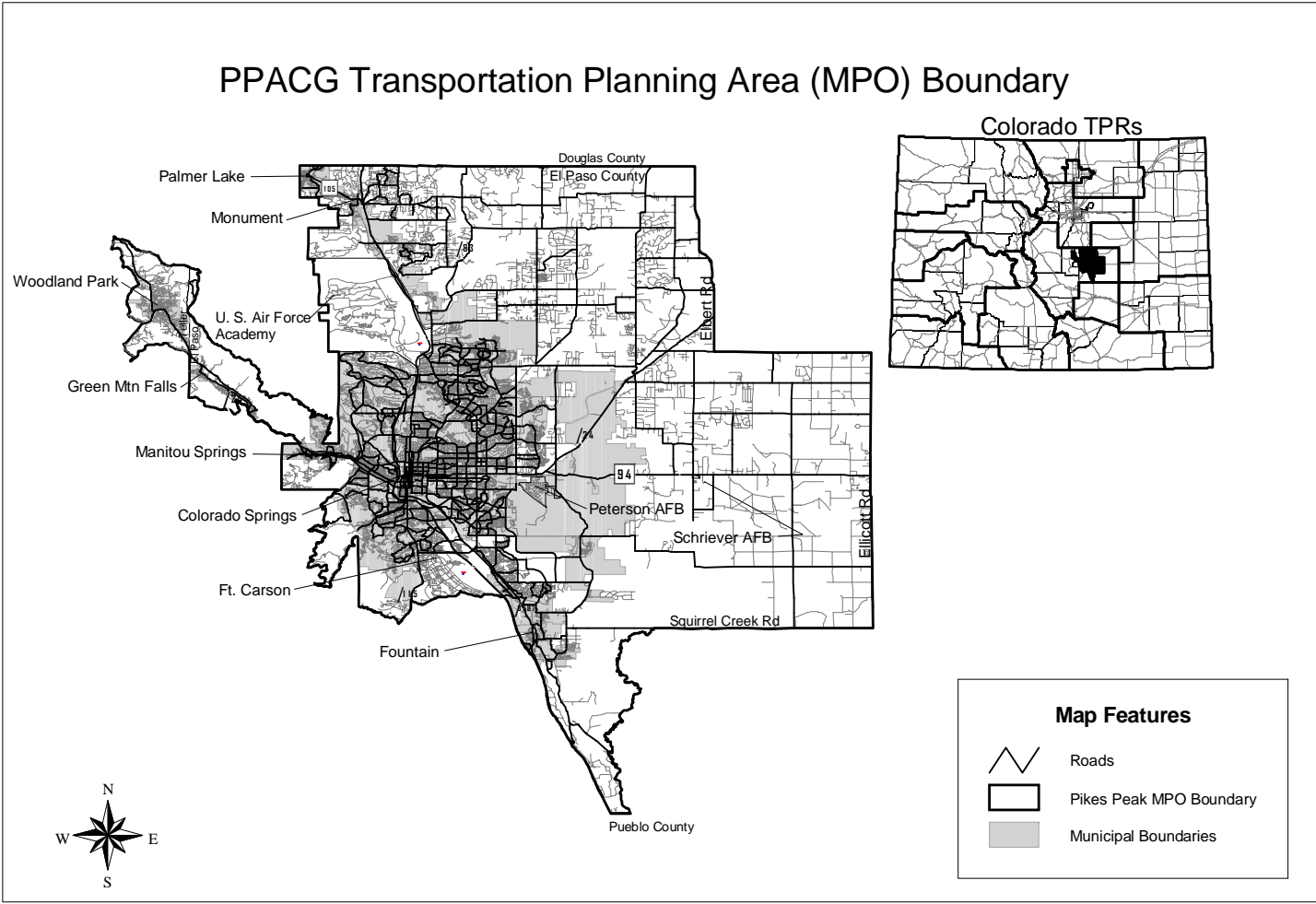




Figure 2



## **2.0 PUBLIC INVOLVEMENT GOAL AND OBJECTIVES**

The PPACG established the public involvement goal and objectives with input from its citizen and technical advisory committees. As part of this update to the public involvement procedures, the goals and objectives were reviewed by PPACG's advisory committees and the general public.

### **2.1 Public Involvement Goal**

To provide an environment encouraging pro-active and continuous public involvement while establishing and maintaining trust in the planning process. This is to be achieved through disseminating complete and timely information and providing full public access.

### **2.2 Public Involvement Objectives**

- Provide timely notice of public involvement opportunities,
- Obtain active public input early in the process,
- Ensure that all citizens who wish to have input have that opportunity, and that all ideas are given fair consideration,
- Obtain widespread community involvement throughout the planning process,
- Conduct a public involvement program as a two-way learning process,
- Perform outreach to those particularly affected by specific alternatives and plan recommendations – to involve them in the alternatives evaluation process,
- Integrate and coordinate public input for regional and local entity planning processes, where possible,
- Obtain and maintain the involvement of supporters of plan recommendations,
- Utilize the Community Advisory Committee as an advisory committee for the public involvement program, and
- Provide feedback to the public to encourage their future involvement.
- Evaluate the effectiveness of the public involvement program on an ongoing basis.

To establish and maintain trust in the planning process, public participation must be encouraged from the initiation of plan development, through creation, analysis, and formation of plan recommendations, to plan adoption and implementation. To accomplish this task, a variety of techniques to help obtain the objective of widespread public involvement are described in Section 3.0, Public Involvement Methods. The input of all participants will be carefully weighed and will be given fair consideration throughout the planning process.

To measure these objectives, PPACG will collect information during the planning process as described in Section 4.0, Evaluation of Public Involvement Procedures, and track comments and levels of participation from speaker's bureaus, open houses, public meetings, focus groups, and PPACG's Internet website.

### 3.0 PUBLIC INVOLVEMENT METHODS

These public involvement procedures require the development of specific public participation plans documenting the planning process to be undertaken by PPACG for each long-range plan or transportation improvement program development process. These participation plans will be prepared through an analysis of the requirements of the particular plan or program that is proposed to be developed, and outreach techniques and tools will be chosen to best reach the target audiences. An assessment to the extent possible of the concerns and issues that may arise during the planning process is recommended to facilitate strategic planning of outreach opportunities. These participation plans will be developed through a consultation process involving PPACG advisory committees and the public.

The public involvement process needs to be interactive with opportunities for early and continuous input into the planning process. Many organizations have found that using an effective media outreach program and ongoing citizen input through workshops, meetings, and focus groups creates the most effective public planning process. These activities will occur to the extent possible for a given planning process.

Core components to include in public participation plans are a media program, methods defining how interested parties, including low-income and minority populations, will be interactively involved in the plan development process, how ongoing communication will be maintained and a plan and/or program development schedule. The schedule will identify the key decision points and generally identify when public input opportunities can be expected to occur. These core components are described below with description of specific techniques that can be used. It should be noted that not all these techniques will need to be used for any one planning process and that additional techniques not specified herein may be used. The specific public participation plan documentation will be prepared using these public involvement procedures as guidance and subsequently reviewed by the Community Advisory Committee and Transportation Advisory Committee before being adopted by the PPACG Board of Directors.

PPACG, to the maximum extent practicable, will hold public meetings at accessible locations and times, employ visualization techniques to describe plans, and make public information available in electronically accessible formats and means, including PPACG's website, [www.ppacg.org](http://www.ppacg.org), as appropriate to provide reasonable opportunity for interested parties to review and comment on transportation planning issues, recommendations, plans, and programs.

### **3.1 PPACG Advisory Committee Structure**

PPACG's standing committees provide the conduit for ongoing community input to address regional transportation and air quality issues. Stakeholders in the regional transportation system, elected officials, Federal, State, and local governments' staff members, and citizens, meet regularly to discuss issues of mutual concern, share data, and coordinate planning activities. Since PPACG's standing committees serve as the "nucleus" of the regional transportation and air quality planning public processes, PPACG strives to ensure that its committee meetings are open and accessible to the public; and that opportunity for members of the public to share their views is included on every committee agenda.

All PPACG committee meetings are open to the public; and most committees maintain a regular monthly or quarterly schedule of meetings. Public input is explicitly considered by the committees and often results in advice given to the PPACG Board concerning modification, additions, or alterations to the finished plan. Members of the public may address committees at the appropriate point on the agenda on all action items. Each committee agenda also includes an item where members of the public can address the committee on items not on the agenda. PPACG has prepared a document that provides general guidance for the conduct of regular committee meetings at PPACG, which is included in Appendix D of this document and on the PPACG Internet website: [www.ppacg.org](http://www.ppacg.org).

Interested persons can have their names added to the mailing list to receive committee agendas. Additional materials mailed to committees are included the extent possible on PPACG's Internet website.

### **3.2 PPACG's Internet Website**

PPACG's Internet website, [www.ppacg.org](http://www.ppacg.org), is used as a focal point for dissemination of information for all of its programs and plan development processes. Frequently updated, the website contains a schedule of upcoming PPACG meetings, press releases, public meeting announcements and planning documents, both drafts in progress and final, adopted versions.

For development of regional transportation plans or transportation improvement programs, PPACG provides a web page dedicated to publishing contemporary information relevant to that effort such as:

- Schedule and Progress
- Project Descriptions
- Plan Documents
- Multi-modal Transportation Subjects
- Public Meeting Announcements
- Projects Prioritization
- Transportation-Related Links
- Mailing List Sign-up

A “Hot Topics” button is provided on the home page to provide web page viewers with instant access to the most recent information. Viewers can participate in interactive surveys, and comments may be submitted via the web page. Viewers can also link to other transportation planning related sites for contextual information and data.

### **3.3 Outreach to Under-Served Populations**

Presidential Executive Order 12898 (1994) directed each Federal agency to make Environmental Justice part of its mission. To implement this executive order, the U. S. Department of Transportation (DOT) directs its funding recipients to address the following fundamental environmental justice principles:

1. To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

These public involvement procedures contain measures intended to help PPACG reach a broad section of the community. The PPACG’s transportation planning process is structured to ensure that all comments and input are given fair consideration.

To address Items 1 and 3 above, as a part of the analysis required for regional transportation plans and/or transportation improvement programs, PPACG will utilize its geographic information system to assemble spatial baseline information on residential locations of low-income households and minority households. This information will be summarized into maps, and project locations will be overlaid to evaluate benefits and/or burdens of specific projects on low-income populations and minority populations. PPACG will use the definitions of minority groups as defined by the Federal Highway Administration and the U. S. Census Bureau. These definitions are as follows:

1. Black – having origins in any of the black racial groups of Africa;
2. Hispanic – of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
3. Asian American – having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands;
4. American Indian or Alaskan Native – having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.

Methodology for definition of low-income or below poverty level groups will be based on standard definitions used by the U. S. Census Bureau.

To address Item 2, specific outreach efforts will be made to encourage participation by ethnic, minority, and low-income groups, persons with disabilities and elderly persons in the transportation planning and decision-making process. The baseline maps prepared to address Items 1 and 2 will be utilized to identify higher than county average concentrations of low-income populations and minority populations and target geographic areas to receive additional outreach. To facilitate such involvement, community-based organizations representing these populations should be contacted for input and guidance into removing barriers to participation. When choosing public meeting locations and times, special needs will be considered, including availability of public transit. Meeting materials and documents will be prepared in accessible formats upon request and will be made available in electronically accessible formats on PPACG's website, [www.ppacg.org](http://www.ppacg.org). Public meetings will be held in locations compliant with the American with Disabilities Act. Press releases to media organizations whose readership, listeners, or viewers include minority and ethnic populations will be utilized to announce public participation opportunities.

All public meetings will be announced at least ten days prior to the meetings by one or more of the following means: media release, published advertisements in regional newspapers, flyers to neighborhood associations and mailing-list participants, PPACG's website, [www.ppacg.org](http://www.ppacg.org), and other appropriate notification means. Additional publicity efforts will be employed when initiating planning processes for major plans such as a regional transportation plan. When feasible, public meetings of similar issues, plans, and programs will be coordinated with the statewide transportation planning public involvement process. All public meetings will be held in locations that are Americans with Disabilities Act (ADA) accessible and to the extent possible near alternative modes of transportation, in particular, transit services. This accessibility includes (but is not limited to) deaf interpreters, wheelchair-accessible buildings, language

translators, and documents in Braille, on audiotape, or on CD. Documents can be provided in accessible formats when five days notice is given. Advertising will include contact information for persons needing special accommodations and arrangements can be made for accessible accommodations to be provided with 48-hour advance notice.

### **3.4 Target Audiences**

PPACG will seek to inform and involve the following groups and individuals regarding regional transportation planning issues, processes, and plans:

- Airport authorities,
- Businesses,
- Faith-based organizations,
- Chamber of Commerce
- Citizens,
- Citizen groups,
- Civic organizations,
- Economic development groups,
- Emergency response organizations,
- Freight shippers,
- Freight transportation service providers,
- Governmental entities and officials,
- Government agencies and non-profit organizations that receive Federal assistance to provide non-emergency transportation services,
- High school and college students,
- Homeowners associations,
- Human service agencies,
- Low-income populations,
- Media,
- Military installations,
- Minority populations,
- Native Americans,
- Neighborhood associations,
- Organizations and agencies that represent the needs of persons with disabilities,
- Parent teacher associations,
- Persons with disabilities,
- Public and Private transportation providers,
- Recipients of assistance under USC 23 204 (Federal Lands Highway Program)
- Regulatory agencies,



- Representatives of users of public transportation and users of bicycle and pedestrian facilities
- School districts,
- Senior populations and organizations,
- Tourist organizations, and
- Youth service organizations.

### 3.5 Media Outreach

Media outreach for the PPACG public involvement program may take place during each key phase of the public involvement process. This outreach will be coordinated through a PPACG spokesperson. Media outreach will be used to inform the public of the key study events, to encourage the media to highlight transportation issues, and to increase awareness of the transportation planning process. Press releases and calendar of events' listings should be distributed at least two weeks before major events. To the extent possible, meeting information should be provided to weekly newspapers two weeks or more in advance to allow timely publication. See Appendix E, Media Contact List, for a current media list. Media outreach techniques can include:

- Briefings: Media briefings can be conducted to provide the media with information regarding the transportation planning process and to answer any questions in regard to transportation issues. Information should be tailored for clear communication to the public.
- Media Interviews/Talk Shows: Local media interviews, including print, television and radio talk shows are important means of conveying information about transportation planning objectives and progress. These interviews provide the opportunity to discuss planning elements in further detail and to address questions from the media and the public. Media interviews may be coordinated with press releases to increase public interest. Television call-in surveys are useful to get input on popular or controversial issues. Public access channels may be used as means to publicize and/or broadcast meetings.
- Press Releases and Public Service Announcements: Press releases and public service announcements (PSA) should be used to inform the media about upcoming transportation planning activities or events. Press releases will be dated and double-spaced to allow editors to easily make notes or changes.

Public service announcements may be used to publicize specific public meetings or other participation activities. The PSA should include the complete text of message, which should be brief and provide only specific information such as meeting purpose, time, place and ADA accessibility information.

Non-English speaking outlets often will translate the press release or PSA information for their audiences for little or no charge.

- Calendar of Events/Advertisements: The PPACG website, the local media “Calendar of Events” and advertisements will be used to notify the public about public meetings and public hearings.

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### **3.6 Public Interaction Techniques**

These workshops, meetings, and special briefings will provide a forum through which partnerships can be forged between stakeholders of the transportation system. Further, they will provide the interested public with the opportunity to interact one-on-one with PPACG Planning Staff and to actively contribute to the policy and decision-making process on transportation planning. These meetings will provide the opportunity for early and continuous input into the process and provide outreach to various professional, civic, cultural, and community groups. These groups will include, but not be limited to schools, neighborhood associations, businesses, community centers, and organizations that serve the needs of persons with disabilities and elderly persons.

The following lists methods that may be used to conduct and facilitate public interaction:

- Speaker's Bureau: The Speaker’s Bureau is a pro-active outreach effort to a greater number of citizens not already directly involved through the transportation-related committee structure and those traditionally under-served by existing transportation systems. The speaker maximizes audience input using comment and meeting summary forms. Targeted groups include, but are not limited to, those listed in Section 3, organizations such as civic-related classes in high schools, parent-teacher associations, neighborhood groups, community centers, and chambers of commerce. Key project staff form the core group of speakers to educate these groups on the process and issues involved in transportation planning and to seek out comments on transportation proposals. Efforts will be made to bring in experts for community-wide lectures on various issues.
- Focus Groups: Focus groups are conducted by an impartial or neutral facilitator as an additional interactive method for obtaining meaningful input at critical milestones and to gain understanding of perceptions, concerns and level of knowledge about the issues. Participants for focus groups may be selected in two ways: 1) solicited from

the general public at random, and, 2) selected to help elicit a particular position or point of view. Selection techniques can be varied to result in focus groups made up of people knowledgeable in transportation issues and those who are solely users of the transportation system

- Facilitated Workshops: These workshops provide education and solicit input through facilitated sessions. As with the focus groups, they provide a mechanism for a higher level of participation in the planning process. The opportunity to receive information in advance of the facilitated workshop meeting can be provided.
- Open House Meetings: The open-house format for general public meetings offers another means to enhance two-way communication by talking with citizens one-on-one and soliciting their input on the planning process. Information stations with displays and other supporting materials can be used and comment forms made available. This information could include interactive computer displays. A station should be available with an individual to record formal verbal comments of participants or audio/video taping should be available. Open houses may be combined with other meetings. The opportunity to receive information in advance of the open house meeting may be provided.
- Elected Official Briefings: These briefings offer education and updates on the status of the transportation planning process so that the officials may be able to answer questions from their constituency. These briefings may occur during PPACG Board of Directors' meetings or may be provided at the member entity council, commission or board meetings. The same information as presented through the speaker's bureau and other general outreach could be used.
- Mall Displays: Appropriate shopping malls throughout the Region may be selected for displays. These displays could contain materials such as project brochures, newsletters, fact sheets, comment forms, any reports available for the public, boards and eye-catching signage. These displays could include interactive computer displays, staffed displays, or stand-alone displays. Special activities held at malls may provide additional outreach opportunities and may be utilized when appropriate.
- Public Fairs/Special Events: Information can be provided to the public on the planning process and/or plans in progress utilizing various community events, such

as SpringsSpree, career and local government fairs, home and garden shows, or media events. A “traveling display” may be assembled to take to these community events. Short survey forms that can be filled out quickly by participants, mailing list sign-up forms and other information appropriate for the event could be provided. Small gifts or premiums may also be provided.

- Final Public Hearing – A final public hearing to formally present the recommended plan to the public in its entirety (following recommendations by the appropriate PPACG Committees and public input) will be held prior to adoption of the plan. A public comment period prior to the PPACG Board of Directors formal adoption of the plan will be given to allow the public to provide input. The comments received during the official review period will be responded to in a formal summary, and may affect the final plan as adopted. Comments received after the official review period has closed will not be responded to in the final plan document. The opportunity to receive information in advance of the final public hearing will be provided. Documents will be distributed to libraries and will be available in PPACG’s administrative offices, where it will accessible to the public. These entities will be provided with a form to certify the document’s availability to the public for the entire review period.
- Meeting Summary Form: This form will be used to provide a medium for members of the public to record their comments at the various input opportunities or meetings. A draft of this form is in Appendix D.
- Internet E-mail: PPACG’s website, [www.ppacg.org](http://www.ppacg.org), will be utilized to solicit email comments and to provide information on meetings, document availability, and general information on the planning process. The website address will be included in publicity materials.
- Public Opinion Surveys – Public opinion surveys may be used to obtain input from the general population of the region, including those who traditionally do not attend public meetings. Formal public opinion surveys are conducted using a scientific methodology on a statistically representative sample of the population or of specific areas or population groups. Informal surveys may be administered through the website, the newspaper or at public meetings and serve as an aid to solicit input and feedback. Public opinion surveys, whether formal or informal,

should be used in concert with other public involvement techniques and with the goals of the survey and its role in the public involvement process clearly identified. When formal surveys are used, professional consultant assistance is generally used to help ensure accuracy of results and guard against bias.

### **3.7 Communication Techniques**

Project materials will be used to obtain public input and will support ongoing two-way communication. This communication effort includes providing reasonable access to technical documents, educational and informational materials, and copies of PPACG committee meeting minutes; and providing the opportunity for public input. PPACG will utilize its website to the maximum extent possible to post information materials pertaining to plan and/or program development. Community-based organizations will be requested to provide assistance to reach their constituents or members with information on transportation planning activities and meetings. As part of developing a consistent visual image to foster public identification of the transportation planning process underway, a project identity using a distinctive logo developed and used on all materials produced. Where appropriate, communication and informational materials will be used to present information on how public comments have been used and/or are being addressed in the planning process. Possible communication techniques are listed below.

- PPACG's Internet Web Site - The Pikes Peak Area Council of Governments maintains an Internet website: [www.ppacg.org](http://www.ppacg.org). A web page specifically for plan and/or program development news will be maintained on PPACG's website. The web page will contain timely plan program information such as upcoming meetings, input opportunities, maps and draft planning products. Summaries of public comments made during the planning process will be listed and responses to those will be provided to the extent possible. Appropriate links to other organization's sites will be included. Descriptions of PPACG's programs, contact information, economic and demographic information, employment information and links to other organizations websites are also available.
- Regional Communication Database: To increase the participation of citizens and organizations in the transportation planning process, PPACG has developed and will maintain a regional communications contact/mailling-list database. The database will be updated as needed and expanded to include those groups and communities not now actively involved in the process and others as noted in Federal and state

legislation/regulations. In addition to groups identified in legislation, PPACG will add those interested parties requesting placement on this mailing list. Participants on the list may be asked to verify their ongoing interest by returning a postcard or calling PPACG. PPACG may provide contact information from its database to local government jurisdictions or to the Colorado Department of Transportation for the purpose of contacting citizens with regard to transportation and/or air quality related planning studies.

- Newsletters: Newsletters have been shown to be an effective communication tool and consultation with citizens has shown it to be a preferred method to receive information. Newsletters may be used to provide timely information on the planning process, answer frequently asked questions, announce meetings, present key issues, offer alternatives or provide draft plan concepts under consideration, promote the website as an ongoing information resource, and provide other contact information. It will offer another avenue to provide input by soliciting "letters to the editor." The newsletter will be sent out to those on the mailing list and made available at repositories, meetings and presentations.
- Fact Sheets: Fact sheets help to translate into layman's language the background, regulatory requirements, network alternatives, and other technical aspects of transportation planning. These fact sheets may be coordinated by subject area (i.e., mass transit, bicycle and pedestrian transportation, planning approaches used by other areas) or by the stages of the planning process.
- Mapping products: maps and other geographic information system (GIS) products may be used to help define an area of concern, illustrate system problems or portray transportation system alternatives. Maps can be included in information packets, as illustrations on fact sheets, in publicity materials and on the website. They may also be produced in a large format for display at public meetings or other events.
- Information Packets: Information packets can be used for media briefings, elected official briefings, and speaker's bureau presentations and for distribution to interested members of the general public. Typically, these will include copies of press releases, project brochures, newsletters, fact sheets, maps and other materials developed for a particular event.

- General Brochure: A general brochure designed to give a succinct overview of the entire transportation planning process and to describe how citizens can participate throughout can be an effective outreach tool. It can be mailed out, included in packets, placed in repositories, and generally widely distributed. Project contact information can be included and the brochure could include a mail-back card to solicit mailing-list additions.
- Flyers: One-page flyers may be used to announce meetings and other public involvement elements. These can be distributed through schools; included in church bulletins; posted/distributed at community centers, libraries, and grocery stores; used as newspaper inserts; and distributed to neighborhood organizations and those on the mailing list.
- Road Signage: Highway signs or billboards on affected routes may be used to inform transportation users about the planning process underway and to advertise the telephone comment line number.
- Information Repositories: PPACG will continue to use the following locations to provide copies of project materials for the public:
  - Libraries to include Penrose Public Library, East Library and Information Center and Kraemer Family Library (UCCS),
  - Administrative offices of PPACG, and
  - Other locations as deemed appropriate for the particular plan in progress.
- Acknowledge Comments: PPACG Staff will acknowledge public comments received throughout public involvement activities and in the final plan. A record of all public comments will be maintained at PPACG. Summaries of comments and responses will be included in final plan/program documentation.
- Final Plan Documentation: Regional transportation plans and programs will include a summary, analysis, and report on how comments were responded to as part of the final regional transportation plan or program.



### **3.8 Time Period for Public Review and Comment on Draft Documents Prior to Final Adoption**

The length of time specified for public review of draft documents may vary according to the scope of the planning process undertaken and the nature of the decisions to be made. The schedule published in the public involvement programs shall provide adequate time for public and PPACG committee review and comment prior to the PPACG Board of Directors taking final action on plan or program recommendations.

### **3.9 Response to Public Comments**

As provided for in these public involvement procedures, PPACG will seek out and consider public input from a wide range of sources. Summarized oral comments will be recorded at public meetings, and forms for written comments will be provided at all public meetings with PPACG's mailing address and staff contact information. PPACG's Internet web site will provide the opportunity for users to email comments on plan components that are published therein.

Comment summaries may be provided to advisory and policy committees and at subsequent public meetings relevant to the topic. PPACG Staff and advisory committees will expressly consider public input, which may result in revision to draft plans and programs, as appropriate. Summaries of how comments are addressed, i.e., changes made, text revised, and/or alternatives considered, should be prepared and distributed at subsequent committee or public meeting. Subject to Staff resources, attempts will be made to respond to public comment in a timely manner. All comments submitted and responses thereto become part of the public record and may be published and/or cited by PPACG and PPACG member governments or other organizations as required by Federal or State law.

Articles featuring summarized comments may appear in newsletters or on the PPACG's Internet web site. Final documentation for plans and programs shall include a summary, analysis and report on the disposition of comments.

## 4.0 EVALUATION OF PUBLIC INVOLVEMENT PROCEDURES

Federal regulations require that the public involvement procedures of a Metropolitan Planning Organization be reviewed periodically for effectiveness in assuring that the process provides full and open access to all. To determine whether specific public involvement programs, such as that for the Regional Transportation Plan or Transportation Improvement Program, have accomplished the established public involvement objectives, evaluation should occur throughout the duration and at the conclusion of the planning process. This evaluation process can help to determine program progress and whether adjustments are needed to better facilitate public involvement in the transportation planning process.

Information may be gathered from surveys, input solicitation and meeting evaluation forms, public comment, and from PPACG advisory committees. Throughout the Plan development process, public comments should be assessed to determine what provisions need to be made to make meetings more accessible and the information more understandable, and to determine what other measures could be undertaken to enhance public participation.

These public involvement procedures recommend that for each major planning process undertaken by PPACG, a public involvement program specific for that process be prepared. Several methods are suggested below that can help solicit feedback from participants in order to gauge the effectiveness of the public involvement techniques:

- Comment forms at meetings, workshops, and displays;
- Meeting evaluation forms;
- Surveys which ask questions regarding demographics or whether an individual has heard about public meetings and/or other input opportunities;
- Telephone comments;
- Citizen letters;
- Internet E-mail;
- Newsletter questionnaires;
- Questions and comments made during meetings, workshops, and at displays;
- Focus group comments; and,
- Recorded comments at public hearings.

Public involvement programs developed for each major planning process should specify tools used to record and analyze public input. This information will help PPACG identify trends and potentially predict future participation; therefore, future efforts can be applied in those areas where resources and response will be the most productive.

## **Appendix A**

### **PPACG Member Entities and Description of Committees**



**Pikes Peak Area Council of Governments  
Member Entities and  
Policy and Advisory Committees  
Description and Representation**

**PPACG Member Entities**

Voting Members:

The City of Colorado Springs (3)\*

The City of Cripple Creek

The City of Fountain\*

The City of Manitou Springs \*

The City of Victor

The City of Woodland Park\*

El Paso County (3)\*

Teller County\*

Park County

The Town of Alma

The Town of Calhan

The Town of Green Mountain Falls\*

The Town of Fairplay

The Town of Monument\*

The Town of Palmer Lake\*

Ex-Officio Members:

Public Transportation Representative

Colorado Transportation Commission

Colorado Air Quality Control Commission

\*Metropolitan Planning Organization Member

All committee meetings are open to the public. Meetings are held in PPACG's Conference Room at 15 South 7th Street, Colorado Springs, unless otherwise noted. From time to time, committee meetings may be cancelled or times and/or locations adjusted. Agendas are published on PPACG's web site, [www.ppacg.org](http://www.ppacg.org), approximately one week before the meeting date. To confirm meeting dates and times, call PPACG at 719.471.7080.

**Air Quality Technical Committee:** The purpose of this committee is to:

- A. Advise the Pikes Peak Area Council of Governments and PPACG staff on current and emerging issues, goals, plans, and programs affecting the air quality of the Pikes Peak Region; and
- B. Aid in the review and advise in the development of regional air quality plan updates.

This committee is composed of staff from planning entities in the region and the State of Colorado. It provides advice to the PPACG on technical activities related to regional air quality and the State Implementation Plan for air quality. Committee meetings are held on the fourth Wednesday of the month at 1:30 p.m. Meetings usually last two to three hours.

**Current Representation<sup>3</sup>**

City of Colorado (2 representatives)	Town of Monument
City of Fountain	Town of Palmer Lake
City of Manitou Springs	Colorado Department of Transportation (Ex-officio)
City of Woodland Park	Fort Carson (Ex-officio)
Colorado Pollution Control Division	Peterson Air Force Base (Ex-officio)
Colorado Springs Utilities	PPACG Transportation Program (Ex-officio)
El Paso County (3 representatives)	PPACG Environmental Program
Teller County	Schriever Air Force Base (Ex-officio)
Town of Green Mountain Falls	U. S. Air Force Academy (Ex-officio)

**Community Advisory Committee:** The purpose of this committee is to:

- A. Advise and recommend appropriate courses of action to the PPACG Board of Directors and PPACG Staff on regional issues directly related to the mission and programs of PPACG brought before it by PPACG and by citizens and citizens groups; and
- B. Assist the Pikes Peak Area Council of Governments and the PPACG staff in keeping the general public informed relative to regional plans and programs.

This committee provides citizen input on planning matters related to the mission of PPACG. It is composed of citizens appointed by the general-purpose governments in the Colorado Springs urban planning area, an at-large membership and representatives of community-based organizations. Committee meetings are held on the third Wednesday of the month at 3 p.m. Meetings usually last two hours.

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<sup>3</sup>. Unless indicated otherwise, entity listed has one representative.

## Current Representation

Citizen-at-Large (6 representatives)	League of Women Voters
City of Colorado Springs (3 representatives)	El Paso County
City of Fountain (2 representatives)	Teller County
City of Manitou Springs (2 representatives)	Town of Green Mountain Falls
City of Woodland Park	Town of Monument
Colorado Springs Chamber of Commerce	Town of Palmer Lake
Council of Neighbors and Organizations	PPACG Staff (non-voting)

**PPACG Board of Directors:** The Board is the governing and policy-making body of PPACG and is composed of elected officials representing general-purpose governments in El Paso, Park, and Teller Counties.

Designated as the Metropolitan Planning Organization for the Colorado Springs area, the PPACG Board of Directors formulates policies, plans, and programs necessary to the planning process for transportation, land use, and air quality management for urban areas and areas likely to become urbanized within the 20-year planning horizon. On all matters related to the MPO, upon the request of any participating member entity within the Colorado Springs metropolitan area, voting on the long-range plan or transportation improvement plan of the MPO is limited to participating members of entities within the Colorado Springs metropolitan area (Cities of Colorado Springs, Fountain, Manitou Springs, and Woodland Park, Towns of Green Mountain Falls, Monument, and Palmer Lake, and El Paso and Teller Counties). Meetings are held on the second Wednesday of the month at 9:00 a.m. Meetings usually last two to three hours.

### Current Representation:

\*MPO voting member

City of Colorado Springs (3 representatives)*	Teller County*
City of Cripple Creek	Town of Alma
City of Fountain*	Town of Calhan
City of Manitou Springs*	Town of Fairplay
City of Victor	Town of Green Mountain Falls*
City of Woodland Park *	Town of Monument*
El Paso County*	Town of Palmer Lake*
Park County	

**Regional Advisory Council to Area Agency on Aging:** The purpose of the Council is to advise and recommend to the PPACG Board of Directors and PPACG staff action on matters regarding the development of an area-wide system of coordinated and comprehensive services for older persons to enable them to maintain as much independence as possible.

In order to carry out its purposes, the Council will assist the Pikes Peak Area Agency on Aging by the following:

- A. Advise on all matters relating to the development and implementation of the four-year plan, annual update and revisions related to the same. The Council shall review the four-year plan, annual update, Title III budget and all revisions prior to their



submission to the state agency for approval. The chairperson of the Council shall indicate completion of review by signature on the proposed plan or part of the plan submitted to the state agency for approval.

- B. Advise and recommend on the policies and procedures manual of the Area Agency on Aging.
- C. Review and comment on community policies, programs and actions affecting older individuals; the conduct of public hearings; representation of the interests of older persons; and encourage the involvement of older persons.

The Regional Advisory Council is composed of representatives of the PPACG's three-county region, with at least 50 percent over age 60, who provide oversight, input and guidance for the expenditure of federal/state Older Americans Act funds that come to the region. The Council advocates for seniors, addresses issues of concern to the older population, and encourages the development of a comprehensive system of services for older persons in the area. Council meetings are held on the last Thursday of the month at 10:30 a.m., depending upon whether there is a Training session prior to the Business meeting. Location is usually at PPACG unless the Council is visiting another County in the region. Meetings last approximately two hours.

**Current Representation:**

Elected Officials/General Public (8 representatives)	Park County
El Paso County (4 representatives)	Teller County
El Paso County Department Of Human Services	Veteran's Services
Health Care Providers – El Paso County Department of Health and Environment	

**Socioeconomic Advisory Committee:** The purpose of this committee is to:

- A. Advise the PPACG Board of Directors and staff on economic and demographic data needs;
- B. Provide a forum for discussion of regional economic and demographic issues; and
- C. Provide technical advice in the development of PPACG related publications and studies.

This committee is composed of local experts in the field of socioeconomic data analysis and applications. It advises PPACG staff on economic and demographic data needs, provides forum for discussion of regional economic and demographic issues, and provides technical advice to PPACG on related publications and studies. The committee meets at 2:00 p.m. on the second Friday of February, May, August and November. Meetings usually last two to three hours.

**Current Representation:**

City of Colorado Springs (2 representatives)	El Paso County (2 representatives)
City of Fountain	Teller County
City of Manitou Springs	Citizen-at-Large (5 representatives)
Colorado Springs Utilities (2 representatives)	

**Specialized Transportation Advisory Subcommittee:** The purpose of this subcommittee is:

- A. To advise the Pikes Peak Area Council of Governments, through the Transportation Advisory Committee, on current and emerging issues, goals, and plans relative to specialized transportation services for elderly persons and persons with disabilities in the Pikes Peak Region;
- B. To provide a forum for coordinating the services of those agencies providing specialized transportation services to elderly persons and persons with disabilities in the Pikes Peak Region; and
- C. To assist the City of Colorado Springs in monitoring and coordination of the Complementary Americans with Disabilities Act Paratransit Service Plan for Colorado Springs, Colorado.

This Subcommittee of the Transportation Advisory Committee is composed of area providers of specialized transportation for persons with disabilities and elderly persons and consumers of those services. It provides forum for coordinating specialized transportation services and advises the Transportation Advisory Committee on planning matters regarding these services. Meets quarterly the fourth Tuesday of the month in January, April, July and October.

**Current Representation:**

Amblicab/Pikes Peak Partnership	Silver Key Senior Services
City of Colorado Springs Public Works/Paratransit	Springs Mobility
Colorado Springs Independence Center	Springs Transit
Colorado Division of Vocational Rehabilitation	Teller Senior Services
Community Partnership for Child Development/Head Start	The Resource Exchange
Easter Seals of Southern Colorado	Yellow Cab
Fountain Valley Senior Services	Colorado Department of Transportation – Transit Unit
Goodwill Industries	PPACG Transportation Program
Paralyzed Veterans of America	Pikes Peak Area Agency on Aging
Pikes Peak Mental Health Center	Transit/Special Transit Users (5 representatives)
Regional Advisory Council	Community Intersections

**Transportation Advisory Committee:** The purpose of this committee is to provide technical advice and to recommend appropriate courses of action to the Pikes Peak Area Council of Governments Board of Directors and PPACG staff on current and emerging transportation issues, goals, plans, and programs affecting Planning and Management Region IV. The advice and recommendations will address at least the Transportation Improvement Program, Unified Planning Work Program, Long-Range Transportation Plan, and transportation program elements of the State Implementation Plan for Air Quality.

This technical advisory committee is composed of staff from the local governmental entities that make up the Metropolitan Planning Organization (see below) and from the Colorado Department of Transportation. The committee reviews transportation planning documents and provides technical advice and recommendations to Pikes Peak Area Council of Governments Board of Directors and to the PPACG Staff. Committee meetings are held on the third Thursday of the month at 1:30 a.m. Special meetings are frequently scheduled for this committee. Meetings usually last three hours.

**Current Representation:**

City of Colorado Springs (2 representatives)	Colorado Springs Utilities (Ex-officio)
City of Fountain	Federal Highway Administration (Ex-officio)
City of Manitou Springs	Federal Transit Administration (Ex-officio)
Colorado Department of Transportation (2 representatives)	Fort Carson (Ex-officio)
El Paso County (2 representatives)	Peterson Air Force Base (Ex-officio)
Teller County	PPACG Transportation Program (Ex-officio)
Town of Green Mountain Falls	Schriever Air Force Base (Ex-officio)
Town of Monument	Springs Transit (Ex-officio)
Town of Palmer Lake	U. S. Air Force Academy (Ex-officio)
Colorado Department of Health – Air Pollution Control Division (Ex-officio)	

**Transportation Enhancement Subcommittee:** The purpose of this subcommittee is to provide technical advice and to recommend appropriate courses of action to the Transportation Advisory committee and PPACG Staff on current and emerging transportation enhancement planning issues, goals, plans, priorities and programs. The advice and recommendations must address the Bicycle and Pedestrian Facilities Element of the Regional Long-Range Transportation Plan and its implementation as well as consider the other enhancement categories as set forth by Title 23, USC, Section 133 of the Intermodal Surface Transportation Efficiency Act of 1991, and all subsequent federal legislation.

**Current Representation:**

City of Colorado Springs (2 representatives)	Colorado Springs Cycling Club
City of Fountain	League of Women Voters

City of Manitou Springs  
City of Woodland Park  
El Paso County  
Teller County  
Town of Green Mountain Falls  
Town of Monument  
Town of Palmer Lake

Ridefinders  
Trails and Open Space Coalition  
Teller Historic and Environmental Coalition  
Ute Pass Historical Society  
PPACG Transportation Program (non-voting)  
Transportation Advisory Committee

This subcommittee of the Transportation Advisory Committee is charged with providing technical advice relative to transportation enhancement projects as addressed the Intermodal Surface Transportation Efficiency Act of 1991 and subsequent federal legislation. It is composed of local agency technical staff and an at-large membership with demonstrated technical background and/or understanding of transportation enhancement issues in the Pikes Peak Region. Committee meetings are held on the first Friday of the month at 9 a.m. Meetings usually last one to two hours.

The objectives of this committee are to serve as the metropolitan planning organization, and to

**Water Quality Management Technical Committee:** The purpose of this committee is to:

- A. Provide the Pikes Peak Area Council of Governments Board of Directors and staff technical assistance on water quality planning issues, give advice and recommendations pursuant to Section 208 of Public Law 92-500 (Federal Water Act Amendment of 1977);
- B. Maintain stream water quality by reviewing proposed changes to NPDES permits, site applications, stream classification/standards and any other projects impacting water quality;
- C. Assist in the review and development of updates to Project Aquarius, the Area-wide Water Quality Management Plan for the three counties; and
- D. Review all requirements for 208 Plan amendments.

The Water Quality Management Committee is composed of technical representatives of local entities and water and sanitation districts. It provides technical advice and recommendations to PPACG on water quality planning issues. Committee meetings are held on the fourth Tuesday of the month at 1:30 p.m. Meetings usually last one to two hours.

**Current Representation:**

Academy Water & Sanitation District  
Cherokee Metropolitan District  
City of Fountain  
City of Woodland Park  
Colorado Springs Utilities

Monument Sanitation District  
Palmer Lake Sanitation District  
Park County  
Schriever Air Force Base  
Security Water & Sanitation District

Donala Water & Sanitation  
El Paso County  
Fort Carson  
Fountain Sanitation District  
Garden Valley Water & Sanitation District

Teller County  
Tri-view Metropolitan District  
U. S. Air Force Academy  
Widefield Water & Sanitation District  
Woodmoor Water & Sanitation District

## **Appendix B**

### **Public Involvement Regulations**

**Title23 CFR 450.316 (b)**



**Public Involvement Regulations**  
**Title 23 CFR 450.316 (b)**  
(Concerning Metropolitan Planning)

(b) In addition, the metropolitan transportation planning process shall:

(1) Include a proactive public involvement process that provides complete information, timely public notice, full public access to key decisions, and supports early and continuing involvement of the public in developing plans and TIPs and meets the requirements and criteria specified as follows:

(i) Require a minimum public comment period of 45 days before the public involvement process is initially adopted or revised;

(ii) Provide timely information about transportation issues and processes to citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, other interested parties and segments of the community affected by transportation plans, programs and projects (including but not limited to central city and other local jurisdiction concerns);

(iii) Provide reasonable public access to technical and policy information used in the development of plans and TIPs and open public meetings where matters related to the Federal-aid highway and transit programs are being considered;

(iv) Require adequate public notice of public involvement activities and time for public review and comment at key decision points, including, but not limited to, approval of plans and TIPs (in non-attainment areas, classified as serious and above, the comment period shall be at least 30 days for the plan, TIP and major amendment(s));

(v) Demonstrate explicit consideration and response to public input received during the planning and program development processes;

(vi) Seek out and consider the needs of those traditionally underserved by existing transportation systems, including but not limited to low-income and minority households;

(vii) When significant written and oral comments are received on the draft transportation plan or TIP (including the financial plan) as a result of the public involvement process or the interagency consultation process required under the U.S. EPA's conformity regulations, a summary, analysis, and report on the disposition of comments shall be made part of the final plan and TIP;

(viii) If the final transportation plan or TIP differs significantly from the one which was made available for public comment by the MPO and raises new material issues which interested parties could not reasonably have fore-seen from the public involvement efforts, an



additional opportunity for public comment on the revised plan or TIP shall be made available;

(ix) Public involvement processes shall be periodically reviewed by the MPO in terms of their effectiveness in assuring that the process provides full and open access to all;

(x) These procedures will be reviewed by the FHWA and the FTA during certification reviews for TMAs, and as otherwise necessary for all MPOs, to assure that full and open access is provided to MPO decision-making processes;

(xi) Metropolitan public involvement processes shall be coordinated with statewide public involvement processes wherever possible to enhance public consideration of the issues, plans, and programs and reduce redundancies and costs;

(2) Be consistent with Title VI of the Civil Rights Act of 1964 and the Title VI assurance executed by each State under 23 U.S.C. 324 and 29 U.S.C. 794, which ensure that no person shall, on the grounds of race, color, sex, national origin, or physical handicap, be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination under any program receiving Federal assistance from the United States Department of Transportation;

(3) Identify actions necessary to comply with the Americans With Disabilities Act of 1990 (Pub. L. 101–336, 104 Stat. 327, as amended) and U.S. DOT regulations “Transportation for Individuals With Disabilities” (49 CFR parts 27, 37, and 38);

(4) Provide for the involvement of traffic, ridesharing, parking, transportation safety and enforcement agencies; commuter rail operators; airport and port authorities; toll authorities; appropriate private transportation providers, and where appropriate city officials; and

(5) Provide for the involvement of local, State, and Federal environment resource and permit agencies as appropriate.

**Appendix C**

**Responses to**

**Public Comments on Regional Transportation Planning Public**

**Involvement Procedures**



**Public Comments on the Revised Regional Transportation Planning Public Involvement  
Procedures  
Public Comment Period July 13 through August 31, 2005**

Comment	Response	Change to the PIP
Encourage the media- newspapers, TV, and radio to participate in educating public about future transportation and possibilities with new technology	Section 3.5 Media Outreach addresses this topic. The purpose of Media Outreach is to inform the public of the key study events, to encourage the media to highlight transportation issues, and to increase awareness of the transportation planning process.	No change recommended
Meet with El Pomar Youth Sports Complex administration.	The City of Colorado Springs Parks Department is represented on the Transportation Enhancement Subcommittee. One of the responsibilities of that position is to serve as conduit for information regarding the transportation planning process to the entity and vice-versa. The park and recreation departments of all member entities are on PPACG's transportation mailing list.	No change recommended
Contact CONO to access neighborhood associations	The current president of CONO serves on the Community Advisory Committee and serves as a conduit for information regarding the planning process. All known neighborhood and homeowners associations are included on PPACG's mailing list.	No change recommended
Revise Media Contact List in Appendix E	The Media Contact List was revised per PPACG's database.	Change has been completed

**Response to Public Comment on the PPACG Transportation Planning Public Involvement Procedures**

## **Appendix D**

### **PPACG Procedures and General Information for Regular Committee Meetings at the Pikes Peak Area Council of Governments**



PROCEDURES AND GENERAL INFORMATION FOR  
REGULAR COMMITTEE MEETINGS AT THE  
PIKES PEAK AREA COUNCIL OF GOVERNMENTS

The purpose of these *Procedures* is to provide general guidance for regular committee meetings of the Pikes Peak Area Council of Governments (PPACG). These include the meetings of the Board of Directors and meetings of the various committees and sub-committees. The *Procedures* are also published to provide members of the general public with information on what to expect at public meetings of PPACG. All committee meetings of the PPACG are open to the public and the media, except Closed Executive Sessions.

These *Procedures* are general, i.e., they cover procedures for all the PPACG committees. This means that the actual procedures for each committee may vary at times, but will generally follow these *Procedures*. Any question of parliamentary procedures will be settled according to the latest revision of *Robert's Rules of Order*, except when they are inconsistent with the Bylaws of each committee. These *Procedures* cover the following topics:

1. Notice and Schedule of Committee Meetings
2. Agendas
3. Order of Business in Regular PPACG Committee Meetings
4. General Procedures for Presenting Information Items at Regular Committee Meetings
5. General Procedures for Presenting Action Items at Regular Committee Meetings
6. Quorum Requirements of PPACG Committees
7. Closed Executive Session

1. NOTICE AND SCHEDULE OF COMMITTEE MEETINGS. All regular committee meetings of the PPACG are publicized no less than 24 hours in advance of the meeting time. Notification is placed on our public notice board, located in the foyer of our building located at 15 S. 7<sup>th</sup> St., Colorado Springs, CO, 80905. Meeting notices are also found on our web site: [www.ppacg.org](http://www.ppacg.org). PPACG's regular committee meetings follow a predictable schedule, as shown below:

Board of Directors	9:00am	2 <sup>nd</sup> Wednesday of each month
Air Quality Technical Committee	1:30pm	4 <sup>th</sup> Wednesday of each month
Community Advisory Committee	3:00pm	3 <sup>rd</sup> Wednesday of each month
Regional Advisory Council	9:30am	4 <sup>th</sup> Thursday of each month
Socioeconomic Advisory Committee	2:00pm	2 <sup>nd</sup> Friday of each quarter (Feb., May, Aug., Nov.)
Specialized Transportation Advisory Committee	10:30am	3 <sup>rd</sup> Tuesday of each quarter (Mar., June, Sept., Dec.)
Transportation Advisory Committee	9:00am	4 <sup>th</sup> Monday of each month
Transportation Enhancement Sub-Committee	10:30am	4 <sup>th</sup> Friday of each month
Water Quality Management Committee	1:30pm	4 <sup>th</sup> Tuesday of each month



These are the regular committee meetings of the PPACG. Occasionally, these meetings change dates and times from the schedule listed above. Also, the PPACG holds other public meetings for specific purposes, such as Public Hearings and Public Input Meetings. These irregular, or exceptional public meetings are also publicized in advance on our Notice Board and on our web site, through mass mailings, and occasionally, on other notice boards throughout the region, in public libraries, etc.

2. AGENDAS. The PPACG prepares an agenda for each regular committee meeting, and publicizes the agenda no less than 24 hours in advance of the meeting. The agenda can be found on its Notice Board and on the web site, [www.ppacg.org](http://www.ppacg.org). The agendas are also available for members of the public at the meetings.

### 3. ORDER OF BUSINESS IN REGULAR PPACG COMMITTEE MEETINGS

- A. Call to Order / Roll Call / Introductions. The Chairperson will call the meeting to order promptly at the time assigned, and will ask those present (committee members and members of the public) to introduce themselves. Staff will also circulate sign-up sheets for committee members and members of the public.
- B. Agenda Approval. Committee members will be asked to approve the agenda. Committee members may request a change in the order of items; the members present must approve these changes.
- C. Public Comment (for items not on the agenda). This is an opportunity for citizens of our region to raise issues and to comment on topics of relevance to the PPACG mission that are not on the agenda. Committee members may respond to public comment, but it is not necessary. Citizens may be asked to use a sign-up sheet to provide their names, address, and the subject they wish to speak about (if used, the sign-up sheet will be collected at the beginning of the meeting and used by the Chairperson to request specific public comment). The Public Comment part of the agenda is usually limited to a total of twenty (20) minutes, and individual citizens must limit their comments to a maximum of three (3) minutes. The Committee chairperson may also, at her/his discretion, ask others who have not used the sign-up sheet, if they wish to speak. Citizens are requested not to duplicate the comments of other citizens preceding them. If citizens begin to comment on agenda items, the Committee Chairperson may interrupt the individual and rule the individual out of order.
- D. Approval of Minutes of Previous Meetings. Committee members will be asked to approve the minutes of previous meeting(s).
- E. Items of Unfinished Business. If items requiring action by the Committee were postponed from previous meetings, these items will be heard before new business items.

- F. Items of New Business. These are all new items for the Committee to consider, and include “information items” and “action items”. The purpose of *information items* is to provide information to Committee members and members of the public are generally not invited to comment. The purpose of *action items* is for the committee to make decisions; in general, the public will be invited to comment on action items.
- G. Other Agenda Items. Depending on the committee, other agenda items may be included, such as, *Reports, Member Reports, Member Announcements, Next Meeting Schedule, etc.*
- H. Adjournment. Committee meetings must be adjourned by a majority vote of the members present.

4. GENERAL PROCEDURES FOR PRESENTING INFORMATION ITEMS AT REGULAR COMMITTEE MEETINGS OF PPACG.

Information items on the agenda are for the general edification of Committee members. Committee members are not requested to take any approval action for these items. Members of the public will generally not be invited to provide input, with the exception of item C below.

- A. Staff shall give an overview of the item. In some cases, PPACG staff will ask additional persons to take part in the presentation, including consultants.
- B. Members of the Committee may ask questions of the staff member making the presentation. These can be questions of clarification, evidence, procedure, etc.
- C. Members of the Committee may discuss the matter, and may also wish to ask individuals in the audience for information concerning the topic.

5. GENERAL PROCEDURES FOR PRESENTING ACTION ITEMS AT REGULAR COMMITTEE MEETINGS OF PPACG.

- A. PPACG staff shall give an overview of the item. In some cases, the staff will ask additional persons to take part in the presentation, including consultants. PPACG staff members will report any recommendations from other PPACG committees on the item, and may make independent recommendations themselves.
- B. Members of the Committee may ask questions of the staff member making the presentation. These can be questions of clarification, evidence, procedure, etc.
- C. The chairperson will invite members of the public to comment on the item (unless there was a public hearing on the item at the same committee meeting). The purpose of this is to allow citizens of our region to voice their opinion(s) on the action items being discussed. Committee members may respond to public comment but it is not necessary. Citizens may be asked to use a sign-up sheet to provide their names,

address, and the subject they wish to speak about (if used, the sign-up sheet will be collected at the beginning of the meeting and used by the Chairperson to request specific public comment). Individual citizens must limit their comments to a maximum of three (3) minutes. The Committee chairperson may, at her/his discretion, ask others who have not used the sign-up sheet if they also wish to speak. Citizens are also requested not to duplicate the comments of other citizens preceding them. Citizens who do not follow these procedures may be interrupted by the Chairperson and ruled out of order.

- D. After the public comment period is closed, the item will return to the Committee members for discussion. Committee members may also ask staff members, citizens or agency representatives in the audience to clarify points or ask additional questions.
  - E. When the committee discussion has ended, the Chairperson may ask for a motion. Motions will generally take the form of approving, not approving, amending, postponing, etc., the requested action, but may also include variations. One of the voting members will make a motion, and a different voting member will second the motion. The members may have a discussion concerning the merits of the motion. The vote will be taken and reported by the Chairperson. A majority of the members present are required before a motion may be approved. Tie votes do not constitute a majority.
  - F. If the Committee decides to postpone the requested action, the date for continued discussion will be announced by the Chairperson to the public.
6. QUORUM REQUIREMENTS. A quorum is required before PPACG committees can conduct business. In the absence of a quorum, the only actions that can be taken are to recess, take measures to obtain a quorum, or adjourn. Any other business transacted without a quorum is null and void. The numbers required for a quorum vary for the different committees of the PPACG. See below the quorum requirements for PPACG committees.
- A. Board of Directors (BOD): A quorum is made up of those Board members present at any meeting, unless the Chairperson, at his/her discretion, declares that there is an insufficient number of Board members present to adequately determine the matters pending before such a meeting. Notwithstanding the above, any Board member present may call for a quorum, and then the quorum shall consist of a majority of the voting members of the Board. A majority of the nineteen (19) voting members of the Board is ten (10).
  - B. Air Quality Technical Committee (AQTC): There are ten (10) voting members of the AQTC. Three (3) individuals (thirty percent, rounded up) of the voting membership constitutes a quorum.
  - C. Citizen Advisory Committee (CAC): There are seventeen (17) voting members of the CAC. Six (6) individuals (thirty percent, rounded up) of the voting membership constitutes a quorum.

- D. Regional Advisory Council (RAC): There are twenty-one (21) voting members of the RAC. Seven (7) individuals (thirty percent, rounded up) of the voting membership constitutes a quorum.
- E. Socio-Economic Advisory Committee (SAC): There are fifteen (15) voting members of the SAC. Five (5) individuals (thirty percent, rounded up) of the voting membership constitutes a quorum.
- F. Specialized Transportation Advisory Committee (STAC): There are seventeen (17) voting members of the STAC. Nine (9) individuals (fifty percent, rounded up) of the voting membership constitutes a quorum.
- G. Transportation Advisory Committee (TAC): There are thirteen (13) voting members of the TAC. Four (4) individuals (thirty percent, rounded up) of the voting membership constitutes a quorum.
- H. Transportation Enhancement Subcommittee. There are seventeen (17) voting members of the Transportation Enhancement Subcommittee. Six (6) individuals (thirty percent, rounded up) of the voting membership constitutes a quorum.
- I. Water Quality Management Committee (WQMC): There are twenty-one (21) voting members of the WQMC. Seven (7) individuals (thirty percent, rounded up) of the voting membership constitutes a quorum.
7. **CLOSED EXECUTIVE SESSION.** The Board of Directors may decide to go into Closed Executive Session. The Colorado Open Meetings law provides that Closed Executive Sessions can be initiated by an affirmative vote of two thirds of the quorum present. The motion to go into Executive Session shall state the reason(s). Any one or more of the following matters may be discussed in closed executive session:
- Real, personal or other property transactions,
  - Specific legal advice from an attorney,
  - Matters required to be kept confidential by federal or state law,
  - Specialized details of security arrangements or investigations,
  - Certain matters involving negotiations or negotiators,
  - Personnel matters (unless the employee who is the subject of the meeting requests that the meeting be open), or
- A. Documents protected by the mandatory nondisclosure provisions of the open records act.

B.

## **Appendix E**

### **Media Contact List**



## Media List

<b>Newspaper/Organization</b>	<b>Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>	<b>Fax Number</b>	<b>WorkPhone</b>
Adelphia	213 N. Union Blvd.	Colorado Springs	CO	80909	(719)633-0085	[719]475-4501
African American Voice	PO Box 25340	Colorado Springs	CO	80936	[719]528-1954	[719]598-6488
Black Forest News & Palmer Divide Pioneer	11425 Black Forest Rd.	Colorado Springs	CO	80908	[719]495-8758	[719]495-8750
Canyon City Daily Record	701 S. 9th Street	Canon City	CO	81212	(719)275-1353	(719)275-7565
Canyon Courier					[303]674-4104	[303]574-5534
Catalyst/Colorado College	902 N. Cascade Ave.	Colorado Springs	CO	80903		(719)389-6675
Catholic Herald	109 Pawnee Ave.	Manitou Springs	CO	80829	[719]685-1448	[719]685-5202
Colo Spgs Business Journal	31 E. Platte Ave.	Colorado Springs	CO	80903	[719]634-5157	[719]634-5905
Daily Record					[719]275-1353	[719]275-7565
Fairplay Flume	5138 Park County Rd. 64	Bailey	CO	80421	(303)838-8414	[800]883-1154
Fountain Valley News	120 E. Ohio Ave.	Fountain	CO	80817	[719]382-5614	[719]382-5611
Hispania News	2860 S. Circle Dr., Suite 2224	Colorado Springs	CO	80935	[719]540-0599	[719]540-0220
KBIQ-FM102	6760 Corporate Dr.	Colorado Springs	CO	80919	[719]531-5588	[719]531-5438
KCCY	3185 Janitell Rd.	Colorado Springs	CO	80906	[719]543-9898	(719)573-5229
KCME-FM 88.7	1921 N. Weber St.	Colorado Springs	CO	80907	(719)578-1033	[719]578-5263
KCMN-1530AM	5050 Edison Ave., Suite 218	Colorado Springs	CO	80915	[719]570-1007	[719]570-1530
KEPC-FM89.7	5675 S. Academy Blvd.	Colorado Springs	CO	80906	[719]540-7487	[719]540-7490
KILO-FM 94.3	1805 E. Cheyenne Rd.	Colorado Springs	CO	80906	[719]634-5837	[719]634-5456
KKCS-FM 101	5145 Centennial Blvd.,	Colorado Springs	CO	80919	(719)6671831	[719]594-9000
KKFM/KKLI/KKMG	6805 Corporate Dr.	Colorado Springs	CO	80919	[719]593-2727	[719]593-2700
KKTV-TV.CBS- Channel 11	3100 N. Nevada Ave.	Colorado Springs	CO	80907	[719]634-3741	[719]634-2844
KOAA-TV 5/30	530 Communications Circle	Colorado Springs	CO	80905	[719]473-2538	[719]632-5030



<b>Newspaper/Organization</b>	<b>Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>	<b>Fax Number</b>	<b>WorkPhone</b>
KPRZ- FM96.1	6760 Corporate Dr.	Colorado Springs	CO	80919	[719]531-5588	[719]531-5438
KRCC-FM91.5	912 N. Weber St.	Colorado Springs	CO	80903	[719]473-7863	[719]473-4801
KRDOAM/KRDOFM/KRDO-TV 13	399 S. 8th St.	Colorado Springs	CO	80905	[719]632-0052	[719]632-1515
KRDOFM95.1 The Peak	3 South 7th st.	Colorado Springs	CO	80905	[719]520-9374	[719]632-1515
KSKX-FM 105.5	3 South 7th st.	Colorado Springs	CO	80905	[719]635-8455	[719]578-1055
KSPZ-FM 92.9 OLDIES	6805 Corporate Dr.	Colorado Springs	CO	80919	[719]593-2727	[719]593-2700
KSSSAM/KSPZFM	2864 S. Circle Dr.	Colorado Springs	CO	80906	[719]579-0882	[719]579-0882
KTSC-FM/USC	2200 N. Bonforte Blvd.	Pueblo	CO	81001	(719)549-2208	
KVOR/KVUU	6805 Corporate Dr.	Colorado Springs	CO	80919	[719]579-0882	[719]593-2700
KWGN-TV2		Denver	CO		[303]740-2803	[303]740-2855
KWYD	P. O. Box 5668	Colorado Springs	CO	80911	(719)392-3307	[719]392-4219
KXRE-AM1490&KRRV-1480	731 1/2 Manitou Ave.	Manitou Springs	CO	80829	[719]632-0052	[719]685-4130
KXRM- TV21 FOX	560 Wooten Rd.	Colorado Springs	CO	80915	[719]591-4180	[719]685-4130
Life After 50 Newspaper	441 Manitou Ave., #101	Manitou Springs	CO	80829	(719)685-9705	(719)685-9690
Pikes Peak Journal	1108 Manitou Ave.	Manitou Springs	CO	80829	[719]685-0176	[719]685-0180
Pueblo Chieftan	P. O. Box 4040	Pueblo	CO	81003	[719]544-5897	[800]279-6397
Ranchland News	P. O. Box 307	Simla	CO	80835	[719]541-2289	[719]541-2288
Rocky Mountain News	400 W. Colfax	Denver	CO	80204	[719]633-0981	(303)892-2592
Senior Times	4360 Montebello Dr.	Colorado Springs	CO	80918	(719)531-0133	(719)531-0088
Space Observer	30 S. Prospect	Colorado Springs	CO	80903	(719)556-7848	[719]476-1663
Springs Magazine	1120 W. Colorado Ave.	Colorado Springs	CO	80904	(719)636-1184	(719)636-2001
Steppin' Out	P. O. Box 62193	Colorado Springs	CO	80962	(719)531-9040	(719)531-9040
The Castle Rock Chronicle	405 S. Wilcox St., Suite 100	Castle Rock	CO	80104		(303)660-8034
The Cheyenne Edition	856 Arcturus Dr.	Colorado Springs	CO	80906	(719)578-5215	(719)578-5112
The Denver Post	1753 S. 8th St.	Denver	CO	80201	(303)820-1679	(303)820-1201
The Gazette	30 S. Prospect St.	Colorado Springs	CO	80903	[719]636-0202	[719]636-0266

<b>Newspaper/Organization</b>	<b>Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>	<b>Fax Number</b>	<b>WorkPhone</b>
The Gold Rush					(719)687-3009	(719)687-3006
The Independent Newspaper	121 E. Pikes Peak Ave.	Colorado Springs	CO	80903	[719]577-4107	[719]577-4545
The Mountaineer-Fort Carson	22 N. Sierra Madre St.	Colorado Springs	CO	80903	[719]632-0762	[719]634-1593
The Mountain Sun	18401 US highway 24	Woodland Park	CO	80863		(719)687-0803
The Woodmen Edition	7750 N. Union Blvd.	Colorado Springs	CO	80920	(719)578-5215	(719)598-7911
Tri-Lakes Tribune	PO Box 488	Monument	CO	80132	[719]481-9005	[719]481-3423
Ute Pass Courier	PO Box 340	Woodland Park	CO	80836	[719]783-3725	[719]687-3006



## **Appendix F**

### **Meeting Comment Form**



(Project Logo)

**PUBLIC MEETING**  
**(Fill in Date and Time)**  
**(Fill in complete location)**

*Meeting Summary Form*

**ZIPCODE:** \_\_\_\_\_

**Topic:** \_\_\_\_\_

Please continue responses on the reverse side of this form if you need more space.

Were your questions regarding this topic answered? Yes \_\_\_\_ No \_\_\_\_

Was there enough time to discuss the topic thoroughly? Yes \_\_\_\_ No \_\_\_\_

What information was the most helpful?

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

**Additional Comments:**

*Are there any other topics you would like to have discussed?*

**Are there any other groups you would recommend that we meet with?**

---

**Project Manager (Name and Title)**

**Project Web Page:**

**Email Comments to:**

**Mail to:**

**Pikes Peak Area Council of Governments**

**15 South 7<sup>th</sup> Street**

**Colorado Springs, CO 80905**



# APPENDIX G

## APPENDIX G: PUBLIC TRANSPORTATION PLAN





**DRAFT**

**2035 LONG RANGE TRANSIT PLAN**  
**MOUNTAIN METROPOLITAN TRANSIT**

*Prepared for:*

**Mountain Metropolitan Transit**  
1015 Transit Drive  
Colorado Springs, CO 80901

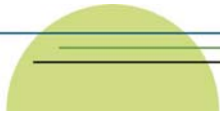
*Prepared by:*

**Felsburg Holt & Ullevig**  
6300 South Syracuse Way, Suite 600  
Centennial, CO 80111  
303/721-1440

*In association with:*

**TransitPlus**

FHU Reference No. 07-293  
February 2008

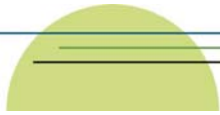


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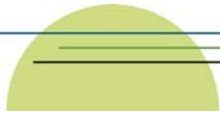
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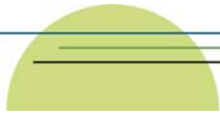
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## EXECUTIVE SUMMARY

Mountain Metropolitan Transit is the designated recipient of federal transit funds and therefore is responsible for developing a long-range regional transit plan in conjunction with PPACG the area's MPO. This plan evaluates the existing transit services provided in the region, identifies future travel needs, assesses the effectiveness of potential improvements, identifies a regional vision for transit and recommends an implementation strategy to best meet future needs in a fiscally constrained environment.

### *Mission and Goals*

The mission of Mountain Metropolitan Transit is to meet the public transportation needs of the Pikes Peak region by providing the highest quality public transportation services possible. These services shall be provided in a safe, reliable, cost-effective and customer-oriented manner in an effort to meet the personal mobility needs of transit riders in the community.

Goals and objectives for Mountain Metropolitan transit services were developed based on public input, community values, land use and demographic information provided by the Pikes Peak Area Council of Governments and the taken from Census 2000. The following six goals were identified for transit:

- ▶ **Goal 1.** Establish a sustainable funding mechanism and solid regional decision-making structure for the transit network to promote appropriate and effective transit services throughout the Pikes Peak Region.
- ▶ **Goal 2.** Provide transit services appropriate to demand, balancing the need to meet basic mobility needs and the need to build ridership in congested corridors.
- ▶ **Goal 3.** Provide cost-effective and financially sustainable services.
- ▶ **Goal 4.** Build the transit mode share to 2% of total trips and 4% of peak hour trips.
- ▶ **Goal 5.** Support the integration of the transit mode with other travel modes.
- ▶ **Goal 6.** Provide for safe, well-maintained, and environmentally responsible fleet and facilities

### *Existing Services*

Residents have currently authorized a one tenth of a percent sales tax in the region for transit services. This is accomplished through the Pikes Peak Rural Transportation Authority sales tax. The public transportation system has been renamed as Mountain Metropolitan Transit and more regional services are operated, including service to Denver. The specialized providers are working to augment the paratransit services provided through Metro Mobility with systems that complement rather than overlap each other.

At present the public transportation services provide a total of 6.4 trips annually per capita in the urbanized area on the fixed-route system and 0.5 trips annually per capita through specialized providers for a total of just under 7 trips annually per capita.

Some critical gaps in service exist. One is that, except for FREX service there are no public transportation services in some growing parts of the urbanized area (including Monument). Another is that no public transportation services exist in much of the northern portion of the City of Colorado Springs, except for limited express service. There are no general public call-and-ride services at this time; they have been recommended to address some of the service gaps.

These are useful in meeting needs in areas where services are unable to support a fixed-route. They are also useful as they can carry people with disabilities, reducing the coverage area for paratransit services while augmenting the services that are provided by the various specialized providers. Mountain Metropolitan Transit is currently evaluating the cost/benefit feasibility for a call-and-ride in the northern part of the city.

The system of providing services through a variety of private providers seems to work well for the region and lends itself to coordination among specialized transportation providers.

There is a need for the decision-making structure to reflect the regional nature of travel patterns and the operational realities of Mountain Metropolitan Transit. Developing a solid regional decision-making structure will be an important next step. This will enable elected officials to focus on building a transit network that reflects the changing needs of the region and to evaluate trade-offs in types of transit investments.

*Existing and Future Demographics*

**Table ES-1** compares population estimates for 2005, 2015, 2025 and 2035 for the PPRTA, the City of Colorado Springs and the Colorado Springs Urbanized area. As shown, the City of Colorado Springs population is expected to grow by 39% between 2005 and 2035. During that same period the urbanized area is expected to grow 21%. Population growth is concentrated in the northern and eastern portions of the city. Population densities exceeding six people per acre are typically considered the minimum density to support fixed-route transit. Population density mapping indicates that about 23% of the urbanized area is considered transit supportive in 2005 increasing to over 30% in 2035.

**Table ES-1 Population Projections**

	2005	2015	2025	2035
PPRTA	517,900	655,700	750,600	861,800
Urbanized Area	438,000	484,400	497,200	530,800
City Of Colorado Springs	362,800	433,400	467,300	505,600

Source: PPACG VISSUM Travel Demand Model October 2007.

A review of census 2000 data showed that population characteristics that are indicative of transit demand such as low income, elderly, and zero-vehicle households are typically concentrated within the city center where transit services are currently provided.

In 2005, 287,600 people living in the urbanized area (66% of the total urbanized area population) lived within a half mile of an existing local transit route. In 2035 the population living within a ½ mile of an existing local route would increase to 344,600 people. This would represent about 65% of the total urbanized area population indicating increases densities within the urbanized area. While the populations near the city center would still be well served in 2035 with the existing fixed-route services, the growth areas along the east side of the city (Marksheffel Road) should be considered for expanding service, along with the major employment and activity centers serving the populations on the north and east sides of the urbanized area.

**Table ES-2** summarizes the employment projections for Colorado Springs and the surrounding area. As shown, employment in the urbanized area increases by 71% between 2005 and 2035. Similarly, employment in the City of Colorado Springs grows by 76% between 2005 and 2035. Employment densities exceeding four jobs per acre are typically considered the minimum density to support fixed-route transit. Employment density mapping indicates that about 15% of the urbanized area employment is considered transit supportive in 2005 increasing to 28% in 2035.

**Table ES-2 Employment Projections**

	2005	2015	2025	2035
PPRTA	275,600	362,900	445,100	527,300
Urbanized Area	257,800	320,500	381,300	441,000
City of Colorado Springs	230,700	293,900	353,500	406,000

Source: PPACG VISSUM Travel Demand Model October 2007.

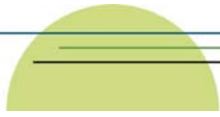
### *Public Outreach*

As a part of the development of the 2035 plan for Mountain Metropolitan Transit, several techniques were used to obtain feedback from the public about transit and its future in the Pikes Peak region. One of the techniques was to review information from public meetings and outreach that was done by the Pikes Peak Area Council of Governments (PPACG) for the larger 2035 Regional Transportation Plan (RTP). Another technique was to survey Mountain Metropolitan Transit riders at two of the system’s main transfer stations. This information helped guide the development of the 2035 transit vision and fiscally constrained plan.

The outreach conducted by the Pikes Peak Area Council of Governments (PPACG) for the development of the 2035 Regional Transportation Plan showed that the residents of the region have developed a strong interest in transit, bicycle and pedestrian modes. The lack of alternatives to driving was identified as one of the top three issues, behind the need for improved east-west travel options and improved pavement/road conditions.

As part of these outreach efforts people were asked to identify how they think the region should spend scarce transportation resources. People believe a significant portion of the investment should be in transit, bike and pedestrian modes. Forty percent of respondents believe that funds should be spent on roads or mostly roads; thirty-five percent of respondents believe that funds should be spent all or mostly on transit and alternative modes. Twenty-five percent opted for splitting the funding 50/50 between roads and alternative modes. This reflects the views of about 1,300 participants at twelve events held throughout the region.

Based on the rider survey conducted, prioritization of service improvements should first address increased frequencies, followed by improving the span of service on Sunday. There are a number of existing riders that are completely satisfied with the system and do not want to see any changes.



### 2035 Vision

The 2035 Transit Vision Plan updates the 2030 plan that was developed in 2004 and incorporates other transportation planning efforts that have been conducted throughout the region. The plan is a guide to development of regional transit services that are fully integrated with other modes of travel, address the mobility and accessibility needs throughout the region, and support sustainable land use planning efforts. **Figure ES-1** and **ES-2** illustrate the key elements of the 2035 transit vision plan. As shown, the vision plan includes four fixed-guideway/rapid transit corridors to more effectively service existing population and employment concentrations, an expanded fixed-route network to provide service where high population growth is anticipated, implementation of new call-and-ride service to provide increased coverage to low-density residential areas that otherwise would not warrant fixed-route service and inter-city rail service to supplement regional travel along the Front Range.

The 2035 Transit Vision Plan described would cost approximately \$2.8 billion in 2008 dollars. Based on the current funding sources, Mountain Metropolitan Transit would likely see approximately \$1.1 billion in revenues or enough to fund about 40% of items identified in the vision plan. Because current revenue sources fall short of meeting the future transit needs in the area, a dedicated funding source would be necessary to support implementation of the transit vision.

### 2035 Fiscally Constrained Plan

The fiscally constrained plan described below and illustrated in **Figure ES-3** assumes that funding of Mountain Metropolitan Transit remains similar to today<sup>1</sup> with the exception of FTA Small Starts and New Starts funding identified for two fixed guideway/rapid transit projects. Significant additional planning would be needed before such funding could be applied for. If the corridors are not competitive for this funding, local funding would need to replace these FTA funds or the projects could not be constructed.

#### FISCALLY CONSTRAINED REVENUE AND EXPENDITURE ESTIMATES

**Table ES-3** summarizes capital and operating and maintenances expenses. They were estimated based on current operating characteristics identified in the existing conditions section of this report. For consistency with PPACG, a four percent annual inflation rate was applied.

Revenue sources include, but are not limited to PPRTA, fare revenues, FTA and state funding. Mountain Metropolitan Transit, PPACG and the CDOT Transit Unit have identified likely FTA revenues that will be available for transit projections in the region through the year 2035. Over the 28-year period the largest revenue sources are local/PPRTA funds at \$1.14 billion, \$225 million in FTA 5307 urbanized area funds and \$150 million in fare revenues. Other sources such as CMAQ and Metro are administered through PPACG and are estimated to be about \$40 million throughout the 28 year period for Mountain Metropolitan Transit use.

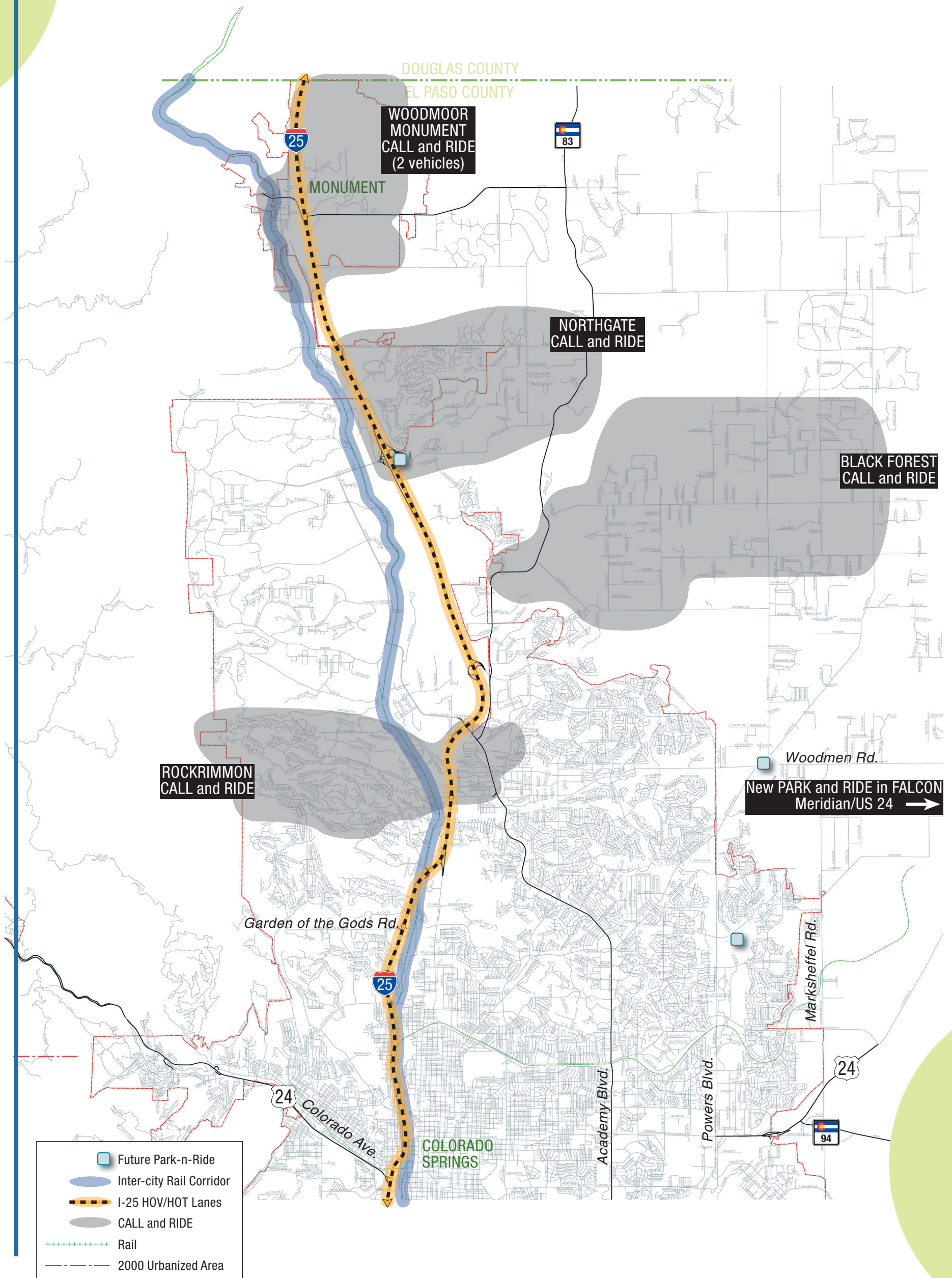
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<sup>1</sup> Starting in 2021 the fiscally constrained plan assumes that PPRTA funds increase to two tenths percent compared to the current funding of one tenth percent. This would not occur should a successful referendum enact a dedicated funding source for transit.



# 2035 Draft Mountain Metropolitan Transit Plan 2035 Vision Plan (Northern)

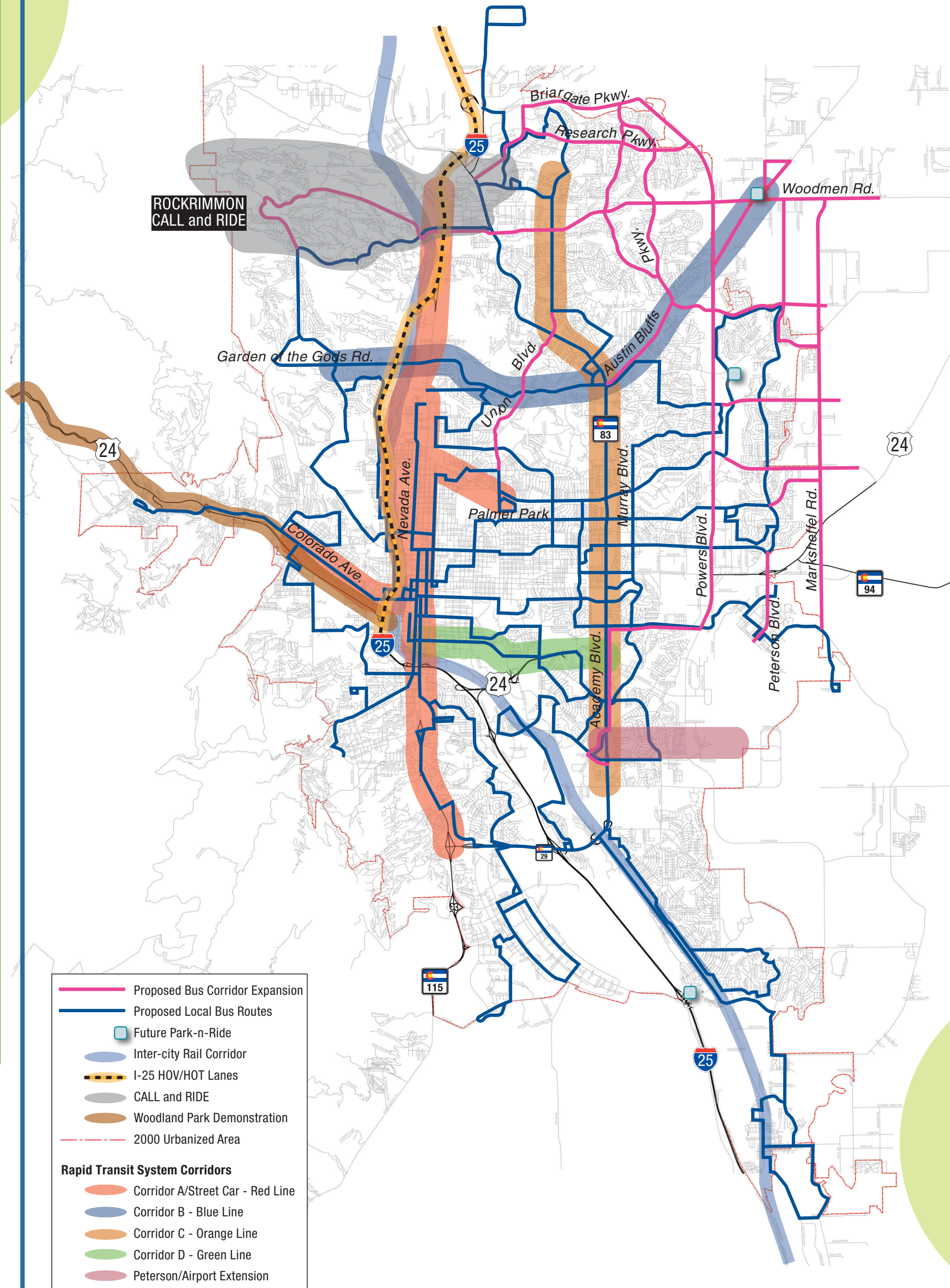
## Figure ES-1



-  Future Park-n-Ride
-  Inter-city Rail Corridor
-  I-25 HOV/HOT Lanes
-  CALL and RIDE
-  Rail
-  2000 Urbanized Area

# 2035 Draft Mountain Metropolitan Transit Plan 2035 Vision Plan (Central)

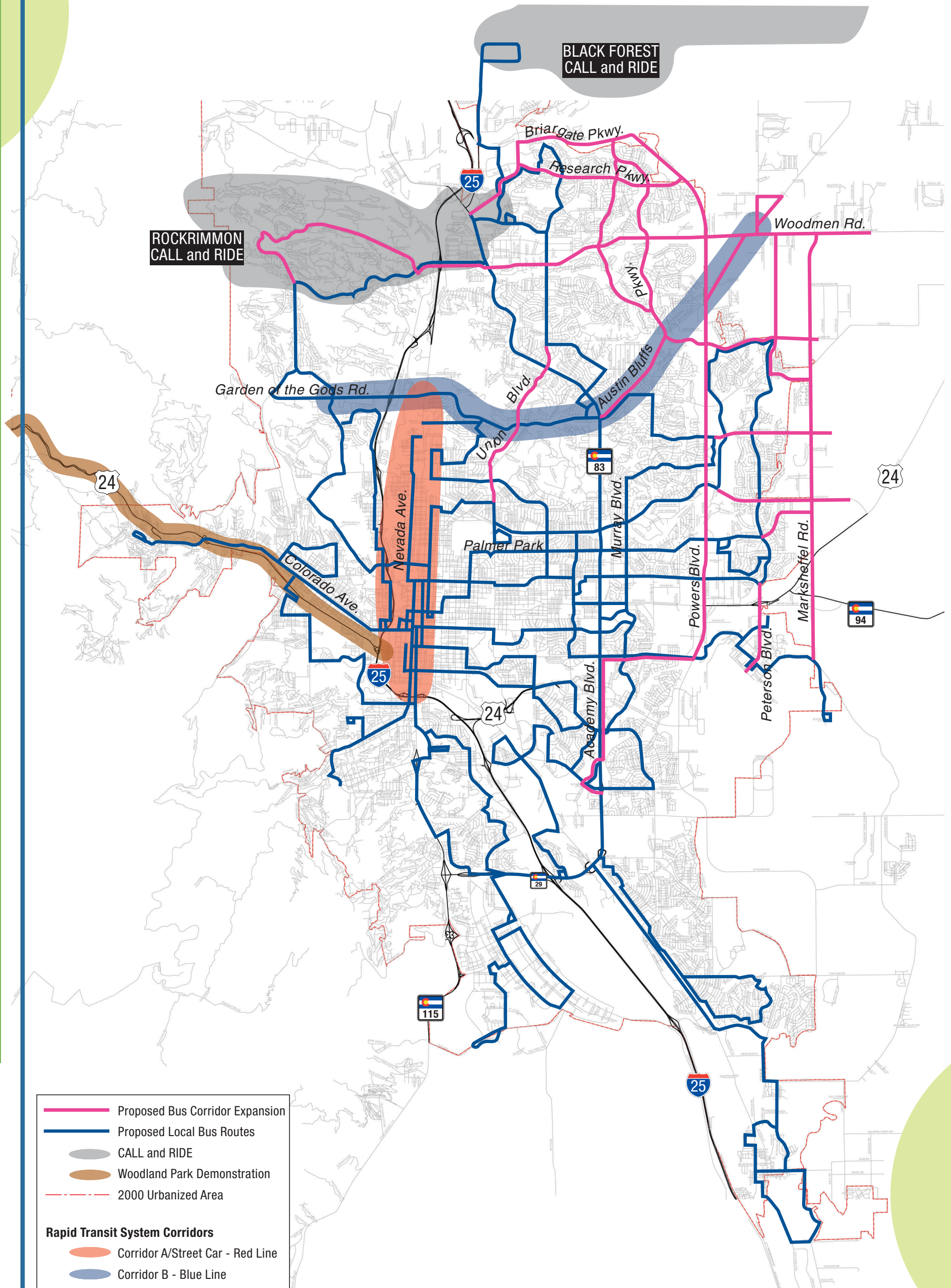
## Figure ES-2



# 2035 Draft Mountain Metropolitan Transit Plan

## 2035 Fiscally Constrained Plan

### Figure ES-3



## 2035 Mountain Metropolitan Transit Plan DRAFT

**Table ES-3 Fiscally Constrained Revenues and Expenditures**

<b>Expenses</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>'08-'15</b>	<b>'16-'20</b>	<b>'21-'25</b>	<b>'26-'30</b>	<b>'31-'35</b>	<b>Total Plan</b>
Fleet - Revenue and Non Revenue	2.63	2.73	3.41	3.60	3.75	3.90	4.05	4.21	28.27	24.22	30.79	38.33	46.60	168.21
Facilities - O&M, Stations, Stops	3.30	2.90	0.45	0.47	0.49	0.51	0.53	0.55	9.18	3.08	3.75	4.57	5.55	26.14
Fixed Guideway/Rapid Transit Projects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.50	103.25	21.75	0.00	168.50
Communications Equipment/IT	0.36	0.37	0.39	0.40	0.42	0.44	0.46	0.47	3.32	2.67	3.25	3.95	4.81	17.99
Planning	1.10	1.41	1.00	0.35	0.30	0.38	0.31	0.39	5.25	1.93	3.41	2.61	3.14	16.35
Marketing	0.25	0.26	0.27	0.28	0.29	0.30	0.32	0.33	2.30	1.85	2.25	2.74	3.34	12.49
Fixed-Route O&M	17.00	17.68	21.33	22.18	23.07	23.99	24.95	25.95	176.16	146.18	177.85	216.38	263.26	979.81
Metro Mobility O&M	3.15	3.28	3.41	3.54	3.69	3.83	3.99	4.15	29.02	26.85	32.67	39.75	48.36	176.65
Call-and-Ride O&M	0.00	0.00	0.00	0.45	0.47	0.49	0.51	0.53	2.43	2.96	3.60	4.38	5.33	18.71
Metro Ride O&M	0.40	0.42	0.43	0.45	0.47	0.49	0.51	0.53	3.70	2.98	3.63	4.41	5.37	20.09
Human Services O&M	0.96	1.00	1.03	1.08	1.12	1.16	1.21	1.26	8.82	7.09	8.63	10.50	12.77	47.81
FREX O&M	1.98	2.06	2.14	2.22	2.31	2.40	2.50	2.60	18.21	14.65	17.82	21.68	26.38	98.74
Fixed Guideway/Rapid Transit O&M	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.75	23.24	28.27	61.26
<b>Total Expenses</b>	<b>31.12</b>	<b>32.10</b>	<b>33.86</b>	<b>35.04</b>	<b>36.37</b>	<b>37.89</b>	<b>39.33</b>	<b>40.96</b>	<b>286.67</b>	<b>277.96</b>	<b>400.65</b>	<b>394.28</b>	<b>453.17</b>	<b>1812.74</b>

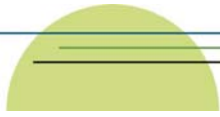
Shaded values are draft numbers that are in the process of being finalized.

**2035 Mountain Metropolitan Transit Plan**  
DRAFT

**Fiscally Constrained Revenues and Expenditures (cont.)**

<b>Revenues</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>'08-'15</b>	<b>'16-'20</b>	<b>'21-'25</b>	<b>'26-'30</b>	<b>'31-'35</b>	<b>Total Plan</b>
Fare Revenues	2.50	2.60	2.71	3.09	3.21	3.34	3.48	3.62	24.56	20.64	27.06	35.19	42.82	150.26
Contributions and Contract Service	0.30	0.31	0.32	0.34	0.35	0.36	0.38	0.39	2.76	2.22	2.71	3.29	4.00	14.99
RTA	7.60	7.90	8.17	8.45	8.74	9.04	9.35	9.67	68.92	53.51	126.54	149.64	178.96	577.57
RTA Carry Forward	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.40
Local Funding	11.20	11.65	12.11	12.60	13.10	13.63	14.17	14.74	103.20	83.02	101.01	122.89	149.52	559.64
CMAQ	0.97	0.98	0.63	0.67	0.71	0.74	0.98	1.02	6.70	4.20	4.54	4.86	5.20	25.50
Metro	0.30	0.31	0.32	0.34	0.35	0.36	0.38	0.39	2.76	2.22	2.71	3.29	4.00	14.99
FTA 5307	5.42	5.76	5.91	6.25	6.56	6.86	7.13	7.39	51.26	38.78	41.91	45.08	48.18	225.21
FTA 5309	1.00	1.04	1.07	1.13	1.19	1.24	1.29	1.34	9.31	7.54	9.17	11.16	13.58	50.77
FTA 5310	0.29	0.30	0.31	0.33	0.35	0.36	0.38	0.39	2.71	2.05	2.21	2.38	2.09	11.44
Small Starts (Fixed Guideway - Street car)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.50	0.00	0.00	0.00	43.50
New Starts (BRT)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	105.00	21.00	0.00	126.00
SB 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Freedoms 5317	0.12	0.13	0.13	0.14	0.14	0.15	0.16	0.16	1.13	0.86	0.92	0.99	1.06	4.96
JARC 5316	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	1.82	1.37	1.48	1.59	1.71	7.97
<b>Total Revenues</b>	<b>30.30</b>	<b>31.19</b>	<b>31.90</b>	<b>33.55</b>	<b>34.94</b>	<b>36.34</b>	<b>37.95</b>	<b>39.37</b>	<b>275.53</b>	<b>259.92</b>	<b>425.25</b>	<b>401.37</b>	<b>451.12</b>	<b>1813.19</b>

Shaded values are draft numbers that are in the process of being finalized.



### IMPLEMENTATION STRATEGIES

Through an understanding of the fiscal constraints and the anticipated growth, an implementation plan was developed. This plan provides guidance on a logical order for transit improvement implementation in a fiscally constrained environment. The key steps of the implementation plan are described below:

- ▶ Adopt service standards and begin routine evaluation of service: ongoing
- ▶ Support statewide commuter rail initiatives: ongoing
- ▶ Implement service improvements to achieve 30 minute peak and 60 minutes off peak headways: 2008 - 2009
- ▶ Implement a regional decision-making structure and evaluate potential for possible dedicated funding source: 2008-2010
- ▶ Conduct Feasibility Study for Downtown fixed guideway/rapid transit corridor: 2008 - 2010
- ▶ Serve northern and eastern areas through possible call-and-ride service and fixed-route expansion: 2009 and beyond

Conduct Alternatives Analysis for Downtown fixed guideway/rapid transit corridor: 2010 – 2011

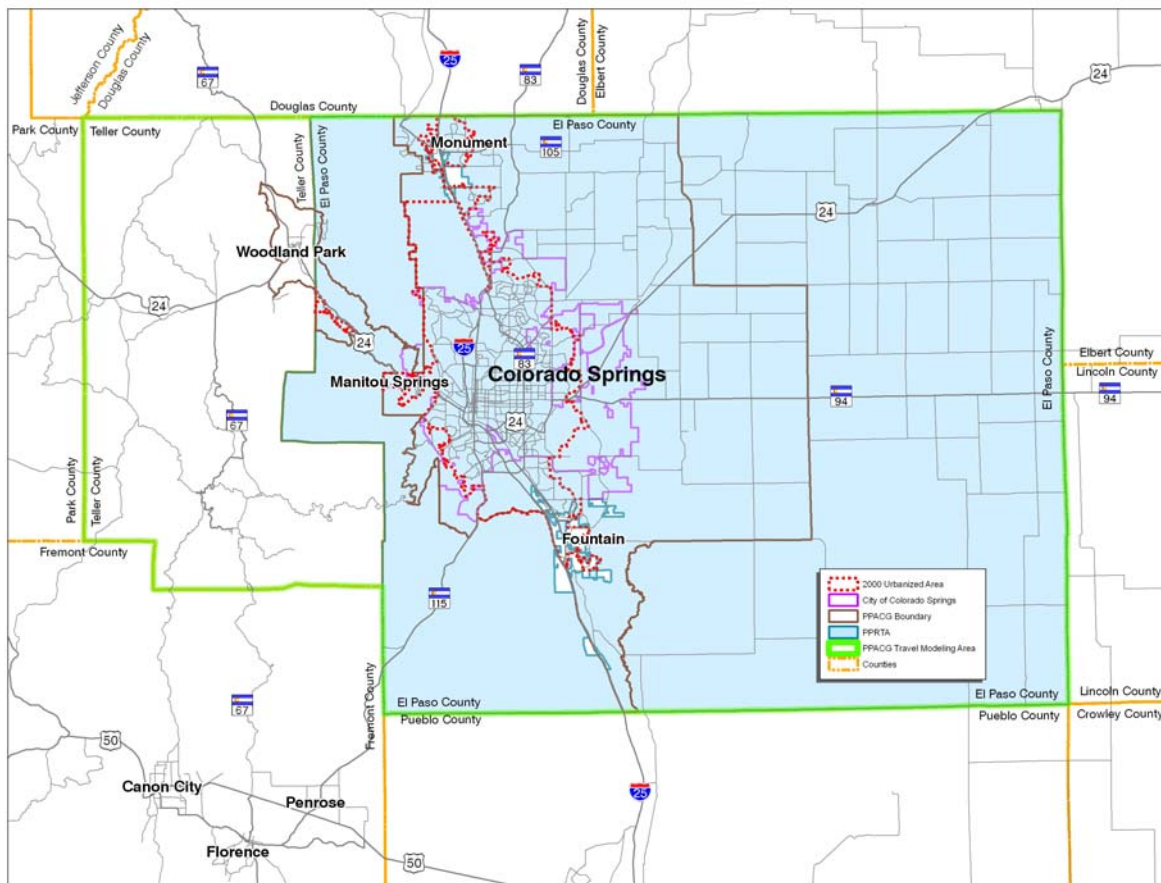
- ▶ Construct Phase 1 of fixed guideway/rapid transit: 2016 - 2020
- ▶ Begin operation of Phase 1 fixed guideway/rapid transit: 2021 - 2025
- ▶ Construct Phase 2 of fixed guideway/rapid transit: 2021 - 2025
- ▶ Begin operation of Phase 2 fixed guideway/rapid transit: 2026 - 2030

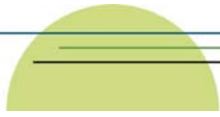
## 1.0 INTRODUCTION

Mountain Metropolitan Transit is the designated recipient of federal transit funds and therefore is responsible for developing a long-range regional transit plan. This plan evaluates the existing transit services provided in the region, identifies future travel needs, assesses the effectiveness of potential improvements, identifies a regional vision for transit and recommends an implementation strategy to best meet future needs in a fiscally constrained environment.

**Figure 1-1** illustrates the project vicinity and the key boundaries that influence the Mountain Metropolitan Transit service and planning. The Pikes Peak Rural Transportation Authority (PPRTA) encompasses most of El Paso County. Mountain Metropolitan Transit receives 10% of the funds generated by PPRTA to provide regional services. The grey line represents the Pikes Peak Area Council of Governments. This is the regional planning area for which Mountain Metropolitan Transit is responsible for long-range transit planning. The red dashed line represent the census defined urbanized area. This area defines the population within an area that Mountain Metropolitan Transit receives urban area formula funds through FTA. Finally the purple line represents the City of Colorado Springs boundary. Mountain Metropolitan Transit falls within the City of Colorado Springs public works department and is governed by the Colorado Springs City Council.

**Figure 1-1 Pikes Peak Region Vicinity Map**

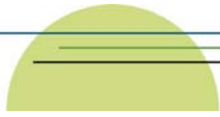




This plan includes the following sections:

- ▶ **Goals and Objectives** – This section summarizes the goals and objectives for regional transit services in the area. They are guided by community values and the regions demand for transit service.
- ▶ **Existing Transportation Services and Providers** – This section summarizes the various public and human transportation services provided in the region and provides key performance measures for each.
- ▶ **Existing and Future Demographics** – This section describes the existing land use characteristics and projected population and employment. These data are used to determine travel demand and travel patterns and set the stage for identification of future transit improvements.
- ▶ **Public Outreach** – This section describes the public outreach effort that was undertaken to better identify the community’s vision for transit.
- ▶ **2035 Transit Vision Plan** – This section describes the key elements of a transit network without fiscal constraint.
- ▶ **2035 Fiscally Constrained Transit Plan** – This section describes elements of the future transit network and provides an implementation strategy for these elements with consideration to the fiscally constrained environment.





## 2.0 GOALS AND OBJECTIVES

The provision of transit services is guided by a clear vision, a common understanding of mission, and a set of goals and objectives. In addition, it is useful to consider strategies and a process for ongoing evaluation and adjustment of services. The development of the vision, mission, goals and objectives are guided by the basic values of the community, and that is where this chapter begins.

### COMMUNITY VALUES

Transit systems reflect the values and needs of individual communities. The transit system may be extensive or limited. It may emphasize services for people dependent on transit and/or services that reduce peak hour congestion and move commuters. The services may range from rail to demand response transit.

The outreach conducted by the Pikes Peak Area Council of Governments (PPACG) for the development of the 2035 Regional Transportation Plan showed that the residents of the region have developed a strong interest in transit, bicycle and pedestrian modes. The lack of alternatives to driving was identified as one of the top three issues, behind the need for improved east-west travel options and improved pavement/road conditions.

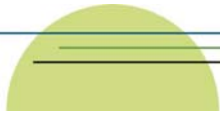
As part of these outreach efforts people were asked to identify how they think the region should spend scarce transportation resources. People believe a significant portion of the investment should be in transit, bike and pedestrian modes. Forty percent of respondents believe that funds should be spent on roads or mostly roads; thirty-five percent of respondents believe that funds should be spent all or mostly on transit and alternative modes. Twenty-five percent opted for splitting the funding 50/50 between roads and alternative modes. This reflects the views of about 1,300 participants at twelve events held throughout the region.

In another question, people were asked to identify how the alternative mode funds should be spent. The resulting split was:

- ▶ Transit (bus or rail)                    48%
- ▶ Specialized transit                    24%
- ▶ Bicycle and pedestrian                28%

These responses highlight the interest in transit in the region, a major shift from the past emphasis on roads. This trend may be the result of many beliefs - perhaps that more roads result in more traffic congestion; that alternatives are needed to reduce dependence on fossil fuels, greenhouse gases and climate change, or that providing mobility to individuals who do not drive is important to the community.

Transit has not been an integral part of the transportation network for the last 50 years, and as such there is not a common language and process for determining what to invest in and how to value investments in transit services. It is important to respond to this shift in community values, but also to increase investments into alternative modes with some caution and to provide many opportunities to evaluate the effectiveness of the decisions along the way.



### REGIONAL DEVELOPMENT

The continuing growth of the Pikes Peak region is another trend that sets the stage for the vision and goals for the long range plan. Population within the existing urbanized area<sup>2</sup> boundary is anticipated to grow to 530,800 in population by 2035, development will be more intense along key corridors, and there will be continued growth of several major employment centers. In addition, travel along the I-25 corridor will continue to increase as more commuters travel between the cities in the Front Range corridor.

### MULTIMODAL TRANSPORTATION NETWORK

The community values having transit become an integrated, vital part of the overall transportation network. With the establishment of the PPRTA, a dedicated funding source for transit is in place to provide services that are regional, without the need for intergovernmental agreements funded through annual appropriations. The PPRTA does not include all governments, so intergovernmental agreements will continue to be needed for services to those communities that do not participate until such time as they join.

In addition to having regional governance, establishing mechanisms to enable policy makers to compare investments in transit with other modes will be important in integrating transit with the overall transportation network.

### SYSTEM CHARACTERISTICS

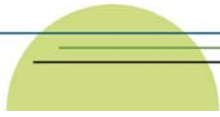
In order to meet the needs of the growing region, it will also be important to ensure the transit network has the following characteristics:

- ▶ **Mix of Services:** A variety of services are offered to meet different needs. The network should include a mix of fixed and flexible services that are integrated to enable passengers to get to make short and long-distance trips. Appropriate types and levels of services are provided to feed the main routes and to provide cost-effective services. The network also provides other mobility options such as carpools, vanpools, and rail services when appropriate.
- ▶ **Stability:** A base network is provided that residents can depend upon that includes stable service levels and stable days and hours of service. These are services where the ridership warrants a long-term investment in transit services in the specific corridors or neighborhoods.
- ▶ **Quality:** Services consistently meet quality standards for reliability, safety, vehicle cleanliness and other quality measures.
- ▶ **Accountability:** The efficiency and effectiveness of the services are measured to assure that the transit investments can be measured against other transit investment options. Taking this a step further, it is important that investments in the transit network can also be compared to investment options in other modes.

The above values and characteristics set the stage for the following vision, mission, goals, and objectives.

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<sup>2</sup> The urbanized area boundary will be updated as part of the 2010 Census.



### VISION

Provide high quality transit services as part of the region's multi-modal transportation system.

### MISSION

To meet the public transportation needs of the Pikes Peak region by providing the highest quality public transportation services possible. These services shall be provided in a safe, reliable, cost-effective and customer-oriented manner in an effort to meet the personal mobility needs of transit riders in the community.

### GOALS AND OBJECTIVES

#### **Goal 1: Establish a sustainable funding mechanism and solid regional decision-making structure for the transit network to promote appropriate and effective transit services throughout the Pikes Peak Region.**

**Objective 1:** Elected officials of region select a regional governance structure for the existing transit network that will be broad enough to accommodate the planned network.

- a.) Complete a project to identify and evaluate governance options under the guidance of elected officials of local jurisdictions in region.
- b.) Identify boundary and sustainable funding issues, evaluate effective ways of addressing these and recommend a service area for the regional entity.
- c.) Select and obtain approval of recommended alternative.
- d.) Implement new structure, establish governing board, and carry-out board education activities.
- e.) Establish policies and subcommittees, including an avenue for citizen and rider participation as part of the implementation activities.

**Objective 2:** Adopt standards for service development and maintenance, implement a process to evaluate all services to assure they remain effective and reflect the travel needs of the residents of the region.

- a.) Complete performance standard process, adopt both a basic set of standards and evaluation process.
- b.) Begin routine review process for subsequent service change.
- c.) Have Board for new governance structure review standards and processes, modifying them as needed or adding additional detail if appropriate.

**Objective 3:** Seek voter approval for sustainable funding for transit services that reflects the costs of providing a viable network of local feeder services, rapid transit services, and specialized transit services.

- a.) Identify the services desired by the residents of the entire region and funding requirements for providing such services.
- b.) Develop a ballot measure to seek voter approval to fund such services.

**Goal 2. Provide transit services appropriate to demand, balancing the need to meet basic mobility needs and the need to build ridership in congested corridors.**

**Objective 1:** Maintain transit services that are appropriate to demand levels in specific corridors or areas, including Bus Rapid Transit, fixed-route services, flexible routes, demand response services, and Paratransit services.

- a.) Maintain existing transit services to provide consistent and reliable services to areas which had transit services in 2007, adjusting the type and frequency as needed to meet productivity standards.

**Objective 2:** Expand transit services to meet the needs of a growing region.

- a.) Develop a transit network serving the newer developments primarily to the north and east portions of the Pikes Peak region.

**Objective 3:** Build a transit network that will be a viable alternative mode in congested corridors.

- a.) Re-orient services as appropriate to feed into the four rapid transit corridors.
- b.) Increase frequencies in the rapid transit corridors to 15-minute peak and 30-minute base service levels as demand warrants.
- c.) Increase frequencies in the rapid transit corridors to 15-minute peak and 20-minute base frequencies, as demand warrants.

**Goal 3. Provide cost-effective and financially sustainable services.**

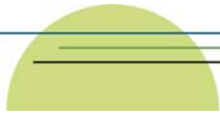
**Objective 1:** Increase ridership on existing fixed-route services by providing quality services that meet identified travel needs.

- a.) Maintain or increase the operating ratio (operating revenues/operating costs)
- b.) Evaluate existing services every six months and consider those with the lowest and highest ridership levels for restructuring or transition to other service types.

**Objective 2:** Use flexible services such as general public call-and-ride or flex routes to provide needed services *and* optimize resources in the service area in which ADA paratransit services must be provided.

**Objective 3:** Build local revenue sources to support the transit service levels desired by the public.

- a.) Build a system of accountability for services and communicate progress in building the transit network broadly within the community.
- b.) Develop plans for system expansion that reflect citizen desires and are based on increased ridership.
- c.) Present plans to voters to obtain approval for additional revenues.



**Goal 4. Build the transit mode share to 2% of total trips and 4% of peak hour trips.**

**Objective 1:** In congested or major travel corridors, provide bus travel times that are no more than three times the auto travel times.

- a.) Minimize transfer connections by using through routing where possible.
- b.) Evaluate transfer connections and schedule vehicles to minimize the wait at transfer points.

**Objective 2:** Provide viable commuter services serving major employers in El Paso County and participate in the provision of services linking regional destinations.

- a.) Provide commuter express services with limited stops and travel times no more than two times the auto travel times.
- b.) Participate in the provision of bus services for regional travel needs, working with partners in the Front Range corridor.
- c.) Support the development of commuter rail services through participation in planning activities, governance, and financing of such services.
- d.) Support the development of commuter rail services through effective connections between bus and rail services.

**Objective 3:** Work to improve pedestrian access from residential developments and commercial developments to bus stops.

- a.) Working with the planning or community development departments of each jurisdiction in the Mountain Metropolitan Transit service area, to develop standards for pedestrian access for various zoning and roadway classifications and identify requirements for builders.
- b.) Working with the planning or community development departments of each jurisdiction in the Mountain Metropolitan Transit service area, to address bus stop, lighting, parking, and other relevant standards to strengthen the orientation of development in new areas and in areas that are being redeveloped.

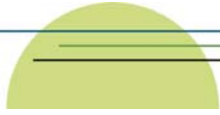
**Goal 5. Support the integration of the transit mode with other travel modes.**

**Objective 1:** Develop park-and-ride lots where transit can be integrated with auto and bicycle modes as well as with neighboring transit systems.

- a.) Partner with the state, county and PPACG

**Objective 2:** Integrate transit/paratransit services with other specialized and human service transportation providers.

- a.) Develop a joint call and scheduling center in partnership with other providers.
- b.) Develop a single client registration process.
- c.) Establish general public demand response services where cost effective to replace both fixed-route and paratransit services in an area.



**Objective 3:** Develop mechanisms to allow the comparison of investments in transit with those in other travel modes, through working with Pikes Peak Area Council of Governments, the Economic Development Council and other regional agencies.

**Goal 6. Provide for safe, well-maintained, and environmentally responsible fleet and facilities.**

**Objective 1:** Maintain a fleet that is safe and environmentally responsible.

- a.) Maintain current fleet in excellent condition and follow the fleet replacement plan
- b.) Transition to “clean” vehicles, considering emissions standards as vehicles are replaced.

**Objective 2:** Maintain existing transit facilities to maximize life cycle and energy efficiency through ongoing maintenance, implementation of recommendations in energy audits, and routine rehabilitation.

**Objective 3:** Improve pedestrian safety at bus stops and facilities

- a) Evaluate pedestrian patterns at all facilities and take actions to reduce pedestrian and vehicle conflicts.
- b) Develop public-private partnerships to provide stations and stops that are safe and desirable pedestrian environments.
- c) Improve stops to encourage safe crossings and reduce visibility problems.
- d) Advocate for pedestrian safety through educating riders via written materials and interior bus cards.

**Objective 4:** Develop and implement a transit safety and security plan that meets all FTA requirements.

### 3.0 EXISTING TRANSPORTATION SERVICES AND PROVIDERS

This chapter presents an overview of existing transit services provided by Mountain Metropolitan Transit, the public transportation provider in the Pikes Peak region. This chapter also inventories the specialized transportation services in the Colorado Springs area.

#### *Overview of Existing Mountain Metropolitan Transit Services*

**Figure 3-1** illustrates the services provided through Mountain Metropolitan Transit. Fixed-route and complementary paratransit services are operated under the banners of Mountain Metropolitan Transit and Metro Mobility. The system grew out of the Springs Transit division originally established in 1976 and funded by the City of Colorado Springs and contracts with other jurisdictions. In 2005, with the passage of the Pikes Peak Rural Transportation Authority, the new Mountain Metropolitan Transit system was inaugurated with dedicated funding to operation a portion of the regional services from the PPRTA. The City of Colorado Springs remains the operator and lead planning/contracting entity.

Mountain Metropolitan Transit includes both local and express fixed-routes throughout the urbanized area, serving the City of Colorado Springs, Manitou Springs, Fountain, Falcon, Widefield, and Security. Additionally, Colorado Springs operates Front Range Express (FREX), which is an express commuter route providing service to and from the Colorado Springs area to Downtown Denver.

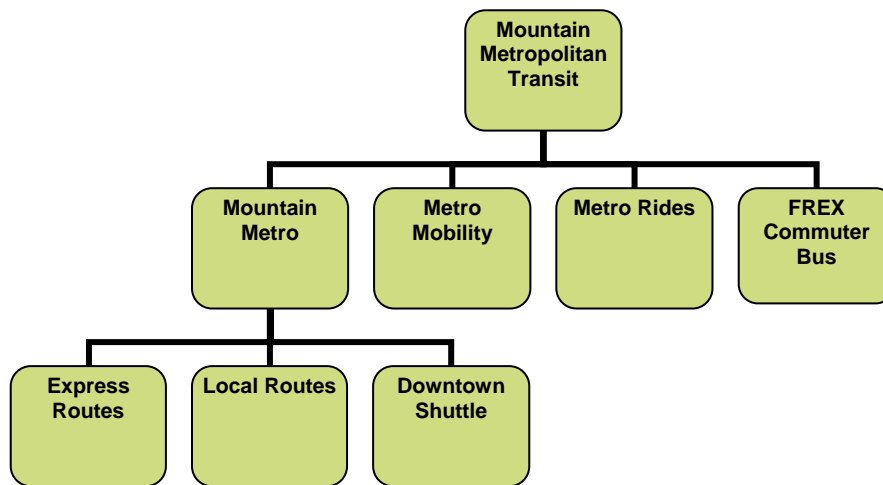
Metro Mobility is Mountain Metropolitan Transit's complementary paratransit service. This service is offered to those that qualify for the service under the Americans with Disabilities Act (ADA) and have been certified as eligible. The service is provided within  $\frac{3}{4}$  of a mile of all fixed-routes that Mountain Metro operates.

Mountain Metropolitan Transit is also home to the Metro Rides program. Staff provides programs, services, and resources to commuters and the general public about alternative modes of transportation, including: taking the bus, vanpooling, carpooling, bicycling, walking and teleworking.

Mountain Metro serves many people that are transit dependent, either because they do not have a driver's license, they have disabilities that prevent them from driving, or they cannot afford an automobile. As these people live, work and recreate throughout Colorado Springs and the surrounding areas, the system makes an effort to serve most of the major areas and activity centers. Additionally, military personnel, students from Colorado College and the University of Colorado at Colorado Springs add to Mountain Metro's ridership.

In the following sections, detailed information on the services provided by Mountain Metropolitan Transit is presented. This is followed by a discussion of topics such as budget, productivity, organizational structure, and operating trends.

Figure 3-1 Mountain Metropolitan Transit Services



**MOUNTAIN METROPOLITAN TRANSIT FIXED-ROUTE SERVICES**

The fixed-route services are known as Mountain Metro, and they include local, express and special services. The downtown shuttle has been grouped with the local routes, although it operates with a higher frequency than most routes. Express routes primarily operate in the peak period and three school routes are grouped with these services. In this section, each type of service is described individually.

Local Fixed-Route Services

There are 27 local fixed-routes with numbers between 1 and 33 plus, the downtown shuttle - route number 55. **Table 3-1** identifies the frequency of each route on weekdays, Saturdays, and Sundays. The local fixed-route services are illustrated in **Figure 3-2**.

Several routes overlap, giving the system flexibility and enabling it to use resources well. Where routes overlap on the main trunk, travelers may be able to access destinations more frequently than the headways indicate. Second, the overlapping structure means that core areas can be covered with limited evening service. Examples are Routes 22 and 31, both serving the Fountain Transfer Center and Security Boulevard. Route 22 operates in the evenings and Monday through Sunday while Route 31 operates Monday through Friday only.

Twenty-five routes operate Monday through Friday in the daytime. All but two of these also operate on Saturdays. Nine routes operate in the evening and a similar limited structure of ten routes operates on Sunday. Note that route 17 (Cheyenne Mountain/Zoo) operates only weekends in the summer and routes 17 (Garden of the Gods) and 19 (Austin Bluffs) operate evenings and Sundays only. **Figure 3-3** illustrates the evening and Sunday service.



Table 3-1 Local Fixed-Route Service Frequencies by Route (in minutes)

Route	Name	Weekday (Peak)	Weekday (Mid-day)	Evenings (Mon-Sat)	Saturday	Sunday	Buses in Revenue Service Weekday Peak
1	Hillside – Hancock Plaza	70	70	60	70	60	1
2	Printers Parkway – Hancock Plaza	70	70		---	---	1
3	Manitou	35	35	60	35	60	2
4	Broadmoor	70	70		70	---	1
5	Boulder - Citadel	35	35		35	---	2
6	Wahsatch - Citadel	35	70		70	---	2
7	Pikes Peak Avenue	35	70		70	---	2
8	Airport Road	35	70		70	---	2
9	Cascade - UCCS	35	35		70	---	2
10	Hwy 115 - PPCC	70	70		70	---	1
11	World Arena - PPCC	70	70	60	70	60	1
12	Rustic Hills	35	70	60	70	60	2
13	Garden of the Gods Road (Eve/Sunday)	---	---	60	---	60	N/A
14	East Library	35	70		70	---	4
15	E. Las Vegas - CJC	35	70		105	---	2
17	Cheyenne Mtn. Zoo (Sat-Sun in Summer)	---	---		70	60	N/A
19	Austin Bluffs (Sunday)	---	---	60	---	60	N/A
20	North Circle - UCCS	70	70		70	---	1
21	Murray - Tutt Boulevard	35	70	60	70	60	2
22	Security - Widefield	70	70	60	70	60	2
23	Constitution – Oro Blanco	35	70		70	---	2
24	Peterson AFB	35	35		70	---	3
25	Academy	35	35	60	35	60	5
30	Fort Carson	70	70		70	---	1
33	Fort Carson	70	70		---	---	N/A
31	Fountain	105	105		---	---	1
32	Uintah Gardens – 21 <sup>st</sup> Street	70	70		70	---	1
55	Free Downtown Shuttle	13-35	10-20		13-35	---	5
<b>Total Peak Vehicles – Local Fixed-Route Services</b>							<b>48</b>

Figure 3-2 Local Fixed-Route Weekday Services

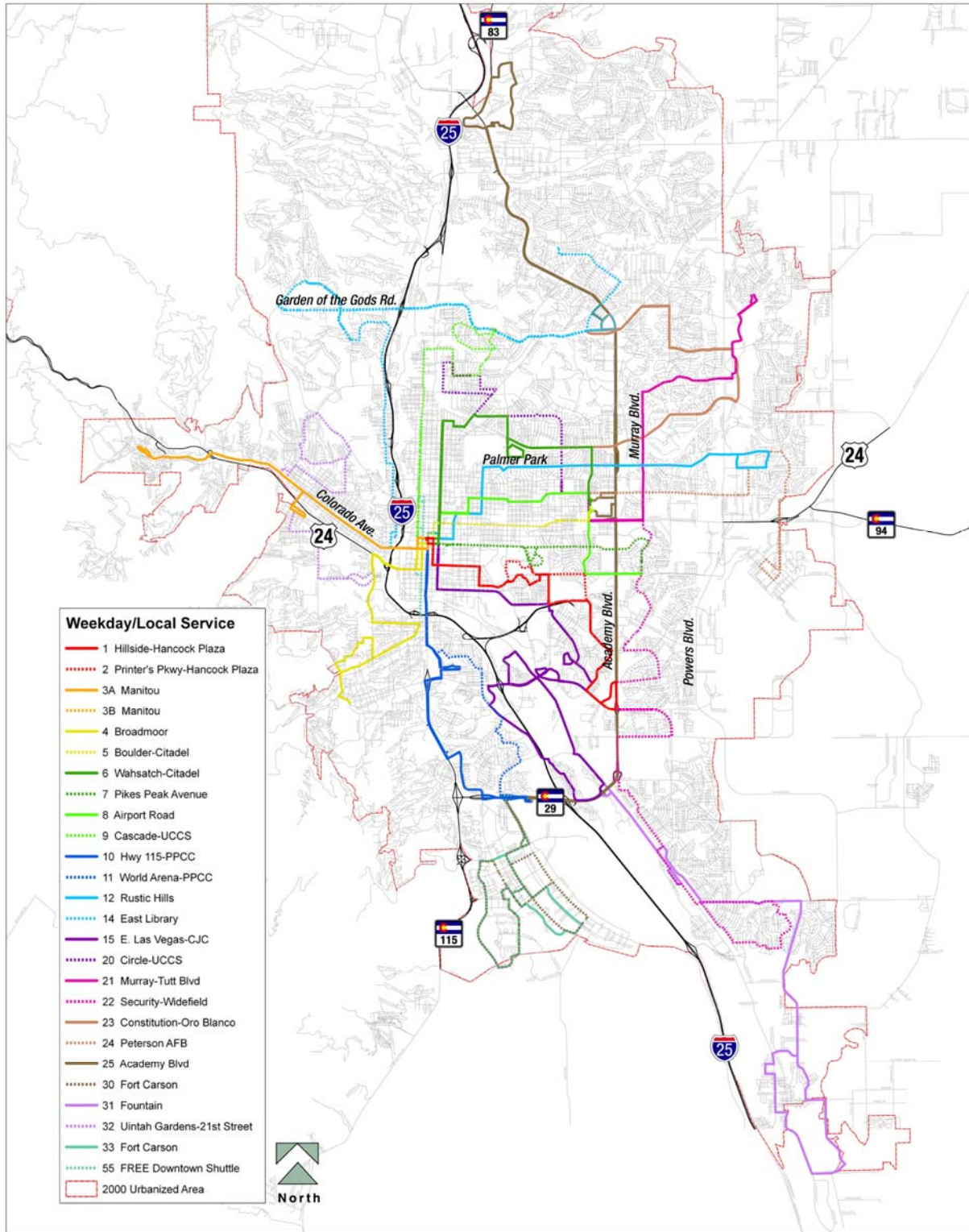
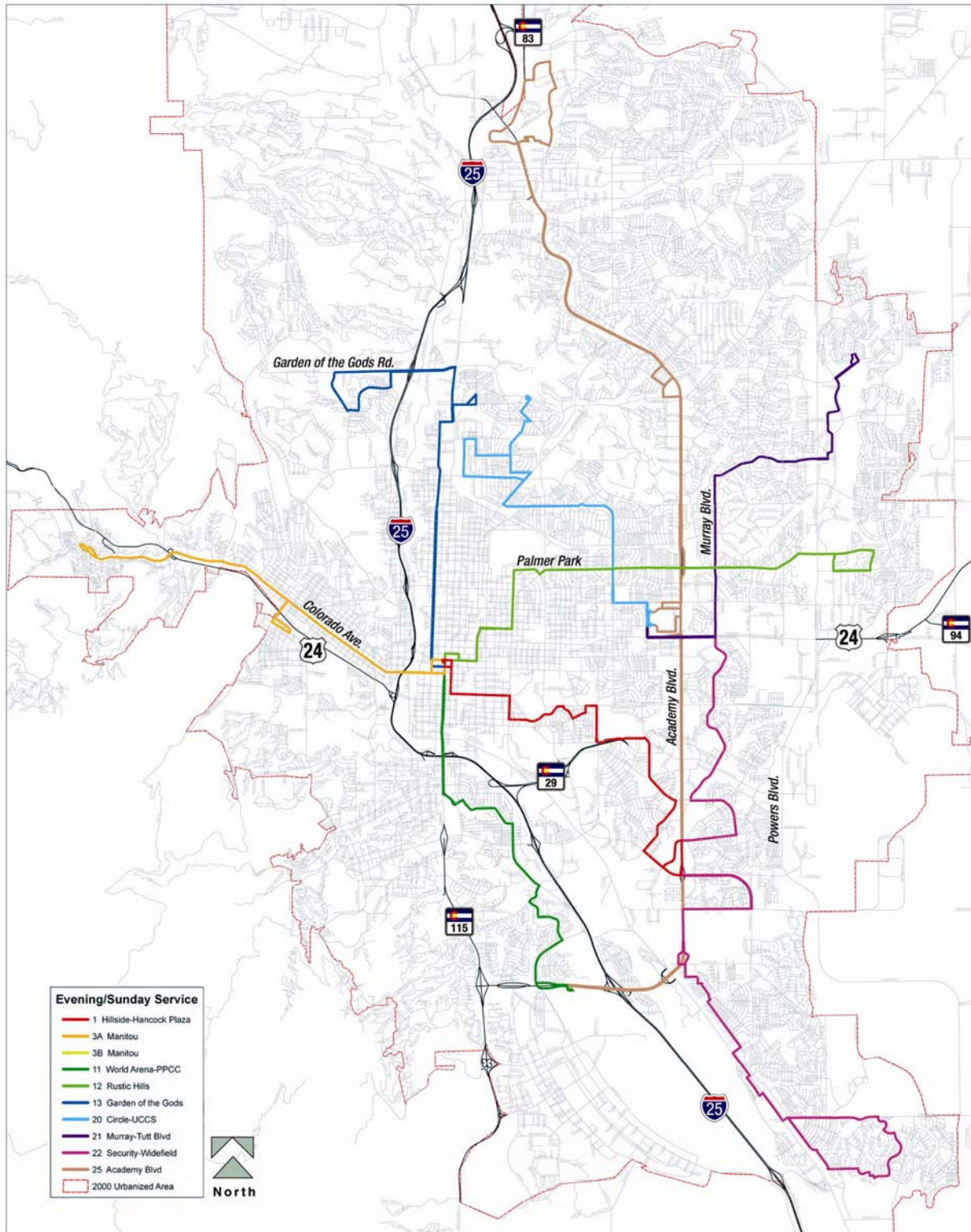


Figure 3-3 Local Fixed-Route Evening and Sunday Service



Service frequencies vary, with major routes operating every 35 minutes in the peak period and every 70 minutes mid-day. The busiest routes operate every 35 minutes all day while those with lower ridership operate 70-minute frequencies all day. Sunday and evening service generally operates every 60 minutes, reflecting the lower level of traffic congestion. The span of service for each local route is identified in **Table 3-2**.

It is easiest to understand the areas served and productivities of routes in corridors if related routes (providing weekday, evening, and Sunday service) are grouped together. In the following description and **Table 3-3**, routes 9/13, 19/20, and 30/33 are combined to enable the most accurate comparisons between routes.

#### 1: Hillside/Hancock Plaza

Operates between the Downtown Terminal and Astrozon Transfer Station via Costilla, Prospect, Eastlake, Winnepeg, Tahoe, Sequoia, Airport, Mallard, Chelton, and Delta.

#### 2: Printers Parkway – Hancock Plaza

Operates between the Downtown Terminal and Astrozon Transfer Station via Costilla, Prospect, Eastlake, Union, Parkside Drive, International Circle, Airport Road, Chelton, and Delta. Serves the County Health Department, and Peak Vista Community health Center.

Together routes 1 and 2 provide 35-minute service between Downtown and Astrozon Transfer Station.

#### 3: Manitou

Operates between the Downtown Terminal and Manitou Springs, primarily on Colorado Avenue and Manitou Avenue. This route detours off the main line to serve the human service agencies on 26<sup>th</sup> Street, Bott, and Robinson (Silver Key, Head Start) and the residences in this neighborhood. In addition, this route serves Goodwill Industries, the many businesses in this corridor, and the residents of the old Colorado City and Manitou Springs neighborhoods.

#### 4: Broadmoor

Operates between the Downtown Terminal and the Broadmoor Hotel via Cimarron, 8<sup>th</sup> Street, Brookside and Cheyenne Boulevard. This route serves the Regency Towers, Cheyenne Mountain High School, and Cheyenne Mountain Junior High School, the neighborhood surrounding the Broadmoor, as well as Walmart and the retail surrounding the Broadmoor Hotel.

#### 5: Boulder-Citadel

Operates between the Downtown Terminal and the Citadel Transfer Station. The route operates primarily along Platte Avenue and Boulder Street and provides access to Memorial Hospital, the U.S. Olympic Training Center, the Citadel Mall, Palmer High School, Walmart and the Penrose Library.

#### 6: Wahsatch – Citadel

Operates between the Downtown Terminal and the Citadel Transfer Station via Chelton, Constitution, Depaul, Union, Van Buren Street, and Wahsatch. This route serves the Mission Medical Clinic, and the Audubon Medical Center and Union Medical Campus are one block north of the route. Additionally, this route serves Wasson High School and the surrounding neighborhood.

**2035 Mountain Metropolitan Transit Plan**  
**DRAFT**

**Table 3-2 Service Span for Local Fixed-Routes**

Route	Name	Transfer Centers Served <sup>(1)</sup>	Weekdays <sup>(1)</sup>	Saturday <sup>(1)</sup>	Sunday <sup>(1)</sup>
1	Hillside	DT, Astrozon	5:56 AM - 10:35 PM	5:56 AM - 10:35 PM	7:45 AM - 5:37 PM
2	Printers Parkway	DT, Astrozon	6:00 AM - 6:37 PM	---	---
3	Manitou	DT	5:24 AM - 10:30 PM	6:35 AM - 10:30 PM	7:45 AM - 5:35 PM
4	Broadmoor	DT	5:53 AM - 6:50 PM	6:51 AM - 6:50 PM	---
5	Boulder - Citadel	Citadel, DT	5:35 AM - 6:53 PM	6:35 AM - 6:30 PM	---
6	Wahsatch - Citadel	Citadel, DT	6:00 AM - 6:37 PM	7:10 AM - 6:37 PM	---
7	Pikes Peak Avenue	DT	5:30 AM - 6:38 PM	7:10 AM - 6:37 PM	---
8	Airport Road	Citadel, DT	5:50 AM - 6:47 PM	7:00 AM - 6:47 PM	---
9/13	Cascade - UCCS	DT, UCCS	5:30 AM - 6:40 PM	6:05 AM - 6:40 PM	7:45 AM - 5:30 PM
10	Hwy 115 - PPCC	DT, PPCC	6:00 AM - 6:32 PM	6:30 AM - 6:32 PM	---
11	World Arena - PPCC	DT, PPCC	6:00 AM - 10:29 PM	6:35 AM - 10:29 PM	7:45 AM - 5:33 PM
12	Rustic Hills	DT	5:55 AM - 10:35 PM	7:05 AM - 10:35 PM	7:45 AM - 5:35 PM
14	East Library	DT, Austin Bluffs/Acad.	5:35 AM - 7:01 PM	6:35 AM - 7:01 PM	---
15	E. Las Vegas/CJC	DT, Astrozon	6:00 AM - 7:11 PM	7:45 AM - 7:04 PM	---
17	Cheyenne Mtn. Zoo (summer only)	DT	---	9:30 AM - 6:25 PM	8:45 AM - 6:15 PM
19	Austin Bluffs	DT, Citadel, UCCS, Austin Bluffs	---	---	7:45 AM - 5:28 PM
20	North Circle - UCCS	Citadel, UCCS	6:23 AM - 7:08 PM	7:33 AM - 6:26 PM	---
21	Murray - Tutt Boulevard	Citadel, 1st & Main	6:22 AM - 10:22 PM	7:00 AM - 10:22 PM	8:05 AM - 5:22 PM
22	Security - Widefield	Citadel, Astrozon, Fountain	5:10 AM - 10:38 PM	5:10 AM - 10:38 PM	7:27 AM - 5:38 PM
23	Constitution	Citadel, 1st & Main, Austin Bluffs	5:24 AM - 7:15 PM	7:00 AM - 7:15 PM	---
24	Peterson AFB	Citadel	5:37 AM - 7:27 PM	7:17 AM - 7:27 PM	---
25	Academy	PPCC, Astrozon, Citadel, Austin Bluffs/Acad., Chapel Hills	5:32 AM - 10:43 PM	6:05 AM - 10:43 PM	7:25 AM - 5:46 PM
30/33	Fort Carson	PPCC	6:30 AM - 6:15 PM	7:05 AM - 6:15 PM	---
31	Fountain	PPCC, Fountain	5:39 AM - 7:10 PM	---	---
32	Uintah Gardens	Local Circulator,	6:15 AM - 6:48 PM	6:48 AM - 6:48 PM	---
55	Free Downtown Shuttle	DT	6:20 AM - 7:55 PM; and Friday Evening: 8:00 PM - 12:50 AM	9:15 AM - 12:50 AM	---

(1) As of October, 2007; DT = Downtown Terminal, UCCS = University of Colorado at Colorado Springs, PPCC = Pikes Peak Community College

Table 3-3 2006 Ridership and Revenue Hours

Route	Name	2006 Annual Service Characteristics(1)			Riders per Rev. Hour	Riders per Rev. Mile
		Ridership	Revenue Hours	Revenue Miles		
1	Hillside - Hancock Plaza	119,795	4,428	60,863	27.1	2.0
2	Printers Parkway – Hancock Plaza	71,956	3,239	44,729	22.2	1.6
3	Manitou	248,634	8,387	102,880	29.6	2.4
4	Broadmoor	80,989	3,924	47,442	20.6	1.7
5	Boulder - Citadel	296,774	6,570	52,074	45.2	5.7
6	Wahsatch - Citadel	74,983	5,695	66,077	13.2	1.1
7	Pikes Peak Ave.	109,122	4,872	68,569	22.4	1.6
8	Airport Rd.	107,591	6,861	80,015	15.7	1.3
9/13	Cascade - UCCS	164,077	7,762	100,504	21.1	1.6
10	Hwy 115 - PPCC	87,459	3,832	51,071	22.8	1.7
11	World Arena - PPCC	119,107	4,378	54,188	27.2	2.2
12	Rustic Hills	87,936	6,079	86,903	14.5	1.0
14	East Library	219,148	11,942	189,383	18.4	1.2
15	E. Las Vegas - CJC	111,060	6,953	114,179	16.0	1.0
17	Cheyenne Mountain. Zoo	<i>New in '07</i>				
19	Austin Bluffs	17,522	1,055	14,241	16.6	1.2
20	North Circle - UCCS	23,099	3,815	47,168	6.1	0.5
21	Murray - Tutt Blvd.	42,695	6,164	82,214	6.9	0.5
22	Security - Widefield	80,330	9,271	127,874	8.7	0.6
23	Constitution – Oro Blanco	51,691	6,596	91,126	7.8	0.6
24	Peterson AFB	66,965	5,860	78,378	11.4	0.9
25	Academy	423,305	21,340	296,294	19.8	1.4
30/33	Fort Carson	20,206	3,195	53,504	6.3	0.4
31	Fountain	28,049	3,432	59,131	8.2	0.5
32	Uintah Gardens – 21 <sup>st</sup> Street	35,966	3,824	51,527	9.4	0.7
55	Free Downtown Shuttle	159,614	9,185	72,300	17.4	2.2
<b>System Totals / Average</b>		<b>2,848,073</b>	<b>158,659</b>	<b>2,092,634</b>	<b>18.0</b>	<b>1.4</b>

(1) Evening service data is not included.

**7: Pikes Peak Avenue**

Operates between Airport/Murray and the Downtown Terminal via Murray, Pikes Peak Avenue, Parkside, Painters Parkway, and back onto Pikes Peak Avenue to the Downtown Terminal. This route provides a direct connection from the Airport/Murray area to Downtown.

**8: Airport Road**

Operates between Airport/Murray and the Downtown Terminal via the Citadel Transfer Station. The route travels via Murray, Airport Road, Chelton, E. Galley Road, Cache la Poudre and Wahsatch. The route provides good access to routes in the northeast quadrant of Colorado Springs at the Citadel Transfer Station and the rest of the City at the Downtown Terminal. Serves the Citadel Mall, Palmer High School, and the US Olympic Training Center and Memorial Hospital are one block south of the designated route.

**9: Cascade – UCCS**

Operates between Downtown Terminal and the UCCS Transfer Station via Cascade, Winters, 4<sup>th</sup> Street, and Manchester. This route provides an important connection between UCCS and the Downtown Terminal for transfers to the rest of the Mountain Metro system. Additionally, the route serves Penrose Hospital, Colorado College and Palmer High School.

**10: Hwy 115 - PPCC**

Operates between the Downtown Terminal and the PPCC Transfer Station via Nevada, Southgate and Highway 115 to Academy and the PPCC Transfer Station. The route takes a brief detour off of the main line east of Southgate.

**11: World Arena – PPCC**

Operates between the Downtown Terminal and the PPCC Transfer Station. Like Route 10, this Route begins heading south on Nevada but then heads east via Corona, Venetucci Boulevard, Crestridge and B Street. Serves Tinseltown, the World Arena, Stratmoor Hills Elementary and Pikes Peak Community College.

**12: Rustic Hills**

Operates between the Downtown Terminal and Palmer Park. This route travels via Hancock Avenue, and Plamer Park Boulevard to its terminus. The route serves the Senior Center and the surrounding neighborhoods along its route.

**13: Garden of the Gods Road**

Operates only in the Evenings and on Sundays between the Downtown Terminal and Garden of the Gods. For passengers that need access to this route during the daytime, they must use routes 9 and 14. The route travels via Cascade, Nevada, Garden of the Gods Road and Centennial. This route provides critical access in off-peak hours to the recreational amenities, businesses and neighborhoods on the west side of the transit system.

**14: East Library**

Operates between the Downtown Terminal and East Library via Walnut, Chestnut, Centennial, and Garden of the Gods Road to the UCCS Transfer Station. The route continues on to the Austin Bluffs/Academy Transfer Station via Austin Bluffs Pkwy and then heads north on Montebello to East Library. This route provides access to Garden of the Gods and the businesses along Austin Bluffs Pkwy.

**15: E. Las Vegas - CJC**

Operates between the Downtown Terminal and the Criminal Justice Center via the Astrozon Transfer Station, traveling on Wahsatch, E. Fountain Boulevard, Verde, Monterey, Hancock, E. Las Vegas, Academy, Venetucci, and Cheyenne Mountain Boulevard. The route serves the Criminal Justice Center, Community Alternative Center, Harrison High School, World Arena, and Tinseltown.

**17: Cheyenne Mountain Zoo**

This route is a very specialized service that operates only on Sundays and provides access to the Cheyenne Mountain Zoo from the Downtown Terminal. The route travels along Nevada Avenue to Cheyenne Boulevard and on to the Zoo.

**19/20: Austin Bluffs and Circle - UCCS**

Route 19 - Operates only in the Evenings and Sundays between the Downtown Terminal and the Austin Bluffs/Academy Transfer Station via Boulder, E. Platte Avenue, stops at the Citadel Transfer Station and continues on Galley Road, North Circle, Van Buren Street North Hancock, Westmoreland Road, Cragmoor Road, stops at the UCCS Transfer Station and then continues on Austin Bluffs to the route's terminus. The route provides access to the Citadel Mall, retail, residential neighborhoods, UCCS, and Palmer Park with connections to routes at the Austin Bluffs/Academy Transfer Station.

Route 20 operates weekdays providing service similar to the evening and Sunday service on Route 19. It operates between the Citadel Transfer Station and the UCCS Transfer Station via Chelton, Dale, N. Circle Drive, Van Buren Street, Templeton Gap Road, Fillmore Street, Stone St. Nichols Boulevard, 4<sup>th</sup> Street, Hancock, Westmoreland, and Acacia Drive. Serves the Citadel Mall, Wasson High School, Audubon Medical Center, Union Medical Campus, neighborhoods and UCCS.

**21: Murray – Tutt Boulevard**

Operates between Citadel Transfer Station and Charlotte Pkwy and Colorado Springs Health Partners via Platte, Murray Boulevard, S. Carefree, stopping at the 1<sup>st</sup> and Main Town Transfer Station continuing on Tutt to the route's terminus at Colorado Springs Health Partners. Serves the Citadel Mall, Mitchell High School, Ruth Holley Library, Irving Middle School and Colorado Springs Health Partners.

**22: Security/Widefield**

Operates between the Citadel Transfer Station and Widefield. The route travels south along Murray Boulevard to the Astrozon Transfer Station and then continues south on Hancock Express Way to Drennan Road and onto Security Boulevard to the Fountain Transfer Station. The route then heads onto Fontaine, Metropolitan, and Widefield Boulevard. This route serves numerous activity centers including Sierra High School, Widefield High School, Watson Junior High School, Janitell Junior High School and the Fountain Wal-Mart.

**23: Constitution – Oro Blanco**

Operates between the Citadel Transfer Station and Austin Bluffs/Academy Transfer Station via Chelton, Constitution Avenue, Powers Boulevard, Carefree Circle, Oro Blanco Drive and Austin Bluffs Parkway. The route stops at the 1<sup>st</sup> and Main Town Center Transfer Station and serves Irving Junior High School, Doherty High School, Safeway and other retail, residential neighborhoods and the Citadel Mall.

**24: Peterson AFB**

Operates between the Citadel Transfer Station and the Peterson AFB and BX. The route travels on E. Galley Road, Ford, Omaha, Palmer Park Boulevard, and on Peterson Boulevard. The route serves primarily those that work at Peterson Air Force Base, but the route also serves the Social Security office, Ruth Holley Library and Mitchell High School. The route runs every 35 minutes in the AM and PM peak to accommodate commuters.

**25: Academy Boulevard**

Operates between the PPCC Transfer Station, Citadel Transfer Station, Austin Bluffs/Academy Transfer Station and the Chapel Hills Transfer Station. The route travels along Academy Boulevard for the majority of its route, with only minor deviations to transfer stations. This route has very high ridership and productivity due to the abundance of retail, shopping, and medical offices it serves. The route also provides access to the Penrose Community Hospital and the businesses located in the Briargate Business Park.



**30/33: Fort Carson**

Route 30 and 33 operate on virtually the same route, but route 33 only has two AM trips Monday through Friday to accommodate commuters. Route 30 operates between the PPCC Transfer Station and the Evans Army Hospital and travels on Academy Boulevard, Magrath Avenue, O’Connell Boulevard, Speckler Avenue, Chiles Avenue, Harr Avenue, and Sheridan Avenue. The routes have many deviations off of main roads to accommodate the various residential neighborhoods and the activity centers. The route has many activity centers, including the Readiness Center, the Outdoor Recreation Center, Evans Army Hospital and the Ft. Carson PX.

**31: Fountain**

Operates between the PPCC Transfer Station and south Fountain with stops at the Fountain Transfer Station. The route travels via Academy, Security, Fontaine, Fountain Mesa Road, Jimmy Camp Road, Link Road, Old Pueblo Road, Santa Fe Avenue, and Commanche Village Drive. The Fountain and PPCC Transfer Station’s provide critical linkages necessary for those traveling to/from Fountain on Mountain Metro. The route serves the DMV, Watson Junior High School, Wal-Mart, residential neighborhoods in South Fountain and along Fontaine Boulevard, and Pikes Peak Community College.

**32: Uintah Gardens – 21<sup>st</sup> Street**

This route begins at Bott and Robinson and heads south on 25<sup>th</sup> Street to Broadway, south on 21<sup>st</sup> to Rio Grande then loops around W. Moreno Avenue and follows the same route back north. The route then travels to stops at 30<sup>th</sup> and Colorado, 19<sup>th</sup> and Uintah and Fontmore and Mesa before looping back down to 19<sup>th</sup> and Uintah and 30<sup>th</sup> and Colorado. The route provides an ongoing loop of fixed-route service for passengers. Passengers can transfer to Route 3 to access the Downtown Terminal to connect with other routes and quadrants of the City.

**RIDERSHIP AND PRODUCTIVITY BY ROUTE**

In **Figure 3-4** the routes are ranked by daytime ridership. The routes with the highest annual ridership in 2006 were:

- ▶ **Route 25:** Academy with 423,305 riders, 14.9% of total fixed-route ridership;
- ▶ **Route 5:** Boulder/Citadel with 296,774 riders, 10.4% of total fixed-route ridership; and
- ▶ **Route 3:** Manitou with 248,634 riders, 8.7% of total fixed-route ridership.

Route productivity is a key way of determining route effectiveness and because hourly costs are the primary determinate of local fixed-route service costs, ridership per revenue service hour is the most common measure of productivity. **Figure 3-5** ranks the routes by passenger per hour, again for daytime ridership. For comparison, the average productivity on local fixed-routes is 18.0 passengers per hour. The following routes rank as the top four most productive fixed-routes:

- ▶ **Route 5:** Boulder/Citadel – 45.2 riders/hour
- ▶ **Route 3:** Manitou – 29.6. riders/hour
- ▶ **Route 11:** World Arena – PPCC – 27.2 riders/hour
- ▶ **Route 1:** Hillside-Hancock Plaza – 27.1 riders/hour

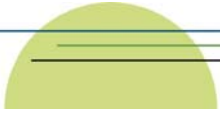
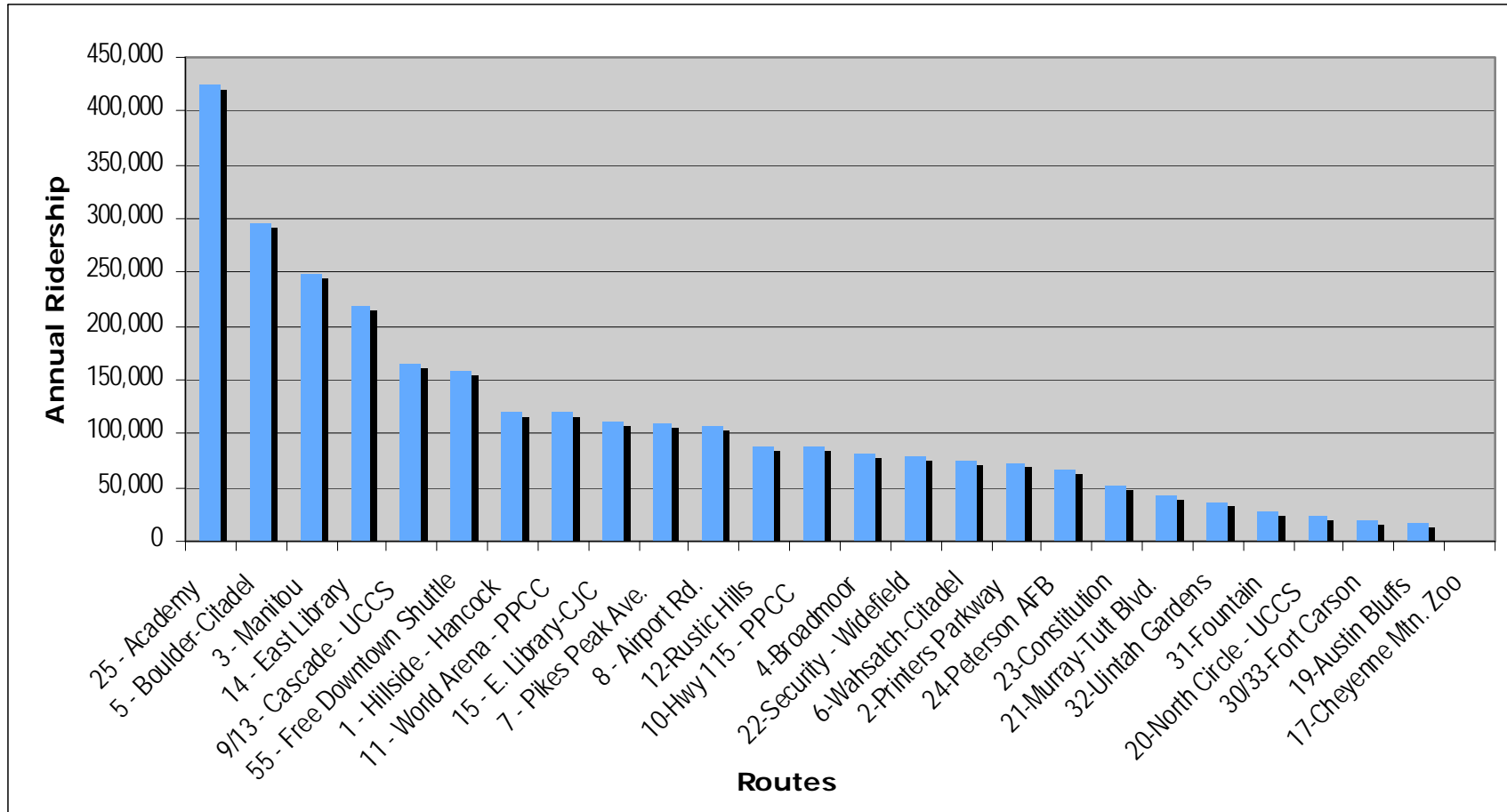


Figure 3-4 Annual Ridership by Local Route, 2006



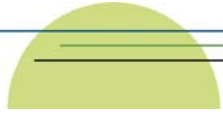
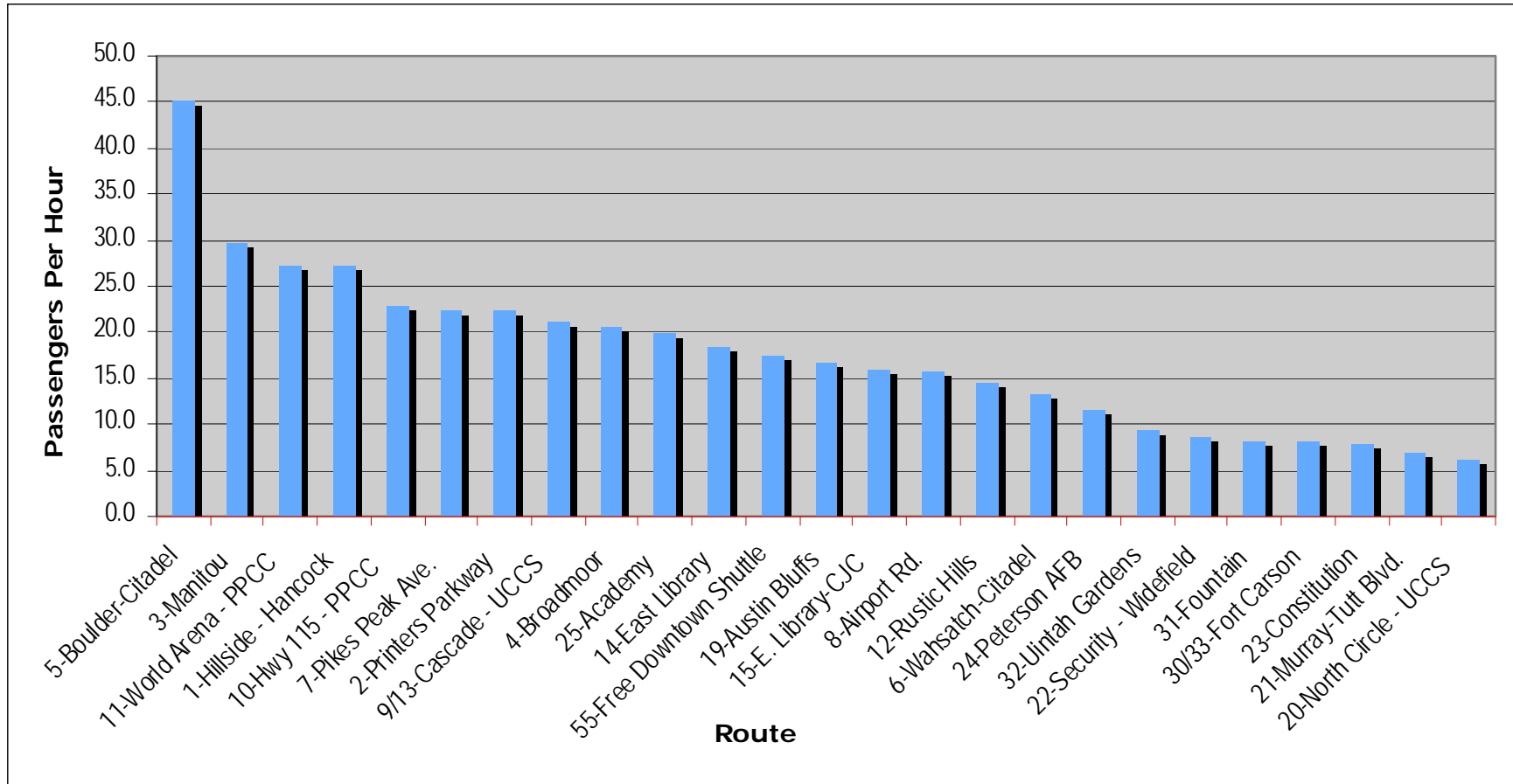


Figure 3-5 Productivity by Local Route, 2006



While Route 25 (Academy) carries the most passengers, its productivity is 19.8 passengers per hour – a solid number but significantly lower than the routes listed above. While Route 5 has outstanding productivity, among the remaining routes one-third have high productivity (20 to 30 passengers/hour), one-third have moderate productivity (10 to 19.9 passengers/hour) and one-third have low productivity (less than 10 passengers/hour).

Express and School Routes

Mountain Metro operates a variety of express, regional, and peak hour services. These services are grouped together because they primarily operate in peak hours, carry passengers in a single direction, and the average trip lengths are generally long. For these routes, it is most realistic to measure their effectiveness based on the number of passengers per trip rather than passengers per hour or per mile. A brief description of these services is included in **Table 3-4** and a map follows as **Figure 3-6**.

**Table 3-4 Express and School Route Service Descriptions**

Routes	Serving	Description
41-43	Schools	Peak hour trips serving selected school; operates on school days only.
6000-6999	Denver via I-25	FREX operates to Denver with the majority of trips are concentrated in peak periods but mid-day service is also operated.
81-84	Regional Express	Four routes offering express peak hour service. Three routes serve downtown, two from Falcon and one from the Union Town Center. One route connects Voyager Parkway to the First & Main Town Center near North Carefree, traveling via North Powers Boulevard
92-95	Schriever AFB	Four routes offering express peak hour service from the north (Air Force Academy), central (South Carefree/Tutt) and south (Fountain) parts of the region.

Peak hour service typically has relatively high ridership per trip, but high capital requirements as a large number of vehicles are required that are used only for a small portion of the day. Peak hour service also primarily carries travelers in the peak direction – and trips are relatively empty on the return trip. As a result there is a relatively high level of non-revenue service. For this reason, it often is most useful to have passengers per trip as a measure of productivity rather than passengers per hour.

It appears that the schedules of the school routes and Schriever AFB routes generally allow the same vehicle to be used for both services, but the peak requirements still remain high – 23 vehicles for the 60, 80, and 90 series routes, plus spares. Characteristics of each of the school and express routes are listed in **Table 3-5**. A narrative description of each of the four types of service follows.

Figure 3-6 Express/School Routes

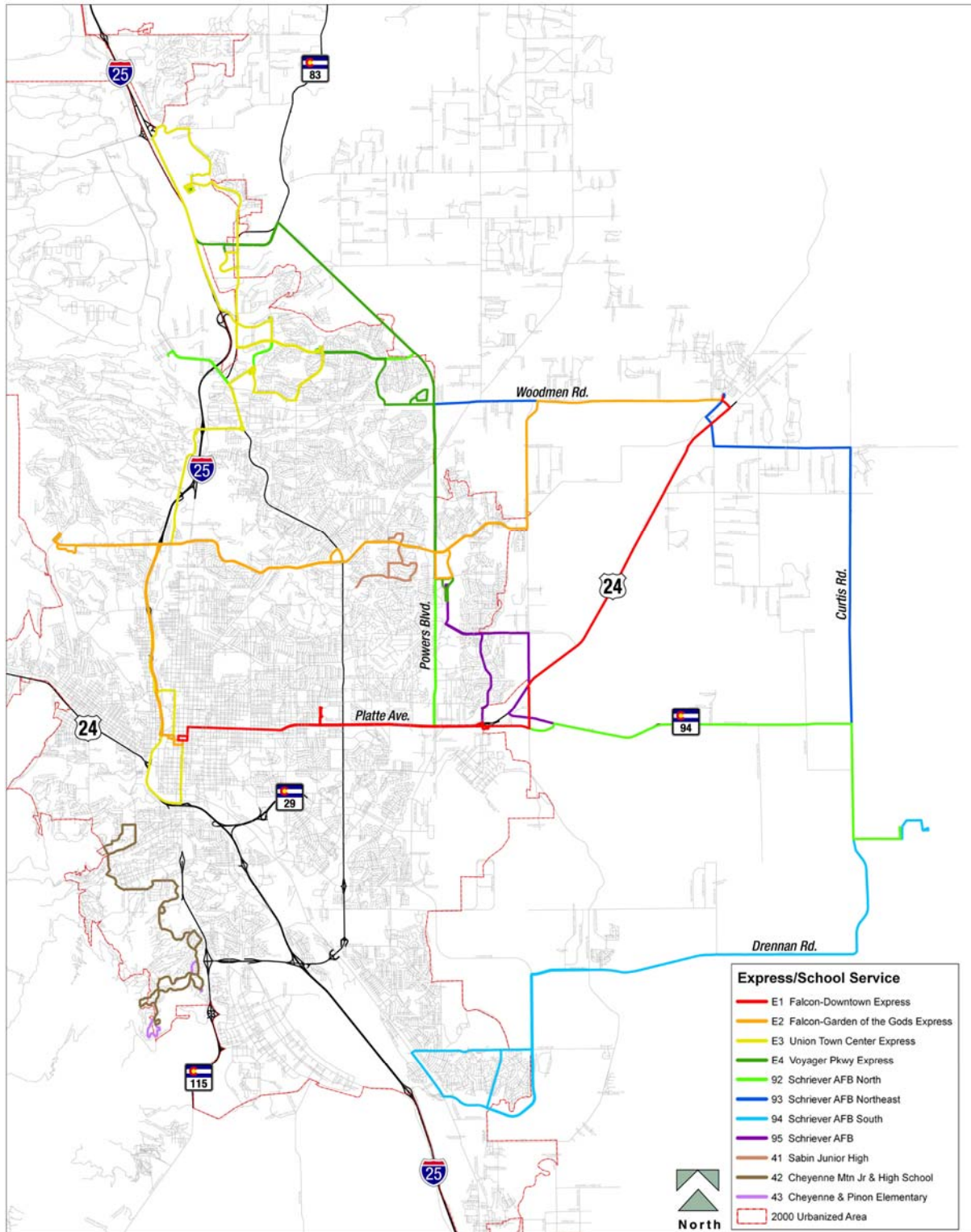


Table 3-5 Characteristics of School and Express Routes, 2006

Name	Monday - Friday <sup>(1)</sup>	Peak Hour Buses	2006 Service Characteristics		Riders per Trip <sup>(2)</sup>
			1-way Trips / Weekday	Annual Ridership	
<b>School Routes</b>					
Sabin Junior High	8:05 AM - 8:23 AM; 3:40 PM - 4:25 PM	1	3	5,649	10
Cheyenne Mtn High School, Junior High and Cheyenne Mtn Elementary & Pinon Routes	6:28 AM – 8:02 AM; 2:55 PM - 3:56 PM	2	4	14,477	32
<b>Express and Regional Route</b>					
Front Range Express (FREX)	3:45 AM - 9:50 PM	8 AM/10 PM	42	154,861	15
E1 Falcon - Downtown Express	5:45 AM - 8:08 AM; 3:50 PM - 6:03 PM	2	9	4,270	2
E2 Falcon - Garden of the Gods Express	5:10 AM - 8:15 PM; 3:15 PM - 6:32 PM	2	8	3,093	2
E3 Union Town Center - Downtown Express	5:40 AM - 8:30 AM; 3:40 PM - 7:05 PM	3	11	8,703	3
E4 Voyager Pkwy Express (began in April 2007)	5:15 AM - 8:38 AM; 3:25 PM - 6:47 PM	2	8	2,618 (in 2007)	Less than 2
Schriever AFB - North	5:30 AM - 6:50 AM; 3:20 PM - 4:45 PM	1	2	8,866	17
Schriever AFB - Northeast (Falcon)	5:50 AM - 7:15 AM; 3:50 PM - 5:20 PM	1	2	8,109	16
Schriever AFB – South (began in June 2007)	5:55 AM - 6:30 AM; 4:00 PM - 4:35 PM	1	2	1,625 (in 2007)	3
Schriever AFB - Central	5:20 AM - 7:15 AM; 3:25 PM - 5:40 PM	1	4	13,843	14
<b>System Totals and Averages</b>		24AM/26PM	95	226,743	11

(1) Riders per trip based on school routes operated 180 days/year and express routes 255 days/year.

#### School Routes

Route 41 connects northeast neighborhoods to both Doherty High School and Sabin Middle School with one morning trip and two afternoon trips. Routes 42 and 43 connect southeast neighborhoods to local schools. Route 42 serves Cheyenne Mountain Junior High and High schools; Route 43 serves Cheyenne Mountain and Pinon elementary schools. Route 42 is the most productive of the school routes with an average of 32 passengers per trip. System data combines routes 42 and 43 for an average productivity of 20 riders per trip. Route 41 is substantially lower with 10 passengers per trip.

#### FREX

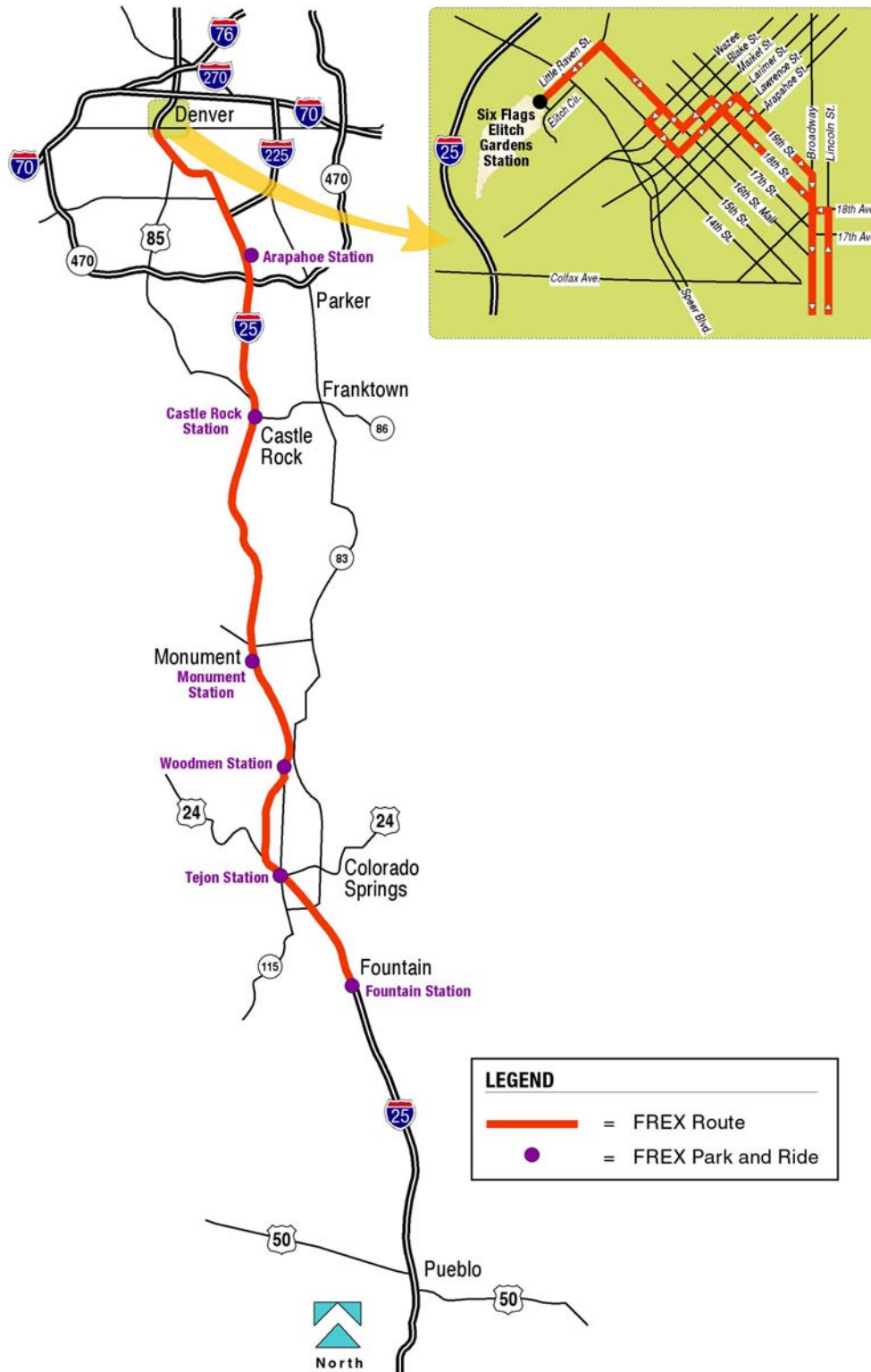
FREX operates throughout the day Monday through Friday. **Figure 3-7** illustrates the FREX route along I-25 and current stops served by FREX within the Pikes Peak region. Approximately 21 trips are operated in each direction, with the bulk of the service focused on peak period trips. Some mid-day and evening service is operated as well. Typical productivity for FREX service is between 15 and 20 passengers per trip. Fare recovery for this service is higher than most other services at around 40%. Recognizing the ways in which this service is different from other local and regional services, FREX has a separate fare structure and funding mechanism. Other agency funding is also received to support this service.

#### Express Service – 80 Series Routes

Three of the four express routes connect the downtown transit center with major employment sites or concentrations of residents in outlying communities. Some operate in two directions and other only carry passengers one-way.

- ▶ **81: Falcon/Downtown Express (E1)** serves the Falcon and Space Village park-and-rides before continuing on to the Citadel and Downtown Transfer Stations via Platte Avenue 82: **Falcon/Garden of the Gods Express (E2)** serves two markets. The route begins at the Falcon park-and-ride and continues on to the Austin Bluffs/Academy and UCCS Transfer Stations and then makes stops at key employers along Garden of the Gods Road. Two of the AM trips then travel express to the Downtown Terminal, providing an express connection from Garden of the Gods Road. Together these two routes provide seven peak hour departures from Falcon.
- ▶ **Route 83: Union Town Center Express (E3)** operates in revenue service in both directions, connecting the Union Town Center to the Downtown Terminal. The route primarily serves businesses along Research, Voyager, and Interquest parkways. It also serves the Chapel Hills Transfer Station and Woodman park-and-ride.
- ▶ **The newest route, 84: Voyager Parkway (E4)** provides service from the First & Main Town Center Transfer Station near Powers and North Carefree to major employers in the north. The route primarily serves businesses along Research, Voyager, and Interquest parkways. At present, these routes have very low productivity, carrying only 2 to 3 passengers per trip.

Figure 3-7 FREX Route Map





**Express Service – 90 Series Routes**

These four routes each serve commuters at Schriever Air Force Base. Two routes (92 and 93) start at the Air Force Academy and travel along Research Parkway. Route 92 then travels via Powers Boulevard while Route 93 travels via Falcon Highway and Curtis Road. 92 and 93 stop at the Space Village park-and-ride. Each route has one AM and one PM trip, for a total of two trips traveling to and from the Air Force Academy.

Route 94 serves commuters from the south and Route 95 serves the central area. Route 94 travels from Fontaine and Mesa Ridge via Bradley Road with one AM and one PM trip. Route 95 travels from South Carefree and Tutt along South Peterson Boulevard to Space Village park-and-ride and Shriever AFB with two AM and two PM trips. Productivity on routes 92, 93, and 95 is solid, with 14 to 17 passengers per trip. The newest route, 94, has very low productivity and is expected to be replaced with a vanpool program in April 2008.

**METRO MOBILITY**

Metro Mobility ADA paratransit service began in 1993 and is currently operated by MV Transportation, Inc. under a service contract with the City of Colorado Springs Transit Services Division. It operates as a demand-response service for those individuals with mobility needs that prevent them from using the fixed-route system, meeting all requirements of the Americans with Disabilities Act.

Paratransit services are provided during the same days and hours as Mountain Metro fixed-route service, seven days a week with various hours. The service is provided along a 1.5 mile corridor (3/4 mile on each side) around all routes on which the fixed-route service operates. Customers of Metro Mobility are required to be certified as ADA paratransit eligible in order to receive this curb-to-curb service. The demand for paratransit service has risen steadily over the years, from an average of 1,000 trips per month in 1993 to nearly 12,000 trips per month in 2006. Revenue hours increased from 66,000 in 2006 to 80,000 in 2007.

Ridership and Performance

There has been a steady increase in Metro Mobility ridership over the years. In 2004 ridership totaled 104,430 and in 2006 that number increased to 137,740 an increase of 33,310 (32%) passengers. Just over 50% of the 2006 trips are subscription trips. Metro Mobility has an ADA policy of meeting 100% of demand, with over-flow trips carried by Yellow Cab. Passengers using wheelchair lifts (28,845) represented 21% of boardings. **Table 3-6** illustrates characteristics of the paratransit service.

**Table 3-6 Metro Mobility Characteristics 2004 - 2006**

Characteristic	2004*	2005*	2006*
Passengers	103,530	117,714	134,268
Trips per Hour	2.2	2.0	2.0
Cost per Hour	\$26.48	\$29.19	\$33.99
Cost per Passenger	\$12.20	\$14.74	\$16.49
Fare Recovery Ratio	19.3%	15.5%	11.5%
Average Fare	\$2.36	\$2.29	\$1.89
Subsidy per Passenger	\$9.84	\$12.45	\$14.60

\* = Full maintenance costs are not included in these cost estimates.

Trends are illustrated in this table because the growth in ridership and costs is significant and must be considered in long-range planning. Metro Mobility has had double digit increases in ridership and anticipates this trend to continue for some time. At present, using a service area population of 516,929, 0.26 rides per capita are provided within the region.

### METRO RIDES

Since 1979, Metro Rides (formerly Ridefinders) has been helping residents and businesses in the Colorado Springs area to try to save time and money through the following services:

- ▶ Carpool matching
- ▶ Commuter vanpools
- ▶ School Pool for families
- ▶ Telecommuting
- ▶ Bicycle and pedestrian commuting resources
- ▶ Outreach to employer

The goal of the program is to reduce congestion and pollution in the Colorado Springs region by encouraging more people to use alternate forms of transportation, instead of driving a single occupancy vehicle. The service is available to residents and employers in the Colorado Springs area and the program receives approximately 5,000 calls annually. A database of approximately 1,500 clients is continually maintained.

Metro Rides is funded by the Congestion Mitigation Air Quality (CMAQ) program, which is administered by Pikes Peak Area Council of Governments (PPACG) and the State of Colorado Department of Transportation (CDOT). CMAQ funds cover capital, operating, and promotional costs.

### Ridership and Performance

The vanpool program is the only program within Metro Rides that provides a transportation service with ridership and performance information, but the other programs have a steady number of clients from year to year. **Table 3-7** illustrates the number of vanpool riders in 2006 and 2007 as well as the number of participants in the other programs.

**Table 3-7 Metro Rides Usage**

Program	2006	2007	Percent Increase
Vanpool riders	112	112	0%
Carpool matches	769	1,021	33%
Transportation information calls	5,014	7,910	58%
Bike month participants	1,500	1,500	0%

In 2007 the majority of the 17 vanpools left from various park-and-ride lots in Colorado Springs and travel to Denver; five vans travel from Pueblo to Colorado Springs and two vans travel between Canon City and Colorado Springs. Van passengers share the operating cost of the van while the volunteer driver rides for free in exchange for performing administrative tasks. Additionally, all vanpool passengers receive the Guaranteed Ride Home program as a part of their vanpool fare. The average cost per person for the program is approximately \$170-\$185 per month. Three additional vans will begin operation in January 2008 and an addition two vans will be purchased later in the year.

### SUMMARY OF MOUNTAIN METROPOLITAN TRANSIT SERVICE INFORMATION

In the preceding sections, the basic services offered by Mountain Metropolitan Transit have been described in some detail. Several characteristics are easiest to discuss for the system as a whole and are covered in the following sections on fleet, budget, and organizational structure, among others.

#### MOUNTAIN METROPOLITAN TRANSIT FLEET REVIEW

Copies of fleet rosters for the Mountain Metro, Metro Mobility, and Metro Rides programs are included in **Appendix A** and information is summarized in this section by service.

Mountain Metropolitan Transit has a comprehensive vehicle replacement and maintenance plan in place. In the next three years, it is anticipated that the Mountain Metropolitan Transit will be purchasing 18 new fixed-route buses, and will need to also purchase an additional 10 vehicles that were not replaced as scheduled in 2007. Additionally, Metro Mobility has the purchase of 30 paratransit vehicles slated for the next three years. Transit Services is on track with its maintenance and replacement plan. The plan ensures that vehicles are up to date, overhauled, and replaced when needed.

##### Mountain Metro Fleet

The current Mountain Metro fleet consists of 109 fixed-route vehicles including 19 FREX buses. The fixed-route fleet is made up of a variety of vehicle sizes and types; all of the vehicles run on clean diesel and bio-diesel (with the exception of the one electric bus in the fleet) and the majority of the vehicles are 35' – 40' with a seated capacity of 32-40 passengers. All vehicles purchased in 2006 and 2007 have been low-floor Gillig's, which better accommodate the needs of passengers, especially older adults and those with special needs. In late 2007, low floor Gillig BRT buses were put into service for the Front Range Express. This was a much needed improvement for this inter-city service. A total of 49 low-floor vehicles are in the fleet. All fixed-route coaches are ADA accessible and have seating available for wheelchairs. The fixed-route fleet is relatively new with an average age of approximately six years. The majority of the vehicles in the fleet are 1999 or newer, with no vehicles older than 1994. These vehicles have an average life of 12 years. On average nine vehicles need to be replaced annually.

##### Metro Mobility Fleet

Metro Mobility has 44 vehicles in its fleet at present, with five new vehicles acquired in 2007. The vehicles are all cutaways and the majority run on diesel fuel; 14 vehicles use gasoline. The cutaways, with a maximum seated capacity between of 14 passengers, all have the capacity to hold two to three wheelchairs. The average age of the paratransit fleet is two years. As these vehicles have an average four-year life span, nine to 10 vehicles need to be replaced each year. Alternate vehicle types to the cutaway are currently being evaluated.

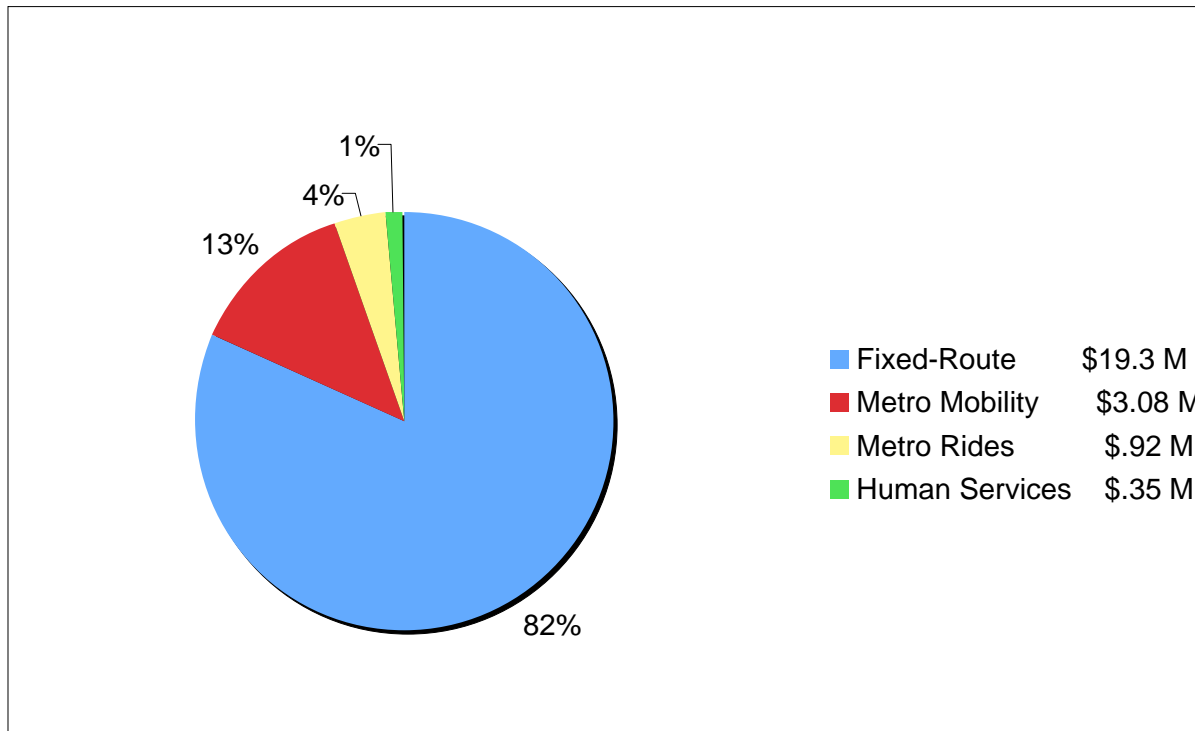
##### Metro Rides Fleet

The vanpool program fleet consists of 18 vans – 16 in use and two backup vehicles. Six additional eight passenger Toyotas were purchased in 2007, but are not yet in service. The fleet consists of both seven-passenger minivans and 12-passenger maxivans.

**MOUNTAIN METROPOLITAN TRANSIT BUDGET**

Mountain Metropolitan Transit has a 2007 operating and administrative budget of just over \$23 million. The various fixed-route services account for 76% of expenditures, as shown in **Figure 3-8**. Metro Mobility and contracts for human services transportation accounts for an additional 22% of expenditures. The Metro Rides program accounts for 2% of expenditures.

**Figure 3-8 Services by 2007 Operating Budget**



**Table 3-8** summarizes the 2007 operating budget for Mountain Metropolitan Transit, broken out two ways – by administrative and operating expenses and by type of service. To arrive at these figures, the administrative costs were allocated to the service with which they were most closely associated. In the case of expenses associated with both fixed-route and paratransit, they were split between the programs based on a relative appropriation of funds based on the size of each program (fixed-route and paratransit).

Revenues for Mountain Metropolitan Transit are derived from a variety of sources. Local funds come from the Pikes Peak Rural Transportation Authority (PPRTA) sales tax, City of Colorado Springs general fund in addition to community support for FREX service from the Town of Castle Rock and Douglas County. The City of Fountain provides contributions to provide service to their community as they are outside the PPRTA. Operating funds include fares and advertising revenues.

Grant funds come from the Federal Transit Administration (FTA) as well as Congestion Mitigation and Air Quality (CAMQ) funds. CMAQ funds have been used for a variety of demonstration projects, including FREX and the Free Downtown Shuttle. They are also used for the Metro Rides program, administration and operations.

Table 3-8 Mountain Metropolitan Transit 2007 Expense Summary

By Budget Category	
Administrative Expenses	\$3,264,377
Operations Expenses	\$20,424,477
<b>TOTAL</b>	<b>\$23,688,854</b>
By Type of Service	
<b>Fixed-Route</b>	
Administration	\$2,231,864
Operations	\$15,266,800
Subtotal	\$17,498,664
<b>Paratransit</b>	
Administration	\$393,053
Operations	\$2,688,630
Subtotal	\$3,081,683
<b>FREX</b>	
Administration	\$234,623
Operations	\$1,604,909
Subtotal	\$1,839,532
<b>Human Services Contracts</b>	
Administration	\$117,119
Operating*	\$801,138
Subtotal	\$918,257
<b>Metro Rides</b>	<b>\$350,718</b>
<b>TOTAL</b>	<b>\$23,688,854</b>

Source: Mountain Metropolitan Transit, 2007.

\* This sum represents the cost to the City of Colorado Springs plus RTA funding, and fleet budget for fuel.

FTA revenues vary from year to year based upon funding availability for individual projects and may include operating, administrative and capital expenses. The urbanized area receives an annual allocation of FTA Section 5307 funding of approximately \$5 million. Capital revenues are not included in the revenue summary because they vary considerably each year, reflecting specific projects and vehicle replacements for the given year. A one-year budget provides only a snapshot and does not accurately reflect capital expenses over time.

Steady sources of capital funding are the Federal Transit Administration programs – either the urbanized formula funds allocated to the area (Section 5307) or bus discretionary funding (Section 5309) that are appropriated at the federal level for specific projects. The City of Colorado Springs is a part of the Colorado Transit Coalition, which requests FTA Section 5309 bus and bus facility funds every year in a group application for the entire State of Colorado. In 2007 Colorado Springs also received Colorado Senate Bill 1 funds to purchase 19 buses for the Front Range Express service. While this source of funding may be available in the future for specific projects, it is not anticipated to be an annual source of funding for routine capital expenses. Both FTA and Senate bill one programs require 20% in local matching funds.

### Mountain Metropolitan Transit and Metro Mobility Fares

Fares are an important, although relatively small portion of the fixed-route and paratransit budgets. **Table 3-9** presents the current fare structure for Mountain Metropolitan Transit's fixed-route and paratransit services. In 2007 the regular cash fare for a one-way local fixed-route trip was \$1.25. In January 2008 the cash fare increased to \$1.50.

Mountain Metro provides discounted fares to seniors (ages 60+), persons with disabilities, Medicare cardholders and youth (ages 6-11), and students (ages 12 – high school). In addition to cash fares, Mountain Metro offers 22-ride tickets and 31-day tickets for express and regular routes. For those traveling to and from Fountain the Fountain city limits, passengers that qualify for the basic fare must pay an additional "zone" fare of \$0.85.

FREX service offers 10, 20, and 40-Ride Tickets in addition to cash fares. A 40-ride FREX pass from Colorado Springs to Denver cost \$210 in 2007 and increased to \$270 in 2008.

For paratransit service on Metro Mobility, the 2007 cash fare for a one-way trip was \$2.00 within the Mountain Metropolitan Transit service limits except Fountain which was \$3.10 in 2007. In 2008 the one-way cash fare increased to \$2.50. Passengers can purchase 10-ride punch cards.

### **MOUNTAIN METROPOLITAN TRANSIT PERFORMANCE INDICATORS**

This section looks at Mountain Metropolitan Transit performance indicators for 2006. Transit performance trends are a tool utilized to measure the productivity of a system. Typically performance measures are focused on attributes of service such as ridership and operating costs. The operating data and performance indicators are listed separately for fixed-route and paratransit/demand response services.

#### Fixed-Route Performance Measures

**Table 3-10** presents operating data and key performance indicators for the fixed-route system for 2006. They are identified separately for Mountain Metro services and FREX services.

Table 3-9 Mountain Metropolitan Fare Structure

Fare Media	Passenger Category	Fixed-Route Fare 2007/2008	Metro Mobility Fare 2007/2008
Cash	<b>Basic Fare</b> (ages 12-59)	\$1.25/\$1.50	\$2/\$2.50
	<b>Express Fare</b> (ages 12-59)	\$2.00/\$2.50	n/a
	<b>Express Fare</b> (Senior citizens (60+), Medicare and disabled - half the posted rate)	\$1.00/\$1.25	
	<b>Student Fare</b> (ages 12-high school)	\$0.95/\$0.75	
	<b>Child Fare</b> (ages 6-11; ages 5 and under ride free with adult)	\$0.60/\$0.75	
	<b>Senior Citizens, Medicare, and Disabled Fare</b> (must show proof of age, Medicare or disabled ID card upon request)	\$0.60/\$0.75	
	<b>Zone Fare</b> (added to all travel that begins/ends in Fountain City limits (does not apply to senior citizens, Medicare, disabled, and 31-day with zone included ticket holders)	\$0.85/\$1.00	\$1.10/\$1.25
	<b>Front Range Express (FREX)</b>	\$3-\$7/\$4-\$9	
Discount Fare Passes	<b>31-Day Ticket</b> (unlimited one-way in a consecutive 31-day period; does not include express routes)	\$35/\$54	
	<b>31-Day Ticket With Zone Fare</b> (same as above but includes zone fare)	\$45/\$59.50	
	<b>31-day Express Ticket</b> (unlimited one-way trips in a consecutive 31-day period on all regular fixed and express routes; does not include Schriever express route)	\$50/\$62	
	<b>22 Ride Express Ticket</b> (includes all regular fixed and express routes; does not include Schriever express routes)	\$40/\$50	
	<b>22-Ride Adult Ticket</b> (does not include express routes)	\$25/\$30	
	<b>22-Ride Student Ticket</b> (does not include express routes)	\$18.75/\$15	
	<b>22-Ride Child, Senior, Medicare and Disabled Ticket</b> (does not include express routes)	\$12/\$15	
	<b>10-Ride Ticket Book for Metro Mobility</b> - within City limits		\$20/\$25
	<b>10-Ride Ticket Book for Metro Mobility</b> - outside City limits		\$31/\$37.50
	<b>Front Range Express (FREX) 10 Ride Ticket</b>	\$36-\$63/ \$36-\$81	
	<b>Front Range Express (FREX) 20 Ride Ticket</b>	\$51-119/ \$68-\$153	
	<b>Front Range Express (FREX) 40 Ride Ticket</b>	\$120-\$210/ \$120-\$270	

**Table 3-10 Mountain Metro Fixed-Route Performance Measures**

Annual Operating Data	2006 Total	Local and Express FR	2006 FREX
Passenger Boardings (unlinked trips)	3,310,803	3,155,942	154,861
Revenue Miles	3,684,778	3,226,794	457,984
Revenue Hours	210,934	197,238	13,696
Operating Costs (Gross)*	\$17,498,664	\$16,070,725	\$1,427,939
Passenger Revenue	\$1,193,917	\$638,761	\$555,156
Service Area Population	516,929	516,929	
<b>Performance Indicators</b>			
Passengers/Revenue Hour	15.70	16.00	11.31
Operating Cost/Passenger	\$5.29	\$5.09	\$9.22
Passenger/Revenue Mile	0.9	1.0	0.3
Average Fare	\$0.36	\$0.20	\$3.58
Subsidy/Passenger	\$4.92	\$4.89	\$5.64
Operating Cost/Revenue Hour	\$82.96	\$81.48	\$104.26
Operating Cost/Revenue Mile	\$4.75	\$4.98	\$3.12
Farebox Recovery	6.8%	4.0%	38.9%
Passengers Per Capita	6.40	6.11	
Service Hours Per Capita	0.41	0.38	

As a high-speed long-distance service, FREX costs are higher than for local fixed-route services; the fare structure is also higher. FREX also achieves a higher farebox recovery than the local and express services at 39%. The fare increase planned for 2008 is expected to increase the farebox recovery as long as ridership is sustained.

Metro Mobility Performance Measures

**Table 3-11** presents operating data and key performance indicators for the paratransit service for 2006. The following is a summary of trends on select performance indicators on the paratransit/demand response services. Demand for this service is increasing each year, and an estimated 80,000 revenue hours were provided in 2007, up from 66,820 in 2006.



**Table 3-11 Paratransit Performance Measures**

Annual Operating Data	FY 2006
Passengers	137,740
Revenue Miles	1,028,189
Revenue Hours	66,820
Operating Costs (Gross)	\$2,271,099
Passenger Revenue	\$260,641
Service Area Population	516,929
Performance Indicators	
Passengers/Revenue Hour	2.06
Operating Cost/Passenger	\$16.49
Average Fare	\$1.89
Subsidy/Passenger	\$14.60
Operating Cost/Revenue Hour	\$33.99
Operating Cost/Revenue Mile	\$2.21
Farebox Recovery	11.5%
Passengers Per Capita	0.27
Service Hours Per Capita	0.13

**ORGANIZATION AND STAFFING**

Decision-making Structure

Mountain Metropolitan Transit is operated as a division of the Public Works Department of the City of Colorado Springs. Reflecting its location within the City of Colorado Springs, the City Council is ultimately responsible for the Transit Services Division. However, Mountain Metropolitan Transit is responsible for transit planning and operation on a regional level by receiving federal funding for the urbanized area (which includes Monument and Fountain) and PPRTA funding for transit in the Pikes Peak region. Mountain Metropolitan Transit has three primary funding mechanisms two of which are regionally focused and has responsibilities for planning and providing service at the regional level. However, under the current structure final determinations about the service are made at a local level by the City of Colorado Springs City Council because the transition to a regional decision-making structure has not yet been made.

A Citizen’s Transportation Advisory Board (CTAB) was established in 2002 to advise the City Council and City Manager on matters related to the City’s multi-modal transportation system. Transit is one facet; this Board also addresses roadways, trails, bicycling and pedestrian issues, freight, and land development issues.

The PPRTA Board is responsible for ensuring that one tenth percent sales tax (10% of PPRTA funds) are spent on transit and city sponsored transit services. The Board of Directors of the PPRTA consists of three elected officials from the City of Colorado Springs, three elected officials from El Paso County and one elected official each from Green Mountain Falls and Manitou Springs so each governmental entity is represented.

A final participant in the transportation planning process is Pikes Peak Area Council of Governments (PPACG), the Metropolitan Planning Organization for the urbanized area. PPACG is governed by a Board of Directors that includes elected officials from all member

organizations. Transportation committees include the Transportation Advisory Committee, a technical committee addressing all aspects of the transportation network, and the Coordinated Human Services Committee, a regional group focused on issues related to specialized transportation.

### Staffing

The system operates services through contracts rather than as a direct operation, however dispatch and communications services for the fixed-route network are handled internally. This enables the system to contract with more than one provider and to have an active role in quality control.

The current organizational structure, shown in **Figure 3-9**, shows 31 positions under the Transit Services Division Manager. In addition, the contracts for paratransit and fixed-route services include an additional 233 employees, with 44 through the paratransit contract and 189 through the fixed-route contracts.

### *Other Specialized Transportation Providers*

It is important to also document and understand the roles of other agencies in the region that also provide specialized transportation.

There are four primary providers of specialized services in the region in addition to Metro Mobility: Silver Key Senior Services, Amblicab, The Resource Exchange, and Fountain Valley Senior Services. Each of these agencies serves a particular niche important to the overall transportation network. They may serve a specific geographic area, provide a specific level of service for a population, or serve a specific demographic population. These include the following:

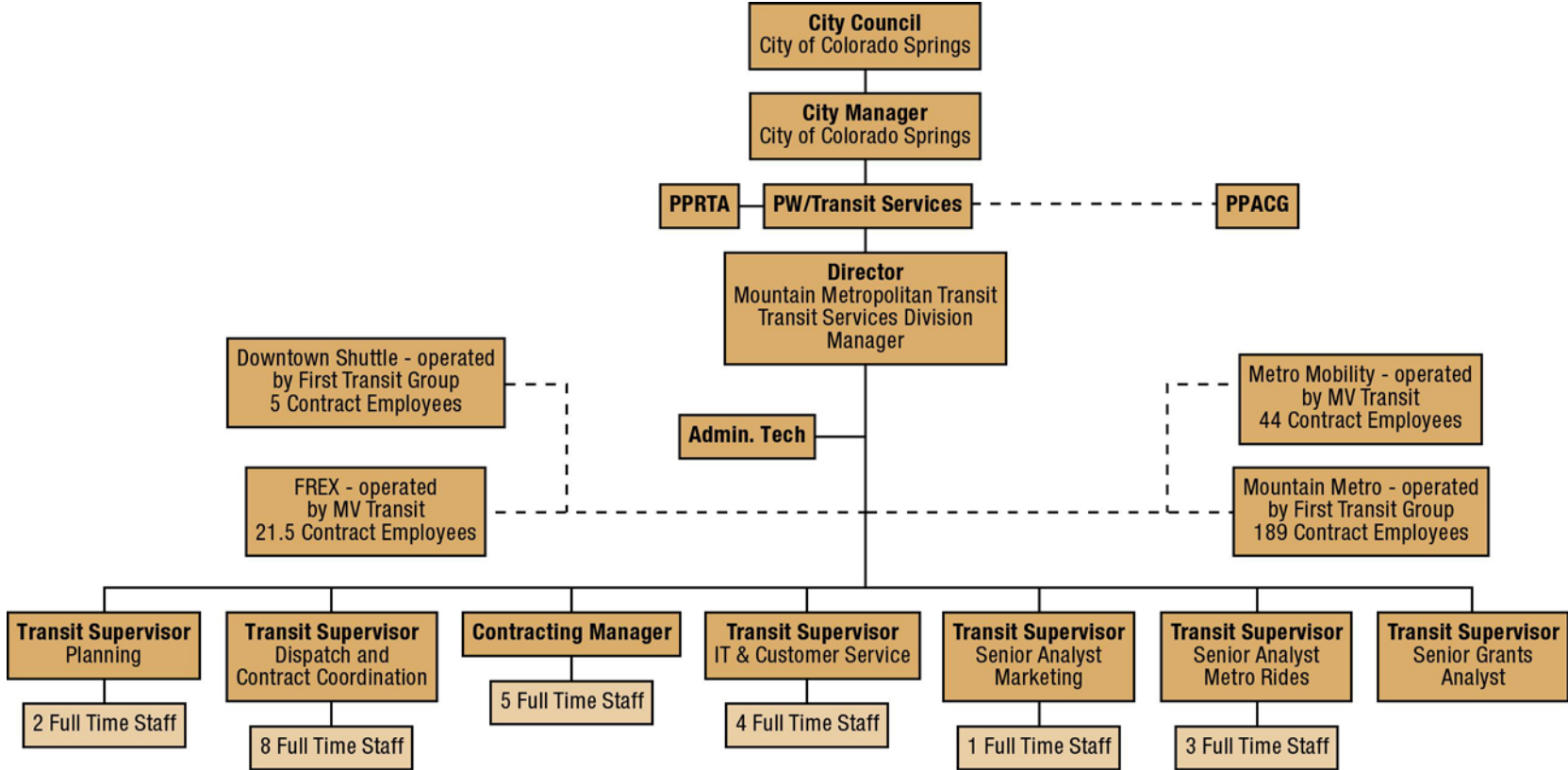
- ▶ Silver Key provides services to people who are elderly (but do not necessarily meet ADA requirements) and can operate outside the ADA service area.
- ▶ Amblicab provides door-through-door services to individuals and also serves individuals outside the ADA paratransit service area.
- ▶ The Resource Exchange provides service to individuals with developmental disabilities who live outside the fixed-route and ADA paratransit service area.
- ▶ Fountain Valley Senior Services operates in southeast El Paso County.

Additional details on these providers, along with fleet rosters, can be found in the *“Human Services Transportation Coordination Study”* prepared by Pikes Peak Area Council of Governments for the region. A variety of other smaller providers are also identified.

A strength of the Pikes Peak region is the unique services that each agency provides. In the Mountain Metropolitan Transit service area, a person who needs specialized transportation services will have at least one way of traveling, and many individuals will be eligible for more than one service. Another example is a person who is not eligible for ADA paratransit on Metro Mobility may still be able to access Silver Key Senior Services; or a person who needs a higher level of assistance than provided by Metro Mobility can use Amblicab or Silver Key.

This section provides a description of the characteristics of each of the five primary providers and then provides summary or comparative information about all of the providers.

Figure 3-9 Organizational Chart



**SILVER KEY SENIOR SERVICES**

Silver Key Senior Services is a non-profit agency that provides services for senior citizens in the Colorado Springs area. Silver Key provides door-to-door and door-through-door services, based on client needs. Drivers will also help by carrying groceries and other parcels for clients. Services are available Monday through Friday, 8:30 AM to 11 AM and 12:30 PM to 4 PM. No fares are charged for Silver Key services, although a \$3.00 donation is suggested. Silver Key has an active volunteer program, with around 12 volunteer drivers and 1-2 volunteer schedulers. There are also 6 paid drivers and 1 paid scheduler.

Silver Key serves El Paso County excluding the following areas: those south of the Colorado Springs City Limit, the portion of the City of Colorado Springs east of Powers, North of Drennan, and south of Highway 24. These outlying areas are served by Fountain Valley Senior Services; the boundaries are agreed upon by the two agencies but they will support each other and are flexible if need be. Silver Key does not serve Monument or Palmer Lake; these entities opted out of the PPRTA tax and therefore do not receive service.

Ridership and Performance

Silver Key Senior Services served 55,110 passengers in 2006, which is down from 108,972 passengers in 2004. This decline is due to a lack of available drivers and the agency is actively searching for drivers. Approximately 50% of all trips are subscription trips. Some of these are accounted for in regularly scheduled shopping trips and field trips. Random trips are often from clients’ homes to doctors’ offices. **Table 3-12** illustrates the ridership and performance measures in 2004, 2005, and 2006.

**Table 3-12 Silver Key Ridership and Performance Measures**

Measure	2004	2005	2006
Passengers	108,972	69,739	55,110
Trips per Hour	3.8	3.0	2.3
Cost per Hour	\$24.64	\$36.30	\$33.61
Cost per Passenger	\$6.46	\$12.24	\$14.85
Recovery Ratio	8.30%	11.92%	11.74%
Average Fare	\$0.54	\$1.46	\$1.74
Subsidy Per Passenger	\$5.92	\$10.78	\$13.10
Trips Per Capita	0.21	0.13	0.11

Vehicle Fleet / Capital Costs

The Silver Key fleet consists of 27 vehicles, of which 2 are not in use and 11 require the driver to have a commercial driver’s license (CDL). Because of a shortage of drivers, particularly those with CDLs, not all the vehicles are in use at all times.

Financial Characteristics

The Silver Key transportation program is funded through Silver Key general revenues, Area Agency on Aging Title III funds, and funding support from the City of Colorado Springs and the PPRTA. Riders also cover 10% of costs through a suggested donation of \$3 per trip.

# APPENDIX F

## APPENDIX F: REGIONAL NON-MOTORIZED TRANSPORTATION PLAN



**Pikes Peak Area  
Council of Governments**

# **Regional Non-Motorized Transportation Plan**

**November 2007**

**LSA**

**Catalyst Consulting**



# PPACG NON-MOTORIZED TRANSPORTATION PLAN

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# 1. INTRODUCTION

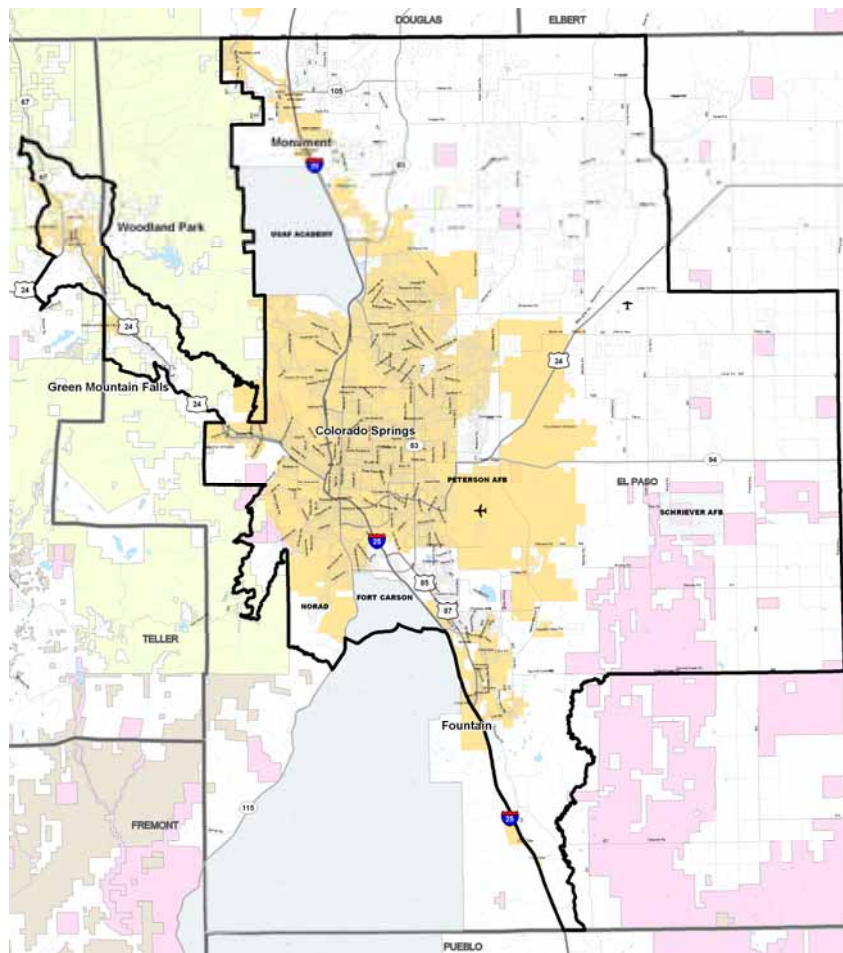
## PURPOSE OF THE PLAN

The Pikes Peak Area Council of Governments (PPACG) is the federally designated Metropolitan Planning Organization (MPO) for the Colorado Springs metro area. In this capacity, PPACG must maintain a Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP) to determine investment priorities for billions of dollars in federal, state, and local funds.

As part of this planning process, PPACG is charged with the development of a non-motorized transportation plan element consisting of bicycle and pedestrian transportation mobility improvements, which complements automobile and transit modes.

The PPACG Metropolitan Planning Area consists of the jurisdictions of Colorado Springs, Fountain, Monument, Palmer Lake, Manitou Springs, Green Mountain Falls, Woodland Park, and portions of unincorporated El Paso and Teller County.

**Figure 1 – PPACG Study Area**





## PLAN HISTORY

The PPACG Bicycle and Pedestrian Facilities Plan was originally prepared in 1994 and adopted by the PPACG in August 1994. Several minor updates were performed concurrent with preparation of Regional Transportation Plan updates in 1998, 2001, and 2004. The most recent Bicycle and Pedestrian Plan was adopted by PPACG as part of the 2030 Regional Transportation Plan in November 2004.

## PLAN OVERVIEW

This Regional Non-Motorized Transportation System Plan provides a comprehensive approach to identifying bicycle and pedestrian needs, reviewing improvements, and prioritizing implementation strategies and viable funding sources by jurisdiction. The Plan looked for opportunities to connect and integrate existing facilities. Precise alignments may be determined during the implementation process.

The project was divided into three (3) phases:

- **Phase 1: Needs Assessment** - Collect input from the public and prepared a needs assessment to identify what is doing well in the region and what needs to be done to improve bicycling and walking within the region.
- **Phase 2: Guidelines and Priorities** - Developed guidelines to identify what type of bicycle and pedestrian improvements are needed and for selecting. A prioritization process was also developed as to how these improvements might be implemented.
- **Phase 3: Plan and Map** - Developed a non-motorized transportation system plan that will be part of the PPACG 2035 Long Range Transportation Plan and a guide to walking and bicycling in the Pikes Peak Region.

## PPACG PLANNING FACTORS

PPACG considers performance measures and evaluation criteria planning factors in all aspects of the metropolitan transportation planning process which have been incorporated in the Non-Motorized Transportation Plan. These factors inform the development of the metropolitan transportation plan, identification of prioritization criteria for projects and strategies, and development of other planning studies. The factors are:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- Increase the safety of the transportation system for all motorized and non-motorized users.
- Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and non-motorized users.
- Increase accessibility and mobility of people and freight.
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- Promote efficient system management and operation.
- Emphasize the preservation of the existing transportation system.



## REGIONAL NON-MOTORIZED TRANSPORTATION SYSTEM PLAN GOALS

- **Establish** a continuous and coordinated regional non-motorized transportation network that will increase the incidence of bicycling and walking.
- **Reduce** the number of bicycle and pedestrian accidents, injuries, and fatalities, particularly those that involve motorists.
- **Encourage** organizations with the appropriate interest or authority to improve traffic safety, education, and enforcement.
- **Promote** public awareness and acceptance of non-motorized transportation modes for all destination-oriented trip purposes.
- **Create** a traveling environment in which bicycling and walking are attractive alternatives.

### DID YOU KNOW?

Bicyclists and pedestrians are a common sight around the Pikes Peak Region. Recent surveys indicate up to 8% of commuters occasionally commute by walking or bicycling.

## PUBLIC PARTICIPATION



During each phase of the Plan, different opportunities for public participation were planned to learn ideas and preferences from people around the region who already commute as bicyclists or pedestrians, as well as from those that may become non-motorized travelers in the future. Public participation opportunities included biking and walkability surveys, the Bike and Trails Jamboree and Festival, open houses, interviews, workshops, and meetings with the PPACG Transportation Enhancement Subcommittee. (See Appendices for survey forms and results.)

## PLAN ORGANIZATION

The PPACG Non-Motorized Transportation Plan is divided into five (5) chapters. The following provides a list of the chapters and their general contents:

1. **Introduction:** Background, purpose, and need for the Plan.
2. **Existing Conditions:** This chapter identifies the existing bicycle network and sidewalks within the region. This network was simplified to reflect jurisdictional differences in defining off-street trails, both paved and unpaved, on-street bicycle lanes, and shoulder. This chapter also identifies locations of bicycle and pedestrian accidents.



3. **Non-Motorized Transportation Vision Plan:** This chapter presents a compilation of all proposed bicycle and pedestrian improvements by PPACG member jurisdictions. This Plan also rectifies, between agencies, facility definitions and includes a hierarchy of bicycle improvements. Because this Plan does not include a dedicated source of funding, it represents a “Vision” for the region. Planning level cost estimates were also developed for the Bicycle and Pedestrian Vision Plan.
4. **Non-Motorized Financially Constrained Transportation Plan:** Because regional funding is limited for all transportation modes, this chapter presents a methodology to select priority projects by jurisdiction, and then evaluate those projects to determine priority. Although an exact funding amount for the non-motorized transportation element has not been determined, a historic level of funding was used to fiscally constrain the budget and list of projects.
5. **Bicycle and Pedestrian Standards and Guidelines:** This chapter summarizes best practices in bicycling and pedestrian planning. This chapter is not a requirement for member jurisdictions, but rather best practices guidelines for implementing bicycle and pedestrian improvements within the region.
6. **Appendices:** Included in the appendices section of this report are community involvement surveys and results, detailed maps by jurisdiction, and evaluation matrices.

### PPACG VISION, MISSION, AND PRINCIPLES

One of the first steps in developing the Regional Transportation Plan was to develop a Regional Long Range Transportation Plan Vision, a Mission and Principles for all Transportation Elements to serve as a guiding framework for both the Regional Long Range Transportation Plan and the Non-Motorized Transportation Plan.

**Vision:** Creates a pre-eminent multi-modal transportation system that meets regional mobility and accessibility expectations as essential elements of the Pikes Peak Area’s quality of life.

**Mission:** Plan multi-modal transportation facilities and services that efficiently move people and goods and support economic vitality while sustaining and improving the quality of life in the Pikes Peak Region.

**Principles:**

1. Preserve the function of the existing transportation system.
2. Provide efficient transportation for people and goods.
3. Develop a multi-modal transportation system that provides access to employment, services, military installations, and other destinations.
4. Fully integrate connections within and between modes for people and for freight.
5. Increase the safety of motorized and non-motorized travel.
6. Increase the security of the multi-modal transportation system.
7. Support the economic vitality of the Pikes Peak Area.
8. Improve mobility of people and goods.
9. Protect and enhance the environment by implementing transportation solutions that are sensitive to natural and human contexts.



## 2. EXISTING CONDITIONS

The existing conditions chapter of the PPACG Non-Motorized Transportation Plan consists of an inventory of currently existing bicycle and pedestrian facilities. This chapter also includes bicycle and accident data that can be used as part of the needs assessment.

### EXISTING BICYCLE AND PEDESTRIAN FACILITIES

At the outset of this work effort, each jurisdiction within the PPACG area was contacted to provide a map or GIS electronic files of their existing bicycle network and if available, their sidewalk overlay. In collecting this information, it was noted that various jurisdictions use different definitions for what is considered a Class 1 or 2 trail and bike lanes. In order to simplify the definitions, trails were simply defined as either paved or unpaved. Bike lanes represented locations that had some physical separation from the automobile travel lane.

The resulting existing bicycle facilities map in Figure 2 presents the existing bicycle trails and lanes that currently serve the region. Although some jurisdictions have designated bicycle routes, they were not included in the map because they are currently under review by local jurisdictions. Furthermore, bike routes typically support local bicycling and not regional level bicycling.

In review of Figure 2, Existing Bicycle Facilities there are a number of immediate observations that can be made, summarized as follows:

1. The network of bicycle trails and lanes are very limited in serving as a system of facilities to accommodate regional bicycle travel within the PPACG area.
2. Many existing trails have missing links and/or difficult, unsafe crossings at major arterials.
3. Trails and lanes begin and end erratically.
4. Many of the trails have obstacles, such as terrain or railroad crossings.
5. Many of the facilities are in need of repair and basic maintenance such as sweeping.
6. Bike lanes are often depositories for snow, making them unavailable to bicyclists during winter conditions.

#### BIKE ROUTES, LANES, AND PATHS - HOW ARE THEY DIFFERENT?

**Bikeway** - A general term for any street or trail which in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designed for the exclusive use of bicycles or are to be shared with other transportation modes.

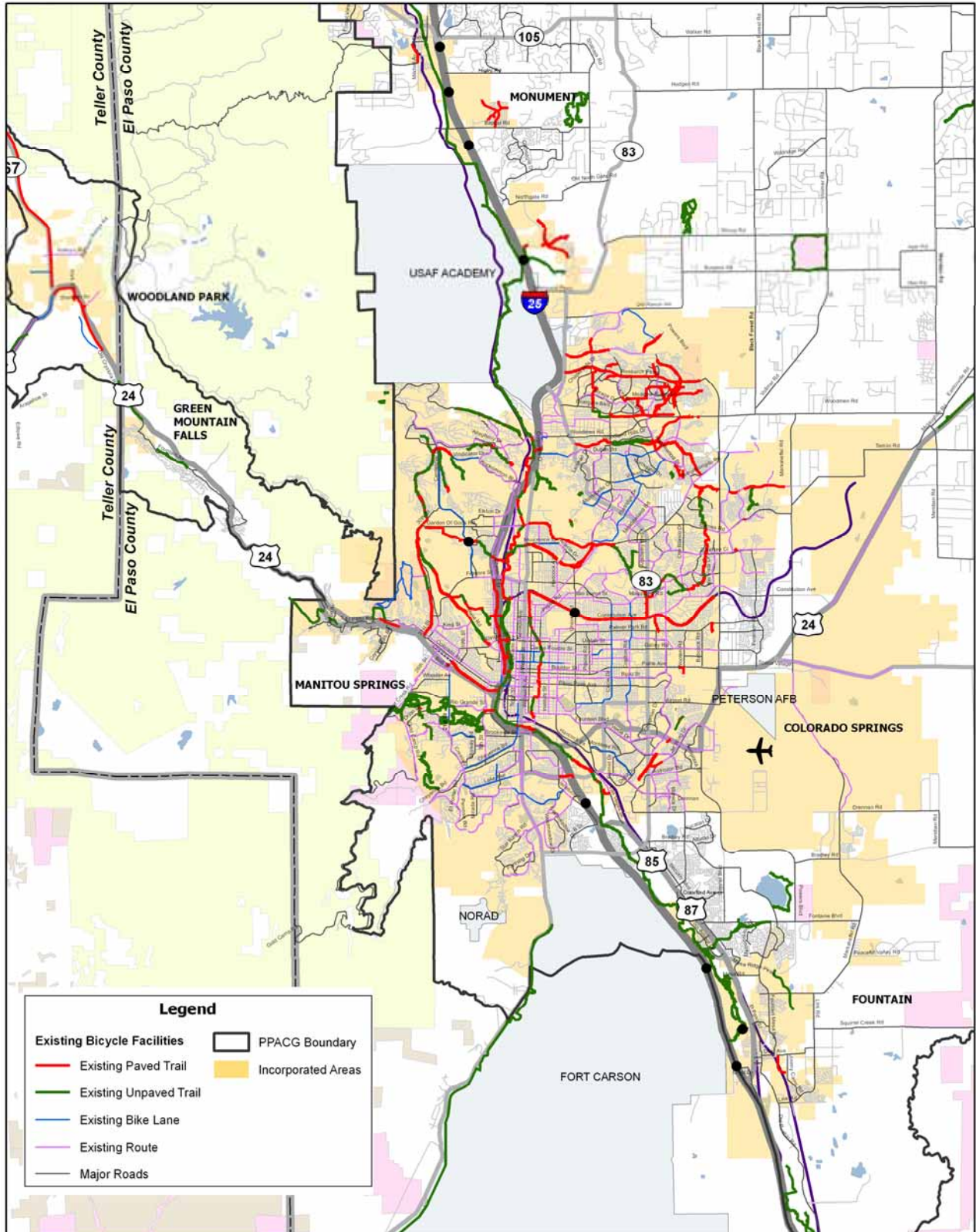
**Trails/Paths** - This is a bikeway that is physically separated from motor vehicle traffic by open space or a barrier and is either within the road right-of-way or within an independent right-of-way. These are also referred to as a shared-use or multi-use paths or recreation trails.

**Bicycle Lane** - This is a bikeway on a portion of a street that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicycles.

**Bicycle Route** - A segment of a system of roadways signed for the shared use of automobiles and bicyclists without striping or pavement markings.



Figure 2 - Existing Bicycle Facilities





In summary, the bicycle network for the PPACG area is non-existent as a system of improvements for non-motorized bicycle travel. Major improvements are needed to provide reliable connections between one area of the region and another.

The existing sidewalk overlay, for the PPACG area is presented in Figure 3. This overlay is based on GIS data from some jurisdictions and additional information added from available maps. This map does not represent all sidewalks within the region. In general, the sidewalk facilities within the Cities of Colorado Springs, Manitou Springs, and Fountain are generally good. In the older areas within these cities, these sidewalks are direct and continuous with a shorter grid system block layout. In newer areas, sidewalks might exist, but because of their serpentine subdivision street layout, they are often indirect requiring significantly out of the way walking. Major street crossings are problematic for areas throughout the PPACG region.



GIS data on pedestrian facilities was not available for the unincorporated County areas. At least 75,000 unincorporated residents reside in urban density areas in unincorporated El Paso County which should be served by sidewalks. Many of these areas are served by adequate and reasonably maintained pedestrian facilities, because the County has required sidewalks. However, there are a number of areas with deficiencies. These deficiencies typically occur in older neighborhoods which predate modern subdivision regulations and thus either have missing facilities or have facilities which have not been fully maintained over time, and are also not ADA-compliant. For the past several decades, the County has required sidewalks to be constructed in all subdivisions with lots of less than one acre. The County has provided some complete or partial waivers of this requirement for larger lots, typically for lots in the ½ acre size range. In April of 2007, the Board of County Commissioners adopted a new El Paso County Land Development Code requirement for sidewalks to be constructed in all subdivisions with lots less than 2.5 acres. For larger rural residential subdivisions, the County encourages off-street pedestrian connections where reasonable.

## CRASH ANALYSIS

One of the primary goals of this Plan is to provide a safe bicycle and pedestrian system to serve the regions population. To address this potential concern, 2001 to 2005 accident data was collected from state records and plotted on a map, as depicted in Figure 4 for bicycle crashes and Figure 5 for pedestrian crashes.

In review of the Bicycle Crashes map, it is evident that bicycle accidents occur throughout the region. Many of these bicycle crashes occur in areas that lack bicycle facilities. As the statistics show, trips are occurring via bicycle even if there are no bicycle facilities to accommodate them. Crashes that occur along bicycle trails and lanes are typically resulting from poor street crossings. Locations of high pedestrian crashes are at locations with high pedestrian utilization, such as the Colorado Springs downtown area or Manitou Springs.

One of the important areas for examining pedestrian safety is around schools. Schools become major attractions for pedestrian activity and should be a focus for pedestrian safety. Presented in Figure 6 are locations of elementary/junior high and high schools. Also included on this map are typical one-quarter mile walking areas around each school. Also included on this map are child pedestrian crashes for the years 2002 to 2005. In the three plus years of available data, there have been 79 child pedestrian crashes within the PPACG area.



Figure 3 - Existing Pedestrian Sidewalks

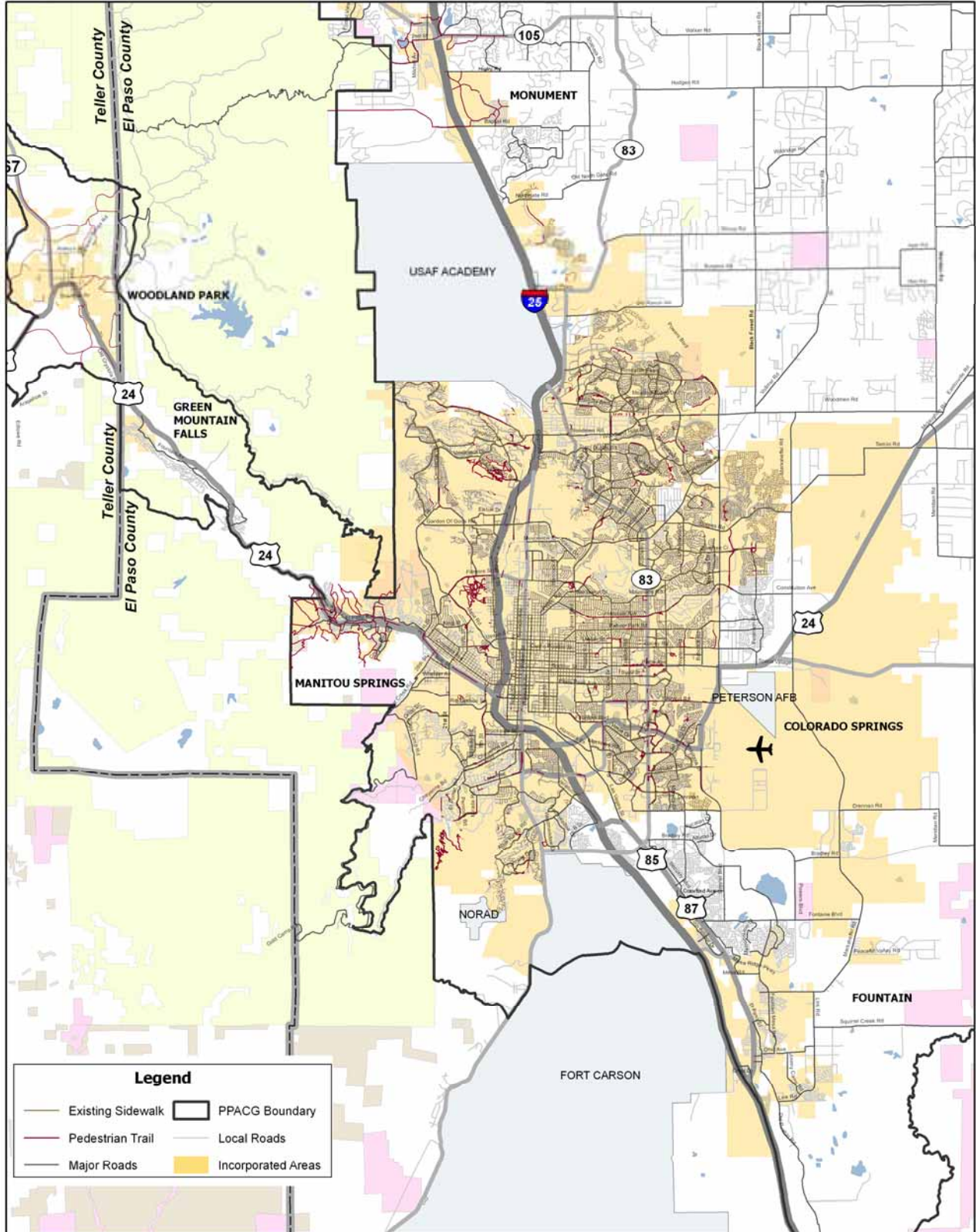






Figure 4 – Historic Bicycle Crashes (Overlay on Top of Existing Bicycle Facilities)

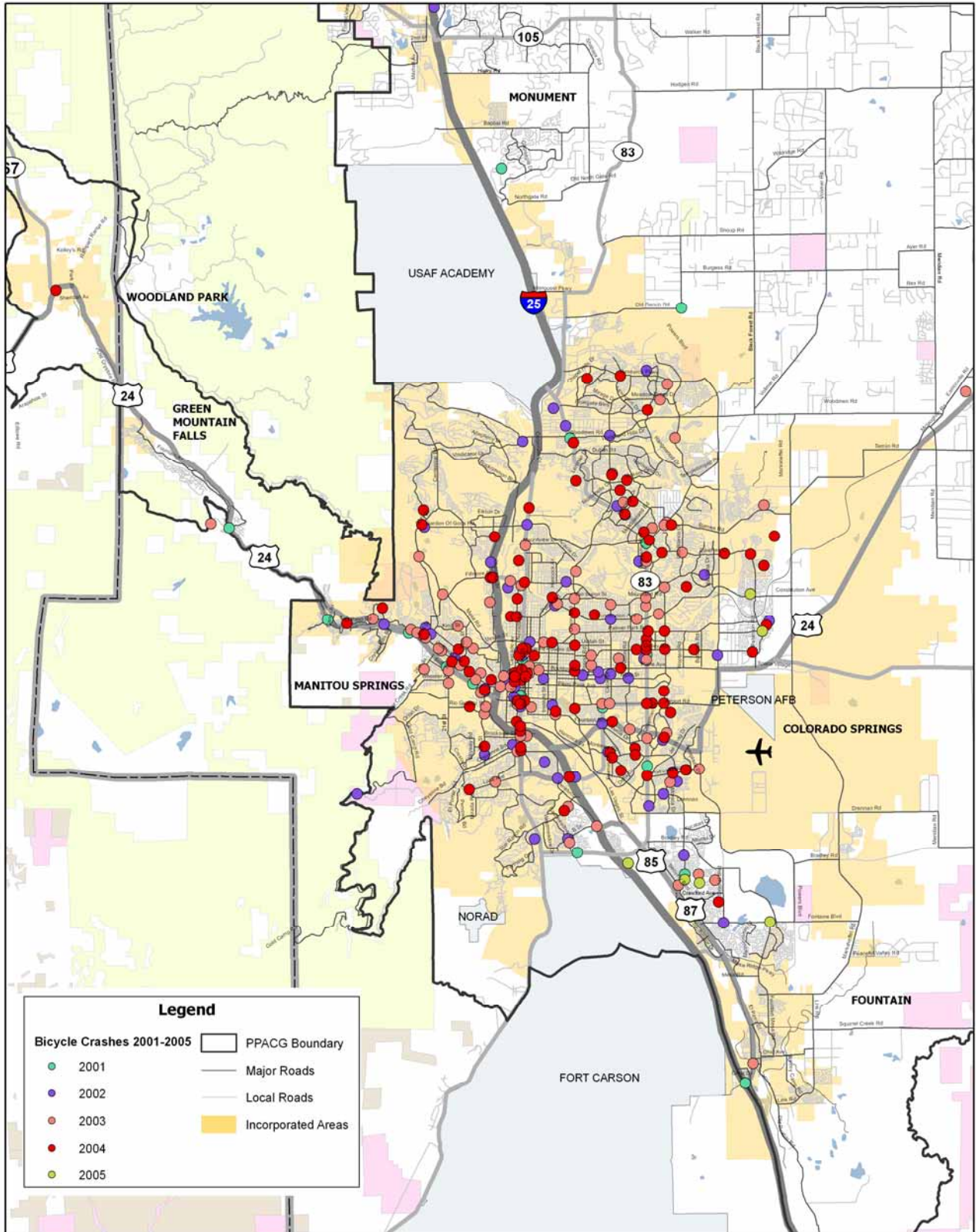




Figure 5 – Historic Pedestrian Crashes (Overlay on Top of Sidewalk Layer)

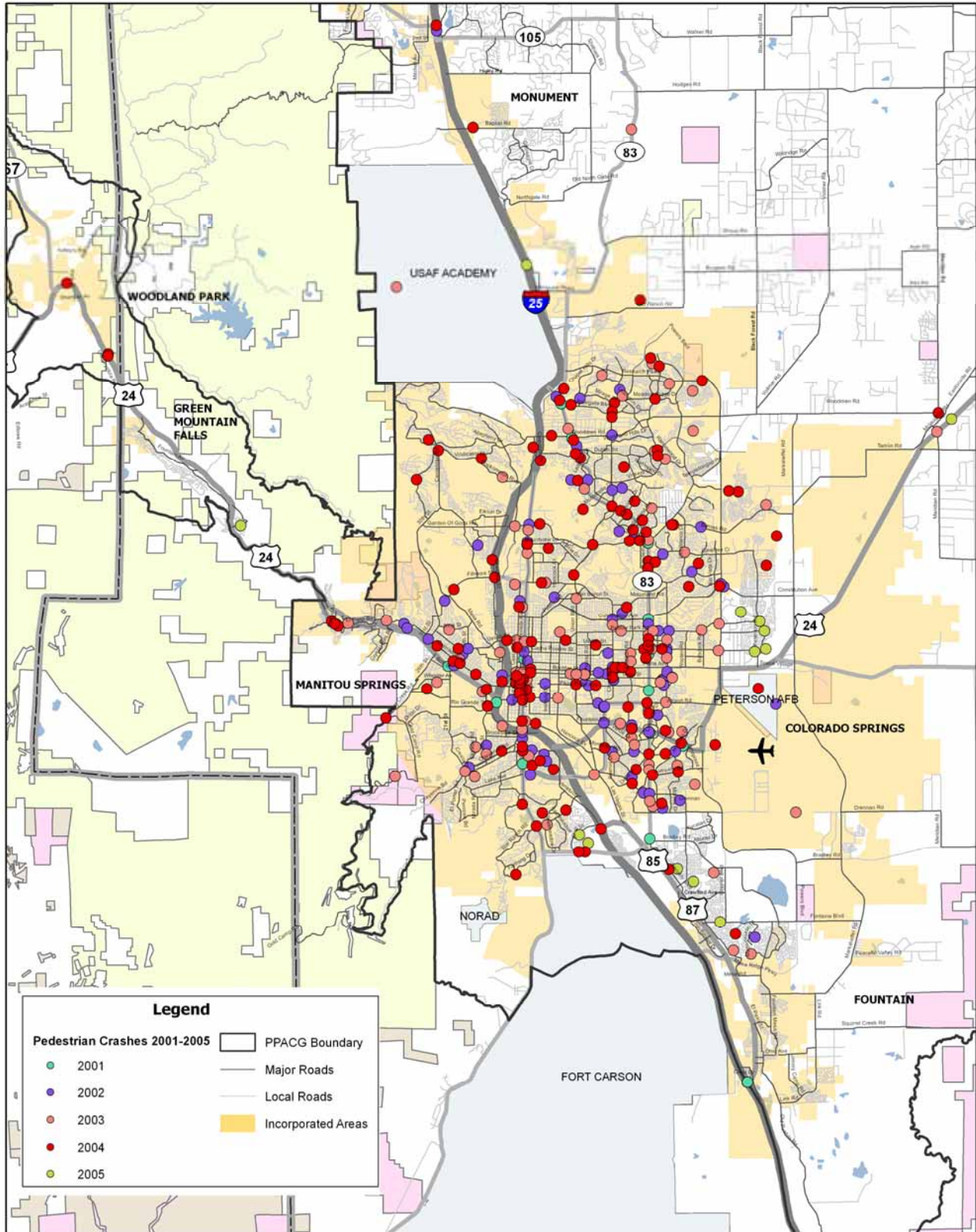
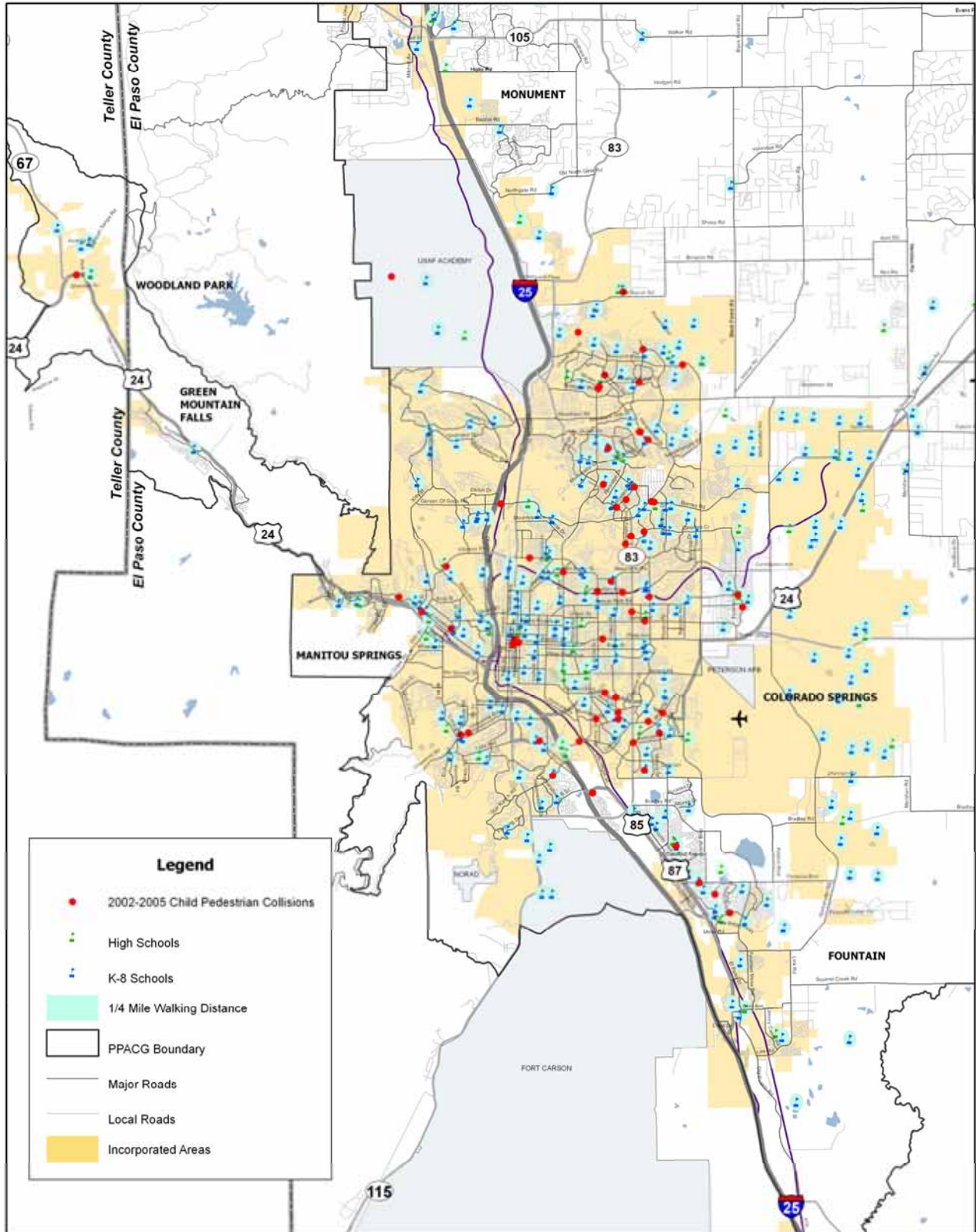




Figure 6 – School Locations and Child Pedestrian Crashes





## FORT CARSON BICYCLE USE

With continued changes in Fort Carson personnel and given that many of these soldiers do not have automobiles; they are dependent on transit, bicycle and walking. A survey of all gates was conducted in October 2007. A map of the gate numbers is presented in Figure 7. The total number of bicycles which entered or exited Fort Collins was almost 600 bicyclists and accounted for approximately one percent of all traffic.

**Table 1 - Fort Carson Gate Survey**

Gate	Daily Arrivals		Bicycle as Percent of Total Vehicles
	Bicycle	Total Vehicles	
1	55	6,122	0.9%
2	17	2,615	0.7%
3	101	10,749	0.9%
4	175	17,318	1.0%
5	59	3,803	1.6%
20	184	12,587	1.5%
<b>Total</b>	<b>591</b>	<b>53,194</b>	<b>1.1%</b>

## PUBLIC INPUT

In order to identify public opinion on existing conditions, a series of bicycle and pedestrian surveys were conducted at the outset of the work effort. This was to determine what the primary areas of concern they have with the existing bicycle and pedestrian network and what would they like to see improved. One of these events was 2006 Bike Jamboree.

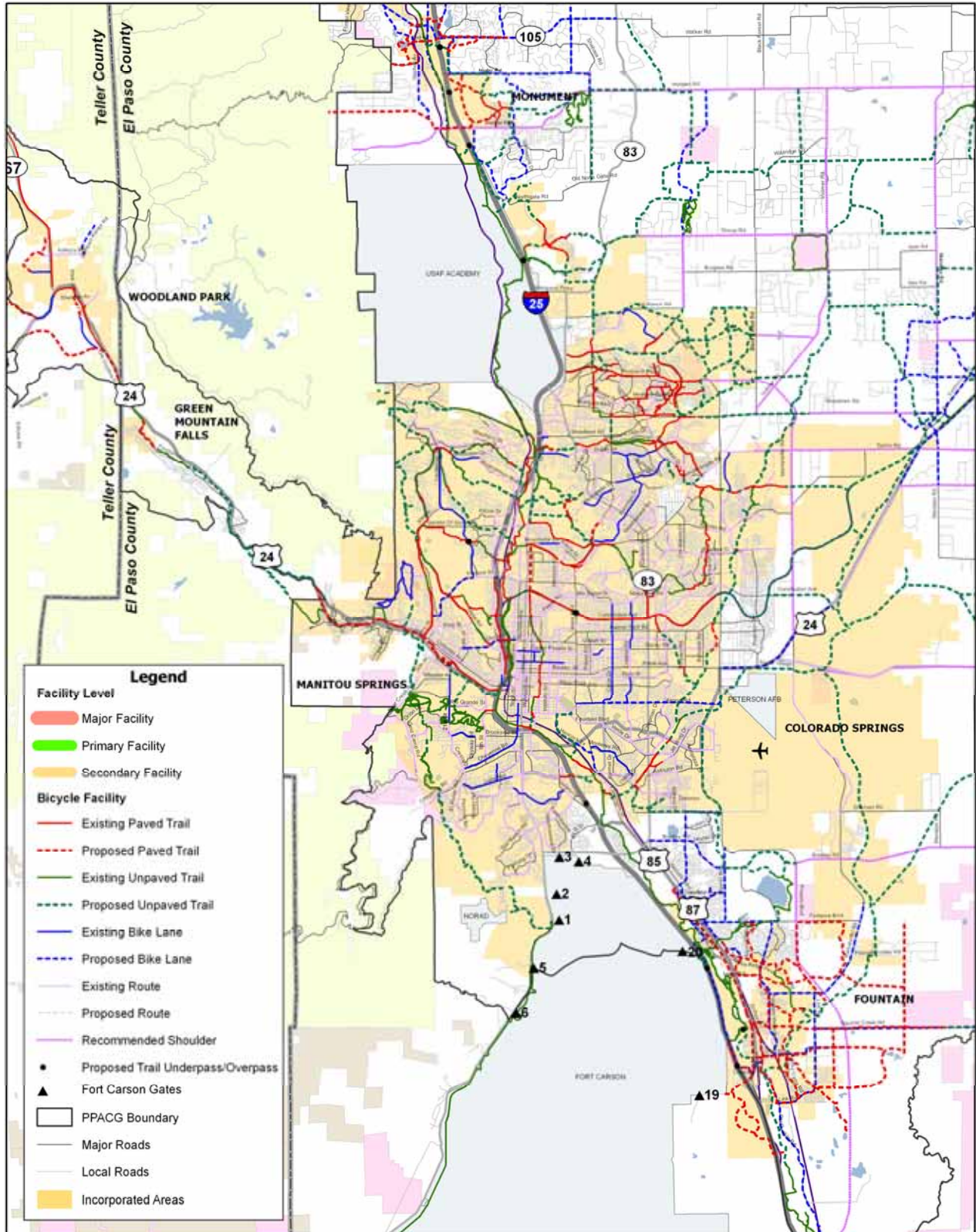
One exercise was conducted with over one-hundred members of the public at the June 2006 Bike Jamboree. Each participant was given three dots of different colors which represented their 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> most important improvement they would like to see for making bicycling better.



As presented in Table 2 below, the regions number one recommended improvement was for more direct off-road facilities. Better bike path connections, more paved shoulders and striped on-street lanes, and safer street crossings were also identified as very important. Secure bike parking, more attractive bike path facilities, and showers at place of work were noted, but not deemed as important.



Figure 7 - Fort Carson Gates



**Table 2 – 2006 Bike Jamboree Ideas for Improvement**

	1 <sup>st</sup> Important	2 <sup>nd</sup> Important	3 <sup>rd</sup> Important	Composite
More Direct Off-Road Facilities	42	16	32	190
Better Bike Path Connections	5	29	14	87
More Paved Shoulders	12	14	18	82
More Striped On-Street Lanes	12	14	18	82
More Direct On-Road Facilities	14	12	14	80
Safer Street Crossings	11	13	15	74
Useful Bicycle Resources (Map, Internet)	13	10	12	71
Secure Bike Parking	4	7	5	31
More Attractive Bike Path Facilities	3	3	6	21
Shower Facilities at Place of Work	0	3	5	11



## 3. NON-MOTORIZED TRANSPORTATION VISION PLAN

The bicycle and pedestrian network are important components of a balanced transportation system. Bicycling and walking can be a healthy alternative to the automobile for many trips. It can also play a role in helping to reduce traffic congestion, improve air quality, and enhance the quality of life in the PPACG region.

The Bicycle and Pedestrian Vision Plans provide the framework for a regional system that with constructing new arterials, based on current City of Colorado Springs complete street standards and guidelines presented in Chapter 5 of this report, will further provide the framework for implementing a system of integrated bikeways and pedestrian improvements.

### PPACG BICYCLE VISION PLAN

Each of the PPACG member jurisdictions has some plan for bicycle improvements. One of the key objectives of this work effort was to collect these plans and consolidate them into one overall plan for the region. The PPACG Bicycle Vision Plan is presented in Figure 8. Part of this work effort was to identify inconsistencies in alignments between jurisdictions. Working in cooperation between all jurisdictions, these alignments were rectified.

For purposes of this Plan, differences in categories between jurisdictions were simplified to three bicycle facilities: 1) paved trails, 2) unpaved trails, 3) and bike lanes. Initially, the Plan included bike routes, but they were dropped because they tend to be more local in nature and not regional and the definition of what constitutes a bike route is more difficult to define.

After review by the PPACG Technical Enhancement Subcommittee (TES), it became evident that 1) additional corridors needed to be added to the composite jurisdictional bicycle map and 2) there needed to be some hierarchy of facilities.



The additional corridors reflected major north-south and east-west gaps in the system, particularly along corridors which have potential high demand areas or were identified to have a history of accidents. Potential high demand areas are along routes which serve large volumes of shorter distance trips. A map of existing trips, less than 6 miles which are candidates for bicycle trips is presented in Figure 9.



Figure 8 - PPACG Bicycle Vision Plan

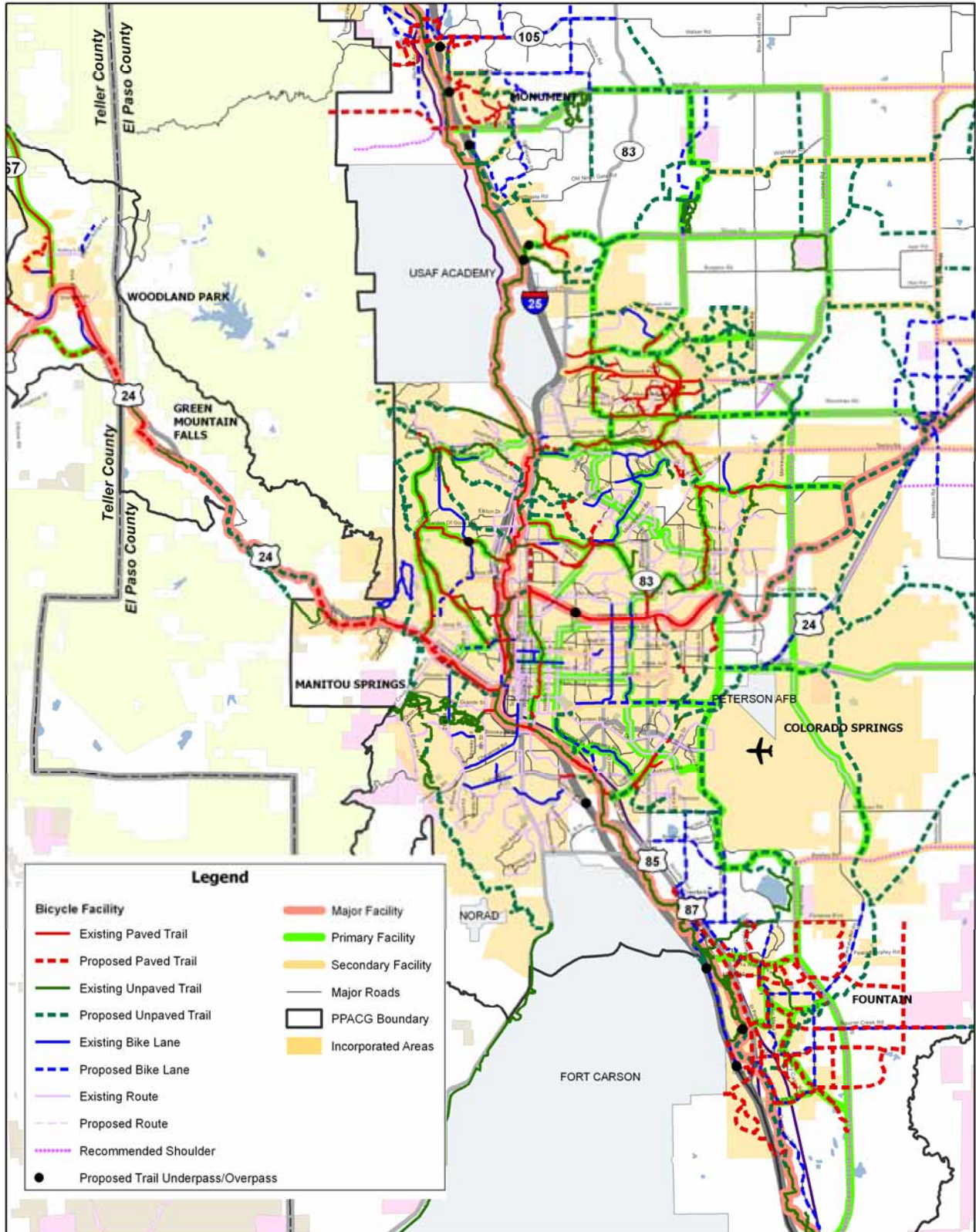
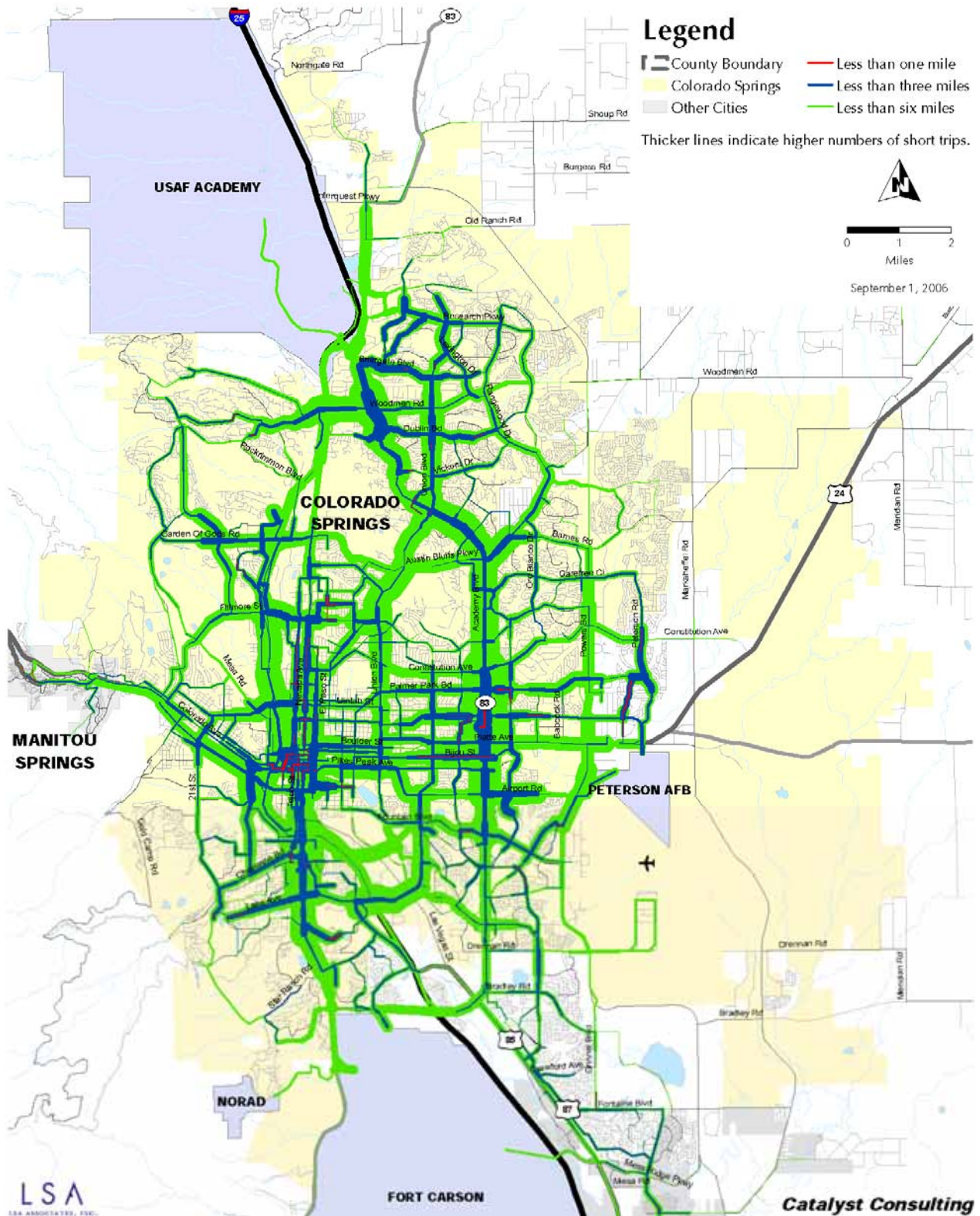






Figure 9 - Existing Short Trips





The idea for a hierarchy of bicycle facilities follows the idea of a hierarchy of roads with freeways and state routes providing the major north-south and east-west regional travel, supported with major and minor arterials. Based on discussions with the TES, two major facilities were identified and are presented in Figure 6. The first is the north-south Santa Fe Trail, Pikes Peak Greenway, and Fountain Creek Trail that would traverse El Paso County from the Douglas County to Pueblo County Line. The east-west major facility would include the existing and proposed Midland Trail and Rock Island Trail that would extend from Woodland Park to east El Paso County.

The primary facilities generally follow the major arterial corridors with shopping, work, and recreation activities. These are the same destinations as to where bicyclists want to go. These major arterial corridors were also shown as locations with a high number of accidents. It should be noted that in many cases, trying to accommodate a bicycle lane along these corridors might not be practical given right-of-way constraints or high-speed traffic volumes. Therefore, parallel routes might be more practical in developing the regional plan.

The secondary facilities are separated bike lanes or paved shoulders, which provide the access to the regional system and connections to the local street system.

### COST ESTIMATES



As part of the Plan process, the work effort included development of planning level cost estimates for the regional bicycle and pedestrian plan. For the development of the Bicycle Vision Plan, unit cost estimates were identified for paved trails, unpaved trails, bike lanes, and shoulders. Based upon research, these costs can vary significantly based on terrain, right-of-way acquisition, and structures. Therefore, for each category a low and high unit cost per linear foot was identified.

Based upon the Bicycle Facilities Plan, the unit cost estimate was applied to each segment of the Vision Plan. This resulted in a planning level cost estimate for the Bicycle Vision Plan at between \$135 million and \$300 million dollars, as presented in Table 3.

**Table 3 - Planning Level Cost Estimate for the Bicycle Vision Plan**

	Planning Level Costs Per Linear Foot		Planning Level Costs for Bicycle Vision Plan (\$ million)	
	Low	High	Low	High
Paved Trails	\$50	\$100	\$47	\$93
Unpaved Trails	\$20	\$50	\$61	\$153
Bike Lanes	\$10	\$25	\$12	\$30
Shoulders	\$20	\$30	\$14	\$21
<b>Totals</b>			<b>\$134</b>	<b>\$297</b>



There was no specific Pedestrian Vision Plan developed for the region as pedestrian improvements tend to be more local and not part of a regional network. Based on planning level efforts for completing missing gaps, pioneering new pedestrian facilities along facilities where they are currently missing, ADA ramps and improvements, street crossings and grade separated pedestrian improvements, it is estimated that a Pedestrian Vision Plan for the region could easily exceed \$100 million, which was used for the Plan cost estimate.



## 4. NON-MOTORIZED FINANCIALLY CONSTRAINED TRANSPORTATION PLAN

Federal legislation over the last 17 years (i.e., ISTEA, TEA-21 and SAFTEA-LU) formalized the concept that regional transportation plans should as accurately as possible describe the transportation system for a point at least 20 years in the future. This was done through the financial constraint mechanism so that the planned transportation system can be implemented and maintained with expected available funding.



As presented previously, the total cost to implement the Bicycle and Pedestrian Vision Plan is estimated at upwards of \$400 million. Based on historical funding revenues for the non-motorized element of the PPACG Long Range Transportation Plan, transportation revenues are estimated at \$25 over the 25-year period of the 2035 Long Range Transportation Plan. This represents the federal, state, and local funding that is reasonably expected to be available. It does not include private sector funding from fees associated with land development projects, nor funds from the existing or future Regional Transportation (RTA) funding program.

Given that the Long Range Non-Motorized Transportation Vision Plan estimate is \$400 million whereas funding might be only \$25 million, an evaluation methodology was required that can significantly pare down the Vision Plan project list to a fundable project list.

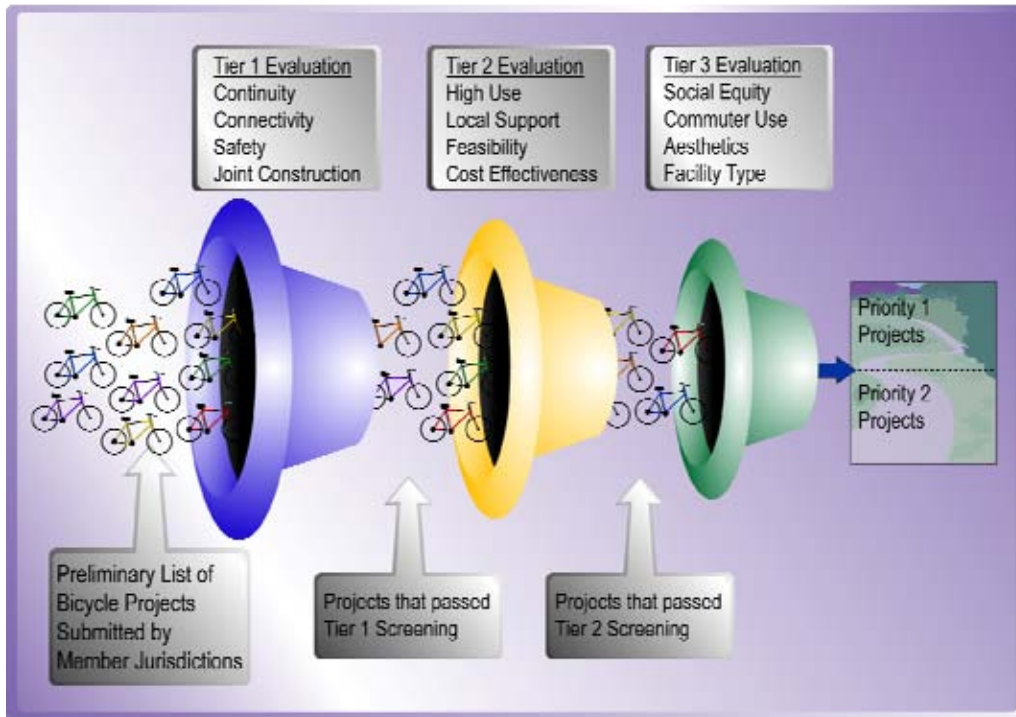
### EVALUATION CRITERIA

Because the Pedestrian and Bicycle Vision Plan projects exceed available funding, it was necessary to develop a simple and concise method to evaluate bicycle and pedestrian projects in the PPACG for use in determining investment recommendations for PPACG funds. The evaluation methodologies of other jurisdictions across the nation were researched as part of this effort, with particular focus on performance measures and scoring methodologies.

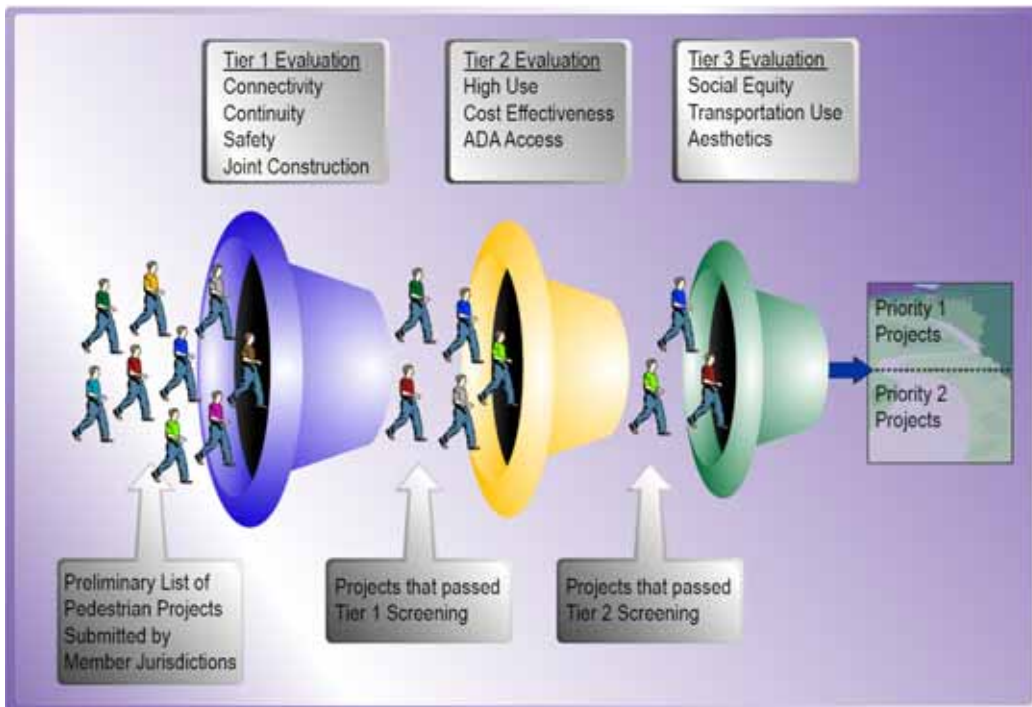
The prioritization process was developed with input from the PPACG Technical Enhancement Subcommittee (TES). Based on discussions with the TES, it became evident that some evaluation criterion was more important than others. Therefore, a system of tiers was developed to allocate points based on level of importance. These criteria are presented in the following graphics.



### Bicycle Evaluation and Prioritization Criteria



### Pedestrian Evaluation and Prioritization Criteria





The highest Tier evaluation criteria were based on whether the improvement would provide connections to major regional destinations or would provide continuity by completing a gap in the system. Safety and ability to be flexible and make the improvement concurrent with another project rounded out the first evaluation tier.

The second Tier was based less on network completion and safety and more on potential use, local support, the feasibility of construction and overall cost effectiveness. The final tier focused on social equity for all user groups, whether the facility might be used by commuters in lieu of the automobile, and aesthetics.

### Bicycle Projects: Project Selection and Priority Criteria

#### Tier 1: Evaluation

- Connectivity:** Will the project provide regional connections or access to major employment, business, shopping, civic and education centers?
- Continuity:** Does the project provide for a missing link in the system or eliminate a barrier that inhibits use?
- Safety:** Does the project mitigate a known safety hazard?
- Joint Construction/ Developer Contribution:** Can the project be "piggybacked" with other major project(s), such as a road widening or land development project?

#### Tier 2: Evaluation

- High Use:** Will the project result in a likelihood of use (*i.e.*, satisfy demand, expand existing use)?
- Local Support:** Is there strong public support for the project or is the project supported by two or more jurisdictions?
- Feasibility:** Is the project ready to be implemented (*i.e.*, right-of-way acquired, preliminary engineering completed)?
- Cost Effectiveness:** Does the project represent a good value for the investment?

#### Tier 3: Evaluation

- Social Equity:** Does the project provide transportation for a disadvantaged/underserved community?
- Commuter Use:** Does the project have the potential to reduce traffic congestion by providing more of a transportation alternative (vs. recreational use)?
- Aesthetics:** Does the project include a landscape feature or provide access to a scenic feature?
- Facility Type:** Does the project provide for a continuous, uninterrupted facility type (*i.e.*, paved, unpaved, bike land)?



The pedestrian evaluation criteria had similar categories with minor variations. The first tier of connectivity, continuity, safety and joint construction is basically the same for bicycle and pedestrian projects. ADA access was added to the pedestrian criteria and is not part of the bicycle criteria.

### **Pedestrian Projects: Project Selection and Priority Criteria**

#### Tier 1: Evaluation

- Connectivity:** Will the project provide access to major employment, business, shopping, civic and education centers and transit stops?
- Continuity:** Does the project provide for a missing link in the system or eliminate a barrier that inhibits use?
- Safety:** Does the project mitigate a major safety concern, such as street crossing or missing sidewalk?
- Joint Construction/ Developer Contribution:** Can the project be “piggybacked” with other major project(s), such as a road widening or land development project?

#### Tier 2: Evaluation

- High Use:** Will the project result in a likelihood of use (*i.e.*, satisfy demand, expand existing use)?
- Cost Effectiveness:** Does the project represent a good value for the investment?
- ADA Access:** Does the project provide improvements for persons with disabilities?

#### Tier 3: Evaluation

- Social Equity:** Does the project provide access for a disadvantaged/underserved community?
- Transportation Use:** Does the project provide an opportunity to walk instead of drive?
- Aesthetics:** Does the project include visual amenities that would encourage pedestrian use?

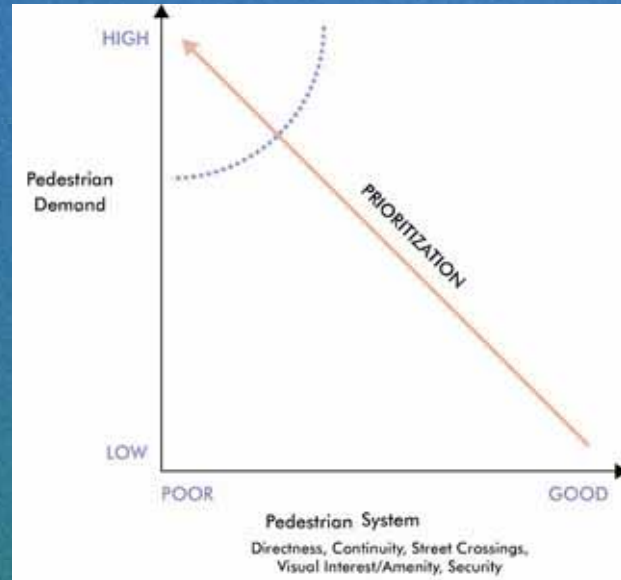


## Pedestrian Demand

Ideally, it would be desirable to have a pedestrian system that provides direct and continuous sidewalks with good street crossings throughout the PPACG region. In addition, it would be desirable for this pedestrian system to be visually interesting to encourage pedestrian activity. This ideal pedestrian network would require hundreds of millions of dollars to implement. Therefore, it is important to identify areas within the region that potentially have the highest propensity to walk if an adequate pedestrian system were available.

To estimate pedestrian demand areas, three sources of data were used to develop a pedestrian priority map, as presented in Figure 10. This data included socio-economic data for the region, accident data, and transit routes.

According to 2000 Census data for the Pikes Peak Region, persons in low-income households are far more likely to walk to work than persons in other income categories. The same is true for those who work in hospitality and amusement jobs. Household and employment density also contribute to pedestrian demand. The shaded areas in Figure 7 represent the top 5 percent of areas within the PPACG region in terms of household density, low-income household density, job density, and hospitality-amusement job density.



The accident data identifies pedestrian accidents that have occurred between 2001 and 2005.

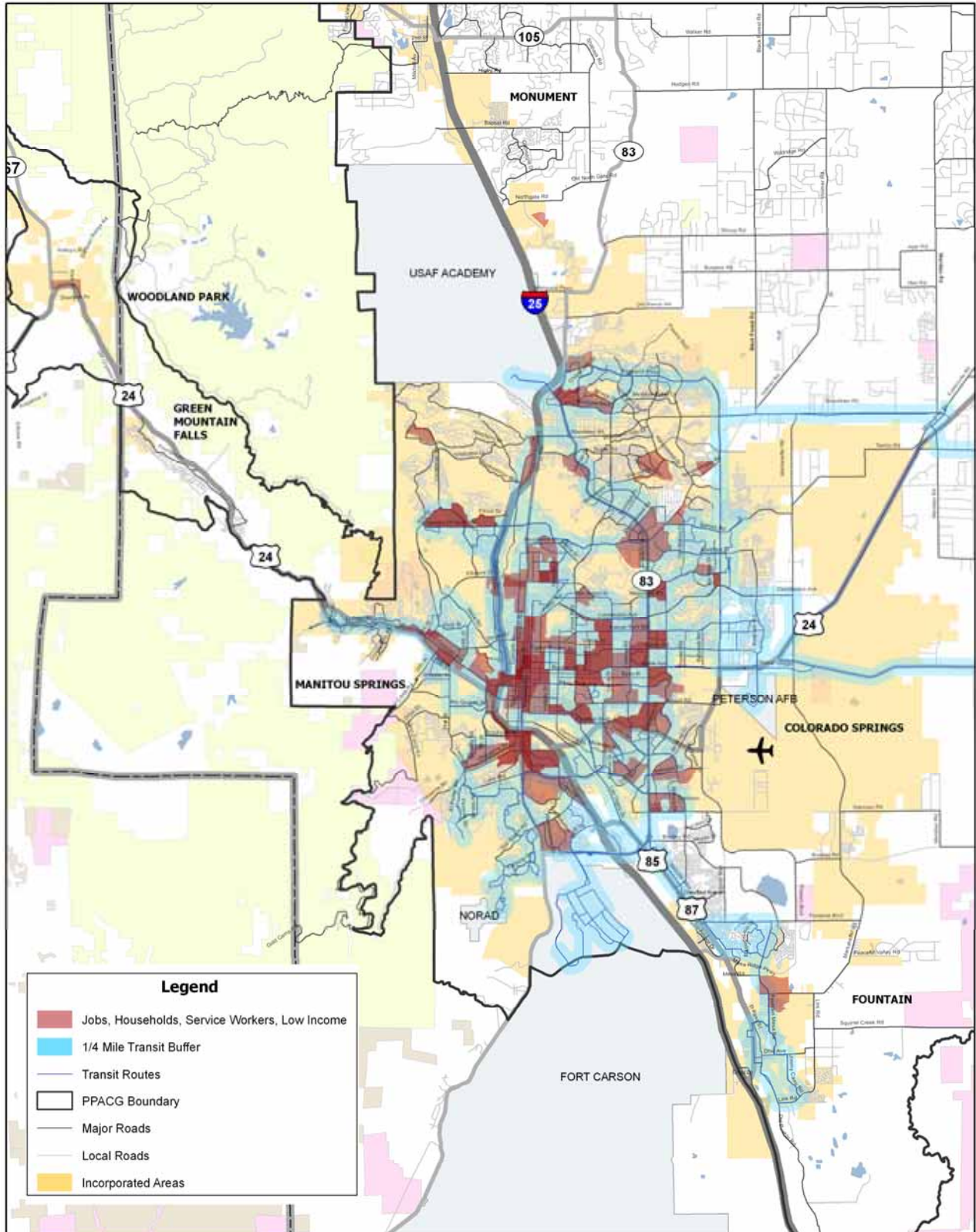
The final pedestrian demand indicator on the map is existing transit routes. Because the overall goal of the PPACG Long Range Transportation Plan is to provide multi-modal transportation solutions for the PPACG region, and all transit trips include a pedestrian trip at both ends of a transit trip, this transit layer was added to the pedestrian demand map. Added to these bus routes is a 1/4-mile buffer, which is a typical walking distance for transit riders.

As presented in the map, the socio-economic and transit layers are each semi-transparent and, when overlaid, create darker areas where several factors combine to produce a much higher likelihood that pedestrian facilities would be used by a significant number of travelers.





Figure 10 - Pedestrian Demand





### Public Input on Bicycle and Pedestrian Priorities

In June 2007, representatives of the Pikes Peak Area Council of Governments Non-Motorized Transportation Systems Plan Update staffed an interactive booth at the Bikes and Trails Festival at America the Beautiful Park in Colorado Springs, Colorado. The objective of this effort was to solicit public opinion on non-motorized improvements. The public input focused on asking two questions:

- **What are the priorities for investing in bicycling improvements in the region?**
- **Where are improvements needed?**

More than 160 people stopped by the booth to look at the displays and to share their views. The following highlights the public input received.

### WHAT ARE THE PRIORITIES FOR INVESTING OUR TRANSPORTATION IMPROVEMENT MONEY?

Since needed bicycle improvements greatly exceed our available funds, the public was asked: "Given limited funds, where should we invest our transportation improvement money?" Three choices were provided:

- **Maintain Existing Paths:** Repairs, Snow Removal, Sweeping
- **Complete Missing Links:** Safety Enhancements, New Crossings
- **Building New Paths:** New Routes Trails and Paths

Each participant was given six orange dots to place on the board to express their preferences. They could put all six dots under one column, or combinations such as 2-2-2 or 3-2-1.

In total, 160 members of the public provided us with input. These results are presented in this table and the following graph.



Where Should We Invest Our Money Survey from Bike and Trail Festival - June 2, 2007		
Maintain Existing Paths	234	24%
Complete Missing Links	407	42%
Build New Paths	319	33%
<b>Total</b>	<b>960</b>	<b>100%</b>

Although there was strong support for all categories, completing missing links received the highest support, followed by building new paths and then maintaining existing paths.



## FINANCIALLY CONSTRAINED CANDIDATE PROJECTS

Recognizing that the available bicycle and pedestrian funding is significantly less than the project list for the Vision Plan, each jurisdiction was asked to submit their top priority projects. A total of 40 bicycle projects were submitted for a total cost of approximately \$45 million. The list of projects encompasses the range of bicycle facilities including paved and unpaved trails, bike lanes, and paved shoulders. These projects are shown in Figure 11.



A total of nine pedestrian projects were submitted for a total of approximately \$20 million. The most extensive and costly project on the list requests on-going funding for the construction of infill sidewalk segments and installation of accessible pedestrian ramps along high priority pedestrian corridors throughout the City of Colorado Springs. The priority pedestrian projects are shown in Figure 12. A description of each of these bicycle projects are presented in Figure 13 and pedestrian descriptions are presented in Figure 14.

Despite this definitive list of priority projects which when combined exceed the anticipated budget, PPACG should retain flexibility in allocating funds for non-motorized transportation projects. The total cost of implementing all of the priority projects (bicycle and pedestrian) is estimated to be approximately \$65 million, in exceedance of the historic \$20-\$25 million in funding earmarked for non-motorized transportation projects. This total does not include funding for maintenance of existing or future facilities. There is strong public support for funding maintenance activities required to care for existing facilities. Monies should be set aside to ensure that necessary maintenance can be funded. In addition, budget should be allocated to fund future projects that may be needed to mitigate safety issues or that may become priority projects due to new development.





Figure 11 – Bicycle Priority Projects

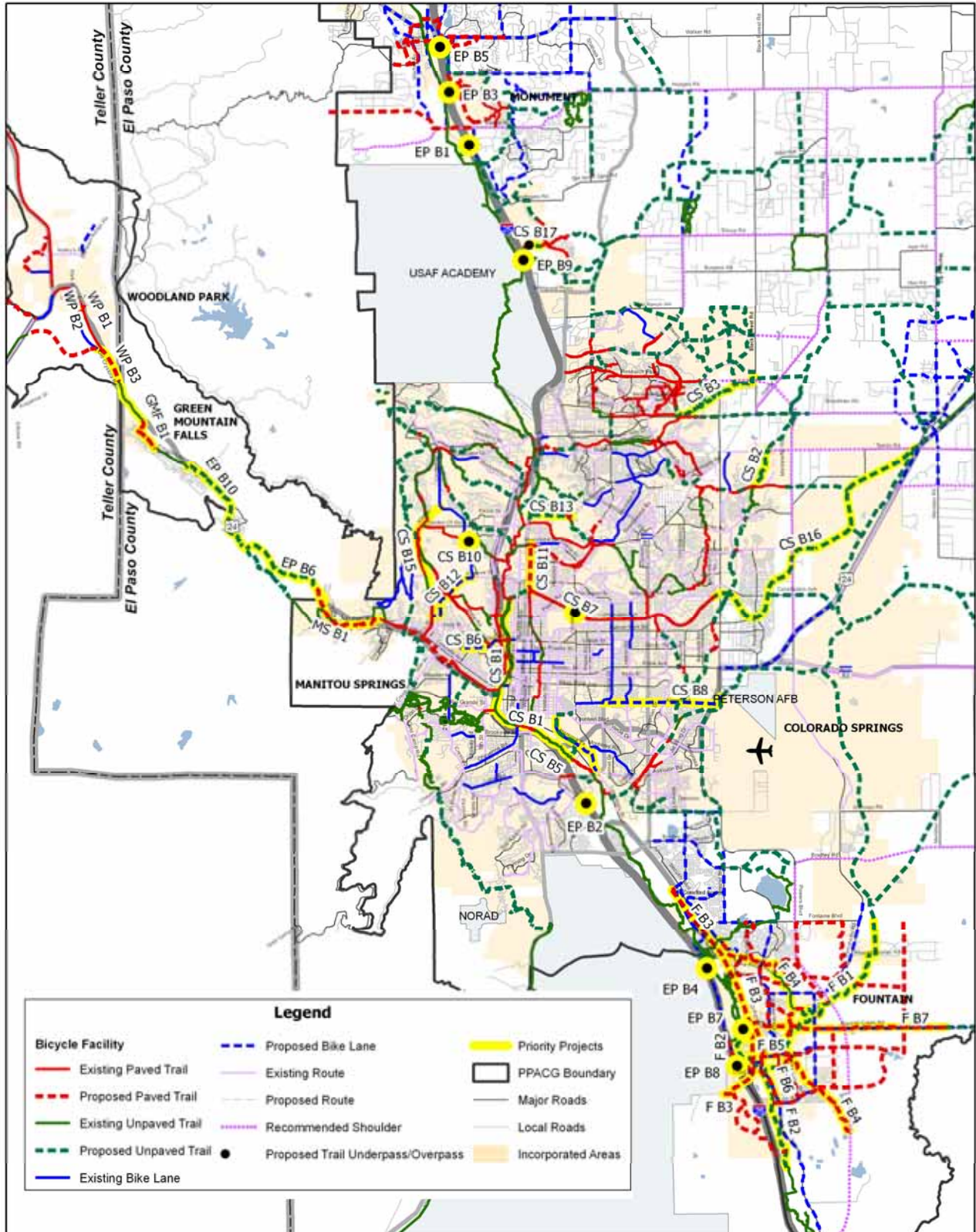
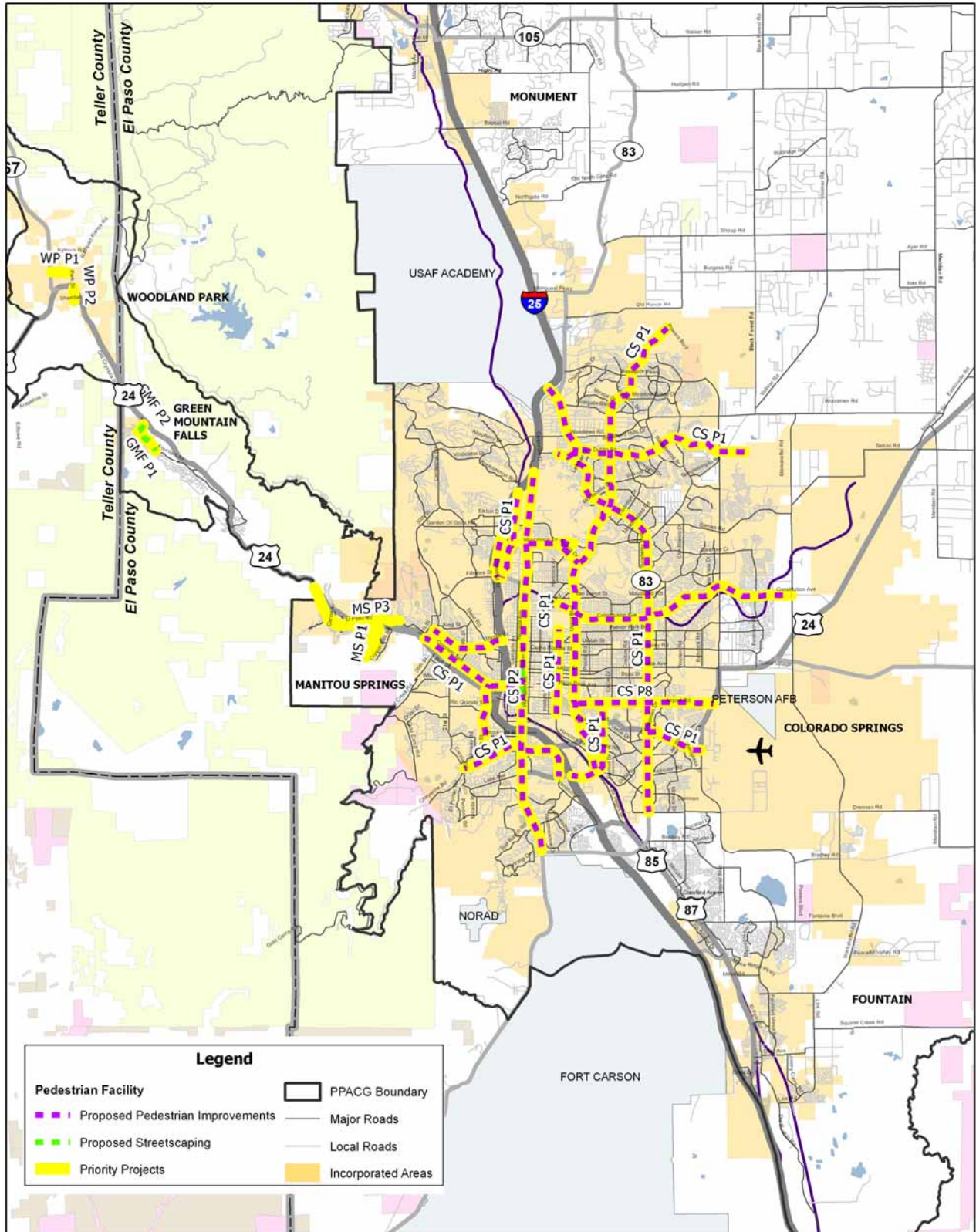




Figure 12 – Pedestrian Priority Projects





**Figure 13 – Descriptions of Priority Bicycle Projects**

### ***Colorado Springs***

#### **CS B1 Pikes Peak Greenway Rehabilitation**

The Pikes Peak Greenway Trail is the City's multi-use spine trail that extends from north to south throughout the central area of the City. The trail functions as the Colorado Front Range Trail, the American Discovery Trail and also connects to several other regional trails throughout the Pikes Peak region. This project will provide rehabilitation of the existing trail through paving with concrete and asphalt surfaces and provide a true, multi-use, non-motorized route through the city of Colorado Springs.

#### **CS B2/B4 Sand Creek Trail**

The Sand Creek Trail follows Sand Creek from the Northeast area of the City to the Southeast and several sections of the trail have yet to be implemented. This project will provide approximately a mile and a half of new 12' wide concrete trail as part of the City's tier one trail classification. The trail is multi-use and accommodates commuters as well as various forms of recreation through the eastern area of Colorado Springs.

#### **CS B3 Cottonwood Trail**

The last remaining section of the Cottonwood Creek Trail that will connect to the Pikes Peak Greenway exists from Academy Boulevard to Vincent Road. This project will provide funding to complete the construction of this trail with a 12' wide concrete multi-use trail in conjunction with additional funding sources including a federal FEMA grant that has been awarded to the City's Engineering Department for stream improvements.

#### **CS B5 Hancock Expressway – Fountain to S. Circle Overpass**

This project would complete an on-street bikeway gap as planned in the City's Bicycle Plan and I.T.P. Because of the current roadway configuration, this project would require moving existing curb and gutter along the roadway and/or narrowing an existing raised median.

#### **CS B6 West Uintah Street Bicycle Lanes – 21<sup>st</sup> to I-25**

Currently there are bike lanes on Uintah east of I-25. This extension of existing bike lanes will connect the west side of the City with the Pikes Peak Greenway, Mesa Road paved shoulders, Colorado College, Monument Valley Park, Cascade Avenue, and Tejon Street Bikeways (which provide access to the downtown business core). These Bike Lanes would provide direct access to the Uintah Gardens Neighborhood Businesses as well as dense neighborhoods and several schools on adjacent streets. These west side neighborhoods are "Neighborhood Strategy Areas" per U.S. Census (CDBG-EUGIBLE). Project requires shoulder stabilization and new paving in existing R.O.W.

#### **CS B7 Rock Island Trail Underpass at Union/Constitution**

This project will construct a trail underpass under Union Blvd. at Constitution, which will allow Rock Island trail users to cross under the 30,000 vehicles/day that pass thru this intersection. At-grade crossing options will also be provided. This project can be coupled with a major intersection project scheduled at this intersection (PPRTA\$) to save on design and construction costs. This project is very similar to the Rock Island trail tunnel being constructed at S. Circle Drive with a PPRTA-\$ intersection safety project (2007-08).

#### **CS B8 Airport Road Bicycle Lanes – Chelton to Powers**

This project would extend paved bicycle lanes the length of the Airport Road corridor per the City's Bicycle and Intermodal Transportation Plan. Presently, there are bicycle lanes on Airport from Union to Circle; additional lanes are programmed in 2008 from Circle to Chelton. This project would require some asphalt and concrete construction, especially near Academy and between Chelton and Academy. This is the modest income area that is underserved by an on off- street bicycling facilities. Airport is also a well used transit route. It would also link to Steward Ave. and access to Peterson AFB.

**CS B9 Las Vegas Street – Tejon St. to Hwy 85/87**

This project will construct paved shoulders on Las Vegas Street, which is a higher speed, 3-lane roadway that traverses both the City and County. It carries a lot of truck traffic and accesses many industrial employers and social services. This is a modest income area. Improvement of this roadway will provide a dedicated paved space for people to walk and bicycle and would provide a connection to the Tejon St. Bike Lanes, the Sand Creek Trail, and also to a proposed EPC trail connection to B Street (near Fort Carson).

**CS B10 Sinton Trail/Centennial Blvd Underpass**

This project would reconstruct an existing trail tunnel which is substandard in design. The current tunnel is only wide enough for one user to travel through in one direction at a time. The tunnel is difficult to maintain due to its substandard width and has poor lighting and drainage. It is a well used underpass under Centennial Blvd. connecting the NW and Holland Park neighborhoods with the Pikes Peak Greenway and Downtown.

**CS B11 BNSF Railroad Corridor Acquisition**

This project would purchase and/or develop the BNSF rail right-of-way along Nevada Avenue into a multi-modal corridor for non-motorized transportation and/or bus rapid transit. This trail corridor would create a connection between the Shooks Run Trail, Rock Island Trail, and Pikes Peak Greenway and the expanding UCCS campus and N Nevada redevelopment area.

**CS B12 Fillmore St/Fontmore – Centennial to Fontanero/31<sup>st</sup> St.**

This project would install on-street bicycle lanes on the remainder of this key E/W corridor from Centennial west to 31<sup>st</sup> Street. Currently there are bike lanes on Fillmore from Chestnut west to Centennial. The City also has plans to improve 30<sup>th</sup> Street and Chestnut Street with bike lanes/paved shoulders. This would help complete an on-street system for this part of the west side of the city. There are also bike lanes on 31<sup>st</sup> and paved shoulders on Mesa Road.

**CS B13 University Park Trail**

Construction of a tier 1 or tier 2 paved trail from Rockhurst Blvd. in the University Park neighborhood to N Nevada Avenue through the UCCS campus. This trail would provide access to the campus from the NE as well as from campus to the redeveloping N. Nevada corridor. The city owns a substantial amount of the R.O.W. needed (University Park Open Space) and is working with the University to I.D. the best route as its campus expands.

**CS B14 Various Transit and Park ‘n’ Ride Locations**

This project would make various bicycle and/or pedestrian access improvements to existing park-and-ride lots and transit substations including improved sidewalks, trail connectivity where trails are proximate, bicycle parking, directional and information signage, etc. This project has regional impacts since these locations are both in the City and outside the City (e.g. Fountain, Monument).

**CS B15 30<sup>th</sup> Street – Fontenaro to Garden of the Gods Road**

The purpose of this project is the construction of paved shoulders and installation of signage and markings to provide continuous on-street bicycling facility along this popular route. Currently, there are long stretches of roadway with many opportunities to construct additional pavement to accommodate bicycle (and to a lesser extent) pedestrian traffic. Some retaining walls will need to be constructed, guard rail relocated, and clearing of overgrown vegetation.

**CS B16 Rock Island Trail – Powers Blvd to Eastern City/County Border**

Completion of the construction of the Rock Island Rail Trail from Powers Blvd. thru Banning Lewis Ranch to the Eastern City line with El Paso County. This trail is expected to be constructed to the City’s Tier 1 or 2 trail standards (paved 10’-12’ wide). The distance of the facility may change if it is rerouted to a new alignment within Banning Lewis Ranch (TBD).

**CS B17 La Foret/New Santa Fe Trail Connection**

This project would reconstruct the approaches and interior of an existing trail tunnel for improved access and safety and reduced maintenance. Presently, the tunnel is frequently under minded by debris collection in the tunnel. Additionally, the trail approaches are difficult to traverse and have A.D.A. deficiencies.

***El Paso County*****EP B1 Jackson Creek Trail @ I-25 Culvert Improvements**

Culvert improvements along Jackson Creek Trail at I-25 to provide access to AFA from Gleneagle. The Jackson Creek Trail will provide links to: the Town of Monument, Pike National Forest, the Air Force Academy, Northgate Blvd, Skyline Trail, New Santa Fe Regional Trail, Fox Run Regional Trail, Fox Run Regional Park, shopping centers, several schools, and a newly planned water park.

**EP B2 B-Street Underpass Improvements**

Improvements to Fountain Creek Regional Trail underpass at S. Academy and I-25. Trail users entering/exiting Fountain Creek Regional Trail are currently required to share an underpass with one-way traffic. This underpass will provide safety improvements for access to: the Fountain Creek Trail and movement across I-25, South of Circle Drive. Trail users will have safe access to shopping, entertainment, restaurants, hotels, and places of employment.

**EP B3 Lewis Palmer Bridge**

Pedestrian bridge North of Baptist Road connecting the west side of Monument to Lewis-Palmer H.S. This overpass will provide access to/from the Town of Monument on the West side of I-25 to: Lewis Palmer High School, Monument YMCA, Jackson Creek Regional Trail, New Santa Fe Regional Trail, and shopping.

**EP B4 Chamberlain Trail Crossing**

Culvert improvements South of Hwy 16 connecting Fountain Creek Regional Trail to Fort Carson. This underpass will provide a link for soldiers and civilians who wish to access Ft. Carson from Gate 20 using a multi-use trail system. The existing Chamberlain Trail extends through Ft. Carson to Gate 1 at Hwy 115 and this underpass will provide a missing link across I-25.

**EP B5 Monument Trail Bridge**

Pedestrian bridge North of Hwy 105 connecting west side of Monument to new high school site. This overpass across I-25 will provide access to a newly planned high school from residents who line on the West side of I-25, north of Monument.

**EP B6 Highway 24 West**

Hwy 24 Westbound lanes need shoulders from Manitou Springs to Cascade. Shoulder addition to Hwy 24 West will provide a much needed safety improvement for road cyclist who wish to ride to/from Woodland Park. Additional benefits would be increased recreational tourism as this would provide a gateway to mountain road riding, which is deemed too unsafe at this point to promote as a road cycling route for tourists.

**EP B7 Fountain Creek Trail Bridge**

Fountain Creek Regional Trail bridge abutments on the South side of Fountain Creek Regional Park have been damaged by recent flooding and need to be replaced. The existing bridge across Fountain Creek risks damage in the near future which would render it unusable by trail users. This section of the Fountain Creek Trail is also part of the Colorado Front Range Trail, which is planned to be completed to the Pueblo County line in the near future.



**EP B8 Front Range Trail Culvert Improvements**

Future regional trail is planned to use an existing culvert underneath I-25, but needs improvements for pedestrian access. Use of this culvert will allow El Paso County parks to provide linkage from our currently planned route for the Front Range Trail on the West side of I-25 to the Fountain Creek Trail on the East side of I-25.

**EP B9 La Foret Trail Culvert Improvements**

Improvements to the existing culvert structure to facilitate passage underneath I-25 for the La Foret Trail. Culvert improvements for this I-25 crossing would result in much needed safety improvements and facilitate increased use for those wishing to access the Air Force Academy. Current conditions require riding/hiking through a water filled culvert and negotiating hidden obstacles such as rocks under water and moss/algae.

**EP B10 Ute Pass Trail – Phase 3**

Ute Pass Trail construction from Cascade to Ute Pass Elementary School along Fountain Creek and Hwy 24 ROW. Completion of this trail section would provide a trail link between Manitou Springs and the Town of Green Mountain Falls. Additionally this is the last remaining section of the American Discovery Trail to be completed within El Paso County.

***Fountain*****F B1 Jimmy Camp Trail**

Jimmy Camp Creek trail is an existing trail in parts of the City, but is not currently constructed in all areas. The unpaved trail follows the Jimmy Camp Creek from the Appletree Golf Course development on the northwest side of the City, to the confluence of Jimmy Camp Creek with Fountain Creek in the southwesterly portion of the City. The trail offers access to several open space areas along the Jimmy Camp Creek as well as other trails, parks and commercial areas in the community.

**F B2 Fountain Creek Regional Trail**

Fountain Creek Regional Trail is an existing unpaved trail that parallels Fountain Creek. The trail is constructed in much of El Paso County and the City of Colorado Springs, but should be extended southerly to the county border. The regional trail through the City of Fountain provides connections to the Fountain Creek Regional Park and Nature Center, as well as trails along Highway 85 and into the City's historic downtown.

**F B3 SH 85/Santa Fe Avenue Trail**

This proposed Santa Fe Avenue trail is a necessary pedestrian corridor along Highway 85 in Fountain. The trail provides pedestrian and other non-motorized means of transportation a safe passage along this busy corridor. The paved trail would begin at the intersection of Highway 85 and Interstate 25 in the southwestern part of Fountain where portions of the trail have already been constructed, and then continue north along the Highway 85/Santa Fe Avenue corridor to the northerly City limits. The path provides access to major commercial hubs, Fountain Creek Regional Park and Nature Center, a proposed off-site military housing project, and other east-west trail heads in the City.

**F B4 Irrigation Ditch Trails**

A trail system is planned in the City of Fountain to follow the Chilcott Ditch and Fountain Mutual Irrigation Ditch paths. These irrigation ditches which wind their way through El Paso County and the City of Fountain offer great opportunities for connectivity to all areas of the community, including schools, parks, open space, residential and commercial areas. Some sections of these trails have already been constructed by adjacent developments, but gaps do exist. The trails are unpaved and in some areas will require pedestrian crossings over the ditches as well as off-site construction for connections to other paths.

**F B5 Ohio Ave/Hwy 85 to Jimmy Camp Creek Trail**

A trail connection between Highway 85 and Jimmy Camp Creek is necessary to provide connectivity between the historic downtown core and the Jimmy Camp Creek trails and open space. The trail will provide connections and access to commercial areas, residential areas, Metcalf Park and the Jimmy Camp Creek trails and open space. The trail begins at the intersection of Ohio Avenue and Highway 85 in the heart of downtown, and then extends easterly to Jimmy Camp Creek.

**F B6 El Paso Trail**

The construction of a paved trail along Link Road, El Paso Street and Old Pueblo Road is planned to connect the southerly developments in the City with the historic downtown and the Highway 85 corridor. The trail also provides access to the City's Adams Open Space and future open space lands and trails along Jimmy Camp Creek and Fountain Creek. The paved trail is not currently constructed.

**F B7 Squirrel Creek Trail**

The Squirrel Creek trail is a proposed paved trail that will parallel the right-of-way for Squirrel Creek Road and Comanche Village Drive. The trail will provide a connection between the easterly areas of the City of Fountain and existing and planned trails, open space areas and parks located near Highway 85. The trail will begin at the intersection of Comanche Village Drive and Highway 85, continuing easterly to the City's corporate limits at the Kane Ranch development.

***Green Mountain Falls*****GMF B1 Ute Pass Avenue**

Widen the paving on Ute Pass Ave to provide bicycle/pedestrian lanes from Town line to Town line (5,355 FT). Urgently required for safety. There are no shoulders along the main street and arterial route through Town. Currently bicycles and pedestrians must use the traffic lanes. Project provides a missing link in the coast-to-coast American Discovery Trail and the regional Ute Pass Trail.

***Manitou Springs*****MS B1 Creekwalk**

The multi-year project involves improvements for a trail with local, regional, and national significance. The project will extend from the eastern city limits, through five parks and the downtown area of Manitou Springs, to the western city limits. The Creekwalk Trail will serve as Manitou Springs' primary bike route.

***Woodland Park/Teller County*****WP B1 American Discovery Trail Connection**

Ten foot paved trail with Fountain Creek bridge/crossing that would extend from the US 24 underpass along Laura Lane to Fountain Creek and across the creek to the American Discovery Trail.

**WP B2 Fountain Creek Trail**

Ten foot paved trail that would extend from Sheridan Ave. to the Safeway shopping center along Fountain Creek, known as the Rosemount section of the American Discovery Trail. The project would also entail significant drainage improvements.

**WP B3 Teller County**

Ten foot paved trail that would extend from Wal-Mart to Crystola.



**Figure 14 – Descriptions of Priority Pedestrian Projects**

### ***Colorado Springs***

#### **CS P1 High Priority Locations Citywide per forthcoming City Pedestrian Plan Recommendations**

This request is for ongoing funding over the 20-year LQTP to fund the construction of critical infill sidewalk segments and installation of accessible pedestrian ramps. The City is in the process of completing a pedestrian plan, which will identify key improvements needed on high priority corridors. Potential corridors will likely serve employment and service centers, transit routes, modest income, senior citizens, and/or disabled persons, and other key locations in the City. Some possible corridors with significant to moderate pedestrian deficiencies include: Academy Blvd., Airport Road, Union Blvd., Nevada Ave., Uintah Street (West), Fountain Blvd., Cheyenne Blvd., Cheyenne Road., Sinton Rd., S. Circle Dr., Mark Dabling Blvd., Meadow Lane, Colorado Ave. (West), Dublin, Hancock Ave., Constitution Ave., Mount View Dr., Acacia Dr., and S. 8<sup>th</sup> Street.

#### **CS P2 Nevada Avenue Streetscaping – Boulder to Cucharaas**

This project will install raised landscaped medians on these 4 blocks of Nevada (currently missing), install corner bumpouts to significantly shorten the pedestrian crossing, add A.D.A. compliant ramps, and upgrade other streetscaping materials (aesthetic paving treatment, planters, bike parking, street lighting, landscaping). The pedestrian crossing improvements and streetscaping will extend north of the median section (Cucharras to Bijou) up to Boulder Street 3 blocks north of Bijou. Funding for this project is being accrued through downtown parking revenues.

### ***Green Mountain Falls***

#### **GMF P1 Ute Pass Avenue Sidewalks**

Construct sidewalks along the main street (Ute Pass Avenue) from Lake St. to the Sallie Bush Community Center. Urgently required for safety. There are no sidewalks along Ute Pass Ave. Currently, pedestrians must use the traffic lanes.

#### **GMF P2 Ute Pass Avenue Streetcaping**

Enhance the east and west entrances to Town and the main transportation corridor through Town. Construct sidewalks, street lights, paved parking spaces, enhanced signage, remove utility poles and overhead lines, and plant street trees, and other landscaping.

### ***Manitou Springs***

#### **MS P1 Crystal Park Road Sidewalks**

Installation of sidewalks on Crystal Park Road from southern City limits to Manitou Avenue. Project intention is to provide a safe pedestrian connection to Manitou Avenue (transit and Creekwalk) for a large, existing residential subdivision of several hundred homes and an underserved population (developmentally disabled) from Cheyenne Village (old McLaughlin Lodge) who must access public transportation on Manitou Avenue.

#### **MS P2 Creekwalk**

The multi-year project involves improvements for a trail with local, regional, and national significance. The project will extend from the eastern city limits, through five parks and the downtown area of Manitou Springs, to the western city limits. The Creekwalk Trail will serve as Manitou Springs' primary bike route.

#### **MS P23 El Paso Blvd Sidewalks**

Installation of sidewalks along El Paso Blvd. from Manitou Avenue to eastern City limits at Columbia Road. Project intention is to provide safe pedestrian access along the El Paso Blvd. collector and to connect a number of neighborhoods with Manitou Avenue (public transit) and the Creekwalk Trail.



***Woodland Park/Teller County***

**WP P1 County Road Sidewalks**

Installation of sidewalks on County Road from Hwy 67 to Park Street.

**WP P2 Fairview Sidewalks**

Installation of five foot attached sidewalk with curb and gutter on Fairview Street from US 24 to Chester Avenue.

**PROJECT PRIORITIZATION**

A primary objective of the Technical Enhancement Sub-Committee was to have a methodology to select priority projects in the future while having flexibility to add or select a different project if a new condition or issue arose. Therefore, this Non-Motorized Transportation Plan provides a Vision Plan and a long list of high priority projects and a methodology for prioritizing projects. This Plan does not, however, prioritize projects identified in the priority bicycle and pedestrian project lists.

Once the PPACG Long Range Transportation Plan has identified funding levels for bicycle and pedestrian improvements, projects will be selected based on the bicycle and pedestrian evaluation criteria, input from the Technical Enhancement Committee, and PPACG Board direction.



## 5. STANDARDS & GUIDELINES

Since the original Intermodal Surface Transportation Efficiency Act of 1991, progressive communities across the United States have embraced the directive to include, to a greater extent, pedestrian and bicycle mobility in the planning process. As a result, there have been significant efforts toward re-looking at pedestrian and bicycle standards and guidelines.

This document represents a compilation of the standards and guidelines of the member jurisdictions and best practices from jurisdictions across the country. It includes a review of Complete Street requirements as required by FHWA, best practices in pedestrian and bicycle facilities planning, and a discussion on travel demand management.

The Pedestrian and Bicycle Guidelines are intended as recommendations for member jurisdictions to improve bicycle and pedestrian mobility. Member jurisdictions are not required to adopt these guidelines; but rather, to use them as a planning tool in developing pedestrian and bicycle plans for their local communities. The guidelines are intended to be flexible to allow for implementation, as appropriate.

### COMPLETE STREETS

In 2000, the Federal Highway Administration (FHWA) provided the following guidance: **“Bicycling and walking facilities will be incorporated into all new transportation projects unless exceptional circumstances exist.”** Since then, cities and counties throughout the country have started working toward providing “complete streets” in their communities. A complete street is one that works for all travel modes, including motorists, transit, bicyclists, pedestrians, and wheelchairs. A complete street policy ensures that the entire right-of-way is routinely designed and operated to enable safe access for all users. In keeping with the “complete streets” philosophy, the following outlines some general guidelines or “best practices” for creating “complete streets” and accommodating bicyclists and pedestrians within roadway corridors.

### COMPLETE STREET GUIDELINES

#### FEDERAL GUIDANCE

In 2003, FHWA published *Design Guidance Accommodating Bicycle and Pedestrian Travel: A Recommended Approach* (Guidance), a policy statement to guide jurisdiction in integrating bicycling and walking into their transportation systems. The Guidance establishes the following four policies:

1. Bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas unless one or more conditions are met:
  - Bicyclists and pedestrians are prohibited by law from using the roadway;
  - The cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use (*i.e.*, >20%); and
  - Where a sparse population or other factors indicate that there is no need.



2. In rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day.
3. Sidewalks, shared use paths, street crossing, pedestrian signals, signs, street furniture, transit stops and facilities, and all connecting pathways shall be designed, constructed, operated, and maintained so that all pedestrians, including people with disabilities, can travel safely and independently.
4. The design and development of the transportation infrastructure shall improve conditions for bicycling and walking through the following additional steps:
  - Planning projects for the long-term;
  - Addressing the need for bicyclists and pedestrians to cross corridors as well as travel along them;
  - Getting exceptions approved at a senior level; and
  - Designing facilities to the best currently available standards and guidelines.

It should be noted that exemptions to the complete streets requirement require exceptional reasons and facilities with federal funding require FHWA approval of the exemption. A state or local agency could be put on probation for receiving additional federal funds, if the FHWA finds inappropriate use of exemptions to exclude accommodation of all modes.

## LOCAL IMPLEMENTATION

In December 2005, the City of Colorado Springs amended their Intermodal Transportation Plan (ITP) to include a recommendation promoting "complete streets." The recommendation reads:

"Construct complete streets designed to accommodate all users. In all new roadway projects or major reconstruction projects, accommodate travel by pedestrian, bicyclists, and transit users, except where pedestrians and bicyclists are prohibited by law from using a given facility or where construction of bikeways or walkways would be unsafe or impractical. Such facilities for pedestrian and bicycle use shall be designed to the best currently available standards and guidelines."

Colorado Springs defines complete streets as streets that have been built for safe and convenient travel by all road users, including people on foot and bicycle, as well as transit users.

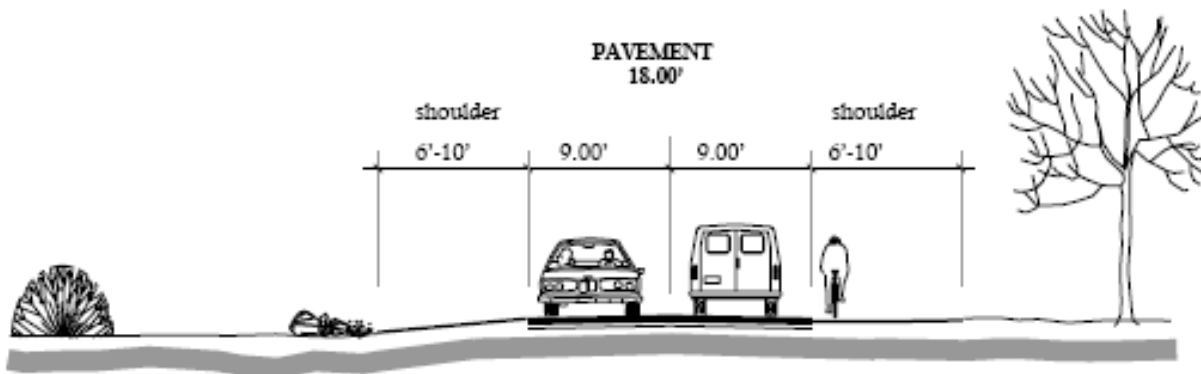
## COMPLETE STREET DESIGN

While the definition of a complete street is universally applicable, the design of complete streets is variable. Each street has unique characteristics that make it distinctive from another. Therefore, **a complete street in a rural area will look quite different from a complete street in a highly urban area.** However, both streets are designed to balance safety and convenience for everyone using the road.



Elements that may be found on a complete street includes: sidewalks, bike lanes, crosswalks, wide shoulder, medians, bus pullouts, special bus lanes, raised crosswalks, audible pedestrian signals, sidewalk bulb-outs, and more. The following outlines the characteristics of “typical” complete streets in an urban and rural setting.

- Rural.** Rural roadways provide unique design challenges to develop complete streets. Rural streets typically have low traffic volume and the traffic lanes serve as multi-modal pathways often accommodating pedestrians, bicyclists, and motorists. These types of streets typically lack sidewalks and few pedestrians use these routes. Streets may be striped in order to provide the best use of the right-of-way and not limit mobility. Rural complete streets provide adequate shoulders (at least 5 feet) for use by bicyclists. Ideally, the shoulder should be 8 feet wide to allow a vehicle to pull off the roadway in an emergency.



- Urban.** Urban streets are utilized to access mixed use and commercial areas. These streets typically carry a higher volume of traffic and have more pedestrians and bicyclists present. Transit is an active component of these areas and intermodal connections are prioritized.

There are many different types of streets found in urban settings. Recommended standards for different types of urban streets are outlined below. These standards include provisions for narrow street widths where low speeds are appropriate, detached sidewalks, bicycle facilities, and shorter block lengths.



## Local Streets

- The maximum width of local residential streets is 30-32 feet (two 7-foot parking lanes and two 8-9 foot travel lanes) depending on the expected travel volume.
- Landscape strips, separating curb from the sidewalk, are required on local residential streets.
- Maximum block length is 600 feet for low-volume residential streets and 800 feet for medium-volume residential streets.
- 6 inch vertical curbs are required.



## Collector Streets

- Landscape strips, separating curb from the sidewalk, would be required on most new streets.
- Maximum block length is 1,000 feet for collector streets.
- Streets with on-street parking bulbouts are encouraged at intersections to reduce the crossing distance for pedestrians and discourage speeding through intersections.
- Roundabouts should be considered where residential streets intersect and ultimate combined volume will exceed 1,000 vehicles daily or where the unimpeded distance on any of the approaches not subject to stop control exceeds 600 feet.
- Bicycle lanes should be provided on all collector streets.



## Arterial Streets

- Bulbouts would be encouraged at some intersections to reduce the crossing distance for pedestrians and discourage speeding through intersections.
- Maximum block length is 1,320 feet (four intersections per mile). This could be lengthened if bike/ped paths were provided that shortens the effective block length for non-auto users.
- Raised medians with turn pockets should be provided.
- Bicycle lanes should be provided on all arterial streets.





## PEDESTRIAN FACILITIES

Walking is the fundamental mode of human mobility. Everyone is a pedestrian at some point in every journey that they take, including walking to a bus or walking to a parking lot. It includes people of all ages, from children to older adults, as well as pedestrians with visual and mobility impairments. Unfortunately, many of our streets and highways were primarily built to facilitate the smooth flow of motor vehicles. People should be able to walk safely, whether for fun and recreation, errands, getting to work or schools, shopping or other reasons. The following provides recommended standards and guidelines for facilitating pedestrian access and increasing pedestrian safety on local roadways.

### SIDEWALKS AND WALKWAYS

Sidewalks are integral to the transportation system. Safe, convenient, accessible pedestrian sidewalks and access should be provided on all new streets within an urban/suburban setting. At a minimum, sidewalks should be provided along all streets used for pedestrian access to schools, parks, shopping areas, and transit stops.

To the extent feasible, pedestrian traffic and those using wheelchairs should be separated from vehicle traffic. Where complete separation of pedestrians from vehicles and bicycles is not possible, potential hazards should be minimized by using techniques such as special paving, pavement marking, signs, striping, bollards, median refuge areas, traffic calming features, landscaping, lighting, or other means to clearly delineate pedestrian areas day and night.

Some effective pedestrian safety measures may increase motor vehicle travel time and have a slight negative impact on motor vehicle level of service (LOS). A rebalancing of the transportation system where pedestrian LOS and safety are included may sometimes mean a change in expectation about the priority that motor vehicle LOS is given in design and decision-making. If serious safety measures are to be achieved, the particular LOS may be lower for motor vehicles than if those measures were not taken.

Development plans should include site amenities that enhance safety and convenience, and promote walking or bicycling as alternative means of transportation. Site amenities may include bike racks, drinking fountains, canopies, and benches.

### STANDARDS AND SPECIFICATIONS

Sidewalks should be provided for any portion of a site that abuts a roadway. All sidewalks should be in the public right-of-way. Sidewalk width will be specified per each jurisdiction's design standards. Both the FHWA and the Institute of Transportation Engineers (ITE) recommend a minimum width of five feet for a sidewalk or walkway, which allows two people to pass comfortably or to walk side-by-side. A buffer zone of four to six feet is desirable and should be provided to separate pedestrians from the street. Parked cars and/or bicycle lanes can provide an acceptable buffer zone.

When a sidewalk abuts angled parking such that there will be vehicular overhang, the sidewalk should be a minimum of six feet in width.



Where there is adequate right-of-way, the construction of the sidewalk should be separated from the curb and gutter section for all arterials and collectors; this separation is also recommended for subdivisions. The area between the sidewalk and the back of the curb should be appropriately landscaped.

Sidewalk construction and removal should be in accordance with the local jurisdictions' Construction Standards and Specifications.

### ACCESSIBILITY GUIDELINES

Sidewalks, walkways, and driveways should be constructed in accordance with the Americans with Disabilities (ADA) Accessibility Guidelines. Curb ramps should be provided wherever an accessible route crosses a curb (ADA Accessibility Guidelines). Driveways should be constructed in accordance with ADA Accessibility Guidelines so that the sidewalk can be negotiated by a wheelchair.

### RESPONSIBILITIES

The builder on the lot is responsible for sidewalk construction. Where sidewalks are not directly related to a lot, the construction of sidewalks is the responsibility of the developer. A Certificate of Occupancy will not be issued until required sidewalks are constructed and approved.

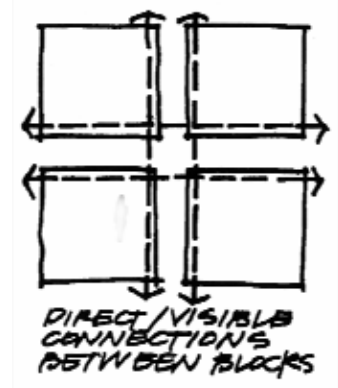
### TECHNIQUES FOR ACCOMMODATING PEDESTRIANS

The parking and circulation system within each development should accommodate the movement of vehicles, bicycles, and pedestrians throughout the proposed development and to/from surrounding areas, safely and conveniently. The system should provide adequate directness, continuity, and street crossing. Walls, fences, and barricades should not restrict access to adjacent uses, particularly for public uses such as schools, parks, and recreational areas.

To the maximum extent feasible, the following guidelines should be incorporated into the design of all new developments to ensure safe and convenient pedestrian access into and within the site, with minimum potential for conflict with motor vehicles. These design elements complement the five measures of pedestrian level of service: Directness, Continuity, Street Crossings, Visual Interest and Amenity, and Security.

#### DIRECTNESS

Sidewalks within the site should be located and aligned to directly and continuously connect areas or points of pedestrian origin and destination, and should not be located and aligned solely based on the outline of a parking lot configuration that does not provide such direct pedestrian access. To the maximum extent feasible, walkways and bicycle connections should provide the most direct access route between intended points of travel.

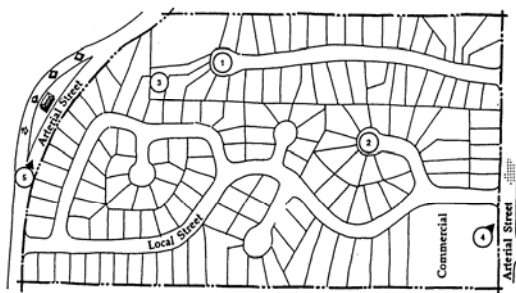


- **Visible Connections.** Provide visible connections to key pedestrian destinations. Align and locate buildings, roadways, and open space so that pedestrians can see their destinations before arriving there. Minimize and remove physical obstructions/barriers that impede direct pedestrian access.

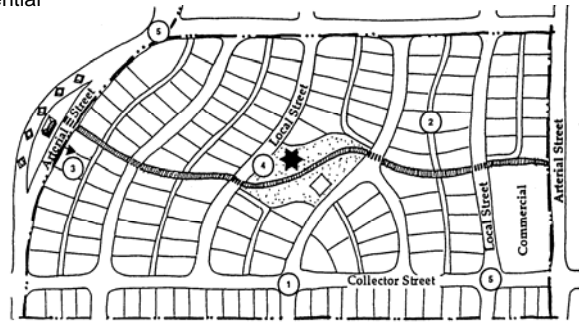


- Building Entries.** Provide clearly marked building entries that can be viewed from the street. Entries from parking lots should be subordinate to those related to the street. Buildings should be sited in ways to make their entries or intended uses clear to pedestrians. Provide clear and direct pedestrian entries from the street, not just from parking areas.
- Development Patterns.** The location and pattern of streets, buildings, and open space must facilitate direct pedestrian access. Locate buildings near street corners to improve access to bus stops and provide pedestrian connections to neighboring activities. Establish appropriate lot patterns that provide direct and visible connections of sidewalks between blocks and between cul-de-sacs. Offer more route choices along quiet local streets. The following exhibits provide examples of typical developments as compared to developments with pedestrian compatible improvements. These examples illustrate the same development yield for the site, illustrating that good pedestrian connections and development opportunities are compatible and efficient.

Residential

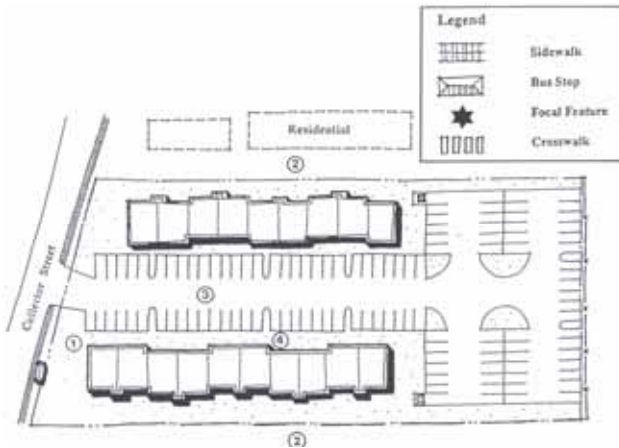


Typical

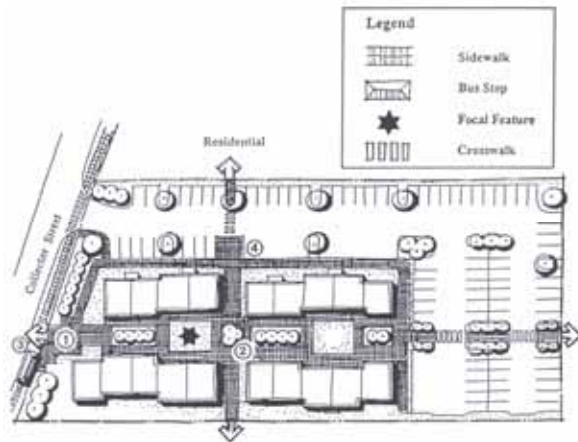


Pedestrian Compatible

Residential Apartment



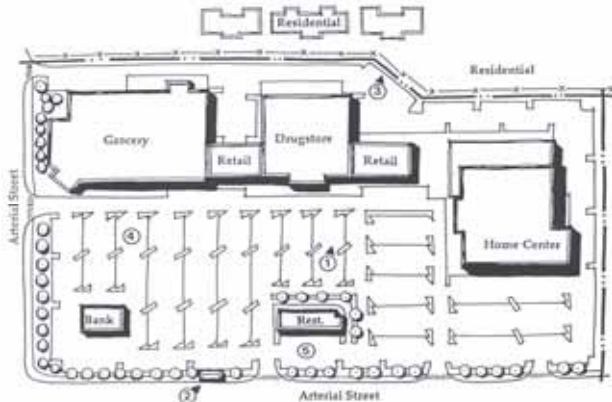
Typical



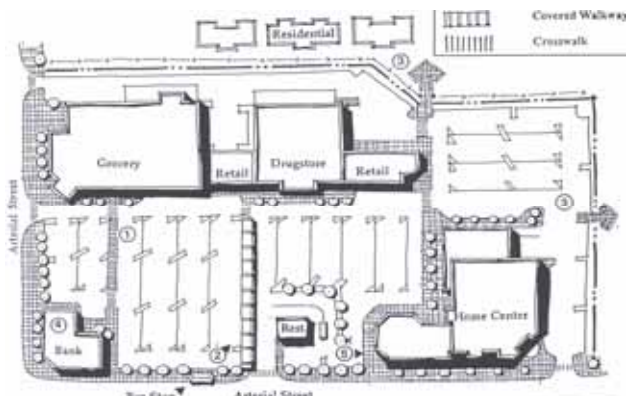
Pedestrian Compatible



Commercial Retail Shopping Center

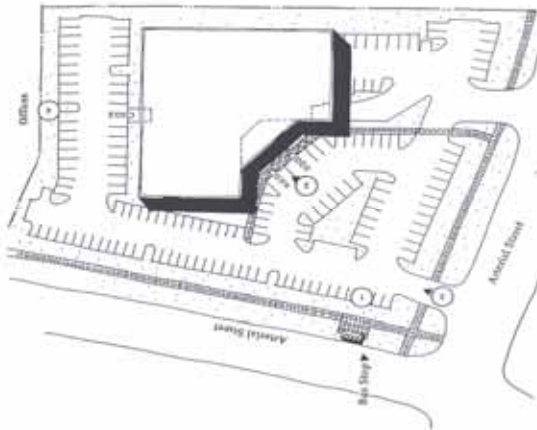


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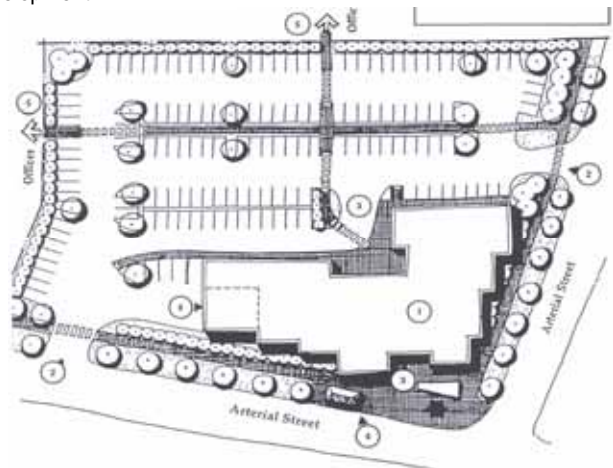


Pedestrian Compatible

Office Development

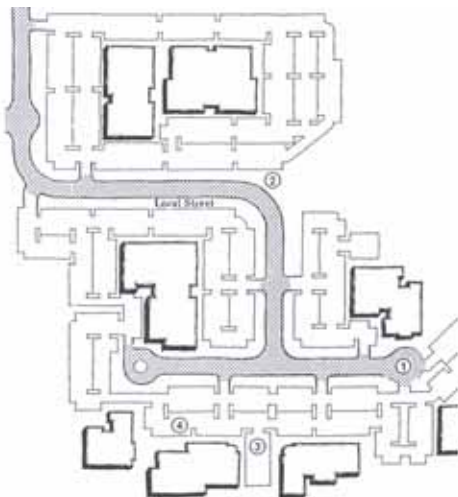


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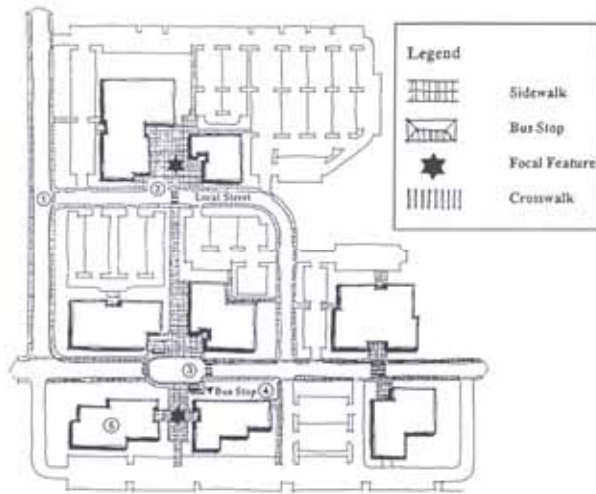


Pedestrian Compatible

Office/Industrial Park



Typical



Pedestrian Compatible

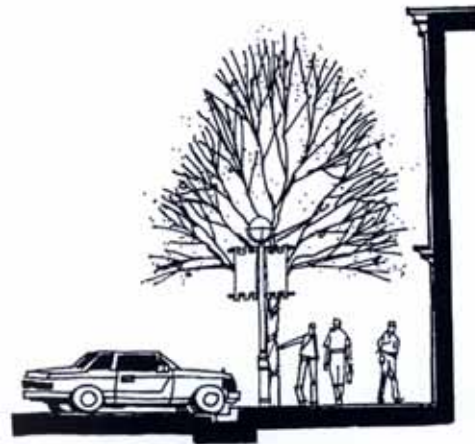


- **Lighting.** Use light fixtures to provide direct indication for pedestrian traffic.
- **Accessory Uses.** Ensure that sidewalk uses such as outdoor cafes, in high-use retail pedestrian settings, are compatible with direct pedestrian access to buildings and other destinations.

**CONTINUITY**

Sidewalks should provide a continuous and understandable pedestrian network that links schools, neighborhoods, parks, activity centers, and other destinations. In order to provide a continuous pedestrian network to destinations, the local jurisdiction may require additional sidewalks, walkways, or bike paths not associated with a street, or the extension of a sidewalk from the end of a cul-de-sac to another street or walkway and connections between developments. When necessary to assure the public’s safety in using on-site or connecting pedestrian sidewalks, the jurisdiction may require a developer to provide on-site or off-site pedestrian overpasses, underpasses, or traffic signalization.

- **Design Elements.** Consistent design can help to create a uniform, readily identifiable pedestrian network. Incorporating the following facilities, measures, and elements can provide a uniform, continuous pedestrian network:
  - Continuous sidewalks on both sides of the street;
  - A continuous alignment of building facades near the sidewalk;
  - A consistent park strip between the curb and the sidewalk; and
  - Consistent street trees.



- **Pedestrian-Scale.** Use pedestrian-scaled furnishings, signs, landscaping, and facilities that appears as unified and themed entities in pedestrian networks, areas, and corridors.

- **Accessory Uses.** Ensures that sidewalk cafes and other uses/features of the sidewalk area support rather than obstruct a continuous pedestrian network.



- **Bridges and Overcrossings.** Provide bridges and crossings over railroads, rivers, drainages, and other features that are major barriers to a continuous pedestrian network. Design these crossings to minimize out of direction travel.



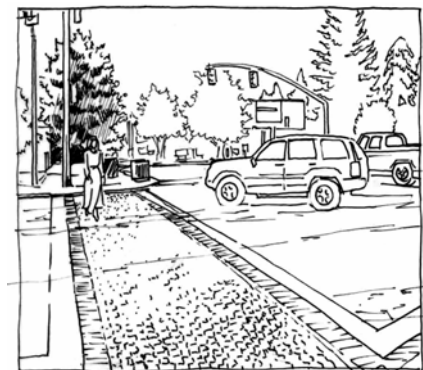
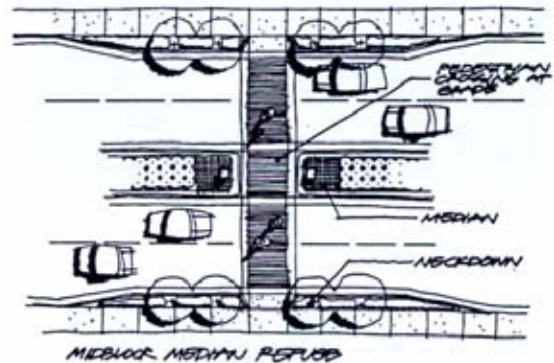
## STREET CROSSINGS

Jurisdictions should develop safe, comfortable, and attractive street crossings. Intersections crossing multiple lanes require pedestrian enhancements. If it is determined that the traffic demand warrants additional through or turn lanes, then pedestrian mobility should be evaluated to determine whether or not additional pedestrian enhancements should be required to offset the traffic impacts on the pedestrian.

- Roadway Design.** Design roadways to improve the safety and comfort of arterial street crossings. The greater the number of lanes that a pedestrian must cross, the greater is the pedestrian's exposure to vehicles. In addition, wider streets tend to carry higher volumes of traffic and higher speeds. Consider the following roadway design elements:



- **Number of Lanes.** The number of travel lanes to cross is a significant safety factor for a pedestrian crossing the street. When the number of travel lanes increase, it is generally in response to higher traffic volumes. In addition, the pedestrian is exposed for a longer period of time in crossing those additional lanes.
  - **Lane Widths.** Typically, a travel lane is 12 feet wide. If the lane width is reduced, the time it takes a pedestrian to cross is also reduced. In addition, the narrower travel lane tends to calm or slow traffic, which is a benefit to the pedestrian.
  - **Parking Lanes.** When parking lanes exist along the street, the pedestrian walk times to cross the street increase as the pedestrian must first cross the parking lane before beginning to cross the traffic lanes. At intersections, vehicles that make wider, higher speed turns often use these parking lanes.
  - **Travel Speed.** Speed is a significant safety factor for pedestrians trying to cross a street. Factors that might affect speed include minimum cross street traffic, low number of access points, and geometric design. As mentioned previously, lane widths also contribute to travel speeds.



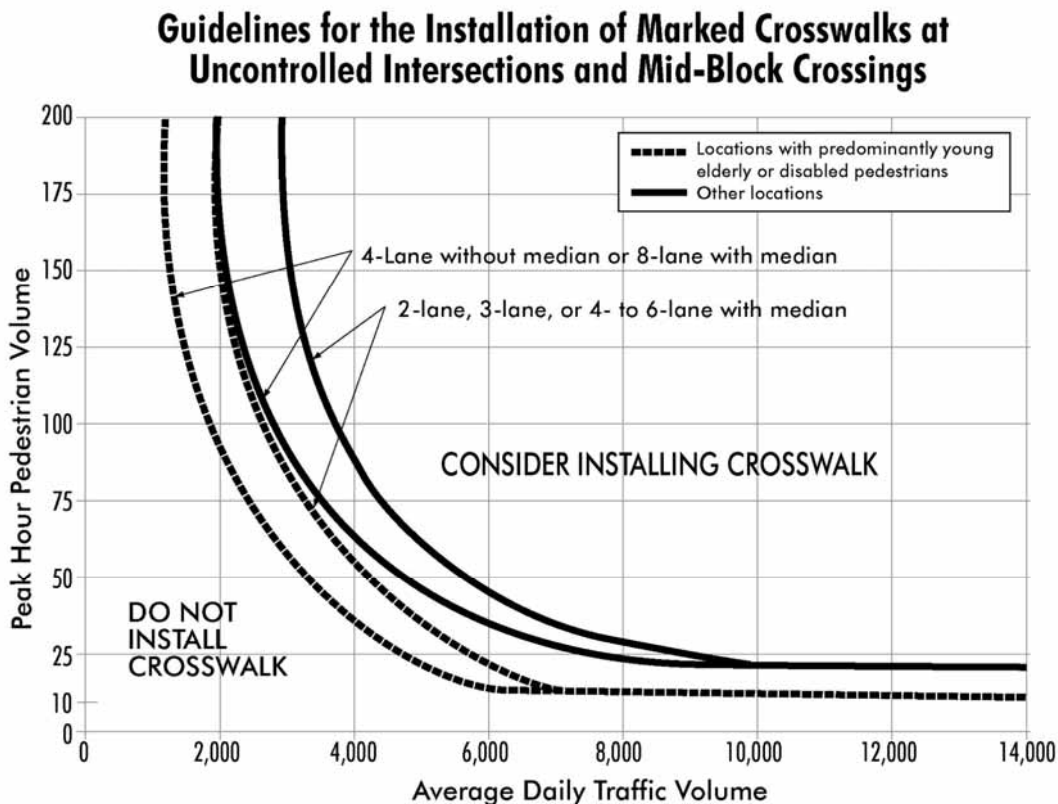
- Crosswalks.** Design crosswalks to create safe crossings for pedestrians. The location and frequency of crosswalks along primary arterials, secondary arterials, and collector streets need to be balanced



between need, traffic flow, and cost. Whereas an optimum pedestrian environment would have crosswalks at all major activity areas and spaced at 400-foot increments, too great a frequency of crosswalks can create a situation where the typical driver becomes immune to the crosswalk, which might create a safety hazard. The following should be taken into account when considering locations for crosswalks:

- All signalized intersections with ADA-accessible pedestrian activated push buttons;
- Locations that will attract high volumes of pedestrian traffic;
- Locations for safety, such as crosswalks to school sites, transit stops or activity areas; and
- Mid-block crossings at a minimum of 350 feet from adjacent intersection crosswalks.

In areas that have high volumes of pedestrians crossing a street, pedestrian crosswalks should be installed. The need for these crosswalks is a function of roadway type and pedestrian volumes. Roadway types from collector to primary arterial result in more travel lanes to cross in which the pedestrian is exposed, higher traffic volumes, and often increased traffic speeds. The chart below and Table 4 is a guideline as to where unprotected intersection and mid-block crosswalks should be considered based on street width/type and pedestrian volumes.



Source: Smith and Knoblauch, AAA Transportation Research Record 1141 as reprinted in the ITE manual, Design and Safety of Pedestrian Facilities



**Table 4 – Guidelines for Installing Marked Crosswalks**

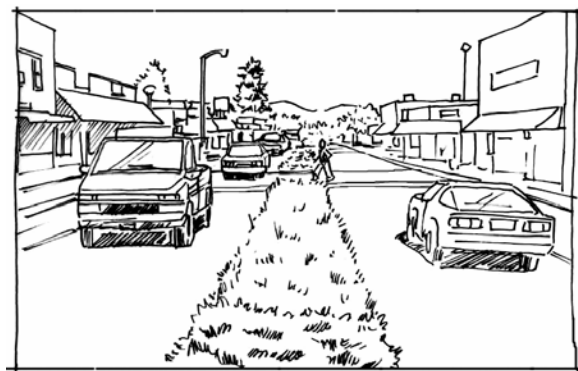
Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT ≤ 9,000			Vehicle ADT > 9,000 to 12,000			Vehicle ADT > 12,000 to 15,000			Vehicle ADT > 15,000		
	Speed Limit											
	≤ 30 mph	35 mph	40 mph	≤ 30 mph	35 mph	40 mph	≤ 30 mph	35 mph	40 mph	≤ 30 mph	35 mph	40 mph
2 Lanes	C	C	P	C	C	P	C	C	N	C	P	N
3 Lanes	C	C	P	C	P	P	P	P	N	P	N	N
Multi-Lane (4 or more lanes) with raised median	C	C	P	C	P	N	P	P	N	N	N	N
Multi-Lane (4 or more lanes) without raised median	C	P	N	P	P	N	N	N	N	N	N	N

Source: FHWA 2006

- C = Candidate for marked crosswalks
- P = Possible increase in pedestrian crash risk may occur if crosswalk markings are added without other pedestrian facility enhancements.
- N = Marked crosswalks alone are insufficient and pedestrian crash risk may increase when providing marked crosswalks alone. Consider using other treatments such as traffic signals with pedestrian signals where warranted or other substantial crossing improvements to increase crossing safety.

- **Mid-Block Crossings.** Mid-block crossings should be provided where there is an existing or potential pedestrian demand to cross at higher volume roadways or streets where crossings are greater than 800 feet.

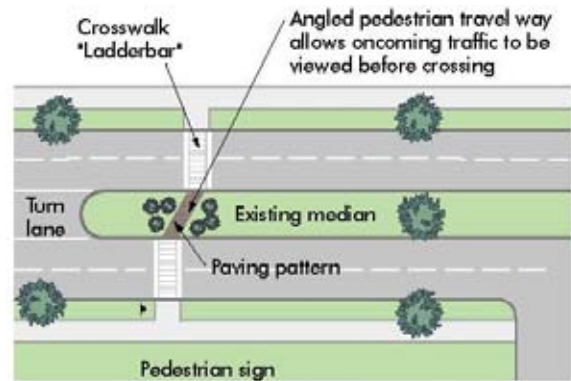
Ideally, these crossings should be accommodated with a refuge island. Where mid-block crossings are installed at uncontrolled locations (i.e., where no traffic signals or stop signs exist), crossing islands should be considered as a supplement to the crosswalk in order that the pedestrian will only cross one lane at a time. Providing an angled pedestrian travel way across the median allows oncoming traffic to be better viewed before crossing, further improving safety.







- Median Refuge Areas.** Painted medians offer little refuge other than getting the pedestrian out of a lane of traffic. Substantive raised medians of significant width with a cut through provide some increase in security for the crossing pedestrian. For arterials with four or greater lanes, a raised median refuge island should be designed for all intersections and mid-block crossings. Center crossing islands allows the pedestrian to deal with only one direction of traffic at a time, and they enable them to stop partway across the street and wait for an adequate gap in traffic before crossing the second half of the street.



- Signs and Signals.** Pedestrian signal heads should be included for all signalized intersections with crosswalks and the heads should be easily visible to the pedestrian. It would be desirable for all activity areas to have designated pedestrian walk phases. Pedestrian push buttons should be required for all other intersections. The location of the push button should be easily accessible and not require pedestrians to divert from their travel route. Signals without dedicated walk phases or push buttons are not acceptable since the only way a pedestrian may ever get a green light is when an automobile on the side street activates the cycle.



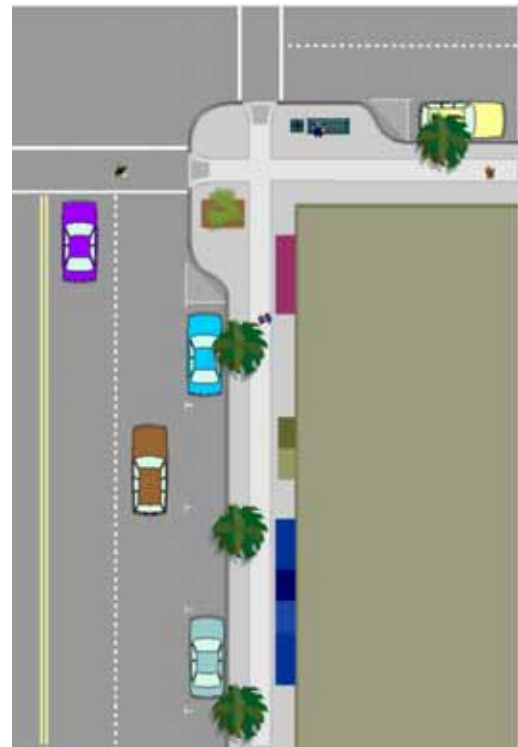
Countdown Signal Head

At signal locations that experience a high number of pedestrians, such as at transit stops or universities, have experienced a large number of pedestrian accidents, or any other area where pedestrians often cross during the "Do Not Walk" phase, countdown signal heads should be considered to provide additional information about how much time is remaining for being able to cross the street.

- Lighting Levels.** The intersection should be well lit so that the pedestrian is visible at night. Ensure that street crossings are lit to reflect the patterns of use.
- Amenities.** In pedestrian districts, amenities should include such elements as signage and design features that strongly suggest the presence of a pedestrian crossing. Enhancements to crosswalks including color, stenciling, and pavement treatments should be considered for all major intersection entryways to mixed-use centers. Develop civic improvements including pedestrian scale elements, landscaping, and sidewalk widenings which improve the visibility and suggestion of pedestrians at street crossings.
- Line-of-Sight Distance.** Sight distance measures the unobstructed view between the motorist and the pedestrian. This can be a problem, particularly when a motorist intends to make a left-turn under the permissive left-turn phase, and it is difficult to see pedestrians

around the opposing left-turn vehicle. Sight distance should be analyzed as a part of all intersection designs.

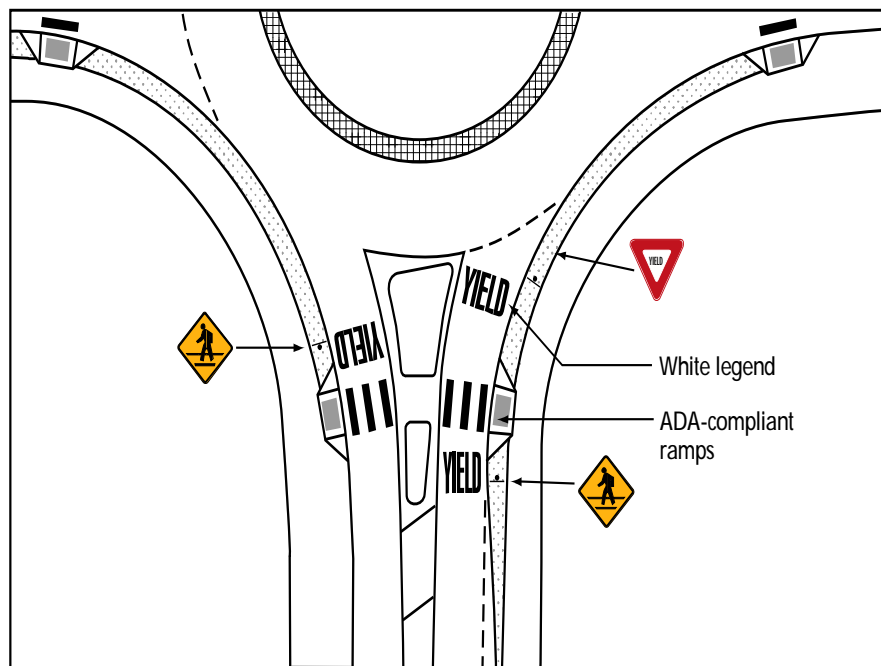
- **Right-Turn on Red (Left-Turn on Red on One-Way Streets).** One of the greatest increases in pedestrian accidents has been associated with right-turns on red lights. Research has determined that an extremely high number of drivers do not stop at the crosswalk before making their turn and instead, continue on while looking to the left for approaching conflicting vehicles, not pedestrians in the crosswalk. Some jurisdictions have installed signs that do not permit right-turns on red in specific places and circumstances in order to improve safety for crossing pedestrians.
- **Bulbouts/Curb Extensions.** In special applications, the City or developer may consider bulbouts to reduce traffic speed and to improve pedestrian safety. Bulbouts are simply intersection curb extensions, which extend past the parking lanes, but not into the bicycle or through lanes. The advantages of bulbouts are as follows:
  - Bulbouts provide an entry or gateway statement into activity areas or where high volumes of pedestrians are present. Entering an area where a bulbout is present provides a clear difference between the arterial function and a local pedestrian activity area.
  - Bulbouts enhance the visibility of the pedestrian because they physically permit the pedestrian to be located closer to the travel lanes, especially where parking is permitted, and allow the pedestrian to be seen more easily by the driver.
  - Bulbouts constrict traffic flow through reduced lateral clearance. This reduction effects a reduction in travel speed along the corridors and improves safety for both pedestrians and vehicles.
  - The bulbout changes the turning radius at the intersection, which reduces turning speed and vehicle and pedestrian conflicts.
  - The extension of the bulbout reduces the time it takes pedestrians to cross from curb to curb. This reduction in pedestrian crossing time consequently reduces the time the pedestrian is exposed to moving vehicles.
  - Bulbouts change the character of the intersection from automobile-dominant to pedestrian-friendly and multimodal-shared.





- Bulbouts can be an extremely positive visual and aesthetic enhancement. Features such as pedestrian lighting, planters, and benches create a focal point for pedestrian activity and change the character of the intersection from automobile to pedestrian. It should be noted that care must be taken when aesthetically enhancing bulbouts as such enhancements can block sight distances and create accident problems.
- **Modern Roundabouts.** The use of modern roundabouts as an alternative to conventional stop and signal control intersections is becoming increasingly popular in the United States. Studies conducted by the insurance industry have determined that these types of intersections result not only in a significant decrease in automobile traffic at an intersection, but also a reduction in pedestrian accidents as well.

Modern Roundabout Pedestrian Crosswalk Treatment



At a conventional intersection, the pedestrian faces four (4) potential vehicle conflicts:

1. Crossing movements on red (typically high-speed, illegal);
2. Right-turns on green (legal);
3. Left-turns on green (legal for protected-permitted or permitted left-turn phasing); and
4. Right-turns on red (typically legal).

Pedestrians at roundabouts, on the other hand, face two (2) conflicting movements on each approach:

1. Conflict with entering vehicle; and
2. Conflict with exiting vehicle.



The crossing of the roundabout is relatively simple. The pedestrian waits for a gap in traffic and crosses from the curb to the splitter island that provides protection, and then crosses from the splitter island to the far curb when a gap in traffic occurs. Crossing in two steps reduces the vehicle exposure in half for each segment. In addition, safety is improved because the vehicles are forced to go slower through the roundabout than at a conventional intersection. The modern roundabout pedestrian crosswalk treatment consists of:

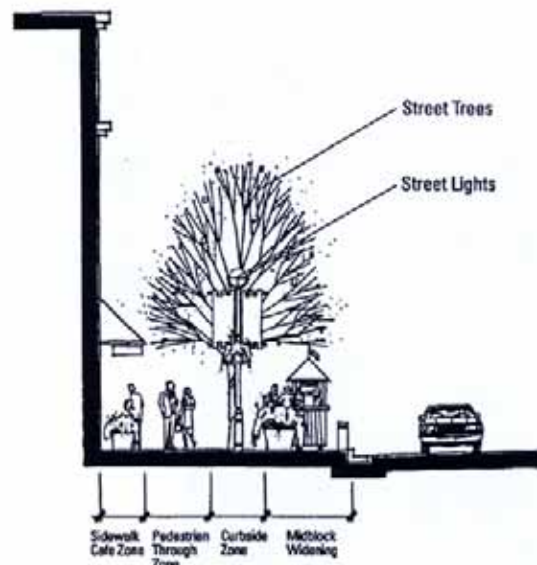
- ADA Compliant Ramps;
- Conventional Crosswalk Striping;
- Raised Splitter Island Pedestrian Pass Through and Refuge;
- Pedestrian Crossing Sign;
- Yield Street Markings; and
- Yield Signs.

Typically, the crosswalk is placed approximately one car length from the yield bar to permit the pedestrian to safely walk behind a vehicle that is awaiting a merge into the roundabout when traffic permits.

### VISUAL INTEREST AND AMENITY

Development plans should include site amenities that enhance safety and convenience and promote walking or bicycling as an alternative means of transportation. Well-designed walking environments are enhanced by urban design elements, street furniture, and landscaping.

- **Pedestrian Facilities and Elements.** Pedestrian scale improvements should fit the urban context of the area. The color, materials, and form of pedestrian facilities and features should be appropriate to the area where it is located, as well as to the functional unity of the pedestrian network. Develop attractive improvements including landscaping, vertical treatments, sidewalk widenings, and furnishing which improve the character and pedestrian scale of the urban environment. Special design features, public art and site details enhance the pedestrian scale of streets and become an urban amenity.

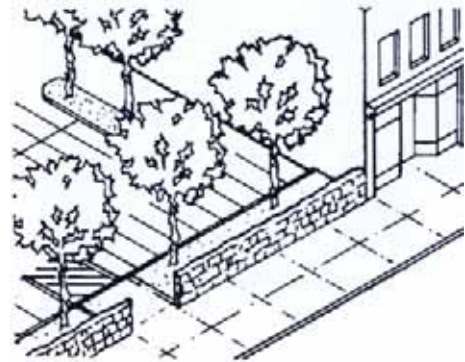


- **Lighting.** Standardized lighting improvements can enhance the character of the pedestrian environment. Consider the following criteria:
  - Varied light spacing and heights to be compatible with site specific issues;
  - Poles to incorporate pedestrian scale features such as banners, potted plants, etc.; and



- Attractive luminaries to provide an organized and unified appearance throughout the pedestrian network.

- **Landscaping.** The careful use of landscaping along a street can provide separation between motorists and pedestrians, reduce the visual width of the roadway (which can help to reduce vehicle speeds), and provide a more pleasant street environment for pedestrians and bicyclists. Consider the following criteria in order to provide attractive landscaping:



- Develop a continuous edge of deciduous canopy street trees on both sides of the street. Select species that provide shade, shelter, and scale for the sidewalk/pedestrian environment, and continuity for the pedestrian/ sidewalk environment.
- Develop attractive landscaping by considering the following criteria:
  - o Reduce clutter of little plants and disorganized planting;
  - o Establish patterns/spacing of street trees to provide a formal visual rhythm, linear edge, and organization of the sidewalk area;
  - o Use trees of similar height and structure to provide a unified image and cohesive character for feature corridors and districts;
  - o Use specialty-landscaping themes to help distinguish districts; and
  - o Use landscaping selectively to soften the harsh appearance of some buildings and parking lots at sidewalk edge.

- **Urban Open Spaces.** Attractive urban open spaces with a distinctive and definite shape, enclosed by buildings on 2-3 sides so it feels like an “outdoor room,” are favored by pedestrians. To be useful, these urban open spaces should be located at intersections of two or more pedestrian routes.

- **Retaining/Building Walls.** Retaining walls should be of materials, which reduce their apparent scale, like brick or stone, or treated architecturally to create an appropriate scale and rhythm. Hanging or climbing vegetation can soften the appearance of retaining walls. High retaining walls should be terraced down and include landscaped setbacks. Blank building walls and retaining walls should be screened with landscaping, architectural features, or art to enrich the pedestrian environment.





- **Buildings.** Outdoor cafes and activity areas that provide pedestrian character and human scale to the sidewalk environment should be encouraged. Windows and other openings should relieve blank walls, adding visual interest, improving pedestrians' sense of security, and introducing a human scale to building frontages. Appropriate building design and details should be used to provide human scale character to the street. Incorporate building entry details like porches and recesses, occupied spaces like bay windows and balconies.

## SECURITY

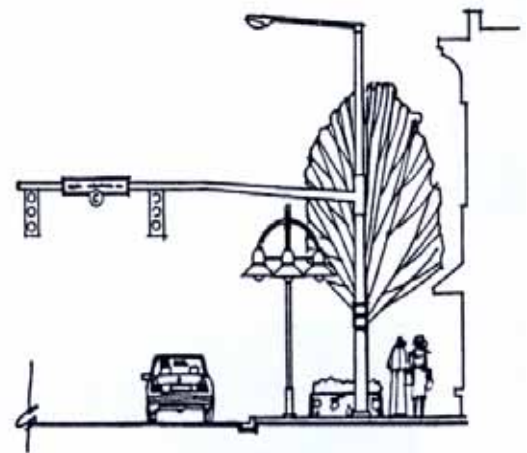
Development plans should include site amenities that enhance safety and convenience and promote walking or bicycling as alternative means of transportation. Secure pedestrian settings should be provided by developing a well-lit, inhabited pedestrian network and by mitigating the impacts of vehicles.



- **Human Activity.** Streets should appear inhabited to the greatest extent possible. New development should accommodate human activity by providing balconies, terraces, and yards for residents' use and interaction. In mixed-use buildings, retail elements like large windows, canopies, and integrated signage add activity by enhancing the shopping experience. Entrances, porches, balconies, decks, and seating should be located to promote pedestrian use of the street edge by providing weather protection, security, and safety.

- **Sight Lines.** Clear and direct lines of sight in pedestrian settings should be provided to increase feelings of security. Minimize the use of shrubs, walls, berms, and other vertical features, which screen lines of sight to pedestrian facilities to achieve clear and direct lines of sight.

- **Lighting.** General illumination should be provided for security and visual safety of pedestrian areas and corridors. Use lighting fixtures to identify and highlight key pedestrian facilities and elements such as pedestrian intersections, paths, sidewalks, and entrances, while enhancing safety, and security. Provide a desirable and safe pedestrian environment by decreasing glare associated with tall, high intensity street fixtures. Provide indirect light to the sidewalk by lighting elements in the street environment such as trees, walkways, canopies, and entryways. Avoid over-illumination of pedestrian areas, since these create, by contrast, shadowy areas nearby which may be threatening to pedestrians.



- **Buffers.** Develop physical buffers/edges between sidewalks and streets/parking lots.



## BICYCLE FACILITIES

Bicycles are a popular form of transportation in the Pikes Peak area. Some bike routes have been signed and shared use paths are established in some parks, in an extensive greenway system, and in some private developments. The safety of bicycle travel is enhanced by the proper design and location of bicycle facilities. Well developed shared use facilities are an increasingly important part of the Pikes Peak area's transportation and recreation system.

The term "AASHTO Guide," as used in this Chapter, refers to the "Guide for the Development of Bicycle Facilities," American Association of State Highway and Transportation Officials, 1999.

### BIKEWAYS

Developers are encouraged to include bikeways in developments. Bikeways should be indicated on site plans and preliminary plats. Existing and future bike lanes and paths within proximity of the development should be identified, along with a description of how the resident or business would safely access these facilities. It is the responsibility of the developer to conform to the standards in this chapter and the requirements for traffic control devices in the Manual for Uniform Traffic Control Devices.

While bicyclists can ride on any City street, a system of designated bicycle paths, routes, and lanes exists to identify those roads that are best suited for bicycles. The American Association of State Highway Officials (AASHTO) guidelines for bikeway design delineate three different types of bikeway facilities.

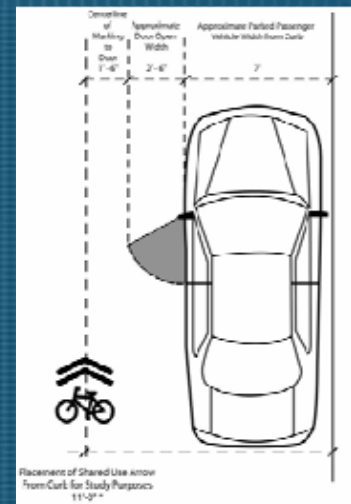
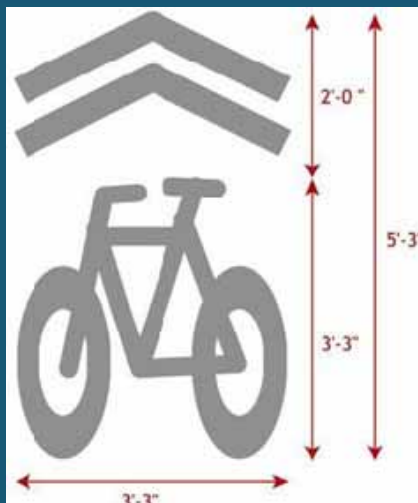
- **Bicycle Paths** include separated pathways along major arterials and portions of the multi-use trail system. While these facilities provide the safety of a separated facility, intersections with roadways and the multiple crossing of driveways and entrances provides the potential for conflict with motor vehicles, and increases the likelihood of accidents. Also, the presence of pedestrians and equestrians on trails increases the likelihood of conflicts with bicyclists. Bicycle paths require a minimum 10-foot width with two feet clear on either side of the trail.
- **Bicycle Lanes** are portions of streets that are dedicated to the exclusive use of bicycles and are usually marked with white lanes on the pavement. Bicycle lanes are located on streets that have sufficient width and high bicycle traffic. The dedicated lane decreases the chance of one mode being slowed by the other and provides a clear lane for the bicyclist. Bike lanes do, however, restrict the cyclist to a relatively narrow section of the roadway and channels them to the far right of through traffic, posing a potential hazard for turning movements of both bicyclists and motor vehicles. Standard bicycle lane widths should be six feet; five feet is the minimum width adjacent to curbs and four feet is the minimum width when no curb exists.





- On-Street Bicycle Routes/Wide Shoulders** are streets or segments of streets that bicyclists share with motor vehicles. In general, designated routes have lower traffic volumes and are sufficiently wide for drivers and bicyclists to share. Most routes are located on secondary or minor streets that parallel busier, major routes. Many of the routes are marked with special signs. Numerous commuting bicyclists prefer on-street, non-striped routes where room is provided on the outside travel lane for both cyclist and motor vehicles, but the cyclist is not restricted to one part of the roadway or another. Bicycle routes require a 14-foot outside travel lane, wide shoulder, or the ability to share the lane (local residential streets).

### Shared Lane Use Designation “Sharrow”



Sharrows are becoming a popular form of striping bike routes on lower volume roadways that are to be shared by automobile and bicyclist and are proposed on bike routes in Champaign. Benefits of Sharrows include:

- Encouraged motorists to be more aware of bicycles.
- Increased the distance between bicyclists and parked cars.
- Increased the distance between bicyclists and passing vehicles.
- Reduced the number of sidewalk riders.
- Significantly reduced the number of wrong-way riders.

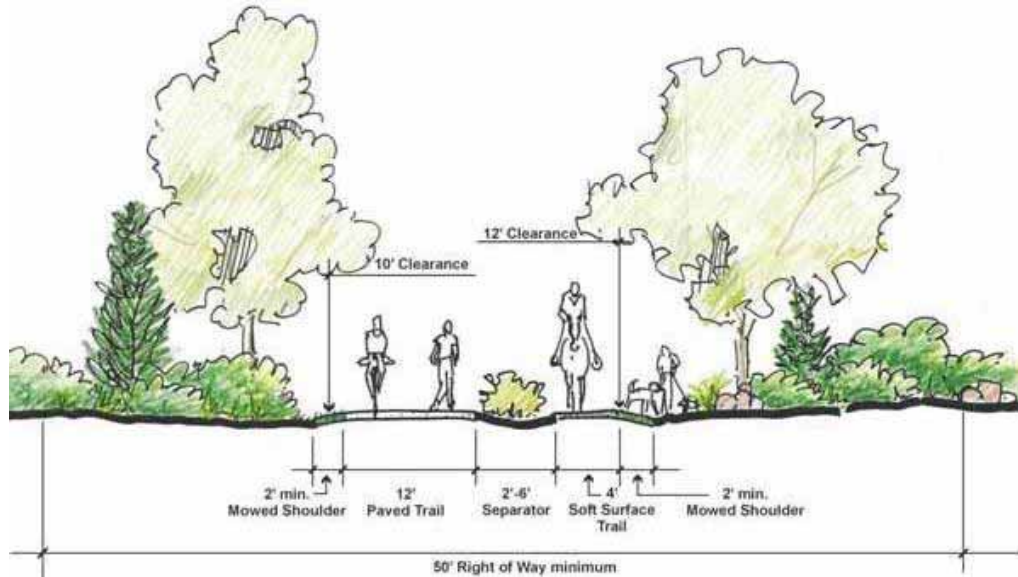
### OFF-STREET BIKEWAYS

Off-street bikeways consist mostly of multi-use trails that are shared with pedestrians, horses, in-line skaters, and others. Urban trails are used primarily for recreation, but also provide an off-street transportation system for non-motorized uses. An urban trail corridor can vary from 25 to 50 feet in width. However, where feasible, a 50-foot wide corridor is found to provide adequate buffer room from other uses and a safer and more pleasant trail experience. A variety of trail designations are used throughout the Pike’s Peak area. For the purposes of the Non-Motorized Transportation System Plan, two types have been designated based on the trail tread: paved trails and unpaved trails.

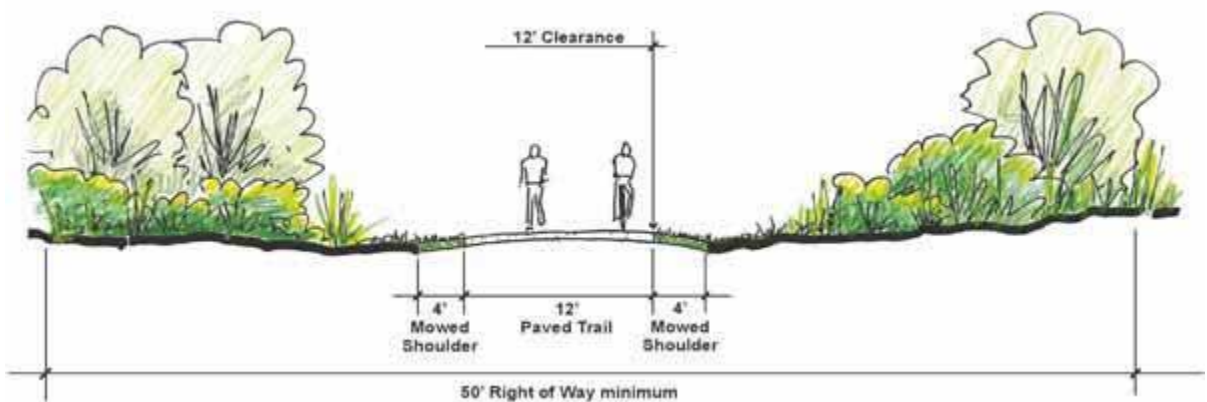




- Paved Trails** often accommodate a variety of users, depending on trail width and intensity of use, as shown in the two examples below. Paved trails in high use areas accommodate a variety of trail users, including walkers, joggers, recreational bikers, commute bikers, roller bladders, and horseback riders within the same corridor. A soft shoulder on each side of the trail can be provided to separate the “wheels” from the “heels” to reduce user conflicts. The main trail tread is a single, paved trail (approximately 12’-wide). The soft shoulder consists of crushed gravel and provides a four-foot surface adjacent to or separated from the main trail head.



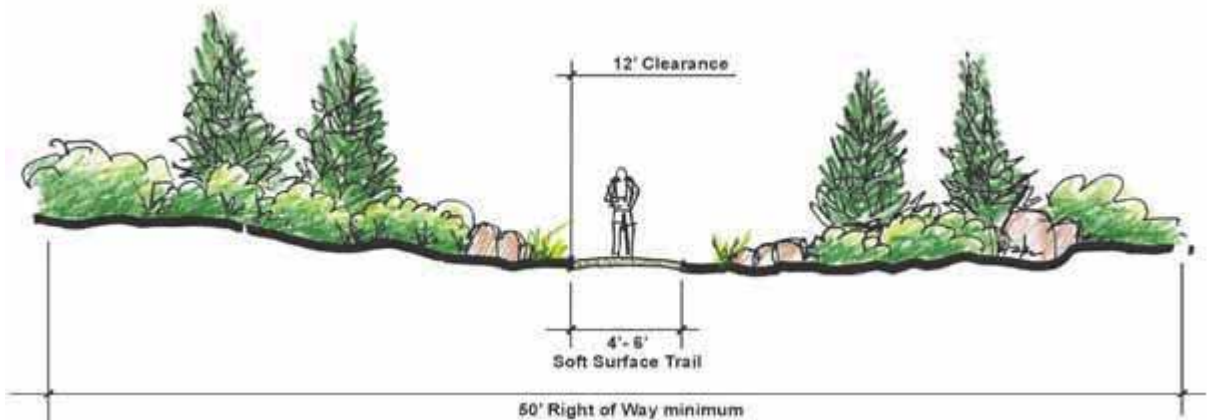
Where insufficient right-of-way is available to accommodate such a trail or where the intensity of use is not as high, a paved trail may consist of a single, 12-foot trail paved with concrete or asphalt. A four-foot soft shoulder on either side of the trail consists of crushed gravel or mowed grass.



- Unpaved Trails** are also multi-purpose but do not accommodate the variety of users that paved trails can accommodate. Unpaved trails are often located in the mountains or foothills and are less improved than paved trails. Unpaved trails can vary in width from four to eight



feet and are constructed with a soft surface tread (*i.e.*, native soil, crushed limestone or crushed gravel). Most users are hikers, mountain bikers, and equestrians.



### INNOVATIVE BICYCLE LANE AND PATH TREATMENTS

Evidence is increasing that bicyclist safety improves as more bicyclists are part of the traffic stream. Some innovative techniques for accommodating bicyclists on area roadways are described below.

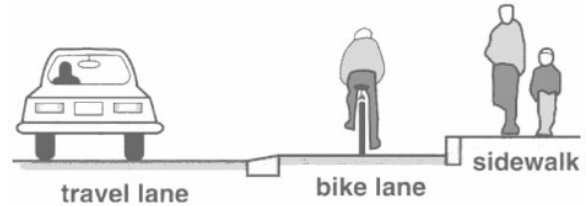
- Wide Curb Lane/Wide Outside Lanes.** A wide curb lane is the lane nearest the curb that is wider than a standard lane and provides extra space so that the lane may be shared by motor vehicles and bicyclists. A desirable width is 14 feet, not including the gutter pan area. Wide curb lanes are sometimes designed when right-of-way constraints preclude the installation of “full width” bike lanes.
- Contra Flow Bike Lanes.** Bicyclists are expected to follow established rules-of-the-road like riding in the same direction as motor vehicle traffic. However, in certain situations placement of a bicycle lane counter to the normal flow of traffic may increase safety or improve access for bicyclists. For example, a contra flow bike lane designated on some one-way streets may enhance connectivity and eliminate out-of-the-way detours and wrong-way riding.
- Combination Lanes.** A combination lane usually refers to a lane nearest the curb, which serves various modes of traffic or movements. Combination lanes are generally designated for the exclusive use of buses, bicycles, and right-turning vehicles. Because bicycles generally travel at slower speeds and buses make frequent stops, these lanes can often function without impeding traffic flow. Generally, multiple uses are operationally acceptable





unless there is considerable bus and bike traffic. These combination lanes are not without problems. If there is a shortage of bus and bike traffic, the lane can become another peak hour traffic lane.

If bus and bike traffic need to be separated, the bus lane is usually nearest the curb, which reduces conflicts between buses accessing stops and bicycles traveling through, and between bus passengers and bicyclists. Separated lanes should reduce conflicts associated with buses moving into and out of a single bus and bike lane.



- **Raised Bike Lane.** Raised bike lanes have a slightly raised edge to prevent motorists from driving in the lane, protecting bicyclists from fast-moving traffic.



- **Median Bike Paths.** Median bike paths are separated bikeways constructed within the medians of major arterial roads.
- **Bicycle Boulevard.** Bicycle boulevards are generally a single street or series of local streets that are connected to form a throughway for bicycling and walking.

These boulevards often include tree canopies, occasional diverters to keep motorists from using them for direct travel, and some connectors, bridges, and other methods to provide trip continuity.



## BICYCLE NETWORKS

Establishing a vision of how bicycling fits into the overall transportation system of a community or region is important in developing a safe and enjoyable bicycle network. Identifying appropriate bicycle routes requires recognition of various user needs and abilities, and analysis of traffic operations and design factors of individual roadways.

Average bicyclists prefer to ride on neighborhood streets or designated bicycle facilities. Experienced bicyclists should be anticipated on roadways where bicycles are not excluded by statute or regulation, regardless of functional classification. Safe accommodation of all bicyclists is best accomplished by creating a comprehensive and continuous bicycle and pedestrian network in built-up areas in order to enhance the safety and travel comfort of users. General guidelines for determining the type of bikeway facility best suited to various roadway types are provided in Tables 5 and 6 below.



**Table 5 – Roadway Design Options for Urban Roadways**

Motor Vehicle AADT/Lane		< 250 cars	250-500 cars	500-1,000 cars	1,000-2,500 cars	2,500-5,000 cars	> 5,000 cars
Peak Hour Volume/Lane		< 22 cars	22-44 cars	44-88 cars	88-220 cars	220-440 cars	> 440 cars
Avg. Peak Hour Headway/Lane		> 164 sec	164-182 sec	82-44 sec	44-16 sec	16-8 sec	< 8 sec
Average Motor Vehicle Operating Speed	0-19 mph	Shared Lane	Shared Lane	Shared Lane	Shared Lane	Shared Lane	N/A
	20-31 mph	Shared Lane	Wide Curb Lane	Wide Curb Lane	Wide Curb Lane	Bike Lane	Bike Lane
	32-43 mph	Wide Curb Lane	Bike Lane	Bike Lane	Bike Lane	Bike Lane	Bike Lane
	> 43 mph	Bike Lane	Bike Lane	Bike Lane	Bike Lane	Bike Lane	Bike Lane

**Table 6 – Shoulder Widths for Rural Roadways**

Motor Vehicle AADT/Lane		< 1,000 cars	1,000-2,500 cars	2,500-5,000 cars	> 5,000 cars
Average Motor Vehicle Operating Speed	0-30 mph	4 ft.	4 ft.	4 ft.	4 ft.
	30-36 mph	4 ft.	6 ft.	6 ft.	6 ft.
	36-43 mph	6 ft.	6 ft.	6 ft.	6 ft.
	> 43 mph	6 ft.	6 ft.	8 ft.	8 ft.

A study conducted by the Federal Highway Administration (FHWA Bicycle Compatibility Index) identified several other factors that should be considered when evaluating the capability of urban and suburban roadways to accommodate both motorists and bicyclists. These factors included:

- Presence and density of on-street parking;
- Type of development or land use adjacent to the roadway;
- Large truck volume in the curb lane;
- Right-turn volumes; and
- Parking time limits.

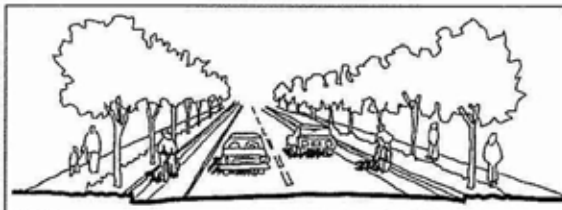
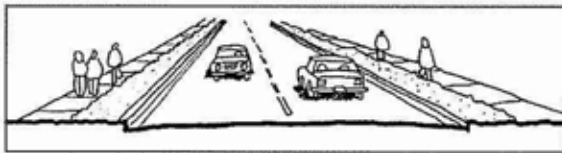


## TECHNIQUES FOR FACILITATING BICYCLE USE

Bicycles are vehicles and need to be safely accommodated on our streets and roadways. Over half of all bicycle-motor vehicle crashes occur at or near intersections or other jurisdictions. Improvements at these locations have the potential to significantly increase safety. Specialized intersection markings that may help bicyclists and motorists safely navigate through intersections and use of innovative techniques are gaining more prominence in some communities.

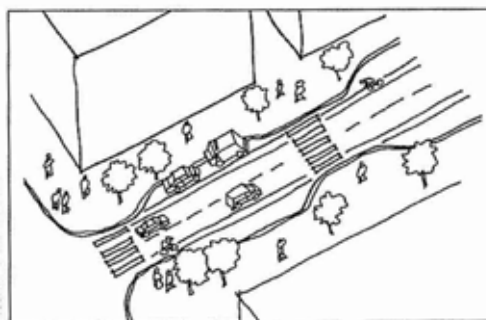
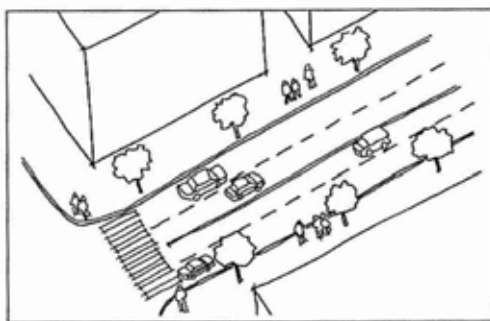
### ROADWAY NARROWING

“Road diet” is a term used to describe the process of reducing the number of travel lanes on a given roadway. Road diets are often conversions of four-lane undivided roads into three lanes (two through lanes and a center turn lane). The fourth lane may be converted to bicycle lanes, sidewalks, and/or on-street parking. Road diets have been shown to improve mobility and access for all travel modes, enhance safety by reducing vehicle speeds, and to promote economic vitality for the community. A variety of reconfigurations are possible for lane number reductions depending on the current configuration, user needs, and potential operational and safety outcomes.



Before (top) and after (bottom) width of lanes is reduced.

Along with lane elimination, roadway lane narrowing may also help to reduce vehicle speeds and enhance movement and safety for pedestrians and bicyclists. Lane narrowing is best used where motor vehicle speeds are low. Lane width reduction can be achieved in several different ways:





- Lane widths can be reduced to 10 or 10.5 feet and excess pavement striped with a bicycle lane or shoulder.
- Excess land width can be reallocated to parking.
- The street and lanes can be physically narrowed by extending the curb for wider sidewalks and landscaped buffers or by adding a raised median.

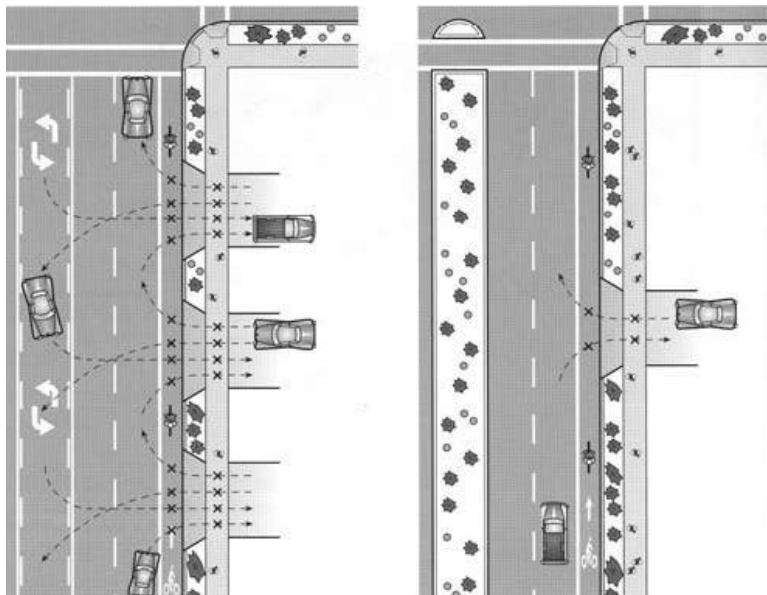
**MEDIAN CROSSING ISLANDS/MID-BLOCK CROSSINGS**

Median crossing islands help manage traffic, particularly left-turn movements, and reduce the number of potential conflict areas between bicyclists and motorists. Restricted access to side streets may also help to reduce cut-through traffic and calm local streets. Median crossing islands provide a refuge for bicyclists crossing a busy street at un-signalized locations where gaps in traffic are rare. The medians must be at least six feet wide to provide sufficient waiting space for bicyclists.



The objective of a mid-block crossing is to make an off-street bike path crossing safer and more visible. Various traffic calming devices exist, such as refuge islands and speed tables, which may be appropriately used at mid-block bicycle crossings. This application is appropriate at the mid-block intersection of an off-street bikeway and a street, and is suitable for streets with faster moving traffic. A bicycle logo and "XING" pavement legend are installed prior to the crossing, at a distance dependent on the roadway design speed.

**ACCESS MANAGEMENT/ DRIVEWAY IMPROVEMENTS**

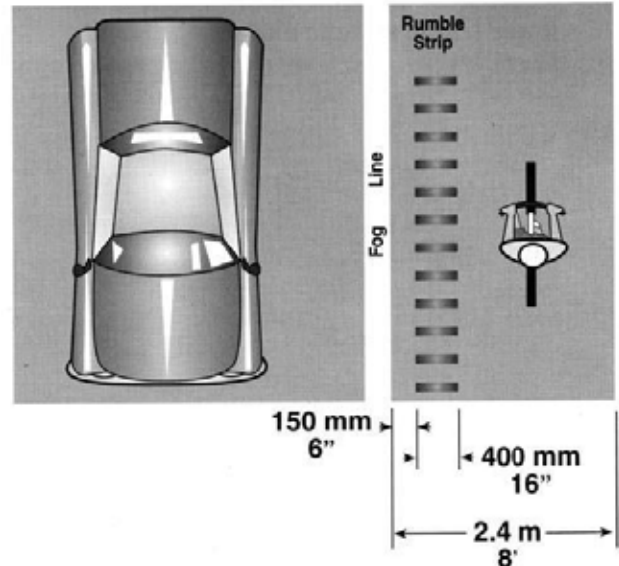


Managing the number, spacing, access, directional flow, and other aspects of driveway and side street connections protects those traveling along the roadway from conflicts with those entering/leaving the roadway. Access management includes such measures as limiting the number or establishing minimum spacing between driveways; providing for right-in, right-out only movements; restricting turns to certain intersections; and using non-traversable medians to manage left- and U-turn movements.

Driveway design affects sight distance for both motorists and bicyclists accessing roadways, as well as the speed and care with which drivers enter or leave the roadway. Right-angle connections are best for visibility of approaching traffic, as well as slowing the turning speed for vehicles exiting or entering the roadway. Tighter turn radii at driveways, as well as ramps to sidewalk level, also slow vehicles speeds.

## PAVED SHOULDERS

The pavement edge line for the paved shoulder provides a separated space for the bicyclist much like a bike lane. Shoulders four feet wide are considered the minimum width to accommodate bicycle traffic. Experienced riders will benefit from shoulder widths as narrow as one to two feet, but these facilities should not be signed for bicyclists. Surface irregularities such as rumble strips, textured paving, and raised lane markers should be avoided on routes intended for bicyclists. Shoulder rumble strips are typically located from 0.5 to one-foot from the road edge and are typically two feet wide. AASHTO recommends that four feet of rideable surface be present for bicyclists if rumble strips are used on a shoulder.



## TRAFFIC CALMING

Traffic calming is a way to lower traffic speeds or volume by using physical and visual cues that induce drivers to travel at lower speeds. The design of the roadway results in the desired effect, without relying on compliance with traffic control devices such as signals and signs, and without enforcement. Traffic calming measures include the following.

- Mini Traffic Circles.** Mini traffic circles are raised circular islands constructed in the center of residential or local street intersections. The primary benefit to bicyclists is that, like roundabouts, mini circles slow traffic approaching the intersection by forcing motorists to maneuver around them. Most impact studies suggest that mini circles have nominal impact on traffic volumes.
- Chicanes.** Chicanes create a serpentine, horizontal shifting of the travel lanes, without reducing the number of lanes or lane width, by alternating curb extensions from one side of the roadway to the other. Shifting a travel lane has an effect on travel speeds by interrupting straight stretches of roadway and forcing vehicles to shift laterally.
- Speed Tables.** Raised devices may provide the greatest impact of traffic calming devices on lowering speeds and may also serve to divert traffic. More gradual and/or longer humps (i.e., speed tables) are less uncomfortable for bicyclists.





- **Visual Narrowing.** Some communities have begun combining traffic calming and other techniques with treatments designed to create a visual perception of a narrow, multi-use roadway in an effort to slow speeds and increase motorist attentiveness.
- **Traffic Diversion.** Traffic diversion techniques are remedies intended primarily to reduce traffic volumes on residential neighborhood streets when traffic calming or other measures have not sufficiently reduced cut-through traffic. The prime beneficiaries of traffic diversion are bicyclists, pedestrians, and those who live on treated streets.
- **Raised Intersections.** A raised intersection is essentially a speed table for the entire intersection. This treatment may improve intersection safety by forcing vehicles approaching the intersection to slow down and could be part of a street-wide traffic calming effort.



## ADVANCE STOP LINE/BIKE BOX

The objectives of the advance bike box are to improve the visibility of bicyclists at intersections and to enable them to correctly position themselves for turning movements during the red signal phase by allowing them to proceed to the front of the queue. A bicycle lane leading up to a bike box is located between the motor vehicle stop line and the crosswalk. The bike box should be 12 to 14 feet deep. To increase its effectiveness, a bicycle stencil should be placed in the bicycle box and a contrasting surface color is strongly recommended for the box and the approaching bicycle lane. Instructional signs and separate bicyclists signal heads can be installed in conjunction with the bicycle box.

## PAVEMENT MARKING

A variety of pavement markings are available to make bicycling safer. Generally, the markings are for lane separation, indicating an assigned path or correct position for the bicyclist, and for information about upcoming turning and crossing maneuvers. Examples of pavement marking include the striping and identification associated with bike lanes, striping for paved shoulders, turning lanes at intersections, railroad crossings, and drainage grates or other pavement hazards or irregularities. A general guideline for improved bicycle safety is to make sure the markings are durable, visible, and non-skid. Markings are usually done with paint or thermoplastic.

Different symbols are used to indicate the presence of bicycles in the traffic stream. Some techniques to identify bicycle facilities include the following.

- **Colored Bike Lanes/Colored Shoulders.** Colored bike lanes have been a feature of bicycle infrastructure in the Netherlands, Denmark, France, and many other countries for many years. However, in the United States their use has been limited to just a handful of locations. Colored bike lanes/colored shoulders have the added effect of visually narrowing the roadway, which is shown to reduce vehicle speeds and, therefore, enhance safety for bicyclists and pedestrians.







- **Diagonally Striped Bike Lane.** A diagonally striped bike lane could be used to indicate an area of concern for bicyclists due to the opening of car doors. Diagonal arcs placed at regular intervals discourage bicyclists from riding in the “door zone.”
- **Bike Route/Shared Lane Pavement Marking.** The primary purpose of this measure is to provide positional guidance to bicyclists on roadways that are too narrow to be striped with bike lanes. Marking may be placed on the street to inform motorists about the presence of bicyclists and also to inform bicyclists how to position themselves with respect to parked cars and the travel lane.



## SIGNS



A consistent system of bicycle wayfinding signs that identify clear routes from origin to destination should be developed and implemented for use in well-defined travel ways. In addition, a sign system for off-street paths that integrates a variety of information such as maps, distances, etiquette, and regulations should be developed and implemented. A variety of signs are available to alert motorists to the presence of bicycles in the traffic stream and to inform bicyclists.

## SIGNALS

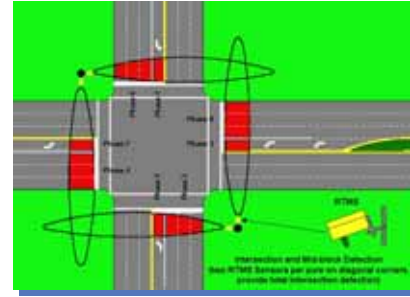
Traffic signals create gaps in traffic flow allowing bicyclists, pedestrians, and motorists to access or cross the street. Signals are particularly important for crossing higher speed roads or highly congested intersections. Besides traditional treatments such as installation of a traffic signal, innovative treatments are also being installed and evaluated throughout the country. These treatments include: separate bicycle signal heads and bicycle and pedestrian crosswalk signals, known as toucan signals.

- **Signal Timing.** Fine-tuning existing traffic detection systems may also improve bicycling conditions. Signal timing should include a minimum green time that allows bicyclists to remount their bikes and travel across the intersection, and yellow/red time that provides a safe bicycle clearance interval. Generally, two to three seconds added to the minimum automobile green time is appropriate; a yellow interval of 3.0 to 6.0 second offers sufficient time for a bicyclist to come to a complete stop or enter an intersection legally; and all red-clearance intervals greater than 2.0 seconds are needed to clear bicycles from most intersections.
- **Bicycle Signals.** A bicycle signal provides a separate signal to direct bicycle traffic through an intersection. Red, amber, and green bicycle indications are installed in addition to the standard red, amber, and green ball and arrow indications.





- Loop Detector Stencil.** When a bicycle approaches an intersection, there are several means of detecting and facilitating its movements. Most of these innovations are passive detection devices such as loop detectors. The installation of bicycle loop detector stencils would assist bicyclists in placing their bikes appropriately on top of a loop detector so that they will be detected.



- Bicycle Detection Using Video Cameras.** Video systems are used to activate treatments such as signal timing specifically needed to assist bicyclists in crossing at signalized intersections. This system is useful at signalized intersections where there are dedicated bicycle lanes. The video system uses detectors drawn in video images to sense the presence of bicycles in bicycle lanes at signalized intersections.
- Bicycle Push Button/Pad/Bar.** The bicyclist activates the signal by pushing a bar or button similar to those used for pedestrians, but the button is installed in a location convenient for bicyclists and the signal timing is set appropriately for bicyclists. The sign plate located above the push button/pad/bar indicates that it is not for the use of pedestrians. The larger the surface of the button, the easier it is for bicyclists to use.



## SUPPORT FACILITIES AND PROGRAMS

### PARKING AND STORAGE



Convenient and secure bicycle parking should be provided at the destination end of a trip. Inadequate bicycle parking facilities and fear of theft are major deterrents to bicycle transportation. A sufficient supply of effective bicycle parking requires a properly designed rack in an appropriate location for the type of use.

Racks should be highly visible so bicyclists can spot them immediately when they arrive from the street. A visible location also discourages theft and vandalism. Adequate lighting and surveillance is essential for the security of the bicycles and the users. Bicycle racks and lockers must be well anchored to the ground to avoid vandalism and theft.

Bicycle lockers should be provided at locations such as park and ride lots, parking garages, and employment centers.



Adequate clearance is required around racks to give bicyclists room to maneuver, and to prevent conflicts with pedestrians or parked cars. Racks should not block access to building entrances or fire hydrants.

Bicycle facilities should be designed in accordance with Chapter 2 of the AASHTO Guide. Bicycle parking may be provided in floor, wall, or ceiling mounted racks. Bicycle parking facilities should meet these requirements:

- Holds the bicycle frame, not just a wheel;
- Can be used with a U-shaped shackle lock;
- Accommodates a wide range of bicycle sizes, wheel sizes and types;
- Is covered with material that will not chip the paint of a bicycle that leans against it; and
- Does not have hazards, such as sharp edges.



There are many types of bicycle racks and lockers available. Some are suitable for certain situations but not others, and some designs are unsuitable anywhere. There are two general categories of bicycle parking requirements:

**Long-Term (Class I)** parking is needed where bicycles will be left for hours at a time. It requires a high degree of security and weather protection, with well-designed racks in covered areas, lockers, storage rooms, or fenced areas with restricted access.

**Short-Term (Class II)** parking is needed where bicycles will be left for short stops. It requires a high degree of convenience (as close to destinations as possible). At least some short-term bicycle parking should be protected from the weather (a portion can be unprotected, since demand tends to increase during dry weather). This can use an existing overhang or covered walkway, a special covering, weatherproof outdoor bicycle lockers, or an indoor storage area.



Table 7 provides a guideline for providing parking spaces per land use category for new development or property which requires a change of use permit.



**Table 7 – Recommended Minimum Bicycle Parking Requirements**

Type of Establishment	Minimum Number of Bicycle Parking Spaces
Primary or Secondary School	10% of the number of students, plus 3% of the number of employees.
College or University Classrooms	6% of the number of students, plus 3% of the number of employees.
Commercial – Retail or Office	One space per 3,000 sq. ft. of commercial space or 5-10% of the number of automobile spaces.
Sport and Recreation Center	10-20% of the number of automobile spaces.
Movie Theater or Restaurant	5-10% of the number of automobile spaces.
Industrial	2-5% of the number of automobile spaces.
Multi-Unit Housing	1 space per 1-2 apartments.
Public Transit Stations	Varies, depending on usage.

### **TRANSIT ACCESS**

Making transit services more bicycle-friendly can greatly expand opportunities for bicyclists. The most frequent option is an exterior rack mounted on the front of the bus that can accommodate two bicycles; however, other options exist, including interior bike racks or simply allowing bikes onboard when conditions are not crowded.

### **BICYCLE PERSONAL FACILITIES**

Along with secure and convenient bike parking and transit access, another prerequisite for encouraging bicycle commuting is facilities for bicyclists to shower, change clothes, or otherwise “freshen up” once they arrive at the workplace. Ideally, such facilities will be located on or very near the worksite premises and will also include lockers for storing clothing and personal items. Some creative options might be to partner with other nearby businesses to provide facilities or make arrangements with a nearby health club to allow bicyclists to use its facilities for a nominal fee.

### **MAPS AND WAYFINDING**

Even great bikeways can be well-kept secrets if the average rider can’t find them. Although there are several bikeway maps published at a regular basis, there is a need for more comprehensive, widely available maps, especially for visitors. Some bicyclists would like to see maps that more accurately depict terrain and difficulty.

Once on a bikeway, proper signs are needed to direct bicyclists. Particularly in the case of on-street routes, bicyclists may follow Bike Route signs for a while only to find they end abruptly or don't indicate which way to go at an intersection.

On-street route signs are not just for bicyclists; they should also serve to notify motorists to watch out for bicycles. However, many of the route signs are not easy to see from a car. In addition to signs designating bicycle routes, "Share the Road" signs directed at motorists should be placed along high traffic routes.



A well-designed bike map is typically in high demand and can serve many functions. In addition to showing the best route for getting places, bike maps often contain information or advertising for a variety of resources including a calendar of bike events, location of bike shops, points of interest in the community, laws and local ordinances pertaining to bicycles, and safety tips for the rider and motor vehicle driver. Thus, a good bike map can be a great tool for promoting bicycling, as well as for educating and informing riders and motorists.

Wayfinding pertains to direction signs, distance markers, posted maps, information kiosks, and other aides for getting people places.

### **AESTHETICS/LANDSCAPING**

Well-designed and well-landscaped bicycle facilities can be an important attraction, especially for the recreational bicyclist. Design of transportation facilities should incorporate the principals of Context Sensitive Design (CSD), which aims to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources while maintaining safety and mobility. Landscaping is integral to good design and is important to the overall aesthetic value of the roadway. Well-designed and landscaped facilities are also easier to maintain, lead to fewer safety and security problems, and are more likely to be supported by the neighborhoods and businesses they access.

### **THE 4 E'S**

Facilities are only one of several elements essential to building a successful bicycle and pedestrian planning transportation system. With bicycle and pedestrian safety education and training encouraging walking and bicycling, and enforcing the rules of the road as they pertain to bicyclists, pedestrians, and motorists should be combined with facilities development to form a comprehensive approach to bicycle and pedestrian use. The Colorado Guide for the Development of Local and Regional Bicycle and Pedestrian Plans identifies the 4 E's - Engineering, Education, Enforcement, and Encouragement – as the basis for comprehensive bicycle and pedestrian planning.



- **Engineering.** Engineering includes facilities, maintenance, and parking. An adequate bicycle or pedestrian transportation system is one that allows users with varying abilities to safely and efficiently travel from origin to destination. Bicycle facilities include on-street facilities such as bike lanes, bike routes, low-volume roads and roads with adequate shoulders, and off-street facilities such as paths, bridges, overpasses, and underpasses.
- **Education.** Education of the public is the most important element in reducing bicyclists and pedestrian injuries, reducing hostility between the various transportation modes, ensuring that the law is obeyed, and facilities are properly designed and built. Bicyclists, pedestrians, and motorists need safety education. Police officers need education regarding the manner in which to enforce bicycle and pedestrian laws, and engineers and planners need facility design education.
- **Enforcement.** Enforcement goes hand in hand with education. Education is not effective if there is not enforcement to back it up. Therefore, it is important to enforce the rights and responsibilities of all modes of transportation by ticketing motorized and non-motorized transportation users alike. Bicyclists and pedestrians should be expected to be ticketed for traffic offenses the same as motorists.
- **Encouragement.** Encouraging bicycling and walking can help mitigate air pollution and traffic congestion, as well as promote healthier, friendlier communities. One-way trips of five miles or less are often suitable for bicycling. Often bicyclists are willing to travel even farther distances for commuting trips or recreation. Shorter trips are often suitable for walking. Providing safe, well-designed and maintained facilities encourages bicycling and walking. Annual events, such as Metro Rides Bicycle and Trails Festival, CDOT's Colorado Bike Month (June), Bike to Work Day, Colorado Pedestrian Month (October), Walk to School Day, and National Trails Day promote bicycling and walking through events and media attention. These events are designed to celebrate non-motorized transportation, encourage people to bicycle or walk, build awareness through safety campaigns in the media, and institutionalize bicycling and walking as viable modes of transportation.

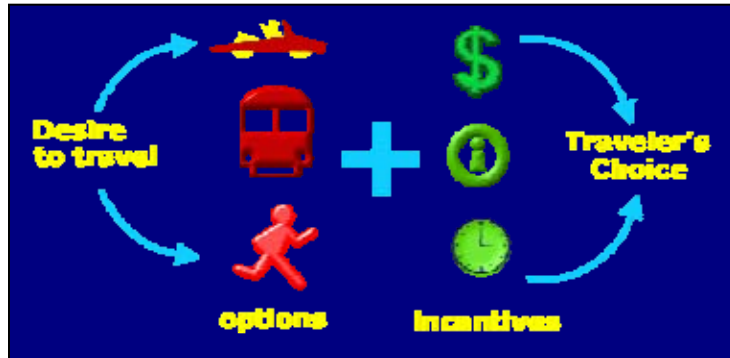
## MAINTENANCE

Broken glass and debris tend to accumulate near curbs where bicyclists ride, resulting in flat tires and accidents. Certain streets become mud-covered after rain, making the riding surface hazardous, while others are prone to icy conditions. Painted lanes delineating bike routes wear off over time and are no longer usable without proper upkeep. During the winter months, snow either gets plowed onto the right-most edge of the roadway (which forces bicyclists to ride farther left) or off the roadway and onto the sidewalks.

Consistent upkeep and maintenance of bikeways should be top priority. On-street routes need to be regularly swept of debris. Bike lane lines should be repainted at least as regularly as those on the rest of the street. Weather-related obstacles such as ice and mud cannot be eliminated, but can be minimized through good design practices. Bikeway segments that regularly have these problems should be identified and corrected when and where it is possible. It is recommended that all paths that are part of the bicycle system be paved.

## TRANSPORTATION DEMAND MANAGEMENT

When cost and community or environmental impacts limit expansion of the transportation system, improving the management and utilization of the existing system becomes a primary strategy. Significant growth in residential and business development is projected for the Pikes Peak region and will require a balance between transportation improvements and management to serve the growing number of residents, employees, and customers. Transportation Demand Management (TDM) is a general term for strategies that result in more efficient use of transportation resources.



TDM is a set of strategies that manage the demand placed on our transportation system. These strategies or options increase people's travel choices, offering them the opportunity to choose how, when, and if they will travel by car or in some other way while increasing the efficiency of our transportation facilities. Options can include incentives for utilizing Mountain Metropolitan transit service to more innovative ideas, such as developing localized Transportation Management Organizations (TMOs), teleworking, or parking management programs. These TDM benefits include:

- Improved access to site and business;
- Improved mobility;
- Access to greater pool of employees;
- Improved employee retention;
- Increased parking availability;
- Tax benefits;
- Cost savings to employer; and
- Decrease congestion and air pollution.

### TRANSPORTATION DEMAND STRATEGIES

Transportation strategies include travel options and/or implementation steps developers, employers, employees, and residents can choose from to customize programs that fit their specific needs. Integration of various elements is the key to creating and maintaining a successful program. Flexibility is essential to the longevity and long-term effectiveness of the City's TDM program.

Metro Rides (formerly Ridefinders) is the local resource for transportation demand management. Metro Rides has been providing TDM services and advocacy since 1994. Metro Rides is minimally funded through CMAQ grants and has limited the level of projects that staff has been able to provide.

TDM strategies include the following.



## EFFICIENCY PROGRAMS

- **Compressed Work Week** – allows employees to receive a day off each week in exchange for working longer hours on other days each week.
- **Flexible Working Hours** – allows employees to alter their arrival and departure times slightly to accommodate commuting schedules.
- **Staggered Work Hours** – allows employees to regularly arrive and leave at times which can vary from as little as 15 minutes to as much as two hours.
- **Telework Policies** – develops specific personnel policies that permit and encourage the use of teleworking at least twice per month.
- **Marketing Strategies**
- **Bicycle Riders Guide** – a guide for your worksite that includes bike routes, locker and rack locations, and other pertinent information.

## MARKETING STRATEGIES

- **Bike to Work Week** – this regional promotion provides commuters with the incentive to try commuting to work by bicycle for a week.
- **Bus Riders Guide** – includes information on how to read a bus schedule, where to wait for the bus, and how to use the “bikes-on-busses” program.
- **Employee Orientation** – orientation meetings provide new employees with the opportunity to learn more about travel to and from their worksite.
- **Employee Transportation Coordinator** – this is an individual assigned the responsibility of helping employees with their commute to and from work.
- **Special Events** – special promotions and events sponsored by the worksite to encourage the use of transportation options for the entire site.
- **Travel Options Marketing** – provides brochures, maps, and other information to commuters either individually or in an information center.

## INCENTIVES STRATEGIES

- **Bicycle Loan Program** – provides a set of bicycles (to be tracked and maintained by the employer/building owner) for general employee use.
- **Car/Bike Sharing** – cars/bikes that are available for limited short trips by either members of the car/bicycle share program, or for a per-use fee.
- **Commuter Club** – a program similar to “airline miles” by providing points or cash incentives to commuters who use transportation options.





- **Free Bike Accessories** – headlamps and helmets, can improve the safety of bicyclists, and serve to encourage greater use of bicycle commuting.
- **Bus Passes** – provide an incentive for “first time” users to try utilizing transit services to commute to work.
- **Guaranteed Ride Home** – provides a free taxi ride home to those employees who fall ill, have an emergency, or are left stranded at work.
- **Taxation Incentives** – are the federal, state, regional, and local tax rules that offer tax savings for both employees and employers.
- **Transportation Allowance** – provides a fixed allowance per month to be used for whatever mode of travel they choose, including parking spaces.
- **Vanpool Empty Seat Subsidy** – ensures that as vanpools lose riders over time, the other riders maintain a consistent users fee.
- **Vanpool Subsidies** – provide financial support to vanpool riders as an incentive to participate in a vanpool.

### FACILITIES AND DESIGN

- **Bicycle Racks / Lockers** – provided to commuters to secure their bicycles once they have reached their employment site.
- **Bicycle Station** – a dedicated space that provides secure and covered parking for bicycles, as well as facilities for bicyclists to shower and change.
- **Commuter Store** – a dedicated storefront that provides a location for obtaining commuter information, travel services, pass sales, etc.
- **Onsite Amenities** – provide retail and services, such as a cafe or dry cleaners, to employees at the worksite.
- **Protected Walk / Bike Corridors** – separate walking / bike traffic from parking spaces onsite, through separated paths and landscaping.
- **Showers and Clothes Lockers** – allows for those who wish to walk or bicycle to work to “freshen up” after getting to work.
- **Traveler Friendly Site Design** – a comprehensive design that features bicycle and walking amenities, bus stop accessibility, passenger loading zones, and other design strategies.

### MANAGEMENT AND PARKING STRATEGIES

- **Clustered Parking** – parking spaces are limited and built in clusters, providing more space and paths for pedestrians.



- **Incidental Use Parking** – spaces dedicated for use by an occasional driver, such as a transit rider who must drive to work on occasion.
- **Parking Cash Out** – provides employees with a choice: receive a parking space or receive the cash equivalent of the space.
- **Parking Charges** – can be set for cost recovery to the employer or developer, or, be variable based upon time of day and length of parking.
- **Parking Management** – balances the number of parking spaces relative to the availability of transit and other services.
- **Preferential Parking** – provides designated parking spaces for carpoolers and vanpoolers near the front entrances.
- **Unbundled Parking Leases** - spaces are not part of the office lease, with flexibility for the tenant to vary the number of parking spaces rented.

## TRANSPORTATION MANAGEMENT ORGANIZATIONS

Besides implementing strategies from the tool kit of options listed above, the development and implementation of TMOs can improve access to employment and retail centers, while reducing traffic congestion and resulting pollution. TMOs are often structured as membership organizations formed to provide flexibility and a forum for employers, developers, building owners, residents, government representatives, and others to work together to establish policies, programs, and services to address their district's particular transportation issues. Typically, private business associations (they are often initiated by Chambers of Commerce), business associations, developers, or businesses as an economic tool, as well as to address congestion issues. TMOs can be self-supporting and advocate for their region's transportation needs.

TDM strategies that can be conducted by the TMOs include, but are not limited to:

- Transportation Center / Commuter Store (where transit passes and other commuter information can be obtained)
- Employee Transportation Coordinators
- Employee Shuttle
- Transit Passes
- Transit Shelters/Facilities
- Ridesharing for carpools
- Van Pools
- Bicycling/Walking (incl. showers, lockers, Bike Station, etc.)
- Preferential Parking for carpools and vanpools
- Unbundled Parking Leases
- Transportation Allowance
- TDM Friendly Site Design
- Promotion, Marketing and Education
- Flextime
- Telework



# APPENDICES



## APPENDIX 1: 2006 BICYCLE SURVEY

### Bicycle Survey

Please fill in this questionnaire to help the Pikes Peak Area Council of Governments (PPACG) plan cycling improvements in the region. PPACG has just started an update to the Regional Non-Motorized Transportation (Bicycle and Pedestrian) System Plan as part of the 2035 Long Range Transportation Plan Update. See [www.ppacg.org](http://www.ppacg.org) for more information and notices of upcoming workshops.



### TODAY'S EXPERIENCE

1. Why are you participating in PPACG's Long Range Transportation Plan Open House? \_\_\_\_\_

---

2. Did you come here with your family? Yes  No
3. Did you come here with your friends? Yes  No
4. How far was your trip (round trip)? \_\_\_\_\_
5. How did you get here? Bike  Walk  Drive  Other: \_\_\_\_\_
6. Thinking about your commute by bike, what one improvement would make it even better? \_\_\_\_\_

---

### ABOUT YOUR CYCLING

7. I ride my bicycle for? (Check all that apply and fill in the days/year and length for each category)

	<input type="checkbox"/> Recreation	<input type="checkbox"/> Exercise/ Training	<input type="checkbox"/> Transportation (shopping, entertainment, etc.)	<input type="checkbox"/> Work Commute
Approximately Days/Year				
Average One-Way Trip Length				

8. Please check the top 3 things in the following list that would increase how often you use your bike to travel to work or other trips for which you might otherwise drive or bus?

- |   |   |
|---|---|
| Secure Bike Parking <input type="checkbox"/>          | More Attractive Bike Path Facilities <input type="checkbox"/> |
| More Direct Off-Road Routes <input type="checkbox"/>  | More Paved Shoulders <input type="checkbox"/>                 |
| More Direct On-Road Routes <input type="checkbox"/>   | More Striped On-Street Lanes <input type="checkbox"/>         |
| Shower and Clothing Storage <input type="checkbox"/>  | Useful Bicycle Resources <input type="checkbox"/>             |
| Facilities at Place of Work <input type="checkbox"/>  | (Maps, Internet Information, etc.) <input type="checkbox"/>   |
| Better Bike Path Connections <input type="checkbox"/> | Other _____ <input type="checkbox"/>                          |
| Safer Street Crossings <input type="checkbox"/>       |   |

Comments: \_\_\_\_\_

---



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Please see reverse side for more questions.



9. We will be selecting some cyclists at random to interview in more detail. If selected, are you interested in being contacted? Yes  Phone #: \_\_\_\_\_ No

10. Can we add you to the mailing or email list for notification for upcoming workshops on this plan? Yes  No

If yes, please provide contact information below.

Name \_\_\_\_\_

Affiliation \_\_\_\_\_

Address \_\_\_\_\_

Email Address \_\_\_\_\_

11. If you were looking for information about cycling in the region, which of the following would you contact? Please rank in order from 1 = most likely to 5 = least likely.

Cycling Organization (please identify) \_\_\_\_\_

Local Bicycle Shop     METRO RIDES / RIDEFINDERS     Trails and Open Space Coalition

Local/Regional Government (please identify) \_\_\_\_\_

What other organizations might you contact? Why? \_\_\_\_\_

**ABOUT YOU**

12. What is your zip code? \_\_\_\_\_

13. What is your age?

25 or under     26-35     36-45     46-55     55-65     66 or Over

*Thank you for your comments.*

Please fax to (719) 471-1226 or mail to the address below. This form may also be filled in online at [www.ppacg.org](http://www.ppacg.org).

First Class  
Stamp  
required

Mr. Warren Whiteaker  
Senior Transportation Planner  
Pike Peak Area Council of Governments  
15 South 7th Street  
Colorado Springs, CO 80905

**Pikes Peak Regional**



Non-Motorized Transportation  
System Plan Update

(use tape, no staples please)



## APPENDIX 2: 2006 PEDESTRIAN SURVEY

### Pedestrian Survey

Please fill in this questionnaire to help the Pikes Peak Area Council of Governments (PPACG) plan walking improvements in the region. PPACG has just started an update to the Regional Non-Motorized Transportation (Bicycle and Pedestrian) System Plan as part of the 2035 Long Range Transportation Plan Update. See [www.ppacg.org](http://www.ppacg.org) for more information and notices of upcoming workshops.



### TODAY'S EXPERIENCE

1. Why are you participating in PPACG's Long Range Transportation Plan Open House? \_\_\_\_\_

---

2. Did you come here with your family? Yes  No
3. Did you come here with your friends? Yes  No
4. How far was your trip (round trip)? \_\_\_\_\_
5. How did you get here? Bike  Walk  Drive  Other: \_\_\_\_\_
6. Thinking about walking in your neighborhood, what one improvement would make it even better? \_\_\_\_\_

---

### ABOUT YOUR WALKING

7. I walk for? (Check all that apply and fill in the days/year and length for each category)

	<input type="checkbox"/> Recreation	<input type="checkbox"/> Exercise/ Training	<input type="checkbox"/> Transportation (shopping, entertainment, etc.)	<input type="checkbox"/> Work Commute
Approximately Days/Year				
Average One-Way Trip Length				

8. Please check the top 3 things in the following list that would increase how often you might walk to work or other trips for which you might otherwise drive or bus?

- |   |  |
|---|--|
| Direct Pedestrian Connections from A to B <input type="checkbox"/>                  | Safer Street Crossings: <input type="checkbox"/>           |
| Complete Missing Segments of Sidewalks <input type="checkbox"/>                     | More Well Marked Crosswalks <input type="checkbox"/>       |
| Sidewalks Separated from Street with<br>Landscaped Parkway <input type="checkbox"/> | Increased Traffic Control <input type="checkbox"/>         |
|   | Count Down Signal Heads <input type="checkbox"/>           |
|   | More Attractive Pedestrian Routes <input type="checkbox"/> |
|   | Street Lighting <input type="checkbox"/>                   |

Comments: \_\_\_\_\_

---



Catalyst Consulting

Please see reverse side for more questions.



9. We will be selecting some pedestrians at random to interview in more detail. If selected, are you interested in being contacted? Yes  Phone #: \_\_\_\_\_ No

10. Can we add you to the mailing or email list for notification for upcoming workshops on this plan? Yes  No

If yes, please provide contact information below.

Name \_\_\_\_\_

Affiliation \_\_\_\_\_

Address \_\_\_\_\_

Email Address \_\_\_\_\_

11. If you were looking for information about walking in the region, which of the following would you contact? Please rank in order from 1 = most likely to 5 = least likely.

- Neighborhood Home Owners Organization
- METRO RIDES / RIDEFINDERS     Trails and Open Space Coalition
- Local/Regional Government (please identify) \_\_\_\_\_

What other organizations might you contact? Why? \_\_\_\_\_

**ABOUT YOU**

12. What is your zip code? \_\_\_\_\_

13. What is your age?

- 25 or under     26-35     36-45     46-55     55-65     66 or Over

*Thank you for your comments.*

Please fax to (719) 471-1226 or mail to the address below. This form may also be filled in online at [www.ppacg.org](http://www.ppacg.org).

First Class  
Stamp  
required

Mr. Warren Whiteaker  
Senior Transportation Planner  
Pike Peak Area Council of Governments  
15 South 7th Street  
Colorado Springs, CO 80905



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## APPENDIX 3: PPACG LRTP GOALS AND OBJECTIVES

### Goals and Objectives

#### PPACG 2030 REGIONAL TRANSPORTATION PLAN NON-MOTORIZED TRAVEL RELATED GOALS AND OBJECTIVES



**Goal 2: Environment** – Provide a regional transportation system that is compatible with natural and human environments.

- Objective A: Meet air quality requirements of the region
- Objective B: Select solutions that have the fewest transportation-related impacts to the natural environment
- Objective D: Select solutions that have the fewest adverse impacts to existing and future neighborhoods and areas identified for cultural or historic preservation.

**Goal 3: Accessibility** – Provide a balanced multi-modal regional transportation system that meets the accessibility needs of all.

- Objective A: Encourage the development of multi-modal transportation options throughout the region.
- Objective B: Promote expansion of accessibility choices throughout the region.

---

#### DRAFT VISION, MISSION AND PRINCIPLES FROM 2035 PLAN EFFORT

*(All are listed, highlighted ones reference/relate to non-motorized travel)*

**Draft Vision:** Create a pre-eminent multi-modal transportation system that meets regional mobility and accessibility expectations as essential elements of the Pikes Peak Area’s quality of life.

**Draft Mission:** Plan multi-modal transportation facilities and services that efficiently move people and goods and support economic vitality while sustaining and improving the quality of life in the Pikes Peak Region.

#### Draft Principles:

1. Preserve the function of the existing transportation system.
2. Provide efficient transportation for people and goods.
3. Develop a multi-modal transportation system that provides access to employment, services, military installations, and other destinations.
4. Fully integrate connections within and between modes for people and for freight.
5. Increase the safety of motorized and non-motorized travel.
6. Increase the security of the multi-modal transportation system.
7. Support the economic vitality of the Pikes Peak Area.
8. Improve mobility of people and goods.
9. Protect and enhance the environment by implementing transportation solutions that are sensitive to natural and human contexts.





APPENDIX 4: NEIGHBORHOOD WALKING SURVEY

# Neighborhood Walking Survey



**How to use this tool:**

1. Follow the instructions in Section 1 to create a map of where you walk or want to walk.
2. In Section 2, rate walking conditions by creating a map and filling in the checklist.
3. Summarize your work in Section 3 by creating a summary map and listing your top walking wishes.
4. Submit your completed package to PPACG (see address on reverse.)

Walking is the most basic form of transportation. People walk everywhere—from home to work, to shop, to school, and to the park. During the day, workers might walk to lunch or to conduct personal business. Both ends of all transit trips are also walking trips.

In spite of how important walking is, it was often overlooked in past transportation plans. That changed with the Pikes Peak Area Council of Governments (PPACG) 2030 Regional Transportation Plan, which represented great strides in our approach to planning for the pedestrian. PPACG is the regional planning organization responsible for identifying regional problems and opportunities and making recommendations on region-wide strategies to address them.

PPACG is now preparing a Non-Motorized Transportation System Plan Update. You can contribute to this Plan by completing this Neighborhood Walking Survey. This survey is designed to help the people who live and work in Colorado Springs communicate their “walking” needs and wants to PPACG and its member jurisdictions.

The survey is divided into three sections. Section 1 tells us where you are walking to and from today, and where you might want to walk in the future. Section two (2) tell us how you rate walking conditions in your neighborhood. Section three (3) determines how you walk in your community and what improvements would make your neighborhood more walkable.

The survey will take approximately 1 - 2 hours to complete. We encourage you to get out and see your neighborhood while you complete the survey.



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# 1 Where Do You Want To Go?

What are the places in your neighborhood that you get to by walking? Accompanying this assessment are three (3) maps and four (4) colored pens. On the map marked "Where do you walk/want to get to by walking?" please do the following.

### Circle Places You Go

Circle all major places you go in the following colors.

**RED** - shopping locations

**BLUE** - workplaces

**GREEN** - schools, parks, places of worship

### Draw Bus Routes

Using a black pen, draw the bus routes within your neighborhood and place a "T" where there are bus or other transit stops.

### Add Important Places You Go

Please place an "IP" for "important places" you go most often, or have a need to go. Choose the 1 or 2 most important places.



# 2a How Do Walking Conditions In Your Area Rate?

The next step of the neighborhood walkability survey is to identify the strengths and weaknesses of your neighborhood for walking. On the map called "Rating Walking Conditions" there are five categories of information.

### 1. Completeness:

It is important to know how complete your sidewalk system is. Are there whole parts missing? Are there major parts that are broken and where you can't walk?

#### Draw Sidewalks In Blue

1. Use the blue pen to draw a dashed line to identify all locations of major problem areas, such as cracked sidewalks.
2. Draw a solid line for any sidewalks not shown on the map.

### 2. Street Crossings:

The ability to safely cross streets is an important part of the walking system. It might be relatively easy to cross a local two-lane street, but is harder to cross a street with 3 - 4 lanes and lots of traffic. How safe are your street crossings?

#### Draw Street Crossings In Red

1. Circle the most important places in red.
2. Draw a red "S" for each traffic signal.
3. Draw crosswalks in red.

they might be barriers like a wide, busy street which is unsafe to cross.)

### 4. Physical Interest and Amenity:

Walkers like places that are pleasant, visually interesting and well maintained. Do you enjoy walking in your neighborhood?

#### Draw the Best and Worst Places In Green

1. Highlight the best places to walk with a solid green circle.
2. Highlight the worst places to walk with a dashed green line.
3. Write a short explanation for your choices. Explain why each of these places are either good or bad.

### 3. Directness:

The distance the walker must go affects whether they choose to walk. If they have to go a long way to get around barriers, they might decide to drive instead. How direct are walking paths in your neighborhood?

#### Draw Barriers In Black

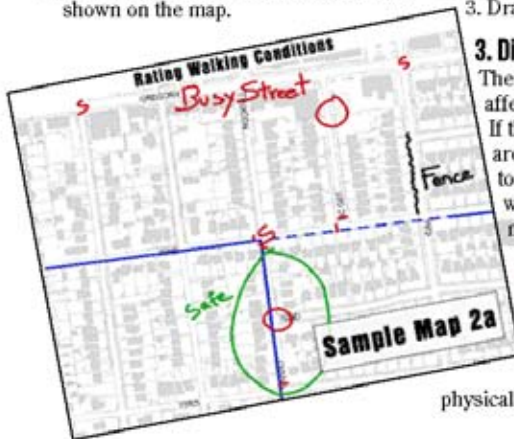
1. Draw a jagged line to show barriers to walking.
2. Write a short explanation on the map. (Barriers might be physical like a fence, freeway or ditch, or

### 5. Security:

If people feel unsafe walking in an area, they will typically choose not to walk there. In general, how safe do you feel walking in your neighborhood?

#### Draw Security Issues In Red

1. Circle and label any areas where you think you are unsafe walking.
2. Write the 2 or 3 reasons you feel an area is unsafe on the edge of the map.





2b

# Take a Walk and Decide for Yourself

Walking needs to be safe, easy, and pleasant. Grab this checklist, take a walk, and use it to decide if your neighborhood is a friendly place to walk. Take heart if you find problems; there are ways you can make things better.

**Getting Started:** Take a walk through your neighborhood and think about the five (5) categories in Section 2a. Read over this checklist before you go and as you walk, note the locations of things you would like to change. At the end of your walk, give an overall rating to each question and then add up the numbers to see how you rated your walk.

### Location of Your Walk:

From: \_\_\_\_\_  
To: \_\_\_\_\_



**Special Travel Needs:**

- Visually Impaired
- In a wheelchair
- Use cane or walker
- Pushing Stroller
- Deaf
- Other

### 1. Did you have room to walk?

- There were sidewalks, paths or shoulders Yes  No
- Sidewalk started and stopped Yes  No
- Sidewalks were broken or cracked Yes  No
- Sidewalks were blocked with poles, signs, shrubbery, dumpsters, etc. Yes  No
- Too much traffic Yes  No
- Something else? \_\_\_\_\_ Yes  No

Locations of problems \_\_\_\_\_

**Rating (circle one):**    1    2    3    4    5    6

### 2. Was it easy to cross streets?

- There were crosswalks and walk/don't walk signals Yes  No
- Road was too wide Yes  No
- Timing on walk signal was long enough Yes  No
- Parked cars blocked view of traffic Yes  No
- Trees or plants blocked view of traffic Yes  No
- There were curb ramps in good repair Yes  No
- Something else? \_\_\_\_\_ Yes  No

Locations of problems \_\_\_\_\_

**Rating (circle one):**    1    2    3    4    5    6

### 3. Did drivers behave well?

- Looked before backing out Yes  No
- Yielded to people crossing the street Yes  No
- Turned into crosswalk when people were crossing Yes  No
- Drove slowly Yes  No
- Sped up to make it through traffic lights or drove through red lights Yes  No
- Something else? \_\_\_\_\_ Yes  No

Locations of problems \_\_\_\_\_

**Rating (circle one):**    1    2    3    4    5    6

### 4. Was it easy to follow safety rules? Could you...

- Cross at crosswalks where you could see and be seen by drivers? Yes  No
- Easily see both directions before crossing streets? Yes  No
- Walk on sidewalks or shoulders facing traffic where there were no sidewalks? Yes  No
- Cross with the lights? Yes  No
- Something else? \_\_\_\_\_ Yes  No

Locations of problems \_\_\_\_\_

**Rating (circle one):**    1    2    3    4    5    6

### 5. Was your walk pleasant?

- Some unpleasant things Yes  No
- Needed more grass, flowers, trees or interesting sights Yes  No
- Scary dogs Yes  No
- There was good lighting Yes  No
- Clean, little litter Yes  No
- Something else? \_\_\_\_\_ Yes  No

Locations of problems \_\_\_\_\_

**Rating (circle one):**    1    2    3    4    5    6



### 3 Where Do You Want To Walk?



Look back at the maps you prepared in Section one (1) and Section two (2). Think about how these maps describe both where you would like to go in your neighborhood and how you feel when you are walking to and from these places.

#### Create a Summary Map

1. On the map called "Walking Wishes" draw the most important destinations and walking routes on your summary in **BLUE**.
2. Pick the most important and negative things about where you walk and add them to your summary in **GREEN**.

#### Walking Wishes

Now that you have reviewed and summarized your work, think about the five most important changes you would like to see in your neighborhood. Write down five specific "walking wishes" in the space provided below.

<b>Name of Neighborhood:</b>
<b>Boundaries:</b>
<b>Contact Person:</b>
<b>Mailing Address:</b>
<b>Daytime Phone:</b>
<b>Email:</b>

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Thank you for letting us know what you think about improving walkability in the Pikes Peak Region.

Please return by ??????????????????????

#### Return Survey & Maps to:

Warren Whiteaker  
 15 South 7th Street  
 Colorado Springs, CO  
 80905





## APPENDIX 5: 2007 BICYCLE SURVEY

### 2007 Regional Bicycling Survey



Please fill in this questionnaire to help the Pikes Peak Area Council of Governments (PPACG), the City of Colorado Springs and other communities plan bicycling improvements in the region. Each year during Bike Month, bicycling surveys will be available at different events to obtain your valuable input toward our ongoing efforts to effectively plan and promote non-motorized travel in the Pikes Peak area. Thank you for taking the time to participate.

#### TODAY'S EXPERIENCE

1. Why are you participating in this event? \_\_\_\_\_

Please select which event you participated in where you received this survey:

- Bicycle & Trails Festival (June 2)
- Le Tour de Parques (June 2)
- Bike to Work Day Breakfast - Pioneer's Museum Downtown (June 6)
- Bike to Work Day Breakfast - Briargate Salsa Brava (June 6)
- Bike to Work Day Breakfast - Rockrimmon Salsa Brava (June 6)
- Bicycle for S.E.T. Benefit Ride (June 9)
- The Starlight Spectacular (June 16)

2. How did you get here? (Check all that apply) Bicycle  Drove a Car  Transit  Walking  Other: \_\_\_\_\_

3. If you rode here, how far are you riding round trip? \_\_\_\_\_

4. Can we add you to the mailing/email list for notification for upcoming bicycling events? Yes  No

*If yes, please provide contact information below.*

Name \_\_\_\_\_  
 Affiliation \_\_\_\_\_  
 Address \_\_\_\_\_  
 Email \_\_\_\_\_

#### ABOUT YOUR CYCLING

5. I ride my bicycle for: (Check all that apply and fill in the days/year and length for each category)

	Recreation	Exercise/ Training	Transportation (shopping, entertainment, etc.)	Work Commute
Approximately Days/Year				
Average One-Way Trip Length				

6. How has your bicycling in the last year compared with the previous year?

More Bicycling this Year  Less Bicycling this Year  About the Same

What, if anything, has changed to influence how often you bicycle? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

7. Looking toward the future, how often and how far would you like to bicycle?

	Recreation	Exercise/ Training	Transportation (shopping, entertainment, etc.)	Work Commute
Approximately Days/Year				
Average One-Way Trip Length				



**PLANNING THE FUTURE**

8. Please check the top three (3) things in the following list that would increase how often you use your bicycle to travel to work or other trips for which you might otherwise drive or use the bus?

- |                              |                          |                                      |                          |
|------------------------------|--------------------------|--------------------------------------|--------------------------|
| Secure Bike Parking          | <input type="checkbox"/> | Well Maintained Bike Routes          | <input type="checkbox"/> |
| More Direct Off-Road Routes  | <input type="checkbox"/> | More Attractive Bike Path Facilities | <input type="checkbox"/> |
| More Direct On-Road Routes   | <input type="checkbox"/> | More Paved Shoulders                 | <input type="checkbox"/> |
| Shower and Clothing Storage  | <input type="checkbox"/> | More Striped On-Street Lanes         | <input type="checkbox"/> |
| Facilities at Place of Work  | <input type="checkbox"/> | Useful Bicycle Resources             | <input type="checkbox"/> |
| Better Bike Path Connections | <input type="checkbox"/> | (Map, Internet information, etc.)    | <input type="checkbox"/> |
| Safer Street Crossings       | <input type="checkbox"/> | Other _____                          | <input type="checkbox"/> |

Please Explain

---



---

9. What other suggestions do you have to improve bicycling in the region?

---



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10. If you were looking for information about bicycling in the region, which of the following would you contact? Please rank in order from 1 = most likely to 5 = least likely.

- Cycling Organization (please identify) \_\_\_\_\_
- Local Bicycle Shop (please identify) \_\_\_\_\_
- METRO RIDES / RIDEFINDERS  Trails and Open Space Coalition
- Local/Regional Government (please identify) \_\_\_\_\_

What other organizations might you contact? Why? \_\_\_\_\_

11. What is your age and gender? MALE  FEMALE  12 or under  13-19   
 20-29  30-39  40-49  50-59  60-69  70 or Over

12. What is your zip code? \_\_\_\_\_

Other Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Thank you for your comments.*

Please fax to (719) 471-1226 or mail to the address below. This form may also be filled in online at [www.ppacg.org](http://www.ppacg.org)

First Class  
Stamp  
required

Mr. Warren Whiteaker  
 Senior Transportation Planner  
 Pike Peak Area Council of Governments  
 15 South 7th Street  
 Colorado Springs, CO 80905

(use tape, no staples please)



# APPENDIX 6: 2007 BIKE AND TRAILS FESTIVAL COMMENT FORM

Pikes Peak Regional Non-Motorized Transportation System Plan Update

## Bike and Trails Festival Comment Form

June 2, 2007

Pikes Peak Regional



Non-Motorized Transportation  
System Plan Update

1. Where should we invest monies to improve bicycling in the region? Please rank in order from 1 = most important to 3 = least important.

- Maintenance
- Missing Links
- New Paths

Why did you pick this ranking? Please explain \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Please identify any specific locations that are priorities for improvement and indicate what type of improvement is needed: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. What other ideas do you have to improve bicycling or walking such as wayfinding, bicycle parking, vehicular connections to trails, transit connections, etc.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Please explain \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Other comments or questions about bicycling, walking, or the PPACG Non-Motorized Transportation Plan

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name (optional) \_\_\_\_\_

Place of Residence:

- |                  |                          |                        |                          |
|------------------|--------------------------|------------------------|--------------------------|
| Colorado Springs | <input type="checkbox"/> | Palmer Lake            | <input type="checkbox"/> |
| Monument         | <input type="checkbox"/> | Green Mountain Falls   | <input type="checkbox"/> |
| Fountain         | <input type="checkbox"/> | Eastern El Paso County | <input type="checkbox"/> |
| Woodland Park    | <input type="checkbox"/> |                        |                          |

*Thank you for your comments.*

Please fax to (719) 471-1226 or mail to the address below.  
This form may also be filled in online at [www.ppacg.org](http://www.ppacg.org).



First Class  
Stamp  
required

Mr. Warren Whiteaker  
Senior Transportation Planner  
Pike Peak Area Council of Governments  
15 South 7th Street  
Colorado Springs, CO 80905

(use tape, no staples please)





## APPENDIX 7: 2007 BIKE AND TRAILS SURVEY RESULTS

### Bike and Trails Festival Survey Results

June 2, 2007



On June 2, 2007, representatives of the Pikes Peak Area Council of Governments Non-Motorized Transportation Systems Plan Update staffed an interactive booth at the Bikes and Trails Festival at America the Beautiful Park in Colorado Springs, Colorado. The objective of this effort was to solicit public on non-motorized improvements. The public input focused on asking two questions:

- What are the priorities for investing in bicycling improvements in the region?
- Where are improvements needed?

More than 160 people stopped by the booth to look at the displays and share their views. The following highlights the public input received.

#### WHAT ARE THE PRIORITIES FOR INVESTING OUR TRANSPORTATION IMPROVEMENT MONEY?

Since needed bicycle improvements greatly exceed our available funds, the public was asked: "Given limited funds, where should we invest our transportation improvement money?" Three choices were provided:

- **Maintain Existing Paths:** Repairs, Snow Removal, Sweeping
- **Complete Missing Links:** Safety Enhancements, New Crossings
- **Building New Paths:** New Routes Trails and Paths

Each participant was given six orange dots to place on the board to express their preferences. They could put all six dots under one column, or combinations such as 2-2-2, or 3-2-1.

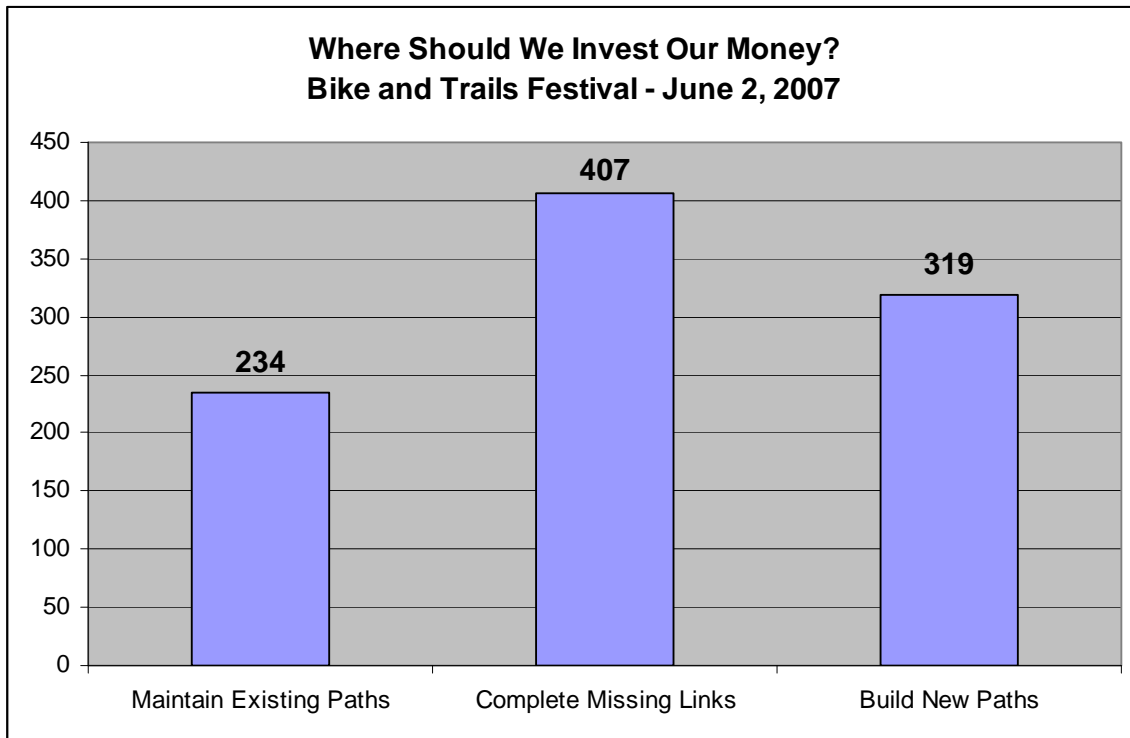
In total, 160 members of the public provided us with input. These results are presented in the following table and graph.





Where Should We Invest Our Money Survey From Bike and Trail Festival - June 2, 2007		
Maintain Existing Paths	234	24%
Complete Missing Links	407	42%
Build New Paths	319	33%
<b>Total</b>	<b>960</b>	<b>100%</b>

Although there was strong support for all categories, completing missing links received the highest support, followed by building new paths and then maintaining existing paths.



### WHAT IMPROVEMENTS ARE NEEDED?

Participants were then asked to share their thoughts regarding specific improvements that are needed in the region. A map of the region was available and participants discussed areas for improvement and marked them on the map. Many had simple solutions that could help bicycling in the region. The key issues that were raised are summarized as follows:



- There are unsafe or missing connections along Cottonwood Trail as it intersects with Academy and New Santa Fe Trail. (It should be noted that this was a major issue raised at last year's Bike Jamboree.)
- Missing connection from Shooks Run Trail with the Pikes Peak Greenway. (Suggestions were made for an interim improvement directional way finding signage that would benefit the user as to how these important routes could be connected.)



- Completion of the Rock Island Trail between the Pikes Peak Greenway and Nevada.
- Arterial crossing along the Rock Island Trail.
- There were a number of striping related issues, particularly west of I-25. These issues included:
  - Replace bike lanes and edge lines after resurfacing. (Many indicated that center and lane lines are quickly painted after resurfacing but in some locations it can be a year or more before bike lanes are added. The resulting wider lane creates a higher speed for motorists, which is hazardous for the bicyclists. Others indicated that when a bike lane is re-striped, it is often less in width than prior to the resurfacing.)
  - Add bike lanes along facilities where existing width is currently available.
- Washed out bridge along Fountain Creek Trail south of US 83.



# Bike and Trails Festival Comment Form Results

Held on June 2, 2007



The following are the responses to our Comment Form for the Bike and Trails Festival on June 2, 2007.

## 1. Where should we invest monies to improve bicycling in the region? Please rank in order from 1 = most important to 3 = least important.

	Maintenance		Missing Links		New Paths	
Most Important	4	23%	11	65%	2	12%
Important	2	17%	3	25%	7	58%
Least Important	7	58%	2	17%	3	25%
<b>Totals</b>	<b>98%</b>		<b>107%</b>		<b>95%</b>	

### Why Did You Pick This Ranking?

- Trail washout needed repairs one mile south of Academy Blvd. on Fountain Creek Trail.
- Let's complete the existing trails and links first.
- Finish Sand Creek-Powers trail for road bikes.
- More paths need to be paved, bridges and over under passes provided.
- Can't get north to south and/or east and west.
- To get to the southern routes, please complete Homestead and Sand Creek Trail.
- Outdoor bathrooms - we need them to be open and up to date maintenance-wise.
- Biggest bang for the buck.
- Need connectivity to facilitate shift from SOV to bicycle.
- There are too many places where you have to zig and zag a lot, to continue in a general direction.
- Weed sidewalk on Academy eastside where Cottonwood Creek Trail ends. Safety hazard as peds and bikes try to cross Academy to the west side - jay walking on a busy street with no sidewalk where the trail ends to walk north on Academy to the light on the street!
- More paths the better.
- The City system is great already but if the trails were continuous, I'd never go to Denver again!
- There are some paths that do not lend to other paths or suddenly drop off on residential streets. Overall the paths are well maintained.
- My wish list is to finish Midland trail to Manitou (from 21<sup>st</sup>) and curbs/sidewalks and shoulders on Colorado Avenue to Manitou Ave.
- Need more to make it safe.



- I feel from a financial standpoint, it's more reasonable to maintain current paths and make them safer. Why would we build additional paths if current ones are not complete or maintained well?

**Please identify any specific locations that are priorities for improvement and indicate what type of improvement is needed.**

- Trail needs repairs one mile south of Academy Blvd. on the Fountain Creek Trail.
- Better signage for the Spine trails where it is routed along surface streets.
- Finish Sand Creek-Powers trail for road bikes.
- Shooks Run south between Pikes Peak to Costilla (behind El Paso) trail scrutiny after storms, floods, etc. clean up debris.
- Cottonwood Creek trail Templeton Gap trail. A better detour should be provided on Cottonwood Creek at Vincent. The hill is really steep.
- Alongside Academy - no route. Sometimes no sidewalk for safety.
- Academy and Dublin by Tire World.
- South 8<sup>th</sup> Street curb lane; could be clearly striped to facilitate bike access to jobs near Cheyenne Blvd./Arcturus. County: shoulders on Falcon Hwy. , Marksheffle, and especially Meridian (access to high school for people who don't yet drive). Missing link between Rock Island/Shooks Run and Monument Valley.
- Rock Island Trail, from Shooks Run to Monument Valley.
- Fountain Creek Trail has a bad washout south of Academy Blvd. there's no way around it.
- It's a huge wish, Santa Cleveland, but crossing Academy Blvd. or the Rock Island keeps me off that one. Midland stopping is another wish at 21<sup>st</sup>.
- Light between Greenway & Shooks Run west end of Midland.
- Right now stretch on Colorado Avenue to Manitou Ave. is very dangerous for pedestrians and bikers. Someone will get killed if no improvements are made.
- More paths so we don't have to compete with vehicles.

**2. What other ideas do you have to improve bicycling or walking such as wayfinding, bicycle parking, vehicular connections to trails, transit connections, etc.**

- More space for bikes on metro buses.
- Education in Colorado Springs to make town more friendly toward cyclists.
- Signage - more bike lanes!
- More routes!
- For maintenance assistance, contact community service organizations and they may be able to help. Orgs such as Boy Scouts, Girl Scouts, Colorado Springs Utilities.
- Better maps, more curb ramps on Dublin.
- As a new auto commuter to Denver, it helped to get info on how to divide a 70-mile commute into bike and auto segments.
- More bike lanes on existing streets.
- Connect trails so people can walk or cycle to shopping centers, mail and small errands etc.
- Better maps on Internet.
- All City-owned facilities should have bike racks for employees.



- Looking forward to re-opening of Monument Park trail from here to Bijou.
- I would like to see more access to partner with buses.
- I am fairly new to the bicycle scene, but the trails I like have been on are fairly nice. They offer a full range for all ability types.

**Please Explain:**

- Now only two bikes can be transported per bus.
- So they don't expect us to ride next to curb causing us to go into drainage areas.
- Sidewalks make decent interim bike paths for the inexperienced rider by busy streets.
- The ones I can find are out of date.
- The Police department does not.

**3. Other comments or questions about bicycling, walking, or the PPACG Non-Motorized Transportation Plan**

- Need snazzier, faster bus routes.
- Still need signage, up on bridges overpassing Monument Valley (see Cherry Creek for an example to aspire to).
- Need more publicity about the PPACG.
- Just thank you for your huge efforts to take on so many entities that are not necessarily non-automated focused.
- I think it is great to have the designated bike lanes on Cheyenne Blvd. and Tejon. I use these daily to commute to work.

**Place of Residence:**

Colorado Springs	13
Monument	0
Fountain	0
Woodland Park	0
Palmer Lake	0
Green Mountain Falls	0
Eastern El Paso County	0
Manitou Springs	1



## APPENDIX 8: EVALUATION SCORING - BICYCLE

### BIKEWAY PROJECT RATING SHEET

### Pikes Peak Regional



### Non-Motorized Transportation System Plan Update

Applicant: \_\_\_\_\_ Facility Type: \_\_\_\_\_

Location: \_\_\_\_\_

Cost: \_\_\_\_\_ Cost/Mile: \_\_\_\_\_

CRITERION ASSESSMENT	SCORE
<b>TIER 1 EVALUATION</b>	
<p><b>CONNECTIVITY</b>                      Will the project provide regional connections or access to major employment, business, shopping, civic and education centers?  <i>Project provides new regional connections or new connections to major activity centers (i.e., employment, business, shopping, civic, and education centers) = 3; Project will increase connectivity between regional facilities or major activity centers. = 2; Project connects to local destinations or improves access to regional destinations. = 1; Project does not provide access or substantially improve connections to any significant destinations. = 0</i></p>	
<p><b>CONTINUITY</b>                      Does the project provide for a missing link in the system or eliminate a barrier that inhibits use?  <i>Project will complete a missing link in the regional plan or will eliminate a barrier that inhibits use. = 3; Project will partially complete a missing link, or improve an existing link in the regional plan or will complete a link to a major destination. = 2; Project will complete a missing link in a local plan. = 1; Project will not address a missing link in the system, either regionally or locally. = 0</i></p>	
<p><b>SAFETY</b>                      Does the project mitigate a known safety hazard?  <i>Project will eliminate conflicts between bicyclists and autos, or will improve a situation which has resulted in recorded bike accidents. = 3; Project will improve (but not eliminate) a situation in which bicyclists are in direct conflict with autos, but where no accidents have been reported. = 2; Project will improve a bicycle or pedestrian facility which presents a hazard to bicyclists without any conflicts with autos. = 1; Project will have no discernible safety benefits for bicyclists. = 0</i></p>	
<p><b>JOINT CONSTRUCTION</b>                      Can the project be "piggybacked" with other major project(s), such as a road widening or land development project?  <i>Project can be "piggybacked" with another major project(s). = 3; Project has secured local matching funds and/or grant funding. = 2; Project has applied for additional funding (i.e., grants). = 1; Project would be solely funded by PPACG. = 0</i></p>	



CRITERION ASSESSMENT	SCORE
<b>TIER 2 EVALUATION</b>	
<p><b>HIGH USE</b>                      Will the project result in a likelihood of use (<i>i.e.</i>, satisfy demand, expand existing use)?  <i>Project would increase use of the bicycle network. = 2; Project would improve the existing network to satisfy existing use. = 1; Project would not result in a likelihood of use. = 0</i></p>	
<p><b>LOCAL SUPPORT</b>                      Is there strong public support for the project or is the project supported by two or more jurisdictions?  <i>Project has significant support from the community at large, affected stakeholders, elected officials, appointed bodies and local or state agencies and support is significantly greater than opposition. = 2; Project has some support from the community at large, affected stakeholders, elected officials, appointed bodies and local or state agencies and support is greater than opposition. = 1; Project has no local support or overwhelming opposition is documented. = 0</i></p>	
<p><b>FEASIBILITY</b>                      Is the project ready to be implemented (<i>i.e.</i>, right-of-way acquired, preliminary engineering completed)?  <i>Project could be implemented by the time horizon of the plan, and minimal environmental, engineering, or political roadblocks exist. = 2; Project could be implemented by the time horizon of the plan, and some environmental, engineering, or political roadblocks exist. = 1; Project could not be implemented by the time horizon of the plan or project faces difficult environmental, engineering, or political roadblocks. = 0</i></p>	
<p><b>COST EFFECTIVENESS</b>                      Does the project represent a good value for the investment?  <i>Project design clearly indicates the project is buildable and the costs are low for the benefit received. Clear value. = 2; Project design indicates the project is probably buildable and the costs seem reasonable for the benefit received. Probable value. = 1; Project is difficult to build or cost is very high for the benefit received. = 0</i></p>	
<b>TIER 3 EVALUATION</b>	
<p><b>SOCIAL EQUITY</b>                      Does the project provide transportation for a disadvantaged/underserved community?  <i>Project will provide transportation for a disadvantage/underserved community. =1 ; Project will not serve a disadvantaged/underserved community. = 0</i></p>	
<p><b>COMMUTER USE</b>                      Does the project have the potential to reduce traffic congestion by providing more of a transportation alternative (vs. recreational use)?  <i>Project has the potential to reduce traffic congestion by providing more of a transportation use (vs. recreational use). = 1; Project has little or no potential to reduce congestion on nearby roadways. = 0</i></p>	
<p><b>AESTHETICS</b>                      Does the project include a landscape feature or provide access to a scenic feature?  <i>Project includes a landscape feature or provides access to a scenic feature. = 1; Project does not include a landscape feature or provides access to a scenic feature. = 0</i></p>	
<p><b>FACILITY TYPE</b>                      Does the project provide for a continuous, uninterrupted facility type (<i>i.e.</i>, paved, unpaved, bike land)?  <i>Project provides for a continuous, uninterrupted facility type (i.e. paved, unpaved, bike lane). = 1; Project does not provide for a continuous, uninterrupted facility type. = 0</i></p>	
<b>TOTAL TIER SCORES</b>	

COMMENTS, OTHER CONSIDERATIONS: (any other outstanding features of the project)

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## APPENDIX 9: EVALUATION SCORING - PEDESTRIAN

### Pikes Peak Regional



### Non-Motorized Transportation System Plan Update

### PEDESTRIAN PROJECT RATING SHEET

Applicant: \_\_\_\_\_ Facility Type: \_\_\_\_\_

Location: \_\_\_\_\_

Cost: \_\_\_\_\_ Cost/Mile: \_\_\_\_\_

CRITERION ASSESSMENT	SCORE
<b>TIER 1 EVALUATION</b>	
<p><b>CONNECTIVITY</b>                      Will the project provide access to major employment, business, shopping, civic and education centers and transit stops?  <i>Project provides new access to major activity centers or transit stops (i.e., employment, business, shopping, civic, and education centers). = 3; Project will increase connectivity between major activity centers. = 2; Project connects to local destinations (i.e., residential neighborhoods, parks) = 1; Project does not provide access or substantially improve connections to any significant destinations. = 0</i></p>	
<p><b>CONTINUITY</b>                      Does the project provide for a missing link in the system or eliminate a barrier that inhibits use?  <i>Project will complete a missing link in the network or will eliminate a barrier that inhibits use. = 3; Project will partially complete a missing link, or improve an existing link in the network or will complete a link to a major destination. = 2; Project will complete a missing link in a local plan. = 1; Project will not address a missing link in the system, either regionally or locally. = 0</i></p>	
<p><b>SAFETY</b>                      Does the project mitigate a major safety concern, such as street crossing or missing sidewalk?  <i>Project will eliminate conflicts between pedestrians and bicyclists/autos, or will improve a situation which has resulted in recorded pedestrian accidents. = 3; Project will improve (but not eliminate) a situation in which pedestrians are in direct conflict with bicyclists/autos, but where no accidents have been reported. = 2; Project will improve a pedestrian facility which presents a hazard to pedestrians without any conflicts with autos. = 1; Project will have no discernible safety benefits for pedestrians. = 0</i></p>	
<p><b>JOINT CONSTRUCTION</b>                      Can the project be "piggybacked" with other major project(s), such as a road widening or land development project?  <i>Project can be "piggybacked" with another major project(s). = 3; Project has secured local matching funds and/or grant funding. = 2; Project has applied for additional funding (i.e., grants). = 1; Project would be solely funded by PPACG. = 0</i></p>	



CRITERION ASSESSMENT	SCORE
<b>TIER 2 EVALUATION</b>	
<p><b>HIGH USE</b>                      Will the project result in a likelihood of use (i.e., satisfy demand, expand existing use)?  <i>Project would result in a high likelihood of use. = 2; Project would improve the existing pedestrian network to satisfy existing use. = 1; Project would not result in a likelihood of use. = 0</i></p>	
<p><b>COST EFFECTIVENESS</b>                      Does the project represent a good value for the investment?  <i>Project design clearly indicates the project is buildable and the costs are low for the benefit received. Clear value. = 2; Project design indicates the project is probably buildable and the costs seem reasonable for the benefit received. Probable value. = 1; Project is difficult to build or cost is very high for the benefit received. = 0</i></p>	
<p><b>ADA ACCESS</b>                      Does the project provide improvements for persons with disabilities?  <i>Project provides improvements for persons with disabilities. = 2</i></p>	
<b>TIER 3 EVALUATION</b>	
<p><b>SOCIAL EQUITY</b>                      Does the project provide access for a disadvantaged/underserved community?  <i>Project will provide access for a disadvantage/underserved community. = 1; Project will not serve a disadvantaged/underserved community. = 0</i></p>	
<p><b>TRANSPORTATION USE</b>                      Does the project provide an opportunity to walk instead of drive?  <i>Project provides an opportunity to walk instead of drive. = 1; Project does not provide an opportunity to walk instead of drive. = 0</i></p>	
<p><b>AESTHETICS</b>                      Does the project include visual amenities that would encourage pedestrian use?  <i>Project includes visual amenities that would encourage pedestrian use. = 1; Project does not include visual amenities that would encourage pedestrian use. = 0</i></p>	
<b>TOTAL TIER SCORES</b>	

COMMENTS, OTHER CONSIDERATIONS: (any other outstanding features of the project)

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## APPENDIX 10: PRIORITY PROJECT EVALUATION

Member agencies developed and drafted scores for each of their projects based on the Evaluation Criteria. The projects were numerically-graded using a tiered scale based on the level of importance assigned to each tier. Tier 1 criteria were each assigned a total possible value of 3 points, making the total possible subtotal for Tier 1 equal to 12 points. Tier 2 criteria were each worth 2 points; Tier 1 criteria were each worth 1 point. The results of the project evaluations are shown in the tables below.

### Bicycle Priority Projects

Project Information						Tier 1 Evaluation				Tier 2 Evaluation				Tier 3 Evaluation				TOTAL			
Project ID	Project	Facility Type	Total Cost (High)	Cost Source	Also serves pedestrian trips	Connectivity	Continuity	Safety	Joint Construction	Tier 1 Subtotal	High Use	Local Support	Feasibility	Cost Effective	Tier 2 Subtotal	Social Equity	Commuter Use		Aesthetics	Facility Type	Tier 3 Subtotal
<i>Woodland Park/Teller County</i>																					
WP B1	America Discovery Trail Connection	paved trail	\$ 75,000	WP	X	3	3	3	0	9	2	2	0	0	4	1	1	1	1	4	17
WP B2	Fountain Creek Trail	paved trail	\$ 90,000	WP	X	3	3	3	0	9	2	2	0	0	4	1	1	1	1	4	17
WP B3	Teller County	paved trail	\$ 356,400	WP	X	3	3	2	0	8	1	2	1	2	6	0	1	1	1	3	17
<i>Green Mountain Falls</i>																					
GMF B1	Ute Pass Avenue	shoulders	\$ 296,000	GMF		3	3	3	3	12	2	2	2	2	8	1	1	1	1	4	24
<i>Manitou Springs</i>																					
MS B1	Creekwalk	paved trail	\$ 701,580	est	X	2	3	2	1	8	2	2	1	1	6	0	1	1	1	3	17
<i>El Paso County</i>																					
EP B1	Jackson Creek Trail Underpass	trail underpass	\$ 400,000	EP	X	3	3	3	3	12	2	2	2	2	8	1	1	1	1	4	24
EP B2	B-Street Underpass	trail underpass	\$ 700,000	EP	X	3	3	2	0	8	2	1	1	2	6	1	1	0	0	2	16
EP B3	Lewis Palmer Bridge	trail overpass	\$ 1,500,000	EP	X	3	3	3	0	9	2	2	1	2	7	1	1	0	1	3	19
EP B4	Chamberlain Trail Crossing	trail underpass	\$ 200,000	EP	X	2	3	2	0	7	1	1	1	1	4	1	1	1	1	4	15
EP B5	Monument Trail Bridge	trail overpass	\$ 1,500,000	EP	X	1	1	3	0	5	1	1	1	1	4	1	1	0	1	3	12
EP B6	Highway 24 West	shoulders	\$ 10,000,000	EP		1	1	3	0	5	2	2	0	1	5	0	0	1	1	2	12
EP B7	Fountain Creek Trail Bridge	trail overpass	\$ 200,000	EP	X	1	0	1	3	5	1	0	2	2	5	1	1	1	1	4	14
EP B8	Front Range Trail	trail underpass	\$ 200,000	EP	X	2	2	2	3	9	2	2	2	2	8	1	1	1	1	4	21
EP B9	La Foret Trail	trail underpass	\$ 400,000	EP	X	3	3	1	0	7	2	1	1	2	6	1	1	1	1	4	17
EP B10	Ute Pass Trail - Phase 3	multi-use trail	\$ 900,000	EP	X	2	3	3	3	11	2	2	0	1	5	1	0	1	1	3	19
<i>Fountain</i>																					
F B1	Jimmy Camp Creek Trail	unpaved trail	\$ 3,300,000	est	X	1	3	1	3	8	2	2	0	0	4	0	1	1	1	3	15
F B2	Fountain Creek Regional Trail	unpaved trail	\$ 300,000	est	X	1	3	1	3	8	2	2	0	2	6	0	1	1	1	3	17
F B3	SH 85/Santa Fe Ave Trail	paved trail	\$ 3,700,000	est	X	3	3	3	3	12	2	2	2	2	8	1	0	0	1	2	22
F B4	Irrigation Ditch Trails	paved trail	\$ 3,800,000	est	X	3	3	1	3	10	2	1	0	1	4	1	1	1	1	4	18
F B5	Ohio Ave/Hwy 85 to Jimmy Camp Creek Trail	paved trail	\$ 500,000	est	X	2	3	2	3	10	2	1	2	1	6	1	1	0	1	3	19
F B6	El Paso Trail	paved trail	\$ 1,200,000	est	X	2	3	2	3	10	2	1	2	1	6	1	1	0	1	3	19
F B7	Squirrel Creek Trail	paved trail	\$ 2,600,000	est	X	3	3	2	3	11	2	1	2	1	6	1	0	1	1	3	20
<i>Colorado Springs</i>																					
CS B1	Pikes Peak Greenway Rehabilitation	multi-use trail	\$ 1,400,000	CS	X	3	3	2	3	11	2	2	2	2	8	1	1	1	1	4	23
CS B2	Sand Creek Trail	multi-use trail	\$ 300,000	CS	X	3	3	2	3	11	2	2	1	2	7	0	1	1	1	3	21
CS B3	Cottonwood Trail	multi-use trail	\$ 300,000	CS	X	3	3	2	3	11	2	2	1	2	7	1	1	1	1	4	22
CS B4	Sand Creek Trail	multi-use trail	\$ 300,000	CS	X	3	3	3	2	11	2	2	1	2	7	1	1	1	1	4	22
CS B5	Hancock Expressway	bike lanes	\$ 2,210,000	CS		2	3	2	2	9	2	1	1	1	5	1	1	1	1	4	18
CS B6	West Unifah St	bike lanes	\$ 207,000	CS		3	2	3	3	11	2	2	2	2	8	1	1	0	1	3	22
CS B7	Rock Island Trail	trail underpass	\$ 300,000	CS	X	2	2	3	3	10	2	2	1	2	7	1	1	1	1	4	21
CS B8	Airport Road	bike lanes	\$ 360,000	CS		3	3	3	2	11	2	1	1	2	6	1	1	0	1	3	20
CS B9	Las Vegas St	shoulders	\$ 665,000	CS		3	3	2	2	10	2	1	2	2	7	1	1	0	1	3	20
CS B10	Sinton Trail	trail underpass	\$ 350,000	CS	X	3	2	1	2	8	2	1	1	1	5	1	1	1	1	4	17
CS B11	BNSF Railroad Corridor Acquisition	trail corridor	\$ 500,000	CS	X	3	2	3	3	11	2	2	1	1	6	1	1	0	1	3	20
CS B12	Fillmore St/Fontmore	bike lanes	\$ 376,200	CS		3	3	2	2	10	2	1	1	1	5	1	1	1	1	4	19
CS B13	University Park Trail	paved trail	\$ 750,000	CS	X	3	3	2	2	10	2	2	1	2	7	1	1	1	1	4	21
CS B14	Various <sup>1</sup>	various <sup>2</sup>	\$ 50,000	CS	X	3	2	2	3	10	2	1	2	2	7	1	1	0	0	2	19
CS B15	30th St	shoulders	\$ 498,000	CS		2	3	3	2	10	2	1	1	2	6	1	1	1	1	4	20
CS B16	Rock Island Trail	paved trail	\$ 1,500,000	CS	X	3	3	2	2	10	2	2	2	2	8	0	1	0	1	2	20
CS B17	La Foret/New Santa Fe Trail	trail underpass	\$ 200,000	CS	X	2	2	1	2	7	2	2	2	1	7	0	1	1	1	3	17
			<b>TOTAL COST</b>								<b>\$ 43,185,180</b>										

<sup>1</sup> Bicycle and/or pedestrian access improvements to existing park-and-ride lots and transit substations (incl. improved sidewalks, trail connectivity where trails are proximate, bicycle parking, signage, etc.)

<sup>2</sup> Locations within the City of Colorado Springs and outside the City Limits (e.g., Fountain, Monument)



Pedestrian Priority Projects

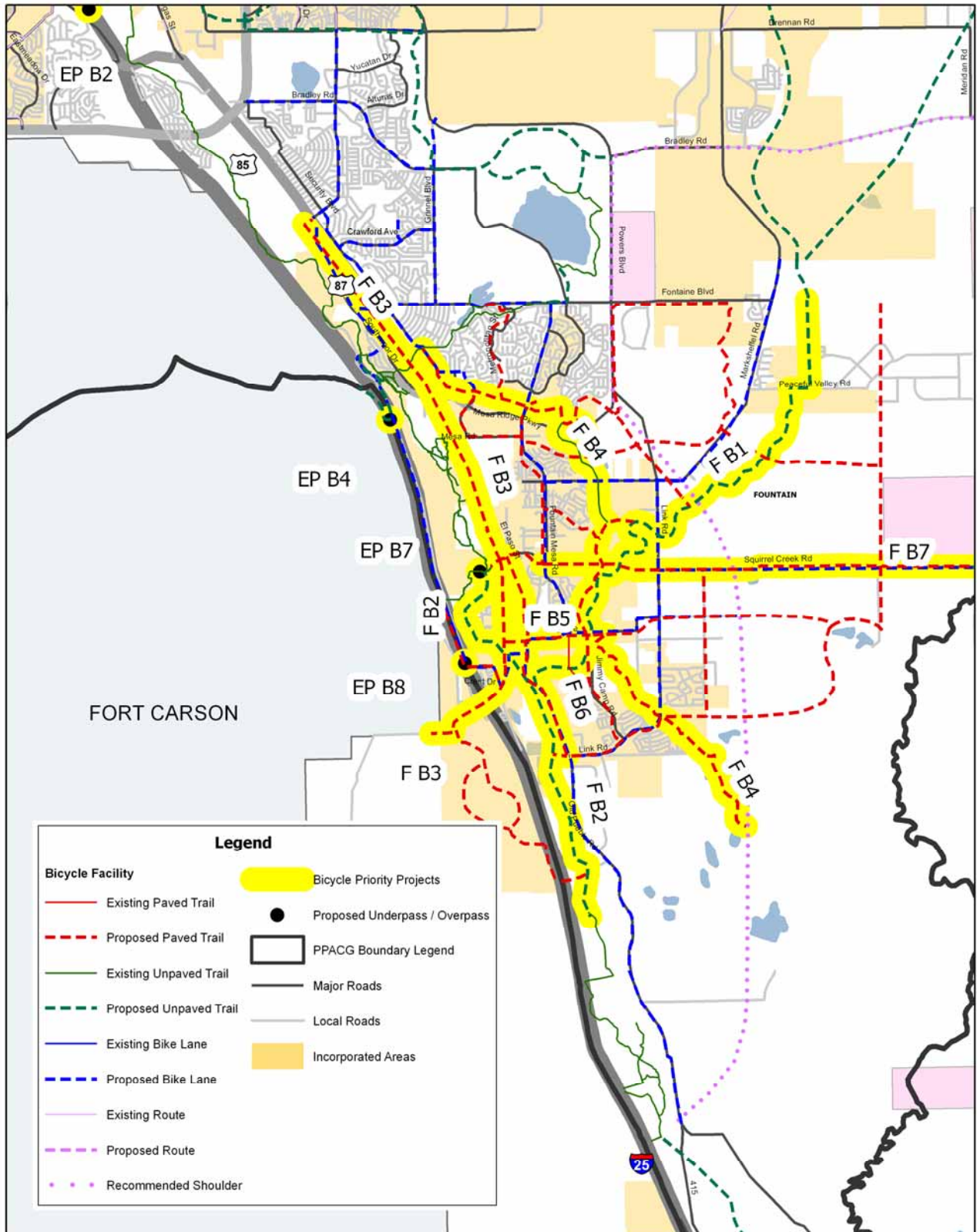
Project Information					Tier 1 Evaluation				Tier 2 Evaluation				Tier 3 Evaluation					
Project ID	Project	Facility	Total Cost (high)	Cost Source	Connectivity	Continuity	Safety	Joint Construction	Tier 1 Subtotal	High Use	Cost Effective	ADA Access	Tier 2 Subtotal	Social Equity	Transportation Use	Aesthetics	Tier 3 Subtotal	TOTAL
<i>Woodland Park</i>																		
WP P1	County Rd	sidewalk	\$ 166,500	WP	2	2	3	0	7	2	2	0	4	0	1	1	2	13
WP P2	Teller County	sidewalk	\$ 51,000	WP	3	3	3	0	9	2	2	2	6	1	1	1	3	18
<i>Green Mountain Falls</i>																		
GMF P1	Ute Pass Ave	sidewalk	\$ 46,000	GMF	2	3	2	3	10	2	2	2	6	1	1	1	3	19
GMF P2	Ute Pass Ave	streetscaping	\$ 200,000	GMF	0	0	0	1	1	2	2	0	4	1	0	1	2	7
<i>Manitou Springs</i>																		
MS P1	Crystal Park Road	sidewalk	\$ 300,000	est	2	3	3	2	10	2	2	2	6	1	1	1	3	19
MS P2	Creekwalk	paved trail	\$ 700,000	est	2	3	2	1	8	2	1	2	5	0	1	1	2	15
MS P3	El Paso Blvd	sidewalk	\$ 200,000	est	1	2	3	2	8	1	1	2	4	1	1	1	3	15
<i>Colorado Springs</i>																		
CS P1	Various <sup>1</sup>	sidewalks/ADA ramps	\$ 15,000,000	CS	3	3	3	2	11	2	2	2	6	1	1	0	2	19
CS P2	Nevada Avenue	streetscaping	\$ 1,975,000	CS	2	2	3	3	10	2	1	2	5	1	1	1	3	18
<b>TOTAL COST</b>			<b>\$ 18,638,500</b>															

<sup>1</sup> Request for ongoing funding over the 20-year LRTP to fund the construction of critical infill sidewalk segments and installation of accessible pedestrian ramps for high priority locations citywide.

As expected, all of the projects scored relatively high, given that municipalities were asked to submit their high priority projects. As shown, the scores for bicycle projects ranged from 15 to 24 out of a total possible score of 24 points. The scores for pedestrian projects ranged from 7 to 19 out of a total possible score of 21 points.

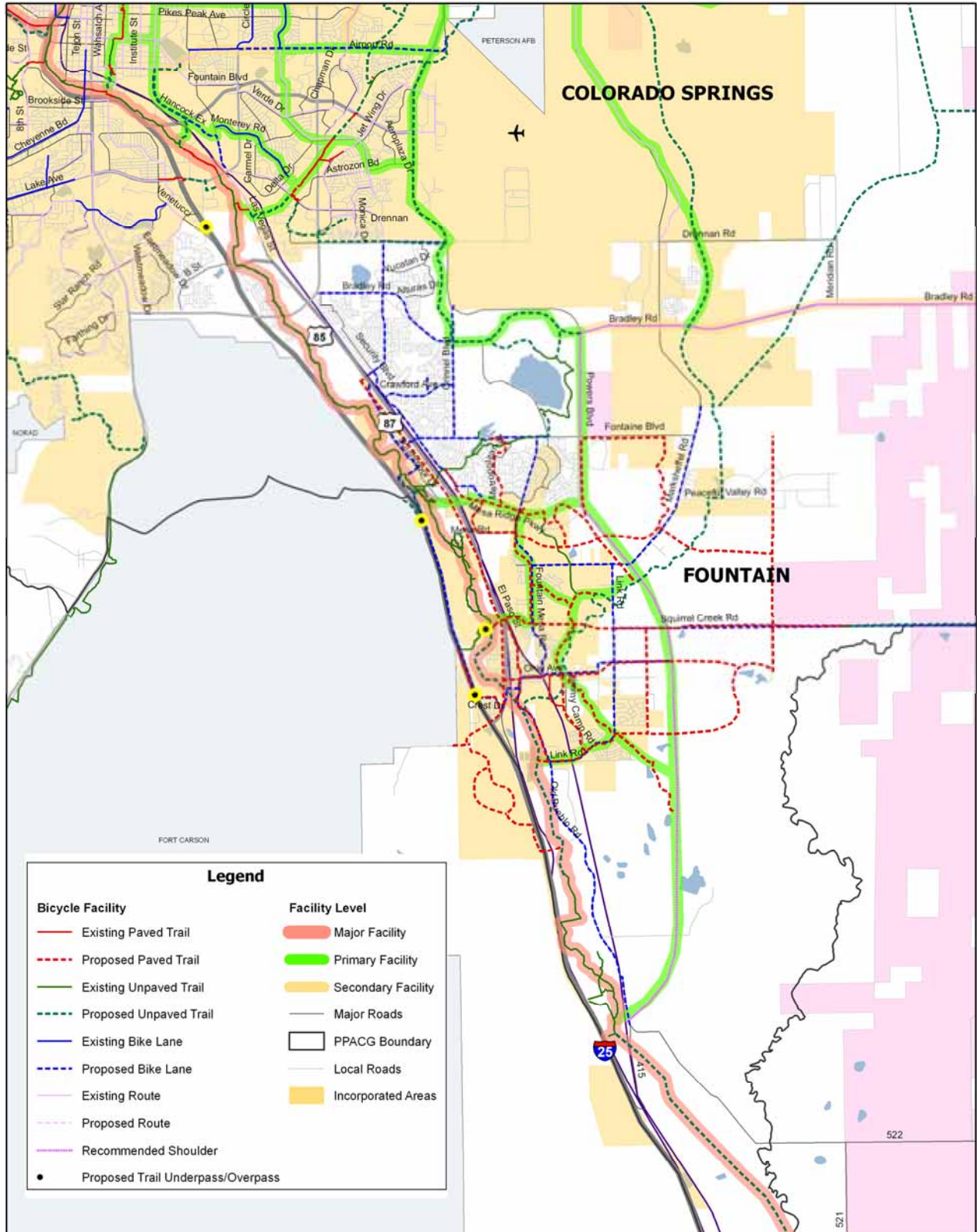


### Fountain Bicycle Priority Projects



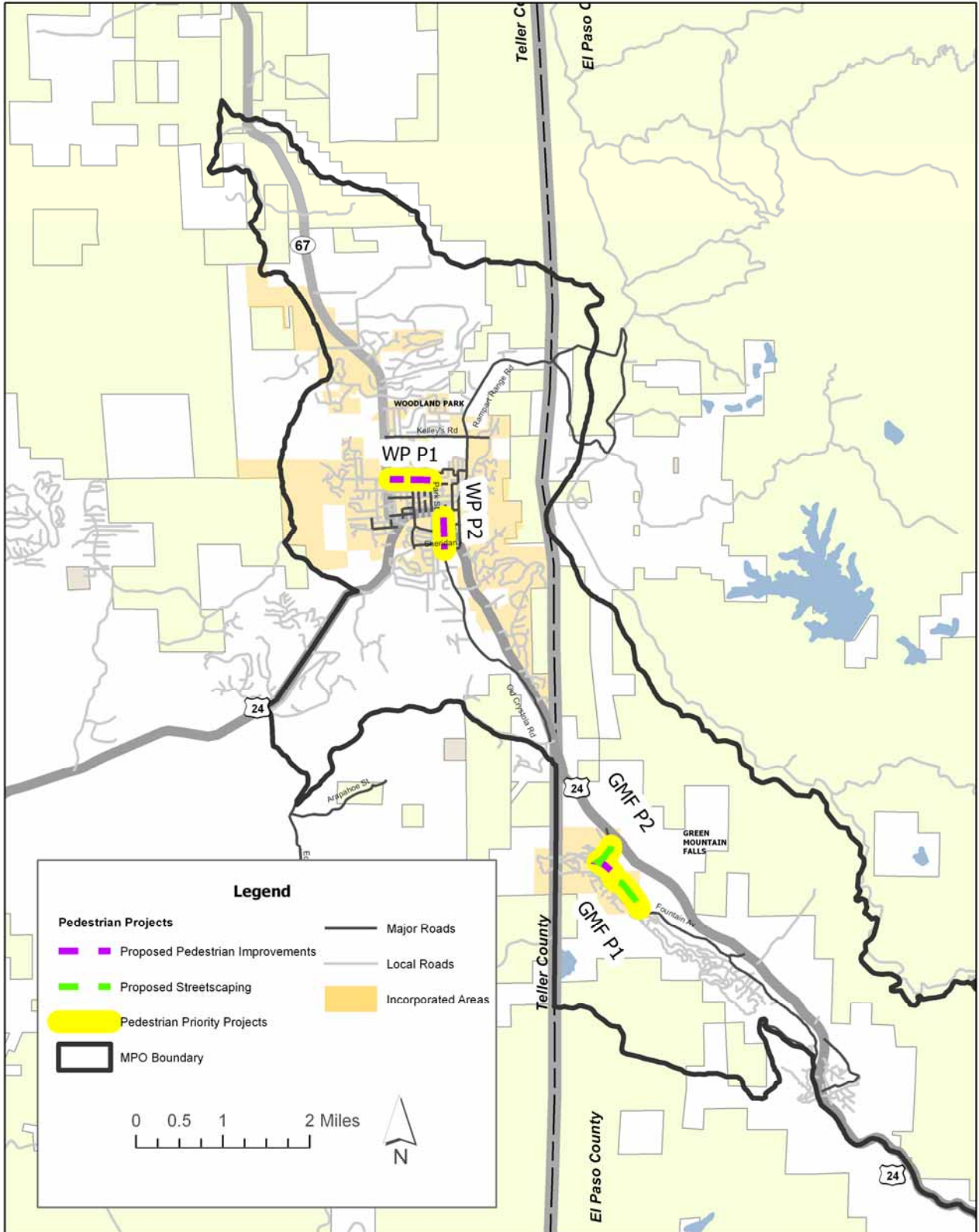


Fountain Vision Plan



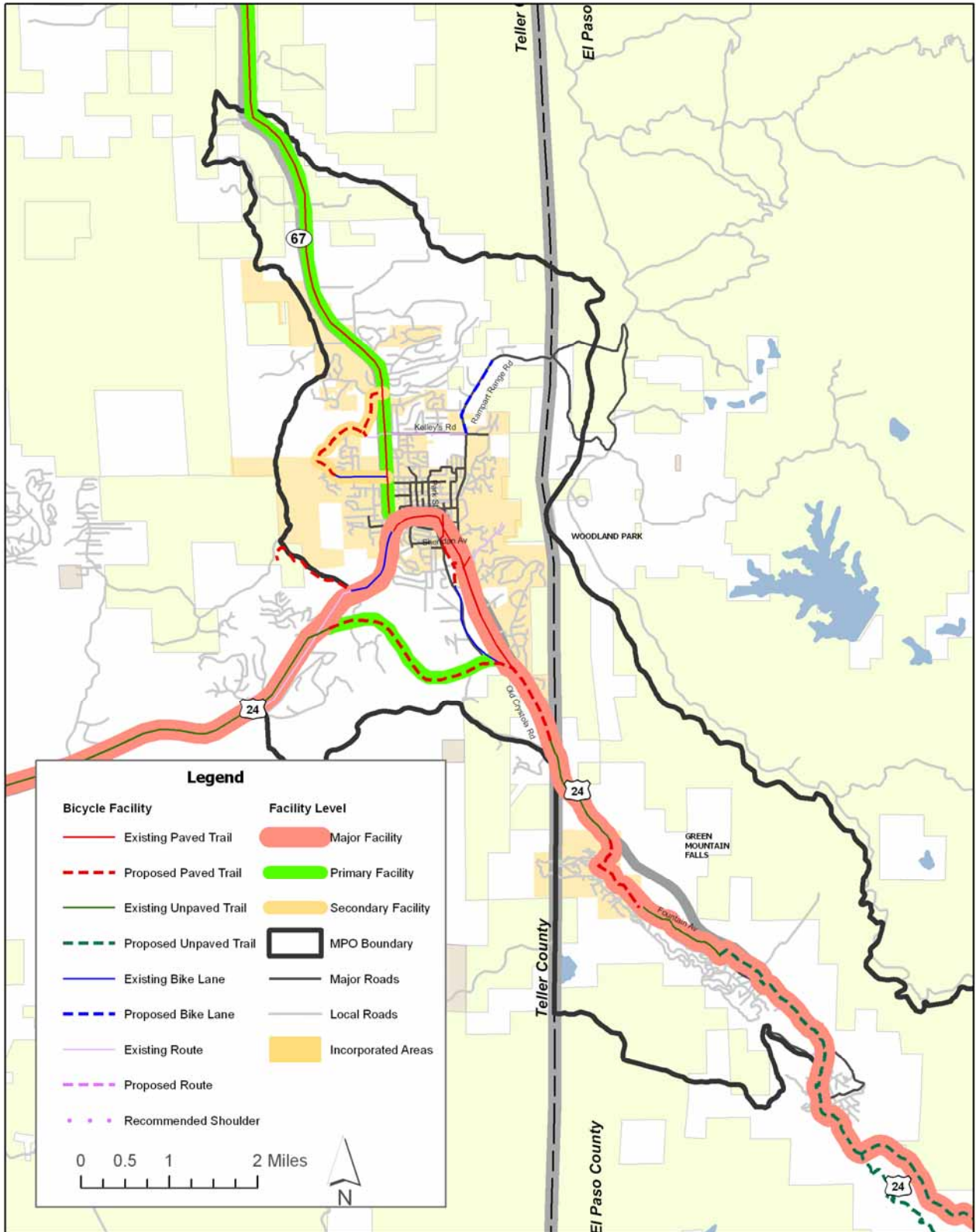


### Woodland Park/Green Mountain Falls Pedestrian Priority Projects





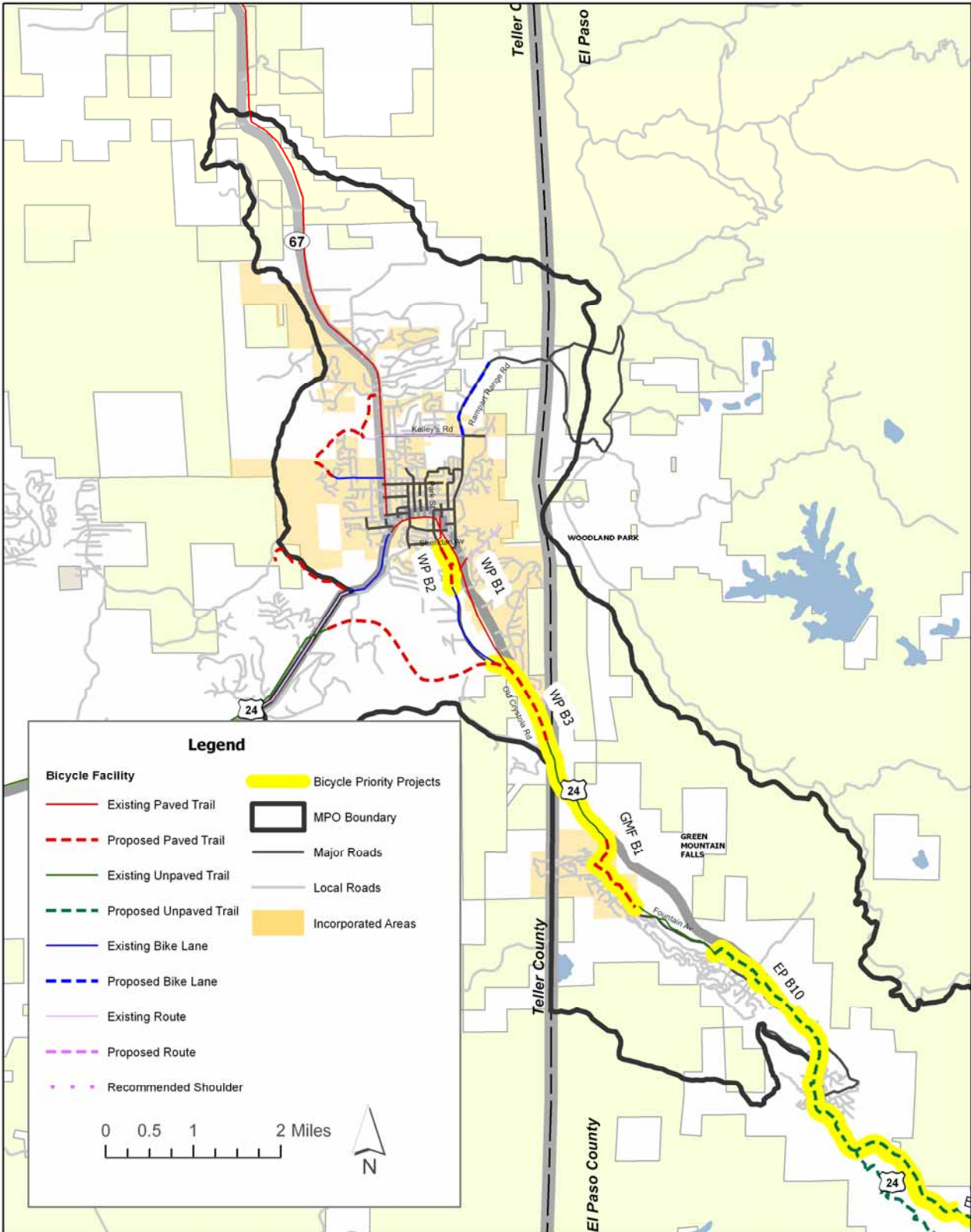
Woodland Park/Green Mountain Falls Vision Plan





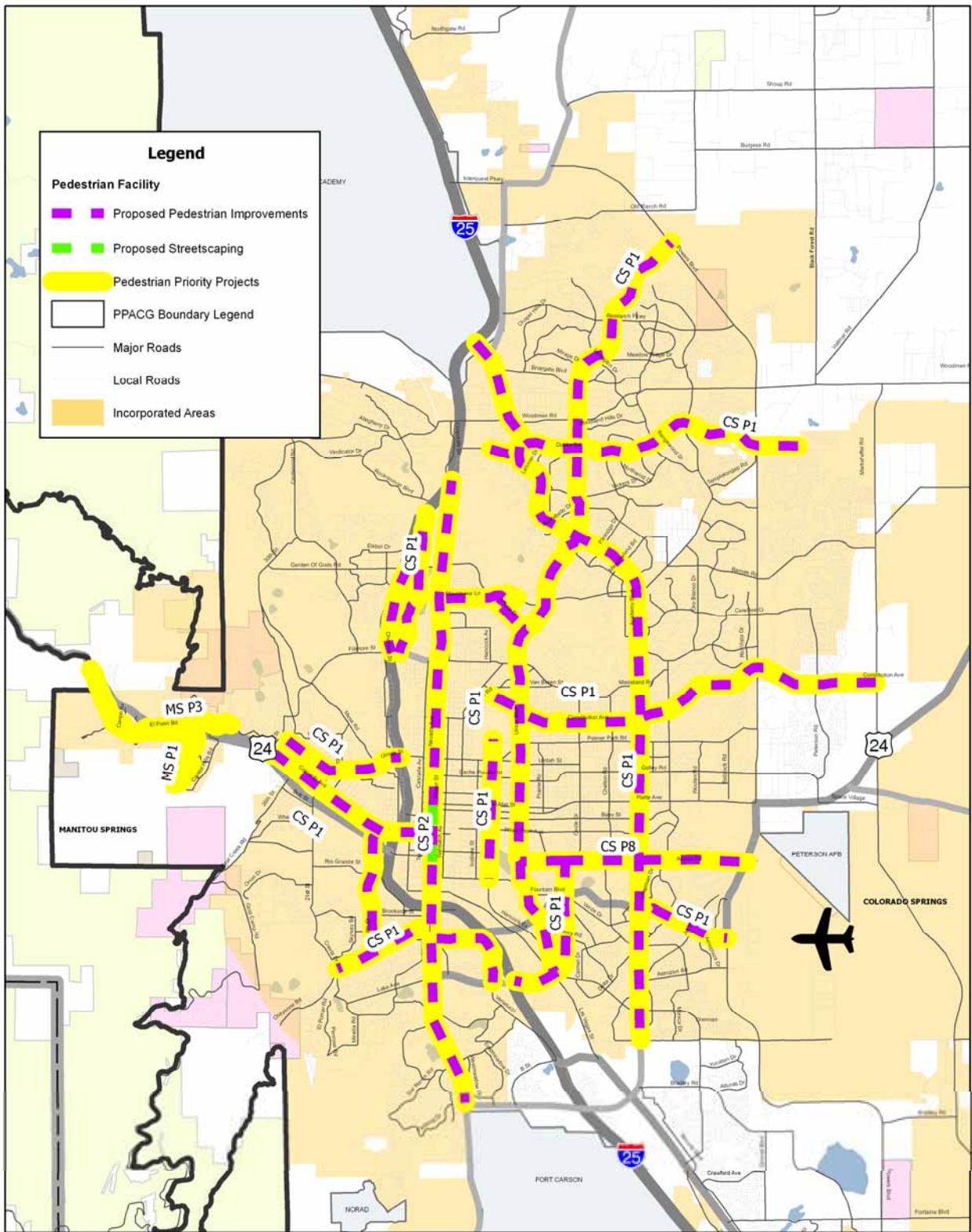


### Woodland Park/Green Mountain Falls Bicycle Priority Projects



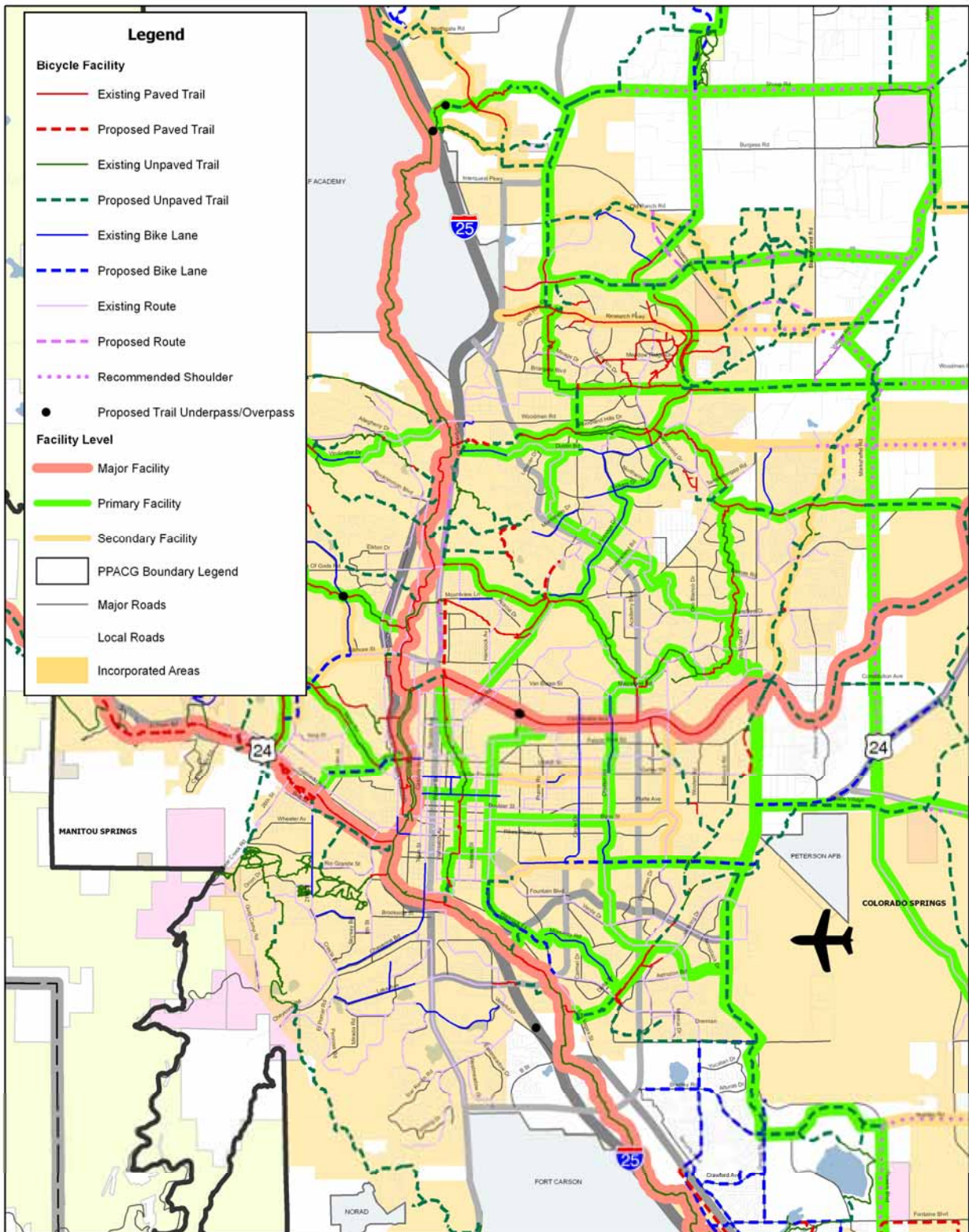


### Colorado Springs Pedestrian Priority Projects



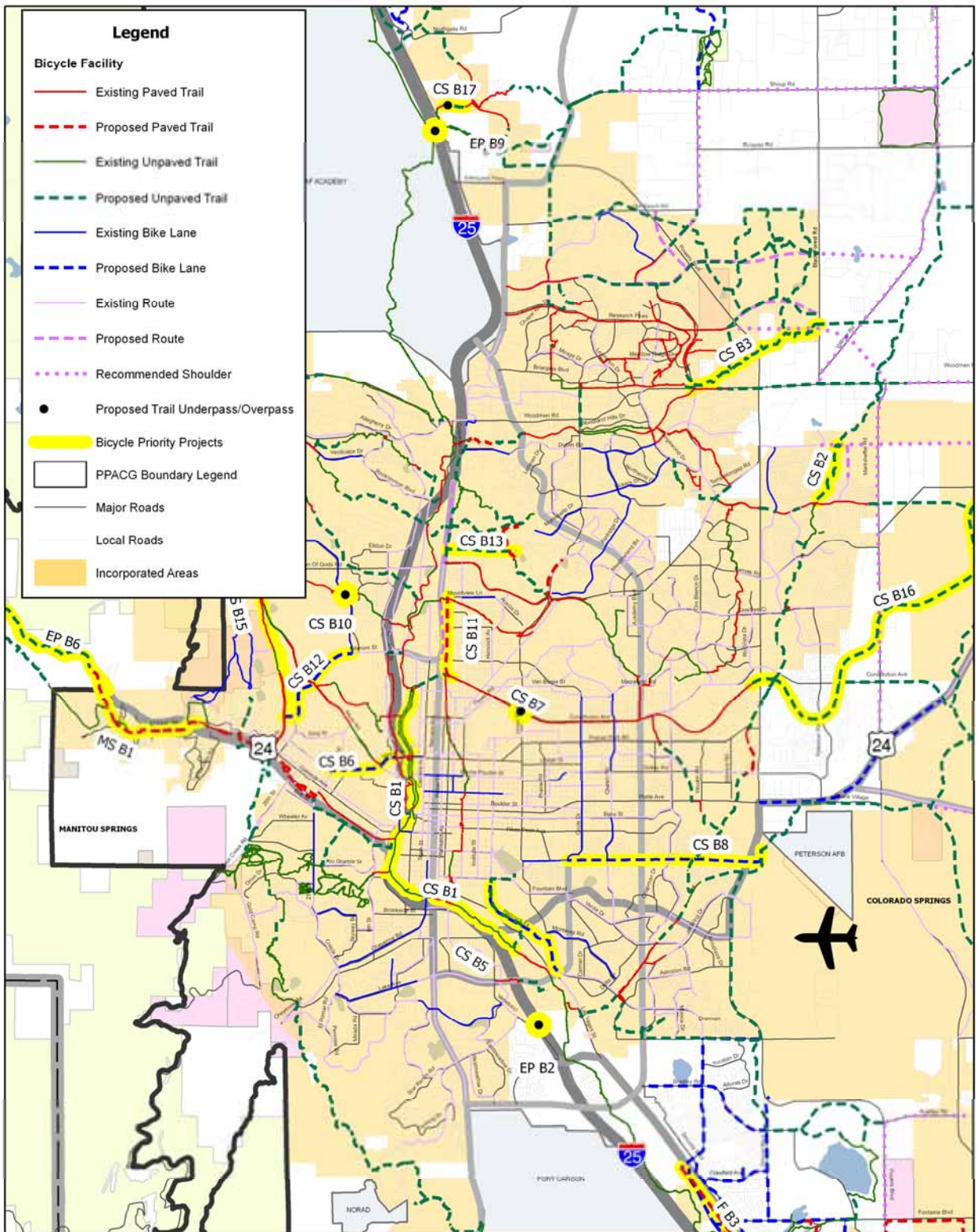


### Colorado Springs Vision Plan



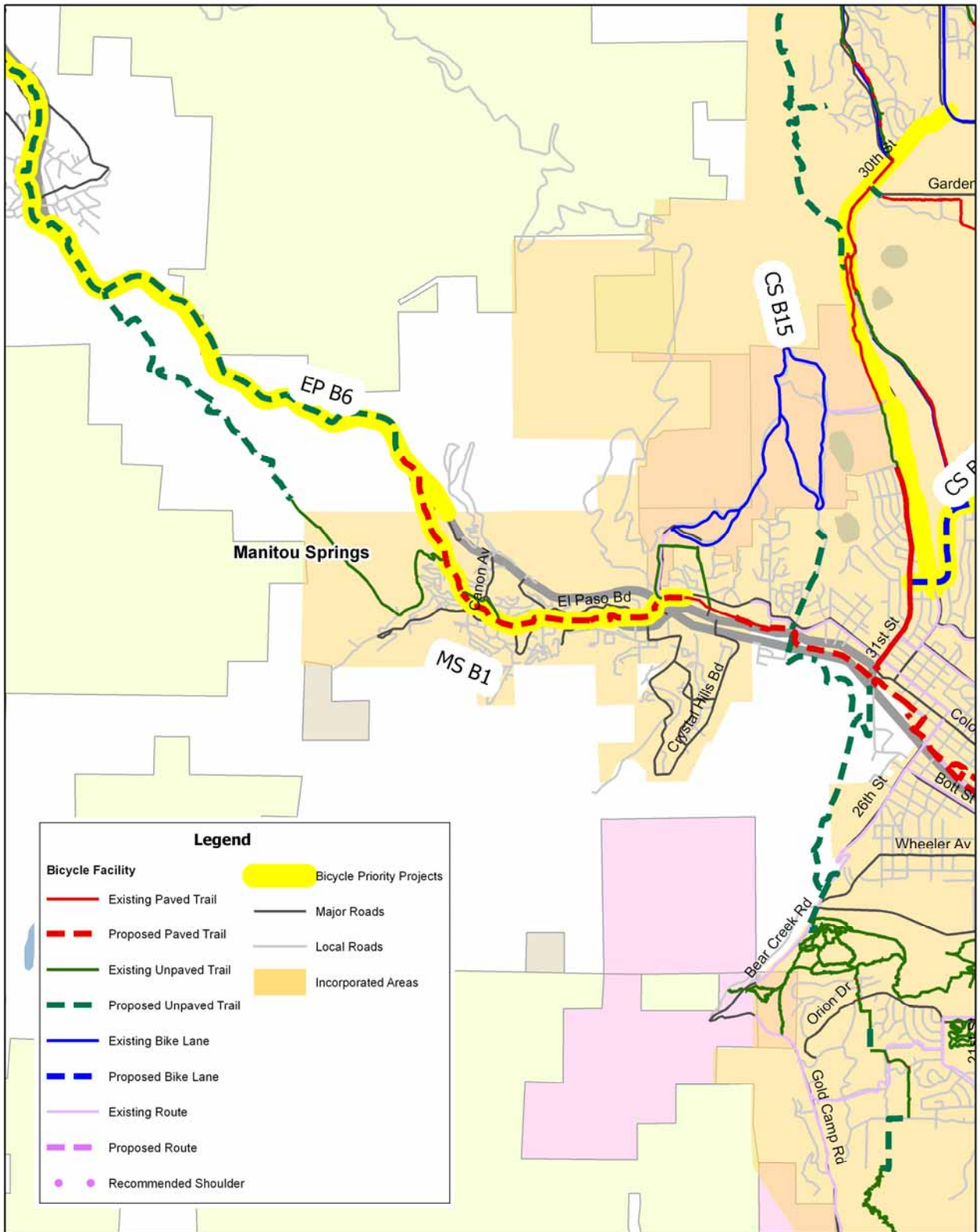


### Colorado Springs Bicycle Priority Projects



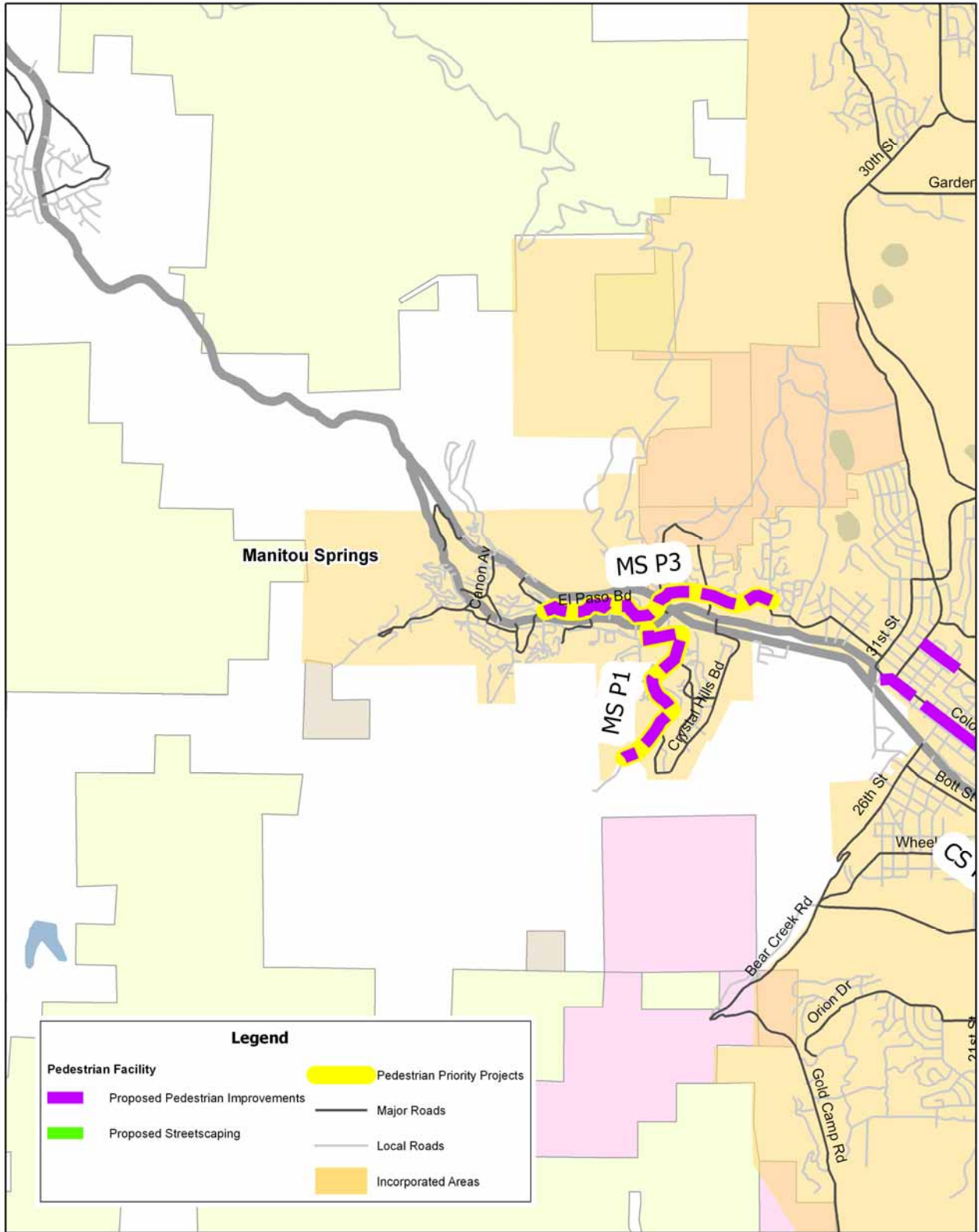


### Manitou Springs Bicycle Priority Projects





### Manitou Springs Pedestrian Priority Projects



# APPENDIX E

## APPENDIX E: HUMAN SERVICES COORDINATION PLAN

# Executive Summary

## Introduction

This study provides a Human Services Transportation Coordination Plan (also referred to in this document as the “Coordination Plan) for the Pikes Peak region, which includes the Colorado Springs metropolitan planning area covering approximately the western half of El Paso County and the Woodland Park area of Teller County (see Figure ES-1, Study Area). The planning process provides an opportunity and an impetus for the region to make decisions about the next steps in coordinating transportation services. It will result in setting priorities for specialized transportation service projects and for transportation services oriented to serving employment trips.

With the 2005 passage of federal transportation bill (known as SAFETEA-LU) there is a requirement for the preparation of coordination plans for entities that will access Federal Transit Administration funds. The plan is to be developed through a process that includes representatives of public, private, and non-profit transportation and human services providers and participation by the public. A specific requirement for a coordination plan is identified for three funding programs of the Federal Transit Administration:

- FTA Section 5310 – Transportation for Individuals who are Elderly and Individuals with Disabilities.
- FTA Section 5316 – Job Access Reverse Commute Program for low-income individuals for transportation to jobs.
- FTA Section 5317 – New Freedom for services and facility improvements to address needs of persons that go beyond those required by the Americans with Disabilities Act.

Human services transportation, also referred to as “specialized transportation services” in this document, is defined as those services that provide transportation for persons with disabilities, elderly persons, low-income job seekers and newly-hired individuals, and other persons who may qualify for such services. These services can be funded through various human services and transportation programs of federal, state and local governments, and by private charitable organizations. In this region those services are provided by Community Intersections, Community Partnership for Child Development, Fountain Valley Seniors, Metro Transit and Metro Mobility, Pikes Peak Partnership/Amblicab, Silver Key Senior Services, Teller Senior Coalition, The Resource Exchange, and other community organizations, churches, and nursing/assisted living facilities.

This Coordination Plan identifies transportation needs of individuals with disabilities, older adults, and individuals with limited incomes, provides strategies for meeting those local needs, and prioritizes transportation services for funding and implementation. It focuses on three areas:



- Proposed recommendations to modify the planning process to respond to the new programs and regulatory guidance;
- Proposed Projects and steps to take in coordinating specialized transportation services; and
- Preparation of a Job Access Reverse Commute (JARC) Plan as an eligibility step for the City of Colorado Springs to apply for a project using Federal Transit Administration Section 5317 funding.

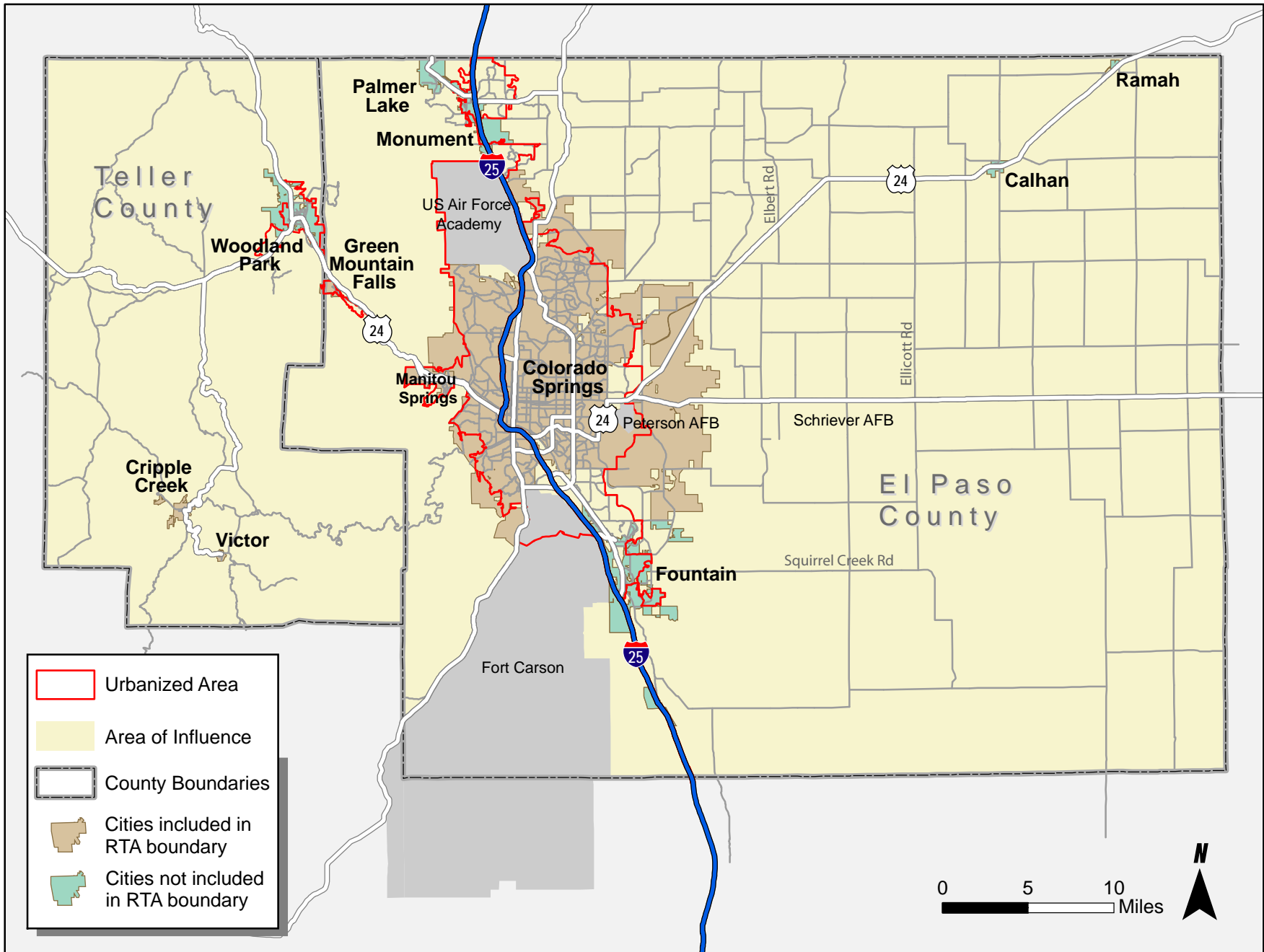
The Pikes Peak Area Council of Governments has long been working toward increased coordination in the delivery of specialized transportation services. This planning process builds upon a solid level of planning work for fixed-route and specialized services in the region.

## Human Services Transportation Coordination Plan Development Process

The Human Services Transportation Coordination Plan development process involved input those directly involved in planning, funding and/or delivering services to individuals with disabilities, elderly persons, and low-income job seekers and input from the public. PPACG partnered with the City of Colorado Springs to fund consultant services to assist in preparing this plan. The City of Colorado Springs funded the Job Access Reverse Commute portion of the planning effort, and coordinated that effort with the Human Services Transportation Coordination Plan development. Both entities contracted with Nelson\Nygaard Consulting Associates to prepare both documents.

Pikes Peak Area Council of Governments has an active Specialized Transportation Advisory Subcommittee (STAS) that provided a forum for addressing issues related to specialized transportation. As a means to obtain critical input from transportation providers, funding agencies, and organizations that serve clients who need specialized transportation services, representatives of these agencies and organizations were invited to meet with the STAS membership. This group was referred to as the STAS Working Group. In addition, those stakeholders specifically interested in the Job Access Reverse Commute program met as a subgroup to examine services needs, opportunities, and alternatives.

**Figure ES-1 Human Services Transportation Coordination Study Area**



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The STAS Working Group was actively involved in developing the Coordination Plan, representing a variety of viewpoints and providing study guidance. The study and plan development process included:

- Analysis of community characteristics;
- Interviews with key stakeholders to inventory existing services and assess community needs;
- Development of alternatives with JARC subcommittee for the Job Access plan;
- Identification of four umbrella alternatives, and refinement of the components of these alternatives over the course of several meetings with the STAS full committee and the Working Group;
- Identification of goals and project selection criteria, based on the draft Vision, Mission, and Principles that were under development for the 2008-2035 Regional Transportation Plan;
- Development of planning process alternatives;
- Work with stakeholders to select recommended alternatives; and
- Development of an implementation plan for putting the recommended alternative into operation.

Once completed, this Coordination Plan will be incorporated into the 2008 through 2035 Regional Transportation Plan. In addition, the Job Access Reverse Commute element of the coordination plan was prepared as a free-standing document and integrated into this overall Coordination Plan.

## Analysis of Needs

The study team evaluated the existing transit services and demographic characteristics to determine gaps in services, which are discussed in Chapters 2 and 3. Chapter 4 discusses needs of the system, both for fixed –route transit and specialized transportation services.

Chapter 2 describes key community characteristics that impact the need for transit services. It includes a description of the study area, key demographic characteristics, the location of activity centers, and information on the location of employment, key employers, and training facilities in the area.

Chapter 3 summarizes the range of existing transportation services available in the region. General information is provided on a wide range of services and the programs that fund those services. More detailed information is provided on the primary fixed-route transit system and specialized service providers to set the stage for considering alternatives for the coordination of these services.

Chapter 4 provides an assessment of needs for fixed-route transit and specialized transportation needs. Important needs for fixed-route transit are:

- Additional service in the northern part of the urbanized area and other areas where service coverage is limited;
- Increased frequencies on routes, particularly in peak hours or where service is well used;
- Improved connections for more direct and timely service to important destinations; and,
- Additional service in evening, late night, and weekend periods.

The following important specialized service needs and issues were identified in Chapter 4:

- Specialized transportation services are too limited to meet the demand for services.
- Limited funding and declining reimbursement rates from federal and state agencies are further constraining services.
- While the Metro Mobility service, a requirement of the Americans with Disabilities Act (ADA), has increased overall mobility of residents with disabilities, because it only operates within the ADA requirements it cannot meet all related service needs.
- Each of the agencies brings a unique and important type of service to the community, and these varying levels of service are needed in the region. They should be preserved and expanded.
- Geographic constraints create problems for riders and result in more than one provider serving these hard to reach locations. Riders who live outside the ADA service boundary, particularly in the north part of the urbanized area where services are limited, face considerable hurdles in obtaining services. Planned implementation of a flexible route service in Briargate and Rockrimmon will address some of these needs.
- There is a need to improve the quality of service, especially in terms of reliability.

## Goals and Challenges

The Vision for this study is to provide mobility to individuals with specialized transportation needs, allowing them to live independently and participate in community life. This Vision, and the Mission Statement and Goals that support it, were designed to complement the Vision, Mission, and Principles of the 2008 – 2035 Regional Transportation Plan, and reflect the views of the stakeholders for specialized transportation services who participated in the STAS Working Group. The Mission and Goals, summarized below, are discussed in Chapter 5.

**Mission:** To establish the planning and service delivery structures that will enable the region to effectively and efficiently meet the diverse needs of individuals with specialized transportation needs.

## Goals:

1. To strengthen the region's network of specialized transportation providers, maintaining and supporting the identity of each provider, in order to provide increased mobility in the region.
2. To provide for alternative services (for example, mileage re-imburements; volunteer drivers; vehicle sharing; mobility training; and vouchers for gas or car repairs) in order to meet diverse human service transportation needs at the lowest cost.
3. To improve the overall condition of the providers' vehicle fleets so they are safe, cost-effective to maintain, and meet passenger needs, with adequate back-up vehicles to provide reliable service.
4. To develop and implement common standards of driver training to provide for safe drivers who can be cross-trained for different services and clientele.
5. To develop a simple, uniform system of eligibility for all services in the network.
6. To develop common customer information that explains the range of service options and encourages rider responsibility for choosing the most appropriate and cost-effective option.

In order to achieve these goals, there are a number of challenges that must be addressed by the transportation providers and by key stakeholders. Among the challenges discussed in Chapter 4 are:

- Building consensus between agencies with different missions in terms of leadership and coordination roles;
- Determining the best use of participating agencies' resources;
- Funding improved service through new and existing streams; and
- Increasing public awareness of new and available specialized transportation services.

## Approach to Coordination

The different facets of increasing coordination are described in separate chapters. Chapter 5 addresses changes in the transportation planning process. Chapter 6 focuses on alternatives to increase the coordination of specialized transportation service delivery. Activities to increase access to jobs for individuals with low incomes and criteria for evaluating projects are presented in Chapter 7. A brief description of each follows.

### **Transportation Planning Process**

Chapter 5 focuses on changes in the planning and decision-making process needed to support increased coordination. Changes in the planning process are needed in order to respond to the new SAFETEA-LU transportation legislation and to meet new coordination challenges. In addition to goals, it:

- Evaluates the potential of the City of Colorado Springs and/or the Pikes Peak Area Council of Governments to serve as the designated recipient of Federal Transit Administration (FTA) funding available from Sections 5316, Job Access Reverse Commute Program, and Section 5317, New Freedom Program.
- Discusses the specific responsibilities of the lead planning agency and designated recipient and recommends how these can be defined in the region; and
- Describes selection criteria for projects submitted for funding to the FTA Section 5310 – Elderly Individuals and Individuals with Disabilities Program, Section 5316 – Job Access Reverse Commute Program, and Section 5317- New Freedom Program.

The proposal is that the City of Colorado Springs continues to be the designated recipient for the Section 5316 program and becomes the designated recipient for the Section 5317 program, working in conjunction with Pikes Peak Area Council of Governments as the lead planning agency. These responsibilities would be defined through revisions to the Memorandum of Agreement that exists between the two entities.

It is further proposed that the Specialized Transportation Advisory Subcommittee be elevated to full committee status under PPACG's Board of Directors and take on more responsibilities for coordination, including an active role in developing service policy recommendations and in the annual selection of projects. To date, the Specialized Transportation Advisory Subcommittee (STAS), a subcommittee of the PPACG's Transportation Advisory Committee, has been charged with the responsibilities of planning for the human services transportation and with facilitating loosely structured coordination of services. This study proposes that STAS take on the additional responsibilities of playing an advisory role in implementing the proposed joint call scheduling system and the proposed transportation brokerage. The intention is that this will provide an opportunity for the group to grow, serving as the local coordinating council for the region, and enable the STAS to benefit from direct oversight of PPACG's Board as well as the ability to accelerate its recommendations through PPACG's approval process. It is envisioned over the long term, that the transportation brokerage system could eventually become an independent entity, requiring a board of its own. The STAS as a coordinating council could establish a working relationship that will help it to evolve into the group that could become the board of the brokerage.

## **Alternatives to Increase the Coordination of Specialized Transportation Services**

The focus of Chapter 6 of the Human Services Transportation Coordination Plan is on alternatives for coordinating specialized transportation services, with an emphasis on those services operated by the City of Colorado Springs, Silver Key Senior Services, The Resource Exchange, Pikes Peak Partnership (Amblicab), and Fountain Valley Senior Services. There are a variety of other human service programs with varied funding, and it is the intention that these may participate as well once a structure is in place that would enable other entities to participate in a unified system.

The framework for discussing and evaluating the coordination alternatives is based on four broad coordination alternatives:

1. Status Quo Alternative
  - Each agency continues its current methods and level of coordination.
  - The level of service may decline due to lower revenues in some agencies.
2. Limited Coordination Alternative
  - Implement those coordination activities that enable each entity to continue separate operations.
  - Examples include putting out combined customer information materials, working with the 211 system, sharing driver training classes, and working together with agencies using vouchers to create a single voucher system.
3. Joint Call Center and Scheduling Alternative
  - Establish a joint call center and joint scheduling as the foundation of a system that will aid in better utilizing resources.
  - Other items included in Limited Coordination Alternative could also be included.
4. Defined Plan for a Comprehensive Transportation Brokerage
  - Define a step-by-step plan that will result in an active brokerage for transportation services that will:
    - Cover the service areas of all participating agencies;
    - Preserve the unique role in the community of each of the participating entities;
    - Provide a wide range of services (curb-to-curb, door-to-door, and door-thru-door) as needed for various client abilities;
    - Enable entities to purchase transportation services if they wish to do so;
    - Provide for joint decision-making; and
    - Build community support for additional resources for specialized transportation.
  - The plan for the brokerage would include a joint call center and scheduling, sharing vehicles, joint training, and an array of other coordinated efforts.
  - The brokerage would likely take five years to implement, with dedicated staff.

### **Access to Jobs for Individuals with Low Income**

As part of the Human Services Transportation Coordination Study and Plan, a plan for Job Access and Reverse Commute services was proposed in Chapter 7, including the following components:

1. Transit Voucher Program and Late Night Service;
2. Focused Service to North Area Employers; and



3. Other alternatives to be developed for the long term based on operational experience gained by implementing the initial service priorities.

## Study Recommendations and Proposed Implementation Plan

The study recommendations and proposed implementation plan presented in Chapter 8 summarizes the recommendations in each of the three major areas addressed in the Human Services Transportation Coordination Study and Plan: the planning process, specialized transportation, and Job Access/Reverse Commute (JARC). Based on the study recommendations, a proposed plan with steps for action, a suggested time schedule, and estimated costs and funding sources for each activity is presented. These are presented as a guide, and timing would depend somewhat on agency approval, submittal and approval of project grant applications, and the various activities involved with implementation.

The Joint Call and Scheduling Center Alternative for service providers is recommended concept to address better coordination of specialized needs of human services transportation in this region. Further, the intention of potentially developing a human services transportation brokerage will be explored in more depth in 2007. A brokerage would enable coordination among a greater number of agencies and provide a wider range of services than the individual agencies now provide.

### Planning Process Proposals

The following proposals are made to enhance the planning process to enable the region to meet its human service transportation coordination vision, mission, and goals:

1. That human service, specialized, and employment transportation be coordinated on a regional basis, covering El Paso and Teller counties. These efforts would be guided by the draft vision, mission, goals, service standards, and evaluation criteria presented in Chapter 5.
2. That the City of Colorado Springs continue to be the designated recipient for Federal Transit Administration 5316 (Job Access / Reverse Commute) funds and become the designated recipient for Section 5317 (New Freedom) funds.
3. That Pikes Peak Area Council of Governments (PPACG) serve as the lead planning agency for these programs, integrating the planning and project selection aspects into its regional planning activities.
4. That the City of Colorado Springs and PPACG define their respective roles for this process through an update to their Memorandum of Agreement.
5. That PPACG support the development of a brokerage for specialized transportation through:

- a. Providing oversight for the development of a brokerage and implementation of the various coordination projects. This could be accomplished through additional staff or consulting assistance.
- b. Transitioning the Specialized Transportation Advisory Subcommittee of the Transportation Advisory Committee to full committee status. As a “public transportation coordinating committee,” the group would be expected to take on a stronger service policy recommendation and oversight role, support coordination efforts for specialized and job access transportation, and expand its stakeholders to include stakeholders with interests in human service transportation, job access for low-income job seekers, and specialized transportation services.

The brokerage for providing transportation services may spin off as a private non-profit organization, in which case a board to direct its activities would be required.

### **Proposed Specialized Transportation Coordination Efforts**

Specific activities to move this concept forward are:

1. Hire a mobility manager or obtain mobility management consulting services.
2. Establish a joint call and scheduling center in a three-step process:
  - a. Separate the call and scheduling function from the current Metro Mobility contract.
  - b. Add the Coordinated Transportation module to the existing Trapeze system (a scheduling and dispatching software), setting it up for all providers and fund sources (including Medicaid), and testing the system so it is fully functional.
  - c. Transfer the current call and scheduling functions from participating agencies to the joint center.
3. Carry-out a study to further investigate the concept of a brokerage and determine what structure would be effective and functional for the Pikes Peak region.
4. Implement ancillary activities to include acquiring communications equipment, preparing common customer information materials, and developing common driver training standards.
5. Support a well-maintained fleet that is matched in size to operating resources and demand for services.

### **Proposed Job Access / Reverse Commute Plan**

The recommendation of the Job Access Reverse Commute Plan is to implement a pilot program to operate late night call-and-ride service, operating from 10 PM to 6 AM, six days per week. Using the Federal Transit Administration's Job Access Reverse Commute funding category for 50 percent of the project cost, this service will enable workers to get to and from jobs that end after 10 PM or start before 6 AM.

Figure ES-2 presents a table summarizing a proposed schedule of activities through 2007 and 2008 necessary to implement coordination activities as proposed in the Plan.

**Figure ES-2 Schedule of Activities**

<i>Planning Activities</i>	2006		2007												2008			
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Restructure STAS																		
Adopt Evaluation Criteria																		
Designated Recipient																		
Update Memorandum of Agreement																		
<b><i>Specialized Transportation Coordination Activities</i></b>																		
Job Description, Advertise and Interview Mobility Mgr.																		
Refine Call Center Project																		
Develop & Sign IGA																		
Develop RFP for Call Center																		
Locate a facility; obtain T-1 line access																		
Procure CT Module																		
Install, test, and train on CT Module and Trapeze																		
Common customer information																		
Other providers transition to joint center																		
Brokerage: Fund, write scope, and procure services																		
Brokerage: carry out study																		
Driver Training: collect information & refine project																		
<b><i>Job Access Plan Activities</i></b>																		
Obtain vehicle for Late Night Service																		
Refine and prepare for service																		
Implement service																		

## Proposed Project Costs and Funding

A proposed four-year funding plan is identified in Figure ES-3. This plan is based on the level of revenues anticipated to be available. Some projects can be funded through more than one fund source. Based on applications received and final availability of funds, funding may be adjusted to reflect necessary changes.

Additional detail was provided in Chapter 7 on the JARC Late Night Service Project. Additional detail is also provided on the costs and funding of the proposed Joint Call and Scheduling Center, in Figure ES-4. This project will use existing revenue streams for most of the ongoing operating expenses.

**Figure ES-3 Proposed Four-Year Funding Plan**

ACTIVITIES AND COST <sup>(1)</sup>	2007	2008	2009	2010
<b>Mobility Manager</b>	\$52,500	\$80,000	\$80,000	\$80,000
<b>Joint Call &amp; Scheduling Center</b>				
Trapeze CT Module	\$30,000			
T-1 Line	\$50,000			
Furnishings & Equipment	\$15,000			
Training	\$15,000	\$5,000		
Ongoing Operating Costs	\$415,000	\$415,000	\$415,000	\$415,000
<b>Brokerage Study</b>	\$60,000			
<b>Customer Information</b>	\$5,000	\$5,000	\$5,000	\$5,000
<b>MDT / AVL Equipment</b>	\$159,000			
<b>Radio Equipment</b>		\$332,000		
<b>JARC Late Night Service</b>				
Capital Expense	\$60,000			
Operating Expense	<u>\$230,000</u>	<u>\$230,000</u>	<u>\$230,000</u>	<u>\$230,000</u>
	\$1,091,500	\$1,067,000	\$730,000	\$730,000
<b>FUNDING</b>				
FTA 5310		\$64,000	\$64,000	\$64,000
FTA 5316 JARC	\$148,284	\$115,000	\$115,000	\$115,000
FTA 5317 New Freedom	\$194,000	\$99,000	\$99,000	\$99,000
Other (planning and capital) <sup>(2)</sup>	\$148,000	\$265,600		
Local Match <sup>(3)</sup>	<u>\$601,216</u>	<u>\$523,400</u>	<u>\$452,000</u>	<u>\$452,000</u>
	\$1,091,500	\$1,067,000	\$730,000	\$730,000

Footnotes:

1. Estimates for a calendar year, although it was assumed in 2007 that the Mobility Manager would not be hired until near the middle of the year.
2. Other funds might include 5307, 5310, 5316, 5317 or other fund sources.
3. Local match may come from existing agency providers or other sources.

Two items are worth noting. The funding projected for the FTA 5310 revenues are about \$40,000 higher than projected as the average award – and this does not count the amount generally received for vehicles. Also, Funding for the federal share of the planning project, and MDT/ AVL and radio equipment has not yet been identified. This amounts to \$48,000 in planning funds and \$393,000 in capital funds.

**Figure ES-4 Draft Budget for Proposed Call and Scheduling Center**

EXPENSES	Personnel Detail	Total Costs	
		Operating	Capital
<i>Staffing Costs</i>			
Manager	\$50,000		
Reservations Agents	\$190,000		
Scheduler	\$60,000		
	TOTAL PERSONNEL	\$300,000	
<i>Telephone</i>			
		\$8,000	
<i>Reservations/Scheduling System</i>			
T-1 Line			\$50,000
Current Trapeze system - City of CS owns			
Current Maintenance/Licensing on Trapeze		\$60,000	
Additional maintenance on new module		\$10,000	
Purchase new CT Module			\$30,000
Training on New System		\$12,000	
<i>Facility Rent<sup>(1)</sup></i>			
		\$40,000	
<i>Furnishings and Equipment</i>			
TOTAL		\$430,000	\$95,000
<b>FUNDING SOURCES<sup>(2)</sup></b>			
<i>Local Funding</i>			
		\$331,000	\$19,000
<i>Federal Funding</i>			
5310 Funding		\$50,000	\$61,000
New Freedom		\$49,000	
TOTAL		\$430,000	\$99,000

(1) *Facility Rent:* Determine if space in a current facility can be used (and a T-1 Line installed at a cost effective level)

(2) *Budget Assumptions*

- Mobility Manager needed to see this process through (\$65,000 w/ benefits, funded by New Freedom and local match)
- All participants contribute what they do today, balanced out over a three-year period.
- Use "built-up" New Freedom funds and apply for 5310 dollars for initial costs - but these will take some time to receive.
- Current costs are projected to be covered by existing entities current budgets; new costs will use new funding sources.
- In calculating costs, the existing expenditures were used to determine maximum to be paid by each agency and the share allocated to each entity. the major current costs were for call takers and schedulers and for software costs.
- Over time, participants will adjust costs based on number of trips scheduled for each agency's vehicles.

(3) *Pikes Peak Partnership* will provide some inkind staffing support with their existing scheduler/dispatcher spending some shifts in call center, based on need for her in dispatch / supervisory role for Amblicab service.

## Conclusion

This study was developed with the cooperation of many individuals and agencies. The proposed concepts identify a workable means for improving coordination of human services transportation and public transportation services. It addresses the regional planning process and proposes specific activities for coordination of specialized transportation and employment transportation to meet the needs of human service agencies.

This plan outlines and proposes an ambitious scope of work for the upcoming four years. The proposed activities identified in this plan can provide a solid foundation for building a coordinated transportation network meeting the needs of human service agencies and the general public.

Implementation of this proposed plan will require leadership and the continued cooperation of the many stakeholders in the region. It will take flexibility, respect for the missions of the varied agencies in the region, creativity, and patience as the partners work to implement this plan. The next few years will bring challenges as the partners adjust the planning process to reflect the need for increased coordination, develop a joint call and scheduling center, and determine how a brokerage can be developed that will meet the region's needs. With these improvements and new relationships developed between the stakeholders, the vision of an improved transportation network will be much more attainable.

## The Full Report

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# APPENDIX D

## APPENDIX D: PUBLIC PARTICIPATION AND COMMENTS



## ***MOVING FORWARD* Participation Process**

### **Introduction**

The *MOVING FORWARD* 2035 Regional Transportation Plan was prepared through a process that relied heavily on participation of local jurisdictions, agencies with other planning responsibilities, and the public. Over 1500 citizens participated in-person in plan development activities; nearly 200 staff members, citizens, and elected officials devoted thousand's of hours to collecting data, reviewing materials, and participating in committee meetings and workshops; 150 citizens, neighborhood activists, and civic and business leaders came together to map needed transportation system improvements and ideas; hundreds of individuals filled out the on-line transportation survey; and countless more received information through the website, direct emails, newsletters, and media announcements.

The *MOVING FORWARD* process was built upon the Regional Transportation Planning Vision, Mission, and Principles that had been developed and adopted by the Pikes Peak Region in 2006.

The transportation Vision for Pikes Peak Region is:

Create a pre-eminent multi-modal transportation system that meets regional mobility and accessibility expectations as essential elements of the Pikes Peak Area's quality of life.

PPACG's Board of Directors provided direct guidance to all participants in the *MOVING FORWARD* Process Mission:

Plan multi-modal transportation facilities and services that efficiently move people and goods and support economic vitality while sustaining and improving the quality of life in the Pikes Peak Region.

The *MOVING FORWARD* public participation process augmented PPACG's committee process to broaden community outreach and ensure relevant input and information at key decision points in the plan development process. Figure D-1 illustrates key decision milestones in the plan development process.

Input from all participants was carefully evaluated and given fair consideration throughout the *MOVING FORWARD* process. Input was compiled and, where appropriate, summarized to provide to PPACG Board members, advisory committee and working group participants, and planning staff public perspectives as the plan was developed. Public input and comments were presented on PPACG's website, made available to subsequent public outreach activities, and are listed in Exhibit A of this Appendix as part of the final plan documentation.

## Public Participation Planning

SAFETEA-LU requires Metropolitan Planning Organizations (MPO) to develop and utilize a participation plan that provides reasonable opportunities for interested parties to comment on the metropolitan transportation plan and metropolitan transportation improvement program (TIP). Further, this participation plan must be developed “in consultation with all interested parties,” and the public must have input on the participation plan. The participation plan must describe “explicit procedures, strategies, and desired outcomes” for elements of the participation program.

PPACG maintains public involvement procedures that are used to guide public participation in its regional transportation planning and programming processes. PPACG adopted the latest update to the *Regional Transportation Planning Process Public Involvement Procedures* in October 2005, and that document serves as PPACG’s participation plan to address new SAFETEA-LU public participation and consultation

Figure D-1 Key Decision Milestones

	January - December 2006 Completed	January - September 2007 In Progress	June - November 2007 In Progress	November 2007 - February 2008 Future Action
<b>Milestones</b>	Identify Issues, Constraints and Opportunities	Define Alternatives	Analyze and Refine Alternatives	Recommend Plan and Implementation Program
<b>Public Involvement Activities</b>	Open Houses Comments on Vision, Mission and Principles Web Page	Traveling Community Events On-line Survey Regional Transportation Roundtable Web Page	Focus Groups On-line Survey Web Page	Public Meetings Final Public Hearing Web Page
<b>Committee Involvement*</b>	Input and Refinement of Vision, Mission and Principles	Input on Alternatives and Evaluation Criteria	Evaluate Alternatives and Compose Preliminary Plan	Recommend Plan to the PPACG Board of Directors

\* Community Advisory Committee (CAC)  
 \* Specialized Transportation Advisory Subcommittee (STAS)  
 \* Transportation Advisory Committee (TAC)  
 \* Transportation Enhancement Subcommittee (TES)  
 \* Air Quality Technical Committee (AQTC)

requirements. A copy of the *Regional Transportation Planning Process Public Involvement Procedures* is included in Appendix C of the *MOVING FORWARD 2035* Regional Transportation Plan.

## **Public Involvement Goal and Objectives:**

The stated goal of PPACG's Public Involvement Procedures is:

To provide an environment encouraging pro-active and continuous public involvement while establishing and maintaining trust in the planning process. This is to be achieved through disseminating complete and timely information and providing full public access.

PPACG defined the following objectives in order to meet its Public Involvement Goal:

1. Provide timely notice of public involvement opportunities,
2. Obtain active public input early in the process,
3. Ensure that all citizens who wish to have input have that opportunity, and that all ideas are given fair consideration,
4. Obtain widespread community involvement throughout the planning process,
5. Conduct a public involvement program as a two-way learning process,
6. Perform outreach to those particularly affected by specific alternatives and plan recommendations – to involve them in the alternatives evaluation process,
7. Integrate and coordinate public input for regional and local entity planning processes, where possible,
8. Obtain and maintain the involvement of supporters of plan recommendations,
9. Utilize the Community Advisory Committee as an advisory committee for the public involvement program,
10. Provide feedback to the public to encourage their future involvement., and
11. Evaluate the effectiveness of the public involvement program on an ongoing basis.

To establish and maintain trust, PPACG encourages participation in all aspects of its planning process. Expanded public participation opportunities are called for in the development of the metropolitan planning process's two major products: the long-range transportation plan and the transportation improvement program. PPACG's committee structure plays a fundamental role in fulfilling its mission to coordinate and cooperatively address regional challenges. A regular schedule of committee and board meetings facilitates discussion among its partners and opens that process to the public.

To meet this greater level of public participation, PPACG secured the services of a public involvement consulting team. In late 2006, PPACG selected a consultant team, led by Catalyst Consulting, Inc.<sup>1</sup>, to help implement public participation activities in developing the *2035 Regional Transportation Plan*. The Catalyst Consulting team brought together experts in public involvement, media relations, and transportation planning to define and implement public involvement components. The consultant team helped PPACG staff implement a variety of public participation activities that provided multiple formats and options for the public to get involved in developing the plan.

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<sup>1</sup> The consultant team consisted of Catalyst Consulting, Inc. as project manager, assisted by LSA Associates, UrbanTrans Consulting, and Christensen Consulting.

*MOVING FORWARD* was the name chosen to identify the public involvement process to develop the 2035 Regional Transportation Plan. A custom logo was developed and was used on plan materials, on the *MOVING FORWARD* traveling booth, the website, and on the final plan document.



### **PPACG Committee Process**

In carrying out its mission as the Metropolitan Planning Organization, the PPACG Board of Directors solicits advice and recommendations from several citizen and technical advisory committees. The advisory committees play crucial roles in transportation plan and program development through providing advice, input, and perspective from local government jurisdictions, citizens representing all the communities in the Pikes Peak Region, and other key transportation stakeholders.

Three standing committees of PPACG meet monthly and provide input into transportation planning matters: the Air Quality Technical Committee, the Community Advisory Committee, and the Transportation Advisory Committee. The Transportation Advisory Committee is advised by two subcommittees: The Transportation Enhancement Subcommittee and the Specialized Transportation Advisory Subcommittee. Two other advisory groups contribute essential data for transportation plan development: the Regional Economic Forum and its Small Area Forecast Subcommittee.

Two ad hoc groups with specific roles were formed to assist with plan development. The Technical Steering Team, formed late 2005, provided ongoing technical advice in the development of PPACG's new travel demand model. The Public Participation Working Group was formed in early 2007 to facilitate two-way communication with key transportation stakeholders in the region during development of the *MOVING FORWARD* 2035 Regional Transportation Plan.

### **Community Advisory Committee**

The Community Advisory Committee (CAC) provides the means for citizens of the Pikes Region to have an ongoing role in planning activities undertaken by the Pikes Peak Area Council of Governments. In particular, the CAC is charged with providing ongoing input into public involvement methods to ensure that the public voice is "heard" in preparing transportation plans and programs. CAC is the lead committee for maintaining PPACG's Regional Transportation Public Involvement Procedures.

The Community Advisory Committee also serves an important role in preparing and reviewing draft transportation plan components. In that role, CAC assists PPACG staff and its fellow advisory committee, the Transportation Advisory Committee in refining draft proposals, documents, and graphics materials to more effectively communicate information to the public. Listed below is CAC's 2007 membership:

Citizen-at-Large

Trajn Boughan

Gary Richey

Francine Hansen, Chair

Jacqueline Dowds Bennett

City of Colorado Springs

Val Snider

Greg Souder

Mike Schmidt

City of Fountain

Richard Decker

Vacant

City of Manitou Springs

Steve Sinn

Kathy Verlo

City of Woodland Park

Kimberly Dimmett

Colorado Springs Chamber of Commerce

Stephannie Finley

Council of Neighborhood Organizations

Jan Doran, 2nd Vice-Chair

El Paso County

Robert Stein

Kyle Fisk

Dan Spohn, 1st Vice-Chair

League of Women Voters

Roger Armstrong

Teller County

Jane Mannon

Town of Green Mountain Falls

Vacant

Town of Monument

Steve Meyer

Town of Palmer Lake  
Vacant

PPACG (non-voting)  
Jennifer Young

**Transportation Advisory Committee**

The Transportation Advisory Committee (TAC) provides technical advice and recommends appropriate courses of action on current and emerging transportation issues, goals, plans, and programs. Its membership is composed of entity staff responsible for funding, planning, and/or implementing transportation services in the Pikes Peak Region. The following is a list of TAC's 2007 voting and non-voting membership:

**Voting Members**

City of Colorado Springs  
Craig Blewitt  
Kristin Bennett (Alternate)

City of Colorado Springs Transit Services Division  
Dave Menter  
Kristin Bennett (Alternate)

City of Fountain  
Duane Greenwood  
Dave Smedsrud (Alternate)

City of Manitou Springs  
Dan Folke, First Vice Chairperson  
Michael Leslie (Alternate)

City of Woodland Park  
Bill Alspach  
David Buttery (Alternate)

Colorado Department of Transportation  
Angie Drumm  
Vacant (Alternate)

Colorado Department of Transportation  
Wendy Pettit  
Richard Annand (Alternate)

El Paso County

Carl Schueler, Second Vice Chairperson  
Jennifer Irvine (First Alternate)

El Paso County

Vacant  
Rich Kramer (Second Alternate)

Teller County

Donald Moore

Town of Green Mountain Falls

Vacant

Town of Monument

Tom Kassawara, Chairperson  
Catherine Green (Alternate)

Town of Palmer Lake

Bob Radosevich  
Della Gray (Alternate)

**Non-Voting Members**

Air Quality Control Division

Jim Dileo

Colorado Springs Utilities

Vacant

Federal Highway Administration

William Haas

Federal Transit Administration

David Beckhouse

Fort Carson

Richard Orphan

Peterson Air Force Base

Glenn Messke

Schriever Air Force Base

Vacant

Mountain Metropolitan Transit General Manager

Bryant Worley  
David Agati (Alternate)

United States Air Force Academy  
Kit Roupe

PPACG  
Craig Casper

**Specialized Transportation Advisory Subcommittee**

The Specialized Transportation Advisory Subcommittee provides input and recommendations on matters related to the provision and coordination of human services transportation in the Pikes Peak Region. STAS is the lead input committee for developing the Human Services Transportation Coordination Plan. The Human Services Transportation Coordination Plan, approved by the PPACG Board of Directors in June 2007, recommended that the STAS become a full, standing committee of PPACG and serve as the coordinating council for human services transportation in the Pikes Peak Region. During the latter half of 2007, the STAS prepared bylaws and revised its membership to transition to the Coordinating Committee of Specialized Transportation. That process is expected to be completed in early 2008. The 2007 STAS membership is listed below:

**Voting Members**

Disability Services, Inc. (formerly Pikes Peak Partnership/Amblicab)  
Jane Hammoud, Vice Chairperson  
Ann MacDonald (Alternate)

City of Colorado Springs Public Works/Paratransit  
John Oliphint  
Vacant (Alternate)

Colorado Springs Independence Center  
Vacant  
Vacant (Alternate)

Colorado Division of Vocational Rehabilitation  
Rich Zajac  
Patty Wagner (Alternate)

Community Partnership for Child Development/Headstart  
Gloria Rizo-Ordenez  
David Stechman

Eastern Seals of Southern Colorado  
Vacant

Fountain Valley Senior Services  
Vacant



Dennis Crosser (Alternate)

Goodwill Industries

Vacant

Citizen-At-Large

Kevin Scott

3 Vacancies

Mountain Metro Mobility

Donna Harper

Glenn Padeway (Alternate)

Pikes Peak Mental Health Center

Vacant

PPAAA Regional Advisory Council

Linda Sanden

Ratu Solanki (Alternate)

Silver Key Senior Services

David Shaffer

Kelly Finnegan (Alternate)

Mountain Metropolitan Transit

Bryant Worley

David Agati (Alternate)

Teller Senior Coalition

Phyllis Sisolak

Barbara Riley-Cunningham (Alternate)

The Resource Exchange

Jim Hill

Sylvia Clark (Alternate)

Yellow Cab

Fred Hair

Community Intersections

Joe Vaccaro, Chairperson

**Non-Voting Members**

Colorado Department of Transportation-Transit Unit

John Valerio  
Vacant (Alternate)

PPACG  
Yolanda Roberts

PPAAA  
Guy Dutra-Silveira  
Eileen Porubsky (Alternate)

### **Transportation Enhancement Subcommittee**

The Transportation Enhancement Subcommittee (TES) provides input and recommendations to the Transportation Advisory Committee on priorities for federal transportation enhancement funding and planning issues relative to non-motorized transportation. Over the past eighteen months, the TES played an active role in the development of the Non-Motorized Transportation Plan, an element of the 2035 Regional Transportation Plan. Listed below is the 2007 TES membership:

#### **Voting Members**

##### **Colorado Department of Transportation-Region II Enhancement Coordinator**

Wendy Pettit  
Richard Annand (Alternate)

City of Colorado Springs  
Kristin Bennett, Vice Chairperson  
Vacant (Alternate)  
Jeff Haley  
Chris Lieber (Alternate)

City of Fountain  
Dave Smedsrud  
Duane Greenwood (Alternate)

City of Manitou Springs  
Michelle Anthony  
Dan Folke (Alternate)

City of Woodland Park  
Sally Riley

Colorado Springs Cycling Club  
Alan Severn  
Stan Hill (Alternate)

El Paso County

Vacant

Neil Katz

League of Women Voters

Judith Rice-Jones

Pikes Peak Historical Street Railway Fountain/Ute Pass Historical Society

Paul Loyd

Howard Noble (Alternate)

Metro Rides

Diane Evergreen, Chairperson

Vacant (Alternate)

Teller County

Vacant

Teller Historic and Environmental Coalition

George Parkhurst

Town of Green Mountain Falls

Dick Bratton

Town of Monument

Karen Griffith

Town of Palmer Lake

Della Gray

Bob Radosevich (Alternate)

Trail and Open Space Coalition

Dan Cleveland

Al Brody (Alternate)

**Non-Voting Members**

TAC Chair

Vacant

PPACG

Jason O'Brien

**Regional Economic Forum**

The Regional Economic Forum (REF) proposes specific economic development goals and objectives for the region and helps coordinate the activities between economic development organizations and local governments. The Small Area Forecast Subcommittee provides technical advice to the Regional Economic Forum on PPACG's 25-year population and employment forecast, known as the Small Area Forecast. The REF was formed in early 2006. The 2007 membership of the REF is as follows:

### **Voting Members**

#### Convention and Visitors Bureau of Colorado Springs

Terry Sullivan, President & CEO

Jim Cassidy, CFO

#### Colorado Springs Economic Development Corporation

Mike Kazmierski, President, CEO

#### Colorado Springs Chamber of Commerce

Will Temby, President, CEO

#### Housing and Building Association of Colorado Springs

Rhonda McDonald, Executive Vice President

#### Downtown Partnership of Colorado Springs

Beth Kosley, Executive Director

#### City of Colorado Springs Economic Development Department

Elena Nunez, Manager of Economic Development Division

#### El Paso County Economic Development Department

Deanne McCann, Economic Development Manager

#### Colorado Springs Airport

Mark Earle, Aviation Director

#### Manitou Springs Economic Development Council/Business Improvement District

Kitty Clemens, Director of Economic Development

#### City of Fountain Economic Development Department

Lisa Cochrun, Economic Development Coordinator

#### Greater Woodland Park Chamber of Commerce

Debbie Miller, Executive Director

#### City of Cripple Creek

Kyle Fenner, Economic Development Director

Colorado Springs Black Chamber of Commerce  
James Stewart, President

Hispanic Chamber of Commerce of Colorado Springs  
Sharon DeWitt, Executive Director

Southern Colorado Women's Chamber of Commerce  
Lynda Carmichael, President

Colorado Springs Utilities  
Jerry Forte, Chief Executive Officer  
Kelly Means, Chief Customer Officer  
Stephen Knopp, Strategic Account Program Manager

Pikes Peak Association of Realtors  
Terry Storm, Executive Director

Tri-Lakes Chamber of Commerce  
Vacant

Pikes Peak Community College  
Jaki Taggart, Director of Workforce Training  
Jon Stepleton, Executive Director Foundation & Development

Pikes Peak United Way  
Howard Brooks  
James Green, Campaign Director

Pikes Peak Work Force Center  
Peggy Herbertson, Executive Director

**Small Area Forecast Subcommittee**

The Small Area Forecast Subcommittee was formed to assist the Regional Economic Forum in technical review of the Small Area Forecast of Households and Employment for the *Moving Forward* 2035 Regional Transportation Plan. An ad hoc committee, its membership is:

**Voting Members**

City of Colorado Springs  
Mr. Timothy Scanlon, Senior Planner, Comprehensive Planning Division

City of Manitou Springs  
Mr. Dan Folke, Planning Director

City of Fountain  
Ms. Sheila Booth, Planner

City of Woodland Park  
Ms. Sally Riley, City Planner

Town of Monument  
Ms. Karen Griffith, Principal Planner

El Paso County  
Mr. Carl Schueler, Planning Division Manager, Department of Development Services

Teller County  
Ms. Jean Garren, Senior Planner

**Non-Voting Members**

Colorado Springs Airport  
Mr. William Keller, Airport Planning and Development Manager

Colorado Springs Utilities  
Ms. Melissa Wetzig, Senior Project Engineer, Water Planning and Design

The information on representation presented above was assembled in late 2007. However, committee membership is subject to frequent changes.

**Technical Steering Team**

To be added.

**Public Participation Working Group**

The Public Participation Working Group was formed in early 2007 to facilitate two-way communication with key transportation stakeholders in the region. It was composed of representatives from existing agency and community transportation organizations such as PPACG's advisory committees, Colorado Springs Citizens Transportation Advisory Board and El Paso County's Highway Advisory Commission. The Working Group's responsibilities were to assist in the development of public involvement methods and products designed to:

- Facilitate public outreach and communication;
- Obtain representative viewpoints of the region's citizens;
- Provide factual information on transportation planning topics; and
- Generate interest in the 2008 through 2035 Regional Transportation Plan development process.

Participants in the Public Participation Working Group were:

Specialized Transportation Advisory Committee  
Donna Rose, Colorado Springs Independence Center

Joe Vaccaro, Community Intersections  
Mary Cathryn Haller, Silver Key Senior Services  
Mike Decker, Silver Key Senior Services

Transportation Advisory Committee

Wendy Pettit, CDOT Region 2  
Janet Stephens, El Paso County

Transportation Enhancement Subcommittee

Kristin Bennet, City of Colorado Springs  
Avia Kallage, City of Colorado Springs  
Al Brody, Pikes Peak Area Bikeways Coalition  
Corinne Donahue, Mountain Metro Transit

Community Advisory Committee

Trajn Boughan, Citizen-at-Large  
Dan Spohn, El Paso County  
Steve Sinn, Citizen at Large

Colorado Springs Citizens Transportation Advisory Board

Jim Ramsey, Member

El Paso County Highway Advisory Committee

Brian Wess, Member

PPRTA Citizens Advisory Committee

Tom Harold, Member  
Bev Johnson, Member

Black Forest Land Use Committee

Phil Hosmer, Member

**Committee Meetings and Plan-Related Topics**

Table D-1 summarizes the PPACG Advisory Committee meetings where plan-related topics were discussed and acted upon. It should be noted that several changes occurred to PPACG's advisory committee and working group structure during the three years that components of the *MOVING FORWARD* 2035 Regional Transportation Plan were developed. The Regional Economic Forum was formed and the Socioeconomic Forecasting Committee became a subcommittee of the Forum. The Public Participation Working Group was activated in January 2007 to provide review proposed public participation activities, methods, and materials. A number of joint meetings and workshops were held to enable committees with different viewpoints to come together to hear each other's viewpoints, share ideas, and develop consensus on a number of issues and recommendations.

Air Quality Technical Committee – AQTC  
 Community Advisory Committee – CAC  
 Public Participation Working Group – PPWP  
 Regional Economic Forum - REF  
 Small Area Forecast Subcommittee – SAFS  
 Specialized Transportation Advisory Subcommittee - STAS  
 Transportation Advisory Committee - TAC  
 Transportation Enhancement Subcommittee – TES  
 Regional Transportation Plan – RTP

**Table D-1**  
***MOVING FORWARD* 2035 Regional Transportation Plan**  
**Advisory Committee and Working Group Agenda Items and Actions**

Agenda Items	Month & Year	Advisory Committees and Working Groups								Action
		AQTC	CAC	PPWP	REF	SAFS	STAS	TAC	TES	
Population and Employment Control Totals – TAC/SAC Joint Meeting	Feb 05					X		x		Discussion
Functional Classification	Feb 05							x		Discussion
Public Involvement Procedures	Feb 05		x					x		Discussion
Joint TAC&SAC Meeting Population and Employment Control Totals	Mar 05					X		x		Review & Recommend
Public Involvement Procedures	Mar 05		x					x		Discussion
Functional Classification	Mar 05							x		Discussion
Public Involvement Procedures	May 05		x					x		Information
Upcoming Milestones	May 05							x		Information
Public Involvement Procedures	Jun 05		x					x		Recommend Release for Public Review
Public Involvement Procedures	Jul 05		x					x		Receive Public Comment
Functional Classification	Jul 05							x		Discussion
& Travel Model Development	Jul 05							x		Discussion
Functional Classification & Travel Model Development	Aug 05							x		Recommend
Public Involvement Procedures	Sep 05		x					x		Recommend
MPO Boundary Change	Sep 05							x		Recommend
Travel Demand Model	Nov 05							x		Discussion
Human Services Trans Coordination Plan	Jan 06						x			Information
RTP Methodology and Schedule	Feb 06		x					x		Discussion
RTP Vision, Mission, and Principles	Feb 06		x					x		Input
First Meeting REF	Mar 06				x					
RTP Vision, Mission, and	Mar 06		x					x		Input



Agenda Items	Month & Year	Advisory Committees and Working Groups								Action
		AQTC	CAC	PPWP	REF	SAFS	STAS	TAC	TES	
Principles										
RTP Vision, Mission, and Principles	Apr 06		x				x	x		Input
RTP Plan Development Process	Apr 06		x					x		Discussion
Joint AQTC/TAC Meeting May 18 RTP Vision, Mission, and Principles	May 06	x	x					x		Discussion
2035 Small Area Forecast	May 06	x	x		x			x		Information
Regional Non-Motorized Plan	May 06								x	Discussion
Human Services Transportation Working Group	May 06								x	Workshop
2035 RTP Vision, Mission, Principles	Jun 06								x	Discussion
Regional Non-Motorized Plan	Jun 06								x	Discussion
Joint CAC/TAC Workshop RTP Vision, Mission, and Principles	Jun 06		x					x		Review and Recommend Release to Public
2035 Small Area Forecast	Jun 06		x					x		Update
RTP Goals and Evaluation Criteria	Jul 06		x				x	x		Discussion
Regional Non-Motorized Plan	Jul 06								x	Discussion
Human Services Coordination	Jul 06						x			Workshop
RTP Goals and Evaluation Criteria	Aug 06		x					x		Discussion
Human Services Coordination	Aug 06						x			Workshop
2035 Small Area Forecast Create SAFS	Aug 06				x					Information
Regional Non-Motorized Plan	Sep 06								x	Discussion
Human Services Trans Plan	Sep 06		x					x	x	Information & STAS Workshop
RTP Update on Major Activities	Sep 06		x					x	x	Information
Congestion Management Process	Sep 06							x		Discussion
Planning Assumption Workshop	Oct 06							x		Information
2035 Small Area Forecast	Oct 06		x					x		Information
RTP Development Update	Oct 06		x					x	x	Information
Revenue Estimates	Oct 06							x		Information
Planning Assumption Workshop Project Costing	Nov 06							x		Information
RTP Vision, Mission, Principles	Nov 06		x					x		Recommendation
Human Services Trans Plan	Nov 06		x				x	x		Review and Recommend Release to Public

Agenda Items	Month & Year	Advisory Committees and Working Groups								Action
		AQTC	CAC	PPWP	REF	SAFS	STAS	TAC	TES	
2035 Small Area Forecast Outreach to the Public	Nov 06		x					x		Information
Resource Allocation	Nov 06		x					x		Information
Planning Assumptions Workshop: Operations and Maintenance	Dec 06							x		Information
Public Participation Workgroup	Dec 06		x					x		Information
Regional Non-Motorized System	Dec 06							x	x	Information, Discussion, and TES Workshop
Roundtable Workshop: RTP Issues	Jan 07							x		Discussion
Public Participation Workgroup	Jan 07		x				x	x	x	Select Participants
Regional Non-Motorized System	Jan 07							x	x	Information and TES Workshop
2035 Small Area Forecast Process and Results	Jan 07		x		x			x		Discussion
Human Services Coordination Plan	Jan 07						x			Information
STAS Interview on Public Participation	Jan 07						x			Consultant Interview of Group
Public Participation Working Group 1 <sup>st</sup> meeting	Feb 07			x						
2035 Small Area Forecast Joint SAFS/TAC Feb 1	Feb 07					X		x		Recommend release for Public Comment
2035 Small Area Forecast Feb 15	Feb 07		x					x		Public Comment
Public Participation Working Group Roundtable Pretest	Mar 07			x						
2035 Small Area Forecast Joint SAC/TAC/REF Mar 1 and Mar 15	Mar 07				x	X		x		Review and Recommend
Human Services Trans Plan	Mar 07		x				x	x		Review and Recommend Final Plan
Regional Non-Motorized System	Mar 07							x		Information
RTP and TIP Schedule	Mar 07		x					x		Information
RTP Scenarios	Mar 07							x		Discussion
Regional Non-Motorized Plan	Apr 07							x	x	Information & TES Workshop
RTP Development Update	Apr 07		x				x	x		Information
Regional Non-Motorized Plan	May 07								x	Workshop
RTP and TIP Revenue Estimates	May 07							x		Discussion
RTP Public Outreach and Focus Groups	May 07		x							Information and Discussion
Context Sensitive Solutions	May 07		x							Information
2035 RTP Economic Goals	May 07				x					Discussion
RTP Development	May 07							x		Discussion

Agenda Items	Month & Year	Advisory Committees and Working Groups								Action
		AQTC	CAC	PPWP	REF	SAFS	STAS	TAC	TES	
Update										
2035 Small Area Forecast Revision	Jun 07							x		Review and Recommend
RTP Draft Planning Framework	Jun 07		x					x		Discussion
Regional Non-Motorized Plan	July 07								x	Workshop
Travel Model Use	Jul 07		x					x		Review and Recommend
2035 Rev Small Area Forecast	Jul 07		x							Review and Recommend
2035 RTP Resource Allocation	Jul 07							x		Review and Recommend
2035 RTP Process Update	Jul 07						x			Information
2035 RTP Process Update	Aug 07		x					x		Information
Travel Model Update	Aug 07		x					x		Information
Goals and Performance Measures	Aug 07		x					x		Discussion
Needed Information	Aug 07							x		Discussion
Regional Transportation Roundtable Test Activity	Aug 07		x	x				x	x	Conduct Test
Regional Non-Motorized Plan Draft	Sep 07		x					x	x	Discussion
Planning and Environmental Linkages	Sep 07		x					x		Discussion
Regional Transportation Roundtable	Sep 07		x					x	x	
Goals and Performance Measures	Sep 07							x		Discussion
Funding Chapter	Sep 07							x		Review and Comment
Regional Non-Motorized Plan Draft	Oct 07		x					x	x	Recommend Release to Public
Goals and Performance Measures	Oct 07		x					x		Recommend Release to Public
2035 RTP Chapters Draft	Oct 07		x					x		Review and Comment
2035 SAF 90-day Comment Period	Oct 07		x					x		Review and Recommend
Joint TAC/CAC/PPWP Workshop Nov 28 Alternatives Analysis	Nov 07		x	x				x		Refine 6 Alternatives
Process Update	Nov 07		x				x	x		Information
TIP/STIP Schedule and Proposed Projects	Nov 07		x					x		Discussion
State Highway Corridors Vision	Nov 07		x							Discussion
Goals and Performance Measures	Nov 07		x	x				x		Review and Recommend
2008-13 TIP Project List	Nov 07							x		Review and Recommend
Goals Weighting	Dec 07			x				x		Interactive Activity
Develop Fiscally Constrained Alternatives	Dec 07		x	x				x		Review and Input
Joint CAC and TAC Jan 3 Moving Forward Project	Jan 08		x					x		Review and Recommend

Agenda Items	Month & Year	Advisory Committees and Working Groups								Action
		AQTC	CAC	PPWP	REF	SAFS	STAS	TAC	TES	
List										
Regional Non-Motorized Plan	Jan 08		x					x		Review and Recommend
State Hiway Corridor Visions	Jan 08		x					x		Review and Recommend
2035 Small Area Forecast	Jan 08		x					x		Review and Recommend
Joint CAC and TAC Jan 30 Draft 2035 RTP	Jan 08		x					x		Recommend Release for Public Review
To be added Feb Mar Meetings										

### PPACG Board of Directors

The PPACG Board of Directors, in its capacity as the Metropolitan Planning Organization, approves regional transportation plans and programs. Throughout the *MOVING FORWARD* 2035 Regional Transportation Plan process, PPACG staff sought Board direction on various components of plan development. At key decision points, the Board was asked to formally release components, such as the Vision, Mission, and Principles and Small Area Forecasts, for public review. The table below is a chronology of PPACG Board agenda items and action relative to components of the *MOVING FORWARD* 2035 Regional Transportation Plan.

Table D-2 PPACG Board of Directors Agenda Items

Agenda Items	Month & Year	Item Type	Action Taken
Regional Transportation Planning Public Involvement Procedures Revision	June 05	Information	Postponed
Regional Transportation Planning Public Involvement Procedures Revision: Release for Public Comment	Jul 05	Release for 45-day Public Comment	Approved
Public Involvement Procedures for Transportation Planning Program	Oct 05	Action	Approved
2007 Long-Range Transportation Plan Update: Draft Vision, Mission and Principles	Jul 06	Release for Public Comment	Approved
Pikes Peak Area Modeling Systems Update	Oct 06	Information and Demonstration	None
Public Involvement for Development of 2007-2035 Regional Transportation Plan	Oct 06	Information	None
Project Evaluation System	Oct 06	Information	None
Human Services Transportation Coordination Study	Oct 06	Information	None
Regional Non-Motorized Transportation System Plan	Oct 06	Information	None

Agenda Items	Month & Year	Item Type	Action Taken
Resource Allocation for the 2008-2035 Regional Transportation Plan and 2009-2014 Transportation Improvement Program	Nov 06	Action	Continued to December Meeting
2008-2035 Regional Transportation Plan: Vision, Mission and Principles	Dec 06	Action	Approved
Resource Allocation for 2008-2035 Plan and 2009-2014 Transportation Improvement Program	Dec 06	Action	Approved
2008-2035 Regional Transportation Plan: Formation of Public Participation Working Group	Jan 07	Action	Approved
PPACG Small Area Forecast Draft: Release for Public Review and Comment	Feb 07	Action	Approved
Human Services Transportation Coordination Study and Plan: Release for Public Comment	Feb 07	Action	Approve
Draft 2035 Small Area Forecast	Mar 07	Information	Extended Public Comment Period
FY-2008 Through FY-2035 Regional Transportation Plan Schedule	Mar 07	Information	None
Draft 2035 Small Area Forecast	Apr 07	Action	Approved for use in developing 2035 Regional Transportation Plan and corridor studies, subject to periodic 90-day public o member entity review
Human Services Transportation Coordination Plan	May 07	Action	Approved
2035 Regional Transportation Plan Update	May 2007	Information	None
Toll Alternative in the Regional Transportation Plan	Jun 07	Information	None
Revenue Forecast for 2035 Regional Transportation Plan	Jun 07	Information	Information
Draft 2035 Small Area Forecast Revisions	Jul 07	Action	Approved for use in regional planning and present to CAC for input
2035 Regional Transportation Plan: <i>Moving Forward</i> Planning Framework	Jul 07	Information	Provide changes by July 18 for CAC input

Agenda Items	Month & Year	Item Type	Action Taken
Regional Transportation Plan: Resource Allocation	Aug 07	Action	Approved use of CDOT estimates for CMAQ, Metro, and Enhancement funds
Revised 2035 Small Area Forecast: Community Advisory Committee Review	Aug 07	Information	None
<i>Moving Forward</i> Public Participation Process Update	Aug 07	Information	None
Regional Travel Demand Model	Aug 07	Information	None
PPACG Travel Demand Model	Sep 07	Action	Approved model for use and directed staff to meet with HBA for input
<i>Moving Forward</i> Goals and Performance Measures	Sep 07	Information	None
Update on Moving Forward 2035 Regional Transportation Plan	Oct 07	Information	None
Draft Regional Non-Motorized Plan	Oct 07	Information	None
2035 Small Area Forecasts	Nov 07	Action	Approved motion not to revise at this time
<i>MOVING FORWARD</i> Proposed Goals and Performance Measures Release for Public Review	Nov 07	Action	Approved
Draft Non-Motorized Plan Release for Public Review	Nov 07	Action	Approved
<i>MOVING FORWARD</i> 2008-2013 Transportation Improvement Program Project List	Nov 07	Action	Approved
<i>MOVING FORWARD</i> Goals and Performance Measures	Dec 07	Action	Approved for use in evaluating transportation system alternatives and projects
<i>MOVING FORWARD</i> 2035 Project List Release for Public Comment	Jan 07	Action	Approved Release with Changes to the list
<i>MOVING FORWARD</i> Plan Update	Jan 07	Information	None
2035 State Highway Corridor Visions	Jan 07	Information	None
2035 Regional Transportation Plan Release for Public Review	Feb 07	Action	Ratify Executive Committee Release of 2035 TP for public review
2035 Regional Transportation Plan State Highway Corridors	Feb 07	Action	Approved
<b>Items To be added</b>	Mar 07		

### Open House Public Forums

PPACG conducted eight open house public forums at strategic points in the *MOVING FORWARD* 2035 Regional Transportation Plan development process. The first series of open house public forums in September 2006 kicked off the plan development process and provided an opportunity for the public to review and comment on the draft *MOVING*

*FORWARD* Vision, Mission, and Principles. An open house held December 11, 2007 presented preliminary alternatives and proposed goals and performance measures for public review and comment. The January 10, 2008, open house presented the recommended alternative system for public review and comment. Finally, February 19, 2008, the open house public meeting was held to provide a formal opportunity for the public to comment on the draft *MOVING FORWARD* 2035 Regional Transportation Plan.

For all meetings, announcements were made through press releases, public service announcements, postcards, newsletters, broadcast emails, and PPACG's website. Plan reference materials and documents were posted on PPACG's website under the *MOVING FORWARD* 2035 Regional Transportation Plan section. All meetings were held in accessible locations and meeting announcements contained contact information for PPACG staff so that individuals could request special accommodations.

### **September 2006 Open House Public Forum Series**

In September 2006 community members throughout the Pikes Peak Region were called upon to share their ideas on a vision and mission for transportation, standards for an integrated multi-modal system, and the current state of road, transit, and bicycle and pedestrian facilities. The series of meetings was announced through press releases, newspaper display advertising in late August and throughout September, newsletter, emailed notices, and announcements published on media internet calendars and community on-line newspapers.

Meetings were held across the Pikes Peak Region featuring an open house and informal discussion input sessions. PPACG staff and representatives of the Colorado Department of Transportation and Mountain Metropolitan Transit presented information and answered questions on transportation conditions, future population and employment distribution, coordinated planning, and the plan development process. Participants were asked to provide input on the draft regional transportation Vision, Mission, and Principles and rank the Principles in order of importance. Meetings were held at the following locations:

- September 6: East Library and Information Center, Colorado Springs, 4 to 7 p.m.
- September 12: Monument Town Hall, 4 to 7 p.m.
- September 20: PPACG Conference Room, Colorado Springs, 4 to 7 p.m.
- September 25: Woodland Park City Hall, 6 to 9 p.m.
- September 26: Falcon High School, 6 to 9 p.m.
- September 28: Fountain Fire Station, 6 to 9 p.m.

The format of the Open Houses varied according to the number of attendees, with those with higher attendance including one or more discussion and comment sessions moderated by PPACG staff. Graphic displays presented information on plan development schedule and key decision points and illustrated geographic information. Attendees were asked to provide input on the draft Vision, Mission and Principles, rank the principles in order of importance, and list transportation related issues and concerns.

PPACG staff participated in the Council of Neighbors and Organizations Community Forum on September 30, 2006. Information presented and graphic materials were similar to those used for the Open Houses, modified to be suitable for CONO Forum format. Participants were also asked to rank principles and list transportation related issues and concerns. Figure D-2 illustrates a sampling of the graphic materials used for the Open Houses and CONO Forum. Figure D-3 shows the principles ranking card.

PPACG asked participants to rank the nine draft Principles by order of importance. This ranking helped PPACG staff to determine what areas to focus on during plan development. Meeting participants were also asked to list what they felt were the most important transportation issues in their community and in the region.

Comments received during the public comment period on the Vision, Mission, and Principles were summarized and responses prepared and presented to the CAC, TAC and PPACG Board of Directors prior to action being taken. The summarized comments and responses are listed below:

1. Reword Principle H to, “Improve mobility, favorable perception of speed, of movement of people and goods.”  
*Response:* Speed is one way to measure mobility, and that will be considered in establishing criteria for determining how well proposed alternatives perform
2. Need to improve public transportation capabilities and emphasis—as Principles are currently worded, they seem generic.  
*Response:* The Principles are intended to articulate values the region has for its transportation system. As subsequent components of the planning framework are developed, i.e., goals and performance measures, the region, through PPACG’s public participation process will articulate how these values will be applied as it seeks to meet its transportation challenges and opportunities.



**Figure D-2 Public Meeting Series One Graphics Samples**

### 2007-2035 Regional Transportation Plan Key Milestones

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**Prepare Planning Framework**  
 February 2006 – September 2006

- Develop Vision, Mission, and Principles
- Develop Goals and Objectives
- Hold Public Meetings to Identify Issues and Needs

**Develop Transportation Scenarios**  
 May 2006 – January 2007

- Identify and Explore Potential Solutions
- Define Scenarios
- Identify, Document, and Present Environmental Mitigation Opportunities

**Refine Scenarios**  
 January 2007 – May 2007

- Analyze and Evaluate Scenarios
- Obtain Public Input on Priority List of Projects
- Prepare Fiscally Constrained Plan for all Modes

**Recommend Plan and Implementation Program**  
 May 2007 – August 2007

- Review Plan Recommendations with PPACG Committees and Local Governments
- Conduct 30-Day Public Review Period
- Approve Plan – PPACG Board August 8, 2007

For more information, see PPACG's website: [www.ppacg.org](http://www.ppacg.org)

### 2007-2035 Regional Transportation Plan Draft Vision and Mission

**Vision:** Create a pre-eminent multi-modal transportation system that meets regional mobility and accessibility expectations as essential elements of the Pikes Peak Area's quality of life.

**Mission:** Plan multi-modal transportation facilities and services that efficiently move people and goods and support economic vitality while sustaining and improving the quality of life in the Pikes Peak Region.

## Welcome

**Pikes Peak Area Council of Governments  
Public Meeting  
On the  
2007-2035 Regional Transportation Plan**

**Open House:  
6 to 8 p.m.**

#### PPACG Metropolitan Planning Area

**DRAFT Transportation Principles**

**Please rank the following from most (1) to least (9) important.**

- \_\_\_ Preserve the function of the existing transportation system.
- \_\_\_ Provide efficient transportation for people and goods.
- \_\_\_ Develop a multi-modal transportation system that provides access to employment, services, military installations, and other destinations.
- \_\_\_ Fully integrate connections within and between modes for people and for freight.
- \_\_\_ Increase the safety of motorized and non-motorized travel.
- \_\_\_ Increase the security of the multi-modal transportation system.
- \_\_\_ Support the economic vitality of the Pikes Peak Area.
- \_\_\_ Improve mobility of people and goods.
- \_\_\_ Protect and enhance the environment by implementing transportation solutions that are sensitive to natural and human contexts.

Your Zipcode \_\_\_\_\_

**Figure D-3  
Principles Ranking Card**

3. Reword Principle H to, “Improve mobility, favorable perception of speed, of movement of people and goods.”  
*Response:* Speed is one way to measure mobility, and that will be considered in establishing criteria for determining how well proposed alternatives perform
4. Need to improve public transportation capabilities and emphasis—as Principles are currently worded, they seem generic.  
*Response:* The Principles are intended to articulate values the region has for its transportation system. As subsequent components of the planning framework are developed, i.e., goals and performance measures, the region, through PPACG’s public participation process will articulate how these values will be applied as it seeks to meet its transportation challenges and opportunities.
5. The Mission should begin with the word “Implement” instead of “Plan.” We need to do more implementing transportation projects.  
*Response:* The Mission is intended to describe how PPACG’s plan development process will be conducted. Consideration of this change was requested of the Community Advisory Committee and the Transportation Advisory Committee prior to each giving its recommendation. Both committees felt that the word “Plan” better reflects PPACG’s regional planning role and recommended that the original wording be retained.
6. Draft Vision statement sounds like a lot of happy talk. What happens when quality of life intersects with “pre-eminent multi-modal,” etc.? Quality of life loses. Prioritization of neighborhood needs versus regional mobility needs should be balanced.  
*Response:* The purpose of creating the planning framework is to help balance competing needs, for example, mobility and protecting the environment. As the planning process unfolds, PPACG’s public process will take up the discussion of needs versus impacts of transportation system recommendations

All the comments received from the September 2006 series of public meetings are presented in Exhibit A of this appendix. The comments are shown by meeting location and the transportation issues are listed by ZIP code of the participant. This information was presented in its entirety to the Transportation Advisory Committee and Community Advisory Committee prior to those groups taking action on the Vision, Mission, and Principles. The PPACG Board of Directors also received copies of the comments.

**December 11, 2007 Open House Public Meeting**

On Tuesday, December 11, 2007, from 4 to 7 p.m., PPACG hosted an open house public meeting on components of the Moving Forward 2035 Regional Transportation Plan. Featured at the open house were the *MOVING FORWARD* Goals and Performance Measures, the draft Regional Non-Motorized Transportation Plan, and regional planning assumptions. Transit planning activities, including progress on the Transit Element of the *MOVING FORWARD* 2035 Regional Transportation, were highlighted. Colorado Department of Transportation staff members provided an informative display and discussed with participants statewide planning issues. Participants were asked to provide input on the three refined draft alternatives:

- The Strategic Corridors System
- The Balanced System
- The Reduced Environmental Impacts System

A list of draft projects proposed for inclusion in the 2008-2013 Transportation Improvement Program was available. Displays included information on regional growth patterns, public participation activities, and schedule and process. A number of handouts were provided including the an information sheet on the *MOVING FORWARD* 2035 Regional Transportation Plan development process, adopted Vision, Mission, and Principles, goals and performance measures, frequently asked questions, and the Regional Transportation Roundtable report.

The comments received were considered in the development of the recommended alternative and fiscally constrained recommended transportation system. The comments, presented on the comment forms, are shown in Exhibit A of this appendix.

#### **January 10, 2008, Open House Public Meeting**

On Thursday, January 10, 2008, from 4 to 7 p.m., PPACG hosted an open house public meeting on the draft recommended list of projects for the *MOVING FORWARD* 2035 Regional Transportation Plan. The meeting took place in PPACG's conference room. The main topic of this public meeting was the draft recommended plan alternative. Participants were asked to comment on the draft recommended system as a prelude to the final steps in plan development. The Regional Non-Motorized Plan and transit options were also topics addressed at this meeting.

Comments from that meeting are presented in Exhibit A to this Appendix.

#### **February 19, 2008, Open House Public Meeting**

On Tuesday, February 19, 2008, from 4 to 7 p.m., PPACG has scheduled an Open House Public Meeting to present the draft *MOVING FORWARD* 2035 Regional Transportation Plan for final public comment. The document was formally released for 30 days of public review by the Executive Committee of PPACG on February 4, 2008. That action was ratified by the PPACG Board of Directors on February 13, 2008, at its formal monthly meeting. Other opportunities for comment on the draft plan included advisory committee meetings during the month of February and in early March. The full document was placed on PPACG's website for viewing and downloading.

Comments on the draft document made during the 30-day review period will be summarized and presented to the PPACG Board of Directors prior to their taking final action on the *MOVING FORWARD* 2035 Regional Transportation Plan. When available, this information will be presented in Exhibit A to this Appendix.

#### **Public Participation Working Group**

The Public Participation Working Group was formed in early 2007, composed of representatives from existing agency and community transportation organizations. The Working Group's main purpose was to facilitate two-way communication with key

transportation stakeholders in the region. The Working Group’s responsibilities were to assist in the development of public involvement methods and products to:

- Facilitate public outreach and communication;
- Obtain representative viewpoints of the region’s citizens;
- Provide factual information on transportation planning topics; and
- Generate interest in the 2008 through 2035 Regional Transportation Plan development process.

Participants in the Working Group were recruited from the following advisory committees, commissions, and boards who have an interest in transportation planning:

- PPACG Advisory Committees;
  - Community Advisory Committee (CAC)
  - Transportation Advisory Committee (TAC)
  - Transportation Enhancement Subcommittee (TES)
  - Specialized Transportation Advisory Subcommittee (STAS)
  - Air Quality Technical Committee (AQTC)
  - PPAAA Regional Advisory Council (RAC)
- City of Colorado Springs Citizen’s Transportation Advisory Board (CTAB); and
- El Paso County’s Highway Advisory Commission (HAC).

The Working Group provided an informal, integrated approach to public participation that facilitated communication among committees, regional transportation stakeholders, and the public. The Working Group met five times with PPACG staff and consultants; the last two meetings were workshops held jointly with Community Advisory Committee and Transportation Advisory Committee members. Topics of the meetings included: input on artwork for the plan graphic logo, input on and testing activities for the Regional Transportation Roundtable, review of Roundtable scenarios and input into formulating alternatives from those scenarios, and alternatives refinement and fiscally constrained alternatives.

### **Stakeholder Interviews**

Stakeholder interviews took place with community leaders in January and February to learn about local issues, community characteristics, community contacts, and ideas to encourage public participation in developing the 2035 Regional Transportation Plan. Some key themes emerged that provided direction for the public involvement process: make public participation activities easily accessible, have a variety of activities to facilitate involvement, and use a variety of techniques, especially media involvement, to “get the word out.” Those interviewed were:

Sallie Clark	Commissioner, El Paso County
Wayne Williams	Commissioner, El Paso County
Dennis Hisey	Commissioner, El Paso County
Jim Ignatius	Commissioner, Teller County
Gary Bradley	Colorado Springs Citizens Transportation Advisory Board

Bob Hartwig	Colorado Springs Citizens Transportation Advisory Board
Ann Oatman-Gardner	PPACG Military Impact Planning
David Sealander	El Paso County Highway Advisory Committee
Francine Hanson	Community Advisory Committee & Council of Neighbors and Organizations
Jan Doran	Community Advisory Committee & Council of Neighbors and Organizations
Rosemary Harris	NAACP
STAS	Specialized Transportation Advisory Subcommittee as a group
Joe Aldaz	Hispanic Chamber of Commerce of Colorado Springs
Mike Kazmierski	Economic Development Corporation
Sarah Jack	Housing and Building Association
Tom Harold	Pikes Peak Regional Transportation Authority Community Advisory Committee
Steve Meyer	PPACG Community Advisory Committee
Darryl Glenn	Colorado Springs City Council
Brian Burnett	University of Colorado at Colorado Springs

### **Stakeholder Interviews Key Themes**

Exhibit B lists the key themes that emerged from the stakeholder interviews. This guidance proved very useful in developing graphic materials, communicating plan information, and connecting to key stakeholders in the community. Coupled with the comments received from the September 2006 series of public meetings, a list of key issues and needed transportation projects was compiled. The information received from the Stakeholder Interviews helped PPACG staff enhance its contact database, and the suggestions given were considered by the Public Participation Working Group as it provided input into the planning for the Regional Transportation Roundtable. This information was shared with the Community Advisory Committee, the Transportation Advisory Committee, and the PPACG Board of Directors.

In the *MOVING FORWARD* process, PPACG expanded its public participation techniques to include, in addition to more traditional open house public meetings, the *MOVING FORWARD* traveling booth and the Regional Transportation Roundtable. A website survey, stakeholder interviews, and focus groups rounded out the public process. PPACG employed widely used techniques like website and media programs, newsletters, postcards, and advertising to publicize participation activities and share information. E-mail notification was used and many organizations agreed to forward e-mail announcements to their contact lists which helped to greatly increase outreach.

### **On-Line Survey**

An on-line transportation survey queried website visitors about travel behavior, transportation priorities, willingness to use alternative travel modes, and demographic characteristics. The *MOVING FORWARD SECTION* of PPACG's website received over 1000 "hits." Information from the survey was presented at the *MOVING FORWARD*

Regional Transportation Roundtable on October 2. Exhibit C at the end of this appendix contains the Survey Instrument.

### ***MOVING FORWARD TRAVELING Booth***

The *MOVING FORWARD* traveling booth was used as a method to outreach to the public throughout the region through summer farmer's markets, community events, and festivals. The *MOVING FORWARD* traveling booth provided an opportunity to present information on the transportation planning process to diverse audiences and to engage participants in a meaningful way that was convenient for them. The public involvement consultant team worked with PPACG staff to design a survey and activities that participants could complete in just a few minutes of their time. The *MOVING FORWARD* Traveling Booth participated in the following summer 2007 community events, festivals, and farmer's markets:

- Bike Festival – America the Beautiful Park Colorado Springs - June 2
- Manitou Springs Farmer's Market—Soda Springs Park – June 13
- Springs Spree—Downtown Colorado Springs – June 16
- Woodland Park July 4 Festival—Memorial Park – July 4
- Manitou Springs Farmer's Market—Soda Springs Park – July 25
- Colorado Farm and Art Market—Briargate - July 28
- Colorado Farm and Art Market—Briargate – August 11
- Black Forest Community Club Festival – August 18
- Colorado Springs Diversity Festival—Colorado Springs – August 18
- Colorado Farm and Art Market— America the Beautiful Park – August 29
- Fountain Fall Festival—Metcalf Park Labor Day – September 3
- Monument Farmer's Market – September 8
- Cruise Above the Clouds Car Show Memorial Park Woodland Park - September 15



Figure D-5 Traveling Booth Activity

Over 1300 people participated in *MOVING FORWARD* booth activities. Plan information was provided; many people provided in-depth comments and mapped locations with information on system problems or ideas for improvements; and many provided information for the contact database. Figure D-5 illustrates activities completed by participants.

Booth participants were asked to indicate preferences by placing colored dot stickers on posters with the following questions and choices. Compiled data from all the events is shown in parentheses:

- Where Should We Spend Out Limited Future Transportation Dollars?  
The choices were:
  - Roads (11%),
  - Mostly Roads (Some Transit And Bicycle/Pedestrian) (29%),
  - 50 /50 (25%),
  - Mostly Transit, Bicycle And Pedestrian (Some Roads)(22%), Or
  - Transit, Bicycle And Pedestrian (13%).
- How Should We Spend Limited Funds for Roadways?  
The choices were:
  - Maintenance (65%)- Maintain what we have- street paving, fixing bridges, etc.
  - Improvements (23%) – Improve operations – spot intersection improvements, timing traffic signals, etc.
  - New Projects (12%)- Construct new projects – build new roads, widen existing roads, etc.
- How Should We Spend Limited Funds for Modes Other Than Roadways?  
The choices were:
  - Transit Routes (48%) (bus or rail)
  - Senior/special Needs Transit Services (24%) (on demand bus or van)

- Bicycle and Pedestrian Facilities (28%)

The information recorded through the traveling booth supplied important data on citizens' views and priorities that were used to shape the transportation plan and the transportation improvement program. Information and data from the traveling booth was provided to participants in the Regional Transportation Roundtable, to PPACG advisory committees and Public Participation Working Group, to the public, and to the PPACG Board of Directors. Comments provided by the participants in the traveling booth are shown in Exhibit A.

### **Speaker's Bureau**

A speaker's bureau presentation was prepared and presented to citizen's organizations, business groups, and transportation interest groups. PPACG staff will continue to provide and adapt as needed the presentation on the *MOVING FORWARD* planning process to organizations in the Pikes Peak Region requesting it.

### ***MOVING FORWARD* Regional Transportation Roundtable**

On October 2, 2007, PPACG hosted its first ever Regional Transportation Roundtable at the Weber Street Center in Colorado Springs. The intent of the Roundtable was to bring the region together to plan the future transportation system. More than 150 people participated in two sessions to create future transportation plans for the region. Each event began with background information on regional trends followed by the Moving Forward Exercise where a small group of 5 to 10 people created a future transportation system using a regional map and "game" pieces for different types of transportation improvements.

The goals of the Regional Transportation Roundtable were to:

- Promote a stronger understanding of regional transportation and transportation funding realities;
- Learn preferences for future transportation improvements for the region; and
- Obtain public input on alternatives to study in the Regional Transportation Plan.

Key factors considered in designing the event were:

- Bringing together people from different parts of the region;
- Making it centrally located;
- Using many information channels to publicize the Roundtables;
- Making the event both engaging and meaningful by designing an exercise that could feed into the Regional Transportation Plan process; and
- Laying the groundwork for additional regional conversations on transportation needs.

PPACG publicized the Roundtable through a number of venues including sending invitations to its full mailing list, email invitations, website and media announcements, and word-of-mouth. According to registration information, participants at the



Roundtable included active community members, business interests, environmental interests, military planners, representatives of persons with disabilities and seniors, and regional transportation professionals.

At the afternoon event, approximately 100 people worked at 13 tables to develop regional transportation maps. In the evening, approximately 50 people worked at 6 tables. Participants came from throughout the region. Based on information from comment forms completed by 80 of the participants, participants were of different ages, with most being middle age “baby boomers.”



A team of table facilitators from PPACG, the Catalyst Consulting team, the PPACG Public Participation Working Group, the Community Advisory Committee, the Transportation Advisory Committee, and other volunteers helped guide the mapping exercise. Technical observers from the Colorado Department of Transportation, Mountain Metro, the City of Colorado Springs, and El Paso County were also available to answer

questions. Regional Roundtable attendees came from throughout the region including Colorado Springs, Monument, Fountain, Green Mountain Falls, Manitou Springs, Sedalia and Woodland Park.

A summary of the Regional Transportation Roundtable was prepared which describes the *MOVING FORWARD* exercise, provides data on participants, and presents findings can be found on PPACG’s website, [www.ppacg.org](http://www.ppacg.org), on *MOVING FORWARD* webpage, under Plan Documents.

### **Focus Groups**

During December 2007, PPACG, with the help of its Catalyst public involvement consultant team, conducted three focus groups. PPACG’s goal for the focus groups was to obtain perspective from participants who were representative of the community’s demographic composition. These groups allowed PPACG to ask questions about the region’s transportation system in an interactive format, which can provide more nuanced information about people’s thoughts and opinions than can traditional surveys. The demographics of focus group participants were representative of the community as a whole; by comparison, an open invitation was extended to participants in the open houses and roundtable event and participants self-selected whether to attend these events.

Participants for the focus group were selected by a third party research center, which contacted residents throughout the region, briefly surveyed them about transportation, and asked them demographic questions to determine whether they qualified to participate. Eligible individuals were invited to attend the focus group meetings.

The focus groups were held at the PPACG offices and at a market research center at the Citadel Mall. The groups were approximately two hours in length and participants were given a \$70 incentive for their participation.

The information obtained through the Focus Groups was used help develop weighting for the *MOVING FORWARD* Goals and Performance Measures. The Focus Group Report is included in Exhibit D at the end of the Appendix.

### ***MOVING FORWARD* Website**

Various information documents and communications items were prepared and distributed via PPACG's website, [www.ppacg.org](http://www.ppacg.org). Links included on the *MOVING FORWARD* website are:

- **Get Involved:** Information on public participation activities
- **About Transportation Planning:** Frequently asked questions on transportation planning in the Pikes Peak Region
- **Plan Documents:** Documents from the *MOVING FORWARD* planning process as well as other related transportation planning documents
- **Media Kit:** Press releases and supplementary information
- **Photo Gallery:** Photos of plan development activities
- **Links:** Links to other planning websites
- **Plan Description and Overview:** General information on the plan
- **Vision, Mission, and Principles:** Adopted *MOVING FORWARD* Vision, Mission, and Principles
- **Process Schedule:** Chart of the *MOVING FORWARD* process and link to calendar for events and activities.

The on-line transportation survey was included on the website beginning in June 2007 and, with updates, remained throughout the remainder of the plan development process. The *MOVING FORWARD* website, which received thousands of hits, was updated throughout the plan development process. The *MOVING FORWARD* 2035 Regional Transportation Plan draft documents were prepared and placed on the website during the public review period. Final documents, once completed, will replace the draft review documents.

**Exhibit A**  
**Public Comments Received From Open House Public Meetings**  
**September 2006 Public Meeting Series Public Comments and Responses to**  
**Questionnaire**

**Comments:**

**East Library**

1. Protect neighborhood areas from noise--especially from big trucks. Nevada should be protected from trucks—it is not.
2. There is a need for social justice—the needs of the many should not outweigh the needs of the few.
3. Children need to be able to travel safely and securely in neighborhoods on their own.
4. There should be consideration of a grid bus system versus a route system (as we have now).
5. Those who participate in public processes may not be representative of the overall community.
6. Seniors and other groups would benefit from better non-automobile transportation options.
7. Connections to important rail projects (Denver) should be considered.
8. Save crossings for school children should be kept in mind.
9. Traffic light cycle timing—cycles are much too long. Long wait from side streets onto main streets. Referenced Johnson County, KS as an exemplary system.
10. Bus stops may be distant from residential areas. Ridership may increase with additional stops.
11. Better access to off-street and on-street bike paths is desired.
12. Park-and-rides for access to bus routes are wanted. Also, better east-west bus service across town, especially to major attractions is needed. Buses could provide better access to tourist destinations, especially for larger groups. Buses should run frequently to avoid long waits.
13. Transit and pedestrian linkages downtown need to be considered in placing a new transit terminal.
14. Alternative fuels should be considered in order to preserve environmental quality and to save on energy costs.
15. Poor public meeting attendance may be a sign of inadequate opportunities for attendance or insufficient awareness.
16. Construction begins long after discussion and announcement of plans (referring to Austin Bluffs and Union Interchange project).
17. Follow through on the US-24 Bypass--extend Martin Luther King to Powers as originally planned. That project appears to be abandoned in favor of Drennan Rd. (Proby Expressway).
18. Prioritization of neighborhood needs versus regional mobility needs should be balanced.
19. Airport access process is unclear.
20. Representation of and emphasis on general mobility is inconsistent or unclear with respect to neighborhood and local needs.
21. The region would benefit from continuation of the FREX.

22. Absence of right turn lanes on Bijou at Academy contributes to high accident numbers at that intersection.
23. It is difficult to get information on roads and plans handled by multiple/changing jurisdictions.
24. The region should work to take advantage of timely development of transit because of equity and because energy savings advantage with the high gas prices.
25. Truth is—need taxes and fees on vehicle ownership, sale, and gas that make grid bus system desirable. Start with minivans, if needed!

**PPACG Open House**

The meeting materials should present a more balanced approach: transit and non-motorized was featured, but roadways were not.

**Woodland Park**

1. Northbound 30<sup>th</sup> Street, between Cimarron (Highway 24) and Colorado Avenue—lengthen the right (eastbound) turn lane to keep traffic moving.
2. I would like to see light rail discussed more.

**Falcon**

There was considerable discussion regarding US-24 from Garrett Rd., where 4-lane section ends, east. In particular, the intersection of Elbert Rd with US-24 was cited as a very dangerous intersection because of the speed and because there are no protected turn bays. It was requested that turn bays and possibly a traffic light be placed at that intersection.

**Fountain**

Questions were asked regarding timing and funding for extension of Powers Boulevard.

**CONO Neighborhood Forum**

The information on County demographics on the PPACG website is very good!

**Comments on Draft Vision, Mission and Principles**

**East Library**

1. Referencing Principle H., Improve mobility of people and goods. It was suggested that this Principle be changed to read, “Improve mobility, favorable perception of speed, of movement of people and goods.”
2. Need improve public transportation capabilities and emphasis—as principles are currently worded, they seem very generic.

**PPACG Open House**

1. The mission should begin with the word “Implement” rather than “Plan.” We need to do more implementing transportation projects.
2. Draft Vision statement sounds like a lot of happy talk. What happens when quality of life intersects with “pre-eminent multi-modal,” etc.? Quality of life loses.

**Responses to Questionnaire:**

<i>What is the most important transportation issue in your area?</i>	<b>Site</b>	<b>ZIPCODE</b>
--	-------------	----------------

1. The amount of time it takes to get to destination.	East Lib	80903
2. Lack of service within easy walking distance. It' a 25-minute walk from our house to the closest bus stop.	East Lib	80917
3. Low signal cycles—waiting for the signal up to 90 seconds rather than waiting for traffic.	East Lib	80907
4. Buses too infrequent, don't go where you need to go, change (transfer) necessary, more waits, and everything too confusing.	East Lib	80903
5. Not being able to transfer from one line to another without going downtown and buses to run more often.	East Lib	80909
6. Too long of light (90 seconds) to turn left coming out of my street.	East Lib	-
7. Getting from one side of town—Colorado Springs—to another in less than a half hour the way it used to be when I moved here in 1985.	East Lib	80917
8. Using less (MUCH LESS) petroleum.	East Lib	80917
9. Preserving the environment—read “NO BROWN CLOUD” over Colorado Springs.	East Lib	80917
10. Bus stops too far from my house.	East Lib	80917
11. Discontinuity of pedestrian and bike network.	East Lib	80917
12. I-25 is the primary north/south access for many area and there is no east/west access except for Woodmen and [highway] 24. Very difficult!	PPACG	80920
13. The lack of east/west freeways through town.	PPACG	80917
14. Traffic jams on Academy and Powers Boulevards that could be alleviated by better timing of signals (along with shorter cycle times), posting the timing speeds, and informing drivers of timing changes from morning to evening peak hours.	PPACG	80917
15. Woodmen needs to be a freeway, I-25 to US-24. (This is a daily issue in my commute.)	PPACG	80917
16. Better access/egress to Highway 24 west of I-25, <u>NOT</u> the major project CDOT is proposing.	PPACG	80904
17. US-24 and especially 8 <sup>th</sup> Street another lane both ways.	PPACG	80904
18. Complete Powers as a freeway.	PPACG	80917
19. Highway 24 [west] expansion.	PPACG	80904
20. Safe routes school and a Bypass of Woodland Park	WP	80863
21. Sidewalks and bike paths.	WP	80863
22. Traffic volume/congestion on US-24 through Woodland Park.	WP	80866
23. Transit in 08. Maintenance of existing roads.	WP	80863
24. Poor surface roads in Teller County	WP	80863
25. Disintegrating road surface on Lower Twin Rocks [Road] and Teller 1.	WP	80816
26. Improved side roads.	WP	80816
27. Traffic congestion/lack of mode choices	Falcon	80908
28. Highway 24 east of Falcon. Elbert Rd/highway 24 intersection. There are no turn lanes in 65 MPH zone.	Falcon	80106
29. Highway 24 east of Falcon!	Falcon	80106
30. Proposed Powers Boulevard project. What progress if any is occurring?	Fountain	80817
31. State Highway 16 widening. Powers Boulevard South construction.	Fountain	80817
32. Transportation to schools. Transportation closer to schools.	CONO	

33. No pathway for foot transportation or bike routes along Powers.	CONO	80916
34. COSMIX completes by end of 2007. They are doing a great job.	CONO	80210
35. Speeding and stopping at signs, but these are truly minimal problems at this time.	CONO	80909
36. We really need more pedestrian bridges over busy streets.	CONO	80906
37. Traffic congestion.	CONO	80831
38. East west connections.	CONO	80919
39. Transportation [transit] to major work areas, e.g., off 83 north and MEI (Garden of the Gods), etc.	CONO	80920

***What is the most important issue in the Pikes Peak Region?***

40. The access to transportation system.	East Lib	80903
41. Having a variety of transit—including rail.	East Lib	80917
42. Enough buses to make use desirable.	East Lib	80907
43. In town, we need more efficient mass transit and fewer cars.	East Lib	80903
44. Providing a viable and efficient transportation system in order for students ages 11-19 can feel they can get about the city (Colorado Springs) with minimal amount of time and frustration.	East Lib	80909
45. Lack of viable public transportation that makes people want to use it.	East Lib	80918
46. Traffic signal function, better coordination and synchronization.	East Lib	-
47. Providing quick, efficient transportation all around the Pikes Peak area using minimal petroleum.	East Lib	80917
48. Lack of efficient public transportation system.	East Lib	80917
49. No east/west corridor, no light rail including to Denver, no land acquisition for mass transit. Total reliance on I-25 for urban travel—these are all important issues with reliance on I-25 being most important.	PPACG	80920
50. Need more funds for roads, less for transit.	PPACG	80917
51. Tremendous waste of time and fuel during traffic jams on I-25. I suggest diverting traffic around accidents onto the shoulder or median whenever possible.	PPACG	80917
52. Complete Powers as a freeway.	PPACG	80917
53. Highway 16, Fort Carson Interchange.	PPACG	80904
54. Front Range (Colorado Springs/Denver) light rail (as a future vision).	PPACG	80904
55. Mobility not neighborhood interests must be paramount. Minimize impact of projects, but first do the project alternative with the most improvement to mobility.	PPACG	80917
56. Proactive planning, not reactive.	PPACG	80904
57. Don't make roads 4 to 6 lanes to east of Colorado Springs. (i.e., force multi-level living, building in Colorado Springs).	WP	80863
58. Providing integrated non-motorized routes.	WP	80863
59. Traffic flow/congestion on US-24 between Manitou and I-25.	WP	80866
60. Highway 24 between Ridge and I-25 completion. Finish I-25.	WP	80863
61. Too many traffic cops . . . just kidding. Poor east/west corridors. No efficient travel alternatives.	WP	80863
62. Increasing congestion on roads/highways. Impacts: safety, fuel use,	WP	80816

mobility. Possible helps: Park and Ride, public transportation (with access and reasonable schedule).		
63. Safety—too many aggressive drivers passing on yellow—no passing—areas.	WP	80816
64. Lack of passenger rail/light rail.	Falcon	80908
65. Timed lights. Each of one-way streets.	Falcon	80106
66. Time the lights! Create one-way streets!	Falcon	80106
67. Proposed Powers Boulevard project.	Fountain	80817
68. Intra-city mobility	Fountain	80817
69. Expanding the interstate to Monument	CONO	80210
70. Our roads can't meet the demands for the amount of traffic.	CONO	80909
71. 1) East-west corridor. 2) Finish bypass around eastern part of the City. 3) Widen I-25. 4) Improve trail system for bicycles throughout region.	CONO	80906
72. Train to Denver.	CONO	80906
73. Need of mass transit.	CONO	80831
74. East west connections.	CONO	80919
75. Not enough transportation. Re-evaluate key lines [transit].	CONO	80920

**December 11, 2007, Open House Public Meeting Comment (on forms)**

**PPACG OPEN HOUSE  
December 11, 2007**

Your ZIPCODE: 80960

**Meeting Purpose:**



**2035 Regional Transportation Plan Process**

- Update
- Draft Non-Motorized Transportation Plan Update
- Draft 2008-2013 Transportation Improvement Program Projects
- Review of Planning Assumptions PPACG uses to Prepare Transportation Plans

**Please continue responses on the reverse side of this form if you need more space.**

Were your questions regarding this topic answered? Yes  No

Was there enough time to discuss the topic thoroughly? Yes  No

What information was the most helpful?

How did you find out about this meeting?

Newsletter  TV  Radio  Newspaper  Other/ specify \_\_\_\_\_

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

**(Phoned In) As a cyclist, I'm concerned over the poor conditions of many stretches of the local bicycle trails. I'm especially concerned over the lack of maintenance. There is dirt, debris, and broken glass under the overpasses where the homeless reside. The section near the Criterion Bike Shop is so rough it is almost unusable. I have to take Mark Dabling instead.**

**Additional Comments:**

**Are there any other topics you would like to have discussed?**

**Are there any other groups you would recommend that we meet with to discuss this topic?**



PPACG OPEN HOUSE  
December 11, 2007

Your ZIPCODE: 80904

Meeting Purpose:



2035 Regional Transportation Plan Process

Update  
Draft Non-Motorized Transportation Plan Update  
Draft 2008-2013 Transportation Improvement Program Projects  
Review of Planning Assumptions PPACG uses to Prepare Transportation Plans

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Please continue responses on the reverse side of this form if you need more space.

Were your questions regarding this topic answered? Yes  No

Was there enough time to discuss the topic thoroughly? Yes  No

What information was the most helpful?

**Costs to build, reasons and decisions to be made.**

How did you find out about this meeting?

Newsletter  TV  Radio  Newspaper  Other/ specify

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

I wonder if a reality check is not in order. We are finding that the way we've handled transportation is starting to fail. But the apparent solutions (e.g., pay more, ride a bike or take the bus) seem unsatisfactory. Poor people will be the first to lose out when it becomes too expensive to drive. What we should seek is creative ways to retain personal transportation as much as possible – use that as a starting point for problem-solving. For example, what if there was light rail between Denver and Colorado Springs, but on arrival in either town economical, non-fancy electric cars were available on loan of some kind (everyone having paid for the necessary insurance and whatever rental costs). If people had cards handy when they needed them – instead of all the time – maybe congestions could be eased.

Additional Comments:

Are there any other topics you would like to have discussed?

Are there any other groups you would recommend that we meet with to discuss this topic?

PPACG OPEN HOUSE  
December 11, 2007

Your ZIPCODE: 80909

Meeting Purpose:



2035 Regional Transportation Plan Process

- Update
- Draft Non-Motorized Transportation Plan Update
- Draft 2008-2013 Transportation Improvement Program Projects
- Review of Planning Assumptions PPACG uses to Prepare Transportation Plans

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Please continue responses on the reverse side of this form if you need more space.

Were your questions regarding this topic answered? Yes  No

Was there enough time to discuss the topic thoroughly? Yes  No

What information was the most helpful?

How did you find out about this meeting?

Newsletter  TV  Radio  Newspaper  Other/ specify  
Email

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

I thought there may be a brief discussion about what we did in October during the  
"Planner for a Day" session. I picked up material and will go through them, but it would  
have been nice to have a summary talk about the event in October and plans forward.

Additional Comments:

Are there any other topics you would like to have discussed?

Are there any other groups you would recommend that we meet with to discuss this topic?

PPACG OPEN HOUSE  
December 11, 2007

Your ZIPCODE: 80907

Meeting Purpose:



2035 Regional Transportation Plan Process

Update  
Draft Non-Motorized Transportation Plan Update  
Draft 2008-2013 Transportation Improvement Program Projects  
Review of Planning Assumptions PPACG uses to Prepare Transportation Plans

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Please continue responses on the reverse side of this form if you need more space.

Were your questions regarding this topic answered? Yes \_\_\_\_\_ No X \_\_\_\_\_

Was there enough time to discuss the topic thoroughly? Yes \_\_\_\_\_ No X \_\_\_\_\_

What information was the most helpful?

How did you find out about this meeting?

     Newsletter      TV      Radio      Newspaper X Other/ specify Email

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

**We have made significant progress on our streetcar project. I will email you a map of the proposed route and an update.**

Additional Comments:

Are there any other topics you would like to have discussed?

Are there any other groups you would recommend that we meet with to discuss this topic?

PPACG OPEN HOUSE  
December 11, 2007

Your ZIPCODE: 80919

Meeting Purpose:



2035 Regional Transportation Plan Process

Update  
Draft Non-Motorized Transportation Plan Update  
Draft 2008-2013 Transportation Improvement Program Projects  
Review of Planning Assumptions PPACG uses to Prepare Transportation Plans

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Please continue responses on the reverse side of this form if you need more space.

Were your questions regarding this topic answered? Yes  No

Was there enough time to discuss the topic thoroughly? Yes  No

What information was the most helpful?

**The diagrams, charts, and people to talk with.**

How did you find out about this meeting?

Newsletter  TV  Radio  Newspaper  Other/ specify  **Email**

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

**Future plans could have been better shown concerning plans with road maintenance and construction. There needs to be more focus on mass transit and maintenance of roads than building/widening roads. Synchronizing stoplights and putting in turn lanes would be beneficial. There is only so wide you can make roads, the taxpayers would be better off investing money sooner on mass transit than putting in more roads and then transit. We need to be thinking long term rather than short term when it comes to construction. Compact development will come when the plan of mass transit is built, look at Denver around their light rail solutions.**

Additional Comments:

**Name tags on the people representing PPACG would be helpful. Also a list of projects, the maps are too small to show detail of names and projects.**

Are there any other topics you would like to have discussed?

Are there any other groups you would recommend that we meet with to discuss this topic?

PPACG OPEN HOUSE  
December 11, 2007

Your ZIPCODE: 80903

Meeting Purpose:



2035 Regional Transportation Plan Process

- Update
- Draft Non-Motorized Transportation Plan Update
- Draft 2008-2013 Transportation Improvement Program Projects
- Review of Planning Assumptions PPACG uses to Prepare Transportation Plans

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Please continue responses on the reverse side of this form if you need more space.

Were your questions regarding this topic answered? Yes  No

Was there enough time to discuss the topic thoroughly? Yes  No

What information was the most helpful?

[Information about non-motorized plan.](#)

How did you find out about this meeting?

Newsletter  TV  Radio  Newspaper  Other/ specify [Email](#)

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

[Please include consideration of trolley system. This is part of the downtown planning and the Old North End Neighborhood plan.](#)

Additional Comments:

Are there any other topics you would like to have discussed?

Are there any other groups you would recommend that we meet with to discuss this topic?

PPACG OPEN HOUSE  
December 11, 2007

Your ZIPCODE: \_\_\_\_\_

Meeting Purpose:



2035 Regional Transportation Plan Process

Update  
Draft Non-Motorized Transportation Plan Update  
Draft 2008-2013 Transportation Improvement Program Projects  
Review of Planning Assumptions PPACG uses to Prepare Transportation Plans

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Please continue responses on the reverse side of this form if you need more space.

Were your questions regarding this topic answered? Yes  No  \_\_\_\_\_

Was there enough time to discuss the topic thoroughly? Yes  No  \_\_\_\_\_

What information was the most helpful?

**Transit Plans**

How did you find out about this meeting?

\_\_\_\_\_ Newsletter \_\_\_\_\_ TV \_\_\_\_\_ Radio \_\_\_\_\_ Newspaper  Other/ specify card in mail

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

Additional Comments:

Are there any other topics you would like to have discussed?

Are there any other groups you would recommend that we meet with to discuss this topic?

PPACG OPEN HOUSE  
December 11, 2007

Your ZIPCODE: \_\_\_\_\_ **80906** \_\_\_\_\_

Meeting Purpose:



2035 Regional Transportation Plan Process

Update  
Draft Non-Motorized Transportation Plan Update  
Draft 2008-2013 Transportation Improvement Program Projects  
Review of Planning Assumptions PPACG uses to Prepare Transportation Plans

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Please continue responses on the reverse side of this form if you need more space.

Were your questions regarding this topic answered? Yes  No  \_\_\_\_\_

Was there enough time to discuss the topic thoroughly? Yes  No  \_\_\_\_\_

What information was the most helpful?

How did you find out about this meeting?

\_\_\_\_\_ Newsletter \_\_\_\_\_ TV \_\_\_\_\_ Radio \_\_\_\_\_ Newspaper  Other/ specify Email \_\_\_\_\_

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

Additional Comments:

Are there any other topics you would like to have discussed?

**We need to talk more about the environmental concerns and smart controlled growth.**

Are there any other groups you would recommend that we meet with to discuss this topic?

PPACG OPEN HOUSE  
December 11, 2007

Your ZIPCODE: \_\_\_\_\_ 80907 \_\_\_\_\_

Meeting Purpose:



2035 Regional Transportation Plan Process

Update  
Draft Non-Motorized Transportation Plan Update  
Draft 2008-2013 Transportation Improvement Program Projects  
Review of Planning Assumptions PPACG uses to Prepare Transportation Plans

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Please continue responses on the reverse side of this form if you need more space.

Were your questions regarding this topic answered? Yes  No  \_\_\_\_\_

Was there enough time to discuss the topic thoroughly? Yes  No  \_\_\_\_\_

What information was the most helpful?

[Information about need for increased funding.](#)

How did you find out about this meeting?

\_\_\_\_\_ Newsletter \_\_\_\_\_ TV \_\_\_\_\_ Radio  Newspaper \_\_\_\_\_ Other/ specify  
\_\_\_\_\_

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

[Important to consider use of rubberized asphalt to reduce noise, improve traction, and improve visibility.](#)

Additional Comments:

Are there any other topics you would like to have discussed?

Are there any other groups you would recommend that we meet with to discuss this topic?



PPACG OPEN HOUSE  
December 11, 2007

Your ZIPCODE: \_\_\_\_\_ **80903** \_\_\_\_\_

Meeting Purpose:



2035 Regional Transportation Plan Process

Update  
Draft Non-Motorized Transportation Plan Update  
Draft 2008-2013 Transportation Improvement Program Projects  
Review of Planning Assumptions PPACG uses to Prepare Transportation Plans

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Please continue responses on the reverse side of this form if you need more space.

Were your questions regarding this topic answered? Yes  No  \_\_\_\_\_

Was there enough time to discuss the topic thoroughly? Yes  No  \_\_\_\_\_

What information was the most helpful?

How did you find out about this meeting?

\_\_\_\_\_ Newsletter \_\_\_\_\_ TV \_\_\_\_\_ Radio \_\_\_\_\_ Newspaper  Other/ specify  Email \_\_\_\_\_

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

All was answered. Some questions raised more questions. Glad that there are people involved in this.

Additional Comments:

The gentleman whom I talked with was very enthusiastic and forward-looking. I hope things go well with all of you, and we can present our city in its best light.

Are there any other topics you would like to have discussed?

Are there any other groups you would recommend that we meet with to discuss this topic?

PPACG OPEN HOUSE  
December 11, 2007

Your ZIPCODE: 80907

Meeting Purpose:



2035 Regional Transportation Plan Process

Update  
Draft Non-Motorized Transportation Plan Update  
Draft 2008-2013 Transportation Improvement Program Projects  
Review of Planning Assumptions PPACG uses to Prepare Transportation Plans

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Please continue responses on the reverse side of this form if you need more space.

Were your questions regarding this topic answered? Yes  No

Was there enough time to discuss the topic thoroughly? Yes  No

What information was the most helpful?

[Staff available to answer questions.](#)

How did you find out about this meeting?

Newsletter  TV  Radio  Newspaper  Other/ specify [Email](#)

Do you have any additional questions or concerns that were not addressed?  
(If so, please describe them.)

[Define Constitution Parkway](#)

Additional Comments:

[Please keep transportation improvements transit/bicycle-centric.](#)

Are there any other topics you would like to have discussed?

Are there any other groups you would recommend that we meet with to discuss this topic?

[HDAs. I trust M. Frye already did this per Francine Hansen? More business, schools, UCCS?](#)

**Comments Submitted Through Summer Events and Festivals – To be provided**

**Exhibit B**  
**Stakeholder Interviews Key Issues**

**1. Issues: What do you see as the most important regional transportation issues?**

**Roads/Highways:**

- Improve traffic signal progression on major arterials.
- Improve both East-West and North South corridors.
- Improve the function and flow of major arterials and limited access roads. If not done correctly motorists will cut through neighborhoods. Also consider construction of additional freeways, a beltway and major arterials.
- Fund additional grade separated interchanges.
- Address the inability to widen arterials and expand lane miles where development is built to edge of road
- Improve road maintenance including snow removal.
- Preserve the right of way for future road corridors (corridor preservation was included in the El Paso County Major Corridors Study). This is especially important in the communities that haven't adopted future plans and adopted corridors to preserve for anticipated long term growth.
- Specific roads/intersections that were mentioned as needing attention include:
  - U.S. Highway 24
  - Cimarron Interchange with I-25
  - Powers Blvd. - grade separation
  - Highway 115 to Fort Carson and beyond
  - 67 North - increase width and improve maintenance)
  - 67 South – widen and add turnout lanes
  - Highway 16
  - Academy to I-25 needs work
  - Garden of the Gods west of I-25
  - Austin Bluffs
  - Marksheffel Road
  - Woodmen Road
- Improve access to airport, including Drennan Road and Milton Proby Pkwy.
- Improve access to northeast part of the city where significant growth has been occurring.
- Improve funding to address roads operating at poor levels of service. The region is far behind on funding for capital improvements and maintenance of existing infrastructure.

**Transit/Multimodal:**

- Improve and modernize bus system including increased service to more areas such as the Black Forest and the northeast part of the city.
- Provide more accessible bus stops, especially during and immediately after snow storms.
- Add more transit service to server local, regional and Front Range riders.

- Consider Front Range rail
- Improve area specialized transit service.
- Provide shorter headways and give maximum options to transit dependent riders. Make the service friendly, easy to use, and intuitive.
- Increase feeder bus service in neighborhoods.
- Add an additional lane designated as High Occupancy Vehicle (HOV) on I-25 to support buses and carpools. Lack of high density may limit rail options.
- Improve affordability of public transportation for low income riders.
- Consider new mass transit such as an East-West Light Rail connection and new shuttle service in Downtown Colorado Springs similar to 16<sup>th</sup> Street Mall Shuttle in Denver.
- Use Mountain Metro funds to attract more choice transit riders such as was done with the Front Range Express (FREX)
- Educate citizens about importance of transit

**Policy/General:**

- Improve coordination of regional long term and multimodal planning efforts. Think further ahead.
- Identify additional transportation funding for transportation improvements.
- Create mechanisms for developers to participate in transportation improvements
- Provide adequate infrastructure maintenance funding
- Improve the ability for people without a working, dependable automobile to navigate the city particularly the aged or those with disabilities. Provide access to work, school, medical care, services, etc.
- Improve overall mobility of people and goods as the region continues to grow. Especially focus on impacts of growth on I-25 traffic.
- Address costs of environmental mitigation to roadway improvements.
- Schools aren't designed to handle the volume of traffic they are experiencing.
- Educate newly elected officials on transportation history and issues
- Improve coordination of truck travel through the region.
- Consider land use implications as it relates to transportation.
- Consider specific areas of growth such as Fort Carson and UCCS
- Consider the role of tourism and access to mountains
- Continue to improve coordination with neighborhoods on transportation concerns.
- Educate community on how transportation improvements are funded.

**2. Suggested Public Participation Activities**

**General Suggestions:**

- Combine elected official and technical staff in working groups
- Educate the Public and elected officials about PPACG and long range planning. This should occur early in the process.

- Use CAC as a sounding board. Assign part of the CAC to technical teams so that they can be the eyes and ears of the elected officials and report back.
- Get people together so they can hear each other's views rather than conducting a Speakers Bureau hopping from group to group.
- Build an email distribution list. Put the text of the message in the email not just as an attachment.
- Use mailings with a postcard or web response to encourage commuter's input.
- Talk to homeowner associations or groups
- At Town Meetings/Open Houses, make a clear presentation up front that explains problems, ranges of possible solutions and process to select ideas. Don't show too many plans/drawings at Open Houses, especially those that are not relevant or that are off the table.
- At Open Houses, avoid problem of stations limiting the ability to learn from others and to hear questions from the public or the responses from knowledgeable professionals on the project team.
- The Confluence Park Charrettes were good
- COSMIX communications are effective  
The Springs Community Improvement Process ranked choices and used stickers.
- Cultural Center of Woodland Park is a good meeting location.
- Post information or host displays at coffee shops, county offices, cultural centers, library, YMCA
- Use VMS signs to announce meetings (Woodland Park has two signs)
- Attend special events such as summer festivals. At the events use surveys, information booths. Spring Spree, Territory Days. The Fountain Labor Day Festival. Balloon Festival (example of hot air balloon rides for kids with disabilities in Holland, MI).
- People need to understand how the plan makes sense and will solve the problem and see what it means for them individually.  
Start with a blueprint; not a pre-sale or predetermined list, but rather a blueprint of possibilities so that there is something to react to and are not starting from scratch.
- Start with the end in mind – a good transportation system. Then backup from there to carefully design and present the appropriate process – and start selling. You will lose too many participants if you start from scratch since the process will be too painful.
- Don't get bogged down in answering specific complaints
- The long range plan needs pizzazz, generate excitement surrounding the effort
- Use plain language and avoid buzz words; use "ways to move people around" instead of "transportation". Avoid saying things like "viability", "mass transit", etc. Use layman terms. Take away jargon such as "BRT". Use terms such as "good planning" and "good transportation". We need good roads in the region.
- The process needs a moniker (brand)
- Don't come across as a know-it-all expert.

- Talk about things in terms of a typical trip that someone would make such as to work, school, church, soccer practice, etc.
- Ask if region should invest in all different modes of transportation and what it would take to use different modes
- Ask about transportation to recreation opportunities
- Ask about proximity from home to trip destinations
- Ask about funding sources for maintenance of transportation infrastructure.
- Vary meeting times to cover different times of day and days of the week. Also vary locations to maximize convenience.
- Communicate with the Highway Advisory Board.
- Use a variety of tools such as flyers, websites and email.
- Need to piggyback on other events or partner with other groups given lack of general interest in future transportation planning.
- Participate again in COCO forum.
- Have to make the issue real for people. Help them see why they should care. Get people involved up front when planning is being done.
- Make public forums an event.  
Address PPACG at Citizens Academy and County College – once per year, not sure when next class will be. Invite participants from past courses to attend RTP meetings.
- Planning and Design Class at the City held usually in the Spring.
- People need to know how the plan affects them, both positive and negative impacts
- Be sure to ask for input - asking for “approval” and “input” is two different things
- Translate materials – primarily Spanish and Korean relevant for this region
- Bring food.
- Survey instruments should avoid questions that would make you answer “depends”. Use a scale of 1-5 for questions instead of yes/no answers.
- Solicit personal feedback instead of general feedback.
- Get the word out, e.g. Wal-Mart voter registration.
- Public forums should have transportation available to individuals not able to drive. For instance, many forums end after the last bus has gone by.
- Meet at employer locations in order to hear from people who might not normally come to an evening public meeting (e.g. USAA)
- Include a flyer and/or survey in utility bills
- Meeting locations should include churches and schools, not just municipal buildings
- Use visual aids as much as possible

### **Media Related Suggestions:**

- Media involvement is critical. They are always a friend or a foe. They must be an ally from the beginning. Regular media updates, information and status reports are important.

- Media community services spots and PSA's Find Human interest angles  
Media – Use the Spanish media: Hispania News, Univision Television, KNKN radio out of Pueblo and KEGQ La Grande based in Denver.
- Advertising in the Gazette and on the Gazette website is important, though many in the region do not receive it
- Television media
- Media blast to schools, particularly elementary schools – students often bring home flyers and other information to their parents
- Monument's Our Community News (OCN)
- Falcon Herald
- Calhan Ranchland News
- Pitch an article to the Gazette. If you can get a journalist to pitch a story, can get people out to meetings. (Example is article by Bill Volgen who writes side streets got 200+ people out for a meeting.)
- Gazette Metro section
- Use Radio PSA's
- Neighborhood papers – put in ads with maps, not just free announcements
- Paid media advertising not effective

### **3. Public Process Goals**

- Work with elected officials and involve them upfront
- Need strong leadership, especially from key players such as City Council, County Commissioners and other local mayors and elected officials.
- Transparent approach, people need to know their voice counts
- Get input at a very early stage, people need to feel their concerns are being heard
- Objectively present and address pros and cons of a particular issue.
- Balance of input; input isn't skewed by one segment of the population
- Develop a cohesive community stance, avoid balkanization of opinions
- Use a quality survey instrument
- Avoid perception of pre-arranged outcomes
- Include all segments of the community – the participation reflected diversity in age, economics, gender, and ethnicity
- Bring critics in early rather than at the 11<sup>th</sup> hour so can work with them.
- Involve diverse neighborhoods
- Avoid parochial interests; it is often very easy for a narrow interest group to dominate the process
- Getting input from people who don't live here.
- Focus on actionable items
- Balance different interests
- Start with a good process
- PPACG is the regional leader and should coordinate local jurisdictions.
- Plan for the future, but be realistic and don't be overly ambitious with pie in the sky solutions in the Long Range plan.



- Community based leadership
- Honesty in the process – demonstrate by clearly outlining need and options. If anything changes, openly address that right away.
- Give options, evaluate each.
- Help people to see the bigger view
- Try to get beyond just roads – must be multimodal
- Flexibility is needed in developing long range priorities
- Consider the future regional growth and economic development expansion opportunities; where is recruitment and retention going to occur in the future?
- Avoid having a “squeaky wheel” with a personal agenda drive any part of the process
- Balance public input with “expert” input

#### 4. Suggested Key Contacts

##### Specific Contacts:

- EDC – Mike Kazmierski
- CTAB - Craig Blewitt
- Chamber of Commerce - Stephannie Finley
- Downtown Partnership – Beth Kosley
- Chuck Brown – toll roads
- Marcy Morrison – Manitou Springs
- NEPCO – Bob Swedenburg
- John Weiss at the Independent
- Scott Smith, Briargate
- Tom Naughton, Banker
- TPAC – There is a new CAC member, Mike Schmidt, from telecommunications
- Trucking Group – subcommittee on truck routes – Larry Bagley
- Colorado Mobility Coalition (Nancy Olson, Jeff Ames)
- John Morse – used to be on CAC
- Hillside Community Center - Ken Callum
- Hillside Point and Payne Chapel - Pastor Jesse Brown Jr.
- Bob Armadariz is the Publisher of Hispania News
- Ken Boulla (sp?) is the new president of the board for the Hispanic Chamber
- Andy Song – Korean Community
- For the differently-abled community, Alphie is a person who was born with birth defects and travels extensively around town. He has graduated from high school and college and the Gazette has written a couple of articles about him, first when he was about 10. His mother, Dee Thomas, is the COO for Pikes Peak Family Connections. (Alphie might be a good contact for the media coverage on traveling in the region.)
- Citadel Mall, contact Jack Lemon, the Dillard’s store manager.
- Rick Z. at Pikes Peak Workforce/Vocational Rehabilitation

- New CDOT Director
- Urban Renewal Authority (Chuck Miller, Jim Rees)
- Nonprofit Center for Excellence at the Chamber (Cathy Robbins)
- Commissioner Williams for outreach to community concerned about taxes

**Specific Groups:**

- Air Force Academy
  - Baptist Road RTA
  - Center for Non Profit Excellence
  - Center for Public Policy Studies at UCCS
  - Centra de Familia
  - Citizens for Effective Government
  - City and County Boards and Commissions
  - Colorado Technical University
  - CONO
  - County Outreach Group - COG
  - Downtown Rotary
  - Freight – Surface Transportation Advisory Council (STAC)
  - HAC
  - HBA – connect with the development community
  - Highway Advisory Board
    - Historic Preservation Board
  - LEAC
  - Major employers such as Agilent Technologies
  - New Hispanic Market at Airport and Circle and the manager or owner, Dan
- 
- Organization of Westside Neighbors
  - Partners in Housing
  - Pikes Peak Association of Realtors
  - Pikes Peak Community College
  - PPACG Community Advisory Committee
  - PPRTA
  - Public School Districts, especially District 11. Also, Districts 2, 20, and 49.
  - Quality Community Group
  - Ritter’s Blue Ribbon Commission
  - Smaller communities such as Ramah, Peyton, Calhan, Falcon
  - Southern Colorado Economic Forum
  - The African Methodist Episcopal Church
  - The City of Fountain, tremendous growth
  - There is also a carneceria on Monterey
  - Transportation Committee
  - Trolley Group – Dave Lippincott
  - United Way
  - USAA

- Woodland Park

**General Constituencies:**

- Airport Staff
- Bicycle Path/Trails/Open Space advocates
- Children/Students who will be impacted by long range planning in the future
- Churches
- Commuters
- Construction industry
- Deaf community
- Employee Associations, Local Labor Council
- Farm Bureaus serving rural areas
- Fire/Police Association
- Hispanic and Asian populations. Language barriers.
- Large landowners – some are involved like Norris and Kane south of Powers. Once you identify corridors, have to find the landowners whose property will be affected.
- Lower income areas such as in the southeast
- Major non profit groups
- Military Stakeholders
- Municipalities – include both staff and elected officials
- Private Schools
- Retirees
- Rotary Clubs
- Rural unincorporated areas east of the city.
- School Districts
- Service Organizations
- Taxicab Drivers
- The Spanish media. 90% of the community speaks Spanish at home but only 20% speak Spanish only.
- Those with disabilities
- Those without computers/email
- Tourists
- Trucking and delivery companies

**Exhibit C On-Line Survey Instrument – To be Provided**

## **Exhibit D Focus Group Report**

### **Focus Group Report**

The Pikes Peak Area Council of Governments (PPACG) is currently developing the 2035 Regional Transportation Plan (RTP). The region's RTP is updated every four years and guides transportation investments.

As part of the update process, PPACG is seeking significant public participation so that the plan will reflect the desires of Pikes Peak area residents, businesses and travelers. Public outreach activities to date have included the development of a project Web site, an online survey, open houses, information booths at community events, and a regional transportation roundtable.

This document discusses the public input gathered from three focus groups conducted during the month of December. These groups allowed PPACG to ask questions about the region's transportation system in an interactive format, which can provide more nuanced information about people's thoughts and opinions than can traditional surveys. The demographics of focus group participants were representative of the community as a whole; by comparison, an open invitation was extended to participants in the open houses and roundtable event and participants self-selected whether to attend these events.

Participants for the focus group were selected by a third party research center, which contacted residents throughout the region, briefly surveyed them about transportation, and asked them demographic questions to determine whether they qualified to participate. Eligible individuals were invited to attend the focus group meetings.

The focus groups were held at the PPACG offices and at a market research center at the Citadel Mall. The groups were approximately two hours in length and participants were given a \$70 incentive for their participation.

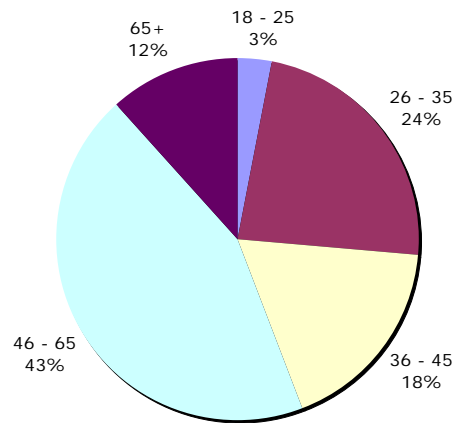
The questions asked during the focus groups were developed by the RTP community involvement consultant team in consultation with PPACG staff. A copy of the focus group discussion guide, which includes the questionnaire used at the focus groups, can be reviewed in Appendix A of this document.

### **Demographic Data of Participants**

All participants were asked questions about their race, ethnicity, household income, and age prior to being invited to participate in the focus groups. This was done to assure that the focus group participants would be representative of the community as a whole. Data from these questions are presented in Figures 1 to 3.

In terms of age, the focus groups participants were very representative of the region as a whole. Figure 1 shows the ages of focus group participants.

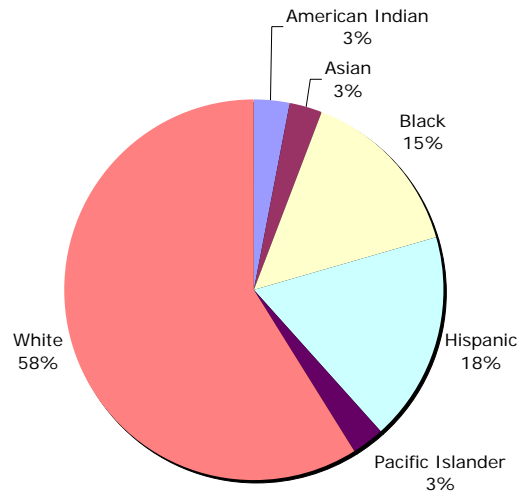
**Figure 1: Age of Participants**



Minorities were overrepresented within the focus groups. Within the region, white, non-Hispanics make up 75 percent of the population; however, these individuals made up only 58 percent of the focus group participants. The majority of the over representation within the minority communities comes from blacks who made up 15 percent of focus group participants but account for only 7 percent of the population, and Hispanics who made up 18 percent of focus group participants but account for only 13 percent of the regional population.

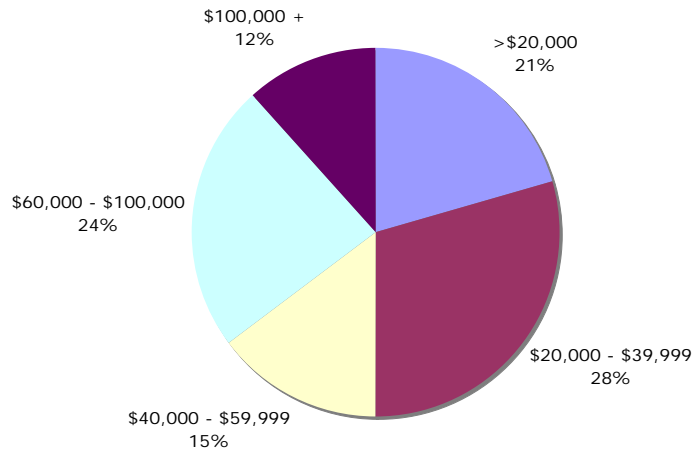
Previous outreach activities have not included minorities in a proportion equal to their population; therefore, it was deemed beneficial to have them overrepresented within the focus group population.

**Figure 2: Race and Ethnicity of Participants**



The household incomes of participants were fairly representative of the region as a whole. The lowest income group was slightly over represented at 21 percent versus 16 percent within the region. The higher income groups with household incomes above \$60,000 were perfectly matched to their regional make-up while middle-income households were slightly under represented.

**Figure 3: Household Income of Participants**



### Focus Group Structure

The methodology used to conduct the focus groups was meant to make all of the participants feel comfortable and elicit a high level of participation. When attendees arrived they were greeted, asked to sign in, and provided with a small meal and drink.

The facilitator explained the purpose of the focus group and explained the ground rules that would be used during the session. A copy of the ground rules is included in Appendix A.

After the introduction, participants were asked to complete a brief survey about the Pikes Peak area transportation system and their general travel habits. The questions were intended to get participants thinking about transportation issues and how they affect them. After the surveys were completed the facilitator asked the participants about their responses and encouraged group discussion.

At the conclusion of the survey exercise a computerized system was used to determine the importance to focus group participants of 10 factors associated with an effective transportation system. The factors were developed based on the Plan Goals and Objectives developed and adopted by the PPACG committees and Board of Directors. The factors were:

- Pavement conditions – effective maintenance of roads and paths
- Safe bridges – effective bridge maintenance
- Efficient intersections – good movement of vehicles through intersections
- Timely travel – minimal delays, efficient connections
- Travel choices – appropriate travel choices available
- Safe travel – minimal crash rates for motorized and non-motorized travel
- Reduced impact on neighborhoods and cultural and historic resources
- Reduced impact on natural areas
- Reduced fuel use and emissions
- Effective freight movement – efficient trucking of goods

The factors were presented in pairs and participants were asked to determine which item within the pair was most important and by how much. Every combination was presented. After the ranking exercise was completed participants were asked to rank how well the region is performing in the 10 ranked areas.

After both ranking exercises were completed the results were presented to the participants who were asked to explain why they ranked items in the manner in which they did. After the discussion the participants were asked to again rank the 10 factors. Their final rankings are presented in Section 3 of this document.

In addition to the ranking exercises, participants were presented with information on the three funding alternatives currently being discussed for the RTP. Those alternatives were:

- Strategic Regional Corridors
- Balancing Investments
- Reducing Environmental Impacts

Participants were asked to vote for the alternative they found most appealing. The results of the vote are presented in Section 3.



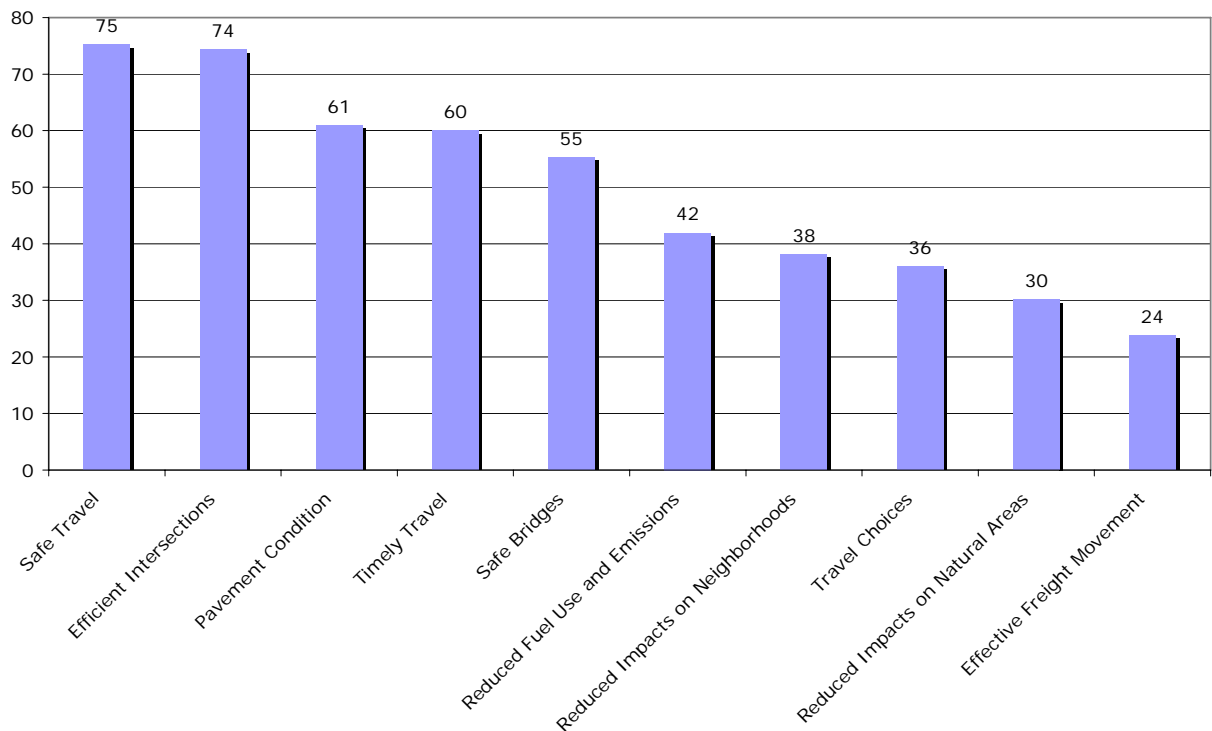
The focus groups concluded after the above discussion and information collection.

### Ranking Exercise Results

The ranking process in which focus group participants took part allowed each presented transportation factor to be ranked against all other factors. Based on the survey results each factor was assigned a value. The higher the assigned value, the greater the factor's importance to the focus group participants.

Figure 4 shows the factor rankings and ratings. The most important issue to participants was travel safety followed very closely by the desire for efficient intersections. Sticking with the safety theme, participants also had a strong desire for safe bridges.

Figure 4: Importance of Transportation Factors

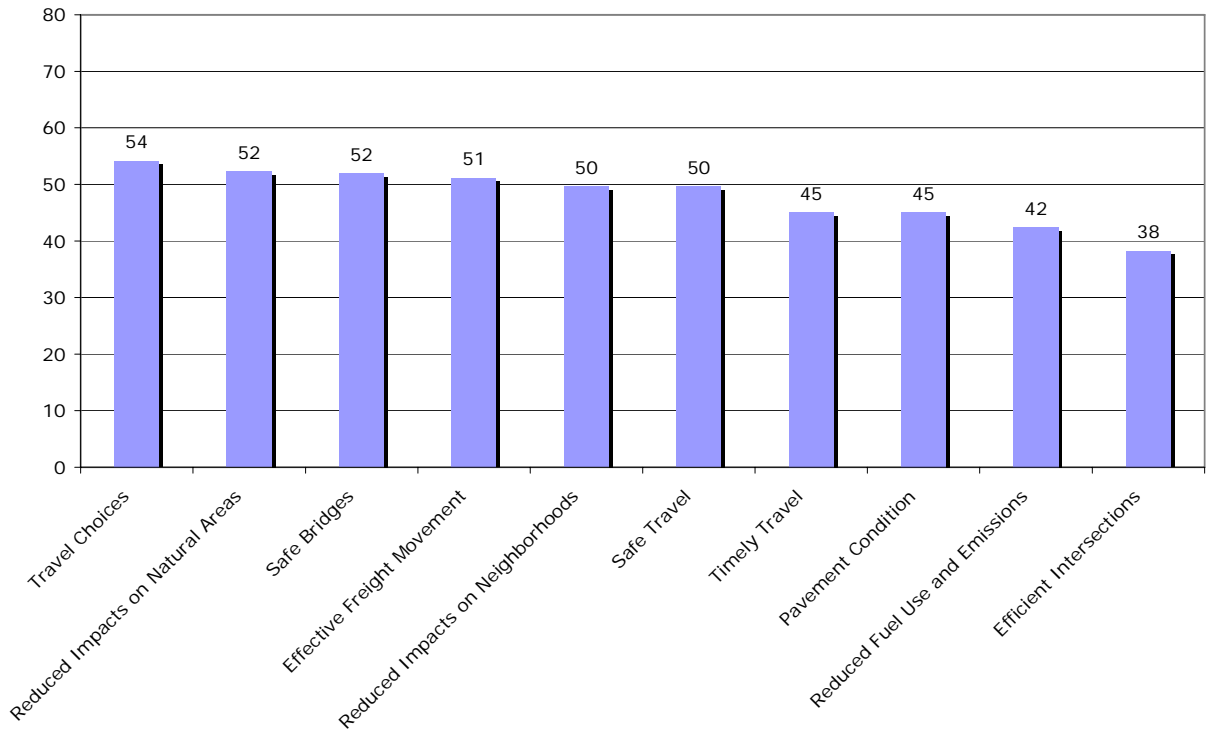


As noted in Section 2, participants were asked to rank how well the region is achieving the 10 transportation factors. Figure 5 presents the rankings and ratings from that exercise.

The results indicate that the focus group participants believe the region is performing similarly in most categories. Unfortunately, the rankings are not very high, which implies that the group does not feel the region performs very well in any category.

It is noteworthy that two of the poorest performing factors, pavement conditions and efficient intersections, were two of the most important factors to participants.

**Figure 5: Performance of Transportation Factors**



Participants voted on the three funding alternatives currently being considered for the RTP. The results follow:

Strategic Regional Corridors: 8  
Balancing Investments: 16  
Reducing Environmental Impacts: 7

### **Results Discussion**

The discussions that occurred during the focus groups can be categorized into five main areas: system maintenance, congestion, safety, alternative modes, and environmental concerns. The comments received during the three focus groups were fairly consistent and are summarized below.

#### **System Maintenance**

- Participants felt that road surface conditions are very poor throughout the region. They cited a prevalence of potholes as being a significant problem.
- Attendees felt that construction zones do not always have sufficient signage to warn of lane shifts and other important items.

## **Congestion**

- Whether or not congestion is an issue is dependent on the direction of travel, time of travel, and route taken.
- Participants identified major routes as suffering from congestion during the peak hours, but generally noted that alternate routes do exist.
- East-west movement was cited as the most difficult.
- Congestion outside of rush hour was not considered to be a major problem by a large majority of participants.
- Construction projects seem to be responsible for a large portion of the congestion that participants encounter.
- There was almost universal complaint that the lights within the region are poorly timed, forcing travelers to make unnecessary stops that delay their trips and use extra gasoline.

## **Safety**

- While concerned with the potential catastrophic failure of bridges, many individuals expressed more concern about ice on bridges during the winter months.
- Many participants felt that adequate steps are currently being taken to prevent bridge failures.
- Many participants believe that motorists do not have enough respect for pedestrians and fail to yield to them.
- Attendees felt that poor road maintenance in certain parts of the region ultimately leads to safety issues.

## **Alternative Modes**

- Participants generally felt that the existing transit system and bike facilities are sufficient and that other factors, such as congestion relief through roadway improvements, deserve more attention.
- Participants expressed a desire to assure that existing travel alternatives remain available.
- Some exceptions existed to the belief that the transit system is currently adequate. Many participants would like to see additional bus routes in areas of the region not currently served by transit and would like to see expanded bus service during off-peak hours.
- Transit users said that travel by bus can be very time consuming when compared to traveling by car.

## **Environmental Concerns**

- Reducing congestion on major streets is seen as having the additional benefit of taking cut through traffic out of neighborhoods.

- Traffic in neighborhoods was not viewed as a problem so long as drivers obey the speed limits, but many individuals felt that speeding in neighborhoods is common.
- Participants cited a concern for the environment; however, participants did not see a strong connection between transportation planning and the health of the environment. Many participants felt that enough actions are already being taken to protect the environment. For this reason they did not rank environmental concerns as high as the other factors being considered. This view, while common, was not universal.
- There was a strong desire to reduce fuel consumption because of the associated costs.

### **Additional Comments**

When asked why the efficient movement of freight was ranked so low, participants generally felt that making other items a priority, such as safety, efficient intersections, timely travel, and travel choices would benefit freight movement while also providing additional benefits to the community. It was this desire to support programs with multiple benefits that led participants to rank efficient freight movement so low, versus a disinterest in efficient freight movement.



**PIKES PEAK PARTNERSHIP/DISABILITY SERVICES INC. - AMBLICAB**

Pikes Peak Partnership/Disability Services Inc. is a non-profit agency that receives financial support from the City of Colorado Springs and PPRTA, to operate the Amblicab service. Amblicab provides curb-to-curb, door-to-door, and door-through-door service for individuals with disabilities, on weekdays from 7:30 AM to 5 PM. Drivers are authorized to go into houses or buildings and assist passengers with entering and exiting their homes and the service vehicles. Amblicab provides service to a) clients living outside of the Metro Mobility service area and b) clients that require door-to-door and door-through-door service. Amblicab does not restrict trip purposes.

Ridership and Performance

The Amblicab program provides nearly 850 trips to people with disabilities per month. Ridership has increased slightly throughout the years as illustrated in **Table 3-13**. The performance measures for Amblicab have remained relatively consistent with the average passengers per hour at approximately 1.30 and the subsidy per passenger at approximately \$3.37

**Table 3-13 Amblicab Ridership and Performance Measures**

Measure	2004	2005	2006
Passengers	9,164	7,429	9,092
Trips per Hour	1.52	1.24	1.26
Cost per Hour	\$31.26	\$36.59	\$36.13
Cost per Passenger	\$23.30	\$29.51	\$28.66
Recovery Ratio	6.2%	8.8%	11.8%
Average Fare	\$1.45	\$2.60	\$3.37
Subsidy per Passenger	\$21.85	\$26.91	\$25.29
Trips per Capita	0.02	0.01	0.02

Vehicle Fleet / Capital Costs

Amblicab has seven vehicles including six buses (five with four ambulatory plus five wheelchair positions and one with four ambulatory and three wheelchair positions) and a van (one ambulatory and two wheelchair positions).

Financial Characteristics

The Amblicab program is primarily funded by the City of Colorado Springs (\$199,918) and PPRTA (\$30,000) in 2007. Other minor funding sources (such as United Way) and rider fees make up the balance of funding.

**THE RESOURCE EXCHANGE**

The Resource Exchange (TRE) provides services to persons with developmental disabilities, to help them live independently. An important component of independent living is the ability to get to and from work and other activities, so transportation is an important component of this mission. Whenever possible, TRE helps clients by purchasing service from local providers, such as the City of Colorado Springs and Amblicab. However, in some cases these services do not meet the needs of their clients, and TRE operates additional service for these clients.

Customers of TRE are encouraged to be self-sufficient, using public transportation when possible; TRE purchases Mountain Metro and Metro Mobility passes for those individuals that are able to ride the fixed-route service or are eligible for the paratransit service.

TRE serves El Paso, Park, and Teller Counties, although transportation is only provided in El Paso County. Some areas, such as Highway 94, Falcon, Black Forest, and Peyton, are not served by Metro Mobility. Individuals are picked up at home and many trips are to activity centers throughout the area.

Ridership and Performance

Approximately 94 clients are transported on the seven demand response routes operated by TRE, on a 100% subscription basis. Of these clients, only 28 can be left alone, meaning others need to be met at the curb. 28,567 one-way trips were provided in 2006 at a total cost of around \$462,455, which is billed primarily to Medicaid. **Table 3-14** illustrates TRE ridership and performance measures between 2004 and 2006.

**Table 3-14 The Resource Exchange Ridership and Performance Measures**

Year	2004	2005	2006
Passengers	36,463	35,753	28,567
Trips per Hour	2.21	2.34	2.29
Cost per Hour	\$33.33	\$30.45	\$37.08
Cost per Passenger	\$15.08	\$13.02	\$16.19
Recovery Ratio	---	---	---
Average Fare	---	---	---
Subsidy per Passenger	\$15.08	\$13.02	\$16.19
Trips per Capita	0.07	0.07	0.06

Vehicle Fleet / Capital Costs

The Resource Exchange operated 7 bus routes, each using a separate vehicle. The TRE vehicle fleet consists of 10 buses:

- ▶ Eight with a 14 passenger capacity (12 plus two wheelchair positions)
- ▶ Two with a 21 passenger capacity (15 plus two wheelchair positions, 17 plus one wheelchair position)

Financial Characteristics

TRE operates service and purchases transportation through the use of state, Medicaid, and other funding. No City of Colorado Springs general funds are currently allocated for the provision of services by TRE. In 2008 PPRTA allocated \$40,000 to TRE. TRE purchases services for 170 Medicaid and 189 Supported Living Service clients through Metro Mobility, Mountain Metro, and Amblicab.

**FOUNTAIN VALLEY SENIOR SERVICES**

Fountain Valley Senior Services provides a variety of social service programs (including transportation services) to seniors over the age of sixty that are located in southeastern El Paso County. The transportation services provided by Fountain Valley Senior Services are based on the requirements of the Older Americans Act. Fountain Valley Senior Services coordinates with Mountain Metro to provide linked trip service from southeastern El Paso County to the Colorado Springs metro area. Transportation services are available for disabled adults as well.

Service can be curb-to-curb, door-to-door, or door-through-door as required by the client. They are also planning on extending services towards Falcon to meet needs in that area.

Ridership and Performance

Fountain Valley Senior Services provided 15,623 trips in 2006 with approximately 60% of them being subscription trips. Of the subscription trips, many are for transporting seniors to the senior center for daily meals provided by The Golden Circle. Dialysis trips are also generally prescheduled. Other trips may go to any number of places in the Colorado Springs Area, but many are to hospitals for medical appointments. Other towns served are Calhan, Peyton, Ellicot, Rush and Yoder. Occasional special field trips to Denver and other locations are provided. There were 100,313 miles driven in 2006 on the company vehicles. **Table 3-15** illustrates Fountain Valley Senior Center Performance Measures in 2006.

**Table 3-15 Fountain Valley Senior Center Performance Measures 2006**

Measure	2006
Passengers	15,623
Trips per Hour	2.58
Cost per Hour	\$46.14
Cost per Passenger	\$17.87
Recovery Ratio	3.1%
Average Fare	\$0.55
Subsidy per Passenger	\$17.32
Trips per Capita	0.03

Vehicle Fleet / Capital Costs

Fountain Valley Senior Services has nine vehicles, of which two are full sized vans, one is a minivan with a wheelchair lift, and the remainder are minibuses with wheelchair lifts. These vehicles were purchased using CDOT 5310 funds and CDOT holds the titles.

Financial Characteristics

A contract signed in June 2006, between the City and El Paso County provides a mechanism (Intergovernmental Agreement) under which transit services previously provided and funded by El Paso County through Fountain Valley Senior Services can be funded using PPRTA funds as a City sponsored transit activity. Funding in the amount of \$200,000 for transportation services was provided for 2006. This was supplemented by approximately \$59,000 in Title III funds and limited donations.

**SUMMARY AND COMPARATIVE INFORMATION OF SPECIALIZED TRANSPORTATION PROVIDERS**

**Table 3-16** summarizes the total ridership, costs, and services provided in the region in 2006. At present, Metro Mobility is responsible for just over half of the total trips and expenses. On the basis of service miles, they provide two-thirds of the service on the street.



**Table 3-16 Summary of Specialized Transportation Service Providers (2006)**

Provider	Annual Trips	Annual Operating Costs	Annual Revenue Hours	Annual Revenue Miles	Number of Vehicles
Metro Mobility	134,268	\$2,271,099	66,820	1,028,189	41
Silver Key	55,110	\$818,182	24,343	314,283	26
Ambilcab	9,092	\$260,576	7,212	119,596	7
The Resource Exchange	28,567	\$462,455	12,472	197,909	10
Fountain Valley Senior Center	15,623	\$279,180	6,051	100,313	9
<b>Total</b>	<b>242,660</b>	<b>\$4,091,492</b>	<b>116,898</b>	<b>1,760,290</b>	<b>93</b>

Combined Performance Measures

Cost per Passenger	\$16.86
Passengers per Hour	\$2.08
Trips per Capital	0.47

It is important to note that different services operate in different ways and cannot be directly compared. The type of service and the geographic area covered directly affects the overall costs and productivity, so these comparisons can give a false impression of performance levels. For example, The Resource Exchange operates demand response services on a subscription basis, traveling fairly long distances while Amblicab transports riders who need the highest level of assistance and Silver Key relies on a large percentage of volunteer drivers.

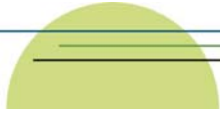
Systemwide averages for cost per trip are well below the levels found in many communities, reflecting an overall system that is operating effectively. Conversely, the number of passengers carried per revenue hour is higher than in many communities. The combined total of .47 trips per capita reflects the overall level of specialized transportation in the region.

**Conclusion**

Residents have authorized a one tenth of a percent sales tax to be used to transit services in the Pikes Peak Region. The public transportation system has been renamed as Mountain Metropolitan Transit and more regional services are operated, including service to Denver. The specialized providers are working to augment the paratransit services provided through Metro Mobility with systems that complement rather than overlap each other.

At present the public transportation services provide a total of 6.4 trips annually per capita in the urbanized area on the fixed-route system and 0.5 trips annually per capita through specialized providers for a total of just under 7 trips annually per capita.

Some critical gaps in service exist. One is that, except for FREX, service there are no public transportation services in some growing parts of the urbanized area (including Monument). Another is that no public transportation services exist in much of the northern portion of the City of Colorado Springs, except for limited express service. Finally, there are no general public call-and-ride services at this time. These are useful in meeting needs in areas where services are unable to support a fixed-route. They are also useful as they can carry people with disabilities, reducing the coverage area for paratransit services while augmenting the services that are provided by the various specialized providers. Mountain Metropolitan Transit is currently evaluating the cost/benefit feasibility for a call-and-ride in the northern part of the city.



## **2035 Mountain Metropolitan Transit Plan**

**DRAFT**

The system of providing services through a variety of private providers seems to work well for the region and lends itself to coordination among specialized transportation providers.

There is a need for the decision-making structure to reflect the regional nature of travel patterns and the operational realities of Mountain Metropolitan Transit. Developing a sustainable and stable funding source and consolidating the funding sources into a regional decision making process will be an important next step. This will enable elected officials to focus on building a transit network that reflects the changing needs of the region and to evaluate trade-offs in types of transit investments.

## 4.0 EXISTING AND FUTURE DEMOGRAPHICS

This section describes the existing and projected demographics in the Pikes Peak region and the surrounding area. Land use data was provided by the PPACG for use in this analysis. Additional information was obtained from the 2000 Census.

### *Population Characteristics*

**Table 4-1** compares population estimates for 2005, 2015, 2025 and 2035 for the PPRTA, the City of Colorado Springs and the Colorado Springs Urbanized area. As shown, the City of Colorado Springs population is expected to grow by 39% between 2005 and 2035. During that same period the urbanized area is expected to grow 21%.

**Table 4-1 Population Projections**

	2005	2015	2025	2035
PPRTA	517,900	655,700	750,600	861,800
Urbanized Area	438,000	484,400	497,200	530,800
City of Colorado Springs	362,800	433,400	467,300	505,600

The next few sections summarize characteristics about population density, household income, age, households without vehicles and persons with disabilities. These are all used as measures to indicate where there is likely demand for transit service.

### POPULATION DENSITY

**Figures 4-1** and **4-2** illustrate existing and future population densities in the project vicinity. Densities exceeding six people per acre are typically considered the minimum density to support fixed-route transit. A comparison of 2005 to 2035 shows substantial increases in densities along the east side of the metro area along Marksheffel Road and in the south along South Academy Boulevard, South Powers Boulevard and into Fountain. The figure shows that about 23% of the urbanized area is considered transit supportive in 2005 increasing to over 30% in 2035.

Figure 4-1 2005 Population Density

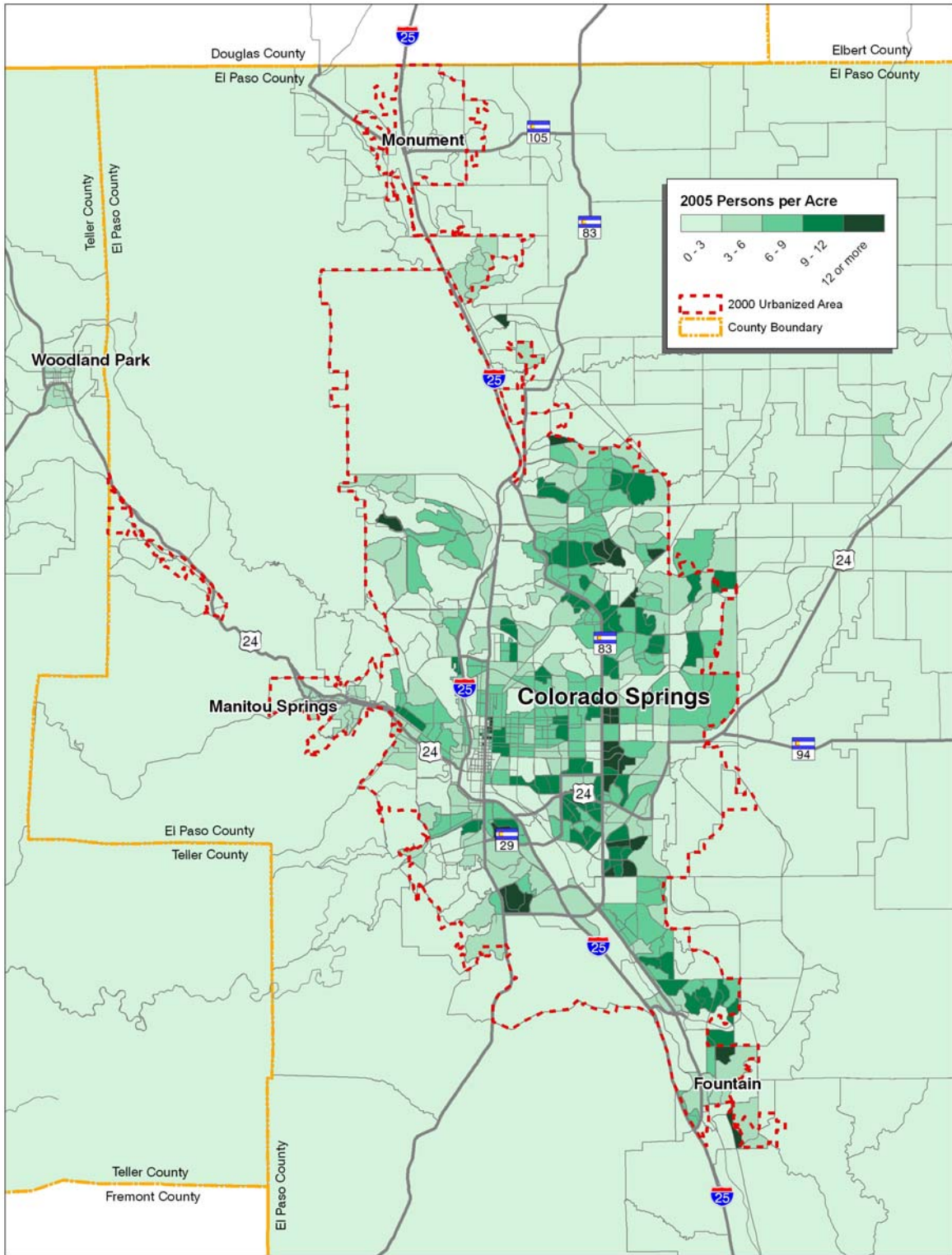
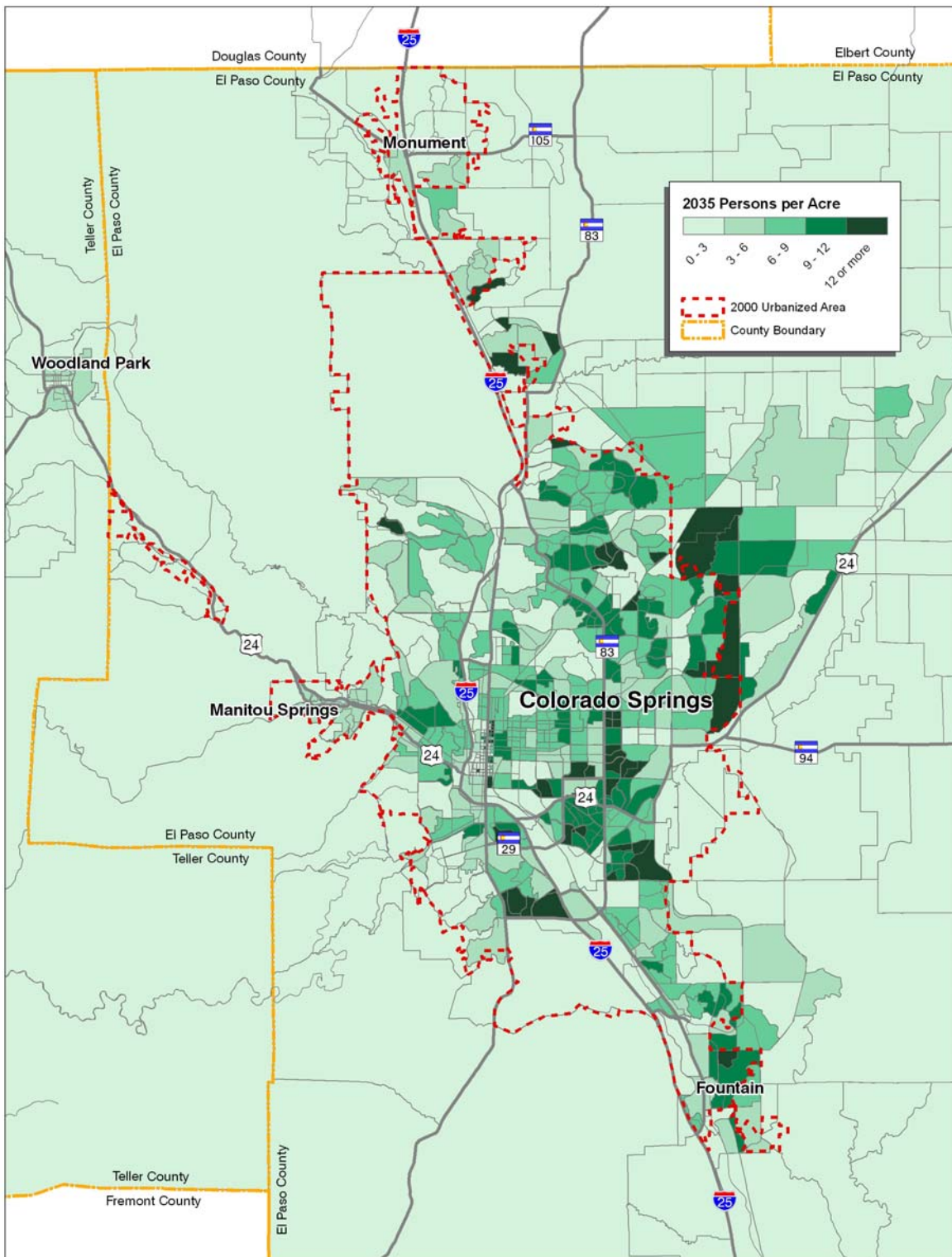
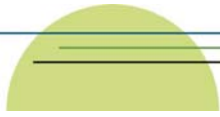


Figure 4-2 2035 Population Density





### LOW-INCOME HOUSEHOLDS

**Figure 4-3** illustrates Census tracts by median household income. As shown, the lowest median income locations are found in the city center. Median household income generally increases farther away from the city center with the highest median incomes located southwest of Colorado Springs and north toward Monument and Woodmoor. Most census tracts have a median household income between \$40,000 and \$80,000 annually.

### AGE OF POPULATION

**Figure 4-4** illustrates the locations with densities of people age of 65 or older. As shown, the highest concentration of people age 65 and older appears to be in the northeast corner of the city near Powers Boulevard and north of Platte Avenue. These locations will likely attract more transit users than other locations with a younger median population.

### ZERO VEHICLE HOUSEHOLDS

**Figure 4-5** illustrates the locations of households where the Census identified zero vehicle households exceed 10%. These locations will likely attract more transit users per capita than locations with one or more vehicles in the household. Similar to the locations of low-income households, zero-vehicle households are highest within the city boundary and concentrated near the city center. The lowest percentages of households without a vehicle are located outside the city.

### PERSONS WITH DISABILITIES

**Figure 4-6** illustrates the locations where the Census identified people with disability are more than 10% of the population. These locations will likely attract more transit users per capita than locations with a smaller percentage of persons with disabilities.

### POPULATION SERVED BY TRANSIT

In 2005, 287,600 people living in the urbanized area (66% of the total urbanized area population) lived within a half mile of an existing local transit route. In 2035 the population living within a ½ mile of an existing local route would increase to 344,600 people. This would represent about 65% of the total urbanized area population indicating increases densities within the urbanized area. While the populations near the city center would still be well served in 2035 with the existing fixed-route services, the growth areas along the east side of the city (Marksheffel Road) should be considered for expanding service, along with the major employment and activity centers serving the populations on the north and east sides of the urbanized area.

Figure 4-3 2000 Median Household Income

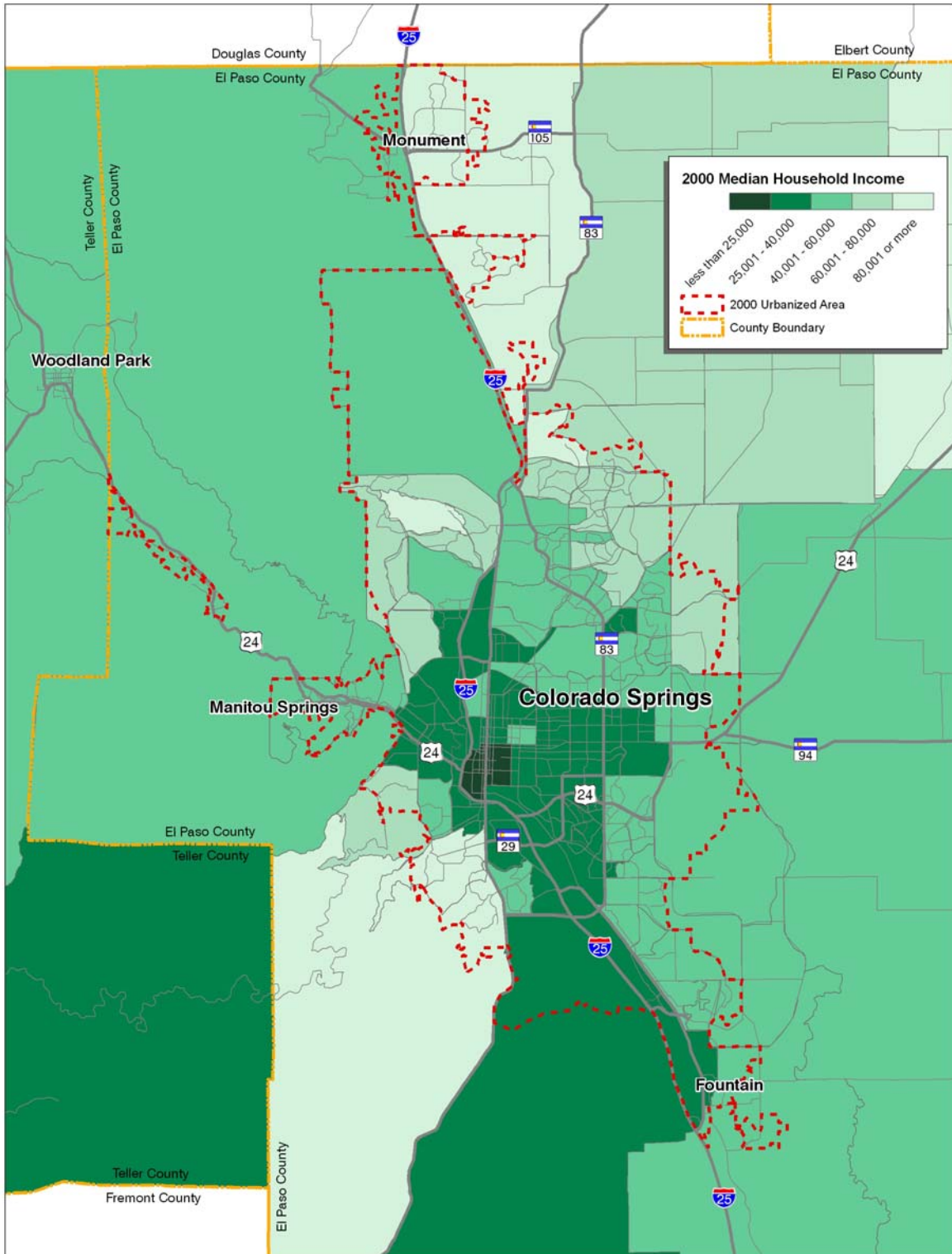


Figure 4-4 Age of Population

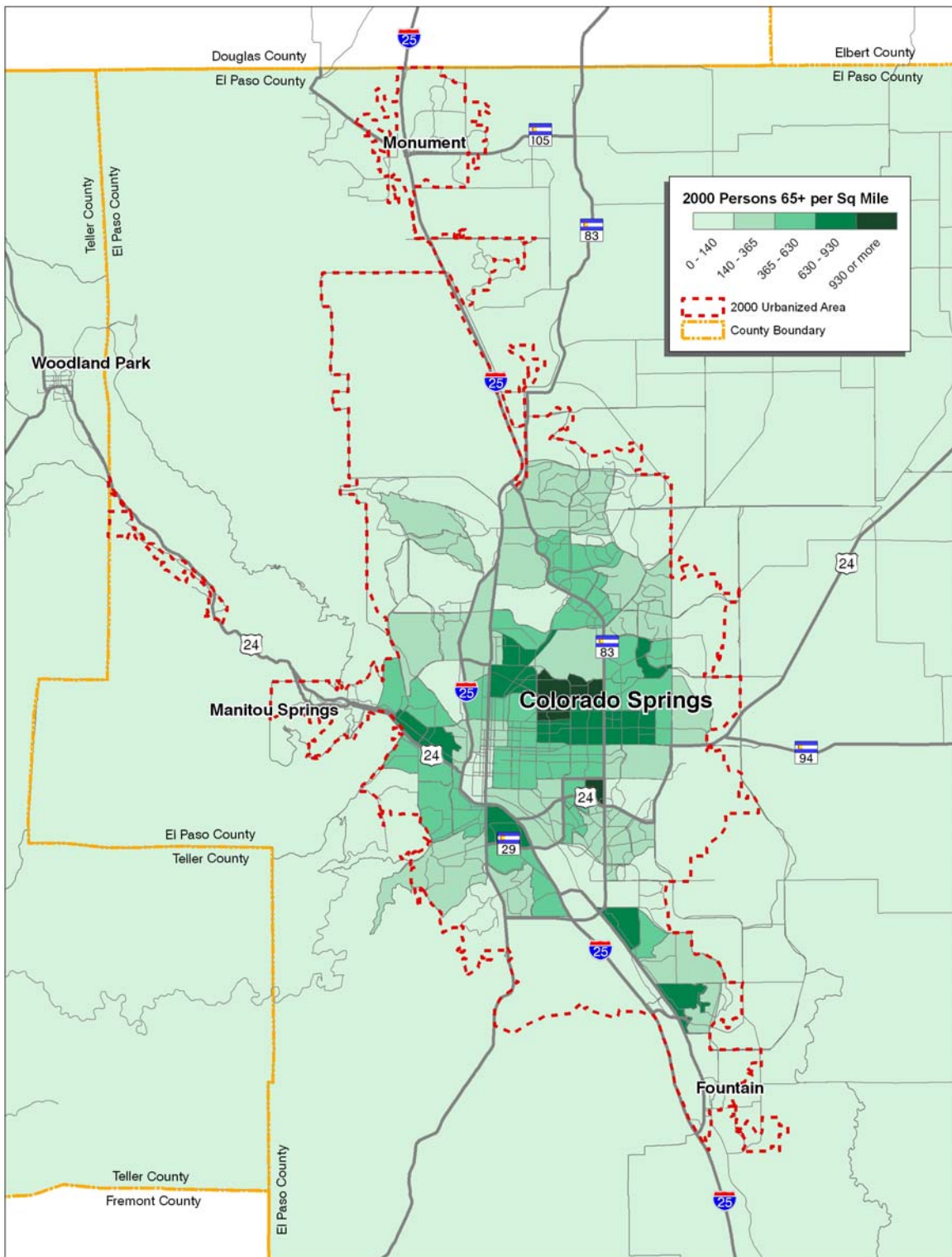




Figure 4-5 Zero Vehicle Households

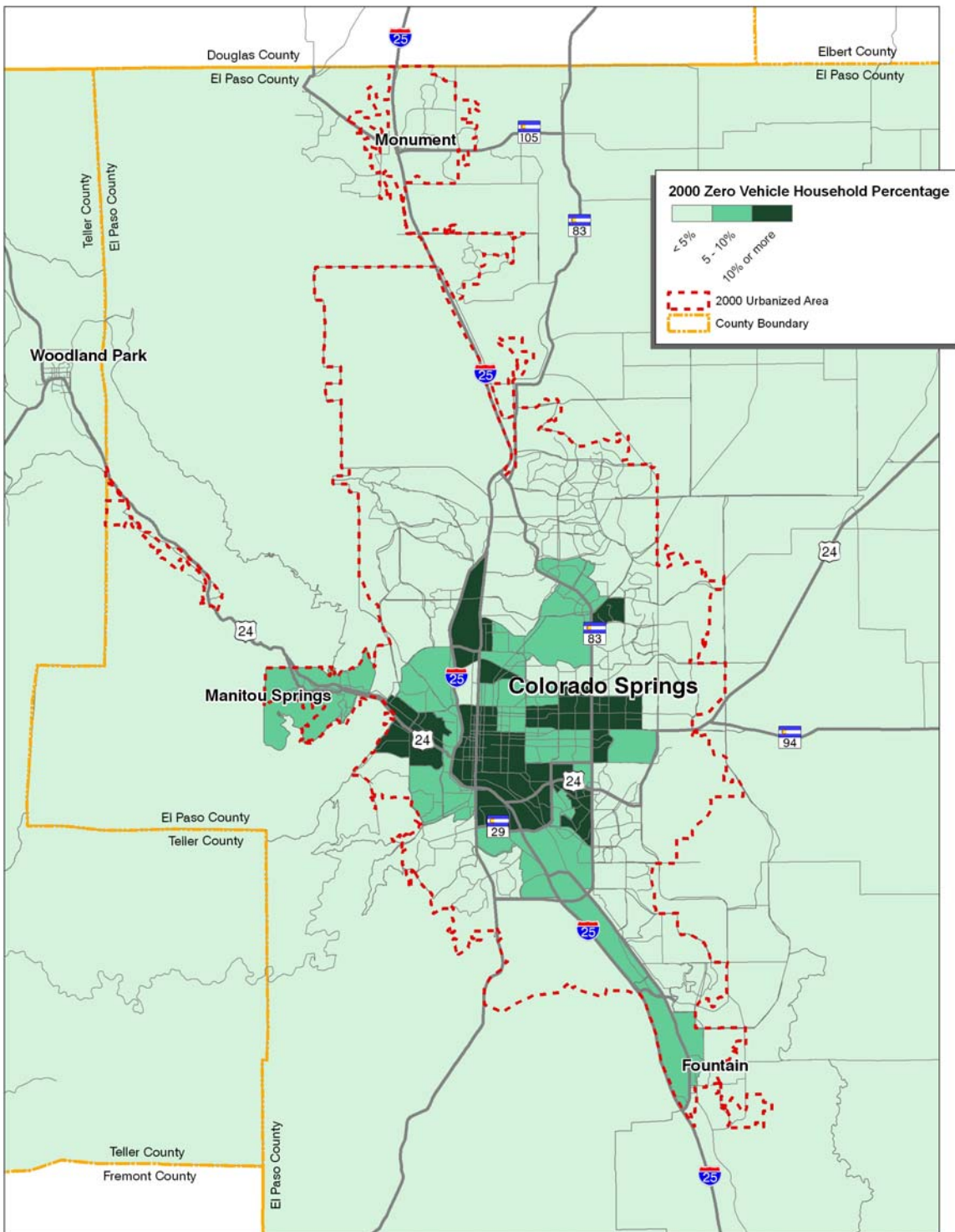
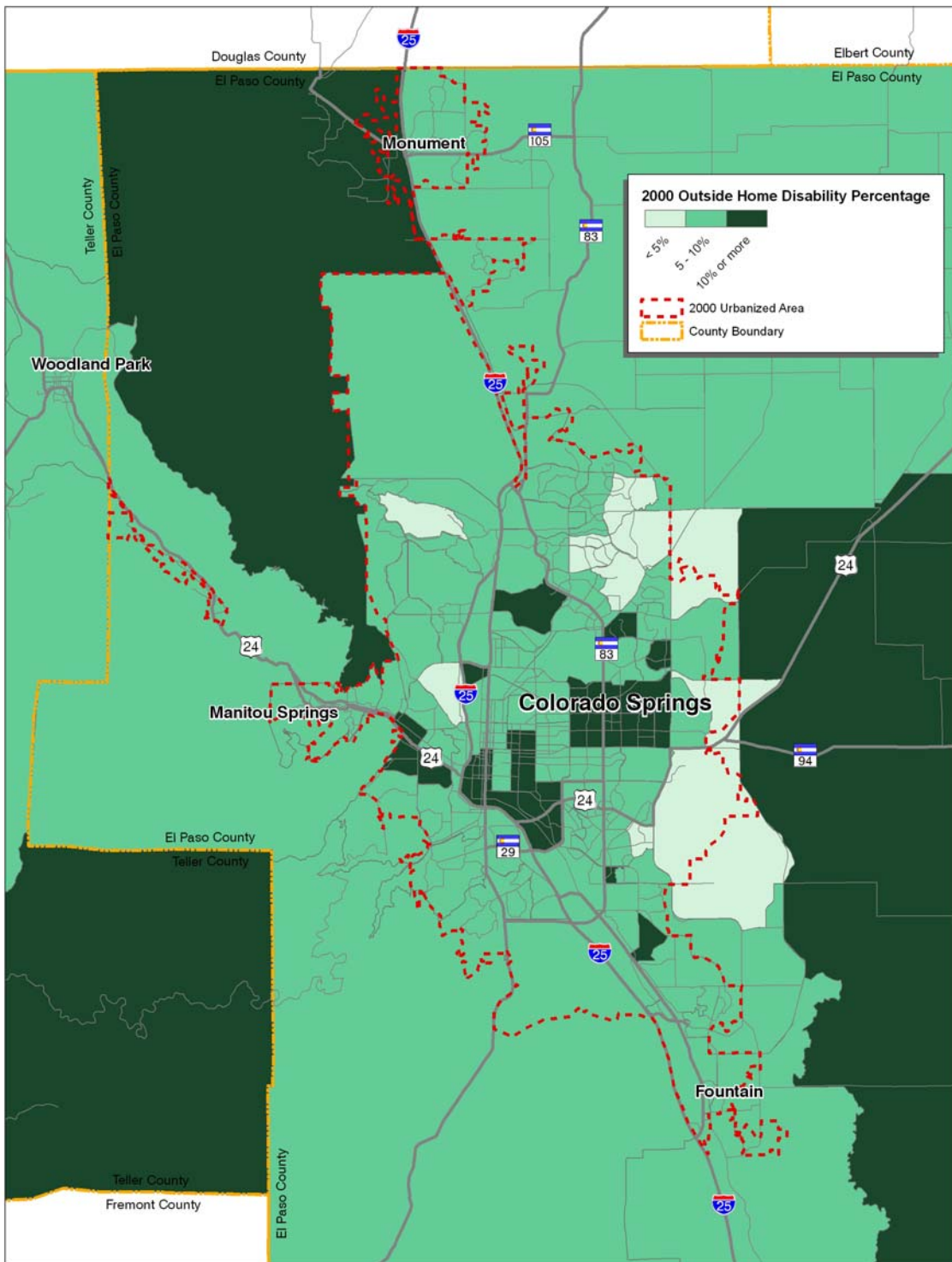
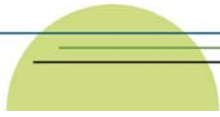


Figure 4-6 Persons with Disabilities





Employment

Table 4-2 summarizes the employment projections for Colorado Springs and the surrounding area. As shown, employment in the urbanized area increases by 71% between 2005 and 2035. Similarly, employment in the City of Colorado Spring grows by 76% between 2005 and 2035.

Table 4-2 Employment Projections

	2005	2015	2025	2035
PPRTA	275,600	362,900	445,100	527,300
Urbanized Area	257,800	320,500	381,300	441,000
City of Colorado Springs	230,700	293,900	353,500	406,000

EMPLOYMENT DENSITY

Figure 4-7 and 4-8 illustrate existing and future job densities in the project vicinity. Densities exceeding four jobs per acre are typically considered the minimum density to support fixed-route transit. Comparing Figures 4-8 and 4-9 shows where employment growth is expected to occur. The figures illustrate the current concentration of jobs in the city center and growth in the south end of the city and north along I-25. As shown about 15% of the urbanized area employment is considered transit supportive in 2005 increasing to 28% in 2035.

Table 4-3 lists the top employers in the Colorado Springs area.

Table 4-3 Top Employers in Colorado Springs Area

Largest Employers	Number of Employees
Fort Carson	15,159
U.S. Air Force Academy	6,410
Peterson AFB/NORAD/Space Command	5,542
Colorado Springs School District #11	3,440
Memorial Hospital	3,100
Penrose-St. Francis Health Services	2,981
City of Colorado Springs	2,424
Hewlett-Packard	2,200
Schriever AFB	2,107
El Paso County	2,029
WorldCom (Verizon)	2,000
ATMEL	1,850

Source: <http://www.city-data.com/us-cities/the-west/colorado-springs-economy.html>

JOBS SERVED BY TRANSIT

In 2005, 201,000 jobs in the urbanized area (78% of the total urbanized area employment) were located within a half mile of an existing fixed-route transit line. In 2035 312,700 jobs in the urbanized area (71% of the total urbanized area employment) are expected to be located within 1/2 mile of the existing local routes.

Figure 4-7 2005 Employment Density

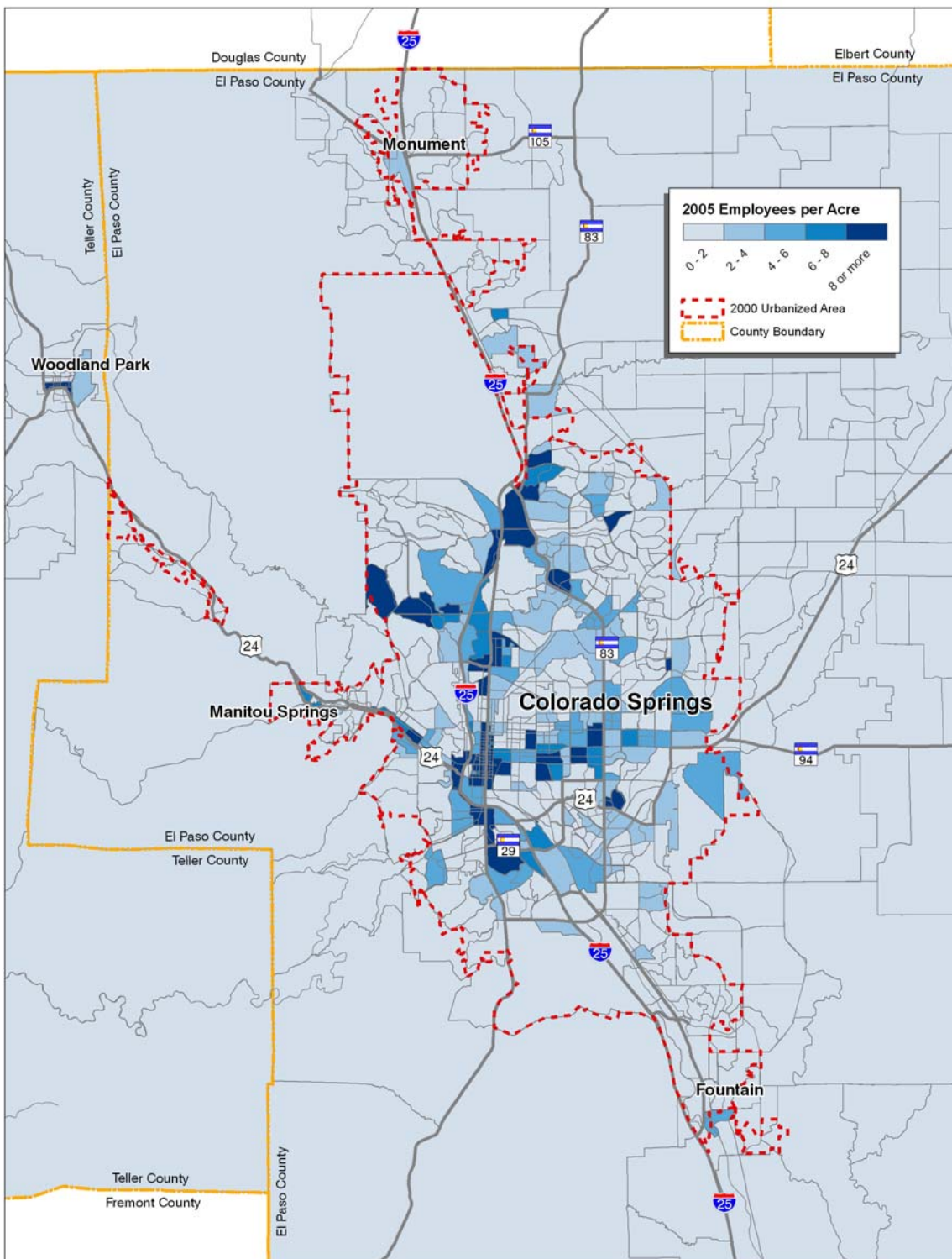
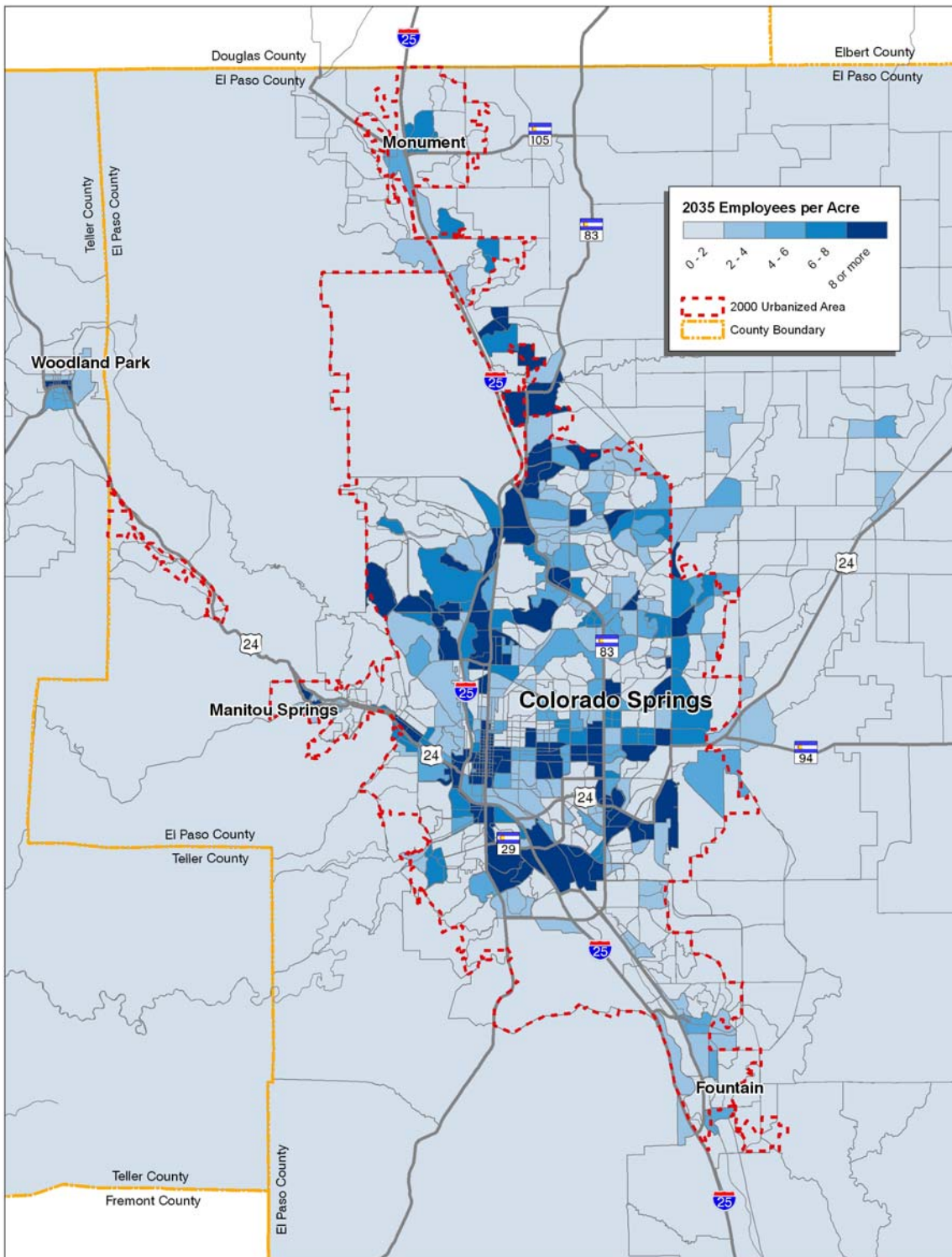


Figure 4-8 2035 Employment Density



*Travel Markets*

Using the population and employment data described above and PPACG’s VISUM travel forecasting model, key origin/destination travel patterns were identified. These are referred to as desire lines. **Figure 4-9** illustrates the key desire line identified. As shown, there is a clear pattern of travel to and from the downtown area. However, the largest movement occurs between UCCS and Garden of the Gods. Other key origin/destination patterns can be seen between downtown and east of downtown. Comparing the 2005 desire lines to the 2035 lines (**Figure 4-10**) shows growth in demand both north and east of downtown as well as between UCCS and downtown and Garden of the Gods.

**Figure 4-9 2005 Key Origin and Destination Travel Desire Lines**

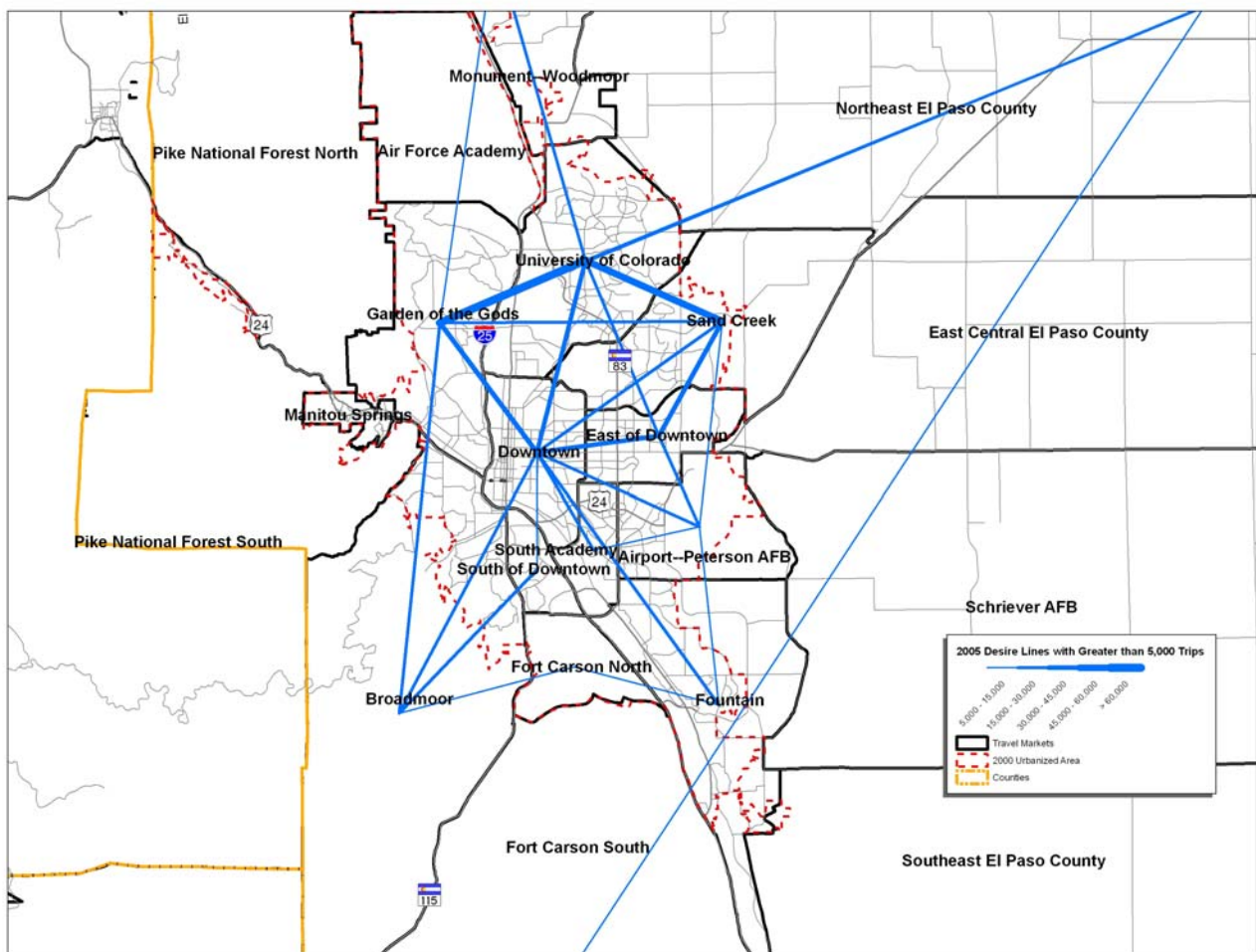
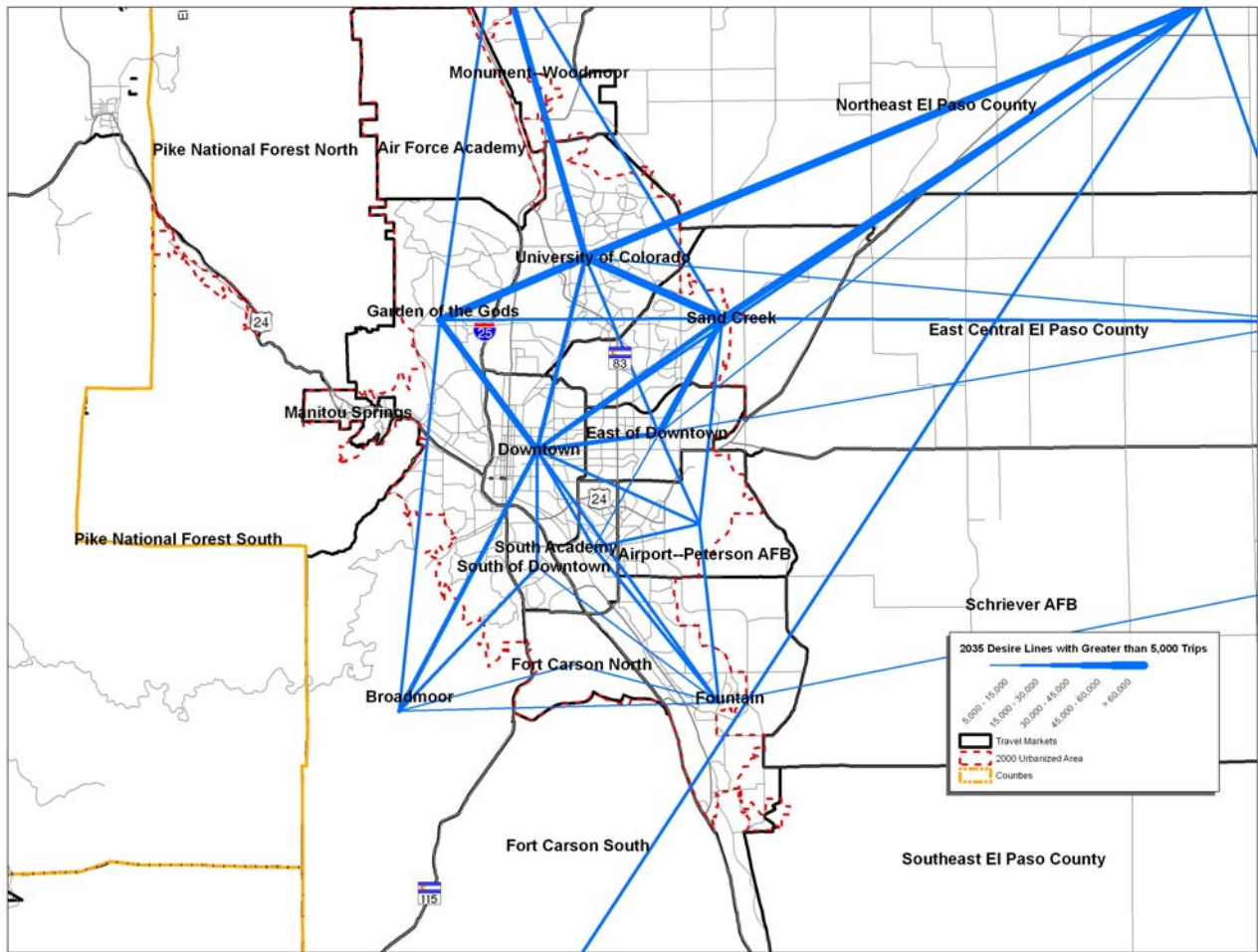


Figure 4-10 2035 Key Origin and Destination Travel Desire Lines



## **5.0 PUBLIC OUTREACH**

As a part of the development of the 2035 plan for Mountain Metropolitan Transit, several techniques were used to obtain feedback from the public about transit and its future in the Pikes Peak region. One of the techniques was to review information from public meetings and outreach that was done by the Pikes Peak Area Council of Governments (PPACG) for the larger 2035 Regional Transportation Plan (RTP). Another technique was to survey Mountain Metropolitan Transit riders at two of the system's main transfer stations. Obtaining feedback from the public in these two ways ensures that information from both the existing transit riders as well as the general public is obtained. This information will help guide the development of the transit alternatives for this plan.

### *Summary of PPACG Outreach*

PPACG had numerous opportunities for public input throughout the development of the broader Pikes Peak Area Regional Transportation Plan. The outreach conducted by PPACG included:

- ▶ Public Meetings
- ▶ Roundtables
- ▶ On-line Surveys
- ▶ Traveling Community Events
- ▶ Focus Groups

The following provides a summary of the input that PPACG obtained regarding transit throughout their process.

#### **MOUNTAIN METROPOLITAN TRANSIT RIDER SURVEY**

To ensure the needs of today's transit riders are fully understood, it was necessary to obtain public input from current riders. Public outreach was conducted at the Citadel Transfer Station from 10:00 AM – 1:00 PM and the Downtown Terminal from 3:00 PM – 6:00 PM on Monday, November 19, 2007.

Information about Mountain Metropolitan Transit's current fixed-route network was provided on three boards: 1) Existing Weekday Routes, 2) Existing Sunday/Evening Routes and 3) Express/School Routes. Additionally, boards were provided with information from PPACG's outreach efforts for the RTP. One board was about the process for the development of the 2035 RTP and the other had information about the expected growth of both population and employment in the region from 2005 to 2035.

A very brief survey was also developed for riders to help understand rider priorities. The survey consisted of one question, and had a general comments section at the end.



The survey question was:

*If additional transit funding were available how would you spend it?*

*Using numbers 1 through 5 (with 1 being your highest priority and 5 being your lowest) please prioritize these improvements – use each number only once.*

*\_\_ Increase Coverage (area served)*

*\_\_ Increase Frequency (have the bus come more often)*

*\_\_ Provide more Evening Service*

*\_\_ Provide more Sunday Service*

*\_\_ Provide more Commuter/Regional Service*

### Public Outreach Results

Over 150 riders were personally interviewed and the majority of riders were willing to provide feedback. There was a wide-range of opinions about the transit system, ranging from completely satisfied to extremely unhappy. The majority of passengers interviewed were transit dependent.

One-hundred and nine valid surveys were collected. Additionally, all verbal and written comments are included in **Appendix B**.

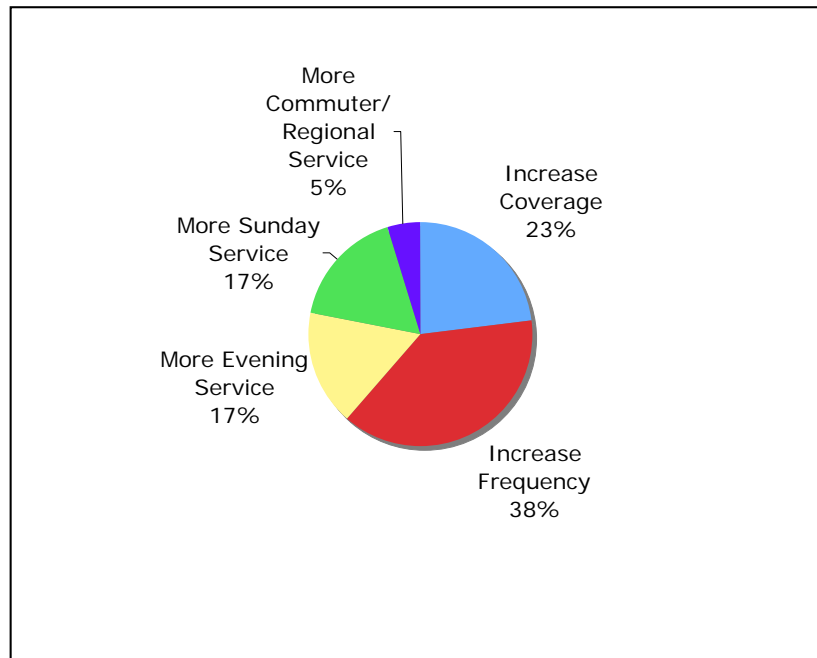
As riders were asked to prioritize improvements on a scale of one through five, with one being their highest priority, the lowest total actually represents the highest priority. **Table 5-1** illustrates the survey results based on prioritization totals.

**Table 5-1 Improvement Prioritization**

Importance	Priority	Total Points(1)	Points Available
Highest Priority	Increase Frequency	244	1635
	Provide more Evening Service	295	1635
	Increase Coverage	305	1635
	Provide more Sunday Service	323	1635
Lowest Priority	Provide more Regional/Commuter Service	469	1635

(1) Lowest total equals highest rider priority.

The data was evaluated based simply on the number of “1” responses (highest priority) associated with their respective improvement. When the data was analyzed in this manner, the results were slightly different than above, as shown in **Figure 5-1**. The highest priority is still *Increase Frequency*, but the second priority is *Increase Coverage*.

**Figure 5-1 Highest Priority Improvements Based on Number "1"**

### PUBLIC OUTREACH COMMENTS

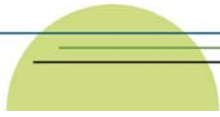
The majority of comments from riders reflected the priorities noted in the survey question. Many riders would like to see improved frequencies, additional service coverage and an extension of night and weekend service. A complete list of comments received by the consultant team can be found in **Appendix B**.

The additional areas that riders would like to see service are:

- ▶ West side/Broadmoor (Sunday Service)
- ▶ Additional service in the northern part of Colorado Springs, including an east/west connection
- ▶ Service on the east side of Town, especially to the area near the SkySox ball field

One rider suggested 30 minute frequencies on all routes on Saturdays, and other riders thought that the 35/70-minute frequencies makes using the system difficult. In addition to increasing frequencies, many riders suggested enhancing timed-transfers at transfer stations.

The majority of comments related to evening and Sunday service requested extending the time that the service operates, not adding additional routes. Most riders want service to run until at least 7 or 8:00 PM at a minimum, and service operating until 10:00 PM seven days a week would be ideal.



### *Conclusion*

Based on the prioritization of service improvements from riders, any additional funding or service improvements should first address increased frequencies, followed by improved evening and Sunday service. There are a number of existing riders that are completely satisfied with the system and do not want to see any changes.

Overall, as transit dependent riders presently make up the majority of passengers on Mountain Metro, positive service changes would undoubtedly improve their quality of life by freeing up time and creating better connections to jobs and needed services.

## 6.0 2035 TRANSIT VISION PLAN

The 2035 Transit Vision Plan updates the 2030 plan that was developed in 2004 and incorporates other transportation planning efforts that have been conducted throughout the region. The plan is a guide to development of regional transit services that are fully integrated with other modes of travel, address the mobility and accessibility needs throughout the region, and support sustainable land use planning efforts. **Figure 6-1** and **6-2** illustrates the key elements of the 2035 transit vision plan.

Key elements of the transit vision plan are described below.

### *Interregional Transit*

Another piece of the integrated transit system is the interregional services. These services provide mobility to people traveling to and from the Pikes Peak Region. The vision plan includes continuation of the FREX commuter bus service connecting the Pikes Peak Region to Castle Rock and the Denver metro area.

In addition to interregional bus service, interregional rail connecting the Pikes Peak Region to other Front Range communities in Colorado, north to Wyoming and south to New Mexico is envisioned. This is part of a statewide initiative for regional rail service. The community would likely be served by five to seven stops.

**Figure 6-1** illustrates the likely commuter rail line and the existing FREX route.

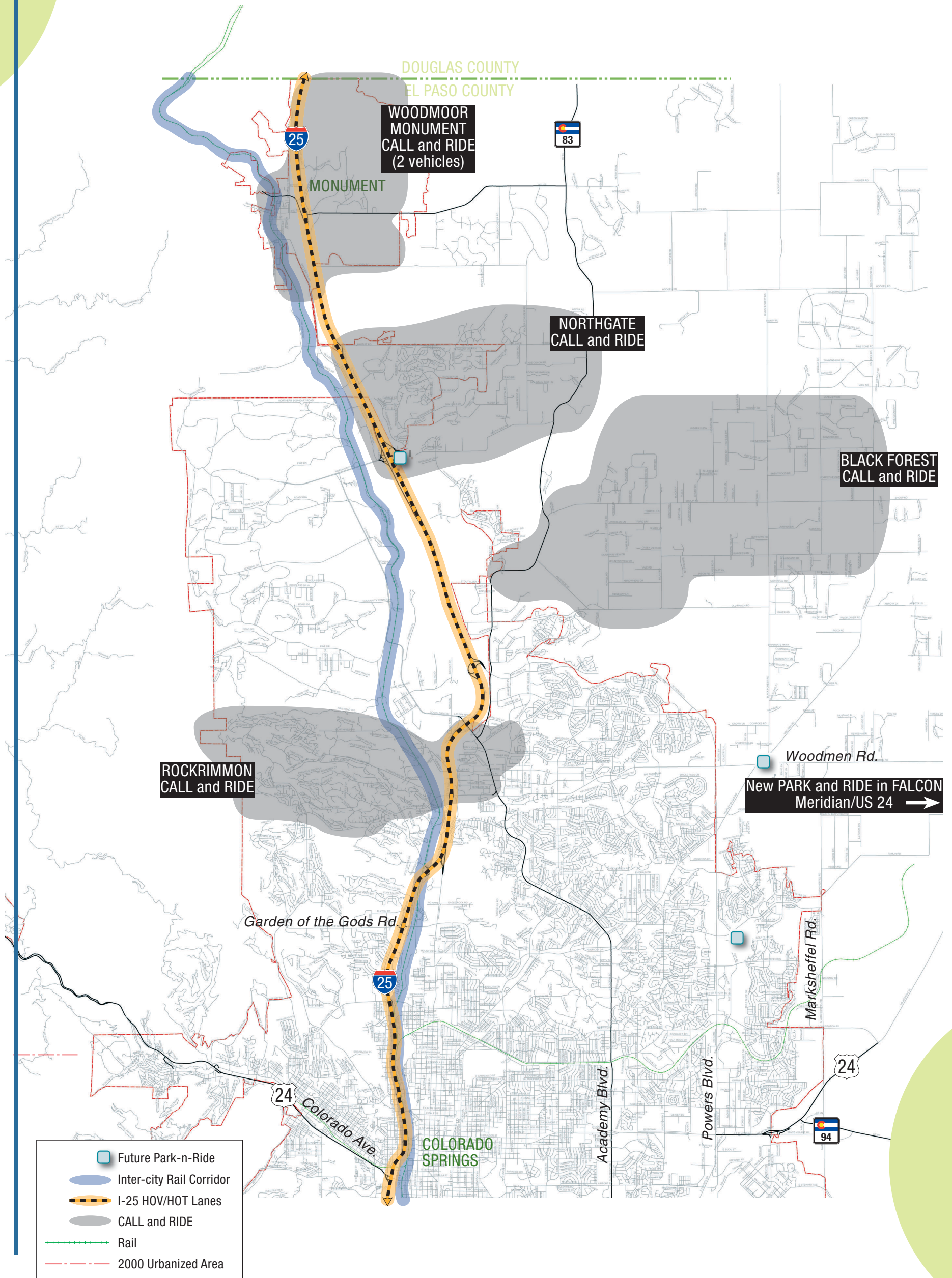
### *Regional Rapid Transit*

In 2004 The City of Colorado Springs conducted a rapid transit feasibility study (Parson and others, 2004) that recommended four key corridors that would likely support rapid transit. A total of 22 corridors were evaluated. The evaluation of the corridors was based on land use patterns, travel demand patterns, potential environmental impacts, roadway congestion and public input. The four selected were identified as having the most potential for the region to compete for federal New Starts funds. Specific alignments were not identified but the feasibility study suggested that BRT would be the most likely technology. The four corridors identified are described below and illustrated in **Figure 6-2**.

- ▶ **Corridor A** - Red Line is a north south corridor parallel to I-25 on the north and SH 115 on the south. The corridor extends north to Woodmen Road and on the south to Academy/Fort Carson area. This corridor has been identified for a possible streetcar alignment.
- ▶ **Corridor B** – Blue Line is an east west corridor parallel to Austin Bluffs Parkway and Templeton Gap Road. The corridor extends west to Garden of the Gods area and east past Powers Boulevard.
- ▶ **Corridor C** – Orange Line is a north south corridor parallel to Academy Boulevard. The corridor extends north to Briargate Boulevard and south to Drennan.
- ▶ **Corridor D** – Green line is an east west corridor parallel to Fountain Boulevard. The corridor extends east to Peterson Air Force Base and west to approximately I-25.

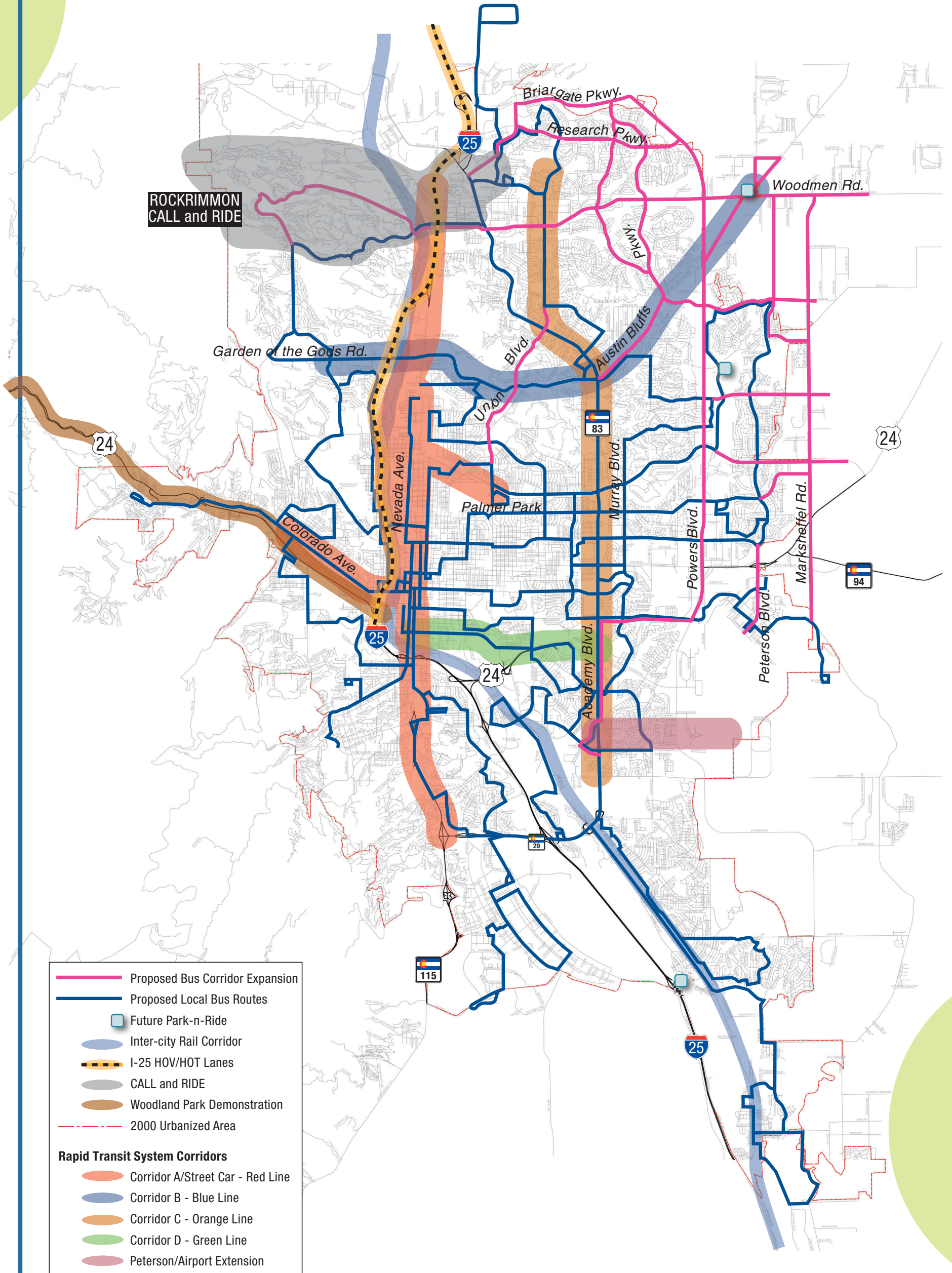
# 2035 Draft Mountain Metropolitan Transit Plan 2035 Vision Plan (Northern)

## Figure 6-1



# 2035 Draft Mountain Metropolitan Transit Plan 2035 Vision Plan (Central)

## Figure 6-2



- Proposed Bus Corridor Expansion
  - Proposed Local Bus Routes
  - Future Park-n-Ride
  - Inter-city Rail Corridor
  - I-25 HOV/HOT Lanes
  - CALL and RIDE
  - Woodland Park Demonstration
  - 2000 Urbanized Area
- Rapid Transit System Corridors**
- Corridor A/Street Car - Red Line
  - Corridor B - Blue Line
  - Corridor C - Orange Line
  - Corridor D - Green Line
  - Peterson/Airport Extension

### *Fixed-Route Bus Service*

Fixed-route bus service would continue to make up the largest portion of the transit system in the Pikes Peak Region and would be primarily focused around the Colorado Springs metro area. It would be expanded to serve the north and east portions of the metro area in the short-term where much of the growth in population and employment is expected to occur. **Figure 6-2** illustrates the proposed fixed-route expansion recommended. Frequencies would be changed to more rider-friendly intervals such as 15, 20, 30 and 60 minute headways.

### *Downtown Street Car*

A downtown Street Car would travel primarily north and south through downtown Colorado Springs parallel to I-25 connecting UCCS on the north to SH 24 on the south. Additional service extensions would travel parallel to SH 24 west of I-25 and parallel to LaSalle Street east of the main trunk line. Specifics about alignment and technology have not yet been identified.

### *Paratransit Service*

Paratransit would continue to be provided and would increase to meet demands of an aging population and increased population growth.

### *Private Providers*

The paratransit service would increase coordination with the private non-profit agencies providing specialized transportation services (Amblicab, Silver Key, Fountain Valley Senior services, The Resource Exchange, and a variety of smaller providers) This will enable the region to provide the least costly services that are appropriate to the ability of various riders. Key activities in the continuing coordination include the PPACG hiring a Mobility Manager for the region, continued development of a joint call and scheduling center, and further examination of an agency brokerage.

### *Call-and-Ride Service*

Four call-and-rides are envisioned in the region. This type of service would be used in outlying, lower density communities that can't efficiently support fixed-route services. In addition call-and-ride services would be used as a precursor to fixed-route services in some area. The service would operate on demand in a specific geographic region. It would be operated with smaller, more neighborhood friendly vehicles to provide curbside service to patrons. The four areas identified for this type of service are listed below and illustrated in **Figure 6-1**.

- ▶ **CNR 1** – This CNR would serve residents of the Woodmoor/Monument area and connect them to destinations within the area and to regional services along I-25. The service would operate six days per week between 6 AM and 6 PM and is expected to require two vehicles.
- ▶ **CNR 2** – This CNR would serve residents of the Black Forest area. This service would operate six days per week between 6 AM and 6 PM and is expected to require a single vehicle.
- ▶ **CNR 3** – This CNR would service the Rockrimmon area and connect residents to other services at Chapel Hills Mall Transfer Center and Woodmen Road Park-and-Ride. This service would operate six days per week between 6 AM and 6 PM and is expected to require a single vehicle.

- ▶ **CNR 4** – This CRN would serve the Northgate area. This service would operate six days per week between 6 AM and 6 PM and is expected to require a single vehicle.

### *Transfer Centers*

As the system grows, the need to provide timed transfers at key locations will increase. The vision identifies three timed transfer/multi-modal hubs: Downtown, North, and East. (All other transfer stations will be ancillary and only call-and-rides will be timed to meet at these ancillary points.)

### *Park and Rides*

Five park-and-ride facilities are planned as part of the integrated transportation system. These would enable patrons to drive to a site to access transit services or to carpool/vanpool. Five sites were identified in the Pikes Peak Regional Park-and-Ride Plan (DEA 2003). The sites are described below and the general locations are illustrated in **Figure 6-1**.

- ▶ **PNR 1** would be located in the northeast sector of the city and would likely require approximately 250 spaces.
- ▶ **PNR 2** would be located near the intersection of Powers Boulevard and Barnes Road. The park-and-ride is identified as a 336 space, 3.93 acre lot. It would be served by routes along Powers Boulevard, Tutt Boulevard and along Carefree Circle.
- ▶ **PNR 3** would be located near I-25 and Northgate Road. It is identified as a 292 space, 3.86 acre lot. This lot would be located off I-25 and would be primarily used by people carpooling/vanpooling.
- ▶ **PNR 4** would be located near US 24 and Meridian. It is identified as a 110 space, 1.42 acre lot. It would be served by two express routes providing service into downtown Colorado Springs and to the Garden of Gods area. At the time of the report, El Paso County is moving forward with the construction of this lot and identification of size. Their estimates indicate that this lot could be 200 spaces.
- ▶ **PNR 5** is located near I-25 and SH 16. It is identified as a 236 space, 3.49 acre lot. It would be served by routes along US 85 serving the southeast section of the city.



## 7.0 2035 FISCALLY CONSTRAINED PLAN

The 2035 Transit Vision Plan described would cost approximately \$2.8 billion in 2008 dollars. Based on the current funding sources, Mountain Metropolitan Transit would likely see approximately \$1.1 billion in revenues (in 2008 dollars) or enough to fund about 40% of items identified in the vision plan. Because current revenue sources fall short of meeting the future transit needs in the area, a possible ballot measure is being considered in 2009 or 2010 for a dedicated funding source to support implementation of the transit vision. However, the fiscally constrained plan described below assumes that funding of Mountain Metropolitan Transit remains similar to today with the exception of an increase in PPRTA funds to two tenths of a percent (compared to the current funding of one tenth of a percent) starting in 2021. In addition, FTA Small Starts and New Starts funding is identified for two fixed guideway/rapid transit project. Significant additional planning would be needed before such funding could be applied for. If the corridors are not competitive for this funding, local funding would need to replace these FTA funds. **Figure 7-1** illustrates the fiscally constrained plan.

### *Estimated Revenues and Expenditures*

**Table 7-1** summarizes the anticipated revenues and expenditures for Mountain Metropolitan Transit for a 28 year period through 2035.

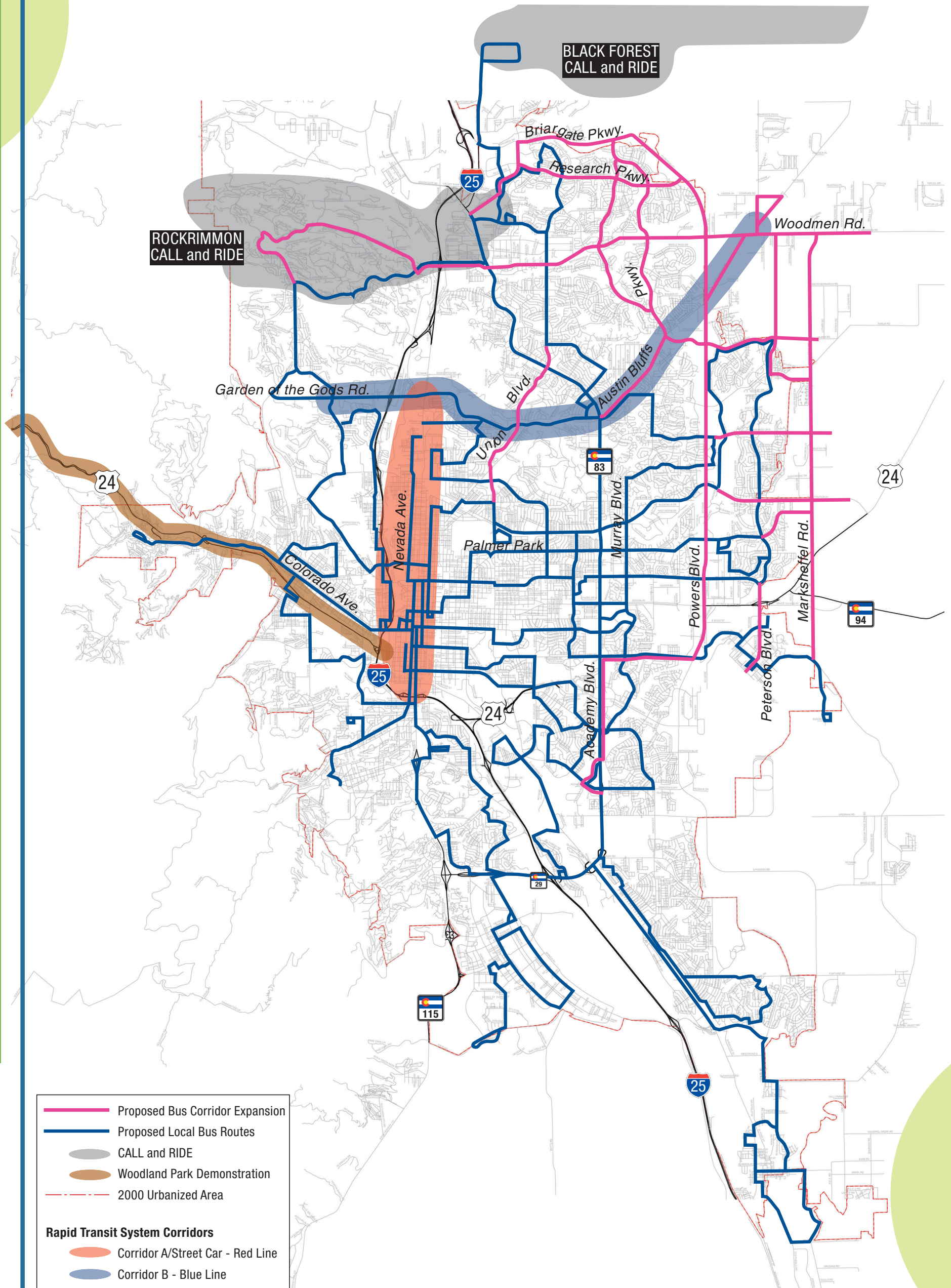
Expenses include both capital projects and operating and maintenances expenses. They were estimated based on current operating characteristics identified in the existing conditions section of this report and through discussions with Mountain Metropolitan Transit staff. A four percent annual inflation rate was applied. Expenses are broken down into the following categories:

- ▶ **Fleet** – This includes the cost to implement the fleet replacement program for 85 fixed-route vehicles, 46 paratransit vans and 10 non-revenue vehicles. Fixed-route vehicles are assumed to have an anticipated life span of 15 years, paratransit vehicles have a useful life of 5 years and non revenue vehicles 10 years. In addition to replacing the existing fleet, this category includes purchase and replacement of vehicles to accommodate anticipated service expansion.
- ▶ **Facilities** – This category includes construction and ongoing maintenance of stations, park-and-rides and contractor facilities.
- ▶ **Fixed Guideway/Rapid Transit Projects** – This category includes construction of potential a potential downtown streetcar and bus rapid transit lines.
- ▶ **Communications Equipment/IT** – This category includes surveillance equipment, vehicle locating equipment, radios and scheduling software.
- ▶ **Planning** – This category includes NEPA planning efforts, on-board surveys, long range planning, feasibility studies and governance/funding studies.
- ▶ **Marketing** – This category includes the costs associated with marketing and marketing related efforts related to the transit service.
- ▶ **Operating and Maintenance Costs** – Operating and maintenance costs are provided fro fixed-route services, paratransit services, human services, new call-and-ride services, FREX and new rapid transit/fixed guideway transit.

# 2035 Draft Mountain Metropolitan Transit Plan

## 2035 Fiscally Constrained Plan

### Figure 7-1



**2035 Mountain Metropolitan Transit Plan**  
**DRAFT**

**Table 7-1 Fiscally Constrained Revenues and Expenditures**

<b>Expenses</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>'08-'15</b>	<b>'16-'20</b>	<b>'21-'25</b>	<b>'26-'30</b>	<b>'31-'35</b>	<b>Total Plan</b>
Fleet - Revenue and Non Revenue	2.63	2.73	3.41	3.60	3.75	3.90	4.05	4.21	28.27	24.22	30.79	38.33	46.60	168.21
Facilities - O&M, Stations, Stops	3.30	2.90	0.45	0.47	0.49	0.51	0.53	0.55	9.18	3.08	3.75	4.57	5.55	26.14
Fixed Guideway/Rapid Transit Projects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.50	103.25	21.75	0.00	168.50
Communications Equipment/IT	0.36	0.37	0.39	0.40	0.42	0.44	0.46	0.47	3.32	2.67	3.25	3.95	4.81	17.99
Planning	1.10	1.41	1.00	0.35	0.30	0.38	0.31	0.39	5.25	1.93	3.41	2.61	3.14	16.35
Marketing	0.25	0.26	0.27	0.28	0.29	0.30	0.32	0.33	2.30	1.85	2.25	2.74	3.34	12.49
Fixed-Route O&M	17.00	17.68	21.33	22.18	23.07	23.99	24.95	25.95	176.16	146.18	177.85	216.38	263.26	979.81
Metro Mobility O&M	3.15	3.28	3.41	3.54	3.69	3.83	3.99	4.15	29.02	26.85	32.67	39.75	48.36	176.65
Call-and-Ride O&M	0.00	0.00	0.00	0.45	0.47	0.49	0.51	0.53	2.43	2.96	3.60	4.38	5.33	18.71
Metro Ride O&M	0.40	0.42	0.43	0.45	0.47	0.49	0.51	0.53	3.70	2.98	3.63	4.41	5.37	20.09
Human Services O&M	0.96	1.00	1.03	1.08	1.12	1.16	1.21	1.26	8.82	7.09	8.63	10.50	12.77	47.81
FREX O&M	1.98	2.06	2.14	2.22	2.31	2.40	2.50	2.60	18.21	14.65	17.82	21.68	26.38	98.74
Fixed Guideway/Rapid Transit O&M	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.75	23.24	28.27	61.26
<b>Total Expenses</b>	<b>31.12</b>	<b>32.10</b>	<b>33.86</b>	<b>35.04</b>	<b>36.37</b>	<b>37.89</b>	<b>39.33</b>	<b>40.96</b>	<b>286.67</b>	<b>277.96</b>	<b>400.65</b>	<b>394.28</b>	<b>453.17</b>	<b>1812.74</b>

Shaded values are draft numbers that are in the process of being finalized.

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**Table 7-1 Fiscally Constrained Revenues and Expenditures (cont.)**

<b>Revenues</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>'08-'15</b>	<b>'16-'20</b>	<b>'21-'25</b>	<b>'26-'30</b>	<b>'31-'35</b>	<b>Total Plan</b>
Fare Revenues	2.50	2.60	2.71	3.09	3.21	3.34	3.48	3.62	24.56	20.64	27.06	35.19	42.82	150.26
Contributions and Contract Service	0.30	0.31	0.32	0.34	0.35	0.36	0.38	0.39	2.76	2.22	2.71	3.29	4.00	14.99
RTA	7.60	7.90	8.17	8.45	8.74	9.04	9.35	9.67	68.92	53.51	126.54	149.64	178.96	577.57
RTA Carry Forward	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.40
Local Funding	11.20	11.65	12.11	12.60	13.10	13.63	14.17	14.74	103.20	83.02	101.01	122.89	149.52	559.64
CMAQ	0.97	0.98	0.63	0.67	0.71	0.74	0.98	1.02	6.70	4.20	4.54	4.86	5.20	25.50
Metro	0.30	0.31	0.32	0.34	0.35	0.36	0.38	0.39	2.76	2.22	2.71	3.29	4.00	14.99
FTA 5307	5.42	5.76	5.91	6.25	6.56	6.86	7.13	7.39	51.26	38.78	41.91	45.08	48.18	225.21
FTA 5309	1.00	1.04	1.07	1.13	1.19	1.24	1.29	1.34	9.31	7.54	9.17	11.16	13.58	50.77
FTA 5310	0.29	0.30	0.31	0.33	0.35	0.36	0.38	0.39	2.71	2.05	2.21	2.38	2.09	11.44
Small Starts (Fixed Guideway - Street car)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.50	0.00	0.00	0.00	43.50
New Starts (BRT)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	105.00	21.00	0.00	126.00
SB 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Freedoms 5317	0.12	0.13	0.13	0.14	0.14	0.15	0.16	0.16	1.13	0.86	0.92	0.99	1.06	4.96
JARC 5316	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	1.82	1.37	1.48	1.59	1.71	7.97
<b>Total Revenues</b>	<b>30.30</b>	<b>31.19</b>	<b>31.90</b>	<b>33.55</b>	<b>34.94</b>	<b>36.34</b>	<b>37.95</b>	<b>39.37</b>	<b>275.53</b>	<b>259.92</b>	<b>425.25</b>	<b>401.37</b>	<b>451.12</b>	<b>1813.19</b>

Shaded values are draft numbers that are in the process of being finalized.

Revenue sources include but are not limited to PPRTA, fare revenues, FTA and state funding. Mountain Metropolitan Transit, PPACG and CDOT Transit Unit have identified likely FTA revenues that will be available for transit projections in the region through the year 2035. Over the 28-year period the largest revenue sources are local/PPRTA funds at \$1.14 billion, \$225 million in FTA 5307 urbanized area funds and \$150 million in fare revenues. Other sources such as CMAQ and Metro are administered through PPACG and are estimated to be just over \$40 million throughout the 28 year period for Mountain Metropolitan Transit use.

### *Implementation Strategies*

Through an understanding of the fiscal constraints and the anticipated growth, an implementation plan was developed. This plan provides guidance on a logical order for transit improvement implementation in a fiscally constrained environment. The key steps of the implementation plan are described below and illustrated in **Figure 7-1**.

#### **REGIONAL GOVERNANCE AND TRANSIT FUNDING (2008 – 2010)**

Undertake comprehensive study with goal of identifying options for regional governance, building a consensus on the most appropriate one, and gaining approval for that structure. The project should address service area boundaries, sustainable funding sources, maintaining a stable core of services, making decisions on services that cross jurisdictional boundaries, accountability for tax dollars, and the potential of the structure to support the development of the transit network into a viable travel mode that is integrated into the overall transportation network. While it is recognized that cash flow will need to be addressed as part of the transition, the transition to regional governance can be made with the current revenue streams. Regional governance structure is a necessary precursor for addressing the service quality and stability issues. Addressing these issues successfully will likely be necessary before the public will be willing to vote for significant new revenues.

#### **ADOPT SERVICE STANDARDS AND BEGIN ROUTINE EVALUATION OF SERVICE. (2008 – ONGOING)**

Evaluate route performance as identified in service performance standards to be adopted. Determine if call-and-ride or flexible route services would result in improved service, if other efficiencies may exist, or if the ability to operate the main line on 30-minute headways can be achieved. Savings can occur in fixed-route bus hours and through a reduction in Metro Mobility services by using call-and-rides in certain instances. Use any savings to expand span of Sunday service.

# 2035 Draft Mountain Metropolitan Transit Plan

## Fiscally Constrained Implementation Plan

Figure 7-2

	2008 - 2009	2010 - 2011	2012 - 2013	2014 - 2015	2016 - 2020	2021 - 2025	2026 - 2030	2031 - 2035
STRUCTURE		<ul style="list-style-type: none"> <li>Implement regional decision-making structure (2010)</li> </ul>				<ul style="list-style-type: none"> <li>Increase RTA transit allocation to 20% (2021)</li> </ul>		
PLANNING	<ul style="list-style-type: none"> <li>Regional Governance and funding evaluation</li> <li>Street car/fixed guideway Feasibility Study</li> </ul>	<ul style="list-style-type: none"> <li>Fixed guideway, land use &amp; travel forecast review</li> <li>Inter-city feasibility study</li> <li>Fixed guideway alternatives analysis &amp; NEPA review</li> </ul>	<ul style="list-style-type: none"> <li>2040 Regional Transit Plan</li> </ul>	<ul style="list-style-type: none"> <li>Update Rapid Transit Feasibility Study (2014)</li> </ul>	<ul style="list-style-type: none"> <li>Begin Rapid Transit alternatives analysis &amp; NEPA review (2016)</li> </ul>			
SERVICE	<ul style="list-style-type: none"> <li>Adopt standards</li> <li>Strengthen under-performing services</li> <li>Increase frequency 30/60 min.</li> <li>Expand Sunday Service</li> <li>Start Woodland park demo grant</li> </ul>	<ul style="list-style-type: none"> <li>Expand services to north and east</li> <li>Rockrimmon and Monument Call-n-Ride</li> <li>15/30 min. service-Black Forest Call-n-Ride</li> <li>Increase bus frequency of Rapid Transit corridors</li> </ul>	<ul style="list-style-type: none"> <li>Modify structure to include 3 multi-modal hubs</li> </ul>			<ul style="list-style-type: none"> <li>Begin Phase 1 fixed guideway / rapid transit operation (2021)</li> </ul>	<ul style="list-style-type: none"> <li>Begin Phase 2 fixed guideway / Rapid Transit operation (2026)</li> </ul>	
INFRA-STRUCTURE	<ul style="list-style-type: none"> <li>Construct 2 transfer centers</li> </ul>	<ul style="list-style-type: none"> <li>Fixed-route contractor facility (Design and land purchase)</li> </ul>	<ul style="list-style-type: none"> <li>Regional Park-n-Ride</li> <li>Establish northern hub</li> </ul>		<ul style="list-style-type: none"> <li>Establish eastern hub</li> <li>Phase 1 fixed guideway / rapid transit construction (2016)</li> </ul>	<ul style="list-style-type: none"> <li>Phase 2 fixed guideway / rapid transit construction</li> </ul>		

### SERVICE IMPROVEMENTS

- ▶ Strengthen or modify weak services. (2008 – 2009 and ongoing)
- ▶ Return to 30 / 60-minute headways on local fixed-routes by implementing Perteet recommendations, adjusted to reflect potential new call-and-rides. Initially use a call-and-ride in the north area of the city rather than a new route (2008-2009).
- ▶ Expand service span on Sundays. (2009)

### SERVICE EXPANSION – SHORT TERM

Build route structure to serve the northern portion of city for a system that includes three timed transfer/multi-modal hubs: Downtown, North, and East. (All other transfer stations will be ancillary and only call-and-rides will be timed to meet at these ancillary points.) Building an effective network for the northern portion of the urbanized area will require significant resources, but for rapid transit to work effectively, a solid transit network will need to cover the entire urbanized area. It is possible that some existing routes would be good candidates for service more frequent than 30-minutes in the peak – but without the northern portion of the urbanized area effectively tied into the network, the system will not be able to meet the breadth of travel needs that will result in significant growth in the transit mode share, capturing choice riders, or building to ridership levels that will justify rapid transit services. (2009 and beyond)

#### Northern Hub

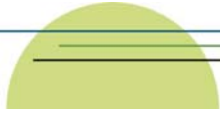
- ▶ Begin service with call-and-ride but plan to move to fixed-route service as demand warrants. Call-and-ride can begin as early as 2008. Fixed-route services will develop based on a northern sector service plan (prepared in 2009). While limited service may begin earlier, it is anticipated the overall plan will be implemented once funding is available (approximately 2012 – 2020) and reflect the development of the Banning-Lewis Ranch area.
- ▶ An initial parameter for services in this area is that the number of hours provided should be approximately equal on a per capita basis to those provided in the southern portion of the urbanized area where the transit network is well developed. Increases or decreases should be dependent on the productivity of these services.
- ▶ Determine if Chapel Hills Mall location can serve as long-term northern terminus. Negotiate as needed for a site, purchasing land as necessary if publicly owned land is needed to provide for a safe site with adequate vehicular and pedestrian access.

#### Eastern Hub

- ▶ As service develops in north and east area, a solid hub in the east will be needed. The existing First and Main location may be suitable. Plan for facility improvements at this location to provide for adequate capacity for vehicles, safe access for vehicles and pedestrians, and waiting facilities (sheltered with lighting and amenities).

#### Downtown Fixed Guideway/Rapid Transit Corridor

- ▶ Conduct feasibility study for downtown fixed-guideway/rapid transit corridor (2008-2010)
- ▶ Begin alternatives analysis for downtown Street car (2010-2011). Identify potential ridership, cost, specific alignment and phasing for desired implementation in 2021.



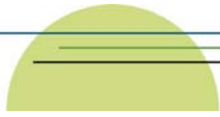
### Rapid Transit Service

- ▶ Strengthen rapid transit corridors, moving to 20-minute peak / 30-minute off-peak frequencies. These will then transition to 15/30 and then 15/20 as ridership increases. When service is at 15/30 minute headways, begin active planning for rapid transit and begin implement of the rapid transit corridors after service is at 15/20 minute frequencies.
- ▶ Begin construction of rapid transit Corridor B - Blue Line is an east west corridor parallel to Austin Bluffs Parkway and Templeton Gap Road. (2021)
- ▶ Begin operation of rapid transit Corridor B. (2026)

### Commuter Rail Service

- ▶ Continue to support statewide measures to implement commuter rail service along the front range.
- ▶ Plan for a downtown rail station (intermodal bus/rail hub)





## APPENDIX A FLEET ROSTERS

**2035 Mountain Metropolitan Transit Plan**  
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**2007 MOUNTAIN METRO FIXED-ROUTE FLEET ROSTER**

Vehicle Number	Location	Description	Year	Type of Fuel	Serial Number	License	GVW	Vehicle Size	Vehicle CW	Sitting Comp
210	CITY South Shop	ELD BUS	2001	Diesel	1FDWE35F41HA57309	CO-175BHF	16000	28	240	12
101	CITY South Shop	GIL PHT 35102	2001	Diesel	15GCB201211110919	CO-789CNG	40000	35	267	37
102	CITY South Shop	GIL PHT 35102	2001	Diesel	15GCB201911110920	CO-790CNG	40000	35	267	37
103	CITY South Shop	GIL PHT 35102	2001	Diesel	15GCB201011110921	CO-791CNG	40000	35	267	37
104	CITY South Shop	GIL PHT 35102	2001	Diesel	15GCB201211110922	CO-792CNG	40000	35	267	37
105	CITY South Shop	GIL PHT 35102	2001	Diesel	15GCB201411110923	CO-793CNG	40000	35	267	37
108	CITY South Shop	ADVANCED BUS IND	2001	Diesel	1A9TF21H41M532037	CO-213ETY	32000	30	240	23
109	CITY South Shop	ADVANCED BUS IND	2001	Diesel	1A9TF21H51M532032	CO-248CLV	32000	30	240	23
110	RTA North Shop	ADVANCED BUS IND	2001	Diesel	1A9TF21H41M532023	CO-239CLV	32000	30	240	23
112	CITY South Shop	ADVANCED BUS IND	2001	Diesel	1A9TF21H31M532028	CO-232CLV	32000	30	240	23
114	RTA North Shop	ADVANCED BUS IND	2001	Diesel	1A9TF21H81M532039	CO-211ETY	32000	30	240	23
115	RTA North Shop	ADVANCED BUS IND	2001	Diesel	1A9TF21H41M532040	CO-212ETY	32000	30	240	23
116	CITY South Shop	ADVANCED BUS IND	2001	Diesel	1A9TF21H61M532041	CO-247CLV	32000	30	240	23
117	RTA North Shop	ADVANCED BUS IND	2001	Diesel	1A9TF21H81M532042	CO-173ETY	32000	30	240	23
118	RTA North Shop	ADVANCED BUS IND	2001	Diesel	1A9TF21H71M532033	CO-214ETY	32000	30	240	23
201	CITY South Shop	NOVA RTS	2002	Diesel	4RKEWTRA12R835575	CO-538EFC	42000	40	282	37
202	CITY South Shop	NOVA RTS	2002	Diesel	4RKEWTRAX2R835574	CO-536EFG	42000	40	287	37
203	CITY South Shop	NOVA RTS	2002	Diesel	4RKEWTRA82R835573	CO-537EFG	42000	40	282	37
204	CITY South Shop	FORD E350 BUS	2002	Diesel	1FDWE35FX2HB70635	CO-654EFG	16000	28	240	12
205	CITY South Shop	FORD E350 BUS	2002	Diesel	1FDWE35F82HB70634	CO-655EFG	16000	28	240	12
206	CITY South Shop	GIL PHT 35102	2002	Diesel	15GCB271921111980	CO-705EFG	40000	35	267	37
207	CITY South Shop	GIL PHT 35102	2002	Diesel	15GCB271021111981	CO-706EFG	40000	35	267	37
208	CITY South Shop	GILLIG LOW FLOOR	2002	Diesel	15GGD271921073662	CO-703EFG	42000	40	282	40
209	CITY South Shop	GILLIG LOW FLOOR	2002	Diesel	15GGD271021073663	CO-704EFG	42000	40	282	40

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**2007 MOUNTAIN METRO FIXED-ROUTE FLEET ROSTER**

Vehicle Number	Location	Description	Year	Type of Fuel	Serial Number	License	GVW	Vehicle Size	Vehicle CW	Sitting Comp
404	CITY South Shop	ELECTRIC BUS	1999	Electric	1E9BS1123YC248021	CO-622IUR	32000	27	285	20
501	RTA North Shop	GILLIG LOW FLOOR	2005	Diesel	15GGB291151075266	CO-380CLV	42000	35	267	32
502	CITY South Shop	GILLIG LOW FLOOR	2005	Diesel	15GGB291351075267	CO-375CLV	42000	35	267	32
503	RTA North Shop	GILLIG LOW FLOOR	2005	Diesel	15GGB291551075268	CO-377CLV	42000	35	267	32
504	RTA North Shop	GILLIG LOW FLOOR	2005	Diesel	15GGB291751075269	CO-381CLV	42000	35	267	32
505	RTA North Shop	GILLIG LOW FLOOR	2005	Diesel	15GGD291351075232	CO-376CLV	42000	40	282	39
506	CITY South Shop	GILLIG LOW FLOOR	2005	Diesel	15GGD291551075233	CO-379CLV	42000	40	282	39
507	RTA North Shop	GILLIG LOW FLOOR	2005	Diesel	15GGD291751075234	CO-378CLV	42000	40	282	39
601	CITY South Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291X61077609	CO-254EUE	42000	40	282	39
602	CITY South Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291661077610	CO-256EUE	42000	40	282	39
603	CITY South Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291861077611	CO-255EUE	42000	40	282	39
604	CITY South Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291X61077612	CO-257EUE	42000	40	282	39
605	CITY South Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291161077613	CO-258EUE	42000	40	282	39
606	CITY South Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291361077614	CO-260EUE	42000	40	282	39
607	CITY South Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291561077615	CO-259EUE	42000	40	282	39
608	RTA North Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291761077616	CO-261EUE	42000	40	282	39
609	RTA North Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291961077617	CO-253EUE	42000	40	282	39
610	RTA North Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291061077618	CO-252EUE	42000	40	282	39
611	RTA North Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291261077619	CO-251EUE	42000	40	282	39
612	RTA North Shop	GILLIG LOW FLOOR	2006	Diesel	15GGD291961077620	CO-390BHF	42000	40	282	39
700	RTA North Shop	GILLIG LOW FLOOR	2007	Diesel	15GGB271171078951	CO-709RBR	42000	35	267	32
701	RTA North Shop	GILLIG LOW FLOOR	2007	Diesel	15GGB271371078952	CO-710RBR	42000	35	267	32
702	RTA North Shop	GILLIG LOW FLOOR	2007	Diesel	15GGB271571078953	CO-711RBR	42000	35	267	32
703	RTA North Shop	GILLIG LOW FLOOR	2007	Diesel	15GGB271771078954	CO-712RBR	42000	35	267	32
704	RTA North Shop	GILLIG LOW FLOOR	2007	Diesel	15GGB271971078955	CO-713RBR	42000	35	267	32

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**2007 MOUNTAIN METRO FIXED-ROUTE FLEET ROSTER**

Vehicle Number	Location	Description	Year	Type of Fuel	Serial Number	License	GVW	Vehicle Size	Vehicle CW	Sitting Comp
705	CITY South Shop	GILLIG LOW FLOOR	2007	Diesel	15GGB271071078956	CO-714RBR	42000	35	267	32
706	CITY South Shop	GILLIG LOW FLOOR	2007	Diesel	15GGB271271078957	CO-715RBR	42000	35	267	32
1685	RTA North Shop	GILLIG PHANTOM	1994	Diesel	15GCB2013P1085098	CO-634A15	40000	35	274	32
1686	RTA North Shop	GILLIG PHANTOM	1994	Diesel	15GCB2015P1085099	CO-605A15	40000	35	274	32
1687	RTA North Shop	GILLIG PHANTOM	1994	Diesel	15GCB2018P1085100	CO-639A15	40000	35	274	32
1688	CITY South Shop	GILLIG PHANTOM	1994	Diesel	15GCB201XP1085101	CO-637A15	40000	35	274	32
1689	CITY South Shop	GILLIG PHANTOM	1994	Diesel	15GCB2011P1085102	CO-635A15	40000	35	274	32
1690	CITY South Shop	GILLIG PHANTOM	1994	Diesel	15GCB2013P1085103	O-636A15	40000	35	274	32
1691	CITY South Shop	GILLIG PHANTOM	1994	Diesel	15GCB2015P1085104	CO-633A15	40000	35	274	32
1692	CITY South Shop	GILLIG PHANTOM	1994	Diesel	15GCB2017P1085105	CO-597IUR	40000	35	274	32
1693	CITY South Shop	GILLIG PHANTOM	1994	Diesel	15GCB2019P1085106	CO-640A15	40000	35	274	32
1694	CITY South Shop	GILLIG PHANTOM	1994	Diesel	15GCB2010P1085107	CO-638A15	40000	35	274	32
9701	RTA North Shop	NEW FLY D30LF	1997	Diesel	5FYD2TN05VU017849	CO-245A17	38000	30	240	25
9702	RTA North Shop	NEW FLY D30LF	1997	Diesel	5FYD2TN01VU017850	CO-246A17	38000	30	240	25
9703	RTA North Shop	NEW FLY D30LF	1997	Diesel	5FYD2TN03VU017851	CO-247A17	38000	30	240	25
9704	RTA North Shop	NEW FLY D30LF	1997	Diesel	5FYD2TN05VU017852	CO-248A17	38000	30	240	25
9705	RTA North Shop	NEW FLY D30LF	1997	Diesel	5FYD2TN07VU017853	CO-251A17	38000	30	240	25
9706	RTA North Shop	NEW FLY D30LF	1997	Diesel	5FYD2TN09VU017854	CO-252A17	38000	30	240	25
99707	RTA North Shop	NEW FLY D30LF	1997	Diesel	5FYD2TN00VU017855	CO-250A17	38000	30	240	25
9708	RTA North Shop	NEW FLY D30LF	1997	Diesel	5FYD2TN02VU017856	CO-249A17	38000	30	240	25
9301	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB201XX1089519	CO-551A17	40000	35	287	37
9902	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2016X1089520	CO-581A17	40,000	35	287	37
9903	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB201XX1089522	CO-583A17	40000	35	287	37
9904	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2018X1089521	CO-582A17	40000	35	287	37
9905	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2011X1089523	CO-584A17	40000	35	287	37

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**2007 MOUNTAIN METRO FIXED-ROUTE FLEET ROSTER**

Vehicle Number	Location	Description	Year	Type of Fuel	Serial Number	License	GVW	Vehicle Size	Vehicle CW	Sitting Comp
9906	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2013X1089524	CO-585A17	40000	35	287	37
9907	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2015X1089525	CO-586A17	40000	35	287	37
9908	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2017X1089526	CO-588A17	40000	35	287	37
9909	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2019X1089527	CO-587A17	40000	35	287	37
9910	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2010X1089528	CO-601A17	40000	35	287	37
9911	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2012X1089529	CO-594A17	40000	35	287	37
9912	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2019X1089530	CO-595A17	40000	35	287	37
9913	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2010X1089531	CO-593A17	40000	35	287	37
9914	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2013X1110064	CO-702A17	40000	35	287	37
9915	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2015X1110065	CO-701A17	40000	35	287	37
9916	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2017X1110066	CO-703A17	40000	35	287	37
9917	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2019X1110067	CO-704A17	40000	35	287	37
9918	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2010X1110068	CO-705A17	40000	35	287	37
9919	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2012X1110069	CO-699A17	40000	35	287	37
9920	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2019X1110070	CO-698A17	40000	35	287	37
9921	CITY South Shop	GILLIG PHANTOM	1999	Diesel	15GCB2010X1110071	CO-700A17	40000	35	287	37
F0701	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211X71078319	086PRP	40000	40	282	39
F0702	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211671078320	367PRP	40000	40	282	39
F0703	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211671078321	366PRP	40000	40	282	39
F0704	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211X71078322	365PRP	40000	40	282	39
F0705	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211171078323	364PRP	40000	40	282	39
F0706	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211371078324	363PRP	40000	40	282	39
F0707	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211571078325	361PRP	40000	40	282	39
F0708	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211771078326	362PRP	40000	40	282	39
F0709	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211971078327	383PRP	40000	40	282	39

**2007 MOUNTAIN METRO FIXED-ROUTE FLEET ROSTER**

Vehicle Number	Location	Description	Year	Type of Fuel	Serial Number	License	GVW	Vehicle Size	Vehicle CW	Sitting Comp
F0710	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211071078328	381PRP	40000	40	282	39
F0711	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211271078329	384PRP	40000	40	282	39
F0712	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211971078330	382PRP	40000	40	282	39
F0713	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211071078331	416PRP	40000	40	282	39
F0714	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211271078332	415PRP	40000	40	282	39
F0715	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211471078333	414PRP	40000	40	282	39
F7016	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211671078334	413PRP	40000	40	282	39
F0717	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211871078335	419PRP	40000	40	282	39
F0718	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211X71078336	418PRP	40000	40	282	39
F0719	FREX North Shop	GILLIG LOW FLOOR BRT	2007	Diesel	15GGD211171078337	417PRP	40000	40	282	39

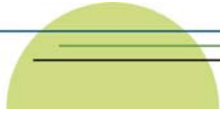
**2006 METRO MOBILITY FLEET ROSTER**

Unit #	Make-Model	Year	Mileage	Replacement Year	Estimated Repl. Cost	Fuel Type	WC	PAX
K70	FORD BUS	1997	241322	2007	\$49,000	Diesel	2	8
K73	FORD PV	2000	167812	2007	\$49,000	Diesel	2	8
K76	ELD BUS	2001	169531	2007	\$49,000	Diesel	2	8
K77	ELD BUS	2001	195124	2007	\$49,000	Diesel	2	8
K78	ELD BUS	2001	185761	2007	\$49,000	Diesel	2	8
K79	ELD BUS	2001	162323	2007	\$49,000	Diesel	2	8
K80	ELD BUS	2001	191105	2007	\$49,000	Diesel	2	8
K81	ELD BUS	2001	197228	2007	\$49,000	Diesel	2	8
K82	ELD BUS	2001	179143	2007	\$49,000	Diesel	2	8
K83	ELD BUS	2002	134349	2007	\$49,000	Diesel	2	8
K84	ELD BUS	2002	136673	2007	\$49,000	Diesel	2	8
K85	ELD BUS	2002	129396	2007	\$49,000	Diesel	2	8
K86	ELD BUS	2002	132565	2007	\$49,000	Diesel	2	8
K87	ELD BUS	2002	140278	2007	\$49,000	Diesel	2	8
K89	ELD BUS	2003	105966	2008	\$50,000	Diesel	3	8
K90	ELD BUS	2003	97433	2008	\$50,000	Diesel	3	8
K91	ELD BUS	2003	103764	2008	\$50,000	Diesel	3	8
K92	ELD BUS	2003	103243	2008	\$50,000	Diesel	3	8
K93	ELD BUS	2003	108282	2008	\$50,000	Diesel	3	8
K94	ELD BUS	2003	115533	2008	\$50,000	Diesel	3	8
K95	ELD BUS	2003	105970	2008	\$50,000	Diesel	3	8
K96	ELD BUS	2004	62906	2009	\$51,000	Diesel	3	8
K97	ELD BUS	2004	66160	2009	\$51,000	Diesel	3	8
K99	FORD BUS	2005	33119	2010	\$52,000	Diesel	3	8
K100	FORD BUS	2005	32074	2010	\$52,000	Diesel	3	8
K101	FORD BUS	2005	28036	2010	\$52,000	Diesel	3	8
K102	FORD BUS	2005	38176	2010	\$52,000	Diesel	3	8
K103	FORD BUS	2005	33049	2010	\$52,000	Diesel	3	8
K104	FORD BUS	2005	33481	2010	\$52,000	Diesel	3	8
K105	FORD BUS	2005	34518	2010	\$52,000	Diesel	3	8
K106	FORD BUS	2005	40575	2010	\$52,000	Diesel	3	8
K107	FORD BUS	2005	26620	2010	\$52,000	Diesel	3	8
K108	FORD BUS	2006	26015	2011	\$53,000	Diesel	3	8
K109	FORD BUS	2006	20989	2011	\$53,000	Diesel	3	4
K110	FORD BUS	2006	32006	2011	\$53,000	Diesel	3	4
K111	FORD BUS	2006	21887	2011	\$53,000	Diesel	3	4
K112	FORD BUS	2005	24423	2010	\$52,000	Diesel	3	4
K113	FORD BUS	2005	24781	2010	\$52,000	Diesel	3	4
K114	FORD BUS	2005	23168	2010	\$52,000	Diesel	3	4
K115	FORD BUS	2005	17520	2010	\$52,000	Diesel	3	4
K116	FORD BUS	2006	22937	2011	\$53,000	Diesel	3	4

**Metro Rides Fleet Roster**

Van No.	Year	Make	Model	Passengers
Ride 6	1999	Chevrolet	Astro	7
Ride 11	2001	Ford	E350	15
Ride 12	2003	Chevrolet	Astro	7
Ride 14	2003	Chevrolet	Astro	7
Ride 15	2004	Chevrolet	Astro	7
Ride 16	2004	Ford	E350	12
Ride 17	2005	Ford	E350	12
Ride 18	2005	Chevrolet	Astro	7
Ride 19	2004	Chevrolet	Astro	7
Ride 20	2004	Chevrolet	Safari	7
Ride 21	2006	Toyota	Sienna	8
Ride 22	2006	Toyota	Sienna	8
Ride 23	2006	Toyota	Sienna	8
Ride 24	2006	Toyota	Sienna	8
Ride 25	2006	Toyota	Sienna	8
Ride 26	2006	Toyota	Sienna	8
Ride 27	2006	Toyota	Sienna	8
Ride 28	2006	Toyota	Sienna	8





**APPENDIX B PUBLIC OUTREACH COMMENT SUMMARY**

Survey #	Comment
1	Try to have the routes running at an average of 30 to 45 minutes apart. Also, let bus drivers be aware of younger children riding and let the drivers make sure all children are sitting before taking off.
2	Put more money into the bus system.
3	Add service to Yucatero Drive and Charro. Add more bus service.
4	Needs to be on a grid system with better frequency and better weekend schedule.
5	Run more north runs on powers, etc. Longer Sunday and evening, like 24-7. Run more often - every 20-30 minutes. Run the 22 more often.
6	More coverage in and out Colorado Springs.
7	Increased frequency. Provide service 24/7. Focus on the transit dependent.
8	Basically, I think Sunday service should be as late as weekdays, however, I think weekdays should run later also, till at least midnight.
9	Should have a bus go up Reunion.
10	
11	
12	Have buses run to the Pikes Peak Community College North Campus.
13	The whole system needs to be scrapped and reworked. You need to use straight runs north and south, east west. Constant runs - you do not then need transfer stations.
14	
15	
16	I would like to see longer Sunday evening service. Other than that the service is good.
17	??? Do not raise bus fare. Be easier to catch, longer bus times.
18	
19	This bus system sucks and there's not enough seats and it is stressful.
20	
21	Bus system is alright with me for now.
22	
23	All main streets have its own bus. Buses should run every 20 min. Transfer not very good for 2 hours but should be able to get back on bus going same direction.
24	Other than that buses are pleasant. Provide later service on weekdays.
25	Schedules when buses arrive at transfer stations (so we can catch transfer)
26	
27	
28	
29	
30	Evening and Sunday routes need to run later.
31	I think you should be able to use a transfer on any bus in any direction like the big cities. The routes should make more sense and you should be able to take less buses to get across town.
32	Let FREX pay for itself and not take from MM transit tax. You cover Falcon but skip Rockrimmon?
33	It needs to run later than 9:00.
34	*L-Train* Evening routes need to run later.
35	Run later on Sunday. More frequent buses in evenings. Wait for transferring passengers.

# 2035 Mountain Metropolitan Transit Plan

DRAFT

Survey #	Comment
36	Sunday run later. Evenings run later and you need more buses after 5 p.m. Drivers are letting people on for FREE! This needs to stop!
37	South Powers needs a route! Transfer from 24 to Powers (mall). Route 5 - need more buses, always crowded. Route 21 needs to be more frequent.
38	
39	Not very easy to use. Not time frames available. Increased frequency.
40	Powers and Briargate, up and down Powers. Increased coverage.
41	4 buses going to Falcon (not needed) 300,000 + homes
42	24/7 service. Fix schedule. Cameras needed downtown to #5 on all busses). Better bus driver training. More care and concern for passengers. Newer buses.
43	Lightrail needed. Better services for disabled people. 22 for \$12.00 (purchasing 3 or 4 per month) Regular pass is \$35.00 (medical appointments).
44	More often or later at night. More routes earlier AM.
45	
46	Buses need to be on time. Don't need to raise fare. More bike racks on new and current buses.
47	When taking a loop, customer has to pay again.
48	Drivers that know the stops and don't pass you by or give the paying customers attitude. More routes. More accountability of the drivers. My major suggestion is the driver does not like their job -- don't take it out on the passenger. Go get a new job somewhere else.
49	No comments!
50	
51	
52	Easier access for strollers.
53	24 hour service. Better bus driver training. Better customer service.
54	
55	
56	Bus only lanes at transfer center (Citadel)
57	
58	
59	
60	
61	No rate increases yet. Enjoy only form of transportation. 2.5 million went where???
62	
63	More Saturday service. Better bus driver attitude and knowledge. Texas has buses readily available for AM service if buses aren't running.
64	
65	Drop price to \$1.00. Customer service (bus drivers). Phones 90% can't get through.
66	Bus #10 doesn't run late or on Sunday.
67	
68	24 hour service.
69	
70	
71	

# 2035 Mountain Metropolitan Transit Plan

DRAFT

Survey #	Comment
72	Not enough service or late enough service. All buses should run the same amount of time #32. Lower bus pass prices.
73	Why doesn't evening service run until 2 AM like other cities? It should. Evening service needs to be extended to Sunday. And stop blaming the union for not doing this, and constant Proposed costs are not the Union's fault either.
74	
75	
76	
77	Drivers are pretty outgoing and cool. Bus 7 & 8 have a lot of littering.
78	
79	Passes should last 3 - 4 hours (longer)
80	
81	Buses are running late. Break down and there is no replacement bus or fee. No change in rates (increase). Better customer service (attitude).
82	
83	
84	
85	More bike racks - need to hold 3-4 bikes. If you ride more bikes (people) to save gas you need more racks.
86	Put the old 8 and 18 routes back. Something put up and down Powers.
87	The buses are a great service of transporting. Don't cut any routes and fare is already high enough. The routes are all equally needed as well as the free shuttle.
88	
89	I would like to see a bigger area covered by the bus system as well as evening services and on Sundays.
90	
91	Need to run longer - more hours.
92	
93	Buses need to run on-time.
94	West side service on weekdays.
95	30 minute Saturday service.
96	Route 10 on Sundays.
97	
98	Take look at <a href="http://www.RBTA.com">www.RBTA.com</a> and <a href="http://www.UGA.com">www.UGA.com</a> Need 1 garage for vehicles - not 2 lots. Need spoke and hub system. Downtown terminal dangerous for auto/bus incidents.
99	
100	
101	Drivers need to know their routes! Drivers not very friendly. Increase coverage. More Sunday service after 5:00 PM.
102	
103	Late night service. Timed meets. More frequency - 5 & 25. More buses down Woodmen. Powers - up with changes.
104	Don't cut school routes.
105	
106	

Survey #	Comment
107	
108	I think we should keep the free shuttle it is very convenient. And more buses.
109	
<b>ADDITIONAL COMMENTS</b>	
	More Service on the east side of town.
	Service to/near the Sky Sox baseball field.
	Friendly bus drivers.
	Happy with system.
	Improve transfers/connections.
	Widefield - connections between 22 and 21.
	Frequencies - 35/70 minutes doesn't work so well.
	Don't change anything. I get to where I need to go and I am happy with it.
	Increase frequencies to Fort Carson and Peterson AFB.
	Get some more drivers who are not prejudice!! And without all the attitude.
	I like your bus service.
	More Sunday service and later.
	I moved here 6 months ago from Chicago. The buses here are more pleasant, cleaner and more cost efficient.
	Overall, not bad. Good service.
	Improved a lot the last few years.
	Run later on evenings/Sundays. 10, 11, 12 should run at night.
	I think you are making a big mistake by reducing service and increasing fare.
	Need a bus that runs up North Nevada.
	A bus should run north on Fillmore, not just South.
	Weekends - the west side of town (Broadmoor) needs more service. The Citadel would be great.
	Sunday route needed to Broadmoor - #4.
	Route #14 is a "wreck"!
	Service should run until at least 7 or 8 p.m. evenings and Sundays.
	Need service in the NE and NW parts of town.
	East - West service needed on north end of town.
	Need service on Powers/Woodmen and Rockrimmon.
	Service needs to run every 30 minutes on Saturdays - all routes.
	Route 21 - Murray - should extend further into the neighborhood on the north end of the route. Many seniors have to walk from Barnes/Shelton.

# APPENDIX K

## APPENDIX K: REGIONAL INDICATORS PROJECTS

# QUALITY OF LIFE INDICATORS FOR THE PIKES PEAK REGION



2007



Creating the first annual Quality of Life Indicators Report for the Pikes Peak Region was a true collaborative effort involving one hundred volunteers and several key community organizations.

Special thanks to:



PIKES PEAK  
COMMUNITY  
FOUNDATION



For more information on how you or your organization can get involved in this annual effort, please contact Pikes Peak United Way at (719) 955-0735.



# INTRODUCTION



If you ask people in El Paso County whether our quality of life is improving or declining, you will get a variety of answers. This is a very subjective topic. Individuals tend to evaluate quality of life through the lens of their own experience, or the experiences of family and friends.

Quality of life factors are critical to a successful future. There are hundreds of examples of once desirable places to live that deteriorated because of controllable issues that local leaders did not recognize and address.

By examining what makes El Paso County great, we can bring people together around the issues that count. It is easier to create broad coalitions when there are basic community goals we can all agree on.

An excellent local example of a successful coalition was Citizen's Goals for the Colorado Springs Community, now called Leadership Pikes Peak. In the late 1970's, the participants accomplished a remarkable track record of improvements that still benefit us today.

In 2006, Pikes Peak United Way invited more than 100 interested community leaders to join Vision Councils to address one of nine different areas. These leaders were drawn from the private, public and nonprofit sectors. While they represent diverse interests, they share a passion for making El Paso County the best it can be. These councils provided the vision and guidance for the report. Their participation in this project makes it a community effort - they deserve many thanks.

The data, or indicators, are quantitative measures of the quality of community life. They reflect a combination of idealism (what we would like to measure) and pragmatism (what are we able to measure) in nine different categories. Although the report uses existing data, compiling the nine sections together gives a comprehensive view of the community. It is clear that ignoring any one of these areas has a negative ripple affect on the others. In turn, when these areas are strong they positively influence our lives in a variety of ways.

These categories cover a variety of issues that the community can improve through public decision making and action. They also point to ways we can support one another in making positive choices as individuals. Our hope is that by tracking data over time, the report helps the community understand who we are, where we've been and where we're going. In future years, the process would benefit from resources to conduct primary research, which answer more specific questions and focuses exclusively on El Paso County.

The report makes a conscious effort to present only facts. While it shows trends, the report does not attempt to evaluate these trends as positive or negative. The goal of presenting this data is to help community members prioritize and make educated decisions about which areas deserve investment of time, talent and resources. The goal of this entire effort is positive action.

With this first annual report in hand, our community will now begin to set goals for the coming year. We will look at what needs to be done, by whom, and what resources are needed. Let's work together to make life better for all of us!

*If you are addressing any one of these issues and would like to share data, or are interested in becoming involved in the project, please contact Howard Brooks at 719-955-0735.*

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- ▶ Religious Membership ..... 101

### **LOCAL LEADERSHIP**

- ▶ Leadership Programs ..... 102

# About El Paso County

## *HISTORY*

El Paso County was established in 1861. Colorado Springs became the county seat in 1873. Early on, many city leaders promoted the area as a tourist destination. Visitors came to see the area's beauty and were inspired to stay by a mild climate and the region's growing resort accommodations.

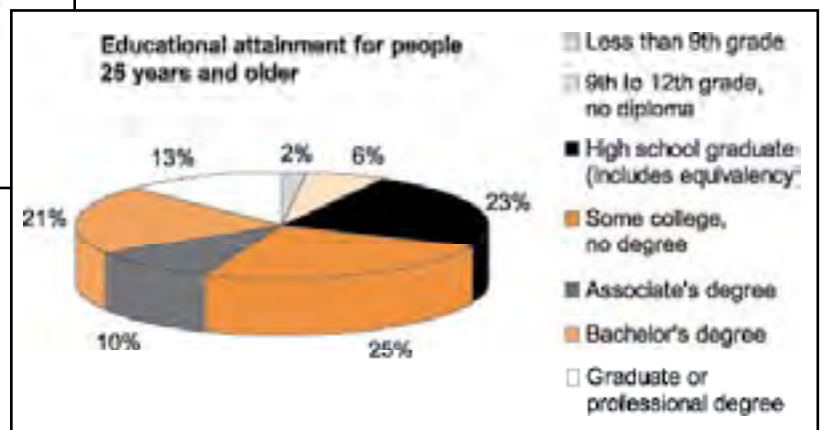
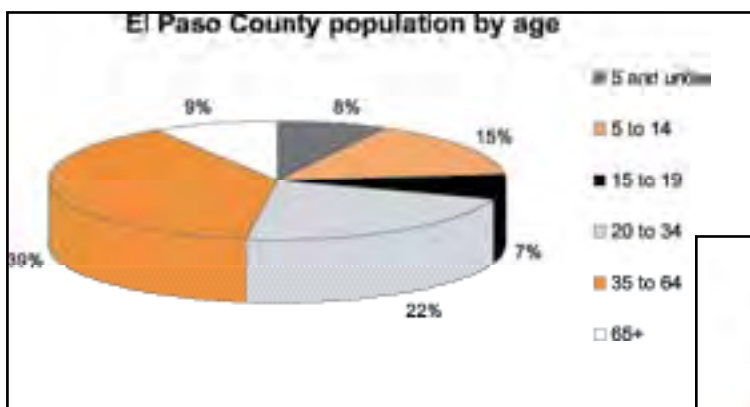
Gold was discovered in nearby Cripple Creek in 1891, and Colorado Springs found itself a thriving financial center until 1917 when the U.S. went to silver for its coinage and the local economy once again emphasized tourism.

With the start of World War II, the area offered land to the military, and Fort Carson was established on 137,000 acres to the south of Colorado Springs. The military's presence grew in the 1950s with the opening of the U.S. Air Force Academy. Over the next 30 years, additional Air Force installations, as well as space command, located here helping create the Pikes Peak Region's reputation as the nation's military space capital.

Manufacturing expanded in the 1960s and 1970s with the addition of computer, electronic equipment, and semiconductor manufacturing. The amateur sports segment is one of several service industries expanding in the region. Colorado Springs is home to the headquarters of the U.S. Olympic Committee and Olympic Training Center, the world's finest multi-sport training facility. Many other national nonprofit and religious organizations have moved their headquarters to the Pikes Peak Region.

## *PEOPLE*

The population of El Paso County in 2005 is 550,130 and comprised of 216,015 households. These charts detail the race, age and educational attainment of the population in 2005. Approximately 471,806 residents reside in Colorado Springs or 85% of the total county population. The average size of a household is 2.55 persons and the average family is 3.15 related individuals.



# GEOGRAPHY

El Paso County lies in east central Colorado, and encompasses more than 2,158 square miles. While the western portion of El Paso County is extremely mountainous, the eastern part is prairie. The altitude ranges from about 5,095 feet (1,569 m) on the southern border at Black Squirrel Creek to 14,110 feet (4,301 m) on the summit of Pikes Peak. This vast elevation difference creates a uniquely wide range of ecosystems and habitats.

When possible, the indicators presented in this report cover data for the entire area of El Paso County. The county seat and population center is Colorado Springs. Other major population centers in the county include Monument and Palmer Lake to the north; Security/Widefield and Fountain to the south; and Manitou Springs, Cascade and Green Mountain Falls to the west. For the past 10 years, rapid population growth continues in the northeastern parts of the county such as the Black Forest and Falcon areas.

At an elevation of 6,035 feet, residents enjoy a number of climatic advantages. During the summer months the days may be seasonally warm but when the sun sets, the evening and nights are refreshingly cool. Sunny days are abundant during the winter and the sun’s intensity at this elevation quickly melts snow from streets and sidewalks. *The region’s* meteorological classification is an alpine desert with about 250 days of sunshine and only 15 to 16 inches of precipitation per year. Humidity remains comfortably low.

# GOVERNMENT

El Paso County is governed by five county commissioners assisted by a variety of other elected and appointed officials. Together, these leaders oversee 13 departments that serve the county’s needs for safety, transportation, human services, environment, parks and recreation and a variety of other public functions. The El Paso County Department of Public Health and Environment is also a government institution receiving tax funds.

Colorado Springs is governed by a mayor and eight city council members. The city is charged with taking care of government responsibilities within city limits. Some of its major services include the municipal Utilities, the airport, the police and fire departments and parks, recreation and cultural services.

Compared to similar Colorado Counties, El Paso County’s property taxes are the lowest and combined sales tax and property tax revenue per person, accounting for 50% of all revenue, is also the lowest.

The county collects the property taxes, but disperses all but 10% of the total property taxes collected to other government entities, like school and library districts. Below is a table demonstrating the dispersal of property taxes for a homeowner living in District 11 whose home has a market value of \$200,000 and a related mill levy of 7.1604% and who pays a total of \$1,140 in annual property taxes.

County	Taxes per person- sales and property	Mill levy -property tax rate
El Paso County	\$187 (10)	8.012 (10)
Adams	\$321 (6)	26.903 (6)
Arapahoe	\$252 (9)	36.226 (1)
Boulder	\$444 (2)	23.767 (7)
Douglas	\$502 (1)	32.715 (2)
Jefferson	\$390 (3)	28.249 (4)
Larimer	\$389 (4)	23.267 (8)
Mesa	\$363 (5)	21.709 (9)
Pueblo	\$295 (7)	29.189 (3)

	Dollars	Percent of total
El Paso County	\$97	9%
El Paso County Road and Bridge	\$13	1%
City of Colorado Springs	\$79	7%
City of Colorado Springs Road and Bridge	\$13	1%
Library District	\$52	5%
School District 11	\$697	61%
Water District	\$15	1%
General and Special improvement districts	\$174	15%



# Growing a vibrant economy

*A vibrant economy is central to our quality of life. For individuals, good incomes and jobs encourage family stability, contributing to physical health and student achievement. For the community, a strong economy provides the tax base for government services that ensure public safety, transportation infrastructure, and public education. Discretionary income provides funding for organizations that promote arts, culture and recreation, community engagement and environmental sustainability. Likewise organizations addressing these issues help to support economic growth and general prosperity.*

## ***EMPLOYMENT AND INDUSTRY***

- ▶ *Employment Rate*
- ▶ *Industry*
- ▶ *Occupations*
- ▶ *Military*
- ▶ *Tourism*

## ***GROWTH***

- ▶ *Employment Growth*
- ▶ *Primary Jobs*
- ▶ *Construction*
- ▶ *Foreclosures*

## ***INNOVATION***

- ▶ *Patents*

## ***INCOME AND COST OF LIVING***

- ▶ *Household Income*
- ▶ *Family Income*
- ▶ *Poverty*
- ▶ *Self-sufficiency*

### **Growing a Vibrant Economy Council Chairs**

#### **Mike Kazmierski**

The Greater Colorado Springs Economic Development Corporation, CEO

#### **Will Temby**

Colorado Springs Chamber of Commerce, CEO

### **Growing a Vibrant Economy Council Members**

#### **Dave Bamberger**

David Bamberger and Associates, President

#### **Barry Baum**

Western Forge Corporation, President

#### **Barbara Cope**

Progressive Insurance, IT Manager

#### **Fred Crowley**

University of Colorado – Colorado Springs,  
Professor of Economics

#### **Wendy Henry**

BKD, LLP, Partner

#### **Peggy Herbertson**

Pikes Peak Workforce Center, Executive Director

#### **Gary Markle**

Colorado Springs Technology Incubator, CEO

#### **Tom Naughton**

U.S. Bank, Regional President

#### **Larry Small**

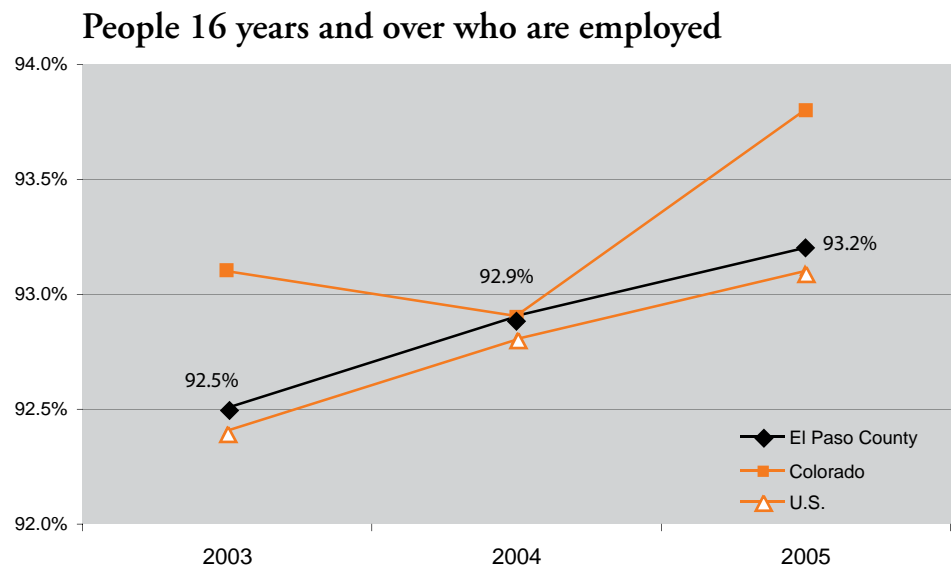
City of Colorado Springs, Vice Mayor

# EMPLOYMENT AND INDUSTRY

A high *employment rate* reflects a healthy economy that provides jobs for all adults seeking employment. A low employment rate reflects a weak economy that results in increased pressure for government and nonprofit agencies to provide services to the unemployed. To fully understand the economy and its employment patterns it is also important to understand what types of *industry* make up a local economy and what types of *occupations* are reflected in the employment rate. A healthy economy should have a diverse range of industries represented so that it can withstand sudden economic shifts that adversely impact any one industry. The *military* and *tourism* are historically strong industries in the region. Optimally, local industries will generate wealth for the community through their revenues for local owners and high quality career opportunities for employees.

## ► *Employment Rate*

**This chart shows** the percentage of people ages 16 years and above who are in the labor force and are employed.



Source: U.S. Census Bureau; American Communities Survey; 2003, 2004, 2005 data

### *How are we doing?*

In El Paso County 93.2 percent of people 16 and over, in the labor force are employed. This is slightly lower than Colorado figures (93.8 percent) and slightly higher than the national average (93.1 percent).



# ► Industry

## Employment by industry

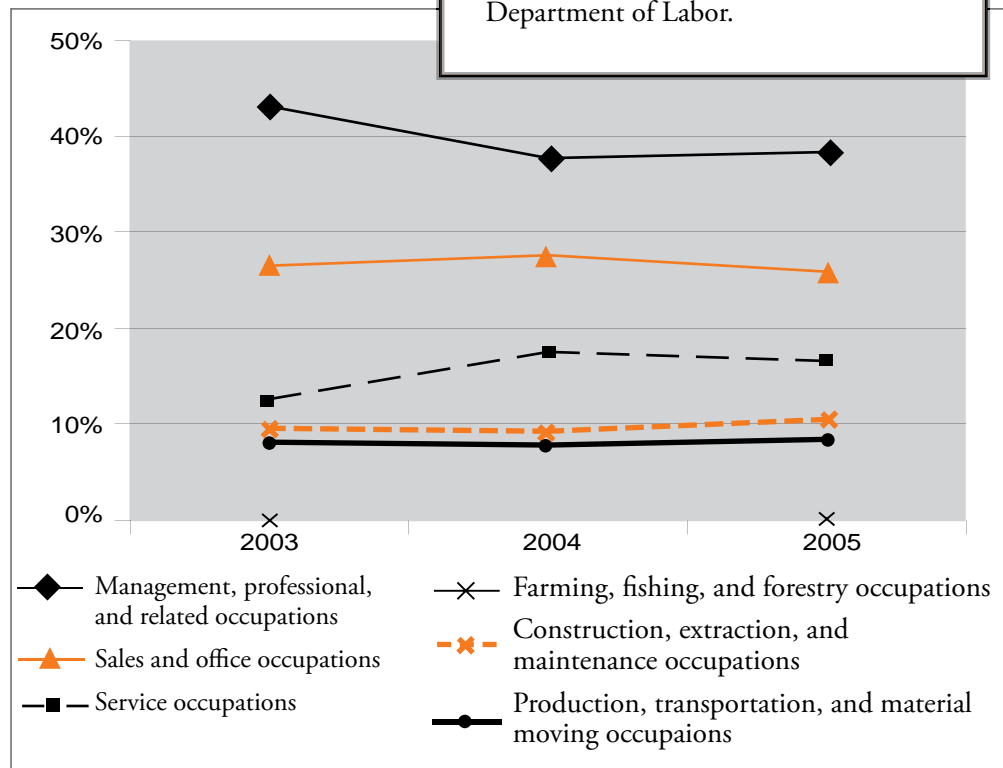
Industry	2003	2004	2005	Change from 2003 to 2005
Educational, health, and social services	17%	16.26%	17.09%	0.09%
Professional, scientific, management, administrative, and waste management services	13%	12.68%	14.41%	1.41%
Retail trade	10%	15.01%	11.78%	1.78%
Arts, entertainment, recreation, accommodation, and food services	9%	8.69%	10.74%	1.74%
Manufacturing	11%	7.52%	8.73%	-2.27%
Finance, insurance, real estate, and rental and leasing	9%	9.61%	8.61%	-0.59%
Construction	9%	8.34%	7.69%	-1.31%
Other services (except public administration)	5%	5.33%	5.78%	0.78%
Public Administration	7%	6.37%	5.32%	-1.68%
Transportation and warehousing, and utilities	4%	3.48%	4.21%	0.21%
Information	4%	3.21%	3.12%	-0.88%
Wholesale trade	2%	2.65%	2.23%	0.23%
Agriculture, forestry, fishing and hunting, and mining	1%	0.85%	0.28%	-.072%

Source: U.S. Census Bureau; American Communities Survey; 2003, 2004, 2005 data

**This chart shows** the percent of total employment held by each industry in El Paso County. Industry categories are determined by the U.S. Census Bureau and the National American Industry Classification System.

# ► Occupations

## Employment by occupation



Source: U.S. Census Bureau; American Communities Survey; 2003, 2004, 2005 data

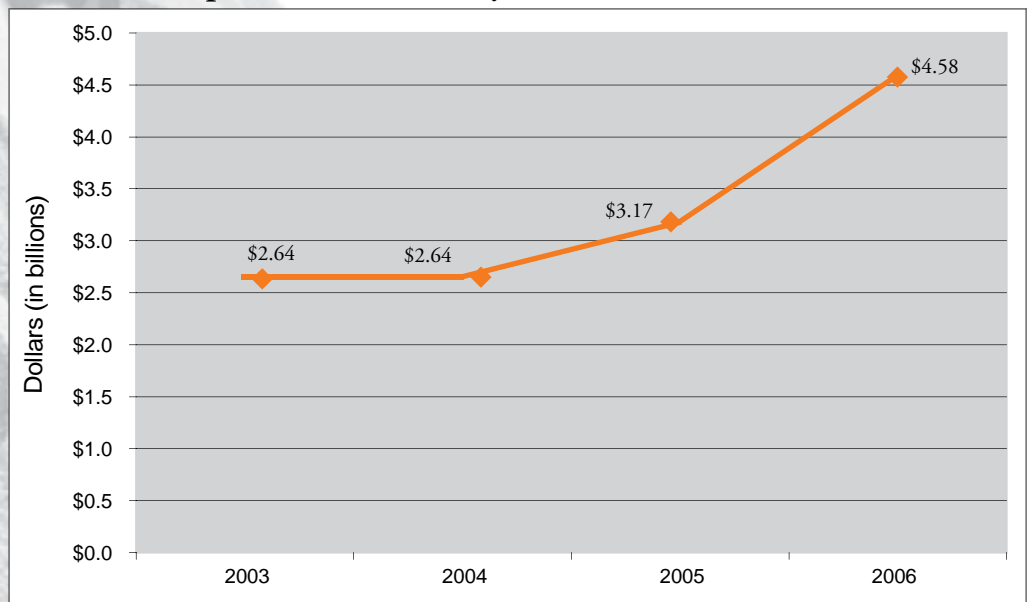
### How are we doing?

The percentage of management, professional and related occupations has decreased slightly from 2003 to 2005 while the percentage of service occupations has increased slightly over the same time period. Generally, service occupations pay less than management occupations. Therefore the region may be seeing a slight shift in the quality of jobs held by the local labor force.

## ► *Military*

**This chart shows** the total estimated economic impact including payroll, construction, services, procurement of materials, equipment, supplies and dollar value of jobs created by the military in El Paso County. Installations included in the study are: Fort Carson, Peterson Complex, United States Air Force Academy, and Shriever Air Force Base.

### Economic impact of U.S. military installations



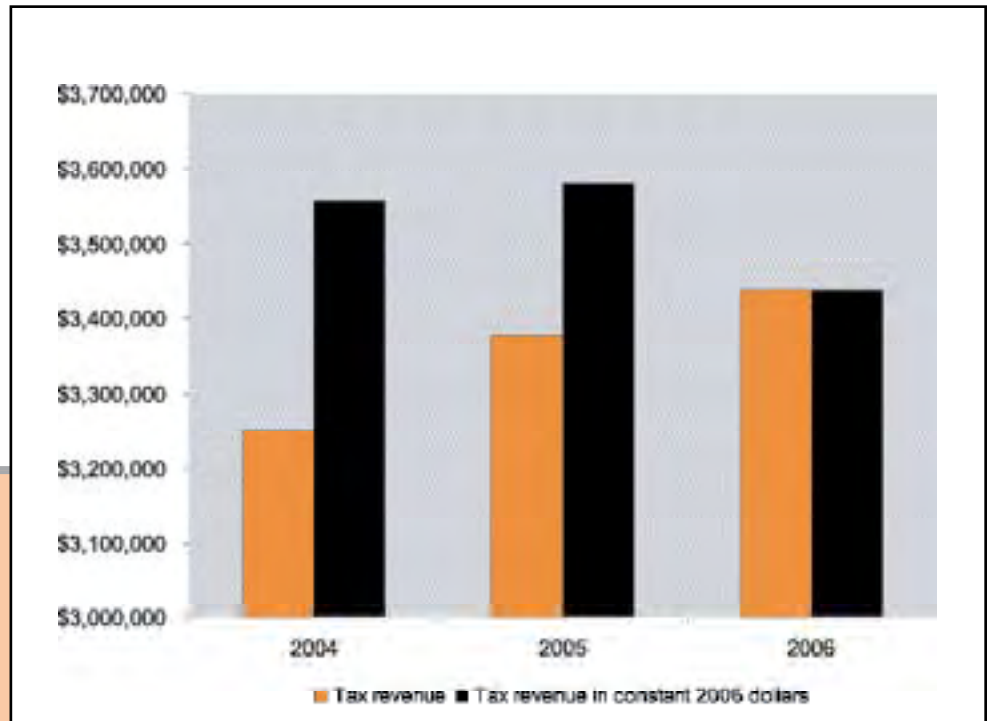
Source: Colorado Springs Chamber of Commerce, Military Affairs Council, Pikes Peak Region Military Facts

### *How are we doing?*

The military is a major economic driver in El Paso County. Since 2003 the total dollar impact has been growing. In 2006 the \$4.58 billion dollars of impact represented 35% of the regional economy.

## ► *Tourism*

**This chart shows** tax revenue in the city of Colorado Springs from taxes specifically levied on lodging and auto rentals. This is a common measure of the economic impact of tourism since tourists represent the bulk of hotel stays and rental needs.



Source: City of Colorado Springs Finance Department

### *How are we doing?*

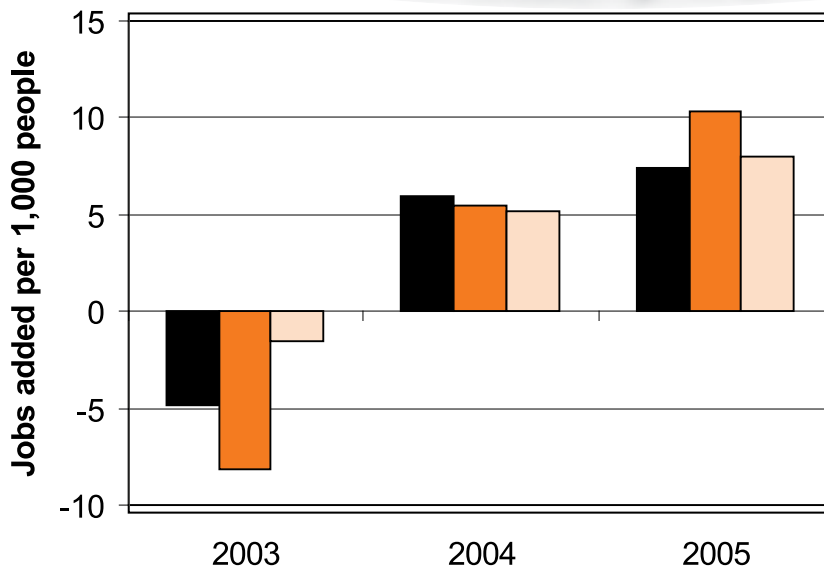
Since 2004, Lodgers and Auto Rental Tax Revenue has been growing. However, because the tax is 2 percent of the total sales cost of hotel rooms and rental cars, it would need to show growth faster than the rate of inflation to indicate greater numbers of tourists traveling through the region. Adjusted to constant 2006 dollars, the revenue grew from 2004 to 2005 but dropped from 2005 to 2006.

# GROWTH

A growing economy adds jobs each year to keep pace with population growth and the needs of growing businesses. Economic development efforts focus on *job growth* with respect to primary jobs. *Primary jobs* are associated with primary industries – those industries that bring new dollars into the local economy by selling goods and services to outside buyers. When those new dollars are spent in the local economy, more jobs are created. This is called the multiplier process.<sup>1</sup> *Construction* also indicates growth as it reflects the desire of people and businesses to join the community. The process of construction and subsequent real estate sales is an investment in the local economy. Remodels and even some demolitions are an economic investment adding value to the community. Conversely, home *foreclosures* signify an inability of individuals to meet mortgage payments. This not only affects the financial sector and housing markets, slowing construction and driving down the value of real estate; it may also indicate a general economic downturn.

## ► Job Growth

Jobs added annually per 10 people



Source Colorado data: Colorado Department of Labor Colorado Quarterly Census of Employment and Wages

Source U.S. data: U.S. Department of Labor Bureau of Labor Statistics Quarterly Census of Employment and Wages

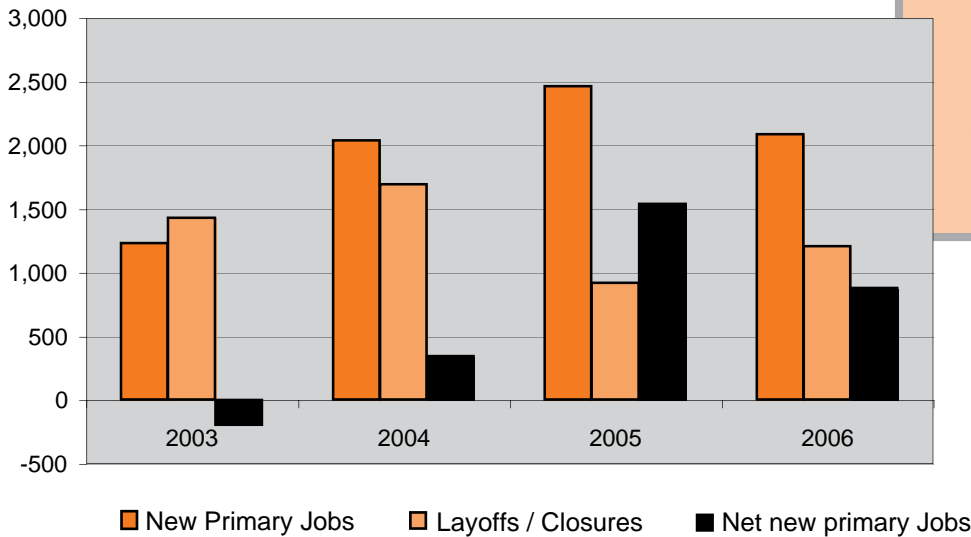
**This chart shows** the net number of jobs added per 1,000 people in El Paso County, Colorado and the U.S. including gains and losses in all industries.

### *How are we doing?*

In 2003, all El Paso County, Colorado and the U.S. all lost jobs with Colorado losing just over 8 per 1,000 people. Since that time, El Paso County has steadily added jobs each year.

## ▶ *Primary Jobs*

Primary job growth –  
new jobs, layoffs/closures and net new primary jobs



Source: Colorado Springs Economic Development Corporation

**This chart shows** the gains and losses of primary jobs which are those added by industries that sell services outside of El Paso County bringing money into the region. Generally, they are higher-paying jobs in specialized sectors of the economy.

### *How are we doing?*

Since 2004, El Paso County has been adding primary jobs, which in turn supports the addition of more jobs within the community. However, some economists estimate that the region needs at least 1,600 new primary jobs each year to keep up with population growth. El Paso County's net new primary jobs indicator has not met this goal in the past five years.

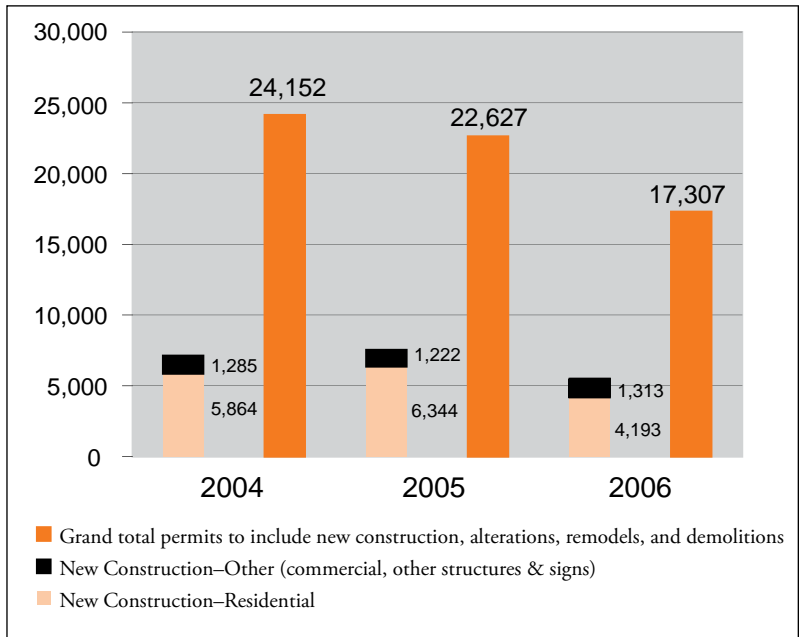
## ► Construction

**This chart shows** the number of building permits issued in El Paso County each year by type.

### *How are we doing?*

New residential construction permits declined by 33 percent between 2005 and 2006. This reflects the state and nationwide decline in the housing market. Other new construction permits were not affected by this trend and saw a slight increase (7.4 percent) during this same period.

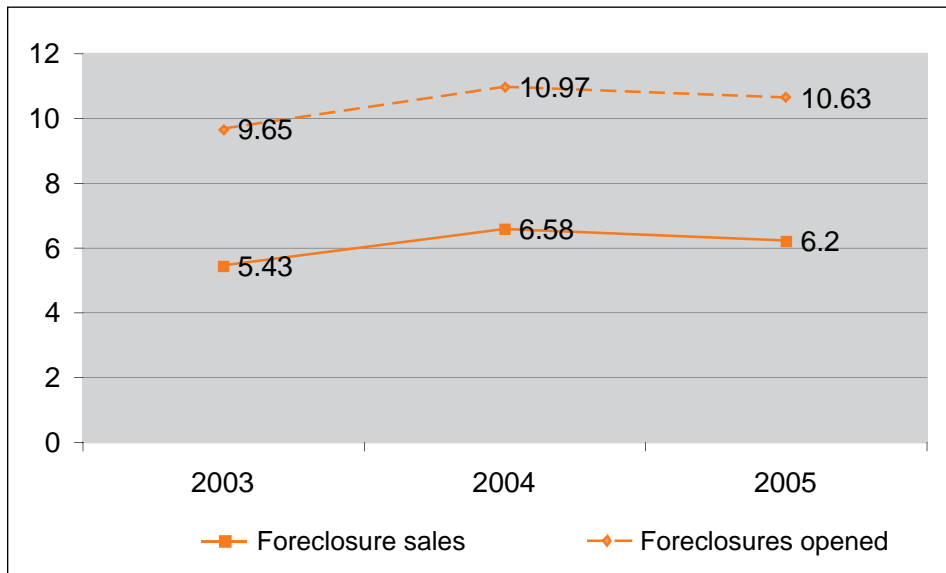
## Construction permits issued



Source: El Paso County Pikes Peak Regional Building Department, Pikes Peak Region Building Report

## ► Foreclosures

### Foreclosures opened and foreclosure sales per 1,000 households



Source: Colorado Public Trustees Association

**This chart shows** the number of foreclosure actions that were started or opened and how many actual sales occurred per 10,000 households in El Paso County. Banks foreclose on a home when the homeowner fails to make loan payments.

### *How are we doing?*

El Paso County foreclosure rates increased from 2003 to 2004 and then decreased from 2004 to 2005.

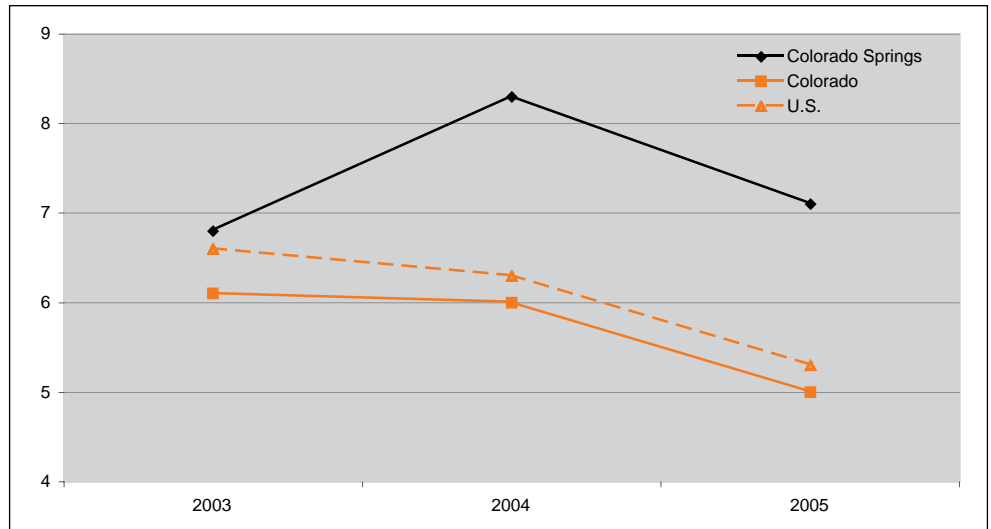
# INNOVATION

*Patents* serve as an indicator of economic innovation as inventors develop new products and solutions. In turn, innovation can drive economic growth and provide new sources of technology and other products that improve quality of life.

## ► *Patents*

**This chart shows** the number of patents issued per 10,000 people to inventors reporting residence in each of the three locations.

Patents issued per 10,000 people



Source: U.S. Patent and Trademark Office Full Text and Image Database

### *How are we doing?*

Colorado Springs has approximately two more patents issued per 10,000 people than the State of Colorado or the U.S. as a whole. From 2004 to 2005 all three demographic regions show a decrease in the number of patents issued.

## ***INCOME AND COST OF LIVING***

Income, poverty and self-sufficiency are closely interlinked. *Household income* level is one way of measuring the general strength of the economy while *family income* depicts the range of incomes in the region and sheds light on how families are doing. Families and individuals with a good income are generally able to meet their basic needs including housing, food and medical care. Families and individuals with discretionary income contribute to the economy by patronizing local services and businesses and consuming durable goods. Conversely, people and families living in *poverty* are typically unable to meet their basic needs and tend to need the support of community and government services. According to the Children's Defense Fund child poverty,

*... places [children] at a greater risk of hunger, homelessness, sickness, physical or mental disability, violence, educational failure, teen parenthood and family stress and deprives them of positive early childhood experiences and the adolescent stimulation and creative outlets that help prepare more affluent children for school and then college and work.<sup>2</sup>*

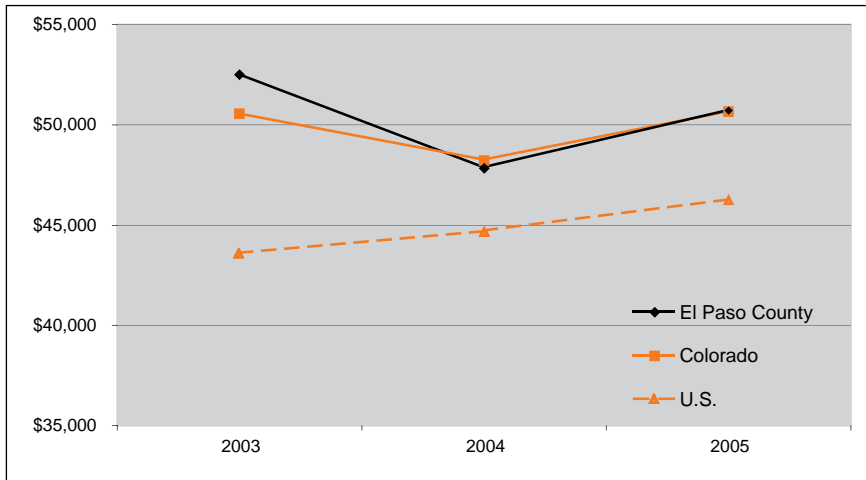
The Institute for Research on Poverty reports that health is directly correlated with income. People living in poverty are less healthy than those who are not whether the benchmark is mortality, the prevalence of acute or chronic diseases, or mental health.<sup>3</sup> Additionally, research shows a clear relationship between poverty and lower test scores and increased school drop-out rates.<sup>4</sup>

The 2005 American Communities Survey data provided by the Census Bureau and included below provides the incidence of poverty based on the definition of the federal government. This definition was first established in the 1930s using a formula based on the cost of an inexpensive but nutritious food diet. Today, this definition is considered by many an inadequate indicator of real poverty and quality of life for households and families with lower incomes. In response, many organizations including the Colorado Fiscal Policy Institute (CFPI) have commissioned studies to calculate the minimum income level it would take for individuals and families to meet basic needs without public assistance<sup>5</sup> and achieve *self-sufficiency*.



## ► Household Income

### Median household income



Source: U.S. Census Bureau; American Communities Survey; 2003, 2004, 2005 data  
Child Development/Head Start

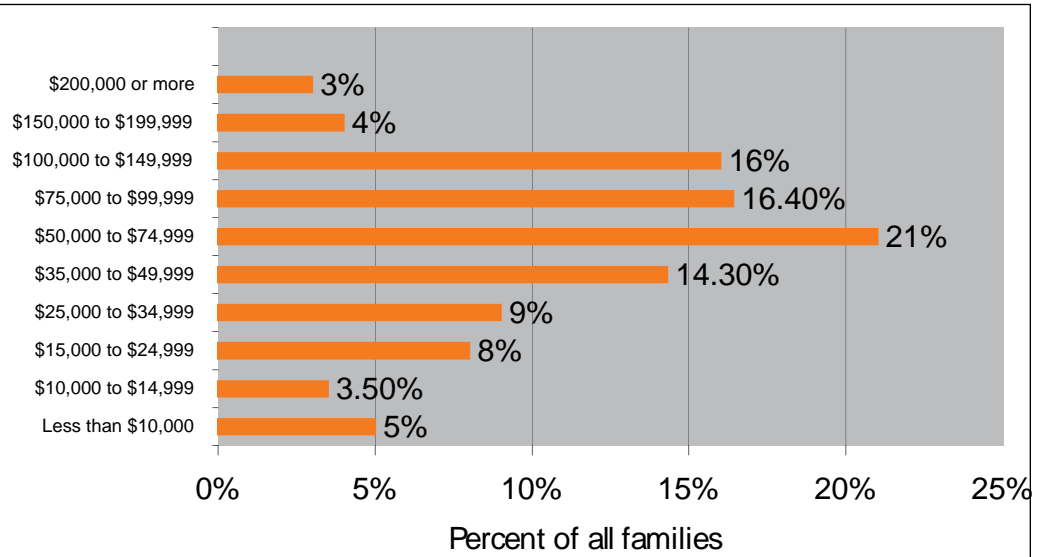
**This chart shows** the median household income in El Paso County, Colorado and the U.S. Median household income represents the exact middle of the income distribution of the household population in the community, with 50 percent of households earning incomes above the median, and 50 percent of households earning below the median. A household is defined as a group of people dwelling together and may consist of a single adult, a family, a group of roommates or unrelated individuals.

### *How are we doing?*

The median household income in El Paso County is higher than that of the U.S and nearly the same as Colorado averages. Since 2003, median income has decreased in El Paso County. Taking inflation into account, the actual buying power of the median income in all three regions has decreased.

## ► Family Income

### Families falling within listed income ranges in 2005



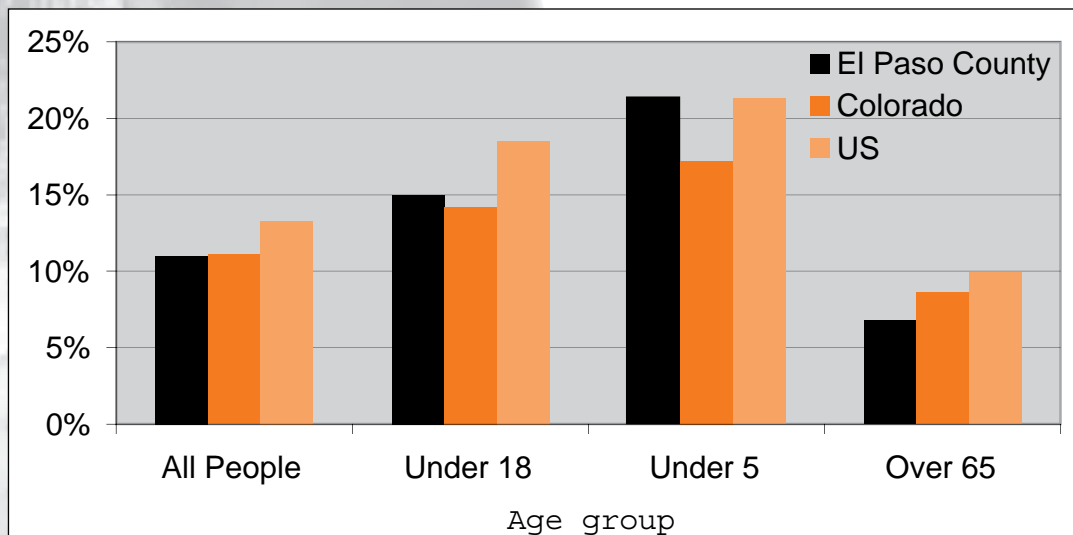
**This chart shows** the percent of total families with annual incomes falling within the ranges in El Paso County in 2005. A family is defined as the head of household plus one or more related individuals.

Source: U.S. Census Bureau; American Communities Survey; 2003, 2004, 2005 data

## ► *Poverty*

**This chart shows** the percentage of people living below the federal poverty thresholds. In 2005, an annual income of \$15,423 was the poverty threshold for a family of three with one member being a child under 18.<sup>6</sup>

People living in poverty by age group in 2005



Source: U.S. Census Bureau; American Communities Survey; 2003, 2004, 2005 data

### *How are we doing?*

In general, a lower percentage of people in El Paso County live in poverty than the Colorado or U.S. average. However, more children under 18 and under five years old live in poverty here than in Colorado on average. Far fewer adults over 65 in El Paso County find themselves in poverty than in Colorado or the U.S. In El Paso County 8.5 percent of families earn incomes lower than \$15,000 per year.

## ► *Self-sufficiency*

**This chart shows** the required self-sufficiency income for different types of families in El Paso County and also gives the percentage of total families without regard to composition that earn less than the given self-sufficiency income. Self-sufficiency means maintaining a decent standard of living and not having to choose between basic necessities— whether to meet one’s need for child care but not for nutrition, or for housing but not health care. Self-sufficiency wages are family-sustaining wages.<sup>7</sup> The self-sufficiency standard is determined by adding together the average costs of housing, food, child care, transportation, health care, minimal miscellaneous expenses and then subtracting applicable tax credits. In 2004, the Colorado self-sufficiency standard for a family of four living in metropolitan areas was \$47,760 and \$34,988 for those living in rural areas.<sup>8</sup> Adjusted for 2005 dollars it would be approximately \$51,000 in metro areas and \$40,600 in rural areas.

### Required income to meet self-sufficiency standards by type of family

	2005 El Paso County annual self-sufficiency income*	Percentage of El Paso County families with less than listed income in 2005
Adult & preschool age child	\$25,352–\$37,296	Less than \$35,000 = 25% Less than \$25,000 = 16.6%
Adult, preschool and school	\$37,926–\$44,489	Less than \$35,000 = 25%
Family of four	\$39,483–\$51,339	Less than 50,000 = 39.5%

Source: Colorado Fiscal Policy Institute

\* range derived from cost of living data showing El Paso County to be slightly more expensive than Pueblo County and less expensive than Denver County

\*\* percentage derived from family income data on page 14 of this report

### *How are we doing?*

The table estimates how many families may live below the self-sufficiency standard in 2005. A study conducted using 2000 census data reported (more accurately) that 19 percent of El Paso County households and 20 percent of Colorado households had incomes below the self-sufficiency standard at that time.<sup>9</sup>



# Promoting social wellbeing

*Because we are all interconnected, the wellbeing of individuals affects each of us. Children are the future of every community, and families are the basic building blocks of society. Healthy, successful children and strong families are fundamental in promoting social wellbeing. The inability to pay for basic needs such as housing and childcare threaten social wellbeing by putting excess strain on individuals and families. Drug and alcohol abuse result in a variety of tragic problems for individuals and society as well.*

## ***CHILDREN AND FAMILIES***

- ▶ *Household Composition*
- ▶ *Family Stability*
- ▶ *Teen Pregnancy*
- ▶ *Subsequent Births to Teen Mothers*

## ***DRUGS AND ALCOHOL***

- ▶ *Deaths Due to Alcohol and Drugs*
- ▶ *Drug and Alcohol Use*

## ***ECONOMIC WELLBEING***

- ▶ *Neighborhood Integration*
- ▶ *Affordable Housing*
- ▶ *Homelessness*
- ▶ *Quality, Affordable Child Care*

### **Promoting Social Wellbeing Council Chairs**

#### **Barbara Drake**

El Paso County Department of Human Services, Director

#### **Valorie Jordan**

City of Colorado Springs Housing and Community  
Development, Division Manager

### **Promoting Social Wellbeing Council Members**

#### **Mary Ann Carter, MSW, LCSW**

Centro de la Familia, Co-Director

#### **Leslie Cook**

Community Leader

#### **Michael Decker**

Silver Key, President and CEO

#### **Denise Krug**

Goodwill Industries of Colorado Springs,  
President of Rehabilitation

#### **Regina Lewis**

Pikes Peak Community Action Agency, Board President

#### **Linda Meredith**

Community Partnership for Child Development,  
Chief Operating Officer

#### **Steve Mulliken**

Silver Key, Board Member

#### **Lindsey Myers**

El Paso County Department of Health and Environment,  
Community Health Program Director

#### **Lee Oesterle**

Kids Crossing Placement Agency, Executive Director

#### **Shannon Ponce**

Goodwill Industries of Colorado Springs

#### **Diane Price**

Child Nursery Center, President and CEO

#### **Patricia Randle**

Army Community Services, Director

#### **Michael Rovaris**

Pikes Peak Behavioral Health, Director - Project BLOOM

#### **Maryann Stadjuhar**

Catholic Charities of Colorado Springs, Director –  
Emergency and Transition Services

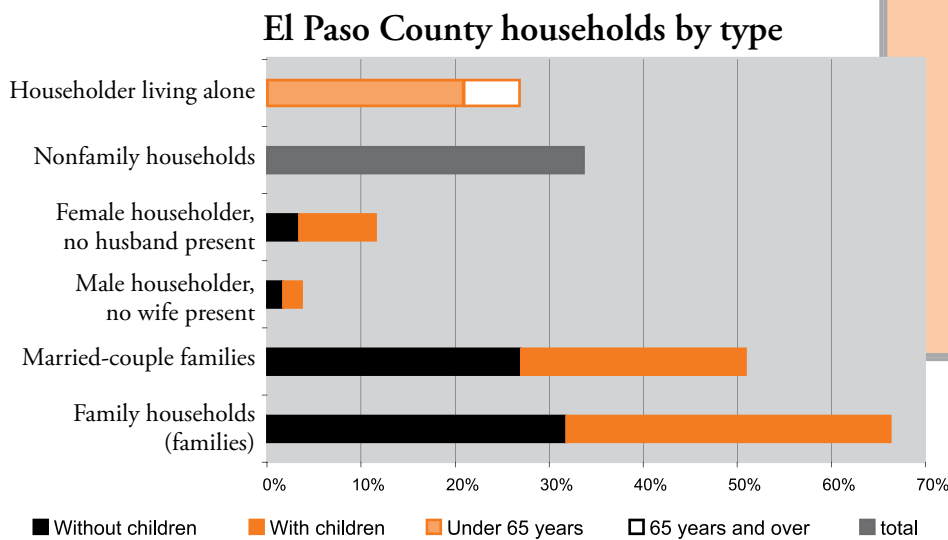
#### **Michelle Valdez**

T.E.S.S.A., Executive Director

# CHILDREN AND FAMILIES

All families are different: from single parents to married couples without children to seniors living alone. Knowing *household composition* helps communities understand how to support the wellbeing of all residents. Children are more likely to succeed when they live in a home characterized by *family stability*. When children must be removed from home because of abuse or neglect, the goal is to place them in a safe, permanent home as soon as possible, with their own family or an adoptive family. *Teen pregnancies* often result in health problems for mother and baby, and parenting problems can create potential social and economic hardship. *Subsequent births to teen mothers* are often the impetus for withdrawal of family support systems, greatly increasing risk factors for these young families.<sup>1</sup>

## ► Household Composition



Source: American Communities Survey, U.S. Census 2005 data

**This chart shows** the types of households in El Paso County as a percentage of total households. Of particular interest, it shows how many married couples, single women and single men lead households and how many of those have children living with them.

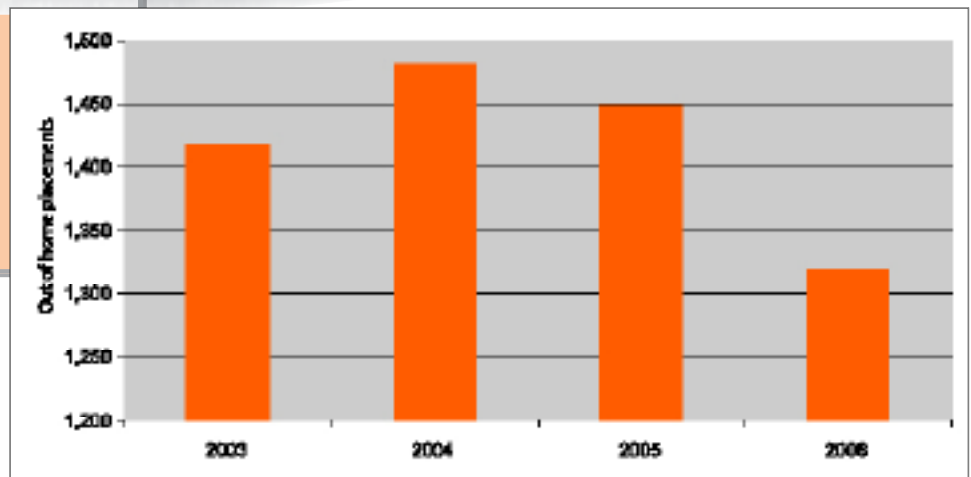
### *How are we doing?*

Just over two-thirds of El Paso County households consist of families, with more than 60 percent of households led by married couples. Single parents with children represent a little more than 10 percent of total households numbering more than 21,000. Nearly 27 percent of households consist of just one person living alone and 6 percent of households consist of a single adult over 65 years. Additionally, in 2005 nearly 6,500 grandparents lived with their grandchildren and 53 percent of those were financially responsible for their grandchild's basic needs including food, shelter, clothing and childcare.<sup>2</sup>

## ► *Family Stability*

**This chart shows** the number of annual out-of-home placements of children 18 and younger. The numbers are not unduplicated – one child may be placed, reunited with family and placed again several times in a given year. Additionally, placements may vary from one day to several years depending on the family situation. Out of home placements include foster and relative care as well as residential treatment.

Out-of-home placements of children in El Paso County



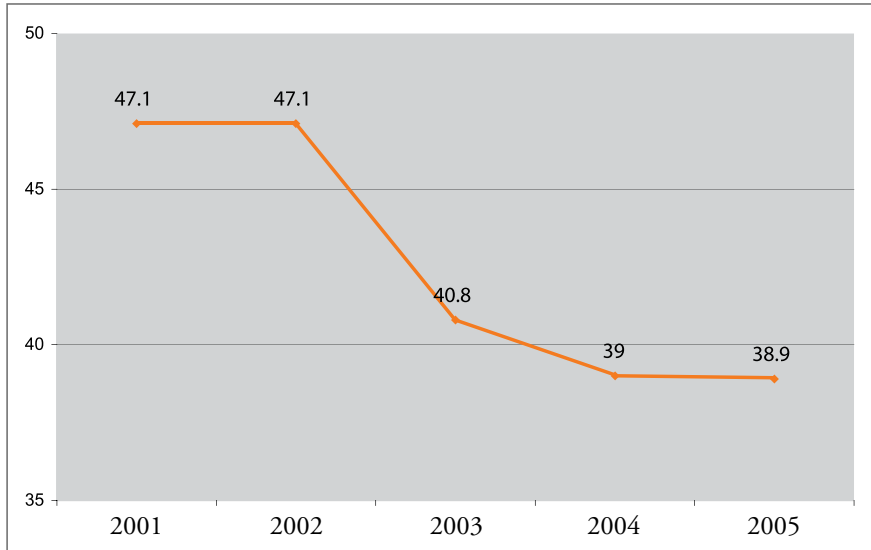
Source: El Paso County Department of Human Services

### *How are we doing?*

The number of out-of-home placements has been decreasing since 2004 despite increases in the county population. This may reflect a combination of more stable families, the assistance of extended families when support is needed, and better preventative services for at-risk families from government and nonprofits before out-of-home placement is necessary.

## ► *Teen Pregnancy*

Births per 1,000 females ages 15-19 years



Source: Colorado Department of Public Health and Environment Vital Statistics

**This chart shows** the total annual live births in El Paso County to females ages 15 to 19 per 1,000 females in the same age group.

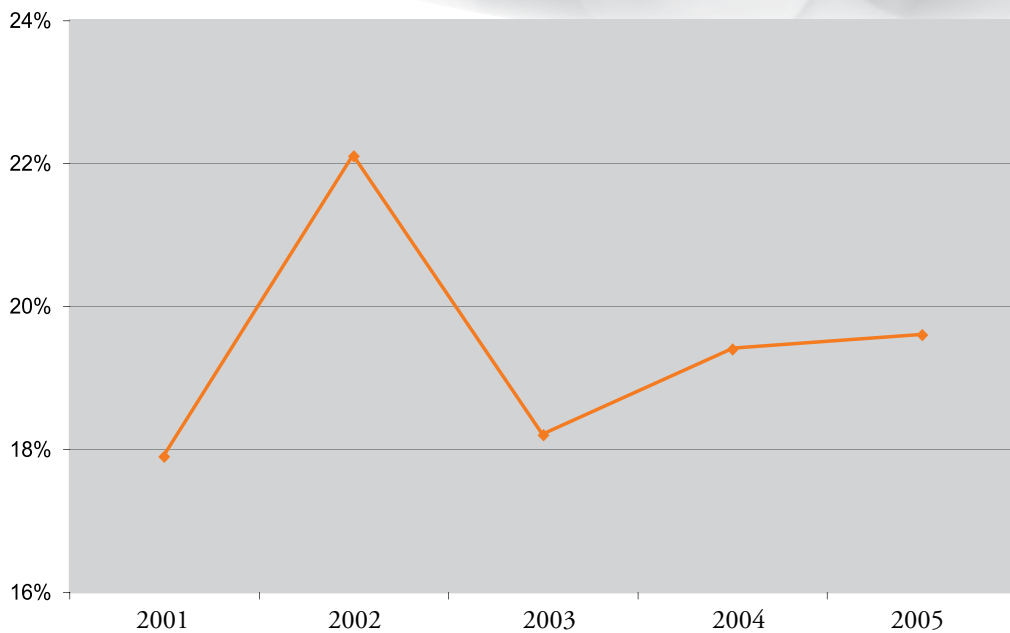
### *How are we doing?*

Since 2001 the rate of births to teen girls has decreased by 17 percent, with the largest decrease between 2002 and 2003.



## ► *Subsequent Births to Teen Mothers*

Share of total births to teen mothers where the teen had a previous child



Source: Colorado Department of Public Health and Environment Vital Statistics

**This chart shows** the percentage of births to mothers ages 19 and younger in El Paso County in which the mother had a previous child.

### ***How are we doing?***

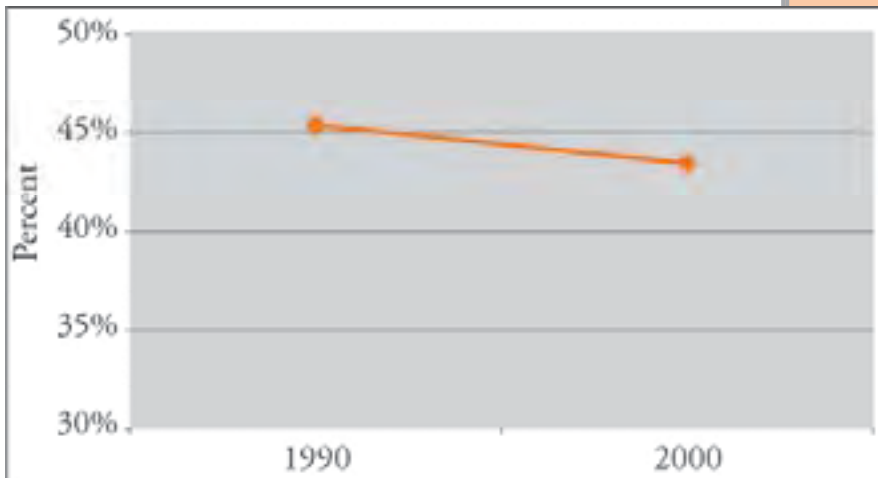
There does not appear to be a trend. However, since 2003 there has been a gradual increase.

# ECONOMIC WELLBEING

Most people would agree that a good quality of life includes having a stable place to live in a safe neighborhood with adequate financial resources to be self-sufficient. A number of studies have shown that economic segregation intensifies problems of crime and drug abuse and exacerbates poverty by making it harder for people to connect to social networks that enable employment and upward mobility. Tracking *neighborhood integration* can help the community understand these issues. In order to achieve integration the community must have *affordable housing* for all its members. In turn, homeownership provides people with more stability, is linked to greater rates of community engagement such as volunteering, and promotes knowing neighbors (which can decrease crime.) Oppositely, *homelessness* is an indicator of a lack of financial stability that, in turn, causes a variety of social hardships. *Quality affordable childcare* is a necessity for many working parents and benefits our society by preparing children for school, work and the social relationships that make us a community. Ninety percent of a person's intellectual, emotional, and social ability is formed by the age of three.<sup>3</sup>

## ► *Neighborhood Integration*

People that would have to move between neighborhoods to achieve complete economic integration



Source: Lewis Mumford Center for Comparative Urban and Regional Research at the University at Albany

**This chart shows** the percentage of low and high-income persons in Colorado Springs who would have to move to a different area to equalize the distribution of persons in each group in each census tract of the region. In 2000 an annual income of less than \$30,000 was defined as low-income, while an annual income of more than \$60,000 was defined as high income.<sup>4</sup>

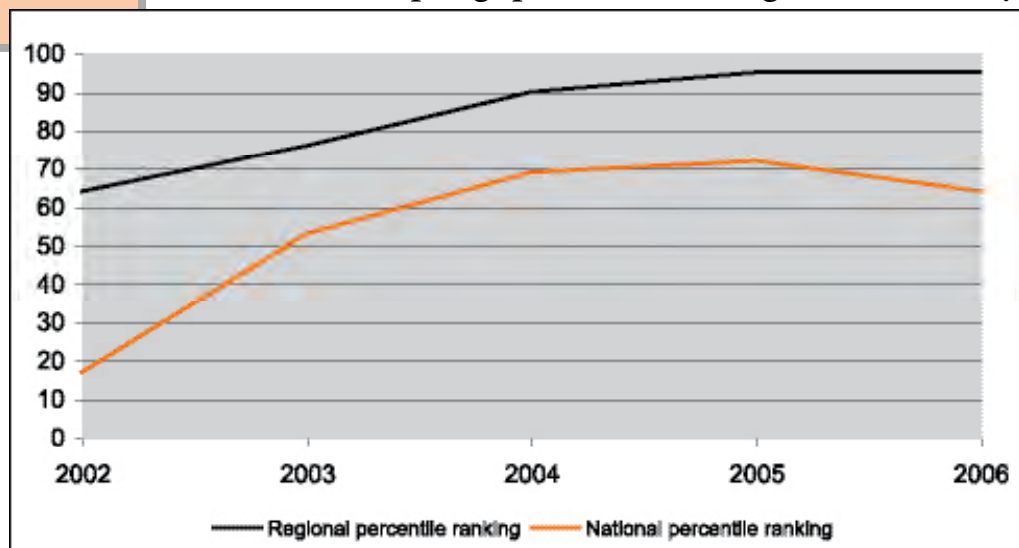
### *How are we doing?*

In 2000, about 43 percent of low- and high-income persons in Colorado Springs would have to move in order to achieve complete economic integration compared to 45 percent in Denver and 39 percent in Pueblo.

## ► Affordable Housing

**This chart shows** Colorado Springs' percentile ranking for affordable housing compared to the region and the nation. For example, in 2006 Colorado Springs was more affordable than 95 percent of its regional peers and 64 percent of areas surveyed nationally.

Colorado Springs percentile ranking for affordability



Source: National Association of Homebuilders/Wells Fargo Housing Opportunity Index

### *How are we doing?*

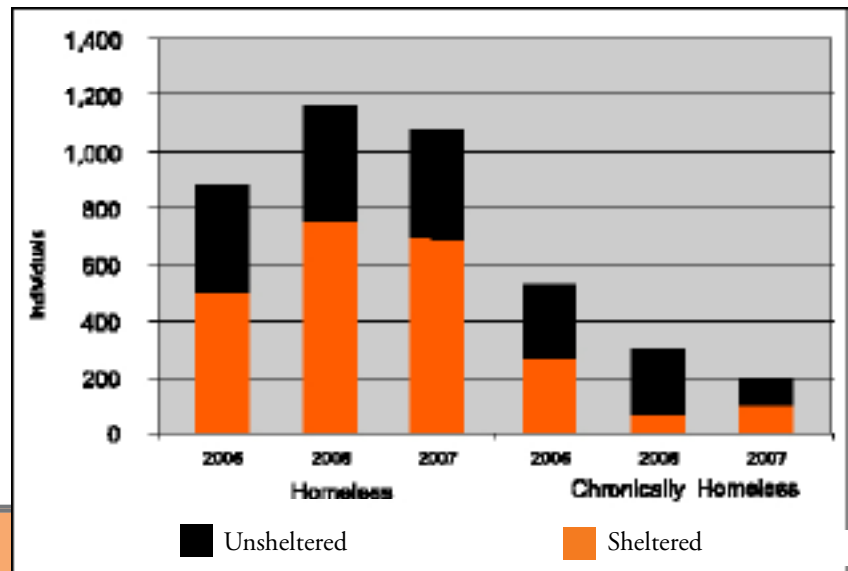
Colorado Springs has become more affordable compared to its regional and national peers since 2002. The median home price in Colorado Springs has remained relatively constant since 2002, hovering around \$200,000 (in constant 2006 dollars). In 2007, the City of Colorado Springs and the Pikes Peak Area Association of Realtors began tracking the number of homes sold for less than \$150,000 as a measure of affordability. Between January and June they reported a total of 75 single-family detached homes, condominiums or town homes sold for less than \$150,000.

## ► Homelessness

WILL WORK  
FOR  
100

**This chart shows** the number of people during a one-day count who were homeless or chronically homeless in El Paso County.

### Homeless and chronically homeless individuals



### *How are we doing?*

The number of total homeless individuals has increased since 2005, peaking at 1,159 in 2006 and declining to 1,077 in 2007. The number of chronically homeless people has declined since 2005. In 2007 nearly 200 people were chronically homeless while, for most, the situation was temporary. According to Homeward Pikes Peak, the number of homeless families with children decreased from 94 in 2005 to 75 in 2006 and the most common characteristics of homeless people in 2007 include veterans (17 percent), chronic substance abuse problems (23 percent), and mental illness (21 percent).

Source: Homeward Pikes Peak, point-in-time study, January 2005, 2006, 2007

## ► *Quality, Affordable Child Care*

### Availability of affordable early childcare for children below the poverty line

	El Paso County
Number of children under 5 benefiting from CCCAP	3395*
Percent of children in poverty under 5 benefiting from CCCAP	less than 37%

\*Source: Colorado Child Care Assistance Program Annual Program Information July 1, 2004-June 30, 2005

**This chart shows** the total number of children under five in El Paso County benefitting from the Colorado Child Care Assistance Program (CCCAP) from July 2004 to June 2005 and the percentage of children five years old and younger living below the federal poverty line who benefit from CCCAP. In El Paso County CCCAP assistance is available to any family that earns less than 140 percent of the federal poverty threshold. The monthly reimbursement rate is \$506.<sup>5</sup> Preschool costs between \$5,000 and \$10,000 annually in Colorado.<sup>6</sup>

### *How are we doing?*

Less than 37 percent of children living below the federal poverty line benefit from CCCAP funds. Even those who can afford child care may find it difficult to attain. El Paso County has more than 1,200 licensed childcare providers, but approximately two-thirds serve fewer than ten children. Therefore there is only one space available for every five children under the age of 15. More information on poverty rates and self-sufficiency can be found the *Growing a Vibrant Economy* section of this report.

# DRUGS AND ALCOHOL

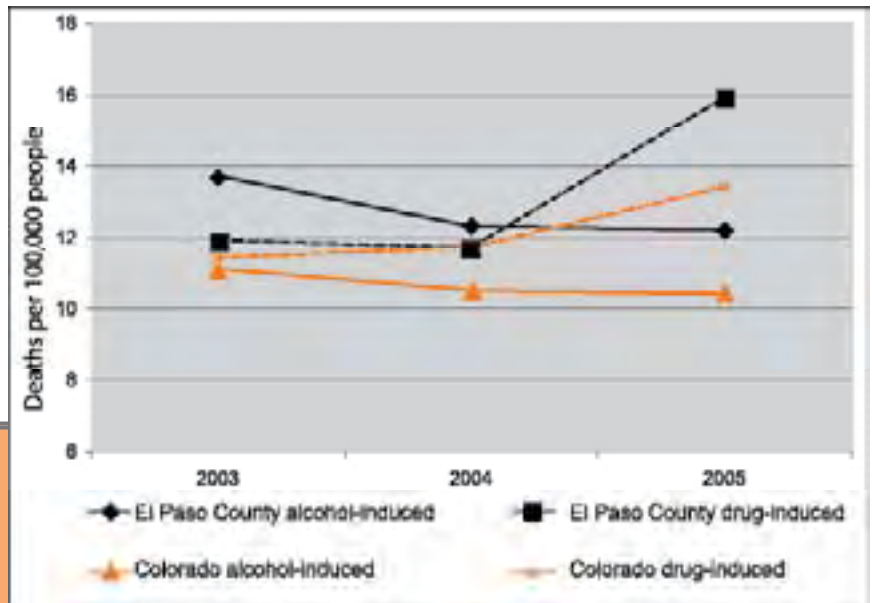
Substance abuse is the overindulgence in and dependence on an addictive substance, especially alcohol or a narcotic drug. Abuse can present significant obstacles in dealing with everyday life from maintaining financial stability and relationships to succeeding at school or work. Sometimes it can result in *death*. Colorado has higher rates of *drug and alcohol use* than U.S. averages and exhibits different patterns of use. For every \$100 spent on problems caused by substance abuse in Colorado, \$0.06 is spent on treatment or prevention compared to an average of \$3.70 in other states.<sup>7</sup>

In many instances, this is not just an individual problem. Substance abuse affects our community in a variety of ways. For individuals it often occurs in conjunction with mental health disorders requiring treatment (see *Maintaining a Healthy Community*). It affects nearly one in four homeless people (see *Promoting Social Wellbeing*). It is also linked to violence in the home against children and other family members and impacts the criminal justice system in a variety of ways (see *Keeping the Community Safe*).

## ► Deaths Due to Alcohol and Drugs

**This chart shows** the rate of alcohol- and drug-induced deaths per 100,000 people in El Paso County compared to Colorado averages.

Drug and alcohol induced death rates



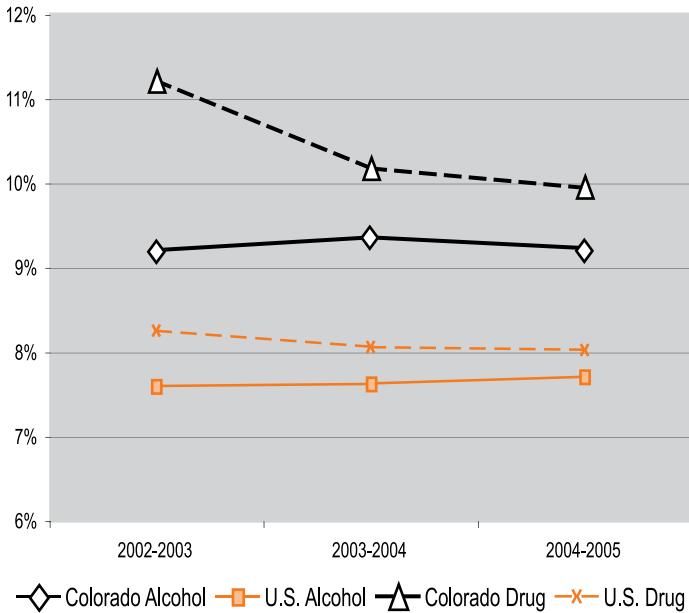
Source: Colorado Department of Public Health and Environment Vital Statistics

### *How are we doing?*

El Paso County has a higher rate of alcohol- and drug- induced deaths than Colorado averages. In both geographic areas, the rate of alcohol-induced deaths is decreasing while the rate of drug-induced deaths increased from 2004 to 2005.

## ► Drug and Alcohol Use

### Drug and alcohol use by people 12 and older



Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, and 2004.

### Average annual percentage of people ages 12 and older who have used drugs in the past year by type of drug

	Colorado	U.S.
Illicit drugs	19.1	14.5
Marijuana	14.5	10.6
Cocaine	4.2	.5
Heroin	.1	.2
Hallucinogens	3.2	1.6
Inhalants	1.0	.9
Non-medical use of psychotherapeutics	7.8	6.1
Illicit drugs other than marijuana	11.7	8.2

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, and 2004

**This chart shows** the percentage of people 12 and older who, when questioned, reported using illicit drugs in the past month. It also tracks the percentage of people 12 and older who reported experiencing alcohol dependence or abuse over the past year. Both indicators compare Colorado averages to U.S. averages.

### *How are we doing?*

Coloradans have higher rates of drug use and alcohol dependence and abuse than U.S. averages. Approximately one in 10 Coloradans over age 12 reports illicit drug use and nearly one in 10 reports an alcohol dependence or abuse problem. While there are slight trends upward and downward in the graph, the study reports that there have been no statistically significant changes from year to year. Many times people begin using drugs and alcohol in their teen years. In 2003, teens between 12 and 17 in El Paso County and five surrounding rural counties reported more frequent use of marijuana, other illicit drugs and binge drinking than U.S. averages.<sup>8</sup>

# Preserving the natural environment



*This community is uniquely gifted with a majestic, but fragile, landscape, great climate, and access to clean, but limited water. Pollutants are a threat to human health and environmental sustainability. Protecting the natural environment and consuming resources responsibly benefits the present and future wellbeing of our citizens and enhances our economy.*



## ***WATER***

- ▶ *Water Consumption*
- ▶ *Impervious Surfaces*
- ▶ *Pollution in Fountain Creek*

## ***AIR***

- ▶ *Ozone Levels*
- ▶ *Asthma Rates*
- ▶ *Trees*

## ***ENERGY***

- ▶ *Renewable Energy*
- ▶ *Energy Consumption: Electricity & Natural Gas*
- ▶ *Energy Efficient Homes*

## ***WASTE***

- ▶ *Pounds of Waste*

### **Preserving the Natural Environment Council Chairs**

**Michael Hannigan**

Pikes Peak Community Foundation, Director

**Eric Cefus**

Catamount Institute, Director

### **Preserving the Natural Environment Council Members**

**Jane Ard-Smith**

Pikes Peak Group of the Sierra Club, Chair

**Simon Baker**

Colorado Springs Utilities, Senior Conservation Specialist

**Mary Barber**

Directorate of Environmental Compliance  
and Management, Fort Carson

**Chris Juniper**

Fort Carson, Sustainability Planner

**Linda Kogan**

University of Colorado- Colorado Springs, Sustainability Officer

**Rich Muzzy**

Pikes Peak Area Council of Governments,  
Environmental Program Manager

**Gary Rapp**

Recycling Coalition of Colorado Springs

**Daphne Greenwood**

Center for Colorado Policy Studies, Director  
& Dept of Economics, Professor

**Mark Robinson**

Southeastern Chapter of the Colorado Renewable Energy Society

# WATER

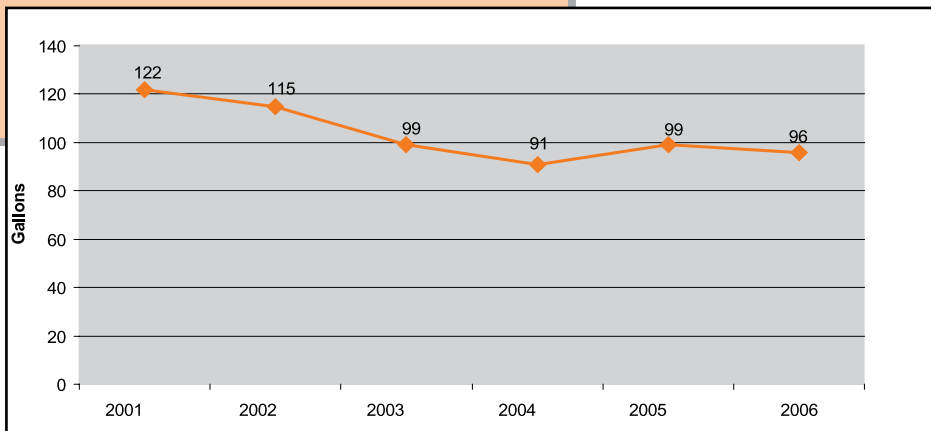
El Paso County is located in a semi-arid region of the country and averages less than 15 inches of rain and snow each year. During the 1930s, approximately 60 percent of Colorado Springs' water supply came from local streams and reservoir storage. Today, nearly 75 percent of the water used for homes and businesses comes directly from snowmelt near the Continental Divide. The infrastructure needed to bring water from afar to Colorado Springs for daily *water consumption* drives both the cost and quantity available.

After water is used, it is treated and released into Fountain Creek, increasing stream flows. Also contributing to stream flows are the increasing areas of *impervious surface* from development within the watershed. During storms, water washes chemicals and waste such as soaps, oils, fertilizers and pet waste from our streets and yards into the streams at rapid rates causing physical damage to the stream, washing *pollutants* into the streams, causing broad ecosystem damage, and creating conflicts with downstream neighbors.

## ► *Water Consumption*

**This chart shows** the average daily water consumption per capita of residential water supplied by Colorado Springs Utilities.

Gallons of water consumed daily per capita



Source: Colorado Springs Utilities

### *How are we doing?*

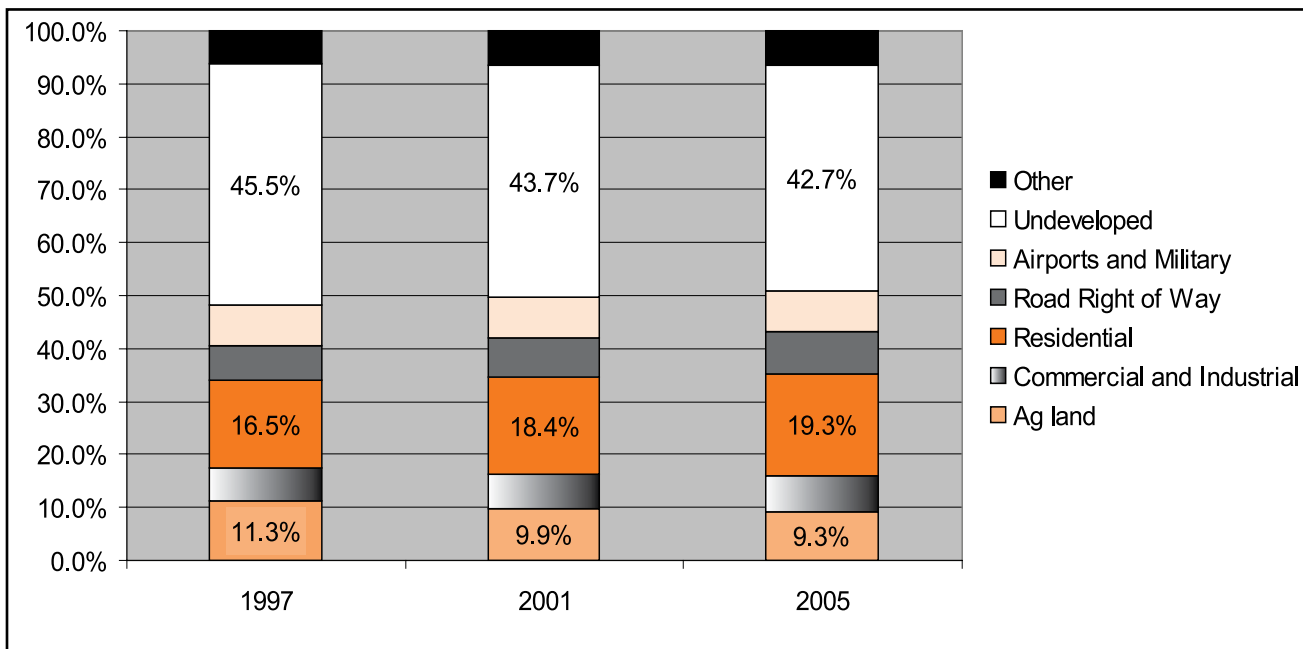
From 2001 to 2004 water consumption dropped nearly 30 gallons per person and is currently hovering between 90 and

100 gallons. An estimated 50 percent of household water is used for landscape irrigation. During the extreme drought that began in 2002, watering restrictions and aggressive water conservation education programs helped the community learn how to conserve. Restrictions were lifted in 2006. Water conservation can help delay the need for costly improvements to the infrastructure, as well as ensure residents continue to enjoy first use water or snowmelt rather than recycled water.

## ► *Impervious Surfaces* (roads, parking lots, buildings, etc)

**This chart shows** impervious surface, as a percentage of total square miles inside a 500 square-mile analysis area covering 54 percent of the total area of the Fountain Creek watershed. Impervious surfaces are those areas covered by material that water can not penetrate, such as roadways, parking lots, rooftops and cement-lined drainage channels. The chart also indicates the percentages of different land uses.

Land uses by type & total impervious surface



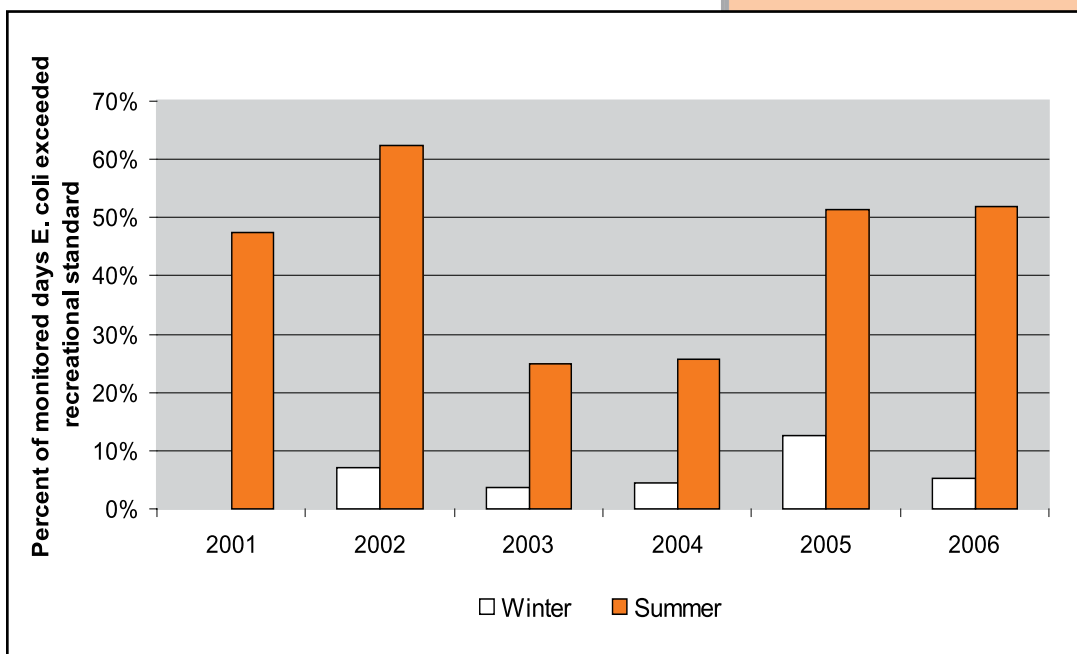
Source: Colorado Springs Utilities

### *How are we doing?*

The Analysis Area averages 16 percent impervious surface, a small but steady increase from 1997. That percent falls within a range of 11 percent to 25 percent, that means the streams show clear signs of declining health.<sup>1</sup> In 2005, a Pikes Peak Area Council of Governments study showed that sub-areas within the city of Colorado Springs reached 45 percent impervious surface. This falls with a range that indicates streams can no longer support their designated uses. Impervious surface blocks the absorption of water into the ground, impacting supply to aquifers county residents rely on for drinking water.

## ► *Pollution in Fountain Creek*

### Bacteria levels exceeding EPA standards



Source: U.S. Geological Survey

**This chart shows** the percentage of times E. coli (Escherichia coli) bacteria levels exceeded Environmental Protection Agency (EPA) standards at monitoring stations located along Fountain Creek during winter (November through April) and summer (May through October) months. The presence of bacteria can lead to human illnesses and harm the natural environment. EPA standards have

multiple levels. The standard shown in this graph is the recreational standard for one-time contact where levels should not exceed 235 col/100ml. The standard for swimming is 100 col/100ml.

### *How are we doing?*

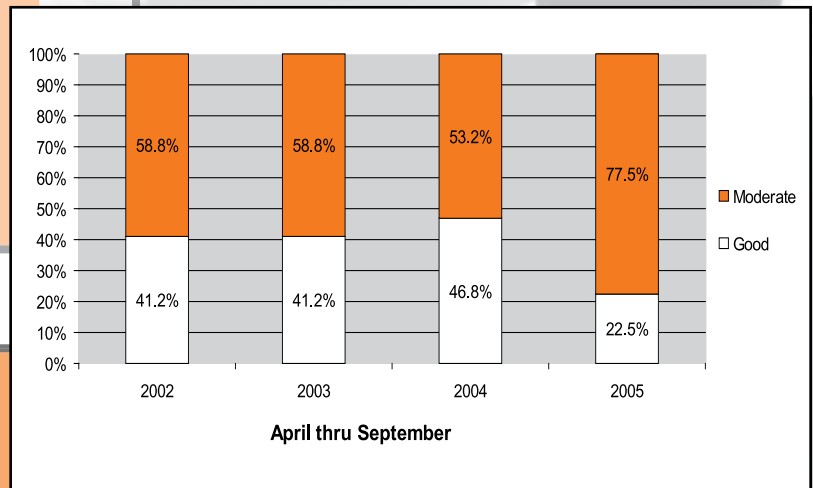
During low flow winter months, E. coli levels rarely exceeded the EPA standard. In the summer months, when flows are considered normal and are highly impacted by storms, the standard was exceeded more often. More than 50 percent of readings in 2006 exceeded the standard. E. coli is measured through a complex series of biological tests making it difficult to get readings on a daily basis. However, readings were as high as 41,000 col/100ml during and after storms in 2005.

One measure of air quality is the presence of ground-level ozone. High *ozone levels* present health concerns for all residents but are especially dangerous for sensitive people, particularly the elderly, young children and those with *asthma* or other respiratory ailments. Ground-level ozone also interferes with the ability of plants to produce and store food, compromising the health of our broader ecosystem. Automobiles contribute an estimated 56 percent of the pollutants that create ozone while the other 44 percent come from other sources, such as power plants, industrial boilers, gasoline vapors, dry cleaners, factories, and commercial products. Measuring vehicle miles traveled (found in the *Getting Around Efficiently* section) gives the community a sense of the impact of daily driving habits on air quality. Car emissions regulations and increased gas efficiency help reduce pollutants. The number of *trees* planted is one positive measure for helping air quality. *Trees* help reduce energy consumption by cooling the air.

## ► *Ozone Levels*

**This chart shows** the level of air quality as a percentage of monitored days each summer (April through September) of ground-level ozone at the Air Force Academy monitoring station. Only summer months are presented, because strong sunlight and hot weather conditions are a catalyst for ozone creation. During winter months, El Paso County has not recorded an ozone problem.

Ozone levels



### *How are we doing?*

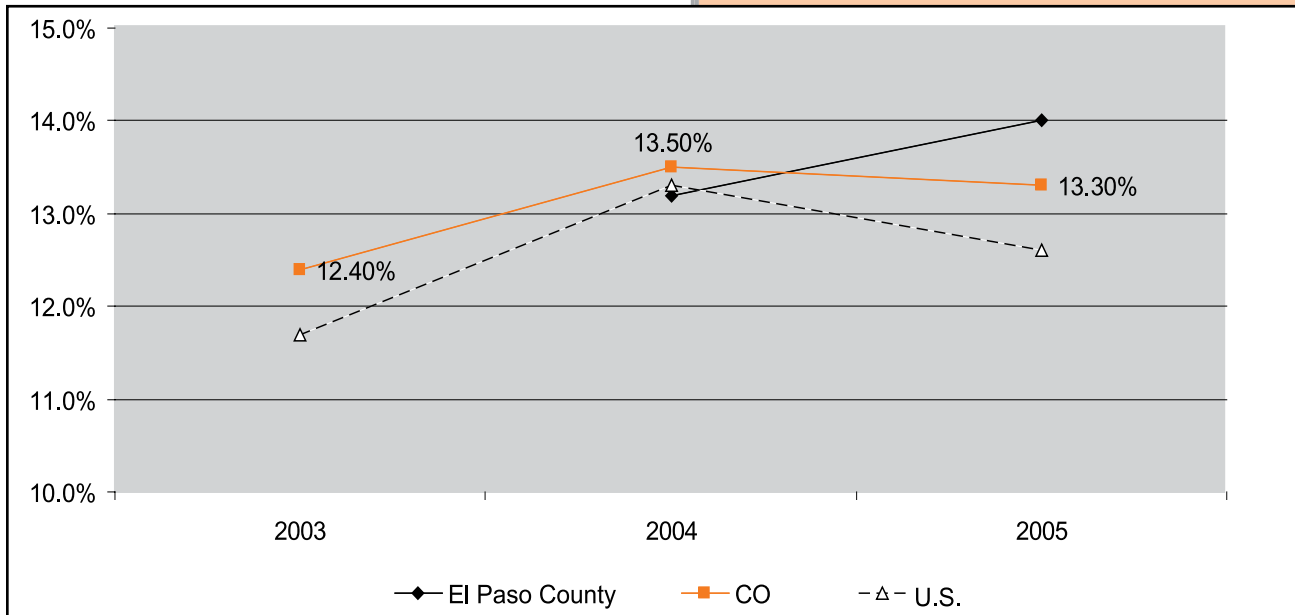
There are six levels for reporting air quality: Good, Moderate, Unhealthy for Sensitive Groups, Unhealthy, Very Unhealthy and Hazardous. Monitors indicate the majority of days have been in the “moderate” range. The remaining days were rated “good,” meaning air quality is satisfactory and air pollution poses little or no risk. Overall El Paso County has clean air with regard to ozone.

Source: Colorado Department of Health and Environment, Air Quality Reporting System

# ▶ Asthma

**This chart shows** the percentage of adults residing in El Paso County who reported having been told they have asthma as compared to the Colorado and U.S. averages. Asthma is a chronic lung condition. People with asthma have difficulty breathing when irritants or “triggers” cause their airways to narrow or obstruct. Triggers of asthma include smoke, pet fur and dander, allergens, pollution, mold, dust and cockroaches.<sup>2</sup>

## Adults with asthma



Source: El Paso County, Colorado-Year 2010 Health Objectives for the Nation BRFSS Data and U.S. Center for Disease Control, Behavior Risk Factors Surveillance System, Prevalence Data

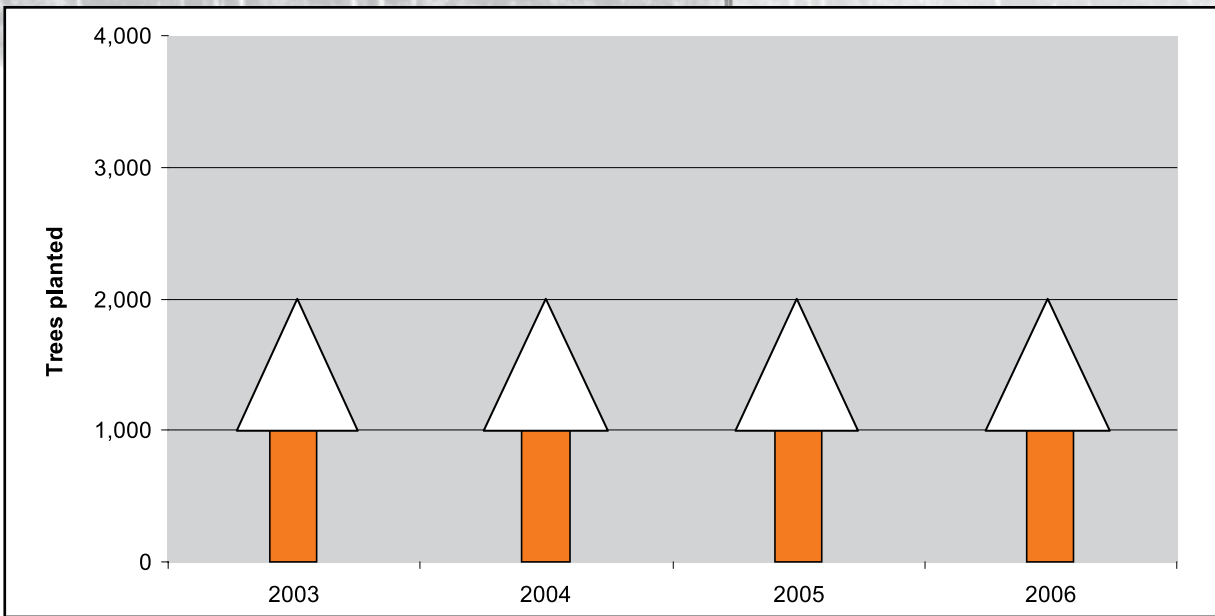
### *How are we doing?*

El Paso County had a slightly higher rate of asthma in 2005 than rates in Colorado or the U.S. Asthma is more common in children than adults and is the cause of approximately one quarter of all emergency room visits in the United States. African Americans are three times more likely than whites to be hospitalized for asthma. Additionally, asthma kills 5,000 people each year in the U.S.<sup>3</sup>

# ► Trees

**This chart shows** the estimated number of trees installed each year by the Colorado Springs Park and Recreation and Forestry Department, including street trees, new parks, park replacement trees, and the new homes program.

## Number of trees planted each year



Source: Colorado Springs Forestry Division

### *How are we doing?*

The Department estimates that it installs between 1,800 and 2,000 trees each year. The Colorado Springs urban forest has grown to more than 99,000 street trees and 18,500 park trees with 6,300 acres of open space and regional park forest areas. Trees supply oxygen, keep our air supply fresh, cut down noise pollution, trap and filter out dust and pollen, slow down strong winds, camouflage unsightly scenes and provide privacy, food and shelter, reduce home heating and cooling costs and roots stabilize the soil and prevent erosion.

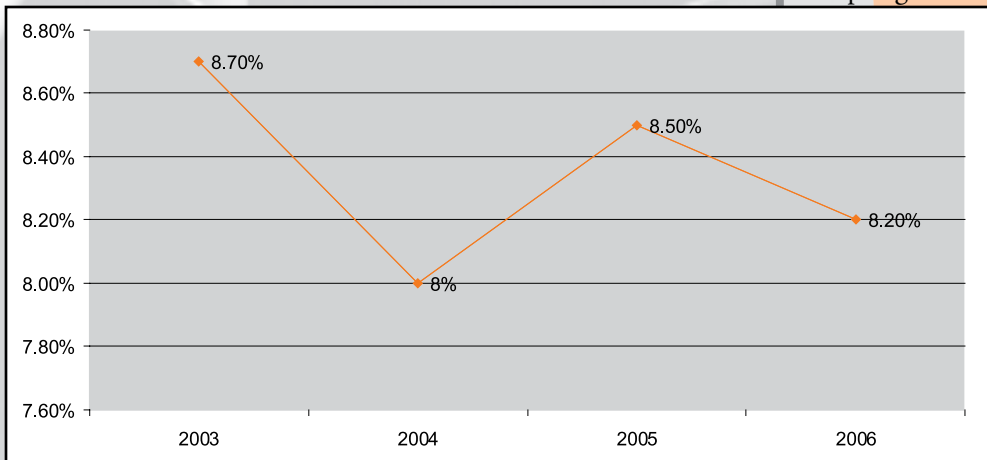
# ENERGY

In recent years citizens have grown concerned about climate change. Science indicates a primary cause of global warming is burning fossil fuels such as natural gas, gasoline and coal to produce electricity. Energy consumption is often linked to air pollution and future supply problems, but is now recognized as contributing to our “carbon footprint.” Vehicle miles traveled (found in the *Moving Around Efficiently* section), is an indirect indicator of energy consumed. The greatest source of emissions of carbon or CO<sub>2</sub> is the energy used to heat and cool our buildings. Tracking household *electricity and natural gas consumption* can help each person better understand his or her impacts on energy consumption, helping protect the environment and save money. *ENERGY STAR* rated homes are one example of buildings constructed to meet efficiency standards. *Renewable energy* sources like wind, water and solar rays present an alternative to fossil fuels.

## ▶ Renewable Energy

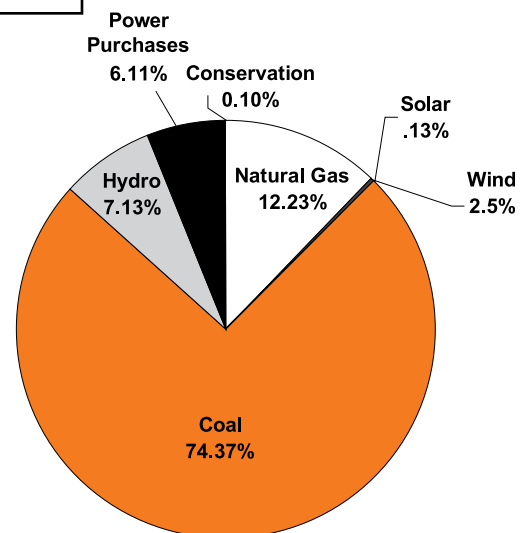
This chart shows the percent of energy coming from renewable energy sources and the sources of energy used to produce electricity for Colorado Springs Utilities customers in 2006. Renewable

Energy is hydropower, solar and wind.



Source: Colorado Springs Utilities

### 2006 sources of energy for Colorado Springs Utilities customers



Source: Colorado Springs Utilities - 2006 Electric Integrated Resource Plan

### How are we doing?

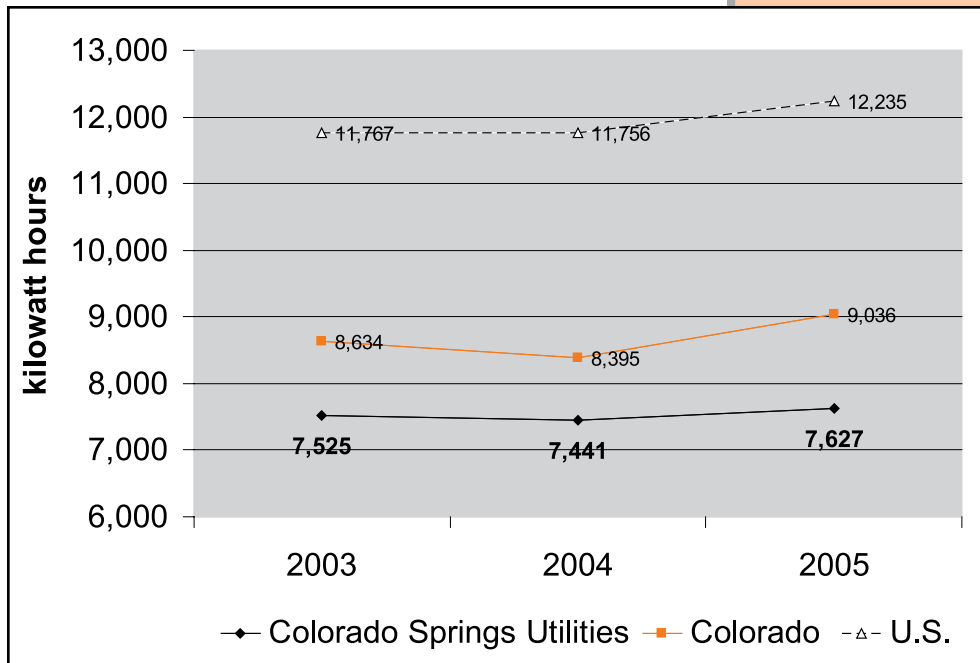
How are we doing? Two fossil fuels – coal and natural gas – generate 91 percent of Colorado Springs Utilities provided electricity. In 2004, Colorado voters approved Amendment 37 which requires that 3 percent of electricity come from renewable energy sources by 2010 increasing to 10 percent by 2015. Colorado Springs Utilities is currently meeting the standard.



# ► Energy Consumption: Electricity & Natural Gas

## Electricity used per household

This chart shows annual household consumption in kilowatt hours for Colorado Springs Utilities customers, Colorado and the U.S.

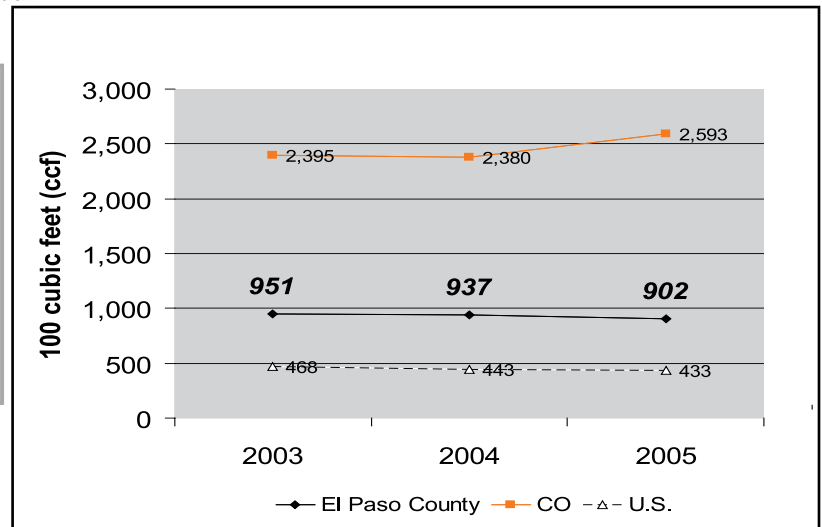


Colorado Springs Utilities customers, Colorado and the U.S.

Source: Colorado Springs Utilities and U.S. Energy Information Administration

## Natural gas used per household

This chart shows the annual cubic feet of natural gas burned per household by Colorado Springs Utilities customers and the Colorado and U.S. averages.



Source El Paso County: Colorado Springs Utilities  
 Source U.S.: Energy Information Administration <http://tonto.eia.doe.gov/dnav/ng/hist/n3010us2A.htm>  
 Source CO: Energy Information Administration [http://tonto.eia.doe.gov/dnav/ng/hist/na1490\\_sco\\_2a.htm](http://tonto.eia.doe.gov/dnav/ng/hist/na1490_sco_2a.htm)

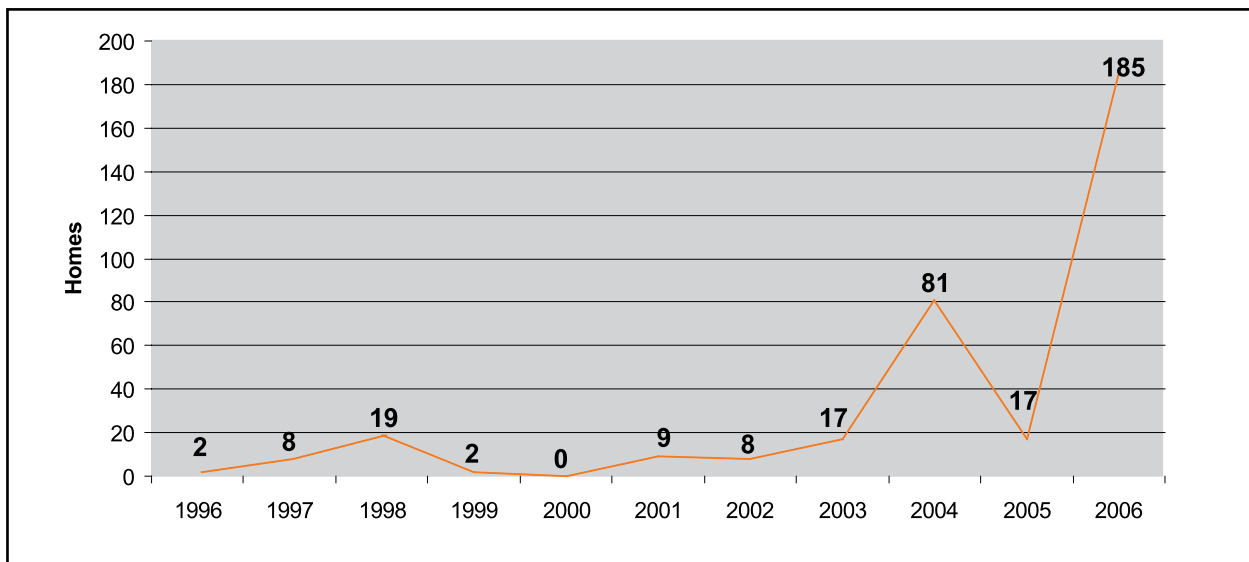
### How are we doing?

Colorado Springs Utilities customers are consuming more natural gas than U.S. averages but less than the average Colorado household. Electricity consumption is less than both U.S. and Colorado averages. It is difficult to make comparisons between geographic regions because of climate differences and access to resources.

## ► *Energy Efficient Homes*

**This charts shows** the number of new homes built in the Pikes Peak Region that received an ENERGY STAR certification. To be ENERGY STAR certified, homes must meet guidelines for energy efficiency set by the U.S. Environmental Protection Agency. The certified homes must be at least 15 percent more energy efficient than homes built to the 2004 International Residential Code.

ENERGY STAR rated homes



Source: Patty Crow, U.S. EPA Region VIII

### *How are we doing?*

The Environmental Protection Agency has begun a program to help homeowners and developers convert to more energy-efficient ENERGY STAR certifications. Since 1996 a total of 348 new homes have been certified with an ENERGY STAR rating in El Paso County. This is a tiny percentage of total homes built. In 2005, more than 6,000 new homes were constructed in El Paso County. In 2006, Americans, with the help of ENERGY STAR, saved enough energy to avoid greenhouse gas emissions equivalent to those from 25 million cars — all while saving \$14 billion on their utility bills.

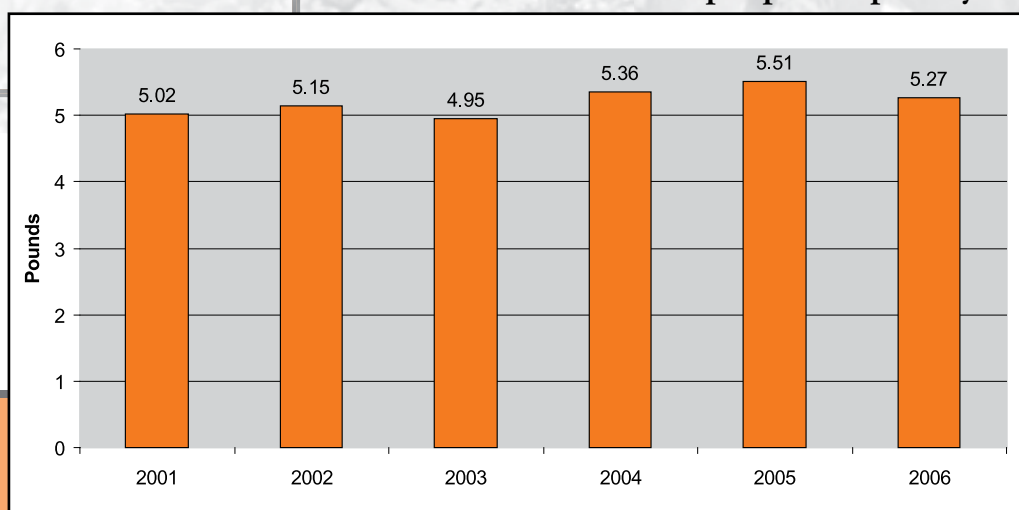
# WASTE

The household goods we throw away were made by extracting resources from the environment. Packaging materials are made from metals mined from the ground, plastics are manufactured from petroleum, and paper and cardboard are derived from trees. When these materials enter a landfill, many of them never decompose and those that do, decompose without the benefit of returning any of these resources for future use. However, many of these items can be recycled and composted. Reducing, reusing and recycling waste supports our environment by limiting the damage done and energy consumed to extract, produce and throw away materials.<sup>4</sup>

## ► *Pounds of Waste*

**This chart shows** the pounds of waste deposited per person per day into El Paso County's three local landfills. In El Paso County there is currently no reliable tracking of the amount of recycled material.

Waste per person per day



Source: El Paso County Solid Waste Management Division

### *How are we doing?*

In the U.S., approximately 230 million tons of municipal solid waste or garbage is generated each year. This means that each person in the U.S. generates an average of 4.6 pounds of solid waste per day. Compared to this estimate, El Paso County citizens generate more waste than the U.S. average.



# Sustaining a healthy community

*As a community we understand the importance of good physical and mental health and access to quality care. Health difficulties can impact family budgets and the local economy, and make it more difficult for individuals to participate as full members of society.*

## ***ACCESS TO CARE***

- ▶ *Uninsured People*
- ▶ *Student Health*

## ***CHRONIC DISEASE***

- ▶ *Cardiovascular Disease*
- ▶ *Diabetes*
- ▶ *Arthritis*

## ***MATERNAL AND INFANT HEALTH***

- ▶ *Low Birth Weight*

## ***IMMUNIZATIONS***

- ▶ *Childhood Immunizations*
- ▶ *Flu and Pneumonia*

## ***MENTAL HEALTH***

- ▶ *Suicide Rates*

## ***ORAL HEALTH***

- ▶ *Access to Oral Health Care*

## ***PUBLIC HEALTH***

- ▶ *Local Funding*

### **Sustaining a Healthy Community Council Chair**

**Rick O'Connell**

Penrose-St. Francis Health System, Hospital Chief Executive

### **Sustaining a Healthy Community Council Members**

**Rosemary Bakes-Martin**

El Paso County Department of Health and Environment,  
Public Health Administrator

**Rita Burns**

Memorial Health System, Vice President of Communications

**Ellen DeAustin**

HealthSouth Rehabilitation Hospital, Hospital Chief Executive

**Dirk Hobbs**

Medical Voyce, Owner

**Zelna Joseph**

S.E.T. of Colorado Springs, President and CEO

**William Mandell, D.O.**

El Paso County Medical Society, Past President

**Laurie Picus, MSW, LCSW**

Colorado Consumer Health Initiative, Social Worker

**Sharon Raggio**

Pikes Peak Behavioral Health Group, COO

**Marcella Ruch**

Mission Medical Clinic, CEO

**BJ Scott**

Peak Vista Community Health Centers, CEO

**Dale Terry**

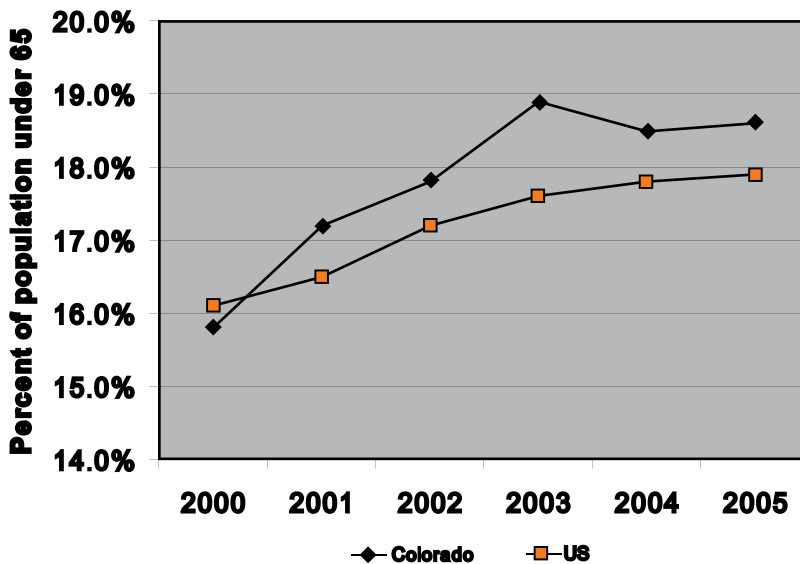
Pikes Peak Behavior Health Group, Research Director

# ACCESS TO CARE

*Uninsured people* are vulnerable to a dangerous combination of health and financial crises.<sup>1</sup> Even those with health insurance are not guaranteed that services will be accessible or affordable.<sup>2</sup> Uninsured people frequently visit the emergency room for routine problems, contributing to inefficiencies. If youth learn to prevent health problems through good diet, exercise, and disease prevention, it will have a positive impact on their future health and the costs to society. The presence of a school nurse increases the opportunity for better *student health*.

## ► *Uninsured People*

People under 65 without health insurance



**This chart shows** an estimate of the number of people under age 65 who do not have health insurance in Colorado and the U.S. Accurate, regularly collected, county-level data for this indicator is not available.

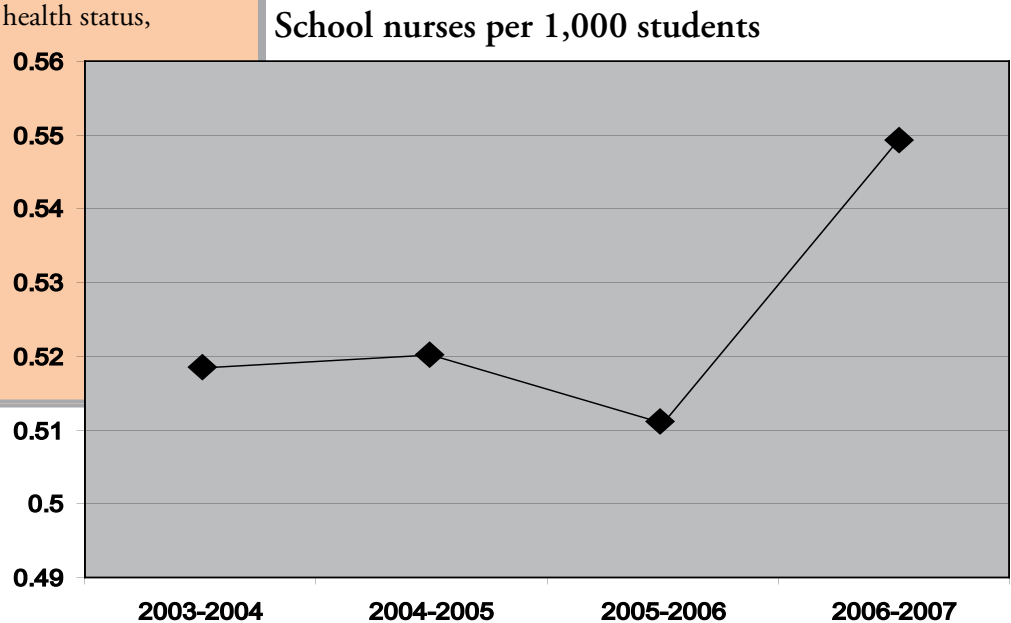
Source: Housing and Household Economic Statistics Division. U.S. Census Bureau.

### *How are we doing?*

Since 2000, an increasing percentage of the population in Colorado and the U.S. are without health insurance. Currently, Colorado is above the national average for uninsured. In 2005, approximately 832,000 Coloradans under 65 were uninsured. The El Paso County Community Health Assessment Survey conducted in 2004 showed that 20.6 percent of local residents were uninsured - higher than the Colorado average.

## ► *Student Health*

**This chart shows** the number of school nurses per 1,000 students in El Paso County's six largest school districts, which enroll approximately 80 percent of the county's public school students. According to the National Association of School Nurses (NASN), the nurse's role includes assessing health status, identifying health problems that have an impact on health and learning, delivering emergency care, administering medications, performing health care procedures, providing wellness programs, advocating for families, and providing health counseling and education.<sup>3</sup>



Source: Colorado Department of Education

### *How are we doing?*

Since the 2003-2004 school year, the rate of school nurses per 1,000 students has increased slightly. Over the 2006-2007 school year the figure ranged from a low of .42 to a high of .81 nurses per 1,000 students among the six school districts. Historically, the federal government and the NASN have recommended a school nurse-to-student ratio of 1:750 (1.33 per 1,000 students) or one full-time professionally prepared registered nurse all day, every day in each building.<sup>4</sup> Currently there is approximately one nurse for every 1,823 students – less than the recommended ratio.

# CHRONIC DISEASE

People with chronic diseases are especially impacted by health insurance and access to care. Many of these diseases, including *cardiovascular disease*, *diabetes* and *arthritis*, can be prevented, delayed and managed through the cooperation of patient and primary care physicians. Once diagnosed, ongoing care in the form of check-ups, medications and monitoring is necessary to effectively manage patient health.

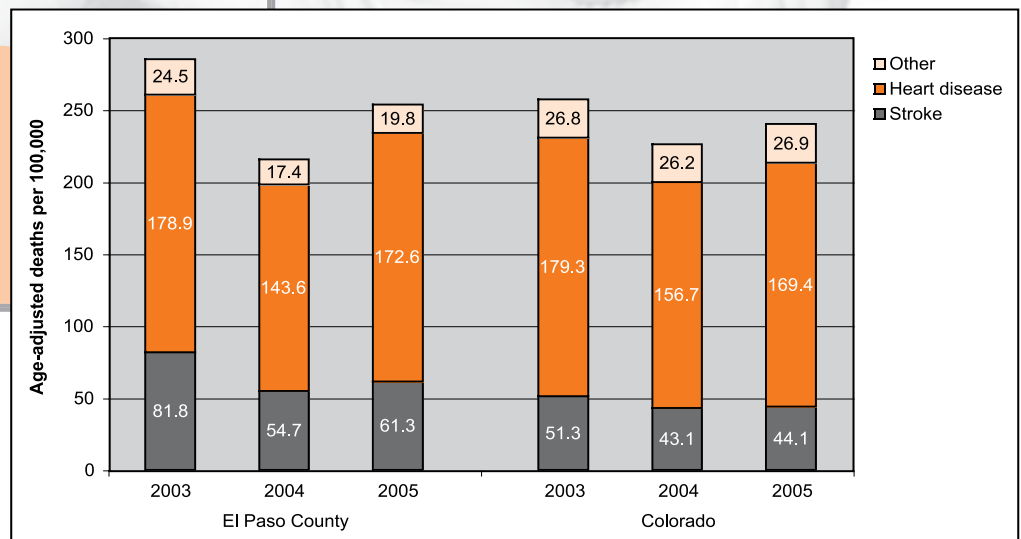
## ► Cardiovascular Disease

**This chart shows** age-adjusted\* deaths due to cardiovascular disease in El Paso County and Colorado. Cardiovascular disease is a classification of diseases that affect the heart and blood vessels. Nationwide, heart disease is the leading cause of death of both men and women and stroke is the third leading cause of death.<sup>5</sup>

In 2004 cardiovascular conditions caused 1,699 El Paso County hospital admissions resulting in, on average, 3.8 days in the hospital with charges totaling \$22,328.<sup>6</sup>

\*Age-adjusted rates are used when a disease disproportionately affects one age group. It allows for fair comparison across populations in different geographic areas.

Age-adjusted deaths due to cardiovascular disease



Source: Colorado Department of Public Health and the Environment

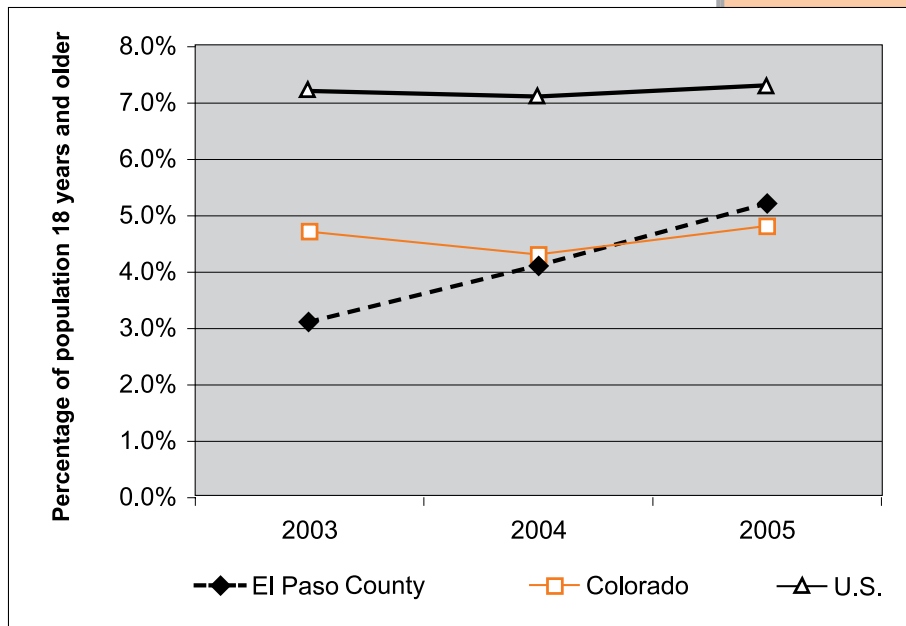
### How are we doing?

In 2003 and 2005, El Paso County had higher rates of death due to cardiovascular disease than Colorado. Death rates due to stroke were higher in El Paso County from 2003-2005 while deaths due to heart disease were similar in El Paso County and Colorado.



## ► *Diabetes*

### Adults diagnosed with diabetes



Source *El Paso County and Colorado*: Colorado Department of Public Health and Environment

Source *U.S.*: National Center for Chronic Disease Prevention and Health Promotion, United States Center for Disease Control

**This chart shows** the percentage of the population 18 years and over who reported that they had been diagnosed with diabetes. Diabetes is a potentially deadly disease in which the body does not properly regulate

blood sugar. Complications include blindness, kidney disease, nervous system disease, amputations, dental disease and complications of pregnancy.<sup>7</sup> The exact causes of diabetes are unclear, although both genetics and environmental factors such as obesity and lack of exercise appear to play roles.<sup>8</sup>

### *How are we doing?*

El Paso County and Colorado residents have a lower rate of diabetes than the national average. Over the past three years rates in El Paso County have increased from 3.1 percent to 5.2 percent.

## ► *Arthritis*

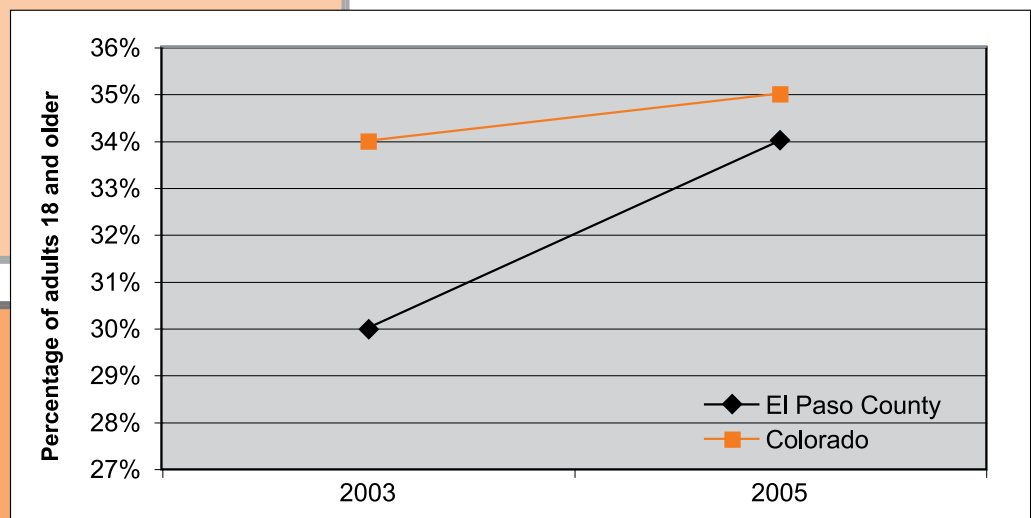
### Adults who have experienced a limitation due to arthritic symptoms

**This chart shows** the percentage of people ages 18 and older who have experienced a limitation due to arthritic symptoms. Arthritis is a term used to describe a class of conditions that affect the joints and other parts of the body. It is a leading cause of disability in the U.S., costing the national economy \$128 billion annually.<sup>9</sup>

### *How are we doing?*

El Paso County's rate of arthritis is slightly less than the Colorado

average. Self-reported rates of arthritic symptoms have increased in El Paso County from 2003 to 2005 to approximately 34 percent. The Center for Disease Control reports that approximately 26.9 percent of adults have been told they have arthritis. Some symptoms can be prevented or alleviated by losing excess weight and staying active.



Source: Colorado Department of Public Health and Environment

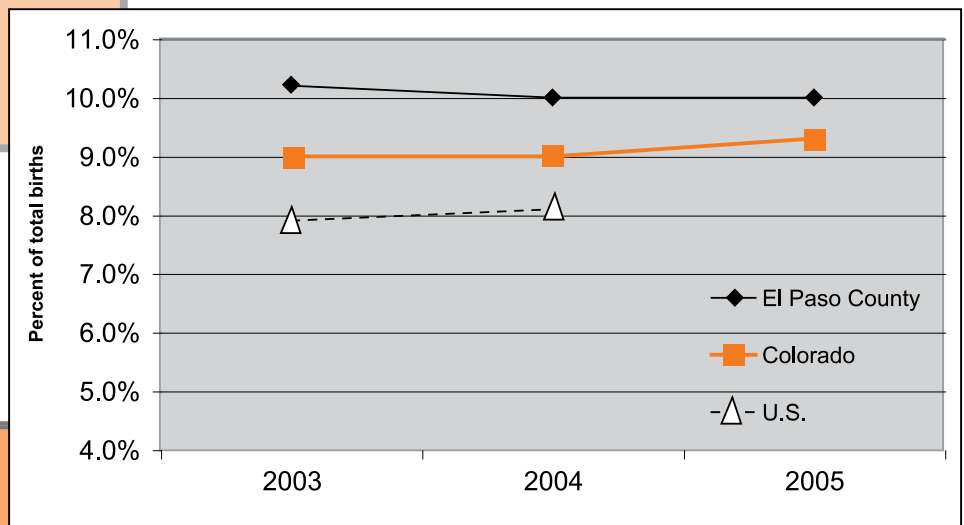
# MATERNAL AND INFANT HEALTH

*Low birth weight* can often be prevented by quality prenatal care and cooperation between mother and doctor. Common causes of low birth weight in Colorado are multiple births, inadequate maternal weight gain, and maternal smoking.<sup>10</sup> These babies have a greater risk of death and health complications. At birth, they are more likely to need intensive care, assisted ventilation, and multiple medical procedures and therapies. Later they may be affected by developmental delays, repeated hospitalizations, and increased susceptibility to illness.<sup>11</sup>

## ► *Low Birth Weight*

**This chart shows** the percentage of babies born who are of low birth weight. A baby is of low birth weight if it is born at less than 5 pounds 8 ounces.

Low birth weight births



### *How are we doing?*

El Paso County has a higher percentage of babies born at low birth weight than Colorado and U.S. averages.

Source *El Paso County and Colorado*: Colorado Department of Public Health and Environment. Vital Statistics.

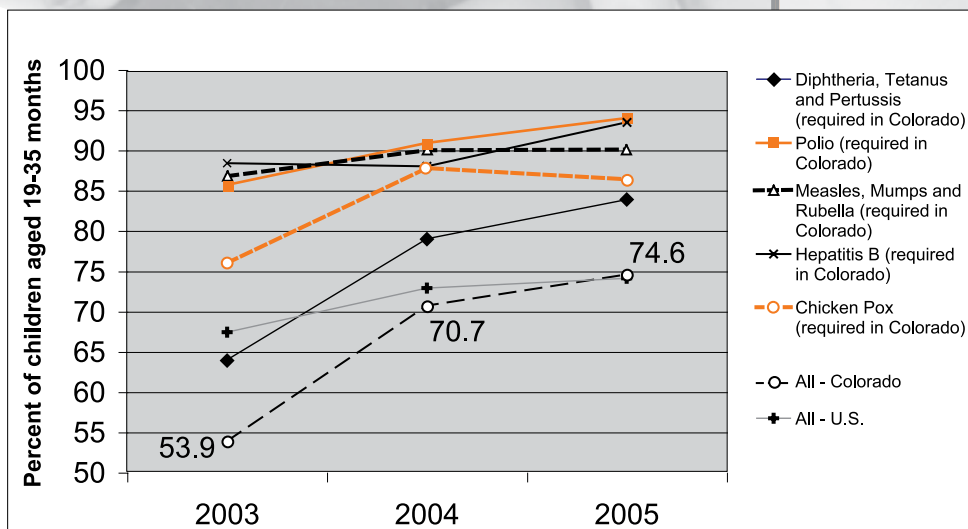
Source *U.S.*: National Center for Health Statistics. Center for Disease Control and Prevention.

# IMMUNIZATIONS

Vaccines and *childhood immunizations* save lives by preventing the spread of infectious diseases that were once common in the U.S.<sup>12</sup> While healthy children and adults can usually overcome common illnesses such as *flu and pneumonia*, these diseases are particularly dangerous for the elderly who can benefit from vaccinations. The Center for Disease Control considers people over 50 years of age, people suffering from chronic medical conditions and people living in long term care facilities particularly high-risk and recommends an annual flu vaccination.<sup>13</sup>

## ► Childhood Immunizations

Children that have received listed immunizations



Source: National Center for Immunization and Respiratory Diseases. United States Center for Disease Control and Prevention

**This chart shows** an estimate of the percentage of children statewide ages 19-35 months old that have completed the disease-specific immunizations required by the state for entry into kindergarten. According to the

American Academy of Pediatrics, a child should complete these immunizations by 24 months. *All* indicates children that have completed these vaccinations plus those for Haemophilus influenzae type b to prevent meningitis.

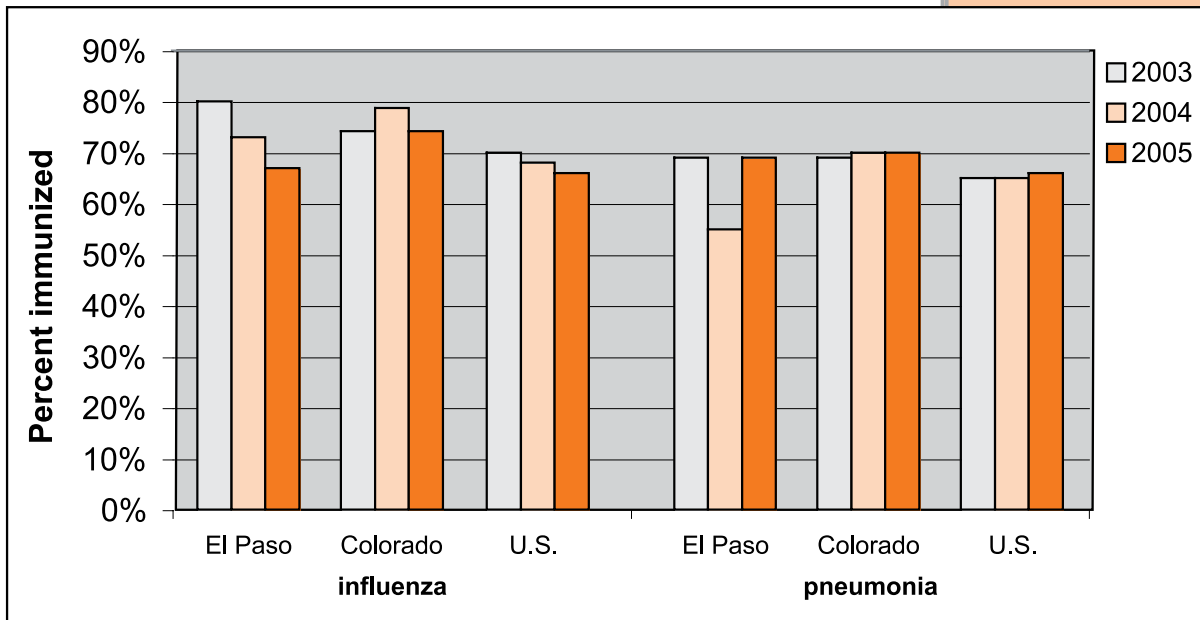
### *How are we doing?*

Colorado immunization rates are steadily increasing. In 2003, Colorado ranked 43<sup>rd</sup> among U.S. states for having completed *All* vaccinations. By 2005, Colorado surpassed the national average ranking at 22<sup>nd</sup>, with 74.6 percent of children having completed the schedule. For required immunizations, more than 80 percent had completed the schedule.

## ► *Flu and Pneumonia*

**This chart shows** the percentage of adults ages 65 and older who reported that they had received a flu shot in the past year and a pneumonia vaccination in their lifetime in El Paso County, Colorado and the U.S.

Flu and pneumonia vaccinations for adults 65 years and older



Source El Paso County & Colorado: Colorado Department of Public Health and Environment

Source U.S.: National Center for Chronic Disease Prevention and Health Promotion. United States Center for Disease Control and Prevention

### *How are we doing?*

Colorado flu and pneumonia vaccination rates appear to be better than national averages and are remaining stable. In El Paso County, fewer adults reported receiving flu shots in 2005 than in previous years. El Paso County pneumonia vaccinations rates do not exhibit a trend.

# MENTAL HEALTH

Mental health helps determine how we handle stress, relate to others and make choices. Everyone feels anxious, sad or stressed sometimes. But with a mental illness, these feelings do not go away and are severe enough to interfere with daily life. Mental health disorders – depression, phobias, bipolar disorder, schizophrenia and many others – are real diseases that one cannot will or wish away. Fortunately, they are often treatable through medication and therapy.<sup>14</sup>

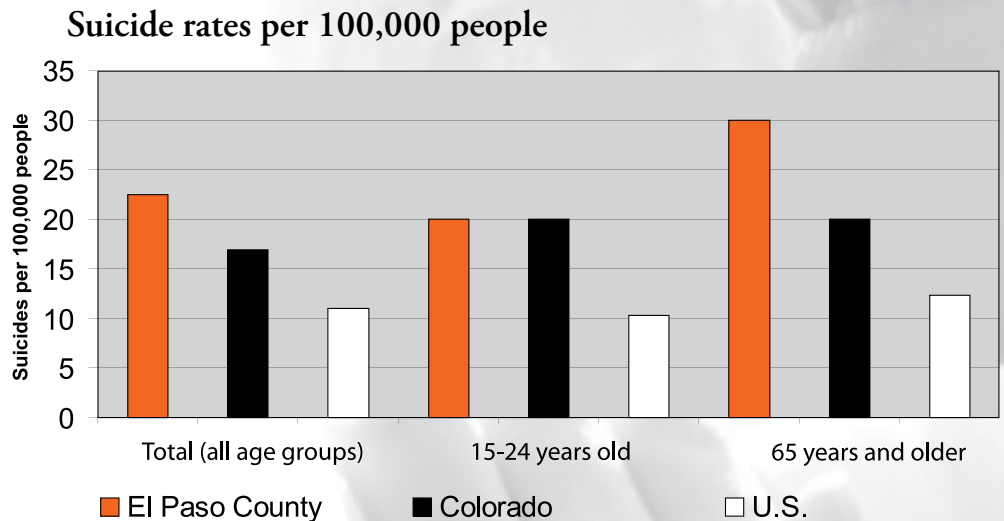
Mental illnesses affect about one in five families in the U.S. According to the National Institute of Mental Health, an estimated 26.2 percent of Americans ages 18 and older suffer annually from a diagnosable mental disorder. Using current population estimates this would indicate more than 112,000 people in El Paso County may need mental health services annually, including 11,000 children and teens.<sup>15</sup> In addition, mental disorders are the leading cause of disability in the U.S. for ages 15 to 44.<sup>16</sup> Mental illness, including suicide, accounts for more than 15 percent of the burden of disease in established market economies, such as the United States.<sup>17</sup>

Mental health disorders also directly impact the criminal justice system. The percentage of Colorado Department of Corrections inmates diagnosed with a serious mental illness has gradually increased from 1991 to 2004 from 3 percent to 18 percent.<sup>18</sup>

*Suicide rates* are one indicator of mental health in a community. More than 90 percent of people who kill themselves have a diagnosable mental disorder, most commonly a depressive or substance abuse disorder.<sup>19</sup> However, far more people live with mental health problems than commit suicide.

## ► *Suicide Rates*

**This chart shows** the number of people per 100,000 who committed suicide in 2004. We present the total (age-adjusted) rate, rates for young people ages 15 to 24, and older adults. Data for older adults represents adults 65 years and older in El Paso County and Colorado. The U.S. data is for adults ages 65 to 74 only.



### *How are we doing?*

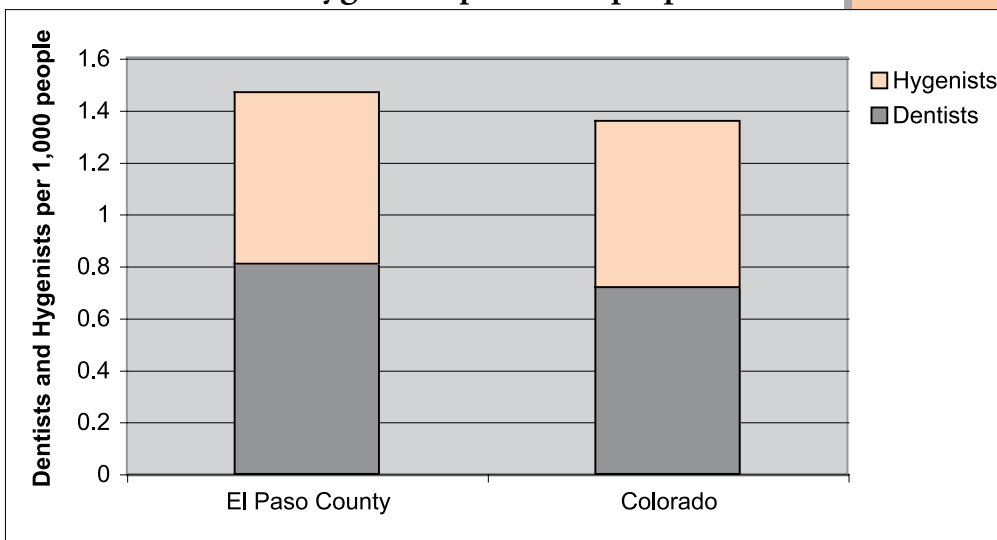
In 2004 the total suicide rate in El Paso County was double the national rate; suicides among young people were twice as frequent, and suicides among the elderly were nearly three times more frequent than national averages. Colorado suicide rates are also higher than national averages but are lower than or similar to El Paso County averages.

# ORAL HEALTH

*Access to oral health care* is important because there is a strong relationship between oral health and general health. At the most basic level, oral pain limits one's ability to eat properly and get the nutrition the body needs. Additionally, some researchers have found that advanced gum disease is associated with cardiovascular disease, stroke, bacterial pneumonia and an increased risk of pregnant women delivering babies pre-term and/or at low birth weight. Tobacco, alcohol and illicit drug use also affects oral health. While the causal connections between these problems are unclear, oral health is one indicator of overall health.<sup>20</sup>

## ► *Access to Oral Health Care*

Dentists and dental hygienists per 1,000 people



Source: Colorado Division of Registrations, May 2, 2007

**This chart shows** the number of dentists and dental hygienists per capita in El Paso County compared to Colorado averages. Per capita estimates are derived using population data from the 2005 American Communities Survey conducted by the U.S. Census Bureau.

### *How are we doing?*

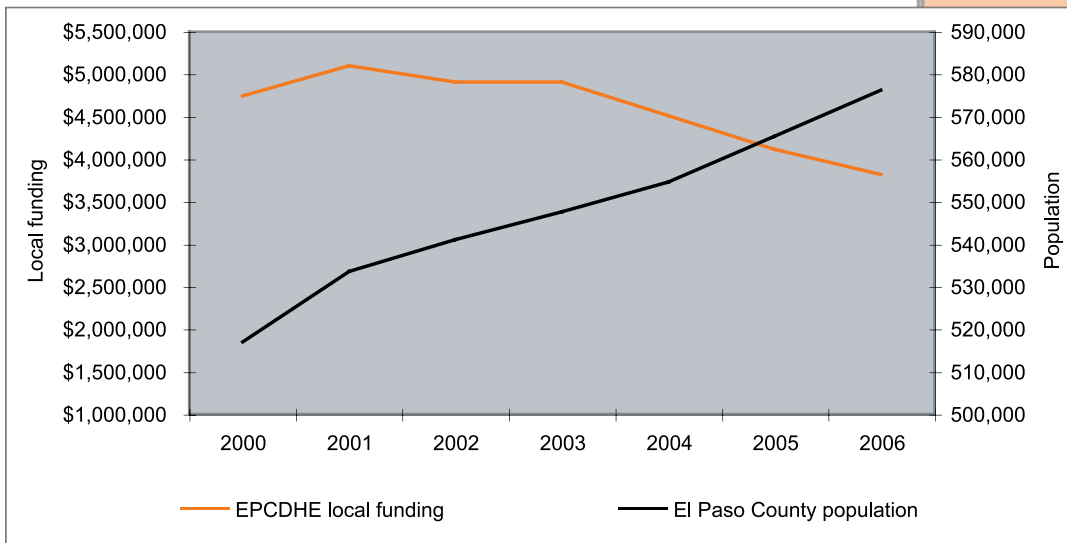
Currently El Paso County has more dentists and dental hygienists per capita than the Colorado average. Rural areas throughout Colorado typically have fewer health care providers which could account for the difference. According to the National Association of Dental Plans, 46 percent of Americans do not have dental insurance.<sup>21</sup> Therefore, while care may be available, it may not be affordable for many people.

# PUBLIC HEALTH

The El Paso County Department of Health and Environment (EPCDHE) provides a variety of services to the public. Among these, it provides immunizations, investigates disease outbreaks and inspects local eating establishments. Funding directly impacts the types and levels of service the EPCDHE can provide to protect public health. For example, the department is mandated to conduct two inspections per retail food establishment per year. The number of retail food establishments has increased steadily over the past five years, just as *local funding* has decreased for mandated services such as restaurant inspections. The number of complaints that required additional inspections in local retail food establishments has also increased, rising from 60 in 2005 to 178 in 2006.

## ► Local Funding

Local funding of EPCDHE and population growth since 2000



This chart shows the local funding of the El Paso County Department of Health and Environment as compared to population growth since 2000.

Source: El Paso County Department of Health and Environment

### *How are we doing?*

Local funding for EPCDHE has steadily decreased over the past four years, despite rapid growth in the population of El Paso County and an increase in need for public health services. Since 2001, local funding of the department decreased more than 20 percent from more than \$5,000,000 to less than \$4,000,000 in 2006. When compared to other similar health departments in Colorado, EPCDHE receives fewer local dollars to provide mandated health protection services. For example, EPCDHE receives \$6.40 per person compared to Pueblo County at \$11.61 per person and Boulder County at \$19.30 per person.

# Achieving educational excellence

*Achieving educational excellence is a process that occurs throughout life from the day a child is born, throughout primary school, to high school graduation and beyond. Having a good education is essential to the quality of life of individuals and to the community. Intelligent, educated people who know how to analyze and solve problems can contribute significantly to economic and civic innovation. Education cultivates an understanding of how our community works and the value of diverse entities.<sup>1</sup>*



## ***EARLY LEARNING***

- ▶ *Early Childhood Education*
- ▶ *Third Grade Reading Skills*

## ***STUDENT ACHIEVEMENT***

- ▶ *Tenth Grade Reading Skills*
- ▶ *Tenth Grade Math Skills*

## ***STUDENT GRADUATION***

- ▶ *High School Graduation Rate*
- ▶ *High School Dropout Rate*

## ***HIGHER EDUCATION***

- ▶ *Adult Educational Attainment*
- ▶ *Outcomes of Higher Education*

## ***TEACHER QUALITY***

- ▶ *Teachers with Advanced Degrees*
- ▶ *Teacher Compensation*

## ***EDUCATIONAL FUNDING***

- ▶ *School Funding*
- ▶ *Students in Need*

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Community Partnership for Child Development, President/CEO

**Pam Shockley-Zalabak**

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Colorado Springs School District 11, Superintendent

**John Box**

JA Worldwide Vice President – Product Development and Support

**Chris Chaparro**

LULAC National Education Service Center/STAR, STAR Coordinator

**Dalton Conner**

Peak Education, Founder

**Roy Crawford**

Manitou Springs School District 14, Superintendent

**Dr. Mike Edmonds**

The Colorado College, Vice President for Student Life/Dean of Students

**Gregory Garcia**

St. Mary's High School Board of Directors, Former Board Chair

**Dwight Jones**

State of Colorado, Commissioner of Education

**Nancy Martinez**

Pikes Peak Community College, Facilities Coordinator

**Mary Ellen McNally**

Community Leader

**Mike Miles**

Harrison School District 2, Superintendent

**Bob Selle**

Pikes Peak Board of Cooperative Education Services, Executive Director

**Donna Selle**

Retired Teacher

**Gina Solazzi**

Children's Literacy Center, Executive Director

**James Stewart**

Colorado Springs Black Chamber of Commerce, President

**Dr. Mary Jane Willshire**

Colorado Technical University, Dean of Computer Science

# EARLY LEARNING

Children have greater chances of success if they learn to read early. Access to affordable *early childhood education* is a strong indicator of social and academic preparedness for a successful elementary education experience. Well-designed and well-implemented early childhood education programs can improve outcomes for all children –particularly those in low-income families. Up until third grade, a child learns to read; after third grade, the child reads to learn. Accordingly, good *third grade reading skills* are critical to future success.

## ► *Early Childhood Education*

Enrollment of children below the poverty line in affordable early childhood education programs

	2004 - 2005	2005 - 2006	Change
El Paso County	54.4%	53.8%	-.6%

**This chart shows** the percentage of 3-4 year old children living below the federal poverty line in El Paso County who are enrolled in either a public preschool or Head Start Program.

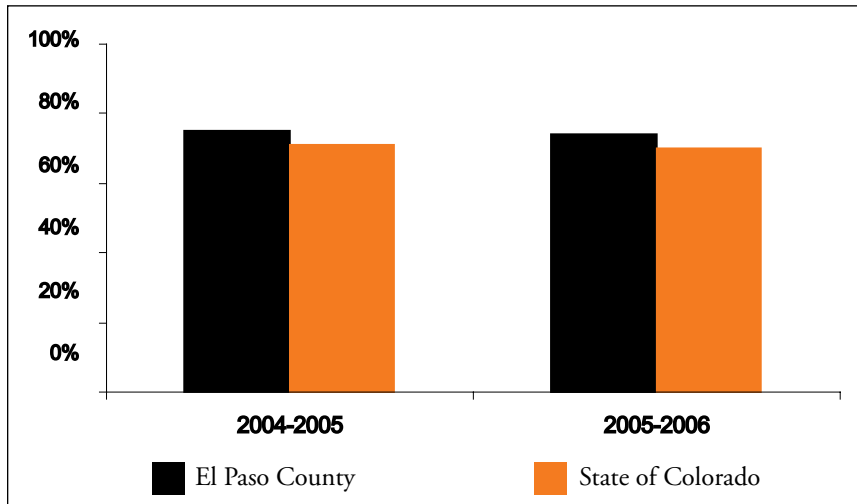
*Source:* U.S. Census Bureau; American Communities Survey; 2004 & 2005 data; Colorado Department of Education; Colorado State Demography Office; Community Partnership for Child Development/Head Start

### *How are we doing?*

In El Paso County, the rate declined from 54.4 percent in 2004-2005 to 53.8 percent in 2005-2006.

## ► *Third Grade Reading Skills*

### Third graders reading at grade level



Source: Colorado Department of Education

**This chart shows** the percentage of public school third graders in El Paso County's six largest school districts\* who achieve at the top two (out of four) levels on the Colorado Student Assessment Program (CSAP) in reading.

\*The six largest districts represent 80% of El Paso County's public school enrollment.

### *How are we doing?*

The average rate for El Paso County's largest school districts declined from 74.9 percent to 73.9 percent in 2005-2006. In Colorado, the rate also fell, from 71 percent to 70 percent.

### Third graders reading at grade level by district

	2004-2005	2005-2006	Change
Colorado Springs 11	70.0%	70.0%	0.0%
Academy 20	85.0%	87.0%	2.0%
Harrison 2	63.0%	61.0%	-2.0%
Falcon 49	80.0%	75.0%	-5.0%
Widefield 3	74.0%	68.0%	-6.0%
Fountain-Ft. Carson 8	78.0%	79.0%	1.0%
<b>Largest Six Districts</b>	<b>74.9%</b>	<b>73.9%</b>	<b>-1.0%</b>
<b>State of Colorado</b>	<b>71.0%</b>	<b>70.0%</b>	<b>-1.0%</b>

Source: Colorado Department of Education

# STUDENT ACHIEVEMENT

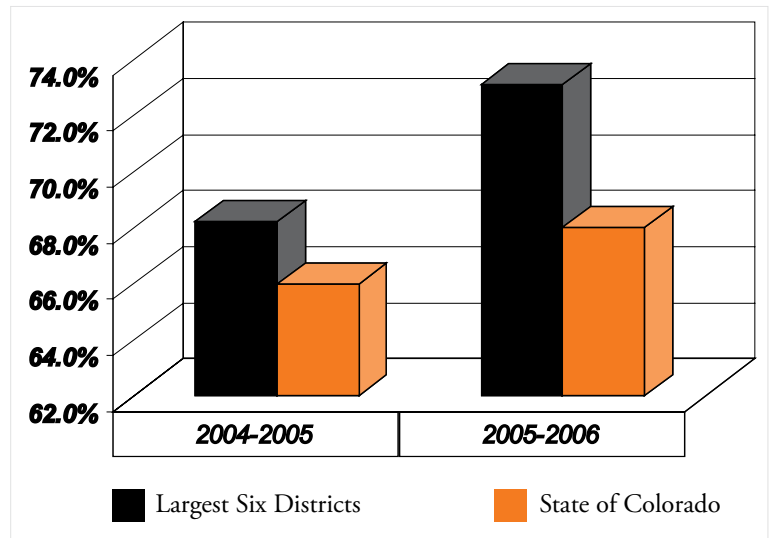
According to the Colorado Department of Education, assessment, challenging academic standards, and school and district accountability are the three pillars supporting Colorado's comprehensive school reform. Consequently, student achievement is often measured through scores on the Colorado Student Assessment Program, a standardized test commonly called the CSAP. The top two (out of four) levels indicate grade-level performance or above. Below are indicators of *tenth grade reading skills* and *tenth grade math skills*.

## ► Tenth Grade Reading Skills

**This chart shows** the percentage of public school tenth graders in El Paso County's six largest school districts who achieve at the top two (out of four) levels on the CSAP in reading.

\*The six largest districts represent 80% of El Paso County's public school enrollment.

Tenth graders reading at grade level



Source: Colorado Department of Education

### How are we doing?

In El Paso County, the rate increased from 68.2 percent to 73.1 percent in 2005-2006. In Colorado, the rate also increased from 66 percent to 68 percent over the same time period.

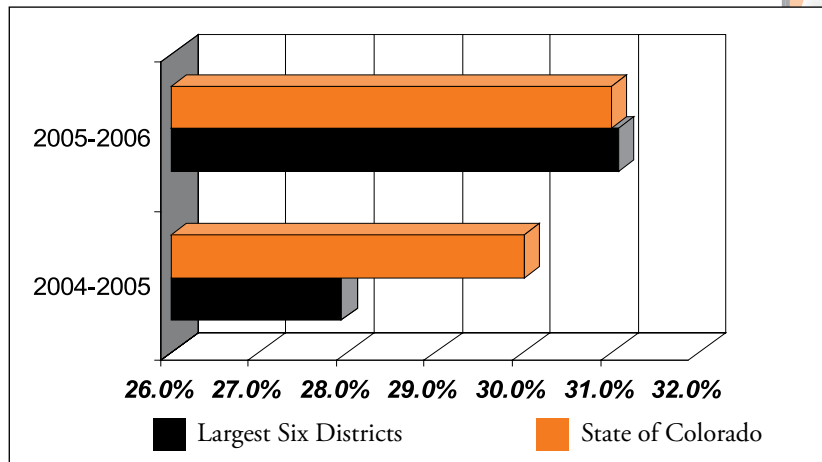
Tenth graders reading at grade level by district

	2004-2005	2005-2006	Change
Colorado Springs 11	64.0%	69.0%	5.0%
Academy 20	82.0%	84.0%	2.0%
Harrison 2	50.0%	57.0%	7.0%
Falcon 49	69.0%	74.0%	5.0%
Widefield 3	68.0%	75.0%	7.0%
Fountain-Ft. Carson 8	65.0%	74.0%	9.0%
<b>Largest Six Districts</b>	<b>68.2%</b>	<b>73.1%</b>	<b>4.8%</b>
State of Colorado	66.0%	68.0%	2.0%

Source: Colorado Department of Education

## ► Tenth Grade Math Skills

### Tenth graders doing math at grade level



Source: Colorado Department of Education

**This chart shows** the percentage of public school tenth graders in El Paso County's six largest school districts who achieve at the top two (out of four) levels on the CSAP in math.

\*The six largest districts represent 80% of El Paso County's public school enrollment.

### *How are we doing?*

In El Paso County, the rate increased from 27.9 percent to 31.1 percent in 2005-2006. In Colorado, the rate also increased from 30 percent to 31 percent over the same time period.

### Tenth graders doing math at grade level by district

	2004-2005	2005-2006	Change
Colorado Springs 11	24.0%	30.0%	6.0%
Academy 20	40.0%	41.0%	1.0%
Harrison 2	13.0%	17.0%	4.0%
Falcon 49	33.0%	31.0%	-2.0%
Widefield 3	22.0%	27.0%	5.0%
Fountain-Ft. Carson 8	27.0%	26.0%	-1.0%
<b>Largest Six Districts</b>	<b>27.9%</b>	<b>31.1%</b>	<b>3.1%</b>
<b>State of Colorado</b>	<b>30.0%</b>	<b>31.0%</b>	<b>1.0%</b>

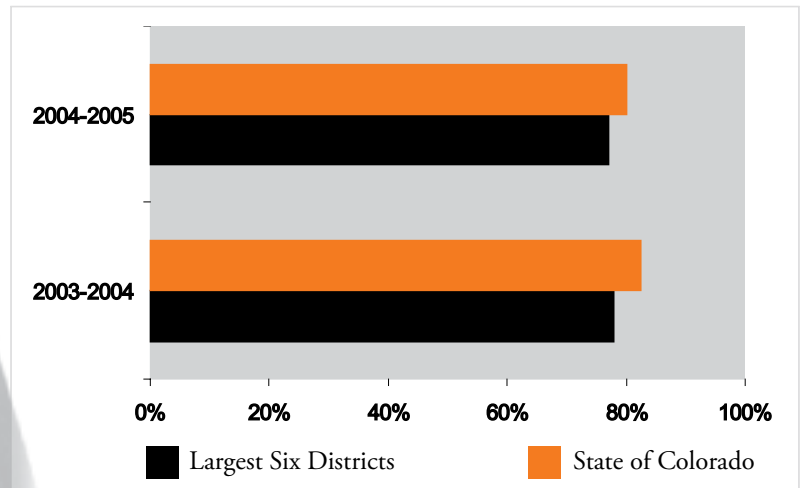
Source: Colorado Department of Education

# STUDENT GRADUATION

Perhaps the clearest indicators of education in the community are the *high school graduation rate* and *high school dropout rate*. A diploma is critical for furthering one's education and obtaining quality employment. Youth who do not complete high school, on the other hand, have a difficult time finding employment or advancing beyond low-paying jobs.

## ► High School Graduation Rate

Students graduating within four years



**This chart shows** the percentage of students who graduate from public high schools in El Paso County's six largest school districts within four years.

\*The six largest districts represent 80% of El Paso County's public school enrollment.

Source: Colorado Department of Education

Students graduating within four years by district

	2004-2005	2005-2006	Change
Colorado Springs 11	67.8%	69.0%	1.2%
Academy 20	91.6%	89.5%	-2.1%
Harrison 2	81.9%	65.0%	-16.9%
Falcon 49	81.5%	85.6%	4.1%
Widfield 3	83.8%	86.3%	2.5%
Fountain-Ft. Carson 8	87.7%	79.4%	-8.3%
<b>Largest Six Districts</b>	<b>77.9%</b>	<b>77.1%</b>	<b>-0.8%</b>
<b>State of Colorado</b>	<b>82.5%</b>	<b>80.1%</b>	<b>-2.4%</b>

Source: Colorado Department of Education

According to the Colorado Department of Education, many districts and schools will note a decrease in the graduation rate reported for the 2004-2005 collection period compared to previous years. In most cases this decrease is due to changes in the way data was tracked and collected.

### How are we doing?

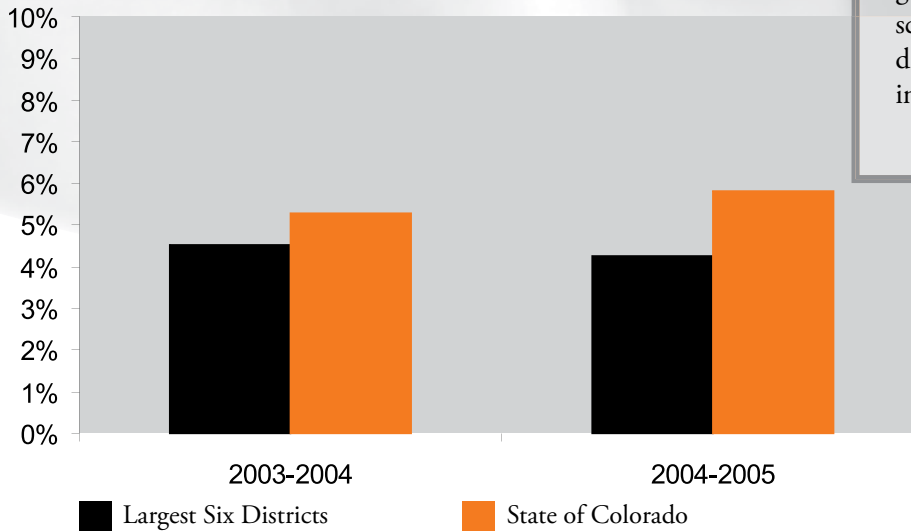
The graduation rate declined from 77.9 percent to 77.1 percent in 2004-2005 in El Paso County's six largest school districts. In Colorado, the rate also declined from 82.5 percent to 80.1 percent.

## ► *High School Dropout Rate*

**This chart shows** the percent of public high school students in El Paso County's six largest school districts who drop out between ninth and twelfth grade. Because many students leave school without graduating but did not drop out, the dropout rate is not the inverse of the graduation rate.

\*The six largest districts represent 80% of El Paso County's public school enrollment.

### Students who drop out between ninth and twelfth grade



Source: Colorado Department of Education

### *How are we doing?*

The dropout rate declined from 4.5 percent to 4.3 percent in 2004-2005 in El Paso County's six largest school districts. In Colorado, the rate increased from 5.3 percent to 5.8 percent.

### Students who drop out between ninth and twelfth grade by district

	2004-2005	2005-2006	Change
Colorado Springs 11	7.0%	6.1%	-0.9%
Academy 20	1.7%	1.6%	-0.1%
Harrison 2	1.9%	8.4%	6.5%
Falcon 49	4.2%	1.6%	-2.6%
Widefield 3	4.9%	4.1%	-0.8%
Fountain-Ft. Carson 8	4.4%	5.3%	0.9%
<b>Largest Six Districts</b>	<b>4.5%</b>	<b>4.3%</b>	<b>-0.3%</b>
<b>State of Colorado</b>	<b>5.3%</b>	<b>5.8%</b>	<b>0.5%</b>

Source: Colorado Department of Education

# HIGHER EDUCATION

Community success in the 21st century often hinges on comprehensively developing the community's intellectual capital, including expanding participation in higher education. Moving to a knowledge-based economy requires a higher percentage of the population with college degrees. To meet the needs of the economy and of individuals who wish to advance their education it is important to understand *adult educational attainment* and the *outcomes of higher education* in the county.

## ► *Adult Educational Attainment*

**This chart shows** the percentage of adults age 25 and older in El Paso County with associate's, bachelor's, or graduate degrees.

Adults with varying levels of educational attainment

	2004-2005	2005-2006	Change
Some College	26.0%	24.8%	-1.2%
Associate	10.1%	10.2%	0.1%
Bachelor	19.7%	21.0%	1.3%
Graduate	11.9%	12.7%	0.8%
Bachelor or Higher	31.6%	33.7%	2.1%

Source: U.S. Census Bureau; American Communities Survey; 2003, 2004 & 2005 data

### *How are we doing?*

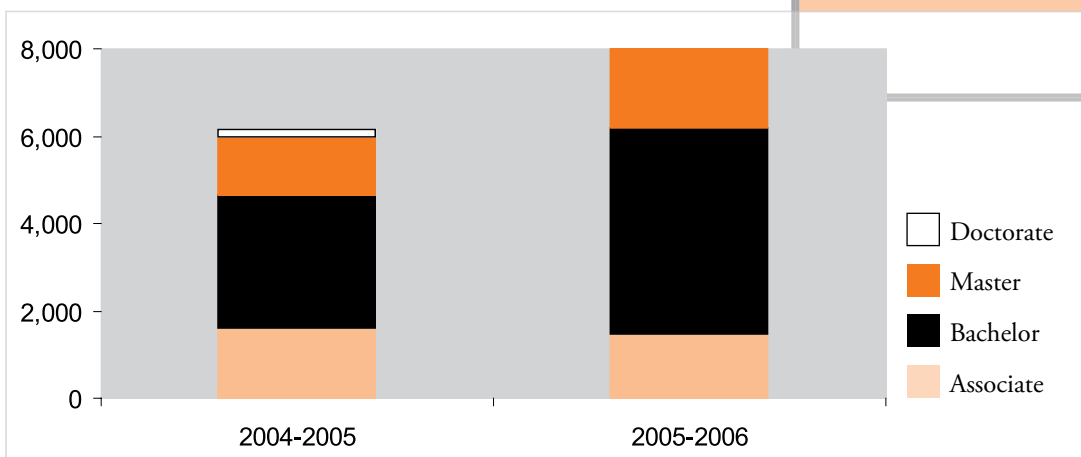
The percentage of adults in El Paso County with a bachelor's or graduate degree rose from 31.6 percent in 2004 to 33.7 percent in 2005. In Colorado, the rate rose from 33.7 percent to 35.5 percent.



## ► *Outcomes of Higher Education*

**This chart shows** the total number of degrees awarded annually in El Paso County at postsecondary institutions accredited by an accrediting agency or state approval agency recognized by the U.S. Secretary of Education and tracked by the Integrated Postsecondary Education Data System (IPEDS).

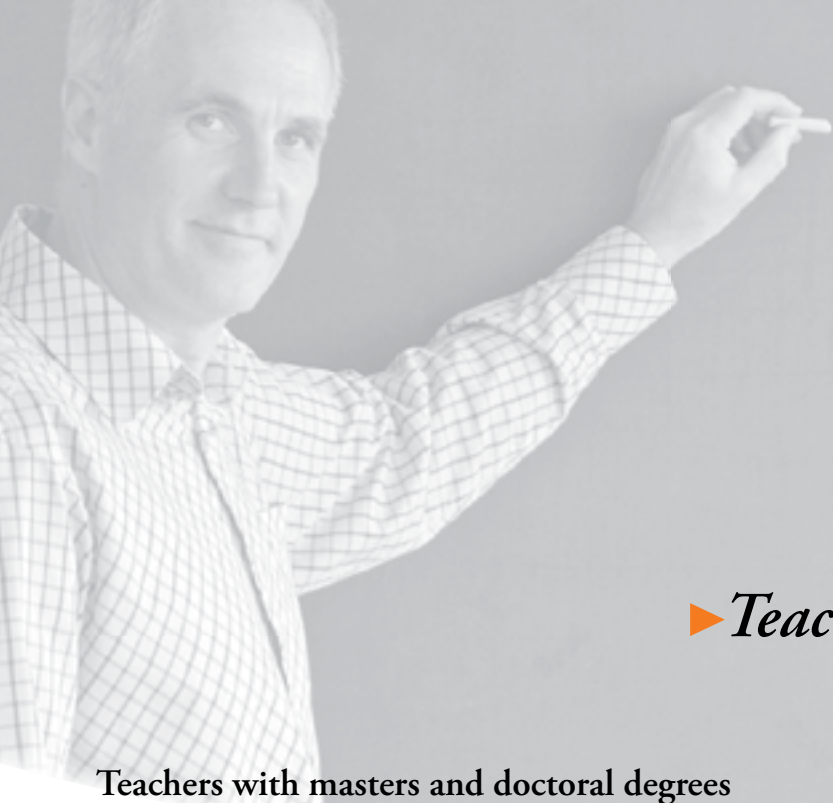
Higher education degrees awarded annually by type



*Source:* Integrated Postsecondary Education Data System (IPEDS)  
 Accredited institutions of higher education included in the data set are: College America-Colorado Springs, Colorado College, Colorado School of Professional Psychology, Colorado Technical University, Colorado Technical University Online, Everest College-Colorado Springs, Intellitec College-Colorado Springs, Intellitec Medical Institute, International Beauty Academy, National American University-Colorado Springs, Nazarene Bible College, Pikes Peak Community College, Pima Medical Institute-Colorado Springs, Remington College-Colorado Springs Campus, Toni & Guy Hairdressing Academy, United States Air Force Academy, University of Colorado at Colorado Springs, University of Phoenix-Southern Colorado Campus

### *How are we doing?*

The total number of degrees rose from 6,154 in 2004-2005 to 8,000 in 2005-2006. The biggest increase was in bachelor's degrees with 1,667 more handed out in 2005-2006. Master's degrees also increased by 456 while the number of associate's and doctoral degrees awarded decreased.

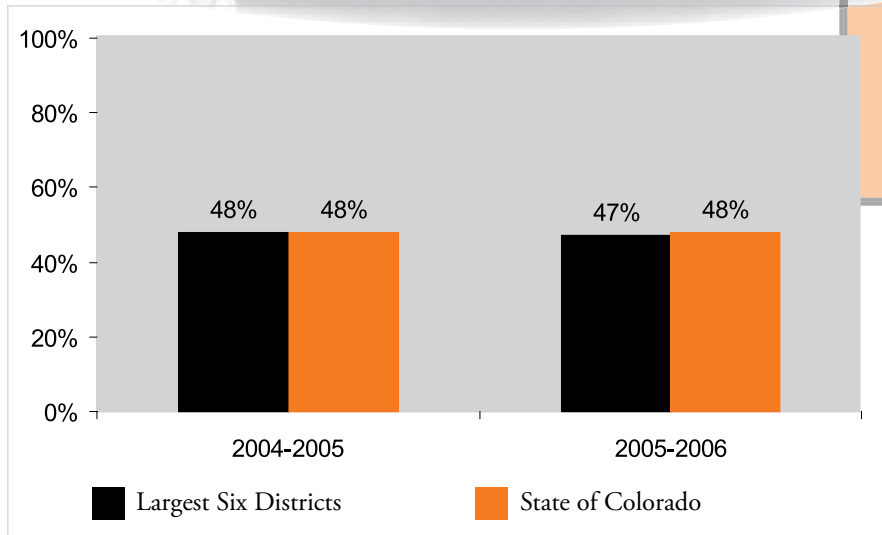


# TEACHER QUALITY

Teacher quality factors such as teacher retention and *teachers with advanced degrees* often correlate to student performance, as well as student achievement as measured by the CSAP. The ability to recruit and retain high-quality teachers is an indicator of educational quality, and is affected by *teacher compensation*.

## ► Teachers with Advanced Degrees

Teachers with masters and doctoral degrees



Source: Colorado Department of Education

**This chart shows** the percentage of public school teachers in El Paso County's six largest school districts holding a masters or doctoral degree.

\*The six largest districts represent 80% of El Paso County's public school enrollment.

Teachers with advanced degrees by district

**How are we doing?**  
 In El Paso County's six largest districts, the rate declined from 48 percent to 47 percent in 2005-2006. In Colorado, the rate remained unchanged at 48 percent.

	2004-2005	2005-2006	Change
Colorado Springs 11	53%	52%	-1%
Academy 20	54%	55%	1%
Harrison 2	41%	39%	-2%
Falcon 49	34%	33%	-1%
Widefield 3	43%	42%	-1%
Fountain-Ft. Carson 8	37%	39%	2%
<b>Largest Six Districts</b>	<b>48%</b>	<b>47%</b>	<b>-1%</b>
<b>State of Colorado</b>	<b>48%</b>	<b>48%</b>	<b>0%</b>

Source: Colorado Department of Education

## ► *Teacher Compensation*

**This chart shows** the average public school teacher salary in El Paso County's six largest school districts compared to Colorado.

\*The six largest districts represent 80% of El Paso County's public school enrollment.

### Teacher salary by district

	2004-2005	2005-2006	Change
Colorado Springs 11	\$ 44,411	\$ 44,388	\$ -23
Academy 20	\$ 40,889	\$ 41,068	\$ 179
Harrison 2	\$ 38,240	\$ 38,394	\$ 154
Falcon 49	\$ 38,391	\$ 38,351	\$ -40
Widefield 3	\$ 42,086	\$ 42,026	\$ -60
Fountain-Ft. Carson 8	\$ 40,488	\$ 41,083	\$ 595
<b>Largest Six Districts</b>	<b>\$ 41,617</b>	<b>\$ 41,666</b>	<b>\$ 49</b>
State of Colorado	\$ 45,339	\$ 46,025	\$ 686

Source: Colorado Department of Education

### *How are we doing?*

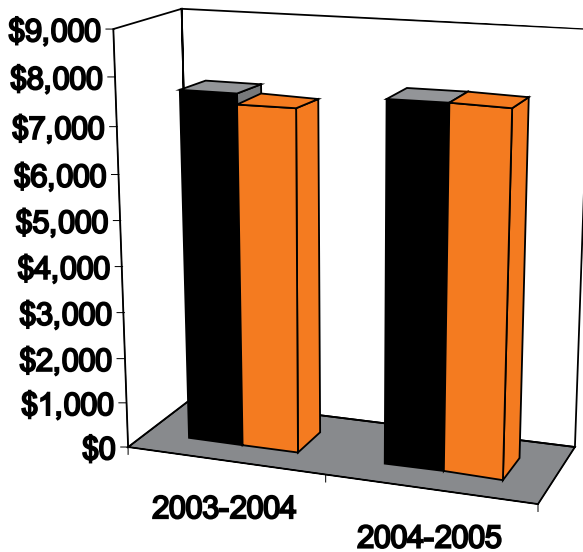
Average public school teacher salaries in El Paso County's six largest school districts increased by \$49 from 2004-2005 to 2005-2006. The median teacher salary for Colorado teachers is greater than El Paso County and increased by \$686 over the same period.

# EDUCATIONAL FUNDING

Adequate *school funding* is critical to school success. Accordingly, the amount of total revenue per student is often an indicator of present and future educational success. This is particularly true when it comes to schools with higher percentages of *students in need*, as these children often require more expensive supplemental services.

## ► School Funding

Total annual revenue per student



This chart shows the amount of total revenue allocated for each public student in El Paso County's six largest school districts.

\*The six largest districts represent 80% of El Paso County's public school enrollment.

■ Largest Six Districts      ■ State of Colorado

Source: Colorado Department of Education

Total annual revenue per student by district

### How are we doing?

The amount of total revenue allocated for each public student in El Paso County's six largest school districts increased from \$7,638 to \$7,733 in 2005. In Colorado, the amount rose from \$7,412 to \$7,730.

	2003-2004	2004-2005	Change
Colorado Springs 11	\$ 7,774	\$ 8,136	4.4%
Academy 20	\$ 7,500	\$ 7,668	2.2%
Harrison 2	\$ 8,020	\$ 8,222	2.4%
Falcon 49	\$ 6,735	\$ 6,612	-1.8%
Widefield 3	\$ 7,138	\$ 7,379	3.3%
Fountain-Ft. Carson 8	\$ 8,659	\$ 8,382	-3.3%
<b>Largest Six Districts</b>	<b>\$ 7,638</b>	<b>\$ 7,733</b>	<b>1.2%</b>
<b>State of Colorado</b>	<b>\$ 7,412</b>	<b>\$ 7,730</b>	<b>4.4%</b>

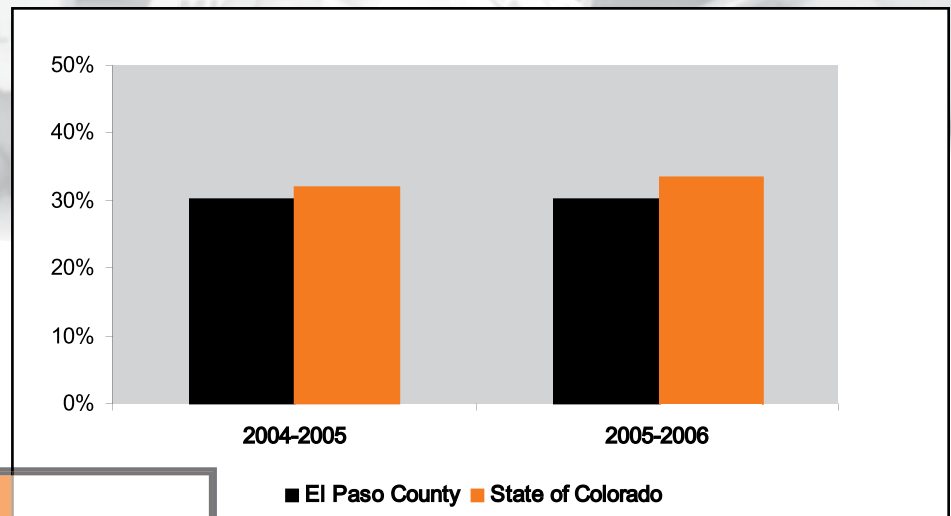
Source: Colorado Department of Education

## ► *Students in Need*

**This chart shows** the percentage of public students eligible for free or reduced lunch in El Paso County's six largest school districts.

\*The six largest districts represent 80% of El Paso County's public school enrollment.

### Students eligible for free or reduced lunch



### *How are we doing?*

The percentage of public students eligible for free or reduced lunch in El Paso County's six largest school districts remained at 30.3 percent in 2005-2006. In Colorado, the amount rose from 32.1 percent to 33.6 percent.

■ Largest Six Districts ■ State of Colorado

Source: Colorado Department of Education

### Students eligible for free or reduced lunch by district

	2004-2005	2005-2006	Change
Colorado Springs 11	40.0%	40.1%	.1%
Academy 20	6.0%	5.9%	-.1%
Harrison 2	62.1%	61.1%	-1.0%
Falcon 49	15.7%	15.0%	-.7%
Widefield 3	24.2%	26.4%	-2.2%
Fountain-Ft. Carson 8	34.1%	33.4%	-.7%
<b>Largest Six Districts</b>	<b>30.3%</b>	<b>30.3%</b>	<b>0%</b>

Source: Colorado Department of Education

# Enjoying arts, culture, and recreation



*Arts, culture and recreation play an important role in our quality of life by providing entertainment and opportunities to come together as a community, promoting physical and mental health, and benefiting our economy. The following indicators help us understand what arts, culture and recreational opportunities exist, how they are supported, and whether we participate.<sup>1</sup>*

## ***PRESENCE***

- ▶ *Arts, Culture and Recreational Establishments*
- ▶ *Community-wide Events*
- ▶ *Park Acreage*
- ▶ *Miles of Recreational Trail*

## ***PARTICIPATION***

- ▶ *Attendance at Local Venues*
- ▶ *Participation in Recreational Activities*
- ▶ *Arts Education*

## ***SUPPORT***

- ▶ *Nonprofit Revenue*
- ▶ *Arts Spending*

### **Enjoying Arts, Culture and Recreation Council Chairs**

#### **Paul Butcher**

City of Colorado Springs –  
Parks, Recreation and Cultural Services, Director

#### **Susan Edmondson**

Bee Vradenburg Foundation, Executive Director

### **Enjoying Arts, Culture and Recreation Council Members**

#### **Kurt Aichele**

Southeast YMCA, Youth and Family Director

#### **Lori Bammesberger**

Colorado Springs Children's Chorale,  
Conductor Sunrise Singers and Eastern Plains Youth Choir

#### **Julie Cole**

Smokebrush Gallery and Foundation for the Arts, Director

#### **Marcia Hendricks**

Colorado Springs Children's Chorale, Executive Director

#### **Dot Lischick**

Colorado Springs World Arena and Pikes Peak  
Center, General Manager

#### **Cleather Marchman**

Community Leader

#### **Doug Martin**

Colorado Springs Sports Corporation, Director –  
State Games of America and Rocky Mountain State Games

#### **Deborah Thornton**

Imagination Celebration, Curious Choreographer of Creativity

#### **Jessica Turnwald**

Colorado Springs Fine Arts Center, Capital Campaign Director

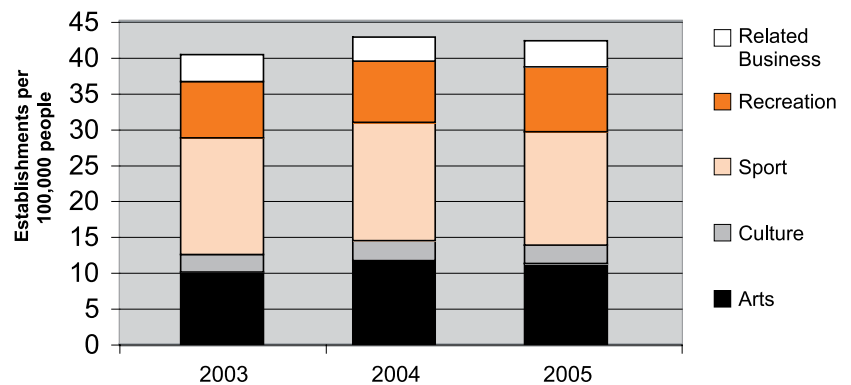
# PRESENCE

Tracking the number of *arts, culture and recreational establishments*, the presence of *community-wide events, park acreage* and *miles of recreational trails* helps the community understand the presence of arts, culture and recreational opportunities. If these indicators are growing at least as quickly as the population, one can assume the community is maintaining current services to meet the needs of the public. This includes opportunities to experience visual and performing arts, maintain health through outdoor and indoor recreation, and participate alongside neighbors in community events, holiday celebrations, or to promote different cultures.

## ► *Arts, Culture and Recreational Establishments*

**This chart shows** the number of arts, culture and recreational establishments per 100,000 people. An establishment is a single physical location at which business is conducted or services or industrial operations are performed. A single company or enterprise may consist of one or more establishments. When two or more activities are carried on at a single location under a single ownership, the entire establishment is classified on the basis of its major activity and all data are included in that classification. Establishment counts represent the number of locations with paid employees any time during the year. Businesses operating without an employer identification number (EIN), and businesses with an EIN but without employees, are excluded from the data.

Arts, culture and recreational establishments per 100,000 people



Source: North American Industry Classification System. U.S. Census Bureau. County Business Patterns

### Definitions:

**Arts** – Theater companies and dinner theaters, dance companies, musical groups and artists, other performing arts companies, and independent artists and writers

**Culture** – Museums, historical sites, zoos and botanical gardens, nature parks and other similar institutions

**Sport** – Sports teams and clubs, racetracks, other spectator sports, golf courses and country clubs, fitness and recreational sports centers, bowling centers

**Recreation** – Amusement and theme parks, amusement arcades, gambling industries, all other amusement and recreations industries

**Related Business** – Promoters with facilities, promoters without facilities, agents and managers

### *How are we doing?*

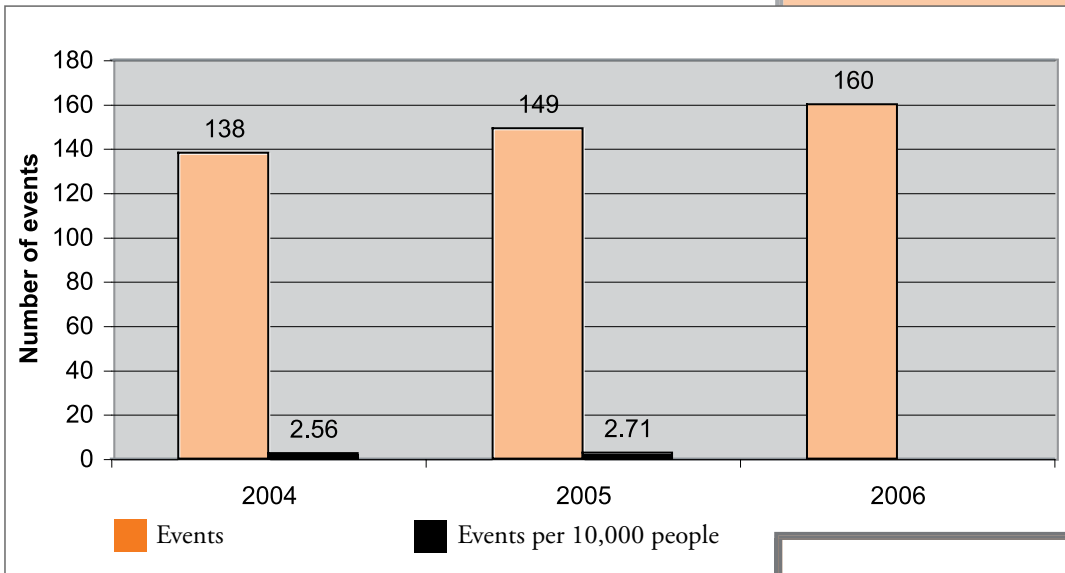
The number of arts, culture and recreational establishments in El Paso County per 100,000 residents kept pace with population growth from 2003 to 2005. Growth in this sector contributes to overall economic growth and serves as an economic niche for the region.



## ► *Community-wide Events*

**This chart shows** the total number of community events and the number of events per 10,000 people that received a major use permit by the City of Colorado Springs. This includes but is not limited to, parades, cultural festivals, races, walks, concerts, and holiday celebrations. Events are classified this way if they involve police officers, road closures, bands, tents, vendors and large groups. Races and walks are included if impact is minimal but participation requires an entry fee. A certificate of insurance is required.

Community events in Colorado Springs



Source: City of Colorado Springs, City Clerks Office - Special Events

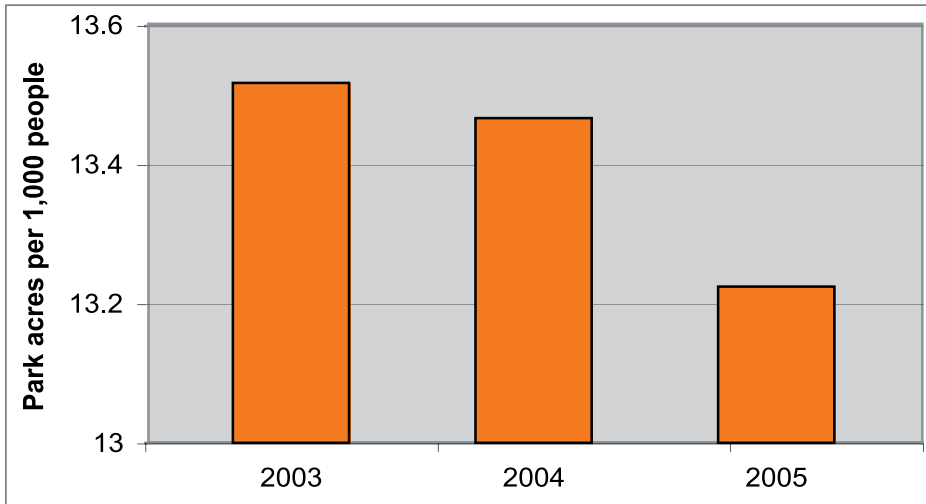
### *How are we doing?*

The number of events scheduled by individuals and local organizations is increasing each year. Likewise, the number of events per 10,000 residents is also increasing. Community events not only provide people with things to do in their spare time, they also promote community togetherness, health, philanthropy and cooperation.

## ► *Park Acreage*

The presence of *parks, trails* and other opportunities for outdoor activity are a main attraction of living in Colorado. Generally mild weather gives Coloradans the opportunity to utilize outdoor spaces for recreational use throughout the year. Additionally, these areas provide space for athletic activities that benefit the overall health of people.

### Park acres per 1,000 people



Source: City of Colorado Springs Parks, Recreation and Cultural Services & El Paso County Parks and Leisure Services

**This chart shows** park acreage per 1,000 people including community parks, neighborhood parks, sports complexes and open spaces designated as parks in El Paso County.

### *How are we doing?*

Park acres per 1,000 people declined slightly, by about .2 acres per person, since 2003.

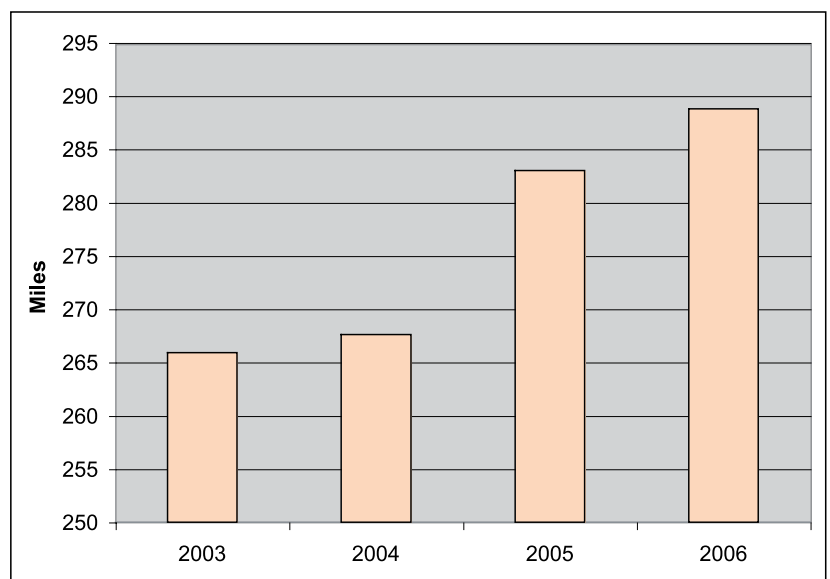
## ► *Miles of Recreational Trails*

**This chart shows** total trail miles in El Paso County to include those trails that are constructed throughout the city and county for commuters and recreational use as well as trails that are constructed inside various parks and open spaces.

### *How are we doing?*

Trail mileage has increased since 2003 and is keeping pace with population growth.

### Total trail miles in El Paso County



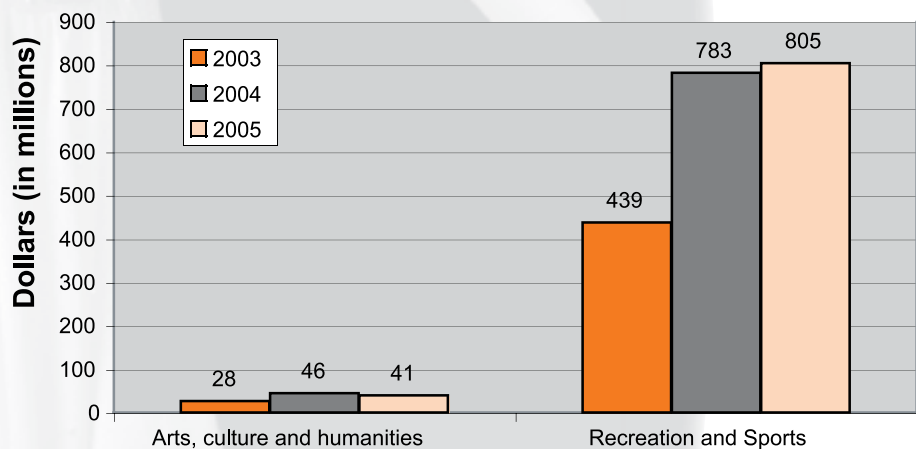
Source: City of Colorado Springs Parks, Recreation and Cultural Services & El Paso County Parks and Leisure Services

## SUPPORT

The nonprofit sector contains many of the organizations that provide arts, culture and recreational services in our community. *Nonprofit revenue* (or income) levels are one measure of the strength of those organizations and the support for them in the community even though revenue sources are not limited to local funders. In general, more revenue indicates the ability to provide more activities and services to clients. Revenue can also reflect the impact of a sector on the economy as a whole. In turn, *spending by nonprofit arts organizations* and their audiences also indicates their activity and their place in the broader community. These types of organizations not only spend money, they also generate economic activity.

### ► Nonprofit Revenue

#### Arts, culture and recreation revenue per capita



**This chart shows** the amount of revenue per capita for nonprofits whose main activities address arts, culture and humanities and nonprofits working in the area of recreation and sports in El Paso County. Revenue is reported only for those nonprofits with an annual operating budget greater than or equal to \$25,000.

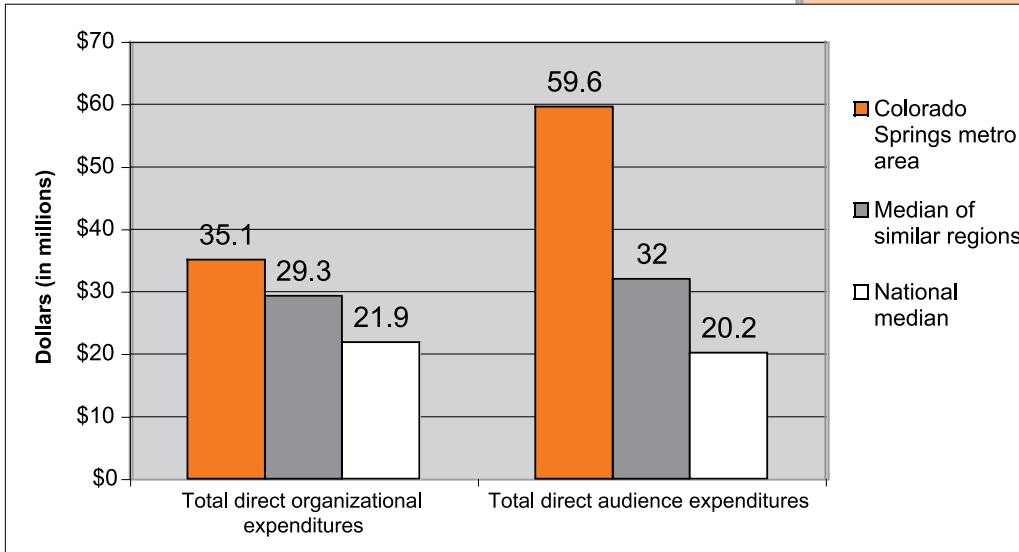
Source: National Center for Charitable Statistics. Registered Nonprofits by County  
Major Category – Arts, culture and humanities.  
Major Category – Recreation and sports

#### *How are we doing?*

The number of arts, culture and humanities nonprofits and their revenue per capita peaked in 2004 and has declined slightly since that time. The number of recreation and sports nonprofits and their revenue per capita has increased since 2003. The large amount of revenue for recreation and sports nonprofits reflects the presence of several national and international athletic organizations such as the U.S. Olympic Training Center – an economic development niche in El Paso County. These organizations may or may not directly serve residents of El Paso County.

## ► Arts Spending

### Direct spending by arts and culture nonprofits and their audiences in 2005



Source: Arts and Economic Prosperity III

**This chart shows** the direct 2005 expenditures of nonprofit arts and culture organizations and their audiences in the Colorado Springs metro area, similar-sized regions and the nation. The Colorado Springs metro area represents 48 organizations located throughout Colorado

Spring, Manitou Springs and the Tri-Lakes area.

Organizational expenditures are all operational expenses including, but not limited to, the costs of staff, materials, and facilities. Audience expenditures include event-related spending such as souvenirs, meals, and parking. It does not include the cost of the ticket.

### *How are we doing?*

Spending by arts and culture nonprofits in the Pikes Peak Region is greater than the same industry in similar regions and throughout the nation. For more information, please access the entire report provided by the Cultural Office of the Pikes Peak Region at [www.coppercolo.org/economic.htm](http://www.coppercolo.org/economic.htm).

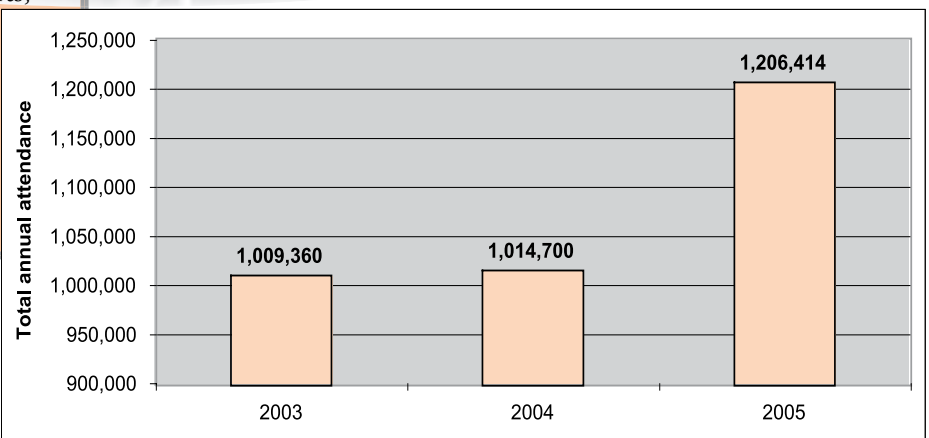
# PARTICIPATION

Although arts, culture and recreational establishments and opportunities exist in the community, residents do not necessarily take advantage of these opportunities. Tracking participation demonstrates how these services touch the lives of individuals. Increasing *attendance* and *participation rates* may indicate that organizations are providing and effectively marketing opportunities for everyone. Another way to promote an appreciation of arts and culture in the population is to provide *arts education* in the public schools. In order to do this effectively, all students must have access to art and music teachers and the courses they offer.

## ► Attendance at Local Venues

**This chart shows** the total annual attendance at the following venues: Cheyenne Mountain Zoo, World Arena, Pikes Peak Center for the Performing Arts, Fine Arts Center, Kennedy Center Imagination Celebration, Hillside Community Center and UCCS Theatreworks.

Attendance at seven arts, culture and recreational venues



SOURCE: Cheyenne Mountain Zoo, World Arena, Pikes Peak Center for the Performing Arts, Fine Arts Center, Kennedy Center Imagination Celebration, Hillside Community Center, and UCCS Theatreworks

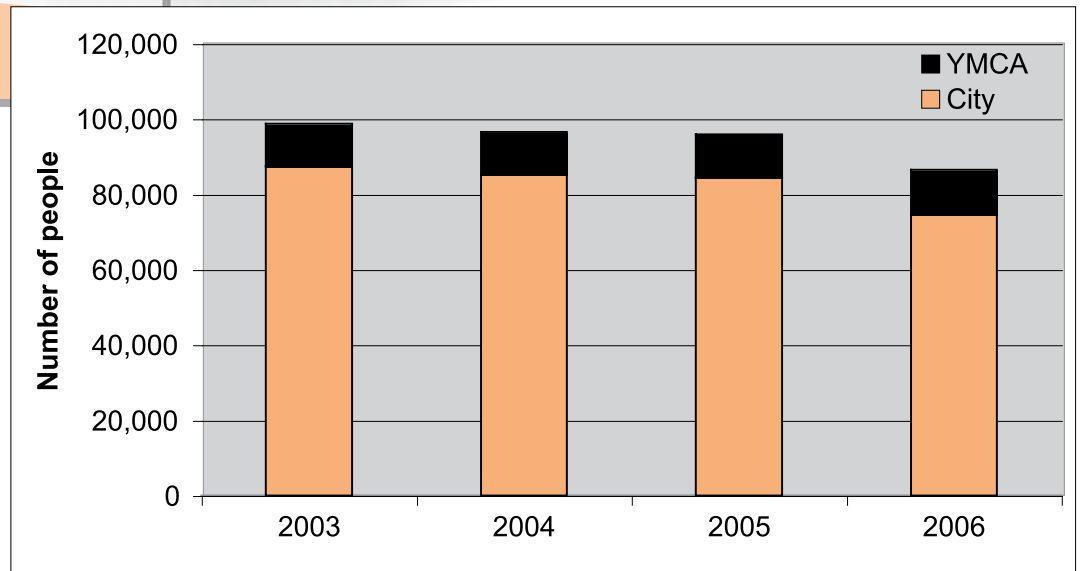
### *How are we doing?*

Although the indicator does not include all venues within El Paso County, attendance at these venues has been growing. From 2004 to 2005 the increase of 191,714 attendees is primarily due to including attendance at the Pikes Peak Center for the Performing Arts for the first time. However, even without these figures, attendance still would have grown by more than 46,000 from 2004 to 2005.

## ► *Participation in Recreational Activities*

**This chart shows** the total annual adult and youth participation in recreational activities provided by the YMCA of the Pikes Peak Region and the City of Colorado Springs.

**Adult and youth participation in recreational activities**



*These indicators only begin to tell a story about the strength of arts, culture and recreation in our community and how it impacts our quality of life. Vision council members recognize the importance of cultivating vibrant, diverse, affordable opportunities that appeal to every sector of society. Our goal is to gather more data through community surveys and primary research. If your organization is promoting arts, culture and recreation in El Paso County and needs more information or wishes to provide data to support this project please contact us.*

Source: YMCA of the Pikes Peak Region & City of Colorado Springs Parks, Recreation and Cultural Services

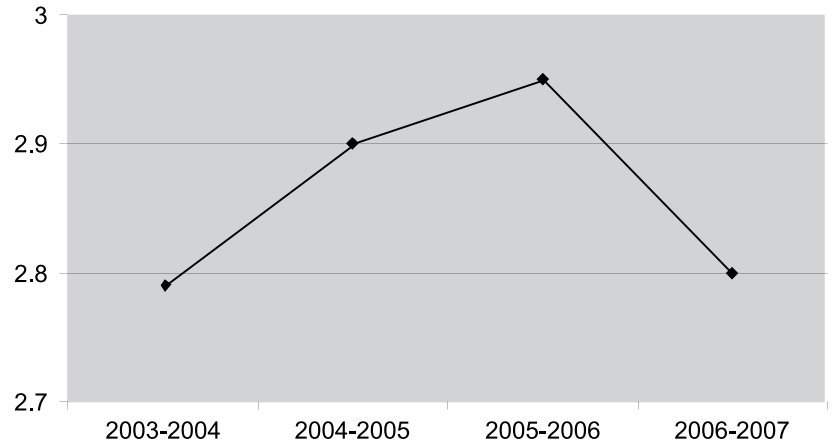
### ***How are we doing?***

Since 2003, participation in recreational activities sponsored by the city has been declining and participation at the YMCA has remained stable.

## ► Arts Education

**This chart shows** the number of music and art teachers per 1,000 students throughout the six largest school districts in El Paso County which enroll 80 percent of public school students.

Music and art teachers per 1,000 students in public schools



Source: Colorado Department of Education

Music and art teachers per 1,000 students in public schools by district

	2003-2004	2004-2005	2005-2006	2006-2007
Harrison 2	2.47	2.71	2.67	3.05
Widefield 3	3.54	3.53	3.51	3.69
Fountain-Ft. Carson 8	1.36	2.01	2.59	2.6
Colorado Springs 11	3.06	3.09	2.94	3
Academy 20	2.99	3.28	3.58	2.69
Falcon 49	1.96	1.79	1.87	1.8
Largest Six Districts	2.79	2.9	2.95	2.8

Source: Colorado Department of Education

### *How are we doing?*

Each district varies in the number of music and art teachers it employs. During the 2006-2007 academic year there were, on average, 2.8 teachers per 1,000 students. What does this mean for student access? In Widefield, the district with the most teachers per 1,000 students, there were nearly 2 teachers per school (1.94) during the 2006-2007 school year. During the same period in Falcon, the district with the least teachers per 1,000 students there were approximately 1.6 teachers per school, and in Colorado Springs District 11, the largest district, there were 1.1 teachers per school.

# Moving around efficiently

*Transportation is the way to get people, goods and services to where they are needed. A global economy and more personal choice has created greater distances between products and the user as well as between our homes, workplaces, recreations areas, and cultural centers. As we spread out, we must allocate more time and money to getting around. Our ability to move around impacts the economy, health, access to quality education, safety, and the environment.*



## ***DAILY TRAVEL***

- ▶ *Public Transportation*
- ▶ *Modes of Travel*
- ▶ *Access by Air*

## ***GETTING AROUND SAFELY***

- ▶ *Quality of Roads*
- ▶ *Traffic Accidents*
- ▶ *Bicycle and Pedestrian Safety*

## ***TRAFFIC***

- ▶ *Travel Time*
- ▶ *Vehicle Miles Traveled*

### **Moving Around Efficiently Council Chairs**

#### **Dan Stuart**

Alpern, Myers & Stuart, Attorney

#### **Wayne Williams**

El Paso County Commissioner

### **Moving Around Efficiently Council Members**

#### **Vic Andrews**

USAA, Vice President and General Manager

#### **Al Brody**

Pikes Peak Area Bikeways Coalition

#### **Gary Bradley**

Colorado Springs Citizen's Transportation Advisory Board

#### **Craig Casper**

PPACG, Transportation Planning Director

#### **Dan Cleveland**

Trails and Open Space Coalition, Director

#### **Michael Decker**

Silver Key, President and CEO

#### **Mark Earle**

Colorado Springs Airport, Aviation Director

#### **Bob Hartwig**

Colorado Springs Citizen's Transportation Advisory Board

#### **Jerry Heimlicher**

Colorado Springs City Council Member

#### **Sara Jack**

Housing and Building Association,  
Vice President of Legislative Affairs

#### **Chris Juniper**

Fort Carson, Sustainability Planner

#### **Sherre Ritenour**

Mountain Metropolitan Transit, Manager of Transit Services

#### **Terry Storm**

Pikes Peak Association of Realtors, CEO

# DAILY TRAVEL

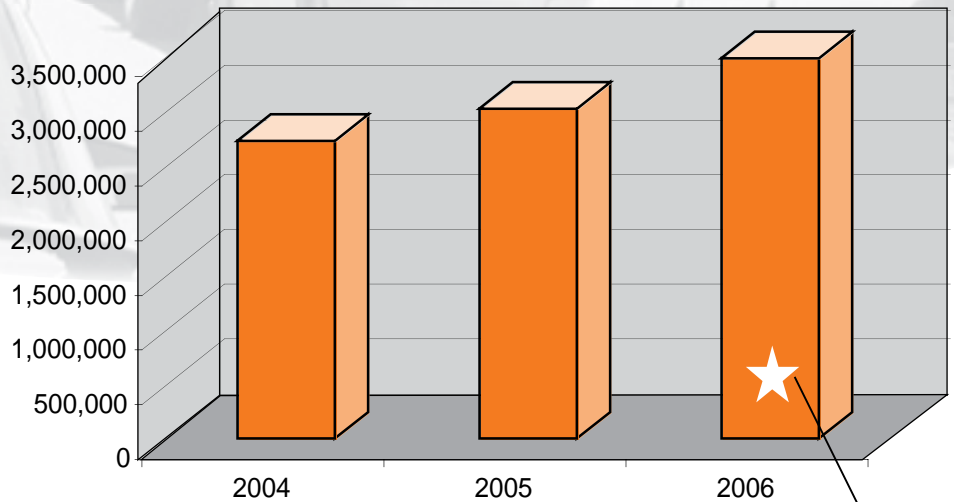
*Modes of travel* give us a snapshot of how our community moves around.

*Public transportation* provides an alternative to driving alone and, for some people who can not drive due to age, disability or financial barriers, it is the only option. Increasing use of frequent, reliable public transportation can save money, relieve congestion and improve air quality by taking cars off the road while generating revenue to improve the service for all users. *Access by air* travel is also critically important to the economic health and business climate of the region. Passengers realize time savings and avoid additional travel costs with access to direct flights.

## ► *Public Transportation*

**This chart shows** the number of rides provided by Mountain Metropolitan Transit's fixed route service including Front Range Express (FREX) to Denver and special needs service, a portion of which is mandated to serve door to door within a mile of the fixed route system.

Rides provided by public transportation



Source: Mountain Metropolitan Transit

*\*Consistent collection of special needs rides data began in 2006, prompted by Federal Legislation and driven by prioritization of federal pilot project research based on increased awareness of needs of specialized populations including the aging American population.*

Special Needs Rides Provided by Amblicab, Silver Key, Fountain Senior Services and Metro Mobility: 217,565

### *How are we doing?*

In 2005, local voters passed the Rural Transportation Authority (RTA) tax that included dedicated funding for bus service in the region. The above increase in rides reflects both the addition of more service and an increase in people using transit in the region. However, in 2000, transit represented only 1 percent of the rides to work while nationally 4.7 percent used transit. A three-year, federal grant was used to begin commuter service to Denver in 2002. State and local RTA funds now support this program. Transit systems become more efficient as population density increases with urban development.

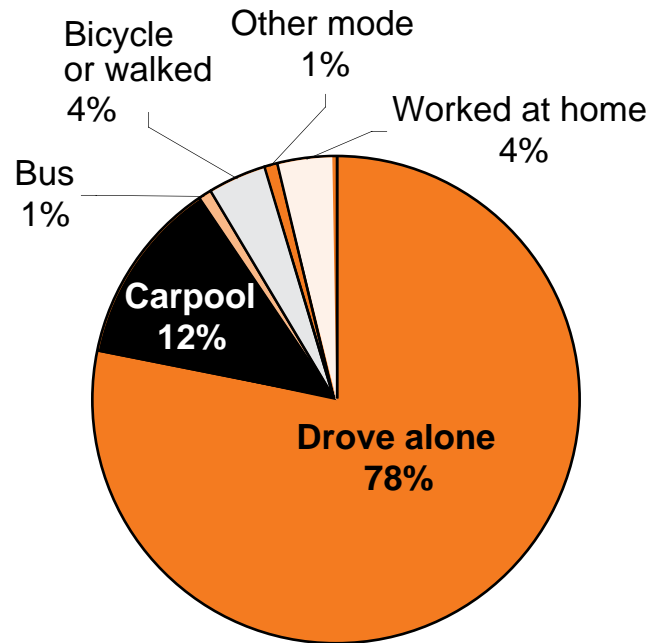
## ► Modes of Travel

**This chart shows** how El Paso County residents, 16 and older, traveled to work in 2000.

### *How are we doing?*

In 2000, 78 percent of El Paso County residents drove alone to work as compared to 76 percent of the U.S. That is an increase from the U.S. averages of 64 percent in 1980 and 73 percent in 1990.

How El Paso County residents traveled to work in 2000

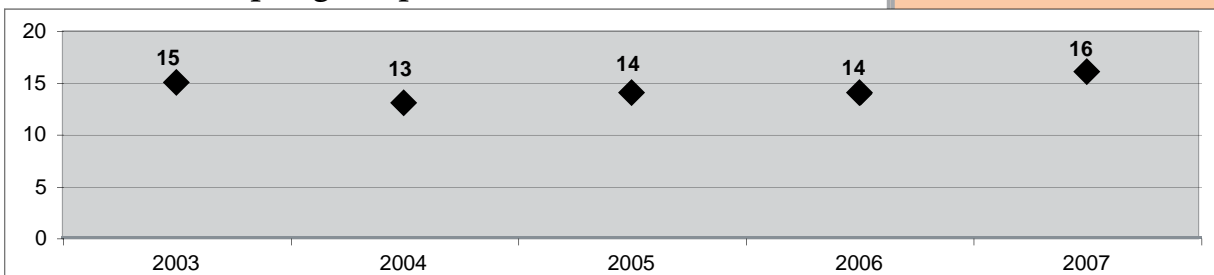


Source: U.S. Census Transportation Planning Package, 2000 data

## ► Access by Air

Number of cities reached by direct flights from Colorado Springs Airport

**This chart shows** the number of cities reachable by a direct flight from Colorado Springs Airport.



Source: Aviation Director, Colorado Springs Airport

### *How are we doing?*

Travelers can now access 16 cities with direct flights from the Colorado Springs Airport including: Atlanta, Chicago, Cincinnati, Dallas, Denver, Houston, Kansas City, Las Vegas, Los Angeles, Minneapolis/St. Paul, Ontario, Phoenix, Salt Lake City, Sacramento, San Francisco, and San Diego. In addition to the economic impacts of passenger travel, air cargo is the fastest growing method of transporting commercial products, creating economic importance for the region with the growth of national and global markets and supply chains for manufactured goods.

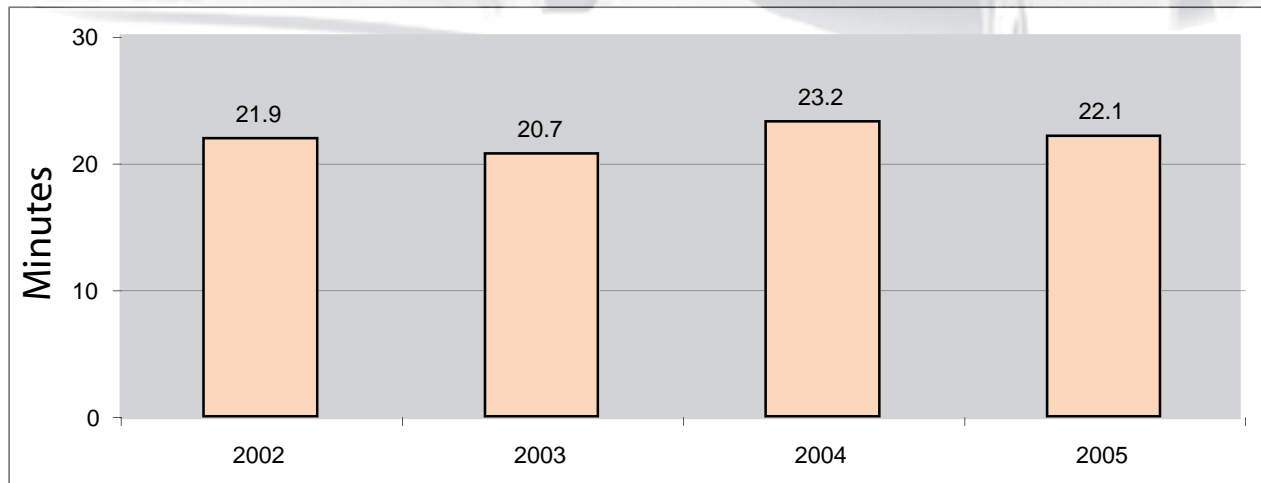
# TRAFFIC

Traffic congestion is a major quality of life issue and is caused by more cars, farther commutes and increasing *vehicle miles traveled*. Nationally, while the number of miles traveled, *travel time*, and the number of residential vehicles increased, the total amount of paved and unpaved roadway did not change significantly providing us some indication of the reasons for increased traffic congestion. It seems reasonable that people living in the “wide-open spaces” of the West would drive more than people living in urban areas of the West and in other regions of the country. However, the average number of miles traveled per vehicle in the West was comparable to the average for the rest of the United States.<sup>1</sup>

## ► *Travel Time*

**This chart shows** the average travel time to work of all workers in El Paso County 16 years and older who did not work at home.

Average commute time to work



Source: American Community Survey

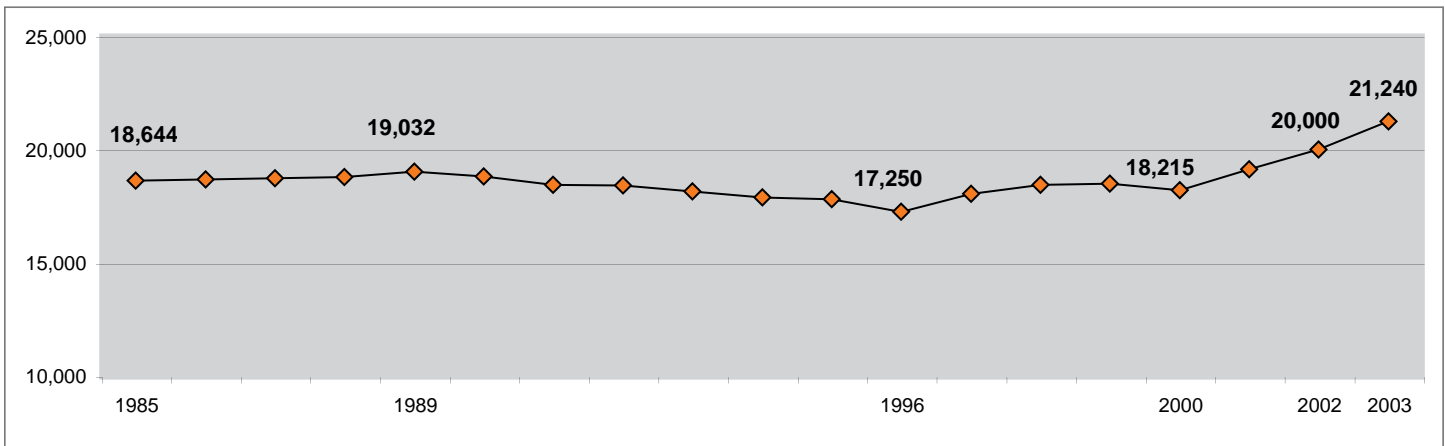
### *How are we doing?*

The average travel time to work has not changed significantly since 2002. In 2005, the average in El Paso County was 22 minutes, up from 18.7 minutes in 1990, but lower than the average commute times in the U.S. (25 minutes in 2005 and 22 minutes in 1990).

## ▶ *Vehicle Miles Traveled*

**This chart shows** the estimated average annual vehicle miles traveled per capita in El Paso County. This number is not actually measured but rather is modeled for our region using a number of factors such as registered vehicles, types of vehicles, population and distance to work and other destinations.

Miles traveled per person per year



Source: Texas Transportation Institute Urban Mobility Report

### *How are we doing?*

From 2000 to 2003 annual vehicle miles per person increased from 18,215 to 21,240 miles. Compared to nation-wide data, El Paso County appears to be about average for distances traveled.

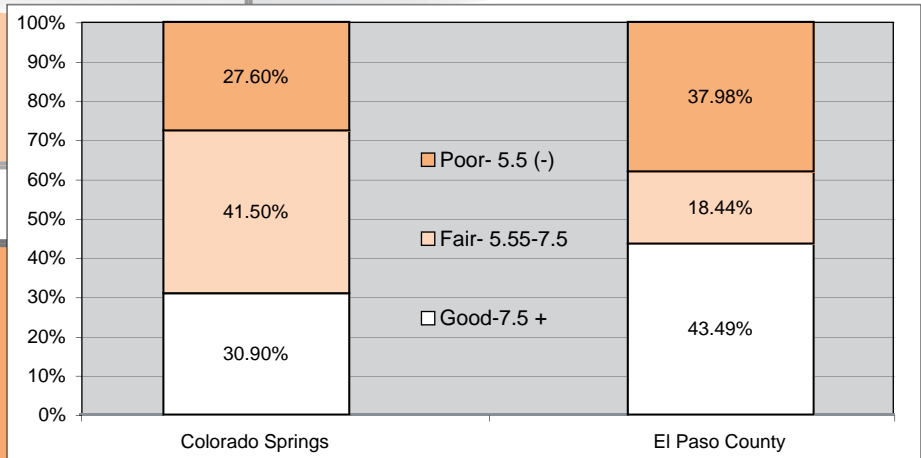
# GETTING AROUND SAFELY

Ensuring our transportation infrastructure, including roadways, bike paths and sidewalks are adequate and well maintained ensures the safety of mobility for all residents and serves and encourages the use of all modes of travel, helping reduce congestion and harmful air emissions. It is possible to prevent *traffic accidents* and ensure *bicycle and pedestrian safety* by following the rules of the road, preventing distractions while driving and improving the *quality of roads*. In 2000, 4 percent of the population regularly biked or walked to work in El Paso County.

## ► Quality of Roads

**This chart shows** the quality of paved roads in El Paso County and the City of Colorado Springs in 2006 as measured by the Pavement Management Application adopted in late 1990's. This measurement is required for access to federal funds. The total number of lane miles maintained by the city in 2006 was 1,638 miles. The County maintained 998 paved miles (represented in the chart) and 1,072 miles of gravel roads (not represented in the chart). Miles of trails can be found in the *Arts, Culture, and Recreation* section of this report.

Road surface ratings in 2006



Source: City of Colorado Springs Public Works and El Paso County Transportation Department

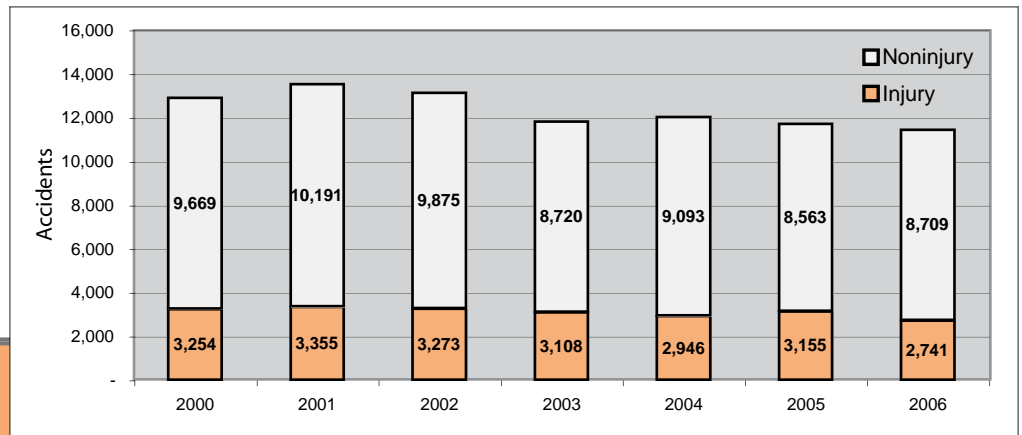
### How are we doing?

Measuring the quality of the roads allows governments to allocate annual revenue to keep the roadways passable and safe. When a maintenance backlog occurs and quality declines from Fair to Poor it becomes more expensive to fix problems. Maintaining our local roadways ensures efficient commerce, reducing costs of products and services. It also protects each of our personal investments in our cars, homes and personal safety.

## ► *Traffic Accidents*

This chart shows the total annual number of accidents in Colorado Springs indicating those with and without injuries.

Number of accidents with no injuries and with injuries



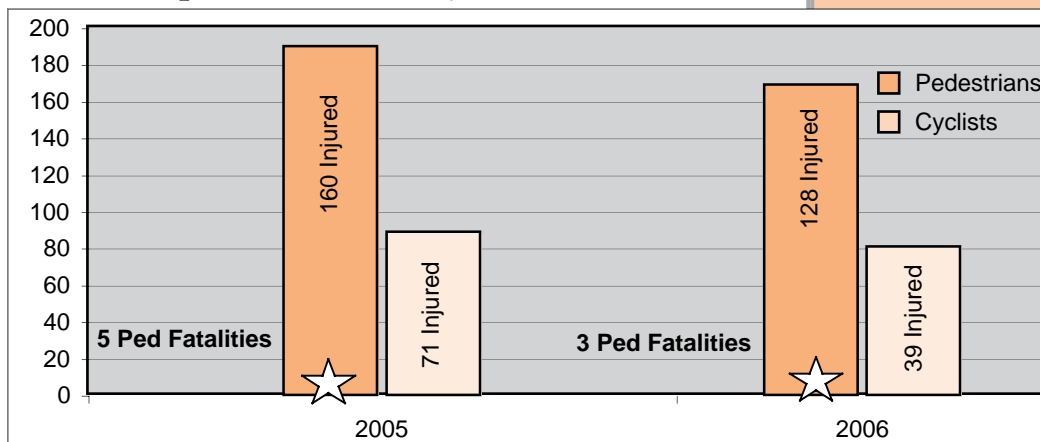
Source: Colorado Springs Police Department

### *How are we doing?*

Since 2000, total traffic accidents have been decreasing. In 2006, there were 8.1 injury producing accidents per 1,000 people which is .9 percent more than comparable cities.<sup>2</sup> In the past six years, traffic fatalities have ranged from 13 to 31.<sup>3</sup>

## ► *Bicycle and Pedestrian Safety*

Number of pedestrian and bicycle crashes



Source: Colorado Springs Police Department

This chart shows the number of crashes involving a vehicle and either a pedestrian or a pedal bicycle, including injuries and fatalities. Accident reports involving

automobiles is only one measure of the safety of walking or biking. Injuries due to unsafe or inadequate infrastructure will occur, but are difficult to track.

### *How are we doing?*

Accidents involving pedestrians and cyclists decreased from 2005 to 2006 as did injuries and fatalities. In 2005, five pedestrian fatalities occurred in Colorado Springs. Across Colorado 48 pedestrians were killed that year.<sup>4</sup>

# Keeping the community safe

*Every citizen's quality of life depends on being and feeling safe at home and in the community. Communities work together to provide a safe environment through prevention initiatives, police and fire service, criminal justice and court services, as well as nonprofit sponsored intervention.*



## ***PUBLIC SAFETY***

- ▶ *Crime Rate*
- ▶ *Drug Cases*
- ▶ *DUI Arrests*
- ▶ *Repeat Offenders in Jail*

## ***SAFETY IN THE HOME***

- ▶ *Child Abuse*
- ▶ *Domestic Violence*

## ***PROVIDING SERVICES***

- ▶ *Calls for Service*
- ▶ *Response Times*
- ▶ *Crime Clearance Rates*
- ▶ *Neighborhood Safety*
- ▶ *Police Presence*

### **Keeping the Community Safe Council Chair**

**Dave Felice**

Colorado Springs Police Department, Deputy Chief

### **Keeping the Community Safe Council Members**

**Charles Crawford**

Fountain Police Chief

**Mike Dalton**

Colorado Springs Fire Department

**Teri Goodall**

El Paso County Sheriff's Office, Retired Undersheriff

**Maile Gray**

DRIVESMART, Director

**Cari Karns**

Pikes Peak Area Crime Stoppers, former Director

**Brett Lacey**

Colorado Springs Fire Marshall

**Terry Maketa**

El Paso County Sheriff

**Manuel Navarro**

Colorado Springs Fire Department, Chief

**John Newsome**

District Attorney, 4th Judicial District

**Shirley Rhodus**

El Paso County Department of Human Services,  
Child Welfare Manager

**MaryJo Smith**

Manitou Springs Police Chief

**Trudy Strewler**

Court Appointed Special Advocates (CASA), Executive Director

**Michelle Valdez**

T.E.S.S.A., Director

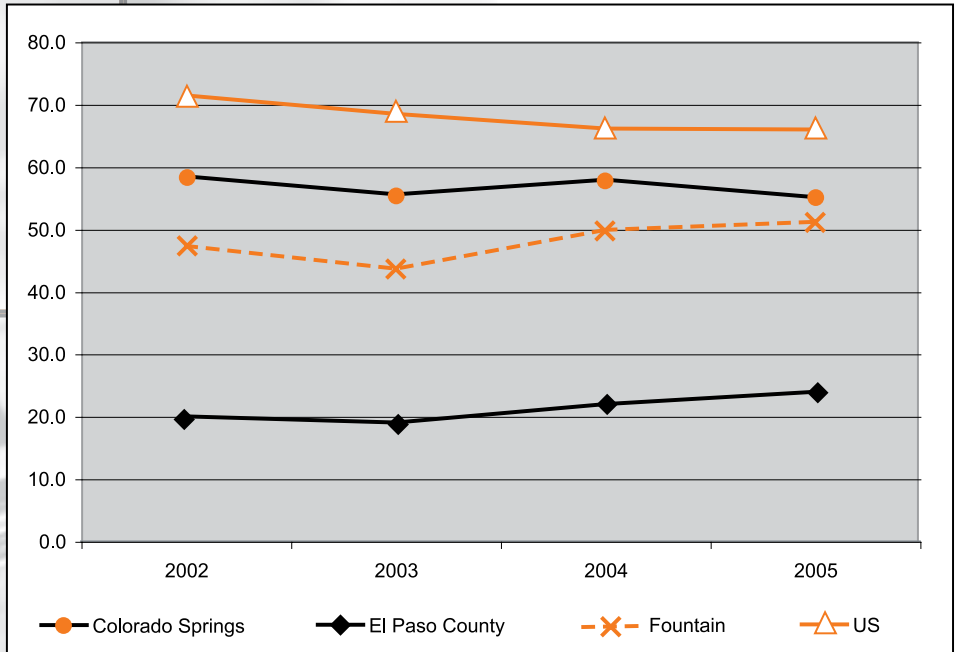
# PUBLIC SAFETY

The *crime rate* is impacted not only by availability of jobs, wages and education levels but by public safety strategies employed to prevent crime and the tax dollars available to fund those strategies. It is well documented that substance abuse plays a role in crime. *Drug crimes, DUI* and *repeat offenders* all impact public costs of victimization and enforcement. El Paso County Sheriff's Office Detention Bureau Chief Presley says "an average of 80 to 85 percent of those incarcerated in El Paso County have some type of chemical dependency." Crime prevention, substance abuse and mental health treatment, as well as offering inmates life skills and job training are prevention measures that have a price tag but can both reduce the number of victims as well as the cost of incarceration.

## ► Crime Rate

**This chart shows** the rate of occurrence of serious or index crimes occurring per 1,000 persons in Colorado Springs, Fountain, unincorporated El Paso County and the U.S. The U.S. rate is for cities of similar size to Colorado Springs, 200,000 to 530,000 residents. Index crimes include: murder, sexual assault, robbery, aggravated assault, burglary, larceny and auto theft.

Serious crimes per 1,000 people



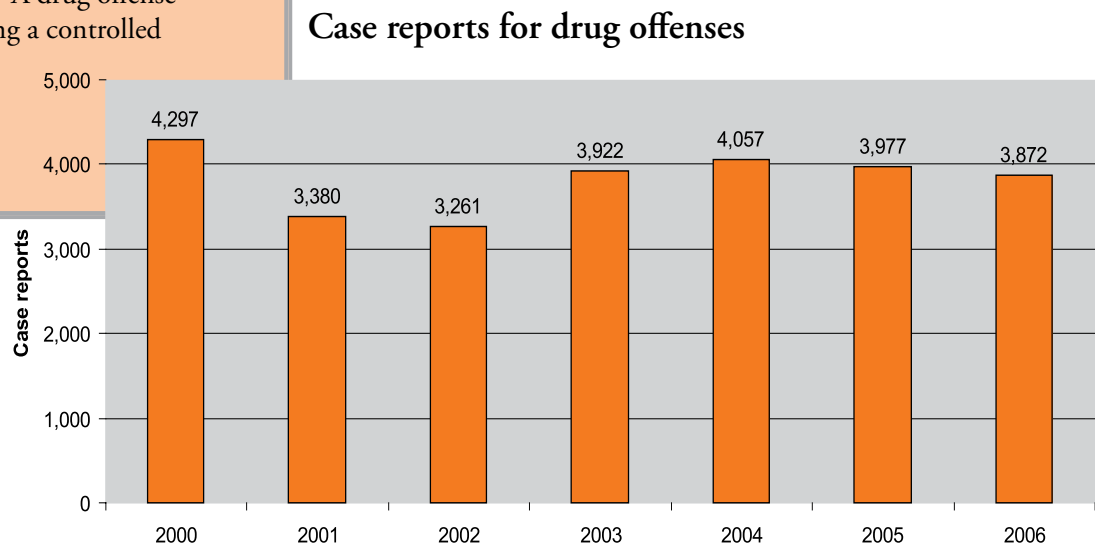
Source: Colorado Springs Police Department, Fountain Police Department, El Paso County Sheriff's Office, and FBI Crimes in the U.S., 2005

### *How are we doing?*

In 2005, the index crime rate in Colorado Springs of 55.1 was below the national average of 66 for cities of similar size.

## ► Drug Cases

**This chart shows** the total number of drug offense case reports taken by Colorado Springs Police Department and El Paso County Sheriff's Office from 2000 to 2006. A drug offense is any crime involving a controlled substance such as possession of methamphetamine or marijuana.



Source: Colorado Springs Police Department and El Paso County Sheriff's Office as reported to the National Incident Based Reporting System (NIBRS)

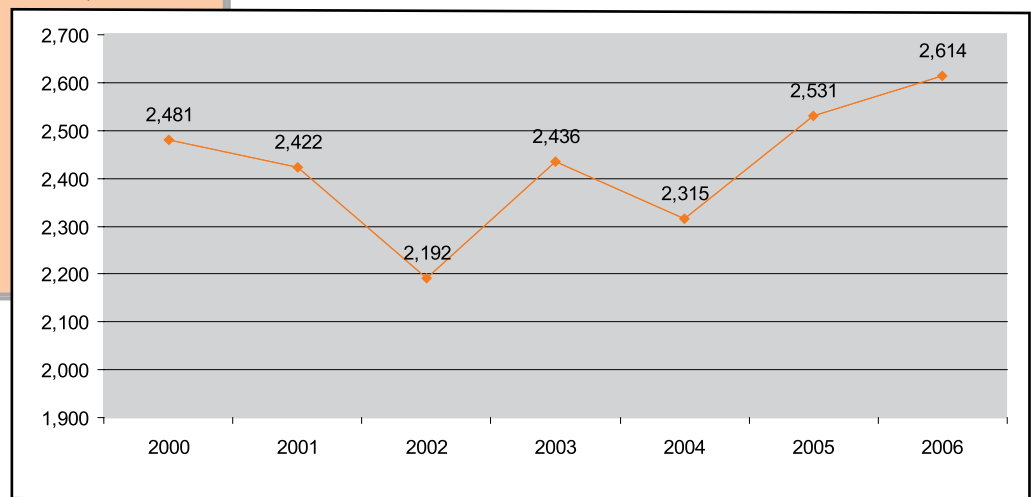
### *How are we doing?*

This indicator held steady from 2003 to 2005, and decreased slightly in 2006. The Colorado Department of Corrections identified 77 percent of the prison population on June 30, 2003 were substance abusers. Substance abusers had more serious criminal histories than non-abusers and 22 percent of the returned substance abusers had committed a new crime while on parole. <sup>1</sup>

## ► *DUI Arrests*

**This chart shows** the total arrests per year for Driving Under the Influence (DUI) of alcohol by the Colorado Springs Police Department, Fountain Police Department and El Paso County Sheriff's Office. For a DUI arrest, drivers must have a blood alcohol level of .08% or greater indicating their driving has been impaired due to consumption.

Arrests for DUI



Source: Colorado Springs Police Department, Fountain Police Department, and El Paso County Sheriff's Office

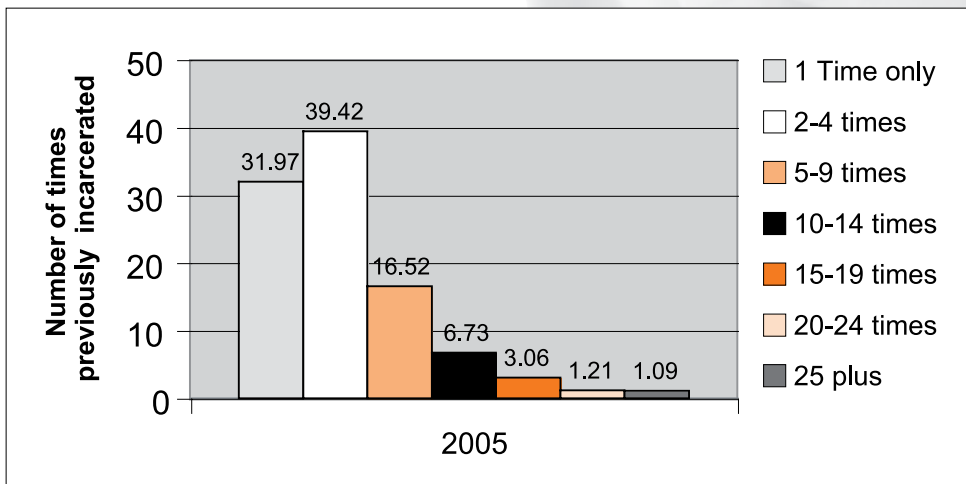
### *How are we doing?*

Since 2002, DUI arrests in Colorado Springs, Fountain and El Paso County have increased. Drunk driving has grave impacts for the community. El Paso County rates third in the state for alcohol related traffic fatalities for a total of 25 deaths. However, because of our population size, the rate of 4.42 deaths per 100,000 people ranks El Paso County 39<sup>th</sup> of all Colorado counties. El Paso County is also below the national county average for alcohol related traffic deaths which is 7.61 per 100,000.<sup>2</sup> The ability to apprehend DUI offenders increases when focused policing strategies such as check points are used. These strategies often require additional funding.

## ► Repeat Offenders in Jail

**This chart shows** the number of times each inmate in the El Paso County jail had been previously incarcerated at the jail.

### Repeat offenders in jail



Source: El Paso County Sheriff's Office

### *How are we doing?*

In 2005, 26,150 people or .4 percent of the population served time in the El Paso County jail. Of these 68 percent had been previously incarcerated compared to 66 percent in 2004. County Sheriff Maketa reported, "The recidivism rate among Colorado state inmates is 49 percent. Simply put, half of those released will commit a crime within three years of their release and those deemed most likely to re-offend have a recidivism rate of 95 percent."<sup>3</sup>

# PROVIDING SERVICES

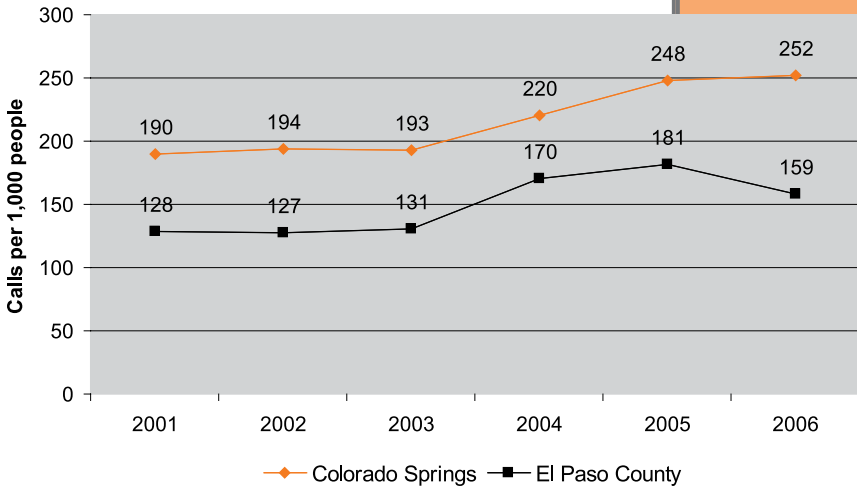
It is the responsibility of any community to ensure the equitable and effective provision of public safety services to all citizens. The crime rate and subsequent need for service is impacted by public safety strategies employed to prevent crime. The number of *calls for service* affect service levels and *response times*. In addition to responding to calls and protecting citizens, it is the duty of police to investigate and solve crimes. The *crime clearance rate* is an indicator of the success of this process. Citizen satisfaction is an important indicator of how successful local government is in delivering public safety services and is measured here by perception of *neighborhood safety* and *police presence*.

## ► Calls for Service

**This chart shows** the number of calls for service received per 1,000 residents by the Colorado Springs Police Department and the El Paso County Sheriff's Office, that patrols unincorporated El Paso County.

**How are we doing?**  
The number of police calls for service per 1,000 people is increasing. Maintaining service levels and response times when calls for service increase requires more police officers. Responding to increasing calls for service also impacts the amount of time law enforcement officers have for other policing activities, such as proactive policing efforts and crime prevention.

Law enforcement calls for service



Source: Colorado Springs Police Department and El Paso County Sheriff's Office

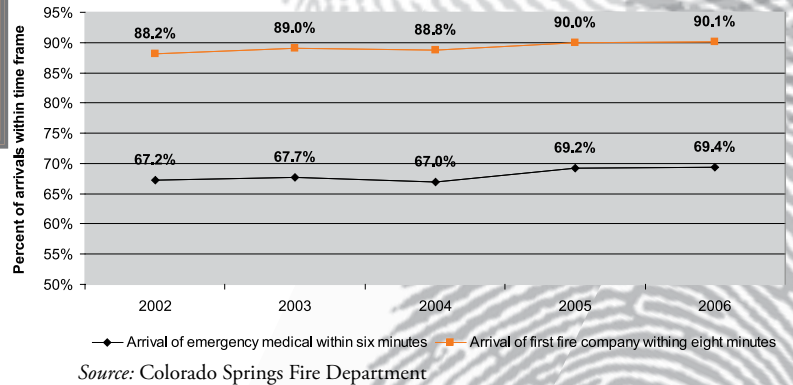
## ► Response Times

### *How are we doing?*

In 2005, the Colorado Springs Fire Department achieved the objective of having the first unit on scene within eight minutes, 90 percent of the time, which is 4.5 percent better than the median of comparable cities for 2005.<sup>4</sup> In 2006, 69.4 percent of emergency medical arrivals were within six minutes.

**This chart shows** the percentage of the time the Colorado Springs Fire Department arrived on the scene for emergency medical and fire calls within a given amount of time set as a goal for response. Response time is defined by the time from when a call is received by 911 until the first unit arrives on scene.

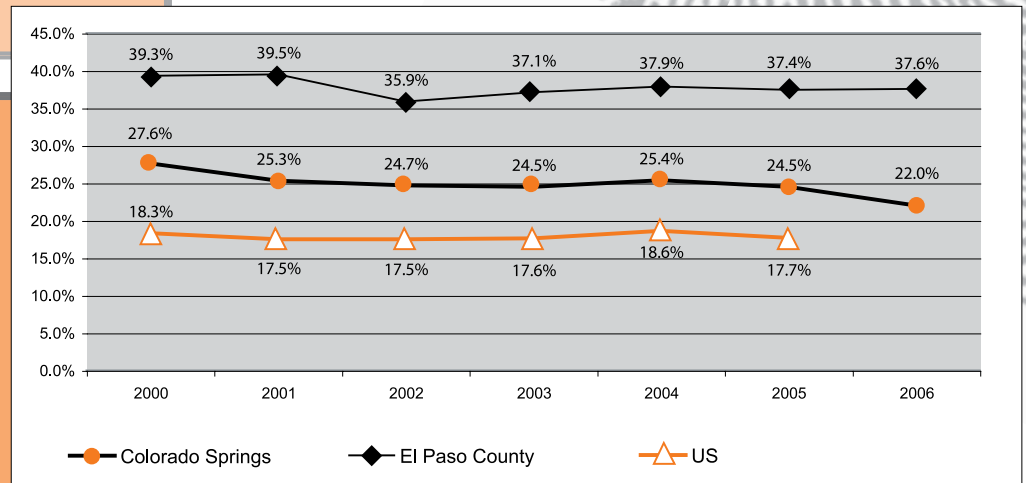
Fire and emergency service response times



## ► Crime Clearance Rate

**This chart shows** the clearance rate or those cases solved by Colorado Springs Police Department and El Paso County Sheriff's Office for all Part 1 Indexed Crimes: murder, sexual assault, robbery, aggravated assault, burglary, larceny and auto theft.

Cases solved

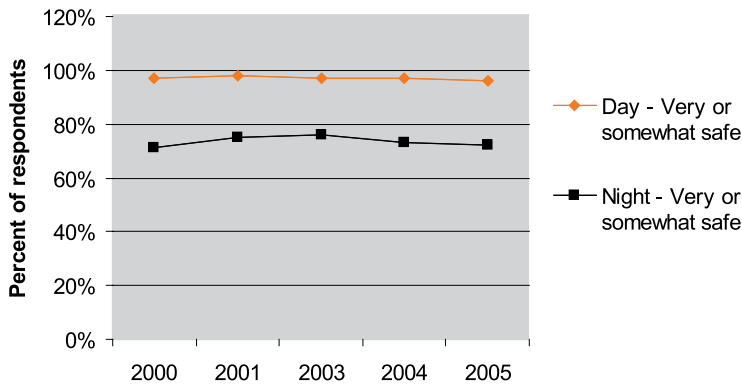


### *How are we doing?*

The clearance rate has remained fairly level in both jurisdictions. In 2006, the El Paso County Sheriff's Office investigated 3,162 Part I Crimes and Colorado Springs investigated 20,284. Property crimes including burglary, larceny and auto theft, represent the vast majority of crimes in both jurisdictions. When separated from all Part 1 Crimes, the clearance rate for violent crimes is higher, about 55 percent for Colorado Springs and 80 percent for El Paso County. The clearance rate is affected by the number of officers available to investigate crime, increased number of crimes and calls for service, and availability of investigative tools such as information sharing.

## ► Neighborhood Safety

Do you feel safe walking in your neighborhood?



Source: Colorado Springs Police Department Police Accountability and Service standards (PASS) City-wide Survey

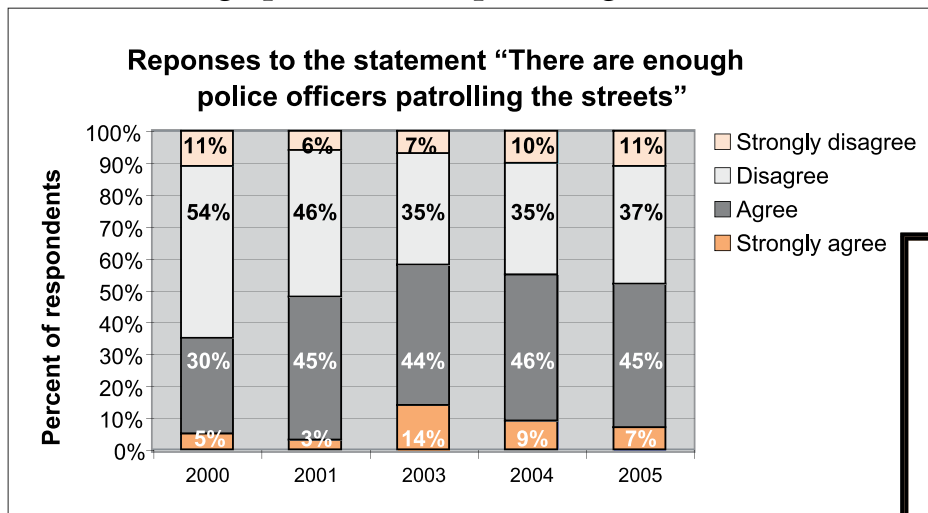
**This chart shows** the responses of independently polled citizens in Colorado Springs when asked if they feel safe walking alone in their neighborhoods during the day and at night.

### *How are we doing?*

In 2005, more than 90 percent of people felt very safe or somewhat safe walking around their neighborhood during the day. Predictably, the number of people who felt very or somewhat safe walking around the neighborhood at night was lower at 72 percent.

## ► Police Presence

There are enough police officers patrolling the streets



Source: Colorado Springs Police Department Police Accountability and Service standards (PASS) City-wide Survey

**This chart shows** the responses of independently polled citizens in Colorado Springs when asked if they agree or disagree with the statement: There are enough police officers patrolling the streets.

### *How are we doing?*

Since 2000, the percentage of respondents who agree or strongly agree with the statement has increased from 35 percent to 52 percent. However, the percentage peaked in 2003 at 58 percent and has been decreasing since that time.



# SAFETY IN THE HOME

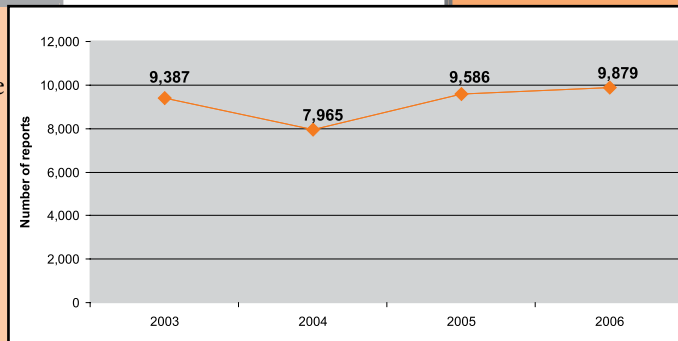
*Domestic violence* is a pattern of abusive behavior (emotional, verbal, physical, or sexual) that is used to establish power and control over another person through fear, intimidation and use of violence. Domestic violence can escalate into homicide. Because parental substance abuse is the primary presenting problem in child abuse cases, *child abuse* numbers can indicate a need for resources for early intervention strategies targeting substance abuse, mental health concerns, family violence, and poverty (please see *Promoting Social Wellbeing* for more information on these issues).

## ▶ Child Abuse

Child abuse reports

### How are we doing?

This chart shows all allegations made by anyone in El Paso County that a child is being abused or neglected, is beyond the control of a parent, or a danger to the community.



Except for a temporary dip in 2004, referrals regarding abused and neglected children or children in trouble are increasing. The Department of Human

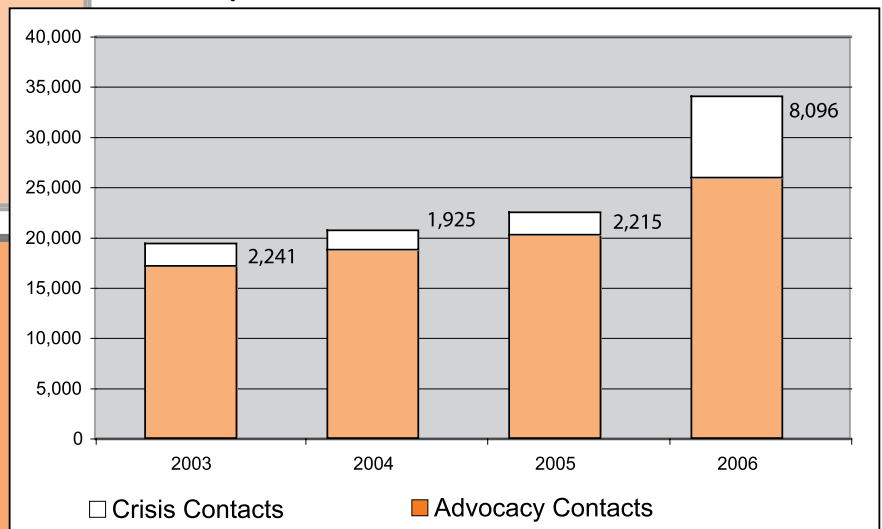
Services staff works closely with doctors, hospitals, law enforcement officials, schools, and others to identify maltreatment and intervene.

Source: El Paso County Department of Human Services

## ▶ Domestic Violence

This chart shows the number of advocacy and crisis contacts received annually at T.E.S.S.A., the primary nonprofit agency dedicated specifically and solely to the issues of domestic violence and sexual assault in El Paso and Teller Counties.

Advocacy and crisis contacts at T.E.S.S.A.



### How are we doing?

Total advocacy and crisis contacts to T.E.S.S.A. increased each year since 2003. Notably, the number of crisis contacts increased from 2,215 in 2005 to 8,096 in 2006. Research estimates that family violence occurs in one out of every six households (Gelles & Straus, 1988), suggesting that over 32,000 El Paso County households could be struggling with this issue. <sup>5</sup> During 2004, nine people died from domestic violence in El Paso and Teller Counties: three females (homicides) and six males (suicides).

Source: T.E.S.S.A., Colorado Springs



# Fostering community engagement

*In order to be inclusive, democratic and effective, communities require the involvement and engagement of all residents. When people are well-informed, vote, donate time and money to local organizations, work together with their neighbors, act as leaders, and meet together in public spaces, the entire community benefits. With engagement comes knowledge about one another's successes, challenges and lifestyles. When people care about one another and community issues, and act upon that concern, it increases the quality of life for everyone.*

## ***LOCAL KNOWLEDGE AND ACCESS***

- ▶ *Awareness of Local Issues*
- ▶ *Library Usage*

## ***POLITICAL ENGAGEMENT***

- ▶ *Voter Participation*

## ***PHILANTHROPY***

- ▶ *Community Donations*
- ▶ *Volunteerism*
- ▶ *Community-wide Volunteering*

## ***RELIGIOUS ENGAGEMENT***

- ▶ *Religious Membership*

## ***LOCAL LEADERSHIP***

- ▶ *Leadership Programs*

### **Fostering Community Engagement Council Chairs**

#### **Cathy Robbins**

El Pomar Foundation, Vice President

#### **Jon Stepleton**

Pikes Peak Community College Foundation, Executive Director

### **Fostering Community Engagement Council Members**

#### **Bev Agnew**

Interfaith Hospitality Network, Executive Director

#### **Cindy Aubrey**

KOAA-TV 5/30, News Director

#### **Donna Gardner**

DOVIA, President

#### **Devin Knuckles**

Focus on the Family, Assistant to the President

#### **Carolyn McDole**

Ecumenical Social Ministries, Executive Director

#### **Amanda Mountain**

Gazette Charities, Manager

#### **Wanda Reeves**

Colorado Mountain Reclamation Foundation, Project Manager

#### **Susan Saks**

Leadership Pikes Peak, Executive Director

#### **Terry Schwartz**

University of Colorado-Colorado Springs,  
Associate Dean - School of Public Affairs

#### **Pam Shipp**

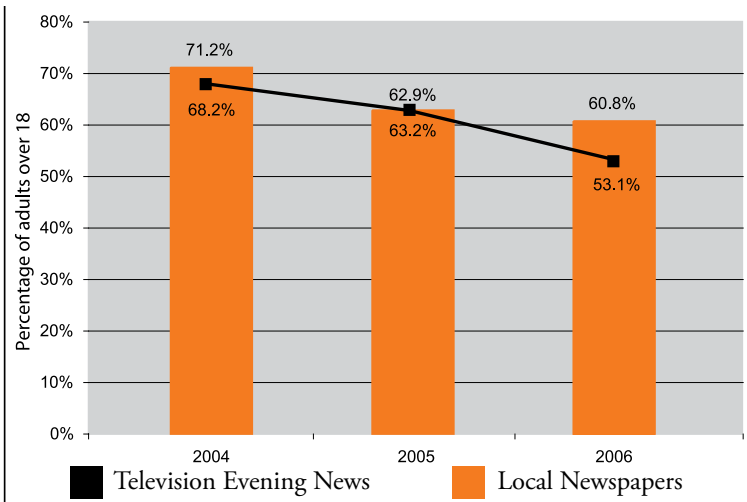
Center for Creative Leadership, Senior Program Associate

# LOCAL KNOWLEDGE AND ACCESS

The first step toward engagement is knowledge of what is going on in the community. Watching local television news or reading the local newspaper gives people *awareness of local issues*, including city and county politics, the local business community and opportunities to socialize with one another. A flourishing *library* system provides residents with information, entertainment, internet access and a place to meet.

## ► Awareness of Local Issues

### Accessing local television and print media



Source: Media Audit

**This chart shows** the percentage of the local population 18 years and older that watched the local television evening news (to include channels: KOAA 5/30, KKTV 11, KRDO 13 and Fox) at least once in the past week or read one of the last five issues of the Gazette, Independent or Colorado Springs Business Journal.

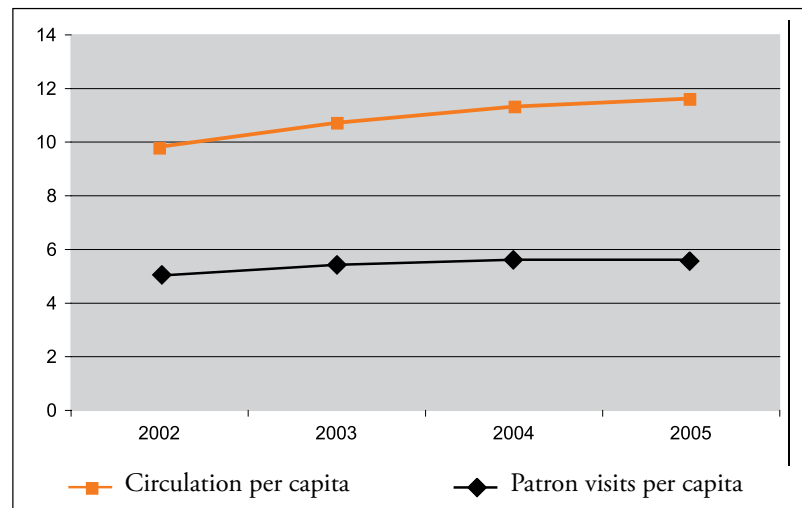
**How are we doing?**  
The percentage of adults accessing traditional local news sources has been declining since 2004 for both television and print sources.

**This chart shows** the total annual patron visits and books circulated per capita since 2002.

## ► Library Usage

**How are we doing?**  
Since 2002, library usage measured by patron visits and circulation is increasing even as the population grows. Patron visits increased from 5 per person to 5.6, and circulation increased from 9.8 books per person to 11.6.

### Library visits and circulation per capita



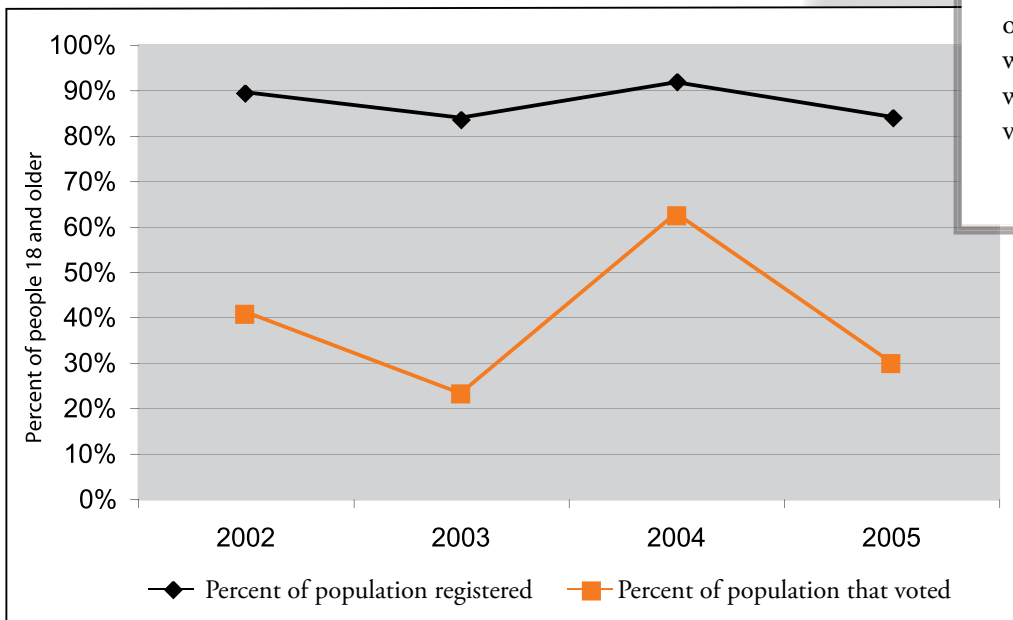
Source: Pikes Peak Library District

# POLITICAL ENGAGEMENT

A universally recognized sign of a community's engagement is its willingness to elect its own leaders and to shape laws at the ballot.<sup>1</sup> *Voter participation* measures civic interest and the public's optimism regarding their impact on decision-making. A high level of citizen involvement improves the accountability of government and increases personal investment in community issues.<sup>2</sup>

## ▶ Voter Participation

### Voter registration and voting



This chart shows the percentage of the population 18 and older who are registered to vote, as well as the percent that actually voted.

Source: El Paso County Clerk and Recorder

### *How are we doing?*

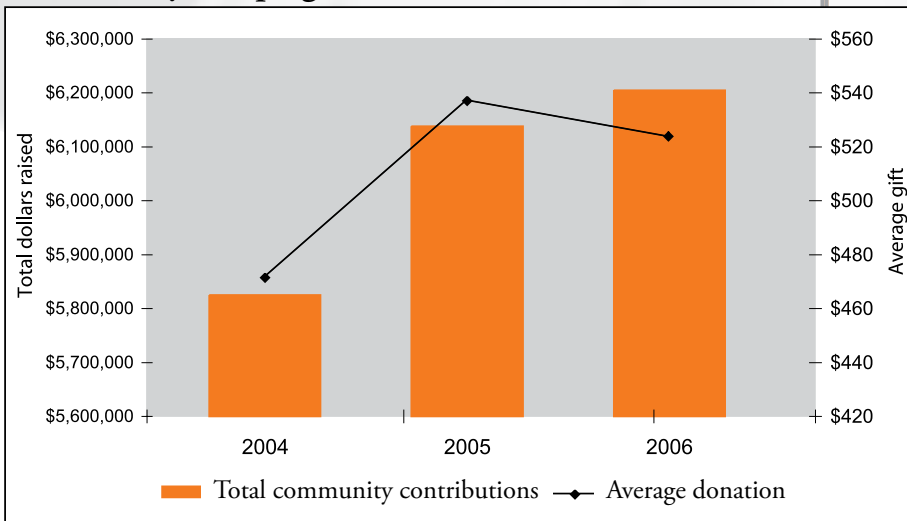
While most eligible voters are registered, less than half typically vote. Since 2002, voting participation has ranged between 23 percent and 63 percent of eligible voters. It is typical to see a spike in voter participation in presidential election years such as 2004. Nationally, voter participation in presidential elections has been declining since it peaked at 62.8 percent in 1960. In 2004, an estimated 55.3 percent of the U.S. population voted in the general election compared to 63 percent in El Paso County.

# PHILANTHROPY

A strong, well-supported nonprofit community service sector is critical for maintaining a healthy and stable region. *Community donations* and *volunteerism* are helpful indicators for assessing the viability of the nonprofit sector and the extent to which residents are engaged and invested in the wellbeing of their community.<sup>3</sup>

## ► *Community Donations*

### Community campaign contributions



**This chart shows** the total dollars raised by Pikes Peak United Way's annual campaign and the Empty Stocking Fund. It also tracks the average amount given by donors. While this does not track all charitable giving in El Paso County, both campaigns are widely marketed to the entire community and each campaign supports numerous local nonprofit organizations.

Source: Pikes Peak United Way & Gazette Charities

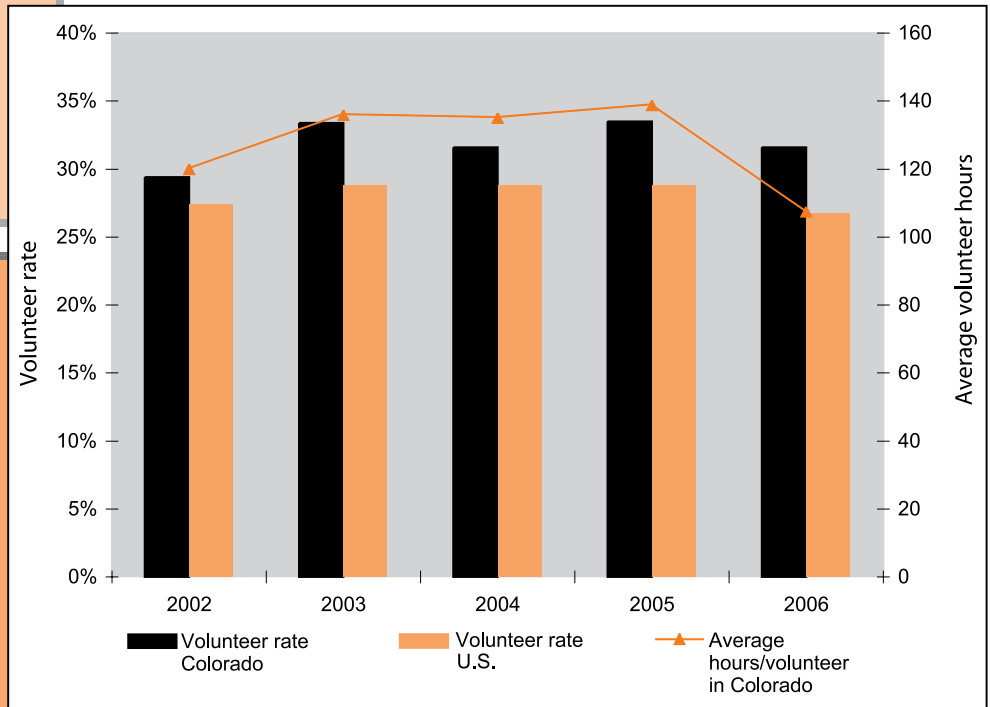
### *How are we doing?*

Contributions to these two campaigns have increased each year. However, the average gift peaked in 2005 at \$537 and then dropped to \$523 in 2006. The 2002 Study on Giving and Volunteering in the Pikes Peak Region reports that 88 percent of El Paso County households make charitable contributions and that the average was \$1,340

## ► Volunteerism

**This chart shows** the percentage of Colorado and U.S. residents who volunteered through or for an organization at least once in the past year, as well as the average annual hours donated by each Colorado volunteer.

### Volunteerism in Colorado and the U.S. and average hours volunteered



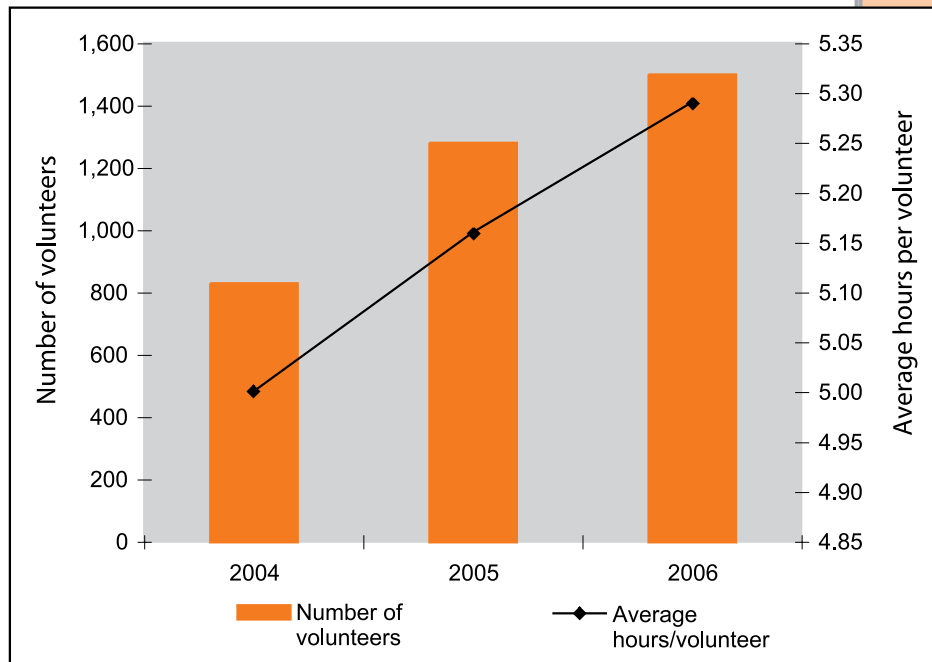
Source: Corporation for National and Community Service

### How are we doing?

Coloradans volunteer more than the U.S. average. Since 2002, the percentage of Coloradans who volunteer has hovered between 29 percent and 32 percent. In 2006, average hours volunteered was at its lowest since 2002 at nearly 108 hours per year.

## ► Community-wide Volunteering

### Volunteers and average hours donated at annual Make a Difference Day



Source: Pikes Peak United Way

**This chart shows** the number of volunteers and the average hours donated per volunteer at the annual Make a Difference Day, a community-wide volunteer event open to all people who want to participate. Individuals and groups can volunteer for a range of community projects with more than 30 local agencies.

### How are we doing?

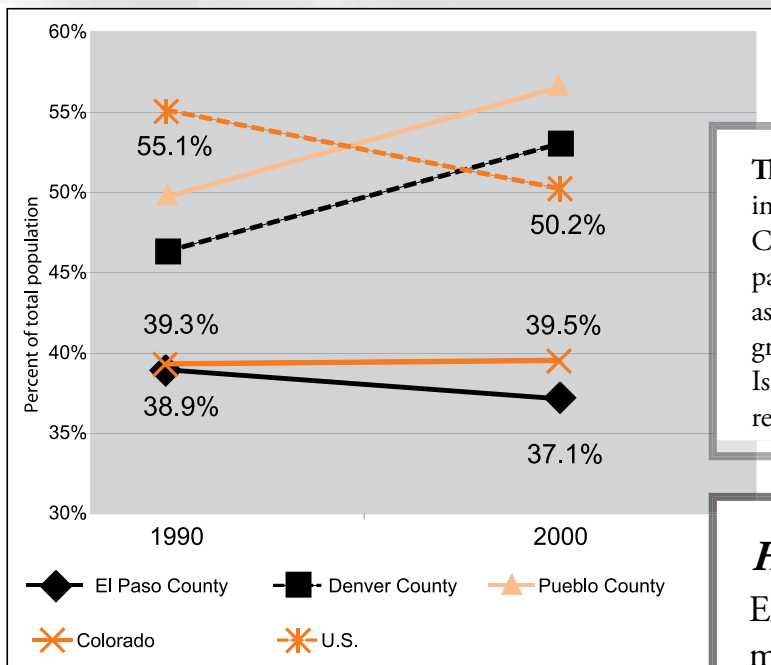
This measures one volunteer opportunity in the community. The number of volunteers and the average hours per volunteer have both increased since 2004. Make a Difference Day is promoted by the Points of Light Foundation and USA Today's Weekend Edition.

# RELIGIOUS ENGAGEMENT

Churches, synagogues, mosques, and other houses of worship provide a vibrant institutional base for civic good works and community engagement. Roughly speaking, nearly half of America's social capital [or community engagement] is religious or religiously affiliated, whether measured by association memberships, philanthropy, or volunteering. Houses of worship run a variety of programs for members, from self-help groups to job training courses to singles' clubs. Houses of worship [across the U.S.] also spend \$15 billion to \$20 billion each year on social services, such as food and housing for the poor and elderly. Regular religious services attendees meet many more people weekly than non-worshippers, making religious institutions a prime forum for informal networking.<sup>4</sup> For these reasons, tracking *religious membership* in the community provides insight into another avenue of community engagement.

## ► Religious Membership

### Members of religious congregations



**This chart shows** membership (adults and children) in religious congregations in a national sample of 149 Christian and other religious bodies. Specifically, participants included 139 Christian denominations, associations or communions; two specially defined groups of independent Christian churches, Jewish and Islamic estimates and counts of temples for six Eastern religions.

***How are we doing?***  
 El Paso County has a lower rate of membership in religious congregations than Denver County, Pueblo County, Colorado and the U.S. Additionally, while other areas show an increase in membership from 1990 to 2000, only El Paso County residents' and U.S. average membership decreased.

Source: Religious Congregations and Membership in the United States, 2000. Collected by the Association of Statisticians of American Religious Bodies (ASARB).

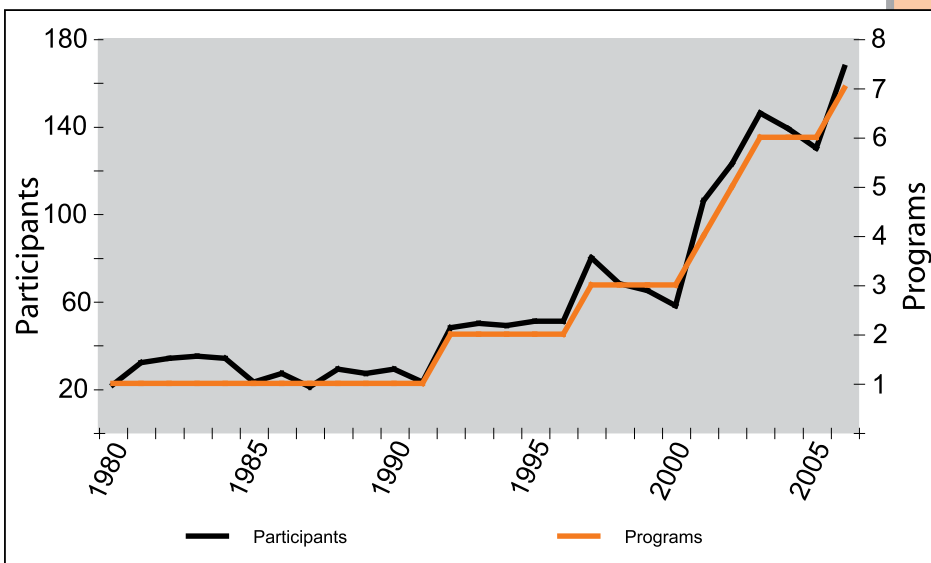


# LOCAL LEADERSHIP

*Leadership programs* teach people leadership skills, increase their knowledge about issues, and provide diverse populations opportunities to engage together in community projects. These programs also connect participants with appropriate volunteer opportunities and provide networking opportunities. This type of community engagement is valuable because it cultivates an even greater level of commitment and empowers people to take responsibility for their community and local government.

## ► Leadership Programs

Annual number of leadership programs and participants



Source: Leadership Pikes Peak, Center for Creative Leadership, El Paso County, City of Colorado Springs

**This chart shows** the number of formal leadership programs and their participants in El Paso County since 1980. The number of participants is not unduplicated – some community leaders have been participants in more than one of these programs. Programs tracked are: Leadership Pikes Peak Signature Program, Community Leadership Program, Colorado Springs Leadership Institute, Nonprofit Executive Leadership Program, Women’s Community Leadership Initiative, Citizen’s Academy and Citizen’s College.

### *How are we doing?*

In 1980 El Paso County offered one formal leadership program. Today, there are seven general leadership training programs plus several other programs offered for specific groups of people and sectors. Participation in these programs has grown from 22 people per year to more than 160 people per year in 2006. Since 1980 a total of 1,667 people have participated in one of these programs.

# END NOTES

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## About El Paso County

1 Much of the narrative in this section is copied and adapted from information posted on El Paso County's official website at: <http://adm2.elpasoco.com/epchome/default.asp>, the City of Colorado Springs' official website at <http://www.springsgov.com/Page.asp?NavID=194> and the 2006 El Paso County Budget in Brief.

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## Growing a Vibrant Economy

- 1 Report on the Economy 2005 Colorado Springs, CO Metropolitan Area Quality Job for a Quality Community. Colorado Springs: The Greater Colorado Springs Economic Development Corporation, 2006. 32-33.
  - 2 Children's Defense Fund. Wasting America's Future. Boston: Beacon P, 1994. xvii.
  - 3 "Health and Poverty." Institute for Research on Poverty. 28 Feb. 2006. University of Wisconsin Madison. 1 June 2007 <<http://www.irp.wisc.edu/research/health.htm>>.
  - 4 Colorado: the State of Opportunity 2005 Report. The Bell Policy Center. Denver: The Bell Policy Center, 2005. 20.
  - 5 Ibid. 76.
  - 6 United States Census Bureau. American Community Survey Puerto Rico Survey 2005 Subject Definitions. 2006. 1 June 2007 <[http://www.census.gov/acs/www/Downloads/2005/usedata/Subject\\_Definitions.pdf](http://www.census.gov/acs/www/Downloads/2005/usedata/Subject_Definitions.pdf)>.
  - 7 Pearce, Diana M. Overlooked and Undercounted: Struggling to Make Ends Meet in Colorado. Colorado Fiscal Policy Institute. 2007. 12. 1 June 2007 <[http://www.wfco.org/documents/CCLP\\_SSPproof\\_final.pdf](http://www.wfco.org/documents/CCLP_SSPproof_final.pdf)>.
  - 8 Colorado: the State of Opportunity 2005 Report. The Bell Policy Center. Denver: The Bell Policy Center, 2005. 76.
  - 9 Pearce, Diana M. Overlooked and Undercounted: Struggling to Make Ends Meet in Colorado. Colorado Fiscal Policy Institute. 2007. 4-5. 1 June 2007 <[http://www.wfco.org/documents/CCLP\\_SSPproof\\_final.pdf](http://www.wfco.org/documents/CCLP_SSPproof_final.pdf)>
- 

## Promoting Social Wellbeing

- 1 Some of the narrative throughout this section is borrowed from: 2006 Quality of Life Progress Report. Jacksonville Community Council Inc. Jacksonville: Jacksonville Community Council Inc., 2006.
- 2 United States. Census Bureau; American Communities Survey; generated by Rachel Lindenberg; using American Fact Finder; <<http://factfinder.census.gov>>; 1 June 2007.
- 3 "Find Child Care: Why Quality Matters." Qualistar Early Learning. 2006. 1 July 2007 <[http://www.qualistar.org/child\\_care/](http://www.qualistar.org/child_care/)>.
- 4 "Income Differences and Residential Segregation."

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Nine separate Vision Councils created these indicators, and will lead efforts to set goals and targets moving forward. We are grateful to all of these members, listed at the beginning of each section.

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Howard Brooks,  
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# APPENDIX K

## APPENDIX K: REGIONAL INDICATORS PROJECTS



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# Pikes Peak Sustainability Indicators Project

## Project Report

(final draft 5 August 2006)

A publication of  
The Pikes Peak Sustainability Indicators Project  
Initiated by Fort Carson Mountain Post  
Conducted in collaboration with citizens and governments  
of El Paso, Fremont and Pueblo Counties, Colorado  
2003-2006

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**SUSTAIN THE MISSION.  
SECURE THE FUTURE.**



# THE ARMY STRATEGY FOR THE ENVIRONMENT



**U.S. ARMY**



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## Goals of the U.S. Army Strategy for the Environment: Sustain the Mission, Secure the Future (2004)

- Foster an ethic within the Army that takes us beyond environmental compliance to sustainability;
- Strengthen Army operational capability by reducing our environmental footprint through more sustainable practices;
- Meet current and future training, testing and other mission requirements by sustaining land, air and water resources.
- Minimize impacts and total ownership costs of Army systems, materiel, facilities and operations by integrating the principles and practices of sustainability.
- Enhance the well-being of our Soldiers, civilians, families, neighbors and communities through leadership in sustainability.
- Use innovative technology and the principles of sustainability to meet user needs and anticipate future Army challenges.



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## Executive Summary

Cities and regions around the country have been developing indicators of their social, economic and environmental progress for use in public policymaking and management. They are sometimes called “progress” indicators, sometimes “quality of life” or “community” indicators, and sometimes “sustainability” indicators. Just as any business or nonprofit organization develops goals and indicators of its success, communities are coming to understand that the phrase “what gets measured gets managed” applies to community development as well as organizations.

The PPSIP project is a partnership between Fort Carson Mountain Post and the governments, businesses and citizens of the Pikes Peak Region that hosts Fort Carson’s primary operations (El Paso, Fremont and Pueblo counties). The objective of PPSIP’s phase one activity, concluding with the Fourth Annual Fort Carson Community Sustainability Conference in November 2005 and this report, was to provide participating governments with sufficient information, developed in a regionally-collaborative manner, to determine whether the governments wish to:

- Adopt indicators as a community and/or regional management strategy;
- Adopt sustainability indicators supportive of Fort Carson’s and other regional sustainability goals
- Adopt indicators that are regionally consistent to the extent practical, and
- Formally collaborate on regional indicators and solutions to key challenges.

The US Army determined in 2001 to begin using sustainability concepts to manage its installations’ environmental and social impacts (and make the installations better neighbors to hosting communities). Fort Carson was one of seven major installations selected for the first round of sustainability planning and strategy implementation. This decision resulted from the Army and Department of Defense enjoying strong cost-effectiveness from its pollution prevention programs, and its recognition that major organizations around the world, especially in private business, were enjoying competitive benefits from the next level of sophistication: a whole-systems sustainability strategy that combines environmental and social responsibility with worker health and safety management into a single system designed to achieve continually improving sustainability (environmental and social) performance rather than merely legal compliance.

## Fort Carson’s Sustainability Goals:

Fort Carson’s award-winning Directorate of Environmental Compliance and Management (DECAM), under the leadership of Director Tom Warren and Deputy Director Mary J. Barber (with support from installation sustainability planner Kelly O’Neill) launched Fort Carson’s Sustainability Program in 2001. The regional community was invited to join with Fort Carson leadership in September, 2002 to learn about the Army’s sustainability strategy and develop long-term (i.e. by year 2027) goals for Fort Carson, which are:



1. Sustain all facility and mobility systems from renewable sources, and reduce the total water purchased from outside sources by 75%.
2. Reduce automobile dependency and provide balanced land use and transportation systems.
3. Improve communication to foster understanding and attain a “Community of One.”
4. Enhance partnering to collaboratively develop, integrate, and implement regional sustainability.
5. The total weight of hazardous air pollutant emissions is reduced to zero.
6. Further integrate sustainability principles into the Fort Carson land use planning, Real Property Master Planning, and Military Construction, Army (MCA) programming processes.
7. All applicable facilities at Fort Carson will be high performance buildings that meet or surpass the Platinum Standard of SPiRiT or LEED.
8. Key stakeholder groups are trained, compliant and motivated toward sustainability principles.
9. All DOD and Fort Carson procurement actions support sustainability.
10. The total weight of solid and hazardous waste disposed of is reduced to zero.
11. Training Ranges (land and associated air space used for live fire ranges, maneuver, testing and urban development designated for Military Operations in Urban Terrain training) capable of supporting current and future military training to standard.
12. Advance a sustainable mission and Fort Carson by adopting a SEMS and by imparting (passing on) a personal commitment and enthusiasm for sustainability.

These goals serve as Fort Carson’s long-term sustainability indicators. Fort Carson’s process includes five-year and shorter-term goals. Though some of the goals/indicators are specific to installation sustainability performance, the list include three goals related to enhancing the installation’s community relationships and recognizing that Fort Carson can only attain its sustainability goals with strong community/regional support. The PPSIP project grew from these goals – summarized as:

- Enhance Regional Partnering Towards Regional Sustainability
- Train and Motivate Stakeholders Towards Sustainability
- Foster understanding to attain a “Community of One”

### **What is sustainability?**



“Sustainability” refers to a systematic approach to long-term environmental, social and economic progress. The world has seen steady adoption of sustainability goals, activities and reporting since the late 1980s when the term “sustainable development” was first adopted by the United Nations and the World Business Council for Sustainable Development (co-founded by Holcim Group).

### **Regional and Statewide Sustainability Activity**

In Colorado, sustainability concepts and strategies are being explored or adopted in both the private, public and academic sectors:

- Fort Carson’s sustainability pilot program was initiated in 2002; sustainability was adopted by the US Army as its service-wide environmental strategy in 2004. Fort Carson’s Fifth Annual Community Sustainability conference will occur in November, 2006.
- The Air Force Academy’s award-winning natural resource protection efforts have been designed to “ensure the long-term sustainability and beauty of our lands” since 1998. A combined heat and power natural gas-fired fuel cell, an energy efficiency technology, is being demonstrated at the Academy’s gymnasium in 2006.
- The Pikes Peak Sustainable Business Network, a program of The Catamount Institute, was initiated in 2002; the Colorado Alliance of Sustainable Business Associations was initiated in 2003 to coordinate statewide efforts of several local sustainable business organizations. Statewide promotion of sustainability practices is conducted by Connected Organizations for a Responsible Economy (CORE) – Fusing Sustainability with Business (CORE is a non-profit economic development partner of the State of Colorado’s Advance Colorado Center).
- The University of Colorado at Colorado Springs has adopted sustainability-based management for its operations and is developing a cross-disciplinary sustainability major.
- Private businesses recognized as sustainability leaders include New Belgium Brewing of Ft. Collins, Holcim US Inc. cement operations in Florence, CH2M Hill and many architectural/engineering firms, and leading-edge global companies with Colorado operations such as Intel Corporation, IBM, Anhaeuser-Busch, Hewlett-Packard and Agilent Technologies.
- The City of Lakewood incorporated sustainability concepts into its Comprehensive Plan in 2003; specific ordinance development is ongoing.
- The Colorado Springs Economic Development Corporation invited a sustainability task force to contribute to its Springs Into Action ’04 economic development strategy.
- Sustainability concepts are guiding the Pueblo Army Depot’s redevelopment planning efforts and the management of the National Renewable Energy Laboratory in Golden.
- The Colorado Department of Public Health and Environment’s Sustainability Program for businesses promotes innovative efforts to develop and implement



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environmentally sustainable practices in Colorado (see [www.cdphe.state.co.us/el/sustainability](http://www.cdphe.state.co.us/el/sustainability))

## **PPSIP Organization**

The PPSIP has been comprised of the work of a Steering Committee and four working Task Forces: Nature, Economy, Well-being and Society.

The Steering Committee is composed of representatives from the participating local governments and Fort Carson, and organizations that provide technical expertise or support. The Steering Committee includes representatives from the following organizations:

- Cities: Canon City, Colorado Springs, Florence, Fountain, Manitou Springs, Pueblo
- Counties: El Paso, Fremont, Pueblo
- Technical: Colorado College, El Paso County United Way, Fort Carson, Pikes Peak Area Council of Governments, US Fish and Wildlife Service

The participating cities and counties were asked to provide a staff or citizen representative to each of the Task Forces. The following regional non-profit civic organizations were represented through participation by its members and governmental departments by staff delegated by cities or counties:

- 2010 Commission of Pueblo
- Action 22
- Bechtel
- Bee Vradenburg Foundation
- Better Pueblo
- Central CO Soil Conservation District
- City/County of Pueblo Health Dept.
- Colorado Springs Council of Neighbors and Organizations
- Colorado Springs Utilities
- CSU Extension Office/Pueblo
- Fountain MAPP
- Housing and Building Association of Colorado Springs
- Pikes Peak Sustainable Business Network
- Pioneers Museum
- Penrose-St. Francis Health Services
- Peterson Air Force Base
- Posada
- Pueblo Chamber of Commerce
- Pueblo County Cooperative Extension
- Pueblo Depot Activity Development Authority
- Pueblo Economic Development Corporation (PEDCO)
- Pueblo Sustainable Development Steering Committee
- Pueblo West Metropolitan District
- Recycling Coalition of Colorado Springs
- Sierra Club, Pikes Peak Chapter



- SE Colorado Renewable Energy Society
- The Nature Conservancy
- UCCS / Center for Colorado Policy Studies
- UCCS / SEAS
- US Fish and Wildlife Service

The various Technical resources contributed their respective expertise to the work of the Task Forces and Steering Committee. The project was staffed by Christopher Juniper and Ann Oatman-Gardner of Natural Capitalism Solutions on contract to Fort Carson.

### **PPSIP Progress**

PPSIP organizational meetings were held in 2003-4. In 2005, following commitments by participating governments to PPSIP participation, the Task Forces and Steering Committee met several times each to explore the merits of using indicators for public progress management and instances where indicators are already being measured to drive performance; to identify hot topics deserving indicators, and to suggest indicators for the hot topics and the key planning goals of the governments.

Over 100 topics were identified that are deserving of progress tracking through regional and/or local indicators. To the extent possible, indicator topics and potential indicators were selected with respect to the whole-system nature of both socio-economic reality, existing government plans, and of sustainability concepts. Indicators of two types were recommended: “Predictive” indicators that predict whether the community/region is set-up for making progress, and “Performance” indicators that measure whether progress has occurred. Ideally, at least one Predictive and Performance indicator (or several indicators combined into an “index” of predicted performance or progress) will be adopted for each topic that the community/region wishes to manage.

As is typical for community indicators projects that have been conducted around the US, Pikes Peak region citizens want to measure indicators that are often not being tracked or are difficult to track. For this reason, the PPSIP lists for consideration by regional governments and civic organizations both the full list of potential indicators, called the “Universe of Indicators,” and a shortened list of “Recommended Indicators” that were selected to reflect the primary concerns of the key topics but using data that is already collected or reasonably collectable.

The full list of indicator topics and potential indicators are provided in the main report; the appendices also contain background information regarding the local plans and hot topics from which the “Recommended Indicators” were developed, and information about indicator projects in other communities.

### **Next Steps**

Governments in the region must now consider the following questions regarding the use of indicators:





- Does the government want to set up an indicators system for measuring and/or managing progress? If so, what should be the role for civic organizations?
- Will a regional approach to the indicators be valuable from cost-effectiveness and regional synergy perspectives?
- Does the “sustainability” concept and/or techniques, including the sustainability goals of Fort Carson, add value to the indicators process?

The PPSIP encourages local governments in the three counties hosting Fort Carson plus Teller County, to answer these questions in coming months; Fort Carson will continue to provide staff support to the PPSIP for this process, and is collaborating with Pikes Peak Area Council of Governments (PPACG) to transfer the PPSIP to a permanent home at the PPACG.

## **Recommended Indicators**

### **Nature**

#### **N1. Land Use**

##### Topics:

- N1.1. Urban Infrastructure and Facilities
- N1.2. Planning and Density
- N1.3. Community Institution Protection
- N1.4. Urban/wild land interfaces

##### Recommended Indicators:

###### **Performance:**

- Bedrooms per acre of residential zoning
- Jobs per acre of commercial or industrial zoning
- Square footage developed (new square footage – whether on new land or in-fill development) relative to total new urban land developed
- Percent linear feet military institution and other major economic institution borders protected from inappropriate adjacent development

###### **Predictive:**

- Adopted and enforced comprehensive plans promoting efficient development, protection of agricultural lands and institutions.

#### **N2. Biodiversity / Ecosystem Health**

##### Topics:

- N2.1. Ecosystem Health Management
- N2.2. Natural Capital



## Recommended Indicators:

### Performance:

- Regional Biological Health Index; potential measures
  - Invasive species
  - In-stream water quality
  - Endangered species
  - Soil health, etc.

### Predictive:

- Percent residents educated about ecological land management

## N3. Energy

### Topics:

- N3.1. Local Impacts from Energy Production / Use
- N3.2. Local Energy Production / Use
- N3.3. Non-Local Global Impacts of Energy Production / Use

## Recommended Indicators:

### Performance:

- Regional Local Sources Pollution Index; potential measures in ratio to population and/or economic output
  - Emissions from energy use
  - Water pollution from energy use, etc.

### Predictive:

- Incentives promoting energy productivity investments (“Energy productivity” is dollar revenues achieved per energy unit (e.g. BTUs) consumed)
- Growth of public transit use relative to population growth

## N4. Water

### Topics:

- N4.1. Water Supply
- N4.2. Wastewater and Water Quality

## Recommended Indicators:

### Performance:

- Gallons treated potable water used relative to population and economic output
- Gallons of wastewater treated relative to population and economic output
- Municipal water shares relative to urban water demand (i.e. supply compared to demand for urban water)
- Annual change in average aquifer levels

### Predictive:



- Incentives promoting water productivity relative to previous year (“water productivity” is water use per dollar of revenue)
- Incentives promoting wastewater reduction
- Annual growth of water demand (specified by urban, and aquifer-supplied)
- Incentives and education protecting in-stream water quality

## **N5. Waste / Solid Waste**

### Topics:

- N5.1. Solid Waste
- N5.2. Other Waste

### Recommended Indicators:

#### **Performance:**

- Solid waste and hazardous waste disposal relative to economic output (i.e. tons of waste landfilled per dollar of regional income)

#### **Predictive:**

- Incentives promoting reduction of solid and hazardous waste (including recycling)

## **Economy**

### **E1. Business: Health of Individual Businesses**

#### Topics:

- E1.1. Local (ownership) business health
- E1.2. Overall business health
- E1.3. Business support infrastructure

#### Recommended Indicators:

##### **Performance**

- Growth in (tracked) local business contracts with large institutions (defined as organizations with more than 500 local employees)
- Local business bankruptcy rates
- Growth of sales taxes generated by small businesses (<20 emp.)

##### **Predictive**

- Programs supporting small business growth and institutional contracts

### **E2. Economic Vitality – Meeting Local Economic Goals**

#### Topics:



- E2.1. Business diversity
- E2.2. Business location
- E2.3. Citizen economic health
- E2.4. Overall Economic Vitality

### Recommended Indicators:

#### **Performance:**

- Annual growth of targeted (by economic development agency) industries measured by employment and total number of business organizations
- Annual growth of employment and total number of business organizations in areas targeted for business growth

#### **Predictive:**

- Time and resources devoted to economic development activities by citizens and governments (compared to previous years and compared on a per capita basis to similar regions elsewhere in the US)
- Incentives supporting economic development goals (whether targeted to individual organizations or to all organizations)

## **E3. Employment – Health of Citizen’s Relationship to Paid Work**

### Topics:

- E3.1. Workforce alignment with employment opportunities
- E3.2. Worker compensation
- E3.3. Worker transportation access to employment opportunities

### Recommended Indicators:

#### **Performance**

- Average commute times
- Total jobs and new jobs that are easily accessible (locally defined e.g. accessible without a personal vehicle?) to economically challenged neighborhoods (i.e. lower income areas)

#### **Predictive**

- Engagement of business community in educational curriculum development of 9-12 and secondary education institutions

## **E4. Sustainable Economic Practices**

### Topics:

- E4.1. Business / organization sustainability practices
- E4.2. Transition to a sustainable economy



## Recommended Indicators:

### Performance

- Percent of organizations greater than 50 people employing an Environmental Management System (EMS/SEMS)

### Predictive

- Public educational and/or cost-effective policies / incentive programs for businesses to implement sustainability management systems

## Well-Being

### W1. Education: Development of Human Capital

#### Topics:

- W1.1. K-12 Education
- W1.2. Continuing Education
- W1.3. Public Education

## Recommended Indicators:

### Performance:

- Percent of all public education students meeting the Colorado state proficiency standard for each subject area assessed.
- The annual dropout rate and graduation rate reported by the state of Colorado.
- Satisfaction of parents
- Calculate the ratio of mean percentile of the District student achievement divided by the District cost per student (per pupil cost).
- Percent of population with higher education degree
- Human capital development index: possible measures
  - Tuition Cost
  - opportunity costs
  - cost of living compared to incomes
  - access to education
- Percent of population with home internet access

### Predictive

- Number of kids per classroom/teacher in K-3, 3-8, 9-12.
- Percent public education staff that meet the certification and highly qualified designation as reported by the state of Colorado.
- Percent of pre-K age children in programs by family income level
- Percent kids in alternatives from general public ed classrooms

### W2. Health: Human Health Performance

#### Topics:



- W2.1. Access
- W2.2. Prevention
- W2.3. Environmental Quality

### Recommended Indicators:

#### Performance:

- Percent of persons of all ages who have a specific source of ongoing primary care.
- Percent of population accessing routine health screening visits, immunizations, etc.
- Percent of those with serious mental illness receiving treatment, including Post Traumatic Stress Syndrome (PTSS)
- Public dollars expended treating results of risky behavior
- Ratio public health dollars spent to population
- Ratio of population to percent change in new STD cases reported
- Ratio of population / Death due to heart disease
- Ratio of population / Self-reported number of adults in poor to fair health

#### Predictive

- Percent of those under 65 years of age with health coverage
- Percent of school districts with mandatory health education
- Percent employers offering preventative health insurance
- Percent population that has smoked in past month
- Percent teen population abstaining or using condoms is active
- Percent Adult population reporting light or moderate physical activity
- Percent of youth 12-17 who will report no use of alcohol or illicit drugs in past 30 days
- Percent of 9-12 grade children engaging in vigorous physical activity (3 or more days per week for 20 min)
- Percent of children receiving child immunizations
- All pregnancies / unintended pregnancies
- Population / Number of persons exposed to air not meeting EPA health standards for ozone, carbon monoxide and particulate matter
- Local mercury emissions from energy production and inoculations
- Percent of fish in local lakes meeting mercury standards

## W3. Housing

### Topics:

- W3.1. Access to housing (costs)
- W3.2. Quality of Housing
- W3.3. Land use / Mobility

### Recommended Indicators:

#### Performance:

- Percent of all existing and new housing affordable to very low, low, moderate, and upper income households



- Production of “Green” high performance housing expressed as percent of new and substantially-rehabilitated housing that complies with local Green Building measures as a percentage of the total new and rehabilitated housing.
- Percent of housing within 1 mile of household services or bus line
- Geographic distribution of affordability/ square mile

## Society

### S1. Community Participation: Our Ability and Inspiration to Work Together

#### Topics:

- S1.1 Volunteerism
- S1.2 Civic/Religious Organizations
- S1.3 Sustainability Awareness

#### Recommended Indicators:

##### Performance:

- Percent of population over 18 volunteering in community
- Percent of youth 10-18 volunteering (civic, religious, etc)

##### Predictive:

- Does a person feel like its worth being involved in the community?
- Percent of organizations greater than 50 people employing an EMS/SEMS
- Percent of organizations greater than 20 employees with adopted sustainability policies or goals

### S2. Crime and Safety

#### Topics:

- S2.1 Crime Prevention and Law Enforcement Effectiveness
- S2.2 Substance Abuse
- S2.3 Youth Crime

#### Recommended Indicators:

##### Performance:

- Violent crime convictions, as a percentage of population
- Nonviolent crime convictions, as a percentage of population
- Residents perception of safety

##### Predictive:

- Percent of population below federal poverty level
- Population / Number of crime victims



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## **S3. Culture and Leisure: Supporting social systems and ecosystems for access**

### Topics:

- S3.1. Government Role
- S3.2. Access to Culture and Leisure
- S3.3. Economic Benefit

### Recommended Indicators:

#### **Performance Indicator:**

Arts Vitality Index; possible measures

- Percent of economy generated by the arts
- Number of nonprofit and government organizations vs businesses in the community that have a percent for arts policy
- Building projects initiated in the year that have a public arts or component in them
- Local dollars donated per capita to 5 largest Local identified arts/performing arts organizations
- Number of seats in arts facilities, public or private per capita

#### **Predictive Indicator:**

- Marriage rate compared to divorce rate

## **S4. Family Health**

### Topics:

- S4.1 Family self-sufficiency
- S4.2 Family vitality

### Recommended Indicators:

#### **Performance Indicator:**

- Pikes Peak Family Self Sufficiency Index: Number of households able to provide sufficient levels of
  - Food
  - Housing
  - Apparel and services
  - Transportation
  - Healthcare
  - Entertainment
  - Personal care products and services
  - Education (higher education support)
  - Tobacco products and smoking supplies
  - Charitable contributions





- Personal insurance and pensions

## **S5. Governance: Managing economic and social behavior**

### Topics:

- S5.1. Accountability
- S5.2. Participation Rates
- S5.3 Fiscal Management

### Recommended Indicators:

#### **Performance:**

- Percent of urban residential land in acres represented by established neighborhood associations
- Percent voting in elections as a percentage of voting age
- government revenues compared to population and government revenues per parcel compared to service requirements

#### **Predictive:**

- Government support of neighborhood associations
- Government support of voter education and ease of voting

## **S6. Mobility: Connection of people to goods and services**

### Topics:

- S6.1. Public Mobility Performance
- S6.2. Employment Access – see Topic E3.3

### Recommended Indicators:

#### **Performance:**

- Percent Change Vehicle Miles Traveled (VMT) per capita
- Mobility based carbon dioxide emissions per capita population growth and economic growth compared to gasoline sales per capita
- Growth in mass transit usage: Bringing down the cost of individual mobility achieved per time and money spent

## **S7. Seniors**

### Topics:

- S7.1. Senior Health: Financial, Physical, Cognitive
- S7.2. Diversity of Senior Activities
- S7.3. Senior Necessities Performance



## Recommended Indicators:

### **Performance:**

- Senior Vitality Index (age 60+ and linked to number of seniors over 60 in region)  
possible measures
  - Self sufficiency
  - Housing: Performance
  - Mobility
  - Social
  - Health/Nutrition
  - Caregivers
  - Fraud

### **Predictive:**

- Percent of population over 60 accessing county delivered or NGO services
- Percent of population over 70 living in own home

## **S.8 Youth**

### Topics:

- S8.1. Education
- S8.2. Health
- S8.3. Crime
- S8.4. Vitality

## Recommended Indicators:

### **Performance:**

- Violent deaths per 10,000 youth
- Licensed daycare vs. youth population aligned with geographic needs
- Drop out rate/graduation rate



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# **Section One: Introduction to the Pikes Peak Sustainability Indicators Project**

## **Project Purpose and Origin**

Cities and regions around the country have been developing indicators of their social, economic and environmental progress for use in public policymaking and management. They are sometimes called “progress” indicators, sometimes “quality of life” or “community” indicators, and sometimes “sustainability” indicators. Just as any business or nonprofit organization develops goals and indicators of its success, communities are coming to understand that the phrase “what gets measured gets managed” applies to community development as well as organizations.

The US Army determined, in 2001, that using sustainability concepts to manage its installations’ environmental and social impacts (and make the installations even better neighbors to hosting communities) would be a core goal. Fort Carson was one of seven major installations selected for the first round of sustainability planning and strategy implementation.

Fort Carson’s award-winning Directorate of Environmental Compliance and Management, under the leadership of Director Tom Warren and Deputy Director Mary Barber and support from Kelly O’Neill of SAIC, launched Fort Carson’s Sustainability Program in 2001. The regional community was invited to join with Fort Carson leadership in September, 2002 to learn about the Army’s sustainability initiative and collaboratively develop long-term (i.e. by year 2027) goals for Fort Carson.

The Fort Carson Sustainability Goals are:

1. Sustain all facility and mobility systems from renewable sources, and reduce the total water purchased from outside sources by 75%.
2. Reduce automobile dependency and provide balanced land use and transportation systems.
3. Improve communication to foster understanding and attain a “Community of One.”
4. Enhance partnering to collaboratively develop, integrate, and implement regional sustainability.
5. The total weight of hazardous air pollutant emissions is reduced to zero.



6. Further integrate sustainability principles into the Fort Carson land use planning, Real Property Master Planning, and Military Construction, Army (MCA) programming processes.
7. All applicable facilities at Fort Carson will be high performance buildings that meet or surpass the Platinum Standard of SPiRiT or LEED.
8. Key stakeholder groups are trained, compliant and motivated toward sustainability principles.
9. All DOD and Fort Carson procurement actions support sustainability.
10. The total weight of solid and hazardous waste disposed of is reduced to zero.
11. Training Ranges (land and associated air space used for live fire ranges, maneuver, testing and urban development designated for Military Operations in Urban Terrain training) capable of supporting current and future military training to standard.
12. Advance a sustainable mission and Fort Carson by adopting a SEMS and by imparting (passing on) a personal commitment and enthusiasm for sustainability.

Though some of the indicators are specific to sustainability performance, such as 100% renewable energy sources (i.e. hydro, biofuels, wind and solar), the goals include three goals related to enhancing the installation's community relationships. These goals are:

- Enhance Regional Partnering Towards Regional Sustainability
- Train and Motivate Stakeholders Towards Sustainability
- Foster understanding and attain a "Community of One"

Following the 2001 community conference (called the first Fort Carson Community Sustainability Conference), Fort Carson developed five-year goals and action plans, began implementation of projects, conducted three (including 2005) community sustainability conferences to report on progress and provide sustainability education to the community/region, and has developed and is implementing a leading-edge management system for the program: the Sustainability and Environmental Management System (SEMS).

## **What is Sustainability?**

"Sustainability" refers to a systematic approach to environmental, social and economic progress. It stems from concepts articulated in the 1980s that people should meet the needs of the present without compromising the ability of people in the future to meet their own needs. It demands whole-systems thinking with an intergenerational approach. Whole-systems thinking calls for skepticism about simplistic solutions, willingness to seek connections between problems and



events that conventional discourse ignores, and the courage to delve into subject matter that may lie outside our direct experience and expertise.” The term “intergenerational” calls for a life cycle approach to activities such as making investments for greater efficiency with up to a 25-year payback, and working to ensure no net loss of human or natural capital from operations. When successful it creates a preservation of prosperity opportunity through reinvestment in all four sources of capital: Built, Financial, Human and Natural.

Organizations around the world are finding competitive advantage and/or greater effectiveness (in the case of governments and non-profits) from sustainability strategies. The primary benefits were well-articulated by sustainable business consultant Bob Willard:<sup>1</sup>

1. Easier hiring of the best talent;
2. Higher retention of top talent;
3. Increased employee productivity;
4. Reduced expenses for manufacturing;
5. Reduced expenses at commercial sites;
6. Increased revenue/market share;
7. Reduced risk / easier financing.

In Colorado, sustainability concepts and strategies are being explored or adopted in both the private and public sectors:

- Fort Carson’s sustainability program was initiated in 2002; sustainability was recently affirmed as the key US Army approach to environmental management by Deputy Assistant Secretary Raymond Fatz.
- The Pikes Peak Sustainable Business Network, a program of The Catamount Institute, was initiated in 2002; the Colorado Alliance of Sustainable Business Associations was initiated in 2003 to coordinate statewide efforts of several local sustainable business organizations.
- Private businesses recognized as sustainability leaders include New Belgium Brewing of Ft. Collins, Holcim in Florence, CH2M Hill in Denver, Intel Corporation, Hewlett-Packard and Agilent Technologies.
- The City of Lakewood incorporated Sustainability concepts into its Comprehensive Plan in 2003; specific ordinance development is ongoing.
- The Colorado Springs Economic Development Corporation invited a sustainability task force to contribute to its Springs Into Action ’04 economic development strategy (report available upon request).
- Sustainability concepts are guiding the Pueblo Army Depot’s redevelopment planning efforts.
- The Colorado Department of Public Health and Environment’s Sustainability Program for businesses promotes innovative efforts to develop and implement

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<sup>1</sup> Bob Willard, *The Sustainability Advantage*, New Society Publishers, 2001, p. 21. These benefits are thoroughly explained throughout the book and readers are invited to use spreadsheets available



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environmentally sustainable practices in Colorado (see [www.cdphe.state.co.us/el/sustainability](http://www.cdphe.state.co.us/el/sustainability))

## Progress To Date

The PPSIP has been comprised of the work of a Steering Committee and four working Task Forces: Nature, Economy, Well-being and Society.

The Steering Committee is composed of representatives from the participating local governments and Fort Carson, and organizations that provide technical expertise or support. The Steering Committee includes representatives from the following organizations:

- Cities: Canon City, Colorado Springs, Florence, Fountain, Manitou Springs
- Counties: El Paso, Fremont, Pueblo
- Technical: Colorado College, El Paso County United Way, Fort Carson, Pikes Peak Area Council of Governments, US Fish and Wildlife Service

The participating cities and counties were asked to provide a staff or citizen representative to each of the Task Forces. The following regional non-profit civic organizations were represented through participation by its members that were delegated by cities or counties:

- 2010 Commission of Pueblo
- Action 22
- Bechtel
- Bee Vradenburg Foundation
- Better Pueblo
- Central CO Soil Conservation District
- City/County of Pueblo Health Dept.
- Colorado Springs Council of Neighbors and Organizations
- Colorado Springs Utilities
- CSU Extension Office/Pueblo
- Fountain MAPP
- Housing and Building Association of Colorado Springs
- Pikes Peak Sustainable Business Network
- Pioneers Museum
- Penrose-St. Francis Health Services
- Peterson Air Force Base
- Posada
- Pueblo Chamber of Commerce
- Pueblo County Cooperative Extension
- Pueblo Depot Activity Development Authority
- Pueblo Economic Development Corporation (PEDCO)
- Pueblo Sustainable Development Steering Committee
- Pueblo West Metropolitan District



- Recycling Coalition of Colorado Springs
- Sierra Club, Pikes Peak Chapter
- SE Colorado Renewable Energy Society
- The Nature Conservancy
- UCCS / Center for Colorado Policy Studies
- UCCS / SEAS
- US Fish and Wildlife Service

The various Technical resources contributed their respective expertise to the work of the Task Forces and Steering Committee, the project was staffed by Christopher Juniper and Ann Oatman-Gardner of Natural Capitalism Solutions (NCS) on contract to Fort Carson. Research assistance was provided by Sandra Iseman of NCS.

PPSIP organizational meetings were held in 2003-4. In 2005, following commitments by participating governments to PPSIP participation, the Task Forces and Steering Committee met several times each to explore the merits of using indicators for public progress management and instances where indicators are already being measured to drive performance; to identify hot topics deserving indicators, and to suggest indicators for the hot topics and the key planning goals of the governments.

Over 100 topics were identified that are deserving of progress tracking through indicators. These are listed in Section Two. To the extent possible, indicator topics and potential indicators were selected with respect to the whole-system nature of both socio-economic reality, and of sustainability concepts.

As is typical for community indicators projects that have been conducted around the US, citizens want to measure indicators that are often not being tracked or are difficult to track. For this reason, the PPSIP lists for consideration by regional governments and civic organizations both the full list of potential indicators, or “Universe of Indicators,” and a shortened list of “Recommended Indicators” that were selected to reflect the primary concerns of the topics and data that is collected or reasonably collectable.

## Next Steps

Governments in the region must now consider the following questions regarding the use of indicators:

- Does the government want to set up an indicators system for measuring and/or managing progress? If so, what should be the role for civic organizations?
- Will a regional approach to the indicators be valuable from cost-effectiveness and regional synergy perspectives?
- Does the “sustainability” concept and/or techniques, including the sustainability goals of Fort Carson, add value to the indicators process?



The PPSIP encourages local governments in the three counties hosting Fort Carson plus Teller County, to answer these questions in coming months; Fort Carson will continue to provide staff support to the PPSIP for this process.

Based on the work of the PPSIP, and the long-term success of the Jacksonville, Florida indicators management effort, based at the Jacksonville Community Council Inc. that is partly funded by that area's United Way, Jerry Smith, the CEO of El Paso County United Way, is launching an indicators and community solutions effort in 2006. This potential project could serve only El Paso County, or its capabilities might be designed so as to serve the region.

## **Section Two: Sustainability, Quality of Life, and Progress Indicators**

Businesses have it easy – a single indicator reflects the progress of the organization and its sustainability into the future: profitability. Though “sustainable” businesses are increasingly measuring progress through a “triple-bottom line” that includes social and environmental responsibility, profitability remains the key dynamic that enables all efforts to make progress.

When governments or civic organizations choose to measure their progress through indicators, the challenge is more complicated. Yet in the indicators projects that have occurred in North America, a strong consensus exists across communities of what people value and wish their organizations to accomplish. As described by sustainable community author and consultant Gwendolyn Hallsmith, the following are universal needs that communities work to meet:<sup>2</sup>

- Social needs for culture, values, care and education
- Governance needs for order, justice, security and collective decision-making
- Economic needs for monetary income and productive employment
- Services and infrastructure for material goods and services and access to them
- Environmental needs for healthy ecosystems and natural spaces

How do “sustainability” indicators differ from “quality of life” or “progress” indicators? Depending on how “quality of life” or “progress” is defined, they may not differ at all. At the core of sustainability is the concept of acting today so as not to diminish the choices and resources available to people in the future. Therefore, it is possible that a quality of life or progress indicator could focus on measuring progress for a short time-frame that might not be good for the long-term.

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<sup>2</sup> See Gwendolyn Hallsmith, Christian Layke and Melissa Everett, “Taking Action for Sustainability,” published by Global Communities Inc., [www.global-communities.org](http://www.global-communities.org), 2003.





For example, if a community dependent on the forestry industry was measuring its progress solely in terms of forestry-related jobs and income today, it might not manage those resources well enough to provide forestry jobs for people in the future. But if “quality of life” or “progress” goals are interpreted as long-term (as well as short-term), indicators of “sustainability” will be virtually synonymous with “quality” of life or “progress.”

Globally, the term “sustainability” often refers to specific adoption of goals, strategies and practices formulated from recognized sustainability concepts. For example, the World Business Council for Sustainable Development defined “sustainable development” as “environmental protection, social equity and economic growth.” The Natural Capitalism sustainability framework defines the goal of sustainability as “no net per capita loss of human or natural capital;” this goal also applies to a widely known sustainability framework known as The Natural Step System Conditions for Sustainability.

Hundreds of cities and communities have adopted local goals that are in synch with national and/or international sustainability efforts, such as the Agenda 21 program developed in the early 1990s through the United Nations. Overall, the fundamental measure of whether goals are “sustainability” goals is determined by their whole-system and long-term nature.

Private consultant Maureen Hart is widely recognized as one of the leading experts in sustainability indicators (see [www.sustainablemeasures.com](http://www.sustainablemeasures.com)). Ms. Hart describes effective indicators below:

- Effective indicators are **relevant**; they show you something about the system that you need to know.
- Effective indicators are **easy to understand**, even by people who are not experts.
- Effective indicators are **reliable**; you can trust the information that the indicator is providing.
- Lastly, effective indicators are based on **accessible data**; the information is available or can be gathered while there is still time to act.

## Sustainability Indicators Elsewhere

The International Institute for Sustainable Development’s Measurement and Assessment team provides a compendium of sustainability measurement initiatives throughout the world ([www.iisd.org/measure](http://www.iisd.org/measure)). The compendium lists the following efforts in the United States (outside of Colorado) as of September, 2005, among a total of 139 North American sustainability measurement initiatives:

- Jacksonville Quality of Life Report – A Guide for Building a Better Community (Florida)
- Community Report Card – Sarasota Openly Plans for Excellence (Florida)
- Sustainable Metro Jackson (Mississippi)
- New Jersey Sustainable State Institute
- Quality Indicators for Economic Development – Joliet/Will County (Illinois)
- Cape Cod Indicators of Community Sustainability (Massachusetts)



- Indicators for a Sustainable San Mateo County (California)
- Northern New England Sustainable Community Project (Maine)
- Sustainable Louisville (Kentucky)
- Joint Venture: Silicon Valley Project (San Jose area, California)
- Sustainable Communities Initiative – City of Austin (Texas)
- Central Texas Sustainability Indicators Project
- Santa Monica Sustainable City Project (California)
- The State of Public Wisconsin
- Minnesota Milestones
- Pierce County Quality of Life Benchmark Project (Washington)
- The Sustainability Plan for the City of San Francisco (California)
- Willapa Indicators for a Sustainable Community (Washington)
- Quality of Life in the Truckee Meadows (California)
- Annual Report on Social Indicators, City of New York City (New York)
- East Metro Trend Watch (Minnesota)
- Direction 2020: Regional Indicators, Delaware Valley (Delaware)
- What Matters in Greater Phoenix: Indicators of Our Quality of Life (Arizona)
- Sierra Nevada Wealth Index (California)
- State Environmental Goals and Indicators Project (Florida)
- 21<sup>st</sup> Century Quality of Life Report (Tallahassee, Florida)
- Sustainable Pittsburgh Goals and Indicators Project (Pennsylvania)
- Sustainable Lansing – Community Indicators (Michigan)
- Sustainable Seattle (Washington)

Selected projects from this list plus existing projects in Colorado and a federal government experimental sustainability indicators list are provided below and in Appendices Four (federal experimental indicators) and Five (Colorado tracked indicators):

**The Jacksonville Community Council Inc. (JCCI)** was formed in 1975 to foster consensus solutions to the area’s primary development challenges. Seeing the need for quantitative indicators, JCCI collaborated with the Jacksonville Regional Chamber of Commerce in 1984 to develop and track key indicators. Today, JCCI stands as a national model of both indicator tracking and reporting, and for development of broad-based public/private solutions. In addition to its annual reports on specific hot topics and the annually published “Quality of Life Report” on 119 indicators, JCCI plans and coordinates services for the United Way of Northeast Florida and the Human Services Coalition, a coalition of local funders of human services. JCCI is substantially supported by the City of Jacksonville and the United Way of Northeast Florida.

**The Larimer County Department of Health and Human Services** collaborated with United Way of Larimer County (primary partner) and other organizations to create the “Compass” project of community indicators. The project’s website was launched in 2001, and tracks data in nine categories: Community Development, Community Living, Crime and Safety, Demographics, Economy,



Education, Enrichments, Environment and Health. The Compass project staff, with assistance from Colorado State University, has created a Community Well-Being Index that summarizes the state of well-being and society indicators from five separate reports that are used by the county and the United Way to prepare annual funding plans. The project has also produced fifteen reports for the community from 2003-2005 describing environmental, societal and well-being topics, and through its website's "Business Index" provides access to information and resources valuable to regional businesses (existing or potential).

In 1998, the Boulder County Civic Forum published "**Quality of Life in Boulder County – A Community Indicators Report**" that reported on the status of fifty indicators selected through a two-year public process in the area. This was followed by a 2000 "Community Indicators Report" that refined the indicators and identified particular issues of concern. In 2002, the City of Boulder partnered with the Forum to "measure the city's performance in achieving its comprehensive plan goals of sustainability." Presently the indicators website provides indicator descriptions, links to the comprehensive plan, advice to citizens on the actions they can take to support positive trends, and linkages to related indicators. See [www.bococivicforum.org/indicators](http://www.bococivicforum.org/indicators).

**Yampa Valley Partners**, a non-profit civic organization based in Steamboat Springs, CO and serving both Routt and Moffat counties, created its Community Indicators Project in 1996 to "document regional quality of life in the Yampa Valley through social, economic, environmental and civic measurements." The Project is a partnership that includes national organizations such as the National Civic League. Yampa Valley Partners also fosters collaboration between local governments through its Regional Leadership Program, administers a regional environmental management project and provides a list of community resources. See [www.yampavalleypartners.com](http://www.yampavalleypartners.com).

This project determined to investigate what data already being collected by the federal government would be potentially useful as indicators of the nation's progress towards sustainable development. Of the forty indicators identified in the Economy, Environment and Social categories in 2001 (reflecting sustainability's triple bottom-line), fifteen were headed in a positive direction, ten were headed in an unfavorable direction and the remaining fifteen were "uncertain." The indicators identified are listed in Appendix Four.

Beginning in 2004, professor Walter Hecox of The Colorado College has guided the **State of the Rockies** project towards annual reports of economic, environmental and social progress of counties throughout the Rocky Mountains on a county-by-county basis. The project is designed to "provide credible research on problems facing the Rocky Mountain West...and convene citizens and experts to discuss the future of the region." Reporting will vary each year according to topics of greatest interest. The 2004 report included an "Economic Vitality Index" that summarized county



economic performance and attractiveness trends from 1970-2000. Professor Hecox serves on the PPSIP Steering Committee. See [www.coloradocollege.edu/stateoftherockies](http://www.coloradocollege.edu/stateoftherockies).

The Bell Policy Center of Denver, Colorado has published in 2002 and in 2005 its **Colorado: The State of Opportunity Report** on nine key “gateways” of opportunity for Coloradans to escape poverty. The Center developed indicators of progress for each gateway. The specific indicators developed and measured are listed in Appendix 5; the report is available at [www.thebell.org](http://www.thebell.org). It examines 39 indicators and makes 55 recommendations for improving opportunity. The gateways are the following:

- A Healthy Birth
- A Safe and Stimulating Early Childhood
- Building a Solid Base for Literacy
- Establishing a Healthy Lifestyle in Childhood and Adolescence
- Leaving High School with a Diploma and the Skills to Succeed
- Access to Education and Training for Adults
- A Healthy Adult Life
- Earning a Decent Living and Building Wealth
- A Financially Secure and Healthy Retirement

## Section Three: Possible and Recommended Regional Indicators

The following are the PPSIP’s recommendations to local governments and citizens in the Pikes Peak region for indicator topics and indicators that address issues of regional concern, including Fort Carson’s sustainability indicators.

The “Recommended Indicators” listed in Section 3.1 are a selected group of indicators for the topic that are recommended by the task forces because data is readily or reasonably available and the indicator can serve to illustrate overall direction in the topic area. One of the objectives of the selection of Recommended Indicators is to start the regional indicator analysis project, the next phase of the PPSIP, with fewer and easier indicators to track and manage. The Recommended Indicators were also selected considering their relationship to the adopted sustainability indicators of Fort Carson.

Indicators are specified as “predictive” indicators or “performance” indicators. A **predictive indicator** is an indicator that will effectively predict the performance of an indicator. For example, a predictive indicator of crime rates (a performance indicator) might be the number of police per square mile, or the poverty rate. Likewise, the crime rate might serve as a predictive indicator of a performance indicator of whether people feel safe in the community. However, generally a predictive indicator will be a “process” or “activity” happening today or in the future,



such as the deployment of police in the community, whereas the performance indicator is a result that is measured based upon past performance.

## Section 3.1: Recommended Indicators

### Nature

#### N1. Land Use

##### Topics:

- N1.1. Urban Infrastructure and Facilities
- N1.2. Planning and Density
- N1.3. Community Institution Protection
- N1.4. Urban/wild land interfaces

##### Recommended Indicators:

###### Performance:

- Bedrooms per acre of residential zoning
- Jobs per acre of commercial or industrial zoning
- Square footage developed (new square footage – whether on new land or in-fill development) relative to total new urban land developed
- Percent linear feet military institution and other major economic institution borders protected from inappropriate adjacent development

###### Predictive:

- Adopted and enforced comprehensive plans promoting efficient development, protection of agricultural lands and institutions.

#### N2. Biodiversity / Ecosystem Health

##### Topics:

- N2.1. Ecosystem Health Management
- N2.2. Natural Capital

##### Recommended Indicators:

###### Performance:

- Regional Biological Health Index; potential measures
  - invasive species
  - in-stream water quality
  - endangered species
  - soil health etc.

###### Predictive:

- Percent residents educated about ecological land management



## N3. Energy

### Topics:

- N3.1. Local Impacts from Energy Production / Use
- N3.2. Local Energy Production / Use
- N3.3. Non-Local Global Impacts of Energy Production / Use

### Recommended Indicators:

#### Performance:

- Regional Local Sources Pollution Index; potential measures in ratio to population and/or economic output
  - Emissions from energy use
  - Water pollution from energy use, etc.

#### Predictive:

- Incentives promoting energy productivity investments (“Energy productivity” is dollar revenues achieved per energy unit (e.g. BTUs) consumed)
- Growth of public transit use relative to population growth

## N4. Water

### Topics:

- N4.1. Water Supply
- N4.2. Wastewater and Water Quality

### Recommended Indicators:

#### Performance:

- Gallons treated potable water used relative to population and economic output
- Gallons of wastewater treated relative to population and economic output
- Municipal water shares relative to urban water demand (i.e. supply compared to demand for urban water)
- Annual change in average aquifer levels

#### Predictive:

- Incentives promoting water productivity relative to previous year (“water productivity” is water use per dollar of revenue)
- Incentives promoting wastewater reduction
- Annual growth of water demand (specified by urban, and aquifer-supplied)
- Incentives and education protecting in-stream water quality

## N5. Waste / Solid Waste

### Topics:



- N5.1. Solid Waste
- N5.2. Other Waste

**Recommended Indicators:**

**Performance:**

- Solid waste and hazardous waste disposal relative to economic output (i.e. tons of waste landfilled per dollar of regional income)

**Predictive:**

- Incentives promoting reduction of solid and hazardous waste (including recycling)

## **Economy**

### **E1. Business: Health of Individual Businesses**

**Topics:**

- E1.1. Local (ownership) business health
- E1.2. Overall business health
- E1.3. Business support infrastructure

**Recommended Indicators:**

**Performance**

- Growth in (tracked) local business contracts with large institutions (defined as organizations with more than 500 local employees)
- Local business bankruptcy rates
- Growth of sales taxes generated by small businesses (<20 emp.)

**Predictive**

- Programs supporting small business growth and institutional contracts

### **E2. Economic Vitality – Meeting Local Economic Goals**

**Topics:**

- E2.1. Business diversity
- E2.2. Business location
- E2.3. Citizen economic health
- E2.4. Overall Economic Vitality

**Recommended Indicators:**

**Performance:**



- Annual growth of targeted (by economic development agency) industries measured by employment and total number of business organizations
- Annual growth of employment and total number of business organizations in areas targeted for business growth

**Predictive:**

- Time and resources devoted to economic development activities by citizens and governments (compared to previous years and compared on a per capita basis to similar regions elsewhere in the US)
- Incentives supporting economic development goals (whether targeted to individual organizations or to all organizations)

### **E3. Employment – Health of Citizen’s Relationship to Paid Work**

**Topics:**

- E3.1. Workforce alignment with employment opportunities
- E3.2. Worker compensation
- E3.3. Worker transportation access to employment opportunities

**Recommended Indicators:**

**Performance**

- Average commute times
- Total jobs and new jobs that are easily accessible (locally defined e.g. accessible without a personal vehicle?) to economically challenged neighborhoods (i.e. lower income areas)

**Predictive**

- Engagement of business community in educational curriculum development of 9-12 and secondary education institutions

### **E4. Sustainable Economic Practices**

Note: Sustainable Economic Practices are the practices being employed at Fort Carson and thousands of for-profit and non-profit/governmental organizations in the US to attain greater competitiveness through reductions in negative social and environmental impacts such as pollution, carbon emissions, below living-wage jobs and other undesirable labor practices, accompanied by superior product and operations design. The terms “SEMS” or “EMS” refers to “Sustainability and Environmental Management System (SEMS)” such as is being deployed at Fort Carson, or “Environmental Management System (EMS)” that is deployed worldwide by leading organizations – usually using the ISO14001 international standards series. For more information visit websites devoted to sustainable management systems including World Business Council for Sustainable





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Development ([www.wbcsd.org](http://www.wbcsd.org)); Natural Capitalism Solutions ([www.natcapsolutions.org](http://www.natcapsolutions.org)); US EPA's Sustainability and Environmental Management Systems site ([www.epa.gov](http://www.epa.gov)); and business sustainability tools/news sites such as [www.greenbiz.com](http://www.greenbiz.com).

**Topics:**

- E4.1. Business / organization sustainability practices
- E4.2. Transition to a sustainable economy

**Recommended Indicators:**

**Performance**

- Percent of organizations greater than 50 people employing an EMS/SEMS

**Predictive**

- Public Educational and/or Cost-effective policies / incentive programs for businesses to implement sustainability management systems

## Well-Being

### W1. Education: Development of Human Capital

**Topics:**

- W1.1. K-12 Education
- W1.2. Continuing Education
- W1.3. Public Education

**Recommended Indicators:**

**Performance:**

- Percent of all public education students meeting the Colorado state proficiency standard for each subject area assessed.
- The annual dropout rate and graduation rate reported by the state of Colorado.
- Satisfaction of parents
- Calculate the ratio of mean percentile of the District student achievement divided by the District cost per student (per pupil cost).
- Percent of population with higher ed degree
- Human capital development index: possible measures
  - Tuition Cost
  - opportunity costs
  - cost of living compared to incomes
  - access to education
- Percent of population with home internet access



### **Predictive**

- Number of kids per classroom/teacher in K-3, 3-8, 9-12.
- Percent public education staff that meet the certification and highly qualified designation as reported by the state of Colorado.
- Percent of pre-K age children in programs by family income level
- Percent kids in alternatives from general public ed classrooms

## **W2. Health: Human Health Performance**

### **Topics:**

- W2.1. Access
- W2.2. Prevention
- W2.3. Environmental Quality

### **Recommended Indicators:**

#### **Performance:**

- Percent of persons of all ages who have a specific source of ongoing primary care.
- Percent of population accessing routine health screening visits, immunizations, etc.
- Percent of those with serious mental illness report receiving treatment, including PTSS.
- Public dollars expended treating results of risky behavior
- Population / public health dollars spent
- Population / Percent change in new STD cases reported
- Population / Death due to heart disease
- Population / Self-reported number of adults in poor to fair health

#### **Predictive**

- Percent of those under 65 years of age with health coverage
- Percent of school districts with mandatory health education
- Percent employers offering preventative health insurance
- Percent population that has smoked in past month
- Percent teen population abstaining or using condoms is active
- Percent Adult population reporting light or moderate physical activity
- Percent of youth 12-17 who will report no use of alcohol or illicit drugs in past 30 days.
- Percent of 9-12 grade children engaging in vigorous physical activity (3 or more days per week for 20 min).
- Percent of children receiving child immunizations
- All pregnancies / unintended pregnancies
- Population / # persons exposed to air not meeting EPA health standards for ozone, carbon monoxide and particulate matter.
- Local mercury emissions from energy production and inoculations
- Percent fish in local lakes meeting mercury standards



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## W3. Housing

### Topics:

- W3.1. Access to housing (costs)
- W3.2. Quality of Housing
- W3.3. Land use / Mobility

### Recommended Indicators:

#### Performance:

- Percent of all existing and new housing affordable to very low, low, moderate, and upper income households
- Production of “Green” high performance housing expressed as percent of new and substantially-rehabilitated housing that complies with local Green Building measures as a percentage of the total new and rehabilitated housing.
- Percent of housing within 1 mile of household services or bus line
- Geographic distribution of affordability, sq mile

## Society

### S1. Community Participation: Our Ability and Inspiration to Work Together

#### Topics:

- S1.1 Volunteerism
- S1.2 Civic/Religious Organizations
- S1.3 Sustainability Awareness

### Recommended Indicators:

#### Performance:

- % of population over 18 volunteering in community
- % of youth 10-18 volunteering (civic, religious, etc)

#### Predictive:

- Does a person feel like its worth being involved in the community?
- Percent of organizations greater than 50 people employing an EMS/SEMS
- Percent of organizations greater than 20 employees with adopted sustainability policies or goals

### S2. Crime and Safety

#### Topics:

- S2.1 Crime Prevention and Law Enforcement Effectiveness
- S2.2 Substance Abuse



### S2.3 Youth Crime

#### Recommended Indicators:

##### **Performance:**

- Violent crime convictions, as a percentage of population
- Nonviolent crime convictions, as a percentage of population
- Residents perception of safety

##### **Predictive:**

- Percent of population below federal poverty level
- Population / Number of crime victims

## **S3. Culture and Leisure: Supporting social systems and ecosystems for access**

#### Topics:

- S3.1. Government Role
- S3.2. Access to Culture and Leisure
- S3.3. Economic Benefit

#### Recommended Indicators:

##### **Performance Indicator:**

Arts Vitality Index; possible measures

- Percent of economy generated by the arts
- Number of nonprofit and government organizations vs businesses in the community that have a percent for arts policy
- Building projects initiated in the year that have a public arts or component in them
- Local dollars donated per capita to 5 largest Local identified arts/performing arts organizations
- Number of seats in arts facilities, public or private per capita

##### **Predictive Indicator:**

- Divorce rate

## **S4. Family Health**

#### Topics:

- S4.1 Family self-sufficiency
- S4.2 Family vitality

#### Recommended Indicators:

##### **Performance Indicator:**



- Family Self Sufficiency Index: Number of households
  - Food
  - Housing
  - Apparel and services
  - Transportation
  - Healthcare
  - Entertainment
  - Personal care products and services
  - Education
  - Tobacco products and smoking supplies
  - Miscellaneous
  - Cash contributions
  - Personal insurance and pensions

## **S5. Governance: Managing economic and social behavior**

### Topics:

- S5.1. Accountability
- S5.2. Participation Rates
- S5.3 Fiscal Management

### Recommended Indicators:

#### **Performance:**

- Percent of urban residential land in acres represented by established neighborhood associations
- Percent voting in elections as a percentage of voting age
- government revenues compared to population and government revenues per parcel compared to service requirements

#### **Predictive:**

- Government support of neighborhood associations
- Government support of voter education and ease of voting

## **S6. Mobility: Connection of people to goods and services**

### Topics:

- S6.1. Public Mobility Performance
- S6.2. Employment Access – see Topic E3.3

### Recommended Indicators:

#### **Performance:**

- Percent Change Vehicle Miles Traveled (VMT) per capita



- Mobility based carbon dioxide emissions per capita population growth and economic growth compared to gasoline sales per capita
- Growth in mass transit usage: Bringing down the cost of individual mobility achieved per time and money spent

## S7. Seniors

### Topics:

- S7.1. Senior Health: Financial, Physical, Cognitive
- S7.2. Diversity of Senior Activities
- S7.3. Senior Necessities Performance

### Recommended Indicators:

#### Performance:

- Senior Vitality Index (age 60+ and linked to number of seniors over 60 in region)possible measures
  - Self sufficiency
  - Housing: Performance
  - Mobility
  - Social
  - Health/Nutrition
  - Caregivers
  - Fraud

#### Predictive:

- Percent of population over 60 accessing county delivered or NGO services
- Percent of population over 70 living in own home

## S.8 Youth

### Topics:

- S8.1. Education
- S8.2. Health
- S8.3. Crime
- S8.4. Vitality

### Recommended Indicators:

#### Performance:

- Violent deaths per 10,000 youth
- Licensed daycare vs. youth population aligned with geographic needs
- Drop out rate/graduation rate



## Section 3.2. Universe of Possible Indicators

This section outlines the total work of the task forces in identifying topics that deserve management by indicator, and possible indicators. The PPSIP recommends that this “universe” be researched for the potential development of cost-effective indicators of progress in all areas, and that new topics for indicators be explored on a regular basis to ensure that the region begins tracking critical information about areas it needs to manage as early as possible.

### Nature

#### N1. Land Use

##### N1.1. Urban Infrastructure and Facilities

**Plan / hot topic:** Urban infrastructure cost-effectiveness

Predictive Indicator:

- Density of urban development
- Cost-effective policies / incentives promoting high quality infrastructure with lower life-cycle costs compared to initial costs.

Performance Indicator:

- Annual life-cycle costs of building/maintaining urban infrastructure and facilities per capita

**Plan / hot topic:** Urban infrastructure access

Predictive Indicator:

- Cost-effective policies and incentives supporting urban developments adjacent to existing developments or as in-fill developments

Performance Indicator:

- Percent of urban development within 1/2 mile of basic urban institutions (e.g. schools, commercial districts, professional employment opportunities, urban parks)

**Plan / hot topic:** Walk-ability and bike-ability of urban development

Predictive Indicator:

- Cost-effective local policies / incentives for walkable and bikeable urban development
- Cost-effective local policies / incentives for natural area access via walking or bicycling

Performance Indicator:

- Percent walking routes meeting safety standards for walkability
- Percent bicycle routes that meet safety standards for bike-ability



- Percent urban development with natural area access reasonably available by walking or bicycling

**Plan / hot topic:** Land use pattern support of urban transit systems

Predictive Indicator:

- Cost-effective land-use policies that directly support transit systems.

Performance Indicator:

- Percent of new residential or business development within 1/4 mile of a transit stop.

**Plan / hot topic:** Sustainable procurement of infrastructure

Predictive Indicator:

- Cost-effective local government policies for sustainable procurement.

Performance Indicator:

- Percent of urban infrastructure built with “green” or “sustainable” procurement standards (including “built to last” techniques) that include sustainability practices of businesses, not just products (or are aligned with military/government sustainability procurement systems under development).

## **N1.2. Planning and Density**

**Plan / hot topic:** Efficient use of developed land

Predictive Indicators:

- Cost-effective government policies / incentives supporting efficient use of developed land
- Adopted and enforced comprehensive plans promoting efficient development, protection of agricultural lands and institutions.

Performance Indicators:

- Percent new development built to transit-viable densities
- Regional GDP per acre developed land
- Square footage developed (new square footage – whether on new land or in-fill development) relative to total new urban land developed
- People per acre in residential zones (i.e. bedrooms per acre of residential zoning)
- Jobs per acre in commercial zones

**Ft. Carson Goal:** Further integrate sustainability principles into the Fort Carson land use planning, Real Property Master Planning, and Military Construction, Army (MCA) programming processes.





### **N1.3. Community Institution Protection**

**Plan / hot topic:** Military installation and local institution encroachment

Predictive Indicator:

- Cost-effective policies and incentives supporting military installation and local institution freedom from encroachment

Performance Indicator:

- Percent linear feet of military installation and other major economic institution borders protected from incompatible adjacent development (e.g. residential or non-compatible commercial)

**Ft. Carson Goal:** Training Ranges (land and associated air space used for live fire ranges, maneuver, testing and urban development designated for Military Operations in Urban Terrain training) capable of supporting current and future military training to standard.

**Plan / hot topic:** Preservation of community plans for development

Predictive Indicator:

- Land-use decision-making using whole systems approaches
- Quality of elected and executive officials

Performance Indicator:

- Acres annually developed in accordance with comprehensive plans as percentage of total lands developed
- Percent land-use planning using whole-system decision-making

**Plan / hot topic:** Preservation of ecological viability of designated open spaces

Predictive Indicator:

- Cost-effective policies / incentives promoting ecologically-compatible developments near designated open-spaces

Performance Indicator:

- Percent of designated open space ecosystems maintaining ecological viability

**Plan / hot topic:** Preservation of agricultural land and economy

Predictive Indicator:

- Performance indicators:
- Community dependence on food imported more than 100 miles
- Acres permanently converted from agricultural use (through selling of water rights, etc.)

### **N1.4. Urban/wild land interfaces**

**Plan / hot topic:** Fire safety in foothills

Predictive Indicator:



- Cost-effective policies and incentives promoting fire safety in foothills and forest lands
  - Education of landowners about fire safety
- Performance Indicator:
- Property, health and ecosystem losses from fire in the foothills and forest lands

## **N2. Biodiversity / Ecosystem Health**

### **N2.1. Ecosystem Health Management**

**Plan / hot topic:** Regional and local ecosystem health

Predictive Indicators:

- Authority to ensure whole-system ecological management of land (i.e. appropriate corridors, legal authority, financial resources, etc.)
- Percent of non-urban land subject to appropriate financial incentives for ecological health (e.g. TDRs)
- Percent of “downstream” communities with sufficient influence over “upstream” operations
- Percent of watersheds with appropriate scale ecosystem health management (watershed, or other that fits scale of ecosystem)

Performance Indicators:

- Percent identifiable ecosystems with improving health
- Regional Biological Health Index; potentially comprised of measurable indicators in the topics of invasive species, in-stream water quality, endangered species, soil health, etc.

**Plan / hot topic:** Invasive species

Predictive Indicator:

- Percent of invasive species with effective management plans

Performance Indicator:

- Annual decline in severity of invasive species problems

**Plan / hot topic:** Appropriate preservation of open space relative to loss of open space to urban growth

Predictive Indicator:

- Cost-effective policies, resources and incentives for open space preservation

Performance Indicator:

- One year average of ratio of preserved open land to land consumed by urban development.

**Plan / hot topic:** Urban/wildlife interface & educating public about ecological management/interactions



Predictive indicator:

- Percent residents educated about ecological land management

Performance Indicator:

- Percent residents that are literate about ecological land management

## **N2.2. Natural Capital**

**Plan / hot topic:** Preservation of natural capital for economic prosperity (resources and services)

Predictive Indicator:

- Percent natural capital monetized and ready for use in decision-making
- Percent of land managed by governments dedicated to natural capital protection

Performance Indicator:

- Percent of natural capital that is monetized and formally included in major regional land-use and economic development planning/decision-making

## **N3. Energy**

### **N3.1. Local Impacts from Energy Production / Use**

**Plan / hot topic:** Regional air quality

Predictive Indicator:

- Cost-effective local policies and incentives reducing air pollution

Performance Indicator:

- Regional Local Sources Pollution Index; potentially comprised of air emissions from energy use, water pollution from energy use, etc. in ratio to population and/or economic output

**Plan / hot topic:** Security of continuous cost-effective energy access

Predictive Indicator:

- Cost-effective government programs / policies supporting investment in continuous distributed generation

Performance Indicators:

- Percent of military institutions meeting energy security goals
- Percentage of energy consumed that is produced from local sustainable sources such as renewables, hydro, etc.
- Growth of installations of sustainable distributed electrical generation

**Plan / hot topic:** Pollution from local energy production / use

Performance Indicators:

- Percent reduction in identified toxics from local energy production
- Percent of energy-efficient vehicles (e.g. >30 MPG)
- Percent of local air pollution coming from energy production



**Plan / hot topic:** Energy affordability

Predictive Indicators:

- Unemployment rate
- Percent of affordable homes rated as energy efficient
- Percent of buildings receiving energy audits in past two years
- Cost-effective local policies / incentives for energy efficient residential structures

Performance Indicators:

- Percent households requiring home energy financial assistance
- Rebates given for energy efficient investments
- Residential energy charges per square foot (real dollars)
- Number of residents spending more than 10% of total expenditures on home and mobility energy and water (alternative: energy use per square foot by lowest income (bottom fifth) consumers: See E1.2. – business vulnerability to energy prices)
- Number of buildings achieving high ratings for energy warming and cooling efficiency and lighting efficiency

## **N3.2. Local Energy Production and Use**

**Plan / hot topic:** Energy efficiency

Predictive Indicators:

- Local subsidies for energy use, or improved productivity
- Residential energy use per capita (e.g., kWh per person)
- Percent of buildings receiving energy audits in past two years
- Cost-effective incentives and education regarding motor fuel reduction strategies
- Adopted and enforced comprehensive plans promoting efficient development, protection of agricultural lands and institutions.
- Incentives promoting energy productivity investments (energy productivity defined as dollars of revenue per energy unit (e.g. BTUs) consumed)

Performance Indicators:

- Energy use per household
- Economic output per energy unit (BTU) consumption
- Motor fuel consumption per capita

**Ft. Carson Goal:** All applicable facilities at Fort Carson will be high performance buildings that meet or surpass the Platinum Standard of SPiRiT or LEED.

**Plan / hot topic:** Accurate energy pricing

Predictive Indicators:

- Number of programs/policies established to include lifecycle costs in local energy costs
- Number of people educated about true lifecycle costs of energy sources



Performance Indicator:

- Percent of lifecycle costs (including indirect costs such as military protection of supplies) included in local energy prices

**Plan / hot topic:** Local sustainable energy production

Predictive Indicator:

- Cost-effective incentives and education regarding sustainable energy production strategies
- Percent local utilities in compliance with state energy laws directing more sustainable energy use

Performance Indicator:

- Percent of local energy production meeting sustainability criteria (e.g. renewable fuels from sustainable sources)

**Ft. Carson Goal:** Sustain all facility and mobility systems from renewable sources

**Plan / hot topic:** Excess energy distribution efficiency

Predictive Indicator:

- Capability of energy distribution systems to export excess energy

Performance Indicator:

- Percent of excess local power exported to other areas

### **N3.3. Non-Local or Global Impacts of Energy Production / Use**

**Plan / hot topic:** Climate change

Predictive Indicator:

- Cost-effectiveness of public incentives and policies supporting climate change activities by organizations and citizens
- Number of people educated about climate change risks and opportunities

Performance Indicator:

- Reduction in carbon / GHG intensity of local energy use
- Reduction in carbon / GHG intensity of local energy production
- Percent of motor fuels consumed originating beyond US borders

**Plan / hot topic:** Nuclear power lifecycle impacts

Predictive Indicator:

- Percent of documented nuclear power risks included in local decision-making processes

Performance Indicator:

- Percent of electricity consumed from non-nuclear sources.

**Plan / hot topic:** Ozone layer impacts

Predictive Indicator:

- Percent energy sources valuing ozone layer impacts in energy planning



Performance Indicator:

- Percent reduction in energy-related releases of ozone-layer damaging substances

**Plan / hot topic:** Energy pollutants leaving local area

Predictive Indicator:

- Energy planning valuation of pollutant damage outside of area

Performance Indicator:

- Reduction of “Nox” and “Sox” and mercury etc. pollutants leaving the region

## N4. Water

### N4.1. Water Supply

**Plan / hot topic:** Water efficiency

Predictive Indicator:

- Education/incentive programs supporting efficient water use

Performance Indicators:

- Percent increase in urban water used more than one time
- Per capita urban potable water use per year
- Gallons treated of potable water used relative to population and economic output

**Plan / hot topic:** Cost of urban water

Predictive Indicators:

- Growth of areas in xeriscape (requires no watering)
- Incentives/regulations supporting general water efficiency or peak period reductions

Performance Indicators:

- Annual change in real dollar water costs per account
- Percent annual reduction in peak day (or relevant period for water planning) of urban water use
- Market prices of water costs as percentage of estimated total water costs including non-market externalities
- Municipal water shares relative to water demand
- Annual growth of water demand (urban, and aquifer-supplied)

**Ft. Carson Goal:** Reduce the total water purchased from outside sources by 75%.

**Plan / hot topic:** Regional approach to water planning

Predictive Indicators:

- Local government policies supporting regional water planning
- Lawsuits or other legal actions between water providers/users in region



- Incentives promoting water productivity relative to previous year (water productivity is dollars of revenue generated per unit of water (e.g. gallon) consumed)

Performance Indicators:

- Percent water projects planned with regional cooperation
- Meaningful community involvement (i.e. decision-making) in water planning

**Plan / hot topic:** Groundwater supply

Predictive Indicators:

- Effective regulations/incentives in place to protect groundwater supply
- Wells permitted for more than 900 feet per minute

Performance Indicators:

- Percent of groundwater free from contamination
- Annual change in average aquifer levels

**Plan / hot topic:** Tap water quality (real and perceived)

Predictive Indicators:

- Watershed quality management practices
- Per gallon cost of treating urban water supply

Performance Indicators:

- Urban (tap) water quality
- Perceived urban (tap) water quality

**Plan / hot topic:** Natural capital damage from life-cycle of new water supplies (electricity effects, habitat disturbance, physical materials used, etc.)

Predictive Indicator:

- Water utilities adopting practice of estimating natural capital damages from new water supply projects

Performance Indicator:

- Natural capital damage from new water supply projects

## **N4.2. Wastewater and Water Quality**

**Plan / hot topic:** Water quality in water bodies (surface and groundwater)

Predictive Indicators:

- Percent of water bodies receiving adequate management focus and resources.
- Annual reduction in human development within 100' of waterways.
- Waterways that are not concrete channels.
- Education or incentive programs that protect in-stream water quality
- Percent reduction in impervious surfaces
- Percent reduction in wastewater contaminants leaving properties



- Percent wastewater contaminants removed from water prior to release to Biosphere
- Annual progress in reducing difference in temperature between wastewater released to biosphere and natural temperature of receiving waterways
- Agricultural runoff water quality
- Growth of impervious surfaces
- Properties achieving zero storm water runoff
- Incentives promoting wastewater reduction relative to previous year

Performance Indicators:

- Alignment of sediment levels in waterways with natural levels (dissolved oxygen, TDS, nutrients, temperature, etc.)
- Percent of assessed water bodies (groundwater and surface water) meeting established quality standards
- Alignment of stream flows with natural levels (volume)
- Gallons treated potable water used relative to population and economic output

## N5. Waste / Solid Waste

### N5.1. Solid Waste

**Note:** “Zero Waste” refers to achieving zero waste put into the biosphere through either landfill, air or water emissions. This is achieved by converting waste into a salable product for other economic uses.

**Plan / hot topic:** Ecological (ecosystem) impacts of solid waste management

Predictive Indicators:

- Solid waste education programs; or # people receiving solid waste education
- Number of organizations with Zero Waste goals

Performance Indicators:

- Acres devoted to landfills
- Carbon emissions from solid waste disposal (transport, management)
- GDP relative to solid waste and hazardous waste disposed (tons)

**Ft. Carson Goal:** The total weight of solid and hazardous waste disposed of is reduced to zero.

**Plan / hot topic:** Recycling

Predictive Indicator:

- Incentives promoting reduction of solid and hazardous waste (including recycling)

Performance Indicator:





- Volume of solid waste purchased for re-use by local organizations (businesses or nonprofits)

## N5.2. Other Waste

**Plan / hot topic:** Total waste released to biosphere

**Plan / hot topic:** Hazardous waste generated and/or released to biosphere

Predictive Indicators:

- Zero Waste supportive policies adopted by local governments
- Number of organizations achieving Zero Waste

Performance Indicator:

- Amount of total waste/hazardous waste (solid, liquid, gaseous) released to the biosphere

**Ft. Carson Goal:** The total weight of hazardous air pollutant emissions is reduced to zero.

## Economy

**Note:** The term “small business” means businesses less than 20 employees total.

### E1. Business: Health of Individual Businesses

#### E1.1. Local (ownership) business health

**Plan / hot topic:** Locally-owned business contracts with large institutions or companies

Predictive Indicators:

- Large business or institution purchasers with small business purchasing programs
- Programs supporting small business growth and institutional contracts

Performance Indicator:

- Annual dollar volume of local business (locally owned) contracts with large purchasers (more than 500 employees)

**Plan / hot topic:** Local business competitiveness (with non-local alternatives)

Predictive Indicator:

- Growth of business management course enrollments or assistance programs
- Growth of Business Management Capability Index (see E1.2.)

Performance Indicator:

- Bankruptcy rate of locally-owned businesses



## **E1.2. Overall business health**

### **Plan / hot topic:** Business management capabilities

Predictive Indicator:

- Growth of business management course enrollments or assistance programs

Performance Indicator:

- Growth of sales taxes generated by small businesses (less than 20 employees);
- Profitability of small businesses
- Business Management Capability Index

### **Plan / hot topic:** Business creditworthiness

Predictive Indicator:

- Business Management Capability Index

Performance Indicator:

- Regional growth of small business loans

## **E1.3. Business support infrastructure**

### **Plan / hot topic:** Access to cost-effective telecommunications

Predictive Indicator:

- Growth of high-speed internet service in commercial areas

Performance Indicator:

- Number of businesses without high-speed internet access

### **Plan / hot topic:** Cost-effective site availability for targeted growth industries

Predictive Indicator:

- Business-zoned property per 1,000 population

Performance Indicator:

- Acres of business-zoned and infrastructure-served properties available for development or redevelopment

### **Plan / hot topic:** Health of business support organizations

Predictive Indicator:

- Growth of locally-owned businesses

Performance Indicator:

- Growth of business support organization memberships and revenues

## **E2. Economic Vitality: Meeting local economic development goals**



**Note:** Livable compensation calculations would include both housing costs and transportation costs.

## E2.1. Business diversity

**Plan / hot topic:** Business recruitment that enhances existing businesses

Predictive Indicator:

- Adopted government policies and activities that support wastes becoming raw materials and target industry growth

Performance Indicator:

- Growth of new businesses that use waste of existing businesses for raw materials;
- Growth of new businesses in targeted clusters (that export products or services from the region)

**Plan / hot topic:** Growth of targeted and key established industries

Predictive Indicator:

- Cost-effective policies and incentives supporting targeted industries

Performance Indicator:

- Annual growth of targeted (by economic development agency) and key established industries measured by employment and total number of business organizations

**Plan / hot topic:** Industry sector diversity

Predictive Indicator:

- Cost-effective policies and incentives promoting diverse industry development

Performance Indicator:

- Alignment of local economic diversity with state and national economy

## E2.2. Business location

**Plan / hot topic:** Location of businesses in central business districts or other targeted areas.

Predictive Indicator:

- Government support (regulations, incentives) for central business district locations

Performance Indicators:

- Cost-effectiveness of central business district locations (considering land costs, redevelopment challenges)
- Annual growth of employment and total number of business organizations in areas targeted for business growth

## E2.3. Citizen economic health

**Plan / hot topic:** Job compensation increases lagging behind cost of living increases



Predictive Indicator:

- Accessibility (geographic and financial) of workforce education programs to those who need them

Performance Indicators:

- Wage growth compared to cost of living growth
- Livability/affordability Index: Percent of people earning below livable compensation and percent of new regional jobs providing livable compensation, percent of income of people earning at and/or below regional median devoted to necessities, economic output per capita, etc.

## E2.4. Overall economic vitality

**Plan / hot topic:** Attractiveness of region to new business investment

Predictive Indicators:

- Economic Vitality Index: Measures economic development goals and business attractiveness:
  - Amenities
  - Workforce skill
  - Business support systems
  - Sustainable business practices
- Incentives supporting economic development goals (whether targeted to individual organizations or to all organizations)

Performance Indicator:

- Annual levels of new business investment in exporting sectors (i.e. not based on local markets)

## E3. Employment: Health of a Citizen's Relationship to Paid Work

**Note:** Indicator selection assumes that local economic development agencies target industries considering quality of employment offered.

### E3.1. Workforce skill alignment with employment opportunities

**Plan / hot topic:** New jobs that fit the needs of residents, i.e. aligning work force skill with job needs

Predictive Indicators:

- Accessibility (geographic and financial) of workforce education programs to those who need them
- Business employment growth in targeted sectors (assumes sectors are targeted partially due to existence of local workforce skills)



- Engagement of business community in educational curriculum development of 9-12 and secondary education institutions

Performance Indicators:

- Percent of new jobs filled by local residents
- Professionally trained students landing trained-for jobs within one year
- Unemployment rate
- Underemployment rate (Percent of people with jobs below their qualifications and/or qualified people not in the workforce)
- Workforce by Class compared to Jobs by Class (Classes are Creative Class, Working Class, Service Class, Ag Class )
- Adults with bachelor's degree or higher level of education

## E3.2. Worker Compensation

**Plan / hot topic:** Economic opportunities providing livable compensation

Predictive Indicator:

- Annual growth of targeted (by economic development agency) and key established industries measured by employment and total number of business organizations

Performance Indicators:

- Percent of population in poverty
- Livability/affordability Index: Percent of people earning below livable compensation and percent of new regional jobs providing livable compensation, percent of income of people earning at and/or below regional median devoted to necessities, economic output per capita, etc.
- Economic output per capita
- Promotions of native residents into managerial positions
- Community Wealth Leakage Index (increase of local economic multipliers)

**Plan / hot topic:** Quality of New Jobs (e.g. benefits including training for advancement personal/professional growth opportunities)

Predictive Indicator:

- Annual growth of targeted (by economic development agency) and key established industries measured by employment and total number of business organizations

Performance Indicator:

- For both new jobs created and total overall jobs, percent that start above livable compensation levels for 40 hour workweek
- Percent new jobs created with at least two-level title increase locally-available

## E3.3. Worker transportation access to employment opportunities



**Note:** The terms “easily accessible” and “reasonably accessible” are to be defined by local transit agencies and economic development agencies (including employment agencies) and are to consider time commitment to a job commute via transit along with other factors.

**Plan / hot topic:** Geographic alignment to work opportunities

Predictive Indicator:

- Cost-effective policies and incentives promoting job growth in developed areas

Performance Indicators:

- Average commute times
- Percent of total jobs and new jobs that are easily accessible to economically challenged neighborhoods (i.e. lower income areas)

**Plan / hot topic:** Transit access to employment

Predictive Indicator:

- Annual growth of employment and total number of business organizations in areas targeted for business growth
- Quality of transit services to areas targeted for business growth.
- Percent businesses participating in partnerships providing reduced-cost transit access and/or providing reduced-cost transit access through own initiative

Performance Indicator:

- Percent of existing and newly created employment opportunities reasonably accessible via transit

## **E4. Sustainable Economy**

### **E4.1. Business / organization sustainability practices**

**Plan / hot topic:** Sustainability Management Literacy

Predictive Indicator:

- Public Educational and/or Cost-effective policies / incentive programs for businesses to implement sustainability management systems

Performance Indicator:

- Percent of organizations greater than 20 employees with adopted sustainability policies or goals

**Plan / hot topic:** Business Protection of natural capital

Predictive Indicators:

- Percent of organizations greater than 50 people employing an EMS/SEMS
- Percent of organizations greater than 20 employees with adopted sustainability policies or goals

Performance Indicators:

- Percent of organizations that reduce energy and water intensity (means use of resources per dollar of revenue) more than 3% annually



- Annual increase in value of natural capital
- Percent of organizations greater than 20 employees that reduce energy and water intensity (means use of resources per dollar of revenue) more than 3% annually

**Ft. Carson Goal:** Advance a sustainable mission and Fort Carson by adopting a SEMS and by imparting (passing on) a personal commitment and enthusiasm for sustainability.

**Plan / hot topic:** Sustainable procurement practices

Predictive Indicator:

- Percent of organizations conducting internal sustainability education

Performance Indicators:

- Percent of organizations that have adopted sustainable procurement practices or goals
- Annual growth in sustainable procurement of organizations tracking it

**Ft. Carson Goal:** All DOD and Fort Carson procurement actions support sustainability.

**Plan / hot topic:** Pollution reduction by business and organizations

Predictive Indicator:

- Cost-effective policies / incentives helping organizations reduce pollution

Performance Indicator:

- Annual reduction in inventory of toxics (federal definition) per GDP

**Ft. Carson Goal:** Annual reduction in government regulated pollutants

## **E4.2. Transition to a sustainable economy**

**Plan / hot topic:** Sustainable or eco labeled product development

Predictive Indicators:

- Cost-effective policies / incentives for sustainable product development

Performance Indicator:

- Annual increase in certified sustainable or eco-labeled products produced locally (within 60 miles of region's urban centers)

**Plan / hot topic:** Global need to reduce greenhouse gas emissions

Predictive Indicator:

- Cost-effective policies / incentives supporting climate change strategies of local organizations

Performance Indicator:

- Annual business/organization facility reduction of greenhouse gas emissions



## Well-Being

### W1. Education: Development of human capital

#### W1.1. K-12 Education

**Plan / hot topic:** Education quality

Predictive Indicators:

- Number of students per classroom and per teacher in grades K-3, 3-8, 9-12
- Percent of pre-K age children in educational programs by family income level
- Percent kids in alternatives from general public education classrooms
- Percent of public education staff that meet the certification and highly qualified designation as reported by the state of Colorado
- Percent experienced teachers (>15 yrs. experience) at schools not meeting state performance standards

Performance Indicators:

- Percent of all public education students meeting the Colorado state proficiency standard for each subject area assessed or federal No Child Left Behind standards
- Annual dropout rate and graduation rate (reported by the State of Colorado)
- Satisfaction of parents with public educational systems
- The ratio of mean percentile of the district student achievement divided by the district cost per student (per pupil cost)

#### W1.2. Continuing Education (degree-based)

**Plan / hot topic:** Improvement of adult workforce skills

Predictive Indicator:

- Accessibility (geographic and financial) of workforce education programs to those who need them
- Per capita government support of higher education

Performance Indicators: (also see E3.1. Adults (percent) with bachelor's degree or higher education and for background, see Bell Policy Institute Gateways of Opportunity)

- Human Capital Development Index: Human capital development index: possible measures
  - Tuition cost
  - Opportunity costs
  - Cost of living compared to incomes
  - Access to education
- Percent of population with higher education degree





### **W1.3. Public Education (non-degree based)**

**Plan / hot topic:** Cost-effective access to information

Predictive Indicator:

- Library funding per capita
- Cost-effective policies / incentives for home installation of internet access by economically disadvantaged people

Performance Indicator:

- Percent of households with internet access (via own computer)
- Public library volumes per capita

**Plan / hot topic:** Adult literacy and literacy with English as second language

Predictive Indicator:

- Percent of population arriving with no English gaining working use of English within one year

Performance Indicator:

- Adult literacy rates
- Adult literacy rates in English among those with English as second language

## **W2. Health: Human health performance**

**Note:** Indicators with an \* at beginning are from State of Colorado's Healthy Colorado 2010 indicators.

### **W2.1. Access**

**Plan / hot topic:** Public access to health care

Predictive Indicators:

- Percent of population with health insurance
- \*Health Insurance Coverage: 100% of persons under 65 years of age will have health care coverage (COH)

Performance Indicators:

- Percent health care institutions within 1/4 mile of transit services
- Public health spending per capita
- Percent of population accessing routine health screening visits, immunizations, etc.
- \*Mental Health Treatment Expansion: 55 percent of adults aged 18 to 54 with a Serious Mental Illness will report receiving treatment (COH)
- \*Specific Source of Ongoing Primary Care: 96 percent of persons of all ages will have a specific source of ongoing primary care (COH)



## W2.2. Prevention

### **Plan / hot topic:** Prevention of health problems

#### Predictive Indicators:

- Percent employers offering preventative health insurance
- Public health funding treating risky (voluntary) behaviors
- Percent of school districts with mandatory health education

#### Performance Indicator:

- Public access to safe cycling/pedestrian mobility or recreational systems (surveyed)
- Incidence of sexually-transmitted disease
- Reduction of deaths due to leading preventable conditions (e.g. heart Disease)
- Self-reported number of adults in poor to fair health
- \*Childhood Immunizations: 80 percent of children 19 to 35 months will receive all DtaP, polio, MMR, Hib, and HepB vaccines (fully immunized with the 4:3:1:3:3 series)
- \*Adult Smoking: Only 12 percent of adults 18 yrs of age and older will have smoked more than 100 cigarettes in their lifetime or smoked on some or all days in the past month
- \*Adolescent Physical Activity: 85 percent of adolescents in grades 9-12 will engage in vigorous physical activity that promotes cardio respiratory fitness three or more days per week for 20 or more minutes per day
- \*Adult Physical Activity: 50 percent of adults aged 18 years and older will report light or moderate physical activity for at least 30 minutes five or more times per week
- \*Adult obesity: Only 15 percent of adults 20 years of age and older will be obese (body mass index of 30 or greater)
- \*Responsible Adolescent Sexual Behavior: 95 percent of adolescents will report abstaining from sexual intercourse or using condoms if currently sexually active
- \*Unintended Pregnancy: Reduce to no more than 30 percent the proportion of all pregnancies that are unintended (COH) Illicit Drug Use Among Adults: Only 2 percent of adults 18 yrs or older will report illicit drug use in the past 30 days
- \*Use of Alcohol and Illicit Drugs by Adolescents: 89 percent of adolescents 12-17 years of age will report no use of alcohol or illicit drugs in the past 30 days.

## W2.3. Environmental Quality

### **Plan / hot topic:** Environmental (ambient) quality effect on human health

#### Predictive Indicators:

- Transition rate to a sustainable economy



- Cost-effective government policies / incentives preventing environmental effects on human health
- Local mercury emissions from energy production and inoculations
- Percent fish in local lakes meeting mercury standards
- Population exposed to air not meeting EPA health standards for ozone, carbon monoxide and particulate matter

Performance Indicator:

- Growth or decline of human health problems attributed to environmental causes

## **W3. Housing: A basic need supporting human capital**

### **W3.1. Access to housing (costs)**

**Plan / Hot Topic:** Access to Housing

Predictive Indicators:

- Cost-effective government policies / incentives for adequate affordable housing
- Cost-effective government policies / incentives for high performance sustainable housing (e.g. Built Green)

Performance Indicator:

- Percent of all existing and new housing affordable to very low, low, and moderate income households (affordability measured by life-cycle ownership costs including utilities and maintenance, not initial cost)

### **W3.2. Quality of Housing**

**Plan / Hot Topic:** Quality of Housing

Predictive Indicator:

- Cost-effective policies and incentives supporting green high performance housing development and/or remodeling

Performance Indicator:

- Production of “Green” high performance housing expressed as percent of new and substantially-rehabilitated housing that complies with local Green Building measures as a percentage of the total new and rehabilitated housing

### **W3.3. Land use / Mobility**

**Plan / Hot Topic:** Housing locations supportive of mobility without private vehicles

Predictive Indicators:



- Square footage developed (new square footage – whether on new land or in-fill development) relative to total new urban land developed
- People per acre in residential zones

Performance Indicators:

- Percent of housing within 1/4 mile of transit services
- Percent of housing within 1 mile of commercial services
- Geographic distribution of housing affordability

**Ft. Carson Goal:** Reduce automobile dependency and provide balanced land use and transportation systems.

## Society

### S1. Community Participation: Our Ability and Inspiration to Work Together

#### S1.1 Volunteerism

**Plan / hot topic:** Governance

Predictive Indicator:

- Elected leadership and executives rated as high quality

Performance Indicator:

- Percent of adults 18+ yrs of age who participate in governance as a volunteer

**Plan / hot topic:** Creating access to participation

Predictive Indicator:

- Cost-effective policies and incentives supporting ADA regulations compliance and performance beyond compliance

Performance Indicator:

- Percent compliance with ADA regulations

**Ft Carson Goal:** Improve communication to foster understanding and attain a “Community of One.”

**Plan / hot topic:** Overall volunteerism for governance and civic activities

Predictive Indicator:

- Elected leadership and executives rated as high quality

Performance Indicators:



- Percent growth of volunteer hours (by those tracking it) compared to population growth
- Percent of population over 18 volunteering in community
- Percent of youth 10-18 volunteering (civic, religious, etc)

## **S1.2 Civic/Religious Organizations**

**Plan / hot topic:** Number of participants

Predictive Indicator:

- Does a person feel like its worth being involved in the community?

Performance Indicators:

- Charities and individual and business charitable donations per 1,000 population
- Percent of identifiable neighborhoods with registered neighborhood associations
- Diversity of participants in civic organizations

**Plan / hot topic:** Churches

Predictive Indicator:

- Does a person feel like its worth being involved in the community?

Performance Indicator:

- Number of religious congregations per 1000 people
- Religious attendees as percent of county population

## **S1.3 Sustainability Awareness**

**Plan / hot topic:** Community knowledge of sustainability

Predictive Indicators:

- Sustainability courses or events offered per year
- Percent of organizations greater than 50 people employing an EMS/SEMS
- Percent of organizations greater than 20 employees with adopted sustainability policies or goals

Performance Indicator:

- Community sustainability awareness (surveyed)

**Ft. Carson Goal:** Key stakeholder groups are trained, compliant and motivated toward sustainability principles.

**Plan / hot topic:** Sustainability partnering in the community

Predictive Indicator:

- Percent organizations in the region adopting and using common sustainability indicators

Performance Indicator:

- Community partnerships for sustainability



**Ft. Carson Goal:** Enhance partnering to collaboratively develop, integrate, and implement regional sustainability.

## **S2. Crime/Safety**

### **S2.1 Crime Prevention and Law Enforcement Effectiveness**

**Plan / hot topic:** Community policing

Predictive Indicator:

- Community / law enforcement partnerships for crime prevention

Performance Indicator:

- Percent of police on foot or bicycle
- Number of neighborhood watch groups per urban resident
- Residents (surveyed) perception of safety (police, fire, ambulance)

**Plan / hot topic:** Crime rates

Predictive Indicators:

- Percent of population above the federal poverty level
- Population growth compared to growth of number of crime victims

Performance Indicators:

- Population relative to violent crime (and separately, felony) convictions
- Population relative to nonviolent crime convictions

### **S2.2. Substance abuse**

**Plan / Hot Topic:** Substance abuse education

Predictive Indicator:

- Cost-effective policies and incentives supporting substance abuse education

Performance Indicator:

- Estimated Number of people receiving substance abuse education compared to population (or if measurable, at-risk populations)

### **S2.3. Youth Crime**

**Plan / hot topic:** Youth crime problems

Predictive Indicators:

- Youth program slots per capita for all youth, and poverty level youth.
- Number of parents without adequate daycare options
- High school drop out rate

Performance Indicators:



- Convicted crime and separately felony rate per 10,000 youth
- Juvenile arrest growth compared to population growth
- Number of youth avoiding prison with community restitution
- Youth population relative to violent deaths of youth

### **S3. Culture and Leisure: Supporting social systems and ecosystems for access**

#### **S3.1. Government Role**

**Note:** Measuring government support for cultural activities does not imply that more government support is a desired solution – it can also be an indicator that too much government support is occurring. I.e., a measure of government support is neutral regarding the ideal level of government support.

**Plan / hot topic:** Government support of cultural / leisure activities

Predictive Indicator:

- Private support of cultural / leisure activities per capita
- Government's obligated spending compared with revenues per capita
- Dedicated government funds for cultural / leisure support
- Adopted government policies supporting cultural / leisure activities (e.g. natural area preservation, historic preservation, arts, etc.)

Performance Indicator:

- Tax dollars supporting cultural / leisure activities events per capita

#### **S3.2. Access to Culture and Leisure**

**Plan / hot topic:** Alignment of cultural event seating/venues/costs with community demand

Predictive Indicators (also see S3.1):

- Variety of community cultural facilities
- Number of seats in public/private arts facilities per capita

Performance Indicators:

- Cultural / leisure event attendance growth per capita
- Financial health of cultural / leisure event organizations
- Percentage of cultural events affordable to poverty-level residents

#### **S3.3. Economic Benefit**

**Plan / hot topic:** Economic contribution of cultural / leisure events

Predictive indicators:

- Alignment of cultural event seating with community demand
- Cultural events marketing to people outside the community



- Cultural events quality
- Percentage of workers classified as Creative Workforce
- Number of cultural/leisure organizations with professional staff

Performance indicators:

- Number of non-resident participants in community cultural / leisure events
- Estimated economic benefit from major cultural / leisure events per capita (including multipliers, etc.)
- Number of tourism-related and culture/leisure-related jobs with benefits that pay living way
- Arts Vitality Index: possible measures
  - Percent of economic growth from the arts
  - Number of organizations with a “percent for the arts” or similar policy
  - Local dollars donate per capita to five largest identified arts organizations, etc.

## S4. Family Health

### S4.1. Family self-sufficiency

**Plan / hot topic:** Family Self-sufficiency

Predictive Indicators:

- Unemployment rate
- Production of green high performance housing
- Cost-effective policies / incentives for home installation of internet access by economically disadvantaged people
- Economic Vitality Index (see Economy section)

Performance Indicator:

- Family Self Sufficiency Index (see Economy section)

**Plan / hot topic:** Health of children of divorce

Predictive Indicators:

- Percent of parents not living in the region (within one hour) of children
- Marriage rate relative to divorce rate

Performance Indicator:

- People under 18 from divorced families and not meeting CSAP requirements

### S4.2 Family vitality

**Plan / hot topic:** Preventable death

Predictive Indicator:

- Growth or decline of human health problems attributed to environmental causes





- \*Motor Vehicle Traffic Crashes: Reduce deaths caused by motor vehicle traffic crashes to 9.2 deaths per 100,000 populations (COH 2010)

Performance Indicator:

- Preventable death rate

## **S5. Governance: Managing economic and social behavior**

### **S5.1. Accountability**

**Plan / hot topic:** Quality of elected leaders and executives

Predictive Indicator:

- Percent of elective offices actively contested
- Percent local elected positions paying a living wage
- Percent of local executive positions compensated in the range of national norms

Performance Indicator:

- Percent of local government entities with an adopted strategic plan with reported results
- Elected leadership and executives rated as high quality

**Plan / hot topic:** Government responsiveness to constituents

Predictive Indicator:

- Elected leadership and executives rated as high quality
- Government's obligated spending compared with revenues per capita

Performance Indicator:

- Access to elected officials or important information (survey gathered)
- Balance of government revenues streams compared to state/national norms
- Flexibility of local leaders to respond to changes (survey gathered)
- Perceived influence (via survey) of campaign donors on local officials

### **S5.2. Participation Rates**

**Plan / Hot Topic:** Citizen participation in governance (local govt. and neighborhood associations)

Predictive Indicators:

- Perceived influence (via survey) of campaign donors on local officials
- Flexibility of local leaders to respond to changes (survey gathered)
- Elected leadership and executives rated as high quality
- Does a person feel like its worth being involved in the community?
- Government or non-profit institution support of neighborhood associations
- Government or non-profit support of voter education and ease of voting
- Government Support of Neighborhood Associations

Performance Indicators:



- Diversity of people who participate in government boards and commissions
- Percent of elective offices actively contested
- Participation in neighborhood associations
- Percent voting in elections and Percent eligible voter registered to vote
- Percent residential (acres) represented by established neighborhood assns or homeowners associations

### **S5.3. Fiscal Management**

**Plan / Hot Topic:** Government fiscal fairness (are people and organizations appropriately paying for government services)

Predictive Indicator:

- Number of citizens educated about government services and revenues

Performance Indicators:

- Percent of new urban development's revenues to local/state governments covering short- and long-term costs
- Government revenues compared to population and government revenues per parcel compared to service requirements
- Percent of government-owned lands providing local government revenues in lieu of taxes equivalent to private landowners
- Local taxes waived through business incentives per dollar collected from those businesses and livable compensation jobs created by those businesses

### **S6. Mobility: Connection of people to goods and services**

**Plan / Hot Topic:** Note: the following mobility indicators are listed in other topics:

- Land Use: See N1.1. Land use pattern support of urban transit systems
- Housing: See W3.3. Housing locations supportive of mobility without private vehicles
- Work: See 3.3. Geographic alignment to work opportunities and Transit access to employment
- Relationship to Health: see W2.1. Public access to health care and W2.2. Prevention of health problems
- Senior mobility: see S7.3. Senior Necessities Performance
- Youth mobility:

#### **S6.1. Public Mobility Performance**

**Plan / hot topic:** Cost-effectiveness of public mobility systems

Predictive Indicator:

- Cost-effective policies and incentives supporting low-cost mobility

Performance Indicators:



- Amount of tax dollars spent on subsidizing single-occupancy vehicle use versus public transit
- Percent of streets with adequate pedestrian and bike facilities
- Percent of land devoted to “car habitat”
- Average life-cycle cost of individual mobility (including costs of time)
- Total mobility-related carbon dioxide emissions per capita and per economic performance
- Percent change Vehicle Miles Traveled (VMT) per capita
- Growth in mass transit usage: Bringing down the cost of individual mobility achieved per time and money spent

## **S7. Seniors**

### **S7.1. Seniors’ Health**

#### **Plan / hot topic: Seniors’ overall health**

##### Predictive Indicator:

- Percent of population over 60 accessing county delivered or NGO services
- Percent of population over 70 living in own home

##### Performance Indicator:

- Senior Vitality Index (age 60+ and linked to number of seniors over 60 in region); possible measures are
  - Self sufficiency
  - Housing: Performance
  - Mobility
  - Social
  - Health/Nutrition
  - Caregivers
  - Fraud

#### **Plan / hot topic: Seniors’ financial health**

##### Predictive Indicators:

- Seniors’ per capita income growth compared to cost of living growth
- Cost-effective policies and incentives protecting seniors from fraud

##### Performance indicators:

- Seniors’ poverty rate
- Rate of seniors that are victims of fraud

#### **Plan / hot topic: Seniors’ physical/mental health**

##### Predictive Indicator:

- See Health Indicators of sections 2.1. and 2.2.



## S7.2. Diversity of Senior Activities

**Plan / hot topic:** Diversity of Senior Needs: (focus on the most fragile if we have to choose)

Predictive Indicator:

- Cost-effective policies and incentives supporting private or public senior programs

Performance Indicator:

- Percent of seniors achieving self-sufficiency: sufficient income considering expenses
- Nursing home patient days per person over 65
- Percent of population over 60 accessing county delivered or NGO services
- Percent of population over 70 living in own home

## S7.3. Senior Necessities Performance

**Plan / hot topic:** Performance of senior housing (access; affordability)

Predictive Indicator:

- Cost-effective policies / incentives supporting senior housing performance.

Performance Indicator:

- Number of units per capita dedicated to 65 and over

**Plan / hot topic:** Senior Mobility: Maximizing independence for frail and disabled

Predictive Indicator:

- Cost-effective policies and incentives supporting senior mobility

Performance Indicator:

- Percent of senior population reporting strong mobility

## S8. Youth

**Note:** Indicators beginning with \* are from State of Colorado “Healthy Colorado 2010”

**Note:** The Youth indicators listed immediately below are consolidated from the relevant indicators previously listed in sections W.1. Education, W.2. Health, and S3.2. Crime, in order to present a coherent picture of youth-related indicators.

### S8.1 Education (same as W1. Wellbeing/Education)

#### S8.1.1 K-12 Education

**Plan / hot topic:** Education quality

Predictive Indicators:

- Percent of public education staff that meet the certification and highly qualified designation as reported by the state of Colorado



- Percent experienced teachers (>15 yrs. experience) at schools not meeting state performance standards
- Number of students per classroom and per teacher in grades K-3, 3-8, 9-12
- Percent of pre-K age children in educational programs by family income level
- Percent kids in alternatives from general public education classrooms

Performance Indicators:

- Percent of all public education students meeting the Colorado state proficiency standard for each subject area assessed or federal No Child Left Behind standards
- Annual dropout rate and graduation rate (reported by the State of Colorado)
- Satisfaction of parents with public educational systems
- The ratio of mean percentile of the district student achievement divided by the district cost per student (per pupil cost)

### **S8.1.2 Public Education (non-degree based)**

**Plan / hot topic:** Improvement of adult workforce skills

Predictive Indicators:

- Accessibility (geographic and financial) of workforce education programs to those who need them
- Per capita government support of higher education

Performance Indicators: (See E3.1. Adults (percent) with bachelor's degree or higher education)

- Human Capital Development Index: Tuition Cost/ opportunity costs/ cost of living compared to incomes/access to education
- Percent of population with higher education degree

## **S8.2 Health: Human health performance (W2. Wellbeing/Health)**

### **S8.2.1 Access**

**Plan / hot topic:** Public access to health care

Predictive Indicator:

- Percent of population with health insurance

Performance Indicators:

- Percent health care institutions within 1/4 mile of transit services
- Public health spending per capita
- Percent of population accessing routine health screening visits, immunizations, etc
- \*Mental Health Treatment Expansion: 55 percent of adults aged 18 to 54 with a Serious
- \*Mental Illness will report receiving treatment
- \*Specific Source of Ongoing Primary Care: 96 percent of persons of all ages will have a specific source of ongoing primary care



- \*Health Insurance Coverage: 100% of persons under 65 years of age will have health care coverage

**Plan / hot topic:** Prevention of health problems

Predictive Indicator:

**Percent employers offering preventative health insurance  
Public health funding treating risky (voluntary) behaviors  
Percent of school districts with mandatory health education**

Performance Indicator:

- Public access to safe cycling/pedestrian mobility or recreational systems (surveyed)
- Incidence of sexually-transmitted disease
- \*Childhood Immunizations: 80 percent of children 19 to 35 months will receive all DtaP, polio, MMR, Hib, and HepB vaccines (fully immunized with the 4:3:1:3:3 series)
- \*Adolescent Physical Activity: 85 percent of adolescents in grades 9-12 will engage in vigorous physical activity that promotes cardio respiratory fitness three or more days per week for 20 or more minutes per day
- \*Responsible Adolescent Sexual Behavior: 95 percent of adolescents will report abstaining from sexual intercourse or using condoms if currently sexually active
- \*Unintended Pregnancy: Reduce to no more than 30 percent the proportion of all pregnancies that are unintended
- \*Illicit Drug Use Among Adults: Only 2 percent of adults 18 yrs or older will report illicit drug use in the past 30 days
- \*Use of Alcohol and Illicit Drugs by Adolescents: 89 percent of adolescents 12-17 years of age will report no use of alcohol or illicit drugs in the past 30 days.

### **S8.3 Youth Crime (same as S2.3 Society/Crime/Youth)**

**Plan / hot topic:** Youth crime problems

Predictive Indicator:

- Youth program slots per capita for all youth, and poverty level youth.
- Number of parents without adequate daycare options
- High school drop out rate

Performance Indicator:

- Convicted crime and separately felony rate per 10,000 youth
- Juvenile arrest growth compared to population growth
- Number of youth avoiding prison with community restitution
- Youth population relative to violent deaths of youth



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## S8.4 Youth Vitality

### **Plan / hot topic:** Youth care

#### Predictive Indicator:

- Percent of family-assistance resources in community to help families dedicated to children.
- Percent families that moved in the past year.

#### Performance Indicator:

- Youth Vitality Index: possible measures comprised of the individual indicators listed in section S8
- Number of children on waiting lists at day care providers.
- Child abuse cases investigated/prosecuted as percent of population.
- Licensed daycare vs. youth population aligned with geographic needs.
- Youth abortion rates.
- Children's response to military deployment.
- Infant mortality rate.
- Bullying measured by survey question: Do you feel safe in your school?



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## Appendices

### Appendix One: PPSIP Steering Committee

The PPSIP has been comprised of the work of a Steering Committee and four working Task Forces: Nature, Economy, Well-being and Society. The Steering Committee is composed of representatives from the participating local governments and Fort Carson. The Taskforce participants were organization representatives, interested citizens as well as Steering Committee members and staff from local governments providing technical expertise.

#### Jurisdictions:

**Terrie Burke**, Fountain City Council  
**Doug Fitzgerald**, Assistant City Manager, City of Pueblo  
**Tom Gallagher**, Colorado Springs City Council  
**Dennis Hisey**, El Paso County Commissioner  
**Frank Jaquez**, Canon City Council  
**Larry Lasha**, Fremont County Commissioner  
**Rob McDonald**, Exec. Director, Pikes Peak Area Council of Governments  
**Greg Nyhoff**, City Manager, City of Fountain  
**Dr. Karen Ramstrom**, Medical Director, El Paso County Dept. of Health and Environment  
**Bob Stovall**, Government Affairs, City of Colorado Springs  
**Mary Talbot**, Community Outreach, El Paso County Dept. of Health and Environment  
**Kathy Verlo**, Manitou Springs City Council  
**Meggan Yoest**, Pueblo County Planner

#### Fort Carson Mountain Post:

**Colonel Mark Silverstein**, Garrison Commander's Office, Fort Carson Mountain Post  
**Tom Warren**, Director, Fort Carson Directorate of Environmental Compliance and Management (DECAM)  
**Mary Barber**, Deputy Director, Fort Carson Directorate of Environmental Compliance and Management (DECAM)

#### Community Resources:

**Walter Hecox**, The Colorado College/State of the Rockies Report  
**Jerry Smith**, CEO, Pikes Peak United Way  
**Rob MacDonald**, Executive Director, and **Richard Muzzy**, Planner, Pikes Peak Area Council of Governments

#### Staff:

**Christopher Juniper**, Fort Carson Mountain Post / Natural Capitalism Solutions  
**Ann Oatman-Gardner**, Fort Carson Mountain Post / Natural Capitalism Solutions





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## Appendix Two:

# Regional Planning Goals and Hot Topics

In 2005, the Task Forces and Steering Committee met numerous times each to explore the merits of using indicators for public progress management and instances where indicators are already being measured to drive performance; to identify hot topics deserving indicators, and to suggest indicators for the hot topics and key planning goals of the governments.

Appendices Two and Three contain the working notes from and research brought to those meeting where well over 100 topics were identified that are deserving of progress tracking through indicators. Research assistants reviewed land use plans from each governmental partner. The information from the plans was collated for and supplied to each taskforce to ensure relevancy to the participating jurisdictions and region.

It was through discussion at the taskforce level that indicator topics and actual measures were selected with respect to the whole-system nature of both socio-economic reality, and of sustainability concepts. A short list of “Recommended Indicators” was created to reflect the immediate concerns of the hot topics considering data that is already being collected or could reasonably be collected in phase two of the project.

## Nature Taskforce

### N.1 Land Use

#### Review of Local Plans

- Provision and efficiency of providing infrastructure (mostly transportation related)
- Creating livable environments
- Preserving image of area/ agricultural land
- Planning for and awareness of impacts on surrounding land uses
- Encourage density where appropriate
- Economic impacts of land use / agricultural land, mineral extraction
- Citizen participation in land use planning
- Protect natural environment
- Keep plans relevant
- Working across jurisdictional boundaries

#### Hot Topics

Infrastructure Fees, open space fees, power plant capital cost charge to all new houses,



CoSpgs:

- Growth paying its own way

Ft. Carson:

- Encroachment issues, onsite land use/security and density incompatibility, new infrastructure, where to put new facilities without intruding on training land, security issues.
- Ranges for weapons are increasing, making it difficult for future protection.
- Contiguous Open Space and corridors are important

Pueblo:

- Sprawl due to Pueblo west being a metro district –Wells and large lots carving up agricultural land, net wash in population for pueblo, but the edge city, growth in county, 138,000, 105,000 in pueblo, officers moving into pueblo west, conservation easements and the walkers to protect the borders. No strong plan, very driven by developer interests.
- Infill would help and more density.

El Paso County:

- Natural capital limits are possible due to wetlands and mouse; will we run out of land to create wetlands?
- Water runoff of the impervious surfaces,
- Other eco systems that might be more impacted and
- Biodiversity rather than sprawl.
- Open space preservation as a growth shaper rather than limiter would help with an indicator.
- Preservation of land for unique features, scenic qualities and recreation

Region-wide concern:

- Growth paying its own way?
- Open space
- Planning needs to be more realistic than 2% a year expansion and bringing more jobs with the attitude that anything we can get we approve,
- Recommend to the society group that they address VMT, new road miles

## **N2. Biodiversity / Ecosystem Health**

### **Review of Local Plans**

- Provide adequate safeguards to minimize impacts of development on ecological and environmental sensitivity
- Preservation of natural resources (5 eco systems) for health of land, wildlife, riparian areas



- Protect from infrastructure Impacts, transportation. and wastewater and storm water facilities
- Water, air, land, noise
- Protect stream sides from erosion
- Plans incorporate protection awareness
- Recognize impacts on downstream communities
- TDRs for sensitive areas
- Mitigation regulations
- Noxious weeds
- Preserve for economic development reasons, recognize value of open space

## **Hot topics**

### CoSpgs

- Plover and Gopher and prairie dogs
- Streamside protection
- Short grass prairie initiative, looking at indicators
- Urban wildlife interface

### Ft. Carson

- Mexican spotted owl is Forest Service land
- Bugs vs eradication
- Protecting wildlife corridors

### El Paso County

- Mapping for Chinese clematis, mountain pine beetle trees
- State listing empowers what to remove or regulate
- Mistletoe
- Need “Code of the West” tools

### Pueblo

- Salt cedar for water consumption
- Land use treatment and building impacts the noxious weed problem, management plan
- Siberian elm, Chinese elm in the city ordinance, asking for removal of diseased trees
- Hantavirus, white footed deer mice
- Could benefit from “Urban living” handbook

### Region-wide concerns

- Defacto managers of all the eco systems yet not empowered to deal with them
- No one manages overall eco system health.

## **N3. Energy**



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## **Review of Local Plans**

### Fort Carson:

- 100% renewable energy generated on Post by 2027; 100% for mission critical functions by 2015
- Army goal (draft): 50% reduction in CO2 emissions by 2025

### CoSprings (Colorado Springs Utilities)

- Charter dedication to minimizing utility costs for customers

## **Hot topics**

### Security

- Grid vulnerability
- Pipeline vulnerability
- Military base concerns

### Sustainable Energy use

- Transmissions Electricity
- Coal train and other transmissions
- Grid Inefficiency
- Visual Concerns from energy production and interfaces
- Distributed Power Rules

### Energy and Water

- Pumping water
- Using water for energy production

### Energy and solid waste

- Use of Solid Waste for energy

### Citizen Control and Input

### Policies/Subsidies (positive and negative)

- A37 Annual progress
- Innovation in
- Track compliance with Governor's adopted policies (west governors)

### Transportation policies

- Are there goals for comp plans to reduce energy?
- Interfaces with Front range issues/efforts
- VMT
- Proactive policies

### Local Energy Policies



- Subsidies
- Effect of local policies on elsewhere
- Reduce subsidies overall, especially long-term for unsustainable energy
- Increase short-term subsidies for sustainable energy
- Measure \$ obtained in region as subsidies for sustainable energy
- Measure \$ provided by region for sustainable energy
- Effect on farms locally

#### Low Cost Goals

- Goals that use lifecycle instead of short term low costs

#### Lighting

- Net Metering (CSU now doing test program)

#### Energy-related pollution

##### Ozone

- Local effects on the global ozone layer
- Use existing 8 hr stds of fed/state designed to protect human health
- Process: examine whether fed/state stds protect ecosystems

##### Visibility

- Compliance with state stds – use of meters (focus of CO ACC Commission)
- Is the brown cloud visible?
- Process: visibility monitors at weather stations?
- Process: adoption and reporting of local standards – are they good enough?
- Process: how are “particulates” related to visibility?

##### Mercury

- Ambient shown by 303d maximum TDL in waterways  
Might not be energy related, however
- Hair testing happening in Pueblo
- How much do we produce to rest of world?

#### Costs not included in energy

- % of lifecycle costs included in prices (include all costs including military)

#### Global Impacts

- Nox and sox production
- GHG production
- Contribution to nuclear lifecycle



## **N4. Water**

### **Review of Local Plans**

- Protect greenways along waterways
- Water Conservation
- Protect water quality
- Recycle water, non-potable uses
- Storm water runoff quality and historic flows
- Land use protecting water quality
- Protect water supply quality
- Transportation systems protect water quality
- Cooperative Drainage Facilities
- Erosion control
- Flood plain protection
- Adequate Water supply
- Adequate water supply prior to development
- Water for Agriculture
- Natural water sources and recreation

### **Hot topics**

- In Colorado, legal “beneficiary” use of water rights by private parties doesn’t include ecosystem health (only State-held rights can be so used)
- Need to recharge aquifers: must slow water down so it can reenter aquifers
- Efficiency of consumption
- Water use and consumption
  - Indicator: Per capita residential consumption: indoor and outdoor non-potable
  - Potable, first use water use by household , gets to efficiency that ensures cost-effective and adequate water supply
- By dollar of economic generated is an industrial use
- Ag land has no incentive for conservation
- Will local produce become more competitive, water rights available in the region, indicates our reserve, how much is being diverted used for agriculture.
- USGS has gauging stations measuring flows is not going to get you quality.
- Natural storm water conveyance vs hard surface conveyance
- Waste water increasing the base flow
- Impervious surface total or per capita, land use rules promoting minimization of impervious surfaces. Minimizing impervious cover in stream sides
- Predictive: Best management practices are implemented or use within the city of Colorado Springs
- in the manual
- % of streamside lands protected for streamside health, flood plain easements to protect the land but to give it value.
- untreated storm water runoff entering streams, more in winter, 50 cubic ft per second



- Summer storms are runoff from transportation systems
- Temporal difference: June thru Oct, storm water from rain; Winter flows from wastewater treatment: how much is being used, discharged
- Education of what is getting into the streams
- Keeping the water on the land for as long as possible to help with recharge
- Watershed flows compared to natural flows, speed and total flow
- Performance indicator: stream flows, base flow in three areas and summer flow (storm water)
- On-site remediation of wastewater, for instance – carwash facilities
- Predictive indicator suggestion: Overall ecosystems health, and community watershed management plans in place
- # of waterways that are concrete

## **N5. Waste/ Solid Waste**

### **Review of Local Plans**

- Reduce Waste Disposal
- Proper Waste Disposal planning and provision, environmental sensitivity
- Promote land planning that protects water ways
- Federal and State compliance
- Facilities do not denigrate scenic vistas

### **Hot Topics**

- Hazardous waste
- Promote an integrated, effective, and environmentally sensitive market-driven approach
- Provision of service when considering land use
- Adequate service levels, plan for future
- Environmentally sensitive service, prevent environmental degradation
- Cooperate with other entities
- Concurrence
- Educate about recycling

## **Economy**

### **E1. Business: Health of Individual Businesses**

#### **Review of Local Plans:**



- Balance jobs, housing and commerce
- Recruit new business that enhances existing business
- Workforce education and training
- Encourage small business
- Communication in the business community
- Telecommunications support
- Quality place to live can attract business
- Emphasize support for military
- Airport development
- Promote tourism

### **Hot topics:**

- Economic development strategy to supply (sell) outside the region but promote business, government and citizen consumption inside the region.
- How many major institutions have a local business filter?
- Measure number of new sustainability products available in the region?
- Growth of regional small business contracts with regional military installations.
- Department of Defense promoting green procurement standards – local businesses should be trained to meet them.
- Military procurement efforts help small businesses, but more could be done – so small local business sales to large institutions deserve watching.
- Some language in military contracts promotes local businesses; Fort Carson looks at annual revenue threshold for small business.
- Is there some way to measure growth of sustainability understanding of in small regional businesses so they can be bigger providers when Fort Carson implements sustainability screens? Should develop a “predictive” indicator based on sustainability training, such as: Number of county or community economic development plans that include military communications, or regional sustainable business training days.
- Consider starting a sustainability training relationship with the small business development centers such as PPCC.
- Another predictive indicator could measure increases in the business community’s awareness of the growing demand for sustainable products.
- Expand this focus beyond the military: What percent of the 5 largest businesses in the region are focused on purchasing from small business in region? Measure small business revenues from large employers by sampling the present market, then conduct annual surveys. Ensure regional chambers of commerce encourage sustainability training and business to business contracts especially for small businesses.
- Number of businesses with social responsibility strategies, such as paying livable wages and benefits, giving back to the community; doing internal or supporting external training of local people, etc.





## **E2. Economic Vitality – Meeting Local Economic Goals**

### **Review of Local Plans:**

- Diversify the economy
- Preserve western values but recognize emerging demographics
- Tourism as economic engine
- Downtowns, strong, healthy urban core
- Arts and culture
- Relationships between residential needs and commercial
- Vibrant neighborhoods and promoting connection with larger community
- Land use provides economic opportunities
- Promote diversity of product availability to residents
- Use sales tax for revitalization
- Concerned about a vital and healthy downtown thru planning and govt. investment and design
- Make developing in the urbanized area easier by providing design standards that are flexible and market driven.
- Ensure commercial development is compatible with neighborhoods
- Economic impacts of land use / agricultural land, mineral extraction

### **Hot topics**

- Define our communities wealth, how much capability to develop, skills mix
- What other areas would indicate a person's ability to live well, that are influenced by local systems?
- Credit:
  - Relationship to banks and available wealth, to the local economy, credit
  - Secondary market, investments,
  - Credit worthiness, small business loans and what they face , especially startups
- Indicator of community vitality and longevity of those businesses, whether they can continue to meet needs, buying local, local food, need to track local spending
- Economics that support "Quality of life" and community relationships and opportunity for families
- What does economic growth mean? Increasing wealth per capita
  - When you measure overall wealth, do you look at salary and cost of living
- How does local area compare in income diversity to other areas?
- Diversity of Sector/ types , sizes, wages, longevity:
- Primary jobs generate 3.3 additional jobs, EDC tracks what type of businesses are being attracted
- Need to Ft. Carson's Economic vitality in tax dollars?
- What is a good mix? Creative class attraction and appropriate mix: Not too dependent on any one sector
- Is there tracking of diversity of employers in the region?



- Technology, venture, locating here because of Ft. Carson
- Look at it by industry, where are they starting, are they service or primary,
- What do the primary businesses look at? Review what a primary employer would look at when they look at a region
- How would we track vitality aspects of a small business? Chamber of commerce, Small Business Admin.
  - Track by type of business, what is the value of longevity: to local economy, startup is the most money they will spend, limited pool of startups, longer they stay.
  - Better business bureau role?
  - Negative impact for turnovers. Foreclosure, bankruptcy,
  - % of small business that have been in business for xxx?
  - Longevity or percentage, \*As a consumer the military: service related, construction related , local buying, credit card purchases
  - Measuring those not employed - Balance of wealth doesn't necessarily come from business, interest generated - Retired or disabled not working, - 23% of employment age on disability:
- How does development and land-use fit in?
  - Land generates income for real estate agents, land owners, developers,
  - Investing in real estate, relationship to new, redeveloped and just access to
  - Raw land as a resource,
  - Target industry or military to bring in employers so look at the land use for economic vitality.
  - Real portion that falls under sustainability is redevelopment, using up raw land, the natural capital, it is not sustainable,
  - What role does the real estate industry play a role in the overall diversity of economic vitality, raising interest rates,
- Community Literacy of Economic Development
  - Hunt for an indicator of how you measure how many people might understand economy numbers, especially sustainable economy measures

## **E3. Employment – Health of Citizen’s Relationship to Paid Work**

### **Review of Local Plans:**

- Employment for local residents
- Employment created near where people work
- Job resource center
- Workforce education
- Incentives for hiring locally trained people
- Govt. jobs are supportive of diverse workforce with competitive salaries
- Protect environment to make great place to work
- Protect land for use by business



- Economic development (new jobs) that fit the needs of residents
- Land-use allowing people to work at home
- Promote educational institutions
- Help with workforce housing
- Promote bus service to help access to jobs
- Pueblo Goal: Total increase in jobs by 2030 for the Pueblo Region should be 73,262.
  - Percentages of increases in each field are as follows
- Encourage business to employ youth

### **Hot topics:**

- Transportation/Mobility: Keystone Indicator
  - Public transit hasn't been upgraded in 20 yrs
  - Ability of people to get to jobs with transportation
- Education: are school districts focused on job training and how do people get more skills if they want?
  - Is there a higher drop out rate?
  - Education not valued enough.
  - Pueblo: Positive to have CSU which is adding majors like engineering.
  - Pueblo West has many retirees - separate from the town.
  - Colleges working with industry well.
  - University impact, x # of students graduating, three military installations with people retiring,
  - Communities want businesses that have qualifications and need for tech experience?
  - Underemployed a big challenge – do universities consider their needs when developing their curriculum?
  - Universities tend to be reactive vs proactive,
  - CSU serves younger students; older students served more by community college is older with higher % of non traditional students – need to examine how these adult learners are being served...especially with many military spouses at the area's schools and more coming.
- Workforce issues:
  - Retirees have an impact on wages: Raising the unemployment rate and depressing wages.
  - Are there more double wage families to support military pay with regard to costs of local living rapidly increasing? Are young people less able to keep up with costs of living increases than young retirees because of lack of retirement incomes in addition to wages? Results in different desires of poor elders and young retirees. Also possible that young people won't take the jobs anyway. Military retire younger and on less, primary jobs would not be competitive, but they compete for minimum wage jobs. Are they affecting the wage rates?



- Does the region we have a problem with livable wages? If so not widely known and indicator might help with awareness. Potential indicator: dual income families; good to know whether a community requires and can socially sustain a higher costs of living that foster the need to be dual income families. How does a community decrease cost: efficiency (a natural for private business but hard for communities).
- Unemployment: who are the unemployed – what are their education levels and ages? How can the region track the full universe of underemployed, those no longer trying for work, and the defined “unemployed” which is usually reported as about a 4% rate?
- Quality of jobs an important issue – development agencies seek more primary jobs (bringing money into region) but unknown as to whether overall this is happening. What quality of civilian jobs is provided by military bases? Are people able to get from educational systems the right skills to helping local small businesses thrive?
- Potential indicators:
  - Livability index, such as how much of national wage average people have to earn to meet basic needs
  - Poverty level
  - Increases in the average wage
  - Training offered regarding sustainability’s management advantages, especially for businesses.

## **E4. Sustainable Economic Practices**

### **Review of Local Plans:**

- Consider compatibility with quality of life in community when reviewing location
- Promote key assets of community
- Continually assess local needs and issues
- Provide equitable assistance between existing and new business
- Sustainable Economic Practices
- Partnerships across region, local govt. and business, schools
- Self-sufficiency
- Efficient and Effective transportation network to support business
- Preserve agriculture
- Promoting waste reduction
- Diversity of housing types
- New development does not create a negative fiscal impact
- Efficient use of existing infrastructure
- Non-polluting industry
- Supportive business environment, actively promote local business
- Mixed use development
- Use sustainability principles
- Product procurement follows sustainability



## **Hot topics:**

- Understanding, then valuing natural capital and sustainable business practices
  - Use of “sustainability” concerned capital: human, natural capital,
  - Get our businesses to operate with sustainability while getting money from outside the region
- How do you measure “grow your own” or “self-sufficiency” and report on it?
- Human capital development: check state website on ability to think and adapt: as how we develop our human capital
- Sustainable business practices and potential indicators:
  - Number of business that have an EMS, ISO certified;
  - Livable wages and benefits,
  - Business giving back to the community/training,
  - Sustainable procurement or supply chain management: Use what DoD comes up with from the procurement standards.
  - Measure consumption to take place in the region and product to go out of the region?
  - Measure government entities purchasing with small local business
    - Explore the merit of a regional materials balance: brining in the same amount of raw material than you were exporting,
    - How many major institutions have a local business filter for purchases?
  - Fort Carson measures and manages for small business contracts
  - Can indicators increase the awareness of the rising demand for sustainable products? E.g. “Number of new sustainability products available in the region” indicator.
  - Military support contracts: can the region measure the opportunity for local people to compete for those?
- Transportation: Will mass transit ever be the solution here - enough that people would give up cars? How to create indicators of people giving up cars?
- Key Natural Capital Concerns:
  - Air quality sometimes an issue - brings people’s awareness up every so often.
    - Pueblo concern about using up air shed with new Xcel plant and cement plant.
  - Water limitations - more chip fabs would take too much water.
- Sustainability relationship to desired types of new business:
  - Technology innovators: space industry for the 21st
  - Communications going into orbit, educated population but they migrated here
  - Global market place changes the traditional way to look at things
  - Specific indicator about the military and local businesses.



- Education (both in access to and as a tactic for understanding and change) is going to be a keystone indicator of sustainability:
  - Put things in place so the kids in our region will be ready for the jobs we are seeing coming to our region a different version of “sustainability”

## Well-Being

### W1. Education

#### Review of Local Plans

- Educate about government roles and details of planning
- Educate about community heritage and western values
- Educate about protecting the environment, water conservation
- Educate about being good citizen, trails etiquette, littering, emergency response
- Educate about safe and unsafe building conditions
- Use best practices on how to communicate
- Help improve institutions to Educate workforce
- Policies to help educate workforce
- Infrastructure for learning, schools and technology
- Use mentoring programs
- Educate about public safety matters, geologic hazards, fire, flood plain

#### Hot Topics

##### K-12 Education:

- PreK
  - Availability of licensed, quality, affordable pre-k programs vs child care assistance for low income families should be considered.
  - Are kids ready to go to kindergarten? Statistics shows that kids will be more likely to graduate with early childhood education.
- Good science background to help with understanding of sustainability, math can be a good invest for a sustainable future. Need funding for science programs and to show performance in math and science as part of the population as an indicator.
- How do you improve public school performance? Are vouchers and charters good?
- Teachers teaching in their area of expertise: credentialing can be important.

##### Continuing Education:

- Drop out rate and Hispanic drop out rate are good indicators.
- What is happening with HAS students longitudinally? Are they going on to post secondary at the same rate?
- Affordability of cost benchmark tuition and the impacts



- Adult education opportunities, life long learners. Is library use an indicator? There was a discussion about the changing role of libraries, checking out electronic media, movies, and as community centers.
- Literacy at different levels, school age, English speaking and how much Adult literacy there is in
- programming to get non-English speaking students, ESL capacity for adults, waiting lists, School districts, catholic charities
- Multilingual skills as unvalued in American education but necessary for global market place.
- What % are utilizing Vo-tech, if didn't go to college?
- Look at future predictions on jobs and training as benchmarks to show if we are preparing technically x % of population fill those jobs
- Need to ID gaps of sectors that aren't being trained.
- Opportunity for technical skills, programming, labor, is there a need? What are the options?

**Public Education:**

- Pueblo: Whole families can be educated to be aware of community concerns and ecological awareness of impacts such as don't let school bus drivers let bus idle with kids in it.

## **W2. Health**

### **Review of Local Plans**

- Health impacts of facilities and land uses
- Drug use
- Transportation mobility
- Tobacco use, unsafe sex, unhealthy eating
- Maintain and enhance advanced medical service provision
- Medical facilities as economic development
- Air quality
- Reduce health risks due to transportation
- Health, safety and welfare
- Protecting the environment
- Pedestrian access
- Water, drainage
- Health issues, West Nile virus

### **Hot Topics**

- Data collection important to monitor trends:
  - Healthy People 2010 1,000 pages 2 goals and 28 indicators, benchmarks.



- Asthma rates, not readily collected.
- Would we want to ask the communities to align with the national trends and data collection? Collecting local data is difficult but tactical and strategic planning can be accomplished using this data.
- People are trying to measure preventable, life style driven health problems; American cancer society,
- American heart association, compass project, Ed/Health/Env. Project
- You can measure how people are actually behaving thru surveys.
- Health department monitors the health status of a community: they used to weave the data together from other sources, but didn't collect it from the people themselves. That is changing. It gives a community an indication of where we are strong and our challenges.
- Government Monitoring of health impacts
  - Pueblo: Pueblo has clean air and the government doesn't find it effective to monitor more when they are in compliance.
  - They have the ability to monitor ambient air levels for mercury, yet lots of air pollution is global drifting from elsewhere.
  - The health dept. does some monitoring of wells.
  - With an increasing lack of health insurance does it put more stress on county budget to monitor more?
  - They have high asthma levels and are seeking grants to study causes / provide solutions.
  - It is a challenge to regulate tailpipes but they have looked at kits to reduce diesel pollution.
- Planning timeframes
  - There is lots of short-term thinking but harder to think long-term.
  - Governments need to show actual leadership towards sustainability and prevention vs. a cure.
  - It is difficult to overcome people's perceptions of what the health department does, for instance they used to go to homes and spray for roaches, but don't do that anymore.
  - Government is precluded by laws from some things that are now privatized.
  - There are different attitudes about compliance requirements among business sectors.
  - It is difficult to know how to mainstream things like reducing emissions with turnover in the workforce and a lack of education. Implemented no smoking in public accommodations two yrs ago...mostly complied with and occasionally monitored. Monitoring compliance with anti-smoking regulations is one of their jobs.
- Transmission of viruses from animals to humans is a hot topic
- Air quality effects on health





- Mercury emissions from coal and inoculations look into that type of pollution.
- % of pollution related issues, hard to measure, difficult to make the correlations
- hormones in the water, not collected by EPA, wastewater treatment not addressing it
- Mercury in fish in lake pueblo, well below the health standard, EPA standard
  
- Region-wide concern:
  - Health Impacts of facilities
  - Drug Use
  - Health affordability
  
- Access to health care, one in 5 people, can't get care because of provider levels
  - Ft. Carson has services, but not going on base for issues, they use the community for providing,
  - 17% of population suffers from PTSD, more than 1/2 would not seek treatment
  - % of population using different agencies that are Ft. Carson populations. WICK, TESSA, Child Nursery Center, CASA, CPCD Headstart.
  - We are about to experience a 5% jump in a population who are not financially stable, combat troops with low wages that are in flux.
  - Low wage people need services at a higher rate.
    - There is an unmet social/health need and the ability of the society to respond to the unmet needs is a challenge. You could index unmet needs by agencies.
    - A living wage would incorporate access to health care.
  - Taking care of kids would grow the well being of the community.
  - Health, animal viruses

### **W3. Housing: A basic need supporting human capital**

#### **Review of Local Plans**

- Good relationship of housing to one another and negative impacts from other uses ,Work and live and shop, mobility, transmission towers
- Good relationship of housing to community, building community and sense of place, neighborhood associations
- Diverse types of housing, affordability
- Landscaping as a key component of good housing
- Balance with jobs
- Design
- Parks and recreation close by
- Encourage homeownership
- Level of service to housing
- Public Safety concerns

#### **Hot Topics**



- Access to housing
  - Good to measure amounts of affordable housing but how to measure levels of Affordable housing- % you pay of your salary for housing: Chad Wright, Colo. Spgs, has data on this.
  - Can we connect housing increases with wage increases? Cost of housing going up?
  - Pueblo housing costs are going up
  - Could measure how many people utilizing programs available for homeownership , IDA
  - Pay more that 30% of your gross income you are house poor, rent or cost
  - Access to housing can be a preventative measure for other health issues.
  - Home ownership rates as a measure of a neighborhood wellness
  - Homelessness is one of the top three problems in El Paso County as identified by the Health Dept.
- Quality of housing / environmentally sound
  - Must look at a Standard of affordable or quality housing, substandard vs acceptable
  - Tenant's rights are another area of interest. Whether there is a clean environment/ look at child care/ track data on complaints
  - Pueblo code enforcement looks at quality/substandard housing when regulating, they look at electricity, in good repair, water sewer, bat calls, no screens , etc. but they need more people to monitor
  - High performance built homes, lower ownership costs, lowers the toxicity and makes it more comfortable, built green. Measure of housing quality,
  - Housing developer for Ft. Carson to build green
  - Best practices for recognizing long term costs when building
  - % of income devoted to utilities
- Access to community/ mobility overlap
  - How much housing is close to transportation?
  - Housing can be looked at in relationship to services, park, shopping, walkable, well being , look at land-use indicators, mixed use development, within a certain distance or across one of a category of different use
  - Dan Burdon building mixed use
  - Fenton's walkability check list

## **Society**

### **S1.Community Participation**

#### **Review of Local Plans**

- Seek community input and enable special needs groups to participate
- Promote volunteerism
- Foster community partnerships that help with identity



- Promote participation to help in preserving the natural environment, history
- Monitor perception on quality of life
- Create opportunities for community gathering, central spaces
- Pedestrian access
- Use community design to promote community identity
- Education and invitation to participate as role of government
- Foster community leadership
- Network public and private leaders
- Increase Participation as crime prevention measures
- Create a feedback mechanism

## **Hot Topics**

### Colorado Springs:

- Mission mentions sustainable development
- School districts carefully tracks volunteer hours
- Volunteer efforts needed for govt. to carry out own policies
- Cable channel plus websites constantly available can equal investment in participation
- Parks and Recreation Dept. has several thousand volunteer hrs/yr tracked
- Large volunteer commitments in faith community - tracked by The Net and Faith Partners
- Should there be city efforts to fund citizen groups more?
- Whose job is it? - County trying to fund neighborhood centers - shifting responsibilities from Government to private sector
  - City Bi-Annual Survey - indicators aligned with survey results of dissatisfaction with govt.
  - Local government tax revenue related to land use is a big issue.

### El Paso County:

- Work loads and hours prevent citizen involvement in many boards, etc.
- Participation is an operating principle for them.
- County allows employees 3 hrs/month for volunteering
- CPCD does quality of life survey comprehensively
- County calculates volunteer hours but not sure they do surveys.
- County has less neighborhood participation in land use, no organization that helps with that process or helps to create a system (90,000, (20,000 military + 70,000) urban residents in the county, 150,000 county residents)

### Pueblo:

- They are doing everything possible to attract participation
- United Way did survey of quality of life issues
- People come out for highly visible/ hot issues, not plans
- Pueblo publishes an accountability report



Fountain:

- Participation is reactionary

Air Force:

- Wellness survey done annually
- They could ask questions of personnel pertinent to the community for information to go back to the local communities.

Fort Carson:

- Do Community forums monthly
- Have activities on base that people participate in
- Restoration advisory board
- Customer survey around housing is asked annually
- Track registered volunteer hours
- Complaint based more than planning based

General Discussion:

- Can surveys/indicators show people's interest better?
- Do cities use volunteer hours to show a monetary correlation in investment in the community?
- Community participation in land use is high and has centered on sprawl issues in the past 5 years.
- Do you feel like you have an impact in your community could be asked in surveys.
- Is there a qualitative aspect of citizen participation, i.e., is my government responsive? Is the involvement of Ft. Carson looked at as a neighborhood or a large employer?
- Do sustainability plans rely on the #s of people who participate?
- Do you have control or influence on political decisions or on the greater community?
  
- Some ideas for indicators:
  - Percentage of urbanized geographic area that are organized into groups.
  - How many people say they participate as measured by planning sub area or neighborhood associations?
  - Numbers of Neighborhood watch groups?
  - How involved are you with others with like interests?

## **S2. Crime/Safety**

### **Review of Local Plans**

- Protect from Flooding



- Provide police and fire service
- Creating safer places, Outdoor lighting
- Central gathering places that are clean, safe, active
- Safe transportation system, speed reduction in neighborhoods
- Neighborhood based crime prevention, partnerships
- Promote communication between schools and youth
- Hazardous materials safety
- Land use is a health , safety and welfare issue, pedestrian safety
- Irregular boundaries cause service provision problems
- Ensuring housing units are safe, sanitary, decent
- Fire dept. medical safety

## **Hot topics**

### Colorado Springs:

- Top crime in 2005 is Identity theft
- Second is residential theft from garages, etc.
- A Methamphetamine (Meth)Task Force exists;
- Meth use is number one reason for foster care/termination of parental rights; CS may have bigger problem than Denver.
- **Colorado Springs 2005 Strategic Plan:**
  - Using the Police Accountability Service Standards Model (PASS), the Metro Vice Narcotics and Intelligence (VNI) Division has been measuring productivity in two identified target areas: the South Nevada Avenue corridor and the East Platte Avenue corridor. Beginning in 2005, the Metro VNI Division adopted a third target area, the downtown area (DTA) of Colorado Springs. The DTA target area is bordered by Interstate 25 on the West, Nevada Avenue on the East, Colorado Avenue on the South and Boulder Street on the North. The same service standards that were previously adopted will apply in this third PASS area. (Metro VNI will identify target areas for enforcement strategies to reduce the visible signs of these activities and respond within 24 hours where open-air drug dealing and prostitution is occurring; Metro VNI will respond within 24 hours to narcotics tips from citizens concerning drug activities.) Current performance regarding the adopted standards is ongoing.
- Fire safety in foothills: Participation in collaborative efforts to reduce the risk of wildfire to the neighborhood
- Paramedic staffing has been a hot topic.

### General Comments:

- Number of police per capita vs effective crime prevention is important to look at.
- Crime rates or Number of people incarcerated could be measures of how safe a community is.



## **S3. Culture and leisure**

### **Review of Local Plans**

- Encourage art and cultural activities as catalyst for economic development
- Land use /downtown embodies character of place
- Design standards
- Preserving natural features
- Educational awareness of heritage is important
- Traditional western values with emerging needs of prosperity in 21<sup>st</sup> c.
- Rural aspects preserved
- Historic preservation and education of

### **Hot topics**

#### Colorado Springs:

- Culture can be seen as supporting economic development in cultural tourism and education, also in a creative workforce and civic life and civic engagement. It has to do with the concept of authenticity and how do you preserve it, keeping an old identity and creating a new one?
- The architecture can also be a treasure in the region yet, no there is no major piece except perhaps the Air Force Academy Chapel.
- There is a lack of Government funding for the arts. It seems to be less valued.
- Colorado Springs and El Paso ranks last in funding for arts of 22 in cities for cultural amenities.
- Creative employment (national study) Colorado Springs ranked 36 out of 276 in Architects, design, etc.
- Colorado Springs Imagination Celebration was started by Kennedy Center and is now a privately funded program.
- Business moves here because of the recreation aspect, beauty, climate, quality of life.
- In the last ten years, open space has been an issue, recreation, access to hunting, more neighborhood parks and protecting the natural features
- Hard to find support for DADA outside a small group, hobbyists, and for the District as an entity
- Largest city not staffed with a cultural commission
- Natural environment is key to the quality of life and unique here. Landscape as you move around on our roads, beauty of the region is key.

#### Air Force Peterson Field:

- Concerned with historic preservation of Native American sites.
- Military families are always looking for cheap places and things to do when new to the area because there are so many new residents in and out from military.

#### Ft. Carson:



- A new military museum, preserving the heritage of Ft. Carson.
- Talking about incorporating sustainability efforts into the programming or displays to educate about sustainability and the building is energy efficient.
- A base MWR program, how many people participate is tracked at Ft. Carson (arts classes, etc.)

#### Pueblo:

- Have great amenities for its size but residents need money to access them.
- Poverty level in the area can prohibit access to even the children's museum. It attempts to make it affordable but is still struggling. A large number of poor families and undocumented workers prohibit fee based support for the arts.

#### General Comments:

- The Wellbeing Taskforce is also having a recreation discussion.
- Access and awareness to the amenities by all population is key.
- Having time for leisure activities is also important and would be a function of income.
- Do we call out what type of programs to recreate? Could you survey this?
- Should investigate the notion of what people want so you can develop programs, golf courses and other programs should be considered as well.
- Culture should be considered as a tourism driver.
- Hispanic community has there own culture within their own communities, dance, music,
- The group discussed the broader view of creativity and how it can be measured
- Are those qualities that are attracting people thriving, still viewing the place as desirable
- Land use policies that mandate protection of natural environment and cultural environment are important.
- Culture diversity as a general measure: bringing different people together, a connecting point is missing but could be a role for the arts.
- Need to keep our infrastructure in place to have healthy lives.
- If people are connected by the arts they work better together, building bridges and resolving issues,
- Lack of free public activities is not necessarily a huge barrier, sending kids to preschool is about \$2,500 for a full day. The Fine Arts Center only costs\$65 per year for a family.
- Early Indicators:
  - Park acres per capita
  - Participation: what is a culture activity, define it.
  - Did you participate in an arts or culture event and did you do it.
  - Libraries as information centers, transitioning, circulation per capita,
  - Comparative to the national average, walking into the building, community centers, or community places are in decline vs use as a function of well read population.
  - How do you measure the economic benefit to community due to the arts?
  - Amount of hours outside of work enjoying culture leisure
  - Time to participate, by age group, old people



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## **S4. Family Health**

### **Review of Local Plans**

- Outreach programs
- Providing services
- Recreational participation
- Housing for specialty populations

### **Hot topics**

#### El Paso County:

- Child abuse and homelessness are two of top three health issues identified in El Paso County Health Dept. Study
- Divorce Rates are a family health issue
- 78% divorce rate for military families
- 65% divorce rate for general population

#### General:

- We could look at comparisons of other cities vs comparison to a time frame.
- What happens when you have a single parent household? Not a judgment on it, but we do know that it can lead to other things. Economic cultural/ education levels about those decisions, young mothers tied to wages.
- Does offering services create more homelessness?
- What kinds of how many services are available, counseling, what kinds and how many services, for different income levels
- Cases that are filed vs phone call reports
- Single parent household could be measured against the poverty rates.
- Broadened, uninsured family, immunization rates, teen pregnancy and child mortality,
- Self sufficiency standard created by Suzette Tucker Welch for a family of 4 is \$34,000: Rent, food, utilities, health insurance, and transportation.
- Number of households at the self-sufficiency standard.

## **S5. Governance**

### **Review of Local Plans**

- Keep plans updated
- Open, respectful, sincere communication between govt. and citizens
- Actively solicit and encourage community participation in decision making
- Intergovernmental Agreements for efficient service provision and in planning, transportation
- Promote good communication across decision makers





- Measure citizen satisfaction with surveys
- Combine private and public decision making to benefit user
- Special districts
- Adequate and equitable opportunity for informed consideration
- Use state and national mechanisms to protect farmland
- Involve youth in government

## **Hot topics**

### General Discussion:

- How do you show government is appropriately staffed? Citizen attitude surveys can help.
- Intergovernmental coordination, how to measure it? Whose job is it to promote it?
- Address the externalities of the pricing system: get the accounting systems fixed.
- Full cost accounting, then people will stop doing it. Paying your own way as a governance issue
- Taxation: 5 to 1 sales tax in county, is it an indicator of tax balance?
- Voters vs registered voters
- Can they deliver on promises, a lot of adopted policies but then are they carried out? Where is the accountability?
- Do governments report their performance?
- How many entities have government reporting on their own progress?
- Military installations could report back to the community how they are doing.
- Element of trust in elected officials could be surveyed.
- Record low turnout in the municipal election if they were unhappy they would have turned out, but the cynicism must be considered.
- What government does is take in money to provide services. It is the way we work together.
- Smaller the jurisdiction the more direct the governance.
- Elected leadership vs appointed Leadership
- El Paso County has 200 elected officials.
- Is the government accessible and transparent?
- Do the military people care about the mayor?
- Are townsfolk reflected in your elected leaders?
- Do they reflect the community values or do they show that they respect their constituents?
- Are we electing officials that want to provide services vs their own agenda?
- What civic organizations support the military?
- Is the community a reflection of how it is governed?
- Limited government mentality, less government is better.
- Government invests in the squeaky wheel,
- A good society requires participation.
- Retirees and others returning here is a good indicator of the quality of community.

## **S6. Mobility**



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## **Review of Local Plans**

- Pedestrian access, safety
- Access to recreation
- Trails
- Multimodal, offers choices
- Safety and efficiency
- Maintenance
- Road Way capacity
- Land use relationships for efficiency and reduce impacts
- Screen and buffer impacts
- Protect environment
- Parking areas attractive and safe
- Minimize air pollution
- Plan for orderly expansion

## **Hot topics: not discussed**

### **S7. Seniors**

#### **Review of Local Plans**

- Coordinate programs for seniors , park and recreation planning , other programs
- Special needs groups included participation outreach
- Location of services
- Housing as particular need for special needs groups

#### **Hot topics**

El Paso County:

- Senior population is expected to increase 40% in the next 10 years.
- Under current systems keeping seniors in independent living situations is least cost in tax dollars.
- Senior Centers and programs are often supported by public dollars: Meals on Wheels

### **S8. Youth**

#### **Review of Local Plans**

- Pedestrian and trail access for mobility
- Recreational planning to serve youth
- Coordination with schools
- Coordination with youth organizations
- Educate youth about government through participation
- Encourage businesses the create jobs for youth

#### **Hot topics**

- Child Abuse top three issue in El Paso County from health dept. survey



## Appendix Three: Local Plans Text

This appendix provides the text of local plans examined by the PPSIP. The statements of policy and activities were summarized into the bulleted list of local plans used in Appendix Two.

### List of Plans Examined:

**Fort Carson:** Fort Carson 2027 Sustainability Goals

#### COUNTIES:

**Fremont County:** Fremont County Master Plan, January 2002

**El Paso County:** County Policy Plan  
El Paso County Fiscal Policies

**Pueblo County:** Pueblo County Comprehensive Plan, July 25, 2002

#### CITIES:

**Canon:** Canon Comprehensive Plan Update 2001

**Pueblo:** Eastside Neighborhood Plan Summary & Action Plan (East),  
Westside Neighborhood Plan Summary & Action Plan (West), and  
the Bessemer Neighborhood Plan Executive Summary & Action Plan  
(Bess).

**Colo. Springs:** Strategic Action Plan 2005-2010 (SAP)  
Colorado Springs Executive Summary, April 2005 (SEA)

**Fountain:** Fountain Comprehensive Development Plan 1999

**Manitou Springs:** Memo re: "Top Ten" Goals for FY 2004 and FY 2005

## Nature

### N1. Land Use

#### Ft. Carson Sustainability Goals:

**Training Lands 100% Capable of Supporting Current and Future Military Training to Standard:**

- Acres surveyed for Cultural Resources
- Percent of Phase II Cultural Resource Site Testing complete
- Acres available for training (compared to acres required)

**Further Integrate Sustainability Principles into the Fort Carson Land Use Planning, Real Property Master Planning, and Military Construction (Army) Programming Processes by 2027:**



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# Land Use/Master Planners on staff  
# noise complaints per year  
Acres of incompatible land use adjacent to Installation

## **CANON CITY: Canon Comprehensive Plan Update 2001**

### **p. 37-39 Community Image:**

- “Evaluate and maintain design standards for new and expanding development, which promotes the history and character of the Cañon City community.”
- “Preserve the western lifestyle and values while recognizing the changing and emerging community demographics and environment.
- “Identify, map and document significant natural features and land marks.
- “Once significant historic, cultural and natural features are quantified, protect, preserve and promote these features for the enjoyment of the community and the promotion of tourism.”

### **p. 44-46 Land Use:**

- “Establish land use opportunities that are compatible with the character and needs of the community.”
- “While providing adequate safeguards to minimize the impacts of intense land use activities on roads, adjacent land uses and the environment, continue to allow adequate areas for commercial, retail, and industrial activities.”

### **p. 48 Housing:**

- “Encourage mixed-use, affordable housing, and higher densities where utilities and services are available, but do not allow for dense development projects where services and facilities do not exist.”

## **CITY OF PUEBLO: Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).**

### **East: p. 3 The Quality of Life**

**Initiative A1:** “Strengthen and aggressively enforce health and land use codes.”

### **West: p. 4 The Quality of Life**

**Initiative A1:** “Strengthen and aggressively enforce health and land use codes.”

### **p. 5 The Housing Initiative**

**D1:** “Develop “Infill” housing projects on scattered sites.”

### **p. 5 The Commercial and Industrial**

**Initiative E:** Establish and develop commercial and industrial areas.



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**Bess: p. 3 The Quality of Life**

**Initiative A1:** “Strengthen and aggressively enforce health and land use codes Colorado Springs.”

**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**Section 1 Transportation SAP 1.3:** Coordinate the development of transportation systems with land use planning to promote a livable environment.

**EL PASO COUNTY:** El Paso County Policy Plan

**Section 2 Natural Systems:**

Encourage development that does not harm the surrounding environment or residents by:

- Protecting flora and fauna,
- Create noise guidelines,
- Comply with the Endangered Species Act,
- Preserve natural features and open space,
- Beware of geological hazards etc...

**Section 4 Historic Resources:** Consider historical sites and vistas when planning.

**Section 5 Economic Development**

**Goal 5.1:** “Maintain a land use environment which encourages quality economic development that is compatible with surrounding land uses.”

**Section 6 Growth and Land Use**

**Goal 6.1.a:** “Encourage patterns of growth and development which complement the regions' unique natural environments and which reinforce community character.”

**Goal 6.1.b:** “Support growth and development in the unincorporated County in a manner which reasonably limits long term public costs, provides for the development of supporting infrastructure, preserves environmental quality, provides economic opportunities, and otherwise enhance the quality of life.”

**Goal 6.3:** “Continue to support existing and carefully planned future urban density development in the unincorporated County, provided the requisite level of urban services is available or will be available in a timely fashion.”

**Goal 6.4:** “Develop and maintain rural residential areas in a manner which protects their integrity, addresses the carrying capacity of the natural environment and provides for an adequate level of non-urban facilities and services.”

**Goal 6.5:** “Encourage the preservation of agricultural uses as an important contributor to the economy and land use character of the County.”

**Section 7 Special and Unique Land Uses**

**Goal 7.1:** “Reasonably accommodate unique and special uses which provide value to the greater community and which can be made consistent with surrounding uses.”



**Goal 7.2:** Promote comprehensive planning for major institutional land uses.

**Goal 7.4:** “Permit mineral extraction and processing activities in the County in a manner which allows for preservation of significant commercial deposits, minimization of adverse visual and other environmental impacts, economical resource use and consideration of other planning issues.”

### **Section 8 Parks, Trails, and Open Space**

**Goal 8.3:** “Fully consider parks, trails, and open space issues in the review of individual development plans.”

### **Section 9 Transportation**

**Goal 9.2.1:** “Promote land use planning which maximizes transportation efficiency.”

### **Section 12 Other Services and Utilities**

**Policy 12.1.1:** “Comprehensively consider all applicable public safety aspects in the preparation and review of land development proposals.”

### **Section 13 Housing**

**Goal 13.4:** “Encourage a positive relationship between housing development, land use planning and transportation systems.”

### **Section 15 Land Development Regulations**

**Goal 15.1:** “Maintain efficiency and balance in the adoption, application and enforcement of land development regulations.”

**Goal 15.4:** “Continue to refine the County’s system of land development regulations to keep them current, clear, effective, equitable and enforceable.”

**Goal 15.5:** “Ensure a public review process that provides adequate and equable opportunity for informed consideration of development proposals by all interested parties.”

## **FOUNTAIN: Fountain Comprehensive Development Plan 1999**

**p. 25 Growth Management and Land Use Principle 1:** “Ensure the logical extension of the City boundaries so that Fountain will expand in a directed and fiscally sound manner, providing greater predictability in the rate, location, type and character of new growth.”

**p. 27 Growth Management and Land Use Principle 4 Policy 4.4:** “Encourage clustered residential development to more efficiently utilize land and public services and to mitigate adverse environmental effects.”

**p. 27 Growth Management and Land Use Principle 6:** “Any non-residential development or redevelopment site, whether public or private shall be reviewed with extraordinary attention to siting, orientation, scale, mix and compatibility of uses, and relationship to community amenities and to make citizens feel comfortable and safe.”



**p. 29 Greenfrastructure Principle 1:** “Preserve agricultural lands in and around the City of Fountain.”

**p. 31 Greenfrastructure Goal Principle 6:** “Ensure that new development acknowledges respects and incorporates existing environmental constraints and opportunities so that Fountain’s natural and manmade environment is preserved and enhanced. This includes utilizing flood plain and other environmentally constrained lands for open space, preserving, where possible, critical view corridors, and making necessary linkages to the proposed regional trail system.”

**p. 33 Principle 1 Community Characteristics Policy 1.4:** “Require new development to demonstrate how it has established compatible relationships with adjacent land uses. This shall include but is not limited to: Demonstrating how different uses are compatible (e.g., how does retail commercial relate to existing residential uses?).”

## **FREMONT COUNTY:** Fremont County Master Plan, January 2002

**Section A Transportation:** “Future urban development should be located within or adjacent to existing urban areas in order to eliminate haphazard sprawl, to assure the provision of adequate urban services, and to maximize return on funds invested in public facilities and services.”

**Section B Urban and Rural Development B 1:** “Urban level densities in eastern Fremont County will be encouraged only in areas that can be reasonably serviced with existing public services. Accomplishment of this objective will help to minimize “leapfrog” development, minimize urban sprawl, minimize cost to the community for expansion of services such as public water and sewer, minimize road construction and road maintenance costs, and promote continuity in growth patterns.”

**Section D Agriculture:** “Encourage farm and rural ranch land to remain in active and productive use.”

**D1.** “Encourage future urban development within or adjacent to existing urban areas in order to prevent sprawl and leapfrog development, to assure adequate urban services, and to preserve agriculture, forestry, and open space land uses on non-urban lands.”

**Section E Water, Sewer, and Utilities:** Encourage new growth in areas where public utility services have available capacity and where new infrastructure is not required.

**Section H Environmental and Cultural Resources:** Encourage a land use pattern which considers the ecological and environmental sensitivity of the land, does not overburden the capacity of the land and promotes the health, safety, and welfare of all County residents.



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**MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

**p. 2 Goal 7:** “Update our Zoning Map and Zoning Ordinances: Amend our zoning map for all approved zoning changes; prepare recommended rezoning for Council Consideration; post notices and conduct public hearings on proposed rezoning; review zoning codes for possible changes in permitted uses and requirements; prepare draft ordinances for Council consideration to implement changes or create new zoning categories.”

**PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

**p. 30 Regional Development Principles:**

“Develop seamless development regulations that consider geographic locations, physical and infrastructure constraints, and desired densities, regardless of jurisdictional boundaries.”

“Create a Regional land use plan that reduces the impact of development on the Region’s transportation system.”

**p. 31 Design Character and Environmental Quality Principles:**

“Achieve a balance between urban and agricultural interests.”

“Preserve character of the Region’s rural areas and communities.”

“Plan growth to enhance the Region’s natural and historic character.”

“Encourage development that adds to the aesthetic quality of the Region.”

“Encourage the integration of open space into the Region’s land use plan.”

**p. 32 Design Character and Environmental Quality Principles:**

“Provide a Regional Plan that recognizes the importance of the natural environment to the Region’s future.”

“Promote both historic & economic neighborhood revitalization & preservation.”

“Promote new subdivision developments that are reflective of Pueblo’s older, traditional neighborhoods (mix of housing types and sizes, interconnected streets, neighborhood commercial and office, pedestrian friendly, accessible to parks, an abundance of street trees, etc.).”

**p. 51 Land Use Goal:** “Coordinate the interaction of transportation systems and land use planning to promote orderly expansion of the multi-modal transportation system serving the Pueblo Region.”

**p. 59 Zoning Regulation Update or Amendments:** Both city and county should consider updates or amendments to their respective zoning regulations. Those should focus on such issues as pedestrian-friendly development, mixed use development, redevelopment, protection of established neighborhoods and rural areas.

**p. 59 Subdivision Regulation Updates or Amendments:** Both city and county should consider updates or amendments to their respective zoning regulations. These should focus on improving suburban developments as well as making them more pedestrian-friendly.





## **N2. Biodiversity / Ecosystem Health**

### **CANON CITY: Canon Comprehensive Plan Update 2001**

**p. 46 Land Use:** “While providing adequate safeguards to minimize the impacts of intense land use activities on roads, adjacent land uses and the environment, continue to allow adequate areas for commercial, retail, and industrial activities.”

**p. 52 Parks, Trails, and Open Space:** “As a component of a parks, trails and open space master plan, consider open space criteria that protect natural resources, wildlife, slopes, ridgelines, view sheds and cultural sites. Provide good stewardship in the preservation of City owned open spaces, greenways and natural areas. Identify, rate and map the environmentally sensitive areas, which may need special considerations for protection.”

### **CITY OF PUEBLO: Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).**

**East: p. 3 The Park and Open Space Initiative B3:** “Dry Creek Arroyo – develop as open space and a trail connection.”

### **COLORADO SPRINGS: Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)**

**Section 4 Citizen Services and Workforce SAP 4.4.2:** “Continue to implement the Open Space Master Plan to acquire parcels that preserve unique vegetation/landforms.”

**p. 10 SEA: Indicator:** Continuing Congestion Mitigation Air Quality (CMAQ) funding. The signal master upgrade is being implemented: To date, 260 of the City’s 510 signals have been upgraded.

### **EL PASO COUNTY: El Paso County Policy Plan**

#### **Section 2 Natural Systems**

**Goal 2.1:** “Preserve, enhance, and restore the environment to acceptable health standards.”

**Goal 2.2:** “Protect the flora and fauna found in the County’s five life zones and transitional communities.”

**Goal 2.3:** “To preserve and enhance geologic features, significant natural landscapes, and waterways.”

#### **Section 6**

**Goal 6.1.b:** “Support growth and development in the unincorporated County in a manner which reasonably limits long term public costs, provides for the development of



supporting infrastructure, preserves environmental quality, provides economic opportunities, and otherwise enhance the quality of life.”

**Policy 6.5.3:** “Encourage the use of strategies such as land trusts and conservation easements which result in the preservation of agricultural or open land use and character.”

### **Section 8 Parks, Trails, and Open Space**

**Goal 8.1:** “Protect and enhance El Paso County’s legacy of unique natural features, open space, trails and park lands.”

**Goal 8.2:** “Promote comprehensive coordinated planning for parks, trails and open space in the County.”

**Goal 8.5:** “Encourage the use of a combination of all private and public options available for the effective provision and maintenance of parks, trails and open space.”

### **Section 9 Transportation**

**Goal 9.3:** “Reduce the adverse environmental impacts of existing and future transportation systems through a combination of careful planning and mitigation techniques.”

### **Section 10 Water and Wastewater Facilities Services**

**Goal 10.3:** “Design and operate water and wastewater treatment, distribution and collection facilities in an environmentally sensitive manner.”

### **Section 11 Drainage and Flood Protection**

**Goal 11.1:** “Promote regional planning and management approaches which protect the integrity of drainage systems and minimize long-term system-wide environmental impacts, costs and recognized flood dangers within the County.”

**Goal 11.3:** “Promote the planning and design of drainage facilities which maximize on-site amenities while minimizing detrimental downstream erosion.”

## **FOUNTAIN: Fountain Comprehensive Development Plan 1999**

**p. 26 Growth Management and Land Use Principle 4 Policy 4.2:** “Require that all new development or redevelopment be planned in ways that limit impacts on natural areas and wildlife.”

**p. 28 Growth Management and Land Use Principle 6 Policy 6.5:** “Building and site design shall be reviewed with attention to how well the development meets the following criteria: Minimizes visibility, noise, or other impacts on adjacent premises  
Avoids unnecessary damage to the natural environment evidenced by minimizing cut and fill and vegetation removal.”

### **p. 29-32 Greenfrastructure**

**Principle 2:** “Recognize the value of the City of Fountain’s open space and promote its preservation.”



**Policy 6.5:** “Minimize the impact of new development on the natural environment and its susceptibility to environmental hazards.”

**Policy 6.6:** “Give special attention to the effect that runoff from development might have on downstream environments (such as low-lying parks and wetlands).”

**p. 39 Traffic Principle 2:** “Minimize traffic congestion and air pollution and provide alternative transportation systems for those who do not own automobiles or prefer not to use them.”

## **FREMONT COUNTY: Fremont County Master Plan, January 2002**

**Section A- Transportation:** “Create a safe, functional and environmentally sound transportation system.”

**Section B Urban and Rural Development B1.3:** “In areas of the County defined by this Plan as appropriate for urban development, the County will designate “receiving areas” for a transfer of development rights program, after considering compatibility, impact on sensitive natural areas, and availability of facilities and services. Location of higher densities in these areas must be consistent with existing uses and intent of this Plan.”

### **Section C Economic Development**

**C5:** “The County will encourage the preservation and enhancement of the natural and cultural amenities of the County, and the unique recreational and priceless scenic features of the natural environment.”

**C6:** “The County will protect the low levels of environmental pollution throughout the County and preserve the strong sense of community pride.”

“Encourage a land use pattern which considers the ecological and environmental sensitivity of the land, does not overburden the capacity of the land and promotes the health, safety, and welfare of all County residents.”

### **Section H Environmental and Cultural Resources**

**H1:** “The County will review all proposed development in terms of potential environmental impacts on land, water, air and wildlife, and place the burden of proof to mitigate any potential impacts with the developer.”

**H2:** “The quality of the Arkansas River and the surrounding area will be protected.”

**H3.1:** “Proposed land uses which may have an adverse impact on environmental quality will be considered on a site specific, case by case basis.”

**H5:** “The County will identify and preserve critical wildlife habitat in cooperation with the State Division of Wildlife.”

**H6:** “Unique open space resources such as riparian areas, unique rock formations, and scenic vistas will be protected (See Visual Resources and Open Space sections of this Plan). “

**H7:** “The County will coordinate with appropriate agencies and organizations to identify sensitive ecological areas and to preserve these areas in a natural state.”

**H8:** “The County will identify and establish noxious weed control to and encourage development of control measures and programs.”



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## **Section L Storm water Drainage**

**L1.4:** “Discourage development in areas that would negatively impact existing floodways.”

**L1.5:** “Encourage development of drainage facilities that have positive impacts on wildlife habitats and natural areas.”

**MANITOU SPRINGS:** None

**PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

**p. 31 Rural Development Principles:**

“Preserve land through purchase or donation of development rights, including landowner education of the estate planning benefits of such conservation actions.

Determine methods to enhance and preserve the natural and historic features (e.g., preservation via conservation easements).”

**p. 31 Design Character and Environmental Quality Principles:**

“Encourage the integration of open space into the Region’s land use plan.

Define open space by habitat, agriculture, parks, buffers & wildlife corridors.”

**p. 32 Design Character and Environmental Quality Principles:**

“Provide a Regional Plan that recognizes the importance of the natural environment to the Region’s future.

Identify those lands deemed valuable to be maintained as part of the natural environment.”

**p. 32 Neighborhood Principles:**

“Address open space and wildlife corridors in new neighborhood development.”

## **N3. Energy**

### **Fort Carson Sustainability Goals:**

**Sustain all Facility and Mobility Systems from Renewable Resources by 2027:**

% energy from renewable sources,

% energy generated on-site from renewable sources,

% reduction in energy use per square foot compared to FY85 baseline,

% reduction in energy use compared to previous fiscal year,

% administrative alternative fueled vehicles (AFV),

Amount of alternate fuel compared to gasoline used in dual fuel vehicles (FY03 baseline),

% tactical alternatively fueled vehicles.



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**Meet or surpass the SPiRiT or LEED Platinum Standard** for all applicable facilities at Fort Carson by 2027:

- Number or Percentage of structures meeting the different SPiRiT or LEED standard for new construction (Army or U.S. Green Building Council),
- Number or Percentage of structures meeting the different SPiRiT or LEED standard for renovation (U.S. Green Building Council Pilot Program)

**CANON CITY:** None

**CITY OF PUEBLO:** None

**COLORADO SPRINGS:** None

**EL PASO COUNTY:** El Paso County Policy Plan

**Section 7 Special and Unique Land Uses**

**Goal 7.5:** “Allow for those towers, transmission lines and related facilities which provide a benefit to County residents in a manner which balances considerations of economics, equity, and environmental sensitivity and provide for the equitable compensation to private land owners for impacts caused by these facilities.”

**Section 9 Transportation Policy 9.5.4:** “Promote the conservation of energy resources through enhancement of all modes of transportation and telecommunications networks.”

**Section 12 Other Services and Utilities**

**Goal 12.4:** “Reduce the adverse impacts and maximize the efficiency of energy generation, transmission and distribution systems.”

**FOUNTAIN:** Fountain Comprehensive Development Plan 1999

**p. 15 Section 4 Drainage:** “Minimize the damage to public facilities and utilities such as water and gas mains, electric facilities, sewer and bridges located in areas of potential flood hazard (i.e. Along Fountain Creek).”

**FREMONT COUNTY:** None

**MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

**Goal 5:** “Underground Overhead Utilities along Manitou Avenue from East Arch to West Arch:  
Determine the requirements and estimated costs to place all overhead utility lines along Manitou Avenue underground;  
Prepare recommended arrangements to finance the costs;



Negotiate a new franchise with Colorado Springs Utilities to replace the expired electric utility franchise;  
Amend our gas, telephone and cable system franchise agreements, as necessary, to implement the approved programs.”

**PUEBLO COUNTY:** None

## **N4. Water**

### **Fort Carson Sustainability Goals**

#### **Reduce The Total Water Purchased From Outside Sources By 75% by 2027:**

% reduction in potable water purchased (compared to FY01 baseline)

Millions of gallons of water purchased/used

Gallons of wastewater treated

% increase in recycled/reused and non-potable water used for irrigation

Number of CWA Section 303(d) Listings caused by impairments from urban storm water runoff

### **CANON CITY:** Canon Comprehensive Plan Update 2001

**p. 46 Land Use:** “Within the zoning ordinance, continue to evaluate and maintain standards for uses that have potentially harmful side effects to the environment (i.e. storm water, drainage and soil erosion).”

### **CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

#### **West p. 4 The Park and Open Space Initiative**

**B4:** “Wild Horse Creek Trail Extension – along drainage ways throughout the area.”

**B6:** “Create additional usable green space – along drainage ways and at new sites.”

### **COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

#### **Section 3 Infrastructure SAP**

**3.3.1:** “Increase annual level of funding for storm water drainage system maintenance.”

**3.4.1:** “Increase percentage of storm water drainage system that receive regular maintenance.”



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## **EL PASO COUNTY: El Paso County Policy Plan**

**Section 2 Natural Systems Policy 2.1.9:** “Encourage approaches to land use that promotes innovative techniques to protect water quality and encourage mitigation to reduce pollution from non-point sources such as run-off from roads, parking lots and lawn chemicals.”

### **Section 3 Water Resources**

**Goal 3.1:** “Protect and enhance the quality, quantity and dependability of water supplies.”

**Goal 3.3:** “Promote awareness of environmental issues associated with water use.”

### **Section 9 Transportation**

**Policy 9.3.5:** “Plan and provide for mitigation of secondary impacts of traffic congestion including the protection of air and water quality and drainage system enhancements.”

### **Section 10 Water and Wastewater Facilities Services**

**Goal 10.1:** “Recognize the unique importance of water and wastewater service provision in the location, type and density of land use.”

**Goal 10.2:** “Promote planning and management approaches which protect the integrity of the County’s water and wastewater systems and ensure that the levels of water and wastewater service are adequate to meet the needs of existing and future County residents.”

**Goal 10.3:** “Design and operate water and wastewater treatment, distribution and collection facilities in an environmentally sensitive manner.”

### **Section 11 Drainage and Flood Protection**

**Goal 11.1:** “Promote regional planning and management approaches which protect the integrity of drainage systems and minimize long-term system-wide environmental impacts, costs and recognized flood dangers within the County.”

**Goal 11.2:** “Develop a more equitable and inclusive system for funding the planning, construction and maintenance of regional drainage facilities.”

**Goal 11.3:** “Promote the planning and design of drainage facilities which maximize on-site amenities while minimizing detrimental downstream erosion.”

## **FOUNTAIN: Fountain Comprehensive Development Plan 1999**

### **p. 31-32 Greenfrastructure**

#### **Principle 5**

**Policy 5.2:** “Prohibit development within the 100-Year Flood Plain of Fountain and Jimmy Camp Creeks and continue the practice of integrating the Flood Plain areas of Fountain and Jimmy Camp Creeks with the County’s regional park and trail system.”

#### **Principle 6**

**Policy 6.2:** “Maintain historic storm water runoff rates.”

**Policy 6.3:** “Communicate flood plain information to landowners and developers by



informing citizens about the adopted FEMA Flood Hazard Boundaries.”

**Policy 6.4:** “Promote the wise and conservative use of Fountain’s water resources through educational programs and outreach from the newly formed El Paso Water Authority.

Encourage the use of potable water for drinking purposes only, and find Alternative sources for irrigation of lawns, parks and open spaces (such as well water).”

#### **p. 33 Community Services and Facilities**

**Principle 1 Policy 1.7:** “Plan now for future water and sewer plant expansion and, if necessary, institute a program for the financing of this expansion.”

**Policy 1.8:** “Continue to seek new and reliable water resources to be used to satisfy demands for future direct supply and augmentation.”

**Policy 1.9:** “Require that new development locate adjacent to existing development to ensure the logical extension of water and wastewater facilities.”

**Policy 1.10:** “Prior to approving development in unincorporated areas, ensure that sufficient water and sewer capacity is available to serve the development (whether that capacity comes from adjoining systems or Fountain’s existing capacities).”

### **FREMONT COUNTY: Fremont County Master Plan, January 2002**

**Section B Urban and Rural Development:** Urban, commercial and industrial development will only be encouraged in areas that can be reasonably serviced with existing public infrastructure. This will help to minimize “leapfrog” development, and reduce costs due to expansion of public services such as public water and sewer.

#### **Section D Agriculture**

**D2.2:** Encourage the development of additional water resources for domestic use by the municipalities, and the continued use of existing agricultural water resources for agriculture.

**Section E Water, Sewer and Utilities:** “Ensure the provision of adequate, dependable, and cost-effective sewer and water facilities, and to guide new development to locate in proximity to existing and proposed sewer and water facilities.”

#### **Section H Environmental and Cultural Resources**

**H2:** “The quality of the Arkansas River and the surrounding area will be protected.”

**Section L Storm water Drainage:** Work with Federal, State and local entities to develop and coordinate regional storm water drainage plan that mitigates problems associated with flooding in Fremont County.

**L3:** Develop and enforce storm water drainage regulations that address and mitigate storm water issues with regard to volumes and quality associated with new residential, agricultural, commercial, and industrial development.





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**MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

**Goal 1: “Protect our water sources, improve our water system and promote water conservation:**

- Take appropriate action to protect our watershed;
- Arrange transfer of City water rights for water above our treatment plant;
- Review our treatment, storage and distribution infrastructure and prepare a plan to implement needed improvements;
- Develop and assist in implementing a comprehensive water conservation program;
- Develop a process to identify impact of proposed developments on the water supply and infrastructure;
- Consider a comprehensive water meter replacement program and a “leak detector” program.

**Goal 9: “Develop plans for a Mineral Springs pool:**

- Research the water rights and aquifers related to the Manitou springs;
- Work with the Mineral Springs Foundation to develop a plan and financing program to build a pool/spa facility for citizens and visitors
- Assist Mineral Springs Foundation, Chamber of Commerce and Pikes Peak Area Attractions in promoting Manitou’s world-famous mineral springs.”

**PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

**p. 31 Rural Development Principles:** “Protect water resources necessary for agricultural uses.”

## **N5. Waste / Solid Waste**

**Fort Carson Sustainability Goals:**

**Reduce Waste Disposal to Zero by 2027:**

- Percent of solid waste disposed per year
- Tons of solid waste disposed per year
- Percent of hazardous waste disposed per year
- Tons of hazardous waste disposed per year

**CANON CITY:** None

**CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).



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**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**EL PASO COUNTY:** El Paso County Policy Plan

**Section 2 Natural Systems**

**Policy 2.1.3:** Properly deal with and dispose of hazardous waste.

**Section 7 Special and Unique Land Uses**

**Goal 7.3:** “Promote an integrated, effective, and environmentally sensitive market-driven approach to solid waste management within El Paso County.”

**Section 10 Water and Wastewater Services and Facilities**

**Goal 10.1:** “Recognize the unique importance of water and wastewater service provision in the location, type and density of land use.”

**Goal 10.2:** “Promote planning and management approaches which protect the integrity of the County’s water and wastewater systems and ensure that the levels of water and wastewater service are adequate to meet the needs of existing and future County residents.”

**Goal 10.3** “Design and operate water and wastewater treatment, distribution and collection facilities in an environmentally sensitive manner.”

**FOUNTAIN:** Fountain Comprehensive Development Plan 1999

**p. 37 Community Services and Facilities: Principle 1**

**Policy 1.6:** “Cooperate with other local units of government, including special districts, to plan for wastewater treatment on a regional scale.”

**Policy 1.7:** “Plan now for future water and sewer plant expansion and, if necessary, institute a program for the financing of this expansion.”

**Policy 1.10:** Prior to approving development in unincorporated areas, ensure that sufficient water and sewer capacity is available to serve the development (whether that capacity comes from adjoining systems or Fountain’s existing capacities).

**FREMONT COUNTY:** Fremont County Master Plan, January 2002

**Section E Water, Sewer and Facilities:** “Ensure the provision of adequate, dependable, and cost-effective sewer and water facilities, and to guide new development to locate in proximity to existing and proposed sewer and water facilities.”

**Section K Solid Waste**

**KI:** “Continue the monitoring of all solid waste facilities in order to ensure compliance with all applicable Federal, State, and Local regulations.”

**K2:** “Continue to educate and encourage the public in the values, methods, and techniques for recycling, resource recovery, and waste reduction, through collaboration with the Upper Arkansas Council of Governments Recycling Program.”



**K3:** “Encourage and cooperate with the State and Federal agencies to ensure that hazardous and special wastes generated within the County are properly recycled, neutralized, or disposed of at authorized facilities.”

**K4:** “Continue to require that all solid waste facility plans, sites, and operations in Fremont County prevent air, water, and noise pollution, and do not allow degradation of scenic vistas.”

**K5:** “Monitor the remedial actions undertaken by the federal Environmental Protection Agency and the Colorado Department of Public Health and Environment for solid waste facilities currently in operation.”

**MANITOU SPRINGS:** None

**PUEBLO COUNTY:** None

## **Economy**

### **E1. Business: Health of Individual Businesses**

#### **Ft. Carson Goals**

**Force Projection:** Enhance Force Projection Capabilities

**Integrate Combat Readiness and Logistics:** Increase Combat Readiness and Logistics Integration

**Information Technology Support:** Increase information technology to support Units of Action and Joint Capabilities

**Support:** Provide an efficient/effective system to manage organizations

#### **Ft. Carson Sustainability Goals:**

**Further Integrate Sustainability Principles into the Fort Carson Land Use Planning, Real Property Master Planning, and Military Construction (Army) Programming Processes by 2027:** # Land Use/Master Planners on staff, Percent of new development that incorporates sustainability principles, # noise complaints per year, Acres of incompatible land use adjacent to Installation

**Procure All Products and Services Aligned With Sustainability Principles by 2027:** Amount of Environmentally Preferable Purchasing (EPP) and Affirmative Procurement (AP) Products/Services Purchased in Acquisitions >\$100,000, # of GPC Cardholders and Billing Officials Receiving EPP/AP/Sustainability Training



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### **CANON CITY: Canon Comprehensive Plan Update 2001**

**p. 40 Community Image:** “Based on current efforts for improvements in downtown, create a strategic downtown development plan that addresses economic redevelopment, market conditions, circulation, parking, historic preservation, urban design, housing and other components that contribute to a vital and healthy downtown.”

**p. 41 Community Image:** “Envision the benefits and opportunities created from the development of a central community place.”

**p. 42 Community Image:** “Guide the community toward economic opportunities, which balance jobs, housing, and commerce.”  
Encourage appropriate new business and industry, while encouraging existing industry to expand, and enhance community education and training.

### **CITY OF PUEBLO: Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).**

**East: p. 5 The Commercial and Industrial Initiative F1:** “Reinforce Neighborhood Commercial Centers”

**p. 5 The Self-Sufficiency Initiative H1:** “Bolster and expand workplace literacy and workforce education programs.”

**Bess: p. 4 The commercial Initiative C5:** “Provide opportunities for entrepreneurship.”

**p. 4 The Heritage Tourism Initiative E:** “The development of the CF and I Museum Site. Recommendations include: Related spin off commercial uses such as a lodging facility, restaurants, galleries or a Mercado.”

**p. 5 The Self-Sufficiency Initiative G1:** “Bolster and expand workplace literacy”  
**G5:** “Encourage the two Chambers to combine the existing Business Roundtables into One.”  
**G6:** “Develop a plan to wire the community”

### **COLORADO SPRINGS: Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)**

**Section 5 Economic Development SAP:** “Foster an environment that makes Colorado Springs an attractive location for quality jobs and businesses for generations to come.”

**5.5:** “Emphasize efforts to retain existing military installations and units and attract other U.S. Department of Defense activities and units to relocate here.”

**5.6:** “Maximize use of the Colorado Springs Airport as a catalyst and magnet for economic development.”



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## **EL PASO COUNTY: El Paso County Policy Plan**

**Section 6 Growth and Land Use Policy 6.3:** Commercial, office, industrial and, residential development should be compatible with surrounding land uses in terms of scale, intensity and potential impacts as well as services and accessibility.

**Section 7 Special and Unique Land Uses Goal 7.4:** “Permit mineral extraction and processing activities in the County in a manner which allows for preservation of significant commercial deposits, minimization of adverse visual and other environmental impacts, economical resource use and consideration of other planning issues.”

## **EL PASO COUNTY FISCAL POLICIES**

### **ACCOUNTING, AUDITING and FINANCIAL REPORTING**

- An independent audit will be performed annually in accordance with the Colorado Statutes.
- The County's accounting system shall be maintained in conformance with the GAAP established by the Governmental Accounting Standards Board (GASB) and with the goal of obtaining an unqualified opinion from the independent auditor.
- The County will produce annual financial reports in accordance with GAAP as outlined in Governmental Accounting, Auditing, and Financial Reporting (GAAFR).
- Each department/office will conduct a physical inventory of all its capital assets annually.

### **OPERATING BUDGET POLICIES**

- The County will avoid budgetary procedures that balance current expenditures at the expense of meeting future year expenses (e.g. postponing expenditures).
- The County will maintain a budgetary control system to ensure adherence to the budget and will make timely reports available to management which compare the actual revenues and expenditures to budgeted amounts.
- The County will encourage the use of technology and capital investment programs that are cost effective and will control the growth of operating costs.
- Supplemental requests for funding which meets the criteria of emergencies, mandates which result from a policy, law, statute or court ruling, one-time nonrecurring expenditures which affect the health, safety or welfare of the residents of El Paso County and/or its employees, or revenues or grants which become available for a specific dedicated purpose will be heard by the Board of County Commissioners on an as-needed basis.

### **DEBT POLICIES**

- The County will confine long term borrowing to capital improvements. The pay back period will not exceed the useful life of the project.
- Debt will not be used to fund current operating expenses.

### **RESERVE POLICIES**



- As required by Article X, Section 20 of the Colorado Constitution, the County will maintain an Emergency Reserve Fund to assist with the expenses of unforeseen emergencies.
- The County will maintain a satisfactory level of un-appropriated working capital reserves in order to insure a continued strong financial position within the County.
- The General Fund shall have a working capital reserve of 12%
- The Road and Bridge Fund shall have a working capital reserve of 10%
- The Social Services Fund shall have a working capital reserve of 20%
- The Debt Service Fund shall have a working capital reserve of a dollar amount equal to the maximum annual debt service of each individual debt issue.
- The Penrose Equestrian Center Fund shall have a working capital reserve of 10%
- The Self Insurance portion of the Self Insurance Fund shall reserve three times the actuarially determined loss estimate for the prior year.
- The Worker's Compensation portion of the Self Insurance Fund shall reserve two times the actuarially determined loss estimate for the prior year.
- The Land Development Review Fund shall have a working capital reserve of 50%
- The Retirement Contribution Fund shall have a working capital reserve of 8.33%
- The Solid Waste Management Fund shall have a working capital reserve of 15%
- The Fleet Services Fund shall have a working capital reserve of 10%

### **FOUNTAIN:** Fountain Comprehensive Development Plan 1999

- p. 42 Economic Development Principle 1:** "Maintain an economically feasible balance between residential growth and commercial/industrial growth in the City of Fountain. An *economically feasible balance* entails increasing both local job opportunities and tax revenues while retaining currently existing jobs and industries to provide increased services to a growing residential population."
- p. 43 Economic Development Principle 2:** "Encourage and support small businesses in the community to increase convenience, to minimize the "leakage" of consumer dollars to Colorado Springs, and to provide more employment opportunities for Fountain's youth and other residents seeking jobs."
- p. 43 Economic Development Principle 3:** "Support existing businesses in all economic development strategy."

### **FREMONT COUNTY:** Fremont County Master Plan, January 2002

- Section C Economic Development C1:** "The County will encourage economic development activities that will provide additional employment opportunities."
- C2:** "The County will encourage existing small businesses and agriculturally related business to remain in the County."
- C3:** "Encourage appropriate development fees based on the impact of new developments on existing services."
- C4:** "Encourage growth in all existing and proposed industrial parks and business parks,



or industrial areas, by providing development incentives.”

**MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

**Goal 2:** “Implement the Manitou Master Plan and Avenue Plan: Issue the voter-approved \$1,850,000 bond issue and collect the earmarked .3% sales tax for the Downtown Revitalization Capital Improvements program; obtain proposals for design and engineering services to implement program; complete in FY2004 the Downtown Streetscape project for Phase 1 (Shoshone Springs park/plaza) and complete by end of FY2005 Phase 2 (Manitou Ave. from Pawnee to Town Clock) project; actively pursue additional grants or other sources of funding for future phases.”

**Goal 4:** “Increase revenues for businesses and for the City: Work with the Economic Development Commission, the Central Manitou Springs Business Improvement District, the Chamber of Commerce and Pikes Peak Area Attractions to attract more first-time visitors and repeat visitors to the City; develop programs to help make visitors feel more comfortable in the public areas; develop programs to enhance the economy of Manitou Springs by attracting more local year-around business; support the Enterprise Zone for new businesses; implement programs for more effective collection of fees, sales taxes, use taxes and lodging taxes; develop programs to enhance the “uniqueness” of Manitou Springs.”

**PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

**p. 30 Urban Development Principles:** “Provide public services and infrastructure to areas of the Region that are environmentally and economically suitable for urban growth.

Identify environmental and economic factors that make land suitable.”

**p. 31 Rural Development Principles:** “Achieve a balance between urban and agricultural interests.

Preserve agricultural land by promoting development in areas adjacent to the urbanized area.”

**p. 32 Neighbourhood Principles:** “Promote both historic & economic neighbourhood revitalization and preservation.

Promote new subdivision developments that are reflective of Pueblo’s older, traditional neighbourhoods (mix of housing types and sizes, interconnected streets, neighbourhood commercial and office, pedestrian friendly, accessible to parks, an abundance of street trees, etc.).”

## **E2. Economic Vitality – Meeting Local Economic Goals**

### **Fort Carson Sustainability Goals:**



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**Further Integrate Sustainability Principles into the Fort Carson Land Use Planning, Real Property Master Planning, and Military Construction (Army) Programming Processes by 2027:** # Land Use/Master Planners on staff, Percent of new development that incorporates sustainability principles, # noise complaints per year, Acres of incompatible land use adjacent to Installation

### **CANON CITY: Canon Comprehensive Plan Update 2001**

- p. 39 Community Image:** “Preserve the western lifestyle and values while recognizing the changing and emerging community demographics and environment. Continue and expand upon special events, which promote historic and cultural values and lifestyles. i.e. Blossom Festival, rodeo events, arts with the park, concerts, etc. Recognize Cañon City as a destination place. Once significant historic, cultural and natural features are quantified, protect, preserve and promote these features for the enjoyment of the community and the promotion of tourism. Building upon the existing tourism efforts, create a comprehensive tourism based business plan involving appropriate community stakeholder who will participate in the tourism-based economy.”
- p. 40 Community Image:** “Based on current efforts for improvements in downtown, create a strategic downtown development plan that addresses economic redevelopment, market conditions, circulation, parking, historic preservation, urban design, housing and other components that contribute to a vital and healthy downtown.”
- p. 42 Community Image:** “Guide the community toward economic opportunities, which balance jobs, housing, and commerce.”
- p. 43 Community Image:** “Encourage the growth of art and cultural activities, such as concerts, art and music festivals, and theater, to serve as a catalyst for economic development.”

### **CITY OF PUEBLO: Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).**

- East: p. 2 Summary of the Neighborhood:** “Build upon existing community advantages of access to shopping and employment and affordable housing. Increase access to commercial goods and services available within the neighborhood.”
- p. 5 The Commercial and Industrial Initiative F1:** “Reinforce Neighborhood Commercial Centers.”
- p. 5 The Economic Opportunity Initiative G2:** “Provide Opportunities for Entrepreneurship.”





**p. 5 The Self-Sufficiency Initiative H5:** “Encourage the two Chambers to combine the existing Business Roundtables into one.”

**p. 5 H6:** “Develop a plan to “wire the community” in an effort to effectively facilitate citizen access to information sources.”

**West: p. 5 The Commercial and Industrial Initiative E:** Establish neighborhood commercial centers, encourage highway commercial activity and designate industrial use areas.

**Bess p. 4 The Commercial Initiative C5:** “Provide Opportunities for Entrepreneurship.”

**p. 4 The Heritage Tourism Initiative E:** “The development of the CF and I Museum Site.

Recommendations include:

Related spin off commercial uses such as a lodging facility, restaurants, galleries or a Mercado.”

**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**Section 6 Community Development and Growth SAP:** “Preserve a sustainable and affordable quality of life while protecting the environment to foster pride in vibrant neighborhoods and promote identification with the larger community.”

**EL PASO COUNTY:** El Paso County Policy Plan

**Section 5 Economic Development Goal 5.1:** “Maintain a land use environment which encourages quality economic development that is compatible with surrounding land uses.”

**Section 6 Growth and Land Use Goal 6.1.b:** “Support growth and development in the unincorporated County in a manner which reasonably limits long term public costs, provides for the development of supporting infrastructure, preserves environmental quality, provides economic opportunities, and otherwise enhance the quality of life.”

**Section 14 Public Finance Districts Goal 14.1:** “Recognize and promote the essential role of special financing districts in the provision and maintenance of public facilities and services in unincorporated areas.”

**Goal 14.2:** “Judiciously support the use of Local Improvement Districts.”

**Goal 14.3:** “Support the use of equitable and reasonable alternative public financing approaches in situations where special or local improvement district mechanisms are not feasible.”

**FOUNTAIN:** Fountain Comprehensive Development Plan 1999



- p. 34 Principle 3 Community Characteristics:** “Preserve and enhance Fountain’s downtown area.”
- p. 43 Economic Development Principle 2 Policy 2.1:** “Work with businesses and residents, as well as with the Small Business Development Center, to identify and pursue opportunities to bring a wider range of basic goods and services into the community (e.g., hardware stores, drugstores, family restaurants, local banks, etc.).”
- p. 43 Economic Development Principle 3:** “Support existing businesses in all economic development strategy.”
- p. 43 Economic Development Principle 3 Policy 3.2:** “The City and its Economic Development Committee shall strive to keep lines of communication open with the business community. In doing so, the City will be able to both formally and informally keep businesses aware of the opportunities available to patronize other local businesses and create the “linkages” that are so important for sustaining and supporting Fountain’s local economy.”

## **FREMONT COUNTY:** Fremont County Master Plan, January 2002

**Section B Urban and Rural Development B8:** “Fremont County will use Transfer of Development Rights (TDR) as a tool to protect important County rural resources, where appropriate.”

## **MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

**Goal 2:** “Implement the Manitou Master Plan and Avenue Plan: Issue the voter-approved \$1,850,000 bond issue and collect the earmarked .3% sales tax for the Downtown Revitalization Capital Improvements program; obtain proposals for design and engineering services to implement program; complete in FY2004 the Downtown Streetscape project for Phase 1 (Shoshone Springs park/plaza) and complete by end of FY2005 Phase 2 (Manitou Ave. from Pawnee to Town Clock) project; actively pursue additional grants or other sources of funding for future phases.”

**Goal 4:** “Increase revenues for businesses and for the City: Work with the Economic Development Commission, the Central Manitou Springs Business Improvement District, the Chamber of Commerce and Pikes Peak Area Attractions to attract more first-time visitors and repeat visitors to the City; develop programs to help make visitors feel more comfortable in the public areas; develop programs to enhance the economy of Manitou Springs by attracting more local year-around business; support the Enterprise Zone for new businesses; implement programs for more effective collection of fees, sales taxes, use taxes and lodging taxes; develop programs to enhance the “uniqueness” of Manitou Springs.”



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**PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

**p. 30 Urban Development Principles:** “Provide public services and infrastructure to areas of the Region that are environmentally and economically suitable for urban growth.

Support a Regional land use plan that maintains a strong and healthy urban core.

Provide a Regional land use plan that recognizes the relative importance of Pueblo’s Downtown to the Region.”

**p. 31 Urban Development Principles:** “Provide for mixed use and in-fill development.

Provide a balance between developing new commercial and industrial sites and maintaining the viability of existing development.”

### **E3. Employment – Health of Citizen’s Relationship to Paid Work**

**CANON CITY:** Canon Comprehensive Plan Update 2001

**p. 42 Community Image:** Guide the community toward economic opportunities, which balance jobs, housing, encourage existing businesses to expand, and enhance community education and training.

**CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

**East: p. 5 The Commercial and Industrial Initiative F:** Reinforce Neighborhood Commercial Centers to ensure employment for local residents and facilitate transport to these centers.

**p. 5 The Economic Opportunity Initiative G1:** “Develop an Eastside Job Resource Center.”

**p. 5 The Self-Sufficiency Initiative H1:** “Bolster and expand workplace literacy and workforce education programs.”

**West: p. 5 The Commercial and Industrial Initiative E5:** “Expand the local hiring/training network by working with PCC.”

**p. 5 E6:** “Create incentives for businesses to hire locally by working with PEDCO.”

**Bess p. 5 The Self-Sufficiency Initiative G1:** “Bolster and expand workplace literacy.”

**p. 5 G3:** “Establish a Jobs Clearinghouse via the Internet.”



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**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**Section 4 Citizen Services and Workforce SAP:** “Provide an environment that supports a diverse, high-performing workforce that delivers superior, cost-effective City services to the public.”

**Section 5 Economic Development SAP:** “Foster an environment that makes Colorado Springs an attractive location for quality jobs and businesses for generations to come.”

**Section 6 Community Development and Growth SAP: 6.4:** “Maintain and enhance neighborhood employment opportunities.”

**p. 20 SEA: Indicator:** “Mentoring Program The City’s first structured mentoring program with 28 participants was completed in 2004. Program evaluation results showed that 90 percent of participants were “very satisfied” or “somewhat satisfied” with the program. Participants engaged in 1,400(+) hours of intensive one-on-one professional development.”

**EL PASO COUNTY:** El Paso County Policy Plan

**Section 5 Economic Development Policy 5.1.4:** “Allow for the maintenance of a sufficient inventory of available sites for employment uses throughout the County.”

**Policy 5.1.5:** “Promote quality and diverse economic development that is consistent with adopted plans, emphasizing both the creation and retention of jobs that meet the needs of citizens of the County at all skill levels.”

**Policy 5.1.7:** “Support land use policies that allow legitimate employment opportunities for individuals to work out of their homes especially in areas which are not conducive to large scale non-residential development and/or would otherwise require long commuting times.”

**Policy 5.1.9:** “Encourage appropriate economic development in rural areas of the County as a means of providing local employment opportunities, increasing community tax base, and reducing long commutes.”

**Policy 5.1.10:** “Accommodate the improvement and development of all educational institutions as a means of maintaining a highly educated work force to compete for high quality economic development.”

**Policy 5.1.12:** “Discourage or prevent land uses which threaten the long-term operating viability of critical infrastructure, such as the airport and industrial areas which must grow to accommodate new primary jobs for the County’s growing population.”

**Section 6 Growth and Land Use Policy 6.1.1:** “Allow for a balance of mutually supporting interdependent land uses, including employment, housing and services in the more urban and urbanizing areas of the County.”



**Policy 6.1.5:** “Support the development of well-planned mixed use projects which promote all, or most, of the following objectives:

Maximize the economy and efficiency of land use.

Integrate employment, housing, shopping, schools and other use.”

**Policy 6.3.3:** “Encourage major new employment centers to locate in proximity to potential employees and housing opportunities.”

**Policy 6.5.2:** “Encourage appropriate opportunities for employment within rural areas.”

**Section 7 Special and Unique Land Uses:** Promote mixed residential and employment uses, allow for the accommodation of daycare centers in or adjacent to residential areas for working parents, and accommodate home-based businesses.

**Section 13 Housing Goal 13.2:** “Encourage a diversity of affordable housing types throughout the unincorporated county to meet the housing need for the people who work in our communities.”

**FOUNTAIN:** Fountain Comprehensive Development Plan 1999

**p. 27 Growth Management and Land Use Principle 5:** “Encourage and assist in, when possible, the addition of new staff to the Fountain Housing Authority. Encourage the establishment of “work force housing,” or housing that is geared specifically to people working in the City of Fountain.”

**p. 43 Economic Development Principle 2:** “Encourage and support small businesses in the community to increase convenience, to minimize the “leakage” of consumer dollars to Colorado Springs, and to provide more employment opportunities for Fountain’s youth and other residents seeking jobs.”

**FREMONT COUNTY:** Fremont County Master Plan, January 2002

**Section C Economic Development C1:** “The County will encourage economic development activities that will provide additional employment opportunities.”

**C2:** The County will encourage existing small businesses and agriculturally related business to remain in the County.”

**MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

**Goal 10:** “Staff Development for City employees: Analyze the budgeted staffing and update staffing requirements; conduct market analysis of wage scales; review and prepare recommendations for “performance” salary adjustment program; develop and implement a comprehensive training program for all City employees.”



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## **PUEBLO COUNTY: Pueblo's Comprehensive Plan, July 25, 2002**

**p. 19 Indicator:** Total increase in jobs by 2030 for the Pueblo Region should be 73,262.

Percentage of increases in each field is as follows

Construction: 157

Services: 146

Retail Trade: 122

Agricultural/ Mining: 97

Finance/ Insurance/ Real Estate: 82

Government: 79

Wholesale Trade: 63

Transportation/ Communications/ Utilities: 50

Manufacturing: 32

**p. 31 Urban Development Principles:** "Provide bus service to major employment centers. Provide for mixed use and in-fill development that make it convenient for employees to walk or bike to work."

**p. 59 Zoning Regulation Update or Amendments:** "Both city and county should consider updates or amendments to their respective zoning regulations. Those should focus on such issues as: Encouraging mixed use in appropriate locations. Protecting sites for future employment centers."

## **E4. Sustainable Economic Practices**

### **Fort Carson Sustainability Goals:**

**Procure All Products And Services Aligned With Sustainability Principles by 2027:** Amount of Environmentally Preferable Purchasing (EPP) and Affirmative Procurement (AP) Products/Services Purchased in Acquisitions >\$100,000, # of GPC Cardholders and Billing Officials Receiving EPP/AP/Sustainability Training

### **CANON CITY: Canon Comprehensive Plan Update 2001**

**p. 42 Community Image:** "

- Guide the community toward economic opportunities, which balance jobs, housing, and commerce.
- Foster business and industry that have the potential to diversify the local economy, increase local incomes and train and employ local residents
- Carefully consider the location and scale of any new commercial and/or industrial development to insure its compatibility with the community's quality of life and the overall objectives of this Master Plan.



- Through organizations like Fremont Economic Development Corporation, develop a strategic business plan promoting and marketing key assets within the County, promoting employment growth stabilization, expansion and diversification.”
- “Encourage appropriate new business and industry.
- Create an environment that encourages existing businesses to prosper and expand.
- Continue to work with Fremont Economic Development Corporation Chamber of Commerce Main Street U.S.A. Organization and other business groups to maintain and enhance business support, education and training.
- Continue to survey community businesses to effectively determine local needs and issues. Provide equitable assistance and support between existing businesses and incoming new businesses.”
- Enhance community education and training.
- Identify key educational opportunities and/or programs that will foster the diversification of employment center growth
- Within the community, continue to develop advanced educational opportunities, which support existing business.
- Explore advanced educational programs through the Pueblo Community College Canon City Campus location that supports existing business and provides technical training for new and/or expanding business opportunities.”

**p. 52 Parks, Trails, and Open Space:** “Foster a financial partnership with the Recreation District, Fremont County and the various school districts to support capital projects. Work cooperatively with the Chamber of Commerce service clubs and other organizations sponsoring special events.”

**CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

**East: p. 5 The Commercial Initiative F1:** “Reinforce Neighbourhood Commercial Centers Designate the area in the vicinity of 4th Street, from Erie Avenue to Hudson Avenue as a neighbourhood business center and create a pedestrian-oriented environment. Encourage a broader range of business and personal services to locate in the neighbourhood, such as banks, legal and other professional services. An additional component of the strategy for reinforcing the commercial centers in the neighbourhood is an expectation that the City would partner with local businesses to implement an improvement program.”

**p. 5 The Economic Opportunity Initiative G1:** “Develop an Eastside Job Resource Center.”

**G2:** “Provide Opportunities for Entrepreneurship. Encourage the creation of commercial spaces that would be affordable to small business owners rather than national chains.”

**P. 5 The Self-Sufficiency Initiative H:** “It is the desire of the Eastside Neighbourhood Association to encourage and promote, to whatever extent possible, actions that will



permit individuals and families the ability to earn an income that will help them be self-sufficient.

**West: p. 5 The Commercial Initiative**

**E1:** “Establish neighbourhood commercial centers at 18th and Lambert, and 24th and Spaulding.

**E2:** “Encourage highway commercial activities along the US 50 and Pueblo Boulevard frontage.”

**E3:** “Designate the entire Foundry Area for industrial use.”

**E4:** “Create an industrial park image through signage, land assemblage and street improvements.”

**E5:** “Expand the local hiring/training network by working with PCC.”

**E6:** “Create incentives for businesses to hire locally by working with PEDCO.”

**Bess: p. 4 The Commercial Initiative C:** “The Bessemer commercial redevelopment strategies are designed to: increase the retail mix in Bessemer to create synergy and draw in both residents and employees; improve the physical conditions of the public rights-of-way and commercial structures in Bessemer; and, strengthen existing businesses.”

**C5:** “Provide Opportunities for Entrepreneurship.”

**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**Section 1 Transportation SAP:** “Provide an effective, efficient, affordable and sustainable transportation network.”

**1.1.1:** “Ensure sustainable funding for construction and maintenance through a combination of measures, including ballot initiatives, user fees, grants, State and Federal funds, and developer contributions.”

**EL PASO COUNTY:** El Paso County Policy Plan

**Section 6 Growth and Land Use Goal 6.5:** “Encourage the preservation of agricultural uses as an important contributor to the economy and land use character of the County.

**Policy 6.5.2:** “Encourage appropriate opportunities for employment within rural areas.”

**Policy 6.5.3:** “Encourage the use of strategies such as land trusts and conservation easements which result in the preservation of agricultural or open land use and character.”

**Section 7 Special and Unique Land Uses Policy 7.3.2:** “Encourage waste reduction through a combination of careful planning, source reduction, recovery and recycling.”

**Policy 7.3.4:** “Allow for the reasonable accommodation of land uses which respond to technical and economic changes in the solid waste management industry.”

**Policy 7.3.5:** “Encourage land development and construction techniques which limit the production of solid waste and promote recycling.”





**Policy 7.3.6:** “Reasonably accommodate uses and facilities which will result in the beneficial use of materials which would otherwise end up in the waste stream.”

**Section 9 Transportation Goal 9.2.1:** “Promote land use planning which maximizes transportation efficiency.”

**Policy 9.2.1:** “Encourage the development of major activity centers with regional multi-modal access.”

**Goal 9.4.1:** “Implement the planned transportation system in a coordinated and cost-effective manner utilizing a fair, equitable and sufficient method of funding.”

**Section 11 Drainage and Flood Protection Goal 11.2:** “Develop a more equitable and inclusive system for funding the planning, construction and maintenance of regional drainage facilities.”

**Section 12 Other Services and Utilities: Goal 12.4:** “Reduce the adverse impacts and maximize the efficiency of energy generation, transmission and distribution systems.”

**Section 13 Housing Goal 13.2:** “Encourage a diversity of [affordable housing](#) types throughout the unincorporated county to meet the housing need for the people who work in our communities.”

**Policy 13.2.7:** “Encourage the issuance by the County of tax-exempt bonds to provide lower interest rates for first-time homebuyers or developers of multifamily projects.”

## **FOUNTAIN:** Fountain Comprehensive Development Plan 1999

**p. 25 Growth Management and Land Use Principle 2:** “Ensure that new development does not create a negative fiscal impact on the City. The costs of servicing new residential developments shall not be borne by existing residential development.”

**Policy 2.1:** “Base approval of annexation and new development proposals on a cost-benefit analysis. An increased tax base shall not be the sole determinant, but shall be a major objective in keeping Fountain an affordable place to live, while still achieving land use objectives.”

**Policy 2.2:** “Assure that developers are bonded 100% for performance of future public improvements, such as streets, water, wastewater and storm sewer.”

**Policy 2.3:** “Encourage development that efficiently uses the City’s existing infrastructure and resources.”

**p. 29 Greeninfrastructure Principle 1:** “Preserve agricultural lands in and around the City of Fountain.”

**p. 33 Community Services and Facilities Principle 1 Policy 1.5:** “Work to minimize the number of special districts that operate in the City of Fountain by encouraging and facilitating the consolidation of special districts that are economically beneficial to the citizens of Fountain.”



**p. 42 Economic Development Principle 1 Policy 1.3:** “Encourage desirable, non-polluting industrial development supportive of the community, and whose presence will be a positive visual and economic addition to the City of Fountain (e.g., SCI). Negative environmental and infrastructure impacts shall be mitigated.”

**p. 43 Economic Development Principle 2 Policy 2.2:** “Develop a supportive business environment that aids in creating a healthy, diverse and sustainable local economy. The City should actively market Fountain’s businesses and promote an increase in telecommunications support.”

**p. 74: Indicator:** Retail sales and professional services should be no more than 1000 square feet each in mixed residential areas.

### **FREMONT COUNTY:** Fremont County Master Plan, January 2002

**Section B Urban and Rural Development B 1:** “Urban level densities in eastern Fremont County will be encouraged only in areas that can be reasonably serviced with existing public services. Accomplishment of this objective will help to minimize “leapfrog” development, minimize urban sprawl, minimize cost to the community for expansion of services such as public water and sewer, minimize road construction and road maintenance costs, and promote continuity in growth patterns.”

**Section C Economic Development C2:** “Encourage existing small businesses and agriculturally related business to remain in the County.”

### **MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

**Goal 2.** “Implement the Manitou Master Plan and Avenue Plan: Issue the voter-approved \$1,850,000 bond issue and collect the earmarked .3% sales tax for the Downtown Revitalization Capital Improvements program; obtain proposals for design and engineering services to implement program; complete in FY2004 the Downtown Streetscape project for Phase 1 (Shoshone Springs park/plaza) and complete by end of FY2005 Phase 2 (Manitou Ave. from Pawnee to Town Clock) project; actively pursue additional grants or other sources of funding for future phases.”

### **PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

**p. 31 Urban Development Principles:** “Provide for mixed use and in-fill development that make it convenient for employees to walk or bike to work.

- Provide a balance between developing new commercial and industrial sites and maintaining the viability of existing development.
- Achieve a balance between urban and agricultural interests.
- Preserve agricultural land by promoting development in areas adjacent to the urbanized area.



- Discourage “leap-frog” development on prime agricultural land.
- Preserve land through purchase or donation of development rights, including landowner education of the estate planning benefits of such conservation actions.
- Protect water resources necessary for agricultural uses.”

## Well-Being

### W1. Education

#### **Fort Carson Sustainability Goals:**

**Train And Motivate All Stakeholders Towards Compliance With Sustainability Principles by 2010:** Training package fully developed, % of targeted stakeholders trained

#### **CANON CITY:** Canon Comprehensive Plan Update 2001

- p. 37 Community Image:** “Initiate an education forum that allows local citizens the benefit of understanding and supporting a comprehensive design standards program.”
- p. 39 Community Image:** “Promote and encourage community heritage through educational awareness, exhibits and events.  
Initiate a community image awareness program which blends traditional western values with the emerging needs of a prosperous 21<sup>st</sup> century city.”
- p. 40 Community Image:** “Provide education and awareness regarding significant community points of interest utilizing directional signage and kiosks.”
- **p. 42 Community Image:** “Foster business and industry that have the potential to diversify the local economy, increase local incomes and train and employ local residents.
  - Continue to work with Fremont Economic Development Corporation Chamber of Commerce Main Street U.S.A. Organization and other business groups to maintain and enhance business support, education and training.
  - Enhance community education and training
  - Identify key educational opportunities and/or programs that will foster the diversification of employment center growth.
  - Within the community, continue to develop advanced educational opportunities, which support existing business.
  - Explore advanced educational programs through the Pueblo Community College Canon City Campus location that supports existing business and provides technical training for new and/or expanding business opportunities.”
- p. 51 Parks, Trails, and Open Space:** “Maintain a parks, trails, and open space master plan which outlines a system of trails and sidewalks, which link parks, schools and residential neighborhoods with important locations and/or destinations within the community. Foster proper trail etiquette with educational materials, activities and signage.”



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**CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

**East p. 5 The Self-Sufficiency Initiative H1:** “Bolster and expand workplace literacy and workforce education programs.”

**H2:** “Encourage the expansion of the role of the Parent Teacher Associations and the Parent Booster Groups.”

**H4:** “Continue to support Colorado State University - Pueblo and Pueblo Community College with their efforts to find creative ways to serve the working, continuing education student and to help integrate older persons back to school so they can gain the skills to stay current as productive members of the workforce.”

**H6:** “Develop a plan to “wire the community” in an effort to effectively facilitate citizen access to information sources.”

**West: p. 4 The Quality of Life Initiative A7:** “Promote communication among schools and youth organizations”

**p. 5 The Commercial and Industrial Initiative E5:** “Expand the local hiring/training network by working with PCC.”

**Bess: p. 5 The Self-Sufficiency Initiative G1:** “Bolster and expand workplace literacy”

**G2:** “Encourage the expansion of the role of the Parent Teacher Associations.”

**G4:** “Continue to support Colorado State University - Pueblo and Pueblo Community College.”

**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**Section 2 Public Safety 2.2.1:** “Develop a Citizen Emergency Response Training (CERT) Program.”

**Section 4 Citizen Services and Workforce SAP 4.9:** “Employees will receive sufficient ongoing training and development, and will have sufficient technology, tools and resources to perform their jobs.”

**p. 20 SEA: Indicator:** The City’s first structured mentoring program with 28 participants was completed in 2004. Program evaluation results showed that 90 percent of participants were “very satisfied” or “somewhat satisfied” with the program. Participants engaged in 1,400(+) hours of intensive one-on-one professional development.

**EL PASO COUNTY:** El Paso County Policy Plan



**Section 2 Natural Systems: Policy 2.2.9:** “Encourage education strategies that address opportunities for public participation in ongoing efforts to preserve the natural environment.”

**Policy 2.4.2:** “Develop public safety guidelines and/or educational materials to explain the risks associated with developing in identified geological hazard areas.”

**Policy 2.4.3:** “Develop a systematic process that informs the public about the dangers of geologic hazards.”

**Policy 2.4.4:** “Encourage more and better methods of notifying potential property investors and the public of the risks and liabilities associated with developing in identified geological hazard zones.”

**Section 3 Water Resources Policy 3.4.3:** “Encourage development and implementation of water conservation plans and programs, primarily using technological, design and incentive approaches, combined with community education.”

**Section 5 Economic Development Policy 5.1.10:** “Accommodate the improvement and development of all educational institutions as a means of maintaining a highly educated work force to compete for high [quality economic development](#).”

**Section 6 Growth and Land Use Policy 6.3.9:** “Promote the multiple use combination of non-residential uses such as shopping, offices, government and education in a manner which maximizes the use of available [infrastructure](#) during weekdays, evenings and weekends.”

**Section 8 Parks, Trails, and Open Space Policy 8.5.3:** “Support [parks](#), [trails](#), and [open space](#) partnerships with municipalities, the educational community and other public and private entities.”

**Section 12 Other Services and Utilities Policy 12.1.11:** “Promote safety and fire prevention through on-going public education and awareness efforts.”

**Goal 12. 3:** “Recognize the importance of educational infrastructure in the land use planning process.”

## **FOUNTAIN:** Fountain Comprehensive Development Plan 1999

### **p. 32 Greenfrastructure**

**Policy 6.3:** “Communicate flood plain information to landowners and developers by informing citizens about the adopted FEMA Flood Hazard Boundaries.”

**Policy 6.4:** “Promote the wise and conservative use of Fountain’s water resources through educational programs and outreach from the newly formed El Paso Water Authority. Encourage the use of potable water for drinking purposes only, and find alternative sources for irrigation of lawns, parks and open spaces (such as well water).”

**p. 35 Community Character Policy 4.5:** “Ask area housing assistance programs to conduct public education programs for landlords and tenants about safe and unsafe building conditions.”



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**FREMONT COUNTY:** Fremont County Master Plan, January 2002

**Section B- Urban and Rural Development B5.1:** “Encourage agricultural businesses through Transfer of Development Rights “sending area” designations, purchase of conservation easements through the Heritage Conservation Fund, and education to build awareness of the Right to Farm resolution provisions.”

**Section H- Environmental and Cultural Resources H7.1:** “Coordinate efforts with public and private organizations to protect threatened plant and animal habitat, riparian corridors, and mountain and prairie ecosystems throughout Fremont County through public education and, when warranted, acquisition of property rights.”

**MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

**Goal 10:** “Staff Development for City employees: Analyze the budgeted staffing and update staffing requirements; conduct market analysis of wage scales; review and prepare recommendations for “performance” salary adjustment program; develop and implement a comprehensive training program for all City employees.”

**PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

**p. 31 Rural Development Principles:** “Preserve land through purchase or donation of development rights, including landowner education of the estate planning benefits of such conservation actions.”

## **W2. Health**

**CANON CITY:** Canon Comprehensive Plan Update 2001

**p. 43 Community Image:**

- “Maintain and enhance advanced medical service provision.
- Identify economic development initiatives, which provide business growth opportunities for existing medical services providers (i.e. senior and/or corrections populations).
- Evaluate and inventory existing medical service providers to assess market potential and new service delivery opportunities.
- Explore traditional and non-traditional partnerships between medical service providers and those interested in expanded health care opportunities (i.e. developers of senior housing, correctional facilities and medical R& D and pharmaceutical manufacturing operations).”



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**CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

**East: p. 3 Summary of the Neighborhood:** “Improve health care systems in the Eastside.”

**The Quality of Life Initiative A1:** “Strengthen and aggressively enforce health and land use codes.”

**West: p. 4 The Quality of Life Initiative A1:** “Strengthen and aggressively enforce health and land use codes.”

**Bess: p. 3 The Quality of Life Initiative A1:** “Strengthen and aggressively enforce health and land use codes”

**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**p. 10 SEA: Indicator:** Continuing Congestion Mitigation Air Quality (CMAQ) funding. The signal master upgrade is being implemented: To date, 260 of the City’s 510 signals have been upgraded.

**EL PASO COUNTY:** El Paso County Policy Plan

**Section 6 Growth and Land Use Policy 6.5.6:** “Encourage the reporting of 35 acre tract development for the health, welfare and safety of county residents.”

**Policy 6.5.7:** “Discourage the proliferation of locally unwanted and potentially hazardous land uses in rural and especially unzoned areas.”

**Section 9 Transportation: Policy 9.4.6:** “Place a high priority on financing transportation improvements which significantly reduce health and safety risks.”

**FOUNTAIN:** Fountain Comprehensive Development Plan 1999

**p. 35 Community Character Policy 4.5:** “Ensure that Fountain’s existing dwelling units are decent, safe, and sanitary at prices affordable to existing residents.”

**p. 38 Community Services and Facilities Principle 2:** “Continue to promote the health, safety, welfare and quality of life of Fountain citizens.”

**FREMONT COUNTY:** Fremont County Master Plan, January 2002

**Section F- Housing F:** “Provide affordable, diverse and quality housing alternatives to accommodate County residents. Housing should not be detrimental to public health, safety or moral welfare, and it should preserve the scenic quality of the area.”



**Section H- Environmental and Cultural Resources H:** “Encourage a land use pattern which considers the ecological and environmental sensitivity of the land, does not overburden the capacity of the land and promotes the health, safety, and welfare of all County residents.”

**Section K- Solid Waste K5:** “Monitor the remedial actions undertaken by the federal Environmental Protection Agency and the Colorado Department of Public Health and Environment for solid waste facilities currently in operation.”

**Section L -Storm water Drainage L3.1:** “Assure that storm water quality and drainage control are addressed in the Fremont County Rood Damage Prevention Resolution, Subdivision Regulations and Building Codes (for multi-family, commercial and industrial construction) consistent with Colorado statutes, regulations of the CO Dept. of Public Health and Environment, and the federal “Clean Water Act”.”

**MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

**Goal 8:** “Improve Public Safety: Develop and implement revised Police Department operating policies and procedures; develop a “Police Reserve” program; implement changes to improve City emergency dispatch services; develop and implement additional “traffic calming” programs; implement a comprehensive drug enforcement program; prepare recommendations to mitigate adverse effects of problems in public areas; implement programs to mitigate West Nile Virus dangers.”

**PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

**p. 52 Liveability Goal:** “Create, enhance and maintain a safe, healthful and aesthetically pleasing living environment by integrating transportation mobility needs with those of the citizens within the Pueblo Region.”

### **W3. Housing**

**CANON CITY:** Canon Comprehensive Plan Update 2001

**p. 38 Community Image:** “Promote planning and design efforts, which establish a sense of community.

Establish landscaping standards and/or programs that compliment the surrounding community or environment.”

**p. 42 Community Image:** “Guide the community toward economic opportunities, which balance jobs, housing, and commerce.”

**p. 44 Land Use:** “Establish land use opportunities that are compatible with the character and needs of the community.

Adopt development design standards that support ‘traditional’ townscape patterns.





Provide linkages between existing neighborhoods and non-residential land uses that reflect the historical and natural landscape elements.”

- p. 45 Land Use:** “Establish land use opportunities that are compatible with the character and needs of the community.  
Support and maintain stable and attractive neighborhoods.  
Review and define enforcement policy as per existing and/or newly adopted neighborhood protection standards. Relate historical neighborhood development design patterns and geography to existing neighborhoods and new residential development.”
- p. 47 Housing:** “Allow for a range of residential land uses in appropriate areas that meet the needs of the community.  
Maintain stable and attractive neighborhoods.  
Identify and map residential areas within the community which have significant historic, environmental, and cultural value.  
Encourage open space areas within and around subdivision developments.  
Preserve unique, culturally and economically diverse neighborhoods.”
- p. 48 Housing:** “Allow for a “new urbanism” concept, if appropriate in new residential development areas, in order to decrease cost and other impacts of required infrastructure.”
- p. 51 Parks, Trails, and Open Space:** “Implement a parks, trails and open space master plan and provide recreational opportunities that meet the needs of the community.”

**CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

- East p. 2 Summary of Neighborhood:** “Increase community participation in addressing neighborhood issues.
- Build upon existing community advantages of access to shopping and employment and affordable housing.
  - Increase access to commercial goods and services available within the neighborhood.
  - Maintain and strengthen the stability of the neighborhood through encouraging increased homeownership.”
- p. 3 The Park and Open Space Initiative B5:** “Establish Pedestrian Linkages Throughout the Eastside Neighborhood.”
- p. 4 The Neighborhood Identity Initiative C:** “The vision is to build up the Eastside’s identity and promote it so that neighbors in other communities and across the City will know the area as the Eastside Neighborhood.”
- p. 4 The Housing Initiative D1:** “Develop “Infill” housing projects on scattered sites.”



**D2:** “Larger vacant land opportunities in the Walters Brewery Area and the Summit brickyard should be considered as redevelopment sites, which should incorporate housing for mixed-income residents.”

**D3:** “Undertake housing rehabilitation and develop new infill housing by applying the building design and landscape standards as proposed in the Charter Neighborhood zoning project.”

**p. 5 The Commercial and Industrial Initiative F1:** “Reinforce Neighborhood Commercial Centers.”

**West: p. 4 The Neighborhood Identity Initiative C:** Create pedestrian amenities and improve the level of neighborhood services.

**p. 5 The Housing Initiative D1:** “Develop “Infill” housing projects on scattered sites”

**D2:** “Larger vacant land opportunities north of 22nd Street could be considered as redevelopment sites, which should incorporate housing for mixed-income residents.”

**D3:** “Undertake housing rehabilitation and develop new infill housing by applying the building design and landscape standards as proposed in the Charter Neighborhood zoning project when they apply.”

**p. 5 The Commercial and Industrial Initiative E1:** “Establish neighborhood commercial centers at 18th and Lambert, and 24th and Spaulding.”

**Bess: p. 3 The Quality of Life Initiative A10:** “Improve the Level of Service in the Neighborhood.”

**p. 3 The Housing Initiative B1:** “Support Neighborhood Housing Service’s Pilot Program of Housing Rehabilitation.”

**B2:** “Develop “Infill” housing projects on scattered sites.”

**B3:** “Undertake housing rehabilitation and develop new infill housing by applying the building design and landscape standards as proposed in the Charter Neighborhood zoning project.”

**p. 4 The Commercial Initiative C1:** “Elevate the Bessemer Association for Neighborhood Development. The adoption of the Bessemer Neighborhood Plan should be followed by instituting a program modeled after the National Trust Main Street Program. Specific steps to take have been described in the strategies.”

**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**Section 2 Public Safety SAP 2.2.11:** “Direct resources to enforce housing-related codes to provide safe, habitable housing and property.”



**Section 6 Community Development and Growth SAP:** “Preserve a sustainable and affordable quality of life while protecting the environment to foster pride in vibrant neighborhoods and promote identification with the larger community.”

**6.2:** “Foster compatibility between existing neighborhoods and new development.”

**6.4.1:** “Promote mixed-use neighborhoods.”

**6.6:** “Provide a wide variety of housing opportunities in neighborhoods.”

**6.6.2:** “Identify potential in-fill sites with neighborhood input.”

**6.6.3:** “Support a mixture of housing densities to include traditional neighborhood design and other strategies.”

**6.6.4:** “Develop funding strategies and incentives for affordable housing.”

**6.6.5:** “Where possible, integrate affordable housing into neighborhoods.”

**6.7:** “Increase development partnerships with non-profit and private developers.”

**6.8:** “Strive to dedicate 33% of Police patrol officer time to proactive policing to address neighborhood problems such as crime, disorder, traffic problems, and delinquency.”

## **EL PASO COUNTY: El Paso County Policy Plan**

**Section 6 Growth and Land Use Goal 6.2:** “Protect and Enhance Existing and Developing Neighborhoods.”

**Goal 6.3:** “Continue to support existing and carefully planned future urban density development in the unincorporated County, provided the requisite level of urban services is available or will be available in a timely fashion.”

**Goal 6.4:** “Develop and maintain rural residential areas in a manner which protects their integrity, addresses the carrying capacity of the natural environment and provides for an adequate level of non-urban facilities and services.”

**Section 7 Special and Unique Land Uses Goal Policy 7.1.1:** “Accommodate unique combinations of land uses (such as employment and residential uses) on the same property if it can be demonstrated that aggregate impacts will be limited, adequate facilities and services will be available and the use will be compatible with the character of the surrounding area.”

**Policy 7.1.3:** “Allow for the accommodation of daycare centers in or adjacent to residential areas and employment centers provided that they are designed and operated in a manner which satisfactorily addresses issues of safety, compatibility and facility and service availability.”

**Goal 7.5:** “Allow for those towers, transmission lines and related facilities which provide a benefit to County residents in a manner which balances considerations of economics, equity, and environmental sensitivity and provide for the equitable compensation to private land owners for impacts caused by these facilities.”

**Section 12 Other Services and Utilities Policy 12.1.3:** “Approve new urban and rural residential development only if structural fire protection is available.”

**Policy 12.1.4:** “Encourage effective provision of on-site water supplies (ponds, cisterns or hydrants as applicable) for fire suppression in rural residential areas.”



**Section 13 Housing Goal 13.1:** “Encourage an adequate supply of housing types to meet the needs of county residents.”

**Goal 13.2:** “Encourage a diversity of affordable housing types throughout the unincorporated county to meet the housing need for the people who work in our communities.”

**Goal 13.3:** “Encourage the provision of low cost housing without direct County involvement whenever possible.”

**Goal 13.4:** “Encourage a positive relationship between housing development, land use planning and transportation systems.”

### **FOUNTAIN:** Fountain Comprehensive Development Plan 1999

**p. 27 Growth Management and Land Use Principle 4:** “Ensure that the siting, development, and construction of housing is aesthetically pleasing, safe, encourages interactive neighborhoods, and complements the existing neighborhoods’ plans and surrounding land uses.”

**p. 27 Growth Management and Land Use Principle 5:** “Promote quality housing and a variety of residential units – both in terms of price and type of unit – allowing households with different incomes and needs to live in Fountain.”

**p. 35 Principle 4 Community Characteristics Policy 4.5:** “Ensure that Fountain’s existing dwelling units are decent, safe, and sanitary at prices affordable to existing residents. Methods include:

Asking area housing assistance programs to conduct public education programs for landlords and tenants about safe and unsafe building conditions.

Referring landlords and tenants to organizations that can respond to questions and concerns.

Conducting workshops and distributing materials to promote greater use of existing programs by residents and property owners.

Supporting efforts by private developers and non-profit organizations to rehabilitate existing units.

Developing criteria for applying sales tax revenues to provide financial assistance for rehabilitation of existing properties.

Encouraging commercial developers to contribute to housing rehabilitation.

Adopting and enforcing a housing code.”

**p. 41 Traffic Principle 5 Policy 5.1:** “Recognize that maintaining safe, quiet neighborhoods takes priority over adding capacity to existing streets.”

**p. 72 Multi-family residential indicator:** Ten to twelve units per acre, clustered to provide additional useable open space and to prevent development in the floodplain.

### **FREMONT COUNTY:** Fremont County Master Plan, January 2002



**Section B Urban and Rural Development B 1:** “Urban level densities in eastern Fremont County will be encouraged only in areas that can be reasonably serviced with existing public services. Accomplishment of this objective will help to minimize “leapfrog” development, minimize urban sprawl, minimize cost to the community for expansion of services such as public water and sewer, minimize road construction and road maintenance costs, and promote continuity in growth patterns.”

**B7.3:** “New rural development subdivisions smaller than 35-acre tracts will be clustered. The character of rural development will vary, based on the natural characteristics of the site, distance from public facilities, and accessibility.

Provide affordable, diverse and quality housing alternatives to accommodate County residents. Housing should not be detrimental to public health, safety or moral welfare, and it should preserve the scenic quality of the area.”

**Section F Housing F 1:** “The County will support the efforts of the Upper Arkansas Council of Governments (UAACOG) to provide increases in low/moderate income housing opportunities, especially through the COG’s Mutual Self Help Housing Program.”

**F2:** “Mobile home developments will be located and designed in a manner compatible with existing development patterns.”

**F3:** “Multi-family housing should be located in Medium and High Density Residential Zone Districts, preferably inside designated urban growth boundaries of municipalities where public sewer and water service are available.”

**F5:** “New residential development will be encouraged to be compatible with the existing residential development pattern and with the aesthetic character of the surrounding landscape.”

**F6:** “Construction of homes will be encouraged in locations which minimize the extension of roads, water, sewer, new utility services, fire protection, emergency services, law enforcement, and/or existing utility systems.”

**F7:** “Residential development in areas outside fire protection districts encouraged to comply with the National Interagency Fire Center Protecting Your Home from Wildland Fire, considering “safe zones” around structures, fire-retardant construction materials, removal standing dead trees, and fuels reduction measures.”

**MANITOU SPRINGS:** None

**PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

**p. 32 Neighborhood Principles:** “Promote both historic & economic neighborhood revitalization & preservation.

Promote new subdivision developments that are reflective of Pueblo’s older, traditional neighborhoods (mix of housing types and sizes, interconnected streets, neighborhood commercial and office, pedestrian friendly, accessible to parks, an abundance of street trees, etc.).

Address open space and wildlife corridors in new neighborhood development.”



- p. 50 Future Land Use Intensities: Density Indicators:** Suburban Residential should have 1-3 units/acre in Pueblo, Pueblo West and Colorado City.  
Urban Residential should have 4-7 units/acre in Pueblo, Pueblo West and Colorado City.  
High Density Urban Residential should have more than 7 units/acre in Pueblo, Pueblo West and Colorado City.  
Urban Mixed Used should have 16 units/acre and 1.5 Floor Area Ratio (ratio of building area to lot size)
- p. 59 Zoning Regulation Update or Amendments:** “Both city and county should consider updates or amendments to their respective zoning regulations. Those should focus on such issues as:
- Encouraging mixed use in appropriate locations,
  - Ensuring the protection of identified neighborhoods
  - Ensuring that zoning for stable neighborhoods treats most existing buildings/uses as conforming uses, so they can be updated or replaced.
  - Both city and county should consider updates or amendments to their respective zoning regulations. These should focus on:
    - Addressing issues of suburban development in rural areas.
    - Creating more pedestrian-friendly urban and suburban neighborhoods.”

## Society

### S1. Community Participation: Our Ability and Inspiration to Work Together

#### Fort Carson Sustainability Goals:

**Enhance Partnering To Collaboratively Develop, Integrate, And Implement Regional Sustainability:** % organizations in the region adopting and using common sustainability indicators, Rate of success in achieving FC sustainability objectives using partnerships, % businesses, non-profits and government organizations, adopting systemic approach to sustainability

#### CANON CITY: Canon Comprehensive Plan Update 2001

- p. 36 Community Image:** “Seek community input through community education and/or awareness programs.
- Identify and develop community partnerships that foster the importance of community identity.
  - Identify and monitor perceived “quality of life’ elements and/or issues.”
  - “Create opportunities for community gathering and fellowship:



- Celebrate pedestrian access initiatives, i.e. bicycle road races, fun runs, marathons, walking festivals along the river.  
Utilize a central gathering place that has a series of special events or programs.  
Introduce “out-of-the-box” gathering events potluck picnics, service club sponsored vents, community breakfasts, etc.”
  
- p. 38 Community Image:** “Promote planning and design efforts, which establish a sense of community, both in terms of theme and:  
With the use of a community design committee, identify and develop a community-wide landscaping program.  
Encourage public/private partnerships in the implementation of community-wide landscaping efforts.  
Develop an aggressive program to solicit both public and private dollars to design and build a comprehensive non- motorized network within the Cañon City community. “
  
- p. 39 Community Image:** “Promote planning and design efforts, which establish a sense of community, both in terms of theme and identity.  
Preserve the western lifestyle and values while recognizing the changing and emerging community demographics and environment.  
Promote and encourage community heritage through educational awareness, exhibits and events,  
Initiate a community image awareness program which blends traditional western values with the emerging needs of a prosperous 21<sup>st</sup> century city.”
  
- p. 40 Community Image:** “Envision the benefits and opportunities created from the development of a central community place.”
  
- p. 52 Parks, Trails, and Open Space:** “Work with outlining communities/county to facilitate/coordinate open space planning provisions.”
  
- p. 54 Community Participation and Leadership:** “Provide an atmosphere that encourages citizen participation in community decision making, in an effort to respond to community issues and to foster community leadership.
  - Promote citizen awareness throughout the community regarding anticipated growth and development issues and/or City directed initiatives.”
  - Facilitate mediation/mitigation of local community concerns involving potentially conflicting land use issues”
  - Explore new technologies that may better enable local Citizen communication and/or provide an understanding of local growth and development issues.”
  - Promote participation in local government.
  - Promote volunteerism
  - Promote an atmosphere that fosters broad-based community involvement in municipal government. Coordinate the public participation process with special needs groups, including senior and handicapped citizens.”



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**p. 55 Community Participation and Leadership:** “Network public/private community leaders in order to recognize and establish common community goals and priorities making.”

**CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

**East p. 2 Summary of the Neighborhood:** “Increase community participation in addressing neighborhood issues.”

**p. 3 The Quality of Life Initiative A3:** “Increase neighborhood-based crime prevention and police presence.”

**A4:** “The Eastside Neighborhood Association as a Sustainable Neighborhood Partnership.”

**A5:** “Continue regular community meetings.”

**A6:** “Establish a locally oriented publication or newspaper column.”

**A7:** “Organize and promote community activities and events.”

**p. 5 The Self-Sufficiency Initiative H2:** “Encourage the expansion of the role of the Parent Teacher Associations and the Parent Booster Groups.”

**p. 6 H5:** “Encourage the two Chambers to combine the existing Business Roundtables into one.”

**West p. 4 The Quality of Life Initiative A3:** “Increase neighborhood-based crime prevention and police presence.”

**A4:** “Increase and Enhance Neighborhood Communication.”

**A5:** “Continue regular community meetings.”

**A6:** “Continue publishing “Hyde Park Highlights”.”

**A7:** “Promote communication among schools and youth organizations.”

**A8:** “Expand community-wide Westside events and traditions.”

**A9:** “Establish a feedback mechanism.”

**Bess p. 3 The Quality of Life Initiative A3:** “Increase neighborhood-based crime prevention and police presence”

**A4:** “Increase and Enhance Neighborhood Communication”

**A5:** “Continue regular community meetings.”

**A6:** “Continue publishing “Bessemer Bylines”.”

**A7:** “Promote communication among schools and youth organizations.”

**A8:** “Expand community-wide Bessemer events and traditions.”

**A9:** “Establish a feedback mechanism.”

**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)





**p. 7 Community Development and Growth 6.1.2:** “Measure citizen satisfaction with code enforcement through annual CSPD surveys.”

**6.9:** “Support partnerships between CSPD and community organizations.”

**p. 23 SEA: Indicator:** Participation in Recreation Services facilities. During the first two months of 2005, 157,891 citizens participated in programs and services directed toward senior, early childhood, therapeutic, teen, aquatics, ice and minority outreach programs. The year-end total for 2003 was 1,043,534, and the year-end total for 2004 was 1,050,354.

**p. 23 SEA: Indicator:** Program hours in recreation services facilities. During the first two months of 2005, 12,705 program hours were provided and directed toward senior, early childhood, therapeutic, teen, aquatics, ice and minority outreach programs. The year-end total for 2003 was 78,389, and the year-end total for 2004 was 78,380.

## **EL PASO COUNTY: El Paso County Policy Plan**

**Section 2 Natural Systems Policy 2.2.9:** “Encourage education strategies that address opportunities for public participation in ongoing efforts to preserve the natural environment.”

**Section 4 Historic Resources Policy 4.1.2:** “Encourage individual research, documentation and preservation of the County’s legacy.”

**Section 5 Economic Development Policy 5.1.1:** “Encourage economic development that enhances a sense of community, provides vigor to the economy and considers the environment while contributing to the overall health of the County.”

**Section 8, Parks, Trails, and Open Space Policy 8.2.3:** “Develop and maintain an informed community consensus as to how open space should be defined, why it is important, and how it should be used.”

## **FOUNTAIN: Fountain Comprehensive Development Plan 1999**

**p. 30 Greeninfrastructure Principle 3 Policy 3.1:** “Involve citizens and special user groups in all aspects of parks and recreation planning and implementation.”

**p. 43 Economic Development Principle 3 Policy 3.3:** “The city will continue active participation in regional planning groups, economic development efforts and activities that address issues of area-wide significance. The city will promote the formation of a public/private Fountain Valley Economic Development Corporation.”

## **FREMONT COUNTY: None**



**MANITOU SPRINGS:** None

**PUEBLO COUNTY:** None

## **S2. Crime/Safety**

**CANON CITY:** Canon Comprehensive Plan Update 2001

**p. 38 Community Image:** “Evaluate and maintain outdoor lighting standards that mitigate light pollution, i.e., downward directed, non-glare, shielded lighting.  
Develop safe pedestrian corridors that cross U.S. Highway 50 and other major roadways.”

**p. 40 Community Image:** “Identify central gathering place locations that are clean, safe and active.”

**p. 49 Transportation Network:** “Promote a multi-modal transportation network, which facilitates safe and efficient movement throughout the community.  
Identify and prioritize safety projects, including school zones.”

**CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

**East: p. 3 The Quality of Life Initiative**

**A2:** “Install night lighting improvements at crime hot spots.”

**A3:** “Increase neighborhood-based crime prevention and police presence.”

**West: p. 4 The Quality of Life Initiative**

**A2:** “Install night lighting improvements at crime hot spots.”

**A3:** “Increase neighborhood-based crime prevention and police presence.”

**A7:** “Promote communication among schools and youth organizations.”

**A9:** “Establish a feedback mechanism.”

**Bess: p. 3 The Quality of Life Initiative**

**A2:** “Install night lighting improvements at crime hot spots.”

**A3:** “Increase neighborhood-based crime prevention and police presence.”

**A7:** “Promote communication among schools and youth organizations.”

**A9:** “Establish a feedback mechanism.”

**A10:** “Improve the Level of Service in the Neighborhood.”



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## **COLORADO SPRINGS: Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)**

**Public Safety SAP 2:** “Proactively safeguard our community as our family by providing principled police and fire services.”

**2.2:** “Support pro-active programs that reduce threat to life and property”

**2.3:** “Improve funding for public safety service.”

**Section 6 Community Development and Growth SAP 6.1.3:** “Reduce neighborhood traffic speeds by implementing traffic calming projects.”

**6.8:** “Strive to dedicate 33% of Police patrol officer time to proactive policing to address neighborhood problems such as crime, disorder, traffic problems, and delinquency.”

**6.9:** “Support partnerships between CSPD and community organizations.”

**6.9.1:** “Create and maintain Neighborhood Watch groups.”

**p. 13 SEA: Indicator:** Hazardous materials inspections: Nearly 50 percent more hazardous materials inspections were performed in the first quarter of 2005 than in the first quarter 2004. In the first quarter, 143 hazardous material inspections were completed.

## **EL PASO COUNTY: El Paso County Policy Plan**

**Section 6 Growth and Land Use Policy 6.1.16:** “Allow for new and innovative concepts in land use design and planning if it can be demonstrated that off-site impacts will not be increased and the health, safety and welfare of property owners and residents will be protected.”

**Policy 6.6.3:** “Encourage municipalities to utilize annexation policies which have the effect of either avoiding or remedying the service and public safety problems associated with irregular city boundaries.”

**Section 7 Special and Unique Land Uses Policy 7.1.3:** “Allow for the accommodation of daycare centers in or adjacent to residential areas and employment centers provided that they are designed and operated in a manner which satisfactorily addresses issues of safety, compatibility and facility and service availability.”

**Section 9 Transportation Policy 9.3.2:** “Place a high priority on those system improvements which will substantially reduce risks to public safety including but not limited to signalization and traffic controls.”

**Section 9 Transportation Policy 9.4.6:** “Place a high priority on financing transportation improvements which significantly reduce health and safety risks.”

**Section 11 Drainage and Flood Protection Goal 11.1:** “Promote regional planning and management approaches which protect the integrity of drainage systems and minimize



long-term system-wide environmental impacts, costs and recognized flood dangers within the County.”

**Goal 11.4:** “Promote public safety and reduce loss of private property.”

**Section 12 Other Services and Utilities Goal 12.1:** “Ensure that public safety services are available at a level which is commensurate with local needs and circumstances.”

### **FOUNTAIN:** Fountain Comprehensive Development Plan 1999

**p. 27 Growth Management and Land Use Principle 6:** “Any non-residential development or redevelopment site, whether public or private shall be reviewed with extraordinary attention to siting, orientation, scale, mix and compatibility of uses, and relationship to community amenities and to make citizens feel comfortable and safe.”

**p. 35 Community Character Policy 4.2:** “Promote the grouping and/or clustering of commercial development along major/minor arterials in order to ensure safe access and discourage strip commercialization. Furthermore, promote a consistency of design style and centralization among these clustered developments.”

**Policy 4.5:** “Ensure that Fountain’s existing dwelling units are decent, safe, and sanitary at prices affordable to existing residents.”

**p. 37 Community Services and Facilities Principle 1 Policy 1.3:** “Continue support of and participation in crime prevention activities, such as the Neighborhood Watch Program.”

**p. 38 Community Services and Facilities Principle 2:** “Continue to promote the health, safety, welfare and quality of life of Fountain citizens.”

**p. 40 Traffic Principle 1:** “Participate in the development of a well balanced regional transportation system to move people and goods safely.”

**p. 40 Traffic Principle 3:** “Ensure that all public and private development makes the pedestrian feel welcome, safe and comfortable.”

**Policy 3.3:** “Establish pedestrian routes that can be used by children traveling to and from school to minimize hazards due to vehicular and train traffic.”

**p. 41 Traffic Principle 4 Policy 4.2:** “Ensure safety along railroads by requiring adequate setbacks and limiting types of development in proximity to the rail right-of-way (i.e., no residential areas, parks or recreation in vicinity).”

**p. 41 Traffic Principle 5 Policy 5.1:** “Recognize that maintaining safe, quiet neighborhoods takes priority over adding capacity to existing streets.”

### **FREMONT COUNTY:** Fremont County Master Plan, January 2002



**Section A Transportation:** “Create a safe, functional and environmentally sound transportation system.”

**Section B Urban and Rural Development B3:** “All areas of proposed development where public water is not available will document access to an adequate means of water storage for fire protection.”

**Section E Water, Sewer and Utilities:** “Emergency and normal medical services are provided through independent entities without public funding, with the exception of those associated with fire departments, Fremont County Search and Rescue, and: Arkansas Valley Ambulance Service.”

**Section G Community Services and Facilities G5:** “Develop adequate services including police protection, fire protection, and emergency medical services for all areas of the County.”

**G6:** “Encourage the creation of a separate fire protection district for the Penrose/Beaver Park Area.”

**MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

**Goal 8:** “Improve Public Safety: Develop and implement revised Police Department operating policies and procedures; develop a “Police Reserve” program; implement changes to improve City emergency dispatch services; develop and implement additional “traffic calming” programs; implement a comprehensive drug enforcement program; prepare recommendations to mitigate adverse effects of problems in public areas; implement programs to mitigate West Nile Virus dangers.”

**PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

**p. 52 Livability Goal:** “Create, enhance and maintain a safe, healthful and aesthetically pleasing living environment by integrating transportation mobility needs with those of the citizens within the Pueblo Region.”

### **S3. Culture and Leisure: Supporting social systems and ecosystems for access**

#### **Fort Carson Sustainability Goals:**

**Number of active FC-Community programs:** % community requests supported, % increase in community engagements, % positive compared to negative media reports, Number of public surveys completed



## **CANON CITY: Canon Comprehensive Plan Update 2001**

**p. 37 Community Image:** “Within Cañon City and the growth management area, maintain the traditional town form and character.

Adopt design standards and a design review process within the Zoning Ordinance.

Maintain design standards that are consistent with the existing City Character.

Evaluate existing zoning districts to insure compatibility with a traditional town theme and form.”

“Continue to incorporate significant natural and cultural features into the design and construction of new and expanding development.”

**p. 39 Community Image:**

- Preserve the western lifestyle and values while recognizing the changing and emerging community demographics and environment.
- Continue and expand upon special events, which promote historic and cultural values and lifestyles. i.e. Blossom Festival, rodeo events, arts with the park, concerts. etc.
- Promote and encourage community heritage through educational awareness, exhibits and events,
- Initiate a community image awareness program which blends traditional western values with the emerging needs of a prosperous 21<sup>st</sup> century city.”
- Recognize Cañon City as a destination place.
- Identify, map and document significant natural features and land marks.
- Once significant historic, cultural and natural features are quantified, protect, preserve and promote these features for the enjoyment of the community and the promotion of tourism.

**p. 43 Community Image:**

- Encourage the growth of art and cultural activities, such as concerts, art and music festivals, and theater, to serve as a catalyst for economic development.
- Promote and maintain cultural anchors within the community that attract area and regional residents (i.e. cultural centers, museum, civic center, college campus. recreation center, library facility and programming, etc.) and that provide the opportunity for local business benefit.
- Establish a central community facility which will serve to accommodate various cultural events and/or activities.”
- Coordinate the needs of businesses in tourism-related industries, i.e. pedestrian connections between events, parking, signage, public and semi-public transportation. Identify and promote special events activities and programs that take advantage of Cañon

**p. 44 Land Use:**

- Support and maintain traditional townscape design and layout.
- Adopt development design standards that support ‘traditional’ townscape patterns.
- Provide linkages between existing neighborhoods and non- residential land uses that reflect the historical and natural landscape elements.”



**p. 53 Historic Preservation - Sense of Permanence:**

- Promote the preservation and adaptive reuse of historic structures, features and amenities throughout the community.
- Create effective historic demonstration restoration projects to show case adaptive reuse and community economic value.
- Within appropriate areas, create district design standards, which emulate historical design themes for new development projects.
- Establish a historic design review committee, working in identified districts within the community, facilitating the development of appropriate design standards and standards for new construction.
- Inventory, define and map appropriate areas for historic preservation.
- Provide for an enforcement approach, once historic districts and/or preservation standards are adopted.
- Provide an educational framework from which citizens can appreciate the value of historical preservation efforts.
- Create a program for an interpretive plaques system for historically important properties, sites and events,
- Integrate local history perspective into local education, the library, walking tours and points of civic interest.
- Showcase historical resources such as photos or relics.

**CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

**Bess: p. 4 The Heritage Tourism Initiative E.** The development of the CF and I Museum Site. Recommendations include:

- Vacating streets and alleys
- Creation of “Bessemer Square” which would become a gathering place for special events and neighborhood functions.
- Bessemer Square should also serve a neighborhood park function.
- A visitor center for CF & I and the greater Bessemer Neighborhood.
- Related spin off commercial uses such as a lodging facility, restaurants, galleries or a Mercado.”

**p. 5 The Historic Preservation Initiative F:** The Pueblo Historic Preservation Commission (HPC) is expected to take the lead in pursuing individual landmark designation status and other activities associated with preserving the historic resources of the Bessemer Neighborhood.

**F1:** Individual Building Nominations. Several buildings are suggested.

**F2:** Develop a Neighborhood History. To describe the social history of the neighborhood.

**F3:** “Research Application of District Designation”



**COLORADO SPRINGS:** None

**EL PASO COUNTY:** El Paso County Policy Plan

**Section 4 Historic Resources Goal 4.1:** Encourage preservation and enhancement of historical resources.

**FOUNTAIN:** Fountain Comprehensive Development Plan 1999

**p. 34 Community Characteristics Principle 2:** Promote the preservation of historic buildings, landmarks and sites to maintain a historic sense of identity for the City of Fountain.

**p. 34 Community Characteristics Principle 3 Policy 3.1:** “Develop downtown Fountain as an area comprised of specialty shops, restaurants, offices, civic facilities and housing, all of which capitalize on the area’s distinct character. Develop an overriding theme for development based on Fountain’s “Old West Town” character, which will help to guide design and development for the downtown area.”

**p. 43 Economic Development Principle 3 Policy 3.1:** “The City will strive to increase awareness of funding sources available to improve existing businesses as well as incentives available to preserve, improve and maintain historic structures (e.g., SHPO Grants, Small Business Incubators, City marketing, etc.).”

**FREMONT COUNTY:** None

**MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

**Goal 3:** Renovate the Historic Spa Building: Encourage a viable developer to submit an acceptable Major Development plan for renovation of the building; participate in obtaining grants to assist in maintaining historic integrity of the building; review status properties.

**Goal 9:** “Develop plans for a Mineral Springs pool: Research the water rights and aquifers related to the Manitou springs; work with the Mineral Springs Foundation to develop a plan and financing program to build a pool/spa facility for citizens and visitors; assist Mineral Springs Foundation, Chamber of Commerce and Pikes Peak Area Attractions in promoting Manitou’s world-famous mineral springs.”

**PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

**p. 31 Rural Development Principles:** “Preserve character of the Region’s rural areas and communities.

- Promote “right-to-farm” laws.
- Promote the benefits of the local agriculture industry.
- Encourage subdivisions in rural areas to develop as “cluster developments” with smaller lots surrounded by large areas of common open space.”
- Plan growth to enhance the Region’s natural and historic character.





- Determine methods to enhance and preserve the natural and historic features (e.g., preservation via conservation easements).

**p. 32 Neighborhood Principles:** Promote both historic & economic neighborhood revitalization & preservation.

Promote new subdivision developments that are reflective of Pueblo's older, traditional neighborhoods (mix of housing types and sizes, interconnected streets, neighborhood commercial and office, pedestrian friendly, accessible to parks, an abundance of street trees, etc.).

## S4. Family Health

**CANON CITY:** None

**CITY OF PUEBLO:** None

**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**Section 4 Citizen Services and Workforce SAP 4.1.1:** "Maintain the full range of existing senior, single-parent, early childhood, disabled, teen, and minority-outreach programs."  
**4.1.2:** "Identify other agencies as suitable partners to provide neighborhood and senior services at new locations."

**p. 23 SEA: Indicator:** Participation in Recreation Services facilities. During the first two months of 2005, 157,891 citizens participated in programs and services directed toward senior, early childhood, therapeutic, teen, aquatics, ice and minority outreach programs. The year-end total for 2003 was 1,043,534, and the year-end total for 2004 was 1,050,354.

**p. 23 SEA: Indicator:** Program hours in recreation services facilities. During the first two months of 2005, 12,705 program hours were provided and directed toward senior, early childhood, therapeutic, teen, aquatics, ice and minority outreach programs. The year-end total for 2003 was 78,389, and the year-end total for 2004 was 78,380.

**EL PASO COUNTY:** El Paso County Policy Plan

**Section 13 Housing: Policy 13.1.3:** "Recognize the need for housing alternatives that provide for the county's special populations. (Special populations may include low income, elderly, physically and mentally impaired)."



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**FOUNTAIN:** Fountain Comprehensive Development Plan 1999

**p. 30 Greenfrastructure Principle 3 Policy 3.2:** “Examine and include the needs of special categories of citizens (i.e. the elderly, handicapped and low to moderate income) when developing recreation and open space plans and facilities.”

**FREMONT COUNTY:** None

**MANITOU SPRINGS:** None

**PUEBLO COUNTY:** None

## **S5. Governance: Managing economic and social behavior**

### **Fort Carson Sustainability Goals:**

**Advance A Sustainable Mission And Fort Carson By Adopting An SMS/EMS And By Imparting A Personal Commitment And Enthusiasm For Sustainability Schedule IAW DA Requirements for EMS:** Policy Statement created, Self-Assessment complete, SMS/EMS Implementation Plan developed, Prioritized List of Aspects completed, % Training, Continual Management Review

### **CANON CITY:** Canon Comprehensive Plan Update 2001

**p. 36 Community Image:** “With an understanding of what makes the Cañon City community unique, utilize this ingredient to help format future planning and development efforts.”

**p. 38 Community Image:** “Promote planning and design efforts, which establish a sense of community, both in terms of theme and:

With the use of a community design committee, identify and develop a community-wide landscaping program.

Encourage public/private partnerships in the implementation of community-wide landscaping efforts.

Evaluate funding and/or incentive programs sponsored by the City, which help promote landscaping standards implementation.

**p. 45 Land Use:** “Within the City’s designated urban growth boundary, establish intergovernmental agreements (IGA’s) with adjoining jurisdictions (seek community



input) to ensure that land use activities are compatible with adjacent City uses and that demands on the City infrastructure do not exceed the system capacity.”

- p. 55 Community Participation and Leadership:** Network public/private community leaders in order to recognize and establish common community goals and priorities, and creating partnerships and committees in order to fulfill those goals.

**CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

**East: p. 2 Summary of the Neighborhood:** “Increase community participation in addressing neighborhood issues.

Coordinate the provision of recreational activities among the community centers in the Eastside.”

- p. 5 The Self-Sufficiency Initiative H2:** “Encourage the expansion of the role of the Parent Teacher Associations and the Parent Booster Groups.”

**H5:** “Encourage the two Chambers to combine the existing Business Roundtables into one.”

**West: p. 4 The Quality of Life Initiative**

**A4:** “Increase and Enhance Neighborhood Communication.”

**A5:** “Continue regular community meetings.”

**A6:** “Continue publishing “Hyde Park Highlights””

**A7:** “Promote communication among schools and youth organizations”

**A9:** “Establish a feedback mechanism.”

**Bess: p. 3 The Quality of Life Initiative**

**A5:** “Continue regular community meetings”

**A6:** “Continue publishing “Bessemer Bylines””

**A7:** “Promote communication among schools and youth organizations.”

**A8:** “Expand community-wide Bessemer events and traditions.”

**A9:** “Establish a feedback mechanism.”

**A10:** “Improve the Level of Service in the Neighborhood.”

**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**Section 6 Community Development and Growth SAP 6.1.2:** “Measure citizen satisfaction with code enforcement through annual CSPD surveys”

**6.5:** “Continue to implement the 2000-2010 Parks and Recreation Master Plan.”

**6.7:** “Increase development partnerships with non-profit and private developers.”



**6.9:** “Support partnerships between CSPD and community organizations.”

## **EL PASO COUNTY: El Paso County Policy Plan**

**Section 3 Water Resources Goal 3.2:** “Encourage cooperative approaches in planning for the long term water supply throughout the County.”

**Policy 3.4.5:** “Consider partnering with the City of Colorado Springs Public Water Utilities Water Conservation branch to promote already established educational programs and techniques which have proven to conserve water.”

**Section 6 Development and Land Use Goal 6.6:** Encourage cooperative intergovernmental land use planning and coordination among the County, its municipalities and other governmental entities.

**Section 8, Parks, Trails, and Open Space Goal 8.2:** “Promote comprehensive coordinated planning for parks, trails and open space in the County.”

**Goal 8.5:** “Encourage the use of a combination of all private and public options available for the effective provision and maintenance of parks, trails and open space.”

**Section 9 Transportation Policy 9.5.7:** “Encourage inter-regional cooperation for the planning and development of alternative modes of transportation.”

**Section 10 Water and Wastewater Facilities Services Goal 10.2:** “Promote planning and management approaches which protect the integrity of the County’s water and wastewater systems and ensure that the levels of water and wastewater service are adequate to meet the needs of existing and future County residents.”

**Section 11 Drainage and Flood Protection Goal 11.1:** “Promote regional planning and management approaches which protect the integrity of drainage systems and minimize long-term system-wide environmental impacts, costs and recognized flood dangers within the County.”

**Section 12 Other Services and Utilities Policy 12.1.2:** “Encourage the implementation of area-specific enhancements of police protection in coordination with the County Sheriffs office.”

**Section 14 Public Finance Districts Goal 14.1:** “Recognize and promote the essential role of special financing districts in the provision and maintenance of public facilities and services in unincorporated areas.”

**Policy 14.1.2:** “Encourage coordination among existing and potential future special districts, municipalities, utilities and other entities in order to provide needed facilities and services in the most cost-effective, equitable and environmentally sensitive way possible.”



**Section 15 Land Development Regulations Goal 15.4:** “Continue to refine the County's system of land development regulations to keep them current, clear, effective, equitable and enforceable.”

**Goal 15.5:** “Ensure a public review process that provides adequate and equable opportunity for informed consideration of development proposals by all interested parties.”

**FOUNTAIN:** Fountain Comprehensive Development Plan 1999

- p. 25 Growth Management and Land Use Principle 2 Policy 2.4:** “Maintain a regional perspective on the growth and development of Fountain through active participation in PPACG, other regional planning groups, and activities that address area-wide issues.”
- p. 29 Greenfrastructure Principle 1 Policy 1.1:** “Work with state and national organizations to provide economically sound mechanisms to protect farmlands and improve land stewardship.”
- p. 30 Greenfrastructure Principle 3 Policy 3.4:** “Coordinate planning, when feasible, and employ joint-use agreements with the school district, federal government and neighboring jurisdictions.”
- p. 33 Community Characteristics Policy 1.1:** “Encourage open, respectful and sincere communication between citizens and City government by:
- Responding to stated public needs contained in this Plan and utilizing techniques such as public meetings, newsletters, surveys, and comment boxes to monitor and respond to citizens concerns.
  - Actively soliciting public input. Public information shall be widely disseminated through notices, creation of citizens’ committees when needed, and local media.
  - Encouraging community leadership and participation in City and Regional government.
  - Involving youth in government activities through “kids voting” days, tours of government offices, and/or visits by city officials to local schools.”
- p. 37 Community Services and Facilities Principle 1 Policy 1.2:** “Encourage cooperation between the Parks Board and the School District to maximize the use of recreational facilities.”
- p. 43 Economic Development Principle 3 Policy 3.2:** “The City and its Economic Development Committee shall strive to keep lines of communication open with the business community. In doing so, the City will be able to both formally and informally keep businesses aware of the opportunities available to patronize other local businesses and create the “linkages” that are so important for sustaining and supporting Fountain’s local economy.”



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- p. 43 Economic Development Principle 3 Policy 3.3:** “The city will continue active participation in regional planning groups, economic development efforts and activities that address issues of area-wide significance. The city will promote the formation of a public/private Fountain Valley Economic Development Corporation.”

**FREMONT COUNTY:** Fremont County Master Plan, January 2002

- Section A Transportation A 1:** “Work together with the City of Florence and the Towns of Williamsburg, Rockvale, Coal Creek and Brookside, ultimately through Intergovernmental Agreements, to coordinate and adopt a transportation plan that identities similar City and County right-of- way widths and Street designations.”
- A3.** “The County should actively participate in the Colorado Department of Transportation “5-Year Plan” review, to encourage roadway improvements on CDOT maintained roadways in Fremont County that will benefit roadway users from safety and convenience standpoints.”

**MANITOU SPRINGS:** Memo re: “Top Ten” Goals for FY 2004 and FY 2005

- Goal 7:** “Update our Zoning Map and Zoning Ordinances: Amend our zoning map for all approved zoning changes; prepare recommended rezoning for Council Consideration; post notices and conduct public hearings on proposed rezoning; review zoning codes for possible changes in permitted uses and requirements; prepare draft ordinances for Council consideration to implement changes or create new zoning categories.”

**PUEBLO COUNTY:** Pueblo’s Comprehensive Plan, July 25, 2002

- p. 30 Regional Development Principles:** “Develop seamless development regulations that consider geographic locations, physical and infrastructure constraints, and desired densities, regardless of jurisdictional boundaries.
- The type and intensity of development should conform to the recommendations of the Development Plan and should not be hindered by jurisdictional boundaries.
- Clearly define the role of the Metro Districts within the Region.”

## **S6. Mobility: Connection of people to goods and services**

### **Fort Carson Sustainability Goals:**

- Sustain all Facility and Mobility Systems from Renewable Resources by 2027:** % energy from renewable sources, % energy generated on-site from renewable sources, % reduction in energy use per square foot compared to FY85 baseline, % reduction in energy use compared to previous fiscal year, % administrative alternative fueled vehicles



(AFV), Amount of alternate fuel compared to gasoline used in dual fuel vehicles (FY03 baseline), % tactical alternatively fueled vehicles

### **CANON CITY:** Canon Comprehensive Plan Update 2001

**p. 36 Community Image:** Require new and/or expanded development projects to contribute to pedestrian linkages.

- Link urban and suburban sidewalks to open space and parks via accessible trails and footpaths.
- Inventory existing sidewalks and trails for maintenance and capital improvement assessment.
- Continue to create appropriate passageways across the railroad and river, breaking down physical barriers.
- Develop and adopt a comprehensive non-motorized access plan with an associated capital facilities planning program.

**p. 49 Transportation Network:** “Promote a multi-modal transportation network, which facilitates safe and efficient movement throughout the community.”

**p. 50 Transportation Network:** “Accommodate alternative means of transportation (i.e. public transit, bicycle, pedestrian).”

**CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

**East: p. 3 The Park and Open Space Initiative B5:** “Establish Pedestrian Linkages Throughout the Eastside Neighborhood. The major east-west corridor is proposed for along 10th Street and the major north-south pedestrian linkage is along LaCrosse venue.”

**West: p. 4 The Neighborhood Initiative C3:** “Pedestrian Street Amenities along 18th Street.”

**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**Section 1 Transportation SAP:** Provide an effective, efficient, affordable and sustainable transportation network

**Section 3 Infrastructure SAP 3.4.2:** “Increase percentage of streets resurfaced each year.”



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## **EL PASO COUNTY: El Paso County Policy Plan**

### **Section 6 Growth and Land Use**

**Policy 6.1.1:** “Accommodate multi-modal transportation linkages.”

**Goal 6.3:** “Continue to support existing and carefully planned future urban density development in the unincorporated County, provided the requisite level of urban services is available or will be available in a timely fashion.”

**Policy 6.3.5:** “The potential for effective integration with multi-modal transportation systems should be considered in the design and location of major non-residential development.”

**Policy 6.4.3:** “Allow rural residential development in those areas with sufficient “carrying capacity” including roadway capacity, water supply, septic suitability, educational facilities and organized structural fire protection. “

**Policy 6.4.7:** “Accommodate limited very low impact business and other employment uses in rural residential developments if these serve to reduce overall levels of traffic in these areas and do not otherwise detract from the desired rural residential character, provided the requisite level of services is or will be available in a timely fashion. These uses should primarily serve the needs of local residents.”

**Section 7 Special and Unique Land Uses Policy 7.2.5:** “Discourage the location of major institutional uses in predominantly residential areas unless these uses are adequately screened and buffered, and potential traffic impacts are fully addressed.”

### **Section 9 Transportation**

**Goal 9.1:** “Plan, develop and maintain a safe and efficient transportation system to meet the present and future mobility needs of people, goods, materials and services.”

**Goal 9.2.1:** “Promote land use planning which maximizes transportation efficiency.”

**Goal 9.3:** “Reduce the adverse environmental impacts of existing and future transportation systems through a combination of careful planning and mitigation techniques.”

**Goal 9.4.1:** “Implement the planned transportation system in a coordinated and cost-effective manner utilizing a fair, equitable and sufficient method of funding.”

**Goal 9.5.1:** “Promote the planning and development of transportation modes offering alternatives to single-occupant automobiles.”

**Section 13 Housing Goal 13.4:** “Encourage a positive relationship between housing development, land use planning and transportation systems.”

## **FOUNTAIN: Fountain Comprehensive Development Plan 1999**

**p. 27 Community Characteristics Principle 1 Policy 1.4:** “Establishing pedestrian connections between parcels of new development. Demonstrating smooth and coherent vehicle movements between and within new development.”





**p. 27 Growth Management and Land Use Principle 6**

**Policy 6.1:** “Require any new commercial development or redevelopment project to increase pedestrian activity and provide open, natural areas, sufficient landscaping, and seating and shelter for pedestrians.”

**Policy 6.3:** “Require that all new development or redevelopment that occurs within the City of Fountain makes both vehicular and pedestrian connections that are safe, functional and serve to reduce the need for private automobile use within a quarter-mile radius.”

**Policy 6.4:** “Encourage the developer to make the sidewalks wider to allow for the comfortable passage of two couples, allow for seating, handicap accessibility, and parents with children in strollers in highly pedestrianized areas. (Note: The City of Fountain requires a minimum 5-foot attached sidewalk and street trees as a part of sidewalk improvements.)”

**p. 35 Principle 4 Community Characteristics Policy 4.10:** “Landscape all newly developed parking lots with indigenous vegetation and include both trees and shrubs. The pedestrian crossings shall be clearly differentiated from the rest of the parking surface.”

**p. 39 Traffic Principle 1:** “Participate in the development of a well balanced regional transportation system to move people and goods safely.”

**p. 39 Traffic Principle 2:** “Minimize traffic congestion and air pollution and provide alternative transportation systems for those who do not own automobiles or prefer not to use them.”

**p. 40 Principle 3:** “Ensure that all public and private development makes the pedestrian feel welcome, safe and comfortable.”

**p. 41 Principle 4:** “Ensure that the railroad corridors are safe and adverse impacts on adjoining properties are mitigated.”

**p. 41 Traffic Principle 5:** “Ensure that the City’s transportation network protects the City’s residential neighborhoods by encouraging commercial and industrial uses to locate on major and minor arterial roadways.”

**FREMONT COUNTY:** Fremont County Master Plan, January 2002

**Section A Transportation:** “Create a safe, functional and environmentally sound transportation system .The aesthetic quality of the County should be given careful consideration when locating, designing, or upgrading any part of the transportation system in order to preserve and enhance public enjoyment of facilities such as mountain roads, bridges, and scenic overlooks.”

**MANITOU SPRINGS:** None



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## **PUEBLO COUNTY:** Pueblo's Comprehensive Plan, July 25, 2002

- P. 30 Regional Development Principles:** “Develop seamless development regulations that consider geographic locations, physical and infrastructure constraints, and desired densities, regardless of jurisdictional boundaries.  
Provide public services and infrastructure to areas of the Region that are environmentally and economically suitable for urban growth.  
Support a Regional land use plan that maintains a strong and healthy urban core.  
Create a Regional land use plan that reduces the impact of development on the Region's transportation system.”
- p. 51 Mobility Goal:** “Plan, develop and maintain a safe and efficient multi-modal transportation system to preserve and enhance the present and future mobility needs of the Pueblo Region.”
- p. 51 Land Use Goal:** “Coordinate the interaction of transportation systems and land use planning to promote orderly expansion of the multi-modal transportation system serving the Pueblo Region.”
- p. 59 Subdivision Regulation Updates or Amendments:** “Both city and county should consider updates or amendments to their respective zoning regulations. Those should focus on such issues as:
- Creating pedestrian-friendly development
  - Creating transit-friendly development
  - Encouraging pedestrian-oriented development in urban mixed use areas, with public or clustered parking and minimal front setbacks
  - Enhancing the character of the Region's gateway entries.”

## **S7. Seniors**

### **CANON CITY:** Canon Comprehensive Plan Update 2001

- p. 52 Parks, Trails, and Open Space:** “Coordinate Parks and Recreation planning priorities with special interest groups, including seniors, at risk youth, and citizens with special needs.”
- p. 54 Community Participation and Leadership:** “Promote an atmosphere that fosters broad-based community involvement in municipal government Coordinate the public participation process with special needs groups, including senior and handicapped citizens.”



**CITY OF PUEBLO:** None

**COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

**Section 4 Citizen Services and Workforce SAP**

**4.1.1:** “Maintain the full range of existing senior, single-parent, early childhood, disabled, teen, and minority-outreach programs.”

**4.1.2:** “Identify other agencies as suitable partners to provide neighborhood and senior services at new locations.”

**p. 23 SEA: Indicator:** Participation in Recreation Services facilities. During the first two months of 2005, 157,891 citizens participated in programs and services directed toward senior, early childhood, therapeutic, teen, aquatics, ice and minority outreach programs. The year-end total for 2003 was 1,043,534, and the year-end total for 2004 was 1,050,354.

**p. 23 SEA: Indicator:** Program hours in recreation services facilities. During the first two months of 2005, 12,705 program hours were provided and directed toward senior, early childhood, therapeutic, teen, aquatics, ice and minority outreach programs. The year-end total for 2003 was 78,389, and the year-end total for 2004 was 78,380.

**EL PASO COUNTY:** El Paso County Policy Plan

**Section 13 Housing: Policy 13.1.3** “Recognize the need for housing alternatives that provide for the county’s special populations. (Special populations may include low income, elderly, physically and mentally impaired).”

**FOUNTAIN:** Fountain Comprehensive Development Plan 1999

**p. 30 Greenfrastructure Principle 3 Policy 3.2:** “Examine and include the needs of special categories of citizens (i.e. the elderly, handicapped and low to moderate income) when developing recreation and open space plans and facilities.”

**FREMONT COUNTY:** None

**MANITOU SPRINGS:** None

**PUEBLO COUNTY:** None



## S8. Youth

### **CANON CITY:** Canon Comprehensive Plan Update 2001

**p. 38 Community Image:** “Develop and adopt a non-motorized access plan pedestrian environment (pedestrian, bicycle, etc.) throughout the Cañon City throughout the City, community, connecting neighborhoods, schools, churches, connecting commercial areas and existing public spaces including parks neighborhoods and areas and trail corridors.”

**p. 52 Parks, Trails, and Open Space:** “Coordinate Parks and Recreation planning priorities with special interest groups, including seniors, at risk youth, and citizens with special needs.”

### **CITY OF PUEBLO:** Eastside Neighborhood Plan Summary & Action Plan (East), Westside Neighborhood Plan Summary & Action Plan (West), and the Bessemer Neighborhood Plan Executive Summary & Action Plan (Bess).

**West: p. 4 The Quality of Life Initiative A7:** “Promote communication among schools and youth organizations.”

**p. 4 The Park and Open Space Initiative B5:** “YMCA Development – encourage the development of the site.”

**Bess: p. 3 The Quality of Life Initiative A7:** “Promote communication among schools and youth organizations.”

### **COLORADO SPRINGS:** Strategic Action Plan 2005-2010 (SAP) and Colorado Springs Executive Summary, April 2005 (SEA)

#### **Section 4 Citizen Services and Workforce SAP**

**4.1.1:** “Maintain the full range of existing senior, single-parent, early childhood, disabled, teen, and minority-outreach programs.”

**4.4.5:** “Concentrate efforts on building youth sports complexes to service fast-growing areas of the city.”

**p. 23 SEA: Indicator:** Participation in Recreation Services facilities. During the first two months of 2005, 157,891 citizens participated in programs and services directed toward senior, early childhood, therapeutic, teen, aquatics, ice and minority outreach programs. The year-end total for 2003 was 1,043,534, and the year-end total for 2004 was 1,050,354.

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childhood, therapeutic, teen, aquatics, ice and minority outreach programs. The year-end total for 2003 was 78,389, and the year-end total for 2004 was 78,380.

**EL PASO COUNTY:** None

**FOUNTAIN: Fountain Comprehensive Development Plan 1999**

**p. 33 Community Characteristics Policy 1.1:** “Involving youth in government activities through “kids voting” days, tours of government offices, and/or visits by city officials to local schools.”

**p. 43 Economic Development Principle 2:** “Encourage and support small businesses in the community to increase convenience, to minimize the “leakage” of consumer dollars to Colorado Springs, and to provide more employment opportunities for Fountain’s youth and other residents seeking jobs.”

**FREMONT COUNTY:** None

**MANITOU SPRINGS:** None

**PUEBLO COUNTY:** None



## Appendix Four: Sustainability and the Federal Government

This appendix will introduce PPSIP stakeholders to sustainability strategies and progress in the US Federal government, beginning with an overview as of July 2006, a specific look at sustainability in the US Military, and finally at the suggested sustainable development indicators developed by the US Interagency Working Group.

### Federal Government Sustainability Overview

Numerous programs have embedded sustainability in the operations of the Federal government since the early 1990s.<sup>3</sup>

The government's commitment to leading environmental practices during the last two decades has followed the path of such efforts around the world – towards the use of sustainability as an over-arching goal. The Office of the Federal Environmental Executive is dedicated to “promoting sustainable environmental stewardship throughout the federal government.” Efforts have focused on sustainable buildings, sustainable procurement, and saving energy and water through sustainable technology development and deployment, as demonstrated by the following:

- Office of the Federal Environmental Executive, White House, 2003: “Green or sustainable building is the practice of designing, constructing, operating, maintaining, and removing buildings in ways that conserve natural resources and reduce pollution. Green building is expanding around the world, and the Federal government is leading by example.”<sup>4</sup>
- Recently extended long-standing goal to improve energy efficiency at federal installations by two percent annually.
- 1969 National Environmental Policy Act established the imperative to consider future generations' needs. According to current EPA Administrator Steve Johnson, “We have a responsibility to sustain – if not enhance – our natural environment and our nation's economy for future generations.” EPA's current

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<sup>3</sup> This section draws from the following publications where additional information is available: (1) Barbara Lither, US EPA, “What the Federal Government is Doing to Promote Sustainability,” Nov 16, 2004 available from website of the Federal Network for Sustainability, [www.federalsustainability.org](http://www.federalsustainability.org); (2) The Federal Commitment to Green Building: Experiences and Expectations, published of the Office of the Federal Environmental Executive, 2003, available from [www.ofee.gov](http://www.ofee.gov); and (3) Department of Defense Green Procurement Strategy, available at [www.ofee.gov](http://www.ofee.gov).

<sup>4</sup> “The Federal Commitment to Green Building,” Office of the Federal Environmental Executive, 2003, Executive Summary.



working definition of sustainability is: “the ability to achieve economic prosperity while protecting the natural systems of the planet, and providing a higher quality of life for its people.” EPA’s Office of Research and Development hosted an international sustainability research conference in 2005 and released its Sustainability Research Strategy in April, 2006.

These efforts are supported by a variety of presidential Executive Orders and legislative acts, most recently including the Energy Policy Act of 2005:

- Executive Order 13101 requires federal agencies to incorporate waste prevention and recycling into daily operations and to increase the use of recovered materials by instituting procurement preferences for these products.
- Executive Orders 13221, 13123, 13149 and 13150 promote energy efficiency through (1) procurement of electrical products with low stand-by energy consumption, (2) improvements to fleet efficiency, (3) incentives for employees to use mass transportation or vanpools for commuting, and (4) management of facilities for reduction of greenhouse gas emissions, use of petroleum, water consumption, and nonrenewable energy sources.
- Executive Orders 13149 and 13134 promote use of alternative fuels and biobased energy and products.
- Executive Order 13148 promotes use of environmental management systems; over 180 federal agencies have adopted their use to more systematically approach environmental goals (Fort Carson is a recognized national leader in the direct integration of community-developed sustainability goals into its environmental management system).
- Energy Policy Act of 2005: extends the annual 2% energy reduction goal for Federal facilities to FY2015; calls for new Federal facilities to be designed to outperform existing energy codes by 30% when lifecycle cost effective; sets targets for renewable energy consumption culminating in a minimum of 7.5% by 2013; and establishes a photovoltaic commercialization goal for federal buildings expected to result in 20,000 solar electric system installations by 2010.<sup>5</sup>

## US Military Sustainability Overview

The Department of Defense has become a sustainability leader in the Federal government, a position it reinforced its commitment towards at its annual environmental management national conference in Denver, January 2006. Leading Department of Defense sustainability actions include (the US Navy is not addressed because the Pikes Peak Region does not host Navy facilities):

- The Department of Defense energy and procurement strategies:

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<sup>5</sup> See Federal Energy Management Program, “Summary of Major Energy Bill Provisions Affecting Federal Energy Managers,” US Department of Energy, at [http://www1.eere.energy.gov/femp/pdfs/epact05\\_fem\\_chart.pdf](http://www1.eere.energy.gov/femp/pdfs/epact05_fem_chart.pdf).



- US Army adoption of sustainability as the foundation of its environmental management strategy in 2004 – calling for:
  - Army personnel to strive to become systems thinkers in order to benefit from the triple bottom line of sustainability for the Army: mission, environment and community.
  - A deep and personal commitment from every member of the Army team, including family members.
  - Transition of the Army’s traditional compliance-based environmental program to a mission-oriented approach based on the principles of sustainability.
  - Definition: a sustainable Army meets current as well as future mission requirements world-wide, safeguards human health improves quality of life and enhances the natural environment.
  - Strategy goals are to:
    - Foster an ethic within the Army that takes us beyond environmental compliance to sustainability;
    - Strengthen Army operational capability by reducing our environmental footprint through more sustainable practices;
    - Meet current and future training, testing and other mission requirements by sustaining land, air and water resources.
    - Minimize impacts and total ownership costs of Army systems, materiel, facilities and operations by integrating the principles and practices of sustainability.
    - Enhance the well-being of our Soldiers, civilians, families, neighbors and communities through leadership in sustainability.
    - Use innovative technology and the principles of sustainability to meet user needs and anticipate future Army challenges.
  - In 2005, the Army adopted its Energy Strategy<sup>6</sup> that calls for the following to reduce “inefficiency and waste that depletes funds that could be applied to multiplying our combat power and caring for families”:
    - Eliminating energy waste in existing facilities, and reducing peak electrical demand;
    - Increasing energy efficiency in renovation and new construction;
    - Reducing dependence on fossil fuels;
    - Conserving water resources; and
    - Improving energy security.
- The US Air Force is increasingly embracing sustainable operations through sustainability action plans.

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<sup>6</sup> See Department of the Army, “Army Energy Strategy for Installations,” 8 July 2005, adopted by Peter J. Schoomaker, General, US Army Chief of Staff and Francis J. Harvey, Secretary of the Army.





- According to the USAF Sustainable Operations website, sustainability is “ensuring viable missions while respecting the resources that support them: human, financial, and the natural and built environments. The Air Force installations of the future will be strong, capable, and certain of their continued success, due to the commitment of today’s commanders that their operations are sustainable.”
- The USAF Civil Engineering Sustainable Development Policy of 2001 stated that, “It is Air Force policy to apply sustainable development concepts in the planning, design, construction, environmental management, operation, maintenance, and disposal of facilities and infrastructure projects, consistent with budget and mission requirements.”
- Sustainability action plans have been developed and implemented at Homestead ARB and March ARB since 2002, with other installations following suit through establishment of comprehensive environmental management programs.

## US Interagency Working Group on Sustainable Development Indicators

The following indicators were determined to be data collected by the federal government that indicate progress towards sustainable development. The indicators are presented according to whether in 2001 the indicator data was moving in a favorable, unfavorable or uncertain direction. The indicators below have been edited for consistency with this report’s division of indicators into Nature, Economy, Well-being and Society categories.

Source: [www.sdi.gov](http://www.sdi.gov).

### Indicator Categories:

<u>Economy</u>	<u>Environment</u>	<u>Social</u>
<b>Favorable Direction:</b>		
Capital assets	Contaminants in biota	Access to telecommunications
Labor productivity	Timber growth to removals balance	Educational attainment by level
Total materials per unit of investment	Metropolitan air quality non-attainment	Educational achievement rates
Investment in R&D as % of GNP	Life expectancy	Economy Management Index
% Children living in poverty	Consumption and Government expenditures per capita	Home Ownership
<b>Unfavorable Direction:</b>		
Vehicle ownership, fuel use and travel	Status of stratospheric ozone	
Greenhouse Climate Response Index	% households with housing problems per capita	
	People in census tracts with 40% poverty	



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Citizen's participation      Waste inventory      Greenhouse gas emissions  
Homelessness      Access to healthcare

**Uncertain or Mixed Direction:**

Percentage of renewable energy      Surface water quality      Population  
Land use      Children living in families with at least one parent present  
Ratio of renewable water supply to withdrawals  
Fisheries utilization      Crime rates      Teacher training and applicants' qualifications



## Appendix Five: Colorado Locally-Tracked Indicators

The following indicators are presently tracked by Colorado communities or the state government, listed by the PPSIP Task Force with responsibility for the category.

### Nature

- Percent of public vs. private land ownership (Yampa)
- Parcelization of private land by county (Yampa)
- Private land with long-term protected status (Yampa)
- Number of farms by size (Yampa)
- Total acreage harvested (Yampa)
- Livestock inventory (Yampa)
- Historic site designation (Yampa)
- Existence of adopted community plans (Yampa)
- Open lands by type of acquisition, public access and funding (Larimer)
  
- Annual snowfall (Yampa)
- Acid levels in moisture (Yampa)
- Air quality (PM-10 monitoring results) (Yampa); ambient air quality (Larimer)
- Occurrence of list “A” weed species (Yampa)
- Post-season elk and deer herd health ratios (Yampa)
- Estimated incidents of Chronic Wasting Disease in elk and mule deer (Larimer)
- Greater Sage Grouse (breeding) activity (Yampa)
- Bald eagle nests (Yampa)
- Days in compliance with state air visibility standards, by area (Larimer)
- Wildlife: common species, and state/federal endangered species (Larimer)
  
- Number of oil and gas wells (Yampa)
- National forest timber harvesting (Yampa)
- Average annual residential electricity consumption, kw/h (Yampa)
- Electricity and natural gas consumption by customer sector and location (Larimer)
- Natural gas prices (Larimer)
- Wind energy generated, and used (by municipality customers) (Larimer)
  
- Surface water quality in Yampa/Green River Basin (Yampa); regarding selenium, aluminum and coliform bacteria (Larimer)
- Population served by community water systems (Larimer)
- Health and monitoring violations (Larimer)
- Yampa River flows (Yampa)



- (1) Annual acre-feet of water diverted for use and (2) Annual consumptive use (upstream of the confluence of the Yampa and Little Snake Rivers) (Yampa)
- Consumption by sector and area (Larimer)
  
- Solid waste, total volume, composition and per capita (Larimer, Yampa)
- Recycling rate (Yampa)

## Economy

- Taxable retail sales (Larimer)
- Market value of agricultural products sold vs. production expenses (Larimer)
  
- Employment by industry and size (Larimer, Yampa)
- Market value of agricultural products sold (Yampa)
- Number of businesses and labor income by industry (Larimer, Yampa)
- State park or national monument visitors (Yampa)
- Annual skier days (Yampa)
- Net export/import of salaries/wages between counties (Yampa)
- Annual commercial de-planements (Yampa)
  
- Poverty percentage and total and relief expenditures (Yampa); by family type (Larimer)
- Average annual wage by industry or median family income; per capita income (Larimer, Yampa)
- Income by racial classification (Larimer)
- Unemployment rates compared to state (Larimer, Yampa)
- Living wage compensation levels and cost of living (Larimer, Yampa)
- Gender issues: median female earnings as a percent of male earnings and % of service industry workforce that is female (Yampa)
- Poverty and unemployment by age and disability status (Larimer)
- Personal income by labor and non-labor sources (Yampa)
- Total and rate of personal bankruptcies and foreclosures (Larimer)
- Food stamps: applications received, households and participants, emergency issuances, age of participants (Larimer)
- Households receiving temporary assistance (Larimer)

## Well-being

- Highest education attainment by people 25+ (Larimer, Yampa)
- K-12 students enrollment trends (Larimer, Yampa)
- K-12 school suspensions (Yampa) or disciplinary actions (Larimer)



- Pupil/teacher ratios (Larimer)
- K-12 English language learners (Yampa)
- High school graduation rates by gender (Larimer, Yampa)
- ACT Test results (Larimer, Yampa)
- Ethnicity and gender of teachers and teacher salaries (Larimer)
- CSAP “proficient and advanced” results (Larimer, Yampa)
- School dropout rate (Larimer, Yampa)
- Preschool and nursery enrollment rates (Larimer)
- Public libraries (Larimer)
  
- Incidence of vaccine-preventable disease (Yampa)
- Body mass index survey (Yampa)
- Coverage rate of health immunizations by age two (Yampa)
- Leading causes of death (Yampa)
- Smoking and smokeless tobacco users (Yampa)
- Population by disability status and type (Larimer)
- Birth defects by category, infant mortality and low birth weight babies (Larimer)
- Cancer incidence and mortality, and lung cancer incidence and mortality (Larimer)
- Cardiovascular disease, stroke, and unintentional injury mortality (Larimer)
- Amount of exercise and Body weight by age, weight, marital status by health risk (Larimer)
- Mental health: poor health, contemplation of suicide or suicide mortality by age and gender, past depression and current anxiety/depression by gender, insurance coverage for services, and mental health services needed and used (Larimer)
  
- Growth in housing units vs. population (Larimer)
- Residential building permits per population; by area (Larimer)
- Housing affordability, including “section 8” housing units and public housing units (Larimer, Yampa)
- Home ownership (Larimer, Yampa)
- Homelessness (Larimer)
- Residential home sales (Larimer)

## Society

- Major philanthropic grants distributed (Yampa)
- Donations to United Way (Larimer)
- Number and type of local public charities (Larimer)
- Generosity Index and contributions to charities as % of adjusted gross income (Larimer)
  
- Crimes by type (Yampa)



- Domestic violence and sexual assault victims served (Larimer, Yampa)
- Domestic violence arrests (Larimer)
- Alcohol-related traffic fatalities (Larimer)
- Perceived levels of safety, by survey (Larimer)
- Law enforcement officers per 1000 people (Larimer)
- Number and rate of “adult abuse” crimes (Larimer)
- Total arrests by crime, locality and criminal charges by category (Larimer)
  
- Number of art and culture non-profit organizations by budget, planning levels and staffing (Yampa)
- Religious affiliations (Larimer)
- Arts, entertainment and recreation establishments (Larimer)
- Performance arts companies and independent artists (Larimer)
  
- Licensed child care capacities (Yampa)
- Grandparents as care givers (Larimer)
- Marriage/divorce rates (Larimer)
- Child care assistance program cases and enrollees (Larimer)
  
- Total assessed valuation and taxes paid by top ten property tax sources (Yampa)
- Sales taxes (Larimer)
- Local government revenue sources, total and % (Yampa)
- % of voting age population registered and that votes (Larimer, Yampa)
- % of voters by age group, educational attainment and income level (Larimer)
- Affiliation trends in general elections (Larimer)
- Types of communication utilized by government to reach citizens (Yampa)
- Top five community concerns by age, gender, race and education (Larimer)
  
- Average daily traffic counts, various locations (Yampa)
- Number and % of workers commuting between counties (Yampa)
- Regional bus service or public transportation monthly rider ship (Larimer, Yampa)
- Characteristics of public transit passengers (Larimer)
- Miles of road per registered vehicle (Larimer)
- Vehicle miles traveled (Larimer)
- % change in vehicle registration by county and municipality (Larimer)
- % households with vehicles available (Larimer)
- Work commute times, destinations, and carpooling % (Larimer)
  
- Senior housing units (Yampa)
  
- Students eligible for reduced/free school lunches (Larimer)
- Alcohol and drug use by grade 7-8 students (Yampa)
- Juvenile arrests, probation and incarceration rates (Larimer)
- Cases of child abuse and infant abuse (Larimer)



## Other (not fitting in above categories)

- Quality of Life perception by residents (Larimer)
- Population by race, ethnicity, age, gender and population projections and foreign-born status(Larimer only) (Larimer, Yampa)
- Household type and housing occupancy (Larimer, Yampa)
- Birth statistics (Yampa)
- Net migration (Yampa)
- Language spoken at home (Larimer)
- # of farm operators by gender (Larimer)
- Minority owned businesses vs. minority population; proportion of minority owned firms by industry; firm ownership by race/ethnicity, including by industry groups (Larimer)
- Women-owned firms (Larimer)

## Bell Policy Center's 9 Gateways and Indicators

### **Gateway 1: A Healthy Birth**

Indicator 1: Low birth-weight babies

Indicator 2: Access to prenatal care

Indicator 3: Teen pregnancies

Indicator 4: Smoking during pregnancy

### **Gateway 2: A Safe and Stimulating Early Childhood**

Indicator 1: Children living in poverty or low-income families

Indicator 2: Children with health insurance coverage

Indicator 3: Quality and affordable child care

Indicator 4: At-risk kids served by the Colorado Preschool Program

### **Gateway 3: Building a Solid Base for Literacy**

Indicator 1: Proficiency in third-grade reading tests

Indicator 2: Proficiency in fifth grade math tests

Indicator 3: Quality instruction in elementary school

Small class sizes that allow for increased personal attention and teachers who are highly qualified to teach in their fields are particularly important to improving student performance in the early years of school.

### **Gateway 4: Establishing a Healthy Lifestyle in Childhood and Adolescence,**

Indicator 1: Percentage of children and adolescents who are overweight.

Indicator 2: Depression among Colorado teens.

Indicator 3: Access to treatment for serious emotional and behavioral problems.

Indicator 4: Drug, alcohol and tobacco use and abuse.



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**Gateway 5: Leaving High School with a Diploma and the Skills to Succeed,**

Indicator 1: High school graduation rates

Indicator 2: Proficiency on the 10th grade math CSAP test

Indicator 3: Performance on the 11th grade ACT test

Indicator 4: Access to and success on advanced placement tests

Indicator 5: General education degrees awarded as a percentage of adults without a high school diploma

**Gateway 6: Access to Education and Training for Adults,**

Indicator 1: Leaks along Colorado's educational pipeline

Indicator 2: Low-income and minority students attending college

Indicator 3: College degrees awarded by race and ethnicity

Indicator 4: Postsecondary affordability

Indicator 5: Access to adult basic education and English as a second language (ESL) services

**Gateway 7: A Healthy Adult Life,**

Indicator 1: The prevalence of adult smokers

Indicator 2: Obesity among Colorado adults

Indicator 3: Suicide among Colorado adults

Indicator 4: Alcohol abuse among adults

Indicator 5: Health insurance coverage for non-elderly adults

Indicator 6: Non-elderly adults on Medicaid

**Gateway 8: Earning a Decent Living and Building Wealth**

Indicator 1: Earning a self sufficient wage

Indicator 2: Home ownership

Indicator 3: Families experiencing asset poverty

Indicator 4: Households with bank accounts

**Gateway 9: A Financially Secure and Healthy Retirement,**

Indicator 1: Colorado workers participating in workplace retirement

Indicator 2: Financial soundness of Colorado-based pension plans

Indicator 3: Retirement assets owned by families

Indicator 4: Colorado seniors with long term care risk factors





## Appendix Six: Other Indicator Projects

### Jacksonville Indicators

The Jacksonville Community Council Inc. (JCCI) process for tracking community indicators and convening solution collaborations is viewed as one of the most successful efforts in the United States. Below are the 139 indicators tracked by JCCI.

Public high school graduation rate	Total participation in continuing education	Gallons of motor fuel sold per person
Public high school dropout rate	Expanding literacy: Early literary	St. Johns River compliance with oxygen standards
High school dropout education outcomes	Expanding literacy: School-age literacy	St. Johns River bacteria standards compliance
High school dropout employment outcomes	Expanding literacy: Adult literacy	Average water consumption
Tenth graders reading at grade level	Net employment growth	Water level in Floridian Aquifer
Tenth graders at grade level in math	Average annual wage	Tons per person of solid waste recycled
Public school attendance	Unemployment rate	New septic-tank permits issued
Public school first grade promotions	Unemployment benefit claims	Manatee deaths
Fourth graders writing at grade level	Children in poverty (free lunch participation)	Conservation land
Average public school teacher salary	Income available per person	Is racism a local problem?
Teachers with advanced degrees	Recipients of public assistance	Have you personally experienced racism?
Students attending racially balanced schools	Requests for emergency assistance	Births to teen mothers per 1000 live births
Magnet school enrollment	Affordability of a single-family home	Subsequent births to teen mothers
High school graduates employed or in college	Typical monthly household utilities costs	Foster children per 10,000 children
High school graduates prepared for college	New housing starts	Median length of stay in foster care
Exceptional ed students completing high school	Total taxable value of real property	Births to mothers with 12 years of education
Satisfaction with public education	Gross tonnage handled by marine terminals	Children of parents becoming divorced
Higher education degrees and certificates	Tourism (as measured by Bed-Tax revenues)	Do you volunteer?
	Days the Air Quality Index is "good"	Do you volunteer more than seven hours per week?



## **Jacksonville Indicators cont.**

Philanthropy given to federated campaigns  
Homeless count per 100,000 people

Public performances or events at selected facilities  
Public and private support per person for the arts  
Public-park acreage per 1,000 people  
Participants in sports activities at parks and pools  
Attendance at musical shows per 1,000 people  
Attendance at sports facilities per 1,000 people  
Attendance at selected events per 1,000 people  
Library use (as measured by circulation per person)  
Recreation expenditures for activities or maintenance  
Boat ramps per 100,000 people  
Racial disparity in infant deaths  
Infant death rate  
Newborns with healthy birth weights  
Early prenatal care  
Children receiving scheduled immunizations  
Alcohol use reported by youth  
People with no health insurance  
Jacksonville health care rated as high quality  
Deaths due to heart disease per 100,000 people  
Cancer deaths per 100,000 people

Lung cancer deaths per 100,000 people  
Packs of cigarettes sold per person  
Nursing-home patient days per person over 65  
People receiving home-delivered meals  
Newly diagnosed AIDS cases per 100,000 people  
Sexually transmitted disease reports  
HIV racial disparity  
HIV/AIDS-related deaths per 100,000 people  
Elected leadership rated as high quality  
School Board leadership rated as high quality  
Can you influence local government?  
Voter registration  
Percent of registered voters who vote  
Satisfaction with public-safety services  
Keeping up with local government news  
Diversity of elected officials  
Satisfaction with basic city services  
Can you name two City Council members?  
Households watching local early-evening news  
  
Commute times of 25 minutes or less  
Average seats on airplane flights  
Destinations served by direct flights  
Total passengers flying in or out of airport

Average weekday local bus rider ship  
Average weekday miles of local bus service  
Local bus headways within 30/60 minutes  
Average weekday Skyway rider ship  
  
Index crimes per 100,000 people  
Juvenile delinquents per 1,000 youth  
Serious student conduct violations  
Juvenile alcohol/drug arrests per 1,000 youth  
People feel safe in their neighborhood at night  
People report being victims of a crime  
Rescue-call response times under four minutes  
Fire-call response times under five minutes  
Police-call response times under five minutes  
Child abuse reports per 1,000 children  
Domestic-violence-related crime reports  
Domestic-violence-related homicides  
Motor-vehicle accidents per 1,000 people  
Violent deaths per 10,000 youth



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## SustainLane US City Rankings

<http://www.sustainlane.com>

SustainLane.com is a private company established in 2004 to serve as an online “destination for healthy and sustainable living” through “information, tools and community” that help connect “cities, citizens and entrepreneurial businesses.” In addition to its annual rankings of the sustainability of US cities, the company provides on-line business directories and lifestyle articles.

The SustainLane US City Rankings, initiated in 2005 for the top 25 largest US cities and expanded in 2006 to the top 50, are the nation's first detailed report card on city quality of life combined with indicators of sustainability programs, policies and performance. According to the company's website regarding their 2005 rankings, “We found an abundance of data and information, but it was fragmented, not always relevant, and presented challenges for use in a comparative analysis. One of our biggest discoveries was that many cities themselves had not found a way to look at the various pieces of information as an integrated system. Much to our surprise, it wasn't difficult to see how hard it would be for individual cities to compare their own efforts at sustainability with those of their peers in a meaningful manner. Besides our own curiosity, we thought the people running the cities would want to know how they were doing and so would the millions of those living in and around the cities themselves.”

According to the company, the SustainLane rankings “focus on healthy regional economic development, vibrant communities and quality of life measurements. Our viewpoint of sustainable practices is weighted toward ideas borrowed from our natural systems and implemented in our cities, particularly those geared toward the revitalization of our economy and public health.” The 2005 rankings examined 12 major categories, expanded to 15 for 2006:

- City commuting
  - Carpooling
  - Use of public transit for commuting
  - Walking or biking to work
- Metro public transit
  - Overall metro region rider ship



- Metro congestion
  - Metro street and freeway congestion
- Air quality
  - Average EPA air quality index
  - Violations of US EPA Clean Air Act Amendment standards
- Tap water quality
  - US EPA Environmental Working Group tap water quality database
- Waste diversion
  - Rate at which cities recycle/reuse green waste (organic waste)
- Planning / land use
  - Parks per total city land area
  - Sprawl data
- City innovation
  - Environmentally preferable purchasing programs
  - Commercial or residential green building incentives
  - Carpooling coordination or car sharing programs
  - Other city innovations
- Housing Affordability
  - Housing and income data
  - Living wage ordinances
- Natural disasters
  - Risk Management Solutions data
- Energy/climate
  - Tracking / managing greenhouse gas emissions
  - Renewable energy use as percentage of total energy use
  - Alternative fuel vehicles in city fleet
- Local Food/Ag



o

- Green Economy
- Knowledge Base
- LEED buildings

## **2006 SustainLane US City Rankings**

The expansion of the 2006 rankings to the top 50 largest metro areas included Colorado Springs, which placed 26th overall. The city was judged to be above average (“sustainability leader” or “moving to sustainability” in SustainLane’s description) in natural disaster risk, metro congestion, air quality, planning / land use, city innovation, and energy / climate change policy. In all other categories it was average (“mixed sustainability progress”) except for poor performance (“sustainability laggard”) in metro public transit and solid waste diversion.

## **San Diego Regional Energy Plan**

For full report visit:

[http://www.sdenergy.org/uploads/Regional\\_Energy\\_Strategy\\_Final\\_07\\_16\\_03.pdf](http://www.sdenergy.org/uploads/Regional_Energy_Strategy_Final_07_16_03.pdf)

### **SAN DIEGO REGIONAL ENERGY PLAN**

**DECEMBER 1994**

First Interstate Plaza 401 B Street · Suite 800 San Diego, CA 92101 (619) 595-5300

This report was financed with federal funds from the U.S. Department of Transportation, state funds from the California Energy Commission and local funds from SANDAG member jurisdictions

**MEMBER AGENCIES:** Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista, and County of San Diego. **ADVISORY/LIAISON**

**MEMBERS:** California Department of Transportation, U.S. Department of Defense, San Diego Unified Port District and Tijuana/Baja/California/Mexico.

### **ABSTRACT**

**TITLE:** Regional Energy Plan

**AUTHOR:** San Diego Association of Governments

**SUBJECT:** Regional Energy Policies and Actions

**DATE:** December 1994



**LOCAL PLANNING AGENCY:** San Diego Association of Governments 401 B Street, Suite 800 San Diego, CA 92101

**SOURCE OF COPIES:** San Diego Association of Governments 401 B Street, Suite 800 San Diego, CA 92101

**NUMBER OF PAGES:** 33

**ABSTRACT:** Energy use in the region has significant effects on the economy, environment and quality of life. The Regional Energy Plan provides a framework of specific actions needed to achieve the reliable, affordable, and environmentally sound future desired by the region. The Plan identifies significant energy issues for the region, offers a portfolio of preferred energy resources, objectives, policies, and specific Action Plan measures for local implementation.

## **CHAPTER 1 INTRODUCTION**

### **Why a Regional Energy Plan?**

One of the San Diego region's indispensable lifebloods is energy. It makes homes and businesses comfortable, moves people and goods, operates the machinery of industry, and powers the infrastructure that underpin the region's communities. The region spends almost \$3 billion every year for its energy supplies.

This pervasive role makes energy a key issue in the region's future. Energy choices made today will have significant effects on tomorrow's economy, environment, and quality of life generally. It is this linkage that constitutes the Regional Energy Plan (REP) purpose: using energy as a tool for improving the region's future.

This linkage has been recognized by participants in the region's growth management process, who requested preparation of the REP. These local government decision-makers are increasingly aware of their ability to improve economic and environmental conditions through energy actions. In response, the REP presents a blueprint that can lead the region to the following benefits by 2010:

- Cumulative energy cost savings of nearly \$1.5 billion.
- Creation of over 5,000 new jobs in energy efficiency services.
- Elimination of about 1/2 million tons of air pollutants.

Also importantly, the REP provides a framework for consensus-building among stakeholders on the specific actions needed to achieve the cumulative benefits illustrated in Figure 1.1.

### **Development of the Plan**

The REP has been developed by the SANDAG Board of Directors' Energy Advisory Committee. The Committee is composed of 30 members representing a cross-section of the region's energy stakeholders: local governments, consumers, suppliers, and regulators.



Using the year 2010 as a planning horizon, this group has assembled the REP according to a 4-step process:

1. Evaluation of trends and projection of future energy demands for the area encompassed by the eighteen cities and the County of San Diego.

2. Formulation of objectives and policies to guide the region toward the goal of an energy-efficient future.

3. Evaluation of options for meeting identified demands; and selection of a flexible "portfolio" of preferred resources for meeting those needs.

4. Design of a short-range plan of specific actions needed as first steps toward the 2010 goal.

The REP will become one of several supporting plans for the Regional Growth Management Strategy. The REP also joins a variety of utility and state government plans that affect energy demands and supplies in the region. The extensive amount of utility and state decision-making on regional energy affairs underscores the importance of an REP that advocates local needs and preferences.



## Appendix Seven: Measuring Overall Progress

*The gross national product does not allow for the health of our children, the quality of their education, or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages; the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage; neither our wisdom nor our learning; neither our compassion nor our devotion to our country; it measures everything, in short, except that which makes life worthwhile.*

Robert F. Kennedy, 1968<sup>7</sup>

During the last half-century, people have investigated how best to measure the overall progress of society and developed systems for doing so. Their motivation was partly the recognition that the United States was relying solely (or at least too much) on the measure of economic activity, Gross National Product, as the only indicator of social progress. Environmental economists in the 1960s were adding up the increasing costs to people and the environment from “externalities” to what was counted in the economic system, such as pollution, depletion of finite resources (such as oil reservoirs) or deterioration of renewable resources (such as forest damage from acid rain), personal health problems, and even the extra costs of clothing damaged by being hung out to dry in dirty air. As these costs mounted, alternative ways to measure overall progress were proposed and developed, and are now being applied to local areas as well as the national economy. The results were sobering: while economic activity was dramatically growing, society’s “net social welfare” was often flat or even diminishing.

One of the first such measures was the Index of Sustainable Economic Welfare (ISEW) proposed by economists John Cobb and Herman Daly in 1989.<sup>8</sup> They found a number of significant flaws in the traditional Gross National Product (GNP) measure, including that it did not account for skewed distribution of wealth, pollution, natural capital depletion, health problems (actually

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<sup>7</sup> Quoted in Robert Costanza et.al., “Estimates of the Genuine Progress Indicator for Vermont, Chittenden County, and Burlington, from 1950 to 2000,” draft, 2003. Available from <http://www.uvm.edu/giee/gpi.htm>.

<sup>8</sup> John Cobb and Herman E. Daly, *For the Common Good – Redirecting the Economy Towards Community, the Environment and a Sustainable Future*, 1989. For an updated discussion, see Herman E. Daly and Joshua Farley, *Ecological Economics – Principles and Applications*, 2004, Chapter 13.





counted as a positive when people paid somebody to get well), inflation, the value to humans of leisure, and household work. All of these factors can be called “non-economic welfare” since they are not included in GNP, which is the market value of final goods and services purchased.

As such, GNP is a measure of more spending, but not necessarily economic or social welfare (i.e. people being better off). For example, if a person must spend their income to fight cancer caused by their air or water supply, they have spent some of their wealth to obtain a health they might otherwise have had. The GNP measure counts that as positive – some spending has occurred – but the person is worse off than if they didn’t have the cancer and could use their own wealth (or our collective wealth in the form of health insurance) for something else such as education, vacations, new furnishings, etc.

The ISEW was developed to provide a more accurate measure of the sustainability of economic health. In most developed countries, the ISEW was found to grow with GNP until about 1980, when it began to decline while GNP continued to grow (the ISEW turned downward in the US in the early 1970s).

Subsequent efforts to accurately measure overall national welfare includes the Genuine Progress Indicator developed by the non-profit Redefining Progress.

Applying the GPI concept to a local area, ecological economist Robert Costanza and his colleagues at the Gund Institute at the University of Vermont estimated the Genuine Progress Indicator for Chittenden County and its major city Burlington in northern Vermont from 1950-2000.<sup>9</sup> The project demonstrated that estimating a state, county or local GPI was feasible and better reflected how people were actually faring than a gross economic indicator. The project specifically developed methodologies for estimating key aspects of the GPI that contribute to the GPI for the United States rapidly declining in recent decades, including costs of pollution, land loss, natural capital depletion, and household work and capital. The project found that due to environmental protection, Vermont’s GPI was closely tracking its GNP since 1970 and had positively improved to a level today of double the national average since the GPI of the United States has been declining since 1970, becoming more disparate from national GNP each year; in Costanza’s view, the US has been in a “recession” of the “real economy” since 1980.

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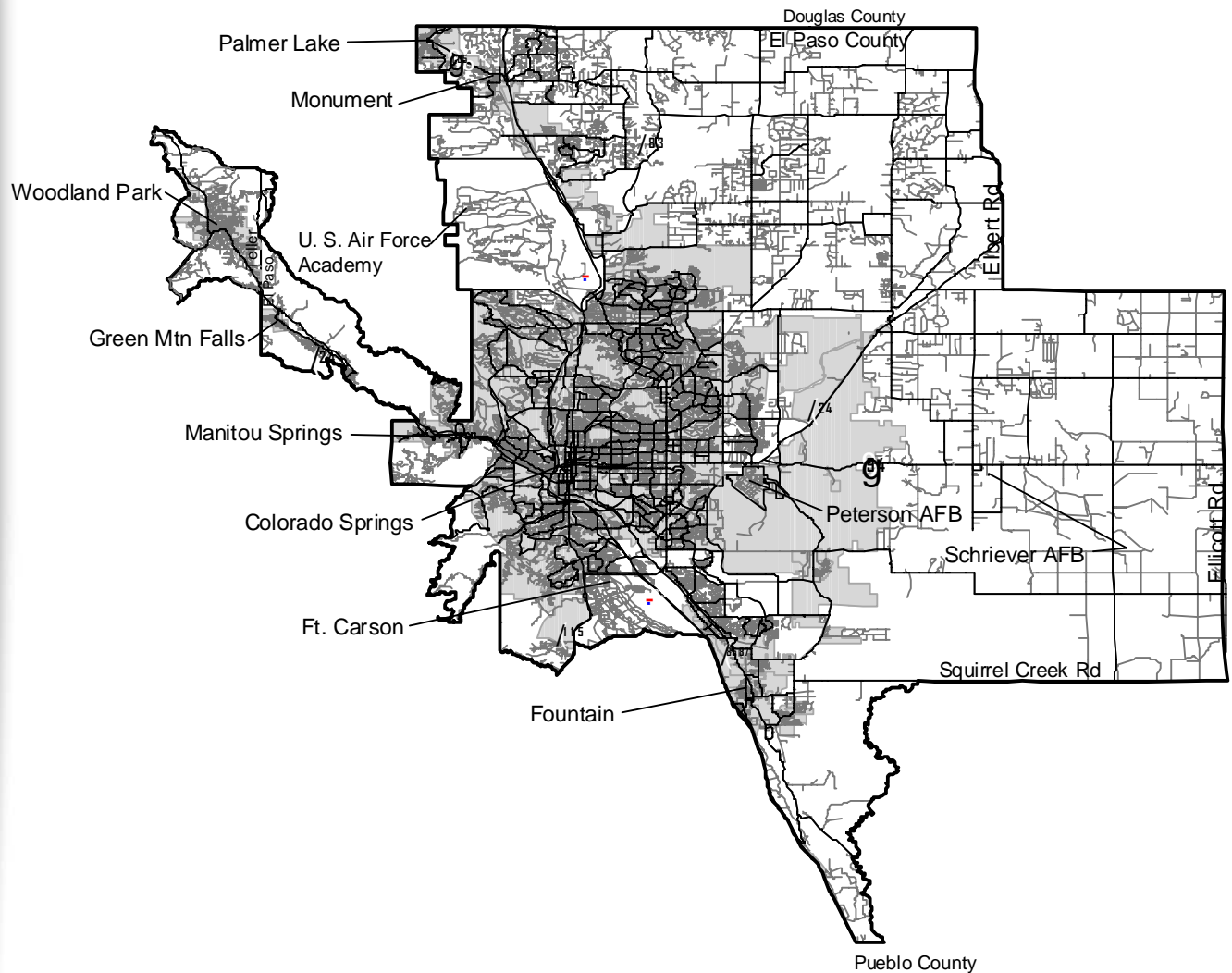
<sup>9</sup> Robert Costanza et.al., “Estimates of the Genuine Progress Indicator...from 1950 to 2000,” draft, 2003. See also Costanza, “The Real Economy in Review,” Rutland Herald 5 January 2005, available at <http://www.rutlandherald.com>.

# APPENDIX J

## APPENDIX J: STATE CORRIDOR VISIONS

# PPACG STATE HIGHWAY CORRIDOR VISIONS

## PPACG Transportation Planning Area (MPO) Boundary



**Corridor:** SH 16

**Primary Investment Category:**

Mobility

**Beginning Milepost:** 0

**Ending Milepost:** 4

**Description:** SH 16 – I-25 to Powers  
(includes Mesa Ridge Pkwy)

Interim Powers Blvd

Connection

#### Vision Statement

The Vision for the SH 16 - I25 to Powers (includes Mesa Ridge) corridor is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal regional facility, provides commuter access, and makes east-west connections within the Fountain Valley area. Future travel modes include passenger vehicle and truck freight. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase while freight volume will remain constant. The communities along the corridor value high levels of mobility and safety. They depend on commercial activity and Military for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

#### **Goals/Objectives**

- Increase travel reliability and improve mobility for all modes
- Support commuter travel by

reducing traffic congestion and improve traffic flow

- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing transportation system
- Accommodate growth in freight transport and improved freight linkages to support economic development while maintaining environmental responsibility

#### **Strategies**

- Add general purpose lanes
- Construct, improve and maintain the system of local roads
- Improve ITS Incident response, Traveler Information and Traffic Management
- Consolidate and limit access, develop and implement access management plans and improve geometrics
- Construct / reconstruct intersection/interchange improvements
- Reconstruct roadway and add surface treatment/overlays
- Bridge repairs/replacement
- Promote environmental responsibility

**Corridor:** US 24 (i)

**Primary Investment Category:**

Mobility

**Beginning Milepost:** 278

**Ending Milepost:** 304

**Description:** US 24 – Divide to I-25

### Vision Statement

The Vision for the US 24 - Divide to I-25 corridor is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal National Highway System facility, connects to places outside the region, and makes east-west connections within the western El Paso and Teller Counties area. Future travel modes include passenger vehicle, commuter transit service, truck freight, bicycle and pedestrian facilities, and Transportation Demand Management (telecommuting and carpooling). The transportation system in the area primarily serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase while freight volume will remain constant. The communities along the corridor value high levels of mobility, connections to other areas, safety, and system preservation. They depend on tourism and commercial activity for economic activity in the area. Users of this corridor want to preserve the urban and mountain character of the area while supporting the movement of tourists and commuters in and through the corridor while recognizing the unique environmental, economic and social needs of the surrounding area as well as its special historic character.

### Goals / Objectives

- Increase travel reliability and improve mobility
- Support commuter and recreation travel
- Reduce fatalities, injuries and property damage crash rate
- Provide for safe and convenient movement of bicyclists and pedestrians
- Increase capacity

### Strategies

- Add roadway bypasses and general purpose lanes
- Consolidate and limit access and develop access management plans
- Provide bicycle/pedestrian facilities
- Improve ITS Traveler Information, Traffic Management and Incident Management
- Improve geometrics and intersection/interchange improvements
- Improve rock fall mitigations
- Construct separated bicycle and pedestrian facilities
- Add surface treatment/overlays
- Promote environmental responsibility
- Add commuter transit service

**Corridor:** US 24 (ii)  
**Primary Investment Category:**  
Mobility  
**Beginning Milepost:** 304  
**Ending Milepost:** 311

**Description:** US 24 – I-25 to Powers

### **Vision Statement**

The Vision for the US 24 - I25 to Powers corridor is primarily to improve safety as well as to maintain system quality. This corridor serves as a multi-modal National Highway System facility, provides local access, and makes east-west connections within the Central Colorado Springs area. Future travel modes include passenger vehicle, transit service, fixed guideway/bus rapid transit and truck freight. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to stay the same. The community along the corridor value system preservation. They depend on tourism and commercial activity for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

### **Goals/Objectives**

- Reduce traffic congestion and improve traffic flow
- Support commuter travel
- Provide for safe and convenient movement of bicycles and pedestrians
- Preserve the existing

- transportation system
- Enhance the viability of downtown Colorado Springs

### **Strategies**

- Promote carpooling and vanpooling
- Synchronize/interconnect traffic signals
- Construct Intersection/Interchange improvements
- Add lights for crosswalks and highways
- Add Surface treatment/overlays
- Consolidate and limit access
- Develop fixed guideway/bus rapid transit
- Provide access to airport

**Corridor:** US 24 (iii)  
**Primary Investment Category:**  
 Mobility  
**Beginning Milepost:** 311  
**Ending Milepost:** 330

**Description:** US 24 – Powers Blvd to Peyton Hwy.

**Vision Statement**

The Vision for the US 24 - Powers Blvd to Peyton Hwy corridor is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal National Highway System facility, connects to places outside the region, and makes east-west connections within the Eastern El Paso County area. Future travel modes include passenger vehicle, transit service, bicycles and pedestrian facilities, and truck freight. The transportation system in the area primarily serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility, connections to other areas, and safety. Users of this corridor want to preserve the developing urban character of the area while supporting the movement of commuters and freight in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

**Goals/Objectives**

- Increase travel reliability and improve mobility for all modes of travel
- Support commuter travel

- Accommodate growth in freight transport
- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing transportation system

**Strategies**

- Add general purpose lanes
- Consolidate and limit access, continue to develop and implement access management plans
- Improve geometrics
- Construct intersection/interchange improvements
- Add turn lanes
- Add/improve shoulders
- Construct separated bicycling and pedestrian facilities
- Bridge repairs/replacement
- Reconstruct roadways
- Consolidate and limit access

**Corridor:** US 24 (iiii)

**Primary Investment Category:**

System Quality

**Beginning Milepost:** 0

**Ending Milepost:** 4

**Description:** US 24 – Business

### **Vision Statement**

The Vision for the US 24 - Business corridor is primarily to maintain system quality as well as to improve safety. This corridor serves as a multi-modal local facility, provides local access, and makes east-west connections within the Manitou Springs area. Future travel modes include passenger vehicle, transit service, fixed guideway/streetcar extension and bicycle and pedestrian facilities. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to stay the same. The communities along the corridor value safety and system preservation. They depend on tourism and commercial activity for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of tourists in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

### **Goals/Objectives**

- Provide for tourist-friendly travel, including transit
- Provide for safe and convenient movement of bicycles and pedestrians
- Preserve the existing transportation system

- Promote transportation improvements that are environmentally responsible

### **Strategies**

- Post informational signs
- Provide bicycle and pedestrian facilities
- Promote carpooling and vanpooling
- Construct Intersection/Interchange improvements
- Add lights (lighting) for crosswalks and highways
- Construct separated bicycling and pedestrian facilities
- Improve landscaping
- Add drainage improvements
- Surface treatment and overlays
- Extend streetcar service



**Corridor:** I-25 (i)

**Primary Investment Category:**

Mobility

**Beginning Milepost:** 108

**Ending Milepost:** 123

**Description:** I-25 – Purcell to South Powers

### **Vision Statement**

The Vision for the I-25 - Purcell to South Powers corridor is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal Interstate facility, connects to places outside the region, and makes north-south connections within the southern El Paso County area. Future travel modes include passenger vehicle, intercity passenger rail, truck freight, rail freight, and Transportation Demand Management (telecommuting and carpooling). The transportation system in the area primarily serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility, transportation choices, and connections to other areas. Users of this corridor want to preserve the rural character of the area while supporting the movement of tourists, commuters, and freight in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

### **Goals/Objectives**

- Increase travel reliability and improve mobility
- Support commuter travel

- Accommodate growth in freight transport
- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing transportation system

### **Strategies**

- Promote carpooling and vanpooling
- Improve ITS Traveler Information, Traffic Management and Incident Management
- Improve accel/decel lanes
- Add surface treatment/overlays
- Add passenger rail service

**Corridor:** I-25 (ii)

**Primary Investment Category:**

Mobility

**Beginning Milepost:** 123

**Ending Milepost:** 163

**Description:** I-25 – South Powers to Douglas County Line

### **Vision Statement**

The Vision for the I-25 - South Powers to Douglas County Line corridor is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal Interstate facility, connects to places outside the region, and makes north-south connections within the Colorado Springs and El Paso County area. Future travel modes include passenger vehicle, commuter transit service, intercity passenger rail, streetcar service, truck freight, rail freight, bicycle and pedestrian facilities, aviation, and Transportation Demand Management (telecommuting and carpooling/vanpooling). The transportation system in the area primarily serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility and connections to other areas. They depend on tourism, high-tech, and commercial activity for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of tourists, commuters, and freight in and through the corridor while recognizing the environmental, economic and social

needs of the surrounding area.

### **Goals/Objectives**

- Increase travel reliability and improve mobility
- Expand transit usage
- Increase Transportation Demand Management (carpool, vanpool, telecommute)
- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing transportation system

### **Strategies**

- Add general purpose lanes and peak hour HOV (high occupancy vehicle) lanes
- Provide and expand transit commuter bus, street car service, and freight and intercity passenger rail services
- Provide inter-modal connections
- Promote carpooling and vanpooling
- Improve ITS Traveler Information, Traffic Management and Incident Management
- Improve geometrics
- Construct intersection/interchange improvements, including interchange replacements at Cimarron and Fillmore
- Bridge repairs/replacement
- Reconstruct roadways
- Promote environmental responsibility

**Corridor:** SH 67

**Primary Investment Category:**

System Quality

**Beginning Milepost:** 77

**Ending Milepost:** 100

**Description:** SH 67 – Woodland Park north

improvements that are environmentally responsible

### Strategies

- Provide bicycle and pedestrian facilities
- Improve geometrics
- Add surface treatment/overlays

### Vision Statement

The Vision for the SH 67 - Woodland Park north corridor is primarily to maintain system quality as well as to improve safety. This corridor serves as a multi-modal local facility, provides local access, and makes north-south connections within the Woodland Park north area. Future travel modes include passenger vehicle and bicycle and pedestrian facilities. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to stay the same. The communities along the corridor value system preservation. They depend on tourism for economic activity in the area. Users of this corridor want to preserve the mountain character of the area while supporting the movement of tourists in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

### Goals/Objectives

- Provide for tourist-friendly travel
- Improve access to public lands
- Provide for safe and convenient movement of bicycles and pedestrians
- Preserve the existing transportation system
- Promote transportation

**Corridor:** SH 83 (ii)  
**Primary Investment Category:**  
Mobility  
**Beginning Milepost:** 21  
**Ending Milepost:** 51

**Description:** SH 83 – Powers Blvd. to SH 86 (Douglas County)

### **Vision Statement**

The Vision for the SH 83 - Powers Blvd. to SH 86 corridor is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal regional facility, connects to places outside the region, and makes north-south connections within the Northeast El Paso County area. Future travel modes include passenger vehicles, bicycles, and pedestrians where developed. The transportation system in the area primarily serves destinations outside of the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase while freight volume will increase. The communities along the corridor value high levels of mobility, connections to other areas, and safety. Users of this corridor want to preserve the rural character of the area while supporting the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

### **Goals/Objectives**

- Increase travel reliability and improve mobility for all modes
- Support commuter travel
- Provide improved freight linkages
- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing

transportation system

- Develop as a scenic corridor and preserve rural character

### **Strategies**

- Construct, improve and maintain the system of local roads
- Consolidate and limit access, develop and implement access management plans
- Add traffic signals
- Improve geometrics
- Construct intersection/interchange improvements
- Add passing lanes
- Improve visibility/sight lines
- Add/improve shoulders
- Improve hot spots
- Add surface treatment/overlays
- Add general purpose lanes

**Corridor:** Powers (i)  
**Primary Investment Category:**  
 Mobility  
**Beginning Milepost:**  
**Ending Milepost:**

**Description:** Powers – I-25 (exit 123) to Mesa Ridge Pkwy (future SH 83)

**Vision Statement**

The Vision for the Powers - I-25 (exit 123) to Mesa Ridge Pkwy (future SH 83) corridor is primarily to increase mobility as well as to maintain system quality and to improve safety. This corridor serves as a multi-modal regional facility, provides commuter access, and makes north-south connections within the South El Paso County area. Future travel modes include passenger vehicle, transit service, and bicycle and pedestrian facilities. The transportation system in the area primarily serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility, transportation choices, and connections to other areas. They depend on commercial activity for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of commuters and freight in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

**Goals/Objectives**

- Increase travel reliability and improve mobility for all modes
- Support commuter travel

- Accommodate growth in freight transport
- Provide improved freight linkages
- Support economic development while maintaining environmental responsibility

**Strategies**

- Add general purpose lanes
- Add roadway bypasses
- Add new Interchanges/Intersections
- Construct, improve and maintain the system of local roads
- Consolidate and limit access, develop and implement access management plans
- Reconstruct roadways
- Study corridors
- Promote environmental responsibility

**Corridor:** Powers - Mesa Ridge Pkwy to I-25 (Northgate) (SH 21)

**Primary Investment Category:**  
Mobility

**Beginning Milepost:**

**Ending Milepost:**

**Description:** Powers – Mesa Ridge Pkwy to I-25 (Northgate) (SH 21)

### **Vision Statement**

The Vision for the Powers - Mesa Ridge Pkwy to I-25 (Northgate) (future SH 83) corridor is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal local facility, provides commuter access, and makes north-south connections within the Colorado Springs area. Future travel modes include passenger vehicle, transit service, and bicycle and pedestrian facilities. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. This corridor is anticipated to be a primary focus of higher density land uses in the region. The communities along the corridor value high levels of mobility and safety. They depend on commercial activity for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of commuters and freight in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

### **Goals/Objectives**

- Reduce traffic congestion and improve traffic flow

- Support commuter travel
- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing transportation system
- Support economic development while maintaining environmental responsibility
- Provide access to airport

### **Strategies**

- Complete general purpose lanes
- Add new interchanges/intersections
- Construct, improve and maintain the system of local roads
- Provide and expand transit bus and rail services
- Construct and maintain Park'n Ride facilities
- Provide inter-modal connections
- Synchronize/interconnect traffic signals
- Consolidate and limit access and develop access management plans
- Add surface treatment/overlays

**Corridor:** US 85

**Primary Investment Category:** Safety

**Beginning Milepost:**

**Ending Milepost:**

**Description:** US 85 – I-25 (Fountain) to I-25 (Nevada Ave)

### **Vision Statement**

The Vision for the US 85 - I-25 (Fountain) to I-25 (Nevada Ave) corridor is primarily to improve safety as well as to maintain system quality. This corridor serves as a multi-modal local facility, acts as Main Street, and makes north-south connections within the Fountain Valley area. Future travel modes include passenger vehicle, transit service, truck freight, rail freight, bicycle and pedestrian facilities, and Transportation Demand Management (telecommuting and carpooling/vanpooling). The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to stay the same. The communities along the corridor value high levels of mobility and safety. They depend on commercial activity for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area including the particular access, safety and other impacts associated with the close proximity of major rail lines to this corridor.

### **Goals/Objectives**

- Increase travel reliability and

improve mobility for all modes

- Reduce fatalities, injuries and property damage crash rate
- Provide for safe and convenient movement of bicycles and pedestrians
- Preserve the existing transportation system
- Coordinate transportation and land use decisions

### **Strategies**

- Add general purpose lanes
- Construct, improve and maintain the system of local roads
- Improve geometrics
- Construct intersection/interchange improvements
- Improve railroad crossing devices
- Add accel/decel lanes
- Add turn lanes
- Add surface treatment/overlays
- Reconstruct roadways
- Consolidate and limit access
- Add bicycle and pedestrian facilities

**Corridor:** SH 94  
**Primary Investment Category:** Safety  
**Beginning Milepost:** 0  
**Ending Milepost:** 17

**Description:** SH 94 – US 24 east

**Vision Statement**

The Vision for the SH 94 - US 24 east corridor is primarily to improve safety as well as to maintain system quality. This corridor serves as a multi-modal regional facility, provides commuter access, and makes east-west connections within the Eastern El Paso County area. Future travel modes include passenger vehicle, bus service, bicycle and pedestrian facilities, and truck freight. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase while freight volume will remain constant. The communities along the corridor value high levels of mobility, safety, and system preservation. They depend on the Military for economic activity in the area. Users of this corridor want to preserve the rural character of the area while supporting the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

**Goals / Objectives**

- Support commuter travel
- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing transportation system
- Serve as primary access to Schriever AFB

- Connect to east/west mobility corridor
- Support safe and convenient bicycle and pedestrian travel
- Coordinate land use decisions with transportation objectives and funding

**Strategies**

- Improve geometrics
- Construct intersection/interchange improvements
- Add passing lanes
- Add/improve shoulders
- Maintain access management
- Add surface treatment/overlays
- Add shoulders
- Expand ITS
- Add transit service
- Add bicycle and pedestrian facilities



**Corridor:** SH 105 (ii)  
**Primary Investment Category:** Safety  
**Beginning Milepost:** 6  
**Ending Milepost:** 9

**Description:** SH 105 – I-25 to Palmer Lake

**Vision Statement**

The Vision for the SH 105 - I-25 to Palmer Lake corridor is primarily to improve safety as well as to maintain system quality. This corridor serves as a multi-modal local facility, provides local access, and makes north-south connections within the Monument/Palmer Lake area. Future travel modes include passenger vehicle, intercity passenger rail, and bicycling and pedestrians. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to stay the same. The communities along the corridor value safety. They depend on commercial activity for economic activity in the area. Users of this corridor want to preserve the rural character of the area while supporting the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

**Goals/Objectives**

- Support commuter travel
- Provide for bicycle and pedestrian travel
- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing transportation system

- Promote transportation improvements that are environmentally responsible
- Address environmental values
- 

**Strategies**

- Construct, improve and maintain the system of local roads
- Improve geometrics
- Add/improve shoulders
- Improve railroad crossing devices
- Add surface treatment/overlays
- Consolidate and limit access
- Add passenger rail
- Add bicycling and pedestrian facilities

**Corridor:** SH 115 (i)

**Primary Investment Category:**

Mobility

**Beginning Milepost:** 14

**Ending Milepost:** 40

**Description:** SH 115 – US 50 to Fort Carson South Gate

### **Vision Statement**

The Vision for the SH 115 - US 50 to Fort Carson South Gate corridor is primarily to increase mobility and to improve safety while maintaining system quality. This corridor serves as a multi-modal regional facility that serves as the primary connection between Fremont County and the El Paso County metropolitan area and is an important scenic and tourist corridor. Future travel modes include passenger vehicle and bicycle. The transportation system in the area primarily serves destinations outside of the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase while freight volume may increase particularly with respect to hauling aggregate. The communities along the corridor value high levels of mobility, connections to other areas, and safety. They depend on the Military for economic activity in the area. Users of this corridor want to preserve the unique scenic, environmental and rural character of the area while supporting the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

### **Goals/Objectives**

- Increase travel reliability and improve mobility for all modes
- Support commuter travel

especially to Ft. Carson

- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing transportation system
- Promote transportation improvements that are environmentally responsible

### **Strategies**

- Improve geometrics
- Construct intersection/interchange improvements
- Add passing lanes
- Add/improve shoulders
- Add surface treatment/overlays
- Bridge repairs/replacement
- Promote environmental responsibility
- Add bicycle facilities

**Corridor:** SH 115 (ii)  
**Primary Investment Category:** Safety  
**Beginning Milepost:** 40  
**Ending Milepost:** 46

**Description:** SH 115 – Fort Carson South Gate to Lake Ave (US 85)

**Vision Statement**

The Vision for the SH 115 - Fort Carson South Gate to Lake Ave (US 85) corridor is primarily to improve safety as well as to increase mobility and to maintain system quality. This corridor serves as a multi-modal local facility, acts as Main Street, and makes north-south connections within the southwest Colorado Springs area. Future travel modes include passenger vehicle, transit service, fixed guideway/bus rapid transit and bicycle, and pedestrian. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to stay the same. The communities along the corridor value high levels of mobility and safety. They depend on commercial activity for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

**Goals/Objectives**

- Reduce traffic congestion and improve traffic flow especially to Ft. Carson
- Support the function of Fort Carson and the development and use of Cheyenne Mountain State

Park

- Reduce fatalities, injuries and property damage crash rate
- Provide for safe and convenient movement of bicycles and pedestrians
- Preserve the existing transportation system

**Strategies**

- Provide and expand transit bus and rail services including fixed guideway/bus rapid transit
- Provide bicycle and pedestrian facilities
- Improve geometrics
- Construct intersection/interchange improvements
- Consolidate and limit access and develop access management plans
- Add surface treatment/overlays
- Add Interchange ramps

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## 2-D. TRANSPORTATION

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**T**he high level of mobility we enjoy as a society enables people to access a larger number of destinations and have more choices of places to live, work, shop or recreate, all of which are important components of quality of life.

But this mobility—as we currently achieve it, largely through private automobiles—comes at a cost. The negative impacts of motorized transportation are well known. They include air and water pollution, noise, energy consumption, accidents and visual impacts. Also, a transportation corridor can bisect neighborhoods or habitat and can be a barrier to movement of people and wildlife.

**Measurable indicators for transportation patterns** (what to look at to gauge what is happening to traffic patterns in the Pikes Peak region).

- Vehicle miles traveled (VMT)
- Road widths
- Miles of road/highway/freeway
- Increases in vehicle registration by vehicle type and gross vehicle weight from 1955 to 2002
- Number of buses per capita
- Motor vehicles registered per capita in El Paso County
- Traffic level-of-service on selected arterial links
- Number of miles of streets with bike lanes per 1,000 persons
- Number of annual bus boardings

### ***HOW EFFECTIVE TRANSPORTATION PATTERNS HELP QUALITY OF LIFE***

While providing mobility is vital to a community, so are planning and design efforts to minimize the adverse impacts of transportation facilities. It's important for a transportation system to fit well with the needs of the community. Adequate freeway capacity, for example, is needed to keep longer, regional trips off local streets. Similarly, an adequate local street system is needed to keep local trips off I-25.

Public transit service provides needed mobility for those who want an alternative to the automobile or who cannot afford or physically cannot operate a motor vehicle. Transit use can reduce air pollution and reduce the amount of land needed for automobile parking spaces.

Non-motorized travel modes (walking and biking) offer valuable exercise opportunities for a populace that has grown increasingly sedentary.

## ***HISTORIC TRANSPORTATION PATTERNS IN THE PIKES PEAK REGION***

Railroad builder General William J. Palmer founded the Fountain Colony, now Colorado Springs, in July 1871, just months before his Denver & Rio Grande Railway reached the site. Palmer staked out his model city with a grid system of dirt roads a hundred feet wide and began selling lots for \$100 each.

Public transit arrived with the advent of horse car service in 1887, replaced with electric streetcars in 1890. In 1900, gold miner Winfield Stratton bought the system and spent \$2 million to build it into a 41-mile, first-class street railway.

The Auto Age began in the early 1900s. Crippled in his early 70s after being thrown from his horse, General Palmer bought a 1907 White Steamer. By 1911, the street railway was getting in the way, and the time had come for paving the streets.

The automobile ascended in popularity as affordable, mass-produced automobiles came onto the scene. Autos made it possible for people to live farther away from the central city. Researchers suggest that nationally, the period of most rapid urban decentralization occurred between 1920 and 1950.

Declining patronage evident as early as 1911 led to the demise of the trolley system in 1932, replaced at that time by privately operated bus service. This bus company expanded to serve the newly established Camp (now Fort) Carson during the gasoline-rationing days of World War II. Congress established the National Interstate Highway Program in 1944, designating as one of the new routes U.S. Highway 87 from New Mexico to Wyoming, through Colorado Springs. Among three alternative routes considered in a 1947 study, downtown business owners successfully lobbied for the western-most route (the “Walnut Line”).



*Figure 2-54. Highway 85 87 to Denver, circa 1920. A portion of Cheyenne Mountain is visible in the background above the hillside in the right side of this view. Photo courtesy of the Pikes Peak Library District.*

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Transportation Patterns

Work on today's I-25, then called the Monument Valley Freeway, began in the mid-1950s, concurrent with construction of the U.S. Air Force Academy.

For Colorado Springs, sheer growth has fueled rapid land consumption since 1950. El Paso County's population from the 1950 Census was just short of 75,000 residents. Spurred first by military and later by high-tech jobs, the county's population has grown by nearly that amount or more every decade since then.

Aerial photography shows that by 1955, development had not progressed eastward much farther than Union Boulevard. Since then, continued eastward suburbanization resulted in the need for first Circle Drive, then Academy Boulevard, focus of commercial development in the 1970s.

After years of financial losses, the Colorado Springs Transit Company ceased operations in 1972. Public transit service began that year as the City of Colorado Springs purchased the system.

Increased oil price shocks in the 1970s produced a measurable increase in carpooling in the 1980 Census, but this phenomenon soon waned. The region's air quality improved dramatically during the 1980s removing this as a motivating issue for reducing vehicle travel.

During the 1980s, the focus of growth shifted northeast to the extensive Briargate development. The City also annexed the Banning-Lewis Ranch, east of Marksheffel Road, a future growth area of more than 20,000 acres.



*Figure 2-55. A 1954 aerial photograph shows eastern Colorado Springs. High aerial view of eastern Colorado Springs looking east. Pikes Peak Avenue is in the center of the picture. Photo courtesy the Pikes Peak Library District. Photographer: Stewarts Commercial Photographers.*

## **TRANSPORTATION PATTERNS TODAY**

A national 1999 survey of 68 metropolitan areas ranked the Colorado Springs area as the most congested among areas with fewer than 500,000 residents. (Texas Transportation Institute, Urban Mobility Report, 1999). Residents of the area recognize that traffic congestion is a key regional problem. Consistent with other survey results since the mid-1990s, traffic congestion ranked as the No. 1 issue in a 2001 public survey about the region's quality of life. (City of Colorado Springs, 2001 Citizen Survey, May 2001)

At a December 2002 symposium entitled, Colorado Springs 2020: Our Town Our Future, participants were asked to describe the current transportation network in Colorado Springs. From this audience (not a large, statistically representative sample) more than half rated the current transportation network as "poor," and fully 92% rated it "fair" or "poor."

**Speeding in neighborhoods** by cut-through traffic is becoming an increasing problem. The City of Colorado Springs has recently established a formal Neighborhood Traffic Calming Program. As reported in the [Colorado Springs] Gazette ("Neighborhoods in Gear to Slow Down Speeders," Bill Vogrin, Oct. 17, 2002), one neighborhood resident implemented her own "traffic calming program" to slow down motorists speeding through a school zone. She sits in her car in front of an elementary school every weekday afternoon and points a hair dryer out her window at passing vehicles. Many drivers mistake the hand-held dryer for a radar gun and slow down.

The region's latest-adopted long-range transportation plan, *Destination 2025*, describes more than \$2.2 billion worth of transportation projects planned in the

region between the years 2000 and 2025. The plan is "financially constrained," containing only improvements for which there is foreseeable funding. The region also has a long list of needed improvements for which funding is not available.

While traditionally, north-south roadway improvements, like the proposed improvements to I-25 and Powers Boulevard, have ranked highest among area residents' concerns, east-west mobility has increasingly become a concern. The City completed a two-year East-West Mobility Study in 2002, identifying a number of prioritized roadway improvements for implementation as funding becomes available.

Fixed-route bus is provided by the City of Colorado Springs, largely serving those who depend on transit for mobility. Today's publicly owned fleet of 56 buses represents little gain over the fleet of 51 buses operated privately more than four decades ago. In fact, since the city has grown in area and population, the number of buses operated per capita has declined by 80% since 1960. The current fixed-route service is supplemented with demand-responsive para-transit services.

Currently, public transit costs are paid by general revenues in the City budget, competing with all other City programs under spending restrictions imposed by State tax and spending limitations. Major transit improvement will require a new dedicated funding source. The City's voters rejected a 1999 proposal to form a transit district and authorize a sales tax to fund bus-system improvements.

Major progress is being made on implementing regional trails, boosted by a sales tax for parks, trails and open space that was approved by the city's voters in 1997.

**TRENDS IN TRANSPORTATION PATTERNS**

The City of Colorado Springs Intermodal Transportation Plan notes that automobile travel continues to increase faster than population growth and faster than roadway capacity. Accordingly, traffic congestion will continue to worsen citywide, with many areas sure to experience severe congestion.

The estimated number of vehicle-miles traveled per El Paso County resident has increased from 13.6 miles per day in 1980 to around 20 daily miles per capita today, an increase of roughly 50%. By the year 2025, this figure is expected to increase by an additional 6 miles per person, to more than 26 daily miles per capita.

Total vehicle miles of travel in the region increased from 4.2 million in 1980 to 10.5 million in 2000, en route to a projection of 19 million in 2025. (See Figure 2-56)

Even if growth in the Colorado Springs region were to slow, rapid population growth along Colorado’s Front Range would continue to increase demand on the region’s transportation facilities, especially on I-25. Between 1990 and 2000, Colorado’s population increased by about 1 million residents, and 80% of the increase occurred in the Front Range counties served by I-25.

In the absence of a dedicated funding source for public transit, continuation of current City subsidies at today’s levels will lose ground to inflation, soon requiring cuts in the City’s already inadequate service levels.

Many in the aging Baby Boom generation will be reaching retirement age by 2025. As they become unable to drive due to physical infirmity, demand for public transit service may increase substantially. This is an extremely important “megatrend” that hasn’t yet received much public attention in the region.

Well before the time that aging baby boomers will demand improved transit service, physicians today are warning that America’s sedentary, auto-dependent lifestyle is causing epidemic levels of obesity. Researchers Killingsworth and Schmidt report 75% of all trips less than one mile in length are made by automobile and that the average adult spends 73 minutes per day driving. As individuals and as a society, our health would improve if we were willing and able to make short trips by foot or bicycle, substituting exercise time for driving time. It is important to have adequate pedestrian and bicycle facilities to meet this urgently needed behavior change.

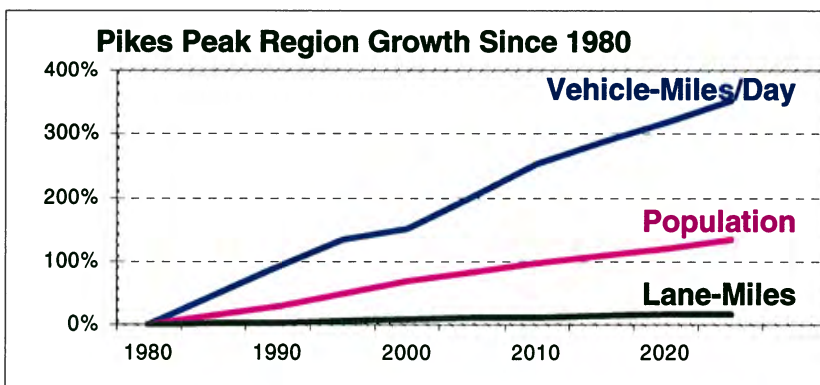


Figure 2-56. Automobile travel is increasing faster than population growth and much faster than roadway capacity. This trend is expected to continue.



### **THE VISION FOR TRANSPORTATION PATTERNS IN THE FUTURE IN THE PIKES PEAK REGION**

The following statements from the *City of Colorado Springs 2001 Comprehensive Plan* express the approach to transportation that the City will take while also striving to achieve its non-transportation goals. Often, competition for funding results in tradeoffs between objectives.

Our Community envisions a Colorado Springs that has...

- ◆ a transportation system with a high degree of efficiency, mobility, accessibility, connectivity; and
- ◆ a range of real choices for traveling between destinations within the community.

Source: *City of Colorado Springs 2001 Comprehensive Plan*

Several of the main points of the *Colorado Springs Comprehensive Plan* relate to transportation and suggest what sustainable patterns might be:

- ▶ Develop a coordinated land-use pattern that efficiently uses land by encouraging mixed-use activity centers rather than segregated land uses.
- ▶ Create opportunities for travel modes that can reduce the rate of growth in automobile use.
- ▶ Evaluate effective tools for assessing the fiscal impact of development. (Since transportation needs far outweigh available resources, ensure that future development pays its own way.)
- ▶ Strengthen the quality of development's visual character and appearance. (This can include pleasing roadway or transit facility design.)
- ▶ Maintain a citywide context or perspective as an integral part of incremental land use decision-making. (This may help to curtail the historic practice of approving discontinuous roadway systems.)

## **KEY STRATEGIES FOR IMPLEMENTING EFFECTIVE TRANSPORTATION PATTERNS IN THE PIKES PEAK REGION**

### **POLICY-LEVEL STRATEGIES: TRANSPORTATION**

- ☑ Incorporate mixed-use land use concepts in future developments so that land use itself does not force new residents to commute to far-away employment centers.
- ☑ Incorporate provision for alternate transportation designs in the design of new developments (including transportation facility development).
- ☑ Develop a dedicated funding mechanism for transit so that the region can accommodate the mobility needs of the aging Baby Boom generation.
- ☑ Assess impact development fees such that new developments will pay for the off-site transportation capacity needs they generate, rather than worsening the current backlog of needed but unfunded projects.
- ☑ Identify and monitor transportation indicator variables that track progress toward established transportation goals. (The City of Colorado Springs now is tracking the number of motor vehicles registered per capita in El Paso County; traffic level-of-service on selected arterial links; number of miles of streets with bike lanes per 1,000 persons; and number of annual bus boardings.)

### **PROJECT-LEVEL STRATEGIES: TRANSPORTATION**

- ☑ Provide all transportation facilities and services within a reasonable timeframe of development to thereby improve concurrency between transportation facility supply and demand.
- ☑ Achieve advance right-of-way reservation and dedication for transportation through the land-development process.
- ☑ Coordinate with appropriate local agencies to identify future alternate mode needs and ensure that transportation project designs don't preclude future alternate mode options.
- ☑ Situate new facilities in locations that minimize habitat or neighborhood fragmentation, as well as providing adequate crossings to minimize corridors' "barrier" effects.
- ☑ Design all projects in full compliance with applicable environmental regulations, as well as ensure designs that recognize the character of the facility's natural and community character.
- ☑ Look for ways to use projects to bring new uses, such as roads and intersections, to Brownfields or other degraded lands.

## Case Study

### National Issue

#### **DO NEW LANES INDUCE TRAVEL OR MERELY RESPOND TO EXISTING DEMAND? THAT IS A QUESTION OF CONTINUING DEBATE IN PROFESSIONAL CIRCLES.**

Within the transportation field, there is a body of research suggesting that adding roadway capacity as a means of addressing traffic congestion may be partially self-defeating, because the added lanes induce more and longer trips than would have been made without them.

The important economic principle underlying the discussion is one of supply and demand. The cost of transportation service perceived by the consumer is measured primarily in travel time. Adding transportation capacity reduces travel times, at least initially, thereby reducing the time cost of the transportation service. When the price of a normal good is lowered, consumers with a fixed time budget will be able to afford a greater quantity of that transportation service. In theory, this means the consumer would have incentive to travel more.

In a presentation to the Transportation Research Board (TRB) in 2000, U.S. Environmental Protection Agency researcher Dr. Lewison Lee Lem identified the following potential behavioral changes that could result in response to increased capacity:

#### Potential short-run effects:

- ▶ Changes in departure time
- ▶ Changes in route
- ▶ Changes in travel mode
- ▶ Changes in destination
- ▶ Changes in the number of trips

#### Potential long-run effects:

- ▶ Changes in household auto ownership
- ▶ Changes in residential location
- ▶ Employee changes in work location
- ▶ Employer changes in work location
- ▶ Changes in land-development location

An important work on the subject is *TRB Special Report 245: Expanding Metropolitan Highways: Implications for Air Quality and Energy Use*. Two key findings from Special Report 245 are as follows:

“Early major highway capacity expansions had major impacts on land use and urban form in metropolitan areas because of the dramatic reduction in travel costs they afforded, which in turn increases access to undeveloped land. In general, currently planned expansions...in built-up metropolitan areas are not as likely to result in major structural changes in metropolitan development patterns.

Planned major capacity expansions in relatively undeveloped areas, such as outer beltways at the urban fringe, that significantly reduce travel times and improve accessibility to developable land will influence development patterns in these corridors.”



## **Case Study**

### **Colorado Springs, Colorado**

#### **CITY OF COLORADO SPRINGS RIDEFINDERS PROGRAM**

The City of Colorado Springs Transit Systems department manages the Ridefinders program, which includes:

Carpool Matching matches families that have children at the same school so they can share driving responsibilities for getting their children to school. These services can be provided not just on a general, regional basis but also customized to meet the collective needs of employers in the high-density corridors (e.g. the Garden of the Gods Transportation Management Association). The service is available by calling Ridefinders at (719) 385-RIDE.

Vanpooling is targeted at long-distance commuters (e.g., Colorado Springs to Denver, Pueblo to Colorado Springs) who want to save money and energy by riding in a vanpool.

The Telecommuting Consulting program helps evaluate a business' telecommuting needs and provides training at minimal costs to the business.

## **Case Study**

### **National Trend**

#### **THE ROLE OF TRANSPORTATION IN 'SMART GROWTH'**

For too long, transportation has been associated with much of what's wrong about land-use patterns, whether it's highways bisecting low-income neighborhoods, new roads fueling sprawl or residential streets designed for automobile travel at the expense of other modes of transport. But in recent years, the transportation field has been quietly changing course, and communities across the United States are starting to use transportation to help manage growth, breathe new life into older neighborhoods and improve their quality of life. And numerous signs indicate that transportation will continue to play a vital role in the pursuit of smarter growth.

Adapted from "Smart Growth: The New Challenge for Transportation" by Don Chen. The complete version of this article appeared in the July 1999 issue of *Getting Smart!*: the newsletter of the Smart Growth Network.

**Other relevant case studies to see in this report:**

- City of Austin, Texas: Sustainable Communities Initiative
- Douglas County, Colorado: U.S. Highway 85 wildlife planning
- Fort Carson, Colorado
- Greater Wasatch Area, Utah: Envision Utah
- Kansas City region, Kansas and Missouri

**Key written resources:**

*Colorado Springs Intermodal Transportation Plan*, City of Colorado Springs.

*Colorado Springs Regional 2025 Long Range Public Transportation Plan*, City of Colorado Springs.

*Destination 2025: A Mobility Plan for the Pikes Peak Region*, Pikes Peak Association of Governments.

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## 2-E. NOISE

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**N**oise can cause hearing loss and interfere with human activities at home and work. It can also be injurious to people's health and well-being. Although hearing loss is the most clearly measurable health hazard, noise is also linked to other physiological and psychological problems. Noise can annoy, awaken, anger or frustrate people. It can disrupt thinking and communication and affect performance capability.

The numerous effects of noise can combine to detract from the quality of people's lives and the environment. Some birds and other animals use sound to navigate and communicate, and excessive noise can interfere with these functions. Noise can sometimes affect wildlife use of an area and add to wildlife stress.

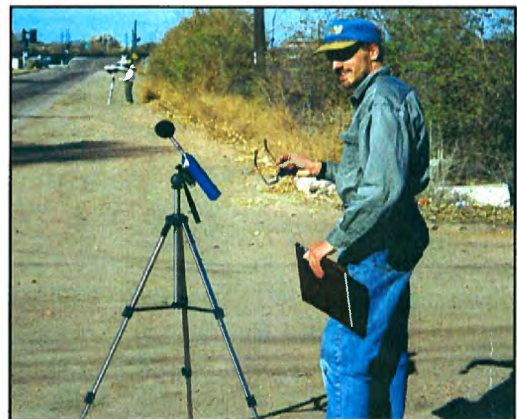
**Measurable indicators of noise** (what to look at in gauging what is happening with noise in the Pikes Peak region).

- Average noise levels
- Number of people living in areas where the 24-hour day-night noise level exceeds 55 dBA

### Did You Hear?

Sound and noise are measured as sound pressure levels in units of decibels (dB). Human hearing can detect decibel levels ranging from 0 dB (the threshold of audibility) to 140 dB (threshold of pain).

Community noise is measured in terms of A-weighted decibels (dBA). A-weighting adjustments are made to mimic the fact that the human ear is less sensitive to low-frequency sound than it is to high-frequency sound.



*Figure 2-57. Measuring sound levels on a roadway near downtown Colorado Springs.*

### CHANGES IN THE PATTERNS OF NOISE

Community noise levels in the Colorado Springs area are the sum of the effects of noise from a number of different sources that vary over time and space (Figure 2-58). For the purposes of this study, the most significant of these sources have been grouped into seven categories.

For each of these categories, the following describes the nature of the sources, existing noise levels, how noise from each source has changed over the past 50 years or so and how it might change in the future.

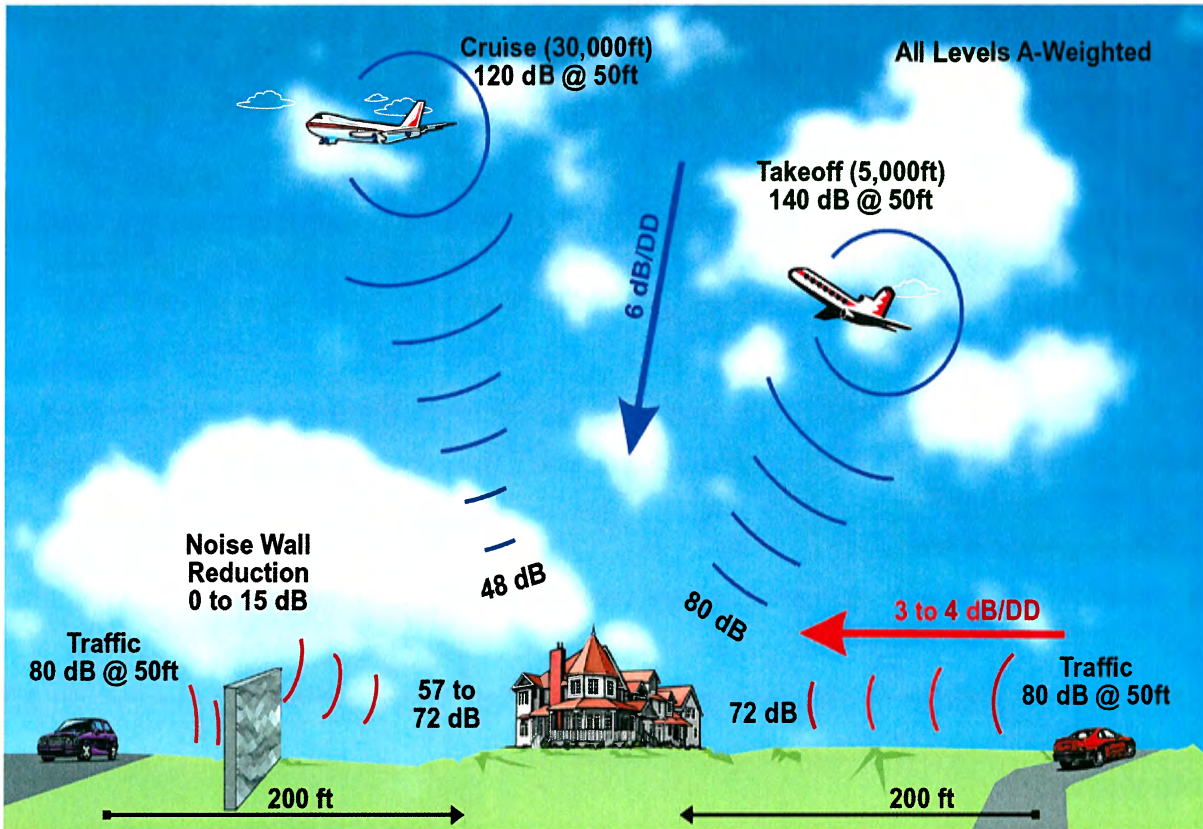


Figure 2-58. Community noise levels in the Colorado Springs area are the sum of the effects of noise from a number of different sources that vary over time and space. In the figure, changes in decibel level with a doubling of distance are denoted as dB/DD.

### ROADWAYS

For many residents, roadway traffic is the most significant and constant source of noise. Between the 1950s and today, the impact of traffic noise has increased because there are more cars and trucks on the road, houses and highways are being built in closer proximity to one another and traffic speeds have increased.

The number of miles being driven is increasing significantly in this area (see Figure 2-54). The result of this is a 3 dBA increase in traffic noise every time the traffic volume on a given road doubles.

Heavy trucks (e.g., semi-trucks) are particularly important to consider because they are as loud as approximately 13 passenger cars. They also are important because truck traffic is growing at a faster pace than the general U.S. population.



Figure 2-59. This noise wall is one of five that are found along Interstate 25 through Colorado Springs. Eight more are planned.

Houses and roads continue to be built near each other, as evidenced throughout the Colorado Springs area. The impact of this is a 3 dB increase in noise for every halving of distance between a house and a road. For example, if noise levels from a road are 55 dBA at a distance of 400 feet, they will be 58 dBA at a distance of 200 feet. Finally, noise levels increase approximately 1 to 2 dBA for every 10 mph increase in speeds.

Vehicle noise emissions were first regulated in the U.S. on the federal level in the 1980s. The EPA set a limit of 80 dBA at 50 feet for new trucks and 83 dBA at 50 feet for trucks already in service. These regulations cover only trucks and

buses engaged in interstate commerce. There are no EPA noise emission regulations for automobiles.

### **AIRCRAFT**

Noise from aircraft taking off and landing at the Colorado Springs Airport and the U.S. Air Force Academy is an issue for residents living near these facilities and under the flight paths. Traffic at the Colorado Springs Airport is growing steadily—it ranked 17th in the nation’s 25 Fastest Growth Airports from 1994-2000. Enplanements jumped 53.5% during that period, compared to 25.2% nationally. It must be noted that a major impetus for this growth was Western Pacific Airlines, which established a hub at Colorado Springs in the late 1990s but went out of business before the end of the decade.

While the number of flights and the size of the aircraft at the Colorado Springs Airport are continually increasing, the noise level of individual planes has been decreasing. By 1989, the quieter “Stage III” airplanes composed nearly 40% of the domestic fleet (Air Transport Association 1991b). By the year 2004, all of the noisier Stage II aircraft must be phased out (based on the Airport Noise and Capacity Act 1990).

Despite these advancements, one reason for increased impact from aircraft over time is the number of residents living in proximity to these airports and their flight paths.

### **NEIGHBORHOOD ACTIVITY (LAWN MOWING, ETC.)**

Noise from lawn mowing, street sweeping and other neighborhood activities has increased since 1950, mainly because many activities that used to be performed by hand are now motorized. That is, most lawnmowers are now motorized, leaf blowers are used in place of rakes, power tools are used in place of hand tools,



snow blowers are used in place of shovels, etc. In the future, it's likely that noise levels from these sources will decrease substantially as more and more tools are converted to electrical power as battery technology continues to develop.

### ***FREIGHT TRAINS***

Today in Colorado Springs, coal freight train noise levels are significant only along the north-south mainline tracks, where there are 30-35 trains per day. Historically, the Colorado Springs area featured far more active railroad tracks than at present, and these operations were more widely distributed.

### ***INDUSTRY***

There is relatively little noise-producing industry, such as power plants and manufacturing facilities, in Colorado Springs. It's likely that noise from manufacturing will decrease with time. Today, much of the Colorado Springs economy is powered by relatively quiet operations such as microchip manufacturing, call centers and other non-manufacturing industries.

### ***CONSTRUCTION (HIGHWAYS, HOUSING, ETC.)***

There is not much empirical data regarding what construction noise levels were like in the Colorado Springs area circa 1950. Two things are known, however: Construction equipment has become larger, more powerful and more prevalent. This is particularly evident in home construction, where almost everything is now done using power tools. Second, individual pieces of construction equipment are quieter now. For example, portable generators and compressor are readily available in "quiet" versions.

### ***TRAINING EXERCISES AT FORT CARSON***

In 1943, the Army established Camp Kit Carson, now Fort Carson, in the southern Colorado Springs area. At this facility, the Army conducts live-fire exercises involving machine guns, tanks, and mortar and artillery shells. The Army also trains with Blackhawk helicopters at the site.

Fifty years ago, this area was remote and the impact to residents minimal, with the possible exception of local ranchers. Today, however, subdivisions have been constructed adjacent to Fort Carson, and residents often complain about the noise and vibration. Sudden noises from military training activities often can startle nearby residents, increasing their annoyance.

**TRENDS IN NOISE IN THE PIKES PEAK REGION**

In general, community noise levels have been increasing in the Colorado Springs area, and will likely continue to increase. This will be primarily due to growth in roadway traffic. There may also be an increase in train and aircraft noise, but these impacts are more localized. Roadway noise permeates all areas of Colorado Springs. Construction and industrial noise will be subject to the trends of the economy, but likely won't increase significantly. The impact of roadway noise will increase as there are more vehicle miles being driven, and more people coming to live in the area and, presumably, many of them living closer to major roadways.

Noise levels in the future will increase by 3 dBA every time vehicle miles traveled doubles, which it's predicted to do. The number of people living with noise levels of 60 dBA or greater, typical of levels along the interstate, will increase as more residences are built along major roads. The impact of these increases depends on people's perception toward noise. A noise increase of 3 dBA or less usually is not offensive to most people, but an increase of 4 to 6 dBA will be noticeable and may be annoying to some, and increases of more than 7 to 10 dBA might be considered annoying to many and very irritating to some. Increases in all these ranges are possible in different areas (see Figure 2-60).

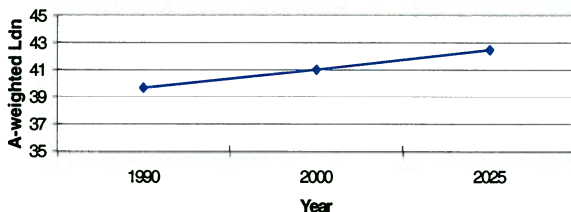


Figure 2-60. Average noise levels based on increasing population density in Colorado Springs.

**NOISE IN THE FUTURE**

It is unlikely that Colorado Springs will become the audible equivalent of New York City anytime soon. Even if it did, most people seem to have an ability to adapt, as evidenced by the millions of people living with noise levels in the 80-dBA range in major cities across the world. Compare this to the City of Colorado Springs noise ordinance, under which levels greater than 55-decibels can result in a citation.

Generally, noise levels in the Pikes Peak region will increase in the future. This will occur in established areas as the result of infill and high-density redevelopment. In rural fringe areas, noise will increase as the prairie gives way to housing subdivisions and new retail and employment centers.

One of the main objectives in the *Colorado Springs Comprehensive Plan* that relates to noise is:

- ◆ Create opportunities for travel modes that can reduce the rate of growth in automobile use.

**KEY STRATEGIES FOR DEALING WITH NOISE IN THE PIKES PEAK REGION**

**POLICY-LEVEL STRATEGIES:  
NOISE**

- ☑ The most effective noise mitigation strategy for roadways and aircraft is good planning: set back development at least 500 feet from major roadways—like I-25—and discourage development near airports.
- ☑ Support research into tire and pavement design to reduce tire/pavement noise.
- ☑ Encourage research into rechargeable-battery technology that can result in electrification of vehicles, as well as lawn mowers and other power tools used in neighborhoods.
- ☑ Minimize future development near freight rail corridors to reduce the impact of freight (and future passenger) train noise.
- ☑ Use zoning to keep noise-producing industry and residences away from one another.

**PROJECT-LEVEL STRATEGIES:  
NOISE**

- ☑ Separate development from major roadways (principal arterials and above) by at least 500 feet.
- ☑ Install earthen berms where possible, and use features within a development such as garages and commercial buildings as shields from roadways.
- ☑ When possible, delay major noise-producing actions, such as blasting or live-fire exercises at Fort Carson, until atmospheric conditions aren't conducive to the spread of sound toward residences. Also, advise nearby residents of the time and duration of such activities to reduce the startle factor.

## Case Study

### Phoenix, Arizona SOUND WALLS AND ART

One of the most ambitious efforts to improve the character of roads is a public-arts program that has been operating in Phoenix since 1987. Under the guidance of the Phoenix Arts Commission, the city planning department, and the street-transportation department, artists have been hired to design new sound walls and improve existing ones, retaining walls, bridges, and overpasses. For example, Marilyn Zwak, of Cochise, Arizona, and two assistants applied 150 tons of adobe to the Thomas Road overpass on Phoenix's Squaw Peak Parkway, shaping the twenty-four-foot-high support columns into evocative profiles inspired by Hohokam Indian zoological forms. On the retaining walls of the overpass Zwak installed thirty-four relief panels based on human, animal, and abstract images found on Hohokam artifacts. Then she invited neighborhood residents to imprint into the adobe their own designs or objects, ranging from tools to clothing remnants to the key to one of the houses that was demolished to make way for the freeway. Completed in 1990, the overpass has since been voted Phoenix's most popular work of public art.

One lesson of the Phoenix experience, says James Matteson, the city's director of street transportation, is that artists and designers should be invited to work with highway engineers while a road is being designed, rather than being asked to relieve existing highway structures of their starkness. He points out that Zwak was asked to collaborate with the engineering team for the Thomas Road overpass from the very beginning—a principal reason the project achieved such wide appreciation and yet cost less than the plain overpass the engineers would have produced.

From "Noisy Highways" by Philip Langdon. Reprinted from *The Atlantic Monthly*, August 1997.



Sample of Phoenix art work at bridge retaining wall.

Source: *Our Shared Environment: Thomas Road Overpass* by Marilyn Zwak, 1990. Images by Marilyn Szabo and courtesy of the Phoenix Arts Commission.

## Case Study

### City and County of Denver, Colorado NOISE CONTROL PROGRAM

Denver has had a community noise program since 1973, when the Noise Ordinance (Revised Municipal Code RMC, Chapter 36) was passed by City Council and signed by the mayor. When complaints of excessive noise are received by the Denver Department of Environmental Health, an inspector is assigned to investigate the complaint. If the complaint is legitimate, the source of the noise (individual/company/organization) receives a verbal or written warning of the violation requiring a noise reduction to legal levels. If the source doesn't comply with the warning, a court summons is issued. If guilty, a fine of up to \$999 per incident can be levied by the court.

A noise survey was conducted in Denver in 1995 to establish the baseline ambient noise levels in various neighborhoods within the City and County of Denver. To provide the data necessary for this baseline study, 178 short-term noise monitoring sites and 17 long-term sites were used. It is anticipated that the survey will be updated periodically to determine if the noise environment within Denver is deteriorating because of continued growth and increased vehicular traffic.

#### Other relevant case studies to see in this report:

- City of Austin, Texas: Sustainable Communities Initiative
- Fort Carson, Colorado
- Greater Wasatch Area, Utah: Envision Utah
- Kansas City region, Kansas and Missouri

#### Key written resources:

*"Noise Analysis and Abatement Guidelines,"* Colorado Department of Transportation, 2002.

*"Highway Traffic Noise,"* U.S. Department of Transportation, Federal Highway Administration, [www.nonoise.org/library/highway/traffic/traffic.htm](http://www.nonoise.org/library/highway/traffic/traffic.htm).

*"Highway Traffic Noise Analysis and Abatement Policy and Guidance,"* U.S. Department of Transportation, Federal Highway Administration, Office of Environment And Planning, Noise and Air Quality Branch, [www.nonoise.org/library/highway/policy.htm](http://www.nonoise.org/library/highway/policy.htm).

*"Highway Traffic Noise in the United States: Problem and Response,"* U.S. Department of Transportation, Federal Highway Administration, [www.nonoise.org/library/highway/probresp.htm](http://www.nonoise.org/library/highway/probresp.htm).

*"Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety,"* U.S. Environmental Protection Agency.

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## 2-F. VISUAL RESOURCES

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**S**ome aspects of the landscape are very important to us and to our quality of life, although hard to define. Visual resources are an example. Most everyone agrees that attractive surroundings contribute greatly to sustaining quality of life. The things we see around us in our daily lives can inspire, exhilarate, or calm us. These visual elements—as small as a tree or a flower and as big as a mountain—are the reference points that tell us not only where we are, but also what we are as a community.

**Measurable indicators of visual resources** (what to look at for gauging what is happening to visual resources in the Pikes Peak region).

- Status of places listed on the Colorado Springs Urban Growth Area Inventory of Significant Natural Features
- Ratio of open lands to built areas
- Number of buildings on the National Register of Historic Places
- Number of historic neighborhoods
- Number of places with public art



*Figure 2-61. Pikes Peak, the region's predominant visual feature.*

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## Visual Resources

A key component of visual quality in the Pikes Peak region is the almost always-present view to Pikes Peak, so important a feature it gives our region its name. Times of the year and times of the day change how we perceive the view.

At a more human scale than views of Pikes Peak, views to the city's historic and architecturally significant features are also important visual resources. These include buildings, open spaces, significant and prominent physical features, and parks.

Also important are views to significant human-created landscapes, including prominent districts such as downtown and its buildings, and the significant vegetation and streetscaping found along many transportation corridors. Often these corridors include planted street medians, street trees, and textured pavement features.

“Smart, talented people, not companies, are the center of the knowledge economy. They are moving where they want to live, and jobs are coming to them. As a result, places that offer a high quality of life, high environmental quality, natural beauty, outdoor recreation, thriving cultural centers and active downtown areas are ones that thrive—because they appeal to talented people.”

—Richard M. Rosan, president  
Urban Institute

Source: “The Key Role of Universities in Our Nation’s Economic Growth and Urban Revitalization”

The *Colorado Springs Urban Growth Area Inventory of Significant Natural Features* carefully documents and evaluates the location, significance and overall

importance of well-defined natural features that are directly connected to travel corridors in the Colorado Springs area, including I-25.

Colorado Springs’ urban forest—the trees that people have planted throughout the city—makes an important contribution to the quality of life in the region by providing air pollution removal, stormwater runoff prevention, water quality improvement, carbon storage and sequestration, and energy savings provided by shade and evapo-transpiration.

Highway corridors with well-placed landscape features contribute to the region’s “sense of place” and the process of finding one’s way through the region. A good example of this is found in the design and careful placement of public art within the Colorado Springs Airport property along Drennan Road (e.g., large sculptures of a bison and a Native American hunter on horseback).

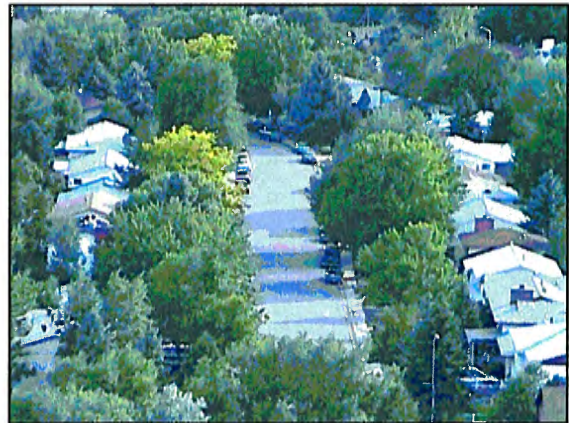


Figure 2-62. *Prairie grassland converted to residential subdivision in 1967 now is part of the urban forest of Colorado Springs.*

### **VISUAL RESOURCES IN THE HISTORIC PAST**

Since before people settled in the region, the Front Range mountain backdrop—and especially Pikes Peak—has been noted as a dominant visual feature. Other significant natural features that have contributed to the region’s scenic quality include Monument Creek, Shooks Run, Pulpit Rock, Garden of the Gods, Cheyenne Canyon and Cheyenne Mountain. Mining and quarrying has degraded the natural appearance of parts of the mountain backdrop.

### **VISUAL RESOURCES TODAY**

Culturally significant buildings of the Pikes Peak region include the historic El Paso County Courthouse (now housing the Colorado Springs Pioneers Museum), the Colorado Springs Fine Arts Center, many downtown Colorado Springs churches, including Saint Mary’s Cathedral, the Denver & Rio Grande Western Railroad station (now Giuseppe’s Restaurant).

The region also has significant open, undeveloped agricultural spaces such as the landscapes mentioned in the Inventory of Significant Visual Resources. These include the foothills between the flatter prairie ecosystems of Colorado Springs and the montane biomes of the Front Range.

Development on hillsides—because of its potential to be seen from a great distance—can have a significant impact on scenic quality. For this reason the City of Colorado Springs has a hillside overlay zone that stipulates how development can occur so that it is less visually intrusive.

Older trees in the urban forest have matured, creating a shady oasis. While the city’s urban forest and extensive park-like landscapes of bluegrass are very



*Figure 2-63. An historic view of Pikes Peak.*



*Figure 2-64. A view of Pikes Peak today.*

attractive to residents, they come at a considerable cost of water and other resources.

There is some recognition today of the importance of views to grasslands, as well as the more dramatic mountains. The *El Paso County Comprehensive Plan* (October 1993) identifies various scenic views suggested for preservation, including not only local views of bluffs and westward views of the Front Range, but also views eastward toward the prairie. Specifically, this includes views between J.D. Johnson Road and Log Road (north-south roads) for the six miles south of Judge Orr Road.

A new stage of landscape design is evolving in the region that makes better use of indigenous plants and materials, rather than trying to recreate the look of more humid landscapes.



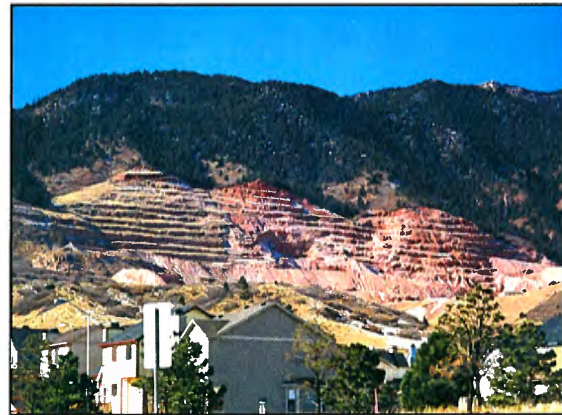
### **AGGREGATE MINING**

The El Paso County Land Development Code (Chapter IV, Section 35.13) identifies development requirements for mineral and natural resource extraction operations. Selected requirements related to visual impacts include:

- ▶ The use will not have an adverse long-term visual impact either from adjacent and adjoining properties or from major transportation corridors.
  - ▶ The site can be reclaimed to a use and character compatible with surrounding uses and zoning.
  - ▶ Reclamation of adverse visual and other environmental impacts will take place within a reasonable and specified time frame.
- ▶ Depiction of the approximate number of existing and anticipated future residences, businesses and institutions that will be visually impacted.
  - ▶ Identification of major transportation corridors from which any part of the proposed operation will be visible.
  - ▶ Temporal aspects of the visual impact.
  - ▶ Night lighting and glare.
  - ▶ Textual and graphic description of measures proposed to mitigate visual impacts.

Report guidelines for visual-impact analysis of mineral and natural resource extraction operations require that the following aspects be addressed:

- ▶ Graphic depiction of all off-site properties which will be visually impacted during each of the proposed phases and upon completion of the operation.



*Figure 2-65. Quarry operations in the foothills of the Pikes Peak region have created visual scars that will take decades to heal.*



Figure 2-66. St. Mary's Cathedral, one of the region's culturally important buildings, stands astride Bijou Street, a key gateway entrance into downtown Colorado Springs.



Figure 2-67. The First Congregational Church, also in downtown Colorado Springs, on St. Vrain Street at Tejon, was built in 1889.

### TRENDS IN VISUAL QUALITY

The region's visual quality is threatened by the sheer volume of development and by the patterns of that development. As Colorado Springs has expanded, fewer people find themselves living adjacent to undeveloped land and the scenic and recreational resources it offers.

The mountain backdrop, however, is so visually dominant that it will always play a crucial role in defining the region's visual quality, even if houses and other developments on its ridges detract from views to it and its mining scars cannot be completely erased.

Sound attenuation walls along roads can limit transportation corridor users' views to scenic resources, such as the mountain backdrop. As more and more people spend time in stop-and-go traffic, it will be important to improve the visual quality of highway corridors in which they will find themselves.

The loss of historic buildings to new development is degrading the sense of place. Often new development has generic architecture not related to the

Pikes Peak region and extensive plantings of bluegrass and other exotic plant species. Through these actions we miss the opportunity to further develop an indigenous sense of place.

Highway improvements—including significant expanses of rights of way, prominent structures and interchanges—negatively compete with the development of more visually pleasing resources. The development of low density, sprawling housing areas can be visually disruptive. This development also can unnecessarily encourage the absorption of significant natural features, including open areas into the less visually appealing built environment.



Figure 2-68. Indigenous plants, which blend with the surrounding landscape in the region, are being used more in new developments.

## VISUAL CHARACTER IN THE FUTURE

A key policy document that pertains to the visual character of the region in the future is the *Colorado Springs Comprehensive Plan*. One of the goals of that plan is to “strengthen the quality of development’s visual character and appearance.” Additional aspects of the City’s vision are noted in the text box below.

Our Community envisions a Colorado Springs that...

- ◆ respects its heritage and natural setting
- ◆ projects a highly attractive image and protects its unique character and scenic beauty
- ◆ provides an incomparable system of open spaces, natural areas, and greenways

Source: *Colorado Springs Comprehensive Plan*

The nighttime sky over Colorado Springs and the Colorado Front Range today is much brighter than in the past, due to continued rapid population growth and the associated increased use of artificial lighting. This is an issue of concern not only to amateur astronomers, but to biologists as well. Artificial light makes vulnerable certain nocturnal animals who depend on darkness for safety from predators. Also, unnecessary use of lighting wastes energy and ultimately causes pollution in the energy production cycle.

In 2001, the Colorado General Assembly passed “Dark Skies” legislation geared toward minimizing unnecessary use of artificial lighting. Additionally, the law (CRS 24-82-901) has specific provisions for CDOT to ensure that highway lighting is installed in a manner so as to shield the fixtures from direct view and minimize upward lighting.



Figure 2-69. The Garden of the Gods is El Paso County’s second most-famous geological landmark.

## **STRATEGIES FOR SUSTAINING VISUAL RESOURCES IN THE PIKES PEAK REGION**

### **POLICY-LEVEL STRATEGIES: VISUAL RESOURCES**

- Protect significant viewsheds and view corridors.
- Minimize the use of artificial lighting to preserve “dark skies.”

### **PROJECT LEVEL STRATEGIES: VISUAL RESOURCES**

- Provide and maintain visual access to important community features.
- Provide significant xeriscape corridor planting in public view.
- Provide well-designed and detailed bridges and other structures.
- Buffer transportation corridor improvements from culturally and historically significant areas.
- Reveal views to streams and other natural areas, through the sides of bridges.
- Plant medians, when possible, with native and locally adapted plants.
- Add public art to appropriate corridor and community locations.
- Provide entryway features in road corridors approaching cultural districts.
- Keep highway improvements from blocking public vistas.
- Trees should be planted in ways and places that don't restrict all-important mountain views.
- By adding significant numbers of trees, transportation arterials can become boulevards and expressways can become parkways. Such transportation corridors increase in value to the community as the trees mature.
- Use appropriate lighting design that shields roadway light fixtures from direct view and minimizes upward lighting.

## Case Study

### City of Boulder, Colorado

#### PROTECTING VIEWS TO THE FLATIRONS

In the mid-1990s, the U.S Bureau of Standards proposed a major redevelopment of their existing site on Broadway in the City of Boulder. There was considerable concern that new buildings would block views of the mesa and the Flatirons behind the property—this was one of the most popular views in the city. City staff worked with federal designers and eventually agreed to restrict the height of new buildings so that existing views could be maintained. The new facility maintains the desired views and blends in with the existing landscape.

In another case, a stretch of Highway 93 between Boulder and Golden, which contains one of the few areas west of the highway that hasn't been developed, was proposed for development. The development would have removed one of the last remaining unrestricted views of the Flatirons. This area also has a significant tallgrass prairie community. This view was considered to be such a high priority that the City of Boulder intervened and purchased a large part of this area to be managed as open space, effectively forcing the developer to change plans. The view remains unobstructed today.

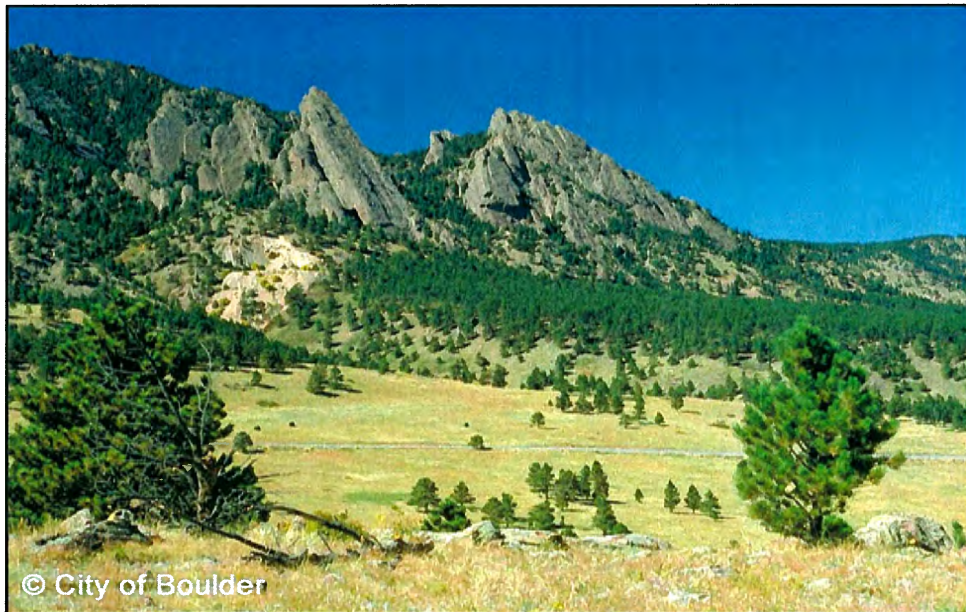


Photo courtesy City of Boulder Open Space and Mountain Parks, [www.ci.boulder.co.us/openspace](http://www.ci.boulder.co.us/openspace).

## Case Study

### Colorado Springs, Colorado BIG JOHNSON OPEN SPACE MASTER PLAN

In the fall of 2000, the City of Colorado Springs acquired an open space parcel of 646 acres adjacent to the Big Johnson Reservoir, south of the Colorado Springs Municipal Airport and Powers Boulevard. This open space area is an important prairie remnant and viewshed and is the City's first open-space acquisition of a grassland area.

The site is a valuable ecological resource attracting over 200 species of birds, including the red-tailed hawk, mountain plover, burrowing owls, and migratory shore birds. Also present are mammals including pronghorn and black-tailed prairie dogs. The site also is noted for its outstanding views of Pikes Peak and the surrounding mountains of Colorado's Front Range.

This project reflects effective collaboration and planning by its governmental and non-profit sponsors. Funding for the \$8.1 million acquisition came from the City of Colorado Springs' Trails, Open Space and Parks (TOPS) Program, supplemented with a grant from Great Outdoors Colorado (GOCO). Valuable additional support was provided by the Trust for Public Land and the Palmer Foundation.

The site is bounded to the north and the east by Powers Boulevard, a four-lane expressway. The Big Johnson Reservoir holds non-potable water and isn't used for recreational water sports. It is owned by the Fountain Mutual Irrigation Company.

Due to its proximity to the airport, noise and aviation safety issues somewhat limit the land's development potential for other uses. Plant communities on the property are somewhat degraded due to past livestock grazing.

After acquiring the land, the City prepared a Master Plan for the area, with input from a large range and number of stakeholders

While it is desirable to make the site accessible for bird watching and wildlife viewing, it's important to ensure that this human intrusion doesn't degrade the usefulness of the site as habitat for grassland flora and fauna. For example, while the Master Plan includes a loop trail, it's likely that trail users won't be allowed to bring dogs or other pets onto the property.

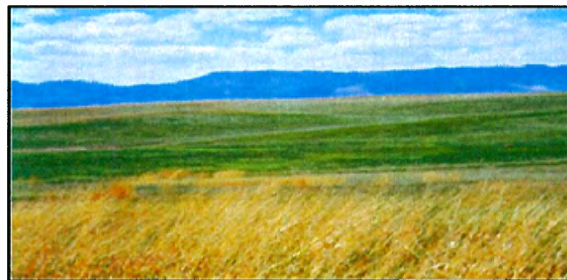
The *Big Johnson Open Space Master Plan* includes the following specific goals:

#### Ecological Goals

- ▶ Manage the property to enhance regional conservation efforts.
- ▶ Promote the conservation and restoration of natural communities.

#### Community Goals

- ▶ Maintain the open space as a buffer to the greater Colorado Springs area.
- ▶ Promote educational programs and recreational activities where appropriate.



Reference: City of Colorado Springs. *Big Johnson Open Space Master Plan, A Resource Management Guide*, November 2002. This resource has since been renamed as the **Bluestem Prairie Open Space**.

## Case Study

### U.S. Air Force Academy, Colorado UNITED STATES AIR FORCE ACADEMY DESIGN CHARETTE

Approximately six miles of Interstate 25 in northern El Paso County, Colorado, are located on U.S. Air Force Academy (USAFA) property, via an easement. This segment, extending roughly from North Academy Boulevard to North Gate Boulevard, includes the planned future connection of Interstate 25 with Powers Boulevard. A design for this interchange had been selected in 1997 through the *Powers Boulevard Environmental Assessment*, but a second chance to examine the issue arose in 2002.

The USAFA and I-25 planners have always worked together; the two facilities were constructed at about the same time. In 2002, at the request of the USAFA, the Federal Highway Administration and the Colorado Department of Transportation agreed to take a new look at the planned I-25/Powers connection. A weeklong design charette meeting was held in February 2002 to address the issue in a comprehensive manner. A public meeting about the interchange was held just before the charette to solicit public comment on issues that ought to be considered. The charette began with a discussion airing of USAFA mission needs, including airspace patterns, base security, and special event considerations, as well as I-25 environmental issues and regional and local traffic demands.

The charette also included a discussion of the academy's original design philosophy. It was noted that the widened highway median extending north and south of the North Gate interchange was deliberately planned as a subtle, visual "arrival experience" for motorists traveling the long rural highway between Denver and Colorado Springs.

The charette team then drafted several different interchange concepts and evaluated these based on criteria developed in the initial discussion. These ideas were later taken to the public for input, and ultimately a proposed concept was identified.

The result of the entire process was a new interchange concept was selected to replace the one earlier approved by FHWA. All ramps in the new design are at or below the I-25 grade, to minimize urban intrusion into the natural landscape and to minimize viewshed impacts.

Subsequently, this cooperative interagency planning process was nominated for an award from the American Planning Association. At press time, the results of the awards judging are not yet known.



*In the foreground, I-25 passes over North Gate Road. The Air Force Academy Cadet Chapel and other key campus buildings (2.5 miles distant) loom behind like a citadel on a hill.*

**Other relevant case studies to see in this report:**

- City of Austin, Texas: Sustainable Communities Initiative
- Greater Wasatch Area, Utah: Envision Utah
- Kansas City region, Kansas and Missouri

**Key written resources:**

*“American Forests Unveils CITYgreen 5.0; Nonprofit Provides New Emphasis on the Environmental and Economical Benefits of Urban Tree Cover,”*  
[www.americanforests.org/news/display.php?id=44](http://www.americanforests.org/news/display.php?id=44).

*“Calculating the Value of Boulder’s Urban Forest,”*  
[www.ci.boulder.co.us/publicworks/depts/utilities/conservation/exec\\_summary.htm](http://www.ci.boulder.co.us/publicworks/depts/utilities/conservation/exec_summary.htm).

Colorado Office of Archaeology and Historic Preservation,  
[www.coloradohistory-oahp.org](http://www.coloradohistory-oahp.org).

*“Colorado Springs Utilities Xeriscape Demonstration Garden,”* [www.csu.org/xeri](http://www.csu.org/xeri).

*“Digging Into Xeriscape Gardening,”*  
[www.ci.boulder.co.us/publicworks/depts/utilities/drought/xeri.htm](http://www.ci.boulder.co.us/publicworks/depts/utilities/drought/xeri.htm).

National Register of Historic Places, [www.cr.nps.gov/nr/about.htm](http://www.cr.nps.gov/nr/about.htm).

*“Scenic America: Smart Growth and Scenic Stewardship,”* [www.scenic.org/growth.htm](http://www.scenic.org/growth.htm).





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## APPENDICES

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### APPENDIX 1 – DESCRIPTION OF TRANSPORTATION CORRIDORS

This appendix provides additional detail about the major transportation corridors that were discussed in Section 1 of this report.

#### INTERSTATE 25

An Environmental Assessment is underway to examine the proposed widening of the region's only existing freeway (currently four lanes) to an ultimate cross-section of eight lanes through central Colorado Springs, including one lane in each direction reserved for use only by carpools and buses during peak periods. The freeway would be six lanes north of Briargate Parkway and south of the Martin Luther King US24 Bypass.

Interstate 25 was opened through Colorado Springs in 1960, and thus has been a part of the region's landscape pattern for nearly 45 years. The freeway runs through central Colorado Springs, where the City began in 1871 and most of the region's oldest buildings can be found.

North and south of central Colorado Springs, I-25 has strongly influenced development. The vast majority of today's community was built since 1960, and access to I-25 interchanges therefore was taken into account in many of these land use decisions.

For adjacent neighborhoods, increased noise levels along I-25 are of concern. There are five noise walls along the corridor today, a sixth is planned, and eight more barriers are proposed to mitigate future capacity improvements. The corridor is a noisy place and is getting ever noisier.

The alignment of I-25 largely follows existing linear features (railroad tracks and Monument and Fountain Creeks) that already created

barriers to east-west movement by people before the highway was built.

I-25 is located very close to Monument and Fountain Creeks, and was built at a time when water quality impacts of stormwater runoff were not as much of a concern as they are today. The proximity of the road to the receiving waters limits the amount of space available for water detention facilities to hold and mitigate the resulting discharge.

#### POWERS BOULEVARD

The 18-mile central section of Powers, extending from Woodmen Road and Mesa Ridge Parkway, is proposed to undergo capacity improvements and is currently the subject of an Environmental Assessment. The PPACG Long-Range Transportation Plan (*Destination 2025*) reflects this segment being upgraded from the existing expressway to a freeway.

Powers also is being extended northward for 7 miles to I-25, and there are plans to extend it southward another 10.5 miles to a future terminus at I-25 near the Pikes Peak International Raceway.

Plans for Powers Boulevard have been on the books since 1963, and was originally conceived as a possible bypass alternative for I-25. Due to rapid growth in eastern Colorado Springs, however, Powers is needed to serve its own local traffic demand, and is not primarily a bypass route.

The road itself is named after the Powers family that operated dairy and ranching operations in eastern Colorado Springs. But the wide-open spaces, cattle and pronghorn that until recently defined the corridor have rapidly given way to residential subdivisions and extensive retail development. Powers also is a main north-south route for accessing the Colorado Springs Municipal Airport.

Powers Boulevard is already a limited-access expressway, and is modeled as a freeway in the region's long-range transportation plan. Many of its at-grade intersections will need to be converted to grade-separated interchanges, which will consume a lot of land adjacent to the existing intersections. This land is already developed or rapidly developing with minimal setbacks, so any proposed corridor improvements (not yet specified in the Powers Boulevard Environmental Assessment) are likely to have impacts to adjacent businesses.

### **WOODMEN ROAD**

An Environmental Assessment is underway for the proposed widening of Woodmen Road, one of the region's busiest east-west routes. The PPACG Destination 2025 Plan reflects widening of the roadway from two lanes in each direction in urban areas and one lane in each direction in rural areas.

The most congested portion of Woodmen is the four-lane section between I-25 and Academy Boulevard. East of the intense retail land use at Academy Boulevard, Woodmen is also four lanes, passing by residential areas and less intense retail centers. East of Powers, Woodmen is just a two-lane road, but carries heavy volumes of traffic to residential areas in Falcon and Peyton. Traffic will intensify with the future development of the 20,000-acre Banning-Lewis Ranch.

Woodmen Road crosses Cottonwood Creek, Sand Creek, and a number of other south-flowing creeks that are part of the Fountain Creek Watershed. Improvements in the

Woodmen corridor will impact prairie grasslands.

### **SOUTH METRO ACCESSIBILITY STUDY**

A proposal to widen two-lane Drennan Road for four miles from Powers Boulevard to South Academy Boulevard has evolved into a joint City-County study seeking to find east-west mobility solutions for the southern edge of Colorado Springs. The study also may consider connectivity to State Highway 115, an additional 3.5 miles west of South Academy.

East of Powers, Drennan is the access road into the Colorado Springs Municipal Airport. The existing Drennan does not provide a high-speed connection between the Airport and I-25.

Social and environmental factors in this corridor include low-income residential areas on the north side of Drennan, prairie wildlife issues, the need for a crossing of Fountain Creek, I-25 interchange issues, and residential impacts near Fort Carson.

Appendices

*Table A-1  
Four Major Transportation Projects - By the Numbers*

<b>Corridor</b>	<b>Length (miles)</b>	<b>Facility Type</b>	<b>Lanes</b>	<b>Existing Weekday Traffic</b>	<b>Future Weekday Traffic</b>	<b>Traffic Increase</b>
Interstate 25 <sup>a</sup>	26 <sup>a</sup>	Freeway	4	108,500 <sup>b</sup>	171,000 <sup>c</sup>	58%
Powers Blvd.	18 <sup>d</sup>	Expressway	4/6	52,000 <sup>e</sup>	128,000 <sup>f</sup>	140%
Woodmen Road	10.5 <sup>g</sup>	Principal Arterial	2/4	35,000 <sup>h</sup>	61,000 <sup>i</sup>	74%
Drennan Road	4 <sup>j</sup>	Minor Arterial	2	14,000 <sup>k</sup>	38,000 <sup>l</sup>	171%

**Notes:**

- a. from South Academy Boulevard (Exit 135) to Monument (Exit 161)
- b. denotes highest year 2000 volume in corridor, found north of Bijou Street (Exit 141)
- c. denotes highest year 2025 volume in corridor, assuming capacity improvements made
- d. segment from Woodmen Road to Mesa Ridge Parkway
- e. denotes highest year 2000 volume in corridor, found north of Palmer Park Blvd.
- f. denotes highest year 2025 volume in corridor, assuming Powers upgraded to freeway
- g. segment from Interstate 25 to U.S. Highway 24
- h. year 2000 volume west of Academy Boulevard, from PPACG Regional 2001 Traffic Volume Map
- i. year 2025 volume west of Academy Boulevard, assuming Woodmen Road capacity improvements
- j. segment from Powers Boulevard to Academy Boulevard; proposed improvements may vary
- k. year 2000 volume west of Hancock Expressway, from PPACG Regional 2001 Traffic Volume Map
- l. projected volume for four-lane freeway segment, from Colorado Springs East-West Mobility Study

## APPENDIX 2 – DESCRIPTION OF ECOLOGICAL COMMUNITIES

This appendix provides additional detail about the land cover types that were discussed in Section 2-A (“Landscape Patterns”) of this report. Additional information about sensitive species found in the Pikes Peak Region follows, in Table A-2.

El Paso County consists of a complex array of ecosystems that mirror a diverse landscape and wide range in elevations. Although much of the County has been converted to other land uses, remnants of many of the original natural ecosystems are still evident. The biodiversity of these systems can be used as a barometer of ecosystem health and a measure of the changes that have occurred since the area was settled by European-influenced culture. Five ecosystems or land cover types were selected as markers to characterize the cumulative effects to natural resources in El Paso County. These include shortgrass prairie, forests, riparian and wetland areas, agricultural development, and urban areas.

Other important ecosystems occur in El Paso County, but tracking changes to many of these through aerial photograph interpretation may not be practicable. For example, shrub-dominated vegetation occurs in much of the County at a slightly lower elevation position or on more xerophytic sites, and in close proximity to ponderosa pine. And in fact, an “Oak – mountain mahogany” zone has been noted for the higher plateaus of the County, between the forested area and grasslands (Monument Creek Watershed Landscape Assessment 2002), but is not described here as a separate entity because of its disjunct, patchy nature.

### SHORTGRASS PRAIRIE

Originally the shortgrass prairie ecosystem covered a nearly contiguous area, extending from eastern Kansas west to the Rocky Mountains and from Texas into Canada (Oosting 1956, Kuchler

1967). This prairie is typified by a blue grama (*Bouteloua gracilis*) and buffalograss (*Buchloe dactyloides*) association. But the dynamics of this ecosystem were characterized by a productive grazer component of bison (*Bison bison*), pronghorn (*Antilocapra americana*) and small mammal (e.g., black-tailed prairie dog: *Cynomys ludovicianus*). These herbivores in turn supported numerous predator species, including wolf (*Canis lupus*), coyote (*Canis latrans*), swift fox (*Vulpes velox*), various raptors, as well as with bullsnake (*Pituophis melanoleucus*) and prairie rattlesnake (*Crotalus viridis viridis*).

Generally, western wheatgrass (*Pascopyrum*[*Agropyron*] *smithii*), needle-and-thread (*Hesperostipa* [*Stipa*] *comata*), and junegrass (*Koeleria macrantha*) occur as associates of blue grama and buffalo grass (Soil Conservation Service [SCS] 1981). In eastern Colorado though, fringed sage (*Artemisia frigida*) and threadleaf sedge (*Carex filifolia*) often occur commonly with junegrass to characterize shortgrass prairie (Barbour and Billings 1988).

Much of this ecosystem was converted either to farmland or livestock production in the late 1800s and early 1900s (*Monument Creek Watershed Landscape Assessment, 2002*). Because short grass plant species are low in stature and adapted to grazing by bison, livestock use has in many cases preserved some elements of this ecosystem. If overgrazed, however, weedy perennial species often predominate, and include prickly pear (*Opuntia polyacantha*), snakeweed (*Gutierrezia sarothrae*), and

yucca (*Yucca glauca*). At present, remnants of short grass prairie occur as scattered tracts in El Paso County, primarily east of I-25.

Because this ecosystem currently exists as disjunct patches, and in a variety of altered states, it contains numerous extirpated and rare species. These include bison, wolf, burrowing owl (*Athene cuniculatus*), swift fox, mountain plover (*Chadrius montanus*), and long-billed curlew (*Numenius americanus*).

## FORESTS

Forests become prominent at approximately 6500 feet elevation in El Paso County, first as open ponderosa pine (*Pinus ponderosa*) parkland or woodland on the eastern edge of the foothills, along what Weber and Whitman (2001) term the mountain front. An outlier of ponderosa pine forest occurs in the Black Forest area northeast of Colorado Springs, with Douglas-fir (*Psuedotsuga menziesii*) occupying north-exposed ravines and canyons. Pinon – juniper (*Pinus edulis* – *Sabina* [*Juniperus*] *monosperma*) woodlands occur along the foothills along the mountain front throughout the County (e.g., Garden of the Gods Park, Fort Carson) and as a lower elevational fringe to ponderosa pine.

In much of the uplands and hills surrounding Colorado Springs, and as the characterizing element of the Black Forest area, ponderosa pine commonly interfaces with oakbrush or Gambel oak (*Quercus gambelii*), as well as grassland elements, such as blue grama, little bluestem, and junegrass that form much of the ground cover. Other prominent species are Oregon grape (*Mahonia repens*), antelope bitterbrush (*Purshia tridentata*), mountain-mahogany (*Cercocarpus montanus*), currant (*Ribes*

*aureum*), and yucca (City of Colorado Springs 1997).

With continued increases in elevation, the montane elements of Douglas-fir and ponderosa pine are replaced at approximately 9500 feet elevation by forests of Englemann spruce (*Picea engelmannii*) and subalpine fir (*Abies bifolia* [= *lasiocarpa*]), as well as lodgepole pine (*Pinus contorta*) and aspen (*Populus tremuloides*) as subclimax or disturbance elements within this forest habitat.

Characteristic animal species of montane woodlands and forests include mule deer (*Odocoileus hemionus*), mountain lion (*Felis concolor*), bobcat (*Lynx rufus*), coyote, red fox (*Vulpes fulva*), black bear (*Ursus americana*), porcupine (*Erethizon dorsatum*), striped skunk (*Mephitis mephitis*), Abert squirrel (*Sciurus aberti*), bushy-tailed woodrat (*Neotoma cinerea*), and many other birds and small mammals.

These forests have changed in composition with the advent of settlement by European culture. Many of the ponderosa pine and Douglas-fir have been logged for timber starting in approximately 1860 (Monument Creek Watershed Landscape Assessment, 2002). Re-growth since logging, along with fire suppression and livestock grazing have generally increased the forest densities, and decreased the heterogeneity or forest diversity both in structure and numbers of species.

## RIPARIAN AND WETLAND ECOSYSTEMS

Riparian communities occur along most of the stream systems in the project area. Willow-dominated shrub habitat defines most stream systems throughout El Paso County (Colorado Division of Wildlife 1998). Dominant species are sandbar willow (*Salix exigua*), crack willow

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(*S. fragilis*), peachleaf willow (*S. amygdaloides*), and in some areas lead plant (*Amorpha fruticosa*) (City of Colorado Springs 1997).

Other species that occur primarily as subordinates to willows include red osier dogwood (*Swida sericea*), wild plum (*Prunus americana*), chokecherry (*Padus [Prunus] virginiana*), Baltic rush (*Juncus balticus*), cocklebur (*Xanthium strumarium*), and snowberry (*Symphoricarpos occidentalis*).

Occasionally, plains cottonwoods (*Populus deltoides*) are scattered along drainages that contain a floodplain or valley floor, and form a more mature community. Boxelder (*Acer negundo*) may also occur as part of this community, along with bluegrass (*Poa* spp.), bluejoint (*Calamagrostis canadensis*), snowberry, orchardgrass (*Dactylis glomerata*), and meadow foxtail (*Alopecurus pratensis*).

Characteristic animal species of riparian areas include mule deer, white-tailed deer (*Odocoileus virginianus*), beaver (*Castor canadensis*), red fox, striped skunk, deer mouse (*Peromyscus maniculatus*), and other small mammals. These areas also provide habitat to a great diversity of songbirds, waterfowl, shore-birds and wading birds (e.g., great blue heron: *Ardea herodias*), as well as reptiles, such as plains garter snake (*Thamnophis radix*). Raptor species including red-tailed hawk (*Buteo jamaicensis*) and great-horned owl (*Bubo virginianus*) often nest in riparian areas where habitat is suitable and prey species are more plentiful.

Preble's meadow jumping mouse (*Zapus hudsonius preblei*) is endemic to riparian habitats along the Front Range of Colorado, and is listed federally as threatened. Such species can be used as a measure of riparian ecosystem health. Over-development, overuse, and stream channelization, for example, often

reduce the habitat diversity making it unsuitable for many of the original species that depend on these scarce waterways.

Riparian areas in much of the County have been affected over the last 150 years by heavy livestock use. Because of the high productivity of forage in riparian areas, and availability of water, livestock often congregate in these areas, resulting in decreased vegetation cover and diversity as well as decreased water quality (sedimentation-siltation) (Monument Creek Watershed Landscape Assessment 2002).

Wetlands occur as part of the riparian stream courses, but also as seeps and ponds, which are a prominent feature in an otherwise dry prairie and woodland landscape. Riparian systems and seeps were often dammed as part of livestock grazing operations, and stock ponds remain a prominent feature in the County, especially east of I-25. These areas have in some cases increased the habitat diversity of riparian systems to include additional areas of marsh and open water.

Wetlands of seeps and springs occur frequently north and east of Colorado Springs in conjunction with the Dawson Formation of alluvium (von Ahlefeldt 1998). Ground water that flows laterally through this alluvium from the Black Forest area surfaces when it encounters a clay lens, forming seeps and ponds. This area gives rise to a number of streams that eventually flow into Fountain Creek and Monument Creek

Seeps and wetland swales are characterized by narrowleaf cattail (*Typha latifolia*), Baltic rush, Nebraska sedge (*Carex nebraskensis*), tufted hairgrass (*Deschampsia cespitosa*), wild iris (*Iris missouriensis*), bulrush (*Bolboschoenus maritimus* ssp. *paludosus* [*Scirpus paludosus*]), and three-square (*Schoenoplectus pungens* [*Scirpus*

*americanus*]). Near-surface moisture is often marked by thick, dark green stands of Baltic rush and sedges. These areas are an important feature to the ecosystem, and support a diverse array of wildlife species.

## AGRICULTURE

Areas of prairie were first used in the region's development for livestock production, which remains as an important livelihood in the County. Both dryland and irrigated crops have been developed in El Paso County since the 1860s (SCS 1981). Settlers in the Fountain Creek valley first irrigated small fields of potatoes and corn. Irrigation was also initiated in the early 1900s in the Black Squirrel Creek basin to grow native hay. Today, dryland crops primarily consist of small grain (e.g., winter wheat), millet, and sorghum, while irrigated crops include alfalfa, corn and pinto beans. Many areas of croplands have lately been converted to pastures and rangeland, and beef production is an important part of most farm operations (SCS 1981).

A second swing in land development has occurred over the last 15 – 20 years, as Colorado Springs and other communities in the County have experienced rapid growth. This growth has converted land use in many communities from agricultural to urban development.

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Appendices

Table A-2. Sensitive Species That Potentially Occur in El Paso County, Colorado

SCIENTIFIC NAME	COMMON NAME	STATUS CODE*	HABITAT	RCEA COVER TYPE	DREN-NAN	I-25	POWERS	WOOD-MEN	POTENTIAL TO BE IMPACTED	TYPE OF IMPACT
<b>AMPHIBIANS</b>										
<i>Rana pipiens</i>	Northern leopard frog	FSS, BLM	Ponds, ditches, wet meadows	OT, RI	1.2%	6.6 %	2.7%	2.9%	Moderate; suitable habitat present within project area buffers and species is known to be present in Colorado Springs area.	Habitat loss, indirect effects due to water quality issues.
<b>BIRDS</b>										
<i>Buteo regalis</i>	Ferruginous hawk	FSS, BLM, SC	Open grasslands	SG, AG	43.1 %	38.8 %	60.3%	4.9 %	Low; project area is within known range of this species and suitable habitat is present. However, this species probably uses the area lightly.	Direct habitat loss, indirect habitat loss due to increased development and disturbance.
<i>Charadrius montanus</i>	Mountain plover	FSS, SC	Short-grass prairie with very short grass (grazed; prairie dog	SG	42.0 %	36.9 %	58.3 %	43.5 %	Low, suitable habitat – heavily grazed or	Direct habitat loss, indirect habitat loss due to increased

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SCIENTIFIC NAME	COMMON NAME	STATUS CODE*	HABITAT	RCEA COVER TYPE	DREN-NAN	I-25	POWERS	WOOD-MEN	POTENTIAL TO BE IMPACTED	TYPE OF IMPACT
			towns), flat slopes						burned, with low amounts of human disturbance - probably rare in project area.	development and disturbance.
<i>Falco peregrinus aratum</i>	American peregrine falcon	FSS	Nests on cliffs, forages in adjacent habitats	All					Depends if there are birds currently breeding in the region. Peregrines hunt widely around their nest sites.	Indirect habitat loss due to increased development and disturbance.
<i>Grus Americana</i>	Whooping crane	FE, SE	Mudflats, wet meadows, agricultural areas	RI, AG	2.0 %	6.7 %	4.6 %	3.2 %	Very low; rare migrant only.	Direct habitat loss, indirect habitat loss due to increased development and disturbance.
<i>Haliaeetus leucocephalus</i>	Bald eagle	FT, ST	Reservoirs, rivers, prairie dog towns	OT, RI, SG, AG	44.3 %	45.4 %	63.0 %	43.9 %	Low; likely present only at active prairie dog towns with adjacent development perches, and only in winter.	Direct habitat loss, indirect habitat loss due to increased development and disturbance.

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SCIENTIFIC NAME	COMMON NAME	STATUS CODE*	HABITAT	RCEA COVER TYPE	DREN-NAN	I-25	POWERS	WOOD-MEN	POTENTIAL TO BE IMPACTED	TYPE OF IMPACT
<i>Numenius americanus</i>	Long-billed curlew	FSS, SC	Shortgrass prairie	SG, AG	43.1%	38.8 %	60.3 %	4.9 %	Low; suitable habitat present in project area but this species is most likely present in the area only during migration.	Direct habitat loss, indirect habitat loss due to increased development and disturbance.
<i>Strix occidentalis lucida</i>	Mexican spotted owl	FT, ST	Canyons with old growth coniferous forest	none	-	-	-	-	None; no suitable habitat in project area.	-
<b>FISH</b>										
<i>Etheostoma cragini</i>	Arkansas darter	ST	Clear waters 3,000-6500', with sandy bottoms, moderate current, and abundant rooted vegetation	OT	0.3 %	1.8 %	0.1 %	0.1 %	Moderate; moderately suitable habitat exists in project area, confirmed present downstream of Colorado Springs.	Indirect effects due to water quality issues.

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SCIENTIFIC NAME	COMMON NAME	STATUS CODE*	HABITAT	RCEA COVER TYPE	DREN-NAN	I-25	POWERS	WOOD-MEN	POTENTIAL TO BE IMPACTED	TYPE OF IMPACT
<b>MAMMALS</b>										
<i>Conepatus mesoleucus</i>	Common hog-nosed skunk	FSS	Canyons in PJ and oakbrush habitats and possibly grasslands.	FR	0.0 %	0.4 %	0.0 %	0.2 %	Very low; very small amounts of suitable habitat present in project area and last confirmed record of this species El Paso County dates from 1920s.	Direct habitat loss, indirect habitat loss due to increased development and disturbance.
<i>Cynomys gunnisoni</i>	Gunnison's prairie dog	FSS	Open grasslands	SG, AG	43.1 %	38.8 %	60.3 %	4.9 %	Moderate; suitable habitat is present, confirmed population at Northgate Interchange on the Air Force Academy However, this is the easternmost record of this species.	Direct habitat loss, indirect habitat loss due to increased development and disturbance.

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SCIENTIFIC NAME	COMMON NAME	STATUS CODE*	HABITAT	RCEA COVER TYPE	DREN-NAN	I-25	POWERS	WOOD-MEN	POTENTIAL TO BE IMPACTED	TYPE OF IMPACT
<i>Cynomys ludovicianus</i>	black-tailed prairie dog	FSS, SC	Short grasslands	SG, AG	43.1 %	38.8 %	60.3 %	4.9 %	Moderate; this species is known to exist in the project area.	Direct habitat loss, indirect habitat loss due to increased development and disturbance.
<i>Mustela nigripes</i>	Black-footed ferret	FE, SE	Prairie dog towns	SG	42.0 %	36.9 %	58.3 %	43.5 %	Very Low; there are no current records of this species on the Front Range. Existing prairie dog towns in the area are too small to support this species.	-
<i>Plecotus townsendii pallescens</i>	Townsend's big-eared bat	FSS	Forested, riparian, and urban areas.	RI, FR, UR	55.7 %	54.2 %	34.6 %	44.9 %	Low; suitable habitat is widespread but there are no records of this species in the project area.	Direct habitat loss, indirect habitat loss due to increased development and disturbance.

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SCIENTIFIC NAME	COMMON NAME	STATUS CODE*	HABITAT	RCEA COVER TYPE	DREN-NAN	I-25	POWERS	WOOD-MEN	POTENTIAL TO BE IMPACTED	TYPE OF IMPACT
<i>Vulpes velox</i>	Swift fox	FSS, SC	Open grasslands	SG, AG	43.1 %	38.8 %	60.3 %	4.9 %	Low; suitable habitat is present within the project area, but the existing level of development in the project area probably excludes this species.	Direct habitat loss, indirect habitat loss due to increased development and disturbance.
<i>Zapus hudsonius preblei</i>	Prebles meadow jumping mouse	FT, ST	Riparian areas and adjacent uplands	RI	0.9 %	4.8 %	2.6 %	2.8 %	High; species is known to be present within the project area buffers.	Direct habitat loss, indirect habitat loss due to increased development/ disturbance.
<b>PLANTS</b>										
<i>Ambrosia linearis</i>	Plains ragweed	FSS	Sandy soils in seasonal moist prairie habitats, elevations of 4,300-6,700'	SG	42.0 %	36.9 %	58.3 %	43.5 %	Moderate; habitat is likely present in the project area.	Direct habitat loss, indirect habitat loss due to increased development and disturbance.
<i>Aquilegia chrysantha var. rydbergii</i>	Golden columbine	FSS, BLM	Rocky outcrops along mountain streams, 5,500-6,000' elevation	RI	0.9 %	4.8 %	2.6 %	2.8 %	None; no suitable habitat in project area.	-

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SCIENTIFIC NAME	COMMON NAME	STATUS CODE*	HABITAT	RCEA COVER TYPE	DREN-NAN	I-25	POWERS	WOOD-MEN	POTENTIAL TO BE IMPACTED	TYPE OF IMPACT
<i>Botrychium echo</i>	Reflected moonwort	FSS	9,500 – 1,100' elevation	none	-	-	-	-	None; project area is to low in elevation.	-
<i>Botrychium lineare</i>	Narrowleaf grapefern	FSS	7,900 – 9,500' elevation	none	-	-	-	-	None; project area is to low in elevation.	-
<i>Eriogonum brandegeei</i>	Brandegee wild buckwheat	FSS, BLM	Sage, Pinyon-Juniper, sparsely vegetated areas, shale/limestone soils, 5,700-7,600' elevation	SH	0.9 %	5.3 %	5.0 %	11.1 %	Very low; preferred habitat does not occur in project area.	Indirect habitat loss due to increased development and disturbance as a result of the project.
<i>Malaxis monophyllos</i> ssp. <i>Brachypoda</i>	White adders-mouth	FSS	Shaded side streams, mossy wet areas, 7,200-8,000' elevation	None	-	-	-	-	None; project area is to low in elevation.	-
<i>Nuttallia chrysantha</i>	Golden blazing star	BLM	Barren slopes of limestone/shale	None	-	-	-	-	None; habitat does not occur in project area.	-
<i>Ptilagrostis mongholica</i> ssp. <i>Porteri</i>	Porter feathergrass	FSS	Hummocks in fens and willow carrs, 9,200 – 12,000' elevation	None	-	-	-	-	None; project area is to low in elevation.	-

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SCIENTIFIC NAME	COMMON NAME	STATUS CODE*	HABITAT	RCEA COVER TYPE	DREN-NAN	I-25	POWERS	WOOD-MEN	POTENTIAL TO BE IMPACTED	TYPE OF IMPACT
<i>Spiranthes diluvialis</i>	Ute Ladies' tresses	FT	Sub-irrigated alluvial area of open meadow floodplains, 4,500-6,800' elevation	RI	0.9%	4.8%	2.6%	2.8%	Very low; suitable habitat may occur in the project area but there are no records of this species in El Paso County	Direct habitat loss, Direct habitat loss, indirect habitat loss due to increased development and disturbance.
<i>Viola pedatifida</i>	Prairie violet	S2	Prairies, open woodlands, and forest openings; rocky sites. 5,800-8,800' elevation	SG	42.0 %	36.9 %	58.3 %	43.5 %	Moderate; suitable habitat likely to occur in foothills adjacent to project area and in the Black Forest area.	Indirect habitat loss due to increased development and disturbance as a result of the project.
<i>Viola selkirkii</i>	Selkirk violet	FSS	Cold mountain forests, moist thickets, 8,500 – 9,100' elevation	None	-	-	-	-	None; project area is too low in elevation.	-
<b>REPTILES</b>										
<i>Sistrurus catenatus</i>	Massasauga rattlesnake	FSS, BLM	Dry plains, grasslands, often in grazed areas	SG	42.0 %	36.9 %	58.3 %	43.5 %	Very low; no known records for El Paso County.	Direct habitat loss, indirect habitat loss due to increased development and disturbance.





## Appendices

*Table A-2, concluded:*

**\*Explanation of Status Codes:**

FSS=Forest Service Sensitive  
BLM=Bureau of Land Management Sensitive,  
SC=State Species of Special Concern,  
FE=Federal Endangered,  
FT=Federal Threatened,  
ST=State Threatened

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## Glossary

***sediment and erosion control.*** Practices and processes that effectively protect the soil surface from the erosive force of rain, stormwater runoff and, in some cases, wind. Higher rates of erosion and sediment loss typically accompany urban development. A variety of planning, design and engineering practices are used to minimize the negative impacts of erosion on urban streams. (MARC)

***sense of place.*** A feeling of attachment and belonging to a particular place or environment having a special character and familiarity. (MARC)

***spatial.*** Related to space. (TRB)

***street hierarchy.*** The system by which roads are classified according to their purpose and the travel demand they serve.

***sustainability.*** The capacity of forests, ranging from stands to eco-regions, to maintain their health, productivity, diversity and overall integrity in the long run, within the context of human activity and use. (SAF)

***temporal.*** Dealing with time. (TRB)

***threatened species.*** A plant or animal species likely to become endangered throughout all or a significant portion of its range. (SAF)

***total maximum daily load (TMDL).*** A calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. (EPA)

***traditional neighborhood development.*** Planned neighborhoods that offer alternatives to conventional, use-segregated developments by providing greater variety in type, design and layout of residential and nonresidential uses. This mixed-use development pattern seeks to connect people to places by combining a variety of housing types with limited office, retail and civic uses into a pedestrian-friendly setting. (MARC)

***traffic calming.*** Street design measures that slow down traffic, restrict the areas in which cars are allowed and otherwise manage the flow of traffic to make other forms of transportation such as walking and bicycling more attractive and feasible options. (MARC)

***transition zone.*** Areas of habitat where species of defined or distinct adjacent communities mix and thereby are not classified as either adjacent community. (TRB)

***transit-supportive development.*** A development pattern that reinforces the use of public transportation through efficient, pedestrian-oriented land-use design and higher densities. The development, within walking distance of the transit station, center or stop, offers a variety of housing and commercial activities. (MARC)

***USDA.*** United States Department of Agriculture.

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## Glossary

**population.** Functional group of individuals that interbreed within a given, often arbitrarily chosen, area. (TRB)

**private lands.** Lands owned by conservation organizations, corporations, private citizens or other non-governmental entities that are eligible for funding and assistance from the Federal agencies for wildlife conservation projects. (SAF)

**public spaces.** Places that create community identity, foster social interaction and add community vitality. They may include major sites in central locations such as urban riverfronts, downtown plazas and parks, shopping streets and historic districts. Public spaces may be libraries, post offices or other civic building areas. Smaller, less central sites include neighborhood streets and parks, playgrounds, gardens, neighborhood squares and older suburban commercial centers. (MARC)

**redevelopment.** Reinvestment in older elements of a region—a historic structure, long-time residential community, Brownfield, shopping center or main street—offers an opportunity to revitalize communities while preserving social and environmental values. (MARC)

**region.** An area of that embraces several landscapes or ecosystems that share some qualitative criteria in, e.g., topography, fauna, vegetation, climate or urbanization. (TRB)

**restoration ecology.** The practice of using ecological principles and experience to return a degraded habitat or ecosystem to its former or original state. (SAF)

**restoration.** Process of returning something to an earlier condition or position. Ecological restoration involves a series of measures and activities undertaken to return a degraded ecosystem to a former healthier state. (TRB)

**riparian.** Of, or pertaining to, the zone of wetland vegetation growing along a flowing or intermittent drainage or standing body of water. (SAF)

**riparian habitat.** Habitat situated by a riverbank or other body of water. (TRB)

**scale.** Spatial and temporal dimensions of objects, patterns, and processes. Scale is an inherent property of nature but also intimately associated with observation, analysis and processing. Scale has two basic properties: grain and extent. Changing the scale in an analysis means changing the resolution and may invoke a new pattern as other hierarchical levels of organization are entered. (TRB)

Urban designers typically emphasize the importance of human scale in successful environments. Considerations of human scale include building height and bulk regulations to ensure that new development and redevelopment efforts are pedestrian-oriented and compatible with the existing built environment. (MARC)

**monitoring.** Conducting studies to determine the presence, extent or relative condition of wildlife and plant resources following an initial inventory or studies and success of land management activities. (SAF)

**multi-modal.** Pertaining to more than one mode of transportation. (TRB)

**NRCS.** Natural Resources Conservation Service.

**network.** Interconnected system of corridors. (TRB)

**nongovernmental organizations (NGOs).** Organizations not directly associated with Federal, State, or local government (e.g., tribes, Alaskan native organizations, conservation, special interest and advocacy groups). (SAF)

**nonpoint source (NPS) pollution.** Pollution that, unlike pollution from industrial and sewage-treatment plants, comes from many diffuse sources. NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and manmade pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even our *underground sources of drinking water*. *These pollutants include the following:*

- *Excess fertilizers, herbicides and insecticides from agricultural lands and residential areas*
- *Oil, grease and toxic chemicals from urban runoff and energy production*
- *Sediment from improperly managed construction sites, crop and forest lands and eroding stream banks*
- *Salt from irrigation practices and acid drainage from abandoned mines*
- *Bacteria and nutrients from livestock, pet wastes and faulty septic systems*
- *Atmospheric deposition and hydromodification are also sources of nonpoint source pollution. (EPA)*

**open space conservation.** Protection of undeveloped areas located within or beyond city boundaries for the purposes of providing recreational, environmental or civic benefits. (MARC)

**overlay zoning.** A zoning district applied over one or more other districts that contains additional provisions for special features or conditions, such as historic buildings, wetland or steep slope protection, or a mix of land uses. (MARC)

**patchiness.** Irregular in appearance, makeup, size or quality. (TRB)

**point source of pollution.** Discrete conveyances, such as pipes or manmade ditches that discharge pollutants into waters of the United States. This includes not only discharges from municipal sewage plants and industrial facilities but also collected storm drainage from larger urban areas, certain animal feedlots and fish farms, some types of ships, tank trucks, offshore oil platforms, and collected runoff from many construction sites. (EPA)

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## Glossary

***infill development.*** The reuse of urban land or vacant lots in developed neighborhoods and urban areas. Infill development is most successful when it is accomplished at a scale and with design features that are compatible with the existing and surrounding neighborhoods. (MARC)

***infrastructure.*** System of communications and services within an area or country. (TRB)

***invasive species.*** A species of plant or animal that is not native to (i.e., did not evolve in) an area (e.g., exotic species). (SAF)

***inventory.*** A set of studies to determine the presence, extent or relative condition of wildlife and plant resources. (SAF)

***landscape.*** Total spatial and visual entity of human living space integrating the geological, biological and humanmade (anthropogenic) environment. (TRB)

***landscape diversity.*** Formal expression of the numerous relations existing in a given period between the individual or a society and a topographically defined territory, the appearance of which is the result of the action, over time, of natural and human factors and a combination of both. (TRB)

***landscape pattern.*** The spatial distribution of landscape elements (patches, corridors, or matrices).

***land-use planning.*** Activity aiming at predetermining the future acting of society by deciding on the temporal and spatial usage of land and water. (TRB)

***life history.*** The description of a species' entire life cycle including rearing, feeding, migratory and breeding behaviors. (SAF)

***linkages.*** Features that promote the interconnectedness of neighborhoods, commercial and office areas, open space resources and public places, and provide convenient access between these different uses. (MARC)

***management indicator species.*** A species that theoretically indicates the general condition or "health" of an ecosystem. (SAF)

***minimization.*** Efforts to reduce impacts by alternative actions. (TRB)

***mitigation.*** Action designed and taken to reduce the severity of or eliminate an adverse impact. (TRB)

***mixed-use development.*** Projects that integrate different land uses such as retail stores, restaurants, residences, civic buildings, offices and parks within a defined area. (MARC)

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## Glossary

**habitat.** (1) The place, natural or otherwise (including climate, food, cover and water), where plant and/or animal populations naturally or normally live and grow. (SAF)

(2) Species-specific concept of the area in which a plant or animal species find all necessary resources to live and reproduce. (TRB)

**habitat capability.** The capability of an area, given the conditions of topography, vegetation, water and climate to support a number of adult individuals of a species, subspecies or group of species. (SAF)

**habitat fragmentation.** A complex process that can be defined as a reduction in the amount of natural habitat within a landscape and apportionment of the remaining habitat into smaller, more isolated patches. (Noss and Csuti 1997)

**hazardous substances.** Any material that can have an adverse impact at the biological level. (TRB)

**heterogeneity.** Quality or state of being dissimilar or diverse. (TRB)

**hierarchy theory.** Hierarchy theory considers a system to be composed of a number of subsystems and contributing itself to a higher-level system. This implies that the mechanisms underlying ecological phenomena expressed at a given level should be sought at the next lower level in the hierarchy. For instance, levels in natural hierarchy are, e.g., cells, organs, individuals, populations, communities, and ecosystems. (TRB)

**I-25.** Interstate 25.

**impact, effect, consequence.** Impact is the immediate response of an organ, organism, species or property to an external factor. This response may have an effect on the species or condition that may give consequences to the population or species community on a longer time scale. For instance, the impact of traffic noise on birds may reduce the capability of identifying and distinguishing other birds' voices. This may effect their social interactions and breeding success, with the possible consequence of local extinction. (TRB)

**indicator.** Quantitative variable, usually with target value representing an objective, which symbolizes environmental or other impacts of transport infrastructure plans (including ordinal scales, e.g., low, medium, high). (TRB)

**indicator species.**

(1) A species that scientists used as a measure of the condition of a particular habitat, community or ecosystem. (SAF)

(2) Species indicative of (a) some environmental or historical influence or (b) a community or habitat type. (TRB)

**indigenous.** Existing, growing or produced naturally in a region or area.

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## Glossary

***ephemeral streams.*** Ephemeral waterbodies are streams, ponds, wetlands, etc. that contain water only a fraction of the time. Vernal pools and desert washes are examples. Sometime such waters are called “intermittent.” As a general rule, a waterbody is not excluded from the definition of “waters of the U.S.,” simply because it is intermittent. (EPA)

***eutrophication.*** A process in which the addition of nutrients (primarily nitrogen and phosphorus) to waterbodies stimulates algal growth. This is a natural process, but it can be greatly accelerated by human activities. (National Oceanic and Atmospheric Administration)

***exotic species.*** Species that occur in a given place as a result of direct or indirect deliberate or accidental introduction by humans. (SAF)

***fauna.*** The animal species in a given area. (SAF)

***federally listed species.*** Species that are formally listed by a Federal agency and/or the National Marine Fisheries Service (NMFS) as endangered or threatened under the Endangered Species Act. (SAF)

***filter effect.*** Road barrier impact has a different effect on different species and may even vary between sexes or age categories. Thus, the road may act as a filter, inhibiting the movement of certain species or individuals. (TRB)

***flora.*** Plant or bacterial life. (TRB)

***fluvial.*** Of or pertaining to a river or growing or living in streams or ponds. (SAF)

***fluvial morphology.*** The description and interpretation of relief features affecting the course, physical attributes, conditions and management capability of rivers and streams. (SAF)

***forb.*** An herb other than grass. (SAF)

***fragmentation.*** The splitting of natural habitats with the occurrence of specific plant and animal species into smaller and more isolated units. (TRB)

***geographic information systems (GIS).*** Diversity of remotely sensed information documenting the geographic character of an area. (TRB)

***green infrastructure.*** A strategically planned and managed network of parks, greenways, conservation easements and working lands with conservation value that supports native species, maintains natural ecological processes, sustains air and water resources and contributes to the health and quality of life for communities and people. (MARC)

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## Glossary

**ecological network.** A system of ecological corridors, habitat core areas and buffer zones surrounding corridors and core areas providing a network of habitat needed for the successful protection of biological diversity at the landscape level. (TRB)

**ecosystem.** A community of living plants and animals interacting with each other and with their physical environments. (SAF)

**ecosystem ecology.** The study of ecosystems and the biotic and abiotic factors that affect them. (SAF)

**ecosystem function.** The flow of minerals, nutrients, water, energy and species within an ecosystem. (SAF)

**ecosystem management.** An approach to maintaining or restoring the composition, structure, and function of natural and modified ecosystems for long-term sustainability. Scientists base this approach on a vision of desired future conditions. (SAF)

**ecosystem.** A dynamic complex of plant, animal and microorganism communities and their non-living environment interacting as a functional unit. (TRB)

**endangered species.** A species that is in imminent danger of extinction throughout all or a significant portion of its range. (SAF)

**enhancement.** Improving the quality of habitat. (TRB)

**environment (natural and built).** A complex of physical, chemical and biotic factors (e.g., climate, soil and living things) that act upon an organism or an ecological community and ultimately determine its form and survival. (TRB)

**environmental assessment.** Concise public document that serves to (1) briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact; (2) aid an agency's compliance with the National Environmental Policy Act when no environmental impact statement is necessary; and (3) facilitate preparation of a statement when one is necessary. It shall include brief discussions of the need for the proposal, of alternatives as required by section 102(2)(E), of the environmental impacts of the proposed action and alternatives and a listing of the agencies and persons consulted. (TRB)

**environmental impact statement (EIS).** A detailed statement of a Federal project's environmental consequences, including:

- *adverse environmental effects that cannot be avoided*
- *alternatives to the proposed action*
- *the relationship between local short-term uses and long-term productivity*
- *any irreversible or irretrievable commitment of resources.* (SAF)



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## Glossary

**community identity (human).** Physical, natural or cultural assets that represent distinctive qualities unique to an individual community. A community's identity is enhanced by embracing and respecting the history and character of those existing features that nurture a sense of attachment and uniqueness within the area. (MARC)

**connectivity.** Quality or condition of structural landscape features being connected, enabling access between places via a continuous route of passage. (TRB)

**conservation agreement.** A formal signed agreement between a Federal agency, bureau or service and/or the National Marine Fisheries Service (NMFS) or other parties that implements specific actions, activities or programs designed to eliminate or reduce threats or otherwise improve the status of a species. These agreements can be developed at the State, regional, or national level. They generally include multiple agencies at both the State and Federal level, as well as tribes. (SAF)

**conservation biology.** An integrative approach to protect and manage biodiversity that uses appropriate principles and experiences from several biological and social sciences fields including genetics, evolution, ecology, animal behavior, wildlife management, anthropology, philosophy and economics. (SAF)

**corridor.** A defined tract of land connecting two or more areas of similar management or habitat type that is reserved from substantial disturbance; and through which a species can travel to reach habitat suitable for reproduction and other life-sustaining needs. (SAF)

**critical habitat.** The ecosystems and/or habitats upon which endangered and threatened species depend in order to thrive and survive. (SAF)

**cumulative effects.** Accumulated effects or impacts of a number of projects or actions. (TRB)

**dBa.** A-weighted decibels; a measurement of the sound levels most perceptible to the human ear.


**density.** The average number of persons, households or dwellings per acre of land. Developments at higher densities may be beneficial to a community if quality design features are utilized. Higher density development may make transit service more effective and maximize public infrastructure costs. (MARC)

**EPA.** United States Environmental Protection Agency.

**easement.** A legal agreement between parties with a vested interest. A conservation easement is a legal agreement a property owner makes to restrict the type and amount of development that may take place on the property for the purpose of protecting wildlife or their habitats. (SAF)

**ecological corridor.** Landscape structures of various size, shape and vegetation that maintain, establish or reestablish natural landscape connectivity throughout the ecological network. (TRB)

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## Glossary

**biodiversity.** Variability among living organisms from all sources; terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part. This includes diversity within species, between species and of ecosystems, as well as of the processes linking ecosystems and species. (TRB)

**biological control.** Controlling pest organisms using other organisms. (SAF)

**biome.** A large, regional ecological unit usually defined by some dominant vegetative pattern such as coniferous forest or prairie biomes and produced by global climate patterns. There are eight major terrestrial biomes, two freshwater biomes and a complex of marine biomes in the United States. (SAF)

**biota.** The living organisms in a given area. (SAF)

**biotic.** Living or derived from living organisms. (SAF)

**brownfields.** Abandoned, idled or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. (MARC)

**buffer zone.** An area in a reserve surrounding the central core zone in which nondestructive human activities such as ecotourism, traditional (low intensity) agriculture or extraction of renewable natural products are permitted. The buffer zone may also include areas that surround a central core with the intent of minimizing or filtering intrusive factors (e.g., noise, cowbird parasitism or pollution). (SAF)

**carrying capacity.** The maximum number of individuals of a given species that a habitat can maintain. (SAF)

**CDOT.** Colorado Department of Transportation.

**CDOW.** Colorado Department of Wildlife.

**CDPHE.** Colorado Department of Public Health and Environment.

**charette.** An intensive workshop at which representatives of various planning-related interests participate to develop a plan for a given area.

**climax.** The final community state (sere) in the process of succession for a given area. Upon reaching this state, the area will be stable and self-replacing until acted upon by an outside process such as a fire or climate change. (SAF)

**community (biotic).** Assemblage of interacting species living in a given location at a given time. (TRB)

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## GLOSSARY

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This glossary includes terms used in this report, plus terms likely to be encountered in some of the general sources referred to in this document.

Most of the definitions given here are taken from the following sources.

- ▶ EPA: U.S. Environmental Protection Agency Watershed Academy Web [www.epa.gov/watertrain/cwa/](http://www.epa.gov/watertrain/cwa/)
- ▶ MARC: Mid-America Regional Council, Kansas City
- ▶ SAF: *Society of American Foresters' Dictionary of Forestry*, and with input from subject-matter experts by the Office of Personnel Management Professional (Draft Job Family Standard for Professional Work in the Natural Sciences Group, Appendix G—Natural Sciences Glossary)
- ▶ TRB: *National Cooperative Highway Research Program NCHRP Synthesis 305: Interaction Between Roadways and Wildlife Ecology A Synthesis of Highway Practice*, Gary L. Evink

Definitions from other sources are noted.

**abiotic.** Non-living, or derived from non-living processes. This term usually applies to environmental processes or elements such as temperature, humidity and pH. (SAF)

**adaptive management.** The process of implementing policy decisions incrementally so that scientists can make changes if they do not achieve the desired results. It is a process similar to a scientific experiment that tests predictions and assumptions in management plans. Experience and new scientific findings are used as the basis to improve resource-management practices and future planning. (SAF)

**ambient monitoring.** Monitoring program with fixed station networks and intensive surveys and producing chemical, physical and biological analyses. Ambient monitoring deals with conditions in the aquatic environment—streams, lakes, bays, estuaries and oceans. By contrast, effluent (discharge) monitoring involves sampling and analysis of wastewater. (EPA)

**assessment.** The act of evaluating and interpreting data and information for a defined purpose. (SAF)

**BLM.** Bureau of Land Management.

**best management practices.** Any program, process, citing criteria, operating method, measure or device that controls, prevents, removes or reduces pollution. (California Environmental Protection Agency)

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**USGS.** United States Geologic Survey.

**walkability.** An area that is considered safe, comfortable, interesting and accessible. It offers amenities such as wide sidewalks, attractive storefronts that face the sidewalk, shade, shelter and a sense of spatial enclosure provided through landscaping and streetscape elements. These areas are inviting to pedestrians for shopping, recreation and relaxation. (MARC)

**water quality criteria.** Levels of individual pollutants or water quality characteristics, or descriptions of conditions of a waterbody that, if met, will generally protect the designated use of the water. (EPA)

**water quality standards.** Includes three major components: designated uses, water quality criteria and anti-degradation provisions. (EPA)

**watershed.** Watersheds are nature's boundaries. They are the land areas that drain to surface water bodies such as lakes and streams. Watershed management seeks to prevent flooding and water pollution, to conserve or restore natural systems and to protect human health through integrated land and water management practices. (MARC)

**wetlands.** Lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation and other factors, including human disturbance. Indeed, wetlands are found from the tundra to the tropics and on every continent except Antarctica. For regulatory purposes under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas." (EPA)

**wildlife corridor.** Vegetated feature that links to other wildlife areas and may act as an interconnecting route for the movement of animals between different areas needed during their lifecycle or to facilitate dispersal of animals and plants by providing access to new or replacement sites. It may also increase the overall extent of habitat for animals with large range requirements and, in urban and agricultural areas, may constitute the main remaining wildlife habitats. (TRB)

**wildlife.** Wild animals, plants and bacteria as a collective body. (TRB)

**xeriscaping™.** Attractive, sustainable landscape design that conserves water and is based on sound horticultural practices. (Colorado Springs Utilities)





Figure 2-20. 1955 aerial photo of Site 5, Pine Creek.

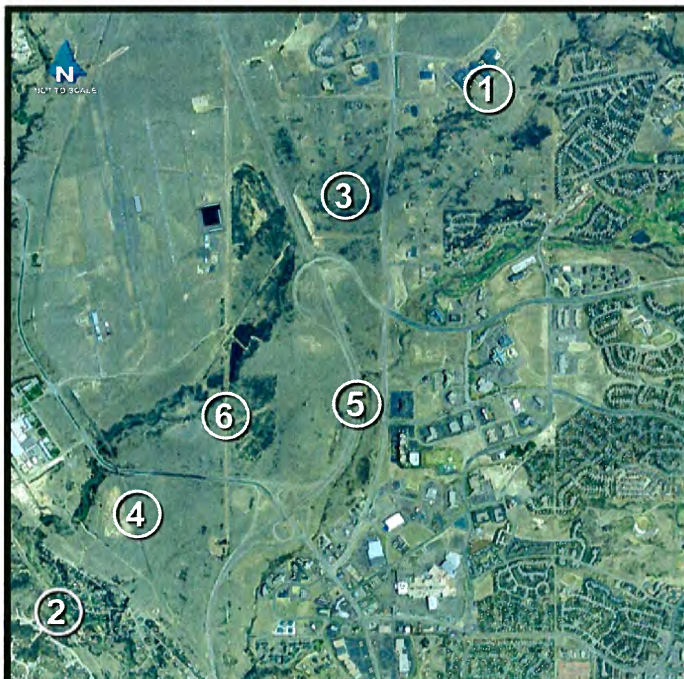


Figure 2-21. 2002 aerial photo of Site 5, Pine Creek.

### Comparison Site 5

#### **RIPARIAN – PINE CREEK**

Denser and more extensive riparian vegetation. This site is 11 miles north of downtown Colorado Springs.

This area was undeveloped at the time the U.S. Air Force Academy was being constructed (Figure 2-20), but now is largely developed (Figure 2-21). Pine Creek currently contains dense riparian shrub areas that are difficult to detect on the 1955 aerials. The riparian vegetation has apparently become more prominent since 1955. The riparian area near Highway 83 is approximately 30 to 40 feet wide and dominated primarily by sandbar willow. There are infrequent peachleaf and crack willows, roughly 20 to 30 feet tall. Willow species indicate that the stream is in early successional stages.

Although willows may have increased on the stream edges since 1955, the Preble's meadow jumping mouse population here is extremely small, with at least two known populations on Pine Creek that have become fragmented because of habitat barriers. Other prominent species included broadleaf cattails and bulrush at the edge of the active channel. Other less abundant species include curly dock, Canada thistle, prickly lettuce, duckweed and water speedwell. Such species are indicative of controlled or low-flow regimes.

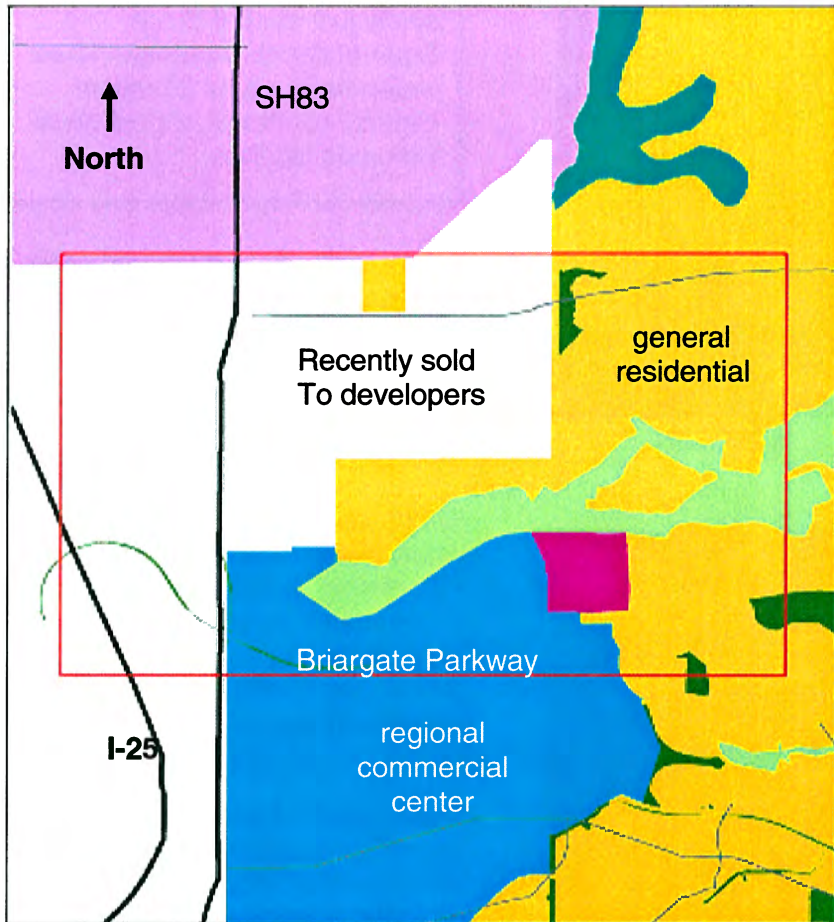
The active channel is 10 to 15 feet in width and contains a slow, shallow flow. The creek contains several concrete drop structures to help control flows, but the stream is somewhat incised in this area. Planned development in the Pine Creek watershed will continue to reduce the amount of natural land cover.

Modern reference points:

1. Old Ranch Road
2. Railroad
3. Kettle Creek
4. Santa Fe Railroad
5. Interstate 25
6. Old Denver Highway

**Comparison Site 5**  
**RIPARIAN – PINE CREEK**  
 (Continued)

Three of the eight sites used for land use comparison are within Colorado Springs city limits, and therefore have planned future land use designations in the *City's 2001 Comprehensive Plan*. These are comparison sites #5 (Pine Creek), #7 (Marksheffel Road), and #8 (Woodmen Road). Shown below from the Comprehensive Plan is an excerpt for site #5, Pine Creek.



In Figure 2-22, the location generally corresponding to the sites depicted on the two previous aerial photographs is outlined in red. Notable linear features are Interstate 25 (black curving line at left), Briargate Parkway (green curving line that crosses I-25) and State Highway 83 (dark vertical line near I-25).

Key land uses include a regional commercial center (blue), general residential (gold), a community activity center (magenta), and the Pine Creek Golf Course (light green).

The area shown in white was not within the City as of 2001, including the Air Force Academy (west of SH83) and a large parcel of adjacent private land. This large parcel of private land was sold to developers in 2003 and will likely be annexed by the City.

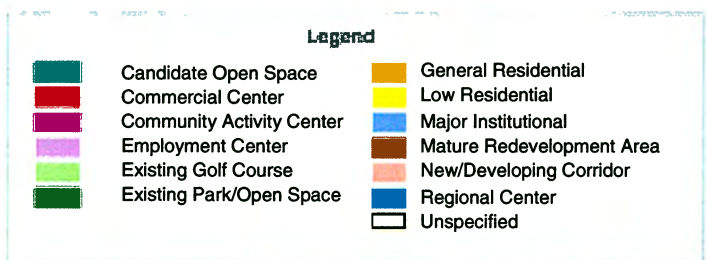


Figure 2-22. Planned future land use at Site 5, Pine Creek.  
 Source: Colorado Springs 2001 Comprehensive Plan.

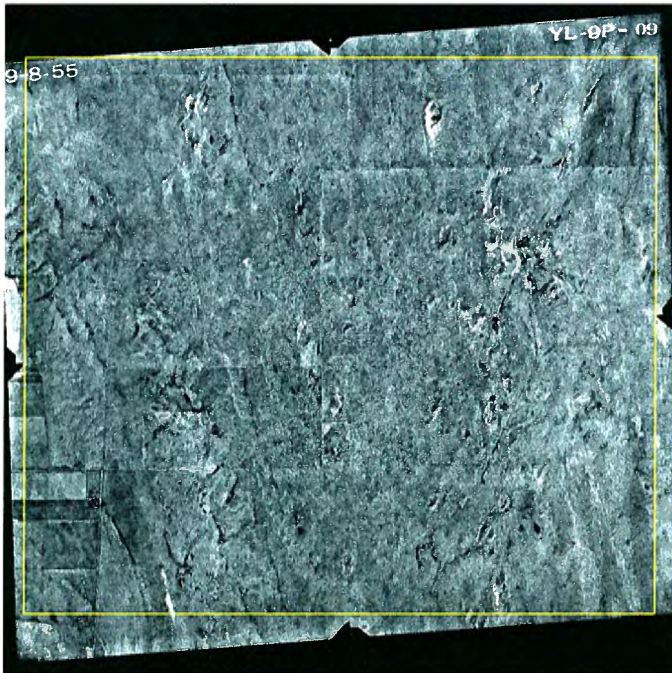


Figure 2-23. 1955 aerial photo of Site 6, Myers Road.



Figure 2-24. 2002 aerial photo of Site 6, Myers Road.

### Comparison Site 6

#### **SHORTGRASS PRAIRIE – MYERS ROAD**

No major differences in pattern between 1955 and 1995. This site is just east of Black Squirrel Creek (Arkansas River watershed), about 25 miles east-by-southeast of downtown Colorado Springs.

Figure 2-23, the 1955 aerial photo of Site 6 depicts primarily open grassland.

The 2002 aerial photo, Figure 2-24, illustrates that the land use has not changed appreciably.

Shortgrass prairie occurs here where the area is relatively flat. Hilly terrain, with its very sandy soil, is dominated by sand sagebrush. This site is characterized by blue grama grass, with scattered sand sagebrush, yucca and native thistle.

This grassland has been severely grazed and, combined with the dry summer, was only several inches high and a yellow-brown color when visited in 2002. The only wildlife observed was horned larks. Prairie dog towns would be expected in this area, but soils are sandy, and a slightly different ecosystem of sand sage is formed.

No modern reference points are distinguishable on the two aerial photos.



Figure 2-25. 1955 aerial photo of Site 7, Marksheffel Road.



Figure 2-26. 2002 aerial photo of Site 7, Marksheffel Road.

### Comparison Site 7

#### **SHORTGRASS PRAIRIE – MARKSHEFFEL ROAD**

Croplands are beginning to give way to urban development. This site is just southeast of the Colorado Springs Municipal Airport, and is about 10 miles east-by-southeast of downtown Colorado Springs.

In 1955 a quiltwork pattern of croplands was evident along Marksheffel Road (Figure 2-25). By 1995 that agricultural pattern had been replaced by commercial and residential development centered at the intersection of Marksheffel Road and Drennan Road (Figure 2-26). Approximately 179 acres were developed over this 40-year period, representing a 40% increase in land development.

The area west of Marksheffel Road hadn't been grazed for a number of years. It has more species diversity and a greater biomass than the Myers Road shortgrass prairie site. The plant community is characterized by blue grama, needle-and-thread, little bluestem, prickly-pear cactus, scurf pea and scattered yucca. Less common species include scarlet globe-mallow, fringed sage and stemless goldenweed. Wildlife species noted included meadowlark, red-tailed hawk and prairie dogs (50 to 60 burrows). Nine pronghorn antelope were observed just north of Drennan Road.

Modern reference points:

1. Marksheffel Road
2. Bradley Road
3. Jimmy Camp Creek
4. Drennan Road

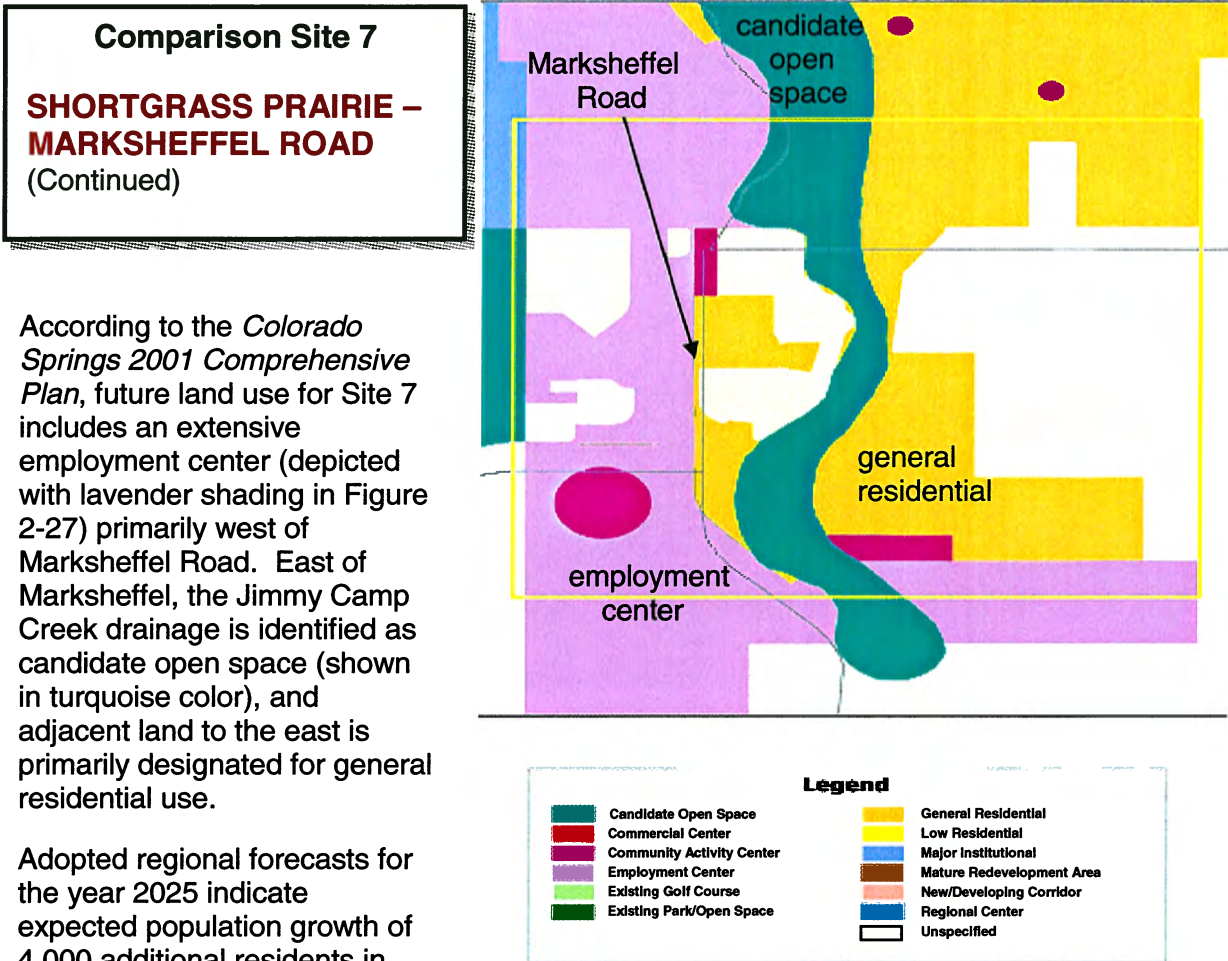


Figure 2-27. Planned future land use at Site 7, Marksheffel Road. Source: Colorado Springs 2001 Comprehensive Plan.



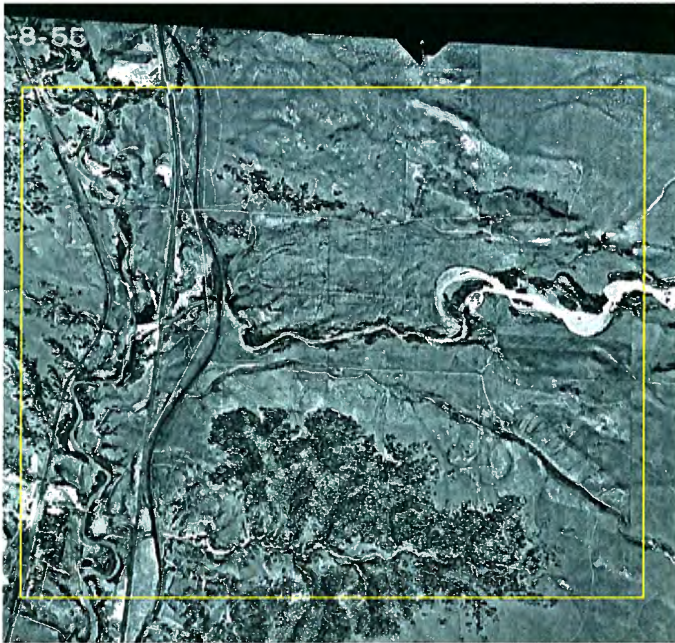


Figure 2-28. 1955 aerial photo of Site 8, Woodmen Road.



Figure 2-29. 1995 aerial photo of Site 8, Woodmen Road.

### Comparison Site 8

#### URBAN – WOODMEN ROAD

This site has seen a 436% increase in development. The site, which includes Woodmen Road, is centered on Dublin Road, east of Academy Boulevard, seven miles north of downtown Colorado Springs.

In 1955, prior to construction of the U.S. Air Force Academy, there was little development in the vicinity of today's Woodmen Road. Out of the 283-acre area shown, only about 28 acres were developed, these being near what today is Woodmen Road at Interstate 25.

Forty years later, at least 150 acres (53%) of the area is developed for commercial and residential uses. The land use pattern is typical for I-25 in suburban Colorado Springs.

Gambel oak and sagebrush-grass mixed vegetation are present. The riparian corridors along Monument and Cottonwood Creeks have been impacted by development to the extent that they do not support the Prebles meadow jumping mouse, which can be found in drainages further north.

Modern reference points:

1. Cottonwood Creek
2. Railroad
3. Academy Blvd/Woodmen Road
4. Nevada Avenue
5. Interstate 25

**Comparison Site 8**  
**URBAN –WOODMEN ROAD**  
 (Continued)

Figure 2-28 depicts future land uses in the vicinity of Site 8, Woodmen Road. Woodmen is shown as the horizontal black line one quarter of the distance down from the top of the site area highlighted in red. Residential areas, shown in gold, comprise the center of this study site.

Interstate 25 is shown as the thick black line at left, fed by Nevada Avenue. To the east is Academy Boulevard, a heavily commercial corridor. These are among the busiest roadways in the region.

Cottonwood Creek flows westerly, south of Woodmen, to its confluence with Monument Creek. Parks and open spaces in this area utilize topography that is largely unsuitable for development.

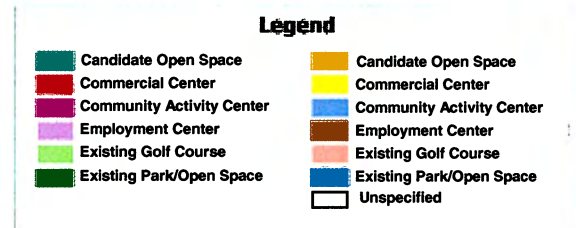
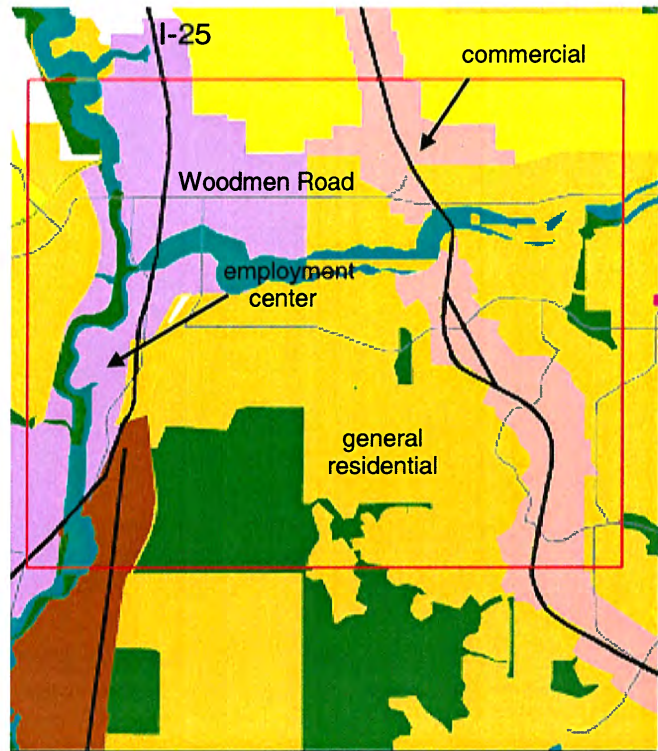


Figure 2-30. Planned land use at Site 8, Woodmen Road.  
 Source: Colorado Springs 2001 Comprehensive Plan.

## ANALYSIS OF PROJECT IMPACT AREAS BY COVER TYPE

A potentially important source of landscape change in the Pikes Peak region is the set of four transportation projects in the Colorado Springs area. These projects and other development may be a source of cumulative impacts the region will experience as it continues to develop. An analysis of the magnitude of impact area from these projects was conducted by comparing the landscape directly affected by the projects to the landscape throughout the study area.

Land-cover type, as indicated by the 1995 satellite imagery, was the component of the landscape considered for analysis. All of the major land-cover categories, consisting of urban, riparian, forest, shortgrass prairie, agriculture, shrub and other (open water and miscellaneous features) were considered in this analysis (Figure 2-31). It can be seen that shortgrass prairie is the predominant cover type in the study area.

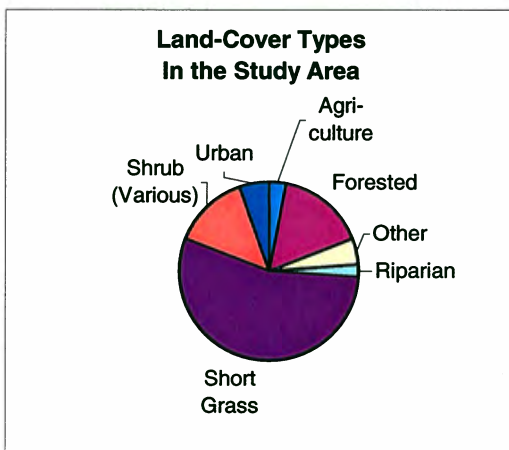


Figure 2-31. The seven major cover types present in the entire study area, by percent.

A Geographic Information System (GIS) was the tool used to conduct the analysis. Specifically, GIS was used to measure the amount of area (in acres) of each cover type over the entire study area and within each of the four project areas (Table 2-6).

The relative degree of impact to areas of each land-cover type was then determined for the project areas. Cumulative changes to landscape patterns throughout the study were then extrapolated to identify potential effects on various sensitive animal and plant species that depend on each land-cover type.

The amount of area that each project would affect was calculated by assuming the boundary of a project area corresponded to a 100-meter (328-foot) area extending from both sides of the centerline of the existing roadway (total width examined = 656 feet).

Even though the proposed roadways are unlikely to exceed 300 feet in width, a 328-foot (100 meter) area was chosen because it encompasses all potential direct impacts. The precise locations of these planned roadways have not been surveyed yet. Consequently, even though these projects will follow the pathway of the existing roadway, final centerline locations may deviate from the existing centerlines upon construction.

Direct project impacts were defined as the conversion of natural cover types to impervious surfaces and other types of related, managed area (e.g., mowed right-of-way, storm water detention ponds). Indirect impacts by definition occur at a different location or different time from the causative factor and are therefore more difficult to quantify.

Landscape Patterns

Table 2-6. Land Cover Type (acres) by Project Area and for the Entire Study Area.

Land Cover Type	Drennan Road	I-25	Powers Boulevard	Woodmen Road	Total for All Project Areas	Total Study Area
Agricultural	0.9 (1.1%)	18.2 (1.9%)	18.5 (2.0%)	0.7 (0.4%)	38.3 (1.7%)	28,342 (3.0%)
Forest	0 (0.0%)	3.8 (0.4%)	0.1 (0.0%)	0.4 (0.2%)	4.3 (<1.0%)	152,436 (16.0%)
Riparian	0.7 (0.9%)	46.4 (4.8%)	24.7 (2.6%)	5.2 (2.8%)	77.0 (3.5%)	19,334 (2.0%)
Grassland	33.4 (42.0%)	359.3 (36.9%)	547.8 (58.3%)	80.7 (43.5%)	1,021.2 (46.8%)	514,304 (55.0%)
Shrub	0.7 (0.9%)	52.1 (5.3%)	47.3 (5.0%)	20.7 (11.1%)	120.8 (5.5%)	132,802 (14.0%)
Urban	43.6 (54.8%)	477.4 (49.0%)	300.3 (32.0%)	77.8 (41.9%)	899.1 (41.2%)	48,374 (5.0%)
Other	0.2 (0.3%)	17.8 (1.8%)	1.1 (0.1%)	0.2 (0.1%)	19.3 (<1.0%)	43,951 (4.7%)
Total Area	79.5 (100.0%)	975.0 (100.0%)	939.8 (100.0%)	185.7 (100.0%)	2,180.0 (100.0%)	939,546 (100.0%)

Indirect impacts include chemical inputs from roadway operation, noise, and altered hydrology from the run-off of the expanded impervious surface area. These types of impacts can be far reaching, but are particularly concentrated close to the roadside. Therefore, it is reasonable to assume that the entire 656 foot-wide analysis area will experience some degree of direct or indirect impact as a result of the proposed projects.

While the incremental impact to different cover types identified in Table 2-6 appear

relatively small, it is the cumulative impact of these projects and other development within the study area over an extended timeframe that can ultimately affect biological diversity and the quality of life in the region. Moreover, while the direct impact to cover types appears relatively small, the indirect impact to natural and community resources due to fragmentation of cover types into smaller patches and the formation of barriers between these smaller patches may be greater, albeit more difficult to quantify.

### IMPACTS TO LAND COVER TYPES

A brief summary of the potential magnitude of the four projects' impacts to each cover type, and consequent contributions to region-wide impacts is provided below. The contribution of these impacts to loss of biodiversity throughout the study area is also discussed, by analyzing the effect of cover-type specific

impacts on sensitive species associated with those cover types. Effects to selected sensitive species are summarized in Table 2-7, and a more comprehensive list of species (18 animals, 11 plants) and potential effects from projects are provided in Appendix 2.

Table 2-7. Summary of Species of Concern and Their Potential Habitats near Major Transportation Projects in El Paso County, Colorado

<b>AGRICULTURE</b>				
	<b>Drennan</b>	<b>I-25</b>	<b>Powers</b>	<b>Woodmen</b>
Percentage of agricultural cover type in each project area	1.1%	1.9%	2.0%	0.4%
<b>Species</b>	<b>Potential to be Impacted and Type of Effect</b>			
Ferruginous hawk, <i>Buteo regalis</i>	Low potential; project area is within known range of this species and suitable habitat is present. However, this species probably uses the Colorado Springs area sparingly. Potential for direct habitat loss and indirect habitat loss due to increased development and disturbance.			
Long-billed curlew, <i>Numenius americanus</i>	Low potential; Curlews may use stock ponds as water sources, but such farms or ranches are east of the project areas. This species is most likely present in the Colorado Springs area only during migration.			
Bald eagle, <i>Haliaeetus leucocephalus</i>	Low potential; likely present only at active prairie dog towns with adjacent perches, and only in winter. Direct habitat loss and indirect habitat loss due to increased development and disturbance are possible.			
Black-tailed prairie dog, <i>Cynomys ludovicianus</i>	Moderate potential; this species is known to exist in the project area. Direct habitat loss possible, indirect habitat loss due to increased development and disturbance.			
<b>FOREST</b>				
	<b>Drennan</b>	<b>I-25</b>	<b>Powers</b>	<b>Woodmen</b>
Percentage of forest cover type in each project area	0.0%	0.4%	0.0%	0.2%
<b>Species</b>	<b>Potential to be Impacted and Type of Effect</b>			
Common hog-nosed skunk, <i>Conepatus mesoleucus</i>	Very low potential; very small amounts of suitable habitat present in project area and last confirmed record of this species El Paso County dates from the 1920s.			
Townsend's big-eared bat, <i>Plecotus townsendii pallescens</i>	Low potential; suitable habitat is widespread but there are no records of this species in the project area.			

Landscape Patterns

Table 2-7, continued

<b>RIPARIAN</b>				
	<b>Drennan</b>	<b>I-25</b>	<b>Powers</b>	<b>Woodmen</b>
Percentage of riparian cover type in each project area	0.9%	4.8%	2.6%	2.8%
<b>Species</b>	<b>Potential to be Impacted and Type of Effect</b>			
Preble's meadow jumping mouse, <i>Zapus hudsonius preblei</i>	High potential for effect; species is known to be present within the I-25 project area.			
Northern leopard frog, <i>Rana pipiens</i>	Moderate potential for effect; suitable habitat present within project area buffers and species is known to be present in Colorado Springs area. Potential for habitat loss, indirect effects due to water quality issues.			
Ute Ladies' tresses orchid, <i>Spiranthes diluvialis</i>	Very low potential for occurrence; suitable habitat may occur in the study area but there are no records of this species in El Paso County			
<b>SHORTGRASS PRAIRIE</b>				
	<b>Drennan</b>	<b>I-25</b>	<b>Powers</b>	<b>Woodmen</b>
Percentage of shortgrass cover type in each project area	42.0%	36.9%	58.3%	43.5%
<b>Species</b>	<b>Potential to be Impacted and Type of Effect</b>			
Ferruginous hawk, <i>Buteo regalis</i>	Low-moderate potential; project area is within known range of this species and suitable habitat is present. This species probably uses the Colorado Springs area sparingly, but look for prairie dog towns which the hawk is associated with, especially from the more undisturbed Powers Boulevard corridor.			
Mountain plover, <i>Charadrius montanus</i>	Low potential; suitable habitat is probably rare in project areas.			
Black-tailed prairie dog, <i>Cynomys ludovicianus</i>	Moderate potential for effect; this species is known to exist in project areas. Direct habitat loss possible, indirect habitat loss due to increased development and disturbance.			
Black-footed ferret, <i>Mustela nigripes</i>	Very low potential for effect; there are no current records of this species on the Front Range. Existing prairie dog towns in the Colorado Springs area are too small to support this species.			
<b>SHRUB</b>				
	<b>Drennan</b>	<b>I-25</b>	<b>Powers</b>	<b>Woodmen</b>
Percentage of shrub cover type in each project area	0.9%	5.3%	5.0%	11.1%
<b>Species</b>	<b>Potential to be Impacted and Type of Effect</b>			
Brandeggee wild buckwheat, <i>Eriogonum brandegeei</i>	Very low potential; preferred habitat does not occur in project area.			

Table 2-7 lists the species with status that could potentially occur in El Paso County. In addition, it lists: the preferred habitat of each species; the vegetation type that corresponds to each habitat; the percent of each roadway project area that is comprised of that habitat; an estimation of the species' potential to be impacted; and the type of impact that is most likely to occur to each species.

It is important to note that in many cases, species habitat preferences are much narrower than the vegetation classes defined in this report. Therefore, even a suitable vegetation class indicates only the potential for a species preferred habitat to be present. A detailed on-site analysis is needed to determine the actual extent of preferred habitat. Also note that the phrase "project area" refers to an undefined area associated with the four roadway projects.

### ***DESCRIPTION OF COVER TYPES AND PROJECT IMPACT AREAS***

Each of the cover type categories is described in more detail below, together with information about how they could be impacted by major transportation projects. It is important to note that specific proposed actions have not yet been defined for some of the transportation projects. Therefore the potential roadway impact acreages discussed below are speculative, worst-case scenarios. The impacts of land development to serve 200,000 additional residents by 2025 will far surpass any habitat loss attributable to the major roadway projects.

### ***AGRICULTURE***

The total acreage of agriculture cover type represents just 3 % of the 939,546-acre, two-watershed study area. The total acreage of agriculture cover types with the project areas is only about 1.6% (94.6 acres). The proposed roadways will not

disproportionately impact agricultural cover types in the RCEA study area.

Table 2-7 lists the species that prefer agriculture habitat and describes the type of impact that could occur to these species. For example, the Ferruginous hawk utilizes open grasslands that may also be used as agricultural pasture. Although some agricultural land may be impacted by each of the four corridor projects, there is a low potential to adversely impact this species because most agricultural lands have low densities of rodents, especially the black-tailed prairie dog, their preferred prey. Additionally, Ferruginous hawks usually avoid areas with high levels of human activity.

The long-billed curlew also uses agricultural lands if they have water sources such as stock ponds or reservoirs. However, although long-billed curlews have been recorded within the study area, these records are all from areas east of the proposed projects.

### ***FOREST***

Forest cover types account for about 16% of the study area, and for less than 1% (about 25 acres) in the transportation project areas. Therefore, these projects will have negligible direct impact on forest cover types in the study area. Most impacts to forested cover types in the study area are associated with I-25, an area that is undergoing rapid population growth. Affected forested areas are primarily ponderosa pine habitat with graminoid and/or shrub understory.

Population growth and increased road capacity are related, and the major roadway projects also contribute to some forest cover reduction indirectly through associated residential and commercial development. Illegal off-road use is also becoming a problem in some of the forests within the study area, and may

also be related to population growth pressures.

Only two of the sensitive species listed in Table 2-7, the hog nosed skunk and Townsend's big-eared bat, are associated with forested cover types. There are no recent records for the hog-nosed skunk in the study area. Townsend's big-eared bat however, probably does occur within the study area. These bats are somewhat sedentary and live their life cycle within relatively small areas. They are known to be associated with human developments as well as forested areas. Low-density housing developments should not negatively affect bats currently using forested cover types in the study area, and may even improve those habitats for bats. Water sources are often a limiting factor for bats, and constructed landscaping ponds and birdbaths can be important sources. High-density housing developments may have a detrimental impact if more trees are removed than are planted and/or insect populations are controlled.

### **RIPARIAN AREAS**

Riparian areas are associated with streambanks and the banks of rivers. Because of the presence of water, the vegetation in riparian areas tends to be thick and lush. In arid regions, riparian zones may be the only places with sufficient moisture for trees to grow.

Because of their proximity to water, riparian zones often contain wetlands. However, the terms "wetland" and "riparian" are not interchangeable. Wetlands are legally defined as having a specific hydrological, soil and vegetation conditions, and only rarely will an entire riparian zone qualify as a wetland.

Additionally, many wetlands, such as those formed by groundwater, are not associated with riparian areas and may be located many miles from a watercourse.

However, for the purpose of this analysis, the riparian cover type was considered a surrogate for wetlands, because riparian areas, but not wetlands, could be accurately identified from the imagery used. Actual wetland impacts from the various projects will almost certainly be less than the riparian areas reported here. Cooper (2002) states "Wetlands occupy approximately 0.5 to 1.5 percent of the landscape in most western states..." The 19,334 acres of riparian cover type in the study area represents approximately 2% of the 939,546-acre study area.

According to Table 2-6, each of the four transportation projects has the potential to directly affect riparian areas. In addition to direct disturbance, the existing and impervious surface of each project has the potential to increase the amount of surface water runoff into nearby riparian areas. Surface water runoff carries pollutants from roads and other impervious surfaces and erodes adjacent uplands, thereby adding sediment and pollutants to the riparian area (see hydrology discussion in Section 2-B, Water Quality and Quantity). Impervious surfaces also reduce the surface area available for precipitation to infiltrate into soils, and ultimately to recharge local aquifers.

A cumulative effect of Front Range development is an increase in the flow and velocity of surface waters, resulting in erosion and down-cutting of streams (Figure 2-6). Down-cutting and lowering of ground water tables in turn combine to sever the connection between streams and adjacent floodplains. This can indirectly affect a much larger area of habitat than directly affected by any one project.

Although riparian and wetland areas within the four major transportation projects represent only 1% to 5% of each of the project areas, these projects, combined with other planned development in the



study area could cause adverse cumulative effects on the existing riparian and wetland resources.

The I-25 improvements and the northern extension of Powers Boulevard (from Woodmen Road to I-25) will have impacts to riparian areas. These projects are within the Monument Creek watershed, part of the larger Arkansas watershed. Streams here have a wide range of conditions, with Monument Creek the largest drainage in the watershed with reliable flow during the entire growing season. Both I-25 and Powers will intersect (or already do) several tributaries of Monument Creek. Stream crossings are common along I-25 and many crossings will be enlarged. The Powers Boulevard northern extension is a new road that will cross smaller Monument Creek tributaries, most with ephemeral flow.

Table 2-7 identifies six animal species and one plant associated with riparian zones that could potentially occur within one or more of the four project areas.

Because of its protected status and documented occurrence in project areas, the Preble's Meadow Jumping Mouse (Preble's) is of particular interest for this cumulative effects analysis. The program that has been implemented to reduce impacts to Preble's as a result of CDOT projects serves as an example of the type of measures that can be created to reduce cumulative impacts to focal resources throughout the study area (see case study end of chapter). CDOT projects will be affecting up to 62 acres of Preble's habitat in northern El Paso County, within both riparian and upland habitat areas. In addition to aggressively working to avoid and minimize impacts, CDOT is using on-and off-site habitat restoration, as well as restoration of habitat linkages. These efforts will provide a wide array of benefits to many riparian species.

Planned restoration projects include using sediment dams on a stream channel to restore groundwater levels needed for maintaining riparian vegetation, and using no-grazing areas on a stream to allow for re-growth of the native shrub layer.

### **SHORTGRASS PRAIRIE**

Short grass cover types account for about 55% of the study area, and about 47% (1,021 acres) of the total impact area for the four transportation projects. Although the majority of sensitive birds and mammals listed in Table 2-7 are associated with short grass habitats, direct impacts to them as a result of the transportation projects should be relatively low.

Most of the short grass habitats in the project corridors probably have low-use by wildlife. This is because of relatively poor habitat quality, due to current levels of disturbance and degradation from the existing highway alignments and associated development. An exception is the northern extension of Powers Boulevard, where there is no existing roadway, and a thus far only a low amount of existing development (but massive development plans have been approved). There is a relatively large undisturbed area of shrub and shortgrass within this corridor and up to 547.8 acres of shortgrass may be disturbed by the planned roadway (about 54% of the total project-related shortgrass disturbance).

Most additional impacts to higher quality short grass cover types in the study area will be a result of population growth and associated development, especially home building. Because population growth and the need for increased road capacity are related, the major roadway projects contribute to some short grass cover impact indirectly.

Sensitive species that may use short-grass prairie habitats include a number of birds (ferruginous hawk, mountain plover, bald eagle, peregrine falcon, long-billed curlew), mammals (Gunnison's prairie dog, black-tailed prairie dog, black-footed ferret), and plants (plains ragweed, prairie violet). Many of these species have restricted ranges within the study area (e.g., long-billed curlew in eastern El Paso County only), or have special habitat requirements that could not be identified within project areas based on the data available (e.g., cliff areas needed by peregrine falcons for nesting). Other species, such as the black-tailed prairie dog may be either expanding or contracting their ranges within specific project areas. Suitable habitat may exist for some species (Massasauga rattlesnake, black-footed ferret) but there are no recent records of these species within the study area.

### **SHRUB**

Shrub cover types account for about 14% of the study area, and about 5% (120.8 acres) of the four transportation project areas. Therefore, these projects will have only a small direct impact on shrub cover types in the study area. The shrub cover type includes a number of plant species associations, covering a wide range of moisture conditions. The three shrub types that are most common in the project areas are Gambel oak, mixed sagebrush, and the mountain shrub mix. There is only one sensitive plant species listed in Table 2-7 associated with shrub habitats (brandegeee wild buckwheat), but it is not known to occur in the project areas. There are no sensitive mammals, birds, or reptiles associated with this cover type.

### **URBAN**

Urban cover types account for only about 5% of the two-watershed study area, but for about 41% of the four major roadway

project areas. Therefore, these projects will have a disproportionate direct impact on urban area in the study area. However, the effect of infrastructure impacts to urban areas is different from impacts to natural cover types. Urban areas require infrastructure such as highways to function, and this type of infrastructure is part of what defines urban areas. Urban project effects are more clearly expressed on the human environment and are covered in Sections 2-B through 2-F of this report, where air and water quality, noise, traffic and visual resources are discussed.

### **OTHER**

"Other" cover types include alpine cover types, open water, barren areas (rock, soil, existing paved areas) and a variety of cover types that covered less than 0.01% each within the areas analyzed. "Other" cover types account for 4.7% of the study area, and for less than 1% of the four major roadway project areas.

### **ADDITIONAL DATA**

In addition to comparison of past and present aerial photography and project specific analysis of recent satellite imagery, data from other sources was used to discern trends in landscape pattern. These data include a more detailed look at land-use changes for three selected areas, changes in agricultural land use throughout El Paso County and estimates on increases in impervious surfaces as a result of the four projects (reviewed in the Water Quality and Quantity section).

Three sites were examined in more detail because of their proximity or other relationship to the four proposed transportation improvement projects. The following summarizes the important characteristics and change for each site.

**Dirty Woman Creek**

Study area stream channel	6,550 ft. long
1955 Riparian area	12.47 acres
1995 Riparian area	25.34 acres
Increase in Riparian area	12.87 acres
Percentage change	103%

**Woodmen Road**

Study area	283.23 acres
1955 Urban area	28.11 acres
1995 Urban area	150.61 acres
Increase in Urban area	122.50 acres
Percentage change	436%

**Marksheffel Road**

Study area	473.35 acres
1955 prairie/agriculture	473.35 acres
1995 prairie/agriculture	298.80 acres
Decrease in prairie/ag.	174.55 acres
Percentage change	-37%

Other changes in landscape pattern are indicated in the agricultural statistics and projections for El Paso County from the Colorado Department of Agriculture (Table 2-8). The numbers show that from 1950 to 1997 both the number of farms in El Paso County as well as the amount of land in farming decreased by nearly a third. Even more dramatic was the decline in overall cropland, with a 70% reduction.

Within that cropland, 91% of the woodland area, including windbreaks and riparian vegetation on farms, were converted to other uses. Loss of this vegetation is particularly significant because of the role it plays in supporting birds and other wildlife. The far right column shows what changes can be expected if current trends continue to 2025.

Attribute	Change		
	1955 to 2000	2000 to 2025	1955 to 2025
Land in Farms	-30%	-6%	-34%
Average Size of Farm	-2%	-45%	-46%
Total Cropland	-69%	-14%	-73%
Harvested	-76%	-39%	-85%
Pasture/ Grazing	-60%	-20%	-68%
Woodland	-91%	-70%	-97%
PERCENTAGES			
% Harvested	-22%	-29%	-25%
% Pasture/ Grazing	-28%	-40%	-57%
% Woodland	-70%	-66%	-90%

*Table 2-8. Historic and projected changes in agricultural lands in El Paso County, Colorado.*

**TRENDS RELATED TO BIODIVERSITY AND SUSTAINABILITY**

Unless road systems and other development that are planned with some recognition of how natural areas function, they will continue to contribute to habitat fragmentation and other unsustainable landscape patterns. Some important current trends:

- ▶ Riparian areas are being converted to non-riparian habitat or are being severely altered. This trend is especially evident in the tributaries to Monument Creek. This is particularly important because riparian areas in northern El Paso County are habitat for the federally listed Preble's Meadow Jumping Mouse. Habitat loss was one of the primary reasons for listing the Preble's mouse as a threatened species.

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## Landscape Patterns

- ▶ Preble's mice also use upland sites that are often affected by residential development. These mice use upland habitat up to 300 feet or more from stream edges, including grasslands for feeding and shrublands for hibernation sites. Trails in riparian areas may have significant impacts on small mammals and birds, and there is increasing public demand for recreation trails of all kinds.
- ▶ Increased stormwater runoff is contributing to downcutting of streams and the lowering of groundwater levels. Lowered groundwater levels can lead to the demise of shrub riparian communities because shrub roots can no longer reach water sources. The decline of riparian communities has severe effects on many wildlife species that depend on these water-rich areas.
- ▶ Trees are invading grasslands because fires have been suppressed. This increase in woody plant cover may lead to changes in the avian community including introducing exotic bird species, increasing nest predators/parasites and habitat generalists and decreasing species that depend on grasslands, such as the meadowlark. Forest fires are increasing in size, severity and effect, due to a buildup of fuels and the popularity of building in forested areas. Severe fires remove both vegetation and litter layers that protect soil from erosion.
- ▶ Many species requiring undeveloped habitats are being pushed to the edges of the urban area as development proceeds. This is illustrated by some of the shortgrass prairie species, such as swift fox, lark bunting (state bird), mountain plover and pronghorn antelope. These species have coexisted with agricultural (e.g., livestock grazing) use but not with urban development.
- ▶ Habitat blocks (required to sustain a functioning ecosystem) are decreasing in size and becoming more fragmented. One large habitat block of shortgrass and shrub cover types will have a major new road, Powers Boulevard. However, it does not appear that there are sensitive vertebrate or plant species in this area.
- ▶ The small patches of natural systems that remain within the urban area support few natural species, and instead contain exotic or weedy species and suffer from lack of connectivity.
- ▶ Increased development is resulting in increased impervious surfaces leading to increased stormwater runoff higher peak flows in streams and lower water quality.
- ▶ Increased trans-basin diversions and runoff are causing excess water to be incorporated into the Fountain Creek and other area stream systems and watersheds. This causes unnatural erosion and deposition, including flooding and erosion of manmade structures near streams.
- ▶ Total acres of agricultural lands are projected to continue to decrease within the county in the decades ahead. Harvested crop production will decline, but grazed land will increase. Agricultural lands in eastern El Paso County are being converted to residential housing.

**TRENDS RELATED TO QUALITY OF LIFE AND SUSTAINABILITY**

- ▶ Scattered development is resulting in more roads. Road use is causing noise and other impacts to the environment. Roads can also form barriers to neighborhood connections.
- ▶ Residential development in former agricultural areas will change the rural area of the county from agricultural production to urban-related services.
- ▶ Residential development in former agricultural areas may cause new conflicts between farmers and new residents, including disputes about animal odors, water quality and farm machinery use of roads.
- ▶ Inappropriately planned development may lead to complete urbanization in the future except for areas that are uneconomical or restricted. This can result in the preservation of open space with little human or habitat value and limited use for active and passive recreation.



*Figure 2-32. Birding at Big Johnson Open Space, a shortgrass prairie habitat west of Powers Boulevard. See the related case study in 2- F, Visual Resources.*

### **VISION FOR THE FUTURE: COLORADO SPRINGS COMPREHENSIVE PLAN**

Several of the main issues addressed by the *Colorado Springs 2001 Comprehensive Plan* relate to landscape patterns and suggest future sustainable patterns for the Pikes Peak region. The Comprehensive Plan is an important resource to help guide the community toward a healthier, sustainable future. That plan specifically lists the following overall strategies for preserving and improving quality of life:

- ▶ Develop a coordinated land use pattern that efficiently uses land by encouraging mixed-use activity centers rather than segregated land uses.
- ▶ Create opportunities for travel modes that can reduce the rate of growth in automobile use.
- ▶ Continually improve the community's stewardship of its natural setting.
- ▶ Strengthen the quality of development's visual character and appearance.
- ▶ Maintain a citywide context or perspective as an integral part of incremental land use decision-making.
- ▶ Recognize the central importance of all neighborhoods.

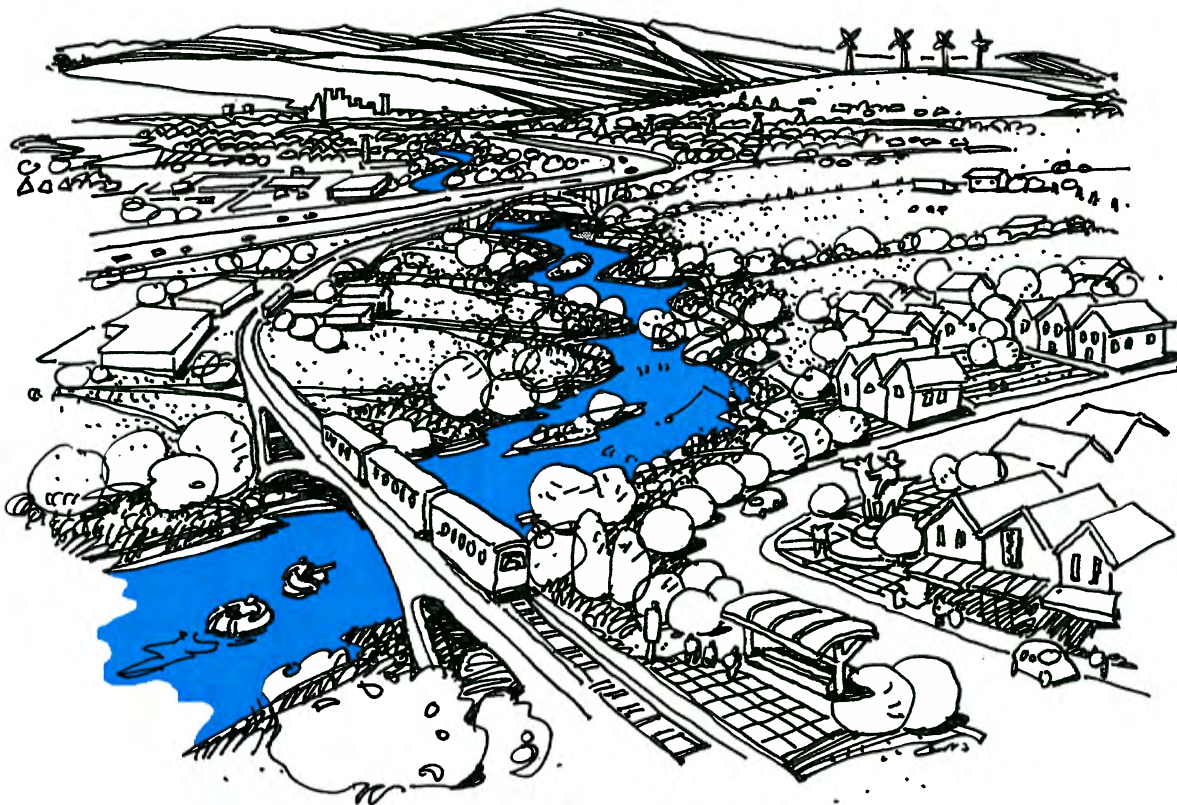


*Figure 2-33. Colorado Springs founder General William Jackson Palmer designed the city with wide streets. The City Parks, Recreation and Cultural Services Department plants and maintains the medians and flowerbeds within City limits.*

### **KEY STRATEGIES FOR SUSTAINING EFFECTIVE LANDSCAPE PATTERNS IN THE PIKES PEAK REGION**

The following strategies are drawn (as for each of the six indicators) from a range of sources, including the *City of Colorado Springs 2001 Comprehensive Plan* and the two panels that were convened for this study. The list is not exhaustive and is

offered to give an idea of the range of strategies that can be enlisted to help include sustainability in decisions. What these strategies might look like on the ground in the Pikes Peak region is suggested in Figure 2-34.



*Figure 2-34. A hypothetical future landscape. If the strategies suggested in this report and related documents were vigorously pursued, the Pikes Peak region of the future would be more likely to sustain high-quality biodiversity and a healthy and vibrant quality of life. Broadly speaking, new development would be aggregated in mixed-use blocks and efficiently served by public transportation, large blocks of natural areas would be protected and interconnected by greenways that permeate development and agriculture would be maintained in blocks large enough to be productive.*

Our Community Envisions a Colorado Springs that:

- ◆ respects its heritage and natural setting,
- ◆ projects a highly attractive image and protects its unique character and scenic beauty,
- ◆ provides an incomparable system of open spaces, natural areas and greenways,
- ◆ is truly a city of neighborhoods—with affordable housing, walkable destinations, convenient parks and quality schools,
- ◆ successfully integrates the uses and activities that meet the daily needs of residents, including housing, shops, work places, schools, parks and civic facilities,
- ◆ has a transportation system with a high degree of efficiency, mobility, accessibility, connectivity and a range of real choices for traveling between destinations within the community,
- ◆ is equitable and fiscally responsible in providing, maintaining and upgrading services and infrastructure.

Source: *City of Colorado Springs 2001 Comprehensive Plan*

To achieve and sustain anything close to the City's vision as detailed at left will require changing the spatial relationships among future areas of development and between development and natural areas. For example, uncoordinated and scattered development will not likely result in mixed-use activity centers or allow residents to move away from dependency on the automobile. The same uncoordinated and scattered development also will likely be more disruptive of the interconnectedness of natural systems.

"Green infrastructure" is an example of one model for developing an integrated, connected system of open space sufficient to sustain key ecological functions and major components of biodiversity as a complement to "gray" infrastructure (e.g., roads and power lines). This is explained more fully on the U.S. Department of Agriculture sponsored web site, [www.greeninfrastructure.net](http://www.greeninfrastructure.net).

Another useful model is the more comprehensive model described by Richard Forman's aggregate-with-outliers principle (see discussion on page 2-16). Forman suggests keeping uses (natural or developed) primarily in large blocks because it is more efficient and effective, and leaving connections between some blocks with outliers in others.



**POLICY-LEVEL STRATEGIES:  
LANDSCAPE PATTERNS**

- ☑ Reduce the negative cumulative effects of growth by:
  - ▶ Encouraging mixed-use development instead of zoning that separates uses.
  - ▶ Encouraging activity centers instead of corridor development.
  - ▶ Balancing distribution of employment and residential opportunities.
  - ▶ Continuing to incorporate land use and traffic planning in development review.
  - ▶ Ensuring that components of the transportation system are compatible with adjacent uses.
  - ▶ Developing land-use patterns that are mutually supportive of an intermodal transportation system.
  - ▶ Identifying and conserving a system of green infrastructure for the region.
- ☑ Generally aggregate broad uses (development, natural areas, agriculture) but have outliers of nature in developed and agricultural areas and allow outliers of development in natural areas near their borders with development.
- ☑ Improve air quality by developing intermodal transportation systems.
- ☑ Manage noxious weeds regionally so they do not threaten biodiversity.
- ☑ Improve stormwater runoff control by maintaining riparian corridors in a natural state whenever possible.
- ☑ Avoid severing connections of wildlife habitat blocks with development by setting aside habitats and connecting them to similar habitats with riparian systems.

**PROJECT-LEVEL STRATEGIES:  
LANDSCAPE PATTERNS**

- ☑ Use alternatives to impervious surfaces whenever possible to encourage percolation of stormwater rather than runoff. Use vegetated swales and other green solutions to intercept and treat runoff from paved surfaces, such as roadways and parking lots.
- ☑ Promote the use of native and locally adapted plants in urban areas where appropriate to promote water use reduction.
- ☑ Reduce sedimentation by following appropriate best management practices (BMPs) for controlling erosion and intercepting runoff.
- ☑ Protect and restore riparian areas because of their tremendous significance to biodiversity and water quality.
- ☑ Manage noxious weeds aggressively to reduce their spread and impacts.
- ☑ Maintain large contiguous habitat blocks because they are crucial for species that are affected by habitat fragmentation.
- ☑ Maintain greenways or other habitat connections between habitat blocks to maximize the value and productivity of those larger areas of habitat.
- ☑ Avoid severing habitat connections with roads, trails, or other disruption.
- ☑ Carefully plan and implement a system of wildlife crossings to maximize the porosity of road corridors for wildlife movement. Remember that different kinds of wildlife may require different types of crossing structures.
- ☑ Create large, contiguous-area, wetland mitigation sites to mitigate the loss or degradation of smaller, isolated wetlands.

## **IMPLEMENTING THE STRATEGIES: CASE STUDIES**

Four cases studies that describe effective approaches for sustainability of landscape patterns are provided here. Additional case studies are provided in the other sections of this sourcebook, addressing water quality and quantity, air quality, transportation patterns, noise and visual resources.

### **Case Study**

#### **State of Colorado**

#### **PROGRAMMATIC APPROACH TO HABITAT CONSERVATION**

One of the most serious effects of urban development on wildlife populations is loss of natural habitat areas and fragmentation of these same areas. Fragmentation refers to the breaking of large habitat areas into smaller ones.

These habitat effects manifest themselves on wildlife populations in several ways: less habitat supports fewer animals and fragmented habitat does not allow animals movement between remaining habitat patches to the extent that pre-fragmented habitat did. Animal movements between adjacent habitat patches are especially important to maintaining genetic diversity in the population, as well as allowing an influx or efflux of suitable mating partners. If habitat patches become isolated, the animals remaining there are more susceptible to genetic maladies, catastrophic events and lowered breeding potential.

The Colorado Department of Transportation (CDOT) has recognized the importance of “linking” habitat patches to allow for animals movements. Habitat linkages have been studied in detail for the Preble’s Meadow Jumping Mouse in El Paso County. This study found there were at least six separate Preble’s populations in the county, and these populations were separated by various types of habitat barriers. CDOT was obligated to mitigate for impacts to Preble’s habitat from several highway projects but devised a novel way to mitigate. Rather than simply replacing habitat that would be affected by the projects, CDOT committed to several conservation practices using a programmatic process that viewed entire landscapes rather than just project areas.

The major conservation measures that will be used include restoring at least two habitat linkages and protecting at least 50 acres of Preble’s habitat in northern El Paso County. If successful, the habitat linkages will allow separate populations to once again mingle and exchange individuals and genes. The restored riparian corridors also will benefit many other wildlife species that will use them for breeding habitat and movement corridors.

CDOT has cooperated with El Paso County and the U.S. Air Force Academy on these conservation measures, and such partnerships are almost necessary when managing landscapes. One of the proposed habitat linkages is on academy property, and to be successful, linkage restoration will require cooperation among biologists, engineers and hydrologists from both agencies.

## Case Study

### El Paso County, Colorado CNHP WETLAND AND RIPARIAN POTENTIAL CONSERVATION AREAS IN EL PASO COUNTY

The report, Survey of Critical Wetlands and Riparian Areas in El Paso and Pueblo Counties, Colorado (CNHP 2001), was prepared by the Colorado Natural Heritage Program (CNHP) in 2001 for the Colorado Department of Natural Resources under a grant from the U.S. Environmental Protection Agency. This report provides the most recent, comprehensive evaluation of wetlands and riparian areas in El Paso County, Colo. Highlights from this report are summarized below; however, readers interested in wetlands and riparian areas in El Paso County are encouraged to review the entire CNHP report online at: [www.cnhp.colostate.edu](http://www.cnhp.colostate.edu).

The CNHP 2001 study delineated 17 Potential Conservation Areas (PCAs) occurring either partially or completely within El Paso County. PCAs contain significant elements of biodiversity including biologically significant wetlands. Designation and delineation of PCAs does not carry with it any regulatory protection. Nor does PCA designation restrict land use or activities --

it is strictly a conservation planning tool. To this end, future actions proposed to occur in or adjacent to these PCAs can use the CNHP 2001 report to assess whether their activities adversely affect these elements of biodiversity. This is one of nine recommendations made in the report for the conservation of biological diversity.

Each PCA has a biological diversity rank, as shown in the table below. These rankings are explained on the CNHP website.

The CNHP 2001 report cites Dahl (2000) to emphasize the rate of wetland habitat loss in the continental U.S. since 1986 (58,500 acres/year) and Dahl (1990) to describe the loss of wetlands in Colorado. Dahl (1990) states approximately 50% (1 million acres) of the wetlands in Colorado were lost prior to 1980.

As the CNHP 2001 report indicates, calculating the rate of wetland habitat loss in El Paso County is difficult to quantify; however, without protection, wetlands in El Paso County will continue to be lost or altered.

*Wetland and Riparian Potential Conservation Areas in El Paso County, Colorado*

Rank	Potential Conservation Area	Acres	Location
Very High	Buffalograss Playas	55,332	Southeastern El Paso County
Very High	Cheyenne Cañon	18,520	Western El Paso County
Very High	Judge Orr Road	25,026	Eastern El Paso County
Very High	Monument Creek	12,709	Northern El Paso County
Very High	Schriever Playas	514	Eastern El Paso County
Very High	Severy Creek	2,264	North of Pikes Peak
High	Big Sandy Creek at Calhan	4,342	Northeastern El Paso County
High	Boehmer Creek	5,688	West of Pikes Peak
High	Bohart Playas	235	Southeastern El Paso County
High	Chico Creek	N/A	Mostly south of El Paso County
High	East Chico Basin Ranch	3,118	Southeastern El Paso County
High	Farish Recreation Area	752	North of Pikes Peak
High	Riser at Calhan	2,564	Northeastern El Paso County
High	West Kiowa Creek at Elbert	N/A	Mostly north of El Paso County
Moderate	Big Johnson Reservoir	3,700	South of Colorado Springs Airport
Moderate	Fountain/Jimmy Camp Creek	5,221	South central El Paso County
Moderate	Rasner Ranch Playas	435	Southeastern corner, El Paso County

**Case Study**

**Denver Metropolitan Area  
CHATFIELD BASIN CONSERVATION NETWORK**

More than 50 public and private agencies, organizations and companies have banded together to conserve an interconnected system of open space for wildlife and people in southwestern metro Denver surrounding Chatfield Reservoir. They have created a plan to coordinate the efforts of developers and conservationists to protect connections and conserve major parts of the ecological vitality of the Chatfield Basin.

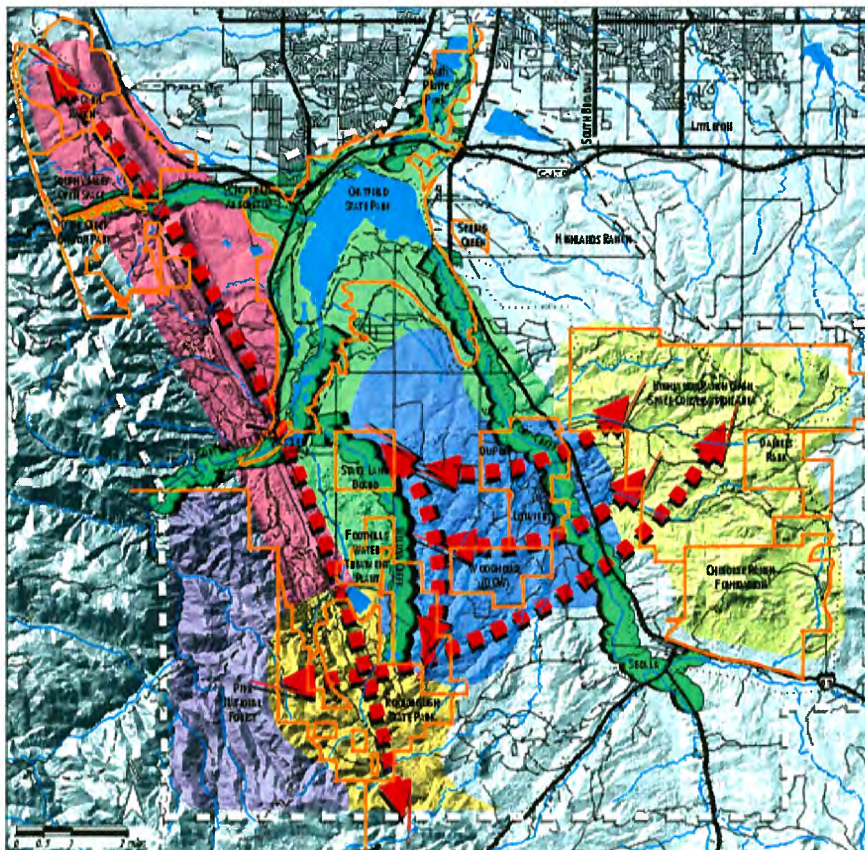
Their plan identifies a conservation network for the Chatfield Basin that utilizes large blocks and major connections. Project participants believe that protecting these connections and significant portions of the

conservation areas will be a major step toward conserving the ecological integrity of the basin.

The stated goal is to work collaboratively— with public agencies, private landowners, and developers. The plan outlines a range of strictly voluntary actions.

The basin’s riparian areas provide important habitat and allow a variety of wildlife to move north and south and east and west, into and through the basin’s conservation areas.

See [www.chatfieldbasin.org](http://www.chatfieldbasin.org)



**CONCEPT PLAN**

*"Conserving connections for nature and people."*

This concept plan identifies six conservation areas, three key riparian corridors, and five urban corridors that will link the various corridors, and a proposed trail system.

- Conservation Areas**
- Highbank and Grassland (A1)
  - Wetlands (A2)
  - Grassland (A3)
  - Woodslands (A4)
  - Shrublands (A5)
  - Forest and Shrublands (A6)

- Riparian Corridors**
- South Platte River (C1)
  - Platte Creek (C2)
  - Denns Creek (C3)
  - W. Low Creek (C4)

- Urban Corridors**
- Debris Highbank (C5)
  - Shrapnel Ridge (L6)
  - East-West (C7)

- Existing Trails
- Proposed Trails
- Study Area

*Chatfield Basin  
Conservation Network*

This plan is a conceptual map and does not represent any specific project. It is intended to provide a general overview of the proposed network of conservation areas and corridors.

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## Case Study

### State of Colorado WEED CONTROL: MANAGING LANDSCAPES

The State of Colorado developed a strategic plan to stop the spread of noxious weeds after recognizing the negative impacts caused by noxious weeds to the environment, agriculture, public health and the economy. The Colorado Department of Transportation supports this vision and is committed to participating in collaborative efforts to implement the Strategic Plan. Twelve working groups with various functions in both the private and public sectors work on common goals (see below).

Goals	Working Groups
<ul style="list-style-type: none"> <li>▶ Curb the introduction of new noxious weeds</li> <li>▶ Prevent the establishment of newly introduced noxious weeds</li> <li>▶ Stop the spread of noxious weed species that are already so well-established within Colorado that statewide eradication is no longer possible.</li> <li>▶ Restore lands of exceptional agricultural and environmental value.</li> </ul>	<ul style="list-style-type: none"> <li>Leadership, Coordination and Partnerships</li> <li>Prevention, Early Detection and Rapid Response</li> <li>Management: Eradication, Containment and Suppression</li> <li>Restoration of Exceptional Lands</li> <li>Integrated Weed Management</li> <li>Education and Awareness</li> <li>Financial and Technical Resources</li> <li>Inventory and Mapping Technology</li> <li>Monitoring and Assessment</li> <li>Research and Technology-Transfer</li> <li>Community Standards and Implementation/Enforcement</li> <li>Community Involvement</li> </ul>

One of these Working Groups—Integrated Weed Management (IWM)—is particularly relevant to transportation projects in the Pikes Peak region. IWM is a multidisciplinary ecological approach to managing unwanted plant species—weeds. The objective of this Working Group is to promote the active management of noxious weeds across jurisdictional boundaries through the use of established IWM processes and principles. IWM considers all available methods for containing and controlling weeds including: education, prevention, physical or mechanical methods, biological control agents, herbicides, cultural and general land management.

Planners of transportation projects in the Pikes Peak Region should consult the Strategic Plan (found at [www.ag.state.co.us](http://www.ag.state.co.us)) and contact members of the appropriate Working Group or El Paso County’s Weed Supervisor to learn about collaborative opportunities for their project.

**Other relevant case studies to see in this report:**

- State of Colorado: *Shortgrass Prairie Initiative*
- Colorado Springs: Monument Creek Watershed Landscape Assessment
- Colorado Springs: Streamside Overlay Ordinance
- Greater Wasatch Area, Utah: Envision Utah
- Kansas City region, Kansas and Missouri

**Key written resources (see the end of this report for full citations):**

*Above and Beyond: Visualizing Change in Small Towns and Rural Areas*, Julie Campoli, et al.

*Alternatives to Sprawl*, Dwight Young.

*Conservation Design Through Subdivisions*, Randall Arendt.

*Designing Open Space Subdivisions: A Practical Step-by-Step Approach*, Randall Arendt.

*Ecology of Greenways*, Daniel Smith and Paul Cawood Hellmund.

*The Image of the City*, Kevin Lynch.

*An Introduction to Sustainable Development*, Jennifer Elliott.

*Land Mosaics: The Ecology of Landscapes and Regions*, Richard T.T. Forman.

*Landscape Ecology Principles*, Dramstad, et al.

*Managing the Sense of a Region*, Kevin Lynch.

*Monument Creek Watershed Landscape Assessment*, US Air Force Academy.

*Road Ecology*, Richard T.T. Forman.

*Rural By Design: Maintaining Small Town Character*, Randall Arendt.

*Streams in the Urban Landscape*, Michael J. Paul and Judy L. Meyer.

*When City and Country Collide*, Tom Daniel.

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## 2-B. WATER QUALITY AND QUANTITY

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**W**ater is of paramount importance in our semi-arid environment. It requires special attention to sustain its positive aspects and to manage those aspects that can be harmful to people and communities, such as water pollution and flooding.

Colorado Springs receives an average of only 16 inches of precipitation per year. Yet there is more water in the Pikes Peak Region today—flowing through faucets in homes, onto trees and lawns in yards and parks, off yards and parking lots and out of wastewater treatment plants—than there was historically. In 2001, Colorado Springs Utilities provided an annual average of 83 million gallons of clean water per day, and received back and treated an average of 44 million gallons of wastewater daily.

Increased flows in the region's watersheds are due to several reasons. First and foremost, water is imported from other basins in the state to be used for municipal and agricultural purposes. According to the Pikes Peak Area Council of Governments (PPACG), 85% of the

city's water is pumped in from west of the Continental Divide. Second, with development has come more impervious surfaces such as roofs, parking lots and roads that increase runoff to the region's drainages. Water that previously would have been stored in the soil from undisturbed areas now runs off these impervious surfaces and is drained quickly into stream channels.

Urban runoff carries a range of pollutants and sediment into stream systems, degrading water quality. The higher levels of flows also cause changes. With their newfound volumes and associated energy, these streams cut deeper and narrower channels, often lowering the water table of the riparian zone and making it unavailable to streamside vegetation.

**Measurable indicators of water quality** (what to look at when gauging what is happening to water quality in the Pikes Peak region).

- Fecal coliform
- Dissolved sulfate
- Dissolved fluoride
- Total iron
- Dissolved manganese
- Dissolved selenium

**Measurable indicators of water quantity**

- Stream flow
- Base flow
- Snowmelt
- Summer flow

Water Quality and Quantity

For this study, the additional impervious surface area that would result from the four proposed projects was estimated, and it is a large amount—437 acres (see Table 2-9). This is an estimate of new surfaces that will not be available for soil infiltration and will contribute to new runoff volume in

area streams, as well as additional pollutant loads. For Interstate 25 only, additional loads of sediment, metals and other indicators of water quality were also estimated from the increase in impervious surface area and are given in Table 2-10.

*Table 2-9. Estimates of existing and potential additional impervious surfaces for four transportation projects in El Paso County, Colorado.*

Roadway Project	Impervious Surfaces (acres)		
	Existing	Additional <sup>1</sup>	Total
Interstate 25	235	128	363
Powers Boulevard	142	219	361
Woodmen Road	44	51	95
Drennan Road	4	39	43
Total for these road segments	425	437	862

<sup>1</sup>Calculation of additional impervious surface areas is preliminary and represents a best estimate based on existing plans for these proposed projects as of Oct. 1, 2003.

*Table 2-10. Estimated existing and potential additional pollutant loading for the Interstate 25 improvement project in El Paso County, Colorado.*

Pollutant	Estimated Existing Annual Mass Load (kilograms per year)	Existing Case Annual kilograms per acre of road surface <sup>1</sup>	Potential Future Additional (kg per acre)	Potential Future Total (kg per acre)
Total Suspended Solids (TSS)	26,056	111.0	203.6	314.6
Total Organic Carbon	4,587	19.5	35.8	55.4
Chemical Oxygen Demand	20,919	89.1	163.4	252.6
Nitrate	140	0.6	1.1	1.7
Phosphorus	73	0.3	0.6	0.9
Copper	10	<0.1	0.1	0.1
Lead	73	0.3	0.6	0.9
Zinc	60	0.3	0.5	0.7

<sup>1</sup>This estimate assumes a homogeneous density of traffic per acre. Estimate of additional loading based on best estimates of increases in impervious surfaces for the I-25 project.



In addition to the indirect, physical changes to riparian areas caused by increases in impervious surfaces is the indirect, and cumulative impact from non-point source and point source pollutants reaching these areas (Paul and Meyer 2001). As shown in Table 2-10, modeling of pollutant loading for I-25 suggests that the total amount of pollutants found in stormwater runoff will increase as impervious surfaces increase. It is not known how much of these pollutants actually will reach riparian and wetland areas, but because of their inherent functionality to trap sediment and other pollutants, riparian and wetland ecosystems could receive increased pollutant levels.

This becomes of particular concern when taking into consideration all of the planned growth and development in the region (e.g., more than 200,000 additional residents by year 2025).

Without intervention, the cumulative effect of pollutant loading over time may cause loss of ecosystem health and diversity, eutrophication (over-enrichment of water with nutrients) and/or sterilization.

**HISTORIC WATER PATTERNS IN THE PIKES PEAK REGION**

The Fountain Creek watershed includes Colorado Springs, Fountain and areas south to Pueblo. Fountain Creek flows into the Arkansas River, which then flows eastward through Kansas, Oklahoma and Arkansas to reach the Mississippi River (see Figure 2-35). El Paso County is by far the most populous Colorado county in the Arkansas River Valley.

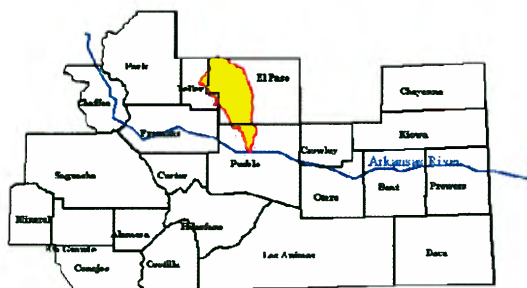


Figure 2-35. Fountain Creek Watershed (in yellow) feeding into the Arkansas River

Historically, snowmelt from higher elevations in El Paso County combined with precipitation events to cause annual high-peak flows and annual flooding during spring and early summer months. These peak flows and annual flooding were essential to the establishment and maintenance of riparian and aquatic systems in the Pikes Peak Region.

Except for summer storm events, stream flows in this region historically reverted to very low or no flow during the summer and fall months. Flora and fauna of this region adapted to and depended on the dynamic nature of this hydrologic cycle. Indeed, some plant species (e.g., cottonwood) require spring flooding to provide the proper seedbed for new seedling establishment. Other species of plants (i.e., hydrophytic) are only found in areas where the soil is saturated for extended periods to create anaerobic (i.e., lack of free oxygen) conditions. Moreover, some wetland communities evolved with spring flooding or high groundwater levels associated with peak flows. Many wetland-dependent animal species (e.g., beaver) also relied on the historic water regime of high spring peak flows and annual flooding.

With development, water diversions and dams were designed to capture and control the annual flooding events. Stream stabilization and channelization projects further altered the region’s historic water patterns. Changes in streams dynamics, water diversions/ impoundments and general urbanization have all contributed to major changes in historic water patterns in the Pikes Peak Region. Urbanization has increased the amount of impervious surface in the area thereby increasing the amount of stormwater runoff. More stormwater runoff has lead to increases in erosion and an increased level of concern regarding pollutants and water quality.

A report on Fountain Creek streamflow published by the US Geological Survey contained the following key trend information (USGS 2000). Since 1977, the high flows of the year have been getting higher and the low flows have also been getting higher. These trends in streamflow were not detected prior to 1977.

The Fountain Creek Watershed can be examined in terms of five subwatersheds as shown in Figure 2-36.

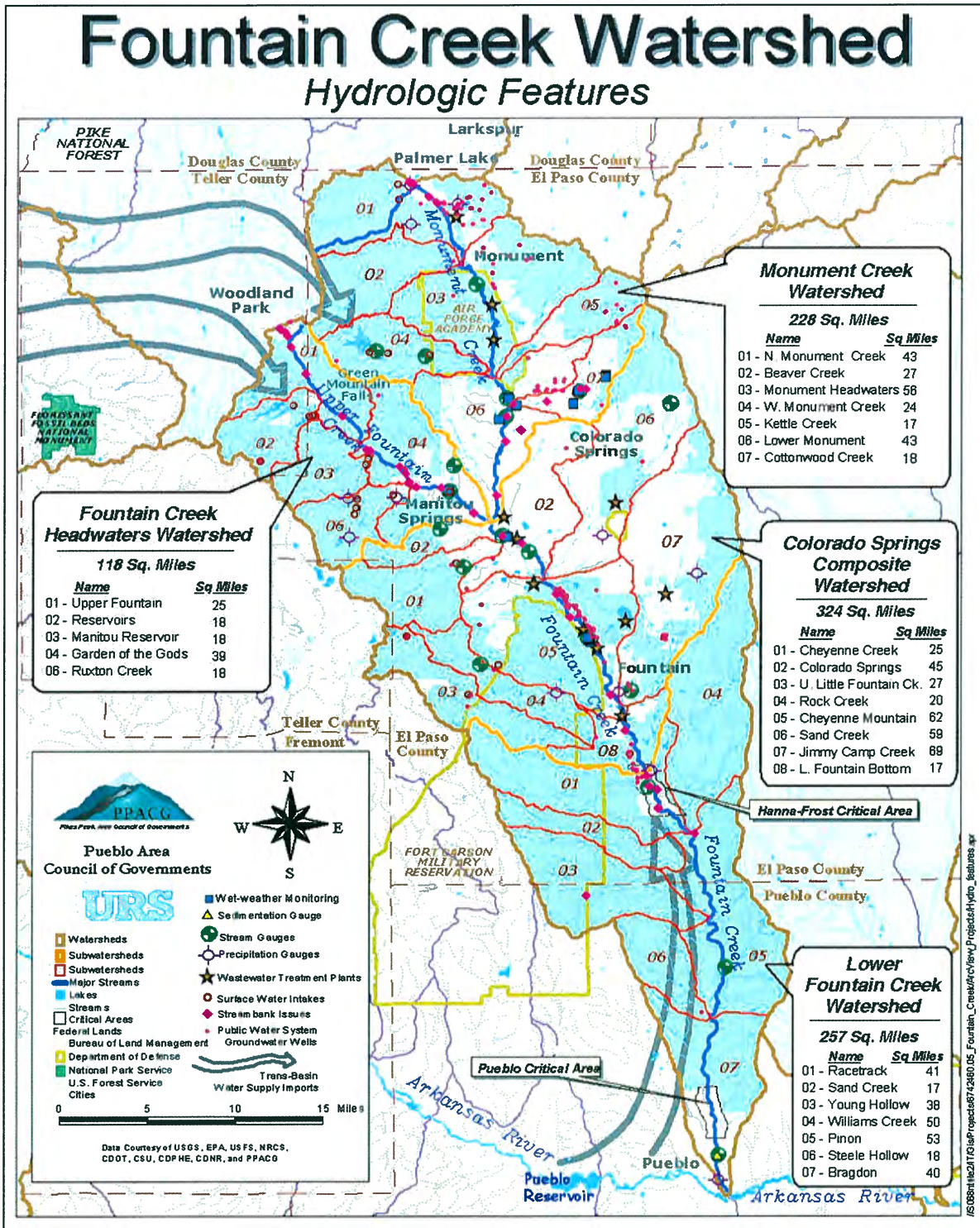


Figure 2-36. Fountain Creek Watershed, Hydrologic Features

## WATER QUALITY IN THE PIKES PEAK REGION

The United States Geological Survey began monitoring water quality in the early 1960s. Today, a number of stations monitor characteristics such as water flow, fecal coliform, pH and dissolved oxygen, sedimentation and the presence of heavy metals.

Maintaining acceptable water quality in the region's surface waters is important for many reasons, including the following:

- ▶ Concentrations of heavy metals, especially a two-fold increase in selenium, may have serious health effects on both aquatic life and humans.
- ▶ Diminished water quality reduces recreational uses such as fishing and their attendant economic benefits.

- ▶ Limitations in drinking water availability restrict sustainable growth and development of the region.

A variety of fish habitats have been found within the Fountain Creek drainage, including riffles, runs and pools, which support different species of fish, vegetation and other aquatic life, but much of the native fish population has been eliminated in the watershed.

The following table indicates the current water quality suitability for various uses designated for specific watershed portions of the study area. Note that a stream may be unsuitable to support aquatic life either due to poor water quality or due to inadequate amounts and frequency of water flows.

*Table 2-11. Uses for segments of the Fountain Creek Watershed*

Segment Description	Size	Assessed Use*
Mainstem of Fountain Creek- source to Monument Creek	165 miles	AC1, R1A, WS, Ag
Mainstem of Fountain Creek from a point above the confluence with Monument Creek to State Hwy 47 Bridge	40 miles	AW2, R1A, WS, Ag
Mainstem of Fountain Creek from Highway 47 Bridge to Arkansas River	14 miles	AW2, R1A, WS, Ag
Fountain Creek-all tributaries on National Forest or U.S. Air Force Academy lands	180 miles	AC1, R1A, WS, Ag
Fountain Creek—all tributaries <u>not</u> on National Forest or U.S. Air Force Academy lands	860 miles	AW2, R1A, Ag
Marshland Jimmy Creek and unnamed tributary	6 miles	AW1, R2, Ag
Mainstem of Monument Creek- National Forest boundary to Fountain Creek	27 miles	AW2, R1A, WS, Ag
Pikeview Reservoir, Willow Springs Ponds #1 and #2	78 acres	AW2, R1B, WS, Ag
Prospect Lake, Quail Lake, Monument Lake	78 acres	AW2, R1A, Ag
Chico and Black Squirrel Creeks	679 miles	AW2, R2, WS, Ag

\*Assessed use classifications:

- Ag                   suitable for agricultural use
- WS                   suitable, after treatment, for human water supply
- AC1 (AW1)        supports cold water (warm water) biological communities
- AC2 (AW2)        does not support cold water (warm water) biological communities
- R1A (R1B)        suitable (or potentially suitable) for recreation uses involving extensive contact with the water
- R2                   suitable for recreation uses with incidental contact with the water

## **GROUNDWATER QUALITY**

Much of the discussion on water quality has centered on effects to surface water supplies. Groundwater supplies both potable and irrigation water to locations within the study area.

Occasionally, groundwater quality becomes locally important. Groundwater pollution can occur due to improper handling, storage or use of certain chemicals. In some cases, due to local soil and water table conditions, the chemicals fortuitously remain a localized soil contamination problem. Such is the case for many leaking underground storage tanks at gasoline stations throughout the United States. In other cases, however, chemicals can reach an underground aquifer and contaminate wells and other downstream receptors. A well-known case of this in the Pikes Peak region is a plume of contaminated groundwater in the Widefield area immediately south of Colorado Springs. This plume is several miles long and affects a drinking water aquifer.

The Schlage Lock Company operates a manufacturing plant where the chemical perchloroethylene (PCE) was used as a metal degreasing agent.

According to the Colorado Springs Gazette, Schlage is the 14th largest employer in El Paso County, with 1,100 workers. In 1979 and 1980, the company reportedly disposed of used PCE by dumping it onto the ground.

Over time, the PCE plume has contaminated the area's groundwater, as well as public and private wells. The plume of underwater contamination flowed southwesterly from the plant to the former Little Johnson Reservoir, then flowed southeasterly, generally paralleling U.S. Highway 85-87, finally reaching the Willow Springs fishing ponds in Fountain Creek Regional Park near State Highway 16 (Fountain/Fort Carson) exit of Interstate 25.

After discovering elevated levels of PCE in fish at the Willow Springs ponds, El Paso County posted warning signs that anglers shouldn't eat fish caught there. PCE can cause liver and kidney damage in high enough concentrations. When the posted warning signs were apparently ignored by some park users, the County closed the ponds to fishing in late 1997. The Fountain Creek Regional Park was the site of a large heron rookery at that time. The herons have subsequently moved their nesting sites about seven miles to the north.

Schlage has been conducting groundwater testing and remediation to various degrees since the late 1980s to address the problem and has assured local residents that their health is not endangered by the contamination of their drinking water. Nevertheless, the matter remains a matter of contention and negotiation between the company and the County and possibly an ongoing source of anxiety for users of the affected water supply.

## ***WATER QUANTITY IN THE PIKES PEAK REGION***

Flooding has been a persistent problem for people in the Pikes Peak region, causing dramatic changes in aquatic habitats and damage to buildings and infrastructure. The five largest streamflow events within the Fountain Creek Watershed during the past century occurred in 1921, 1935, 1945, 1965 and 1999 (see Table 2-12). Photos of the 1999 flood event are provided in Figures 2-37, 2-38 and 2-39.



*Figure 2-37. Flooding in Palmer Lake, 1999.*



*Figure 2-38. Flooding in Manitou Springs, 1999.*



*Figure 2-39. Flood damage on Fountain Creek Trail, Colorado Springs, 1999.*

Population growth has caused an increase in impervious surfaces, increased water use and increased stormwater runoff. These factors have contributed to flooding, erosion and sedimentation. Flooding combined with increases in impervious surfaces since 1962 have caused increased water quantity in streams. This has increased total suspended solids and sedimentation and flooding severity. It has also damaged stream habitats, as well as buildings and infrastructure.

Water Quality and Quantity

Table 2-12. El Paso County Flood Events.

<b>Date</b>	<b>Location</b>	<b>Event*</b>
June 10, 1864	Colorado Springs	Torrential rains, 3-inch hail, extensive flooding
May 20, 1878	El Paso County	Cloudburst, hail, heavy losses
July 26, 1885	Templeton Gap Basin	Localized estimate of 16 inches of rain, apparently the most severe storm in the basin
May 30, 1894	Colorado City	Fountain Creek flooding, bridge and house washed away
June 2-7, 1921	Shooks Run, Sand and Fountain Creeks	Worst storm in 25 years, extensive regional flooding
May 27, 1922	Templeton Gap Basin, Eastern Colorado Springs	6-inch rainfall recorded, extensive damage in Colorado Springs, eastern neighborhoods inundated
July 27-30, 1932	El Paso County	Flooding in most of northern Colorado Springs, Black Forest and along all of Fountain Creek, maximum known flood in Templeton Gap
May 31, 1935	Monument Valley, Eastern Colorado Springs	Greatest known flood on Monument Creek, which reached flood stage in less than one hour, personal property damage of \$1.2 million throughout city (\$15.7 million in 2002 dollars), flooding killed 18
June, 1965	El Paso County	Flood levels far in excess of 500-year intervals, exceeded all known floods in County history, 15 days and over 14 inches of rain
August 14, 1977	Colorado Springs	2.78 inches of rain in one hour
August 13, 1989	Northern Colorado Springs	Street flooding
May 30, 1990	Colorado Springs	3 inches of rain in 3 hours
June 17, 1993	Colorado Springs	4 inches of rain, flash flooding, Fountain Creek overflowing
April-May, 1995	El Paso County	Black Squirrel Creek inundated, railroad track and bed washed away, 40 roads damaged, 3" hail, 3 inches of rain, 24 roads closed due to heavy May rains
July 30, 1998	Security-Widefield	3–4 inches of rain
May 1, 1999	El Paso County and 11 other counties	Extensive flooding, disaster declared

\*Note: the floods of 1935 and 1965 both exceeded 500-year flood magnitudes.

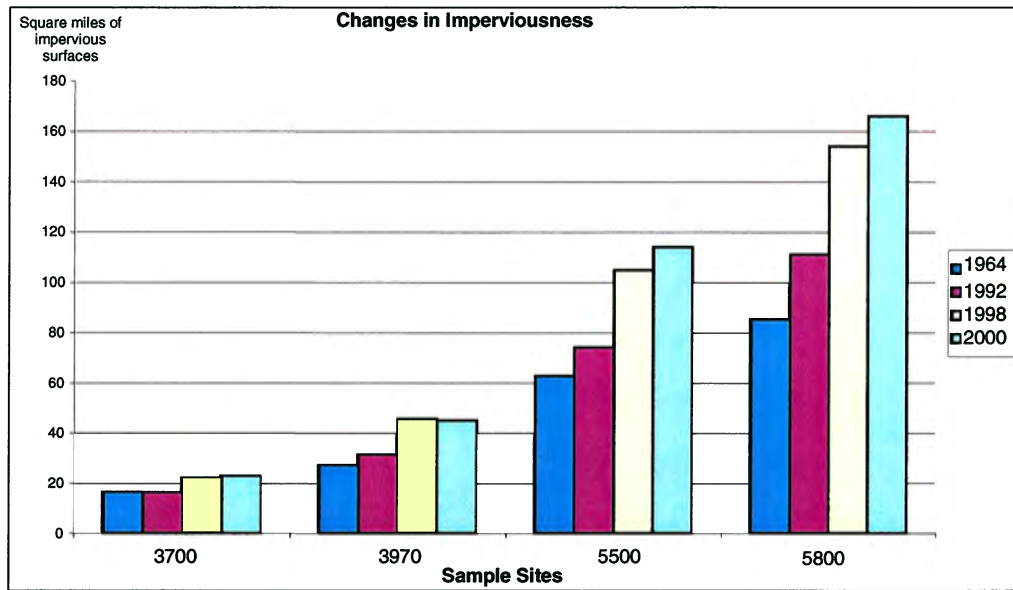


Figure 2-40. Changes in Imperviousness. Based on data from Edelman, et al. (2002) for four drainages in the Fountain Creek Watershed.

A recent study by the U.S. Geological Survey (Edelman et al. 2002) estimated the amount of impervious surface area in the drainage basins that contribute to the flow that passes at various monitoring stations in the Fountain Creek Watershed. The results are shown in Figure 2-40. The site locations are shown in Figure 2-41.

The first sample site, station 3700, represents flow from Fountain Creek above its confluence with Monument Creek. Areas contributing to this flow (western Colorado Springs and Ute Pass communities) saw little development for several decades (1964 to 1992, shown) and thus saw little change in impervious surface over that time period. Growth in this area increased markedly during the 1990s, as reflected by the increase in impervious surface from 1992 to 1998.

Sample site 3970 monitors water flowing in Monument Creek, for the area north of Cottonwood Creek. This is the northern portion of El Paso County that is currently

experiencing rapid growth. As with the first sample site, it is again estimated that impervious surface area contributing to flows at this station increased significantly during 1992 to 1998—clearly a greater amount than in the preceding 28 years.

Sample site 5500 monitors the flow of Fountain Creek south of its confluence with Monument Creek. Flows here, and their associated drainage basin area and impervious surfaces, thus represent the combined efforts of western Colorado Springs, northern El Paso County, plus central Colorado Springs. Again, the rapid growth in the 1990s is reflected in the impervious surface estimates.

Sample site 5800 reflects all of the factors and trends noted for site 5500, with the addition of impervious surfaces from eastern, southwestern and southeastern portions of the urbanized area. Cumulative effects to water quality and quantity of lower Fountain Creek logically result from all of the upstream development.

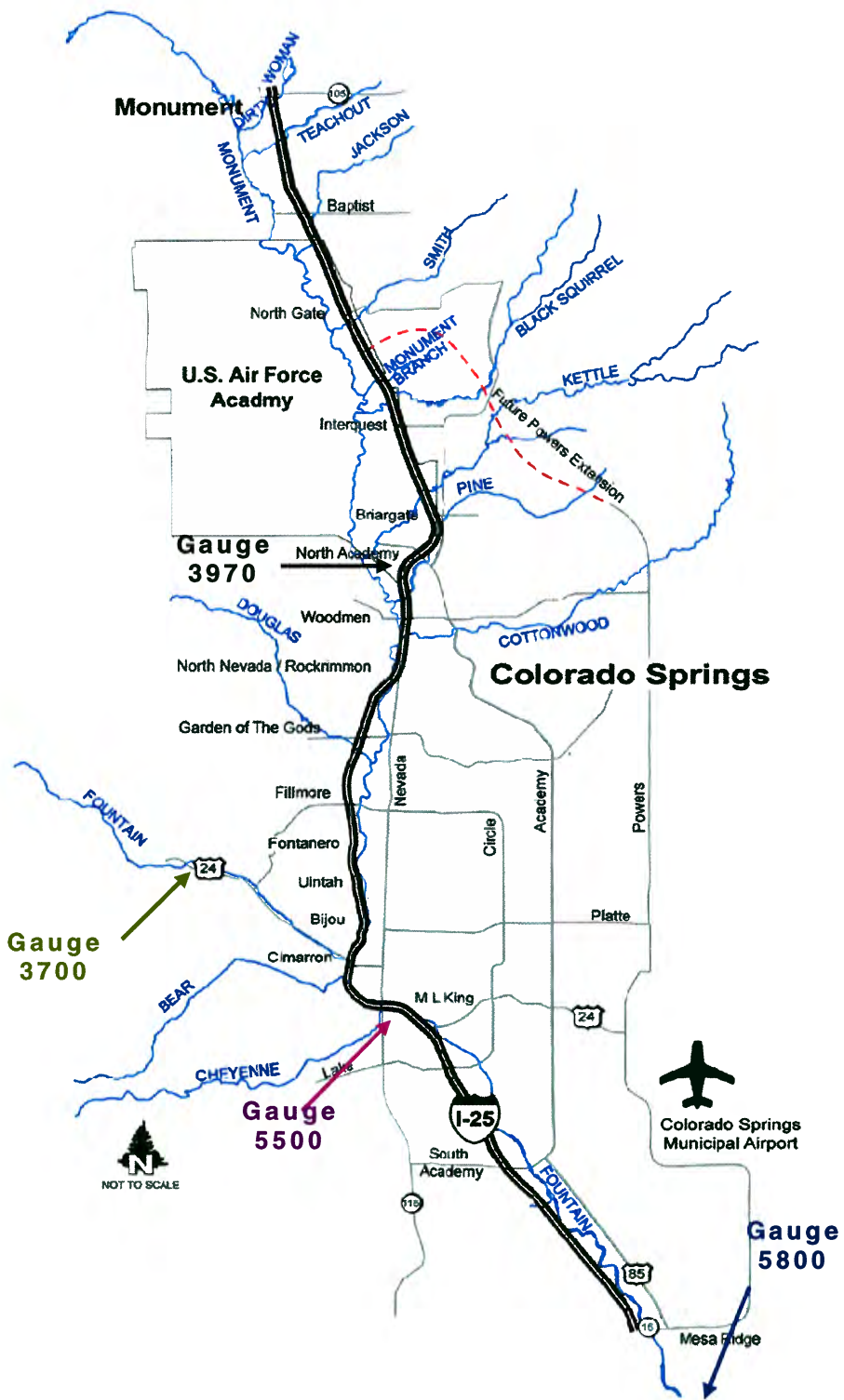
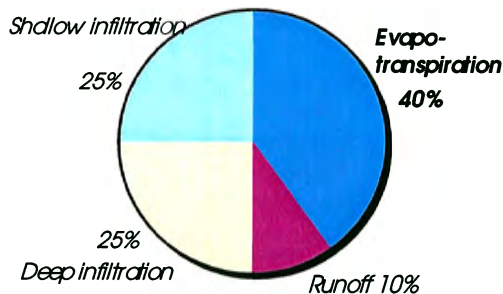


Figure 2-41. Location of USGS Gauges Measuring Water Quantity and Quality in the Fountain Creek Watershed.

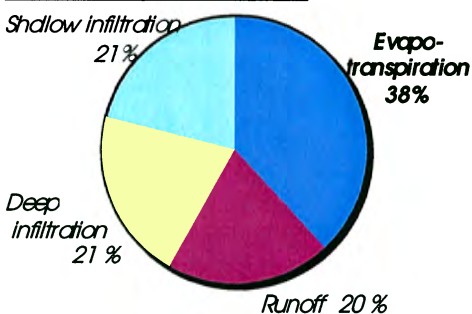


Figure 2-42 Changes in hydrologic flows with increasing impervious surface cover in urbanizing catchments (based on Arnold & Gibbons, 1996).

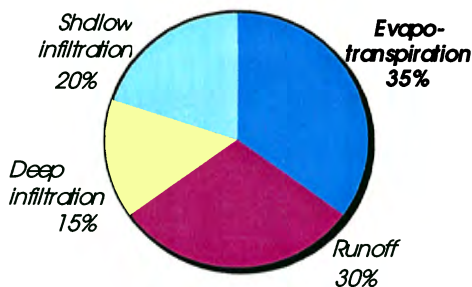
**Forested Conditions:**



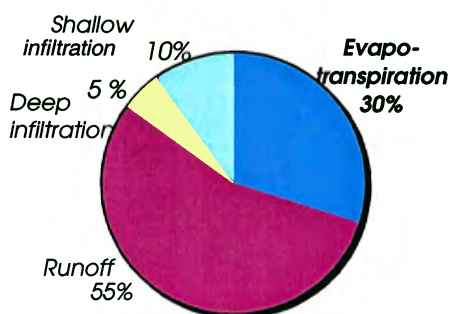
**10-20% Imperviousness**



**35-50% Imperviousness**



**75-100% Imperviousness**



**CHANGES IN IMPERVIOUSNESS**

Figure 2-42 (a set of four pie charts) conceptually depicts the degree to which changes in impervious surface affect the immediate destination of rainfall in a given landscape.

The first pie chart represents a forested area with minimal (less than 10%) impervious surface. Here, as in all four pie charts, much of the water returns to the air by the process of evapo-transpiration. That is, the water evaporates and increases the ambient humidity of the air. One quarter of the water infiltrates deep into the ground to recharge groundwater, and another one quarter achieves only shallow infiltration, keeping the ground moist to benefit vegetation. Only 10% of the water runs off the land into surface drainages.

In the second pie chart, 10-20% impervious surface doubles the runoff to 20%, resulting in decreases to other outcomes, primarily reducing infiltration.

In the third pie chart, 35-50% impervious surface yields even higher runoff and further reduced infiltration. This can have serious downstream impacts in surface drainages, such as erosion, scouring and flooding. At the same time, it inhibits natural recharging of underground aquifers.

The fourth pie chart, reflecting 75% or more impervious surface, yields even higher runoff and further reduced infiltration. This can have serious downstream impacts in surface drainages (e.g., erosion, scouring, flooding) while at the same time inhibiting natural recharges of underground aquifers.

The estimate of impervious surface area covering much of the 927 square-mile Fountain Creek watershed was about 170 square miles. Using these numbers, a ballpark estimate for imperviousness in this watershed would be about 18%, corresponding to the second pie chart. Imperviousness in the Chico Creek watershed, to the east, would be much lower, corresponding to the first pie chart.

## TRENDS IN WATER QUALITY AND QUANTITY

Just as there are major floods in the region from time to time, there are also occasional periods of drought. The drought in 2002 (possibly just the beginning of a multi-year drought cycle) dramatically reduced water levels in the region's reservoirs, and necessitated water use restrictions enacted by various local governments. Clearly, long-range planning of the water supply system, and long-term conservation planning are important to regional sustainability.

Moreover, trends in water quality and quantity suggest it may be hard to sustain biodiversity and quality of life with current approaches. Some parameters in the Fountain Creek watershed, such as Total Suspended Solids (TSS) and selenium, may be harmful for maintenance of biodiversity and quality of life.

Continued impairment of water quality in the Pikes Peak Region can result in a loss in the abundance and diversity of aquatic habitat and fish species, damage to the reproductive functions and population dynamics in fishes, a loss of recreation opportunities, and higher costs to treat drinking water, while increased water quantity can result in a greater loss of public and private property and damage to infrastructure.

Regarding water quantity, the three graphs in Figure 2-43 show an overall increase in stream flows at five monitoring stations in the Fountain Creek Watershed. The flows, measured in cubic feet per second (cfs) vary dramatically by time of year. Therefore, the reader is advised to note the differing scales of the three line plots comprising the figure. For each of the line plots, an overall trend line has been determined and appears as the solid black line. For every season, there is a clear trend of increasing flows over the 14-year period analyzed.

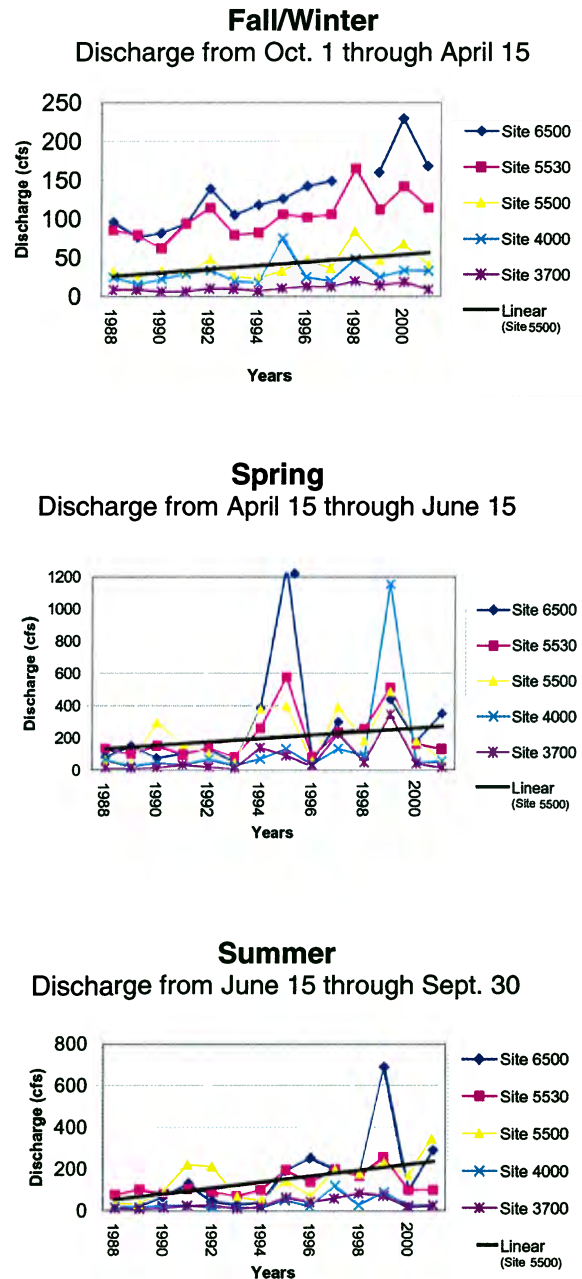


Figure 2-43. Temporal trends in flow for five USGS monitoring stations in the Fountain Creek Watershed show increased flow from 1988 to 2001. Note that the scale is different for each season.

### **THE VISION FOR WATER QUALITY AND QUANTITY IN THE FUTURE IN THE PIKES PEAK REGION**

The Federal Water Pollution Control Act (Clean Water Act) was enacted in 1972 as a result of a growing concern over water pollution, and today it forms the foundation of surface water protection in the United States. A goal of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters.

Among other things, the Clean Water Act prohibits the discharge of any pollutant from a point source into navigable waters, including wetlands, without a permit. Section 404 of the Clean Water Act

regulates these discharges and is jointly administered by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency.

Although the Clean Water Act initially focused on individual pollutants and individual sources, the focus of practitioners has shifted towards a more holistic watershed-based approach. The watershed-based approach is commonly used by most federal agencies to assess impacts to water resources, and was used in this report.

Several important points from the *Colorado Springs Comprehensive Plan* that could be applied to water issues and suggest what sustainable patterns might be:

- ◆ Continually improve the community's stewardship of its natural setting.
- ◆ Maintain a citywide context or perspective as an integral part of incremental land use decision-making.

## **KEY STRATEGIES FOR SUSTAINING WATER QUALITY AND CONTROLLING WATER QUANTITY IN THE PIKES PEAK REGION**

### **POLICY-LEVEL STRATEGIES WATER QUALITY AND QUANTITY**

- Control creation of new impervious cover to enable continued groundwater contribution to streamflow during low flow conditions and to minimize flooding impacts from increased surface runoff.
- Enhance public knowledge of the importance of maintaining vegetative cover.
- Develop policies such as streamside setbacks that control development such as parking lots and roadways adjacent to streams, to protect or enhance water quality.
- Institute a local policy requiring no net loss of wetland for projects involving impacts to wetland habitat, even though the wetlands in question may not be regulated under the Clean Water Act.

### **PROJECT-LEVEL STRATEGIES WATER QUALITY AND QUANTITY**

- Ensure that best management practices (BMPs) are appropriately applied. (A Best Management Practice is any program, process, citing criteria, operating method, measure or device, which controls, prevents, removes, or reduces pollution.)
- Enforce existing local water quality regulations.
- Ensure that all contractors are properly applying erosion control measures.
- Ensure that a National Pollution Discharge Elimination System (NPDES) permit is obtained for all projects affecting one acre or more.
- Apply BMPs to target runoff associated with roads, highways and bridges to prevent highway related nonpoint source water quality related issues.
- Minimize impervious surfaces associated with parking lots, buildings, and roads, as well as the amount of vegetation and soil removal.
- Avoid impacts to wetlands, floodplains, and riparian corridors when a practicable alternative exists.

## Case Study

### Colorado Springs, Colorado STREAMSIDE OVERLAY ORDINANCE APPROVED

In the On October 24, 2002, the Colorado Springs City Council approved a streamside overlay ordinance that establishes jurisdictional limits, application processes, physical standards, suitable land uses, and qualitative review criteria for development in the vicinity of streams within the City. The primary objectives of the ordinance and overlay are to conserve natural features of streams and promote development that is compatible with its stream setting.



*Fountain Creek through Colorado Springs*

The ordinance should help protect streams, adjacent floodplains, intact natural slopes and riparian vegetation, all very important components of landscape pattern.

## Case Study

### Castle Rock, Colorado CDOT/FHWA RESTORATION OF AN URBAN AFFECTED STREAM

The Colorado Department of Transportation (CDOT) owns about 25 acres of riparian and wetland area in the town of Castle Rock, in Douglas County, Colorado. While determining future impacts from I-25 improvements in this area, CDOT discovered that riparian communities on East Plum Creek were declining rapidly. Further investigation showed that the threatened Preble's meadow jumping mouse lived in willow stands on the edge of the stream, and that willows were dying because their roots systems were no longer in contact with the water table.

The depression of the water table was due to severe stream downcutting in the past decade, which was caused by additional

water in the stream channel flowing from impervious surfaces in the watershed.

CDOT devised a series of nine check dams on the stream to restore the natural stream channel and raise the water table, reversing the decline of the riparian vegetation. Initial results have been very promising, with ground water levels rising and being maintained. CDOT/FHWA worked with the U.S. Fish and Wildlife Service to protect this area as a conservation bank, and CDOT will also receive conservation credits for their efforts.

This project illustrates an innovative, but costly, solution to stream degradation in a riparian area.

## Case Study

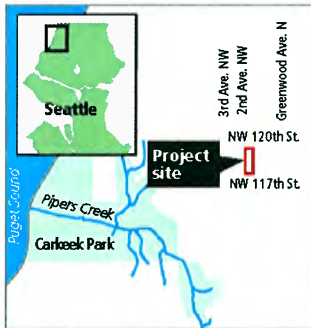
### Seattle, Washington PILOT PROJECT TO REDUCE RUNOFF

In a pilot project using green engineering, a residential block in a Seattle neighborhood reduced stormwater runoff by 98%. Details are provided in the article below.

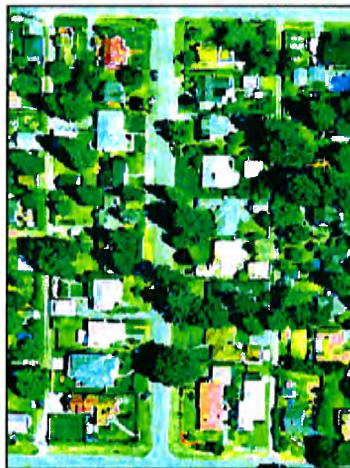
## Seattle Post-Intelligencer

### A PILOT PROJECT TO REDUCE RUNOFF

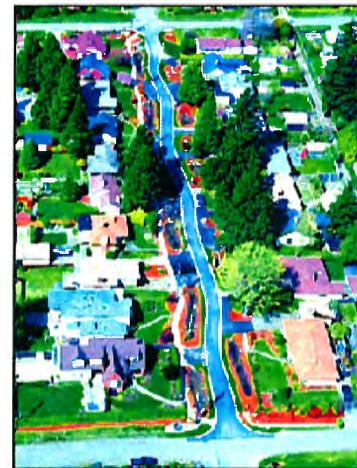
In a pilot project using "green" engineering, a block in Seattle's Broadview neighborhood reduced stormwater runoff by 98 percent. Seattle Public Utilities spent \$800,000 to create a natural drainage system in place of the traditional curb-and-gutter designs that send tainted runoff into area waters.



BEFORE



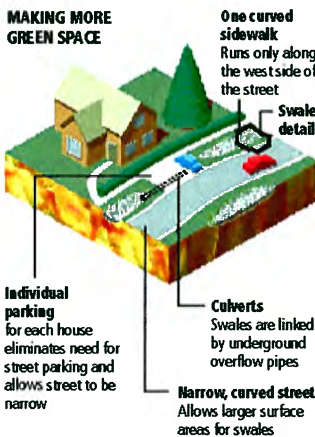
AFTER



#### DESIGN FEATURES OF A NATURAL DRAINAGE SYSTEM

Urban development removed many of the trees and natural surfaces that soaked up rain like a sponge. Without those natural barriers, rain not only has the potential to cause flooding and erosion, but it collects pollution and can overwhelm sewer systems. A natural drainage system slows the flow of runoff by making more water soak into the ground.

#### MAKING MORE GREEN SPACE



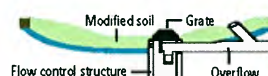
Source: Seattle Public Utilities

#### SWALES: STEERING STORMWATER

A major feature of the project involved creating carefully graded and landscaped swales along the street to collect most of the runoff. Three types of swales were used on this project. All swales are filled with modified soils to speed absorption and vegetation to slow runoff but they serve different purposes during larger storms.

##### ► Flow control swale

Regulates flow of stormwater for all swales



##### ④ Flow direction

Water from other swales flows downstream through underground overflow pipes into flow control swale

##### ⑤ Absorption

Modified soil absorbs water until it begins to pool

##### ⑥ Ponding

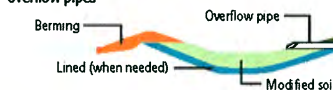
During heavy rains the catch basin backs storm water up through the grate, creating a pond in the swale

##### ⑦ Overflow port

Another overflow pipe carries excess water to another swale

##### ► Conveyance swale

Drains excess water to other swales through connecting overflow pipes



##### ► Holding swale

Absorbs the most water into ground and receives water from other swales



DAVID BADDERS/SEATTLE POST-INTELLIGENCER

**Other relevant case studies to see in this report:**

- City of Austin, Texas: Sustainable Communities Initiative
- Fort Carson, Colorado
- Greater Wasatch Area, Utah: Envision Utah
- Kansas City region, Kansas and Missouri

**Key written resources:**

*“Evaluation of Water Quality, Suspended Sediment, and Stream Morphology with an Emphasis on Effects of Stormwater on Fountain and Monument Creek Basins, Colorado Springs and Vicinity, Colorado, 1981-2001,”* P. Edelman et al.

*“Summary of Water Quality Data, October 1987 through September 1997, for Fountain and Monument Creeks, El Paso and Pueblo Counties, Colorado,”* Clifford Bussong.

*“Trends in Precipitation and Streamflow and Changes in Stream Morphology in the Fountain Creek Watershed, Colorado 1939-1999,”* Robert Stogner, Jr.

*Water Quality Management Plan for the Pikes Peak Region, Pikes Peak Area Council of Governments.*

*Fountain Creek Watershed Plan (Phase I), Pikes Peak Area Council of Governments.*





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## 2-C. AIR QUALITY

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**G**ood air helps sustain quality of life for humans and is a key element for biodiversity. Air pollution impairs human and animal respiratory functions and may lead to lung disease and death. Clean air also is an important part of the Pikes Peak area's famous scenic quality.

Air quality is affected by population growth, housing and other development, transportation patterns, and pollution control policies and technology. The causes of air pollution include motor vehicle emissions, street sanding, power plants, factories, and wood burning.

**Measurable indicators of air quality** (what to look at when gauging what is happening to air quality in the Pikes Peak region).

- Carbon monoxide (CO)
- Particulate matter 10 microns or less in aerodynamic diameter (PM<sub>10</sub>)
- Particulate matter 2.5 microns or less in aerodynamic diameter (PM<sub>2.5</sub>)
- Nitrogen dioxide (NO<sub>2</sub>)
- Sulfur dioxide (SO<sub>2</sub>)
- Lead (Pb)
- Ozone (O<sub>3</sub>)

**CLEAN AIR AND DRAMATIC VIEWS  
LONG-ASSOCIATED WITH  
COLORADO SPRINGS**

Colorado Springs has long been known for its healthy environment, clean air and scenic views (for an example, see Figure 2-44). In fact, clean air was one reason many tuberculosis sanatoria were built here at the turn of the 20th century.

With the Clean Air Act of 1970 and its 1977 amendments, Congress tasked the U.S. Environmental Protection Agency with

establishing and enforcing national air quality standards. States with areas violating the National Ambient Air Quality Standards (NAAQS) were required to submit and implement plans detailing how they would accomplish emissions reductions sufficient to meet the standards by applicable mandated deadlines.

The EPA established air quality standards for six criteria pollutants. The primary standards, established to protect human health, are listed in Table 2-13.



*Figure 2-44. Good air quality enhances enjoyment of the region's viewsheds. This view includes Union Boulevard, north central Colorado Springs, and the Garden of the Gods (red-rock formations) nestled at the base of Pikes Peak.*

Table 2-13. National Ambient Air Quality Standards

Pollutant	National Standard
<b>Carbon Monoxide (CO)</b> 8-hour average 1-hour average	9 parts per million 35 parts per million
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b> Annual arithmetic mean	0.053 parts per million
<b>Ozone (O<sub>3</sub>)</b> 1-hour average 8-hour average	0.12 parts per million 0.08 parts per million
<b>Lead (Pb)</b> Quarterly average	1.5 micrograms per cubic meter
<b>Particulate (PM<sub>10</sub>) Particles with diameters of 10 micrometers or less</b> Annual arithmetic mean 24-hour average	50 micrograms per cubic meter 150 micrograms per cubic meter
<b>Particulate (PM<sub>2.5</sub>) Particles with diameters of 2.5 micrometers or less</b> Annual arithmetic mean 24-hour average	15 micrograms per cubic meter 65 micrograms per cubic meter
<b>Sulfur Dioxide (SO<sub>2</sub>)</b> Annual arithmetic mean 24-hour average	0.030 parts per million 0.014 parts per million

Source: [www.epa.gov](http://www.epa.gov)

Air quality has been monitored in the Colorado Springs area since the late 1970s (see Figure 2-45 and Table 2-14). Air quality has been affected primarily by the following sources:

- ▶ Automobiles and other vehicles emit carbon monoxide, hydrocarbons, and nitrous oxides.
- ▶ Burning coal and wood for energy and home heating emits particulates and carbon monoxide.
- ▶ Factories and service facilities emit urban air toxics (hazardous air pollutants such as benzene, carbon tetrachloride and methylene chloride).

Carbon monoxide levels regularly exceeded federal standards of 9 parts per million throughout the 1970s and early 1980s. No violation of the carbon monoxide standard has been recorded since 1989. After a decade with no violations, the region was allowed to discontinue mandatory use of wintertime oxygenated fuels.

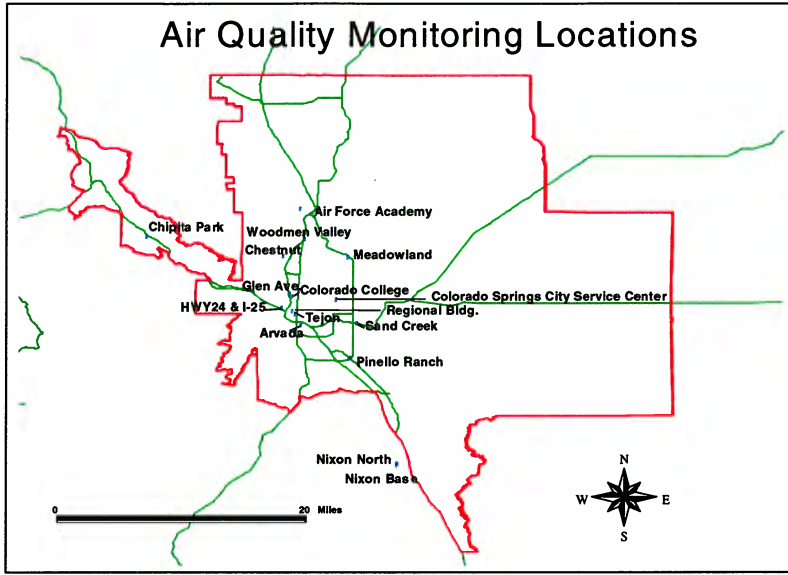


Figure 2-45. Location of air quality monitoring sites in the Pikes Peak region. Air quality has been monitored in the Colorado Springs area only since the late 1970s.

Table 2-14. Monitoring locations and parameters in the Pikes Peak region.

Site Name	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	Agency*	Status
Nixon Base		X		Utilities	Active
Nixon North	X			Utilities	Inactive
Woodmen Valley	X	X		Utilities	Active
Pinello Ranch	X	X		Utilities	Active
Chipita Park	X	X		Utilities	Active
Colorado College	X	X		Utilities	Active
Meadowland	X	X	X	Utilities, State, County	Active
Sand Creek	X	X		Utilities	Inactive
Glen Ave.	X			State, County	Active
City Service Center		X		State, County	Inactive
Regional Bldg. Dept.		X	X	State, County	Active
Air Force Academy				State, County	Active
Highway at I-25	X			State, County	Active
Arvada	X	X		Utilities	Active
Tejon St.	X			EPA, County	Inactive
Chestnut				County	Inactive

**Utilities** = Colorado Springs Utilities  
**State** = Colorado Department of Public Health and Environment  
**County** = El Paso County Department of Health and Environment  
**EPA** = U.S. Environmental Protection Agency

### **NITROGEN IMPACTS**

Nitrogen is a key element in all biological systems. All proteins contain nitrogen, including the enzymes that catalyze biological reactions and allow for normal life-processes. Nitrogen can occur in both organic forms (carbon-nitrogen compounds), and inorganic forms (nitrate { $\text{NO}_3^-$ }, nitrite { $\text{NO}_2^-$ }, ammonium { $\text{NH}_4^+$ }, ammonia { $\text{NH}_3$ }, and others). There are many potential pathways that cycle nitrogen between these organic and inorganic forms. These pathways can be found in the atmosphere and in aquatic and terrestrial systems.

There has been concern that increases in nitrogen emissions from a variety of sources has caused effects on both aquatic and terrestrial biological systems. The Colorado Front Range has seen an increase in nitrogen deposition in the past few decades from a variety of sources, including agriculture (animal emissions and fertilizers) and automobiles. These increases are greater on the east side of the Front Range compared to the west side and are estimated to be 3 to 5 kg (or 6 to 11 pounds) of nitrogen deposition per hectare per year. The Colorado Springs emission rate of nitrous oxide species ( $\text{NO}_x$ ) is greater than 5 Mg annually, with about 50% of that from mobile sources. The deposition rate of inorganic N averaged 2.5 to 3.5 kg per hectare per year for sites greater than 2500 meters elevation on the east side of the continental divide (about 5-10 times greater than background sites on the west side).

Although this load is considerably less than emissions from areas that have documented ecological effects (of around 10 kg N per hectare per year), there is concern that chronic, low additions in nitrogen also will have ecological effects (Baron et. al., 2000). There is increasing

evidence that these low, chronic additions have caused changes to terrestrial forest systems (changes in soil nitrogen, tree foliar chemistry and microbial mineralization rate) and alpine lakes (water chemistry and algal populations).

Although many of the documented effects area related to soil and water nitrogen-cycling processes, they will ultimately affect plant and animal resources. Such changes would include changes in plant composition (some plants are better adapted to high nitrogen soils), tree winter damage, changes in aquatic invertebrates/zooplankton, fish sensitivity and amphibian development.

### **URBAN AIR TOXICS**

In addition to the national air quality standards set forth by the EPA for the six criteria pollutants, EPA also has established a list of 33 urban air toxics. Urban air toxics, also known as hazardous air pollutants, are those pollutants that cause or may cause cancer or other serious health effects or adverse environmental and ecological effects. Most air toxics originate from human-made sources, including road mobile sources (e.g., cars, trucks, buses), non-road mobile sources (e.g., airplanes, lawnmowers, etc.), and stationary sources (e.g., factories, refineries, power plants), as well as indoor sources (e.g., building materials). Some air toxics also are released from natural sources such as volcanic eruptions and forest fires.

Science has been providing more evidence about the risks these pollutants pose to human health. The health risks for people exposed to urban air toxics at sufficiently high concentrations or lengthy duration include an increased risk of cancer or other serious health effects, including damage to the immune system and neurological, reproductive,

developmental, respiratory and other health problems.

To better understand the harmful effects urban air toxics from road sources have on human health, in 1996 the EPA developed a list of 22 mobile source air toxics, such as acetaldehyde, benzene, formaldehyde, diesel exhaust, acrolein and 1,3-butadiene and assessed the risks of various kinds of exposures to these pollutants on human health.

In July 1999, the EPA published a strategy to reduce urban air toxics, and subsequently, in March 2001, the EPA issued regulations for the producers of urban air toxics to decrease the amounts of these pollutants by target dates in 2007 and 2020. Under these regulations, between 1990 and 2020, on-highway emissions of benzene, formaldehyde, 1,3-butadiene and acetaldehyde will be reduced by 67% to 76%. On-highway diesel particulate matter emissions will be reduced by 90%. These reductions will be the result of national mobile source control programs, including the reformulated gasoline program, a new cap on the toxics content of gasoline, the national low-emission vehicle standards, the Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and the heavy-duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. These are net emission reductions; that is, the reductions will be experienced even after growth in vehicle miles traveled is taken into account.

The EPA has not yet determined how best to evaluate the impact of future roads and intersections on the ambient concentrations of urban air toxics.

There are no standards for mobile source air toxics and there are no tools to determine the significance of localized concentrations or of increases or decreases in emissions.

Throughout the United States, emissions of air toxics can be expected to decrease over time due to EPA's national control programs.

### **AIR QUALITY TODAY**

The results of ongoing air-quality monitoring efforts indicate the Pikes Peak region currently meets State and Federal air-quality standards (i.e., it is "in attainment") for all six major air quality pollutants.

Levels of sulfur dioxide, nitrogen dioxide and lead have remained relatively unchanged and far below the State and Federal standards. These pollutants have never been a serious problem in the region, except lead, which was a problem in the late 1970s when leaded gasoline was still being used.

- ▶ The last violations were of the carbon monoxide standard in 1989 and the ozone standard in 1980.
- ▶ The highest levels of carbon monoxide have been reported at the Highway 24 monitoring station just west of I-25 and are probably a result of construction and traffic delays that result in more idling and sporadic acceleration and braking.
- ▶ The highest levels of PM<sub>10</sub> were detected at the Meadowland station near Academy Boulevard and probably are primarily a result of street sanding before and after winter storms.

Concentrations of other pollutants have varied from year to year, with no discernible trend up or down.

The toxic release inventory for Colorado shows an 80 percent decrease of toxic manufacturers since 1988.

Carbon monoxide (CO) is a colorless, odorless gas that results from incomplete combustion of carbon-based fuels (such as gasoline, used by motor vehicles and wood burned in fireplaces).

Concentrations of CO typically are highest in winter months, when climatic conditions called thermal inversions trap polluted air close to the ground. The Federal eight-hour standard for CO was violated regularly in the late 1970s and 1980s. Thanks to improved motor-vehicle emission technology, together with cleaner fuels and state-mandated emission inspections, no CO violations have been recorded in the region since 1989.

Particulate matter consists of dust and other particles suspended in the air. Street sanding during winter storm events contributes to particulate pollution when motor vehicles crush the sand and kick up the dust into the air.

Air pollution standards for particulate matter have evolved over time. Initially, the focus was on Total Suspended Particulates, regardless of their size. Later, a second standard was established to focus on particles 10 microns or smaller in diameter, because these smaller PM<sub>10</sub> particles were more likely to be inhaled into the respiratory system. Later, a third standard was developed, called PM<sub>2.5</sub>, which focused on particles 2.5 microns or smaller in diameter. These smaller particles are understood to be especially adverse for human health. Particles of this

small size typically are more closely associated with chemical processes (e.g., motor fuel combustion) than larger particles. Figure 2-45 depicts estimated source contributions of PM<sub>10</sub> in the Pikes Peak region.

The Pikes Peak region has not had problems with ozone, but needs to remain vigilant regarding this possibility. Ozone is a pungent, poisonous gas consisting of molecules with three oxygen atoms (O<sub>3</sub>). Stratospheric ozone helps protect Earth from dangerous solar radiation, but ground-level ozone is a respiratory irritant. Ground-level ozone is not directly emitted by human activities but instead forms as the result of atmospheric chemical processes in the presence of sunlight. Ozone is the chemical smog that has plagued southern California and other highly congested, highly industrialized metropolitan areas.

The chemical precursor ingredients for ozone are hydrocarbons (especially the volatile organic compounds) and oxides of nitrogen. Both of these are contained in motor vehicle exhausts. Power plants, industry, fuel use and chemical solvents also release these chemicals into the air. Ozone formation is more typically a problem in summer than in other parts of the year.

A case study in this air quality section provides a menu of ozone-oriented pollution reduction strategies promoted by Denver's Regional Air Quality Council.

Air quality improvement has involved a variety of programs at the Federal, State and local level. For example, a main contributor to improved air quality in El Paso County has been improved vehicle technology mandated by Federal Motor Vehicle Emission Standards. Oxygenated fuel requirements and motor

vehicle emission testing required by Colorado Law has also helped reduce mobile source emissions.

Federal air quality standards and noncompliance sanctions have been one of the bigger weapons in the war on pollution. Generally, the control measures with the biggest impacts are those that are mandatory and cannot be avoided. Voluntary programs and initiatives targeting only a portion of motor vehicle emissions (e.g., focusing only on work trips) tend to have significantly smaller identifiable benefits.

El Paso County has the authority to regulate and monitor stationary emission sources and area sources of pollutants. The owners of stationary sources (e.g., Colorado Springs Utilities, which operates the area's electrical power plants) ultimately are responsible for reducing their own emissions to stay within mandated allowable limits.

Another tool used to protect air quality is the requirement that the regional transportation planning agency project future mobile source emissions and compare them to an adopted allowable emissions budget (see Figure 2-46). Under these Federal conformity requirements, the Pikes Peak Area Council of Governments is prohibited from approving a short-term Transportation Improvement Program or long-range transportation plan unless there is analysis indicating that future air quality will remain within acceptable levels.

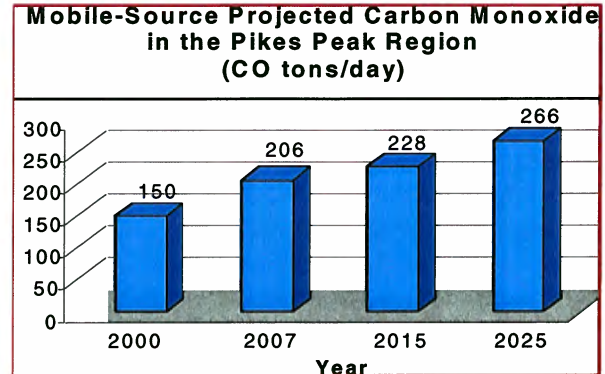


Figure 2-46. As the population increases, carbon monoxide levels are also expected to increase. The region is required to stay within a conformity budget of 270 CO tons per day.

Slow, congested traffic produces unnecessarily high rates of tailpipe emissions. Air quality improvement is produced if the regional transportation plan can find ways to reduce congestion and even moderately increase average travel speeds. In the regional transportation plan, certain corridors such as I-25 have been designated as part of a Congestion Management System. With this system, cameras are used to monitor traffic to detect incidents and variable message signs are used to alert motorists to potential problems. These steps can help minimize delay and therefore unnecessary emissions.

### TRENDS IN AIR QUALITY

Monitored concentrations of carbon monoxide, ozone and particulate matter for the years 1988 to 2001 are presented in the following pages, together with a discussion of the sources of these pollutants.



**Carbon Monoxide:** As seen in Figure 2-47, the predominant source of carbon-monoxide emissions has been and will continue to be on-road mobile sources, meaning tailpipe emissions from motor vehicles. Improved vehicle technology is helping to reduce the emissions per vehicle mile traveled (VMT), even as the region's VMT per day increases.

With increased population comes increased use of gasoline-powered generators, construction vehicles, snowblowers, chainsaws and other non-road mobile sources. Stationary area sources include primarily woodburning in

fireplaces. Stationary point sources include power generating facilities and industrial plants.

An average ambient carbon monoxide (CO) concentration of more than nine parts per million (ppm) over any eight-hour period constitutes an exceedance of the national air quality standard for CO. The Pikes Peak region has not experienced a violation of the national CO standard since 1989, thanks to cleaner motor-vehicle technology, vehicle inspections programs and oxygenated winter fuels. The highest concentration recorded in 2001 was about half of the standard.

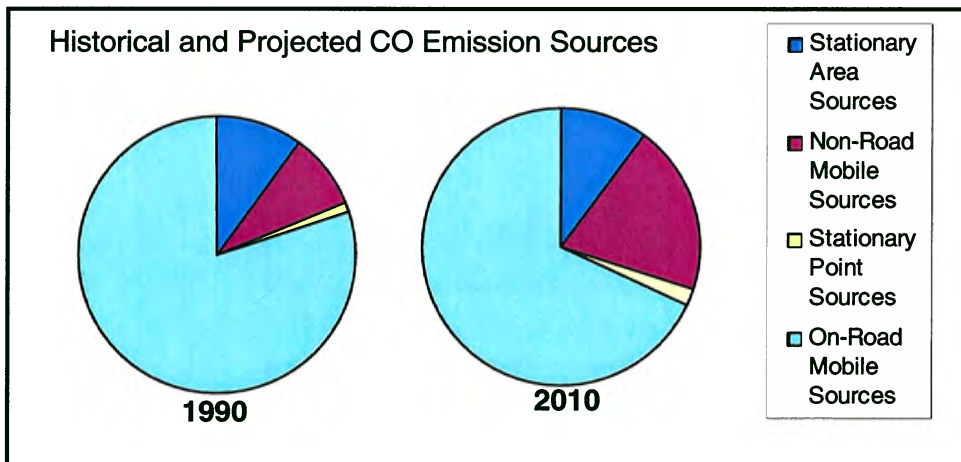


Figure 2-47. The percentages of different carbon monoxide sources have changed over time and are expected to continue to do so.

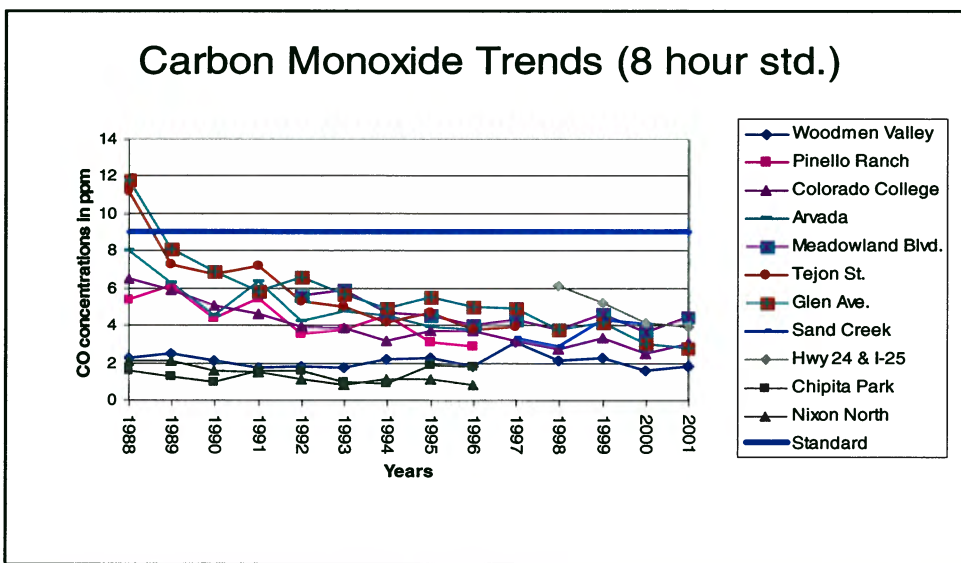


Figure 2-48. The late 1980s showed significant decreases in carbon monoxide trends. The solid blue line depicts the federal standard.

**Ozone:** The national ambient air quality standard for ozone is 0.12 parts per million. The Pikes Peak region has not experienced a violation of the one-hour ozone standard since 1983, and over the past decade recorded concentrations have not been greater than about 75% of the allowable concentration. However, the outlook with respect to the eight-hour ozone standard suggests that population growth is leading the region in the direction of future ozone problems.

Much newer than the one-hour ozone standard is an eight-hour standard promulgated by the U.S. Environmental Protection Agency in the mid 1990s. As seen in Figure 2-50, monitoring of eight-hour ozone concentrations in the region began in 1996 and has indicated an apparent upward trend. The Pikes Peak Area Council of Governments has examined this trend and concluded that a violation of this standard appears likely by 2007.

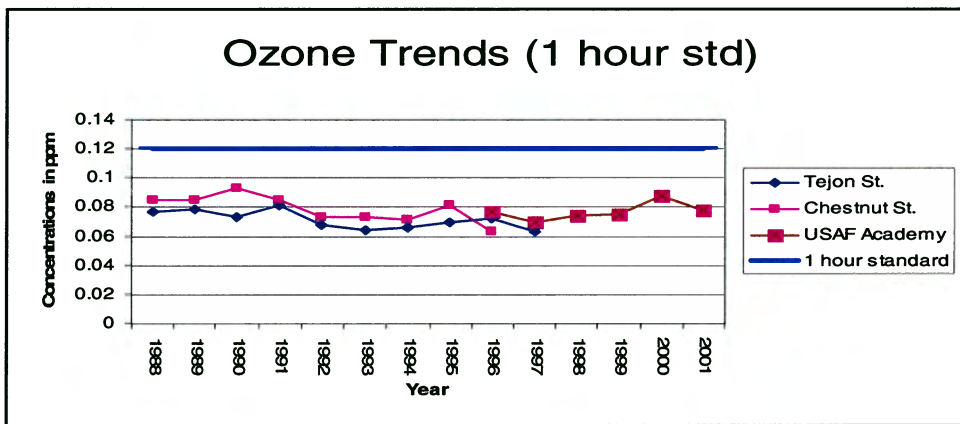


Figure 2-49. Monitored ozone levels in the Pikes Peak region as compared to the one-hour allowable concentration.

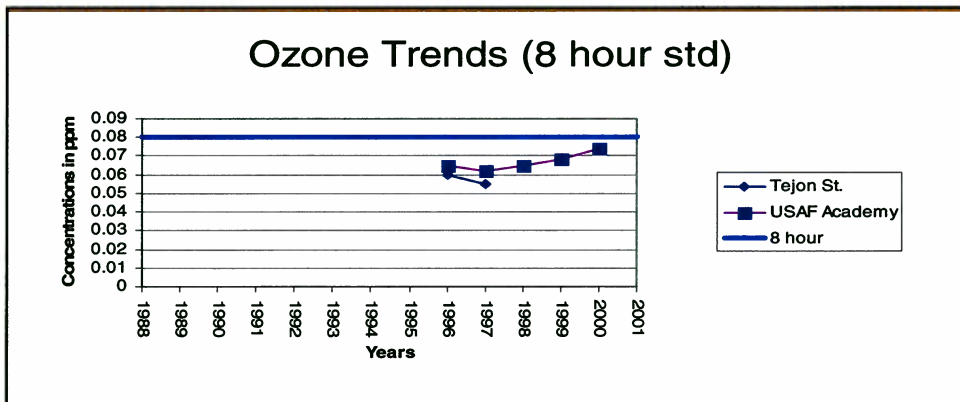


Figure 2-50. Eight-hour average ozone levels, monitored only since 1996, show an increase in the northern part of the Pikes Peak region. (Air Force Academy monitor)

**Particulate Matter:** Figure 2-51 depicts the sources of particulate matter in the air as determined in a regional inventory in 1988. At that time, the U.S. Environmental Protection Agency promulgated a new PM<sub>10</sub> standard focusing attention of fine, inhalable particulates ten microns or smaller in diameter. Previously, the agency had focused on total suspended particles, which included the fine particles as well as larger particles.

Based on chemical analysis of particles collected on air filters, it was determined that geologic sources (dust, due to our semi-arid climate) were the leading source of PM<sub>10</sub>, followed closely by woodburning as the second major source. Together, all other sources accounted for about 21% of the pollutant emissions. Diesel engines are used heavily in construction

equipment and other non-road mobile sources, but do not account for a large portion of the on-road motor vehicle fleet. Particulate matter is measured not in parts per million but in micrograms per cubic meter (ug/m<sup>3</sup>). Over a 24-hour period, the national standard is that PM<sub>10</sub> should not exceed 150 micrograms per cubic meter. As seen in Figure 2-52, measured concentrations of PM<sub>10</sub> reached a high of about 120 ug/m<sup>3</sup> in 1992 (about 80% of the standard), but in recent years have been no higher than 60 percent of the standard. In addition to woodburning restrictions, useful strategies for PM<sub>10</sub> control include watering of disturbed surfaces at construction sites and use of load covers for the truck transport of dirt and rock products.

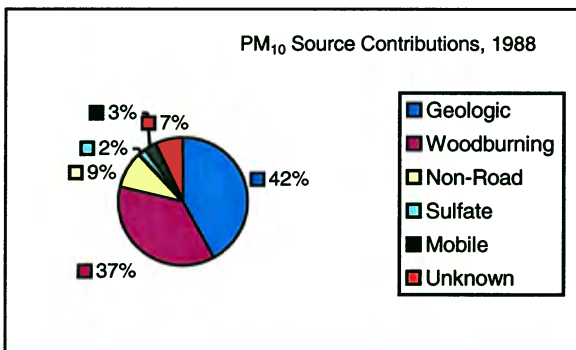


Figure 2-51. Measured PM<sub>10</sub> concentrations in the Pikes Peak region seem to have trended downward over the past 14 years.

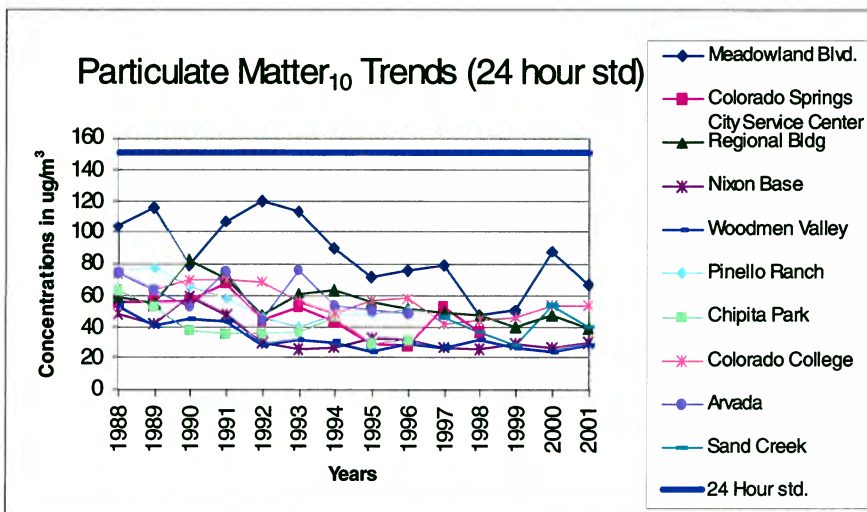


Figure 2-52. The region's dry climate contributes to the large percentage of geologic PM<sub>10</sub> source contributions.

## **AIR QUALITY IN THE FUTURE**

Of the six air pollutants for which there are national ambient air quality standards, the Pikes Peak region has no current or projected difficulties in meeting four of them, but has reason for concern about two of them: ozone and carbon monoxide.

Ozone is the most immediate problem, as current trends suggest the strong likelihood the region could violate the eight-hour ozone standard within the next five years.

Carbon-monoxide emissions are expected to increase over time as growth in vehicle travel in the region outpaces currently foreseen improvements in vehicle emissions control technology.

For both ozone and carbon monoxide, emissions from motor vehicles are the primary source of pollutants. Note that ozone is not emitted directly from vehicle tailpipes, but is the result of chemical reactions in the atmosphere, for which vehicular exhausts of volatile organic compounds (hydrocarbons) and oxides of nitrogen are the precursors.

For ozone, in addition to vehicle technology improvements and alternate mode use, control strategies address a very wide range of everyday chemical processes both for industry and in private homes, including the use of solvents and paints. Ozone control efforts include the transportation sector but also reach into every facet of modern urban living.

For carbon monoxide, control efforts will focus on motor vehicle use, but also address woodburning and portable gas-powered equipment. Residents in the Pikes Peak region currently are not subject to fireplace use restrictions (“No-Burn Days”) that have long been used in the Denver region.

The bottom line is rapid population growth in the region is increasing the amount of human activity that causes air pollution. As more such activities occur within the confines of the region’s airshed, the concentration of these pollutants increases. To remain in compliance with air quality standards, ways must be found to reduce the amount of pollution generated per person as the number of people in the region continues to grow.

Good air quality is one of the factors that attract visitors and new residents to the Pikes Peak Region. Therefore, protecting our air quality is important to the health of the region’s residents as well as to the region’s economic well-being.

Several of the main points of the *Colorado Springs Comprehensive Plan* relate to air quality issues and suggest what sustainable patterns might be:

- ▶ Develop a coordinated land use pattern that efficiently uses land by encouraging mixed-use activity centers rather than segregated land uses.
- ▶ Create opportunities for travel modes that can reduce the rate of growth in automobile use.
- ▶ Continually improve the community’s stewardship of its natural setting.
- ▶ Maintain a citywide context or perspective as an integral part of incremental land use decision-making.



Figure 2-53. Monitoring stations in key areas of the region help keep track of air pollution concentrations.

## **KEY STRATEGIES FOR SUSTAINING GOOD AIR QUALITY IN THE PIKES PEAK REGION**

### **POLICY-LEVEL STRATEGIES: AIR QUALITY**

- Encourage mixed-use development along transportation corridors to reduce vehicle miles traveled (VMT).
- Support higher density residential and mixed use development in growth areas.
- Encourage intermodal transportation system development to reduce influence of automobile emissions.
- Support increasing fuel economy requirements for motor vehicles.
- Support voluntary programs such as car/van pooling.

### **PROJECT-LEVEL STRATEGIES: AIR QUALITY**

- Incorporate ozone-reducing strategies in project planning. (See case study, next page.)
- Improve street sanding techniques that produce less PM<sub>10</sub>.
- Switch to cleaner burning fuels, such as electricity, natural gas and propane.
- Use of clean power technologies by Colorado Springs Utilities.
- Federal installations in the area can continue to fully comply with Executive Order 13149, Greening the Government through Federal Fleet and Transportation Efficiency (2000).

## Case Study

### Denver, Colorado REGIONAL AIR QUALITY COUNCIL

The following are suggested ways businesses in the Denver metro area can voluntarily help to keep air healthy and the Denver metro region in compliance with federal health standards for ozone pollution. These strategies help reduce summer air pollution by limiting VOC and NO<sub>x</sub> emissions.

	Be Ozone Aware All Summer Long	Use Extra Effort on Ozone Action Days
Fleet operations	<ol style="list-style-type: none"> <li>1. Keep fleet vehicles well tuned up, regularly check and correct tire pressure.</li> <li>2. Pressure test fuel caps to ensure seal.</li> <li>3. Avoid overfilling or "topping off" gas tanks on fleet vehicles when refueling.</li> <li>4. Avoid idling vehicles when making deliveries or in rounds to customers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn off delivery vehicles during loading and unloading and while in lines.</li> <li>2. Refuel fleet vehicles after 6 p.m.</li> <li>3. Reschedule discretionary activities such as degreasing of vehicles and equipment.</li> </ol>
Staff issues and work styles	<ol style="list-style-type: none"> <li>1. Reduce travel--Allow telecommuting, compressed work schedules, and teleconferencing.</li> <li>2. Encourage on-site lunches.</li> <li>3. Promote biking to work, carpooling and transit use.</li> <li>4. Encourage employees to maintain their cars and reduce vehicle travel through trip linking.</li> </ol>	<ol style="list-style-type: none"> <li>1. Postpone discretionary auto trips.</li> <li>2. Support telecommuting.</li> </ol>
Buildings maintenance/ custodial operations	<ol style="list-style-type: none"> <li>1. Encourage use of low VOC paints &amp; stains.</li> <li>2. Suggest use of low VOC products for custodial care.</li> <li>3. Use "Best Management Practices" in emissions control for company operations--tightly seal all solvents, properly dispose of rags with solvent waste, and use substitutes for solvents where possible. See web site resources, such as <a href="http://es.epa.gov/ssds/issds.htm">http://es.epa.gov/ssds/issds.htm</a></li> </ol>	Reschedule discretionary maintenance, such as painting, varnishing, and stripping.
Grounds maintenance	<ol style="list-style-type: none"> <li>1. Reduce lawn areas—xeriscape to reduce mowing, or change to native western grasses to reduce the need for irrigation and mowing.</li> </ol>	

	<ol style="list-style-type: none"> <li>2. Reduce or eliminate the use of gas-powered blowers, trimmers and weeders, especially on high ozone days.</li> <li>3. Avoid using gasoline powered yard equipment, most of which have high emissions.</li> <li>4. Ask contractors who do company grounds maintenance to observe these guides.</li> </ol>	<p>Reschedule discretionary maintenance such as:</p> <ul style="list-style-type: none"> <li>• Landscape operations that utilize gas-powered mowers and equipment.</li> <li>• Parking lot/driveway paving or painting lane stripes.</li> <li>• Building and grounds painting, varnishing, and stripping.</li> </ul>
<p>Staff and customer awareness</p>	<ol style="list-style-type: none"> <li>1. Alert all company departments, employees and customers about metro Denver's summer air pollution problem.</li> <li>2. Share information on pollution advisory system announcements.</li> <li>3. Promote summertime pollution reduction strategies through staff newsletters, web pages, email, and bulletin boards.</li> <li>4. Underscore your commitment to ozone reduction through a memo or letter from your owner, president or CEO.</li> </ol>	<p>Share information on Ozone Action Days.</p>

Source: [www.raqc.org/ozone/ozone-busi.htm](http://www.raqc.org/ozone/ozone-busi.htm)

**Other relevant case studies to see in this report:**

- City of Austin, Texas: Sustainable Communities Initiative
- Fort Carson, Colorado
- Greater Wasatch Area, Utah: Envision Utah
- Kansas City Region, Kansas and Missouri

**Key written resources:**

Colorado Air Quality Control Commission *Report to the Public 2000-2001*, 2001, Colorado Department of Public Health and Environment.

*Colorado Springs Revised Carbon Monoxide Plan*, Colorado Department of Public Health and Environment.

“Important Trends in Air Quality,” Colorado Springs Clean Air Campaign.

“1995 National Air Quality: Status and Trends,” [www.epa.gov/oar/aqtrnd](http://www.epa.gov/oar/aqtrnd).

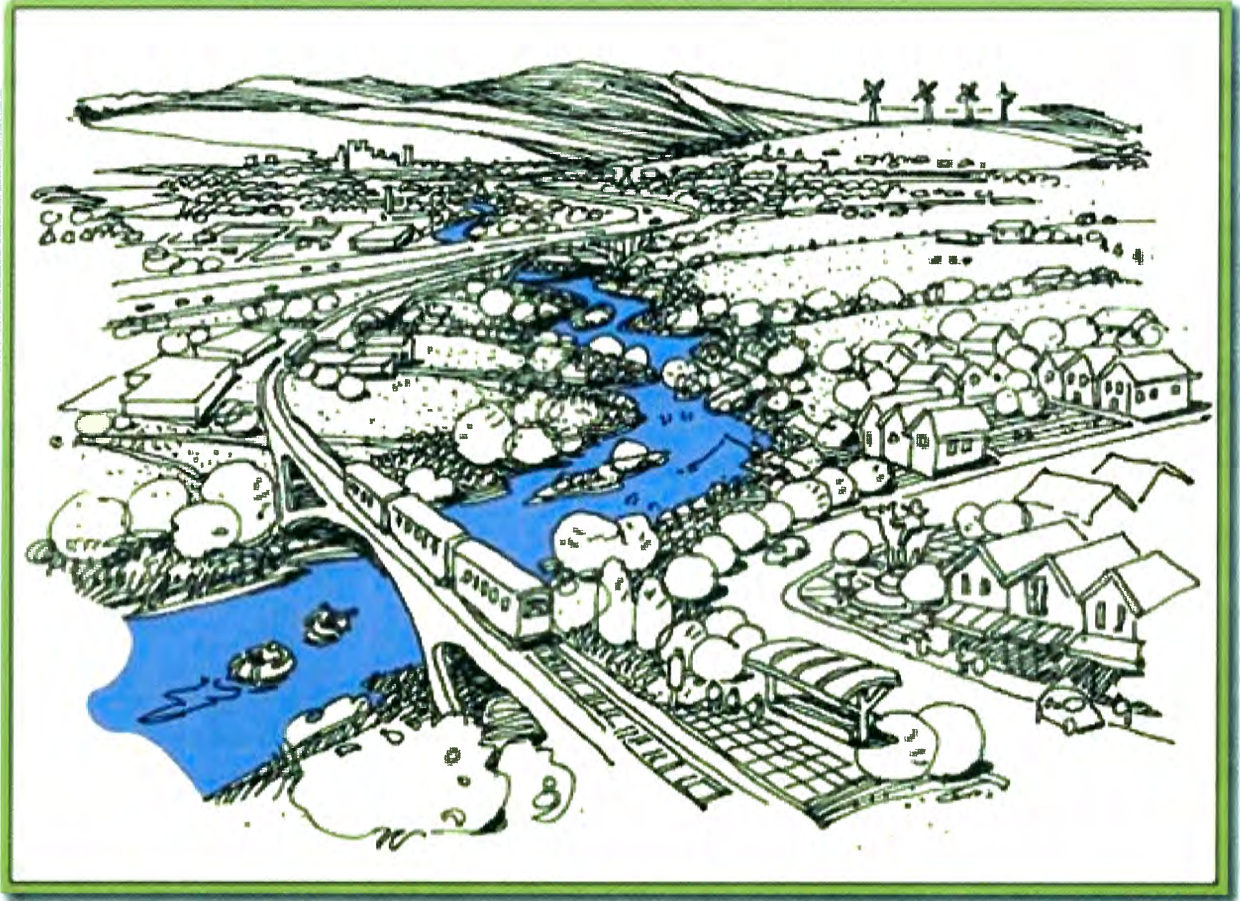
“Summary of Spatial and Temporal Trends of EPA Air Quality Pollutants in the Pikes Peak Region,” Rich Muzzy (PPACG).



# APPENDIX I

## APPENDIX I: REGIONAL CUMULATIVE EFFECTS

# SUSTAINING NATURE AND COMMUNITY IN THE PIKES PEAK REGION



*A Sourcebook for Analyzing  
Regional Cumulative Effects*



Colorado Department of Transportation

## **PANELS OF EXPERTS, AGENCY REPRESENTATIVES, AND CONSULTANTS WHO PARTICIPATED IN THIS STUDY**

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# Sustaining Nature and Community in the Pikes Peak Region

*A Sourcebook for Analyzing Regional Cumulative Effects*

Colorado Department of Transportation



December 2003

## WHAT YOU WILL FIND IN THIS REPORT

“Sustaining Nature and Community in the Pikes Peak Region: A Sourcebook for Analyzing Regional Cumulative Effects” provides both a general discussion of cumulative effects and sustainability, as well as an overview of issues specific to Colorado’s Pikes Peak region. The first section introduces biodiversity and quality of life as twin components of sustainability.

That section also describes the process that guided the preparation of this report, and a summary is given of the evolution of the Pikes Peak landscape over the last 100 years.

The second section – the Sourcebook – is a compendium of useful information about six key indicators of sustainability in the Pikes Peak region.

This report was designed for a wide range of readers (see below).

## HOW YOU CAN USE THIS REPORT

### **Planners of Major Transportation Projects in the Pikes Peak Region**

Use the information to gain additional background on cumulative effects as they relate to biodiversity, quality of life, and ultimately, sustainability. Use the more detailed discussions of key indicators of sustainability, especially the trend analyses, to target impact analyses on individual projects.

### **Local Governments**

Use the information to help identify priorities, facilitate long-term visioning, allocate resources, and track your environmental performance.

- ▶ Evaluate land-use policies and regulatory framework. Consider environmental conditions during updates of your General Plan.
- ▶ Enhance accountability of agencies or departments with primary responsibility for an area of environmental performance.

### **Businesses**

Use the information to understand how your company’s actions impact the local environment.

- ▶ Benchmark your company’s progress against regional performance.

- ▶ Reap the benefits of reduced environmental impacts, potentially including reduced costs and liabilities, enhanced community relations, and market access.

### **Community Organizations**

Communicate to the public and decision-makers about local environmental trends.

- ▶ Use the information to advance the goal of environmental sustainability.
- ▶ Hold organizations and individuals accountable for improved environmental performance.

### **Individuals**

Consider how your day-to-day activities can impact the environment.

- ▶ Make more informed purchasing decisions, voting choices and everyday actions.
- ▶ Better understand environmental conditions in your community.

### **Educators and the Media**

- ▶ Integrate environmental sustainability into school curricula.
- ▶ Include coverage of environmental indicators in the media.

(Adapted from *1999 Silicon Valley Environmental Index*.)



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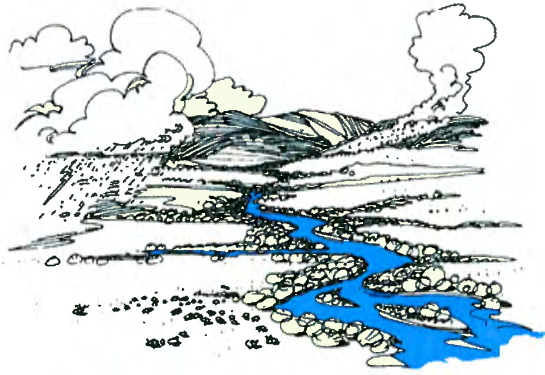
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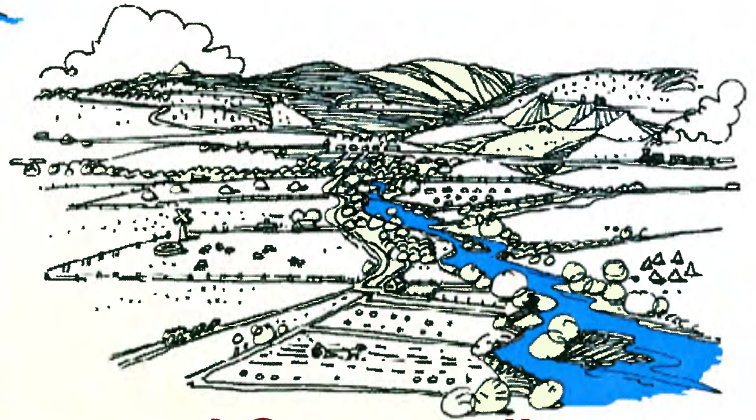
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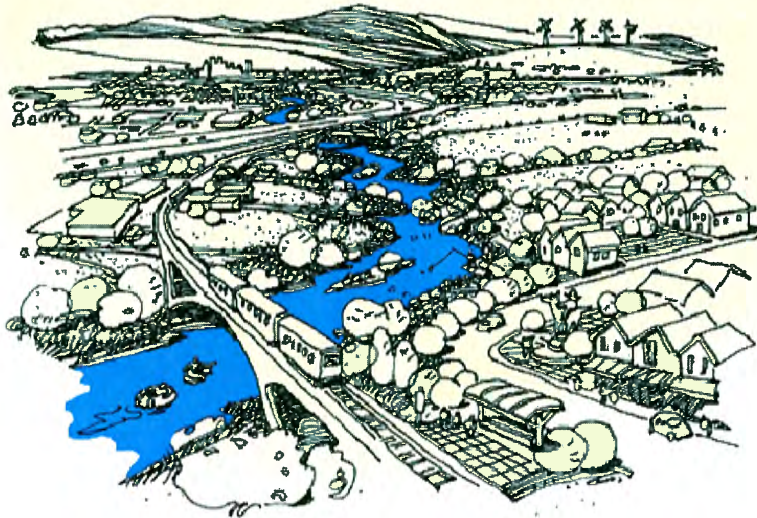
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**1.**



***Sustaining Nature and Community  
in the Pikes Peak Region***





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## 1. SUSTAINING NATURE AND COMMUNITY IN THE PIKES PEAK REGION

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***“Think globally, act locally.”***

— Rene Dubois

***“Maintain a citywide context or perspective as an integral part of incremental land use decision making.”***

— Comprehensive Plan, City of Colorado Springs, 2001

***“Sustainability: To meet the needs of the present without compromising the ability of future generations to meet their own needs.”***

— UN World Commission on Environment and Development. Our Common Future (Bruntland Report), 1987

**R**esidents of the Pikes Peak region want to preserve their quality of life and sustain the natural environment. That message has come through loud and clear in a wide range of public forums. But will the region in the future be what its residents want it to be for themselves, their children and their grandchildren? This report focuses on overcoming some of the potential obstacles to sustaining such a future.



Our region is changing rapidly, and with new development and population come additional impacts to many aspects of the community and natural resources. Some of these impacts are obvious, while others are more subtle.

Some of the more subtle impacts are ones that hardly get noticed until you take a regional perspective or wait for years or decades. On a very local scale, these impacts may seem like small losses, such as the modest area of short-grass prairie replaced by new homes or the small amount of fertilizer running off a yard into a stream.

The impacts of these losses to prairie birds and butterflies or water quality may not appear that great.

Perhaps it is only when looking across the region and over a wider time span that larger patterns are apparent. It may be that the impacts of the loss of that small piece of prairie or that small amount of fertilizer are really part of a serious trend. The small amount of fertilizer entering the stream from one location may in fact be part of a much greater accumulated volume of such pollutants. Collectively, many acres of grassland may be disappearing.

Such incremental impacts—known as cumulative effects—from diverse projects are particularly challenging because they can “sneak up” on a region, with a small loss here and there. To understand cumulative effects requires taking a systems view and recognizing the interrelated nature of things.

### **CUMULATIVE EFFECTS AND MAJOR TRANSPORTATION PROJECTS**

The Colorado Department of Transportation (CDOT) initiated this study of potential cumulative effects due largely to the need to conduct environmental evaluation of proposed improvements to the four important corridors: Interstate 25, Powers Boulevard, Woodmen Road, and Drennan Road (now expanded to consider South Metro Area accessibility needs). The location of these corridors is depicted in Figure 1-1. Many other transportation projects, large and small, publicly or privately funded, are also planned in the Pikes Peak region.

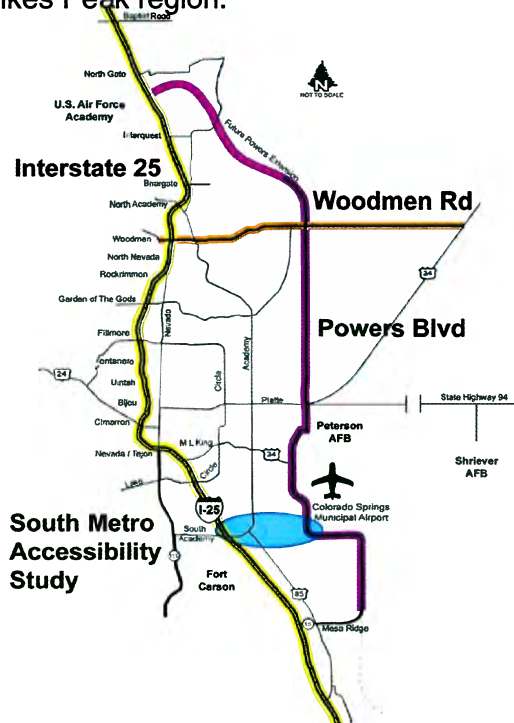


Figure 1-1. Four major transportation improvement projects provided the impetus for conducting a regional look at cumulative effects.

It is CDOT’s hope that “Sustaining Nature and Community in the Pikes Peak Region” can give a broader regional perspective to planners working on its individual transportation projects, as well as other projects in the Pike Peak area. The study also acknowledges that responses to some impacts are beyond the level of any one project and may better be addressed by regional policy makers.

### **CONGESTION IS A PROBLEM TODAY AND EXPECTED TO WORSEN**

Major transportation improvements in the Pikes Peak region are being considered at a time when an ever-increasing disparity is projected between a rapidly increasing population and a relatively static number of miles of roadway lane-miles (see Figure 1-2).

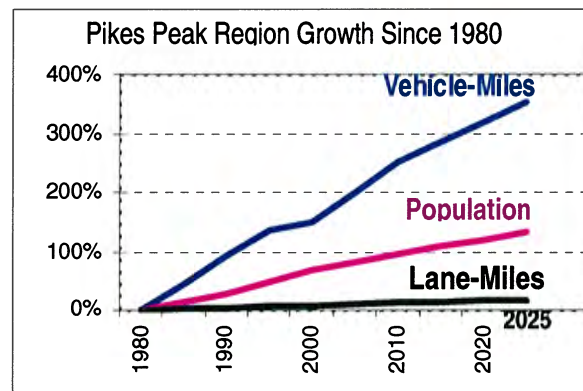


Figure 1-2. The number of new miles of road lanes built in the region or projected to be built is not proportional to the projected growth in population and vehicle miles traveled (VMT).

In the Texas Transportation Institute’s annual survey of congestion in U.S. metropolitan areas, the Colorado Springs Urbanized Area recently has been ranked as the most congested area of its size (i.e., population under 500,000 residents).

The U.S. Decennial Census indicated that the population of El Paso County reached approximately 517,000 in the year 2000. Rapid growth is expected to add more than 200,000 additional residents to the region by the year 2025.

---

The region is not trying to “build its way out of congestion,” but is endeavoring to provide a reasonable level of mobility with the limited financial resources available for transportation improvements. Even if the planned improvements are made, congestion that is considered a major problem today is projected to worsen significantly in the future.

By paying special attention to potential cumulative effects, the planned transportation improvements may be able to make positive contributions to sustaining quality of life and the environment of the Pikes Peak region.

### **MAJOR CORRIDORS AND OTHER TRANSPORTATION PROJECTS IN THE FORESEEABLE FUTURE**

The future transportation system assumed in this look at the Pikes Peak region is the one specified in *Destination 2025*, the region’s adopted long-range transportation plan, prepared by the Pikes Peak Area Council of Governments (PPACG).

The 2025 plan identifies \$2.2 billion in Federal, State and local funding as being reasonably available during the fiscal years 2002-2025. Based on regional transportation needs, the PPACG plan identified the following funding levels for several major projects during that timeframe:

- ▶ \$518 million for Interstate 25 capacity improvements
- ▶ \$345 million for the Powers Boulevard Corridor
- ▶ \$75 million for Woodmen Road Corridor improvements
- ▶ \$1 million for the South Metro Accessibility Study, focusing on Drennan Road

The four roadway projects highlighted above comprise about 40 percent of the region’s long-term foreseeable transportation funding. Each of these projects was the subject of active environmental analysis at the time that

“*Sustaining Nature and Community in the Pikes Peak Region*” was begun, and these projects were the impetus for this CDOT study.

**Interstate 25:** An Environmental Assessment is underway to examine potential impacts of widening the region’s only existing freeway (currently two through-lanes in each direction) to an ultimate cross-section of four lanes each way, with one lane each direction being reserved in peak periods for use by carpools and buses.

**Powers Boulevard:** An Environmental Assessment is underway for possible capacity improvements. For modeling purposes, the PPACG *Destination 2025* Plan reflects this existing expressway (three lanes each direction, with numerous stoplights) being upgraded to a freeway.

**Woodmen Road:** An Environmental Assessment is underway for possible capacity improvements. Additional lanes have been recommended for this busy principal arterial that currently has just two lanes each direction between Powers Boulevard and I-25, and one lane per direction in rapidly developing areas east of Powers.

**South Metro Accessibility Study:** The City of Colorado Springs and El Paso County are jointly seeking a long-term corridor solution to connect the main entrance to the Colorado Springs Municipal Area to I-25, or even further west to State Highway 115.

**Other Transportation Projects:** While the major corridors described above are important, numerous other transportation projects are planned that will also affect the region’s future. For example, the *Destination 2025* Plan also programs \$100 million for improvements to US Highway 24 (Midland Expressway), west of I-25 to Manitou Springs, and \$250 million for future Bus Rapid Transit in four corridors (corridors being selected in a year 2003 City study). The balance of available funds is allocated to hundreds of street, transit and trail projects throughout the region.

---

## **PURPOSE AND APPROACH OF THIS REGIONAL STUDY**

Two broad goals were identified for this study of the Pikes Peak region:

- ▶ To provide a regional framework for evaluating the cumulative effects of the major transportation improvement projects described at left.
- ▶ To develop comprehensive strategies that could be used by CDOT and other government and non-government organizations to reduce, mitigate or reverse negative environmental trends and support sustainability and quality of life in the Pikes Peak region.

## **CUMULATIVE IMPACTS DEFINED**

The National Environmental Policy Act (NEPA) recognizes three types of effects or impacts: direct, indirect and cumulative.

A *direct effect* one caused by a project and that occurs at the same time and place as the project.

An *indirect effect* is caused by project actions but occurs later in time or farther removed in distance. Indirect effects may include growth-inducing effects and other effects related to induced changes to the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems including ecosystems.

A *cumulative effect* is an impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions.

Various examples of cumulative effects are presented below.

### **1. Time crowding**

Frequent and repetitive effects on an environmental system. *Example: forest harvesting rate exceeds regrowth.*

### **2. Time lags**

Delayed effects. *Example: exposure to carcinogens results in cancer years after the time of exposure.*

### **3. Space crowding**

High spatial density of effects on an environmental system. *Example: pollution discharges into streams from non-point sources.*

### **4. Cross-boundary**

Effects occur away from the source. *Example: air pollution in one region of the country produces acid rain in areas downwind.*

### **5. Fragmentation**

Change in landscape pattern. *Example: conversion of homes to commercial uses in a residential area.*

### **6. Compounding**

Effect arising from multiple sources or pathways. *Example: synergism among effects from pesticides*

### **7. Indirect effects**

Secondary effects. *Example: commercial development following highway construction.*

### **8. Triggers and thresholds**

Changes in system behavior or structure. *Example: global climate change.*

## ***IDENTIFYING POTENTIAL CUMULATIVE EFFECTS ISSUES***

The following questions should help planners for major transportation projects and others to identify potential cumulative effects:

1. What is the value of the affected resource or ecosystem? Is it:
  - ▶ protected by legislation or planning goals?
  - ▶ ecologically important?
  - ▶ culturally important?
  - ▶ economically important?
  - ▶ important to the well being of a human community?
2. Is the proposed action one of several similar past, present or future actions in the same geographic area? (Regions may be land-management units, watersheds, regulatory regions, states, ecoregions, etc.)

**Examples:** timber sales in a national forest, U.S. Air Force Academy Programmatic Biological Assessment, incinerators in a community.
3. Do other activities (governmental or private) in the region have known environmental effects similar to those of the proposed action?

**Example:** release of oxidizing pollutants to a river by a municipality, an industry or individual septic systems.
4. Will the proposed action (in combination with other planned activities) affect any natural resources, cultural resources, social or economic units, or ecosystems of regional, national or global public concern?

**Examples:** release of chlorofluorocarbons to the atmosphere, conversion of wetland habitat to farmland located in a migratory bird flyway.
5. Have any recent or ongoing NEPA analyses of similar or nearby actions identified important adverse or beneficial cumulative effect issues?
6. Has the impact been historically significant, such that the importance of the resource is defined by past loss, past gain or investments to restore resources?

**Example:** loss and fragmentation of short-grass prairie remnants.
7. Might the proposed action involve any of the following cumulative effects issues?
  - ▶ air pollutant emissions resulting in degradation of regional air quality
  - ▶ loading large water bodies with discharges of sediment, thermal or toxic pollutants
  - ▶ changes in hydrological regimes of major rivers and estuaries
  - ▶ long-term containment and disposal of hazardous wastes
  - ▶ mobilization of persistent or bio-accumulated substances through the food chain
  - ▶ decreases in the quantity and quality of soils
  - ▶ loss of natural habitats or historic character through residential, commercial and industrial development
  - ▶ habitat fragmentation due to infrastructure construction or changes in land use
  - ▶ habitat degradation due to grazing and other consumptive uses
  - ▶ disruption of migrating wildlife populations
  - ▶ loss of biological diversity



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**AIMING FOR SUSTAINABILITY AS AN ANTIDOTE TO CUMULATIVE EFFECTS**

In the broadest sense, when communities describe what they want for the future, they say it is to sustain the positive aspects of their communities and reduce or eliminate the negative ones. Cumulative effects, as here defined, are frequently included in those negative aspects.

Sustainability is an internationally recognized objective (but not the only objective) for community and resource stewardship. It means meeting the needs of the present without compromising the needs of the future. Harvard landscape ecologist Richard Forman (1995) defines a

sustainable environment as “an area in which ecological integrity and basic human needs are concurrently maintained over generations.” Thus, the concept is useful in bringing together both ecological and social concerns over a broad timeframe. See Figure 1-3 below.

Sustaining desirable natural and cultural aspects of the Pikes Peak region means working to meet our communities’ needs and aspirations today, while sustaining the resources future generations will need to meet their own needs and aspirations. We are not thinking about sustainability if we allow major portions of our community or natural resources to be permanently lost or degraded today and thereby precluding or diminishing their use by our children and their children.

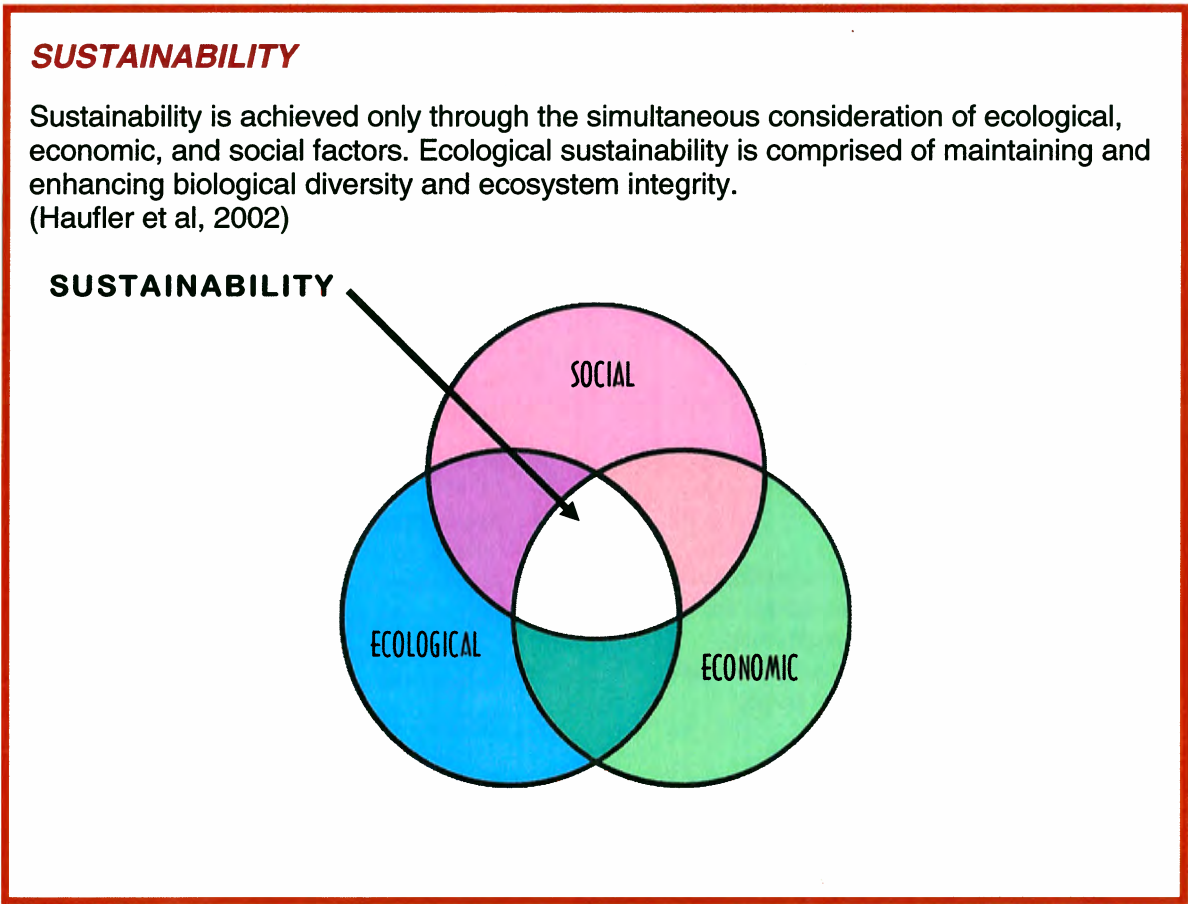


Figure 1-3. Sustainability Venn Diagram

## **STUDY AREA AND TIMEFRAME PICKED TO MATCH RESOURCES**

For setting the broad parameters of the study, participants in this study followed the procedure regarding cumulative effects recommended by the Council of Environmental Quality (1977):

**Step 1:** Identify the significant cumulative effects issues associated with the proposed actions and define the assessment goals.

**Step 2:** Establish the geographic scope for the analysis.

**Step 3:** Establish the timeframe for the analysis.

**Step 4:** Identify other actions affecting the resources, ecosystems and human communities of concern.

In following these steps, two panels of experts—one panel including experts on the natural environment, the other experts on community resources:

- ▶ Guided agency and consultant project investigators in collecting and analyzing data and determining project direction.
- ▶ Identified the natural and community resource issues relevant to analyzing cumulative effects.
- ▶ Developed indicators or resource trends under two broad categories: biodiversity and quality of life.
- ▶ Identified appropriate scales of analysis in terms of both geography and time.
- ▶ Collected, evaluated and analyzed data using geographic information systems (GIS) as a principal means of spatial analysis.
- ▶ Identified strategies for sustaining key aspects of those natural and community resources most susceptible to community effects.

Because of the kinds of issues involved and the variable data available, two slightly different study areas were selected, one for natural resources and the other for quality of life (community) resources. These boundaries are depicted in Figure 1-4.

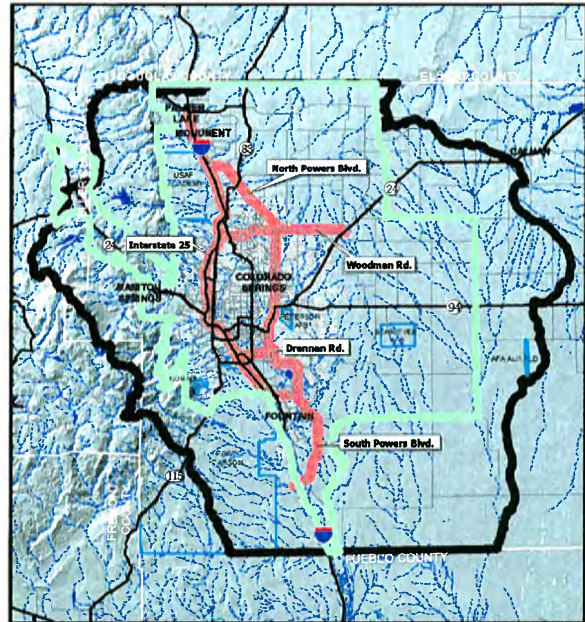


Figure 1-4. The spatial limits of the study area were determined by defining the geographic extent of the affected resources.

In Figure 1-4, the black line shows the boundary of the area used to consider impacts on the natural environment. The natural resource boundary includes the Fountain Creek, Chico, Cherry Creek and Kiowa watersheds within El Paso and Teller counties. The green line shows the boundary used to consider impacts on community resources. This boundary corresponds to the urbanized planning area boundary of the Pikes Peak Area Council of Governments.

To select the appropriate timeframe for the study it was necessary to go back to significant points in history when human impacts caused noticeable changes in the condition of the resources, such as the development of I-25 in the early 1960s; and to determine the availability of reliable data.

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Based on these factors, the analysis was taken back to 1955 and projected forward to 2025. The 1955 timeframe corresponds to the first major population increase in the county, while 2025 is the planning horizon year for the PPACG Long-Range Transportation Plan.

## **SUSTAINING THE PIKES PEAK REGION**

Sustainability is an ambitious concept that needs better definition if it is to be useful in addressing cumulative effects. The resource panels for this study identified two broad concepts that can help define sustainability for a region: quality of life and biodiversity.

**Biodiversity** (biological diversity) is the variety of life in all its forms, levels and combinations, including ecosystem diversity, species diversity, and genetic diversity. (IUCN, UNEP and WWF, 1991)

**Quality of life** is people's overall well-being. (World Book, 2000)

The expert panels selected six interrelated key indicators were used to understand these twin concepts, how they have changed over the years and how they are likely to change in the future. The indicators are:

- A. Landscape pattern
- B. Water quality and quantity
- C. Air quality
- D. Transportation patterns
- E. Noise levels
- F. Visual character

The natural resources panel examined these indicators with respect to land cover types (e.g., Shortgrass prairie ecosystems), and the community resources panel examined them with regard to the spatial relationship of key community resources (see Figure 1-5).

## **BROAD CONCLUSIONS**

From their analyses, investigators broadly concluded that:

- ▶ The best way to mitigate effects of cumulative effects to these six key indicators—and more generally, sustainability—is by raising awareness of issues and coordinating strategies at the regional level, and then encouraging action locally on a project-by-project basis.
- ▶ While many important contributions can be made on a project-level basis, there are also regional policy choices that need to be made that can have considerable effect on sustainability.
- ▶ The pattern of landscapes—the relationships between and among land uses and land covers—can have particularly significant effects on biodiversity and quality of life. This is because of the important interactions between all of the inhabitants of the landscape and their settings.

## **EVOLUTION OF THE LANDSCAPE**

Figures 1-6 through 1-9 provide a series of snapshots of the Pikes Peak region at various stages of development. They present a broad overview of how the region has changed over time. Each drawing includes a brief assessment of the six key indicators of sustainability at approximately that point in time. More details of the characteristics of each of these time periods are given in Section 2, *Sourcebook for Analyzing Regional Cumulative Effects*.

Figure 1-5. The Community Resources Panel identified as key community features the major parks and open spaces and other cultural resources depicted on this map. The Panel also identified six focus areas, circled in blue, where the interrelationship of these resources and major transportation projects.

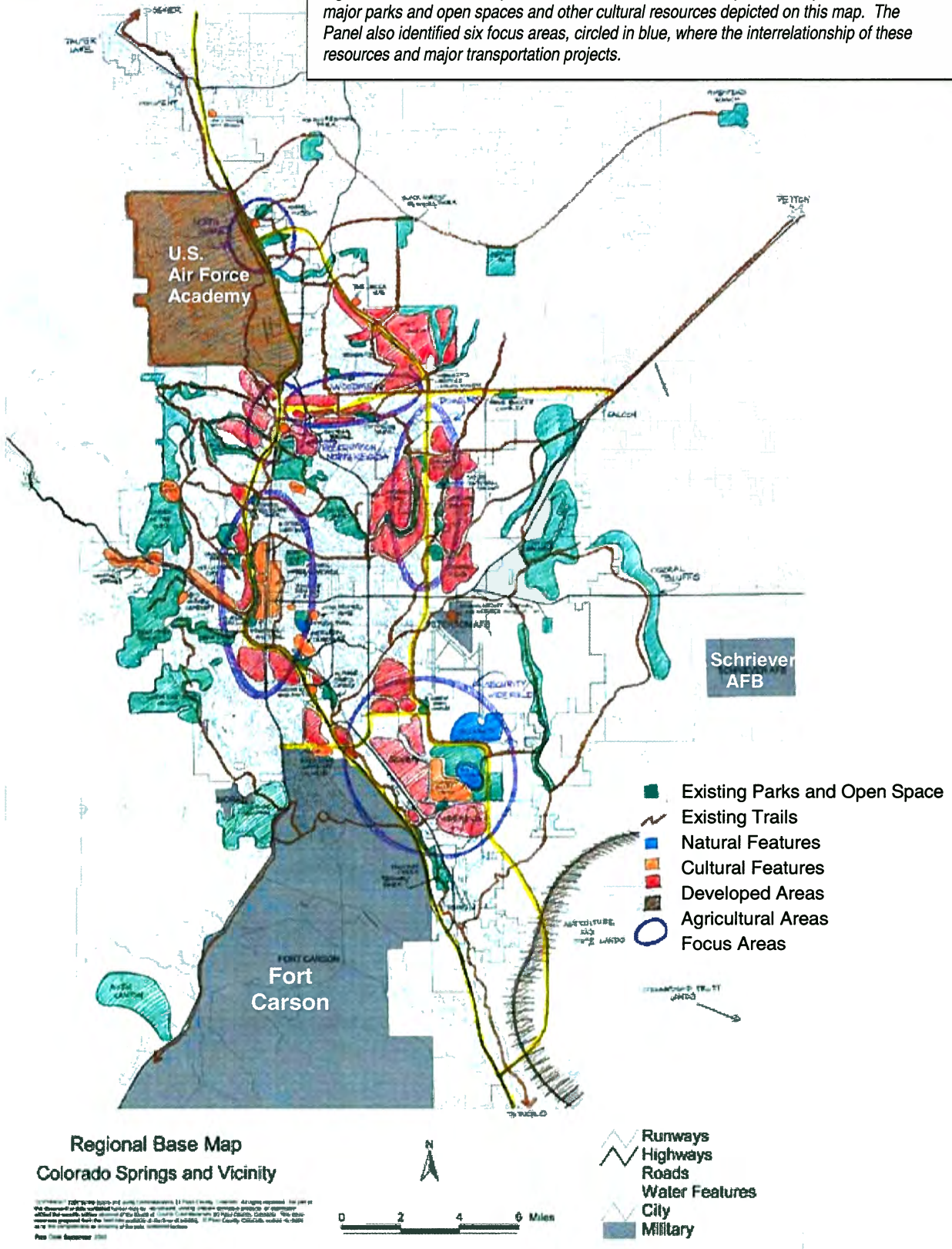


Figure 1-6

**BEFORE MAJOR SETTLEMENTS BEGAN...**

**Landscape pattern...**

was determined by forces of nature—water, wind and bison—with some intervention by Native Americans.

**Air quality...**

presumably was very good but occasionally was influenced by grass and forest fires and dust storms.

**Water quality and quantity...**

were dictated by the ebbs and flows of nature, including periods of drought. Plants and animals evolved and adapted with these patterns of water availability.

**Transportation patterns...**

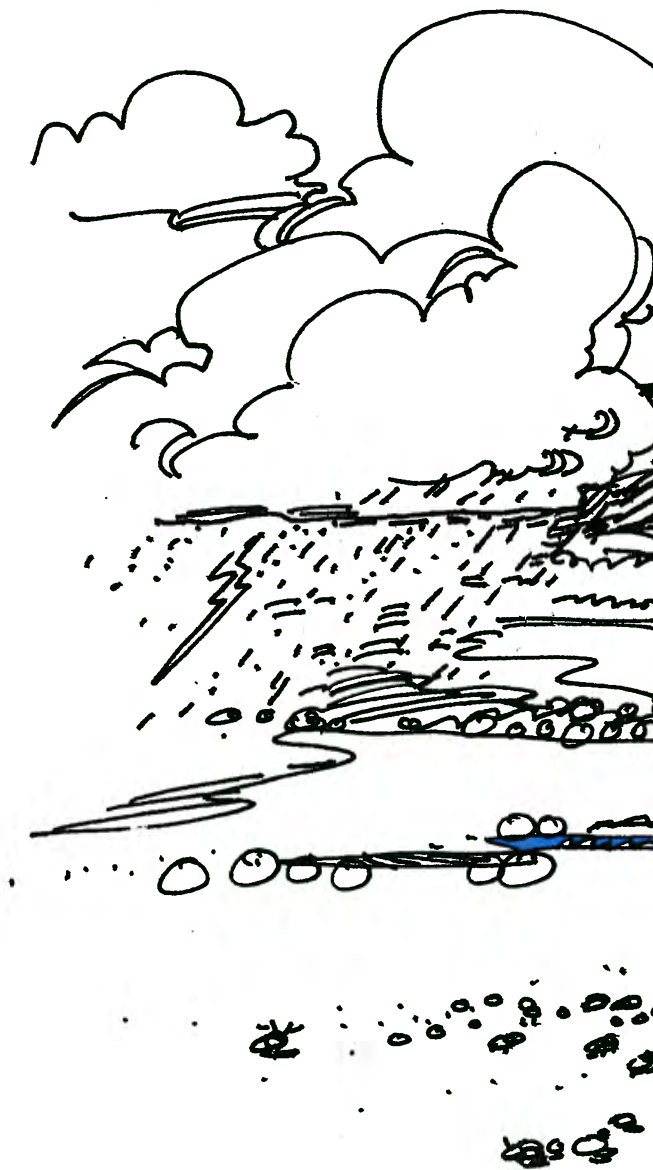
were wide open, because they were not limited by fences or ownership. Trails and streams were used by Native Americans.

**Noise levels...**

were minimal and varied with the dynamics of nature, including wind and wildlife.

**Visual character...**

was shaped by natural factors operating on the landscape.

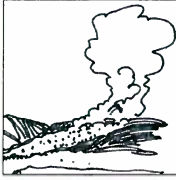


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**Key features of this landscape:**



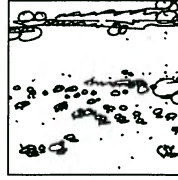
Naturally low rainfall and no imported water



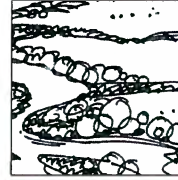
Forest and prairie fires are natural disturbances



Streams are frequently wide and shallow



Large herbivores: bison



Water dictates where vegetation is found



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wilderness was being tamed and made more beautiful.

Figure 1-7

## **A CENTURY AGO...**

### **Landscape pattern...**

was beginning to be changed extensively by people. Forests were cut in support of mining and railroads. People used riparian areas for water and built homes nearby. Agricultural management (primarily ranching) was imposed on prairie areas. Attempts were made to stabilize and control dynamic landscape patterns when they interfered with human activities.

### **Air quality...**

was influenced by some human activities but generally was so good as to attract health seekers.

### **Water quality and quantity...**

were beginning to be impacted by people. Mining and other activities degraded water quality. People began to move water with irrigation canals to where they wanted to for agriculture or other uses.

### **Transportation patterns...**

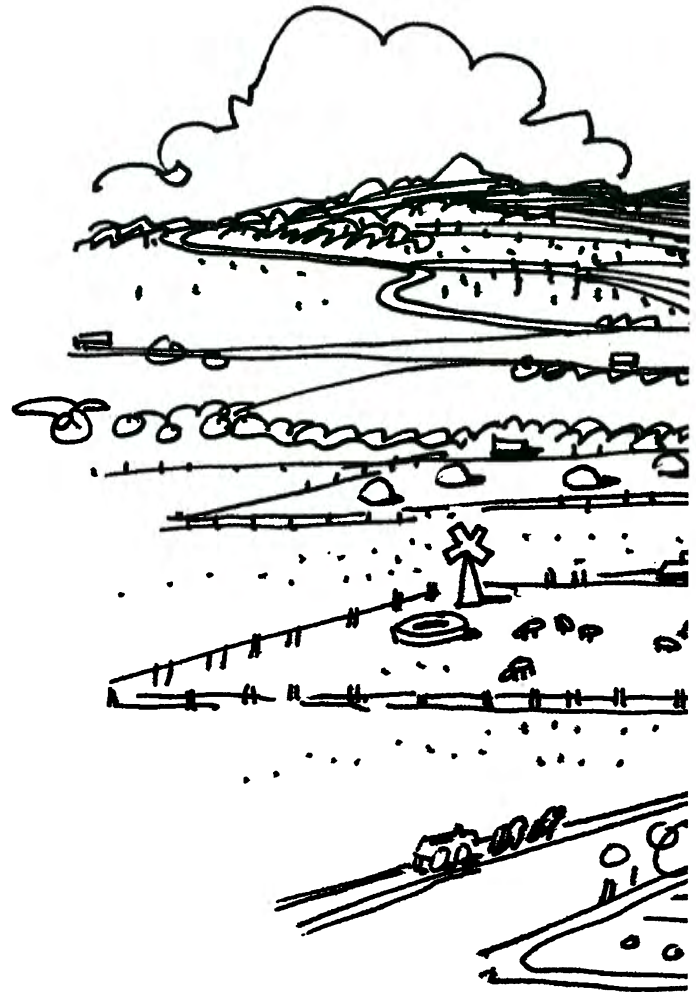
such as railroad lines, roads and trails cut across the patterns of the landscape.

### **Noise levels...**

increased as people carried out new activities, but still the vastness of the landscape tended to dampen any of these sounds.

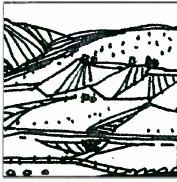
### **Visual character...**

was changed as roads and buildings appeared, with the sense that the

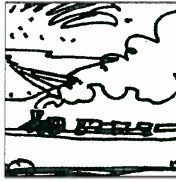


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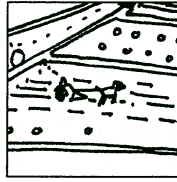
Key features of this landscape:



Mining cuts into mountain sides



Railroads and roads begin to fragment open spaces



Agriculture changes prairies



Water taken from the ground and other basins



Modern development patterns begun





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Figure 1-8

**TODAY...**

**Landscape pattern...**

*is dominated by humans and natural patterns are largely overwhelmed with habitats fragmented.*

**Air quality...**

*is influenced by motor-vehicle emissions, street sanding, power plants, factories and wood burning in home fireplaces.*

**Water quality and quantity...**

*are dramatically changed with water imported from other basins and increased runoff from development's impervious surfaces. More water pollutants find their way into surface and underground waters.*

**Transportation patterns...**

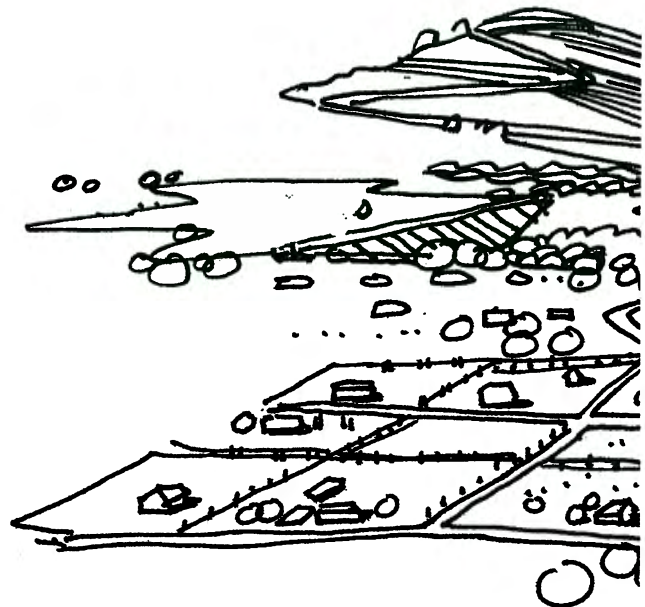
*are well developed and crisscross the landscape.*

**Noise levels...**

*have been increased by motor-vehicle traffic, aircraft operations and other sources.*

**Visual character...**

*has been significantly altered by homes and mining scars on mountainsides, homogeneous development and the loss of historic structures.*



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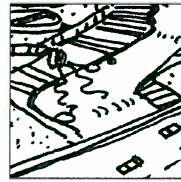
**Key features of this landscape:**



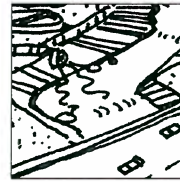
Development spreads across the landscape



Industry contributes to air and water pollution



Transportation connects, but also divides



Streams are channelized



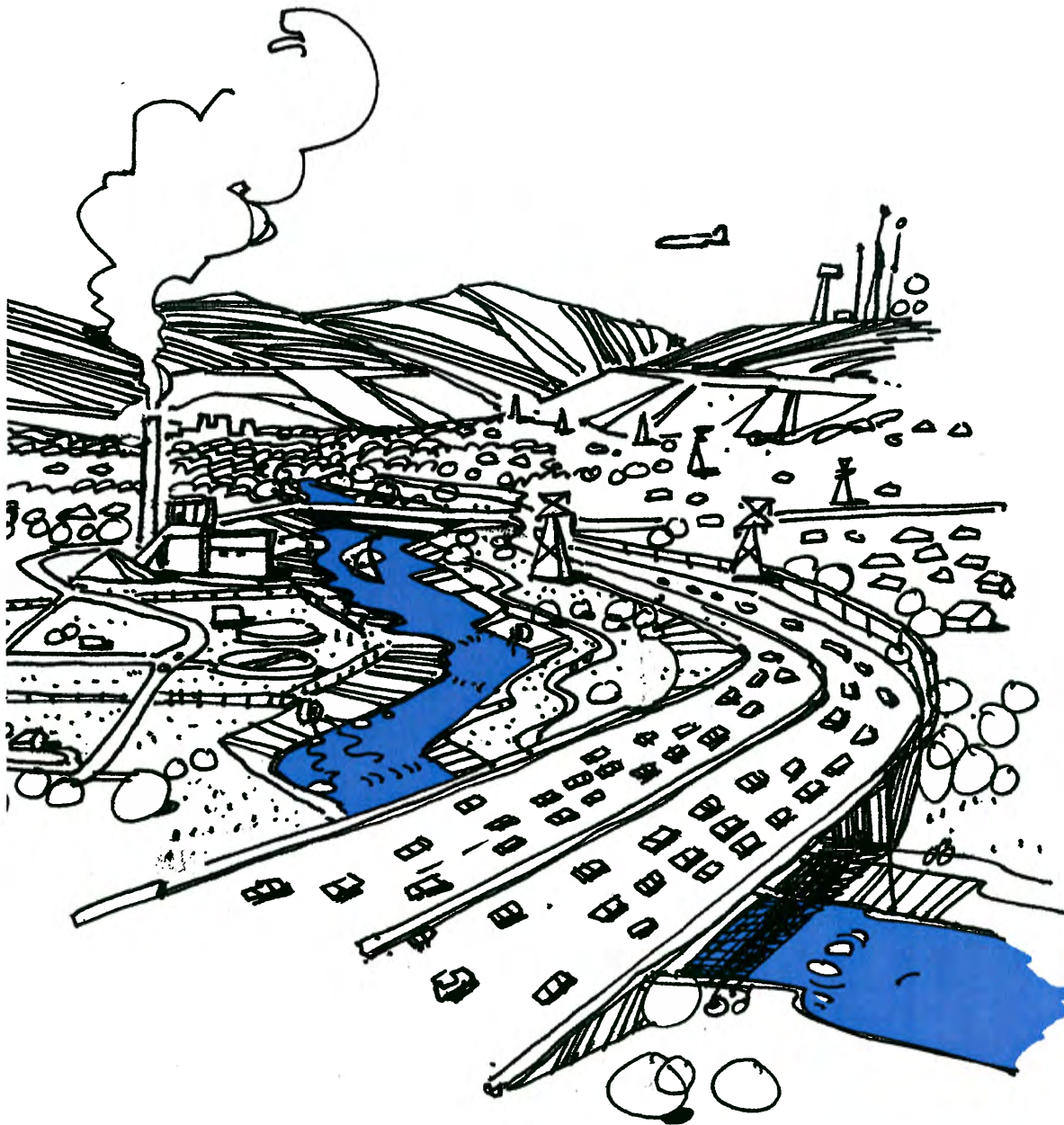
Urban forest transforms ecosystem



Stormwater changes nature of streams



Aircraft and other sources generate noise



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Figure 1-9

## **IN A SUSTAINABLE FUTURE...**

### **Landscape pattern...**

*consists of carefully interwoven land uses for people and nature.*

### **Air quality...**

*is improved because motor vehicles produce extremely clean emissions, the city is walkable and public transportation is convenient.*

### **Water quality and quantity...**

*are enhanced because there is less non-point pollution and less impervious surface in new developments, as well as water-quality treating features, such as constructed wetlands.*

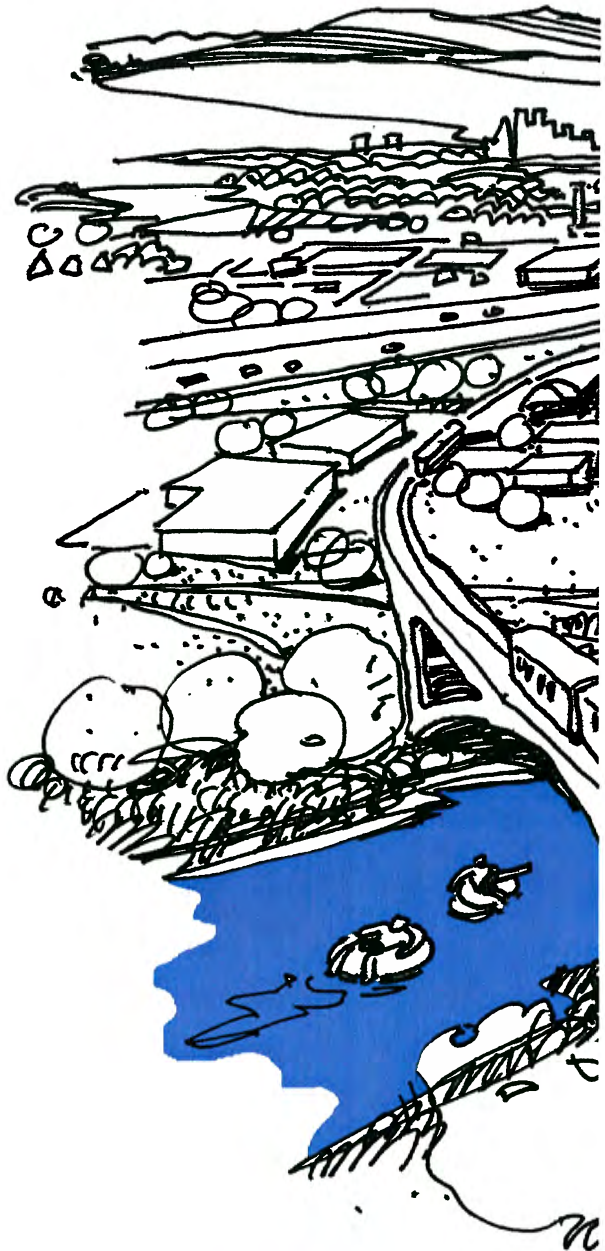
### **Transportation patterns...**

*have public transportation at their core, and many multimodal options are available.*

### **Noise levels...**

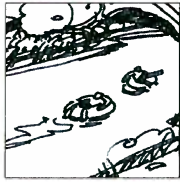
*are carefully managed, with some land uses kept separate.*

### **Visual character...**

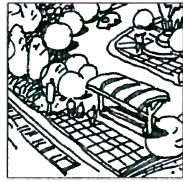


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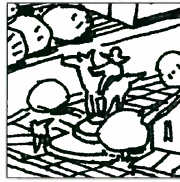
**Key features of this landscape:**



Space for dynamics of streams



Residential development focused on public transportation



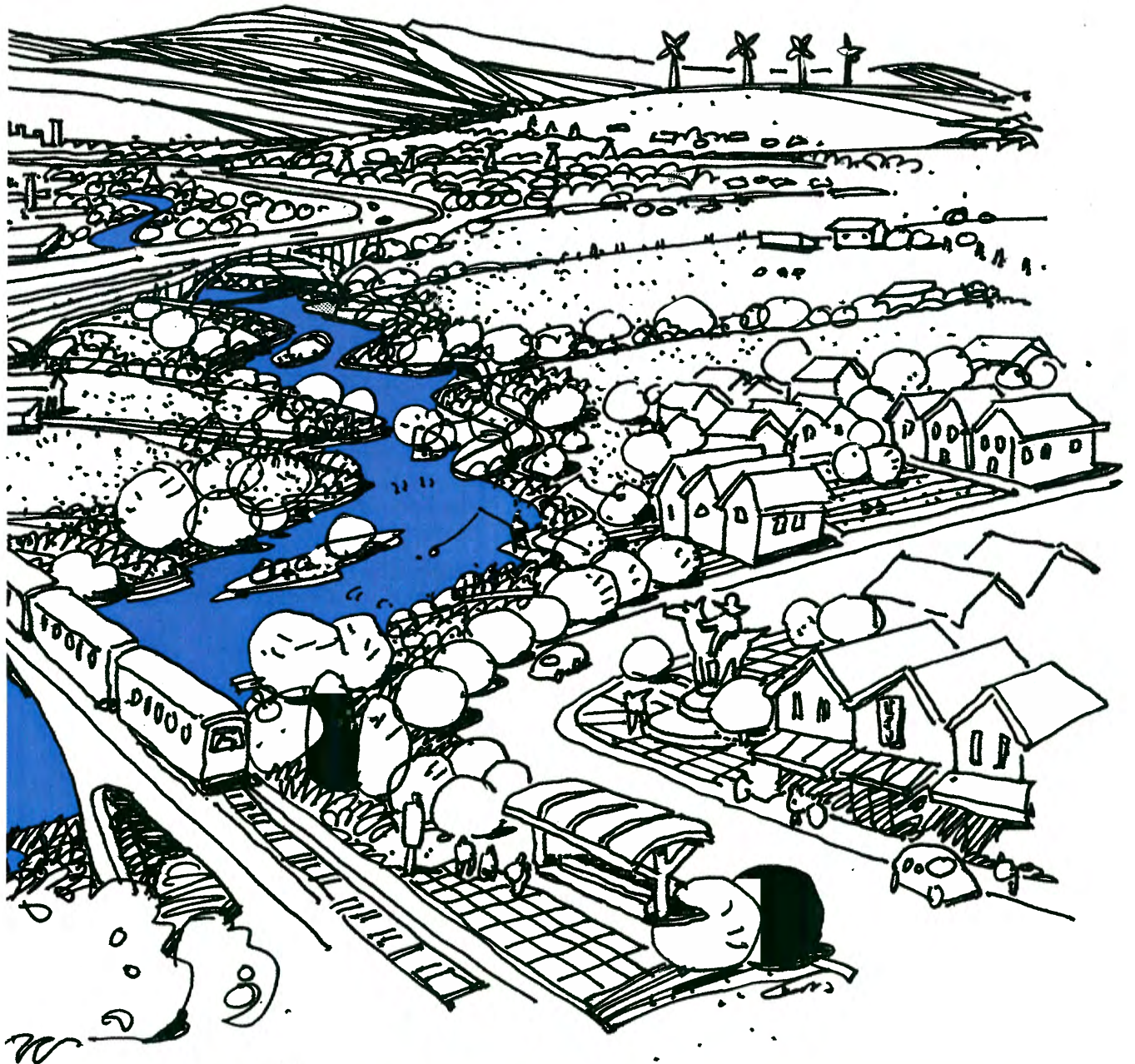
Public art, historic preservation, monuments



Revitalized town centers



Integrated activity centers instead of strips



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## CASE STUDIES

Much can be learned about cumulative effects and sustainability from the experiences of other communities. On the following pages and interspersed throughout this report are case studies and other reports from around the country that shed light on various topics related to sustainability and the Pikes Peak region.

### Case Study

#### Kansas City Region, Kansas and Missouri

#### 20 PRINCIPLES FOR CREATING QUALITY PLACES

##### *Homes and Neighborhoods Principles*

1. **Choice and Diversity.** Quality neighborhoods offer a choice of well-designed and maintained housing types and sizes. This variety of housing choices within a community meets the needs of different economic levels and age groups.
2. **Linkages.** Quality neighborhoods are linked to surrounding areas and, when possible, share commercial spaces and open-space resources.
3. **Reinvestment.** Quality neighborhoods encourage actions to preserve, restore and reuse historic sites or structures; to conserve and restore environmental resources; to foster appropriate infill development; and to redevelop Brownfields.
4. **Identity.** Quality neighborhoods have a distinct identity that helps define their boundaries and fosters pride and belonging among residents.
5. **Pedestrian/Cyclist Friendly.** The streets of a quality neighborhood are pedestrian-friendly.
6. **Green Space.** A variety of public green spaces are within easy access of residents in a quality neighborhood.
7. **Live/Work.** Quality neighborhoods offer the opportunity for residents to work and live within the neighborhood when the scale, character and function of business settings are compatible with homes.

##### *Commercial Development Principles*

8. **Mixed Use.** Quality places include a variety of uses (e.g. retail stores, residences, civic buildings and offices) that create multi-purpose activity centers in neighborhoods, small towns, suburbs and cities.
9. **Scale.** The scale, character and function of a quality development are compatible and integrated with that of its surroundings while remaining flexible to accommodate the densities, mix of uses and infrastructure that the market demands.
10. **Durability.** Quality places are built to last with quality materials, are designed to allow for changing uses over time and provide for shifting markets and consumer needs.
11. **Walkability.** Quality shopping areas, small or large, are designed to make the pedestrian feel comfortable and safe by providing wide sidewalks, storefronts that open to the street, shade and shelter and a sense of spatial enclosure.
12. **Parking.** Quality shopping areas provide a variety of convenient parking choices consistent with the scale of development, the location and the types of stores.

##### *Transportation and Public Places Principles*

13. **Multimodal.** A quality transportation system accommodates automobiles, public transit, public-safety vehicles, freight, pedestrians and bicycles in a

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balanced way to maximize access and mobility and to minimize congestion throughout the community.

**14. Local Streets.** Quality local streets are an integral part of a larger network of routes designed to provide access to homes, shops and businesses and to keep local traffic off major arterials and high-speed through-traffic off local roads.

**15. Bike/Pedestrian Access.** The design of a quality local street encourages pedestrian and bicycle use through such features as continuous sidewalks, outside tree planting and narrow street width and small turning radii at corners to slow down cars.

**16. Transit Supportive Development.** A system of quality local streets complements the planning and development of a regional public transit network.

**17. Public Spaces.** Quality public places are provided in urban and suburban area to

encourage social interaction and to foster a distinct sense of place.

**18. Water and Air Quality.** The design of quality places incorporates features and amenities that minimize environmental impacts on water quality caused by stormwater runoff and erosion, and on air quality caused by motor vehicle traffic.

#### ***Environmental Quality Principles***

**19. Resource Efficiency.** The design of buildings and properties maximizes the efficient use of environmental and economic resources by minimizing energy, water and material use.

**20. Natural Elements.** A quality place preserves major natural features in a neighborhood or a community (streams, slopes and natural habitats) as open space, and links those resources to public places by pedestrian and pike paths.

From: Mid-America Regional Council,  
[www.qualityplaces.marc.org](http://www.qualityplaces.marc.org)

## **Case Study**

### **Greater Wasatch Area, Utah ENVISION UTAH**

“Formed in January of 1997, Envision Utah is a public/private community partnership dedicated to studying the effects of long-term growth in the Greater Wasatch Area of northern Utah. Sponsored by the Coalition for Utah’s Future, Envision Utah and its partners—with extensive input from the public—have developed a publicly supported growth strategy that will preserve Utah’s high quality of life, natural environment and economic vitality during the next 50 years.

The Envision Utah partnership includes state and local government officials, business leaders, developers, conservationists, landowners, academicians, church groups and general citizens.

This unique and diverse coalition is working together to implement a common vision for the Greater Wasatch Area as it faces the prospect of immense growth in the coming decades.”

The coalition is addressing the following topics:

- ▶ Protecting sensitive lands
- ▶ Meeting household needs
- ▶ Making the community a good place to walk
- ▶ Reuse and infill
- ▶ Water conservation
- ▶ Urban forestry
- ▶ Energy conservation
- ▶ Strategies for walkable commercial development
- ▶ Public safety and residential street design

From: [www.envisionutah.org](http://www.envisionutah.org)

## Case Study

### State of Colorado

#### PREBLE'S MOUSE CONSERVATION AREA IN EL PASO COUNTY

Rapid development in northern El Paso County, Colo., is placing development pressure on the riparian habitat of the Preble's Meadow Jumping Mouse. While El Paso County itself is working with stakeholders to develop a Habitat Conservation Plan, the Colorado Department of Transportation (CDOT) has needed to make strong mitigation commitments to secure federal permits to proceed with several critically needed roadway improvement projects.



CDOT recognized a major opportunity in the form of a 65-acre parcel of vacant land in the southeast quadrant of the Interstate 25/Baptist Road interchange. Jackson Creek flows through

this parcel of critical mouse habitat, which was slated for imminent development, and also would generate important right-of-way issues for the planned future reconstruction of the interchange. By purchasing the property in 2001, CDOT has protected a vital habitat resource and can ensure that upcoming roadway projects surrounding the property are designed to have minimal adverse impacts.

CDOT plans several habitat improvements on the property to benefit the threatened mouse, including conversion of dense cattail stands to shrub islands, the removal of a frontage road and a culvert under it and improvements to the culvert that carries Jackson Creek under I-25 to join Monument Creek.

*From: Programmatic Biological Assessment: Interstate 25 Corridor, Powers Boulevard North, and Shoup Road Projects in El Paso County (CDOT, February 2003).*

## Case Study

### Fort Carson, Colorado

#### SUSTAINABILITY IS "IN THE ARMY NOW"

Fort Carson and other U.S. Army installations around the country are taking a serious look at sustainability, including the implications from and for the regional contexts for such bases. For what is being considered at Fort Carson, see: [www.envquest.com/library-Carson.asp](http://www.envquest.com/library-Carson.asp).

"For the past 30 years, environmental management in the United States (and the Army) has been compliance-based, with the ultimate goal of any environmental program being to reduce releases of pollutants and avoid costly and painful violations. Yet while compliance with the law may provide the environment with some level of protection, it does not protect the ability of the Army to train and deploy soldiers.

The modern Army installation requires, among other things, thousands of acres of undamaged training lands, a plentiful source of drinking water, and affordable energy sources to power its buildings and vehicles. An installation subject to severe restrictions or a rapidly increasing cost of energy or water may not be able to maintain readiness. A Sustainable Installation is an installation that plans proactively for these issues to ensure that they never affect readiness and the mission."



*The U.S. Army is steward of one of the largest single blocks of land in the Pikes Peak region—the 138,523 acres that make up Fort Carson.*

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## Case Study

### State of Colorado CDOT'S SHORTGRASS PRAIRIE INITIATIVE SEEKS TO MITIGATE IN ADVANCE OF IMPACTS

In an innovative, \$5 million agreement between the Colorado Department of Transportation (CDOT), the Federal Highway Administration, the U.S. Fish and Wildlife Service, the Colorado Division of Wildlife, and The Nature Conservancy, participants are working to mitigate impacts from future CDOT projects included in the 20-year State Transportation Plan.



By mitigating in advance of impacts, critical habitat will be preserved and requirements of the Endangered Species Act will be addressed on a system-wide basis. Through this advance mitigation, CDOT hopes to reduce right-of-way costs, regulatory time, and project uncertainty, while maximizing environmental benefits.

See: <http://environment.fhwa.dot.gov/stmlng/comoa.htm>

## Case Study

### City of Austin, Texas SUSTAINABLE COMMUNITIES INITIATIVE

Austin, Texas, like most urban areas, is facing increasing pressures to maintain quality of life while fiscal constraints and population also are growing. The need is to find new development pathways to deal effectively with these pressures as they adapt to decreasing amounts of resources and increasing environmental quality concerns.

Austin's Sustainable Communities Initiative reflects the international trend to embrace sustainable development as a way to meet these challenges. The initiative recognizes that several characteristics form the basis of a sustainable community:

- ▶ Long-range outlook
- ▶ Equity
- ▶ Stewardship of the natural environment and living within its carrying capacity
- ▶ Economic, human and biological diversity
- ▶ Community self-reliance
- ▶ Recognition of social, environmental and economic interdependence

“In a sustainable neighborhood, economic prosperity does not come at the expense of social justice and a healthy community, nor does it compromise environmental quality. Likewise, efforts to protect environmental resources do not limit people's opportunities to achieve a decent lifestyle or receive basic services. And programs and projects to improve lives and communities are planned and implemented so that both economic and natural systems are enhanced. In short, people in a sustainable neighborhood find ‘win-win’ practices that avoid harming the economy, the environment, and the community.”

From: [www.ci.austin.tx.us/sustainable](http://www.ci.austin.tx.us/sustainable)



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## Case Study

### State of Colorado COLORADO HERITAGE REPORTS ON SMART GROWTH

The concept of smart growth has emerged nationwide as an important planning concept. In Colorado, this topic is the focus of the Office of Smart Growth, in the Colorado Department of Local Affairs. Additionally, the Governor launched a project to identify and compile reports documenting successful smart growth policies that had been put in place around the State by county and municipal governments, as well as other organizations.

The outcome of this effort was the preparation of the *Colorado Heritage Reports*:

- ▶ Practices in Land Use Planning and Growth Management
- ▶ Intergovernmental Agreements
- ▶ Preservation of Open Space, Ranches and Farms.

Hundreds of actual Colorado plans, policies, programs and regulations are documented in these reports. For Colorado, the Heritage Reports could be considered “the mother of all case studies.”

A number of the Smart Growth examples in the Colorado Heritage Reports are cited from programs within El Paso County. A partial listing of these examples includes the following:

- ▶ *City of Colorado Springs: Open Space Plan, 1997*
- ▶ *City of Fountain: Trails Master Plan, 1996*
- ▶ *PPACG: Coordinated Regional Open Space Planning & Implementation, 1996*
- ▶ *City of Colorado Springs: Trails, Open Space and Parks (TOPS) Program, 1997*
- ▶ *El Paso County: Open Space and Parks Acquisition, 1997*
- ▶ *Teller County: Catamount Ranch Open Space Project*
- ▶ *City of Manitou Springs: Open Space Zone*
- ▶ *PPACG: Fountain Creek Watershed Project, 1996*
- ▶ *City of Colorado Springs: Hillside Area Overlay Zone District, 1996*
- ▶ *City of Fountain: Flood Damage Prevention Ordinance, 1996*
- ▶ *Town of Green Mountain Falls: Comprehensive Plan and Annexation Plan, 1997*
- ▶ *Town of Palmer Lake: Comprehensive Plan, 1993*
- ▶ *University of Colorado Corridor Transportation Management Association, 1997*

For more information, see:  
[www.state.co.us/smartgrowth](http://www.state.co.us/smartgrowth)

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## **SMART GROWTH**

Citizens in many parts of the country, including Colorado, are speaking of and pursuing what they term “smart growth.” Its principles include:

- ◆ Mix land uses
- ◆ Take advantage of compact building design
- ◆ Create housing opportunities and choices for a wide range of household types, family sizes and incomes
- ◆ Create walkable neighborhoods
- ◆ Foster distinctive, attractive communities with a strong sense of place
- ◆ Preserve open space, farmland, natural beauty, historic buildings and critical environmental areas
- ◆ Reinvest in and strengthen existing communities and achieve more balanced regional development
- ◆ Provide a variety of transportation choices
- ◆ Make development decisions predictable, fair and cost-effective
- ◆ Encourage citizen and stakeholder involvement in development decisions

*From: [www.smartgrowth.org](http://www.smartgrowth.org)*

## **FISCAL IMPLICATIONS**

It will cost money to mitigate cumulative effects through the wide variety of policy-level and project-level strategies presented later in this report. This is a critical issue to State and local government agencies, especially due to continued economic weakness in the post-September 11 era, as homeland-security needs place increased demands on scarce government resources. Also, growth in spending by local governments in Colorado is restricted under provisions of the state’s Taxpayers Bill of Rights (TABOR) law.

Federal, State and local laws already require mitigation of many of the adverse impacts that might be associated with a transportation project. Compliance with requirements pertaining to resources such as air quality, water quality, wetlands and threatened or endangered species is not optional—if the project does not comply, its sponsor cannot obtain permits needed to initiate construction. The good news is that the cumulative effects mitigation strategies presented in this report may actually save money.

If public-private partnerships and other synergistic strategies can be identified to address cumulative effects, it may be possible to achieve required mitigation in a more coordinated and cost-effective manner. Coordinated and partnership strategies result in cost savings by eliminating redundancies associated with individual and unrelated conservation efforts in the same region. In addition to cost savings, coordinated efforts can improve the functionality and sustainability of conservation efforts.

For example, if ten individual and unrelated projects in El Paso County are each required to mitigate for unavoidable impacts to an acre of wetlands, most likely it would be more cost-effective and produce a better quality wetland to create or restore ten acres of wetlands in one

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location, rather than ten one-acre locations. Cost savings would accrue by eliminating nine of the ten mitigation planning, land acquisition, construction and monitoring efforts.

The case study examples cited later in this report are predominantly “success stories” for which suitable funding mechanisms were found.

The scope of this cumulative effects analysis did not include estimating implementation costs.



The potential strategies listed in this report are numerous and could be implemented to varying degrees. Thus estimating their costs would have added minimal value to this study. Mitigation strategies should be assessed for fiscal impact on a case-by-case basis, when the affected agencies develop proposals or options in sufficient detail to facilitate meaningful cost estimates. At that time, it will be important—and feasible—to identify reasonably available funding as needed for strategy implementation, as well as any quantifiable cost savings attributable to coordinated mitigation efforts.

## **FROM HERE...**

The first section of this report presented a broad overview of the changing characteristics of nature and community in the Pikes Peak region. It also described in general terms what a sustainable future might be like for the region.

The second section—*A Sourcebook for Analyzing Cumulative Effects*—provides a more detailed assessment of the past, present and possible future of the region and identifies a wide range of resources that should be of use to project planners who want to contribute to sustaining what people value about the region.

Much has been said and is being accomplished in the Pikes Peak region to sustain those aspects of community and environment that people value. In recent months and years, a trails and open-space tax was approved (then extended) by voters, wetland and habitat banking have begun, a streamside overlay zone has been created and more.

The discussion of cumulative effects presented here suggests it may take even greater levels of cooperation and collaboration to be able to offer our children and their children the high quality of life and biodiversity now found in the region. With that increased cooperation and collaboration, participants in projects of all kinds—public and private, large and small—should be able to gain some of the regional perspective that will help them anticipate and mitigate cumulative effects and make a positive contribution to the region’s future.

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## 2. A SOURCEBOOK FOR ANALYZING REGIONAL CUMULATIVE EFFECTS

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**T**his section of the report provides additional detail about the cumulative effects issues presented in the previous section.

The contents of this section grew out of the work of two panels convened by the Colorado Department of Transportation to examine cumulative effects in the Pikes Peak region. This Sourcebook should be useful to anyone interested in sustaining the twin goals of quality of life and biodiversity identified by the panels, one of which focused on the natural environment and the other on community resources.

In this report, biodiversity (or biological diversity) is defined as “the variety of life in all its forms, levels and combinations, including ecosystem diversity, species diversity, and genetic diversity” (IUCN, UNEP and WWF, 1991) and quality of life is “people’s overall well-being” (World Bank, 2000).

Consistent with recommendations of the Council on Environmental Quality (1997), the panelists established both the geographic scope (see Figure 1-4) and the timeframe for their examination of the region’s potential cumulative effects. The panels identified 1955 as the approximate time in the past when the region shifted from a community of stable, slow growth to one of rapid expansion. They projected the Council on Environmental Quality’s “reasonably foreseeable future” as that time in the future (2025) to which readily available regional planning documents also projected, but also considered the duration of potential project effects.

In their report entitled *Considering Cumulative Effects Under the National Environmental Policy Act* (1997),

the Council on Environmental Quality (CEQ) suggests that indicators can be used as benchmarks of accumulated change as a method to assess cumulative effects. Several previous studies in the region have focused on identifying or using indicators to benchmark or measure changes in the environment and quality of life. To avoid redundancy and to take advantage of the work of others regarding indicators, panel members reviewed and considered other recent studies of environmental indicators in the Pikes Peak Region, including the following:

- ▶ Greenwood, Daphne. *Local Indicators of Quality of Life – A Preliminary Look at the Pikes Peak Region*. UCCS Center for Colorado Policy Studies, 2001.
- ▶ Clean Air Campaign. *Sustainable Indicators in Colorado Springs* (ongoing research).
- ▶ University of Colorado at Colorado Springs. Southern Colorado Economic Forum, 2001.
- ▶ The Colorado Forum on National and Community Indicators, 1997.
- ▶ Environmental Alliance of the Pikes Peak Region. *State of the Environmental Report for Colorado Springs*, April 1999 and 2000 Update.

This Sourcebook does not quantify environmental effects of specific projects (transportation or otherwise), but instead discusses overall trends in the region, assuming continued growth and development consistent with adopted regional transportation and land use plans.

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## SIX KEY INDICATORS

To make more practical the concepts of sustainability, biodiversity, and quality of life, panelists and project planners for this study identified six key indicators. They are:

- A. Landscape patterns
- B. Water quality and quantity
- C. Air quality
- D. Transportation patterns
- E. Noise
- F. Visual resources

Discussed in this Sourcebook for each of these six indicators are:

- ▶ what the issues has to do with sustainability;
- ▶ what the past and present status of the issue is;
- ▶ where trends seem to indicate things are going with this issue with respect to the Pikes Peak region;
- ▶ what a desired future state might be; and
- ▶ key strategies for moving toward that desired state.

The information and strategies in this study came from a wide range of sources. Some of the trends were developed during this

study; others were developed by earlier studies. Desired future states and strategies were obtained from a number of sources, including the Colorado Springs Comprehensive Plan.

As an aid to readers, strategies for each indicator are grouped under two headings: policy-level and project-level. Readers involved or interested in setting policy that supports sustainability should see the first list. If your interests center on a particular project – such as one of the major transportation improvement projects for which this study was undertaken – and relevant sustainable practices, see the second list. In some cases strategies for the same topic are found on both lists. These policies can be found on pages 2-47, 2-67, 2-83, 2-93, 2-102 and 2-111.

Case studies, such as that for the Monument Creek Watershed Landscape Assessment described below, were also examined for useful suggestions. The Monument Creek Watershed Landscape Assessment (2002) is highlighted here because it is a recent scientific and comprehensive assessment covering the rapidly developing northern portion of Colorado Springs and El Paso County. The full report can be accessed on the Internet at [http:// www.cnhp.colostate.edu/ projects/mcwla](http://www.cnhp.colostate.edu/projects/mcwla).

### CUMULATIVE EFFECTS TIMEFRAMES FOR THE PIKES PEAK REGION

The expert panels participating in this study selected the following timeframes for looking at the region's past, present, and reasonably foreseeable future:

**Past = circa 1955:** Prior to opening Interstate 25 and the US Air Force Academy; Aerial photography available.

**Present = circa 2000:** Utilizing the decennial census and other latest available datasets.

**Future = circa 2025:** Horizon year for current regional long-range transportation plans; 2020 land uses identified in the *City of Colorado Springs Comprehensive Plan*.

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## Case Study

### U.S. Air Force Academy, Colorado

### MONUMENT CREEK WATERSHED LANDSCAPE ASSESSMENT

Initiated by the United States Air Force Academy, the 2002 "Monument Creek Watershed Landscape Assessment" describes the desired future condition of that part of the Pikes Peak region (*Colorado Natural Heritage Program, 2002*) from a landscape perspective. In following the goals of the plan, its authors anticipate a future watershed that would be characterized by the following future conditions.

#### ***Future condition of biological resources***

##### Vegetation

1. Fundamental structures and ecological processes will be reestablished and maintained across landscape.
2. Plant habitat will be protected and restored.
3. Plant species composition and populations will be maintained.
4. Weeds will be controlled to mitigate potential impacts to native systems and habitats.

##### Wildlife

5. Wildlife habitat will be protected and restored.
6. Wildlife species composition and populations will be maintained.
7. Movement corridors and linkages will be established to encourage movement among populations and genetic diversity.

##### Rare and /or Imperiled Plants, Animals or Communities

8. Enhanced efforts will be made to restore imperiled populations or protect critical habitat.

#### ***Future condition of the physical domain soils***

##### Soil Loss

9. Efforts to mitigate against soil loss and associated impacts on landscape scale will be made.

##### Hydrology

10. Fundamental hydrologic regimes and processes will be reestablished on watershed scale.

##### Slope

11. Issues related to slope will be addressed on a watershed scale.

#### ***Future condition of the social domain***

12. Opportunities for local economic development of sustainable extractive industries will exist.
13. Viewsheds will be maintained.
14. The amount of open space will be increased within the watershed.
15. The region will be managed under the auspices of regional and multi-jurisdictional planning efforts that include participation from a broad range of stakeholders, resource managers and public officials.
16. Development and population growth will occur under a comprehensive understanding of socio-economic needs, the importance of high quality habitat and the needs of the community for the long-term.
17. Recreational opportunities will be expanded under a system more sensitive to diverse public needs, balanced with needs to conserve resources, maintain wildlife habitat, viewshed and watershed.

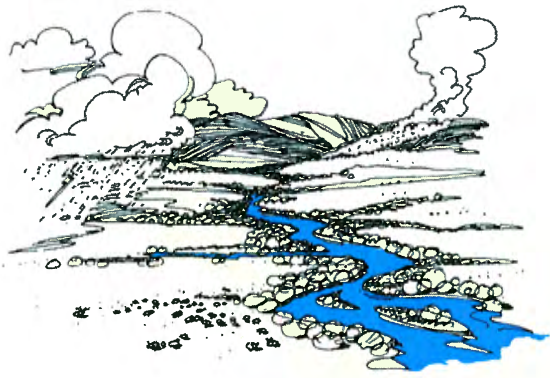


## **INFORMATION RELEVANT TO PROJECT-LEVEL ANALYSIS**

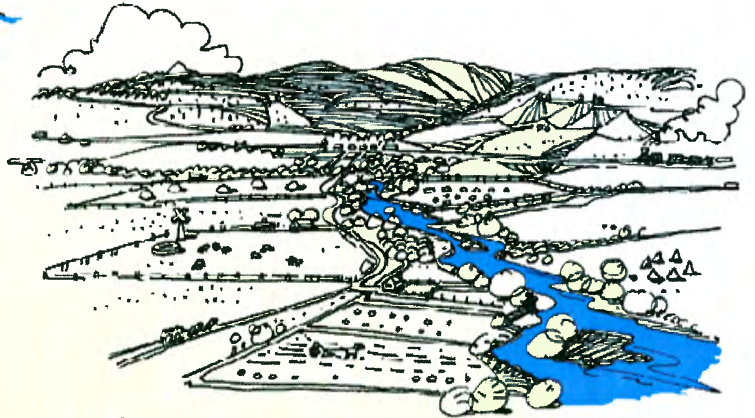
Some readers may be using this report because they are preparing documents required by the National Environmental Policy Act (NEPA). Table 2-1 relates more traditional NEPA topics with the six key indicators identified in this study. Due to the interrelated nature of these indicators, not all pertinent discussion is included solely under one heading.

*Table 2-1. Key Indicators versus NEPA topics*

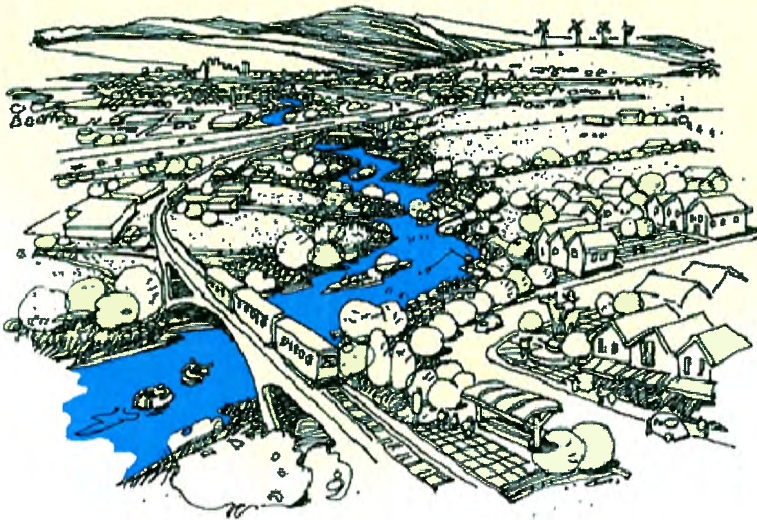
<b>If you are looking for discussion about these issues traditionally addressed in National Environmental Policy Act (NEPA) documents...</b>	<b>...the principal place to look in this report is under this topic:</b>
Land use	Landscape pattern
Traffic	Traffic pattern
Air quality	Air quality
Noise	Noise
Farmlands	Landscape pattern
Section 4(f) / 6(f)	Landscape pattern
Ecology	Landscape pattern
Threatened or endangered species	Landscape pattern
Wetlands	Landscape pattern
Floodplains	Landscape pattern
Hydrology	Landscape pattern Water quality and quantity
Water Quality	Water quality and quantity
Senate Bill 40 (Wetlands approval by the Colorado Division of Wildlife)	Landscape pattern
401 Permit (Clean air)	Air quality
402 Permit (Clean water)	Water quality and quantity
404 Permit (Wetlands)	Landscape pattern
Visual	Visual quality



# 2.



## *A Sourcebook for Analyzing Regional Cumulative Effects*







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## 2-A. LANDSCAPE PATTERNS

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**“In communities across the nation, there is a growing movement to improve development patterns and practices. Concerned by recurring problems, such as loss of open space, neglected infrastructure, growing commutes, and disinvestment in existing communities, many are turning to smart growth for new solutions.”**

—*Smart Growth at Work*, Carlton Eley and Javier Vélez-Arocho, 2000

**“The Comprehensive Plan provides positive guidance by presenting a framework for creating livable, walkable neighborhoods, attractive and accessible shopping areas, conveniently located schools, parks, and public spaces, dynamic centers for employment, and a network of natural areas and greenways.”**

—*Comprehensive Plan*, City of Colorado Springs, 2001

### **WHAT ARE LANDSCAPE PATTERNS AND WHY ARE THEY IMPORTANT?**

**L**andscape patterns refer to the type, size, arrangement and use of parcels of land. The arrangement of landscape components is critical from both a biological and human perspective. Appropriate landscape patterns can help sustain quality of life and biodiversity because people need access to such places as offices, schools and grocery stores. Wildlife need habitat areas for eating, finding cover, movement and reproduction. If the needed resources are not accessible, life can be hard or impossible.

**Measurable indicators of landscape pattern** (what to look for in gauging what is happening to landscape patterns across the Pikes Peak region).

- Changes in acreage (by watershed) of significant habitat types -- especially wetlands, riparian areas, forest and shortgrass prairie. (Are these areas increasing, decreasing, or staying the same?)
- Analysis of patches and other structural components of the landscape.
- Changes in the numbers of species of special concern, including federal and state listed plant and animal species.
- Average distance from residences to open space or a public park.

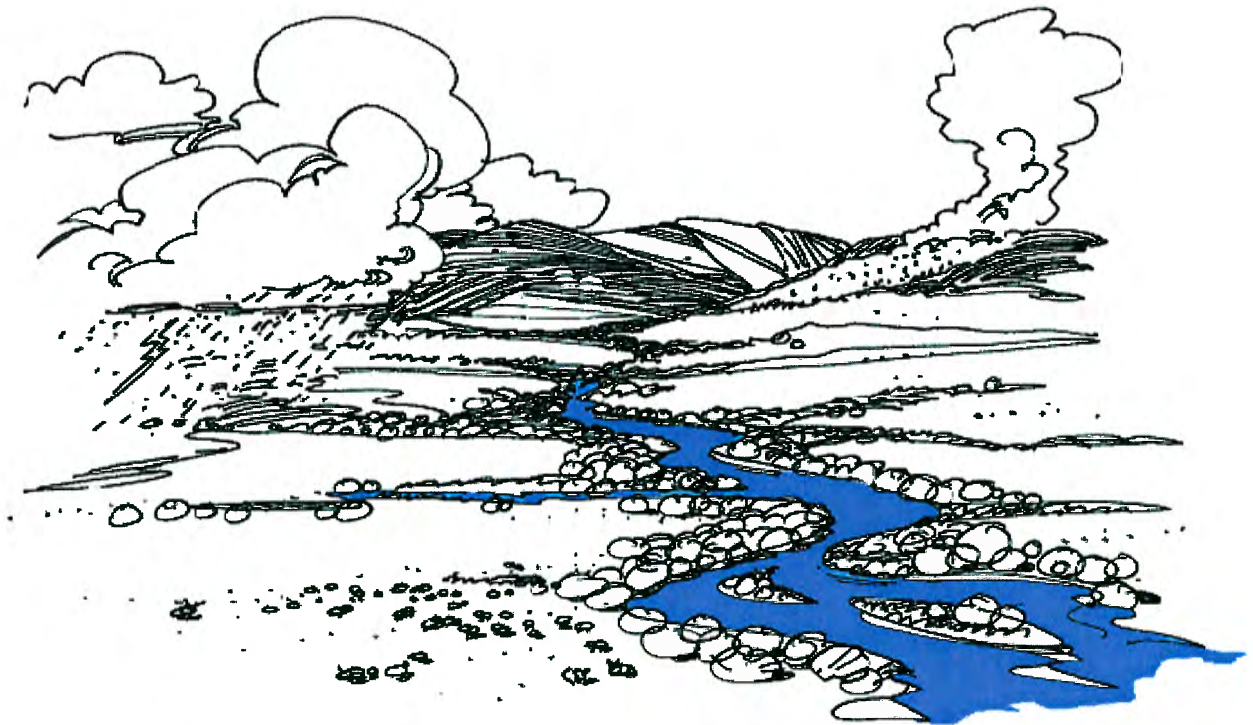
In this section, changes in landscape patterns and processes in the study area are reviewed. We will look at landscapes in the study area from 1955, present day (circa 2000), and, in some cases, the future (2025). The impacts of the four proposed projects on future landscapes also will be assessed. There are desired future landscape conditions that are needed to maintain biodiversity and quality of life. We have used a conceptual model to help guide strategies for achieving these desired future landscapes.

Finally, in order to plan for desired landscapes, we need to understand both the natural and anthropogenic (man-caused) processes that shape land patterns. Some of the more important processes are highlighted below.

### **LANDSCAPE HISTORY AND PROCESSES IN THE STUDY AREA**

Landscape processes are a series of factors that alter and shape natural communities and human environments. Important historical processes in the study area include prairies and forest fires,

flooding, bison herds, drought and insect infestations. These natural processes affected landscape properties almost exclusively before human settlement (Figure 2-1).



*Figure 2-1. Before communities developed in the region, natural processes determined the patterns across landscapes.*

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## Landscape Patterns

Plants and animals co-evolved with those patterns and disturbances, and often became dependent upon them. For example, cottonwood seeds only will regenerate after flooding exposes bare, moist sand or point bars on streams and rivers.

Early development, in general, was sparse and not as intensive as today. Such development was less likely to affect the dynamics of nature (see Figure 2-2). Before large numbers of people lived in the region, most areas (e.g., rangeland and forests) were relatively unchanged, and development was limited and concentrated.

A major exception was mineral mining, which had a significant impact on montane riparian areas in the middle and late 1800s. Mining affected many of the nearby forest ecosystems by intensive logging for mine timbers, smelting and rail development. Communities then developed to support these activities, both in the mountains and along the Front Range (e.g., Colorado City, now the west side of Colorado Springs).

Later, fire suppression was implemented to protect commercial interests and residential developments. Historical fire suppression has now resulted in thick, even-aged stands that are susceptible to catastrophic fires.

In addition to fire suppression, attempts also were more frequently made to control flooding and other disturbances and to “freeze” desired human-created landscape patterns. Streams were channelized and dammed, and wildfires suppressed. These efforts were costly and tended to exacerbate situations when a large flood or fire came along, but were viewed as appropriate ways of keeping nature otherwise under control.

Anthropogenic resource management has changed the structure and function of natural communities. For example, a naturally curving stream dissipates water energy. Water in a straightened, channelized stream flows faster and will cut down through the channel bed, lowering the alluvial water table and affecting streamside vegetation. Prairies were grazed and farmed, reducing native biodiversity and resulting in native shortgrass prairie remnants on non-arable lands. Fires were suppressed in these communities as well.

Predators and other species (including the coyote, fox, grizzly bear and timber wolf) were hunted, some to extinction. This changed the mix of wildlife species, which in turn affected vegetation communities. For instance, with the removal of large predators, herds of elk and deer have increased above historic levels, and grazing/browsing pressures have increased on native vegetation.

Another example of a natural community that has been profoundly affected by human intervention is riparian zones and wetlands. People and wildlife have always needed water and in the arid west, both have always been attracted to riparian areas for water, as well as other resources. The early settlers of Colorado often built in or near riparian zones, and this development pattern continues today.

Additionally, it is estimated that riparian areas are used for at least part of the year by 73% of the state’s wildlife species (Colorado State Parks, 1998). This attraction of people has created substantial impacts to riparian zones and wetlands throughout the west, as well in the Pikes Peak region, and inevitably wildlife has suffered because of these changes. A more detailed discussion of riparian areas is given in the following section.

**WETLANDS AND RIPARIAN ZONES**

Riparian and wetland areas are found in areas affected by increased water availability. We've all seen riparian areas. In El Paso County, the riparian areas are the "green belts" associated with streams or lakes and contain plant species such as willows, cottonwoods, cattails and sedges. Wetland areas differ from riparian areas in that they are generally wetter for a longer time period during the growing season and often Wetlands and riparian areas are widely recognized for the significant and diverse roles they play in the landscape. They are considered valuable to humans because they clean the water, recharge water supplies, and reduce flood risks among other functions. In addition,

riparian areas and wetlands provide recreational opportunities, aesthetic benefits, research and education sites, and wildlife habitat. The capability of a wetland or riparian area to perform one or more of these functions can be affected in whole or in part by a range of activities (Table 2-2). Predictably, the increased availability of water, increased humidity, more shade, high vegetative production and diversity, as well as other factors cause these areas to receive a disproportionate amount of use by wildlife, livestock, and humans. This has led to tremendous losses of riparian areas and wetlands in the past.

***Direct Impacts to Wetland/Riparian Areas***

Deposition of fill material (e.g., rip-rap); dredging and stream channelization; tilling for crop production; levees; diking and damming; logging; mining; construction/development; grazing by domestic animals; roads/highways

***Indirect Impacts to Wetland/Riparian Areas***

Drainage; increases or decreases in runoff volumes; Introduction of nonnative plant species (e.g., noxious weeds); water pollutants (e.g., sediment, nutrients, heavy metals, etc.); increase in noise levels; changes in water pH

*Table 2-2. Selected examples of the types of direct and indirect impacts that typically affect riparian and wetland areas. (Adapted from [www.epa.gov/owow/wetlands](http://www.epa.gov/owow/wetlands) and [www.ecosystemvaluation.org](http://www.ecosystemvaluation.org).)*

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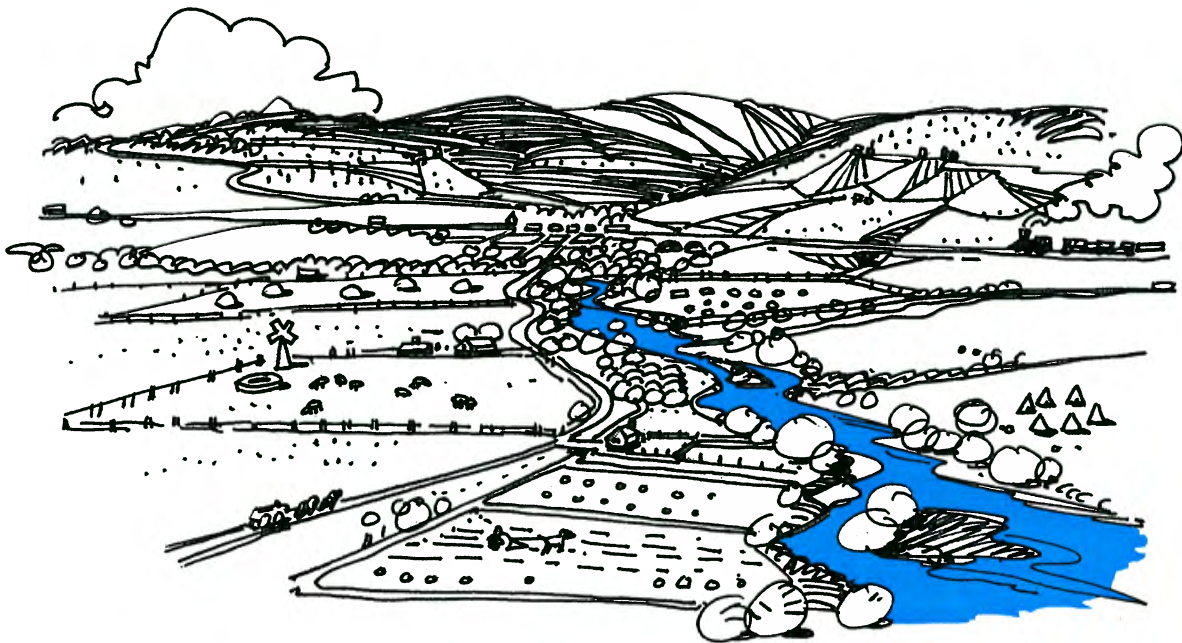
## Landscape Patterns

It is estimated that in the 1600s, there were 220 million acres of wetlands in the area now comprising America's "lower 48" states. By 1997, that number had plummeted to 105.5 million, a loss of 52% of the wetland area. Similarly, from the 1780s to the 1980s, it's estimated that half of Colorado's wetlands were lost (Mitch and Gosselink 2000). Currently, wetlands are estimated to occupy approximately 0.5% to 1.5% of the western U.S. landscape (Cooper 2002).

Most direct impacts to riparian areas are typically offset by compensatory mitigation due to regulatory requirements in Section 404 of the Clean Water Act. However, it is the indirect and ultimately, the cumulative effect of all impacts to riparian resources that threatens their sustainability. For example, excessive sediment loads in runoff water can lead to changes in

streambed morphology, loss of aquatic habitat, reduction in storage capacity of reservoirs, and loss of aesthetic value. Conversely, increases in impervious surfaces, which increase runoff volumes entering streams and rivers, can increase stream power, or its ability to move sediment. Impervious surfaces also reduce the surface area available for precipitation to infiltrate soils and ultimately to recharge local aquifers.

Impacts to riparian areas have occurred since the region was first settled and water was diverted for irrigation. Indeed, water diversions continue to impact riparian areas in the region even though some riparian areas carry more water for longer periods of time today than they did historically. Though subtler, this too can be considered an impact to these systems.



*Figure 2-2. With settlers on the scene, attempts were more frequently made to control flooding, fires and other disturbances and to control and stabilize desired, often human-created landscape patterns.*



Figure 2-3. Modern urban forest. View eastward shows I-25 crossing over Uintah Street. The large buildings in the upper right of the photo are part of the Colorado College, which was established in 1874. Dense summer foliage in this view hides the adjacent neighborhoods.

### **LANDSCAPES TODAY ARE FREQUENTLY FRAGMENTED BY ROADS AND OTHER LAND USES**

Rapid growth and development trends since World War II have resulted in low density, suburban land use patterns or sprawl, which spreads the impacts of development more broadly across the region (Figure 2-5.)

With sprawl comes more automobile use because development is spread out and not easily served by public transportation.

More automobile use means more air and water pollution, more widespread infrastructure and more time spent in a car. This represents a degraded quality of life for many people. Gasoline, insurance and automobile maintenance costs contribute to a greater cost of living, thereby degrading quality of life even more.

Roads, in particular, have had an impact on the landscape, fragmenting natural areas and neighborhoods. These effects on natural systems include:

- ▶ direct loss of habitat;
- ▶ habitat fragmentation;
- ▶ degradation of habitat quality (e.g., introduction of exotic plants, air pollution, noise and contaminated runoff), which can extend for several hundred feet from the roadside;
- ▶ direct killing of wildlife by impact (road kill);
- ▶ road avoidance by wildlife due to aversion to noise and human activity;
- ▶ increased human access, which can lead to over hunting and poaching;
- ▶ reduced access to important habitat (e.g., summer and winter ranges, breeding sites, etc.); and
- ▶ population fragmentation, leading to smaller populations that are more susceptible to genetic changes resulting from genetic drift or inbreeding, and extinction from single events (Jackson 1999).

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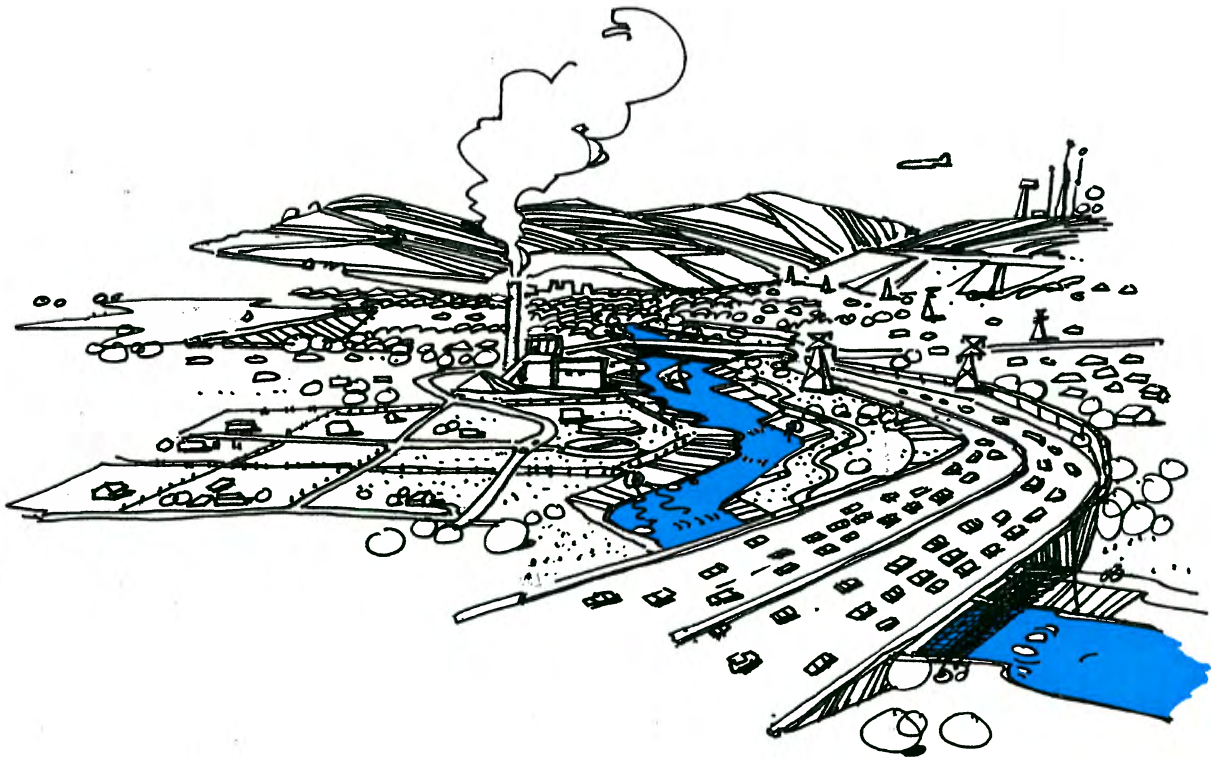
Landscape Patterns

Effects of highways and other roads on neighborhoods include:

- ▶ loss of landmarks
- ▶ degraded neighborhood identity
- ▶ loss of community cohesion
- ▶ interruption of local traffic flow within neighborhoods
- ▶ increased noise



*Figure 2-4. A sea of rooftops fills the vista east of Powers Boulevard on the fast-growing east side of Colorado Springs. These neighborhoods lack mature trees that would soften their stark visual impact.*



*Figure 2-5. Rapid growth has resulted in sprawl, spreading development impacts more broadly across the region. Among other things, the increased area of impervious surfaces associated with new development and attendant roads has reduced water quality and increased the quantity of water reaching streams.*



**SPRAWL AND 35-ACRE DEVELOPMENT**

Many parts of Colorado, including the Pikes Peak region, have seen extensive development of 35-acre lots because 35 acres is the 1972 statutory threshold above which development is exempted from subdivision requirements. In the last five years, 33% of all existing 35-acre parcels in El Paso County have been created. As seen in Table 2-3, parcels of this size add up to 200 square miles in El Paso County. By comparison, the City of Colorado Springs contains about 186 square miles, 40% of which is undeveloped.

**ALTERED HYDROLOGY**

Altered hydrology can lead to profound changes in ecological functions. Hydrological changes occur due to increased development because of growth in impervious surfaces. These surfaces prevent water from being adsorbed by the ground, causing greater amounts of run-off. More impervious surface increases the quantity and contamination of water reaching streams and drainages, thereby reducing water quality.

Another common scenario of many urban streams across the nation is for streams to downcut (Groffman et al. 2003, Paul and Meyer 2001), or become more gully-like as a result of the increased run-off. When

consequences is a drop in the riparian groundwater table, termed by Groffman et al. (2003) as ‘hydrologic drought’, which affects the ability of the existing riparian vegetation to persist (Figure 2-6). Downcutting also severs the connection between streams and their adjacent floodplains.

The loss of the floodplain not only impairs the health of the riparian area, but also its ability to provide many of the functions valued by humans (e.g., flood control, water quality improvement, etc.). These types of indirect impacts affect us all in the long run and become of greater concern and importance as more and more land is converted into roads, sidewalks, rooftops, and parking lots.

**WEEDS**

A relatively new but very important agent of change for landscape-level ecological functions is the spread of invasive weed species. Because vehicles and water are two of the most common methods by which noxious weeds are spread, both road construction and changes in hydrology are connected to the spread of weeds.

Roadsides, parking areas, construction zones, trails, irrigation ditches and stream banks are subject to frequent disturbance. Disturbance often results in soil exposure, creating favorable conditions for noxious weed establishment. Vehicles and water

Time Period	Number of 35-50 acre parcels	Acres in these parcels	Square miles in these parcels
Pre-1987	1,243	48,098	75.2
1987-1991	411	15,904	24.9
1992-1996	561	21,708	33.9
1997-2001	1,098	42,487	66.4
Total	3,313	128,197	200.4

*Table 2-3. Thirty-five to fifty-acre parcels created in unincorporated El Paso County. Adapted from “Forty - Acre People,” Carl F. Schueler, December 2002. Planning Matters, the newsletter of the Colorado Chapter of the American Planning Association. From [www.apacolorado.org](http://www.apacolorado.org).*

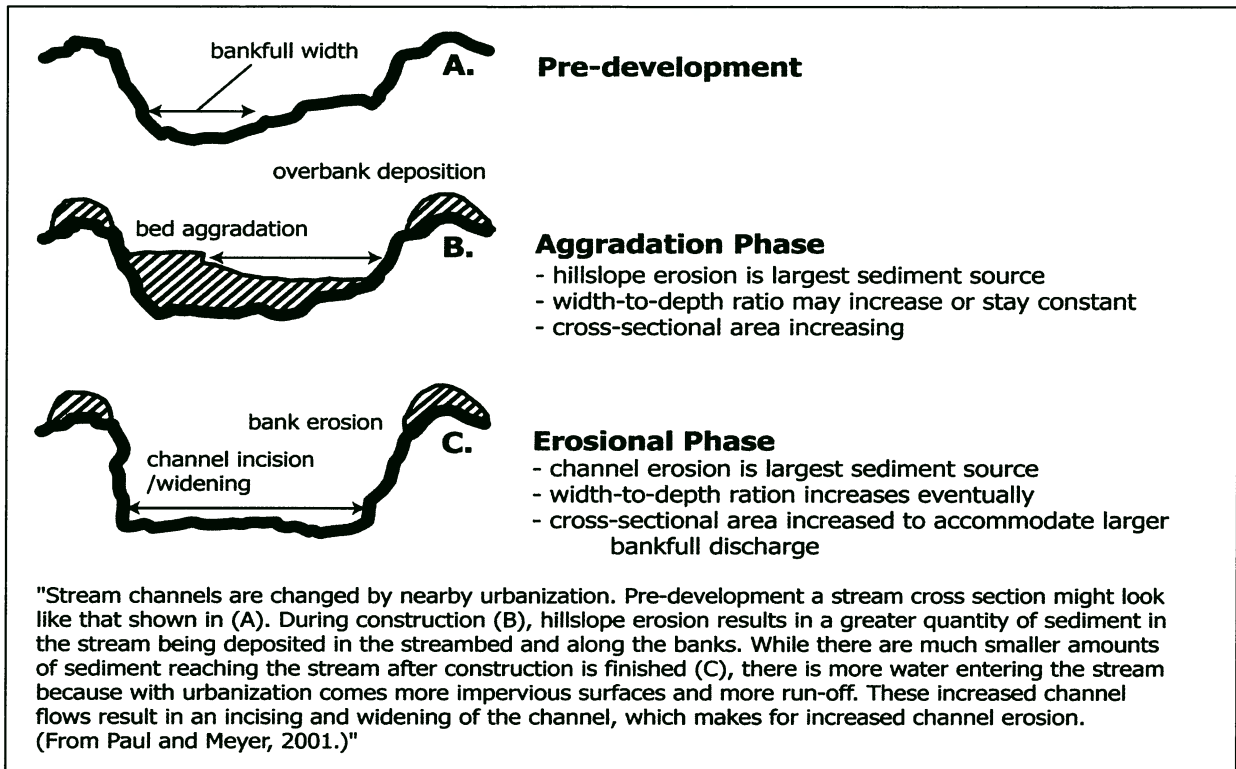


Figure 2-6. Increased stormwater runoff due to development, has resulted in stream downcutting and erosion.

intersecting these disturbed sites become carriers for transporting weed seed and may infect new areas many miles away.

Noxious weeds impair ecological process because they out-compete native species, yet often provide little food or shelter for native wildlife. Additionally, some noxious weeds consume enough water to lower water tables or are poisonous to live stock and grazing wildlife. Some species of weeds have already become serious pests in El Paso County. A collaborative strategy for fighting the spread of weeds is given at the end of this chapter.

### **EVOLUTION OF THE BUILT ENVIRONMENT**

This chapter is primarily focused on changes in landscape patterns and subsequent effects to the natural environment, but changes also are happening concurrently to the built environment.

Change to the built environment occurs in response to natural causes, community growth, economic changes and ever-improving construction technologies. In Colorado Springs, the first Antlers Hotel (built in 1881) burned down in 1898 following a dynamite explosion on the railroad behind it. The second Antlers Hotel was built in 1901 and was demolished in the late 1960s. The third and current version of the Antlers Hotel is more modern in construction, better meeting the needs of its owners and guests. Will this hotel someday be an historic structure worthy of preservation, or will it become economically obsolete and be replaced again?

Not all old buildings are worth preserving, but many that should be preserved instead get demolished. At the national level, guidance for identifying important historic resources has been developed in conjunction with the National Historic

Preservation Act, passed by Congress in 1966 in recognition of the “ever-increasing extensions of urban centers, highways and residential, commercial and industrial developments.” Federal agencies are required to consider and take prudent steps to avoid adverse impacts to historic resources. Local governments and private property owners are not required to be so careful.



*Figure 2-7. On Pikes Peak Avenue, a home constructed in 1900 has as its neighbor a 1960s office building.*

Most of the oldest buildings in Colorado Springs are located in the downtown area where the city started. After being founded in 1871, the City had expanded to a total of just less than 7.5 square miles by the year 1900 (compared to 186 square miles in 2002). Growth in the region was slow until World War II, when Camp Carson was established south of the city.

In the decade from 1950 to 1960, the population of El Paso County doubled, increasing by nearly 70,000 residents, and since that time, it has increased every

decade by approximately 70,000 to 100,000 residents. The additional population has created more demand for goods and services, raising property values and creating pressure to use downtown land more intensively (including the need for more parking spaces for the intensified land uses). See Figure 2-7.

In an extensive December 1999 article entitled “Ghosts of Colorado Springs Past,” Hazelhurst noted that in Colorado Springs, “historic buildings, even entire neighborhoods are often acquired by institutions and allowed to deteriorate, are moved or are simply demolished.” He cited a list of examples, including:

- ▶ The second Antlers Hotel and the Burns Opera House in the late 1960s;
- ▶ In the 1970s, several dozen Victorian commercial buildings downtown along Colorado, Costilla and Cascade (“creating drab parking lots which were eventually replaced by drab, international-style buildings”); and
- ▶ In the 1980s, the viable, if shabby, historic working-class neighborhood that surrounded Lowell School with a grandiose public-private development.

More recent losses cited in the article include:

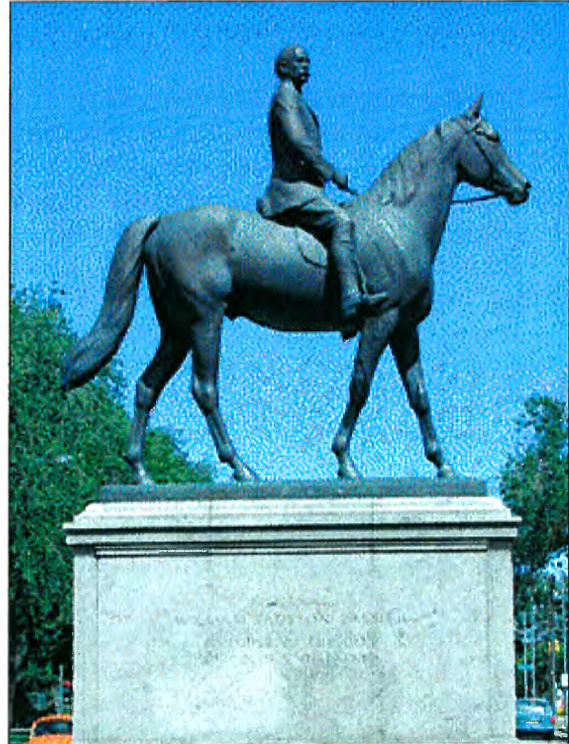
- ▶ All of the houses between Mesa and Monument Streets, on the west side of Cascade Avenue;
- ▶ Nearly 200 houses on the west side of I-25, between the Uintah and Bijou Street exits, condemned for widening;
- ▶ Half a dozen houses bordering the Colorado College campus, either moved or razed to clear the ground for implementation of the college’s new master plan; and
- ▶ More than 20 houses moved or razed to make room for the expansion of Penrose Hospital during the last two decades.

The article also listed a number of historic properties at risk, as well as a number of historic preservation success stories: “Over the last two decades, individual homeowners and small-business people have seen to the preservation, restoration, or adaptive re-use of thousands of historic structures in the Pikes Peak region.”

One important step for historic preservation occurred just north of Colorado College. The Old North End Neighborhood obtained from the City a Historic Preservation Overlay designation intended to slow down or stop the loss of the neighborhood’s historic and residential character.

Somehow, not mentioned in the article is a statue of City founder General William Jackson Palmer on horseback, located in the middle of the intersection of Nevada and Platte avenues downtown. This statue is depicted in Figure 2-8. At the time of its placement, this was the intersection of federal highways 85 and 24, indeed the most prominent intersection in town and by Council order was to remain in perpetuity until such time as the people in a general election should vote to remove and place it in an equally prominent location.

Today, the Palmer statue is controversial because it impedes driver vision, especially for left turns. Preservationists want the statute left in place while others with traffic flow and safety priorities urge that it be relocated. Even as downtown has drastically changed over the decades, the statue has not moved and remains as the City’s best known symbol in the struggle between growth and historic preservation.

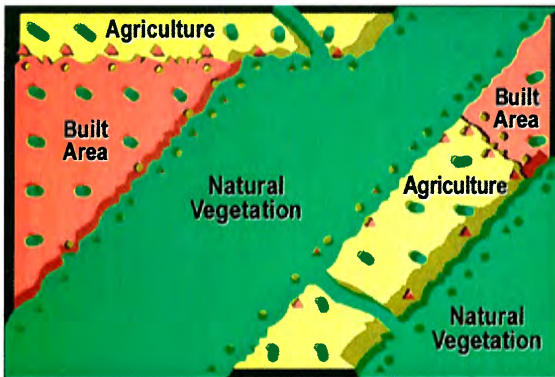


*Figure 2-8. Statue of General William Jackson Palmer at the intersection of Nevada and Platte.*

## WHAT IS THE DESIRED LANDSCAPE CONDITION?

Harvard landscape ecologist Richard Forman (1995) suggests that the optimal arrangement of land uses in a landscape—the most sustainable—may be found by applying his aggregate-with-outliers principle. This principle states: “One should aggregate land uses, yet maintain corridors and small patches of nature throughout developed areas, as well as outliers of human activity spatially arranged along major boundaries.”

As shown graphically in Figure 2-9, this model suggests that there should be major, separate blocks of development, natural areas, and agriculture. With this aggregation into larger blocks, each of these land use types can typically function more effectively than in smaller blocks.



*Figure 2-9. The aggregate-with-outliers principle suggests that generally land uses should be aggregated, but corridors and small patches of nature should also be maintained throughout developed areas, as well as outliers of human activity spatially arranged along major boundaries (Forman 1995).*

For example, for protecting many—though not all—aspects of biodiversity, large patches of natural areas are very important. The fragmentation and isolation of habitat is frequently cited as the major threat to biodiversity. Similarly, large areas devoted to agriculture typically function more efficiently than small, scattered farms. When mixed development is

aggregated, people can walk to work and more easily get to schools, shops, places of worship, and offices.

But big blocks are not enough to satisfy all desired spatial relationships, and Forman’s aggregate-with-outliers model addresses this, too. For example, within blocks of development, it is important to have areas of nature (i.e., open space) and agriculture (i.e., gardens) for people to enjoy. Some wildlife species prefer small areas of specialized habitat or require stepping stones of habitat between large blocks (note the outliers in Figure 2-9).

Even within large blocks of natural areas, it may be important to have carefully sited places for people to camp, hike or even live. The Forman model suggests that outliers of nature should be located throughout both developed and agricultural areas. In natural areas, however, outliers are more appropriately located near boundaries with other types of land uses, where they contribute less to the perforation of the large habitat blocks. Preserving movement corridors is also a part of the model. People need to move between blocks of development, as wildlife needs to move between blocks of habitat.

Following this approach, sprawling development would be discouraged because it can create landscape patterns that are less efficient and effective for both people and nature.

The overall approach of the Forman model is consistent with the Comprehensive Plan of the City of Colorado Springs, with its emphasis on a regional perspective and aggregated land uses.

## **MAKING DECISIONS BASED ON THE FORMAN MODEL**

Models like Forman's, however, are very general and do not reflect the specifics of any one place. Also, such models typically describe idealized relationships that might only be achieved if starting from scratch. Still, in the Pikes Peak region there are newly developing areas where these concepts can be applied directly.

For the major transportation improvement projects now undergoing environmental study, examining the Forman model suggests that reducing the barrier effect of the transportation corridors to the degree possible is paramount. This could be accomplished by finding ways of maintaining the integrity of neighborhoods and other adjacent areas that form blocks of development that otherwise would become disconnected and potentially isolated.

Also important is reducing how much a transportation corridor creates a barrier between large natural areas between which wildlife have traditionally moved. For example, given the regional significance of large open spaces, it is probably better to avoid such open areas as potential transportation corridors where possible. If such areas cannot be avoided, then it may be better to align a road corridor along the boundaries of such an area, rather than disturb its interior.

Without planning and actions based on a pattern-sensitive, regional perspective, such as Forman's model provides, cumulative impacts are more likely to diminish the quality of a region.

New transportation projects, inappropriate development, and incompatible land uses can degrade neighborhoods or natural systems when they:

- ▶ displace or degrade needed resources (e.g., when a neighborhood park or a prairie is replaced by development);
- ▶ break or degrade connections between needed resources or habitats (e.g., access to a nearby neighborhood or community center is lost or made difficult for residents, or wildlife access to a watering hole is severed by development);
- ▶ turn large blocks of resources into smaller, less useful fragments (e.g., when a large prairie block is cut into smaller areas that are not large enough to sustain pronghorn antelope or other species, or when parts of a neighborhood are separated from the rest of the neighborhood).

With such changes it is harder to sustain biodiversity (with more sensitive species disappearing first), although the new conditions may encourage certain, more common or exotic species that are more tolerant of human intrusion and modified habitats. Such species include magpie, starling, jay, raccoon, coyote, red fox and skunk, as well as feral cats.

With these changes it is also harder to sustain the quality of life people desire because they find it harder to get to the resources they want, they may pollute air and water more in traveling greater distances, and increased development can degrade the visual environment.

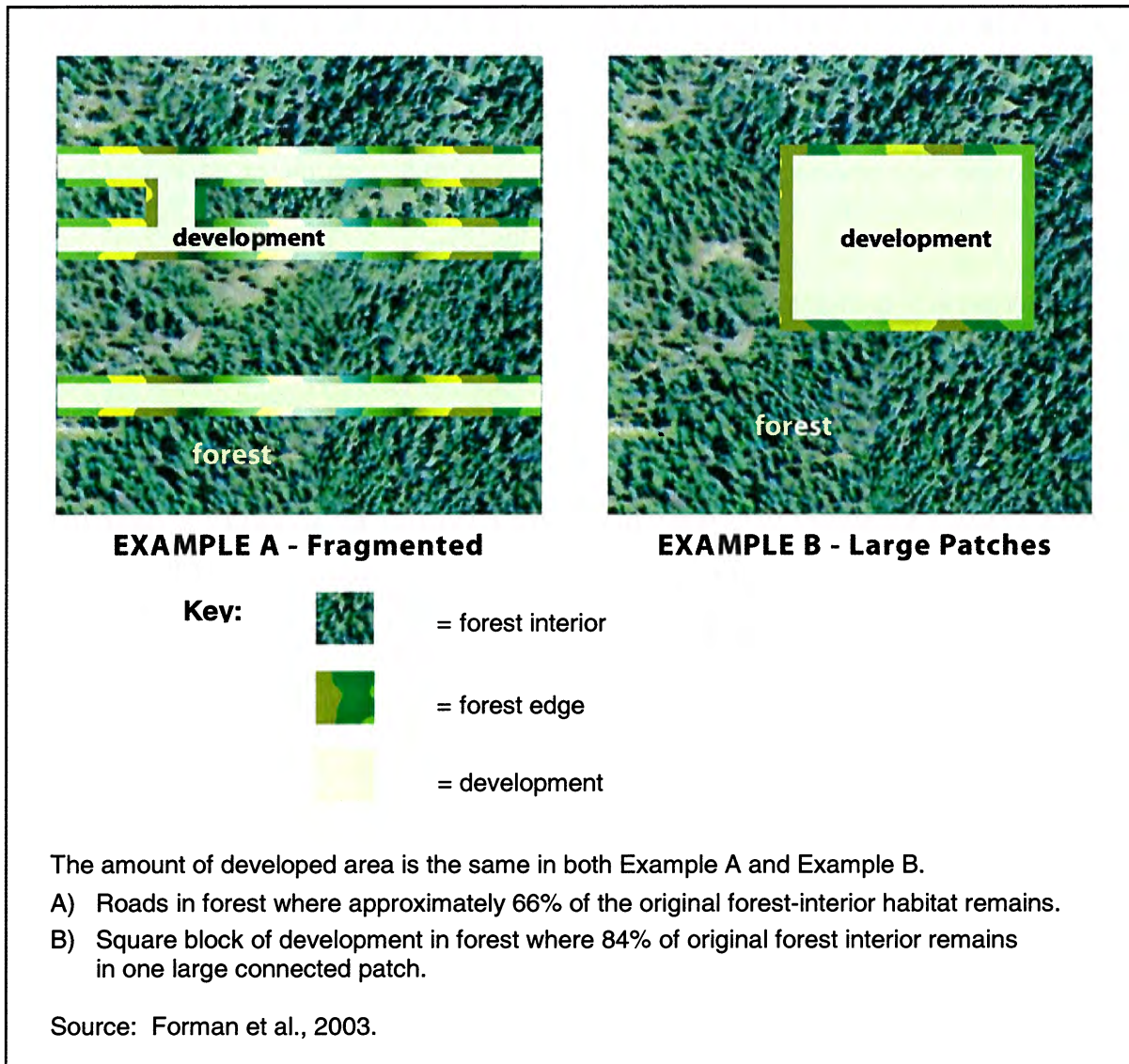
On the other hand, carefully planned changes in landscape pattern can minimize or even improve the way a landscape functions for people and nature.

**ROAD EFFECTS ON WILDLIFE AND LANDSCAPE PATTERN**

Road density and pattern often affect wildlife populations. The specific effects on a particular species are dependent on several factors, such as the behavioral response to the road, habitat needs, and movement ability. Most species require multiple types of habitat patches, arranged in such a way that the organism has access to all needed areas for survival. The number of roads in an area (road density) and the placement of roads may

both have cumulative impacts. Both the placement of new roads and additional development of existing roads usually reduce natural habitat patches adjacent to the road (see Figure 2-10). For many species, the full effect of the road on a local population may be many years removed from the impact (in some cases, by 30 to 40 years, from Forman et al., 2003).

Figure 2-10. Loss of forest interior habitat due to road and block development.



### **ANALYSIS OF LANDSCAPE CHANGE IN THE STUDY AREA**

In an effort to understand the types of cumulative impacts the Pikes Peak region has experienced in the past and may experience in the future, an analysis of landscape pattern change within the study area was conducted.

The indicator of change considered was land-cover type and its potential associated impacts on biodiversity and quality of life. Three different analyses were conducted:

1. Past and present aerial photography of eight sites in the study area were qualitatively assessed for change in the type and amount of each land cover class present.

2. The amount of existing land cover types that will potentially be impacted by the four proposed transportation projects was estimated, using a GIS-based analysis. Cover type change was then linked to impacts to sensitive species that may occur within the study area.

3. Additional past and current data from county records were assessed to determine land cover changes within the study area, including projected future changes. These data include statistics on land use change in three areas associated with proposed roadway projects and County-wide agricultural statistics.

### **ANALYSIS OF COVER TYPE CHANGE, 1955-2000**

Eight sites, listed in Table 2-4, were selected for detailed examination to compare the change in land-cover type from past to present. Black-and-white aerial photography from 1955 was used to characterize past conditions. Current conditions were interpreted from satellite imagery taken in 1995.

Current conditions of each of the sites also were verified with field visits in August and September 2002. The eight comparison sites were selected in locations known to have undergone some degree of land cover change. However, the exact locations for analysis were randomly selected for most sites.

*Table 2-4. Information on eight sites selected for analysis of land cover type change, 1955-2000.*

Site	Type	Name	Location (distance from downtown Colorado Springs)
1	Agriculture	Ellicott South	South of State Highway 94 (25 miles east)
2	Agriculture	Ellicott North	North of State Highway 94; (24 miles east)
3	Forest	Black Forest	West of Meridian Rd at Ayer Rd (14 miles northeast)
4	Riparian	Dirty Woman Creek	At the I-25/State Highway 105 Interchange in Monument (19 miles north)
5	Riparian	Pine Creek	East of State Highway 83, near the I-25/ Briargate interchange (10 miles north)
6	Shortgrass Prairie	Myers Road	Along Myers Road, east of Black Squirrel Creek (25 miles southeast)
7	Shortgrass Prairie	Marksheffel Road	Near the Marksheffel intersection with Drennan Road, 2 miles east of the municipal airport; (7 miles east-by-southeast)
8	Urban	Woodmen Road	Near Dublin Blvd, south of Woodmen Road and west of Academy Boulevard (7 miles north)



Landscape Patterns

Over 50 different land-cover classes were identified on 1995 satellite imagery analyzed by the U.S. Bureau of Land Management and Colorado Division of Wildlife. These classes can be aggregated into various ways, depending on the complexity of the data analysis. For example, Figure 2-11 depicts the data aggregated into 31 types.

These vegetation classes can be broadly lumped into seven categories: agricultural lands, riparian systems, shrublands, forested areas, shortgrass prairie, urban areas and "other." The "other" class is a

catchall for land-cover types that did not fit the other six definitions. On the black-and-white aerials, it was not possible to distinguish shrublands from forest areas, nor was it possible to distinguish land-cover types that fit into the "other" category. Therefore, for the comparison of change from 1955 to 1995 images, only five land-cover types could be considered. All quantitative analyses of changes to cover types were based on the seven cover type classes. See Table 2-5 for descriptions of these cover types. In addition, there is a summary of the important community types in Appendix 2.

*Table 2-5. Descriptions of the land-cover types considered in the analysis of land cover change, 1955-1995.*

<b>Vegetation Type</b>
<p><b>Riparian/wetlands</b>                      riparian, forested riparian, shrub riparian, herbaceous riparian, cottonwood, willow</p>
<p><b>Forest</b>                      ponderosa pine, ponderosa pine/Gambel oak, ponderosa pine/aspen, ponderosa pine/Douglas fir, ponderosa pine/mesic mountain shrub, Douglas fir, aspen, ponderosa pine/aspen/mesic mountain shrub, Engelmann spruce/fir mix, spruce/fir/aspen, Douglas fir/aspen aspen/mesic mountain shrub, bristlecone pine, limber pine, spruce/fir/lodgepole/aspen mix</p>
<p><b>Shortgrass prairie</b>                      grass dominated, grass/forb mix, sparse grass, grass/cactus mix, grass/cholla cactus mix, sparse grass (blowouts)</p>
<p><b>Urban/Other</b>                      urban/built-up, residential, commercial</p>
<p><b>Agricultural</b>                      agricultural land, agriculture, dryland agriculture, irrigated agriculture</p>
<p><b>Shrublands</b>                      Gambel oak, greasewood, mesic mountain shrub mix, mountain shrub mix, sagebrush community, sagebrush/grass mix, shrub/grass/forb mix</p>
<p><b>Other</b>                      rock, water, talus slopes, alpine grass, barren, soil</p>

## Landscape Patterns

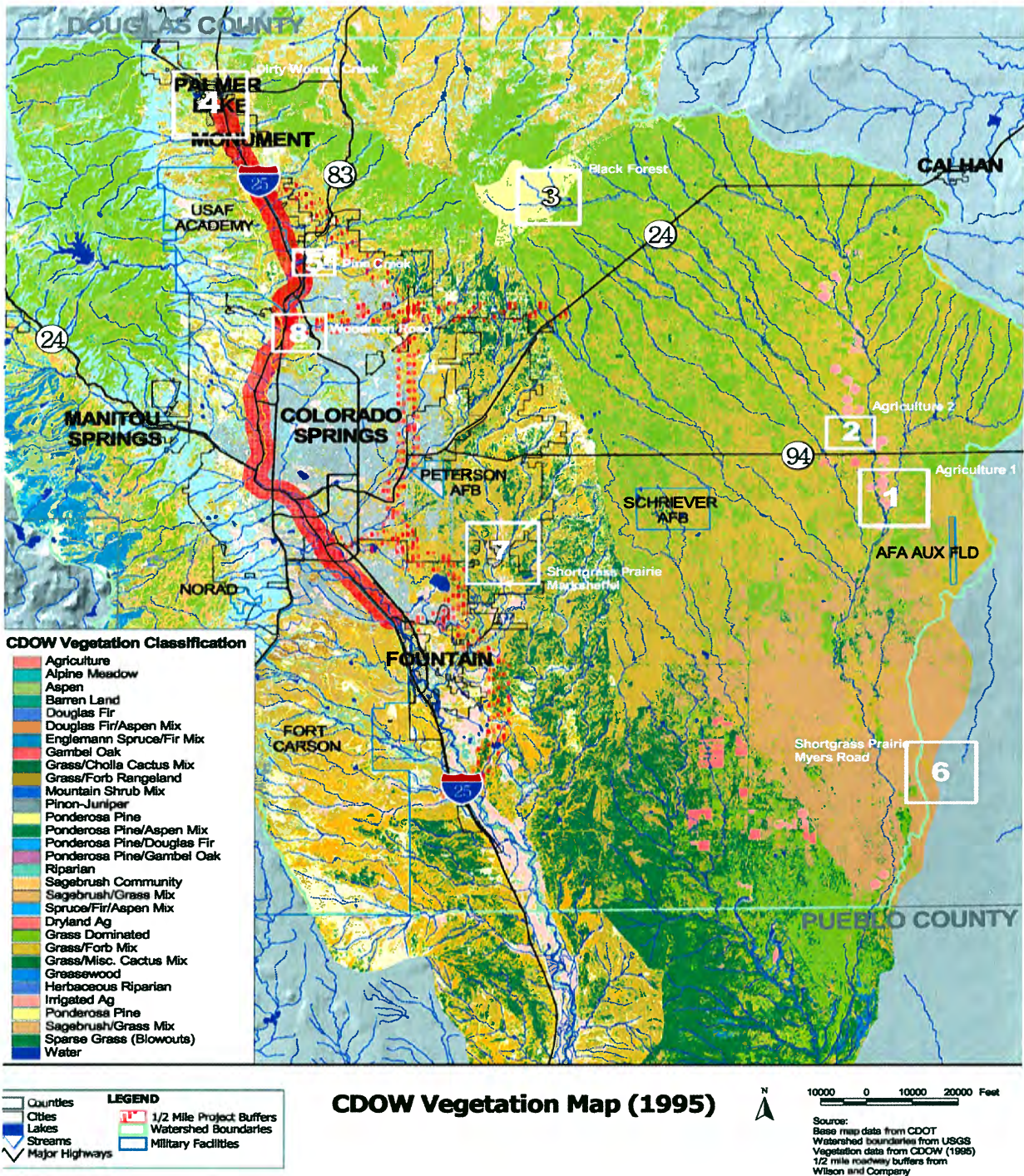


Figure 2-11. To understand better the specific changes in landscape pattern in the Pikes Peak region, eight sites were selected for more detailed examination. These sites are indicated in the map above as rectangles numbered 1 through 8. See Table 2-5 for acreages of each vegetation type. See sections for explanation of each of the eight sites.

The following section shows past (1955) and present (1995) aerial photographs/satellite imagery of eight sites in the study area and future projections of changes at three of those sites.

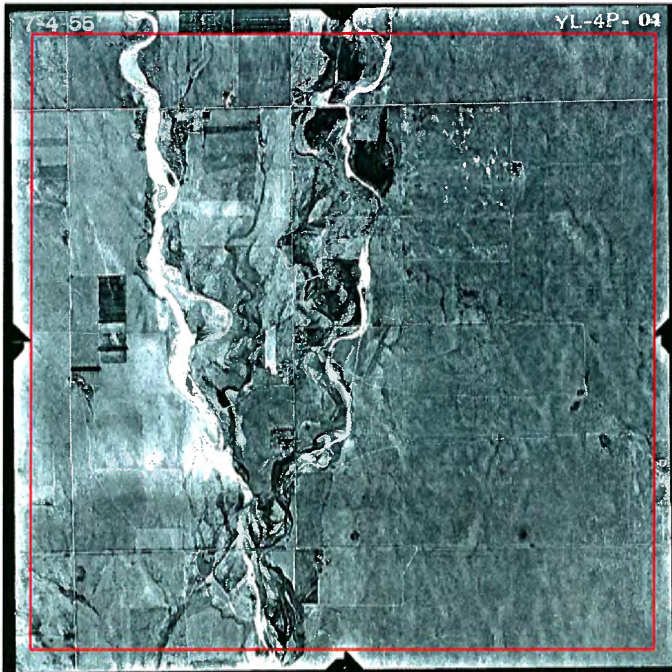


Figure 2-12. 1955 aerial photo of Site 1, Ellicott South.

### Comparison Site 1

#### **AGRICULTURE – ELLICOTT SOUTH**

(two miles southeast of Ellicott): Small, quilt-work field patterns give way to large irrigation circles. This site is approximately 25 miles east of downtown Colorado Springs.

This section of land in eastern El Paso County currently includes several sod farms, but its western side contains a mixture of native grasses and weedy species. Much of the irrigated agriculture is located within parts of the drainages, such as Brackett Creek, which, in 1955, formed distinctive braided stream patterns.

Since 1955, ten full or partial center-pivot irrigation systems have been constructed. Now, much of the quiltwork field pattern shown in the 1955 photo is gone. The creek in the southern and northern section edges is composed of a dry, sandy wash.

Modern reference points:

1. Black Squirrel Creek
2. Brackett Creek
3. Big Spring Road
4. State Highway 94
5. Ellicott Highway

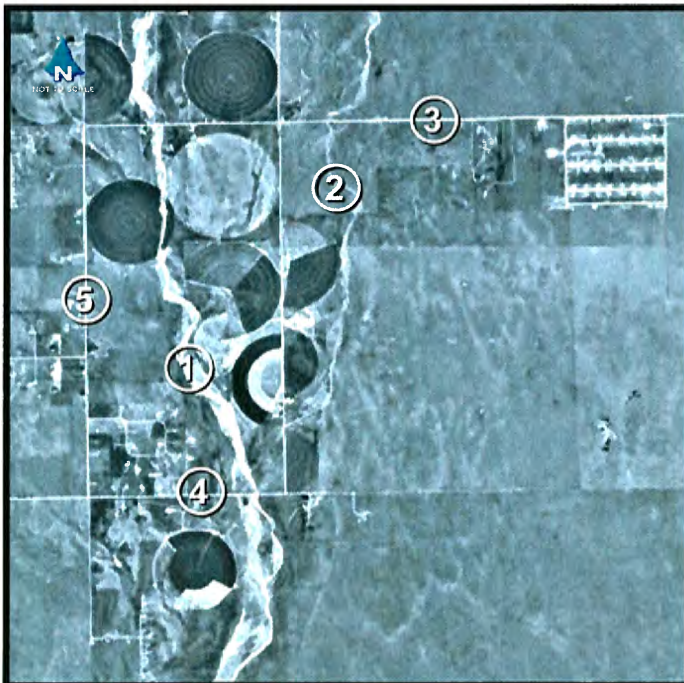


Figure 2-13. 2002 aerial photo of Site 1, Ellicott South.

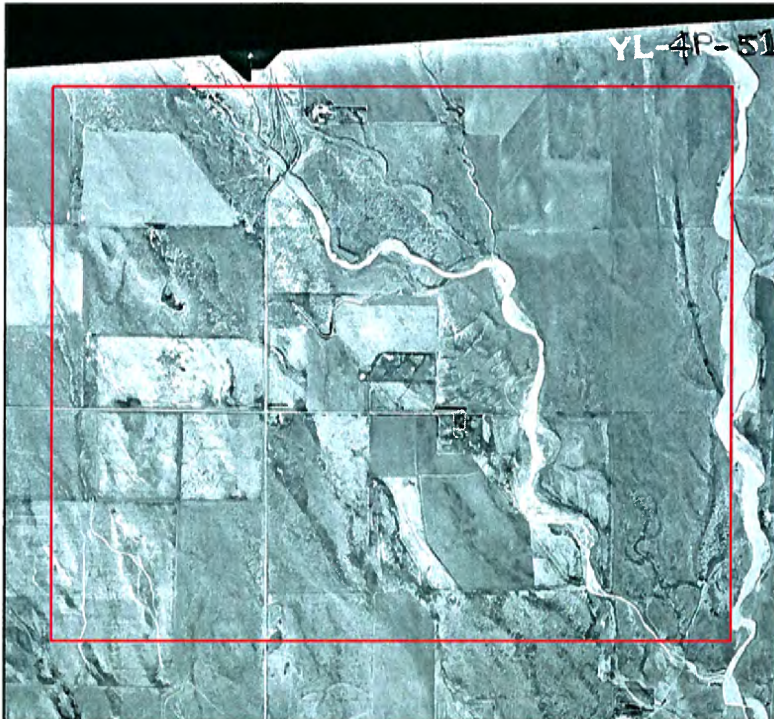


Figure 2-14. 1955 aerial photo of Site 2, Ellicott North 1955.



Figure 2-15. 2002 aerial photo of Site 2, Ellicott North.

### Comparison Site 2

#### **AGRICULTURE – ELLICOTT NORTH**

(one mile north of Ellicott):  
Small, quiltwork field patterns  
give way to rangeland. This  
site is approximately 24 miles  
east of downtown Colorado  
Springs.

From the 1955 aerial photo of  
this site (Figure 2-14) there  
was no irrigation in the area at  
that time. Since then, some of  
the small field patterns have  
disappeared.

The drainage system of today  
(See Figure 2-15) appears  
similar to that on the 1955  
aerial photograph and is  
composed of a sandy wash  
bordered by several  
cottonwood trees.

This area currently is being  
used for livestock pasture,  
although some parts of it are  
being irrigated, including one  
central-pivot system.

#### Modern reference points:

1. Black Squirrel Creek
2. Brackett Creek
3. Big Spring Road
4. Ellicott Highway
5. State Highway 94

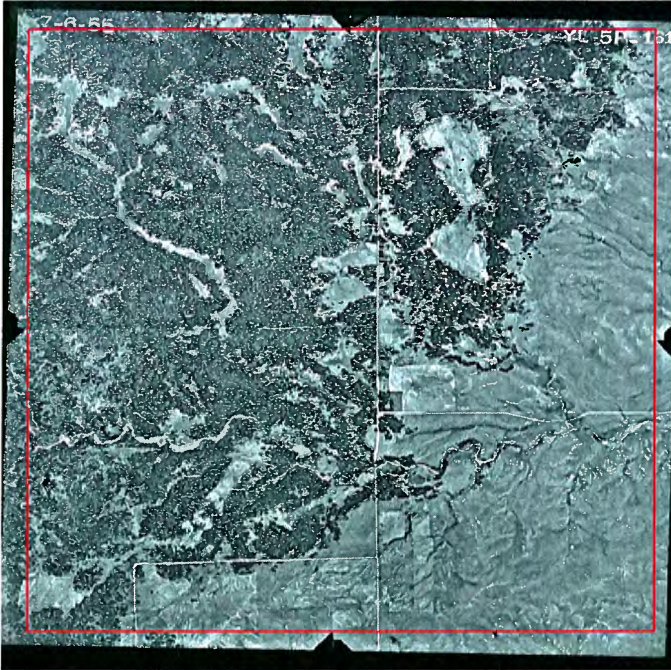


Figure 2-16. 1955 aerial photo of Site 3, Black Forest.



Figure 2-17. 2002 aerial photo of Site 3, Black Forest.

### Comparison Site 3

#### **FOREST - BLACK FOREST**

(immediately west of Meridian Road, including Ayer Road):  
Trees replace grasslands in a dramatic increase in forest density and extent. This site is approximately 14 miles northeast of downtown Colorado Springs.

Comparing the aerial photos from 1955 and 1995 (Figures 2-16 and 2-17), there is a noticeable increase in density and area of ponderosa pine. This increase in forest cover is especially prominent to the south of Ayer Road and on the east side of Meridian Road, where trees have filled in many of the areas that contained open grassland in 1955.

Today, ponderosa pine occurs in open to relatively closed stands and in a wide range of sizes, from seedlings up to approximately 35 feet in height. The understory consists primarily of grasses, elk sedge and semi-woody forbs, as well as thickets of chokecherry and wild rose.

Note new residential road system northwest of Ayer Road (reference point #4).

Modern reference points:

1. Dawson Road
2. Meridian Road
3. Latigo Boulevard
4. Ayer Road

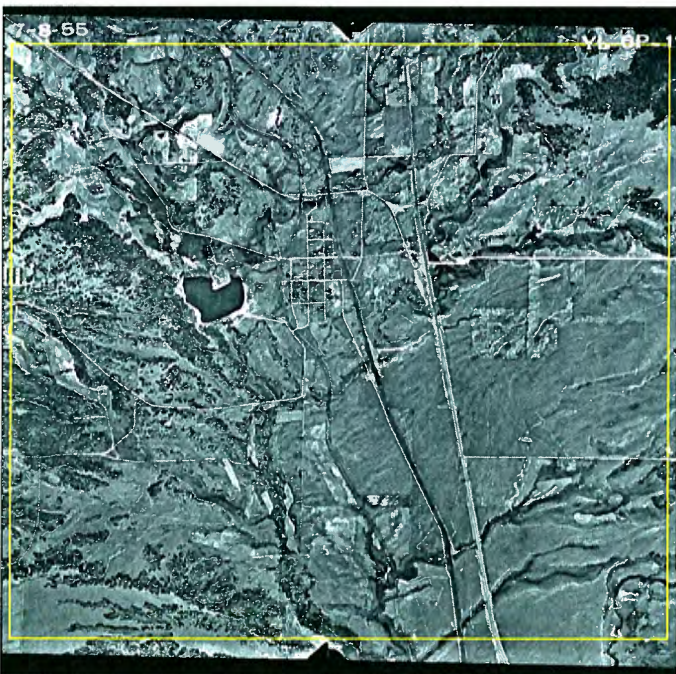


Figure 2-18. 1955 aerial photo of Site 4, Dirty Woman Creek.



Figure 2-19. 2002 aerial photo of Site 4, Dirty Woman Creek.

### Comparison Site 4

#### **RIPARIAN – DIRTY WOMAN CREEK**

Denser and more extensive riparian vegetation. This site is in Monument, approximately 19 miles north of down-town Colorado Springs.

Comparing Figures 2-18 and 2-19, the density and extent of riparian vegetation, with its 100 to 150-foot wide floodplain, appears to have increased during the four decades between 1955 and 1995. The area covered by vegetation approximately doubled along a 6,550-foot reach from near Monument to the old railroad bed to the west. Several factors may be responsible for this riparian tree and shrub development, including reduced grazing and the development of control structures in the creek.

This area provides a diverse and productive habitat for a number of species, including the Preble’s Meadow Jumping Mouse, which is federally listed as threatened. The vegetation currently consists of a tree canopy of large (to 50 feet tall and approximately 30 inches diameter at breast height) crack willow and peachleaf willow, with sandbar willow shrubs below. The canopy cover was from 70% to 80% but has been significantly reduced in the past few years by beavers (1999-2003). In and near the active channel, the willows are replaced by dense stands of broadleaved cattail and sedges. Adjacent upland grasslands contain an infestation of knapweed, a noxious weed.

#### Modern reference points:

1. State Highway 105
2. Higby Road
3. Dirty Woman Creek
4. Old Denver Highway
5. Interstate 25

# APPENDIX H

## APPENDIX H: 2035 SMALL AREA FORECAST

## SMALL AREA FORECAST FOR 2005 – 2035

PPACG prepares a socioeconomic forecast each time it updates its long-range transportation plan. These forecasts serve three purposes: First, the forecasts are used extensively by PPACG and its member entities as best estimates of housing, employment, population, school enrollment, income and military presence, essential input to long-range transportation planning for the Colorado Springs Urbanized Area. Second, the data are also extremely valuable to member governments' planners who are responsible for long-range planning for their communities. Third, a large number of local businesses and others in the private sector use these data for marketing and other strategic purposes. *The Small Area Forecast 2005 - 2035* was developed and reviewed in 2006 and 2007, and was approved for the use in the development of the *2035 Regional Transportation Plan* by the PPACG Board of Directors in July 2007.

The *2035 Regional Transportation Plan* is based upon reliable estimates of future growth in the Pikes Peak Region. Transportation models that estimate travel in the future rely heavily upon estimates of population, housing, employment, income, school enrollment, and other data, in order to predict when and where trips will take place in the future. This socioeconomic data needs to be estimated for small subareas of the community, referred to as "traffic analysis zones," or TAZs. This document summarizes the procedures used to generate the *Small Area Forecast for 2005 - 2035*.

### **BACKGROUND:**

#### Region

The region covered by the *Small Area Forecast for 2005 - 2035* includes all of El Paso and Teller Counties. The *2030 Small Area Forecast* covered El Paso County and only Woodland Park in Teller County.

The subareas, TAZs, that were used in the *2030 Small Area Forecast* were also redefined and generally made smaller. In the *2030 Small Area Forecast*, there were 516 TAZs in El Paso County and the Woodland Park portion of Teller County. For the *Small Area Forecast for 2005 - 2035*, additional TAZs were created resulting in 625 in El Paso County and 51 in Teller County for a total of 676 TAZs.

#### Population and Employment Control Totals

Projections of population and employment at the county level are prepared annually by the Colorado State Demographer. The PPACG uses these figures as the county control totals that are used in small area forecasts. Below are the Demographer's projections that have been used in the preparation of the *Small Area Forecast for 2005 – 2035*.



**Population and Employment Control Totals**

	Population							
	2000	2005	2010	2015	2020	2025	2030	2035
El Paso County	520,571	565,341	647,600	708,186	762,879	816,060	869,071	935,542
Teller County	21,147	22,348	24,982	27,958	30,841	33,408	35,720	37,771
Model Area	541,718	587,689	672,582	736,144	793,720	849,468	904,791	973,313

**El Paso County Employment**

	2005	2010	2015	2020	2025	2030	2035
Basic	50,727	58,443	65,521	72,510	79,450	86,697	93,052
Retail	57,174	66,485	74,741	82,507	89,808	97,064	104,731
TCU_Gov/Service1	48,090	55,303	61,635	67,502	72,895	78,116	84,124
FIRES/Service2	56,510	67,236	77,362	87,282	96,858	106,390	116,259
Hosp_Amuse/Service3	69,189	82,569	95,419	108,352	121,326	134,844	146,362
Total Civilian	281,690	330,036	374,678	418,154	460,338	503,112	544,528
Military	39,999	50,654	50,654	50,654	50,654	50,654	50,654
Total	321,689	380,690	425,332	468,808	510,992	553,766	595,182

**Teller County Employment**

	2005	2010	2015	2020	2025	2030	2035
Basic	1,657	1,930	2,103	2,305	2,496	2,647	2,788
Retail	1,541	1,835	2,035	2,264	2,490	2,679	2,818
TCU_Gov/Service1	1,370	1,618	1,780	1,966	2,149	2,299	2,454
FIRES/Service2	1,518	1,832	2,054	2,302	2,537	2,724	2,944
Hosp_Amuse/Service3	3,827	4,703	5,379	6,171	6,986	7,735	8,281
Total Civilian	9,913	11,918	13,351	15,008	16,657	18,083	19,285
Military	-	-	-	-	-	-	-
Total	9,913	11,918	13,351	15,008	16,657	18,083	19,285

**Pikes Peak Area Total Employment**

	2005	2010	2015	2020	2025	2030	2035
Basic	52,384	60,373	67,624	74,815	81,946	89,344	95,840
Retail	58,715	68,320	76,776	84,771	92,298	99,743	107,549
TCU_Gov/Service1	49,460	56,921	63,415	69,468	75,044	80,415	86,578
FIRES/Service2	58,028	69,068	79,416	89,584	99,395	109,114	119,203
Hosp_Amuse/Service3	73,016	87,272	100,798	114,523	128,312	142,579	154,643
Total Civilian	291,603	341,954	388,029	433,162	476,995	521,195	563,813
Military	39,999	50,654	50,654	50,654	50,654	50,654	50,654
Total	331,602	392,608	438,683	483,816	527,649	571,849	614,467

**TAZ STRUCTURE:**

PPACG staff met with staff from PPACG member entities that have been experiencing growth in their municipal land area, and/or growth in the amount of development occurring on undeveloped land. These entities were the Counties of El Paso and Teller, the Cities of Colorado Springs, Fountain and Woodland Park, and the Town of Monument. The majority of the 171 new TAZs that were created are located within the boundaries of the above municipalities and in those parts of unincorporated El Paso and Teller Counties bordering these municipalities. The following data and policies were used as the basis to create new TAZ's:

- The latest available aerial photographs (June 2005) were used to identify growth in housing units that had occurred within the existing TAZs between 2000 and 2005;
- Member entity staff's knowledge of where growth was expected to occur within existing TAZs;
- 2000 Census tract, block group and block geographies;
- 2000 Census population thresholds for Census tracts were used as a guide to splitting existing TAZs;
- Logical divisions of TAZ boundaries based on existing roadways;
- Logical divisions of TAZ boundaries based on creeks and other drainage ways when Census boundaries and roadways were not available;
- The assumption that smaller socio-economic zones would more accurately model future travel behavior throughout the region;
- Minor corrections to 2030 Small Area Forecast boundaries;
- Data from existing TAZs were reallocated among new TAZs based on proportional shares of housing units for population, and on aerial photos and the 2004 Qwest employment database for employment;
- In Teller County, TAZs were created as the county was not included in the *2030 Small Area Forecast*. TAZ boundaries were developed to match the 2000 Census blocks, subdivision boundaries and existing roadways as closely as possible; and
- 2000 and 2005 socio-economic data were developed for all TAZs in Teller County based on Census 2000 block and block group level observed data, parcel maps, and building permits.

### **SOCIO-ECONOMIC FORECASTING MODEL:**

Many types of socio-economic models exist. The most detailed and complex models tend to be used by large metropolises with substantial budgets dedicated to forecasting. At the opposite end of the spectrum, the smallest agencies, which lack the resources to use almost any mathematical model, tend to use the panel-of-experts model, called the "Delphi method." Other agencies create models based on simple, linear observed trends. The U.S. Federal Highway Administration (FHWA) funded the development of TELUM so that small- and middle-sized agencies could have access to a level of sophistication and reliability that was traditionally out of their reach.

The disaggregation methodology used for the *Small Area Forecast for 2005 - 2035* relies on the use of a commercial software package called TELUM (Transportation, Employment, Land Use Model) that represents an evolution of a software package used by PPACG in the early 1990s called DRAM/EMPAL. TELUM is a socio-economic distribution model that does not predict growth in jobs and households; rather it distributes already projected growth within a region. TELUM currently enjoys the widest popularity and implementation of all socioeconomic models because of its reasonable and reliable results, replicability, availability of data, and ease of use. The TELUM forecasting software increases the rigor and sophistication of small area forecasts by interacting with travel demand models. Studies have shown a very strong link between transportation conditions and the location of development.

Like many of the popular models that predict socio-economic conditions, TELUM has a long history. It has evolved over the years to accommodate changes in development patterns, trends, and influences as they have been uncovered by research. Originally developed by Dr. Putman during the early 1970s, the essential model has been called, at different times, ITLUP, DRAM/EMPAL, Metropolis and TELUM. This model currently enjoys the widest popularity and implementation of all socio-economic models. PPACG used the DRAM/EMPAL version of this model in the preparation of its small area forecasts in the past and has made the decision to return to it because of its reasonable results, replicability and ease of use.

### TELUM Process

The TELUM software package consists of two core modules: DRAM (Disaggregated Residential Allocation Model) and EMPAL (EMPLOYment Allocation Model). Although these two modules overlap during certain stages of the prediction process, EMPAL essentially runs first.

Although TELUM uses six employment categories, TELUM initially makes one important, high-level distinction between these employment types: each is considered to be either basic (non-local market sensitive) or non-basic (local market sensitive). The first type of employment to be allocated is basic, which can be defined as export-related employment. Households and non-basic employment will make location decisions based in part upon the location of basic employment. Once basic employment has been forecast, a more intense interaction takes place between the households and the non-basic (local market sensitive) employment sectors. So businesses may follow rooftops, or rooftops may follow jobs, depending upon which type of employment is being allocated.

During the discussion of a particular variable, it is important to note that each variable, by itself, represents an *influence* over model allocations of population or employment. No one factor dictates allocation.

The relationship between jobs and households is probably the most important one to be used by the model. The relationship that is modeled is a composite of several relationships. The Census provides information that describes the relationship between households and employment specific to the region. This relationship is called the PUMS Ratio (because it is derived from Census long form data stored in the Public Use Microdata Sample). This ratio describes the way that households of different income categories will respond to changes in different employment types. Another regional ratio, employees per household by income category, describes the number of households that will be affected by a change in employment.

Other factors that affect the allocation of households and employment are land use acreages and auto accessibility. TELUM uses land use data to make it density sensitive. TELUM picks up on base-year densities and consumes available land at a comparable rate in most analysis zones. In this way the model knows when a zone is “built out” and will increase density in individual zones only where demand for development is greatest. On the other hand, TELUM is aware of which zones lay adjacent to any given zone, so demand for development in a zone may spill over into an adjacent zone that has more available land. This enables the model to avoid over densifying one zone while an empty zone sits undeveloped next door.

Auto accessibility inputs come from PPACG's travel demand model. TELUM requires zone-to-zone travel times from a travel demand model for each forecast year. This represents a tremendous improvement over other models that do not acknowledge the influence of transportation upon the location of households or businesses. Each household and employment type develops its own distinct relationship with travel times within the model. TELUM and the travel demand model work iteratively to show the interaction between land use and transportation over time. This interaction occurs at each analysis period. The first time TELUM is run, data for the base year (2005) and the lag year (2000) are entered together for calibration and to develop initial trends. For the first analysis period (2010), the base year data plus the travel impedances (time) for that analysis period are entered into TELUM. The resulting household and employment distribution is then fed back into the travel demand model, which generates a new set of travel impedances for use during the next analysis period. This process is repeated for each time interval until the desired year is reached.

The total numbers of jobs and households to be allocated by the model during a forecast period is dictated by control totals entered by the user. The model does not attempt to predict the level of growth in the region, only its distribution to the TAZs. For the *Small Area Forecast for 2005 - 2035*, the control totals came from the Colorado State Demographer.

TELUM offers the option of using local planning knowledge to impose constraints upon the allocation process. The numbers of households and jobs may be set at a minimum, maximum or fixed number by the user, leaving the model free to work within those limits.

### RAZ Structure

As a freeware version of a commercial software program, TELUM is limited to being able to handle a maximum of 499 analysis zone. TELUM's limit of 499 zones precluded the direct use of PPACG's TAZ's, which consists of 676 zones. This created the need for a new analysis zone geography called regional analysis zones, or RAZs.

PPACG created a RAZ geography that deviated as little as possible from the TAZ structure already in place. To that end, the RAZ structure was produced by combining neighboring TAZs until the zone limit allowed by TELUM was reached. RAZs that are not aggregates of TAZs correspond exactly to a single TAZ. Because transportation demand modeling would eventually be performed at the TAZ level, the creation of RAZs was done with consideration for future disaggregation back to TAZs. Specifically, aggregation was only performed upon TAZs that led to a RAZ with a relatively homogenous composition. That is, two or more TAZs were combined if they possessed similar characteristics, especially established residential neighborhoods with similar densities. This allowed zones to be disaggregated based upon simple measures such as the ratio of their land area or population.

## Land Usage

TELUM uses different types of land uses in allocating households and employment. Land use data is input by TAZ and given in gross acres. Acreages of specific types of land such as vacant developable land, residential land, commercial land and land used for basic employment are used by TELUM to determine where there is room to grow in the region. PPACG staff was provided data for current (2005) land use from each member government. These land use data were taken from master plans and from zoning maps when master plan data were not available. PPACG staff conducted a process of fitting the member entity land use designations to TELUM land use categories. The following is a list of TELUM land use categories and the corresponding land use designations (generalized) from PPACG member entity land use schemas and zoning classifications.

### TELUM Land Use

Land area occupied by commercial (service, retail, office) employment.

Land area occupied by basic employment (manufacturing, mining, any industries that export goods and services to outside the region; high-tech, defense etc., also includes institutional employment).

Land occupied by residential development

Land occupied by streets and highways.

Vacant developable land (total vacant land minus restricted or reserved land).

Total usable land (developed + vacant developable).

Total unusable land (restricted or reserved).

Total developed land area = (commercial + residential + basic + streets and highways).

Total land area = all land excluding all bodies of water.

### Member Entity Land Use

Commercial, office uses.

Industrial, extractive, utilities, schools, institutional, military, libraries, police/fire, hospitals.

All residential land uses.  
(all housing types).

Land occupied by streets and highways.

Agriculture, vacant land.

Commercial, basic, residential, agriculture, vacant land.

Parks, open space, golf courses, cemeteries, conservation easements, flood plains, steep slopes, State lands, National Forest lands, BLM lands.

## DATA SOURCES:

### Population and Household Data

The following defines the key population and household data utilized in the *Small Area Forecast for 2005 - 2035*:

- Household population is defined as the number of people in households, which is a subset of the total population. The total population in the small area forecast dataset is the sum of the household population and the population in group quarters.
- Households are people, not buildings. They include all the people who occupy a single housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room occupied as separate living quarters. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living quarters.
- Group quarters population is defined as all people not living in housing units. Group quarters consists of institutionalized populations and non-institutionalized populations. Institutionalized populations include correctional institutions, nursing homes and other institutions. Non-institutionalized includes college dormitories, military quarters and other non-institutional group quarters.
- Persons per household is a calculated value. Persons per household is derived by dividing household population by the number of households.
- Household incomes are split into the following five categories:
  - Income Bin #1 households are defined as households with an annual income from all sources of \$0 to \$19,999.
  - Income Bin #2 households are defined as households with an annual income from all sources of \$20,000 to \$39,999.
  - Income Bin #3 households are defined as households with an annual income from all sources of \$40,000 to \$59,999.
  - Income Bin #4 households are defined as households with an annual income from all sources of \$60,000 to \$99,999.
  - Income Bin #5 households are defined as households with an annual income from all sources of \$100,000 or more.

Population control totals used in the *Small Area Forecast for 2005 - 2035* were prepared by the Colorado State Demographer. The Demographer does not project numbers of households or of group quarters. The population control totals used in the *Small Area Forecast for 2005 - 2035* are:

	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
El Paso County	520,571	565,341	647,600	708,186	762,879	816,060	869,071	935,542
Teller County	21,147	22,348	24,982	27,958	30,841	33,408	35,720	37,771
Model Area	541,718	587,689	672,582	736,144	793,720	849,468	904,791	973,313

The number of households in 2000 was obtained at the block level from the 2000 Census. Household income distribution data were obtained at the block group level from the 2000 Census. The ratio of the households within each of the five income categories was applied to all blocks within each block group to split households into each income category.

The 2005 population and household data for El Paso County and Woodland Park were grown by TAZ from their 2000 Census-based levels using the 2000 to 2005 growth rates in the adopted *2030 Small Area Forecast*. The population and household data for Teller County TAZs outside of Woodland Park were grown from their 2000 Census-based levels utilizing 1) Colorado State Demographer estimates of Teller County and Incorporated Jurisdiction's 2005 population estimates (control totals) and 2) Teller County building permit data.

The data for 2000 and 2005 were plotted and compared to aerial photos for validation. Additionally, data on population and household estimates from the Colorado State Demographer were compared to the 2000 and 2005 data. Site visits were also conducted for areas with high recent actual and/or anticipated development activity. Furthermore, county assessor data were used to verify date of construction and sale of newly developed properties, number of units in selected multi-family developments and overall validation of 2000 and 2005 year data.

Although group quarters data were available from the 2000 Census, it was not obtained as TELUM does not disaggregate group quarters. New facilities since the last forecast and places with known numbers of residents were identified. Group quarters data for 2005 was provided by:

- The Area Agency on Aging for nursing homes and retirement facilities.
- The actual facilities or their official websites for:
  - Correctional facilities,
  - Colleges with dormitories, and
  - Military facilities with barracks.

The future group quarters populations were projected using a separate methodology that grows group quarters populations, with the exception of military barracks, proportionately to the total population.

Zones with military bases in them are treated differently from all other zones because changes in military personnel are based upon actions of Congress rather than market forces. Each military base is in its own zone. Household and population numbers on military bases were obtained from economic impact studies and base/post representatives. Household numbers used include plans for the construction of new family quarters and barracks. Changes in military and family members assigned to the bases and for on-base civilian employment because of the 2005 Base Realignment and Closure action are anticipated to occur by 2010. On-base populations and households are held constant after 2010. For each military installation, the distribution of households into the various income levels was done by extension of the 2005 proportions.

### Employment Data

Employment was split into six categories utilizing the Standard Industrial Classification (SIC) system. All splitting was done at the "Major Group" or two-digit level or above. The categories are:

- Basic is defined as SIC codes 01 through 39, which includes:
  - Agriculture, Forestry, and Fishing,
  - Mining,
  - Construction, and
  - Manufacturing.

- Retail is defined as SIC codes 50 through 59, which includes Wholesale and Retail Trade.
- Service category #1 is defined as SIC codes 40 through 49, and 91 through 99, which includes
  - Transportation,
  - Communications,
  - Electric, Gas, and Sanitary Services, and
  - Public Administration.
- Service category #2 is defined as SIC codes 60 through 67, 80, 81, and 87, which includes:
  - Finance, Insurance, and Real Estate,
  - Health Services,
  - Legal Services, and
  - Engineering, Accounting, Research, Management, and Related Services.
- Service category #3 is defined as SIC codes 70 through 79, 82 through 86, 88 and 89, which includes all other services.
- Military is defined as active duty military personnel at Fort Carson, Cheyenne Mountain Air Force Station (NORAD), Peterson Air Force Base, Schriever Air Force Base, and the United States Air Force Academy.

Control totals for total jobs used in the *Small Area Forecast for 2005 - 2035* were provided at the county level by the Colorado State Demographer. The Colorado State Demographer does not subdivide the total jobs into the employment categories used by TELUM. Another employment database, Woods and Poole Economics, was used to determine the percentage of each employment category. These proportions were applied to the total jobs. The employment control totals used in the Small Area Forecast for 2005 - 2035 for are:

El Paso County

	2005	2010	2015	2020	2025	2030	2035
Basic	50,727	58,443	65,521	72,510	79,450	86,697	93,052
Retail	57,174	66,485	74,741	82,507	89,808	97,064	104,731
TCU_Gov/Service1	48,090	55,303	61,635	67,502	72,895	78,116	84,124
FIRES/Service2	56,510	67,236	77,362	87,282	96,858	106,390	116,259
Hosp_Amuse/Service3	69,189	82,569	95,419	108,352	121,326	134,844	146,362
Total Civilian	281,690	330,036	374,678	418,154	460,338	503,112	544,528
Military	39,999	50,654	50,654	50,654	50,654	50,654	50,654
Total	321,689	380,690	425,332	468,808	510,992	553,766	595,182

Teller County

	2005	2010	2015	2020	2025	2030	2035
Basic	1,657	1,930	2,103	2,305	2,496	2,647	2,788
Retail	1,541	1,835	2,035	2,264	2,490	2,679	2,818
TCU_Gov/Service1	1,370	1,618	1,780	1,966	2,149	2,299	2,454
FIRES/Service2	1,518	1,832	2,054	2,302	2,537	2,724	2,944
Hosp_Amuse/Service3	3,827	4,703	5,379	6,171	6,986	7,735	8,281
Total Civilian	9,913	11,918	13,351	15,008	16,657	18,083	19,285
Military	-	-	-	-	-	-	-
Total	9,913	11,918	13,351	15,008	16,657	18,083	19,285



Total Model Area

	2005	2010	2015	2020	2025	2030	2035
Basic	52,384	60,373	67,624	74,815	81,946	89,344	95,840
Retail	58,715	68,320	76,776	84,771	92,298	99,743	107,549
TCU_Gov/Service1	49,460	56,921	63,415	69,468	75,044	80,415	86,578
FIRES/Service2	58,028	69,068	79,416	89,584	99,395	109,114	119,203
Hosp_Amuse/Service3	73,016	87,272	100,798	114,523	128,312	142,579	154,643
Total Civilian	291,603	341,954	388,029	433,162	476,995	521,195	563,813
Military	39,999	50,654	50,654	50,654	50,654	50,654	50,654
Total	331,602	392,608	438,683	483,816	527,649	571,849	614,467

Employment data is one of the cornerstones of the overall modeling system. The six categories of employment—basic, retail, three categories of service, and military—are independently calibrated. Base-year employment distribution is a driver of future-year employment and households distribution. Although portions of the DRAM and EMPAL modules that power TELUM interact iteratively, EMPAL is essentially the first of the modules to run during the prediction process. For this reason, employment distribution may be the single most important data type to be used in TELUM.

Employment data is the most detailed type of data required by TELUM. It must be supplied, by category, for both the base and lag years. Household data, in contrast, must be supplied by category for the “current” year but only by total for the “lag” year.

Because the U.S. Census—the source of PPACG’s household data—does not provide business data at the level necessary to run the model, a commercially available employment database was purchased for both the base (2005) and lag (2000) years. Purchasing the data for both years from the same provider—Claritas—was essential because the calibration/trend data must come from parallel survey processes. If two different methods and/or standards were used to get data for each year, then apparent growth trends may only reflect differences in the survey methods rather than actual changes on the ground. As added assurance differences in methodologies, PPACG performed its own geocoding of the databases using the same street network, E-911.

The distribution of employment types reflected in the TELUM input files originates with the Claritas database.

While most commercially available business databases paint a good picture of the general distribution of employment across the region, they are often inaccurate at the analysis-zone level. The Claritas datasets are no exception to this rule. For data cleaning, PPACG conducted the following process:

- 1) Manually checked the location of all business that listed over 80 employees. This would give the highest rate of return for time spent performing corrections. It also meant examining the location of fully half of the jobs in the modeling region.
- 2) Used the “city” attribute of the data as a flag for further investigation. If the location of a business and the attributed city were mismatched, the location was investigated.
- 3) Researched the addresses of over 1,000 businesses (out of 40,000+) that either had no address or were addressed to a P.O. Box.

- 4) Allowed all points for which no correct address could be located to remain at the original locations assigned to them in the dataset. These locations appeared to be the center of zip code areas.

In addition to examining business locations, PPACG also investigated employee numbers that seemed unlikely or that appeared to be double counted.

Finally, employment data was overlaid on land use data to spot areas where extravagant densities raised the suspicion that an error might exist in one of the datasets. This type of error-checking was especially important since it directly impacts both employment and land use variables and the relationship that TELUM draws between them. The corrections dramatically improved predictability statistics (of the R-squared type), which for some employment categories nearly doubled.

Military employment used to be included in the Basic category. During the present forecasting cycle, it was decided that the locating behavior of military employees is sufficiently different from other Basic employment sectors to warrant its own category. This would also make it easier to control the number of forecast military personnel without artificially constraining all Basic employment. TELUM requires more control over military numbers because the military is not a market-responsive sector. It does not conform to the theories that govern the model. On the other hand, military employment does lead to changes in population and to changes in demand for other services such as restaurants and movie theaters, so altogether excluding it from the model would be unrealistic. The decision was made to maintain this employment type separately in the model in a controlled fashion, i.e. using the TELUM feature that allows local knowledge of a future condition to override model predictions.

Zones with military bases in them are treated differently from all other zones because changes in military personnel are based upon actions of Congress rather than market forces. Each military base is in its own zone. Military and other employment numbers on military bases were obtained from economic impact studies and base/post representatives. Changes in military and on-base civilian employment because of the 2005 Base Realignment and Closure action are anticipated to occur by 2010. On-base military and civilian employment are held constant after 2010. For each military installation, the distribution of civilian employment into the various categories was done by extension of the 2005 proportions, and the ratio of civilian-to-military jobs on base were carried forward throughout the forecast.

### School Enrollment

School enrollment is split into three categories. These are:

- K-8 enrollment, defined as public and private school enrolled students in kindergarten through 8<sup>th</sup> grade.
- High school enrollment, defined as public and private school enrolled students in 9<sup>th</sup> grade through 12<sup>th</sup> grade, and
- College enrollment, defined as public and private school full-time students in post-secondary educational facilities.

School enrollment data was collected for 2005 only, as TELUM does not disaggregate school enrollment. Kindergarten through high school enrollment was collected from the Colorado Department of Education for both public and private schools. Locations and capacities of future schools and expansions of existing schools were provided by school districts and or developers. College enrollment was collected from the educational facility or its official website.

The location of school enrollment is the location of the school, not the location of students' residences. School enrollments were projected using a separate methodology that grows school enrollment numbers proportionately to the total population. The projections were done at a TAZ level, not by individual school districts or schools. Locations and capacities of future schools and expansions of existing schools were utilized in the forecast to the extent that they were available.

Travel Impedances

PPACG generated travel time impedances for TELUM:

- Using the approved 2030 travel demand model with corrections to the existing (2005) network (lanes, functional class, speed, capacity);
- Using projects approved in the 2030 regional transportation plan with completion years identified by member entity staff; and
- Using the congested evening peak travel time between every combination of two analysis zones.

**CALIBRATION:**

The goodness-of-fit measure is a type of statistic called a PRE – proportional reduction of error. It is the proportion of a distribution that is explained by the model, or the degree to which the model equation is superior to a random distribution. The acceptable scientific standard range is 0.70 – 0.95. TELUM calibration results, listed below, are within this band except military employment. This is because the levels and locations of military employment are assigned and not forecast.

Employment					
Basic	Retail	TCU_GOV	FIRES	Hosp_Amuse	Military
0.7928	0.7934	0.7576	0.8409	0.7289	0.9926
Household Income					
Type 1	Type 2	Type 3	Type 4	Type 5	
0.8691	0.8803	0.8491	0.7855	0.7251	

A value of 0.95 is generally used as a maximum because a higher degree of accuracy means that it is likely that the cause and effect in the model are actually the same (e.g. our military employment category).

**FORECAST NUMBERS:**

Tables showing the forecast values for each TAZ in 2005, 2015, 2025 and 2035 are provided below.

2005 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
1	1,320	8	566	64	142	170	161	29	2	241	7	26	86	40	400	0	0	0	0
2	1,736	8	746	59	161	263	208	55	2	21	68	5	8	81	183	0	297	0	0
3	867	8	393	12	67	37	86	190	2	9	9	3	17	28	66	0	0	0	0
4	1,780	425	929	136	312	212	155	115	2	51	173	228	1,604	751	2,807	0	0	0	0
5	2,650	0	1,384	331	476	283	178	116	2	80	273	88	283	305	1,029	0	0	0	0
6	189	0	88	13	30	20	15	11	2	0	0	0	9	70	79	0	0	0	0
7	1,299	1,140	609	68	155	152	183	52	2	24	2	12	9	1,454	1,501	0	0	0	6,460
8	18	0	9	1	2	2	3	1	2	0	0	0	0	0	0	0	0	0	0
9	441	0	164	12	11	60	44	37	3	8	0	12	0	2	22	0	0	0	0
10	2,526	8	1,147	152	234	208	340	214	2	88	94	18	40	25	265	0	0	0	0
11	901	0	435	37	174	68	133	22	2	109	616	27	2,195	162	3,109	0	0	0	0
12	1,269	0	702	69	313	91	151	77	2	38	55	144	463	316	1,016	0	0	0	170
13	1,931	61	885	91	243	211	244	97	2	91	263	70	539	439	1,402	0	0	0	0
14	1,428	0	711	165	296	115	107	28	2	25	552	80	197	146	1,000	0	0	0	0
15	1,138	0	468	36	75	109	167	81	2	12	28	0	198	60	298	0	467	0	0
16	1,837	0	741	53	198	212	209	68	2	37	116	33	199	64	449	0	0	0	0
17	1,523	0	626	76	91	245	134	81	2	56	9	24	267	124	480	0	12	0	0
18	1,259	0	576	114	206	155	89	12	2	6	0	0	10	19	35	0	0	0	0
19	1,123	0	517	128	144	106	108	31	2	399	137	59	9	381	985	0	1,091	464	0
20	969	76	489	96	148	83	162	0	2	57	60	3	158	135	413	0	200	40	0
21	776	0	375	111	113	78	57	17	2	22	102	0	6	20	150	0	0	0	0
22	488	36	229	93	78	39	17	2	2	77	98	11	54	193	433	0	0	0	0
23	492	0	226	45	60	54	49	17	2	161	54	44	5	54	318	0	0	0	0
24	255	0	134	44	48	23	15	5	2	1,245	503	507	31	543	2,829	0	0	0	0
25	221	0	163	61	63	23	12	4	1	172	266	182	283	105	1,008	0	0	0	0
26	1,286	207	699	263	271	99	50	16	2	697	129	90	403	71	1,390	0	0	0	0
27	339	0	238	68	93	46	23	8	1	545	475	126	222	163	1,531	0	0	0	0
28	72	139	34	10	13	7	3	1	2	468	417	304	152	195	1,536	0	0	0	0
29	187	0	99	28	39	19	10	3	2	649	173	147	261	234	1,464	0	0	0	150
30	1,021	153	464	134	181	90	45	15	2	53	46	53	19	51	222	0	0	0	0
31	635	0	334	68	108	96	62	0	2	1	0	0	0	128	129	0	1,018	0	0
32	823	0	375	52	108	142	60	13	2	335	252	164	60	87	898	0	0	0	0
33	577	0	269	52	82	67	29	39	2	13	9	0	6	49	77	0	206	101	0
34	447	0	226	35	69	28	86	8	2	6	12	0	15	48	81	0	0	0	0
35	529	0	272	42	75	72	62	21	2	38	19	21	114	11	203	0	0	0	0
36	863	0	472	137	137	95	69	33	2	31	105	102	16	67	321	0	40	0	0
37	885	0	373	44	94	82	106	46	2	15	4	0	6	124	149	0	317	1,586	0
38	1,011	0	436	66	138	136	73	23	2	13	1	15	8	18	55	0	0	0	0
39	1,097	0	491	105	174	107	84	20	2	8	47	6	23	27	111	0	0	0	0
40	1,506	0	723	253	209	164	70	26	2	32	23	0	57	109	221	0	229	0	0
41	1,560	0	726	147	199	204	131	46	2	67	79	27	413	134	720	0	0	0	0
42	991	0	514	81	174	142	85	31	2	6	2	0	25	19	52	0	0	0	0
43	723	0	355	57	114	99	61	25	2	4	2	0	1	4	11	0	0	0	0
44	1,029	20	526	206	171	68	69	12	2	8	1	36	199	242	486	0	639	0	0
45	1,162	0	620	153	206	90	135	37	2	18	14	12	6	68	118	0	0	0	0
46	958	0	525	156	108	99	85	77	2	14	7	6	132	96	255	0	307	0	0
47	619	0	304	55	52	35	72	90	2	5	3	11	44	40	103	0	0	0	0
48	482	0	238	44	34	23	65	73	2	8	0	0	4	27	39	0	0	0	0
49	56	0	29	5	4	3	8	9	2	17	13	43	0	199	272	0	0	0	0
50	503	91	286	65	38	69	60	54	2	13	15	24	3,491	84	3,627	0	314	0	0
51	513	0	239	41	50	33	46	68	2	1	0	0	22	16	39	0	0	0	0

2005 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
52	697	0	387	122	179	44	13	29	2	2	4	0	39	57	102	0	271	0	0
53	3	0	1	0	0	0	0	0	3	18	65	216	2	29	330	0	0	0	0
54	601	0	369	155	113	52	37	12	2	383	76	26	81	52	618	0	0	0	0
56	385	0	256	18	33	55	72	78	2	4	3	8	100	278	393	0	0	1,675	0
57	378	0	268	13	49	61	92	52	1	0	0	0	6	48	54	0	0	0	0
58	0	0	0	0	0	0	0	0	0	903	30	3	171	47	1,154	0	0	0	0
59	939	8	425	93	114	89	97	32	2	221	350	74	125	360	1,130	0	0	0	0
60	1,352	0	698	183	221	121	126	47	2	0	201	15	23	279	518	0	319	0	1,800
61	310	0	134	25	56	34	13	5	2	9	3	17	1	12	42	0	0	0	0
62	1,775	0	900	176	305	196	147	76	2	2	11	0	47	126	186	0	823	0	0
63	706	0	311	61	104	67	52	27	2	9	30	0	6	9	54	0	0	0	0
64	580	0	276	53	103	64	37	18	2	1	0	0	0	14	15	0	0	0	0
65	367	0	188	37	65	57	21	7	2	409	488	146	102	96	1,241	0	0	0	0
66	338	65	212	54	79	57	22	0	2	66	317	33	75	158	649	0	11	5	0
67	1,055	0	505	100	175	153	58	18	2	22	6	12	15	29	84	0	0	0	0
68	1,159	0	593	75	287	80	123	28	2	6	333	0	44	46	429	0	0	0	0
69	1,780	0	904	256	342	171	111	24	2	34	28	3	7	58	130	0	0	0	0
70	2,101	0	963	151	236	247	202	127	2	32	14	3	11	52	112	0	0	0	0
71	742	0	381	127	157	84	0	14	2	93	80	55	47	104	379	0	0	0	0
72	538	0	286	116	113	38	12	7	2	30	47	99	78	106	360	0	418	0	0
73	684	0	346	68	137	88	43	10	2	17	43	43	22	61	186	0	210	0	0
74	1,418	0	763	137	261	163	163	39	2	46	25	3	87	101	262	0	0	0	0
75	564	0	271	98	76	42	37	19	2	315	283	1,031	71	440	2,140	0	219	0	0
76	1,057	83	488	101	200	115	67	6	2	25	79	15	39	158	316	0	203	135	0
77	666	0	328	120	87	87	28	5	2	1	19	2	18	12	52	0	0	0	0
78	285	0	191	53	74	29	21	14	2	47	163	58	610	412	1,290	0	41	0	0
79	219	0	145	40	56	23	16	10	2	6	16	61	98	278	459	0	0	0	0
80	204	1,546	154	38	57	36	16	8	1	46	6	0	92	149	293	0	0	0	484
81	36	0	28	11	9	4	2	2	1	0	46	0	0	675	721	0	0	0	1,965
82	1,031	0	536	196	166	78	84	12	2	13	5	46	0	53	117	0	0	0	0
83	573	0	315	133	96	43	31	13	2	2	5	3	1	257	268	0	669	0	0
84	385	0	202	31	44	73	39	15	2	6	0	135	4,270	647	5,058	0	215	0	0
85	741	0	383	53	138	72	91	29	2	0	0	6	6	61	73	0	158	0	0
86	731	0	386	61	75	150	71	29	2	24	2	0	6	16	48	0	0	0	0
87	2,041	0	1,062	456	420	107	59	20	2	176	179	170	249	217	991	0	0	0	0
88	926	100	574	271	158	90	49	5	2	8	7	17	151	55	238	0	0	378	0
89	336	0	175	38	62	55	18	1	2	11	53	3	16	63	146	0	265	0	0
90	680	0	345	76	123	109	35	3	2	9	7	0	0	32	48	0	0	0	0
91	1,035	0	516	145	200	96	37	38	2	143	1,427	229	410	524	2,733	0	0	0	266
92	934	0	405	81	129	103	85	6	2	46	482	24	83	162	797	0	0	0	0
93	959	0	384	77	117	92	89	9	3	71	231	49	23	185	559	0	0	0	0
94	1,330	0	557	114	164	124	137	18	2	11	77	14	62	226	390	0	533	0	0
95	2,114	0	1,037	219	329	314	142	33	2	18	197	8	144	145	512	0	0	0	0
96	687	0	301	88	114	56	35	8	2	109	102	61	36	223	531	0	366	0	0
97	541	337	295	76	110	59	41	9	2	12	22	50	460	273	817	0	49	220	0
98	673	0	369	112	141	66	40	10	2	271	176	374	734	624	2,179	0	162	61	500
99	947	0	515	201	205	74	25	10	2	234	178	35	58	368	873	0	0	0	0
100	748	0	274	72	86	81	31	4	3	744	691	33	70	367	1,905	0	512	0	0
101	2,617	0	1,112	221	354	295	206	37	2	30	39	29	9	18	125	0	0	0	0
102	1,047	0	433	136	182	82	17	15	2	317	815	29	146	269	1,576	0	0	0	0
103	997	0	430	213	146	46	17	7	2	46	9	3	21	55	134	0	164	0	0

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TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
104	159	0	139	80	41	10	5	4	1	615	207	144	374	152	1,492	0	0	0	0
105	1,058	0	625	229	211	97	58	30	2	159	134	55	148	291	787	0	86	0	0
106	426	0	180	66	75	30	9	0	2	719	29	2	662	137	1,549	0	0	0	0
107	0	0	0	0	0	0	0	0	0	157	122	4,014	1,419	429	6,141	0	0	0	0
108	0	0	0	0	0	0	0	0	0	166	65	586	202	46	1,065	0	0	0	0
109	0	0	0	0	0	0	0	0	0	0	3	12	0	1	16	0	0	0	0
110	1	0	1	1	0	0	0	0	1	54	425	128	1,097	458	2,162	0	0	0	1,980
111	187	0	188	140	15	25	8	0	1	190	628	76	221	242	1,357	0	0	0	0
112	3	0	1	1	0	0	0	0	3	473	501	1,445	608	348	3,375	0	0	0	0
113	165	0	92	24	33	17	17	1	2	30	63	132	2	84	311	0	0	0	0
114	1,044	0	573	147	207	108	106	5	2	41	133	87	38	286	585	0	0	0	0
115	1,394	734	900	279	406	126	62	28	2	187	47	17	80	138	469	0	0	0	0
116	562	0	250	88	89	22	26	26	2	190	7	0	0	39	236	0	0	0	0
117	784	0	388	91	129	75	73	20	2	426	107	84	0	545	1,162	0	193	0	0
118	1,306	0	503	15	70	56	223	139	3	14	1	3	0	2	20	0	0	0	0
119	737	8	414	41	81	86	83	123	2	17	8	24	137	95	281	0	181	0	0
120	391	0	129	4	18	14	57	36	3	13	1	0	0	0	14	0	0	0	0
121	111	0	50	6	10	11	9	13	2	0	0	0	7	95	102	0	0	0	0
122	2,529	0	1,034	74	84	159	277	441	2	51	1	18	47	200	317	0	282	1,394	0
123	1,044	0	498	102	130	119	100	48	2	35	119	71	48	170	443	0	0	0	0
124	828	0	413	50	84	100	128	51	2	1	0	3	29	50	83	0	295	0	0
125	1,750	0	1,009	239	284	240	160	86	2	50	76	15	60	78	279	0	678	0	0
126	170	0	85	41	24	11	7	1	2	125	146	35	451	207	964	0	20	0	0
127	471	0	249	122	69	34	22	3	2	263	288	76	116	382	1,125	0	0	0	0
128	576	0	263	89	80	64	29	1	2	5	16	61	83	95	260	0	0	0	0
129	825	0	389	202	81	47	46	14	2	11	29	18	10	152	220	0	153	0	0
130	1,242	181	697	161	226	161	127	22	2	18	127	0	534	273	952	0	0	0	0
131	830	0	302	9	42	34	134	83	3	25	0	0	0	80	105	0	0	0	0
132	458	0	266	125	90	38	13	0	2	180	102	799	115	678	1,874	0	0	0	500
133	219	0	93	44	32	13	4	0	2	38	38	331	46	67	520	0	0	0	0
134	534	0	181	5	13	43	92	28	3	5	4	0	8	63	80	0	0	906	0
136	1,259	108	443	81	147	118	81	15	3	19	32	50	115	17	233	0	0	43	0
137	846	0	332	106	98	93	35	0	3	127	146	15	10	86	384	0	200	0	0
138	2,214	0	820	236	366	134	82	3	3	18	4	0	9	11	42	0	578	0	0
139	958	0	538	229	205	53	40	12	2	96	1,021	213	292	299	1,921	0	0	0	0
140	1,245	0	521	221	196	54	38	11	2	504	75	155	9	26	769	0	0	0	0
141	1,258	0	530	168	219	90	50	2	2	5	1	27	0	73	106	0	332	0	0
142	1,269	55	727	202	222	121	142	40	2	19	8	0	40	32	99	0	0	0	0
143	1,116	0	631	141	261	106	60	63	2	49	214	27	179	143	612	0	0	0	0
144	1,005	61	519	132	158	109	100	21	2	33	809	20	199	277	1,338	0	16	0	0
145	0	0	0	0	0	0	0	0	0	4	631	85	10	99	829	0	0	0	0
146	823	0	440	186	109	93	31	22	2	124	1,316	43	140	343	1,966	0	119	0	0
147	934	0	349	11	48	39	155	96	3	15	6	0	7	20	48	0	0	0	0
148	671	0	274	13	29	38	66	127	2	1	9	0	18	11	39	0	0	0	0
149	71	0	35	1	3	4	8	19	2	0	0	0	0	0	0	0	0	0	0
150	283	0	115	4	11	12	25	63	2	0	0	11	3	102	116	0	553	144	0
151	675	0	291	8	26	41	74	141	2	6	0	3	11	70	90	0	271	0	0
152	583	0	292	26	46	75	82	64	2	54	8	3	6	37	108	0	0	0	0
153	817	0	388	23	38	30	92	206	2	18	47	29	347	65	506	0	0	0	0
154	424	0	210	30	43	26	41	69	2	32	102	12	14	1,647	1,807	0	0	0	0
155	599	0	215	6	15	51	110	33	3	7	0	0	0	0	7	0	0	0	0

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156	465	0	204	10	33	33	46	82	2	6	1	3	4	4	18	0	0	0	0
157	5	0	2	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
159	399	0	133	4	10	31	68	21	3	0	71	12	0	22	105	0	0	0	0
160	311	0	109	3	8	26	56	17	3	52	3	155	9	25	244	0	0	0	0
161	1,562	0	580	18	80	65	257	160	3	6	36	0	0	23	65	0	0	0	0
162	569	0	289	20	40	41	63	125	2	1	17	6	4	1,107	1,135	0	0	0	0
164	1,082	0	473	38	66	82	111	177	2	18	12	15	6	18	69	0	0	0	0
165	1,951	0	655	158	239	141	114	3	3	2	106	12	28	84	232	0	0	0	0
166	1,015	0	396	38	87	99	139	33	3	24	1	6	8	15	54	0	0	0	0
167	5,143	0	2,302	316	666	701	477	142	2	28	242	36	141	250	697	0	676	0	0
168	2,393	0	1,084	81	227	352	331	94	2	1,064	132	214	135	278	1,823	0	961	0	0
169	1,656	364	973	254	354	183	128	55	2	2,896	187	144	1,240	291	4,758	0	0	0	0
170	631	0	356	93	129	67	47	20	2	49	438	18	127	825	1,457	0	18	0	0
171	996	0	397	31	73	114	140	40	3	21	13	0	3	2	39	0	0	0	0
172	806	0	288	9	40	32	128	80	3	9	37	15	8	169	238	0	882	0	0
173	467	0	196	28	37	27	49	56	2	0	2	0	21	12	35	0	0	0	0
174	91	0	48	7	9	7	12	14	2	2	0	0	0	26	28	0	0	0	0
175	953	0	436	59	97	83	107	89	2	112	37	134	6	189	478	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	288	0	132	18	38	31	31	14	2	2	0	6	1	0	9	0	0	0	0
178	780	0	396	55	114	93	93	41	2	22	24	74	13	231	364	0	129	0	0
179	228	0	120	17	23	16	30	34	2	0	41	0	7	22	70	0	0	0	0
180	449	0	175	14	51	12	81	18	3	1	157	2	66	38	264	0	0	0	0
181	673	0	313	43	81	78	78	34	2	13	29	128	14	4	188	0	0	0	0
182	40	0	15	2	4	4	4	2	3	0	0	0	0	1	1	0	0	0	0
183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
184	508	0	280	71	104	75	30	0	2	5	1	0	0	47	53	0	184	0	0
185	7	0	2	0	1	0	0	0	4	64	0	0	2	0	66	0	0	0	0
186	522	0	285	22	83	19	131	29	2	9	0	0	0	3	12	0	0	0	0
187	236	0	96	13	25	16	20	22	2	66	469	8	1	3	547	0	0	0	0
188	266	0	100	14	26	17	21	23	3	30	9	2	13	26	80	0	0	0	0
189	601	0	257	36	66	43	54	58	2	50	294	208	241	261	1,054	0	475	0	0
190	564	0	219	31	56	37	46	49	3	9	64	3	22	1	99	0	0	0	0
191	538	0	211	30	54	35	44	48	3	6	7	26	7	11	57	0	0	0	0
192	309	0	140	20	36	24	29	32	2	8	6	2	0	8	24	0	0	0	1,500
193	315	0	147	20	38	25	31	33	2	9	4	65	7	0	85	0	0	0	0
194	1,352	0	544	51	103	130	167	93	3	82	234	41	81	64	502	0	0	0	0
195	344	0	125	12	24	30	38	21	3	35	57	53	27	34	206	0	0	0	0
196	895	0	376	35	71	90	115	65	2	76	57	108	40	101	382	0	286	0	0
197	1,560	0	753	63	189	196	204	100	2	118	33	12	207	197	567	0	0	0	0
198	2,722	0	1,075	85	148	213	456	173	3	39	118	30	136	71	394	0	0	0	0
199	2,115	0	819	57	100	126	265	271	3	17	11	30	111	65	234	0	428	0	0
200	2,717	0	1,042	80	111	200	299	352	3	49	141	43	26	11	270	0	0	0	0
201	2,272	0	873	63	59	129	199	423	3	14	29	0	43	26	112	0	0	0	0
202	924	0	408	10	56	120	141	82	2	15	10	0	47	95	167	0	363	0	0
203	2,020	108	649	41	38	66	171	334	3	117	1	5	115	95	333	0	409	0	0
204	771	0	283	17	16	26	77	147	3	12	9	12	26	70	129	0	0	0	0
205	273	0	120	7	7	11	32	62	2	56	1,014	6	135	225	1,436	0	0	0	55
206	0	0	0	0	0	0	0	0	0	588	821	814	411	138	2,772	0	0	0	0
207	570	149	315	28	58	81	68	80	2	4	31	0	76	0	111	0	0	0	0
208	2,154	0	953	85	176	245	204	243	2	883	606	449	627	4,648	7,213	0	967	0	192

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209	0	0	0	0	0	0	0	0	0	1,925	565	39	237	86	2,852	0	0	0	0
210	550	0	308	20	51	53	95	89	2	813	3,143	143	822	206	5,127	0	0	0	0
211	2,796	0	1,220	67	194	326	435	200	2	53	4	59	239	41	396	0	0	0	0
212	2,275	0	830	80	105	130	210	305	3	19	20	18	156	228	441	0	757	0	0
214	1,212	0	488	5	45	88	178	172	3	17	67	3	91	25	203	0	0	0	0
216	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
217	3,781	7,643	1,131	52	400	429	189	61	3	78	298	322	1,376	1,244	3,318	6,695	539	1,486	0
218	116	0	44	1	6	5	19	12	3	32	28	27	3	18	108	0	0	0	0
219	93	0	29	1	4	3	13	8	3	0	0	0	1	31	32	0	414	0	0
220	60	0	23	1	3	3	10	6	3	0	0	0	0	0	0	0	0	0	0
221	1,341	0	491	30	40	47	262	111	3	31	22	0	10	11	74	0	0	0	0
222	473	0	164	10	13	16	87	37	3	43	2	3	6	30	84	0	0	0	0
223	76	0	33	1	2	3	15	11	2	65	11	12	115	28	231	0	0	0	0
226	650	0	227	3	22	18	85	99	3	26	4	0	29	16	75	0	0	0	0
227	1,004	0	385	12	29	39	173	132	3	19	15	33	26	11	104	0	0	0	0
228	519	0	168	2	15	30	61	59	3	2	0	14	0	61	77	0	491	0	0
229	0	0	0	0	0	0	0	0	0	0	78	0	0	0	78	0	0	0	0
230	1,115	0	390	9	18	63	135	166	3	7	102	9	23	52	193	0	0	0	0
231	264	0	88	1	9	7	33	38	3	7	15	0	0	0	22	0	0	0	0
232	1,100	0	378	6	37	29	141	165	3	15	9	3	6	26	59	0	0	0	0
233	342	0	109	2	11	8	41	48	3	0	0	12	51	116	179	0	0	1,858	0
234	1,090	0	430	7	19	58	163	183	3	72	57	162	253	464	1,008	0	1,688	89	0
235	1,604	0	538	26	33	37	145	297	3	50	28	36	193	99	406	0	0	0	0
236	1,243	0	413	16	27	52	103	215	3	35	9	8	8	88	148	0	0	0	0
238	358	0	138	4	10	32	70	21	3	30	14	2	4	11	61	0	0	0	0
240	396	0	157	16	17	17	47	60	3	4	0	0	8	2	14	0	0	0	0
241	328	0	98	3	7	23	50	15	3	8	0	0	0	2	10	0	0	0	0
242	233	0	82	2	6	19	42	13	3	9	0	3	0	3	15	0	0	0	0
243	852	0	317	28	29	55	95	111	3	22	22	3	29	42	118	0	0	0	0
244	354	0	138	8	29	29	47	25	3	15	9	12	0	5	41	0	0	0	0
245	228	0	95	5	12	12	29	37	2	4	2	0	5	11	22	0	0	0	0
247	134	0	50	3	11	10	17	9	3	1	12	0	7	15	35	0	0	0	0
248	496	0	198	6	36	41	50	65	3	45	5	3	41	0	94	0	0	0	0
249	85	0	34	1	6	7	9	11	3	0	0	0	0	0	0	0	0	0	0
250	447	0	162	5	29	34	41	53	3	4	5	0	5	4	18	0	0	0	0
251	791	0	300	18	11	103	87	80	3	21	70	3	24	25	143	0	0	0	0
252	1,190	0	425	20	6	80	154	166	3	44	17	0	20	15	96	0	0	0	0
253	405	0	157	10	33	32	54	28	3	14	11	0	0	64	89	0	515	0	0
254	875	0	364	19	45	47	110	142	2	102	0	8	22	21	153	0	0	0	0
255	972	0	349	19	43	45	106	136	3	43	0	8	34	48	133	0	330	0	0
256	577	0	217	16	23	25	86	66	3	24	6	0	3	5	38	0	390	97	0
257	383	0	139	10	15	16	55	43	3	6	2	3	0	9	20	0	0	0	0
258	430	0	162	12	17	19	64	50	3	9	2	0	1	9	21	0	0	0	0
259	1,181	0	396	21	49	51	120	155	3	59	6	12	4	5	86	0	0	0	0
260	103	0	38	4	10	6	10	8	3	1	6	8	31	18	64	0	0	0	0
261	1,017	0	518	51	135	80	141	111	2	12	489	26	31	11	569	0	0	0	0
262	1,463	0	556	21	114	203	143	75	3	49	1,227	14	113	143	1,546	0	0	0	0
263	657	0	341	49	83	64	76	69	2	202	1,129	802	1,475	567	4,175	0	0	0	3,000
264	124	0	65	6	8	20	15	17	2	64	1,778	179	69	230	2,320	0	0	0	0
265	2,677	0	1,086	44	163	289	369	220	2	40	9	82	470	178	779	0	0	0	0
266	2,492	0	941	42	161	186	243	309	3	52	8	3	37	151	251	0	0	574	0



2005 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
267	557	0	195	17	24	59	45	50	3	366	825	68	692	471	2,422	0	0	0	0
270	1,742	37	744	57	168	242	227	50	2	40	160	11	58	84	353	0	0	0	0
271	2,349	0	787	0	94	194	302	196	3	344	249	30	10	136	769	0	537	0	0
273	1,020	0	332	21	19	39	134	118	3	15	39	0	14	27	95	0	534	0	0
275	117	0	48	3	4	6	23	12	2	8	0	0	0	0	8	0	0	0	0
276	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
278	0	0	0	0	0	0	0	0	0	59	111	347	7	240	764	0	0	0	0
279	38	0	23	2	7	7	6	0	2	182	28	38	34	38	320	0	0	0	0
280	1,698	900	508	54	161	161	122	10	3	90	280	2,854	756	1,456	5,436	6,145	0	0	0
281	0	0	0	0	0	0	0	0	0	1,233	283	317	98	211	2,142	0	0	0	0
283	949	0	379	89	130	97	42	21	3	2	130	21	14	74	241	0	0	0	0
284	1,217	0	456	85	163	99	81	27	3	25	9	3	0	11	48	0	0	0	0
285	1,651	0	596	57	136	156	227	20	3	5	0	0	11	142	158	0	784	0	0
286	976	0	408	52	98	142	100	17	2	9	1	0	20	36	66	0	300	0	0
287	912	0	424	132	124	76	75	17	2	24	43	97	137	53	354	0	0	0	0
288	2,395	0	891	79	244	267	253	49	3	33	26	12	24	227	322	0	366	1,355	0
289	87	0	38	2	7	12	12	5	2	0	0	0	1	88	89	0	0	237	0
290	927	8	378	78	158	113	24	5	2	19	2	0	18	78	117	0	964	0	0
291	1,604	31	542	55	115	167	179	27	3	51	10	65	38	25	189	0	0	0	0
292	1,179	0	378	17	73	115	124	50	3	7	0	3	8	3	21	0	0	0	0
293	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
294	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
295	5,906	4,615	1,718	149	945	460	144	19	3	205	1,196	361	1,049	2,006	4,817	20,145	2,162	0	65
296	5	0	2	0	1	1	0	0	3	150	30	117	0	50	347	0	0	0	0
297	693	0	266	43	97	83	32	11	3	23	350	0	10	3	386	0	0	0	0
298	115	0	61	10	22	19	7	3	2	48	108	11	14	25	206	0	0	0	0
299	675	0	224	36	81	70	27	10	3	0	2	3	0	0	5	0	0	0	0
300	1,857	0	726	208	251	146	105	16	3	93	7	30	10	19	159	0	0	0	0
301	0	0	0	0	0	0	0	0	0	47	38	0	3	8	96	0	0	0	0
302	10	0	2	0	1	0	0	0	5	512	328	1,221	33	384	2,478	0	35	1,282	0
303	515	2,541	233	37	71	52	55	18	2	1,649	517	673	63	278	3,180	0	0	0	0
304	494	0	140	5	9	18	35	73	4	9	10	0	2	38	59	0	333	0	0
305	6	0	5	1	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0
306	1,845	0	630	36	154	183	190	66	3	13	3	0	5	13	34	0	0	0	0
307	401	0	125	5	8	16	31	65	3	13	0	0	5	16	34	0	0	0	0
308	297	0	100	5	20	33	27	15	3	0	0	0	7	3	10	0	0	0	0
310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
311	2,809	0	996	107	205	336	281	67	3	893	9	0	8	2	912	0	0	0	0
312	4	0	2	0	1	1	1	0	2	72	26	36	0	65	199	0	0	0	0
313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
314	773	0	266	38	75	65	69	19	3	9	0	0	0	1	10	0	0	0	0
315	1,785	0	683	156	134	226	129	37	3	25	23	12	15	124	199	0	438	0	0
316	53	0	22	1	5	7	7	2	2	0	200	0	10	115	325	0	0	1,185	0
317	1,647	0	551	39	127	167	167	51	3	8	0	0	1	14	23	0	0	0	0
318	1,108	0	416	77	206	107	20	6	3	12	5	0	35	2	54	0	0	0	0
319	1,367	0	581	149	168	159	91	13	2	13	63	47	22	125	270	0	805	0	0
320	0	0	0	0	0	0	0	0	0	0	634	0	0	26	660	0	0	0	0
321	10	0	6	2	2	2	1	0	2	100	38	115	50	0	303	0	0	0	0
322	893	0	322	89	129	52	52	0	3	15	65	50	0	35	165	0	0	0	0
323	943	0	320	21	121	94	70	15	3	325	0	75	0	0	400	0	0	0	0
324	937	0	385	78	121	108	67	11	2	18	35	150	10	21	234	0	0	0	0

2005 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
325	47	0	17	2	4	5	4	2	3	37	0	0	0	26	63	0	0	0	0
326	66	0	23	1	5	7	7	3	3	4	25	48	0	0	77	0	0	0	0
327	238	0	95	30	28	27	6	5	3	6	0	0	0	6	0	0	0	0	0
328	275	0	99	6	21	30	30	12	3	1	0	0	0	0	1	0	0	0	0
329	327	0	128	8	27	38	39	15	3	12	1	2	0	3	18	0	0	0	0
330	0	0	0	0	0	0	0	0	0	325	54	65	0	0	444	0	0	0	0
331	471	0	183	57	54	52	11	9	3	94	70	220	18	35	437	0	0	0	0
332	389	0	149	46	44	42	9	8	3	17	37	1,011	52	156	1,273	0	422	0	0
333	2,590	0	911	85	197	354	208	66	3	25	6	30	26	74	161	0	18	71	0
334	933	0	275	26	60	107	63	20	3	0	0	0	0	0	0	0	0	0	0
335	2,367	0	747	46	160	224	228	89	3	11	0	9	1	160	181	0	556	1,290	0
336	53	0	21	2	5	8	5	2	3	33	0	0	10	9	52	0	0	0	0
338	1,507	0	598	186	176	170	35	31	3	2	5	0	8	18	33	0	0	0	0
339	0	0	0	0	0	0	0	0	3	222	28	384	0	0	634	0	0	0	0
340	151	0	57	5	11	21	16	5	3	6	0	2	0	2	10	0	0	0	0
341	563	0	206	10	41	69	56	30	3	22	0	0	0	3	25	0	0	0	0
343	2,879	10	966	78	193	349	266	80	3	26	26	8	36	47	143	0	0	0	0
344	276	0	108	9	22	39	30	9	3	18	0	53	1	0	72	0	0	0	0
345	28	0	13	1	3	5	4	1	2	1	0	0	0	0	1	0	0	0	0
346	185	0	76	6	15	27	21	6	2	18	5	0	0	10	33	0	0	0	0
347	994	0	364	37	77	112	120	18	3	0	3	39	3	3	48	0	0	0	0
348	1,145	0	418	35	103	130	134	16	3	69	39	30	34	76	248	0	685	0	0
349	0	0	0	0	0	0	0	0	0	0	12	5	0	0	17	6,312	0	0	0
350	84	0	32	3	6	12	9	3	3	6	0	43	0	1	50	0	0	0	0
351	664	0	223	18	44	81	61	18	3	2	19	12	1	7	41	0	310	0	0
352	609	0	198	31	42	68	49	8	3	11	29	11	8	11	70	0	0	0	0
353	831	0	274	42	58	95	68	12	3	17	2	3	0	2	24	0	0	0	0
354	639	0	246	38	52	85	61	11	3	7	3	53	0	6	69	0	0	0	0
355	996	0	352	55	74	121	87	15	3	17	14	0	0	5	36	0	0	0	0
356	295	0	102	16	22	35	25	4	3	5	1	0	0	0	6	0	0	0	0
357	673	0	243	38	51	84	60	10	3	26	9	0	0	3	38	0	0	0	0
358	11	0	5	0	1	2	2	1	2	0	5	0	0	31	36	0	0	0	0
361	973	0	531	13	69	174	194	81	2	20	30	0	11	88	149	0	918	0	0
363	2,256	113	851	110	171	155	252	163	3	137	102	23	168	223	653	0	458	0	0
364	2,518	68	954	74	141	254	325	160	3	92	221	123	138	331	905	0	63	0	0
365	2,435	0	937	67	183	242	283	162	3	53	162	3	440	318	976	0	0	0	0
366	2,099	0	830	41	120	279	260	131	3	27	1	17	11	88	144	0	0	0	0
368	1,575	35	731	84	172	174	244	57	2	181	444	175	1,101	503	2,404	0	0	0	244
369	904	0	365	6	41	58	173	87	2	274	22	9	41	98	444	0	0	0	0
370	2,147	0	895	125	286	256	184	44	2	79	311	170	143	389	1,092	0	8	0	0
371	1,272	0	517	66	119	160	153	19	2	19	46	0	27	149	241	0	829	0	0
372	383	0	145	17	11	39	39	39	3	4	1	0	3	62	70	0	541	0	0
374	1,011	0	421	66	192	106	47	11	2	524	298	217	16	111	1,166	0	0	0	0
375	2,732	0	1,168	178	389	422	162	17	2	1,080	249	88	37	205	1,659	0	0	0	0
376	1,427	20	530	71	105	108	192	53	3	1,034	599	261	119	298	2,311	0	0	0	0
377	451	0	177	24	42	51	43	18	3	21	10	18	0	5	54	0	0	0	0
378	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
379	16	0	5	1	1	1	1	1	3	0	0	0	0	0	0	0	0	0	0
380	19	0	12	2	4	3	3	1	2	60	16	18	0	7	101	0	0	0	0
381	4,486	0	1,698	171	565	423	419	119	3	54	48	61	23	118	304	0	810	42	0
382	2,131	0	778	35	196	255	236	56	3	17	3	0	1	58	79	0	719	0	0

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385	3,361	0	1,173	35	177	386	434	141	3	202	35	364	32	11	644	0	0	0	0
386	335	0	124	18	25	37	25	19	3	390	5	6	0	5	406	0	0	0	0
387	0	0	0	0	0	0	0	0	0	14	147	27	0	0	188	0	0	0	0
388	0	0	0	0	0	0	0	0	3	5	6	8	0	1	20	0	0	0	0
389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
390	459	0	183	24	43	52	44	19	3	1	0	0	0	14	15	0	180	0	0
391	506	0	201	27	48	57	48	21	3	47	2	2	0	6	57	0	0	0	0
392	429	0	157	21	37	45	38	16	3	28	7	0	0	5	40	0	0	0	0
393	702	0	268	36	64	77	65	27	3	30	4	0	0	94	128	0	935	0	0
394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
395	246	0	95	13	23	27	23	10	3	0	15	0	0	3	18	0	0	0	0
396	424	0	166	22	39	47	40	17	3	50	13	49	7	7	126	0	0	0	0
397	1,583	0	517	24	116	165	148	64	3	2	0	9	1	52	64	0	590	0	0
398	10	0	3	0	1	0	1	0	3	0	0	41	0	0	41	0	0	0	0
399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400	152	0	53	3	5	21	20	4	3	156	21	15	5	25	222	0	0	0	0
401	1,587	0	897	248	321	215	89	23	2	77	153	18	185	123	556	0	0	0	0
403	855	110	400	104	194	59	17	25	2	26	84	3	152	107	372	0	0	0	0
407	2,331	0	1,177	264	487	224	133	69	2	30	289	18	79	179	595	0	0	0	0
409	960	0	295	14	59	98	80	43	3	5	3	20	0	1	29	0	0	0	0
410	2,660	0	963	4	115	172	515	157	3	18	21	12	25	18	94	0	0	0	0
411	78	0	34	0	3	6	20	6	2	12	9	5	2	0	28	0	0	0	0
413	958	0	378	21	82	98	109	67	3	15	12	56	52	83	218	0	488	0	0
414	2,291	0	886	105	179	252	200	150	3	35	48	0	31	62	176	0	15	0	0
415	1,784	0	748	64	208	129	258	89	2	7	5	3	3	28	46	0	0	0	0
416	1,407	8	557	6	55	100	271	125	3	9	20	62	6	35	132	0	0	0	0
417	2,115	0	1,092	277	348	178	219	69	2	13	80	12	78	43	226	0	0	0	0
418	2,068	0	802	74	246	209	247	26	3	18	170	59	876	323	1,446	0	1,197	0	0
419	1,333	0	500	37	76	91	186	111	3	5	0	0	22	29	56	0	0	0	0
420	1,557	0	708	69	188	195	175	81	2	12	1	0	1	42	56	0	0	0	0
422	1,685	0	671	32	107	183	252	97	3	396	148	504	36	200	1,284	0	47	4	0
423	1,442	0	565	95	161	140	112	56	3	20	232	35	126	206	619	0	728	0	0
424	1,370	0	574	53	108	127	128	158	2	79	70	3	46	45	243	0	0	0	0
425	765	0	359	38	104	64	126	27	2	143	127	27	298	277	872	0	383	0	129
430	1,460	0	513	112	154	135	105	7	3	127	28	23	4	22	204	0	0	0	0
435	1,715	0	600	40	209	170	181	0	3	44	2	6	0	2	54	0	0	0	0
436	1,999	0	778	143	219	274	123	20	3	327	176	490	69	393	1,455	0	343	1,183	500
437	2,795	0	1,022	114	365	347	155	41	3	32	8	0	6	68	114	0	486	0	0
440	1,357	0	616	102	142	161	171	41	2	19	10	3	27	74	133	0	210	0	0
441	330	0	190	42	50	41	40	18	2	14	269	46	29	118	476	0	0	0	0
442	794	0	427	90	119	108	78	32	2	12	3	23	10	39	87	0	14	0	0
443	1,420	0	495	24	30	34	133	273	3	9	4	9	33	16	71	0	0	0	0
444	1,517	0	555	9	25	75	211	236	3	54	4	21	5	34	118	0	0	0	0
445	1,109	5	523	63	115	87	178	80	2	7	39	29	11	34	120	0	0	0	0
446	12	0	5	1	1	1	2	1	2	0	0	0	7	8	15	0	0	0	0
447	951	0	315	14	60	96	103	41	3	5	0	3	4	31	43	0	0	0	0
448	535	0	308	83	108	49	34	34	2	2	9	114	7	43	175	0	0	0	0
449	958	0	547	171	106	116	105	48	2	13	97	27	27	208	372	0	407	0	0
450	457	0	259	70	91	41	29	29	2	53	161	311	34	141	700	0	0	0	0
451	9	0	6	2	2	1	1	1	2	0	0	0	0	50	0	0	0	0	0
452	386	0	214	58	75	34	24	24	2	0	63	29	14	100	206	0	0	0	0

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453	337	0	182	57	35	39	35	16	2	67	26	43	7	137	280	0	323	466	0
454	2	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
455	589	0	316	67	65	49	78	57	2	33	83	15	7	65	203	0	0	0	0
456	583	48	288	63	59	45	69	52	2	13	3	0	63	30	109	0	0	0	0
457	1,681	0	555	18	41	56	249	191	3	18	12	55	141	248	474	0	0	0	0
458	841	0	410	13	31	41	184	141	2	0	2	0	10	5	17	0	0	0	0
459	328	0	111	2	5	18	38	47	3	13	5	0	0	0	18	0	0	0	0
460	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
461	9	0	4	1	1	1	1	1	2	0	0	0	0	0	0	0	0	0	0
463	2,815	0	1,024	48	206	342	277	151	3	7	0	39	0	4	50	0	0	0	0
464	1,190	0	399	26	151	117	87	18	3	13	28	90	9	43	183	0	610	0	0
465	2,123	0	687	64	149	267	157	50	3	5	1	0	0	11	17	0	0	0	0
466	714	0	253	12	51	84	69	37	3	2	19	0	3	26	50	0	0	0	0
467	263	0	92	9	20	36	21	7	3	14	2	0	0	0	16	0	0	0	0
469	1,662	0	403	25	86	121	123	48	4	0	2	0	0	2	4	0	0	0	0
470	591	0	188	12	23	80	56	17	3	26	2	0	0	55	83	0	600	0	0
471	1,388	0	616	30	113	141	212	119	2	614	60	3	135	28	840	0	0	0	0
472	1,803	0	834	176	215	180	198	64	2	452	68	257	26	123	926	0	9	0	0
473	1,564	178	701	265	254	110	56	16	2	11	33	2	13	107	166	0	241	309	0
474	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	407	0	0
475	733	0	431	139	199	40	54	0	2	5	19	0	13	43	80	0	0	0	0
476	799	0	324	104	149	30	41	0	2	7	0	39	9	4	59	0	0	0	0
477	0	0	0	0	0	0	0	0	0	47	0	0	0	0	47	0	0	0	0
478	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
479	265	0	98	32	45	9	12	0	3	163	87	348	21	66	685	0	0	0	0
480	756	0	269	21	41	39	56	112	3	17	7	8	19	11	62	0	0	0	0
481	0	0	0	0	0	0	0	0	0	80	225	115	0	81	501	0	374	334	0
482	1,197	0	447	7	43	35	167	195	3	6	4	9	3	3	25	0	0	0	0
483	789	0	288	6	13	46	100	123	3	5	50	12	65	77	209	0	666	0	0
484	1,114	0	451	28	59	110	134	121	2	7	11	26	6	65	115	0	0	0	0
485	1,433	0	510	14	36	120	260	79	3	35	1	3	0	2	41	0	0	0	0
486	108	0	32	3	4	4	10	12	3	6	0	32	0	0	38	0	0	0	0
488	4,287	0	1,379	46	95	287	705	246	3	22	12	5	8	79	126	0	574	0	0
489	3,061	0	915	22	43	123	550	177	3	24	14	0	44	124	206	0	481	0	0
490	2,542	0	818	13	131	200	315	159	3	5	2	9	6	18	40	0	0	0	0
491	203	0	84	5	18	17	29	15	2	32	19	0	27	0	78	0	0	0	0
492	352	0	134	7	17	17	41	52	3	4	2	0	4	5	15	0	0	0	0
494	1,253	0	485	5	45	88	177	171	3	64	0	3	17	68	152	0	0	0	0
495	1,061	0	397	13	30	40	178	136	3	7	19	0	26	10	62	0	0	0	0
496	272	0	102	14	26	17	21	23	3	13	0	0	1	4	18	0	0	0	0
497	366	0	159	5	12	16	71	55	2	79	101	0	13	139	332	0	0	0	0
498	1,647	286	760	24	57	76	341	261	2	89	59	623	338	9	1,118	0	0	0	0
499	7	0	3	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0
500	419	0	176	15	63	54	29	15	2	49	20	34	59	22	184	0	0	0	0
501	773	0	338	35	100	80	104	19	2	49	153	40	87	49	378	0	0	0	0
502	1,014	0	426	44	126	101	132	24	2	74	253	11	168	97	603	0	0	0	0
503	855	0	346	40	62	58	140	45	3	177	36	30	136	41	420	0	0	0	0
504	596	0	210	24	38	35	85	27	3	91	56	154	47	68	416	0	78	0	0
505	1,330	0	538	69	66	139	179	84	3	27	27	81	83	722	940	0	326	1,066	0
506	1,240	0	467	45	66	75	169	112	3	42	5	5	20	15	87	0	0	0	0
507	873	0	318	30	45	51	115	76	3	32	0	10	13	89	144	0	716	0	0

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508	1,067	0	402	35	143	123	67	34	3	7	8	53	27	76	171	0	421	0	0
509	326	0	155	25	71	35	23	0	2	165	403	159	386	215	1,328	0	0	0	0
510	398	0	207	27	26	54	69	32	2	39	101	10	133	13	296	0	0	0	0
511	63	0	21	3	3	5	7	3	3	0	0	0	0	0	0	0	0	0	0
512	538	0	269	104	91	35	22	17	2	20	9	21	120	93	263	0	0	0	0
513	462	0	318	89	123	48	35	23	1	49	25	30	298	209	611	0	0	170	0
514	73	145	51	13	19	10	7	2	1	33	12	1,573	708	369	2,695	0	22	179	500
517	1,601	0	642	51	98	92	134	267	3	12	13	39	32	21	117	0	0	0	0
518	978	0	443	35	67	64	92	185	2	11	157	0	89	74	331	0	0	0	0
519	2,962	75	975	78	148	140	203	406	3	9	2	0	16	69	96	0	386	0	0
520	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	702	0	0	0
521	1,255	0	497	40	76	71	104	207	3	12	52	0	60	105	229	0	330	0	0
522	1,539	0	532	37	48	97	214	136	3	69	2	0	5	18	94	0	0	0	0
523	574	0	214	0	0	27	60	126	3	0	100	6,076	1	348	6,525	0	0	0	0
524	824	0	297	21	27	54	119	76	3	9	1	0	1	4	15	0	0	0	0
525	1,998	0	819	58	74	149	329	210	2	76	50	3	3	25	157	0	0	0	0
526	366	0	204	19	23	33	58	71	2	20	18	0	7	22	67	0	8	0	0
527	1	0	1	0	0	0	0	0	1	8	0	0	0	15	23	0	0	0	0
528	0	0	0	0	0	0	0	0	0	0	0	625	0	0	625	0	0	0	0
529	206	0	86	9	9	9	26	33	2	7	7	0	0	4	18	0	0	0	0
532	82	0	64	48	5	8	3	0	1	0	98	211	38	482	829	0	0	2,057	0
533	5	0	6	4	0	1	0	0	1	37	98	483	230	118	966	0	0	0	0
534	125	0	68	51	6	9	3	0	2	46	206	121	279	313	965	0	0	0	0
535	330	0	132	64	36	18	14	0	3	110	19	2,260	71	250	2,710	0	0	0	0
600	0	0	0	0	0	0	0	0	0	40	393	9	61	50	553	0	0	0	0
601	710	0	266	0	31	105	91	39	3	12	252	6	40	40	350	0	0	0	0
602	0	0	0	0	0	0	0	0	0	220	64	0	319	207	810	0	0	0	0
603	1,221	0	544	94	145	173	110	21	2	12	26	0	14	67	119	0	451	0	0
604	3	0	2	0	1	1	0	0	2	477	94	80	55	120	826	0	0	0	286
605	1,292	8	523	76	157	73	170	47	2	19	5	6	3	77	110	0	481	0	0
606	0	0	0	0	0	0	0	0	0	277	209	128	221	236	1,071	0	0	0	0
607	1,976	320	903	359	291	153	91	9	2	9	290	91	123	411	920	0	0	1,503	0
608	1,364	0	568	154	158	116	112	27	2	65	482	20	31	52	650	0	0	0	0
609	2,184	0	935	390	429	89	27	0	2	12	384	3	57	90	546	0	422	0	0
610	1,589	0	520	84	202	168	61	5	3	4	49	5	11	119	188	0	618	0	0
611	549	0	209	48	98	38	21	5	3	17	126	17	92	49	301	0	0	0	0
612	1,591	0	917	263	419	179	43	13	2	102	143	199	211	58	713	0	0	0	0
613	1,402	0	506	62	167	150	94	33	3	1	1	2	4	8	16	0	0	0	0
614	391	0	138	30	41	36	28	2	3	1	0	12	0	0	13	0	0	0	0
615	1,052	0	367	12	92	125	122	16	3	12	26	9	4	87	138	0	440	0	0
616	1,939	0	690	23	172	235	229	31	3	303	0	6	3	52	364	0	350	0	0
617	840	0	291	7	95	79	110	0	3	187	24	0	18	61	290	0	0	0	0
618	1,573	0	739	188	342	168	30	10	2	22	169	3	48	18	260	0	0	0	0
619	1,308	0	587	84	198	177	109	19	2	1,042	95	47	510	126	1,820	0	0	0	175
620	1,361	0	498	71	168	150	93	16	3	0	35	0	50	39	124	0	0	0	0
621	1,146	0	390	43	154	102	91	0	3	0	3	0	0	3	6	0	0	0	0
622	1,656	0	570	93	128	187	146	17	3	0	1	0	0	79	80	0	413	0	0
623	0	0	0	0	0	0	0	0	0	0	104	0	0	0	104	0	0	0	0
624	1,526	0	521	37	123	150	198	13	3	414	2	3	24	325	768	0	1,203	0	0
625	1,381	0	533	99	195	155	69	16	3	7	18	2	17	0	44	0	0	0	0
628	85	0	25	2	3	3	8	9	3	21	20	0	64	4	109	0	0	0	0

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629	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
630	3	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
631	2,705	0	792	47	74	312	304	55	3	22	0	6	6	4	38	0	0	0	0
632	2,377	0	804	48	75	317	309	55	3	14	0	6	3	21	44	0	0	0	0
633	810	0	267	1	31	84	124	27	3	4	0	0	5	136	145	0	833	0	0
634	0	0	0	0	0	0	0	0	0	22	301	0	23	60	406	0	0	0	0
635	0	0	0	0	0	0	0	0	0	69	880	43	96	55	1,143	0	0	0	0
637	19	0	13	1	4	1	6	1	2	8	55	12	18	15	108	0	0	0	0
638	219	0	88	7	26	6	41	9	3	5	0	5	0	9	19	0	0	0	0
639	0	0	0	0	0	0	0	0	0	0	9	0	0	4	13	0	0	0	0
640	37	0	20	1	2	3	6	8	2	0	0	0	0	0	0	0	0	0	0
641	0	0	0	0	0	0	0	0	0	0	0	0	0	116	116	0	0	1,519	0
642	268	0	115	4	9	12	52	40	2	5	0	3	0	14	22	0	0	0	0
643	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
644	1,859	0	586	30	45	80	285	145	3	34	248	231	60	140	713	0	0	0	0
645	1,564	0	482	26	38	61	233	125	3	24	0	0	7	236	267	0	1,651	1,412	0
646	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
647	1,757	0	557	35	34	67	229	193	3	51	26	18	8	182	285	0	1,271	0	0
649	8	0	3	0	0	0	1	1	3	0	0	0	0	0	0	0	0	0	0
650	2,670	0	900	48	71	113	435	233	3	0	0	0	0	0	0	0	0	0	0
652	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
653	1,494	0	517	39	135	174	144	24	3	13	4	3	0	34	54	0	0	0	0
654	711	0	233	11	47	78	63	34	3	33	8	0	0	120	161	0	473	0	0
655	651	0	240	8	18	24	108	82	3	389	544	46	155	24	1,158	0	532	0	0
656	713	0	284	60	78	76	43	27	3	0	0	18	4	46	68	0	516	0	0
657	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
658	0	0	0	0	0	0	0	0	0	77	0	0	0	0	77	0	0	0	0
659	0	0	0	0	0	0	0	0	0	0	0	15	0	884	899	0	0	0	5,500
800	5	0	3	0	1	1	1	1	2	0	0	15	0	0	15	0	0	0	0
801	926	0	364	12	27	36	164	125	3	0	0	0	7	0	7	0	0	0	0
802	450	0	200	16	19	53	64	47	2	22	51	12	9	20	114	0	0	0	0
803	667	0	252	18	36	59	72	67	3	31	12	0	17	123	183	0	0	0	0
804	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21	0	1,032	397	0
805	257	0	108	20	30	24	27	7	2	1	0	0	0	1	2	0	0	0	0
806	328	0	130	23	36	28	33	9	3	14	20	0	4	5	43	0	0	0	0
807	662	0	247	45	69	54	62	17	3	12	0	2	10	4	28	0	0	0	0
808	490	0	186	34	52	41	47	13	3	51	2	0	3	4	60	0	0	0	0
809	531	0	193	21	43	36	67	27	3	12	53	3	3	1	72	0	0	0	0
810	323	0	131	14	29	25	45	18	2	35	0	27	0	150	212	0	400	247	0
811	1,033	0	322	35	71	60	111	45	3	39	10	6	8	4	67	0	0	0	0
812	256	0	91	16	25	20	23	6	3	0	2	0	0	0	2	0	0	0	0
813	739	0	289	52	81	63	73	20	3	300	9	8	9	5	331	0	0	0	0
814	62	0	25	5	7	5	6	2	2	17	2	21	0	0	40	0	0	0	0
815	168	0	63	11	18	14	16	4	3	9	1	3	0	4	17	0	0	0	0
816	116	0	54	10	15	12	14	4	2	9	1	5	0	3	18	0	0	0	0
817	912	0	381	69	107	83	96	26	2	40	175	235	127	151	728	0	455	227	0
818	27	0	7	1	4	2	1	0	4	75	0	0	567	65	707	0	0	0	0
819	31	0	16	4	5	4	2	1	2	0	0	0	0	51	51	0	81	67	0
820	4	0	3	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0
821	108	0	38	8	12	9	6	2	3	5	1	0	0	0	6	0	0	0	0
822	34	0	14	3	5	3	2	1	2	8	7	43	0	0	58	0	0	0	0

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823	18	0	5	1	2	1	1	0	4	0	0	0	0	0	0	0	0	0	0
824	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
825	418	0	138	31	45	34	20	7	3	0	0	2	0	88	90	0	208	92	0
826	51	0	20	4	7	5	3	1	3	0	0	44	0	0	44	0	0	0	0
827	251	0	90	20	30	22	13	5	3	2	0	0	1	2	5	0	0	0	0
828	301	0	104	23	34	26	15	5	3	32	0	0	0	0	32	0	0	0	0
829	190	0	71	16	23	18	11	4	3	6	0	0	0	1	7	0	0	0	0
830	378	0	139	31	46	35	21	7	3	4	0	30	0	3	37	0	0	0	0
831	149	0	68	15	22	17	10	4	2	5	0	2	0	49	56	0	223	139	0
832	209	0	84	19	28	21	12	4	3	4	8	12	0	0	24	0	0	0	0
833	532	0	210	47	69	52	31	11	3	4	2	0	0	2	8	0	0	0	0
834	301	0	102	23	33	25	15	5	3	53	1	39	0	4	97	0	0	0	0
835	407	0	149	33	49	37	22	8	3	39	12	0	5	4	60	0	0	0	0
836	980	0	323	72	106	81	48	17	3	37	0	88	13	222	360	0	353	304	0
837	109	0	42	1	3	4	19	14	3	5	0	0	0	9	14	0	298	0	0
838	1	0	1	0	0	0	0	0	1	0	0	12	0	0	12	0	0	0	0
839	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
840	2	0	1	0	0	0	1	0	2	41	0	0	0	0	41	0	0	0	0
841	126	0	46	1	3	11	23	7	3	17	1	0	1	29	48	0	0	0	0
842	10	0	3	0	0	1	2	0	3	18	12	12	0	9	51	0	0	0	0
843	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
844	5	0	3	0	0	1	2	0	2	0	0	0	0	0	0	0	0	0	0
845	184	0	66	4	8	8	20	26	3	595	92	0	0	882	1,569	0	0	0	2,800
846	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
847	1,252	0	491	17	57	137	239	40	3	49	238	14	286	275	862	0	454	0	0
848	1,713	0	594	12	80	139	250	113	3	15	9	0	9	13	46	0	0	0	0
850	0	0	0	0	0	0	0	0	0	47	19	164	245	1,244	1,719	0	0	0	0
851	1,697	0	500	0	14	52	200	233	3	125	2	3	158	6	294	0	1,191	0	0
852	0	0	0	0	0	0	0	0	0	53	18	12	132	97	312	0	0	0	0
853	1,135	0	348	0	10	37	139	162	3	0	16	0	51	40	107	0	0	0	0
854	1,163	0	334	0	10	35	134	156	3	19	161	8	157	113	458	0	576	0	0
855	2,366	0	982	42	272	181	381	107	2	22	39	6	17	125	209	0	535	0	0
856	319	0	105	4	7	22	54	19	3	840	2	380	37	52	1,311	0	0	0	0
857	1,057	0	402	33	53	76	180	61	3	31	24	3	11	73	142	0	730	0	0
858	745	0	281	7	37	92	103	43	3	1	1	0	9	3	14	0	0	0	0
859	1,454	0	527	9	39	145	296	38	3	34	6	2	0	5	47	0	0	0	0
860	252	0	92	2	12	30	34	14	3	63	21	0	31	20	135	0	0	0	0
861	381	0	156	4	20	51	57	24	2	9	314	0	8	4	335	0	0	0	0
862	970	0	1,059	26	138	347	387	161	1	25	47	14	21	39	146	0	0	0	0
863	1,060	0	424	10	55	139	155	64	3	6	90	17	17	60	190	0	28	0	0
864	1,448	0	536	25	89	175	183	63	3	18	4	2	5	83	112	0	291	118	0
865	1,384	0	489	56	62	107	197	66	3	7	2	0	7	4	20	0	0	0	0
866	1,070	0	488	56	62	107	197	66	2	44	0	0	9	3	56	0	665	0	0
867	1,280	0	489	42	105	103	185	54	3	24	17	49	50	32	172	0	0	0	0
868	685	0	263	24	21	95	78	45	3	0	0	0	8	4	12	0	0	0	0
869	1,101	0	454	98	114	119	77	45	2	19	229	65	384	92	789	0	365	0	0
870	2,279	0	880	18	75	186	378	223	3	28	0	0	7	92	127	0	50	21	0
871	1,173	0	437	9	37	92	188	111	3	56	9	12	17	25	119	0	0	0	0
872	4	0	1	0	0	0	0	0	4	11	88	20	117	53	289	0	0	0	0
873	5,777	0	2,630	155	246	1,036	1,011	181	2	53	103	0	34	140	330	0	1,837	0	0
874	1,748	0	589	3	69	185	273	60	3	19	3	14	4	56	96	0	0	0	0

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TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
875	2,067	0	715	4	83	224	331	73	3	19	40	30	110	88	287	0	0	0	0
876	871	0	294	10	48	49	175	12	3	37	63	0	8	6	114	0	0	0	0
877	427	0	146	4	21	53	51	17	3	25	21	0	21	73	140	0	633	0	0
878	1,692	0	590	11	96	206	200	77	3	26	0	0	14	204	244	0	577	1,810	0
879	2,672	0	894	33	129	283	348	101	3	0	9	6	14	6	35	0	0	0	0
880	899	0	387	97	172	80	30	9	2	4	106	3	64	85	262	0	0	0	0
881	1,034	0	369	93	170	67	29	11	3	6	0	0	9	0	15	0	0	0	0
882	532	0	172	43	64	53	12	0	3	2	0	14	0	56	72	0	368	0	0
883	1,580	0	558	55	198	194	87	23	3	15	4	0	0	4	23	0	0	0	0
884	1,765	0	812	269	309	141	60	31	2	0	52	3	58	37	150	0	0	0	0
885	1,389	0	628	173	228	145	68	14	2	14	8	0	31	4	57	0	0	0	0
886	924	0	369	107	117	90	35	20	3	2	25	15	130	48	220	0	0	0	0
887	990	0	340	92	57	95	78	19	3	6	0	0	0	7	13	0	0	0	0
888	1,519	112	577	144	190	126	117	0	3	1	13	0	15	5	34	0	0	0	0
889	1,147	0	479	116	148	145	57	12	2	0	4	0	7	19	30	0	0	0	0
890	2	0	1	0	0	0	0	0	2	12	254	2	66	61	395	0	0	0	0
891	1,525	0	541	206	162	85	68	19	3	13	31	6	15	93	158	0	345	0	0
892	1,193	0	452	136	137	89	82	8	3	35	86	0	55	228	404	0	1,148	0	0
893	1,544	0	634	219	237	115	51	12	2	13	40	164	40	72	329	0	0	0	0
894	1,407	0	722	130	274	160	127	31	2	103	178	79	50	118	528	0	0	0	0
895	1,675	0	617	53	216	206	138	5	3	4	9	0	6	230	249	0	381	2,156	0
896	963	0	333	62	67	73	99	31	3	2	1	9	3	1	16	0	0	0	0
897	729	0	311	24	68	121	81	18	2	21	22	0	0	8	51	0	0	0	0
898	855	0	335	14	63	110	112	37	3	20	2	0	1	4	27	0	0	0	0
899	381	0	222	41	45	49	66	21	2	4	0	0	0	13	17	0	0	0	0
900	96	0	42	12	15	9	4	2	2	0	0	0	0	0	0	0	0	0	0
901	25	0	8	2	3	2	1	0	3	0	0	0	0	0	0	0	0	0	0
902	118	0	56	16	20	12	5	3	2	0	0	0	0	0	0	0	0	0	0
903	417	0	198	57	72	42	17	10	2	508	28	24	3	22	585	0	0	0	0
904	1,038	0	493	59	163	126	113	33	2	45	194	365	145	2,040	2,789	0	342	185	0
905	453	0	198	27	72	52	36	11	2	10	9	0	1	2	22	0	0	0	0
906	202	64	92	11	30	23	21	6	2	5	0	4	1	0	10	0	0	0	0
907	410	0	166	29	40	40	43	13	3	10	0	0	0	0	10	0	0	0	0
908	1,140	0	519	40	115	144	160	60	2	62	5	10	34	12	123	0	0	0	0
909	490	0	206	36	50	50	53	16	2	8	32	10	3	9	62	0	0	0	0
910	105	0	44	3	10	12	14	5	2	0	0	0	0	0	0	0	0	0	0
911	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	0	0	0
912	242	0	115	2	22	16	44	30	2	0	0	0	0	2	2	0	0	0	0
913	338	0	142	3	27	20	55	37	2	2	3	0	3	5	13	0	0	0	0
914	331	0	139	17	29	25	35	33	2	7	0	0	0	2	9	0	0	0	0
915	1,274	8	480	60	99	88	120	114	3	35	76	38	89	30	268	0	0	0	0
916	1,367	0	515	41	144	121	133	76	3	47	25	77	5	69	223	0	0	0	0
917	602	0	263	21	74	62	68	39	2	3	16	10	0	11	40	0	0	0	0
918	23	0	11	1	3	1	4	2	2	0	1	0	0	0	1	0	0	0	0
919	179	0	85	10	28	22	19	6	2	0	1	0	0	0	1	0	0	0	0
920	1,060	0	429	51	142	110	98	29	3	7	0	0	8	5	20	0	0	0	0
921	21	0	8	1	3	2	1	0	3	5	2	13	3	1	24	0	0	0	0
922	7	0	3	0	1	0	1	0	2	0	0	0	0	5	5	0	0	0	0
923	103	0	47	5	15	6	15	7	2	0	0	0	0	3	3	0	0	0	0
924	449	0	196	19	61	24	64	28	2	2	0	2	7	3	14	0	0	0	0
925	124	0	50	5	16	6	16	7	3	7	0	10	0	0	17	0	0	0	0



2005 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
926	859	0	335	27	94	79	86	50	3	27	21	19	31	4	102	0	0	0	0
927	82	0	30	5	7	7	8	2	3	25	3	16	23	22	89	0	0	0	0
928	535	0	225	17	50	63	69	26	2	17	18	12	1	6	54	0	0	0	0
929	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
930	46	0	28	3	9	7	6	2	2	0	0	0	0	0	0	0	0	0	0
931	38	0	20	2	7	5	5	1	2	0	0	0	0	0	0	0	0	0	0
932	127	0	63	1	12	9	24	16	2	25	0	2	0	1	28	0	0	0	0
933	23	60	9	0	2	1	3	2	3	24	2	162	0	3	191	0	0	0	0
934	310	0	141	14	44	17	46	20	2	8	0	0	0	28	36	0	0	0	0
935	37	0	16	2	5	2	5	2	2	0	9	0	0	5	14	0	0	0	0
936	236	0	112	20	27	27	29	9	2	0	3	10	0	37	50	0	0	0	0
937	240	0	97	9	30	12	32	14	3	12	0	0	0	2	14	0	0	0	0
938	114	0	54	4	15	13	14	8	2	5	30	0	4	74	113	0	421	0	0

2015 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
1	1,320	10	566	66	144	169	159	29	2	376	28	40	203	36	683	0	0	0	0
2	1,736	10	746	61	163	261	206	54	2	50	169	10	37	73	339	0	275	0	0
3	867	10	393	13	69	37	86	189	2	21	29	6	29	66	151	0	0	0	0
4	1,982	538	1,042	166	349	244	179	104	2	54	233	289	2,189	1,067	3,831	0	0	0	0
5	2,650	0	1,384	338	481	281	173	111	2	72	253	100	284	322	1,031	0	0	0	0
6	228	0	108	17	38	25	17	12	2	0	0	0	15	210	225	0	0	0	0
7	1,456	1,442	692	85	181	175	196	56	2	42	4	20	21	1,877	1,964	0	0	0	8,100
8	25	0	13	2	3	3	3	1	2	2	2	2	2	3	11	0	0	0	0
9	554	0	205	24	20	78	50	34	3	33	0	26	0	7	66	0	0	0	0
10	2,526	10	1,147	157	239	209	335	206	2	126	167	42	75	48	458	0	0	0	0
11	1,105	0	526	49	214	87	150	26	2	99	617	25	4,620	146	5,508	0	0	0	0
12	1,338	0	743	76	346	98	151	71	2	34	50	130	464	366	1,044	0	0	0	213
13	2,212	77	1,004	129	301	246	239	89	2	124	237	89	655	569	1,674	0	0	0	0
14	1,542	0	761	176	318	130	111	26	2	23	505	94	186	173	981	0	0	0	0
15	1,359	0	564	57	118	137	175	77	2	10	19	2	185	76	293	0	436	0	0
16	1,964	0	795	65	223	228	214	66	3	34	103	40	188	78	442	0	0	0	0
17	1,784	0	743	104	124	284	151	79	2	92	9	30	282	137	551	0	12	0	0
18	1,474	0	669	137	246	179	95	12	2	10	0	0	10	79	99	0	0	0	0
19	1,373	0	624	159	176	129	125	34	2	447	146	65	13	569	1,240	0	1,084	432	0
20	976	96	493	103	154	85	152	0	2	50	56	2	183	132	422	0	197	37	0
21	779	0	377	114	115	79	53	16	2	19	97	0	8	19	143	0	0	0	0
22	490	46	229	95	80	39	14	1	2	70	93	10	62	189	425	0	0	0	0
23	495	0	226	47	62	54	46	16	2	147	51	40	7	53	298	0	0	0	0
24	329	0	173	63	68	25	13	5	2	1,256	454	458	28	508	2,703	0	0	0	0
25	221	0	163	61	63	23	12	4	1	173	260	179	274	108	994	0	0	0	0
26	1,519	262	843	389	294	99	47	14	2	629	148	81	404	114	1,377	0	0	0	0
27	365	0	261	76	101	52	24	8	1	550	491	114	268	207	1,630	0	0	0	0
28	72	176	34	10	13	7	3	1	2	473	376	274	221	285	1,630	0	0	0	0
29	252	0	133	39	52	25	13	4	2	713	173	147	261	234	1,528	0	0	0	188
30	1,267	194	575	180	215	109	55	16	2	103	540	128	43	46	860	0	0	0	0
31	723	0	377	92	125	98	62	0	2	0	0	0	6	152	159	0	912	0	0
32	984	0	451	95	139	145	60	11	2	305	256	149	142	107	960	0	0	0	0
33	687	0	321	82	103	69	29	38	2	10	9	0	21	61	101	0	185	94	0
34	447	0	226	37	70	28	85	7	2	10	14	0	14	53	92	0	0	0	0
35	529	0	272	44	76	72	61	20	2	55	22	19	109	13	218	0	0	0	0
36	863	0	471	140	139	95	67	32	2	47	117	93	15	74	346	0	36	0	0
37	885	0	372	44	94	82	106	46	2	15	3	0	5	120	143	0	294	1,459	0
38	1,011	0	436	66	138	136	73	23	2	13	1	14	7	17	52	0	0	0	0
39	1,097	0	490	105	174	107	84	20	2	8	44	6	21	26	104	0	0	0	0
40	1,648	0	788	280	234	177	73	25	2	52	20	0	55	120	247	0	212	0	0
41	1,743	0	812	181	231	221	134	45	2	104	72	25	403	148	752	0	0	0	0
42	991	0	513	81	174	142	85	31	2	6	2	0	23	18	49	0	0	0	0
43	723	0	356	57	114	99	61	25	2	4	2	0	0	4	10	0	0	0	0
44	1,029	25	526	206	171	68	69	12	2	8	1	33	184	234	460	0	573	0	0
45	1,162	0	620	153	206	90	135	37	2	21	14	11	4	73	123	0	0	0	0
46	958	0	525	156	108	99	85	77	2	16	7	5	121	103	252	0	275	0	0
47	619	0	304	56	53	35	72	89	2	5	4	10	44	45	109	0	0	0	0
48	482	0	239	46	35	23	64	71	2	9	1	0	5	33	47	0	0	0	0
49	56	0	29	6	4	3	8	8	2	18	16	39	0	219	293	0	0	0	0
50	503	115	286	66	39	69	59	53	2	14	18	22	3,497	94	3,645	0	281	0	0

2015 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
51	513	0	238	42	51	33	46	67	2	1	0	0	22	19	43	0	0	0	0
52	697	0	387	122	179	44	13	29	2	2	4	0	39	60	105	0	268	0	0
53	54	0	18	5	9	2	0	2	3	19	113	234	4	27	397	0	0	0	0
54	659	0	411	174	125	60	40	13	2	453	69	46	75	64	706	0	0	0	0
56	453	0	302	23	42	67	85	85	2	4	6	8	191	618	828	0	0	1,559	0
57	447	0	319	25	68	75	98	53	1	0	0	0	8	43	51	0	0	0	0
58	15	0	7	1	1	1	3	2	2	815	33	3	224	65	1,140	0	0	0	0
59	1,092	10	499	112	138	108	109	32	2	325	328	68	114	492	1,326	0	0	0	0
60	1,534	0	786	205	250	143	141	48	2	14	186	13	20	391	623	0	319	0	2,257
61	359	0	156	30	67	40	14	5	2	30	4	35	3	33	105	0	0	0	0
62	2,054	0	1,026	294	359	190	127	56	2	3	21	0	161	214	399	0	817	0	0
63	706	0	311	62	105	66	51	26	2	12	27	0	6	9	54	0	0	0	0
64	593	0	282	57	109	66	35	16	2	1	0	0	0	32	33	0	0	0	0
65	454	0	233	51	80	67	27	8	2	603	445	133	95	109	1,385	0	0	0	0
66	412	82	251	66	92	66	27	1	2	109	288	29	70	178	674	0	11	5	0
67	1,152	0	555	116	192	164	64	19	2	51	1	10	13	35	110	0	0	0	0
68	1,415	0	707	117	342	97	124	27	2	6	301	0	46	66	418	0	0	0	0
69	2,111	0	1,054	327	387	194	120	25	2	56	48	6	7	88	204	0	0	0	0
70	2,332	0	1,059	177	274	278	211	118	2	39	16	4	13	63	135	0	0	0	0
71	842	0	443	149	183	96	0	15	2	99	72	75	59	137	443	0	0	0	0
72	538	0	286	117	114	37	11	7	2	32	43	123	103	119	419	0	414	0	0
73	684	0	346	69	138	87	42	10	2	18	39	54	32	70	213	0	208	0	0
74	1,418	0	763	140	263	161	161	38	2	48	22	8	119	116	313	0	0	0	0
75	646	0	307	113	87	47	41	20	2	344	255	1,102	71	460	2,233	0	265	0	0
76	1,326	105	602	146	243	132	75	6	2	45	84	33	53	185	400	0	201	130	0
77	666	0	328	122	88	86	26	5	2	1	58	4	24	20	107	0	0	0	0
78	285	0	191	51	75	30	20	15	2	58	163	58	612	412	1,303	0	37	0	0
79	263	0	175	48	68	28	19	12	2	8	18	55	88	311	480	0	0	0	0
80	221	1,956	170	43	63	39	17	8	1	46	10	0	83	135	274	0	0	0	607
81	36	0	28	11	9	4	2	2	1	0	42	0	0	652	694	0	0	0	2,464
82	1,031	0	536	199	166	77	83	12	2	20	8	42	0	97	167	0	0	0	0
83	573	0	315	135	96	42	30	12	2	2	7	3	1	378	391	0	599	0	0
84	385	0	202	31	44	73	39	15	2	6	0	129	4,351	648	5,134	0	193	0	0
85	741	0	383	54	138	72	91	29	2	0	0	7	7	79	93	0	168	0	0
86	731	0	386	61	75	150	71	29	2	27	3	0	8	22	60	0	0	0	0
87	2,041	0	1,062	467	415	107	55	19	2	220	163	155	264	285	1,087	0	0	0	0
88	926	127	573	277	155	90	47	4	2	13	5	15	160	76	269	0	0	348	0
89	336	0	174	41	60	55	17	1	2	15	48	2	18	83	166	0	237	0	0
90	680	0	346	82	120	109	33	2	2	14	5	0	1	46	66	0	0	0	0
91	1,182	0	583	168	232	106	40	37	2	130	1,304	271	395	556	2,656	0	0	0	334
92	1,028	0	446	96	149	109	87	5	2	41	437	30	79	173	761	0	0	0	0
93	1,053	0	426	92	137	98	91	8	3	64	206	59	21	198	548	0	0	0	0
94	1,450	0	611	133	190	132	139	17	2	9	62	19	59	242	390	0	494	0	0
95	2,250	0	1,098	240	358	323	145	32	2	15	171	13	138	157	493	0	0	0	0
96	789	0	354	106	130	67	42	9	2	156	92	122	33	262	666	0	361	0	0
97	631	426	342	92	124	68	47	10	2	26	19	103	448	317	914	0	48	258	0
98	787	0	428	132	159	78	48	11	2	371	160	550	716	714	2,512	0	160	0	627
99	1,043	0	565	218	220	84	32	11	2	321	162	85	55	425	1,047	0	0	0	0
100	1,003	0	378	121	119	92	41	5	3	725	750	30	81	409	1,995	0	504	0	0
101	2,845	0	1,206	265	384	305	215	38	2	27	51	26	13	25	143	0	0	0	0

2015 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
102	1,201	0	495	166	202	88	23	16	2	309	878	26	165	299	1,677	0	0	0	0
103	1,264	0	549	297	170	55	20	7	2	89	9	6	24	114	241	0	174	0	0
104	159	0	139	79	41	10	5	4	1	857	231	130	338	190	1,746	0	0	0	0
105	1,058	0	625	233	213	96	56	27	2	194	180	66	197	406	1,044	0	91	0	0
106	564	0	235	89	95	39	12	0	2	719	30	2	664	236	1,651	0	0	0	0
107	0	0	0	0	0	0	0	0	0	194	122	4,014	1,422	429	6,181	0	0	0	0
108	0	0	0	0	0	0	0	0	0	150	59	529	222	42	1,001	0	0	0	0
109	0	0	0	0	0	0	0	0	0	0	6	11	0	1	18	0	0	0	0
110	31	0	31	15	15	1	0	0	1	49	468	152	1,023	413	2,105	0	0	0	2,483
111	187	0	188	140	15	25	8	0	1	183	573	135	201	273	1,365	0	0	0	0
112	3	0	1	1	0	0	0	0	3	749	452	1,304	551	314	3,370	0	0	0	0
113	197	0	109	26	36	23	23	1	2	37	57	500	2	76	671	0	0	0	0
114	2,831	0	1,573	440	549	288	281	15	2	140	193	79	34	407	854	0	0	0	0
115	1,394	929	900	283	408	124	59	25	2	169	56	19	72	173	489	0	0	0	0
116	659	0	299	112	106	29	30	22	2	222	7	0	0	46	275	0	0	0	0
117	922	0	460	108	153	91	85	22	2	497	101	96	0	631	1,325	0	183	0	0
118	1,306	0	503	17	81	64	231	110	3	65	2	5	0	7	79	0	0	0	0
119	766	10	422	49	88	90	83	111	2	41	13	22	183	83	341	0	167	0	0
120	514	0	171	9	30	21	68	43	3	59	2	0	0	0	61	0	0	0	0
121	138	0	63	10	15	14	10	12	2	0	0	0	7	92	99	0	0	0	0
122	2,748	0	1,144	127	126	202	292	398	2	53	1	16	49	217	336	0	269	1,241	0
123	1,207	0	574	146	164	129	96	39	2	39	126	64	51	187	468	0	0	0	0
124	828	0	413	51	85	100	127	51	2	1	0	4	32	58	95	0	272	0	0
125	1,893	0	1,113	276	326	265	165	80	2	54	78	15	61	70	278	0	626	0	0
126	170	0	85	41	24	11	7	2	2	113	132	40	455	263	1,003	0	21	0	0
127	471	0	249	121	69	34	22	3	2	277	357	69	129	455	1,288	0	0	0	0
128	736	0	334	116	102	78	37	1	2	5	29	55	248	124	462	0	0	0	0
129	861	0	409	217	86	49	44	12	2	10	32	26	10	137	215	0	163	0	0
130	1,242	229	697	162	226	161	127	22	2	16	126	0	526	246	915	0	0	0	0
131	830	0	302	10	49	38	138	66	3	124	0	0	0	449	573	0	0	0	0
132	458	0	266	125	90	38	13	0	2	162	151	721	104	942	2,081	0	0	0	627
133	499	0	208	98	71	29	9	0	2	62	34	299	193	160	749	0	0	0	0
134	670	0	223	7	19	56	109	32	3	10	11	0	57	123	201	0	0	2,291	0
136	1,259	137	443	84	150	119	78	14	3	52	35	64	126	15	292	0	0	40	0
137	846	0	332	106	98	93	35	0	3	125	132	14	10	84	364	0	196	0	0
138	2,214	0	820	236	366	134	82	3	3	18	6	0	9	16	49	0	0	0	0
139	958	0	538	229	205	53	40	12	2	141	1,422	192	404	433	2,593	0	565	0	0
140	1,496	0	623	262	227	72	48	13	2	543	68	259	11	52	932	0	0	0	0
141	1,258	0	530	168	219	90	50	2	2	5	1	25	0	71	102	0	325	0	0
142	1,269	70	727	206	225	120	138	38	2	26	8	0	48	34	116	0	0	0	0
143	1,116	0	631	145	266	105	58	58	2	121	222	33	164	154	695	0	0	0	0
144	1,005	77	519	132	158	109	100	21	2	52	730	37	229	335	1,383	0	15	0	0
145	0	0	0	0	0	0	0	0	0	5	631	85	10	99	830	0	0	0	0
146	1,002	0	527	226	132	109	36	24	2	321	1,735	39	137	502	2,734	0	110	0	0
147	1,148	0	425	16	70	56	183	101	3	20	7	0	9	27	63	0	0	0	0
148	796	0	331	25	45	52	79	130	2	2	25	0	40	58	125	0	0	0	0
149	83	0	40	4	6	6	8	15	2	1	1	0	1	0	3	0	0	0	0
150	301	0	122	9	16	15	25	56	2	2	1	10	5	91	109	0	511	128	0
151	708	0	302	18	35	46	74	128	2	17	2	3	17	59	97	0	250	0	0
152	583	0	292	26	47	76	81	62	2	91	14	5	13	64	187	0	0	0	0

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TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
153	817	0	388	23	38	30	92	205	2	18	44	26	322	63	473	0	0	0	0
154	469	0	228	43	56	34	43	53	2	76	143	11	21	1,502	1,753	0	0	0	0
155	599	0	215	7	17	56	108	28	3	27	2	2	2	2	35	0	0	0	0
156	496	0	216	19	42	38	47	70	2	16	3	3	7	0	29	0	0	0	0
157	69	0	53	19	19	11	3	0	2	6	3	0	4	0	14	0	0	0	0
159	533	0	177	9	17	44	84	24	3	0	108	19	0	35	161	0	0	0	0
160	437	0	151	10	20	39	63	18	3	51	3	140	9	24	227	0	0	0	0
161	1,562	0	580	33	149	119	192	86	3	9	48	0	0	32	89	0	0	1,125	0
162	651	0	325	25	52	52	72	125	2	1	23	11	4	1,042	1,081	0	0	0	0
164	1,351	0	587	54	93	113	139	188	2	23	11	14	6	37	91	0	0	0	0
165	2,260	0	753	240	279	137	94	3	3	5	96	11	26	188	326	0	0	0	0
166	1,015	0	396	38	87	99	139	33	3	26	1	7	9	18	61	0	0	0	0
167	5,143	0	2,302	323	675	697	468	139	2	37	228	47	184	342	838	0	627	0	0
168	2,724	0	1,237	127	297	385	336	93	2	1,035	129	204	293	507	2,168	0	893	0	0
169	1,996	461	1,173	315	421	222	154	60	2	2,769	169	202	1,433	372	4,944	0	0	0	0
170	731	0	406	110	149	77	51	20	2	269	406	26	134	918	1,753	0	18	0	0
171	1,029	0	411	34	80	123	137	38	3	25	24	0	14	2	65	0	0	0	0
172	806	0	288	10	44	35	126	74	3	38	114	29	25	481	687	0	833	0	0
173	469	0	198	29	38	27	49	55	2	0	4	0	36	11	51	0	0	0	0
174	101	0	52	10	13	9	11	9	2	4	1	0	3	24	32	0	0	0	0
175	953	0	432	59	97	83	106	88	2	188	43	219	6	222	679	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	330	0	152	33	47	33	28	11	2	2	0	8	1	15	26	0	0	0	0
178	867	0	439	86	134	97	87	36	2	23	22	86	16	421	568	0	115	0	0
179	291	0	153	38	35	19	30	32	2	2	163	2	66	98	331	0	0	0	0
180	449	0	175	15	54	13	77	16	3	2	310	4	129	79	523	0	0	0	0
181	742	0	337	49	91	86	79	32	2	13	27	122	13	4	179	0	0	0	0
182	40	0	19	4	7	5	2	0	3	17	1	20	0	9	47	0	0	0	0
183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
184	551	0	302	78	111	80	33	0	2	16	0	0	0	54	69	0	179	0	0
185	78	0	22	5	1	6	7	4	4	97	484	2	2	968	1,553	0	0	0	0
186	522	0	285	24	90	20	127	24	2	38	0	0	0	13	51	0	0	0	0
187	236	0	96	14	26	16	20	21	3	150	438	16	2	11	617	0	0	0	0
188	1,080	0	400	57	105	68	81	89	3	45	13	3	18	39	118	0	0	0	0
189	1,741	0	757	106	194	127	160	170	2	63	544	307	346	446	1,706	0	687	0	0
190	991	0	381	58	102	66	75	80	3	9	89	5	30	1	134	0	0	0	0
191	572	0	228	38	66	42	49	34	3	9	17	55	17	12	110	0	0	0	0
192	377	0	171	27	48	32	34	29	2	11	6	4	0	26	47	0	0	0	1,881
193	315	0	147	21	41	26	30	29	2	9	4	123	7	0	143	0	0	0	0
194	1,775	0	710	78	153	165	202	112	3	166	908	83	226	127	1,511	0	0	0	0
195	397	0	142	23	35	35	33	16	3	32	51	48	50	31	212	0	0	0	0
196	895	0	376	35	71	90	115	65	2	74	53	103	37	98	364	0	271	0	0
197	1,838	0	874	79	234	237	224	100	2	149	47	27	228	253	704	0	0	0	0
198	2,890	0	1,155	112	192	272	429	149	3	114	139	48	123	105	529	0	0	0	0
199	2,115	0	819	61	107	133	264	253	3	15	13	34	260	72	394	0	390	0	0
200	2,717	0	1,042	82	114	202	299	345	3	59	164	51	31	14	318	0	0	0	0
201	2,272	0	873	67	64	132	199	412	3	19	37	1	51	32	140	0	0	0	0
202	1,064	0	462	13	68	143	154	84	2	21	16	0	54	115	206	0	331	0	0
203	2,020	137	650	42	39	67	171	330	3	124	1	5	117	101	348	0	375	0	0
204	771	0	282	19	17	27	78	142	3	14	9	13	27	75	137	0	0	0	0

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205	349	0	151	10	10	15	41	75	2	51	1,588	12	124	288	2,063	0	0	0	69
206	59	0	27	2	5	8	10	3	2	1,105	1,005	734	501	176	3,521	0	0	0	0
207	625	189	347	46	75	93	70	63	2	5	31	0	335	0	371	0	0	0	0
208	2,154	0	953	89	181	247	201	235	2	818	547	506	682	5,297	7,849	0	881	0	241
209	0	0	0	0	0	0	0	0	0	1,891	814	37	223	78	3,043	0	0	0	0
210	613	0	340	30	66	64	103	78	2	734	2,915	129	1,302	342	5,421	0	0	0	0
211	2,796	0	1,220	71	205	337	424	183	2	59	4	53	216	57	389	0	0	0	0
212	2,346	0	868	98	127	155	227	262	3	17	20	18	141	230	426	0	705	0	0
214	1,212	0	488	6	51	98	181	152	3	25	95	3	216	35	374	0	0	0	0
216	0	0	0	0	0	0	0	0	0	0	2	0	2	3	7	0	0	0	0
217	4,250	7,643	1,131	52	400	429	130	120	4	78	298	322	1,376	1,244	3,318	6,695	515	1,340	0
218	154	0	59	2	10	8	24	15	3	65	54	35	6	36	196	0	0	0	0
219	3,040	0	950	33	130	99	426	262	3	2	0	2	1	35	40	0	1,084	0	0
220	82	0	31	2	6	5	13	6	3	2	2	2	2	3	11	0	0	0	0
221	1,533	0	567	43	56	65	284	119	3	39	27	0	12	14	92	0	0	0	0
222	606	0	209	19	19	20	102	49	3	56	2	4	7	39	108	0	0	0	0
223	101	0	44	2	4	5	20	13	2	64	36	24	908	26	1,058	0	0	0	0
226	850	0	293	6	38	29	107	113	3	63	10	0	79	21	173	0	0	0	0
227	1,264	0	486	15	37	49	218	167	3	26	29	30	50	22	157	0	0	0	0
228	769	0	248	5	30	48	86	78	3	4	0	30	0	195	229	0	1,329	0	0
229	7	0	3	0	0	0	1	1	3	2	498	2	2	354	857	0	0	0	0
230	6,676	0	2,302	27	46	385	827	1,017	3	15	203	17	64	47	346	0	0	0	0
231	312	0	104	1	12	9	40	43	3	9	24	0	0	0	33	0	0	0	0
232	1,274	0	439	12	66	47	159	154	3	29	10	4	6	32	81	0	0	0	0
233	381	0	123	3	18	12	43	46	3	0	0	15	89	212	316	0	0	1,727	0
234	1,157	0	462	12	32	82	167	169	3	97	102	261	288	803	1,550	0	2,228	83	0
235	1,910	0	636	51	57	58	167	304	3	67	54	97	365	178	761	0	0	764	0
236	1,407	0	469	25	42	75	122	205	3	96	9	8	8	79	200	0	0	0	0
238	3,900	0	1,500	51	116	348	746	239	3	43	174	4	26	83	330	0	0	0	0
240	500	0	200	23	25	24	61	67	3	13	0	0	70	7	90	0	0	0	0
241	328	0	98	4	7	24	49	14	3	32	0	0	0	3	35	0	0	0	0
242	319	0	114	4	9	29	57	16	3	38	0	6	0	13	57	0	0	0	0
243	1,111	0	411	71	49	73	106	112	3	20	58	6	119	83	286	0	0	0	0
244	408	0	157	10	35	34	52	26	3	18	11	24	0	12	65	0	0	0	0
245	228	0	95	5	13	12	29	37	2	6	4	0	5	46	61	0	0	0	0
247	172	0	64	5	15	13	21	10	3	1	19	0	14	16	50	0	0	0	0
248	634	0	254	11	64	56	58	64	3	79	8	5	68	0	160	0	0	0	0
249	119	0	47	2	11	11	11	12	3	0	2	0	2	3	7	0	0	0	0
250	562	0	201	10	43	43	45	60	3	8	14	0	15	13	50	0	0	0	0
251	1,010	0	388	34	20	138	106	91	3	29	198	6	80	93	406	0	0	0	0
252	1,461	0	521	42	11	110	180	178	3	123	48	0	18	23	212	0	0	0	0
253	405	0	157	10	35	34	53	26	3	23	11	0	0	110	143	0	519	0	0
254	1,042	0	434	35	76	58	111	154	2	171	0	13	40	41	265	0	0	0	0
255	1,038	0	371	25	56	56	107	128	3	131	0	17	47	72	267	0	313	0	0
256	632	0	236	29	32	29	81	66	3	38	10	0	5	10	64	0	0	0	0
257	429	0	156	21	23	19	51	43	3	11	4	5	0	17	36	0	0	0	0
258	508	0	191	31	30	24	57	50	3	16	4	0	2	17	39	0	0	0	0
259	1,282	0	430	30	69	67	121	143	3	182	10	26	7	11	237	0	0	0	0
260	143	0	53	7	17	8	12	9	3	2	12	15	274	133	437	0	0	0	0
261	1,155	0	580	65	157	96	152	110	2	30	528	51	45	20	673	0	0	0	0

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262	1,657	0	643	40	145	225	159	74	3	92	1,313	42	140	174	1,762	0	0	0	0
263	862	0	433	69	115	88	92	68	2	332	1,210	1,063	1,647	662	4,913	0	0	0	3,762
264	189	0	91	15	23	29	18	6	2	103	1,627	233	61	262	2,287	0	0	0	0
265	2,773	0	1,122	57	185	302	374	204	3	72	0	111	435	206	824	0	367	90	0
266	2,650	0	1,002	63	197	207	251	283	3	98	0	13	27	181	319	0	0	530	0
267	671	0	239	33	50	74	51	31	3	550	745	94	641	536	2,566	0	0	0	0
270	1,742	47	744	58	171	241	224	49	2	36	174	10	63	76	359	0	0	0	0
271	2,349	0	787	0	97	197	302	192	3	370	428	31	12	243	1,084	0	504	0	0
273	1,251	0	403	41	34	58	147	124	3	38	157	0	35	26	256	0	573	0	0
275	1,469	0	612	38	49	77	295	153	2	31	273	2	24	74	404	0	0	0	0
276	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
278	0	0	0	0	0	0	0	0	0	68	128	402	8	277	883	0	0	0	0
279	52	0	30	3	10	10	8	0	2	330	26	34	73	78	541	0	0	0	0
280	2,772	900	737	79	233	234	121	70	4	97	303	3,086	818	1,574	5,878	6,645	0	0	0
281	0	0	0	0	0	0	0	0	0	1,265	649	380	244	255	2,793	0	0	0	0
283	903	0	361	25	96	81	105	54	3	4	119	19	31	98	271	0	0	0	0
284	1,159	0	433	50	134	84	99	66	3	34	8	3	3	18	66	0	0	0	0
285	1,541	0	555	13	125	132	200	85	3	8	0	0	26	187	222	0	715	0	0
286	919	0	386	23	89	129	94	51	2	13	0	0	42	49	104	0	274	0	0
287	848	0	396	96	113	70	92	25	2	27	54	89	185	69	423	0	0	0	0
288	2,257	0	838	33	199	239	225	142	3	37	35	10	42	288	411	0	334	1,375	0
289	81	0	35	0	6	10	10	9	2	0	0	0	1	119	120	0	0	259	0
290	874	10	358	53	138	106	48	13	2	39	4	0	30	117	190	0	881	0	0
291	1,517	39	513	6	110	153	164	81	3	99	16	59	62	41	277	0	0	0	0
292	1,121	0	359	4	65	98	101	91	3	17	0	2	15	8	43	0	0	0	0
293	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
294	12	0	4	0	0	2	1	1	3	0	2	0	3	3	8	0	0	0	0
295	8,617	7,243	2,264	196	1,246	606	137	79	4	225	1,781	518	1,010	2,030	5,563	30,000	2,492	0	82
296	5	0	2	0	1	1	0	0	3	235	27	334	0	45	641	0	0	0	0
297	892	0	343	48	102	105	64	24	3	21	316	0	10	3	350	0	0	0	0
298	133	0	70	9	18	14	19	10	2	47	101	10	13	24	194	0	0	0	0
299	663	0	221	31	55	42	60	33	3	0	3	6	0	0	9	0	0	0	0
300	2,257	0	867	296	298	155	102	16	3	155	7	33	10	17	222	0	0	0	0
301	9	0	4	1	1	1	1	0	3	81	49	0	3	8	141	0	0	0	0
302	126	0	25	9	1	8	5	2	5	462	683	1,642	85	587	3,458	0	34	1,202	0
303	631	3,215	287	47	89	65	65	21	2	1,633	867	607	57	506	3,670	0	0	0	0
304	571	0	163	9	15	24	40	75	4	14	14	0	3	56	87	0	335	0	0
305	6	0	5	1	2	1	1	0	1	1	0	0	2	2	5	0	0	0	0
306	1,737	0	599	7	136	164	163	129	3	36	3	0	6	25	70	0	0	0	0
307	445	0	139	11	17	26	33	52	3	19	0	0	7	23	49	0	0	0	0
308	2,835	0	945	10	167	276	234	258	3	2	2	2	58	13	77	0	0	0	0
310	475	0	172	2	19	70	46	35	3	2	2	2	3	3	12	0	0	0	0
311	2,820	0	1,007	24	180	336	276	191	3	826	22	0	19	3	870	0	0	0	0
312	20	0	10	1	2	2	3	2	2	65	43	32	0	141	282	0	0	0	0
313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
314	728	0	251	11	70	63	71	36	3	22	0	0	0	3	25	0	0	0	0
315	1,672	0	643	110	115	200	133	85	3	49	21	13	21	185	289	0	416	0	0
316	434	0	181	2	33	59	50	37	2	1	788	1	81	260	1,131	0	0	1,293	0
317	1,578	0	526	6	99	171	144	106	3	8	0	0	1	14	23	0	0	0	0
318	1,134	0	420	81	174	117	25	23	3	12	5	0	32	2	51	0	0	0	0

2015 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
319	1,303	0	543	122	133	148	98	42	2	13	59	44	20	115	250	0	746	0	0
320	0	0	0	0	0	0	0	0	0	0	1,176	0	0	50	1,226	0	0	0	0
321	462	0	272	24	80	79	63	26	2	90	34	159	230	1	515	0	0	0	0
322	1,016	0	363	32	71	116	102	42	3	22	59	58	2	69	209	0	0	0	0
323	1,099	0	379	85	92	104	68	30	3	633	0	143	0	0	776	0	0	0	0
324	908	0	363	5	119	105	96	38	3	16	33	135	23	19	226	0	0	0	0
325	367	0	131	2	25	37	37	30	3	176	0	0	0	53	229	0	0	0	0
326	609	0	210	3	39	60	59	49	3	4	94	43	2	3	146	0	0	0	0
327	308	0	123	35	30	33	15	10	3	6	0	0	0	0	6	0	0	0	0
328	1,798	0	642	7	120	184	181	150	3	1	2	1	2	3	9	0	0	0	0
329	393	0	151	2	29	43	42	35	3	11	1	2	1	5	20	0	0	0	0
330	484	0	146	40	37	39	18	12	3	316	50	62	0	0	428	0	0	0	0
331	439	0	169	48	42	45	21	13	3	91	65	210	17	34	416	0	0	0	0
332	364	0	140	40	35	37	17	11	3	15	34	963	48	150	1,211	0	434	0	0
333	2,540	0	907	30	179	322	239	137	3	59	8	77	73	67	284	0	17	76	0
334	2,904	0	854	28	169	303	225	129	3	2	2	2	2	3	11	0	0	0	0
335	3,066	0	958	10	185	272	269	222	3	10	0	18	1	244	273	0	642	1,384	0
336	738	0	295	8	57	106	79	45	3	38	0	0	27	59	124	0	0	0	0
338	1,507	0	958	307	288	273	52	38	2	2	5	0	11	21	39	0	53	0	0
339	0	0	0	0	0	0	0	0	0	216	26	366	0	0	608	0	0	0	0
340	187	0	72	8	16	25	18	5	3	21	0	4	0	7	32	0	0	0	0
341	626	0	232	3	42	67	57	63	3	60	0	0	0	9	69	0	0	0	0
343	3,059	13	1,019	134	238	338	221	89	3	24	85	8	124	119	359	0	358	0	0
344	378	0	145	17	33	51	34	9	3	23	0	180	3	0	206	0	0	0	0
345	43	0	20	2	5	7	4	1	2	1	2	2	3	3	11	0	0	757	0
346	248	0	103	12	24	37	23	6	2	66	15	0	0	28	109	0	0	0	0
347	917	0	336	78	97	60	79	22	3	3	5	36	6	7	56	0	0	0	0
348	1,067	0	395	5	83	99	145	63	3	149	60	70	69	131	479	0	650	0	0
349	458	0	276	30	56	98	45	47	2	0	13	5	0	0	18	6,612	0	0	0
350	114	0	44	6	9	16	10	3	3	8	0	63	0	2	73	0	0	0	0
351	756	0	252	27	58	87	63	17	3	2	19	26	1	7	55	0	314	0	0
352	764	0	246	50	59	78	50	8	3	13	27	10	8	11	69	0	0	0	0
353	1,022	0	340	77	80	106	65	13	3	22	4	6	0	3	35	0	0	0	0
354	821	0	315	78	74	93	59	11	3	8	3	55	0	7	73	0	0	0	0
355	1,233	0	440	120	104	124	77	15	3	32	19	0	0	10	61	0	0	0	0
356	367	0	126	26	32	40	25	4	3	17	2	0	0	0	19	0	0	0	0
357	861	0	307	71	72	94	59	11	3	24	27	0	0	10	61	0	0	0	0
358	32	0	14	7	2	2	2	1	2	1	180	2	400	49	633	0	0	0	0
361	973	0	531	15	78	192	176	71	2	27	116	0	62	144	350	0	935	0	0
363	2,256	143	852	116	180	158	246	152	3	166	113	21	189	350	840	0	428	0	0
364	2,723	86	1,046	99	189	303	315	140	3	132	199	111	188	439	1,070	0	60	0	0
365	2,632	0	1,011	79	215	264	300	153	3	48	181	4	490	371	1,094	0	0	0	0
366	2,099	0	830	41	120	279	260	131	3	26	1	16	10	85	138	0	0	0	0
368	1,785	44	811	98	196	195	264	58	2	324	401	320	1,100	549	2,693	0	0	0	306
369	904	0	365	7	44	62	171	80	3	307	20	24	65	158	575	0	0	0	0
370	2,147	0	895	127	290	256	180	41	2	78	283	155	141	405	1,062	0	7	0	0
371	1,272	0	517	68	122	160	150	17	3	19	40	0	26	156	241	0	775	0	0
372	383	0	145	18	13	39	37	38	3	4	0	0	3	65	72	0	506	0	0
374	1,175	0	489	89	211	118	58	13	2	639	282	197	25	169	1,312	0	0	0	0
375	2,935	0	1,250	206	412	436	176	19	2	1,294	234	78	54	302	1,961	0	0	0	0



2015 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
376	1,688	25	635	108	135	126	210	56	3	1,251	568	236	164	436	2,654	0	0	0	0
377	585	0	234	51	63	60	42	17	3	109	21	17	0	17	164	0	0	0	0
378	4	0	2	0	0	0	1	1	1	3	0	1	0	3	7	0	0	0	0
379	23	0	7	2	2	1	1	1	3	2	150	27	27	102	308	0	0	0	0
380	29	0	18	4	6	4	3	1	2	209	60	41	0	18	328	0	0	0	0
381	4,728	0	1,817	290	641	422	359	104	3	63	78	55	21	190	407	0	792	43	0
382	2,438	0	902	62	255	287	241	57	3	46	5	0	1	65	117	0	703	0	0
385	3,669	0	1,264	70	239	413	403	139	3	248	63	329	81	29	749	0	0	0	0
386	1,528	0	566	102	140	145	112	68	3	540	15	6	0	27	588	0	0	0	0
387	0	0	0	0	0	0	0	0	0	13	542	74	0	0	629	0	0	0	0
388	1,350	0	500	80	100	150	100	70	3	18	18	16	0	3	55	0	0	0	0
389	0	0	0	0	0	0	0	0	0	2	2	2	3	3	12	0	0	0	0
390	565	0	226	32	57	67	51	19	3	2	0	0	0	106	108	0	190	0	0
391	506	0	201	28	50	59	45	19	3	160	5	4	0	33	202	0	0	0	0
392	562	0	208	40	58	55	40	15	3	77	22	0	0	12	111	0	0	0	0
393	958	0	368	81	101	91	68	27	3	47	5	0	0	202	254	0	1,551	0	0
394	31	0	12	0	1	3	6	1	3	2	2	2	2	3	11	0	0	0	0
395	347	0	133	29	38	33	24	10	3	0	36	0	0	4	40	0	0	0	0
396	597	0	229	46	68	57	41	17	3	73	14	44	18	7	156	0	0	0	0
397	1,525	0	492	6	107	144	128	107	3	2	0	18	2	66	88	0	975	0	0
398	5,561	0	1,686	112	225	562	225	562	3	0	0	82	0	0	82	0	0	0	0
399	9,587	0	2,996	450	600	898	600	448	3	2	84	2	231	3	322	0	9,725	0	0
400	4,887	0	1,685	100	160	682	622	121	3	222	37	29	36	114	437	0	0	2,511	0
401	1,861	0	1,033	316	366	229	98	24	2	272	138	20	167	154	752	0	0	0	0
403	881	139	419	110	203	64	18	24	2	41	97	3	174	128	443	0	0	0	0
407	2,387	0	1,200	280	497	225	132	67	2	33	409	16	82	195	735	0	0	0	0
409	934	0	283	3	52	82	69	77	3	7	7	39	0	1	54	0	0	0	0
410	3,061	0	1,092	6	176	231	519	160	3	18	42	27	48	35	170	0	0	0	0
411	78	0	34	0	3	6	19	6	2	26	26	9	4	0	65	0	0	0	0
413	1,119	0	441	57	118	112	105	50	3	33	31	182	123	138	508	0	446	0	0
414	2,469	0	957	144	219	267	195	131	3	72	109	15	79	106	380	0	14	0	0
415	1,933	0	807	97	242	142	254	73	2	18	16	21	16	52	123	0	0	0	0
416	1,407	10	557	10	60	101	265	121	3	8	21	66	0	41	137	0	0	0	0
417	2,115	0	1,091	280	352	179	215	66	2	12	83	13	68	49	225	0	0	0	0
418	2,068	0	802	79	252	210	240	21	3	16	176	63	801	357	1,413	0	1,094	0	0
419	1,333	0	501	37	76	91	186	111	3	5	0	0	31	44	80	0	0	0	0
420	1,557	0	707	69	188	195	175	81	2	13	1	0	2	62	78	0	0	0	0
422	1,814	0	723	50	128	195	257	92	3	362	200	1,019	42	381	2,005	0	50	0	0
423	1,556	0	609	110	180	151	117	52	3	16	305	95	140	387	943	0	713	0	0
424	1,595	0	665	83	145	148	137	150	2	68	109	58	56	142	433	0	0	0	0
425	836	0	387	48	116	71	129	25	2	130	168	70	325	497	1,190	0	375	0	162
430	1,604	0	572	136	177	143	109	6	3	296	76	21	6	21	420	0	0	0	0
435	1,715	0	600	40	209	170	181	0	3	43	2	6	0	2	53	0	0	0	0
436	2,315	0	890	178	262	289	138	22	3	351	187	585	117	772	2,012	0	332	1,110	627
437	3,131	0	1,158	193	434	339	154	38	3	63	8	0	6	74	151	0	443	0	0
440	1,357	0	617	102	142	161	171	41	2	19	9	3	26	73	130	0	204	0	0
441	375	0	220	47	61	49	46	18	2	13	247	92	29	125	506	0	0	0	0
442	794	0	426	90	119	108	78	32	2	12	3	23	9	38	85	0	14	0	0
443	1,420	0	495	27	34	37	141	256	3	11	5	18	118	28	180	0	0	0	0
444	1,517	0	555	10	28	81	213	224	3	49	4	19	5	52	129	0	0	0	0

2015 SMALL AREA FORECAST

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445	1,181	6	560	86	138	94	172	69	2	9	34	25	18	47	135	0	0	0	0
446	41	0	24	10	10	4	0	0	2	0	0	0	7	8	15	0	0	0	0
447	905	0	298	4	54	81	84	75	3	13	0	2	8	49	73	0	0	0	0
448	638	0	361	116	141	60	26	19	2	4	6	104	14	61	189	0	0	0	0
449	1,010	0	572	187	123	121	101	40	2	16	89	24	40	252	421	0	387	0	0
450	477	0	270	76	97	43	27	26	2	62	148	291	49	170	720	0	0	0	0
451	13	0	9	2	3	2	1	1	2	2	0	2	0	47	51	0	0	0	0
452	412	0	228	66	83	37	22	20	2	0	58	27	21	121	227	0	0	0	0
453	361	0	194	65	43	41	33	12	2	78	23	40	11	165	317	0	307	423	0
454	16	0	10	5	3	2	0	0	2	0	0	0	0	0	0	0	0	0	0
455	637	0	339	83	76	54	76	50	2	33	88	15	6	63	205	0	0	0	0
456	665	61	329	91	79	54	66	39	2	13	4	0	58	29	104	0	0	0	0
457	1,681	0	555	18	42	56	249	191	3	21	16	79	565	687	1,368	0	0	0	0
458	891	0	424	28	59	66	173	98	2	2	2	2	14	5	25	0	0	0	0
459	412	0	137	3	8	28	50	48	3	58	14	0	0	0	72	0	0	0	0
460	1,820	0	650	98	130	195	130	97	3	2	2	2	2	3	11	0	0	0	0
461	19	0	8	2	2	2	2	1	2	2	0	2	0	0	4	0	0	0	0
463	2,630	0	974	11	198	246	261	258	3	9	0	99	0	13	121	0	0	0	0
464	1,227	0	409	6	134	118	108	43	3	39	76	262	10	74	460	0	565	0	0
465	2,024	0	653	21	129	232	172	99	3	5	2	0	0	42	49	0	0	0	0
466	4,502	0	1,608	18	402	476	447	265	3	2	64	20	15	49	149	0	358	0	0
467	310	0	107	4	21	38	28	16	3	33	3	0	0	0	36	0	358	0	0
469	1,579	0	385	5	74	109	108	89	4	2	2	2	2	6	14	0	0	0	0
470	558	0	180	2	20	73	48	37	3	83	4	0	0	89	176	0	547	0	0
471	1,788	0	777	53	166	181	241	135	2	1,407	189	6	224	26	1,852	0	0	0	0
472	2,068	0	939	195	252	211	217	65	2	1,366	90	760	25	169	2,410	0	9	0	0
473	1,852	225	841	325	295	135	68	18	2	24	78	4	12	130	248	0	238	284	0
474	10	0	4	1	2	1	1	0	2	2	2	2	2	3	11	0	0	0	0
475	1,130	0	628	201	290	58	79	0	2	17	17	0	13	58	105	0	433	0	0
476	947	0	526	169	242	48	67	0	2	9	0	49	14	15	87	0	0	0	0
477	460	0	200	40	40	40	80	0	2	63	1	0	494	3	561	0	0	0	0
478	570	0	300	45	120	90	45	0	2	2	2	2	2	3	11	0	0	0	0
479	346	0	128	43	57	13	15	0	3	209	193	334	71	132	939	0	0	0	0
480	756	0	269	22	43	41	57	106	3	19	7	10	21	10	67	0	0	0	0
481	0	0	0	0	0	0	0	0	0	72	273	111	0	124	580	0	362	363	0
482	1,274	0	471	13	61	47	181	169	3	9	4	12	3	3	31	0	0	0	0
483	1,157	0	428	10	22	78	156	162	3	11	154	21	352	292	830	0	1,803	0	0
484	1,222	0	488	44	89	132	136	88	3	26	28	59	10	157	280	0	0	0	0
485	1,670	0	596	25	63	165	266	77	3	84	1	6	0	7	98	0	0	0	0
486	162	0	47	6	9	7	12	13	3	6	0	32	0	0	38	0	0	0	0
488	4,487	0	1,446	60	125	363	669	229	3	36	23	7	14	95	175	0	589	0	0
489	3,308	0	1,002	29	55	157	572	189	3	85	13	0	125	243	466	0	494	0	0
490	2,542	0	818	14	138	207	311	147	3	6	4	19	6	81	116	0	0	0	0
491	286	0	119	8	29	27	36	19	2	31	18	0	25	0	74	0	0	0	0
492	473	0	182	13	31	27	51	61	3	7	4	0	4	19	34	0	0	0	0
494	1,253	0	485	5	45	88	177	171	3	96	0	6	24	102	228	0	0	0	0
495	1,194	0	442	17	37	48	198	141	3	9	40	0	56	60	165	0	0	0	0
496	356	0	132	35	41	20	19	17	3	21	0	0	2	10	33	0	0	0	0
497	1,493	0	649	21	48	66	289	225	2	93	296	0	75	840	1,304	0	0	0	0
498	1,647	362	760	38	90	118	296	217	2	81	182	1,682	305	29	2,279	0	0	0	0

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499	1,840	0	800	0	114	229	229	228	2	2	2	2	2	3	11	0	0	0	0
500	430	0	180	16	65	55	29	15	2	71	26	43	72	39	251	0	0	0	0
501	1,355	0	586	97	194	132	136	27	2	47	170	38	121	103	479	0	0	0	0
502	1,082	0	456	51	137	107	136	25	2	69	291	10	255	247	872	0	0	0	0
503	955	0	385	50	79	70	143	43	3	260	52	41	170	94	617	0	0	0	0
504	754	0	272	41	64	54	90	24	3	142	81	197	66	153	639	0	84	0	0
505	1,378	0	556	74	74	145	181	83	3	42	38	102	103	1,214	1,499	0	317	992	0
506	1,616	0	618	84	129	119	181	104	3	89	27	20	45	121	301	0	0	0	0
507	916	0	334	35	52	56	116	75	3	49	2	14	18	159	242	0	691	0	0
508	1,100	0	415	38	148	127	68	33	3	12	12	67	35	135	261	0	406	0	0
509	340	0	160	26	73	37	23	0	2	236	523	198	469	361	1,787	0	0	0	0
510	484	0	242	36	40	64	72	30	2	62	135	15	166	43	423	0	0	0	0
511	142	0	53	11	16	14	10	1	3	6	4	3	4	20	38	0	0	0	0
512	538	0	269	104	91	35	22	17	2	19	9	20	110	90	248	0	0	0	0
513	477	0	318	89	123	48	35	23	2	66	23	62	289	249	689	0	0	164	0
514	182	183	108	33	36	21	15	3	2	56	9	2,169	691	427	3,353	0	23	165	627
517	1,601	0	642	53	99	92	133	266	3	14	15	36	35	24	124	0	0	0	0
518	978	0	443	36	69	65	92	181	2	11	200	0	113	99	423	0	0	0	0
519	2,962	95	975	89	168	157	207	353	3	11	2	0	17	80	110	0	399	0	0
520	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	702	0	0	0
521	1,255	0	497	44	82	75	103	192	3	12	58	0	66	121	257	0	341	0	0
522	1,703	0	587	46	60	119	240	123	3	75	2	0	5	16	98	0	0	0	0
523	646	0	239	0	0	38	73	128	3	0	103	6,195	1	374	6,673	0	0	0	0
524	894	0	319	25	31	62	126	76	3	16	2	0	3	9	30	0	0	0	0
525	2,040	0	849	73	94	184	317	181	2	221	114	6	3	38	382	0	0	0	0
526	392	0	218	28	29	38	61	61	2	83	32	0	17	32	164	0	7	0	0
527	9	0	9	0	1	1	4	3	1	32	0	0	0	37	69	0	0	0	0
528	7	0	3	0	0	1	1	1	3	0	2	2,296	2	2	2,302	0	0	0	0
529	275	0	115	23	16	13	29	33	2	11	22	0	0	19	52	0	0	0	0
532	82	0	64	48	5	8	3	0	1	0	103	190	49	435	777	0	0	1,983	0
533	309	0	206	153	17	27	9	0	2	57	118	436	662	176	1,449	0	0	0	0
534	125	0	68	50	6	9	3	0	2	42	253	384	307	363	1,349	0	0	0	0
535	845	0	324	157	88	44	34	1	3	137	17	3,508	65	241	3,968	0	0	0	0
600	41	0	17	3	6	5	2	0	3	91	442	9	80	60	680	0	0	0	0
601	813	0	307	14	48	115	95	35	3	9	330	36	46	98	519	0	0	0	0
602	74	0	33	10	12	7	3	0	3	201	88	17	348	377	1,032	0	0	0	0
603	1,337	0	593	104	161	186	119	23	2	21	21	2	19	96	159	0	442	0	0
604	124	0	54	11	18	15	9	2	2	569	83	95	66	164	978	0	0	0	359
605	1,417	10	577	87	174	87	179	49	3	29	1	9	6	110	156	0	471	0	0
606	122	0	53	11	17	14	9	2	2	334	189	151	257	312	1,243	0	0	0	0
607	2,097	405	955	370	308	167	100	11	2	17	264	103	144	535	1,064	0	0	1,382	0
608	1,486	0	620	165	175	130	121	29	2	84	441	25	39	78	666	0	0	0	0
609	2,454	0	1,038	451	449	106	32	0	2	11	349	3	67	121	550	0	413	0	0
610	1,774	0	590	126	216	180	65	5	3	4	42	5	14	155	219	0	605	0	0
611	642	0	245	69	105	44	23	5	3	16	114	16	104	64	315	0	0	0	0
612	1,736	0	1,020	293	447	208	56	16	2	186	187	833	510	67	1,783	0	0	0	0
613	1,402	0	506	62	167	150	94	33	3	1	1	2	4	8	16	0	0	0	0
614	502	0	179	53	56	41	27	2	3	2	0	24	0	0	26	0	0	0	0
615	1,204	0	426	50	119	124	117	16	3	6	24	8	11	79	128	0	431	0	0
616	2,155	0	774	77	211	234	221	31	3	271	0	5	13	46	335	0	343	0	0

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TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
617	1,007	0	356	49	125	78	104	0	3	166	23	0	29	55	272	0	0	0	0
618	1,661	0	772	210	358	168	27	10	2	17	162	3	62	16	260	0	0	0	0
619	1,448	0	641	119	223	176	104	19	2	954	91	43	626	115	1,829	0	0	0	219
620	1,481	0	545	101	189	149	89	16	3	0	33	0	66	35	134	0	0	0	0
621	1,146	0	390	43	154	102	91	0	3	0	3	0	0	3	6	0	0	0	0
622	1,656	0	570	93	128	187	146	17	3	0	1	0	0	77	78	0	400	0	0
623	19	0	7	1	1	2	3	1	3	0	94	0	0	0	94	0	0	0	0
624	1,849	0	637	58	160	182	219	17	3	615	2	3	94	550	1,264	0	1,166	0	0
625	1,499	0	576	107	208	167	77	18	3	22	16	2	60	14	115	0	0	0	0
628	119	0	35	5	6	5	10	10	3	40	36	0	116	8	200	0	0	0	0
629	11	0	4	0	0	1	1	1	3	2	2	2	2	3	11	0	0	0	0
630	2,295	0	765	45	72	301	294	53	3	2	26	2	2	27	59	0	0	0	0
631	4,991	0	1,468	87	137	578	564	102	3	49	27	11	45	36	168	0	716	0	0
632	2,377	0	804	54	83	333	288	46	3	67	0	11	14	113	205	0	0	0	0
633	984	0	324	3	60	112	121	28	3	6	0	0	22	403	431	0	975	0	0
634	0	0	0	0	0	0	0	0	0	115	1,100	0	103	283	1,601	0	0	0	0
635	0	0	0	0	0	0	0	0	0	91	1,432	137	155	94	1,908	0	0	0	0
637	3,006	0	2,004	154	617	154	925	154	2	10	139	11	314	14	488	0	0	0	0
638	11,055	0	4,422	349	1,293	298	2,036	446	3	18	176	10	481	27	712	0	0	0	0
639	0	0	0	0	0	0	0	0	0	0	29	0	0	4	32	0	0	0	0
640	48	0	25	3	4	5	6	8	2	2	2	2	2	3	11	0	0	0	0
641	13	0	4	0	0	1	1	2	3	0	0	0	0	189	189	0	358	3,268	0
642	2,208	0	960	32	73	98	429	328	2	17	0	6	0	96	119	0	0	0	0
643	1,392	0	580	193	387	0	0	0	2	2	2	2	2	3	11	0	0	0	0
644	1,908	0	596	48	71	115	242	119	3	105	454	702	109	268	1,638	0	0	0	0
645	1,684	0	526	48	74	95	202	107	3	42	0	0	55	344	441	0	1,694	1,304	0
646	0	0	0	0	0	0	0	0	0	2	94	2	400	3	502	0	0	0	0
647	2,032	0	634	75	68	104	226	161	3	107	44	44	8	349	551	0	1,661	0	0
649	3,510	0	1,300	70	102	164	628	336	3	2	462	2	3	3	472	0	0	0	0
650	6,150	0	2,050	109	162	257	991	531	3	2	2	2	928	3	937	0	716	757	0
652	13	0	5	0	1	1	2	2	2	2	201	2	302	3	510	0	0	0	0
653	1,424	0	491	6	114	158	132	81	3	14	6	3	0	52	75	0	0	0	0
654	812	0	262	3	48	76	64	71	3	57	19	0	0	178	254	0	449	0	0
655	1,458	0	540	19	42	54	241	184	3	351	1,299	130	212	60	2,052	0	1,084	0	0
656	668	0	267	44	66	62	57	38	3	0	0	35	5	55	95	0	490	0	0
657	0	0	0	0	0	0	0	0	0	2	76	2	350	74	504	0	0	0	0
658	0	0	0	0	0	0	0	0	0	100	105	2	541	105	852	0	0	0	0
659	0	0	0	0	0	0	0	0	0	0	0	20	0	892	912	0	0	0	6,896
800	14	0	8	5	1	1	1	0	2	0	0	14	0	0	14	0	0	0	0
801	926	0	364	20	44	57	152	92	3	0	0	0	42	0	42	0	0	0	0
802	495	0	215	19	22	61	67	46	2	47	87	26	28	47	234	0	0	0	0
803	818	0	314	25	50	80	89	71	3	49	41	0	61	246	397	0	0	0	0
804	5	0	2	0	0	0	1	1	3	0	0	0	0	128	128	0	2,102	662	0
805	261	0	110	20	32	25	26	7	2	1	0	0	0	1	2	0	0	0	0
806	334	0	132	24	39	29	31	9	3	13	19	0	4	5	41	0	0	0	0
807	778	0	289	57	89	65	62	16	3	11	6	2	15	4	37	0	0	0	0
808	592	0	224	45	69	51	47	12	3	48	9	0	5	4	66	0	0	0	0
809	576	0	210	26	51	40	67	27	3	11	99	3	4	1	118	0	0	0	0
810	417	0	167	26	43	32	46	19	3	34	0	25	0	148	207	0	440	252	0
811	1,607	0	502	66	132	96	145	63	3	48	12	8	9	5	82	0	0	0	0

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812	283	0	101	23	33	22	18	6	3	2	3	0	1	1	8	0	0	0	0
813	810	0	317	71	101	67	59	20	3	339	13	5	12	10	378	0	0	0	0
814	66	0	27	5	9	6	5	2	3	16	2	19	0	0	37	0	0	0	0
815	173	0	65	12	20	15	15	4	3	8	1	3	0	4	16	0	0	0	0
816	116	0	54	10	15	12	14	4	2	31	1	5	0	9	46	0	0	0	0
817	934	0	390	75	113	84	92	26	2	46	196	216	142	175	775	0	425	198	0
818	27	0	8	1	4	2	1	0	3	80	0	0	552	66	698	0	0	0	0
819	31	0	16	5	6	4	1	0	2	0	0	0	0	59	59	0	71	57	0
820	4	0	3	1	1	1	0	0	1	5	1	0	0	0	6	0	0	0	0
821	108	0	37	8	12	9	6	2	3	0	0	43	0	0	43	0	0	0	0
822	37	0	15	4	5	4	2	1	2	9	17	144	0	0	170	0	0	0	0
823	18	0	5	1	2	1	1	0	4	2	0	0	0	0	2	0	0	0	0
824	21	0	7	1	2	2	1	1	3	2	0	2	0	0	4	0	0	0	0
825	425	0	142	33	48	35	19	6	3	0	0	2	0	96	98	0	187	79	0
826	51	0	20	4	7	5	3	1	3	2	0	0	1	3	6	0	0	0	0
827	251	0	91	20	31	23	13	5	3	7	1	43	1	3	55	0	0	0	0
828	301	0	103	25	35	26	14	4	3	31	0	0	0	2	33	0	0	0	0
829	226	0	83	20	28	21	11	3	3	6	0	0	0	1	7	0	0	0	0
830	378	0	140	31	46	35	21	7	3	4	0	27	0	4	35	0	0	0	0
831	149	0	68	16	22	17	10	3	2	5	0	2	0	57	63	0	197	121	0
832	223	0	89	19	32	22	13	3	3	5	8	29	0	0	42	0	0	0	0
833	548	0	216	47	73	53	32	10	3	5	2	3	0	2	11	0	0	0	0
834	387	0	129	36	44	28	16	5	3	87	1	35	0	5	128	0	0	0	0
835	414	0	153	35	52	38	21	8	3	93	17	0	7	6	123	0	0	0	0
836	1,063	0	350	81	118	88	49	15	3	36	0	84	12	218	350	0	340	288	0
837	933	0	359	9	26	35	166	123	3	7	0	0	0	12	19	0	303	0	0
838	540	0	360	12	27	36	162	123	2	2	117	23	752	3	897	0	0	0	0
839	385	0	148	0	0	0	49	99	3	2	2	2	2	2	10	0	0	0	0
840	600	0	300	0	14	55	27	204	2	230	0	0	0	0	230	0	0	0	0
841	126	0	46	1	3	11	24	7	3	28	1	0	2	67	98	0	0	0	0
842	600	0	200	0	0	80	120	0	3	16	41	19	0	9	85	0	0	0	0
843	419	0	155	0	0	0	52	103	3	2	2	2	2	3	11	0	0	0	0
844	8	0	4	0	0	2	3	0	2	0	47	0	2	3	52	0	0	0	0
845	234	0	83	9	13	11	23	26	3	537	102	0	0	4,530	5,168	0	0	0	3,511
846	7	0	3	0	0	0	1	1	2	2	2	2	3	3	12	0	0	0	0
847	1,477	0	590	26	78	166	274	47	3	45	251	22	347	351	1,016	0	462	0	0
848	2,002	0	690	20	117	176	264	113	3	17	28	0	26	22	93	0	0	0	0
850	0	0	0	0	0	0	0	0	0	114	47	388	222	1,252	2,022	0	0	0	0
851	1,802	0	529	0	18	63	214	235	3	485	3	6	501	6	1,000	0	1,118	0	0
852	0	0	0	0	0	0	0	0	0	284	28	11	188	88	599	0	0	0	0
853	1,135	0	348	0	18	68	126	136	3	0	43	0	135	112	289	0	0	0	0
854	1,281	0	366	0	17	51	143	155	4	97	682	15	950	225	1,969	0	541	0	0
855	2,645	0	1,101	66	325	215	387	107	2	48	131	8	30	183	401	0	545	0	0
856	404	0	134	6	10	29	68	22	3	1,216	4	1,176	33	241	2,670	0	0	0	0
857	1,240	0	470	44	76	97	188	64	3	68	39	6	80	97	290	0	743	0	0
858	882	0	332	15	54	108	109	46	3	8	3	0	64	6	82	0	0	0	0
859	1,558	0	565	15	52	157	301	40	3	70	10	4	9	8	101	0	0	0	0
860	1,039	0	384	8	50	125	142	58	3	218	77	0	98	73	465	0	0	0	0
861	437	0	182	11	40	58	54	18	2	39	1,338	0	42	11	1,430	0	0	0	0
862	970	0	1,059	30	150	370	377	132	1	134	134	30	82	159	540	0	0	0	0

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863	1,269	0	507	18	83	164	174	68	3	8	344	37	95	198	683	0	29	0	0
864	1,448	0	536	29	94	177	179	56	3	24	5	2	7	135	172	0	272	104	0
865	1,384	0	488	59	66	109	194	61	3	10	3	0	9	15	37	0	0	0	0
866	1,162	0	528	65	72	121	206	64	2	67	0	0	11	13	91	0	677	0	0
867	1,280	0	489	44	108	103	183	52	3	22	14	53	52	28	170	0	0	0	0
868	685	0	263	25	22	95	77	44	3	0	0	0	9	3	12	0	0	0	0
869	1,101	0	453	100	116	119	75	43	2	17	211	70	394	84	776	0	341	0	0
870	2,279	0	880	18	75	186	378	223	3	27	0	0	7	89	123	0	47	19	0
871	1,173	0	437	10	40	97	186	104	3	67	8	31	30	48	183	0	0	0	0
872	100	0	25	2	3	7	10	2	4	49	260	44	342	163	859	0	0	0	0
873	5,777	0	2,630	259	407	981	849	134	2	86	158	0	52	224	520	0	2,940	0	0
874	1,897	0	639	5	94	209	271	61	3	26	6	15	17	189	253	0	0	0	0
875	2,419	0	833	7	126	275	348	78	3	47	150	81	881	509	1,668	0	0	0	0
876	2,271	0	756	31	123	125	447	30	3	204	218	0	21	35	478	0	0	0	0
877	4,392	0	1,513	41	218	549	529	176	3	24	20	0	19	71	134	0	741	0	0
878	1,943	0	669	13	118	242	218	79	3	30	0	0	41	330	401	0	738	2,572	0
879	3,002	0	1,000	43	166	335	355	100	3	0	17	10	24	10	61	0	0	0	0
880	1,062	0	461	118	207	94	33	9	2	4	96	3	62	93	257	0	0	0	0
881	1,034	0	369	93	170	67	29	11	3	6	0	0	9	0	15	0	0	0	0
882	532	0	172	44	64	53	12	0	3	2	0	13	0	62	77	0	336	0	0
883	1,602	0	572	59	209	200	83	21	3	33	6	0	0	9	48	0	0	0	0
884	1,765	0	812	270	310	141	60	31	2	0	50	3	52	38	143	0	0	0	0
885	1,675	0	761	224	279	165	78	15	2	30	13	0	60	4	107	0	0	0	0
886	924	0	369	107	117	90	35	20	3	2	23	14	120	47	206	0	0	0	0
887	990	0	340	92	57	95	78	19	3	7	0	0	0	10	17	0	0	0	0
888	1,758	142	675	217	229	129	101	0	3	1	36	0	23	5	65	0	0	0	0
889	1,147	0	479	117	148	145	57	12	2	1	7	2	10	17	37	0	0	0	0
890	4	0	2	1	1	0	0	0	2	24	249	2	109	93	477	0	0	0	0
891	1,525	0	541	206	162	85	68	19	3	15	54	7	27	127	230	0	367	0	0
892	1,393	0	531	157	162	108	95	10	3	51	81	0	79	287	498	0	1,222	0	0
893	1,762	0	720	241	264	135	65	14	2	21	37	149	59	97	363	0	0	0	0
894	1,556	0	818	152	307	183	142	33	2	194	209	242	80	135	860	0	0	0	0
895	1,726	0	640	68	225	207	137	3	3	5	26	0	6	249	287	0	348	1,899	0
896	1,054	0	369	70	79	84	104	31	3	12	4	9	5	2	32	0	0	0	0
897	805	0	342	30	78	130	85	18	2	52	27	0	1	10	91	0	0	0	0
898	955	0	376	22	76	122	118	38	3	52	6	0	3	6	66	0	0	0	0
899	436	0	244	46	52	56	69	21	2	14	2	0	1	16	32	0	0	0	0
900	199	0	88	32	28	17	7	4	2	0	0	0	0	0	0	0	0	0	0
901	82	0	33	14	10	6	2	1	3	0	0	0	0	0	0	0	0	0	0
902	171	0	80	26	27	16	7	4	2	0	0	0	0	0	0	0	0	0	0
903	499	0	238	71	84	51	22	10	2	476	46	23	3	42	591	0	0	0	0
904	1,284	0	611	93	209	146	127	37	2	42	224	384	171	2,131	2,952	0	377	196	0
905	534	0	233	32	79	64	45	12	2	15	14	0	3	2	34	0	0	0	0
906	432	81	190	19	59	55	48	10	2	8	1	4	5	0	18	0	0	0	0
907	554	0	229	47	61	54	50	17	2	19	1	5	1	3	28	0	0	0	0
908	1,326	0	601	63	142	162	169	65	2	105	8	24	63	26	226	0	0	0	0
909	555	0	234	44	60	56	56	18	2	14	45	20	6	18	104	0	0	0	0
910	105	0	44	3	10	12	14	5	2	0	0	0	0	0	0	0	0	0	0
911	48	0	21	6	7	5	2	1	2	1	0	2	0	39	42	0	0	0	0
912	988	0	443	95	131	87	81	49	2	14	3	24	7	17	64	0	0	0	0

2015 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
913	407	0	173	12	37	27	58	39	2	5	4	2	6	11	28	0	0	0	0
914	394	0	164	26	38	31	37	32	2	7	1	0	1	2	11	0	0	0	0
915	1,310	10	495	65	104	91	121	113	3	33	112	37	115	31	328	0	0	0	0
916	1,455	0	550	54	157	129	136	75	3	44	38	74	7	72	236	0	0	0	0
917	665	0	289	30	83	68	70	38	2	3	25	10	1	12	49	0	0	0	0
918	175	0	72	24	25	15	9	0	2	0	4	0	1	0	6	0	0	0	0
919	253	0	117	13	36	32	28	7	2	0	2	0	1	0	3	0	0	0	0
920	1,139	0	464	55	150	121	107	30	3	10	0	0	19	5	35	0	0	0	0
921	41	0	16	2	5	5	3	0	3	7	3	12	7	1	31	0	0	0	0
922	94	0	38	13	14	8	4	0	3	0	2	0	1	5	8	0	0	0	0
923	148	0	66	12	21	10	16	6	2	0	1	0	0	3	5	0	0	0	0
924	473	0	205	23	64	26	65	28	2	2	0	2	9	3	17	0	0	0	0
925	275	0	110	28	38	20	21	5	3	6	3	9	1	0	21	0	0	0	0
926	921	0	360	36	103	85	88	49	3	25	32	18	41	4	120	0	0	0	0
927	82	0	29	5	7	7	8	2	3	41	4	29	42	42	158	0	0	0	0
928	662	0	281	33	69	75	75	29	2	30	26	26	3	14	98	0	0	0	0
929	119	0	52	15	17	11	6	3	2	2	0	4	1	2	10	0	0	0	0
930	90	0	46	5	14	13	11	3	2	0	0	0	0	0	1	0	0	0	0
931	64	0	31	3	10	9	8	1	2	0	0	0	0	0	0	0	0	0	0
932	167	0	80	6	18	13	26	17	2	42	0	5	0	3	50	0	0	0	0
933	117	76	49	12	16	10	8	4	2	41	3	299	1	7	352	0	0	0	0
934	435	0	191	33	62	29	50	18	2	7	2	0	1	30	41	0	0	0	0
935	81	0	34	9	11	6	6	1	2	0	14	0	0	5	20	0	0	0	0
936	320	0	149	31	39	35	33	11	2	2	5	21	1	72	99	0	0	0	0
937	444	0	178	39	59	31	38	11	3	11	4	0	2	3	19	0	0	0	0
938	133	0	61	7	18	15	15	8	2	5	44	0	5	78	132	0	409	0	0

2025 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
1	1,320	12	566	66	144	169	159	29	2	379	30	42	217	35	703	0	0	0	0
2	1,736	12	746	61	163	261	206	54	2	51	175	10	42	73	350	0	418	0	0
3	867	12	393	13	69	37	86	189	2	22	31	7	59	96	216	0	0	0	0
4	1,982	620	1,042	166	349	244	179	104	2	65	245	517	2,305	1,080	4,212	0	0	0	0
5	2,650	0	1,384	338	481	281	173	111	2	75	285	104	299	323	1,087	0	0	0	0
6	228	0	108	17	38	25	17	12	2	0	0	0	28	293	322	0	0	0	0
7	1,456	1,664	692	93	179	173	193	55	2	42	4	21	48	2,664	2,780	0	0	0	9,375
8	53	0	29	11	11	4	3	1	2	3	2	3	4	4	16	0	0	0	0
9	697	0	285	25	23	122	66	49	2	57	0	53	0	11	120	0	0	0	0
10	2,526	12	1,147	157	239	209	335	206	2	178	260	99	160	75	773	0	0	0	0
11	1,105	0	526	49	214	87	150	26	2	89	760	23	4,866	132	5,871	0	0	0	0
12	1,338	0	743	78	345	101	149	70	2	32	46	118	538	368	1,102	0	0	0	247
13	2,212	89	1,004	132	300	245	238	89	2	172	214	157	703	572	1,817	0	0	0	0
14	1,542	0	761	177	320	130	109	25	2	24	538	152	237	174	1,125	0	0	0	0
15	1,359	0	564	59	121	139	171	75	2	11	25	14	244	76	370	0	457	0	0
16	1,964	0	795	66	224	229	211	65	3	36	112	68	240	78	533	0	0	0	0
17	1,784	0	743	96	114	304	145	82	2	94	10	41	296	138	578	0	12	0	0
18	1,474	0	669	138	245	183	91	12	2	14	0	0	10	166	191	0	0	0	0
19	1,373	0	624	159	176	129	125	34	2	451	183	68	13	587	1,302	0	955	398	0
20	976	111	494	105	155	86	148	0	2	43	68	2	192	155	459	0	199	34	0
21	779	0	376	115	116	79	51	16	2	16	111	0	9	24	161	0	0	0	0
22	490	53	229	95	80	40	13	1	2	64	107	9	65	216	461	0	0	0	0
23	495	0	226	48	62	55	44	16	2	135	59	38	8	62	301	0	0	0	0
24	342	0	198	67	72	34	19	6	2	1,315	410	484	27	563	2,800	0	0	0	0
25	221	0	163	61	63	23	12	4	1	175	268	187	289	108	1,028	0	0	0	0
26	1,546	302	947	366	371	134	59	18	2	573	194	75	595	165	1,602	0	0	0	0
27	365	0	261	76	101	52	24	8	1	607	597	104	282	208	1,799	0	0	0	0
28	72	203	34	10	13	7	3	1	2	528	340	349	233	299	1,750	0	0	0	0
29	252	0	133	39	52	25	13	4	2	737	173	150	265	234	1,559	0	0	0	218
30	1,267	223	575	180	215	109	55	16	2	132	487	134	101	51	904	0	0	0	0
31	723	0	377	95	135	89	58	0	2	0	3	0	7	196	206	0	1,409	0	0
32	984	0	451	101	157	129	53	11	2	277	307	139	149	143	1,016	0	0	0	0
33	687	0	321	86	116	58	24	38	2	7	15	0	22	83	127	0	285	87	0
34	447	0	226	37	70	28	85	7	2	11	15	1	18	56	100	0	0	0	0
35	529	0	272	44	76	72	61	20	2	56	22	23	131	14	245	0	0	0	0
36	863	0	471	140	139	95	67	32	2	48	120	111	21	78	378	0	55	0	0
37	885	0	372	44	94	82	106	46	2	15	4	0	5	120	144	0	446	1,320	0
38	1,011	0	436	66	138	136	73	23	2	13	1	15	7	17	53	0	0	0	0
39	1,097	0	490	105	174	107	84	20	2	8	45	6	22	26	107	0	0	0	0
40	1,648	0	788	283	236	174	71	25	2	52	19	0	77	134	283	0	322	0	0
41	1,743	0	812	186	234	216	132	44	2	105	69	24	500	165	862	0	0	0	0
42	991	0	513	81	174	142	85	31	2	6	2	0	24	18	50	0	0	0	0
43	723	0	356	57	114	99	61	25	2	4	2	0	1	4	10	0	0	0	0
44	1,029	29	526	206	171	68	69	12	2	8	1	31	193	235	467	0	885	0	0
45	1,162	0	620	153	206	90	135	37	2	21	15	10	7	74	127	0	0	0	0
46	958	0	525	156	108	99	85	77	2	16	7	5	141	103	272	0	425	0	0
47	619	0	304	56	53	35	72	89	2	5	5	9	69	57	146	0	0	0	0
48	482	0	239	46	35	23	64	71	2	9	1	0	50	47	106	0	0	0	0
49	56	0	29	6	4	3	8	8	2	18	18	37	14	263	350	0	0	0	0
50	503	133	286	66	39	69	59	53	2	14	21	20	3,996	116	4,167	0	435	0	0
51	513	0	238	42	51	33	46	67	2	1	0	0	44	26	71	0	0	0	0



2025 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
52	697	0	387	122	179	44	13	29	2	2	4	0	40	60	107	0	269	0	0
53	54	0	18	5	9	2	0	2	3	20	188	244	8	31	491	0	0	0	0
54	659	0	411	174	125	60	40	13	2	567	75	48	99	64	853	0	0	0	0
56	453	0	302	23	42	67	85	85	2	5	7	9	410	1,135	1,567	0	0	1,437	0
57	584	0	460	31	115	117	115	82	1	0	0	0	12	46	58	0	0	0	0
58	71	0	37	2	8	10	12	6	2	735	41	3	236	65	1,081	0	0	0	0
59	1,092	12	499	112	138	108	109	32	2	328	376	63	144	494	1,404	0	0	0	0
60	1,534	0	786	205	250	143	141	48	2	14	218	11	29	393	665	0	295	0	2,612
61	359	0	156	30	67	40	13	5	2	33	4	64	4	56	161	0	0	0	0
62	2,764	0	1,524	315	537	342	223	108	2	4	27	0	462	314	807	0	760	0	0
63	706	0	311	62	105	66	51	26	2	12	28	0	6	8	55	0	0	0	0
64	593	0	282	57	109	67	34	16	2	1	0	0	0	52	53	0	0	0	0
65	454	0	233	51	80	67	27	8	2	606	405	148	119	122	1,400	0	0	0	0
66	412	95	251	66	92	66	27	1	2	110	261	34	88	196	689	0	13	4	0
67	1,152	0	555	116	192	164	64	19	2	52	0	12	20	41	125	0	0	0	0
68	1,415	0	707	97	366	100	116	28	2	7	317	0	69	82	475	0	0	0	0
69	2,111	0	1,054	334	383	192	121	25	2	73	73	7	7	124	284	0	0	0	0
70	2,332	0	1,059	178	274	283	205	119	2	39	16	4	13	63	136	0	0	0	0
71	842	0	443	150	182	96	0	14	2	112	78	79	63	138	469	0	0	0	0
72	538	0	286	117	114	37	11	7	2	35	47	128	128	147	485	0	386	0	0
73	684	0	346	69	138	87	42	10	2	21	43	57	42	87	249	0	194	0	0
74	1,418	0	763	140	263	161	161	38	2	55	25	9	150	147	386	0	0	0	0
75	646	0	307	113	87	47	41	20	2	347	236	1,151	75	462	2,271	0	233	0	0
76	1,326	121	602	146	243	132	75	6	2	61	106	36	93	236	532	0	187	120	0
77	666	0	328	123	88	87	26	5	2	1	60	6	41	29	137	0	0	0	0
78	285	0	191	51	75	30	20	15	2	59	165	59	634	412	1,329	0	57	0	0
79	263	0	175	48	68	28	19	12	2	8	18	56	107	312	501	0	0	0	0
80	221	2,257	170	45	62	39	17	8	1	46	11	0	76	144	276	0	0	0	702
81	36	0	28	11	9	4	2	2	1	0	41	0	0	655	696	0	0	0	2,852
82	1,031	0	536	199	166	77	83	12	2	21	9	54	0	97	181	0	0	0	0
83	573	0	315	137	94	42	29	12	2	2	8	3	1	380	395	0	926	0	0
84	385	0	202	31	44	73	39	15	2	6	0	135	4,582	695	5,418	0	298	0	0
85	741	0	383	54	138	72	91	29	2	0	0	7	8	78	93	0	152	0	0
86	731	0	386	61	75	150	71	29	2	28	3	0	9	23	63	0	0	0	0
87	2,041	0	1,062	467	415	107	55	19	2	231	175	144	327	285	1,163	0	0	0	0
88	926	146	573	278	155	90	47	4	2	14	7	13	198	76	308	0	0	315	0
89	336	0	174	41	60	55	17	1	2	16	52	2	24	83	177	0	367	0	0
90	680	0	346	82	120	109	33	2	2	15	7	0	6	46	74	0	0	0	0
91	1,182	0	583	168	233	105	39	37	2	119	1,258	398	437	558	2,770	0	0	0	386
92	1,028	0	446	95	150	109	87	5	2	37	420	51	89	174	772	0	0	0	0
93	1,053	0	426	91	138	98	91	8	3	59	196	92	26	198	571	0	0	0	0
94	1,450	0	611	133	191	132	139	17	2	7	56	37	68	243	410	0	750	0	0
95	2,250	0	1,098	240	360	323	144	32	2	13	162	29	155	157	515	0	0	0	0
96	789	0	354	106	130	67	42	9	2	177	83	148	62	283	752	0	408	0	0
97	631	492	342	92	124	68	47	10	2	33	16	125	563	340	1,077	0	55	234	0
98	787	0	428	132	159	78	48	11	2	415	146	617	892	760	2,830	0	180	0	726
99	1,043	0	565	218	220	84	32	11	2	358	148	106	87	453	1,153	0	0	0	0
100	1,003	0	378	121	119	92	41	5	3	774	827	27	86	442	2,155	0	570	0	0
101	2,845	0	1,206	265	384	305	215	38	2	34	68	24	14	32	173	0	0	0	0
102	1,201	0	495	166	202	89	23	16	2	330	960	24	173	322	1,810	0	0	0	0
103	1,264	0	549	278	174	66	22	9	2	137	9	10	37	189	382	0	158	0	0

2025 SMALL AREA FORECAST

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104	159	0	139	79	41	10	5	4	1	865	278	166	322	207	1,838	0	0	0	0
105	1,058	0	625	233	213	96	56	27	2	196	186	69	208	408	1,067	0	83	0	0
106	564	0	235	89	95	39	12	0	2	719	36	2	672	291	1,721	0	0	0	0
107	0	0	0	0	0	0	0	0	0	196	122	5,047	1,440	429	7,234	0	0	0	0
108	190	0	100	74	8	13	5	0	2	135	69	485	345	38	1,072	0	0	0	0
109	80	0	40	30	3	5	2	0	2	0	7	10	0	1	18	0	0	0	0
110	31	0	31	15	15	1	0	0	1	45	483	158	1,264	408	2,359	0	0	0	2,873
111	187	0	188	140	15	25	8	0	1	197	636	142	250	274	1,499	0	0	0	0
112	3	0	1	1	0	0	0	0	3	1,203	478	1,198	534	283	3,697	0	0	0	0
113	197	0	109	26	33	24	25	1	2	45	51	522	2	70	690	0	0	0	0
114	2,831	0	1,573	594	455	265	247	13	2	285	296	73	31	583	1,269	0	0	0	0
115	1,394	1,071	900	284	407	125	59	25	2	155	58	22	67	173	475	0	0	0	0
116	659	0	299	110	110	27	28	24	2	224	8	0	0	46	277	0	0	0	0
117	922	0	460	108	153	91	85	22	2	502	119	100	0	634	1,356	0	151	0	0
118	1,306	0	503	17	79	63	218	126	3	169	6	8	0	20	203	0	0	0	0
119	766	12	422	49	88	90	83	111	2	70	20	21	292	83	484	0	130	0	0
120	2,180	0	801	123	289	130	157	103	3	161	4	0	0	0	165	0	0	0	0
121	163	0	82	18	29	18	8	9	2	0	0	0	7	92	99	0	0	0	0
122	2,748	0	1,144	197	147	202	258	340	2	57	1	21	51	218	349	0	196	1,120	0
123	1,207	0	574	125	156	142	104	46	2	39	130	62	53	188	472	0	0	0	0
124	828	0	413	51	85	100	127	51	2	1	0	4	34	58	98	0	211	0	0
125	1,893	0	1,113	278	325	272	158	80	2	54	80	16	64	64	277	0	485	0	0
126	370	0	185	90	53	24	15	3	2	102	147	45	583	268	1,144	0	19	0	0
127	701	0	369	180	102	50	32	5	2	280	369	63	151	497	1,361	0	0	0	0
128	736	0	334	116	102	78	37	1	2	5	38	76	262	167	549	0	0	0	0
129	861	0	409	220	86	49	43	12	2	9	40	27	10	138	224	0	148	0	0
130	1,242	264	697	162	226	161	127	22	2	17	130	0	554	226	926	0	0	0	0
131	830	0	302	11	50	40	137	64	3	232	0	0	0	733	965	0	0	0	0
132	458	0	266	125	90	38	13	0	2	163	230	750	133	1,390	2,666	0	0	0	726
133	499	0	208	98	71	29	9	0	2	69	31	274	204	277	856	0	0	0	0
134	670	0	223	7	20	56	109	32	3	10	30	0	74	290	404	0	0	3,587	0
136	1,259	158	443	85	149	118	78	14	3	75	36	113	133	14	372	0	0	36	0
137	846	0	332	106	98	93	35	0	3	126	124	15	10	84	359	0	160	0	0
138	2,214	0	820	236	366	134	82	3	3	18	6	0	9	16	49	0	0	0	0
139	958	0	538	229	205	53	40	12	2	143	1,469	248	425	436	2,721	0	462	0	0
140	1,496	0	623	262	227	72	48	13	2	626	61	271	17	54	1,029	0	0	0	0
141	1,258	0	530	168	219	90	50	2	2	5	1	23	0	70	100	0	265	0	0
142	1,269	80	727	206	225	120	138	38	2	27	8	0	50	41	126	0	0	0	0
143	1,116	0	631	145	266	105	58	58	2	185	229	57	194	156	820	0	0	0	0
144	1,005	89	519	132	158	109	100	21	2	64	795	38	242	336	1,475	0	11	0	0
145	0	0	0	0	0	0	0	0	0	5	631	86	10	99	832	0	0	0	0
146	1,002	0	527	226	132	109	36	24	2	366	2,706	35	196	714	4,017	0	85	0	0
147	1,148	0	425	15	66	53	184	107	3	21	8	0	10	27	66	0	0	0	0
148	796	0	331	43	60	59	73	96	2	2	37	0	84	122	245	0	0	0	0
149	83	0	40	4	6	6	8	15	2	3	2	0	3	0	8	0	0	0	0
150	301	0	122	9	16	15	25	56	2	5	3	9	11	91	119	0	395	116	0
151	708	0	302	18	35	46	74	128	2	31	5	2	32	59	129	0	194	0	0
152	583	0	292	26	47	76	81	62	2	93	18	5	13	83	212	0	0	0	0
153	817	0	388	23	38	30	92	205	2	18	45	24	340	64	491	0	0	0	0
154	469	0	228	43	56	34	42	53	2	130	203	10	41	1,504	1,887	0	0	0	0
155	612	0	241	8	19	63	119	33	3	61	5	3	5	6	80	0	0	0	0

2025 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
156	496	0	216	19	42	38	47	70	2	31	6	2	17	0	56	0	0	0	0
157	69	0	53	19	19	11	3	0	2	19	10	0	17	0	45	0	0	0	0
159	602	0	221	9	22	63	92	35	3	0	111	20	0	35	166	0	0	0	0
160	590	0	224	11	30	94	67	23	3	51	3	129	9	24	215	0	0	0	0
161	2,699	0	1,103	39	172	138	476	277	2	9	50	0	0	32	91	0	0	2,004	0
162	651	0	325	26	51	51	70	127	2	1	24	18	6	1,136	1,186	0	0	0	0
164	1,351	0	587	54	91	112	132	197	2	27	12	20	7	53	119	0	0	0	0
165	3,099	0	1,139	385	426	186	136	5	3	6	86	11	28	337	468	0	0	0	0
166	1,015	0	396	38	87	99	139	33	3	27	1	7	10	19	64	0	0	0	0
167	5,143	0	2,302	323	675	697	468	139	2	37	269	49	194	344	892	0	520	0	0
168	2,724	0	1,237	138	294	381	333	92	2	1,046	157	213	696	871	2,982	0	740	0	0
169	1,996	531	1,173	315	421	222	154	60	2	2,861	167	212	1,596	375	5,210	0	0	0	0
170	731	0	406	128	138	73	49	18	2	573	466	46	141	922	2,148	0	14	0	0
171	1,029	0	411	35	80	124	135	38	3	29	33	0	43	2	107	0	0	0	0
172	806	0	288	10	44	35	126	74	3	81	118	51	26	547	823	0	763	0	0
173	469	0	198	29	38	27	49	55	2	0	5	0	58	11	75	0	0	0	0
174	101	0	52	11	13	9	11	8	2	5	1	0	11	24	41	0	0	0	0
175	953	0	432	59	97	83	106	88	2	190	61	228	7	278	764	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
177	341	0	178	31	65	38	29	15	2	3	0	16	3	52	73	0	0	0	0
178	891	0	494	83	170	109	88	43	2	25	20	138	24	761	968	0	83	0	0
179	602	0	349	177	91	30	28	23	2	3	294	3	79	158	536	0	0	0	0
180	449	0	175	16	56	12	75	15	3	3	320	5	136	78	543	0	0	0	0
181	742	0	337	50	91	87	77	31	2	13	28	128	13	4	186	0	0	0	0
182	40	0	19	5	7	5	2	0	3	17	6	23	0	24	70	0	0	0	0
183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
184	551	0	302	78	111	80	33	0	2	16	0	0	1	60	77	0	212	0	0
185	115	0	36	8	1	9	10	9	3	98	437	3	2	874	1,414	0	0	0	0
186	522	0	285	24	91	21	123	26	2	84	0	0	0	37	120	0	0	0	0
187	236	0	96	14	26	16	20	21	3	183	519	23	4	24	753	0	0	0	0
188	1,080	0	400	57	105	68	81	89	3	45	13	3	19	39	119	0	0	0	0
189	1,741	0	757	106	194	127	160	170	2	86	563	414	468	506	2,038	0	565	0	0
190	991	0	381	59	104	68	73	77	3	9	92	5	32	1	139	0	0	0	0
191	572	0	228	36	63	41	44	44	3	13	17	110	17	17	174	0	0	0	0
192	377	0	171	26	47	31	32	34	2	15	9	6	0	31	61	0	0	0	2,177
193	315	0	147	22	40	27	30	29	2	11	4	129	7	0	151	0	0	0	0
194	1,775	0	710	78	153	165	202	112	3	187	1,366	192	479	241	2,465	0	0	0	0
195	1,053	0	415	47	92	113	107	56	3	29	51	62	116	28	286	0	0	0	0
196	895	0	376	35	71	90	115	65	2	75	55	107	38	98	374	0	283	0	0
197	1,838	0	874	81	235	236	223	100	2	198	49	52	310	295	903	0	0	0	0
198	2,890	0	1,155	114	194	277	422	147	3	223	186	93	153	153	808	0	0	0	0
199	2,115	0	819	62	107	133	264	253	3	14	16	38	274	92	435	0	296	0	0
200	2,717	0	1,042	82	114	202	299	345	3	60	169	53	32	14	328	0	0	0	0
201	2,272	0	873	67	64	132	199	412	3	19	39	2	53	32	145	0	0	0	0
202	1,064	0	462	13	68	145	153	83	2	22	16	0	78	157	272	0	251	0	0
203	2,020	158	650	42	39	67	171	330	3	126	1	6	122	101	355	0	322	0	0
204	771	0	282	19	17	27	78	142	3	14	10	14	28	75	141	0	0	0	0
205	349	0	151	10	10	15	41	75	2	47	1,640	20	170	369	2,246	0	0	0	80
206	197	0	100	11	22	30	29	8	2	1,700	1,038	675	526	176	4,116	0	0	0	0
207	625	217	347	66	84	90	63	43	2	5	37	0	1,040	0	1,082	0	0	0	0
208	2,154	0	953	89	181	247	201	235	2	837	494	528	718	5,320	7,897	0	670	0	279

2025 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
209	0	0	0	0	0	0	0	0	0	2,015	841	44	303	72	3,275	0	0	0	0
210	613	0	340	39	64	62	100	76	2	662	3,313	118	1,370	344	5,808	0	0	0	0
211	2,796	0	1,220	72	204	339	423	182	2	70	4	50	254	74	452	0	0	0	0
212	2,346	0	868	95	123	150	212	287	3	15	20	19	145	231	431	0	577	0	0
214	1,212	0	488	6	52	101	179	150	3	35	163	3	528	54	783	0	0	0	0
216	0	0	0	0	0	0	0	0	0	0	2	0	4	4	10	0	0	0	0
217	4,250	7,643	1,131	52	400	429	130	120	4	78	298	322	1,376	1,244	3,318	6,695	383	1,214	0
218	392	0	166	13	42	21	45	45	2	66	56	56	6	36	219	0	0	0	0
219	4,320	0	1,350	56	235	153	561	345	3	3	0	3	1	35	42	0	1,190	0	0
220	136	0	58	8	13	10	16	11	2	3	4	3	5	6	21	0	0	0	0
221	1,533	0	567	40	52	61	296	117	3	39	28	0	13	14	94	0	0	0	0
222	889	0	338	29	37	39	148	85	3	57	3	4	8	39	111	0	0	0	0
223	101	0	44	2	4	5	20	13	2	77	73	43	3,312	29	3,533	0	0	0	0
226	850	0	293	4	33	27	109	119	3	120	22	0	224	39	404	0	0	0	0
227	1,264	0	486	15	37	49	218	167	3	27	30	44	52	23	176	0	0	0	0
228	769	0	248	4	29	57	79	78	3	5	0	56	0	222	283	0	1,328	0	0
229	124	0	50	1	3	9	17	20	3	3	449	3	4	319	778	0	0	0	0
230	6,676	0	2,302	28	63	382	820	1,009	3	19	407	24	168	57	676	0	0	0	0
231	312	0	104	1	12	9	40	43	3	13	25	0	0	0	38	0	0	0	0
232	1,274	0	439	8	50	38	164	179	3	48	11	5	6	32	102	0	0	0	0
233	551	0	196	4	23	16	73	80	3	0	0	16	94	213	323	0	0	1,648	0
234	1,157	0	462	13	33	82	166	168	3	138	190	513	478	1,504	2,823	0	1,853	79	0
235	1,910	0	636	80	66	63	153	274	3	96	56	264	385	198	999	0	0	729	0
236	1,407	0	469	21	35	68	117	228	3	213	9	8	8	72	309	0	0	0	0
238	13,000	0	5,000	170	387	1,160	2,487	796	3	66	304	6	101	269	745	0	0	0	0
240	500	0	200	23	24	24	58	69	3	22	0	0	341	15	378	0	0	0	0
241	328	0	98	4	7	24	49	14	3	75	0	0	0	6	81	0	0	0	0
242	319	0	114	4	9	29	56	16	3	82	0	8	0	31	121	0	0	0	0
243	1,127	0	460	86	87	95	94	97	2	21	141	8	405	172	748	0	0	0	0
244	408	0	157	10	35	35	52	26	3	25	22	42	0	26	114	0	0	0	0
245	228	0	95	5	13	12	29	37	2	6	9	0	8	121	144	0	0	0	0
247	172	0	64	5	15	13	21	10	3	1	26	0	14	28	69	0	0	0	0
248	704	0	311	11	63	71	75	91	2	80	9	5	72	0	165	0	0	0	0
249	319	0	141	9	51	32	22	28	2	0	3	0	5	6	14	0	0	0	0
250	745	0	294	11	58	68	71	86	3	14	25	0	45	32	116	0	0	0	0
251	1,010	0	388	33	20	156	101	79	3	46	258	9	90	93	496	0	0	0	0
252	1,461	0	521	37	11	113	172	188	3	288	117	0	27	48	480	0	0	0	0
253	405	0	157	10	35	34	53	26	3	36	22	0	0	226	284	0	476	0	0
254	1,705	0	784	47	110	114	232	280	2	173	0	14	42	41	270	0	0	0	0
255	1,058	0	412	25	57	59	123	149	3	174	0	33	55	79	342	0	342	0	0
256	951	0	386	34	48	52	136	116	3	39	10	0	6	10	65	0	0	0	0
257	697	0	282	25	36	39	97	85	3	11	4	5	0	16	36	0	0	0	0
258	967	0	406	38	53	58	136	121	2	16	4	0	2	17	40	0	0	0	0
259	1,313	0	493	31	70	72	146	174	3	244	11	50	10	13	328	0	0	0	0
260	143	0	53	7	17	8	12	9	3	3	16	25	692	401	1,137	0	0	0	0
261	1,155	0	580	65	157	96	152	110	2	62	584	151	52	20	869	0	0	0	0
262	1,657	0	643	41	145	225	159	74	3	163	1,437	163	153	175	2,091	0	0	0	0
263	862	0	433	70	115	88	92	68	2	528	1,327	1,936	1,723	664	6,178	0	0	0	4,354
264	189	0	91	19	23	27	17	5	2	103	1,488	270	83	262	2,206	0	0	0	0
265	2,773	0	1,122	63	186	300	371	202	3	73	0	131	535	206	945	0	369	82	0
266	2,650	0	1,002	73	198	203	247	280	3	99	0	21	56	181	357	0	0	487	0

2025 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
267	671	0	239	40	51	72	48	29	3	553	673	112	786	536	2,659	0	0	0	0
270	1,742	54	744	58	171	241	224	49	2	33	180	10	66	77	366	0	0	0	0
271	2,349	0	787	0	97	197	302	192	3	373	442	32	18	245	1,111	0	431	0	0
273	1,251	0	403	41	34	58	147	124	3	51	441	0	88	34	614	0	971	0	0
275	3,187	0	1,328	136	142	153	590	307	2	34	293	3	22	94	447	0	0	0	0
276	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
278	0	0	0	0	0	0	0	0	0	107	200	635	13	429	1,384	0	0	0	0
279	52	0	30	3	10	10	8	0	2	342	34	34	77	86	574	0	0	0	0
280	2,772	900	737	79	233	234	121	70	4	97	303	3,086	818	1,574	5,878	6,645	0	0	0
281	0	0	0	0	0	0	0	0	0	1,426	1,486	396	652	361	4,321	0	0	0	0
283	898	0	359	15	98	81	108	57	3	5	125	20	32	139	323	0	0	0	0
284	1,151	0	430	38	137	84	102	69	3	42	8	3	3	31	88	0	0	0	0
285	1,563	0	563	7	126	142	202	86	3	11	0	0	28	262	301	0	746	0	0
286	921	0	387	12	92	132	97	54	2	16	1	0	44	72	133	0	420	0	0
287	859	0	401	89	116	73	95	29	2	27	60	84	194	81	446	0	0	0	0
288	2,262	0	840	9	205	246	232	148	3	38	40	8	45	334	465	0	513	1,264	0
289	81	0	35	0	6	10	10	9	2	0	0	0	1	119	120	0	0	262	0
290	874	12	358	43	140	108	51	16	2	53	4	0	31	131	219	0	1,626	0	0
291	1,517	45	513	6	109	153	164	81	3	130	17	58	64	47	316	0	0	0	0
292	1,121	0	359	4	65	98	101	91	3	25	1	2	16	10	53	0	0	0	0
293	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
294	114	0	39	0	5	16	10	8	3	0	3	0	5	4	12	0	0	0	0
295	8,617	7,243	2,264	196	1,246	606	137	79	4	225	1,781	518	1,010	2,030	5,563	30,000	1,905	0	94
296	5	0	2	0	1	1	0	0	3	246	24	348	0	41	659	0	0	0	0
297	889	0	342	37	105	107	66	27	3	19	285	0	10	3	317	0	0	0	0
298	667	0	351	39	89	69	99	55	2	47	103	9	13	24	196	0	0	0	0
299	657	0	219	24	56	43	62	34	3	0	3	9	0	0	12	0	0	0	0
300	2,257	0	867	302	271	161	117	16	3	234	7	54	10	17	321	0	0	0	0
301	9	0	4	1	1	1	1	0	3	86	66	0	4	8	164	0	0	0	0
302	287	0	63	12	1	23	22	6	5	417	880	2,727	90	885	4,998	0	28	1,163	0
303	631	3,709	287	47	89	65	65	21	2	1,759	1,601	740	56	848	5,005	0	0	0	0
304	821	0	259	11	20	38	65	126	3	14	14	0	3	56	87	0	372	0	0
305	12	0	11	3	4	2	2	0	1	2	0	0	4	4	10	0	0	0	0
306	1,726	0	595	6	133	164	163	129	3	65	6	0	10	46	127	0	0	0	0
307	992	0	342	16	25	50	84	165	3	28	0	0	8	23	59	0	0	0	0
308	5,697	0	1,899	21	344	551	467	516	3	3	4	3	264	29	303	0	0	0	0
310	2,275	0	823	9	92	333	220	169	3	3	2	3	5	4	17	0	0	0	0
311	2,808	0	1,003	11	179	339	280	194	3	843	31	0	43	5	923	0	0	0	0
312	18	0	9	0	2	2	3	2	2	59	60	41	0	246	405	0	0	0	0
313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
314	728	0	251	5	72	65	72	37	3	35	0	0	0	4	39	0	0	0	0
315	1,667	0	641	91	117	205	138	90	3	49	19	21	22	186	298	0	349	0	0
316	636	0	265	3	48	87	73	54	2	1	815	2	291	538	1,647	0	0	1,309	0
317	1,572	0	524	6	97	171	144	106	3	8	0	0	1	14	23	0	0	0	0
318	1,131	0	419	68	177	120	28	26	3	12	5	0	34	2	53	0	292	0	0
319	1,330	0	554	107	138	156	105	48	2	13	60	47	21	121	262	0	618	0	0
320	0	0	0	0	0	0	0	0	0	0	1,215	0	0	51	1,265	0	0	0	0
321	626	0	368	25	110	109	87	37	2	81	31	249	243	1	606	0	0	0	0
322	1,142	0	408	24	81	134	118	51	3	25	53	94	4	113	289	0	0	0	0
323	1,424	0	491	96	122	138	93	42	3	639	0	150	0	0	789	0	0	0	0
324	910	0	364	4	120	105	96	39	3	15	33	147	24	24	243	0	0	0	0

2025 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
325	630	0	225	3	42	64	64	52	3	458	0	0	0	78	536	0	0	0	0
326	1,679	0	579	6	109	166	163	135	3	4	98	39	4	5	150	0	391	0	0
327	308	0	123	31	31	34	16	11	3	6	0	0	0	0	6	0	0	0	0
328	4,883	0	1,744	19	331	498	491	405	3	1	3	2	5	5	16	0	427	0	0
329	699	0	269	3	51	77	76	62	3	10	1	2	1	5	18	0	0	0	0
330	977	0	295	75	75	81	38	26	3	319	52	65	0	0	436	0	0	0	0
331	439	0	169	43	43	46	22	15	3	93	67	219	17	34	429	0	0	0	0
332	382	0	147	38	37	40	19	13	3	14	35	1,007	50	152	1,258	0	404	0	0
333	4,357	0	1,556	17	307	564	422	246	3	105	15	196	206	60	582	0	14	75	0
334	2,893	0	851	9	170	308	230	134	3	3	4	3	4	5	19	0	0	0	0
335	3,664	0	1,145	13	217	327	322	266	3	9	0	29	1	437	476	0	644	1,356	0
336	945	0	378	5	74	137	102	60	3	50	0	0	70	170	290	0	0	0	0
338	1,507	0	958	308	286	273	50	41	2	2	6	0	19	32	59	0	44	0	0
339	0	0	0	0	0	0	0	0	0	219	27	383	0	0	628	0	0	0	0
340	218	0	93	17	23	29	17	7	2	43	0	6	0	12	61	0	0	0	0
341	737	0	273	3	50	79	67	74	3	107	0	0	0	17	124	0	0	0	0
343	6,331	15	2,327	202	493	883	586	164	3	27	93	9	131	170	431	0	1,207	0	0
344	1,111	0	471	191	120	91	47	21	2	33	0	373	6	0	412	0	0	0	0
345	1,088	0	545	94	132	188	113	19	2	1	4	3	5	5	18	0	0	2,127	0
346	330	0	152	25	54	43	22	8	2	129	33	0	0	60	222	0	0	0	0
347	936	0	343	76	100	62	81	24	3	5	5	35	7	8	60	0	0	0	0
348	1,067	0	395	5	83	99	145	63	3	177	98	78	101	226	679	0	546	0	0
349	458	0	276	30	56	98	45	47	2	0	13	5	0	0	18	6,612	0	0	0
350	218	0	93	28	22	25	13	5	2	11	0	118	0	3	132	0	0	0	0
351	1,345	0	495	108	126	138	87	36	3	2	19	42	1	7	70	0	475	0	0
352	1,620	0	576	154	197	130	77	18	3	16	28	9	8	11	72	0	0	0	0
353	2,194	0	806	224	276	174	106	27	3	34	9	8	0	8	59	0	0	0	0
354	1,244	0	527	127	171	133	79	18	2	8	3	58	0	7	76	0	0	0	0
355	2,076	0	818	183	242	226	136	32	3	59	47	0	0	27	133	0	0	0	0
356	1,199	0	456	96	129	139	72	19	3	36	5	0	0	0	41	0	0	0	0
357	1,621	0	638	167	219	145	87	21	3	29	50	0	0	22	101	0	0	0	0
358	32	0	14	8	2	2	2	1	2	1	163	3	405	83	656	0	0	0	0
361	973	0	531	17	84	201	163	66	2	28	174	0	65	251	517	0	830	0	0
363	2,256	165	852	116	180	158	246	152	3	168	144	20	307	410	1,049	0	448	0	0
364	2,723	99	1,046	105	194	298	310	138	3	191	219	118	222	533	1,283	0	61	0	0
365	2,632	0	1,011	79	214	268	298	152	3	53	188	4	516	374	1,135	0	0	0	0
366	2,099	0	830	41	120	279	260	131	3	27	1	17	11	85	141	0	0	0	0
368	1,785	51	811	101	195	194	263	58	2	341	392	334	1,206	551	2,825	0	0	0	354
369	904	0	365	7	44	62	171	80	3	378	23	66	129	257	853	0	0	0	0
370	2,147	0	895	127	290	257	180	41	2	84	258	150	149	406	1,046	0	5	0	0
371	1,272	0	517	68	122	160	150	17	3	20	35	0	29	156	240	0	569	0	0
372	383	0	145	18	13	39	37	38	3	5	0	0	3	66	74	0	529	0	0
374	1,175	0	489	89	211	118	58	13	2	840	340	182	27	170	1,559	0	0	0	0
375	2,935	0	1,250	206	412	436	176	19	2	1,659	288	70	57	303	2,376	0	0	0	0
376	1,688	29	635	108	135	126	210	56	3	1,624	680	217	172	438	3,131	0	0	0	0
377	1,314	0	579	138	238	107	64	32	2	298	49	24	0	41	412	0	0	0	0
378	242	0	107	10	16	25	39	16	2	0	2	0	5	6	13	0	0	0	0
379	208	0	72	44	18	4	3	3	3	102	1,149	129	230	693	2,302	0	0	0	0
380	44	0	36	19	10	4	2	1	1	497	117	90	0	35	739	0	0	0	0
381	6,971	0	2,957	533	1,200	593	474	158	2	83	130	51	28	325	617	0	890	46	0
382	2,438	0	902	82	276	268	224	53	3	55	8	0	1	95	159	0	790	0	0

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TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
385	5,801	0	2,206	184	529	701	547	245	3	326	92	302	86	29	835	0	0	0	0
386	1,982	0	800	205	256	166	121	51	3	780	29	7	0	41	856	0	0	0	0
387	952	0	340	65	79	87	71	39	3	12	1,798	217	0	0	2,027	0	0	745	0
388	2,699	0	1,103	164	427	262	182	68	2	29	35	27	0	5	96	0	292	0	0
389	3,035	0	1,253	267	335	293	196	162	2	3	4	3	5	5	20	0	292	683	0
390	565	0	226	32	56	68	49	20	3	3	0	0	0	372	375	0	160	0	0
391	506	0	201	28	51	60	44	19	3	421	14	6	0	114	555	0	0	0	0
392	563	0	230	41	71	62	41	15	2	171	67	0	0	33	270	0	0	0	0
393	958	0	368	74	129	89	53	23	3	76	14	0	0	502	592	0	1,500	0	0
394	837	0	343	20	33	61	162	66	2	3	6	3	5	6	23	0	0	0	0
395	347	0	133	25	44	36	19	9	3	0	106	0	0	8	114	0	0	0	0
396	674	0	286	46	79	87	48	26	2	113	40	48	48	12	261	0	0	0	0
397	1,519	0	490	6	105	144	128	107	3	3	0	29	4	99	135	0	896	0	0
398	5,561	0	1,685	765	124	363	124	309	3	0	0	199	0	0	199	0	594	0	0
399	9,587	0	2,996	450	600	898	600	448	3	3	76	3	212	5	299	0	8,458	0	0
400	9,570	0	3,300	196	313	1,336	1,218	237	3	322	77	55	140	282	877	0	0	3,215	0
401	1,861	0	1,033	305	384	219	101	24	2	690	144	34	198	156	1,221	0	0	0	0
403	881	161	419	112	202	64	18	24	2	41	100	4	183	129	457	0	0	0	0
407	2,387	0	1,200	280	497	226	131	66	2	42	499	15	125	262	944	0	0	0	0
409	931	0	282	3	51	82	69	77	3	10	12	72	0	2	96	0	0	0	0
410	3,061	0	1,092	5	162	240	516	169	3	22	69	54	106	61	312	0	0	0	0
411	78	0	34	0	3	6	19	6	2	32	27	13	6	0	78	0	0	0	0
413	1,119	0	441	69	122	106	98	47	3	59	28	369	313	232	1,001	0	515	0	0
414	2,469	0	957	158	223	260	188	127	3	120	99	47	214	184	664	0	10	0	0
415	1,933	0	807	108	245	136	248	70	2	34	14	57	64	96	265	0	0	0	0
416	1,407	12	557	10	60	101	265	121	3	8	24	69	5	42	147	0	0	0	0
417	2,115	0	1,091	280	352	179	215	66	2	11	88	14	77	49	240	0	0	0	0
418	2,068	0	802	79	252	210	240	21	3	16	187	66	871	358	1,498	0	1,263	0	0
419	1,333	0	501	37	76	91	186	111	3	5	0	0	32	45	82	0	0	0	0
420	1,557	0	707	69	188	195	175	81	2	13	1	0	3	63	80	0	0	0	0
422	1,814	0	723	49	129	195	257	92	3	350	313	1,160	88	444	2,355	0	54	0	0
423	1,556	0	609	110	180	151	117	52	3	14	461	114	232	449	1,271	0	764	0	0
424	1,595	0	664	83	146	148	137	150	2	64	203	79	126	181	653	0	0	0	0
425	836	0	387	48	116	71	129	24	2	126	256	83	503	570	1,537	0	402	0	187
430	1,604	0	572	124	163	148	129	7	3	490	127	24	12	28	681	0	0	0	0
435	1,715	0	600	40	209	170	181	0	3	43	2	6	0	2	53	0	0	0	0
436	2,315	0	890	178	262	289	138	22	3	415	239	990	199	1,135	2,979	0	465	1,074	726
437	4,500	0	1,838	267	829	460	218	64	2	64	9	0	7	73	153	0	463	0	0
440	1,357	0	617	102	142	161	171	41	2	20	9	3	27	73	133	0	241	0	0
441	375	0	220	54	58	47	44	17	2	12	277	103	31	126	550	0	0	0	0
442	794	0	426	90	119	108	78	32	2	12	3	24	10	39	88	0	16	0	0
443	1,420	0	495	27	34	37	141	256	3	16	8	29	370	51	474	0	0	0	0
444	1,517	0	555	10	28	81	213	224	3	46	5	17	5	88	161	0	0	0	0
445	1,181	7	560	80	131	97	176	76	2	13	34	27	35	48	157	0	0	0	0
446	41	0	22	8	7	5	1	0	2	0	0	0	7	8	15	0	0	0	0
447	905	0	298	4	54	81	84	75	3	20	1	2	9	55	86	0	0	0	0
448	638	0	362	108	131	63	31	28	2	7	6	110	30	62	215	0	0	0	0
449	1,010	0	573	184	118	123	104	45	2	20	89	26	68	255	457	0	929	0	0
450	477	0	270	75	95	44	28	28	2	73	149	304	79	171	775	0	0	0	0
451	13	0	9	2	3	2	1	1	2	2	0	3	0	43	48	0	0	0	0
452	412	0	228	64	81	38	23	22	2	1	58	28	35	122	244	0	0	0	0

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TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
453	361	0	194	63	40	42	34	15	2	92	24	42	19	167	343	0	737	382	0
454	16	0	12	5	5	2	0	0	2	0	1	0	0	0	1	0	0	0	0
455	637	0	338	85	81	55	69	48	2	33	108	16	6	64	227	0	0	0	0
456	665	70	328	94	87	55	54	37	2	13	8	0	59	29	109	0	0	0	0
457	1,681	0	555	18	42	56	249	191	3	28	29	146	607	1,068	1,878	0	0	0	0
458	1,154	0	606	39	93	122	235	116	2	3	2	3	14	5	27	0	0	0	0
459	412	0	137	3	7	25	46	55	3	140	28	0	0	0	168	0	0	0	0
460	2,772	0	990	149	198	297	198	148	3	3	3	3	4	4	17	0	0	0	0
461	28	0	13	3	5	3	1	1	2	3	0	3	0	0	6	0	0	0	0
463	2,616	0	969	11	193	246	261	258	3	11	0	263	0	28	302	0	0	0	0
464	1,224	0	408	5	134	118	108	43	3	39	78	273	17	121	528	0	469	0	0
465	2,015	0	650	7	129	235	176	103	3	5	3	0	0	111	119	0	0	0	0
466	5,552	0	1,983	22	496	587	551	327	3	2	120	20	47	49	238	0	329	0	0
467	1,407	0	485	6	97	175	131	76	3	58	9	0	0	0	67	0	623	0	0
469	1,570	0	383	5	72	109	108	89	4	3	5	3	4	15	30	0	0	0	0
470	555	0	179	2	19	73	48	37	3	84	6	0	0	142	232	0	571	0	0
471	1,788	0	777	62	164	179	238	133	2	1,776	334	9	437	24	2,579	0	0	0	0
472	2,068	0	939	195	252	211	217	65	2	1,379	109	795	35	201	2,520	0	8	0	0
473	1,852	260	841	325	295	135	68	18	2	25	90	4	11	173	304	0	269	257	0
474	74	0	35	11	16	3	4	0	2	2	2	3	4	4	15	0	0	0	0
475	1,130	0	628	201	290	58	79	0	2	27	15	0	19	79	141	0	503	0	0
476	947	0	526	169	242	48	67	0	2	9	0	51	24	15	99	0	0	0	0
477	460	0	200	40	41	40	80	0	2	72	1	0	452	4	529	0	0	0	0
478	570	0	300	46	120	90	45	0	2	2	2	3	4	4	15	0	0	0	0
479	346	0	128	43	57	13	15	0	3	250	365	459	125	209	1,408	0	0	0	0
480	756	0	269	22	43	41	57	106	3	20	8	10	22	9	69	0	0	0	0
481	0	0	0	0	0	0	0	0	0	65	344	115	0	125	650	0	507	482	0
482	1,384	0	566	11	68	47	183	256	2	12	4	19	4	3	42	0	0	0	0
483	1,157	0	428	13	28	96	149	142	3	16	446	35	743	861	2,102	0	1,801	0	0
484	1,222	0	488	44	92	149	136	67	3	58	55	129	22	359	622	0	0	0	0
485	1,769	0	697	22	55	181	342	97	3	175	3	8	0	19	205	0	0	0	0
486	180	0	58	6	8	8	17	19	3	6	0	33	0	0	39	0	0	0	0
488	4,487	0	1,446	56	114	342	696	238	3	54	39	10	30	148	281	0	537	0	0
489	3,308	0	1,002	29	55	157	572	189	3	104	12	0	294	478	888	0	450	0	0
490	2,542	0	818	14	138	208	311	147	3	8	7	31	6	205	258	0	0	0	0
491	286	0	119	8	28	26	39	19	2	32	18	0	26	0	76	0	0	0	0
492	473	0	182	11	26	26	54	65	3	11	7	0	4	42	64	0	0	0	0
494	1,253	0	485	5	45	88	177	171	3	141	0	8	25	102	276	0	0	0	0
495	1,194	0	442	17	37	48	198	141	3	12	86	0	133	139	370	0	0	0	0
496	734	0	300	72	131	42	31	24	2	32	0	0	4	18	54	0	0	0	0
497	2,262	0	1,085	39	94	124	480	347	2	95	299	0	79	844	1,317	0	0	0	0
498	1,647	417	760	41	97	128	285	208	2	73	188	1,757	400	29	2,447	0	0	0	0
499	4,140	0	1,800	142	232	475	475	475	2	3	3	3	5	4	18	0	0	0	0
500	430	0	180	17	65	55	29	15	2	77	33	43	81	47	280	0	0	0	0
501	1,355	0	586	148	213	115	87	22	2	52	177	35	121	164	549	0	0	0	0
502	1,082	0	456	57	139	105	130	24	2	81	307	8	255	446	1,097	0	0	0	0
503	955	0	385	55	78	69	142	42	3	284	70	41	193	119	707	0	0	0	0
504	754	0	272	48	63	52	88	23	3	158	108	197	78	195	736	0	252	0	0
505	1,378	0	556	76	73	144	180	83	3	47	49	102	117	1,416	1,730	0	637	905	0
506	1,616	0	618	101	124	115	176	102	3	105	55	20	63	179	420	0	0	0	0
507	916	0	334	36	52	56	116	75	3	54	5	14	22	189	284	0	719	0	0



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TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
508	1,100	0	415	40	148	126	68	33	3	14	17	67	40	160	297	0	423	0	0
509	340	0	160	27	73	36	23	0	2	257	641	198	523	421	2,039	0	0	0	0
510	484	0	242	40	39	63	71	30	2	69	171	15	188	59	503	0	0	0	0
511	142	0	53	15	15	13	8	1	3	8	10	3	7	32	60	0	0	0	0
512	538	0	269	104	91	35	22	17	2	20	9	21	116	90	256	0	0	0	0
513	477	0	318	89	123	48	35	23	2	86	23	65	412	285	871	0	0	152	0
514	182	212	108	33	36	21	15	3	2	67	7	2,385	861	457	3,776	0	21	149	726
517	1,601	0	642	53	99	92	133	266	3	14	15	47	37	24	137	0	0	0	0
518	978	0	443	36	69	65	92	181	2	13	207	0	119	99	438	0	0	0	0
519	2,962	109	975	89	166	156	197	368	3	11	2	0	18	80	111	0	313	0	0
520	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	702	0	0	0
521	1,255	0	497	44	82	76	103	192	3	14	59	0	70	122	264	0	268	0	0
522	1,703	0	587	47	59	118	228	135	3	76	2	0	6	15	99	0	0	0	0
523	646	0	239	0	0	38	79	123	3	0	106	6,474	1	377	6,958	0	0	0	0
524	894	0	319	25	32	62	125	75	3	16	2	0	4	13	35	0	0	0	0
525	2,040	0	849	75	95	183	316	180	2	508	249	8	3	54	823	0	0	0	0
526	392	0	218	48	40	44	51	34	2	171	44	0	37	44	296	0	6	0	0
527	9	0	9	0	1	1	4	3	1	60	0	0	0	70	130	0	0	0	0
528	7	0	3	0	0	1	1	1	3	0	3	2,399	4	4	2,410	0	0	0	0
529	373	0	171	44	43	26	30	29	2	17	52	0	0	50	119	0	0	0	0
532	82	0	64	48	5	8	3	0	1	0	130	234	51	428	843	0	0	1,836	0
533	309	0	206	153	17	27	9	0	2	80	168	400	815	198	1,661	0	0	0	0
534	125	0	68	50	6	9	3	0	2	38	261	667	358	401	1,726	0	0	0	0
535	894	0	344	166	94	47	36	1	3	174	15	3,666	69	243	4,166	0	0	0	0
600	41	0	17	4	6	5	2	0	3	169	528	12	83	68	861	0	0	0	0
601	813	0	307	14	48	115	95	35	3	8	494	47	89	121	758	0	0	0	0
602	74	0	33	10	12	7	3	0	3	194	142	24	538	435	1,332	0	0	0	0
603	1,337	0	593	104	161	186	119	23	2	21	16	3	23	97	160	0	473	0	0
604	124	0	54	11	18	15	9	2	2	574	73	99	76	165	987	0	0	0	415
605	1,417	12	577	87	174	87	179	49	3	30	0	10	10	111	160	0	505	0	0
606	122	0	53	11	17	14	9	2	2	336	171	157	287	313	1,265	0	0	0	0
607	2,097	467	955	370	308	167	100	11	2	18	240	107	162	537	1,064	0	0	1,251	0
608	1,486	0	620	165	175	130	121	29	2	84	403	27	45	78	638	0	0	0	0
609	2,454	0	1,038	450	449	106	33	0	2	10	355	3	77	122	568	0	581	0	0
610	1,774	0	590	125	216	179	65	5	3	3	43	6	18	156	225	0	852	0	0
611	642	0	245	69	105	44	23	5	3	14	116	18	118	65	332	0	0	0	0
612	1,736	0	1,020	293	447	208	56	16	2	306	273	906	815	94	2,395	0	0	0	0
613	1,402	0	506	62	167	150	94	33	3	1	1	2	4	8	16	0	0	0	0
614	684	0	269	101	95	42	29	3	3	3	0	46	0	0	49	0	0	0	0
615	1,204	0	426	68	131	109	102	16	3	1	31	7	43	85	166	0	606	0	0
616	2,155	0	774	103	227	213	200	31	3	243	2	5	55	50	356	0	482	0	0
617	1,007	0	356	69	138	62	88	0	3	148	29	0	73	59	309	0	0	0	0
618	1,661	0	772	220	365	159	18	10	2	13	189	2	114	17	336	0	0	0	0
619	1,448	0	641	135	234	163	90	19	2	874	107	40	1,034	123	2,178	0	0	0	254
620	1,481	0	545	115	199	138	77	16	3	0	40	0	126	38	204	0	0	0	0
621	1,146	0	390	43	154	102	91	0	3	0	3	0	0	3	6	0	0	0	0
622	1,656	0	570	93	128	187	146	17	3	0	1	0	0	76	77	0	560	0	0
623	137	0	56	10	13	19	13	1	2	0	93	0	0	0	93	0	0	0	0
624	1,849	0	637	64	158	180	218	17	3	867	2	3	100	928	1,900	0	1,631	0	0
625	1,499	0	576	109	208	166	76	18	3	46	19	2	63	47	176	0	0	0	0
628	164	0	53	13	19	8	7	7	3	40	37	0	122	8	207	0	0	0	0

2025 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
629	976	0	365	43	47	46	96	132	3	3	4	3	5	5	20	0	0	0	0
630	2,295	0	765	45	72	301	294	53	3	3	24	3	4	24	59	0	0	0	0
631	4,991	0	1,468	87	137	578	564	102	3	49	25	17	97	51	238	0	858	0	0
632	2,377	0	804	52	80	337	286	48	3	147	0	17	46	314	524	0	0	0	0
633	984	0	324	3	65	110	119	27	3	9	1	1	55	1,020	1,087	0	992	0	0
634	0	0	0	0	0	0	0	0	0	297	1,409	0	109	284	2,100	0	0	0	0
635	0	0	0	0	0	0	0	0	0	126	1,479	507	163	94	2,370	0	0	0	0
637	3,006	0	2,004	154	617	154	925	154	2	10	144	10	340	12	516	0	626	0	0
638	11,055	0	4,422	349	1,293	298	2,036	446	3	20	159	15	440	49	682	0	297	0	0
639	7,985	0	3,194	251	933	215	1,471	323	3	0	51	0	0	3	54	0	1,017	842	0
640	370	0	215	38	75	48	24	30	2	3	3	3	5	5	19	0	0	0	0
641	137	0	51	3	8	8	15	18	3	0	0	0	0	339	339	0	414	4,191	0
642	2,208	0	960	32	73	98	429	328	2	29	0	8	0	292	329	0	0	0	0
643	1,392	0	580	126	247	121	86	0	2	3	4	3	5	5	20	0	0	0	0
644	1,908	0	596	52	77	134	223	109	3	106	469	734	115	269	1,693	0	0	0	0
645	1,684	0	526	53	77	122	203	70	3	42	0	0	115	579	735	0	1,546	1,198	0
646	0	0	0	0	0	0	0	0	0	3	85	3	405	5	502	0	0	0	0
647	2,032	0	634	81	77	149	221	107	3	182	74	100	8	659	1,023	0	1,922	0	0
649	7,830	0	2,900	156	228	365	1,401	750	3	3	417	3	5	5	433	0	584	0	0
650	10,050	0	3,350	179	264	421	1,619	867	3	3	4	3	849	5	864	0	851	970	0
652	49	0	23	1	2	3	10	8	2	3	182	3	276	4	468	0	0	0	0
653	1,415	0	488	6	111	158	132	81	3	14	6	3	0	53	76	0	0	0	0
654	809	0	261	3	47	76	64	71	3	87	35	0	0	291	413	0	377	0	0
655	1,458	0	540	19	42	54	241	184	3	320	1,342	378	394	60	2,495	0	1,130	0	0
656	663	0	265	36	66	64	59	40	3	0	0	65	5	56	126	0	411	0	0
657	0	0	0	0	0	0	0	0	0	3	76	3	355	72	509	0	0	0	0
658	0	0	0	0	0	0	0	0	0	136	105	3	547	103	894	0	0	0	0
659	0	0	0	0	0	0	0	0	0	0	0	20	0	892	912	0	0	0	7,982
800	41	0	27	10	13	3	1	1	2	0	0	15	0	0	15	0	0	0	0
801	987	0	436	17	37	49	194	138	2	0	0	0	188	0	188	0	0	0	0
802	495	0	215	19	23	61	66	46	2	71	154	52	66	75	417	0	0	0	0
803	818	0	314	26	50	80	85	75	3	72	88	0	171	460	791	0	0	0	0
804	5	0	2	0	0	0	1	1	3	0	0	0	0	479	479	0	2,192	781	0
805	261	0	110	28	31	22	22	7	2	1	0	0	0	1	2	0	0	0	0
806	334	0	132	34	38	25	26	9	3	11	20	0	4	5	41	0	0	0	0
807	778	0	289	56	85	66	66	17	3	14	25	2	28	5	74	0	0	0	0
808	592	0	224	43	66	52	50	13	3	57	30	0	11	5	103	0	0	0	0
809	576	0	210	25	49	41	68	27	3	14	198	3	9	1	225	0	0	0	0
810	1,099	0	485	89	183	79	80	54	2	34	0	25	0	150	209	0	928	438	0
811	1,652	0	569	68	136	113	183	69	3	48	12	8	10	5	83	0	0	0	0
812	353	0	150	39	56	25	19	10	2	2	4	0	1	1	9	0	0	0	0
813	1,006	0	455	114	167	77	64	32	2	342	15	9	14	10	389	0	0	0	0
814	66	0	27	12	8	3	2	2	3	14	2	26	0	0	42	0	0	0	0
815	173	0	65	20	19	12	10	4	3	7	1	4	0	4	16	0	0	0	0
816	116	0	54	10	15	12	14	4	2	81	1	5	0	20	107	0	0	0	0
817	992	0	430	88	133	87	93	30	2	47	202	240	148	176	813	0	338	196	0
818	27	0	8	1	4	2	1	0	3	80	0	0	552	66	698	0	0	0	0
819	31	0	16	5	6	4	1	0	2	0	0	0	0	65	65	0	919	51	0
820	4	0	4	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0
821	108	0	37	8	12	9	6	2	3	5	2	0	0	0	7	0	0	0	0
822	37	0	15	4	5	4	2	1	2	10	26	245	0	0	281	0	0	0	0

2025 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
823	72	0	22	7	9	4	3	0	3	2	0	0	0	0	2	0	0	0	0
824	325	0	110	17	32	28	20	13	3	3	0	3	0	0	6	0	0	0	0
825	425	0	142	34	48	36	18	6	3	0	0	2	0	96	98	0	488	71	0
826	51	0	20	4	7	5	3	1	3	0	0	45	0	0	45	0	0	0	0
827	251	0	90	21	31	23	12	4	3	2	0	0	1	3	6	0	0	0	0
828	301	0	103	24	35	27	13	4	3	31	0	0	0	3	34	0	0	0	0
829	226	0	83	20	28	21	11	3	3	6	0	0	0	1	7	0	0	0	0
830	378	0	140	31	46	35	20	7	3	4	0	26	0	5	35	0	0	0	0
831	149	0	68	16	23	17	9	3	2	5	0	2	0	62	69	0	2,249	115	0
832	236	0	109	43	36	17	9	4	2	5	8	44	0	0	58	0	0	0	0
833	564	0	241	75	78	48	28	11	2	6	2	6	0	2	15	0	0	0	0
834	914	0	336	120	133	46	25	12	3	88	1	32	0	5	126	0	0	0	0
835	414	0	153	36	51	38	20	8	3	100	17	0	8	6	131	0	0	0	0
836	1,063	0	350	81	118	89	47	16	3	36	0	88	13	219	356	0	287	353	0
837	933	0	359	9	26	35	166	123	3	7	0	0	0	12	19	0	258	0	0
838	540	0	360	12	27	36	162	123	2	3	106	35	687	5	836	0	0	0	0
839	385	0	148	0	0	0	49	99	3	3	3	3	4	4	17	0	0	0	0
840	600	0	300	25	64	85	13	112	2	716	0	0	0	0	716	0	0	0	0
841	126	0	46	1	3	11	24	7	3	41	2	0	2	67	112	0	0	0	0
842	1,860	0	620	0	0	248	372	0	3	15	59	29	0	14	117	0	0	0	0
843	837	0	310	0	17	28	76	189	3	3	4	3	5	5	20	0	0	0	0
844	9	0	6	0	0	3	3	0	2	0	43	0	5	5	53	0	0	0	0
845	234	0	83	10	17	13	21	23	3	485	157	0	0	9,474	10,116	0	0	0	4,063
846	1,059	0	479	33	77	79	122	169	2	3	4	3	5	5	20	0	0	0	0
847	1,477	0	590	32	84	162	267	45	3	44	301	31	366	352	1,094	0	410	0	0
848	2,002	0	690	17	109	186	255	123	3	22	48	0	71	38	178	0	0	0	0
850	0	0	0	0	0	0	0	0	0	115	49	405	203	1,504	2,276	0	0	0	0
851	1,802	0	529	0	18	64	213	234	3	489	5	8	527	6	1,035	0	956	0	0
852	0	0	0	0	0	0	0	0	0	708	29	12	217	88	1,054	0	0	0	0
853	1,178	0	394	0	14	51	165	164	3	0	44	0	142	112	298	0	0	0	0
854	1,281	0	366	0	19	51	142	154	4	128	1,125	24	1,111	439	2,827	0	462	0	0
855	2,645	0	1,101	73	323	214	385	106	2	48	168	12	63	301	592	0	484	0	0
856	404	0	134	9	10	28	66	21	3	1,853	6	1,229	31	753	3,873	0	0	0	0
857	1,240	0	470	44	76	97	189	64	3	70	62	7	84	150	374	0	660	0	0
858	882	0	332	15	54	108	109	46	3	8	7	1	68	14	97	0	0	0	0
859	1,558	0	565	15	52	157	301	40	3	72	18	5	10	16	120	0	0	0	0
860	1,039	0	384	8	50	125	142	58	3	548	143	0	215	138	1,044	0	0	0	0
861	437	0	182	23	64	53	32	9	2	75	1,735	0	44	22	1,876	0	0	0	0
862	970	0	1,059	30	154	383	373	119	1	366	190	58	87	161	861	0	0	0	0
863	1,269	0	507	18	83	164	174	68	3	12	524	52	100	354	1,042	0	25	0	0
864	1,448	0	536	29	94	177	179	56	3	24	9	2	20	160	214	0	285	94	0
865	1,384	0	488	59	66	109	194	61	3	10	5	0	21	21	58	0	0	0	0
866	1,162	0	528	65	71	123	204	63	2	68	0	0	20	27	115	0	601	0	0
867	1,280	0	489	44	108	103	183	52	3	25	17	56	57	25	180	0	0	0	0
868	685	0	263	25	22	95	77	44	3	0	0	1	10	3	13	0	0	0	0
869	1,101	0	453	100	116	119	75	43	2	20	232	73	413	76	814	0	357	0	0
870	2,279	0	880	18	75	186	378	223	3	28	0	0	7	89	124	0	49	17	0
871	1,173	0	437	10	41	97	186	104	3	90	9	84	66	90	339	0	0	0	0
872	212	0	58	4	6	24	21	4	4	105	268	92	361	163	990	0	0	0	0
873	8,504	0	4,263	275	429	1,787	1,518	254	2	87	164	0	54	225	530	0	3,672	0	0
874	1,897	0	639	5	99	207	268	60	3	34	9	21	45	526	636	0	0	0	0

2025 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
875	2,419	0	833	10	126	273	346	78	3	78	358	231	997	799	2,463	0	0	0	0
876	2,271	0	756	35	123	125	444	30	3	456	534	0	53	52	1,095	0	0	0	0
877	4,392	0	1,513	50	217	546	526	175	3	25	20	0	20	70	135	0	754	0	0
878	1,943	0	669	14	120	241	216	79	3	31	0	0	43	579	653	0	776	2,565	0
879	3,002	0	1,000	40	157	340	364	99	3	0	28	16	48	16	108	0	0	0	0
880	1,062	0	461	119	207	96	31	8	2	4	86	4	74	98	266	0	0	0	0
881	1,034	0	369	93	170	67	29	11	3	6	0	0	9	0	15	0	0	0	0
882	532	0	172	44	64	53	12	0	3	2	0	14	0	62	79	0	351	0	0
883	1,602	0	572	59	210	203	80	20	3	48	8	0	0	15	71	0	0	0	0
884	1,765	0	812	270	310	141	60	31	2	0	52	3	48	38	141	0	0	0	0
885	1,675	0	761	217	281	177	72	14	2	45	16	0	64	4	128	0	0	0	0
886	924	0	369	107	117	90	35	20	3	2	24	13	126	47	212	0	0	0	0
887	990	0	340	92	57	95	78	19	3	7	0	0	0	13	20	0	0	0	0
888	2,562	163	1,087	397	384	170	136	0	2	1	55	0	42	6	104	0	0	0	0
889	1,147	0	479	117	148	145	57	12	2	1	8	3	11	15	39	0	0	0	0
890	4	0	2	1	1	0	0	0	2	35	301	2	115	107	560	0	0	0	0
891	1,525	0	541	206	162	85	68	19	3	15	57	7	28	175	283	0	427	0	0
892	1,393	0	531	157	162	108	95	10	3	52	94	0	145	390	681	0	1,420	0	0
893	1,762	0	720	241	264	135	65	14	2	21	45	139	113	143	461	0	0	0	0
894	1,556	0	818	152	307	183	142	33	2	325	296	253	93	190	1,158	0	0	0	0
895	1,726	0	640	67	226	207	137	3	3	7	42	0	15	329	392	0	402	1,712	0
896	1,054	0	369	70	79	84	104	31	3	35	11	12	6	3	67	0	0	0	0
897	805	0	342	31	78	130	85	18	2	105	38	0	1	12	156	0	0	0	0
898	955	0	376	23	76	122	118	37	3	108	13	0	3	7	133	0	0	0	0
899	436	0	244	46	52	56	69	21	2	32	6	0	1	19	58	0	0	0	0
900	830	0	368	195	104	37	17	15	2	0	0	0	0	0	0	0	0	0	0
901	491	0	215	119	60	19	9	8	2	0	0	0	0	0	0	0	0	0	0
902	451	0	204	98	60	25	11	9	2	0	0	0	0	0	0	0	0	0	0
903	499	0	238	70	83	51	22	12	2	459	69	21	3	86	638	0	0	0	0
904	1,284	0	611	93	209	146	127	37	2	45	230	374	266	2,667	3,582	0	409	190	0
905	685	0	298	42	101	78	58	20	2	25	19	0	7	3	54	0	0	0	0
906	903	93	393	48	126	99	86	35	2	17	2	3	13	0	36	0	0	0	0
907	700	0	293	74	83	62	51	22	2	36	2	15	3	8	65	0	0	0	0
908	1,515	0	684	98	171	172	170	72	2	178	12	51	97	48	386	0	0	0	0
909	621	0	263	56	70	60	57	20	2	26	64	38	10	32	169	0	0	0	0
910	105	0	44	3	10	12	14	5	2	0	0	0	0	0	0	0	0	0	0
911	96	0	42	15	14	7	3	3	2	3	1	5	1	66	75	0	0	0	0
912	1,742	0	773	235	245	130	86	77	2	48	9	80	18	49	204	0	0	0	0
913	477	0	203	25	48	31	59	41	2	10	7	7	10	20	53	0	0	0	0
914	462	0	191	48	45	31	32	36	2	6	2	0	2	3	14	0	0	0	0
915	1,350	12	510	78	108	91	118	115	3	32	138	32	163	38	403	0	0	0	0
916	1,551	0	588	85	166	129	129	80	3	42	48	65	12	88	256	0	0	0	0
917	733	0	316	52	90	67	65	42	2	3	31	8	2	15	59	0	0	0	0
918	340	0	140	76	41	14	0	8	3	0	8	0	5	2	15	0	0	0	0
919	400	0	180	22	57	46	39	15	2	2	3	0	3	0	7	0	0	0	0
920	1,293	0	531	65	172	136	120	39	2	18	1	0	39	6	64	0	0	0	0
921	79	0	32	5	10	8	6	2	3	12	4	11	14	1	43	0	0	0	0
922	189	0	78	43	23	8	0	4	3	0	3	0	3	8	14	0	0	0	0
923	197	0	85	27	26	10	13	9	2	0	2	0	1	4	8	0	0	0	0
924	499	0	216	31	67	26	63	29	2	2	1	2	13	4	22	0	0	0	0
925	439	0	176	80	54	19	9	13	3	6	6	8	5	2	27	0	0	0	0

2025 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
926	987	0	387	57	109	84	83	53	3	24	40	16	58	6	145	0	0	0	0
927	82	0	29	5	7	7	8	2	3	67	6	49	62	69	254	0	0	0	0
928	790	0	337	57	88	82	76	34	2	54	37	51	6	26	173	0	0	0	0
929	239	0	105	37	36	18	7	7	2	8	1	13	3	7	31	0	0	0	0
930	175	0	83	10	26	21	18	7	2	1	0	0	2	0	3	0	0	0	0
931	116	0	54	6	18	14	12	4	2	1	0	0	1	0	2	0	0	0	0
932	207	0	97	13	24	15	26	18	2	70	0	10	1	5	87	0	0	0	0
933	212	88	91	29	30	15	8	8	2	70	5	511	2	15	604	0	0	0	0
934	571	0	245	76	75	28	41	25	2	7	5	0	4	37	53	0	0	0	0
935	129	0	53	24	16	6	3	4	2	0	18	0	1	7	26	0	0	0	0
936	405	0	186	46	52	40	34	14	2	5	7	40	2	121	175	0	0	0	0
937	666	0	267	110	81	30	23	23	3	10	8	0	6	6	30	0	0	0	0
938	153	0	69	13	20	15	13	9	2	4	55	0	8	94	161	0	1,765	0	0

2035 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
1	1320	13	566	66	144	169	159	29	2.3	383	31	44	224	43	724	0	0	0	0
2	1736	13	746	61	163	261	206	54	2.3	52	179	11	44	86	372	0	276	0	0
3	867	13	393	13	69	37	86	189	2.2	22	31	7	60	98	218	0	0	0	0
4	1982	704	1042	235	324	217	164	101	1.9	77	251	989	2381	1095	4794	0	0	0	0
5	2650	0	1384	342	487	280	167	108	1.9	85	292	109	310	328	1125	0	0	0	0
6	228	0	108	17	38	25	17	12	2.1	0	0	0	39	298	337	0	0	0	0
7	1456	1888	692	135	184	155	170	49	2.1	43	5	22	94	4336	4500	0	0	0	10768
8	103	0	54	13	27	7	4	3	1.9	3	3	5	8	5	25	0	0	0	0
9	1030	0	396	31	29	151	102	83	2.6	76	0	106	0	15	198	0	0	0	0
10	2526	13	1147	159	243	208	333	205	2.2	232	397	252	321	106	1309	0	0	0	0
11	1105	0	526	54	212	86	149	26	2.1	81	1103	22	5026	119	6351	0	0	0	0
12	1338	0	743	77	347	98	148	73	1.8	34	53	116	556	373	1131	0	0	0	283
13	2212	101	1004	133	311	234	238	89	2.2	226	202	346	725	580	2079	0	0	0	0
14	1542	0	761	181	318	129	107	25	2.0	27	660	169	244	176	1277	0	0	0	0
15	1359	0	564	67	117	136	168	76	2.4	14	48	18	253	77	410	0	439	0	0
16	1964	0	795	71	222	227	209	65	2.5	40	146	76	248	79	590	0	0	0	0
17	1784	0	743	96	114	297	149	86	2.4	94	10	43	307	140	595	0	13	0	0
18	1474	0	669	146	236	174	100	13	2.2	17	0	0	10	209	236	0	0	0	0
19	1373	0	624	159	176	129	125	34	2.2	456	214	70	14	596	1351	0	1190	391	0
20	976	126	493	104	155	84	151	0	2.0	39	79	2	198	171	489	0	215	34	0
21	779	0	377	114	116	78	52	16	2.1	15	125	0	10	28	178	0	0	0	0
22	490	60	229	95	80	39	14	1	2.1	60	119	9	67	234	489	0	0	0	0
23	495	0	226	48	62	54	45	16	2.2	127	67	37	8	68	308	0	0	0	0
24	460	0	252	84	92	42	25	8	1.8	1332	376	569	38	636	2950	0	0	0	0
25	221	0	163	61	63	23	12	4	1.4	177	275	197	299	109	1056	0	0	0	0
26	1660	343	974	343	336	182	86	27	1.7	557	283	73	1068	185	2165	0	0	0	0
27	365	0	261	76	101	52	24	8	1.4	615	612	102	292	211	1831	0	0	0	0
28	72	230	34	10	13	7	3	1	2.1	587	342	400	240	303	1872	0	0	0	0
29	252	0	133	39	52	25	13	4	1.9	746	176	178	315	234	1648	0	0	0	250
30	1267	253	575	178	212	108	58	20	2.2	134	446	140	245	64	1029	0	0	0	0
31	956	0	504	105	170	136	85	7	1.9	0	11	0	7	276	293	0	933	0	0
32	1407	0	683	119	221	216	102	26	2.1	255	409	166	154	212	1196	0	0	0	0
33	978	0	481	98	159	117	58	48	2.0	5	27	0	23	125	180	0	189	85	0
34	447	0	226	37	71	28	83	7	2.0	11	15	4	19	56	106	0	0	0	0
35	529	0	272	44	77	72	59	20	1.9	56	23	35	134	14	263	0	0	0	0
36	863	0	471	141	141	95	64	31	1.8	48	123	159	22	79	431	0	37	0	0
37	885	0	372	44	94	82	106	46	2.4	15	4	0	6	122	147	0	295	1239	0
38	1011	0	436	66	138	136	73	23	2.3	13	1	16	8	18	55	0	0	0	0
39	1097	0	490	105	174	107	84	20	2.2	8	46	6	23	26	110	0	0	0	0
40	1648	0	788	279	234	180	71	25	2.1	53	24	0	81	136	293	0	213	0	0
41	1743	0	812	181	231	225	132	45	2.1	106	82	22	516	167	893	0	0	0	0
42	991	0	513	81	174	142	85	31	1.9	6	2	0	25	19	52	0	0	0	0
43	723	0	356	57	114	99	61	25	2.0	4	2	0	1	4	11	0	0	0	0
44	1029	33	526	206	171	68	69	12	2.0	8	1	34	199	238	480	0	586	0	0
45	1162	0	620	153	206	90	135	37	1.9	22	15	14	8	75	133	0	0	0	0
46	958	0	525	156	108	99	85	77	1.8	17	7	7	145	104	281	0	282	0	0
47	619	0	304	56	53	35	71	89	2.0	5	5	10	125	62	207	0	0	0	0
48	482	0	239	47	36	22	64	71	2.0	9	1	0	153	52	215	0	0	0	0
49	56	0	29	6	5	3	8	8	1.9	18	18	41	46	279	402	0	0	0	0
50	503	151	286	67	39	69	59	53	1.8	14	22	22	4989	125	5172	0	288	0	0
51	513	0	238	42	51	33	45	67	2.2	1	1	0	91	28	121	0	0	0	0

2035 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
52	697	0	387	122	179	44	13	29	1.8	2	4	0	42	61	109	0	291	0	0
53	54	0	18	5	9	2	0	2	3.0	20	323	256	15	38	652	0	0	0	0
54	659	0	411	174	125	60	40	13	1.6	708	95	50	103	65	1022	0	0	0	0
56	453	0	302	25	43	67	84	84	1.5	5	9	9	421	1153	1598	0	0	1412	0
57	996	0	739	39	146	177	244	133	1.3	0	0	0	22	56	78	0	0	0	0
58	97	0	48	2	9	12	16	8	2.0	667	42	3	243	66	1022	0	0	0	0
59	1092	13	499	112	138	108	109	32	2.2	331	482	61	174	501	1548	0	0	0	0
60	1534	0	786	205	250	143	141	48	2.0	15	290	11	38	399	753	0	352	0	3000
61	359	0	156	32	65	38	15	6	2.3	34	5	67	5	60	172	0	0	0	0
62	3617	0	1879	397	625	421	291	145	1.9	4	32	0	1317	458	1811	0	899	0	0
63	706	0	311	63	106	66	51	26	2.3	12	31	0	6	8	58	0	0	0	0
64	593	0	282	56	109	66	34	17	2.1	1	0	0	0	75	76	0	0	0	0
65	454	0	233	58	76	64	26	8	2.0	614	427	214	131	124	1509	0	0	0	0
66	412	108	251	72	89	63	27	1	1.6	112	276	52	97	199	736	0	12	4	0
67	1152	0	555	123	188	161	64	19	2.1	53	0	24	23	42	142	0	0	0	0
68	1552	0	806	106	403	109	154	34	1.9	8	406	0	82	84	580	0	0	0	0
69	2111	0	1054	327	375	188	132	33	2.0	73	108	7	7	180	376	0	0	0	0
70	2332	0	1059	176	274	277	207	125	2.2	40	17	4	14	64	140	0	0	0	0
71	842	0	443	150	183	95	0	14	1.9	132	99	82	64	140	516	0	0	0	0
72	538	0	286	117	114	37	11	7	1.9	40	59	133	132	176	540	0	456	0	0
73	684	0	346	69	138	87	42	10	2.0	23	55	60	43	107	287	0	229	0	0
74	1418	0	763	140	263	161	161	38	1.9	62	34	10	155	181	442	0	0	0	0
75	646	0	307	113	87	47	41	20	2.1	351	266	1206	77	469	2369	0	319	0	0
76	1326	137	602	146	243	132	75	7	2.2	61	145	39	132	332	709	0	222	116	0
77	666	0	328	124	88	86	25	5	2.0	1	62	7	60	39	169	0	0	0	0
78	317	0	211	59	82	32	23	15	1.5	59	172	64	662	412	1370	0	38	0	0
79	263	0	175	48	68	28	19	12	1.5	8	18	81	113	317	537	0	0	0	0
80	221	2560	170	44	64	39	16	7	1.3	47	11	0	76	184	318	0	0	0	807
81	36	0	28	11	9	4	2	2	1.3	0	45	0	0	664	710	0	0	0	3275
82	1031	0	536	199	166	77	83	12	1.9	21	9	76	0	99	205	0	0	0	0
83	573	0	315	137	98	42	28	11	1.8	2	8	3	1	386	400	0	613	0	0
84	385	0	202	31	44	73	39	15	1.9	6	0	141	4733	704	5585	0	197	0	0
85	741	0	383	54	138	72	91	29	1.9	0	0	7	8	80	96	0	175	0	0
86	731	0	386	61	75	150	71	29	1.9	28	3	0	9	23	63	0	0	0	0
87	2041	0	1062	465	414	108	56	19	1.9	234	221	157	338	289	1238	0	0	0	0
88	926	166	573	277	154	91	47	4	1.6	14	12	15	205	77	323	0	0	295	0
89	336	0	174	41	60	55	17	1	1.9	16	65	2	25	84	193	0	243	0	0
90	680	0	346	81	120	110	33	3	2.0	15	11	0	7	47	80	0	0	0	0
91	1182	0	583	176	226	100	43	38	2.0	109	1471	415	449	566	3009	0	0	0	443
92	1028	0	446	101	145	105	89	6	2.3	34	498	53	93	177	854	0	0	0	0
93	1053	0	426	97	133	94	93	9	2.5	54	239	97	27	201	618	0	0	0	0
94	1450	0	611	139	185	127	142	18	2.4	6	82	39	70	246	444	0	495	0	0
95	2250	0	1098	248	353	317	147	33	2.0	11	205	31	160	160	567	0	0	0	0
96	789	0	354	106	129	66	42	11	2.2	179	90	160	67	287	783	0	364	0	0
97	631	558	342	92	124	68	47	11	1.8	34	18	136	580	345	1113	0	49	220	0
98	787	0	428	132	158	78	48	13	1.8	420	157	648	919	770	2914	0	161	0	833
99	1043	0	565	218	219	84	32	12	1.8	362	159	116	92	460	1190	0	0	0	0
100	1003	0	378	120	118	91	41	8	2.7	867	846	26	89	448	2276	0	509	0	0
101	2845	0	1206	264	382	304	215	41	2.4	49	73	23	15	33	193	0	0	0	0
102	1201	0	495	165	201	88	23	18	2.4	372	981	23	178	327	1881	0	0	0	0
103	1264	0	549	276	172	66	25	10	2.3	190	10	13	72	311	596	0	182	0	0

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TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRE Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
104	230	0	209	119	61	15	7	7	1.1	876	285	215	440	210	2025	0	0	0	0
105	1058	0	625	232	212	98	56	28	1.7	198	190	72	214	415	1088	0	96	0	0
106	564	0	235	89	94	39	13	0	2.4	723	45	2	703	296	1769	0	0	0	0
107	0	0	0	0	0	0	0	0	0.0	198	123	5321	1506	429	7577	0	0	0	0
108	380	0	200	149	16	26	9	0	1.9	124	64	478	910	34	1609	0	0	0	0
109	80	0	40	30	3	5	2	0	2.0	0	9	11	0	1	21	0	0	0	0
110	31	0	31	15	15	1	0	0	1.0	41	495	166	1306	483	2491	0	0	0	3300
111	208	0	208	154	17	28	9	0	1.0	223	720	148	259	279	1629	0	0	0	0
112	3	0	1	1	0	0	0	0	3.0	1926	620	1327	752	256	4882	0	0	0	0
113	829	0	479	151	161	83	79	5	1.7	53	47	547	3	76	727	0	0	0	0
114	2831	0	1573	402	466	331	355	19	1.8	483	481	70	30	909	1974	0	0	0	0
115	1394	1216	900	286	411	124	56	24	1.5	155	60	23	74	176	488	0	0	0	0
116	721	0	340	123	124	30	32	31	2.1	227	8	0	0	46	281	0	0	0	0
117	922	0	460	108	153	91	85	22	2.0	509	125	105	0	644	1382	0	187	0	0
118	1306	0	503	17	81	62	225	118	2.6	336	10	11	0	38	394	0	0	0	0
119	766	13	420	55	87	88	81	109	1.8	85	32	20	442	106	685	0	169	0	0
120	4805	0	1664	155	690	349	315	154	2.9	334	6	0	0	0	340	0	0	0	0
121	290	0	137	23	37	37	18	23	2.1	0	0	0	7	94	101	0	0	0	0
122	2748	0	1144	184	137	189	242	392	2.4	57	1	22	54	222	356	0	279	1028	0
123	1438	0	711	154	193	171	132	60	2.0	40	133	83	55	191	502	0	0	0	0
124	828	0	413	51	85	100	127	51	2.0	1	0	4	35	59	99	0	275	0	0
125	1893	0	1113	276	325	266	162	84	1.7	54	83	17	66	57	277	0	632	0	0
126	450	0	225	110	64	29	19	3	2.0	92	191	47	603	272	1205	0	22	0	0
127	891	0	469	229	129	64	41	6	1.9	283	379	66	157	505	1390	0	0	0	0
128	736	0	334	116	102	78	37	1	2.2	6	48	122	271	240	687	0	0	0	0
129	861	0	409	219	87	48	43	13	2.1	9	53	28	10	169	269	0	170	0	0
130	1242	300	697	162	226	161	127	22	1.8	18	133	0	572	245	968	0	0	0	0
131	830	0	302	10	47	36	131	78	2.7	235	0	0	0	744	980	0	0	0	0
132	458	0	266	125	90	38	13	0	1.7	179	364	1048	236	2339	4165	0	0	0	833
133	499	0	208	98	71	29	10	0	2.4	69	29	291	210	301	901	0	0	0	0
134	670	0	223	8	21	55	108	32	3.0	10	37	0	76	587	710	0	0	3433	0
136	1259	179	443	85	149	118	78	14	2.8	75	37	208	137	13	471	0	0	34	0
137	846	0	332	106	98	93	35	0	2.5	128	143	16	10	86	383	0	197	0	0
138	2214	0	820	236	366	134	82	3	2.7	18	6	0	9	16	49	0	0	0	0
139	958	0	538	229	205	53	40	12	1.8	144	1505	337	440	442	2867	0	568	0	0
140	1496	0	623	260	225	72	51	16	2.4	747	56	284	19	54	1159	0	0	0	0
141	1258	0	530	168	219	90	50	2	2.4	5	1	25	0	72	103	0	326	0	0
142	1269	91	727	208	227	119	135	37	1.7	27	8	0	53	41	129	0	0	0	0
143	1116	0	631	145	266	105	58	58	1.8	187	234	104	201	158	884	0	0	0	0
144	1005	101	519	132	158	109	100	21	1.9	64	991	41	249	341	1686	0	15	0	0
145	0	0	0	0	0	0	0	0	0.0	5	639	93	10	100	847	0	0	0	0
146	1002	0	527	225	132	109	36	25	1.9	371	2770	36	302	724	4203	0	111	0	0
147	1148	0	425	14	65	50	185	110	2.7	21	8	0	10	28	67	0	0	0	0
148	796	0	331	48	64	63	75	80	2.4	3	50	0	188	210	451	0	0	0	0
149	83	0	40	7	6	5	8	14	2.0	5	4	0	7	2	17	0	0	0	0
150	301	0	122	13	16	14	24	54	2.4	7	6	9	21	112	155	0	516	106	0
151	708	0	300	24	34	45	72	125	2.3	39	11	2	55	80	188	0	253	0	0
152	583	0	292	27	48	75	80	62	2.0	93	18	5	14	85	216	0	0	0	0
153	817	0	388	23	38	30	92	205	2.1	18	46	23	350	65	503	0	0	0	0
154	469	0	227	52	54	32	40	49	2.0	157	296	10	72	1774	2309	0	0	0	0
155	835	0	310	9	24	78	154	44	2.7	106	8	4	11	11	140	0	0	0	0



2035 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
156	496	0	215	25	41	37	45	68	2.3	39	13	2	32	8	94	0	0	0	0
157	69	0	58	32	17	9	0	0	2.2	26	22	0	41	9	97	0	0	0	0
159	992	0	343	11	28	84	170	50	2.9	0	114	21	0	35	170	0	0	0	0
160	1052	0	377	14	37	119	142	65	2.8	51	3	134	9	25	222	0	0	0	0
161	3721	0	1431	49	218	172	621	372	2.6	9	50	0	0	33	93	0	0	2995	0
162	651	0	325	26	53	51	68	127	2.0	1	24	28	6	1510	1570	0	0	0	0
164	1436	0	648	57	99	119	148	226	2.2	30	14	33	10	69	156	0	0	0	0
165	5137	0	1778	486	685	331	268	8	2.9	8	95	17	43	591	754	0	0	0	0
166	1015	0	396	38	87	99	139	33	2.6	27	1	7	10	19	65	0	0	0	0
167	5143	0	2302	324	676	696	467	139	2.2	38	336	52	201	349	976	0	660	0	0
168	2724	0	1237	152	290	376	329	91	2.2	1058	214	223	1929	1590	5014	0	938	0	0
169	1996	603	1173	315	421	222	154	60	1.7	3097	203	221	1649	380	5550	0	0	0	0
170	731	0	406	135	126	71	52	23	1.8	580	495	81	146	936	2238	0	18	0	0
171	1029	0	411	34	81	122	137	38	2.5	34	43	0	118	2	198	0	0	0	0
172	806	0	288	11	46	36	124	72	2.8	134	120	86	27	556	922	0	1120	0	0
173	469	0	198	29	38	27	49	55	2.4	0	6	0	62	14	82	0	0	0	0
174	101	0	52	10	12	9	10	10	2.0	6	1	0	13	30	50	0	0	0	0
175	953	0	431	59	97	82	106	87	2.2	192	62	237	10	316	817	0	0	0	0
176	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	1	0	0	0	0
177	535	0	266	41	85	59	54	26	2.0	4	0	39	7	167	217	0	0	0	0
178	1299	0	676	103	213	152	142	66	1.9	34	19	267	47	1578	1945	0	118	0	0
179	1041	0	569	223	193	59	54	39	1.8	5	301	4	81	186	577	0	0	0	0
180	449	0	175	15	54	12	77	17	2.6	4	327	7	140	80	559	0	0	0	0
181	742	0	337	50	92	85	78	33	2.2	13	28	134	14	4	193	0	0	0	0
182	40	0	20	5	9	5	1	0	2.5	18	7	26	1	35	87	0	0	0	0
183	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0
184	551	0	302	81	110	79	33	0	1.8	16	0	3	2	61	82	0	193	0	0
185	162	0	48	9	1	11	13	14	3.4	99	400	4	4	788	1296	0	0	0	0
186	550	0	317	27	99	22	139	30	1.7	145	0	0	0	58	203	0	0	0	0
187	236	0	96	14	26	16	20	21	2.5	185	747	24	8	38	1003	0	0	0	0
188	1080	0	400	59	108	69	79	86	2.7	46	14	3	20	39	122	0	0	0	0
189	1741	0	757	108	194	126	159	169	2.3	99	577	434	483	514	2107	0	702	0	0
190	991	0	381	58	104	66	76	78	2.6	9	94	5	33	1	142	0	0	0	0
191	589	0	245	37	67	42	48	50	2.4	16	17	228	19	23	303	0	0	0	0
192	377	0	171	27	46	30	33	35	2.2	19	11	8	0	32	71	0	0	0	2500
193	315	0	147	22	40	26	29	30	2.1	13	4	135	7	0	159	0	0	0	0
194	1775	0	710	113	155	154	185	103	2.5	216	1399	261	495	384	2754	0	0	0	0
195	1523	0	565	59	116	140	163	87	2.7	26	61	97	311	25	520	0	0	0	0
196	895	0	376	35	71	90	115	65	2.4	75	56	113	40	99	383	0	398	0	0
197	1838	0	874	84	234	235	222	100	2.1	253	50	56	319	299	978	0	0	0	0
198	2890	0	1155	128	220	264	402	140	2.5	356	269	200	261	224	1309	0	0	0	0
199	2115	0	819	63	110	134	259	254	2.6	15	19	41	283	126	485	0	391	0	0
200	2717	0	1042	83	114	202	298	345	2.6	60	173	56	33	14	336	0	0	0	0
201	2272	0	873	68	64	132	198	411	2.6	19	41	2	55	32	149	0	0	0	0
202	1064	0	462	12	68	143	153	86	2.3	22	17	0	80	159	279	0	331	0	0
203	2020	179	650	42	39	67	171	330	3.1	127	1	6	126	102	362	0	376	0	0
204	771	0	282	19	17	27	78	142	2.7	15	10	14	30	76	145	0	0	0	0
205	349	0	151	11	10	15	41	75	2.3	49	1679	25	229	374	2356	0	0	0	92
206	308	0	147	13	39	40	37	18	2.1	1720	1063	659	544	179	4166	0	0	0	0
207	625	247	347	74	83	83	62	45	1.8	5	48	0	1076	0	1129	0	0	0	0
208	2154	0	953	90	183	246	200	234	2.3	906	452	553	742	5398	8052	0	883	0	320

2035 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
209	0	0	0	0	0	0	0	0	0.0	2173	861	46	369	78	3527	0	0	0	0
210	1291	0	745	65	157	114	167	242	1.7	601	4591	116	1416	349	7072	0	0	0	0
211	2796	0	1220	75	214	337	416	179	2.3	82	4	48	416	76	627	0	0	0	0
212	2346	0	868	93	120	144	213	297	2.7	14	20	20	164	234	452	0	757	0	0
214	1212	0	488	6	53	101	186	142	2.5	43	288	4	546	80	961	0	0	0	0
216	0	0	0	0	0	0	0	0	0.0	0	3	0	7	4	14	0	0	0	0
217	4250	7643	1131	52	400	429	130	120	3.8	78	298	322	1376	1244	3318	6695	515	1117	0
218	947	0	378	16	96	49	76	142	2.5	66	57	59	6	36	224	0	0	0	0
219	4960	0	1550	67	268	179	642	394	3.2	4	0	4	1	35	44	0	1748	0	0
220	486	0	194	15	43	37	43	57	2.5	5	7	4	13	10	40	0	0	0	0
221	1759	0	677	46	61	70	355	145	2.6	40	28	0	13	14	96	0	0	0	0
222	1486	0	532	37	47	56	278	114	2.8	57	3	4	8	39	112	0	0	0	0
223	101	0	44	2	4	5	20	13	2.3	91	124	75	3422	37	3749	0	0	0	0
226	956	0	343	5	37	30	128	143	2.8	186	30	0	638	58	912	0	0	0	0
227	1264	0	486	15	37	49	218	167	2.6	27	30	49	55	23	184	0	0	0	0
228	1132	0	379	5	37	73	136	127	3.0	6	0	100	0	298	404	0	1699	0	0
229	173	0	66	2	4	11	22	27	2.6	3	479	4	8	288	782	0	0	0	0
230	6676	0	2302	29	67	382	818	1007	2.9	19	822	25	447	78	1391	0	0	0	0
231	312	0	104	1	12	9	39	44	3.0	17	25	0	0	0	42	0	0	0	0
232	1716	0	615	11	67	51	229	257	2.8	66	11	7	6	33	124	0	0	0	0
233	769	0	258	5	29	21	96	107	3.0	0	0	17	97	217	331	0	0	1727	0
234	1157	0	462	13	35	82	165	167	2.5	186	273	537	1047	2226	4269	0	2402	83	0
235	1910	0	636	96	72	63	153	253	3.0	129	57	292	398	201	1076	0	0	764	0
236	1407	0	469	24	41	75	127	201	3.0	398	9	11	8	74	500	0	0	0	0
238	13000	0	5000	192	386	1155	2476	792	2.6	90	554	7	320	571	1543	0	0	0	0
240	500	0	200	25	27	26	57	65	2.5	28	0	0	1381	24	1433	0	0	0	0
241	328	0	98	4	8	24	48	14	3.3	133	0	0	0	10	143	0	0	0	0
242	319	0	114	3	8	28	57	17	2.8	131	0	11	0	53	194	0	0	0	0
243	1320	0	516	117	89	112	114	84	2.6	24	272	12	1298	296	1901	0	0	0	0
244	408	0	157	10	35	34	50	27	2.6	32	37	73	0	42	184	0	0	0	0
245	228	0	95	5	13	12	29	37	2.4	6	15	0	15	244	280	0	0	0	0
247	172	0	64	5	15	13	20	10	2.7	1	26	0	15	33	76	0	0	0	0
248	966	0	401	13	80	88	98	123	2.4	80	9	5	74	0	169	0	0	0	0
249	609	0	253	11	65	70	42	65	2.4	0	5	0	13	10	28	0	0	0	0
250	1022	0	379	13	74	84	93	115	2.7	19	41	0	123	54	237	0	0	0	0
251	1051	0	420	28	18	159	119	96	2.5	63	265	12	93	95	527	0	0	0	0
252	1704	0	643	50	15	157	216	205	2.7	570	227	0	52	79	927	0	0	0	0
253	405	0	157	11	35	34	52	26	2.6	49	36	0	0	429	514	0	686	0	0
254	2355	0	1019	60	139	141	303	376	2.3	175	0	15	44	41	275	0	0	0	0
255	1415	0	520	31	70	71	155	192	2.7	176	0	34	57	80	349	0	440	0	0
256	1330	0	514	42	60	63	200	149	2.6	39	10	0	6	10	65	0	0	0	0
257	1015	0	389	31	46	48	151	113	2.6	11	4	5	0	17	36	0	0	0	0
258	1511	0	589	49	70	74	228	170	2.6	16	4	0	2	17	40	0	0	0	0
259	1861	0	658	39	91	91	195	241	2.8	248	11	52	11	14	335	0	0	0	0
260	143	0	53	7	17	8	12	9	2.7	3	21	41	714	408	1187	0	0	0	0
261	1155	0	580	66	157	96	152	110	2.0	80	600	235	57	21	992	0	0	0	0
262	1657	0	643	41	144	225	158	74	2.6	201	1470	267	162	178	2278	0	0	0	0
263	862	0	433	71	115	87	92	68	2.0	625	1359	2541	1774	673	6973	0	0	0	5001
264	189	0	91	20	26	26	15	4	2.1	105	1548	281	87	267	2287	0	0	0	0
265	2773	0	1122	65	189	298	369	201	2.5	74	0	137	553	210	974	0	369	78	0
266	2650	0	1002	76	203	201	244	277	2.6	101	0	24	61	185	370	0	0	459	0

2035 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
267	671	0	239	42	55	70	45	27	2.8	560	704	118	810	544	2736	0	0	0	0
270	1742	61	744	59	171	241	224	49	2.3	30	185	15	68	95	393	0	0	0	0
271	2349	0	787	0	98	197	301	192	3.0	378	453	35	19	248	1132	0	532	0	0
273	1251	0	403	52	33	56	142	120	3.1	51	749	0	217	46	1064	0	576	0	0
275	4462	0	1859	293	247	253	641	425	2.4	40	269	4	21	85	419	0	0	0	0
276	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0
278	0	0	0	0	0	0	0	0	0.0	144	272	886	18	583	1901	0	0	0	0
279	52	0	30	5	9	9	7	0	1.7	346	50	48	79	88	612	0	0	0	0
280	2772	900	737	79	233	234	121	70	3.8	97	303	3086	818	1574	5878	6645	0	0	0
281	0	0	0	0	0	0	0	0	0.0	1539	3092	415	1094	556	6696	0	0	0	0
283	895	0	358	9	100	82	109	58	2.5	5	156	29	33	175	399	0	0	0	0
284	1154	0	431	32	139	85	104	71	2.7	43	12	5	3	44	107	0	0	0	0
285	1563	0	563	7	126	142	202	86	2.8	11	2	1	29	328	371	0	839	0	0
286	921	0	387	6	93	134	99	55	2.4	16	2	0	45	92	157	0	279	0	0
287	859	0	401	83	118	74	96	30	2.1	27	62	102	199	83	473	0	0	0	0
288	2268	0	842	10	205	246	232	149	2.7	38	41	13	47	339	479	0	341	1167	0
289	83	0	36	0	7	10	10	9	2.3	0	0	0	1	121	122	0	0	241	0
290	871	13	357	37	141	110	52	17	2.4	53	4	1	32	132	223	0	971	0	0
291	1517	51	513	6	109	153	164	81	3.0	132	17	75	66	47	338	0	0	0	0
292	1121	0	359	4	65	98	101	91	3.1	25	1	4	16	11	57	0	0	0	0
293	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0
294	153	0	52	1	6	21	14	10	2.9	0	4	0	9	7	20	0	0	0	0
295	8617	7243	2264	196	1246	606	137	79	3.8	225	1781	518	1010	2030	5563	30000	2495	0	108
296	5	0	2	0	1	1	0	0	2.5	248	22	365	0	37	672	0	0	0	0
297	905	0	348	34	108	109	67	30	2.6	17	261	0	10	3	291	0	0	0	0
298	868	0	457	45	121	91	128	72	1.9	47	106	12	14	25	204	0	0	0	0
299	669	0	223	22	59	44	63	35	3.0	0	3	13	0	0	16	0	0	0	0
300	2257	0	867	301	270	160	118	19	2.6	241	7	81	10	20	360	0	0	0	0
301	11	0	5	2	2	1	1	0	2.5	86	91	0	8	8	194	0	0	0	0
302	416	0	86	21	1	28	28	8	4.8	378	900	2858	92	1058	5285	0	34	1209	0
303	631	4208	287	57	85	62	62	20	2.2	1987	3318	1204	83	1478	8070	0	0	0	0
304	1141	0	339	14	24	47	84	169	3.4	14	15	0	3	57	89	0	573	0	0
305	67	0	58	23	21	8	6	0	1.2	4	0	0	9	9	22	0	0	0	0
306	1749	0	603	7	140	164	163	129	2.9	96	8	0	22	81	207	0	0	0	0
307	1376	0	447	21	32	62	110	222	3.1	37	0	0	8	24	69	0	0	0	0
308	5751	0	1917	22	361	551	467	516	3.0	3	6	4	1039	50	1102	0	0	0	0
310	3383	0	1224	13	143	493	326	249	2.8	3	3	4	10	6	27	0	0	0	0
311	2836	0	1013	12	188	339	280	194	2.8	918	42	0	102	7	1069	0	0	0	0
312	20	0	10	0	2	3	3	2	2.0	53	84	60	0	412	609	0	0	0	0
313	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0
314	737	0	254	3	75	65	73	38	2.9	47	0	0	0	6	53	0	0	0	0
315	1693	0	651	85	125	208	140	93	2.6	49	17	25	23	189	303	0	431	0	0
316	636	0	265	3	48	87	73	54	2.4	1	833	3	301	636	1774	0	0	1203	0
317	1587	0	529	6	102	171	144	106	3.0	8	0	0	1	14	23	0	0	0	0
318	1156	0	428	65	180	122	33	28	2.7	12	5	0	35	2	54	0	616	0	0
319	1421	0	592	109	153	166	112	52	2.4	13	62	49	22	123	269	0	1073	0	0
320	0	0	0	0	0	0	0	0	0.0	0	1243	0	0	51	1294	0	0	0	0
321	802	0	472	37	139	137	110	49	1.7	74	35	261	250	1	621	0	0	0	0
322	1336	0	477	22	101	156	138	60	2.8	25	49	135	9	114	332	0	0	0	0
323	1876	0	647	119	166	181	122	59	2.9	646	0	157	0	0	803	0	0	0	0
324	953	0	381	5	126	109	100	41	2.5	17	34	157	25	25	258	0	0	0	0

2035 SMALL AREA FORECAST

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325	742	0	265	3	52	75	74	61	2.8	463	0	0	0	80	543	0	0	0	0
326	2784	0	960	11	191	271	267	220	2.9	4	100	35	9	8	157	0	734	0	0
327	393	0	157	38	41	42	21	15	2.5	6	0	0	0	6	0	0	0	0	0
328	8047	0	2874	33	567	812	801	661	2.8	1	4	2	10	5	22	0	821	0	0
329	1118	0	430	5	85	121	120	99	2.6	9	2	1	1	5	18	0	0	0	0
330	1040	0	314	77	82	85	41	29	3.3	324	53	68	0	0	444	0	0	0	0
331	452	0	174	42	46	47	23	16	2.6	93	69	229	19	34	444	0	0	0	0
332	419	0	161	39	42	44	21	15	2.6	15	36	1055	53	154	1313	0	500	0	0
333	8896	0	3177	36	658	1137	850	496	2.8	163	22	560	620	54	1419	0	24	91	0
334	2927	0	861	10	179	308	230	134	3.4	3	6	4	9	9	32	0	0	0	0
335	3699	0	1156	13	228	327	322	266	3.2	9	0	45	2	904	961	0	838	1651	0
336	945	0	378	5	74	137	102	60	2.5	64	0	0	186	388	638	0	0	0	0
338	1765	0	958	308	286	273	50	42	1.8	2	9	0	41	56	108	0	63	0	0
339	0	0	0	0	0	0	0	0	0.0	221	27	401	0	0	649	0	0	0	0
340	1091	0	436	112	139	90	52	43	2.5	80	0	8	0	27	116	0	0	0	0
341	964	0	357	4	67	103	87	96	2.7	163	0	0	0	28	191	0	0	0	0
343	8544	17	2958	255	625	1094	764	221	2.9	33	95	14	135	173	450	0	2196	0	0
344	1671	0	667	253	238	90	60	26	2.5	47	0	390	13	0	451	0	0	0	0
345	5705	0	2694	668	592	842	506	86	2.1	1	6	4	11	8	31	0	0	5377	0
346	330	0	152	34	50	40	21	7	2.2	201	65	0	0	106	372	0	0	0	0
347	939	0	344	71	101	64	83	25	2.7	6	5	45	7	9	71	0	0	0	0
348	1077	0	399	5	87	99	145	63	2.7	179	117	81	104	230	711	0	674	0	0
349	458	0	276	30	56	98	45	47	1.7	0	13	5	0	0	18	6612	0	0	0
350	341	0	136	42	51	23	13	7	2.5	17	0	150	0	7	174	0	0	0	0
351	5894	0	2041	971	439	318	219	93	2.9	3	19	44	1	7	74	0	2331	0	0
352	2773	0	929	193	260	257	177	42	3.0	16	28	12	8	11	75	0	0	0	0
353	3803	0	1317	282	385	346	235	68	2.9	51	15	12	0	15	93	0	0	0	0
354	2117	0	846	160	216	259	171	39	2.5	8	3	61	0	7	79	0	0	0	0
355	3766	0	1397	230	307	486	320	54	2.7	93	95	0	0	52	240	0	0	0	0
356	2037	0	729	121	164	253	166	25	2.8	59	8	0	0	0	67	0	0	0	0
357	2750	0	1020	210	278	291	193	47	2.7	42	81	0	0	43	166	0	0	0	0
358	32	0	14	8	2	2	2	1	2.2	1	149	4	423	132	710	0	0	0	0
361	973	0	531	14	74	182	186	74	1.8	28	179	0	67	429	703	0	950	0	0
363	2256	187	852	120	186	155	241	150	2.6	170	185	21	312	416	1105	0	430	0	0
364	2723	113	1046	109	207	292	303	135	2.6	259	287	172	230	542	1490	0	60	0	0
365	2632	0	1011	83	223	267	290	148	2.6	62	192	4	533	379	1170	0	0	0	0
366	2099	0	830	41	120	279	260	131	2.5	27	1	18	11	87	144	0	0	0	0
368	1785	58	811	106	199	191	258	57	2.2	345	473	350	1246	560	2973	0	0	0	407
369	904	0	365	7	46	62	171	80	2.5	472	28	146	226	403	1275	0	0	0	0
370	2147	0	895	130	293	257	175	40	2.4	85	253	190	154	412	1094	0	8	0	0
371	1272	0	517	69	124	161	146	16	2.5	21	34	1	30	159	245	0	778	0	0
372	383	0	145	19	15	40	34	37	2.6	5	0	1	4	67	76	0	508	0	0
374	1175	0	489	121	197	105	50	15	2.4	1139	447	178	28	172	1964	0	0	0	0
375	2935	0	1250	246	396	421	166	22	2.3	2192	387	68	59	308	3013	0	0	0	0
376	1688	33	635	159	113	107	197	59	2.7	2176	885	212	177	444	3894	0	0	0	0
377	1877	0	780	174	301	146	106	53	2.4	640	91	37	0	77	845	0	0	0	0
378	550	0	228	32	57	67	51	21	2.4	0	3	0	11	9	23	0	950	921	0
379	238	0	77	55	11	5	3	3	3.1	92	1050	125	216	625	2109	0	0	0	0
380	44	0	36	19	10	4	2	1	1.2	989	119	207	0	52	1367	0	0	0	0
381	14615	0	5838	671	2194	1368	1211	395	2.5	104	214	49	50	546	963	0	1187	58	0
382	2438	0	902	86	274	266	222	55	2.7	55	11	0	1	145	212	0	1054	0	0

2035 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
385	13148	0	4709	232	1165	1460	1204	647	2.8	429	94	334	89	30	976	0	0	0	0
386	2963	0	1126	259	324	248	215	80	2.6	1122	41	9	0	41	1213	0	0	0	0
387	1153	0	424	97	111	95	87	34	2.7	11	1854	544	0	0	2409	0	0	833	0
388	3890	0	1496	206	541	324	333	92	2.6	37	55	44	0	7	143	0	616	0	0
389	6043	0	2349	336	590	685	520	218	2.6	3	6	4	10	8	32	0	610	891	0
390	565	0	226	32	56	66	51	20	2.5	4	0	0	0	957	961	0	222	0	0
391	506	0	201	28	51	60	44	19	2.5	947	26	7	0	127	1107	0	0	0	0
392	563	0	230	51	64	58	44	14	2.4	326	150	0	0	68	544	0	0	0	0
393	958	0	368	79	127	81	61	21	2.6	110	23	0	0	1124	1257	0	2013	0	0
394	2995	0	1156	193	261	159	333	210	2.6	4	10	4	11	10	40	0	0	0	0
395	553	0	221	34	60	66	40	22	2.5	0	155	0	0	13	168	0	0	0	0
396	1009	0	403	57	100	117	91	37	2.5	165	71	68	100	19	423	0	0	0	0
397	1535	0	495	6	110	144	128	107	3.1	3	0	32	6	166	207	0	1091	0	0
398	6318	0	1989	1008	101	538	63	280	3.2	0	0	578	0	0	578	0	820	0	0
399	9587	0	2996	450	600	898	600	448	3.2	3	70	4	200	8	285	0	10382	0	0
400	9570	0	3300	196	313	1336	1218	237	2.9	454	121	104	465	554	1698	0	0	3307	0
401	1861	0	1033	301	380	217	106	29	1.8	879	183	59	240	158	1519	0	0	0	0
403	881	182	419	119	195	64	18	24	2.1	42	102	5	190	131	470	0	0	0	0
407	2387	0	1200	287	491	222	133	68	2.0	45	511	18	143	341	1057	0	0	0	0
409	937	0	284	3	53	82	69	77	3.3	12	18	131	0	3	165	0	0	0	0
410	3061	0	1092	6	162	234	513	177	2.8	27	97	110	201	93	528	0	0	0	0
411	78	0	34	0	3	6	19	6	2.3	32	27	14	6	0	79	0	0	0	0
413	1119	0	441	85	118	101	93	44	2.5	90	32	384	489	390	1386	0	447	0	0
414	2469	0	957	175	219	256	182	125	2.6	176	110	51	344	318	998	0	14	0	0
415	1933	0	807	123	241	132	243	68	2.4	55	16	60	117	175	424	0	0	0	0
416	1407	13	557	13	64	102	259	119	2.5	9	25	72	17	43	165	0	0	0	0
417	2115	0	1091	282	355	179	210	65	1.9	13	90	15	95	50	263	0	0	0	0
418	2068	0	802	82	258	211	232	19	2.6	18	191	69	1000	363	1641	0	1097	0	0
419	1333	0	501	37	76	91	186	111	2.7	5	0	0	33	45	84	0	0	0	0
420	1557	0	707	69	188	195	175	81	2.2	13	2	0	3	64	81	0	0	0	0
422	1814	0	721	75	126	186	247	88	2.5	366	342	1206	124	450	2488	0	50	0	0
423	1556	0	608	132	177	143	108	48	2.5	16	499	121	297	455	1389	0	716	0	0
424	1595	0	663	127	141	133	120	142	2.4	69	228	87	182	185	751	0	0	0	0
425	836	0	387	61	114	66	123	22	2.2	132	277	87	623	577	1696	0	376	0	215
430	1604	0	572	145	154	136	127	10	2.8	496	200	36	26	39	797	0	0	0	0
435	1715	0	600	40	209	170	181	0	2.9	44	2	6	0	2	55	0	0	0	0
436	2315	0	890	238	241	253	132	26	2.6	507	345	1261	205	1152	3471	0	388	1115	833
437	7428	0	2857	336	1064	953	401	102	2.6	64	9	0	7	75	156	0	520	0	0
440	1357	0	617	102	142	161	171	41	2.2	20	10	3	28	74	135	0	220	0	0
441	375	0	220	51	60	48	43	19	1.7	11	291	108	32	128	570	0	0	0	0
442	794	0	426	90	119	108	78	32	1.9	13	3	25	10	39	90	0	15	0	0
443	1420	0	495	28	35	38	140	254	2.9	19	10	45	383	82	540	0	0	0	0
444	1517	0	555	11	29	82	209	225	2.7	48	6	19	5	139	217	0	0	0	0
445	1181	8	561	79	131	95	178	78	2.1	24	63	41	86	68	282	0	0	0	0
446	41	0	21	7	7	4	2	0	1.9	0	0	0	7	8	15	0	0	0	0
447	905	0	298	4	54	81	84	75	3.0	20	1	4	9	56	90	0	0	0	0
448	638	0	362	106	130	60	34	32	1.8	16	18	162	82	88	366	0	0	0	0
449	1010	0	573	183	117	122	105	47	1.8	35	151	38	153	360	736	0	399	0	0
450	477	0	270	74	95	43	29	29	1.8	120	248	440	170	241	1220	0	0	0	0
451	13	0	9	2	3	2	1	1	1.5	3	0	4	0	38	46	0	0	0	0
452	412	0	228	64	81	37	24	23	1.8	3	98	41	79	173	393	0	0	0	0

2035 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
453	361	0	195	62	40	42	35	15	1.9	152	41	61	45	235	533	0	317	368	0
454	71	0	40	10	9	7	8	5	1.8	0	2	0	1	0	2	0	0	0	0
455	829	0	452	102	97	72	106	76	1.8	34	145	17	11	65	271	0	0	0	0
456	994	79	522	122	114	84	117	84	1.9	13	16	0	84	30	144	0	0	0	0
457	1681	0	555	18	42	56	249	191	3.0	33	43	306	627	1084	2094	0	0	0	0
458	2563	0	1268	50	119	152	557	391	2.0	3	2	4	15	5	30	0	0	0	0
459	412	0	137	3	9	30	48	48	3.0	263	42	0	0	0	306	0	0	0	0
460	2772	0	990	149	198	297	198	148	2.8	3	4	4	8	5	25	0	0	0	0
461	51	0	23	4	7	5	3	5	2.2	3	0	4	0	0	7	0	0	0	0
463	2646	0	980	12	203	246	261	258	2.7	13	0	792	0	50	855	0	0	0	0
464	1233	0	411	5	137	118	108	43	3.0	40	81	287	26	123	557	0	813	0	0
465	2040	0	658	8	136	235	176	103	3.1	6	5	0	0	146	157	0	0	0	0
466	5614	0	2005	23	517	587	551	327	2.8	1	122	22	100	49	295	0	401	0	0
467	2723	0	939	11	195	336	251	146	2.9	86	14	0	0	0	101	0	1134	0	0
469	1587	0	387	5	76	109	108	89	4.1	3	10	4	8	31	57	0	0	0	0
470	561	0	181	2	21	73	48	37	3.1	84	7	0	0	234	325	0	642	0	0
471	1788	0	777	101	184	170	209	113	2.3	1797	342	9	786	22	2957	0	0	0	0
472	2133	0	1007	326	248	179	183	71	2.1	1396	112	833	44	204	2589	0	10	0	0
473	1852	295	841	321	291	133	74	22	2.2	25	92	4	11	253	385	0	239	241	0
474	103	0	46	15	21	5	5	0	2.2	3	3	4	8	5	23	0	0	0	0
475	1130	0	628	201	290	58	79	0	1.8	35	14	0	35	115	199	0	526	0	0
476	947	0	526	169	242	48	67	0	1.8	9	0	54	35	15	113	0	0	0	0
477	460	0	200	42	42	40	76	0	2.3	72	1	0	427	5	505	0	0	0	0
478	570	0	300	48	119	89	45	0	1.9	3	3	4	8	5	23	0	0	0	0
479	346	0	128	43	57	13	15	0	2.7	252	524	567	129	323	1795	0	0	0	0
480	756	0	269	23	45	41	57	104	2.8	20	8	11	23	8	70	0	0	0	0
481	0	0	0	0	0	0	0	0	0.0	59	352	121	0	127	660	0	423	719	0
482	2192	0	843	15	91	72	313	352	2.6	14	5	27	7	3	57	0	0	0	0
483	1157	0	428	13	30	103	151	131	2.7	20	578	56	768	893	2314	0	2305	0	0
484	1222	0	488	56	104	139	127	63	2.5	67	100	262	52	831	1312	0	0	0	0
485	2420	0	898	28	70	225	446	130	2.7	310	4	11	0	35	359	0	0	0	0
486	248	0	76	8	10	10	22	26	3.3	6	0	36	0	0	42	0	0	0	0
488	4487	0	1446	55	113	331	697	250	3.1	71	57	15	68	230	440	0	724	0	0
489	3308	0	1002	30	58	156	569	188	3.3	106	14	0	305	843	1268	0	607	0	0
490	2542	0	818	14	142	210	304	148	3.1	10	9	53	6	208	286	0	0	0	0
491	286	0	119	8	27	25	39	20	2.4	32	18	0	27	0	77	0	0	0	0
492	478	0	191	11	27	26	57	70	2.5	13	11	0	5	67	96	0	0	0	0
494	1253	0	485	5	45	88	177	171	2.6	193	0	12	26	103	333	0	0	0	0
495	1194	0	442	17	39	50	196	140	2.7	14	155	0	348	141	658	0	0	0	0
496	1288	0	495	90	166	93	73	73	2.6	42	0	0	8	26	76	0	0	0	0
497	3134	0	1415	50	119	154	625	466	2.2	95	379	0	81	856	1412	0	0	0	0
498	1647	474	760	44	103	132	278	203	2.2	66	192	1842	724	30	2854	0	0	0	0
499	4140	0	1800	156	244	477	461	461	2.3	3	4	4	9	6	27	0	0	0	0
500	430	0	180	19	65	54	28	15	2.4	71	30	39	74	43	257	0	0	0	0
501	1355	0	586	166	202	104	85	29	2.3	68	193	33	136	197	627	0	0	0	0
502	1082	0	456	59	138	104	130	25	2.4	115	346	7	298	563	1328	0	0	0	0
503	955	0	385	74	78	61	130	41	2.5	260	62	36	175	104	638	0	0	0	0
504	754	0	272	78	63	40	70	21	2.8	142	96	179	68	171	656	0	87	0	0
505	1378	0	556	85	74	140	174	82	2.5	42	44	93	106	1303	1589	0	318	840	0
506	1616	0	618	173	126	86	133	99	2.6	89	41	13	48	144	334	0	0	0	0
507	916	0	334	45	52	52	111	74	2.7	49	4	12	19	172	256	0	692	0	0

2035 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRE Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
508	1100	0	415	46	148	124	64	33	2.6	12	15	61	36	146	270	0	407	0	0
509	340	0	160	30	73	35	22	0	2.1	236	590	182	482	388	1878	0	0	0	0
510	484	0	242	56	40	56	61	29	2.0	62	155	13	171	50	451	0	0	0	0
511	142	0	53	30	16	7	0	0	2.7	6	7	1	5	25	44	0	0	0	0
512	538	0	269	104	91	35	22	17	2.0	20	9	22	121	92	264	0	0	0	0
513	492	0	328	91	127	50	36	24	1.5	106	28	68	420	290	912	0	0	146	0
514	182	240	108	32	35	21	15	5	1.7	68	8	2483	887	464	3910	0	24	140	833
517	1601	0	642	53	99	92	133	266	2.5	14	16	49	38	25	143	0	0	0	0
518	978	0	443	36	69	65	92	181	2.2	15	212	0	125	100	452	0	0	0	0
519	2962	124	975	86	162	148	198	380	3.0	11	2	0	19	82	114	0	400	0	0
520	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	702	0	0	0
521	1255	0	497	44	83	75	101	194	2.5	14	61	0	72	124	271	0	342	0	0
522	1703	0	587	45	58	114	230	140	2.9	76	2	0	6	13	98	0	0	0	0
523	646	0	239	0	0	38	79	123	2.7	0	109	6784	1	382	7276	0	0	0	0
524	894	0	319	25	32	61	125	76	2.8	16	2	0	8	17	43	0	0	0	0
525	2040	0	849	79	99	181	312	178	2.4	565	504	12	5	81	1166	0	0	0	0
526	392	0	218	59	40	42	50	28	1.8	173	61	0	83	61	378	0	7	0	0
527	9	0	9	0	1	1	4	3	1.0	60	0	0	0	115	175	0	0	0	0
528	11	0	5	0	0	1	2	2	2.5	0	4	2515	8	6	2533	0	0	0	0
529	666	0	288	55	54	53	63	63	2.3	22	97	0	0	87	206	0	0	0	0
532	96	0	74	56	6	9	3	0	1.3	0	135	262	54	506	956	0	0	1764	0
533	309	0	206	153	17	27	9	0	1.5	89	245	390	851	201	1777	0	0	0	0
534	144	0	78	58	7	10	3	0	1.8	38	268	699	370	408	1783	0	0	0	0
535	894	0	344	166	94	47	36	1	2.6	178	14	3842	71	246	4351	0	0	0	0
600	41	0	17	5	5	5	2	0	2.5	213	539	18	85	69	924	0	0	0	0
601	813	0	307	34	46	107	87	32	2.6	9	534	50	121	123	838	0	0	0	0
602	74	0	38	25	11	2	0	0	2.5	203	155	26	666	440	1491	0	0	0	0
603	1337	0	593	109	159	185	117	24	2.3	22	12	4	25	99	161	0	443	0	0
604	124	0	54	15	15	13	8	3	2.3	580	66	103	78	168	995	0	0	0	477
605	1417	13	577	92	172	85	178	50	2.5	31	0	11	11	112	165	0	473	0	0
606	122	0	53	15	14	12	8	3	2.3	340	157	163	296	318	1273	0	0	0	0
607	2097	530	955	374	305	165	99	12	2.2	18	221	112	167	544	1063	0	0	1174	0
608	1486	0	620	170	173	128	120	30	2.4	86	373	29	47	80	614	0	0	0	0
609	2454	0	1038	431	474	105	28	0	2.4	9	443	5	80	124	661	0	453	0	0
610	1774	0	590	112	233	179	62	5	3.0	3	61	7	19	158	248	0	664	0	0
611	642	0	245	62	113	44	21	5	2.6	13	146	23	121	66	369	0	0	0	0
612	1736	0	1020	291	444	206	59	21	1.7	463	439	950	842	141	2835	0	0	0	0
613	1402	0	506	62	167	150	94	33	2.8	1	1	2	4	8	16	0	0	0	0
614	1169	0	434	128	172	73	55	6	2.7	3	0	84	0	0	87	0	0	0	0
615	1436	0	545	79	159	142	140	25	2.6	0	46	9	82	111	248	0	473	0	0
616	2483	0	942	118	267	259	254	44	2.6	219	11	6	109	70	415	0	376	0	0
617	1260	0	486	80	169	97	129	10	2.6	133	44	0	126	80	382	0	0	0	0
618	1794	0	841	226	381	178	40	15	2.1	10	250	3	170	25	458	0	0	0	0
619	1659	0	750	145	260	192	125	28	2.2	805	145	45	1437	159	2591	0	0	0	292
620	1663	0	638	124	221	163	107	23	2.6	0	57	0	190	51	299	0	0	0	0
621	1146	0	390	43	154	102	91	0	2.9	0	3	0	0	3	6	0	0	0	0
622	1656	0	570	93	128	187	146	17	2.9	0	1	0	0	78	79	0	467	0	0
623	184	0	71	12	17	24	17	2	2.6	0	114	0	0	0	114	0	0	0	0
624	1849	0	637	89	164	162	203	19	2.9	876	3	3	102	1225	2210	0	1361	0	0
625	1499	0	576	118	210	159	71	18	2.6	47	23	2	64	77	213	0	0	0	0
628	270	0	83	16	24	19	12	11	3.3	41	38	0	127	8	214	0	0	0	0

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629	1404	0	494	54	60	57	146	177	2.8	3	5	4	9	7	29	0	0	0	0
630	2295	0	765	45	72	301	294	53	3.0	3	22	4	9	22	61	0	0	0	0
631	4991	0	1468	87	137	578	564	102	3.4	49	23	26	100	76	275	0	1099	0	0
632	3145	0	1089	70	109	445	397	68	2.9	251	0	25	134	718	1129	0	0	0	0
633	984	0	324	4	67	109	118	27	3.0	13	2	3	57	1415	1489	0	1210	0	0
634	0	0	0	0	0	0	0	0	0.0	596	1442	0	112	289	2439	0	0	0	0
635	0	0	0	0	0	0	0	0	0.0	164	1514	552	168	96	2494	0	0	0	0
637	3006	0	2004	154	617	154	925	154	1.5	10	147	11	350	11	529	0	772	0	0
638	11055	0	4422	349	1293	298	2036	446	2.5	20	145	22	415	49	652	0	410	0	0
639	7985	0	3194	251	933	215	1471	323	2.5	0	52	0	0	3	54	0	1746	1100	0
640	730	0	399	47	95	137	57	63	1.8	3	5	4	9	7	29	0	0	0	0
641	189	0	67	4	9	9	20	24	2.8	0	0	0	0	588	588	0	645	4972	0
642	2208	0	960	32	73	98	429	328	2.3	38	0	12	0	704	754	0	0	0	0
643	1898	0	834	147	291	268	129	0	2.3	3	5	4	9	6	28	0	0	0	0
644	1908	0	596	55	81	139	219	102	3.2	108	481	769	120	273	1749	0	0	0	0
645	1684	0	526	54	79	122	207	64	3.2	43	0	0	118	1023	1185	0	2083	1129	0
646	0	0	0	0	0	0	0	0	0.0	3	78	4	423	7	515	0	0	0	0
647	2032	0	634	122	110	145	195	62	3.2	265	113	195	10	1188	1771	0	2996	0	0
649	12150	0	4500	243	354	567	2173	1163	2.7	3	382	4	10	7	406	0	877	0	0
650	13500	0	4500	240	355	565	2175	1165	3.0	4	5	4	801	8	822	0	1311	997	0
652	70	0	31	1	2	4	14	10	2.3	3	167	4	261	6	441	0	0	0	0
653	1433	0	494	6	117	158	132	81	2.9	14	6	3	0	53	76	0	0	0	0
654	815	0	263	3	49	76	64	71	3.1	122	54	0	0	531	706	0	465	0	0
655	1458	0	540	19	43	55	240	183	2.7	316	1373	395	400	61	2545	0	1442	0	0
656	675	0	270	34	70	65	60	41	2.5	0	0	102	5	57	164	0	508	0	0
657	0	0	0	0	0	0	0	0	0.0	3	77	4	371	72	527	0	0	0	0
658	0	0	0	0	0	0	0	0	0.0	180	106	4	572	102	964	0	0	0	0
659	0	0	0	0	0	0	0	0	0.0	0	0	20	0	892	912	0	0	0	9168
800	78	0	47	11	16	9	3	8	1.6	0	0	16	0	0	16	0	0	0	0
801	1367	0	568	21	47	60	253	186	2.4	0	0	0	803	0	803	0	0	0	0
802	495	0	215	20	24	60	66	45	2.3	93	286	104	144	110	738	0	0	0	0
803	818	0	314	40	58	80	82	55	2.6	92	139	0	239	736	1207	0	0	0	0
804	6	0	2	0	0	0	2	1	2.5	0	0	0	0	1599	1599	0	2796	745	0
805	641	0	271	60	91	50	51	19	2.4	0	0	1	0	1	3	0	0	0	0
806	914	0	378	83	129	67	71	27	2.4	10	20	2	4	5	42	0	0	0	0
807	847	0	328	62	95	72	78	21	2.6	22	92	2	81	11	208	0	0	0	0
808	655	0	259	49	75	57	61	17	2.5	80	99	0	36	10	226	0	0	0	0
809	605	0	227	28	54	43	74	29	2.7	20	443	3	27	3	495	0	0	0	0
810	2030	0	843	113	232	180	195	123	2.4	35	0	28	0	152	215	0	1921	691	0
811	2252	0	731	86	172	141	239	93	3.1	48	13	8	10	5	85	0	0	0	0
812	669	0	268	52	79	60	61	15	2.5	2	4	2	1	2	12	0	0	0	0
813	1902	0	789	152	233	175	182	47	2.4	346	15	16	15	10	403	0	0	0	0
814	340	0	143	35	51	23	23	10	2.4	13	2	40	0	0	55	0	0	0	0
815	550	0	225	52	79	39	40	16	2.4	7	1	7	0	4	19	0	0	0	0
816	116	0	54	10	15	12	14	4	2.1	208	3	7	0	53	271	0	0	0	0
817	1257	0	529	99	152	116	128	34	2.4	47	206	279	152	178	862	0	652	257	0
818	27	0	8	1	4	2	1	0	3.4	80	0	0	552	66	698	0	0	0	0
819	31	0	16	5	6	4	1	0	1.9	0	0	0	0	66	66	0	71	47	0
820	4	0	3	1	1	1	0	0	1.3	0	0	0	0	0	1	0	0	0	0
821	108	0	37	8	12	9	6	2	2.9	5	2	0	0	0	7	0	0	0	0
822	37	0	15	4	5	4	2	1	2.4	13	41	257	0	0	311	0	0	0	0



2035 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
823	368	0	106	28	56	14	9	0	3.5	3	0	0	0	0	3	0	0	0	0
824	621	0	210	29	63	54	39	25	3.0	4	0	4	0	0	8	0	0	0	0
825	425	0	142	34	48	35	19	6	3.0	0	0	2	0	98	100	0	187	66	0
826	51	0	20	4	7	5	3	1	2.5	0	0	47	0	0	47	0	0	0	0
827	251	0	91	21	31	22	12	4	2.8	2	0	0	2	6	10	0	0	0	0
828	301	0	103	24	35	26	14	4	2.9	32	0	0	0	3	35	0	0	0	0
829	226	0	83	20	28	21	11	4	2.7	6	0	0	0	1	7	0	0	0	0
830	378	0	140	31	46	35	21	7	2.7	4	0	28	0	5	37	0	0	0	0
831	149	0	68	16	23	17	9	3	2.2	5	0	2	0	63	70	0	197	234	0
832	760	0	316	75	108	78	41	14	2.4	8	8	46	0	0	63	0	0	0	0
833	1212	0	497	115	168	123	67	23	2.4	9	2	6	0	2	19	0	0	0	0
834	1656	0	573	152	216	108	70	28	2.9	88	1	41	0	5	135	0	0	0	0
835	414	0	153	35	52	37	21	7	2.7	101	17	0	8	6	133	0	0	0	0
836	1063	0	350	81	118	88	48	16	3.0	37	0	91	13	223	365	0	384	461	0
837	933	0	359	9	26	35	166	123	2.6	7	0	0	0	12	19	0	379	0	0
838	540	0	360	12	29	37	161	122	1.5	3	97	38	648	6	792	0	0	0	0
839	385	0	148	0	0	0	49	99	2.6	3	5	4	8	6	27	0	0	0	0
840	600	0	300	36	83	84	10	86	2.0	1805	0	0	0	0	1805	0	0	0	0
841	126	0	46	1	3	11	24	7	2.7	55	2	0	2	68	127	0	0	0	0
842	1860	0	620	0	0	248	372	0	3.0	14	61	47	0	21	143	0	0	0	0
843	837	0	310	0	19	28	76	187	2.7	4	6	4	10	8	33	0	0	0	0
844	20	0	12	0	0	7	5	0	1.6	0	39	0	9	8	57	0	0	0	0
845	272	0	101	21	21	15	23	22	2.7	454	256	0	0	9614	10323	0	0	0	4667
846	1665	0	710	42	97	98	211	261	2.3	3	5	4	9	6	28	0	0	0	0
847	1477	0	590	34	90	159	262	45	2.5	49	308	34	378	358	1127	0	470	0	0
848	2094	0	750	17	110	185	305	133	2.8	27	72	0	189	58	345	0	0	0	0
850	0	0	0	0	0	0	0	0	0.0	117	50	425	235	2176	3003	0	0	0	0
851	1802	0	529	0	18	65	213	234	3.4	495	6	12	545	6	1064	0	1180	0	0
852	0	0	0	0	0	0	0	0	0.0	716	29	17	224	107	1092	0	0	0	0
853	1705	0	537	0	18	63	215	242	3.2	0	45	0	147	113	306	0	0	0	0
854	1281	0	366	0	22	52	140	152	3.5	130	1151	39	1148	811	3279	0	571	0	0
855	2645	0	1101	76	322	214	384	106	2.4	48	173	14	77	500	811	0	554	0	0
856	404	0	134	13	12	27	63	20	3.0	2711	8	1288	30	1715	5752	0	0	0	0
857	1240	0	470	45	79	95	186	64	2.6	71	90	7	86	231	486	0	756	0	0
858	882	0	332	16	57	106	108	45	2.7	9	13	1	69	28	119	0	0	0	0
859	1558	0	565	16	54	156	300	40	2.8	73	27	5	10	29	143	0	0	0	0
860	1039	0	384	9	50	125	142	58	2.7	864	146	0	222	140	1372	0	0	0	0
861	611	0	265	35	104	70	41	15	2.3	112	1776	0	46	23	1957	0	0	0	0
862	970	0	1059	30	155	377	386	111	0.9	780	195	113	90	163	1340	0	0	0	0
863	1269	0	507	19	83	164	174	68	2.5	14	537	55	103	360	1069	0	29	0	0
864	1448	0	536	31	98	175	177	55	2.7	24	14	2	21	162	223	0	273	86	0
865	1384	0	488	61	69	107	192	60	2.8	10	9	0	21	22	63	0	0	0	0
866	1162	0	528	65	72	121	204	65	2.2	68	0	0	42	43	154	0	689	0	0
867	1280	0	489	45	109	102	181	51	2.6	27	20	58	59	22	187	0	0	0	0
868	685	0	263	25	23	95	76	44	2.6	0	1	1	11	2	15	0	0	0	0
869	1101	0	453	101	117	119	74	43	2.4	21	249	76	425	70	842	0	343	0	0
870	2279	0	880	18	75	186	378	223	2.6	28	0	0	7	91	126	0	47	15	0
871	1173	0	437	10	42	96	186	103	2.7	124	12	182	125	157	600	0	0	0	0
872	289	0	75	5	8	31	27	5	3.9	171	275	203	373	166	1187	0	0	0	0
873	11494	0	5426	346	544	2216	1980	341	2.1	87	168	0	56	229	540	0	4755	0	0
874	1897	0	639	5	100	207	268	60	3.0	43	11	32	46	753	886	0	0	0	0

2035 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
875	2419	0	833	14	126	271	344	78	2.9	110	367	770	1030	810	3087	0	0	0	0
876	2271	0	756	36	123	125	442	30	3.0	461	547	0	71	52	1132	0	0	0	0
877	4392	0	1513	81	214	534	514	171	2.9	25	20	0	21	72	138	0	919	0	0
878	1943	0	669	14	126	238	213	78	2.9	31	0	0	45	639	715	0	977	2868	0
879	3002	0	1000	40	156	330	371	104	3.0	0	42	23	109	24	199	0	0	0	0
880	1062	0	461	119	207	94	32	9	2.3	4	79	5	76	99	263	0	0	0	0
881	1034	0	369	93	170	67	29	11	2.8	6	0	0	9	0	15	0	0	0	0
882	532	0	172	44	64	53	12	0	3.1	2	0	15	0	63	80	0	394	0	0
883	1602	0	572	58	211	199	82	21	2.8	48	9	0	0	21	78	0	0	0	0
884	1765	0	812	270	310	141	60	31	2.2	0	53	3	47	38	141	0	0	0	0
885	1675	0	761	216	282	174	74	15	2.2	58	17	0	65	4	144	0	0	0	0
886	924	0	369	107	117	90	35	20	2.5	2	24	16	130	47	219	0	0	0	0
887	990	0	340	92	57	95	78	19	2.9	7	0	0	0	18	25	0	0	0	0
888	4511	185	1802	500	653	347	302	0	2.5	1	78	0	91	8	177	0	0	0	0
889	1147	0	479	117	148	145	57	12	2.4	2	8	4	11	14	40	0	0	0	0
890	4	0	2	1	1	0	0	0	2.0	44	430	3	120	108	705	0	0	0	0
891	1525	0	541	206	162	85	68	19	2.8	15	59	7	29	178	288	0	446	0	0
892	1393	0	531	156	161	107	95	12	2.6	52	123	0	159	589	924	0	1483	0	0
893	1762	0	720	241	263	135	65	16	2.4	21	61	149	125	239	594	0	0	0	0
894	1556	0	818	167	300	179	139	34	1.9	330	335	265	96	224	1250	0	0	0	0
895	1726	0	640	75	220	204	138	4	2.7	8	44	0	19	422	492	0	349	1574	0
896	1054	0	369	72	79	83	103	31	2.9	50	12	19	6	3	91	0	0	0	0
897	805	0	342	32	78	130	85	18	2.3	136	39	1	1	12	190	0	0	0	0
898	955	0	376	25	76	121	117	37	2.5	142	15	2	3	8	169	0	0	0	0
899	436	0	244	47	52	55	69	21	1.8	44	7	1	1	19	71	0	0	0	0
900	1077	0	477	222	146	55	28	26	2.3	0	0	0	0	0	0	0	0	0	0
901	651	0	286	137	87	30	16	15	2.3	0	0	0	0	0	0	0	0	0	0
902	560	0	252	110	79	33	16	14	2.2	0	0	0	0	0	0	0	0	0	0
903	499	0	238	69	82	50	24	13	2.1	436	116	19	3	186	760	0	0	0	0
904	1284	0	611	93	209	146	127	37	2.1	72	237	344	456	3353	4463	0	397	190	0
905	957	0	415	61	135	100	80	38	2.3	37	37	0	14	3	91	0	0	0	0
906	1745	106	756	107	233	169	156	91	2.3	29	7	3	28	0	67	0	0	0	0
907	718	0	300	74	88	60	53	25	2.4	57	5	29	7	26	124	0	0	0	0
908	1537	0	693	98	177	170	173	76	2.2	261	21	81	142	105	610	0	0	0	0
909	629	0	266	56	72	59	58	22	2.4	39	98	56	15	65	274	0	0	0	0
910	105	0	44	3	10	12	14	5	2.4	0	0	0	0	0	0	0	0	0	0
911	102	0	45	15	16	7	3	4	2.3	6	2	10	2	127	147	0	0	0	0
912	1831	0	812	233	269	120	96	93	2.3	97	24	152	37	146	456	0	0	0	0
913	486	0	207	24	50	30	60	43	2.3	17	11	14	15	42	99	0	0	0	0
914	551	0	227	59	50	34	38	46	2.4	6	6	0	4	5	20	0	0	0	0
915	1401	13	532	84	111	93	122	121	2.6	29	197	27	208	47	508	0	0	0	0
916	1675	0	639	100	174	133	137	94	2.6	39	72	54	17	109	290	0	0	0	0
917	823	0	352	63	95	71	71	52	2.3	2	47	7	4	19	78	0	0	0	0
918	555	0	225	104	54	22	12	33	2.5	0	17	0	9	5	30	0	0	0	0
919	662	0	293	41	91	68	61	33	2.3	4	6	0	6	0	16	0	0	0	0
920	1568	0	649	84	207	158	142	57	2.4	27	2	0	66	6	102	0	0	0	0
921	147	0	61	9	19	14	12	7	2.4	18	8	11	24	1	62	0	0	0	0
922	313	0	125	59	31	12	5	18	2.5	0	8	0	5	11	24	0	0	0	0
923	261	0	111	35	30	12	17	16	2.3	0	4	0	3	6	13	0	0	0	0
924	533	0	230	35	69	27	65	33	2.3	2	2	1	18	5	28	0	0	0	0
925	653	0	262	107	67	27	24	37	2.5	5	14	6	9	5	39	0	0	0	0

2035 SMALL AREA FORECAST

TAZ	Household Population	Group Quarters Population	Total Households	Income Bin 1	Income Bin 2	Income Bin 3	Income Bin 4	Income Bin 5	Persons per Households	Basic Jobs	Retail Jobs	Transportation, Communication, Utilities and Government Jobs	FIRES Jobs	Hospitality-Amusement Jobs	Total Jobs	Military	K-8 Enrollment	HS Enrollment	College Enrollment
926	1074	0	422	68	115	88	89	62	2.5	22	59	13	75	8	178	0	0	0	0
927	82	0	29	5	7	7	8	2	2.8	96	9	69	90	131	394	0	0	0	0
928	805	0	344	56	92	81	78	37	2.3	81	58	77	10	58	286	0	0	0	0
929	253	0	111	37	39	17	8	10	2.3	15	4	24	6	21	71	0	0	0	0
930	328	0	149	21	45	34	31	18	2.2	2	1	0	4	0	7	0	0	0	0
931	210	0	94	13	29	21	20	10	2.2	1	1	0	2	0	4	0	0	0	0
932	212	0	99	13	25	15	27	19	2.1	101	1	17	2	13	134	0	0	0	0
933	223	99	96	29	33	14	10	10	2.3	104	9	716	5	35	869	0	0	0	0
934	749	0	317	99	86	35	52	45	2.4	6	12	0	7	47	72	0	0	0	0
935	192	0	78	32	20	8	7	11	2.5	0	27	0	3	9	39	0	0	0	0
936	415	0	191	46	55	39	35	16	2.2	11	12	60	4	235	322	0	0	0	0
937	955	0	384	147	99	40	42	55	2.5	9	19	0	12	10	49	0	0	0	0
938	179	0	80	17	21	16	15	12	2.2	4	78	0	10	114	207	0	492	0	0

# APPENDIX L

## APPENDIX L: REFERENCES

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## REFERENCES

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